

Notes on available tabulations of photoelectric cross sections:

- **Non-relativistic subshell photoelectric cross sections and asymmetry parameters relevant to lower photon energies in the vacuum ultraviolet/soft x-ray range (10-1500 eV) with entries also at 8 keV, are available at:**

J.-J. Yeh and I. Lindau, “Atomic Subshell Photoionization Cross Sections and Asymmetry Parameters: $1 < Z < 103$,” *At. Data Nucl. Data Tables* **32, 1 (1985).**

J.-J. Yeh, *Atomic Calculations of Photoionization Cross Sections and Asymmetry Parameters* (Gordon and Breach, Langhorne, PA, 1993).

Graphical representations of these cross sections are also available at:

**[http://ulisse.elettra.trieste.it/services/elements/
WebElements.html](http://ulisse.elettra.trieste.it/services/elements/WebElements.html)**

- **The same non-relativistic program due to Manson has also been used previously to calculate cross sections, asymmetry parameters, and $\ell \pm 1$ matrix elements for 20 elements, in:**

S. M. Goldberg, C. S. Fadley, and S. Kono, *Journal of Electron Spectroscopy and Related Phenomena* 21, 285 (1981).

- **The relativistic subshell photoelectric cross sections for 1-100 keV photon energies in the following tabulation by Scofield can be supplemented for some cases with the asymmetry parameter calculations of Nefedov and co-workers so as to yield differential cross sections:**

M.B. Trzhaskovskaya, V.I. Nefedov, V.G. Yarzhemsky, *Atomic Data & Nuclear Data Tables* 82, 257 (2002).

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**THEORETICAL PHOTOIONIZATION CROSS SECTIONS
FROM 1 TO 1500 keV**

James H. Scofield

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ABSTRACT

Cross sections for photoionization from elements with Z from 1 to 101 and for photon energies from 1 to 1500 keV were calculated. In this calculation, the electrons are treated relativistically and as moving in a Hartree-Slater central potential. Cross sections for ionizations from the individual subshells are given here.

INTRODUCTION

The bulk of the present report lists the calculated photoionization cross sections for ionization of neutral atoms with Z 's from 1 to 101 by photons of energies from 1 to 1500 keV. The cross sections for the ionization from the individual subshells are listed.

In the calculation of the cross section, the electrons are treated relativistically and are assumed to be moving in the same Hartree-Slater central potential both before and after the absorption of the photon. All contributing multipoles and retardation effects are included in the treatment of the radiation field.

Calculations in this energy range were reviewed recently by Pratt *et al.*¹ Proper relativistic treatment of the electrons has been made possible by the availability of high-speed computers; and relativistic calculations treating the electrons as moving in a Coulomb field were carried out by Hulme *et al.*,² Hultberg *et al.*,³ Pratt *et al.*,⁴ and Alling and Johnson.⁵ The effects of screening of the nuclear charge by the other electrons in the atom were included in works of Matese and Johnson,⁶ Rakavy and Ron,⁷ Hall and Sullivan,⁸ and Schmickley and Pratt.⁹ Previously, by means of a computer code developed by Brysk and Zerby, results for the Hartree-Slater model were given by Brysk and Zerby,¹⁰ Storm and Israel,¹¹ and Barfield *et al.*¹² The Hartree-Slater model has also been used by McGuire for an extensive set of nonrelativistic calculations.¹³

Within the framework of a potential model for the treatment of the electrons, the relativistic calculations represent highly accurate descriptions of the photoionization process. However, there is the crucial question of a proper potential to be used and of the validity of any potential model. These questions are taken up to some extent in the review by Pratt *et al.*,² and more fully in that by Fano and Cooper.¹⁴ A great deal of impetus was given to the use of the Hartree-Slater model by the exploratory work of Manson and Cooper,¹⁵ who found that at least reasonable results could be obtained with it.

For photon energies much greater than the binding energy of an electron, Pratt,¹⁶ with Schmickley⁹ and Tseng,¹⁷ has shown that, at least in the potential model, the photoelectric cross section is proportional to the square of the bound-state wave function at the nucleus. As pointed out to the author by R. T. Brown,¹⁸ the Hartree-Fock model gives a more accurate value of the charge density at the nucleus than does the Hartree-Slater model, so the Hartree-Fock wave functions should give more accurate results for high-energy photons. While we have not carried out the calculation with the Hartree-Fock model, we do list the factor by which our high-energy cross sections should be multiplied to convert them to Hartree-Fock values for the low- Z elements.

THEORETICAL DEVELOPMENT

The cross section for the absorption of a beam of photons of energy $\hbar\omega$, momentum $\hbar\mathbf{k}$ and polarization vector $\underline{\epsilon}$ is given by¹⁹

$$\sigma = \frac{4\pi\alpha\hbar c^2}{\omega} \sum_{\substack{\text{final} \\ \text{states}}} |\langle B | \sum_i \underline{\alpha}_i \cdot \underline{\epsilon} e^{i\mathbf{k}\cdot\mathbf{r}_i} | A \rangle|^2 \delta(E_B - \hbar\omega - E_A).$$

The plane-wave radiation field may be expanded in the multipole fields²⁰:

$$\underline{\epsilon} e^{i\mathbf{k}\cdot\mathbf{r}} = (2\pi)^{3/2} \sum_{\substack{LM \\ \lambda=e,m}} i^L A_{LM}^{(\lambda)}(\underline{r}) \underline{\epsilon} \cdot \underline{Y}_{LM}^{(\lambda)*}(\hat{\mathbf{k}});$$

with $\underline{\epsilon}$ perpendicular to \underline{k} , only the electric (e) and magnetic (m) multipoles enter the expansion.

The \underline{Y} 's are the orthonormal vector spherical harmonics

$$\int \underline{Y}_{L'M'}^{(\lambda')}(\hat{\mathbf{r}}) \underline{Y}_{LM}^{(\lambda)}(\hat{\mathbf{r}}) d\Omega = \delta_{\lambda\lambda'} \delta_{LL'} \delta_{MM'}$$

and can be expressed as

$$\underline{Y}_{LM}^{(e)}(\hat{\mathbf{r}}) = \frac{1}{[L(L+1)]^{1/2}} \mathbf{r} \nabla \underline{Y}_{LM}(\hat{\mathbf{r}})$$

$$\underline{Y}_{LM}^{(m)}(\hat{\mathbf{r}}) = \frac{1}{[L(L+1)]^{1/2}} \mathbf{r} \times \nabla \underline{Y}_{LM}(\hat{\mathbf{r}})$$

$$\underline{Y}_{LM}^{(0)}(\hat{\mathbf{r}}) = \hat{\mathbf{r}} \underline{Y}_{LM}(\hat{\mathbf{r}}).$$

The \underline{A} 's are given as

$$\underline{A}_{L,M}^{(e)}(\underline{r}) = \left(\frac{2}{\pi}\right)^{1/2} \frac{1}{k[L(L+1)]^{1/2}} \nabla \times \underline{L} j_L(kr) Y_{LM}(\hat{r})$$

$$\underline{A}_{L,M}^{(m)}(\underline{r}) = i\left(\frac{2}{\pi}\right)^{1/2} \frac{j_L(kr)}{[L(L+1)]^{1/2}} \underline{L} Y_{LM}(\hat{r}),$$

with $\underline{L} = -i\underline{r} \times \nabla$. The \underline{A} 's are divergentless solutions of the vector Helmholtz equation

$$[\nabla^2 + k^2] \underline{A} = 0$$

with definite angular momentum and parity.

In the present work we average over the photon polarization and direction and thus do not treat correlations with the photons, polarization or direction. For the total cross section, we have

$$\sigma = \frac{4\pi^4 \alpha \hbar c^2}{\omega} \sum_{\lambda=e,m} \sum_{L=1}^{\infty} \sum_{M=-L}^L |(B| \sum_i \underline{\alpha}_i \cdot \underline{A}_{LM}^{(\lambda)}(\underline{r}_i) |A)|^2 \delta(E_B - \hbar\omega - E_A).$$

In the present calculation the electrons in the initial and final state are treated as moving independently in the same central potential. We denote by a and b the single-particle states of the electron being ionized.

The single-particle wave functions satisfy the Dirac equation:

$$(\underline{\alpha} \cdot \underline{p} + V(r) + \beta)\psi = E\psi$$

(using $m = \hbar = c = 1$).

Using the representation in terms of 2×2 matrices

$$\underline{\alpha} = \begin{pmatrix} 0 & \underline{\sigma} \\ \underline{\sigma} & 0 \end{pmatrix} \text{ and } \beta = \begin{pmatrix} 1 & \\ & -1 \end{pmatrix},$$

one can write the wave functions of definite angular momentum as

$$\psi = \frac{1}{r} \begin{pmatrix} G(r) & \chi_{\kappa}^{\mu}(\hat{r}) \\ i F(r) & \chi_{-\kappa}^{\mu}(\hat{r}) \end{pmatrix},$$

with

$$\chi_{\kappa}^{\mu}(\hat{r}) = \sum C \left(\ell \frac{1}{2} j; \mu - m, m \right) Y_{\ell \mu - m} Y_{\ell \mu - m} \chi_{1/2}^m$$

$$j = |\kappa| - \frac{1}{2} \quad \ell = \kappa, \quad \kappa > 0, \\ = -\kappa - 1, \quad \kappa < 0;$$

$\chi_{1/2}^m$ are the spin 1/2 spinors.

The G and F satisfy the radial Dirac equations

$$\frac{dG}{dr} + \frac{\kappa}{r} G = (E - V + 1) F$$

$$-\frac{dF}{dr} + \frac{\kappa}{r} F = (E - V - 1) G.$$

This is an eigenvalue equation for the ground-state energies. For the ground states, the radial wave functions are to be normalized as

$$\int [G^2(r) + F^2(r)] dr = 1.$$

For the continuum states for large r, G and F are to go as

$$G(r) \sim \left(\frac{E + 1}{2E} \right)^{1/2} \sin \left[\int^r p(r') dr' + \delta \right]$$

$$F(r) \sim \left(\frac{E - 1}{2E} \right)^{1/2} \cos \left[\int^r p(r') dr' + \delta \right],$$

with $p(r) = [(E - V)^2 - 1]^{1/2}$; that is, the average value of $(G^2 + F^2)$ goes to 1/2. With this normalization, the sum over the final states reads

$$\sum \delta(E_B - \hbar\omega - E_A) = \sum_{k_b} (2j_b + 1) \frac{2 E_b}{\pi p_b};$$

E_b and p_b are the final electron energy and momentum.

The matrix elements have the form

$$\langle b | \underline{\sigma} \cdot \underline{A}^{(\lambda)} | a \rangle = i \int dr d\Omega \left[G_b^{\mu_b^\dagger} \chi_{\kappa_b}^{\mu_b^\dagger} \underline{\sigma} \cdot \underline{A}_{LM}^{(\lambda)} F_a^{\mu_a} \chi_{-\kappa_a}^{\mu_a} - F_b^{\mu_b^\dagger} \chi_{-\kappa_b}^{\mu_b^\dagger} \underline{\sigma} \cdot \underline{A}_{LM}^{(\lambda)} G_a^{\mu_a} \chi_{\kappa_a}^{\mu_a} \right].$$

Straightforward tensorial analysis will give the angular and spin parts in terms of nine -j symbols; the resulting ones having simple expressions for them.²¹ Following Rose,²² one may simplify the original matrix element expressions and give the results in terms of six - j symbols.

Using

$$\underline{\sigma} \cdot \underline{L} \chi_{\kappa} = -(\kappa + 1) \chi_{\kappa}$$

and

$$\underline{\sigma} \cdot \hat{r} \chi_{\kappa} = -\chi_{-\kappa},$$

we have

$$\left[\chi_{-\kappa_b}^{\mu_b^\dagger} \underline{\sigma} \cdot \underline{L} (Y_{LM}) \chi_{\kappa_a}^{\mu_a} \right] = (\kappa_b + \kappa_a) \left(\chi_{-\kappa_b}^{\mu_b^\dagger} Y_{LM} \chi_{\kappa_a}^{\mu_a} \right)$$

Note that

$$r^2 \underline{\nabla} \times \underline{L} = \underline{r} \times \underline{L} (\underline{r} \cdot \underline{\nabla} + 1) + i \underline{r} \underline{L} \cdot \underline{L},$$

giving

$$i r^2 \underline{\sigma} \cdot \underline{\nabla} \times \underline{L} = \underline{\sigma} \cdot \underline{r} \underline{\sigma} \cdot \underline{L} (\underline{r} \cdot \underline{\nabla} + 1) - \underline{\sigma} \cdot \underline{r} \underline{L} \cdot \underline{L},$$

so

$$\chi_{-\kappa_b}^{\mu_b^\dagger} i \underline{\sigma} \cdot \underline{\nabla} \times \underline{L} [Y_{LM}(\hat{r}) j_L(kr)] \chi_{\kappa_a}^{\mu_a} = \left(\chi_{\kappa_b}^{\mu_b^\dagger} Y_{LM}(\hat{r}) \chi_{\kappa_a}^{\mu_a} \right) \frac{1}{r}$$

$$\times [(\kappa_b - \kappa_a) (\underline{r} \cdot \underline{\nabla} + 1) - L(L + 1)] j_L(kr).$$

For

$$\chi_{\kappa_b}^{\mu_b \dagger} Y_{LM}(\hat{r}) \chi_{\kappa_a}^{\mu_a} = (-1)^{j_b+1/2} \left[\frac{(2\ell_a+1)(2\ell_b+1)(2j_a+1)(2L+1)}{4\pi} \right]^{1/2} \\ \times \left\{ \begin{matrix} L & \ell_a & \ell_b \\ \frac{1}{2} & j_b & j_a \end{matrix} \right\} \begin{pmatrix} L & \ell_a & \ell_b \\ 0 & 0 & 0 \end{pmatrix} C(L j_a j_b; M \mu_a).$$

The final expression for the cross section is

$$\sigma = \frac{4\pi\alpha}{\hbar\omega} \left(\frac{\hbar}{mc} \right)^2 \sum_a \frac{N_a E_b}{P_n} \sum_{\kappa_b} (2j_b+1) \sum_L \frac{(2L+1)}{L(L+1)} \\ \times \left[X(\kappa_a, \kappa_b, L) R_e^2 + X(\kappa_a, -\kappa_b, L) R_M^2 \right].$$

The sum on a is over the occupied subshells with N_a electrons in them.

$$R_e = \int \frac{dr}{kr} (F_b G_a - G_b F_a) L(L+1) j_L(kr) + (\kappa_b - \kappa_a) (F_b G_a + G_b F_a) \left(r \frac{d}{dr} + 1 \right) j(kr)$$

$$R_m = (\kappa_a + \kappa_b) \int dr j_L(kr) (F_b G_a + G_b F_a)$$

$$X = (2\ell_a+1)(2\ell_b+1) \begin{pmatrix} \ell_a & \ell_b & L \\ 0 & 0 & 0 \end{pmatrix}^2 \left\{ \begin{matrix} L & \ell_a & \ell_b \\ \frac{1}{2} & j_b & j_a \end{matrix} \right\}^2.$$

X is nonzero, provided $J = \ell_a + \ell_b + L$ is even and L, j_a, j_b form a triangle; with these conditions met, we have

$$\begin{pmatrix} \ell_a & \ell_b & L \\ 0 & 0 & 0 \end{pmatrix}^2 = \frac{(J-2L)! (J-2\ell_a)! (J-2\ell_b)!}{(J+1)!} \times \left[\frac{(J/2)!}{(J/2-L)! (J/2-\ell_a)! (J/2-\ell_b)!} \right]^2$$

and

$$\left\{ \begin{array}{ccc} L & l_a & l_b \\ \frac{1}{2} & j_b & j_a \end{array} \right\}^2 = \left| \frac{(L + \kappa_a + \kappa_b + 1) (\kappa_a + \kappa_b - L)}{4\kappa_a \kappa_b (2\kappa_a + 1) (2\kappa_b + 1)} \right|.$$

THE CENTRAL POTENTIAL

The central potential used for the calculation is identical to the variation of the Hartree potential previously used²³ and was introduced to relativistic calculations by Liebermann et al.²⁴ The effective potential was introduced by Slater to approximate the effect of exchange, with

$$V_s(r) = -1.5 e^2 (e\rho/\pi)^{1/3},$$

where ρ is the electron charge density. The modification due to Latter is made in that the potential is not allowed to rise above the value of $-e^2/r$, which it would otherwise do in the outer regions. For partially filled outer subshells, fractional occupations of the states are assumed to contribute to the central potential. For a specified occupation of the subshells, the self-consistent potential is found. The electron ejected from the atom is assumed to see the same potential as the bound electron.

CALCULATION OF THE CENTRAL POTENTIAL

Calculation of the central potential is carried out in a logarithmic mesh in r ie $r_{j+1} = \exp(h) r_j$. The calculation starts with a Thomas-Fermi potential, calculated by procedures derived from those of Shalitin.²⁵

The bound-state energy eigenvalues and wave functions are found for a given potential. Starting in the exponentially damped region for the wave function, the radial Dirac equation is integrated inward to the first maximum in $G(r)$; the integration is then done from the origin to this same point. The first-order correction to energy is found from

$$\delta E = \frac{F_0(r_M)/G_0(r_M) - F_i(r_M)/G_i(r_M)}{\left[\int_0^{r_M} (G_0^2 + F_0^2) dr/G_0^2(r_M) + \int_{r_M}^{\infty} (G_i^2 + F_i^2) dr/G_i^2(r_M) \right]},$$

in which the subscripts i and 0 refer to the inward and outward integrated solutions. To check that the solution is converging to the one with the desired number of nodes,

one repeats the integrations with the corrected value of E until the desired accuracy is obtained.

The charge distribution from the occupied states determines a new potential. We introduce $U(r)$:

$$V(r) = -\frac{e^2}{r} U(r),$$

so $U(0) = Z$, and, for r greater than some value, $U(r) = 1$. Writing

$$Q(r) = \sum_a Na \left[G_a^2(r) + F_a^2(r) \right],$$

$U_Q(r)$ is the solution of

$$\frac{d^2}{dr^2} U_Q(r) = Q(r)/r,$$

with $U_Q(r) = 0$,

$$\frac{dU_Q(r)}{dr} = 0$$

for $r \rightarrow \infty$. The exchange contribution is

$$U_x(r) = \frac{3}{2} \left(\frac{3Qr}{4\pi^2} \right)^{1/3}.$$

$$U(r) = U_x(r) + U_Q(r),$$

provided this is greater than 1; otherwise, $U(r) = 1$.

To converge to a self-consistent potential, an average is formed between the potential in which the electrons are assumed moving and the one determined by them. The Dirac equations are then solved for this potential, and the procedure is repeated until the desired convergence is obtained.

CALCULATION OF THE WAVE FUNCTIONS FOR THE MATRIX ELEMENTS

Matrix elements are computed by integrations in a linear mesh in r . For photon energies of the same order of magnitude as the electron binding energy, the bound-state

wave function is calculated in the same way as indicated above. For energies much greater than the binding energy, the bound-state wave function is not needed out to the exponentially decaying region, so the behavior of the wave function at the origin and the binding energy derived in the calculation of the potential are used, and the Dirac equation is integrated outward from the origin only.

For states in the continuum, the Dirac equation is integrated outward far enough to obtain the asymptotic behavior and to yield the contributions to the matrix elements. Only for energies just above the ionization limit is there any difficulty in picking up the asymptotic limit. Our method of picking up the limit is based on the WKB expansion.

With

$$\chi = (E - V + 1)^{-1/2} G,$$

χ satisfies

$$\frac{d^2}{dr^2} \chi = -y\chi$$

with

$$y = (E - V)^2 - 1 - \frac{\kappa(\kappa + 1)}{r^2} - (E - V + 1)^{1/2} \frac{d^2}{dr^2} (E - V + 1)^{-1/2}.$$

With

$$\chi(r) = \chi_1 e^{is} + \text{c. c.}$$

or

$$\chi(r) = \chi_\infty \exp\left(-\int_\infty^r \text{Im } \dot{s} dr'\right) \cos\left(\int_{r_0}^r \text{Re } \dot{s} dr' + \delta\right)$$

$$\chi_\infty^2 = \left[\exp\left(\int_\infty^r \text{Im } \dot{s} dr'\right) \right]^2 \{ \chi^2 + [(\chi' + \chi \text{Im } \dot{s})^2 / (\text{Re } \dot{s})^2] \},$$

the WKB expansion gives

$$\text{Im } \dot{s} = 1/4 \dot{y}/y + \dots$$

$$\text{Re } \dot{s} = y^{1/2} \left[1 + \frac{1}{8} (\dot{y}^2/y^3) + \dots \right].$$

CALCULATION OF THE MATRIX ELEMENTS

The radial Dirac equation and the corresponding equations satisfied by the j 's, i.e.,

$$\left(\frac{d}{dx} + \frac{\ell + 1}{x}\right) j_{\ell}(x) = j_{\ell-1}(x)$$

$$\left(-\frac{d}{dx} + \frac{\ell - 1}{x}\right) j_{\ell-1}(x) = j_{\ell}(x),$$

may be used to generate different expressions for the matrix elements, with the integrands possibly differing by derivative terms.

The integrands consist of the product of a component of the bound-state wave function, one of the continuum wave functions, a spherical Bessel function, and possibly factors of powers of r , the potential or its derivatives depending on the form used. For photon energies much greater than the binding energy of a state, compared to the variations in the bound-state wave functions, the continuum-wave function is rapidly oscillating, as is also the Bessel function, if the photon energy is not negligibly small compared to the electron's rest energy.

For small values for r , the forms of the integrands given above were used. For larger r values, forms of the integrands with explicit $1/r^2$ factors were used to decrease the value of r to which the integration must be performed for large photon energies. These forms of the integrands are generated by inverting the expressions for the derivatives of the product of the two wave functions and the Bessel function; the derivative terms yield contributions at the end points. At the outer limit of the integration, the end-point contribution is included for the transformation to an integrand with one additional factor of $1/r$.

SUM OVER THE ANGULAR MOMENTUM OF THE RADIATION FIELD

The total cross section is given as an infinite sum over the multipoles of the radiation field and a sum over the angular momenta of the continuum states. For a given angular momentum of the radiation field, the angular momentum of the continuum state is limited by the triangle requirement. The contributions for the higher multipoles come from larger r values, where the smallness of the potential or the bound-state functions causes these values to diminish. In the computation, the number of terms required for a given accuracy was determined by experimentation.

NUMERICAL ACCURACY

During the development of the computer program for the calculation, an accuracy of at least 0.1% was maintained in calculating the total absorption cross section. This level of accuracy was desired but was not maintained for the individual subshell contributions. After the completion of the calculation, the values of the cross section at $Z = 4, 50,$ and 92 and for energies of $10, 100,$ and 1000 keV were checked by increasing the number of mesh points and varying the other parameters in the program. The estimated percentage errors for the subshell cross sections greater than 0.1% are listed in Table 1.

Table 1. Percent errors in subshell cross sections for $Z = 4, 50, 92$ and photon energies of $10, 100,$ and 1000 keV. Errors less than 0.1% are not listed.

Z	Energy	State	% error
4	100	1S	0.2
		2S	0.2
50	10	4S	0.1
		4P	0.1
		4D	0.6
	1000	2P	0.2
		3D	2.0
		4D	0.4
		5S	0.1
		5P	0.6
92	10	6S	1.6
		6P	0.5
	100	4F	1.3
		5S	0.2
		5P	0.4
		5D	0.6
		5F	0.2
		7S	0.2
		1000	2P
	3P		0.3
	3D		0.9
	4P		0.3
	4D		3
	4F		17
	5P		0.3
	5D		3
5F	17		
6P	0.3		
6D	3		
7S	0.5		

The large inaccuracies in the d and f subshell cross sections at 1000 keV for $Z = 92$ are due to an insufficient number of multipoles being included. These errors have a negligible effect on the total cross section.

CALCULATED RESULTS

In the Appendix tables are the calculated values of the photoionization cross sections for elements with Z from $Z = 1$ to 102 and for a set of photon energies from 1 keV to 1500 keV. The total cross sections, the cross section for the ionization from the K, L and M shells as well as that from the individual subshells are given.

Included in the tables are characteristics of the bound-state wave functions. Those given are the assumed occupation numbers of the states, the calculated binding energies, and, under the heading "normalization," the square of the ratio of wave function near the origin to that for an electron with the same quantum

numbers in a coulomb potential with the same nuclear charge. For photon energies much greater than the electron binding energy, Pratt¹⁶ with Schmickley⁹ and Tseng¹⁷ showed that the photoionization cross section in a single electron model for a given angular state and nuclear charge is proportional to the normalization of the bound-state

wave function near the origin. This probably holds for an atom as a whole, if the single-particle model is given up. In the high-energy region the present results could be renormalized by using the normalizations derived from a more accurate atomic model. In the present report such a renormalization has not been performed; however, in Table A1 of the Appendix we list the normalizations derived from a restricted relativistic Hartree-Fock calculation for $Z = 1$ to 54.

Tabular results for the total photoionization cross sections covering the range of the present calculation were given by Storm and Israel.¹¹ Their results are based on the computer code of Brysk and Zerby¹⁰ up to 200 keV and on the results of Rakavy and Ron⁷ and Schmickley and Pratt⁹ for higher energies. The model used in the low-energy region differs from that used here only in that the Slater exchange potential is taken as 2/3 of the one used here and the experimental binding energies were introduced into the calculation. Interpolations were used between the elements actually calculated.

Recently, Barfield et al.¹² published results from the Brysk and Zerby code for energies up to 300 keV and Z 's up to 36. At points checked thus far, reasonable agreement exists between these calculations and the present one.

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21. See A. R. Edmonds, Angular Momentum in Quantum Mechanics (Princeton University Press, Princeton, New Jersey, 1957), p. 107.
22. M. E. Rose, Multipole Fields (John Wiley, New York, 1955).
23. J. H. Scofield, Phys. Rev. 179, 9 (1969).
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APPENDIX
TABLES OF CALCULATED VALUES
OF PHOTOIONIZATION CROSS SECTIONS

Table A1. Hartree-Fock normalizations and binding energies.

Z=	1.0						
	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS	
	1 S 1/2	1.00	.014	1.0000	1.0000	1.0000	

Z=	2.0						
	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS	
	1 S 1/2	2.00	.025	.7061	.7358	.9596	

Z=	3.0						
	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS	
	1 S 1/2	2.00	.067	.7941	.8551	.9287	
	2 S 1/2	1.00	.005	.1526	.2005	.7615	

Z=	4.0						
	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS	
	1 S 1/2	2.00	.129	.8405	.8842	.9506	
	2 S 1/2	2.00	.008	.2234	.2780	.8038	

Z=	5.0						
	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS	
	1 S 1/2	2.00	.209	.8683	.9016	.9630	
	2 S 1/2	2.00	.013	.2828	.3527	.8018	
	2 P 1/2	.33	.009	.0840	.1159	.7248	
	2 P 3/2	.67	.008	.0823	.1158	.7106	

Z=	6.0						
	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS	
	1 S 1/2	2.00	.309	.8866	.9134	.9706	
	2 S 1/2	2.00	.019	.3233	.3892	.8308	
	2 P 1/2	.67	.011	.1135	.1531	.7417	
	2 P 3/2	1.33	.011	.1121	.1529	.7331	

Z=	7.0						
	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS	
	1 S 1/2	2.00	.426	.8995	.9220	.9756	
	2 S 1/2	2.00	.026	.3525	.4101	.8595	
	2 P 1/2	1.00	.014	.1374	.1797	.7644	
	2 P 3/2	2.00	.014	.1361	.1794	.7589	

Z=	8.0						
	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS	
	1 S 1/2	2.00	.563	.9092	.9286	.9791	
	2 S 1/2	2.00	.034	.3750	.4233	.8858	
	2 P 1/2	1.33	.017	.1567	.1997	.7848	
	2 P 3/2	2.67	.017	.1558	.1992	.7819	

Z= 9.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS
1	S 1/2	2.00	.719	.9167	.9338	.9817
2	S 1/2	2.00	.043	.3926	.4322	.9084
2	P 1/2	1.67	.020	.1726	.2152	.8021
2	P 3/2	3.33	.020	.1719	.2145	.8013

Z= 10.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS
1	S 1/2	2.00	.893	.9226	.9381	.9835
2	S 1/2	2.00	.053	.4069	.4386	.9278
2	P 1/2	2.00	.023	.1859	.2277	.8167
2	P 3/2	4.00	.023	.1854	.2267	.8176

Z= 11.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS
1	S 1/2	2.00	1.103	.9277	.9417	.9851
2	S 1/2	2.00	.076	.4423	.4698	.9414
2	P 1/2	2.00	.041	.2245	.2687	.8356
2	P 3/2	4.00	.041	.2239	.2677	.8366
3	S 1/2	1.00	.005	.0336	.0485	.6914

Z= 12.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS
1	S 1/2	2.00	1.337	.9322	.9450	.9864
2	S 1/2	2.00	.103	.4757	.4992	.9530
2	P 1/2	2.00	.062	.2599	.3039	.8551
2	P 3/2	4.00	.062	.2592	.3028	.8562
3	S 1/2	2.00	.007	.0595	.0845	.7047

Z= 13.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS
1	S 1/2	2.00	1.595	.9360	.9479	.9875
2	S 1/2	2.00	.134	.5055	.5260	.9610
2	P 1/2	2.00	.088	.2928	.3360	.8715
2	P 3/2	4.00	.087	.2920	.3346	.8727
3	S 1/2	2.00	.011	.0908	.1274	.7131
3	P 1/2	.33	.006	.0270	.0379	.7126
3	P 3/2	.67	.006	.0264	.0376	.7015

Z= 14.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS
1	S 1/2	2.00	1.878	.9394	.9505	.9883
2	S 1/2	2.00	.168	.5318	.5498	.9673
2	P 1/2	2.00	.116	.3231	.3650	.8853
2	P 3/2	4.00	.116	.3222	.3634	.8866
3	S 1/2	2.00	.015	.1181	.1582	.7466
3	P 1/2	.67	.008	.0412	.0580	.7105
3	P 3/2	1.33	.008	.0406	.0576	.7045

Z= 15.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS
1	S 1/2	2.00	2.183	.9424	.9528	.9891
2	S 1/2	2.00	.206	.5553	.5712	.9722
2	P 1/2	2.00	.148	.3508	.3912	.8969
2	P 3/2	4.00	.147	.3498	.3894	.8984
3	S 1/2	2.00	.019	.1423	.1831	.7770
3	P 1/2	1.00	.010	.0552	.0759	.7272
3	P 3/2	2.00	.010	.0545	.0753	.7242

Z= 16.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS
1	S 1/2	2.00	2.512	.9451	.9549	.9897
2	S 1/2	2.00	.247	.5761	.5903	.9760
2	P 1/2	2.00	.183	.3763	.4150	.9068
2	P 3/2	4.00	.182	.3752	.4130	.9084
3	S 1/2	2.00	.024	.1640	.2043	.8027
3	P 1/2	1.33	.012	.0686	.0919	.7463
3	P 3/2	2.67	.012	.0679	.0911	.7452

Z= 17.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS
1	S 1/2	2.00	2.865	.9475	.9567	.9903
2	S 1/2	2.00	.290	.5948	.6074	.9791
2	P 1/2	2.00	.221	.3997	.4367	.9153
2	P 3/2	4.00	.219	.3985	.4345	.9170
3	S 1/2	2.00	.029	.1837	.2227	.8249
3	P 1/2	1.67	.014	.0814	.1065	.7642
3	P 3/2	3.33	.014	.0806	.1055	.7646

Z= 18.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS
1	S 1/2	2.00	3.242	.9496	.9585	.9908
2	S 1/2	2.00	.338	.6115	.6230	.9816
2	P 1/2	2.00	.262	.4213	.4566	.9227
2	P 3/2	4.00	.260	.4199	.4542	.9245
3	S 1/2	2.00	.035	.2015	.2387	.8441
3	P 1/2	2.00	.016	.0935	.1199	.7799
3	P 3/2	4.00	.016	.0927	.1186	.7816

Z= 19.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS
1	S 1/2	2.00	3.651	.9516	.9600	.9912
2	S 1/2	2.00	.397	.6271	.6374	.9839
2	P 1/2	2.00	.316	.4413	.4753	.9286
2	P 3/2	4.00	.313	.4398	.4726	.9306
3	S 1/2	2.00	.048	.2297	.2654	.8656
3	P 1/2	2.00	.026	.1165	.1467	.7945
3	P 3/2	4.00	.026	.1156	.1452	.7960
4	S 1/2	1.00	.004	.0202	.0306	.6594

Z= 20.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS
1	S 1/2	2.00	4.086	.9534	.9615	.9916
2	S 1/2	2.00	.462	.6416	.6509	.9857
2	P 1/2	2.00	.374	.4600	.4928	.9334
2	P 3/2	4.00	.370	.4583	.4899	.9355
3	S 1/2	2.00	.062	.2572	.2908	.8845
3	P 1/2	2.00	.037	.1386	.1704	.8138
3	P 3/2	4.00	.036	.1376	.1687	.8155
4	S 1/2	2.00	.005	.0348	.0525	.6641

Z= 21.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS
1	S 1/2	2.00	4.541	.9551	.9629	.9920
2	S 1/2	2.00	.524	.6549	.6636	.9870
2	P 1/2	2.00	.430	.4778	.5098	.9372
2	P 3/2	4.00	.425	.4759	.5066	.9394
3	S 1/2	2.00	.071	.2741	.3051	.8983
3	P 1/2	2.00	.043	.1532	.1840	.8326
3	P 3/2	4.00	.043	.1519	.1820	.8345
3	D 3/2	.40	.009	.0130	.0200	.6478
3	D 5/2	.60	.009	.0130	.0199	.6502
4	S 1/2	2.00	.006	.0368	.0552	.6664

Z= 22.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS
1	S 1/2	2.00	5.020	.9567	.9642	.9923
2	S 1/2	2.00	.590	.6671	.6752	.9880
2	P 1/2	2.00	.489	.4943	.5256	.9405
2	P 3/2	4.00	.483	.4923	.5222	.9427
3	S 1/2	2.00	.079	.2881	.3172	.9083
3	P 1/2	2.00	.050	.1659	.1959	.8468
3	P 3/2	4.00	.049	.1643	.1936	.8489
3	D 3/2	.80	.011	.0172	.0248	.6951
3	D 5/2	1.20	.011	.0172	.0247	.6969
4	S 1/2	2.00	.006	.0375	.0563	.6657

Z= 23.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS
1	S 1/2	2.00	5.523	.9582	.9654	.9926
2	S 1/2	2.00	.658	.6782	.6859	.9889
2	P 1/2	2.00	.551	.5097	.5403	.9433
2	P 3/2	4.00	.544	.5075	.5366	.9457
3	S 1/2	2.00	.088	.3001	.3275	.9165
3	P 1/2	2.00	.056	.1773	.2065	.8587
3	P 3/2	4.00	.055	.1755	.2038	.8611
3	D 3/2	1.20	.012	.0214	.0294	.7275
3	D 5/2	1.80	.012	.0213	.0293	.7291
4	S 1/2	2.00	.006	.0376	.0566	.6651

Z= 24.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS
1	S 1/2	2.00	6.046	.9597	.9666	.9928
2	S 1/2	2.00	.724	.6885	.6959	.9894
2	P 1/2	2.00	.612	.5242	.5544	.9456
2	P 3/2	4.00	.603	.5219	.5504	.9481
3	S 1/2	2.00	.092	.3060	.3316	.9227
3	P 1/2	2.00	.058	.1841	.2112	.8717
3	P 3/2	4.00	.057	.1820	.2081	.8745
3	D 3/2	2.00	.009	.0217	.0296	.7345
3	D 5/2	3.00	.009	.0216	.0293	.7353
4	S 1/2	1.00	.006	.0278	.0423	.6571

Z= 25.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS
1	S 1/2	2.00	8.5753	.9609	.9676	.9931
2	S 1/2	2.00	2.1482	.6979	.7048	.9902
2	P 1/2	2.00	2.1482	.5374	.5669	.9480
2	P 3/2	4.00	2.1303	.5349	.5627	.9506
3	S 1/2	2.00	.9526	.3201	.3444	.9294
3	P 1/2	2.00	.9526	.1974	.2247	.8783
3	P 3/2	4.00	.9474	.1950	.2213	.8811
3	D 3/2	2.00	.9474	.0296	.0384	.7713
3	D 5/2	3.00	.9457	.0294	.0381	.7725
4	S 1/2	2.00	.5349	.0372	.0559	.6653

Z= 26.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS
1	S 1/2	2.00	9.2815	.9622	.9686	.9933
2	S 1/2	2.00	2.3255	.7066	.7133	.9906
2	P 1/2	2.00	2.3255	.5500	.5790	.9499
2	P 3/2	4.00	2.3045	.5472	.5744	.9526
3	S 1/2	2.00	1.0311	.3286	.3515	.9348
3	P 1/2	2.00	1.0311	.2063	.2327	.8866
3	P 3/2	4.00	1.0249	.2036	.2288	.8897
3	D 3/2	2.40	1.0249	.0336	.0427	.7872
3	D 5/2	3.60	1.0229	.0334	.0423	.7883
4	S 1/2	2.00	.5789	.0367	.0552	.6660

Z= 27.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS
1	S 1/2	2.00	10.0164	.9633	.9696	.9935
2	S 1/2	2.00	2.5101	.7146	.7211	.9910
2	P 1/2	2.00	2.5101	.5617	.5903	.9516
2	P 3/2	4.00	2.4856	.5588	.5855	.9544
3	S 1/2	2.00	1.1127	.3362	.3579	.9395
3	P 1/2	2.00	1.1127	.2146	.2401	.8941
3	P 3/2	4.00	1.1055	.2116	.2357	.8975
3	D 3/2	2.80	1.1055	.0375	.0469	.8004
3	D 5/2	4.20	1.1032	.0372	.0465	.8013
4	S 1/2	2.00	.6246	.0362	.0543	.6667

Z= 28.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS
1	S 1/2	2.00	10.7803	.9644	.9705	.9937
2	S 1/2	2.00	2.7021	.7221	.7284	.9913
2	P 1/2	2.00	2.7021	.5728	.6009	.9531
2	P 3/2	4.00	2.6736	.5696	.5958	.9560
3	S 1/2	2.00	1.1976	.3432	.3636	.9439
3	P 1/2	2.00	1.1976	.2225	.2469	.9010
3	P 3/2	4.00	1.1892	.2190	.2421	.9047
3	D 3/2	3.20	1.1892	.0414	.0509	.8120
3	D 5/2	4.80	1.1866	.0410	.0504	.8127
4	S 1/2	2.00	.6722	.0357	.0535	.6678

Z= 29.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS
1	S 1/2	2.00	11.5731	.9654	.9713	.9939
2	S 1/2	2.00	2.9014	.7291	.7354	.9915
2	P 1/2	2.00	2.9014	.5834	.6112	.9544
2	P 3/2	4.00	2.8686	.5800	.6058	.9574
3	S 1/2	2.00	1.2856	.3458	.3652	.9469
3	P 1/2	2.00	1.2856	.2268	.2496	.9085
3	P 3/2	4.00	1.2760	.2228	.2442	.9125
3	D 3/2	4.00	1.2760	.0412	.0505	.8161
3	D 5/2	6.00	1.2729	.0406	.0498	.8156
4	S 1/2	1.00	.7215	.0255	.0396	.6438

Z= 30.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS
1	S 1/2	2.00	12.3951	.9663	.9721	.9941
2	S 1/2	2.00	3.1081	.7356	.7417	.9918
2	P 1/2	2.00	3.1081	.5930	.6205	.9557
2	P 3/2	4.00	3.0704	.5894	.6147	.9588
3	S 1/2	2.00	1.3769	.3556	.3737	.9516
3	P 1/2	2.00	1.3769	.2368	.2593	.9133
3	P 3/2	4.00	1.3659	.2325	.2534	.9176
3	D 3/2	4.00	1.3659	.0488	.0587	.8311
3	D 5/2	6.00	1.3623	.0482	.0579	.8315
4	S 1/2	2.00	.7726	.0346	.0516	.6702

Z= 31.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS
1	S 1/2	2.00	13.2464	.9672	.9728	.9942
2	S 1/2	2.00	3.3222	.7416	.7476	.9920
2	P 1/2	2.00	3.3222	.6021	.6292	.9570
2	P 3/2	4.00	3.2792	.5982	.6231	.9601
3	S 1/2	2.00	1.4715	.3657	.3827	.9556
3	P 1/2	2.00	1.4715	.2475	.2695	.9185
3	P 3/2	4.00	1.4589	.2429	.2632	.9230
3	D 3/2	4.00	1.4589	.0565	.0671	.8428
3	D 5/2	6.00	1.4548	.0560	.0663	.8438
4	S 1/2	2.00	.8255	.0477	.0693	.6884
4	P 1/2	.33	.8255	.0151	.0211	.7166
4	P 3/2	.67	.8203	.0143	.0200	.7125

Z= 32.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS	
1	S	1/2	2.00	14.1271	.9680	.9735	.9944
2	S	1/2	2.00	3.5439	.7473	.7532	.9922
2	P	1/2	2.00	3.5439	.6107	.6374	.9581
2	P	3/2	4.00	3.4949	.6066	.6310	.9614
3	S	1/2	2.00	1.5693	.3761	.3921	.9593
3	P	1/2	2.00	1.5693	.2586	.2800	.9236
3	P	3/2	4.00	1.5550	.2538	.2734	.9283
3	D	3/2	4.00	1.5550	.0644	.0755	.8528
3	D	5/2	6.00	1.5503	.0638	.0747	.8541
4	S	1/2	2.00	.8803	.0595	.0827	.7197
4	P	1/2	.67	.8803	.0225	.0314	.7157
4	P	3/2	1.33	.8743	.0214	.0299	.7147

Z= 33.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS	
1	S	1/2	2.00	15.0375	.9687	.9741	.9945
2	S	1/2	2.00	3.7731	.7527	.7585	.9923
2	P	1/2	2.00	3.7731	.6189	.6452	.9593
2	P	3/2	4.00	3.7176	.6146	.6384	.9626
3	S	1/2	2.00	1.6705	.3868	.4017	.9628
3	P	1/2	2.00	1.6705	.2699	.2907	.9284
3	P	3/2	4.00	1.6541	.2648	.2837	.9333
3	D	3/2	4.00	1.6541	.0723	.0839	.8614
3	D	5/2	6.00	1.6489	.0716	.0830	.8628
4	S	1/2	2.00	.9368	.0707	.0947	.7465
4	P	1/2	1.00	.9368	.0297	.0407	.7309
4	P	3/2	2.00	.9300	.0284	.0388	.7313

Z= 34.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS	
1	S	1/2	2.00	15.9775	.9694	.9747	.9946
2	S	1/2	2.00	4.0099	.7578	.7635	.9924
2	P	1/2	2.00	4.0099	.6267	.6526	.9603
2	P	3/2	4.00	3.9472	.6221	.6455	.9637
3	S	1/2	2.00	1.7749	.3974	.4113	.9661
3	P	1/2	2.00	1.7749	.2812	.3014	.9331
3	P	3/2	4.00	1.7564	.2757	.2939	.9381
3	D	3/2	4.00	1.7564	.0802	.0923	.8688
3	D	5/2	6.00	1.7505	.0795	.0913	.8704
4	S	1/2	2.00	.9952	.0814	.1059	.7683
4	P	1/2	1.33	.9952	.0369	.0493	.7480
4	P	3/2	2.67	.9875	.0353	.0471	.7497

Z= 35.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS	
1	S	1/2	2.00	16.9476	.9701	.9752	.9947
2	S	1/2	2.00	4.2544	.7626	.7683	.9926
2	P	1/2	2.00	4.2544	.6341	.6596	.9613
2	P	3/2	4.00	4.1838	.6293	.6522	.9648
3	S	1/2	2.00	1.8826	.4079	.4209	.9691
3	P	1/2	2.00	1.8826	.2924	.3119	.9373
3	P	3/2	4.00	1.8619	.2866	.3040	.9426
3	D	3/2	4.00	1.8619	.0881	.1006	.8754
3	D	5/2	6.00	1.8552	.0873	.0996	.8770
4	S	1/2	2.00	1.0555	.0915	.1164	.7857
4	P	1/2	1.67	1.0555	.0439	.0575	.7635
4	P	3/2	3.33	1.0468	.0421	.0549	.7665

Z= 36.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS	
1	S	1/2	2.00	17.9477	.9707	.9757	.9949
2	S	1/2	2.00	4.5065	.7672	.7729	.9926
2	P	1/2	2.00	4.5065	.6412	.6664	.9623
2	P	3/2	4.00	4.4273	.6361	.6585	.9659
3	S	1/2	2.00	1.9937	.4182	.4303	.9718
3	P	1/2	2.00	1.9937	.3033	.3222	.9414
3	P	3/2	4.00	1.9704	.2972	.3139	.9468
3	D	3/2	4.00	1.9704	.0960	.1089	.8813
3	D	5/2	6.00	1.9629	.0951	.1077	.8828
4	S	1/2	2.00	1.1175	.1012	.1264	.8002
4	P	1/2	2.00	1.1175	.0508	.0654	.7771
4	P	3/2	4.00	1.1078	.0487	.0623	.7817

Z= 37.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS	
1	S	1/2	2.00	18.9781	.9713	.9762	.9950
2	S	1/2	2.00	4.7665	.7716	.7773	.9928
2	P	1/2	2.00	4.7665	.6480	.6728	.9632
2	P	3/2	4.00	4.6778	.6426	.6646	.9668
3	S	1/2	2.00	2.1082	.4284	.4396	.9744
3	P	1/2	2.00	2.1082	.3140	.3324	.9447
3	P	3/2	4.00	2.0821	.3076	.3237	.9503
3	D	3/2	4.00	2.0821	.1039	.1172	.8866
3	D	5/2	6.00	2.0737	.1029	.1159	.8880
4	S	1/2	2.00	1.1815	.1163	.1415	.8223
4	P	1/2	2.00	1.1815	.0632	.0801	.7890
4	P	3/2	4.00	1.1705	.0609	.0769	.7918
5	S	1/2	1.00	.7541	.0101	.0155	.6557

Z= 38.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS
1	S 1/2	2.00	20.0390	.9719	.9767	.9951
2	S 1/2	2.00	5.0343	.7759	.7815	.9929
2	P 1/2	2.00	5.0343	.6545	.6790	.9640
2	P 3/2	4.00	4.9354	.6488	.6704	.9677
3	S 1/2	2.00	2.2260	.4384	.4488	.9768
3	P 1/2	2.00	2.2260	.3245	.3425	.9474
3	P 3/2	4.00	2.1969	.3178	.3334	.9532
3	D 3/2	4.00	2.1969	.1118	.1254	.8911
3	D 5/2	6.00	2.1876	.1107	.1241	.8923
4	S 1/2	2.00	1.2472	.1316	.1564	.8416
4	P 1/2	2.00	1.2472	.0754	.0935	.8059
4	P 3/2	4.00	1.2350	.0728	.0900	.8090
5	S 1/2	2.00	.7959	.0173	.0264	.6559

Z= 39.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS
1	S 1/2	2.00	21.1306	.9724	.9771	.9952
2	S 1/2	2.00	5.3099	.7800	.7855	.9929
2	P 1/2	2.00	5.3099	.6607	.6849	.9647
2	P 3/2	4.00	5.1999	.6548	.6760	.9685
3	S 1/2	2.00	2.3473	.4479	.4578	.9786
3	P 1/2	2.00	2.3473	.3348	.3524	.9499
3	P 3/2	4.00	2.3148	.3277	.3428	.9558
3	D 3/2	4.00	2.3148	.1197	.1336	.8960
3	D 5/2	6.00	2.3045	.1185	.1321	.8968
4	S 1/2	2.00	1.3149	.1441	.1685	.8551
4	P 1/2	2.00	1.3149	.0853	.1039	.8208
4	P 3/2	4.00	1.3013	.0824	.0999	.8245
4	D 3/2	.40	1.3013	.0087	.0133	.6557
4	D 5/2	.60	1.2971	.0085	.0129	.6545
5	S 1/2	2.00	.8390	.0204	.0306	.6665

Z= 40.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS
1	S 1/2	2.00	22.2530	.9729	.9776	.9952
2	S 1/2	2.00	5.5936	.7839	.7894	.9930
2	P 1/2	2.00	5.5936	.6667	.6907	.9653
2	P 3/2	4.00	5.4714	.6605	.6814	.9693
3	S 1/2	2.00	2.4720	.4572	.4665	.9801
3	P 1/2	2.00	2.4720	.3447	.3620	.9521
3	P 3/2	4.00	2.4359	.3372	.3519	.9581
3	D 3/2	4.00	2.4359	.1275	.1416	.9006
3	D 5/2	6.00	2.4245	.1262	.1401	.9010
4	S 1/2	2.00	1.3845	.1553	.1795	.8651
4	P 1/2	2.00	1.3845	.0943	.1134	.8315
4	P 3/2	4.00	1.3694	.0910	.1088	.8359
4	D 3/2	.80	1.3694	.0119	.0168	.7055
4	D 5/2	1.20	1.3647	.0116	.0165	.7033
5	S 1/2	2.00	.8832	.0223	.0332	.6725

Z= 41.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS	
1	S	1/2	2.00	23.4066	.9734	.9780	.9953
2	S	1/2	2.00	5.8852	.7876	.7932	.9930
2	P	1/2	2.00	5.8852	.6725	.6962	.9659
2	P	3/2	4.00	5.7500	.6660	.6866	.9700
3	S	1/2	2.00	2.6001	.4659	.4749	.9812
3	P	1/2	2.00	2.6001	.3542	.3713	.9541
3	P	3/2	4.00	2.5602	.3464	.3608	.9602
3	D	3/2	4.00	2.5602	.1353	.1494	.9054
3	D	5/2	6.00	2.5475	.1338	.1478	.9053
4	S	1/2	2.00	1.4559	.1634	.1879	.8699
4	P	1/2	2.00	1.4559	.1010	.1202	.8403
4	P	3/2	4.00	1.4392	.0973	.1151	.8457
4	D	3/2	1.60	1.4392	.0131	.0180	.7242
4	D	5/2	2.40	1.4340	.0126	.0175	.7201
5	S	1/2	1.00	.9287	.0196	.0287	.6826

Z= 42.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS	
1	S	1/2	2.00	24.5915	.9739	.9784	.9954
2	S	1/2	2.00	6.1850	.7912	.7967	.9930
2	P	1/2	2.00	6.1850	.6780	.7015	.9665
2	P	3/2	4.00	6.0356	.6712	.6915	.9707
3	S	1/2	2.00	2.7317	.4745	.4831	.9823
3	P	1/2	2.00	2.7317	.3635	.3803	.9558
3	P	3/2	4.00	2.6876	.3553	.3694	.9621
3	D	3/2	4.00	2.6876	.1430	.1572	.9096
3	D	5/2	6.00	2.6736	.1412	.1554	.9087
4	S	1/2	2.00	1.5292	.1729	.1972	.8764
4	P	1/2	2.00	1.5292	.1088	.1284	.8471
4	P	3/2	4.00	1.5108	.1047	.1227	.8530
4	D	3/2	2.00	1.5108	.0160	.0213	.7505
4	D	5/2	3.00	1.5050	.0154	.0207	.7455
5	S	1/2	1.00	.9753	.0201	.0295	.6826

Z= 43.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS	
1	S	1/2	2.00	25.8079	.9743	.9788	.9955
2	S	1/2	2.00	6.4929	.7946	.8002	.9930
2	P	1/2	2.00	6.4929	.6834	.7067	.9670
2	P	3/2	4.00	6.3282	.6763	.6963	.9713
3	S	1/2	2.00	2.8668	.4828	.4910	.9833
3	P	1/2	2.00	2.8668	.3725	.3891	.9574
3	P	3/2	4.00	2.8182	.3640	.3776	.9637
3	D	3/2	4.00	2.8182	.1505	.1647	.9134
3	D	5/2	6.00	2.8028	.1485	.1629	.9116
4	S	1/2	2.00	1.6045	.1817	.2060	.8819
4	P	1/2	2.00	1.6045	.1162	.1362	.8531
4	P	3/2	4.00	1.5841	.1117	.1300	.8596
4	D	3/2	2.40	1.5841	.0189	.0245	.7710
4	D	5/2	3.60	1.5778	.0182	.0238	.7650
5	S	1/2	1.00	1.0231	.0205	.0300	.6828

Z= 44.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS
1	S 1/2	2.00	27.0562	.9747	.9791	.9955
2	S 1/2	2.00	6.8090	.7979	.8035	.9930
2	P 1/2	2.00	6.8090	.6885	.7116	.9675
2	P 3/2	4.00	6.6280	.6811	.7008	.9719
3	S 1/2	2.00	3.0055	.4907	.4986	.9842
3	P 1/2	2.00	3.0055	.3812	.3976	.9588
3	P 3/2	4.00	2.9520	.3723	.3857	.9653
3	D 3/2	4.00	2.9520	.1579	.1722	.9170
3	D 5/2	6.00	2.9351	.1556	.1702	.9141
4	S 1/2	2.00	1.6817	.1901	.2143	.8868
4	P 1/2	2.00	1.6817	.1233	.1436	.8585
4	P 3/2	4.00	1.6593	.1184	.1368	.8655
4	D 3/2	2.80	1.6593	.0218	.0277	.7870
4	D 5/2	4.20	1.6523	.0210	.0269	.7799
5	S 1/2	1.00	1.0722	.0207	.0303	.6831

Z= 45.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS
1	S 1/2	2.00	28.3364	.9751	.9795	.9956
2	S 1/2	2.00	7.1335	.8011	.8067	.9930
2	P 1/2	2.00	7.1335	.6934	.7164	.9680
2	P 3/2	4.00	6.9347	.6857	.7052	.9724
3	S 1/2	2.00	3.1476	.4984	.5060	.9849
3	P 1/2	2.00	3.1476	.3897	.4059	.9600
3	P 3/2	4.00	3.0889	.3803	.3934	.9666
3	D 3/2	4.00	3.0889	.1652	.1795	.9204
3	D 5/2	6.00	3.0704	.1625	.1774	.9160
4	S 1/2	2.00	1.7608	.1979	.2221	.8911
4	P 1/2	2.00	1.7608	.1301	.1507	.8634
4	P 3/2	4.00	1.7362	.1248	.1433	.8710
4	D 3/2	3.20	1.7362	.0246	.0308	.7999
4	D 5/2	4.80	1.7286	.0237	.0299	.7914
5	S 1/2	1.00	1.1224	.0207	.0304	.6826

Z= 46.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS
1	S 1/2	2.00	29.6490	.9755	.9798	.9956
2	S 1/2	2.00	7.4664	.8042	.8098	.9930
2	P 1/2	2.00	7.4664	.6982	.7210	.9684
2	P 3/2	4.00	7.2486	.6902	.7094	.9729
3	S 1/2	2.00	3.2934	.5057	.5132	.9854
3	P 1/2	2.00	3.2934	.3978	.4139	.9612
3	P 3/2	4.00	3.2290	.3880	.4009	.9678
3	D 3/2	4.00	3.2290	.1724	.1866	.9239
3	D 5/2	6.00	3.2088	.1692	.1844	.9176
4	S 1/2	2.00	1.8419	.2038	.2284	.8926
4	P 1/2	2.00	1.8419	.1353	.1561	.8668
4	P 3/2	4.00	1.8150	.1294	.1479	.8752
4	D 3/2	4.00	1.8150	.0254	.0314	.8090
4	D 5/2	6.00	1.8066	.0242	.0303	.7976
5	S 1/2	.0	1.1739	.0180	.0263	.6826

Z= 47.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS
1	S 1/2	2.00	30.9941	.9759	.9801	.9957
2	S 1/2	2.00	7.8077	.8071	.8128	.9930
2	P 1/2	2.00	7.8077	.7028	.7254	.9688
2	P 3/2	4.00	7.5696	.6944	.7134	.9734
3	S 1/2	2.00	3.4428	.5129	.5201	.9862
3	P 1/2	2.00	3.4428	.4057	.4217	.9622
3	P 3/2	4.00	3.3724	.3955	.4082	.9690
3	D 3/2	4.00	3.3724	.1794	.1936	.9266
3	D 5/2	6.00	3.3503	.1756	.1912	.9181
4	S 1/2	2.00	1.9250	.2126	.2366	.8986
4	P 1/2	2.00	1.9250	.1430	.1640	.8722
4	P 3/2	4.00	1.8955	.1368	.1552	.8810
4	D 3/2	4.00	1.8955	.0303	.0369	.8207
4	D 5/2	6.00	1.8864	.0289	.0358	.8084
5	S 1/2	1.00	1.2266	.0206	.0302	.6828

Z= 48.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS
1	S 1/2	2.00	32.3720	.9763	.9804	.9958
2	S 1/2	2.00	8.1577	.8100	.8157	.9931
2	P 1/2	2.00	8.1577	.7072	.7296	.9692
2	P 3/2	4.00	7.8977	.6985	.7172	.9739
3	S 1/2	2.00	3.5958	.5199	.5269	.9868
3	P 1/2	2.00	3.5958	.4134	.4292	.9631
3	P 3/2	4.00	3.5189	.4028	.4152	.9700
3	D 3/2	4.00	3.5189	.1863	.2005	.9291
3	D 5/2	6.00	3.4949	.1817	.1980	.9177
4	S 1/2	2.00	2.0100	.2218	.2451	.9049
4	P 1/2	2.00	2.0100	.1511	.1723	.8774
4	P 3/2	4.00	1.9778	.1445	.1630	.8865
4	D 3/2	4.00	1.9778	.0353	.0424	.8317
4	D 5/2	6.00	1.9679	.0336	.0411	.8177
5	S 1/2	2.00	1.2806	.0267	.0381	.7002

Z= 49.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS
1	S 1/2	2.00	33.7831	.9766	.9807	.9958
2	S 1/2	2.00	8.5163	.8128	.8184	.9931
2	P 1/2	2.00	8.5163	.7114	.7337	.9696
2	P 3/2	4.00	8.2329	.7024	.7209	.9744
3	S 1/2	2.00	3.7525	.5267	.5334	.9874
3	P 1/2	2.00	3.7525	.4209	.4366	.9640
3	P 3/2	4.00	3.6687	.4098	.4221	.9710
3	D 3/2	4.00	3.6687	.1931	.2073	.9314
3	D 5/2	6.00	3.6426	.1876	.2047	.9165
4	S 1/2	2.00	2.0970	.2309	.2537	.9100
4	P 1/2	2.00	2.0970	.1595	.1806	.8831
4	P 3/2	4.00	2.0619	.1525	.1708	.8926
4	D 3/2	4.00	2.0619	.0404	.0481	.8402
4	D 5/2	6.00	2.0511	.0385	.0467	.8238
5	S 1/2	2.00	1.3358	.0350	.0494	.7092
5	P 1/2	.33	1.3358	.0128	.0175	.7297
5	P 3/2	.67	1.3179	.0112	.0152	.7359

Z= 50.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS	
1	S	1/2	2.00	35.2276	.9769	.9810	.9958
2	S	1/2	2.00	8.8836	.8154	.8211	.9931
2	P	1/2	2.00	8.8836	.7155	.7377	.9699
2	P	3/2	4.00	8.5753	.7062	.7244	.9749
3	S	1/2	2.00	3.9130	.5333	.5398	.9879
3	P	1/2	2.00	3.9130	.4282	.4438	.9649
3	P	3/2	4.00	3.8217	.4167	.4287	.9719
3	D	3/2	4.00	3.8217	.1997	.2139	.9335
3	D	5/2	6.00	3.7933	.1931	.2112	.9142
4	S	1/2	2.00	2.1861	.2400	.2623	.9149
4	P	1/2	2.00	2.1861	.1681	.1891	.8887
4	P	3/2	4.00	2.1478	.1607	.1788	.8986
4	D	3/2	4.00	2.1478	.0455	.0537	.8475
4	D	5/2	6.00	2.1361	.0433	.0523	.8277
5	S	1/2	2.00	1.3922	.0425	.0580	.7319
5	P	1/2	.67	1.3922	.0180	.0248	.7279
5	P	3/2	1.33	1.3728	.0160	.0218	.7327

Z= 51.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS	
1	S	1/2	2.00	36.7057	.9772	.9813	.9959
2	S	1/2	2.00	9.2598	.8180	.8237	.9931
2	P	1/2	2.00	9.2598	.7195	.7415	.9703
2	P	3/2	4.00	8.9248	.7099	.7278	.9753
3	S	1/2	2.00	4.0771	.5397	.5461	.9883
3	P	1/2	2.00	4.0771	.4354	.4509	.9656
3	P	3/2	4.00	3.9779	.4234	.4352	.9728
3	D	3/2	4.00	3.9779	.2063	.2205	.9354
3	D	5/2	6.00	3.9472	.1982	.2176	.9108
4	S	1/2	2.00	2.2771	.2491	.2709	.9195
4	P	1/2	2.00	2.2771	.1767	.1976	.8942
4	P	3/2	4.00	2.2356	.1689	.1868	.9044
4	D	3/2	4.00	2.2356	.0507	.0593	.8539
4	D	5/2	6.00	2.2228	.0479	.0578	.8295
5	S	1/2	2.00	1.4499	.0495	.0658	.7517
5	P	1/2	1.00	1.4499	.0231	.0312	.7419
5	P	3/2	2.00	1.4288	.0206	.0277	.7447

Z= 52.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS	
1	S	1/2	2.00	38.2179	.9775	.9815	.9959
2	S	1/2	2.00	9.6450	.8205	.8262	.9930
2	P	1/2	2.00	9.6450	.7233	.7452	.9706
2	P	3/2	4.00	9.2815	.7134	.7311	.9757
3	S	1/2	2.00	4.2450	.5459	.5521	.9887
3	P	1/2	2.00	4.2450	.4424	.4578	.9664
3	P	3/2	4.00	4.1374	.4299	.4415	.9736
3	D	3/2	4.00	4.1374	.2127	.2270	.9372
3	D	5/2	6.00	4.1041	.2029	.2239	.9061
4	S	1/2	2.00	2.3702	.2582	.2794	.9240
4	P	1/2	2.00	2.3702	.1853	.2060	.8995
4	P	3/2	4.00	2.3251	.1771	.1946	.9101
4	D	3/2	4.00	2.3251	.0558	.0649	.8596
4	D	5/2	6.00	2.3113	.0524	.0632	.8294
5	S	1/2	2.00	1.5089	.0562	.0732	.7674
5	P	1/2	1.33	1.5089	.0281	.0371	.7569
5	P	3/2	2.67	1.4860	.0252	.0331	.7607

Z= 53.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS	
1	S	1/2	2.00	39.7645	.9778	.9817	.9960
2	S	1/2	2.00	10.0392	.8229	.8287	.9930
2	P	1/2	2.00	10.0392	.7270	.7488	.9709
2	P	3/2	4.00	9.6454	.7167	.7343	.9761
3	S	1/2	2.00	4.4168	.5519	.5581	.9890
3	P	1/2	2.00	4.4168	.4492	.4645	.9670
3	P	3/2	4.00	4.3001	.4362	.4476	.9744
3	D	3/2	4.00	4.3001	.2190	.2333	.9389
3	D	5/2	6.00	4.2642	.2070	.2301	.8997
4	S	1/2	2.00	2.4654	.2671	.2878	.9282
4	P	1/2	2.00	2.4654	.1938	.2143	.9045
4	P	3/2	4.00	2.4165	.1853	.2024	.9154
4	D	3/2	4.00	2.4165	.0609	.0704	.8646
4	D	5/2	6.00	2.4016	.0568	.0686	.8272
5	S	1/2	2.00	1.5691	.0627	.0804	.7797
5	P	1/2	1.67	1.5691	.0330	.0428	.7704
5	P	3/2	3.33	1.5443	.0297	.0383	.7759

Z= 54.0

	STATE	NE	B.E.(KEV)	NORM(HF)	NORM(HS)	HF/HS	
1	S	1/2	2.00	41.3458	.9781	.9820	.9960
2	S	1/2	2.00	10.4426	.8252	.8310	.9930
2	P	1/2	2.00	10.4426	.7306	.7523	.9712
2	P	3/2	4.00	10.0164	.7200	.7373	.9765
3	S	1/2	2.00	4.5923	.5578	.5638	.9893
3	P	1/2	2.00	4.5923	.4558	.4710	.9677
3	P	3/2	4.00	4.4661	.4423	.4536	.9751
3	D	3/2	4.00	4.4661	.2252	.2395	.9404
3	D	5/2	6.00	4.4273	.2106	.2362	.8914
4	S	1/2	2.00	2.5626	.2760	.2961	.9321
4	P	1/2	2.00	2.5626	.2023	.2225	.9093
4	P	3/2	4.00	2.5097	.1933	.2100	.9205
4	D	3/2	4.00	2.5097	.0660	.0759	.8692
4	D	5/2	6.00	2.4936	.0609	.0740	.8229
5	S	1/2	2.00	1.6307	.0689	.0873	.7898
5	P	1/2	2.00	1.6307	.0379	.0484	.7828
5	P	3/2	4.00	1.6038	.0341	.0433	.7895

Table A2. Photoelectric cross sections, based on the Hartree-Slater model.

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      Z= 1          1 STATE ,   26 ENERGYS

STATE   NE   E(KEV)   NORM
1 S 1/2  1.00  .0136   1.0000

      Z= 1  PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)  TOTAL      K-SHELL
1.0000E+00   1.1414E+01  1.1414E+01
1.5000E+00   2.9316E+00  2.9316E+00
2.0000E+00   1.1106E+00  1.1106E+00
3.0000E+00   2.8064E-01  2.8064E-01
4.0000E+00   1.0525E-01  1.0525E-01
5.0000E+00   4.9069E-02  4.9069E-02
6.0000E+00   2.6274E-02  2.6274E-02
8.0000E+00   9.8163E-03  9.8163E-03
1.0000E+01   4.5582E-03  4.5582E-03
1.5000E+01   1.1280E-03  1.1280E-03
2.0000E+01   4.1816E-04  4.1816E-04
3.0000E+01   1.0316E-04  1.0316E-04
4.0000E+01   3.8228E-05  3.8228E-05
5.0000E+01   1.7709E-05  1.7709E-05
6.0000E+01   9.4551E-06  9.4551E-06
8.0000E+01   3.5226E-06  3.5226E-06
1.0000E+02   1.6442E-06  1.6442E-06
1.5000E+02   4.1765E-07  4.1765E-07
2.0000E+02   1.6106E-07  1.6106E-07
3.0000E+02   4.4138E-08  4.4138E-08
4.0000E+02   1.8581E-08  1.8581E-08
5.0000E+02   9.9272E-09  9.9272E-09
6.0000E+02   6.1578E-09  6.1578E-09
8.0000E+02   3.1176E-09  3.1176E-09
1.0000E+03   1.9607E-09  1.9607E-09
1.5000E+03   9.7318E-10  9.7318E-10

      Z= 1

ENERGY      1 S 1/2
1.000E+00   1.1414E+01
1.500E+00   2.9316E+00
2.000E+00   1.1106E+00
3.000E+00   2.8064E-01
4.000E+00   1.0525E-01
5.000E+00   4.9069E-02
6.000E+00   2.6274E-02
8.000E+00   9.8163E-03
1.000E+01   4.5582E-03
1.500E+01   1.1280E-03
2.000E+01   4.1816E-04
3.000E+01   1.0316E-04
4.000E+01   3.8228E-05
5.000E+01   1.7709E-05
6.000E+01   9.4551E-06
8.000E+01   3.5226E-06
1.000E+02   1.6442E-06
1.500E+02   4.1765E-07
2.000E+02   1.6106E-07
3.000E+02   4.4138E-08
4.000E+02   1.8581E-08
5.000E+02   9.9272E-09
6.000E+02   6.1578E-09
8.000E+02   3.1176E-09

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Z= 1

ENERGY 1 S 1/2
1.000E+03 1.9607E-09
1.500E+03 9.7318E-10

Z= 2 1 STATES, 26 ENERGYS

STATE NE E(KEV) NORM
1 S 1/2 2.00 .0234 .73588

Z= 2 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	4.0177E+02	4.0177E+02	.0E+00	.0E+00	.0E+00
1.5000E+00	1.0888E+02	1.0888E+02	.0E+00	.0E+00	.0E+00
2.0000E+00	4.3222E+01	4.3222E+01	.0E+00	.0E+00	.0E+00
3.0000E+00	1.1171E+01	1.1171E+01	.0E+00	.0E+00	.0E+00
4.0000E+00	4.2341E+00	4.2341E+00	.0E+00	.0E+00	.0E+00
5.0000E+00	2.0258E+00	2.0258E+00	.0E+00	.0E+00	.0E+00
6.0000E+00	1.0991E+00	1.0991E+00	.0E+00	.0E+00	.0E+00
8.0000E+00	4.1103E-01	4.1103E-01	.0E+00	.0E+00	.0E+00
1.0000E+01	1.9410E-01	1.9410E-01	.0E+00	.0E+00	.0E+00
1.5000E+01	4.8748E-02	4.8748E-02	.0E+00	.0E+00	.0E+00
2.0000E+01	1.8286E-02	1.8286E-02	.0E+00	.0E+00	.0E+00
3.0000E+01	4.5679E-03	4.5679E-03	.0E+00	.0E+00	.0E+00
4.0000E+01	1.7051E-03	1.7051E-03	.0E+00	.0E+00	.0E+00
5.0000E+01	7.9453E-04	7.9453E-04	.0E+00	.0E+00	.0E+00
6.0000E+01	4.2594E-04	4.2594E-04	.0E+00	.0E+00	.0E+00
8.0000E+01	1.5965E-04	1.5965E-04	.0E+00	.0E+00	.0E+00
1.0000E+02	7.4841E-05	7.4841E-05	.0E+00	.0E+00	.0E+00
1.5000E+02	1.9161E-05	1.9161E-05	.0E+00	.0E+00	.0E+00
2.0000E+02	7.4277E-06	7.4277E-06	.0E+00	.0E+00	.0E+00
3.0000E+02	2.0488E-06	2.0488E-06	.0E+00	.0E+00	.0E+00
4.0000E+02	8.6621E-07	8.6621E-07	.0E+00	.0E+00	.0E+00
5.0000E+02	4.6353E-07	4.6353E-07	.0E+00	.0E+00	.0E+00
6.0000E+02	2.8760E-07	2.8760E-07	.0E+00	.0E+00	.0E+00
8.0000E+02	1.4487E-07	1.4487E-07	.0E+00	.0E+00	.0E+00
1.0000E+03	9.0275E-08	9.0275E-08	.0E+00	.0E+00	.0E+00
1.5000E+03	4.3147E-08	4.3147E-08	.0E+00	.0E+00	.0E+00

Z= 2

ENERGY 1 S 1/2
1.000E+00 4.0177E+02
1.500E+00 1.0888E+02
2.000E+00 4.3222E+01
3.000E+00 1.1171E+01
4.000E+00 4.2341E+00
5.000E+00 2.0258E+00
6.000E+00 1.0991E+00
8.000E+00 4.1103E-01
1.000E+01 1.9410E-01
1.500E+01 4.8748E-02
2.000E+01 1.8286E-02
3.000E+01 4.5679E-03
4.000E+01 1.7051E-03
5.000E+01 7.9453E-04
6.000E+01 4.2594E-04
8.000E+01 1.5965E-04
1.000E+02 7.4841E-05
1.500E+02 1.9161E-05

Z= 2

ENERGY	1 S 1/2
2.000E+02	7.4277E-06
3.000E+02	2.0488E-06
4.000E+02	8.6621E-07
5.000E+02	4.6353E-07
6.000E+02	2.8760E-07
8.000E+02	1.4487E-07
1.000E+03	9.0275E-08
1.500E+03	4.3147E-08

Z= 3 2 STATES, 26 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	.0598	.85510
2 S 1/2	1.00	.0055	.20045

Z= 3 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	2.6909E+03	2.6536E+03	3.7219E+01	.0E+00	.0E+00
1.5000E+00	7.6411E+02	7.5338E+02	1.0730E+01	.0E+00	.0E+00
2.0000E+00	3.0797E+02	3.0365E+02	4.3221E+00	.0E+00	.0E+00
3.0000E+00	8.3543E+01	8.2354E+01	1.1886E+00	.0E+00	.0E+00
4.0000E+00	3.2730E+01	3.2264E+01	4.6607E-01	.0E+00	.0E+00
5.0000E+00	1.5712E+01	1.5487E+01	2.2483E-01	.0E+00	.0E+00
6.0000E+00	8.6032E+00	8.4802E+00	1.2298E-01	.0E+00	.0E+00
8.0000E+00	3.3050E+00	3.2576E+00	4.7412E-02	.0E+00	.0E+00
1.0000E+01	1.5674E+00	1.5449E+00	2.2516E-02	.0E+00	.0E+00
1.5000E+01	4.0101E-01	3.9523E-01	5.7724E-03	.0E+00	.0E+00
2.0000E+01	1.5169E-01	1.4951E-01	2.1860E-03	.0E+00	.0E+00
3.0000E+01	3.8418E-02	3.7865E-02	5.5340E-04	.0E+00	.0E+00
4.0000E+01	1.4457E-02	1.4248E-02	2.0827E-04	.0E+00	.0E+00
5.0000E+01	6.7708E-03	6.6733E-03	9.7556E-05	.0E+00	.0E+00
6.0000E+01	3.6442E-03	3.5917E-03	5.2502E-05	.0E+00	.0E+00
8.0000E+01	1.3736E-03	1.3538E-03	1.9786E-05	.0E+00	.0E+00
1.0000E+02	6.4646E-04	6.3715E-04	9.3079E-06	.0E+00	.0E+00
1.5000E+02	1.6655E-04	1.6415E-04	2.3954E-06	.0E+00	.0E+00
2.0000E+02	6.4808E-05	6.3877E-05	9.3094E-07	.0E+00	.0E+00
3.0000E+02	1.7961E-05	1.7704E-05	2.5761E-07	.0E+00	.0E+00
4.0000E+02	7.6156E-06	7.5065E-06	1.0913E-07	.0E+00	.0E+00
5.0000E+02	4.0815E-06	4.0230E-06	5.8498E-08	.0E+00	.0E+00
6.0000E+02	2.5338E-06	2.4975E-06	3.6348E-08	.0E+00	.0E+00
8.0000E+02	1.2763E-06	1.2579E-06	1.8388E-08	.0E+00	.0E+00
1.0000E+03	7.9389E-07	7.8237E-07	1.1523E-08	.0E+00	.0E+00
1.5000E+03	3.7644E-07	3.7080E-07	5.6360E-09	.0E+00	.0E+00

Z= 3

ENERGY	1 S 1/2	2 S 1/2
1.000E+00	2.6536E+03	3.7219E+01
1.500E+00	7.5338E+02	1.0730E+01
2.000E+00	3.0365E+02	4.3221E+00
3.000E+00	8.2354E+01	1.1886E+00
4.000E+00	3.2264E+01	4.6607E-01
5.000E+00	1.5487E+01	2.2483E-01
6.000E+00	8.4802E+00	1.2298E-01
8.000E+00	3.2576E+00	4.7412E-02
1.000E+01	1.5449E+00	2.2516E-02
1.500E+01	3.9523E-01	5.7724E-03
2.000E+01	1.4951E-01	2.1860E-03

Z= 3

ENERGY	1 S 1/2	2 S 1/2
3.000E+01	3.7865E-02	5.5340E-04
4.000E+01	1.4248E-02	2.0827E-04
5.000E+01	6.6733E-03	9.7556E-05
6.000E+01	3.5917E-03	5.2502E-05
8.000E+01	1.3538E-03	1.9786E-05
1.000E+02	6.3715E-04	9.3079E-06
1.500E+02	1.6415E-04	2.3954E-06
2.000E+02	6.3877E-05	9.3094E-07
3.000E+02	1.7704E-05	2.5761E-07
4.000E+02	7.5065E-06	1.0913E-07
5.000E+02	4.0230E-06	5.8498E-08
6.000E+02	2.4975E-06	3.6348E-08
8.000E+02	1.2579E-06	1.8388E-08
1.000E+03	7.8237E-07	1.1523E-08
1.500E+03	3.7080E-07	5.6360E-09

Z= 4 2 STATES, 26 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	.1184	.88419
2 S 1/2	2.00	.0082	.27794

Z= 4 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	9.0314E+03	8.7130E+03	3.1842E+02	.0E+00	.0E+00
1.5000E+00	2.6810E+03	2.5849E+03	9.6108E+01	.0E+00	.0E+00
2.0000E+00	1.1108E+03	1.0706E+03	4.0229E+01	.0E+00	.0E+00
3.0000E+00	3.1274E+02	3.0126E+02	1.1478E+01	.0E+00	.0E+00
4.0000E+00	1.2521E+02	1.2058E+02	4.6236E+00	.0E+00	.0E+00
5.0000E+00	6.1068E+01	5.8803E+01	2.2645E+00	.0E+00	.0E+00
6.0000E+00	3.3807E+01	3.2550E+01	1.2577E+00	.0E+00	.0E+00
8.0000E+00	1.3199E+01	1.2707E+01	4.9289E-01	.0E+00	.0E+00
1.0000E+01	6.3289E+00	6.0920E+00	2.3688E-01	.0E+00	.0E+00
1.5000E+01	1.6472E+00	1.5854E+00	6.1858E-02	.0E+00	.0E+00
2.0000E+01	6.2961E-01	6.0592E-01	2.3686E-02	.0E+00	.0E+00
3.0000E+01	1.6115E-01	1.5508E-01	6.0751E-03	.0E+00	.0E+00
4.0000E+01	6.1057E-02	5.8752E-02	2.3046E-03	.0E+00	.0E+00
5.0000E+01	2.8724E-02	2.7639E-02	1.0852E-03	.0E+00	.0E+00
6.0000E+01	1.5547E-02	1.4960E-02	5.8639E-04	.0E+00	.0E+00
8.0000E+01	5.8915E-03	5.6693E-03	2.2224E-04	.0E+00	.0E+00
1.0000E+02	2.7827E-03	2.6777E-03	1.0498E-04	.0E+00	.0E+00
1.5000E+02	7.2098E-04	6.9380E-04	2.7187E-05	.0E+00	.0E+00
2.0000E+02	2.8153E-04	2.7092E-04	1.0610E-05	.0E+00	.0E+00
3.0000E+02	7.8331E-05	7.5381E-05	2.9500E-06	.0E+00	.0E+00
4.0000E+02	3.3281E-05	3.2029E-05	1.2521E-06	.0E+00	.0E+00
5.0000E+02	1.7861E-05	1.7189E-05	6.7190E-07	.0E+00	.0E+00
6.0000E+02	1.1095E-05	1.0678E-05	4.1751E-07	.0E+00	.0E+00
8.0000E+02	5.5901E-06	5.3794E-06	2.1072E-07	.0E+00	.0E+00
1.0000E+03	3.4762E-06	3.3447E-06	1.3149E-07	.0E+00	.0E+00
1.5000E+03	1.6451E-06	1.5820E-06	6.3090E-08	.0E+00	.0E+00

Z= 4

ENERGY	1 S 1/2	2 S 1/2
1.000E+00	8.7130E+03	3.1842E+02
1.500E+00	2.5849E+03	9.6108E+01
2.000E+00	1.0706E+03	4.0229E+01
3.000E+00	3.0126E+02	1.1478E+01
4.000E+00	1.2058E+02	4.6236E+00
5.000E+00	5.8803E+01	2.2645E+00
6.000E+00	3.2550E+01	1.2577E+00
8.000E+00	1.2707E+01	4.9289E-01
1.000E+01	6.0920E+00	2.3688E-01
1.500E+01	1.5854E+00	6.1858E-02
2.000E+01	6.0592E-01	2.3686E-02
3.000E+01	1.5508E-01	6.0751E-03
4.000E+01	5.8752E-02	2.3046E-03
5.000E+01	2.7639E-02	1.0852E-03
6.000E+01	1.4960E-02	5.8639E-04
8.000E+01	5.6693E-03	2.2224E-04
1.000E+02	2.6777E-03	1.0498E-04
1.500E+02	6.9380E-04	2.7187E-05
2.000E+02	2.7092E-04	1.0610E-05
3.000E+02	7.5381E-05	2.9500E-06
4.000E+02	3.2029E-05	1.2521E-06
5.000E+02	1.7189E-05	6.7190E-07
6.000E+02	1.0678E-05	4.1751E-07
8.000E+02	5.3794E-06	2.1072E-07
1.000E+03	3.3447E-06	1.3149E-07
1.500E+03	1.5820E-06	6.3090E-08

Z= 5 4 STATES, 26 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	.1956	.90162
2 S 1/2	2.00	.0126	.35267
2 P 1/2	.33	.0067	.11593
2 P 3/2	.67	.0067	.11583

Z= 5 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	2.2046E+04	2.1103E+04	9.4274E+02	.0E+00	.0E+00
1.5000E+00	6.7489E+03	6.4538E+03	2.9512E+02	.0E+00	.0E+00
2.0000E+00	2.8563E+03	2.7303E+03	1.2593E+02	.0E+00	.0E+00
3.0000E+00	8.2902E+02	7.9198E+02	3.7048E+01	.0E+00	.0E+00
4.0000E+00	3.3869E+02	3.2341E+02	1.5276E+01	.0E+00	.0E+00
5.0000E+00	1.6755E+02	1.5994E+02	7.6042E+00	.0E+00	.0E+00
6.0000E+00	9.3754E+01	8.9483E+01	4.2714E+00	.0E+00	.0E+00
8.0000E+00	3.7170E+01	3.5468E+01	1.7022E+00	.0E+00	.0E+00
1.0000E+01	1.8012E+01	1.7185E+01	8.2758E-01	.0E+00	.0E+00
1.5000E+01	4.7667E+00	4.5467E+00	2.2002E-01	.0E+00	.0E+00
2.0000E+01	1.8404E+00	1.7552E+00	8.5155E-02	.0E+00	.0E+00
3.0000E+01	4.7680E-01	4.5468E-01	2.2120E-02	.0E+00	.0E+00
4.0000E+01	1.8199E-01	1.7354E-01	8.4555E-03	.0E+00	.0E+00
5.0000E+01	8.6063E-02	8.2060E-02	4.0026E-03	.0E+00	.0E+00
6.0000E+01	4.6650E-02	4.4478E-02	2.1713E-03	.0E+00	.0E+00
8.0000E+01	1.7757E-02	1.6930E-02	8.2749E-04	.0E+00	.0E+00
1.0000E+02	8.4321E-03	8.0398E-03	3.9229E-04	.0E+00	.0E+00
1.5000E+02	2.1968E-03	2.0946E-03	1.0222E-04	.0E+00	.0E+00
2.0000E+02	8.6057E-04	8.2054E-04	4.0030E-05	.0E+00	.0E+00
3.0000E+02	2.4033E-04	2.2916E-04	1.1175E-05	.0E+00	.0E+00
4.0000E+02	1.0232E-04	9.7562E-05	4.7552E-06	.0E+00	.0E+00

Z= 5 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
5.0000E+02	5.4970E-05	5.2415E-05	2.5547E-06	.0E+00	.0E+00
6.0000E+02	3.4168E-05	3.2580E-05	1.5879E-06	.0E+00	.0E+00
8.0000E+02	1.7222E-05	1.6421E-05	8.0097E-07	.0E+00	.0E+00
1.0000E+03	1.0708E-05	1.0209E-05	4.9881E-07	.0E+00	.0E+00
1.5000E+03	5.0601E-06	4.8227E-06	2.3736E-07	.0E+00	.0E+00

Z= 5

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2
1.000E+00	2.1103E+04	9.2969E+02	4.3631E+00	8.6843E+00
1.500E+00	6.4538E+03	2.9243E+02	9.0202E-01	1.7949E+00
2.000E+00	2.7303E+03	1.2507E+02	2.8809E-01	5.7272E-01
3.000E+00	7.9198E+02	3.6875E+01	5.7824E-02	1.1451E-01
4.000E+00	3.2341E+02	1.5222E+01	1.8132E-02	3.5844E-02
5.000E+00	1.5994E+02	7.5826E+00	7.2769E-03	1.4374E-02
6.000E+00	8.9483E+01	4.2612E+00	3.4331E-03	6.7662E-03
8.000E+00	3.5468E+01	1.6991E+00	1.0366E-03	2.0390E-03
1.000E+01	1.7185E+01	8.2638E-01	4.0730E-04	7.9884E-04
1.500E+01	4.5467E+00	2.1981E-01	7.3725E-05	1.4381E-04
2.000E+01	1.7552E+00	8.5091E-02	2.1847E-05	4.2351E-05
3.000E+01	4.5468E-01	2.2108E-02	3.9334E-06	7.5719E-06
4.000E+01	1.7354E-01	8.4521E-03	1.1718E-06	2.2357E-06
5.000E+01	8.2060E-02	4.0012E-03	4.6078E-07	8.7223E-07
6.000E+01	4.4478E-02	2.1707E-03	2.1651E-07	4.0508E-07
8.000E+01	1.6930E-02	8.2730E-04	6.6328E-08	1.2265E-07
1.000E+02	8.0398E-03	3.9221E-04	2.6850E-08	4.9288E-08
1.500E+02	2.0946E-03	1.0220E-04	5.4408E-09	9.7490E-09
2.000E+02	8.2054E-04	4.0025E-05	1.8233E-09	3.2528E-09
3.000E+02	2.2916E-04	1.1174E-05	4.2526E-10	7.5871E-10
4.000E+02	9.7562E-05	4.7547E-06	1.6052E-10	2.9946E-10
5.000E+02	5.2415E-05	2.5545E-06	7.9547E-11	1.5297E-10
6.000E+02	3.2580E-05	1.5878E-06	4.6091E-11	9.3538E-11
8.000E+02	1.6421E-05	8.0090E-07	2.1054E-11	4.6458E-11
1.000E+03	1.0209E-05	4.9877E-07	1.2152E-11	2.9719E-11
1.500E+03	4.8227E-06	2.3734E-07	6.0614E-12	1.6936E-11

Z= 6 4 STATES, 26 ENERGYS

CARBON

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	.2910	.91341
2 S 1/2	2.00	.0176	.38920
2 P 1/2	.67	.0090	.15310
2 P 3/2	1.33	.0090	.15290

Z= 6 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	4.4073E+04	4.2045E+04	2.0280E+03	.0E+00	.0E+00
1.5000E+00	1.3947E+04	1.3291E+04	6.5564E+02	.0E+00	.0E+00
2.0000E+00	6.0178E+03	5.7308E+03	2.8699E+02	.0E+00	.0E+00
3.0000E+00	1.7882E+03	1.7018E+03	8.6410E+01	.0E+00	.0E+00
4.0000E+00	7.4273E+02	7.0657E+02	3.6161E+01	.0E+00	.0E+00
5.0000E+00	3.7215E+02	3.5393E+02	1.8217E+01	.0E+00	.0E+00
6.0000E+00	2.1032E+02	1.9998E+02	1.0345E+01	.0E+00	.0E+00
8.0000E+00	8.4593E+01	8.0406E+01	4.1864E+00	.0E+00	.0E+00
1.0000E+01	4.1405E+01	3.9348E+01	2.0570E+00	.0E+00	.0E+00
1.5000E+01	1.1134E+01	1.0578E+01	5.5620E-01	.0E+00	.0E+00
2.0000E+01	4.3408E+00	4.1233E+00	2.1749E-01	.0E+00	.0E+00
3.0000E+01	1.1379E+00	1.0807E+00	5.7194E-02	.0E+00	.0E+00

Z= 6 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
4.0000E+01	4.3741E-01	4.1539E-01	2.2024E-02	.0E+00	.0E+00
5.0000E+01	2.0789E-01	1.9741E-01	1.0479E-02	.0E+00	.0E+00
6.0000E+01	1.1310E-01	1.0740E-01	5.7056E-03	.0E+00	.0E+00
8.0000E+01	4.3278E-02	4.1092E-02	2.1859E-03	.0E+00	.0E+00
1.0000E+02	2.0578E-02	1.9538E-02	1.0401E-03	.0E+00	.0E+00
1.5000E+02	5.3970E-03	5.1244E-03	2.7255E-04	.0E+00	.0E+00
2.0000E+02	2.1209E-03	2.0138E-03	1.0711E-04	.0E+00	.0E+00
3.0000E+02	5.9441E-04	5.6440E-04	3.0015E-05	.0E+00	.0E+00
4.0000E+02	2.5354E-04	2.4075E-04	1.2799E-05	.0E+00	.0E+00
5.0000E+02	1.3637E-04	1.2948E-04	6.8844E-06	.0E+00	.0E+00
6.0000E+02	8.4818E-05	8.0537E-05	4.2813E-06	.0E+00	.0E+00
8.0000E+02	4.2771E-05	4.0612E-05	2.1596E-06	.0E+00	.0E+00
1.0000E+03	2.6590E-05	2.5246E-05	1.3439E-06	.0E+00	.0E+00
1.5000E+03	1.2553E-05	1.1916E-05	6.3698E-07	.0E+00	.0E+00

Z= 6

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2
1.000E+00	4.2045E+04	1.9334E+03	3.1667E+01	6.2950E+01
1.500E+00	1.3291E+04	6.3497E+02	6.9219E+00	1.3744E+01
2.000E+00	5.7308E+03	2.8025E+02	2.2604E+00	4.4856E+00
3.000E+00	1.7018E+03	8.5054E+01	4.5500E-01	9.0187E-01
4.000E+00	7.0657E+02	3.5730E+01	1.4513E-01	2.8642E-01
5.000E+00	3.5393E+02	1.8041E+01	5.9278E-02	1.1676E-01
6.000E+00	1.9998E+02	1.0261E+01	2.8341E-02	5.5753E-02
8.000E+00	8.0406E+01	4.1605E+00	8.7355E-03	1.7136E-02
1.000E+01	3.9348E+01	2.0468E+00	3.4718E-03	6.7972E-03
1.500E+01	1.0578E+01	5.5431E-01	6.4151E-04	1.2474E-03
2.000E+01	4.1233E+00	2.1693E-01	1.9230E-04	3.7185E-04
3.000E+01	1.0807E+00	5.7091E-02	3.5120E-05	6.7293E-05
4.000E+01	4.1539E-01	2.1993E-02	1.0552E-05	2.0033E-05
5.000E+01	1.9741E-01	1.0467E-02	4.1739E-06	7.8540E-06
6.000E+01	1.0740E-01	5.7000E-03	1.9667E-06	3.6666E-06
8.000E+01	4.1092E-02	2.1842E-03	6.0648E-07	1.1169E-06
1.000E+02	1.9538E-02	1.0394E-03	2.4720E-07	4.4896E-07
1.500E+02	5.1244E-03	2.7241E-04	5.0332E-08	8.9595E-08
2.000E+02	2.0138E-03	1.0706E-04	1.7005E-08	2.9869E-08
3.000E+02	5.6440E-04	3.0004E-05	3.9700E-09	7.0157E-09
4.000E+02	2.4075E-04	1.2795E-05	1.5162E-09	2.7428E-09
5.000E+02	1.2948E-04	6.8822E-06	7.5045E-10	1.4118E-09
6.000E+02	8.0537E-05	4.2800E-06	4.3842E-10	8.5245E-10
8.000E+02	4.0612E-05	2.1590E-06	1.9866E-10	4.2089E-10
1.000E+03	2.5246E-05	1.3435E-06	1.1381E-10	2.6232E-10
1.500E+03	1.1916E-05	6.3680E-07	4.8764E-11	1.3302E-10

Z= 7 4 STATES, 26 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	.4049	.92200
2 S 1/2	2.00	.0231	.41010
2 P 1/2	1.00	.0115	.17974
2 P 3/2	2.00	.0115	.17941

Z= 7 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	7.6990E+04	7.3239E+04	3.7508E+03	.0E+00	.0E+00
1.5000E+00	2.5152E+04	2.3914E+04	1.2382E+03	.0E+00	.0E+00
2.0000E+00	1.1066E+04	1.0516E+04	5.5093E+02	.0E+00	.0E+00
3.0000E+00	3.3666E+03	3.1969E+03	1.6968E+02	.0E+00	.0E+00
4.0000E+00	1.4181E+03	1.3461E+03	7.1967E+01	.0E+00	.0E+00
5.0000E+00	7.1805E+02	6.8144E+02	3.6615E+01	.0E+00	.0E+00
6.0000E+00	4.0926E+02	3.8833E+02	2.0940E+01	.0E+00	.0E+00
8.0000E+00	1.6678E+02	1.5820E+02	8.5808E+00	.0E+00	.0E+00
1.0000E+01	8.2413E+01	7.8156E+01	4.2574E+00	.0E+00	.0E+00
1.5000E+01	2.2502E+01	2.1332E+01	1.1694E+00	.0E+00	.0E+00
2.0000E+01	8.8550E+00	8.3934E+00	4.6167E-01	.0E+00	.0E+00
3.0000E+01	2.3477E+00	2.2249E+00	1.2283E-01	.0E+00	.0E+00
4.0000E+01	9.0877E-01	8.6113E-01	4.7636E-02	.0E+00	.0E+00
5.0000E+01	4.3396E-01	4.1119E-01	2.2775E-02	.0E+00	.0E+00
6.0000E+01	2.3695E-01	2.2450E-01	1.2446E-02	.0E+00	.0E+00
8.0000E+01	9.1137E-02	8.6344E-02	4.7927E-03	.0E+00	.0E+00
1.0000E+02	4.3478E-02	4.1190E-02	2.2885E-03	.0E+00	.0E+00
1.5000E+02	1.1439E-02	1.0836E-02	6.0297E-04	.0E+00	.0E+00
2.0000E+02	4.5163E-03	4.2786E-03	2.3772E-04	.0E+00	.0E+00
3.0000E+02	1.2702E-03	1.2034E-03	6.6864E-05	.0E+00	.0E+00
4.0000E+02	5.4285E-04	5.1428E-04	2.8574E-05	.0E+00	.0E+00
5.0000E+02	2.9228E-04	2.7690E-04	1.5383E-05	.0E+00	.0E+00
6.0000E+02	1.8189E-04	1.7232E-04	9.5721E-06	.0E+00	.0E+00
8.0000E+02	9.1770E-05	8.6939E-05	4.8306E-06	.0E+00	.0E+00
1.0000E+03	5.7044E-05	5.4040E-05	3.0046E-06	.0E+00	.0E+00
1.5000E+03	2.6911E-05	2.5490E-05	1.4211E-06	.0E+00	.0E+00

Z= 7

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2
1.000E+00	7.3239E+04	3.3815E+03	1.2374E+02	2.4558E+02
1.500E+00	2.3914E+04	1.1534E+03	2.8442E+01	5.6385E+01
2.000E+00	1.0516E+04	5.2192E+02	9.7336E+00	1.9275E+01
3.000E+00	3.1969E+03	1.6366E+02	2.0237E+00	4.0017E+00
4.000E+00	1.3461E+03	7.0043E+01	6.4657E-01	1.2772E+00
5.000E+00	6.8144E+02	3.5825E+01	2.6590E-01	5.2441E-01
6.000E+00	3.8833E+02	2.0560E+01	1.2835E-01	2.5192E-01
8.000E+00	1.5820E+02	8.4619E+00	4.0237E-02	7.8749E-02
1.000E+01	7.8156E+01	4.2095E+00	1.6222E-02	3.1665E-02
1.500E+01	2.1332E+01	1.1604E+00	3.0559E-03	5.9259E-03
2.000E+01	8.3934E+00	4.5896E-01	9.2657E-04	1.7862E-03
3.000E+01	2.2249E+00	1.2233E-01	1.7168E-04	3.2741E-04
4.000E+01	8.6113E-01	4.7486E-02	5.2019E-05	9.8217E-05
5.000E+01	4.1119E-01	2.2716E-02	2.0688E-05	3.8722E-05
6.000E+01	2.2450E-01	1.2418E-02	9.7839E-06	1.8166E-05
8.000E+01	8.6344E-02	4.7841E-03	3.0382E-06	5.5530E-06
1.000E+02	4.1190E-02	2.2850E-03	1.2412E-06	2.2455E-06
1.500E+02	1.0836E-02	6.0227E-04	2.5498E-07	4.4972E-07
2.000E+02	4.2786E-03	2.3748E-04	8.6346E-08	1.5066E-07
3.000E+02	1.2034E-03	6.6808E-05	2.0348E-08	3.5357E-08
4.000E+02	5.1428E-04	2.8552E-05	7.7753E-09	1.3878E-08
5.000E+02	2.7690E-04	1.5372E-05	3.8790E-09	7.0974E-09
6.000E+02	1.7232E-04	9.5655E-06	2.2532E-09	4.3221E-09
8.000E+02	8.6939E-05	4.8274E-06	1.0214E-09	2.1244E-09
1.000E+03	5.4040E-05	3.0027E-06	5.8498E-10	1.3127E-09
1.500E+03	2.5490E-05	1.4202E-06	2.4362E-10	6.2892E-10

OXYGEN

Z= 8 4 STATES, 26 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	.5373	.92859
2 S 1/2	2.00	.0292	.42331
2 P 1/2	1.33	.0142	.19971
2 P 3/2	2.67	.0141	.19921

Z= 8 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	1.2192E+05	1.1553E+05	6.3873E+03	.0E+00	.0E+00
1.5000E+00	4.1116E+04	3.8989E+04	2.1267E+03	.0E+00	.0E+00
2.0000E+00	1.8429E+04	1.7476E+04	9.5265E+02	.0E+00	.0E+00
3.0000E+00	5.7394E+03	5.4408E+03	2.9863E+02	.0E+00	.0E+00
4.0000E+00	2.4522E+03	2.3239E+03	1.2826E+02	.0E+00	.0E+00
5.0000E+00	1.2537E+03	1.1880E+03	6.5762E+01	.0E+00	.0E+00
6.0000E+00	7.1991E+02	6.8205E+02	3.7861E+01	.0E+00	.0E+00
8.0000E+00	2.9670E+02	2.8104E+02	1.5661E+01	.0E+00	.0E+00
1.0000E+01	1.4787E+02	1.4004E+02	7.8278E+00	.0E+00	.0E+00
1.5000E+01	4.0962E+01	3.8782E+01	2.1797E+00	.0E+00	.0E+00
2.0000E+01	1.6265E+01	1.5397E+01	8.6824E-01	.0E+00	.0E+00
3.0000E+01	4.3599E+00	4.1264E+00	2.3354E-01	.0E+00	.0E+00
4.0000E+01	1.6990E+00	1.6078E+00	9.1179E-02	.0E+00	.0E+00
5.0000E+01	8.1509E-01	7.7129E-01	4.3797E-02	.0E+00	.0E+00
6.0000E+01	4.4658E-01	4.2257E-01	2.4017E-02	.0E+00	.0E+00
8.0000E+01	1.7262E-01	1.6332E-01	9.2942E-03	.0E+00	.0E+00
1.0000E+02	8.2635E-02	7.8182E-02	4.4529E-03	.0E+00	.0E+00
1.5000E+02	2.1858E-02	2.0678E-02	1.1794E-03	.0E+00	.0E+00
2.0000E+02	8.6372E-03	8.1707E-03	4.6649E-04	.0E+00	.0E+00
3.0000E+02	2.4415E-03	2.3098E-03	1.3168E-04	.0E+00	.0E+00
4.0000E+02	1.0454E-03	9.8899E-04	5.6376E-05	.0E+00	.0E+00
5.0000E+02	5.6346E-04	5.3308E-04	3.0383E-05	.0E+00	.0E+00
6.0000E+02	3.5086E-04	3.3194E-04	1.8920E-05	.0E+00	.0E+00
8.0000E+02	1.7708E-04	1.6753E-04	9.5514E-06	.0E+00	.0E+00
1.0000E+03	1.1009E-04	1.0415E-04	5.9387E-06	.0E+00	.0E+00
1.5000E+03	5.1892E-05	4.9087E-05	2.8043E-06	.0E+00	.0E+00

Z= 8

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2
1.000E+00	1.1553E+05	5.3221E+03	3.5731E+02	7.0783E+02
1.500E+00	3.8989E+04	1.8715E+03	8.5678E+01	1.6953E+02
2.000E+00	1.7476E+04	8.6336E+02	2.9999E+01	5.9296E+01
3.000E+00	5.4408E+03	2.7929E+02	6.5079E+00	1.2835E+01
4.000E+00	2.3239E+03	1.2193E+02	2.1347E+00	4.2041E+00
5.000E+00	1.1880E+03	6.3139E+01	8.8424E-01	1.7397E+00
6.000E+00	6.8205E+02	3.6592E+01	4.2796E-01	8.4088E-01
8.000E+00	2.8104E+02	1.5261E+01	1.3560E-01	2.6466E-01
1.000E+01	1.4004E+02	7.6652E+00	5.5183E-02	1.0740E-01
1.500E+01	3.8782E+01	2.1486E+00	1.0607E-02	2.0504E-02
2.000E+01	1.5397E+01	8.5874E-01	3.2539E-03	6.2521E-03
3.000E+01	4.1264E+00	2.3177E-01	6.1108E-04	1.1606E-03
4.000E+01	1.6078E+00	9.0641E-02	1.8666E-04	3.5095E-04
5.000E+01	7.7129E-01	4.3583E-02	7.4648E-05	1.3914E-04
6.000E+01	4.2257E-01	2.3916E-02	3.5464E-05	6.5471E-05
8.000E+01	1.6332E-01	9.2630E-03	1.1070E-05	2.0144E-05
1.000E+02	7.8182E-02	4.4402E-03	4.5487E-06	8.1612E-06
1.500E+02	2.0678E-02	1.1769E-03	9.3874E-07	1.6465E-06
2.000E+02	8.1707E-03	4.6562E-04	3.1966E-07	5.5244E-07
3.000E+02	2.3098E-03	1.3147E-04	7.5493E-08	1.3034E-07
4.000E+02	9.8899E-04	5.6296E-05	2.9062E-08	5.0979E-08

Z= 8

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2
5.000E+02	5.3308E-04	3.0342E-05	1.4468E-08	2.6204E-08
6.000E+02	3.3194E-04	1.8896E-05	8.4708E-09	1.5831E-08
8.000E+02	1.6753E-04	9.5398E-06	3.8580E-09	7.7643E-09
1.000E+03	1.0415E-04	5.9317E-06	2.2056E-09	4.7719E-09
1.500E+03	4.9087E-05	2.8012E-06	9.0659E-10	2.2497E-09

Z= 9 4 STATES, 26 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	.6884	.93381
2 S 1/2	2.00	.0359	.43223
2 P 1/2	1.67	.0170	.21524
2 P 3/2	3.33	.0170	.21455

Z= 9 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	1.7817E+05	1.6785E+05	1.0321E+04	.0E+00	.0E+00
1.5000E+00	6.2375E+04	5.8941E+04	3.4348E+03	.0E+00	.0E+00
2.0000E+00	2.8496E+04	2.6952E+04	1.5436E+03	.0E+00	.0E+00
3.0000E+00	9.0729E+03	8.5848E+03	4.8816E+02	.0E+00	.0E+00
4.0000E+00	3.9313E+03	3.7200E+03	2.1130E+02	.0E+00	.0E+00
5.0000E+00	2.0296E+03	1.9204E+03	1.0917E+02	.0E+00	.0E+00
6.0000E+00	1.1738E+03	1.1107E+03	6.3184E+01	.0E+00	.0E+00
8.0000E+00	4.8883E+02	4.6248E+02	2.6347E+01	.0E+00	.0E+00
1.0000E+01	2.4548E+02	2.3223E+02	1.3249E+01	.0E+00	.0E+00
1.5000E+01	6.8904E+01	6.5174E+01	3.7301E+00	.0E+00	.0E+00
2.0000E+01	2.7596E+01	2.6099E+01	1.4973E+00	.0E+00	.0E+00
3.0000E+01	7.4761E+00	7.0693E+00	4.0684E-01	.0E+00	.0E+00
4.0000E+01	2.9323E+00	2.7725E+00	1.5984E-01	.0E+00	.0E+00
5.0000E+01	1.4131E+00	1.3360E+00	7.7115E-02	.0E+00	.0E+00
6.0000E+01	7.7687E-01	7.3445E-01	4.2428E-02	.0E+00	.0E+00
8.0000E+01	3.0172E-01	2.8522E-01	1.6496E-02	.0E+00	.0E+00
1.0000E+02	1.4492E-01	1.3699E-01	7.9293E-03	.0E+00	.0E+00
1.5000E+02	3.8535E-02	3.6424E-02	2.1109E-03	.0E+00	.0E+00
2.0000E+02	1.5274E-02	1.4437E-02	8.3743E-04	.0E+00	.0E+00
3.0000E+02	4.3304E-03	4.0932E-03	2.3721E-04	.0E+00	.0E+00
4.0000E+02	1.8575E-03	1.7557E-03	1.0176E-04	.0E+00	.0E+00
5.0000E+02	1.0022E-03	9.4730E-04	5.4899E-05	.0E+00	.0E+00
6.0000E+02	6.2446E-04	5.9025E-04	3.4208E-05	.0E+00	.0E+00
8.0000E+02	3.1534E-04	2.9807E-04	1.7274E-05	.0E+00	.0E+00
1.0000E+03	1.9601E-04	1.8527E-04	1.0740E-05	.0E+00	.0E+00
1.5000E+03	9.2338E-05	8.7273E-05	5.0652E-06	.0E+00	.0E+00

Z= 9

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2
1.000E+00	1.6785E+05	7.7597E+03	8.6019E+02	1.7009E+03
1.500E+00	5.8941E+04	2.8037E+03	2.1215E+02	4.1890E+02
2.000E+00	2.6952E+04	1.3188E+03	7.5661E+01	1.4922E+02
3.000E+00	8.5848E+03	4.3761E+02	1.7032E+01	3.3520E+01
4.000E+00	3.7200E+03	1.9437E+02	5.7127E+00	1.1220E+01
5.000E+00	1.9204E+03	1.0206E+02	2.4032E+00	4.7127E+00
6.000E+00	1.1107E+03	5.9708E+01	1.1747E+00	2.3010E+00
8.000E+00	4.6248E+02	2.5241E+01	3.7545E-01	7.3064E-01
1.000E+01	2.3223E+02	1.2797E+01	1.5374E-01	2.9828E-01
1.500E+01	6.5174E+01	3.6423E+00	2.9984E-02	5.7757E-02
2.000E+01	2.6099E+01	1.4702E+00	9.3095E-03	1.7818E-02
3.000E+01	7.0693E+00	4.0171E-01	1.7722E-03	3.3524E-03

Z= 9

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2
4.000E+01	2.7725E+00	1.5827E-01	5.4571E-04	1.0214E-03
5.000E+01	1.3360E+00	7.6489E-02	2.1945E-04	4.0699E-04
6.000E+01	7.3445E-01	4.2131E-02	1.0468E-04	1.9230E-04
8.000E+01	2.8522E-01	1.6404E-02	3.2877E-05	5.9473E-05
1.000E+02	1.3699E-01	7.8916E-03	1.3558E-05	2.4183E-05
1.500E+02	3.6424E-02	2.1032E-03	2.8169E-06	4.9046E-06
2.000E+02	1.4437E-02	8.3482E-04	9.6255E-07	1.6509E-06
3.000E+02	4.0932E-03	2.3660E-04	2.2869E-07	3.9055E-07
4.000E+02	1.7557E-03	1.0152E-04	8.8238E-08	1.5291E-07
5.000E+02	9.4730E-04	5.4776E-05	4.4039E-08	7.8580E-08
6.000E+02	5.9025E-04	3.4134E-05	2.5790E-08	4.7513E-08
8.000E+02	2.9807E-04	1.7239E-05	1.1770E-08	2.3278E-08
1.000E+03	1.8527E-04	1.0719E-05	6.7369E-09	1.4294E-08
1.500E+03	8.7273E-05	5.0557E-06	2.7539E-09	6.6919E-09

Z= 10 4 STATES, 26 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	.8582	.93807
2 S 1/2	2.00	.0432	.43857
2 P 1/2	2.00	.0201	.22769
2 P 3/2	4.00	.0200	.22676

Z= 10 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	2.4820E+05	2.3215E+05	1.6051E+04	.0E+00	.0E+00
1.5000E+00	8.9278E+04	8.3964E+04	5.3137E+03	.0E+00	.0E+00
2.0000E+00	4.1584E+04	3.9194E+04	2.3900E+03	.0E+00	.0E+00
3.0000E+00	1.3526E+04	1.2769E+04	7.5725E+02	.0E+00	.0E+00
4.0000E+00	5.9395E+03	5.6101E+03	3.2939E+02	.0E+00	.0E+00
5.0000E+00	3.0954E+03	2.9244E+03	1.7103E+02	.0E+00	.0E+00
6.0000E+00	1.8031E+03	1.7037E+03	9.9401E+01	.0E+00	.0E+00
8.0000E+00	7.5861E+02	7.1687E+02	4.1735E+01	.0E+00	.0E+00
1.0000E+01	3.8369E+02	3.6260E+02	2.1089E+01	.0E+00	.0E+00
1.5000E+01	1.0900E+02	1.0301E+02	5.9898E+00	.0E+00	.0E+00
2.0000E+01	4.4006E+01	4.1586E+01	2.4203E+00	.0E+00	.0E+00
3.0000E+01	1.2044E+01	1.1380E+01	6.6344E-01	.0E+00	.0E+00
4.0000E+01	4.7536E+00	4.4915E+00	2.6217E-01	.0E+00	.0E+00
5.0000E+01	2.3010E+00	2.1739E+00	1.2701E-01	.0E+00	.0E+00
6.0000E+01	1.2691E+00	1.1990E+00	7.0095E-02	.0E+00	.0E+00
8.0000E+01	4.9521E-01	4.6784E-01	2.7375E-02	.0E+00	.0E+00
1.0000E+02	2.3863E-01	2.2543E-01	1.3199E-02	.0E+00	.0E+00
1.5000E+02	6.3775E-02	6.0244E-02	3.5312E-03	.0E+00	.0E+00
2.0000E+02	2.5357E-02	2.3952E-02	1.4050E-03	.0E+00	.0E+00
3.0000E+02	7.2005E-03	6.8012E-03	3.9933E-04	.0E+00	.0E+00
4.0000E+02	3.0985E-03	2.9269E-03	1.7160E-04	.0E+00	.0E+00
5.0000E+02	1.6736E-03	1.5809E-03	9.2690E-05	.0E+00	.0E+00
6.0000E+02	1.0434E-03	9.8562E-04	5.7782E-05	.0E+00	.0E+00
8.0000E+02	5.2709E-04	4.9791E-04	2.9189E-05	.0E+00	.0E+00
1.0000E+03	3.2767E-04	3.0953E-04	1.8146E-05	.0E+00	.0E+00
1.5000E+03	1.5423E-04	1.4568E-04	8.5481E-06	.0E+00	.0E+00

Z= 10

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2
1.000E+00	2.3215E+05	1.0634E+04	1.8214E+03	3.5951E+03
1.500E+00	8.3964E+04	3.9517E+03	4.5856E+02	9.0348E+02
2.000E+00	3.9194E+04	1.8951E+03	1.6679E+02	3.2817E+02
3.000E+00	1.2769E+04	6.4321E+02	3.8485E+01	7.5554E+01
4.000E+00	5.6101E+03	2.9047E+02	1.3155E+01	2.5767E+01
5.000E+00	2.9244E+03	1.5438E+02	5.6370E+00	1.1020E+01
6.000E+00	1.7037E+03	9.1185E+01	2.7833E+00	5.4324E+00
8.000E+00	7.1687E+02	3.9080E+01	9.0080E-01	1.7534E+00
1.000E+01	3.6260E+02	1.9997E+01	3.7231E-01	7.2000E-01
1.500E+01	1.0301E+02	5.7755E+00	7.3419E-02	1.4094E-01
2.000E+01	4.1586E+01	2.3535E+00	2.3009E-02	4.3868E-02
3.000E+01	1.1380E+01	6.5063E-01	4.4407E-03	8.3654E-03
4.000E+01	4.4915E+00	2.5822E-01	1.3785E-03	2.5682E-03
5.000E+01	2.1739E+00	1.2542E-01	5.5743E-04	1.0285E-03
6.000E+01	1.1990E+00	6.9340E-02	2.6696E-04	4.8786E-04
8.000E+01	4.6784E-01	2.7139E-02	8.4329E-05	1.5166E-04
1.000E+02	2.2543E-01	1.3103E-02	3.4914E-05	6.1899E-05
1.500E+02	6.0244E-02	3.5113E-03	7.3002E-06	1.2619E-05
2.000E+02	2.3952E-02	1.3982E-03	2.5043E-06	4.2606E-06
3.000E+02	6.8012E-03	3.9772E-04	5.9766E-07	1.0107E-06
4.000E+02	2.9269E-03	1.7098E-04	2.3133E-07	3.9633E-07
5.000E+02	1.5809E-03	9.2371E-05	1.1568E-07	2.0365E-07
6.000E+02	9.8562E-04	5.7591E-05	6.7824E-08	1.2323E-07
8.000E+02	4.9791E-04	2.9098E-05	3.0973E-08	6.0386E-08
1.000E+03	3.0953E-04	1.8091E-05	1.7778E-08	3.7008E-08
1.500E+03	1.4568E-04	8.5236E-06	7.2651E-09	1.7168E-08

Z= 11 5 STATES, 28 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	1.0640	.94173
2 S 1/2	2.00	.0645	.46985
2 P 1/2	2.00	.0364	.26869
2 P 3/2	4.00	.0362	.26767
3 S 1/2	1.00	.0051	.04852

Z= 11 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	2.4900E+04	.0E+00	2.4677E+04	2.2306E+02	.0E+00
1.0629E+00	2.1139E+04	.0E+00	2.0945E+04	1.9365E+02	.0E+00
1.0714E+00	2.4587E+05	2.2518E+05	2.0500E+04	1.9009E+02	.0E+00
1.5000E+00	1.2185E+05	1.1356E+05	8.2016E+03	8.5552E+01	.0E+00
2.0000E+00	5.7985E+04	5.4247E+04	3.6969E+03	4.1639E+01	.0E+00
3.0000E+00	1.9302E+04	1.8110E+04	1.1774E+03	1.4464E+01	.0E+00
4.0000E+00	8.5855E+03	8.0640E+03	5.1491E+02	6.6402E+00	.0E+00
5.0000E+00	4.5161E+03	4.2439E+03	2.6862E+02	3.5705E+00	.0E+00
6.0000E+00	2.6493E+03	2.4903E+03	1.5685E+02	2.1293E+00	.0E+00
8.0000E+00	1.1259E+03	1.0587E+03	6.6339E+01	9.2580E-01	.0E+00
1.0000E+01	5.7355E+02	5.3936E+02	3.3710E+01	4.7856E-01	.0E+00
1.5000E+01	1.6482E+02	1.5501E+02	9.6635E+00	1.4041E-01	.0E+00
2.0000E+01	6.7043E+01	6.3056E+01	3.9288E+00	5.7767E-02	.0E+00
3.0000E+01	1.8528E+01	1.7426E+01	1.0863E+00	1.6167E-02	.0E+00
4.0000E+01	7.3583E+00	6.9200E+00	4.3181E-01	6.4649E-03	.0E+00
5.0000E+01	3.5771E+00	3.3639E+00	2.1005E-01	3.1563E-03	.0E+00
6.0000E+01	1.9793E+00	1.8613E+00	1.1629E-01	1.7516E-03	.0E+00
8.0000E+01	7.7590E-01	7.2959E-01	4.5621E-02	6.8917E-04	.0E+00
1.0000E+02	3.7507E-01	3.5267E-01	2.2065E-02	3.3391E-04	.0E+00
1.5000E+02	1.0074E-01	9.4722E-02	5.9323E-03	8.9972E-05	.0E+00

Z= 11 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
2.0000E+02	4.0179E-02	3.7775E-02	2.3673E-03	3.5935E-05	.0E+00
3.0000E+02	1.1449E-02	1.0763E-02	6.7515E-04	1.0259E-05	.0E+00
4.0000E+02	4.9334E-03	4.6383E-03	2.9066E-04	4.4201E-06	.0E+00
5.0000E+02	2.6674E-03	2.5079E-03	1.5715E-04	2.3922E-06	.0E+00
6.0000E+02	1.6640E-03	1.5644E-03	9.8031E-05	1.4936E-06	.0E+00
8.0000E+02	8.4109E-04	7.9079E-04	4.9543E-05	7.5751E-07	.0E+00
1.0000E+03	5.2282E-04	4.9155E-04	3.0794E-05	4.7326E-07	.0E+00
1.5000E+03	2.4597E-04	2.3125E-04	1.4491E-05	2.2731E-07	.0E+00

Z= 11

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2
1.000E+00	.0E+00	1.4701E+04	3.3561E+03	6.6200E+03	2.2306E+02
1.063E+00	.0E+00	1.2781E+04	2.7471E+03	5.4170E+03	1.9365E+02
1.071E+00	2.2518E+05	1.2548E+04	2.6758E+03	5.2763E+03	1.9009E+02
1.500E+00	1.1356E+05	5.6336E+03	8.6511E+02	1.7028E+03	8.5552E+01
2.000E+00	5.4247E+04	2.7478E+03	3.2009E+02	6.2900E+02	4.1639E+01
3.000E+00	1.8110E+04	9.5394E+02	7.5492E+01	1.4796E+02	1.4464E+01
4.000E+00	8.0640E+03	4.3718E+02	2.6297E+01	5.1427E+01	6.6402E+00
5.000E+00	4.2439E+03	2.3494E+02	1.1411E+01	2.2267E+01	3.5705E+00
6.000E+00	2.4903E+03	1.4003E+02	5.7070E+00	1.1114E+01	2.1293E+00
8.000E+00	1.0587E+03	6.0820E+01	1.8768E+00	3.6421E+00	9.2580E-01
1.000E+01	5.3936E+02	3.1417E+01	7.8147E-01	1.5122E+00	4.7856E-01
1.500E+01	1.5501E+02	9.2081E+00	1.5591E-01	2.9954E-01	1.4041E-01
2.000E+01	6.3056E+01	3.7856E+00	4.9347E-02	9.3826E-02	5.7767E-02
3.000E+01	1.7426E+01	1.0585E+00	9.6411E-03	1.8101E-02	1.6167E-02
4.000E+01	6.9200E+00	4.2319E-01	3.0177E-03	5.6027E-03	6.4649E-03
5.000E+01	3.3639E+00	2.0657E-01	1.2275E-03	2.2547E-03	3.1563E-03
6.000E+01	1.8613E+00	1.1463E-01	5.9015E-04	1.0740E-03	1.7516E-03
8.000E+01	7.2959E-01	4.5098E-02	1.8754E-04	3.3554E-04	6.8917E-04
1.000E+02	3.5267E-01	2.1850E-02	7.7964E-05	1.3745E-04	3.3391E-04
1.500E+02	9.4722E-02	5.8878E-03	1.6406E-05	2.8177E-05	8.9972E-05
2.000E+02	3.7775E-02	2.3521E-03	5.6499E-06	9.5421E-06	3.5935E-05
3.000E+02	1.0763E-02	6.7152E-04	1.3549E-06	2.2703E-06	1.0259E-05
4.000E+02	4.6383E-03	2.8924E-04	5.2628E-07	8.9081E-07	4.4201E-06
5.000E+02	2.5079E-03	1.5643E-04	2.6404E-07	4.5759E-07	2.3922E-06
6.000E+02	1.5644E-03	9.7599E-05	1.5479E-07	2.7737E-07	1.4936E-06
8.000E+02	7.9079E-04	4.9336E-05	7.1005E-08	1.3571E-07	7.5751E-07
1.000E+03	4.9155E-04	3.0671E-05	4.0932E-08	8.2591E-08	4.7326E-07
1.500E+03	2.3125E-04	1.4436E-05	1.6734E-08	3.8166E-08	2.2731E-07

Z= 12 5 STATES, 28 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	1.2945	.94499
2 S 1/2	2.00	.0895	.49924
2 P 1/2	2.00	.0566	.30395
2 P 3/2	4.00	.0562	.30276
3 S 1/2	2.00	.0069	.08449

Z= 12 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	3.7146E+04	.0E+00	3.6175E+04	9.7091E+02	.0E+00
1.2932E+00	1.8654E+04	.0E+00	1.8114E+04	5.4047E+02	.0E+00
1.3035E+00	2.2014E+05	2.0189E+05	1.7726E+04	5.3049E+02	.0E+00
1.5000E+00	1.6152E+05	1.4905E+05	1.2091E+04	3.8098E+02	.0E+00
2.0000E+00	7.7886E+04	7.2229E+04	5.4685E+03	1.8905E+02	.0E+00
3.0000E+00	2.6514E+04	2.4696E+04	1.7506E+03	6.7106E+01	.0E+00
4.0000E+00	1.1950E+04	1.1149E+04	7.6907E+02	3.1220E+01	.0E+00
5.0000E+00	6.3415E+03	5.9216E+03	4.0288E+02	1.6966E+01	.0E+00
6.0000E+00	3.7453E+03	3.4989E+03	2.3617E+02	1.0204E+01	.0E+00
8.0000E+00	1.6076E+03	1.5025E+03	1.0056E+02	4.4936E+00	.0E+00
1.0000E+01	8.2466E+02	7.7094E+02	5.1375E+01	2.3446E+00	.0E+00
1.5000E+01	2.3966E+02	2.2410E+02	1.4863E+01	6.9831E-01	.0E+00
2.0000E+01	9.8183E+01	9.1815E+01	6.0787E+00	2.8989E-01	.0E+00
3.0000E+01	2.7387E+01	2.5610E+01	1.6945E+00	8.2046E-02	.0E+00
4.0000E+01	1.0941E+01	1.0231E+01	6.7709E-01	3.3043E-02	.0E+00
5.0000E+01	5.3414E+00	4.9944E+00	3.3076E-01	1.6213E-02	.0E+00
6.0000E+01	2.9650E+00	2.7723E+00	1.8368E-01	9.0310E-03	.0E+00
8.0000E+01	1.1675E+00	1.0916E+00	7.2374E-02	3.5722E-03	.0E+00
1.0000E+02	5.6615E-01	5.2930E-01	3.5113E-02	1.7370E-03	.0E+00
1.5000E+02	1.5282E-01	1.4286E-01	9.4861E-03	4.7063E-04	.0E+00
2.0000E+02	6.1123E-02	5.7137E-02	3.7965E-03	1.8860E-04	.0E+00
3.0000E+02	1.7476E-02	1.6336E-02	1.0864E-03	5.4031E-05	.0E+00
4.0000E+02	7.5339E-03	7.0420E-03	4.6856E-04	2.3319E-05	.0E+00
5.0000E+02	4.0824E-03	3.8162E-03	2.5361E-04	1.2633E-05	.0E+00
6.0000E+02	2.5483E-03	2.3821E-03	1.5829E-04	7.8890E-06	.0E+00
8.0000E+02	1.2886E-03	1.2046E-03	8.0033E-05	3.9983E-06	.0E+00
1.0000E+03	8.0099E-04	7.4875E-04	4.9741E-05	2.4934E-06	.0E+00
1.5000E+03	3.7662E-04	3.5205E-04	2.3383E-05	1.1877E-06	.0E+00

Z= 12

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2
1.000E+00	.0E+00	1.9466E+04	5.6250E+03	1.1084E+04	9.7091E+02
1.293E+00	.0E+00	1.0876E+04	2.4389E+03	4.7987E+03	5.4047E+02
1.304E+00	2.0189E+05	1.0677E+04	2.3756E+03	4.6737E+03	5.3049E+02
1.500E+00	1.4905E+05	7.6757E+03	1.4889E+03	2.9268E+03	3.8098E+02
2.000E+00	7.2229E+04	3.8110E+03	5.5959E+02	1.0979E+03	1.8905E+02
3.000E+00	2.4696E+04	1.3522E+03	1.3476E+02	2.6360E+02	6.7106E+01
4.000E+00	1.1149E+04	6.2845E+02	4.7645E+01	9.2975E+01	3.1220E+01
5.000E+00	5.9216E+03	3.4121E+02	2.0925E+01	4.0742E+01	1.6966E+01
6.000E+00	3.4989E+03	2.0506E+02	1.0570E+01	2.0537E+01	1.0204E+01
8.000E+00	1.5025E+03	9.0197E+01	3.5317E+00	6.8347E+00	4.4936E+00
1.000E+01	7.7094E+02	4.7020E+01	1.4871E+00	2.8679E+00	2.3446E+00
1.500E+01	2.2410E+02	1.3985E+01	3.0112E-01	5.7647E-01	6.9831E-01
2.000E+01	9.1815E+01	5.8009E+00	9.5781E-02	1.8205E-01	2.8989E-01
3.000E+01	2.5610E+01	1.6401E+00	1.8945E-02	3.5428E-02	8.2046E-02
4.000E+01	1.0231E+01	6.6006E-01	5.9756E-03	1.1048E-02	3.3043E-02
5.000E+01	4.9944E+00	3.2384E-01	2.4446E-03	4.4700E-03	1.6213E-02
6.000E+01	2.7723E+00	1.8036E-01	1.1800E-03	2.1378E-03	9.0310E-03
8.000E+01	1.0916E+00	7.1326E-02	3.7726E-04	6.7125E-04	3.5722E-03
1.000E+02	5.2930E-01	3.4680E-02	1.5743E-04	2.7602E-04	1.7370E-03
1.500E+02	1.4286E-01	9.3959E-03	3.3336E-05	5.6874E-05	4.7063E-04
2.000E+02	5.7137E-02	3.7656E-03	1.1523E-05	1.9317E-05	1.8860E-04
3.000E+02	1.6336E-02	1.0790E-03	2.7758E-06	4.6104E-06	5.4031E-05
4.000E+02	7.0420E-03	4.6567E-04	1.0812E-06	1.8126E-06	2.3319E-05
5.000E+02	3.8162E-03	2.5214E-04	5.4393E-07	9.2995E-07	1.2633E-05
6.000E+02	2.3821E-03	1.5740E-04	3.1898E-07	5.6466E-07	7.8890E-06
8.000E+02	1.2046E-03	7.9611E-05	1.4689E-07	2.7496E-07	3.9983E-06
1.000E+03	7.4875E-04	4.9488E-05	8.4985E-08	1.6780E-07	2.4934E-06
1.500E+03	3.5205E-04	2.3271E-05	3.4743E-08	7.6998E-08	1.1877E-06

Z= 13 7 STATES, 28 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	1.5499	.94789
2 S 1/2	2.00	.1191	.52595
2 P 1/2	2.00	.0812	.33601
2 P 3/2	4.00	.0807	.33464
3 S 1/2	2.00	.0102	.12736
3 P 1/2	.33	.0049	.03789
3 P 3/2	.67	.0049	.03761

Z= 13 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	5.2999E+04	.0E+00	5.1057E+04	1.9414E+03	.0E+00
1.5000E+00	1.7929E+04	.0E+00	1.7170E+04	7.5902E+02	.0E+00
1.5483E+00	1.6451E+04	.0E+00	1.5748E+04	7.0362E+02	.0E+00
1.5607E+00	1.7694E+05	1.6084E+05	1.5409E+04	6.9031E+02	.0E+00
2.0000E+00	1.0131E+05	9.3139E+04	7.7942E+03	3.7761E+02	.0E+00
3.0000E+00	3.5238E+04	3.2595E+04	2.5076E+03	1.3496E+02	.0E+00
4.0000E+00	1.6090E+04	1.4921E+04	1.1059E+03	6.3189E+01	.0E+00
5.0000E+00	8.6123E+03	7.9965E+03	5.8134E+02	3.4483E+01	.0E+00
6.0000E+00	5.1196E+03	4.7569E+03	3.4189E+02	2.0838E+01	.0E+00
8.0000E+00	2.2184E+03	2.0627E+03	1.4642E+02	9.2500E+00	.0E+00
1.0000E+01	1.1458E+03	1.0657E+03	7.5168E+01	4.8577E+00	.0E+00
1.5000E+01	3.3668E+02	3.1328E+02	2.1937E+01	1.4635E+00	.0E+00
2.0000E+01	1.3888E+02	1.2924E+02	9.0237E+00	6.1201E-01	.0E+00
3.0000E+01	3.9080E+01	3.6371E+01	2.5344E+00	1.7483E-01	.0E+00
4.0000E+01	1.5702E+01	1.4613E+01	1.0180E+00	7.0834E-02	.0E+00
5.0000E+01	7.6968E+00	7.1628E+00	4.9903E-01	3.4909E-02	.0E+00
6.0000E+01	4.2857E+00	3.9882E+00	2.7799E-01	1.9511E-02	.0E+00
8.0000E+01	1.6950E+00	1.5773E+00	1.1001E-01	7.7540E-03	.0E+00
1.0000E+02	8.2447E-01	7.6715E-01	5.3532E-02	3.7830E-03	.0E+00
1.5000E+02	2.2362E-01	2.0806E-01	1.4531E-02	1.0304E-03	.0E+00
2.0000E+02	8.9703E-02	8.3457E-02	5.8323E-03	4.1418E-04	.0E+00
3.0000E+02	2.5735E-02	2.3941E-02	1.6744E-03	1.1908E-04	.0E+00
4.0000E+02	1.1115E-02	1.0340E-02	7.2350E-04	5.1488E-05	.0E+00
5.0000E+02	6.0211E-03	5.6011E-03	3.9200E-04	2.7908E-05	.0E+00
6.0000E+02	3.7644E-03	3.5022E-03	2.4481E-04	1.7441E-05	.0E+00
8.0000E+02	1.9045E-03	1.7718E-03	1.2383E-04	8.8330E-06	.0E+00
1.0000E+03	1.1839E-03	1.1015E-03	7.6960E-05	5.4993E-06	.0E+00
1.5000E+03	5.5624E-04	5.1749E-04	3.6151E-05	2.6016E-06	.0E+00

Z= 13

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	2.4855E+04	8.8278E+03	1.7374E+04	1.7826E+03	5.3490E+01
1.500E+00	.0E+00	1.0063E+04	2.3985E+03	4.7083E+03	7.1487E+02	1.4898E+01
1.548E+00	.0E+00	9.3479E+03	2.1602E+03	4.2396E+03	6.6382E+02	1.3434E+01
1.561E+00	1.6084E+05	9.1757E+03	2.1040E+03	4.1291E+03	6.5153E+02	1.3088E+01
2.000E+00	9.3139E+04	5.0835E+03	9.1609E+02	1.7946E+03	3.6054E+02	5.7700E+00
3.000E+00	3.2595E+04	1.8431E+03	2.2509E+02	4.3945E+02	1.3073E+02	1.4348E+00
4.000E+00	1.4921E+04	8.6818E+02	8.0659E+01	1.5705E+02	6.1665E+01	5.1800E-01
5.000E+00	7.9965E+03	4.7600E+02	3.5799E+01	6.9539E+01	3.3805E+01	2.3093E-01
6.000E+00	4.7569E+03	2.8828E+02	1.8244E+01	3.5362E+01	2.0491E+01	1.1807E-01
8.000E+00	2.0627E+03	1.2831E+02	6.1832E+00	1.1935E+01	9.1325E+00	4.0180E-02
1.000E+01	1.0657E+03	6.7476E+01	2.6318E+00	5.0605E+00	4.8077E+00	1.7149E-02
1.500E+01	3.1328E+02	2.0362E+01	5.4183E-01	1.0335E+00	1.4532E+00	3.5457E-03
2.000E+01	1.2924E+02	8.5208E+00	1.7378E-01	3.2909E-01	6.0872E-01	1.1400E-03
3.000E+01	3.6371E+01	2.4351E+00	3.4619E-02	6.4700E-02	1.7417E-01	2.2766E-04
4.000E+01	1.4613E+01	9.8670E-01	1.1018E-02	2.0282E-02	7.0628E-02	7.2366E-05
5.000E+01	7.1628E+00	4.8625E-01	4.5307E-03	8.2482E-03	3.4825E-02	2.9764E-05

Z= 13

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
6.000E+01	3.9882E+00	2.7184E-01	2.1968E-03	3.9584E-03	1.9470E-02	1.4434E-05
8.000E+01	1.5773E+00	1.0805E-01	7.0607E-04	1.2506E-03	7.7411E-03	4.6401E-06
1.000E+02	7.6715E-01	5.2721E-02	2.9589E-04	5.1580E-04	3.7777E-03	1.9426E-06
1.500E+02	2.0806E-01	1.4361E-02	6.3077E-05	1.0679E-04	1.0292E-03	4.1366E-07
2.000E+02	8.3457E-02	5.7740E-03	2.1879E-05	3.6399E-05	4.1380E-04	1.4326E-07
3.000E+02	2.3941E-02	1.6604E-03	5.3001E-06	8.7016E-06	1.1899E-04	3.4581E-08
4.000E+02	1.0340E-02	7.1801E-04	2.0679E-06	3.4264E-06	5.1452E-05	1.3446E-08
5.000E+02	5.6011E-03	3.8920E-04	1.0393E-06	1.7677E-06	2.7889E-05	6.7468E-09
6.000E+02	3.5022E-03	2.4313E-04	6.1320E-07	1.0667E-06	1.7430E-05	3.9654E-09
8.000E+02	1.7718E-03	1.2303E-04	2.8161E-07	5.2323E-07	8.8277E-06	1.8197E-09
1.000E+03	1.1015E-03	7.6480E-05	1.6341E-07	3.1698E-07	5.4961E-06	1.0487E-09
1.500E+03	5.1749E-04	3.5938E-05	6.7042E-08	1.4616E-07	2.6001E-06	4.3805E-10

Z= 13

ENERGY	3 P 3/2
1.000E+00	1.0531E+02
1.500E+00	2.9250E+01
1.548E+00	2.6370E+01
1.561E+00	2.5690E+01
2.000E+00	1.1303E+01
3.000E+00	2.7951E+00
4.000E+00	1.0061E+00
5.000E+00	4.4751E-01
6.000E+00	2.2827E-01
8.000E+00	7.7369E-02
1.000E+01	3.2897E-02
1.500E+01	6.7436E-03
2.000E+01	2.1522E-03
3.000E+01	4.2400E-04
4.000E+01	1.3321E-04
5.000E+01	5.4204E-05
6.000E+01	2.6025E-05
8.000E+01	8.2241E-06
1.000E+02	3.3947E-06
1.500E+02	7.0328E-07
2.000E+02	2.3986E-07
3.000E+02	5.7462E-08
4.000E+02	2.2704E-08
5.000E+02	1.1710E-08
6.000E+02	7.1123E-09
8.000E+02	3.5109E-09
1.000E+03	2.1700E-09
1.500E+03	1.0467E-09

Z= 14

7 STATES, 28 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	1.8285	.95048
2 S 1/2	2.00	.1516	.54984
2 P 1/2	2.00	.1087	.36497
2 P 3/2	4.00	.1080	.36340
3 S 1/2	2.00	.0136	.15815
3 P 1/2	.67	.0066	.05804
3 P 3/2	1.33	.0065	.05759

Z= 14 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	7.3101E+04	.0E+00	6.9800E+04	3.3010E+03	.0E+00
1.5000E+00	2.4866E+04	.0E+00	2.3601E+04	1.2654E+03	.0E+00
1.8267E+00	1.4582E+04	.0E+00	1.3799E+04	7.8254E+02	.0E+00
1.8413E+00	1.4849E+05	1.3422E+05	1.3501E+04	7.6731E+02	.0E+00
2.0000E+00	1.2942E+05	1.1803E+05	1.0757E+04	6.2545E+02	.0E+00
3.0000E+00	4.5548E+04	4.1847E+04	3.4783E+03	2.2298E+02	.0E+00
4.0000E+00	2.1054E+04	1.9410E+04	1.5394E+03	1.0443E+02	.0E+00
5.0000E+00	1.1369E+04	1.0500E+04	8.1169E+02	5.7162E+01	.0E+00
6.0000E+00	6.8022E+03	6.2889E+03	4.7867E+02	3.4623E+01	.0E+00
8.0000E+00	2.9744E+03	2.7530E+03	2.0602E+02	1.5415E+01	.0E+00
1.0000E+01	1.5464E+03	1.4321E+03	1.0621E+02	8.1288E+00	.0E+00
1.5000E+01	4.5934E+02	4.2562E+02	3.1251E+01	2.4696E+00	.0E+00
2.0000E+01	1.9075E+02	1.7679E+02	1.2926E+01	1.0389E+00	.0E+00
3.0000E+01	5.4131E+01	5.0175E+01	3.6568E+00	2.9907E-01	.0E+00
4.0000E+01	2.1868E+01	2.0271E+01	1.4759E+00	1.2180E-01	.0E+00
5.0000E+01	1.0761E+01	9.9749E+00	7.2612E-01	6.0256E-02	.0E+00
6.0000E+01	6.0099E+00	5.5706E+00	4.0549E-01	3.3777E-02	.0E+00
8.0000E+01	2.3873E+00	2.2126E+00	1.6117E-01	1.3483E-02	.0E+00
1.0000E+02	1.1647E+00	1.0794E+00	7.8660E-02	6.5984E-03	.0E+00
1.5000E+02	3.1740E-01	2.9414E-01	2.1452E-02	1.8059E-03	.0E+00
2.0000E+02	1.2769E-01	1.1832E-01	8.6344E-03	7.2811E-04	.0E+00
3.0000E+02	3.6753E-02	3.4056E-02	2.4871E-03	2.1004E-04	.0E+00
4.0000E+02	1.5903E-02	1.4735E-02	1.0765E-03	9.0983E-05	.0E+00
5.0000E+02	8.6235E-03	7.9902E-03	5.8390E-04	4.9370E-05	.0E+00
6.0000E+02	5.3935E-03	4.9978E-03	3.6486E-04	3.0866E-05	.0E+00
8.0000E+02	2.7302E-03	2.5299E-03	1.8464E-04	1.5633E-05	.0E+00
1.0000E+03	1.6973E-03	1.5728E-03	1.1475E-04	9.7260E-06	.0E+00
1.5000E+03	7.9692E-04	7.3848E-04	5.3859E-05	4.5867E-06	.0E+00

Z= 14

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	3.0801E+04	1.3149E+04	2.5849E+04	2.6478E+03	2.2022E+02
1.500E+00	.0E+00	1.2766E+04	3.6599E+03	7.1743E+03	1.0791E+03	6.2936E+01
1.827E+00	.0E+00	8.1189E+03	1.9208E+03	3.7594E+03	6.8374E+02	3.3408E+01
1.841E+00	1.3422E+05	7.9690E+03	1.8707E+03	3.6611E+03	6.7105E+02	3.2555E+01
2.000E+00	1.1803E+05	6.5575E+03	1.4207E+03	2.7786E+03	5.5197E+02	2.4858E+01
3.000E+00	4.1847E+04	2.4285E+03	3.5605E+02	6.9380E+02	2.0431E+02	6.3403E+00
4.000E+00	1.9410E+04	1.1591E+03	1.2924E+02	2.5108E+02	9.7607E+01	2.3222E+00
5.000E+00	1.0500E+04	6.4155E+02	5.7914E+01	1.1222E+02	5.4092E+01	1.0469E+00
6.000E+00	6.2889E+03	3.9141E+02	2.9750E+01	5.7514E+01	3.3042E+01	5.3996E-01
8.000E+00	2.7530E+03	1.7615E+02	1.0211E+01	1.9657E+01	1.4871E+01	1.8632E-01
1.000E+01	1.4321E+03	9.3408E+01	4.3899E+00	8.4168E+00	7.8947E+00	8.0377E-02
1.500E+01	4.2562E+02	2.8585E+01	9.1907E-01	1.7467E+00	2.4206E+00	1.6912E-02
2.000E+01	1.7679E+02	1.2067E+01	2.9755E-01	5.6130E-01	1.0231E+00	5.4920E-03
3.000E+01	5.0175E+01	3.4855E+00	5.9875E-02	1.1140E-01	2.9591E-01	1.1087E-03
4.000E+01	2.0271E+01	1.4216E+00	1.9118E-02	3.5159E-02	1.2080E-01	3.5478E-04
5.000E+01	9.9749E+00	7.0386E-01	7.8928E-03	1.4365E-02	5.9843E-02	1.4670E-04
6.000E+01	5.5706E+00	3.9473E-01	3.8548E-03	6.9116E-03	3.3578E-02	7.1407E-05
8.000E+01	2.2126E+00	1.5773E-01	1.2462E-03	2.1952E-03	1.3420E-02	2.3098E-05
1.000E+02	1.0794E+00	7.7227E-02	5.2425E-04	9.0879E-04	6.5718E-03	9.7146E-06
1.500E+02	2.9414E-01	2.1151E-02	1.1247E-04	1.8911E-04	1.8003E-03	2.0812E-06
2.000E+02	1.1832E-01	8.5306E-03	3.9161E-05	6.4633E-05	7.2618E-04	7.2425E-07
3.000E+02	3.4056E-02	2.4621E-03	9.5269E-06	1.5500E-05	2.0958E-04	1.7557E-07
4.000E+02	1.4735E-02	1.0667E-03	3.7239E-06	6.1173E-06	9.0800E-05	6.8516E-08
5.000E+02	7.9902E-03	5.7886E-04	1.8749E-06	3.1564E-06	4.9277E-05	3.4453E-08
6.000E+02	4.9978E-03	3.6185E-04	1.1080E-06	1.9047E-06	3.0810E-05	2.0294E-08
8.000E+02	2.5299E-03	1.8319E-04	5.0989E-07	9.3449E-07	1.5607E-05	9.3113E-09
1.000E+03	1.5728E-03	1.1388E-04	2.9648E-07	5.6566E-07	9.7098E-06	5.3743E-09
1.500E+03	7.3848E-04	5.3478E-05	1.2202E-07	2.5896E-07	4.5793E-06	2.2189E-09

Z= 14

ENERGY	3 P 3/2
1.000E+00	4.3296E+02
1.500E+00	1.2338E+02
1.827E+00	6.5386E+01
1.841E+00	6.3711E+01
2.000E+00	4.8616E+01
3.000E+00	1.2326E+01
4.000E+00	4.5013E+00
5.000E+00	2.0235E+00
6.000E+00	1.0411E+00
8.000E+00	3.5769E-01
1.000E+01	1.5370E-01
1.500E+01	3.2063E-02
2.000E+01	1.0331E-02
3.000E+01	2.0561E-03
4.000E+01	6.4995E-04
5.000E+01	2.6574E-04
6.000E+01	1.2810E-04
8.000E+01	4.0705E-05
1.000E+02	1.6857E-05
1.500E+02	3.5126E-06
2.000E+02	1.2010E-06
3.000E+02	2.8865E-07
4.000E+02	1.1402E-07
5.000E+02	5.8862E-08
6.000E+02	3.5692E-08
8.000E+02	1.7569E-08
1.000E+03	1.0799E-08
1.500E+03	5.0973E-09

Z= 15 7 STATES, 28 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	2.1304	.95279
2 S 1/2	2.00	.1872	.57117
2 P 1/2	2.00	.1392	.39119
2 P 3/2	4.00	.1382	.38942
3 S 1/2	2.00	.0172	.18312
3 P 1/2	1.00	.0084	.07588
3 P 3/2	2.00	.0083	.07524

Z= 15 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	9.8248E+04	.0E+00	9.2971E+04	5.2766E+03	.0E+00
1.5000E+00	3.3549E+04	.0E+00	3.1569E+04	1.9800E+03	.0E+00
2.0000E+00	1.5410E+04	.0E+00	1.4442E+04	9.6771E+02	.0E+00
2.1283E+00	1.3003E+04	.0E+00	1.2176E+04	8.2717E+02	.0E+00
2.1453E+00	1.2709E+05	1.1437E+05	1.1912E+04	8.1066E+02	.0E+00
3.0000E+00	5.7409E+04	5.2372E+04	4.6946E+03	3.4227E+02	.0E+00
4.0000E+00	2.6884E+04	2.4639E+04	2.0848E+03	1.5982E+02	.0E+00
5.0000E+00	1.4645E+04	1.3455E+04	1.1023E+03	8.7379E+01	.0E+00
6.0000E+00	8.8185E+03	8.1140E+03	6.5159E+02	5.2923E+01	.0E+00
8.0000E+00	3.8920E+03	3.5868E+03	2.8164E+02	2.3610E+01	.0E+00
1.0000E+01	2.0364E+03	1.8782E+03	1.4574E+02	1.2478E+01	.0E+00
1.5000E+01	6.1121E+02	5.6419E+02	4.3200E+01	3.8121E+00	.0E+00
2.0000E+01	2.5550E+02	2.3592E+02	1.7963E+01	1.6110E+00	.0E+00
3.0000E+01	7.3099E+01	6.7515E+01	5.1170E+00	4.6676E-01	.0E+00
4.0000E+01	2.9686E+01	2.7420E+01	2.0748E+00	1.9092E-01	.0E+00
5.0000E+01	1.4664E+01	1.3545E+01	1.0242E+00	9.4763E-02	.0E+00

Z= 15 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
6.0000E+01	8.2131E+00	7.5862E+00	5.7356E-01	5.3262E-02	.0E+00
8.0000E+01	3.2761E+00	3.0260E+00	2.2877E-01	2.1345E-02	.0E+00
1.0000E+02	1.6031E+00	1.4806E+00	1.1201E-01	1.0475E-02	.0E+00
1.5000E+02	4.3891E-01	4.0534E-01	3.0689E-02	2.8802E-03	.0E+00
2.0000E+02	1.7706E-01	1.6351E-01	1.2386E-02	1.1645E-03	.0E+00
3.0000E+02	5.1133E-02	4.7217E-02	3.5793E-03	3.3702E-04	.0E+00
4.0000E+02	2.2164E-02	2.0466E-02	1.5521E-03	1.4625E-04	.0E+00
5.0000E+02	1.2032E-02	1.1109E-02	8.4265E-04	7.9436E-05	.0E+00
6.0000E+02	7.5228E-03	6.9463E-03	5.2687E-04	4.9685E-05	.0E+00
8.0000E+02	3.8129E-03	3.5210E-03	2.6674E-04	2.5172E-05	.0E+00
1.0000E+03	2.3702E-03	2.1888E-03	1.6576E-04	1.5659E-05	.0E+00
1.5000E+03	1.1124E-03	1.0273E-03	7.7748E-05	7.3693E-06	.0E+00

Z= 15

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	3.7279E+04	1.8793E+04	3.6899E+04	3.6029E+03	5.6472E+02
1.500E+00	.0E+00	1.5773E+04	5.3413E+03	1.0455E+04	1.4919E+03	1.6506E+02
2.000E+00	.0E+00	8.2237E+03	2.1061E+03	4.1122E+03	7.7202E+02	6.6286E+01
2.128E+00	.0E+00	7.1137E+03	1.7151E+03	3.3469E+03	6.6715E+02	5.4222E+01
2.145E+00	1.1437E+05	6.9818E+03	1.6704E+03	3.2594E+03	6.5473E+02	5.2837E+01
3.000E+00	5.2372E+04	3.1088E+03	5.3849E+02	1.0472E+03	2.9116E+02	1.7361E+01
4.000E+00	2.4639E+04	1.5033E+03	1.9789E+02	3.8361E+02	1.4089E+02	6.4523E+00
5.000E+00	1.3455E+04	8.3977E+02	8.9494E+01	1.7300E+02	7.8775E+01	2.9388E+00
6.000E+00	8.1140E+03	5.1599E+02	4.6309E+01	8.9293E+01	4.8456E+01	1.5283E+00
8.000E+00	3.5868E+03	2.3469E+02	1.6080E+01	3.0867E+01	2.2053E+01	5.3424E-01
1.000E+01	1.8782E+03	1.2543E+02	6.9758E+00	1.3336E+01	1.1801E+01	2.3274E-01
1.500E+01	5.6419E+02	3.8905E+01	1.4842E+00	2.8110E+00	3.6682E+00	4.9822E-02
2.000E+01	2.3592E+02	1.6566E+01	4.8532E-01	9.1186E-01	1.5640E+00	1.6348E-02
3.000E+01	6.7515E+01	4.8355E+00	9.8692E-02	1.8285E-01	4.5726E-01	3.3373E-03
4.000E+01	2.7420E+01	1.9850E+00	3.1719E-02	5.8038E-02	1.8789E-01	1.0750E-03
5.000E+01	1.3545E+01	9.8728E-01	1.3157E-02	2.3810E-02	9.3511E-02	4.4662E-04
6.000E+01	7.5862E+00	5.5563E-01	6.4209E-03	1.1508E-02	5.2654E-02	2.1830E-04
8.000E+01	3.0260E+00	2.2301E-01	2.0947E-03	3.6686E-03	2.1149E-02	7.1014E-05
1.000E+02	1.4806E+00	1.0960E-01	8.8475E-04	1.5240E-03	1.0394E-02	2.9990E-05
1.500E+02	4.0534E-01	3.0179E-02	1.9088E-04	3.1903E-04	2.8629E-03	6.4688E-06
2.000E+02	1.6351E-01	1.2210E-02	6.6688E-05	1.0939E-04	1.1585E-03	2.2590E-06
3.000E+02	4.7217E-02	3.5367E-03	1.6290E-05	2.6320E-05	3.3558E-04	5.5046E-07
4.000E+02	2.0466E-02	1.5353E-03	6.3927E-06	1.0384E-05	1.4568E-04	2.1549E-07
5.000E+02	1.1109E-02	8.3406E-04	3.2233E-06	5.3603E-06	7.9144E-05	1.0861E-07
6.000E+02	6.9463E-03	5.2172E-04	1.9008E-06	3.2489E-06	4.9510E-05	6.4015E-08
8.000E+02	3.5210E-03	2.6428E-04	8.8011E-07	1.5822E-06	2.5089E-05	2.9485E-08
1.000E+03	2.1888E-03	1.6429E-04	5.0811E-07	9.6636E-07	1.5609E-05	1.6991E-08
1.500E+03	1.0273E-03	7.7096E-05	2.1091E-07	4.4052E-07	7.3467E-06	7.0057E-09

Z= 15

ENERGY	3 P 3/2
1.000E+00	1.1090E+03
1.500E+00	3.2306E+02
2.000E+00	1.2941E+02
2.128E+00	1.0580E+02
2.145E+00	1.0309E+02
3.000E+00	3.3752E+01
4.000E+00	1.2477E+01
5.000E+00	5.6660E+00
6.000E+00	2.9393E+00
8.000E+00	1.0227E+00
1.000E+01	4.4371E-01
1.500E+01	9.4099E-02
2.000E+01	3.0627E-02

Z= 15

ENERGY	3 P 3/2
3.000E+01	6.1639E-03
4.000E+01	1.9603E-03
5.000E+01	8.0511E-04
6.000E+01	3.8936E-04
8.000E+01	1.2438E-04
1.000E+02	5.1709E-05
1.500E+02	1.0832E-05
2.000E+02	3.7146E-06
3.000E+02	8.9531E-07
4.000E+02	3.5421E-07
5.000E+02	1.8275E-07
6.000E+02	1.1082E-07
8.000E+02	5.4381E-08
1.000E+03	3.3363E-08
1.500E+03	1.5581E-08

SULFUR Z= 16 7 STATES, 28 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	2.4559	.95487
2 S 1/2	2.00	.2260	.59027
2 P 1/2	2.00	.1727	.41502
2 P 3/2	4.00	.1714	.41303
3 S 1/2	2.00	.0209	.20431
3 P 1/2	1.33	.0103	.09193
3 P 3/2	2.67	.0103	.09108

Z= 16 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	1.2919E+05	.0E+00	1.2110E+05	8.0821E+03	.0E+00
1.5000E+00	4.4275E+04	.0E+00	4.1288E+04	2.9871E+03	.0E+00
2.0000E+00	2.0385E+04	.0E+00	1.8942E+04	1.4429E+03	.0E+00
2.4534E+00	1.1664E+04	.0E+00	1.0812E+04	8.5245E+02	.0E+00
2.4731E+00	1.1002E+05	9.8606E+04	1.0577E+04	8.3503E+02	.0E+00
3.0000E+00	7.1169E+04	6.4477E+04	6.1885E+03	5.0403E+02	.0E+00
4.0000E+00	3.3661E+04	3.0669E+04	2.7578E+03	2.3429E+02	.0E+00
5.0000E+00	1.8490E+04	1.6900E+04	1.4618E+03	1.2774E+02	.0E+00
6.0000E+00	1.1199E+04	1.0256E+04	8.6602E+02	7.7247E+01	.0E+00
8.0000E+00	4.9864E+03	4.5762E+03	3.7573E+02	3.4477E+01	.0E+00
1.0000E+01	2.6248E+03	2.4116E+03	1.9507E+02	1.8213E+01	.0E+00
1.5000E+01	7.9586E+02	7.3207E+02	5.8208E+01	5.5812E+00	.0E+00
2.0000E+01	3.3484E+02	3.0815E+02	2.4325E+01	2.3663E+00	.0E+00
3.0000E+01	9.6570E+01	8.8906E+01	6.9755E+00	6.8908E-01	.0E+00
4.0000E+01	3.9417E+01	3.6293E+01	2.8408E+00	2.8289E-01	.0E+00
5.0000E+01	1.9541E+01	1.7993E+01	1.4070E+00	1.4081E-01	.0E+00
6.0000E+01	1.0976E+01	1.0106E+01	7.8989E-01	7.9319E-02	.0E+00
8.0000E+01	4.3960E+00	4.0479E+00	3.1626E-01	3.1900E-02	.0E+00
1.0000E+02	2.1572E+00	1.9863E+00	1.5520E-01	1.5696E-02	.0E+00
1.5000E+02	5.9336E-01	5.4630E-01	4.2732E-02	4.3341E-03	.0E+00
2.0000E+02	2.4003E-01	2.2098E-01	1.7294E-02	1.7569E-03	.0E+00
3.0000E+02	6.9543E-02	6.4020E-02	5.0137E-03	5.1008E-04	.0E+00
4.0000E+02	3.0199E-02	2.7799E-02	2.1778E-03	2.2172E-04	.0E+00
5.0000E+02	1.6410E-02	1.5106E-02	1.1836E-03	1.2054E-04	.0E+00
6.0000E+02	1.0267E-02	9.4510E-03	7.4047E-04	7.5440E-05	.0E+00
8.0000E+02	5.2053E-03	4.7921E-03	3.7505E-04	3.8231E-05	.0E+00
1.0000E+03	3.2359E-03	2.9790E-03	2.3307E-04	2.3774E-05	.0E+00
1.5000E+03	1.5180E-03	1.3975E-03	1.0924E-04	1.1172E-05	.0E+00

Z= 16

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	4.4168E+04	2.5981E+04	5.0955E+04	4.6463E+03	1.1603E+03
1.500E+00	.0E+00	1.9066E+04	7.5216E+03	1.4700E+04	1.9590E+03	3.4801E+02
2.000E+00	.0E+00	1.0076E+04	3.0063E+03	5.8598E+03	1.0243E+03	1.4196E+02
2.453E+00	.0E+00	6.2806E+03	1.5386E+03	2.9928E+03	6.3561E+02	7.3638E+01
2.473E+00	9.8606E+04	6.1637E+03	1.4984E+03	2.9144E+03	6.2374E+02	7.1755E+01
3.000E+00	6.4477E+04	3.8828E+03	7.8402E+02	1.5217E+03	3.9234E+02	3.7987E+01
4.000E+00	3.0669E+04	1.9019E+03	2.9172E+02	5.6421E+02	1.9220E+02	1.4350E+01
5.000E+00	1.6900E+04	1.0721E+03	1.3309E+02	2.5663E+02	1.0843E+02	6.6044E+00
6.000E+00	1.0256E+04	6.6331E+02	6.9346E+01	1.3336E+02	6.7146E+01	3.4620E+00
8.000E+00	4.5762E+03	3.0480E+02	2.4340E+01	4.6585E+01	3.0915E+01	1.2249E+00
1.000E+01	2.4116E+03	1.6413E+02	1.0648E+01	2.0292E+01	1.6651E+01	5.3854E-01
1.500E+01	7.3207E+02	5.1568E+01	2.2998E+00	4.3407E+00	5.2435E+00	1.1717E-01
2.000E+01	3.0815E+02	2.2144E+01	7.5952E-01	1.4215E+00	2.2550E+00	3.8853E-02
3.000E+01	8.8906E+01	6.5312E+00	1.5621E-01	2.8812E-01	6.6630E-01	8.0275E-03
4.000E+01	3.6293E+01	2.6983E+00	5.0526E-02	9.1997E-02	2.7557E-01	2.6032E-03
5.000E+01	1.7993E+01	1.3480E+00	2.1053E-02	3.7891E-02	1.3777E-01	1.0866E-03
6.000E+01	1.0106E+01	7.6120E-01	1.0314E-02	1.8372E-02	7.7841E-02	5.3289E-04
8.000E+01	4.0479E+00	3.0701E-01	3.3659E-03	5.8901E-03	3.1422E-02	1.7435E-04
1.000E+02	1.9863E+00	1.5132E-01	1.4324E-03	2.4534E-03	1.5495E-02	7.3929E-05
1.500E+02	5.4630E-01	4.1905E-02	3.1084E-04	5.1641E-04	4.2913E-03	1.6048E-05
2.000E+02	2.2098E-01	1.7008E-02	1.0901E-04	1.7755E-04	1.7421E-03	5.6257E-06
3.000E+02	6.4020E-02	4.9441E-03	2.6717E-05	4.2898E-05	5.0648E-04	1.3774E-06
4.000E+02	2.7799E-02	2.1504E-03	1.0508E-05	1.6963E-05	2.2030E-04	5.4044E-07
5.000E+02	1.5106E-02	1.1695E-03	5.3258E-06	8.7247E-06	1.1981E-04	2.7293E-07
6.000E+02	9.4510E-03	7.3204E-04	3.1401E-06	5.2920E-06	7.5004E-05	1.6106E-07
8.000E+02	4.7921E-03	3.7101E-04	1.4559E-06	2.5841E-06	3.8022E-05	7.4297E-08
1.000E+03	2.9790E-03	2.3065E-04	8.4065E-07	1.5769E-06	2.3649E-05	4.2867E-08
1.500E+03	1.3975E-03	1.0817E-04	3.4852E-07	7.2107E-07	1.1116E-05	1.7690E-08

Z= 16

ENERGY	3 P 3/2
1.000E+00	2.2754E+03
1.500E+00	6.8003E+02
2.000E+00	2.7665E+02
2.453E+00	1.4320E+02
2.473E+00	1.3953E+02
3.000E+00	7.3707E+01
4.000E+00	2.7741E+01
5.000E+00	1.2700E+01
6.000E+00	6.6390E+00
8.000E+00	2.3374E+00
1.000E+01	1.0233E+00
1.500E+01	2.2048E-01
2.000E+01	7.2494E-02
3.000E+01	1.4759E-02
4.000E+01	4.7232E-03
5.000E+01	1.9479E-03
6.000E+01	9.4541E-04
8.000E+01	3.0347E-04
1.000E+02	1.2662E-04
1.500E+02	2.6674E-05
2.000E+02	9.1769E-06
3.000E+02	2.2184E-06
4.000E+02	8.7813E-07
5.000E+02	4.5354E-07
6.000E+02	2.7501E-07
8.000E+02	1.3492E-07
1.000E+03	8.2574E-08
1.500E+03	3.8320E-08

Z= 17 7 STATES, 28 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	2.8049	.95675
2 S 1/2	2.00	.2681	.60744
2 P 1/2	2.00	.2095	.43674
2 P 3/2	4.00	.2077	.43453
3 S 1/2	2.00	.0248	.22266
3 P 1/2	1.67	.0124	.10655
3 P 3/2	3.33	.0123	.10545

Z= 17 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	1.6655E+05	.0E+00	1.5458E+05	1.1962E+04	.0E+00
1.5000E+00	5.7361E+04	.0E+00	5.2983E+04	4.3785E+03	.0E+00
2.0000E+00	2.6458E+04	.0E+00	2.4364E+04	2.0943E+03	.0E+00
2.8021E+00	1.0523E+04	.0E+00	9.6578E+03	8.6525E+02	.0E+00
2.8245E+00	9.6109E+04	8.5815E+04	9.4469E+03	8.4718E+02	.0E+00
3.0000E+00	8.6579E+04	7.7864E+04	7.9930E+03	7.2195E+02	.0E+00
4.0000E+00	4.1329E+04	3.7421E+04	3.5744E+03	3.3344E+02	.0E+00
5.0000E+00	2.2881E+04	2.0800E+04	1.8995E+03	1.8120E+02	.0E+00
6.0000E+00	1.3963E+04	1.2726E+04	1.1276E+03	1.0930E+02	.0E+00
8.0000E+00	6.2693E+03	5.7297E+03	4.9088E+02	4.8652E+01	.0E+00
1.0000E+01	3.3206E+03	3.0393E+03	2.5560E+02	2.5712E+01	.0E+00
1.5000E+01	1.0169E+03	9.3233E+02	7.6726E+01	7.8782E+00	.0E+00
2.0000E+01	4.3054E+02	3.9498E+02	3.2211E+01	3.3466E+00	.0E+00
3.0000E+01	1.2515E+02	1.1488E+02	9.2964E+00	9.7819E-01	.0E+00
4.0000E+01	5.1335E+01	4.7130E+01	3.8020E+00	4.0276E-01	.0E+00
5.0000E+01	2.5540E+01	2.3450E+01	1.8889E+00	2.0094E-01	.0E+00
6.0000E+01	1.4384E+01	1.3207E+01	1.0631E+00	1.1341E-01	.0E+00
8.0000E+01	5.7840E+00	5.3110E+00	4.2725E-01	4.5749E-02	.0E+00
1.0000E+02	2.8463E+00	2.6135E+00	2.1023E-01	2.2562E-02	.0E+00
1.5000E+02	7.8644E-01	7.2206E-01	5.8128E-02	6.2544E-03	.0E+00
2.0000E+02	3.1901E-01	2.9288E-01	2.3589E-02	2.5417E-03	.0E+00
3.0000E+02	9.2719E-02	8.5119E-02	6.8602E-03	7.4012E-04	.0E+00
4.0000E+02	4.0334E-02	3.7026E-02	2.9851E-03	3.2223E-04	.0E+00
5.0000E+02	2.1940E-02	2.0141E-02	1.6240E-03	1.7536E-04	.0E+00
6.0000E+02	1.3735E-02	1.2609E-02	1.0166E-03	1.0980E-04	.0E+00
8.0000E+02	6.9630E-03	6.3923E-03	5.1512E-04	5.5661E-05	.0E+00
1.0000E+03	4.3309E-03	3.9762E-03	3.2009E-04	3.4610E-05	.0E+00
1.5000E+03	2.0304E-03	1.8642E-03	1.4993E-04	1.6240E-05	.0E+00

Z= 17

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	5.1430E+04	3.4860E+04	6.8294E+04	5.7788E+03	2.0903E+03
1.500E+00	.0E+00	2.2631E+04	1.0283E+04	2.0068E+04	2.4763E+03	6.4465E+02
2.000E+00	.0E+00	1.2109E+04	4.1598E+03	8.0944E+03	1.3088E+03	2.6678E+02
2.802E+00	.0E+00	5.5832E+03	1.3866E+03	2.6880E+03	5.9813E+02	9.0943E+01
2.825E+00	8.5815E+04	5.4789E+03	1.3504E+03	2.6176E+03	5.8691E+02	8.8615E+01
3.000E+00	7.7864E+04	4.7484E+03	1.1048E+03	2.1398E+03	5.0831E+02	7.2775E+01
4.000E+00	3.7421E+04	2.3550E+03	4.1624E+02	8.0323E+02	2.5173E+02	2.7904E+01
5.000E+00	2.0800E+04	1.3395E+03	1.9156E+02	3.6847E+02	1.4327E+02	1.2983E+01
6.000E+00	1.2726E+04	8.3441E+02	1.0048E+02	1.9272E+02	8.9324E+01	6.8587E+00
8.000E+00	5.7297E+03	3.8726E+02	3.5631E+01	6.7991E+01	4.1528E+01	2.4547E+00
1.000E+01	3.0393E+03	2.1005E+02	1.5709E+01	2.9841E+01	2.2562E+01	1.0888E+00
1.500E+01	9.3233E+02	6.6814E+01	3.4408E+00	6.4717E+00	7.1868E+00	2.4054E-01
2.000E+01	3.9498E+02	2.8925E+01	1.1473E+00	2.1389E+00	3.1163E+00	8.0581E-02
3.000E+01	1.1488E+02	8.6193E+00	2.3873E-01	4.3837E-01	9.3050E-01	1.6855E-02
4.000E+01	4.7130E+01	3.5834E+00	7.7729E-02	1.4084E-01	3.8732E-01	5.5041E-03
5.000E+01	2.3450E+01	1.7981E+00	3.2530E-02	5.8246E-02	1.9451E-01	2.3080E-03

Z= 17

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
6.000E+01	1.3207E+01	1.0188E+00	1.5992E-02	2.8322E-02	1.1027E-01	1.1361E-03
8.000E+01	5.3110E+00	4.1288E-01	5.2475E-03	9.1213E-03	4.4729E-02	3.7362E-04
1.000E+02	2.6135E+00	2.0417E-01	2.2387E-03	3.8117E-03	2.2133E-02	1.5902E-04
1.500E+02	7.2206E-01	5.6833E-02	4.8908E-04	8.0597E-04	6.1624E-03	3.4744E-05
2.000E+02	2.9288E-01	2.3139E-02	1.7218E-04	2.7790E-04	2.5097E-03	1.2227E-05
3.000E+02	8.5119E-02	6.7505E-03	4.2399E-05	6.7293E-05	7.3232E-04	3.0077E-06
4.000E+02	3.7026E-02	2.9417E-03	1.6686E-05	2.6682E-05	3.1914E-04	1.1829E-06
5.000E+02	2.0141E-02	1.6017E-03	8.4489E-06	1.3787E-05	1.7378E-04	5.9896E-07
6.000E+02	1.2609E-02	1.0032E-03	5.0086E-06	8.3349E-06	1.0885E-04	3.5370E-07
8.000E+02	6.3923E-03	5.0873E-04	2.3158E-06	4.0781E-06	5.5206E-05	1.6340E-07
1.000E+03	3.9762E-03	3.1627E-04	1.3458E-06	2.4793E-06	3.4337E-05	9.4412E-08
1.500E+03	1.8642E-03	1.4824E-04	5.5873E-07	1.1315E-06	1.6119E-05	3.8997E-08

Z= 17

ENERGY	3 P 3/2
1.000E+00	4.0926E+03
1.500E+00	1.2575E+03
2.000E+00	5.1879E+02
2.802E+00	1.7618E+02
2.825E+00	1.7165E+02
3.000E+00	1.4086E+02
4.000E+00	5.3802E+01
5.000E+00	2.4951E+01
6.000E+00	1.3113E+01
8.000E+00	4.6688E+00
1.000E+01	2.0614E+00
1.500E+01	4.5085E-01
2.000E+01	1.4971E-01
3.000E+01	3.0842E-02
4.000E+01	9.9354E-03
5.000E+01	4.1153E-03
6.000E+01	2.0038E-03
8.000E+01	6.4615E-04
1.000E+02	2.7057E-04
1.500E+02	5.7295E-05
2.000E+02	1.9774E-05
3.000E+02	4.7939E-06
4.000E+02	1.9013E-06
5.000E+02	9.8169E-07
6.000E+02	5.9572E-07
8.000E+02	2.9202E-07
1.000E+03	1.7851E-07
1.500E+03	8.2405E-08

Z= 18

7 STATES, 28 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	3.1776	.95846
2 S 1/2	2.00	.3134	.62295
2 P 1/2	2.00	.2494	.45661
2 P 3/2	4.00	.2471	.45418
3 S 1/2	2.00	.0289	.23874
3 P 1/2	2.00	.0146	.11995
3 P 3/2	4.00	.0144	.11859

Z= 18 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	2.1101E+05	.0E+00	1.9384E+05	1.7170E+04	.0E+00
1.5000E+00	7.3100E+04	.0E+00	6.6848E+04	6.2517E+03	.0E+00
2.0000E+00	3.3790E+04	.0E+00	3.0819E+04	2.9705E+03	.0E+00
3.0000E+00	1.1157E+04	.0E+00	1.0144E+04	1.0124E+03	.0E+00
3.1744E+00	9.5439E+03	.0E+00	8.6743E+03	8.6965E+02	.0E+00
3.1998E+00	8.4622E+04	7.5287E+04	8.4844E+03	8.5116E+02	.0E+00
4.0000E+00	5.0111E+04	4.5096E+04	4.5508E+03	4.6423E+02	.0E+00
5.0000E+00	2.7931E+04	2.5255E+04	2.4246E+03	2.5128E+02	.0E+00
6.0000E+00	1.7119E+04	1.5526E+04	1.4422E+03	1.5120E+02	.0E+00
8.0000E+00	7.7602E+03	7.0633E+03	6.2981E+02	6.7039E+01	.0E+00
1.0000E+01	4.1343E+03	3.7701E+03	3.2880E+02	3.5358E+01	.0E+00
1.5000E+01	1.2781E+03	1.1681E+03	9.9235E+01	1.0824E+01	.0E+00
2.0000E+01	5.4439E+02	4.9795E+02	4.1837E+01	4.6010E+00	.0E+00
3.0000E+01	1.5947E+02	1.4597E+02	1.2148E+01	1.3481E+00	.0E+00
4.0000E+01	6.5726E+01	6.0181E+01	4.9888E+00	5.5627E-01	.0E+00
5.0000E+01	3.2812E+01	3.0048E+01	2.4860E+00	2.7804E-01	.0E+00
6.0000E+01	1.8528E+01	1.6968E+01	1.4024E+00	1.5718E-01	.0E+00
8.0000E+01	7.4794E+00	6.8502E+00	5.6565E-01	6.3569E-02	.0E+00
1.0000E+02	3.6907E+00	3.3803E+00	2.7904E-01	3.1414E-02	.0E+00
1.5000E+02	1.0243E+00	9.3805E-01	7.7479E-02	8.7392E-03	.0E+00
2.0000E+02	4.1660E-01	3.8152E-01	3.1526E-02	3.5596E-03	.0E+00
3.0000E+02	1.2147E-01	1.1123E-01	9.1970E-03	1.0394E-03	.0E+00
4.0000E+02	5.2932E-02	4.8470E-02	4.0088E-03	4.5326E-04	.0E+00
5.0000E+02	2.8824E-02	2.6394E-02	2.1831E-03	2.4688E-04	.0E+00
6.0000E+02	1.8055E-02	1.6533E-02	1.3674E-03	1.5466E-04	.0E+00
8.0000E+02	9.1574E-03	8.3858E-03	6.9319E-04	7.8432E-05	.0E+00
1.0000E+03	5.6959E-03	5.2165E-03	4.3073E-04	4.8755E-05	.0E+00
1.5000E+03	2.6686E-03	2.4441E-03	2.0160E-04	2.2856E-05	.0E+00

Z= 18

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	5.8891E+04	4.5635E+04	8.9311E+04	6.9960E+03	3.4428E+03
1.500E+00	.0E+00	2.6429E+04	1.3707E+04	2.6712E+04	3.0395E+03	1.0899E+03
2.000E+00	.0E+00	1.4315E+04	5.6090E+03	1.0895E+04	1.6238E+03	4.5791E+02
3.000E+00	.0E+00	5.7050E+03	1.5137E+03	2.9258E+03	6.3941E+02	1.2727E+02
3.174E+00	.0E+00	4.9939E+03	1.2554E+03	2.4249E+03	5.5922E+02	1.0597E+02
3.200E+00	7.5287E+04	4.9005E+03	1.2226E+03	2.3613E+03	5.4870E+02	1.0326E+02
4.000E+00	4.5096E+04	2.8621E+03	5.7727E+02	1.1114E+03	3.1970E+02	4.9442E+01
5.000E+00	2.5255E+04	1.6423E+03	2.6804E+02	5.1428E+02	1.8344E+02	2.3263E+01
6.000E+00	1.5526E+04	1.0300E+03	1.4153E+02	2.7072E+02	1.1513E+02	1.2392E+01
8.000E+00	7.0633E+03	4.8271E+02	5.0679E+01	9.6417E+01	5.4050E+01	4.4859E+00
1.000E+01	3.7701E+03	2.6367E+02	2.2509E+01	4.2620E+01	2.9568E+01	2.0061E+00
1.500E+01	1.1681E+03	8.4876E+01	4.9961E+00	9.3624E+00	9.5345E+00	4.4970E-01
2.000E+01	4.9795E+02	3.7034E+01	1.6812E+00	3.1218E+00	4.1675E+00	1.5214E-01
3.000E+01	1.4597E+02	1.1147E+01	3.5392E-01	6.4691E-01	1.2572E+00	3.2219E-02
4.000E+01	6.0181E+01	4.6636E+00	1.1602E-01	2.0918E-01	5.2665E-01	1.0597E-02
5.000E+01	3.0048E+01	2.3504E+00	4.8780E-02	8.6868E-02	2.6566E-01	4.4649E-03
6.000E+01	1.6968E+01	1.3360E+00	2.4060E-02	4.2369E-02	1.5111E-01	2.2054E-03
8.000E+01	6.8502E+00	5.4401E-01	7.9344E-03	1.3704E-02	6.1587E-02	7.2906E-04
1.000E+02	3.3803E+00	2.6991E-01	3.3841E-03	5.7507E-03	3.0577E-02	3.1145E-04
1.500E+02	9.3805E-01	7.5512E-02	7.4562E-04	1.2215E-03	8.5587E-03	6.8468E-05
2.000E+02	3.8152E-01	3.0840E-02	2.6335E-04	4.2254E-04	3.4966E-03	2.4190E-05
3.000E+02	1.1123E-01	9.0292E-03	6.5096E-05	1.0271E-04	1.0240E-03	5.9765E-06
4.000E+02	4.8470E-02	3.9424E-03	2.5728E-05	4.0718E-05	4.4715E-04	2.3562E-06
5.000E+02	2.6394E-02	2.1490E-03	1.3069E-05	2.0988E-05	2.4375E-04	1.1955E-06
6.000E+02	1.6533E-02	1.3469E-03	7.7246E-06	1.2741E-05	1.5278E-04	7.0667E-07
8.000E+02	8.3858E-03	6.8338E-04	3.5906E-06	6.2235E-06	7.7530E-05	3.2713E-07
1.000E+03	5.2165E-03	4.2487E-04	2.0789E-06	3.7859E-06	4.8214E-05	1.8918E-07
1.500E+03	2.4441E-03	1.9902E-04	8.6316E-07	1.7211E-06	2.2616E-05	7.8184E-08

Z= 18

ENERGY	3 P 3/2
1.000E+00	6.7308E+03
1.500E+00	2.1223E+03
2.000E+00	8.8874E+02
3.000E+00	2.4573E+02
3.174E+00	2.0446E+02
3.200E+00	1.9920E+02
4.000E+00	9.5083E+01
5.000E+00	4.4574E+01
6.000E+00	2.3673E+01
8.000E+00	8.5036E+00
1.000E+01	3.7843E+00
1.500E+01	8.3950E-01
2.000E+01	2.8143E-01
3.000E+01	5.8668E-02
4.000E+01	1.9029E-02
5.000E+01	7.9169E-03
6.000E+01	3.8670E-03
8.000E+01	1.2527E-03
1.000E+02	5.2629E-04
1.500E+02	1.1203E-04
2.000E+02	3.8782E-05
3.000E+02	9.4317E-06
4.000E+02	3.7466E-06
5.000E+02	1.9352E-06
6.000E+02	1.1747E-06
8.000E+02	5.7537E-07
1.000E+03	3.5137E-07
1.500E+03	1.6166E-07

Z= 19 8 STATES, 28 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	3.5833	.96002
2 S 1/2	2.00	.3712	.63740
2 P 1/2	2.00	.3017	.47527
2 P 3/2	4.00	.2986	.47260
3 S 1/2	2.00	.0405	.26535
3 P 1/2	2.00	.0238	.14668
3 P 3/2	4.00	.0235	.14519
4 S 1/2	1.00	.0042	.03059

Z= 19 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	2.6322E+05	.0E+00	2.3941E+05	2.3596E+04	2.1251E+02
1.5000E+00	9.1866E+04	.0E+00	8.3134E+04	8.6389E+03	9.2910E+01
2.0000E+00	4.2617E+04	.0E+00	3.8447E+04	4.1191E+03	5.0232E+01
3.0000E+00	1.4116E+04	.0E+00	1.2692E+04	1.4042E+03	2.0019E+01
3.5797E+00	8.6634E+03	.0E+00	7.7796E+03	8.7054E+02	1.3185E+01
3.6084E+00	7.7767E+04	6.9293E+04	7.6090E+03	8.5185E+02	1.2936E+01
4.0000E+00	5.9965E+04	5.3604E+04	5.7081E+03	6.4311E+02	1.0091E+01
5.0000E+00	3.3581E+04	3.0179E+04	3.0485E+03	3.4796E+02	5.8291E+00
6.0000E+00	2.0715E+04	1.8685E+04	1.8170E+03	2.0945E+02	3.6806E+00
8.0000E+00	9.4635E+03	8.5729E+03	7.9588E+02	9.2975E+01	1.7444E+00
1.0000E+01	5.0729E+03	4.6064E+03	4.1649E+02	4.9069E+01	9.6069E-01
1.5000E+01	1.5835E+03	1.4418E+03	1.2631E+02	1.5069E+01	3.1373E-01
2.0000E+01	6.7861E+02	6.1859E+02	5.3460E+01	6.4170E+00	1.3821E-01
3.0000E+01	2.0028E+02	1.8273E+02	1.5612E+01	1.8882E+00	4.2122E-02
4.0000E+01	8.2940E+01	7.5704E+01	6.4367E+00	7.8168E-01	1.7760E-02

Z= 19 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
5.0000E+01	4.1545E+01	3.7928E+01	3.2169E+00	3.9168E-01	8.9986E-03
6.0000E+01	2.3520E+01	2.1474E+01	1.8189E+00	2.2186E-01	5.1357E-03
8.0000E+01	9.5304E+00	8.7022E+00	7.3614E-01	9.0003E-02	2.1032E-03
1.0000E+02	4.7155E+00	4.3058E+00	3.6406E-01	4.4579E-02	1.0477E-03
1.5000E+02	1.3143E+00	1.2001E+00	1.0146E-01	1.2450E-02	2.9481E-04
2.0000E+02	5.3601E-01	4.8940E-01	4.1407E-02	5.0838E-03	1.2083E-04
3.0000E+02	1.5677E-01	1.4313E-01	1.2117E-02	1.4889E-03	3.5525E-05
4.0000E+02	6.8437E-02	6.2480E-02	5.2907E-03	6.5036E-04	1.5555E-05
5.0000E+02	3.7305E-02	3.4058E-02	2.8841E-03	3.5459E-04	8.4978E-06
6.0000E+02	2.3383E-02	2.1348E-02	1.8074E-03	2.2226E-04	5.3385E-06
8.0000E+02	1.1865E-02	1.0833E-02	9.1670E-04	1.1275E-04	2.7214E-06
1.0000E+03	7.3804E-03	6.7390E-03	5.6963E-04	7.0074E-05	1.7036E-06
1.5000E+03	3.4557E-03	3.1556E-03	2.6646E-04	3.2806E-05	8.1969E-07

Z= 19

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	6.6596E+04	5.8477E+04	1.1434E+05	8.7111E+03	5.0346E+03
1.500E+00	.0E+00	3.0440E+04	1.7886E+04	3.4807E+04	3.8243E+03	1.6335E+03
2.000E+00	.0E+00	1.6693E+04	7.4014E+03	1.4353E+04	2.0650E+03	6.9847E+02
3.000E+00	.0E+00	6.7549E+03	2.0271E+03	3.9100E+03	8.2449E+02	1.9785E+02
3.580E+00	.0E+00	4.4671E+03	1.1329E+03	2.1797E+03	5.4323E+02	1.1190E+02
3.608E+00	6.9293E+04	4.3834E+03	1.1032E+03	2.1224E+03	5.3297E+02	1.0903E+02
4.000E+00	5.3604E+04	3.4250E+03	7.8169E+02	1.5014E+03	4.1585E+02	7.7782E+01
5.000E+00	3.0179E+04	1.9817E+03	3.6613E+02	7.0071E+02	2.4027E+02	3.6948E+01
6.000E+00	1.8685E+04	1.2511E+03	1.9463E+02	3.7128E+02	1.5173E+02	1.9847E+01
8.000E+00	8.5729E+03	5.9205E+02	7.0365E+01	1.3346E+02	7.1912E+01	7.2700E+00
1.000E+01	4.6064E+03	3.2561E+02	3.1473E+01	5.9398E+01	3.9606E+01	3.2763E+00
1.500E+01	1.4418E+03	1.0603E+02	7.0740E+00	1.3207E+01	1.2936E+01	7.4509E-01
2.000E+01	6.1859E+02	4.6618E+01	2.4010E+00	4.4408E+00	5.6928E+00	2.5447E-01
3.000E+01	1.8273E+02	1.4171E+01	5.1128E-01	9.3026E-01	1.7346E+00	5.4558E-02
4.000E+01	7.5704E+01	5.9652E+00	1.6877E-01	3.0277E-01	7.3124E-01	1.8078E-02
5.000E+01	3.7928E+01	3.0193E+00	7.1289E-02	1.2628E-01	3.7049E-01	7.6540E-03
6.000E+01	2.1474E+01	1.7218E+00	3.5281E-02	6.1779E-02	2.1144E-01	3.7947E-03
8.000E+01	8.7022E+00	7.0438E-01	1.1692E-02	2.0067E-02	8.6584E-02	1.2606E-03
1.000E+02	4.3058E+00	3.5061E-01	5.0051E-03	8.4461E-03	4.3130E-02	5.4057E-04
1.500E+02	1.2001E+00	9.8548E-02	1.1087E-03	1.8017E-03	1.2136E-02	1.1957E-04
2.000E+02	4.8940E-01	4.0389E-02	3.9309E-04	6.2489E-04	4.9738E-03	4.2391E-05
3.000E+02	1.4313E-01	1.1867E-02	9.7604E-05	1.5230E-04	1.4619E-03	1.0524E-05
4.000E+02	6.2480E-02	5.1915E-03	3.8605E-05	6.0564E-05	6.3965E-04	4.1634E-06
5.000E+02	3.4058E-02	2.8331E-03	1.9604E-05	3.1331E-05	3.4909E-04	2.1142E-06
6.000E+02	2.1348E-02	1.7768E-03	1.1635E-05	1.8963E-05	2.1895E-04	1.2535E-06
8.000E+02	1.0833E-02	9.0203E-04	5.4054E-06	9.2634E-06	1.1116E-04	5.8140E-07
1.000E+03	6.7390E-03	5.6084E-04	3.1319E-06	5.6519E-06	6.9124E-05	3.3672E-07
1.500E+03	3.1556E-03	2.6257E-04	1.3020E-06	2.5853E-06	3.2386E-05	1.3928E-07

Z= 19

ENERGY	3 P 3/2	4 S 1/2
1.000E+00	9.8502E+03	2.1251E+02
1.500E+00	3.1812E+03	9.2910E+01
2.000E+00	1.3556E+03	5.0232E+01
3.000E+00	3.8187E+02	2.0019E+01
3.580E+00	2.1541E+02	1.3185E+01
3.608E+00	2.0986E+02	1.2936E+01
4.000E+00	1.4948E+02	1.0091E+01
5.000E+00	7.0744E+01	5.8291E+00
6.000E+00	3.7875E+01	3.6806E+00
8.000E+00	1.3793E+01	1.7444E+00
1.000E+01	6.1864E+00	9.6069E-01
1.500E+01	1.3884E+00	3.1373E-01

Z= 19

ENERGY	3 P 3/2	4 S 1/2
2.000E+01	4.6972E-01	1.3821E-01
3.000E+01	9.9069E-02	4.2122E-02
4.000E+01	3.2359E-02	1.7760E-02
5.000E+01	1.3528E-02	8.9986E-03
6.000E+01	6.6279E-03	5.1357E-03
8.000E+01	2.1575E-03	2.1032E-03
1.000E+02	9.0899E-04	1.0477E-03
1.500E+02	1.9454E-04	2.9481E-04
2.000E+02	6.7551E-05	1.2083E-04
3.000E+02	1.6482E-05	3.5525E-05
4.000E+02	6.5505E-06	1.5555E-05
5.000E+02	3.3890E-06	8.4978E-06
6.000E+02	2.0540E-06	5.3385E-06
8.000E+02	1.0051E-06	2.7214E-06
1.000E+03	6.1329E-07	1.7036E-06
1.500E+03	2.8097E-07	8.1969E-07

Z= 20 8 STATES, 28 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	4.0150	.96146
2 S 1/2	2.00	.4341	.65089
2 P 1/2	2.00	.3591	.49283
2 P 3/2	4.00	.3552	.48992
3 S 1/2	2.00	.0532	.29076
3 P 1/2	2.00	.0340	.17038
3 P 3/2	4.00	.0336	.16867
4 S 1/2	2.00	.0055	.05247

Z= 20 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	3.2367E+05	.0E+00	2.9184E+05	3.1008E+04	8.1370E+02
1.5000E+00	1.1383E+05	.0E+00	1.0203E+05	1.1443E+04	3.5798E+02
2.0000E+00	5.3034E+04	.0E+00	4.7355E+04	5.4843E+03	1.9444E+02
3.0000E+00	1.7640E+04	.0E+00	1.5683E+04	1.8782E+03	7.8796E+01
4.0000E+00	7.9686E+03	.0E+00	7.0674E+03	8.6114E+02	4.0062E+01
4.0110E+00	7.9078E+03	.0E+00	7.0133E+03	8.5468E+02	3.9798E+01
4.0432E+00	6.7766E+04	6.0032E+04	6.8590E+03	8.3624E+02	3.9044E+01
5.0000E+00	3.9986E+04	3.5714E+04	3.7822E+03	4.6624E+02	2.3289E+01
6.0000E+00	2.4730E+04	2.2176E+04	2.2585E+03	2.8090E+02	1.4785E+01
8.0000E+00	1.1409E+04	1.0285E+04	9.9223E+02	1.2496E+02	7.0712E+00
1.0000E+01	6.1500E+03	5.5596E+03	5.2041E+02	6.6064E+01	3.9212E+00
1.5000E+01	1.9371E+03	1.7569E+03	1.5853E+02	2.0355E+01	1.2950E+00
2.0000E+01	8.3488E+02	7.5827E+02	6.7334E+01	8.7010E+00	5.7482E-01
3.0000E+01	2.4825E+02	2.2574E+02	1.9769E+01	2.5699E+00	1.7691E-01
4.0000E+01	1.0329E+02	9.3964E+01	8.1816E+00	1.0675E+00	7.5057E-02
5.0000E+01	5.1909E+01	4.7234E+01	4.1005E+00	5.3630E-01	3.8199E-02
6.0000E+01	2.9462E+01	2.6812E+01	2.3237E+00	3.0441E-01	2.1873E-02
8.0000E+01	1.1982E+01	1.0906E+01	9.4356E-01	1.2388E-01	8.9999E-03
1.0000E+02	5.9442E+00	5.4104E+00	4.6779E-01	6.1501E-02	4.4979E-03
1.5000E+02	1.6639E+00	1.5145E+00	1.3090E-01	1.7244E-02	1.2723E-03
2.0000E+02	6.8034E-01	6.1921E-01	5.3552E-02	7.0588E-03	5.2310E-04
3.0000E+02	1.9961E-01	1.8166E-01	1.5719E-02	2.0737E-03	1.5433E-04
4.0000E+02	8.7286E-02	7.9436E-02	6.8750E-03	9.0729E-04	6.7688E-05
5.0000E+02	4.7629E-02	4.3346E-02	3.7514E-03	4.9516E-04	3.7009E-05
6.0000E+02	2.9872E-02	2.7186E-02	2.3524E-03	3.1054E-04	2.3247E-05
8.0000E+02	1.5166E-02	1.3803E-02	1.1937E-03	1.5759E-04	1.1845E-05
1.0000E+03	9.4308E-03	8.5838E-03	7.4166E-04	9.7940E-05	7.3982E-06

Z= 20 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY (KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.5000E+03	4.4147E-03	4.0187E-03	3.4669E-04	4.5806E-05	3.5242E-06

Z= 20

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	7.4392E+04	7.3625E+04	1.4383E+05	1.0626E+04	6.8946E+03
1.500E+00	.0E+00	3.4651E+04	2.2892E+04	4.4488E+04	4.7041E+03	2.2872E+03
2.000E+00	.0E+00	1.9222E+04	9.5820E+03	1.8551E+04	2.5619E+03	9.9438E+02
3.000E+00	.0E+00	7.8977E+03	2.6617E+03	5.1233E+03	1.0369E+03	2.8738E+02
4.000E+00	.0E+00	4.0442E+03	1.0367E+03	1.9865E+03	5.2756E+02	1.1429E+02
4.011E+00	.0E+00	4.0178E+03	1.0272E+03	1.9683E+03	5.2409E+02	1.1327E+02
4.043E+00	6.0032E+04	3.9422E+03	1.0003E+03	1.9165E+03	5.1416E+02	1.1036E+02
5.000E+00	3.5714E+04	2.3581E+03	4.8955E+02	9.3451E+02	3.0679E+02	5.4772E+01
6.000E+00	2.2176E+04	1.4981E+03	2.6197E+02	4.9838E+02	1.9480E+02	2.9645E+01
8.000E+00	1.0285E+04	7.1576E+02	9.5632E+01	1.8084E+02	9.3168E+01	1.0990E+01
1.000E+01	5.5596E+03	3.9633E+02	4.3068E+01	8.1011E+01	5.1664E+01	4.9949E+00
1.500E+01	1.7569E+03	1.3051E+02	9.7962E+00	1.8220E+01	1.7063E+01	1.1499E+00
2.000E+01	7.5827E+02	5.7806E+01	3.3526E+00	6.1753E+00	7.5744E+00	3.9669E-01
3.000E+01	2.2574E+02	1.7740E+01	7.2185E-01	1.3073E+00	2.3281E+00	8.6070E-02
4.000E+01	9.3964E+01	7.5134E+00	2.3996E-01	4.2828E-01	9.8758E-01	2.8734E-02
5.000E+01	4.7234E+01	3.8193E+00	1.0183E-01	1.7941E-01	5.0256E-01	1.2228E-02
6.000E+01	2.6812E+01	2.1850E+00	5.0573E-02	8.8049E-02	2.8775E-01	6.0847E-03
8.000E+01	1.0906E+01	8.9799E-01	1.6842E-02	2.8723E-02	1.1839E-01	2.0316E-03
1.000E+02	5.4104E+00	4.4843E-01	7.2342E-03	1.2125E-02	5.9165E-02	8.7445E-04
1.500E+02	1.5145E+00	1.2669E-01	1.6041E-03	2.6031E-03	1.6735E-02	1.9448E-04
2.000E+02	6.1921E-01	5.2075E-02	5.7264E-04	9.0454E-04	6.8801E-03	6.9219E-05
3.000E+02	1.8166E-01	1.5355E-02	1.4271E-04	2.2129E-04	2.0296E-03	1.7259E-05
4.000E+02	7.9436E-02	6.7304E-03	5.6646E-05	8.8028E-05	8.8977E-04	6.8491E-06
5.000E+02	4.3346E-02	3.6771E-03	2.8880E-05	4.5435E-05	4.8616E-04	3.4833E-06
6.000E+02	2.7186E-02	2.3077E-03	1.7122E-05	2.7557E-05	3.0512E-04	2.0666E-06
8.000E+02	1.3803E-02	1.1722E-03	7.9514E-06	1.3511E-05	1.5499E-04	9.5979E-07
1.000E+03	8.5838E-03	7.2885E-04	4.6377E-06	8.1786E-06	9.6384E-05	5.5671E-07
1.500E+03	4.0187E-03	3.4103E-04	1.9381E-06	3.7203E-06	4.5119E-05	2.3105E-07

Z= 20

ENERGY	3 P 3/2	4 S 1/2
1.000E+00	1.3487E+04	8.1370E+02
1.500E+00	4.4514E+03	3.5798E+02
2.000E+00	1.9280E+03	1.9444E+02
3.000E+00	5.5397E+02	7.8796E+01
4.000E+00	2.1929E+02	4.0062E+01
4.011E+00	2.1732E+02	3.9798E+01
4.043E+00	2.1172E+02	3.9044E+01
5.000E+00	1.0468E+02	2.3289E+01
6.000E+00	5.6460E+01	1.4785E+01
8.000E+00	2.0803E+01	7.0712E+00
1.000E+01	9.4050E+00	3.9212E+00
1.500E+01	2.1421E+00	1.2950E+00
2.000E+01	7.2993E-01	5.7482E-01
3.000E+01	1.5572E-01	1.7691E-01
4.000E+01	5.1221E-02	7.5057E-02
5.000E+01	2.1512E-02	3.8199E-02
6.000E+01	1.0576E-02	2.1873E-02
8.000E+01	3.4584E-03	8.9999E-03
1.000E+02	1.4616E-03	4.4979E-03
1.500E+02	3.1443E-04	1.2723E-03
2.000E+02	1.0949E-04	5.2310E-04
3.000E+02	2.6806E-05	1.5433E-04
4.000E+02	1.0666E-05	6.7688E-05
5.000E+02	5.5211E-06	3.7009E-05

Z= 20

ENERGY	3 P 3/2	4 S 1/2
6.000E+02	3.3487E-06	2.3247E-05
8.000E+02	1.6394E-06	1.1845E-05
1.000E+03	9.9895E-07	7.3982E-06
1.500E+03	4.5543E-07	3.5242E-06

Z= 21 10 STATES, 28 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	4.4659	.96287
2 S 1/2	2.00	.4943	.66357
2 P 1/2	2.00	.4137	.50979
2 P 3/2	4.00	.4088	.50663
3 S 1/2	2.00	.0609	.30515
3 P 1/2	2.00	.0396	.18404
3 P 3/2	4.00	.0391	.18202
3 D 3/2	.40	.0071	.02003
3 D 5/2	.60	.0070	.01994
4 S 1/2	2.00	.0059	.05522

Z= 21 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	3.9072E+05	.0E+00	3.5150E+05	3.8272E+04	9.4892E+02
1.5000E+00	1.3843E+05	.0E+00	1.2380E+05	1.4210E+04	4.2009E+02
2.0000E+00	6.4767E+04	.0E+00	5.7693E+04	6.8443E+03	2.2972E+02
3.0000E+00	2.1629E+04	.0E+00	1.9175E+04	2.3589E+03	9.4287E+01
4.0000E+00	9.7894E+03	.0E+00	8.6564E+03	1.0846E+03	4.8353E+01
4.4614E+00	7.2269E+03	.0E+00	6.3849E+03	8.0472E+02	3.7267E+01
4.4971E+00	6.0551E+04	5.3483E+04	6.2441E+03	7.8731E+02	3.6560E+01
5.0000E+00	4.6936E+04	4.1680E+04	4.6398E+03	5.8815E+02	2.8284E+01
6.0000E+00	2.9250E+04	2.6102E+04	2.7748E+03	3.5482E+02	1.8046E+01
8.0000E+00	1.3559E+04	1.2170E+04	1.2225E+03	1.5828E+02	8.7021E+00
1.0000E+01	7.3566E+03	6.6253E+03	6.4254E+02	8.3883E+01	4.8574E+00
1.5000E+01	2.3398E+03	2.1157E+03	1.9653E+02	2.5955E+01	1.6220E+00
2.0000E+01	1.0143E+03	9.1872E+02	8.3742E+01	1.1130E+01	7.2515E-01
3.0000E+01	3.0378E+02	2.7554E+02	2.4709E+01	3.3048E+00	2.2530E-01
4.0000E+01	1.2697E+02	1.1524E+02	1.0263E+01	1.3779E+00	9.6175E-02
5.0000E+01	6.4022E+01	5.8121E+01	5.1577E+00	6.9415E-01	4.9160E-02
6.0000E+01	3.6426E+01	3.3074E+01	2.9290E+00	3.9486E-01	2.8241E-02
8.0000E+01	1.4868E+01	1.3502E+01	1.1932E+00	1.6122E-01	1.1675E-02
1.0000E+02	7.3950E+00	6.7159E+00	5.9295E-01	8.0229E-02	5.8536E-03
1.5000E+02	2.0787E+00	1.8878E+00	1.6657E-01	2.2585E-02	1.6643E-03
2.0000E+02	8.5211E-01	7.7386E-01	6.8289E-02	9.2689E-03	6.8637E-04
3.0000E+02	2.5077E-01	2.2773E-01	2.0112E-02	2.7312E-03	2.0323E-04
4.0000E+02	1.0985E-01	9.9751E-02	8.8112E-03	1.1970E-03	8.9300E-05
5.0000E+02	6.0004E-02	5.4488E-02	4.8127E-03	6.5395E-04	4.8878E-05
6.0000E+02	3.7656E-02	3.4196E-02	3.0197E-03	4.1035E-04	3.0726E-05
8.0000E+02	1.9128E-02	1.7371E-02	1.5329E-03	2.0835E-04	1.5653E-05
1.0000E+03	1.1895E-02	1.0803E-02	9.5248E-04	1.2947E-04	9.7692E-06
1.5000E+03	5.5654E-03	5.0553E-03	4.4489E-04	6.0508E-05	4.6396E-06

Z= 21

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	8.2051E+04	9.1266E+04	1.7819E+05	1.2338E+04	8.6906E+03
1.500E+00	.0E+00	3.9002E+04	2.8834E+04	5.5964E+04	5.5019E+03	2.9395E+03
2.000E+00	.0E+00	2.1891E+04	1.2207E+04	2.3595E+04	3.0179E+03	1.2974E+03
3.000E+00	.0E+00	9.1317E+03	3.4386E+03	6.6051E+03	1.2369E+03	3.8263E+02
4.000E+00	.0E+00	4.7211E+03	1.3516E+03	2.5838E+03	6.3492E+02	1.5400E+02
4.461E+00	.0E+00	3.6467E+03	9.4163E+02	1.7966E+03	4.8946E+02	1.0812E+02
4.497E+00	5.3483E+04	3.5779E+03	9.1695E+02	1.7492E+03	4.8017E+02	1.0535E+02
5.000E+00	4.1680E+04	2.7726E+03	6.4299E+02	1.2242E+03	3.7155E+02	7.4407E+01
6.000E+00	2.6102E+04	1.7718E+03	3.4623E+02	6.5682E+02	2.3711E+02	4.0546E+01
8.000E+00	1.2170E+04	8.5431E+02	1.2761E+02	2.4056E+02	1.1435E+02	1.5201E+01
1.000E+01	6.6253E+03	4.7622E+02	5.7858E+01	1.0847E+02	6.3828E+01	6.9665E+00
1.500E+01	2.1157E+03	1.5855E+02	1.3312E+01	2.4664E+01	2.1313E+01	1.6252E+00
2.000E+01	9.1872E+02	7.0727E+01	4.5920E+00	8.4227E+00	9.5283E+00	5.6547E-01
3.000E+01	2.7554E+02	2.1908E+01	9.9928E-01	1.8013E+00	2.9572E+00	1.2412E-01
4.000E+01	1.1524E+02	9.3345E+00	3.3448E-01	5.9393E-01	1.2621E+00	4.1740E-02
5.000E+01	5.8121E+01	4.7652E+00	1.4262E-01	2.4990E-01	6.4505E-01	1.7855E-02
6.000E+01	3.3074E+01	2.7349E+00	7.1080E-02	1.2304E-01	3.7053E-01	8.9161E-03
8.000E+01	1.3502E+01	1.1291E+00	2.3790E-02	4.0315E-02	1.5316E-01	2.9932E-03
1.000E+02	6.7159E+00	5.6563E-01	1.0253E-02	1.7068E-02	7.6790E-02	1.2925E-03
1.500E+02	-1.8878E+00	1.6061E-01	2.2861E-03	3.6808E-03	2.1832E-02	2.8919E-04
2.000E+02	7.7386E-01	6.6188E-02	8.1879E-04	1.2822E-03	9.0036E-03	1.0331E-04
3.000E+02	2.2773E-01	1.9593E-02	2.0500E-04	3.1441E-04	2.6656E-03	2.5865E-05
4.000E+02	9.9751E-02	8.6044E-03	8.1546E-05	1.2523E-04	1.1709E-03	1.0284E-05
5.000E+02	5.4488E-02	4.7063E-03	4.1535E-05	6.4854E-05	6.4050E-04	5.2452E-06
6.000E+02	3.4196E-02	2.9556E-03	2.4649E-05	3.9415E-05	4.0225E-04	3.1113E-06
8.000E+02	1.7371E-02	1.5022E-03	1.1526E-05	1.9189E-05	2.0446E-04	1.4490E-06
1.000E+03	1.0803E-02	9.3408E-04	6.6759E-06	1.1720E-05	1.2714E-04	8.4185E-07
1.500E+03	5.0553E-03	4.3681E-04	2.7849E-06	5.3042E-06	5.9481E-05	3.4899E-07

Z= 21

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2
1.000E+00	1.6984E+04	1.0491E+02	1.5507E+02	9.4892E+02
1.500E+00	5.7127E+03	2.2707E+01	3.3499E+01	4.2009E+02
2.000E+00	2.5111E+03	7.2642E+00	1.0694E+01	2.2972E+02
3.000E+00	7.3597E+02	1.3555E+00	1.9912E+00	9.4287E+01
4.000E+00	2.9474E+02	3.9948E-01	5.8188E-01	4.8353E+01
4.461E+00	2.0653E+02	2.5052E-01	3.6447E-01	3.7267E+01
4.497E+00	2.0119E+02	2.4210E-01	3.5220E-01	3.6560E+01
5.000E+00	1.4181E+02	1.5359E-01	2.2315E-01	2.8284E+01
6.000E+00	7.6994E+01	6.9712E-02	1.0109E-01	1.8046E+01
8.000E+00	2.8680E+01	1.9502E-02	2.8169E-02	8.7021E+00
1.000E+01	1.3071E+01	7.0879E-03	1.0201E-02	4.8574E+00
1.500E+01	3.0146E+00	1.0983E-03	1.5675E-03	1.6220E+00
2.000E+01	1.0358E+00	2.8904E-04	4.0980E-04	7.2515E-01
3.000E+01	2.2343E-01	4.3375E-05	6.0703E-05	2.2530E-01
4.000E+01	7.4019E-02	1.1227E-05	1.5546E-05	9.6175E-02
5.000E+01	3.1233E-02	3.9361E-06	5.4037E-06	4.9160E-02
6.000E+01	1.5411E-02	1.6769E-06	2.2857E-06	2.8241E-02
8.000E+01	5.0613E-03	4.4217E-07	5.9361E-07	1.1675E-02
1.000E+02	2.1467E-03	1.5961E-07	2.1229E-07	5.8536E-03
1.500E+02	4.6381E-04	2.6406E-08	3.4723E-08	1.6643E-03
2.000E+02	1.6194E-04	7.7623E-09	1.0216E-08	6.8637E-04
3.000E+02	3.9777E-05	1.5181E-09	2.0500E-09	2.0323E-04
4.000E+02	1.5870E-05	5.1587E-10	7.2351E-10	8.9300E-05
5.000E+02	8.2075E-06	2.3461E-10	3.4883E-10	4.8878E-05
6.000E+02	4.9864E-06	1.2775E-10	2.0366E-10	3.0726E-05
8.000E+02	2.4377E-06	5.2923E-11	9.3470E-11	1.5653E-05
1.000E+03	1.4844E-06	2.9228E-11	5.5013E-11	9.7692E-06
1.500E+03	6.7790E-07	1.3039E-11	2.7512E-11	4.6396E-06

Z= 22 10 STATES, 28 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	4.9406	.96419
2 S 1/2	2.00	.5575	.67520
2 P 1/2	2.00	.4712	.52558
2 P 3/2	4.00	.4652	.52217
3 S 1/2	2.00	.0686	.31718
3 P 1/2	2.00	.0451	.19592
3 P 3/2	4.00	.0444	.19358
3 D 3/2	.80	.0084	.02479
3 D 5/2	1.20	.0083	.02466
4 S 1/2	2.00	.0063	.05633

Z= 22 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	4.6634E+05	.0E+00	4.1882E+05	4.6448E+04	1.0670E+03
1.5000E+00	1.6636E+05	.0E+00	1.4855E+05	1.7333E+04	4.7515E+02
2.0000E+00	7.8151E+04	.0E+00	6.9509E+04	8.3809E+03	2.6128E+02
3.0000E+00	2.6210E+04	.0E+00	2.3196E+04	2.9054E+03	1.0842E+02
4.0000E+00	1.1888E+04	.0E+00	1.0491E+04	1.3403E+03	5.6076E+01
4.9357E+00	6.6269E+03	.0E+00	5.8384E+03	7.5447E+02	3.4050E+01
4.9752E+00	5.4452E+04	4.7971E+04	5.7094E+03	7.3810E+02	3.3403E+01
5.0000E+00	5.4216E+04	4.7825E+04	5.6305E+03	7.2808E+02	3.3005E+01
6.0000E+00	3.4243E+04	3.0411E+04	3.3718E+03	4.3978E+02	2.1160E+01
8.0000E+00	1.5986E+04	1.4290E+04	1.4891E+03	1.9663E+02	1.0282E+01
1.0000E+01	8.7187E+03	7.8241E+03	7.8434E+02	1.0445E+02	5.7745E+00
1.5000E+01	2.7964E+03	2.5212E+03	2.4081E+02	3.2456E+01	1.9492E+00
2.0000E+01	1.2190E+03	1.1012E+03	1.0291E+02	1.3962E+01	8.7753E-01
3.0000E+01	3.6765E+02	3.3270E+02	3.0507E+01	4.1694E+00	2.7517E-01
4.0000E+01	1.5436E+02	1.3979E+02	1.2714E+01	1.7428E+00	1.1817E-01
5.0000E+01	7.8083E+01	7.0736E+01	6.4065E+00	8.8036E-01	6.0660E-02
6.0000E+01	4.4535E+01	4.0353E+01	3.6457E+00	5.0186E-01	3.4960E-02
8.0000E+01	1.8243E+01	1.6533E+01	1.4898E+00	2.0556E-01	1.4519E-02
1.0000E+02	9.0963E+00	8.2444E+00	7.4206E-01	1.0254E-01	7.3034E-03
1.5000E+02	2.7964E+00	2.3271E+00	2.0927E-01	2.8979E-02	2.0871E-03
2.0000E+02	1.0551E+00	9.5635E-01	8.6001E-02	1.1922E-02	8.6346E-04
3.0000E+02	3.1147E-01	2.8228E-01	2.5402E-02	3.5237E-03	2.5657E-04
4.0000E+02	1.3667E-01	1.2386E-01	1.1148E-02	1.5470E-03	1.1296E-04
5.0000E+02	7.4729E-02	6.7726E-02	6.0946E-03	8.4596E-04	6.1890E-05
6.0000E+02	4.6927E-02	4.2531E-02	3.8262E-03	5.3114E-04	3.8924E-05
8.0000E+02	2.3851E-02	2.1618E-02	1.9432E-03	2.6980E-04	1.9839E-05
1.0000E+03	1.4832E-02	1.3445E-02	1.2075E-03	1.6765E-04	1.2381E-05
1.5000E+03	6.9363E-03	6.2885E-03	5.6369E-04	7.8290E-05	5.8685E-06

Z= 22

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	8.9688E+04	1.1153E+05	2.1761E+05	1.4094E+04	1.0682E+04
1.500E+00	.0E+00	4.3447E+04	3.5766E+04	6.9340E+04	6.3326E+03	3.6796E+03
2.000E+00	.0E+00	2.4675E+04	1.5302E+04	2.9531E+04	3.4949E+03	1.6465E+03
3.000E+00	.0E+00	1.0445E+04	4.3714E+03	8.3798E+03	1.4487E+03	4.9521E+02
4.000E+00	.0E+00	5.4516E+03	1.7335E+03	3.3061E+03	7.5007E+02	2.0177E+02
4.936E+00	.0E+00	3.3249E+03	8.6690E+02	1.6466E+03	4.5567E+02	1.0253E+02
4.975E+00	4.7971E+04	3.2621E+03	8.4418E+02	1.6032E+03	4.4702E+02	9.9899E+01
5.000E+00	4.7825E+04	3.2235E+03	8.3032E+02	1.5767E+03	4.4170E+02	9.8293E+01
6.000E+00	3.0411E+04	2.0714E+03	4.4968E+02	8.5067E+02	2.8325E+02	5.3903E+01
8.000E+00	1.4290E+04	1.0075E+03	1.6727E+02	3.1434E+02	1.3566E+02	2.0417E+01
1.000E+01	7.8241E+03	5.6532E+02	7.6358E+01	1.4267E+02	7.7318E+01	9.4337E+00
1.500E+01	2.5212E+03	1.9025E+02	1.7765E+01	3.2787E+01	2.6097E+01	2.2306E+00
2.000E+01	1.1012E+03	8.5462E+01	6.1747E+00	1.1278E+01	1.1749E+01	7.8161E-01

Z= 22

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
3.000E+01	3.3270E+02	2.6713E+01	1.3576E+00	2.4355E+00	3.6843E+00	1.7367E-01
4.000E+01	1.3979E+02	1.1449E+01	4.5749E-01	8.0815E-01	1.5801E+00	5.8835E-02
5.000E+01	7.0736E+01	5.8689E+00	1.9602E-01	3.4154E-01	8.1104E-01	2.5291E-02
6.000E+01	4.0353E+01	3.3790E+00	9.8034E-02	1.6871E-01	4.6739E-01	1.2680E-02
8.000E+01	1.6533E+01	1.4013E+00	3.2974E-02	5.5522E-02	1.9409E-01	4.2779E-03
1.000E+02	8.2444E+00	7.0422E-01	1.4260E-02	2.3576E-02	9.7623E-02	1.8541E-03
1.500E+02	2.3271E+00	2.0096E-01	3.1975E-03	5.1071E-03	2.7897E-02	4.1727E-04
2.000E+02	9.5635E-01	8.3069E-02	1.1484E-03	1.7835E-03	1.1540E-02	1.4956E-04
3.000E+02	2.8228E-01	2.4675E-02	2.8858E-04	4.3883E-04	3.4288E-03	3.7614E-05
4.000E+02	1.2386E-01	1.0857E-02	1.1496E-04	1.7530E-04	1.5091E-03	1.5091E-05
5.000E+02	6.7726E-02	5.9452E-03	5.8666E-05	9.0789E-05	8.2645E-04	7.6490E-06
6.000E+02	4.2531E-02	3.7362E-03	3.4941E-05	5.5019E-05	5.1940E-04	4.5519E-06
8.000E+02	2.1618E-02	1.9000E-03	1.6297E-05	2.6899E-05	2.6416E-04	2.1213E-06
1.000E+03	1.3445E-02	1.1816E-03	9.4599E-06	1.6412E-05	1.6428E-04	1.2317E-06
1.500E+03	6.2885E-03	5.5225E-04	3.9570E-06	7.4808E-06	7.6802E-05	5.1268E-07

Z= 22

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2
1.000E+00	2.0857E+04	3.2891E+02	4.8556E+02	1.0670E+03
1.500E+00	7.1407E+03	7.2691E+01	1.0711E+02	4.7515E+02
2.000E+00	3.1810E+03	2.3678E+01	3.4823E+01	2.6128E+02
3.000E+00	9.5036E+02	4.5240E+00	6.6307E+00	1.0842E+02
4.000E+00	3.8519E+02	1.3413E+00	1.9509E+00	5.6076E+01
4.936E+00	1.9492E+02	5.4638E-01	7.9274E-01	3.4050E+01
4.975E+00	1.8989E+02	5.2800E-01	7.6601E-01	3.3403E+01
5.000E+00	1.8682E+02	5.1687E-01	7.4982E-01	3.3005E+01
6.000E+00	1.0205E+02	2.3559E-01	3.4096E-01	2.1160E+01
8.000E+00	3.8392E+01	6.6824E-02	9.6333E-02	1.0282E+01
1.000E+01	1.7636E+01	2.4567E-02	3.5283E-02	5.7745E+00
1.500E+01	4.1193E+00	3.8441E-03	5.4747E-03	1.9492E+00
2.000E+01	1.4291E+00	1.0182E-03	1.4398E-03	8.7753E-01
3.000E+01	3.1109E-01	1.5430E-04	2.1539E-04	2.7517E-01
4.000E+01	1.0375E-01	4.0227E-05	5.5550E-05	1.1817E-01
5.000E+01	4.3996E-02	1.4181E-05	1.9420E-05	6.0660E-02
6.000E+01	2.1778E-02	6.0710E-06	8.2372E-06	3.4960E-02
8.000E+01	7.1891E-03	1.6086E-06	2.1505E-06	1.4519E-02
1.000E+02	3.0578E-03	5.8277E-07	7.7290E-07	7.3034E-03
1.500E+02	6.6391E-04	9.7057E-08	1.2637E-07	2.0871E-03
2.000E+02	2.3253E-04	2.8600E-08	3.7320E-08	8.6346E-04
3.000E+02	5.7269E-05	5.6259E-09	7.4685E-09	2.5657E-04
4.000E+02	2.2874E-05	1.9001E-09	2.6753E-09	1.1296E-04
5.000E+02	1.1856E-05	8.7097E-10	1.2714E-09	6.1890E-05
6.000E+02	7.1919E-06	4.7213E-10	7.4429E-10	3.8924E-05
8.000E+02	3.5209E-06	1.9822E-10	3.3809E-10	1.9839E-05
1.000E+03	2.1454E-06	1.0743E-10	1.9814E-10	1.2381E-05
1.500E+03	9.7569E-07	4.3195E-11	9.3470E-11	5.8685E-06

Z= 23 10 STATES, 28 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	5.4397	.96542
2 S 1/2	2.00	.6238	.68588
2 P 1/2	2.00	.5319	.54031
2 P 3/2	4.00	.5245	.53663
3 S 1/2	2.00	.0764	.32751
3 P 1/2	2.00	.0507	.20651
3 P 3/2	4.00	.0498	.20381
3 D 3/2	1.20	.0096	.02943
3 D 5/2	1.80	.0095	.02926
4 S 1/2	2.00	.0066	.05661

Z= 23 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	5.4909E+05	.0E+00	4.9223E+05	5.5688E+04	1.1746E+03
1.5000E+00	1.9780E+05	.0E+00	1.7641E+05	2.0863E+04	5.2651E+02
2.0000E+00	9.3275E+04	.0E+00	8.2865E+04	1.0119E+04	2.9091E+02
3.0000E+00	3.1429E+04	.0E+00	2.7782E+04	3.5254E+03	1.2187E+02
4.0000E+00	1.4288E+04	.0E+00	1.2593E+04	1.6317E+03	6.3539E+01
5.0000E+00	7.6929E+03	.0E+00	6.7671E+03	8.8811E+02	3.7629E+01
5.4342E+00	6.0966E+03	.0E+00	5.3595E+03	7.0628E+02	3.0820E+01
5.4777E+00	4.9234E+04	4.3272E+04	5.2409E+03	6.9092E+02	3.0233E+01
6.0000E+00	3.9509E+04	3.4891E+04	4.0570E+03	5.3712E+02	2.4239E+01
8.0000E+00	1.8641E+04	1.6593E+04	1.7956E+03	2.4064E+02	1.1863E+01
1.0000E+01	1.0214E+04	9.1314E+03	9.4762E+02	1.2807E+02	6.7013E+00
1.5000E+01	3.3087E+03	2.9744E+03	2.9200E+02	3.9959E+01	2.2858E+00
2.0000E+01	1.4505E+03	1.3071E+03	1.2513E+02	1.7239E+01	1.0361E+00
3.0000E+01	4.4057E+02	3.9782E+02	3.7253E+01	5.1709E+00	3.2782E-01
4.0000E+01	1.8579E+02	1.6790E+02	1.5577E+01	2.1690E+00	1.4160E-01
5.0000E+01	9.4273E+01	8.5233E+01	7.8684E+00	1.0985E+00	7.2997E-02
6.0000E+01	5.3900E+01	4.8744E+01	4.4867E+00	6.2751E-01	4.2205E-02
8.0000E+01	2.2156E+01	2.0041E+01	1.8391E+00	2.5783E-01	1.7609E-02
1.0000E+02	1.1075E+01	1.0019E+01	9.1808E-01	1.2891E-01	8.8859E-03
1.5000E+02	3.1385E+00	2.8395E+00	2.5989E-01	3.6571E-02	2.5523E-03
2.0000E+02	1.2931E+00	1.1699E+00	1.0705E-01	1.5083E-02	1.0591E-03
3.0000E+02	3.8285E-01	3.4635E-01	3.1712E-02	4.4711E-03	3.1584E-04
4.0000E+02	1.6827E-01	1.5223E-01	1.3939E-02	1.9662E-03	1.3932E-04
5.0000E+02	9.2105E-02	8.3324E-02	7.6284E-03	1.0762E-03	7.6421E-05
6.0000E+02	5.7875E-02	5.2359E-02	4.7918E-03	6.7615E-04	4.8094E-05
8.0000E+02	2.9430E-02	2.6627E-02	2.4348E-03	3.4358E-04	2.4525E-05
1.0000E+03	1.8303E-02	1.6562E-02	1.5128E-03	2.1351E-04	1.5300E-05
1.5000E+03	8.5554E-03	7.7427E-03	7.0579E-04	9.9634E-05	7.2407E-06

Z= 23

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	9.6843E+04	1.3401E+05	2.6138E+05	1.5900E+04	1.2870E+04
1.500E+00	.0E+00	4.7931E+04	4.3757E+04	8.4724E+04	7.1987E+03	4.5126E+03
2.000E+00	.0E+00	2.7534E+04	1.8904E+04	3.6428E+04	3.9952E+03	2.0450E+03
3.000E+00	.0E+00	1.1827E+04	5.4768E+03	1.0478E+04	1.6726E+03	6.2665E+02
4.000E+00	.0E+00	6.2331E+03	2.1910E+03	4.1685E+03	8.7314E+02	2.5851E+02
5.000E+00	.0E+00	3.7105E+03	1.0562E+03	2.0004E+03	5.1739E+02	1.2700E+02
5.434E+00	.0E+00	3.0438E+03	8.0116E+02	1.5146E+03	4.2384E+02	9.6944E+01
5.478E+00	4.3272E+04	2.9862E+03	7.8015E+02	1.4746E+03	4.1577E+02	9.4456E+01
6.000E+00	3.4891E+04	2.3971E+03	5.7510E+02	1.0848E+03	3.3339E+02	7.0083E+01
8.000E+00	1.6593E+04	1.1756E+03	2.1579E+02	4.0424E+02	1.6322E+02	2.6801E+01
1.000E+01	9.1314E+03	6.6380E+02	9.9165E+01	1.8465E+02	9.2203E+01	1.2479E+01
1.500E+01	2.9744E+03	2.2579E+02	2.3327E+01	4.2882E+01	3.1449E+01	2.9897E+00
2.000E+01	1.3071E+03	1.0211E+02	8.1669E+00	1.4851E+01	1.4255E+01	1.0562E+00

Z= 23

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
3.000E+01	3.9782E+02	3.2202E+01	1.8135E+00	3.2375E+00	4.5100E+00	2.3724E-01
4.000E+01	1.6790E+02	1.3880E+01	6.1517E-01	1.0810E+00	1.9459E+00	8.0937E-02
5.000E+01	8.5233E+01	7.1448E+00	2.6483E-01	4.5885E-01	1.0030E+00	3.4975E-02
6.000E+01	4.8744E+01	4.1264E+00	1.3292E-01	2.2739E-01	5.7983E-01	1.7598E-02
8.000E+01	2.0041E+01	1.7190E+00	4.4930E-02	7.5168E-02	2.4189E-01	5.9697E-03
1.000E+02	1.0019E+01	8.6657E-01	1.9500E-02	3.2014E-02	1.2205E-01	2.5967E-03
1.500E+02	2.8395E+00	2.4853E-01	4.3962E-03	6.9663E-03	3.5055E-02	5.8746E-04
2.000E+02	1.1699E+00	1.0303E-01	1.5772E-03	2.4437E-03	1.4545E-02	2.1130E-04
3.000E+02	3.4635E-01	3.0710E-02	3.9922E-04	6.0234E-04	4.3372E-03	5.3345E-05
4.000E+02	1.5223E-01	1.3539E-02	1.5951E-04	2.4079E-04	1.9126E-03	2.1323E-05
5.000E+02	8.3324E-02	7.4221E-03	8.1635E-05	1.2462E-04	1.0487E-03	1.0904E-05
6.000E+02	5.2359E-02	4.6676E-03	4.8632E-05	7.5592E-05	6.5951E-04	6.4861E-06
8.000E+02	2.6627E-02	2.3750E-03	2.2652E-05	3.7083E-05	3.3559E-04	3.0281E-06
1.000E+03	1.6562E-02	1.4771E-03	1.3235E-05	2.2487E-05	2.0873E-04	1.7634E-06
1.500E+03	7.7427E-03	6.9002E-04	5.5003E-06	1.0268E-05	9.7526E-05	7.3335E-07

Z= 23

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2
1.000E+00	2.5106E+04	7.3272E+02	1.0803E+03	1.1746E+03
1.500E+00	8.7446E+03	1.6489E+02	2.4264E+02	5.2651E+02
2.000E+00	3.9438E+03	5.4549E+01	8.0126E+01	2.9091E+02
3.000E+00	1.1998E+03	1.0672E+01	1.5616E+01	1.2187E+02
4.000E+00	4.9223E+02	3.2006E+00	4.6724E+00	6.3539E+01
5.000E+00	2.4069E+02	1.2360E+00	1.7898E+00	3.7629E+01
5.434E+00	1.8338E+02	8.6488E-01	1.2510E+00	3.0820E+01
5.478E+00	1.7864E+02	8.3576E-01	1.2088E+00	3.0233E+01
6.000E+00	1.3227E+02	5.6473E-01	8.1594E-01	2.4239E+01
8.000E+00	5.0225E+01	1.6164E-01	2.3260E-01	1.1863E+01
1.000E+01	2.3243E+01	6.0083E-02	8.6113E-02	6.7013E+00
1.500E+01	5.4979E+00	9.5255E-03	1.3536E-02	2.2858E+00
2.000E+01	1.9223E+00	2.5364E-03	3.5769E-03	1.0361E+00
3.000E+01	4.2272E-01	3.8815E-04	5.4019E-04	3.2782E-01
4.000E+01	1.4195E-01	1.0186E-04	1.4021E-04	1.4160E-01
5.000E+01	6.0469E-02	3.6099E-05	4.9237E-05	7.2997E-02
6.000E+01	3.0045E-02	1.5513E-05	2.0987E-05	4.2205E-02
8.000E+01	9.9626E-03	4.1347E-06	5.5079E-06	1.7609E-02
1.000E+02	4.2518E-03	1.5027E-06	1.9850E-06	8.8859E-03
1.500E+02	9.2775E-04	2.5150E-07	3.2626E-07	2.5523E-03
2.000E+02	3.2577E-04	7.4303E-08	9.6507E-08	1.0591E-03
3.000E+02	8.0519E-05	1.4659E-08	1.9373E-08	3.1584E-04
4.000E+02	3.2205E-05	4.9659E-09	6.9182E-09	1.3932E-04
5.000E+02	1.6684E-05	2.2786E-09	3.3050E-09	7.6421E-05
6.000E+02	1.0145E-05	1.2346E-09	1.9310E-09	4.8094E-05
8.000E+02	4.9590E-06	5.0870E-10	8.8127E-10	2.4525E-05
1.000E+03	3.0183E-06	2.7430E-10	5.1644E-10	1.5300E-05
1.500E+03	1.3745E-06	1.1124E-10	2.3194E-10	7.2407E-06

Z= 24 10 STATES, 28 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	5.9576	.96661
2 S 1/2	2.00	.6874	.69587
2 P 1/2	2.00	.5898	.55440
2 P 3/2	4.00	.5808	.55044
3 S 1/2	2.00	.0792	.33165
3 P 1/2	2.00	.0513	.21126
3 P 3/2	4.00	.0502	.20810
3 D 3/2	2.00	.0065	.02958
3 D 5/2	3.00	.0064	.02933
4 S 1/2	1.00	.0060	.04231

Z= 24 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	6.3899E+05	.0E+00	5.7331E+05	6.5205E+04	4.7604E+02
1.5000E+00	2.3231E+05	.0E+00	2.0764E+05	2.4457E+04	2.1529E+02
2.0000E+00	1.0997E+05	.0E+00	9.7977E+04	1.1878E+04	1.1960E+02
3.0000E+00	3.7199E+04	.0E+00	3.2996E+04	4.1524E+03	5.0601E+01
4.0000E+00	1.6943E+04	.0E+00	1.4989E+04	1.9278E+03	2.6576E+01
5.0000E+00	9.1337E+03	.0E+00	8.0663E+03	1.0515E+03	1.5833E+01
5.9517E+00	5.6138E+03	.0E+00	4.9521E+03	6.5128E+02	1.0449E+01
5.9993E+00	4.4395E+04	3.8905E+04	4.8423E+03	6.3709E+02	1.0250E+01
6.0000E+00	4.4395E+04	3.8907E+04	4.8408E+03	6.3689E+02	1.0247E+01
8.0000E+00	2.1576E+04	1.9139E+04	2.1464E+03	2.8595E+02	5.0511E+00
1.0000E+01	1.1872E+04	1.0582E+04	1.1347E+03	1.5248E+02	2.8687E+00
1.5000E+01	3.8805E+03	3.4809E+03	3.5084E+02	4.7775E+01	9.8831E-01
2.0000E+01	1.7097E+03	1.5378E+03	1.5073E+02	2.0675E+01	4.5100E-01
3.0000E+01	5.2279E+02	4.7136E+02	4.5054E+01	6.2294E+00	1.4393E-01
4.0000E+01	2.2144E+02	1.9986E+02	1.8896E+01	2.6221E+00	6.2528E-02
5.0000E+01	1.1271E+02	1.0178E+02	9.5684E+00	1.3314E+00	3.2366E-02
6.0000E+01	6.4594E+01	5.8346E+01	5.4666E+00	7.6219E-01	1.8772E-02
8.0000E+01	2.6643E+01	2.4073E+01	2.2474E+00	3.1416E-01	7.8677E-03
1.0000E+02	1.3350E+01	1.2064E+01	1.1244E+00	1.5743E-01	3.9828E-03
1.5000E+02	3.7983E+00	3.4329E+00	3.1945E-01	4.4837E-02	1.1498E-03
2.0000E+02	1.5688E+00	1.4179E+00	1.3190E-01	1.8537E-02	4.7858E-04
3.0000E+02	4.6585E-01	4.2101E-01	3.9181E-02	5.5115E-03	1.4324E-04
4.0000E+02	2.0510E-01	1.8536E-01	1.7251E-02	2.4278E-03	6.3315E-05
5.0000E+02	1.1238E-01	1.0156E-01	9.4497E-03	1.3303E-03	3.4774E-05
6.0000E+02	7.0656E-02	6.3859E-02	5.9393E-03	8.3623E-04	2.1904E-05
8.0000E+02	3.5950E-02	3.2494E-02	3.0192E-03	4.2513E-04	1.1180E-05
1.0000E+03	2.2359E-02	2.0212E-02	1.8759E-03	2.6419E-04	6.9786E-06
1.5000E+03	1.0446E-02	9.4447E-03	8.7459E-04	1.2319E-04	3.3086E-06

Z= 24

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	1.0339E+05	1.5929E+05	3.1063E+05	1.7474E+04	1.4915E+04
1.500E+00	.0E+00	5.2446E+04	5.2881E+04	1.0231E+05	7.9795E+03	5.3237E+03
2.000E+00	.0E+00	3.0487E+04	2.3081E+04	4.4409E+04	4.4531E+03	2.4413E+03
3.000E+00	.0E+00	1.3283E+04	6.7763E+03	1.2937E+04	1.8811E+03	7.6119E+02
4.000E+00	.0E+00	7.0636E+03	2.7347E+03	5.1907E+03	9.8946E+02	3.1782E+02
5.000E+00	.0E+00	4.2341E+03	1.3266E+03	2.5057E+03	5.8989E+02	1.5748E+02
5.952E+00	.0E+00	2.8034E+03	7.4577E+02	1.4030E+03	3.8945E+02	8.9790E+01
5.999E+00	3.8905E+04	2.7502E+03	7.2620E+02	1.3659E+03	3.8203E+02	8.7487E+01
6.000E+00	3.8907E+04	2.7495E+03	7.2593E+02	1.3654E+03	3.8193E+02	8.7455E+01
8.000E+00	1.9139E+04	1.3590E+03	2.7461E+02	5.1276E+02	1.8832E+02	3.3756E+01
1.000E+01	1.0582E+04	7.7203E+02	1.2700E+02	2.3565E+02	1.0697E+02	1.5830E+01
1.500E+01	3.4809E+03	2.6534E+02	3.0201E+01	5.5297E+01	3.6851E+01	3.8415E+00
2.000E+01	1.5378E+03	1.2081E+02	1.0649E+01	1.9280E+01	1.6816E+01	1.3683E+00

Z= 24

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
3.000E+01	4.7136E+02	3.8426E+01	2.3873E+00	4.2408E+00	5.3667E+00	3.1054E-01
4.000E+01	1.9986E+02	1.6657E+01	8.1502E-01	1.4245E+00	2.3289E+00	1.0668E-01
5.000E+01	1.0178E+02	8.6086E+00	3.5251E-01	6.0727E-01	1.2054E+00	4.6330E-02
6.000E+01	5.8346E+01	4.9871E+00	1.7755E-01	3.0192E-01	6.9903E-01	2.3400E-02
8.000E+01	2.4073E+01	2.0868E+00	6.0319E-02	1.0026E-01	2.9294E-01	7.9800E-03
1.000E+02	1.2064E+01	1.0553E+00	2.6269E-02	4.2827E-02	1.4828E-01	3.4837E-03
1.500E+02	3.4329E+00	3.0414E-01	5.9548E-03	9.3616E-03	4.2803E-02	7.9256E-04
2.000E+02	1.4179E+00	1.2647E-01	2.1437E-03	3.2921E-03	1.7814E-02	2.8603E-04
3.000E+02	4.2101E-01	3.7823E-02	5.4461E-04	8.1364E-04	5.3306E-03	7.2507E-05
4.000E+02	1.8536E-01	1.6707E-02	2.1820E-04	3.2549E-04	2.3554E-03	2.9053E-05
5.000E+02	1.0156E-01	9.1693E-03	1.1175E-04	1.6866E-04	1.2929E-03	1.4877E-05
6.000E+02	6.3859E-02	5.7702E-03	6.6546E-05	1.0256E-04	8.1368E-04	8.8612E-06
8.000E+02	3.2494E-02	2.9378E-03	3.1111E-05	5.0191E-05	4.1430E-04	4.1420E-06
1.000E+03	2.0212E-02	1.8273E-03	1.8181E-05	3.0418E-05	2.5770E-04	2.4145E-06
1.500E+03	9.4447E-03	8.5316E-04	7.6016E-06	1.3824E-05	1.2034E-04	1.0049E-06

Z= 24

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2
1.000E+00	2.9054E+04	1.5237E+03	2.2382E+03	4.7604E+02
1.500E+00	1.0295E+04	3.4825E+02	5.1025E+02	2.1529E+02
2.000E+00	4.6965E+03	1.1670E+02	1.7065E+02	1.1960E+02
3.000E+00	1.4531E+03	2.3258E+01	3.3753E+01	5.0601E+01
4.000E+00	6.0318E+02	7.0678E+00	1.0224E+01	2.6576E+01
5.000E+00	2.9741E+02	2.7481E+00	3.9643E+00	1.5833E+01
5.952E+00	1.6886E+02	1.3034E+00	1.8757E+00	1.0449E+01
5.999E+00	1.6450E+02	1.2595E+00	1.8123E+00	1.0250E+01
6.000E+00	1.6444E+02	1.2588E+00	1.8114E+00	1.0247E+01
8.000E+00	6.2994E+01	3.6234E-01	5.1914E-01	5.0511E+00
1.000E+01	2.9351E+01	1.3579E-01	1.9379E-01	2.8687E+00
1.500E+01	7.0288E+00	2.1856E-02	3.0914E-02	9.8831E-01
2.000E+01	2.4765E+00	5.8523E-03	8.2128E-03	4.5100E-01
3.000E+01	5.5000E-01	9.0282E-04	1.2508E-03	1.4393E-01
4.000E+01	1.8591E-01	2.3841E-04	3.2664E-04	6.2528E-02
5.000E+01	7.9562E-02	8.4910E-05	1.1525E-04	3.2366E-02
6.000E+01	3.9668E-02	3.6633E-05	4.9268E-05	1.8772E-02
8.000E+01	1.3218E-02	9.8119E-06	1.3010E-05	7.8677E-03
1.000E+02	5.6591E-03	3.5816E-06	4.7014E-06	3.9828E-03
1.500E+02	1.2408E-03	6.0164E-07	7.7720E-07	1.1498E-03
2.000E+02	4.3691E-04	1.7826E-07	2.3016E-07	4.7858E-04
3.000E+02	1.0831E-04	3.5207E-08	4.6436E-08	1.4324E-04
4.000E+02	4.3380E-05	1.1968E-08	1.6583E-08	6.3315E-05
5.000E+02	2.2496E-05	5.4740E-09	7.9512E-09	3.4774E-05
6.000E+02	1.3682E-05	2.9932E-09	4.6173E-09	2.1904E-05
8.000E+02	6.6904E-06	1.2362E-09	2.1116E-09	1.1180E-05
1.000E+03	4.0706E-06	6.6532E-10	1.2520E-09	6.9786E-06
1.500E+03	1.8525E-06	2.8228E-10	6.0719E-10	3.3086E-06

Z= 25 10 STATES, 28 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	6.5109	.96764
2 S 1/2	2.00	.7665	.70482
2 P 1/2	2.00	.6630	.56693
2 P 3/2	4.00	.6522	.56269
3 S 1/2	2.00	.0926	.34446
3 P 1/2	2.00	.0621	.22476
3 P 3/2	4.00	.0608	.22128
3 D 3/2	2.00	.0119	.03839
3 D 5/2	3.00	.0117	.03811
4 S 1/2	2.00	.0072	.05587

Z= 25 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	7.3789E+05	.0E+00	6.5855E+05	7.7975E+04	1.3646E+03
1.5000E+00	2.7185E+05	.0E+00	2.4186E+05	2.9371E+04	6.2086E+02
2.0000E+00	1.2930E+05	.0E+00	1.1465E+05	1.4298E+04	3.4635E+02
3.0000E+00	4.3971E+04	.0E+00	3.8809E+04	5.0157E+03	1.4688E+02
4.0000E+00	2.0092E+04	.0E+00	1.7679E+04	2.3347E+03	7.8051E+01
5.0000E+00	1.0851E+04	.0E+00	9.5280E+03	1.2758E+03	4.6761E+01
6.0000E+00	6.5283E+03	.0E+00	5.7242E+03	7.7364E+02	3.0404E+01
6.5044E+00	5.2069E+03	.0E+00	4.5629E+03	6.1895E+02	2.5044E+01
6.5565E+00	4.0805E+04	3.5714E+04	4.4616E+03	6.0542E+02	2.4565E+01
8.0000E+00	2.4805E+04	2.1899E+04	2.5426E+03	3.4787E+02	1.5091E+01
1.0000E+01	1.3708E+04	1.2167E+04	1.3463E+03	1.8572E+02	8.6150E+00
1.5000E+01	4.5142E+03	4.0351E+03	4.1768E+02	5.8361E+01	2.9966E+00
2.0000E+01	2.0014E+03	1.7948E+03	1.7990E+02	2.5316E+01	1.3765E+00
3.0000E+01	6.1607E+02	5.5400E+02	5.3974E+01	7.6542E+00	4.4305E-01
4.0000E+01	2.6203E+02	2.3590E+02	2.2703E+01	3.2344E+00	1.9356E-01
5.0000E+01	1.3378E+02	1.2051E+02	1.1523E+01	1.6446E+00	1.0060E-01
6.0000E+01	7.6845E+01	6.9248E+01	6.5956E+00	9.4317E-01	5.8530E-02
8.0000E+01	3.1805E+01	2.8671E+01	2.7194E+00	3.8987E-01	2.4642E-02
1.0000E+02	1.5975E+01	1.4404E+01	1.3634E+00	1.9579E-01	1.2514E-02
1.5000E+02	4.5631E+00	4.1147E+00	3.8877E-01	5.5960E-02	3.6307E-03
2.0000E+02	1.8892E+00	1.7036E+00	1.6090E-01	2.3190E-02	1.5157E-03
3.0000E+02	5.6263E-01	5.0735E-01	4.7913E-02	6.9142E-03	4.5524E-04
4.0000E+02	2.4814E-01	2.2375E-01	2.1135E-02	3.0507E-03	2.0161E-04
5.0000E+02	1.3610E-01	1.2272E-01	1.1589E-02	1.6732E-03	1.1083E-04
6.0000E+02	8.5622E-02	7.7212E-02	7.2879E-03	1.0524E-03	6.9837E-05
8.0000E+02	4.3588E-02	3.9311E-02	3.7062E-03	5.3525E-04	3.5645E-05
1.0000E+03	2.7112E-02	2.4454E-02	2.3029E-03	3.3262E-04	2.2230E-05
1.5000E+03	1.2660E-02	1.1421E-02	1.0729E-03	1.5499E-04	1.0488E-05

Z= 25

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	1.1016E+05	1.8580E+05	3.6259E+05	1.9598E+04	1.7786E+04
1.500E+00	.0E+00	5.6830E+04	6.3099E+04	1.2193E+05	9.0268E+03	6.4668E+03
2.000E+00	.0E+00	3.3448E+04	2.7796E+04	5.3408E+04	5.0643E+03	3.0002E+03
3.000E+00	.0E+00	1.4784E+04	8.2688E+03	1.5756E+04	2.1568E+03	9.5112E+02
4.000E+00	.0E+00	7.9370E+03	3.3670E+03	6.3755E+03	1.1424E+03	4.0187E+02
5.000E+00	.0E+00	4.7885E+03	1.6434E+03	3.0960E+03	6.8503E+02	2.0086E+02
6.000E+00	.0E+00	3.1254E+03	9.0377E+02	1.6950E+03	4.4560E+02	1.1226E+02
6.504E+00	.0E+00	2.5778E+03	6.9127E+02	1.2938E+03	3.6709E+02	8.6422E+01
6.556E+00	3.5714E+04	2.5289E+03	6.7313E+02	1.2595E+03	3.6009E+02	8.4206E+01
8.000E+00	2.1899E+04	1.5568E+03	3.4455E+02	6.4126E+02	2.2126E+02	4.3730E+01
1.000E+01	1.2167E+04	8.8955E+02	1.6033E+02	2.9644E+02	1.2634E+02	2.0649E+01
1.500E+01	4.0351E+03	3.0887E+02	3.8538E+01	7.0278E+01	4.3945E+01	5.0749E+00
2.000E+01	1.7948E+03	1.4155E+02	1.3683E+01	2.4663E+01	2.0185E+01	1.8226E+00

Z= 25

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
3.000E+01	5.5400E+02	4.5406E+01	3.0960E+00	5.4721E+00	6.4966E+00	4.1716E-01
4.000E+01	2.3590E+02	1.9791E+01	1.0636E+00	1.8488E+00	2.8383E+00	1.4452E-01
5.000E+01	1.2051E+02	1.0269E+01	4.6213E-01	7.9151E-01	1.4734E+00	6.3068E-02
6.000E+01	6.9248E+01	5.9673E+00	2.3358E-01	3.9477E-01	8.5715E-01	3.1975E-02
8.000E+01	2.8671E+01	2.5080E+00	7.9756E-02	1.3169E-01	3.6082E-01	1.0963E-02
1.000E+02	1.4404E+01	1.2721E+00	3.4854E-02	5.6424E-02	1.8322E-01	4.8029E-03
1.500E+02	4.1147E+00	3.6844E-01	7.9443E-03	1.2389E-02	5.3151E-02	1.0991E-03
2.000E+02	1.7036E+00	1.5366E-01	2.8699E-03	4.3679E-03	2.2188E-02	3.9804E-04
3.000E+02	5.0735E-01	4.6100E-02	7.3161E-04	1.0818E-03	6.6629E-03	1.0130E-04
4.000E+02	2.2375E-01	2.0408E-02	2.9366E-04	4.3366E-04	2.9499E-03	4.0672E-05
5.000E+02	1.2272E-01	1.1213E-02	1.5049E-04	2.2520E-04	1.6211E-03	2.0871E-05
6.000E+02	7.7212E-02	7.0612E-03	8.9747E-05	1.3697E-04	1.0209E-03	1.2445E-05
8.000E+02	3.9311E-02	3.5973E-03	4.2136E-05	6.6779E-05	5.2014E-04	5.8288E-06
1.000E+03	2.4454E-02	2.2377E-03	2.4522E-05	4.0688E-05	3.2356E-04	3.3956E-06
1.500E+03	1.1421E-02	1.0442E-03	1.0310E-05	1.8362E-05	1.5101E-04	1.4183E-06

Z= 25

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2
1.000E+00	3.4645E+04	2.4067E+03	3.5397E+03	1.3646E+03
1.500E+00	1.2497E+04	5.5935E+02	8.2045E+02	6.2086E+02
2.000E+00	5.7653E+03	1.8988E+02	2.7792E+02	3.4635E+02
3.000E+00	1.8127E+03	3.8702E+01	5.6453E+01	1.4688E+02
4.000E+00	7.6112E+02	1.1922E+01	1.7338E+01	7.8051E+01
5.000E+00	3.7844E+02	4.6689E+00	6.7723E+00	4.6761E+01
6.000E+00	2.1055E+02	2.1438E+00	3.0855E+00	3.0404E+01
6.504E+00	1.6174E+02	1.5162E+00	2.1793E+00	2.5044E+01
6.556E+00	1.5756E+02	1.4651E+00	2.1056E+00	2.4565E+01
8.000E+00	8.1372E+01	6.2014E-01	8.8846E-01	1.5091E+01
1.000E+01	3.8165E+01	2.3396E-01	3.3380E-01	8.6150E+00
1.500E+01	9.2494E+00	3.8249E-02	5.4094E-02	2.9966E+00
2.000E+01	3.2841E+00	1.0312E-02	1.4467E-02	1.3765E+00
3.000E+01	7.3654E-01	1.6035E-03	2.2183E-03	4.4305E-01
4.000E+01	2.5052E-01	4.2610E-04	5.8286E-04	1.9356E-01
5.000E+01	1.0773E-01	1.5248E-04	2.0662E-04	1.0060E-01
6.000E+01	5.3889E-02	6.6025E-05	8.8610E-05	5.8530E-02
8.000E+01	1.8046E-02	1.7787E-05	2.3542E-05	2.4642E-02
1.000E+02	7.7516E-03	6.5219E-06	8.5266E-06	1.2514E-02
1.500E+02	1.7073E-03	1.1006E-06	1.4172E-06	3.6307E-03
2.000E+02	6.0280E-04	3.2747E-07	4.1954E-07	1.5157E-03
3.000E+02	1.4984E-04	6.4702E-08	8.4959E-08	4.5524E-04
4.000E+02	6.0150E-05	2.2194E-08	3.0321E-08	2.0161E-04
5.000E+02	3.1209E-05	1.0103E-08	1.4585E-08	1.1083E-04
6.000E+02	1.8971E-05	5.5607E-09	8.3757E-09	6.9837E-05
8.000E+02	9.2797E-06	2.2938E-09	3.8091E-09	3.5645E-05
1.000E+03	5.6546E-06	1.2301E-09	2.2207E-09	2.2230E-05
1.500E+03	2.5640E-06	4.6452E-10	9.7142E-10	1.0488E-05

Z= 26 10 STATES, 28 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	7.0834	.96864
2 S 1/2	2.00	.8430	.71326
2 P 1/2	2.00	.7336	.57899
2 P 3/2	4.00	.7207	.57446
3 S 1/2	2.00	.1010	.35153
3 P 1/2	2.00	.0681	.23274
3 P 3/2	4.00	.0664	.22882
3 D 3/2	2.40	.0129	.04269
3 D 5/2	3.60	.0127	.04234
4 S 1/2	2.00	.0075	.05516

Z= 26 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	8.4208E+05	.0E+00	7.4923E+05	9.1400E+04	1.4494E+03
1.5000E+00	3.1484E+05	.0E+00	2.7971E+05	3.4473E+04	6.6498E+02
2.0000E+00	1.5045E+05	.0E+00	1.3329E+05	1.6796E+04	3.7300E+02
3.0000E+00	5.1398E+04	.0E+00	4.5335E+04	5.9037E+03	1.5924E+02
4.0000E+00	2.3541E+04	.0E+00	2.0702E+04	2.7536E+03	8.5180E+01
5.0000E+00	1.2736E+04	.0E+00	1.1177E+04	1.5073E+03	5.1306E+01
6.0000E+00	7.6713E+03	.0E+00	6.7225E+03	9.1525E+02	3.3508E+01
7.0763E+00	4.8322E+03	.0E+00	4.2294E+03	5.8013E+02	2.2581E+01
7.1330E+00	3.7370E+04	3.2645E+04	4.1355E+03	5.6743E+02	2.2149E+01
8.0000E+00	2.8189E+04	2.4769E+04	2.9909E+03	4.1228E+02	1.6745E+01
1.0000E+01	1.5705E+04	1.3889E+04	1.5859E+03	2.2039E+02	9.6078E+00
1.5000E+01	5.2145E+03	4.6481E+03	4.9353E+02	6.9463E+01	3.3725E+00
2.0000E+01	2.3227E+03	2.0778E+03	2.1306E+02	3.0208E+01	1.5591E+00
3.0000E+01	7.1986E+02	6.4603E+02	6.4153E+01	9.1684E+00	5.0603E-01
4.0000E+01	3.0752E+02	2.7635E+02	2.7059E+01	3.8845E+00	2.2228E-01
5.0000E+01	1.5746E+02	1.4160E+02	1.3764E+01	1.9798E+00	1.1599E-01
6.0000E+01	9.0663E+01	8.1565E+01	7.8925E+00	1.1376E+00	6.7690E-02
8.0000E+01	3.7648E+01	3.3885E+01	3.2632E+00	4.7158E-01	2.8626E-02
1.0000E+02	1.8955E+01	1.7064E+01	1.6395E+00	2.3733E-01	1.4583E-02
1.5000E+02	5.4352E+00	4.8937E+00	4.6914E-01	6.8081E-02	4.2521E-03
2.0000E+02	2.2557E+00	2.0311E+00	1.9460E-01	2.8278E-02	1.7805E-03
3.0000E+02	6.7373E-01	6.0663E-01	5.8109E-02	8.4554E-03	5.3664E-04
4.0000E+02	2.9763E-01	2.6798E-01	2.5673E-02	3.7367E-03	2.3809E-04
5.0000E+02	1.6340E-01	1.4713E-01	1.4091E-02	2.0514E-03	1.3105E-04
6.0000E+02	1.0287E-01	9.2627E-02	8.8661E-03	1.2910E-03	8.2630E-05
8.0000E+02	5.2397E-02	4.7187E-02	4.5109E-03	6.5693E-04	4.2197E-05
1.0000E+03	3.2594E-02	2.9356E-02	2.8030E-03	4.0821E-04	2.6313E-05
1.5000E+03	1.5211E-02	1.3704E-02	1.3049E-03	1.9008E-04	1.2399E-05

Z= 26

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	1.1698E+05	2.1422E+05	4.1803E+05	2.1475E+04	2.0474E+04
1.500E+00	.0E+00	6.1302E+04	7.4496E+04	1.4391E+05	9.9829E+03	7.5869E+03
2.000E+00	.0E+00	3.6465E+04	3.3171E+04	6.3649E+04	5.6310E+03	3.5604E+03
3.000E+00	.0E+00	1.6348E+04	9.9896E+03	1.8998E+04	2.4169E+03	1.1465E+03
4.000E+00	.0E+00	8.8517E+03	4.1018E+03	7.7489E+03	1.2884E+03	4.8993E+02
5.000E+00	.0E+00	5.3761E+03	2.0149E+03	3.7858E+03	7.7677E+02	2.4695E+02
6.000E+00	.0E+00	3.5270E+03	1.1134E+03	2.0821E+03	5.0758E+02	1.3892E+02
7.076E+00	.0E+00	2.3835E+03	6.4506E+02	1.2008E+03	3.4216E+02	8.1622E+01
7.133E+00	3.2645E+04	2.3383E+03	6.2813E+02	1.1691E+03	3.3563E+02	7.9531E+01
8.000E+00	2.4769E+04	1.7701E+03	4.2760E+02	7.9321E+02	2.5378E+02	5.4616E+01
1.000E+01	1.3889E+04	1.0171E+03	2.0013E+02	3.6871E+02	1.4564E+02	2.5960E+01
1.500E+01	4.6481E+03	3.5664E+02	4.8610E+01	8.8280E+01	5.1127E+01	6.4569E+00
2.000E+01	2.0778E+03	1.6451E+02	1.7377E+01	3.1181E+01	2.3634E+01	2.3378E+00

Z= 26

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
3.000E+01	6.4603E+02	5.3209E+01	3.9673E+00	6.9765E+00	7.6704E+00	5.4071E-01
4.000E+01	2.7635E+02	2.3317E+01	1.3713E+00	2.3704E+00	3.3694E+00	1.8847E-01
5.000E+01	1.4160E+02	1.2146E+01	5.9849E-01	1.0190E+00	1.7563E+00	8.2654E-02
6.000E+01	8.1565E+01	7.0791E+00	3.0355E-01	5.0985E-01	1.0248E+00	4.2061E-02
8.000E+01	3.3885E+01	2.9882E+00	1.0417E-01	1.7084E-01	4.3331E-01	1.4496E-02
1.000E+02	1.7064E+01	1.5204E+00	4.5679E-02	7.3423E-02	2.2072E-01	6.3754E-03
1.500E+02	4.8937E+00	4.4248E-01	1.0469E-02	1.6195E-02	6.4349E-02	1.4670E-03
2.000E+02	2.0311E+00	1.8508E-01	3.7940E-03	5.7244E-03	2.6943E-02	5.3299E-04
3.000E+02	6.0663E-01	5.5716E-02	9.7033E-04	1.4221E-03	8.1194E-03	1.3621E-04
4.000E+02	2.6798E-01	2.4712E-02	3.9021E-04	5.7122E-04	3.6016E-03	5.4847E-05
5.000E+02	1.4713E-01	1.3593E-02	2.0035E-04	2.9673E-04	1.9816E-03	2.8162E-05
6.000E+02	9.2627E-02	8.5661E-03	1.1975E-04	1.8024E-04	1.2488E-03	1.6817E-05
8.000E+02	4.7187E-02	4.3667E-03	5.6192E-05	8.8001E-05	6.3664E-04	7.8831E-06
1.000E+03	2.9356E-02	2.7165E-03	3.2726E-05	5.3725E-05	3.9607E-04	4.6034E-06
1.500E+03	1.3704E-02	1.2670E-03	1.3732E-05	2.4226E-05	1.8474E-04	1.9218E-06

Z= 26

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2
1.000E+00	3.9857E+04	3.8858E+03	5.7077E+03	1.4494E+03
1.500E+00	1.4643E+04	9.1699E+02	1.3430E+03	6.6498E+02
2.000E+00	6.8300E+03	3.1465E+02	4.5981E+02	3.7300E+02
3.000E+00	2.1799E+03	6.5287E+01	9.5061E+01	1.5924E+02
4.000E+00	9.2538E+02	2.0381E+01	2.9585E+01	8.5180E+01
5.000E+00	4.6389E+02	8.0514E+00	1.1655E+01	5.1306E+01
6.000E+00	2.5970E+02	3.7147E+00	5.3354E+00	3.3508E+01
7.076E+00	1.5188E+02	1.8328E+00	2.6255E+00	2.2581E+01
7.133E+00	1.4796E+02	1.7710E+00	2.5366E+00	2.2149E+01
8.000E+00	1.0126E+02	1.0799E+00	1.5435E+00	1.6745E+01
1.000E+01	4.7794E+01	4.0928E-01	5.8256E-01	9.6078E+00
1.500E+01	1.1715E+01	6.7839E-02	9.5675E-02	3.3725E+00
2.000E+01	4.1913E+00	1.8439E-02	2.5790E-02	1.5591E+00
3.000E+01	9.5049E-01	2.8880E-03	3.9843E-03	5.0603E-01
4.000E+01	3.2481E-01	7.7194E-04	1.0525E-03	2.2228E-01
5.000E+01	1.4027E-01	2.7750E-04	3.7440E-04	1.1599E-01
6.000E+01	7.0419E-02	1.2055E-04	1.6133E-04	6.7690E-02
8.000E+01	2.3695E-02	3.2665E-05	4.3038E-05	2.8626E-02
1.000E+02	1.0210E-02	1.2011E-05	1.5658E-05	1.4583E-02
1.500E+02	2.2606E-03	2.0413E-06	2.6136E-06	4.2521E-03
2.000E+02	8.0045E-04	6.0848E-07	7.7779E-07	1.7805E-03
3.000E+02	1.9955E-04	1.2090E-07	1.5729E-07	5.3664E-04
4.000E+02	8.0145E-05	4.1355E-08	5.6187E-08	2.3809E-04
5.000E+02	4.1642E-05	1.8969E-08	2.7010E-08	1.3105E-04
6.000E+02	2.5335E-05	1.0330E-08	1.5637E-08	8.2630E-05
8.000E+02	1.2394E-05	4.2467E-09	7.1474E-09	4.2197E-05
1.000E+03	7.5357E-06	2.2771E-09	4.1768E-09	2.6313E-05
1.500E+03	3.4206E-06	8.5377E-10	1.8247E-09	1.2399E-05

Z= 27 10 STATES, 28 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	7.6807	.96958
2 S 1/2	2.00	.9230	.72111
2 P 1/2	2.00	.8076	.59031
2 P 3/2	4.00	.7923	.58548
3 S 1/2	2.00	.1097	.35790
3 P 1/2	2.00	.0742	.24012
3 P 3/2	4.00	.0723	.23574
3 D 3/2	2.80	.0139	.04687
3 D 5/2	4.20	.0137	.04645
4 S 1/2	2.00	.0078	.05436

Z= 27 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	9.5820E+05	.0E+00	8.5000E+05	1.0667E+05	1.5298E+03
1.5000E+00	3.6136E+05	.0E+00	3.2041E+05	4.0241E+04	7.0786E+02
2.0000E+00	1.7371E+05	.0E+00	1.5370E+05	1.9612E+04	3.9910E+02
3.0000E+00	5.9631E+04	.0E+00	5.2558E+04	6.9013E+03	1.7152E+02
4.0000E+00	2.7395E+04	.0E+00	2.4079E+04	3.2237E+03	9.2299E+01
5.0000E+00	1.4844E+04	.0E+00	1.3021E+04	1.7671E+03	5.5869E+01
6.0000E+00	8.9519E+03	.0E+00	7.8409E+03	1.0744E+03	3.6643E+01
7.6731E+00	4.4960E+03	.0E+00	3.9311E+03	5.4446E+02	2.0399E+01
7.7345E+00	3.4342E+04	2.9946E+04	3.8437E+03	5.3251E+02	2.0009E+01
8.0000E+00	3.1618E+04	2.7621E+04	3.4943E+03	4.8475E+02	1.8434E+01
1.0000E+01	1.7887E+04	1.5761E+04	1.8552E+03	2.5944E+02	1.0630E+01
1.5000E+01	5.9822E+03	5.3175E+03	5.7898E+02	8.1983E+01	3.7639E+00
2.0000E+01	2.6788E+03	2.3908E+03	2.5052E+02	3.5736E+01	1.7508E+00
3.0000E+01	8.3552E+02	7.4838E+02	7.5685E+01	1.0884E+01	5.7293E-01
4.0000E+01	3.5832E+02	3.2144E+02	3.2006E+01	4.6237E+00	2.5302E-01
5.0000E+01	1.8404E+02	1.6523E+02	1.6314E+01	2.3642E+00	1.3254E-01
6.0000E+01	1.0619E+02	9.5385E+01	9.3714E+00	1.3595E+00	7.7585E-02
8.0000E+01	4.4244E+01	3.9761E+01	3.8852E+00	5.6518E-01	3.2955E-02
1.0000E+02	2.2328E+01	2.0071E+01	1.9559E+00	2.8503E-01	1.6840E-02
1.5000E+02	6.4270E+00	5.7783E+00	5.6165E-01	8.2055E-02	4.9347E-03
2.0000E+02	2.6737E+00	2.4040E+00	2.3349E-01	3.4160E-02	2.0725E-03
3.0000E+02	8.0084E-01	7.2006E-01	6.9914E-02	1.0243E-02	6.2687E-04
4.0000E+02	3.5436E-01	3.1862E-01	3.0936E-02	4.5341E-03	2.7866E-04
5.0000E+02	1.9475E-01	1.7511E-01	1.6995E-02	2.4916E-03	1.5355E-04
6.0000E+02	1.2268E-01	1.1031E-01	1.0700E-02	1.5688E-03	9.6891E-05
8.0000E+02	6.2523E-02	5.6228E-02	5.4464E-03	7.9870E-04	4.9504E-05
1.0000E+03	3.8896E-02	3.4985E-02	3.3842E-03	4.9628E-04	3.0873E-05
1.5000E+03	1.8144E-02	1.6324E-02	1.5745E-03	2.3093E-04	1.4531E-05

Z= 27

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	1.2303E+05	2.4630E+05	4.8067E+05	2.3353E+04	2.3290E+04
1.500E+00	.0E+00	6.5522E+04	8.6993E+04	1.6789E+05	1.0960E+04	8.7996E+03
2.000E+00	.0E+00	3.9485E+04	3.9158E+04	7.5058E+04	6.2181E+03	4.1769E+03
3.000E+00	.0E+00	1.7945E+04	1.1943E+04	2.2670E+04	2.6890E+03	1.3655E+03
4.000E+00	.0E+00	9.8077E+03	4.9471E+03	9.3240E+03	1.4419E+03	5.8985E+02
5.000E+00	.0E+00	5.9948E+03	2.4450E+03	4.5815E+03	8.7375E+02	2.9979E+02
6.000E+00	.0E+00	3.9525E+03	1.3574E+03	2.5310E+03	5.7343E+02	1.6973E+02
7.673E+00	.0E+00	2.2101E+03	6.0359E+02	1.1174E+03	3.1939E+02	7.7158E+01
7.734E+00	2.9946E+04	2.1681E+03	5.8775E+02	1.0878E+03	3.1328E+02	7.5183E+01
8.000E+00	2.7621E+04	1.9984E+03	5.2508E+02	9.7083E+02	2.8865E+02	6.7350E+01
1.000E+01	1.5761E+04	1.1545E+03	2.4713E+02	4.5365E+02	1.6648E+02	3.2222E+01
1.500E+01	5.3175E+03	4.0869E+02	6.0634E+01	1.0966E+02	5.8960E+01	8.1070E+00
2.000E+01	2.3908E+03	1.8972E+02	2.1822E+01	3.8979E+01	2.7424E+01	2.9586E+00

Z= 27

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
3.000E+01	7.4838E+02	6.1866E+01	5.0262E+00	8.7929E+00	8.9734E+00	6.9124E-01
4.000E+01	3.2144E+02	2.7255E+01	1.7476E+00	3.0040E+00	3.9628E+00	2.4248E-01
5.000E+01	1.6523E+02	1.4252E+01	7.6606E-01	1.2966E+00	2.0760E+00	1.0684E-01
6.000E+01	9.5385E+01	8.3308E+00	3.8987E-01	6.5073E-01	1.2137E+00	5.4571E-02
8.000E+01	3.9761E+01	3.5317E+00	1.3445E-01	2.1902E-01	5.1546E-01	1.8907E-02
1.000E+02	2.0071E+01	1.8024E+00	5.9164E-02	9.4415E-02	2.6337E-01	8.3451E-03
1.500E+02	5.7783E+00	5.2709E-01	1.3633E-02	2.0922E-02	7.7165E-02	1.9317E-03
2.000E+02	2.4040E+00	2.2112E-01	4.9577E-03	7.4137E-03	3.2406E-02	7.0427E-04
3.000E+02	7.2006E-01	6.6795E-02	1.2676E-03	1.8509E-03	9.7998E-03	1.8071E-04
4.000E+02	3.1862E-01	2.9680E-02	5.1273E-04	7.4300E-04	4.3556E-03	7.2889E-05
5.000E+02	1.7511E-01	1.6345E-02	2.6382E-04	3.8590E-04	2.3992E-03	3.7490E-05
6.000E+02	1.1031E-01	1.0307E-02	1.5787E-04	2.3438E-04	1.5130E-03	2.2430E-05
8.000E+02	5.6228E-02	5.2576E-03	7.4028E-05	1.1477E-04	7.7184E-04	1.0521E-05
1.000E+03	3.4985E-02	3.2711E-03	4.3223E-05	6.9890E-05	4.8020E-04	6.1462E-06
1.500E+03	1.6324E-02	1.5248E-03	1.8110E-05	3.1631E-05	2.2386E-04	2.5686E-06

Z= 27

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2
1.000E+00	4.5316E+04	5.9628E+03	8.7470E+03	1.5298E+03
1.500E+00	1.6963E+04	1.4290E+03	2.0897E+03	7.0786E+02
2.000E+00	7.9992E+03	4.9539E+02	7.2271E+02	3.9910E+02
3.000E+00	2.5905E+03	1.0444E+02	1.5180E+02	1.7152E+02
4.000E+00	1.1111E+03	3.3022E+01	4.7838E+01	9.2299E+01
5.000E+00	5.6143E+02	1.3164E+01	1.9016E+01	5.5869E+01
6.000E+00	3.1627E+02	6.1161E+00	8.8129E+00	3.6643E+01
7.673E+00	1.4272E+02	2.1379E+00	3.0516E+00	2.0399E+01
7.734E+00	1.3903E+02	2.0658E+00	2.9482E+00	2.0009E+01
8.000E+00	1.2442E+02	1.7865E+00	2.5479E+00	1.8434E+01
1.000E+01	5.9088E+01	6.7976E-01	9.6526E-01	1.0630E+01
1.500E+01	1.4642E+01	1.1396E-01	1.6031E-01	3.7639E+00
2.000E+01	5.2776E+00	3.1247E-02	4.3589E-02	1.7508E+00
3.000E+01	1.2081E+00	4.9335E-03	6.7820E-03	5.7293E-01
4.000E+01	4.1533E-01	1.3255E-03	1.8004E-03	2.5302E-01
5.000E+01	1.8017E-01	4.7848E-04	6.4359E-04	1.3254E-01
6.000E+01	9.0738E-02	2.0865E-04	2.7791E-04	7.7585E-02
8.000E+01	3.0684E-02	5.6797E-05	7.4568E-05	3.2955E-02
1.000E+02	1.3265E-02	2.0979E-05	2.7200E-05	1.6840E-02
1.500E+02	2.9506E-03	3.5810E-06	4.5688E-06	4.9347E-03
2.000E+02	1.0476E-03	1.0714E-06	1.3600E-06	2.0725E-03
3.000E+02	2.6188E-04	2.1315E-07	2.7660E-07	6.2687E-04
4.000E+02	1.0539E-04	7.3358E-08	9.8736E-08	2.7866E-04
5.000E+02	5.4814E-05	3.3480E-08	4.7565E-08	1.5355E-04
6.000E+02	3.3318E-05	1.8424E-08	2.7347E-08	9.6891E-05
8.000E+02	1.6321E-05	7.6037E-09	1.2442E-08	4.9504E-05
1.000E+03	9.9213E-06	4.0736E-09	7.2481E-09	3.0873E-05
1.500E+03	4.5021E-06	1.5049E-09	3.1301E-09	1.4531E-05

NICKEL

Z= 28 10 STATES, 30 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	8.3029	.97047
2 S 1/2	2.00	1.0065	.72842
2 P 1/2	2.00	.8850	.60096
2 P 3/2	4.00	.8670	.59583
3 S 1/2	2.00	.1187	.36365
3 P 1/2	2.00	.0805	.24695
3 P 3/2	4.00	.0782	.24210
3 D 3/2	3.20	.0149	.05093
3 D 5/2	4.80	.0147	.05041
4 S 1/2	2.00	.0081	.05348

Z= 28 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	9.5994E+05	.0E+00	8.3431E+05	1.2402E+05	1.6057E+03
1.0055E+00	9.4652E+05	.0E+00	8.2251E+05	1.2243E+05	1.5895E+03
1.0136E+00	1.0567E+06	.0E+00	9.3501E+05	1.2016E+05	1.5664E+03
1.5000E+00	4.1221E+05	.0E+00	3.6470E+05	4.6755E+04	7.4914E+02
2.0000E+00	1.9925E+05	.0E+00	1.7604E+05	2.2784E+04	4.2448E+02
3.0000E+00	6.8764E+04	.0E+00	6.0561E+04	8.0194E+03	1.8367E+02
4.0000E+00	3.1664E+04	.0E+00	2.7815E+04	3.7494E+03	9.9383E+01
5.0000E+00	1.7190E+04	.0E+00	1.5072E+04	2.0576E+03	6.0428E+01
6.0000E+00	1.0380E+04	.0E+00	9.0877E+03	1.2522E+03	3.9792E+01
8.0000E+00	4.6428E+03	.0E+00	4.0567E+03	5.6589E+02	2.0148E+01
8.2946E+00	4.1934E+03	.0E+00	3.6632E+03	5.1169E+02	1.8462E+01
8.3610E+00	3.1661E+04	2.7560E+04	3.5817E+03	5.0044E+02	1.8109E+01
1.0000E+01	2.0226E+04	1.7755E+04	2.1566E+03	3.0321E+02	1.1675E+01
1.5000E+01	6.8072E+03	6.0322E+03	6.7479E+02	9.6034E+01	4.1691E+00
2.0000E+01	3.0685E+03	2.7320E+03	2.9260E+02	4.1948E+01	1.9509E+00
3.0000E+01	9.6321E+02	8.6106E+02	8.8684E+01	1.2819E+01	6.4353E-01
4.0000E+01	4.1482E+02	3.7148E+02	3.7595E+01	5.4593E+00	2.8569E-01
5.0000E+01	2.1366E+02	1.9151E+02	1.9202E+01	2.7972E+00	1.5023E-01
6.0000E+01	1.2357E+02	1.1082E+02	1.1049E+01	1.6115E+00	8.8200E-02
8.0000E+01	5.1651E+01	4.6349E+01	4.5926E+00	6.7171E-01	3.7627E-02
1.0000E+02	2.6127E+01	2.3451E+01	2.3166E+00	3.3945E-01	1.9287E-02
1.5000E+02	7.5485E+00	6.7773E+00	6.6749E-01	9.8062E-02	5.6795E-03
2.0000E+02	3.1476E+00	2.8262E+00	2.7811E-01	4.0916E-02	2.3925E-03
3.0000E+02	9.4549E-01	8.4896E-01	8.3497E-02	1.2303E-02	7.2614E-04
4.0000E+02	4.1905E-01	3.7627E-01	3.7003E-02	5.4545E-03	3.2344E-04
5.0000E+02	2.3053E-01	2.0701E-01	2.0347E-02	3.0002E-03	1.7844E-04
6.0000E+02	1.4531E-01	1.3049E-01	1.2817E-02	1.8902E-03	1.1266E-04
8.0000E+02	7.4099E-02	6.6551E-02	6.5273E-03	9.6272E-04	5.7586E-05
1.0000E+03	4.6102E-02	4.1413E-02	4.0557E-03	5.9820E-04	3.5911E-05
1.5000E+03	2.1494E-02	1.9313E-02	1.8858E-03	2.7818E-04	1.6882E-05

Z= 28

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	2.8288E+05	5.5143E+05	2.5219E+04	2.6195E+04
1.006E+00	.0E+00	.0E+00	2.7889E+05	5.4362E+05	2.4973E+04	2.5876E+04
1.014E+00	.0E+00	1.2922E+05	2.7323E+05	5.3256E+05	2.4622E+04	2.5420E+04
1.500E+00	.0E+00	6.9355E+04	1.0083E+05	1.9452E+05	1.1954E+04	1.0097E+04
2.000E+00	.0E+00	4.2446E+04	4.5845E+04	8.7747E+04	6.8225E+03	4.8498E+03
3.000E+00	.0E+00	1.9588E+04	1.4155E+04	2.6817E+04	2.9724E+03	1.6090E+03
4.000E+00	.0E+00	1.0795E+04	5.9090E+03	1.1111E+04	1.6027E+03	7.0225E+02
5.000E+00	.0E+00	6.6408E+03	2.9387E+03	5.4925E+03	9.7579E+02	3.5977E+02
6.000E+00	.0E+00	4.4003E+03	1.6394E+03	3.0480E+03	6.4304E+02	2.0498E+02
8.000E+00	.0E+00	2.2412E+03	6.3862E+02	1.1769E+03	3.2582E+02	8.2096E+01
8.295E+00	.0E+00	2.0547E+03	5.6625E+02	1.0423E+03	2.9857E+02	7.3014E+01

Z= 28

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
8.361E+00	2.7560E+04	2.0156E+03	5.5139E+02	1.0147E+03	2.9286E+02	7.1146E+01
1.000E+01	1.7755E+04	1.3018E+03	3.0216E+02	5.5267E+02	1.8885E+02	3.9535E+01
1.500E+01	6.0322E+03	4.6510E+02	7.4862E+01	1.3482E+02	6.7454E+01	1.0058E+01
2.000E+01	2.7320E+03	2.1726E+02	2.7123E+01	4.8224E+01	3.1563E+01	3.6992E+00
3.000E+01	8.6106E+02	7.1417E+01	6.3013E+00	1.0966E+01	1.0411E+01	8.7296E-01
4.000E+01	3.7148E+02	3.1626E+01	2.2036E+00	3.7662E+00	4.6216E+00	3.0813E-01
5.000E+01	1.9151E+02	1.6600E+01	9.7009E-01	1.6319E+00	2.4304E+00	1.3639E-01
6.000E+01	1.1082E+02	9.7317E+00	4.9536E-01	8.2153E-01	1.4253E+00	6.9917E-02
8.000E+01	4.6349E+01	4.1432E+00	1.7167E-01	2.7773E-01	6.0791E-01	2.4354E-02
1.000E+02	2.3451E+01	2.1208E+00	7.5803E-02	1.2009E-01	3.1156E-01	1.0788E-02
1.500E+02	6.7773E+00	6.2320E-01	1.7564E-02	2.6733E-02	9.1733E-02	2.5114E-03
2.000E+02	2.8262E+00	2.6220E-01	6.4076E-03	9.4974E-03	3.8639E-02	9.1873E-04
3.000E+02	8.4896E-01	7.9474E-02	1.6448E-03	2.3773E-03	1.1726E-02	2.3663E-04
4.000E+02	3.7627E-01	3.5381E-02	6.6675E-04	9.5535E-04	5.2217E-03	9.5678E-05
5.000E+02	2.0701E-01	1.9507E-02	3.4360E-04	4.9635E-04	2.8796E-03	4.9319E-05
6.000E+02	1.3049E-01	1.2310E-02	2.0567E-04	3.0178E-04	1.8173E-03	2.9510E-05
8.000E+02	6.6551E-02	6.2828E-03	9.6536E-05	1.4797E-04	9.2761E-04	1.3878E-05
1.000E+03	4.1413E-02	3.9094E-03	5.6551E-05	8.9803E-05	5.7718E-04	8.1053E-06
1.500E+03	1.9313E-02	1.8214E-03	2.3657E-05	4.0792E-05	2.6893E-04	3.3949E-06

Z= 28

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2
1.000E+00	5.0954E+04	8.7849E+03	1.2870E+04	1.6057E+03
1.006E+00	5.0325E+04	8.6222E+03	1.2631E+04	1.5895E+03
1.014E+00	4.9429E+04	8.3923E+03	1.2293E+04	1.5664E+03
1.500E+00	1.9442E+04	2.1387E+03	3.1226E+03	7.4914E+02
2.000E+00	9.2727E+03	7.4866E+02	1.0903E+03	4.2448E+02
3.000E+00	3.0454E+03	1.6018E+02	2.3236E+02	1.8367E+02
4.000E+00	1.3192E+03	5.1238E+01	7.4078E+01	9.9383E+01
5.000E+00	6.7171E+02	2.0611E+01	2.9711E+01	6.0428E+01
6.000E+00	3.8069E+02	9.6388E+00	1.3858E+01	3.9792E+01
8.000E+00	1.5110E+02	2.8358E+00	4.0353E+00	2.0148E+01
8.295E+00	1.3422E+02	2.4280E+00	3.4526E+00	1.8462E+01
8.361E+00	1.3075E+02	2.3462E+00	3.3357E+00	1.8109E+01
1.000E+01	7.2206E+01	1.0833E+00	1.5343E+00	1.1675E+01
1.500E+01	1.8081E+01	1.8334E-01	2.5719E-01	4.1691E+00
2.000E+01	6.5647E+00	5.0702E-02	7.0527E-02	1.9509E+00
3.000E+01	1.5166E+00	8.0743E-03	1.1067E-02	6.4353E-01
4.000E+01	5.2449E-01	2.1799E-03	2.9517E-03	2.8569E-01
5.000E+01	2.2852E-01	7.9034E-04	1.0585E-03	1.5023E-01
6.000E+01	1.1547E-01	3.4565E-04	4.5887E-04	8.8200E-02
8.000E+01	3.9229E-02	9.4597E-05	1.2366E-04	3.7627E-02
1.000E+02	1.7016E-02	3.5048E-05	4.5272E-05	1.9287E-02
1.500E+02	3.8036E-03	6.0209E-06	7.6414E-06	5.6795E-03
2.000E+02	1.3541E-03	1.8059E-06	2.2851E-06	2.3925E-03
3.000E+02	3.3954E-04	3.6107E-07	4.6473E-07	7.2614E-04
4.000E+02	1.3687E-04	1.2411E-07	1.6599E-07	3.2344E-04
5.000E+02	7.1177E-05	5.6921E-08	8.0101E-08	1.7844E-04
6.000E+02	4.3304E-05	3.1144E-08	4.6102E-08	1.1266E-04
8.000E+02	2.1197E-05	1.2817E-08	2.1008E-08	5.7586E-05
1.000E+03	1.2903E-05	6.8568E-09	1.2204E-08	3.5911E-05
1.500E+03	5.8421E-06	2.5029E-09	5.2259E-09	1.6882E-05

2.165 (104)

Z= 29 10 STATES, 30 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	8.9433	.97133
2 S 1/2	2.00	1.0862	.73538
2 P 1/2	2.00	.9586	.61124
2 P 3/2	4.00	.9375	.60579
3 S 1/2	2.00	.1213	.36527
3 P 1/2	2.00	.0805	.24964
3 P 3/2	4.00	.0779	.24416
3 D 3/2	4.00	.0101	.05049
3 D 5/2	6.00	.0098	.04980
4 S 1/2	1.00	.0071	.03965

Z= 29 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	1.1148E+06	.0E+00	9.7115E+05	1.4300E+05	6.3076E+02
1.0851E+00	8.9220E+05	.0E+00	7.7382E+05	1.1784E+05	5.4425E+02
1.0938E+00	9.9081E+05	.0E+00	8.7466E+05	1.1562E+05	5.3638E+02
1.5000E+00	4.6570E+05	.0E+00	4.1172E+05	5.3681E+04	2.9626E+02
2.0000E+00	2.2679E+05	.0E+00	2.0051E+05	2.6104E+04	1.6897E+02
3.0000E+00	7.8601E+04	.0E+00	6.9354E+04	9.1735E+03	7.3643E+01
4.0000E+00	3.6289E+04	.0E+00	3.1960E+04	4.2885E+03	4.0148E+01
5.0000E+00	1.9728E+04	.0E+00	1.7349E+04	2.3543E+03	2.4516E+01
6.0000E+00	1.1924E+04	.0E+00	1.0474E+04	1.4338E+03	1.6204E+01
8.0000E+00	5.3412E+03	.0E+00	4.6840E+03	6.4890E+02	8.2563E+00
8.9344E+00	3.9136E+03	.0E+00	3.4301E+03	4.7711E+02	6.3290E+00
9.0059E+00	2.8990E+04	2.5164E+04	3.3537E+03	4.6661E+02	6.2078E+00
1.0000E+01	2.2626E+04	1.9780E+04	2.4930E+03	3.4808E+02	4.8069E+00
1.5000E+01	7.7106E+03	6.8164E+03	7.8192E+02	1.1049E+02	1.7309E+00
2.0000E+01	3.4905E+03	3.1015E+03	3.3974E+02	4.8364E+01	8.1459E-01
3.0000E+01	1.1033E+03	9.8490E+02	1.0329E+02	1.4830E+01	2.7080E-01
4.0000E+01	4.7709E+02	4.2674E+02	4.3888E+01	6.3316E+00	1.2084E-01
5.0000E+01	2.4644E+02	2.2066E+02	2.2459E+01	3.2508E+00	6.3783E-02
6.0000E+01	1.4283E+02	1.2797E+02	1.2943E+01	1.8761E+00	3.7556E-02
8.0000E+01	5.9891E+01	5.3697E+01	5.3938E+00	7.8418E-01	1.6090E-02
1.0000E+02	3.0364E+01	2.7233E+01	2.7261E+00	3.9709E-01	8.2726E-03
1.5000E+02	8.8055E+00	7.8999E+00	7.8808E-01	1.1512E-01	2.4480E-03
2.0000E+02	3.6803E+00	3.3021E+00	3.2907E-01	4.8141E-02	1.0343E-03
3.0000E+02	1.1086E+00	9.9473E-01	9.9062E-02	1.4516E-02	3.1503E-04
4.0000E+02	4.9215E-01	4.4160E-01	4.3960E-02	6.4459E-03	1.4061E-04
5.0000E+02	2.7102E-01	2.4319E-01	2.4198E-02	3.5489E-03	7.7664E-05
6.0000E+02	1.7093E-01	1.5339E-01	1.5252E-02	2.2372E-03	4.9080E-05
8.0000E+02	8.7216E-02	7.8280E-02	7.7706E-03	1.1400E-03	2.5113E-05
1.0000E+03	5.4268E-02	4.8716E-02	4.8281E-03	7.0835E-04	1.5671E-05
1.5000E+03	2.5289E-02	2.2709E-02	2.2436E-03	3.2918E-04	7.3814E-06

Z= 29

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.0000E+00	.0E+00	.0E+00	3.3222E+05	6.3893E+05	2.6787E+04	2.8747E+04
1.0851E+00	.0E+00	.0E+00	2.6287E+05	5.1095E+05	2.3207E+04	2.4034E+04
1.094E+00	.0E+00	1.1687E+05	2.5740E+05	5.0039E+05	2.2881E+04	2.3611E+04
1.5000E+00	.0E+00	7.3393E+04	1.1543E+05	2.2290E+05	1.2833E+04	1.1312E+04
2.0000E+00	.0E+00	4.5472E+04	5.3227E+04	1.0182E+05	7.3682E+03	5.4984E+03
3.0000E+00	.0E+00	2.1258E+04	1.6634E+04	3.1461E+04	3.2346E+03	1.8511E+03
4.0000E+00	.0E+00	1.1820E+04	7.0027E+03	1.3138E+04	1.7533E+03	8.1592E+02
5.0000E+00	.0E+00	7.3160E+03	3.5031E+03	6.5298E+03	1.0723E+03	4.2122E+02
6.0000E+00	.0E+00	4.8713E+03	1.9634E+03	3.6397E+03	7.0935E+02	2.4147E+02
8.0000E+00	.0E+00	2.4992E+03	7.7021E+02	1.4146E+03	3.6171E+02	9.7602E+01
8.934E+00	.0E+00	1.9188E+03	5.3409E+02	9.7725E+02	2.7732E+02	6.8349E+01

Z= 29

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
9.006E+00	2.5164E+04	1.8822E+03	5.2009E+02	9.5136E+02	2.7202E+02	6.6602E+01
1.000E+01	1.9780E+04	1.4591E+03	3.6630E+02	6.6755E+02	2.1066E+02	4.7310E+01
1.500E+01	6.8164E+03	5.2604E+02	9.1604E+01	1.6428E+02	7.5876E+01	1.2167E+01
2.000E+01	3.1015E+03	2.4722E+02	3.3405E+01	5.9116E+01	3.5709E+01	4.5086E+00
3.000E+01	9.8490E+02	8.1911E+01	7.8271E+00	1.3549E+01	1.1870E+01	1.0744E+00
4.000E+01	4.2674E+02	3.6458E+01	2.7526E+00	4.6774E+00	5.2968E+00	3.8160E-01
5.000E+01	2.2066E+02	1.9207E+01	1.2169E+00	2.0345E+00	2.7959E+00	1.6969E-01
6.000E+01	1.2797E+02	1.1293E+01	6.2341E-01	1.0272E+00	1.6445E+00	8.7293E-02
8.000E+01	5.3697E+01	4.8280E+00	2.1709E-01	3.4877E-01	7.0443E-01	3.0565E-02
1.000E+02	2.7233E+01	2.4786E+00	9.6190E-02	1.5126E-01	3.6213E-01	1.3589E-02
1.500E+02	7.8999E+00	7.3184E-01	2.2409E-02	3.3828E-02	1.0714E-01	3.1816E-03
2.000E+02	3.3021E+00	3.0881E-01	8.2021E-03	1.2049E-02	4.5263E-02	1.1679E-03
3.000E+02	9.9473E-01	9.3924E-02	2.1136E-03	3.0242E-03	1.3784E-02	3.0200E-04
4.000E+02	4.4160E-01	4.1885E-02	8.5869E-04	1.2164E-03	6.1501E-03	1.2238E-04
5.000E+02	2.4319E-01	2.3123E-02	4.4298E-04	6.3262E-04	3.3955E-03	6.3174E-05
6.000E+02	1.5339E-01	1.4601E-02	2.6525E-04	3.8513E-04	2.1444E-03	3.7844E-05
8.000E+02	7.8280E-02	7.4571E-03	1.2479E-04	1.8865E-04	1.0953E-03	1.7819E-05
1.000E+03	4.8716E-02	4.6406E-03	7.3212E-05	1.1432E-04	6.8158E-04	1.0417E-05
1.500E+03	2.2709E-02	2.1611E-03	3.0617E-05	5.1935E-05	3.1742E-04	4.3679E-06

Z= 29

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2
1.000E+00	5.5867E+04	1.2849E+04	1.8748E+04	6.3076E+02
1.085E+00	4.6600E+04	9.7618E+03	1.4233E+04	5.4425E+02
1.094E+00	4.5770E+04	9.5017E+03	1.3853E+04	5.3638E+02
1.500E+00	2.1743E+04	3.1756E+03	4.6170E+03	2.9626E+02
2.000E+00	1.0489E+04	1.1222E+03	1.6272E+03	1.6897E+02
3.000E+00	3.4932E+03	2.4323E+02	3.5129E+02	7.3643E+01
4.000E+00	1.5274E+03	7.8606E+01	1.1317E+02	4.0148E+01
5.000E+00	7.8344E+02	3.1834E+01	4.5463E+01	2.4516E+01
6.000E+00	4.4664E+02	1.4989E+01	2.1342E+01	1.6204E+01
8.000E+00	1.7883E+02	4.4517E+00	6.3041E+00	8.2563E+00
8.934E+00	1.2474E+02	2.7745E+00	3.9202E+00	6.3290E+00
9.006E+00	1.2152E+02	2.6811E+00	3.7875E+00	6.2078E+00
1.000E+01	8.5990E+01	1.7079E+00	2.4069E+00	4.8069E+00
1.500E+01	2.1754E+01	2.9135E-01	4.0654E-01	1.7309E+00
2.000E+01	7.9533E+00	8.1196E-02	1.1233E-01	8.1459E-01
3.000E+01	1.8543E+00	1.3050E-02	1.7784E-02	2.7080E-01
4.000E+01	6.4496E-01	3.5403E-03	4.7640E-03	1.2084E-01
5.000E+01	2.8218E-01	1.2881E-03	1.7151E-03	6.3783E-02
6.000E+01	1.4304E-01	5.6523E-04	7.4540E-04	3.7556E-02
8.000E+01	4.8826E-02	1.5538E-04	2.0179E-04	1.6090E-02
1.000E+02	2.1248E-02	5.7776E-05	7.4152E-05	8.2726E-03
1.500E+02	4.7731E-03	9.9761E-06	1.2573E-05	2.4480E-03
2.000E+02	1.7039E-03	3.0027E-06	3.7679E-06	1.0343E-03
3.000E+02	4.2851E-04	6.0153E-07	7.6888E-07	3.1503E-04
4.000E+02	1.7297E-04	2.0722E-07	2.7603E-07	1.4061E-04
5.000E+02	9.0023E-05	9.4985E-08	1.3270E-07	7.7664E-05
6.000E+02	5.4784E-05	5.2161E-08	7.6697E-08	4.9080E-05
8.000E+02	2.6823E-05	2.1541E-08	3.4921E-08	2.5113E-05
1.000E+03	1.6321E-05	1.1546E-08	2.0371E-08	1.5671E-05
1.500E+03	7.3852E-06	4.2222E-09	8.8325E-09	7.3814E-06

Z= 30 10 STATES, 34 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	9.6225	.97208
2 S 1/2	2.00	1.1845	.74168
2 P 1/2	2.00	1.0505	.62048
2 P 3/2	4.00	1.0260	.61470
3 S 1/2	2.00	.1375	.37371
3 P 1/2	2.00	.0938	.25931
3 P 3/2	4.00	.0906	.25341
3 D 3/2	4.00	.0168	.05866
3 D 5/2	6.00	.0164	.05794
4 S 1/2	2.00	.0086	.05166

Z= 30 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	1.6807E+05	.0E+00	.0E+00	1.6632E+05	1.7442E+03
1.0250E+00	1.5858E+05	.0E+00	.0E+00	1.5691E+05	1.6685E+03
1.0332E+00	5.7956E+05	.0E+00	4.2394E+05	1.5398E+05	1.6447E+03
1.0495E+00	7.5725E+05	.0E+00	6.0729E+05	1.4836E+05	1.5987E+03
1.0579E+00	9.6568E+05	.0E+00	8.1853E+05	1.4558E+05	1.5758E+03
1.1833E+00	8.1799E+05	.0E+00	7.0532E+05	1.1138E+05	1.2847E+03
1.1928E+00	9.1262E+05	.0E+00	8.0209E+05	1.0926E+05	1.2660E+03
1.5000E+00	5.2338E+05	.0E+00	4.6010E+05	6.2449E+04	8.2671E+02
2.0000E+00	2.5733E+05	.0E+00	2.2648E+05	3.0373E+04	4.7299E+02
3.0000E+00	8.9793E+04	.0E+00	7.8911E+04	1.0675E+04	2.0760E+02
4.0000E+00	4.1584E+04	.0E+00	3.6478E+04	4.9922E+03	1.1352E+02
5.0000E+00	2.2657E+04	.0E+00	1.9845E+04	2.7426E+03	6.9594E+01
6.0000E+00	1.3716E+04	.0E+00	1.1998E+04	1.6713E+03	4.6164E+01
8.0000E+00	6.1560E+03	.0E+00	5.3751E+03	7.5717E+02	2.3659E+01
9.6129E+00	3.6725E+03	.0E+00	3.2033E+03	4.5402E+02	1.5233E+01
9.6899E+00	2.7139E+04	2.3548E+04	3.1318E+03	4.4400E+02	1.4941E+01
1.0000E+01	2.5136E+04	2.1851E+04	2.8647E+03	4.0651E+02	1.3839E+01
1.5000E+01	8.7019E+03	7.6670E+03	9.0061E+02	1.2925E+02	5.0235E+00
2.0000E+01	3.9568E+03	3.5057E+03	3.9206E+02	5.6659E+01	2.3774E+00
3.0000E+01	1.2583E+03	1.1206E+03	1.1955E+02	1.7420E+01	7.9642E-01
4.0000E+01	5.4607E+02	4.8735E+02	5.0914E+01	7.4537E+00	3.5720E-01
5.0000E+01	2.8290E+02	2.5278E+02	2.6102E+01	3.8332E+00	1.8924E-01
6.0000E+01	1.6433E+02	1.4693E+02	1.5066E+01	2.2177E+00	1.1174E-01
8.0000E+01	6.9126E+01	6.1855E+01	6.2940E+00	9.2837E-01	4.8079E-02
1.0000E+02	3.5124E+01	3.1441E+01	3.1870E+00	4.7099E-01	2.4794E-02
1.5000E+02	1.0224E+01	9.1548E+00	9.2436E-01	1.3699E-01	7.3729E-03
2.0000E+02	4.2829E+00	3.8356E+00	3.8679E-01	5.7409E-02	3.1243E-03
3.0000E+02	1.2937E+00	1.1587E+00	1.1675E-01	1.7356E-02	9.5490E-04
4.0000E+02	5.7525E-01	5.1522E-01	5.1887E-02	7.7191E-03	4.2699E-04
5.0000E+02	3.1710E-01	2.8402E-01	2.8588E-02	4.2539E-03	2.3608E-04
6.0000E+02	2.0011E-01	1.7925E-01	1.8028E-02	2.6830E-03	1.4926E-04
8.0000E+02	1.0217E-01	9.1535E-02	9.1894E-03	1.3677E-03	7.6388E-05
1.0000E+03	6.3579E-02	5.6972E-02	5.7096E-03	8.4988E-04	4.7637E-05
1.5000E+03	2.9613E-02	2.6545E-02	2.6516E-03	3.9466E-04	2.2352E-05

Z= 30

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.8902E+04	3.2173E+04
1.025E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.7698E+04	3.0537E+04
1.033E+00	.0E+00	.0E+00	.0E+00	4.2394E+05	2.7318E+04	3.0023E+04
1.049E+00	.0E+00	.0E+00	.0E+00	6.0729E+05	2.6584E+04	2.9033E+04
1.058E+00	.0E+00	.0E+00	2.0445E+05	6.1407E+05	2.6217E+04	2.8540E+04
1.183E+00	.0E+00	.0E+00	2.3993E+05	4.6539E+05	2.1530E+04	2.2337E+04
1.193E+00	.0E+00	1.1138E+05	2.3496E+05	4.5574E+05	2.1226E+04	2.1943E+04

Z= 30

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.500E+00	.0E+00	7.7458E+04	1.3063E+05	2.5201E+05	1.3979E+04	1.2926E+04
2.000E+00	.0E+00	4.8411E+04	6.1166E+04	1.1691E+05	8.0754E+03	6.3596E+03
3.000E+00	.0E+00	2.2932E+04	1.9385E+04	3.6594E+04	3.5717E+03	2.1728E+03
4.000E+00	.0E+00	1.2865E+04	8.2218E+03	1.5391E+04	1.9459E+03	9.6705E+02
5.000E+00	.0E+00	8.0129E+03	4.1380E+03	7.6938E+03	1.1950E+03	5.0298E+02
6.000E+00	.0E+00	5.3607E+03	2.3301E+03	4.3073E+03	7.9344E+02	2.9009E+02
8.000E+00	.0E+00	2.7699E+03	9.2039E+02	1.6849E+03	4.0704E+02	1.1833E+02
9.613E+00	.0E+00	1.7887E+03	5.0190E+02	9.1267E+02	2.6217E+02	6.5635E+01
9.690E+00	2.3548E+04	1.7546E+03	4.8875E+02	8.8849E+02	2.5715E+02	6.3959E+01
1.000E+01	2.1851E+04	1.6258E+03	4.4000E+02	7.9889E+02	2.3818E+02	5.7732E+01
1.500E+01	7.6670E+03	5.9131E+02	1.1104E+02	1.9827E+02	8.6489E+01	1.5009E+01
2.000E+01	3.5057E+03	2.7954E+02	4.0749E+01	7.1773E+01	4.0932E+01	5.6018E+00
3.000E+01	1.1206E+03	9.3344E+01	9.6285E+00	1.6578E+01	1.3711E+01	1.3481E+00
4.000E+01	4.8735E+02	4.1757E+01	3.4049E+00	5.7520E+00	6.1490E+00	4.8121E-01
5.000E+01	2.5278E+02	2.2079E+01	1.5114E+00	2.5112E+00	3.2578E+00	2.1519E-01
6.000E+01	1.4693E+02	1.3018E+01	7.7680E-01	1.2716E+00	1.9238E+00	1.1109E-01
8.000E+01	6.1855E+01	5.5886E+00	2.7180E-01	4.3358E-01	8.2670E-01	3.9095E-02
1.000E+02	3.1441E+01	2.8776E+00	1.2084E-01	1.8860E-01	4.2626E-01	1.7447E-02
1.500E+02	9.1548E+00	8.5368E-01	2.8306E-02	4.2374E-02	1.2673E-01	4.1084E-03
2.000E+02	3.8356E+00	3.6126E-01	1.0395E-02	1.5132E-02	5.3696E-02	1.5131E-03
3.000E+02	1.1587E+00	1.1025E-01	2.6895E-03	3.8082E-03	1.6409E-02	3.9292E-04
4.000E+02	5.1522E-01	4.9259E-02	1.0944E-03	1.5337E-03	7.3357E-03	1.5962E-04
5.000E+02	2.8402E-01	2.7225E-02	5.6516E-04	7.9868E-04	4.0548E-03	8.2458E-05
6.000E+02	1.7925E-01	1.7203E-02	3.3863E-04	4.8638E-04	2.5626E-03	4.9460E-05
8.000E+02	9.1535E-02	8.7917E-03	1.5981E-04	2.3786E-04	1.3097E-03	2.3311E-05
1.000E+03	5.6972E-02	5.4717E-03	9.3676E-05	1.4428E-04	8.1512E-04	1.3661E-05
1.500E+03	2.6545E-02	2.5469E-03	3.9325E-05	6.5322E-05	3.7940E-04	5.7293E-06

Z= 30

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2
1.000E+00	6.2573E+04	1.7341E+04	2.5332E+04	1.7442E+03
1.025E+00	5.9345E+04	1.5987E+04	2.3349E+04	1.6685E+03
1.033E+00	5.8331E+04	1.5570E+04	2.2739E+04	1.6447E+03
1.049E+00	5.6381E+04	1.4780E+04	2.1583E+04	1.5987E+03
1.058E+00	5.5411E+04	1.4394E+04	2.1016E+04	1.5758E+03
1.183E+00	4.3221E+04	9.8813E+03	1.4413E+04	1.2847E+03
1.193E+00	4.2448E+04	9.6178E+03	1.4028E+04	1.2660E+03
1.500E+00	2.4840E+04	4.3594E+03	6.3448E+03	8.2671E+02
2.000E+00	1.2122E+04	1.5567E+03	2.2591E+03	4.7299E+02
3.000E+00	4.0941E+03	3.4204E+02	4.9415E+02	2.0760E+02
4.000E+00	1.8068E+03	1.1168E+02	1.6078E+02	1.1352E+02
5.000E+00	9.3331E+02	4.5691E+01	6.5579E+01	6.9594E+01
6.000E+00	5.3514E+02	2.1658E+01	3.0992E+01	4.6164E+01
8.000E+00	2.1615E+02	6.4805E+00	9.1777E+00	2.3659E+01
9.613E+00	1.1908E+02	2.9604E+00	4.1759E+00	1.5233E+01
9.690E+00	1.1600E+02	2.8608E+00	4.0347E+00	1.4941E+01
1.000E+01	1.0458E+02	2.4987E+00	3.5213E+00	1.3839E+01
1.500E+01	2.6726E+01	4.2961E-01	5.9914E-01	5.0235E+00
2.000E+01	9.8380E+00	1.2060E-01	1.6672E-01	2.3774E+00
3.000E+01	2.3145E+00	1.9576E-02	2.6649E-02	7.9642E-01
4.000E+01	8.1099E-01	5.3372E-03	7.1721E-03	3.5720E-01
5.000E+01	3.5568E-01	1.9488E-03	2.5908E-03	1.8924E-01
6.000E+01	1.8089E-01	8.5783E-04	1.1291E-03	1.1174E-01
8.000E+01	6.2031E-02	2.3695E-04	3.0710E-04	4.8079E-02
1.000E+02	2.7077E-02	8.8429E-05	1.1314E-04	2.4794E-02
1.500E+02	6.1141E-03	1.5350E-05	1.9303E-05	7.3729E-03
2.000E+02	2.1890E-03	4.6358E-06	5.7976E-06	3.1243E-03
3.000E+02	5.5206E-04	9.3200E-07	1.1877E-06	9.5490E-04
4.000E+02	2.2301E-04	3.2225E-07	4.2494E-07	4.2699E-04
5.000E+02	1.1623E-04	1.4776E-07	2.0505E-07	2.3608E-04

Z= 30

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2
6.000E+02	7.0756E-05	8.1075E-08	1.1785E-07	1.4926E-04
8.000E+02	3.4649E-05	3.3611E-08	5.3678E-08	7.6388E-05
1.000E+03	2.1049E-05	1.7969E-08	3.1284E-08	4.7637E-05
1.500E+03	9.5147E-06	6.5099E-09	1.3445E-08	2.2352E-05

Z= 31 12 STATES, 34 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	10.3312	.97279
2 S 1/2	2.00	1.2908	.74761
2 P 1/2	2.00	1.1504	.62919
2 P 3/2	4.00	1.1220	.62309
3 S 1/2	2.00	.1578	.38269
3 P 1/2	2.00	.1110	.26950
3 P 3/2	4.00	.1073	.26321
3 D 3/2	4.00	.0274	.06709
3 D 5/2	6.00	.0269	.06632
4 S 1/2	2.00	.0117	.06928
4 P 1/2	.33	.0050	.02113
4 P 3/2	.67	.0049	.02000

Z= 31 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	1.9591E+05	.0E+00	.0E+00	1.9284E+05	3.0643E+03
1.1209E+00	1.4955E+05	.0E+00	.0E+00	1.4707E+05	2.4818E+03
1.1299E+00	5.7300E+05	.0E+00	4.2626E+05	1.4429E+05	2.4450E+03
1.1493E+00	6.7459E+05	.0E+00	5.3370E+05	1.3852E+05	2.3679E+03
1.1585E+00	8.7605E+05	.0E+00	7.3782E+05	1.3590E+05	2.3326E+03
1.2895E+00	7.4761E+05	.0E+00	6.4079E+05	1.0491E+05	1.9024E+03
1.2998E+00	8.3032E+05	.0E+00	7.2555E+05	1.0290E+05	1.8735E+03
1.5000E+00	5.8837E+05	.0E+00	5.1451E+05	7.2441E+04	1.4188E+03
2.0000E+00	2.9062E+05	.0E+00	2.5458E+05	3.5246E+04	7.9781E+02
3.0000E+00	1.0207E+05	.0E+00	8.9342E+04	1.2390E+04	3.4115E+02
4.0000E+00	4.7400E+04	.0E+00	4.1422E+04	5.7960E+03	1.8209E+02
5.0000E+00	2.5875E+04	.0E+00	2.2579E+04	3.1856E+03	1.1036E+02
6.0000E+00	1.5687E+04	.0E+00	1.3672E+04	1.9423E+03	7.2944E+01
8.0000E+00	7.0557E+03	.0E+00	6.1377E+03	8.8093E+02	3.7012E+01
1.0000E+01	3.7698E+03	.0E+00	3.2750E+03	4.7334E+02	2.1524E+01
1.0321E+01	3.4482E+03	.0E+00	2.9950E+03	4.3327E+02	1.9911E+01
1.0404E+01	2.5222E+04	2.1851E+04	2.9282E+03	4.2370E+02	1.9523E+01
1.5000E+01	9.7628E+03	8.5724E+03	1.0320E+03	1.5072E+02	7.7586E+00
2.0000E+01	4.4603E+03	3.9404E+03	4.5008E+02	6.6155E+01	3.6621E+00
3.0000E+01	1.4267E+03	1.2675E+03	1.3764E+02	2.0389E+01	1.2255E+00
4.0000E+01	6.2186E+02	5.5383E+02	5.8743E+01	8.7414E+00	5.4991E-01
5.0000E+01	3.2300E+02	2.8803E+02	3.0169E+01	4.5028E+00	2.9160E-01
6.0000E+01	1.8802E+02	1.6779E+02	1.7440E+01	2.6086E+00	1.7236E-01
8.0000E+01	7.9340E+01	7.0868E+01	7.3030E+00	1.0946E+00	7.4295E-02
1.0000E+02	4.0406E+01	3.6107E+01	3.7048E+00	5.5635E-01	3.8374E-02
1.5000E+02	1.1804E+01	1.0552E+01	1.0780E+00	1.6232E-01	1.1444E-02
2.0000E+02	4.9561E+00	4.4311E+00	4.5203E-01	6.8170E-02	4.8594E-03
3.0000E+02	1.5013E+00	1.3423E+00	1.3680E-01	2.0663E-02	1.4890E-03
4.0000E+02	6.6861E-01	5.9785E-01	6.0887E-02	9.2042E-03	6.6672E-04
5.0000E+02	3.6893E-01	3.2991E-01	3.3579E-02	5.0768E-03	3.6894E-04
6.0000E+02	2.3297E-01	2.0834E-01	2.1186E-02	3.2037E-03	2.3335E-04
8.0000E+02	1.1901E-01	1.0645E-01	1.0804E-02	1.6340E-03	1.1941E-04
1.0000E+03	7.4068E-02	6.6266E-02	6.7130E-03	1.0153E-03	7.4396E-05
1.5000E+03	3.4482E-02	3.0861E-02	3.1154E-03	4.7115E-04	3.4776E-05

Z= 31

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.1105E+04	3.5811E+04
1.121E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.5567E+04	2.8191E+04
1.130E+00	.0E+00	.0E+00	.0E+00	4.2626E+05	2.5216E+04	2.7714E+04
1.149E+00	.0E+00	.0E+00	.0E+00	5.3370E+05	2.4478E+04	2.6717E+04
1.159E+00	.0E+00	.0E+00	2.0665E+05	5.3117E+05	2.4140E+04	2.6261E+04
1.290E+00	.0E+00	.0E+00	2.1830E+05	4.2250E+05	1.9974E+04	2.0745E+04
1.300E+00	.0E+00	9.8027E+04	2.1380E+05	4.1372E+05	1.9691E+04	2.0378E+04
1.500E+00	.0E+00	8.1603E+04	1.4782E+05	2.8509E+05	1.5185E+04	1.4683E+04
2.000E+00	.0E+00	5.1165E+04	6.9928E+04	1.3349E+05	8.8255E+03	7.3144E+03
3.000E+00	.0E+00	2.4643E+04	2.2426E+04	4.2274E+04	3.9332E+03	2.5361E+03
4.000E+00	.0E+00	1.3933E+04	9.5860E+03	1.7904E+04	2.1535E+03	1.1395E+03
5.000E+00	.0E+00	8.7308E+03	4.8515E+03	8.9964E+03	1.3277E+03	5.9698E+02
6.000E+00	.0E+00	5.8692E+03	2.7444E+03	5.0583E+03	8.8459E+02	3.4633E+02
8.000E+00	.0E+00	3.0545E+03	1.0916E+03	1.9916E+03	4.5643E+02	1.4255E+02
1.000E+01	.0E+00	1.8018E+03	5.2442E+02	9.4868E+02	2.6831E+02	7.0002E+01
1.032E+01	.0E+00	1.6697E+03	4.7218E+02	8.5312E+02	2.4855E+02	6.3206E+01
1.040E+01	2.1851E+04	1.6379E+03	4.5982E+02	8.3052E+02	2.4379E+02	6.1593E+01
1.500E+01	8.5724E+03	6.6108E+02	1.3352E+02	2.3739E+02	9.8211E+01	1.8394E+01
2.000E+01	3.9404E+03	3.1435E+02	4.9306E+01	8.6429E+01	4.6733E+01	6.9147E+00
3.000E+01	1.2675E+03	1.0577E+02	1.1747E+01	2.0116E+01	1.5771E+01	1.6802E+00
4.000E+01	5.5383E+02	4.7552E+01	4.1767E+00	7.0142E+00	7.1081E+00	6.0361E-01
5.000E+01	2.8803E+02	2.5234E+01	1.8615E+00	3.0734E+00	3.7794E+00	2.7067E-01
6.000E+01	1.6779E+02	1.4919E+01	9.5973E-01	1.5607E+00	2.2381E+00	1.4039E-01
8.000E+01	7.0868E+01	6.4312E+00	3.3739E-01	5.3437E-01	9.6591E-01	4.9665E-02
1.000E+02	3.6107E+01	3.3211E+00	1.5051E-01	2.3314E-01	4.9953E-01	2.2242E-02
1.500E+02	1.0552E+01	9.8992E-01	3.5447E-02	5.2620E-02	1.4923E-01	5.2673E-03
2.000E+02	4.4311E+00	4.2013E-01	1.3060E-02	1.8840E-02	6.3415E-02	1.9468E-03
3.000E+02	1.3423E+00	1.2865E-01	3.3920E-03	4.7542E-03	1.9446E-02	5.0744E-04
4.000E+02	5.9785E-01	5.7587E-02	1.3778E-03	1.9224E-03	8.7105E-03	2.0664E-04
5.000E+02	3.2991E-01	3.1864E-02	7.1496E-04	9.9966E-04	4.8204E-03	1.0698E-04
6.000E+02	2.0834E-01	2.0149E-02	4.2899E-04	6.0866E-04	3.0485E-03	6.4191E-05
8.000E+02	1.0645E-01	1.0304E-02	2.0285E-04	2.9734E-04	1.5591E-03	3.0328E-05
1.000E+03	6.6266E-02	6.4134E-03	1.1880E-04	1.8075E-04	9.7043E-04	1.7758E-05
1.500E+03	3.0861E-02	2.9839E-03	5.0098E-05	8.1442E-05	4.5145E-04	7.4618E-06

Z= 31

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	6.9729E+04	2.2829E+04	3.3370E+04	2.4784E+03	2.0101E+02	3.8484E+02
1.121E+00	5.4684E+04	1.5701E+04	2.2926E+04	2.0225E+03	1.5785E+02	3.0142E+02
1.130E+00	5.3744E+04	1.5291E+04	2.2326E+04	1.9936E+03	1.5515E+02	2.9620E+02
1.149E+00	5.1782E+04	1.4449E+04	2.1094E+04	1.9331E+03	1.4951E+02	2.8531E+02
1.159E+00	5.0885E+04	1.4071E+04	2.0540E+04	1.9054E+03	1.4693E+02	2.8033E+02
1.290E+00	4.0059E+04	9.8182E+03	1.4317E+04	1.5663E+03	1.1579E+02	2.2038E+02
1.300E+00	3.9340E+04	9.5560E+03	1.3934E+04	1.5434E+03	1.1372E+02	2.1640E+02
1.500E+00	2.8219E+04	5.8441E+03	8.5092E+03	1.1818E+03	8.1832E+01	1.5520E+02
2.000E+00	1.3936E+04	2.1090E+03	3.0613E+03	6.8023E+02	4.0770E+01	7.6809E+01
3.000E+00	4.7727E+03	4.6965E+02	6.7850E+02	3.0044E+02	1.4380E+01	2.6327E+01
4.000E+00	2.1253E+03	1.5483E+02	2.2286E+02	1.6385E+02	6.4805E+00	1.1759E+01
5.000E+00	1.1054E+03	6.3849E+01	9.1599E+01	1.0083E+02	3.4030E+00	6.1303E+00
6.000E+00	6.3737E+02	3.0459E+01	4.3564E+01	6.7425E+01	1.9779E+00	3.5412E+00
8.000E+00	2.5964E+02	9.2115E+00	1.3101E+01	3.4749E+01	8.1630E-01	1.4465E+00
1.000E+01	1.2641E+02	3.5703E+00	5.0541E+00	2.0416E+01	4.0161E-01	7.0554E-01
1.032E+01	1.1399E+02	3.1182E+00	4.4114E+00	1.8912E+01	3.6271E-01	6.3639E-01
1.040E+01	1.1104E+02	3.0132E+00	4.2625E+00	1.8550E+01	3.5348E-01	6.1999E-01
1.500E+01	3.2631E+01	6.1809E-01	8.6110E-01	7.4701E+00	1.0582E-01	1.8266E-01
2.000E+01	1.2091E+01	1.7463E-01	2.4112E-01	3.5545E+00	3.9841E-02	6.7795E-02
3.000E+01	2.8699E+00	2.8624E-02	3.8910E-02	1.1996E+00	9.7004E-03	1.6123E-02
4.000E+01	1.0113E+00	7.8453E-03	1.0526E-02	5.4074E-01	3.4894E-03	5.6873E-03
5.000E+01	4.4605E-01	2.8753E-03	3.8127E-03	2.8753E-01	1.5664E-03	2.5101E-03
6.000E+01	2.2720E-01	1.2690E-03	1.6672E-03	1.7027E-01	8.1168E-04	1.2811E-03

Z= 31

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
8.000E+01	7.8262E-02	3.5225E-04	4.5501E-04	7.3566E-02	2.8724E-04	4.4158E-04
1.000E+02	3.4277E-02	1.3185E-04	1.6834E-04	3.8051E-02	1.2865E-04	1.9346E-04
1.500E+02	7.7775E-03	2.3028E-05	2.8819E-05	1.1370E-02	3.0462E-05	4.3927E-05
2.000E+02	2.7920E-03	6.9804E-06	8.6785E-06	4.8323E-03	1.1255E-05	1.5778E-05
3.000E+02	7.0636E-04	1.4086E-06	1.7810E-06	1.4820E-03	2.9307E-06	3.9961E-06
4.000E+02	2.8585E-04	4.8695E-07	6.4129E-07	6.6391E-04	1.1929E-06	1.6194E-06
5.000E+02	1.4894E-04	2.2465E-07	3.0707E-07	3.6748E-04	6.1714E-07	8.4580E-07
6.000E+02	9.0715E-05	1.2263E-07	1.7807E-07	2.3246E-04	3.7028E-07	5.1625E-07
8.000E+02	4.4413E-05	5.0796E-08	8.0936E-08	1.1898E-04	1.7498E-07	2.5433E-07
1.000E+03	2.7018E-05	2.7296E-08	4.6650E-08	7.4137E-05	1.0270E-07	1.5577E-07
1.500E+03	1.2207E-05	9.9922E-09	1.9915E-08	3.4660E-05	4.3625E-08	7.2439E-08

Z= 32 12 STATES, 34 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	11.0667	.97345
2 S 1/2	2.00	1.4024	.75321
2 P 1/2	2.00	1.2555	.63742
2 P 3/2	4.00	1.2228	.63099
3 S 1/2	2.00	.1793	.39212
3 P 1/2	2.00	.1294	.28008
3 P 3/2	4.00	.1250	.27340
3 D 3/2	4.00	.0388	.07552
3 D 5/2	6.00	.0382	.07470
4 S 1/2	2.00	.0148	.08275
4 P 1/2	.67	.0065	.03145
4 P 3/2	1.33	.0063	.02992

Z= 32 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	2.2755E+05	.0E+00	.0E+00	2.2255E+05	5.0020E+03
1.2215E+00	1.4152E+05	.0E+00	.0E+00	1.3812E+05	3.4091E+03
1.2313E+00	5.6836E+05	.0E+00	4.2952E+05	1.3548E+05	3.3564E+03
1.2542E+00	6.0454E+05	.0E+00	4.7173E+05	1.2958E+05	3.2374E+03
1.2643E+00	8.1378E+05	.0E+00	6.8350E+05	1.2710E+05	3.1871E+03
1.4010E+00	6.8561E+05	.0E+00	5.8402E+05	9.8988E+04	2.6011E+03
1.4122E+00	7.6009E+05	.0E+00	6.6046E+05	9.7072E+04	2.5601E+03
1.5000E+00	6.5954E+05	.0E+00	5.7359E+05	8.3685E+04	2.2688E+03
2.0000E+00	3.2635E+05	.0E+00	2.8435E+05	4.0748E+04	1.2525E+03
3.0000E+00	1.1541E+05	.0E+00	1.0056E+05	1.4334E+04	5.2081E+02
4.0000E+00	5.3791E+04	.0E+00	4.6812E+04	6.7075E+03	2.7231E+02
5.0000E+00	2.9422E+04	.0E+00	2.5571E+04	3.6881E+03	1.6256E+02
6.0000E+00	1.7862E+04	.0E+00	1.5506E+04	2.2498E+03	1.0577E+02
8.0000E+00	8.0484E+03	.0E+00	6.9740E+03	1.0214E+03	5.3017E+01
1.0000E+01	4.3064E+03	.0E+00	3.7266E+03	5.4927E+02	3.0527E+01
1.1056E+01	3.2445E+03	.0E+00	2.8061E+03	4.1469E+02	2.3721E+01
1.1144E+01	2.3489E+04	2.0317E+04	2.7434E+03	4.0551E+02	2.3248E+01
1.5000E+01	1.0905E+04	9.5419E+03	1.1769E+03	1.7516E+02	1.0854E+01
2.0000E+01	4.9961E+03	4.3998E+03	5.1419E+02	7.6973E+01	5.0884E+00
3.0000E+01	1.6101E+03	1.4269E+03	1.5767E+02	2.3776E+01	1.6929E+00
4.0000E+01	7.0453E+02	6.2612E+02	6.7436E+01	1.0213E+01	7.5809E-01
5.0000E+01	3.6701E+02	3.2664E+02	3.4692E+01	5.2688E+00	4.0169E-01
6.0000E+01	2.1408E+02	1.9070E+02	2.0083E+01	3.0560E+00	2.3738E-01
8.0000E+01	9.0614E+01	8.0796E+01	8.4294E+00	1.2866E+00	1.0236E-01
1.0000E+02	4.6247E+01	4.1255E+01	4.2839E+00	6.5450E-01	5.2904E-02
1.5000E+02	1.3559E+01	1.2101E+01	1.2504E+00	1.9155E-01	1.5805E-02
2.0000E+02	5.7060E+00	5.0932E+00	5.2542E-01	8.0610E-02	6.7202E-03
3.0000E+02	1.7332E+00	1.5472E+00	1.5942E-01	2.4497E-02	2.0632E-03

Z= 32 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
4.0000E+02	7.7313E-01	6.9021E-01	7.1065E-02	1.0928E-02	9.2498E-04
5.0000E+02	4.2703E-01	3.8125E-01	3.9226E-02	6.0334E-03	5.1221E-04
6.0000E+02	2.6982E-01	2.4092E-01	2.4763E-02	3.8094E-03	3.2407E-04
8.0000E+02	1.3792E-01	1.2317E-01	1.2634E-02	1.9437E-03	1.6584E-04
1.0000E+03	8.5845E-02	7.6684E-02	7.8500E-03	1.2077E-03	1.0328E-04
1.5000E+03	3.9947E-02	3.5698E-02	3.6406E-03	5.6007E-04	4.8168E-05

Z= 32

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.3404E+04	3.9631E+04
1.222E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.3724E+04	2.6153E+04
1.231E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.3395E+04	2.5707E+04
1.254E+00	.0E+00	.0E+00	.0E+00	4.2952E+05	2.2650E+04	2.4703E+04
1.264E+00	.0E+00	.0E+00	2.0789E+05	4.7561E+05	2.2334E+04	2.4279E+04
1.401E+00	.0E+00	.0E+00	1.9918E+05	3.8484E+05	1.8612E+04	1.9354E+04
1.412E+00	.0E+00	8.8502E+04	1.9511E+05	3.7684E+05	1.8348E+04	1.9010E+04
1.500E+00	.0E+00	8.5135E+04	1.6678E+05	3.2167E+05	1.6451E+04	1.6576E+04
2.000E+00	.0E+00	5.3753E+04	7.9220E+04	1.5138E+05	9.6195E+03	8.3613E+03
3.000E+00	.0E+00	2.6343E+04	2.5749E+04	4.8465E+04	4.3193E+03	2.9428E+03
4.000E+00	.0E+00	1.5029E+04	1.1097E+04	2.0686E+04	2.3765E+03	1.3347E+03
5.000E+00	.0E+00	9.4734E+03	5.6486E+03	1.0449E+04	1.4708E+03	7.0415E+02
6.000E+00	.0E+00	6.3970E+03	3.2096E+03	5.8994E+03	9.8311E+02	4.1084E+02
8.000E+00	.0E+00	3.3516E+03	1.2852E+03	2.3372E+03	5.1004E+02	1.7060E+02
1.000E+01	.0E+00	1.9874E+03	6.2061E+02	1.1186E+03	3.0115E+02	8.4323E+01
1.106E+01	.0E+00	1.5620E+03	4.4516E+02	7.9897E+02	2.3640E+02	6.1051E+01
1.114E+01	2.0317E+04	1.5321E+03	4.3350E+02	7.7780E+02	2.3187E+02	5.9495E+01
1.500E+01	9.5419E+03	7.3539E+02	1.5938E+02	2.8213E+02	1.1110E+02	2.2395E+01
2.000E+01	4.3998E+03	3.5169E+02	5.9209E+01	1.0329E+02	5.3148E+01	8.4778E+00
3.000E+01	1.4269E+03	1.1923E+02	1.4222E+01	2.4221E+01	1.8066E+01	2.0796E+00
4.000E+01	6.2612E+02	5.3865E+01	5.0839E+00	8.4867E+00	8.1822E+00	7.5171E-01
5.000E+01	3.2664E+02	2.8686E+01	2.2747E+00	3.7318E+00	4.3660E+00	3.3859E-01
6.000E+01	1.9070E+02	1.7006E+01	1.1764E+00	1.9002E+00	2.5925E+00	1.7592E-01
8.000E+01	8.0796E+01	7.3606E+00	4.1549E-01	6.5331E-01	1.1247E+00	6.2633E-02
1.000E+02	4.1255E+01	3.8120E+00	1.8597E-01	2.8586E-01	5.8284E-01	2.8152E-02
1.500E+02	1.2101E+01	1.1416E+00	4.4035E-02	6.4814E-02	1.7495E-01	6.7066E-03
2.000E+02	5.0932E+00	4.8588E-01	1.6278E-02	2.3267E-02	7.4564E-02	2.4873E-03
3.000E+02	1.5472E+00	1.4929E-01	4.2446E-03	5.8873E-03	2.2945E-02	6.5106E-04
4.000E+02	6.9021E-01	6.6953E-02	1.7281E-03	2.3835E-03	1.0297E-02	2.6566E-04
5.000E+02	3.8125E-01	3.7088E-02	8.9757E-04	1.2405E-03	5.7052E-03	1.3766E-04
6.000E+02	2.4092E-01	2.3469E-02	5.3937E-04	7.5509E-04	3.6107E-03	8.2765E-05
8.000E+02	1.2317E-01	1.2009E-02	2.5520E-04	3.6900E-04	1.8478E-03	3.9112E-05
1.000E+03	7.6684E-02	7.4759E-03	1.4947E-04	2.2459E-04	1.1503E-03	2.2963E-05
1.500E+03	3.5698E-02	3.4766E-03	6.3153E-05	1.0088E-04	5.3487E-04	9.6597E-06

Z= 32

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	7.7286E+04	2.9338E+04	4.2891E+04	3.1319E+03	6.4010E+02	1.2299E+03
1.222E+00	5.0636E+04	1.5292E+04	2.2312E+04	2.1887E+03	4.1924E+02	8.0117E+02
1.231E+00	4.9760E+04	1.4892E+04	2.1728E+04	2.1572E+03	4.1201E+02	7.8718E+02
1.254E+00	4.7786E+04	1.4006E+04	2.0431E+04	2.0860E+03	3.9570E+02	7.5569E+02
1.264E+00	4.6953E+04	1.3639E+04	1.9893E+04	2.0558E+03	3.8883E+02	7.4241E+02
1.401E+00	3.7296E+04	9.6560E+03	1.4069E+04	1.7024E+03	3.0944E+02	5.8924E+02
1.412E+00	3.6624E+04	9.3982E+03	1.3692E+04	1.6775E+03	3.0393E+02	5.7864E+02
1.500E+00	3.1871E+04	7.6493E+03	1.1137E+04	1.5000E+03	2.6503E+02	5.0376E+02
2.000E+00	1.5926E+04	2.7909E+03	4.0503E+03	8.6696E+02	1.3357E+02	2.5199E+02
3.000E+00	5.5324E+03	6.2978E+02	9.0943E+02	3.8547E+02	4.7667E+01	8.7677E+01
4.000E+00	2.4854E+03	2.0955E+02	3.0140E+02	2.1111E+02	2.1688E+01	3.9519E+01
5.000E+00	1.3013E+03	8.7057E+01	1.2479E+02	1.3035E+02	1.1471E+01	2.0743E+01
6.000E+00	7.5439E+02	4.1791E+01	5.9719E+01	8.7014E+01	6.7060E+00	1.2049E+01

Z= 32

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
8.000E+00	3.0988E+02	1.2757E+01	1.8126E+01	4.5259E+01	2.7930E+00	4.9646E+00
1.000E+01	1.5179E+02	4.9755E+00	7.0331E+00	2.6706E+01	1.3834E+00	2.4370E+00
1.106E+01	1.0943E+02	3.2418E+00	4.5714E+00	2.0961E+01	1.0025E+00	1.7583E+00
1.114E+01	1.0660E+02	3.1329E+00	4.4170E+00	2.0558E+01	9.7700E-01	1.7130E+00
1.500E+01	3.9579E+01	8.6834E-01	1.2150E+00	9.8475E+00	3.6857E-01	6.3748E-01
2.000E+01	1.4761E+01	2.4670E-01	3.4007E-01	4.7104E+00	1.3977E-01	2.3820E-01
3.000E+01	3.5341E+00	4.0820E-02	5.5386E-02	1.6014E+00	3.4360E-02	5.7153E-02
4.000E+01	1.2523E+00	1.1252E-02	1.5058E-02	7.2537E-01	1.2438E-02	2.0277E-02
5.000E+01	5.5456E-01	4.1373E-03	5.4760E-03	3.8709E-01	5.6088E-03	8.9858E-03
6.000E+01	2.8335E-01	1.8313E-03	2.3985E-03	2.2987E-01	2.9166E-03	4.6007E-03
8.000E+01	9.8052E-02	5.1048E-04	6.5790E-04	9.9730E-02	1.0374E-03	1.5930E-03
1.000E+02	4.3074E-02	1.9170E-04	2.4395E-04	5.1737E-02	4.6634E-04	7.0016E-04
1.500E+02	9.8217E-03	3.3682E-05	4.1968E-05	1.5534E-02	1.1110E-04	1.5977E-04
2.000E+02	3.5361E-03	1.0240E-05	1.2690E-05	6.6215E-03	4.1193E-05	5.7544E-05
3.000E+02	8.9702E-04	2.0772E-06	2.6067E-06	2.0378E-03	1.0774E-05	1.4614E-05
4.000E+02	3.6345E-04	7.1843E-07	9.3780E-07	9.1466E-04	4.3947E-06	5.9275E-06
5.000E+02	1.8970E-04	3.3116E-07	4.5321E-07	5.0683E-04	2.2768E-06	3.0969E-06
6.000E+02	1.1552E-04	1.8205E-07	2.5902E-07	3.2081E-04	1.3682E-06	1.8894E-06
8.000E+02	5.6587E-05	7.6033E-08	1.1802E-07	1.6426E-04	6.4673E-07	9.2930E-07
1.000E+03	3.4358E-05	4.0352E-08	6.9339E-08	1.0234E-04	3.7943E-07	5.6777E-07
1.500E+03	1.5497E-05	1.4832E-08	2.8775E-08	4.7746E-05	1.6060E-07	2.6142E-07

Z= 33 12 STATES, 34 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	11.8291	.97407
2 S 1/2	2.00	1.5193	.75851
2 P 1/2	2.00	1.3658	.64522
2 P 3/2	4.00	1.3282	.63845
3 S 1/2	2.00	.2021	.40174
3 P 1/2	2.00	.1490	.29077
3 P 3/2	4.00	.1438	.28368
3 D 3/2	4.00	.0513	.08394
3 D 5/2	6.00	.0505	.08304
4 S 1/2	2.00	.0179	.09473
4 P 1/2	1.00	.0081	.04071
4 P 3/2	2.00	.0078	.03882

Z= 33 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	2.6323E+05	.0E+00	.0E+00	2.5557E+05	7.6556E+03
1.3269E+00	1.3429E+05	.0E+00	.0E+00	1.2989E+05	4.4032E+03
1.3376E+00	5.5608E+05	.0E+00	4.2436E+05	1.2739E+05	4.3331E+03
1.3644E+00	5.5294E+05	.0E+00	4.2740E+05	1.2137E+05	4.1629E+03
1.3753E+00	7.6004E+05	.0E+00	6.3691E+05	1.1904E+05	4.0963E+03
1.5000E+00	6.4964E+05	.0E+00	5.4998E+05	9.6221E+04	3.4338E+03
1.5178E+00	6.3035E+05	.0E+00	5.3352E+05	9.3470E+04	3.3520E+03
1.5299E+00	6.9888E+05	.0E+00	6.0393E+05	9.1649E+04	3.2975E+03
2.0000E+00	3.6408E+05	.0E+00	3.1530E+05	4.6899E+04	1.8745E+03
3.0000E+00	1.2997E+05	.0E+00	1.1269E+05	1.6514E+04	7.6353E+02
4.0000E+00	6.0754E+04	.0E+00	5.2630E+04	7.7317E+03	3.9284E+02
5.0000E+00	3.3300E+04	.0E+00	2.8816E+04	4.2531E+03	2.3144E+02
6.0000E+00	2.0247E+04	.0E+00	1.7502E+04	2.5957E+03	1.4901E+02
8.0000E+00	9.1433E+03	.0E+00	7.8905E+03	1.1795E+03	7.3331E+01
1.0000E+01	4.8982E+03	.0E+00	4.2215E+03	6.3484E+02	4.1888E+01
1.1817E+01	3.0591E+03	.0E+00	2.6341E+03	3.9768E+02	2.7304E+01
1.1912E+01	2.1906E+04	1.8915E+04	2.5752E+03	3.8886E+02	2.6747E+01
1.5000E+01	1.2122E+04	1.0569E+04	1.3363E+03	2.0275E+02	1.4663E+01

Z= 33 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
2.0000E+01	5.5780E+03	4.8972E+03	5.8476E+02	8.9201E+01	6.8174E+00
3.0000E+01	1.8097E+03	1.6000E+03	1.7979E+02	2.7610E+01	2.2499E+00
4.0000E+01	7.9447E+02	7.0453E+02	7.7053E+01	1.1881E+01	1.0040E+00
5.0000E+01	4.1499E+02	3.6861E+02	3.9704E+01	6.1386E+00	5.3108E-01
6.0000E+01	2.4258E+02	2.1569E+02	2.3017E+01	3.5656E+00	3.1357E-01
8.0000E+01	1.0300E+02	9.1675E+01	9.6823E+00	1.5041E+00	1.3514E-01
1.0000E+02	5.2685E+01	4.6919E+01	4.9292E+00	7.6648E-01	6.9848E-02
1.5000E+02	1.5501E+01	1.3812E+01	1.4432E+00	2.2500E-01	2.0885E-02
2.0000E+02	6.5380E+00	5.8265E+00	6.0769E-01	9.4877E-02	8.8894E-03
3.0000E+02	1.9913E+00	1.7748E+00	1.8486E-01	2.8907E-02	2.7335E-03
4.0000E+02	8.8971E-01	7.9304E-01	8.2527E-02	1.2915E-02	1.2267E-03
5.0000E+02	4.9190E-01	4.3849E-01	4.5590E-02	7.1364E-03	6.7969E-04
6.0000E+02	3.1100E-01	2.7727E-01	2.8798E-02	4.5083E-03	4.3017E-04
8.0000E+02	1.5906E-01	1.4184E-01	1.4699E-02	2.3013E-03	2.2016E-04
1.0000E+03	9.9019E-02	8.8319E-02	9.1334E-03	1.4299E-03	1.3705E-04
1.5000E+03	4.6056E-02	4.1097E-02	4.2329E-03	6.6266E-04	6.3803E-05

Z= 33

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.5798E+04	4.3606E+04
1.327E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.2094E+04	2.4357E+04
1.338E+00	.0E+00	.0E+00	.0E+00	4.2436E+05	2.1786E+04	2.3941E+04
1.364E+00	.0E+00	.0E+00	.0E+00	4.2740E+05	2.1037E+04	2.2930E+04
1.375E+00	.0E+00	.0E+00	2.0473E+05	4.3218E+05	2.0743E+04	2.2534E+04
1.500E+00	.0E+00	.0E+00	1.8769E+05	3.6229E+05	1.7771E+04	1.8592E+04
1.518E+00	.0E+00	.0E+00	1.8224E+05	3.5128E+05	1.7398E+04	1.8106E+04
1.530E+00	.0E+00	8.1376E+04	1.7857E+05	3.4398E+05	1.7150E+04	1.7784E+04
2.000E+00	.0E+00	5.6594E+04	8.8779E+04	1.6993E+05	1.0450E+04	9.4949E+03
3.000E+00	.0E+00	2.8021E+04	2.9413E+04	5.5260E+04	4.7275E+03	3.3923E+03
4.000E+00	.0E+00	1.6130E+04	1.2762E+04	2.3738E+04	2.6137E+03	1.5530E+03
5.000E+00	.0E+00	1.0229E+04	6.5327E+03	1.2054E+04	1.6236E+03	8.2499E+02
6.000E+00	.0E+00	6.9395E+03	3.7287E+03	6.8337E+03	1.0886E+03	4.8402E+02
8.000E+00	.0E+00	3.6621E+03	1.5035E+03	2.7248E+03	5.6772E+02	2.0272E+02
1.000E+01	.0E+00	2.1821E+03	7.2948E+02	1.3099E+03	3.3663E+02	1.0085E+02
1.182E+01	.0E+00	1.4640E+03	4.2052E+02	7.4958E+02	2.2535E+02	5.9076E+01
1.191E+01	1.8915E+04	1.4360E+03	4.0952E+02	7.2971E+02	2.2103E+02	5.7572E+01
1.500E+01	1.0569E+04	8.1432E+02	1.8894E+02	3.3299E+02	1.2515E+02	2.7070E+01
2.000E+01	4.8972E+03	3.9159E+02	7.0605E+01	1.2257E+02	6.0180E+01	1.0318E+01
3.000E+01	1.6000E+03	1.3374E+02	1.7096E+01	2.8954E+01	2.0602E+01	2.5545E+00
4.000E+01	7.0453E+02	6.0715E+01	6.1436E+00	1.0194E+01	9.3756E+00	9.2903E-01
5.000E+01	3.6861E+02	3.2447E+01	2.7596E+00	4.4980E+00	5.0204E+00	4.2038E-01
6.000E+01	2.1569E+02	1.9288E+01	1.4316E+00	2.2966E+00	2.9893E+00	2.1916E-01
8.000E+01	9.1675E+01	8.3816E+00	5.0791E-01	7.9277E-01	1.3021E+00	7.8398E-02
1.000E+02	4.6919E+01	4.3533E+00	2.2808E-01	3.4787E-01	6.7678E-01	3.5361E-02
1.500E+02	1.3812E+01	1.3097E+00	5.4297E-02	7.9233E-02	2.0411E-01	8.4710E-03
2.000E+02	5.8265E+00	5.5903E-01	2.0136E-02	2.8517E-02	8.7248E-02	3.1524E-03
3.000E+02	1.7748E+00	1.7235E-01	5.2712E-03	7.2357E-03	2.6941E-02	8.2835E-04
4.000E+02	7.9304E-01	7.7443E-02	2.1509E-03	2.9328E-03	1.2114E-02	3.3888E-04
5.000E+02	4.3849E-01	4.2944E-02	1.1187E-03	1.5272E-03	6.7198E-03	1.7599E-04
6.000E+02	2.7727E-01	2.7195E-02	6.7303E-04	9.2954E-04	4.2559E-03	1.0582E-04
8.000E+02	1.4184E-01	1.3925E-02	3.1856E-04	4.5484E-04	2.1794E-03	5.0128E-05
1.000E+03	8.8319E-02	8.6697E-03	1.8676E-04	2.7688E-04	1.3569E-03	2.9406E-05
1.500E+03	4.1097E-02	4.0298E-03	7.8917E-05	1.2417E-04	6.3063E-04	1.2382E-05

Z= 33

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	8.5195E+04	3.6952E+04	5.4018E+04	3.7855E+03	1.3225E+03	2.5475E+03
1.327E+00	4.7070E+04	1.4797E+04	2.1568E+04	2.2797E+03	7.2975E+02	1.3937E+03
1.338E+00	4.6252E+04	1.4410E+04	2.1002E+04	2.2467E+03	7.1711E+02	1.3693E+03
1.364E+00	4.4266E+04	1.3488E+04	1.9654E+04	2.1664E+03	6.8649E+02	1.3100E+03
1.375E+00	4.3490E+04	1.3134E+04	1.9136E+04	2.1349E+03	6.7454E+02	1.2869E+03
1.500E+00	3.5769E+04	9.8101E+03	1.4280E+04	1.8194E+03	5.5608E+02	1.0583E+03
1.518E+00	3.4820E+04	9.4264E+03	1.3719E+04	1.7802E+03	5.4152E+02	1.0302E+03
1.530E+00	3.4190E+04	9.1744E+03	1.3351E+04	1.7541E+03	5.3184E+02	1.0116E+03
2.000E+00	1.8084E+04	3.6195E+03	5.2508E+03	1.0558E+03	2.8353E+02	5.3515E+02
3.000E+00	6.3717E+03	8.2779E+02	1.1946E+03	4.7237E+02	1.0163E+02	1.8953E+02
4.000E+00	2.8878E+03	2.7785E+02	3.9932E+02	2.5982E+02	4.7084E+01	8.5938E+01
5.000E+00	1.5218E+03	1.1625E+02	1.6648E+02	1.6095E+02	2.5080E+01	4.5410E+01
6.000E+00	8.8682E+02	5.6138E+01	8.0138E+01	1.0775E+02	1.4746E+01	2.6520E+01
8.000E+00	3.6725E+02	1.7298E+01	2.4548E+01	5.6116E+01	6.1963E+00	1.1019E+01
1.000E+01	1.8098E+02	6.7895E+00	9.5838E+00	3.3356E+01	3.0896E+00	5.4429E+00
1.182E+01	1.0523E+02	3.3369E+00	4.6901E+00	2.2321E+01	1.8127E+00	3.1695E+00
1.191E+01	1.0251E+02	3.2249E+00	4.5318E+00	2.1893E+01	1.7667E+00	3.0879E+00
1.500E+01	4.7663E+01	1.1953E+00	1.6691E+00	1.2392E+01	8.3225E-01	1.4386E+00
2.000E+01	1.7890E+01	3.4131E-01	4.7232E-01	5.9585E+00	3.1786E-01	5.4106E-01
3.000E+01	4.3197E+00	5.6979E-02	7.7142E-02	2.0401E+00	7.8880E-02	1.3097E-01
4.000E+01	1.5391E+00	1.5796E-02	2.1092E-02	9.2854E-01	2.8731E-02	4.6730E-02
5.000E+01	6.8428E-01	5.8301E-03	7.6951E-03	4.9727E-01	1.3015E-02	2.0793E-02
6.000E+01	3.5123E-01	2.5872E-03	3.3805E-03	2.9610E-01	6.7910E-03	1.0678E-02
8.000E+01	1.2189E-01	7.2435E-04	9.2994E-04	1.2899E-01	2.4278E-03	3.7142E-03
1.000E+02	5.3721E-02	2.7282E-04	3.4618E-04	6.7115E-02	1.0955E-03	1.6377E-03
1.500E+02	1.2310E-02	4.8177E-05	5.9824E-05	2.0247E-02	2.6249E-04	3.7553E-04
2.000E+02	4.4440E-03	1.4702E-05	1.8112E-05	8.6561E-03	9.7672E-05	1.3564E-04
3.000E+02	1.1310E-03	2.9893E-06	3.7389E-06	2.6733E-03	2.5656E-05	3.4544E-05
4.000E+02	4.5897E-04	1.0361E-06	1.3517E-06	1.2022E-03	1.0489E-05	1.4029E-05
5.000E+02	2.3946E-04	4.7998E-07	6.4698E-07	6.6692E-04	5.4422E-06	7.3313E-06
6.000E+02	1.4592E-04	2.6276E-07	3.7380E-07	4.2243E-04	3.2725E-06	4.4728E-06
8.000E+02	7.1479E-05	1.1029E-07	1.6866E-07	2.1641E-04	1.5491E-06	2.1974E-06
1.000E+03	4.3431E-05	5.8514E-08	9.9266E-08	1.3480E-04	9.0912E-07	1.3405E-06
1.500E+03	1.9592E-05	2.1900E-08	4.1085E-08	6.2806E-05	3.8410E-07	6.1314E-07

Z= 34

12 STATES, 34 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	12.6187	.97466
2 S 1/2	2.00	1.6416	.76354
2 P 1/2	2.00	1.4813	.65262
2 P 3/2	4.00	1.4385	.64551
3 S 1/2	2.00	.2262	.41137
3 P 1/2	2.00	.1698	.30141
3 P 3/2	4.00	.1637	.29392
3 D 3/2	4.00	.0649	.09232
3 D 5/2	6.00	.0639	.09134
4 S 1/2	2.00	.0210	.10591
4 P 1/2	1.33	.0098	.04934
4 P 3/2	2.67	.0094	.04707

Z= 34 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	3.0312E+05	.0E+00	.0E+00	2.9203E+05	1.1092E+04
1.4371E+00	1.2771E+05	.0E+00	.0E+00	1.2229E+05	5.4132E+03
1.4486E+00	5.4124E+05	.0E+00	4.1598E+05	1.1993E+05	5.3252E+03
1.4799E+00	5.1045E+05	.0E+00	3.9154E+05	1.1381E+05	5.0962E+03
1.4917E+00	7.1095E+05	.0E+00	5.9433E+05	1.1161E+05	5.0130E+03
1.5000E+00	6.9898E+05	.0E+00	5.8393E+05	1.1009E+05	4.9558E+03
1.6399E+00	5.8108E+05	.0E+00	4.8865E+05	8.8321E+04	4.1158E+03
1.6531E+00	6.4456E+05	.0E+00	5.5393E+05	8.6590E+04	4.0473E+03
2.0000E+00	4.0559E+05	.0E+00	3.4918E+05	5.3721E+04	2.6900E+03
3.0000E+00	1.4579E+05	.0E+00	1.2577E+05	1.8943E+04	1.0821E+03
4.0000E+00	6.8373E+04	.0E+00	5.8948E+04	8.8745E+03	5.5026E+02
5.0000E+00	3.7551E+04	.0E+00	3.2346E+04	4.8842E+03	3.2100E+02
6.0000E+00	2.2865E+04	.0E+00	1.9678E+04	2.9822E+03	2.0493E+02
8.0000E+00	1.0344E+04	.0E+00	8.8879E+03	1.3564E+03	9.9520E+01
1.0000E+01	5.5496E+03	.0E+00	4.7627E+03	7.3063E+02	5.6284E+01
1.2606E+01	2.8898E+03	.0E+00	2.4771E+03	3.8191E+02	3.0759E+01
1.2707E+01	2.0448E+04	1.7623E+04	2.4217E+03	3.7343E+02	3.0120E+01
1.5000E+01	1.3391E+04	1.1627E+04	1.5108E+03	2.3369E+02	1.9407E+01
2.0000E+01	6.2098E+03	5.4356E+03	6.6225E+02	1.0293E+02	8.9445E+00
3.0000E+01	2.0241E+03	1.7852E+03	2.0413E+02	3.1924E+01	2.9251E+00
4.0000E+01	8.9236E+02	7.8964E+02	8.7657E+01	1.3760E+01	1.2997E+00
5.0000E+01	4.6730E+02	4.1425E+02	4.5240E+01	7.1200E+00	6.8587E-01
6.0000E+01	2.7372E+02	2.4291E+02	2.6261E+01	4.1407E+00	4.0443E-01
8.0000E+01	1.1657E+02	1.0357E+02	1.1071E+01	1.7501E+00	1.7407E-01
1.0000E+02	5.9753E+01	5.3123E+01	5.6458E+00	8.9416E-01	8.9941E-02
1.5000E+02	1.7643E+01	1.5695E+01	1.6580E+00	2.6304E-01	2.6901E-02
2.0000E+02	7.4579E+00	6.6357E+00	6.9955E-01	1.1114E-01	1.1457E-02
3.0000E+02	2.2777E+00	2.0269E+00	2.1335E-01	3.3946E-02	3.5274E-03
4.0000E+02	1.0193E+00	9.0711E-01	9.5389E-02	1.5188E-02	1.5844E-03
5.0000E+02	5.6409E-01	5.0207E-01	5.2736E-02	8.4004E-03	8.7834E-04
6.0000E+02	3.5687E-01	3.1767E-01	3.3333E-02	5.3096E-03	5.5604E-04
8.0000E+02	1.8263E-01	1.6261E-01	1.7021E-02	2.7115E-03	2.8458E-04
1.0000E+03	1.1370E-01	1.0126E-01	1.0576E-02	1.6847E-03	1.7710E-04
1.5000E+03	5.2864E-02	4.7103E-02	4.8986E-03	7.8023E-04	8.2316E-05

Z= 34

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.8264E+04	4.7718E+04
1.437E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.0643E+04	2.2753E+04
1.449E+00	.0E+00	.0E+00	.0E+00	4.1598E+05	2.0355E+04	2.2362E+04
1.480E+00	.0E+00	.0E+00	.0E+00	3.9154E+05	1.9600E+04	2.1344E+04
1.492E+00	.0E+00	.0E+00	1.9992E+05	3.9441E+05	1.9325E+04	2.0974E+04
1.500E+00	.0E+00	.0E+00	1.9072E+05	3.9321E+05	1.9136E+04	2.0720E+04
1.640E+00	.0E+00	.0E+00	1.6708E+05	3.2156E+05	1.6306E+04	1.6980E+04
1.653E+00	.0E+00	7.5248E+04	1.6377E+05	3.1490E+05	1.6072E+04	1.6677E+04
2.000E+00	.0E+00	5.9571E+04	9.9581E+04	1.9003E+05	1.1313E+04	1.0709E+04
3.000E+00	.0E+00	2.9740E+04	3.3371E+04	6.2657E+04	5.1563E+03	3.8844E+03
4.000E+00	.0E+00	1.7246E+04	1.4602E+04	2.7101E+04	2.8644E+03	1.7950E+03
5.000E+00	.0E+00	1.1004E+04	7.5137E+03	1.3828E+04	1.7857E+03	9.6002E+02
6.000E+00	.0E+00	7.5008E+03	4.3067E+03	7.8708E+03	1.2009E+03	5.6629E+02
8.000E+00	.0E+00	3.9836E+03	1.7475E+03	3.1568E+03	6.2940E+02	2.3918E+02
1.000E+01	.0E+00	2.3859E+03	8.5218E+02	1.5246E+03	3.7473E+02	1.1974E+02
1.261E+01	.0E+00	1.3747E+03	3.9801E+02	7.0445E+02	2.1519E+02	5.7236E+01
1.271E+01	1.7623E+04	1.3483E+03	3.8761E+02	6.8578E+02	2.1106E+02	5.5780E+01
1.500E+01	1.1627E+04	8.9774E+02	2.2256E+02	3.9054E+02	1.4036E+02	3.2484E+01
2.000E+01	5.4356E+03	4.3410E+02	8.3649E+01	1.4451E+02	6.7838E+01	1.2466E+01
3.000E+01	1.7852E+03	1.4934E+02	2.0414E+01	3.4380E+01	2.3385E+01	3.1143E+00
4.000E+01	7.8964E+02	6.8120E+01	7.3746E+00	1.2162E+01	1.0692E+01	1.1395E+00
5.000E+01	4.1425E+02	3.6530E+01	3.3252E+00	5.3847E+00	5.7454E+00	5.1790E-01
6.000E+01	2.4291E+02	2.1774E+01	1.7302E+00	2.7567E+00	3.4301E+00	2.7089E-01

Z= 34

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
8.000E+01	1.0357E+02	9.4991E+00	6.1661E-01	9.5532E-01	1.5001E+00	9.7365E-02
1.000E+02	5.3123E+01	4.9476E+00	2.7780E-01	4.2038E-01	7.8275E-01	4.4076E-02
1.500E+02	1.5695E+01	1.4954E+00	6.6485E-02	9.6178E-02	2.3696E-01	1.0620E-02
2.000E+02	6.6357E+00	6.4011E-01	2.4738E-02	3.4706E-02	1.0158E-01	3.9656E-03
3.000E+02	2.0269E+00	1.9802E-01	6.5011E-03	8.8304E-03	3.1476E-02	1.0464E-03
4.000E+02	9.0711E-01	8.9146E-02	2.6587E-03	3.5838E-03	1.4181E-02	4.2908E-04
5.000E+02	5.0207E-01	4.9489E-02	1.3798E-03	1.8668E-03	7.8756E-03	2.2299E-04
6.000E+02	3.1767E-01	3.1362E-02	8.3379E-04	1.1366E-03	4.9914E-03	1.3428E-04
8.000E+02	1.6261E-01	1.6069E-02	3.9486E-04	5.5685E-04	2.5578E-03	6.3691E-05
1.000E+03	1.0126E-01	1.0006E-02	2.3188E-04	3.3853E-04	1.5926E-03	3.7410E-05
1.500E+03	4.7103E-02	4.6487E-03	9.7925E-05	1.5197E-04	7.3982E-04	1.5776E-05

Z= 34

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	9.3431E+04	4.5751E+04	6.6868E+04	4.4591E+03	2.2647E+03	4.3681E+03
1.437E+00	4.3884E+04	1.4257E+04	2.0756E+04	2.3274E+03	1.0618E+03	2.0240E+03
1.449E+00	4.3117E+04	1.3884E+04	2.0211E+04	2.2935E+03	1.0434E+03	1.9883E+03
1.480E+00	4.1119E+04	1.2931E+04	1.8818E+04	2.2051E+03	9.9543E+02	1.8957E+03
1.492E+00	4.0394E+04	1.2591E+04	1.8322E+04	2.1729E+03	9.7802E+02	1.8621E+03
1.500E+00	3.9895E+04	1.2360E+04	1.7984E+04	2.1508E+03	9.6608E+02	1.8390E+03
1.640E+00	3.2584E+04	9.1507E+03	1.3301E+04	1.8231E+03	7.9105E+02	1.5016E+03
1.653E+00	3.1992E+04	8.9058E+03	1.2544E+04	1.7962E+03	7.7684E+02	1.4743E+03
2.000E+00	2.0398E+04	4.6128E+03	6.6885E+03	1.2523E+03	4.9811E+02	9.3962E+02
3.000E+00	7.2903E+03	1.0694E+03	1.5421E+03	5.6355E+02	1.8118E+02	3.3738E+02
4.000E+00	3.3333E+03	3.6204E+02	5.1982E+02	3.1133E+02	8.4003E+01	1.5493E+02
5.000E+00	1.7678E+03	1.5248E+02	2.1814E+02	1.9348E+02	4.5385E+01	8.2138E+01
6.000E+00	1.0354E+03	7.4053E+01	1.0559E+02	1.2988E+02	2.6834E+01	4.8220E+01
8.000E+00	4.3217E+02	2.3026E+01	3.2634E+01	6.7948E+01	1.1373E+01	2.0199E+01
1.000E+01	2.1424E+02	9.0968E+00	1.2822E+01	4.0537E+01	5.7083E+00	1.0039E+01
1.261E+01	1.0129E+02	3.4086E+00	4.7743E+00	2.3266E+01	2.7349E+00	4.7577E+00
1.271E+01	9.8679E+01	3.2944E+00	4.6134E+00	2.2819E+01	2.6656E+00	4.6352E+00
1.500E+01	5.6985E+01	1.6161E+00	2.2522E+00	1.5171E+01	1.5546E+00	2.6807E+00
2.000E+01	2.1524E+01	4.6391E-01	6.4051E-01	7.3317E+00	5.9794E-01	1.0148E+00
3.000E+01	5.2403E+00	7.8008E-02	1.0606E-01	2.5276E+00	1.4977E-01	2.4775E-01
4.000E+01	1.8775E+00	2.1770E-02	2.8994E-02	1.1559E+00	5.4890E-02	8.8898E-02
5.000E+01	8.3796E-01	8.0648E-03	1.0618E-02	6.2118E-01	2.4976E-02	3.9715E-02
6.000E+01	4.3137E-01	3.5887E-03	4.6747E-03	3.7089E-01	1.3077E-02	2.0459E-02
8.000E+01	1.5036E-01	1.0088E-03	1.2911E-03	1.6223E-01	4.6988E-03	7.1479E-03
1.000E+02	6.6467E-02	3.8112E-04	4.8192E-04	8.4652E-02	2.1277E-03	3.1614E-03
1.500E+02	1.5306E-02	6.7636E-05	8.3653E-05	2.5659E-02	5.1285E-04	7.2856E-04
2.000E+02	5.5417E-03	2.0705E-05	2.5399E-05	1.1002E-02	1.9152E-04	2.6389E-04
3.000E+02	1.4143E-03	4.2247E-06	5.2569E-06	3.4095E-03	5.0512E-05	6.7407E-05
4.000E+02	5.7450E-04	1.4675E-06	1.9040E-06	1.5363E-03	2.0701E-05	2.7408E-05
5.000E+02	3.0021E-04	6.8120E-07	9.1305E-07	8.5325E-04	1.0761E-05	1.4331E-05
6.000E+02	1.8305E-04	3.7331E-07	5.2510E-07	5.4082E-04	6.4747E-06	8.7426E-06
8.000E+02	8.9575E-05	1.5691E-07	2.3841E-07	2.7722E-04	3.0680E-06	4.2927E-06
1.000E+03	5.4463E-05	8.3617E-08	1.4086E-07	1.7268E-04	1.8026E-06	2.6158E-06
1.500E+03	2.4535E-05	3.1958E-08	5.8239E-08	8.0364E-05	7.6124E-07	1.1915E-06

Z= 35 12 STATES, 34 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	13.4356	.97521
2 S 1/2	2.00	1.7693	.76833
2 P 1/2	2.00	1.6022	.65966
2 P 3/2	4.00	1.5536	.65220
3 S 1/2	2.00	.2515	.42091
3 P 1/2	2.00	.1919	.31193
3 P 3/2	4.00	.1848	.30401
3 D 3/2	4.00	.0796	.10064
3 D 5/2	6.00	.0784	.09957
4 S 1/2	2.00	.0242	.11645
4 P 1/2	1.67	.0116	.05753
4 P 3/2	3.33	.0110	.05484

Z= 35 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	3.4737E+05	.0E+00	.0E+00	3.3200E+05	1.5369E+04
1.5000E+00	1.3222E+05	.0E+00	.0E+00	1.2534E+05	6.8756E+03
1.5520E+00	1.2167E+05	.0E+00	.0E+00	1.1527E+05	6.4042E+03
1.5644E+00	5.2560E+05	.0E+00	4.0627E+05	1.1303E+05	6.2983E+03
1.6006E+00	4.7333E+05	.0E+00	3.6050E+05	1.0683E+05	6.0038E+03
1.6134E+00	6.6600E+05	.0E+00	5.5535E+05	1.0474E+05	5.9041E+03
1.7675E+00	5.3692E+05	.0E+00	4.4855E+05	8.3505E+04	4.8665E+03
1.7817E+00	5.9591E+05	.0E+00	5.0927E+05	8.1859E+04	4.7841E+03
2.0000E+00	4.5141E+05	.0E+00	3.8644E+05	6.1244E+04	3.7234E+03
3.0000E+00	1.6271E+05	.0E+00	1.3959E+05	2.1631E+04	1.4877E+03
4.0000E+00	7.6643E+04	.0E+00	6.5750E+04	1.0142E+04	7.5094E+02
5.0000E+00	4.2181E+04	.0E+00	3.6162E+04	5.5849E+03	4.3452E+02
6.0000E+00	2.5718E+04	.0E+00	2.2031E+04	3.4116E+03	2.7591E+02
8.0000E+00	1.1659E+04	.0E+00	9.9737E+03	1.5531E+03	1.3257E+02
1.0000E+01	6.2630E+03	.0E+00	5.3515E+03	8.3727E+02	7.4220E+01
1.3422E+01	2.7348E+03	.0E+00	2.3336E+03	3.6713E+02	3.4082E+01
1.3530E+01	1.9129E+04	1.6456E+04	2.2814E+03	3.5897E+02	3.3362E+01
1.5000E+01	1.4688E+04	1.2692E+04	1.7017E+03	2.6822E+02	2.5283E+01
2.0000E+01	6.8721E+03	5.9952E+03	7.4705E+02	1.1827E+02	1.1554E+01
3.0000E+01	2.2540E+03	1.9827E+03	2.3084E+02	3.6749E+01	3.7430E+00
4.0000E+01	9.9570E+02	8.8123E+02	9.6955E+01	1.5866E+01	1.6551E+00
5.0000E+01	5.2411E+02	4.6369E+02	5.1335E+01	8.2207E+00	8.7103E-01
6.0000E+01	3.0761E+02	2.7247E+02	2.9837E+01	4.7865E+00	5.1276E-01
8.0000E+01	1.3138E+02	1.1652E+02	1.2605E+01	2.0271E+00	2.2031E-01
1.0000E+02	6.7489E+01	5.9899E+01	6.4389E+00	1.0372E+00	1.1375E-01
1.5000E+02	1.9997E+01	1.7760E+01	1.8966E+00	3.0605E-01	3.4012E-02
2.0000E+02	8.4715E+00	7.5257E+00	8.0179E-01	1.2957E-01	1.4492E-02
3.0000E+02	2.5943E+00	2.3050E+00	2.4515E-01	3.9674E-02	4.4660E-03
4.0000E+02	1.1628E+00	1.0332E+00	1.0977E-01	1.7777E-02	2.0074E-03
5.0000E+02	6.4415E-01	5.7245E-01	6.0745E-02	9.8411E-03	1.1133E-03
6.0000E+02	4.0777E-01	3.6243E-01	3.8412E-02	6.2234E-03	7.0495E-04
8.0000E+02	2.0880E-01	1.8564E-01	1.9624E-02	3.1796E-03	3.6078E-04
1.0000E+03	1.3001E-01	1.1562E-01	1.2193E-02	1.9753E-03	2.2444E-04
1.5000E+03	6.0422E-02	5.3759E-02	5.6443E-03	9.1425E-04	1.0418E-04

Z= 35

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.0782E+04	5.1911E+04
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.0543E+04	2.2943E+04
1.552E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.9341E+04	2.1309E+04
1.564E+00	.0E+00	.0E+00	.0E+00	4.0627E+05	1.9069E+04	2.0941E+04
1.601E+00	.0E+00	.0E+00	.0E+00	3.6050E+05	1.8310E+04	1.9917E+04
1.613E+00	.0E+00	.0E+00	1.9449E+05	3.6085E+05	1.8051E+04	1.9570E+04
1.767E+00	.0E+00	.0E+00	1.5354E+05	2.9501E+05	1.5316E+04	1.5955E+04
1.782E+00	.0E+00	6.9766E+04	1.5056E+05	2.8894E+05	1.9568E+04	1.5669E+04
2.000E+00	.0E+00	6.2517E+04	1.1143E+05	2.1249E+05	1.2207E+04	1.2000E+04
3.000E+00	.0E+00	3.1462E+04	3.7603E+04	7.0529E+04	5.6031E+03	4.4190E+03
4.000E+00	.0E+00	1.8389E+04	1.6598E+04	3.0763E+04	3.1278E+03	2.0611E+03
5.000E+00	.0E+00	1.1799E+04	8.5887E+03	1.5774E+04	1.9568E+03	1.1098E+03
6.000E+00	.0E+00	8.0755E+03	4.9437E+03	9.0117E+03	1.3198E+03	6.5810E+02
8.000E+00	.0E+00	4.3175E+03	2.0199E+03	3.6364E+03	6.9499E+02	2.8024E+02
1.000E+01	.0E+00	2.5980E+03	9.8961E+02	1.7639E+03	4.1540E+02	1.4117E+02
1.342E+01	.0E+00	1.2931E+03	3.7741E+02	6.6312E+02	2.0577E+02	5.5501E+01
1.353E+01	1.6456E+04	1.2683E+03	3.6755E+02	6.4554E+02	2.0181E+02	5.4092E+01
1.500E+01	1.2692E+04	9.8581E+02	2.6062E+02	4.5527E+02	1.5673E+02	3.8704E+01
2.000E+01	5.9952E+03	4.7923E+02	9.8500E+01	1.6932E+02	7.6130E+01	1.4954E+01
3.000E+01	1.9827E+03	1.6605E+02	2.4224E+01	4.0567E+01	2.6421E+01	3.7692E+00
4.000E+01	8.8123E+02	7.6099E+01	8.7965E+00	1.2059E+01	1.2136E+01	1.3875E+00
5.000E+01	4.6369E+02	4.0948E+01	3.9814E+00	6.4048E+00	6.5435E+00	6.3334E-01
6.000E+01	2.7247E+02	2.4472E+01	2.0777E+00	3.2875E+00	3.9170E+00	3.3241E-01
8.000E+01	1.1652E+02	1.0718E+01	7.4376E-01	1.1437E+00	1.7198E+00	1.1985E-01
1.000E+02	5.9899E+01	5.5981E+00	3.3617E-01	5.0467E-01	8.9990E-01	5.4520E-02
1.500E+02	1.7760E+01	1.6997E+00	8.0880E-02	1.1598E-01	2.7375E-01	1.3212E-02
2.000E+02	7.5257E+00	7.2963E-01	3.0192E-02	4.1959E-02	1.1769E-01	4.9509E-03
3.000E+02	2.3050E+00	2.2648E-01	7.9653E-03	1.0705E-02	3.6594E-02	1.3115E-03
4.000E+02	1.0332E+00	1.0215E-01	3.2651E-03	4.3503E-03	1.6519E-02	5.3883E-04
5.000E+02	5.7245E-01	5.6774E-02	1.6970E-03	2.2733E-03	9.1848E-03	2.8062E-04
6.000E+02	3.6243E-01	3.6004E-02	1.0259E-03	1.3812E-03	5.8254E-03	1.6923E-04
8.000E+02	1.8564E-01	1.8460E-02	4.8643E-04	6.7705E-04	2.9871E-03	8.0286E-05
1.000E+03	1.1562E-01	1.1496E-02	2.8603E-04	4.1085E-04	1.8602E-03	4.7235E-05
1.500E+03	5.3759E-02	5.3387E-03	1.2082E-04	1.8480E-04	8.6373E-04	1.9954E-05

Z= 35

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	1.0190E+05	5.5830E+04	8.1578E+04	5.1576E+03	3.4846E+03	6.7270E+03
1.500E+00	4.4222E+04	1.5334E+04	2.2303E+04	2.4973E+03	1.5079E+03	2.8703E+03
1.552E+00	4.1014E+04	1.3695E+04	1.9910E+04	2.3451E+03	1.3991E+03	2.6600E+03
1.564E+00	4.0294E+04	1.3336E+04	1.9386E+04	2.3108E+03	1.3747E+03	2.6128E+03
1.601E+00	3.8287E+04	1.2357E+04	1.7958E+04	2.2151E+03	1.3068E+03	2.4819E+03
1.613E+00	3.7607E+04	1.2032E+04	1.7484E+04	2.1826E+03	1.2839E+03	2.4377E+03
1.767E+00	3.0548E+04	8.8461E+03	1.2840E+04	1.8416E+03	1.0457E+03	1.9793E+03
1.782E+00	2.9991E+04	8.6092E+03	1.2495E+04	1.8142E+03	1.0268E+03	1.9430E+03
2.000E+00	2.2862E+04	5.7878E+03	8.3874E+03	1.4577E+03	7.8537E+02	1.4803E+03
3.000E+00	8.2880E+03	1.3605E+03	1.9603E+03	6.5939E+02	2.8975E+02	5.3859E+02
4.000E+00	3.8226E+03	4.6450E+02	6.6626E+02	3.6580E+02	1.3563E+02	2.4952E+02
5.000E+00	2.0400E+03	1.9690E+02	2.8134E+02	2.2806E+02	7.3248E+01	1.3321E+02
6.000E+00	1.2007E+03	9.6138E+01	1.3690E+02	1.5349E+02	4.3817E+01	7.8602E+01
8.000E+00	5.0505E+02	3.0154E+01	4.2678E+01	8.0653E+01	1.8729E+01	3.3186E+01
1.000E+01	2.5183E+02	1.1990E+01	1.6876E+01	4.8167E+01	9.4602E+00	1.6593E+01
1.342E+01	9.7575E+01	3.4602E+00	4.8292E+00	2.3901E+01	3.7312E+00	6.4499E+00
1.353E+01	9.5057E+01	3.3444E+00	4.6665E+00	2.3442E+01	3.6367E+00	6.2840E+00
1.500E+01	6.7644E+01	2.1506E+00	2.9913E+00	1.8202E+01	2.6048E+00	4.4764E+00
2.000E+01	2.5710E+01	6.2052E-01	8.5490E-01	8.8397E+00	1.0089E+00	1.7056E+00
3.000E+01	6.3106E+00	1.0521E-01	1.4260E-01	3.0681E+00	2.5502E-01	4.1988E-01
4.000E+01	2.2732E+00	2.9511E-02	3.9216E-02	1.4095E+00	9.4035E-02	1.5150E-01
5.000E+01	1.0185E+00	1.0974E-02	1.4406E-02	7.6010E-01	4.2976E-02	6.7952E-02
6.000E+01	5.2586E-01	4.8988E-03	6.3587E-03	4.5507E-01	2.2579E-02	3.5112E-02

Z= 35

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
8.000E+01	1.8437E-01	1.3817E-03	1.7642E-03	1.9984E-01	8.1535E-03	1.2321E-02
1.000E+02	8.1633E-02	5.2371E-04	6.5945E-04	1.0458E-01	3.7053E-03	5.4665E-03
1.500E+02	1.8885E-02	9.3458E-05	1.1505E-04	3.1848E-02	8.9831E-04	1.2659E-03
2.000E+02	6.8561E-03	2.8687E-05	3.5068E-05	1.3695E-02	3.3663E-04	4.5985E-04
3.000E+02	1.7551E-03	5.8840E-06	7.2644E-06	4.2590E-03	8.9166E-05	1.1781E-04
4.000E+02	7.1443E-04	2.0479E-06	2.6235E-06	1.9228E-03	3.6629E-05	4.7964E-05
5.000E+02	3.7348E-04	9.4546E-07	1.2752E-06	1.0692E-03	1.9065E-05	2.5094E-05
6.000E+02	2.2755E-04	5.2470E-07	7.2681E-07	6.7816E-04	1.1486E-05	1.5312E-05
8.000E+02	1.1157E-04	2.1643E-07	3.3573E-07	3.4782E-04	5.4514E-06	7.5153E-06
1.000E+03	6.7643E-05	1.1605E-07	1.9122E-07	2.1667E-04	3.2025E-06	4.5740E-06
1.500E+03	3.0441E-05	4.4579E-08	8.3049E-08	1.0075E-04	1.3531E-06	2.0778E-06

Z= 36 12 STATES, 34 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	14.2800	.97573
2 S 1/2	2.00	1.9024	.77290
2 P 1/2	2.00	1.7284	.66637
2 P 3/2	4.00	1.6733	.65856
3 S 1/2	2.00	.2782	.43031
3 P 1/2	2.00	.2152	.32226
3 P 3/2	4.00	.2069	.31391
3 D 3/2	4.00	.0953	.10889
3 D 5/2	6.00	.0939	.10773
4 S 1/2	2.00	.0275	.12645
4 P 1/2	2.00	.0134	.06537
4 P 3/2	4.00	.0127	.06224

Z= 36 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	3.9630E+05	.0E+00	.0E+00	3.7575E+05	2.0549E+04
1.5000E+00	1.5131E+05	.0E+00	.0E+00	1.4208E+05	9.2310E+03
1.6717E+00	1.1613E+05	.0E+00	.0E+00	1.0877E+05	7.3546E+03
1.6851E+00	5.0960E+05	.0E+00	3.9572E+05	1.0664E+05	7.2314E+03
1.7267E+00	4.3993E+05	.0E+00	3.3269E+05	1.0038E+05	6.8659E+03
1.7405E+00	6.2464E+05	.0E+00	5.1948E+05	9.8407E+04	6.7502E+03
1.9005E+00	4.9720E+05	.0E+00	4.1261E+05	7.9002E+04	5.5877E+03
1.9157E+00	5.5208E+05	.0E+00	4.6915E+05	7.7437E+04	5.4918E+03
2.0000E+00	5.0013E+05	.0E+00	4.2564E+05	6.9495E+04	4.9989E+03
3.0000E+00	1.8097E+05	.0E+00	1.5439E+05	2.4591E+04	1.9919E+03
4.0000E+00	8.5543E+04	.0E+00	7.3000E+04	1.1542E+04	1.0013E+03
5.0000E+00	4.7191E+04	.0E+00	4.0254E+04	6.3594E+03	5.7722E+02
6.0000E+00	2.8821E+04	.0E+00	2.4570E+04	3.8867E+03	3.6410E+02
8.0000E+00	1.3095E+04	.0E+00	1.1150E+04	1.7709E+03	1.7371E+02
1.0000E+01	7.0443E+03	.0E+00	5.9923E+03	9.5545E+02	9.6602E+01
1.4266E+01	2.5925E+03	.0E+00	2.2020E+03	3.5324E+02	3.7266E+01
1.4380E+01	1.7918E+04	1.5383E+04	2.1527E+03	3.4538E+02	3.6467E+01
1.5000E+01	1.6076E+04	1.3828E+04	1.9095E+03	3.0655E+02	3.2508E+01
2.0000E+01	7.5986E+03	6.6089E+03	8.3961E+02	1.3532E+02	1.4740E+01
3.0000E+01	2.5024E+03	2.1955E+03	2.6005E+02	4.2125E+01	4.7304E+00
4.0000E+01	1.1117E+03	9.7932E+02	1.1209E+02	1.8215E+01	2.0812E+00
5.0000E+01	5.8542E+02	5.1685E+02	5.8025E+01	9.4507E+00	1.0920E+00
6.0000E+01	3.4430E+02	3.0438E+02	3.3768E+01	5.5091E+00	6.4159E-01
8.0000E+01	1.4749E+02	1.3059E+02	1.4295E+01	2.3376E+00	2.7507E-01
1.0000E+02	7.5930E+01	6.7277E+01	7.3139E+00	1.1978E+00	1.4188E-01
1.5000E+02	2.2576E+01	2.0019E+01	2.1606E+00	3.5448E-01	4.2393E-02
2.0000E+02	9.5850E+00	8.5013E+00	9.1520E-01	1.5036E-01	1.8065E-02
3.0000E+02	2.9431E+00	2.6109E+00	2.8052E-01	4.6154E-02	5.5709E-03

Z= 36 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
4.0000E+02	1.3212E+00	1.1722E+00	1.2579E-01	2.0711E-02	2.5055E-03
5.0000E+02	7.3264E-01	6.5010E-01	6.9674E-02	1.1475E-02	1.3901E-03
6.0000E+02	4.6408E-01	4.1186E-01	4.4081E-02	7.2607E-03	8.8037E-04
8.0000E+02	2.3778E-01	2.1109E-01	2.2531E-02	3.7110E-03	4.5054E-04
1.0000E+03	1.4807E-01	1.3149E-01	1.3999E-02	2.3056E-03	2.8019E-04
1.5000E+03	6.8788E-02	6.1115E-02	6.4767E-03	1.0664E-03	1.2989E-04

Z= 36

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.3377E+04	5.6172E+04
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.1997E+04	2.5263E+04
1.672E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.8164E+04	2.0003E+04
1.685E+00	.0E+00	.0E+00	.0E+00	3.9572E+05	1.7908E+04	1.9656E+04
1.727E+00	.0E+00	.0E+00	.0E+00	3.3269E+05	1.7144E+04	1.8627E+04
1.741E+00	.0E+00	.0E+00	1.8870E+05	3.3079E+05	1.6900E+04	1.8300E+04
1.901E+00	.0E+00	.0E+00	1.4140E+05	2.7120E+05	1.4414E+04	1.5019E+04
1.916E+00	.0E+00	6.4798E+04	1.3871E+05	2.6563E+05	1.4205E+04	1.4748E+04
2.000E+00	.0E+00	6.4283E+04	1.2437E+05	2.3698E+05	1.3127E+04	1.3363E+04
3.000E+00	.0E+00	3.3071E+04	4.2248E+04	7.9066E+04	6.0678E+03	4.9949E+03
4.000E+00	.0E+00	1.9522E+04	1.8768E+04	3.4710E+04	3.4032E+03	2.3517E+03
5.000E+00	.0E+00	1.2596E+04	9.7666E+03	1.7891E+04	2.1367E+03	1.2747E+03
6.000E+00	.0E+00	8.6595E+03	5.6472E+03	1.0263E+04	1.4451E+03	7.5987E+02
8.000E+00	.0E+00	4.6626E+03	2.3215E+03	4.1664E+03	7.6446E+02	3.2619E+02
1.000E+01	.0E+00	2.8193E+03	1.1431E+03	2.0299E+03	4.5863E+02	1.6532E+02
1.427E+01	.0E+00	1.2183E+03	3.5851E+02	6.2520E+02	1.9698E+02	5.3858E+01
1.438E+01	1.5383E+04	1.1950E+03	3.4915E+02	6.0862E+02	1.9319E+02	5.2492E+01
1.500E+01	1.3828E+04	1.0783E+03	3.0347E+02	5.2779E+02	1.7426E+02	4.5801E+01
2.000E+01	6.6089E+03	5.2700E+02	1.1533E+02	1.9728E+02	8.5067E+01	1.7815E+01
3.000E+01	2.1955E+03	1.8389E+02	2.8579E+01	4.7587E+01	2.9719E+01	4.5299E+00
4.000E+01	9.7932E+02	8.4667E+01	1.0431E+01	1.6990E+01	1.3713E+01	1.6774E+00
5.000E+01	5.1685E+02	4.5713E+01	4.7389E+00	7.5728E+00	7.4186E+00	7.6895E-01
6.000E+01	3.0438E+02	2.7391E+01	2.4803E+00	3.8971E+00	4.4525E+00	4.0493E-01
8.000E+01	1.3059E+02	1.2043E+01	8.9175E-01	1.3609E+00	1.9625E+00	1.4674E-01
1.000E+02	6.7277E+01	6.3074E+00	4.0434E-01	6.0215E-01	1.0298E+00	6.6842E-02
1.500E+02	2.0019E+01	1.9238E+00	9.7791E-02	1.3899E-01	3.1474E-01	1.6317E-02
2.000E+02	8.5013E+00	8.2816E-01	3.6624E-02	5.0414E-02	1.3571E-01	6.1350E-03
3.000E+02	2.6109E+00	2.5792E-01	9.6993E-03	1.2898E-02	4.2341E-02	1.6318E-03
4.000E+02	1.1722E+00	1.1656E-01	3.9850E-03	5.2480E-03	1.9151E-02	6.7235E-04
5.000E+02	6.5010E-01	6.4856E-02	2.0743E-03	2.7439E-03	1.0661E-02	3.5066E-04
6.000E+02	4.1186E-01	4.1158E-02	1.2545E-03	1.6686E-03	6.7663E-03	2.1149E-04
8.000E+02	2.1109E-01	2.1117E-02	5.9577E-04	8.1782E-04	3.4719E-03	1.0062E-04
1.000E+03	1.3149E-01	1.3152E-02	3.5082E-04	4.9541E-04	2.1624E-03	5.9147E-05
1.500E+03	6.1115E-02	6.1052E-03	1.4818E-04	2.2338E-04	1.0036E-03	2.5006E-05

Z= 36

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	1.1058E+05	6.7307E+04	9.8313E+04	5.8817E+03	5.0017E+03	9.6658E+03
1.500E+00	4.8755E+04	1.8773E+04	2.7289E+04	2.8589E+03	2.1947E+03	4.1775E+03
1.672E+00	3.8419E+04	1.3129E+04	1.9058E+04	2.3410E+03	1.7312E+03	3.2824E+03
1.685E+00	3.7740E+04	1.2784E+04	1.8556E+04	2.3065E+03	1.7009E+03	3.2239E+03
1.727E+00	3.5726E+04	1.1783E+04	1.7098E+04	2.2041E+03	1.6110E+03	3.0508E+03
1.741E+00	3.5088E+04	1.1473E+04	1.6645E+04	2.1716E+03	1.5825E+03	2.9961E+03
1.901E+00	2.8687E+04	8.5261E+03	1.2356E+04	1.8421E+03	1.2973E+03	2.4484E+03
1.916E+00	2.8162E+04	8.2977E+03	1.2024E+04	1.8146E+03	1.2738E+03	2.4034E+03
2.000E+00	2.5471E+04	7.1620E+03	1.0372E+04	1.6726E+03	1.1534E+03	2.1728E+03
3.000E+00	9.3628E+03	1.7076E+03	2.4584E+03	7.5995E+02	4.3132E+02	8.0063E+02
4.000E+00	4.3565E+03	5.8794E+02	8.4246E+02	4.2331E+02	2.0378E+02	3.7421E+02
5.000E+00	2.3394E+03	2.5077E+02	3.5789E+02	2.6475E+02	1.1079E+02	2.0168E+02
6.000E+00	1.3837E+03	1.2307E+02	1.7502E+02	1.7863E+02	6.6216E+01	1.1925E+02

Z= 36

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
8.000E+00	5.8636E+02	3.8924E+01	5.5007E+01	9.4258E+01	2.8715E+01	5.0738E+01
1.000E+01	2.9404E+02	1.5577E+01	2.1889E+01	5.6488E+01	1.4596E+01	2.5518E+01
1.427E+01	9.4043E+01	3.4955E+00	4.8604E+00	2.4296E+01	4.7747E+00	8.1955E+00
1.438E+01	9.1617E+01	3.3787E+00	4.6968E+00	2.3828E+01	4.6539E+00	7.9848E+00
1.500E+01	7.9751E+01	2.8219E+00	3.9174E+00	2.1492E+01	4.0624E+00	6.9538E+00
2.000E+01	3.0500E+01	8.1857E-01	1.1250E+00	1.0488E+01	1.5845E+00	2.6667E+00
3.000E+01	7.5464E+00	1.3980E-01	1.8898E-01	3.6644E+00	4.0413E-01	6.6187E-01
4.000E+01	2.7328E+00	3.9400E-02	5.2540E-02	1.6911E+00	1.4991E-01	2.4012E-01
5.000E+01	1.2291E+00	1.4722E-02	1.9264E-02	9.1504E-01	6.8818E-02	1.0813E-01
6.000E+01	6.3649E-01	6.5880E-03	8.5323E-03	5.4927E-01	3.6276E-02	5.6039E-02
8.000E+01	2.2409E-01	1.8660E-03	2.3727E-03	2.4216E-01	1.3165E-02	1.9751E-02
1.000E+02	9.9520E-02	7.0957E-04	8.8924E-04	1.2708E-01	6.0041E-03	8.7896E-03
1.500E+02	2.3138E-02	1.2706E-04	1.5623E-04	3.8884E-02	1.4641E-03	2.0454E-03
2.000E+02	8.4240E-03	3.9094E-05	4.7780E-05	1.6769E-02	5.5058E-04	7.4510E-04
3.000E+02	2.1633E-03	8.0407E-06	9.9533E-06	5.2330E-03	1.4644E-04	1.9146E-04
4.000E+02	8.8143E-04	2.8206E-06	3.5741E-06	2.3672E-03	6.0299E-05	7.8056E-05
5.000E+02	4.6086E-04	1.3015E-06	1.7268E-06	1.3178E-03	3.1435E-05	4.0862E-05
6.000E+02	2.8114E-04	7.1544E-07	1.0052E-06	8.3647E-04	1.8963E-05	2.4936E-05
8.000E+02	1.3774E-04	2.9941E-07	4.5115E-07	4.2929E-04	9.0110E-06	1.2236E-05
1.000E+03	8.3582E-05	1.6161E-07	2.6321E-07	2.6745E-04	5.2971E-06	7.4408E-06
1.500E+03	3.7589E-05	6.3254E-08	1.0907E-07	1.2428E-04	2.2409E-06	3.3711E-06

Z= 37 13 STATES, 34 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	15.1593	.97622
2 S 1/2	2.00	2.0481	.77728
2 P 1/2	2.00	1.8671	.67280
2 P 3/2	4.00	1.8050	.66463
3 S 1/2	2.00	.3133	.43961
3 P 1/2	2.00	.2467	.33248
3 P 3/2	4.00	.2373	.32371
3 D 3/2	4.00	.1192	.11716
3 D 5/2	6.00	.1175	.11591
4 S 1/2	2.00	.0367	.14147
4 P 1/2	2.00	.0207	.08014
4 P 3/2	4.00	.0197	.07689
5 S 1/2	1.00	.0040	.01547

Z= 37 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	4.4960E+05	.0E+00	.0E+00	4.2350E+05	2.6101E+04
1.5000E+00	1.7224E+05	.0E+00	.0E+00	1.6042E+05	1.1819E+04
1.8032E+00	1.0985E+05	.0E+00	.0E+00	1.0181E+05	8.0396E+03
1.8176E+00	4.2999E+05	.0E+00	3.2228E+05	9.9802E+04	7.9040E+03
1.8653E+00	4.0467E+05	.0E+00	3.0364E+05	9.3559E+04	7.4779E+03
1.8802E+00	5.5175E+05	.0E+00	4.5268E+05	9.1711E+04	7.3508E+03
2.0000E+00	4.8328E+05	.0E+00	3.9830E+05	7.8550E+04	6.4309E+03
2.0461E+00	4.5727E+05	.0E+00	3.7698E+05	7.4174E+04	6.1189E+03
2.0625E+00	5.1264E+05	.0E+00	4.3393E+05	7.2698E+04	6.0131E+03
3.0000E+00	2.0059E+05	.0E+00	1.7016E+05	2.7847E+04	2.5762E+03
4.0000E+00	9.5194E+04	.0E+00	8.0811E+04	1.3085E+04	1.2989E+03
5.0000E+00	5.2639E+04	.0E+00	4.4674E+04	7.2145E+03	7.4989E+02
6.0000E+00	3.2203E+04	.0E+00	2.7317E+04	4.4115E+03	4.7379E+02
8.0000E+00	1.4658E+04	.0E+00	1.2420E+04	2.0118E+03	2.2588E+02
1.0000E+01	7.8968E+03	.0E+00	6.6850E+03	1.0862E+03	1.2556E+02
1.5000E+01	2.5268E+03	.0E+00	2.1356E+03	3.4905E+02	4.2173E+01
1.5144E+01	2.4593E+03	.0E+00	2.0784E+03	3.3975E+02	4.1087E+01

Z= 37 PHOTOLECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.5265E+01	1.6782E+04	1.4378E+04	2.0319E+03	3.3218E+02	4.0202E+01
2.0000E+01	8.3571E+03	7.2433E+03	9.4041E+02	1.5426E+02	1.9126E+01
3.0000E+01	2.7694E+03	2.4233E+03	2.9193E+02	4.8100E+01	6.1340E+00
4.0000E+01	1.2343E+03	1.0848E+03	1.2605E+02	2.0830E+01	2.6986E+00
5.0000E+01	6.5166E+02	5.7407E+02	6.5350E+01	1.0822E+01	1.4163E+00
6.0000E+01	3.8404E+02	3.3882E+02	3.8078E+01	6.3152E+00	8.3249E-01
8.0000E+01	1.6502E+02	1.4582E+02	1.6152E+01	2.6846E+00	3.5724E-01
1.0000E+02	8.5119E+01	7.5280E+01	8.2768E+00	1.3778E+00	1.8442E-01
1.5000E+02	2.5396E+01	2.2480E+01	2.4520E+00	4.0885E-01	5.5210E-02
2.0000E+02	1.0805E+01	9.5675E+00	1.0406E+00	1.7375E-01	2.3561E-02
3.0000E+02	3.3268E+00	2.9463E+00	3.1977E-01	5.3464E-02	7.2807E-03
4.0000E+02	1.4958E+00	1.3249E+00	1.4359E-01	2.4025E-02	3.2785E-03
5.0000E+02	8.3028E-01	7.3553E-01	7.9608E-02	1.3324E-02	1.8204E-03
6.0000E+02	5.2626E-01	4.6627E-01	5.0394E-02	8.4349E-03	1.1534E-03
8.0000E+02	2.6980E-01	2.3913E-01	2.5768E-02	4.3129E-03	5.9052E-04
1.0000E+03	1.6803E-01	1.4898E-01	1.6010E-02	2.6796E-03	3.6722E-04
1.5000E+03	7.8030E-02	6.9219E-02	7.4030E-03	1.2386E-03	1.7014E-04

Z= 37

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.6002E+04	6.0511E+04
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.3490E+04	2.7676E+04
1.803E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.6983E+04	1.8658E+04
1.818E+00	.0E+00	.0E+00	.0E+00	3.2228E+05	1.6741E+04	1.8333E+04
1.865E+00	.0E+00	.0E+00	.0E+00	3.0364E+05	1.5979E+04	1.7312E+04
1.880E+00	.0E+00	.0E+00	1.5331E+05	2.9937E+05	1.5750E+04	1.7007E+04
2.000E+00	.0E+00	.0E+00	1.3605E+05	2.6225E+05	1.4080E+04	1.4800E+04
2.046E+00	.0E+00	.0E+00	1.2933E+05	2.4765E+05	1.3506E+04	1.4052E+04
2.062E+00	.0E+00	6.4413E+04	1.2691E+05	2.4260E+05	1.3310E+04	1.3799E+04
3.000E+00	.0E+00	3.4551E+04	4.7226E+04	8.8386E+04	6.5496E+03	5.6135E+03
4.000E+00	.0E+00	2.0636E+04	2.1146E+04	3.9028E+04	3.6928E+03	2.6680E+03
5.000E+00	.0E+00	1.3403E+04	1.1060E+04	2.0212E+04	2.3253E+03	1.4558E+03
6.000E+00	.0E+00	9.2613E+03	6.4191E+03	1.1637E+04	1.5770E+03	8.7230E+02
8.000E+00	.0E+00	5.0162E+03	2.6550E+03	4.7487E+03	8.3794E+02	3.7741E+02
1.000E+01	.0E+00	3.0480E+03	1.3133E+03	2.3237E+03	5.0452E+02	1.9242E+02
1.500E+01	.0E+00	1.1754E+03	3.5156E+02	6.0869E+02	1.9301E+02	5.3863E+01
1.514E+01	.0E+00	1.1484E+03	3.4061E+02	5.8941E+02	1.8857E+02	5.2233E+01
1.527E+01	1.4378E+04	1.1264E+03	3.3173E+02	5.7378E+02	1.8495E+02	5.0909E+01
2.000E+01	7.2433E+03	5.7746E+02	1.3433E+02	2.2862E+02	9.4675E+01	2.1092E+01
3.000E+01	2.4233E+03	2.0288E+02	3.3534E+01	5.5517E+01	3.3292E+01	5.4099E+00
4.000E+01	1.0848E+03	9.3841E+01	1.2301E+01	1.9910E+01	1.5430E+01	2.0148E+00
5.000E+01	5.7407E+02	5.0837E+01	5.6094E+00	8.9038E+00	8.3752E+00	9.2762E-01
6.000E+01	3.3882E+02	3.0540E+01	2.9444E+00	4.5936E+00	5.0396E+00	4.9013E-01
8.000E+01	1.4582E+02	1.3478E+01	1.0632E+00	1.6101E+00	2.2299E+00	1.7846E-01
1.000E+02	7.5280E+01	7.0789E+00	4.8358E-01	7.1434E-01	1.1734E+00	8.1585E-02
1.500E+02	2.2480E+01	2.1688E+00	1.1757E-01	1.6559E-01	3.6029E-01	2.0024E-02
2.000E+02	9.5675E+00	9.3625E-01	4.4172E-02	6.0220E-02	1.5580E-01	7.5552E-03
3.000E+02	2.9463E+00	2.9257E-01	1.1744E-02	1.5450E-02	4.8775E-02	2.0180E-03
4.000E+02	1.3249E+00	1.3247E-01	4.8347E-03	6.2930E-03	2.2104E-02	8.3288E-04
5.000E+02	7.3553E-01	7.3794E-02	2.5210E-03	3.2929E-03	1.2319E-02	4.3492E-04
6.000E+02	4.6627E-01	4.6864E-02	1.5254E-03	2.0041E-03	7.8247E-03	2.6277E-04
8.000E+02	2.3913E-01	2.4061E-02	7.2574E-04	9.8149E-04	4.0178E-03	1.2514E-04
1.000E+03	1.4898E-01	1.4988E-02	4.2774E-04	5.9428E-04	2.5027E-03	7.3640E-05
1.500E+03	6.9219E-02	6.9542E-03	1.8067E-04	2.6807E-04	1.1611E-03	3.1164E-05

Z= 37

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	1.1951E+05	8.0264E+04	1.1721E+05	6.9005E+03	6.4433E+03	1.2564E+04
1.500E+00	5.3497E+04	2.2730E+04	3.3024E+04	3.3667E+03	2.8647E+03	5.4939E+03
1.803E+00	3.5754E+04	1.2416E+04	1.7995E+04	2.3985E+03	1.9194E+03	3.6544E+03
1.818E+00	3.5118E+04	1.2090E+04	1.7520E+04	2.3631E+03	1.8856E+03	3.5889E+03
1.865E+00	3.3121E+04	1.1086E+04	1.6061E+04	2.2516E+03	1.7795E+03	3.3836E+03
1.880E+00	3.2525E+04	1.0794E+04	1.5635E+04	2.2182E+03	1.7479E+03	3.3224E+03
2.000E+00	2.8227E+04	8.7620E+03	1.2681E+04	1.9749E+03	1.5194E+03	2.8811E+03
2.046E+00	2.6774E+04	8.1091E+03	1.1732E+04	1.8916E+03	1.4421E+03	2.7321E+03
2.062E+00	2.6281E+04	7.8916E+03	1.1416E+04	1.8632E+03	1.4159E+03	2.6816E+03
3.000E+00	1.0518E+04	2.1186E+03	3.0473E+03	9.0089E+02	5.7570E+02	1.0744E+03
4.000E+00	4.9372E+03	7.3580E+02	1.0532E+03	5.0371E+02	2.7459E+02	5.0651E+02
5.000E+00	2.6676E+03	3.1574E+02	4.5006E+02	3.1603E+02	1.5031E+02	2.7470E+02
6.000E+00	1.5853E+03	1.5572E+02	2.2116E+02	2.1376E+02	9.0310E+01	1.6374E+02
8.000E+00	6.7672E+02	4.9642E+01	7.0054E+01	1.1325E+02	3.9244E+01	7.0222E+01
1.000E+01	3.4124E+02	1.9991E+01	2.8049E+01	6.8093E+01	2.0146E+01	3.5419E+01
1.500E+01	9.3444E+01	3.6587E+00	5.0690E+00	2.6029E+01	5.6676E+00	9.7485E+00
1.514E+01	9.0566E+01	3.5129E+00	4.8655E+00	2.5430E+01	5.4966E+00	9.4492E+00
1.527E+01	8.8230E+01	3.3957E+00	4.7020E+00	2.4941E+01	5.3579E+00	9.2064E+00
2.000E+01	3.5957E+01	1.0672E+00	1.4633E+00	1.2780E+01	2.2260E+00	3.7625E+00
3.000E+01	8.9671E+00	1.8355E-01	2.4742E-01	4.4941E+00	5.7287E-01	9.4152E-01
4.000E+01	3.2641E+00	5.2028E-02	6.9143E-02	2.0833E+00	2.1379E-01	3.4341E-01
5.000E+01	1.4737E+00	1.9491E-02	2.5595E-02	1.1310E+00	9.8564E-02	1.5524E-01
6.000E+01	7.6535E-01	8.7531E-03	1.1302E-02	6.8065E-01	5.2135E-02	8.0700E-02
8.000E+01	2.7060E-01	2.4900E-03	3.1536E-03	3.0125E-01	1.9013E-02	2.8565E-02
1.000E+02	1.2072E-01	9.4903E-04	1.1861E-03	1.5854E-01	8.7025E-03	1.2752E-02
1.500E+02	2.8152E-02	1.7072E-04	2.0916E-04	4.8733E-02	2.1343E-03	2.9815E-03
2.000E+02	1.0278E-02	5.2702E-05	6.4073E-05	2.1078E-02	8.0553E-04	1.0891E-03
3.000E+02	2.6467E-03	1.0870E-05	1.3407E-05	6.6004E-03	2.1514E-04	2.8068E-04
4.000E+02	1.0797E-03	3.8057E-06	4.8370E-06	2.9914E-03	8.8795E-05	1.1458E-04
5.000E+02	5.6560E-04	1.7760E-06	2.3194E-06	1.6673E-03	4.6374E-05	6.0009E-05
6.000E+02	3.4511E-04	9.7234E-07	1.3498E-06	1.0591E-03	2.8007E-05	3.6632E-05
8.000E+02	1.6891E-04	4.1284E-07	6.0721E-07	5.4389E-04	1.3328E-05	1.7964E-05
1.000E+03	1.0263E-04	2.1875E-07	3.5994E-07	3.3884E-04	7.8425E-06	1.0914E-05
1.500E+03	4.6142E-05	8.0886E-08	1.5353E-07	1.5730E-04	3.3176E-06	4.9239E-06

Z= 37

ENERGY	5 S 1/2
1.000E+00	1.9338E+02
1.500E+00	9.3348E+01
1.803E+00	6.7365E+01
1.818E+00	6.6363E+01
1.865E+00	6.3208E+01
1.880E+00	6.2265E+01
2.000E+00	5.5404E+01
2.046E+00	5.3064E+01
2.062E+00	5.2268E+01
3.000E+00	2.5247E+01
4.000E+00	1.4107E+01
5.000E+00	8.8481E+00
6.000E+00	5.9837E+00
8.000E+00	3.1692E+00
1.000E+01	1.9051E+00
1.500E+01	7.2771E-01
1.514E+01	7.1096E-01
1.527E+01	6.9727E-01
2.000E+01	3.5681E-01
3.000E+01	1.2547E-01
4.000E+01	5.8163E-02
5.000E+01	3.1576E-02
6.000E+01	1.9004E-02

Z= 37

ENERGY	5 S 1/2
8.000E+01	8.4113E-03
1.000E+02	4.4270E-03
1.500E+02	1.3610E-03
2.000E+02	5.8878E-04
3.000E+02	1.8448E-04
4.000E+02	8.3688E-05
5.000E+02	4.6706E-05
6.000E+02	2.9724E-05
8.000E+02	1.5337E-05
1.000E+03	9.6240E-06
1.500E+03	4.5974E-06

Z= 38 13 STATES, 34 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	16.0673	.97669
2 S 1/2	2.00	2.2003	.78148
2 P 1/2	2.00	2.0122	.67897
2 P 3/2	4.00	1.9423	.67045
3 S 1/2	2.00	.3504	.44881
3 P 1/2	2.00	.2804	.34258
3 P 3/2	4.00	.2695	.33337
3 D 3/2	4.00	.1449	.12543
3 D 5/2	6.00	.1430	.12409
4 S 1/2	2.00	.0464	.15641
4 P 1/2	2.00	.0285	.09354
4 P 3/2	4.00	.0272	.08996
5 S 1/2	2.00	.0051	.02636

Z= 38 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	5.0744E+05	.0E+00	.0E+00	4.7546E+05	3.1978E+04
1.5000E+00	1.9508E+05	.0E+00	.0E+00	1.8047E+05	1.4613E+04
1.9404E+00	1.0397E+05	.0E+00	.0E+00	9.5434E+04	8.5396E+03
1.9559E+00	4.0191E+05	.0E+00	2.9997E+05	9.3546E+04	8.3947E+03
2.0000E+00	3.7597E+05	.0E+00	2.7951E+05	8.8459E+04	8.0016E+03
2.0102E+00	3.7209E+05	.0E+00	2.7684E+05	8.7336E+04	7.9142E+03
2.0263E+00	5.0902E+05	.0E+00	4.1563E+05	8.5604E+04	7.7791E+03
2.1981E+00	4.2130E+05	.0E+00	3.4507E+05	6.9717E+04	6.5177E+03
2.2157E+00	4.7113E+05	.0E+00	3.9640E+05	6.8323E+04	6.4045E+03
3.0000E+00	2.2127E+05	.0E+00	1.8663E+05	3.1413E+04	3.2326E+03
4.0000E+00	1.0558E+05	.0E+00	8.9161E+04	1.4779E+04	1.6389E+03
5.0000E+00	5.8519E+04	.0E+00	4.9414E+04	8.1550E+03	9.4997E+02
6.0000E+00	3.5850E+04	.0E+00	3.0258E+04	4.9893E+03	6.0191E+02
8.0000E+00	1.6359E+04	.0E+00	1.3793E+04	2.2772E+03	2.8806E+02
1.0000E+01	8.8254E+03	.0E+00	7.4343E+03	1.2304E+03	1.6061E+02
1.5000E+01	2.8307E+03	.0E+00	2.3806E+03	3.9599E+02	5.4163E+01
1.6051E+01	2.3368E+03	.0E+00	1.9647E+03	3.2707E+02	4.5041E+01
1.6180E+01	1.5763E+04	1.3478E+04	1.9207E+03	3.1978E+02	4.4071E+01
2.0000E+01	9.1545E+03	7.9048E+03	1.0499E+03	1.7520E+02	2.4619E+01
3.0000E+01	3.0518E+03	2.6625E+03	3.2664E+02	5.4722E+01	7.9285E+00
4.0000E+01	1.3664E+03	1.1979E+03	1.4128E+02	2.3732E+01	3.4970E+00
5.0000E+01	7.2318E+02	6.3564E+02	7.3349E+01	1.2344E+01	1.8391E+00
6.0000E+01	4.2701E+02	3.7592E+02	4.2790E+01	7.2116E+00	1.0827E+00
8.0000E+01	1.8397E+02	1.6224E+02	1.8186E+01	3.0712E+00	4.6579E-01
1.0000E+02	9.5102E+01	8.3949E+01	9.3334E+00	1.5785E+00	2.4092E-01
1.5000E+02	2.8470E+01	2.5155E+01	2.7727E+00	4.7001E-01	7.2369E-02
2.0000E+02	1.2140E+01	1.0730E+01	1.1790E+00	1.9997E-01	3.0953E-02

Z= 38 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
3.0000E+02	3.7475E+00	3.3130E+00	3.6318E-01	6.1681E-02	9.5914E-03
4.0000E+02	1.6876E+00	1.4922E+00	1.6332E-01	2.7758E-02	4.3261E-03
5.0000E+02	9.3767E-01	8.2923E-01	9.0627E-02	1.5407E-02	2.4046E-03
6.0000E+02	5.9470E-01	5.2601E-01	5.7399E-02	9.7588E-03	1.5245E-03
8.0000E+02	3.0507E-01	2.6994E-01	2.9363E-02	4.9923E-03	7.8094E-04
1.0000E+03	1.9003E-01	1.6820E-01	1.8244E-02	3.1013E-03	4.8570E-04
1.5000E+03	8.8210E-02	7.8121E-02	8.4309E-03	1.4326E-03	2.2501E-04

Z= 38

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.8658E+04	6.4893E+04
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.5018E+04	3.0179E+04
1.940E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.5911E+04	1.7446E+04
1.956E+00	.0E+00	.0E+00	.0E+00	2.9997E+05	1.5684E+04	1.7140E+04
2.000E+00	.0E+00	.0E+00	.0E+00	2.7951E+05	1.5065E+04	1.6310E+04
2.010E+00	.0E+00	.0E+00	.0E+00	2.7684E+05	1.4926E+04	1.6126E+04
2.026E+00	.0E+00	.0E+00	1.4313E+05	2.7251E+05	1.4712E+04	1.5840E+04
2.198E+00	.0E+00	.0E+00	1.1854E+05	2.2653E+05	1.2678E+04	1.3173E+04
2.216E+00	.0E+00	5.8073E+04	1.1636E+05	2.2196E+05	1.2493E+04	1.2934E+04
3.000E+00	.0E+00	3.6265E+04	5.2309E+04	9.8054E+04	7.0487E+03	6.2743E+03
4.000E+00	.0E+00	2.1786E+04	2.3688E+04	4.3686E+04	3.9901E+03	3.0101E+03
5.000E+00	.0E+00	1.4233E+04	1.2456E+04	2.2725E+04	2.5226E+03	1.6535E+03
6.000E+00	.0E+00	9.8737E+03	7.2581E+03	1.3127E+04	1.7155E+03	9.9582E+02
8.000E+00	.0E+00	5.3820E+03	3.0226E+03	5.3888E+03	9.1545E+02	4.3420E+02
1.000E+01	.0E+00	3.2848E+03	1.5020E+03	2.6475E+03	5.5308E+02	2.2268E+02
1.500E+01	.0E+00	1.2767E+03	4.0525E+02	6.9856E+02	2.1300E+02	6.2972E+01
1.605E+01	.0E+00	1.0841E+03	3.2414E+02	5.5645E+02	1.8072E+02	5.0699E+01
1.618E+01	1.3478E+04	1.0633E+03	3.1570E+02	5.4170E+02	1.7724E+02	4.9417E+01
2.000E+01	7.9048E+03	6.3055E+02	1.5568E+02	2.6364E+02	1.0497E+02	2.4824E+01
3.000E+01	2.6625E+03	2.2306E+02	3.9147E+01	6.4434E+01	3.7150E+01	6.4221E+00
4.000E+01	1.1979E+03	1.0364E+02	1.4432E+01	2.3211E+01	1.7293E+01	2.4055E+00
5.000E+01	6.3564E+02	5.6331E+01	6.6052E+00	1.0414E+01	9.4169E+00	1.1121E+00
6.000E+01	3.7592E+02	3.3927E+01	3.4771E+00	5.3859E+00	5.6810E+00	5.8957E-01
8.000E+01	1.6224E+02	1.5030E+01	1.2609E+00	1.8948E+00	2.5234E+00	2.1572E-01
1.000E+02	8.3949E+01	7.9153E+00	5.7530E-01	8.4286E-01	1.3314E+00	9.8960E-02
1.500E+02	2.5155E+01	2.4359E+00	1.4058E-01	1.9622E-01	4.1105E-01	2.4414E-02
2.000E+02	1.0730E+01	1.0545E+00	5.2990E-02	7.1540E-02	1.7811E-01	9.2435E-03
3.000E+02	3.3130E+00	3.3063E-01	1.4142E-02	1.8405E-02	5.5951E-02	2.4785E-03
4.000E+02	1.4922E+00	1.4998E-01	5.8354E-03	7.5065E-03	2.5405E-02	1.0252E-03
5.000E+02	8.2923E-01	8.3649E-02	3.0475E-03	3.9303E-03	1.4176E-02	5.3655E-04
6.000E+02	5.2601E-01	5.3160E-02	1.8400E-03	2.3984E-03	9.0107E-03	3.2459E-04
8.000E+02	2.6994E-01	2.7312E-02	8.7946E-04	1.1715E-03	4.6301E-03	1.5461E-04
1.000E+03	1.6820E-01	1.7016E-02	5.1846E-04	7.0934E-04	2.8844E-03	9.1206E-05
1.500E+03	7.8121E-02	7.8920E-03	2.1926E-04	3.1964E-04	1.3376E-03	3.8655E-05

Z= 38

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	1.2866E+05	9.4819E+04	1.3843E+05	7.9873E+03	7.8725E+03	1.5423E+04
1.500E+00	5.8439E+04	2.7255E+04	3.9579E+04	3.9101E+03	3.5448E+03	6.8218E+03
1.940E+00	3.3348E+04	1.1741E+04	1.6988E+04	2.4344E+03	2.0309E+03	3.8662E+03
1.956E+00	3.2751E+04	1.1432E+04	1.6539E+04	2.3983E+03	1.9950E+03	3.7965E+03
2.000E+00	3.1133E+04	1.0608E+04	1.5343E+04	2.3001E+03	1.8974E+03	3.6076E+03
2.010E+00	3.0774E+04	1.0429E+04	1.5082E+04	2.2782E+03	1.8758E+03	3.5657E+03
2.026E+00	3.0218E+04	1.0153E+04	1.4681E+04	2.2443E+03	1.8423E+03	3.5008E+03
2.198E+00	2.5030E+04	7.7061E+03	1.1130E+04	1.9240E+03	1.5299E+03	2.8973E+03
2.216E+00	2.4567E+04	7.4993E+03	1.0830E+04	1.8951E+03	1.5020E+03	2.8435E+03
3.000E+00	1.1752E+04	2.6003E+03	3.7370E+03	1.0531E+03	7.2789E+02	1.3606E+03
4.000E+00	5.5650E+03	9.1113E+02	1.3028E+03	5.9077E+02	3.5032E+02	6.4683E+02
5.000E+00	3.0255E+03	3.9335E+02	5.6002E+02	3.7178E+02	1.9309E+02	3.5303E+02

Z= 38

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
6.000E+00	1.8065E+03	1.9492E+02	2.7647E+02	2.5210E+02	1.1662E+02	2.1145E+02
8.000E+00	7.7666E+02	6.2621E+01	8.8234E+01	1.3408E+02	5.1075E+01	9.1341E+01
1.000E+01	3.9375E+02	2.5370E+01	3.5538E+01	8.0876E+01	2.6282E+01	4.6476E+01
1.500E+01	1.0885E+02	4.6905E+00	6.4864E+00	3.1105E+01	7.4940E+00	1.2883E+01
1.605E+01	8.7275E+01	3.5204E+00	4.8564E+00	2.6390E+01	6.0383E+00	1.0339E+01
1.618E+01	8.5026E+01	3.4031E+00	4.6933E+00	2.5882E+01	5.8861E+00	1.0073E+01
2.000E+01	4.2141E+01	1.3761E+00	1.8825E+00	1.5331E+01	2.9637E+00	5.0041E+00
3.000E+01	1.0591E+01	2.3829E-01	3.2036E-01	5.4294E+00	7.6957E-01	1.2624E+00
4.000E+01	3.8752E+00	6.7892E-02	8.9960E-02	2.5278E+00	2.8886E-01	4.6289E-01
5.000E+01	1.7562E+00	2.5541E-02	3.3427E-02	1.3768E+00	1.3376E-01	2.1007E-01
6.000E+01	9.1467E-01	1.1493E-02	1.4881E-02	8.3072E-01	7.0986E-02	1.0952E-01
8.000E+01	3.2473E-01	3.2833E-03	4.1493E-03	3.6908E-01	2.6018E-02	3.8935E-02
1.000E+02	1.4529E-01	1.2546E-03	1.5637E-03	1.9478E-01	1.1949E-02	1.7433E-02
1.500E+02	3.4044E-02	2.2706E-04	2.7607E-04	6.0149E-02	2.9475E-03	4.0955E-03
2.000E+02	1.2463E-02	7.0363E-05	8.4727E-05	2.6090E-02	1.1164E-03	1.5003E-03
3.000E+02	3.2195E-03	1.4571E-05	1.7724E-05	8.1983E-03	2.9946E-04	3.8779E-04
4.000E+02	1.3158E-03	5.0880E-06	6.4479E-06	3.7230E-03	1.2387E-04	1.5852E-04
5.000E+02	6.8932E-04	2.3681E-06	3.1316E-06	2.0775E-03	6.4813E-05	8.3088E-05
6.000E+02	4.2040E-04	1.3201E-06	1.7817E-06	1.3206E-03	3.9179E-05	5.0721E-05
8.000E+02	2.0620E-04	5.4763E-07	8.2856E-07	6.7862E-04	1.8672E-05	2.4866E-05
1.000E+03	1.2493E-04	2.9982E-07	4.6563E-07	4.2281E-04	1.0999E-05	1.5097E-05
1.500E+03	5.6106E-05	1.1169E-07	1.9473E-07	1.9616E-04	4.6571E-06	6.7985E-06

Z= 38

ENERGY	5 S 1/2
1.000E+00	6.9454E+02
1.500E+00	3.3593E+02
1.940E+00	2.0806E+02
1.956E+00	2.0494E+02
2.000E+00	1.9645E+02
2.010E+00	1.9457E+02
2.026E+00	1.9164E+02
2.198E+00	1.6648E+02
2.216E+00	1.6397E+02
3.000E+00	9.0980E+01
4.000E+00	5.0993E+01
5.000E+00	3.2076E+01
6.000E+00	2.1745E+01
8.000E+00	1.1561E+01
1.000E+01	6.9716E+00
1.500E+01	2.6799E+00
1.605E+01	2.2734E+00
1.618E+01	2.2296E+00
2.000E+01	1.3201E+00
3.000E+01	4.6715E-01
4.000E+01	2.1750E-01
5.000E+01	1.1846E-01
6.000E+01	7.1481E-02
8.000E+01	3.1759E-02
1.000E+02	1.6762E-02
1.500E+02	5.1765E-03
2.000E+02	2.2457E-03
3.000E+02	7.0593E-04
4.000E+02	3.2076E-04
5.000E+02	1.7914E-04
6.000E+02	1.1400E-04
8.000E+02	5.8774E-05
1.000E+03	3.6792E-05
1.500E+03	1.7396E-05

Z= 39 15 STATES, 34 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	17.0008	.97714
2 S 1/2	2.00	2.3550	.78553
2 P 1/2	2.00	2.1598	.68494
2 P 3/2	4.00	2.0814	.67605
3 S 1/2	2.00	.3859	.45777
3 P 1/2	2.00	.3123	.35245
3 P 3/2	4.00	.2999	.34280
3 D 3/2	4.00	.1687	.13358
3 D 5/2	6.00	.1665	.13214
4 S 1/2	2.00	.0534	.16854
4 P 1/2	2.00	.0337	.10392
4 P 3/2	4.00	.0321	.09987
4 D 3/2	.40	.0052	.01325
4 D 5/2	.60	.0051	.01293
5 S 1/2	2.00	.0057	.03056

Z= 39 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	5.6952E+05	.0E+00	.0E+00	5.3127E+05	3.8244E+04
1.5000E+00	2.1960E+05	.0E+00	.0E+00	2.0218E+05	1.7411E+04
2.0000E+00	1.0875E+05	.0E+00	.0E+00	9.9217E+04	9.5305E+03
2.0793E+00	9.8745E+04	.0E+00	.0E+00	8.9983E+04	8.7612E+03
2.0960E+00	3.7564E+05	.0E+00	2.7883E+05	8.8195E+04	8.6107E+03
2.1576E+00	3.4412E+05	.0E+00	2.5406E+05	8.1980E+04	8.0824E+03
2.1749E+00	4.7099E+05	.0E+00	3.8270E+05	8.0346E+04	7.9426E+03
2.3526E+00	3.9063E+05	.0E+00	3.1810E+05	6.5850E+04	6.6791E+03
2.3715E+00	4.3695E+05	.0E+00	3.6586E+05	6.4528E+04	6.5618E+03
3.0000E+00	2.4350E+05	.0E+00	2.0436E+05	3.5294E+04	3.8527E+03
4.0000E+00	1.1653E+05	.0E+00	9.7951E+04	1.6627E+04	1.9558E+03
5.0000E+00	6.4763E+04	.0E+00	5.4445E+04	9.1829E+03	1.1352E+03
6.0000E+00	3.9747E+04	.0E+00	3.3405E+04	5.6215E+03	7.1999E+02
8.0000E+00	1.8181E+04	.0E+00	1.5268E+04	2.5680E+03	3.4501E+02
1.0000E+01	9.8246E+03	.0E+00	8.2435E+03	1.3886E+03	1.9253E+02
1.5000E+01	3.1583E+03	.0E+00	2.6457E+03	4.4757E+02	6.5062E+01
1.6984E+01	2.2227E+03	.0E+00	1.8611E+03	3.1523E+02	4.6368E+01
1.7120E+01	1.4839E+04	1.2666E+04	1.8195E+03	3.0819E+02	4.5367E+01
2.0000E+01	9.9746E+03	8.5782E+03	1.1686E+03	1.9823E+02	2.9593E+01
3.0000E+01	3.3498E+03	2.9139E+03	3.6435E+02	6.2020E+01	9.5462E+00
4.0000E+01	1.5067E+03	1.3177E+03	1.5786E+02	2.6933E+01	4.2162E+00
5.0000E+01	7.9963E+02	7.0132E+02	8.2065E+01	1.4026E+01	2.2199E+00
6.0000E+01	4.7305E+02	4.1561E+02	4.7930E+01	8.2030E+00	1.3083E+00
8.0000E+01	2.0441E+02	1.7994E+02	2.0409E+01	3.4995E+00	5.6383E-01
1.0000E+02	1.0588E+02	9.3301E+01	1.0490E+01	1.8011E+00	2.9206E-01
1.5000E+02	3.1806E+01	2.8055E+01	3.1249E+00	5.3769E-01	8.7963E-02
2.0000E+02	1.3591E+01	1.1993E+01	1.3313E+00	2.2921E-01	3.7693E-02
3.0000E+02	4.2066E+00	3.7130E+00	4.1107E-01	7.0871E-02	1.1708E-02
4.0000E+02	1.8973E+00	1.6750E+00	1.8513E-01	3.1939E-02	5.2885E-03
5.0000E+02	1.0553E+00	9.3175E-01	1.0282E-01	1.7743E-02	2.9421E-03
6.0000E+02	6.6969E-01	5.9142E-01	6.5154E-02	1.1244E-02	1.8662E-03
8.0000E+02	3.4375E-01	3.0370E-01	3.3345E-02	5.7547E-03	9.5638E-04
1.0000E+03	2.1416E-01	1.8927E-01	2.0718E-02	3.5749E-03	5.9477E-04
1.5000E+03	9.9371E-02	8.7876E-02	9.5686E-03	1.6503E-03	2.7528E-04

Z= 39

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	5.1322E+04	6.9248E+04
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.6584E+04	3.2739E+04
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.6069E+04	1.7884E+04
2.079E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.4982E+04	1.6411E+04
2.096E+00	.0E+00	.0E+00	.0E+00	2.7883E+05	1.4768E+04	1.6122E+04
2.158E+00	.0E+00	.0E+00	.0E+00	2.5406E+05	1.4011E+04	1.5109E+04
2.175E+00	.0E+00	.0E+00	1.3285E+05	2.4985E+05	1.3809E+04	1.4840E+04
2.353E+00	.0E+00	.0E+00	1.0943E+05	2.0867E+05	1.1954E+04	1.2412E+04
2.371E+00	.0E+00	5.3933E+04	1.0744E+05	2.0449E+05	1.1779E+04	1.2187E+04
3.000E+00	.0E+00	3.8037E+04	5.7997E+04	1.0832E+05	7.5635E+03	6.9748E+03
4.000E+00	.0E+00	2.2957E+04	2.6385E+04	4.8609E+04	4.3000E+03	3.3775E+03
5.000E+00	.0E+00	1.5063E+04	1.3963E+04	2.5419E+04	2.7277E+03	1.8677E+03
6.000E+00	.0E+00	1.0486E+04	8.1766E+03	1.4743E+04	1.8600E+03	1.1306E+03
8.000E+00	.0E+00	5.7568E+03	3.4244E+03	6.0872E+03	9.9673E+02	4.9674E+02
1.000E+01	.0E+00	3.5301E+03	1.7100E+03	3.0035E+03	6.0420E+02	2.5622E+02
1.500E+01	.0E+00	1.3826E+03	4.6506E+02	7.9798E+02	2.3418E+02	7.3189E+01
1.698E+01	.0E+00	1.0254E+03	3.0919E+02	5.2649E+02	1.7341E+02	4.9270E+01
1.712E+01	1.2666E+04	1.0058E+03	3.0115E+02	5.1254E+02	1.7007E+02	4.8025E+01
2.000E+01	8.5782E+03	6.8640E+02	1.7960E+02	3.0259E+02	1.1594E+02	2.9044E+01
3.000E+01	2.9139E+03	2.4443E+02	4.5484E+01	7.4428E+01	4.1291E+01	7.5781E+00
4.000E+01	1.3177E+03	1.1408E+02	1.6850E+01	2.6927E+01	1.9303E+01	2.8545E+00
5.000E+01	7.0132E+02	6.2205E+01	7.7402E+00	1.2119E+01	1.0545E+01	1.3253E+00
6.000E+01	4.1561E+02	3.7560E+01	4.0861E+00	6.2837E+00	6.3776E+00	7.0482E-01
8.000E+01	1.7994E+02	1.6702E+01	1.4881E+00	2.2187E+00	2.8434E+00	2.5912E-01
1.000E+02	9.3301E+01	8.8196E+00	6.8102E-01	9.8950E-01	1.5044E+00	1.1928E-01
1.500E+02	2.8055E+01	2.7263E+00	1.6727E-01	2.3133E-01	4.6653E-01	2.9585E-02
2.000E+02	1.1993E+01	1.1835E+00	6.3248E-02	8.4552E-02	1.2397E-01	1.1239E-02
3.000E+02	3.7130E+00	3.7231E-01	1.6945E-02	2.1812E-02	6.3911E-02	3.0259E-03
4.000E+02	1.6750E+00	1.6921E-01	7.0077E-03	8.9081E-03	2.9076E-02	1.2551E-03
5.000E+02	9.3175E-01	9.4487E-02	3.6652E-03	4.6669E-03	1.6244E-02	6.5780E-04
6.000E+02	5.9142E-01	6.0090E-02	2.2156E-03	2.8484E-03	1.0333E-02	3.9803E-04
8.000E+02	3.0370E-01	3.0894E-02	1.0603E-03	1.3908E-03	5.3131E-03	1.9006E-04
1.000E+03	1.8927E-01	1.9251E-02	6.2512E-04	8.4264E-04	3.3105E-03	1.1210E-04
1.500E+03	8.7876E-02	8.9247E-03	2.6495E-04	3.7889E-04	1.5344E-03	4.7584E-05

Z= 39

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	1.3784E+05	1.1094E+05	1.6192E+05	9.0007E+03	9.1326E+03	1.7935E+04
1.500E+00	6.3525E+04	3.2365E+04	4.6971E+04	4.4181E+03	4.1602E+03	8.0158E+03
2.000E+00	3.4171E+04	1.2715E+04	1.8377E+04	2.6058E+03	2.2468E+03	4.2737E+03
2.079E+00	3.1292E+04	1.1168E+04	1.6131E+04	2.4226E+03	2.0598E+03	3.9113E+03
2.096E+00	3.0729E+04	1.0873E+04	1.5703E+04	2.3865E+03	2.0232E+03	3.8405E+03
2.158E+00	2.8757E+04	9.8640E+03	1.4239E+04	2.2597E+03	1.8950E+03	3.5926E+03
2.175E+00	2.8235E+04	9.6024E+03	1.3860E+04	2.2259E+03	1.8611E+03	3.5269E+03
2.353E+00	2.3523E+04	7.3558E+03	1.0604E+04	1.9173E+03	1.5545E+03	2.9358E+03
2.371E+00	2.3086E+04	7.1581E+03	1.0318E+04	1.8884E+03	1.5261E+03	2.8811E+03
3.000E+00	1.3063E+04	3.1582E+03	4.5346E+03	1.1974E+03	8.7235E+02	1.6299E+03
4.000E+00	6.2389E+03	1.1164E+03	1.5946E+03	6.7373E+02	4.2347E+02	7.8104E+02
5.000E+00	3.4129E+03	4.8495E+02	6.8960E+02	4.2518E+02	2.3499E+02	4.2896E+02
6.000E+00	2.0474E+03	2.4145E+02	3.4199E+02	2.8903E+02	1.4267E+02	2.5819E+02
8.000E+00	8.8643E+02	7.8144E+01	1.0993E+02	1.5431E+02	6.2975E+01	1.1234E+02
1.000E+01	4.5178E+02	3.1846E+01	4.4531E+01	9.3365E+01	3.2599E+01	5.7466E+01
1.500E+01	1.2605E+02	5.9470E+00	8.2086E+00	3.6126E+01	9.3704E+00	1.6135E+01
1.698E+01	8.4191E+01	3.5200E+00	4.8364E+00	2.6747E+01	6.3306E+00	1.0762E+01
1.712E+01	8.2022E+01	3.4029E+00	4.6742E+00	2.6232E+01	6.1713E+00	1.0486E+01
2.000E+01	4.9097E+01	1.7550E+00	2.3958E+00	1.7884E+01	3.7390E+00	6.2884E+00
3.000E+01	1.2435E+01	3.0602E-01	4.1030E-01	6.3734E+00	9.7947E-01	1.5991E+00
4.000E+01	4.5727E+00	8.7611E-02	1.1574E-01	2.9799E+00	3.6980E-01	5.8939E-01
5.000E+01	2.0799E+00	3.3083E-02	4.3163E-02	1.6282E+00	1.7196E-01	2.6851E-01
6.000E+01	1.0864E+00	1.4931E-02	1.9269E-02	9.8494E-01	9.1565E-02	1.4040E-01

Z= 39

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
8.000E+01	3.8729E-01	4.2835E-03	5.3887E-03	4.3926E-01	3.3723E-02	5.0126E-02
1.000E+02	1.7377E-01	1.6419E-03	2.0357E-03	2.3246E-01	1.5543E-02	2.2509E-02
1.500E+02	4.0915E-02	2.9803E-04	3.6214E-04	7.2113E-02	3.8557E-03	5.3135E-03
2.000E+02	1.5020E-02	9.2519E-05	1.1162E-04	3.1369E-02	1.4654E-03	1.9520E-03
3.000E+02	3.8920E-03	1.9223E-05	2.3478E-05	9.8910E-03	3.9474E-04	5.0605E-04
4.000E+02	1.5921E-03	6.7697E-06	8.4573E-06	4.5005E-03	1.6368E-04	2.0715E-04
5.000E+02	8.3439E-04	3.1561E-06	4.0754E-06	2.5144E-03	8.5754E-05	1.0866E-04
6.000E+02	5.0954E-04	1.7328E-06	2.3809E-06	1.5995E-03	5.1911E-05	6.6342E-05
8.000E+02	2.4974E-04	7.4049E-07	1.0662E-06	8.2252E-04	2.4774E-05	3.2526E-05
1.000E+03	1.5133E-04	3.9553E-07	6.3171E-07	5.1254E-04	1.4604E-05	1.9744E-05
1.500E+03	6.7843E-05	1.5463E-07	2.7220E-07	2.3766E-04	6.1904E-06	8.8759E-06

Z= 39

ENERGY	4 D 3/2	4 D 5/2	5 S 1/2
1.000E+00	5.4376E+02	7.8891E+02	8.4390E+02
1.500E+00	1.6685E+02	2.4067E+02	4.0910E+02
2.000E+00	6.7447E+01	9.6846E+01	2.3981E+02
2.079E+00	5.9438E+01	8.5296E+01	2.2277E+02
2.096E+00	5.7911E+01	8.3098E+01	2.1942E+02
2.158E+00	5.2663E+01	7.4847E+01	2.0764E+02
2.175E+00	5.1301E+01	7.2901E+01	2.0450E+02
2.353E+00	3.9427E+01	5.6131E+01	1.7596E+02
2.371E+00	3.8392E+01	5.4650E+01	1.7329E+02
3.000E+00	1.7246E+01	2.4451E+01	1.1134E+02
4.000E+00	6.2160E+00	8.7663E+00	6.2575E+01
5.000E+00	2.7330E+00	3.8369E+00	3.9467E+01
6.000E+00	1.3715E+00	1.9177E+00	2.6820E+01
8.000E+00	4.4846E-01	6.2274E-01	1.4313E+01
1.000E+01	1.8401E-01	2.5397E-01	8.6577E+00
1.500E+01	3.4713E-02	4.7291E-02	3.3483E+00
1.698E+01	2.0600E-02	2.7937E-02	2.4786E+00
1.712E+01	1.9918E-02	2.7004E-02	2.4308E+00
2.000E+01	1.0301E-02	1.3879E-02	1.6568E+00
3.000E+01	1.8065E-03	2.3903E-03	5.8995E-01
4.000E+01	5.1873E-04	6.7616E-04	2.7584E-01
5.000E+01	1.9629E-04	2.5264E-04	1.5072E-01
6.000E+01	8.8741E-05	1.1294E-04	9.1176E-02
8.000E+01	2.5470E-05	3.1827E-05	4.0665E-02
1.000E+02	9.7672E-06	1.2032E-05	2.1521E-02
1.500E+02	1.7750E-06	2.1412E-06	6.6767E-03
2.000E+02	5.5110E-07	6.5996E-07	2.9047E-03
3.000E+02	1.1443E-07	1.3896E-07	9.1615E-04
4.000E+02	4.0118E-08	5.0373E-08	4.1706E-04
5.000E+02	1.8682E-08	2.4501E-08	2.3317E-04
6.000E+02	1.0301E-08	1.4181E-08	1.4847E-04
8.000E+02	4.3148E-09	6.4982E-09	7.6551E-05
1.000E+03	2.3132E-09	3.7923E-09	4.7882E-05
1.500E+03	8.6768E-10	1.6626E-09	2.2552E-05

Z= 40 15 STATES, 34 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	17.9620	.97757
2 S 1/2	2.00	2.5148	.78942
2 P 1/2	2.00	2.3123	.69068
2 P 3/2	4.00	2.2247	.68142
3 S 1/2	2.00	.4221	.46649
3 P 1/2	2.00	.3450	.36205
3 P 3/2	4.00	.3309	.35194
3 D 3/2	4.00	.1931	.14160
3 D 5/2	6.00	.1904	.14006
4 S 1/2	2.00	.0600	.17953
4 P 1/2	2.00	.0386	.11337
4 P 3/2	4.00	.0367	.10883
4 D 3/2	.80	.0067	.01683
4 D 5/2	1.20	.0065	.01644
5 S 1/2	2.00	.0061	.03320

Z= 40 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	6.3672E+05	.0E+00	.0E+00	5.9130E+05	4.5418E+04
1.5000E+00	2.4616E+05	.0E+00	.0E+00	2.2563E+05	2.0525E+04
2.0000E+00	1.2206E+05	.0E+00	.0E+00	1.1086E+05	1.1208E+04
2.2225E+00	9.3934E+04	.0E+00	.0E+00	8.5030E+04	8.9032E+03
2.2403E+00	3.5041E+05	.0E+00	2.5833E+05	8.3334E+04	8.7481E+03
2.3100E+00	3.1918E+05	.0E+00	2.3389E+05	7.7112E+04	8.1746E+03
2.3285E+00	4.3638E+05	.0E+00	3.5278E+05	7.5569E+04	8.0312E+03
2.5123E+00	3.6328E+05	.0E+00	2.9421E+05	6.2299E+04	6.7774E+03
2.5324E+00	4.0660E+05	.0E+00	3.3890E+05	6.1044E+04	6.6568E+03
3.0000E+00	2.6773E+05	.0E+00	2.2370E+05	3.9501E+04	4.5236E+03
4.0000E+00	1.2821E+05	.0E+00	1.0728E+05	1.8635E+04	2.2963E+03
5.0000E+00	7.1457E+04	.0E+00	5.9822E+04	1.0302E+04	1.3335E+03
6.0000E+00	4.3947E+04	.0E+00	3.6790E+04	6.3106E+03	8.4636E+02
6.0000E+00	2.0139E+04	.0E+00	1.6847E+04	2.8854E+03	4.0591E+02
1.0000E+01	1.0899E+04	.0E+00	9.1108E+03	1.5614E+03	2.2665E+02
1.5000E+01	3.5126E+03	.0E+00	2.9319E+03	5.0402E+02	7.6690E+01
1.7944E+01	2.1167E+03	.0E+00	1.7657E+03	3.0400E+02	4.7034E+01
1.8088E+01	1.3991E+04	1.1921E+04	1.7261E+03	2.9722E+02	4.6017E+01
2.0000E+01	1.0809E+04	9.2537E+03	1.2969E+03	2.2349E+02	3.4919E+01
3.0000E+01	3.6693E+03	3.1828E+03	4.0521E+02	7.0037E+01	1.1282E+01
4.0000E+01	1.6557E+03	1.4445E+03	1.7584E+02	3.0455E+01	4.9892E+00
5.0000E+01	8.8121E+02	7.7116E+02	9.1537E+01	1.5879E+01	2.6299E+00
6.0000E+01	5.2241E+02	4.5804E+02	5.3523E+01	9.2958E+00	1.5515E+00
8.0000E+01	2.2643E+02	1.9896E+02	2.2832E+01	3.9725E+00	6.6980E-01
1.0000E+02	1.1752E+02	1.0337E+02	1.1753E+01	2.0474E+00	3.4743E-01
1.5000E+02	3.5419E+01	3.1191E+01	3.5105E+00	6.1271E-01	1.0491E-01
2.0000E+02	1.5167E+01	1.3362E+01	1.4983E+00	2.6170E-01	4.5038E-02
3.0000E+02	4.7069E+00	4.1480E+00	4.6377E-01	8.1109E-02	1.4024E-02
4.0000E+02	2.1263E+00	1.8742E+00	2.0916E-01	3.6604E-02	6.3437E-03
5.0000E+02	1.1838E+00	1.0436E+00	1.1627E-01	2.0353E-02	3.5321E-03
6.0000E+02	7.5172E-01	6.6286E-01	7.3717E-02	1.2905E-02	2.2417E-03
8.0000E+02	3.8610E-01	3.4060E-01	3.7744E-02	6.6071E-03	1.1492E-03
1.0000E+03	2.4057E-01	2.1230E-01	2.3452E-02	4.1048E-03	7.1469E-04
1.5000E+03	1.1159E-01	9.8537E-02	1.0825E-02	1.8936E-03	3.3050E-04

Z= 40

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	5.4034E+04	7.3597E+04
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.8161E+04	3.5354E+04
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.7101E+04	1.9513E+04
2.222E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.4142E+04	1.5478E+04
2.240E+00	.0E+00	.0E+00	.0E+00	2.5833E+05	1.3939E+04	1.5205E+04
2.310E+00	.0E+00	.0E+00	.0E+00	2.3389E+05	1.3183E+04	1.4193E+04
2.329E+00	.0E+00	.0E+00	1.2294E+05	2.2984E+05	1.2992E+04	1.3939E+04
2.512E+00	.0E+00	.0E+00	1.0136E+05	1.9285E+05	1.1295E+04	1.1721E+04
2.532E+00	.0E+00	5.0374E+04	9.9531E+04	1.8899E+05	1.1129E+04	1.1507E+04
3.000E+00	.0E+00	3.9834E+04	6.4155E+04	1.1971E+05	8.0915E+03	7.7144E+03
4.000E+00	.0E+00	2.4065E+04	2.9333E+04	5.3877E+04	4.6194E+03	3.7697E+03
5.000E+00	.0E+00	1.5877E+04	1.5609E+04	2.8336E+04	2.9402E+03	2.9886E+03
6.000E+00	.0E+00	1.1110E+04	9.1753E+03	1.6504E+04	2.0103E+03	1.2768E+03
8.000E+00	.0E+00	6.1370E+03	3.8647E+03	6.8458E+03	1.0817E+03	5.6524E+02
1.000E+01	.0E+00	3.7811E+03	1.9381E+03	3.3916E+03	6.5783E+02	2.9320E+02
1.500E+01	.0E+00	1.4929E+03	5.3132E+02	9.0771E+02	2.5654E+02	8.4587E+01
1.794E+01	.0E+00	9.7135E+02	2.9544E+02	4.9889E+02	1.6653E+02	4.7911E+01
1.809E+01	1.1921E+04	9.5270E+02	2.8777E+02	4.8567E+02	1.6332E+02	4.6702E+01
2.000E+01	9.2537E+03	7.4483E+02	2.0626E+02	3.4578E+02	1.2759E+02	3.3789E+01
3.000E+01	3.1828E+03	2.6702E+02	5.2609E+01	8.5579E+01	4.5721E+01	8.8912E+00
4.000E+01	1.4445E+03	1.2516E+02	1.9584E+01	3.1093E+01	2.1463E+01	3.3677E+00
5.000E+01	7.7116E+02	6.8471E+01	9.0281E+00	1.4038E+01	1.1762E+01	1.5700E+00
6.000E+01	4.5804E+02	4.1447E+01	4.7794E+00	7.2964E+00	7.1315E+00	8.3769E-01
8.000E+01	1.9896E+02	1.8499E+01	1.7478E+00	2.5855E+00	3.1914E+00	3.0944E-01
1.000E+02	1.0337E+02	9.7947E+00	8.0235E-01	1.1561E+00	1.6931E+00	1.4293E-01
1.500E+02	3.1191E+01	3.0411E+00	1.9807E-01	2.7139E-01	5.2741E-01	3.5576E-02
2.000E+02	1.3362E+01	1.3238E+00	7.5123E-02	9.9432E-02	2.2986E-01	1.3585E-02
3.000E+02	4.1480E+00	4.1784E-01	2.0206E-02	2.5724E-02	7.2706E-02	3.6733E-03
4.000E+02	1.8742E+00	1.9027E-01	8.3751E-03	1.0519E-02	3.3142E-02	1.5271E-03
5.000E+02	1.0436E+00	1.0637E-01	4.3867E-03	5.5145E-03	1.8537E-02	8.0114E-04
6.000E+02	6.6286E-01	6.7695E-02	2.6546E-03	3.3665E-03	1.1801E-02	4.8533E-04
8.000E+02	3.4060E-01	3.4829E-02	1.2719E-03	1.6435E-03	6.0720E-03	2.3225E-04
1.000E+03	2.1230E-01	2.1706E-02	7.5006E-04	9.9645E-04	3.7841E-03	1.3694E-04
1.500E+03	9.8537E-02	1.0059E-02	3.1876E-04	4.4679E-04	1.7532E-03	5.8176E-05

Z= 40

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	1.4721E+05	1.2869E+05	1.8777E+05	1.0016E+04	1.0383E+04	2.0436E+04
1.500E+00	6.8778E+04	3.8091E+04	5.5251E+04	4.9265E+03	4.7811E+03	9.2217E+03
2.000E+00	3.7330E+04	1.5102E+04	2.1810E+04	2.9133E+03	2.6046E+03	4.9558E+03
2.222E+00	2.9442E+04	1.0635E+04	1.5333E+04	2.3909E+03	2.0601E+03	3.9006E+03
2.240E+00	2.8909E+04	1.0354E+04	1.4927E+04	2.3552E+03	2.0234E+03	3.8297E+03
2.310E+00	2.6941E+04	9.3392E+03	1.3457E+04	2.2225E+03	1.8876E+03	3.5677E+03
2.329E+00	2.6449E+04	9.0912E+03	1.3098E+04	2.1892E+03	1.8537E+03	3.5022E+03
2.512E+00	2.2154E+04	7.0237E+03	1.0106E+04	1.8941E+03	1.5568E+03	2.9309E+03
2.532E+00	2.1740E+04	6.8347E+03	9.8329E+03	1.8654E+03	1.5282E+03	2.8761E+03
3.000E+00	1.4447E+04	3.7987E+03	5.4492E+03	1.3435E+03	1.0232E+03	1.9105E+03
4.000E+00	6.9579E+03	1.3548E+03	1.9329E+03	7.5802E+02	5.0079E+02	9.2250E+02
5.000E+00	3.8298E+03	5.9216E+02	8.4100E+02	4.7962E+02	2.7971E+02	5.0974E+02
6.000E+00	2.3084E+03	2.9619E+02	4.1895E+02	3.2681E+02	1.7072E+02	3.0830E+02
8.000E+00	1.0063E+03	9.6548E+01	1.3561E+02	1.7514E+02	7.5938E+01	1.3511E+02
1.000E+01	5.1554E+02	3.9569E+01	5.5236E+01	1.0629E+02	3.9534E+01	6.9482E+01
1.500E+01	1.4514E+02	7.4636E+00	1.0282E+01	4.1366E+01	1.1480E+01	1.9690E+01
1.794E+01	8.1251E+01	3.5114E+00	4.8044E+00	2.6844E+01	6.5190E+00	1.1020E+01
1.809E+01	7.9159E+01	3.3949E+00	4.6435E+00	2.6326E+01	6.3552E+00	1.0737E+01
2.000E+01	5.6877E+01	2.2159E+00	3.0184E+00	2.0566E+01	4.6128E+00	7.7241E+00
3.000E+01	1.4516E+01	3.8904E-01	5.2022E-01	7.3745E+00	1.2190E+00	1.9799E+00
4.000E+01	5.3644E+00	1.1189E-01	1.4739E-01	3.4624E+00	4.6289E-01	7.3352E-01
5.000E+01	2.4489E+00	4.2417E-02	5.5156E-02	1.8978E+00	2.1616E-01	3.3539E-01
6.000E+01	1.2827E+00	1.9201E-02	2.4691E-02	1.1509E+00	1.1548E-01	1.7589E-01

Z= 40

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
8.000E+01	4.5916E-01	5.5226E-03	6.9740E-03	5.1520E-01	4.2736E-02	6.3057E-02
1.000E+02	2.0661E-01	2.1247E-03	2.6263E-03	2.7339E-01	1.9766E-02	2.8402E-02
1.500E+02	4.8866E-02	3.8795E-04	4.6756E-04	8.5194E-02	4.9303E-03	6.7362E-03
2.000E+02	1.7987E-02	1.2074E-04	1.4419E-04	3.7165E-02	1.8802E-03	2.4810E-03
3.000E+02	4.6741E-03	2.5233E-05	3.0330E-05	1.1759E-02	5.0860E-04	6.4533E-04
4.000E+02	1.9147E-03	8.8556E-06	1.1030E-05	5.3609E-03	2.1145E-04	2.6453E-04
5.000E+02	1.0048E-03	4.1194E-06	5.3986E-06	2.9988E-03	1.1094E-04	1.3883E-04
6.000E+02	6.1399E-04	2.2854E-06	3.0873E-06	1.9090E-03	6.7228E-05	8.4818E-05
8.000E+02	3.0052E-04	9.5532E-07	1.4102E-06	9.8234E-04	3.2127E-05	4.1583E-05
1.000E+03	1.8241E-04	5.1865E-07	8.1119E-07	6.1223E-04	1.8956E-05	2.5225E-05
1.500E+03	8.1695E-05	1.9735E-07	3.4097E-07	2.8373E-04	8.0465E-06	1.1330E-05

Z= 40

ENERGY	4 D 3/2	4 D 5/2	5 S 1/2
1.000E+00	1.4783E+03	2.1459E+03	9.5942E+02
1.500E+00	4.6246E+02	6.6726E+02	4.6589E+02
2.000E+00	1.8922E+02	2.7174E+02	2.7366E+02
2.222E+00	1.3459E+02	1.9295E+02	2.2415E+02
2.240E+00	1.3113E+02	1.8796E+02	2.2076E+02
2.310E+00	1.1860E+02	1.6991E+02	2.0820E+02
2.329E+00	1.1553E+02	1.6550E+02	2.0505E+02
2.512E+00	8.9852E+01	1.2853E+02	1.7720E+02
2.532E+00	8.7492E+01	1.2514E+02	1.7450E+02
3.000E+00	4.9169E+01	6.9719E+01	1.2742E+02
4.000E+00	1.7911E+01	2.5258E+01	7.1797E+01
5.000E+00	7.9379E+00	1.1142E+01	4.5396E+01
6.000E+00	4.0068E+00	5.6012E+00	3.0920E+01
8.000E+00	1.3212E+00	1.8337E+00	1.6563E+01
1.000E+01	5.4557E-01	7.5254E-01	1.0048E+01
1.500E+01	1.0408E-01	1.4167E-01	3.9088E+00
1.794E+01	4.9165E-02	6.6461E-02	2.5359E+00
1.809E+01	4.7543E-02	6.4246E-02	2.4870E+00
2.000E+01	3.1092E-02	4.1850E-02	1.9426E+00
3.000E+01	5.4948E-03	7.2581E-03	6.9594E-01
4.000E+01	1.5858E-03	2.0630E-03	3.2676E-01
5.000E+01	6.0247E-04	7.7363E-04	1.7911E-01
6.000E+01	2.7316E-04	3.4690E-04	1.0862E-01
8.000E+01	7.8761E-05	9.8154E-05	4.8627E-02
1.000E+02	3.0293E-05	3.7205E-05	2.5804E-02
1.500E+02	5.5301E-06	6.6478E-06	8.0419E-03
2.000E+02	1.7209E-06	2.0527E-06	3.5085E-03
3.000E+02	3.5896E-07	4.3359E-07	1.1104E-03
4.000E+02	1.2611E-07	1.5731E-07	5.0645E-04
5.000E+02	5.8769E-08	7.6502E-08	2.8348E-04
6.000E+02	3.2445E-08	4.4254E-08	1.8060E-04
8.000E+02	1.3578E-08	2.0264E-08	9.3161E-05
1.000E+03	7.2959E-09	1.1785E-08	5.8258E-05
1.500E+03	2.7043E-09	5.0837E-09	2.7385E-05

Z= 41 15 STATES, 34 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	18.9482	.97799
2 S 1/2	2.00	2.6765	.79316
2 P 1/2	2.00	2.4668	.69624
2 P 3/2	4.00	2.3690	.68660
3 S 1/2	2.00	.4561	.47490
3 P 1/2	2.00	.3753	.37134
3 P 3/2	4.00	.3593	.36078
3 D 3/2	4.00	.2148	.14944
3 D 5/2	6.00	.2118	.14779
4 S 1/2	2.00	.0635	.18787
4 P 1/2	2.00	.0406	.12019
4 P 3/2	4.00	.0384	.11505
4 D 3/2	1.60	.0059	.01804
4 D 5/2	2.40	.0058	.01753
5 S 1/2	1.00	.0057	.02870

Z= 41 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	7.0856E+05	.0E+00	.0E+00	6.5489E+05	5.3668E+04
1.5000E+00	2.7458E+05	.0E+00	.0E+00	2.5076E+05	2.3822E+04
2.0000E+00	1.3628E+05	.0E+00	.0E+00	1.2339E+05	1.2889E+04
2.3667E+00	8.9642E+04	.0E+00	.0E+00	8.0774E+04	8.8688E+03
2.3856E+00	3.2799E+05	.0E+00	2.4013E+05	7.9157E+04	8.7108E+03
2.4643E+00	2.9776E+05	.0E+00	2.1677E+05	7.2897E+04	8.0935E+03
2.4840E+00	4.0669E+05	.0E+00	3.2731E+05	7.1433E+04	7.9486E+03
2.6738E+00	3.3986E+05	.0E+00	2.7394E+05	5.9200E+04	6.7198E+03
2.6952E+00	3.8103E+05	.0E+00	3.1643E+05	5.8004E+04	6.5979E+03
3.0000E+00	2.9322E+05	.0E+00	2.4403E+05	4.4041E+04	5.1496E+03
4.0000E+00	1.4069E+05	.0E+00	1.1728E+05	2.0805E+04	2.6005E+03
5.0000E+00	7.8596E+04	.0E+00	6.5576E+04	1.1514E+04	1.5056E+03
6.0000E+00	4.8403E+04	.0E+00	4.0391E+04	7.0585E+03	9.5362E+02
8.0000E+00	2.2232E+04	.0E+00	1.8546E+04	3.2306E+03	4.5602E+02
1.0000E+01	1.2047E+04	.0E+00	1.0044E+04	1.7494E+03	2.5408E+02
1.5000E+01	3.8909E+03	.0E+00	3.2396E+03	5.6557E+02	8.5686E+01
1.8929E+01	2.0171E+03	.0E+00	1.6784E+03	2.9345E+02	4.5311E+01
1.9081E+01	1.3210E+04	1.1238E+04	1.6408E+03	2.8690E+02	4.4326E+01
2.0000E+01	1.1734E+04	1.0009E+04	1.4353E+03	2.5107E+02	3.8941E+01
3.0000E+01	4.0116E+03	3.4708E+03	4.4940E+02	7.8808E+01	1.2555E+01
4.0000E+01	1.8148E+03	1.5796E+03	1.9532E+02	3.4313E+01	5.5474E+00
5.0000E+01	9.6837E+02	8.4572E+02	1.0181E+02	1.7910E+01	2.9229E+00
6.0000E+01	5.7528E+02	5.0346E+02	5.9597E+01	1.0496E+01	1.7242E+00
8.0000E+01	2.5001E+02	2.1931E+02	2.5469E+01	4.4928E+00	7.4453E-01
1.0000E+02	1.3003E+02	1.1419E+02	1.3129E+01	2.3187E+00	3.8636E-01
1.5000E+02	3.9319E+01	3.4574E+01	3.9319E+00	6.9573E-01	1.1682E-01
2.0000E+02	1.6872E+01	1.4843E+01	1.6812E+00	2.9766E-01	5.0204E-02
3.0000E+02	5.2497E+00	4.6200E+00	5.2161E-01	9.2468E-02	1.5658E-02
4.0000E+02	2.3752E+00	2.0907E+00	2.3559E-01	4.1789E-02	7.0905E-03
5.0000E+02	1.3237E+00	1.1654E+00	1.3107E-01	2.3257E-02	3.9506E-03
6.0000E+02	8.4110E-01	7.4069E-01	8.3148E-02	1.4754E-02	2.5082E-03
8.0000E+02	4.3228E-01	3.8084E-01	4.2592E-02	7.5568E-03	1.2861E-03
1.0000E+03	2.6939E-01	2.3743E-01	2.6466E-02	4.6950E-03	7.9957E-04
1.5000E+03	1.2490E-01	1.1016E-01	1.2208E-02	2.1646E-03	3.6922E-04

Z= 41

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	5.6647E+04	7.7800E+04
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.9753E+04	3.7997E+04
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.8144E+04	2.1193E+04
2.367E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.3410E+04	1.4675E+04
2.386E+00	.0E+00	.0E+00	.0E+00	2.4013E+05	1.3217E+04	1.4415E+04
2.464E+00	.0E+00	.0E+00	.0E+00	2.1677E+05	1.2456E+04	1.3400E+04
2.484E+00	.0E+00	.0E+00	1.1443E+05	2.1289E+05	1.2276E+04	1.3161E+04
2.674E+00	.0E+00	.0E+00	9.4534E+04	1.7941E+05	1.0714E+04	1.1119E+04
2.695E+00	.0E+00	4.7775E+04	9.2838E+04	1.7582E+05	1.0556E+04	1.0916E+04
3.000E+00	.0E+00	4.1307E+04	7.0758E+04	1.3197E+05	8.6333E+03	8.4898E+03
4.000E+00	.0E+00	2.5106E+04	3.2517E+04	5.9662E+04	4.9476E+03	4.1859E+03
5.000E+00	.0E+00	1.6698E+04	1.7375E+04	3.1503E+04	3.1592E+03	2.3459E+03
6.000E+00	.0E+00	1.1752E+04	1.0244E+04	1.8395E+04	2.1658E+03	1.4346E+03
8.000E+00	.0E+00	6.5267E+03	4.3453E+03	7.6737E+03	1.1701E+03	6.3988E+02
1.000E+01	.0E+00	4.0392E+03	2.1889E+03	3.8159E+03	7.1387E+02	3.3377E+02
1.500E+01	.0E+00	1.6070E+03	6.0458E+02	1.0281E+03	2.8006E+02	9.7234E+01
1.893E+01	.0E+00	9.2175E+02	2.8292E+02	4.7369E+02	1.6008E+02	4.6637E+01
1.908E+01	1.1238E+04	9.0405E+02	2.7558E+02	4.6114E+02	1.5699E+02	4.5462E+01
2.000E+01	1.0009E+04	8.0593E+02	2.3593E+02	3.9347E+02	1.3990E+02	3.9096E+01
3.000E+01	3.4708E+03	2.9083E+02	6.0591E+01	9.7980E+01	5.0439E+01	1.0375E+01
4.000E+01	1.5796E+03	1.3692E+02	2.2663E+01	3.5746E+01	2.3776E+01	3.9513E+00
5.000E+01	8.4572E+02	7.5139E+01	1.0484E+01	1.6189E+01	1.3070E+01	1.8496E+00
6.000E+01	5.0346E+02	4.5596E+01	5.5659E+00	8.4347E+00	7.9439E+00	9.9000E-01
8.000E+01	2.1931E+02	2.0426E+01	2.0440E+00	2.9995E+00	3.5681E+00	3.6744E-01
1.000E+02	1.1419E+02	1.0843E+01	9.4112E-01	1.3446E+00	1.8981E+00	1.7029E-01
1.500E+02	3.4574E+01	3.3815E+00	2.3349E-01	3.1694E-01	5.9389E-01	4.2622E-02
2.000E+02	1.4843E+01	1.4760E+00	8.8836E-02	1.1641E-01	2.5957E-01	1.6329E-02
3.000E+02	4.6200E+00	4.6743E-01	2.3985E-02	3.0198E-02	8.2382E-02	4.4330E-02
4.000E+02	2.0907E+00	2.1326E-01	9.9643E-03	1.2365E-02	3.7626E-02	1.8466E-03
5.000E+02	1.1654E+00	1.1936E-01	5.2269E-03	6.4859E-03	2.1071E-02	9.7022E-04
6.000E+02	7.4069E-01	7.6021E-02	3.1665E-03	3.9605E-03	1.3423E-02	5.8873E-04
8.000E+02	3.8084E-01	3.9140E-02	1.5186E-03	1.9337E-03	6.9119E-03	2.8193E-04
1.000E+03	2.3743E-01	2.4397E-02	8.9596E-04	1.1730E-03	4.3084E-03	1.6642E-04
1.500E+03	1.1016E-01	1.1302E-02	3.8163E-04	5.2444E-04	1.9953E-03	7.0749E-05

Z= 41

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	1.5646E+05	1.4804E+05	2.1594E+05	1.0939E+04	1.1454E+04	2.2561E+04
1.500E+00	7.4114E+04	4.4452E+04	6.4443E+04	5.3892E+03	5.3258E+03	1.0268E+04
2.000E+00	4.0607E+04	1.7784E+04	2.5664E+04	3.1943E+03	2.9256E+03	5.5600E+03
2.367E+00	2.7848E+04	1.0184E+04	1.4656E+04	2.3310E+03	2.0162E+03	3.8003E+03
2.386E+00	2.7343E+04	9.9152E+03	1.4267E+04	2.2961E+03	1.9802E+03	3.7309E+03
2.464E+00	2.5369E+04	8.8884E+03	1.2782E+04	2.1589E+03	1.8395E+03	3.4604E+03
2.484E+00	2.4904E+04	8.6520E+03	1.2441E+04	2.1264E+03	1.8063E+03	3.3967E+03
2.674E+00	2.0959E+04	6.7358E+03	9.6730E+03	1.8472E+03	1.5246E+03	2.8565E+03
2.695E+00	2.0567E+04	6.5545E+03	9.4113E+03	1.8191E+03	1.4965E+03	2.8029E+03
3.000E+00	1.5901E+04	4.5280E+03	6.4890E+03	1.4785E+03	1.1627E+03	2.1664E+03
4.000E+00	7.7212E+03	1.6289E+03	2.3214E+03	8.3630E+02	5.7362E+02	1.0537E+03
5.000E+00	4.2759E+03	7.1647E+02	1.0163E+03	5.3042E+02	3.2242E+02	5.8566E+02
6.000E+00	2.5894E+03	3.6005E+02	5.0857E+02	3.6224E+02	1.9780E+02	3.5592E+02
8.000E+00	1.1366E+03	1.1818E+02	1.6573E+02	1.9486E+02	8.8673E+01	1.5709E+02
1.000E+01	5.8524E+02	4.8699E+01	6.7863E+01	1.1859E+02	4.6427E+01	8.1209E+01
1.500E+01	1.6624E+02	9.2766E+00	1.2754E+01	4.6416E+01	1.3615E+01	2.3226E+01
1.893E+01	7.8478E+01	3.4975E+00	4.7646E+00	2.6518E+01	6.5536E+00	1.0972E+01
1.908E+01	7.6459E+01	3.3816E+00	4.6052E+00	2.6007E+01	6.3893E+00	1.0690E+01
2.000E+01	6.5531E+01	2.7712E+00	3.7664E+00	2.3176E+01	5.5089E+00	9.1681E+00
3.000E+01	1.6852E+01	4.8992E-01	6.5337E-01	8.3600E+00	1.4686E+00	2.3686E+00
4.000E+01	6.2582E+00	1.4154E-01	1.8588E-01	3.9416E+00	5.6083E-01	8.8194E-01
5.000E+01	2.8671E+00	5.3845E-02	6.9793E-02	2.1672E+00	2.6298E-01	4.0475E-01
6.000E+01	1.5059E+00	2.4448E-02	3.1328E-02	1.3174E+00	1.4095E-01	2.1286E-01

Z= 41

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
8.000E+01	5.4125E-01	7.0610E-03	8.8828E-03	5.9195E-01	5.2413E-02	7.6636E-02
1.000E+02	2.4424E-01	2.7228E-03	3.3559E-03	3.1497E-01	2.4325E-02	3.4617E-02
1.500E+02	5.8123E-02	4.9896E-04	6.0052E-04	9.8591E-02	6.1019E-03	8.2489E-03
2.000E+02	2.1414E-02	1.5573E-04	1.8556E-04	4.3131E-02	2.3351E-03	3.0467E-03
3.000E+02	5.5811E-03	3.2588E-05	3.9295E-05	1.3693E-02	6.3423E-04	7.9481E-04
4.000E+02	2.2904E-03	1.1463E-05	1.4321E-05	6.2551E-03	2.6427E-04	3.2625E-04
5.000E+02	1.2032E-03	5.3733E-06	6.8970E-06	3.5032E-03	1.3888E-04	1.7139E-04
6.000E+02	7.3496E-04	2.9869E-06	3.9565E-06	2.2318E-03	8.4257E-05	1.0471E-04
8.000E+02	3.5984E-04	1.2421E-06	1.8404E-06	1.1493E-03	4.0325E-05	5.1348E-05
1.000E+03	2.1846E-04	6.8875E-07	1.0341E-06	7.1638E-04	2.3811E-05	3.1144E-05
1.500E+03	9.7855E-05	2.7509E-07	4.3217E-07	3.3184E-04	1.0119E-05	1.3970E-05

Z= 41

ENERGY	4 D 3/2	4 D 5/2	5 S 1/2
1.000E+00	3.3857E+03	4.8941E+03	4.3345E+02
1.500E+00	1.0791E+03	1.5499E+03	2.1025E+02
2.000E+00	4.4693E+02	6.3884E+02	1.2364E+02
2.367E+00	2.6036E+02	3.7106E+02	8.9874E+01
2.386E+00	2.5367E+02	3.6148E+02	8.8514E+01
2.464E+00	2.2809E+02	3.2191E+02	8.4707E+01
2.484E+00	2.2218E+02	3.1353E+02	8.3429E+01
2.674E+00	1.7360E+02	2.4536E+02	7.2452E+01
2.695E+00	1.6904E+02	2.3888E+02	7.1346E+01
3.000E+00	1.1785E+02	1.6620E+02	5.7935E+01
4.000E+00	4.3365E+01	6.0811E+01	3.2725E+01
5.000E+00	1.9368E+01	2.7031E+01	2.0740E+01
6.000E+00	9.8351E+00	1.3668E+01	1.4157E+01
8.000E+00	3.2698E+00	4.5109E+00	7.6120E+00
1.000E+01	1.3585E+00	1.8622E+00	4.6313E+00
1.500E+01	2.6199E-01	3.5429E-01	1.8117E+00
1.893E+01	9.9338E-02	1.3311E-01	1.0347E+00
1.908E+01	9.6063E-02	1.2868E-01	1.0148E+00
2.000E+01	7.8803E-02	1.0535E-01	9.0425E-01
3.000E+01	1.4032E-02	1.8406E-02	3.2589E-01
4.000E+01	4.0691E-03	5.2552E-03	1.5364E-01
5.000E+01	1.5517E-03	1.9778E-03	8.4476E-02
6.000E+01	7.0581E-04	8.8927E-04	5.1355E-02
8.000E+01	2.0437E-04	2.5264E-04	2.3076E-02
1.000E+02	7.8827E-05	9.6038E-05	1.2279E-02
1.500E+02	1.4459E-05	1.7228E-05	3.8440E-03
2.000E+02	4.5105E-06	5.3329E-06	1.6818E-03
3.000E+02	9.4438E-07	1.1297E-06	5.3411E-04
4.000E+02	3.3237E-07	4.1077E-07	2.4410E-04
5.000E+02	1.5510E-07	1.9985E-07	1.3681E-04
6.000E+02	8.5710E-08	1.1570E-07	8.7246E-05
8.000E+02	3.5958E-08	5.2985E-08	4.5048E-05
1.000E+03	1.9330E-08	3.0849E-08	2.8187E-05
1.500E+03	7.1798E-09	1.3391E-08	1.3266E-05

Z= 42 15 STATES, 34 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	19.9658	.97838
2 S 1/2	2.00	2.8467	.79675
2 P 1/2	2.00	2.6296	.70156
2 P 3/2	4.00	2.5210	.69154
3 S 1/2	2.00	.4942	.48308
3 P 1/2	2.00	.4097	.38038
3 P 3/2	4.00	.3916	.36935
3 D 3/2	4.00	.2404	.15717
3 D 5/2	6.00	.2369	.15541
4 S 1/2	2.00	.0697	.19726
4 P 1/2	2.00	.0451	.12843
4 P 3/2	4.00	.0425	.12273
4 D 3/2	2.00	.0070	.02131
4 D 5/2	3.00	.0068	.02071
5 S 1/2	1.00	.0060	.02952

Z= 42 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	7.8627E+05	.0E+00	.0E+00	7.2300E+05	6.3266E+04
1.5000E+00	3.0564E+05	.0E+00	.0E+00	2.7782E+05	2.7815E+04
2.0000E+00	1.5186E+05	.0E+00	.0E+00	1.3688E+05	1.4980E+04
2.5184E+00	8.5524E+04	.0E+00	.0E+00	7.6591E+04	8.9326E+03
2.5386E+00	3.0657E+05	.0E+00	2.2275E+05	7.5054E+04	8.7729E+03
2.6270E+00	2.7746E+05	.0E+00	2.0056E+05	6.8789E+04	8.1112E+03
2.6480E+00	3.7826E+05	.0E+00	3.0289E+05	6.7403E+04	7.9638E+03
2.8439E+00	3.1744E+05	.0E+00	2.5454E+05	5.6150E+04	6.7534E+03
2.8666E+00	3.5612E+05	.0E+00	2.9448E+05	5.5012E+04	6.6294E+03
3.0000E+00	3.1959E+05	.0E+00	2.6469E+05	4.8941E+04	5.9599E+03
4.0000E+00	1.5385E+05	.0E+00	1.2770E+05	2.3150E+04	3.0038E+03
5.0000E+00	8.6193E+04	.0E+00	7.1630E+04	1.2825E+04	1.7377E+03
6.0000E+00	5.3167E+04	.0E+00	4.4198E+04	7.8688E+03	1.1004E+03
8.0000E+00	2.4488E+04	.0E+00	2.0357E+04	3.6053E+03	5.2627E+02
1.0000E+01	1.3291E+04	.0E+00	1.1044E+04	1.9538E+03	2.9326E+02
1.5000E+01	4.3024E+03	.0E+00	3.5709E+03	6.3258E+02	9.8955E+01
1.9946E+01	1.9253E+03	.0E+00	1.5967E+03	2.8330E+02	4.5360E+01
2.0000E+01	1.2501E+04	1.0590E+04	1.5844E+03	2.8113E+02	4.5022E+01
2.0106E+01	1.2489E+04	1.0607E+04	1.5609E+03	2.7697E+02	4.4373E+01
3.0000E+01	4.3701E+03	3.7701E+03	4.9708E+02	8.8390E+01	1.4527E+01
4.0000E+01	1.9849E+03	1.7236E+03	2.1638E+02	3.8534E+01	6.4259E+00
5.0000E+01	1.0616E+03	9.2519E+02	1.1293E+02	2.0135E+01	3.3892E+00
6.0000E+01	6.3183E+02	5.5184E+02	6.6174E+01	1.1811E+01	2.0010E+00
8.0000E+01	2.7530E+02	2.4104E+02	2.8330E+01	5.0640E+00	8.6541E-01
1.0000E+02	1.4348E+02	1.2579E+02	1.4625E+01	2.6170E+00	4.4968E-01
1.5000E+02	4.3528E+01	3.8213E+01	4.3911E+00	7.8717E-01	1.3629E-01
2.0000E+02	1.8718E+01	1.6441E+01	1.8809E+00	3.3758E-01	5.8677E-02
3.0000E+02	5.8392E+00	5.1309E+00	5.8496E-01	1.0505E-01	1.8344E-02
4.0000E+02	2.6461E+00	2.3256E+00	2.6458E-01	4.7543E-02	8.3181E-03
5.0000E+02	1.4761E+00	1.2976E+00	1.4733E-01	2.6481E-02	4.6385E-03
6.0000E+02	9.3854E-01	8.2528E-01	9.3509E-02	1.6808E-02	2.9465E-03
8.0000E+02	4.8267E-01	4.2462E-01	4.7922E-02	8.6130E-03	1.5115E-03
1.0000E+03	3.0084E-01	2.6477E-01	2.9778E-02	5.3509E-03	9.3966E-04
1.5000E+03	1.3943E-01	1.2281E-01	1.3727E-02	2.4656E-03	4.3360E-04

Z= 42

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	5.9227E+04	8.2005E+04
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.1380E+04	4.0691E+04
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.9207E+04	2.2918E+04
2.518E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.2708E+04	1.3899E+04
2.539E+00	.0E+00	.0E+00	.0E+00	2.2275E+05	1.2524E+04	1.3653E+04
2.627E+00	.0E+00	.0E+00	.0E+00	2.0056E+05	1.1762E+04	1.2639E+04
2.648E+00	.0E+00	.0E+00	1.0603E+05	1.9686E+05	1.1591E+04	1.2412E+04
2.844E+00	.0E+00	.0E+00	8.7976E+04	1.6656E+05	1.0156E+04	1.0536E+04
2.867E+00	.0E+00	4.4822E+04	8.6403E+04	1.6325E+05	1.0005E+04	1.0343E+04
3.000E+00	.0E+00	4.2260E+04	7.7460E+04	1.4497E+05	9.1872E+03	9.3024E+03
4.000E+00	.0E+00	2.6194E+04	3.5760E+04	6.5747E+04	5.2853E+03	4.6267E+03
5.000E+00	.0E+00	1.7553E+04	1.9231E+04	3.4846E+04	3.3851E+03	2.6099E+03
6.000E+00	.0E+00	1.2391E+04	1.1397E+04	2.0410E+04	2.3268E+03	1.6043E+03
8.000E+00	.0E+00	6.9269E+03	4.8637E+03	8.5662E+03	1.2622E+03	7.2095E+02
1.000E+01	.0E+00	4.3054E+03	2.4614E+03	4.2768E+03	7.7239E+02	3.7812E+02
1.500E+01	.0E+00	1.7256E+03	6.8525E+02	1.1600E+03	3.0478E+02	1.1122E+02
1.995E+01	.0E+00	8.7544E+02	2.7117E+02	4.5005E+02	1.5392E+02	4.5399E+01
2.000E+01	1.0590E+04	8.6970E+02	2.6877E+02	4.4597E+02	1.5291E+02	4.5009E+01
2.011E+01	1.0607E+04	8.5863E+02	2.6415E+02	4.3814E+02	1.5095E+02	4.4258E+01
3.000E+01	3.7701E+03	3.1586E+02	6.9500E+01	1.1172E+02	5.5457E+01	1.2044E+01
4.000E+01	1.7236E+03	1.4934E+02	2.6116E+01	4.0923E+01	2.6248E+01	4.6123E+00
5.000E+01	9.2519E+02	8.2213E+01	1.2124E+01	1.8590E+01	1.4473E+01	2.1677E+00
6.000E+01	5.5184E+02	5.0011E+01	6.4544E+00	9.7085E+00	8.8178E+00	1.1639E+00
8.000E+01	2.4104E+02	2.2486E+01	2.3800E+00	3.4646E+00	3.9751E+00	4.3404E-01
1.000E+02	1.2579E+02	1.1968E+01	1.0991E+00	1.5569E+00	2.1202E+00	2.0184E-01
1.500E+02	3.8213E+01	3.7486E+00	2.7404E-01	3.6849E-01	6.6632E-01	5.0793E-02
2.000E+02	1.6441E+01	1.6407E+00	1.0459E-01	1.3567E-01	2.9226E-01	1.9521E-02
3.000E+02	5.1309E+00	5.2132E-01	2.8347E-02	3.5290E-02	9.3007E-02	5.3201E-03
4.000E+02	2.3256E+00	2.3831E-01	1.1803E-02	1.4469E-02	4.2563E-02	2.2213E-03
5.000E+02	1.2976E+00	1.3354E-01	6.2003E-03	7.5945E-03	2.3864E-02	1.1694E-03
6.000E+02	8.2528E-01	8.5111E-02	3.7601E-03	4.6387E-03	1.5214E-02	7.1051E-04
8.000E+02	4.2462E-01	4.3851E-02	1.8050E-03	2.2655E-03	7.8398E-03	3.4037E-04
1.000E+03	2.6477E-01	2.7338E-02	1.0658E-03	1.3743E-03	4.8875E-03	2.0133E-04
1.500E+03	1.2281E-01	1.2659E-02	4.5462E-04	6.1320E-04	2.2627E-03	8.5644E-05

Z= 42

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	1.6576E+05	1.6922E+05	2.4679E+05	1.1973E+04	1.2715E+04	2.5102E+04
1.500E+00	7.9613E+04	5.1508E+04	7.4630E+04	5.9065E+03	5.9657E+03	1.1513E+04
2.000E+00	4.3987E+04	2.0790E+04	2.9580E+04	3.5085E+03	3.3032E+03	6.2786E+03
2.518E+00	2.6309E+04	9.7175E+03	1.3957E+04	2.2801E+03	1.9895E+03	3.7369E+03
2.539E+00	2.5830E+04	9.4604E+03	1.3586E+04	2.2459E+03	1.9539E+03	3.6685E+03
2.627E+00	2.3861E+04	8.4291E+03	1.2098E+04	2.1042E+03	1.8074E+03	3.3875E+03
2.648E+00	2.3422E+04	8.2047E+03	1.1774E+04	2.0724E+03	1.7747E+03	3.3248E+03
2.844E+00	1.9802E+04	6.4348E+03	9.2217E+03	1.8074E+03	1.5051E+03	2.8095E+03
2.867E+00	1.9430E+04	6.2613E+03	8.9719E+03	1.7798E+03	1.4774E+03	2.7566E+03
3.000E+00	1.7430E+04	5.3550E+03	7.6667E+03	1.6300E+03	1.3280E+03	2.4721E+03
4.000E+00	8.5299E+03	1.9427E+03	2.7655E+03	9.2433E+02	6.6026E+02	1.2110E+03
5.000E+00	4.7519E+03	8.5990E+02	1.2182E+03	5.8752E+02	3.7338E+02	6.7679E+02
6.000E+00	2.8911E+03	4.3419E+02	6.1243E+02	4.0206E+02	2.3023E+02	4.1322E+02
8.000E+00	1.2778E+03	1.4350E+02	2.0090E+02	2.1707E+02	1.0401E+02	1.8368E+02
1.000E+01	6.6119E+02	5.9442E+01	8.2685E+01	1.3249E+02	5.4766E+01	9.5446E+01
1.500E+01	1.8946E+02	1.1432E+01	1.5686E+01	5.2137E+01	1.6219E+01	2.7544E+01
1.995E+01	7.5789E+01	3.4758E+00	4.7141E+00	2.6312E+01	6.6504E+00	1.1068E+01
2.000E+01	7.5121E+01	3.4363E+00	4.6600E+00	2.6139E+01	6.5933E+00	1.0971E+01
2.011E+01	7.3840E+01	3.3609E+00	4.5566E+00	2.5805E+01	6.4851E+00	1.0785E+01
3.000E+01	1.9464E+01	6.1184E-01	8.1378E-01	9.4831E+00	1.7763E+00	2.8485E+00
4.000E+01	7.2632E+00	1.7754E-01	2.3246E-01	4.4901E+00	6.8214E-01	1.0659E+00
5.000E+01	3.3393E+00	6.7777E-02	8.7560E-02	2.4762E+00	3.2121E-01	4.9100E-01
6.000E+01	1.7587E+00	3.0858E-02	3.9407E-02	1.5090E+00	1.7270E-01	2.5895E-01

Z= 42

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
8.000E+01	6.3465E-01	8.9514E-03	1.1216E-02	6.8048E-01	6.4533E-02	9.3612E-02
1.000E+02	2.8721E-01	3.4568E-03	4.2699E-03	3.6304E-01	3.0050E-02	4.2413E-02
1.500E+02	6.8651E-02	6.3684E-04	7.6360E-04	1.1415E-01	7.5799E-03	1.0152E-02
2.000E+02	2.5363E-02	1.9915E-04	2.3689E-04	5.0077E-02	2.9108E-03	3.7596E-03
3.000E+02	6.6310E-03	4.1845E-05	5.0230E-05	1.5953E-02	7.9383E-04	9.8373E-04
4.000E+02	2.7258E-03	1.4823E-05	1.8170E-05	7.3016E-03	3.3156E-04	4.0451E-04
5.000E+02	1.4323E-03	6.9310E-06	8.7902E-06	4.0942E-03	1.7455E-04	2.1259E-04
6.000E+02	8.7463E-04	3.8163E-06	5.1352E-06	2.6103E-03	1.0598E-04	1.2994E-04
8.000E+02	4.2891E-04	1.6341E-06	2.3079E-06	1.3452E-03	5.0800E-05	6.3707E-05
1.000E+03	2.5992E-04	8.6832E-07	1.3554E-06	8.3861E-04	3.0030E-05	3.8636E-05
1.500E+03	1.1644E-04	3.2766E-07	5.6671E-07	3.8830E-04	1.2771E-05	1.7314E-05

Z= 42

ENERGY	4 D 3/2	4 D 5/2	5 S 1/2
1.000E+00	5.3203E+03	7.6904E+03	4.6560E+02
1.500E+00	1.7257E+03	2.4780E+03	2.2594E+02
2.000E+00	7.2342E+02	1.0336E+03	1.3305E+02
2.518E+00	3.4671E+02	4.9326E+02	8.6031E+01
2.539E+00	3.3780E+02	4.8051E+02	8.6333E+01
2.627E+00	3.0195E+02	4.2927E+02	8.0867E+01
2.648E+00	2.9413E+02	4.1810E+02	7.9642E+01
2.844E+00	2.3225E+02	3.2963E+02	6.9436E+01
2.867E+00	2.2615E+02	3.2093E+02	6.8373E+01
3.000E+00	1.9425E+02	2.7299E+02	6.2597E+01
4.000E+00	7.1967E+01	1.0084E+02	3.5437E+01
5.000E+00	3.2389E+01	4.5159E+01	2.2504E+01
6.000E+00	1.6546E+01	2.2970E+01	1.5392E+01
8.000E+00	5.5478E+00	7.6437E+00	8.3054E+00
1.000E+01	2.3187E+00	3.1739E+00	5.0675E+00
1.500E+01	4.5202E-01	6.1021E-01	1.9931E+00
1.995E+01	1.3846E-01	1.8477E-01	1.0055E+00
2.000E+01	1.3689E-01	1.8266E-01	9.9889E-01
2.011E+01	1.3390E-01	1.7863E-01	9.8612E-01
3.000E+01	2.4568E-02	3.2151E-02	3.6211E-01
4.000E+01	7.1591E-03	9.2210E-03	1.7141E-01
5.000E+01	2.7401E-03	3.4823E-03	9.4532E-02
6.000E+01	1.2499E-03	1.5700E-03	5.7607E-02
8.000E+01	3.6355E-04	4.4785E-04	2.5980E-02
1.000E+02	1.4066E-04	1.7074E-04	1.3862E-02
1.500E+02	2.5918E-05	3.0743E-05	4.3587E-03
2.000E+02	8.1097E-06	9.5425E-06	1.9124E-03
3.000E+02	1.7038E-06	2.0255E-06	6.0941E-04
4.000E+02	6.0074E-07	7.3766E-07	2.7906E-04
5.000E+02	2.8071E-07	3.5876E-07	1.5657E-04
6.000E+02	1.5520E-07	2.0783E-07	9.9921E-05
8.000E+02	6.5203E-08	9.5007E-08	5.1618E-05
1.000E+03	3.5012E-08	5.5248E-08	3.2298E-05
1.500E+03	1.2980E-08	2.3788E-08	1.5173E-05

Z= 43 15 STATES, 34 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	21.0122	.97876
2 S 1/2	2.00	3.0226	.80021
2 P 1/2	2.00	2.7980	.70668
2 P 3/2	4.00	2.6775	.69627
3 S 1/2	2.00	.5335	.49099
3 P 1/2	2.00	.4453	.38916
3 P 3/2	4.00	.4249	.37764
3 D 3/2	4.00	.2670	.16476
3 D 5/2	6.00	.2630	.16289
4 S 1/2	2.00	.0759	.20605
4 P 1/2	2.00	.0496	.13623
4 P 3/2	4.00	.0466	.12996
4 D 3/2	2.40	.0081	.02452
4 D 5/2	3.60	.0078	.02382
5 S 1/2	1.00	.0062	.03001

Z= 43 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	8.6965E+05	.0E+00	.0E+00	7.9540E+05	7.4253E+04
1.5000E+00	3.3897E+05	.0E+00	.0E+00	3.0663E+05	3.2340E+04
2.0000E+00	1.6871E+05	.0E+00	.0E+00	1.5137E+05	1.7332E+04
2.6748E+00	8.1700E+04	.0E+00	.0E+00	7.2730E+04	8.9698E+03
2.6962E+00	2.8690E+05	.0E+00	2.0683E+05	7.1265E+04	8.8057E+03
2.7952E+00	2.5907E+05	.0E+00	1.8597E+05	6.4993E+04	8.0984E+03
2.8176E+00	3.5245E+05	.0E+00	2.8082E+05	6.3680E+04	7.9493E+03
3.0000E+00	3.0191E+05	.0E+00	2.4084E+05	5.4210E+04	6.8642E+03
3.0195E+00	2.9720E+05	.0E+00	2.3713E+05	5.3312E+04	6.7603E+03
3.0437E+00	3.3358E+05	.0E+00	2.7472E+05	5.2228E+04	6.6347E+03
4.0000E+00	1.6769E+05	.0E+00	1.3856E+05	2.5674E+04	3.4493E+03
5.0000E+00	9.4213E+04	.0E+00	7.7982E+04	1.4239E+04	1.9929E+03
6.0000E+00	5.8253E+04	.0E+00	4.8248E+04	8.7435E+03	1.2613E+03
8.0000E+00	2.6891E+04	.0E+00	2.2277E+04	4.0108E+03	6.0305E+02
1.0000E+01	1.4619E+04	.0E+00	1.2107E+04	2.1752E+03	3.3603E+02
1.5000E+01	4.7443E+03	.0E+00	3.9255E+03	7.0529E+02	1.1342E+02
2.0000E+01	2.1098E+03	.0E+00	1.7444E+03	3.1381E+02	5.1634E+01
2.0991E+01	1.8396E+03	.0E+00	1.5208E+03	2.7363E+02	4.5178E+01
2.1159E+01	1.1827E+04	1.0028E+04	1.4868E+03	2.6751E+02	4.4193E+01
3.0000E+01	4.7541E+03	4.0902E+03	5.4841E+02	9.8824E+01	1.6679E+01
4.0000E+01	2.1644E+03	1.8748E+03	2.3908E+02	4.3136E+01	7.3862E+00
5.0000E+01	1.1605E+03	1.0091E+03	1.2493E+02	2.2564E+01	3.8992E+00
6.0000E+01	6.9191E+02	6.0307E+02	7.3287E+01	1.3248E+01	2.3042E+00
8.0000E+01	3.0237E+02	2.6425E+02	3.1429E+01	5.6891E+00	9.9803E-01
1.0000E+02	1.5788E+02	1.3817E+02	1.6247E+01	2.9438E+00	5.1925E-01
1.5000E+02	4.8058E+01	4.2122E+01	4.8906E+00	8.8766E-01	1.5776E-01
2.0000E+02	2.0709E+01	1.8161E+01	2.0986E+00	3.8132E-01	6.8038E-02
3.0000E+02	6.4772E+00	5.6827E+00	6.5418E-01	1.1894E-01	2.1319E-02
4.0000E+02	2.9397E+00	2.5798E+00	2.9631E-01	5.3904E-02	9.6807E-03
5.0000E+02	1.6415E+00	1.4409E+00	1.6515E-01	3.0050E-02	5.4031E-03
6.0000E+02	1.0444E+00	9.1702E-01	1.0487E-01	1.9083E-02	3.4340E-03
8.0000E+02	5.3743E-01	4.7212E-01	5.3770E-02	9.7826E-03	1.7621E-03
1.0000E+03	3.3504E-01	2.9445E-01	3.3413E-02	6.0777E-03	1.0956E-03
1.5000E+03	1.5523E-01	1.3653E-01	1.5393E-02	2.7989E-03	5.0519E-04

Z= 43

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	6.1855E+04	8.5992E+04
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.2984E+04	4.3376E+04
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.0290E+04	2.4689E+04
2.675E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.2062E+04	1.3188E+04
2.696E+00	.0E+00	.0E+00	.0E+00	2.0683E+05	1.1887E+04	1.2954E+04
2.795E+00	.0E+00	.0E+00	.0E+00	1.8597E+05	1.1123E+04	1.1939E+04
2.818E+00	.0E+00	.0E+00	9.8356E+04	1.8247E+05	1.0961E+04	1.1725E+04
3.000E+00	.0E+00	.0E+00	8.3355E+04	1.5748E+05	9.7558E+03	1.0151E+04
3.020E+00	.0E+00	.0E+00	8.2157E+04	1.5497E+05	9.6381E+03	9.9987E+03
3.044E+00	.0E+00	4.2123E+04	8.0692E+04	1.5190E+05	9.4952E+03	9.8150E+03
4.000E+00	.0E+00	2.7377E+04	3.9273E+04	7.1914E+04	5.6312E+03	5.0916E+03
5.000E+00	.0E+00	1.8403E+04	2.1220E+04	3.8359E+04	3.6175E+03	2.8905E+03
6.000E+00	.0E+00	1.3013E+04	1.2652E+04	2.2583E+04	2.4926E+03	1.7859E+03
8.000E+00	.0E+00	7.3287E+03	5.4250E+03	9.5238E+03	1.3576E+03	8.0859E+02
1.000E+01	.0E+00	4.5758E+03	2.7574E+03	4.7741E+03	8.3331E+02	4.2640E+02
1.500E+01	.0E+00	1.8480E+03	7.7359E+02	1.3040E+03	3.3068E+02	1.2661E+02
2.000E+01	.0E+00	9.3586E+02	3.0501E+02	5.0350E+02	1.6659E+02	5.1567E+01
2.099E+01	.0E+00	8.3243E+02	2.6027E+02	4.2811E+02	1.4809E+02	4.4218E+01
2.116E+01	1.0028E+04	8.1645E+02	2.5355E+02	4.1678E+02	1.4523E+02	4.3109E+01
3.000E+01	4.0902E+03	3.4213E+02	7.9409E+01	1.2688E+02	6.0775E+01	1.3915E+01
4.000E+01	1.8748E+03	1.6244E+02	2.9978E+01	4.6664E+01	2.8881E+01	5.3576E+00
5.000E+01	1.0091E+03	8.9708E+01	1.3966E+01	2.1261E+01	1.5972E+01	2.5281E+00
6.000E+01	6.0307E+02	5.4703E+01	7.4549E+00	1.1129E+01	9.7546E+00	1.3617E+00
8.000E+01	2.6425E+02	2.4684E+01	2.7602E+00	3.9855E+00	4.4132E+00	5.1015E-01
1.000E+02	1.3817E+02	1.3173E+01	1.2785E+00	1.7954E+00	2.3601E+00	2.3802E-01
1.500E+02	4.2122E+01	4.1436E+00	3.2034E-01	4.2664E-01	7.4498E-01	6.0231E-02
2.000E+02	1.8161E+01	1.8185E+00	1.2264E-01	1.5746E-01	3.2766E-01	2.3218E-02
3.000E+02	5.6827E+00	5.7975E-01	3.3364E-02	4.1068E-02	1.0463E-01	6.3532E-03
4.000E+02	2.5798E+00	2.6552E-01	1.3922E-02	1.6860E-02	4.7977E-02	2.6596E-03
5.000E+02	1.4409E+00	1.4897E-01	7.3250E-03	8.8551E-03	2.6932E-02	1.4026E-03
6.000E+02	9.1702E-01	9.5014E-02	4.4469E-03	5.4100E-03	1.7183E-02	8.5267E-04
8.000E+02	4.7212E-01	4.8992E-02	2.1353E-03	2.6425E-03	8.8606E-03	4.0882E-04
1.000E+03	2.9445E-01	3.0547E-02	1.2627E-03	1.6031E-03	5.5249E-03	2.4231E-04
1.500E+03	1.3653E-01	1.4140E-02	5.3921E-04	7.1418E-04	2.5568E-03	1.0323E-04

Z= 43

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	1.7510E+05	1.9222E+05	2.8024E+05	1.3025E+04	1.3990E+04	2.7687E+04
1.500E+00	8.5185E+04	5.9265E+04	8.5822E+04	6.4331E+03	6.6193E+03	1.2788E+04
2.000E+00	4.7481E+04	2.4136E+04	3.4778E+04	3.8285E+03	3.6931E+03	7.0214E+03
2.675E+00	2.4897E+04	9.2804E+03	1.3302E+04	2.2241E+03	1.9548E+03	3.6584E+03
2.696E+00	2.4442E+04	9.0345E+03	1.2948E+04	2.1906E+03	1.9197E+03	3.5912E+03
2.795E+00	2.2477E+04	7.9983E+03	1.1455E+04	2.0449E+03	1.7680E+03	3.3011E+03
2.818E+00	2.2062E+04	7.7850E+03	1.1148E+04	2.0140E+03	1.7360E+03	3.2398E+03
3.000E+00	1.9025E+04	6.2869E+03	8.9919E+03	1.7851E+03	1.5016E+03	2.7929E+03
3.020E+00	1.8733E+04	6.1486E+03	8.7929E+03	1.7629E+03	1.4790E+03	2.7500E+03
3.044E+00	1.8381E+04	5.9828E+03	8.5544E+03	1.7360E+03	1.4517E+03	2.6981E+03
4.000E+00	9.3821E+03	2.2993E+03	3.2693E+03	1.0149E+03	7.5222E+02	1.3776E+03
5.000E+00	5.2577E+03	1.0241E+03	1.4489E+03	6.4635E+02	4.2786E+02	7.7401E+02
6.000E+00	3.2135E+03	5.1960E+02	7.3187E+02	4.4317E+02	2.6511E+02	4.7470E+02
8.000E+00	1.4300E+03	1.7290E+02	2.4167E+02	2.4011E+02	1.2069E+02	2.1250E+02
1.000E+01	7.4359E+02	7.1988E+01	9.9958E+01	1.4696E+02	6.3905E+01	1.1098E+02
1.500E+01	2.1489E+02	1.3976E+01	1.9136E+01	5.8136E+01	1.9109E+01	3.2310E+01
2.000E+01	8.5700E+01	4.2269E+00	5.7191E+00	2.9263E+01	7.8200E+00	1.2946E+01
2.099E+01	7.3214E+01	3.4494E+00	4.6569E+00	2.6012E+01	6.7102E+00	1.1068E+01
2.116E+01	7.1332E+01	3.3355E+00	4.5015E+00	2.5510E+01	6.5426E+00	1.0786E+01
3.000E+01	2.2371E+01	7.5804E-01	1.0055E+00	1.0677E+01	2.1251E+00	3.3880E+00
4.000E+01	8.3881E+00	2.2093E-01	2.8838E-01	5.0760E+00	8.2068E-01	1.2742E+00
5.000E+01	3.8699E+00	8.4619E-02	1.0896E-01	2.8077E+00	3.8802E-01	5.8900E-01
6.000E+01	2.0437E+00	3.8631E-02	4.9162E-02	1.7151E+00	2.0931E-01	3.1151E-01

Z= 43

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
8.000E+01	7.4043E-01	1.1254E-02	1.4047E-02	7.7621E-01	7.8575E-02	1.1307E-01
1.000E+02	3.3602E-01	4.3585E-03	5.3610E-03	4.1521E-01	3.6716E-02	5.1375E-02
1.500E+02	8.0676E-02	8.0687E-04	9.6056E-04	1.3113E-01	9.3129E-03	1.2355E-02
2.000E+02	2.9889E-02	2.5313E-04	2.9839E-04	5.7688E-02	3.5883E-03	4.5882E-03
3.000E+02	7.8379E-03	5.3425E-05	6.3258E-05	1.8440E-02	9.8266E-04	1.2042E-03
4.000E+02	3.2259E-03	1.8870E-05	2.3032E-05	8.4568E-03	4.1145E-04	4.9574E-04
5.000E+02	1.6955E-03	8.8028E-06	1.1286E-05	4.7477E-03	2.1689E-04	2.6076E-04
6.000E+02	1.0360E-03	4.8817E-06	6.5222E-06	3.0292E-03	1.3187E-04	1.5945E-04
8.000E+02	5.0824E-04	2.0574E-06	2.9209E-06	1.5621E-03	6.3255E-05	7.8165E-05
1.000E+03	3.0764E-04	1.1037E-06	1.7355E-06	9.7409E-04	3.7439E-05	4.7389E-05
1.500E+03	1.3769E-04	4.3326E-07	7.4501E-07	4.5083E-04	1.5947E-05	2.1220E-05

Z= 43

ENERGY	4 D 3/2	4 D 5/2	5 S 1/2
1.000E+00	7.7949E+03	1.1263E+04	4.9336E+02
1.500E+00	2.5710E+03	3.6893E+03	2.3955E+02
2.000E+00	1.0905E+03	1.5568E+03	1.4132E+02
2.675E+00	4.3365E+02	6.1559E+02	8.3219E+01
2.696E+00	4.2250E+02	5.9967E+02	8.1957E+01
2.795E+00	3.7540E+02	5.3247E+02	7.6479E+01
2.818E+00	3.6567E+02	5.1859E+02	7.5317E+01
3.000E+00	2.9711E+02	4.2077E+02	6.6741E+01
3.020E+00	2.9075E+02	4.1171E+02	6.5907E+01
3.044E+00	2.8312E+02	4.0084E+02	6.4897E+01
4.000E+00	1.1118E+02	1.5560E+02	3.7873E+01
5.000E+00	5.0407E+01	7.0185E+01	2.4096E+01
6.000E+00	2.5905E+01	3.5908E+01	1.6512E+01
8.000E+00	8.7608E+00	1.2050E+01	8.9400E+00
1.000E+01	3.6831E+00	5.0321E+00	5.4699E+00
1.500E+01	7.2554E-01	9.7737E-01	2.1627E+00
2.000E+01	2.2124E-01	2.9452E-01	1.0882E+00
2.099E+01	1.8076E-01	2.4011E-01	9.6721E-01
2.116E+01	1.7483E-01	2.3214E-01	9.4854E-01
3.000E+01	4.0027E-02	5.2237E-02	3.9676E-01
4.000E+01	1.1719E-02	1.5048E-02	1.8855E-01
5.000E+01	4.5014E-03	5.7018E-03	1.0430E-01
6.000E+01	2.0594E-03	2.5774E-03	6.3710E-02
8.000E+01	6.0151E-04	7.3822E-04	2.8836E-02
1.000E+02	2.3345E-04	2.8224E-04	1.5426E-02
1.500E+02	4.3214E-05	5.1013E-05	4.8723E-03
2.000E+02	1.3560E-05	1.5872E-05	2.1437E-03
3.000E+02	2.8583E-06	3.3771E-06	6.8544E-04
4.000E+02	1.0098E-06	1.2322E-06	3.1449E-04
5.000E+02	4.7240E-07	5.9915E-07	1.7666E-04
6.000E+02	2.6177E-07	3.4715E-07	1.1281E-04
8.000E+02	1.0952E-07	1.5830E-07	5.8309E-05
1.000E+03	5.9098E-08	9.2048E-08	3.6484E-05
1.500E+03	2.1841E-08	3.9401E-08	1.7125E-05

Z= 44 15 STATES, 34 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	22.0876	.97912
2 S 1/2	2.00	3.2041	.80353
2 P 1/2	2.00	2.9720	.71161
2 P 3/2	4.00	2.8386	.70081
3 S 1/2	2.00	.5742	.49865
3 P 1/2	2.00	.4822	.39767
3 P 3/2	4.00	.4593	.38566
3 D 3/2	4.00	.2945	.17219
3 D 5/2	6.00	.2900	.17021
4 S 1/2	2.00	.0822	.21434
4 P 1/2	2.00	.0542	.14365
4 P 3/2	4.00	.0507	.13678
4 D 3/2	2.80	.0091	.02769
4 D 5/2	4.20	.0088	.02687
5 S 1/2	1.00	.0064	.03028

Z= 44 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	9.5839E+05	.0E+00	.0E+00	8.7160E+05	8.6799E+04
1.5000E+00	3.7487E+05	.0E+00	.0E+00	3.3740E+05	3.7475E+04
2.0000E+00	1.8681E+05	.0E+00	.0E+00	1.6684E+05	1.9977E+04
2.8358E+00	7.8138E+04	.0E+00	.0E+00	6.9153E+04	8.9846E+03
2.8585E+00	2.6891E+05	.0E+00	1.9234E+05	6.7756E+04	8.8181E+03
2.9690E+00	2.4237E+05	.0E+00	1.7283E+05	6.1480E+04	8.0654E+03
2.9928E+00	3.2905E+05	.0E+00	2.6090E+05	6.0235E+04	7.9151E+03
3.0000E+00	3.2850E+05	.0E+00	2.6076E+05	5.9863E+04	7.8702E+03
3.2009E+00	2.7885E+05	.0E+00	2.2144E+05	5.0663E+04	6.7496E+03
3.2265E+00	3.1310E+05	.0E+00	2.5684E+05	4.9631E+04	6.6227E+03
4.0000E+00	1.8295E+05	.0E+00	1.5062E+05	2.8385E+04	3.9434E+03
5.0000E+00	1.0276E+05	.0E+00	8.4730E+04	1.5758E+04	2.2743E+03
6.0000E+00	6.3692E+04	.0E+00	5.2568E+04	9.6854E+03	1.4381E+03
8.0000E+00	2.9459E+04	.0E+00	2.4324E+04	4.4483E+03	6.8713E+02
1.0000E+01	1.6039E+04	.0E+00	1.3242E+04	2.4145E+03	3.8280E+02
1.5000E+01	5.2177E+03	.0E+00	4.3045E+03	7.8401E+02	1.2920E+02
2.0000E+01	2.3242E+03	.0E+00	1.9162E+03	3.4922E+02	5.8843E+01
2.2066E+01	1.7596E+03	.0E+00	1.4503E+03	2.6441E+02	4.4852E+01
2.2242E+01	1.1208E+04	9.4882E+03	1.4178E+03	2.5849E+02	4.3872E+01
3.0000E+01	5.1515E+03	4.4187E+03	6.0363E+02	1.1016E+02	1.9027E+01
4.0000E+01	2.3522E+03	2.0321E+03	2.6354E+02	4.8142E+01	8.4345E+00
5.0000E+01	1.2649E+03	1.0974E+03	1.3788E+02	2.5209E+01	4.4567E+00
6.0000E+01	7.5567E+02	6.5726E+02	8.0963E+01	1.4814E+01	2.6358E+00
8.0000E+01	3.3128E+02	2.8898E+02	3.4780E+01	6.3716E+00	1.1433E+00
1.0000E+02	1.7330E+02	1.5140E+02	1.8003E+01	3.3012E+00	5.9558E-01
1.5000E+02	5.2923E+01	4.6311E+01	5.4328E+00	9.9780E-01	1.8139E-01
2.0000E+02	2.2852E+01	2.0009E+01	2.3354E+00	4.2931E-01	7.8359E-02
3.0000E+02	7.1660E+00	6.2775E+00	7.2967E-01	1.3423E-01	2.4609E-02
4.0000E+02	3.2575E+00	2.8544E+00	3.3096E-01	6.0918E-02	1.1190E-02
5.0000E+02	1.8208E+00	1.5959E+00	1.8462E-01	3.3989E-02	6.2511E-03
6.0000E+02	1.1592E+00	1.0163E+00	1.1730E-01	2.1596E-02	3.9749E-03
8.0000E+02	5.9688E-01	5.2359E-01	6.0172E-02	1.1076E-02	2.0406E-03
1.0000E+03	3.7216E-01	3.2662E-01	3.7391E-02	6.8808E-03	1.2687E-03
1.5000E+03	1.7236E-01	1.5140E-01	1.7215E-02	3.1664E-03	5.8457E-04

Z= 44

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	6.4297E+04	8.9724E+04
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.4595E+04	4.6100E+04
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.1371E+04	2.6484E+04
2.836E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.1465E+04	1.2534E+04
2.858E+00	.0E+00	.0E+00	.0E+00	1.9234E+05	1.1298E+04	1.2311E+04
2.969E+00	.0E+00	.0E+00	.0E+00	1.7283E+05	1.0533E+04	1.1296E+04
2.993E+00	.0E+00	.0E+00	9.1336E+04	1.6957E+05	1.0379E+04	1.1092E+04
3.000E+00	.0E+00	.0E+00	9.2154E+04	1.6861E+05	1.0332E+04	1.1031E+04
3.201E+00	.0E+00	.0E+00	7.6816E+04	1.4462E+05	9.1572E+03	9.5002E+03
3.227E+00	.0E+00	3.9646E+04	7.5442E+04	1.4175E+05	9.0212E+03	9.3253E+03
4.000E+00	.0E+00	2.8615E+04	4.3140E+04	7.8867E+04	5.9859E+03	5.5795E+03
5.000E+00	.0E+00	1.9187E+04	2.3397E+04	4.2146E+04	3.8559E+03	3.1878E+03
6.000E+00	.0E+00	1.3645E+04	1.3987E+04	2.4936E+04	2.6636E+03	1.9793E+03
8.000E+00	.0E+00	7.7313E+03	6.0350E+03	1.0558E+04	1.4563E+03	9.0297E+02
1.000E+01	.0E+00	4.8500E+03	3.0801E+03	5.3117E+03	8.9657E+02	4.7874E+02
1.500E+01	.0E+00	1.9738E+03	8.7043E+02	1.4603E+03	3.5774E+02	1.4349E+02
2.000E+01	.0E+00	1.0048E+03	3.4493E+02	5.6644E+02	1.8096E+02	5.8812E+01
2.207E+01	.0E+00	7.9245E+02	2.5016E+02	4.0769E+02	1.4255E+02	4.3089E+01
2.224E+01	9.4882E+03	7.7723E+02	2.4370E+02	3.9691E+02	1.3980E+02	4.2010E+01
3.000E+01	4.4187E+03	3.6965E+02	9.0404E+01	1.4357E+02	6.6397E+01	1.6002E+01
4.000E+01	2.0321E+03	1.7624E+02	3.4283E+01	5.3009E+01	3.1677E+01	6.1945E+00
5.000E+01	1.0974E+03	9.7627E+01	1.6026E+01	2.4223E+01	1.7571E+01	2.9345E+00
6.000E+01	6.5726E+02	5.9676E+01	8.5778E+00	1.2709E+01	1.0756E+01	1.5855E+00
8.000E+01	2.8898E+02	2.7024E+01	3.1889E+00	4.5668E+00	4.8837E+00	5.9675E-01
1.000E+02	1.5140E+02	1.4459E+01	1.4814E+00	2.0624E+00	2.6185E+00	2.7936E-01
1.500E+02	4.6311E+01	4.5678E+00	3.7301E-01	4.9201E-01	8.3015E-01	7.1085E-02
2.000E+02	2.0009E+01	2.0101E+00	1.4325E-01	1.8202E-01	3.6613E-01	2.7440E-02
3.000E+02	6.2775E+00	6.4295E-01	3.9116E-02	4.7600E-02	1.1732E-01	7.5522E-03
4.000E+02	2.8544E+00	2.9504E-01	1.6359E-02	1.9568E-02	5.3898E-02	3.1693E-03
5.000E+02	1.5959E+00	1.6572E-01	8.6195E-03	1.0283E-02	3.0292E-02	1.6736E-03
6.000E+02	1.0163E+00	1.0578E-01	5.2383E-03	6.2842E-03	1.9342E-02	1.0181E-03
8.000E+02	5.2359E-01	5.4582E-02	2.5115E-03	3.0792E-03	9.9812E-03	4.8918E-04
1.000E+03	3.2662E-01	3.4039E-02	1.4905E-03	1.8620E-03	6.2247E-03	2.9004E-04
1.500E+03	1.5140E-01	1.5750E-02	6.3645E-04	8.2857E-04	2.8794E-03	1.2372E-04

Z= 44

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	1.8401E+05	2.1708E+05	3.1649E+05	1.4097E+04	1.5285E+04	3.0329E+04
1.500E+00	9.0834E+04	6.7773E+04	9.8096E+04	6.9702E+03	7.2889E+03	1.4099E+04
2.000E+00	5.1060E+04	2.7837E+04	4.0084E+04	4.1541E+03	4.0948E+03	7.7876E+03
2.836E+00	2.3596E+04	8.8697E+03	1.2688E+04	2.1651E+03	1.9149E+03	3.5701E+03
2.858E+00	2.3164E+04	8.6346E+03	1.2349E+04	2.1324E+03	1.8805E+03	3.5044E+03
2.969E+00	2.1203E+04	7.5947E+03	1.0854E+04	1.9831E+03	1.7242E+03	3.2063E+03
2.993E+00	2.0810E+04	7.3918E+03	1.0562E+04	1.9530E+03	1.6929E+03	3.1466E+03
3.000E+00	2.0692E+04	7.3315E+03	1.0475E+04	1.9440E+03	1.6835E+03	3.1287E+03
3.201E+00	1.7745E+04	5.8763E+03	8.3852E+03	1.7155E+03	1.4485E+03	2.6822E+03
3.227E+00	1.7409E+04	5.7177E+03	8.1575E+03	1.6893E+03	1.4218E+03	2.6315E+03
4.000E+00	1.0279E+04	2.7023E+03	3.8378E+03	1.1079E+03	8.4977E+02	1.5538E+03
5.000E+00	5.7926E+03	1.2110E+03	1.7111E+03	7.0701E+02	4.8611E+02	8.7752E+02
6.000E+00	3.5568E+03	6.1738E+02	8.6835E+02	4.8563E+02	3.0262E+02	5.4048E+02
8.000E+00	1.5935E+03	2.0686E+02	2.8866E+02	2.6398E+02	1.3881E+02	2.4362E+02
1.000E+01	8.3266E+02	8.6552E+01	1.1996E+02	1.6202E+02	7.3912E+01	1.2788E+02
1.500E+01	2.4266E+02	1.6957E+01	2.3169E+01	6.4423E+01	2.2314E+01	3.7551E+01
2.000E+01	9.7324E+01	5.1603E+00	6.9660E+00	3.2553E+01	9.1909E+00	1.5135E+01
2.207E+01	7.0749E+01	3.4188E+00	4.5942E+00	2.5640E+01	6.7446E+00	1.1019E+01
2.224E+01	6.8931E+01	3.3062E+00	4.4411E+00	2.5145E+01	6.5765E+00	1.0737E+01
3.000E+01	2.5594E+01	9.3223E-01	1.2333E+00	1.1943E+01	2.5188E+00	3.9920E+00
4.000E+01	9.6420E+00	2.7287E-01	3.5512E-01	5.7007E+00	9.7819E-01	1.5087E+00
5.000E+01	4.4637E+00	1.0485E-01	1.3457E-01	3.1626E+00	4.6436E-01	6.9990E-01
6.000E+01	2.3636E+00	4.7997E-02	6.0866E-02	1.9364E+00	2.5127E-01	3.7115E-01

Z= 44

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
8.000E+01	8.5970E-01	1.4039E-02	1.7456E-02	8.7949E-01	9.4779E-02	1.3528E-01
1.000E+02	3.9124E-01	5.4539E-03	6.6796E-03	4.7170E-01	4.4435E-02	6.1641E-02
1.500E+02	9.4348E-02	1.0131E-03	1.2021E-03	1.4962E-01	1.1334E-02	1.4890E-02
2.000E+02	3.5050E-02	3.1872E-04	3.7394E-04	6.6007E-02	4.3822E-03	5.5447E-03
3.000E+02	9.2174E-03	6.7365E-05	7.9633E-05	2.1171E-02	1.2049E-03	1.4594E-03
4.000E+02	3.7977E-03	2.3826E-05	2.9179E-05	9.7284E-03	5.0564E-04	6.0176E-04
5.000E+02	1.9976E-03	1.1169E-05	1.4211E-05	5.4682E-03	2.6703E-04	3.1679E-04
6.000E+02	1.2219E-03	6.2541E-06	8.1221E-06	3.4916E-03	1.6250E-04	1.9372E-04
8.000E+02	5.9903E-04	2.5963E-06	3.7380E-06	1.8019E-03	7.8077E-05	9.4980E-05
1.000E+03	3.6252E-04	1.4308E-06	2.1437E-06	1.1238E-03	4.6245E-05	5.7585E-05
1.500E+03	1.6189E-04	5.3073E-07	9.1463E-07	5.1989E-04	1.9709E-05	2.5743E-05

Z= 44

ENERGY	4 D 3/2	4 D 5/2	5 S 1/2
1.000E+00	1.0871E+04	1.5699E+04	5.1856E+02
1.500E+00	3.6428E+03	5.2227E+03	2.5199E+02
2.000E+00	1.5630E+03	2.2290E+03	1.4887E+02
2.836E+00	5.1979E+02	7.3606E+02	7.8576E+01
2.858E+00	5.0642E+02	7.1703E+02	7.7382E+01
2.969E+00	4.4718E+02	6.3268E+02	7.1934E+01
2.993E+00	4.3559E+02	6.1618E+02	7.0837E+01
3.000E+00	4.3221E+02	6.1127E+02	7.0508E+01
3.201E+00	3.4862E+02	4.9242E+02	6.2203E+01
3.227E+00	3.3947E+02	4.7941E+02	6.1247E+01
4.000E+00	1.6366E+02	2.2814E+02	4.0111E+01
5.000E+00	7.4529E+01	1.0361E+02	2.5568E+01
6.000E+00	3.8525E+01	5.3310E+01	1.7550E+01
8.000E+00	1.3142E+01	1.8041E+01	9.5328E+00
1.000E+01	5.5580E+00	7.5776E+00	5.8486E+00
1.500E+01	1.1060E+00	1.4864E+00	2.3242E+00
2.000E+01	3.3959E-01	4.5087E-01	1.1740E+00
2.207E+01	2.2558E-01	2.9812E-01	9.2459E-01
2.224E+01	2.1819E-01	2.8825E-01	9.0673E-01
3.000E+01	6.1941E-02	8.0591E-02	4.3046E-01
4.000E+01	1.8222E-02	2.3320E-02	2.0536E-01
5.000E+01	7.0232E-03	8.8639E-03	1.1393E-01
6.000E+01	3.2221E-03	4.0179E-03	6.9759E-02
8.000E+01	9.4523E-04	1.1553E-03	3.1687E-02
1.000E+02	3.6790E-04	4.4288E-04	1.6996E-02
1.500E+02	6.8429E-05	8.0392E-05	5.3915E-03
2.000E+02	2.1528E-05	2.5069E-05	2.3788E-03
3.000E+02	4.5540E-06	5.3483E-06	7.6319E-04
4.000E+02	1.6120E-06	1.9524E-06	3.5084E-04
5.000E+02	7.5538E-07	9.5055E-07	1.9732E-04
6.000E+02	4.1854E-07	5.5065E-07	1.2609E-04
8.000E+02	1.7543E-07	2.5131E-07	6.5216E-05
1.000E+03	9.4774E-08	1.4606E-07	4.0807E-05
1.500E+03	3.4871E-08	6.1976E-08	1.9132E-05

Z= 45 15 STATES, 34 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	23.1922	.97947
2 S 1/2	2.00	3.3914	.80673
2 P 1/2	2.00	3.1516	.71637
2 P 3/2	4.00	3.0044	.70517
3 S 1/2	2.00	.6161	.50605
3 P 1/2	2.00	.5203	.40592
3 P 3/2	4.00	.4946	.39342
3 D 3/2	4.00	.3230	.17948
3 D 5/2	6.00	.3179	.17738
4 S 1/2	2.00	.0886	.22217
4 P 1/2	2.00	.0589	.15074
4 P 3/2	4.00	.0548	.14325
4 D 3/2	3.20	.0102	.03081
4 D 5/2	4.80	.0098	.02988
5 S 1/2	1.00	.0066	.03038

Z= 45 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	1.0529E+06	.0E+00	.0E+00	9.5189E+05	1.0101E+05
1.5000E+00	4.1341E+05	.0E+00	.0E+00	3.7013E+05	4.3276E+04
2.0000E+00	2.0631E+05	.0E+00	.0E+00	1.8336E+05	2.2953E+04
3.0000E+00	7.4904E+04	.0E+00	.0E+00	6.5912E+04	8.9919E+03
3.0014E+00	7.4817E+04	.0E+00	.0E+00	6.5834E+04	8.9821E+03
3.0254E+00	2.5243E+05	.0E+00	1.7911E+05	6.4501E+04	8.8137E+03
3.1485E+00	2.2714E+05	.0E+00	1.6090E+05	5.8221E+04	8.0156E+03
3.1737E+00	3.0768E+05	.0E+00	2.4277E+05	5.7039E+04	7.8645E+03
3.3880E+00	2.6198E+05	.0E+00	2.0707E+05	4.8188E+04	6.7240E+03
3.4152E+00	2.9426E+05	.0E+00	2.4046E+05	4.7204E+04	6.5962E+03
4.0000E+00	1.9914E+05	.0E+00	1.6336E+05	3.1291E+04	4.4934E+03
5.0000E+00	1.1185E+05	.0E+00	9.1874E+04	1.7389E+04	2.5849E+03
6.0000E+00	6.9431E+04	.0E+00	5.7102E+04	1.0697E+04	1.6325E+03
8.0000E+00	3.2204E+04	.0E+00	2.6506E+04	4.9192E+03	7.7914E+02
1.0000E+01	1.7560E+04	.0E+00	1.4454E+04	2.6724E+03	4.3389E+02
1.5000E+01	5.7258E+03	.0E+00	4.7104E+03	8.6904E+02	1.4640E+02
2.0000E+01	2.5541E+03	.0E+00	2.0999E+03	3.8753E+02	6.6693E+01
2.3169E+01	1.6846E+03	.0E+00	1.3846E+03	2.5561E+02	4.4413E+01
2.3355E+01	1.0634E+04	8.9871E+03	1.3536E+03	2.4989E+02	4.3441E+01
3.0000E+01	5.5664E+03	4.7595E+03	6.6282E+02	1.2244E+02	2.1584E+01
4.0000E+01	2.5496E+03	2.1967E+03	2.8982E+02	5.3575E+01	9.5773E+00
5.0000E+01	1.3753E+03	1.1903E+03	1.5180E+02	2.8082E+01	5.0647E+00
6.0000E+01	8.2355E+02	7.1480E+02	8.9230E+01	1.6517E+01	2.9977E+00
8.0000E+01	3.6199E+02	3.1518E+02	3.8395E+01	7.1148E+00	1.3022E+00
1.0000E+02	1.8977E+02	1.6550E+02	1.9901E+01	3.6909E+00	6.7915E-01
1.5000E+02	5.8135E+01	5.0789E+01	6.0203E+00	1.1182E+00	2.0732E-01
2.0000E+02	2.5155E+01	2.1991E+01	2.5924E+00	4.8196E-01	8.9713E-02
3.0000E+02	7.9084E+00	6.9173E+00	8.1183E-01	1.5103E-01	2.8238E-02
4.0000E+02	3.6005E+00	3.1503E+00	3.6875E-01	6.8633E-02	1.2858E-02
5.0000E+02	2.0145E+00	1.7631E+00	2.0586E-01	3.8324E-02	7.1886E-03
6.0000E+02	1.2834E+00	1.1236E+00	1.3088E-01	2.4365E-02	4.5738E-03
8.0000E+02	6.6126E-01	5.7924E-01	6.7165E-02	1.2501E-02	2.3490E-03
1.0000E+03	4.1238E-01	3.6141E-01	4.1739E-02	7.7666E-03	1.4604E-03
1.5000E+03	1.9092E-01	1.6747E-01	1.9205E-02	3.5716E-03	6.7245E-04

Z= 45

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	6.6498E+04	9.3387E+04
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.6230E+04	4.8807E+04
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.2470E+04	2.8320E+04
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.0922E+04	1.1944E+04
3.001E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.0913E+04	1.1931E+04
3.025E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.0753E+04	1.1718E+04
3.148E+00	.0E+00	.0E+00	.0E+00	1.7911E+05	9.9867E+03	1.0702E+04
3.174E+00	.0E+00	.0E+00	8.4944E+04	1.5783E+05	9.8397E+03	1.0508E+04
3.388E+00	.0E+00	.0E+00	7.1977E+04	1.3509E+05	8.7092E+03	9.0371E+03
3.415E+00	.0E+00	3.7362E+04	7.0683E+04	1.3242E+05	8.5796E+03	8.8706E+03
4.000E+00	.0E+00	2.9770E+04	4.7257E+04	8.6330E+04	6.3487E+03	6.0915E+03
5.000E+00	.0E+00	1.9913E+04	2.5694E+04	4.6267E+04	4.1005E+03	3.5013E+03
6.000E+00	.0E+00	1.4304E+04	1.5386E+04	2.7412E+04	2.8388E+03	2.1850E+03
8.000E+00	.0E+00	8.1437E+03	6.6890E+03	1.1673E+04	1.5582E+03	1.0042E+03
1.000E+01	.0E+00	5.1320E+03	3.4286E+03	5.8934E+03	9.6213E+02	5.3530E+02
1.500E+01	.0E+00	2.1040E+03	9.7614E+02	1.6303E+03	3.8597E+02	1.6193E+02
2.000E+01	.0E+00	1.0762E+03	3.8868E+02	6.3508E+02	1.9601E+02	6.6787E+01
2.317E+01	.0E+00	7.5520E+02	2.4074E+02	3.8867E+02	1.3730E+02	4.2012E+01
2.335E+01	8.9871E+03	7.4070E+02	2.3454E+02	3.7840E+02	1.3465E+02	4.0961E+01
3.000E+01	4.7595E+03	3.9838E+02	1.0256E+02	1.6189E+02	7.2327E+01	1.8322E+01
4.000E+01	2.1967E+03	1.9074E+02	3.9069E+01	6.0004E+01	3.4641E+01	7.1309E+00
5.000E+01	1.1903E+03	1.0598E+02	1.8325E+01	2.7498E+01	1.9271E+01	3.3913E+00
6.000E+01	7.1480E+02	6.4935E+01	9.8346E+00	1.4460E+01	1.1824E+01	1.8379E+00
8.000E+01	3.1518E+02	2.9511E+01	3.6709E+00	5.2136E+00	5.3873E+00	6.9491E-01
1.000E+02	1.6550E+02	1.5830E+01	1.7103E+00	2.3602E+00	2.8960E+00	3.2641E-01
1.500E+02	5.0789E+01	5.0223E+00	4.3274E-01	5.6525E-01	9.2211E-01	8.3505E-02
2.000E+02	2.1991E+01	2.2161E+00	1.6670E-01	2.0961E-01	4.0779E-01	3.2341E-02
3.000E+02	6.9173E+00	7.1118E-01	4.5690E-02	5.4961E-02	1.3112E-01	8.9375E-03
4.000E+02	3.1503E+00	3.2697E-01	1.9151E-02	2.2623E-02	6.0357E-02	3.7591E-03
5.000E+02	1.7631E+00	1.8387E-01	1.0101E-02	1.1893E-02	3.3962E-02	1.9866E-03
6.000E+02	1.1236E+00	1.1746E-01	6.1476E-03	7.2718E-03	2.1702E-02	1.2104E-03
8.000E+02	5.7924E-01	6.0650E-02	2.9518E-03	3.5630E-03	1.1208E-02	5.8276E-04
1.000E+03	3.6141E-01	3.7832E-02	1.7531E-03	2.1540E-03	6.9910E-03	3.4548E-04
1.500E+03	1.6747E-01	1.7498E-02	7.4894E-04	9.5813E-04	3.2325E-03	1.4761E-04

Z= 45

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	1.9281E+05	2.4382E+05	3.5537E+05	1.5180E+04	1.6591E+04	3.3014E+04
1.500E+00	9.6612E+04	7.7038E+04	1.1144E+05	7.5166E+03	7.9718E+03	1.5441E+04
2.000E+00	5.4723E+04	3.1919E+04	4.5928E+04	4.4865E+03	4.5081E+03	8.5778E+03
3.000E+00	2.2420E+04	8.4971E+03	1.2129E+04	2.1062E+03	1.8734E+03	3.4794E+03
3.001E+00	2.2396E+04	8.4840E+03	1.2110E+04	2.1044E+03	1.8715E+03	3.4757E+03
3.025E+00	2.1985E+04	8.2588E+03	1.1787E+04	2.0726E+03	1.8378E+03	3.4115E+03
3.148E+00	2.0027E+04	7.2160E+03	1.0290E+04	1.9200E+03	1.6773E+03	3.1063E+03
3.174E+00	1.9654E+04	7.0231E+03	1.0013E+04	1.8908E+03	1.6468E+03	3.0484E+03
3.388E+00	1.6826E+04	5.6174E+03	7.9978E+03	1.6664E+03	1.4149E+03	2.6090E+03
3.415E+00	1.6508E+04	5.4657E+03	7.7804E+03	1.6408E+03	1.3887E+03	2.5595E+03
4.000E+00	1.1220E+04	3.1553E+03	4.4759E+03	1.2036E+03	9.5274E+02	1.7396E+03
5.000E+00	6.3577E+03	1.4224E+03	2.0072E+03	7.6952E+02	5.4803E+02	9.8738E+02
6.000E+00	3.9209E+03	7.2864E+02	1.0234E+03	5.2943E+02	3.4273E+02	6.1065E+02
8.000E+00	1.7685E+03	2.4584E+02	3.4249E+02	2.8868E+02	1.5836E+02	2.7708E+02
1.000E+01	9.2861E+02	1.0337E+02	1.4301E+02	1.7766E+02	8.4793E+01	1.4619E+02
1.500E+01	2.7285E+02	2.0431E+01	2.7857E+01	7.0996E+01	2.5842E+01	4.3293E+01
2.000E+01	1.1005E+02	6.2555E+00	8.4250E+00	3.6009E+01	1.0712E+01	1.7550E+01
2.317E+01	6.8388E+01	3.3853E+00	4.5275E+00	2.5216E+01	6.7541E+00	1.0933E+01
2.335E+01	6.6633E+01	3.2740E+00	4.3769E+00	2.4729E+01	6.5860E+00	1.0653E+01
3.000E+01	2.9153E+01	1.1385E+00	1.5021E+00	1.3283E+01	2.9612E+00	4.6646E+00
4.000E+01	1.1035E+01	3.3470E-01	4.3427E-01	6.3656E+00	1.1563E+00	1.7715E+00
5.000E+01	5.1257E+00	1.2901E-01	1.6504E-01	3.5416E+00	5.5116E-01	8.2473E-01
6.000E+01	2.7213E+00	5.9207E-02	7.4823E-02	2.1734E+00	2.9917E-01	4.3855E-01

Z= 45

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
8.000E+01	9.9366E-01	1.7388E-02	2.1537E-02	9.9062E-01	1.1338E-01	1.6047E-01
1.000E+02	4.5345E-01	6.7742E-03	8.2627E-03	5.3268E-01	5.3336E-02	7.3335E-02
1.500E+02	1.0983E-01	1.2629E-03	1.4950E-03	1.6970E-01	1.3678E-02	1.7795E-02
2.000E+02	4.0972E-02	3.9815E-04	4.6642E-04	7.5074E-02	5.3064E-03	6.6435E-03
3.000E+02	1.0787E-02	8.4369E-05	9.9802E-05	2.4161E-02	1.4650E-03	1.7539E-03
4.000E+02	4.4508E-03	2.9959E-05	3.6442E-05	1.1124E-02	6.1635E-04	7.2434E-04
5.000E+02	2.3432E-03	1.4085E-05	1.7576E-05	6.2601E-03	3.2584E-04	3.8137E-04
6.000E+02	1.4345E-03	7.8454E-06	1.0141E-05	4.0005E-03	1.9858E-04	2.3342E-04
8.000E+02	7.0253E-04	3.2685E-06	4.6976E-06	2.0660E-03	9.5541E-05	1.1442E-04
1.000E+03	4.2558E-04	1.8206E-06	2.6463E-06	1.2888E-03	5.6652E-05	6.9363E-05
1.500E+03	1.8968E-04	7.1500E-07	1.1112E-06	5.9596E-04	2.4168E-05	3.0975E-05

Z= 45

ENERGY	4 D 3/2	4 D 5/2	5 S 1/2
1.000E+00	1.4604E+04	2.1081E+04	5.4192E+02
1.500E+00	4.9666E+03	7.1162E+03	2.6353E+02
2.000E+00	2.1547E+03	3.0699E+03	1.5577E+02
3.000E+00	6.0461E+02	8.5423E+02	7.3993E+01
3.001E+00	6.0371E+02	8.5295E+02	7.3928E+01
3.025E+00	5.8819E+02	8.3088E+02	7.2802E+01
3.148E+00	5.1613E+02	7.2840E+02	6.7412E+01
3.174E+00	5.0275E+02	7.0940E+02	6.6380E+01
3.388E+00	4.0479E+02	5.7042E+02	5.8481E+01
3.415E+00	3.9416E+02	5.5534E+02	5.7581E+01
4.000E+00	2.3102E+02	3.2426E+02	4.2190E+01
5.000E+00	1.0598E+02	1.4707E+02	2.6942E+01
6.000E+00	5.5086E+01	7.6081E+01	1.8522E+01
8.000E+00	1.8956E+01	2.5967E+01	1.0091E+01
1.000E+01	8.0649E+00	1.0971E+01	6.2075E+00
1.500E+01	1.6209E+00	2.1725E+00	2.4791E+00
2.000E+01	5.0106E-01	6.6336E-01	1.2570E+00
2.317E+01	2.7229E-01	3.5799E-01	8.8004E-01
2.335E+01	2.6339E-01	3.4615E-01	8.6304E-01
3.000E+01	9.2145E-02	1.1952E-01	4.6341E-01
4.000E+01	2.7237E-02	3.4740E-02	2.2193E-01
5.000E+01	1.0535E-02	1.3246E-02	1.2348E-01
6.000E+01	4.8457E-03	6.0188E-03	7.5781E-02
8.000E+01	1.4276E-03	1.7378E-03	3.4543E-02
1.000E+02	5.5733E-04	6.6779E-04	1.8576E-02
1.500E+02	1.0414E-04	1.2175E-04	5.9186E-03
2.000E+02	3.2852E-05	3.8039E-05	2.6186E-03
3.000E+02	6.9705E-06	8.1400E-06	8.4295E-04
4.000E+02	2.4737E-06	2.9734E-06	3.8825E-04
5.000E+02	1.1569E-06	1.4476E-06	2.1862E-04
6.000E+02	6.4327E-07	8.3834E-07	1.3981E-04
8.000E+02	2.6970E-07	3.8266E-07	7.2358E-05
1.000E+03	1.4578E-07	2.2246E-07	4.5275E-05
1.500E+03	5.3738E-08	9.4426E-08	2.1202E-05

Z= 46 14 STATES, 34 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	24.3223	.97981
2 S 1/2	2.00	3.5803	.80983
2 P 1/2	2.00	3.3328	.72098
2 P 3/2	4.00	3.1705	.70938
3 S 1/2	2.00	.6551	.51320
3 P 1/2	2.00	.5554	.41392
3 P 3/2	4.00	.5268	.40091
3 D 3/2	4.00	.3482	.18661
3 D 5/2	6.00	.3424	.18438
4 S 1/2	2.00	.0911	.22837
4 P 1/2	2.00	.0597	.15611
4 P 3/2	4.00	.0551	.14784
4 D 3/2	4.00	.0081	.03145
4 D 5/2	6.00	.0076	.03029

Z= 46 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	1.1540E+06	.0E+00	.0E+00	1.0369E+06	1.1716E+05
1.5000E+00	4.5441E+05	.0E+00	.0E+00	4.0471E+05	4.9704E+04
2.0000E+00	2.2710E+05	.0E+00	.0E+00	2.0093E+05	2.6167E+04
3.0000E+00	8.2525E+04	.0E+00	.0E+00	7.2373E+04	1.0151E+04
3.1674E+00	7.1875E+04	.0E+00	.0E+00	6.2964E+04	8.9105E+03
3.1927E+00	2.3541E+05	.0E+00	1.6499E+05	6.1686E+04	8.7408E+03
3.3294E+00	2.1390E+05	.0E+00	1.5064E+05	5.5371E+04	7.8911E+03
3.3561E+00	2.8780E+05	.0E+00	2.2581E+05	5.4244E+04	7.7401E+03
3.5767E+00	2.4742E+05	.0E+00	1.9478E+05	4.6011E+04	6.6286E+03
3.6054E+00	2.7841E+05	.0E+00	2.2684E+05	4.5070E+04	6.5008E+03
4.0000E+00	2.1585E+05	.0E+00	1.7642E+05	3.4397E+04	5.0377E+03
5.0000E+00	1.2135E+05	.0E+00	9.9329E+04	1.9134E+04	2.8878E+03
6.0000E+00	7.5436E+04	.0E+00	6.1837E+04	1.1780E+04	1.8183E+03
8.0000E+00	3.5098E+04	.0E+00	2.8809E+04	5.4248E+03	8.6444E+02
1.0000E+01	1.9169E+04	.0E+00	1.5739E+04	2.9498E+03	4.8024E+02
1.5000E+01	6.2650E+03	.0E+00	5.1429E+03	9.6065E+02	1.6146E+02
2.0000E+01	2.7983E+03	.0E+00	2.2960E+03	4.2886E+02	7.3406E+01
2.4298E+01	1.6141E+03	.0E+00	1.3240E+03	2.4733E+02	4.2790E+01
2.4493E+01	1.0105E+04	8.5269E+03	1.2944E+03	2.4180E+02	4.1850E+01
3.0000E+01	5.9930E+03	5.1073E+03	7.2632E+02	1.3572E+02	2.3712E+01
4.0000E+01	2.7595E+03	2.3715E+03	3.1801E+02	5.9458E+01	1.0513E+01
5.0000E+01	1.4924E+03	1.2889E+03	1.6677E+02	3.1196E+01	5.5580E+00
6.0000E+01	8.9550E+02	7.7572E+02	9.8124E+01	1.8365E+01	3.2895E+00
8.0000E+01	3.9458E+02	3.4293E+02	4.2290E+01	7.9225E+00	1.4292E+00
1.0000E+02	2.0728E+02	1.8047E+02	2.1948E+01	4.1149E+00	7.4570E-01
1.5000E+02	6.3702E+01	5.5569E+01	6.6558E+00	1.2496E+00	2.2790E-01
2.0000E+02	2.7620E+01	2.4111E+01	2.8709E+00	5.3948E-01	9.8726E-02
3.0000E+02	8.7059E+00	7.6042E+00	9.0109E-01	1.6943E-01	3.1126E-02
4.0000E+02	3.9698E+00	3.4686E+00	4.0986E-01	7.7099E-02	1.4188E-02
5.0000E+02	2.2233E+00	1.9432E+00	2.2902E-01	4.3088E-02	7.9372E-03
6.0000E+02	1.4173E+00	1.2392E+00	1.4567E-01	2.7409E-02	5.0520E-03
8.0000E+02	7.3076E-01	6.3930E-01	7.4794E-02	1.4068E-02	2.5952E-03
1.0000E+03	4.5580E-01	3.9896E-01	4.6481E-02	8.7408E-03	1.6132E-03
1.5000E+03	2.1095E-01	1.8482E-01	2.1375E-02	4.0169E-03	7.4193E-04

Z= 46

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	6.8775E+04	9.6745E+04
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.7820E+04	5.1456E+04
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.3580E+04	3.0170E+04
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.1520E+04	1.2886E+04
3.167E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.0425E+04	1.1408E+04
3.193E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.6499E+05	1.1203E+04
3.329E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.5064E+05	9.5017E+03
3.356E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.4776E+05	9.3614E+03
3.577E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.2689E+05	8.3092E+03
3.605E+00	.0E+00	3.5786E+04	6.7890E+04	1.2438E+05	8.1854E+03	8.4706E+03
4.000E+00	.0E+00	3.0631E+04	5.1545E+04	9.4243E+04	6.7181E+03	6.6249E+03
5.000E+00	.0E+00	2.0769E+04	2.7992E+04	5.0568E+04	4.3506E+03	3.8315E+03
6.000E+00	.0E+00	1.4968E+04	1.6873E+04	2.9996E+04	3.0189E+03	2.4024E+03
8.000E+00	.0E+00	8.5676E+03	7.3823E+03	1.2859E+04	1.6632E+03	1.1124E+03
1.000E+01	.0E+00	5.4210E+03	3.8018E+03	6.5162E+03	1.0300E+03	5.9620E+02
1.500E+01	.0E+00	2.2380E+03	1.0908E+03	1.8141E+03	4.1534E+02	1.8200E+02
2.000E+01	.0E+00	1.1498E+03	4.3663E+02	7.0963E+02	2.1174E+02	7.5531E+01
2.430E+01	.0E+00	7.2073E+02	2.3211E+02	3.7114E+02	1.3235E+02	4.1003E+01
2.449E+01	8.5269E+03	7.0689E+02	2.2613E+02	3.6134E+02	1.2980E+02	3.9980E+01
3.000E+01	5.1073E+03	4.2841E+02	1.1598E+02	1.8194E+02	7.8565E+01	2.0892E+01
4.000E+01	2.3715E+03	2.0594E+02	4.4375E+01	6.7692E+01	3.7773E+01	8.1744E+00
5.000E+01	1.2889E+03	1.1477E+02	2.0884E+01	3.1110E+01	2.1074E+01	3.9028E+00
6.000E+01	7.7572E+02	7.0491E+01	1.1237E+01	1.6396E+01	1.2960E+01	2.1124E+00
8.000E+01	3.4293E+02	3.2148E+01	4.2112E+00	5.9312E+00	5.9254E+00	8.0580E-01
1.000E+02	1.8047E+02	1.7289E+01	1.9678E+00	2.6914E+00	3.1934E+00	3.7974E-01
1.500E+02	5.5569E+01	5.5084E+00	5.0029E-01	6.4709E-01	1.0212E+00	9.7676E-02
2.000E+02	2.4111E+01	2.4371E+00	1.9337E-01	2.4052E-01	4.5284E-01	3.7961E-02
3.000E+02	7.6042E+00	7.8468E-01	5.3182E-02	6.3230E-02	1.4610E-01	1.0530E-02
4.000E+02	3.4686E+00	3.6146E-01	2.2340E-02	2.6060E-02	6.7383E-02	4.4385E-03
5.000E+02	1.9432E+00	2.0351E-01	1.1801E-02	1.3709E-02	3.7963E-02	2.3489E-03
6.000E+02	1.2392E+00	1.3010E-01	7.1896E-03	8.3843E-03	2.4277E-02	1.4331E-03
8.000E+02	6.3930E-01	6.7230E-02	3.4567E-03	4.1080E-03	1.2547E-02	6.9103E-04
1.000E+03	3.9896E-01	4.1944E-02	2.0549E-03	2.4823E-03	7.8281E-03	4.0977E-04
1.500E+03	1.8482E-01	1.9393E-02	8.7812E-04	1.1043E-03	3.6180E-03	1.7526E-04

Z= 46

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	2.0162E+05	2.7252E+05	3.9721E+05	1.6190E+04	1.7744E+04	3.5371E+04
1.500E+00	1.0238E+05	8.7104E+04	1.2595E+05	8.0314E+03	8.5905E+03	1.6643E+04
2.000E+00	5.8484E+04	3.6383E+04	5.2315E+04	4.7991E+03	4.8882E+03	9.2945E+03
3.000E+00	2.4215E+04	9.7911E+03	1.3962E+04	2.2599E+03	2.0522E+03	3.8044E+03
3.167E+00	2.1353E+04	8.1585E+03	1.1620E+04	2.0374E+03	1.8148E+03	3.3531E+03
3.193E+00	2.0959E+04	7.9417E+03	1.1309E+04	2.0065E+03	1.7821E+03	3.2910E+03
3.329E+00	1.8996E+04	6.8895E+03	9.8019E+03	1.8511E+03	1.6188E+03	2.9817E+03
3.356E+00	1.8642E+04	6.7052E+03	9.5380E+03	1.8229E+03	1.5893E+03	2.9259E+03
3.577E+00	1.6017E+04	5.3937E+03	7.6615E+03	1.6115E+03	1.3706E+03	2.5133E+03
3.605E+00	1.5713E+04	5.2478E+03	7.4530E+03	1.5867E+03	1.3452E+03	2.4655E+03
4.000E+00	1.2204E+04	3.6619E+03	5.1882E+03	1.2947E+03	1.0514E+03	1.9148E+03
5.000E+00	6.9516E+03	1.6603E+03	2.3396E+03	8.2936E+02	6.0811E+02	1.0922E+03
6.000E+00	4.3061E+03	8.5450E+02	1.1984E+03	5.7152E+02	3.8197E+02	6.7815E+02
8.000E+00	1.9552E+03	2.9032E+02	4.0379E+02	3.1254E+02	1.7776E+02	3.0970E+02
1.000E+01	1.0316E+03	1.2267E+02	1.6940E+02	1.9284E+02	9.5702E+01	1.6422E+02
1.500E+01	3.0559E+02	2.4454E+01	3.3272E+01	7.7443E+01	2.9441E+01	4.9044E+01
2.000E+01	1.2393E+02	7.5327E+00	1.0121E+01	3.9422E+01	1.2281E+01	1.9995E+01
2.430E+01	6.6163E+01	3.3513E+00	4.4601E+00	2.4631E+01	6.6890E+00	1.0710E+01
2.449E+01	6.4466E+01	3.2412E+00	4.3119E+00	2.4156E+01	6.5228E+00	1.0436E+01
3.000E+01	3.3068E+01	1.3812E+00	1.8175E+00	1.4620E+01	3.4248E+00	5.3545E+00
4.000E+01	1.2575E+01	4.0785E-01	5.2758E-01	7.0327E+00	1.3448E+00	2.0434E+00
5.000E+01	5.8610E+00	1.5770E-01	2.0108E-01	3.9244E+00	6.4356E-01	9.5461E-01
6.000E+01	3.1197E+00	7.2551E-02	9.1366E-02	2.4138E+00	3.5042E-01	5.0898E-01

Z= 46

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
8.000E+01	1.1435E+00	2.1389E-02	2.6392E-02	1.1040E+00	1.3342E-01	1.8698E-01
1.000E+02	5.2327E-01	8.3566E-03	1.0151E-02	5.9519E-01	6.2974E-02	8.5690E-02
1.500E+02	1.2730E-01	1.5631E-03	1.8532E-03	1.9044E-01	1.6238E-02	2.0887E-02
2.000E+02	4.7610E-02	4.9453E-04	5.7692E-04	8.4479E-02	6.3208E-03	7.8187E-03
3.000E+02	1.2570E-02	1.0522E-04	1.2352E-04	2.7280E-02	1.7522E-03	2.0703E-03
4.000E+02	5.1946E-03	3.7537E-05	4.4951E-05	1.2585E-02	7.3895E-04	8.5619E-04
5.000E+02	2.7374E-03	1.7584E-05	2.1779E-05	7.0909E-03	3.9124E-04	4.5111E-04
6.000E+02	1.6761E-03	9.7535E-06	1.2724E-05	4.5348E-03	2.3869E-04	2.7621E-04
8.000E+02	8.2056E-04	4.1321E-06	5.7631E-06	2.3438E-03	1.1500E-04	1.3541E-04
1.000E+03	4.9743E-04	2.2304E-06	3.3182E-06	1.4623E-03	6.8254E-05	8.2059E-05
1.500E+03	2.2141E-04	8.6281E-07	1.3675E-06	6.7594E-04	2.9149E-05	3.6614E-05

Z= 46

ENERGY	4 D 3/2	4 D 5/2
1.000E+00	1.9654E+04	2.8202E+04
1.500E+00	6.7826E+03	9.6566E+03
2.000E+00	2.9743E+03	4.2105E+03
3.000E+00	8.4671E+02	1.1882E+03
3.167E+00	7.1005E+02	9.9516E+02
3.193E+00	6.9180E+02	9.6941E+02
3.329E+00	6.0291E+02	8.3658E+02
3.356E+00	5.8727E+02	8.1473E+02
3.577E+00	4.7451E+02	6.5875E+02
3.605E+00	4.6206E+02	6.4135E+02
4.000E+00	3.2572E+02	4.5100E+02
5.000E+00	1.5067E+02	2.0746E+02
6.000E+00	7.8733E+01	1.0788E+02
8.000E+00	2.7322E+01	3.7125E+01
1.000E+01	1.1695E+01	1.5777E+01
1.500E+01	2.3733E+00	3.1539E+00
2.000E+01	7.3855E-01	9.6924E-01
2.430E+01	3.3048E-01	4.2959E-01
2.449E+01	3.1971E-01	4.1541E-01
3.000E+01	1.3694E-01	1.7599E-01
4.000E+01	4.0671E-02	5.1387E-02
5.000E+01	1.5783E-02	1.9656E-02
6.000E+01	7.2796E-03	8.9536E-03
8.000E+01	2.1531E-03	2.5944E-03
1.000E+02	8.4316E-04	9.9996E-04
1.500E+02	1.5824E-04	1.8304E-04
2.000E+02	5.0058E-05	5.7336E-05
3.000E+02	1.0652E-05	1.2298E-05
4.000E+02	3.7859E-06	4.5020E-06
5.000E+02	1.7726E-06	2.1917E-06
6.000E+02	9.8759E-07	1.2723E-06
8.000E+02	4.1477E-07	5.8105E-07
1.000E+03	2.2427E-07	3.3784E-07
1.500E+03	8.2844E-08	1.4374E-07

Z= 47

15 STATES, 34 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	25.4903	.98012
2 S 1/2	2.00	3.7837	.81280
2 P 1/2	2.00	3.5283	.72539
2 P 3/2	4.00	3.3499	.71338
3 S 1/2	2.00	.7040	.52014
3 P 1/2	2.00	.6003	.42170
3 P 3/2	4.00	.5685	.40816
3 D 3/2	4.00	.3830	.19361
3 D 5/2	6.00	.3765	.19126
4 S 1/2	2.00	.1017	.23663
4 P 1/2	2.00	.0685	.16405
4 P 3/2	4.00	.0631	.15523
4 D 3/2	4.00	.0125	.03695
4 D 5/2	6.00	.0118	.03576
5 S 1/2	1.00	.0069	.03023

Z= 47 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	1.2594E+06	.0E+00	.0E+00	1.1245E+06	1.3490E+05
1.5000E+00	4.9845E+05	.0E+00	.0E+00	4.4129E+05	5.7160E+04
2.0000E+00	2.4961E+05	.0E+00	.0E+00	2.1958E+05	3.0038E+04
3.0000E+00	9.0895E+04	.0E+00	.0E+00	7.9259E+04	1.1636E+04
3.3465E+00	6.8819E+04	.0E+00	.0E+00	5.9879E+04	8.9393E+03
3.3733E+00	2.2353E+05	.0E+00	1.5610E+05	5.8661E+04	8.7680E+03
3.5247E+00	2.0047E+05	.0E+00	1.4022E+05	5.2374E+04	7.8793E+03
3.5530E+00	2.7038E+05	.0E+00	2.1135E+05	5.1305E+04	7.7274E+03
3.7799E+00	2.3246E+05	.0E+00	1.8211E+05	4.3702E+04	6.6401E+03
3.8102E+00	2.6124E+05	.0E+00	2.1192E+05	4.2806E+04	6.5112E+03
4.0000E+00	2.3282E+05	.0E+00	1.8933E+05	3.7717E+04	5.7758E+03
5.0000E+00	1.3146E+05	.0E+00	1.0715E+05	2.0999E+04	3.3093E+03
6.0000E+00	8.1859E+04	.0E+00	6.6838E+04	1.2939E+04	2.0819E+03
8.0000E+00	3.8187E+04	.0E+00	3.1230E+04	5.9666E+03	9.9022E+02
1.0000E+01	2.0893E+04	.0E+00	1.7095E+04	3.2475E+03	5.5062E+02
1.5000E+01	6.8464E+03	.0E+00	5.6016E+03	1.0592E+03	1.8553E+02
2.0000E+01	3.0634E+03	.0E+00	2.5055E+03	4.7338E+02	8.4510E+01
2.5465E+01	1.5485E+03	.0E+00	1.2660E+03	2.3920E+02	4.3301E+01
2.5669E+01	9.6074E+03	8.0935E+03	1.2377E+03	2.3385E+02	4.2351E+01
3.0000E+01	6.4337E+03	5.4621E+03	7.9416E+02	1.5006E+02	2.7395E+01
4.0000E+01	2.9836E+03	2.5574E+03	3.4822E+02	6.5818E+01	1.2169E+01
5.0000E+01	1.6169E+03	1.3930E+03	1.8281E+02	3.4567E+01	6.4462E+00
6.0000E+01	9.7165E+02	8.3979E+02	1.0767E+02	2.0367E+01	3.8211E+00
8.0000E+01	4.2929E+02	3.7235E+02	4.6478E+01	8.7988E+00	1.6643E+00
1.0000E+02	2.2593E+02	1.9633E+02	2.4153E+01	4.5755E+00	8.6998E-01
1.5000E+02	6.9664E+01	6.0663E+01	7.3416E+00	1.3926E+00	2.6677E-01
2.0000E+02	3.0266E+01	2.6376E+01	3.1722E+00	6.0223E-01	1.1582E-01
3.0000E+02	9.5643E+00	8.3403E+00	9.5788E-01	1.8955E-01	3.6619E-02
4.0000E+02	4.3680E+00	3.8104E+00	4.5451E-01	8.6375E-02	1.6720E-02
5.0000E+02	2.4488E+00	2.1369E+00	2.5419E-01	4.8314E-02	9.3634E-03
6.0000E+02	1.5621E+00	1.3636E+00	1.6177E-01	3.0748E-02	5.9637E-03
8.0000E+02	8.0593E-01	7.0398E-01	8.3098E-02	1.5789E-02	3.0656E-03
1.0000E+03	5.0278E-01	4.3942E-01	5.1644E-02	9.8108E-03	1.9059E-03
1.5000E+03	2.3262E-01	2.0350E-01	2.3737E-02	4.5058E-03	8.7646E-04

Z= 47

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.0572E+04	9.9531E+04
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.9350E+04	5.4115E+04
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.4674E+04	3.2029E+04
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.2123E+04	1.3853E+04
3.347E+00	.0E+00	.0E+00	.0E+00	.0E+00	9.9219E+03	1.0856E+04
3.373E+00	.0E+00	.0E+00	.0E+00	1.5610E+05	9.7762E+03	1.0662E+04
3.525E+00	.0E+00	.0E+00	.0E+00	1.4022E+05	9.0078E+03	9.6442E+03
3.553E+00	.0E+00	.0E+00	7.3835E+04	1.3751E+05	8.8743E+03	9.4690E+03
3.780E+00	.0E+00	.0E+00	6.3618E+04	1.1850E+05	7.9000E+03	8.2041E+03
3.810E+00	.0E+00	3.3296E+04	6.2470E+04	1.1616E+05	7.7820E+03	8.0527E+03
4.000E+00	.0E+00	3.1271E+04	5.5694E+04	1.0236E+05	7.0969E+03	7.1819E+03
5.000E+00	.0E+00	2.1664E+04	3.0603E+04	5.4882E+04	4.6067E+03	4.1777E+03
6.000E+00	.0E+00	1.5589E+04	1.8501E+04	3.2748E+04	3.2031E+03	2.6322E+03
8.000E+00	.0E+00	8.9902E+03	8.1283E+03	1.4111E+04	1.7710E+03	1.2277E+03
1.000E+01	.0E+00	5.7106E+03	4.2049E+03	7.1794E+03	1.0999E+03	6.6156E+02
1.500E+01	.0E+00	2.3744E+03	1.2154E+03	2.0119E+03	4.4587E+02	2.5379E+02
2.000E+01	.0E+00	1.2261E+03	4.8894E+02	7.9053E+02	2.2816E+02	8.5094E+01
2.546E+01	.0E+00	6.8793E+02	2.2378E+02	3.5431E+02	1.2755E+02	3.9998E+01
2.567E+01	8.0935E+03	6.7472E+02	2.1803E+02	3.4496E+02	1.2508E+02	3.9002E+01
3.000E+01	5.4621E+03	4.5964E+02	1.3071E+02	2.0382E+02	8.5119E+01	2.3729E+01
4.000E+01	2.5574E+03	2.2187E+02	5.0237E+01	7.6112E+01	4.1079E+01	9.3340E+00
5.000E+01	1.3930E+03	1.2402E+02	2.3721E+01	3.5077E+01	2.2983E+01	4.4737E+00
6.000E+01	8.3979E+02	7.6342E+01	1.2797E+01	1.8527E+01	1.4166E+01	2.4392E+00
8.000E+01	3.7235E+02	3.4939E+01	4.8149E+00	6.7243E+00	6.4992E+00	9.3066E-01
1.000E+02	1.9633E+02	1.8838E+01	2.2564E+00	3.0586E+00	3.5115E+00	4.4002E-01
1.500E+02	6.0663E+01	6.0271E+00	5.7638E-01	7.3812E-01	1.1277E+00	1.1377E-01
2.000E+02	2.6376E+01	2.6738E+00	2.2340E-01	2.7501E-01	5.0144E-01	4.4372E-02
3.000E+02	8.3403E+00	8.6371E-01	6.1689E-02	7.2487E-02	1.6233E-01	1.2355E-02
4.000E+02	3.8104E+00	3.9863E-01	2.5971E-02	2.9913E-02	7.5015E-02	5.2191E-03
5.000E+02	2.1369E+00	2.2471E-01	1.3739E-02	1.5745E-02	4.2314E-02	2.7667E-03
6.000E+02	1.3636E+00	1.4376E-01	8.3793E-03	9.6327E-03	2.7081E-02	1.6904E-03
8.000E+02	7.0398E-01	7.4344E-02	4.0344E-03	4.7195E-03	1.4006E-02	8.1579E-04
1.000E+03	4.3942E-01	4.6393E-02	2.4004E-03	2.8504E-03	8.7406E-03	4.8423E-04
1.500E+03	2.0350E-01	2.1442E-02	1.0263E-03	1.2683E-03	4.0382E-03	2.0724E-04

Z= 47

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	2.0986E+05	3.0296E+05	4.4162E+05	1.7374E+04	1.9219E+04	3.8490E+04
1.500E+00	1.0814E+05	9.8016E+04	1.4166E+05	8.6421E+03	9.3815E+03	1.8230E+04
2.000E+00	6.2298E+04	4.1272E+04	5.9303E+04	5.1693E+03	5.3684E+03	1.0228E+04
3.000E+00	2.6070E+04	1.1224E+04	1.5989E+04	2.4409E+03	2.2763E+03	4.2227E+03
3.347E+00	2.0260E+04	7.7825E+03	1.1059E+04	1.9817E+03	1.7795E+03	3.2779E+03
3.373E+00	1.9885E+04	7.5755E+03	1.0763E+04	1.9516E+03	1.7474E+03	3.2171E+03
3.525E+00	1.7931E+04	6.5267E+03	9.2639E+03	1.7935E+03	1.5798E+03	2.9002E+03
3.553E+00	1.7595E+04	6.3519E+03	9.0140E+03	1.7660E+03	1.5509E+03	2.8458E+03
3.780E+00	1.5176E+04	5.1390E+03	7.2821E+03	1.5661E+03	1.3427E+03	2.4539E+03
3.810E+00	1.4887E+04	5.0000E+03	7.0837E+03	1.5419E+03	1.3178E+03	2.4071E+03
4.000E+00	1.3230E+04	4.2268E+03	5.9814E+03	1.4021E+03	1.1749E+03	2.1393E+03
5.000E+00	7.5762E+03	1.9270E+03	2.7118E+03	8.9995E+02	6.8326E+02	1.2262E+03
6.000E+00	4.7125E+03	9.9632E+02	1.3952E+03	6.2111E+02	4.3103E+02	7.6431E+02
8.000E+00	2.1536E+03	3.4088E+02	4.7333E+02	3.4058E+02	2.0197E+02	3.5121E+02
1.000E+01	1.1418E+03	1.4474E+02	1.9951E+02	2.1067E+02	1.0933E+02	1.8714E+02
1.500E+01	3.4096E+02	2.9097E+01	3.9502E+01	8.5012E+01	3.3950E+01	5.6358E+01
2.000E+01	1.3902E+02	9.0159E+00	1.2085E+01	4.3428E+01	1.4251E+01	2.3103E+01
2.546E+01	6.3962E+01	3.3108E+00	4.3843E+00	2.4261E+01	6.7263E+00	1.0673E+01
2.567E+01	6.2322E+01	3.2023E+00	4.2389E+00	2.3793E+01	6.5595E+00	1.0401E+01
3.000E+01	3.7362E+01	1.6656E+00	2.1857E+00	1.6189E+01	4.0005E+00	6.2511E+00
4.000E+01	1.4274E+01	4.9400E-01	6.3709E-01	7.8152E+00	1.5820E+00	2.3906E+00
5.000E+01	6.6750E+00	1.9161E-01	2.4350E-01	4.3743E+00	7.6010E-01	1.1207E+00
6.000E+01	3.5622E+00	8.8367E-02	1.1089E-01	2.6966E+00	4.1518E-01	5.9911E-01

Z= 47

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
8.000E+01	1.3107E+00	2.6149E-02	3.2142E-02	1.2376E+00	1.5880E-01	2.2097E-01
1.000E+02	6.0139E-01	1.0246E-02	1.2394E-02	6.6889E-01	7.5203E-02	1.0154E-01
1.500E+02	1.4692E-01	1.9237E-03	2.2701E-03	2.1494E-01	1.9498E-02	2.4860E-02
2.000E+02	5.5094E-02	6.1105E-04	7.0754E-04	9.5610E-02	7.6163E-03	9.3321E-03
3.000E+02	1.4588E-02	1.3054E-04	1.5152E-04	3.0979E-02	2.1200E-03	2.4780E-03
4.000E+02	6.0391E-03	4.6516E-05	5.5351E-05	1.4319E-02	8.9599E-04	1.0261E-03
5.000E+02	3.1846E-03	2.1739E-05	2.7060E-05	8.0780E-03	4.7517E-04	5.4123E-04
6.000E+02	1.9493E-03	1.2105E-05	1.5791E-05	5.1701E-03	2.9027E-04	3.3139E-04
8.000E+02	9.5477E-04	5.1758E-06	7.0436E-06	2.6742E-03	1.4004E-04	1.6253E-04
1.000E+03	5.7900E-04	2.7840E-06	4.1779E-06	1.6688E-03	8.3170E-05	9.8430E-05
1.500E+03	2.5761E-04	1.0369E-06	1.7146E-06	7.7110E-04	3.5572E-05	4.3892E-05

Z= 47

ENERGY	4 D 3/2	4 D 5/2	5 S 1/2
1.000E+00	2.4263E+04	3.4967E+04	5.8301E+02
1.500E+00	8.4887E+03	1.2134E+04	2.8393E+02
2.000E+00	3.7610E+03	5.3440E+03	1.6776E+02
3.000E+00	1.0862E+03	1.5293E+03	8.0208E+01
3.347E+00	7.6325E+02	1.0719E+03	6.5036E+01
3.373E+00	7.4363E+02	1.0441E+03	6.4042E+01
3.525E+00	6.4387E+02	9.0314E+02	5.8820E+01
3.553E+00	6.2717E+02	8.7955E+02	5.7916E+01
3.780E+00	5.1081E+02	7.1528E+02	5.1336E+01
3.810E+00	4.9740E+02	6.9636E+02	5.0543E+01
4.000E+00	4.2262E+02	5.9092E+02	4.5946E+01
5.000E+00	1.9683E+02	2.7359E+02	2.9447E+01
6.000E+00	1.0318E+02	1.4191E+02	2.0304E+01
8.000E+00	3.6104E+01	4.9233E+01	1.1122E+01
1.000E+01	1.5550E+01	2.1049E+01	6.8758E+00
1.500E+01	3.1865E+00	4.2475E+00	2.7727E+00
2.000E+01	9.9814E-01	1.3136E+00	1.4159E+00
2.546E+01	3.6933E-01	4.8019E-01	7.9078E-01
2.567E+01	3.5733E-01	4.6436E-01	7.7549E-01
3.000E+01	1.8663E-01	2.4045E-01	5.2756E-01
4.000E+01	5.5707E-02	7.0534E-02	2.5456E-01
5.000E+01	2.1691E-02	2.7063E-02	1.4244E-01
6.000E+01	1.0031E-02	1.2358E-02	8.7810E-02
8.000E+01	2.9792E-03	3.5941E-03	4.0303E-02
1.000E+02	1.1700E-03	1.3891E-03	2.1784E-02
1.500E+02	2.2048E-04	2.5511E-04	7.0008E-03
2.000E+02	7.0000E-05	8.0150E-05	3.1145E-03
3.000E+02	1.4946E-05	1.7225E-05	1.0094E-03
4.000E+02	5.3232E-06	6.3127E-06	4.6674E-04
5.000E+02	2.4959E-06	3.0726E-06	2.6345E-04
6.000E+02	1.3910E-06	1.7837E-06	1.6873E-04
8.000E+02	5.8519E-07	8.1364E-07	8.7441E-05
1.000E+03	3.1676E-07	4.7237E-07	5.4725E-05
1.500E+03	1.1690E-07	1.9939E-07	2.5583E-05

Z= 48 15 STATES, 34 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	26.6896	.98042
2 S 1/2	2.00	3.9944	.81567
2 P 1/2	2.00	3.7310	.72964
2 P 3/2	4.00	3.5353	.71722
3 S 1/2	2.00	.7555	.52689
3 P 1/2	2.00	.6479	.42928
3 P 3/2	4.00	.6126	.41521
3 D 3/2	4.00	.4200	.20051
3 D 5/2	6.00	.4128	.19803
4 S 1/2	2.00	.1134	.24514
4 P 1/2	2.00	.0783	.17230
4 P 3/2	4.00	.0722	.16295
4 D 3/2	4.00	.0177	.04239
4 D 5/2	6.00	.0169	.04112
5 S 1/2	2.00	.0082	.03811

Z= 48 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	1.3706E+06	.0E+00	.0E+00	1.2165E+06	1.5413E+05
1.5000E+00	5.4566E+05	.0E+00	.0E+00	4.8027E+05	6.5383E+04
2.0000E+00	2.7372E+05	.0E+00	.0E+00	2.3936E+05	3.4350E+04
3.0000E+00	9.9912E+04	.0E+00	.0E+00	8.6608E+04	1.3304E+04
3.5318E+00	6.5944E+04	.0E+00	.0E+00	5.6976E+04	8.9674E+03
3.5600E+00	2.1075E+05	.0E+00	1.4614E+05	5.5815E+04	8.7946E+03
3.7273E+00	1.8809E+05	.0E+00	1.3066E+05	4.9561E+04	7.8631E+03
3.7571E+00	2.5317E+05	.0E+00	1.9691E+05	4.8547E+04	7.7108E+03
3.9904E+00	2.1861E+05	.0E+00	1.7044E+05	4.1518E+04	6.6486E+03
4.0000E+00	2.5116E+05	.0E+00	2.0329E+05	4.1260E+04	6.6094E+03
4.0224E+00	2.4553E+05	.0E+00	1.9835E+05	4.0666E+04	6.5190E+03
5.0000E+00	1.4259E+05	.0E+00	1.1581E+05	2.2992E+04	3.7887E+03
6.0000E+00	8.8706E+04	.0E+00	7.2142E+04	1.4178E+04	2.3862E+03
8.0000E+00	4.1470E+04	.0E+00	3.3787E+04	6.5467E+03	1.1359E+03
1.0000E+01	2.2730E+04	.0E+00	1.8531E+04	3.5668E+03	6.3253E+02
1.5000E+01	7.4687E+03	.0E+00	6.0897E+03	1.1651E+03	2.1385E+02
2.0000E+01	3.3475E+03	.0E+00	2.7286E+03	5.2129E+02	9.7673E+01
2.6663E+01	1.4873E+03	.0E+00	1.2117E+03	2.3144E+02	4.4158E+01
2.6876E+01	9.1439E+03	7.6899E+03	1.1846E+03	2.2626E+02	4.3190E+01
3.0000E+01	6.8849E+03	5.8210E+03	8.6655E+02	1.6552E+02	3.1794E+01
4.0000E+01	3.2173E+03	2.7500E+03	3.8050E+02	7.2683E+01	1.4165E+01
5.0000E+01	1.7472E+03	1.5015E+03	1.9999E+02	3.8210E+01	7.5224E+00
6.0000E+01	1.0516E+03	9.0671E+02	1.1790E+02	2.2532E+01	4.4670E+00
8.0000E+01	4.6616E+02	4.0349E+02	5.0974E+01	9.7481E+00	1.9513E+00
1.0000E+02	2.4578E+02	2.1316E+02	2.6523E+01	5.0752E+00	1.0223E+00
1.5000E+02	7.6022E+01	6.6078E+01	8.0811E+00	1.5481E+00	3.1467E-01
2.0000E+02	3.3096E+01	2.8791E+01	3.4975E+00	6.7057E-01	1.3696E-01
3.0000E+02	1.0485E+01	9.1277E+00	1.1027E+00	2.1153E-01	4.3434E-02
4.0000E+02	4.7961E+00	4.1768E+00	5.0294E-01	9.6520E-02	1.9868E-02
5.0000E+02	2.6915E+00	2.3448E+00	2.8151E-01	5.4034E-02	1.1139E-02
6.0000E+02	1.7181E+00	1.4973E+00	1.7926E-01	3.4405E-02	7.0997E-03
8.0000E+02	8.8698E-01	7.7353E-01	9.2122E-02	1.7675E-02	3.6520E-03
1.0000E+03	5.5346E-01	4.8294E-01	5.7266E-02	1.0983E-02	2.2711E-03
1.5000E+03	2.5599E-01	2.2360E-01	2.6302E-02	5.0417E-03	1.0441E-03

Z= 48

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.2327E+04	1.0218E+05
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.0903E+04	5.6731E+04
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.5771E+04	3.3924E+04
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.2740E+04	1.4852E+04
3.532E+00	.0E+00	.0E+00	.0E+00	.0E+00	9.4492E+03	1.0340E+04
3.560E+00	.0E+00	.0E+00	.0E+00	1.4614E+05	9.3103E+03	1.0154E+04
3.727E+00	.0E+00	.0E+00	.0E+00	1.3066E+05	8.5450E+03	9.1418E+03
3.757E+00	.0E+00	.0E+00	6.8804E+04	1.2811E+05	8.4180E+03	8.9752E+03
3.990E+00	.0E+00	.0E+00	5.9687E+04	1.1076E+05	7.5147E+03	7.8035E+03
4.000E+00	.0E+00	3.3837E+04	5.9357E+04	1.1010E+05	7.4807E+03	7.7599E+03
4.022E+00	.0E+00	3.1176E+04	5.8599E+04	1.0857E+05	7.4022E+03	7.6593E+03
5.000E+00	.0E+00	2.2567E+04	3.3385E+04	5.9859E+04	4.8690E+03	4.5411E+03
6.000E+00	.0E+00	1.6169E+04	2.0231E+04	3.5742E+04	3.3925E+03	2.8742E+03
8.000E+00	.0E+00	9.4015E+03	8.9349E+03	1.5451E+04	1.8821E+03	1.5303E+03
1.000E+01	.0E+00	5.9996E+03	4.6403E+03	7.8910E+03	1.1722E+03	7.3152E+02
1.500E+01	.0E+00	2.5140E+03	1.3506E+03	2.2251E+03	4.7757E+02	2.2739E+02
2.000E+01	.0E+00	1.3048E+03	5.4576E+02	8.7804E+02	2.4529E+02	9.5523E+01
2.666E+01	.0E+00	6.5717E+02	2.1598E+02	3.3851E+02	1.2297E+02	3.9038E+01
2.688E+01	7.6899E+03	6.4455E+02	2.1044E+02	3.2959E+02	1.2060E+02	3.8067E+01
3.000E+01	5.8210E+03	4.9207E+02	1.4688E+02	2.2760E+02	9.1994E+01	2.6853E+01
4.000E+01	2.7500E+03	2.3849E+02	5.6698E+01	8.5314E+01	4.4562E+01	1.0619E+01
5.000E+01	1.5015E+03	1.3371E+02	2.6860E+01	3.9425E+01	2.5002E+01	5.1092E+00
6.000E+01	9.0671E+02	8.2502E+01	1.4529E+01	2.0869E+01	1.5445E+01	2.7941E+00
8.000E+01	4.0349E+02	3.7888E+01	5.4877E+00	7.5990E+00	7.1099E+00	1.0709E+00
1.000E+02	2.1316E+02	2.0479E+01	2.5791E+00	3.4645E+00	3.8512E+00	5.0796E-01
1.500E+02	6.6078E+01	6.5798E+00	6.6197E-01	8.3926E-01	1.2420E+00	1.3205E-01
2.000E+02	2.8791E+01	2.9267E+00	2.5735E-01	3.1341E-01	5.5378E-01	5.1668E-02
3.000E+02	9.1277E+00	9.4853E-01	7.1327E-02	8.2821E-02	1.7987E-01	1.4440E-02
4.000E+02	4.1768E+00	4.3862E-01	3.0095E-02	3.4221E-02	8.3287E-02	6.1145E-03
5.000E+02	2.3448E+00	2.4755E-01	1.5944E-02	1.8024E-02	4.7038E-02	3.2474E-03
6.000E+02	1.4973E+00	1.5850E-01	9.7340E-03	1.1030E-02	3.0127E-02	1.9864E-03
8.000E+02	7.7353E-01	8.2025E-02	4.6929E-03	5.4039E-03	1.5594E-02	9.5918E-04
1.000E+03	4.8294E-01	5.1209E-02	2.7947E-03	3.2621E-03	9.7336E-03	5.7032E-04
1.500E+03	2.2360E-01	2.3655E-02	1.1956E-03	1.4518E-03	4.4954E-03	2.4418E-04

Z= 48

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	2.1733E+05	3.3558E+05	4.8907E+05	1.8619E+04	2.0781E+04	4.1840E+04
1.500E+00	1.1405E+05	1.0987E+05	1.5872E+05	9.2870E+03	1.0224E+04	1.9937E+04
2.000E+00	6.6188E+04	4.6587E+04	6.6896E+04	5.5627E+03	5.8833E+03	1.1237E+04
3.000E+00	2.7985E+04	1.2806E+04	1.8225E+04	2.6328E+03	2.5180E+03	4.6766E+03
3.532E+00	1.9236E+04	7.4249E+03	1.0526E+04	1.9297E+03	1.7468E+03	3.2085E+03
3.560E+00	1.8879E+04	7.2272E+03	1.0244E+04	1.9003E+03	1.7152E+03	3.1488E+03
3.727E+00	1.6937E+04	6.1833E+03	8.7547E+03	1.7392E+03	1.5433E+03	2.8244E+03
3.757E+00	1.6619E+04	6.0173E+03	8.5181E+03	1.7125E+03	1.5151E+03	2.7713E+03
3.990E+00	1.4386E+04	4.8951E+03	6.9194E+03	1.5233E+03	1.3165E+03	2.3984E+03
4.000E+00	1.4303E+04	4.8548E+03	6.8621E+03	1.5162E+03	1.3091E+03	2.3845E+03
4.022E+00	1.4111E+04	4.7625E+03	6.7307E+03	1.4998E+03	1.2921E+03	2.3526E+03
5.000E+00	8.2305E+03	2.2249E+03	3.1268E+03	9.7510E+02	7.6550E+02	1.3734E+03
6.000E+00	5.1403E+03	1.1555E+03	1.6157E+03	6.7402E+02	4.8500E+02	8.5929E+02
8.000E+00	2.3643E+03	3.9808E+02	5.5184E+02	3.7054E+02	2.2879E+02	3.9721E+02
1.000E+01	1.2595E+03	1.6987E+02	2.3372E+02	2.2974E+02	1.2451E+02	2.1266E+02
1.500E+01	3.7911E+02	3.4429E+01	4.6639E+01	9.3145E+01	3.9025E+01	6.4577E+01
2.000E+01	1.5540E+02	1.0730E+01	1.4349E+01	4.7747E+01	1.6481E+01	2.6618E+01
2.666E+01	6.1852E+01	3.2691E+00	4.3070E+00	2.3917E+01	6.7695E+00	1.0648E+01
2.688E+01	6.0268E+01	3.1622E+00	4.1643E+00	2.3455E+01	6.6019E+00	1.0377E+01
3.000E+01	4.2059E+01	1.9971E+00	2.6137E+00	1.7890E+01	4.6653E+00	7.2544E+00
4.000E+01	1.6143E+01	5.9500E-01	7.6502E-01	8.6674E+00	1.8548E+00	2.7881E+00
5.000E+01	7.5739E+00	2.3150E-01	2.9323E-01	4.8655E+00	8.9475E-01	1.3115E+00
6.000E+01	4.0522E+00	1.0702E-01	1.3383E-01	3.0057E+00	4.9022E-01	7.0300E-01

Z= 48

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
8.000E+01	1.4966E+00	3.1787E-02	3.8921E-02	1.3842E+00	1.8837E-01	2.6028E-01
1.000E+02	6.8854E-01	1.2489E-02	1.5046E-02	7.4998E-01	8.9507E-02	1.1995E-01
1.500E+02	1.6894E-01	2.3553E-03	2.7665E-03	2.4202E-01	2.3331E-02	2.9496E-02
2.000E+02	6.3510E-02	7.5005E-04	8.6331E-04	1.0795E-01	9.1441E-03	1.1101E-02
3.000E+02	1.6868E-02	1.6055E-04	1.8552E-04	3.5096E-02	2.5555E-03	2.9565E-03
4.000E+02	6.9929E-03	5.7204E-05	6.8168E-05	1.6254E-02	1.0829E-03	1.2261E-03
5.000E+02	3.6888E-03	2.6813E-05	3.3346E-05	9.1810E-03	5.7511E-04	6.4694E-04
6.000E+02	2.2580E-03	1.5028E-05	1.9228E-05	5.8807E-03	3.5166E-04	3.9639E-04
8.000E+02	1.1071E-03	6.3302E-06	8.6860E-06	3.0439E-03	1.6992E-04	1.9433E-04
1.000E+03	6.7072E-04	3.4265E-06	5.1391E-06	1.9000E-03	1.0103E-04	1.1772E-04
1.500E+03	2.9855E-04	1.3481E-06	2.1632E-06	8.7757E-04	4.3254E-05	5.2411E-05

Z= 48

ENERGY	4 D 3/2	4 D 5/2	5 S 1/2
1.000E+00	2.9193E+04	4.2169E+04	1.5299E+03
1.500E+00	1.0357E+04	1.4831E+04	7.4718E+02
2.000E+00	4.6322E+03	6.5927E+03	4.4258E+02
3.000E+00	1.3568E+03	1.9130E+03	2.0688E+02
3.532E+00	8.0329E+02	1.1281E+03	1.5109E+02
3.560E+00	7.8265E+02	1.0989E+03	1.4877E+02
3.727E+00	6.7326E+02	9.4420E+02	1.3882E+02
3.757E+00	6.5579E+02	9.1951E+02	1.3668E+02
3.990E+00	5.3706E+02	7.5184E+02	1.2151E+02
4.000E+00	5.3277E+02	7.4580E+02	1.2094E+02
4.022E+00	5.2295E+02	7.3196E+02	1.1962E+02
5.000E+00	2.4967E+02	3.4744E+02	7.7654E+01
6.000E+00	1.3182E+02	1.8248E+02	5.3623E+01
8.000E+00	4.6511E+01	6.3370E+01	2.9442E+01
1.000E+01	2.0116E+01	2.7256E+01	1.8243E+01
1.500E+01	4.1629E+00	5.5525E+00	7.3909E+00
2.000E+01	1.3124E+00	1.7278E+00	3.7871E+00
2.666E+01	4.0368E-01	5.2358E-01	1.8963E+00
2.688E+01	3.9057E-01	5.0636E-01	1.8597E+00
3.000E+01	2.4744E-01	3.1881E-01	1.4183E+00
4.000E+01	7.4230E-02	9.3960E-02	6.8685E-01
5.000E+01	2.9004E-02	3.6164E-02	3.8540E-01
6.000E+01	1.3448E-02	1.6554E-02	2.3812E-01
8.000E+01	4.0096E-03	4.8315E-03	1.0966E-01
1.000E+02	1.5795E-03	1.8725E-03	5.9421E-02
1.500E+02	2.9902E-04	3.4525E-04	1.9177E-02
2.000E+02	9.5198E-05	1.0871E-04	8.5546E-03
3.000E+02	2.0388E-05	2.3415E-05	2.7817E-03
4.000E+02	7.2785E-06	8.5962E-06	1.2887E-03
5.000E+02	3.4165E-06	4.1825E-06	7.2818E-04
6.000E+02	1.9065E-06	2.4296E-06	4.6665E-04
8.000E+02	8.0272E-07	1.1075E-06	2.4189E-04
1.000E+03	4.3455E-07	6.4189E-07	1.5129E-04
1.500E+03	1.6032E-07	2.6945E-07	7.0481E-05

Z= 49 17 STATES, 34 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	27.9221	.98071
2 S 1/2	2.00	4.2141	.81844
2 P 1/2	2.00	3.9427	.73374
2 P 3/2	4.00	3.7283	.72090
3 S 1/2	2.00	.8114	.53346
3 P 1/2	2.00	.6998	.43666
3 P 3/2	4.00	.6606	.42205
3 D 3/2	4.00	.4610	.20729
3 D 5/2	6.00	.4529	.20468
4 S 1/2	2.00	.1280	.25370
4 P 1/2	2.00	.0908	.18069
4 P 3/2	4.00	.0839	.17084
4 D 3/2	4.00	.0255	.04807
4 D 5/2	6.00	.0246	.04672
5 S 1/2	2.00	.0108	.04938
5 P 1/2	.33	.0049	.01755
5 P 3/2	.67	.0046	.01514

Z= 49 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	1.4874E+06	.0E+00	.0E+00	1.3125E+06	1.7498E+05
1.5000E+00	5.9552E+05	.0E+00	.0E+00	5.2111E+05	7.4411E+04
2.0000E+00	2.9950E+05	.0E+00	.0E+00	2.6040E+05	3.9100E+04
3.0000E+00	1.0956E+05	.0E+00	.0E+00	9.4413E+04	1.5142E+04
3.7246E+00	6.3147E+04	.0E+00	.0E+00	5.4184E+04	8.9631E+03
3.7544E+00	1.9600E+05	.0E+00	1.3413E+05	5.3078E+04	8.7895E+03
3.9388E+00	1.7644E+05	.0E+00	1.2176E+05	4.6874E+04	7.8123E+03
3.9703E+00	2.3580E+05	.0E+00	1.8223E+05	4.5913E+04	7.6601E+03
4.0000E+00	2.3363E+05	.0E+00	1.8107E+05	4.5032E+04	7.5205E+03
4.2099E+00	2.0555E+05	.0E+00	1.5951E+05	3.9418E+04	6.6263E+03
4.2436E+00	2.3144E+05	.0E+00	1.8634E+05	3.8608E+04	6.4964E+03
5.0000E+00	1.5419E+05	.0E+00	1.2477E+05	2.5116E+04	4.3122E+03
6.0000E+00	9.5912E+04	.0E+00	7.7697E+04	1.5499E+04	2.7157E+03
8.0000E+00	4.4955E+04	.0E+00	3.6496E+04	7.1659E+03	1.2932E+03
1.0000E+01	2.4683E+04	.0E+00	2.0054E+04	3.9082E+03	7.2039E+02
1.5000E+01	8.1313E+03	.0E+00	6.6089E+03	1.2787E+03	2.4372E+02
2.0000E+01	3.6493E+03	.0E+00	2.9651E+03	5.7273E+02	1.1141E+02
2.7894E+01	1.4289E+03	.0E+00	1.1605E+03	2.2398E+02	4.4479E+01
2.8118E+01	8.7173E+03	7.3204E+03	1.1345E+03	2.1897E+02	4.3504E+01
3.0000E+01	7.3792E+03	6.2169E+03	9.4385E+02	1.8214E+02	3.6320E+01
4.0000E+01	3.4648E+03	2.9535E+03	4.1501E+02	8.0081E+01	1.6209E+01
5.0000E+01	1.8829E+03	1.6138E+03	2.1837E+02	4.2139E+01	8.6134E+00
6.0000E+01	1.1358E+03	9.7700E+02	1.2885E+02	2.4870E+01	5.1217E+00
8.0000E+01	5.0504E+02	4.3623E+02	5.5794E+01	1.0775E+01	2.2403E+00
1.0000E+02	2.6682E+02	2.3096E+02	2.9067E+01	5.6160E+00	1.1752E+00
1.5000E+02	8.2781E+01	7.1825E+01	8.8769E+00	1.7169E+00	3.6265E-01
2.0000E+02	3.6112E+01	3.1361E+01	3.8483E+00	7.4488E-01	1.5812E-01
3.0000E+02	1.1470E+01	9.9685E+00	1.2160E+00	2.3558E-01	5.0263E-02
4.0000E+02	5.2548E+00	4.5688E+00	5.5536E-01	1.0759E-01	2.3025E-02
5.0000E+02	2.9519E+00	2.5675E+00	3.1113E-01	6.0282E-02	1.2921E-02
6.0000E+02	1.8855E+00	1.6406E+00	1.9822E-01	3.8403E-02	8.2397E-03
8.0000E+02	9.7409E-01	8.4820E-01	1.0192E-01	1.9739E-02	4.2406E-03
1.0000E+03	6.0792E-01	5.2968E-01	6.3344E-02	1.2265E-02	2.6370E-03
1.5000E+03	2.8110E-01	2.4517E-01	2.9085E-02	5.6273E-03	1.2116E-03

Z= 49

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.4344E+04	1.0417E+05
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.2453E+04	5.9186E+04
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.6884E+04	3.5806E+04
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.3362E+04	1.5869E+04
3.725E+00	.0E+00	.0E+00	.0E+00	.0E+00	8.9982E+03	9.8457E+03
3.754E+00	.0E+00	.0E+00	.0E+00	1.3413E+05	8.8656E+03	9.6690E+03
3.939E+00	.0E+00	.0E+00	.0E+00	1.2176E+05	8.1045E+03	8.6636E+03
3.970E+00	.0E+00	.0E+00	6.2883E+04	1.1935E+05	7.9837E+03	8.5055E+03
4.000E+00	.0E+00	.0E+00	6.3887E+04	1.1719E+05	7.8724E+03	8.3600E+03
4.210E+00	.0E+00	.0E+00	5.6009E+04	1.0350E+05	7.1470E+03	7.4208E+03
4.244E+00	.0E+00	2.9908E+04	5.4973E+04	1.0146E+05	7.0398E+03	7.2833E+03
5.000E+00	.0E+00	2.3383E+04	3.6314E+04	6.5069E+04	5.1360E+03	4.9200E+03
6.000E+00	.0E+00	1.6790E+04	2.1979E+04	3.8928E+04	3.5858E+03	3.1285E+03
8.000E+00	.0E+00	9.8116E+03	9.7909E+03	1.6894E+04	1.9959E+03	1.4802E+03
1.000E+01	.0E+00	6.2946E+03	5.1043E+03	8.6556E+03	1.2466E+03	8.0620E+02
1.500E+01	.0E+00	2.6581E+03	1.4960E+03	2.4547E+03	5.1045E+02	2.5286E+02
2.000E+01	.0E+00	1.3853E+03	6.0756E+02	9.7224E+02	2.6311E+02	1.0686E+02
2.789E+01	.0E+00	6.2821E+02	2.0862E+02	3.2362E+02	1.1860E+02	3.8112E+01
2.812E+01	7.3204E+03	6.1614E+02	2.0328E+02	3.1509E+02	1.1630E+02	3.7167E+01
3.000E+01	6.2169E+03	5.2582E+02	1.6458E+02	2.5345E+02	9.9191E+01	3.0282E+01
4.000E+01	2.9535E+03	2.5586E+02	6.3807E+01	9.5343E+01	4.8225E+01	1.2038E+01
5.000E+01	1.6138E+03	1.4386E+02	3.0325E+01	4.4180E+01	2.7132E+01	5.8144E+00
6.000E+01	9.7700E+02	8.8967E+01	1.6445E+01	2.3436E+01	1.6798E+01	3.1893E+00
8.000E+01	4.3623E+02	4.0998E+01	6.2358E+00	8.5610E+00	7.7588E+00	1.2277E+00
1.000E+02	2.3096E+02	2.2216E+01	2.9391E+00	3.9122E+00	4.2130E+00	5.8425E-01
1.500E+02	7.1825E+01	7.1676E+00	7.5796E-01	9.5128E-01	1.3645E+00	1.5270E-01
2.000E+02	3.1361E+01	3.1967E+00	2.9556E-01	3.5605E-01	6.1002E-01	5.9949E-02
3.000E+02	9.9685E+00	1.0394E+00	8.2216E-02	9.4328E-02	1.9891E-01	1.6817E-02
4.000E+02	4.5688E+00	4.8157E-01	3.4765E-02	3.9025E-02	9.2234E-02	7.1391E-03
5.000E+02	2.5675E+00	2.7212E-01	1.8445E-02	2.0567E-02	5.2154E-02	3.7978E-03
6.000E+02	1.6406E+00	1.7436E-01	1.1273E-02	1.2589E-02	3.3430E-02	2.3249E-03
8.000E+02	8.4820E-01	9.0305E-02	5.4426E-03	6.1679E-03	1.7317E-02	1.1240E-03
1.000E+03	5.2968E-01	5.6389E-02	3.2339E-03	3.7214E-03	1.0812E-02	6.6939E-04
1.500E+03	2.4517E-01	2.6040E-02	1.3886E-03	1.6564E-03	4.9918E-03	2.8678E-04

Z= 49

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	2.2512E+05	3.6972E+05	5.3911E+05	1.9900E+04	2.2389E+04	4.5347E+04
1.500E+00	1.1988E+05	1.2257E+05	1.7701E+05	9.9612E+03	1.1109E+04	2.1753E+04
2.000E+00	7.0180E+04	5.2374E+04	7.5156E+04	5.9739E+03	6.4275E+03	1.2313E+04
3.000E+00	2.9965E+04	1.4542E+04	2.0675E+04	2.8337E+03	2.7753E+03	5.1626E+03
3.725E+00	1.8259E+04	7.0750E+03	1.0006E+04	1.8778E+03	1.7130E+03	3.1381E+03
3.754E+00	1.7919E+04	6.8865E+03	9.7377E+03	1.8491E+03	1.6820E+03	3.0796E+03
3.939E+00	1.5993E+04	5.8506E+03	8.2628E+03	1.6855E+03	1.5062E+03	2.7484E+03
3.970E+00	1.5691E+04	5.6933E+03	8.0391E+03	1.6596E+03	1.4786E+03	2.6965E+03
4.000E+00	1.5414E+04	5.5500E+03	7.8353E+03	1.6358E+03	1.4532E+03	2.6488E+03
4.210E+00	1.3630E+04	4.6561E+03	6.5647E+03	1.4805E+03	1.2895E+03	2.3419E+03
4.244E+00	1.3369E+04	4.5299E+03	6.3854E+03	1.4576E+03	1.2655E+03	2.2971E+03
5.000E+00	8.9161E+03	2.5564E+03	3.5879E+03	1.0541E+03	8.5437E+02	1.5329E+03
6.000E+00	5.5904E+03	1.3333E+03	1.8616E+03	7.2978E+02	5.4361E+02	9.6271E+02
8.000E+00	2.5872E+03	4.6248E+02	6.4003E+02	4.0219E+02	2.5813E+02	4.4761E+02
1.000E+01	1.3847E+03	1.9833E+02	2.7237E+02	2.4991E+02	1.4121E+02	2.4075E+02
1.500E+01	4.2012E+02	4.0526E+01	5.4778E+01	1.0179E+02	4.4670E+01	7.3707E+01
2.000E+01	1.7311E+02	1.2702E+01	1.6944E+01	5.2355E+01	1.8982E+01	3.0544E+01
2.789E+01	5.9819E+01	3.2254E+00	4.2274E+00	2.3572E+01	6.8096E+00	1.0617E+01
2.812E+01	5.8288E+01	3.1201E+00	4.0876E+00	2.3117E+01	6.6415E+00	1.0347E+01
3.000E+01	4.7182E+01	2.3818E+00	3.1085E+00	1.9714E+01	5.4166E+00	8.3842E+00
4.000E+01	1.8191E+01	7.1282E-01	9.1372E-01	9.5848E+00	2.1628E+00	3.2465E+00
5.000E+01	8.5631E+00	2.7820E-01	3.5122E-01	5.3948E+00	1.0486E+00	1.5285E+00
6.000E+01	4.5931E+00	1.2891E-01	1.6064E-01	3.3418E+00	5.7632E-01	8.2144E-01

Z= 49

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
8.000E+01	1.7027E+00	3.8428E-02	4.6871E-02	1.5434E+00	2.2246E-01	3.0533E-01
1.000E+02	7.8544E-01	1.5139E-02	1.8163E-02	8.3837E-01	1.0605E-01	1.4108E-01
1.500E+02	1.9353E-01	2.8680E-03	3.3527E-03	2.7169E-01	2.7797E-02	3.4846E-02
2.000E+02	7.2944E-02	9.1487E-04	1.0501E-03	1.2151E-01	1.0932E-02	1.3149E-02
3.000E+02	1.9432E-02	1.9623E-04	2.2660E-04	3.9638E-02	3.0675E-03	3.5118E-03
4.000E+02	8.0652E-03	7.0071E-05	8.3341E-05	1.8394E-02	1.3026E-03	1.4585E-03
5.000E+02	4.2563E-03	3.2986E-05	4.0461E-05	1.0403E-02	6.9302E-04	7.7036E-04
6.000E+02	2.6065E-03	1.8556E-05	2.3260E-05	6.6682E-03	4.2427E-04	4.7196E-04
8.000E+02	1.2791E-03	7.7702E-06	1.0738E-05	3.4544E-03	2.0528E-04	2.3151E-04
1.000E+03	7.7372E-04	4.2369E-06	6.1664E-06	2.1566E-03	1.2213E-04	1.4012E-04
1.500E+03	3.4452E-04	1.6176E-06	2.6575E-06	9.9572E-04	5.2358E-05	6.2357E-05

Z= 49

ENERGY	4 D 3/2	4 D 5/2	5 S 1/2	5 P 1/2	5 P 3/2
1.000E+00	3.4622E+04	5.0109E+04	2.0657E+03	1.8905E+02	3.5548E+02
1.500E+00	1.2454E+04	1.7862E+04	1.0113E+03	9.1814E+01	1.6847E+02
2.000E+00	5.6241E+03	8.0142E+03	5.9956E+02	5.2576E+01	9.5170E+01
3.000E+00	1.6698E+03	2.3567E+03	2.8102E+02	2.3341E+01	3.9780E+01
3.725E+00	8.3641E+02	1.1740E+03	1.8536E+02	1.4396E+01	2.4166E+01
3.754E+00	8.1492E+02	1.1436E+03	1.8251E+02	1.4136E+01	2.3715E+01
3.939E+00	6.9631E+02	9.7588E+02	1.6620E+02	1.2657E+01	2.1163E+01
3.970E+00	6.7823E+02	9.5034E+02	1.6363E+02	1.2425E+01	2.0763E+01
4.000E+00	6.6174E+02	9.2706E+02	1.6125E+02	1.2211E+01	2.0396E+01
4.210E+00	5.5841E+02	7.8123E+02	1.4583E+02	1.0835E+01	1.8033E+01
4.244E+00	5.4375E+02	7.6055E+02	1.4355E+02	1.0634E+01	1.7688E+01
5.000E+00	3.1211E+02	4.3459E+02	1.0515E+02	7.1797E+00	1.1804E+01
6.000E+00	1.6559E+02	2.2934E+02	7.2716E+01	4.5692E+00	7.4146E+00
8.000E+00	5.8873E+01	8.0793E+01	4.0019E+01	2.1709E+00	3.4492E+00
1.000E+01	2.5669E+01	3.4956E+01	2.4848E+01	1.1883E+00	1.8561E+00
1.500E+01	5.3557E+00	7.1438E+00	1.0112E+01	3.7631E-01	5.6880E-01
2.000E+01	1.6990E+00	2.2365E+00	5.1989E+00	1.6000E-01	2.3585E-01
2.789E+01	4.3648E-01	5.6449E-01	2.3398E+00	5.7427E-02	8.2029E-02
2.812E+01	4.2234E-01	5.4595E-01	2.2946E+00	5.6010E-02	7.9941E-02
3.000E+01	3.2302E-01	4.1596E-01	1.9566E+00	4.5685E-02	6.4782E-02
4.000E+01	9.7393E-02	1.2319E-01	9.5097E-01	1.8244E-02	2.5093E-02
5.000E+01	3.8188E-02	4.7561E-02	5.3506E-01	8.8381E-03	1.1848E-02
6.000E+01	1.7752E-02	2.1824E-02	3.3131E-01	4.8582E-03	6.3692E-03
8.000E+01	5.3136E-03	6.3919E-03	1.5309E-01	1.8756E-03	2.3682E-03
1.000E+02	2.0991E-03	2.4839E-03	8.3162E-02	8.9416E-04	1.0946E-03
1.500E+02	3.9925E-04	4.5984E-04	2.6953E-02	2.3435E-04	2.7048E-04
2.000E+02	1.2746E-04	1.4510E-04	1.2056E-02	9.2168E-05	1.0211E-04
3.000E+02	2.7384E-05	3.1332E-05	3.9332E-03	2.5852E-05	2.7300E-05
4.000E+02	9.7975E-06	1.1519E-05	1.8255E-03	1.0979E-05	1.1353E-05
5.000E+02	4.6052E-06	5.6040E-06	1.0326E-03	5.8431E-06	6.0060E-06
6.000E+02	2.5710E-06	3.2567E-06	6.6213E-04	3.5775E-06	3.6882E-06
8.000E+02	1.0834E-06	1.4832E-06	3.4331E-04	1.7342E-06	1.8189E-06
1.000E+03	5.8729E-07	8.5744E-07	2.1461E-04	1.0350E-06	1.1095E-06
1.500E+03	2.1772E-07	3.5956E-07	9.9634E-05	4.5024E-07	5.0782E-07

Z= 50 17 STATES, 34 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	29.1857	.98099
2 S 1/2	2.00	4.4406	.82112
2 P 1/2	2.00	4.1610	.73771
2 P 3/2	4.00	3.9266	.72445
3 S 1/2	2.00	.8692	.53985
3 P 1/2	2.00	.7535	.44388
3 P 3/2	4.00	.7103	.42872
3 D 3/2	4.00	.5035	.21396
3 D 5/2	6.00	.4945	.21121
4 S 1/2	2.00	.1429	.26233
4 P 1/2	2.00	.1037	.18917
4 P 3/2	4.00	.0958	.17881
4 D 3/2	4.00	.0335	.05371
4 D 5/2	6.00	.0324	.05226
5 S 1/2	2.00	.0134	.05804
5 P 1/2	.67	.0063	.02480
5 P 3/2	1.33	.0058	.02179

Z= 50 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	1.6064E+06	.0E+00	.0E+00	1.4092E+06	1.9725E+05
1.5000E+00	6.4827E+05	.0E+00	.0E+00	5.6404E+05	8.4233E+04
2.0000E+00	3.2683E+05	.0E+00	.0E+00	2.8252E+05	4.4310E+04
3.0000E+00	1.1986E+05	.0E+00	.0E+00	1.0268E+05	1.7176E+04
3.9227E+00	6.0549E+04	.0E+00	.0E+00	5.1593E+04	8.9558E+03
3.9541E+00	1.8319E+05	.0E+00	1.2387E+05	5.0538E+04	8.7816E+03
4.0000E+00	1.8408E+05	.0E+00	1.2650E+05	4.9048E+04	8.5352E+03
4.1569E+00	1.6580E+05	.0E+00	1.1366E+05	4.4382E+04	7.7612E+03
4.1901E+00	2.2062E+05	.0E+00	1.6954E+05	4.3471E+04	7.6094E+03
4.4362E+00	1.9348E+05	.0E+00	1.4942E+05	3.7461E+04	6.6035E+03
4.4717E+00	2.1838E+05	.0E+00	1.7522E+05	3.6689E+04	6.4736E+03
5.0000E+00	1.6606E+05	.0E+00	1.3378E+05	2.7378E+04	4.8937E+03
6.0000E+00	1.0354E+05	.0E+00	8.3547E+04	1.6907E+04	3.0820E+03
8.0000E+00	4.8635E+04	.0E+00	3.9340E+04	7.8267E+03	1.4682E+03
1.0000E+01	2.6751E+04	.0E+00	2.1660E+04	4.2728E+03	8.1799E+02
1.5000E+01	8.8349E+03	.0E+00	7.1575E+03	1.4004E+03	2.7697E+02
2.0000E+01	3.9711E+03	.0E+00	3.2166E+03	6.2788E+02	1.2663E+02
2.9156E+01	1.3740E+03	.0E+00	1.1124E+03	2.1688E+02	4.4731E+01
2.9390E+01	8.3186E+03	6.9752E+03	1.0876E+03	2.1202E+02	4.3749E+01
3.0000E+01	7.9675E+03	6.7001E+03	1.0260E+03	2.0001E+02	4.1316E+01
4.0000E+01	3.7186E+03	3.1603E+03	4.5179E+02	8.8040E+01	1.8452E+01
5.0000E+01	2.0250E+03	1.7308E+03	2.3798E+02	4.6372E+01	9.8119E+00
6.0000E+01	1.2248E+03	1.0510E+03	1.4056E+02	2.7390E+01	5.8376E+00
8.0000E+01	5.4600E+02	4.7060E+02	6.0956E+01	1.1883E+01	2.5566E+00
1.0000E+02	2.8906E+02	2.4972E+02	3.1795E+01	6.2007E+00	1.3426E+00
1.5000E+02	8.9967E+01	7.7920E+01	9.7322E+00	1.8998E+00	4.1512E-01
2.0000E+02	3.9325E+01	3.4092E+01	4.2260E+00	8.2552E-01	1.8127E-01
3.0000E+02	1.2523E+01	1.0865E+01	1.3382E+00	2.6164E-01	5.7742E-02
4.0000E+02	5.7458E+00	4.9876E+00	6.1204E-01	1.1966E-01	2.6486E-02
5.0000E+02	3.2310E+00	2.8058E+00	3.4318E-01	6.7096E-02	1.4874E-02
6.0000E+02	2.0651E+00	1.7941E+00	2.1876E-01	4.2767E-02	9.4907E-03
8.0000E+02	1.0676E+00	9.2822E-01	1.1253E-01	2.1992E-02	4.8864E-03
1.0000E+03	6.6643E-01	5.7979E-01	6.9941E-02	1.3665E-02	3.0387E-03
1.5000E+03	3.0806E-01	2.6830E-01	3.2098E-02	6.2664E-03	1.3952E-03

Z= 50

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.6501E+04	1.0587E+05
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.3891E+04	6.1593E+04
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.7983E+04	3.7665E+04
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.3982E+04	1.6908E+04
3.923E+00	.0E+00	.0E+00	.0E+00	.0E+00	8.5782E+03	9.3886E+03
3.954E+00	.0E+00	.0E+00	.0E+00	1.2387E+05	8.4518E+03	9.2198E+03
4.000E+00	.0E+00	.0E+00	.0E+00	1.2650E+05	8.2717E+03	8.9803E+03
4.157E+00	.0E+00	.0E+00	.0E+00	1.1366E+05	7.6954E+03	8.2206E+03
4.190E+00	.0E+00	.0E+00	5.8186E+04	1.1135E+05	7.5805E+03	8.0703E+03
4.436E+00	.0E+00	.0E+00	5.2659E+04	9.6761E+04	6.8036E+03	7.0649E+03
4.472E+00	.0E+00	2.8696E+04	5.1668E+04	9.4853E+04	6.7012E+03	6.9339E+03
5.000E+00	.0E+00	2.3969E+04	3.9290E+04	7.0525E+04	5.4098E+03	5.3158E+03
6.000E+00	.0E+00	1.7476E+04	2.3894E+04	4.2177E+04	3.7839E+03	3.3951E+03
8.000E+00	.0E+00	1.0239E+04	1.0681E+04	1.8420E+04	2.1130E+03	1.6176E+03
1.000E+01	.0E+00	6.5991E+03	5.5944E+03	9.4666E+03	1.3231E+03	8.8570E+02
1.500E+01	.0E+00	2.8051E+03	1.6523E+03	2.7001E+03	5.4446E+02	2.8030E+02
2.000E+01	.0E+00	1.4683E+03	6.7462E+02	1.0737E+03	2.8163E+02	1.1916E+02
2.916E+01	.0E+00	6.0105E+02	2.0173E+02	3.0965E+02	1.1444E+02	3.7233E+01
2.939E+01	6.9752E+03	5.8950E+02	1.9658E+02	3.0150E+02	1.1222E+02	3.6310E+01
3.000E+01	6.7001E+03	5.6071E+02	1.8388E+02	2.8144E+02	1.0672E+02	3.4036E+01
4.000E+01	3.1603E+03	2.7393E+02	7.1601E+01	1.0625E+02	5.2071E+01	1.3602E+01
5.000E+01	1.7308E+03	1.5447E+02	3.4139E+01	4.9367E+01	2.9377E+01	6.5949E+00
6.000E+01	1.0510E+03	9.5752E+01	1.8562E+01	2.6242E+01	1.8227E+01	1.6281E+00
8.000E+01	4.7060E+02	4.4274E+01	7.0657E+00	9.6164E+00	8.4468E+00	1.4029E+00
1.000E+02	2.4972E+02	2.4050E+01	3.3397E+00	4.4046E+00	4.5980E+00	6.6976E-01
1.500E+02	7.7920E+01	7.7918E+00	8.6535E-01	1.0750E+00	1.4954E+00	1.7598E-01
2.000E+02	3.4092E+01	3.4843E+00	3.3844E-01	4.0327E-01	6.7033E-01	6.9323E-02
3.000E+02	1.0865E+01	1.1366E+00	9.4490E-02	1.0711E-01	2.1931E-01	1.9521E-02
4.000E+02	4.9876E+00	5.2763E-01	4.0043E-02	4.4367E-02	1.0189E-01	8.3069E-03
5.000E+02	2.8058E+00	2.9850E-01	2.1277E-02	2.3397E-02	5.7687E-02	4.4254E-03
6.000E+02	1.7941E+00	1.9142E-01	1.3016E-02	1.4325E-02	3.7005E-02	2.7114E-03
8.000E+02	9.2822E-01	9.9215E-02	6.2930E-03	7.0185E-03	1.9185E-02	1.3130E-03
1.000E+03	5.7979E-01	6.1966E-02	3.7424E-03	4.2333E-03	1.1980E-02	7.8278E-04
1.500E+03	2.6830E-01	2.8606E-02	1.6082E-03	1.8832E-03	5.5297E-03	3.3572E-04

Z= 50

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	2.3111E+05	4.0498E+05	5.9069E+05	2.1220E+04	2.4039E+04	4.8999E+04
1.500E+00	1.2556E+05	1.3629E+05	1.9671E+05	1.0662E+04	1.2032E+04	2.3663E+04
2.000E+00	7.4186E+04	5.8616E+04	8.4067E+04	6.4046E+03	6.9997E+03	1.3453E+04
3.000E+00	3.1990E+04	1.6445E+04	2.3359E+04	3.0442E+03	3.0480E+03	5.6803E+03
3.923E+00	1.7354E+04	6.7494E+03	9.5224E+03	1.8287E+03	1.6806E+03	3.0705E+03
3.954E+00	1.7030E+04	6.5694E+03	9.2665E+03	1.8007E+03	1.6502E+03	3.0132E+03
4.000E+00	1.6571E+04	6.3170E+03	8.9079E+03	1.7610E+03	1.6070E+03	2.9319E+03
4.157E+00	1.5119E+04	5.5413E+03	7.8058E+03	1.6345E+03	1.4704E+03	2.6751E+03
4.190E+00	1.4833E+04	5.3922E+03	7.5942E+03	1.6093E+03	1.4434E+03	2.6245E+03
4.436E+00	1.2927E+04	4.4322E+03	6.2326E+03	1.4397E+03	1.2632E+03	2.2871E+03
4.472E+00	1.2680E+04	4.3119E+03	6.0621E+03	1.4174E+03	1.2397E+03	2.2432E+03
5.000E+00	9.6307E+03	2.9240E+03	4.0981E+03	1.1371E+03	9.4987E+02	1.7047E+03
6.000E+00	6.0622E+03	1.5312E+03	2.1348E+03	7.8847E+02	6.0694E+02	1.0746E+03
8.000E+00	2.8227E+03	5.3469E+02	7.3871E+02	4.3559E+02	2.9007E+02	5.0246E+02
1.000E+01	1.5177E+03	2.3044E+02	3.1588E+02	2.7123E+02	1.5948E+02	2.7146E+02
1.500E+01	4.6410E+02	4.7469E+01	6.4022E+01	1.1097E+02	5.0914E+01	8.3787E+01
2.000E+01	1.9223E+02	1.4960E+01	1.9908E+01	5.7263E+01	2.1767E+01	3.4907E+01
2.916E+01	5.7878E+01	3.1815E+00	4.1478E+00	2.3235E+01	6.8475E+00	1.0582E+01
2.939E+01	5.6398E+01	3.0779E+00	4.0108E+00	2.2785E+01	6.6788E+00	1.0313E+01
3.000E+01	5.2753E+01	2.8261E+00	3.6783E+00	2.1666E+01	6.2624E+00	9.6499E+00
4.000E+01	2.0431E+01	8.4965E-01	1.0858E+00	1.0571E+01	2.5140E+00	3.7539E+00
5.000E+01	9.6490E+00	3.3265E-01	4.1857E-01	5.9657E+00	1.2237E+00	1.7738E+00
6.000E+01	5.1885E+00	1.5451E-01	1.9185E-01	3.7031E+00	6.7455E-01	9.5575E-01

Z= 50

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
8.000E+01	1.9305E+00	4.6221E-02	5.6157E-02	1.7163E+00	2.6157E-01	3.5658E-01
1.000E+02	8.9289E-01	1.8258E-02	2.1814E-02	9.3454E-01	1.2512E-01	1.6522E-01
1.500E+02	2.2095E-01	3.4743E-03	4.0422E-03	3.0413E-01	3.2968E-02	4.0990E-02
2.000E+02	8.3484E-02	1.1091E-03	1.2765E-03	1.3639E-01	1.3009E-02	1.5507E-02
3.000E+02	2.2303E-02	2.3884E-04	2.7489E-04	4.4641E-02	3.6651E-03	4.1540E-03
4.000E+02	9.2682E-03	8.5609E-05	1.0086E-04	2.0757E-02	1.5605E-03	1.7275E-03
5.000E+02	4.8942E-03	4.0463E-05	4.8838E-05	1.1753E-02	8.3135E-04	9.1278E-04
6.000E+02	2.9991E-03	2.2606E-05	2.8257E-05	7.5398E-03	5.0945E-04	5.5965E-04
8.000E+02	1.4719E-03	9.4952E-06	1.3088E-05	3.9089E-03	2.4690E-04	2.7439E-04
1.000E+03	8.8958E-04	5.2896E-06	7.4034E-06	2.4409E-03	1.4703E-04	1.6614E-04
1.500E+03	3.9588E-04	1.9363E-06	3.1645E-06	1.1266E-03	6.3113E-05	7.3827E-05

Z= 50

ENERGY	4 D 3/2	4 D 5/2	5 S 1/2	5 P 1/2	5 P 3/2
1.000E+00	4.0360E+04	5.8500E+04	2.5178E+03	5.5284E+02	1.0592E+03
1.500E+00	1.4725E+04	2.1139E+04	1.2361E+03	2.7039E+02	5.0462E+02
2.000E+00	6.7101E+03	9.5679E+03	7.3387E+02	1.5562E+02	2.8543E+02
3.000E+00	2.0188E+03	2.8503E+03	3.4455E+02	6.9144E+01	1.2032E+02
3.923E+00	8.6059E+02	1.2065E+03	2.0580E+02	3.8085E+01	6.4990E+01
3.954E+00	8.3847E+02	1.1753E+03	2.0262E+02	3.7394E+01	6.3775E+01
4.000E+00	8.0740E+02	1.1314E+03	1.9811E+02	3.6416E+01	6.2053E+01
4.157E+00	7.1157E+02	9.9601E+02	1.8375E+02	3.3318E+01	5.6615E+01
4.190E+00	6.9309E+02	9.6993E+02	1.8090E+02	3.2707E+01	5.5544E+01
4.436E+00	5.7353E+02	8.0133E+02	1.6168E+02	2.8620E+01	4.8402E+01
4.472E+00	5.5847E+02	7.8011E+02	1.5915E+02	2.8088E+01	4.7474E+01
5.000E+00	3.8330E+02	5.3370E+02	1.2746E+02	2.1522E+01	3.6077E+01
6.000E+00	2.0434E+02	2.8297E+02	8.8190E+01	1.3754E+01	2.2746E+01
8.000E+00	7.3195E+01	1.0042E+02	4.9263E+01	6.5772E+00	1.0641E+01
1.000E+01	3.2103E+01	4.3693E+01	3.0649E+01	3.6184E+00	5.7522E+00
1.500E+01	6.7732E+00	9.0742E+00	1.2527E+01	1.1565E+00	1.7773E+00
2.000E+01	2.1598E+00	2.8406E+00	6.4614E+00	4.9479E-01	7.4097E-01
2.916E+01	4.6567E-01	5.9998E-01	2.6205E+00	1.5576E-01	2.2480E-01
2.939E+01	4.5062E-01	5.8031E-01	2.5698E+00	1.5192E-01	2.1908E-01
3.000E+01	4.1402E-01	5.3253E-01	2.4436E+00	1.4246E-01	2.0500E-01
4.000E+01	1.2547E-01	1.5844E-01	1.1918E+00	5.7202E-02	7.9784E-02
5.000E+01	4.9363E-02	6.1377E-02	6.7238E-01	2.7821E-02	3.7801E-02
6.000E+01	2.3009E-02	2.8225E-02	4.1724E-01	1.5340E-02	2.0374E-02
8.000E+01	6.9127E-03	8.2982E-03	1.9344E-01	5.9497E-03	7.6046E-03
1.000E+02	2.7388E-03	3.2310E-03	1.0534E-01	2.8462E-03	3.5244E-03
1.500E+02	5.2335E-04	6.0125E-04	3.4283E-02	7.5011E-04	8.7473E-04
2.000E+02	1.6750E-04	1.9017E-04	1.5376E-02	2.9595E-04	3.3106E-04
3.000E+02	3.6117E-05	4.1187E-05	5.0332E-03	8.3358E-05	8.8746E-05
4.000E+02	1.2948E-05	1.5115E-05	2.3406E-03	3.5485E-05	3.6945E-05
5.000E+02	6.0867E-06	7.3788E-06	1.3255E-03	1.8904E-05	1.9549E-05
6.000E+02	3.4083E-06	4.2796E-06	8.5054E-04	1.1592E-05	1.2001E-05
8.000E+02	1.4377E-06	1.9525E-06	4.4121E-04	5.6213E-06	5.9089E-06
1.000E+03	7.7903E-07	1.1301E-06	2.7577E-04	3.3528E-06	3.5956E-06
1.500E+03	2.8932E-07	4.7100E-07	1.2776E-04	1.4524E-06	1.6297E-06

Z= 51 17 STATES, 34 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	30.4807	.98125
2 S 1/2	2.00	4.6741	.82371
2 P 1/2	2.00	4.3862	.74154
2 P 3/2	4.00	4.1303	.72785
3 S 1/2	2.00	.9292	.54609
3 P 1/2	2.00	.8093	.45091
3 P 3/2	4.00	.7616	.43520
3 D 3/2	4.00	.5478	.22051
3 D 5/2	6.00	.5377	.21763
4 S 1/2	2.00	.1583	.27092
4 P 1/2	2.00	.1171	.19763
4 P 3/2	4.00	.1081	.18676
4 D 3/2	4.00	.0419	.05932
4 D 5/2	6.00	.0405	.05775
5 S 1/2	2.00	.0159	.06584
5 P 1/2	1.00	.0077	.03119
5 P 3/2	2.00	.0070	.02768

Z= 51 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	1.7335E+06	.0E+00	.0E+00	1.5126E+06	2.2091E+05
1.5000E+00	7.0421E+05	.0E+00	.0E+00	6.0935E+05	9.4857E+04
2.0000E+00	3.5583E+05	.0E+00	.0E+00	3.0584E+05	4.9994E+04
3.0000E+00	1.3086E+05	.0E+00	.0E+00	1.1145E+05	1.9408E+04
4.0000E+00	6.2960E+04	.0E+00	.0E+00	5.3304E+04	9.6560E+03
4.1262E+00	5.8124E+04	.0E+00	.0E+00	4.9180E+04	8.9434E+03
4.1593E+00	1.7306E+05	.0E+00	1.1612E+05	4.8173E+04	8.7688E+03
4.3818E+00	1.5603E+05	.0E+00	1.0626E+05	4.2064E+04	7.7059E+03
4.4169E+00	2.0742E+05	.0E+00	1.5866E+05	4.1199E+04	7.5546E+03
4.6694E+00	1.8250E+05	.0E+00	1.4030E+05	3.5630E+04	6.5765E+03
4.7068E+00	2.0620E+05	.0E+00	1.6486E+05	3.4894E+04	6.4467E+03
5.0000E+00	1.7787E+05	.0E+00	1.4255E+05	2.9783E+04	5.5399E+03
6.0000E+00	1.1173E+05	.0E+00	8.9835E+04	1.8405E+04	3.4901E+03
8.0000E+00	5.2503E+04	.0E+00	4.2310E+04	8.5298E+03	1.6629E+03
1.0000E+01	2.8931E+04	.0E+00	2.3343E+04	4.6616E+03	9.2664E+02
1.5000E+01	9.5799E+03	.0E+00	7.7356E+03	1.5304E+03	3.1393E+02
2.0000E+01	4.3143E+03	.0E+00	3.4838E+03	6.8692E+02	1.4357E+02
3.0000E+01	1.3794E+03	.0E+00	1.1134E+03	2.1917E+02	4.6865E+01
3.0450E+01	1.3224E+03	.0E+00	1.0673E+03	2.1010E+02	4.4960E+01
3.0694E+01	7.9394E+03	6.6465E+03	1.0435E+03	2.0540E+02	4.3972E+01
4.0000E+01	3.9828E+03	3.3743E+03	4.9095E+02	9.6588E+01	2.0940E+01
5.0000E+01	2.1752E+03	1.8542E+03	2.5890E+02	5.0922E+01	1.1144E+01
6.0000E+01	1.3188E+03	1.1290E+03	1.5305E+02	3.0102E+01	6.6311E+00
8.0000E+01	5.8916E+02	5.0670E+02	6.6473E+01	1.3077E+01	2.9069E+00
1.0000E+02	3.1252E+02	2.6945E+02	3.4715E+01	6.8314E+00	1.5277E+00
1.5000E+02	9.7594E+01	8.4373E+01	1.0650E+01	2.0976E+00	4.7322E-01
2.0000E+02	4.2744E+01	3.6992E+01	4.6320E+00	9.1289E-01	2.0692E-01
3.0000E+02	1.3645E+01	1.1819E+01	1.4700E+00	2.8990E-01	6.6041E-02
4.0000E+02	6.2707E+00	5.4344E+00	6.7322E-01	1.3278E-01	3.0329E-02
5.0000E+02	3.5297E+00	3.0603E+00	3.7781E-01	7.4516E-02	1.7047E-02
6.0000E+02	2.2576E+00	1.9582E+00	2.4096E-01	4.7522E-02	1.0882E-02
8.0000E+02	1.1679E+00	1.0139E+00	1.2401E-01	2.4448E-02	5.6046E-03
1.0000E+03	7.2921E-01	6.3343E-01	7.7096E-02	1.5191E-02	3.4853E-03
1.5000E+03	3.3697E-01	2.9305E-01	3.5357E-02	6.9626E-03	1.5991E-03

Z= 51

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.7990E+04	1.0772E+05
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.5180E+04	6.4006E+04
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.9028E+04	3.9541E+04
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.4614E+04	1.7973E+04
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	8.6725E+03	9.6171E+03
4.126E+00	.0E+00	.0E+00	.0E+00	.0E+00	8.1859E+03	8.9632E+03
4.159E+00	.0E+00	.0E+00	.0E+00	1.1612E+05	8.0652E+03	8.8019E+03
4.382E+00	.0E+00	.0E+00	.0E+00	1.0626E+05	7.3138E+03	7.8095E+03
4.417E+00	.0E+00	.0E+00	5.4584E+04	1.0408E+05	7.2045E+03	7.6666E+03
4.669E+00	.0E+00	.0E+00	4.9593E+04	9.0705E+04	6.4823E+03	6.7330E+03
4.707E+00	.0E+00	2.7313E+04	4.8628E+04	8.8916E+04	6.3845E+03	6.6078E+03
5.000E+00	.0E+00	2.4456E+04	4.2077E+04	7.6015E+04	5.6874E+03	5.7269E+03
6.000E+00	.0E+00	1.8170E+04	2.5965E+04	4.5700E+04	3.9861E+03	3.6744E+03
8.000E+00	.0E+00	1.0681E+04	1.1619E+04	2.0010E+04	2.2326E+03	1.7626E+03
1.000E+01	.0E+00	6.9056E+03	6.1176E+03	1.0320E+04	1.4017E+03	9.7006E+02
1.500E+01	.0E+00	2.9532E+03	1.8209E+03	2.9615E+03	5.7961E+02	3.0977E+02
2.000E+01	.0E+00	1.5539E+03	7.4695E+02	1.1830E+03	3.0085E+02	1.3246E+02
3.000E+01	.0E+00	5.9677E+02	2.0492E+02	3.1166E+02	1.1457E+02	3.8135E+01
3.045E+01	.0E+00	5.7554E+02	1.9527E+02	2.9652E+02	1.1047E+02	3.6395E+01
3.069E+01	6.6465E+03	5.6447E+02	1.9029E+02	2.8872E+02	1.0834E+02	3.5495E+01
4.000E+01	3.3743E+03	2.9272E+02	8.0137E+01	1.1809E+02	5.6102E+01	1.5320E+01
5.000E+01	1.8542E+03	1.6556E+02	3.8332E+01	5.5008E+01	3.1736E+01	7.4561E+00
6.000E+01	1.1290E+03	1.0285E+02	2.0893E+01	2.9303E+01	1.9733E+01	4.1140E+00
8.000E+01	5.0670E+02	4.7718E+01	7.9839E+00	1.0771E+01	9.1751E+00	1.5978E+00
1.000E+02	2.6945E+02	2.5986E+01	3.7842E+00	4.9445E+00	5.0066E+00	7.6523E-01
1.500E+02	8.4373E+01	8.4535E+00	9.8520E-01	1.2113E+00	1.6350E+00	2.0214E-01
2.000E+02	3.6992E+01	3.7901E+00	3.8647E-01	4.5542E-01	7.3490E-01	7.9888E-02
3.000E+02	1.1819E+01	1.2405E+00	1.0829E-01	1.2126E-01	2.4122E-01	2.2550E-02
4.000E+02	5.4344E+00	5.7694E-01	4.5992E-02	5.0293E-02	1.1230E-01	9.6341E-03
5.000E+02	3.0603E+00	3.2680E-01	2.4473E-02	2.6538E-02	6.3658E-02	5.1392E-03
6.000E+02	1.9582E+00	2.0972E-01	1.4987E-02	1.6253E-02	4.0868E-02	3.1515E-03
8.000E+02	1.0139E+00	1.0879E-01	7.2558E-03	7.9626E-03	2.1204E-02	1.5291E-03
1.000E+03	6.3343E-01	6.7960E-02	4.3186E-03	4.8177E-03	1.3244E-02	9.1216E-04
1.500E+03	2.9305E-01	3.1365E-02	1.8575E-03	2.1352E-03	6.1113E-03	3.9191E-04

Z= 51

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	2.3789E+05	4.4298E+05	6.4602E+05	2.2566E+04	2.5713E+04	5.2768E+04
1.500E+00	1.3126E+05	1.5099E+05	2.1792E+05	1.1386E+04	1.2985E+04	2.5658E+04
2.000E+00	7.8194E+04	6.5382E+04	9.3695E+04	6.8514E+03	7.5956E+03	1.4649E+04
3.000E+00	3.4072E+04	1.8517E+04	2.6276E+04	3.2630E+03	3.3343E+03	6.2266E+03
4.000E+00	1.7768E+04	7.1611E+03	1.0086E+04	1.8914E+03	1.7697E+03	3.2322E+03
4.126E+00	1.6514E+04	6.4460E+03	9.0709E+03	1.7814E+03	1.6484E+03	3.0036E+03
4.159E+00	1.6205E+04	6.2738E+03	8.8267E+03	1.7541E+03	1.6186E+03	2.9474E+03
4.382E+00	1.4309E+04	5.2525E+03	7.3796E+03	1.5853E+03	1.4351E+03	2.6028E+03
4.417E+00	1.4037E+04	5.1111E+03	7.1794E+03	1.5609E+03	1.4087E+03	2.5534E+03
4.669E+00	1.2272E+04	4.2219E+03	5.9208E+03	1.4001E+03	1.2368E+03	2.2323E+03
4.707E+00	1.2036E+04	4.1072E+03	5.7586E+03	1.3783E+03	1.2138E+03	2.1894E+03
5.000E+00	1.0377E+04	3.3301E+03	4.6613E+03	1.2236E+03	1.0516E+03	1.8881E+03
6.000E+00	6.5563E+03	1.7509E+03	2.4375E+03	8.4982E+02	6.7478E+02	1.1946E+03
8.000E+00	3.0707E+03	6.1533E+02	8.4867E+02	4.7062E+02	3.2455E+02	5.6168E+02
1.000E+01	1.6587E+03	2.6651E+02	3.6465E+02	2.9363E+02	1.7933E+02	3.0476E+02
1.500E+01	5.1116E+02	5.5344E+01	7.4480E+01	1.2064E+02	5.7768E+01	9.4816E+01
2.000E+01	2.1279E+02	1.7535E+01	2.3279E+01	6.2459E+01	2.4848E+01	3.9712E+01
3.000E+01	5.8795E+01	3.3371E+00	4.3313E+00	2.3744E+01	7.2069E+00	1.1055E+01
3.045E+01	5.6023E+01	3.1375E+00	4.0685E+00	2.2895E+01	6.8797E+00	1.0537E+01
3.069E+01	5.4592E+01	3.0356E+00	3.9344E+00	2.2453E+01	6.7105E+00	1.0269E+01
4.000E+01	2.2874E+01	1.0079E+00	1.2841E+00	1.1625E+01	2.9083E+00	4.3206E+00
5.000E+01	1.0838E+01	3.9583E-01	4.9643E-01	6.5777E+00	1.4198E+00	2.0534E+00
6.000E+01	5.8421E+00	1.8429E-01	2.2802E-01	4.0916E+00	7.8589E-01	1.1067E+00

Z= 51

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
8.000E+01	2.1817E+00	5.5325E-02	6.6957E-02	1.9027E+00	3.0611E-01	4.1450E-01
1.000E+02	1.0116E+00	2.1902E-02	2.6058E-02	1.0386E+00	1.4689E-01	1.9255E-01
1.500E+02	2.5140E-01	4.1877E-03	4.8493E-03	3.3939E-01	3.8921E-02	4.7978E-02
2.000E+02	9.5229E-02	1.3405E-03	1.5347E-03	1.5262E-01	1.5410E-02	1.8199E-02
3.000E+02	2.5509E-02	2.8980E-04	3.3059E-04	5.0118E-02	4.3593E-03	4.8884E-03
4.000E+02	1.0614E-02	1.0420E-04	1.2108E-04	2.3350E-02	1.8600E-03	2.0358E-03
5.000E+02	5.6099E-03	4.9090E-05	5.8927E-05	1.3238E-02	9.9252E-04	1.0769E-03
6.000E+02	3.4401E-03	2.7369E-05	3.4408E-05	8.4990E-03	6.0906E-04	6.6023E-04
8.000E+02	1.6874E-03	1.1611E-05	1.5680E-05	4.4096E-03	2.9548E-04	3.2386E-04
1.000E+03	1.0194E-03	6.3698E-06	8.9269E-06	2.7542E-03	1.7616E-04	1.9589E-04
1.500E+03	4.5305E-04	2.5448E-06	3.7219E-06	1.2708E-03	7.5689E-05	8.6983E-05

Z= 51

ENERGY	4 D 3/2	4 D 5/2	5 S 1/2	5 P 1/2	5 P 3/2
1.000E+00	4.6403E+04	6.7339E+04	2.9581E+03	1.0771E+03	2.0885E+03
1.500E+00	1.7171E+04	2.4670E+04	1.4555E+03	5.3106E+02	1.0001E+03
2.000E+00	7.8948E+03	1.1263E+04	8.6527E+02	3.0739E+02	5.6774E+02
3.000E+00	2.4058E+03	3.3972E+03	4.0689E+02	1.3360E+02	2.4034E+02
4.000E+00	9.7090E+02	1.3603E+03	2.3436E+02	7.2371E+01	1.2477E+02
4.126E+00	8.7757E+02	1.2285E+03	2.2060E+02	6.7408E+01	1.1594E+02
4.159E+00	8.5501E+02	1.1967E+03	2.1719E+02	6.6185E+01	1.1377E+02
4.382E+00	7.2055E+02	1.0070E+03	1.9611E+02	5.8674E+01	1.0046E+02
4.417E+00	7.0183E+02	9.8058E+02	1.9306E+02	5.7596E+01	9.8555E+01
4.669E+00	5.8358E+02	8.1404E+02	1.7301E+02	5.0566E+01	8.6160E+01
4.707E+00	5.6825E+02	7.9247E+02	1.7031E+02	4.9625E+01	8.4504E+01
5.000E+00	4.6392E+02	6.4582E+02	1.5105E+02	4.2993E+01	7.2872E+01
6.000E+00	2.4853E+02	3.4404E+02	1.0466E+02	2.7591E+01	4.6113E+01
8.000E+00	8.9676E+01	1.2295E+02	5.8466E+01	1.3278E+01	2.1694E+01
1.000E+01	3.9561E+01	5.3800E+01	3.6442E+01	7.3408E+00	1.1777E+01
1.500E+01	8.4319E+00	1.1280E+01	1.4956E+01	2.3677E+00	3.6685E+00
2.000E+01	2.7047E+00	3.5526E+00	7.7395E+00	1.0192E+00	1.5376E+00
3.000E+01	5.2271E-01	6.7123E-01	2.9407E+00	2.9586E-01	4.2844E-01
3.045E+01	4.9169E-01	6.3081E-01	2.8355E+00	2.8244E-01	4.0836E-01
3.069E+01	4.7583E-01	6.1016E-01	2.7807E+00	2.7550E-01	3.9799E-01
4.000E+01	1.5922E-01	2.0068E-01	1.4393E+00	1.1945E-01	1.6754E-01
5.000E+01	6.2861E-02	7.7991E-02	8.1415E-01	5.8334E-02	7.9648E-02
6.000E+01	2.9376E-02	3.5949E-02	5.0629E-01	3.2261E-02	4.3040E-02
8.000E+01	8.8592E-03	1.0607E-02	2.3549E-01	1.2571E-02	1.6126E-02
1.000E+02	3.5183E-03	4.1382E-03	1.2855E-01	6.0332E-03	7.4939E-03
1.500E+02	6.7568E-04	7.7353E-04	4.2013E-02	1.5986E-03	1.8682E-03
2.000E+02	2.1684E-04	2.4531E-04	1.8894E-02	6.3293E-04	7.0885E-04
3.000E+02	4.6904E-05	5.3233E-05	6.2052E-03	1.7902E-04	1.9053E-04
4.000E+02	1.6848E-05	1.9557E-05	2.8912E-03	7.6381E-05	7.9414E-05
5.000E+02	7.9281E-06	9.5589E-06	1.6393E-03	4.0752E-05	4.2036E-05
6.000E+02	4.4429E-06	5.5412E-06	1.0527E-03	2.5008E-05	2.5805E-05
8.000E+02	1.8756E-06	2.5296E-06	5.4643E-04	1.2140E-05	1.2694E-05
1.000E+03	1.0180E-06	1.4623E-06	3.4152E-04	7.2440E-06	7.7105E-06
1.500E+03	3.7858E-07	6.1041E-07	1.5802E-04	3.1311E-06	3.4738E-06

Z= 52 17 STATES, 34 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	31.8077	.98151
2 S 1/2	2.00	4.9146	.82622
2 P 1/2	2.00	4.6184	.74525
2 P 3/2	4.00	4.3396	.73113
3 S 1/2	2.00	.9913	.55216
3 P 1/2	2.00	.8672	.45778
3 P 3/2	4.00	.8148	.44150
3 D 3/2	4.00	.5937	.22696
3 D 5/2	6.00	.5826	.22394
4 S 1/2	2.00	.1744	.27943
4 P 1/2	2.00	.1310	.20603
4 P 3/2	4.00	.1209	.19462
4 D 3/2	4.00	.0507	.06489
4 D 5/2	6.00	.0491	.06321
5 S 1/2	2.00	.0185	.07324
5 P 1/2	1.33	.0092	.03715
5 P 3/2	2.67	.0083	.03313

Z= 52 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	1.8616E+06	.0E+00	.0E+00	1.6157E+06	2.4592E+05
1.5000E+00	7.6290E+05	.0E+00	.0E+00	6.5663E+05	1.0627E+05
2.0000E+00	3.8671E+05	.0E+00	.0E+00	3.3055E+05	5.6158E+04
3.0000E+00	1.4260E+05	.0E+00	.0E+00	1.2075E+05	2.1851E+04
4.0000E+00	6.8699E+04	.0E+00	.0E+00	5.7815E+04	1.0884E+04
4.3352E+00	5.5854E+04	.0E+00	.0E+00	4.6929E+04	8.9252E+03
4.3699E+00	1.6429E+05	.0E+00	1.0958E+05	4.5967E+04	8.7505E+03
4.6137E+00	1.4702E+05	.0E+00	9.9467E+04	3.9904E+04	7.6455E+03
4.6507E+00	1.9549E+05	.0E+00	1.4892E+05	3.9082E+04	7.4949E+03
4.9097E+00	1.7239E+05	.0E+00	1.3193E+05	3.3914E+04	6.5446E+03
4.9490E+00	1.9489E+05	.0E+00	1.5526E+05	3.3213E+04	6.4150E+03
5.0000E+00	1.8998E+05	.0E+00	1.5140E+05	3.2333E+04	6.2521E+03
6.0000E+00	1.2032E+05	.0E+00	9.6385E+04	1.9995E+04	3.9411E+03
8.0000E+00	5.6551E+04	.0E+00	4.5395E+04	9.2777E+03	1.8780E+03
1.0000E+01	3.1229E+04	.0E+00	2.5106E+04	5.0752E+03	1.0471E+03
1.5000E+01	1.0372E+04	.0E+00	8.3475E+03	1.6691E+03	3.5496E+02
2.0000E+01	4.6784E+03	.0E+00	3.7660E+03	7.5002E+02	1.6241E+02
3.0000E+01	1.4989E+03	.0E+00	1.2062E+03	2.3968E+02	5.3026E+01
3.1776E+01	1.2737E+03	.0E+00	1.0249E+03	2.0363E+02	4.5173E+01
3.2030E+01	7.5898E+03	6.3445E+03	1.0020E+03	1.9907E+02	4.4179E+01
4.0000E+01	4.2544E+03	3.5923E+03	5.3263E+02	1.0575E+02	2.3701E+01
5.0000E+01	2.3341E+03	1.9845E+03	2.8117E+02	5.5807E+01	1.2617E+01
6.0000E+01	1.4171E+03	1.2102E+03	1.6636E+02	3.3016E+01	7.5097E+00
8.0000E+01	6.3475E+02	5.4473E+02	7.2366E+01	1.4362E+01	3.2965E+00
1.0000E+02	3.3731E+02	2.9023E+02	3.7836E+01	7.5110E+00	1.7330E+00
1.5000E+02	1.0567E+02	9.1185E+01	1.1634E+01	2.3112E+00	5.3762E-01
2.0000E+02	4.6373E+01	4.0062E+01	5.0680E+00	1.0074E+00	2.3538E-01
3.0000E+02	1.4842E+01	1.2834E+01	1.6118E+00	3.2063E-01	7.5258E-02
4.0000E+02	6.8310E+00	5.9102E+00	7.3918E-01	1.4702E-01	3.4603E-02
5.0000E+02	3.8490E+00	3.3318E+00	4.1518E-01	8.2581E-02	1.9463E-02
6.0000E+02	2.4634E+00	2.1333E+00	2.6492E-01	5.2688E-02	1.2428E-02
8.0000E+02	1.2753E+00	1.1054E+00	1.3641E-01	2.7121E-02	6.4044E-03
1.0000E+03	7.9643E-01	6.9078E-01	8.4813E-02	1.6851E-02	3.9824E-03
1.5000E+03	3.6793E-01	3.1951E-01	3.8877E-02	7.7194E-03	1.8260E-03

Z= 52

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.6242E+04	1.0960E+05
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.6512E+04	6.6210E+04
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.0072E+04	4.1413E+04
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.5253E+04	1.9045E+04
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	9.0806E+03	1.0276E+04
4.335E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.8196E+03	8.5672E+03
4.370E+00	.0E+00	.0E+00	.0E+00	1.0958E+05	7.7040E+03	8.4128E+03
4.614E+00	.0E+00	.0E+00	.0E+00	9.9467E+04	6.9569E+03	7.4266E+03
4.651E+00	.0E+00	.0E+00	5.1499E+04	9.7416E+04	6.8527E+03	7.2906E+03
4.910E+00	.0E+00	.0E+00	4.6790E+04	8.5145E+04	6.1808E+03	6.4229E+03
4.949E+00	.0E+00	2.5937E+04	4.5862E+04	8.3464E+04	6.0873E+03	6.3034E+03
5.000E+00	.0E+00	2.5333E+04	4.4730E+04	8.1335E+04	5.9692E+03	6.1528E+03
6.000E+00	.0E+00	1.8828E+04	2.8112E+04	4.9444E+04	4.1919E+03	3.9651E+03
8.000E+00	.0E+00	1.1112E+04	1.2624E+04	2.1660E+04	2.3553E+03	1.9150E+03
1.000E+01	.0E+00	7.2062E+03	6.6798E+03	1.1220E+04	1.4823E+03	1.0595E+03
1.500E+01	.0E+00	3.1038E+03	2.0025E+03	3.2413E+03	6.1591E+02	3.4133E+02
2.000E+01	.0E+00	1.6413E+03	8.2483E+02	1.2999E+03	3.2077E+02	1.4682E+02
3.000E+01	.0E+00	6.3415E+02	2.2780E+02	3.4427E+02	1.2275E+02	4.2598E+01
3.178E+01	.0E+00	5.5154E+02	1.8920E+02	2.8417E+02	1.0670E+02	3.5597E+01
3.203E+01	6.3445E+03	5.4094E+02	1.8438E+02	2.7669E+02	1.0464E+02	3.4719E+01
4.000E+01	3.5923E+03	3.1227E+02	8.9462E+01	1.3090E+02	6.0320E+01	1.7202E+01
5.000E+01	1.9845E+03	1.7711E+02	4.2927E+01	6.1137E+01	3.4213E+01	8.4041E+00
6.000E+01	1.2102E+03	1.1027E+02	2.3457E+01	3.2633E+01	2.1319E+01	4.6508E+00
8.000E+01	5.4473E+02	5.1335E+01	8.9978E+00	1.2033E+01	9.9446E+00	1.8143E+00
1.000E+02	2.9023E+02	2.8023E+01	4.2767E+00	5.5359E+00	5.4396E+00	8.7164E-01
1.500E+02	9.1185E+01	9.1540E+00	1.1187E+00	1.3612E+00	1.7837E+00	2.3147E-01
2.000E+02	4.0062E+01	4.1150E+00	4.4013E-01	5.1289E-01	8.0389E-01	9.1783E-02
3.000E+02	1.2834E+01	1.3512E+00	1.2378E-01	1.3690E-01	2.6474E-01	2.6010E-02
4.000E+02	5.9102E+00	6.2965E-01	5.2683E-02	5.6850E-02	1.2350E-01	1.1137E-02
5.000E+02	3.3318E+00	3.5709E-01	2.8074E-02	3.0017E-02	7.0092E-02	5.9486E-03
6.000E+02	2.1333E+00	2.2934E-01	1.7200E-02	1.8380E-02	4.5032E-02	3.6500E-03
8.000E+02	1.1054E+00	1.1906E-01	8.3434E-03	9.0085E-03	2.3385E-02	1.7754E-03
1.000E+03	6.9078E-01	7.4393E-02	4.9704E-03	5.4487E-03	1.4609E-02	1.0592E-03
1.500E+03	3.1951E-01	3.4324E-02	2.1398E-03	2.4131E-03	6.7391E-03	4.5606E-04

Z= 52

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	2.4520E+05	4.8139E+05	7.0327E+05	2.3931E+04	2.7402E+04	5.6638E+04
1.500E+00	1.3714E+05	1.6651E+05	2.4026E+05	1.2129E+04	1.3963E+04	2.7728E+04
2.000E+00	8.2318E+04	7.2659E+04	1.0409E+05	7.3125E+03	8.2129E+03	1.5899E+04
3.000E+00	3.6221E+04	2.0774E+04	2.9453E+04	3.4898E+03	3.6336E+03	6.8006E+03
4.000E+00	1.9000E+04	8.0847E+03	1.1374E+04	2.0266E+03	1.9408E+03	3.5491E+03
4.335E+00	1.5731E+04	6.1622E+03	8.6492E+03	1.7354E+03	1.6163E+03	2.9368E+03
4.370E+00	1.5436E+04	5.9974E+03	8.4159E+03	1.7088E+03	1.5870E+03	2.8817E+03
4.614E+00	1.3556E+04	4.9829E+03	6.9818E+03	1.5376E+03	1.3999E+03	2.5310E+03
4.651E+00	1.3298E+04	4.8486E+03	6.7921E+03	1.5139E+03	1.3742E+03	2.4828E+03
4.910E+00	1.1659E+04	4.0237E+03	5.6275E+03	1.3613E+03	1.2103E+03	2.1773E+03
4.949E+00	1.1435E+04	3.9143E+03	5.4732E+03	1.3402E+03	1.1877E+03	2.1354E+03
5.000E+00	1.1152E+04	3.7780E+03	5.2809E+03	1.3134E+03	1.1593E+03	2.0826E+03
6.000E+00	7.0728E+03	1.9937E+03	2.7714E+03	9.1366E+02	7.4704E+02	1.3225E+03
8.000E+00	3.3316E+03	7.0505E+02	9.7080E+02	5.0721E+02	3.6159E+02	6.2524E+02
1.000E+01	1.8075E+03	3.0686E+02	4.1909E+02	3.1706E+02	2.0076E+02	3.4068E+02
1.500E+01	5.6137E+02	6.4242E+01	8.6264E+01	1.3080E+02	6.5251E+01	1.0682E+02
2.000E+01	2.3487E+02	2.0462E+01	2.7097E+01	6.7936E+01	2.8236E+01	4.4975E+01
3.000E+01	6.5332E+01	3.9223E+00	5.0766E+00	2.5947E+01	8.2555E+00	1.2607E+01
3.178E+01	5.4248E+01	3.0936E+00	3.9896E+00	2.2551E+01	6.9053E+00	1.0479E+01
3.203E+01	5.2863E+01	2.9933E+00	3.8583E+00	2.2115E+01	6.7359E+00	1.0213E+01
4.000E+01	2.5530E+01	1.1901E+00	1.5116E+00	1.2746E+01	3.3494E+00	4.9500E+00
5.000E+01	1.2135E+01	4.6887E-01	5.8608E-01	7.2307E+00	1.6415E+00	2.3604E+00
6.000E+01	6.5576E+00	2.1881E-01	2.6978E-01	4.5071E+00	9.1055E-01	1.2755E+00

Z= 52

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
8.000E+01	2.4578E+00	6.5917E-02	7.9465E-02	2.1043E+00	3.5659E-01	4.7950E-01
1.000E+02	1.1426E+00	2.6161E-02	3.0996E-02	1.1506E+00	1.7166E-01	2.2336E-01
1.500E+02	2.8514E-01	5.0240E-03	5.7901E-03	3.7756E-01	4.5727E-02	5.5893E-02
2.000E+02	1.0828E-01	1.6125E-03	1.8364E-03	1.7024E-01	1.8165E-02	2.1254E-02
3.000E+02	2.9135E-02	3.4995E-04	3.9565E-04	5.6092E-02	5.1590E-03	5.7260E-03
4.000E+02	1.2117E-02	1.2585E-04	1.4528E-04	2.6184E-02	2.2069E-03	2.3884E-03
5.000E+02	6.4108E-03	5.9212E-05	7.1065E-05	1.4863E-02	1.1796E-03	1.2637E-03
6.000E+02	3.9315E-03	3.2946E-05	4.1424E-05	9.5498E-03	7.2405E-04	7.7477E-04
8.000E+02	1.9277E-03	1.4183E-05	1.8663E-05	4.9591E-03	3.5209E-04	3.8024E-04
1.000E+03	1.1650E-03	7.6747E-06	1.0825E-05	3.0981E-03	2.1000E-04	2.3000E-04
1.500E+03	5.1668E-04	3.0645E-06	4.4312E-06	1.4290E-03	9.0349E-05	1.0205E-04

Z= 52

ENERGY	4 D 3/2	4 D 5/2	5 S 1/2	5 P 1/2	5 P 3/2
1.000E+00	5.2733E+04	7.6604E+04	3.4051E+03	1.7608E+03	3.4456E+03
1.500E+00	1.9791E+04	2.8451E+04	1.6787E+03	8.7342E+02	1.6572E+03
2.000E+00	9.1807E+03	1.3101E+04	9.9927E+02	5.0791E+02	9.4415E+02
3.000E+00	2.8325E+03	3.9995E+03	4.7060E+02	2.2231E+02	4.0188E+02
4.000E+00	1.1532E+03	1.6154E+03	2.7146E+02	1.1820E+02	2.0969E+02
4.335E+00	8.8864E+02	1.2419E+03	2.3210E+02	1.0060E+02	1.7349E+02
4.370E+00	8.6580E+02	1.2097E+03	2.2851E+02	9.8775E+01	1.7023E+02
4.614E+00	7.2444E+02	1.0105E+03	2.0542E+02	8.7119E+01	1.4950E+02
4.651E+00	7.0561E+02	9.8403E+02	2.0222E+02	8.5516E+01	1.4666E+02
4.910E+00	5.8942E+02	8.2064E+02	1.8169E+02	7.5314E+01	1.2861E+02
4.949E+00	5.7393E+02	7.9889E+02	1.7884E+02	7.3910E+01	1.2613E+02
5.000E+00	5.5461E+02	7.7175E+02	1.7525E+02	7.2143E+01	1.2302E+02
6.000E+00	2.9859E+02	4.1310E+02	1.2160E+02	4.6488E+01	7.8123E+01
8.000E+00	1.0851E+02	1.4866E+02	6.7305E+01	2.2513E+01	3.6956E+01
1.000E+01	4.8134E+01	6.5399E+01	4.2445E+01	1.2507E+01	2.0148E+01
1.500E+01	1.0363E+01	1.3843E+01	1.7489E+01	4.0703E+00	6.3251E+00
2.000E+01	3.3468E+00	4.4113E+00	9.0784E+00	1.7629E+00	2.6654E+00
3.000E+01	6.5156E-01	8.3499E-01	3.4654E+00	5.1590E-01	7.4791E-01
3.178E+01	5.1492E-01	6.5751E-01	3.0117E+00	4.3158E-01	6.2173E-01
3.203E+01	4.9836E-01	6.3604E-01	2.9535E+00	4.2100E-01	6.0595E-01
4.000E+01	1.9947E-01	2.5090E-01	1.7018E+00	2.0943E-01	2.9383E-01
5.000E+01	7.9038E-02	9.7813E-02	9.6518E-01	1.0267E-01	1.4016E-01
6.000E+01	3.7028E-02	4.5208E-02	6.0148E-01	5.6962E-02	7.5937E-02
8.000E+01	1.1210E-02	1.3378E-02	2.8067E-01	2.2298E-02	2.8560E-02
1.000E+02	4.4641E-03	5.2344E-03	1.5358E-01	1.0736E-02	1.3308E-02
1.500E+02	8.6101E-04	9.8232E-04	5.0402E-02	2.8605E-03	3.3319E-03
2.000E+02	2.7710E-04	3.1213E-04	2.2727E-02	1.1364E-03	1.2675E-03
3.000E+02	6.0108E-05	6.7944E-05	7.4893E-03	3.2271E-04	3.4164E-04
4.000E+02	2.1640E-05	2.5005E-05	3.4964E-03	1.3802E-04	1.4257E-04
5.000E+02	1.0199E-05	1.2193E-05	1.9849E-03	7.3753E-05	7.5509E-05
6.000E+02	5.6891E-06	7.0821E-06	1.2754E-03	4.5276E-05	4.6341E-05
8.000E+02	2.4154E-06	3.2289E-06	6.6255E-04	2.2025E-05	2.2790E-05
1.000E+03	1.3167E-06	1.8625E-06	4.1413E-04	1.3146E-05	1.3828E-05
1.500E+03	4.8722E-07	7.8227E-07	1.9144E-04	5.6776E-06	6.2034E-06

Z= 53 17 STATES, 36 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	33.1668	.98175
2 S 1/2	2.00	5.1624	.82866
2 P 1/2	2.00	4.8576	.74884
2 P 3/2	4.00	4.5543	.73428
3 S 1/2	2.00	1.0556	.55807
3 P 1/2	2.00	.9274	.46449
3 P 3/2	4.00	.8698	.44763
3 D 3/2	4.00	.6414	.23329
3 D 5/2	6.00	.6292	.23014
4 S 1/2	2.00	.1911	.28783
4 P 1/2	2.00	.1456	.21433
4 P 3/2	4.00	.1342	.20238
4 D 3/2	4.00	.0600	.07043
4 D 5/2	6.00	.0582	.06862
5 S 1/2	2.00	.0210	.08038
5 P 1/2	1.67	.0108	.04286
5 P 3/2	3.33	.0096	.03829

Z= 53 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	1.9150E+06	.0E+00	.0E+00	1.6428E+06	2.7223E+05
1.0546E+00	1.7149E+06	.0E+00	.0E+00	1.4696E+06	2.4533E+05
1.0630E+00	1.7576E+06	.0E+00	.0E+00	1.5161E+06	2.4149E+05
1.5000E+00	8.2429E+05	.0E+00	.0E+00	7.0581E+05	1.1847E+05
2.0000E+00	4.1920E+05	.0E+00	.0E+00	3.5640E+05	6.2806E+04
3.0000E+00	1.5501E+05	.0E+00	.0E+00	1.3050E+05	2.4510E+04
4.0000E+00	7.4826E+04	.0E+00	.0E+00	6.2597E+04	1.2230E+04
4.5498E+00	5.3724E+04	.0E+00	.0E+00	4.4825E+04	8.8986E+03
4.5862E+00	1.5639E+05	.0E+00	1.0376E+05	4.3905E+04	8.7240E+03
4.8528E+00	1.3873E+05	.0E+00	9.3261E+04	3.7887E+04	7.5798E+03
4.8916E+00	1.8456E+05	.0E+00	1.4003E+05	3.7105E+04	7.4302E+03
5.0000E+00	1.7660E+05	.0E+00	1.3453E+05	3.5037E+04	7.0334E+03
5.1573E+00	1.6295E+05	.0E+00	1.2414E+05	3.2305E+04	6.5074E+03
5.1985E+00	1.8430E+05	.0E+00	1.4629E+05	3.1636E+04	6.3782E+03
6.0000E+00	1.2916E+05	.0E+00	1.0304E+05	2.1683E+04	4.4371E+03
8.0000E+00	6.0831E+04	.0E+00	4.8643E+04	1.0072E+04	2.1161E+03
1.0000E+01	3.3658E+04	.0E+00	2.6963E+04	5.5148E+03	1.1803E+03
1.5000E+01	1.1212E+04	.0E+00	8.9945E+03	1.8169E+03	4.0038E+02
2.0000E+01	5.0643E+03	.0E+00	4.0637E+03	8.1735E+02	1.8326E+02
3.0000E+01	1.6261E+03	.0E+00	1.3046E+03	2.6161E+02	5.9847E+01
3.3134E+01	1.2278E+03	.0E+00	9.8497E+02	1.9745E+02	4.5367E+01
3.3399E+01	7.2614E+03	6.0611E+03	9.6297E+02	1.9303E+02	4.4367E+01
4.0000E+01	4.5327E+03	3.8135E+03	5.7688E+02	1.1557E+02	2.6757E+01
5.0000E+01	2.5002E+03	2.1201E+03	3.0486E+02	6.1044E+01	1.4248E+01
6.0000E+01	1.5194E+03	1.2942E+03	1.8055E+02	3.6142E+01	8.4860E+00
8.0000E+01	6.8276E+02	5.8464E+02	7.8647E+01	1.5743E+01	3.7254E+00
1.0000E+02	3.6348E+02	3.1211E+02	4.1170E+01	8.2420E+00	1.9600E+00
1.5000E+02	1.1421E+02	9.8370E+01	1.2687E+01	2.5414E+00	6.0892E-01
2.0000E+02	5.0221E+01	4.3309E+01	5.5355E+00	1.1094E+00	2.6690E-01
3.0000E+02	1.6114E+01	1.3911E+01	1.7643E+00	3.5384E-01	8.5484E-02
4.0000E+02	7.4284E+00	6.4163E+00	8.1019E-01	1.6247E-01	3.9348E-02
5.0000E+02	4.1899E+00	3.6209E+00	4.5546E-01	9.1336E-02	2.2147E-02
6.0000E+02	2.6833E+00	2.3201E+00	2.9077E-01	5.8304E-02	1.4149E-02
8.0000E+02	1.3902E+00	1.2031E+00	1.4980E-01	3.0024E-02	7.2933E-03
1.0000E+03	8.6834E-01	7.5201E-01	9.3141E-02	1.8656E-02	4.5350E-03
1.5000E+03	4.0104E-01	3.4775E-01	4.2674E-02	8.5410E-03	2.0779E-03

Z= 53

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.1034E+05
1.055E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.0521E+05
1.063E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.1292E+04	1.0434E+05
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.7518E+04	6.8075E+04
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.1150E+04	4.3180E+04
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.5881E+04	2.0129E+04
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	9.4959E+03	1.0948E+04
4.550E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.4758E+03	8.1983E+03
4.586E+00	.0E+00	.0E+00	.0E+00	1.0376E+05	7.3651E+03	8.0503E+03
4.853E+00	.0E+00	.0E+00	.0E+00	9.3261E+04	6.6229E+03	7.0693E+03
4.892E+00	.0E+00	.0E+00	4.8726E+04	9.1303E+04	6.5236E+03	6.9398E+03
5.000E+00	.0E+00	.0E+00	4.8193E+04	8.6337E+04	6.2576E+03	6.5948E+03
5.157E+00	.0E+00	.0E+00	4.4210E+04	7.9932E+04	5.8981E+03	6.1328E+03
5.199E+00	.0E+00	2.4620E+04	4.3317E+04	7.8350E+04	5.8086E+03	6.0185E+03
6.000E+00	.0E+00	1.9354E+04	3.0313E+04	5.3377E+04	4.4028E+03	4.2688E+03
8.000E+00	.0E+00	1.1514E+04	1.3714E+04	2.3415E+04	2.4806E+03	2.0753E+03
1.000E+01	.0E+00	7.4998E+03	7.2812E+03	1.2182E+04	1.5649E+03	1.1538E+03
1.500E+01	.0E+00	3.2583E+03	2.1960E+03	3.5403E+03	6.5326E+02	3.7506E+02
2.000E+01	.0E+00	1.7301E+03	9.0895E+02	1.4247E+03	3.4138E+02	1.6227E+02
3.000E+01	.0E+00	6.7269E+02	2.5258E+02	3.7937E+02	1.3127E+02	4.7447E+01
3.313E+01	.0E+00	5.2893E+02	1.8351E+02	2.7254E+02	1.0310E+02	3.4837E+01
3.340E+01	6.0611E+03	5.1876E+02	1.7884E+02	2.6538E+02	1.0111E+02	3.3980E+01
4.000E+01	3.8135E+03	3.3252E+02	9.9618E+01	1.4474E+02	6.4726E+01	1.9260E+01
5.000E+01	2.1201E+03	1.8913E+02	4.7955E+01	6.7775E+01	3.6810E+01	9.4449E+00
6.000E+01	1.2942E+03	1.1803E+02	2.6270E+01	3.6249E+01	2.2985E+01	5.2422E+00
8.000E+01	5.8464E+02	5.5126E+01	1.0115E+01	1.3407E+01	1.0756E+01	2.0539E+00
1.000E+02	3.1211E+02	3.0167E+01	4.8212E+00	6.1819E+00	5.8976E+00	9.8991E-01
1.500E+02	9.8370E+01	9.8943E+00	1.2670E+00	1.5255E+00	1.9418E+00	2.6426E-01
2.000E+02	4.3309E+01	4.4595E+00	4.9595E-01	5.7608E-01	8.7746E-01	1.0513E-01
3.000E+02	1.3911E+01	1.4691E+00	1.4111E-01	1.5415E-01	2.8993E-01	2.9912E-02
4.000E+02	6.4163E+00	6.8591E-01	6.0192E-02	6.4089E-02	1.3552E-01	1.2833E-02
5.000E+02	3.6209E+00	3.8948E-01	3.2122E-02	3.3859E-02	7.7010E-02	6.8653E-03
6.000E+02	2.3201E+00	2.5033E-01	1.9701E-02	2.0738E-02	4.9517E-02	4.2179E-03
8.000E+02	1.2031E+00	1.3007E-01	9.5693E-03	1.0164E-02	2.5734E-02	2.0549E-03
1.000E+03	7.5201E-01	8.1289E-02	5.7057E-03	6.1457E-03	1.6080E-02	1.2262E-03
1.500E+03	3.4775E-01	3.7495E-02	2.4590E-03	2.7192E-03	7.4156E-03	5.2888E-04

Z= 53

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	2.5288E+05	5.1984E+05	7.5973E+05	2.5308E+04	2.9090E+04	6.0587E+04
1.055E+00	2.3616E+05	4.5870E+05	6.6948E+05	2.3231E+04	2.6809E+04	5.5503E+04
1.063E+00	2.3367E+05	4.5009E+05	6.5668E+05	2.2932E+04	2.6478E+04	5.4769E+04
1.500E+00	1.4275E+05	1.8324E+05	2.6423E+05	1.2884E+04	1.4958E+04	2.9863E+04
2.000E+00	8.6483E+04	8.0430E+04	1.1515E+05	7.7856E+03	8.8481E+03	1.7197E+04
3.000E+00	3.8398E+04	2.3211E+04	3.2879E+04	3.7237E+03	3.9450E+03	7.4010E+03
4.000E+00	2.0278E+04	9.0951E+03	1.2780E+04	2.1663E+03	2.1201E+03	3.8824E+03
4.550E+00	1.5001E+04	5.8961E+03	8.2542E+03	1.6906E+03	1.5842E+03	2.8701E+03
4.586E+00	1.4719E+04	5.7384E+03	8.0314E+03	1.6646E+03	1.5555E+03	2.8162E+03
4.853E+00	1.2854E+04	4.7309E+03	6.6101E+03	1.4911E+03	1.3649E+03	2.4596E+03
4.892E+00	1.2609E+04	4.6032E+03	6.4302E+03	1.4681E+03	1.3398E+03	2.4127E+03
5.000E+00	1.1956E+04	4.2692E+03	5.9598E+03	1.4064E+03	1.2729E+03	2.2881E+03
5.157E+00	1.1087E+04	3.8368E+03	5.3512E+03	1.3234E+03	1.1836E+03	2.1220E+03
5.199E+00	1.0872E+04	3.7324E+03	5.2043E+03	1.3028E+03	1.1615E+03	2.0811E+03
6.000E+00	7.6105E+03	2.2615E+03	3.1391E+03	9.7987E+02	8.2365E+02	1.4582E+03
8.000E+00	3.6053E+03	8.0458E+02	1.1059E+03	5.4528E+02	4.0120E+02	6.9318E+02
1.000E+01	1.9646E+03	3.5185E+02	4.7963E+02	3.4150E+02	2.2381E+02	3.7924E+02
1.500E+01	6.1480E+02	7.4259E+01	9.9493E+01	1.4144E+02	7.3379E+01	1.1982E+02
2.000E+01	2.5852E+02	2.3775E+01	3.1406E+01	7.3692E+01	3.1946E+01	5.0712E+01
3.000E+01	7.2386E+01	4.5899E+00	5.9239E+00	2.8273E+01	9.4140E+00	1.4313E+01
3.313E+01	5.2550E+01	3.0499E+00	3.9113E+00	2.2201E+01	6.9242E+00	1.0409E+01

Z= 53

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
3.340E+01	5.1210E+01	2.9512E+00	3.7828E+00	2.1772E+01	6.7547E+00	1.0145E+01
4.000E+01	2.8411E+01	1.3991E+00	1.7715E+00	1.3935E+01	3.8401E+00	5.6453E+00
5.000E+01	1.3547E+01	5.5296E-01	6.8889E-01	7.9251E+00	1.8894E+00	2.7008E+00
6.000E+01	7.3388E+00	2.5867E-01	3.1779E-01	4.9500E+00	1.0512E+00	1.4666E+00
8.000E+01	2.7605E+00	7.8191E-02	9.3894E-02	2.3181E+00	4.1348E-01	5.5215E-01
1.000E+02	1.2867E+00	3.1110E-02	3.6707E-02	1.2709E+00	1.9972E-01	2.5788E-01
1.500E+02	3.2242E-01	5.9996E-03	6.8823E-03	4.1875E-01	5.3485E-02	6.4816E-02
2.000E+02	1.2274E-01	1.9306E-03	2.1876E-03	1.8931E-01	2.1317E-02	2.4712E-02
3.000E+02	3.3115E-02	4.2012E-04	4.7208E-04	6.2585E-02	6.0795E-03	6.6762E-03
4.000E+02	1.3793E-02	1.5108E-04	1.7407E-04	2.9273E-02	2.6068E-03	2.7877E-03
5.000E+02	7.3037E-03	7.1169E-05	8.5393E-05	1.6637E-02	1.3952E-03	1.4763E-03
6.000E+02	4.4799E-03	3.9732E-05	4.9537E-05	1.0698E-02	8.5737E-04	9.0570E-04
8.000E+02	2.1956E-03	1.7113E-05	2.2237E-05	5.5600E-03	4.1751E-04	4.4426E-04
1.000E+03	1.3278E-03	9.2637E-06	1.3106E-05	3.4743E-03	2.4930E-04	2.6879E-04
1.500E+03	5.8768E-04	3.5317E-06	5.3191E-06	1.6020E-03	1.0740E-04	1.1911E-04

Z= 53

ENERGY	4 D 3/2	4 D 5/2	5 S 1/2	5 P 1/2	5 P 3/2
1.000E+00	5.9344E+04	8.6287E+04	3.8639E+03	2.6097E+03	5.1436E+03
1.055E+00	5.2684E+04	7.6490E+04	3.5281E+03	2.3923E+03	4.6937E+03
1.063E+00	5.1740E+04	7.5104E+04	3.4802E+03	2.3610E+03	4.6292E+03
1.500E+00	2.2588E+04	3.2486E+04	1.9076E+03	1.3029E+03	2.4841E+03
2.000E+00	1.0570E+04	1.5087E+04	1.1369E+03	7.6157E+02	1.4201E+03
3.000E+00	3.3004E+03	4.6594E+03	5.3625E+02	3.3594E+02	6.0787E+02
4.000E+00	1.3553E+03	1.8977E+03	3.0974E+02	1.7972E+02	3.1844E+02
4.550E+00	8.9487E+02	1.2482E+03	2.4110E+02	1.3411E+02	2.3547E+02
4.586E+00	8.7188E+02	1.2158E+03	2.3737E+02	1.3167E+02	2.3104E+02
4.853E+00	7.2422E+02	1.0081E+03	2.1242E+02	1.1765E+02	2.0177E+02
4.892E+00	7.0540E+02	9.8167E+02	2.0911E+02	1.1548E+02	1.9792E+02
5.000E+00	6.5603E+02	9.1234E+02	2.0025E+02	1.0971E+02	1.8770E+02
5.157E+00	5.9182E+02	8.2223E+02	1.8834E+02	1.0201E+02	1.7407E+02
5.199E+00	5.7627E+02	8.0043E+02	1.8538E+02	1.0011E+02	1.7072E+02
6.000E+00	3.5493E+02	4.9070E+02	1.3914E+02	7.0989E+01	1.1963E+02
8.000E+00	1.2991E+02	1.7780E+02	7.7184E+01	3.4594E+01	5.6897E+01
1.000E+01	5.7937E+01	7.8627E+01	4.8711E+01	1.9309E+01	3.1147E+01
1.500E+01	1.2597E+01	1.6802E+01	2.0146E+01	6.3394E+00	9.8534E+00
2.000E+01	4.0943E+00	5.3854E+00	1.0490E+01	2.7624E+00	4.1742E+00
3.000E+01	8.0320E-01	1.0273E+00	4.0223E+00	8.1490E-01	1.1794E+00
3.313E+01	5.3557E-01	6.8073E-01	3.1582E+00	5.9952E-01	8.5797E-01
3.340E+01	5.1839E-01	6.5854E-01	3.0971E+00	5.8486E-01	8.3622E-01
4.000E+01	2.4718E-01	3.1012E-01	1.9819E+00	3.3261E-01	4.6550E-01
5.000E+01	9.8279E-02	1.2134E-01	1.1269E+00	1.6371E-01	2.2281E-01
6.000E+01	4.6159E-02	5.6202E-02	7.0373E-01	9.1107E-02	1.2102E-01
8.000E+01	1.4030E-02	1.6689E-02	3.2944E-01	3.5826E-02	4.5689E-02
1.000E+02	5.6005E-03	6.5483E-03	1.8070E-01	1.7307E-02	2.1346E-02
1.500E+02	1.0853E-03	1.2326E-03	5.9545E-02	4.6365E-03	5.3675E-03
2.000E+02	3.5032E-04	3.9251E-04	2.6922E-02	1.8481E-03	2.0470E-03
3.000E+02	7.6204E-05	8.5618E-05	8.9012E-03	5.2700E-04	5.5332E-04
4.000E+02	2.7455E-05	3.1632E-05	4.1637E-03	2.2590E-04	2.3121E-04
5.000E+02	1.2987E-05	1.5408E-05	2.3666E-03	1.2092E-04	1.2252E-04
6.000E+02	7.2367E-06	8.9350E-06	1.5219E-03	7.4305E-05	7.5202E-05
8.000E+02	3.0863E-06	4.0699E-06	7.9118E-04	3.6184E-05	3.6972E-05
1.000E+03	1.6775E-06	2.3650E-06	4.9460E-04	2.1617E-05	2.2413E-05
1.500E+03	6.2495E-07	9.8057E-07	2.2847E-04	9.3378E-06	1.0022E-05

Z= 54 17 STATES, 36 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	34.5584	.98198
2 S 1/2	2.00	5.4175	.83101
2 P 1/2	2.00	5.1041	.75231
2 P 3/2	4.00	4.7745	.73731
3 S 1/2	2.00	1.1222	.56384
3 P 1/2	2.00	.9896	.47104
3 P 3/2	4.00	.9265	.45360
3 D 3/2	4.00	.6909	.23951
3 D 5/2	6.00	.6774	.23622
4 S 1/2	2.00	.2085	.29609
4 P 1/2	2.00	.1608	.22251
4 P 3/2	4.00	.1480	.21001
4 D 3/2	4.00	.0698	.07593
4 D 5/2	6.00	.0677	.07399
5 S 1/2	2.00	.0236	.08729
5 P 1/2	2.00	.0124	.04838
5 P 3/2	4.00	.0110	.04323

Z= 54 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	2.0504E+06	.0E+00	.0E+00	1.7506E+06	2.9981E+05
1.1211E+00	1.6155E+06	.0E+00	.0E+00	1.3757E+06	2.3979E+05
1.1301E+00	1.6555E+06	.0E+00	.0E+00	1.4195E+06	2.3601E+05
1.5000E+00	8.8877E+05	.0E+00	.0E+00	7.5732E+05	1.3145E+05
2.0000E+00	4.5349E+05	.0E+00	.0E+00	3.8355E+05	6.9941E+04
3.0000E+00	1.6819E+05	.0E+00	.0E+00	1.4080E+05	2.7390E+04
4.0000E+00	8.1327E+04	.0E+00	.0E+00	6.7633E+04	1.3694E+04
4.7698E+00	5.1725E+04	.0E+00	.0E+00	4.2856E+04	8.8683E+03
4.8080E+00	1.4916E+05	.0E+00	9.8487E+04	4.1975E+04	8.6939E+03
5.0000E+00	1.3826E+05	.0E+00	9.2479E+04	3.7897E+04	7.8841E+03
5.0990E+00	1.3103E+05	.0E+00	8.7515E+04	3.6004E+04	7.5067E+03
5.1398E+00	1.7448E+05	.0E+00	1.3187E+05	3.5260E+04	7.3582E+03
5.4120E+00	1.5431E+05	.0E+00	1.1705E+05	3.0794E+04	6.4630E+03
5.4554E+00	1.7457E+05	.0E+00	1.3808E+05	3.0155E+04	6.3344E+03
6.0000E+00	1.3805E+05	.0E+00	1.0960E+05	2.3469E+04	4.9803E+03
8.0000E+00	6.5342E+04	.0E+00	5.2051E+04	1.0913E+04	2.3777E+03
1.0000E+01	3.6226E+04	.0E+00	2.8918E+04	5.9812E+03	1.3264E+03
1.5000E+01	1.2101E+04	.0E+00	9.6761E+03	1.9741E+03	4.5047E+02
2.0000E+01	5.4739E+03	.0E+00	4.3786E+03	8.8907E+02	2.0627E+02
3.0000E+01	1.7611E+03	.0E+00	1.4087E+03	2.8502E+02	6.7391E+01
3.4524E+01	1.1844E+03	.0E+00	9.4732E+02	1.9155E+02	4.5539E+01
3.4800E+01	6.9471E+03	5.7891E+03	9.2616E+02	1.8726E+02	4.4535E+01
4.0000E+01	4.8200E+03	4.0400E+03	6.2380E+02	1.2606E+02	3.0134E+01
5.0000E+01	2.6747E+03	2.2619E+03	3.3004E+02	6.6648E+01	1.6050E+01
6.0000E+01	1.6254E+03	1.3807E+03	1.9562E+02	3.9491E+01	9.5610E+00
8.0000E+01	7.3308E+02	6.2631E+02	8.5341E+01	1.7224E+01	4.1996E+00
1.0000E+02	3.9104E+02	3.3508E+02	4.4724E+01	9.0272E+00	2.2107E+00
1.5000E+02	1.2324E+02	1.0595E+02	1.3813E+01	2.7893E+00	6.8766E-01
2.0000E+02	5.4299E+01	4.6742E+01	6.0362E+00	1.2195E+00	3.0174E-01
3.0000E+02	1.7466E+01	1.5052E+01	1.9279E+00	3.8973E-01	9.6791E-02
4.0000E+02	8.0643E+00	6.9539E+00	8.8655E-01	1.7927E-01	4.4603E-02
5.0000E+02	4.5532E+00	3.9285E+00	4.9881E-01	1.0082E-01	2.5123E-02
6.0000E+02	2.9180E+00	2.5189E+00	3.1862E-01	6.4393E-02	1.6056E-02
8.0000E+02	1.5128E+00	1.3072E+00	1.6423E-01	3.3173E-02	8.2792E-03
1.0000E+03	9.4510E-01	8.1724E-01	1.0210E-01	2.0613E-02	5.1472E-03
1.5000E+03	4.3641E-01	3.7785E-01	4.6764E-02	9.4320E-03	2.3571E-03

Z= 54

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.1958E+05
1.121E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.0008E+05
1.130E+00	.0E+00	.0E+00	.0E+00	.0E+00	6.7155E+04	9.9237E+04
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.8711E+04	6.9936E+04
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.2193E+04	4.4896E+04
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.6504E+04	2.1237E+04
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	9.9091E+03	1.1633E+04
4.770E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.1541E+03	7.8540E+03
4.808E+00	.0E+00	.0E+00	.0E+00	9.8487E+04	7.0479E+03	7.7120E+03
5.000E+00	.0E+00	.0E+00	.0E+00	9.2479E+04	6.5478E+03	7.0483E+03
5.099E+00	.0E+00	.0E+00	.0E+00	8.7515E+04	6.3097E+03	6.7361E+03
5.140E+00	.0E+00	.0E+00	4.6192E+04	8.5675E+04	6.2151E+03	6.6126E+03
5.412E+00	.0E+00	.0E+00	4.1828E+04	7.5223E+04	5.6319E+03	5.8604E+03
5.455E+00	.0E+00	2.3377E+04	4.0969E+04	7.3734E+04	5.5463E+03	5.7512E+03
6.000E+00	.0E+00	1.9727E+04	3.2479E+04	5.7395E+04	4.6159E+03	4.5883E+03
8.000E+00	.0E+00	1.1886E+04	1.4854E+04	2.5312E+04	2.6084E+03	2.2429E+03
1.000E+01	.0E+00	7.7988E+03	7.9092E+03	1.3210E+04	1.6495E+03	1.2534E+03
1.500E+01	.0E+00	3.4166E+03	2.4015E+03	3.8580E+03	6.9175E+02	4.1100E+02
2.000E+01	.0E+00	1.8211E+03	9.9947E+02	1.5580E+03	3.6267E+02	1.7886E+02
3.000E+01	.0E+00	7.1222E+02	2.7943E+02	4.1702E+02	1.4011E+02	5.2701E+01
3.452E+01	.0E+00	5.0761E+02	1.7815E+02	2.6156E+02	9.9669E+01	3.4112E+01
3.480E+01	5.7891E+03	4.9784E+02	1.7363E+02	2.5470E+02	9.7743E+01	3.3275E+01
4.000E+01	4.0400E+03	3.5347E+02	1.1068E+02	1.5966E+02	6.9322E+01	2.1503E+01
5.000E+01	2.2619E+03	2.0164E+02	5.3444E+01	7.4950E+01	3.9526E+01	1.0585E+01
6.000E+01	1.3807E+03	1.2610E+02	2.9349E+01	4.0169E+01	2.4732E+01	5.8920E+00
8.000E+01	6.2631E+02	5.9096E+01	1.1344E+01	1.4901E+01	1.1611E+01	2.3186E+00
1.000E+02	3.3508E+02	3.2417E+01	5.4217E+00	6.8858E+00	6.3814E+00	1.1210E+00
1.500E+02	1.0595E+02	1.0676E+01	1.4314E+00	1.7053E+00	2.1097E+00	3.0083E-01
2.000E+02	4.6742E+01	4.8243E+00	5.6652E-01	6.4539E-01	9.5583E-01	1.2007E-01
3.000E+02	1.5052E+01	1.5944E+00	1.6043E-01	1.7307E-01	3.1686E-01	3.4289E-02
4.000E+02	6.9539E+00	7.4588E-01	6.8601E-02	7.2063E-02	1.4848E-01	1.4747E-02
5.000E+02	3.9285E+00	4.2405E-01	3.6662E-02	3.8094E-02	8.4438E-02	7.9015E-03
6.000E+02	2.5189E+00	2.7277E-01	2.2509E-02	2.3338E-02	5.4337E-02	4.8607E-03
8.000E+02	1.3072E+00	1.4184E-01	1.0948E-02	1.1438E-02	2.8261E-02	2.3708E-03
1.000E+03	8.1724E-01	8.8665E-02	6.5289E-03	6.9110E-03	1.7663E-02	1.4148E-03
1.500E+03	3.7785E-01	4.0889E-02	2.8191E-03	3.0561E-03	8.1434E-03	6.1137E-04

Z= 54

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	2.5785E+05	5.5773E+05	8.1545E+05	2.6708E+04	3.0779E+04	6.4615E+04
1.121E+00	2.2449E+05	4.2776E+05	6.2341E+05	2.2215E+04	2.5833E+04	5.3509E+04
1.130E+00	2.2206E+05	4.1966E+05	6.1139E+05	2.1928E+04	2.5511E+04	5.2795E+04
1.500E+00	1.4783E+05	2.0097E+05	2.8987E+05	1.3655E+04	1.5967E+04	3.2054E+04
2.000E+00	9.0533E+04	8.8839E+04	1.2709E+05	8.2715E+03	9.5004E+03	1.8542E+04
3.000E+00	4.0614E+04	2.5857E+04	3.6589E+04	3.9652E+03	4.2682E+03	8.0279E+03
4.000E+00	2.1589E+04	1.0193E+04	1.4309E+04	2.3104E+03	2.3072E+03	4.2314E+03
4.770E+00	1.4318E+04	5.6464E+03	7.8837E+03	1.6469E+03	1.5522E+03	2.8036E+03
4.808E+00	1.4049E+04	5.4954E+03	7.6709E+03	1.6216E+03	1.5240E+03	2.7508E+03
5.000E+00	1.2791E+04	4.8078E+03	6.7024E+03	1.5024E+03	1.3922E+03	2.5043E+03
5.099E+00	1.2200E+04	4.4952E+03	6.2628E+03	1.4459E+03	1.3302E+03	2.3888E+03
5.140E+00	1.1966E+04	4.3737E+03	6.0920E+03	1.4235E+03	1.3057E+03	2.3432E+03
5.412E+00	1.0550E+04	3.6605E+03	5.0907E+03	1.2862E+03	1.1567E+03	2.0666E+03
5.455E+00	1.0346E+04	3.5609E+03	4.9509E+03	1.2661E+03	1.1351E+03	2.0267E+03
6.000E+00	8.1720E+03	2.5557E+03	3.5421E+03	1.0483E+03	9.0452E+02	1.6016E+03
8.000E+00	3.8923E+03	9.1452E+02	1.2549E+03	5.8481E+02	4.4337E+02	7.6551E+02
1.000E+01	2.1297E+03	4.0181E+02	5.4669E+02	3.6694E+02	2.4849E+02	4.2050E+02
1.500E+01	6.7157E+02	8.5491E+01	1.1429E+02	1.5255E+02	8.2171E+01	1.3384E+02
2.000E+01	2.8379E+02	2.7512E+01	3.6253E+01	7.9721E+01	3.5986E+01	5.6940E+01
3.000E+01	7.9980E+01	5.3486E+00	6.8836E+00	3.0723E+01	1.0689E+01	1.6180E+01
3.452E+01	5.0924E+01	3.0065E+00	3.8339E+00	2.1846E+01	6.9361E+00	1.0328E+01

Z= 54

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
3.480E+01	4.9626E+01	2.9095E+00	3.7081E+00	2.1424E+01	6.7671E+00	1.0066E+01
4.000E+01	3.1528E+01	1.6379E+00	2.0675E+00	1.5191E+01	4.3832E+00	6.4104E+00
5.000E+01	1.5081E+01	6.4941E-01	8.0635E-01	8.6618E+00	2.1650E+00	3.0768E+00
6.000E+01	8.1898E+00	3.0450E-01	3.7278E-01	5.4211E+00	1.2082E+00	1.6750E+00
8.000E+01	3.0916E+00	9.2362E-02	1.1048E-01	2.5468E+00	4.7739E-01	6.3306E-01
1.000E+02	1.4447E+00	3.6841E-02	4.3285E-02	1.3997E+00	2.3132E-01	2.9643E-01
1.500E+02	3.6350E-01	7.1346E-03	8.1454E-03	4.6305E-01	6.2287E-02	7.4816E-02
2.000E+02	1.3872E-01	2.3018E-03	2.5948E-03	2.0989E-01	2.4910E-02	2.8598E-02
3.000E+02	3.7518E-02	5.0065E-04	5.6110E-04	6.9619E-02	7.1302E-03	7.7450E-03
4.000E+02	1.5656E-02	1.8064E-04	2.0790E-04	3.2629E-02	3.0648E-03	3.2399E-03
5.000E+02	8.2959E-03	8.5347E-05	1.0176E-04	1.8567E-02	1.6432E-03	1.7173E-03
6.000E+02	5.0882E-03	4.7843E-05	5.8648E-05	1.1949E-02	1.0111E-03	1.0535E-03
8.000E+02	2.4937E-03	2.0432E-05	2.6581E-05	6.2151E-03	4.9288E-04	5.1701E-04
1.000E+03	1.5084E-03	1.1027E-05	1.5672E-05	3.8844E-03	2.9448E-04	3.1241E-04
1.500E+03	6.6661E-04	4.1991E-06	6.4346E-06	1.7907E-03	1.2707E-04	1.3836E-04

Z= 54

ENERGY	4 D 3/2	4 D 5/2	5 S 1/2	5 P 1/2	5 P 3/2
1.000E+00	6.6202E+04	9.6346E+04	4.3337E+03	3.6287E+03	7.1957E+03
1.121E+00	5.1316E+04	7.4435E+04	3.5639E+03	3.0100E+03	5.9083E+03
1.130E+00	5.0390E+04	7.3076E+04	3.5152E+03	2.9703E+03	5.8263E+03
1.500E+00	2.5554E+04	3.6767E+04	2.1429E+03	1.8217E+03	3.4885E+03
2.000E+00	1.2061E+04	1.7218E+04	1.2783E+03	1.0692E+03	2.0005E+03
3.000E+00	3.8105E+03	5.3782E+03	6.0403E+02	4.7498E+02	8.6111E+02
4.000E+00	1.5781E+03	2.2085E+03	3.4933E+02	2.5548E+02	4.5312E+02
4.770E+00	8.9712E+02	1.2487E+03	2.4811E+02	1.7151E+02	3.0017E+02
4.808E+00	8.7407E+02	1.2163E+03	2.4426E+02	1.6840E+02	2.9451E+02
5.000E+00	7.6873E+02	1.0684E+03	2.2616E+02	1.5378E+02	2.6818E+02
5.099E+00	7.2065E+02	1.0009E+03	2.1758E+02	1.4691E+02	2.5580E+02
5.140E+00	7.0191E+02	9.7463E+02	2.1418E+02	1.4419E+02	2.5091E+02
5.412E+00	5.9135E+02	8.1973E+02	1.9336E+02	1.2770E+02	2.2130E+02
5.455E+00	5.7581E+02	7.9798E+02	1.9032E+02	1.2531E+02	2.1702E+02
6.000E+00	4.1796E+02	5.7737E+02	1.5735E+02	1.0165E+02	1.7151E+02
8.000E+00	1.5407E+02	2.1065E+02	8.7477E+01	4.9844E+01	8.2013E+01
1.000E+01	6.9073E+01	9.3623E+01	5.4786E+01	2.7951E+01	4.5079E+01
1.500E+01	1.5164E+01	2.0192E+01	2.2934E+01	9.2556E+00	1.4367E+01
2.000E+01	4.9598E+00	6.5109E+00	1.1977E+01	4.0576E+00	6.1183E+00
3.000E+01	9.8068E-01	1.2584E+00	4.6130E+00	1.2066E+00	1.7407E+00
3.452E+01	5.5402E-01	7.0050E-01	3.2797E+00	7.8331E-01	1.1116E+00
3.480E+01	5.3629E-01	6.7771E-01	3.2163E+00	7.6419E-01	1.0834E+00
4.000E+01	3.0328E-01	3.7965E-01	2.2803E+00	4.9515E-01	6.9015E-01
5.000E+01	1.2101E-01	1.4899E-01	1.2999E+00	2.4468E-01	3.3143E-01
6.000E+01	5.6998E-02	6.9176E-02	8.1343E-01	1.3658E-01	1.8049E-01
8.000E+01	1.7383E-02	2.0622E-02	3.8200E-01	5.3952E-02	6.8395E-02
1.000E+02	6.9589E-03	8.1043E-03	2.1003E-01	2.6150E-02	3.2041E-02
1.500E+02	1.3549E-03	1.5325E-03	6.9491E-02	7.0434E-03	8.0910E-03
2.000E+02	4.3846E-04	4.8952E-04	3.1502E-02	2.8168E-03	3.0937E-03
3.000E+02	9.5546E-05	1.0677E-04	1.0450E-02	8.0630E-04	8.3831E-04
4.000E+02	3.4540E-05	3.9450E-05	4.8980E-03	3.4657E-04	3.5087E-04
5.000E+02	1.6319E-05	1.9330E-05	2.7874E-03	1.8578E-04	1.8603E-04
6.000E+02	9.1402E-06	1.1179E-05	1.7940E-03	1.1430E-04	1.1422E-04
8.000E+02	3.8841E-06	5.1187E-06	9.3332E-04	5.5731E-05	5.6141E-05
1.000E+03	2.1058E-06	2.9409E-06	5.8352E-04	3.3296E-05	3.3997E-05
1.500E+03	7.8656E-07	1.2363E-06	2.6938E-04	1.4397E-05	1.5170E-05

Z= 55 18 STATES, 38 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	35.9885	.98221
2 S 1/2	2.00	5.6855	.83331
2 P 1/2	2.00	5.3634	.75569
2 P 3/2	4.00	5.0059	.74024
3 S 1/2	2.00	1.1966	.56947
3 P 1/2	2.00	1.0597	.47744
3 P 3/2	4.00	.9906	.45941
3 D 3/2	4.00	.7476	.24563
3 D 5/2	6.00	.7328	.24220
4 S 1/2	2.00	.2320	.30427
4 P 1/2	2.00	.1821	.23064
4 P 3/2	4.00	.1678	.21759
4 D 3/2	4.00	.0856	.08149
4 D 5/2	6.00	.0832	.07943
5 S 1/2	2.00	.0310	.09755
5 P 1/2	2.00	.0183	.05846
5 P 3/2	4.00	.0164	.05319
6 S 1/2	1.00	.0037	.01093

Z= 55 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	2.0650E+06	.0E+00	.0E+00	1.7366E+06	3.2846E+05
1.0587E+00	1.8338E+06	.0E+00	.0E+00	1.5393E+06	2.9450E+05
1.0671E+00	1.9072E+06	.0E+00	.0E+00	1.6172E+06	2.8999E+05
1.1954E+00	1.5090E+06	.0E+00	.0E+00	1.2772E+06	2.3182E+05
1.2050E+00	1.5513E+06	.0E+00	.0E+00	1.3232E+06	2.2814E+05
1.5000E+00	9.5499E+05	.0E+00	.0E+00	8.0989E+05	1.4510E+05
2.0000E+00	4.8950E+05	.0E+00	.0E+00	4.1200E+05	7.7504E+04
3.0000E+00	1.8215E+05	.0E+00	.0E+00	1.5168E+05	3.0469E+04
4.0000E+00	8.8209E+04	.0E+00	.0E+00	7.2943E+04	1.5266E+04
5.0000E+00	4.9717E+04	.0E+00	.0E+00	4.0913E+04	8.8037E+03
5.0009E+00	4.9695E+04	.0E+00	.0E+00	4.0895E+04	8.7999E+03
5.0409E+00	1.4416E+05	.0E+00	9.5483E+04	4.0053E+04	8.6265E+03
5.3580E+00	1.2359E+05	.0E+00	8.2040E+04	3.4148E+04	7.4051E+03
5.4009E+00	1.6551E+05	.0E+00	1.2482E+05	3.3441E+04	7.2583E+03
5.6798E+00	1.4594E+05	.0E+00	1.1025E+05	2.9298E+04	6.3943E+03
5.7253E+00	1.6477E+05	.0E+00	1.2981E+05	2.8689E+04	6.2668E+03
6.0000E+00	1.4711E+05	.0E+00	1.1619E+05	2.5357E+04	5.5661E+03
8.0000E+00	7.0146E+04	.0E+00	5.5680E+04	1.1805E+04	2.6616E+03
1.0000E+01	3.8924E+04	.0E+00	3.0962E+04	6.4755E+03	1.4868E+03
1.5000E+01	1.3036E+04	.0E+00	1.0390E+04	2.1410E+03	5.0573E+02
2.0000E+01	5.9088E+03	.0E+00	4.7115E+03	9.6542E+02	2.3186E+02
3.0000E+01	1.9047E+03	.0E+00	1.5189E+03	3.0999E+02	7.5859E+01
3.5953E+01	1.1430E+03	.0E+00	9.1138E+02	1.8582E+02	4.5794E+01
3.6240E+01	6.6561E+03	5.5386E+03	8.9104E+02	1.8166E+02	4.4783E+01
4.0000E+01	5.1191E+03	4.2742E+03	6.7359E+02	1.3726E+02	3.3956E+01
5.0000E+01	2.8530E+03	2.4055E+03	3.5674E+02	7.2639E+01	1.8099E+01
6.0000E+01	1.7367E+03	1.4712E+03	2.1164E+02	4.3075E+01	1.0789E+01
8.0000E+01	7.8561E+02	6.6959E+02	9.2460E+01	1.8811E+01	4.7438E+00
1.0000E+02	4.1995E+02	3.5907E+02	4.8512E+01	9.8697E+00	2.5010E+00
1.5000E+02	1.3277E+02	1.1392E+02	1.5015E+01	3.0559E+00	7.7912E-01
2.0000E+02	5.8615E+01	5.0363E+01	6.5718E+00	1.3381E+00	3.4236E-01
3.0000E+02	1.8901E+01	1.6260E+01	2.1034E+00	4.2850E-01	1.1004E-01
4.0000E+02	8.7408E+00	7.5241E+00	9.6855E-01	1.9735E-01	5.0773E-02
5.0000E+02	4.9402E+00	4.2551E+00	5.4542E-01	1.1109E-01	2.8620E-02
6.0000E+02	3.1682E+00	2.7303E+00	3.4858E-01	7.0986E-02	1.8301E-02
8.0000E+02	1.6437E+00	1.4179E+00	1.7976E-01	3.6585E-02	9.4409E-03
1.0000E+03	1.0271E+00	8.8674E-01	1.1177E-01	2.2736E-02	5.8696E-03

Z= 55 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY (KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.5000E+03	4.7415E-01	4.0990E-01	5.1165E-02	1.0397E-02	2.6866E-03

Z= 55

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.059E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.067E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.0385E+05
1.195E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	9.4824E+04
1.205E+00	.0E+00	.0E+00	.0E+00	.0E+00	6.7961E+04	9.4008E+04
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	5.0167E+04	7.1265E+04
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.3134E+04	4.6651E+04
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.7139E+04	2.2346E+04
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.0324E+04	1.2339E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	6.8400E+03	7.5166E+03
5.001E+00	.0E+00	.0E+00	.0E+00	.0E+00	6.8377E+03	7.5136E+03
5.041E+00	.0E+00	.0E+00	.0E+00	9.5483E+04	6.7361E+03	7.3775E+03
5.358E+00	.0E+00	.0E+00	.0E+00	8.2040E+04	6.0041E+03	6.4088E+03
5.401E+00	.0E+00	.0E+00	4.4517E+04	8.0298E+04	5.9138E+03	6.2912E+03
5.680E+00	.0E+00	.0E+00	3.9588E+04	7.0664E+04	5.3711E+03	5.5920E+03
5.725E+00	.0E+00	2.1809E+04	3.8742E+04	6.9261E+04	5.2894E+03	5.4878E+03
6.000E+00	.0E+00	2.0337E+04	3.4468E+04	6.1384E+04	4.8320E+03	4.9092E+03
8.000E+00	.0E+00	1.2343E+04	1.6603E+04	2.7334E+04	2.7334E+03	2.4187E+03
1.000E+01	.0E+00	8.1098E+03	8.5621E+03	1.4290E+04	1.7359E+03	1.3581E+03
1.500E+01	.0E+00	3.5753E+03	2.6215E+03	4.1928E+03	7.3124E+02	4.4925E+02
2.000E+01	.0E+00	1.9146E+03	1.0962E+03	1.7007E+03	3.8466E+02	1.9663E+02
3.000E+01	.0E+00	7.5301E+02	3.0847E+02	4.5738E+02	1.4929E+02	5.8383E+01
3.595E+01	.0E+00	4.8730E+02	1.7301E+02	2.5108E+02	9.6353E+01	3.3406E+01
3.624E+01	5.5386E+03	4.7792E+02	1.6863E+02	2.4449E+02	9.4492E+01	3.2588E+01
4.000E+01	4.2742E+03	3.7519E+02	1.2269E+02	1.7572E+02	7.4111E+01	2.3943E+01
5.000E+01	2.4055E+03	2.1461E+02	5.9425E+01	8.2698E+01	4.2364E+01	1.1830E+01
6.000E+01	1.4712E+03	1.3452E+02	3.2716E+01	4.4406E+01	2.6563E+01	6.6048E+00
8.000E+01	6.6959E+02	6.3246E+01	1.2692E+01	1.6522E+01	1.2510E+01	2.6104E+00
1.000E+02	3.5907E+02	3.4778E+01	6.0829E+00	7.6516E+00	6.8917E+00	1.2661E+00
1.500E+02	1.1392E+02	1.1500E+01	1.6134E+00	1.9017E+00	2.2876E+00	3.4154E-01
2.000E+02	5.0363E+01	5.2101E+00	6.4044E-01	7.2127E-01	1.0392E+00	1.3677E-01
3.000E+02	1.6260E+01	1.7275E+00	1.8202E-01	1.9389E-01	3.4562E-01	3.9215E-02
4.000E+02	7.5241E+00	8.0972E-01	7.8001E-02	8.0828E-02	1.6227E-01	1.6900E-02
5.000E+02	4.2551E+00	4.6092E-01	4.1746E-02	4.2752E-02	9.2403E-02	9.0705E-03
6.000E+02	2.7303E+00	2.9672E-01	2.5656E-02	2.6199E-02	5.9510E-02	5.5867E-03
8.000E+02	1.4179E+00	1.5442E-01	1.2496E-02	1.2840E-02	3.0977E-02	2.7274E-03
1.000E+03	8.8674E-01	9.6554E-02	7.4581E-03	7.7554E-03	1.9366E-02	1.6292E-03
1.500E+03	4.0990E-01	4.4516E-02	3.2241E-03	3.4251E-03	8.9254E-03	7.0457E-04

Z= 55

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	2.5862E+05	6.0007E+05	8.7788E+05	2.8117E+04	3.2475E+04	6.8768E+04
1.059E+00	2.4628E+05	5.2569E+05	7.6735E+05	2.5683E+04	2.9828E+04	6.2702E+04
1.067E+00	2.4460E+05	5.1589E+05	7.5283E+05	2.5358E+04	2.9470E+04	6.1887E+04
1.195E+00	2.1270E+05	3.9500E+05	5.7467E+05	2.1097E+04	2.4709E+04	5.1188E+04
1.205E+00	2.1032E+05	3.8743E+05	5.6347E+05	2.0822E+04	2.4399E+04	5.0497E+04
1.500E+00	1.5303E+05	2.1917E+05	3.1625E+05	1.4441E+04	1.6998E+04	3.4323E+04
2.000E+00	9.4542E+04	9.7793E+04	1.3988E+05	8.7683E+03	1.0170E+04	1.9939E+04
3.000E+00	4.2905E+04	2.8701E+04	4.0586E+04	4.2140E+03	4.6039E+03	8.6835E+03
4.000E+00	2.2931E+04	1.1386E+04	1.5963E+04	2.4594E+03	2.5029E+03	4.5982E+03
5.000E+00	1.3650E+04	5.3948E+03	7.5117E+03	1.6017E+03	1.5175E+03	2.7324E+03
5.001E+00	1.3645E+04	5.3916E+03	7.5072E+03	1.6012E+03	1.5169E+03	2.7313E+03
5.041E+00	1.3388E+04	5.2473E+03	7.3044E+03	1.5765E+03	1.4894E+03	2.6797E+03
5.358E+00	1.1559E+04	4.2592E+03	5.9166E+03	1.3993E+03	1.2930E+03	2.3138E+03
5.401E+00	1.1337E+04	4.1440E+03	5.7550E+03	1.3776E+03	1.2692E+03	2.2695E+03

Z= 55

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
5.680E+00	1.0023E+04	3.4826E+03	4.8287E+03	1.2476E+03	1.1277E+03	2.0073E+03
5.725E+00	9.8285E+03	3.3877E+03	4.6959E+03	1.2281E+03	1.1066E+03	1.9684E+03
6.000E+00	8.7533E+03	2.8784E+03	3.9837E+03	1.1193E+03	9.8999E+02	1.7535E+03
8.000E+00	4.1920E+03	1.0358E+03	1.4189E+03	6.2587E+02	4.8831E+02	8.4259E+02
1.000E+01	2.3035E+03	4.5715E+02	6.2084E+02	3.9342E+02	2.7495E+02	4.6469E+02
1.500E+01	7.3170E+02	9.8051E+01	1.3079E+02	1.6415E+02	9.1687E+01	1.4897E+02
2.000E+01	3.1073E+02	3.1715E+01	4.1688E+01	8.6042E+01	4.0393E+01	6.3702E+01
3.000E+01	8.8140E+01	6.2082E+00	7.9669E+00	3.3304E+01	1.2092E+01	1.8223E+01
3.595E+01	4.9342E+01	2.9617E+00	3.7551E+00	2.1483E+01	6.9421E+00	1.0236E+01
3.624E+01	4.8086E+01	2.8664E+00	3.6321E+00	2.1067E+01	6.7730E+00	9.9765E+00
4.000E+01	3.4895E+01	1.9098E+00	2.4032E+00	1.6520E+01	4.9846E+00	7.2520E+00
5.000E+01	1.6744E+01	7.5966E-01	9.4009E-01	9.4432E+00	2.4718E+00	3.4922E+00
6.000E+01	9.1147E+00	3.5705E-01	4.3555E-01	5.9221E+00	1.3835E+00	1.9058E+00
8.000E+01	3.4530E+00	1.0867E-01	1.2948E-01	2.7906E+00	5.4865E-01	7.2301E-01
1.000E+02	1.6176E+00	4.3452E-02	5.0839E-02	1.5384E+00	2.6694E-01	3.3947E-01
1.500E+02	4.0868E-01	8.4493E-03	9.6012E-03	5.1068E-01	7.2252E-02	8.6038E-02
2.000E+02	1.5634E-01	2.7332E-03	3.0651E-03	2.3210E-01	2.8991E-02	3.2968E-02
3.000E+02	4.2398E-02	5.9560E-04	6.6586E-04	7.7240E-02	8.3318E-03	8.9765E-03
4.000E+02	1.7721E-02	2.1540E-04	2.4673E-04	3.6272E-02	3.5906E-03	3.7516E-03
5.000E+02	9.3945E-03	1.0210E-04	1.2029E-04	2.0666E-02	1.9282E-03	1.9891E-03
6.000E+02	5.7623E-03	5.7366E-05	6.9258E-05	1.3311E-02	1.1874E-03	1.2206E-03
8.000E+02	2.8252E-03	2.4343E-05	3.1806E-05	6.9290E-03	5.7991E-04	5.9922E-04
1.000E+03	1.7089E-03	1.3191E-05	1.8480E-05	4.3318E-03	3.4658E-04	3.6194E-04
1.500E+03	7.5440E-04	5.1410E-06	7.7797E-06	1.9963E-03	1.4974E-04	1.6017E-04

Z= 55

ENERGY	4 D 3/2	4 D 5/2	5 S 1/2	5 P 1/2	5 P 3/2	6 S 1/2
1.000E+00	7.3396E+04	1.0692E+05	4.9949E+03	4.4992E+03	9.1345E+03	1.6253E+02
1.059E+00	6.4870E+04	9.4333E+04	4.5354E+03	4.1072E+03	8.2929E+03	1.4697E+02
1.067E+00	6.3745E+04	9.2675E+04	4.4743E+03	4.0546E+03	8.1805E+03	1.4491E+02
1.195E+00	4.9388E+04	7.1560E+04	3.6824E+03	3.3632E+03	6.7135E+03	1.1856E+02
1.205E+00	4.8490E+04	7.0241E+04	3.6320E+03	3.3185E+03	6.6195E+03	1.1690E+02
1.500E+00	2.8721E+04	4.1342E+04	2.4763E+03	2.2743E+03	4.4477E+03	8.0209E+01
2.000E+00	1.3675E+04	1.9524E+04	1.4791E+03	1.3415E+03	2.5590E+03	4.7902E+01
3.000E+00	4.3704E+03	6.1670E+03	7.0018E+02	6.0036E+02	1.1071E+03	2.2691E+01
4.000E+00	1.8247E+03	2.5525E+03	4.0550E+02	3.2478E+02	5.8499E+02	1.3149E+01
5.000E+00	8.9449E+02	1.2423E+03	2.6287E+02	1.9644E+02	3.4743E+02	8.5287E+00
5.001E+00	8.9398E+02	1.2416E+03	2.6278E+02	1.9636E+02	3.4728E+02	8.5258E+00
5.041E+00	8.7100E+02	1.2094E+03	2.5870E+02	1.9278E+02	3.4073E+02	8.3934E+00
5.358E+00	7.1284E+02	9.8773E+02	2.2939E+02	1.6729E+02	2.9421E+02	7.4434E+00
5.401E+00	6.9429E+02	9.6177E+02	2.2580E+02	1.6419E+02	2.8858E+02	7.3270E+00
5.680E+00	5.8736E+02	8.1225E+02	2.0433E+02	1.4584E+02	2.5526E+02	6.6313E+00
5.725E+00	5.7193E+02	7.9069E+02	2.0111E+02	1.4311E+02	2.5031E+02	6.5270E+00
6.000E+00	4.8872E+02	6.7457E+02	1.8315E+02	1.2799E+02	2.2301E+02	5.9446E+00
8.000E+00	1.8144E+02	2.4781E+02	1.0205E+02	6.3080E+01	1.0714E+02	3.3144E+00
1.000E+01	8.1764E+01	1.1069E+02	6.4021E+01	3.6020E+01	5.9126E+01	2.0800E+00
1.500E+01	1.8120E+01	2.4090E+01	2.6835E+01	1.2028E+01	1.8981E+01	8.6610E-01
2.000E+01	5.9646E+00	7.8142E+00	1.4055E+01	5.3050E+00	8.1253E+00	4.5359E-01
3.000E+01	1.1886E+00	1.5213E+00	5.4368E+00	1.5902E+00	2.3275E+00	1.7544E-01
3.595E+01	5.7071E-01	7.2203E-01	3.5063E+00	9.1341E-01	1.3080E+00	1.1314E-01
3.624E+01	5.5245E-01	6.9860E-01	3.4384E+00	8.9118E-01	1.2749E+00	1.1095E-01
4.000E+01	3.6934E-01	4.6384E-01	2.6961E+00	6.5603E-01	9.2700E-01	8.7001E-02
5.000E+01	1.4793E-01	1.8161E-01	1.5408E+00	3.2548E-01	4.4665E-01	4.9719E-02
6.000E+01	6.9844E-02	8.4551E-02	9.6610E-01	1.8224E-01	2.4385E-01	3.1175E-02
8.000E+01	2.1385E-02	2.5279E-02	4.5511E-01	7.2316E-02	9.2754E-02	1.4687E-02
1.000E+02	8.5846E-03	9.9593E-03	2.5082E-01	3.5166E-02	4.3565E-02	8.0944E-03
1.500E+02	1.6779E-03	1.8917E-03	8.3322E-02	9.5232E-03	1.1049E-02	2.6896E-03
2.000E+02	5.4434E-04	6.0566E-04	3.7872E-02	3.8219E-03	4.2352E-03	1.2228E-03
3.000E+02	1.1897E-04	1.3251E-04	1.2605E-02	1.0985E-03	1.1508E-03	4.0732E-04
4.000E+02	4.3157E-05	4.8946E-05	5.9197E-03	4.7329E-04	4.8222E-04	1.9150E-04

Z= 55

ENERGY	4 D 3/2	4 D 5/2	5 S 1/2	5 P 1/2	5 P 3/2	6 S 1/2
5.000E+02	2.0401E-05	2.3963E-05	3.3730E-03	2.5412E-04	2.5582E-04	1.0930E-04
6.000E+02	1.1408E-05	1.3922E-05	2.1726E-03	1.5649E-04	1.5706E-04	7.0541E-05
8.000E+02	4.8647E-06	6.3387E-06	1.1311E-03	7.6402E-05	7.7149E-05	3.6935E-05
1.000E+03	2.6479E-06	3.6536E-06	7.0727E-04	4.5673E-05	4.6668E-05	2.3285E-05
1.500E+03	9.9125E-07	1.5208E-06	3.2625E-04	1.9746E-05	2.0735E-05	1.1095E-05

Z= 56 18 STATES, 40 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	37.4522	.98242
2 S 1/2	2.00	5.9614	.83554
2 P 1/2	2.00	5.6305	.75897
2 P 3/2	4.00	5.2432	.74306
3 S 1/2	2.00	1.2737	.57497
3 P 1/2	2.00	1.1324	.48371
3 P 3/2	4.00	1.0569	.46509
3 D 3/2	4.00	.8066	.25165
3 D 5/2	6.00	.7903	.24807
4 S 1/2	2.00	.2565	.31237
4 P 1/2	2.00	.2043	.23871
4 P 3/2	4.00	.1883	.22510
4 D 3/2	4.00	.1022	.08707
4 D 5/2	6.00	.0994	.08488
5 S 1/2	2.00	.0384	.10780
5 P 1/2	2.00	.0243	.06767
5 P 3/2	4.00	.0220	.06195
6 S 1/2	2.00	.0046	.01829

Z= 56 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	1.9461E+06	.0E+00	.0E+00	1.5880E+06	3.5809E+05
1.0559E+00	1.7235E+06	.0E+00	.0E+00	1.4004E+06	3.2311E+05
1.0643E+00	1.9390E+06	.0E+00	.0E+00	1.6208E+06	3.1821E+05
1.1313E+00	1.7038E+06	.0E+00	.0E+00	1.4211E+06	2.8278E+05
1.1403E+00	1.7735E+06	.0E+00	.0E+00	1.4951E+06	2.7841E+05
1.2724E+00	1.4113E+06	.0E+00	.0E+00	1.1874E+06	2.2386E+05
1.2826E+00	1.4492E+06	.0E+00	.0E+00	1.2289E+06	2.2027E+05
1.5000E+00	1.0242E+06	.0E+00	.0E+00	8.6475E+05	1.5941E+05
2.0000E+00	5.2702E+05	.0E+00	.0E+00	4.4154E+05	8.5479E+04
3.0000E+00	1.9681E+05	.0E+00	.0E+00	1.6306E+05	3.3743E+04
4.0000E+00	9.5505E+04	.0E+00	.0E+00	7.8559E+04	1.6946E+04
5.0000E+00	5.3891E+04	.0E+00	.0E+00	4.4101E+04	9.7897E+03
5.2379E+00	4.7780E+04	.0E+00	.0E+00	3.9061E+04	8.7191E+03
5.2799E+00	1.3609E+05	.0E+00	8.9290E+04	3.8255E+04	8.5471E+03
5.6248E+00	1.1674E+05	.0E+00	7.7027E+04	3.2416E+04	7.2936E+03
5.6699E+00	1.5588E+05	.0E+00	1.1699E+05	3.1744E+04	7.1488E+03
5.9554E+00	1.3809E+05	.0E+00	1.0388E+05	2.7895E+04	6.3160E+03
6.0000E+00	1.5631E+05	.0E+00	1.2276E+05	2.7353E+04	6.1981E+03
6.0031E+00	1.5608E+05	.0E+00	1.2258E+05	2.7315E+04	6.1900E+03
8.0000E+00	7.5218E+04	.0E+00	5.9500E+04	1.2748E+04	2.9698E+03
1.0000E+01	4.1745E+04	.0E+00	3.3085E+04	6.9990E+03	1.6605E+03
1.5000E+01	1.4022E+04	.0E+00	1.1138E+04	2.3182E+03	5.6601E+02
2.0000E+01	6.3683E+03	.0E+00	5.0617E+03	1.0466E+03	2.6000E+02
3.0000E+01	2.0573E+03	.0E+00	1.6355E+03	3.3657E+02	8.5248E+01
3.7415E+01	1.1039E+03	.0E+00	8.7746E+02	1.8034E+02	4.6078E+01
3.7714E+01	6.3802E+03	5.3010E+03	8.5788E+02	1.7631E+02	4.5061E+01
4.0000E+01	5.4633E+03	4.5496E+03	7.2626E+02	1.4921E+02	3.8215E+01
5.0000E+01	3.0374E+03	2.5529E+03	3.8504E+02	7.9036E+01	2.0392E+01

Z= 56 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY (KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
6.0000E+01	1.8541E+03	1.5664E+03	2.2864E+02	4.6905E+01	1.2168E+01
8.0000E+01	8.4054E+02	7.1465E+02	1.0003E+02	2.0510E+01	5.3597E+00
1.0000E+02	4.5025E+02	3.8410E+02	5.2542E+01	1.0772E+01	2.8281E+00
1.5000E+02	1.4282E+02	1.2230E+02	1.6297E+01	3.3421E+00	8.8310E-01
2.0000E+02	6.3174E+01	5.4176E+01	7.1441E+00	1.4656E+00	3.8868E-01
3.0000E+02	2.0424E+01	1.7537E+01	2.2914E+00	4.7029E-01	1.2520E-01
4.0000E+02	9.4594E+00	8.1282E+00	1.0565E+00	2.1685E-01	5.7849E-02
5.0000E+02	5.3519E+00	4.6017E+00	5.9547E-01	1.2219E-01	3.2638E-02
6.0000E+02	3.4346E+00	2.9548E+00	3.8077E-01	7.8115E-02	2.0882E-02
8.0000E+02	1.7832E+00	1.5357E+00	1.9646E-01	4.0279E-02	1.0778E-02
1.0000E+03	1.1145E+00	9.6065E-01	1.2216E-01	2.5033E-02	6.7017E-03
1.5000E+03	5.1438E-01	4.4398E-01	5.5896E-02	1.1442E-02	3.0663E-03

Z= 56

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.056E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.064E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.131E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.140E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	9.8453E+04
1.272E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	8.9862E+04
1.283E+00	.0E+00	.0E+00	.0E+00	.0E+00	6.2080E+04	8.9096E+04
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	5.1696E+04	7.2955E+04
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.3995E+04	4.8364E+04
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.7779E+04	2.3439E+04
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.0746E+04	1.3056E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.1379E+03	7.9991E+03
5.238E+00	.0E+00	.0E+00	.0E+00	.0E+00	6.5410E+03	7.1953E+03
5.280E+00	.0E+00	.0E+00	.0E+00	8.9290E+04	6.4436E+03	7.0648E+03
5.625E+00	.0E+00	.0E+00	.0E+00	7.7027E+04	5.7176E+03	6.1037E+03
5.670E+00	.0E+00	.0E+00	4.1629E+04	7.5361E+04	5.6316E+03	5.9915E+03
5.955E+00	.0E+00	.0E+00	3.7489E+04	6.6389E+04	5.1260E+03	5.3404E+03
6.000E+00	.0E+00	2.0887E+04	3.6722E+04	6.5148E+04	5.0529E+03	5.2473E+03
6.003E+00	.0E+00	2.0846E+04	3.6670E+04	6.5062E+04	5.0479E+03	5.2408E+03
8.000E+00	.0E+00	1.2795E+04	1.7306E+04	2.9399E+04	2.8725E+03	2.6017E+03
1.000E+01	.0E+00	8.4303E+03	9.2476E+03	1.5407E+04	1.8245E+03	1.4682E+03
1.500E+01	.0E+00	3.7333E+03	2.8573E+03	4.5475E+03	7.7187E+02	4.8983E+02
2.000E+01	.0E+00	2.0101E+03	1.1995E+03	1.8522E+03	4.0730E+02	2.1564E+02
3.000E+01	.0E+00	7.9510E+02	3.3974E+02	5.0063E+02	1.5881E+02	6.4514E+01
3.741E+01	.0E+00	4.6811E+02	1.6817E+02	2.4118E+02	9.3187E+01	3.2734E+01
3.771E+01	5.3010E+03	4.5910E+02	1.6393E+02	2.3485E+02	9.1387E+01	3.1934E+01
4.000E+01	4.5496E+03	3.9760E+02	1.3569E+02	1.9297E+02	7.9092E+01	2.6593E+01
5.000E+01	2.5529E+03	2.2806E+02	6.5935E+01	9.1039E+01	4.5327E+01	1.3189E+01
6.000E+01	1.5664E+03	1.4327E+02	3.6387E+01	4.8982E+01	2.8479E+01	7.3847E+00
8.000E+01	7.1465E+02	6.7580E+01	1.4169E+01	1.8278E+01	1.3454E+01	2.9313E+00
1.000E+02	3.8410E+02	3.7250E+01	6.8096E+00	8.4828E+00	7.4292E+00	1.4262E+00
1.500E+02	1.2230E+02	1.2367E+01	1.8145E+00	2.1158E+00	2.4759E+00	3.8674E-01
2.000E+02	5.4176E+01	5.6176E+00	7.2237E-01	8.0417E-01	1.1276E+00	1.5538E-01
3.000E+02	1.7537E+01	1.8687E+00	2.0605E-01	2.1669E-01	3.7629E-01	4.4725E-02
4.000E+02	8.1282E+00	8.7760E-01	8.8487E-02	9.0442E-02	1.7702E-01	1.9288E-02
5.000E+02	4.6017E+00	5.0017E-01	4.7426E-02	4.7866E-02	1.0093E-01	1.0386E-02
6.000E+02	2.9548E+00	3.2225E-01	2.9178E-02	2.9339E-02	6.5053E-02	6.4035E-03
8.000E+02	1.5357E+00	1.6785E-01	1.4231E-02	1.4379E-02	3.3890E-02	3.1295E-03
1.000E+03	9.6065E-01	1.0498E-01	8.5010E-03	8.6820E-03	2.1194E-02	1.8716E-03
1.500E+03	4.4398E-01	4.8387E-02	3.6796E-03	3.8299E-03	9.7646E-03	8.0995E-04

Z= 56

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	6.4453E+05	9.4349E+05	2.9548E+04	3.4168E+04	7.3003E+04
1.056E+00	.0E+00	5.6912E+05	8.3129E+05	2.7120E+04	3.1541E+04	6.6913E+04
1.064E+00	2.4637E+05	5.5868E+05	8.1578E+05	2.6778E+04	3.1168E+04	6.6055E+04
1.131E+00	2.3270E+05	4.8373E+05	7.0463E+05	2.4285E+04	2.8427E+04	5.9760E+04
1.140E+00	2.3107E+05	4.7456E+05	6.9106E+05	2.3975E+04	2.8082E+04	5.8973E+04
1.272E+00	2.0158E+05	3.6535E+05	5.3061E+05	2.0061E+04	2.3648E+04	4.8997E+04
1.283E+00	1.9927E+05	3.5828E+05	5.2018E+05	1.9799E+04	2.3348E+04	4.8329E+04
1.500E+00	1.5749E+05	2.3862E+05	3.4398E+05	1.5244E+04	1.8040E+04	3.6663E+04
2.000E+00	9.8682E+04	1.0721E+05	1.5330E+05	9.2769E+03	1.0855E+04	2.1385E+04
3.000E+00	4.5234E+04	3.1753E+04	4.4859E+04	4.4702E+03	4.9516E+03	9.3680E+03
4.000E+00	2.4318E+04	1.2680E+04	1.7759E+04	2.6131E+03	2.7069E+03	4.9827E+03
5.000E+00	1.4538E+04	6.0350E+03	8.3912E+03	1.7043E+03	1.6489E+03	2.9723E+03
5.238E+00	1.3016E+04	5.1535E+03	7.1550E+03	1.5570E+03	1.4825E+03	2.6609E+03
5.280E+00	1.2770E+04	5.0154E+03	6.9615E+03	1.5330E+03	1.4556E+03	2.6105E+03
5.625E+00	1.0962E+04	4.0387E+03	5.5937E+03	1.3545E+03	1.2569E+03	2.2410E+03
5.670E+00	1.0751E+04	3.9294E+03	5.4407E+03	1.3334E+03	1.2337E+03	2.1980E+03
5.955E+00	9.5301E+03	3.3156E+03	4.5830E+03	1.2103E+03	1.0992E+03	1.9492E+03
6.000E+00	9.3564E+03	3.2310E+03	4.4649E+03	1.1926E+03	1.0800E+03	1.9139E+03
6.003E+00	9.3444E+03	3.2251E+03	4.4567E+03	1.1913E+03	1.0786E+03	1.9114E+03
8.000E+00	4.5058E+03	1.1691E+03	1.5987E+03	6.6847E+02	5.3601E+02	9.2449E+02
1.000E+01	2.4856E+03	5.1827E+02	7.0248E+02	4.2097E+02	3.0321E+02	5.1187E+02
1.500E+01	7.9536E+02	1.1205E+02	1.4913E+02	1.7627E+02	1.0195E+02	1.6525E+02
2.000E+01	3.3941E+02	3.6428E+01	4.7762E+01	9.2658E+01	4.5180E+01	7.1021E+01
3.000E+01	9.6889E+01	7.1788E+00	9.1860E+00	3.6019E+01	1.3631E+01	2.0452E+01
3.741E+01	4.7828E+01	2.9177E+00	3.6776E+00	2.1120E+01	6.9450E+00	1.0138E+01
3.771E+01	4.6612E+01	2.8239E+00	3.5574E+00	2.0712E+01	6.7763E+00	9.8814E+00
4.000E+01	3.8522E+01	2.2185E+00	2.7829E+00	1.7923E+01	5.6486E+00	8.1749E+00
5.000E+01	1.8542E+01	8.8527E-01	1.0919E+00	1.0270E+01	2.8118E+00	3.9493E+00
6.000E+01	1.0118E+01	4.1709E-01	5.0697E-01	6.4535E+00	1.5786E+00	2.1607E+00
8.000E+01	3.8466E+00	1.2738E-01	1.5117E-01	3.0504E+00	6.2889E-01	8.2443E-01
1.000E+02	1.8065E+00	5.1054E-02	5.9484E-02	1.6854E+00	3.0692E-01	3.8729E-01
1.500E+02	4.5825E-01	9.9681E-03	1.1274E-02	5.6179E-01	8.3519E-02	9.8579E-02
2.000E+02	1.7573E-01	3.2329E-03	3.6067E-03	2.5600E-01	3.3622E-02	3.7871E-02
3.000E+02	4.7785E-02	7.0583E-04	7.8928E-04	8.5476E-02	9.7025E-03	1.0315E-02
4.000E+02	2.0001E-02	2.5618E-04	2.9088E-04	4.0219E-02	4.1911E-03	4.3259E-03
5.000E+02	1.0608E-02	1.2174E-04	1.4154E-04	2.2945E-02	2.2536E-03	2.2956E-03
6.000E+02	6.5080E-03	6.8225E-05	8.1724E-05	1.4790E-02	1.3894E-03	1.4097E-03
8.000E+02	3.1927E-03	2.8944E-05	3.7812E-05	7.7055E-03	6.7962E-04	6.9155E-04
1.000E+03	1.9303E-03	1.5857E-05	2.1631E-05	4.8185E-03	4.0652E-04	4.1794E-04
1.500E+03	8.5171E-04	6.1291E-06	9.2792E-06	2.2200E-03	1.7585E-04	1.8477E-04

Z= 56

ENERGY	4 D 3/2	4 D 5/2	5 S 1/2	5 P 1/2	5 P 3/2	6 S 1/2
1.000E+00	8.0882E+04	1.1794E+05	5.6819E+03	5.3328E+03	1.0970E+04	5.6376E+02
1.056E+00	7.2053E+04	1.0488E+05	5.1839E+03	4.8923E+03	1.0008E+04	5.1302E+02
1.064E+00	7.0824E+04	1.0307E+05	5.1144E+03	4.8302E+03	9.8728E+03	5.0596E+02
1.131E+00	6.1970E+04	9.0009E+04	4.6105E+03	4.3767E+03	8.8912E+03	4.5484E+02
1.140E+00	6.0883E+04	8.8408E+04	4.5481E+03	4.3201E+03	8.7692E+03	4.4852E+02
1.272E+00	4.7475E+04	6.8706E+04	3.7661E+03	3.6012E+03	7.2319E+03	3.6929E+02
1.283E+00	4.6605E+04	6.7431E+04	3.7144E+03	3.5531E+03	7.1298E+03	3.6408E+02
1.500E+00	3.2083E+04	4.6203E+04	2.8246E+03	2.7125E+03	5.3625E+03	2.7500E+02
2.000E+00	1.5407E+04	2.1999E+04	1.6890E+03	1.6068E+03	3.0940E+03	1.6586E+02
3.000E+00	4.9797E+03	7.0250E+03	8.0094E+02	7.2401E+02	1.3452E+03	7.8621E+01
4.000E+00	2.0958E+03	2.9302E+03	4.6451E+02	3.9381E+02	7.1376E+02	4.5604E+01
5.000E+00	1.0337E+03	1.4347E+03	3.0152E+02	2.3929E+02	4.2544E+02	2.9609E+01
5.238E+00	8.8882E+02	1.2316E+03	2.7524E+02	2.1507E+02	3.8084E+02	2.7029E+01
5.280E+00	8.6598E+02	1.1996E+03	2.7096E+02	2.1115E+02	3.7364E+02	2.6609E+01
5.625E+00	7.0338E+02	9.7224E+02	2.3914E+02	1.8225E+02	3.2074E+02	2.3486E+01
5.670E+00	6.8508E+02	9.4667E+02	2.3539E+02	1.7888E+02	3.1459E+02	2.3118E+01
5.955E+00	5.8186E+02	8.0265E+02	2.1349E+02	1.5933E+02	2.7900E+02	2.0969E+01

Z= 56

ENERGY	4 D 3/2	4 D 5/2	5 S 1/2	5 P 1/2	5 P 3/2	6 S 1/2
6.000E+00	5.6756E+02	7.8271E+02	2.1034E+02	1.5654E+02	2.7394E+02	2.0660E+01
6.003E+00	5.6657E+02	7.8133E+02	2.1012E+02	1.5634E+02	2.7359E+02	2.0638E+01
8.000E+00	2.1221E+02	2.8952E+02	1.1747E+02	7.7630E+01	1.3244E+02	1.1543E+01
1.000E+01	9.6120E+01	1.2995E+02	7.3823E+01	4.3913E+01	7.3411E+01	7.2555E+00
1.500E+01	2.1498E+01	2.8533E+01	3.0837E+01	1.4945E+01	2.3694E+01	3.0310E+00
2.000E+01	7.1207E+00	9.3112E+00	1.6289E+01	6.6307E+00	1.0195E+01	1.5918E+00
3.000E+01	1.4302E+00	1.8260E+00	6.3276E+00	2.0034E+00	2.9400E+00	6.1830E-01
3.741E+01	5.8606E-01	7.3737E-01	3.7093E+00	1.0214E+00	1.4584E+00	3.6244E-01
3.771E+01	5.6736E-01	7.1349E-01	3.6376E+00	9.9659E-01	1.4215E+00	3.5543E-01
4.000E+01	4.4662E-01	5.5930E-01	3.1477E+00	8.3091E-01	1.1762E+00	3.0756E-01
5.000E+01	1.7948E-01	2.1984E-01	1.8033E+00	4.1384E-01	5.6857E-01	1.7619E-01
6.000E+01	8.4977E-02	1.0256E-01	1.1329E+00	2.3243E-01	3.1122E-01	1.1070E-01
8.000E+01	2.6121E-02	3.0768E-02	5.3536E-01	9.2648E-02	1.1881E-01	5.2312E-02
1.000E+02	1.0509E-02	1.2160E-02	2.9573E-01	4.5203E-02	5.5954E-02	2.8897E-02
1.500E+02	2.0633E-03	2.3163E-03	9.8638E-02	1.2307E-02	1.4250E-02	9.6396E-03
2.000E+02	6.7140E-04	7.4267E-04	4.4952E-02	4.9557E-03	5.4761E-03	4.3938E-03
3.000E+02	1.4710E-04	1.6302E-04	1.5011E-02	1.4302E-03	1.4922E-03	1.4680E-03
4.000E+02	5.3386E-05	6.0499E-05	7.0637E-03	6.1775E-04	6.2613E-04	6.9133E-04
5.000E+02	2.5360E-05	2.9489E-05	4.0299E-03	3.3220E-04	3.3235E-04	3.9481E-04
6.000E+02	1.4172E-05	1.7111E-05	2.5977E-03	2.0481E-04	2.0410E-04	2.5486E-04
8.000E+02	6.0679E-06	7.8049E-06	1.3535E-03	1.0014E-04	1.0023E-04	1.3330E-04
1.000E+03	3.2781E-06	4.5259E-06	8.4652E-04	5.9910E-05	6.0591E-05	8.3830E-05
1.500E+03	1.2299E-06	1.8907E-06	3.9025E-04	2.5920E-05	2.6858E-05	3.9511E-05

Z= 57 20 STATES, 40 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	38.9472	.98263
2 S 1/2	2.00	6.2425	.83771
2 P 1/2	2.00	5.9026	.76216
2 P 3/2	4.00	5.4836	.74580
3 S 1/2	2.00	1.3507	.58034
3 P 1/2	2.00	1.2050	.48984
3 P 3/2	4.00	1.1227	.47060
3 D 3/2	4.00	.8649	.25756
3 D 5/2	6.00	.8471	.25383
4 S 1/2	2.00	.2792	.32032
4 P 1/2	2.00	.2248	.24665
4 P 3/2	4.00	.2071	.23248
4 D 3/2	4.00	.1168	.09260
4 D 5/2	6.00	.1137	.09028
5 S 1/2	2.00	.0437	.11639
5 P 1/2	2.00	.0284	.07498
5 P 3/2	4.00	.0256	.06865
5 D 3/2	.40	.0056	.01275
5 D 5/2	.60	.0053	.01214
6 S 1/2	2.00	.0051	.02132

Z= 57 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	2.0941E+06	.0E+00	.0E+00	1.7049E+06	3.8914E+05
1.1216E+00	1.6185E+06	.0E+00	.0E+00	1.3052E+06	3.1330E+05
1.1305E+00	1.8241E+06	.0E+00	.0E+00	1.5156E+06	3.0851E+05
1.2038E+00	1.5938E+06	.0E+00	.0E+00	1.3210E+06	2.7289E+05
1.2134E+00	1.6605E+06	.0E+00	.0E+00	1.3919E+06	2.6863E+05
1.3494E+00	1.3271E+06	.0E+00	.0E+00	1.1100E+06	2.1708E+05
1.3602E+00	1.3625E+06	.0E+00	.0E+00	1.1489E+06	2.1358E+05
1.5000E+00	1.0987E+06	.0E+00	.0E+00	9.2425E+05	1.7449E+05

Z= 57 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
2.0000E+00	5.6665E+05	.0E+00	.0E+00	4.7276E+05	9.3889E+04
3.0000E+00	2.1220E+05	.0E+00	.0E+00	1.7502E+05	3.7187E+04
4.0000E+00	1.0315E+05	.0E+00	.0E+00	8.4446E+04	1.8706E+04
5.0000E+00	5.8281E+04	.0E+00	.0E+00	4.7463E+04	1.0818E+04
5.4781E+00	4.6009E+04	.0E+00	.0E+00	3.7392E+04	8.6166E+03
5.5220E+00	1.2976E+05	.0E+00	8.4696E+04	3.6620E+04	8.4463E+03
5.8968E+00	1.1041E+05	.0E+00	7.2420E+04	3.0833E+04	7.1623E+03
5.9440E+00	1.4748E+05	.0E+00	1.1027E+05	3.0194E+04	7.0198E+03
6.0000E+00	1.4470E+05	.0E+00	1.0838E+05	2.9459E+04	6.8556E+03
6.2363E+00	1.3103E+05	.0E+00	9.8205E+04	2.6610E+04	6.2181E+03
6.2862E+00	1.4814E+05	.0E+00	1.1599E+05	2.6055E+04	6.0938E+03
8.0000E+00	8.0539E+04	.0E+00	6.3507E+04	1.3743E+04	3.2890E+03
1.0000E+01	4.4680E+04	.0E+00	3.5287E+04	7.5523E+03	1.8404E+03
1.5000E+01	1.5059E+04	.0E+00	1.1926E+04	2.5058E+03	6.2813E+02
2.0000E+01	6.8504E+03	.0E+00	5.4290E+03	1.1326E+03	2.8874E+02
3.0000E+01	2.2180E+03	.0E+00	1.7583E+03	3.6484E+02	9.4836E+01
3.8908E+01	1.0667E+03	.0E+00	8.4556E+02	1.7514E+02	4.5983E+01
3.9220E+01	6.1186E+03	5.0757E+03	8.2670E+02	1.7123E+02	4.4969E+01
4.0000E+01	5.8023E+03	4.8159E+03	7.8191E+02	1.6193E+02	4.2557E+01
5.0000E+01	3.2273E+03	2.7037E+03	4.1503E+02	8.5855E+01	2.2729E+01
6.0000E+01	1.9773E+03	1.6661E+03	2.4665E+02	5.0992E+01	1.3571E+01
8.0000E+01	8.9809E+02	7.6172E+02	1.0806E+02	2.2326E+01	5.9847E+00
1.0000E+02	4.8201E+02	4.1028E+02	5.6827E+01	1.1738E+01	3.1607E+00
1.5000E+02	1.5338E+02	1.3108E+02	1.7664E+01	3.6490E+00	9.8902E-01
2.0000E+02	6.7981E+01	5.8188E+01	7.7550E+00	1.6026E+00	4.3593E-01
3.0000E+02	2.2034E+01	1.8885E+01	2.4926E+00	5.1528E-01	1.4071E-01
4.0000E+02	1.0221E+01	8.7673E+00	1.1508E+00	2.3794E-01	6.5095E-02
5.0000E+02	5.7889E+00	4.9688E+00	6.4916E-01	1.3416E-01	3.6757E-02
6.0000E+02	3.7175E+00	3.1929E+00	4.1533E-01	8.5812E-02	2.3529E-02
8.0000E+02	1.9316E+00	1.6608E+00	2.1440E-01	4.4271E-02	1.2149E-02
1.0000E+03	1.2076E+00	1.0392E+00	1.3332E-01	2.7515E-02	7.5548E-03
1.5000E+03	5.5717E-01	4.8017E-01	6.0976E-02	1.2570E-02	3.4547E-03

Z= 57

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.122E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.131E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.204E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.213E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	9.3949E+04
1.349E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	8.5295E+04
1.360E+00	.0E+00	.0E+00	.0E+00	.0E+00	5.8325E+04	8.4582E+04
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	5.2535E+04	7.4785E+04
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.4887E+04	4.9886E+04
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.8400E+04	2.4538E+04
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.1172E+04	1.3775E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.4397E+03	8.4897E+03
5.478E+00	.0E+00	.0E+00	.0E+00	.0E+00	6.2682E+03	6.9056E+03
5.522E+00	.0E+00	.0E+00	.0E+00	8.4696E+04	6.1747E+03	6.7803E+03
5.897E+00	.0E+00	.0E+00	.0E+00	7.2420E+04	5.4535E+03	5.8248E+03
5.944E+00	.0E+00	.0E+00	3.9413E+04	7.0853E+04	5.3713E+03	5.7177E+03
6.000E+00	.0E+00	.0E+00	3.9279E+04	6.9102E+04	5.2761E+03	5.5939E+03
6.236E+00	.0E+00	.0E+00	3.5609E+04	6.2597E+04	4.8993E+03	5.1095E+03
6.286E+00	.0E+00	1.9841E+04	3.4810E+04	6.1345E+04	4.8245E+03	5.0143E+03
8.000E+00	.0E+00	1.3244E+04	1.8636E+04	3.1627E+04	3.0076E+03	2.7924E+03
1.000E+01	.0E+00	8.7401E+03	9.9850E+03	1.6562E+04	1.9148E+03	1.5834E+03
1.500E+01	.0E+00	3.8928E+03	3.1080E+03	4.9248E+03	8.1344E+02	5.3282E+02
2.000E+01	.0E+00	2.1063E+03	1.3103E+03	2.0124E+03	4.3064E+02	2.3591E+02
3.000E+01	.0E+00	8.3814E+02	3.7339E+02	5.4681E+02	1.6865E+02	7.1117E+01
3.891E+01	.0E+00	4.5004E+02	1.6365E+02	2.3187E+02	9.0175E+01	3.2099E+01

Z= 57

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
3.922E+01	5.0757E+03	4.4138E+02	1.5953E+02	2.2579E+02	8.8433E+01	3.1317E+01
4.000E+01	4.8159E+03	4.2068E+02	1.4977E+02	2.1146E+02	8.4268E+01	2.9463E+01
5.000E+01	2.7037E+03	2.4202E+02	7.3005E+01	1.0001E+02	4.8414E+01	1.4667E+01
6.000E+01	1.6661E+03	1.5235E+02	4.0387E+01	5.3913E+01	3.0480E+01	8.2362E+00
8.000E+01	7.6172E+02	7.2102E+01	1.5785E+01	2.0176E+01	1.4444E+01	3.2835E+00
1.000E+02	4.1028E+02	3.9837E+01	7.6069E+00	9.3837E+00	7.9942E+00	1.6026E+00
1.500E+02	1.3108E+02	1.3279E+01	2.0363E+00	2.3486E+00	2.6748E+00	4.3681E-01
2.000E+02	5.8188E+01	6.0474E+00	8.1303E-01	8.9457E-01	1.2214E+00	1.7606E-01
3.000E+02	1.8885E+01	2.0182E+00	2.3275E-01	2.4163E-01	4.0892E-01	5.0882E-02
4.000E+02	8.7673E+00	9.4967E-01	1.0017E-01	1.0097E-01	1.9274E-01	2.1997E-02
5.000E+02	4.9688E+00	5.4193E-01	5.3763E-02	5.3468E-02	1.1004E-01	1.1862E-02
6.000E+02	3.1929E+00	3.4944E-01	3.3110E-02	3.2781E-02	7.0983E-02	7.3206E-03
8.000E+02	1.6608E+00	1.8216E-01	1.6170E-02	1.6065E-02	3.7011E-02	3.5819E-03
1.000E+03	1.0392E+00	1.1396E-01	9.6678E-03	9.6970E-03	2.3152E-02	2.1449E-03
1.500E+03	4.8017E-01	5.2514E-02	4.1897E-03	4.2720E-03	1.0664E-02	9.2886E-04

Z= 57

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	6.9205E+05	1.0129E+06	3.0954E+04	3.5821E+04	7.7309E+04
1.122E+00	.0E+00	5.3102E+05	7.7418E+05	2.5854E+04	3.0288E+04	6.4296E+04
1.131E+00	2.3497E+05	5.2114E+05	7.5952E+05	2.5527E+04	2.9926E+04	6.3462E+04
1.204E+00	2.2085E+05	4.4833E+05	6.5177E+05	2.3072E+04	2.7189E+04	5.7189E+04
1.213E+00	2.1923E+05	4.3970E+05	6.3904E+05	2.2776E+04	2.6856E+04	5.6428E+04
1.349E+00	1.9138E+05	3.4015E+05	4.9316E+05	1.9150E+04	2.2710E+04	4.7062E+04
1.360E+00	1.8913E+05	3.3351E+05	4.8340E+05	1.8899E+04	2.2419E+04	4.6415E+04
1.500E+00	1.6289E+05	2.5972E+05	3.7431E+05	1.6051E+04	1.9089E+04	3.9053E+04
2.000E+00	1.0297E+05	1.1737E+05	1.6765E+05	9.7947E+03	1.1552E+04	2.2874E+04
3.000E+00	4.7549E+04	3.5054E+04	4.9475E+04	4.7327E+03	5.3097E+03	1.0078E+04
4.000E+00	2.5744E+04	1.4070E+04	1.9685E+04	2.7708E+03	2.9184E+03	5.3834E+03
5.000E+00	1.5459E+04	6.7292E+03	9.3455E+03	1.8096E+03	1.7857E+03	3.2231E+03
5.478E+00	1.2442E+04	4.9392E+03	6.8373E+03	1.5156E+03	1.4504E+03	2.5948E+03
5.522E+00	1.2206E+04	4.8066E+03	6.6520E+03	1.4922E+03	1.4240E+03	2.5456E+03
5.897E+00	1.0416E+04	3.8384E+03	5.3003E+03	1.3120E+03	1.2228E+03	2.1721E+03
5.944E+00	1.0215E+04	3.7345E+03	5.1553E+03	1.2916E+03	1.2002E+03	2.1303E+03
6.000E+00	9.9835E+03	3.6157E+03	4.9895E+03	1.2680E+03	1.1742E+03	2.0821E+03
6.236E+00	9.0783E+03	3.1634E+03	4.3590E+03	1.1748E+03	1.0721E+03	1.8941E+03
6.286E+00	8.9009E+03	3.0770E+03	4.2387E+03	1.1564E+03	1.0521E+03	1.8572E+03
8.000E+00	4.8322E+03	1.3152E+03	1.7956E+03	7.1239E+02	5.8637E+02	1.0110E+03
1.000E+01	2.6765E+03	5.8550E+02	7.9214E+02	4.4945E+02	3.3323E+02	5.6194E+02
1.500E+01	8.6250E+02	1.2758E+02	1.6943E+02	1.8884E+02	1.1296E+02	1.8268E+02
2.000E+01	3.6987E+02	4.1692E+01	5.4527E+01	9.9543E+01	5.0350E+01	7.8897E+01
3.000E+01	1.0625E+02	8.2708E+00	1.0553E+01	3.8860E+01	1.5310E+01	2.2870E+01
3.891E+01	4.6387E+01	2.8750E+00	3.6023E+00	2.0758E+01	6.9446E+00	1.0035E+01
3.922E+01	4.5208E+01	2.7828E+00	3.4848E+00	2.0356E+01	6.7763E+00	9.7811E+00
4.000E+01	4.2421E+01	2.5675E+00	3.2105E+00	1.9397E+01	6.3773E+00	9.1813E+00
5.000E+01	2.0482E+01	1.0279E+00	1.2634E+00	1.1141E+01	3.1868E+00	4.4497E+00
6.000E+01	1.1203E+01	4.8542E-01	5.8792E-01	7.0146E+00	1.7945E+00	2.4405E+00
8.000E+01	4.2740E+00	1.4875E-01	1.7585E-01	3.3256E+00	7.1807E-01	9.3456E-01
1.000E+02	2.0123E+00	5.9767E-02	6.9341E-02	1.8417E+00	3.5130E-01	4.4019E-01
1.500E+02	5.1251E-01	1.1715E-02	1.3187E-02	6.1638E-01	9.6181E-02	1.1250E-01
2.000E+02	1.9702E-01	3.8092E-03	4.2279E-03	2.8161E-01	3.8850E-02	4.3327E-02
3.000E+02	5.3715E-02	8.3428E-04	9.2725E-04	9.4340E-02	1.1256E-02	1.1833E-02
4.000E+02	2.2552E-02	3.0374E-04	3.4109E-04	4.4478E-02	4.8725E-03	4.9702E-03
5.000E+02	1.1946E-02	1.4434E-04	1.6620E-04	2.5407E-02	2.6244E-03	2.6401E-03
6.000E+02	7.3309E-03	8.0649E-05	9.6500E-05	1.6390E-02	1.6203E-03	1.6212E-03
8.000E+02	3.5992E-03	3.4337E-05	4.4579E-05	8.5465E-03	7.9326E-04	7.9549E-04
1.000E+03	2.1739E-03	1.9034E-05	2.5233E-05	5.3457E-03	4.7518E-04	4.8050E-04
1.500E+03	9.5950E-04	7.1141E-06	1.0864E-05	2.4622E-03	2.0579E-04	2.1222E-04

Z= 57

ENERGY	4 D 3/2	4 D 5/2	5 S 1/2	5 P 1/2	5 P 3/2	5 D 3/2
1.000E+00	8.8570E+04	1.2928E+05	6.3131E+03	6.0375E+03	1.2519E+04	6.8048E+02
1.122E+00	6.9460E+04	1.0100E+05	5.2031E+03	5.0341E+03	1.0311E+04	5.3280E+02
1.131E+00	6.8265E+04	9.9233E+04	5.1331E+03	4.9698E+03	1.0171E+04	5.2359E+02
1.204E+00	5.9422E+04	8.6203E+04	4.6115E+03	4.4865E+03	9.1217E+03	4.5562E+02
1.213E+00	5.8370E+04	8.4656E+04	4.5489E+03	4.4280E+03	8.9952E+03	4.4753E+02
1.349E+00	4.5783E+04	6.6176E+04	3.7865E+03	3.7072E+03	7.4500E+03	3.5105E+02
1.360E+00	4.4938E+04	6.4939E+04	3.7343E+03	3.6574E+03	7.3439E+03	3.4459E+02
1.500E+00	3.5615E+04	5.1310E+04	3.1467E+03	3.0900E+03	6.1446E+03	2.7320E+02
2.000E+00	1.7246E+04	2.4628E+04	1.8837E+03	1.8381E+03	3.5554E+03	1.3280E+02
3.000E+00	5.6367E+03	7.9496E+03	8.9454E+02	8.3357E+02	1.5531E+03	4.3928E+01
4.000E+00	2.3908E+03	3.3407E+03	5.1944E+02	4.5577E+02	8.2730E+02	1.8737E+01
5.000E+00	1.1863E+03	1.6453E+03	3.3754E+02	2.7815E+02	4.9482E+02	9.3362E+00
5.478E+00	8.8285E+02	1.2204E+03	2.8222E+02	2.2575E+02	3.9829E+02	6.9593E+00
5.522E+00	8.6016E+02	1.1887E+03	2.7782E+02	2.2163E+02	3.9075E+02	6.7815E+00
5.897E+00	6.9321E+02	9.5575E+02	2.4400E+02	1.9024E+02	3.3341E+02	5.4714E+00
5.944E+00	6.7517E+02	9.3060E+02	2.4017E+02	1.8672E+02	3.2700E+02	5.3297E+00
6.000E+00	6.5451E+02	9.0181E+02	2.3573E+02	1.8265E+02	3.1960E+02	5.1674E+00
6.236E+00	5.7559E+02	7.9195E+02	2.1828E+02	1.6675E+02	2.9074E+02	4.5473E+00
6.286E+00	5.6046E+02	7.7090E+02	2.1484E+02	1.6362E+02	2.8509E+02	4.4284E+00
8.000E+00	2.4647E+02	3.3588E+02	1.3193E+02	9.1133E+01	1.5529E+02	1.9548E+00
1.000E+01	1.1220E+02	1.5149E+02	8.3050E+01	5.1788E+01	8.6403E+01	8.9259E-01
1.500E+01	2.5321E+01	3.3548E+01	3.4802E+01	1.7740E+01	2.8089E+01	2.0237E-01
2.000E+01	8.4401E+00	1.1013E+01	1.8331E+01	7.9168E+00	1.2146E+01	6.7645E-02
3.000E+01	1.7084E+00	2.1756E+00	7.1860E+00	2.4110E+00	3.5262E+00	1.3739E-02
3.891E+01	5.9986E-01	7.5048E-01	3.8373E+00	1.0946E+00	1.5486E+00	4.8330E-03
3.922E+01	5.8078E-01	7.2621E-01	3.7631E+00	1.0681E+00	1.5095E+00	4.6796E-03
4.000E+01	5.3620E-01	6.6954E-01	3.5856E+00	1.0052E+00	1.4170E+00	4.3213E-03
5.000E+01	2.1617E-01	2.6549E-01	2.0591E+00	5.0263E-01	6.8720E-01	1.7445E-03
6.000E+01	1.0265E-01	1.2351E-01	1.2962E+00	2.8316E-01	3.7710E-01	8.2862E-04
8.000E+01	3.1660E-02	3.7185E-02	6.1440E-01	1.1338E-01	1.4450E-01	2.5583E-04
1.000E+02	1.2777E-02	1.4716E-02	3.4017E-01	5.5498E-02	6.8229E-02	1.0325E-04
1.500E+02	2.5197E-03	2.8161E-03	1.1391E-01	1.5191E-02	1.7449E-02	2.0362E-05
2.000E+02	8.2185E-04	9.0583E-04	5.2050E-02	6.1376E-03	6.7223E-03	6.6422E-06
3.000E+02	1.8081E-04	1.9904E-04	1.7439E-02	1.7786E-03	1.8368E-03	1.4605E-06
4.000E+02	6.5759E-05	7.3717E-05	8.2224E-03	7.7006E-04	7.7181E-04	5.3080E-07
5.000E+02	3.1143E-05	3.6178E-05	4.6969E-03	4.1475E-04	4.0993E-04	2.5189E-07
6.000E+02	1.7472E-05	2.1001E-05	3.0302E-03	2.5599E-04	2.5181E-04	1.4107E-07
8.000E+02	7.4585E-06	9.5632E-06	1.5802E-03	1.2534E-04	1.2365E-04	6.0321E-08
1.000E+03	4.0689E-06	5.5148E-06	9.8848E-04	7.5056E-05	7.4719E-05	3.2802E-08
1.500E+03	1.5324E-06	2.2886E-06	4.5551E-04	3.2505E-05	3.3073E-05	1.2418E-08

Z= 57

ENERGY	5 D 5/2	6 S 1/2
1.000E+00	9.7957E+02	6.7913E+02
1.122E+00	7.6463E+02	5.5645E+02
1.131E+00	7.5126E+02	5.4878E+02
1.204E+00	6.5263E+02	4.9163E+02
1.213E+00	6.4091E+02	4.8476E+02
1.349E+00	5.0133E+02	4.0130E+02
1.360E+00	4.9200E+02	3.9561E+02
1.500E+00	3.8910E+02	3.3196E+02
2.000E+00	1.8769E+02	1.9643E+02
3.000E+00	6.0549E+01	9.4812E+01
4.000E+00	2.5589E+01	5.5052E+01
5.000E+00	1.2655E+01	3.5777E+01
5.478E+00	9.4024E+00	2.9914E+01
5.522E+00	9.1594E+00	2.9448E+01
5.897E+00	7.3730E+00	2.5865E+01
5.944E+00	7.1799E+00	2.5459E+01
6.000E+00	6.9590E+00	2.4989E+01

Z= 57

ENERGY	5 D 5/2	6 S 1/2
6.236E+00	6.1152E+00	2.3140E+01
6.286E+00	5.9535E+00	2.2775E+01
8.000E+00	2.6038E+00	1.3989E+01
1.000E+01	1.1780E+00	8.8079E+00
1.500E+01	2.6211E-01	3.6913E+00
2.000E+01	8.6291E-02	1.9438E+00
3.000E+01	1.7097E-02	7.5813E-01
3.891E+01	5.9061E-03	4.0483E-01
3.922E+01	5.7153E-03	3.9700E-01
4.000E+01	5.2699E-03	3.7827E-01
5.000E+01	2.0916E-03	2.1723E-01
6.000E+01	9.7917E-04	1.3675E-01
8.000E+01	2.9512E-04	6.4818E-02
1.000E+02	1.1691E-04	3.5889E-02
1.500E+02	2.2383E-05	1.2019E-02
2.000E+02	7.2011E-06	5.4928E-03
3.000E+02	1.5857E-06	1.8411E-03
4.000E+02	5.8925E-07	8.6861E-04
5.000E+02	2.8903E-07	4.9663E-04
6.000E+02	1.6795E-07	3.2077E-04
8.000E+02	7.7107E-08	1.6782E-04
1.000E+03	4.4793E-08	1.0545E-04
1.500E+03	1.9142E-08	4.9521E-05

Z= 58 20 STATES, 40 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	40.4606	.98284
2 S 1/2	2.00	6.5141	.84003
2 P 1/2	2.00	6.1655	.76551
2 P 3/2	4.00	5.7126	.74870
3 S 1/2	2.00	1.4103	.58589
3 P 1/2	2.00	1.2602	.49626
3 P 3/2	4.00	1.1704	.47636
3 D 3/2	4.00	.9054	.26399
3 D 5/2	6.00	.8860	.26010
4 S 1/2	2.00	.2852	.32361
4 P 1/2	2.00	.2287	.25004
4 P 3/2	4.00	.2094	.23489
4 D 3/2	4.00	.1158	.09457
4 D 5/2	6.00	.1124	.09205
4 F 5/2	.86	.0068	.00619
4 F 7/2	1.14	.0065	.00607
5 S 1/2	2.00	.0418	.11126
5 P 1/2	2.00	.0264	.07037
5 P 3/2	4.00	.0236	.06385
6 S 1/2	2.00	.0048	.01804

Z= 58 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	2.2573E+06	.0E+00	.0E+00	1.8487E+06	4.0863E+05
1.1693E+00	1.5744E+06	.0E+00	.0E+00	1.2708E+06	3.0366E+05
1.1786E+00	1.7757E+06	.0E+00	.0E+00	1.4767E+06	2.9897E+05
1.2589E+00	1.5386E+06	.0E+00	.0E+00	1.2760E+06	2.6252E+05
1.2690E+00	1.6025E+06	.0E+00	.0E+00	1.3441E+06	2.5838E+05
1.4089E+00	1.2833E+06	.0E+00	.0E+00	1.0742E+06	2.0907E+05
1.4202E+00	1.3175E+06	.0E+00	.0E+00	1.1118E+06	2.0567E+05
1.5000E+00	1.1691E+06	.0E+00	.0E+00	9.8549E+05	1.8364E+05

Z= 58 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY (KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
2.0000E+00	6.0484E+05	.0E+00	.0E+00	5.0589E+05	9.8946E+04
3.0000E+00	2.2773E+05	.0E+00	.0E+00	1.8783E+05	3.9903E+04
4.0000E+00	1.1052E+05	.0E+00	.0E+00	9.0751E+04	1.9774E+04
5.0000E+00	6.2504E+04	.0E+00	.0E+00	5.1054E+04	1.1450E+04
5.7069E+00	4.4398E+04	.0E+00	.0E+00	3.6160E+04	8.2372E+03
5.7526E+00	1.2452E+05	.0E+00	8.1031E+04	3.5413E+04	8.0742E+03
6.0000E+00	1.1308E+05	.0E+00	7.4105E+04	3.1711E+04	7.2637E+03
6.1594E+00	1.0510E+05	.0E+00	6.8696E+04	2.9602E+04	6.7995E+03
6.2087E+00	1.4050E+05	.0E+00	1.0485E+05	2.8988E+04	6.6641E+03
6.5076E+00	1.2508E+05	.0E+00	9.3556E+04	2.5610E+04	5.9169E+03
6.5597E+00	1.4144E+05	.0E+00	1.1056E+05	2.5077E+04	5.7985E+03
8.0000E+00	8.5947E+04	.0E+00	6.7645E+04	1.4811E+04	3.4910E+03
1.0000E+01	4.7712E+04	.0E+00	3.7611E+04	8.1448E+03	1.9560E+03
1.5000E+01	1.6133E+04	.0E+00	1.2758E+04	2.7066E+03	6.6900E+02
2.0000E+01	7.3496E+03	.0E+00	5.8167E+03	1.2248E+03	3.0811E+02
3.0000E+01	2.3848E+03	.0E+00	1.8882E+03	3.9515E+02	1.0139E+02
4.0000E+01	1.0621E+03	.0E+00	8.4100E+02	1.7558E+02	4.5563E+01
4.0420E+01	1.0312E+03	.0E+00	8.1652E+02	1.7046E+02	4.4251E+01
4.0744E+01	5.8663E+03	4.8581E+03	7.9831E+02	1.6665E+02	4.3275E+01
5.0000E+01	3.4218E+03	2.8574E+03	4.4685E+02	9.3178E+01	2.4363E+01
6.0000E+01	2.1048E+03	1.7690E+03	2.6581E+02	5.5384E+01	1.4559E+01
8.0000E+01	9.5831E+02	8.1098E+02	1.1661E+02	2.4279E+01	6.4303E+00
1.0000E+02	5.1525E+02	4.3768E+02	6.1393E+01	1.2778E+01	3.3999E+00
1.5000E+02	1.6445E+02	1.4028E+02	1.9123E+01	3.9802E+00	1.0663E+00
2.0000E+02	7.3037E+01	6.2407E+01	8.4086E+00	1.7505E+00	4.7072E-01
3.0000E+02	2.3732E+01	2.0307E+01	2.7083E+00	5.6400E-01	1.5226E-01
4.0000E+02	1.1026E+01	9.4429E+00	1.2521E+00	2.6076E-01	7.0537E-02
5.0000E+02	6.2514E+00	5.3575E+00	7.0688E-01	1.4715E-01	3.9865E-02
6.0000E+02	4.0174E+00	3.4451E+00	4.5250E-01	9.4170E-02	2.5532E-02
8.0000E+02	2.0889E+00	1.7934E+00	2.3371E-01	4.8607E-02	1.3190E-02
1.0000E+03	1.3062E+00	1.1225E+00	1.4534E-01	3.0211E-02	8.2025E-03
1.5000E+03	6.0256E-01	5.1858E-01	6.6443E-02	1.3795E-02	3.7490E-03

Z= 58

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.169E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.179E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.259E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.269E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	9.0470E+04
1.409E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	8.2258E+04
1.420E+00	.0E+00	.0E+00	.0E+00	.0E+00	5.6480E+04	8.1550E+04
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	5.2950E+04	7.6289E+04
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.5577E+04	5.1266E+04
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.9004E+04	2.5678E+04
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.1599E+04	1.4519E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.7453E+03	8.9987E+03
5.707E+00	.0E+00	.0E+00	.0E+00	.0E+00	6.0505E+03	6.6859E+03
5.753E+00	.0E+00	.0E+00	.0E+00	8.1031E+04	5.9600E+03	6.5647E+03
6.000E+00	.0E+00	.0E+00	.0E+00	7.4105E+04	5.5036E+03	5.9566E+03
6.159E+00	.0E+00	.0E+00	.0E+00	6.8696E+04	5.2364E+03	5.6047E+03
6.209E+00	.0E+00	.0E+00	3.7626E+04	6.7223E+04	5.1575E+03	5.5015E+03
6.508E+00	.0E+00	.0E+00	3.4008E+04	5.9548E+04	4.7132E+03	4.9278E+03
6.560E+00	.0E+00	1.8957E+04	3.3252E+04	5.8354E+04	4.6412E+03	4.8360E+03
8.000E+00	.0E+00	1.3661E+04	2.0017E+04	3.3967E+04	3.1481E+03	2.9937E+03
1.000E+01	.0E+00	9.0309E+03	1.0785E+04	1.7795E+04	2.0080E+03	1.7053E+03
1.500E+01	.0E+00	4.0575E+03	3.3730E+03	5.3271E+03	8.5661E+02	5.7867E+02
2.000E+01	.0E+00	2.2039E+03	1.4295E+03	2.1833E+03	4.5486E+02	2.5771E+02
3.000E+01	.0E+00	8.8227E+02	4.0976E+02	5.9617E+02	1.7893E+02	7.8272E+01
4.000E+01	.0E+00	4.4463E+02	1.6505E+02	2.3132E+02	8.9687E+01	3.2591E+01

Z= 58

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
4.042E+01	.0E+00	4.3346E+02	1.5963E+02	2.2342E+02	8.7426E+01	3.1557E+01
4.074E+01	4.8581E+03	4.2512E+02	1.5562E+02	2.1758E+02	8.5736E+01	3.0790E+01
5.000E+01	2.8574E+03	2.5649E+02	8.0686E+01	1.0968E+02	5.1654E+01	1.6285E+01
6.000E+01	1.7690E+03	1.6182E+02	4.4750E+01	5.9235E+01	3.2584E+01	9.1713E+00
8.000E+01	8.1098E+02	7.6827E+01	1.7554E+01	2.2233E+01	1.5488E+01	3.6721E+00
1.000E+02	4.3768E+02	4.2549E+01	8.4825E+00	1.0361E+01	8.5921E+00	1.7979E+00
1.500E+02	1.4028E+02	1.4240E+01	2.2812E+00	2.6023E+00	2.8862E+00	4.9259E-01
2.000E+02	6.2407E+01	6.5019E+00	9.1345E-01	9.9330E-01	1.3214E+00	1.9919E-01
3.000E+02	2.0307E+01	2.1769E+00	2.6243E-01	2.6893E-01	4.4385E-01	5.7800E-02
4.000E+02	9.4429E+00	1.0264E+00	1.1318E-01	1.1251E-01	2.0962E-01	2.5045E-02
5.000E+02	5.3575E+00	5.8643E-01	6.0837E-02	5.9612E-02	1.1983E-01	1.3525E-02
6.000E+02	3.4451E+00	3.7844E-01	3.7506E-02	3.6557E-02	7.7360E-02	8.3550E-03
8.000E+02	1.7934E+00	1.9745E-01	1.8342E-02	1.7915E-02	4.0371E-02	4.0936E-03
1.000E+03	1.1225E+00	1.2355E-01	1.0976E-02	1.0810E-02	2.5261E-02	2.4544E-03
1.500E+03	5.1858E-01	5.6924E-02	4.7623E-03	4.7565E-03	1.1632E-02	1.0636E-03

Z= 58

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	7.5175E+05	1.0970E+06	3.1773E+04	3.6643E+04	7.9704E+04
1.169E+00	.0E+00	5.1709E+05	7.5367E+05	2.4911E+04	2.9236E+04	6.2120E+04
1.179E+00	2.3002E+05	5.0739E+05	7.3928E+05	2.4597E+04	2.8888E+04	6.1313E+04
1.259E+00	2.1422E+05	4.3290E+05	6.2892E+05	2.2130E+04	2.6132E+04	5.4958E+04
1.269E+00	2.1255E+05	4.2454E+05	6.1656E+05	2.1847E+04	2.5813E+04	5.4225E+04
1.409E+00	1.8527E+05	3.2945E+05	4.7721E+05	1.8427E+04	2.1887E+04	4.5344E+04
1.420E+00	1.8308E+05	3.2296E+05	4.6773E+05	1.8186E+04	2.1607E+04	4.4720E+04
1.500E+00	1.6846E+05	2.8147E+05	4.0633E+05	1.6607E+04	1.9765E+04	4.0621E+04
2.000E+00	1.0712E+05	1.2849E+05	1.8344E+05	1.0172E+04	1.2042E+04	2.3910E+04
3.000E+00	4.9942E+04	3.8663E+04	5.4540E+04	5.5788E+03	5.5788E+03	1.0597E+04
4.000E+00	2.7208E+04	1.5612E+04	2.1813E+04	2.8923E+03	3.0830E+03	5.6845E+03
5.000E+00	1.6413E+04	7.4977E+03	1.0400E+04	1.8915E+03	1.8947E+03	3.4155E+03
5.707E+00	1.2002E+04	4.7985E+03	6.6235E+03	1.4638E+03	1.4040E+03	2.4974E+03
5.753E+00	1.1774E+04	4.6696E+03	6.4440E+03	1.4412E+03	1.3785E+03	2.4500E+03
6.000E+00	1.0637E+04	4.0427E+03	5.5711E+03	1.3270E+03	1.2505E+03	2.2132E+03
6.159E+00	9.9798E+03	3.6946E+03	5.0865E+03	1.2604E+03	1.1764E+03	2.0766E+03
6.209E+00	9.7871E+03	3.5945E+03	4.9471E+03	1.2407E+03	1.1547E+03	2.0366E+03
6.508E+00	8.7174E+03	3.0552E+03	4.1969E+03	1.1306E+03	1.0338E+03	1.8148E+03
6.560E+00	8.5468E+03	2.9718E+03	4.0811E+03	1.1129E+03	1.0145E+03	1.7795E+03
8.000E+00	5.1759E+03	1.4784E+03	2.0149E+03	7.4728E+02	6.2829E+02	1.0801E+03
1.000E+01	2.8782E+03	6.6086E+02	8.9234E+02	4.7232E+02	3.5869E+02	6.0266E+02
1.500E+01	9.3395E+02	1.4509E+02	1.9225E+02	1.9911E+02	1.2257E+02	1.9723E+02
2.000E+01	4.0240E+02	4.7656E+01	6.2173E+01	1.0524E+02	5.4943E+01	8.5593E+01
3.000E+01	1.1633E+02	9.5169E+00	1.2107E+01	4.1252E+01	1.6837E+01	2.4973E+01
4.000E+01	4.6637E+01	2.9676E+00	3.6989E+00	2.0653E+01	7.0495E+00	1.0069E+01
4.042E+01	4.5093E+01	2.8438E+00	3.5419E+00	2.0132E+01	6.8272E+00	9.7374E+00
4.074E+01	4.3949E+01	2.7529E+00	3.4265E+00	1.9743E+01	6.6621E+00	9.4916E+00
5.000E+01	2.2587E+01	1.1918E+00	1.4600E+00	1.1891E+01	3.5362E+00	4.8954E+00
6.000E+01	1.2383E+01	5.6424E-01	6.8091E-01	7.5013E+00	1.9972E+00	2.6916E+00
8.000E+01	4.7409E+00	1.7350E-01	2.0430E-01	3.5671E+00	8.0278E-01	1.0345E+00
1.000E+02	2.2377E+00	6.9879E-02	8.0731E-02	1.9799E+00	3.9401E-01	4.8848E-01
1.500E+02	5.7220E-01	1.3753E-02	1.5407E-02	6.6531E-01	1.0844E-01	1.2536E-01
2.000E+02	2.2049E-01	4.4825E-03	4.9497E-03	3.0476E-01	4.3948E-02	4.8398E-02
3.000E+02	6.0276E-02	9.8470E-04	1.0881E-03	1.0243E-01	1.2784E-02	1.3254E-02
4.000E+02	2.5339E-02	3.5927E-04	4.0038E-04	4.8389E-02	5.5471E-03	5.5751E-03
5.000E+02	1.3430E-02	1.7060E-04	1.9543E-04	2.7675E-02	2.9925E-03	2.9633E-03
6.000E+02	8.2454E-03	9.5365E-05	1.1369E-04	1.7868E-02	1.8496E-03	1.8201E-03
8.000E+02	4.0489E-03	4.0780E-05	5.2246E-05	9.3255E-03	9.0678E-04	8.9325E-04
1.000E+03	2.4437E-03	2.2545E-05	2.9596E-05	5.8345E-03	5.4369E-04	5.3932E-04
1.500E+03	1.0783E-03	8.4153E-06	1.2703E-05	2.6866E-03	2.3574E-04	2.3798E-04

Z= 58

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	9.2888E+04	1.3553E+05	3.3705E+03	4.3323E+03	6.1548E+03	5.7408E+03
1.169E+00	6.6942E+04	9.7140E+04	1.9621E+03	2.5176E+03	4.7367E+03	4.4919E+03
1.179E+00	6.5791E+04	9.5445E+04	1.9079E+03	2.4480E+03	4.6732E+03	4.4346E+03
1.259E+00	5.6888E+04	8.2347E+04	1.5121E+03	1.9387E+03	4.1775E+03	3.9841E+03
1.269E+00	5.5882E+04	8.0869E+04	1.4699E+03	1.8844E+03	4.1209E+03	3.9322E+03
1.409E+00	4.3992E+04	6.3445E+04	1.0108E+03	1.2944E+03	3.4418E+03	3.3024E+03
1.420E+00	4.3181E+04	6.2258E+04	9.8207E+02	1.2575E+03	3.3945E+03	3.2581E+03
1.500E+00	3.7953E+04	5.4624E+04	8.0522E+02	1.0304E+03	3.0861E+03	2.9671E+03
2.000E+00	1.8536E+04	2.6436E+04	2.7555E+02	3.5155E+02	1.8533E+03	1.7753E+03
3.000E+00	6.1227E+03	8.6198E+03	5.5781E+01	7.0275E+01	8.8244E+02	8.1065E+02
4.000E+00	2.6161E+03	3.6481E+03	1.7111E+01	2.1468E+01	5.1312E+02	4.4539E+02
5.000E+00	1.3056E+03	1.8066E+03	6.6207E+00	8.2774E+00	3.3382E+02	2.7292E+02
5.707E+00	8.5267E+02	1.1742E+03	3.7208E+00	4.6410E+00	2.5767E+02	2.0199E+02
5.753E+00	8.3076E+02	1.1437E+03	3.5926E+00	4.4804E+00	2.5365E+02	1.9831E+02
6.000E+00	7.2363E+02	9.9464E+02	2.9838E+00	3.7183E+00	2.3339E+02	1.7985E+02
6.159E+00	6.6371E+02	9.1137E+02	2.6570E+00	3.3095E+00	2.2157E+02	1.6916E+02
6.209E+00	6.4643E+02	8.8737E+02	2.5647E+00	3.1940E+00	2.1809E+02	1.6603E+02
6.508E+00	5.5292E+02	7.5764E+02	2.0808E+00	2.5891E+00	1.9859E+02	1.4861E+02
6.560E+00	5.3839E+02	7.3751E+02	2.0081E+00	2.4983E+00	1.9545E+02	1.4583E+02
8.000E+00	2.7440E+02	3.7293E+02	8.2204E-01	1.0186E+00	1.3088E+02	9.0246E+01
1.000E+01	1.2553E+02	1.6900E+02	2.9680E-01	3.6603E-01	8.2532E+01	5.1509E+01
1.500E+01	2.8572E+01	3.7731E+01	4.4732E-02	5.4651E-02	3.4695E+01	1.7816E+01
2.000E+01	9.5813E+00	1.2458E+01	1.1189E-02	1.3557E-02	1.8425E+01	7.9951E+00
3.000E+01	1.9546E+00	2.4789E+00	1.5269E-03	1.8246E-03	7.2167E+00	2.4538E+00
4.000E+01	6.1646E-01	7.6640E-01	3.6792E-04	4.3475E-04	3.6118E+00	1.0283E+00
4.042E+01	5.9095E-01	7.3416E-01	3.4933E-04	4.1261E-04	3.5206E+00	9.9592E-01
4.074E+01	5.7220E-01	7.1046E-01	3.3577E-04	3.9647E-04	3.4525E+00	9.7187E-01
5.000E+01	2.4937E-01	3.0492E-01	1.2141E-04	1.4205E-04	2.0791E+00	5.1616E-01
6.000E+01	1.1873E-01	1.4220E-01	4.9079E-05	5.6918E-05	1.3113E+00	2.9165E-01
8.000E+01	3.6763E-02	4.2959E-02	1.1838E-05	1.3530E-05	6.2344E-01	1.1730E-01
1.000E+02	1.4874E-02	1.7043E-02	3.9814E-06	4.4978E-06	3.4596E-01	5.7601E-02
1.500E+02	2.9452E-03	3.2733E-03	5.7942E-07	6.4347E-07	1.1631E-01	1.5851E-02
2.000E+02	9.6308E-04	1.0552E-03	1.5594E-07	1.7230E-07	5.3284E-02	6.4256E-03
3.000E+02	2.1250E-04	2.3247E-04	2.6777E-08	3.0071E-08	1.7911E-02	1.8695E-03
4.000E+02	7.7461E-05	8.6204E-05	8.4235E-09	9.7735E-09	8.4621E-03	8.1132E-04
5.000E+02	3.6735E-05	4.2312E-05	3.5713E-09	4.3508E-09	4.8399E-03	4.3767E-04
6.000E+02	2.0605E-05	2.4572E-05	1.8436E-09	2.3440E-09	3.1250E-03	2.7042E-04
8.000E+02	8.8179E-06	1.1189E-05	7.1268E-10	9.8869E-10	1.6310E-03	1.3260E-04
1.000E+03	4.8048E-06	6.4536E-06	3.6004E-10	5.5047E-10	1.0206E-03	7.9473E-05
1.500E+03	1.8140E-06	2.6770E-06	1.3931E-10	2.3621E-10	4.7019E-04	3.4466E-05

Z= 58

ENERGY	5 P 3/2	6 S 1/2
1.000E+00	1.1908E+04	5.8626E+02
1.169E+00	9.1564E+03	4.4732E+02
1.179E+00	9.0319E+03	4.4115E+02
1.259E+00	8.0568E+03	3.9304E+02
1.269E+00	7.9451E+03	3.8754E+02
1.409E+00	6.5994E+03	3.2185E+02
1.420E+00	6.5053E+03	3.1730E+02
1.500E+00	5.8909E+03	2.8777E+02
2.000E+00	3.4246E+03	1.7067E+02
3.000E+00	1.5042E+03	8.2794E+01
4.000E+00	8.0452E+02	4.8149E+01
5.000E+00	4.8285E+02	3.1330E+01
5.707E+00	3.5298E+02	2.4187E+01
5.753E+00	3.4628E+02	2.3810E+01
6.000E+00	3.1281E+02	2.1909E+01
6.159E+00	2.9351E+02	2.0800E+01
6.209E+00	2.8786E+02	2.0473E+01

Z= 58

ENERGY	5 P 3/2	6 S 1/2
6.508E+00	2.5653E+02	1.8644E+01
6.560E+00	2.5153E+02	1.8349E+01
8.000E+00	1.5275E+02	1.2291E+01
1.000E+01	8.5321E+01	7.7525E+00
1.500E+01	2.7924E+01	3.2596E+00
2.000E+01	1.2132E+01	1.7209E+00
3.000E+01	3.5452E+00	6.7396E-01
4.000E+01	1.4307E+00	3.3729E-01
4.042E+01	1.3837E+00	3.2878E-01
4.074E+01	1.3488E+00	3.2242E-01
5.000E+01	6.9607E-01	1.9415E-01
6.000E+01	3.8289E-01	1.2246E-01
8.000E+01	1.4726E-01	5.8221E-02
1.000E+02	6.9706E-02	3.2309E-02
1.500E+02	1.7902E-02	1.0863E-02
2.000E+02	6.9142E-03	4.9776E-03
3.000E+02	1.8945E-03	1.6740E-03
4.000E+02	7.9705E-04	7.9145E-04
5.000E+02	4.2368E-04	4.5309E-04
6.000E+02	2.6031E-04	2.9291E-04
8.000E+02	1.2785E-04	1.5343E-04
1.000E+03	7.7240E-05	9.6498E-05
1.500E+03	3.4168E-05	4.5376E-05

Z= 59 20 STATES, 40 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	42.0148	.98304
2 S 1/2	2.00	6.8006	.84220
2 P 1/2	2.00	6.4431	.76865
2 P 3/2	4.00	5.9542	.75139
3 S 1/2	2.00	1.4805	.59112
3 P 1/2	2.00	1.3259	.50230
3 P 3/2	4.00	1.2283	.48174
3 D 3/2	4.00	.9559	.26999
3 D 5/2	6.00	.9347	.26595
4 S 1/2	2.00	.2994	.32868
4 P 1/2	2.00	.2408	.25521
4 P 3/2	4.00	.2196	.23924
4 D 3/2	4.00	.1223	.09804
4 D 5/2	6.00	.1185	.09534
4 F 5/2	1.29	.0076	.00700
4 F 7/2	1.71	.0072	.00686
5 S 1/2	2.00	.0433	.11244
5 P 1/2	2.00	.0273	.07128
5 P 3/2	4.00	.0243	.06437
6 S 1/2	2.00	.0049	.01783

Z= 59 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	2.4740E+06	.0E+00	.0E+00	2.0388E+06	4.3524E+05
1.2271E+00	1.5095E+06	.0E+00	.0E+00	1.2147E+06	2.9476E+05
1.2369E+00	1.7043E+06	.0E+00	.0E+00	1.4141E+06	2.9017E+05
1.3246E+00	1.4658E+06	.0E+00	.0E+00	1.2127E+06	2.5316E+05
1.3352E+00	1.5271E+06	.0E+00	.0E+00	1.2780E+06	2.4912E+05
1.4790E+00	1.2264E+06	.0E+00	.0E+00	1.0243E+06	2.0214E+05
1.4909E+00	1.2590E+06	.0E+00	.0E+00	1.0601E+06	1.9882E+05
1.5000E+00	1.2426E+06	.0E+00	.0E+00	1.0463E+06	1.9632E+05

Z= 59 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY (KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
2.0000E+00	6.4573E+05	.0E+00	.0E+00	5.3973E+05	1.0601E+05
3.0000E+00	2.4322E+05	.0E+00	.0E+00	2.0107E+05	4.2153E+04
4.0000E+00	1.1856E+05	.0E+00	.0E+00	9.7305E+04	2.1260E+04
5.0000E+00	6.7117E+04	.0E+00	.0E+00	5.4794E+04	1.2323E+04
5.9482E+00	4.2842E+04	.0E+00	.0E+00	3.4845E+04	7.9975E+03
5.9958E+00	1.1930E+05	.0E+00	7.7334E+04	3.4123E+04	7.8390E+03
6.0000E+00	1.1921E+05	.0E+00	7.7327E+04	3.4061E+04	7.8254E+03
6.4367E+00	9.9888E+04	.0E+00	6.5009E+04	2.8323E+04	6.5562E+03
6.4882E+00	1.3361E+05	.0E+00	9.9447E+04	2.7735E+04	6.4254E+03
6.7938E+00	1.1922E+05	.0E+00	8.8935E+04	2.4566E+04	5.7183E+03
6.8482E+00	1.3483E+05	.0E+00	1.0517E+05	2.4054E+04	5.6037E+03
8.0000E+00	9.1490E+04	.0E+00	7.1795E+04	1.5927E+04	3.7667E+03
1.0000E+01	5.0916E+04	.0E+00	4.0038E+04	8.7658E+03	2.1127E+03
1.5000E+01	1.7268E+04	.0E+00	1.3627E+04	2.9175E+03	7.2387E+02
2.0000E+01	7.8796E+03	.0E+00	6.2240E+03	1.3218E+03	3.3370E+02
3.0000E+01	2.5622E+03	.0E+00	2.0250E+03	4.2714E+02	1.1005E+02
4.0000E+01	1.1428E+03	.0E+00	9.0328E+02	1.9001E+02	4.9518E+01
4.1973E+01	9.9758E+02	.0E+00	7.8847E+02	1.6582E+02	4.3288E+01
4.2309E+01	5.6299E+03	4.6545E+03	7.7090E+02	1.6212E+02	4.2334E+01
5.0000E+01	3.6211E+03	3.0133E+03	4.8042E+02	1.0093E+02	2.6504E+01
6.0000E+01	2.2378E+03	1.8759E+03	2.8603E+02	6.0038E+01	1.5852E+01
8.0000E+01	1.0213E+03	8.6231E+02	1.2567E+02	2.6353E+01	7.0106E+00
1.0000E+02	5.5012E+02	4.6629E+02	6.6231E+01	1.3884E+01	3.7119E+00
1.5000E+02	1.7610E+02	1.4993E+02	2.0673E+01	4.3330E+00	1.1662E+00
2.0000E+02	7.8365E+01	6.6837E+01	9.1040E+00	1.9085E+00	5.1562E-01
3.0000E+02	2.5526E+01	2.1805E+01	2.9383E+00	6.1612E-01	1.6713E-01
4.0000E+02	1.1879E+01	1.0156E+01	1.3602E+00	2.8522E-01	7.7529E-02
5.0000E+02	6.7419E+00	5.7684E+00	7.6859E-01	1.6108E-01	4.3853E-02
6.0000E+02	4.3356E+00	3.7121E+00	4.9228E-01	1.0314E-01	2.8101E-02
8.0000E+02	2.2561E+00	1.9339E+00	2.5438E-01	5.3264E-02	1.4525E-02
1.0000E+03	1.4111E+00	1.2108E+00	1.5821E-01	3.3107E-02	9.0326E-03
1.5000E+03	6.5080E-01	5.5927E-01	7.2294E-02	1.5111E-02	4.1263E-03

Z= 59

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.227E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.237E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.325E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.335E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.479E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	8.6847E+04
1.491E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.8785E+04
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	5.3954E+04	7.8101E+04
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	5.3791E+04	7.7564E+04
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.6430E+04	5.2620E+04
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.9593E+04	2.6791E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.2014E+04	1.5272E+04
5.948E+00	.0E+00	.0E+00	.0E+00	.0E+00	8.0471E+03	9.5180E+03
5.996E+00	.0E+00	.0E+00	.0E+00	.0E+00	5.8266E+03	6.4551E+03
6.000E+00	.0E+00	.0E+00	.0E+00	7.7334E+04	5.7393E+03	6.3381E+03
6.437E+00	.0E+00	.0E+00	.0E+00	7.7327E+04	5.7318E+03	6.3281E+03
6.488E+00	.0E+00	.0E+00	.0E+00	6.5009E+04	5.0165E+03	5.3783E+03
6.794E+00	.0E+00	.0E+00	3.5832E+04	6.3615E+04	4.9408E+03	5.2792E+03
6.848E+00	.0E+00	.0E+00	3.2464E+04	5.6471E+04	4.5237E+03	4.7395E+03
8.000E+00	.0E+00	1.8105E+04	3.1735E+04	5.5334E+04	4.4546E+03	4.6512E+03
1.000E+01	.0E+00	1.4000E+04	2.1407E+04	3.6389E+04	3.2889E+03	3.2002E+03
1.500E+01	.0E+00	9.3129E+03	1.1614E+04	1.9111E+04	2.1027E+03	1.8322E+03
2.000E+01	.0E+00	4.2255E+03	3.6514E+03	5.7499E+03	9.0050E+02	6.2687E+02
3.000E+01	.0E+00	2.3035E+03	1.5559E+03	2.3645E+03	4.7961E+02	2.8074E+02
4.000E+01	.0E+00	9.2752E+02	4.4877E+02	6.4867E+02	1.8949E+02	8.5913E+01
4.000E+01	.0E+00	4.6928E+02	1.8148E+02	2.5253E+02	9.5271E+01	3.5952E+01

Z= 59

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
4.197E+01	.0E+00	4.1749E+02	1.5573E+02	2.1525E+02	8.4723E+01	3.1009E+01
4.231E+01	4.6545E+03	4.0945E+02	1.5182E+02	2.0963E+02	8.3087E+01	3.0256E+01
5.000E+01	3.0133E+03	2.7140E+02	8.8998E+01	1.2002E+02	5.5004E+01	1.8031E+01
6.000E+01	1.8759E+03	1.7162E+02	4.9477E+01	6.4943E+01	3.4766E+01	1.0184E+01
8.000E+01	8.6231E+02	8.1740E+01	1.9481E+01	2.4444E+01	1.6576E+01	4.0953E+00
1.000E+02	4.6629E+02	4.5376E+01	9.4389E+00	1.1416E+01	9.2162E+00	2.0113E+00
1.500E+02	1.4993E+02	1.5246E+01	2.5500E+00	2.8770E+00	3.1081E+00	5.5393E-01
2.000E+02	6.6837E+01	6.9795E+00	1.0241E+00	1.1004E+00	1.4267E+00	2.2473E-01
3.000E+02	2.1805E+01	2.3444E+00	2.9527E-01	2.9864E-01	4.8079E-01	6.5464E-02
4.000E+02	1.0156E+01	1.1075E+00	1.2762E-01	1.2508E-01	2.2751E-01	2.8433E-02
5.000E+02	5.7684E+00	6.3358E-01	6.8695E-02	6.6311E-02	1.3022E-01	1.5377E-02
6.000E+02	3.7121E+00	4.0921E-01	4.2392E-02	4.0674E-02	8.4140E-02	9.5081E-03
8.000E+02	1.9339E+00	2.1369E-01	2.0759E-02	1.9932E-02	4.3948E-02	4.6657E-03
1.000E+03	1.2108E+00	1.3375E-01	1.2433E-02	1.2023E-02	2.7507E-02	2.8007E-03
1.500E+03	5.5927E-01	6.1609E-02	5.4009E-03	5.2840E-03	1.2663E-02	1.2146E-03

Z= 59

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	8.3501E+05	1.2038E+06	3.2797E+04	3.7733E+04	8.2845E+04
1.227E+00	.0E+00	4.9472E+05	7.1999E+05	2.3895E+04	2.8154E+04	5.9873E+04
1.237E+00	2.2265E+05	4.8535E+05	7.0610E+05	2.3593E+04	2.7818E+04	5.9093E+04
1.325E+00	2.0581E+05	4.1088E+05	5.9597E+05	2.1140E+04	2.5058E+04	5.2711E+04
1.335E+00	2.0412E+05	4.0288E+05	5.8416E+05	2.0870E+04	2.4751E+04	5.2004E+04
1.479E+00	1.7783E+05	3.1383E+05	4.5383E+05	1.7666E+04	2.1054E+04	4.3618E+04
1.491E+00	1.7570E+05	3.0760E+05	4.4477E+05	1.7435E+04	2.0784E+04	4.3014E+04
1.500E+00	1.7408E+05	3.0293E+05	4.3794E+05	1.7260E+04	2.0580E+04	4.2558E+04
2.000E+00	1.1094E+05	1.3988E+05	1.9986E+05	1.0607E+04	1.2621E+04	2.5166E+04
3.000E+00	5.2376E+04	4.2457E+04	5.9853E+04	5.1606E+03	5.8938E+03	1.1221E+04
4.000E+00	2.8685E+04	1.7253E+04	2.4081E+04	3.0323E+03	3.2743E+03	6.0434E+03
5.000E+00	1.7381E+04	8.3221E+03	1.1526E+04	1.9858E+03	2.0210E+03	3.6436E+03
5.948E+00	1.1543E+04	4.6376E+03	6.3826E+03	1.4188E+03	1.3658E+03	2.4180E+03
5.996E+00	1.1323E+04	4.5131E+03	6.2094E+03	1.3968E+03	1.3409E+03	2.3721E+03
6.000E+00	1.1304E+04	4.5024E+03	6.1946E+03	1.3949E+03	1.3388E+03	2.3682E+03
6.437E+00	9.5340E+03	3.5382E+03	4.8560E+03	1.2151E+03	1.1375E+03	1.9974E+03
6.488E+00	9.3498E+03	3.4423E+03	4.7229E+03	1.1962E+03	1.1165E+03	1.9588E+03
6.794E+00	8.3468E+03	2.9358E+03	4.0202E+03	1.0920E+03	1.0019E+03	1.7495E+03
6.848E+00	8.1833E+03	2.8556E+03	3.9091E+03	1.0749E+03	9.8323E+02	1.7154E+03
8.000E+00	5.5316E+03	1.6550E+03	2.2516E+03	7.8724E+02	6.7669E+02	1.1615E+03
1.000E+01	3.0872E+03	7.4270E+02	1.0010E+03	4.9848E+02	3.8809E+02	6.5053E+02
1.500E+01	1.0087E+03	1.6429E+02	2.1717E+02	2.1083E+02	1.3367E+02	2.1432E+02
2.000E+01	4.3667E+02	5.4236E+01	7.0575E+01	1.1172E+02	6.0259E+01	9.3445E+01
3.000E+01	1.2701E+02	1.0902E+01	1.3828E+01	4.3972E+01	1.8608E+01	2.7440E+01
4.000E+01	5.1132E+01	3.4143E+00	4.2421E+00	2.2081E+01	7.8312E+00	1.1111E+01
4.197E+01	4.3805E+01	2.8077E+00	3.4755E+00	1.9633E+01	6.7605E+00	9.5270E+00
4.231E+01	4.2695E+01	2.7181E+00	3.3625E+00	1.9254E+01	6.5974E+00	9.2868E+00
5.000E+01	2.4839E+01	1.3757E+00	1.6794E+00	1.2743E+01	3.9433E+00	5.4188E+00
6.000E+01	1.3650E+01	6.5285E-01	7.8499E-01	8.0540E+00	2.2338E+00	2.9866E+00
8.000E+01	5.2440E+00	2.0144E-01	2.3626E-01	3.8414E+00	9.0182E-01	1.1520E+00
1.000E+02	2.4812E+00	8.1326E-02	9.3558E-02	2.1369E+00	4.4403E-01	5.4652E-01
1.500E+02	6.3701E-01	1.6068E-02	1.7915E-02	7.2094E-01	1.2287E-01	1.4054E-01
2.000E+02	2.4605E-01	5.2503E-03	5.7675E-03	3.3110E-01	4.9959E-02	5.4391E-02
3.000E+02	6.7443E-02	1.1568E-03	1.2706E-03	1.1165E-01	1.4590E-02	1.4937E-02
4.000E+02	2.8388E-02	4.2265E-04	4.6772E-04	5.2850E-02	6.3461E-03	6.2924E-03
5.000E+02	1.5055E-02	2.0060E-04	2.2911E-04	3.0265E-02	3.4294E-03	3.3463E-03
6.000E+02	9.2474E-03	1.1225E-04	1.3354E-04	1.9557E-02	2.1217E-03	2.0555E-03
8.000E+02	4.5414E-03	4.8328E-05	6.0888E-05	1.0215E-02	1.0417E-03	1.0092E-03
1.000E+03	2.7386E-03	2.6482E-05	3.4626E-05	6.3930E-03	6.2514E-04	6.0891E-04
1.500E+03	1.2085E-03	1.0098E-05	1.4641E-05	2.9430E-03	2.7138E-04	2.6842E-04

Z= 59

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	9.8706E+04	1.4407E+05	6.1030E+03	7.8403E+03	6.3568E+03	5.9011E+03
1.227E+00	6.4527E+04	9.3483E+04	3.0156E+03	3.8651E+03	4.5181E+03	4.2888E+03
1.237E+00	6.3415E+04	9.1846E+04	2.9324E+03	3.7581E+03	4.4576E+03	4.2341E+03
1.325E+00	5.4495E+04	7.8741E+04	2.3027E+03	2.9487E+03	3.9671E+03	3.7871E+03
1.335E+00	5.3527E+04	7.7321E+04	2.2384E+03	2.8661E+03	3.9133E+03	3.7376E+03
1.479E+00	4.2325E+04	6.0927E+04	1.5513E+03	1.9841E+03	3.2813E+03	3.1499E+03
1.491E+00	4.1542E+04	5.9785E+04	1.5073E+03	1.9275E+03	3.2362E+03	3.1075E+03
1.500E+00	4.0952E+04	5.8924E+04	1.4744E+03	1.8853E+03	3.2021E+03	3.0754E+03
2.000E+00	2.0176E+04	2.8756E+04	5.0817E+02	6.4771E+02	1.9276E+03	1.8498E+03
3.000E+00	6.7358E+03	9.4727E+03	1.0471E+02	1.3283E+02	9.2010E+02	8.5047E+02
4.000E+00	2.8990E+03	4.0372E+03	3.2105E+01	4.0230E+01	5.3577E+02	4.6958E+02
5.000E+00	1.4550E+03	2.0102E+03	1.2501E+01	1.5608E+01	3.4894E+02	2.8891E+02
5.948E+00	8.3341E+02	1.1439E+03	5.8819E+00	7.3215E+00	2.4843E+02	1.9492E+02
5.996E+00	8.1201E+02	1.1142E+03	5.6794E+00	7.0685E+00	2.4456E+02	1.9136E+02
6.000E+00	8.1017E+02	1.1117E+03	5.6622E+00	7.0469E+00	2.4422E+02	1.9106E+02
6.437E+00	6.4318E+02	8.8011E+02	4.1532E+00	5.1618E+00	2.1249E+02	1.6225E+02
6.488E+00	6.2643E+02	8.5693E+02	4.0090E+00	4.9818E+00	2.0914E+02	1.5924E+02
6.794E+00	5.3758E+02	7.3404E+02	3.2675E+00	4.0567E+00	1.9080E+02	1.4287E+02
6.848E+00	5.2346E+02	7.1453E+02	3.1534E+00	3.9144E+00	1.8778E+02	1.4019E+02
8.000E+00	3.0935E+02	4.1960E+02	1.5693E+00	1.9419E+00	1.3723E+02	9.6428E+01
1.000E+01	1.4223E+02	1.9106E+02	5.6834E-01	6.9981E-01	8.6677E+01	5.5284E+01
1.500E+01	3.2648E+01	4.3002E+01	8.6308E-02	1.0525E-01	3.6550E+01	1.9273E+01
2.000E+01	1.1014E+01	1.4279E+01	2.1755E-02	2.6311E-02	1.9350E+01	8.6977E+00
3.000E+01	2.2641E+00	2.8620E+00	2.9886E-03	3.5635E-03	7.6528E+00	2.6901E+00
4.000E+01	7.1756E-01	8.8886E-01	7.2298E-04	8.5228E-04	3.8414E+00	1.1332E+00
4.197E+01	5.9114E-01	7.2961E-01	5.6982E-04	6.7031E-04	3.4154E+00	9.7841E-01
4.231E+01	5.7242E-01	7.0610E-01	5.4777E-04	6.4416E-04	3.3493E+00	9.5484E-01
5.000E+01	2.9135E-01	3.5480E-01	2.3954E-04	2.7964E-04	2.2164E+00	5.7099E-01
6.000E+01	1.3907E-01	1.6585E-01	9.7141E-05	1.1237E-04	1.4006E+00	3.2360E-01
8.000E+01	4.3218E-02	5.0300E-02	2.3521E-05	2.6803E-05	6.6788E-01	1.3074E-01
1.000E+02	1.7530E-02	2.0002E-02	7.9311E-06	8.9364E-06	3.7146E-01	6.4406E-02
1.500E+02	3.4868E-03	3.8528E-03	1.1580E-06	1.2819E-06	1.2537E-01	1.7818E-02
2.000E+02	1.1434E-03	1.2444E-03	3.1234E-07	3.4409E-07	5.7585E-02	7.2470E-03
3.000E+02	2.5307E-04	2.7475E-04	5.3762E-08	6.0156E-08	1.9421E-02	2.1169E-03
4.000E+02	9.2282E-05	1.0220E-04	1.6963E-08	1.9567E-08	9.1935E-03	9.2091E-04
5.000E+02	4.3846E-05	5.0209E-05	7.1956E-09	8.6712E-09	5.2650E-03	4.9759E-04
6.000E+02	2.4657E-05	2.9064E-05	3.7209E-09	4.7062E-09	3.4023E-03	3.0777E-04
8.000E+02	1.0535E-05	1.3307E-05	1.4309E-09	1.9679E-09	1.7772E-03	1.5113E-04
1.000E+03	5.7601E-06	7.6277E-06	7.2007E-10	1.0793E-09	1.1124E-03	9.0658E-05
1.500E+03	2.1680E-06	3.1695E-06	2.7273E-10	4.6569E-10	5.1234E-04	3.9360E-05

Z= 59

ENERGY	5 P 3/2	6 S 1/2
1.000E+00	1.2298E+04	5.9345E+02
1.227E+00	8.7274E+03	4.1683E+02
1.237E+00	8.6083E+03	4.1108E+02
1.325E+00	7.6406E+03	3.6450E+02
1.335E+00	7.5342E+03	3.5940E+02
1.479E+00	6.2787E+03	2.9967E+02
1.491E+00	6.1889E+03	2.9544E+02
1.500E+00	6.1210E+03	2.9224E+02
2.000E+00	3.5722E+03	1.7366E+02
3.000E+00	1.5772E+03	8.4401E+01
4.000E+00	8.4677E+02	4.9152E+01
5.000E+00	5.0987E+02	3.2019E+01
5.948E+00	3.3825E+02	2.2801E+01
5.996E+00	3.3182E+02	2.2445E+01
6.000E+00	3.3127E+02	2.2414E+01
6.437E+00	2.7940E+02	1.9503E+01
6.488E+00	2.7401E+02	1.9197E+01

Z= 59

ENERGY	5 P 3/2	6 S 1/2
6.794E+00	2.4474E+02	1.7514E+01
6.848E+00	2.3997E+02	1.7237E+01
8.000E+00	1.6255E+02	1.2599E+01
1.000E+01	9.1133E+01	7.9604E+00
1.500E+01	3.0030E+01	3.3576E+00
2.000E+01	1.3109E+01	1.7771E+00
3.000E+01	3.8554E+00	6.9874E-01
4.000E+01	1.5626E+00	3.5072E-01
4.197E+01	1.3401E+00	3.1183E-01
4.231E+01	1.3063E+00	3.0920E-01
5.000E+01	7.6265E-01	2.0235E-01
6.000E+01	4.2054E-01	1.2788E-01
8.000E+01	1.6232E-01	6.0978E-02
1.000E+02	7.7037E-02	3.3915E-02
1.500E+02	1.9866E-02	1.1448E-02
2.000E+02	7.6919E-03	5.2592E-03
3.000E+02	2.1134E-03	1.7745E-03
4.000E+02	8.9037E-04	8.4063E-04
5.000E+02	4.7359E-04	4.8186E-04
6.000E+02	2.9107E-04	3.1176E-04
8.000E+02	1.4295E-04	1.6343E-04
1.000E+03	8.6335E-05	1.0280E-04
1.500E+03	3.8150E-05	4.8303E-05

Z= 60 20 STATES, 42 ENERGYS

STATE	NE	E (KEV)	NORM
1 S 1/2	2.00	43.6030	.98324
2 S 1/2	2.00	7.0943	.84432
2 P 1/2	2.00	6.7277	.77172
2 P 3/2	4.00	6.2005	.75400
3 S 1/2	2.00	1.5523	.59620
3 P 1/2	2.00	1.3931	.50818
3 P 3/2	4.00	1.2871	.48695
3 D 3/2	4.00	1.0073	.27588
3 D 5/2	6.00	.9842	.27168
4 S 1/2	2.00	.3138	.33346
4 P 1/2	2.00	.2529	.26013
4 P 3/2	4.00	.2297	.24332
4 D 3/2	4.00	.1287	.10136
4 D 5/2	6.00	.1246	.09848
4 F 5/2	1.71	.0083	.00780
4 F 7/2	2.29	.0078	.00764
5 S 1/2	2.00	.0448	.11339
5 P 1/2	2.00	.0281	.07202
5 P 3/2	4.00	.0249	.06472
6 S 1/2	2.00	.0050	.01760

Z= 60 PHOTOELECTRIC CROSS SECTIONS (BARNs)

ENERGY (KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	1.5851E+06	.0E+00	.0E+00	1.1220E+06	4.6310E+05
1.0063E+00	1.6739E+06	.0E+00	.0E+00	1.2161E+06	4.5781E+05
1.0143E+00	2.1021E+06	.0E+00	.0E+00	1.6510E+06	4.5115E+05
1.2858E+00	1.4494E+06	.0E+00	.0E+00	1.1630E+06	2.8639E+05
1.2961E+00	1.6380E+06	.0E+00	.0E+00	1.3562E+06	2.8188E+05
1.3917E+00	1.3981E+06	.0E+00	.0E+00	1.1538E+06	2.4428E+05
1.4029E+00	1.4569E+06	.0E+00	.0E+00	1.2166E+06	2.4035E+05
1.5000E+00	1.2609E+06	.0E+00	.0E+00	1.0514E+06	2.0950E+05

Z= 60 PHOTCELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.5507E+00	1.1735E+06	.0E+00	.0E+00	9.7802E+05	1.9552E+05
1.5631E+00	1.2045E+06	.0E+00	.0E+00	1.0122E+06	1.9229E+05
2.0000E+00	6.8744E+05	.0E+00	.0E+00	5.7411E+05	1.1333E+05
3.0000E+00	2.6009E+05	.0E+00	.0E+00	2.1493E+05	4.5159E+04
4.0000E+00	1.2698E+05	.0E+00	.0E+00	1.0417E+05	2.2804E+04
5.0000E+00	7.1959E+04	.0E+00	.0E+00	5.8727E+04	1.3232E+04
6.0000E+00	4.4944E+04	.0E+00	.0E+00	3.6535E+04	8.4094E+03
6.1943E+00	4.1368E+04	.0E+00	.0E+00	3.3605E+04	7.7629E+03
6.2439E+00	1.1440E+05	.0E+00	7.3886E+04	3.2909E+04	7.6088E+03
6.7210E+00	9.5021E+04	.0E+00	6.1583E+04	2.7119E+04	6.3191E+03
6.7748E+00	1.2717E+05	.0E+00	9.4425E+04	2.6555E+04	6.1928E+03
7.0872E+00	1.1369E+05	.0E+00	8.4594E+04	2.3577E+04	5.5236E+03
7.1439E+00	1.2860E+05	.0E+00	1.0011E+05	2.3085E+04	5.4128E+03
8.0000E+00	9.7094E+04	.0E+00	7.5939E+04	1.7101E+04	4.0538E+03
1.0000E+01	5.4287E+04	.0E+00	4.2591E+04	9.4196E+03	2.2762E+03
1.5000E+01	1.8454E+04	.0E+00	1.4533E+04	3.1399E+03	7.8128E+02
2.0000E+01	8.4373E+03	.0E+00	6.6523E+03	1.4244E+03	3.6063E+02
3.0000E+01	2.7493E+03	.0E+00	2.1692E+03	4.6102E+02	1.1915E+02
4.0000E+01	1.2279E+03	.0E+00	9.6886E+02	2.0532E+02	5.3684E+01
4.3559E+01	9.6559E+02	.0E+00	7.6190E+02	1.6136E+02	4.2320E+01
4.3908E+01	5.4059E+03	4.4618E+03	7.4494E+02	1.5776E+02	4.1387E+01
5.0000E+01	3.8267E+03	3.1729E+03	5.1590E+02	1.0916E+02	8.762E+01
6.0000E+01	2.3733E+03	1.9837E+03	3.0740E+02	6.4984E+01	1.7217E+01
8.0000E+01	1.0868E+03	9.1533E+02	1.3525E+02	2.8560E+01	7.6247E+00
1.0000E+02	5.8649E+02	4.9603E+02	7.1360E+01	1.5062E+01	4.0413E+00
1.5000E+02	1.8832E+02	1.6002E+02	2.2320E+01	4.7099E+00	1.2723E+00
2.0000E+02	8.3965E+01	7.1480E+01	9.8440E+00	2.0774E+00	5.6340E-01
3.0000E+02	2.7420E+01	2.3381E+01	3.1838E+00	6.7201E-01	1.8300E-01
4.0000E+02	1.2780E+01	1.0908E+01	1.4758E+00	3.1149E-01	8.5001E-02
5.0000E+02	7.2611E+00	6.2022E+00	8.3460E-01	1.7612E-01	4.8120E-02
6.0000E+02	4.6727E+00	3.9942E+00	5.3485E-01	1.1279E-01	3.0851E-02
8.0000E+02	2.4334E+00	2.0826E+00	2.7652E-01	5.8277E-02	1.5955E-02
1.0000E+03	1.5224E+00	1.3043E+00	1.7200E-01	3.6224E-02	9.9222E-03
1.5000E+03	7.0197E-01	6.0235E-01	7.8561E-02	1.6526E-02	4.5305E-03

Z= 60

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.006E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.014E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.286E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.296E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.392E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.403E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	8.3400E+04
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.7908E+04
1.551E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.5497E+04
1.563E+00	.0E+00	.0E+00	.0E+00	.0E+00	5.1585E+04	7.4837E+04
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.7354E+04	5.3603E+04
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.0191E+04	2.7852E+04
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.2431E+04	1.6028E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	8.3526E+03	1.0046E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	5.9632E+03	6.7068E+03
6.194E+00	.0E+00	.0E+00	.0E+00	.0E+00	5.6147E+03	6.2378E+03
6.244E+00	.0E+00	.0E+00	.0E+00	7.3886E+04	5.5306E+03	6.1250E+03
6.721E+00	.0E+00	.0E+00	.0E+00	6.1583E+04	4.8091E+03	5.1653E+03
6.775E+00	.0E+00	.0E+00	3.4162E+04	6.0263E+04	4.7365E+03	5.0700E+03
7.087E+00	.0E+00	.0E+00	3.0986E+04	5.3608E+04	4.3440E+03	4.5616E+03
7.144E+00	.0E+00	1.7292E+04	3.0289E+04	5.2525E+04	4.2776E+03	4.4767E+03
8.000E+00	.0E+00	1.4276E+04	2.2800E+04	3.8863E+04	3.4309E+03	3.4141E+03
1.000E+01	.0E+00	9.6319E+03	1.2445E+04	2.0515E+04	2.1988E+03	1.9640E+03

Z= 60

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.500E+01	.0E+00	4.3951E+03	3.9460E+03	6.1921E+03	9.4525E+02	6.7754E+02
2.000E+01	.0E+00	2.4060E+03	1.6896E+03	2.5567E+03	5.0498E+02	3.0518E+02
3.000E+01	.0E+00	9.7412E+02	4.9047E+02	7.0457E+02	2.0036E+02	9.4093E+01
4.000E+01	.0E+00	4.9453E+02	1.9916E+02	2.7517E+02	1.0105E+02	3.9571E+01
4.356E+01	.0E+00	4.0236E+02	1.5204E+02	2.0750E+02	8.2130E+01	3.0485E+01
4.391E+01	4.4618E+03	3.9461E+02	1.4824E+02	2.0209E+02	8.0544E+01	2.9747E+01
5.000E+01	3.1729E+03	2.8684E+02	9.7985E+01	1.3108E+02	5.8480E+01	1.9919E+01
6.000E+01	1.9837E+03	1.8174E+02	5.4601E+01	7.1062E+01	3.7034E+01	1.1283E+01
8.000E+01	9.1533E+02	8.6846E+01	2.1577E+01	2.6822E+01	1.7711E+01	4.5568E+00
1.000E+02	4.9603E+02	4.8325E+01	1.0483E+01	1.2553E+01	9.8695E+00	2.2450E+00
1.500E+02	1.6002E+02	1.6301E+01	2.8450E+00	3.1741E+00	3.3414E+00	6.2148E-01
2.000E+02	7.1480E+01	7.4816E+00	1.1459E+00	1.2166E+00	1.5377E+00	2.5295E-01
3.000E+02	2.3381E+01	2.5213E+00	3.3157E-01	3.3094E-01	5.1992E-01	7.3981E-02
4.000E+02	1.0908E+01	1.1934E+00	1.4361E-01	1.3877E-01	2.4651E-01	3.2208E-02
5.000E+02	6.2022E+00	6.8358E-01	7.7416E-02	7.3609E-02	1.4134E-01	1.7442E-02
6.000E+02	3.9942E+00	4.4186E-01	4.7824E-02	4.5162E-02	9.1362E-02	1.0795E-02
8.000E+02	2.0826E+00	2.3094E-01	2.3451E-02	2.2130E-02	4.7762E-02	5.3063E-03
1.000E+03	1.3043E+00	1.4459E-01	1.4057E-02	1.3345E-02	2.9902E-02	3.1881E-03
1.500E+03	6.0235E-01	6.6589E-02	6.1134E-03	5.8582E-03	1.3763E-02	1.3840E-03

Z= 60

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	1.1220E+06	3.3759E+04	3.8719E+04	8.5874E+04
1.006E+00	.0E+00	.0E+00	1.2161E+06	3.3445E+04	3.8398E+04	8.5067E+04
1.014E+00	.0E+00	3.9324E+05	1.2578E+06	3.3049E+04	3.7991E+04	8.4048E+04
1.286E+00	.0E+00	4.7408E+05	6.8890E+05	2.2934E+04	2.7117E+04	5.7728E+04
1.296E+00	2.1565E+05	4.6501E+05	6.7549E+05	2.2645E+04	2.6794E+04	5.6973E+04
1.392E+00	1.9770E+05	3.9055E+05	5.6556E+05	2.0203E+04	2.4032E+04	5.0563E+04
1.403E+00	1.9602E+05	3.8288E+05	5.5427E+05	1.9945E+04	2.3737E+04	4.9882E+04
1.500E+00	1.7964E+05	3.2352E+05	4.7033E+05	1.7892E+04	2.1364E+04	4.4463E+04
1.551E+00	1.7097E+05	2.9938E+05	4.3218E+05	1.6942E+04	2.0254E+04	4.1961E+04
1.563E+00	1.6890E+05	2.9339E+05	4.2350E+05	1.6721E+04	1.9994E+04	4.1378E+04
2.000E+00	1.1468E+05	1.5170E+05	2.1677E+05	1.1036E+04	1.3189E+04	2.6420E+04
3.000E+00	5.4849E+04	4.6529E+04	6.5511E+04	5.3899E+03	6.2093E+03	1.1850E+04
4.000E+00	3.0203E+04	1.9005E+04	2.6507E+04	3.1731E+03	3.4683E+03	6.4089E+03
5.000E+00	1.8378E+04	9.2097E+03	1.2741E+04	2.0808E+03	2.1498E+03	3.8766E+03
6.000E+00	1.1995E+04	5.0000E+03	6.8699E+03	1.4634E+03	1.4293E+03	2.5270E+03
6.194E+00	1.1111E+04	4.4862E+03	6.1557E+03	1.3751E+03	1.3286E+03	2.3410E+03
6.244E+00	1.0899E+04	4.3657E+03	5.9885E+03	1.3538E+03	1.3045E+03	2.2965E+03
6.721E+00	9.1150E+03	3.3907E+03	4.6388E+03	1.1714E+03	1.0997E+03	1.9207E+03
6.775E+00	8.9384E+03	3.2988E+03	4.5115E+03	1.1531E+03	1.0794E+03	1.8835E+03
7.087E+00	7.9965E+03	2.8225E+03	3.8527E+03	1.0546E+03	9.7086E+02	1.6859E+03
7.144E+00	7.8396E+03	2.7454E+03	3.7462E+03	1.0380E+03	9.5273E+02	1.6529E+03
8.000E+00	5.8999E+03	1.8472E+03	2.5091E+03	8.2767E+02	7.2668E+02	1.2454E+03
1.000E+01	3.3052E+03	8.3220E+02	1.1194E+03	5.2502E+02	4.1865E+02	7.0014E+02
1.500E+01	1.0871E+03	1.8543E+02	2.4457E+02	2.2279E+02	1.4535E+02	2.3217E+02
2.000E+01	4.7283E+02	6.1524E+01	7.9858E+01	1.1836E+02	6.5884E+01	1.0170E+02
3.000E+01	1.3838E+02	1.2447E+01	1.5742E+01	4.6768E+01	2.0501E+01	3.0054E+01
4.000E+01	5.5935E+01	3.9154E+00	4.8489E+00	2.3553E+01	8.6722E+00	1.2220E+01
4.356E+01	4.2566E+01	2.7719E+00	3.4101E+00	1.9138E+01	6.6916E+00	9.3146E+00
4.391E+01	4.1488E+01	2.6837E+00	3.2994E+00	1.8768E+01	6.5306E+00	9.0801E+00
5.000E+01	2.7253E+01	1.5826E+00	1.9254E+00	1.3624E+01	4.3832E+00	5.9786E+00
6.000E+01	1.5012E+01	7.5268E-01	9.0171E-01	8.6272E+00	2.4902E+00	3.3030E+00
8.000E+01	5.7871E+00	2.3310E-01	2.7231E-01	4.1270E+00	1.0099E+00	1.2786E+00
1.000E+02	2.7449E+00	9.4335E-02	1.0806E-01	2.3009E+00	4.9889E-01	6.0813E-01
1.500E+02	7.0749E-01	1.8710E-02	2.0762E-02	7.7933E-01	1.3876E-01	1.5703E-01
2.000E+02	2.7392E-01	6.1286E-03	6.6975E-03	3.5884E-01	5.6606E-01	6.0922E-02
3.000E+02	7.5281E-02	1.3543E-03	1.4788E-03	1.2141E-01	1.6598E-02	1.6777E-02
4.000E+02	3.1727E-02	4.9516E-04	5.4517E-04	5.7581E-02	7.2374E-03	7.0770E-03
5.000E+02	1.6837E-02	2.3515E-04	2.6764E-04	3.3017E-02	3.9172E-03	3.7655E-03

Z= 60

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
6.000E+02	1.0347E-02	1.3181E-04	1.5590E-04	2.1353E-02	2.4258E-03	2.3138E-03
8.000E+02	5.0808E-03	5.7039E-05	7.0593E-05	1.1163E-02	1.1929E-03	1.1362E-03
1.000E+03	3.0621E-03	3.0989E-05	4.0461E-05	6.9881E-03	7.1637E-04	6.8520E-04
1.500E+03	1.3505E-03	1.2200E-05	1.6886E-05	3.2162E-03	3.1137E-04	3.0176E-04

Z= 60

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	1.0440E+05	1.5243E+05	9.6716E+03	1.2415E+04	6.5427E+03	6.0406E+03
1.006E+00	1.0314E+05	1.5056E+05	9.4708E+03	1.2156E+04	6.4760E+03	5.9844E+03
1.014E+00	1.0156E+05	1.4820E+05	9.2205E+03	1.1834E+04	6.3921E+03	5.9135E+03
1.286E+00	6.2215E+04	8.9985E+04	4.0840E+03	5.2270E+03	4.3080E+03	4.0913E+03
1.296E+00	6.1141E+04	8.8405E+04	3.9714E+03	5.0822E+03	4.2503E+03	4.0391E+03
1.392E+00	5.2206E+04	7.5295E+04	3.0889E+03	3.9495E+03	3.7655E+03	3.5962E+03
1.403E+00	5.1276E+04	7.3932E+04	3.0025E+03	3.8388E+03	3.7144E+03	3.5492E+03
1.500E+00	4.3994E+04	6.3283E+04	2.3632E+03	3.0191E+03	3.3110E+03	3.1745E+03
1.551E+00	4.0716E+04	5.8501E+04	2.0964E+03	2.6770E+03	3.1260E+03	3.0010E+03
1.563E+00	3.9961E+04	5.7401E+04	2.0368E+03	2.6007E+03	3.0831E+03	2.9606E+03
2.000E+00	2.1867E+04	3.1146E+04	8.2033E+02	1.0444E+03	1.9986E+03	1.9198E+03
3.000E+00	7.3784E+03	1.0365E+04	1.7060E+02	2.1615E+02	9.5651E+02	8.8883E+02
4.000E+00	3.1983E+03	4.4479E+03	5.2686E+01	6.5928E+01	5.5780E+02	4.9315E+02
5.000E+00	1.6142E+03	2.2265E+03	2.0638E+01	2.5731E+01	3.6370E+02	3.0462E+02
6.000E+00	9.0282E+02	1.2366E+03	9.3947E+00	1.1674E+01	2.5481E+02	2.0214E+02
6.194E+00	8.1398E+02	1.1135E+03	8.1716E+00	1.0148E+01	2.3929E+02	1.8786E+02
6.244E+00	7.9308E+02	1.0846E+03	7.8907E+00	9.7981E+00	2.3555E+02	1.8443E+02
6.721E+00	6.2269E+02	8.4905E+02	5.7040E+00	7.0725E+00	2.0355E+02	1.5540E+02
6.775E+00	6.0648E+02	8.2667E+02	5.5061E+00	6.8260E+00	2.0034E+02	1.5252E+02
7.087E+00	5.2210E+02	7.1034E+02	4.5073E+00	5.5825E+00	1.8310E+02	1.3715E+02
7.144E+00	5.0838E+02	6.9145E+02	4.3500E+00	5.3868E+00	1.8019E+02	1.3459E+02
8.000E+00	3.4711E+02	4.6986E+02	2.6206E+00	3.2373E+00	1.4345E+02	1.0260E+02
1.000E+01	1.6039E+02	2.1496E+02	9.5210E-01	1.1702E+00	9.0757E+01	5.9085E+01
1.500E+01	3.7124E+01	4.8768E+01	1.4556E-01	1.7716E-01	3.8389E+01	2.0762E+01
2.000E+01	1.2597E+01	1.6284E+01	3.6961E-02	4.4610E-02	2.0371E+01	9.4219E+00
3.000E+01	2.6095E+00	3.2875E+00	5.1143E-03	6.0845E-03	8.0893E+00	2.9365E+00
4.000E+01	8.3104E-01	1.0256E+00	1.2419E-03	1.4604E-03	4.0723E+00	1.2434E+00
4.356E+01	5.9022E-01	7.2374E-01	8.1581E-04	9.5584E-04	3.3086E+00	9.5968E-01
4.391E+01	5.7158E-01	7.0049E-01	7.8433E-04	9.1864E-04	3.2447E+00	9.3661E-01
5.000E+01	3.3860E-01	4.1072E-01	4.1298E-04	4.8079E-04	2.3550E+00	6.2888E-01
6.000E+01	1.6193E-01	1.9242E-01	1.6782E-04	1.9367E-04	1.4910E+00	3.5748E-01
8.000E+01	5.0555E-02	5.8577E-02	4.0851E-05	4.6430E-05	7.1310E-01	1.4507E-01
1.000E+02	2.0555E-02	2.3357E-02	1.3802E-05	1.5501E-05	3.9750E-01	7.1698E-02
1.500E+02	4.1057E-03	4.5136E-03	2.0239E-06	2.2336E-06	1.3469E-01	1.9941E-02
2.000E+02	1.3500E-03	1.4605E-03	5.4681E-07	5.9996E-07	6.2021E-02	8.1374E-03
3.000E+02	2.9958E-04	3.2340E-04	9.4564E-08	1.0535E-07	2.0987E-02	2.3866E-03
4.000E+02	1.0938E-04	1.2065E-04	2.9718E-08	3.4074E-08	9.9543E-03	1.0407E-03
5.000E+02	5.2121E-05	5.9156E-05	1.2677E-08	1.5233E-08	5.7080E-03	5.6315E-04
6.000E+02	2.9330E-05	3.4205E-05	6.5609E-09	8.2344E-09	3.6917E-03	3.4874E-04
8.000E+02	1.2542E-05	1.5702E-05	2.5433E-09	3.4692E-09	1.9301E-03	1.7149E-04
1.000E+03	6.8488E-06	8.9948E-06	1.2714E-09	1.8913E-09	1.2084E-03	1.0296E-04
1.500E+03	2.5744E-06	3.7462E-06	4.5727E-10	7.7744E-10	5.5640E-04	4.4756E-05

Z= 60

ENERGY	5 P 3/2	6 S 1/2
1.000E+00	1.2651E+04	5.9915E+02
1.006E+00	1.2523E+04	5.9278E+02
1.014E+00	1.2362E+04	5.8477E+02
1.286E+00	8.3109E+03	3.8859E+02
1.296E+00	8.1971E+03	3.8321E+02
1.392E+00	7.2383E+03	3.3815E+02
1.403E+00	7.1372E+03	3.3341E+02

Z= 60

ENERGY	5 P 3/2	6 S 1/2
1.500E+00	6.3353E+03	2.9607E+02
1.551E+00	5.9666E+03	2.7906E+02
1.563E+00	5.8810E+03	2.7513E+02
2.000E+00	3.7124E+03	1.7629E+02
3.000E+00	1.6477E+03	8.5850E+01
4.000E+00	8.8795E+02	5.0069E+01
5.000E+00	5.3635E+02	3.2653E+01
6.000E+00	3.4945E+02	2.2882E+01
6.194E+00	3.2373E+02	2.1489E+01
6.244E+00	3.1757E+02	2.1153E+01
6.721E+00	2.6560E+02	1.8281E+01
6.775E+00	2.6047E+02	1.7993E+01
7.087E+00	2.3315E+02	1.6445E+01
7.144E+00	2.2860E+02	1.6185E+01
8.000E+00	1.7228E+02	1.2887E+01
1.000E+01	9.6944E+01	8.1554E+00
1.500E+01	3.2158E+01	3.4506E+00
2.000E+01	1.4102E+01	1.8308E+00
3.000E+01	4.1742E+00	7.2265E-01
4.000E+01	1.6990E+00	3.6377E-01
4.356E+01	1.2954E+00	2.9556E-01
4.391E+01	1.2628E+00	2.8984E-01
5.000E+01	8.3181E-01	2.1037E-01
6.000E+01	4.5980E-01	1.3319E-01
8.000E+01	1.7811E-01	6.3701E-02
1.000E+02	8.4749E-02	3.5509E-02
1.500E+02	2.1944E-02	1.2033E-02
2.000E+02	8.5173E-03	5.5420E-03
3.000E+02	2.3466E-03	1.8761E-03
4.000E+02	9.9001E-04	8.9050E-04
5.000E+02	5.2691E-04	5.1109E-04
6.000E+02	3.2394E-04	3.3094E-04
8.000E+02	1.5909E-04	1.7362E-04
1.000E+03	9.6055E-05	1.0921E-04
1.500E+03	4.2398E-05	5.1283E-05

Z= 61

20 STATES, 44 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	45.2257	.98342
2 S 1/2	2.00	7.3952	.84638
2 P 1/2	2.00	7.0195	.77471
2 P 3/2	4.00	6.4517	.75652
3 S 1/2	2.00	1.6256	.60113
3 P 1/2	2.00	1.4619	.51392
3 P 3/2	4.00	1.3469	.49200
3 D 3/2	4.00	1.0596	.28166
3 D 5/2	6.00	1.0345	.27730
4 S 1/2	2.00	.3283	.33800
4 P 1/2	2.00	.2652	.26484
4 P 3/2	4.00	.2399	.24715
4 D 3/2	4.00	.1351	.10456
4 D 5/2	6.00	.1305	.10150
4 F 5/2	2.14	.0088	.00860
4 F 7/2	2.86	.0083	.00841
5 S 1/2	2.00	.0463	.11419
5 P 1/2	2.00	.0290	.07264
5 P 3/2	4.00	.0255	.06495
6 S 1/2	2.00	.0050	.01736

Z= 61 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY (KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	4.9246E+05	.0E+00	.0E+00	.0E+00	4.9246E+05
1.0334E+00	4.6357E+05	.0E+00	.0E+00	.0E+00	4.6357E+05
1.0417E+00	1.0197E+06	.0E+00	.0E+00	5.6290E+05	4.5678E+05
1.0585E+00	1.5929E+06	.0E+00	.0E+00	1.1495E+06	4.4336E+05
1.0670E+00	1.9826E+06	.0E+00	.0E+00	1.5458E+06	4.3681E+05
1.3455E+00	1.3939E+06	.0E+00	.0E+00	1.1154E+06	2.7850E+05
1.3563E+00	1.5768E+06	.0E+00	.0E+00	1.3027E+06	2.7407E+05
1.4604E+00	1.3353E+06	.0E+00	.0E+00	1.0994E+06	2.3586E+05
1.4721E+00	1.3917E+06	.0E+00	.0E+00	1.1597E+06	2.3203E+05
1.5000E+00	1.3341E+06	.0E+00	.0E+00	1.1109E+06	2.2323E+05
1.6240E+00	1.1239E+06	.0E+00	.0E+00	9.3466E+05	1.8920E+05
1.6370E+00	1.1534E+06	.0E+00	.0E+00	9.6731E+05	1.8606E+05
2.0000E+00	7.3137E+05	.0E+00	.0E+00	6.1042E+05	1.2095E+05
3.0000E+00	2.7775E+05	.0E+00	.0E+00	2.2946E+05	4.8286E+04
4.0000E+00	1.3577E+05	.0E+00	.0E+00	1.1136E+05	2.4410E+04
5.0000E+00	7.7024E+04	.0E+00	.0E+00	6.2848E+04	1.4176E+04
6.0000E+00	4.8145E+04	.0E+00	.0E+00	3.9128E+04	9.0173E+03
6.4452E+00	3.9971E+04	.0E+00	.0E+00	3.2436E+04	7.5349E+03
6.4968E+00	1.0982E+05	.0E+00	7.0668E+04	3.1763E+04	7.3851E+03
7.0124E+00	9.0441E+04	.0E+00	5.8370E+04	2.5981E+04	6.0893E+03
7.0686E+00	1.2114E+05	.0E+00	8.9734E+04	2.5441E+04	5.9674E+03
7.3878E+00	1.0860E+05	.0E+00	8.0629E+04	2.2642E+04	5.3341E+03
7.4469E+00	1.2286E+05	.0E+00	9.5466E+04	2.2169E+04	5.2268E+03
8.0000E+00	1.0280E+05	.0E+00	8.0109E+04	1.8334E+04	4.3531E+03
1.0000E+01	5.7895E+04	.0E+00	4.5341E+04	1.0107E+04	2.4469E+03
1.5000E+01	1.9690E+04	.0E+00	1.5475E+04	3.3745E+03	8.4138E+02
2.0000E+01	9.0218E+03	.0E+00	7.1004E+03	1.5325E+03	3.8886E+02
3.0000E+01	2.9462E+03	.0E+00	2.3206E+03	4.9686E+02	1.2873E+02
4.0000E+01	1.3175E+03	.0E+00	1.0379E+03	2.2154E+02	5.8071E+01
4.5180E+01	9.3511E+02	.0E+00	7.3667E+02	1.5708E+02	4.1356E+01
4.5542E+01	5.1936E+03	4.2793E+03	7.2028E+02	1.5358E+02	4.0444E+01
5.0000E+01	4.0461E+03	3.3437E+03	5.5332E+02	1.1789E+02	3.1145E+01
6.0000E+01	2.5131E+03	2.0942E+03	3.2998E+02	7.0236E+01	1.8660E+01
8.0000E+01	1.1543E+03	9.6974E+02	1.4538E+02	3.0907E+01	8.2742E+00
1.0000E+02	6.2430E+02	5.2680E+02	7.6790E+01	1.6316E+01	4.3903E+00
1.5000E+02	2.0112E+02	1.7055E+02	2.4069E+01	5.1120E+00	1.3851E+00
2.0000E+02	8.9842E+01	7.6339E+01	1.0631E+01	2.2580E+00	6.1426E-01
3.0000E+02	2.9414E+01	2.5037E+01	3.4454E+00	7.3187E-01	1.9994E-01
4.0000E+02	1.3731E+01	1.1700E+01	1.5991E+00	3.3966E-01	9.2989E-02
5.0000E+02	7.8099E+00	6.6599E+00	9.0514E-01	1.9221E-01	5.2685E-02
6.0000E+02	5.0295E+00	4.2922E+00	5.8037E-01	1.2316E-01	3.3796E-02
8.0000E+02	2.6212E+00	2.2398E+00	3.0021E-01	6.3665E-02	1.7486E-02
1.0000E+03	1.6403E+00	1.4031E+00	1.8675E-01	3.9574E-02	1.0876E-02
1.5000E+03	7.5619E-01	6.4792E-01	8.5263E-02	1.8048E-02	4.9635E-03

Z= 61

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.033E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.042E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.059E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.067E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.346E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.356E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.460E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.472E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	8.0102E+04
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.7095E+04
1.624E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.2369E+04
1.637E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.9344E+04	7.1744E+04
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.8263E+04	5.4801E+04

Z= 61

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.0797E+04	2.8881E+04
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.2853E+04	1.6775E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	8.6619E+03	1.0576E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	6.1959E+03	7.0921E+03
6.445E+00	.0E+00	.0E+00	.0E+00	.0E+00	5.4146E+03	6.0330E+03
6.497E+00	.0E+00	.0E+00	.0E+00	7.0668E+04	5.3333E+03	5.9239E+03
7.012E+00	.0E+00	.0E+00	.0E+00	5.8370E+04	4.6124E+03	4.9643E+03
7.069E+00	.0E+00	.0E+00	3.2597E+04	5.7137E+04	4.5427E+03	4.8728E+03
7.388E+00	.0E+00	.0E+00	2.9635E+04	5.0994E+04	4.1735E+03	4.3937E+03
7.447E+00	.0E+00	1.6537E+04	2.8964E+04	4.9966E+04	4.1097E+03	4.3119E+03
8.000E+00	.0E+00	1.4583E+04	2.4133E+04	4.1393E+04	3.5748E+03	3.6356E+03
1.000E+01	.0E+00	9.9628E+03	1.3399E+04	2.1979E+04	2.2958E+03	2.1010E+03
1.500E+01	.0E+00	4.5608E+03	4.2609E+03	6.6528E+03	9.9102E+02	7.3084E+02
2.000E+01	.0E+00	2.5096E+03	1.8315E+03	2.7593E+03	5.3093E+02	3.3102E+02
3.000E+01	.0E+00	1.0216E+03	5.3504E+02	7.6397E+02	2.1156E+02	1.0283E+02
4.000E+01	.0E+00	5.2043E+02	2.1821E+02	2.9926E+02	1.0702E+02	4.3461E+01
4.518E+01	.0E+00	3.8797E+02	1.4856E+02	2.0014E+02	7.9640E+01	2.9984E+01
4.554E+01	4.2793E+03	3.8050E+02	1.4485E+02	1.9492E+02	7.8103E+01	2.9261E+01
5.000E+01	3.3437E+03	3.0275E+02	1.0767E+02	1.4290E+02	6.2082E+01	2.1958E+01
6.000E+01	2.0942E+03	1.9222E+02	6.0150E+01	7.7610E+01	3.9391E+01	1.2474E+01
8.000E+01	9.6974E+02	9.2144E+01	2.3856E+01	2.9377E+01	1.8894E+01	5.0594E+00
1.000E+02	5.2680E+02	5.1393E+01	1.1621E+01	1.3776E+01	1.0552E+01	2.5003E+00
1.500E+02	1.7055E+02	1.7405E+01	3.1682E+00	3.4952E+00	3.5866E+00	6.9574E-01
2.000E+02	7.6339E+01	8.0089E+00	1.2798E+00	1.3424E+00	1.6548E+00	2.8410E-01
3.000E+02	2.5037E+01	2.7077E+00	3.7164E-01	3.6601E-01	5.6133E-01	8.3416E-02
4.000E+02	1.1700E+01	1.2842E+00	1.6131E-01	1.5365E-01	2.6667E-01	3.6399E-02
5.000E+02	6.6599E+00	7.3651E-01	8.7082E-02	8.1548E-02	1.5309E-01	1.9740E-02
6.000E+02	4.2922E+00	4.7647E-01	5.3850E-02	5.0043E-02	9.9045E-02	1.2231E-02
8.000E+02	2.2398E+00	2.4925E-01	2.6442E-02	2.4521E-02	5.1825E-02	6.0216E-03
1.000E+03	1.4031E+00	1.5611E-01	1.5864E-02	1.4782E-02	3.2454E-02	3.6206E-03
1.500E+03	6.4792E-01	7.1876E-02	6.9062E-03	6.4808E-03	1.4935E-02	1.5738E-03

Z= 61

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	3.4641E+04	3.9595E+04	8.8805E+04
1.033E+00	.0E+00	.0E+00	.0E+00	3.3010E+04	3.7933E+04	8.4540E+04
1.042E+00	.0E+00	.0E+00	5.6290E+05	3.2623E+04	3.7535E+04	8.3529E+04
1.059E+00	.0E+00	.0E+00	1.1495E+06	3.1854E+04	3.6742E+04	8.1525E+04
1.067E+00	.0E+00	3.5677E+05	1.1890E+06	3.1477E+04	3.6351E+04	8.0543E+04
1.346E+00	.0E+00	4.5540E+05	6.6003E+05	2.2023E+04	2.6125E+04	5.5678E+04
1.356E+00	2.0905E+05	4.4660E+05	6.4709E+05	2.1745E+04	2.5813E+04	5.4947E+04
1.460E+00	1.9016E+05	3.7192E+05	5.3733E+05	1.9315E+04	2.3053E+04	4.8516E+04
1.472E+00	1.8847E+05	3.6456E+05	5.2653E+05	1.9068E+04	2.2769E+04	4.7859E+04
1.500E+00	1.8421E+05	3.4773E+05	5.0187E+05	1.8499E+04	2.2112E+04	4.6343E+04
1.624E+00	1.6429E+05	2.8599E+05	4.1202E+05	1.6251E+04	1.9485E+04	4.0370E+04
1.637E+00	1.6227E+05	2.8025E+05	4.0370E+05	1.6039E+04	1.9234E+04	3.9807E+04
2.000E+00	1.1861E+05	1.6428E+05	2.3447E+05	1.1459E+04	1.3745E+04	2.7674E+04
3.000E+00	5.7320E+04	5.0884E+04	7.1581E+04	5.6180E+03	6.5258E+03	1.2488E+04
4.000E+00	3.1761E+04	2.0881E+04	2.9089E+04	3.3143E+03	3.6646E+03	6.7806E+03
5.000E+00	1.9405E+04	1.0162E+04	1.4042E+04	2.1765E+03	2.2809E+03	4.1148E+03
6.000E+00	1.2707E+04	5.5364E+03	7.5967E+03	1.5325E+03	1.5218E+03	2.6897E+03
6.445E+00	1.0704E+04	4.3429E+03	5.9414E+03	1.3328E+03	1.2927E+03	2.2665E+03
6.497E+00	1.0500E+04	4.2263E+03	5.7799E+03	1.3122E+03	1.2692E+03	2.2234E+03
7.012E+00	8.7196E+03	3.2515E+03	4.4335E+03	1.1291E+03	1.0633E+03	1.8467E+03
7.069E+00	8.5505E+03	3.1633E+03	4.3119E+03	1.1114E+03	1.0436E+03	1.8109E+03
7.388E+00	7.6658E+03	2.7149E+03	3.6937E+03	1.0182E+03	9.4069E+02	1.6243E+03
7.447E+00	7.5151E+03	2.6407E+03	3.5915E+03	1.0022E+03	9.2312E+02	1.5925E+03
8.000E+00	6.2797E+03	2.0559E+03	2.7878E+03	8.6859E+02	7.7828E+02	1.3319E+03
1.000E+01	3.5323E+03	9.2990E+02	1.2485E+03	5.5196E+02	4.5040E+02	7.5153E+02
1.500E+01	1.1694E+03	2.0866E+02	2.7458E+02	2.3498E+02	1.5760E+02	2.5083E+02

Z= 61

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
2.000E+01	5.1092E+02	6.9581E+01	9.0082E+01	1.2514E+02	7.1831E+01	1.1037E+02
3.000E+01	1.5044E+02	1.4168E+01	1.7865E+01	4.9640E+01	2.2522E+01	3.2821E+01
4.000E+01	6.1056E+01	4.4757E+00	5.5248E+00	2.5072E+01	9.5754E+00	1.3401E+01
4.518E+01	4.1373E+01	2.7366E+00	3.3456E+00	1.8650E+01	6.6216E+00	9.1023E+00
4.554E+01	4.0326E+01	2.6497E+00	3.2372E+00	1.8290E+01	6.4627E+00	8.8733E+00
5.000E+01	2.9837E+01	1.8148E+00	2.2002E+00	1.4536E+01	4.8581E+00	6.5765E+00
6.000E+01	1.6473E+01	8.6522E-01	1.0327E+00	9.2216E+00	2.7683E+00	3.6421E+00
8.000E+01	6.3720E+00	2.6888E-01	3.1285E-01	4.4241E+00	1.1276E+00	1.4148E+00
1.000E+02	3.0297E+00	1.0907E-01	1.2441E-01	2.4721E+00	5.5875E-01	6.7461E-01
1.500E+02	7.8397E-01	2.1717E-02	2.3983E-02	8.4059E-01	1.5625E-01	1.7492E-01
2.000E+02	3.0425E-01	7.1304E-03	7.7521E-03	3.8804E-01	6.3952E-02	6.8029E-02
3.000E+02	8.3836E-02	1.5803E-03	1.7155E-03	1.3172E-01	1.8828E-02	1.8786E-02
4.000E+02	3.5377E-02	5.7831E-04	6.3417E-04	6.2596E-02	8.2294E-03	7.9343E-03
5.000E+02	1.8789E-02	2.7505E-04	3.1169E-04	3.5938E-02	4.4609E-03	4.2237E-03
6.000E+02	1.1551E-02	1.5442E-04	1.8122E-04	2.3262E-02	2.7652E-03	2.5965E-03
8.000E+02	5.6701E-03	6.6883E-05	8.1773E-05	1.2172E-02	1.3620E-03	1.2750E-03
1.000E+03	3.4156E-03	3.6217E-05	4.7318E-05	7.6220E-03	8.1852E-04	7.6871E-04
1.500E+03	1.5056E-03	1.4360E-05	1.9447E-05	3.5071E-03	3.5618E-04	3.3818E-04

Z= 61

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	1.0995E+05	1.6062E+05	1.4192E+04	1.8201E+04	6.7149E+03	6.1625E+03
1.033E+00	1.0328E+05	1.5067E+05	1.2720E+04	1.6307E+04	6.3653E+03	5.8703E+03
1.042E+00	1.0171E+05	1.4833E+05	1.2386E+04	1.5877E+04	6.2830E+03	5.8011E+03
1.059E+00	9.8597E+04	1.4369E+05	1.1738E+04	1.5043E+04	6.1206E+03	5.6639E+03
1.067E+00	9.7075E+04	1.4143E+05	1.1427E+04	1.4644E+04	6.0412E+03	5.5966E+03
1.346E+00	6.0008E+04	8.6645E+04	5.1525E+03	6.5840E+03	4.1076E+03	3.9018E+03
1.356E+00	5.8970E+04	8.5120E+04	5.0103E+03	6.4018E+03	4.0526E+03	3.8519E+03
1.460E+00	5.0023E+04	7.2010E+04	3.8587E+03	4.9259E+03	3.5737E+03	3.4138E+03
1.472E+00	4.9128E+04	7.0701E+04	3.7508E+03	4.7877E+03	3.5253E+03	3.3691E+03
1.500E+00	4.7074E+04	6.7699E+04	3.5081E+03	4.4767E+03	3.4138E+03	3.2659E+03
1.624E+00	3.9169E+04	5.6169E+04	2.6372E+03	3.3620E+03	2.9772E+03	2.8578E+03
1.637E+00	3.8441E+04	5.5109E+04	2.5621E+03	3.2661E+03	2.9363E+03	2.8192E+03
2.000E+00	2.3607E+04	3.3605E+04	1.2263E+03	1.5592E+03	2.0666E+03	1.9863E+03
3.000E+00	8.0511E+03	1.1298E+04	2.5740E+02	3.2564E+02	9.9194E+02	9.2613E+02
4.000E+00	3.5146E+03	4.8810E+03	8.0025E+01	9.9993E+01	5.7939E+02	5.1638E+02
5.000E+00	1.7834E+03	2.4560E+03	3.1526E+01	3.9244E+01	3.7821E+02	3.2022E+02
6.000E+00	1.0019E+03	1.3699E+03	1.4421E+01	1.7891E+01	2.6524E+02	2.1320E+02
6.445E+00	7.9464E+02	1.0833E+03	1.0555E+01	1.3076E+01	2.3036E+02	1.8099E+02
6.497E+00	7.7424E+02	1.0552E+03	1.0192E+01	1.2625E+01	2.2676E+02	1.7769E+02
7.012E+00	6.0246E+02	8.1846E+02	7.2812E+00	9.0051E+00	1.9486E+02	1.4877E+02
7.069E+00	5.8677E+02	7.9688E+02	7.0287E+00	8.6914E+00	1.9179E+02	1.4601E+02
7.388E+00	5.0666E+02	6.8680E+02	5.7778E+00	7.1379E+00	1.7558E+02	1.3159E+02
7.447E+00	4.9335E+02	6.6853E+02	5.5764E+00	6.8879E+00	1.7280E+02	1.2912E+02
8.000E+00	3.8782E+02	5.2389E+02	4.0495E+00	4.9938E+00	1.4960E+02	1.0883E+02
1.000E+01	1.8008E+02	2.4081E+02	1.4764E+00	1.8114E+00	9.4802E+01	6.2945E+01
1.500E+01	4.2028E+01	5.5063E+01	2.2711E-01	2.7581E-01	4.0222E+01	2.2291E+01
2.000E+01	1.4344E+01	1.8486E+01	5.8065E-02	6.9927E-02	2.1394E+01	1.0171E+01
3.000E+01	2.9940E+00	3.7591E+00	8.0973E-03	9.6104E-03	8.5286E+00	3.1942E+00
4.000E+01	9.5808E-01	1.1780E+00	1.9733E-03	2.3145E-03	4.3057E+00	1.3595E+00
4.518E+01	5.8858E-01	7.1689E-01	1.0843E-03	1.2649E-03	3.2024E+00	9.4043E-01
4.554E+01	5.7007E-01	6.9390E-01	1.0426E-03	1.2158E-03	3.1405E+00	9.1789E-01
5.000E+01	3.9177E-01	4.7329E-01	6.5858E-04	7.6469E-04	2.4957E+00	6.9018E-01
6.000E+01	1.8785E-01	2.2355E-01	2.6837E-04	3.0881E-04	1.5830E+00	3.9350E-01
8.000E+01	5.8869E-02	6.7893E-02	6.5591E-05	7.4327E-05	7.5930E-01	1.6039E-01
1.000E+02	2.3996E-02	2.7141E-02	2.2223E-05	2.4889E-05	4.2419E-01	7.9529E-02
1.500E+02	4.8114E-03	5.2653E-03	3.2679E-06	3.5919E-06	1.4429E-01	2.2237E-02
2.000E+02	1.5860E-03	1.7073E-03	8.8462E-07	9.6687E-07	6.6614E-02	9.1043E-03
3.000E+02	3.5290E-04	3.7910E-04	1.5327E-07	1.6976E-07	2.2615E-02	2.6810E-03
4.000E+02	1.2917E-04	1.4157E-04	4.8445E-08	5.5356E-08	1.0748E-02	1.1718E-03

Z= 61

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
5.000E+02	6.1690E-05	6.9323E-05	2.0631E-08	2.4579E-08	6.1710E-03	6.3509E-04
6.000E+02	3.4665E-05	4.0158E-05	1.0668E-08	1.3297E-08	3.9944E-03	3.9374E-04
8.000E+02	1.4881E-05	1.8407E-05	4.1018E-09	5.5540E-09	2.0902E-03	1.9390E-04
1.000E+03	8.0981E-06	1.0573E-05	2.0593E-09	3.0332E-09	1.3090E-03	1.1652E-04
1.500E+03	3.0515E-06	4.4070E-06	7.3156E-10	1.2539E-09	6.0259E-04	5.0709E-05

Z= 61

ENERGY	5 P 3/2	6 S 1/2
1.000E+00	1.2974E+04	6.0380E+02
1.033E+00	1.2306E+04	5.7105E+02
1.042E+00	1.2148E+04	5.6335E+02
1.059E+00	1.1836E+04	5.4816E+02
1.067E+00	1.1683E+04	5.4075E+02
1.346E+00	7.9115E+03	3.6260E+02
1.356E+00	7.8028E+03	3.5758E+02
1.460E+00	6.8542E+03	3.1396E+02
1.472E+00	6.7581E+03	3.0957E+02
1.500E+00	6.5365E+03	2.9945E+02
1.624E+00	5.6666E+03	2.6006E+02
1.637E+00	5.5851E+03	2.5639E+02
2.000E+00	3.8463E+03	1.7869E+02
3.000E+00	1.7162E+03	8.7198E+01
4.000E+00	9.2833E+02	5.0935E+01
5.000E+00	5.6246E+02	3.3256E+01
6.000E+00	3.6745E+02	2.3327E+01
6.445E+00	3.0961E+02	2.0262E+01
6.497E+00	3.0372E+02	1.9945E+01
7.012E+00	2.5227E+02	1.7141E+01
7.069E+00	2.4738E+02	1.6871E+01
7.388E+00	2.2190E+02	1.5446E+01
7.447E+00	2.1756E+02	1.5201E+01
8.000E+00	1.8199E+02	1.3162E+01
1.000E+01	1.0278E+02	8.3434E+00
1.500E+01	3.4318E+01	3.5410E+00
2.000E+01	1.5117E+01	1.8833E+00
3.000E+01	4.5029E+00	7.4618E-01
4.000E+01	1.8406E+00	3.7669E-01
4.518E+01	1.2506E+00	2.8017E-01
4.554E+01	1.2192E+00	2.7475E-01
5.000E+01	9.0387E-01	2.1833E-01
6.000E+01	5.0084E-01	1.3849E-01
8.000E+01	1.9470E-01	6.6427E-02
1.000E+02	9.2880E-02	3.7112E-02
1.500E+02	2.4147E-02	1.2625E-02
2.000E+02	9.3954E-03	5.8295E-03
3.000E+02	2.5956E-03	1.9799E-03
4.000E+02	1.0966E-03	9.4162E-04
5.000E+02	5.8399E-04	5.4111E-04
6.000E+02	3.5914E-04	3.5066E-04
8.000E+02	1.7638E-04	1.8410E-04
1.000E+03	1.0646E-04	1.1583E-04
1.500E+03	4.6944E-05	5.4353E-05

Z= 62 20 STATES, 44 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	46.8832	.98360
2 S 1/2	2.00	7.7035	.84840
2 P 1/2	2.00	7.3185	.77763
2 P 3/2	4.00	6.7077	.75897
3 S 1/2	2.00	1.7006	.60593
3 P 1/2	2.00	1.5322	.51952
3 P 3/2	4.00	1.4077	.49689
3 D 3/2	4.00	1.1129	.28732
3 D 5/2	6.00	1.0856	.28279
4 S 1/2	2.00	.3430	.34233
4 P 1/2	2.00	.2776	.26936
4 P 3/2	4.00	.2501	.25078
4 D 3/2	4.00	.1414	.10765
4 D 5/2	6.00	.1365	.10439
4 F 5/2	2.57	.0093	.00939
4 F 7/2	3.43	.0087	.00918
5 S 1/2	2.00	.0478	.11486
5 P 1/2	2.00	.0298	.07316
5 P 3/2	4.00	.0260	.06507
6 S 1/2	2.00	.0051	.01712

Z= 62 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	5.2356E+05	.0E+00	.0E+00	.0E+00	5.2356E+05
1.0845E+00	4.5047E+05	.0E+00	.0E+00	.0E+00	4.5047E+05
1.0932E+00	9.6039E+05	.0E+00	.0E+00	5.1663E+05	4.4376E+05
1.1118E+00	1.5209E+06	.0E+00	.0E+00	1.0910E+06	4.2986E+05
1.1207E+00	1.8772E+06	.0E+00	.0E+00	1.4538E+06	4.2341E+05
1.4063E+00	1.3417E+06	.0E+00	.0E+00	1.0706E+06	2.7107E+05
1.4176E+00	1.5191E+06	.0E+00	.0E+00	1.2524E+06	2.6672E+05
1.5000E+00	1.3355E+06	.0E+00	.0E+00	1.0979E+06	2.3760E+05
1.5307E+00	1.2762E+06	.0E+00	.0E+00	1.0483E+06	2.2786E+05
1.5430E+00	1.3303E+06	.0E+00	.0E+00	1.1062E+06	2.2413E+05
1.6989E+00	1.0771E+06	.0E+00	.0E+00	8.9391E+05	1.8318E+05
1.7125E+00	1.1052E+06	.0E+00	.0E+00	9.2506E+05	1.8011E+05
2.0000E+00	7.7695E+05	.0E+00	.0E+00	6.4805E+05	1.2891E+05
3.0000E+00	2.9608E+05	.0E+00	.0E+00	2.4453E+05	5.1543E+04
4.0000E+00	1.4495E+05	.0E+00	.0E+00	1.1887E+05	2.6083E+04
5.0000E+00	8.2309E+04	.0E+00	.0E+00	6.7149E+04	1.5160E+04
6.0000E+00	5.1487E+04	.0E+00	.0E+00	4.1836E+04	9.6506E+03
6.7010E+00	3.8645E+04	.0E+00	.0E+00	3.1330E+04	7.3143E+03
6.7546E+00	1.0550E+05	.0E+00	6.7650E+04	3.0680E+04	7.1687E+03
7.3112E+00	8.6171E+04	.0E+00	5.5398E+04	2.4906E+04	5.8673E+03
7.3698E+00	1.1550E+05	.0E+00	8.5359E+04	2.4388E+04	5.7497E+03
7.6958E+00	1.0377E+05	.0E+00	7.6865E+04	2.1753E+04	5.1501E+03
7.7574E+00	1.1741E+05	.0E+00	9.1062E+04	2.1299E+04	5.0465E+03
8.0000E+00	1.0884E+05	.0E+00	8.4542E+04	1.9630E+04	4.6651E+03
1.0000E+01	6.1542E+04	.0E+00	4.8087E+04	1.0830E+04	2.6252E+03
1.5000E+01	2.0983E+04	.0E+00	1.6458E+04	3.6214E+03	9.0429E+02
2.0000E+01	9.6327E+03	.0E+00	7.5676E+03	1.6467E+03	4.1847E+02
3.0000E+01	3.1528E+03	.0E+00	2.4792E+03	5.3474E+02	1.3879E+02
4.0000E+01	1.4120E+03	.0E+00	1.1106E+03	2.3870E+02	6.2692E+01
4.6836E+01	9.0607E+02	.0E+00	7.1271E+02	1.5296E+02	4.0403E+01
4.7211E+01	4.9922E+03	4.1063E+03	6.9685E+02	1.4955E+02	3.9513E+01
5.0000E+01	4.2969E+03	3.5434E+03	5.9271E+02	1.2714E+02	3.3657E+01
6.0000E+01	2.6567E+03	2.2069E+03	3.5381E+02	7.5806E+01	2.0182E+01
8.0000E+01	1.2241E+03	1.0256E+03	1.5609E+02	3.3400E+01	8.9614E+00
1.0000E+02	6.6358E+02	5.5863E+02	8.2538E+01	1.7650E+01	4.7601E+00

Z= 62 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY (KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.5000E+02	2.1449E+02	1.8152E+02	2.5923E+01	5.5405E+00	1.5056E+00
2.0000E+02	9.6009E+01	8.1423E+01	1.1467E+01	2.4508E+00	6.6838E-01
3.0000E+02	3.1513E+01	2.6775E+01	3.7240E+00	7.9593E-01	2.1800E-01
4.0000E+02	1.4734E+01	1.2533E+01	1.7305E+00	3.6981E-01	1.0151E-01
5.0000E+02	8.3895E+00	7.1421E+00	9.8045E-01	2.0943E-01	5.7569E-02
6.0000E+02	5.4067E+00	4.6064E+00	6.2900E-01	1.3429E-01	3.6949E-02
8.0000E+02	2.8199E+00	2.4058E+00	3.2554E-01	6.9452E-02	1.9127E-02
1.0000E+03	1.7652E+00	1.5076E+00	2.0253E-01	4.3173E-02	1.1897E-02
1.5000E+03	8.1356E-01	6.9602E-01	9.2434E-02	1.9679E-02	5.4265E-03

Z= 62

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.085E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.093E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.112E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.121E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.406E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.418E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.531E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.543E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.699E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.6962E+04
1.713E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	6.9407E+04
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.7223E+04	6.8803E+04
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.9118E+04	5.953E+04
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.1373E+04	2.9899E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.3273E+04	1.7514E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	8.9682E+03	1.1110E+04
6.701E+00	.0E+00	.0E+00	.0E+00	.0E+00	6.4259E+03	7.4860E+03
6.755E+00	.0E+00	.0E+00	.0E+00	.0E+00	5.2249E+03	5.8396E+03
7.311E+00	.0E+00	.0E+00	.0E+00	6.7650E+04	5.1464E+03	5.7342E+03
7.370E+00	.0E+00	.0E+00	.0E+00	5.5398E+04	4.4260E+03	4.7746E+03
7.696E+00	.0E+00	.0E+00	3.1130E+04	5.4229E+04	4.3590E+03	4.6865E+03
7.757E+00	.0E+00	1.5823E+04	2.8367E+04	4.8498E+04	4.0114E+03	4.2342E+03
8.000E+00	.0E+00	1.5144E+04	2.7722E+04	4.7517E+04	3.9501E+03	4.1555E+03
1.000E+01	.0E+00	1.0287E+04	2.5523E+04	4.3875E+04	3.7211E+03	3.8635E+03
1.500E+01	.0E+00	4.7234E+03	1.4353E+04	2.3447E+04	2.3946E+03	2.2436E+03
2.000E+01	.0E+00	4.5951E+03	4.5951E+03	7.1393E+03	1.0377E+03	7.8679E+02
3.000E+01	.0E+00	2.6133E+03	1.9826E+03	2.9717E+03	5.5753E+02	3.5835E+02
4.000E+01	.0E+00	1.0697E+03	5.8275E+02	8.2677E+02	2.2307E+02	1.1215E+02
4.684E+01	.0E+00	5.4708E+02	2.3867E+02	3.2488E+02	1.1318E+02	4.7634E+01
4.721E+01	.0E+00	3.7429E+02	1.4527E+02	1.9315E+02	7.7248E+01	2.9505E+01
5.000E+01	4.1063E+03	3.6709E+02	1.4165E+02	1.8812E+02	7.5757E+01	2.8795E+01
6.000E+01	3.5434E+03	3.1908E+02	1.1811E+02	1.5551E+02	6.5810E+01	2.4155E+01
8.000E+01	2.2069E+03	2.0306E+02	6.6142E+01	8.4613E+01	4.1836E+01	1.3761E+01
1.000E+02	1.0256E+03	9.7644E+01	2.6329E+01	3.2116E+01	2.0126E+01	5.6055E+00
1.000E+02	5.5863E+02	5.4587E+01	1.2861E+01	1.5091E+01	1.1266E+01	2.7789E+00
1.500E+02	1.8152E+02	1.8560E+01	3.5219E+00	3.8415E+00	3.8437E+00	7.7723E-01
2.000E+02	8.1423E+01	8.5619E+00	1.4268E+00	1.4785E+00	1.7780E+00	3.1840E-01
3.000E+02	2.6775E+01	2.9041E+00	4.1581E-01	4.0403E-01	6.0509E-01	9.3858E-02
4.000E+02	1.2533E+01	1.3800E+00	1.8078E-01	1.6972E-01	2.8803E-01	4.1032E-02
5.000E+02	7.1421E+00	7.9251E-01	9.7779E-02	9.0168E-02	1.6557E-01	2.2260E-02
6.000E+02	4.6064E+00	5.1313E-01	6.0527E-02	5.5345E-02	1.0721E-01	1.3829E-02
8.000E+02	2.4058E+00	2.6866E-01	2.9760E-02	2.7117E-02	5.6147E-02	6.8194E-03
1.000E+03	1.5076E+00	1.6832E-01	1.7869E-02	1.6342E-02	3.5171E-02	4.1029E-03
1.500E+03	6.9602E-01	7.7497E-02	7.7820E-03	7.1551E-03	1.6181E-02	1.7848E-03

Z= 62

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	3.5453E+04	4.0362E+04	9.1628E+04
1.085E+00	.0E+00	.0E+00	.0E+00	3.1507E+04	3.6357E+04	8.1190E+04
1.093E+00	.0E+00	.0E+00	5.1663E+05	3.1137E+04	3.5976E+04	8.0215E+04
1.112E+00	.0E+00	.0E+00	1.0910E+06	3.0366E+04	3.5176E+04	7.8184E+04
1.121E+00	.0E+00	3.2665E+05	1.1272E+06	3.0006E+04	3.4801E+04	7.7237E+04
1.406E+00	.0E+00	4.3751E+05	6.3312E+05	2.1157E+04	2.5178E+04	5.3724E+04
1.418E+00	2.0276E+05	4.2900E+05	6.2061E+05	2.0891E+04	2.4877E+04	5.3015E+04
1.500E+00	1.8699E+05	3.7280E+05	5.3813E+05	1.9086E+04	2.2822E+04	4.8201E+04
1.531E+00	1.8298E+05	3.5430E+05	5.1103E+05	1.8474E+04	2.2118E+04	4.6562E+04
1.543E+00	1.8128E+05	3.4725E+05	5.0070E+05	1.8238E+04	2.1845E+04	4.5929E+04
1.699E+00	1.5794E+05	2.7340E+05	3.9317E+05	1.5593E+04	1.8748E+04	3.8846E+04
1.713E+00	1.5598E+05	2.6787E+05	3.8519E+05	1.5389E+04	1.8589E+04	3.8303E+04
2.000E+00	1.2172E+05	1.7777E+05	2.5348E+05	1.1873E+04	1.4291E+04	2.8925E+04
3.000E+00	5.9729E+04	5.5497E+04	7.8035E+04	5.8456E+03	6.8427E+03	1.3132E+04
4.000E+00	3.3332E+04	2.2895E+04	3.1855E+04	3.4561E+03	3.8632E+03	7.1590E+03
5.000E+00	2.0450E+04	1.1186E+04	1.5435E+04	2.2729E+03	2.4145E+03	4.3581E+03
6.000E+00	1.3433E+04	6.1146E+03	8.3773E+03	1.6022E+03	1.6166E+03	2.8565E+03
6.701E+00	1.0320E+04	4.2076E+03	5.7386E+03	1.2920E+03	1.2581E+03	2.1947E+03
6.755E+00	1.0123E+04	4.0946E+03	5.5825E+03	1.2720E+03	1.2353E+03	2.1529E+03
7.311E+00	8.3463E+03	3.1195E+03	4.2394E+03	1.0883E+03	1.0281E+03	1.7755E+03
7.370E+00	8.1842E+03	3.0348E+03	4.1230E+03	1.0713E+03	1.0091E+03	1.7411E+03
7.696E+00	7.3526E+03	2.6125E+03	3.5424E+03	9.8309E+02	9.1150E+02	1.5647E+03
7.757E+00	7.2079E+03	2.5411E+03	3.4444E+03	9.6761E+02	8.9448E+02	1.5341E+03
8.000E+00	6.6733E+03	2.2825E+03	3.0896E+03	9.0998E+02	8.3148E+02	1.4210E+03
1.000E+01	3.7674E+03	1.0361E+03	1.3885E+03	5.7928E+02	4.8334E+02	8.0473E+02
1.500E+01	1.2554E+03	2.3413E+02	3.0739E+02	2.4741E+02	1.7046E+02	2.7030E+02
2.000E+01	5.5101E+02	7.8456E+01	1.0131E+02	1.3208E+02	7.8110E+01	1.1946E+02
3.000E+01	1.6323E+02	1.6078E+01	2.0214E+01	5.2590E+01	2.4675E+01	3.5746E+01
4.000E+01	6.6507E+01	5.1007E+00	6.2756E+00	2.6637E+01	1.0545E+01	1.4656E+01
4.684E+01	4.0223E+01	2.7018E+00	3.2820E+00	1.8170E+01	6.5515E+00	8.8913E+00
4.721E+01	3.9207E+01	2.6162E+00	3.1759E+00	1.7819E+01	6.3948E+00	8.6679E+00
5.000E+01	3.2596E+01	2.0747E+00	2.5065E+00	1.5478E+01	5.3697E+00	7.2141E+00
6.000E+01	1.8038E+01	9.9152E-01	1.1791E+00	9.8373E+00	3.0690E+00	4.0047E+00
8.000E+01	7.0010E+00	3.0920E-01	3.5832E-01	4.7332E+00	1.2556E+00	1.5611E+00
1.000E+02	3.3368E+00	1.2573E-01	1.4280E-01	2.6506E+00	6.2422E-01	7.4627E-01
1.500E+02	8.6681E-01	2.5130E-02	2.7618E-02	9.0547E-01	1.7547E-01	1.9429E-01
2.000E+02	3.3719E-01	8.2707E-03	8.9447E-03	4.1875E-01	7.2056E-02	7.5746E-02
3.000E+02	9.3156E-02	1.8384E-03	1.9837E-03	1.4261E-01	2.1300E-02	2.0974E-02
4.000E+02	3.9342E-02	6.7075E-04	7.3321E-04	6.7905E-02	9.3277E-03	8.8651E-03
5.000E+02	2.0921E-02	3.2063E-04	3.6143E-04	3.9038E-02	5.0657E-03	4.7243E-03
6.000E+02	1.2866E-02	1.8044E-04	2.0953E-04	2.5290E-02	3.1435E-03	2.9056E-03
8.000E+02	6.3128E-03	7.8159E-05	9.4564E-05	1.3244E-02	1.5509E-03	1.4266E-03
1.000E+03	3.8022E-03	4.2284E-05	5.5079E-05	8.2962E-03	9.3264E-04	8.5996E-04
1.500E+03	1.6735E-03	1.6643E-05	2.2355E-05	3.8163E-03	4.0605E-04	3.7782E-04

Z= 62

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	1.1536E+05	1.6861E+05	1.9782E+04	2.5345E+04	6.8745E+03	6.2683E+03
1.085E+00	9.8990E+04	1.4418E+05	1.5119E+04	1.9351E+04	6.0278E+03	5.5645E+03
1.093E+00	9.7475E+04	1.4192E+05	1.4722E+04	1.8840E+04	5.9500E+03	5.4988E+03
1.112E+00	9.4329E+04	1.3724E+05	1.3914E+04	1.7802E+04	5.7886E+03	5.3622E+03
1.121E+00	9.2865E+04	1.3507E+05	1.3546E+04	1.7330E+04	5.7137E+03	5.2985E+03
1.406E+00	5.7904E+04	8.3462E+04	6.2107E+03	7.9226E+03	3.9174E+03	3.7209E+03
1.418E+00	5.6901E+04	8.1991E+04	6.0393E+03	7.7032E+03	3.8649E+03	3.6733E+03
1.500E+00	5.0186E+04	7.2160E+04	4.9479E+03	6.3064E+03	3.5113E+03	3.3502E+03
1.531E+00	4.7942E+04	6.8880E+04	4.6043E+03	5.8671E+03	3.3920E+03	3.2403E+03
1.543E+00	4.7082E+04	6.7624E+04	4.4754E+03	5.7023E+03	3.3461E+03	3.1979E+03
1.699E+00	3.7683E+04	5.3930E+04	3.1676E+03	4.0308E+03	2.8353E+03	2.7208E+03
1.713E+00	3.6981E+04	5.2910E+04	3.0774E+03	3.9157E+03	2.7964E+03	2.6841E+03
2.000E+00	2.5397E+04	3.6130E+04	1.7418E+03	2.2117E+03	2.1319E+03	2.0492E+03

Z= 62

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
3.000E+00	8.7546E+03	1.2272E+04	3.6901E+02	4.6605E+02	1.0265E+03	9.6246E+02
4.000E+00	3.8481E+03	5.3369E+03	1.1626E+02	1.4401E+02	6.0062E+02	5.3928E+02
5.000E+00	1.9630E+03	2.6990E+03	4.5724E+01	5.6820E+01	3.9254E+02	3.3572E+02
6.000E+00	1.1076E+03	1.5117E+03	2.1014E+01	2.6026E+01	2.7556E+02	2.2425E+02
6.701E+00	7.7554E+02	1.0536E+03	1.3001E+01	1.6065E+01	2.2173E+02	1.7435E+02
6.755E+00	7.5564E+02	1.0262E+03	1.2555E+01	1.5512E+01	2.1825E+02	1.7117E+02
7.311E+00	5.8260E+02	7.8852E+02	8.8616E+00	1.0930E+01	1.8648E+02	1.4239E+02
7.370E+00	5.6743E+02	7.6772E+02	8.5546E+00	1.0550E+01	1.8354E+02	1.3975E+02
7.696E+00	4.9139E+02	6.6357E+02	7.0604E+00	8.6990E+00	1.6831E+02	1.2620E+02
7.757E+00	4.7848E+02	6.4592E+02	6.8144E+00	8.3945E+00	1.6564E+02	1.2384E+02
8.000E+00	4.3162E+02	5.8185E+02	5.9411E+00	7.3135E+00	1.5570E+02	1.1510E+02
1.000E+01	2.0141E+02	2.6871E+02	2.1743E+00	2.6625E+00	9.8826E+01	6.6864E+01
1.500E+01	4.7391E+01	6.1922E+01	3.3639E-01	4.0762E-01	4.2056E+01	2.3863E+01
2.000E+01	1.6265E+01	2.0899E+01	8.6548E-02	1.0399E-01	2.2421E+01	1.0947E+01
3.000E+01	3.4209E+00	4.2802E+00	1.2169E-02	1.4408E-02	8.9719E+00	3.4638E+00
4.000E+01	1.1001E+00	1.3473E+00	2.9764E-03	3.4817E-03	4.5423E+00	1.4818E+00
4.684E+01	5.8632E-01	7.0925E-01	1.3729E-03	1.5945E-03	3.0979E+00	9.2109E-01
4.721E+01	5.6790E-01	6.8653E-01	1.3203E-03	1.5327E-03	3.0380E+00	8.9907E-01
5.000E+01	4.5131E-01	5.4303E-01	9.9636E-04	1.1536E-03	2.6386E+00	7.5510E-01
6.000E+01	2.1697E-01	2.5712E-01	4.0730E-04	4.6732E-04	1.6768E+00	4.3178E-01
8.000E+01	6.8255E-02	7.8350E-02	9.9970E-05	1.1296E-04	8.0659E-01	1.7678E-01
1.000E+02	2.7897E-02	3.1398E-02	3.3943E-05	3.7886E-05	4.5161E-01	8.7938E-02
1.500E+02	5.6151E-03	6.1168E-03	5.0132E-06	5.4922E-06	1.5420E-01	2.4719E-02
2.000E+02	1.8552E-03	1.9879E-03	1.3595E-06	1.4795E-06	7.1374E-02	1.0154E-02
3.000E+02	4.1410E-04	4.4271E-04	2.3641E-07	2.6081E-07	2.4310E-02	3.0024E-03
4.000E+02	1.5143E-04	1.6481E-04	7.3548E-08	8.3943E-08	1.1577E-02	1.3148E-03
5.000E+02	7.2632E-05	8.0867E-05	3.1947E-08	3.7876E-08	6.6555E-03	7.1404E-04
6.000E+02	4.0779E-05	4.7005E-05	1.6482E-08	2.0401E-08	4.3116E-03	4.4317E-04
8.000E+02	1.7584E-05	2.1453E-05	6.3749E-09	8.5663E-09	2.2582E-03	2.1856E-04
1.000E+03	9.5476E-06	1.2392E-05	3.2038E-09	4.6792E-09	1.4146E-03	1.3145E-04
1.500E+03	3.5852E-06	5.1557E-06	1.1222E-09	1.8838E-09	6.5101E-04	5.7235E-05

Z= 62

ENERGY	5 P 3/2	6 S 1/2
1.000E+00	1.3272E+04	6.0756E+02
1.085E+00	1.1651E+04	5.2960E+02
1.093E+00	1.1501E+04	5.2246E+02
1.112E+00	1.1190E+04	5.0766E+02
1.121E+00	1.1045E+04	5.0079E+02
1.406E+00	7.5312E+03	3.3862E+02
1.418E+00	7.4274E+03	3.3393E+02
1.500E+00	6.7265E+03	3.0233E+02
1.531E+00	6.4895E+03	2.9170E+02
1.543E+00	6.3983E+03	2.8762E+02
1.699E+00	5.3802E+03	2.4245E+02
1.713E+00	5.3026E+03	2.3903E+02
2.000E+00	3.9747E+03	1.8079E+02
3.000E+00	1.7830E+03	8.8440E+01
4.000E+00	9.6807E+02	5.1746E+01
5.000E+00	5.8830E+02	3.3825E+01
6.000E+00	3.8534E+02	2.3750E+01
6.701E+00	2.9602E+02	1.9113E+01
6.755E+00	2.9038E+02	1.8815E+01
7.311E+00	2.3949E+02	1.6077E+01
7.370E+00	2.3484E+02	1.5824E+01
7.696E+00	2.1107E+02	1.4512E+01
7.757E+00	2.0694E+02	1.4282E+01
8.000E+00	1.9169E+02	1.3425E+01
1.000E+01	1.0865E+02	8.5239E+00
1.500E+01	3.6513E+01	3.6288E+00

Z= 62

ENERGY	5 P 3/2	6 S 1/2
2.000E+01	1.6156E+01	1.9344E+00
3.000E+01	4.8421E+00	7.6928E-01
4.000E+01	1.9875E+00	3.8944E-01
4.684E+01	1.2063E+00	2.6560E-01
4.721E+01	1.1761E+00	2.6047E-01
5.000E+01	9.7899E-01	2.2623E-01
6.000E+01	5.4376E-01	1.4376E-01
8.000E+01	2.1213E-01	6.9155E-02
1.000E+02	1.0145E-01	3.8721E-02
1.500E+02	2.6483E-02	1.3223E-02
2.000E+02	1.0329E-02	6.1212E-03
3.000E+02	2.8614E-03	2.0858E-03
4.000E+02	1.2099E-03	9.9395E-04
5.000E+02	6.4506E-04	5.7194E-04
6.000E+02	3.9682E-04	3.7095E-04
8.000E+02	1.9489E-04	1.9493E-04
1.000E+03	1.1759E-04	1.2268E-04
1.500E+03	5.1782E-05	5.7555E-05

Z= 63 20 STATES, 44 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	48.5761	.98378
2 S 1/2	2.00	8.0195	.85036
2 P 1/2	2.00	7.6251	.78047
2 P 3/2	4.00	6.9686	.76133
3 S 1/2	2.00	1.7774	.61060
3 P 1/2	2.00	1.6043	.52498
3 P 3/2	4.00	1.4696	.50163
3 D 3/2	4.00	1.1672	.29287
3 D 5/2	6.00	1.1376	.28817
4 S 1/2	2.00	.3579	.34648
4 P 1/2	2.00	.2902	.27372
4 P 3/2	4.00	.2603	.25421
4 D 3/2	4.00	.1478	.11064
4 D 5/2	6.00	.1424	.10718
4 F 5/2	3.00	.0097	.01019
4 F 7/2	4.00	.0090	.00995
5 S 1/2	2.00	.0493	.11544
5 P 1/2	2.00	.0306	.07360
5 P 3/2	4.00	.0266	.06511
6 S 1/2	2.00	.0052	.01687

Z= 63 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	5.5664E+05	.0E+00	.0E+00	.0E+00	5.5664E+05
1.1365E+00	4.3823E+05	.0E+00	.0E+00	.0E+00	4.3823E+05
1.1456E+00	9.0898E+05	.0E+00	.0E+00	4.7738E+05	4.3161E+05
1.1660E+00	1.4559E+06	.0E+00	.0E+00	1.0386E+06	4.1722E+05
1.1754E+00	1.7821E+06	.0E+00	.0E+00	1.3712E+06	4.1086E+05
1.4681E+00	1.2934E+06	.0E+00	.0E+00	1.0293E+06	2.6405E+05
1.4799E+00	1.4655E+06	.0E+00	.0E+00	1.2057E+06	2.5978E+05
1.5000E+00	1.4169E+06	.0E+00	.0E+00	1.1642E+06	2.5268E+05
1.6027E+00	1.2209E+06	.0E+00	.0E+00	1.0006E+06	2.2026E+05
1.6155E+00	1.2728E+06	.0E+00	.0E+00	1.0562E+06	2.1662E+05
1.7756E+00	1.0333E+06	.0E+00	.0E+00	8.5591E+05	1.7742E+05
1.7899E+00	1.0601E+06	.0E+00	.0E+00	8.8565E+05	1.7442E+05
2.0000E+00	8.2504E+05	.0E+00	.0E+00	6.8783E+05	1.3721E+05

Z= 63 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
3.0000E+00	3.1504E+05	.0E+00	.0E+00	2.6011E+05	5.4939E+04
4.0000E+00	1.5453E+05	.0E+00	.0E+00	1.2670E+05	2.7827E+04
5.0000E+00	8.7832E+04	.0E+00	.0E+00	7.1646E+04	1.6186E+04
6.0000E+00	5.4986E+04	.0E+00	.0E+00	4.4676E+04	1.0310E+04
6.9616E+00	3.7384E+04	.0E+00	.0E+00	3.0282E+04	7.1014E+03
7.0173E+00	1.0143E+05	.0E+00	6.4820E+04	2.9654E+04	6.9599E+03
7.6175E+00	8.2162E+04	.0E+00	5.2620E+04	2.3888E+04	5.6535E+03
7.6785E+00	1.1020E+05	.0E+00	8.1271E+04	2.3391E+04	5.5400E+03
8.0000E+00	9.9566E+04	.0E+00	7.3588E+04	2.0988E+04	4.9904E+03
8.0114E+00	9.9185E+04	.0E+00	7.3305E+04	2.0909E+04	4.9722E+03
8.0756E+00	1.1224E+05	.0E+00	8.6900E+04	2.0472E+04	4.8721E+03
1.0000E+01	6.5446E+04	.0E+00	5.1046E+04	1.1589E+04	2.8112E+03
1.5000E+01	2.2336E+04	.0E+00	1.7485E+04	3.8809E+03	9.7013E+02
2.0000E+01	1.0272E+04	.0E+00	8.0556E+03	1.7667E+03	4.4950E+02
3.0000E+01	3.3697E+03	.0E+00	2.6457E+03	5.7471E+02	1.4936E+02
4.0000E+01	1.5116E+03	.0E+00	1.1872E+03	2.5684E+02	6.7558E+01
4.8528E+01	8.7838E+02	.0E+00	6.8992E+02	1.4900E+02	3.9466E+01
4.8916E+01	4.8010E+03	3.9422E+03	6.7458E+02	1.4568E+02	3.8597E+01
5.0000E+01	4.5296E+03	3.7222E+03	6.3418E+02	1.3693E+02	3.6306E+01
6.0000E+01	2.8038E+03	2.3214E+03	3.7890E+02	8.1705E+01	2.1789E+01
8.0000E+01	1.2967E+03	1.0836E+03	1.6740E+02	3.6045E+01	9.6880E+00
1.0000E+02	7.0448E+02	5.9165E+02	8.8615E+01	1.9067E+01	5.1516E+00
1.5000E+02	2.2846E+02	1.9295E+02	2.7888E+01	5.9967E+00	1.6328E+00
2.0000E+02	1.0248E+02	8.6739E+01	1.2355E+01	2.6564E+00	7.2594E-01
3.0000E+02	3.3721E+01	2.8599E+01	4.0204E+00	8.6439E-01	2.3726E-01
4.0000E+02	1.5792E+01	1.3408E+01	1.8707E+00	4.0212E-01	1.1062E-01
5.0000E+02	9.0012E+00	7.6497E+00	1.0608E+00	2.2792E-01	6.2790E-02
6.0000E+02	5.8051E+00	4.9376E+00	6.8092E-01	1.4623E-01	4.0323E-02
8.0000E+02	3.0299E+00	2.5808E+00	3.5254E-01	7.5646E-02	2.0880E-02
1.0000E+03	1.8973E+00	1.6179E+00	2.1939E-01	4.7035E-02	1.2991E-02
1.5000E+03	8.7425E-01	7.4683E-01	1.0006E-01	2.1430E-02	5.9228E-03

Z= 63

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.136E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.146E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.166E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.175E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.468E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.480E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.603E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.616E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.3957E+04
1.776E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	6.6587E+04
1.790E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.5222E+04	6.6003E+04
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.9735E+04	5.7054E+04
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.1894E+04	3.0936E+04
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.3676E+04	1.8263E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	9.2680E+03	1.1655E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	6.6560E+03	7.8899E+03
6.962E+00	.0E+00	.0E+00	.0E+00	.0E+00	5.0443E+03	5.6565E+03
7.017E+00	.0E+00	.0E+00	.0E+00	6.4820E+04	4.9685E+03	5.5546E+03
7.617E+00	.0E+00	.0E+00	.0E+00	5.2620E+04	4.2494E+03	4.5952E+03
7.678E+00	.0E+00	.0E+00	2.9758E+04	5.1513E+04	4.1851E+03	4.5104E+03
8.000E+00	.0E+00	.0E+00	2.7258E+04	4.6331E+04	3.8679E+03	4.0967E+03
8.011E+00	.0E+00	.0E+00	2.7143E+04	4.6161E+04	3.8573E+03	4.0830E+03
8.076E+00	.0E+00	1.5149E+04	2.6525E+04	4.5225E+04	3.7983E+03	4.0070E+03
1.000E+01	.0E+00	1.0589E+04	1.5337E+04	2.5120E+04	2.4950E+03	2.3911E+03
1.500E+01	.0E+00	4.8857E+03	4.9451E+03	7.6545E+03	1.0851E+03	8.4529E+02

Z= 63

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
2.000E+01	.0E+00	2.7167E+03	2.1439E+03	3.1950E+03	5.8467E+02	3.8716E+02
3.000E+01	.0E+00	1.1187E+03	6.3382E+02	8.9317E+02	2.3490E+02	1.2206E+02
4.000E+01	.0E+00	5.7448E+02	2.6056E+02	3.5214E+02	1.1954E+02	5.2104E+01
4.853E+01	.0E+00	3.6127E+02	1.4215E+02	1.8649E+02	7.4949E+01	2.9048E+01
4.892E+01	3.9422E+03	3.5432E+02	1.3862E+02	1.8164E+02	7.3503E+01	2.8351E+01
5.000E+01	3.7222E+03	3.3589E+02	1.2936E+02	1.6893E+02	6.9665E+01	2.6518E+01
6.000E+01	2.3214E+03	2.1421E+02	7.2608E+01	9.2089E+01	4.4369E+01	1.5151E+01
8.000E+01	1.0836E+03	1.0334E+02	2.9008E+01	3.5047E+01	2.1407E+01	6.1980E+00
1.000E+02	5.9165E+02	5.7906E+01	1.4208E+01	1.6501E+01	1.2009E+01	3.0822E+00
1.500E+02	1.9295E+02	1.9765E+01	3.9084E+00	4.2144E+00	4.1132E+00	8.6650E-01
2.000E+02	8.6739E+01	9.1416E+00	1.5879E+00	1.6253E+00	1.9075E+00	3.5612E-01
3.000E+02	2.8599E+01	3.1108E+00	4.6442E-01	4.4516E-01	6.5129E-01	1.0539E-01
4.000E+02	1.3408E+01	1.4811E+00	2.0235E-01	1.8721E-01	3.1063E-01	4.6184E-02
5.000E+02	7.6497E+00	8.5168E-01	1.0960E-01	9.9512E-02	1.7879E-01	2.5095E-02
6.000E+02	4.9376E+00	5.5191E-01	6.7914E-02	6.1094E-02	1.1587E-01	1.5604E-02
8.000E+02	2.5808E+00	2.8921E-01	3.3411E-02	2.9916E-02	6.0735E-02	7.7012E-03
1.000E+03	1.6179E+00	1.8126E-01	2.0095E-02	1.8032E-02	3.8059E-02	4.6395E-03
1.500E+03	7.4683E-01	8.3438E-02	8.7393E-03	7.8871E-03	1.7507E-02	2.0217E-03

Z= 63

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	3.6205E+04	4.1034E+04	9.4331E+04
1.136E+00	.0E+00	.0E+00	.0E+00	3.0097E+04	3.4866E+04	7.8028E+04
1.146E+00	.0E+00	.0E+00	4.7738E+05	2.9743E+04	3.4499E+04	7.7086E+04
1.166E+00	.0E+00	.0E+00	1.0386E+06	2.8970E+04	3.3693E+04	7.5031E+04
1.175E+00	.0E+00	3.0120E+05	1.0700E+06	2.8627E+04	3.3333E+04	7.4117E+04
1.468E+00	.0E+00	4.2076E+05	6.0855E+05	2.0335E+04	2.4271E+04	5.1859E+04
1.480E+00	1.9673E+05	4.1252E+05	5.9643E+05	2.0080E+04	2.3981E+04	5.1173E+04
1.500E+00	1.8888E+05	3.9891E+05	5.7643E+05	1.9654E+04	2.3497E+04	5.0028E+04
1.603E+00	1.7604E+05	3.3782E+05	4.8674E+05	1.7676E+04	2.1226E+04	4.4699E+04
1.616E+00	1.7435E+05	3.3106E+05	4.7683E+05	1.7451E+04	2.0964E+04	4.4090E+04
1.776E+00	1.5205E+05	2.6160E+05	3.7567E+05	1.4964E+04	1.8041E+04	3.7386E+04
1.790E+00	1.5015E+05	2.5627E+05	3.6801E+05	1.4769E+04	1.7809E+04	3.6861E+04
2.000E+00	1.2560E+05	1.9185E+05	2.7359E+05	1.2276E+04	1.4822E+04	3.0169E+04
3.000E+00	6.2135E+04	6.0328E+04	8.4811E+04	6.0725E+03	7.1586E+03	1.3782E+04
4.000E+00	3.4904E+04	2.5046E+04	3.4811E+04	3.5984E+03	4.0640E+03	7.5440E+03
5.000E+00	2.1509E+04	1.2285E+04	1.6929E+04	2.3700E+03	2.5505E+03	4.6066E+03
6.000E+00	1.4175E+04	6.7377E+03	9.2169E+03	1.6726E+03	1.7135E+03	3.0274E+03
6.962E+00	9.9563E+03	4.0792E+03	5.5460E+03	1.2527E+03	1.2248E+03	2.1256E+03
7.017E+00	9.7658E+03	3.9697E+03	5.3951E+03	1.2333E+03	1.2025E+03	2.0850E+03
7.617E+00	7.9938E+03	2.9944E+03	4.0557E+03	1.0491E+03	9.9432E+02	1.7071E+03
7.678E+00	7.8383E+03	2.9130E+03	3.9442E+03	1.0327E+03	9.7595E+02	1.6740E+03
8.000E+00	7.0803E+03	2.5273E+03	3.4155E+03	9.5186E+02	8.8628E+02	1.5127E+03
8.011E+00	7.0551E+03	2.5148E+03	3.3984E+03	9.4916E+02	8.8329E+02	1.5073E+03
8.076E+00	6.9161E+03	2.4461E+03	3.3042E+03	9.3420E+02	8.6681E+02	1.4778E+03
1.000E+01	4.0114E+03	1.1515E+03	1.5401E+03	6.0700E+02	5.1748E+02	8.5974E+02
1.500E+01	1.3454E+03	2.6197E+02	3.4316E+02	2.6008E+02	1.8392E+02	2.9061E+02
2.000E+01	5.9308E+02	8.8217E+01	1.1362E+02	1.3917E+02	8.4734E+01	1.2900E+02
3.000E+01	1.7674E+02	1.8193E+01	2.2805E+01	5.5619E+01	2.6968E+01	3.8834E+01
4.000E+01	7.2301E+01	5.7959E+00	7.1076E+00	2.8250E+01	1.1582E+01	1.5987E+01
4.853E+01	3.9116E+01	2.6675E+00	3.2195E+00	1.7700E+01	6.4819E+00	8.6828E+00
4.892E+01	3.8128E+01	2.5832E+00	3.1156E+00	1.7359E+01	6.3272E+00	8.4649E+00
5.000E+01	3.5539E+01	2.3649E+00	2.8470E+00	1.6451E+01	5.9205E+00	7.8932E+00
6.000E+01	1.9711E+01	1.1329E+00	1.3423E+00	1.0475E+01	3.3936E+00	4.3920E+00
8.000E+01	7.6761E+00	3.5451E-01	4.0917E-01	5.0543E+00	1.3945E+00	1.7181E+00
1.000E+02	3.6674E+00	1.4450E-01	1.6341E-01	2.8366E+00	6.9554E-01	8.2333E-01
1.500E+02	9.5639E-01	2.8991E-02	3.1708E-02	9.7271E-01	1.9655E-01	2.1522E-01
2.000E+02	3.7291E-01	9.5640E-03	1.0290E-02	4.5103E-01	8.0981E-02	8.4110E-02
3.000E+02	1.0329E-01	2.1320E-03	2.2868E-03	1.5410E-01	2.4034E-02	2.3352E-02
4.000E+02	4.3677E-02	7.7840E-04	8.5109E-04	7.3526E-02	1.0550E-02	9.8827E-03

Z= 63

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
5.000E+02	2.3244E-02	3.7294E-04	4.1712E-04	4.2324E-02	5.7379E-03	5.2703E-03
6.000E+02	1.4298E-02	2.1033E-04	2.4150E-04	2.7442E-02	3.5648E-03	3.2426E-03
8.000E+02	7.0099E-03	9.0246E-05	1.0906E-04	1.4383E-02	1.7600E-03	1.5909E-03
1.000E+03	4.2239E-03	4.9256E-05	6.3849E-05	9.0131E-03	1.0600E-03	9.5950E-04
1.500E+03	1.8566E-03	1.9078E-05	2.5794E-05	4.1452E-03	4.6206E-04	4.2113E-04

Z= 63

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	1.2060E+05	1.7637E+05	2.6566E+04	3.4000E+04	7.0228E+03	6.3594E+03
1.136E+00	9.4954E+04	1.3808E+05	1.7424E+04	2.2262E+04	5.7130E+03	5.2774E+03
1.146E+00	9.3495E+04	1.3591E+05	1.6966E+04	2.1674E+04	5.6393E+03	5.2151E+03
1.166E+00	9.0316E+04	1.3118E+05	1.5990E+04	2.0423E+04	5.4790E+03	5.0791E+03
1.175E+00	8.8907E+04	1.2909E+05	1.5567E+04	1.9881E+04	5.4081E+03	5.0186E+03
1.468E+00	5.5899E+04	8.0430E+04	7.2512E+03	9.2330E+03	3.7372E+03	3.5492E+03
1.480E+00	5.4929E+04	7.9009E+04	7.0511E+03	8.9775E+03	3.6872E+03	3.5038E+03
1.500E+00	5.3319E+04	7.6652E+04	6.7246E+03	8.5602E+03	3.6040E+03	3.4281E+03
1.603E+00	4.5961E+04	6.5902E+04	5.3200E+03	6.7659E+03	3.2204E+03	3.0760E+03
1.616E+00	4.5135E+04	6.4697E+04	5.1710E+03	6.5757E+03	3.1769E+03	3.0357E+03
1.776E+00	3.6258E+04	5.1784E+04	3.6829E+03	4.6776E+03	2.7005E+03	2.5905E+03
1.790E+00	3.5581E+04	5.0803E+04	3.5780E+03	4.5439E+03	2.6635E+03	2.5556E+03
2.000E+00	2.7233E+04	3.8720E+04	2.3841E+03	3.0231E+03	2.1948E+03	2.1091E+03
3.000E+00	9.4889E+03	1.3288E+04	5.0964E+02	6.4264E+02	1.0604E+03	9.9796E+02
4.000E+00	4.1996E+03	5.8162E+03	1.6158E+02	1.9979E+02	6.2159E+02	5.6192E+02
5.000E+00	2.1534E+03	2.9561E+03	6.3869E+01	7.9229E+01	4.0674E+02	3.5116E+02
6.000E+00	1.2202E+03	1.6624E+03	2.9488E+01	3.6454E+01	2.8581E+02	2.3534E+02
6.962E+00	7.5680E+02	1.0245E+03	1.5489E+01	1.9089E+01	2.1341E+02	1.6798E+02
7.017E+00	7.3739E+02	9.9785E+02	1.4959E+01	1.8432E+01	2.1007E+02	1.6492E+02
7.617E+00	5.6320E+02	7.5935E+02	1.0428E+01	1.2827E+01	1.7844E+02	1.3628E+02
7.678E+00	5.4853E+02	7.3931E+02	1.0067E+01	1.2381E+01	1.7562E+02	1.3376E+02
8.000E+00	4.7864E+02	6.4390E+02	8.3941E+00	1.0313E+01	1.6178E+02	1.2144E+02
8.011E+00	4.7636E+02	6.4079E+02	8.3410E+00	1.0248E+01	1.6131E+02	1.2103E+02
8.076E+00	4.6385E+02	6.2374E+02	8.0507E+00	9.8893E+00	1.5875E+02	1.1877E+02
1.000E+01	2.2444E+02	2.9876E+02	3.0845E+00	3.7694E+00	1.0284E+02	7.0852E+01
1.500E+01	5.3241E+01	6.9377E+01	4.7988E-01	5.8015E-01	4.3898E+01	2.5480E+01
2.000E+01	1.8373E+01	2.3538E+01	1.2418E-01	1.4884E-01	2.3455E+01	1.1752E+01
3.000E+01	3.8936E+00	4.8545E+00	1.7605E-02	2.0791E-02	9.4205E+00	3.7463E+00
4.000E+01	1.2579E+00	1.5350E+00	4.3223E-03	5.0421E-03	4.7825E+00	1.6107E+00
4.853E+01	5.8351E-01	7.0099E-01	1.6796E-03	1.9418E-03	2.9958E+00	9.0196E-01
4.892E+01	5.6522E-01	6.7858E-01	1.6154E-03	1.8668E-03	2.9379E+00	8.8046E-01
5.000E+01	5.1787E-01	6.2061E-01	1.4512E-03	1.6752E-03	2.7843E+00	8.2392E-01
6.000E+01	2.4967E-01	2.9457E-01	5.9493E-04	6.8062E-04	1.7726E+00	4.7252E-01
8.000E+01	7.8821E-02	9.0077E-02	1.4662E-04	1.6516E-04	8.5509E-01	1.9432E-01
1.000E+02	3.2304E-02	3.6178E-02	4.9929E-05	5.5550E-05	4.7981E-01	9.6972E-02
1.500E+02	6.5288E-03	7.0753E-03	7.3982E-06	8.0772E-06	1.6446E-01	2.7404E-02
2.000E+02	2.1623E-03	2.3049E-03	2.0115E-06	2.1813E-06	7.6315E-02	1.1295E-02
3.000E+02	4.8420E-04	5.1437E-04	3.5041E-07	3.8488E-07	2.6078E-02	3.3531E-03
4.000E+02	1.7743E-04	1.9154E-04	1.0931E-07	1.2399E-07	1.2443E-02	1.4718E-03
5.000E+02	8.5107E-05	9.4089E-05	4.7420E-08	5.5883E-08	7.1632E-03	8.0057E-04
6.000E+02	4.7831E-05	5.4788E-05	2.4610E-08	3.0259E-08	4.6444E-03	4.9742E-04
8.000E+02	2.0535E-05	2.4875E-05	9.2974E-09	1.2589E-08	2.4345E-03	2.4550E-04
1.000E+03	1.1226E-05	1.4445E-05	4.7809E-09	6.9093E-09	1.5256E-03	1.4789E-04
1.500E+03	4.2214E-06	5.9974E-06	1.6349E-09	2.7550E-09	7.0193E-04	6.4467E-05

Z= 63

ENERGY	5 P 3/2	6 S 1/2
1.000E+00	1.3546E+04	6.1039E+02
1.136E+00	1.1038E+04	4.9188E+02
1.146E+00	1.0895E+04	4.8524E+02
1.166E+00	1.0585E+04	4.7083E+02
1.175E+00	1.0447E+04	4.6446E+02
1.468E+00	7.1706E+03	3.1660E+02
1.480E+00	7.0716E+03	3.1221E+02
1.500E+00	6.9067E+03	3.0490E+02
1.603E+00	6.1447E+03	2.7133E+02
1.616E+00	6.0580E+03	2.6753E+02
1.776E+00	5.1083E+03	2.2628E+02
1.790E+00	5.0344E+03	2.2309E+02
2.000E+00	4.0983E+03	1.8277E+02
3.000E+00	1.8486E+03	8.9604E+01
4.000E+00	1.0074E+03	5.2520E+01
5.000E+00	6.1399E+02	3.4374E+01
6.000E+00	4.0318E+02	2.4159E+01
6.962E+00	2.8302E+02	1.8044E+01
7.017E+00	2.7762E+02	1.7761E+01
7.617E+00	2.2731E+02	1.5089E+01
7.678E+00	2.2290E+02	1.4851E+01
8.000E+00	2.0143E+02	1.3680E+01
8.011E+00	2.0072E+02	1.3641E+01
8.076E+00	1.9679E+02	1.3425E+01
1.000E+01	1.1457E+02	8.6996E+00
1.500E+01	3.8749E+01	3.7149E+00
2.000E+01	1.7220E+01	1.9848E+00
3.000E+01	5.1926E+00	7.9219E-01
4.000E+01	2.1401E+00	4.0215E-01
4.853E+01	1.1630E+00	2.5190E-01
4.892E+01	1.1339E+00	2.4704E-01
5.000E+01	1.0574E+00	2.3412E-01
6.000E+01	5.8868E-01	1.4905E-01
8.000E+01	2.3046E-01	7.1900E-02
1.000E+02	1.1049E-01	4.0346E-02
1.500E+02	2.8961E-02	1.3830E-02
2.000E+02	1.1323E-02	6.4187E-03
3.000E+02	3.1452E-03	2.1944E-03
4.000E+02	1.3316E-03	1.0478E-03
5.000E+02	7.1041E-04	6.0366E-04
6.000E+02	4.3715E-04	3.9185E-04
8.000E+02	2.1458E-04	2.0606E-04
1.000E+03	1.2950E-04	1.2972E-04
1.500E+03	5.6963E-05	6.0818E-05

Z= 64 22 STATES, 44 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	50.3123	.98394
2 S 1/2	2.00	8.3513	.85221
2 P 1/2	2.00	7.9473	.78316
2 P 3/2	4.00	7.2424	.76353
3 S 1/2	2.00	1.8652	.61502
3 P 1/2	2.00	1.6873	.53016
3 P 3/2	4.00	1.5418	.50609
3 D 3/2	4.00	1.2316	.29808
3 D 5/2	6.00	1.1996	.29321
4 S 1/2	2.00	.3816	.35178
4 P 1/2	2.00	.3115	.27924
4 P 3/2	4.00	.2789	.25896
4 D 3/2	4.00	.1622	.11469
4 D 5/2	6.00	.1562	.11106
4 F 5/2	3.00	.0170	.01184
4 F 7/2	4.00	.0161	.01159
5 S 1/2	2.00	.0547	.12143
5 P 1/2	2.00	.0349	.07903
5 P 3/2	4.00	.0302	.06995
5 D 3/2	.40	.0052	.01206
5 D 5/2	.60	.0048	.01116
6 S 1/2	2.00	.0057	.01957

Z= 64 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	5.9574E+05	.0E+00	.0E+00	.0E+00	5.9574E+05
1.1985E+00	4.2395E+05	.0E+00	.0E+00	.0E+00	4.2395E+05
1.2080E+00	7.9857E+05	.0E+00	.0E+00	3.8111E+05	4.1746E+05
1.2304E+00	1.3380E+06	.0E+00	.0E+00	9.3509E+05	4.0288E+05
1.2402E+00	1.6141E+06	.0E+00	.0E+00	1.2174E+06	3.9667E+05
1.5000E+00	1.3140E+06	.0E+00	.0E+00	1.0429E+06	2.7113E+05
1.5402E+00	1.2324E+06	.0E+00	.0E+00	9.7564E+05	2.5677E+05
1.5526E+00	1.3979E+06	.0E+00	.0E+00	1.1453E+06	2.5258E+05
1.6856E+00	1.1562E+06	.0E+00	.0E+00	9.4340E+05	2.1279E+05
1.6991E+00	1.2060E+06	.0E+00	.0E+00	9.9678E+05	2.0924E+05
1.8633E+00	9.8214E+05	.0E+00	.0E+00	8.1020E+05	1.7194E+05
1.8782E+00	1.0073E+06	.0E+00	.0E+00	8.3824E+05	1.6902E+05
2.0000E+00	8.7504E+05	.0E+00	.0E+00	7.2751E+05	1.4752E+05
3.0000E+00	3.3529E+05	.0E+00	.0E+00	2.7608E+05	5.9210E+04
4.0000E+00	1.6479E+05	.0E+00	.0E+00	1.3476E+05	3.0033E+04
5.0000E+00	9.3786E+04	.0E+00	.0E+00	7.6302E+04	1.7484E+04
6.0000E+00	5.8770E+04	.0E+00	.0E+00	4.7625E+04	1.1145E+04
7.2352E+00	3.6161E+04	.0E+00	.0E+00	2.9192E+04	6.9690E+03
7.2931E+00	9.7419E+04	.0E+00	6.2003E+04	2.8586E+04	6.8299E+03
7.9393E+00	7.8237E+04	.0E+00	4.9878E+04	2.2852E+04	5.5063E+03
8.0000E+00	1.0508E+05	.0E+00	7.7277E+04	2.2398E+04	5.4006E+03
8.0029E+00	1.0499E+05	.0E+00	7.7219E+04	2.2376E+04	5.3956E+03
8.3430E+00	9.4702E+04	.0E+00	6.9805E+04	2.0046E+04	4.8523E+03
8.4098E+00	1.0718E+05	.0E+00	8.2798E+04	1.9627E+04	4.7544E+03
1.0000E+01	6.9383E+04	.0E+00	5.3957E+04	1.2380E+04	3.0454E+03
1.5000E+01	2.3760E+04	.0E+00	1.8555E+04	4.1524E+03	1.0524E+03
2.0000E+01	1.0945E+04	.0E+00	8.5640E+03	1.8926E+03	4.8830E+02
3.0000E+01	3.5993E+03	.0E+00	2.8201E+03	6.1671E+02	1.6253E+02
4.0000E+01	1.6169E+03	.0E+00	1.2674E+03	2.7594E+02	7.3604E+01
5.0000E+01	8.6465E+02	.0E+00	6.7781E+02	1.4725E+02	3.9593E+01
5.0262E+01	8.5202E+02	.0E+00	6.6791E+02	1.4509E+02	3.9020E+01
5.0665E+01	4.6202E+03	3.7871E+03	6.5307E+02	1.4186E+02	3.8161E+01
6.0000E+01	2.9545E+03	2.4375E+03	4.0530E+02	8.7930E+01	2.3780E+01

Z= 64 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY (KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
8.0000E+01	1.3728E+03	1.1441E+03	1.7930E+02	3.8839E+01	1.0587E+01
1.0000E+02	7.4726E+02	6.2604E+02	9.5022E+01	2.0566E+01	5.6353E+00
1.5000E+02	2.4309E+02	2.0485E+02	2.9966E+01	6.4806E+00	1.7894E+00
2.0000E+02	1.0926E+02	9.2291E+01	1.3295E+01	2.8748E+00	7.9682E-01
3.0000E+02	3.6043E+01	3.0509E+01	4.3352E+00	9.3730E-01	2.6095E-01
4.0000E+02	1.6906E+01	1.4328E+01	2.0198E+00	4.3659E-01	1.2182E-01
5.0000E+02	9.6468E+00	8.1836E+00	1.1463E+00	2.4770E-01	6.9205E-02
6.0000E+02	6.2260E+00	5.2863E+00	7.3623E-01	1.5898E-01	4.4467E-02
8.0000E+02	3.2521E+00	2.7654E+00	3.8138E-01	8.2280E-02	2.3036E-02
1.0000E+03	2.0370E+00	1.7342E+00	2.3736E-01	5.1165E-02	1.4335E-02
1.5000E+03	9.3846E-01	8.0041E-01	1.0822E-01	2.3302E-02	6.5324E-03

Z= 64

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.198E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.208E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.230E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.240E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.540E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.553E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.686E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.699E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.0828E+04
1.863E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	6.3533E+04
1.878E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.2755E+04	6.2991E+04
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.9859E+04	5.8226E+04
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.2352E+04	3.1928E+04
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.4055E+04	1.9011E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	9.5601E+03	1.2204E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	6.8866E+03	8.2959E+03
7.235E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.8617E+03	5.4679E+03
7.293E+00	.0E+00	.0E+00	.0E+00	6.2003E+04	4.7886E+03	5.3695E+03
7.939E+00	.0E+00	.0E+00	.0E+00	4.9878E+04	4.0724E+03	4.4133E+03
8.000E+00	.0E+00	.0E+00	2.8405E+04	4.8872E+04	4.0134E+03	4.3356E+03
8.003E+00	.0E+00	.0E+00	2.8395E+04	4.8825E+04	4.0106E+03	4.3319E+03
8.343E+00	.0E+00	.0E+00	2.5976E+04	4.3829E+04	3.7024E+03	3.9293E+03
8.410E+00	.0E+00	1.4483E+04	2.5377E+04	4.2937E+04	3.6458E+03	3.8562E+03
1.000E+01	.0E+00	1.0851E+04	1.6328E+04	2.6777E+04	2.5954E+03	2.5425E+03
1.500E+01	.0E+00	5.0524E+03	5.3053E+03	8.1977E+03	1.1332E+03	9.0631E+02
2.000E+01	.0E+00	2.8200E+03	2.3137E+03	3.4303E+03	6.1226E+02	4.1737E+02
3.000E+01	.0E+00	1.1687E+03	6.8804E+02	9.6337E+02	2.4699E+02	1.3257E+02
4.000E+01	.0E+00	6.0240E+02	2.8396E+02	3.8102E+02	1.2606E+02	5.6868E+01
5.000E+01	.0E+00	3.5320E+02	1.4143E+02	1.8318E+02	7.3631E+01	2.9048E+01
5.026E+01	.0E+00	3.4873E+02	1.3913E+02	1.8005E+02	7.2697E+01	2.8591E+01
5.066E+01	3.7871E+03	3.4203E+02	1.3568E+02	1.7536E+02	7.1295E+01	2.7906E+01
6.000E+01	2.4375E+03	2.2568E+02	7.9574E+01	1.0004E+02	4.6983E+01	1.6644E+01
8.000E+01	1.1441E+03	1.0922E+02	3.1905E+01	3.8178E+01	2.2733E+01	6.8379E+00
1.000E+02	6.2604E+02	6.1344E+01	1.5668E+01	1.8010E+01	1.2781E+01	3.4109E+00
1.500E+02	2.0485E+02	2.1022E+01	4.3296E+00	4.6149E+00	4.3944E+00	9.6386E-01
2.000E+02	9.2291E+01	9.7475E+00	1.7641E+00	1.7833E+00	2.0431E+00	3.9741E-01
3.000E+02	3.0509E+01	3.3278E+00	5.1779E-01	4.8955E-01	6.9987E-01	1.1808E-01
4.000E+02	1.4328E+01	1.5876E+00	2.2609E-01	2.0611E-01	3.3447E-01	5.1863E-02
5.000E+02	8.1836E+00	9.1408E-01	1.2263E-01	1.0961E-01	1.9276E-01	2.8223E-02
6.000E+02	5.2863E+00	5.9285E-01	7.6068E-02	6.7310E-02	1.2504E-01	1.7568E-02
8.000E+02	2.7654E+00	3.1095E-01	3.7473E-02	3.2958E-02	6.5597E-02	8.6835E-03
1.000E+03	1.7342E+00	1.9495E-01	2.2557E-02	1.9859E-02	4.1117E-02	5.2346E-03
1.500E+03	8.0041E-01	8.9718E-02	9.8214E-03	8.6777E-03	1.8911E-02	2.2845E-03

Z= 64

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	3.7120E+04	4.1884E+04	9.7623E+04
1.198E+00	.0E+00	.0E+00	.0E+00	2.8598E+04	3.3314E+04	7.4685E+04
1.208E+00	.0E+00	.0E+00	3.8111E+05	2.8262E+04	3.2961E+04	7.3774E+04
1.230E+00	.0E+00	.0E+00	9.3509E+05	2.7500E+04	3.2159E+04	7.1716E+04
1.240E+00	.0E+00	2.4499E+05	9.7244E+05	2.7173E+04	3.1814E+04	7.0834E+04
1.500E+00	.0E+00	4.2647E+05	6.1639E+05	2.0290E+04	2.4265E+04	5.2147E+04
1.540E+00	.0E+00	3.9925E+05	5.7639E+05	1.9461E+04	2.3322E+04	4.9893E+04
1.553E+00	1.8915E+05	3.9137E+05	5.6482E+05	1.9216E+04	2.3042E+04	4.9229E+04
1.686E+00	1.6820E+05	3.1797E+05	4.5722E+05	1.6844E+04	2.0306E+04	4.2789E+04
1.699E+00	1.6655E+05	3.1155E+05	4.4784E+05	1.6628E+04	2.0055E+04	4.2201E+04
1.863E+00	1.4536E+05	2.4713E+05	3.5418E+05	1.4308E+04	1.7313E+04	3.5889E+04
1.878E+00	1.4352E+05	2.4205E+05	3.4692E+05	1.4122E+04	1.7090E+04	3.5383E+04
2.000E+00	1.2960E+05	2.0576E+05	2.9407E+05	1.2722E+04	1.5411E+04	3.1597E+04
3.000E+00	6.4568E+04	6.5390E+04	9.1840E+04	6.3210E+03	7.5091E+03	1.4523E+04
4.000E+00	3.6476E+04	2.7298E+04	3.7920E+04	3.7548E+03	4.2866E+03	7.9806E+03
5.000E+00	2.2579E+04	1.3447E+04	1.8512E+04	2.4769E+03	2.7011E+03	4.8881E+03
6.000E+00	1.4934E+04	7.3988E+03	1.0110E+04	1.7502E+03	1.8209E+03	3.2207E+03
7.235E+00	9.5843E+03	3.9393E+03	5.3388E+03	1.2167E+03	1.1952E+03	2.0654E+03
7.293E+00	9.4006E+03	3.8336E+03	5.1935E+03	1.1978E+03	1.1735E+03	2.0259E+03
7.939E+00	7.6385E+03	2.8635E+03	3.8646E+03	1.0131E+03	9.6406E+02	1.6468E+03
8.000E+00	7.4965E+03	2.7891E+03	3.7631E+03	9.9795E+02	9.4706E+02	1.6163E+03
8.003E+00	7.4898E+03	2.7856E+03	3.7583E+03	9.9723E+02	9.4625E+02	1.6148E+03
8.343E+00	6.7548E+03	2.4116E+03	3.2475E+03	9.1807E+02	8.5810E+02	1.4568E+03
8.410E+00	6.6215E+03	2.3457E+03	3.1575E+03	9.0358E+02	8.4210E+02	1.4283E+03
1.000E+01	4.2636E+03	1.2757E+03	1.7030E+03	6.3747E+02	5.5541E+02	9.2184E+02
1.500E+01	1.4389E+03	2.9217E+02	3.8182E+02	2.7402E+02	1.9894E+02	3.1355E+02
2.000E+01	6.3709E+02	9.8851E+01	1.2699E+02	1.4697E+02	9.2141E+01	1.3978E+02
3.000E+01	1.9098E+02	2.0517E+01	2.5640E+01	5.8950E+01	2.9543E+01	4.2332E+01
4.000E+01	7.8428E+01	6.5630E+00	8.0217E+00	3.0024E+01	1.2752E+01	1.7499E+01
5.000E+01	3.8662E+01	2.6861E+00	3.2222E+00	1.7522E+01	6.5428E+00	8.6652E+00
5.026E+01	3.8020E+01	2.6303E+00	3.1538E+00	1.7300E+01	6.4403E+00	8.5223E+00
5.066E+01	3.7062E+01	2.5474E+00	3.0523E+00	1.6966E+01	6.2871E+00	8.3087E+00
6.000E+01	2.1491E+01	1.2898E+00	1.5225E+00	1.1177E+01	3.7612E+00	4.8328E+00
8.000E+01	8.3974E+00	4.0502E-01	4.6557E-01	5.4083E+00	1.5525E+00	1.8971E+00
1.000E+02	4.0216E+00	1.6548E-01	1.8633E-01	3.0417E+00	7.7676E-01	9.1135E-01
1.500E+02	1.0528E+00	3.3327E-02	3.6274E-02	1.0469E+00	2.2068E-01	2.3918E-01
2.000E+02	4.1145E-01	1.1020E-02	1.1794E-02	4.8674E-01	9.1222E-02	9.3699E-02
3.000E+02	1.1426E-01	2.4636E-03	2.6267E-03	1.6685E-01	2.7182E-02	2.6082E-02
4.000E+02	4.8376E-02	9.0097E-04	9.7852E-04	7.9768E-02	1.1959E-02	1.1052E-02
5.000E+02	2.5812E-02	4.3251E-04	4.7938E-04	4.5977E-02	6.5140E-03	5.8991E-03
6.000E+02	1.5852E-02	2.4424E-04	2.7727E-04	2.9835E-02	4.0522E-03	3.6308E-03
8.000E+02	7.7694E-03	1.0450E-04	1.2572E-04	1.5652E-02	2.0032E-03	1.7806E-03
1.000E+03	4.6824E-03	5.7122E-05	7.3642E-05	9.8113E-03	1.2077E-03	1.0741E-03
1.500E+03	2.0544E-03	2.1860E-05	2.9721E-05	4.5115E-03	5.2701E-04	4.7100E-04

Z= 64

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	1.2703E+05	1.8603E+05	3.2501E+04	4.1710E+04	7.5249E+03	6.9003E+03
1.198E+00	9.0759E+04	1.3180E+05	1.7946E+04	2.2976E+04	5.6212E+03	5.3036E+03
1.208E+00	8.9352E+04	1.2971E+05	1.7474E+04	2.2368E+04	5.5486E+03	5.2407E+03
1.230E+00	8.6180E+04	1.2500E+05	1.6432E+04	2.1029E+04	5.3849E+03	5.0983E+03
1.240E+00	8.4825E+04	1.2299E+05	1.5959E+04	2.0470E+04	5.3150E+03	5.0372E+03
1.500E+00	5.7034E+04	8.2027E+04	8.3338E+03	1.0637E+04	3.8749E+03	3.7453E+03
1.540E+00	5.3819E+04	7.7322E+04	7.5571E+03	9.6929E+03	3.7057E+03	3.5890E+03
1.553E+00	5.2880E+04	7.5949E+04	7.3876E+03	9.4245E+03	3.6560E+03	3.5430E+03
1.686E+00	4.3966E+04	6.2935E+04	5.5242E+03	7.0391E+03	3.1792E+03	3.0965E+03
1.699E+00	4.3172E+04	6.1778E+04	5.3693E+03	6.8411E+03	3.1361E+03	3.0558E+03
1.863E+00	3.4825E+04	4.9655E+04	3.8541E+03	4.9041E+03	2.6755E+03	2.6161E+03
1.878E+00	3.4173E+04	4.8710E+04	3.7443E+03	4.7639E+03	2.6388E+03	2.5807E+03
2.000E+00	2.9394E+04	4.1794E+04	2.9781E+03	3.7857E+03	2.3655E+03	2.3159E+03

Z= 64

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
3.000E+00	1.0354E+04	1.4492E+04	6.4307E+02	8.1259E+02	1.1463E+03	1.1035E+03
4.000E+00	4.6140E+03	6.3852E+03	2.0518E+02	2.5811E+02	6.7309E+02	6.2439E+02
5.000E+00	2.3781E+03	3.2612E+03	8.2094E+01	1.0287E+02	4.4100E+02	3.9170E+02
6.000E+00	1.3531E+03	1.8413E+03	3.8065E+01	4.7545E+01	3.1019E+02	2.6334E+02
7.235E+00	7.4313E+02	1.0029E+03	1.6968E+01	2.1111E+01	2.1481E+02	1.7253E+02
7.293E+00	7.2407E+02	9.7679E+02	1.6387E+01	2.0384E+01	2.1144E+02	1.6939E+02
7.939E+00	5.4791E+02	7.3626E+02	1.1221E+01	1.3811E+01	1.7857E+02	1.3907E+02
8.000E+00	5.3428E+02	7.1769E+02	1.0850E+01	1.3352E+01	1.7588E+02	1.3662E+02
8.003E+00	5.3364E+02	7.1681E+02	1.0833E+01	1.3330E+01	1.7575E+02	1.3650E+02
8.343E+00	4.6471E+02	6.2301E+02	9.0100E+00	1.1077E+01	1.6169E+02	1.2375E+02
8.410E+00	4.5251E+02	6.0642E+02	8.6966E+00	1.0689E+01	1.5912E+02	1.2144E+02
1.000E+01	2.5176E+02	3.3455E+02	4.0044E+00	4.9011E+00	1.1198E+02	8.0044E+01
1.500E+01	6.0208E+01	7.8290E+01	6.2663E-01	7.5848E-01	4.7943E+01	2.8668E+01
2.000E+01	2.0891E+01	2.6698E+01	1.6305E-01	1.9563E-01	2.5671E+01	1.3439E+01
3.000E+01	4.4601E+00	5.5450E+00	2.3315E-02	2.7556E-02	1.0342E+01	4.3163E+00
4.000E+01	1.4480E+00	1.7611E+00	5.7469E-03	6.7081E-03	5.2647E+00	1.8652E+00
5.000E+01	5.9816E-01	7.1428E-01	1.9351E-03	2.2353E-03	3.0716E+00	9.5773E-01
5.026E+01	5.8583E-01	6.9926E-01	1.8864E-03	2.1785E-03	3.0326E+00	9.4276E-01
5.066E+01	5.6752E-01	6.7697E-01	1.8144E-03	2.0945E-03	2.9741E+00	9.2035E-01
6.000E+01	2.8912E-01	3.3985E-01	7.9535E-04	9.1003E-04	1.9590E+00	5.5088E-01
8.000E+01	9.1600E-02	1.0431E-01	1.9688E-04	2.2186E-04	9.4768E-01	2.2756E-01
1.000E+02	3.7644E-02	4.1976E-02	6.7233E-05	7.4770E-05	5.3291E-01	1.1392E-01
1.500E+02	7.6421E-03	8.2377E-03	9.9996E-06	1.0915E-05	1.8335E-01	3.2364E-02
2.000E+02	2.5376E-03	2.6897E-03	2.7227E-06	2.9510E-06	8.5300E-02	1.3383E-02
3.000E+02	5.7018E-04	6.0108E-04	4.7592E-07	5.2209E-07	2.9244E-02	3.9891E-03
4.000E+02	2.0909E-04	2.2401E-04	1.4893E-07	1.6786E-07	1.3982E-02	1.7554E-03
5.000E+02	1.0026E-04	1.1052E-04	6.4565E-08	7.5966E-08	8.0593E-03	9.5627E-04
6.000E+02	5.6542E-05	6.4265E-05	3.3546E-08	4.0737E-08	5.2299E-03	5.9485E-04
8.000E+02	2.4222E-05	2.9166E-05	1.2676E-08	1.6836E-08	2.7439E-03	2.9398E-04
1.000E+03	1.3315E-05	1.6900E-05	6.5522E-09	9.1967E-09	1.7200E-03	1.7727E-04
1.500E+03	5.0226E-06	6.9944E-06	2.2530E-09	3.5750E-09	7.9114E-04	7.7362E-05

Z= 64

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	6 S 1/2
1.000E+00	1.4875E+04	7.4978E+02	1.0627E+03	7.2476E+02
1.198E+00	1.1130E+04	5.3097E+02	7.4795E+02	5.3414E+02
1.208E+00	1.0986E+04	5.2260E+02	7.3597E+02	5.2693E+02
1.230E+00	1.0659E+04	5.0374E+02	7.0895E+02	5.1073E+02
1.240E+00	1.0519E+04	4.9570E+02	6.9745E+02	5.0383E+02
1.500E+00	7.6171E+03	3.3208E+02	4.6436E+02	3.6328E+02
1.540E+00	7.2732E+03	3.1335E+02	4.3776E+02	3.4684E+02
1.553E+00	7.1723E+03	3.0787E+02	4.3000E+02	3.4203E+02
1.686E+00	6.2002E+03	2.5591E+02	3.5650E+02	2.9594E+02
1.699E+00	6.1122E+03	2.5129E+02	3.4997E+02	2.9180E+02
1.863E+00	5.1702E+03	2.0278E+02	2.8155E+02	2.4781E+02
1.878E+00	5.0950E+03	1.9899E+02	2.7622E+02	2.4432E+02
2.000E+00	4.5356E+03	1.7124E+02	2.3723E+02	2.1831E+02
3.000E+00	2.0560E+03	6.1177E+01	8.2077E+01	1.0677E+02
4.000E+00	1.1244E+03	2.7432E+01	3.6388E+01	6.2681E+01
5.000E+00	6.8729E+02	1.4204E+01	1.8671E+01	4.1070E+01
6.000E+00	4.5242E+02	8.1108E+00	1.0579E+01	2.8892E+01
7.235E+00	2.9003E+02	4.4701E+00	5.7823E+00	2.0011E+01
7.293E+00	2.8449E+02	4.3561E+00	5.6327E+00	1.9698E+01
7.939E+00	2.3126E+02	3.3013E+00	4.2521E+00	1.6637E+01
8.000E+00	2.2697E+02	3.2196E+00	4.1454E+00	1.6386E+01
8.003E+00	2.2677E+02	3.2157E+00	4.1404E+00	1.6374E+01
8.343E+00	2.0460E+02	2.8024E+00	3.6C12E+00	1.5065E+01
8.410E+00	2.0058E+02	2.7292E+00	3.5C58E+00	1.4826E+01
1.000E+01	1.2953E+02	1.5228E+00	1.9396E+00	1.0436E+01
1.500E+01	4.4085E+01	3.6625E-01	4.5652E-01	4.4695E+00

Z= 64

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	6 S 1/2
2.000E+01	1.9675E+01	1.2750E-01	1.5621E-01	2.3932E+00
3.000E+01	5.9688E+00	2.7330E-02	3.2573E-02	9.5856E-01
4.000E+01	2.4700E+00	8.8939E-03	1.0367E-02	4.8792E-01
5.000E+01	1.2241E+00	3.6802E-03	4.2105E-03	2.8466E-01
5.026E+01	1.2040E+00	3.6046E-03	4.1221E-03	2.8105E-01
5.066E+01	1.1738E+00	3.4921E-03	3.9908E-03	2.7562E-01
6.000E+01	6.8311E-01	1.7809E-03	2.0052E-03	1.8155E-01
8.000E+01	2.6838E-01	5.6492E-04	6.1958E-04	8.7826E-02
1.000E+02	1.2899E-01	2.3225E-04	2.4960E-04	4.9389E-02
1.500E+02	3.3946E-02	4.7179E-05	4.9039E-05	1.6994E-02
2.000E+02	1.3304E-02	1.5667E-05	1.6022E-05	7.9070E-03
3.000E+02	3.7053E-03	3.5195E-06	3.5883E-06	2.7118E-03
4.000E+02	1.5708E-03	1.2902E-06	1.3407E-06	1.2973E-03
5.000E+02	8.3860E-04	6.1953E-07	6.6175E-07	7.4828E-04
6.000E+02	5.1612E-04	3.4920E-07	3.8530E-07	4.8607E-04
8.000E+02	2.5333E-04	1.4968E-07	1.7652E-07	2.5569E-04
1.000E+03	1.5283E-04	8.2352E-08	1.0276E-07	1.6092E-04
1.500E+03	6.7140E-05	3.1367E-08	4.3782E-08	7.5190E-05

Z= 65 20 STATES, 44 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	52.0699	.98411
2 S 1/2	2.00	8.6747	.85415
2 P 1/2	2.00	8.2612	.78594
2 P 3/2	4.00	7.5051	.76583
3 S 1/2	2.00	1.9365	.61956
3 P 1/2	2.00	1.7538	.53551
3 P 3/2	4.00	1.5968	.51068
3 D 3/2	4.00	1.2790	.30362
3 D 5/2	6.00	1.2445	.29857
4 S 1/2	2.00	.3887	.35430
4 P 1/2	2.00	.3162	.28202
4 P 3/2	4.00	.2811	.26059
4 D 3/2	4.00	.1606	.11635
4 D 5/2	6.00	.1542	.11248
4 F 5/2	3.86	.0103	.01180
4 F 7/2	5.14	.0095	.01149
5 S 1/2	2.00	.0522	.11639
5 P 1/2	2.00	.0323	.07435
5 P 3/2	4.00	.0276	.06502
6 S 1/2	2.00	.0053	.01640

Z= 65 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	6.2970E+05	.0E+00	.0E+00	.0E+00	6.2970E+05
1.2432E+00	4.1604E+05	.0E+00	.0E+00	.0E+00	4.1604E+05
1.2532E+00	8.2503E+05	.0E+00	.0E+00	4.1546E+05	4.0957E+05
1.2777E+00	1.3429E+06	.0E+00	.0E+00	9.4871E+05	3.9419E+05
1.2880E+00	1.6167E+06	.0E+00	.0E+00	1.2287E+06	3.8802E+05
1.5000E+00	1.3999E+06	.0E+00	.0E+00	1.1146E+06	2.8525E+05
1.5952E+00	1.2050E+06	.0E+00	.0E+00	9.5385E+05	2.5116E+05
1.6079E+00	1.3672E+06	.0E+00	.0E+00	1.1202E+06	2.4701E+05
1.7520E+00	1.1196E+06	.0E+00	.0E+00	9.1346E+05	2.0614E+05
1.7661E+00	1.1674E+06	.0E+00	.0E+00	9.6477E+05	2.0267E+05
1.9346E+00	9.5245E+05	.0E+00	.0E+00	7.8580E+05	1.6665E+05
1.9500E+00	9.7676E+05	.0E+00	.0E+00	8.1297E+05	1.6379E+05
2.0000E+00	9.2316E+05	.0E+00	.0E+00	7.6814E+05	1.5502E+05

Z= 65 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY (KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
3.0000E+00	3.5529E+05	.0E+00	.0E+00	2.9311E+05	6.2186E+04
4.0000E+00	1.7484E+05	.0E+00	.0E+00	1.4329E+05	3.1546E+04
5.0000E+00	9.9601E+04	.0E+00	.0E+00	8.1232E+04	1.8369E+04
6.0000E+00	6.2460E+04	.0E+00	.0E+00	5.0745E+04	1.1715E+04
7.4976E+00	3.5046E+04	.0E+00	.0E+00	2.8347E+04	6.6995E+03
7.5576E+00	9.3983E+04	.0E+00	5.9660E+04	2.7758E+04	6.5656E+03
8.0000E+00	8.1484E+04	.0E+00	5.1909E+04	2.3892E+04	5.6833E+03
8.2529E+00	7.4844E+04	.0E+00	4.7586E+04	2.2007E+04	5.2504E+03
8.3190E+00	1.0053E+05	.0E+00	7.3838E+04	2.1549E+04	5.1448E+03
8.6660E+00	9.0853E+04	.0E+00	6.6878E+04	1.9341E+04	4.6350E+03
8.7354E+00	1.0283E+05	.0E+00	7.9350E+04	1.8936E+04	4.5414E+03
1.0000E+01	7.3309E+04	.0E+00	5.6883E+04	1.3218E+04	3.2081E+03
1.5000E+01	2.5226E+04	.0E+00	1.9675E+04	4.4400E+03	1.1108E+03
2.0000E+01	1.1641E+04	.0E+00	9.0988E+03	2.0260E+03	5.1609E+02
3.0000E+01	3.8370E+03	.0E+00	3.0037E+03	6.6125E+02	1.7213E+02
4.0000E+01	1.7260E+03	.0E+00	1.3517E+03	2.9622E+02	7.8066E+01
5.0000E+01	9.2404E+02	.0E+00	7.2378E+02	1.5822E+02	4.2040E+01
5.2018E+01	8.2676E+02	.0E+00	6.4759E+02	1.4152E+02	3.7653E+01
5.2434E+01	4.4466E+03	3.6382E+03	6.3322E+02	1.3837E+02	3.6826E+01
6.0000E+01	3.1093E+03	2.5563E+03	4.3317E+02	9.4553E+01	2.5273E+01
8.0000E+01	1.4524E+03	1.2074E+03	1.9190E+02	4.1817E+01	1.1268E+01
1.0000E+02	7.9179E+02	6.6181E+02	1.0181E+02	2.2165E+01	6.0046E+00
1.5000E+02	2.5834E+02	2.1726E+02	3.2170E+01	6.9978E+00	1.9107E+00
2.0000E+02	1.1633E+02	9.8076E+01	1.4294E+01	3.1085E+00	8.5216E-01
3.0000E+02	3.8474E+01	3.2508E+01	4.6703E+00	1.0155E+00	2.7965E-01
4.0000E+02	1.8076E+01	1.5292E+01	2.1788E+00	4.7361E-01	1.3073E-01
5.0000E+02	1.0325E+01	8.7445E+00	1.2376E+00	2.6893E-01	7.4330E-02
6.0000E+02	6.6689E+00	5.6531E+00	7.9530E-01	1.7274E-01	4.7786E-02
8.0000E+02	3.4863E+00	2.9599E+00	4.1221E-01	8.9420E-02	2.4769E-02
1.0000E+03	2.1843E+00	1.8567E+00	2.5658E-01	5.5610E-02	1.5415E-02
1.5000E+03	1.0061E+00	8.5687E-01	1.1693E-01	2.5316E-02	7.0218E-03

Z= 65

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.243E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.253E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.278E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.288E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.595E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.608E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.752E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.766E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	6.8309E+04
1.935E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	6.1327E+04
1.950E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.1509E+04	6.0790E+04
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.0486E+04	5.8978E+04
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.2819E+04	3.2848E+04
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.4436E+04	1.9760E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	9.8589E+03	1.2757E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.1219E+03	8.7077E+03
7.498E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.7098E+03	5.3190E+03
7.558E+00	.0E+00	.0E+00	.0E+00	5.9660E+04	4.6390E+03	5.2234E+03
8.000E+00	.0E+00	.0E+00	.0E+00	5.1909E+04	4.1622E+03	4.5840E+03
8.253E+00	.0E+00	.0E+00	.0E+00	4.7586E+04	3.9217E+03	4.2639E+03
8.319E+00	.0E+00	.0E+00	2.7248E+04	4.6590E+04	3.8622E+03	4.1853E+03
8.666E+00	.0E+00	.0E+00	2.4964E+04	4.1914E+04	3.5703E+03	3.8028E+03
8.735E+00	.0E+00	1.3898E+04	2.4392E+04	4.1061E+04	3.5157E+03	3.7321E+03
1.000E+01	.0E+00	1.1065E+04	1.7326E+04	2.8492E+04	2.6977E+03	2.7006E+03
1.500E+01	.0E+00	5.2267E+03	5.6803E+03	8.7677E+03	1.1828E+03	9.7055E+02

Z= 65

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
2.000E+01	.0E+00	2.9268E+03	2.4923E+03	3.6797E+03	6.4073E+02	4.4940E+02
3.000E+01	.0E+00	1.2201E+03	7.4570E+02	1.0379E+03	2.5948E+02	1.4379E+02
4.000E+01	.0E+00	6.3091E+02	3.0909E+02	4.1167E+02	1.3281E+02	6.1985E+01
5.000E+01	.0E+00	3.7101E+02	1.5439E+02	1.9838E+02	7.7753E+01	3.1777E+01
5.202E+01	.0E+00	3.3707E+02	1.3641E+02	1.7411E+02	7.0610E+01	2.8193E+01
5.243E+01	3.6382E+03	3.3059E+02	1.3304E+02	1.6959E+02	6.9248E+01	2.7520E+01
6.000E+01	2.5563E+03	2.3757E+02	8.7C83E+01	1.0852E+02	4.9703E+01	1.8259E+01
8.000E+01	1.2074E+03	1.1533E+02	3.5043E+01	4.1527E+01	2.4119E+01	7.5338E+00
1.000E+02	6.6181E+02	6.4923E+01	1.7255E+01	1.9629E+01	1.3590E+01	3.7697E+00
1.500E+02	2.1726E+02	2.2335E+01	4.7895E+00	5.0459E+00	4.6901E+00	1.0707E+00
2.000E+02	9.8076E+01	1.0383E+01	1.9571E+00	1.9537E+00	2.1861E+00	4.4291E-01
3.000E+02	3.2508E+01	3.5563E+00	5.7649E-01	5.3754E-01	7.5130E-01	1.3212E-01
4.000E+02	1.5292E+01	1.7000E+00	1.5226E-01	2.2656E-01	3.5977E-01	5.8167E-02
5.000E+02	8.7445E+00	9.8004E-01	1.3702E-01	1.2056E-01	2.0761E-01	3.1703E-02
6.000E+02	5.6531E+00	6.3618E-01	8.5080E-02	7.4045E-02	1.3484E-01	1.9755E-02
8.000E+02	2.9599E+00	3.3399E-01	4.1969E-02	3.6253E-02	7.0777E-02	9.7779E-03
1.000E+03	1.8567E+00	2.0946E-01	2.5285E-02	2.1837E-02	4.4379E-02	5.8981E-03
1.500E+03	8.5687E-01	9.6379E-02	1.1022E-02	9.5335E-03	2.0408E-02	2.5784E-03

Z= 65

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	3.7538E+04	4.2063E+04	9.9379E+04
1.243E+00	.0E+00	.0E+00	.0E+00	2.7529E+04	3.2113E+04	7.2215E+04
1.253E+00	.0E+00	.0E+00	4.1546E+05	2.7206E+04	3.1775E+04	7.1336E+04
1.278E+00	.0E+00	.0E+00	9.4871E+05	2.6432E+04	3.0960E+04	6.9232E+04
1.288E+00	.0E+00	2.6021E+05	9.6849E+05	2.6119E+04	3.0628E+04	6.8381E+04
1.500E+00	.0E+00	4.5594E+05	6.5871E+05	2.0712E+04	2.4726E+04	5.3580E+04
1.595E+00	.0E+00	3.9066E+05	5.6318E+05	1.8813E+04	2.2577E+04	4.8381E+04
1.608E+00	1.8547E+05	3.8291E+05	5.5182E+05	1.8577E+04	2.2308E+04	4.7738E+04
1.752E+00	1.6319E+05	3.0802E+05	4.4225E+05	1.6199E+04	1.9562E+04	4.1231E+04
1.766E+00	1.6152E+05	3.0179E+05	4.3316E+05	1.5993E+04	1.9320E+04	4.0665E+04
1.935E+00	1.4093E+05	2.4006E+05	3.4348E+05	1.3792E+04	1.6714E+04	3.4650E+04
1.950E+00	1.3914E+05	2.3511E+05	3.3642E+05	1.3612E+04	1.6500E+04	3.4160E+04
2.000E+00	1.3356E+05	2.2019E+05	3.1492E+05	1.3055E+04	1.5833E+04	3.2645E+04
3.000E+00	6.7109E+04	7.0891E+04	9.9440E+04	6.5201E+03	7.7875E+03	1.5102E+04
4.000E+00	3.8108E+04	2.9729E+04	4.1260E+04	3.8834E+03	4.4704E+03	8.3327E+03
5.000E+00	2.3691E+04	1.4704E+04	2.0221E+04	2.5659E+03	2.8288E+03	5.1192E+03
6.000E+00	1.5723E+04	8.1170E+03	1.1076E+04	1.8153E+03	1.9133E+03	3.3814E+03
7.498E+00	9.2867E+03	3.8415E+03	5.1896E+03	1.1784E+03	1.1620E+03	1.9954E+03
7.558E+00	9.1086E+03	3.7384E+03	5.0483E+03	1.1601E+03	1.1409E+03	1.9573E+03
8.000E+00	7.9276E+03	3.0759E+03	4.1424E+03	1.0371E+03	1.0006E+03	1.7041E+03
8.253E+00	7.3435E+03	2.7627E+03	3.7156E+03	9.7515E+02	9.3067E+02	1.5786E+03
8.319E+00	7.2002E+03	2.6875E+03	3.6133E+03	9.5985E+02	9.1348E+02	1.5479E+03
8.666E+00	6.5048E+03	2.3327E+03	3.1301E+03	8.8490E+02	8.2991E+02	1.3989E+03
8.735E+00	6.3763E+03	2.2689E+03	3.0434E+03	8.7093E+02	8.1444E+02	1.3714E+03
1.000E+01	4.5262E+03	1.4118E+03	1.8813E+03	6.6360E+02	5.8936E+02	9.7527E+02
1.500E+01	1.5369E+03	3.2545E+02	4.2434E+02	2.8615E+02	2.1274E+02	3.3377E+02
2.000E+01	6.8346E+02	1.1063E+02	1.4175E+02	1.5383E+02	9.9052E+01	1.4942E+02
3.000E+01	2.0608E+02	2.3106E+01	2.8788E+01	6.1920E+01	3.1992E+01	4.5518E+01
4.000E+01	8.4959E+01	7.4218E+00	9.0411E+00	3.1622E+01	1.3879E+01	1.8891E+01
5.000E+01	4.2001E+01	3.0468E+00	3.6419E+00	1.8494E+01	7.1473E+00	9.3823E+00
5.202E+01	3.7018E+01	2.6003E+00	3.0974E+00	1.6794E+01	6.3461E+00	8.2757E+00
5.243E+01	3.6086E+01	2.5185E+00	2.9979E+00	1.6469E+01	6.1955E+00	8.0685E+00
6.000E+01	2.3399E+01	1.4665E+00	1.7246E+00	1.1818E+01	4.1208E+00	5.2448E+00
8.000E+01	9.1733E+00	4.6209E-01	5.2902E-01	5.7343E+00	1.7084E+00	2.0659E+00
1.000E+02	4.4037E+00	1.8925E-01	2.1218E-01	3.2320E+00	8.5748E-01	9.9490E-01
1.500E+02	1.1573E+00	3.8259E-02	4.1441E-02	1.1166E+00	2.4489E-01	2.6215E-01
2.000E+02	4.5332E-01	1.2681E-02	1.3500E-02	5.2048E-01	1.0157E-01	1.0294E-01
3.000E+02	1.2621E-01	2.8430E-03	3.0130E-03	1.7900E-01	3.0386E-02	2.8730E-02
4.000E+02	5.3502E-02	1.0414E-03	1.1235E-03	8.5749E-02	1.3400E-02	1.2190E-02

Z= 65

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
5.000E+02	2.8564E-02	5.0077E-04	5.5021E-04	4.9489E-02	7.3105E-03	6.5111E-03
6.000E+02	1.7546E-02	2.8301E-04	3.1819E-04	3.2141E-02	4.5529E-03	4.0084E-03
8.000E+02	8.5991E-03	1.2093E-04	1.4488E-04	1.6877E-02	2.2538E-03	1.9658E-03
1.000E+03	5.1827E-03	6.6261E-05	8.4555E-05	1.0583E-02	1.3601E-03	1.1855E-03
1.500E+03	2.2702E-03	2.5317E-05	3.4242E-05	4.8653E-03	5.9420E-04	5.1936E-04

Z= 65

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	1.3048E+05	1.9113E+05	4.4213E+04	5.6453E+04	7.2900E+03	6.5022E+03
1.243E+00	8.7586E+04	1.2694E+05	2.1733E+04	2.7665E+04	5.1456E+03	4.7562E+03
1.253E+00	8.6230E+04	1.2493E+05	2.1162E+04	2.6934E+04	5.0793E+03	4.7000E+03
1.278E+00	8.2995E+04	1.2013E+05	1.9828E+04	2.5231E+04	4.9213E+03	4.5655E+03
1.288E+00	8.1690E+04	1.1820E+05	1.9304E+04	2.4560E+04	4.8576E+03	4.5111E+03
1.500E+00	5.9619E+04	8.5689E+04	1.1471E+04	1.4563E+04	3.7766E+03	3.5661E+03
1.595E+00	5.2168E+04	7.4791E+04	9.2584E+03	1.1744E+04	3.4065E+03	3.2329E+03
1.608E+00	5.1261E+04	7.3464E+04	9.0031E+03	1.1418E+04	3.3610E+03	3.1917E+03
1.752E+00	4.2280E+04	6.0375E+04	6.6464E+03	8.4189E+03	2.9060E+03	2.7744E+03
1.766E+00	4.1516E+04	5.9265E+04	6.4601E+03	8.1819E+03	2.8667E+03	2.7380E+03
1.935E+00	3.3583E+04	4.7761E+04	4.6558E+03	5.8887E+03	2.4516E+03	2.3497E+03
1.950E+00	3.2955E+04	4.6852E+04	4.5231E+03	5.7202E+03	2.4180E+03	2.3180E+03
2.000E+00	3.1027E+04	4.4067E+04	4.1256E+03	5.2157E+03	2.3144E+03	2.2199E+03
3.000E+00	1.1049E+04	1.5440E+04	8.9792E+02	1.1284E+03	1.1263E+03	1.0665E+03
4.000E+00	4.9569E+03	6.8463E+03	2.8806E+02	3.6040E+02	6.6279E+02	6.0656E+02
5.000E+00	2.5676E+03	3.5134E+03	1.1497E+02	1.4208E+02	4.3484E+02	3.8197E+02
6.000E+00	1.4669E+03	1.9913E+03	5.3532E+01	6.5920E+01	3.0618E+02	2.5762E+02
7.498E+00	7.2067E+02	9.6842E+02	2.0522E+01	2.5149E+01	1.9782E+02	1.5608E+02
7.558E+00	7.0219E+02	9.4324E+02	1.9820E+01	2.4284E+01	1.9472E+02	1.5324E+02
8.000E+00	5.8287E+02	7.8084E+02	1.5447E+01	1.8902E+01	1.7390E+02	1.3434E+02
8.253E+00	5.2599E+02	7.0359E+02	1.3468E+01	1.6469E+01	1.6342E+02	1.2493E+02
8.319E+00	5.1230E+02	6.8500E+02	1.3003E+01	1.5896E+01	1.6083E+02	1.2262E+02
8.666E+00	4.4725E+02	5.9684E+02	1.0852E+01	1.3254E+01	1.4817E+02	1.1137E+02
8.735E+00	4.3550E+02	5.8094E+02	1.0475E+01	1.2790E+01	1.4582E+02	1.0929E+02
1.000E+01	2.7597E+02	3.6564E+02	5.7258E+00	6.9675E+00	1.1088E+02	7.9044E+01
1.500E+01	6.6528E+01	8.6215E+01	9.0091E-01	1.0840E+00	4.7613E+01	2.8523E+01
2.000E+01	2.3206E+01	2.9547E+01	2.3548E-01	2.8081E-01	2.5551E+01	1.3453E+01
3.000E+01	4.9907E+00	6.1786E+00	3.3942E-02	3.9869E-02	1.0337E+01	4.3523E+00
4.000E+01	1.6279E+00	1.9710E+00	8.4014E-03	9.7444E-03	5.2759E+00	1.8902E+00
5.000E+01	6.7471E-01	8.0193E-01	2.8366E-03	3.2549E-03	3.0848E+00	9.7418E-01
5.202E+01	5.7677E-01	6.8313E-01	2.3398E-03	2.6796E-03	2.8010E+00	8.6506E-01
5.243E+01	5.5878E-01	6.6139E-01	2.2508E-03	2.5765E-03	2.7469E+00	8.4456E-01
6.000E+01	3.2697E-01	3.8246E-01	1.1686E-03	1.3286E-03	1.9708E+00	5.6198E-01
8.000E+01	1.0398E-01	1.1780E-01	2.9046E-04	3.2501E-04	9.5607E-01	2.3316E-01
1.000E+02	4.2845E-02	4.7517E-02	9.9459E-05	1.0993E-04	5.3877E-01	1.1710E-01
1.500E+02	8.7335E-03	9.3588E-03	1.4843E-05	1.6079E-05	1.8607E-01	3.3442E-02
2.000E+02	2.9072E-03	3.0620E-03	4.0508E-06	4.3568E-06	8.6782E-02	1.3876E-02
3.000E+02	6.5511E-04	6.8592E-04	7.0900E-07	7.7079E-07	2.9850E-02	4.1524E-03
4.000E+02	2.4067E-04	2.5592E-04	2.2234E-07	2.4973E-07	1.4300E-02	1.8314E-03
5.000E+02	1.1554E-04	1.2630E-04	9.6527E-08	1.1213E-07	8.2534E-03	9.9936E-04
6.000E+02	6.5205E-05	7.3460E-05	5.0081E-08	6.0936E-08	5.3605E-03	6.2231E-04
8.000E+02	2.7969E-05	3.3344E-05	1.8952E-08	2.5209E-08	2.8150E-03	3.0799E-04
1.000E+03	1.5382E-05	1.9317E-05	9.6804E-09	1.3800E-08	1.7652E-03	1.8589E-04
1.500E+03	5.8078E-06	7.9906E-06	3.2967E-09	5.4456E-09	8.1179E-04	8.1226E-05

Z= 65

ENERGY	5 P 3/2	6 S 1/2
1.000E+00	1.4037E+04	6.1406E+02
1.243E+00	9.9266E+03	4.2630E+02
1.253E+00	9.7976E+03	4.2056E+02
1.278E+00	9.4897E+03	4.0689E+02
1.288E+00	9.3654E+03	4.0140E+02
1.500E+00	7.2413E+03	3.0911E+02
1.595E+00	6.5081E+03	2.7770E+02
1.608E+00	6.4179E+03	2.7385E+02
1.752E+00	5.5129E+03	2.3550E+02
1.766E+00	5.4347E+03	2.3221E+02
1.935E+00	4.6068E+03	1.9762E+02
1.950E+00	4.5398E+03	1.9483E+02
2.000E+00	4.3330E+03	1.8622E+02
3.000E+00	1.9761E+03	9.1716E+01
4.000E+00	1.0848E+03	5.3971E+01
5.000E+00	6.6500E+02	3.5416E+01
6.000E+00	4.3881E+02	2.4942E+01
7.498E+00	2.5884E+02	1.6121E+01
7.558E+00	2.5389E+02	1.5868E+01
8.000E+00	2.2105E+02	1.4173E+01
8.253E+00	2.0479E+02	1.3319E+01
8.319E+00	2.0080E+02	1.3108E+01
8.666E+00	1.8149E+02	1.2078E+01
8.735E+00	1.7792E+02	1.1886E+01
1.000E+01	1.2658E+02	9.0402E+00
1.500E+01	4.3353E+01	3.8837E+00
2.000E+01	1.9430E+01	2.0842E+00
3.000E+01	5.9289E+00	8.3768E-01
4.000E+01	2.4634E+00	4.2753E-01
5.000E+01	1.2244E+00	2.4996E-01
5.202E+01	1.0801E+00	2.2697E-01
5.243E+01	1.0531E+00	2.2258E-01
6.000E+01	6.8486E-01	1.5970E-01
8.000E+01	2.6999E-01	7.7472E-02
1.000E+02	1.3009E-01	4.3659E-02
1.500E+02	3.4371E-02	1.5079E-02
2.000E+02	1.3503E-02	7.0338E-03
3.000E+02	3.7707E-03	2.4204E-03
4.000E+02	1.6006E-03	1.1603E-03
5.000E+02	8.5505E-04	6.7020E-04
6.000E+02	5.2641E-04	4.3575E-04
8.000E+02	2.5840E-04	2.2954E-04
1.000E+03	1.5586E-04	1.4455E-04
1.500E+03	6.8410E-05	6.7679E-05

Z= 66 20 STATES, 44 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	53.8718	.98427
2 S 1/2	2.00	9.0143	.85598
2 P 1/2	2.00	8.5911	.78857
2 P 3/2	4.00	7.7808	.76798
3 S 1/2	2.00	2.0189	.62386
3 P 1/2	2.00	1.8313	.54060
3 P 3/2	4.00	1.6621	.51500
3 D 3/2	4.00	1.3366	.30883
3 D 5/2	6.00	1.2993	.30361
4 S 1/2	2.00	.4045	.35801
4 P 1/2	2.00	.3296	.28600
4 P 3/2	4.00	.2916	.26356
4 D 3/2	4.00	.1671	.11909
4 D 5/2	6.00	.1602	.11500
4 F 5/2	4.29	.0106	.01260
4 F 7/2	5.71	.0096	.01226
5 S 1/2	2.00	.0537	.11680
5 P 1/2	2.00	.0331	.07466
5 P 3/2	4.00	.0281	.06491
6 S 1/2	2.00	.0054	.01618

Z= 66 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	6.7017E+05	.0E+00	.0E+00	.0E+00	6.7017E+05
1.2980E+00	4.0595E+05	.0E+00	.0E+00	.0E+00	4.0595E+05
1.3084E+00	7.9041E+05	.0E+00	.0E+00	3.9086E+05	3.9955E+05
1.3352E+00	1.2930E+06	.0E+00	.0E+00	9.0937E+05	3.8367E+05
1.3459E+00	1.5447E+06	.0E+00	.0E+00	1.1671E+06	3.7758E+05
1.5000E+00	1.4951E+06	.0E+00	.0E+00	1.1921E+06	3.0293E+05
1.6604E+00	1.1644E+06	.0E+00	.0E+00	9.1923E+05	2.4522E+05
1.6737E+00	1.3220E+06	.0E+00	.0E+00	1.0809E+06	2.4114E+05
1.8295E+00	1.0730E+06	.0E+00	.0E+00	8.7347E+05	1.9956E+05
1.8441E+00	1.1190E+06	.0E+00	.0E+00	9.2278E+05	1.9618E+05
2.0000E+00	9.3295E+05	.0E+00	.0E+00	7.6835E+05	1.6460E+05
2.0169E+00	9.1511E+05	.0E+00	.0E+00	7.5350E+05	1.6161E+05
2.0330E+00	9.3831E+05	.0E+00	.0E+00	7.7949E+05	1.5881E+05
3.0000E+00	3.7678E+05	.0E+00	.0E+00	3.1072E+05	6.6056E+04
4.0000E+00	1.8563E+05	.0E+00	.0E+00	1.5210E+05	3.3528E+04
5.0000E+00	1.0586E+05	.0E+00	.0E+00	8.6329E+04	1.9532E+04
6.0000E+00	6.6437E+04	.0E+00	.0E+00	5.3975E+04	1.2463E+04
7.7730E+00	3.3961E+04	.0E+00	.0E+00	2.7450E+04	6.5103E+03
7.8352E+00	9.0564E+04	.0E+00	5.7304E+04	2.6880E+04	6.3801E+03
8.0000E+00	8.6961E+04	.0E+00	5.5463E+04	2.5446E+04	6.0521E+03
8.5825E+00	7.1499E+04	.0E+00	4.5301E+04	2.1137E+04	5.0610E+03
8.6512E+00	9.6112E+04	.0E+00	7.0457E+04	2.0696E+04	4.9590E+03
9.0053E+00	8.7031E+04	.0E+00	6.3944E+04	1.8612E+04	4.4757E+03
9.0774E+00	9.8510E+04	.0E+00	7.5902E+04	1.8223E+04	4.3852E+03
1.0000E+01	7.7287E+04	.0E+00	5.9779E+04	1.4089E+04	3.4195E+03
1.5000E+01	2.6758E+04	.0E+00	2.0832E+04	4.7401E+03	1.1861E+03
2.0000E+01	1.2374E+04	.0E+00	9.6564E+03	2.1654E+03	5.5177E+02
3.0000E+01	4.0877E+03	.0E+00	3.1953E+03	7.0798E+02	1.8437E+02
4.0000E+01	1.8412E+03	.0E+00	1.4400E+03	3.1753E+02	8.3729E+01
5.0000E+01	9.8682E+02	.0E+00	7.7193E+02	1.6976E+02	4.5137E+01
5.3818E+01	8.0266E+02	.0E+00	6.2789E+02	1.3799E+02	3.6781E+01
5.4249E+01	4.2830E+03	3.4982E+03	6.1397E+02	1.3492E+02	3.5973E+01
6.0000E+01	3.2744E+03	2.6833E+03	4.6243E+02	1.0153E+02	2.7158E+01
8.0000E+01	1.5347E+03	1.2724E+03	2.0515E+02	4.4958E+01	1.2125E+01
1.0000E+02	8.3800E+02	6.9873E+02	1.0895E+02	2.3853E+01	6.4682E+00

Z= 66 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY (KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.5000E+02	2.7424E+02	2.3013E+02	3.4497E+01	7.5453E+00	2.0624E+00
2.0000E+02	1.2373E+02	1.0410E+02	1.5350E+01	3.3564E+00	9.2121E-01
3.0000E+02	4.1025E+01	3.4598E+01	5.0256E+00	1.0986E+00	3.0293E-01
4.0000E+02	1.9306E+01	1.6303E+01	2.3476E+00	5.1303E-01	1.4180E-01
5.0000E+02	1.1040E+01	9.3333E+00	1.3347E+00	2.9154E-01	8.0692E-02
6.0000E+02	7.1359E+00	6.0385E+00	8.5815E-01	1.8737E-01	5.1904E-02
8.0000E+02	3.7334E+00	3.1644E+00	4.4503E-01	9.7041E-02	2.6918E-02
1.0000E+03	2.3399E+00	1.9857E+00	2.7704E-01	6.0356E-02	1.6754E-02
1.5000E+03	1.0777E+00	9.1631E-01	1.2625E-01	2.7465E-02	7.6287E-03

Z= 66

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.298E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.308E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.335E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.346E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.660E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.674E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.829E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.844E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	5.9382E+04
2.017E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	5.8868E+04
2.033E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.9791E+04	5.8358E+04
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.3296E+04	3.3658E+04
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.4812E+04	2.0473E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.0156E+04	1.3301E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.3537E+03	9.1214E+03
7.773E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.5542E+03	5.1633E+03
7.835E+00	.0E+00	.0E+00	.0E+00	5.7304E+04	4.4858E+03	5.0707E+03
8.000E+00	.0E+00	.0E+00	.0E+00	5.5463E+04	4.3115E+03	4.8357E+03
8.582E+00	.0E+00	.0E+00	.0E+00	4.5301E+04	3.7698E+03	4.1106E+03
8.651E+00	.0E+00	.0E+00	2.6101E+04	4.4355E+04	3.7126E+03	4.0348E+03
9.005E+00	.0E+00	.0E+00	2.3964E+04	3.9980E+04	3.4368E+03	3.6729E+03
9.077E+00	.0E+00	1.3324E+04	2.3414E+04	3.9164E+04	3.3841E+03	3.6046E+03
1.000E+01	.0E+00	1.1248E+04	1.8296E+04	3.0234E+04	2.8006E+03	2.8630E+03
1.500E+01	.0E+00	5.4023E+03	6.0746E+03	9.3552E+03	1.2326E+03	1.0371E+03
2.000E+01	.0E+00	3.0357E+03	2.6789E+03	3.9418E+03	6.6955E+02	4.8287E+02
3.000E+01	.0E+00	1.2722E+03	8.0682E+02	1.1164E+03	2.7224E+02	1.5565E+02
4.000E+01	.0E+00	6.6003E+02	3.3592E+02	4.4401E+02	1.3974E+02	6.7424E+01
5.000E+01	.0E+00	3.8918E+02	1.6827E+02	2.1447E+02	8.1986E+01	3.4691E+01
5.382E+01	.0E+00	3.2578E+02	1.3376E+02	1.6835E+02	6.8562E+01	2.7794E+01
5.425E+01	3.4982E+03	3.1952E+02	1.3047E+02	1.6398E+02	6.7241E+01	2.7132E+01
6.000E+01	2.6833E+03	2.4976E+02	9.5139E+01	1.1753E+02	5.2505E+01	1.9990E+01
8.000E+01	1.2724E+03	1.2163E+02	3.8425E+01	4.5092E+01	2.5551E+01	8.2832E+00
1.000E+02	6.9873E+02	6.8625E+01	1.8971E+01	2.1355E+01	1.4428E+01	4.1576E+00
1.500E+02	2.3013E+02	2.3700E+01	5.2895E+00	5.5074E+00	4.9980E+00	1.1870E+00
2.000E+02	1.0410E+02	1.1046E+01	2.1676E+00	2.1366E+00	2.3355E+00	4.9258E-01
3.000E+02	3.4598E+01	3.7957E+00	6.4078E-01	5.8919E-01	8.0529E-01	1.4751E-01
4.000E+02	1.6303E+01	1.8180E+00	2.8099E-01	2.4860E-01	3.8640E-01	6.5099E-02
5.000E+02	9.3333E+00	1.0495E+00	1.5285E-01	1.3235E-01	2.2326E-01	3.5534E-02
6.000E+02	6.0385E+00	6.8184E-01	9.5002E-02	8.1306E-02	1.4513E-01	2.2168E-02
8.000E+02	3.1644E+00	3.5829E-01	4.6929E-02	3.9805E-02	7.6251E-02	1.0986E-02
1.000E+03	1.9857E+00	2.2478E-01	2.8296E-02	2.3968E-02	4.7827E-02	6.6323E-03
1.500E+03	9.1631E-01	1.0341E-01	1.2349E-02	1.0492E-02	2.1990E-02	2.9034E-03

Z= 66

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	3.8096E+04	4.2401E+04	1.0176E+05
1.298E+00	.0E+00	.0E+00	.0E+00	2.6357E+04	3.0842E+04	6.9543E+04
1.308E+00	.0E+00	.0E+00	3.9C86E+05	2.6048E+04	3.0517E+04	6.8694E+04
1.335E+00	.0E+00	.0E+00	9.0937E+05	2.5274E+04	2.9699E+04	6.6568E+04
1.346E+00	.0E+00	2.4345E+05	9.2363E+05	2.4975E+04	2.9380E+04	6.5747E+04
1.500E+00	.0E+00	4.8829E+05	7.0383E+05	2.1197E+04	2.5270E+04	5.5313E+04
1.660E+00	.0E+00	3.7710E+05	5.4213E+05	1.81C6E+04	2.1785E+04	4.6762E+04
1.674E+00	1.8016E+05	3.6957E+05	5.3114E+05	1.7879E+04	2.1525E+04	4.6138E+04
1.829E+00	1.5716E+05	2.9452E+05	4.2179E+05	1.5515E+04	1.8786E+04	3.9616E+04
1.844E+00	1.5551E+05	2.8853E+05	4.1309E+05	1.5318E+04	1.8554E+04	3.9071E+04
2.000E+00	1.3766E+05	2.3532E+05	3.3599E+05	1.3429E+04	1.6312E+04	3.3872E+04
2.017E+00	1.3581E+05	2.3017E+05	3.2865E+05	1.3245E+04	1.6092E+04	3.3368E+04
2.033E+00	1.3407E+05	2.2542E+05	3.2185E+05	1.3072E+04	1.5885E+04	3.2895E+04
3.000E+00	6.9651E+04	7.6661E+04	1.0746E+05	6.7410E+03	8.0980E+03	1.5769E+04
4.000E+00	3.9765E+04	3.2295E+04	4.4761E+04	4.0260E+03	4.6756E+03	8.7363E+03
5.000E+00	2.4821E+04	1.6033E+04	2.2018E+04	2.6647E+03	2.9708E+03	5.3831E+03
6.000E+00	1.6522E+04	8.8797E+03	1.2098E+04	1.8874E+03	2.0161E+03	3.5645E+03
7.773E+00	8.9773E+03	3.7313E+03	5.0242E+03	1.1434E+03	1.1325E+03	1.9343E+03
7.835E+00	8.8049E+03	3.6312E+03	4.8E74E+03	1.1256E+03	1.1120E+03	1.8973E+03
8.000E+00	8.3695E+03	3.3819E+03	4.5471E+03	1.08C5E+03	1.0601E+03	1.8038E+03
8.582E+00	7.0435E+03	2.6552E+03	3.5581E+03	9.4033E+02	9.0074E+02	1.5184E+03
8.651E+00	6.9059E+03	2.5829E+03	3.4600E+03	9.2556E+02	8.8412E+02	1.4888E+03
9.005E+00	6.2496E+03	2.2476E+03	3.0C50E+03	8.5451E+02	8.0469E+02	1.3478E+03
9.077E+00	6.1260E+03	2.1862E+03	2.9217E+03	8.4101E+02	7.8970E+02	1.3213E+03
1.000E+01	4.7956E+03	1.5577E+03	2.0716E+03	6.9246E+02	6.2709E+02	1.0358E+03
1.500E+01	1.6388E+03	3.6140E+02	4.7C11E+02	2.9955E+02	2.2810E+02	3.5664E+02
2.000E+01	7.3179E+02	1.2342E+02	1.5773E+02	1.6140E+02	1.0676E+02	1.6033E+02
3.000E+01	2.2194E+02	2.5938E+01	3.2219E+01	6.5191E+01	3.4734E+01	4.9123E+01
4.000E+01	9.1846E+01	8.3654E+00	1.0157E+01	3.3381E+01	1.5144E+01	2.0469E+01
5.000E+01	4.5534E+01	3.4445E+00	4.1026E+00	1.9564E+01	7.8278E+00	1.0196E+01
5.382E+01	3.6024E+01	2.5675E+00	3.0379E+00	1.6357E+01	6.2805E+00	8.0780E+00
5.425E+01	3.5118E+01	2.4869E+00	2.9405E+00	1.6042E+01	6.1319E+00	7.8760E+00
6.000E+01	2.5424E+01	1.6619E+00	1.9469E+00	1.2523E+01	4.5263E+00	5.7125E+00
8.000E+01	9.9998E+00	5.2544E-01	5.9509E-01	6.0935E+00	1.8846E+00	2.2578E+00
1.000E+02	4.8118E+00	2.1572E-01	2.4C80E-01	3.4417E+00	9.4904E-01	1.0900E+00
1.500E+02	1.2693E+00	4.3773E-02	4.7183E-02	1.1935E+00	2.7246E-01	2.8833E-01
2.000E+02	4.9836E-01	1.4542E-02	1.5399E-02	5.5776E-01	1.1338E-01	1.1349E-01
3.000E+02	1.3911E-01	3.2693E-03	3.4441E-03	1.9245E-01	3.4054E-02	3.1757E-02
4.000E+02	5.9043E-02	1.1995E-03	1.2855E-03	9.2376E-02	1.5053E-02	1.3493E-02
5.000E+02	3.1540E-02	5.7783E-04	6.2866E-04	5.3383E-02	8.2255E-03	7.2120E-03
6.000E+02	1.9379E-02	3.2652E-04	3.6382E-04	3.4700E-02	5.1287E-03	4.4406E-03
8.000E+02	9.4971E-03	1.3954E-04	1.6638E-04	1.8238E-02	2.5421E-03	2.1779E-03
1.000E+03	5.7238E-03	7.6619E-05	9.6698E-05	1.1440E-02	1.5357E-03	1.3131E-03
1.500E+03	2.5035E-03	2.9186E-05	3.9509E-05	5.2584E-03	6.7171E-04	5.7469E-04

Z= 66

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	1.3511E+05	1.9808E+05	5.5330E+04	7.0560E+04	7.4C99E+03	6.5558E+03
1.298E+00	8.4223E+04	1.2186E+05	2.3736E+04	3.0156E+04	4.8899E+03	4.5203E+03
1.308E+00	8.2915E+04	1.1992E+05	2.3112E+04	2.9359E+04	4.8269E+03	4.4669E+03
1.335E+00	7.9653E+04	1.1509E+05	2.1591E+04	2.7419E+04	4.6700E+03	4.3332E+03
1.346E+00	7.8397E+04	1.1323E+05	2.1C19E+04	2.6690E+04	4.6C96E+03	4.2815E+03
1.500E+00	6.2768E+04	9.0217E+04	1.4539E+04	1.8431E+04	3.8567E+03	3.6265E+03
1.660E+00	5.0434E+04	7.2169E+04	1.0219E+04	1.2935E+04	3.2549E+03	3.0879E+03
1.674E+00	4.9556E+04	7.0887E+04	9.9373E+03	1.2577E+04	3.2116E+03	3.0486E+03
1.829E+00	4.0570E+04	5.7811E+04	7.2534E+03	9.1681E+03	2.7623E+03	2.6365E+03
1.844E+00	3.9836E+04	5.6746E+04	7.0500E+03	8.9100E+03	2.7250E+03	2.6019E+03
2.000E+00	3.2980E+04	4.6817E+04	5.2670E+03	6.6482E+03	2.3711E+03	2.2711E+03
2.017E+00	3.2330E+04	4.5878E+04	5.1C89E+03	6.4478E+03	2.3370E+03	2.2389E+03
2.033E+00	3.1724E+04	4.5003E+04	4.9E32E+03	6.2632E+03	2.3C50E+03	2.2087E+03

Z= 66

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
3.000E+00	1.1875E+04	1.6577E+04	1.1567E+03	1.4509E+03	1.1583E+03	1.0996E+03
4.000E+00	5.3633E+03	7.3977E+03	3.7324E+02	4.6604E+02	6.8313E+02	6.2859E+02
5.000E+00	2.7920E+03	3.8142E+03	1.4962E+02	1.8454E+02	4.4882E+02	3.9735E+02
6.000E+00	1.6015E+03	2.1701E+03	6.9946E+01	8.5956E+01	3.1635E+02	2.6884E+02
7.773E+00	7.0336E+02	9.4159E+02	2.3038E+01	2.8150E+01	1.9056E+02	1.5056E+02
7.835E+00	6.8533E+02	9.1711E+02	2.2251E+01	2.7183E+01	1.8757E+02	1.4783E+02
8.000E+00	6.4035E+02	8.5604E+02	2.0317E+01	2.4808E+01	1.7998E+02	1.4092E+02
8.582E+00	5.0824E+02	6.7707E+02	1.4922E+01	1.8190E+01	1.5644E+02	1.1967E+02
8.651E+00	4.9500E+02	6.5917E+02	1.4407E+01	1.7558E+01	1.5396E+02	1.1746E+02
9.005E+00	4.3323E+02	5.7575E+02	1.2065E+01	1.4689E+01	1.4205E+02	1.0688E+02
9.077E+00	4.2185E+02	5.6041E+02	1.1646E+01	1.4176E+01	1.3979E+02	1.0488E+02
1.000E+01	3.0463E+02	4.0267E+02	7.5654E+00	9.1858E+00	1.1493E+02	8.3255E+01
1.500E+01	7.4026E+01	9.5666E+01	1.1974E+00	1.4371E+00	4.9496E+01	3.0270E+01
2.000E+01	2.5958E+01	3.2948E+01	3.1435E-01	3.7387E-01	2.6618E+01	1.4353E+01
3.000E+01	5.6226E+00	6.9364E+00	4.5674E-02	5.3501E-02	1.0805E+01	4.6772E+00
4.000E+01	1.8428E+00	2.2226E+00	1.1356E-02	1.3132E-02	5.5297E+00	2.0415E+00
5.000E+01	7.6642E-01	9.0705E-01	3.8444E-03	4.3977E-03	3.2399E+00	1.0561E+00
5.382E+01	5.7294E-01	6.7373E-01	2.6899E-03	3.0654E-03	2.7086E+00	8.4751E-01
5.425E+01	5.5512E-01	6.5234E-01	2.5879E-03	2.9478E-03	2.6563E+00	8.2749E-01
6.000E+01	3.7233E-01	4.3364E-01	1.5876E-03	1.7989E-03	2.0735E+00	6.1101E-01
8.000E+01	1.1885E-01	1.3404E-01	3.9617E-04	4.4182E-04	1.0087E+00	2.5462E-01
1.000E+02	4.9096E-02	5.4196E-02	1.3601E-04	1.4983E-04	5.6962E-01	1.2829E-01
1.500E+02	1.0050E-02	1.0709E-02	2.0384E-05	2.1992E-05	1.9746E-01	3.6831E-02
2.000E+02	3.3539E-03	3.5106E-03	5.5740E-06	5.9676E-06	9.2327E-02	1.5332E-02
3.000E+02	7.5793E-04	7.8805E-04	9.7873E-07	1.0579E-06	3.1861E-02	4.6069E-03
4.000E+02	2.7878E-04	2.9458E-04	3.0685E-07	3.4299E-07	1.5294E-02	2.0367E-03
5.000E+02	1.3405E-04	1.4556E-04	1.3365E-07	1.5423E-07	8.8387E-03	1.1131E-03
6.000E+02	7.5773E-05	8.4516E-05	6.9221E-08	8.3584E-08	5.7456E-03	6.9390E-04
8.000E+02	3.2486E-05	3.8460E-05	2.6195E-08	3.4603E-08	3.0200E-03	3.4394E-04
1.000E+03	1.7919E-05	2.2205E-05	1.3411E-08	1.8960E-08	1.8943E-03	2.0777E-04
1.500E+03	6.7766E-06	9.1724E-06	4.5548E-09	7.4401E-09	8.7101E-04	9.0891E-05

Z= 66

ENERGY	5 P 3/2	6 S 1/2
1.000E+00	1.4257E+04	6.1524E+02
1.298E+00	9.4248E+03	3.9789E+02
1.308E+00	9.3020E+03	3.9253E+02
1.335E+00	8.9954E+03	3.7922E+02
1.346E+00	8.8772E+03	3.7411E+02
1.500E+00	7.3969E+03	3.1087E+02
1.660E+00	6.2050E+03	2.6060E+02
1.674E+00	6.1188E+03	2.5699E+02
1.829E+00	5.2246E+03	2.1981E+02
1.844E+00	5.1503E+03	2.1674E+02
2.000E+00	4.4447E+03	1.8776E+02
2.017E+00	4.3766E+03	1.8497E+02
2.033E+00	4.3128E+03	1.8235E+02
3.000E+00	2.0383E+03	9.2695E+01
4.000E+00	1.1231E+03	5.4665E+01
5.000E+00	6.9043E+02	3.5922E+01
6.000E+00	4.5666E+02	2.5325E+01
7.773E+00	2.4767E+02	1.5261E+01
7.835E+00	2.4293E+02	1.5022E+01
8.000E+00	2.3096E+02	1.4415E+01
8.582E+00	1.9443E+02	1.2531E+01
8.651E+00	1.9064E+02	1.2332E+01
9.005E+00	1.7260E+02	1.1379E+01
9.077E+00	1.6921E+02	1.1198E+01
1.000E+01	1.3269E+02	9.2082E+00
1.500E+01	4.5724E+01	3.9676E+00

Z= 66

ENERGY	5 P 3/2	6 S 1/2
2.000E+01	2.0578E+01	2.1339E+00
3.000E+01	6.3155E+00	8.6055E-01
4.000E+01	2.6345E+00	4.4035E-01
5.000E+01	1.3133E+00	2.5800E-01
5.382E+01	1.0408E+00	2.1569E-01
5.425E+01	1.0148E+00	2.1153E-01
6.000E+01	7.3628E-01	1.6512E-01
8.000E+01	2.9125E-01	8.0321E-02
1.000E+02	1.4068E-01	4.5360E-02
1.500E+02	3.7318E-02	1.5725E-02
2.000E+02	1.4695E-02	7.3538E-03
3.000E+02	4.1147E-03	2.5387E-03
4.000E+02	1.7489E-03	1.2194E-03
5.000E+02	9.3485E-04	7.0528E-04
6.000E+02	5.7568E-04	4.5894E-04
8.000E+02	2.8259E-04	2.4196E-04
1.000E+03	1.7039E-04	1.5240E-04
1.500E+03	7.4711E-05	7.1311E-05

Z= 67 20 STATES, 44 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	55.7110	.98442
2 S 1/2	2.00	9.3622	.85776
2 P 1/2	2.00	8.9290	.79114
2 P 3/2	4.00	8.0614	.77005
3 S 1/2	2.00	2.1033	.62806
3 P 1/2	2.00	1.9108	.54556
3 P 3/2	4.00	1.7285	.51919
3 D 3/2	4.00	1.3952	.31393
3 D 5/2	6.00	1.3551	.30853
4 S 1/2	2.00	.4207	.36161
4 P 1/2	2.00	.3433	.28987
4 P 3/2	4.00	.3023	.26640
4 D 3/2	4.00	.1737	.12176
4 D 5/2	6.00	.1662	.11744
4 F 5/2	4.71	.0108	.01340
4 F 7/2	6.29	.0097	.01302
5 S 1/2	2.00	.0553	.11717
5 P 1/2	2.00	.0339	.07496
5 P 3/2	4.00	.0286	.06477
6 S 1/2	2.00	.0054	.01596

Z= 67 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	7.1361E+05	.0E+00	.0E+00	.0E+00	7.1361E+05
1.3537E+00	3.9645E+05	.0E+00	.0E+00	.0E+00	3.9645E+05
1.3646E+00	7.5901E+05	.0E+00	.0E+00	3.6889E+05	3.9013E+05
1.3938E+00	1.2463E+06	.0E+00	.0E+00	8.7258E+05	3.7374E+05
1.4050E+00	1.4793E+06	.0E+00	.0E+00	1.1115E+06	3.6774E+05
1.5000E+00	1.5987E+06	.0E+00	.0E+00	1.2770E+06	3.2164E+05
1.7268E+00	1.1262E+06	.0E+00	.0E+00	8.8664E+05	2.3959E+05
1.7406E+00	1.2793E+06	.0E+00	.0E+00	1.0437E+06	2.3556E+05
1.9089E+00	1.0290E+06	.0E+00	.0E+00	8.3565E+05	1.9328E+05
1.9241E+00	1.0730E+06	.0E+00	.0E+00	8.8306E+05	1.8997E+05
2.0000E+00	9.8077E+05	.0E+00	.0E+00	8.0611E+05	1.7467E+05
2.1012E+00	8.7974E+05	.0E+00	.0E+00	7.2297E+05	1.5677E+05
2.1180E+00	9.0187E+05	.0E+00	.0E+00	7.4783E+05	1.5404E+05

Z= 67 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
3.0000E+00	3.9881E+05	.0E+00	.0E+00	3.2870E+05	7.0106E+04
4.0000E+00	1.9690E+05	.0E+00	.0E+00	1.6130E+05	3.5596E+04
5.0000E+00	1.1239E+05	.0E+00	.0E+00	9.1642E+04	2.0744E+04
6.0000E+00	7.0582E+04	.0E+00	.0E+00	5.7340E+04	1.3242E+04
8.0000E+00	3.3504E+04	.0E+00	.0E+00	2.7067E+04	6.4365E+03
8.0534E+00	3.2926E+04	.0E+00	.0E+00	2.6597E+04	6.3289E+03
8.1179E+00	8.7330E+04	.0E+00	5.5083E+04	2.6045E+04	6.2022E+03
8.9201E+00	6.8343E+04	.0E+00	4.3155E+04	2.0310E+04	4.8793E+03
8.9915E+00	9.1943E+04	.0E+00	6.7276E+04	1.9886E+04	4.7809E+03
9.3528E+00	8.3416E+04	.0E+00	6.1177E+04	1.7916E+04	4.3224E+03
9.4277E+00	9.4425E+04	.0E+00	7.2648E+04	1.7542E+04	4.2349E+03
1.0000E+01	8.1430E+04	.0E+00	6.2790E+04	1.5000E+04	3.6399E+03
1.5000E+01	2.8347E+04	.0E+00	2.2027E+04	5.0544E+03	1.2648E+03
2.0000E+01	1.3137E+04	.0E+00	1.0236E+04	2.3116E+03	5.8911E+02
3.0000E+01	4.3495E+03	.0E+00	3.3952E+03	7.5710E+02	1.9720E+02
4.0000E+01	1.9623E+03	.0E+00	1.5326E+03	3.3997E+02	8.9680E+01
5.0000E+01	1.0528E+03	.0E+00	8.2244E+02	1.8193E+02	4.8395E+01
5.5655E+01	7.7962E+02	.0E+00	6.0910E+02	1.3458E+02	3.5932E+01
5.6101E+01	4.1263E+03	3.3640E+03	5.9561E+02	1.3159E+02	3.5144E+01
6.0000E+01	3.4587E+03	2.8275E+03	4.9313E+02	1.0889E+02	2.9143E+01
8.0000E+01	1.6195E+03	1.3391E+03	2.1908E+02	4.8278E+01	1.3029E+01
1.0000E+02	8.8577E+02	7.3670E+02	1.1648E+02	2.5641E+01	6.9581E+00
1.5000E+02	2.9078E+02	2.4348E+02	3.6955E+01	8.1261E+00	2.2228E+00
2.0000E+02	1.3145E+02	1.1036E+02	1.6468E+01	3.6198E+00	9.9448E-01
3.0000E+02	4.3699E+01	3.6781E+01	5.4025E+00	1.1871E+00	3.2769E-01
4.0000E+02	2.0598E+01	1.7362E+01	2.5270E+00	5.5507E-01	1.5359E-01
5.0000E+02	1.1792E+01	9.9509E+00	1.4379E+00	3.1569E-01	8.7480E-02
6.0000E+02	7.6274E+00	6.4431E+00	9.2502E-01	2.0299E-01	5.6300E-02
8.0000E+02	3.9939E+00	3.3795E+00	4.7997E-01	1.0519E-01	2.9213E-02
1.0000E+03	2.5039E+00	2.1214E+00	2.9884E-01	6.5432E-02	1.8184E-02
1.5000E+03	1.1530E+00	9.7884E-01	1.3613E-01	2.9763E-02	8.2770E-03

Z= 67

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.354E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.365E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.394E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.405E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.727E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.741E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.909E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.924E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	6.3092E+04
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	5.9001E+04
2.101E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	5.6516E+04
2.118E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.8154E+04	5.6032E+04
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.3590E+04	3.4403E+04
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.5189E+04	2.1159E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.0451E+04	1.3840E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.5810E+03	9.5410E+03
8.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.4618E+03	5.0914E+03
8.053E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.4058E+03	5.0153E+03
8.118E+00	.0E+00	.0E+00	.0E+00	5.5083E+04	4.3396E+03	4.9255E+03
8.920E+00	.0E+00	.0E+00	.0E+00	4.3155E+04	3.6250E+03	3.9649E+03
8.992E+00	.0E+00	.0E+00	2.5020E+04	4.2257E+04	3.5700E+03	3.8919E+03
9.353E+00	.0E+00	.0E+00	2.3019E+04	3.8158E+04	3.3092E+03	3.5490E+03
9.428E+00	.0E+00	1.2779E+04	2.2490E+04	3.7379E+04	3.2585E+03	3.4831E+03
1.000E+01	.0E+00	1.1533E+04	1.9269E+04	3.1988E+04	2.9047E+03	3.0298E+03
1.500E+01	.0E+00	5.5727E+03	6.4960E+03	9.9587E+03	1.2832E+03	1.1065E+03

Z= 67

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
2.000E+01	.0E+00	3.1456E+03	2.8754E+03	4.2153E+03	6.9888E+02	5.1795E+02
3.000E+01	.0E+00	1.3246E+03	8.7185E+02	1.1988E+03	2.8529E+02	1.6819E+02
4.000E+01	.0E+00	6.8990E+02	3.6450E+02	4.7821E+02	1.4684E+02	7.3214E+01
5.000E+01	.0E+00	4.0778E+02	1.8315E+02	2.3151E+02	8.6347E+01	3.7806E+01
5.566E+01	.0E+00	3.1501E+02	1.3125E+02	1.6284E+02	6.6590E+01	2.7412E+01
5.610E+01	3.3640E+03	3.0896E+02	1.2803E+02	1.5862E+02	6.5307E+01	2.6761E+01
6.000E+01	2.8275E+03	2.6225E+02	1.0379E+02	1.2710E+02	5.5396E+01	2.1847E+01
8.000E+01	1.3391E+03	1.2812E+02	4.2070E+01	4.8888E+01	2.7033E+01	9.0912E+00
1.000E+02	7.3670E+02	7.2452E+01	2.0826E+01	2.3197E+01	1.5298E+01	4.5773E+00
1.500E+02	2.4348E+02	2.5120E+01	5.8329E+00	6.0016E+00	5.3194E+00	1.3135E+00
2.000E+02	1.1036E+02	1.1738E+01	2.3972E+00	2.3329E+00	2.4919E+00	5.4686E-01
3.000E+02	3.6781E+01	4.0466E+00	7.1117E-01	6.4473E-01	8.6202E-01	1.6441E-01
4.000E+02	1.7362E+01	1.9421E+00	3.1253E-01	2.7233E-01	4.1446E-01	7.2728E-02
5.000E+02	9.9509E+00	1.1226E+00	1.7024E-01	1.4506E-01	2.3978E-01	3.9762E-02
6.000E+02	6.4431E+00	7.2997E-01	1.0592E-01	8.9131E-02	1.5601E-01	2.4831E-02
8.000E+02	3.3795E+00	3.8395E-01	5.2394E-02	4.3633E-02	8.2044E-02	1.2323E-02
1.000E+03	2.1214E+00	2.4095E-01	3.1618E-02	2.6263E-02	5.1478E-02	7.4451E-03
1.500E+03	9.7884E-01	1.1084E-01	1.3815E-02	1.1484E-02	2.3665E-02	3.2635E-03

Z= 67

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	3.8564E+04	4.2618E+04	1.0403E+05
1.354E+00	.0E+00	.0E+00	.0E+00	2.5252E+04	2.9634E+04	6.7015E+04
1.365E+00	.0E+00	.0E+00	3.6889E+05	2.4957E+04	2.9323E+04	6.6194E+04
1.394E+00	.0E+00	.0E+00	8.7258E+05	2.4184E+04	2.8503E+04	6.4047E+04
1.405E+00	.0E+00	2.2894E+05	8.8257E+05	2.3898E+04	2.8198E+04	6.3254E+04
1.500E+00	.0E+00	5.2260E+05	7.5443E+05	2.1656E+04	2.5769E+04	5.7014E+04
1.727E+00	.0E+00	3.6385E+05	5.2279E+05	1.7433E+04	2.1028E+04	4.5216E+04
1.741E+00	1.7506E+05	3.5655E+05	5.1213E+05	1.7216E+04	2.0778E+04	4.4611E+04
1.909E+00	1.5139E+05	2.8154E+05	4.0276E+05	1.4864E+04	1.8045E+04	3.8076E+04
1.924E+00	1.4977E+05	2.7579E+05	3.9440E+05	1.4675E+04	1.7823E+04	3.7551E+04
2.000E+00	1.4156E+05	2.4944E+05	3.5611E+05	1.3788E+04	1.6772E+04	3.5088E+04
2.101E+00	1.3092E+05	2.2081E+05	3.1473E+05	1.2722E+04	1.5496E+04	3.2140E+04
2.118E+00	1.2923E+05	2.1621E+05	3.0820E+05	1.2557E+04	1.5297E+04	3.1684E+04
3.000E+00	7.2140E+04	8.2690E+04	1.1588E+05	6.9597E+03	8.4051E+03	1.6441E+04
4.000E+00	4.1438E+04	3.5029E+04	4.8486E+04	4.1683E+03	4.8812E+03	9.1453E+03
5.000E+00	2.5967E+04	1.7453E+04	2.3932E+04	2.7636E+03	3.1146E+03	5.6520E+03
6.000E+00	1.7333E+04	9.6959E+03	1.3189E+04	1.9602E+03	2.1208E+03	3.7517E+03
8.000E+00	8.8248E+03	3.7093E+03	4.9798E+03	1.1243E+03	1.1211E+03	1.9061E+03
8.053E+00	8.6833E+03	3.6262E+03	4.8666E+03	1.1097E+03	1.1042E+03	1.8756E+03
8.118E+00	8.5164E+03	3.5290E+03	4.7341E+03	1.0924E+03	1.0842E+03	1.8397E+03
8.920E+00	6.7587E+03	2.5528E+03	3.4083E+03	9.0688E+02	8.7205E+02	1.4607E+03
8.992E+00	6.6264E+03	2.4833E+03	3.3143E+03	8.9263E+02	8.5597E+02	1.4322E+03
9.353E+00	6.0066E+03	2.1662E+03	2.8856E+03	8.2526E+02	7.8042E+02	1.2987E+03
9.428E+00	5.8876E+03	2.1070E+03	2.8055E+03	8.1221E+02	7.6589E+02	1.2732E+03
1.000E+01	5.0737E+03	1.7151E+03	2.2764E+03	7.2171E+02	6.6600E+02	1.0982E+03
1.500E+01	1.7447E+03	4.0041E+02	5.1964E+02	3.1318E+02	2.4412E+02	3.8040E+02
2.000E+01	7.8232E+02	1.3735E+02	1.7507E+02	1.6913E+02	1.1486E+02	1.7171E+02
3.000E+01	2.3861E+02	2.9044E+01	3.5969E+01	6.8544E+01	3.7638E+01	5.2911E+01
4.000E+01	9.9123E+01	9.4055E+00	1.1381E+01	3.5189E+01	1.6492E+01	2.2133E+01
5.000E+01	4.9279E+01	3.8843E+00	4.6097E+00	2.0667E+01	8.5559E+00	1.1057E+01
5.566E+01	3.5065E+01	2.5351E+00	2.9794E+00	1.5933E+01	6.2166E+00	7.8846E+00
5.610E+01	3.4184E+01	2.4558E+00	2.8841E+00	1.5626E+01	6.0699E+00	7.6877E+00
6.000E+01	2.7575E+01	1.8784E+00	2.1922E+00	1.3252E+01	4.9617E+00	6.2091E+00
8.000E+01	1.0881E+01	5.9595E-01	6.7669E-01	6.4658E+00	2.0750E+00	2.4624E+00
1.000E+02	5.2482E+00	2.4525E-01	2.7257E-01	3.6596E+00	1.0482E+00	1.1916E+00
1.500E+02	1.3897E+00	4.9955E-02	5.3583E-02	1.2737E+00	3.0223E-01	3.1646E-01
2.000E+02	5.4687E-01	1.6634E-02	1.7521E-02	5.9680E-01	1.2630E-01	1.2485E-01
3.000E+02	1.5304E-01	3.7498E-03	3.9267E-03	2.0659E-01	3.8088E-02	3.5029E-02
4.000E+02	6.5036E-02	1.3783E-03	1.4670E-03	9.9365E-02	1.6876E-02	1.4904E-02

Z= 67

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
5.000E+02	3.4761E-02	6.6496E-04	7.1708E-04	5.7497E-02	9.2370E-03	7.9711E-03
6.000E+02	2.1362E-02	3.7558E-04	4.1560E-04	3.7407E-02	5.7658E-03	4.9087E-03
8.000E+02	1.0470E-02	1.6069E-04	1.9034E-04	1.9680E-02	2.8616E-03	2.4077E-03
1.000E+03	6.3098E-03	8.8544E-05	1.1005E-04	1.2348E-02	1.7306E-03	1.4510E-03
1.500E+03	2.7554E-03	3.3866E-05	4.5294E-05	5.6749E-03	7.5786E-04	6.3451E-04

Z= 67

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	1.3951E+05	2.0474E+05	6.8146E+04	8.6791E+04	7.5215E+03	6.5984E+03
1.354E+00	8.1053E+04	1.1707E+05	2.5640E+04	3.2508E+04	4.6510E+03	4.2995E+03
1.365E+00	7.9791E+04	1.1520E+05	2.4966E+04	3.1649E+04	4.5911E+03	4.2487E+03
1.394E+00	7.6504E+04	1.1034E+05	2.3253E+04	2.9467E+04	4.4354E+03	4.1160E+03
1.405E+00	7.5294E+04	1.0856E+05	2.2637E+04	2.8684E+04	4.3781E+03	4.0669E+03
1.500E+00	6.5902E+04	9.4730E+04	1.8137E+04	2.2959E+04	3.9329E+03	3.6817E+03
1.727E+00	4.8782E+04	6.9671E+04	1.1148E+04	1.4081E+04	3.1120E+03	2.9513E+03
1.741E+00	4.7931E+04	6.8432E+04	1.0840E+04	1.3691E+04	3.0706E+03	2.9137E+03
1.909E+00	3.8942E+04	5.5370E+04	7.8222E+03	9.8645E+03	2.6269E+03	2.5068E+03
1.924E+00	3.8235E+04	5.4348E+04	7.6027E+03	9.5866E+03	2.5915E+03	2.4739E+03
2.000E+00	3.4962E+04	4.9611E+04	6.6193E+03	8.3413E+03	2.4258E+03	2.3197E+03
2.101E+00	3.1129E+04	4.4076E+04	5.5382E+03	6.9738E+03	2.2286E+03	2.1343E+03
2.118E+00	3.0544E+04	4.3234E+04	5.3806E+03	6.7742E+03	2.1981E+03	2.1056E+03
3.000E+00	1.2730E+04	1.7753E+04	1.4668E+03	1.8364E+03	1.1898E+03	1.1321E+03
4.000E+00	5.7884E+03	7.9733E+03	4.7602E+02	5.9316E+02	7.0330E+02	6.5049E+02
5.000E+00	3.0282E+03	4.1302E+03	1.9164E+02	2.3590E+02	4.6275E+02	4.1279E+02
6.000E+00	1.7438E+03	2.3587E+03	8.9935E+01	1.1029E+02	3.2653E+02	2.8016E+02
8.000E+00	7.0157E+02	9.3590E+02	2.6292E+01	3.2033E+01	1.8608E+02	1.4759E+02
8.053E+00	6.8657E+02	9.1559E+02	2.5542E+01	3.1114E+01	1.8365E+02	1.4536E+02
8.118E+00	6.6899E+02	8.9179E+02	2.4670E+01	3.0046E+01	1.8076E+02	1.4272E+02
8.920E+00	4.9105E+02	6.5145E+02	1.6323E+01	1.9834E+01	1.4981E+02	1.1472E+02
8.992E+00	4.7826E+02	6.3423E+02	1.5759E+01	1.9145E+01	1.4743E+02	1.1259E+02
9.353E+00	4.1959E+02	5.5528E+02	1.3241E+01	1.6069E+01	1.3622E+02	1.0263E+02
9.428E+00	4.0857E+02	5.4048E+02	1.2781E+01	1.5508E+01	1.3405E+02	1.0072E+02
1.000E+01	3.3532E+02	4.4220E+02	9.8359E+00	1.1915E+01	1.1900E+02	8.7554E+01
1.500E+01	8.2136E+01	1.0585E+02	1.5663E+00	1.8751E+00	5.1397E+01	3.2074E+01
2.000E+01	2.8951E+01	3.6634E+01	4.1288E-01	4.8972E-01	2.7700E+01	1.5288E+01
3.000E+01	6.3156E+00	7.7637E+00	6.0453E-02	7.0610E-02	1.1282E+01	5.0177E+00
4.000E+01	2.0797E+00	2.4985E+00	1.5100E-02	1.7410E-02	5.7886E+00	2.2011E+00
5.000E+01	8.6782E-01	1.0229E+00	5.1255E-03	5.8450E-03	3.3986E+00	1.1428E+00
5.566E+01	5.6889E-01	6.6412E-01	3.0515E-03	3.4600E-03	2.6198E+00	8.3068E-01
5.610E+01	5.5125E-01	6.4308E-01	2.9360E-03	3.3277E-03	2.5692E+00	8.1110E-01
6.000E+01	4.2272E-01	4.9013E-01	2.1214E-03	2.3958E-03	2.1788E+00	6.6314E-01
8.000E+01	1.3539E-01	1.5203E-01	5.3146E-04	5.9068E-04	1.0628E+00	2.7755E-01
1.000E+02	5.6088E-02	6.1624E-02	1.8297E-04	2.0083E-04	6.0144E-01	1.4029E-01
1.500E+02	1.1528E-02	1.2218E-02	2.7534E-05	2.9592E-05	2.0926E-01	4.0490E-02
2.000E+02	3.8570E-03	4.0129E-03	7.5454E-06	8.0414E-06	9.8093E-02	1.6911E-02
3.000E+02	8.7399E-04	9.0298E-04	1.3279E-06	1.4285E-06	3.3961E-02	5.1021E-03
4.000E+02	3.2195E-04	3.3817E-04	4.1682E-07	4.6323E-07	1.6335E-02	2.2611E-03
5.000E+02	1.5509E-04	1.6707E-04	1.8186E-07	2.0859E-07	9.4527E-03	1.2376E-03
6.000E+02	8.7767E-05	9.6919E-05	9.4195E-08	1.1300E-07	6.1501E-03	7.7237E-04
8.000E+02	3.7638E-05	4.4211E-05	3.5702E-08	4.6790E-08	3.2356E-03	3.8342E-04
1.000E+03	2.0796E-05	2.5438E-05	1.8362E-08	2.5619E-08	2.0303E-03	2.3181E-04
1.500E+03	7.8700E-06	1.0498E-05	6.2185E-09	1.0062E-08	9.3334E-04	1.0153E-04

Z= 67

ENERGY	5 P 3/2	6 S 1/2
1.000E+00	1.4462E+04	6.1588E+02
1.354E+00	8.9558E+03	3.7185E+02
1.365E+00	8.8388E+03	3.6686E+02
1.394E+00	8.5336E+03	3.5389E+02
1.405E+00	8.4212E+03	3.4913E+02
1.500E+00	7.5454E+03	3.1231E+02
1.727E+00	5.9195E+03	2.4478E+02
1.741E+00	5.8372E+03	2.4139E+02
1.909E+00	4.9536E+03	2.0521E+02
1.924E+00	4.8830E+03	2.0235E+02
2.000E+00	4.5528E+03	1.8901E+02
2.101E+00	4.1593E+03	1.7314E+02
2.118E+00	4.0986E+03	1.7069E+02
3.000E+00	2.0996E+03	9.3618E+01
4.000E+00	1.1612E+03	5.5327E+01
5.000E+00	7.1583E+02	3.6410E+01
6.000E+00	4.7457E+02	2.5698E+01
8.000E+00	2.4094E+02	1.4651E+01
8.053E+00	2.3709E+02	1.4459E+01
8.118E+00	2.3255E+02	1.4233E+01
8.920E+00	1.8465E+02	1.1797E+01
8.992E+00	1.8105E+02	1.1610E+01
9.353E+00	1.6419E+02	1.0728E+01
9.428E+00	1.6096E+02	1.0557E+01
1.000E+01	1.3886E+02	9.3730E+00
1.500E+01	4.8144E+01	4.0504E+00
2.000E+01	2.1755E+01	2.1832E+00
3.000E+01	6.7151E+00	8.8333E-01
4.000E+01	2.8122E+00	4.5318E-01
5.000E+01	1.4060E+00	2.6606E-01
5.566E+01	1.0030E+00	2.0509E-01
5.610E+01	9.7795E-01	2.0113E-01
6.000E+01	7.9004E-01	1.7057E-01
8.000E+01	3.1359E-01	8.3199E-02
1.000E+02	1.5183E-01	4.7084E-02
1.500E+02	4.0436E-02	1.6384E-02
2.000E+02	1.5961E-02	7.6808E-03
3.000E+02	4.4809E-03	2.6602E-03
4.000E+02	1.9070E-03	1.2804E-03
5.000E+02	1.0200E-03	7.4148E-04
6.000E+02	6.2828E-04	4.8290E-04
8.000E+02	3.0841E-04	2.5481E-04
1.000E+03	1.8589E-04	1.6053E-04
1.500E+03	8.1423E-05	7.5069E-05

Z= 68 20 STATES, 44 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	57.5881	.98457
2 S 1/2	2.00	9.7184	.85950
2 P 1/2	2.00	9.2752	.79364
2 P 3/2	4.00	8.3471	.77205
3 S 1/2	2.00	2.1898	.63216
3 P 1/2	2.00	1.9922	.55042
3 P 3/2	4.00	1.7962	.52325
3 D 3/2	4.00	1.4550	.31892
3 D 5/2	6.00	1.4119	.31334
4 S 1/2	2.00	.4372	.36510
4 P 1/2	2.00	.3573	.29365
4 P 3/2	4.00	.3130	.26911
4 D 3/2	4.00	.1803	.12436
4 D 5/2	6.00	.1722	.11981
4 F 5/2	5.14	.0109	.01420
4 F 7/2	6.86	.0097	.01378
5 S 1/2	2.00	.0568	.11753
5 P 1/2	2.00	.0348	.07523
5 P 3/2	4.00	.0291	.06460
6 S 1/2	2.00	.0055	.01575

Z= 68 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	7.6023E+05	.0E+00	.0E+00	.0E+00	7.6023E+05
1.4105E+00	3.8750E+05	.0E+00	.0E+00	.0E+00	3.8750E+05
1.4217E+00	7.3130E+05	.0E+00	.0E+00	3.5006E+05	3.8124E+05
1.4536E+00	1.2025E+06	.0E+00	.0E+00	8.3816E+05	3.6434E+05
1.4652E+00	1.4184E+06	.0E+00	.0E+00	1.0599E+06	3.5842E+05
1.5000E+00	1.6829E+06	.0E+00	.0E+00	1.3415E+06	3.4149E+05
1.7944E+00	1.0899E+06	.0E+00	.0E+00	8.5563E+05	2.3423E+05
1.8088E+00	1.2386E+06	.0E+00	.0E+00	1.0084E+06	2.3027E+05
1.9902E+00	9.8712E+05	.0E+00	.0E+00	7.9986E+05	1.8726E+05
2.0000E+00	1.0370E+06	.0E+00	.0E+00	8.5178E+05	1.8527E+05
2.0061E+00	1.0294E+06	.0E+00	.0E+00	8.4540E+05	1.8403E+05
2.1876E+00	8.4596E+05	.0E+00	.0E+00	6.9384E+05	1.5213E+05
2.2051E+00	8.6707E+05	.0E+00	.0E+00	7.1761E+05	1.4946E+05
3.0000E+00	4.2154E+05	.0E+00	.0E+00	3.4719E+05	7.4347E+04
4.0000E+00	2.0860E+05	.0E+00	.0E+00	1.7085E+05	3.7757E+04
5.0000E+00	1.1917E+05	.0E+00	.0E+00	9.7165E+04	2.2009E+04
6.0000E+00	7.4895E+04	.0E+00	.0E+00	6.0840E+04	1.4055E+04
8.0000E+00	3.5593E+04	.0E+00	.0E+00	2.8755E+04	6.8372E+03
8.3388E+00	3.1940E+04	.0E+00	.0E+00	2.5785E+04	6.1548E+03
8.4055E+00	8.4266E+04	.0E+00	5.2986E+04	2.5249E+04	6.0315E+03
9.2660E+00	6.5363E+04	.0E+00	4.1136E+04	1.9522E+04	4.7050E+03
9.3402E+00	8.8010E+04	.0E+00	6.4285E+04	1.9114E+04	4.6100E+03
9.7087E+00	7.9967E+04	.0E+00	5.8540E+04	1.7252E+04	4.1749E+03
9.7865E+00	9.0529E+04	.0E+00	6.9547E+04	1.6891E+04	4.0903E+03
1.0000E+01	8.5799E+04	.0E+00	6.5978E+04	1.5951E+04	3.8697E+03
1.5000E+01	2.9995E+04	.0E+00	2.3265E+04	5.3836E+03	1.3470E+03
2.0000E+01	1.3931E+04	.0E+00	1.0838E+04	2.4650E+03	6.2815E+02
3.0000E+01	4.6230E+03	.0E+00	3.6037E+03	8.0866E+02	2.1066E+02
4.0000E+01	2.0891E+03	.0E+00	1.6296E+03	3.6358E+02	9.5929E+01
5.0000E+01	1.1220E+03	.0E+00	8.7546E+02	1.9474E+02	5.1822E+01
5.7531E+01	7.5757E+02	.0E+00	5.9116E+02	1.3130E+02	3.5108E+01
5.7991E+01	3.9770E+03	3.2362E+03	5.7807E+02	1.2839E+02	3.4338E+01
6.0000E+01	3.6510E+03	2.9777E+03	5.2538E+02	1.1665E+02	3.1234E+01
8.0000E+01	1.7058E+03	1.4063E+03	2.3373E+02	5.1786E+01	1.3983E+01
1.0000E+02	9.3485E+02	7.7544E+02	1.2441E+02	2.7531E+01	7.4756E+00

Z= 68 PHOTCELECTRIC CROSS SECTIONS(BARNS)

ENERGY (KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.5000E+02	3.0796E+02	2.5728E+02	3.9550E+01	8.7418E+00	2.3929E+00
2.0000E+02	1.3950E+02	1.1688E+02	1.7649E+01	3.8995E+00	1.0722E+00
3.0000E+02	4.6498E+01	3.9061E+01	5.8019E+00	1.2814E+00	3.5403E-01
4.0000E+02	2.1953E+01	1.8469E+01	2.7174E+00	5.9986E-01	1.6615E-01
5.0000E+02	1.2581E+01	1.0597E+01	1.5473E+00	3.4138E-01	9.4697E-02
6.0000E+02	8.1444E+00	6.8676E+00	9.9614E-01	2.1962E-01	6.0989E-02
8.0000E+02	4.2682E+00	3.6054E+00	5.1717E-01	1.1389E-01	3.1664E-02
1.0000E+03	2.6766E+00	2.2640E+00	3.2204E-01	7.0854E-02	1.9712E-02
1.5000E+03	1.2324E+00	1.0446E+00	1.4666E-01	3.2216E-02	8.9691E-03

Z= 68

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.410E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.422E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.454E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.465E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.794E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.809E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.990E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	6.1249E+04
2.006E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	6.0646E+04
2.188E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	5.4283E+04
2.205E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.6587E+04	5.3813E+04
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.3996E+04	3.5152E+04
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.5565E+04	2.1826E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.0737E+04	1.4382E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.8023E+03	9.9675E+03
8.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.6113E+03	5.3512E+03
8.339E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.2646E+03	4.8742E+03
8.406E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.2005E+03	4.7870E+03
9.266E+00	.0E+00	.0E+00	.0E+00	5.2986E+04	3.4866E+03	3.8266E+03
9.340E+00	.0E+00	.0E+00	2.4003E+04	4.1136E+04	3.4336E+03	3.7561E+03
9.709E+00	.0E+00	.0E+00	2.2098E+04	4.0283E+04	3.1870E+03	3.4307E+03
9.786E+00	.0E+00	1.2261E+04	2.1590E+04	3.6442E+04	3.1383E+03	3.3670E+03
1.000E+01	.0E+00	1.1897E+04	2.0344E+04	3.5696E+04	3.0095E+03	3.2001E+03
1.500E+01	.0E+00	5.7320E+03	6.9491E+03	1.0584E+04	1.3346E+03	1.1787E+03
2.000E+01	.0E+00	3.2543E+03	3.0843E+03	4.4993E+03	7.2882E+02	5.5473E+02
3.000E+01	.0E+00	1.3773E+03	9.4113E+02	1.2853E+03	2.9862E+02	1.8143E+02
4.000E+01	.0E+00	7.2042E+02	3.9485E+02	5.1437E+02	1.5414E+02	7.9366E+01
5.000E+01	.0E+00	4.2688E+02	1.9906E+02	2.4952E+02	9.0831E+01	4.1132E+01
5.753E+01	.0E+00	3.0471E+02	1.2887E+02	1.5758E+02	6.4691E+01	2.7047E+01
5.799E+01	3.2362E+03	2.9886E+02	1.2571E+02	1.5350E+02	6.3444E+01	2.6407E+01
6.000E+01	2.9777E+03	2.7507E+02	1.1308E+02	1.3723E+02	5.8378E+01	2.3836E+01
8.000E+01	1.4063E+03	1.3481E+02	4.5998E+01	5.2925E+01	2.8568E+01	9.9612E+00
1.000E+02	7.7544E+02	7.6415E+01	2.2831E+01	2.5160E+01	1.6200E+01	5.0309E+00
1.500E+02	2.5728E+02	2.6597E+01	6.4230E+00	6.5299E+00	5.6543E+00	1.4511E+00
2.000E+02	1.1688E+02	1.2459E+01	2.6473E+00	2.5432E+00	2.6555E+00	6.0610E-01
3.000E+02	3.9061E+01	4.3094E+00	7.8816E-01	7.0440E-01	9.2160E-01	1.8294E-01
4.000E+02	1.8469E+01	2.0724E+00	3.4710E-01	2.9786E-01	4.4399E-01	8.1114E-02
5.000E+02	1.0597E+01	1.1994E+00	1.8922E-01	1.5864E-01	2.5720E-01	4.4389E-02
6.000E+02	6.8676E+00	7.8066E-01	1.1793E-01	9.7552E-02	1.6749E-01	2.7728E-02
8.000E+02	3.6054E+00	4.1100E-01	5.8413E-02	4.7751E-02	8.8168E-02	1.3798E-02
1.000E+03	2.2640E+00	2.5802E-01	3.5280E-02	2.8732E-02	5.5340E-02	8.3436E-03
1.500E+03	1.0446E+00	1.1867E-01	1.5433E-02	1.2551E-02	2.5436E-02	3.6619E-03

Z= 68

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	3.8953E+04	4.2731E+04	1.0620E+05
1.410E+00	.0E+00	.0E+00	.0E+00	2.4209E+04	2.8488E+04	6.4620E+04
1.422E+00	.0E+00	.0E+00	3.5006E+05	2.3926E+04	2.8189E+04	6.3825E+04
1.454E+00	.0E+00	.0E+00	8.3816E+05	2.3154E+04	2.7367E+04	6.1659E+04
1.465E+00	.0E+00	2.1587E+05	8.4408E+05	2.2881E+04	2.7074E+04	6.0892E+04
1.500E+00	.0E+00	5.3486E+05	8.0659E+05	2.2091E+04	2.6224E+04	5.8677E+04
1.794E+00	.0E+00	3.5171E+05	5.0392E+05	1.6791E+04	2.0302E+04	4.3740E+04
1.809E+00	1.7016E+05	3.4461E+05	4.9360E+05	1.6582E+04	2.0061E+04	4.3154E+04
1.990E+00	1.4588E+05	2.6947E+05	3.8451E+05	1.4244E+04	1.7338E+04	3.6607E+04
2.000E+00	1.4491E+05	2.6606E+05	3.7957E+05	1.4133E+04	1.7206E+04	3.6294E+04
2.006E+00	1.4429E+05	2.6394E+05	3.7652E+05	1.4063E+04	1.7124E+04	3.6100E+04
2.188E+00	1.2623E+05	2.1192E+05	3.0141E+05	1.2222E+04	1.4925E+04	3.0965E+04
2.205E+00	1.2459E+05	2.0749E+05	2.9512E+05	1.2064E+04	1.4733E+04	3.0524E+04
3.000E+00	7.4517E+04	8.8908E+04	1.2462E+05	7.1742E+03	8.7085E+03	1.7117E+04
4.000E+00	4.3105E+04	3.7911E+04	5.2441E+04	4.3096E+03	5.0874E+03	9.5600E+03
5.000E+00	2.7117E+04	1.8959E+04	2.5970E+04	2.8629E+03	3.2599E+03	5.9260E+03
6.000E+00	1.8155E+04	1.0563E+04	1.4352E+04	2.0332E+03	2.2271E+03	3.9429E+03
8.000E+00	9.2920E+03	4.0599E+03	5.4411E+03	1.1685E+03	1.1835E+03	2.0111E+03
8.339E+00	8.4039E+03	3.5263E+03	4.7162E+03	1.0773E+03	1.0771E+03	1.8194E+03
8.406E+00	8.2422E+03	3.4317E+03	4.5879E+03	1.0606E+03	1.0576E+03	1.7846E+03
9.266E+00	6.8479E+03	2.4551E+03	3.2657E+03	8.7475E+02	8.4452E+02	1.4054E+03
9.340E+00	6.3608E+03	2.3883E+03	3.1755E+03	8.6099E+02	8.2895E+02	1.3780E+03
9.709E+00	5.7750E+03	2.0883E+03	2.7712E+03	7.9708E+02	7.5707E+02	1.2516E+03
9.786E+00	5.6605E+03	2.0312E+03	2.6943E+03	7.8447E+02	7.4299E+02	1.2269E+03
1.000E+01	5.3609E+03	1.8841E+03	2.4963E+03	7.5130E+02	7.0608E+02	1.1624E+03
1.500E+01	1.8546E+03	4.4261E+02	5.7310E+02	3.2704E+02	2.6079E+02	4.0503E+02
2.000E+01	8.3503E+02	1.5251E+02	1.9388E+02	1.7701E+02	1.2334E+02	1.8357E+02
3.000E+01	2.5611E+02	3.2447E+01	4.0059E+01	7.1978E+01	4.0709E+01	5.6884E+01
4.000E+01	1.0680E+02	1.0549E+01	1.2722E+01	3.7047E+01	1.7926E+01	2.3888E+01
5.000E+01	5.3242E+01	4.3696E+00	5.1669E+00	2.1803E+01	9.3342E+00	1.1968E+01
5.753E+01	3.4139E+01	2.5033E+00	2.9220E+00	1.5521E+01	6.1548E+00	7.6957E+00
5.799E+01	3.3283E+01	2.4252E+00	2.8287E+00	1.5221E+01	6.0101E+00	7.5038E+00
6.000E+01	2.9857E+01	2.1180E+00	2.4624E+00	1.4005E+01	5.4287E+00	6.7358E+00
8.000E+01	1.1820E+01	6.7424E-01	7.6243E-01	6.8513E+00	2.2801E+00	2.6802E+00
1.000E+02	5.7143E+00	2.7814E-01	3.0777E-01	3.8859E+00	1.1555E+00	1.3001E+00
1.500E+02	1.5188E+00	5.6867E-02	6.0699E-02	1.3575E+00	3.3494E-01	3.4663E-01
2.000E+02	5.9904E-01	1.8978E-02	1.9885E-02	6.3766E-01	1.4043E-01	1.3708E-01
3.000E+02	1.6806E-01	4.2901E-03	4.4655E-03	2.2146E-01	4.2518E-02	3.8561E-02
4.000E+02	7.1507E-02	1.5794E-03	1.6699E-03	1.0673E-01	1.8884E-02	1.6828E-02
5.000E+02	3.8220E-02	7.5872E-04	8.1348E-04	6.1837E-02	1.0347E-02	8.7862E-03
6.000E+02	2.3506E-02	4.3085E-04	4.7392E-04	4.0268E-02	6.4693E-03	5.4146E-03
8.000E+02	1.1522E-02	1.8454E-04	2.1739E-04	2.1205E-02	3.2153E-03	2.6564E-03
1.000E+03	6.9429E-03	1.0201E-04	1.2487E-04	1.3309E-02	1.9464E-03	1.6000E-03
1.500E+03	3.0274E-03	3.8870E-05	5.2060E-05	6.1158E-03	8.5340E-04	6.9903E-04

Z= 68

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	1.4366E+05	2.1109E+05	8.2783E+04	1.0529E+05	7.6257E+03	6.6304E+03
1.410E+00	7.8064E+04	1.1256E+05	2.7449E+04	3.4727E+04	4.4279E+03	4.0927E+03
1.422E+00	7.6845E+04	1.1075E+05	2.6726E+04	3.3809E+04	4.3710E+03	4.0444E+03
1.454E+00	7.3535E+04	1.0587E+05	2.4815E+04	3.1380E+04	4.2165E+03	3.9127E+03
1.465E+00	7.2368E+04	1.0415E+05	2.4159E+04	3.0546E+04	4.1621E+03	3.8661E+03
1.500E+00	6.9016E+04	9.9214E+04	2.2320E+04	2.8211E+04	4.0057E+03	3.7316E+03
1.794E+00	4.7206E+04	6.7290E+04	1.2044E+04	1.5179E+04	2.9773E+03	2.8223E+03
1.809E+00	4.6382E+04	6.6091E+04	1.1712E+04	1.4759E+04	2.9377E+03	2.7864E+03
1.990E+00	3.7390E+04	5.3047E+04	8.3513E+03	1.0508E+04	2.4995E+03	2.3846E+03
2.000E+00	3.6970E+04	5.2440E+04	8.2062E+03	1.0324E+04	2.4787E+03	2.3654E+03
2.006E+00	3.6710E+04	5.2064E+04	8.1168E+03	1.0211E+04	2.4658E+03	2.3534E+03
2.188E+00	2.9978E+04	4.2350E+04	5.9432E+03	7.4660E+03	2.1261E+03	2.0355E+03
2.205E+00	2.9415E+04	4.1540E+04	5.7736E+03	7.2520E+03	2.0970E+03	2.0081E+03

Z= 68

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
3.000E+00	1.3614E+04	1.8967E+04	1.8350E+03	2.2930E+03	1.2207E+03	1.1637E+03
4.000E+00	6.2324E+03	8.5733E+03	5.9882E+02	7.4478E+02	7.2324E+02	6.7216E+02
5.000E+00	3.2763E+03	4.4616E+03	2.4214E+02	2.9743E+02	4.7660E+02	4.2819E+02
6.000E+00	1.8940E+03	2.5573E+03	1.1405E+02	1.3955E+02	3.3668E+02	2.9152E+02
8.000E+00	7.6667E+02	1.0206E+03	3.3550E+01	4.0783E+01	1.9220E+02	1.5435E+02
8.339E+00	6.7033E+02	8.9043E+02	2.8024E+01	3.4030E+01	1.7705E+02	1.4041E+02
8.406E+00	6.5317E+02	8.6728E+02	2.7068E+01	3.2863E+01	1.7427E+02	1.3787E+02
9.266E+00	4.7444E+02	6.2675E+02	1.7664E+01	2.1393E+01	1.4348E+02	1.1001E+02
9.340E+00	4.6208E+02	6.1017E+02	1.7054E+01	2.0650E+01	1.4121E+02	1.0798E+02
9.709E+00	4.0634E+02	5.3544E+02	1.4375E+01	1.7387E+01	1.3064E+02	9.8590E+01
9.786E+00	3.9567E+02	5.2117E+02	1.3876E+01	1.6780E+01	1.2856E+02	9.6751E+01
1.000E+01	3.6813E+02	4.8433E+02	1.2610E+01	1.5240E+01	1.2308E+02	9.1933E+01
1.500E+01	9.0890E+01	1.1680E+02	2.0207E+00	2.4130E+00	5.3313E+01	3.3930E+01
2.000E+01	3.2202E+01	4.0620E+01	5.3477E-01	6.3254E-01	2.8793E+01	1.6258E+01
3.000E+01	7.0742E+00	8.6647E+00	7.8876E-02	9.1855E-02	1.1767E+01	5.3742E+00
4.000E+01	2.3405E+00	2.8006E+00	1.9795E-02	2.2753E-02	6.0528E+00	2.3692E+00
5.000E+01	9.7990E-01	1.1501E+00	6.7380E-03	7.6591E-03	3.5610E+00	1.2347E+00
5.753E+01	5.6467E-01	6.5435E-01	3.4229E-03	3.8615E-03	2.5345E+00	8.1454E-01
5.799E+01	5.4721E-01	6.3367E-01	3.2937E-03	3.7142E-03	2.4856E+00	7.9540E-01
6.000E+01	4.7850E-01	5.5239E-01	2.7949E-03	3.1457E-03	2.2868E+00	7.1852E-01
8.000E+01	1.5383E-01	1.7285E-01	7.0276E-04	7.7831E-04	1.1184E+00	3.0205E-01
1.000E+02	6.3890E-02	6.9864E-02	2.4265E-04	2.6536E-04	6.3425E-01	1.5316E-01
1.500E+02	1.3185E-02	1.3901E-02	3.6662E-05	3.9246E-05	2.2150E-01	4.4439E-02
2.000E+02	4.4220E-03	4.5744E-03	1.0068E-05	1.0684E-05	1.0409E-01	1.8622E-02
3.000E+02	1.0047E-03	1.0319E-03	1.7761E-06	1.9010E-06	3.6154E-02	5.6410E-03
4.000E+02	3.7077E-04	3.8709E-04	5.5826E-07	6.1699E-07	1.7425E-02	2.5059E-03
5.000E+02	1.7802E-04	1.9047E-04	2.3939E-07	2.7484E-07	1.0096E-02	1.3729E-03
6.000E+02	1.0131E-04	1.1082E-04	1.2647E-07	1.5064E-07	6.5748E-03	8.5830E-04
8.000E+02	4.3492E-05	5.0649E-05	4.8098E-08	6.2380E-08	3.4623E-03	4.2667E-04
1.000E+03	2.4041E-05	2.9083E-05	2.4732E-08	3.4144E-08	2.1733E-03	2.5820E-04
1.500E+03	9.1039E-06	1.1995E-05	8.3784E-09	1.3384E-08	9.9891E-04	1.1323E-04

Z= 68

ENERGY	5 P 3/2	6 S 1/2
1.000E+00	1.4654E+04	6.1659E+02
1.410E+00	8.5173E+03	3.4815E+02
1.422E+00	8.4057E+03	3.4348E+02
1.454E+00	8.1023E+03	3.3083E+02
1.465E+00	7.9953E+03	3.2639E+02
1.500E+00	7.6875E+03	3.1365E+02
1.794E+00	5.6506E+03	2.3025E+02
1.809E+00	5.5719E+03	2.2706E+02
1.990E+00	4.6989E+03	1.9203E+02
2.000E+00	4.6575E+03	1.9038E+02
2.006E+00	4.6318E+03	1.8936E+02
2.188E+00	3.9544E+03	1.6243E+02
2.205E+00	3.8965E+03	1.6013E+02
3.000E+00	2.1600E+03	9.4486E+01
4.000E+00	1.1991E+03	5.5970E+01
5.000E+00	7.4122E+02	3.6889E+01
6.000E+00	4.9253E+02	2.6066E+01
8.000E+00	2.5100E+02	1.4887E+01
8.339E+00	2.2707E+02	1.3714E+01
8.406E+00	2.2272E+02	1.3499E+01
9.266E+00	1.7542E+02	1.1117E+01
9.340E+00	1.7200E+02	1.0940E+01
9.709E+00	1.5624E+02	1.0122E+01
9.786E+00	1.5316E+02	9.9613E+00
1.000E+01	1.4511E+02	9.5372E+00
1.500E+01	5.0611E+01	4.1334E+00

Z= 68

ENERGY	5 P 3/2	6 S 1/2
2.000E+01	2.2963E+01	2.2327E+00
3.000E+01	7.1277E+00	9.0630E-01
4.000E+01	2.9966E+00	4.6613E-01
5.000E+01	1.5026E+00	2.7422E-01
5.753E+01	9.6664E-01	1.9517E-01
5.799E+01	9.4257E-01	1.9141E-01
6.000E+01	8.4619E-01	1.7610E-01
8.000E+01	3.3701E-01	8.6127E-02
1.000E+02	1.6357E-01	4.8843E-02
1.500E+02	4.3732E-02	1.7058E-02
2.000E+02	1.7303E-02	8.0173E-03
3.000E+02	4.8704E-03	2.7858E-03
4.000E+02	2.0754E-03	1.3435E-03
5.000E+02	1.1102E-03	7.7904E-04
6.000E+02	6.8437E-04	5.0783E-04
8.000E+02	3.3593E-04	2.6822E-04
1.000E+03	2.0242E-04	1.6904E-04
1.500E+03	8.8571E-05	7.9033E-05

Z= 69 20 STATES, 44 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	59.5037	.98471
2 S 1/2	2.00	10.0832	.86120
2 P 1/2	2.00	9.6299	.79609
2 P 3/2	4.00	8.6378	.77398
3 S 1/2	2.00	2.2783	.63615
3 P 1/2	2.00	2.0757	.55517
3 P 3/2	4.00	1.8651	.52718
3 D 3/2	4.00	1.5160	.32380
3 D 5/2	6.00	1.4696	.31804
4 S 1/2	2.00	.4541	.36850
4 P 1/2	2.00	.3716	.29734
4 P 3/2	4.00	.3239	.27172
4 D 3/2	4.00	.1870	.12689
4 D 5/2	6.00	.1783	.12211
4 F 5/2	5.57	.0110	.01500
4 F 7/2	7.43	.0097	.01453
5 S 1/2	2.00	.0584	.11787
5 P 1/2	2.00	.0356	.07550
5 P 3/2	4.00	.0295	.06441
6 S 1/2	2.00	.0056	.01555

Z= 69 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	8.1025E+05	.0E+00	.0E+00	.0E+00	8.1025E+05
1.4681E+00	3.7904E+05	.0E+00	.0E+00	.0E+00	3.7904E+05
1.4799E+00	7.0608E+05	.0E+00	.0E+00	3.3324E+05	3.7285E+05
1.5000E+00	1.1014E+06	.0E+00	.0E+00	7.3885E+05	3.6258E+05
1.5145E+00	1.1600E+06	.0E+00	.0E+00	8.0457E+05	3.5543E+05
1.5266E+00	1.3625E+06	.0E+00	.0E+00	1.0130E+06	3.4959E+05
1.8632E+00	1.0559E+06	.0E+00	.0E+00	8.2673E+05	2.2914E+05
1.8781E+00	1.2005E+06	.0E+00	.0E+00	9.7524E+05	2.2523E+05
2.0000E+00	1.0313E+06	.0E+00	.0E+00	8.3484E+05	1.9645E+05
2.0736E+00	9.4760E+05	.0E+00	.0E+00	7.6611E+05	1.8149E+05
2.0902E+00	9.8818E+05	.0E+00	.0E+00	8.0984E+05	1.7834E+05
2.2761E+00	8.1386E+05	.0E+00	.0E+00	6.6619E+05	1.4767E+05
2.2943E+00	8.3402E+05	.0E+00	.0E+00	6.8896E+05	1.4506E+05

Z= 69 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
3.0000E+00	4.4461E+05	.0E+00	.0E+00	3.6581E+05	7.8790E+04
4.0000E+00	2.2069E+05	.0E+00	.0E+00	1.8067E+05	4.0016E+04
5.0000E+00	1.2621E+05	.0E+00	.0E+00	1.0288E+05	2.3330E+04
6.0000E+00	7.9374E+04	.0E+00	.0E+00	6.4472E+04	1.4903E+04
8.0000E+00	3.7769E+04	.0E+00	.0E+00	3.0514E+04	7.2548E+03
8.6292E+00	3.0999E+04	.0E+00	.0E+00	2.5011E+04	5.9881E+03
8.6983E+00	8.1363E+04	.0E+00	5.1004E+04	2.4491E+04	5.8679E+03
9.6202E+00	6.2545E+04	.0E+00	3.9236E+04	1.8771E+04	4.5379E+03
9.6973E+00	8.4286E+04	.0E+00	6.1461E+04	1.8379E+04	4.4462E+03
1.0000E+01	7.8247E+04	.0E+00	5.7195E+04	1.6942E+04	4.1093E+03
1.0073E+01	7.6722E+04	.0E+00	5.6071E+04	1.6618E+04	4.0331E+03
1.0154E+01	8.6859E+04	.0E+00	6.6637E+04	1.6270E+04	3.9513E+03
1.5000E+01	3.1698E+04	.0E+00	2.4538E+04	5.7274E+03	1.4328E+03
2.0000E+01	1.4755E+04	.0E+00	1.1461E+04	2.6254E+03	6.6899E+02
3.0000E+01	4.9088E+03	.0E+00	3.8212E+03	8.6281E+02	2.2475E+02
4.0000E+01	2.2220E+03	.0E+00	1.7311E+03	3.8839E+02	1.0249E+02
5.0000E+01	1.1947E+03	.0E+00	9.3104E+02	2.0823E+02	5.5423E+01
5.9444E+01	7.3646E+02	.0E+00	5.7401E+02	1.2814E+02	3.4309E+01
5.9920E+01	3.8345E+03	3.1143E+03	5.6132E+02	1.2530E+02	3.3557E+01
6.0000E+01	3.8156E+03	3.0981E+03	5.5923E+02	1.2483E+02	3.3433E+01
8.0000E+01	1.7946E+03	1.4750E+03	2.4914E+02	5.5486E+01	1.4989E+01
1.0000E+02	9.8536E+02	8.1506E+02	1.3275E+02	2.9529E+01	8.0217E+00
1.5000E+02	3.2580E+02	2.7155E+02	4.2287E+01	9.3938E+00	2.5730E+00
2.0000E+02	1.4791E+02	1.2366E+02	1.8898E+01	4.1962E+00	1.1546E+00
3.0000E+02	4.9425E+01	4.1437E+01	6.2250E+00	1.3815E+00	3.8201E-01
4.0000E+02	2.3373E+01	1.9627E+01	2.9193E+00	6.4757E-01	1.7952E-01
5.0000E+02	1.3410E+01	1.1275E+01	1.6637E+00	3.6883E-01	1.0240E-01
6.0000E+02	8.6877E+00	7.3126E+00	1.0717E+00	2.3741E-01	6.5989E-02
8.0000E+02	4.5568E+00	3.8426E+00	5.5672E-01	1.2318E-01	3.4279E-02
1.0000E+03	2.8585E+00	2.4138E+00	3.4672E-01	7.6643E-02	2.1342E-02
1.5000E+03	1.3160E+00	1.1136E+00	1.5784E-01	3.4835E-02	9.7073E-03

Z= 69

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.468E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.480E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.514E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.527E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.863E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.878E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.074E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.090E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.276E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	5.8281E+04
2.294E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	5.2130E+04
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.5097E+04	5.1683E+04
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.4416E+04	3.5623E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.5912E+04	2.2499E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.1009E+04	1.4928E+04
8.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	8.0230E+03	1.0393E+04
8.629E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.7590E+03	5.6171E+03
8.698E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.1293E+03	4.7402E+03
8.698E+00	.0E+00	.0E+00	.0E+00	5.1004E+04	4.0673E+03	4.6556E+03
9.620E+00	.0E+00	.0E+00	.0E+00	3.9236E+04	3.3547E+03	3.6946E+03
9.697E+00	.0E+00	.0E+00	2.3036E+04	3.8425E+04	3.3038E+03	3.6266E+03
1.000E+01	.0E+00	.0E+00	2.1711E+04	3.5485E+04	3.1139E+03	3.3751E+03
1.007E+01	.0E+00	.0E+00	2.1250E+04	3.4821E+04	3.0704E+03	3.3179E+03
1.015E+01	.0E+00	1.1769E+04	2.0761E+04	3.4107E+04	3.0234E+03	3.2563E+03
1.500E+01	.0E+00	5.8809E+03	7.4158E+03	1.1241E+04	1.3867E+03	1.2535E+03

Z= 69

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
2.000E+01	.0E+00	3.3602E+03	3.3057E+03	4.7945E+03	7.5921E+02	5.9312E+02
3.000E+01	.0E+00	1.4308E+03	1.0143E+03	1.3762E+03	3.1226E+02	1.9541E+02
4.000E+01	.0E+00	7.5140E+02	4.2719E+02	5.5249E+02	1.6162E+02	8.5898E+01
5.000E+01	.0E+00	4.4646E+02	2.1602E+02	2.6856E+02	9.5443E+01	4.4677E+01
5.944E+01	.0E+00	2.9486E+02	1.2661E+02	1.5254E+02	6.2859E+01	2.6698E+01
5.992E+01	3.1143E+03	2.8920E+02	1.2352E+02	1.4860E+02	6.1648E+01	2.6068E+01
6.000E+01	3.0981E+03	2.8827E+02	1.2301E+02	1.4795E+02	6.1449E+01	2.5965E+01
8.000E+01	1.4750E+03	1.4171E+02	5.0220E+01	5.7209E+01	3.0153E+01	1.0897E+01
1.000E+02	8.1506E+02	8.0510E+01	2.4992E+01	2.7249E+01	1.7136E+01	5.5204E+00
1.500E+02	2.7155E+02	2.8130E+01	7.0627E+00	7.0941E+00	6.0030E+00	1.6005E+00
2.000E+02	1.2366E+02	1.3211E+01	2.9193E+00	2.7682E+00	2.8263E+00	6.7066E-01
3.000E+02	4.1437E+01	4.5843E+00	8.7225E-01	7.6841E-01	9.8409E-01	2.0324E-01
4.000E+02	1.9627E+01	2.2091E+00	3.8496E-01	3.2527E-01	4.7506E-01	9.0324E-02
5.000E+02	1.1275E+01	1.2802E+00	2.1015E-01	1.7333E-01	2.7556E-01	4.9504E-02
6.000E+02	7.3126E+00	8.3400E-01	1.3111E-01	1.0660E-01	1.7960E-01	3.0959E-02
8.000E+02	3.8426E+00	4.3951E-01	6.5031E-02	5.2177E-02	9.4638E-02	1.5424E-02
1.000E+03	2.4138E+00	2.7602E-01	3.9311E-02	3.1384E-02	5.9423E-02	9.3361E-03
1.500E+03	1.1136E+00	1.2693E-01	1.7217E-02	1.3694E-02	2.7308E-02	4.1019E-03

Z= 69

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	3.9275E+04	4.2740E+04	1.0823E+05
1.468E+00	.0E+00	.0E+00	.0E+00	2.3222E+04	2.7397E+04	6.2349E+04
1.480E+00	.0E+00	.0E+00	3.3324E+05	2.2951E+04	2.7110E+04	6.1581E+04
1.500E+00	.0E+00	.0E+00	7.3885E+05	2.2499E+04	2.6628E+04	6.0296E+04
1.514E+00	.0E+00	.0E+00	8.0457E+05	2.2181E+04	2.6288E+04	5.9395E+04
1.527E+00	.0E+00	2.0426E+05	8.0869E+05	2.1919E+04	2.6007E+04	5.8654E+04
1.863E+00	.0E+00	3.4018E+05	4.8655E+05	1.6179E+04	1.9607E+04	4.2330E+04
1.878E+00	1.6543E+05	3.3328E+05	4.7653E+05	1.5978E+04	1.9375E+04	4.1762E+04
2.000E+00	1.4722E+05	2.8341E+05	4.0421E+05	1.4465E+04	1.7617E+04	3.7491E+04
2.074E+00	1.4061E+05	2.5803E+05	3.6747E+05	1.3654E+04	1.6662E+04	3.5204E+04
2.090E+00	1.3904E+05	2.5272E+05	3.5979E+05	1.3481E+04	1.6457E+04	3.4715E+04
2.276E+00	1.2174E+05	2.0346E+05	2.8886E+05	1.1744E+04	1.4376E+04	2.9839E+04
2.294E+00	1.2015E+05	1.9921E+05	2.8282E+05	1.1592E+04	1.4192E+04	2.9412E+04
3.000E+00	7.6792E+04	9.5363E+04	1.3362E+05	7.3849E+03	9.0065E+03	1.7796E+04
4.000E+00	4.4749E+04	4.0930E+04	5.6585E+04	4.4504E+03	5.2934E+03	9.9801E+03
5.000E+00	2.8272E+04	2.0548E+04	2.8121E+04	2.9623E+03	3.4064E+03	6.2046E+03
6.000E+00	1.8993E+04	1.1482E+04	1.5581E+04	2.1067E+03	2.3350E+03	4.1381E+03
8.000E+00	9.7687E+03	4.4353E+03	5.9337E+03	1.2132E+03	1.2474E+03	2.1187E+03
8.629E+00	8.1380E+03	3.4309E+03	4.5728E+03	1.0461E+03	1.0511E+03	1.7655E+03
8.698E+00	7.9813E+03	3.3389E+03	4.4483E+03	1.0299E+03	1.0321E+03	1.7317E+03
9.620E+00	6.2303E+03	2.3619E+03	3.1298E+03	8.4389E+02	8.1811E+02	1.3525E+03
9.697E+00	6.1080E+03	2.2976E+03	3.0433E+03	8.3061E+02	8.0304E+02	1.3260E+03
1.000E+01	5.6567E+03	2.0653E+03	2.7313E+03	7.8125E+02	7.4730E+02	1.2284E+03
1.007E+01	5.5541E+03	2.0136E+03	2.6619E+03	7.6995E+02	7.3461E+02	1.2063E+03
1.015E+01	5.4439E+03	1.9586E+03	2.5880E+03	7.5777E+02	7.2096E+02	1.1825E+03
1.500E+01	1.9684E+03	4.8821E+02	6.3067E+02	3.4112E+02	2.7812E+02	4.3055E+02
2.000E+01	8.8991E+02	1.6895E+02	2.1423E+02	1.8504E+02	1.3223E+02	1.9592E+02
3.000E+01	2.7447E+02	3.6163E+01	4.4511E+01	7.5494E+01	4.3951E+01	6.1048E+01
4.000E+01	1.1488E+02	1.1805E+01	1.4189E+01	3.8955E+01	1.9449E+01	2.5735E+01
5.000E+01	5.7430E+01	4.9040E+00	5.7778E+00	2.2972E+01	1.0165E+01	1.2930E+01
5.944E+01	3.3244E+01	2.4720E+00	2.8656E+00	1.5120E+01	6.0952E+00	7.5113E+00
5.992E+01	3.2411E+01	2.3950E+00	2.7742E+00	1.4829E+01	5.9525E+00	7.3243E+00
6.000E+01	3.2274E+01	2.3824E+00	2.7593E+00	1.4780E+01	5.9290E+00	7.2935E+00
8.000E+01	1.2818E+01	7.6100E-01	8.5698E-01	7.2501E+00	2.5011E+00	2.9118E+00
1.000E+02	6.2112E+00	3.1468E-01	3.4667E-01	4.1206E+00	1.2715E+00	1.4158E+00
1.500E+02	1.6571E+00	6.4581E-02	6.8595E-02	1.4447E+00	3.7052E-01	3.7896E-01
2.000E+02	6.5506E-01	2.1601E-02	2.2513E-02	6.8038E-01	1.5585E-01	1.5021E-01
3.000E+02	1.8424E-01	4.8963E-03	5.0658E-03	2.3706E-01	4.7378E-02	4.2366E-02
4.000E+02	7.8487E-02	1.8058E-03	1.8961E-03	1.1448E-01	2.1094E-02	1.8073E-02

Z= 69

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
5.000E+02	4.1974E-02	8.6567E-04	9.2418E-04	6.6417E-02	1.1576E-02	9.6711E-03
6.000E+02	2.5820E-02	4.9303E-04	5.3899E-04	4.3288E-02	7.2452E-03	5.9610E-03
8.000E+02	1.2658E-02	2.1153E-04	2.4695E-04	2.2817E-02	3.6064E-03	2.9250E-03
1.000E+03	7.6253E-03	1.1745E-04	1.4138E-04	1.4326E-02	2.1850E-03	1.7608E-03
1.500E+03	3.3209E-03	4.4548E-05	5.9243E-05	6.5822E-03	9.5924E-04	7.6854E-04

Z= 69

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	1.4753E+05	2.1708E+05	9.9359E+04	1.2620E+05	7.7318E+03	6.6520E+03
1.468E+00	7.5240E+04	1.0829E+05	2.9165E+04	3.6815E+04	4.2237E+03	3.8992E+03
1.480E+00	7.4064E+04	1.0656E+05	2.8398E+04	3.5843E+04	4.1694E+03	3.8532E+03
1.500E+00	7.2104E+04	1.0366E+05	2.7143E+04	3.4252E+04	4.0791E+03	3.7765E+03
1.514E+00	7.0733E+04	1.0164E+05	2.6283E+04	3.3161E+04	4.0160E+03	3.7227E+03
1.527E+00	6.9608E+04	9.9988E+04	2.5588E+04	3.2279E+04	3.9642E+03	3.6784E+03
1.863E+00	4.5702E+04	6.5019E+04	1.2907E+04	1.6229E+04	2.8527E+03	2.7007E+03
1.878E+00	4.4904E+04	6.3859E+04	1.2551E+04	1.5779E+04	2.8149E+03	2.6665E+03
2.000E+00	3.9003E+04	5.5300E+04	1.0055E+04	1.2628E+04	2.5320E+03	2.4085E+03
2.074E+00	3.5911E+04	5.0833E+04	8.8419E+03	1.1098E+04	2.3816E+03	2.2698E+03
2.090E+00	3.5257E+04	4.9889E+04	8.5935E+03	1.0785E+04	2.3495E+03	2.2401E+03
2.276E+00	2.8876E+04	4.0698E+04	6.3231E+03	7.9235E+03	2.0308E+03	1.9422E+03
2.294E+00	2.8333E+04	3.9918E+04	6.1426E+03	7.6964E+03	2.0031E+03	1.9161E+03
3.000E+00	1.4525E+04	2.0218E+04	2.2688E+03	2.8296E+03	1.2520E+03	1.1946E+03
4.000E+00	6.6951E+03	9.1977E+03	7.4473E+02	9.2412E+02	7.4349E+02	6.9368E+02
5.000E+00	3.5367E+03	4.8085E+03	3.0231E+02	3.7055E+02	4.9071E+02	4.4364E+02
6.000E+00	2.0524E+03	2.7661E+03	1.4290E+02	1.7447E+02	3.4703E+02	3.0299E+02
8.000E+00	8.3575E+02	1.1102E+03	4.2292E+01	5.1289E+01	1.9843E+02	1.6122E+02
8.629E+00	6.5462E+02	8.6611E+02	3.0477E+01	3.6891E+01	1.7085E+02	1.3575E+02
8.698E+00	6.3787E+02	8.4359E+02	2.9438E+01	3.5626E+01	1.6817E+02	1.3329E+02
9.620E+00	4.5839E+02	6.0294E+02	1.8943E+01	2.2863E+01	1.3754E+02	1.0557E+02
9.697E+00	4.4645E+02	5.8698E+02	1.8289E+01	2.2069E+01	1.3536E+02	1.0362E+02
1.000E+01	4.0314E+02	5.2913E+02	1.5970E+01	1.9254E+01	1.2725E+02	9.6412E+01
1.007E+01	3.9347E+02	5.1623E+02	1.5463E+01	1.8639E+01	1.2539E+02	9.4771E+01
1.015E+01	3.8315E+02	5.0247E+02	1.4927E+01	1.7989E+01	1.2339E+02	9.3005E+01
1.500E+01	1.0032E+02	1.2856E+02	2.5759E+00	3.0680E+00	5.5271E+01	3.5846E+01
2.000E+01	3.5724E+01	4.4922E+01	6.8429E-01	8.0712E-01	2.9913E+01	1.7264E+01
3.000E+01	7.9024E+00	9.6441E+00	1.0163E-01	1.1800E-01	1.2261E+01	5.7474E+00
4.000E+01	2.6266E+00	3.1306E+00	2.5629E-02	2.9366E-02	6.3224E+00	2.5462E+00
5.000E+01	1.1034E+00	1.2895E+00	8.7493E-03	9.9124E-03	3.7271E+00	1.3318E+00
5.944E+01	5.6036E-01	6.4447E-01	3.8033E-03	4.2683E-03	2.4526E+00	7.9913E-01
5.992E+01	5.4307E-01	6.2415E-01	3.6601E-03	4.1058E-03	2.4053E+00	7.8042E-01
6.000E+01	5.4024E-01	6.2082E-01	3.6367E-03	4.0793E-03	2.3975E+00	7.7734E-01
8.000E+01	1.7432E-01	1.9492E-01	9.1765E-04	1.0127E-03	1.1757E+00	3.2820E-01
1.000E+02	7.2581E-02	7.8977E-02	3.1776E-04	3.4621E-04	6.6809E-01	1.6695E-01
1.500E+02	1.5037E-02	1.5773E-02	4.8205E-05	5.1400E-05	2.3417E-01	4.8698E-02
2.000E+02	5.0549E-03	5.2006E-03	1.3267E-05	1.4019E-05	1.1032E-01	2.0474E-02
3.000E+02	1.1517E-03	1.1760E-03	2.3457E-06	2.4986E-06	3.8443E-02	6.2272E-03
4.000E+02	4.2596E-04	4.4160E-04	7.3854E-07	8.1150E-07	1.8566E-02	2.7730E-03
5.000E+02	2.0487E-04	2.1720E-04	3.1700E-07	3.6168E-07	1.0772E-02	1.5215E-03
6.000E+02	1.1652E-04	1.2646E-04	1.6761E-07	1.9821E-07	7.0207E-03	9.5238E-04
8.000E+02	5.0162E-05	5.7808E-05	6.3812E-08	8.2079E-08	3.7007E-03	4.7413E-04
1.000E+03	2.7678E-05	3.3180E-05	3.2784E-08	4.4965E-08	2.3237E-03	2.8715E-04
1.500E+03	1.0480E-05	1.3680E-05	1.1099E-08	1.7578E-08	1.0679E-03	1.2608E-04

Z= 69

ENERGY	5 P 3/2	6 S 1/2
1.000E+00	1.4833E+04	6.1670E+02
1.468E+00	8.1073E+03	3.2637E+02
1.480E+00	8.0008E+03	3.2200E+02
1.500E+00	7.8234E+03	3.1474E+02
1.514E+00	7.6993E+03	3.0967E+02
1.527E+00	7.5974E+03	3.0552E+02
1.863E+00	5.3973E+03	2.1680E+02
1.878E+00	5.3220E+03	2.1380E+02
2.000E+00	4.7591E+03	1.9155E+02
2.074E+00	4.4595E+03	1.7978E+02
2.090E+00	4.3956E+03	1.7727E+02
2.276E+00	3.7611E+03	1.5243E+02
2.294E+00	3.7060E+03	1.5027E+02
3.000E+00	2.2195E+03	9.5307E+01
4.000E+00	1.2367E+03	5.6592E+01
5.000E+00	7.6662E+02	3.7360E+01
6.000E+00	5.1054E+02	2.6429E+01
8.000E+00	2.6114E+02	1.5120E+01
8.629E+00	2.1760E+02	1.3021E+01
8.698E+00	2.1343E+02	1.2816E+01
9.620E+00	1.6671E+02	1.0484E+01
9.697E+00	1.6346E+02	1.0318E+01
1.000E+01	1.5143E+02	9.7005E+00
1.007E+01	1.4871E+02	9.5592E+00
1.015E+01	1.4578E+02	9.4069E+00
1.500E+01	5.3128E+01	4.2162E+00
2.000E+01	2.4201E+01	2.2823E+00
3.000E+01	7.5536E+00	9.2941E-01
4.000E+01	3.1879E+00	4.7920E-01
5.000E+01	1.6030E+00	2.8248E-01
5.944E+01	9.3179E-01	1.8588E-01
5.992E+01	9.0862E-01	1.8229E-01
6.000E+01	9.0481E-01	1.8170E-01
8.000E+01	3.6155E-01	8.9104E-02
1.000E+02	1.7591E-01	5.0635E-02
1.500E+02	4.7215E-02	1.7749E-02
2.000E+02	1.8725E-02	8.3627E-03
3.000E+02	5.2843E-03	2.9153E-03
4.000E+02	2.2547E-03	1.4088E-03
5.000E+02	1.2068E-03	8.1794E-04
6.000E+02	7.4412E-04	5.3364E-04
8.000E+02	3.6525E-04	2.8210E-04
1.000E+03	2.2001E-04	1.7784E-04
1.500E+03	9.6171E-05	8.3096E-05

Z= 70 20 STATES, 44 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	61.4583	.98484
2 S 1/2	2.00	10.4568	.86286
2 P 1/2	2.00	9.9931	.79848
2 P 3/2	4.00	8.9335	.77585
3 S 1/2	2.00	2.3691	.64005
3 P 1/2	2.00	2.1612	.55981
3 P 3/2	4.00	1.9352	.53100
3 D 3/2	4.00	1.5781	.32858
3 D 5/2	6.00	1.5284	.32263
4 S 1/2	2.00	.4714	.37182
4 P 1/2	2.00	.3863	.30097
4 P 3/2	4.00	.3350	.27423
4 D 3/2	4.00	.1938	.12936
4 D 5/2	6.00	.1844	.12434
4 F 5/2	6.00	.0111	.01580
4 F 7/2	8.00	.0096	.01528
5 S 1/2	2.00	.0600	.11820
5 P 1/2	2.00	.0365	.07576
5 P 3/2	4.00	.0300	.06420
6 S 1/2	2.00	.0056	.01536

Z= 70 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	8.6388E+05	.0E+00	.0E+00	.0E+00	8.6388E+05
1.5000E+00	3.8499E+05	.0E+00	.0E+00	.0E+00	3.8499E+05
1.5268E+00	3.7103E+05	.0E+00	.0E+00	.0E+00	3.7103E+05
1.5391E+00	6.8327E+05	.0E+00	.0E+00	3.1836E+05	3.6490E+05
1.5765E+00	1.1200E+06	.0E+00	.0E+00	7.7307E+05	3.4697E+05
1.5891E+00	1.3108E+06	.0E+00	.0E+00	9.6956E+05	3.4120E+05
1.9332E+00	1.0232E+06	.0E+00	.0E+00	7.9886E+05	2.2429E+05
1.9487E+00	1.1637E+06	.0E+00	.0E+00	9.4331E+05	2.2042E+05
2.0000E+00	1.0881E+06	.0E+00	.0E+00	8.7979E+05	2.0826E+05
2.1591E+00	9.0980E+05	.0E+00	.0E+00	7.3384E+05	1.7596E+05
2.1764E+00	9.4872E+05	.0E+00	.0E+00	7.7584E+05	1.7288E+05
2.3667E+00	7.8323E+05	.0E+00	.0E+00	6.3986E+05	1.4337E+05
2.3857E+00	8.0246E+05	.0E+00	.0E+00	6.6164E+05	1.4083E+05
3.0000E+00	4.6875E+05	.0E+00	.0E+00	3.8530E+05	8.3447E+04
4.0000E+00	2.3314E+05	.0E+00	.0E+00	1.9076E+05	4.2377E+04
5.0000E+00	1.3349E+05	.0E+00	.0E+00	1.0878E+05	2.4710E+04
6.0000E+00	8.4031E+04	.0E+00	.0E+00	6.8245E+04	1.5787E+04
8.0000E+00	4.0033E+04	.0E+00	.0E+00	3.2344E+04	7.6898E+03
8.9246E+00	3.0101E+04	.0E+00	.0E+00	2.4272E+04	5.8281E+03
8.9960E+00	7.8608E+04	.0E+00	4.9129E+04	2.3768E+04	5.7110E+03
9.9831E+00	5.9878E+04	.0E+00	3.7445E+04	1.8056E+04	4.3777E+03
1.0000E+01	8.3382E+04	.0E+00	6.1048E+04	1.7975E+04	4.3588E+03
1.0063E+01	8.0762E+04	.0E+00	5.8795E+04	1.7678E+04	4.2892E+03
1.0446E+01	7.3643E+04	.0E+00	5.3735E+04	1.6011E+04	3.8967E+03
1.0530E+01	8.3374E+04	.0E+00	6.3881E+04	1.5676E+04	3.8177E+03
1.5000E+01	3.3487E+04	.0E+00	2.5878E+04	6.0866E+03	1.5223E+03
2.0000E+01	1.5610E+04	.0E+00	1.2105E+04	2.7932E+03	7.1164E+02
3.0000E+01	5.2076E+03	.0E+00	4.0486E+03	9.1956E+02	2.3951E+02
4.0000E+01	2.3607E+03	.0E+00	1.8369E+03	4.1445E+02	1.0936E+02
5.0000E+01	1.2708E+03	.0E+00	9.8922E+02	2.2242E+02	5.9205E+01
6.0000E+01	7.6391E+02	.0E+00	5.9472E+02	1.3344E+02	3.5745E+01
6.1397E+01	7.1624E+02	.0E+00	5.5762E+02	1.2509E+02	3.3533E+01
6.1889E+01	3.6985E+03	2.9981E+03	5.4530E+02	1.2232E+02	3.2799E+01
8.0000E+01	1.8856E+03	1.5449E+03	2.6532E+02	5.9389E+01	1.6047E+01
1.0000E+02	1.0377E+03	8.5598E+02	1.4152E+02	3.1637E+01	8.5977E+00

Z= 70 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY (KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.5000E+02	3.4435E+02	2.8634E+02	4.5172E+01	1.0084E+01	2.7633E+00
2.0000E+02	1.5666E+02	1.3069E+02	2.0217E+01	4.5106E+00	1.2423E+00
3.0000E+02	5.2483E+01	4.3911E+01	6.6728E+00	1.4879E+00	4.1173E-01
4.0000E+02	2.4861E+01	2.0836E+01	3.1335E+00	6.9833E-01	1.9374E-01
5.0000E+02	1.4280E+01	1.1984E+01	1.7873E+00	3.9808E-01	1.1061E-01
6.0000E+02	9.2583E+00	7.7786E+00	1.1520E+00	2.5643E-01	7.1317E-02
8.0000E+02	4.8602E+00	4.0913E+00	5.9876E-01	1.3309E-01	3.7068E-02
1.0000E+03	3.0499E+00	2.5710E+00	3.7296E-01	8.2820E-02	2.3080E-02
1.5000E+03	1.4039E+00	1.1860E+00	1.6974E-01	3.7627E-02	1.0495E-02

Z= 70

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.527E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.539E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.577E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.589E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.933E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.949E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.159E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.176E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	5.6006E+04
2.367E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	5.0067E+04
2.386E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.3673E+04	4.9642E+04
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.4848E+04	3.6240E+04
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.6223E+04	2.3165E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.1269E+04	1.5467E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	8.2440E+03	1.0813E+04
8.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.9061E+03	5.8876E+03
8.925E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.9998E+03	4.6126E+03
8.996E+00	.0E+00	.0E+00	.0E+00	4.9129E+04	3.9398E+03	4.5304E+03
9.983E+00	.0E+00	.0E+00	.0E+00	3.7445E+04	3.2288E+03	3.5687E+03
1.000E+01	.0E+00	.0E+00	2.3769E+04	3.7280E+04	3.2183E+03	3.5547E+03
1.006E+01	.0E+00	.0E+00	2.2122E+04	3.6673E+04	3.1797E+03	3.5031E+03
1.045E+01	.0E+00	.0E+00	2.0446E+04	3.3290E+04	2.9587E+03	3.2100E+03
1.053E+01	.0E+00	1.1300E+04	1.9975E+04	3.2606E+04	2.9134E+03	3.1505E+03
1.500E+01	.0E+00	6.0521E+03	7.8855E+03	1.1940E+04	1.4392E+03	1.3308E+03
2.000E+01	.0E+00	3.4643E+03	3.5377E+03	5.1035E+03	7.9001E+02	6.3317E+02
3.000E+01	.0E+00	1.4854E+03	1.0913E+03	1.4719E+03	3.2616E+02	2.1013E+02
4.000E+01	.0E+00	7.8270E+02	4.6165E+02	5.9256E+02	1.6927E+02	9.2820E+01
5.000E+01	.0E+00	4.6643E+02	2.3410E+02	2.8869E+02	1.0018E+02	4.8452E+01
6.000E+01	.0E+00	3.0180E+02	1.3363E+02	1.5930E+02	6.4610E+01	2.8238E+01
6.140E+01	.0E+00	2.8543E+02	1.2446E+02	1.4772E+02	6.1092E+01	2.6365E+01
6.189E+01	2.9981E+03	2.7996E+02	1.2144E+02	1.4391E+02	5.9916E+01	2.5745E+01
8.000E+01	1.5449E+03	1.4881E+02	5.4754E+01	6.1752E+01	3.1791E+01	1.1901E+01
1.000E+02	8.5598E+02	8.4731E+01	2.7321E+01	2.9468E+01	1.8104E+01	6.0480E+00
1.500E+02	2.8634E+02	2.9720E+01	7.7557E+00	7.6958E+00	6.3658E+00	1.7625E+00
2.000E+02	1.3069E+02	1.3993E+01	3.2150E+00	3.0088E+00	3.0046E+00	7.4094E-01
3.000E+02	4.3911E+01	4.8718E+00	9.6401E-01	8.3699E-01	1.0496E+00	2.2542E-01
4.000E+02	2.0836E+01	2.3524E+00	4.2637E-01	3.5467E-01	5.0770E-01	1.0042E-01
5.000E+02	1.1984E+01	1.3651E+00	2.3310E-01	1.8909E-01	2.9489E-01	5.5124E-02
6.000E+02	7.7786E+00	8.9008E-01	1.4557E-01	1.1632E-01	1.9237E-01	3.4510E-02
8.000E+02	4.0913E+00	4.6953E-01	7.2301E-02	5.6926E-02	1.0147E-01	1.7216E-02
1.000E+03	2.5710E+00	2.9499E-01	4.3743E-02	3.4228E-02	6.3734E-02	1.0431E-02
1.500E+03	1.1860E+00	1.3564E-01	1.9180E-02	1.4919E-02	2.9285E-02	4.5876E-03

Z= 70

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	3.9540E+04	4.2638E+04	1.1014E+05
1.500E+00	.0E+00	.0E+00	.0E+00	2.2873E+04	2.6976E+04	6.1876E+04
1.527E+00	.0E+00	.0E+00	.0E+00	2.2288E+04	2.6359E+04	6.0195E+04
1.539E+00	.0E+00	.0E+00	3.1836E+05	2.2029E+04	2.6083E+04	5.9451E+04
1.577E+00	.0E+00	.0E+00	7.7307E+05	2.1260E+04	2.5261E+04	5.7248E+04
1.589E+00	.0E+00	1.9392E+05	7.7564E+05	2.1009E+04	2.4992E+04	5.6531E+04
1.933E+00	.0E+00	3.2883E+05	4.7003E+05	1.5594E+04	1.8942E+04	4.0983E+04
1.949E+00	1.6087E+05	3.2213E+05	4.6031E+05	1.5400E+04	1.8718E+04	4.0432E+04
2.000E+00	1.4857E+05	3.0124E+05	4.2998E+05	1.4784E+04	1.8004E+04	3.8678E+04
2.159E+00	1.3555E+05	2.4697E+05	3.5131E+05	1.3092E+04	1.6016E+04	3.3864E+04
2.176E+00	1.3401E+05	2.4188E+05	3.4394E+05	1.2926E+04	1.5819E+04	3.3393E+04
2.367E+00	1.1744E+05	1.9544E+05	2.7692E+05	1.1287E+04	1.3850E+04	2.8759E+04
2.386E+00	1.1590E+05	1.9131E+05	2.7111E+05	1.1140E+04	1.3673E+04	2.8347E+04
3.000E+00	7.9052E+04	1.0216E+05	1.4300E+05	7.5920E+03	9.2978E+03	1.8476E+04
4.000E+00	4.6380E+04	4.4082E+04	6.0913E+04	4.5903E+03	5.4985E+03	1.0404E+04
5.000E+00	2.9439E+04	2.2220E+04	3.0382E+04	3.0615E+03	3.5538E+03	6.4877E+03
6.000E+00	1.9851E+04	1.2456E+04	1.6881E+04	2.1804E+03	2.4444E+03	4.3372E+03
8.000E+00	1.0255E+04	4.8362E+03	6.4592E+03	1.2582E+03	1.3127E+03	2.2291E+03
8.925E+00	7.8847E+03	3.3396E+03	4.4358E+03	1.0162E+03	1.0261E+03	1.7139E+03
8.996E+00	7.7328E+03	3.2501E+03	4.3150E+03	1.0004E+03	1.0077E+03	1.6810E+03
9.983E+00	5.9850E+03	2.2729E+03	3.0001E+03	8.1425E+02	7.9276E+02	1.3018E+03
1.000E+01	5.9599E+03	2.2596E+03	2.9824E+03	8.1151E+02	7.8965E+02	1.2964E+03
1.006E+01	5.8674E+03	2.2110E+03	2.9172E+03	8.0143E+02	7.7817E+02	1.2763E+03
1.045E+01	5.3433E+03	1.9420E+03	2.5573E+03	7.4383E+02	7.1299E+02	1.1628E+03
1.053E+01	5.2371E+03	1.8889E+03	2.4862E+03	7.3205E+02	6.9976E+02	1.1398E+03
1.500E+01	2.0865E+03	5.3744E+02	6.9263E+02	3.5543E+02	2.9610E+02	4.5697E+02
2.000E+01	9.4706E+02	1.8677E+02	2.3620E+02	1.9323E+02	1.4151E+02	2.0877E+02
3.000E+01	2.9370E+02	4.0217E+01	4.9348E+01	7.9091E+01	4.7370E+01	6.5407E+01
4.000E+01	1.2339E+02	1.3181E+01	1.5788E+01	4.0912E+01	2.1064E+01	2.7677E+01
5.000E+01	6.1849E+01	5.4913E+00	6.4462E+00	2.4175E+01	1.1049E+01	1.3945E+01
6.000E+01	3.4833E+01	2.6738E+00	3.0848E+00	1.5580E+01	6.4634E+00	7.8834E+00
6.140E+01	3.2379E+01	2.4412E+00	2.8102E+00	1.4731E+01	6.0373E+00	7.3316E+00
6.189E+01	3.1569E+01	2.3654E+00	2.7208E+00	1.4447E+01	5.8964E+00	7.1493E+00
8.000E+01	1.3878E+01	8.5695E-01	9.6100E-01	7.6625E+00	2.7384E+00	3.1577E+00
1.000E+02	6.7403E+00	3.5520E-01	3.8959E-01	4.3639E+00	1.3965E+00	1.5391E+00
1.500E+02	1.8050E+00	7.3171E-02	7.7337E-02	1.5356E+00	4.0911E-01	4.1355E-01
2.000E+02	7.1512E-01	2.4530E-02	2.5429E-02	7.2545E-01	1.7267E-01	1.6430E-01
3.000E+02	2.0164E-01	5.5755E-03	5.7335E-03	2.5344E-01	5.2703E-02	4.6461E-02
4.000E+02	8.6002E-02	2.0594E-03	3.1480E-03	1.2264E-01	2.3522E-02	1.9845E-02
5.000E+02	4.6019E-02	9.8849E-04	1.0567E-03	7.1244E-02	1.2928E-02	1.0625E-02
6.000E+02	2.8376E-02	5.6278E-04	6.1171E-04	4.6476E-02	8.1000E-03	6.5504E-03
8.000E+02	1.3882E-02	2.4210E-04	2.7976E-04	2.4521E-02	4.0382E-03	3.2147E-03
1.000E+03	8.3603E-03	1.3474E-04	1.5979E-04	1.5401E-02	2.4487E-03	1.9341E-03
1.500E+03	3.6368E-03	5.0929E-05	6.7294E-05	7.0751E-03	1.0763E-03	8.4330E-04

Z= 70

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	1.5114E+05	2.2270E+05	1.1798E+05	1.4964E+05	7.8199E+03	6.6637E+03
1.500E+00	7.5148E+04	1.0807E+05	3.2663E+04	4.1153E+04	4.1449E+03	3.8165E+03
1.527E+00	7.2573E+04	1.0427E+05	3.0790E+04	3.8781E+04	4.0279E+03	3.7178E+03
1.539E+00	7.1436E+04	1.0259E+05	2.9981E+04	3.7757E+04	3.9762E+03	3.6741E+03
1.577E+00	6.8084E+04	9.7655E+04	2.7659E+04	3.4818E+04	3.8241E+03	3.5447E+03
1.589E+00	6.6999E+04	9.6059E+04	2.6926E+04	3.3892E+04	3.7749E+03	3.5026E+03
1.933E+00	4.4268E+04	6.2852E+04	1.3736E+04	1.7231E+04	2.7325E+03	2.5860E+03
1.949E+00	4.3494E+04	6.1730E+04	1.3357E+04	1.6754E+04	2.6962E+03	2.5533E+03
2.000E+00	4.1052E+04	5.8187E+04	1.2192E+04	1.5285E+04	2.5813E+03	2.4490E+03
2.159E+00	3.4500E+04	4.8723E+04	9.2938E+03	1.1636E+04	2.2683E+03	2.1617E+03
2.176E+00	3.3870E+04	4.7816E+04	9.0325E+03	1.1308E+04	2.2378E+03	2.1334E+03
2.367E+00	2.7820E+04	3.9116E+04	6.6772E+03	8.3469E+03	1.9390E+03	1.8542E+03
2.386E+00	2.7295E+04	3.8364E+04	6.4865E+03	8.1075E+03	1.9126E+03	1.8293E+03

Z= 70

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
3.000E+00	1.5464E+04	2.1504E+04	2.7762E+03	3.4556E+03	1.2818E+03	1.2247E+03
4.000E+00	7.1766E+03	9.8463E+03	9.1628E+02	1.1349E+03	7.6315E+02	7.1496E+02
5.000E+00	3.8094E+03	5.1711E+03	3.7623E+02	4.5682E+02	5.0453E+02	4.5906E+02
6.000E+00	2.2191E+03	2.9854E+03	1.7716E+02	2.1581E+02	3.5724E+02	3.1450E+02
8.000E+00	9.0895E+02	1.2049E+03	5.2739E+01	6.3807E+01	2.0463E+02	1.6818E+02
8.925E+00	6.3945E+02	8.4262E+02	3.2899E+01	3.9690E+01	1.6490E+02	1.3133E+02
8.996E+00	6.2309E+02	8.2071E+02	3.1778E+01	3.8330E+01	1.6231E+02	1.2895E+02
9.983E+00	4.4290E+02	5.8000E+02	2.0156E+01	2.4243E+01	1.3185E+02	1.0137E+02
1.000E+01	4.4043E+02	5.7671E+02	2.0007E+01	2.4062E+01	1.3141E+02	1.0097E+02
1.006E+01	4.3137E+02	5.6464E+02	1.9462E+01	2.3401E+01	1.2976E+02	9.9499E+01
1.045E+01	3.8100E+02	4.9765E+02	1.6503E+01	1.9823E+01	1.2036E+02	9.1151E+01
1.053E+01	3.7101E+02	4.8438E+02	1.5931E+01	1.9132E+01	1.1844E+02	8.9454E+01
1.500E+01	1.1046E+02	1.4115E+02	3.2491E+00	3.8594E+00	5.7237E+01	3.7817E+01
2.000E+01	3.9536E+01	4.9557E+01	8.6634E-01	1.0189E+00	3.1042E+01	1.8308E+01
3.000E+01	8.8048E+00	1.0706E+01	1.2951E-01	1.4990E-01	1.2764E+01	6.1383E+00
4.000E+01	2.9401E+00	3.4904E+00	3.2819E-02	3.7482E-02	6.5979E+00	2.7328E+00
5.000E+01	1.2393E+00	1.4421E+00	1.1237E-02	1.2689E-02	3.8972E+00	1.4347E+00
6.000E+01	6.0823E-01	6.9588E-01	4.6809E-03	5.2324E-03	2.5110E+00	8.3978E-01
6.140E+01	5.5589E-01	6.3453E-01	4.1913E-03	4.6794E-03	2.3741E+00	7.8449E-01
6.189E+01	5.3879E-01	6.1456E-01	4.0339E-03	4.5017E-03	2.3283E+00	7.6617E-01
8.000E+01	1.9698E-01	2.1922E-01	1.1851E-03	1.3030E-03	1.2346E+00	3.5611E-01
1.000E+02	8.2239E-02	8.9034E-02	4.1152E-04	4.4668E-04	7.0301E-01	1.8173E-01
1.500E+02	1.7106E-02	1.7849E-02	6.2691E-05	6.6571E-05	2.4731E-01	5.3289E-02
2.000E+02	5.7640E-03	5.8977E-03	1.7293E-05	1.8195E-05	1.1680E-01	2.2480E-02
3.000E+02	1.3171E-03	1.3369E-03	3.0639E-06	3.2475E-06	4.0833E-02	6.8648E-03
4.000E+02	4.8816E-04	5.0229E-04	9.6653E-07	1.0557E-06	1.9760E-02	3.0642E-03
5.000E+02	2.3501E-04	2.4699E-04	4.1498E-07	4.7051E-07	1.1480E-02	1.6840E-03
6.000E+02	1.3365E-04	1.4396E-04	2.1977E-07	2.5823E-07	7.4889E-03	1.0553E-03
8.000E+02	5.7693E-05	6.5749E-05	8.3757E-08	1.0704E-07	3.9513E-03	5.2610E-04
1.000E+03	3.1794E-05	3.7788E-05	4.3121E-08	5.8513E-08	2.4819E-03	3.1891E-04
1.500E+03	1.2046E-05	1.5574E-05	1.4572E-08	2.2791E-08	1.1404E-03	1.4019E-04

Z= 70

ENERGY	5 P 3/2	6 S 1/2
1.000E+00	1.5000E+04	6.1662E+02
1.500E+00	7.9540E+03	3.1571E+02
1.527E+00	7.7239E+03	3.0641E+02
1.539E+00	7.6223E+03	3.0232E+02
1.577E+00	7.3227E+03	2.9028E+02
1.589E+00	7.2256E+03	2.8638E+02
1.933E+00	5.1588E+03	2.0438E+02
1.949E+00	5.0867E+03	2.0156E+02
2.000E+00	4.8579E+03	1.9264E+02
2.159E+00	4.2345E+03	1.6848E+02
2.176E+00	4.1738E+03	1.6613E+02
2.367E+00	3.5789E+03	1.4319E+02
2.386E+00	3.5264E+03	1.4346E+02
3.000E+00	2.2782E+03	9.6092E+01
4.000E+00	1.2741E+03	5.7200E+01
5.000E+00	7.9204E+02	3.7824E+01
6.000E+00	5.2866E+02	2.6790E+01
8.000E+00	2.7138E+02	1.5354E+01
8.925E+00	2.0865E+02	1.2375E+01
8.996E+00	2.0464E+02	1.2181E+01
9.983E+00	1.5850E+02	9.8977E+00
1.000E+01	1.5784E+02	9.8642E+00
1.006E+01	1.5540E+02	9.7407E+00
1.045E+01	1.4159E+02	9.0356E+00
1.053E+01	1.3880E+02	8.8916E+00
1.500E+01	5.5696E+01	4.2996E+00

Z= 70

ENERGY	5 P 3/2	6 S 1/2
2.000E+01	2.5471E+01	2.3324E+00
3.000E+01	7.9934E+00	9.5278E-01
4.000E+01	3.3863E+00	4.9245E-01
5.000E+01	1.7076E+00	2.9086E-01
6.000E+01	9.6599E-01	1.8740E-01
6.140E+01	8.9843E-01	1.7718E-01
6.189E+01	8.7612E-01	1.7377E-01
8.000E+01	3.8728E-01	9.2140E-02
1.000E+02	1.8888E-01	5.2468E-02
1.500E+02	5.0892E-02	1.8459E-02
2.000E+02	2.0231E-02	8.7185E-03
3.000E+02	5.7240E-03	3.0492E-03
4.000E+02	2.4454E-03	1.4764E-03
5.000E+02	1.3097E-03	8.5837E-04
6.000E+02	8.0776E-04	5.6049E-04
8.000E+02	3.9647E-04	2.9656E-04
1.000E+03	2.3874E-04	1.8700E-04
1.500E+03	1.0425E-04	8.7330E-05

Z= 71 22 STATES, 44 ENERGYS

STATE	NE	E (KEV)	NORM
1 S 1/2	2.00	63.4607	.98497
2 S 1/2	2.00	10.8480	.86444
2 P 1/2	2.00	10.3737	.80075
2 P 3/2	4.00	9.2429	.77759
3 S 1/2	2.00	2.4716	.64377
3 P 1/2	2.00	2.2585	.56424
3 P 3/2	4.00	2.0161	.53460
3 D 3/2	4.00	1.6509	.33309
3 D 5/2	6.00	1.5976	.32695
4 S 1/2	2.00	.4983	.37590
4 P 1/2	2.00	.4105	.30536
4 P 3/2	4.00	.3551	.27766
4 D 3/2	4.00	.2094	.13260
4 D 5/2	6.00	.1993	.12738
4 F 5/2	6.00	.0189	.01745
4 F 7/2	8.00	.0173	.01693
5 S 1/2	2.00	.0664	.12333
5 P 1/2	2.00	.0416	.08064
5 P 3/2	4.00	.0342	.06850
5 D 3/2	.40	.0044	.01025
5 D 5/2	.60	.0040	.00907
6 S 1/2	2.00	.0063	.01828

Z= 71 PHOTOELECTRIC CROSS SECTIONS (BARNs)

ENERGY (KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	9.2272E+05	.0E+00	.0E+00	.0E+00	9.2272E+05
1.5000E+00	4.1068E+05	.0E+00	.0E+00	.0E+00	4.1068E+05
1.5960E+00	3.6067E+05	.0E+00	.0E+00	.0E+00	3.6067E+05
1.6088E+00	6.1797E+05	.0E+00	.0E+00	2.6331E+05	3.5466E+05
1.6492E+00	1.0556E+06	.0E+00	.0E+00	7.1911E+05	3.3652E+05
1.6624E+00	1.2212E+06	.0E+00	.0E+00	8.9036E+05	3.3087E+05
2.0000E+00	9.9998E+05	.0E+00	.0E+00	7.7787E+05	2.2212E+05
2.0141E+00	9.8245E+05	.0E+00	.0E+00	7.6371E+05	2.1873E+05
2.0302E+00	1.1182E+06	.0E+00	.0E+00	9.0330E+05	2.1494E+05
2.2562E+00	8.6652E+05	.0E+00	.0E+00	6.9634E+05	1.7018E+05
2.2743E+00	9.0379E+05	.0E+00	.0E+00	7.3661E+05	1.6718E+05

Z= 71 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL CHER
2.4691E+00	7.4788E+05	.0E+00	.0E+00	6.0887E+05	1.3901E+05
2.4889E+00	7.6603E+05	.0E+00	.0E+00	6.2950E+05	1.3653E+05
3.0000E+00	4.9423E+05	.0E+00	.0E+00	4.0519E+05	8.9037E+04
4.0000E+00	2.4635E+05	.0E+00	.0E+00	2.0111E+05	4.5240E+04
5.0000E+00	1.4126E+05	.0E+00	.0E+00	1.1486E+05	2.6400E+04
6.0000E+00	8.9018E+04	.0E+00	.0E+00	7.2146E+04	1.6873E+04
8.0000E+00	4.2457E+04	.0E+00	.0E+00	3.4234E+04	8.2233E+03
9.2337E+00	2.9220E+04	.0E+00	.0E+00	2.3503E+04	5.7172E+03
9.3076E+00	7.5876E+04	.0E+00	4.7260E+04	2.3014E+04	5.6023E+03
1.0000E+01	6.2989E+04	.0E+00	3.9280E+04	1.9044E+04	4.6646E+03
1.0363E+01	5.7251E+04	.0E+00	3.5665E+04	1.7329E+04	4.2571E+03
1.0446E+01	7.7284E+04	.0E+00	5.6145E+04	1.6967E+04	4.1709E+03
1.0837E+01	7.0601E+04	.0E+00	5.1411E+04	1.5394E+04	3.7953E+03
1.0924E+01	7.9935E+04	.0E+00	6.1145E+04	1.5072E+04	3.7182E+03
1.5000E+01	3.5411E+04	.0E+00	2.7319E+04	6.4599E+03	1.6318E+03
2.0000E+01	1.6506E+04	.0E+00	1.2774E+04	2.9681E+03	7.6376E+02
3.0000E+01	5.5219E+03	.0E+00	4.2857E+03	9.7879E+02	2.5741E+02
4.0000E+01	2.5067E+03	.0E+00	1.9472E+03	4.4172E+02	1.1773E+02
5.0000E+01	1.3510E+03	.0E+00	1.0499E+03	2.3728E+02	6.3801E+01
6.0000E+01	8.1285E+02	.0E+00	6.3183E+02	1.4247E+02	3.8553E+01
6.3397E+01	6.9687E+02	.0E+00	5.4170E+02	1.2208E+02	3.3094E+01
6.3905E+01	3.5691E+03	2.8876E+03	5.2975E+02	1.1938E+02	3.2370E+01
8.0000E+01	1.9781E+03	1.6150E+03	2.8227E+02	6.3489E+01	1.7331E+01
1.0000E+02	1.0924E+03	8.9847E+02	1.5073E+02	3.3856E+01	9.2953E+00
1.5000E+02	3.6366E+02	3.0165E+02	4.8209E+01	1.0812E+01	2.9943E+00
2.0000E+02	1.6577E+02	1.3798E+02	2.1607E+01	4.8429E+00	1.3477E+00
3.0000E+02	5.5680E+01	4.6486E+01	7.1461E+00	1.6007E+00	4.4758E-01
4.0000E+02	2.6420E+01	2.2097E+01	3.3601E+00	7.5218E-01	2.1088E-01
5.0000E+02	1.5192E+01	1.2724E+01	1.9183E+00	4.2913E-01	1.2050E-01
6.0000E+02	9.8576E+00	8.2662E+00	1.2371E+00	2.7657E-01	7.7733E-02
8.0000E+02	5.1793E+00	4.3519E+00	6.4338E-01	1.4362E-01	4.0426E-02
1.0000E+03	3.2512E+00	2.7358E+00	4.0081E-01	8.9391E-02	2.5174E-02
1.5000E+03	1.4963E+00	1.2619E+00	1.8236E-01	4.0597E-02	1.1443E-02

Z= 71

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.596E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.609E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.649E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.662E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.014E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.030E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.256E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.274E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.469E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	5.3655E+04
2.489E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.7901E+04
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.1958E+04	4.7496E+04
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.5296E+04	3.6818E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.6500E+04	2.3802E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.1523E+04	1.5984E+04
8.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	8.4629E+03	1.1223E+04
9.234E+00	.0E+00	.0E+00	.0E+00	.0E+00	5.0527E+03	6.1589E+03
9.308E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.8684E+03	4.4801E+03
1.000E+01	.0E+00	.0E+00	.0E+00	4.7260E+04	3.8104E+03	4.4003E+03
1.036E+01	.0E+00	.0E+00	.0E+00	3.9280E+04	3.3227E+03	3.7375E+03
1.045E+01	.0E+00	.0E+00	.0E+00	3.5665E+04	3.1029E+03	3.4415E+03
1.084E+01	.0E+00	.0E+00	2.1215E+04	3.4930E+04	3.0557E+03	3.3783E+03
			1.9656E+04	3.1756E+04	2.8468E+03	3.1004E+03

Z= 71

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.092E+01	.0E+00	1.0842E+04	1.9201E+04	3.1102E+04	2.8032E+03	3.0429E+03
1.500E+01	.0E+00	6.2280E+03	8.4101E+03	1.2681E+04	1.4918E+03	1.4108E+03
2.000E+01	.0E+00	3.5688E+03	3.7771E+03	5.4283E+03	8.2115E+02	6.7485E+02
3.000E+01	.0E+00	1.5410E+03	1.1723E+03	1.5724E+03	3.4028E+02	2.2557E+02
4.000E+01	.0E+00	8.1442E+02	4.9822E+02	6.3458E+02	1.7709E+02	1.0013E+02
5.000E+01	.0E+00	4.8668E+02	2.5338E+02	3.0988E+02	1.0502E+02	5.2456E+01
6.000E+01	.0E+00	3.1558E+02	1.4497E+02	1.7128E+02	6.7849E+01	3.0658E+01
6.340E+01	.0E+00	2.7630E+02	1.2237E+02	1.4303E+02	5.9361E+01	2.6032E+01
6.390E+01	2.8876E+03	2.7100E+02	1.1940E+02	1.3934E+02	5.8219E+01	2.5422E+01
8.000E+01	1.6150E+03	1.5609E+02	5.9616E+01	6.6562E+01	3.3476E+01	1.2976E+01
1.000E+02	8.9847E+02	8.9078E+01	2.9828E+01	3.1822E+01	1.9103E+01	6.6146E+00
1.500E+02	3.0165E+02	3.1368E+01	8.5050E+00	8.3360E+00	6.7418E+00	1.9376E+00
2.000E+02	1.3798E+02	1.4806E+01	3.5357E+00	3.2653E+00	3.1901E+00	8.1717E-01
3.000E+02	4.6486E+01	5.1718E+00	1.0640E+00	9.1029E-01	1.1180E+00	2.4960E-01
4.000E+02	2.2097E+01	2.5024E+00	4.7159E-01	3.8614E-01	5.4190E-01	1.1145E-01
5.000E+02	1.2724E+01	1.4541E+00	2.5819E-01	2.0596E-01	3.1517E-01	6.1273E-02
6.000E+02	8.2662E+00	9.4896E-01	1.6140E-01	1.2672E-01	2.0578E-01	3.8404E-02
8.000E+02	4.3519E+00	5.0109E-01	8.0275E-02	6.2011E-02	1.0865E-01	1.9183E-02
1.000E+03	2.7358E+00	3.1493E-01	4.8608E-02	3.7272E-02	6.8272E-02	1.1635E-02
1.500E+03	1.2619E+00	1.4479E-01	2.1339E-02	1.6229E-02	3.1365E-02	5.1217E-03

Z= 71

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	3.9925E+04	4.2612E+04	1.1254E+05
1.500E+00	.0E+00	.0E+00	.0E+00	2.3279E+04	2.7358E+04	6.3702E+04
1.596E+00	.0E+00	.0E+00	.0E+00	2.1282E+04	2.5257E+04	5.7855E+04
1.609E+00	.0E+00	.0E+00	2.6331E+05	2.1034E+04	2.4993E+04	5.7135E+04
1.649E+00	.0E+00	.0E+00	7.1911E+05	2.0276E+04	2.4180E+04	5.4937E+04
1.662E+00	.0E+00	1.6514E+05	7.2521E+05	2.0038E+04	2.3922E+04	5.4245E+04
2.000E+00	.0E+00	3.2052E+05	4.5735E+05	1.5129E+04	1.8422E+04	4.0005E+04
2.014E+00	.0E+00	3.1474E+05	4.4897E+05	1.4964E+04	1.8232E+04	3.9531E+04
2.030E+00	1.5537E+05	3.0830E+05	4.3963E+05	1.4779E+04	1.8017E+04	3.8998E+04
2.256E+00	1.2996E+05	2.3412E+05	3.3226E+05	1.2502E+04	1.5342E+04	3.2466E+04
2.274E+00	1.2845E+05	2.2926E+05	3.2525E+05	1.2343E+04	1.5152E+04	3.2012E+04
2.469E+00	1.1259E+05	1.8572E+05	2.6266E+05	1.0807E+04	1.3301E+04	2.7635E+04
2.489E+00	1.1110E+05	1.8180E+05	2.5715E+05	1.0667E+04	1.3131E+04	2.7238E+04
3.000E+00	8.0930E+04	1.0934E+05	1.5281E+05	7.8134E+03	9.6092E+03	1.9230E+04
4.000E+00	4.8013E+04	4.7388E+04	6.5406E+04	4.7391E+03	5.7184E+03	1.0873E+04
5.000E+00	3.0627E+04	2.3980E+04	3.2745E+04	3.1675E+03	3.7123E+03	6.8004E+03
6.000E+00	2.0726E+04	1.3486E+04	1.8248E+04	2.2593E+03	2.5619E+03	4.5568E+03
8.000E+00	1.0749E+04	5.2593E+03	7.0141E+03	1.3064E+03	1.3831E+03	2.3506E+03
9.234E+00	7.6250E+03	3.2406E+03	4.2887E+03	9.8776E+02	1.0029E+03	1.6666E+03
9.308E+00	7.4780E+03	3.1537E+03	4.1719E+03	9.7239E+02	9.8487E+02	1.6346E+03
1.000E+01	6.2687E+03	2.4664E+03	3.2490E+03	8.4396E+02	8.3542E+02	1.3711E+03
1.036E+01	5.7379E+03	2.1804E+03	2.8666E+03	7.8621E+02	7.6911E+02	1.2553E+03
1.045E+01	5.6251E+03	2.1210E+03	2.7874E+03	7.7382E+02	7.5496E+02	1.2306E+03
1.084E+01	5.1307E+03	1.8671E+03	2.4488E+03	7.1912E+02	6.9282E+02	1.1229E+03
1.092E+01	5.0287E+03	1.8161E+03	2.3808E+03	7.0773E+02	6.7997E+02	1.1007E+03
1.500E+01	2.2084E+03	5.9012E+02	7.5882E+02	3.7077E+02	3.1564E+02	4.8607E+02
2.000E+01	1.0064E+03	2.0596E+02	2.5977E+02	2.0202E+02	1.5163E+02	2.2294E+02
3.000E+01	3.1376E+02	4.4609E+01	5.4569E+01	8.2955E+01	5.1118E+01	7.0223E+01
4.000E+01	1.3230E+02	1.4678E+01	1.7522E+01	4.3016E+01	2.2842E+01	2.9825E+01
5.000E+01	6.6496E+01	6.1326E+00	7.1728E+00	2.5468E+01	1.2026E+01	1.5069E+01
6.000E+01	3.7529E+01	2.9928E+00	3.4395E+00	1.6441E+01	7.0549E+00	8.5380E+00
6.340E+01	3.1525E+01	2.4085E+00	2.7531E+00	1.4381E+01	5.9969E+00	7.1799E+00
6.390E+01	3.0737E+01	2.3339E+00	2.6657E+00	1.4104E+01	5.8572E+00	7.0016E+00
8.000E+01	1.5000E+01	9.6239E-01	1.0747E+00	8.1069E+00	3.0020E+00	3.4310E+00
1.000E+02	7.3015E+00	3.9985E-01	4.3661E-01	4.6263E+00	1.5358E+00	1.6763E+00
1.500E+02	1.9625E+00	8.2678E-02	8.6955E-02	1.6338E+00	4.5231E-01	4.5306E-01
2.000E+02	7.7927E-01	2.7779E-02	2.8644E-02	7.7373E-01	1.9151E-01	1.8006E-01

Z= 71

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
3.000E+02	2.2027E-01	6.3311E-03	6.4710E-03	2.7121E-01	5.8694E-02	5.1050E-02
4.000E+02	9.4064E-02	2.3424E-03	2.4265E-03	1.3151E-01	2.6259E-02	2.1831E-02
5.000E+02	5.0362E-02	1.1255E-03	1.1942E-03	7.6498E-02	1.4454E-02	1.1694E-02
6.000E+02	3.1059E-02	6.4079E-04	6.9249E-04	4.9948E-02	9.0651E-03	7.2119E-03
8.000E+02	1.5199E-02	2.7630E-04	3.1609E-04	2.6379E-02	4.5270E-03	3.5395E-03
1.000E+03	9.1490E-03	1.5383E-04	1.8034E-04	1.6574E-02	2.7468E-03	2.1284E-03
1.500E+03	3.9761E-03	5.7907E-05	7.6050E-05	7.6128E-03	1.2090E-03	9.2697E-04

Z= 71

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	1.5568E+05	2.2984E+05	1.3559E+05	1.7251E+05	8.2377E+03	7.1003E+03
1.500E+00	7.8652E+04	1.1321E+05	3.8062E+04	4.8094E+04	4.3813E+03	4.0945E+03
1.596E+00	6.9671E+04	9.9947E+04	3.0984E+04	3.9109E+04	3.9649E+03	3.7381E+03
1.609E+00	6.8574E+04	9.8328E+04	3.0169E+04	3.8074E+04	3.9141E+03	3.6941E+03
1.649E+00	6.5239E+04	9.3416E+04	2.7756E+04	3.5015E+04	3.7596E+03	3.5596E+03
1.662E+00	6.4194E+04	9.1879E+04	2.7021E+04	3.4082E+04	3.7112E+03	3.5172E+03
2.000E+00	4.3379E+04	6.1502E+04	1.4322E+04	1.8006E+04	2.7361E+03	2.6416E+03
2.014E+00	4.2712E+04	6.0536E+04	1.3975E+04	1.7568E+04	2.7042E+03	2.6122E+03
2.030E+00	4.1963E+04	5.9452E+04	1.3590E+04	1.7081E+04	2.6684E+03	2.5791E+03
2.256E+00	3.3032E+04	4.6553E+04	9.3522E+03	1.1733E+04	2.2334E+03	2.1724E+03
2.274E+00	3.2427E+04	4.5683E+04	9.0894E+03	1.1401E+04	2.2034E+03	2.1440E+03
2.469E+00	2.6720E+04	3.7492E+04	6.7578E+03	8.4638E+03	1.9145E+03	1.8683E+03
2.489E+00	2.6216E+04	3.6769E+04	6.5647E+03	8.2208E+03	1.8885E+03	1.8432E+03
3.000E+00	1.6528E+04	2.2976E+04	3.2933E+03	4.1098E+03	1.3640E+03	1.3312E+03
4.000E+00	7.7235E+03	1.0589E+04	1.0937E+03	1.3573E+03	8.1420E+02	7.8126E+02
5.000E+00	4.1196E+03	5.5866E+03	4.5103E+02	5.5722E+02	5.3925E+02	5.0361E+02
6.000E+00	2.4089E+03	3.2367E+03	2.1459E+02	2.6415E+02	3.8232E+02	3.4611E+02
8.000E+00	9.9248E+02	1.3135E+03	6.4238E+01	7.7423E+01	2.1941E+02	1.8600E+02
9.234E+00	6.2675E+02	8.2291E+02	3.4460E+01	4.1611E+01	1.6539E+02	1.3467E+02
1.000E+01	6.1073E+02	8.0152E+02	3.3287E+01	4.0187E+01	1.6280E+02	1.3224E+02
1.036E+01	4.2943E+02	5.6012E+02	2.0816E+01	2.5055E+01	1.3137E+02	1.0319E+02
1.045E+01	4.1825E+02	5.4528E+02	2.0098E+01	2.4186E+01	1.2928E+02	1.0129E+02
1.084E+01	3.7021E+02	4.8162E+02	1.7094E+01	2.0548E+01	1.2007E+02	9.2929E+01
1.092E+01	3.6051E+02	4.6876E+02	1.6502E+01	1.9832E+01	1.1815E+02	9.1200E+01
1.500E+01	1.2209E+02	1.5566E+02	3.9813E+00	4.7369E+00	6.1637E+01	4.2293E+01
2.000E+01	4.3923E+01	5.4913E+01	1.0657E+00	1.2551E+00	3.3497E+01	2.0565E+01
3.000E+01	9.8481E+00	1.1938E+01	1.6033E-01	1.8579E-01	1.3729E+01	6.9438E+00
4.000E+01	3.3035E+00	3.9083E+00	4.0829E-02	4.6680E-02	7.1576E+00	3.1064E+00
5.000E+01	1.3971E+00	1.6197E+00	1.4024E-02	1.5847E-02	4.2360E+00	1.6369E+00
6.000E+01	6.8744E-01	7.8338E-01	5.8542E-03	6.5489E-03	2.7338E+00	9.6092E-01
6.340E+01	5.5451E-01	6.2852E-01	4.4975E-03	5.0153E-03	2.3912E+00	8.1696E-01
6.390E+01	5.3749E-01	6.0878E-01	4.3293E-03	4.8253E-03	2.3451E+00	7.9795E-01
8.000E+01	2.2345E-01	2.4760E-01	1.4870E-03	1.6358E-03	1.3477E+00	4.0928E-01
1.000E+02	9.3531E-02	1.0079E-01	5.1788E-04	5.6218E-04	7.6892E-01	2.0952E-01
1.500E+02	1.9535E-02	2.0286E-02	7.9214E-05	8.4113E-05	2.7148E-01	6.1767E-02
2.000E+02	6.5977E-03	6.7186E-03	2.1905E-05	2.3037E-05	1.2853E-01	2.6144E-02
3.000E+02	1.5124E-03	1.5261E-03	3.8897E-06	4.1156E-06	4.5081E-02	8.0160E-03
4.000E+02	5.6167E-04	5.7316E-04	1.2303E-06	1.3379E-06	2.1861E-02	3.5867E-03
5.000E+02	2.7039E-04	2.8204E-04	5.2794E-07	5.9688E-07	1.2717E-02	1.9744E-03
6.000E+02	1.5385E-04	1.6486E-04	2.8038E-07	3.2716E-07	8.3034E-03	1.2384E-03
8.000E+02	6.6623E-05	7.4963E-05	1.0691E-07	1.3544E-07	4.3853E-03	6.1838E-04
1.000E+03	3.6655E-05	4.3315E-05	5.4790E-08	7.3800E-08	2.7555E-03	3.7521E-04
1.500E+03	1.3903E-05	1.7861E-05	1.8321E-08	2.8121E-08	1.2659E-03	1.6512E-04

Z= 71

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	6 S 1/2
1.000E+00	1.6281E+04	6.8864E+02	9.5296E+02	7.4735E+02
1.500E+00	8.6634E+03	3.3569E+02	4.5720E+02	3.8404E+02
1.596E+00	7.8190E+03	2.9663E+02	4.0309E+02	3.4607E+02
1.609E+00	7.7157E+03	2.9187E+02	3.9652E+02	3.4144E+02
1.649E+00	7.4012E+03	2.7748E+02	3.7245E+02	3.2738E+02
1.662E+00	7.3025E+03	2.7297E+02	3.6628E+02	3.2298E+02
2.000E+00	5.3082E+03	1.8676E+02	2.4494E+02	2.3503E+02
2.014E+00	5.2428E+03	1.8389E+02	2.4109E+02	2.3219E+02
2.030E+00	5.1693E+03	1.8066E+02	2.3677E+02	2.2900E+02
2.256E+00	4.2769E+03	1.4226E+02	1.8551E+02	1.9043E+02
2.274E+00	4.2152E+03	1.3966E+02	1.8205E+02	1.8777E+02
2.469E+00	3.6235E+03	1.1518E+02	1.4957E+02	1.6232E+02
2.489E+00	3.5701E+03	1.1301E+02	1.4670E+02	1.6003E+02
3.000E+00	2.5019E+03	7.1457E+01	9.1940E+01	1.1673E+02
4.000E+00	1.4042E+03	3.3587E+01	4.2624E+01	6.9637E+01
5.000E+00	8.7527E+02	1.8002E+01	2.2598E+01	4.6120E+01
6.000E+00	5.8549E+02	1.0567E+01	1.3143E+01	3.2703E+01
8.000E+00	3.0161E+02	4.3785E+00	5.3636E+00	1.8774E+01
9.234E+00	2.1382E+02	2.7724E+00	3.3693E+00	1.4155E+01
9.308E+00	2.0972E+02	2.7020E+00	3.2821E+00	1.3933E+01
1.000E+01	1.7592E+02	2.1399E+00	2.5887E+00	1.2078E+01
1.036E+01	1.6106E+02	1.9035E+00	2.2981E+00	1.1245E+01
1.045E+01	1.5791E+02	1.8542E+00	2.2375E+00	1.1066E+01
1.084E+01	1.4409E+02	1.6423E+00	1.9775E+00	1.0278E+01
1.092E+01	1.4125E+02	1.5994E+00	1.9250E+00	1.0114E+01
1.500E+01	6.2460E+01	5.4440E-01	6.4246E-01	5.2786E+00
2.000E+01	2.8659E+01	1.9660E-01	2.2752E-01	2.8694E+00
3.000E+01	9.0423E+00	4.4275E-02	4.9687E-02	1.1758E+00
4.000E+01	3.8452E+00	1.4892E-02	1.6309E-02	6.0916E-01
5.000E+01	1.9445E+00	6.3091E-03	6.7706E-03	3.6050E-01
6.000E+01	1.1024E+00	3.1088E-03	3.2784E-03	2.3264E-01
6.340E+01	9.2725E-01	2.5086E-03	2.6312E-03	2.0349E-01
6.390E+01	9.0425E-01	2.4318E-03	2.5486E-03	1.9957E-01
8.000E+01	4.4342E-01	1.0125E-03	1.0377E-03	1.1468E-01
1.000E+02	2.1677E-01	4.2403E-04	4.2513E-04	6.5434E-02
1.500E+02	5.8637E-02	8.8666E-05	8.5687E-05	2.3104E-02
2.000E+02	2.3364E-02	2.9959E-05	2.8409E-05	1.0939E-02
3.000E+02	6.6277E-03	6.8685E-06	6.4642E-06	3.8381E-03
4.000E+02	2.8350E-03	2.5495E-06	2.4350E-06	1.8620E-03
5.000E+02	1.5192E-03	1.2279E-06	1.2025E-06	1.0838E-03
6.000E+02	9.3724E-04	6.9990E-07	7.0389E-07	7.0823E-04
8.000E+02	4.5999E-04	3.0295E-07	3.2310E-07	3.7487E-04
1.000E+03	2.7685E-04	1.6767E-07	1.8821E-07	2.3631E-04
1.500E+03	1.2073E-04	6.4762E-08	8.0541E-08	1.1002E-04

Z= 72 22 STATES, 44 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	65.5038	.98510
2 S 1/2	2.00	11.2489	.86597
2 P 1/2	2.00	10.7637	.80297
2 P 3/2	4.00	9.5580	.77926
3 S 1/2	2.00	2.5772	.64740
3 P 1/2	2.00	2.3586	.56856
3 P 3/2	4.00	2.0990	.53807
3 D 3/2	4.00	1.7256	.33747
3 D 5/2	6.00	1.6685	.33114
4 S 1/2	2.00	.5261	.38010
4 P 1/2	2.00	.4355	.30986
4 P 3/2	4.00	.3759	.28122
4 D 3/2	4.00	.2256	.13595
4 D 5/2	6.00	.2146	.13052
4 F 5/2	6.00	.0272	.01913
4 F 7/2	8.00	.0253	.01858
5 S 1/2	2.00	.0727	.12863
5 P 1/2	2.00	.0464	.08557
5 P 3/2	4.00	.0381	.07276
5 D 3/2	.80	.0057	.01282
5 D 5/2	1.20	.0052	.01152
6 S 1/2	2.00	.0069	.02034

Z= 72 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL CHER
1.0000E+00	9.8530E+05	.0E+00	.0E+00	.0E+00	9.8530E+05
1.5000E+00	4.3820E+05	.0E+00	.0E+00	.0E+00	4.3820E+05
1.6669E+00	3.5099E+05	.0E+00	.0E+00	.0E+00	3.5099E+05
1.6802E+00	5.6900E+05	.0E+00	.0E+00	2.2390E+05	3.4510E+05
1.7238E+00	9.9915E+05	.0E+00	.0E+00	6.7239E+05	3.2676E+05
1.7376E+00	1.1442E+06	.0E+00	.0E+00	8.2298E+05	3.2124E+05
2.0000E+00	1.0634E+06	.0E+00	.0E+00	8.2649E+05	2.3695E+05
2.0969E+00	9.4343E+05	.0E+00	.0E+00	7.2986E+05	2.1357E+05
2.1137E+00	1.0739E+06	.0E+00	.0E+00	8.6406E+05	2.0984E+05
2.3563E+00	8.2543E+05	.0E+00	.0E+00	6.6066E+05	1.6477E+05
2.3752E+00	8.6096E+05	.0E+00	.0E+00	6.9911E+05	1.6185E+05
2.5746E+00	7.1440E+05	.0E+00	.0E+00	5.7948E+05	1.3493E+05
2.5952E+00	7.3159E+05	.0E+00	.0E+00	5.9909E+05	1.3250E+05
3.0000E+00	5.2145E+05	.0E+00	.0E+00	4.2643E+05	9.5027E+04
4.0000E+00	2.6014E+05	.0E+00	.0E+00	2.1184E+05	4.8306E+04
5.0000E+00	1.4938E+05	.0E+00	.0E+00	1.2118E+05	2.8200E+04
6.0000E+00	9.4223E+04	.0E+00	.0E+00	7.6193E+04	1.8030E+04
8.0000E+00	4.4991E+04	.0E+00	.0E+00	3.6197E+04	8.7939E+03
9.5484E+00	2.8384E+04	.0E+00	.0E+00	2.2767E+04	5.6161E+03
9.6249E+00	7.3328E+04	.0E+00	4.5530E+04	2.2294E+04	5.5031E+03
1.0000E+01	6.6918E+04	.0E+00	4.1770E+04	2.0157E+04	4.9913E+03
1.0753E+01	5.4766E+04	.0E+00	3.3984E+04	1.6637E+04	4.1443E+03
1.0839E+01	7.4007E+04	.0E+00	5.3657E+04	1.6290E+04	4.0603E+03
1.1238E+01	6.7714E+04	.0E+00	4.9211E+04	1.4803E+04	3.7002E+03
1.1328E+01	7.6668E+04	.0E+00	5.8550E+04	1.4493E+04	3.6250E+03
1.5000E+01	3.7384E+04	.0E+00	2.8787E+04	6.8488E+03	1.7484E+03
2.0000E+01	1.7440E+04	.0E+00	1.3470E+04	3.1506E+03	8.1898E+02
3.0000E+01	5.8498E+03	.0E+00	4.5324E+03	1.0408E+03	2.7655E+02
4.0000E+01	2.6594E+03	.0E+00	2.0624E+03	4.7028E+02	1.2664E+02
5.0000E+01	1.4349E+03	.0E+00	1.1134E+03	2.5288E+02	6.8695E+01
6.0000E+01	8.6413E+02	.0E+00	6.7063E+02	1.5196E+02	4.1544E+01
6.5438E+01	6.7831E+02	.0E+00	5.2646E+02	1.1917E+02	3.2673E+01
6.5962E+01	3.4451E+03	2.7818E+03	5.1486E+02	1.1654E+02	3.1958E+01

Z= 72 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
8.0000E+01	2.0734E+03	1.6868E+03	3.0004E+02	6.7804E+01	1.8700E+01
1.0000E+02	1.1494E+03	9.4275E+02	1.6040E+02	3.6194E+01	1.0040E+01
1.5000E+02	3.8373E+02	3.1750E+02	5.1405E+01	1.1580E+01	3.2403E+00
2.0000E+02	1.7524E+02	1.4551E+02	2.3073E+01	5.1945E+00	1.4605E+00
3.0000E+02	5.9017E+01	4.9164E+01	7.6463E+00	1.7202E+00	4.8602E-01
4.0000E+02	2.8050E+01	2.3411E+01	3.6001E+00	8.0939E-01	2.2928E-01
5.0000E+02	1.6148E+01	1.3498E+01	2.0570E+00	4.6215E-01	1.3112E-01
6.0000E+02	1.0486E+01	8.7762E+00	1.3274E+00	2.9802E-01	8.4636E-02
8.0000E+02	5.5145E+00	4.6248E+00	6.9073E-01	1.5484E-01	4.4039E-02
1.0000E+03	3.4627E+00	2.9085E+00	4.3039E-01	9.6388E-02	2.7427E-02
1.5000E+03	1.5935E+00	1.3415E+00	1.9576E-01	4.3760E-02	1.2463E-02

Z= 72

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.667E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.680E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.724E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.738E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.097E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.114E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.356E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.375E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	5.1213E+04
2.575E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.5810E+04
2.595E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.0418E+04	4.5431E+04
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.5666E+04	3.7411E+04
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.6756E+04	2.4368E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.1779E+04	1.6477E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	8.6779E+03	1.1635E+04
8.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	5.2004E+03	6.4303E+03
9.548E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.7428E+03	4.3541E+03
9.625E+00	.0E+00	.0E+00	.0E+00	4.5530E+04	3.6868E+03	4.2766E+03
1.000E+01	.0E+00	.0E+00	.0E+00	4.1770E+04	3.4281E+03	3.9225E+03
1.075E+01	.0E+00	.0E+00	.0E+00	3.3984E+04	2.9824E+03	3.3200E+03
1.084E+01	.0E+00	.0E+00	2.0372E+04	3.3285E+04	2.9370E+03	3.2590E+03
1.124E+01	.0E+00	.0E+00	1.8905E+04	3.0306E+04	2.7394E+03	2.9955E+03
1.133E+01	.0E+00	1.0403E+04	1.8465E+04	2.9681E+04	2.6974E+03	2.9401E+03
1.500E+01	.0E+00	6.4013E+03	8.9342E+03	1.3451E+04	1.5451E+03	1.4933E+03
2.000E+01	.0E+00	3.6764E+03	4.0235E+03	5.7702E+03	8.5283E+02	7.1819E+02
3.000E+01	.0E+00	1.5970E+03	1.2578E+03	1.6776E+03	3.5470E+02	2.4181E+02
4.000E+01	.0E+00	8.4679E+02	5.3690E+02	6.7875E+02	1.8507E+02	1.0785E+02
5.000E+01	.0E+00	5.0729E+02	2.7392E+02	3.3215E+02	1.0998E+02	5.6707E+01
6.000E+01	.0E+00	3.2964E+02	1.5709E+02	1.8390E+02	7.1179E+01	3.3236E+01
6.544E+01	.0E+00	2.6754E+02	1.2038E+02	1.3853E+02	5.7690E+01	2.5714E+01
6.596E+01	2.7818E+03	2.6242E+02	1.1747E+02	1.3497E+02	5.6581E+01	2.5112E+01
8.000E+01	1.6868E+03	1.6356E+02	6.4831E+01	7.1650E+01	3.5213E+01	1.4127E+01
1.000E+02	9.4275E+02	9.3564E+01	3.2522E+01	3.4317E+01	2.0136E+01	7.2236E+00
1.500E+02	3.1750E+02	3.3073E+01	9.3148E+00	9.0170E+00	7.1322E+00	2.1268E+00
2.000E+02	1.4551E+02	1.5651E+01	3.8835E+00	3.5387E+00	3.3832E+00	8.9992E-01
3.000E+02	4.9164E+01	5.4850E+00	1.1728E+00	9.8861E-01	1.1896E+00	2.7596E-01
4.000E+02	2.3411E+01	2.6593E+00	5.2094E-01	4.1980E-01	5.7776E-01	1.2351E-01
5.000E+02	1.3498E+01	1.5474E+00	2.8562E-01	2.2402E-01	3.3648E-01	6.8014E-02
6.000E+02	8.7762E+00	1.0108E+00	1.7874E-01	1.3786E-01	2.1989E-01	4.2675E-02
8.000E+02	4.6248E+00	5.3427E-01	8.9015E-02	6.7453E-02	1.1622E-01	2.1344E-02
1.000E+03	2.9085E+00	3.3591E-01	5.3946E-02	4.0529E-02	7.3057E-02	1.2959E-02
1.500E+03	1.3415E+00	1.5443E-01	2.3710E-02	1.7628E-02	3.3558E-02	5.7099E-03

Z= 72

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	4.0274E+04	4.2495E+04	1.1505E+05
1.500E+00	.0E+00	.0E+00	.0E+00	2.3670E+04	2.7718E+04	6.5578E+04
1.667E+00	.0E+00	.0E+00	.0E+00	2.0344E+04	2.4227E+04	5.5680E+04
1.680E+00	.0E+00	.0E+00	2.2390E+05	2.0107E+04	2.3974E+04	5.4982E+04
1.724E+00	.0E+00	.0E+00	6.7239E+05	1.9360E+04	2.3169E+04	5.2789E+04
1.738E+00	.0E+00	1.4309E+05	6.7989E+05	1.9132E+04	2.2922E+04	5.2120E+04
2.000E+00	.0E+00	3.4086E+05	4.8563E+05	1.5463E+04	1.8821E+04	4.1358E+04
2.097E+00	.0E+00	3.0138E+05	4.2848E+05	1.4371E+04	1.7562E+04	3.8172E+04
2.114E+00	1.4935E+05	2.9519E+05	4.1953E+05	1.4194E+04	1.7356E+04	3.7655E+04
2.356E+00	1.2460E+05	2.2201E+05	3.1406E+05	1.1947E+04	1.4707E+04	3.1157E+04
2.375E+00	1.2313E+05	2.1737E+05	3.0704E+05	1.1795E+04	1.4526E+04	3.0719E+04
2.575E+00	1.0807E+05	1.7653E+05	2.4907E+05	1.0354E+04	1.2783E+04	2.6579E+04
2.595E+00	1.0662E+05	1.7280E+05	2.4382E+05	1.0220E+04	1.2619E+04	2.6196E+04
3.000E+00	8.3216E+04	1.1686E+05	1.6327E+05	8.0333E+03	9.9201E+03	2.0005E+04
4.000E+00	4.9700E+04	5.0882E+04	7.0131E+04	4.8890E+03	5.9405E+03	1.1358E+04
5.000E+00	3.1841E+04	2.5843E+04	3.5238E+04	3.2752E+03	3.8736E+03	7.1242E+03
6.000E+00	2.1607E+04	1.4577E+04	1.9697E+04	2.3397E+03	2.6827E+03	4.7850E+03
8.000E+00	1.1258E+04	5.7080E+03	7.6003E+03	1.3557E+03	1.4558E+03	2.4773E+03
9.548E+00	7.3769E+03	3.1459E+03	4.1479E+03	9.6083E+02	9.8110E+02	1.6225E+03
9.625E+00	7.2345E+03	3.0615E+03	4.0349E+03	9.4588E+02	9.6348E+02	1.5913E+03
1.000E+01	6.5865E+03	2.6867E+03	3.5330E+03	8.7722E+02	8.8296E+02	1.4493E+03
1.075E+01	5.5031E+03	2.0922E+03	2.7395E+03	7.5959E+02	7.4674E+02	1.2115E+03
1.084E+01	5.3948E+03	2.0352E+03	2.6636E+03	7.4762E+02	7.3302E+02	1.1877E+03
1.124E+01	4.9277E+03	1.7954E+03	2.3450E+03	6.9561E+02	6.7373E+02	1.0853E+03
1.133E+01	4.8296E+03	1.7463E+03	2.2798E+03	6.8460E+02	6.6124E+02	1.0638E+03
1.500E+01	2.3341E+03	6.4668E+02	8.2960E+02	3.8655E+02	3.3610E+02	5.1665E+02
2.000E+01	1.0678E+03	2.2665E+02	2.8512E+02	2.1109E+02	1.6229E+02	2.3789E+02
3.000E+01	3.3473E+02	4.9375E+01	6.0213E+01	8.6955E+01	5.5100E+01	7.5330E+01
4.000E+01	1.4165E+02	1.6310E+01	1.9404E+01	4.5199E+01	2.4741E+01	3.2113E+01
5.000E+01	7.1386E+01	6.8341E+00	7.9639E+00	2.6813E+01	1.3073E+01	1.6270E+01
6.000E+01	4.0373E+01	3.3426E+00	3.8266E+00	1.7337E+01	7.6916E+00	9.2381E+00
6.544E+01	3.0698E+01	2.3763E+00	2.6969E+00	1.4047E+01	5.9610E+00	7.0366E+00
6.596E+01	2.9932E+01	2.3029E+00	2.6115E+00	1.3777E+01	5.8225E+00	6.8622E+00
8.000E+01	1.6187E+01	1.0784E+00	1.1992E+00	8.5709E+00	3.2871E+00	3.7244E+00
1.000E+02	7.8974E+00	4.4912E-01	4.8823E-01	4.9009E+00	1.6870E+00	1.8238E+00
1.500E+02	2.1305E+00	9.3215E-02	9.7552E-02	1.7370E+00	4.9944E-01	4.9481E-01
2.000E+02	8.4785E-01	3.1390E-02	3.2194E-02	8.2460E-01	2.1219E-01	1.9713E-01
3.000E+02	2.4025E-01	7.1731E-03	7.2870E-03	2.9001E-01	6.5294E-02	5.6032E-02
4.000E+02	1.0272E-01	2.6580E-03	2.7349E-03	1.4091E-01	2.9281E-02	2.3989E-02
5.000E+02	5.5026E-02	1.2786E-03	1.3464E-03	8.2077E-02	1.6142E-02	1.2857E-02
6.000E+02	3.3942E-02	7.2817E-04	7.8212E-04	5.3639E-02	1.0135E-02	7.9328E-03
8.000E+02	1.6613E-02	3.1481E-04	3.5559E-04	2.8356E-02	5.0693E-03	3.8924E-03
1.000E+03	9.9943E-03	1.7518E-04	2.0299E-04	1.7823E-02	3.0780E-03	2.3400E-03
1.500E+03	4.3403E-03	6.5989E-05	8.5511E-05	8.1856E-03	1.3564E-03	1.0179E-03

Z= 72

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	1.6018E+05	2.3711E+05	1.5445E+05	1.9689E+05	8.6840E+03	7.5395E+03
1.500E+00	8.2246E+04	1.1850E+05	4.3961E+04	5.5646E+04	4.6325E+03	4.3764E+03
1.667E+00	6.6993E+04	9.5961E+04	3.1025E+04	3.9199E+04	3.9100E+03	3.7509E+03
1.680E+00	6.5932E+04	9.4399E+04	3.0208E+04	3.8161E+04	3.8598E+03	3.7067E+03
1.724E+00	6.2609E+04	8.9510E+04	2.7717E+04	3.4999E+04	3.7026E+03	3.5672E+03
1.738E+00	6.1601E+04	8.8029E+04	2.6982E+04	3.4065E+04	3.6548E+03	3.5247E+03
2.000E+00	4.5788E+04	6.4945E+04	1.6677E+04	2.1001E+04	2.9000E+03	2.8380E+03
2.097E+00	4.1266E+04	5.8384E+04	1.4141E+04	1.7792E+04	2.6799E+03	2.6327E+03
2.114E+00	4.0540E+04	5.7334E+04	1.3751E+04	1.7300E+04	2.6444E+03	2.5994E+03
2.356E+00	3.1664E+04	4.4534E+04	9.3585E+03	1.1750E+04	2.2016E+03	2.1781E+03
2.375E+00	3.1082E+04	4.3698E+04	9.0951E+03	1.1417E+04	2.1720E+03	2.1496E+03
2.575E+00	2.5691E+04	3.5976E+04	6.7996E+03	8.5230E+03	1.8923E+03	1.8779E+03
2.595E+00	2.5204E+04	3.5280E+04	6.6053E+03	8.2781E+03	1.8665E+03	1.8526E+03

Z= 72

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
3.000E+00	1.7646E+04	2.4523E+04	3.8731E+03	4.8404E+03	1.4508E+03	1.4410E+03
4.000E+00	8.3027E+03	1.1376E+04	1.2942E+03	1.6082E+03	8.6813E+02	8.5017E+02
5.000E+00	4.4503E+03	6.0293E+03	5.3598E+02	6.6293E+02	5.7596E+02	5.5021E+02
6.000E+00	2.6120E+03	3.5057E+03	2.5591E+02	3.1526E+02	4.0888E+02	3.7935E+02
8.000E+00	1.0824E+03	1.4304E+03	7.7036E+01	9.4255E+01	2.3509E+02	2.0487E+02
9.548E+00	6.1505E+02	8.0467E+02	3.6048E+01	4.3905E+01	1.6597E+02	1.3780E+02
9.625E+00	5.9934E+02	7.8375E+02	3.4822E+01	4.2403E+01	1.6336E+02	1.3531E+02
1.000E+01	5.2914E+02	6.9041E+02	2.9490E+01	3.5870E+01	1.5139E+02	1.2396E+02
1.075E+01	4.1679E+02	5.4147E+02	2.1463E+01	2.6053E+01	1.3092E+02	1.0479E+02
1.084E+01	4.0593E+02	5.2712E+02	2.0723E+01	2.5150E+01	1.2884E+02	1.0286E+02
1.124E+01	3.6006E+02	4.6653E+02	1.7673E+01	2.1429E+01	1.1981E+02	9.4515E+01
1.133E+01	3.5062E+02	4.5407E+02	1.7066E+01	2.0683E+01	1.1789E+02	9.2759E+01
1.500E+01	1.3478E+02	1.7146E+02	4.8326E+00	5.7531E+00	6.6314E+01	4.7103E+01
2.000E+01	4.8731E+01	6.0771E+01	1.2985E+00	1.5299E+00	3.6114E+01	2.2747E+01
3.000E+01	1.1000E+01	1.3293E+01	1.9654E-01	2.2779E-01	1.4845E+01	7.8218E+00
4.000E+01	3.7065E+00	4.3703E+00	5.0295E-02	5.7505E-02	7.7551E+00	3.5164E+00
5.000E+01	1.5726E+00	1.8167E+00	1.7332E-02	1.9582E-02	4.5985E+00	1.8597E+00
6.000E+01	7.7582E-01	8.8066E-01	7.2505E-03	8.1093E-03	2.9725E+00	1.0949E+00
6.544E+01	5.5356E-01	6.2305E-01	4.7915E-03	5.3317E-03	2.4082E+00	8.4881E-01
6.596E+01	5.3667E-01	6.0351E-01	4.6126E-03	5.1303E-03	2.3619E+00	8.2912E-01
8.000E+01	2.5312E-01	2.7927E-01	1.8478E-03	2.0313E-03	1.4691E+00	4.6838E-01
1.000E+02	1.0616E-01	1.1393E-01	6.4522E-04	7.0002E-04	8.3989E-01	2.4055E-01
1.500E+02	2.2277E-02	2.3013E-02	9.9115E-05	1.0512E-04	2.9760E-01	7.1292E-02
2.000E+02	7.5430E-03	7.6375E-03	2.7472E-05	2.8831E-05	1.4124E-01	3.0276E-02
3.000E+02	1.7343E-03	1.7378E-03	4.8898E-06	5.1597E-06	4.9702E-02	9.3211E-03
4.000E+02	6.4476E-04	6.5321E-04	1.5494E-06	1.6813E-06	2.4151E-02	4.1806E-03
5.000E+02	3.1051E-04	3.2213E-04	6.6601E-07	7.4800E-07	1.4068E-02	2.3050E-03
6.000E+02	1.7705E-04	1.8841E-04	3.5330E-07	4.1080E-07	9.1939E-03	1.4475E-03
8.000E+02	7.6653E-05	8.5447E-05	1.3462E-07	1.6960E-07	4.8604E-03	7.2382E-04
1.000E+03	4.2267E-05	4.9525E-05	6.9055E-08	9.2123E-08	3.0551E-03	4.3956E-04
1.500E+03	1.6054E-05	2.0438E-05	2.3772E-08	3.5469E-08	1.4034E-03	1.9367E-04

Z= 72

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	6 S 1/2
1.000E+00	1.7593E+04	1.7445E+03	2.4410E+03	8.4440E+02
1.500E+00	9.3907E+03	8.6124E+02	1.1833E+03	4.3481E+02
1.667E+00	7.8876E+03	6.9868E+02	9.5573E+02	3.6434E+02
1.680E+00	7.7829E+03	6.8744E+02	9.4005E+02	3.5947E+02
1.724E+00	7.4541E+03	6.5228E+02	8.9104E+02	3.4421E+02
1.738E+00	7.3542E+03	6.4169E+02	8.7618E+02	3.3958E+02
2.000E+00	5.7710E+03	4.7587E+02	6.4609E+02	2.6677E+02
2.097E+00	5.3084E+03	4.2869E+02	5.8092E+02	2.4579E+02
2.114E+00	5.2337E+03	4.2114E+02	5.7051E+02	2.4242E+02
2.356E+00	4.3030E+03	3.2892E+02	4.3930E+02	2.0052E+02
2.375E+00	4.2407E+03	3.2289E+02	4.3109E+02	1.9772E+02
2.575E+00	3.6539E+03	2.6977E+02	3.5527E+02	1.7141E+02
2.595E+00	3.5999E+03	2.6468E+02	3.4843E+02	1.6900E+02
3.000E+00	2.7329E+03	1.8570E+02	2.4275E+02	1.3250E+02
4.000E+00	1.5393E+03	8.7895E+01	1.1329E+02	7.9212E+01
5.000E+00	9.6209E+02	4.7349E+01	6.0348E+01	5.2544E+01
6.000E+00	6.4499E+02	2.7903E+01	3.5229E+01	3.7303E+01
8.000E+00	3.3342E+02	1.1631E+01	1.4459E+01	2.1452E+01
9.548E+00	2.1831E+02	6.6320E+00	8.1619E+00	1.5148E+01
9.625E+00	2.1412E+02	6.4635E+00	7.9509E+00	1.4910E+01
1.000E+01	1.9502E+02	5.7106E+00	7.0090E+00	1.3818E+01
1.075E+01	1.6303E+02	4.5040E+00	5.5042E+00	1.1951E+01
1.084E+01	1.5983E+02	4.3873E+00	5.3591E+00	1.1761E+01
1.124E+01	1.4606E+02	3.8941E+00	4.7462E+00	1.0936E+01
1.133E+01	1.4317E+02	3.7925E+00	4.6202E+00	1.0762E+01
1.500E+01	6.9611E+01	1.4646E+00	1.7527E+00	6.0554E+00

Z= 72

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	6 S 1/2
2.000E+01	3.2065E+01	5.3171E-01	6.2378E-01	3.2985E+00
3.000E+01	1.0171E+01	1.2057E-01	1.3710E-01	1.3557E+00
4.000E+01	4.3411E+00	4.0745E-02	4.5198E-02	7.0402E-01
5.000E+01	2.2015E+00	1.7322E-02	1.8822E-02	4.1743E-01
6.000E+01	1.2509E+00	8.5577E-03	9.1354E-03	2.6982E-01
6.544E+01	9.5305E-01	6.1095E-03	6.4664E-03	2.1860E-01
6.596E+01	9.2945E-01	5.9230E-03	6.2642E-03	2.1439E-01
8.000E+01	5.0478E-01	2.7975E-03	2.9015E-03	1.3335E-01
1.000E+02	2.4736E-01	1.1748E-03	1.1915E-03	7.6238E-02
1.500E+02	6.7165E-02	2.4668E-04	2.4101E-04	2.7015E-02
2.000E+02	2.6824E-02	8.3572E-05	8.0064E-05	1.2823E-02
3.000E+02	7.6287E-03	1.9213E-05	1.8251E-05	4.5132E-03
4.000E+02	3.2675E-03	7.1415E-06	6.8788E-06	2.1938E-03
5.000E+02	1.7519E-03	3.4437E-06	3.3964E-06	1.2786E-03
6.000E+02	1.0811E-03	1.9633E-06	1.9867E-06	8.3620E-04
8.000E+02	5.3050E-04	8.4939E-07	9.0983E-07	4.4288E-04
1.000E+03	3.1920E-04	4.6999E-07	5.2825E-07	2.7919E-04
1.500E+03	1.3903E-04	1.8037E-07	2.2321E-07	1.2973E-04

Z= 73 22 STATES, 44 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	67.5884	.98522
2 S 1/2	2.00	11.6598	.86746
2 P 1/2	2.00	11.1637	.80512
2 P 3/2	4.00	9.8788	.78087
3 S 1/2	2.00	2.6859	.65094
3 P 1/2	2.00	2.4619	.57279
3 P 3/2	4.00	2.1841	.54144
3 D 3/2	4.00	1.8023	.34174
3 D 5/2	6.00	1.7414	.33522
4 S 1/2	2.00	.5551	.38437
4 P 1/2	2.00	.4617	.31444
4 P 3/2	4.00	.3974	.28486
4 D 3/2	4.00	.2425	.13937
4 D 5/2	6.00	.2306	.13374
4 F 5/2	6.00	.0361	.02083
4 F 7/2	8.00	.0339	.02026
5 S 1/2	2.00	.0789	.13400
5 P 1/2	2.00	.0512	.09054
5 P 3/2	4.00	.0419	.07698
5 D 3/2	1.20	.0070	.01519
5 D 5/2	1.80	.0063	.01375
6 S 1/2	2.00	.0073	.02200

Z= 73 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	1.0513E+06	.0E+00	.0E+00	.0E+00	1.0513E+06
1.5000E+00	4.6743E+05	.0E+00	.0E+00	.0E+00	4.6743E+05
1.7396E+00	3.4179E+05	.0E+00	.0E+00	.0E+00	3.4179E+05
1.7535E+00	5.3101E+05	.0E+00	.0E+00	1.9500E+05	3.3601E+05
1.8005E+00	9.5051E+05	.0E+00	.0E+00	6.3302E+05	3.1750E+05
1.8149E+00	1.0791E+06	.0E+00	.0E+00	7.6704E+05	3.1209E+05
2.0000E+00	1.1300E+06	.0E+00	.0E+00	8.7727E+05	2.5274E+05
2.1819E+00	9.0651E+05	.0E+00	.0E+00	6.9785E+05	2.0866E+05
2.1993E+00	1.0316E+06	.0E+00	.0E+00	8.2658E+05	2.0500E+05
2.4595E+00	7.8655E+05	.0E+00	.0E+00	6.2692E+05	1.5963E+05
2.4792E+00	8.2035E+05	.0E+00	.0E+00	6.6357E+05	1.5679E+05

Z= 73 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY (KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
2.6832E+00	6.8269E+05	.0E+00	.0E+00	5.5165E+05	1.3104E+05
2.7047E+00	6.9900E+05	.0E+00	.0E+00	5.7033E+05	1.2867E+05
3.0000E+00	5.4950E+05	.0E+00	.0E+00	4.4810E+05	1.0140E+05
4.0000E+00	2.7460E+05	.0E+00	.0E+00	2.2302E+05	5.1574E+04
5.0000E+00	1.5786E+05	.0E+00	.0E+00	1.2774E+05	3.0119E+04
6.0000E+00	9.9631E+04	.0E+00	.0E+00	8.0369E+04	1.9262E+04
8.0000E+00	4.7633E+04	.0E+00	.0E+00	3.8233E+04	9.4001E+03
9.8690E+00	2.7585E+04	.0E+00	.0E+00	2.2064E+04	5.5210E+03
9.9480E+00	7.0915E+04	.0E+00	4.3900E+04	2.1606E+04	5.4098E+03
1.0000E+01	7.0153E+04	.0E+00	4.3503E+04	2.1311E+04	5.3383E+03
1.1153E+01	5.2393E+04	.0E+00	3.2379E+04	1.5977E+04	4.0369E+03
1.1242E+01	7.0883E+04	.0E+00	5.1285E+04	1.5643E+04	3.9550E+03
1.1648E+01	6.4936E+04	.0E+00	4.7088E+04	1.4238E+04	3.6095E+03
1.1741E+01	7.3526E+04	.0E+00	5.6049E+04	1.3940E+04	3.5361E+03
1.5000E+01	3.9398E+04	.0E+00	3.0272E+04	7.2536E+03	1.8725E+03
2.0000E+01	1.8411E+04	.0E+00	1.4192E+04	3.3407E+03	8.7797E+02
3.0000E+01	6.1910E+03	.0E+00	4.7885E+03	1.1056E+03	2.9690E+02
4.0000E+01	2.8191E+03	.0E+00	2.1828E+03	5.0021E+02	1.3611E+02
5.0000E+01	1.5228E+03	.0E+00	1.1797E+03	2.6923E+02	7.3903E+01
6.0000E+01	9.1788E+02	.0E+00	7.1124E+02	1.6192E+02	4.4728E+01
6.7521E+01	6.6051E+02	.0E+00	5.1187E+02	1.1637E+02	3.2268E+01
6.8062E+01	3.3265E+03	2.6806E+03	5.0060E+02	1.1380E+02	3.1563E+01
8.0000E+01	2.1710E+03	1.7598E+03	3.1868E+02	7.2343E+01	2.0159E+01
1.0000E+02	1.2084E+03	9.8837E+02	1.7055E+02	3.8656E+01	1.0834E+01
1.5000E+02	4.0449E+02	3.3383E+02	5.4766E+01	1.2392E+01	3.5032E+00
2.0000E+02	1.8507E+02	1.5330E+02	2.4618E+01	5.5663E+00	1.5812E+00
3.0000E+02	6.2497E+01	5.1949E+01	8.1748E+00	1.8469E+00	5.2723E-01
4.0000E+02	2.9754E+01	2.4781E+01	3.8540E+00	8.7011E-01	2.4904E-01
5.0000E+02	1.7149E+01	1.4305E+01	2.2041E+00	4.9723E-01	1.4254E-01
6.0000E+02	1.1144E+01	9.3086E+00	1.4227E+00	3.2073E-01	9.2039E-02
8.0000E+02	5.8661E+00	4.9104E+00	7.4097E-01	1.6679E-01	4.7928E-02
1.0000E+03	3.6845E+00	3.0891E+00	4.6168E-01	1.0381E-01	2.9848E-02
1.5000E+03	1.6956E+00	1.4249E+00	2.0999E-01	4.7127E-02	1.3561E-02

Z= 73

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.740E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.754E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.800E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.815E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.182E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.199E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.459E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.479E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.683E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.8813E+04
2.705E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.3804E+04
2.705E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.8993E+04	4.3449E+04
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.5856E+04	3.7995E+04
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.7028E+04	2.4863E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.2034E+04	1.6951E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	8.8811E+03	1.2049E+04
8.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	5.3460E+03	6.7031E+03
9.869E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.6223E+03	4.2336E+03
9.948E+00	.0E+00	.0E+00	.0E+00	4.3900E+04	3.5681E+03	4.1584E+03
1.000E+01	.0E+00	.0E+00	.0E+00	4.3503E+04	3.5330E+03	4.1099E+03
1.115E+01	.0E+00	.0E+00	.0E+00	3.2379E+04	2.8673E+03	3.2040E+03
1.124E+01	.0E+00	.0E+00	1.9578E+04	3.1707E+04	2.8236E+03	3.1452E+03
1.165E+01	.0E+00	.0E+00	1.8191E+04	2.8897E+04	2.6367E+03	2.8952E+03

Z= 73

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.174E+01	.0E+00	9.9845E+03	1.7765E+04	2.8300E+04	2.5963E+03	2.8416E+03
1.500E+01	.0E+00	6.5667E+03	9.4720E+03	1.4233E+04	1.5989E+03	1.5782E+03
2.000E+01	.0E+00	3.7876E+03	4.2790E+03	6.1254E+03	8.8476E+02	7.6315E+02
3.000E+01	.0E+00	1.6529E+03	1.3483E+03	1.7873E+03	3.6933E+02	2.5882E+02
4.000E+01	.0E+00	8.7986E+02	5.7774E+02	7.2516E+02	1.9322E+02	1.1601E+02
5.000E+01	.0E+00	5.2837E+02	2.9572E+02	3.5557E+02	1.1507E+02	6.1214E+01
6.000E+01	.0E+00	3.4403E+02	1.7001E+02	1.9720E+02	7.4593E+01	3.5980E+01
6.752E+01	.0E+00	2.5914E+02	1.1850E+02	1.3423E+02	5.6077E+01	2.5410E+01
6.806E+01	2.6806E+03	2.5418E+02	1.1564E+02	1.3078E+02	5.4999E+01	2.4817E+01
8.000E+01	1.7598E+03	1.7124E+02	7.0413E+01	7.7024E+01	3.7001E+01	1.5358E+01
1.000E+02	9.8837E+02	9.8179E+01	3.5414E+01	3.6958E+01	2.1202E+01	7.8773E+00
1.500E+02	3.3383E+02	3.4837E+01	1.0189E+01	9.7405E+00	7.5372E+00	2.3313E+00
2.000E+02	1.5330E+02	1.6528E+01	4.2602E+00	3.8298E+00	3.5841E+00	9.8963E-01
3.000E+02	5.1949E+01	5.8114E+00	1.2911E+00	1.0722E+00	1.2643E+00	3.0468E-01
4.000E+02	2.4781E+01	2.8235E+00	5.7476E-01	4.5576E-01	6.1534E-01	1.3669E-01
5.000E+02	1.4305E+01	1.6451E+00	3.1558E-01	2.4333E-01	3.5885E-01	7.5386E-02
6.000E+02	9.3086E+00	1.0756E+00	1.9752E-01	1.4965E-01	2.3471E-01	4.7314E-02
8.000E+02	4.9104E+00	5.6912E-01	9.8578E-02	7.3270E-02	1.2418E-01	2.3716E-02
1.000E+03	3.0891E+00	3.5795E-01	5.9744E-02	4.3980E-02	7.8091E-02	1.4401E-02
1.500E+03	1.4249E+00	1.6455E-01	2.6313E-02	1.9121E-02	3.5868E-02	6.3569E-03

Z= 73

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	4.0533E+04	4.2312E+04	1.1762E+05
1.500E+00	.0E+00	.0E+00	.0E+00	2.4058E+04	2.8049E+04	6.7469E+04
1.740E+00	.0E+00	.0E+00	.0E+00	1.9464E+04	2.3256E+04	5.3643E+04
1.754E+00	.0E+00	.0E+00	1.9500E+05	1.9238E+04	2.3013E+04	5.2967E+04
1.800E+00	.0E+00	.0E+00	6.3302E+05	1.8501E+04	2.2217E+04	5.0776E+04
1.815E+00	.0E+00	1.2673E+05	6.4032E+05	1.8283E+04	2.1979E+04	5.0129E+04
2.000E+00	.0E+00	3.6128E+05	5.1599E+05	1.5789E+04	1.9203E+04	4.2746E+04
2.182E+00	.0E+00	2.8830E+05	4.0956E+05	1.3811E+04	1.6928E+04	3.6890E+04
2.199E+00	1.4328E+05	2.8235E+05	4.0095E+05	1.3640E+04	1.6729E+04	3.6389E+04
2.459E+00	1.1946E+05	2.1034E+05	2.9712E+05	1.1424E+04	1.4107E+04	2.9922E+04
2.479E+00	1.1804E+05	2.0593E+05	2.9078E+05	1.1278E+04	1.3933E+04	2.9499E+04
2.683E+00	1.0373E+05	1.6783E+05	2.3629E+05	9.9245E+03	1.2290E+04	2.5578E+04
2.705E+00	1.0233E+05	1.6426E+05	2.3130E+05	9.7960E+03	1.2133E+04	2.5209E+04
3.000E+00	8.5591E+04	1.2453E+05	1.7413E+05	8.2517E+03	1.0226E+04	2.0796E+04
4.000E+00	5.1427E+04	5.4575E+04	7.5128E+04	5.0402E+03	6.1636E+03	1.1855E+04
5.000E+00	3.3065E+04	2.7813E+04	3.7875E+04	3.3836E+03	4.0378E+03	7.4589E+03
6.000E+00	2.2490E+04	1.5725E+04	2.1224E+04	2.4212E+03	2.8058E+03	5.0213E+03
8.000E+00	1.1778E+04	6.1851E+03	8.2208E+03	1.4061E+03	1.5308E+03	2.6090E+03
9.869E+00	7.1400E+03	3.0551E+03	4.0133E+03	9.3518E+02	9.6052E+02	1.5807E+03
9.948E+00	7.0021E+03	2.9731E+03	3.9039E+03	9.2063E+02	9.4329E+02	1.5503E+03
1.000E+01	6.9133E+03	2.9207E+03	3.8340E+03	9.1123E+02	9.3217E+02	1.5308E+03
1.115E+01	5.2794E+03	2.0079E+03	2.6182E+03	7.3422E+02	7.2550E+02	1.1700E+03
1.124E+01	5.1753E+03	1.9532E+03	2.5457E+03	7.2264E+02	7.1218E+02	1.1470E+03
1.165E+01	4.7338E+03	1.7266E+03	2.2458E+03	6.7314E+02	6.5555E+02	1.0495E+03
1.174E+01	4.6395E+03	1.6794E+03	2.1833E+03	6.6248E+02	6.4341E+02	1.0287E+03
1.500E+01	2.4637E+03	7.0740E+02	9.0533E+02	4.0274E+02	3.5749E+02	5.4867E+02
2.000E+01	1.1316E+03	2.4893E+02	3.1231E+02	2.2041E+02	1.7352E+02	2.5361E+02
3.000E+01	3.5659E+02	5.4543E+01	6.6308E+01	9.1084E+01	5.9324E+01	8.0730E+01
4.000E+01	1.5144E+02	1.8087E+01	2.1444E+01	4.7458E+01	2.6767E+01	3.4540E+01
5.000E+01	7.6529E+01	7.6001E+00	8.8240E+00	2.8207E+01	1.4195E+01	1.7548E+01
6.000E+01	4.3371E+01	3.7255E+00	4.2483E+00	1.8268E+01	8.3758E+00	9.9851E+00
6.752E+01	2.9900E+01	2.3454E+00	2.6429E+00	1.3727E+01	5.9291E+00	6.9004E+00
6.806E+01	2.9155E+01	2.2732E+00	2.5594E+00	1.3463E+01	5.7920E+00	6.7296E+00
8.000E+01	1.7443E+01	1.2059E+00	1.3354E+00	9.0543E+00	3.5951E+00	4.0386E+00
1.000E+02	8.5292E+00	5.0341E-01	5.4479E-01	5.1876E+00	1.8509E+00	1.9823E+00
1.500E+02	2.3094E+00	1.0487E-01	1.0921E-01	1.8452E+00	5.5087E-01	5.3982E-01
2.000E+02	9.2107E-01	3.5395E-02	3.6106E-02	8.7807E-01	2.3482E-01	2.1557E-01

Z= 73

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
3.000E+02	2.6164E-01	8.1096E-03	8.1883E-03	3.0984E-01	7.2550E-02	6.1426E-02
4.000E+02	1.1200E-01	3.0099E-03	3.0759E-03	1.5085E-01	3.2611E-02	2.6329E-02
5.000E+02	6.0030E-02	1.4495E-03	1.5149E-03	8.7992E-02	1.8005E-02	1.4121E-02
6.000E+02	3.7010E-02	8.2049E-04	8.7714E-04	5.7554E-02	1.1310E-02	8.7098E-03
8.000E+02	1.8129E-02	3.5811E-04	3.9941E-04	3.0457E-02	5.6696E-03	4.2753E-03
1.000E+03	1.0894E-02	1.9724E-04	2.2792E-04	1.9151E-02	3.4425E-03	2.5685E-03
1.500E+03	4.7307E-03	7.5056E-05	9.5947E-05	8.7946E-03	1.5200E-03	1.1166E-03

Z= 73

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	1.6469E+05	2.4434E+05	1.7452E+05	2.2277E+05	9.1415E+03	7.9717E+03
1.500E+00	8.5883E+04	1.2390E+05	5.0364E+04	6.3826E+04	4.8896E+03	4.6572E+03
1.740E+00	6.4496E+04	9.2238E+04	3.0927E+04	3.9089E+04	3.8548E+03	3.7541E+03
1.754E+00	6.3468E+04	9.0729E+04	3.0112E+04	3.8054E+04	3.8053E+03	3.7098E+03
1.800E+00	6.0153E+04	8.5865E+04	2.7554E+04	3.4805E+04	3.6454E+03	3.5658E+03
1.815E+00	5.9179E+04	8.4436E+04	2.6823E+04	3.3876E+04	3.5984E+03	3.5232E+03
2.000E+00	4.8265E+04	6.8492E+04	1.9262E+04	2.4283E+04	3.0679E+03	3.0357E+03
2.182E+00	3.9904E+04	5.6363E+04	1.4237E+04	1.7919E+04	2.6545E+03	2.6464E+03
2.199E+00	3.9201E+04	5.5346E+04	1.3845E+04	1.7423E+04	2.6193E+03	2.6128E+03
2.459E+00	3.0373E+04	4.2636E+04	9.3163E+03	1.1699E+04	2.1690E+03	2.1780E+03
2.479E+00	2.9814E+04	4.1833E+04	9.0538E+03	1.1368E+04	2.1397E+03	2.1494E+03
2.683E+00	2.4718E+04	3.4543E+04	6.8052E+03	8.5315E+03	1.8689E+03	1.8824E+03
2.705E+00	2.4248E+04	3.3873E+04	6.6107E+03	8.2862E+03	1.8434E+03	1.8570E+03
3.000E+00	1.8813E+04	2.6140E+04	4.5185E+03	5.6522E+03	1.5402E+03	1.5532E+03
4.000E+00	8.9134E+03	1.2206E+04	1.5193E+03	1.8892E+03	9.2384E+02	9.2128E+02
5.000E+00	4.8009E+03	6.4989E+03	6.3190E+02	7.8202E+02	6.1400E+02	5.9868E+02
6.000E+00	2.8284E+03	3.7921E+03	3.0273E+02	3.7310E+02	4.3646E+02	4.1411E+02
8.000E+00	1.1788E+03	1.5555E+03	9.1624E+01	1.1214E+02	2.5141E+02	2.2479E+02
9.869E+00	6.0408E+02	7.8749E+02	3.7308E+01	4.5401E+01	1.6644E+02	1.4073E+02
9.948E+00	5.8865E+02	7.6702E+02	3.6040E+01	4.3848E+01	1.6382E+02	1.3819E+02
1.000E+01	5.7877E+02	7.5390E+02	3.5234E+01	4.2861E+01	1.6213E+02	1.3656E+02
1.115E+01	4.0477E+02	5.2377E+02	2.1888E+01	2.6540E+01	1.3038E+02	1.0620E+02
1.124E+01	3.9423E+02	5.0987E+02	2.1134E+01	2.5620E+01	1.2830E+02	1.0424E+02
1.165E+01	3.5038E+02	4.5216E+02	1.8073E+01	2.1888E+01	1.1945E+02	9.5934E+01
1.174E+01	3.4120E+02	4.4009E+02	1.7448E+01	2.1127E+01	1.1754E+02	9.4153E+01
1.500E+01	1.4855E+02	1.8858E+02	5.8451E+00	7.0222E+00	7.1211E+01	5.2277E+01
2.000E+01	5.3983E+01	6.7153E+01	1.5692E+00	1.8488E+00	3.8862E+01	2.5375E+01
3.000E+01	1.2265E+01	1.4780E+01	2.3890E-01	2.7680E-01	1.6022E+01	8.7740E+00
4.000E+01	4.1517E+00	4.8790E+00	6.1426E-02	7.0197E-02	8.3863E+00	3.9637E+00
5.000E+01	1.7674E+00	2.0343E+00	2.1235E-02	2.3979E-02	4.9821E+00	2.1039E+00
6.000E+01	8.7411E-01	9.8840E-01	8.9041E-03	9.9503E-03	3.2256E+00	1.2423E+00
6.752E+01	5.5311E-01	6.1812E-01	5.0837E-03	5.6424E-03	2.4235E+00	8.7980E-01
6.806E+01	5.3624E-01	5.9881E-01	4.8948E-03	5.4301E-03	2.3768E+00	8.5946E-01
8.000E+01	2.8623E-01	3.1446E-01	2.2760E-03	2.5001E-03	1.5983E+00	5.3376E-01
1.000E+02	1.2036E-01	1.2931E-01	7.9681E-04	8.6321E-04	9.1555E-01	2.7500E-01
1.500E+02	2.5357E-02	2.6060E-02	1.2299E-04	1.3033E-04	3.2557E-01	8.1937E-02
2.000E+02	8.6077E-03	8.6650E-03	3.4152E-05	3.5813E-05	1.5490E-01	3.4914E-02
3.000E+02	1.9842E-03	1.9753E-03	6.1032E-06	6.4329E-06	5.4685E-02	1.0792E-02
4.000E+02	7.3844E-04	7.4409E-04	1.9347E-06	2.0862E-06	2.6626E-02	4.8523E-03
5.000E+02	3.5628E-04	3.6746E-04	8.3092E-07	9.3142E-07	1.5531E-02	2.6798E-03
6.000E+02	2.0225E-04	2.1361E-04	4.3355E-07	5.0558E-07	1.0159E-02	1.6833E-03
8.000E+02	8.7981E-05	9.7501E-05	1.6944E-07	2.1252E-07	5.3761E-03	8.4366E-04
1.000E+03	4.8399E-05	5.6184E-05	8.4750E-08	1.1411E-07	3.3804E-03	5.1239E-04
1.500E+03	1.8529E-05	2.3235E-05	2.9910E-08	4.3707E-08	1.5526E-03	2.2622E-04

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	6 S 1/2
1.000E+00	1.8939E+04	3.1292E+03	4.4084E+03	9.2718E+02
1.500E+00	1.0137E+04	1.5624E+03	2.1584E+03	4.7810E+02
1.740E+00	7.9335E+03	1.1663E+03	1.6005E+03	3.7286E+02
1.754E+00	7.8276E+03	1.1475E+03	1.5741E+03	3.6787E+02
1.800E+00	7.4853E+03	1.0867E+03	1.4891E+03	3.5179E+02
1.815E+00	7.3845E+03	1.0689E+03	1.4642E+03	3.4706E+02
2.000E+00	6.2463E+03	8.7033E+02	1.1871E+03	2.9389E+02
2.182E+00	5.3579E+03	7.1900E+02	9.7699E+02	2.5281E+02
2.199E+00	5.2822E+03	7.0630E+02	9.5941E+02	2.4933E+02
2.459E+00	4.3148E+03	5.4731E+02	7.3981E+02	2.0512E+02
2.479E+00	4.2521E+03	5.3724E+02	7.2594E+02	2.0226E+02
2.683E+00	3.6720E+03	4.4569E+02	6.0020E+02	1.7582E+02
2.705E+00	3.6176E+03	4.3725E+02	5.8352E+02	1.7334E+02
3.000E+00	2.9716E+03	3.3970E+02	4.5107E+02	1.4403E+02
4.000E+00	1.6795E+03	1.6323E+02	2.1189E+02	8.7524E+01
5.000E+00	1.0525E+03	8.8375E+01	1.1341E+02	5.8150E+01
6.000E+00	7.0712E+02	5.2283E+01	6.6449E+01	4.1333E+01
8.000E+00	3.6678E+02	2.1925E+01	2.7426E+01	2.3810E+01
9.869E+00	2.2215E+02	1.1283E+01	1.3943E+01	1.5765E+01
9.948E+00	2.1788E+02	1.0997E+01	1.3583E+01	1.5518E+01
1.000E+01	2.1512E+02	1.0813E+01	1.3352E+01	1.5358E+01
1.115E+01	1.6444E+02	7.5782E+00	9.2951E+00	1.2351E+01
1.124E+01	1.6121E+02	7.3819E+00	9.0500E+00	1.2155E+01
1.165E+01	1.4752E+02	6.5651E+00	8.0310E+00	1.1316E+01
1.174E+01	1.4460E+02	6.3939E+00	7.8177E+00	1.1135E+01
1.500E+01	7.7193E+01	2.7955E+00	3.3641E+00	6.7478E+00
2.000E+01	3.5743E+01	1.0203E+00	1.2031E+00	3.6832E+00
3.000E+01	1.1383E+01	2.3296E-01	2.6613E-01	1.5184E+00
4.000E+01	4.8764E+00	7.9087E-02	8.8109E-02	7.9031E-01
5.000E+01	2.4797E+00	3.3736E-02	3.6807E-02	4.6947E-01
6.000E+01	1.4120E+00	1.6709E-02	1.7908E-02	3.0394E-01
6.752E+01	9.7622E-01	1.0583E-02	1.1207E-02	2.2835E-01
6.806E+01	9.5208E-01	1.0261E-02	1.0858E-02	2.2396E-01
8.000E+01	5.7167E-01	5.4829E-03	5.7070E-03	1.5060E-01
1.000E+02	2.8079E-01	2.3088E-03	2.3491E-03	8.6268E-02
1.500E+02	7.6539E-02	4.8683E-04	4.7693E-04	3.0678E-02
2.000E+02	3.0638E-02	1.6534E-04	1.5875E-04	1.4597E-02
3.000E+02	8.7361E-03	3.8119E-05	3.6261E-05	5.1542E-03
4.000E+02	3.7462E-03	1.4195E-05	1.3674E-05	2.5105E-03
5.000E+02	2.0098E-03	6.8501E-06	6.7526E-06	1.4651E-03
6.000E+02	1.2397E-03	3.8828E-06	3.9351E-06	9.5888E-04
8.000E+02	6.0874E-04	1.6927E-06	1.8057E-06	5.0830E-04
1.000E+03	3.6588E-04	9.3007E-07	1.0434E-06	3.2042E-04
1.500E+03	1.5928E-04	3.5861E-07	4.3923E-07	1.4870E-04

Z= 74 22 STATES, 44 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	69.7152	.98534
2 S 1/2	2.00	12.0810	.86892
2 P 1/2	2.00	11.5736	.80723
2 P 3/2	4.00	10.2055	.78241
3 S 1/2	2.00	2.7979	.65441
3 P 1/2	2.00	2.5684	.57693
3 P 3/2	4.00	2.2712	.54471
3 D 3/2	4.00	1.8810	.34590
3 D 5/2	6.00	1.8160	.33919
4 S 1/2	2.00	.5852	.38871
4 P 1/2	2.00	.4889	.31909
4 P 3/2	4.00	.4197	.28856
4 D 3/2	4.00	.2601	.14285
4 D 5/2	6.00	.2472	.13701
4 F 5/2	6.00	.0455	.02254
4 F 7/2	8.00	.0431	.02195
5 S 1/2	2.00	.0853	.13940
5 P 1/2	2.00	.0561	.09551
5 P 3/2	4.00	.0457	.08115
5 D 3/2	1.60	.0083	.01747
5 D 5/2	2.40	.0074	.01587
6 S 1/2	2.00	.0077	.02340

Z= 74 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	1.1209E+06	.0E+00	.0E+00	.0E+00	1.1209E+06
1.5000E+00	4.9838E+05	.0E+00	.0E+00	.0E+00	4.9838E+05
1.8142E+00	3.3302E+05	.0E+00	.0E+00	.0E+00	3.3302E+05
1.8287E+00	4.9995E+05	.0E+00	.0E+00	1.7260E+05	3.2735E+05
1.8792E+00	9.0784E+05	.0E+00	.0E+00	5.9918E+05	3.0866E+05
1.8942E+00	1.0224E+06	.0E+00	.0E+00	7.1899E+05	3.0337E+05
2.0000E+00	1.1941E+06	.0E+00	.0E+00	9.2455E+05	2.6951E+05
2.2689E+00	8.7187E+05	.0E+00	.0E+00	6.6790E+05	2.0397E+05
2.2871E+00	9.9163E+05	.0E+00	.0E+00	7.9125E+05	2.0038E+05
2.5658E+00	7.4997E+05	.0E+00	.0E+00	5.9526E+05	1.5472E+05
2.5864E+00	7.8207E+05	.0E+00	.0E+00	6.3013E+05	1.5194E+05
2.7951E+00	6.5257E+05	.0E+00	.0E+00	5.2526E+05	1.2731E+05
2.8175E+00	6.6808E+05	.0E+00	.0E+00	5.4308E+05	1.2500E+05
3.0000E+00	5.7780E+05	.0E+00	.0E+00	4.6962E+05	1.0818E+05
4.0000E+00	2.8944E+05	.0E+00	.0E+00	2.3439E+05	5.5047E+04
5.0000E+00	1.6665E+05	.0E+00	.0E+00	1.3449E+05	3.2158E+04
6.0000E+00	1.0524E+05	.0E+00	.0E+00	8.4667E+04	2.0572E+04
8.0000E+00	5.0387E+04	.0E+00	.0E+00	4.0343E+04	1.0044E+04
1.0000E+01	2.8215E+04	.0E+00	.0E+00	2.2509E+04	5.7063E+03
1.0195E+01	2.6823E+04	.0E+00	.0E+00	2.1392E+04	5.4315E+03
1.0277E+01	6.8617E+04	.0E+00	4.2348E+04	2.0947E+04	5.3220E+03
1.1562E+01	5.0158E+04	.0E+00	3.0877E+04	1.5347E+04	3.9343E+03
1.1655E+01	6.7941E+04	.0E+00	4.9060E+04	1.5026E+04	3.8544E+03
1.2069E+01	6.2330E+04	.0E+00	4.5110E+04	1.3698E+04	3.5227E+03
1.2166E+01	7.0574E+04	.0E+00	5.3712E+04	1.3411E+04	3.4509E+03
1.5000E+01	4.1503E+04	.0E+00	3.1825E+04	7.6745E+03	2.0039E+03
2.0000E+01	1.9422E+04	.0E+00	1.4943E+04	3.5390E+03	9.4050E+02
3.0000E+01	6.5455E+03	.0E+00	5.0538E+03	1.1733E+03	3.1848E+02
4.0000E+01	2.9859E+03	.0E+00	2.3082E+03	5.3153E+02	1.4612E+02
5.0000E+01	1.6147E+03	.0E+00	1.2489E+03	2.8638E+02	7.9435E+01
6.0000E+01	9.7419E+02	.0E+00	7.5371E+02	1.7237E+02	4.8113E+01
6.9646E+01	6.4341E+02	.0E+00	4.9787E+02	1.1367E+02	3.1875E+01
7.0203E+01	3.2125E+03	2.5833E+03	4.8692E+02	1.1116E+02	3.1180E+01

Z= 74 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
8.0000E+01	2.2722E+03	1.8352E+03	3.3820E+02	7.7113E+01	2.1711E+01
1.0000E+02	1.2683E+03	1.0341E+03	1.8119E+02	4.1248E+01	1.1680E+01
1.5000E+02	4.2592E+02	3.5059E+02	5.8302E+01	1.3248E+01	3.7838E+00
2.0000E+02	1.9528E+02	1.6137E+02	2.6245E+01	5.9593E+00	1.7099E+00
3.0000E+02	6.6123E+01	5.4838E+01	8.7327E+00	1.9812E+00	5.7137E-01
4.0000E+02	3.1534E+01	2.6207E+01	4.1224E+00	9.3454E-01	2.7024E-01
5.0000E+02	1.8196E+01	1.5147E+01	2.3597E+00	5.3450E-01	1.5481E-01
6.0000E+02	1.1834E+01	9.8650E+00	1.5241E+00	3.4496E-01	1.0001E-01
8.0000E+02	6.2349E+00	5.2091E+00	7.9424E-01	1.7949E-01	5.2107E-02
1.0000E+03	3.9175E+00	3.2784E+00	4.9496E-01	1.1173E-01	3.2457E-02
1.5000E+03	1.8026E+00	1.5121E+00	2.2507E-01	5.0709E-02	1.4741E-02

Z= 74

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.814E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.829E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.879E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.894E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.269E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.287E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.566E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.586E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.6490E+04
2.795E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.1914E+04
2.817E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.7654E+04	4.1576E+04
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.5797E+04	3.8476E+04
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.7176E+04	2.5301E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.2278E+04	1.7423E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	9.0734E+03	1.2464E+04
8.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	5.4879E+03	6.9800E+03
1.000E+01	.0E+00	.0E+00	.0E+00	.0E+00	3.6366E+03	4.3010E+03
1.020E+01	.0E+00	.0E+00	.0E+00	.0E+00	3.5068E+03	4.1185E+03
1.028E+01	.0E+00	.0E+00	.0E+00	4.2348E+04	3.4544E+03	3.0453E+03
1.156E+01	.0E+00	.0E+00	.0E+00	3.0877E+04	2.7573E+03	3.0934E+03
1.165E+01	.0E+00	.0E+00	1.8824E+04	3.0237E+04	2.7152E+03	3.0367E+03
1.207E+01	.0E+00	.0E+00	1.7511E+04	2.7599E+04	2.5383E+03	2.7993E+03
1.217E+01	.0E+00	9.5848E+03	1.7100E+04	2.7027E+04	2.4994E+03	2.7475E+03
1.500E+01	.0E+00	6.7169E+03	1.0018E+04	1.5090E+04	1.6529E+03	1.6654E+03
2.000E+01	.0E+00	3.8998E+03	4.5484E+03	6.4946E+03	9.1698E+02	8.0985E+02
3.000E+01	.0E+00	1.7082E+03	1.4440E+03	1.9015E+03	3.8421E+02	2.7665E+02
4.000E+01	.0E+00	9.1338E+02	6.2092E+02	7.7392E+02	2.0155E+02	1.2461E+02
5.000E+01	.0E+00	5.4991E+02	3.1883E+02	3.8019E+02	1.2027E+02	6.5988E+01
6.000E+01	.0E+00	3.5877E+02	1.8374E+02	2.1120E+02	7.8097E+01	3.8895E+01
6.965E+01	.0E+00	2.5108E+02	1.1670E+02	1.3009E+02	5.4518E+01	2.5119E+01
7.020E+01	2.5833E+03	2.4628E+02	1.1390E+02	1.2675E+02	5.3472E+01	2.4535E+01
8.000E+01	1.8352E+03	1.7913E+02	7.6379E+01	8.2695E+01	3.8841E+01	1.6673E+01
1.000E+02	1.0341E+03	1.0292E+02	3.8519E+01	3.9752E+01	2.2302E+01	8.5783E+00
1.500E+02	3.5059E+02	3.6661E+01	1.1132E+01	1.0508E+01	7.9569E+00	2.5519E+00
2.000E+02	1.6137E+02	1.7438E+01	4.6680E+00	4.1393E+00	3.7931E+00	1.0868E+00
3.000E+02	5.4838E+01	6.1516E+00	1.4198E+00	1.1613E+00	1.3424E+00	3.3592E-01
4.000E+02	2.6207E+01	2.9949E+00	6.3338E-01	4.9413E-01	6.5469E-01	1.5107E-01
5.000E+02	1.5147E+01	1.7475E+00	3.4827E-01	2.6394E-01	3.8232E-01	8.3446E-02
6.000E+02	9.8650E+00	1.1435E+00	2.1820E-01	1.6236E-01	2.5029E-01	5.2431E-02
8.000E+02	5.2091E+00	6.0570E-01	1.0906E-01	7.9480E-02	1.3256E-01	2.6317E-02
1.000E+03	3.2784E+00	3.8112E-01	6.6147E-02	4.7689E-02	8.3394E-02	1.5998E-02
1.500E+03	1.5121E+00	1.7519E-01	2.9167E-02	2.0712E-02	3.8300E-02	7.0674E-03

Z= 74

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	4.0707E+04	4.2082E+04	1.2017E+05
1.500E+00	.0E+00	.0E+00	.0E+00	2.4438E+04	2.8330E+04	6.9375E+04
1.814E+00	.0E+00	.0E+00	.0E+00	1.8636E+04	2.2340E+04	5.1731E+04
1.829E+00	.0E+00	.0E+00	1.7260E+05	1.8420E+04	2.2106E+04	5.1074E+04
1.879E+00	.0E+00	.0E+00	5.9918E+05	1.7694E+04	2.1318E+04	4.8886E+04
1.894E+00	.0E+00	1.1367E+05	6.0532E+05	1.7486E+04	2.1090E+04	4.8259E+04
2.000E+00	.0E+00	3.7814E+05	5.4640E+05	1.6113E+04	1.9571E+04	4.4155E+04
2.269E+00	.0E+00	2.7627E+05	3.9163E+05	1.3279E+04	1.6324E+04	3.5678E+04
2.287E+00	1.3735E+05	2.7055E+05	3.8336E+05	1.3115E+04	1.6133E+04	3.5192E+04
2.566E+00	1.1455E+05	1.9955E+05	2.8116E+05	1.0929E+04	1.3539E+04	2.8754E+04
2.586E+00	1.1317E+05	1.9534E+05	2.7513E+05	1.0790E+04	1.3371E+04	2.8346E+04
2.795E+00	9.9577E+04	1.5956E+05	2.2420E+05	9.5165E+03	1.1821E+04	2.4629E+04
2.817E+00	9.8220E+04	1.5617E+05	2.1946E+05	9.3934E+03	1.1670E+04	2.4272E+04
3.000E+00	8.8076E+04	1.3215E+05	1.8512E+05	8.4702E+03	1.0530E+04	2.1607E+04
4.000E+00	5.3155E+04	5.8391E+04	8.0366E+04	5.1909E+03	6.3880E+03	1.2367E+04
5.000E+00	3.4281E+04	2.9865E+04	4.0643E+04	3.4932E+03	4.2034E+03	7.8033E+03
6.000E+00	2.3375E+04	1.6928E+04	2.2827E+04	2.5035E+03	2.9315E+03	5.2654E+03
8.000E+00	1.2305E+04	6.6916E+03	8.8784E+03	1.4572E+03	1.6077E+03	2.7456E+03
1.000E+01	7.2477E+03	3.1701E+03	4.1531E+03	9.4587E+02	9.8300E+02	1.6154E+03
1.020E+01	6.9139E+03	2.9682E+03	3.8844E+03	9.1065E+02	9.4098E+02	1.5412E+03
1.028E+01	6.7803E+03	2.8886E+03	3.7786E+03	8.9649E+02	9.2414E+02	1.5116E+03
1.156E+01	5.0660E+03	1.9274E+03	2.5026E+03	7.0996E+02	7.0527E+02	1.1305E+03
1.165E+01	4.9660E+03	1.8748E+03	2.4332E+03	6.9876E+02	6.9232E+02	1.1083E+03
1.207E+01	4.5486E+03	1.6606E+03	2.1509E+03	6.5162E+02	6.3817E+02	1.0155E+03
1.217E+01	4.4578E+03	1.6152E+03	2.0910E+03	6.4130E+02	6.2637E+02	9.9532E+02
1.500E+01	2.5976E+03	7.7236E+02	9.8626E+02	4.1931E+02	3.7979E+02	5.8213E+02
2.000E+01	1.1977E+03	2.7291E+02	3.4148E+02	2.2999E+02	1.8529E+02	2.7010E+02
3.000E+01	3.7939E+02	6.0132E+01	7.2878E+01	9.5340E+01	6.3795E+01	8.6428E+01
4.000E+01	1.6171E+02	2.0017E+01	2.3652E+01	4.9793E+01	2.8923E+01	3.7111E+01
5.000E+01	8.1927E+01	8.4352E+00	9.7575E+00	2.9651E+01	1.5395E+01	1.8905E+01
6.000E+01	4.6527E+01	4.1439E+00	4.7071E+00	1.9233E+01	9.1096E+00	1.0780E+01
6.965E+01	2.9126E+01	2.3143E+00	2.5890E+00	1.3419E+01	5.9007E+00	6.7695E+00
7.020E+01	2.8402E+01	2.2432E+00	2.5074E+00	1.3161E+01	5.7646E+00	6.6022E+00
8.000E+01	1.8770E+01	1.3457E+00	1.4839E+00	9.5570E+00	3.9270E+00	4.3741E+00
1.000E+02	9.1985E+00	5.6309E-01	6.0665E-01	5.4864E+00	2.0283E+00	2.1520E+00
1.500E+02	2.4997E+00	1.1774E-01	1.2200E-01	1.9584E+00	6.0681E-01	5.8823E-01
2.000E+02	9.9916E-01	3.9828E-02	4.0410E-02	9.3423E-01	2.5925E-01	2.3543E-01
3.000E+02	2.8452E-01	9.1495E-03	9.1819E-03	3.3075E-01	8.0513E-02	6.7255E-02
4.000E+02	1.2193E-01	3.4015E-03	3.4522E-03	1.6136E-01	3.6275E-02	2.8864E-02
5.000E+02	6.5392E-02	1.6398E-03	1.7008E-03	9.4251E-02	2.0061E-02	1.5492E-02
6.000E+02	4.0324E-02	9.2890E-04	9.8499E-04	6.1704E-02	1.2617E-02	9.5575E-03
8.000E+02	1.9754E-02	4.0616E-04	4.4801E-04	3.2686E-02	6.3330E-03	4.6898E-03
1.000E+03	1.1863E-02	2.2335E-04	2.5598E-04	2.0561E-02	3.8490E-03	2.8177E-03
1.500E+03	5.1491E-03	8.5433E-05	1.0715E-04	9.4414E-03	1.7014E-03	1.2235E-03

Z= 74

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	1.6913E+05	2.5165E+05	1.9586E+05	2.5028E+05	9.6084E+03	8.4060E+03
1.500E+00	8.9584E+04	1.2938E+05	5.7281E+04	7.2654E+04	5.1514E+03	4.9393E+03
1.814E+00	6.2158E+04	8.8749E+04	3.0716E+04	3.8823E+04	3.7984E+03	3.7504E+03
1.829E+00	6.1162E+04	8.7288E+04	2.9906E+04	3.7794E+04	3.7495E+03	3.7060E+03
1.879E+00	5.7852E+04	8.2444E+04	2.7291E+04	3.4472E+04	3.5871E+03	3.5576E+03
1.894E+00	5.6910E+04	8.1065E+04	2.6566E+04	3.3551E+04	3.5408E+03	3.5150E+03
2.000E+00	5.0804E+04	7.2142E+04	2.2086E+04	2.7865E+04	3.2391E+03	3.2353E+03
2.269E+00	3.8614E+04	5.4455E+04	1.4275E+04	1.7965E+04	2.6272E+03	2.6544E+03
2.287E+00	3.7932E+04	5.3469E+04	1.3881E+04	1.7467E+04	2.5924E+03	2.6207E+03
2.566E+00	2.9153E+04	4.0842E+04	9.2337E+03	1.1593E+04	2.1348E+03	2.1728E+03
2.586E+00	2.8614E+04	4.0070E+04	8.9733E+03	1.1265E+04	2.1060E+03	2.1443E+03
2.795E+00	2.3795E+04	3.3182E+04	6.7797E+03	8.4975E+03	1.8438E+03	1.8822E+03
2.817E+00	2.3341E+04	3.2536E+04	6.5858E+03	8.2531E+03	1.8187E+03	1.8569E+03

Z= 74

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
3.000E+00	2.0026E+04	2.7825E+04	5.2333E+03	6.5499E+03	1.6316E+03	1.6672E+03
4.000E+00	9.5547E+03	1.3077E+04	1.7707E+03	2.2027E+03	9.8091E+02	9.9410E+02
5.000E+00	5.1714E+03	6.9950E+03	7.3967E+02	9.1564E+02	6.5306E+02	6.4856E+02
6.000E+00	3.0581E+03	4.0959E+03	3.5553E+02	4.3826E+02	4.6485E+02	4.5003E+02
8.000E+00	1.2817E+03	1.6891E+03	1.0818E+02	1.3240E+02	2.6827E+02	2.4549E+02
1.000E+01	6.3202E+02	8.2194E+02	4.1781E+01	5.0823E+01	1.7324E+02	1.4971E+02
1.020E+01	5.9369E+02	7.7118E+02	3.8432E+01	4.6720E+01	1.6673E+02	1.4328E+02
1.028E+01	5.7854E+02	7.5113E+02	3.7127E+01	4.5123E+01	1.6411E+02	1.4071E+02
1.156E+01	3.9328E+02	5.0684E+02	2.2210E+01	2.6897E+01	1.2968E+02	1.0729E+02
1.165E+01	3.8303E+02	4.9339E+02	2.1445E+01	2.5965E+01	1.2761E+02	1.0532E+02
1.207E+01	3.4109E+02	4.3839E+02	1.8389E+01	2.2241E+01	1.1894E+02	9.7063E+01
1.217E+01	3.3215E+02	4.2667E+02	1.7755E+01	2.1468E+01	1.1704E+02	9.5264E+01
1.500E+01	1.6345E+02	2.0707E+02	6.9835E+00	8.3857E+00	7.6295E+01	5.7720E+01
2.000E+01	5.9698E+01	7.4083E+01	1.8904E+00	2.2474E+00	4.1721E+01	2.8161E+01
3.000E+01	1.3654E+01	1.6404E+01	2.8817E-01	3.3367E-01	1.7252E+01	9.8011E+00
4.000E+01	4.6421E+00	5.4374E+00	7.4438E-02	8.5000E-02	9.0038E+00	4.4490E+00
5.000E+01	1.9826E+00	2.2739E+00	2.5819E-02	2.9130E-02	5.3855E+00	2.3703E+00
6.000E+01	9.8301E-01	1.1073E+00	1.0851E-02	1.2113E-02	3.4922E+00	1.4036E+00
6.965E+01	5.5258E-01	6.1319E-01	5.3568E-03	5.9278E-03	2.4360E+00	9.0968E-01
7.020E+01	5.3580E-01	5.9407E-01	5.1582E-03	5.7055E-03	2.3892E+00	8.8871E-01
8.000E+01	3.2306E-01	3.5346E-01	2.7823E-03	3.0532E-03	1.7347E+00	6.0569E-01
1.000E+02	1.3619E-01	1.4567E-01	9.7640E-04	1.0561E-03	9.9569E-01	3.1307E-01
1.500E+02	2.8803E-02	2.9469E-02	1.5139E-04	1.6012E-04	3.5533E-01	9.3775E-02
2.000E+02	9.8009E-03	9.8160E-03	4.2149E-05	4.4123E-05	1.6947E-01	4.0092E-02
3.000E+02	2.2651E-03	2.2436E-03	7.5527E-06	7.9305E-06	6.0024E-02	1.2444E-02
4.000E+02	8.4456E-04	8.4666E-04	2.3953E-06	2.5709E-06	2.9286E-02	5.6086E-03
5.000E+02	4.0838E-04	4.1781E-04	1.0301E-06	1.1533E-06	1.7106E-02	3.1023E-03
6.000E+02	2.3192E-04	2.4254E-04	5.3842E-07	6.2328E-07	1.1199E-02	1.9510E-03
8.000E+02	1.0092E-04	1.1116E-04	2.1024E-07	2.6270E-07	5.9326E-03	9.7920E-04
1.000E+03	5.5660E-05	6.3691E-05	1.0520E-07	1.4095E-07	3.7318E-03	5.9527E-04
1.500E+03	2.1392E-05	2.6285E-05	3.8041E-08	5.4469E-08	1.7139E-03	2.6310E-04

Z= 74

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	6 S 1/2
1.000E+00	2.0320E+04	4.8380E+03	6.8485E+03	1.0009E+03
1.500E+00	1.0899E+04	2.4399E+03	3.3841E+03	5.1659E+02
1.814E+00	7.9578E+03	1.6792E+03	2.3086E+03	3.7535E+02
1.829E+00	7.8510E+03	1.6519E+03	2.2703E+03	3.7033E+02
1.879E+00	7.4958E+03	1.5616E+03	2.1434E+03	3.5366E+02
1.894E+00	7.3943E+03	1.5359E+03	2.1073E+03	3.4891E+02
2.000E+00	6.7334E+03	1.3694E+03	1.8744E+03	3.1799E+02
2.269E+00	5.3919E+03	1.0397E+03	1.4150E+03	2.5569E+02
2.287E+00	5.3155E+03	1.0212E+03	1.3894E+03	2.5217E+02
2.566E+00	4.3134E+03	7.8487E+02	1.0624E+03	2.0628E+02
2.586E+00	4.2504E+03	7.7037E+02	1.0424E+03	2.0340E+02
2.795E+00	3.6785E+03	6.4102E+02	8.6432E+02	1.7726E+02
2.817E+00	3.6238E+03	6.2886E+02	8.4762E+02	1.7476E+02
3.000E+00	3.2172E+03	5.3990E+02	7.2570E+02	1.5622E+02
4.000E+00	1.8244E+03	2.6121E+02	3.4034E+02	9.5019E+01
5.000E+00	1.1463E+03	1.4213E+02	1.8302E+02	6.3228E+01
6.000E+00	7.7179E+02	8.4414E+01	1.0763E+02	4.4998E+01
8.000E+00	4.0168E+02	3.5608E+01	4.4673E+01	2.5969E+01
1.000E+01	2.3623E+02	1.7641E+01	2.1840E+01	1.6772E+01
1.020E+01	2.2538E+02	1.6578E+01	2.0499E+01	1.6141E+01
1.028E+01	2.2104E+02	1.6157E+01	1.9969E+01	1.5887E+01
1.156E+01	1.6534E+02	1.1009E+01	1.3506E+01	1.2555E+01
1.165E+01	1.6208E+02	1.0723E+01	1.3150E+01	1.2356E+01
1.207E+01	1.4852E+02	9.5556E+00	1.1691E+01	1.1516E+01
1.217E+01	1.4558E+02	9.3065E+00	1.1381E+01	1.1332E+01
1.500E+01	8.5206E+01	4.5971E+00	5.5439E+00	7.3883E+00

Z= 74

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	6 S 1/2
2.000E+01	3.9601E+01	1.6866E+00	1.9925E+00	4.0409E+00
3.000E+01	1.2679E+01	3.8776E-01	4.4353E-01	1.6708E+00
4.000E+01	5.4513E+00	1.3224E-01	1.4746E-01	8.7163E-01
5.000E+01	2.7796E+00	5.6598E-02	6.1794E-02	5.1875E-01
6.000E+01	1.5862E+00	2.8107E-02	3.0135E-02	3.3636E-01
6.965E+01	9.9663E-01	1.5819E-02	1.6704E-02	2.3462E-01
7.020E+01	9.7202E-01	1.5339E-02	1.6184E-02	2.3011E-01
8.000E+01	6.4429E-01	9.2575E-03	9.6362E-03	1.6708E-01
1.000E+02	3.1720E-01	3.9082E-03	3.9761E-03	9.5900E-02
1.500E+02	8.6790E-02	8.2762E-04	8.1016E-04	3.4225E-02
2.000E+02	3.4822E-02	2.8174E-04	2.7023E-04	1.6324E-02
3.000E+02	9.9542E-03	6.5149E-05	6.1847E-05	5.7828E-03
4.000E+02	4.2740E-03	2.4302E-05	2.3347E-05	2.8223E-03
5.000E+02	2.2944E-03	1.1743E-05	1.1530E-05	1.6493E-03
6.000E+02	1.4154E-03	6.6610E-06	6.7177E-06	1.0803E-03
8.000E+02	6.9499E-04	2.9058E-06	3.0802E-06	5.7320E-04
1.000E+03	4.1761E-04	1.5976E-06	1.7776E-06	3.6138E-04
1.500E+03	1.8157E-04	6.1535E-07	7.4449E-07	1.6756E-04

Z= 75 22 STATES, 44 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	71.8850	.98545
2 S 1/2	2.00	12.5126	.87034
2 P 1/2	2.00	11.9938	.80928
2 P 3/2	4.00	10.5379	.78389
3 S 1/2	2.00	2.9131	.65780
3 P 1/2	2.00	2.6780	.58098
3 P 3/2	4.00	2.3604	.54788
3 D 3/2	4.00	1.9618	.34996
3 D 5/2	6.00	1.8924	.34306
4 S 1/2	2.00	.6164	.39309
4 P 1/2	2.00	.5171	.32377
4 P 3/2	4.00	.4427	.29230
4 D 3/2	4.00	.2783	.14635
4 D 5/2	6.00	.2644	.14031
4 F 5/2	6.00	.0556	.02428
4 F 7/2	8.00	.0529	.02366
5 S 1/2	2.00	.0917	.14478
5 P 1/2	2.00	.0610	.10045
5 P 3/2	4.00	.0494	.08524
5 D 3/2	2.00	.0095	.01969
5 D 5/2	3.00	.0085	.01792
6 S 1/2	2.00	.0081	.02460

Z= 75 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	1.1936E+06	.0E+00	.0E+00	.0E+00	1.1936E+06
1.5000E+00	5.3106E+05	.0E+00	.0E+00	.0E+00	5.3106E+05
1.8905E+00	3.2465E+05	.0E+00	.0E+00	.0E+00	3.2465E+05
1.9057E+00	4.7347E+05	.0E+00	.0E+00	1.5439E+05	3.1908E+05
1.9598E+00	8.6979E+05	.0E+00	.0E+00	5.6957E+05	3.0022E+05
1.9755E+00	9.7184E+05	.0E+00	.0E+00	6.7680E+05	2.9504E+05
2.0000E+00	1.1635E+06	.0E+00	.0E+00	8.7628E+05	2.8722E+05
2.3581E+00	8.3845E+05	.0E+00	.0E+00	6.3897E+05	1.9948E+05
2.3769E+00	9.5309E+05	.0E+00	.0E+00	7.5713E+05	1.9595E+05
2.6753E+00	7.1508E+05	.0E+00	.0E+00	5.6508E+05	1.5001E+05
2.6967E+00	7.4555E+05	.0E+00	.0E+00	5.9824E+05	1.4731E+05

Z= 75 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY (KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
2.9102E+00	6.2382E+05	.0E+00	.0E+00	5.0010E+05	1.2373E+05
2.9335E+00	6.3858E+05	.0E+00	.0E+00	5.1710E+05	1.2148E+05
3.0000E+00	6.0677E+05	.0E+00	.0E+00	4.9141E+05	1.1536E+05
4.0000E+00	3.0480E+05	.0E+00	.0E+00	2.4608E+05	5.8722E+04
5.0000E+00	1.7571E+05	.0E+00	.0E+00	1.4139E+05	3.4320E+04
6.0000E+00	1.1105E+05	.0E+00	.0E+00	8.9086E+04	2.1961E+04
8.0000E+00	5.3251E+04	.0E+00	.0E+00	4.2525E+04	1.0726E+04
1.0000E+01	2.9846E+04	.0E+00	.0E+00	2.3750E+04	6.0963E+03
1.0527E+01	2.6095E+04	.0E+00	.0E+00	2.0748E+04	5.3468E+03
1.0612E+01	6.6420E+04	.0E+00	4.0864E+04	2.0317E+04	5.2388E+03
1.1982E+01	4.8037E+04	.0E+00	2.9457E+04	1.4745E+04	3.8360E+03
1.2078E+01	6.5147E+04	.0E+00	4.6952E+04	1.4437E+04	3.7580E+03
1.2500E+01	5.9851E+04	.0E+00	4.3232E+04	1.3180E+04	3.4391E+03
1.2600E+01	6.7764E+04	.0E+00	5.1491E+04	1.2904E+04	3.3690E+03
1.5000E+01	4.3602E+04	.0E+00	3.3347E+04	8.1122E+03	2.1430E+03
2.0000E+01	2.0469E+04	.0E+00	1.5716E+04	3.7455E+03	1.0067E+03
3.0000E+01	6.9138E+03	.0E+00	5.3285E+03	1.2440E+03	3.4134E+02
4.0000E+01	3.1598E+03	.0E+00	2.4387E+03	5.6427E+02	1.5678E+02
5.0000E+01	1.7108E+03	.0E+00	1.3212E+03	3.0433E+02	8.5303E+01
6.0000E+01	1.0331E+03	.0E+00	7.9807E+02	1.8333E+02	5.1706E+01
7.1813E+01	6.2698E+02	.0E+00	4.8444E+02	1.1105E+02	3.1494E+01
7.2388E+01	3.1037E+03	2.4905E+03	4.7380E+02	1.0860E+02	3.0807E+01
8.0000E+01	2.3798E+03	1.9157E+03	3.5861E+02	8.2124E+01	2.3361E+01
1.0000E+02	1.3295E+03	1.0806E+03	1.9234E+02	4.3974E+01	1.2580E+01
1.5000E+02	4.4801E+02	3.6776E+02	6.2017E+01	1.4151E+01	4.0829E+00
2.0000E+02	2.0589E+02	1.6971E+02	2.7958E+01	6.3743E+00	1.8475E+00
3.0000E+02	6.9897E+01	5.7834E+01	9.3214E+00	2.1233E+00	6.1858E-01
4.0000E+02	3.3392E+01	2.7690E+01	4.4062E+00	1.0028E+00	2.9294E-01
5.0000E+02	1.9291E+01	1.6025E+01	2.5243E+00	5.7406E-01	1.6796E-01
6.0000E+02	1.2556E+01	1.0446E+01	1.6314E+00	3.7069E-01	1.0857E-01
8.0000E+02	6.6215E+00	5.5212E+00	8.5069E-01	1.9304E-01	5.6594E-02
1.0000E+03	4.1619E+00	3.4762E+00	5.3024E-01	1.2016E-01	3.5258E-02
1.5000E+03	1.9149E+00	1.6033E+00	2.4106E-01	5.4518E-02	1.6009E-02

Z= 75

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.891E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.906E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.960E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.976E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.358E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.377E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.675E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.697E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.4242E+04
2.910E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.0077E+04
2.933E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.0077E+04
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.6391E+04	3.9760E+04
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.6120E+04	3.8788E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.7416E+04	2.5756E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.2499E+04	1.7897E+04
8.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	9.2578E+03	1.2864E+04
1.000E+01	.0E+00	.0E+00	.0E+00	.0E+00	5.6257E+03	7.2596E+03
1.053E+01	.0E+00	.0E+00	.0E+00	.0E+00	3.7387E+03	4.4958E+03
1.061E+01	.0E+00	.0E+00	.0E+00	.0E+00	3.3960E+03	4.0085E+03
1.198E+01	.0E+00	.0E+00	.0E+00	4.0864E+04	3.3453E+03	3.9374E+03
1.208E+01	.0E+00	.0E+00	.0E+00	2.9457E+04	2.6519E+03	2.9875E+03
1.250E+01	.0E+00	.0E+00	1.8105E+04	2.8847E+04	2.6115E+03	2.9329E+03
1.250E+01	.0E+00	.0E+00	1.6863E+04	2.6368E+04	2.4439E+03	2.7073E+03

Z= 75

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.260E+01	.0E+00	9.2030E+03	1.6466E+04	2.5821E+04	2.4065E+03	2.6573E+03
1.500E+01	.0E+00	6.8443E+03	1.0565E+04	1.5937E+04	1.7068E+03	1.7553E+03
2.000E+01	.0E+00	4.0084E+03	4.8354E+03	6.8726E+03	9.4962E+02	8.5833E+02
3.000E+01	.0E+00	1.7636E+03	1.5445E+03	2.0204E+03	3.9936E+02	2.9533E+02
4.000E+01	.0E+00	9.4704E+02	6.6669E+02	8.2497E+02	2.1002E+02	1.3366E+02
5.000E+01	.0E+00	5.7179E+02	3.4333E+02	4.0608E+02	1.2559E+02	7.1039E+01
6.000E+01	.0E+00	3.7380E+02	1.9835E+02	2.2593E+02	8.1685E+01	4.1991E+01
7.181E+01	.0E+00	2.4333E+02	1.1500E+02	1.2611E+02	5.3013E+01	2.4841E+01
7.239E+01	2.4905E+03	2.3868E+02	1.1224E+02	1.2288E+02	5.1996E+01	2.4266E+01
8.000E+01	1.9157E+03	1.8718E+02	8.2756E+01	8.8678E+01	4.0733E+01	1.8076E+01
1.000E+02	1.0806E+03	1.0778E+02	4.1849E+01	4.2705E+01	2.3435E+01	9.3293E+00
1.500E+02	3.6776E+02	3.8546E+01	1.2149E+01	1.1322E+01	8.3914E+00	2.7896E+00
2.000E+02	1.6971E+02	1.8381E+01	5.1089E+00	4.4682E+00	4.0101E+00	1.1919E+00
3.000E+02	5.7834E+01	6.5058E+00	1.5595E+00	1.2562E+00	1.4239E+00	3.6989E-01
4.000E+02	2.7690E+01	3.1740E+00	6.9719E-01	5.3504E-01	6.9585E-01	1.6673E-01
5.000E+02	1.6025E+01	1.8545E+00	3.8391E-01	2.8593E-01	4.0692E-01	9.2247E-02
6.000E+02	1.0446E+01	1.2147E+00	2.4078E-01	1.7591E-01	2.6664E-01	5.8025E-02
8.000E+02	5.5212E+00	6.4408E-01	1.2051E-01	8.6101E-02	1.4142E-01	2.9165E-02
1.000E+03	3.4762E+00	4.0544E-01	7.3154E-02	5.1643E-02	8.8971E-02	1.7746E-02
1.500E+03	1.6033E+00	1.8636E-01	3.2295E-02	2.2405E-02	4.0858E-02	7.8477E-03

Z= 75

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	4.0874E+04	4.1766E+04	1.2268E+05
1.500E+00	.0E+00	.0E+00	.0E+00	2.4787E+04	2.8555E+04	7.1326E+04
1.891E+00	.0E+00	.0E+00	.0E+00	1.7857E+04	2.1472E+04	4.9932E+04
1.906E+00	.0E+00	.0E+00	1.5439E+05	1.7649E+04	2.1247E+04	4.9294E+04
1.960E+00	.0E+00	.0E+00	5.6957E+05	1.6935E+04	2.0467E+04	4.7106E+04
1.976E+00	.0E+00	1.0279E+05	5.7401E+05	1.6735E+04	2.0248E+04	4.6499E+04
2.000E+00	.0E+00	3.0865E+05	5.762E+05	1.6430E+04	1.9913E+04	4.5574E+04
2.358E+00	.0E+00	2.6486E+05	3.7410E+05	1.2775E+04	1.5749E+04	3.4532E+04
2.377E+00	1.3160E+05	2.5936E+05	3.6617E+05	1.2617E+04	1.5565E+04	3.4058E+04
2.675E+00	1.0985E+05	1.8937E+05	2.6585E+05	1.0460E+04	1.2999E+04	2.7648E+04
2.697E+00	1.0852E+05	1.8535E+05	2.6013E+05	1.0327E+04	1.2897E+04	2.7254E+04
2.910E+00	9.5601E+04	1.5175E+05	2.1267E+05	9.1285E+03	1.1374E+04	2.3726E+04
2.933E+00	9.4287E+04	1.4852E+05	2.0815E+05	9.0105E+03	1.1229E+04	2.3381E+04
3.000E+00	9.0669E+04	1.3988E+05	1.9596E+05	8.6857E+03	1.0828E+04	2.2433E+04
4.000E+00	5.4829E+04	6.2309E+04	8.5773E+04	5.3408E+03	6.6108E+03	1.2889E+04
5.000E+00	3.5478E+04	3.1999E+04	4.3521E+04	3.6030E+03	4.3708E+03	8.1571E+03
6.000E+00	2.4273E+04	1.8193E+04	2.4499E+04	2.5868E+03	3.0589E+03	5.5170E+03
8.000E+00	1.2838E+04	7.2266E+03	9.5749E+03	1.5091E+03	1.6866E+03	2.8869E+03
1.000E+01	7.5882E+03	3.4354E+03	4.4920E+03	9.8117E+02	1.0354E+03	1.7033E+03
1.053E+01	6.6980E+03	2.8850E+03	3.7609E+03	8.8716E+02	9.2241E+02	1.5037E+03
1.061E+01	6.5685E+03	2.8077E+03	3.6584E+03	8.7337E+02	9.0592E+02	1.4747E+03
1.198E+01	4.8626E+03	1.8504E+03	2.3925E+03	6.8671E+02	6.8594E+02	1.0929E+03
1.208E+01	4.7665E+03	1.7999E+03	2.3261E+03	6.7588E+02	6.7336E+02	1.0713E+03
1.250E+01	4.3715E+03	1.5974E+03	2.0600E+03	6.3098E+02	6.2155E+02	9.8293E+02
1.260E+01	4.2842E+03	1.5537E+03	2.0026E+03	6.2097E+02	6.1007E+02	9.6340E+02
1.500E+01	2.7358E+03	8.4176E+02	1.0725E+03	4.3625E+02	4.0300E+02	6.1703E+02
2.000E+01	1.2662E+03	2.9863E+02	3.7272E+02	2.3980E+02	1.9763E+02	2.8737E+02
3.000E+01	4.0316E+02	6.6173E+01	7.9947E+01	9.9720E+01	6.8522E+01	9.2429E+01
4.000E+01	1.7244E+02	2.2112E+01	2.6037E+01	5.2201E+01	3.1216E+01	3.9829E+01
5.000E+01	8.7593E+01	9.3442E+00	1.0769E+01	3.1143E+01	1.6675E+01	2.0344E+01
6.000E+01	4.9846E+01	4.6004E+00	5.2052E+00	2.0233E+01	9.8959E+00	1.1625E+01
7.181E+01	2.8378E+01	2.2837E+00	2.5361E+00	1.3121E+01	5.8758E+00	6.6435E+00
7.239E+01	2.7673E+01	2.2137E+00	2.4564E+00	1.2869E+01	5.7406E+00	6.4795E+00
8.000E+01	2.0170E+01	1.4988E+00	1.6457E+00	1.0079E+01	4.2844E+00	4.7319E+00
1.000E+02	9.9066E+00	6.2861E-01	6.7419E-01	5.7975E+00	2.2199E+00	2.3333E+00
1.500E+02	2.7019E+00	1.3194E-01	1.3603E-01	2.0767E+00	6.6772E-01	6.4017E-01
2.000E+02	1.0823E+00	4.4727E-02	4.5137E-02	9.9308E-01	2.8622E-01	2.5681E-01

Z= 75

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
3.000E+02	3.0895E-01	1.0302E-02	1.0276E-02	3.5275E-01	8.9237E-02	7.3546E-02
4.000E+02	1.3256E-01	3.8361E-03	3.8667E-03	1.7245E-01	4.0302E-02	3.1604E-02
5.000E+02	7.1131E-02	1.8512E-03	1.9057E-03	1.0087E-01	2.2325E-02	1.6974E-02
6.000E+02	4.3871E-02	1.0494E-03	1.1082E-03	6.6095E-02	1.4057E-02	1.0474E-02
8.000E+02	2.1493E-02	4.5976E-04	5.0101E-04	3.5048E-02	7.0651E-03	5.1385E-03
1.000E+03	1.2900E-02	2.5241E-04	2.8753E-04	2.2056E-02	4.2985E-03	3.0869E-03
1.500E+03	5.5961E-03	9.7167E-05	1.1933E-04	1.0127E-02	1.9021E-03	1.3391E-03

Z= 75

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	1.7340E+05	2.5886E+05	2.1839E+05	2.7931E+05	1.0077E+04	8.8313E+03
1.500E+00	9.3296E+04	1.3497E+05	6.4738E+04	8.2164E+04	5.4157E+03	5.2193E+03
1.891E+00	5.9957E+04	8.5475E+04	3.0417E+04	3.8435E+04	3.7400E+03	3.7388E+03
1.906E+00	5.8991E+04	8.4059E+04	2.9614E+04	3.7415E+04	3.6918E+03	3.6945E+03
1.960E+00	5.5691E+04	7.9228E+04	2.6949E+04	3.4030E+04	3.5270E+03	3.5419E+03
1.976E+00	5.4778E+04	7.7895E+04	2.6233E+04	3.3121E+04	3.4814E+03	3.4994E+03
2.000E+00	5.3392E+04	7.5873E+04	2.5162E+04	3.1761E+04	3.4120E+03	3.4346E+03
2.358E+00	3.7392E+04	5.2642E+04	1.4263E+04	1.7945E+04	2.5975E+03	2.6562E+03
2.377E+00	3.6730E+04	5.1687E+04	1.3869E+04	1.7447E+04	2.5631E+03	2.6225E+03
2.675E+00	2.7997E+04	3.9141E+04	9.1181E+03	1.1443E+04	2.0988E+03	2.1624E+03
2.697E+00	2.7477E+04	3.8398E+04	8.8609E+03	1.1118E+04	2.0705E+03	2.1340E+03
2.910E+00	2.2915E+04	3.1888E+04	6.7280E+03	8.4286E+03	1.8170E+03	1.8775E+03
2.933E+00	2.2477E+04	3.1266E+04	6.5355E+03	8.1861E+03	1.7922E+03	1.8522E+03
3.000E+00	2.1285E+04	2.9572E+04	6.0219E+03	7.5393E+03	1.7242E+03	1.7826E+03
4.000E+00	1.0225E+04	1.3990E+04	2.0503E+03	2.5511E+03	1.0390E+03	1.0684E+03
5.000E+00	5.5617E+03	7.5176E+03	8.6025E+02	1.0650E+03	6.9294E+02	6.9978E+02
6.000E+00	3.3012E+03	4.4174E+03	4.1486E+02	5.1136E+02	4.9390E+02	4.8713E+02
8.000E+00	1.3914E+03	1.8313E+03	1.2689E+02	1.5527E+02	2.8560E+02	2.6704E+02
1.000E+01	6.8903E+02	8.9466E+02	4.9217E+01	5.9848E+01	1.8469E+02	1.6347E+02
1.053E+01	5.8380E+02	7.5559E+02	3.9434E+01	4.7878E+01	1.6682E+02	1.4556E+02
1.061E+01	5.6891E+02	7.3594E+02	3.8096E+01	4.6243E+01	1.6420E+02	1.4295E+02
1.198E+01	3.8222E+02	4.9060E+02	2.2442E+01	2.7138E+01	1.2881E+02	1.0814E+02
1.208E+01	3.7227E+02	4.7758E+02	2.1670E+01	2.6198E+01	1.2676E+02	1.0615E+02
1.250E+01	3.3213E+02	4.2511E+02	1.8631E+01	2.2498E+01	1.1828E+02	9.7966E+01
1.260E+01	3.2342E+02	4.1375E+02	1.7988E+01	2.1716E+01	1.1639E+02	9.6152E+01
1.500E+01	1.7954E+02	2.2698E+02	8.2875E+00	9.9459E+00	8.1553E+01	6.3474E+01
2.000E+01	6.5902E+01	8.1586E+01	2.2531E+00	2.6760E+00	4.4687E+01	3.1123E+01
3.000E+01	1.5171E+01	1.8175E+01	3.4527E-01	3.9938E-01	1.8532E+01	1.0904E+01
4.000E+01	5.1806E+00	6.0485E+00	8.9576E-02	1.0219E-01	9.6932E+00	4.9736E+00
5.000E+01	2.2198E+00	2.5369E+00	3.1178E-02	3.5131E-02	5.8077E+00	2.6594E+00
6.000E+01	1.1034E+00	1.2383E+00	1.3133E-02	1.4645E-02	3.7718E+00	1.5794E+00
7.181E+01	5.5215E-01	6.0836E-01	5.6181E-03	6.1976E-03	2.4454E+00	9.3841E-01
7.239E+01	5.3542E-01	5.8943E-01	5.4106E-03	5.9657E-03	2.3985E+00	9.1685E-01
8.000E+01	3.6396E-01	3.9654E-01	3.3779E-03	3.7003E-03	1.8783E+00	6.8452E-01
1.000E+02	1.5384E-01	1.6380E-01	1.1885E-03	1.2834E-03	1.0802E+00	3.5494E-01
1.500E+02	3.2658E-02	3.3268E-02	1.8497E-04	1.9537E-04	3.8684E-01	1.0689E-01
2.000E+02	1.1138E-02	1.1106E-02	5.1609E-05	5.3925E-05	1.8495E-01	4.5853E-02
3.000E+02	2.5814E-03	2.5447E-03	9.2682E-06	9.7214E-06	6.5722E-02	1.4291E-02
4.000E+02	9.6461E-04	9.6076E-04	2.9520E-06	3.1559E-06	3.2132E-02	6.4561E-03
5.000E+02	4.6706E-04	4.7345E-04	1.2670E-06	1.4085E-06	1.8794E-02	3.5769E-03
6.000E+02	2.6516E-04	2.7523E-04	6.6211E-07	7.6752E-07	1.2316E-02	2.2521E-03
8.000E+02	1.1566E-04	1.2624E-04	2.5812E-07	3.2041E-07	6.5307E-03	1.1320E-03
1.000E+03	6.3758E-05	7.2171E-05	1.3079E-07	1.7091E-07	4.1097E-03	6.8873E-04
1.500E+03	2.4546E-05	2.9701E-05	4.5738E-08	6.7206E-08	1.8872E-03	3.0480E-04

Z= 75

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	6 S 1/2
1.000E+00	2.1726E+04	6.8741E+03	9.7604E+03	1.0667E+03
1.500E+00	1.1677E+04	3.5014E+03	4.8654E+03	5.5117E+02
1.891E+00	7.9623E+03	2.2262E+03	3.0589E+03	3.7366E+02
1.906E+00	7.8548E+03	2.1899E+03	3.0078E+03	3.6866E+02
1.960E+00	7.4872E+03	2.0661E+03	2.8340E+03	3.5157E+02
1.976E+00	7.3854E+03	2.0320E+03	2.7860E+03	3.4684E+02
2.000E+00	7.2305E+03	1.9801E+03	2.7133E+03	3.3966E+02
2.358E+00	5.4113E+03	1.3842E+03	1.8821E+03	2.5569E+02
2.377E+00	5.3343E+03	1.3596E+03	1.8480E+03	2.5217E+02
2.675E+00	4.2996E+03	1.0364E+03	1.4010E+03	2.0506E+02
2.697E+00	4.2366E+03	1.0172E+03	1.3745E+03	2.0220E+02
2.910E+00	3.6743E+03	8.4885E+02	1.1429E+03	1.7266E+02
2.933E+00	3.6194E+03	8.3271E+02	1.1207E+03	1.7417E+02
3.000E+00	3.4690E+03	7.8876E+02	1.0605E+03	1.6734E+02
4.000E+00	1.9735E+03	3.8088E+02	5.0084E+02	1.0188E+02
5.000E+00	1.2432E+03	2.0979E+02	2.7061E+02	6.7898E+01
6.000E+00	8.3883E+02	1.2508E+02	1.5973E+02	4.8381E+01
8.000E+00	4.3804E+02	5.3075E+01	6.6664E+01	2.7972E+01
1.000E+01	2.5829E+02	2.6410E+01	3.2726E+01	1.8090E+01
1.053E+01	2.2801E+02	2.2401E+01	2.7669E+01	1.6340E+01
1.061E+01	2.2362E+02	2.1833E+01	2.6954E+01	1.6083E+01
1.198E+01	1.6574E+02	1.4705E+01	1.8012E+01	1.2618E+01
1.208E+01	1.6248E+02	1.4325E+01	1.7537E+01	1.2417E+01
1.250E+01	1.4908E+02	1.2788E+01	1.5621E+01	1.1586E+01
1.260E+01	1.4612E+02	1.2455E+01	1.5206E+01	1.1401E+01
1.500E+01	9.3640E+01	6.9368E+00	8.3690E+00	7.9895E+00
2.000E+01	4.3680E+01	2.5583E+00	3.0226E+00	4.3785E+00
3.000E+01	1.4060E+01	5.9216E-01	6.7705E-01	1.8158E+00
4.000E+01	6.0663E+00	2.0287E-01	2.2605E-01	9.4936E-01
5.000E+01	3.1017E+00	8.7121E-02	9.5016E-02	5.6604E-01
6.000E+01	1.7738E+00	4.3374E-02	4.6446E-02	3.6760E-01
7.181E+01	1.0143E+00	2.1738E-02	2.2848E-02	2.3832E-01
7.239E+01	9.8934E-01	2.1081E-02	2.2138E-02	2.3374E-01
8.000E+01	7.2277E-01	1.4340E-02	1.4902E-02	1.8305E-01
1.000E+02	3.5667E-01	6.0701E-03	6.1636E-03	1.0527E-01
1.500E+02	9.7959E-02	1.2907E-03	1.2605E-03	3.7701E-02
2.000E+02	3.9392E-02	4.4050E-04	4.2130E-04	1.8026E-02
3.000E+02	1.1290E-02	1.0216E-04	9.6623E-05	6.4065E-03
4.000E+02	4.8535E-03	3.8172E-05	3.6509E-05	3.1330E-03
5.000E+02	2.6068E-03	1.8463E-05	1.8035E-05	1.8332E-03
6.000E+02	1.6086E-03	1.0483E-05	1.0508E-05	1.2019E-03
8.000E+02	7.8975E-04	4.5765E-06	4.8155E-06	6.3825E-04
1.000E+03	4.7438E-04	2.5182E-06	2.7763E-06	4.0251E-04
1.500E+03	2.0603E-04	9.6965E-07	1.1589E-06	1.8645E-04

Z= 76 22 STATES, 44 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	74.0983	.98556
2 S 1/2	2.00	12.9548	.87173
2 P 1/2	2.00	12.4244	.81128
2 P 3/2	4.00	10.8761	.78531
3 S 1/2	2.00	3.0316	.66113
3 P 1/2	2.00	2.7908	.58496
3 P 3/2	4.00	2.4517	.55096
3 D 3/2	4.00	2.0445	.35392
3 D 5/2	6.00	1.9706	.34682
4 S 1/2	2.00	.6486	.39749
4 P 1/2	2.00	.5464	.32848
4 P 3/2	4.00	.4663	.29605
4 D 3/2	4.00	.2971	.14987
4 D 5/2	6.00	.2822	.14362
4 F 5/2	6.00	.0661	.02604
4 F 7/2	8.00	.0631	.02539
5 S 1/2	2.00	.0983	.15012
5 P 1/2	2.00	.0661	.10536
5 P 3/2	4.00	.0532	.08926
5 D 3/2	2.40	.0108	.02188
5 D 5/2	3.60	.0096	.01992
6 S 1/2	2.00	.0084	.02564

Z= 76 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	1.2696E+06	.0E+00	.0E+00	.0E+00	1.2696E+06
1.5000E+00	5.6541E+05	.0E+00	.0E+00	.0E+00	5.6541E+05
1.9687E+00	3.1663E+05	.0E+00	.0E+00	.0E+00	3.1663E+05
1.9844E+00	4.5023E+05	.0E+00	.0E+00	1.3907E+05	3.1117E+05
2.0000E+00	6.9718E+05	.0E+00	.0E+00	3.9128E+05	3.0589E+05
2.0425E+00	8.3541E+05	.0E+00	.0E+00	5.4327E+05	2.9214E+05
2.0588E+00	9.2657E+05	.0E+00	.0E+00	6.3949E+05	2.8708E+05
2.4492E+00	8.0689E+05	.0E+00	.0E+00	6.1172E+05	1.9517E+05
2.4688E+00	9.1660E+05	.0E+00	.0E+00	7.2490E+05	1.9170E+05
2.7880E+00	6.8208E+05	.0E+00	.0E+00	5.3660E+05	1.4548E+05
2.8103E+00	7.1097E+05	.0E+00	.0E+00	5.6812E+05	1.4285E+05
3.0000E+00	6.0922E+05	.0E+00	.0E+00	4.8628E+05	1.2293E+05
3.0286E+00	5.9569E+05	.0E+00	.0E+00	4.7542E+05	1.2027E+05
3.0528E+00	6.1065E+05	.0E+00	.0E+00	4.9257E+05	1.1808E+05
4.0000E+00	3.2033E+05	.0E+00	.0E+00	2.5771E+05	6.2618E+04
5.0000E+00	1.8505E+05	.0E+00	.0E+00	1.4844E+05	3.6607E+04
6.0000E+00	1.1710E+05	.0E+00	.0E+00	9.3666E+04	2.3430E+04
8.0000E+00	5.6220E+04	.0E+00	.0E+00	4.4773E+04	1.1448E+04
1.0000E+01	3.1543E+04	.0E+00	.0E+00	2.5034E+04	6.5088E+03
1.0865E+01	2.5399E+04	.0E+00	.0E+00	2.0133E+04	5.2661E+03
1.0952E+01	6.4318E+04	.0E+00	3.9444E+04	1.9715E+04	5.1597E+03
1.2412E+01	4.6024E+04	.0E+00	2.8113E+04	1.4170E+04	3.7412E+03
1.2511E+01	6.2490E+04	.0E+00	4.4951E+04	1.3874E+04	3.6650E+03
1.2942E+01	5.7491E+04	.0E+00	4.1447E+04	1.2685E+04	3.3585E+03
1.3045E+01	6.5088E+04	.0E+00	4.9379E+04	1.2419E+04	3.2899E+03
1.5000E+01	4.5719E+04	.0E+00	3.4862E+04	8.5667E+03	2.2901E+03
2.0000E+01	2.1545E+04	.0E+00	1.6508E+04	3.9603E+03	1.0766E+03
3.0000E+01	7.2970E+03	.0E+00	5.6139E+03	1.3177E+03	3.6542E+02
4.0000E+01	3.3407E+03	.0E+00	2.5742E+03	5.9849E+02	1.6806E+02
5.0000E+01	1.8111E+03	.0E+00	1.3964E+03	3.2312E+02	9.1517E+01
6.0000E+01	1.0947E+03	.0E+00	8.4434E+02	1.9481E+02	5.5513E+01
7.4024E+01	6.1120E+02	.0E+00	4.7155E+02	1.0852E+02	3.1120E+01
7.4617E+01	2.9985E+03	2.4007E+03	4.6121E+02	1.0614E+02	3.0442E+01

Z= 76 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
8.0000E+01	2.4995E+03	2.0071E+03	3.7995E+02	8.7383E+01	2.5111E+01
1.0000E+02	1.3917E+03	1.1273E+03	2.0403E+02	4.6839E+01	1.3536E+01
1.5000E+02	4.7084E+02	3.8542E+02	6.5916E+01	1.5102E+01	4.4011E+00
2.0000E+02	2.1688E+02	1.7832E+02	2.9757E+01	6.8114E+00	1.9941E+00
3.0000E+02	7.3823E+01	6.0938E+01	9.9423E+00	2.2736E+00	6.6902E-01
4.0000E+02	3.5330E+01	2.9231E+01	4.7060E+00	1.0752E+00	3.1723E-01
5.0000E+02	2.0435E+01	1.6938E+01	2.6985E+00	6.1601E-01	1.8204E-01
6.0000E+02	1.3312E+01	1.1051E+01	1.7450E+00	3.9800E-01	1.1773E-01
8.0000E+02	7.0264E+00	5.8472E+00	9.1049E-01	2.0738E-01	6.1407E-02
1.0000E+03	4.4180E+00	3.6830E+00	5.6763E-01	1.2911E-01	3.8263E-02
1.5000E+03	2.0326E+00	1.6987E+00	2.5800E-01	5.8567E-02	1.7369E-02

Z= 76

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.969E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.984E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.042E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.059E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.449E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.469E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.788E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.810E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	4.2083E+04
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.8655E+04
3.029E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.8319E+04
3.053E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.5192E+04	3.8022E+04
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.7671E+04	2.6005E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.2691E+04	1.8358E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	9.4399E+03	1.3245E+04
8.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	5.7607E+03	7.5382E+03
1.000E+01	.0E+00	.0E+00	.0E+00	.0E+00	3.8400E+03	4.6924E+03
1.087E+01	.0E+00	.0E+00	.0E+00	.0E+00	3.2897E+03	3.9033E+03
1.095E+01	.0E+00	.0E+00	.0E+00	3.9444E+04	3.2407E+03	3.8342E+03
1.241E+01	.0E+00	.0E+00	.0E+00	2.8113E+04	2.5511E+03	2.8863E+03
1.251E+01	.0E+00	.0E+00	1.7419E+04	2.7532E+04	2.5122E+03	2.8336E+03
1.294E+01	.0E+00	.0E+00	1.6246E+04	2.5202E+04	2.3534E+03	2.6192E+03
1.305E+01	.0E+00	8.8380E+03	1.5863E+04	2.4678E+04	2.3174E+03	2.5709E+03
1.500E+01	.0E+00	6.9468E+03	1.1107E+04	1.6808E+04	1.7610E+03	1.8478E+03
2.000E+01	.0E+00	4.1096E+03	5.1394E+03	7.2592E+03	9.8268E+02	9.0842E+02
3.000E+01	.0E+00	1.8197E+03	1.6493E+03	2.1448E+03	4.1474E+02	3.1483E+02
4.000E+01	.0E+00	9.8075E+02	7.1518E+02	8.7823E+02	2.1867E+02	1.4319E+02
5.000E+01	.0E+00	5.9386E+02	3.6935E+02	4.3323E+02	1.3102E+02	7.6375E+01
6.000E+01	.0E+00	3.8904E+02	2.1389E+02	2.4141E+02	8.5359E+01	4.5273E+01
7.402E+01	.0E+00	2.3589E+02	1.1337E+02	1.2229E+02	5.1558E+01	2.4576E+01
7.462E+01	2.4007E+03	2.3139E+02	1.1067E+02	1.1916E+02	5.0569E+01	2.4009E+01
8.000E+01	2.0071E+03	1.9540E+02	8.9571E+01	9.4983E+01	4.2677E+01	1.9572E+01
1.000E+02	1.1273E+03	1.1279E+02	4.5414E+01	4.5820E+01	2.4603E+01	1.0133E+01
1.500E+02	3.8542E+02	4.0489E+01	1.3243E+01	1.2184E+01	8.8411E+00	3.0456E+00
2.000E+02	1.7832E+02	1.9357E+01	5.5839E+00	4.8157E+00	4.2354E+00	1.3053E+00
3.000E+02	6.0938E+01	6.8743E+00	1.7110E+00	1.3571E+00	1.5088E+00	4.0677E-01
4.000E+02	2.9231E+01	3.3608E+00	7.6658E-01	5.7859E-01	7.3888E-01	1.8379E-01
5.000E+02	1.6938E+01	1.9664E+00	4.2273E-01	3.0934E-01	4.3268E-01	1.0185E-01
6.000E+02	1.1051E+01	1.2892E+00	2.6541E-01	1.9034E-01	2.8378E-01	6.4135E-02
8.000E+02	5.8472E+00	6.8433E-01	1.3301E-01	9.3154E-02	1.5067E-01	3.2283E-02
1.000E+03	3.6830E+00	4.3096E-01	8.0816E-02	5.5853E-02	9.4832E-02	1.9661E-02
1.500E+03	1.6987E+00	1.9808E-01	3.5718E-02	2.4205E-02	4.3547E-02	8.7037E-03

Z= 76

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	4.1064E+04	4.1316E+04	1.2524E+05
1.500E+00	.0E+00	.0E+00	.0E+00	2.5099E+04	2.8741E+04	7.3313E+04
1.969E+00	.0E+00	.0E+00	.0E+00	1.7123E+04	2.0651E+04	4.8237E+04
1.984E+00	.0E+00	.0E+00	1.3907E+05	1.6924E+04	2.0434E+04	4.7617E+04
2.000E+00	.0E+00	.0E+00	3.9128E+05	1.6731E+04	2.0222E+04	4.7015E+04
2.042E+00	.0E+00	.0E+00	5.4327E+05	1.6219E+04	1.9662E+04	4.5429E+04
2.059E+00	.0E+00	9.3645E+04	5.4585E+05	1.6027E+04	1.9451E+04	4.4839E+04
2.449E+00	.0E+00	2.5368E+05	3.5804E+05	1.2296E+04	1.5202E+04	3.3444E+04
2.469E+00	1.2609E+05	2.4839E+05	3.5042E+05	1.2145E+04	1.5024E+04	3.2984E+04
2.788E+00	1.0537E+05	1.7953E+05	2.5170E+05	1.0015E+04	1.2485E+04	2.6597E+04
2.810E+00	1.0407E+05	1.7571E+05	2.4625E+05	9.8877E+03	1.2330E+04	2.6217E+04
3.000E+00	9.3323E+04	1.4719E+05	2.0711E+05	8.8960E+03	1.1116E+04	2.3270E+04
3.029E+00	9.1796E+04	1.4344E+05	2.0187E+05	8.7598E+03	1.0948E+04	2.2867E+04
3.053E+00	9.0524E+04	1.4127E+05	1.9757E+05	8.6466E+03	1.0808E+04	2.2533E+04
4.000E+00	5.6415E+04	6.6324E+04	9.1298E+04	5.4907E+03	6.8325E+03	1.3423E+04
5.000E+00	3.6665E+04	3.4224E+04	4.6506E+04	3.7127E+03	4.5388E+03	8.5204E+03
6.000E+00	2.5192E+04	1.9531E+04	2.6258E+04	2.6704E+03	3.1881E+03	5.7757E+03
8.000E+00	1.3378E+04	7.7888E+03	1.0306E+04	1.5617E+03	1.7672E+03	3.0330E+03
1.000E+01	7.9345E+03	3.7163E+03	4.8510E+03	1.0170E+03	1.0893E+03	1.7943E+03
1.087E+01	6.4918E+03	2.8056E+03	3.6429E+03	8.6463E+02	9.0469E+02	1.4679E+03
1.095E+01	6.3662E+03	2.7303E+03	3.5436E+03	8.5119E+02	8.8854E+02	1.4396E+03
1.241E+01	4.6686E+03	1.7769E+03	2.2874E+03	6.6439E+02	6.6739E+02	1.0569E+03
1.251E+01	4.5762E+03	1.7285E+03	2.2239E+03	6.5390E+02	6.5518E+02	1.0360E+03
1.294E+01	4.2022E+03	1.5368E+03	1.9731E+03	6.1112E+02	6.0559E+02	9.5174E+02
1.305E+01	4.1182E+03	1.4947E+03	1.9181E+03	6.0142E+02	5.9441E+02	9.3282E+02
1.500E+01	2.8778E+03	9.1592E+02	1.1642E+03	4.5352E+02	4.2709E+02	6.5337E+02
2.000E+01	1.3369E+03	3.2623E+02	4.0607E+02	2.4984E+02	2.1053E+02	3.0543E+02
3.000E+01	4.2787E+02	7.2688E+01	8.7548E+01	1.0422E+02	7.3506E+01	9.8737E+01
4.000E+01	1.8364E+02	2.4382E+01	2.8611E+01	5.4681E+01	3.3648E+01	4.2696E+01
5.000E+01	9.3529E+01	1.0332E+01	1.1863E+01	3.2683E+01	1.8039E+01	2.1866E+01
6.000E+01	5.3332E+01	5.0978E+00	5.7453E+00	2.1266E+01	1.0736E+01	1.2522E+01
7.402E+01	2.7653E+01	2.2535E+00	2.4843E+00	1.2833E+01	5.8532E+00	6.5217E+00
7.462E+01	2.6967E+01	2.1847E+00	2.4064E+00	1.2587E+01	5.7190E+00	6.3610E+00
8.000E+01	2.1646E+01	1.6662E+00	1.8217E+00	1.0620E+01	4.6684E+00	5.1128E+00
1.000E+02	1.0655E+01	7.0043E-01	7.4782E-01	6.1207E+00	2.4266E+00	2.5269E+00
1.500E+02	2.9164E+00	1.4756E-01	1.5137E-01	2.2002E+00	7.3370E-01	6.9585E-01
2.000E+02	1.1705E+00	5.0021E-02	5.0212E-02	1.0547E+00	3.1551E-01	2.7970E-01
3.000E+02	3.3502E-01	1.1578E-02	1.1477E-02	3.7587E-01	9.8785E-02	8.0325E-02
4.000E+02	1.4391E-01	4.3178E-03	4.3225E-03	1.8414E-01	4.4723E-02	3.4563E-02
5.000E+02	7.7265E-02	2.0862E-03	2.1311E-03	1.0785E-01	2.4815E-02	1.8574E-02
6.000E+02	4.7664E-02	1.1836E-03	1.2394E-03	7.0736E-02	1.5643E-02	1.1461E-02
8.000E+02	2.3350E-02	5.1913E-04	5.5983E-04	3.7548E-02	7.8724E-03	5.6235E-03
1.000E+03	1.4007E-02	2.8460E-04	3.2209E-04	2.3639E-02	4.7949E-03	3.3773E-03
1.500E+03	6.0731E-03	1.1079E-04	1.3270E-04	1.0854E-02	2.1241E-03	1.4638E-03

Z= 76

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	1.7761E+05	2.6591E+05	2.4215E+05	3.0989E+05	1.0542E+04	9.2439E+03
1.500E+00	9.7031E+04	1.4057E+05	7.2729E+04	9.2343E+04	5.6802E+03	5.4945E+03
1.969E+00	5.7880E+04	8.2390E+04	3.0049E+04	3.7952E+04	3.6794E+03	3.7198E+03
1.984E+00	5.6944E+04	8.1016E+04	2.9255E+04	3.6943E+04	3.6319E+03	3.6755E+03
2.000E+00	5.6037E+04	7.9686E+04	2.8496E+04	3.5979E+04	3.5859E+03	3.6326E+03
2.042E+00	5.3655E+04	7.6201E+04	2.6547E+04	3.3504E+04	3.4649E+03	3.5191E+03
2.059E+00	5.2771E+04	7.4911E+04	2.5841E+04	3.2608E+04	3.4200E+03	3.4768E+03
2.449E+00	3.6233E+04	5.0919E+04	1.4209E+04	1.7867E+04	2.5654E+03	2.6522E+03
2.469E+00	3.5589E+04	4.9993E+04	1.3817E+04	1.7372E+04	2.5313E+03	2.6186E+03
2.788E+00	2.6899E+04	3.7526E+04	8.9754E+03	1.1256E+04	2.0610E+03	2.1472E+03
2.810E+00	2.6398E+04	3.6811E+04	8.7220E+03	1.0937E+04	2.0331E+03	2.1190E+03
3.000E+00	2.2586E+04	3.1382E+04	6.8878E+03	8.6247E+03	1.8178E+03	1.8987E+03
3.029E+00	2.2074E+04	3.0655E+04	6.6544E+03	8.3307E+03	1.7884E+03	1.8684E+03

Z= 76

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
3.053E+00	2.1652E+04	3.0054E+04	6.4639E+03	8.0908E+03	1.7640E+03	1.8432E+03
4.000E+00	1.0926E+04	1.4942E+04	2.3601E+03	2.9366E+03	1.0979E+03	1.1438E+03
5.000E+00	5.9718E+03	8.0662E+03	9.9458E+02	1.2311E+03	7.3350E+02	7.5212E+02
6.000E+00	3.5579E+03	4.7564E+03	4.8123E+02	5.9304E+02	5.2353E+02	5.2524E+02
8.000E+00	1.5080E+03	1.9821E+03	1.4794E+02	1.8095E+02	3.0333E+02	2.8935E+02
1.000E+01	7.4989E+02	9.7218E+02	5.7618E+01	7.0029E+01	1.9644E+02	1.7781E+02
1.087E+01	5.7432E+02	7.4061E+02	4.0326E+01	4.8887E+01	1.6672E+02	1.4756E+02
1.095E+01	5.5967E+02	7.2135E+02	3.8959E+01	4.7219E+01	1.6410E+02	1.4491E+02
1.241E+01	3.7156E+02	4.7495E+02	2.2594E+01	2.7275E+01	1.2778E+02	1.0874E+02
1.251E+01	3.6188E+02	4.6233E+02	2.1819E+01	2.6331E+01	1.2575E+02	1.0675E+02
1.294E+01	3.2345E+02	4.1228E+02	1.8804E+01	2.2668E+01	1.1746E+02	9.8648E+01
1.305E+01	3.1497E+02	4.0126E+02	1.8155E+01	2.1880E+01	1.1558E+02	9.6824E+01
1.500E+01	1.9686E+02	2.4837E+02	9.7753E+00	1.1724E+01	8.6969E+01	6.9530E+01
2.000E+01	7.2619E+01	8.9688E+01	2.6689E+00	3.1667E+00	4.7751E+01	3.4262E+01
3.000E+01	1.6826E+01	2.0099E+01	4.1259E-01	4.8152E-01	1.9861E+01	1.1974E+01
4.000E+01	5.7708E+00	6.7157E+00	1.0712E-01	1.2204E-01	1.0411E+01	5.5384E+00
5.000E+01	2.4807E+00	2.8250E+00	3.7408E-02	4.2107E-02	6.2477E+00	2.9721E+00
6.000E+01	1.2361E+00	1.3820E+00	1.5793E-02	1.7589E-02	4.0638E+00	1.7702E+00
7.402E+01	5.5171E-01	6.0355E-01	5.8711E-03	6.4506E-03	2.4516E+00	9.6589E-01
7.462E+01	5.3503E-01	5.8482E-01	5.6550E-03	6.2099E-03	2.4045E+00	9.4377E-01
8.000E+01	4.0924E-01	4.4402E-01	4.0767E-03	4.4568E-03	2.0287E+00	7.7060E-01
1.000E+02	1.7341E-01	1.8383E-01	1.4370E-03	1.5502E-03	1.1690E+00	4.0084E-01
1.500E+02	3.6961E-02	3.7476E-02	2.2454E-04	2.3658E-04	4.2010E-01	1.2136E-01
2.000E+02	1.2608E-02	1.2512E-02	6.2246E-05	6.4859E-05	2.0134E-01	5.2225E-02
3.000E+02	2.9373E-03	2.8790E-03	1.1294E-05	1.1806E-05	7.1779E-02	1.6347E-02
4.000E+02	1.1000E-03	1.0868E-03	3.5999E-06	3.8585E-06	3.5166E-02	7.4029E-03
5.000E+02	5.3278E-04	5.3582E-04	1.5594E-06	1.7105E-06	2.0597E-02	4.1082E-03
6.000E+02	3.0242E-04	3.1205E-04	8.0622E-07	9.3133E-07	1.3510E-02	2.5895E-03
8.000E+02	1.3242E-04	1.4283E-04	3.1986E-07	3.8590E-07	7.1713E-03	1.3035E-03
1.000E+03	7.2783E-05	8.1794E-05	1.6022E-07	2.1284E-07	4.5146E-03	7.9383E-04
1.500E+03	2.8026E-05	3.3609E-05	5.8731E-08	7.8674E-08	2.0730E-03	3.5172E-04

Z= 76

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	6 S 1/2
1.000E+00	2.3150E+04	9.2348E+03	1.3144E+04	1.1266E+03
1.500E+00	1.2467E+04	4.7489E+03	6.6068E+03	5.8257E+02
1.969E+00	7.9485E+03	2.7951E+03	3.8352E+03	3.6911E+02
1.984E+00	7.8407E+03	2.7493E+03	3.7709E+03	3.6415E+02
2.000E+00	7.7361E+03	2.7049E+03	3.7086E+03	3.5935E+02
2.042E+00	7.4613E+03	2.5887E+03	3.5456E+03	3.4676E+02
2.059E+00	7.3593E+03	2.5457E+03	3.4853E+03	3.4209E+02
2.449E+00	5.4173E+03	1.7447E+03	2.3683E+03	2.5361E+02
2.469E+00	5.3400E+03	1.7138E+03	2.3253E+03	2.5010E+02
2.788E+00	4.2746E+03	1.2955E+03	1.7475E+03	2.0213E+02
2.810E+00	4.2117E+03	1.2715E+03	1.7144E+03	1.9931E+02
3.000E+00	3.7265E+03	1.0885E+03	1.4629E+03	1.7753E+02
3.029E+00	3.6603E+03	1.0640E+03	1.4293E+03	1.7455E+02
3.053E+00	3.6054E+03	1.0437E+03	1.4015E+03	1.7209E+02
4.000E+00	2.1267E+03	5.2913E+02	7.0108E+02	1.0822E+02
5.000E+00	1.3432E+03	2.9256E+02	3.7765E+02	7.2232E+01
6.000E+00	9.0817E+02	1.7511E+02	2.2373E+02	5.1535E+01
8.000E+00	4.7582E+02	7.4741E+01	9.3888E+01	2.9851E+01
1.000E+01	2.8130E+02	3.7355E+01	4.6281E+01	1.9331E+01
1.087E+01	2.3011E+02	2.8660E+01	3.5320E+01	1.6407E+01
1.095E+01	2.2568E+02	2.7934E+01	3.4407E+01	1.6149E+01
1.241E+01	1.6570E+02	1.8593E+01	2.2713E+01	1.2576E+01
1.251E+01	1.6244E+02	1.8112E+01	2.2113E+01	1.2375E+01
1.294E+01	1.4923E+02	1.6199E+01	1.9733E+01	1.1559E+01
1.305E+01	1.4627E+02	1.5777E+01	1.9208E+01	1.1374E+01
1.500E+01	1.0249E+02	9.8877E+00	1.1921E+01	8.5595E+00

Z= 76

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	6 S 1/2
2.000E+01	4.7984E+01	3.6657E+00	4.3266E+00	4.7002E+00
3.000E+01	1.5524E+01	8.5424E-01	9.7524E-01	1.9549E+00
4.000E+01	6.7221E+00	2.9398E-01	3.2696E-01	1.0244E+00
5.000E+01	3.4461E+00	1.2667E-01	1.3785E-01	6.1186E-01
6.000E+01	1.9750E+00	6.3225E-02	6.7544E-02	3.9796E-01
7.402E+01	1.0295E+00	2.8270E-02	2.9542E-02	2.4007E-01
7.462E+01	1.0041E+00	2.7417E-02	2.8627E-02	2.3546E-01
8.000E+01	8.0730E-01	2.0980E-02	2.1745E-02	1.9865E-01
1.000E+02	3.9930E-01	8.9044E-03	9.0147E-03	1.1447E-01
1.500E+02	1.1008E-01	1.9014E-03	1.8504E-03	4.1139E-02
2.000E+02	4.4357E-02	6.4909E-04	6.1846E-04	1.9717E-02
3.000E+02	1.2748E-02	1.5131E-04	1.4244E-04	7.0304E-03
4.000E+02	5.4870E-03	5.6632E-05	5.3862E-05	3.4452E-03
5.000E+02	2.9489E-03	2.7420E-05	2.6619E-05	2.0186E-03
6.000E+02	1.8202E-03	1.5584E-05	1.5510E-05	1.3246E-03
8.000E+02	8.9355E-04	6.8106E-06	7.1C63E-06	7.0411E-04
1.000E+03	5.3648E-04	3.7488E-06	4.0942E-06	4.4416E-04
1.500E+03	2.3277E-04	1.4434E-06	1.7C39E-06	2.0563E-04

Z= 77 21 STATES, 44 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	76.3502	.98567
2 S 1/2	2.00	13.4017	.87309
2 P 1/2	2.00	12.8595	.81324
2 P 3/2	4.00	11.2139	.78668
3 S 1/2	2.00	3.1474	.66439
3 P 1/2	2.00	2.9008	.58886
3 P 3/2	4.00	2.5390	.55395
3 D 3/2	4.00	2.1232	.35777
3 D 5/2	6.00	2.0445	.35048
4 S 1/2	2.00	.6760	.40193
4 P 1/2	2.00	.5707	.33321
4 P 3/2	4.00	.4846	.29983
4 D 3/2	4.00	.3106	.15341
4 D 5/2	6.00	.2945	.14695
4 F 5/2	6.00	.0713	.02780
4 F 7/2	8.00	.0679	.02711
5 S 1/2	2.00	.0993	.15425
5 P 1/2	2.00	.0658	.10877
5 P 3/2	4.00	.0517	.09132
5 D 3/2	3.60	.0080	.02127
5 D 5/2	5.40	.0068	.01892

Z= 77 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	1.3505E+06	.0E+00	.0E+00	.0E+00	1.3505E+06
1.5000E+00	6.0220E+05	.0E+00	.0E+00	.0E+00	6.0220E+05
2.0000E+00	3.2591E+05	.0E+00	.0E+00	.0E+00	3.2591E+05
2.0425E+00	3.1126E+05	.0E+00	.0E+00	.0E+00	3.1126E+05
2.0588E+00	3.8144E+05	.0E+00	.0E+00	7.5576E+04	3.0587E+05
2.1211E+00	7.9797E+05	.0E+00	.0E+00	5.1149E+05	2.8648E+05
2.1380E+00	8.5089E+05	.0E+00	.0E+00	5.6940E+05	2.8149E+05
2.5364E+00	7.8147E+05	.0E+00	.0E+00	5.8926E+05	1.9221E+05
2.5567E+00	8.8513E+05	.0E+00	.0E+00	6.9635E+05	1.8877E+05
2.8979E+00	6.5412E+05	.0E+00	.0E+00	5.1222E+05	1.4190E+05
2.9211E+00	6.8118E+05	.0E+00	.0E+00	5.4187E+05	1.3932E+05
3.0000E+00	6.3889E+05	.0E+00	.0E+00	5.0789E+05	1.3100E+05

Z= 77 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY (KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
3.1443E+00	5.7244E+05	.0E+00	.0E+00	4.5493E+05	1.1751E+05
3.1695E+00	5.8690E+05	.0E+00	.0E+00	4.7155E+05	1.1536E+05
4.0000E+00	3.3652E+05	.0E+00	.0E+00	2.6978E+05	6.6738E+04
5.0000E+00	1.9471E+05	.0E+00	.0E+00	1.5570E+05	3.9010E+04
6.0000E+00	1.2338E+05	.0E+00	.0E+00	9.8422E+04	2.4963E+04
8.0000E+00	5.9283E+04	.0E+00	.0E+00	4.7093E+04	1.2190E+04
1.0000E+01	3.3289E+04	.0E+00	.0E+00	2.6362E+04	6.9277E+03
1.1203E+01	2.4753E+04	.0E+00	.0E+00	1.9572E+04	5.1815E+03
1.1292E+01	6.2509E+04	.0E+00	3.8267E+04	1.9165E+04	5.0766E+03
1.2847E+01	4.4137E+04	.0E+00	2.6857E+04	1.3638E+04	3.6419E+03
1.2950E+01	6.0042E+04	.0E+00	4.3121E+04	1.3353E+04	3.5676E+03
1.3388E+01	5.5265E+04	.0E+00	3.9768E+04	1.2224E+04	3.2728E+03
1.3496E+01	6.2553E+04	.0E+00	4.7378E+04	1.1969E+04	3.2059E+03
1.5000E+01	4.7848E+04	.0E+00	3.6374E+04	9.0382E+03	2.4359E+03
2.0000E+01	2.2647E+04	.0E+00	1.7318E+04	4.1834E+03	1.1449E+03
3.0000E+01	7.6934E+03	.0E+00	5.9105E+03	1.3944E+03	3.8851E+02
4.0000E+01	3.5278E+03	.0E+00	2.7149E+03	6.3424E+02	1.7868E+02
5.0000E+01	1.9148E+03	.0E+00	1.4747E+03	3.4277E+02	9.7312E+01
6.0000E+01	1.1584E+03	.0E+00	8.9258E+02	2.0683E+02	5.9037E+01
7.6274E+01	5.9586E+02	.0E+00	4.5928E+02	1.0610E+02	3.0477E+01
7.6885E+01	2.8994E+03	2.3166E+03	4.4922E+02	1.0377E+02	2.9813E+01
8.0000E+01	2.6182E+03	2.0963E+03	4.0228E+02	9.2899E+01	2.6715E+01
1.0000E+02	1.4558E+03	1.1753E+03	2.1626E+02	4.9847E+01	1.4405E+01
1.5000E+02	4.9437E+02	4.0357E+02	7.0011E+01	1.6104E+01	4.6879E+00
2.0000E+02	2.2825E+02	1.8720E+02	3.1651E+01	7.2734E+00	2.1263E+00
3.0000E+02	7.7897E+01	6.4153E+01	1.0597E+01	2.4326E+00	7.1412E-01
4.0000E+02	3.7345E+01	3.0832E+01	5.0225E+00	1.1519E+00	3.3892E-01
5.0000E+02	2.1627E+01	1.7889E+01	2.8826E+00	6.6049E-01	1.9460E-01
6.0000E+02	1.4100E+01	1.1682E+01	1.8651E+00	4.2698E-01	1.2591E-01
8.0000E+02	7.4494E+00	6.1873E+00	9.7382E-01	2.2256E-01	6.5695E-02
1.0000E+03	4.6857E+00	3.8990E+00	6.0723E-01	1.3861E-01	4.0936E-02
1.5000E+03	2.1557E+00	1.7983E+00	2.7596E-01	6.2867E-02	1.8575E-02

Z= 77

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.042E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.059E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.121E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.138E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.536E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.557E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.898E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.921E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.9775E+04
3.144E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.8418E+04
3.169E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.6750E+04
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.4314E+04	3.6465E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.7906E+04	2.6380E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.2852E+04	1.8783E+04
8.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	9.6262E+03	1.3607E+04
1.000E+01	.0E+00	.0E+00	.0E+00	.0E+00	5.8955E+03	7.8120E+03
1.120E+01	.0E+00	.0E+00	.0E+00	.0E+00	3.9421E+03	4.8891E+03
1.129E+01	.0E+00	.0E+00	.0E+00	.0E+00	3.1906E+03	3.8072E+03
1.129E+01	.0E+00	.0E+00	.0E+00	3.8267E+04	3.1432E+03	3.7399E+03
1.285E+01	.0E+00	.0E+00	.0E+00	2.6857E+04	2.4567E+03	2.7925E+03
1.295E+01	.0E+00	.0E+00	1.6821E+04	2.6300E+04	2.4191E+03	2.7415E+03
1.339E+01	.0E+00	.0E+00	1.5670E+04	2.4098E+04	2.2683E+03	2.5374E+03
1.350E+01	.0E+00	8.4840E+03	1.5298E+04	2.3596E+04	2.2335E+03	2.4906E+03

Z= 77

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.500E+01	.0E+00	7.0408E+03	1.1642E+04	1.7691E+04	1.8158E+03	1.9423E+03
2.000E+01	.0E+00	4.2033E+03	5.4542E+03	7.6608E+03	1.0159E+03	9.6007E+02
3.000E+01	.0E+00	1.8771E+03	1.7583E+03	2.2750E+03	4.3027E+02	3.3519E+02
4.000E+01	.0E+00	1.0147E+03	7.6632E+02	9.3385E+02	2.2747E+02	1.5320E+02
5.000E+01	.0E+00	6.1614E+02	3.9697E+02	4.6164E+02	1.3657E+02	8.2011E+01
6.000E+01	.0E+00	4.0450E+02	2.3043E+02	2.5766E+02	8.9118E+01	4.8752E+01
7.627E+01	.0E+00	2.2877E+02	1.1186E+02	1.1864E+02	5.0159E+01	2.4329E+01
7.688E+01	2.3166E+03	2.2441E+02	1.0920E+02	1.1561E+02	4.9198E+01	2.3769E+01
8.000E+01	2.0963E+03	2.0383E+02	9.6841E+01	1.0162E+02	4.4671E+01	2.1166E+01
1.000E+02	1.1753E+03	1.1793E+02	4.9228E+01	4.9106E+01	2.5804E+01	1.0992E+01
1.500E+02	4.0357E+02	4.2494E+01	1.4421E+01	1.3096E+01	9.3060E+00	3.3209E+00
2.000E+02	1.8720E+02	2.0368E+01	6.0981E+00	5.1856E+00	4.4691E+00	1.4279E+00
3.000E+02	6.4153E+01	7.2574E+00	1.8752E+00	1.4643E+00	1.5973E+00	4.4677E-01
4.000E+02	3.0832E+01	3.5556E+00	8.4199E-01	6.2493E-01	7.8384E-01	2.6235E-01
5.000E+02	1.7889E+01	2.0833E+00	4.6499E-01	3.3427E-01	4.5965E-01	1.1231E-01
6.000E+02	1.1682E+01	1.3672E+00	2.9224E-01	2.0571E-01	3.0175E-01	7.0803E-02
8.000E+02	6.1873E+00	7.2650E-01	1.4666E-01	1.0066E-01	1.6037E-01	3.5653E-02
1.000E+03	3.8990E+00	4.5772E-01	8.9185E-02	6.0330E-02	1.0099E-01	2.1755E-02
1.500E+03	1.7983E+00	2.1037E-01	3.9464E-02	2.6118E-02	4.6371E-02	9.6413E-03

Z= 77

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	4.1246E+04	4.0749E+04	1.2790E+05
1.500E+00	.0E+00	.0E+00	.0E+00	2.5382E+04	2.8893E+04	7.5302E+04
2.000E+00	.0E+00	.0E+00	.0E+00	1.7011E+04	2.0508E+04	4.8481E+04
2.042E+00	.0E+00	.0E+00	.0E+00	1.6498E+04	1.9948E+04	4.6855E+04
2.059E+00	.0E+00	.0E+00	7.5576E+04	1.6307E+04	1.9738E+04	4.6250E+04
2.121E+00	.0E+00	.0E+00	5.1149E+05	1.5607E+04	1.8969E+04	4.4049E+04
2.138E+00	.0E+00	5.1696E+04	5.1770E+05	1.5423E+04	1.8766E+04	4.3474E+04
2.536E+00	.0E+00	2.4465E+05	3.4461E+05	1.1883E+04	1.4730E+04	3.2543E+04
2.557E+00	1.1956E+05	2.3955E+05	3.3725E+05	1.1736E+04	1.4558E+04	3.2093E+04
2.898E+00	1.0142E+05	1.7127E+05	2.3953E+05	9.6250E+03	1.2034E+04	2.5692E+04
2.921E+00	1.0015E+05	1.6762E+05	2.3432E+05	9.5021E+03	1.1885E+04	2.5323E+04
3.000E+00	9.5862E+04	1.5592E+05	2.1769E+05	9.1016E+03	1.1395E+04	2.4122E+04
3.144E+00	8.8381E+04	1.3717E+05	1.9263E+05	8.4334E+03	1.0572E+04	2.2125E+04
3.169E+00	8.7146E+04	1.3510E+05	1.8852E+05	8.3244E+03	1.0437E+04	2.1801E+04
4.000E+00	5.7932E+04	7.0564E+04	9.6996E+04	5.6393E+03	7.0525E+03	1.3969E+04
5.000E+00	3.7865E+04	3.6578E+04	4.9624E+04	3.8225E+03	4.7068E+03	8.8918E+03
6.000E+00	2.6133E+04	2.0944E+04	2.8113E+04	2.7541E+03	3.3183E+03	6.0418E+03
8.000E+00	1.3930E+04	8.3820E+03	1.1074E+04	1.6147E+03	1.8495E+03	3.1836E+03
1.000E+01	8.2885E+03	4.0128E+03	5.2293E+03	1.0533E+03	1.1446E+03	1.8885E+03
1.120E+01	6.3030E+03	2.7343E+03	3.5365E+03	8.4388E+02	8.8886E+02	1.4356E+03
1.129E+01	6.1810E+03	2.6610E+03	3.4400E+03	8.3076E+02	8.7302E+02	1.4079E+03
1.285E+01	4.4885E+03	1.7093E+03	2.1908E+03	6.4353E+02	6.5030E+02	1.0236E+03
1.295E+01	4.3996E+03	1.6627E+03	2.1299E+03	6.3338E+02	6.3842E+02	1.0034E+03
1.339E+01	4.0449E+03	1.4810E+03	1.8930E+03	5.9254E+02	5.9086E+02	9.2287E+02
1.350E+01	3.9639E+03	1.4404E+03	1.8402E+03	5.8313E+02	5.7997E+02	9.0451E+02
1.500E+01	3.0233E+03	9.9503E+02	1.2617E+03	4.7111E+02	4.5207E+02	6.9117E+02
2.000E+01	1.4100E+03	3.5579E+02	4.4168E+02	2.6010E+02	2.2400E+02	3.2429E+02
3.000E+01	4.5355E+02	7.9703E+01	9.5698E+01	1.0883E+02	7.8755E+01	1.0536E+02
4.000E+01	1.9535E+02	2.6836E+01	3.1381E+01	5.7233E+01	3.6223E+01	4.5720E+01
5.000E+01	9.9742E+01	1.1403E+01	1.3045E+01	3.4271E+01	1.9491E+01	2.3476E+01
6.000E+01	5.6990E+01	5.6386E+00	6.3298E+00	2.2334E+01	1.1633E+01	1.3472E+01
7.627E+01	2.6958E+01	2.2245E+00	2.4342E+00	1.2556E+01	5.8342E+00	6.4054E+00
7.688E+01	2.6290E+01	2.1568E+00	2.3580E+00	1.2316E+01	5.7009E+00	6.2478E+00
8.000E+01	2.3200E+01	1.8488E+00	2.0127E+00	1.1181E+01	5.0804E+00	5.5178E+00
1.000E+02	1.1445E+01	7.7899E-01	8.2793E-01	6.4563E+00	2.6491E+00	2.7332E+00
1.500E+02	3.1438E+00	1.6472E-01	1.6813E-01	2.3289E+00	8.0527E-01	7.5546E-01
2.000E+02	1.2645E+00	5.5964E-02	5.5873E-02	1.1191E+00	3.4744E-01	3.0496E-01
3.000E+02	3.6280E-01	1.2988E-02	1.2795E-02	4.0014E-01	1.0922E-01	8.7624E-02

Z= 77

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
4.000E+02	1.5603E-01	4.8508E-03	4.8229E-03	1.9643E-01	4.9571E-02	3.7750E-02
5.000E+02	8.3813E-02	2.3461E-03	2.3787E-03	1.1521E-01	2.7550E-02	2.0297E-02
6.000E+02	5.1713E-02	1.3322E-03	1.3835E-03	7.5636E-02	1.7385E-02	1.2526E-02
8.000E+02	2.5332E-02	5.8462E-04	6.2491E-04	4.0192E-02	8.7617E-03	6.1467E-03
1.000E+03	1.5189E-02	3.2072E-04	3.6002E-04	2.5313E-02	5.3423E-03	3.6897E-03
1.500E+03	6.5819E-03	1.2531E-04	1.4738E-04	1.1622E-02	2.3694E-03	1.5979E-03

Z= 77

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	1.8175E+05	2.7301E+05	2.6699E+05	3.4186E+05	1.0926E+04	9.5143E+03
1.500E+00	1.0079E+05	1.4625E+05	8.1228E+04	1.0316E+05	5.9023E+03	5.6881E+03
2.000E+00	5.8709E+04	8.3577E+04	3.2081E+04	4.0510E+04	3.7326E+03	3.7773E+03
2.042E+00	5.6250E+04	7.9965E+04	2.9902E+04	3.7743E+04	3.6073E+03	3.6606E+03
2.059E+00	5.5338E+04	7.8627E+04	2.9112E+04	3.6740E+04	3.5607E+03	3.6171E+03
2.121E+00	5.2032E+04	7.3788E+04	2.6333E+04	3.3212E+04	3.3918E+03	3.4581E+03
2.138E+00	5.1173E+04	7.2533E+04	2.5632E+04	3.2322E+04	3.3477E+03	3.4165E+03
2.536E+00	3.5314E+04	4.9546E+04	1.4228E+04	1.7879E+04	2.5222E+03	2.6173E+03
2.557E+00	3.4685E+04	4.8642E+04	1.3836E+04	1.7383E+04	2.4886E+03	2.5840E+03
2.898E+00	2.5979E+04	3.6169E+04	8.8714E+03	1.1116E+04	2.0134E+03	2.1062E+03
2.921E+00	2.5493E+04	3.5477E+04	8.6208E+03	1.0800E+04	1.9862E+03	2.0784E+03
3.000E+00	2.3927E+04	3.3248E+04	7.8313E+03	9.8055E+03	1.8976E+03	1.9878E+03
3.144E+00	2.1368E+04	2.9615E+04	6.6050E+03	8.2616E+03	1.7504E+03	1.8362E+03
3.169E+00	2.0959E+04	2.9033E+04	6.4158E+03	8.0236E+03	1.7265E+03	1.8114E+03
4.000E+00	1.1655E+04	1.5935E+04	2.7005E+03	3.3595E+03	1.1486E+03	1.2034E+03
5.000E+00	6.4017E+03	8.6417E+03	1.1431E+03	1.4145E+03	7.6865E+02	7.9444E+02
6.000E+00	3.8284E+03	5.1135E+03	5.5487E+02	6.8353E+02	5.4937E+02	5.5657E+02
8.000E+00	1.6316E+03	2.1420E+03	1.7143E+02	2.0956E+02	3.1895E+02	3.0814E+02
1.000E+01	8.1475E+02	1.0547E+03	6.7035E+01	8.1420E+01	2.0684E+02	1.9006E+02
1.120E+01	5.6619E+02	7.2747E+02	4.1184E+01	4.9846E+01	1.6530E+02	1.4742E+02
1.129E+01	5.5177E+02	7.0855E+02	3.9791E+01	4.8146E+01	1.6271E+02	1.4478E+02
1.285E+01	3.6181E+02	4.6057E+02	2.2705E+01	2.7357E+01	1.2573E+02	1.0774E+02
1.295E+01	3.5239E+02	4.4833E+02	2.1925E+01	2.6410E+01	1.2372E+02	1.0577E+02
1.339E+01	3.1549E+02	4.0046E+02	1.8941E+01	2.2789E+01	1.1568E+02	9.7868E+01
1.350E+01	3.0723E+02	3.8975E+02	1.8288E+01	2.1997E+01	1.1383E+02	9.6060E+01
1.500E+01	2.1546E+02	2.7129E+02	1.1457E+01	1.3730E+01	9.1809E+01	7.4843E+01
2.000E+01	7.9877E+01	9.8420E+01	3.1417E+00	3.7240E+00	5.0508E+01	3.7069E+01
3.000E+01	1.8627E+01	2.2187E+01	4.8835E-01	5.6904E-01	2.1069E+01	1.3044E+01
4.000E+01	6.4159E+00	7.4426E+00	1.2728E-01	1.4483E-01	1.1068E+01	6.0633E+00
5.000E+01	2.7669E+00	3.1400E+00	4.4597E-02	5.0112E-02	6.6549E+00	3.2656E+00
6.000E+01	1.3822E+00	1.5395E+00	1.8876E-02	2.0988E-02	4.3352E+00	1.9507E+00
7.627E+01	5.5146E-01	5.9893E-01	6.1099E-03	6.6918E-03	2.4365E+00	9.7924E-01
7.688E+01	5.3484E-01	5.8039E-01	5.8856E-03	6.4427E-03	2.3897E+00	9.5690E-01
8.000E+01	4.5924E-01	4.9624E-01	4.8860E-03	5.3345E-03	2.1695E+00	8.5286E-01
1.000E+02	1.9509E-01	2.0592E-01	1.7269E-03	1.8578E-03	1.2525E+00	4.4505E-01
1.500E+02	4.1754E-02	4.2127E-02	2.7102E-04	2.8499E-04	4.5169E-01	1.3546E-01
2.000E+02	1.4278E-02	1.4094E-02	7.5286E-05	7.8374E-05	2.1701E-01	5.8492E-02
3.000E+02	3.3365E-03	3.2486E-03	1.3721E-05	1.4298E-05	7.7616E-02	1.8383E-02
4.000E+02	1.2513E-03	1.2271E-03	4.3825E-06	4.6448E-06	3.8105E-02	8.3458E-03
5.000E+02	6.0621E-04	6.0590E-04	1.8839E-06	2.0736E-06	2.2349E-02	4.6388E-03
6.000E+02	3.4450E-04	3.5335E-04	9.8529E-07	1.1322E-06	1.4673E-02	2.9273E-03
8.000E+02	1.5118E-04	1.6114E-04	3.8537E-07	4.7098E-07	7.7968E-03	1.4757E-03
1.000E+03	8.3016E-05	9.2654E-05	1.9839E-07	2.5254E-07	4.9105E-03	8.9950E-04
1.500E+03	3.1956E-05	3.8041E-05	6.7638E-08	9.6214E-08	2.2546E-03	3.9902E-04

Z= 77

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2
1.000E+00	2.4102E+04	1.3534E+04	1.8903E+04
1.500E+00	1.3002E+04	7.0186E+03	9.5827E+03
2.000E+00	8.0844E+03	4.0244E+03	5.4156E+03
2.042E+00	7.7986E+03	3.8532E+03	5.1799E+03
2.059E+00	7.6924E+03	3.7898E+03	5.0926E+03
2.121E+00	7.3069E+03	3.5605E+03	4.7776E+03
2.138E+00	7.2064E+03	3.5010E+03	4.6960E+03
2.536E+00	5.3247E+03	2.4115E+03	3.2080E+03
2.557E+00	5.2484E+03	2.3685E+03	3.1496E+03
2.898E+00	4.1700E+03	1.7744E+03	2.3451E+03
2.921E+00	4.1084E+03	1.7413E+03	2.3006E+03
3.000E+00	3.9084E+03	1.6347E+03	2.1388E+03
3.144E+00	3.5767E+03	1.4606E+03	1.9065E+03
3.169E+00	3.5230E+03	1.4327E+03	1.8693E+03
4.000E+00	2.2373E+03	8.0765E+02	1.0308E+03
5.000E+00	1.4165E+03	4.4605E+02	5.6216E+02
6.000E+00	9.5977E+02	2.6802E+02	3.3425E+02
8.000E+00	5.0451E+02	1.1506E+02	1.4103E+02
1.000E+01	2.9903E+02	5.7752E+01	6.9799E+01
1.120E+01	2.2729E+02	4.0236E+01	4.8267E+01
1.129E+01	2.2290E+02	3.9217E+01	4.7020E+01
1.285E+01	1.6209E+02	2.5786E+01	3.0647E+01
1.295E+01	1.5889E+02	2.5119E+01	2.9838E+01
1.339E+01	1.4615E+02	2.2504E+01	2.6670E+01
1.350E+01	1.4324E+02	2.1918E+01	2.5961E+01
1.500E+01	1.0949E+02	1.5404E+01	1.8109E+01
2.000E+01	5.1449E+01	5.7403E+00	6.6037E+00
3.000E+01	1.6732E+01	1.3466E+00	1.4978E+00
4.000E+01	7.2704E+00	4.6548E-01	5.0419E-01
5.000E+01	3.7371E+00	2.0121E-01	2.1321E-01
6.000E+01	2.1462E+00	1.0069E-01	1.0471E-01
7.627E+01	1.0215E+00	4.0253E-02	4.0812E-02
7.688E+01	9.9635E-01	3.9043E-02	3.9551E-02
8.000E+01	8.8007E-01	3.3533E-02	3.3826E-02
1.000E+02	4.3629E-01	1.4269E-02	1.4055E-02
1.500E+02	1.2073E-01	3.0594E-03	2.8958E-03
2.000E+02	4.8758E-02	1.0471E-03	9.6990E-04
3.000E+02	1.4048E-02	2.4475E-04	2.2393E-04
4.000E+02	6.0541E-03	9.1758E-05	8.4783E-05
5.000E+02	3.2554E-03	4.4482E-05	4.1942E-05
6.000E+02	2.0099E-03	2.5303E-05	2.4446E-05
8.000E+02	9.8659E-04	1.1075E-05	1.1216E-05
1.000E+03	5.9215E-04	6.1040E-06	6.4719E-06
1.500E+03	2.5666E-04	2.3608E-06	2.7087E-06

Z= 78 22 STATES, 44 ENERGYS

STATE	NE	E(KEY)	NORM
1 S 1/2	2.00	78.6555	.98577
2 S 1/2	2.00	13.8684	.87441
2 P 1/2	2.00	13.3141	.81515
2 P 3/2	4.00	11.5662	.78798
3 S 1/2	2.00	3.2752	.66759
3 P 1/2	2.00	3.0226	.59269
3 P 3/2	4.00	2.6368	.55685
3 D 3/2	4.00	2.2124	.36155
3 D 5/2	6.00	2.1287	.35406
4 S 1/2	2.00	.7129	.40635
4 P 1/2	2.00	.6045	.33794
4 P 3/2	4.00	.5121	.30357
4 D 3/2	4.00	.3332	.15693
4 D 5/2	6.00	.3158	.15026
4 F 5/2	6.00	.0854	.02959
4 F 7/2	8.00	.0817	.02887
5 S 1/2	2.00	.1086	.15997
5 P 1/2	2.00	.0734	.11423
5 P 3/2	4.00	.0578	.09599
5 D 3/2	3.60	.0110	.02476
5 D 5/2	5.40	.0095	.02233
6 S 1/2	1.00	.0081	.02404

Z= 78 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	1.4323E+06	.0E+00	.0E+00	.0E+00	1.4323E+06
1.5000E+00	6.3974E+05	.0E+00	.0E+00	.0E+00	6.3974E+05
2.0000E+00	3.4644E+05	.0E+00	.0E+00	.0E+00	3.4644E+05
2.1266E+00	3.0281E+05	.0E+00	.0E+00	.0E+00	3.0281E+05
2.1436E+00	3.8358E+05	.0E+00	.0E+00	8.6041E+04	2.9754E+05
2.2102E+00	7.7278E+05	.0E+00	.0E+00	4.9466E+05	2.7812E+05
2.2279E+00	8.2849E+05	.0E+00	.0E+00	5.5524E+05	2.7325E+05
2.6342E+00	7.5143E+05	.0E+00	.0E+00	5.6377E+05	1.8766E+05
2.6553E+00	8.5104E+05	.0E+00	.0E+00	6.6675E+05	1.8430E+05
3.0000E+00	6.3337E+05	.0E+00	.0E+00	4.9396E+05	1.3941E+05
3.0196E+00	6.2328E+05	.0E+00	.0E+00	4.8594E+05	1.3733E+05
3.0438E+00	6.4911E+05	.0E+00	.0E+00	5.1428E+05	1.3483E+05
3.2719E+00	5.4679E+05	.0E+00	.0E+00	4.3277E+05	1.1402E+05
3.2981E+00	5.6031E+05	.0E+00	.0E+00	4.4838E+05	1.1193E+05
4.0000E+00	3.5355E+05	.0E+00	.0E+00	2.8248E+05	7.1066E+04
5.0000E+00	2.0482E+05	.0E+00	.0E+00	1.6325E+05	4.1566E+04
6.0000E+00	1.2995E+05	.0E+00	.0E+00	1.0334E+05	2.6611E+04
8.0000E+00	6.2504E+04	.0E+00	.0E+00	4.9495E+04	1.3005E+04
1.0000E+01	3.5131E+04	.0E+00	.0E+00	2.7736E+04	7.3950E+03
1.1555E+01	2.4106E+04	.0E+00	.0E+00	1.8995E+04	5.1109E+03
1.1647E+01	6.0489E+04	.0E+00	3.6881E+04	1.8601E+04	5.0074E+03
1.3301E+01	4.2297E+04	.0E+00	2.5636E+04	1.3105E+04	3.5566E+03
1.3407E+01	5.7588E+04	.0E+00	4.1273E+04	1.2831E+04	3.4840E+03
1.3855E+01	5.3109E+04	.0E+00	3.8145E+04	1.1763E+04	3.2002E+03
1.3965E+01	6.0123E+04	.0E+00	4.5471E+04	1.1517E+04	3.1347E+03
1.5000E+01	5.0076E+04	.0E+00	3.7945E+04	9.5270E+03	2.6037E+03
2.0000E+01	2.3803E+04	.0E+00	1.8163E+04	4.4154E+03	1.2252E+03
3.0000E+01	8.1096E+03	.0E+00	6.2187E+03	1.4745E+03	4.1648E+02
4.0000E+01	3.7244E+03	.0E+00	2.8611E+03	6.7151E+02	1.9180E+02
5.0000E+01	2.0241E+03	.0E+00	1.5562E+03	3.6330E+02	1.0454E+02
6.0000E+01	1.2258E+03	.0E+00	9.4288E+02	2.1940E+02	6.3503E+01
7.8577E+01	5.8131E+02	.0E+00	4.4734E+02	1.0373E+02	3.0240E+01
7.9206E+01	2.8017E+03	2.2331E+03	4.3755E+02	1.0146E+02	2.9582E+01

Z= 78 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY (KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL CTHER
8.0000E+01	2.7029E+03	2.1498E+03	4.2561E+02	9.8681E+01	2.8779E+01
1.0000E+02	1.5209E+03	1.2233E+03	2.2905E+02	5.3006E+01	1.5537E+01
1.5000E+02	5.1882E+02	4.2229E+02	7.4307E+01	1.7158E+01	5.0675E+00
2.0000E+02	2.4002E+02	1.9632E+02	3.3643E+01	7.7604E+00	2.3021E+00
3.0000E+02	8.2144E+01	6.7482E+01	1.1286E+01	2.6006E+00	7.7490E-01
4.0000E+02	3.9450E+01	3.2492E+01	5.3565E+00	1.2330E+00	3.6830E-01
5.0000E+02	2.2874E+01	1.8877E+01	3.0771E+00	7.0763E-01	2.1167E-01
6.0000E+02	1.4925E+01	1.2339E+01	1.9922E+00	4.5771E-01	1.3703E-01
8.0000E+02	7.8932E+00	6.5421E+00	1.0408E+00	2.3872E-01	7.1550E-02
1.0000E+03	4.9668E+00	4.1244E+00	6.4916E-01	1.4870E-01	4.4594E-02
1.5000E+03	2.2849E+00	1.9022E+00	2.9496E-01	6.7434E-02	2.0233E-02

Z= 78

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.127E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.144E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.210E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.228E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.634E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.655E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.020E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.044E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.7994E+04
3.272E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.5091E+04
3.298E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.3038E+04	3.4825E+04
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.8179E+04	2.6767E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.3016E+04	1.9150E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	9.8084E+03	1.3958E+04
8.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	6.0307E+03	8.0806E+03
1.000E+01	.0E+00	.0E+00	.0E+00	.0E+00	4.0439E+03	5.0856E+03
1.155E+01	.0E+00	.0E+00	.0E+00	.0E+00	3.0911E+03	3.7089E+03
1.165E+01	.0E+00	.0E+00	.0E+00	3.6881E+04	3.0452E+03	3.6434E+03
1.330E+01	.0E+00	.0E+00	.0E+00	2.5636E+04	2.3631E+03	2.6985E+03
1.341E+01	.0E+00	.0E+00	1.6169E+04	2.5104E+04	2.3270E+03	2.6493E+03
1.385E+01	.0E+00	.0E+00	1.5113E+04	2.3033E+04	2.1840E+03	2.4552E+03
1.397E+01	.0E+00	8.1571E+03	1.4762E+04	2.2552E+04	2.1506E+03	2.4100E+03
1.500E+01	.0E+00	7.1861E+03	1.2170E+04	1.8589E+04	1.8707E+03	2.0386E+03
2.000E+01	.0E+00	4.3133E+03	5.7723E+03	8.0771E+03	1.0492E+03	1.0135E+03
3.000E+01	.0E+00	1.9348E+03	1.8726E+03	2.4112E+03	4.4608E+02	3.5645E+02
4.000E+01	.0E+00	1.0492E+03	8.2000E+02	9.9181E+02	2.3641E+02	1.6370E+02
5.000E+01	.0E+00	6.3878E+02	4.2614E+02	4.9133E+02	1.4222E+02	8.7951E+01
6.000E+01	.0E+00	4.2025E+02	2.4795E+02	2.7467E+02	9.2960E+01	5.2432E+01
7.858E+01	.0E+00	2.2186E+02	1.1039E+02	1.1509E+02	4.8794E+01	2.4086E+01
7.921E+01	2.2331E+03	2.1763E+02	1.0777E+02	1.1215E+02	4.7860E+01	2.3534E+01
8.000E+01	2.1498E+03	2.1245E+02	1.0458E+02	1.0858E+02	4.6717E+01	2.2861E+01
1.000E+02	1.2233E+03	1.2318E+02	5.3306E+01	5.2566E+01	2.7039E+01	1.1909E+01
1.500E+02	4.2229E+02	4.4561E+01	1.5686E+01	1.4060E+01	9.7863E+00	3.6167E+00
2.000E+02	1.9632E+02	2.1413E+01	6.6526E+00	5.5771E+00	4.7113E+00	1.5603E+00
3.000E+02	6.7482E+01	7.6553E+00	2.0531E+00	1.5781E+00	1.6893E+00	4.9013E-01
4.000E+02	3.2492E+01	3.7586E+00	9.2385E-01	6.7414E-01	8.3077E-01	2.2252E-01
5.000E+02	1.8877E+01	2.2054E+00	5.1094E-01	3.6075E-01	4.8785E-01	1.2370E-01
6.000E+02	1.2339E+01	1.4487E+00	3.2146E-01	2.2204E-01	3.2057E-01	7.8070E-02
8.000E+02	6.5421E+00	7.7065E-01	1.6154E-01	1.0863E-01	1.7055E-01	3.9368E-02
1.000E+03	4.1244E+00	4.8575E-01	9.8319E-02	6.5085E-02	1.0745E-01	2.4044E-02
1.500E+03	1.9022E+00	2.2326E-01	4.3556E-02	2.8147E-02	4.9337E-02	1.0668E-02

Z= 78

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	4.1082E+04	4.0088E+04	1.3054E+05
1.500E+00	.0E+00	.0E+00	.0E+00	2.5656E+04	2.8980E+04	7.7265E+04
2.000E+00	.0E+00	.0E+00	.0E+00	1.7280E+04	2.0771E+04	4.9962E+04
2.127E+00	.0E+00	.0E+00	.0E+00	1.5806E+04	1.9170E+04	4.5235E+04
2.144E+00	.0E+00	.0E+00	8.6041E+04	1.5623E+04	1.8968E+04	4.4647E+04
2.210E+00	.0E+00	.0E+00	4.9466E+05	1.4935E+04	1.8208E+04	4.2453E+04
2.228E+00	.0E+00	5.9311E+04	4.9593E+05	1.4760E+04	1.8013E+04	4.1895E+04
2.634E+00	.0E+00	2.3438E+05	3.2938E+05	1.1428E+04	1.4207E+04	3.1497E+04
2.655E+00	1.1495E+05	2.2948E+05	3.2232E+05	1.1287E+04	1.4041E+04	3.1060E+04
3.000E+00	9.8165E+04	1.6526E+05	2.3054E+05	9.3061E+03	1.1668E+04	2.4990E+04
3.020E+00	9.7173E+04	1.6236E+05	2.2642E+05	9.2090E+03	1.1550E+04	2.4695E+04
3.044E+00	9.5947E+04	1.5887E+05	2.2147E+05	9.0912E+03	1.1406E+04	2.4339E+04
3.272E+00	8.4791E+04	1.3036E+05	1.8253E+05	8.0852E+03	1.0167E+04	2.1306E+04
3.298E+00	8.3597E+04	1.2829E+05	1.7863E+05	7.9807E+03	1.0037E+04	2.0992E+04
4.000E+00	5.9466E+04	7.5080E+04	1.0299E+05	5.7848E+03	7.2679E+03	1.4522E+04
5.000E+00	3.9105E+04	3.9066E+04	5.2913E+04	3.9318E+03	4.8749E+03	9.2712E+03
6.000E+00	2.7085E+04	2.2424E+04	3.0068E+04	2.8382E+03	3.4493E+03	6.3136E+03
8.000E+00	1.4496E+04	9.0103E+03	1.1881E+04	1.6681E+03	1.9330E+03	3.3387E+03
1.000E+01	8.6522E+03	4.3268E+03	5.6278E+03	1.0900E+03	1.2011E+03	1.9857E+03
1.155E+01	6.1107E+03	2.6591E+03	3.4254E+03	8.2262E+02	8.7212E+02	1.4018E+03
1.165E+01	5.9924E+03	2.5878E+03	3.3320E+03	8.0982E+02	8.5662E+02	1.3748E+03
1.330E+01	4.3092E+03	1.6408E+03	2.0935E+03	6.2259E+02	6.3285E+02	9.8993E+02
1.341E+01	4.2238E+03	1.5961E+03	2.0353E+03	6.1275E+02	6.2129E+02	9.7035E+02
1.385E+01	3.8879E+03	1.4241E+03	1.8121E+03	5.7382E+02	5.7574E+02	8.9352E+02
1.397E+01	3.8100E+03	1.3851E+03	1.7615E+03	5.6472E+02	5.6515E+02	8.7573E+02
1.500E+01	3.1731E+03	1.0792E+03	1.3655E+03	4.8898E+02	4.7789E+02	7.3035E+02
2.000E+01	1.4856E+03	3.8740E+02	4.7970E+02	2.7056E+02	2.3801E+02	3.4392E+02
3.000E+01	4.8025E+02	8.7256E+01	1.0444E+02	1.1356E+02	8.4269E+01	1.1230E+02
4.000E+01	2.0755E+02	2.9487E+01	3.4363E+01	5.9852E+01	3.8945E+01	4.8896E+01
5.000E+01	1.0624E+02	1.2565E+01	1.4320E+01	3.5905E+01	2.1031E+01	2.5172E+01
6.000E+01	6.0825E+01	6.2260E+00	6.9618E+00	2.3434E+01	1.2589E+01	1.4474E+01
7.858E+01	2.6275E+01	2.1952E+00	2.3842E+00	1.2284E+01	5.8152E+00	6.2894E+00
7.921E+01	2.5626E+01	2.1285E+00	2.3097E+00	1.2049E+01	5.6829E+00	6.1349E+00
8.000E+01	2.4836E+01	2.0479E+00	2.2199E+00	1.1760E+01	5.5214E+00	5.9469E+00
1.000E+02	1.2278E+01	8.6486E-01	9.1502E-01	6.8038E+00	2.8882E+00	2.9524E+00
1.500E+02	3.3846E+00	1.8355E-01	1.8641E-01	2.4628E+00	8.8262E-01	8.1901E-01
2.000E+02	1.3643E+00	6.2501E-02	6.2062E-02	1.1863E+00	3.8211E-01	3.3134E-01
3.000E+02	3.9237E-01	1.4543E-02	1.4239E-02	4.2557E-01	1.2061E-01	9.5455E-02
4.000E+02	1.6894E-01	5.4401E-03	5.3717E-03	2.0936E-01	5.4876E-02	4.1173E-02
5.000E+02	9.0798E-02	2.6339E-03	2.6503E-03	1.2296E-01	3.0547E-02	2.2148E-02
6.000E+02	5.6033E-02	1.4967E-03	1.5416E-03	8.0800E-02	1.9297E-02	1.3670E-02
8.000E+02	2.7445E-02	6.5719E-04	6.9663E-04	4.2983E-02	9.7398E-03	6.7096E-03
1.000E+03	1.6448E-02	3.6067E-04	4.0191E-04	2.7082E-02	5.9443E-03	4.0249E-03
1.500E+03	7.1232E-03	1.4185E-04	1.6369E-04	1.2434E-02	2.6397E-03	1.7418E-03

Z= 78

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	1.8553E+05	2.7988E+05	2.9330E+05	3.7577E+05	1.1418E+04	9.9530E+03
1.500E+00	1.0452E+05	1.5198E+05	9.0364E+04	1.1479E+05	6.1830E+03	5.9843E+03
2.000E+00	6.1426E+04	8.7515E+04	3.5970E+04	4.5427E+04	3.9182E+03	3.9925E+03
2.127E+00	5.4230E+04	7.6971E+04	2.9309E+04	3.6968E+04	3.5464E+03	3.6442E+03
2.144E+00	5.3346E+04	7.5678E+04	2.8534E+04	3.5985E+04	3.5006E+03	3.6008E+03
2.210E+00	5.0062E+04	7.0876E+04	2.5740E+04	3.2440E+04	3.3301E+03	3.4384E+03
2.228E+00	4.9232E+04	6.9663E+04	2.5054E+04	3.1571E+04	3.2868E+03	3.3970E+03
2.634E+00	3.4171E+04	4.7857E+04	1.4062E+04	1.7656E+04	2.4896E+03	2.6154E+03
2.655E+00	3.3562E+04	4.6980E+04	1.3674E+04	1.7166E+04	2.4566E+03	2.5823E+03
3.000E+00	2.5307E+04	3.5171E+04	8.8663E+03	1.1101E+04	1.9981E+03	2.1159E+03
3.020E+00	2.4920E+04	3.4619E+04	8.6613E+03	1.0843E+04	1.9761E+03	2.0931E+03
3.044E+00	2.4453E+04	3.3954E+04	8.4165E+03	1.0535E+04	1.9493E+03	2.0655E+03
3.272E+00	2.0551E+04	2.8419E+04	6.4783E+03	8.0956E+03	1.7219E+03	1.8288E+03

Z= 78

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
3.298E+00	2.0156E+04	2.7859E+04	6.2927E+03	7.8622E+03	1.6983E+03	1.8041E+03
4.000E+00	1.2412E+04	1.6963E+04	3.0766E+03	3.8268E+03	1.2122E+03	1.2875E+03
5.000E+00	6.8506E+03	9.2417E+03	1.3081E+03	1.6184E+03	8.1262E+02	8.5327E+02
6.000E+00	4.1121E+03	5.4878E+03	6.3716E+02	7.8461E+02	5.8158E+02	5.9968E+02
8.000E+00	1.7622E+03	2.3107E+03	1.9782E+02	2.4170E+02	3.3835E+02	3.3368E+02
1.000E+01	8.8361E+02	1.1421E+03	7.7659E+01	9.4264E+01	2.1976E+02	2.0660E+02
1.155E+01	5.5691E+02	7.1285E+02	4.1848E+01	5.0565E+01	1.6531E+02	1.4977E+02
1.165E+01	5.4272E+02	6.9432E+02	4.0434E+01	4.8841E+01	1.6271E+02	1.4710E+02
1.330E+01	3.5152E+02	4.4556E+02	2.2702E+01	2.7301E+01	1.2477E+02	1.0856E+02
1.341E+01	3.4236E+02	4.3371E+02	2.1924E+01	2.6356E+01	1.2278E+02	1.0657E+02
1.385E+01	3.0705E+02	3.8806E+02	1.8983E+01	2.2795E+01	1.1491E+02	9.8740E+01
1.397E+01	2.9900E+02	3.7768E+02	1.8330E+01	2.2004E+01	1.1308E+02	9.6918E+01
1.500E+01	2.3538E+02	2.9578E+02	1.3371E+01	1.6009E+01	9.7799E+01	8.1926E+01
2.000E+01	8.7692E+01	1.0779E+02	3.6831E+00	4.3608E+00	5.3912E+01	4.0779E+01
3.000E+01	2.0580E+01	2.4444E+01	5.7545E-01	6.6952E-01	2.2554E+01	1.4448E+01
4.000E+01	7.1192E+00	8.2317E+00	1.5108E-01	1.7106E-01	1.1873E+01	6.7452E+00
5.000E+01	3.0798E+00	3.4829E+00	5.2923E-02	5.9398E-02	7.1200E+00	3.6462E+00
6.000E+01	1.5423E+00	1.7115E+00	2.2453E-02	2.4927E-02	4.6645E+00	2.1842E+00
7.858E+01	5.5084E-01	5.9394E-01	6.3438E-03	6.9194E-03	2.4441E+00	1.0101E+00
7.921E+01	5.3427E-01	5.7560E-01	6.1117E-03	6.6628E-03	2.3973E+00	9.8715E-01
8.000E+01	5.1429E-01	5.5346E-01	5.8334E-03	6.3555E-03	2.3399E+00	9.5915E-01
1.000E+02	2.1905E-01	2.3018E-01	2.0655E-03	2.2196E-03	1.3534E+00	5.0214E-01
1.500E+02	4.7071E-02	4.7244E-02	3.2531E-04	3.4123E-04	4.8979E-01	1.5365E-01
2.000E+02	1.6137E-02	1.5838E-02	9.0635E-05	9.3971E-05	2.3589E-01	6.6571E-02
3.000E+02	3.7816E-03	3.6570E-03	1.6532E-05	1.7167E-05	8.4642E-02	2.1009E-02
4.000E+02	1.4195E-03	1.3831E-03	5.2877E-06	5.6225E-06	4.1641E-02	9.5617E-03
5.000E+02	6.8831E-04	6.8429E-04	2.2945E-06	2.4981E-06	2.4458E-02	5.3228E-03
6.000E+02	3.9195E-04	3.9893E-04	1.1873E-06	1.3540E-06	1.6072E-02	3.3630E-03
8.000E+02	1.7200E-04	1.8155E-04	4.7397E-07	5.6400E-07	8.5495E-03	1.6977E-03
1.000E+03	9.4575E-05	1.0478E-04	2.3688E-07	3.1127E-07	5.3867E-03	1.0359E-03
1.500E+03	3.6414E-05	4.3066E-05	8.7917E-08	1.1800E-07	2.4731E-03	4.6003E-04

Z= 78

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	6 S 1/2
1.000E+00	2.5780E+04	1.5886E+04	2.2512E+04	5.3847E+02
1.500E+00	1.3928E+04	8.3103E+03	1.1495E+04	2.7878E+02
2.000E+00	8.6771E+03	4.7968E+03	6.5340E+03	1.7221E+02
2.127E+00	7.8105E+03	4.2273E+03	5.7400E+03	1.5507E+02
2.144E+00	7.7036E+03	4.1575E+03	5.6430E+03	1.5296E+02
2.210E+00	7.3061E+03	3.8989E+03	5.2837E+03	1.4513E+02
2.228E+00	7.2053E+03	3.8336E+03	5.1931E+03	1.4315E+02
2.634E+00	5.3488E+03	2.6560E+03	3.5672E+03	1.0713E+02
2.655E+00	5.2720E+03	2.6085E+03	3.5020E+03	1.0565E+02
3.000E+00	4.2104E+03	1.9676E+03	2.6252E+03	8.5210E+01
3.020E+00	4.1594E+03	1.9376E+03	2.5843E+03	8.4230E+01
3.044E+00	4.0978E+03	1.9014E+03	2.5350E+03	8.3046E+01
3.272E+00	3.5748E+03	1.5991E+03	2.1242E+03	7.3011E+01
3.298E+00	3.5208E+03	1.5685E+03	2.0827E+03	7.1979E+01
4.000E+00	2.4174E+03	9.6898E+02	1.2738E+03	5.2575E+01
5.000E+00	1.5342E+03	5.4176E+02	6.9257E+02	3.5206E+01
6.000E+00	1.0416E+03	3.2679E+02	4.1328E+02	2.5180E+01
8.000E+00	5.4933E+02	1.4110E+02	1.7533E+02	1.4643E+01
1.000E+01	3.2642E+02	7.1133E+01	8.7127E+01	9.5088E+00
1.155E+01	2.3041E+02	4.4981E+01	5.4561E+01	7.1526E+00
1.165E+01	2.2596E+02	4.3843E+01	5.3152E+01	7.0403E+00
1.330E+01	1.6273E+02	2.8479E+01	3.4208E+01	5.3988E+00
1.341E+01	1.5951E+02	2.7742E+01	3.3304E+01	5.3128E+00
1.385E+01	1.4689E+02	2.4898E+01	2.9820E+01	4.9723E+00
1.397E+01	1.4397E+02	2.4250E+01	2.9027E+01	4.8928E+00
1.500E+01	1.2009E+02	1.9118E+01	2.2765E+01	4.2318E+00

Z= 78

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	6 S 1/2
2.000E+01	5.6629E+01	7.1613E+00	8.3420E+00	2.3330E+00
3.000E+01	1.8510E+01	1.6913E+00	1.9038E+00	9.7597E-01
4.000E+01	8.0705E+00	5.8722E-01	6.4347E-01	5.1363E-01
5.000E+01	4.1591E+00	2.5468E-01	2.7292E-01	3.0789E-01
6.000E+01	2.3935E+00	1.2777E-01	1.3435E-01	2.0086E-01
7.858E+01	1.0412E+00	4.5741E-02	4.6725E-02	1.0524E-01
7.921E+01	1.0157E+00	4.4369E-02	4.5284E-02	1.0322E-01
8.000E+01	9.8459E-01	4.2711E-02	4.3545E-02	1.0075E-01
1.000E+02	4.8920E-01	1.8222E-02	1.8137E-02	5.8275E-02
1.500E+02	1.3588E-01	3.9234E-03	3.7503E-03	2.1090E-02
2.000E+02	5.5000E-02	1.3461E-03	1.2587E-03	1.0157E-02
3.000E+02	1.5886E-02	3.1558E-04	2.9117E-04	3.6452E-03
4.000E+02	6.8543E-03	1.1851E-04	1.1032E-04	1.7939E-03
5.000E+02	3.6882E-03	5.7514E-05	5.4570E-05	1.0540E-03
6.000E+02	2.2772E-03	3.2739E-05	3.1807E-05	6.9297E-04
8.000E+02	1.1178E-03	1.4342E-05	1.4572E-05	3.6917E-04
1.000E+03	6.7068E-04	7.9076E-06	8.3912E-06	2.3309E-04
1.500E+03	2.9035E-04	3.0515E-06	3.4877E-06	1.0797E-04

Z= 79 22 STATES, 44 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	81.0040	.98586
2 S 1/2	2.00	14.3435	.87571
2 P 1/2	2.00	13.7769	.81701
2 P 3/2	4.00	11.9214	.78924
3 S 1/2	2.00	3.4035	.67074
3 P 1/2	2.00	3.1450	.59645
3 P 3/2	4.00	2.7339	.55968
3 D 3/2	4.00	2.3007	.36522
3 D 5/2	6.00	2.2118	.35754
4 S 1/2	2.00	.7481	.41079
4 P 1/2	2.00	.6366	.34266
4 P 3/2	4.00	.5375	.30731
4 D 3/2	4.00	.3535	.16044
4 D 5/2	6.00	.3349	.15356
4 F 5/2	6.00	.0973	.03139
4 F 7/2	8.00	.0932	.03063
5 S 1/2	2.00	.1154	.16513
5 P 1/2	2.00	.0786	.11901
5 P 3/2	4.00	.0614	.09973
5 D 3/2	4.00	.0122	.02684
5 D 5/2	6.00	.0104	.02421
6 S 1/2	1.00	.0083	.02462

*12.2 eV
10.2 eV*

Z= 79 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	1.5176E+06	.0E+00	.0E+00	.0E+00	1.5176E+06
1.5000E+00	6.7927E+05	.0E+00	.0E+00	.0E+00	6.7927E+05
2.0000E+00	3.6812E+05	.0E+00	.0E+00	.0E+00	3.6812E+05
2.2096E+00	2.9573E+05	.0E+00	.0E+00	.0E+00	2.9573E+05
2.2273E+00	3.6810E+05	.0E+00	.0E+00	7.7551E+04	2.9055E+05
2.2984E+00	7.4635E+05	.0E+00	.0E+00	4.7536E+05	2.7099E+05
2.3168E+00	7.9477E+05	.0E+00	.0E+00	5.2855E+05	2.6622E+05
2.7312E+00	7.2470E+05	.0E+00	.0E+00	5.4091E+05	1.8380E+05
2.7531E+00	8.1998E+05	.0E+00	.0E+00	6.3949E+05	1.8049E+05
3.0000E+00	6.6702E+05	.0E+00	.0E+00	5.1877E+05	1.4826E+05
3.1419E+00	5.9538E+05	.0E+00	.0E+00	4.6212E+05	1.3326E+05

Z= 79 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY (KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
3.1670E+00	6.1980E+05	.0E+00	.0E+00	4.8898E+05	1.3082E+05
3.4001E+00	5.2353E+05	.0E+00	.0E+00	4.1264E+05	1.1089E+05
3.4274E+00	5.3634E+05	.0E+00	.0E+00	4.2750E+05	1.0884E+05
4.0000E+00	3.7107E+05	.0E+00	.0E+00	2.9545E+05	7.5621E+04
5.0000E+00	2.1524E+05	.0E+00	.0E+00	1.7100E+05	4.4245E+04
6.0000E+00	1.3673E+05	.0E+00	.0E+00	1.0839E+05	2.8337E+04
8.0000E+00	6.5844E+04	.0E+00	.0E+00	5.1991E+04	1.3853E+04
1.0000E+01	3.7039E+04	.0E+00	.0E+00	2.9159E+04	7.8794E+03
1.1909E+01	2.3496E+04	.0E+00	.0E+00	1.8456E+04	5.0398E+03
1.2005E+01	5.8640E+04	.0E+00	3.5629E+04	1.8073E+04	4.9376E+03
1.3763E+01	4.0567E+04	.0E+00	2.4493E+04	1.2603E+04	3.4705E+03
1.3873E+01	5.5293E+04	.0E+00	3.9553E+04	1.2340E+04	3.3996E+03
1.4329E+01	5.1063E+04	.0E+00	3.6609E+04	1.1328E+04	3.1263E+03
1.4444E+01	5.7801E+04	.0E+00	4.3648E+04	1.1091E+04	3.0623E+03
1.5000E+01	5.2492E+04	.0E+00	3.9683E+04	1.0033E+04	2.7761E+03
2.0000E+01	2.5025E+04	.0E+00	1.9062E+04	4.6564E+03	1.3071E+03
3.0000E+01	8.5410E+03	.0E+00	6.5384E+03	1.5578E+03	4.4483E+02
4.0000E+01	3.9285E+03	.0E+00	3.0131E+03	7.1040E+02	2.0504E+02
5.0000E+01	2.1376E+03	.0E+00	1.6410E+03	3.8474E+02	1.1185E+02
6.0000E+01	1.2959E+03	.0E+00	9.9531E+02	2.3256E+02	6.7986E+01
8.0000E+01	5.8556E+02	.0E+00	4.4998E+02	1.0474E+02	3.0846E+01
8.0923E+01	5.6725E+02	.0E+00	4.3591E+02	1.0145E+02	2.9887E+01
8.1571E+01	2.7095E+03	2.1547E+03	4.2639E+02	9.9229E+01	2.9237E+01
1.0000E+02	1.5880E+03	1.2725E+03	2.4243E+02	5.6320E+01	1.6669E+01
1.5000E+02	5.4412E+02	4.4160E+02	7.8811E+01	1.8266E+01	5.4464E+00
2.0000E+02	2.5217E+02	2.0569E+02	3.5734E+01	8.2736E+00	2.4775E+00
3.0000E+02	8.6552E+01	7.0925E+01	1.2013E+01	2.7781E+00	8.3558E-01
4.0000E+02	4.1641E+01	3.4215E+01	5.7090E+00	1.3189E+00	3.9763E-01
5.0000E+02	2.4173E+01	1.9905E+01	3.2825E+00	7.5756E-01	2.2871E-01
6.0000E+02	1.5787E+01	1.3022E+01	2.1265E+00	4.9029E-01	1.4815E-01
8.0000E+02	8.3569E+00	6.9120E+00	1.1117E+00	2.5586E-01	7.7404E-02
1.0000E+03	5.2607E+00	4.3595E+00	6.9353E-01	1.5941E-01	4.8249E-02
1.5000E+03	2.4198E+00	2.0106E+00	3.1501E-01	7.2263E-02	2.1883E-02

Z= 79

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.210E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.227E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.298E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.317E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.731E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.753E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.142E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.167E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.6082E+04
3.400E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.3590E+04
3.427E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.2006E+04	3.3337E+04
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.8397E+04	2.7108E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.3113E+04	1.9449E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	9.9783E+03	1.4313E+04
8.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	6.1630E+03	8.3462E+03
1.000E+01	.0E+00	.0E+00	.0E+00	.0E+00	4.1436E+03	5.2832E+03
1.191E+01	.0E+00	.0E+00	.0E+00	.0E+00	2.9969E+03	3.6172E+03
1.200E+01	.0E+00	.0E+00	.0E+00	3.5629E+04	2.9525E+03	3.5534E+03
1.376E+01	.0E+00	.0E+00	.0E+00	2.4493E+04	2.2744E+03	2.6098E+03
1.387E+01	.0E+00	.0E+00	1.5567E+04	2.3987E+04	2.2396E+03	2.5624E+03
1.433E+01	.0E+00	.0E+00	1.4574E+04	2.2035E+04	2.1040E+03	2.3777E+03

Z= 79

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.444E+01	.0E+00	7.8361E+03	1.4237E+04	2.1575E+04	2.0717E+03	2.3340E+03
1.500E+01	.0E+00	7.4098E+03	1.2777E+04	1.9496E+04	1.9251E+03	2.1368E+03
2.000E+01	.0E+00	4.4219E+03	6.1227E+03	8.5173E+03	1.0828E+03	1.0687E+03
3.000E+01	.0E+00	1.9930E+03	1.9923E+03	2.5531E+03	4.6210E+02	3.7859E+02
4.000E+01	.0E+00	1.0843E+03	8.7628E+02	1.0525E+03	2.4552E+02	1.7472E+02
5.000E+01	.0E+00	6.6178E+02	4.5692E+02	5.2235E+02	1.4799E+02	9.4210E+01
6.000E+01	.0E+00	4.3631E+02	2.6652E+02	2.9248E+02	9.6888E+01	5.6324E+01
8.000E+01	.0E+00	2.2126E+02	1.1282E+02	1.1590E+02	4.8814E+01	2.4662E+01
8.092E+01	.0E+00	2.1523E+02	1.0900E+02	1.1168E+02	4.7478E+01	2.3856E+01
8.157E+01	2.1547E+03	2.1113E+02	1.0642E+02	1.0883E+02	4.6570E+01	2.3312E+01
1.000E+02	1.2725E+03	1.2856E+02	5.7665E+01	5.6209E+01	2.8309E+01	1.2888E+01
1.500E+02	4.4160E+02	4.6688E+01	1.7045E+01	1.5078E+01	1.0282E+01	3.9343E+00
2.000E+02	2.0569E+02	2.2493E+01	7.2501E+00	5.9915E+00	4.9621E+00	1.7029E+00
3.000E+02	7.0925E+01	8.0686E+00	2.2455E+00	1.6987E+00	1.7851E+00	5.3709E-01
4.000E+02	3.4215E+01	3.9699E+00	1.0127E+00	7.2639E-01	8.7972E-01	2.4442E-01
5.000E+02	1.9905E+01	2.3328E+00	5.6088E-01	3.8888E-01	5.1733E-01	1.3609E-01
6.000E+02	1.3022E+01	1.5339E+00	3.5324E-01	2.3939E-01	3.4027E-01	8.5988E-02
8.000E+02	6.9120E+00	8.1686E-01	1.7776E-01	1.1710E-01	1.8122E-01	4.3425E-02
1.000E+03	4.3595E+00	5.1512E-01	1.0828E-01	7.0131E-02	1.1423E-01	2.6544E-02
1.500E+03	2.0106E+00	2.3674E-01	4.7988E-02	3.0282E-02	5.2447E-02	1.1783E-02

Z= 79

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	4.0857E+04	3.9389E+04	1.3308E+05
1.500E+00	.0E+00	.0E+00	.0E+00	2.5919E+04	2.8986E+04	7.9246E+04
2.000E+00	.0E+00	.0E+00	.0E+00	1.7543E+04	2.0995E+04	5.1437E+04
2.210E+00	.0E+00	.0E+00	.0E+00	1.5183E+04	1.8464E+04	4.3797E+04
2.227E+00	.0E+00	.0E+00	7.7551E+04	1.5007E+04	1.8269E+04	4.3225E+04
2.298E+00	.0E+00	.0E+00	4.7536E+05	1.4329E+04	1.7516E+04	4.1031E+04
2.317E+00	.0E+00	5.3995E+04	4.7455E+05	1.4160E+04	1.7328E+04	4.0489E+04
2.731E+00	.0E+00	2.2517E+05	3.1574E+05	1.1014E+04	1.3730E+04	3.0560E+04
2.753E+00	1.1009E+05	2.2046E+05	3.0894E+05	1.0878E+04	1.3569E+04	3.0135E+04
3.000E+00	9.9874E+04	1.7497E+05	2.4392E+05	9.5046E+03	1.1925E+04	2.5863E+04
3.142E+00	9.3263E+04	1.5429E+05	2.1457E+05	8.8260E+03	1.1103E+04	2.3787E+04
3.167E+00	9.2074E+04	1.5096E+05	2.0986E+05	8.7131E+03	1.0965E+04	2.3442E+04
3.400E+00	8.1455E+04	1.2419E+05	1.7341E+05	7.7645E+03	9.7929E+03	2.0557E+04
3.427E+00	8.0299E+04	1.2216E+05	1.6970E+05	7.6642E+03	9.6677E+03	2.0253E+04
4.000E+00	6.0747E+04	7.9841E+04	1.0935E+05	5.9285E+03	7.4796E+03	1.5085E+04
5.000E+00	4.0387E+04	4.1667E+04	5.6379E+04	4.0396E+03	5.0413E+03	9.6586E+03
6.000E+00	2.8031E+04	2.3960E+04	3.2110E+04	2.9217E+03	3.5809E+03	6.5924E+03
8.000E+00	1.5074E+04	9.6739E+03	1.2734E+04	1.7218E+03	2.0178E+03	3.4979E+03
1.000E+01	9.0247E+03	4.6595E+03	6.0481E+03	1.1270E+03	1.2590E+03	2.0859E+03
1.191E+01	5.9305E+03	2.5893E+03	3.3220E+03	8.0249E+02	8.5653E+02	1.3703E+03
1.200E+01	5.8157E+03	2.5199E+03	3.2313E+03	7.9002E+02	8.4134E+02	1.3439E+03
1.376E+01	4.1402E+03	1.5765E+03	2.0023E+03	6.0266E+02	6.1636E+02	9.5808E+02
1.387E+01	4.0580E+03	1.5336E+03	1.9466E+03	5.9314E+02	6.0512E+02	9.3911E+02
1.433E+01	3.7396E+03	1.3707E+03	1.7360E+03	5.5599E+02	5.6144E+02	8.6573E+02
1.444E+01	3.6646E+03	1.3331E+03	1.6876E+03	5.4717E+02	5.5112E+02	8.4847E+02
1.500E+01	3.3274E+03	1.1686E+03	1.4754E+03	5.0712E+02	5.0458E+02	7.7098E+02
2.000E+01	1.5637E+03	4.2114E+02	5.2012E+02	2.8120E+02	2.5259E+02	3.6435E+02
3.000E+01	5.0796E+02	9.5366E+01	1.1379E+02	1.1839E+02	9.0061E+01	1.1956E+02
4.000E+01	2.2025E+02	3.2347E+01	3.7565E+01	6.2539E+01	4.1822E+01	5.2233E+01
5.000E+01	1.1303E+02	1.3821E+01	1.5693E+01	3.7584E+01	2.2666E+01	2.6959E+01
6.000E+01	6.4841E+01	6.8631E+00	7.6439E+00	2.4566E+01	1.3606E+01	1.5534E+01
8.000E+01	2.6554E+01	2.2646E+00	2.4442E+00	1.2359E+01	5.9936E+00	6.4016E+00
8.092E+01	2.5616E+01	2.1666E+00	2.3355E+00	1.2020E+01	5.7992E+00	6.1771E+00
8.157E+01	2.4984E+01	2.1009E+00	2.2627E+00	1.1790E+01	5.6676E+00	6.0256E+00
1.000E+02	1.3156E+01	9.5854E-01	1.0095E+00	7.1637E+00	3.1453E+00	3.1852E+00
1.500E+02	3.6394E+00	2.0418E-01	2.0631E-01	2.6021E+00	9.6632E-01	8.8685E-01
2.000E+02	1.4701E+00	6.9682E-02	6.8815E-02	1.2564E+00	4.1973E-01	3.5956E-01

Z= 79

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
3.000E+02	4.2381E-01	1.6255E-02	1.5818E-02	4.5221E-01	1.3303E-01	1.0385E-01
4.000E+02	1.8269E-01	6.0904E-03	5.9723E-03	2.2292E-01	6.0675E-02	4.4847E-02
5.000E+02	9.8238E-02	2.9518E-03	2.9476E-03	1.3111E-01	3.3828E-02	2.4135E-02
6.000E+02	6.0636E-02	1.6788E-03	1.7148E-03	8.6241E-02	2.1392E-02	1.4901E-02
8.000E+02	2.9696E-02	7.3725E-04	7.7513E-04	4.5926E-02	1.0815E-02	7.3143E-03
1.000E+03	1.7790E-02	4.0493E-04	4.4784E-04	2.8949E-02	6.6059E-03	4.3846E-03
1.500E+03	7.6946E-03	1.5798E-04	1.8121E-04	1.3290E-02	2.9353E-03	1.8949E-03

Z= 79

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	1.8912E+05	2.8643E+05	3.2C84E+05	4.1126E+05	1.1865E+04	1.0315E+04
1.500E+00	1.0825E+05	1.5768E+05	1.0C07E+05	1.2715E+05	6.4446E+03	6.2399E+03
2.000E+00	6.4173E+04	9.1529E+04	4.0139E+04	5.0694E+04	4.0912E+03	4.1815E+03
2.210E+00	5.2465E+04	7.4347E+04	2.8817E+04	3.6318E+04	3.4810E+03	3.6085E+03
2.227E+00	5.1605E+04	7.3092E+04	2.8C54E+04	3.5351E+04	3.4359E+03	3.5653E+03
2.298E+00	4.8329E+04	6.8309E+04	2.5232E+04	3.1773E+04	3.2638E+03	3.4001E+03
2.317E+00	4.7524E+04	6.7135E+04	2.4559E+04	3.0920E+04	3.2214E+03	3.3591E+03
2.731E+00	3.3161E+04	4.6363E+04	1.3922E+04	1.7465E+04	2.4519E+03	2.5982E+03
2.753E+00	3.2569E+04	4.5510E+04	1.3538E+04	1.6980E+04	2.4193E+03	2.5653E+03
3.000E+00	2.6721E+04	3.7147E+04	9.9890E+03	1.2505E+04	2.0927E+03	2.2315E+03
3.142E+00	2.3964E+04	3.3221E+04	8.4660E+03	1.0587E+04	1.9343E+03	2.0673E+03
3.167E+00	2.3514E+04	3.2580E+04	8.2266E+03	1.0286E+04	1.9081E+03	2.0401E+03
3.400E+00	1.9812E+04	2.7334E+04	6.3596E+03	7.9387E+03	1.6890E+03	1.8100E+03
3.427E+00	1.9430E+04	2.6795E+04	6.1772E+03	7.7096E+03	1.6659E+03	1.7856E+03
4.000E+00	1.3195E+04	1.8030E+04	3.4881E+03	4.3376E+03	1.2723E+03	1.3646E+03
5.000E+00	7.3187E+03	9.8679E+03	1.4898E+03	1.8425E+03	8.5436E+02	9.0795E+02
6.000E+00	4.4097E+03	5.8800E+03	7.2810E+02	8.9617E+02	6.1230E+02	6.4017E+02
8.000E+00	1.9002E+03	2.4886E+03	2.2716E+02	2.7738E+02	3.5697E+02	3.5798E+02
1.000E+01	9.5667E+02	1.2347E+03	8.9518E+01	1.0858E+02	2.3219E+02	2.2250E+02
1.191E+01	5.4836E+02	6.9927E+02	4.2463E+01	5.1213E+01	1.6465E+02	1.5107E+02
1.200E+01	5.3440E+02	6.8109E+02	4.1C28E+01	4.9469E+01	1.6207E+02	1.4838E+02
1.376E+01	3.4177E+02	4.3134E+02	2.2657E+01	2.7189E+01	1.2330E+02	1.0858E+02
1.387E+01	3.3287E+02	4.1987E+02	2.1880E+01	2.6249E+01	1.2134E+02	1.0660E+02
1.433E+01	2.9902E+02	3.7628E+02	1.8988E+01	2.2753E+01	1.1367E+02	9.8884E+01
1.444E+01	2.9119E+02	3.6621E+02	1.8334E+01	2.1963E+01	1.1185E+02	9.7062E+01
1.500E+01	2.5669E+02	3.2191E+02	1.5524E+01	1.8570E+01	1.0360E+02	8.8849E+01
2.000E+01	9.6098E+01	1.1785E+02	4.2955E+00	5.0804E+00	5.7224E+01	4.4445E+01
3.000E+01	2.2698E+01	2.6882E+01	6.7459E-01	7.8380E-01	2.4009E+01	1.5856E+01
4.000E+01	7.8848E+00	9.0876E+00	1.7781E-01	2.0369E-01	1.2665E+01	7.4359E+00
5.000E+01	3.4217E+00	3.8560E+00	6.2479E-02	6.9991E-02	7.6082E+00	4.0341E+00
6.000E+01	1.7178E+00	1.8991E+00	2.6578E-02	2.9450E-02	4.9915E+00	2.4236E+00
8.000E+01	5.7485E-01	6.1609E-01	6.9241E-03	7.5355E-03	2.5099E+00	1.0689E+00
8.092E+01	5.5023E-01	5.8898E-01	6.5635E-03	7.1376E-03	2.4411E+00	1.0343E+00
8.157E+01	5.3375E-01	5.7083E-01	6.3241E-03	6.8735E-03	2.3944E+00	1.0108E+00
1.000E+02	2.4546E-01	2.5681E-01	2.4578E-03	2.6338E-03	1.4545E+00	5.6138E-01
1.500E+02	5.2926E-02	5.2891E-02	3.8901E-04	4.0669E-04	5.2820E-01	1.7271E-01
2.000E+02	1.8199E-02	1.7765E-02	1.0865E-04	1.1240E-04	2.5499E-01	7.5083E-02
3.000E+02	4.2760E-03	4.1101E-03	1.9923E-05	2.0544E-05	9.1797E-02	2.3794E-02
4.000E+02	1.6072E-03	1.5576E-03	6.3613E-06	6.6861E-06	4.5256E-02	1.0855E-02
5.000E+02	7.8054E-04	7.7124E-04	2.7432E-06	3.0144E-06	2.6618E-02	6.0528E-03
6.000E+02	4.4521E-04	4.4885E-04	1.4418E-06	1.6302E-06	1.7509E-02	3.8285E-03
8.000E+02	1.9519E-04	2.0461E-04	5.6325E-07	6.8360E-07	9.3237E-03	1.9356E-03
1.000E+03	1.0762E-04	1.1800E-04	2.9121E-07	3.6230E-07	5.8771E-03	1.1821E-03
1.500E+03	4.1192E-05	4.8477E-05	9.6746E-08	1.3664E-07	2.6981E-03	5.2523E-04

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	6 S 1/2
1.000E+00	2.7249E+04	1.9268E+04	2.7352E+04	5.5803E+02
1.500E+00	1.4747E+04	1.0167E+04	1.4072E+04	2.8915E+02
2.000E+00	9.2030E+03	5.9081E+03	8.0468E+03	1.7868E+02
2.210E+00	7.7579E+03	4.8153E+03	6.5231E+03	1.5077E+02
2.227E+00	7.6513E+03	4.7355E+03	6.4123E+03	1.4872E+02
2.298E+00	7.2439E+03	4.4318E+03	5.9911E+03	1.4090E+02
2.317E+00	7.1436E+03	4.3573E+03	5.8880E+03	1.3898E+02
2.731E+00	5.3253E+03	3.0356E+03	4.0663E+03	1.0450E+02
2.753E+00	5.2486E+03	2.9812E+03	3.9918E+03	1.0306E+02
3.000E+00	4.4811E+03	2.4465E+03	3.2609E+03	8.8616E+01
3.142E+00	4.1106E+03	2.1948E+03	2.9182E+03	8.1647E+01
3.167E+00	4.0495E+03	2.1536E+03	2.8624E+03	8.0498E+01
3.400E+00	3.5393E+03	1.8161E+03	2.4045E+03	7.0917E+01
3.427E+00	3.4857E+03	1.7812E+03	2.3573E+03	6.9912E+01
4.000E+00	2.5801E+03	1.2127E+03	1.5917E+03	5.4757E+01
5.000E+00	1.6414E+03	6.7611E+02	8.6978E+02	3.6721E+01
6.000E+00	1.1166E+03	4.1209E+02	5.2089E+02	2.6296E+01
8.000E+00	5.9078E+02	1.7896E+02	2.2218E+02	1.5322E+01
1.000E+01	3.5193E+02	9.0606E+01	1.1085E+02	9.9643E+00
1.191E+01	2.3115E+02	5.2150E+01	6.3041E+01	7.0654E+00
1.200E+01	2.2669E+02	5.0832E+01	6.1413E+01	6.9544E+00
1.376E+01	1.6163E+02	3.2608E+01	3.9012E+01	5.2911E+00
1.387E+01	1.5843E+02	3.1765E+01	3.7981E+01	5.2067E+00
1.433E+01	1.4607E+02	2.8554E+01	3.4062E+01	4.8778E+00
1.444E+01	1.4316E+02	2.7811E+01	3.3156E+01	4.7997E+00
1.500E+01	1.3009E+02	2.4535E+01	2.9169E+01	4.4457E+00
2.000E+01	6.1559E+01	9.2379E+00	1.0740E+01	2.4556E+00
3.000E+01	2.0222E+01	2.1964E+00	2.4660E+00	1.0303E+00
4.000E+01	8.8470E+00	7.6592E-01	8.3686E-01	5.4336E-01
5.000E+01	4.5712E+00	3.3325E-01	3.5601E-01	3.2628E-01
6.000E+01	2.6361E+00	1.6761E-01	1.7565E-01	2.1316E-01
8.000E+01	1.0877E+00	5.6237E-02	5.7123E-02	1.0718E-01
8.092E+01	1.0496E+00	5.3834E-02	5.4614E-02	1.0424E-01
8.157E+01	1.0239E+00	5.2224E-02	5.2935E-02	1.0224E-01
1.000E+02	5.4168E-01	2.4056E-02	2.3847E-02	6.2110E-02
1.500E+02	1.5100E-01	5.2009E-03	4.9491E-03	2.2555E-02
2.000E+02	6.1260E-02	1.7890E-03	1.6645E-03	1.0889E-02
3.000E+02	1.7739E-02	4.2058E-04	3.8589E-04	3.9206E-03
4.000E+02	7.6632E-03	1.5821E-04	1.4632E-04	1.9334E-03
5.000E+02	4.1254E-03	7.6866E-05	7.2419E-05	1.1376E-03
6.000E+02	2.5479E-03	4.3800E-05	4.2200E-05	7.4860E-04
8.000E+02	1.2505E-03	1.9208E-05	1.9328E-05	3.9918E-04
1.000E+03	7.5005E-04	1.0598E-05	1.1124E-05	2.5213E-04
1.500E+03	3.2418E-04	4.0672E-06	4.6071E-06	1.1672E-04

Z= 80 22 STATES, 44 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	83.4030	.98596
2 S 1/2	2.00	14.8340	.87698
2 P 1/2	2.00	14.2548	.81883
2 P 3/2	4.00	12.2862	.79043
3 S 1/2	2.00	3.5392	.67384
3 P 1/2	2.00	3.2745	.60015
3 P 3/2	4.00	2.8368	.56242
3 D 3/2	4.00	2.3948	.36882
3 D 5/2	6.00	2.3005	.36094
4 S 1/2	2.00	.7882	.41522
4 P 1/2	2.00	.6735	.34739
4 P 3/2	4.00	.5672	.31102
4 D 3/2	4.00	.3783	.16395
4 D 5/2	6.00	.3583	.15685
4 F 5/2	6.00	.1134	.03321
4 F 7/2	8.00	.1090	.03242
5 S 1/2	2.00	.1259	.17091
5 P 1/2	2.00	.0874	.12455
5 P 3/2	4.00	.0683	.10445
5 D 3/2	4.00	.0160	.03032
5 D 5/2	6.00	.0139	.02755
6 S 1/2	2.00	.0096	.02870

Z= 80 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	1.6049E+06	.0E+00	.0E+00	.0E+00	1.6049E+06
1.5000E+00	7.2009E+05	.0E+00	.0E+00	.0E+00	7.2009E+05
2.0000E+00	3.9053E+05	.0E+00	.0E+00	.0E+00	3.9053E+05
2.2981E+00	2.8767E+05	.0E+00	.0E+00	.0E+00	2.8767E+05
2.3165E+00	3.7794E+05	.0E+00	.0E+00	9.5328E+04	2.8262E+05
2.3924E+00	7.2132E+05	.0E+00	.0E+00	4.5829E+05	2.6304E+05
2.4115E+00	7.7931E+05	.0E+00	.0E+00	5.2092E+05	2.5839E+05
2.8339E+00	6.9713E+05	.0E+00	.0E+00	5.1773E+05	1.7940E+05
2.8566E+00	7.8929E+05	.0E+00	.0E+00	6.1312E+05	1.7616E+05
3.0000E+00	7.0189E+05	.0E+00	.0E+00	5.4444E+05	1.5746E+05
3.2713E+00	5.6741E+05	.0E+00	.0E+00	4.3849E+05	1.2891E+05
3.2975E+00	5.9063E+05	.0E+00	.0E+00	4.6408E+05	1.2655E+05
3.5356E+00	5.0010E+05	.0E+00	.0E+00	3.9256E+05	1.0753E+05
3.5639E+00	5.1217E+05	.0E+00	.0E+00	4.0663E+05	1.0554E+05
4.0000E+00	3.8958E+05	.0E+00	.0E+00	3.0919E+05	8.0388E+04
5.0000E+00	2.2610E+05	.0E+00	.0E+00	1.7903E+05	4.7072E+04
6.0000E+00	1.4369E+05	.0E+00	.0E+00	1.1353E+05	3.0162E+04
8.0000E+00	6.9321E+04	.0E+00	.0E+00	5.4564E+04	1.4757E+04
1.0000E+01	3.9030E+04	.0E+00	.0E+00	3.0631E+04	8.3993E+03
1.2274E+01	2.2899E+04	.0E+00	.0E+00	1.7924E+04	4.9750E+03
1.2372E+01	5.6796E+04	.0E+00	3.4370E+04	1.7552E+04	4.8740E+03
1.4241E+01	3.8879E+04	.0E+00	2.3373E+04	1.2115E+04	3.3907E+03
1.4355E+01	5.3039E+04	.0E+00	3.7855E+04	1.1862E+04	3.3214E+03
1.4819E+01	4.9055E+04	.0E+00	3.5094E+04	1.0903E+04	3.0581E+03
1.4938E+01	5.5534E+04	.0E+00	4.1863E+04	1.0675E+04	2.9955E+03
1.5000E+01	5.4895E+04	.0E+00	4.1373E+04	1.0558E+04	2.9633E+03
2.0000E+01	2.6278E+04	.0E+00	1.9975E+04	4.9063E+03	1.3970E+03
3.0000E+01	8.9892E+03	.0E+00	6.8685E+03	1.6444E+03	4.7635E+02
4.0000E+01	4.1418E+03	.0E+00	3.1710E+03	7.5094E+02	2.1980E+02
5.0000E+01	2.2565E+03	.0E+00	1.7293E+03	4.0713E+02	1.2008E+02
6.0000E+01	1.3693E+03	.0E+00	1.0499E+03	2.4630E+02	7.3060E+01
8.0000E+01	6.1966E+02	.0E+00	4.7538E+02	1.1108E+02	3.3203E+01
8.3320E+01	5.5379E+02	.0E+00	4.2487E+02	9.9233E+01	2.9691E+01

Z= 80 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY (KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
8.3987E+01	2.6188E+03	2.0771E+03	4.1560E+02	9.7062E+01	2.9047E+01
1.0000E+02	1.6565E+03	1.3223E+03	2.5642E+02	5.9795E+01	1.7965E+01
1.5000E+02	5.7020E+02	4.6136E+02	8.3529E+01	1.9432E+01	5.8841E+00
2.0000E+02	2.6475E+02	2.1532E+02	3.7930E+01	8.8141E+00	2.6809E+00
3.0000E+02	9.1130E+01	7.4481E+01	1.2777E+01	2.9655E+00	9.0649E-01
4.0000E+02	4.3922E+01	3.6000E+01	6.0805E+00	1.4097E+00	4.3192E-01
5.0000E+02	2.5530E+01	2.0971E+01	3.4994E+00	8.1041E-01	2.4868E-01
6.0000E+02	1.6687E+01	1.3733E+01	2.2684E+00	5.2480E-01	1.6119E-01
8.0000E+02	8.8422E+00	7.2972E+00	1.1867E+00	2.7402E-01	8.4280E-02
1.0000E+03	5.5684E+00	4.6046E+00	7.4048E-01	1.7077E-01	5.2546E-02
1.5000E+03	2.5612E+00	2.1237E+00	3.3630E-01	7.7403E-02	2.3831E-02

Z= 80

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.298E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.317E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.392E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.412E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.834E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.857E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.271E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.297E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.4381E+04
3.536E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.2065E+04
3.564E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.0952E+04	3.1829E+04
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.8467E+04	2.7481E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.3261E+04	1.9739E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.0127E+04	1.4667E+04
8.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	6.2888E+03	8.6152E+03
1.000E+01	.0E+00	.0E+00	.0E+00	.0E+00	4.2399E+03	5.4842E+03
1.227E+01	.0E+00	.0E+00	.0E+00	.0E+00	2.9047E+03	3.5265E+03
1.237E+01	.0E+00	.0E+00	.0E+00	3.4370E+04	2.8617E+03	3.4645E+03
1.424E+01	.0E+00	.0E+00	.0E+00	2.3373E+04	2.1882E+03	2.5233E+03
1.435E+01	.0E+00	.0E+00	1.4968E+04	2.2887E+04	2.1547E+03	2.4775E+03
1.482E+01	.0E+00	.0E+00	1.4051E+04	2.1044E+04	2.0261E+03	2.3018E+03
1.494E+01	.0E+00	7.5321E+03	1.3728E+04	2.0603E+04	1.9950E+03	2.2595E+03
1.500E+01	.0E+00	7.4382E+03	1.3559E+04	2.0376E+04	1.9790E+03	2.2378E+03
2.000E+01	.0E+00	4.5282E+03	6.4678E+03	8.9787E+03	1.1167E+03	1.1254E+03
3.000E+01	.0E+00	2.0500E+03	2.1188E+03	2.6997E+03	4.7826E+02	4.0159E+02
4.000E+01	.0E+00	1.1199E+03	9.3530E+02	1.1158E+03	2.5477E+02	1.8626E+02
5.000E+01	.0E+00	6.8521E+02	4.8932E+02	5.5480E+02	1.5386E+02	1.0080E+02
6.000E+01	.0E+00	4.5267E+02	2.8614E+02	3.1113E+02	1.0089E+02	6.0433E+01
8.000E+01	.0E+00	2.3021E+02	1.2158E+02	1.2359E+02	5.0962E+01	2.6575E+01
8.332E+01	.0E+00	2.0882E+02	1.0767E+02	1.0838E+02	4.6198E+01	2.3635E+01
8.399E+01	2.0771E+03	2.0485E+02	1.0513E+02	1.0563E+02	4.5316E+01	2.3097E+01
1.000E+02	1.3223E+03	1.3407E+02	6.2318E+01	6.0038E+01	2.9612E+01	1.3931E+01
1.500E+02	4.6136E+02	4.8875E+01	1.8504E+01	1.6151E+01	1.0793E+01	4.2750E+00
2.000E+02	2.1532E+02	2.3607E+01	7.8936E+00	6.4293E+00	5.2217E+00	1.8565E+00
3.000E+02	7.4481E+01	8.4971E+00	2.4537E+00	1.8265E+00	1.8847E+00	5.8789E-01
4.000E+02	3.6000E+01	4.1898E+00	1.1089E+00	7.8177E-01	9.3076E-01	2.6818E-01
5.000E+02	2.0971E+01	2.4656E+00	6.1511E-01	4.1871E-01	5.4812E-01	1.4956E-01
6.000E+02	1.3733E+01	1.6228E+00	3.8780E-01	2.5778E-01	3.6087E-01	9.4605E-02
8.000E+02	7.2972E+00	8.6519E-01	1.9541E-01	1.2608E-01	1.9240E-01	4.7845E-02
1.000E+03	4.6046E+00	5.4586E-01	1.1914E-01	7.5479E-02	1.2133E-01	2.9270E-02
1.500E+03	2.1237E+00	2.5088E-01	5.2864E-02	3.2557E-02	5.5710E-02	1.3010E-02

Z= 80

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	4.0651E+04	3.8656E+04	1.3543E+05
1.500E+00	.0E+00	.0E+00	.0E+00	2.6151E+04	2.8923E+04	8.1274E+04
2.000E+00	.0E+00	.0E+00	.0E+00	1.7796E+04	2.1174E+04	5.2926E+04
2.298E+00	.0E+00	.0E+00	.0E+00	1.4555E+04	1.7753E+04	4.2317E+04
2.317E+00	.0E+00	.0E+00	9.5328E+04	1.4386E+04	1.7565E+04	4.1762E+04
2.392E+00	.0E+00	.0E+00	4.5829E+05	1.3720E+04	1.6821E+04	3.9578E+04
2.412E+00	.0E+00	6.6883E+04	4.5403E+05	1.3558E+04	1.6641E+04	3.9052E+04
2.834E+00	.0E+00	2.1581E+05	3.0192E+05	1.0596E+04	1.3247E+04	2.9597E+04
2.857E+00	1.0644E+05	2.1128E+05	2.9540E+05	1.0465E+04	1.3092E+04	2.9184E+04
3.000E+00	1.0108E+05	1.8525E+05	2.5811E+05	9.6945E+03	1.2168E+04	2.6748E+04
3.271E+00	8.9358E+04	1.4629E+05	2.0285E+05	8.4463E+03	1.0657E+04	2.2871E+04
3.297E+00	8.8209E+04	1.4312E+05	1.9837E+05	8.3382E+03	1.0525E+04	2.2539E+04
3.536E+00	7.8144E+04	1.1804E+05	1.6431E+05	7.4448E+03	9.4191E+03	1.9802E+04
3.564E+00	7.7028E+04	1.1603E+05	1.6079E+05	7.3485E+03	9.2985E+03	1.9578E+04
4.000E+00	6.2435E+04	8.4730E+04	1.1607E+05	6.0713E+03	7.6880E+03	1.5661E+04
5.000E+00	4.1685E+04	4.4345E+04	5.9999E+04	4.1466E+03	5.2064E+03	1.0053E+04
6.000E+00	2.8960E+04	2.5554E+04	3.4225E+04	3.0047E+03	3.7120E+03	6.8772E+03
8.000E+00	1.5657E+04	1.0371E+04	1.3632E+04	1.7755E+03	2.1036E+03	3.6618E+03
1.000E+01	9.4031E+03	5.0113E+03	6.4924E+03	1.1644E+03	1.3179E+03	2.1892E+03
1.227E+01	5.7537E+03	2.5198E+03	3.2196E+03	7.8258E+02	8.4097E+02	1.3391E+03
1.237E+01	5.6422E+03	2.4523E+03	3.1316E+03	7.7043E+02	8.2608E+02	1.3132E+03
1.424E+01	3.9760E+03	1.5136E+03	1.9135E+03	5.8314E+02	6.0008E+02	9.2679E+02
1.435E+01	3.8970E+03	1.4724E+03	1.8603E+03	5.7392E+02	5.8915E+02	9.0842E+02
1.482E+01	3.5953E+03	1.3182E+03	1.6617E+03	5.3847E+02	5.4728E+02	8.3838E+02
1.494E+01	3.5231E+03	1.2821E+03	1.6153E+03	5.2992E+02	5.3724E+02	8.2165E+02
1.500E+01	3.4860E+03	1.2637E+03	1.5917E+03	5.2552E+02	5.3207E+02	8.1305E+02
2.000E+01	1.6439E+03	4.5717E+02	5.6310E+02	2.9204E+02	2.6774E+02	3.8560E+02
3.000E+01	5.3666E+02	1.0407E+02	1.2379E+02	1.2334E+02	9.6131E+01	1.2715E+02
4.000E+01	2.3349E+02	3.5428E+01	4.0999E+01	6.5294E+01	4.4854E+01	5.5734E+01
5.000E+01	1.2012E+02	1.5178E+01	1.7170E+01	3.9310E+01	2.4397E+01	2.8839E+01
6.000E+01	6.9043E+01	7.5531E+00	8.3792E+00	2.5733E+01	1.4687E+01	1.6650E+01
8.000E+01	2.8358E+01	2.5001E+00	2.6868E+00	1.2976E+01	6.4981E+00	6.8828E+00
8.332E+01	2.4974E+01	2.1381E+00	2.2874E+00	1.1762E+01	5.7838E+00	6.0667E+00
8.399E+01	2.4359E+01	2.0736E+00	2.2164E+00	1.1537E+01	5.6531E+00	5.9181E+00
1.000E+02	1.4079E+01	1.0606E+00	1.1119E+00	7.5359E+00	3.4208E+00	3.4322E+00
1.500E+02	3.9085E+00	2.2675E-01	2.2796E-01	2.7467E+00	1.0566E+00	9.5907E-01
2.000E+02	1.5822E+00	7.7557E-02	7.6176E-02	1.3294E+00	4.6052E-01	3.8970E-01
3.000E+02	4.5721E-01	1.8139E-02	1.7543E-02	4.8027E-01	1.4656E-01	1.1284E-01
4.000E+02	1.9731E-01	6.8066E-03	6.6288E-03	2.3715E-01	6.7007E-02	4.8782E-02
5.000E+02	1.0616E-01	3.3025E-03	3.2727E-03	1.3968E-01	3.7416E-02	2.6266E-02
6.000E+02	6.5535E-02	1.8797E-03	1.9040E-03	9.1967E-02	2.3687E-02	1.6222E-02
8.000E+02	3.2089E-02	8.2579E-04	8.6129E-04	4.9029E-02	1.1995E-02	7.9623E-03
1.000E+03	1.9217E-02	4.5393E-04	4.9751E-04	3.0918E-02	7.3321E-03	4.7703E-03
1.500E+03	8.3046E-03	1.7704E-04	2.0066E-04	1.4194E-02	3.2625E-03	2.0594E-03

Z= 80

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	1.9256E+05	2.9270E+05	3.4967E+05	4.4844E+05	1.2353E+04	1.0723E+04
1.500E+00	1.1199E+05	1.6343E+05	1.1041E+05	1.4030E+05	6.7279E+03	6.5265E+03
2.000E+00	6.6938E+04	9.5601E+04	4.4625E+04	5.6360E+04	4.2797E+03	4.3943E+03
2.298E+00	5.0619E+04	7.1603E+04	2.8158E+04	3.5456E+04	3.4183E+03	3.5823E+03
2.317E+00	4.9785E+04	7.0388E+04	2.7412E+04	3.4510E+04	3.3741E+03	3.5397E+03
2.392E+00	4.6530E+04	6.5649E+04	2.4583E+04	3.0927E+04	3.2008E+03	3.3713E+03
2.412E+00	4.5751E+04	6.4515E+04	2.3926E+04	3.0095E+04	3.1592E+03	3.3306E+03
2.834E+00	3.2100E+04	4.4797E+04	1.3703E+04	1.7174E+04	2.4167E+03	2.5887E+03
2.857E+00	3.1524E+04	4.3971E+04	1.3325E+04	1.6697E+04	2.3846E+03	2.5559E+03
3.000E+00	2.8177E+04	3.9177E+04	1.1211E+04	1.4032E+04	2.1957E+03	2.3618E+03
3.271E+00	2.2989E+04	3.1796E+04	8.2285E+03	1.0279E+04	1.8954E+03	2.0483E+03
3.297E+00	2.2555E+04	3.1181E+04	7.9955E+03	9.9858E+03	1.8697E+03	2.0213E+03
3.536E+00	1.9054E+04	2.6226E+04	6.2087E+03	7.7415E+03	1.6585E+03	1.7973E+03

Z= 80

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
3.564E+00	1.8685E+04	2.5706E+04	6.0305E+03	7.5178E+03	1.6358E+03	1.7730E+03
4.000E+00	1.4008E+04	1.9135E+04	3.9389E+03	4.8967E+03	1.3381E+03	1.4519E+03
5.000E+00	7.8067E+03	1.0520E+04	1.6900E+03	2.0892E+03	9.0003E+02	9.6985E+02
6.000E+00	4.7210E+03	6.2904E+03	8.2876E+02	1.0196E+03	6.4590E+02	6.8602E+02
8.000E+00	2.0457E+03	2.6760E+03	2.5984E+02	3.1708E+02	3.7736E+02	3.8560E+02
1.000E+01	1.0341E+03	1.3326E+03	1.0278E+02	1.2457E+02	2.4583E+02	2.4061E+02
1.227E+01	5.3956E+02	6.8541E+02	4.2958E+01	5.1713E+01	1.6441E+02	1.5316E+02
1.237E+01	5.2583E+02	6.6759E+02	4.1508E+01	4.9953E+01	1.6183E+02	1.5044E+02
1.424E+01	3.3201E+02	4.1719E+02	2.2541E+01	2.6992E+01	1.2215E+02	1.0916E+02
1.435E+01	3.2337E+02	4.0608E+02	2.1768E+01	2.6059E+01	1.2021E+02	1.0717E+02
1.482E+01	2.9095E+02	3.6450E+02	1.8933E+01	2.2637E+01	1.1272E+02	9.9533E+01
1.494E+01	2.8334E+02	3.5474E+02	1.8281E+01	2.1851E+01	1.1091E+02	9.7703E+01
1.500E+01	2.7944E+02	3.4976E+02	1.7950E+01	2.1452E+01	1.0999E+02	9.6764E+01
2.000E+01	1.0513E+02	1.2862E+02	4.9897E+00	5.8947E+00	6.0870E+01	4.8651E+01
3.000E+01	2.4988E+01	2.9511E+01	7.8778E-01	9.1384E-01	2.5612E+01	1.7478E+01
4.000E+01	8.7169E+00	1.0014E+01	2.0838E-01	2.3832E-01	1.3539E+01	8.1638E+00
5.000E+01	3.7946E+00	4.2613E+00	7.3681E-02	8.3247E-02	8.1467E+00	4.4791E+00
6.000E+01	1.9096E+00	2.1033E+00	3.1315E-02	3.4644E-02	5.3514E+00	2.6987E+00
8.000E+01	6.4133E-01	6.8454E-01	8.1899E-03	8.8890E-03	2.6973E+00	1.1955E+00
8.332E+01	5.4947E-01	5.8386E-01	6.7793E-03	7.3385E-03	2.4448E+00	1.0643E+00
8.399E+01	5.3305E-01	5.6592E-01	6.5327E-03	7.0680E-03	2.3980E+00	1.0402E+00
1.000E+02	2.7455E-01	2.8598E-01	2.9124E-03	3.1172E-03	1.5660E+00	6.2988E-01
1.500E+02	5.9439E-02	5.9438E-02	4.6226E-04	4.8271E-04	5.7064E-01	1.9482E-01
2.000E+02	2.0483E-02	1.9893E-02	1.2946E-04	1.3355E-04	2.7615E-01	8.4985E-02
3.000E+02	4.8248E-03	4.6145E-03	2.3740E-05	2.4518E-05	9.9738E-02	2.7043E-02
4.000E+02	1.8166E-03	1.7513E-03	7.6100E-06	8.0442E-06	4.9274E-02	1.2368E-02
5.000E+02	8.8389E-04	8.6650E-04	3.3152E-06	3.5645E-06	2.9023E-02	6.9081E-03
6.000E+02	5.0466E-04	5.0369E-04	1.7170E-06	1.9351E-06	1.9109E-02	4.3741E-03
8.000E+02	2.2114E-04	2.3048E-04	6.9014E-07	8.0839E-07	1.0187E-02	2.2150E-03
1.000E+03	1.2233E-04	1.3230E-04	3.4284E-07	4.4393E-07	6.4240E-03	1.3539E-03
1.500E+03	4.6829E-05	5.4457E-05	1.1911E-07	1.7174E-07	2.9491E-03	6.0232E-04

Z= 80

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	6 S 1/2
1.000E+00	2.9040E+04	2.1919E+04	3.1417E+04	1.3201E+03
1.500E+00	1.5738E+04	1.1660E+04	1.6273E+04	6.8624E+02
2.000E+00	9.8377E+03	6.8175E+03	9.3558E+03	4.2533E+02
2.298E+00	7.7533E+03	5.1321E+03	6.9882E+03	3.3579E+02
2.317E+00	7.6464E+03	5.0467E+03	6.8688E+03	3.3124E+02
2.392E+00	7.2272E+03	4.7133E+03	6.4037E+03	3.1346E+02
2.412E+00	7.1265E+03	4.6337E+03	6.2927E+03	3.0921E+02
2.834E+00	5.3361E+03	3.2465E+03	4.3696E+03	2.3396E+02
2.857E+00	5.2588E+03	3.1883E+03	4.2894E+03	2.3072E+02
3.000E+00	4.8061E+03	2.8499E+03	3.8239E+03	2.1174E+02
3.271E+00	4.0889E+03	2.3266E+03	3.1068E+03	1.8175E+02
3.297E+00	4.0278E+03	2.2829E+03	3.0471E+03	1.7921E+02
3.536E+00	3.5273E+03	1.9300E+03	2.5662E+03	1.5832E+02
3.564E+00	3.4738E+03	1.8928E+03	2.5157E+03	1.5609E+02
4.000E+00	2.7751E+03	1.4216E+03	1.8773E+03	1.2681E+02
5.000E+00	1.7695E+03	7.9621E+02	1.0382E+03	8.7170E+01
6.000E+00	1.2061E+03	4.8387E+02	6.2428E+02	6.2499E+01
8.000E+00	6.4011E+02	2.1250E+02	2.6577E+02	3.6485E+01
1.000E+01	3.8227E+02	1.0805E+02	1.3313E+02	2.3761E+01
1.227E+01	2.3375E+02	5.6658E+01	6.8813E+01	1.5889E+01
1.237E+01	2.2923E+02	5.5227E+01	6.7036E+01	1.5639E+01
1.424E+01	1.6180E+02	3.4983E+01	4.2027E+01	1.1804E+01
1.435E+01	1.5860E+02	3.4078E+01	4.0916E+01	1.1616E+01
1.482E+01	1.4638E+02	3.0684E+01	3.6752E+01	1.0892E+01
1.494E+01	1.4346E+02	2.9886E+01	3.5774E+01	1.0718E+01
1.500E+01	1.4196E+02	2.9478E+01	3.5275E+01	1.0628E+01

Z= 80

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	6 S 1/2
2.000E+01	6.7405E+01	1.1156E+01	1.3049E+01	5.8818E+00
3.000E+01	2.2285E+01	2.6700E+00	3.0148E+00	2.4747E+00
4.000E+01	9.7677E+00	9.3516E-01	1.0272E+00	1.3079E+00
5.000E+01	5.0598E+00	4.0821E-01	4.3828E-01	7.8674E-01
6.000E+01	2.9238E+00	2.0583E-01	2.1674E-01	5.1474E-01
8.000E+01	1.2101E+00	6.9318E-02	7.0720E-02	2.5943E-01
8.332E+01	1.0668E+00	5.9409E-02	6.0338E-02	2.3513E-01
8.399E+01	1.0407E+00	5.7638E-02	5.8487E-02	2.3063E-01
1.000E+02	6.0399E-01	2.9728E-02	2.9592E-02	1.5062E-01
1.500E+02	1.6900E-01	6.4542E-03	6.1637E-03	5.4882E-02
2.000E+02	6.8715E-02	2.2256E-03	2.0772E-03	2.6560E-02
3.000E+02	1.9947E-02	5.2478E-04	4.8258E-04	9.5937E-03
4.000E+02	8.6267E-03	1.9773E-04	1.8315E-04	4.7406E-03
5.000E+02	4.6469E-03	9.6191E-05	9.0662E-05	2.7929E-03
6.000E+02	2.8707E-03	5.4841E-05	5.2831E-05	1.8396E-03
8.000E+02	1.4087E-03	2.4075E-05	2.4179E-05	9.8172E-04
1.000E+03	8.4457E-04	1.3292E-05	1.3902E-05	6.2009E-04
1.500E+03	3.6466E-04	5.1017E-06	5.7356E-06	2.8657E-04

Z= 81 24 STATES, 44 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	85.8527	.98605
2 S 1/2	2.00	15.3391	.87822
2 P 1/2	2.00	14.7472	.82060
2 P 3/2	4.00	12.6596	.79158
3 S 1/2	2.00	3.6812	.67688
3 P 1/2	2.00	3.4104	.60379
3 P 3/2	4.00	2.9445	.56509
3 D 3/2	4.00	2.4936	.37234
3 D 5/2	6.00	2.3936	.36425
4 S 1/2	2.00	.8323	.41964
4 P 1/2	2.00	.7143	.35210
4 P 3/2	4.00	.6004	.31472
4 D 3/2	4.00	.4064	.16744
4 D 5/2	6.00	.3850	.16012
4 F 5/2	6.00	.1328	.03505
4 F 7/2	8.00	.1280	.03422
5 S 1/2	2.00	.1394	.17671
5 P 1/2	2.00	.0991	.13017
5 P 3/2	4.00	.0780	.10930
5 D 3/2	4.00	.0224	.03408
5 D 5/2	6.00	.0200	.03121
6 S 1/2	2.00	.0124	.03547
6 P 1/2	.33	.0055	.01418
6 P 3/2	.67	.0043	.00878

Z= 81 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	1.6955E+06	.0E+00	.0E+00	.0E+00	1.6955E+06
1.5000E+00	7.6266E+05	.0E+00	.0E+00	.0E+00	7.6266E+05
2.0000E+00	4.1396E+05	.0E+00	.0E+00	.0E+00	4.1396E+05
2.3912E+00	2.7927E+05	.0E+00	.0E+00	.0E+00	2.7927E+05
2.4103E+00	4.4445E+05	.0E+00	.0E+00	1.7011E+05	2.7434E+05
2.4911E+00	6.9359E+05	.0E+00	.0E+00	4.3876E+05	2.5483E+05
2.5111E+00	8.0123E+05	.0E+00	.0E+00	5.5092E+05	2.5031E+05
2.9416E+00	6.6962E+05	.0E+00	.0E+00	4.9480E+05	1.7482E+05
2.9651E+00	7.6020E+05	.0E+00	.0E+00	5.8855E+05	1.7165E+05

Z= 81 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
3.0000E+00	7.3929E+05	.0E+00	.0E+00	5.7219E+05	1.6711E+05
3.4070E+00	5.4000E+05	.0E+00	.0E+00	4.1550E+05	1.2451E+05
3.4343E+00	5.6183E+05	.0E+00	.0E+00	4.3962E+05	1.2221E+05
3.6775E+00	4.7707E+05	.0E+00	.0E+00	3.7295E+05	1.0412E+05
3.7070E+00	4.8874E+05	.0E+00	.0E+00	3.8655E+05	1.0218E+05
4.0000E+00	4.0833E+05	.0E+00	.0E+00	3.2294E+05	8.5388E+04
5.0000E+00	2.3712E+05	.0E+00	.0E+00	1.8708E+05	5.0034E+04
6.0000E+00	1.5084E+05	.0E+00	.0E+00	1.1877E+05	3.2077E+04
8.0000E+00	7.2908E+04	.0E+00	.0E+00	5.7201E+04	1.5707E+04
1.0000E+01	4.1089E+04	.0E+00	.0E+00	3.2145E+04	8.9440E+03
1.2647E+01	2.2313E+04	.0E+00	.0E+00	1.7405E+04	4.9082E+03
1.2748E+01	5.5018E+04	.0E+00	3.3166E+04	1.7044E+04	4.8086E+03
1.4732E+01	3.7268E+04	.0E+00	2.2317E+04	1.1642E+04	3.3101E+03
1.4850E+01	5.0896E+04	.0E+00	3.6255E+04	1.1395E+04	3.2424E+03
1.5000E+01	4.9668E+04	.0E+00	3.5408E+04	1.1101E+04	3.1593E+03
1.5324E+01	4.7139E+04	.0E+00	3.3660E+04	1.0491E+04	2.9890E+03
1.5446E+01	5.3373E+04	.0E+00	4.0174E+04	1.0272E+04	2.9277E+03
2.0000E+01	2.7571E+04	.0E+00	2.0915E+04	5.1650E+03	1.4908E+03
3.0000E+01	9.4516E+03	.0E+00	7.2081E+03	1.7343E+03	5.0910E+02
4.0000E+01	4.3633E+03	.0E+00	3.3350E+03	7.9311E+02	2.3518E+02
5.0000E+01	2.3802E+03	.0E+00	1.8211E+03	4.3046E+02	1.2860E+02
6.0000E+01	1.4457E+03	.0E+00	1.1068E+03	2.6065E+02	7.8290E+01
8.0000E+01	6.5521E+02	.0E+00	5.0186E+02	1.1772E+02	3.5635E+01
8.5767E+01	5.4072E+02	.0E+00	4.1421E+02	9.7078E+01	2.9436E+01
8.6454E+01	2.5325E+03	2.0035E+03	4.0519E+02	9.4957E+01	2.8798E+01
1.0000E+02	1.7274E+03	1.3736E+03	2.7104E+02	6.3436E+01	1.9301E+01
1.5000E+02	5.9699E+02	4.8152E+02	8.8475E+01	2.0656E+01	6.3341E+00
2.0000E+02	2.7775E+02	2.2524E+02	4.0235E+01	9.3829E+00	2.8901E+00
3.0000E+02	9.5873E+01	7.8149E+01	1.3582E+01	3.1632E+00	9.7915E-01
4.0000E+02	4.6294E+01	3.7849E+01	6.4722E+00	1.5056E+00	4.6717E-01
5.0000E+02	2.6942E+01	2.2078E+01	3.7282E+00	8.6633E-01	2.6921E-01
6.0000E+02	1.7626E+01	1.4472E+01	2.4182E+00	5.6134E-01	1.7461E-01
8.0000E+02	9.3489E+00	7.6983E+00	1.2659E+00	2.9335E-01	9.1352E-02
1.0000E+03	5.8899E+00	4.8600E+00	7.9013E-01	1.8281E-01	5.6965E-02
1.5000E+03	2.7090E+00	2.2415E+00	3.5881E-01	8.2852E-02	2.5831E-02

Z= 81

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.391E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.410E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.491E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.511E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.942E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.965E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.407E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.434E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.678E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.2493E+04
3.707E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.0570E+04
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.0247E+04	3.0350E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.8353E+04	2.7785E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.3420E+04	1.9912E+04
8.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.0251E+04	1.5003E+04
1.000E+01	.0E+00	.0E+00	.0E+00	.0E+00	6.4057E+03	8.8839E+03
1.265E+01	.0E+00	.0E+00	.0E+00	.0E+00	4.3327E+03	5.6861E+03
1.275E+01	.0E+00	.0E+00	.0E+00	.0E+00	2.8149E+03	3.4380E+03
1.473E+01	.0E+00	.0E+00	.0E+00	3.3166E+04	2.7733E+03	3.3777E+03
				2.2317E+04	2.1047E+03	2.4393E+03

Z= 81

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.485E+01	.0E+00	.0E+00	1.4402E+04	2.1853E+04	2.0726E+03	2.3952E+03
1.500E+01	.0E+00	.0E+00	1.4124E+04	2.1284E+04	2.0328E+03	2.3406E+03
1.532E+01	.0E+00	.0E+00	1.3543E+04	2.0116E+04	1.9505E+03	2.2280E+03
1.545E+01	.0E+00	7.2421E+03	1.3237E+04	1.9694E+04	1.9207E+03	2.1871E+03
2.000E+01	.0E+00	4.6297E+03	6.8207E+03	9.4650E+03	1.1507E+03	1.1835E+03
3.000E+01	.0E+00	2.1052E+03	2.2518E+03	2.8511E+03	4.9456E+02	4.2553E+02
4.000E+01	.0E+00	1.1555E+03	9.9749E+02	1.1820E+03	2.6413E+02	1.9832E+02
5.000E+01	.0E+00	7.0889E+02	5.2349E+02	5.8875E+02	1.5983E+02	1.0772E+02
6.000E+01	.0E+00	4.6922E+02	3.0690E+02	3.3066E+02	1.0498E+02	6.4768E+01
8.000E+01	.0E+00	2.3930E+02	1.3092E+02	1.3165E+02	5.3158E+01	2.8604E+01
8.577E+01	.0E+00	2.0262E+02	1.0639E+02	1.0519E+02	4.4956E+01	2.3423E+01
8.645E+01	2.0035E+03	1.9877E+02	1.0389E+02	1.0252E+02	4.4098E+01	2.2892E+01
1.000E+02	1.3736E+03	1.3971E+02	6.7275E+01	6.4058E+01	3.0949E+01	1.5041E+01
1.500E+02	4.8152E+02	5.1125E+01	2.0068E+01	1.7281E+01	1.1320E+01	4.6400E+00
2.000E+02	2.2524E+02	2.4758E+01	8.5861E+00	6.8915E+00	5.4900E+00	2.0217E+00
3.000E+02	7.8149E+01	8.9415E+00	2.6786E+00	1.9617E+00	1.9881E+00	6.4280E-01
4.000E+02	3.7849E+01	4.4185E+00	1.2133E+00	8.4044E-01	9.8391E-01	2.9394E-01
5.000E+02	2.2078E+01	2.6039E+00	6.7395E-01	4.5032E-01	5.8026E-01	1.6418E-01
6.000E+02	1.4472E+01	1.7156E+00	4.2535E-01	2.7728E-01	3.8241E-01	1.0397E-01
8.000E+02	7.6983E+00	9.1572E-01	2.1463E-01	1.3560E-01	2.0411E-01	5.2660E-02
1.000E+03	4.8600E+00	5.7801E-01	1.3097E-01	8.1143E-02	1.2878E-01	3.2243E-02
1.500E+03	2.2415E+00	2.6567E-01	5.8181E-02	3.4964E-02	5.9130E-02	1.4350E-02

Z= 81

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	4.0580E+04	3.7585E+04	1.3775E+05
1.500E+00	.0E+00	.0E+00	.0E+00	2.6312E+04	2.8819E+04	8.3317E+04
2.000E+00	.0E+00	.0E+00	.0E+00	1.8019E+04	2.1316E+04	5.4447E+04
2.391E+00	.0E+00	.0E+00	.0E+00	1.3937E+04	1.7050E+04	4.0838E+04
2.410E+00	.0E+00	.0E+00	1.7011E+05	1.3775E+04	1.6870E+04	4.0300E+04
2.491E+00	.0E+00	.0E+00	4.3876E+05	1.3122E+04	1.6138E+04	3.8132E+04
2.511E+00	.0E+00	1.1857E+05	4.3236E+05	1.2967E+04	1.5964E+04	3.7622E+04
2.942E+00	.0E+00	2.0652E+05	2.8828E+05	1.0183E+04	1.2768E+04	2.8633E+04
2.965E+00	1.0433E+05	2.0219E+05	2.8203E+05	1.0058E+04	1.2618E+04	2.8232E+04
3.000E+00	1.0313E+05	1.9597E+05	2.7308E+05	9.8760E+03	1.2401E+04	2.7651E+04
3.407E+00	8.5514E+04	1.3851E+05	1.9148E+05	8.0747E+03	1.0219E+04	2.1966E+04
3.434E+00	8.4409E+04	1.3549E+05	1.8723E+05	7.9714E+03	1.0092E+04	2.1645E+04
3.678E+00	7.4901E+04	1.1204E+05	1.5544E+05	7.1313E+03	9.0508E+03	1.9054E+04
3.707E+00	7.3825E+04	1.1003E+05	1.5210E+05	7.0389E+03	8.9349E+03	1.8770E+04
4.000E+00	6.4217E+04	8.9603E+04	1.2298E+05	6.2105E+03	7.8888E+03	1.6242E+04
5.000E+00	4.2952E+04	4.7080E+04	6.3720E+04	4.2530E+03	5.3703E+03	1.0456E+04
6.000E+00	2.9878E+04	2.7221E+04	3.6414E+04	3.0877E+03	3.8434E+03	7.1679E+03
8.000E+00	1.6240E+04	1.1099E+04	1.4573E+04	1.8296E+03	2.1904E+03	3.8296E+03
1.000E+01	9.7847E+03	5.3811E+03	6.9605E+03	1.2020E+03	1.3780E+03	2.2955E+03
1.265E+01	5.5815E+03	2.4515E+03	3.1192E+03	7.6302E+02	8.2563E+02	1.3084E+03
1.275E+01	5.4734E+03	2.3859E+03	3.0340E+03	7.5117E+02	8.1104E+02	1.2831E+03
1.473E+01	3.8174E+03	1.4526E+03	1.8277E+03	5.6409E+02	5.8413E+02	8.9626E+02
1.485E+01	3.7414E+03	1.4130E+03	1.7768E+03	5.5518E+02	5.7350E+02	8.7848E+02
1.500E+01	3.6478E+03	1.3647E+03	1.7148E+03	5.4415E+02	5.6040E+02	8.5659E+02
1.532E+01	3.4555E+03	1.2671E+03	1.5897E+03	5.2136E+02	5.3339E+02	8.1165E+02
1.545E+01	3.3861E+03	1.2324E+03	1.5453E+03	5.1308E+02	5.2362E+02	7.9543E+02
2.000E+01	1.7264E+03	4.9559E+02	6.0880E+02	3.0305E+02	2.8344E+02	4.0765E+02
3.000E+01	5.6640E+02	1.1340E+02	1.3446E+02	1.2838E+02	1.0249E+02	1.3507E+02
4.000E+01	2.4725E+02	3.8742E+01	4.4679E+01	6.8114E+01	4.8047E+01	5.9404E+01
5.000E+01	1.2752E+02	1.6643E+01	1.8756E+01	4.1080E+01	2.6228E+01	3.0815E+01
6.000E+01	7.3436E+01	8.2993E+00	9.1705E+00	2.6931E+01	1.5835E+01	1.7827E+01
8.000E+01	3.0250E+01	2.7557E+00	2.9487E+00	1.3613E+01	7.0364E+00	7.3913E+00
8.577E+01	2.4349E+01	2.1099E+00	2.2401E+00	1.1510E+01	5.7698E+00	5.9581E+00
8.645E+01	2.3750E+01	2.0464E+00	2.1707E+00	1.1290E+01	5.6398E+00	5.8125E+00
1.000E+02	1.5051E+01	1.1716E+00	1.2227E+00	7.9205E+00	3.7160E+00	3.6939E+00

Z= 81

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.500E+02	4.1927E+00	2.5140E-01	2.5146E-01	2.8967E+00	1.1539E+00	1.0359E+00
2.000E+02	1.7009E+00	8.6181E-02	8.4183E-02	1.4054E+00	5.0463E-01	4.2184E-01
3.000E+02	4.9265E-01	2.0208E-02	1.9423E-02	5.0936E-01	1.6127E-01	1.2245E-01
4.000E+02	2.1284E-01	7.5947E-03	7.3454E-03	2.5207E-01	7.3911E-02	5.2995E-02
5.000E+02	1.1457E-01	3.6889E-03	3.6277E-03	1.4868E-01	4.1336E-02	2.8552E-02
6.000E+02	7.0744E-02	2.1012E-03	2.1107E-03	9.7989E-02	2.6200E-02	1.7640E-02
8.000E+02	3.4701E-02	9.2330E-04	9.5602E-04	5.2296E-02	1.3288E-02	8.6557E-03
1.000E+03	2.0735E-02	5.0838E-04	5.5156E-04	3.2994E-02	8.1287E-03	5.1839E-03
1.500E+03	8.9518E-03	1.9796E-04	2.2201E-04	1.5147E-02	3.6217E-03	2.2353E-03

Z= 81

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	1.9578E+05	2.9894E+05	3.7987E+05	4.8740E+05	1.2833E+04	1.1123E+04
1.500E+00	1.1567E+05	1.6923E+05	1.2137E+05	1.5425E+05	7.0121E+03	6.8128E+03
2.000E+00	6.9741E+04	9.9707E+04	4.9421E+04	6.2416E+04	4.4688E+03	4.6077E+03
2.391E+00	4.8761E+04	6.8842E+04	2.7388E+04	3.4452E+04	3.3493E+03	3.5482E+03
2.410E+00	4.7953E+04	6.7667E+04	2.6661E+04	3.3532E+04	3.3059E+03	3.5059E+03
2.491E+00	4.4726E+04	6.2981E+04	2.3846E+04	2.9969E+04	3.1322E+03	3.3353E+03
2.511E+00	4.3972E+04	6.1888E+04	2.3208E+04	2.9162E+04	3.0915E+03	3.2951E+03
2.942E+00	3.1023E+04	4.3210E+04	1.3430E+04	1.6814E+04	2.3772E+03	2.5737E+03
2.965E+00	3.0465E+04	4.2411E+04	1.3059E+04	1.6347E+04	2.3455E+03	2.5411E+03
3.000E+00	2.9662E+04	4.1262E+04	1.2532E+04	1.5683E+04	2.2999E+03	2.4939E+03
3.407E+00	2.2018E+04	3.0380E+04	7.9641E+03	9.9363E+03	1.8535E+03	2.0251E+03
3.434E+00	2.1601E+04	2.9790E+04	7.7382E+03	9.6526E+03	1.8284E+03	1.9984E+03
3.678E+00	1.8297E+04	2.5121E+04	6.0357E+03	7.5164E+03	1.6254E+03	1.7807E+03
3.707E+00	1.7942E+04	2.4621E+04	5.8622E+03	7.2990E+03	1.6032E+03	1.7567E+03
4.000E+00	1.4845E+04	2.0278E+04	4.4303E+03	5.5058E+03	1.4047E+03	1.5409E+03
5.000E+00	8.3139E+03	1.1198E+04	1.9095E+03	2.3594E+03	9.4650E+02	1.0334E+03
6.000E+00	5.0466E+03	6.7190E+03	9.3961E+02	1.1553E+03	6.8019E+02	7.3329E+02
8.000E+00	2.1988E+03	2.8730E+03	2.9605E+02	3.6101E+02	3.9824E+02	4.1424E+02
1.000E+01	1.1160E+03	1.4361E+03	1.1753E+02	1.4233E+02	2.5986E+02	2.5949E+02
1.265E+01	5.3068E+02	6.7150E+02	4.3346E+01	5.2078E+01	1.6401E+02	1.5502E+02
1.275E+01	5.1718E+02	6.5404E+02	4.1883E+01	5.0306E+01	1.6144E+02	1.5227E+02
1.473E+01	3.2234E+02	4.0322E+02	2.2362E+01	2.6717E+01	1.2088E+02	1.0954E+02
1.485E+01	3.1395E+02	3.9248E+02	2.1596E+01	2.5794E+01	1.1895E+02	1.0755E+02
1.500E+01	3.0370E+02	3.7938E+02	2.0670E+01	2.4677E+01	1.1657E+02	1.0508E+02
1.532E+01	2.8292E+02	3.5284E+02	1.8823E+01	2.2454E+01	1.1165E+02	1.0001E+02
1.545E+01	2.7552E+02	3.4339E+02	1.8175E+01	2.1675E+01	1.0986E+02	9.8169E+01
2.000E+01	1.1481E+02	1.4014E+02	5.7721E+00	6.8111E+00	6.4643E+01	5.3098E+01
3.000E+01	2.7462E+01	3.2341E+01	9.1609E-01	1.0611E+00	2.7279E+01	1.9207E+01
4.000E+01	9.6197E+00	1.1016E+01	2.4322E-01	2.7765E-01	1.4450E+01	9.0129E+00
5.000E+01	4.2006E+00	4.7007E+00	8.6264E-02	9.7264E-02	8.7092E+00	4.9614E+00
6.000E+01	2.1189E+00	2.3252E+00	3.6863E-02	4.1118E-02	5.7084E+00	2.9979E+00
8.000E+01	7.1419E-01	7.5919E-01	9.6390E-03	1.0451E-02	2.8937E+00	1.3338E+00
8.577E+01	5.4854E-01	5.7860E-01	6.9802E-03	7.5319E-03	2.4464E+00	1.0940E+00
8.645E+01	5.3219E-01	5.6087E-01	6.7271E-03	7.2549E-03	2.3996E+00	1.0694E+00
1.000E+02	3.0650E-01	3.1788E-01	3.4364E-03	3.6678E-03	1.6832E+00	7.0502E-01
1.500E+02	6.6630E-02	6.6297E-02	5.4815E-04	5.6975E-04	6.1542E-01	2.1924E-01
2.000E+02	2.3008E-02	2.2242E-02	1.5392E-04	1.5825E-04	2.9854E-01	9.5964E-02
3.000E+02	5.4343E-03	5.1714E-03	2.8386E-05	2.9007E-05	1.0818E-01	3.0665E-02
4.000E+02	2.0505E-03	1.9643E-03	9.0772E-06	9.4698E-06	5.3556E-02	1.4059E-02
5.000E+02	9.9945E-04	9.7107E-04	3.9249E-06	4.2774E-06	3.1590E-02	7.8647E-03
6.000E+02	5.7055E-04	5.6448E-04	2.0679E-06	2.3100E-06	2.0819E-02	4.9861E-03
8.000E+02	2.5025E-04	2.5886E-04	8.0975E-07	9.6823E-07	1.1111E-02	2.5284E-03
1.000E+03	1.3880E-04	1.4800E-04	4.2614E-07	5.1512E-07	7.0100E-03	1.5470E-03
1.500E+03	5.3257E-05	6.0891E-05	1.5853E-07	1.9119E-07	3.2180E-03	6.8904E-04

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	6 S 1/2	6 P 1/2	6 P 3/2
1.000E+00	3.0905E+04	2.4799E+04	3.5894E+04	1.6540E+03	1.2683E+02	2.4560E+02
1.500E+00	1.6777E+04	1.3304E+04	1.8720E+04	8.6338E+02	7.2810E+01	1.3045E+02
2.000E+00	1.0502E+04	7.8268E+03	1.0820E+04	5.3673E+02	4.7459E+01	8.3066E+01
2.391E+00	7.7318E+03	5.4388E+03	7.4399E+03	3.9721E+02	3.7680E+01	6.1028E+01
2.410E+00	7.6246E+03	5.3481E+03	7.3122E+03	3.9185E+02	3.7224E+01	6.0175E+01
2.491E+00	7.1955E+03	4.9856E+03	6.8037E+03	3.7042E+02	3.5387E+01	5.6759E+01
2.511E+00	7.0949E+03	4.9010E+03	6.6851E+03	3.6540E+02	3.4955E+01	5.5959E+01
2.942E+00	5.3367E+03	3.4539E+03	4.6683E+03	2.7828E+02	2.7244E+01	4.2047E+01
2.965E+00	5.2592E+03	3.3917E+03	4.5822E+03	2.7445E+02	2.6896E+01	4.1434E+01
3.000E+00	5.1474E+03	3.3023E+03	4.4585E+03	2.6892E+02	2.6392E+01	4.0549E+01
3.407E+00	4.0596E+03	2.4534E+03	3.2881E+03	2.1518E+02	2.1406E+01	3.1947E+01
3.434E+00	3.9987E+03	2.4071E+03	3.2246E+03	2.1217E+02	2.1122E+01	3.1466E+01
3.678E+00	3.5088E+03	2.0406E+03	2.7227E+03	1.8796E+02	1.8811E+01	2.7605E+01
3.707E+00	3.4553E+03	2.0012E+03	2.6690E+03	1.8531E+02	1.8556E+01	2.7183E+01
4.000E+00	2.9803E+03	1.6581E+03	2.2016E+03	1.6175E+02	1.6268E+01	2.3437E+01
5.000E+00	1.9346E+03	9.3310E+02	1.2228E+03	1.0787E+02	1.0900E+01	1.4967E+01
6.000E+00	1.3006E+03	5.6922E+02	7.3764E+02	7.8663E+01	7.7327E+00	1.0217E+01
8.000E+00	6.9245E+02	2.5009E+02	3.1821E+02	4.6007E+01	4.3681E+00	5.4376E+00
1.000E+01	4.1454E+02	1.2773E+02	1.5893E+02	3.0006E+01	2.7368E+00	3.2548E+00
1.265E+01	2.3617E+02	6.1272E+01	7.4752E+01	1.8934E+01	1.6357E+00	1.8541E+00
1.275E+01	2.3161E+02	5.9725E+01	7.2822E+01	1.8636E+01	1.6067E+00	1.8183E+00
1.473E+01	1.6181E+02	3.7352E+01	4.5049E+01	1.3953E+01	1.1562E+00	1.2702E+00
1.485E+01	1.5860E+02	3.6386E+01	4.3858E+01	1.3731E+01	1.1351E+00	1.2450E+00
1.500E+01	1.5465E+02	3.5207E+01	4.2403E+01	1.3456E+01	1.1091E+00	1.2140E+00
1.532E+01	1.4654E+02	3.2814E+01	3.9456E+01	1.2887E+01	1.0556E+00	1.1504E+00
1.545E+01	1.4362E+02	3.1960E+01	3.8406E+01	1.2681E+01	1.0362E+00	1.1274E+00
2.000E+01	7.3677E+01	1.3391E+01	1.5760E+01	7.4606E+00	5.6078E-01	5.7831E-01
3.000E+01	2.4473E+01	3.2265E+00	3.6635E+00	3.1479E+00	2.0300E-01	1.9202E-01
4.000E+01	1.0764E+01	1.1350E+00	1.2532E+00	1.6672E+00	9.5293E-02	8.4592E-02
5.000E+01	5.5900E+00	4.9703E-01	5.3625E-01	1.0045E+00	5.2075E-02	4.3938E-02
6.000E+01	3.2366E+00	2.5124E-01	2.6579E-01	6.5818E-01	3.1468E-02	2.5445E-02
8.000E+01	1.3437E+00	8.4925E-02	8.7016E-02	3.3249E-01	1.4002E-02	1.0566E-02
8.577E+01	1.0835E+00	6.5266E-02	6.6353E-02	2.8109E-01	1.1485E-02	8.5204E-03
8.645E+01	1.0571E+00	6.3326E-02	6.4324E-02	2.7571E-01	1.1226E-02	8.3124E-03
1.000E+02	6.7216E-01	3.6515E-02	3.6495E-02	1.9340E-01	7.4016E-03	5.2863E-03
1.500E+02	1.8876E-01	7.9610E-03	7.6294E-03	7.0710E-02	2.3015E-03	1.4851E-03
2.000E+02	7.6918E-02	2.7521E-03	2.5765E-03	3.4301E-02	1.0074E-03	6.0542E-04
3.000E+02	2.2383E-02	6.5088E-04	5.9585E-04	1.2430E-02	3.2195E-04	1.7634E-04
4.000E+02	9.6927E-03	2.4564E-04	2.2783E-04	6.1545E-03	1.4764E-04	7.6455E-05
5.000E+02	5.2239E-03	1.1965E-04	1.1281E-04	3.6308E-03	8.2632E-05	4.1272E-05
6.000E+02	3.2275E-03	6.8270E-05	6.5738E-05	2.3934E-03	5.2427E-05	2.5553E-05
8.000E+02	1.5838E-03	3.0006E-05	3.0074E-05	1.2781E-03	2.6647E-05	1.2606E-05
1.000E+03	9.4920E-04	1.6580E-05	1.7279E-05	8.0724E-04	1.6362E-05	7.6109E-06
1.500E+03	4.0938E-04	6.3690E-06	7.1093E-06	3.7216E-04	7.3967E-06	3.3781E-06

Z= 82 24 STATES, 44 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	88.3511	.98613
2 S 1/2	2.00	15.8566	.87944
2 P 1/2	2.00	15.2516	.82234
2 P 3/2	4.00	13.0390	.79267
3 S 1/2	2.00	3.8271	.67988
3 P 1/2	2.00	3.5500	.60738
3 P 3/2	4.00	3.0545	.56769
3 D 3/2	4.00	2.5946	.37577
3 D 5/2	6.00	2.4886	.36749
4 S 1/2	2.00	.8777	.42407
4 P 1/2	2.00	.7564	.35682
4 P 3/2	4.00	.6343	.31840
4 D 3/2	4.00	.4353	.17093
4 D 5/2	6.00	.4123	.16339
4 F 5/2	6.00	.1529	.03690
4 F 7/2	8.00	.1476	.03603
5 S 1/2	2.00	.1531	.18262
5 P 1/2	2.00	.1110	.13590
5 P 3/2	4.00	.0876	.11426
5 D 3/2	4.00	.0288	.03778
5 D 5/2	6.00	.0260	.03477
6 S 1/2	2.00	.0151	.04086
6 P 1/2	.67	.0070	.01911
6 P 3/2	1.33	.0053	.01270

Z= 82 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	1.7884E+06	.0E+00	.0E+00	.0E+00	1.7884E+06
1.5000E+00	8.0662E+05	.0E+00	.0E+00	.0E+00	8.0662E+05
2.0000E+00	4.3835E+05	.0E+00	.0E+00	.0E+00	4.3835E+05
2.4861E+00	2.7122E+05	.0E+00	.0E+00	.0E+00	2.7122E+05
2.5060E+00	5.3203E+05	.0E+00	.0E+00	2.6561E+05	2.6642E+05
2.5920E+00	6.6538E+05	.0E+00	.0E+00	4.1841E+05	2.4696E+05
2.6128E+00	8.3578E+05	.0E+00	.0E+00	5.9322E+05	2.4256E+05
3.0000E+00	6.7248E+05	.0E+00	.0E+00	4.9532E+05	1.7716E+05
3.0514E+00	6.4351E+05	.0E+00	.0E+00	4.7312E+05	1.7039E+05
3.0758E+00	7.2956E+05	.0E+00	.0E+00	5.6227E+05	1.6729E+05
3.5464E+00	5.1414E+05	.0E+00	.0E+00	3.9388E+05	1.2026E+05
3.5748E+00	5.3449E+05	.0E+00	.0E+00	4.1645E+05	1.1804E+05
3.8233E+00	4.5527E+05	.0E+00	.0E+00	3.5446E+05	1.0081E+05
3.8539E+00	4.6654E+05	.0E+00	.0E+00	3.6760E+05	9.8936E+04
4.0000E+00	4.2733E+05	.0E+00	.0E+00	3.3672E+05	9.0607E+04
5.0000E+00	2.4847E+05	.0E+00	.0E+00	1.9534E+05	5.3133E+04
6.0000E+00	1.5822E+05	.0E+00	.0E+00	1.2414E+05	3.4083E+04
8.0000E+00	7.6600E+04	.0E+00	.0E+00	5.9895E+04	1.6705E+04
1.0000E+01	4.3219E+04	.0E+00	.0E+00	3.3700E+04	9.5193E+03
1.3026E+01	2.1753E+04	.0E+00	.0E+00	1.6908E+04	4.8447E+03
1.3130E+01	5.3353E+04	.0E+00	3.2049E+04	1.6558E+04	4.7463E+03
1.5000E+01	3.7230E+04	.0E+00	2.2203E+04	1.1661E+04	3.3661E+03
1.5236E+01	3.5720E+04	.0E+00	2.1298E+04	1.1190E+04	3.2325E+03
1.5358E+01	4.8841E+04	.0E+00	3.4718E+04	1.0956E+04	3.1663E+03
1.5841E+01	4.5288E+04	.0E+00	3.2270E+04	1.0096E+04	2.9222E+03
1.5968E+01	5.1286E+04	.0E+00	3.8539E+04	9.8851E+03	2.8623E+03
2.0000E+01	2.8886E+04	.0E+00	2.1863E+04	5.4331E+03	1.5900E+03
3.0000E+01	9.9289E+03	.0E+00	7.5571E+03	1.8279E+03	5.4381E+02
4.0000E+01	4.5932E+03	.0E+00	3.5047E+03	8.3702E+02	2.5152E+02
5.0000E+01	2.5088E+03	.0E+00	1.9164E+03	4.5479E+02	1.3761E+02
6.0000E+01	1.5253E+03	.0E+00	1.1658E+03	2.7563E+02	8.3860E+01

Z= 82 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
8.0000E+01	6.9236E+02	.0E+00	5.2949E+02	1.2466E+02	3.8218E+01
8.8263E+01	5.2813E+02	.0E+00	4.0395E+02	9.4993E+01	2.9190E+01
8.8970E+01	2.4477E+03	1.9311E+03	3.9517E+02	5.2920E+01	2.8558E+01
1.0000E+02	1.8022E+03	1.4279E+03	2.8630E+02	6.7249E+01	2.0721E+01
1.5000E+02	6.2438E+02	5.0197E+02	9.3653E+01	2.1942E+01	6.8129E+00
2.0000E+02	2.9118E+02	2.3543E+02	4.2653E+01	9.9814E+00	3.1128E+00
3.0000E+02	1.0079E+02	8.1931E+01	1.4428E+01	3.3717E+00	1.0566E+00
4.0000E+02	4.8757E+01	3.9761E+01	6.8848E+00	1.6070E+00	5.0480E-01
5.0000E+02	2.8412E+01	2.3226E+01	3.9696E+00	9.2547E-01	2.9115E-01
6.0000E+02	1.8604E+01	1.5239E+01	2.5764E+00	6.0002E-01	1.8895E-01
8.0000E+02	9.8780E+00	8.1156E+00	1.3497E+00	3.1376E-01	9.8914E-02
1.0000E+03	6.2258E+00	5.1259E+00	8.4262E-01	1.9558E-01	6.1693E-02
1.5000E+03	2.8635E+00	2.3643E+00	3.8262E-01	8.8630E-02	2.7970E-02

Z= 82

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.486E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.506E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.592E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.613E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.051E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.076E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.546E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.575E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.0542E+04
3.823E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.9151E+04
3.854E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.9555E+04	2.8944E+04
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.8443E+04	2.7873E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.3592E+04	2.0183E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.0359E+04	1.5301E+04
8.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	6.5150E+03	9.1461E+03
1.000E+01	.0E+00	.0E+00	.0E+00	.0E+00	4.4235E+03	5.8857E+03
1.303E+01	.0E+00	.0E+00	.0E+00	.0E+00	2.7286E+03	3.3532E+03
1.313E+01	.0E+00	.0E+00	.0E+00	3.2049E+04	2.6883E+03	3.2945E+03
1.500E+01	.0E+00	.0E+00	.0E+00	2.2203E+04	2.0868E+03	2.4445E+03
1.524E+01	.0E+00	.0E+00	.0E+00	2.1298E+04	2.0247E+03	2.3590E+03
1.536E+01	.0E+00	.0E+00	1.3866E+04	2.0853E+04	1.9938E+03	2.3163E+03
1.584E+01	.0E+00	.0E+00	1.3058E+04	1.9212E+04	1.8780E+03	2.1572E+03
1.597E+01	.0E+00	6.9631E+03	1.2768E+04	1.8808E+04	1.8493E+03	2.1177E+03
2.000E+01	.0E+00	4.7226E+03	7.1785E+03	9.9615E+03	1.1846E+03	1.2432E+03
3.000E+01	.0E+00	2.1591E+03	2.3903E+03	3.0077E+03	5.1108E+02	4.5041E+02
4.000E+01	.0E+00	1.1908E+03	1.0631E+03	1.2508E+03	2.7362E+02	2.1094E+02
5.000E+01	.0E+00	7.3258E+02	5.5962E+02	6.2416E+02	1.6590E+02	1.1499E+02
6.000E+01	.0E+00	4.8586E+02	3.2891E+02	3.5107E+02	1.0914E+02	6.9340E+01
8.000E+01	.0E+00	2.4857E+02	1.4083E+02	1.4009E+02	5.5406E+01	3.0755E+01
8.826E+01	.0E+00	1.9665E+02	1.0518E+02	1.0211E+02	4.3753E+01	2.3221E+01
8.897E+01	1.9311E+03	1.9292E+02	1.0272E+02	9.9526E+01	4.2919E+01	2.2696E+01
1.000E+02	1.4279E+03	1.4546E+02	7.2559E+01	6.8278E+01	3.2320E+01	1.6223E+01
1.500E+02	5.0197E+02	5.3437E+01	2.1744E+01	1.8472E+01	1.1863E+01	5.0309E+00
2.000E+02	2.3543E+02	2.5943E+01	9.3305E+00	7.3791E+00	5.7673E+00	2.1993E+00
3.000E+02	8.1931E+01	9.4018E+00	2.9215E+00	2.1046E+00	2.0954E+00	7.0211E-01
4.000E+02	3.9761E+01	4.6561E+00	1.3262E+00	9.0252E-01	1.0393E+00	3.2184E-01
5.000E+02	2.3226E+01	2.7481E+00	7.377E-01	4.8379E-01	6.1379E-01	1.8005E-01
6.000E+02	1.5239E+01	1.8124E+00	4.6611E-01	2.9793E-01	4.0490E-01	1.1415E-01
8.000E+02	8.1156E+00	9.6851E-01	2.3552E-01	1.4567E-01	2.1636E-01	5.7900E-02
1.000E+03	5.1259E+00	6.1164E-01	1.4285E-01	8.7135E-02	1.3657E-01	3.5481E-02
1.500E+03	2.3643E+00	2.8113E-01	6.3977E-02	3.7507E-02	6.2713E-02	1.5813E-02

Z= 82

ENERGY	3 P 3/2	3 C 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	4.0627E+C4	3.6461E+04	1.4022E+05
1.500E+00	.0E+00	.0E+00	.0E+00	2.6402E+C4	2.8668E+04	8.5307E+04
2.000E+00	.0E+00	.0E+00	.0E+00	1.8209E+C4	2.1434E+04	5.5983E+04
2.486E+00	.0E+00	.0E+00	.0E+00	1.3353E+C4	1.6383E+04	3.9439E+04
2.506E+00	.0E+00	.0E+00	2.6561E+C5	1.3197E+C4	1.6210E+04	3.8917E+04
2.592E+00	.0E+00	.0E+00	4.1841E+C5	1.2556E+C4	1.5489E+04	3.6767E+04
2.613E+00	.0E+00	1.8223E+05	4.1099E+C5	1.2409E+C4	1.5322E+04	3.6273E+04
3.000E+00	.0E+00	2.0678E+05	2.8854E+C5	1.0055E+C4	1.2620E+04	2.8562E+04
3.051E+00	.0E+00	1.9773E+05	2.7540E+C5	9.7919E+03	1.2310E+04	2.7716E+04
3.076E+00	9.9275E+04	1.9358E+05	2.6941E+C5	9.6707E+03	1.2167E+04	2.7327E+04
3.546E+00	8.1864E+04	1.3120E+05	1.8082E+C5	7.7219E+03	9.8015E+03	2.1105E+04
3.575E+00	8.0800E+04	1.2833E+05	1.7678E+C5	7.6231E+03	9.6802E+03	2.0796E+04
3.823E+00	7.1807E+04	1.0639E+05	1.4711E+05	6.8330E+03	8.6994E+03	1.8341E+04
3.854E+00	7.0769E+04	1.0439E+05	1.4394E+C5	6.7443E+03	8.5880E+03	1.8067E+04
4.000E+00	6.6083E+04	9.4439E+04	1.2988E+C5	6.3445E+03	8.0829E+03	1.6832E+04
5.000E+00	4.4154E+04	4.9895E+04	6.7514E+04	4.3570E+C3	5.5304E+03	1.0865E+04
6.000E+00	3.0805E+04	2.8978E+04	3.8695E+C4	3.1696E+03	3.9738E+03	7.4656E+03
8.000E+00	1.6823E+04	1.1859E+04	1.5553E+C4	1.8833E+C3	2.2778E+03	4.0021E+03
1.000E+01	1.0170E+04	5.7689E+03	7.4513E+C3	1.2398E+C3	1.4389E+03	2.4050E+03
1.303E+01	5.4166E+03	2.3862E+03	3.0234E+03	7.4414E+02	8.1088E+02	1.2788E+03
1.313E+01	5.3119E+03	2.3224E+03	2.9407E+03	7.3258E+02	7.9659E+02	1.2541E+03
1.500E+01	3.8130E+03	1.4717E+03	1.8452E+C3	5.6299E+02	5.8951E+02	9.0162E+02
1.524E+01	3.6658E+03	1.3943E+03	1.7459E+C3	5.4571E+02	5.6874E+02	8.6690E+02
1.536E+01	3.5928E+03	1.3563E+03	1.6972E+03	5.3708E+02	5.5841E+02	8.4967E+02
1.584E+01	3.3218E+03	1.2182E+03	1.5209E+03	5.0483E+02	5.1997E+02	7.8587E+02
1.597E+01	3.2550E+03	1.1848E+03	1.4784E+C3	4.9681E+02	5.1046E+02	7.7016E+02
2.000E+01	1.8116E+03	5.3642E+02	6.5731E+02	3.1422E+02	2.9970E+02	4.3055E+02
3.000E+01	5.9723E+02	1.2338E+02	1.4584E+02	1.3352E+02	1.0913E+02	1.4334E+02
4.000E+01	2.6153E+02	4.2302E+01	4.8616E+01	7.1000E+01	5.1408E+01	6.3247E+01
5.000E+01	1.3522E+02	1.8221E+01	2.0457E+01	4.2895E+01	2.8164E+01	3.2890E+01
6.000E+01	7.8022E+01	9.1054E+00	1.0021E+01	2.8162E+01	1.7053E+01	1.9065E+01
8.000E+01	3.2233E+01	3.0326E+00	3.2311E+00	1.4269E+01	7.6104E+00	7.9282E+00
8.826E+01	2.3743E+01	2.0822E+00	2.1938E+00	1.1264E+01	5.7575E+00	5.8521E+00
8.897E+01	2.3160E+01	2.0197E+00	2.1259E+00	1.1049E+01	5.6283E+00	5.7093E+00
1.000E+02	1.6071E+01	1.2923E+00	1.3424E+00	8.3175E+00	4.0320E+00	3.9709E+00
1.500E+02	4.4924E+00	2.7830E-01	2.7695E-01	3.0523E+00	1.2588E+00	1.1176E+00
2.000E+02	1.8263E+00	9.5612E-02	9.2885E-02	1.4844E+00	5.5238E-01	4.5608E-01
3.000E+02	5.3021E-01	2.2478E-02	2.1471E-02	5.3975E-01	1.7726E-01	1.3271E-01
4.000E+02	2.2933E-01	8.4606E-03	8.1263E-03	2.6769E-01	8.1433E-02	5.7503E-02
5.000E+02	1.2351E-01	4.1138E-03	4.0147E-03	1.5812E-01	4.8617E-02	3.1000E-02
6.000E+02	7.6276E-02	2.3452E-03	2.3360E-03	1.0432E-01	2.8949E-02	1.9158E-02
8.000E+02	3.7409E-02	1.0308E-03	1.0595E-03	5.5735E-02	1.4704E-02	9.3971E-03
1.000E+03	2.2346E-02	5.6819E-04	6.1068E-04	3.5180E-02	9.0020E-03	5.6270E-03
1.500E+03	9.6374E-03	2.2114E-04	2.4573E-04	1.6150E-02	4.0159E-03	2.4231E-03

Z= 82

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	1.9850E+05	3.0485E+05	4.1121E+05	5.2789E+05	1.3317E+04	1.1509E+04
1.500E+00	1.1929E+05	1.7495E+05	1.3299E+05	1.6904E+05	7.3000E+03	7.0944E+03
2.000E+00	7.2565E+04	1.0390E+05	5.4548E+04	6.8887E+04	4.6610E+03	4.8203E+03
2.486E+00	4.7010E+04	6.6244E+04	2.6635E+04	3.3470E+04	3.2826E+03	3.5127E+03
2.506E+00	4.6227E+04	6.5105E+04	2.5927E+04	3.2575E+04	3.2401E+03	3.4708E+03
2.592E+00	4.3029E+04	6.0465E+04	2.3125E+04	2.9032E+04	3.0659E+03	3.2981E+03
2.613E+00	4.2300E+04	5.9410E+04	2.2506E+04	2.8249E+04	3.0260E+03	3.2582E+03
3.000E+00	3.1187E+04	4.3392E+04	1.3961E+04	1.7467E+04	2.4059E+03	2.6273E+03
3.051E+00	3.0004E+04	4.1702E+04	1.3153E+04	1.6449E+04	2.3384E+03	2.5571E+03
3.076E+00	2.9462E+04	4.0928E+04	1.2790E+04	1.5991E+04	2.3072E+03	2.5247E+03
3.546E+00	2.1099E+04	2.9038E+04	7.7007E+03	9.5953E+03	1.8125E+03	2.0009E+03
3.575E+00	2.0698E+04	2.8471E+04	7.4821E+03	9.3211E+03	1.7879E+03	1.9744E+03
3.823E+00	1.7574E+04	2.4071E+04	5.8607E+03	7.2890E+03	1.5928E+03	1.7630E+03

ENERGY	4 C 3/2	4 C 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
3.854E+00	1.7237E+04	2.3590E+04	5.6922E+03	7.0779E+03	1.5710E+03	1.7393E+03
4.000E+00	1.5712E+04	2.1457E+04	4.9651E+03	6.1680E+03	1.4728E+03	1.6318E+03
5.000E+00	8.8407E+03	1.1902E+04	2.1495E+03	2.6548E+03	9.9411E+02	1.0987E+03
6.000E+00	5.3864E+03	7.1661E+03	1.0614E+03	1.3044E+03	7.1538E+02	7.8219E+02
8.000E+00	2.3598E+03	3.0798E+03	3.3609E+02	4.0955E+02	4.1973E+02	4.4412E+02
1.000E+01	1.2025E+03	1.5452E+03	1.3390E+02	1.6202E+02	2.7432E+02	2.7929E+02
1.303E+01	5.2209E+02	6.5804E+02	4.3677E+01	5.2370E+01	1.6357E+02	1.5685E+02
1.313E+01	5.0882E+02	6.4093E+02	4.2205E+01	5.0589E+01	1.6100E+02	1.5407E+02
1.500E+01	3.2953E+02	4.1085E+02	2.3710E+01	2.8279E+01	1.2340E+02	1.1391E+02
1.524E+01	3.1296E+02	3.8971E+02	2.2147E+01	2.6398E+01	1.1957E+02	1.0988E+02
1.536E+01	3.0482E+02	3.7933E+02	2.1388E+01	2.5486E+01	1.1767E+02	1.0788E+02
1.584E+01	2.7511E+02	3.4152E+02	1.8681E+01	2.2232E+01	1.1054E+02	1.0044E+02
1.597E+01	2.6791E+02	3.3237E+02	1.8039E+01	2.1461E+01	1.0877E+02	9.8596E+01
2.000E+01	1.2517E+02	1.5244E+02	6.6520E+00	7.8401E+00	6.8562E+01	5.7848E+01
3.000E+01	3.0129E+01	3.5382E+01	1.0614E+00	1.2275E+00	2.9016E+01	2.1072E+01
4.000E+01	1.0598E+01	1.2098E+01	2.8284E-01	3.2225E-01	1.5402E+01	9.9367E+00
5.000E+01	4.6419E+00	5.1764E+00	1.0061E-01	1.1320E-01	5.2983E+00	5.4495E+00
6.000E+01	2.3472E+00	2.5661E+00	4.3098E-02	4.7965E-02	6.1030E+00	3.3233E+00
8.000E+01	7.9392E-01	8.4050E-01	1.1310E-02	1.2226E-02	3.1005E+00	1.4851E+00
8.826E+01	5.4755E-01	5.7331E-01	7.1789E-03	7.7115E-03	2.4471E+00	1.1240E+00
8.897E+01	5.3128E-01	5.5578E-01	6.9194E-03	7.4290E-03	2.4004E+00	1.0988E+00
1.000E+02	3.4159E-01	3.5271E-01	4.0396E-03	4.3055E-03	1.8068E+00	7.8750E-01
1.500E+02	7.4547E-02	7.3816E-02	6.4580E-04	6.7134E-04	6.6285E-01	2.4622E-01
2.000E+02	2.5802E-02	2.4825E-02	1.8175E-04	1.8663E-04	3.2232E-01	1.0814E-01
3.000E+02	6.1124E-03	5.7851E-03	3.3513E-05	3.4432E-05	1.1717E-01	3.4700E-02
4.000E+02	2.3114E-03	2.1967E-03	1.0782E-05	1.1307E-05	5.8134E-02	1.5948E-02
5.000E+02	1.1274E-03	1.0858E-03	4.7126E-06	5.0038E-06	3.4340E-02	8.9370E-03
6.000E+02	6.4332E-04	6.3241E-04	2.4417E-06	2.7163E-06	2.2654E-02	5.6723E-03
8.000E+02	2.8306E-04	2.8992E-04	9.8006E-07	1.1416E-06	1.2104E-02	2.8807E-03
1.000E+03	1.5689E-04	1.6538E-04	4.8730E-07	6.1644E-07	7.6398E-03	1.7641E-03
1.500E+03	6.0489E-05	6.7836E-05	1.8083E-07	2.3674E-07	3.5071E-03	7.8670E-04

ENERGY	5 P 3/2	5 L 3/2	5 D 5/2	6 S 1/2	6 P 1/2	6 P 3/2
1.000E+00	3.2860E+04	2.7658E+04	4.0326E+04	1.9207E+03	3.4109E+02	7.2988E+02
1.500E+00	1.7864E+04	1.4953E+04	2.1167E+04	1.0062E+03	1.9907E+02	3.8811E+02
2.000E+00	1.1199E+04	8.8491E+03	1.2297E+04	6.2725E+02	1.3137E+02	2.4066E+02
2.486E+00	7.7107E+03	5.6877E+03	7.7599E+03	4.3523E+02	9.4004E+01	1.6839E+02
2.506E+00	7.6034E+03	5.5923E+03	7.6653E+03	4.2938E+02	9.2827E+01	1.6604E+02
2.592E+00	7.1638E+03	5.2030E+03	7.1173E+03	4.0544E+02	8.7982E+01	1.5638E+02
2.613E+00	7.0631E+03	5.1143E+03	6.9927E+03	3.9996E+02	8.6867E+01	1.5417E+02
3.000E+00	5.5050E+03	3.7672E+03	5.1086E+03	3.1545E+02	6.9357E+01	1.1998E+02
3.051E+00	5.3360E+03	3.6245E+03	4.9101E+03	3.0631E+02	6.9901E+01	1.1628E+02
3.076E+00	5.2583E+03	3.5591E+03	4.8193E+03	3.0211E+02	6.9008E+01	1.1458E+02
3.546E+00	4.0290E+03	2.5514E+03	3.4256E+03	2.3561E+02	5.4601E+01	8.7711E+01
3.575E+00	3.9683E+03	2.5032E+03	3.3593E+03	2.3232E+02	5.3875E+01	8.6387E+01
3.823E+00	3.4887E+03	2.1273E+03	2.8433E+03	2.0629E+02	4.8073E+01	7.5916E+01
3.854E+00	3.4353E+03	2.0862E+03	2.7870E+03	2.0340E+02	4.7422E+01	7.4752E+01
4.000E+00	3.1958E+03	1.9034E+03	2.5371E+03	1.9037E+02	4.4479E+01	6.9528E+01
5.000E+00	2.0468E+03	1.0762E+03	1.4151E+03	1.2727E+02	2.9911E+01	4.4490E+01
6.000E+00	1.4003E+03	6.5889E+02	8.5662E+02	9.0951E+01	2.1280E+01	3.0424E+01
8.000E+00	7.4781E+02	2.9111E+02	3.7143E+02	5.4049E+01	1.2079E+01	1.6241E+01
1.000E+01	4.4877E+02	1.4931E+02	1.8761E+02	3.5303E+01	7.5972E+00	9.7444E+00
1.303E+01	2.3851E+02	6.5311E+01	7.9912E+01	2.1041E+01	4.2680E+00	5.1782E+00
1.313E+01	2.3389E+02	6.3665E+01	7.7850E+01	2.0711E+01	4.1925E+00	5.0781E+00
1.500E+01	1.6818E+02	4.1425E+01	5.0065E+01	1.5871E+01	3.1001E+00	3.6511E+00
1.524E+01	1.6170E+02	3.9356E+01	4.7507E+01	1.5379E+01	2.9907E+00	3.5106E+00
1.536E+01	1.5850E+02	3.8339E+01	4.6250E+01	1.5133E+01	2.9362E+00	3.4409E+00
1.584E+01	1.4660E+02	3.4627E+01	4.1670E+01	1.4217E+01	2.7337E+00	3.1827E+00
1.597E+01	1.4367E+02	3.3727E+01	4.0562E+01	1.3989E+01	2.6836E+00	3.1191E+00

Z= 82

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	6 S 1/2	6 P 1/2	6 P 3/2
2.000E+01	8.0387E+01	1.5836E+01	1.8695E+01	8.8165E+00	1.5752E+00	1.7450E+00
3.000E+01	2.6826E+01	3.8408E+00	4.3722E+00	3.7305E+00	5.7415E-01	5.8218E-01
4.000E+01	1.1862E+01	1.3569E+00	1.5015E+00	1.9799E+00	2.7081E-01	2.5732E-01
5.000E+01	6.1639E+00	5.9611E-01	6.4440E-01	1.1949E+00	1.4853E-01	1.3399E-01
6.000E+01	3.5762E+00	3.0208E-01	3.2011E-01	7.8404E-01	9.0012E-02	7.7751E-02
8.000E+01	1.4891E+00	1.0248E-01	1.0515E-01	3.9699E-01	4.0227E-02	3.2384E-02
8.826E+01	1.0996E+00	7.0745E-02	7.1782E-02	3.1333E-01	3.0448E-02	2.3917E-02
8.897E+01	1.0729E+00	6.8649E-02	6.9593E-02	3.0735E-01	2.9765E-02	2.3334E-02
1.000E+02	7.4655E-01	4.4181E-02	4.4202E-02	2.3134E-01	2.1333E-02	1.6238E-02
1.500E+02	2.1042E-01	9.6711E-03	9.2733E-03	8.4867E-02	6.6703E-03	4.5782E-03
2.000E+02	8.5933E-02	3.3519E-03	3.1386E-03	4.1268E-02	2.9296E-03	1.8704E-03
3.000E+02	2.5069E-02	7.9491E-04	7.3211E-04	1.5003E-02	9.4007E-04	5.4601E-04
4.000E+02	1.0868E-02	3.0059E-04	2.7837E-04	7.4441E-03	4.3212E-04	2.3693E-04
5.000E+02	5.8602E-03	1.4655E-04	1.3790E-04	4.3976E-03	2.4219E-04	1.2791E-04
6.000E+02	3.6219E-03	8.3706E-05	8.0345E-05	2.9016E-03	1.5379E-04	7.9166E-05
8.000E+02	1.7769E-03	3.6828E-05	3.6737E-05	1.5510E-03	7.8212E-05	3.8995E-05
1.000E+03	1.0646E-03	2.0364E-05	2.1096E-05	9.7968E-04	4.7995E-05	2.3485E-05
1.500E+03	4.5860E-04	7.8323E-06	8.6673E-06	4.5112E-04	2.1606E-05	1.0332E-05

Z= 83 24 STATES, 44 ENERGYS

STATE	NE	E(KEV)	NCRM
1 S 1/2	2.00	90.8995	.98622
2 S 1/2	2.00	16.3869	.88063
2 P 1/2	2.00	15.7685	.82403
2 P 3/2	4.00	13.4246	.79371
3 S 1/2	2.00	3.9770	.68284
3 P 1/2	2.00	3.6935	.61091
3 P 3/2	4.00	3.1667	.57022
3 D 3/2	4.00	2.6979	.37913
3 D 5/2	6.00	2.5856	.37065
4 S 1/2	2.00	.9244	.42849
4 P 1/2	2.00	.7998	.36153
4 P 3/2	4.00	.6692	.32206
4 D 3/2	4.00	.4650	.17439
4 D 5/2	6.00	.4404	.16664
4 F 5/2	6.00	.1737	.03876
4 F 7/2	8.00	.1680	.03786
5 S 1/2	2.00	.1671	.18856
5 P 1/2	2.00	.1232	.14167
5 P 3/2	4.00	.0975	.11923
5 D 3/2	4.00	.0354	.04143
5 D 5/2	6.00	.0321	.03826
6 S 1/2	2.00	.0177	.04582
6 P 1/2	1.00	.0086	.02339
6 P 3/2	2.00	.0063	.01618

Z= 83 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	1.8837E+06	.0E+00	.0E+00	.0E+00	1.8837E+06
1.5000E+00	8.5214E+05	.0E+00	.0E+00	.0E+00	8.5214E+05
2.0000E+00	4.6361E+05	.0E+00	.0E+00	.0E+00	4.6361E+05
2.5830E+00	2.6349E+05	.0E+00	.0E+00	.0E+00	2.6349E+05
2.6037E+00	6.3109E+05	.0E+00	.0E+00	3.7229E+05	2.5880E+05
2.6952E+00	6.3751E+05	.0E+00	.0E+00	3.9811E+05	2.3941E+05
2.7167E+00	8.7548E+05	.0E+00	.0E+00	6.4035E+05	2.3513E+05
3.0000E+00	7.0890E+05	.0E+00	.0E+00	5.2127E+05	1.8763E+05
3.1636E+00	6.1870E+05	.0E+00	.0E+00	4.5260E+05	1.6609E+05

Z= 83 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
3.1889E+00	7.0079E+05	.0E+00	.0E+00	5.3772E+05	1.6306E+05
3.6898E+00	4.8968E+05	.0E+00	.0E+00	3.7353E+05	1.1616E+05
3.7193E+00	5.0896E+05	.0E+00	.0E+00	3.9496E+05	1.1400E+05
3.9730E+00	4.3460E+05	.0E+00	.0E+00	3.3699E+05	9.7610E+04
4.0000E+00	4.4662E+05	.0E+00	.0E+00	3.5057E+05	9.6059E+04
4.0048E+00	4.4532E+05	.0E+00	.0E+00	3.4953E+05	9.5787E+04
5.0000E+00	2.6013E+05	.0E+00	.0E+00	2.0376E+05	5.6369E+04
6.0000E+00	1.6588E+05	.0E+00	.0E+00	1.2970E+05	3.6183E+04
8.0000E+00	8.0408E+04	.0E+00	.0E+00	6.2657E+04	1.7750E+04
1.0000E+01	4.5421E+04	.0E+00	.0E+00	3.5299E+04	1.0123E+04
1.3411E+01	2.1216E+04	.0E+00	.0E+00	1.6432E+04	4.7844E+03
1.3519E+01	5.1740E+04	.0E+00	3.0962E+04	1.6092E+04	4.6872E+03
1.5000E+01	3.9047E+04	.0E+00	2.3223E+04	1.2240E+04	3.5843E+03
1.5753E+01	3.4261E+04	.0E+00	2.0346E+04	1.0757E+04	3.1572E+03
1.5879E+01	4.6902E+04	.0E+00	3.3276E+04	1.0533E+04	3.0926E+03
1.6370E+01	4.3543E+04	.0E+00	3.0968E+04	9.7176E+03	2.8574E+03
1.6502E+01	4.9314E+04	.0E+00	3.7001E+04	9.5147E+03	2.7988E+03
2.0000E+01	3.0213E+04	.0E+00	2.2807E+04	5.7107E+03	1.6947E+03
3.0000E+01	1.0420E+04	.0E+00	7.9149E+03	1.9250E+03	5.8051E+02
4.0000E+01	4.8314E+03	.0E+00	3.6799E+03	8.8272E+02	2.6880E+02
5.0000E+01	2.6424E+03	.0E+00	2.0151E+03	4.8014E+02	1.4720E+02
6.0000E+01	1.6082E+03	.0E+00	1.2272E+03	2.9125E+02	8.9771E+01
8.0000E+01	7.3116E+02	.0E+00	5.5829E+02	1.3191E+02	4.0962E+01
9.0809E+01	5.1600E+02	.0E+00	3.9407E+02	9.2974E+01	2.8954E+01
9.1536E+01	2.3681E+03	1.8633E+03	3.8552E+02	9.0948E+01	2.8329E+01
1.0000E+02	1.8815E+03	1.4858E+03	3.0221E+02	7.1239E+01	2.2231E+01
1.5000E+02	6.5231E+02	5.2263E+02	9.9070E+01	2.3291E+01	7.3229E+00
2.0000E+02	3.0507E+02	2.4592E+02	4.5188E+01	1.0611E+01	3.3503E+00
3.0000E+02	1.0587E+02	8.5826E+01	1.5314E+01	3.5906E+00	1.1389E+00
4.0000E+02	5.1316E+01	4.1738E+01	7.3194E+00	1.7140E+00	5.4506E-01
5.0000E+02	2.9943E+01	2.4416E+01	4.2242E+00	9.8800E-01	3.1465E-01
6.0000E+02	1.9624E+01	1.6035E+01	2.7434E+00	6.4094E-01	2.0432E-01
8.0000E+02	1.0429E+01	8.5490E+00	1.4377E+00	3.3526E-01	1.0698E-01
1.0000E+03	6.5766E+00	5.4027E+00	8.9810E-01	2.0910E-01	6.6765E-02
1.5000E+03	3.0249E+00	2.4921E+00	4.0778E-01	9.4750E-02	3.0264E-02

Z= 83

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.583E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.604E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.695E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.717E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.164E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.189E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.690E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.719E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.973E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.9022E+04
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.7801E+04
4.005E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.8810E+04	2.7635E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.8723E+04	2.7605E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.3769E+04	2.0452E+04
8.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.0462E+04	1.5550E+04
1.000E+01	.0E+00	.0E+00	.0E+00	.0E+00	6.6199E+03	9.3948E+03
1.341E+01	.0E+00	.0E+00	.0E+00	.0E+00	4.5138E+03	6.0807E+03
1.352E+01	.0E+00	.0E+00	.0E+00	.0E+00	2.6456E+03	3.2719E+03
1.500E+01	.0E+00	.0E+00	.0E+00	3.0962E+04	2.6065E+03	3.2148E+03
				2.3223E+04	2.1409E+03	2.5492E+03

Z= 83

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.575E+01	.0E+00	.0E+00	.0E+00	2.0346E+04	1.9480E+03	2.2819E+03
1.588E+01	.0E+00	.0E+00	1.3355E+04	1.9922E+04	1.9182E+03	2.2407E+03
1.637E+01	.0E+00	.0E+00	1.2593E+04	1.8375E+04	1.8083E+03	2.0892E+03
1.650E+01	.0E+00	6.6952E+03	1.2318E+04	1.7988E+04	1.7806E+03	2.0510E+03
2.000E+01	.0E+00	4.8033E+03	7.5378E+03	1.0466E+04	1.2183E+03	1.3046E+03
3.000E+01	.0E+00	2.2129E+03	2.5328E+03	3.1692E+03	5.2778E+02	4.7616E+02
4.000E+01	.0E+00	1.2256E+03	1.1322E+03	1.3221E+03	2.8327E+02	2.2412E+02
5.000E+01	.0E+00	7.5622E+02	5.9778E+02	6.6109E+02	1.7208E+02	1.2262E+02
6.000E+01	.0E+00	5.0263E+02	3.5220E+02	3.7238E+02	1.1338E+02	7.4152E+01
8.000E+01	.0E+00	2.5805E+02	1.5133E+02	1.4891E+02	5.7700E+01	3.3032E+01
9.081E+01	.0E+00	1.9089E+02	1.0404E+02	9.9145E+01	4.2587E+01	2.3029E+01
9.154E+01	1.8633E+03	1.8727E+02	1.0161E+02	9.6636E+01	4.1776E+01	2.2511E+01
1.000E+02	1.4858E+03	1.5131E+02	7.8191E+01	7.2703E+01	3.3723E+01	1.7479E+01
1.500E+02	5.2263E+02	5.5807E+01	2.3539E+01	1.9724E+01	1.2422E+01	5.4490E+00
2.000E+02	2.4592E+02	2.7164E+01	1.0131E+01	7.8930E+00	6.0536E+00	2.3901E+00
3.000E+02	8.5826E+01	9.8782E+00	3.1820E+00	2.2541E+00	2.2067E+00	7.6579E-01
4.000E+02	4.1738E+01	4.9029E+00	1.4483E+00	9.6816E-01	1.0968E+00	3.5203E-01
5.000E+02	2.4416E+01	2.8981E+00	8.0692E-01	5.1919E-01	6.4873E-01	1.9726E-01
6.000E+02	1.6035E+01	1.9133E+00	5.1034E-01	3.1976E-01	4.2839E-01	1.2521E-01
8.000E+02	8.5490E+00	1.0236E+00	2.5796E-01	1.5617E-01	2.2916E-01	6.3544E-02
1.000E+03	5.4027E+00	6.4678E-01	1.5785E-01	9.3467E-02	1.4473E-01	3.9005E-02
1.500E+03	2.4921E+00	2.9730E-01	7.0290E-02	4.0190E-02	6.6463E-02	1.7408E-02

Z= 83

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	4.0406E+04	3.5340E+04	1.4279E+05
1.500E+00	.0E+00	.0E+00	.0E+00	2.6470E+04	2.8428E+04	8.7258E+04
2.000E+00	.0E+00	.0E+00	.0E+00	1.8381E+04	2.1511E+04	5.7503E+04
2.583E+00	.0E+00	.0E+00	.0E+00	1.2801E+04	1.5747E+04	3.8113E+04
2.604E+00	.0E+00	.0E+00	3.7229E+05	1.2652E+04	1.5581E+04	3.7606E+04
2.695E+00	.0E+00	.0E+00	3.9811E+05	1.2023E+04	1.4873E+04	3.5471E+04
2.717E+00	.0E+00	2.5003E+05	3.9032E+05	1.1882E+04	1.4712E+04	3.4991E+04
3.000E+00	.0E+00	2.1716E+05	3.0411E+05	1.0227E+04	1.2816E+04	2.9476E+04
3.164E+00	.0E+00	1.8939E+05	2.6322E+05	9.4182E+03	1.1872E+04	2.6842E+04
3.189E+00	9.4818E+04	1.8542E+05	2.5748E+05	9.3017E+03	1.1734E+04	2.6464E+04
3.690E+00	7.8393E+04	1.2432E+05	1.7081E+05	7.3859E+03	9.4030E+03	2.0287E+04
3.719E+00	7.7366E+04	1.2159E+05	1.6698E+05	7.2914E+03	9.2867E+03	1.9989E+04
3.973E+00	6.8852E+04	1.0106E+05	1.3927E+05	6.5482E+03	8.3633E+03	1.7660E+04
4.000E+00	6.8001E+04	9.9407E+04	1.3671E+05	6.4759E+03	8.2723E+03	1.7434E+04
4.005E+00	6.7851E+04	9.9084E+04	1.3627E+05	6.4632E+03	8.2563E+03	1.7395E+04
5.000E+00	4.5292E+04	5.2845E+04	7.1406E+04	4.4588E+03	5.6876E+03	1.1281E+04
6.000E+00	3.1763E+04	3.0832E+04	4.1094E+04	3.2503E+03	4.1027E+03	7.7684E+03
8.000E+00	1.7413E+04	1.2657E+04	1.6573E+04	1.9370E+03	2.3655E+03	4.1786E+03
1.000E+01	1.0564E+04	6.1764E+03	7.9642E+03	1.2777E+03	1.5009E+03	2.5174E+03
1.341E+01	5.2590E+03	2.3237E+03	2.9316E+03	7.2587E+02	7.9665E+02	1.2504E+03
1.352E+01	5.1572E+03	2.2615E+03	2.8514E+03	7.1460E+02	7.8265E+02	1.2262E+03
1.500E+01	3.9822E+03	1.5847E+03	1.9827E+03	5.8201E+02	6.1941E+02	9.4811E+02
1.575E+01	3.5209E+03	1.3385E+03	1.6679E+03	5.2794E+02	5.5389E+02	8.3860E+02
1.588E+01	3.4507E+03	1.3021E+03	1.6215E+03	5.1960E+02	5.4385E+02	8.2192E+02
1.637E+01	3.1937E+03	1.1713E+03	1.4551E+03	4.8882E+02	5.0696E+02	7.6098E+02
1.650E+01	3.1294E+03	1.1392E+03	1.4145E+03	4.8105E+02	4.9771E+02	7.4575E+02
2.000E+01	1.8993E+03	5.7980E+02	7.0865E+02	3.2555E+02	3.1652E+02	4.5428E+02
3.000E+01	6.2910E+02	1.3404E+02	1.5796E+02	1.3876E+02	1.1607E+02	1.5196E+02
4.000E+01	2.7638E+02	4.6123E+01	5.2822E+01	7.3947E+01	5.4939E+01	6.7267E+01
5.000E+01	1.4324E+02	1.9919E+01	2.2280E+01	4.4753E+01	3.0207E+01	3.5066E+01
6.000E+01	8.2809E+01	9.9747E+00	1.0934E+01	2.9425E+01	1.8342E+01	2.0366E+01
8.000E+01	3.4308E+01	3.3324E+00	3.5351E+00	1.4944E+01	8.2217E+00	8.4945E+00
9.081E+01	2.3154E+01	2.0550E+00	2.1484E+00	1.1024E+01	5.7467E+00	5.7482E+00
9.154E+01	2.2586E+01	1.9934E+00	2.0821E+00	1.0813E+01	5.6182E+00	5.6082E+00
1.000E+02	1.7142E+01	1.4232E+00	1.4716E+00	8.7268E+00	4.3699E+00	4.2637E+00

Z= 83

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.500E+02	4.8081E+00	3.0759E-01	3.0454E-01	3.2134E+00	1.3716E+00	1.2043E+00
2.000E+02	1.9587E+00	1.0591E-01	1.0233E-01	1.5665E+00	6.0392E-01	4.9253E-01
3.000E+02	5.6965E-01	2.4845E-02	2.3600E-02	5.7143E-01	1.9431E-01	1.4358E-01
4.000E+02	2.4681E-01	9.4106E-03	8.9763E-03	2.8404E-01	8.9621E-02	6.2320E-02
5.000E+02	1.3299E-01	4.5803E-03	4.4360E-03	1.6802E-01	5.0287E-02	3.3618E-02
6.000E+02	8.2146E-02	2.6133E-03	2.5814E-03	1.1096E-01	3.1952E-02	2.0780E-02
8.000E+02	4.0248E-02	1.1396E-03	1.1667E-03	5.9348E-02	1.6237E-02	1.0182E-02
1.000E+03	2.4057E-02	6.3445E-04	6.7439E-04	3.7481E-02	9.9586E-03	6.1009E-03
1.500E+03	1.0362E-02	2.4636E-04	2.7147E-04	1.7207E-02	4.4478E-03	2.6238E-03

Z= 83

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	2.0102E+05	3.1016E+05	4.4384E+05	5.7009E+05	1.3793E+04	1.1879E+04
1.500E+00	1.2295E+05	1.8067E+05	1.4525E+05	1.8465E+05	7.5866E+03	7.3701E+03
2.000E+00	7.5382E+04	1.0812E+05	6.0010E+04	7.5779E+04	4.8536E+03	5.0307E+03
2.583E+00	4.5349E+04	6.3789E+04	2.5896E+04	3.2506E+04	3.2167E+03	3.4752E+03
2.604E+00	4.4591E+04	6.2686E+04	2.5207E+04	3.1635E+04	3.1750E+03	3.4337E+03
2.695E+00	4.1425E+04	5.8092E+04	2.2419E+04	2.8112E+04	3.0002E+03	3.2587E+03
2.717E+00	4.0719E+04	5.7072E+04	2.1817E+04	2.7353E+04	2.9610E+03	3.2194E+03
3.000E+00	3.2741E+04	4.5582E+04	1.5500E+04	1.9387E+04	2.5127E+03	2.7610E+03
3.164E+00	2.9033E+04	4.0269E+04	1.2874E+04	1.6081E+04	2.2993E+03	2.5385E+03
3.189E+00	2.8507E+04	3.9519E+04	1.2518E+04	1.5633E+04	2.2687E+03	2.5063E+03
3.690E+00	2.0224E+04	2.7764E+04	7.4388E+03	9.2563E+03	1.7715E+03	1.9750E+03
3.719E+00	1.9838E+04	2.7220E+04	7.2273E+03	8.9914E+03	1.7475E+03	1.9489E+03
3.973E+00	1.6884E+04	2.3069E+04	5.6847E+03	7.0603E+03	1.5599E+03	1.7438E+03
4.000E+00	1.6603E+04	2.2675E+04	5.5453E+03	6.8860E+03	1.5418E+03	1.7237E+03
4.005E+00	1.6554E+04	2.2606E+04	5.5210E+03	6.8556E+03	1.5386E+03	1.7202E+03
5.000E+00	9.3872E+03	1.2632E+04	2.4114E+03	2.9768E+03	1.0424E+03	1.1652E+03
6.000E+00	5.7403E+03	7.6320E+03	1.1949E+03	1.4675E+03	7.5119E+02	8.3215E+02
8.000E+00	2.5286E+03	3.2967E+03	3.8023E+02	4.6300E+02	4.4168E+02	4.7487E+02
1.000E+01	1.2937E+03	1.6602E+03	1.5203E+02	1.8380E+02	2.8913E+02	2.9980E+02
1.341E+01	5.1378E+02	6.4498E+02	4.3955E+01	5.2592E+01	1.6304E+02	1.5851E+02
1.352E+01	5.0073E+02	6.2822E+02	4.2474E+01	5.0806E+01	1.6048E+02	1.5571E+02
1.500E+01	3.5699E+02	4.4424E+02	2.7101E+01	3.2288E+01	1.3042E+02	1.2313E+02
1.575E+01	3.0385E+02	3.7662E+02	2.1897E+01	2.6038E+01	1.1819E+02	1.1007E+02
1.588E+01	2.9595E+02	3.6659E+02	2.1148E+01	2.5139E+01	1.1631E+02	1.0807E+02
1.637E+01	2.6749E+02	3.3053E+02	1.8508E+01	2.1973E+01	1.0936E+02	1.0072E+02
1.650E+01	2.6050E+02	3.2167E+02	1.7872E+01	2.1211E+01	1.0761E+02	9.8878E+01
2.000E+01	1.3624E+02	1.6555E+02	7.6382E+00	8.9918E+00	7.2606E+01	6.2841E+01
3.000E+01	3.3001E+01	3.8646E+01	1.2253E+00	1.4150E+00	3.0815E+01	2.3048E+01
4.000E+01	1.1656E+01	1.3263E+01	3.2763E-01	3.7265E-01	1.6392E+01	1.0920E+01
5.000E+01	5.1207E+00	5.6906E+00	1.1687E-01	1.3125E-01	9.9119E+00	6.0097E+00
6.000E+01	2.5955E+00	2.8270E+00	5.0191E-02	5.5742E-02	6.5146E+00	3.6748E+00
8.000E+01	8.8098E-01	9.2889E-01	1.3250E-02	1.4260E-02	3.3167E+00	1.6494E+00
9.081E+01	5.4647E-01	5.6794E-01	7.3655E-03	7.8773E-03	2.4462E+00	1.1535E+00
9.154E+01	5.3031E-01	5.5062E-01	7.1003E-03	7.5893E-03	2.3995E+00	1.1277E+00
1.000E+02	3.8000E-01	3.9067E-01	4.7318E-03	5.0251E-03	1.9363E+00	8.7748E-01
1.500E+02	8.3262E-02	8.2043E-02	7.5990E-04	7.8669E-04	7.1277E-01	2.7583E-01
2.000E+02	2.8890E-02	2.7650E-02	2.1437E-04	2.1954E-04	3.4742E-01	1.2156E-01
3.000E+02	6.8325E-03	6.4291E-03	3.9035E-05	3.9913E-05	1.2671E-01	3.9154E-02
4.000E+02	2.6001E-03	2.4523E-03	1.2806E-05	1.3170E-05	6.3002E-02	1.8049E-02
5.000E+02	1.2687E-03	1.2132E-03	5.5228E-06	5.9405E-06	3.7269E-02	1.0130E-02
6.000E+02	7.2431E-04	7.0777E-04	2.8994E-06	3.2430E-06	2.4611E-02	6.4367E-03
8.000E+02	3.1697E-04	3.2221E-04	1.1157E-06	1.3101E-06	1.3164E-02	3.2712E-03
1.000E+03	1.7686E-04	1.8492E-04	5.8090E-07	7.4126E-07	8.3132E-03	2.0068E-03
1.500E+03	6.8397E-05	7.5536E-05	2.0094E-07	2.8545E-07	3.8163E-03	8.9609E-04

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	6 S 1/2	6 P 1/2	6 P 3/2
1.000E+00	3.4864E+04	3.0500E+04	4.4749E+04	2.1671E+03	6.3008E+02	1.4296E+03
1.500E+00	1.8983E+04	1.6616E+04	2.3642E+04	1.1386E+03	3.6938E+02	7.6090E+02
2.000E+00	1.1917E+04	9.8888E+03	1.3802E+04	7.1130E+02	2.4470E+02	4.7238E+02
2.583E+00	7.6830E+03	5.8896E+03	8.0890E+03	4.6349E+02	1.6544E+02	3.0231E+02
2.604E+00	7.5756E+03	5.7903E+03	7.9488E+03	4.5727E+02	1.6336E+02	2.9798E+02
2.695E+00	7.1256E+03	5.3767E+03	7.3654E+03	4.3123E+02	1.5464E+02	2.8004E+02
2.717E+00	7.0251E+03	5.2847E+03	7.2358E+03	4.2542E+02	1.5268E+02	2.8085E+02
3.000E+00	5.8748E+03	4.2464E+03	5.7789E+03	3.5902E+02	1.3003E+02	2.3462E+02
3.164E+00	5.3301E+03	3.7656E+03	5.1079E+03	3.2763E+02	1.1913E+02	2.1276E+02
3.189E+00	5.2522E+03	3.6975E+03	5.0131E+03	3.2314E+02	1.1756E+02	2.0964E+02
3.690E+00	3.9939E+03	2.6262E+03	3.5290E+03	2.5055E+02	9.1804E+01	1.5924E+02
3.719E+00	3.9336E+03	2.5764E+03	3.4604E+03	2.4706E+02	9.0549E+01	1.5683E+02
3.973E+00	3.4647E+03	2.1950E+03	2.9361E+03	2.1990E+02	8.3734E+01	1.3807E+02
4.000E+00	3.4194E+03	2.1588E+03	2.8865E+03	2.1728E+02	8.2768E+01	1.3626E+02
4.005E+00	3.4115E+03	2.1525E+03	2.8778E+03	2.1682E+02	8.2598E+01	1.3594E+02
5.000E+00	2.1947E+03	1.2263E+03	1.6168E+03	1.4559E+02	5.5855E+01	8.7369E+01
6.000E+00	1.5043E+03	7.5355E+02	9.8204E+02	1.0423E+02	3.9861E+01	5.9850E+01
8.000E+00	8.0572E+02	3.3479E+02	4.2803E+02	6.0742E+01	2.2733E+01	3.2040E+01
1.000E+01	4.8469E+02	1.7242E+02	2.1701E+02	4.0403E+01	1.4352E+01	1.9270E+01
1.341E+01	2.4059E+02	6.9050E+01	8.5016E+01	2.2769E+01	7.5899E+00	9.5643E+00
1.352E+01	2.3594E+02	6.7311E+01	8.2824E+01	2.2411E+01	7.4559E+00	9.3793E+00
1.500E+01	1.8244E+02	4.8126E+01	5.8729E+01	1.8211E+01	5.8965E+00	7.2524E+00
1.575E+01	1.6138E+02	4.1013E+01	4.9512E+01	1.6502E+01	5.2717E+00	6.4151E+00
1.588E+01	1.5818E+02	3.9954E+01	4.8202E+01	1.6239E+01	5.1759E+00	6.2876E+00
1.637E+01	1.4646E+02	3.6140E+01	4.3491E+01	1.5268E+01	4.8243E+00	5.8217E+00
1.650E+01	1.4353E+02	3.5202E+01	4.2334E+01	1.5024E+01	4.7360E+00	5.7053E+00
2.000E+01	8.7492E+01	1.8504E+01	2.1882E+01	1.0135E+01	3.0109E+00	3.4776E+00
3.000E+01	2.9333E+01	4.5175E+00	5.1487E+00	4.3006E+00	1.1051E+00	1.1657E+00
4.000E+01	1.3011E+01	1.6029E+00	1.7751E+00	2.2871E+00	5.2373E-01	5.1693E-01
5.000E+01	6.7789E+00	7.0638E-01	7.6400E-01	1.3827E+00	2.8830E-01	2.6985E-01
6.000E+01	3.9408E+00	3.5883E-01	3.8037E-01	9.0850E-01	1.7522E-01	1.5689E-01
8.000E+01	1.6459E+00	1.2218E-01	1.2536E-01	4.6107E-01	7.8653E-02	6.5545E-02
9.081E+01	1.1144E+00	7.5881E-02	7.6732E-02	3.4004E-01	5.5009E-02	4.4384E-02
9.154E+01	1.0873E+00	7.3639E-02	7.4398E-02	3.3356E-01	5.3781E-02	4.3304E-02
1.000E+02	8.2694E-01	5.2810E-02	5.2821E-02	2.6916E-01	4.1847E-02	3.2937E-02
1.500E+02	2.3391E-01	1.1608E-02	1.1121E-02	9.9076E-02	1.3156E-02	9.3199E-03
2.000E+02	9.5741E-02	4.0332E-03	3.7716E-03	4.8292E-02	5.7980E-03	3.8156E-03
3.000E+02	2.7981E-02	9.5488E-04	8.7816E-04	1.7614E-02	1.8676E-03	1.1158E-03
4.000E+02	1.2152E-02	3.6333E-04	3.3559E-04	8.7579E-03	8.6090E-04	4.8493E-04
5.000E+02	6.5569E-03	1.7737E-04	1.6629E-04	5.1811E-03	4.8322E-04	2.6188E-04
6.000E+02	4.0527E-03	1.0137E-04	9.6901E-05	3.4217E-03	3.0717E-04	1.6205E-04
8.000E+02	1.9866E-03	4.4294E-05	4.4115E-05	1.8308E-03	1.5620E-04	7.9670E-05
1.000E+03	1.1906E-03	2.4724E-05	2.5430E-05	1.1568E-03	9.5982E-05	4.7939E-05
1.500E+03	5.1240E-04	9.5129E-06	1.0432E-05	5.3227E-04	4.3133E-05	2.0952E-05

Z= 84 24 STATES, 44 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	93.4990	.98630
2 S 1/2	2.00	16.9302	.88180
2 P 1/2	2.00	16.2982	.82569
2 P 3/2	4.00	13.8163	.79470
3 S 1/2	2.00	4.1310	.68575
3 P 1/2	2.00	3.8410	.61439
3 P 3/2	4.00	3.2813	.57268
3 D 3/2	4.00	2.8034	.38241
3 D 5/2	6.00	2.6846	.37373
4 S 1/2	2.00	.9727	.43289
4 P 1/2	2.00	.8447	.36622
4 P 3/2	4.00	.7050	.32568
4 D 3/2	4.00	.4956	.17784
4 D 5/2	6.00	.4693	.16986
4 F 5/2	6.00	.1953	.04064
4 F 7/2	8.00	.1891	.03969
5 S 1/2	2.00	.1816	.19450
5 P 1/2	2.00	.1358	.14745
5 P 3/2	4.00	.1075	.12420
5 D 3/2	4.00	.0422	.04504
5 D 5/2	6.00	.0385	.04170
6 S 1/2	2.00	.0204	.05063
6 P 1/2	1.33	.0103	.02740
6 P 3/2	2.67	.0074	.01937

Z= 84 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL CTER
1.0000E+00	1.9819E+06	.0E+00	.0E+00	.0E+00	1.9819E+06
1.5000E+00	8.9930E+05	.0E+00	.0E+00	.0E+00	8.9930E+05
2.0000E+00	4.8976E+05	.0E+00	.0E+00	.0E+00	4.8976E+05
2.6820E+00	2.5603E+05	.0E+00	.0E+00	.0E+00	2.5603E+05
2.7034E+00	7.2151E+05	.0E+00	.0E+00	4.7004E+05	2.5147E+05
2.8006E+00	6.1044E+05	.0E+00	.0E+00	3.7829E+05	2.3215E+05
2.8230E+00	9.0608E+05	.0E+00	.0E+00	6.7810E+05	2.2799E+05
3.0000E+00	7.4402E+05	.0E+00	.0E+00	5.4553E+05	1.9849E+05
3.2781E+00	5.9508E+05	.0E+00	.0E+00	4.3315E+05	1.6193E+05
3.3043E+00	6.7402E+05	.0E+00	.0E+00	5.1505E+05	1.5897E+05
3.8371E+00	4.6653E+05	.0E+00	.0E+00	3.5434E+05	1.1219E+05
3.8679E+00	4.8493E+05	.0E+00	.0E+00	3.7482E+05	1.1011E+05
4.0000E+00	4.4754E+05	.0E+00	.0E+00	3.4581E+05	1.0173E+05
4.1268E+00	4.1497E+05	.0E+00	.0E+00	3.2047E+05	9.4496E+04
4.1599E+00	4.2511E+05	.0E+00	.0E+00	3.3238E+05	9.2728E+04
5.0000E+00	2.7226E+05	.0E+00	.0E+00	2.1250E+05	5.9752E+04
6.0000E+00	1.7380E+05	.0E+00	.0E+00	1.3543E+05	3.8378E+04
8.0000E+00	8.4356E+04	.0E+00	.0E+00	6.5510E+04	1.8847E+04
1.0000E+01	4.7705E+04	.0E+00	.0E+00	3.6950E+04	1.0756E+04
1.3802E+01	2.0701E+04	.0E+00	.0E+00	1.5975E+04	4.7259E+03
1.3913E+01	5.0226E+04	.0E+00	2.9952E+04	1.5644E+04	4.6299E+03
1.5000E+01	4.1090E+04	.0E+00	2.4439E+04	1.2837E+04	3.8137E+03
1.6282E+01	3.2855E+04	.0E+00	1.9427E+04	1.0343E+04	3.0845E+03
1.6412E+01	4.5049E+04	.0E+00	3.1899E+04	1.0128E+04	3.0214E+03
1.6913E+01	4.1852E+04	.0E+00	2.9703E+04	9.3546E+03	2.7946E+03
1.7049E+01	4.7415E+04	.0E+00	3.5518E+04	9.1594E+03	2.7373E+03
2.0000E+01	3.1577E+04	.0E+00	2.3774E+04	5.9979E+03	1.8051E+03
3.0000E+01	1.0930E+04	.0E+00	8.2848E+03	2.0256E+03	6.1930E+02
4.0000E+01	5.0782E+03	.0E+00	3.8609E+03	9.3017E+02	2.8709E+02
5.0000E+01	2.7813E+03	.0E+00	2.1174E+03	5.0650E+02	1.5738E+02
6.0000E+01	1.6945E+03	.0E+00	1.2910E+03	3.0752E+02	9.6020E+01

Z= 84 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY (KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
8.0000E+01	7.7162E+02	.0E+00	5.8827E+02	1.3948E+02	4.3869E+01
9.3406E+01	5.0430E+02	.0E+00	3.8455E+02	9.1018E+01	2.8729E+01
9.4153E+01	2.2895E+03	1.7961E+03	3.7622E+02	8.9039E+01	2.8109E+01
1.0000E+02	1.9661E+03	1.5480E+03	3.1881E+02	7.5414E+01	2.3837E+01
1.5000E+02	6.8103E+02	5.4372E+02	1.0474E+02	2.4706E+01	7.8662E+00
2.0000E+02	3.1935E+02	2.5663E+02	4.7846E+01	1.1272E+01	3.6037E+00
3.0000E+02	1.1114E+02	8.9843E+01	1.6249E+01	3.8222E+00	1.2274E+00
4.0000E+02	5.3973E+01	4.3781E+01	7.7770E+00	1.8270E+00	5.8815E-01
5.0000E+02	3.1534E+01	2.5648E+01	4.4925E+00	1.0541E+00	3.3981E-01
6.0000E+02	2.0686E+01	1.6862E+01	2.9196E+00	6.8421E-01	2.2079E-01
8.0000E+02	1.1005E+01	9.0001E+00	1.5312E+00	3.5813E-01	1.1567E-01
1.0000E+03	6.9430E+00	5.6906E+00	9.5672E-01	2.2346E-01	7.2207E-02
1.5000E+03	3.1934E+00	2.6251E+00	4.3439E-01	1.0123E-01	3.2724E-02

Z= 84

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.682E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.703E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.801E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.823E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.278E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.304E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.837E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.868E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.7715E+04
4.127E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.7383E+04
4.160E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.6518E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.7873E+04	2.6330E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.3918E+04	2.0719E+04
8.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.0517E+04	1.5757E+04
1.000E+01	.0E+00	.0E+00	.0E+00	.0E+00	6.7243E+03	9.6273E+03
1.380E+01	.0E+00	.0E+00	.0E+00	.0E+00	4.6038E+03	6.2711E+03
1.391E+01	.0E+00	.0E+00	.0E+00	.0E+00	2.5657E+03	3.1938E+03
1.500E+01	.0E+00	.0E+00	.0E+00	2.9952E+04	2.5278E+03	3.1382E+03
1.628E+01	.0E+00	.0E+00	.0E+00	2.4439E+04	2.1942E+03	2.6553E+03
1.641E+01	.0E+00	.0E+00	1.2880E+04	1.9020E+04	1.8743E+03	2.2079E+03
1.691E+01	.0E+00	.0E+00	1.2146E+04	1.7557E+04	1.8456E+03	2.1682E+03
1.705E+01	.0E+00	6.4375E+03	1.1894E+04	1.7186E+04	1.7413E+03	2.0238E+03
2.000E+01	.0E+00	4.8639E+03	7.8852E+03	1.1025E+04	1.7146E+03	1.9869E+03
3.000E+01	.0E+00	2.2678E+03	2.6794E+03	3.3375E+03	1.2522E+03	1.3675E+03
4.000E+01	.0E+00	1.2606E+03	1.2043E+03	1.3961E+03	5.4452E+02	5.0279E+02
5.000E+01	.0E+00	7.8008E+02	6.3788E+02	6.9946E+02	2.9301E+02	2.3785E+02
6.000E+01	.0E+00	5.1965E+02	3.7674E+02	3.9458E+02	1.7833E+02	1.3061E+02
8.000E+01	.0E+00	2.6767E+02	1.6247E+02	1.5814E+02	1.1769E+02	7.9215E+01
9.341E+01	.0E+00	1.8532E+02	1.0295E+02	9.6279E+01	6.0042E+01	3.5441E+01
9.415E+01	1.7961E+03	1.8181E+02	1.0056E+02	9.3847E+01	4.1456E+01	2.2847E+01
1.000E+02	1.5480E+03	1.5729E+02	8.4184E+01	7.7340E+01	4.0667E+01	2.2335E+01
1.500E+02	5.4372E+02	5.8237E+01	2.5460E+01	2.1040E+01	3.5161E+01	1.8813E+01
2.000E+02	2.5663E+02	2.8422E+01	1.0990E+01	8.4341E+00	1.2996E+01	5.8959E+00
3.000E+02	8.9843E+01	1.0371E+01	3.4646E+00	2.4132E+00	6.3489E+00	2.5948E+00
4.000E+02	4.3781E+01	5.1591E+00	1.5804E+00	1.0375E+00	2.3221E+00	8.3480E-01
5.000E+02	2.5648E+01	3.0541E+00	8.8182E-01	5.5659E-01	1.1567E+00	3.8469E-01
6.000E+02	1.6862E+01	2.0184E+00	5.5830E-01	3.4284E-01	6.8513E-01	2.1590E-01
8.000E+02	9.0001E+00	1.0811E+00	2.8260E-01	1.6741E-01	4.5289E-01	1.3720E-01
1.000E+03	5.6906E+00	6.8349E-01	1.7308E-01	1.0015E-01	2.4255E-01	6.9732E-02
1.500E+03	2.6251E+00	3.1420E-01	7.7163E-02	4.3021E-02	1.5330E-01	4.2839E-02
					7.0386E-02	1.9145E-02

Z= 84

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	4.1003E+04	3.4228E+04	1.4477E+05
1.500E+00	.0E+00	.0E+00	.0E+00	2.6552E+04	2.8072E+04	8.9202E+04
2.000E+00	.0E+00	.0E+00	.0E+00	1.8547E+04	2.1525E+04	5.9007E+04
2.682E+00	.0E+00	.0E+00	.0E+00	1.2276E+04	1.5139E+04	3.6851E+04
2.703E+00	.0E+00	.0E+00	4.7004E+05	1.2133E+04	1.4980E+04	3.6360E+04
2.801E+00	.0E+00	.0E+00	3.7829E+05	1.1515E+04	1.4286E+04	3.4242E+04
2.823E+00	.0E+00	3.0756E+05	3.7054E+05	1.1380E+04	1.4132E+04	3.3777E+04
3.000E+00	.0E+00	2.2641E+05	3.1912E+05	1.0389E+04	1.2992E+04	3.0401E+04
3.278E+00	.0E+00	1.8147E+05	2.5169E+05	9.0623E+03	1.1451E+04	2.6007E+04
3.304E+00	9.1178E+04	1.7768E+05	2.4619E+05	8.9500E+03	1.1318E+04	2.5639E+04
3.837E+00	7.5087E+04	1.1785E+05	1.6140E+05	7.0660E+03	9.0220E+03	1.9505E+04
3.868E+00	7.4096E+04	1.1524E+05	1.5777E+05	6.9757E+03	8.9105E+03	1.9217E+04
4.000E+00	6.9887E+04	1.0487E+05	1.4367E+05	6.6054E+03	8.4520E+03	1.8045E+04
4.127E+00	6.6028E+04	9.6031E+04	1.3189E+05	6.2765E+03	8.0410E+03	1.7009E+04
4.160E+00	6.5062E+04	9.4082E+04	1.2904E+05	6.1949E+03	7.9383E+03	1.6753E+04
5.000E+00	4.6415E+04	5.5983E+04	7.5469E+04	4.5593E+03	5.8424E+03	1.1706E+04
6.000E+00	3.2758E+04	3.2770E+04	4.3622E+04	3.3303E+03	4.2310E+03	8.0768E+03
8.000E+00	1.8019E+04	1.3499E+04	1.7640E+04	1.9905E+03	2.4539E+03	4.3589E+03
1.000E+01	1.0967E+04	6.6063E+03	8.5013E+03	1.3154E+03	1.5634E+03	2.6328E+03
1.380E+01	5.1078E+03	2.2638E+03	2.8437E+03	7.0820E+02	7.8293E+02	1.2230E+03
1.391E+01	5.0089E+03	2.2033E+03	2.7659E+03	6.9721E+02	7.6920E+02	1.1993E+03
1.500E+01	4.1563E+03	1.7041E+03	2.1274E+03	6.0120E+02	6.5003E+02	9.9610E+02
1.628E+01	3.3822E+03	1.2852E+03	1.5936E+03	5.1076E+02	5.3955E+02	8.1132E+02
1.641E+01	3.3147E+03	1.2502E+03	1.5491E+03	5.0269E+02	5.2977E+02	7.9516E+02
1.691E+01	3.0709E+03	1.1263E+03	1.3922E+03	4.7332E+02	4.9437E+02	7.3691E+02
1.705E+01	3.0090E+03	1.0955E+03	1.3533E+03	4.6581E+02	4.8536E+02	7.2215E+02
2.000E+01	1.9893E+03	6.2592E+02	7.6296E+02	3.3701E+02	3.3389E+02	4.7885E+02
3.000E+01	6.6197E+02	1.4544E+02	1.7085E+02	1.4409E+02	1.2331E+02	1.6093E+02
4.000E+01	2.9179E+02	5.0218E+01	5.7313E+01	7.6955E+01	5.8646E+01	7.1467E+01
5.000E+01	1.5159E+02	2.1745E+01	2.4231E+01	4.6654E+01	3.2362E+01	3.7346E+01
6.000E+01	8.7799E+01	1.0911E+01	1.1913E+01	3.0719E+01	1.9707E+01	2.1732E+01
8.000E+01	3.6479E+01	3.6565E+00	3.8621E+00	1.5637E+01	8.8723E+00	9.0909E+00
9.341E+01	2.2583E+01	2.0281E+00	2.1040E+00	1.0789E+01	5.7376E+00	5.6464E+00
9.415E+01	2.2030E+01	1.9676E+00	2.0392E+00	1.0583E+01	5.6098E+00	5.5091E+00
1.000E+02	1.8264E+01	1.5650E+00	1.6108E+00	9.1486E+00	4.7308E+00	4.5729E+00
1.500E+02	5.1404E+00	3.3946E-01	3.3439E-01	3.3800E+00	1.4929E+00	1.2962E+00
2.000E+02	2.0985E+00	1.1714E-01	1.1256E-01	1.6516E+00	6.5961E-01	5.3125E-01
3.000E+02	6.1171E-01	2.7552E-02	2.6009E-02	6.0448E-01	2.1309E-01	1.5524E-01
4.000E+02	2.6532E-01	1.0452E-02	9.9000E-03	3.0113E-01	9.8527E-02	6.7464E-02
5.000E+02	1.4304E-01	5.0924E-03	4.8942E-03	1.7839E-01	5.5378E-02	3.6415E-02
6.000E+02	8.8368E-02	2.9077E-03	2.8482E-03	1.1792E-01	3.5229E-02	2.2512E-02
8.000E+02	4.3289E-02	1.2687E-03	1.2885E-03	6.3146E-02	1.7927E-02	1.1027E-02
1.000E+03	2.5869E-02	7.0752E-04	7.4295E-04	3.9900E-02	1.1006E-02	6.6071E-03
1.500E+03	1.1128E-02	2.7450E-04	2.9962E-04	1.8317E-02	4.9209E-03	2.8379E-03

Z= 84

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	2.0349E+05	3.1528E+05	4.7766E+05	6.1385E+05	1.4261E+04	1.2220E+04
1.500E+00	1.2653E+05	1.8648E+05	1.5818E+05	2.0111E+05	7.8720E+03	7.6329E+03
2.000E+00	7.8236E+04	1.1235E+05	6.5818E+04	8.3105E+04	5.0460E+03	5.2348E+03
2.682E+00	4.3773E+04	6.1465E+04	2.5171E+04	3.1559E+04	3.1508E+03	3.4336E+03
2.703E+00	4.3039E+04	6.0397E+04	2.4500E+04	3.0713E+04	3.1099E+03	3.3926E+03
2.801E+00	3.9904E+04	5.5848E+04	2.1728E+04	2.7214E+04	2.9349E+03	3.2160E+03
2.823E+00	3.9221E+04	5.4861E+04	2.1145E+04	2.6478E+04	2.8967E+03	3.1772E+03
3.000E+00	3.4322E+04	4.7811E+04	1.7155E+04	2.1450E+04	2.6198E+03	2.8933E+03
3.278E+00	2.8107E+04	3.8905E+04	1.2592E+04	1.5710E+04	2.2597E+03	2.5167E+03
3.304E+00	2.7596E+04	3.8177E+04	1.2244E+04	1.5272E+04	2.2297E+03	2.4848E+03
3.837E+00	1.9390E+04	2.6552E+04	7.1791E+03	8.9205E+03	1.7303E+03	1.9468E+03
3.868E+00	1.9019E+04	2.6030E+04	6.9748E+03	8.6649E+03	1.7068E+03	1.9211E+03
4.000E+00	1.7522E+04	2.3927E+04	6.1734E+03	7.6625E+03	1.6112E+03	1.8158E+03

Z= 84

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
4.127E+00	1.6224E+04	2.2110E+04	5.5078E+03	6.8308E+03	1.5267E+03	1.7223E+03
4.160E+00	1.5906E+04	2.1666E+04	5.3491E+03	6.6326E+03	1.5058E+03	1.6991E+03
5.000E+00	9.9533E+03	1.3389E+04	2.6963E+03	3.3266E+03	1.0913E+03	1.2324E+03
6.000E+00	6.1086E+03	8.1160E+03	1.3407E+03	1.6455E+03	7.8746E+02	8.8299E+02
8.000E+00	2.7056E+03	3.5237E+03	4.2877E+02	5.2170E+02	4.6399E+02	5.0645E+02
1.000E+01	1.3897E+03	1.7810E+03	1.7205E+02	2.0782E+02	3.0423E+02	3.2100E+02
1.380E+01	5.0571E+02	6.3231E+02	4.4181E+01	5.2750E+01	1.6239E+02	1.6003E+02
1.391E+01	4.9287E+02	6.1587E+02	4.2694E+01	5.0960E+01	1.5984E+02	1.5721E+02
1.500E+01	3.8614E+02	4.7959E+02	3.0869E+01	3.6738E+01	1.3761E+02	1.3277E+02
1.628E+01	2.9499E+02	3.6393E+02	2.1617E+01	2.5642E+01	1.1673E+02	1.1014E+02
1.641E+01	2.8732E+02	3.5423E+02	2.0878E+01	2.4757E+01	1.1486E+02	1.0814E+02
1.691E+01	2.6007E+02	3.1983E+02	1.8306E+01	2.1680E+01	1.0809E+02	1.0090E+02
1.705E+01	2.5326E+02	3.1126E+02	1.7678E+01	2.0929E+01	1.0636E+02	9.9056E+01
2.000E+01	1.4806E+02	1.7950E+02	8.7407E+00	1.0277E+01	7.6759E+01	6.8104E+01
3.000E+01	3.6088E+01	4.2142E+01	1.4098E+00	1.6255E+00	3.2671E+01	2.5155E+01
4.000E+01	1.2798E+01	1.4516E+01	3.7825E-01	4.2945E-01	1.7415E+01	1.1975E+01
5.000E+01	5.6395E+00	6.2453E+00	1.3530E-01	1.5165E-01	1.0548E+01	6.6141E+00
6.000E+01	2.8652E+00	3.1092E+00	5.8239E-02	6.4548E-02	6.9420E+00	4.0320E+00
8.000E+01	9.7594E-01	1.0248E+00	1.5431E-02	1.6786E-02	3.5334E+00	1.8271E+00
9.341E+01	5.4530E-01	5.6250E-01	7.5425E-03	8.0454E-03	2.4433E+00	1.1824E+00
9.415E+01	5.2919E-01	5.4540E-01	7.2716E-03	7.7520E-03	2.3967E+00	1.1561E+00
1.000E+02	4.2200E-01	4.3196E-01	5.5186E-03	5.8584E-03	2.0716E+00	9.7521E-01
1.500E+02	9.2836E-02	9.1029E-02	8.8969E-04	9.1805E-04	7.6514E-01	3.0823E-01
2.000E+02	3.2275E-02	3.0734E-02	2.5180E-04	2.5623E-04	3.7384E-01	1.3631E-01
3.000E+02	7.6596E-03	7.1583E-03	4.5891E-05	4.6706E-05	1.3680E-01	4.4090E-02
4.000E+02	2.9186E-03	2.7328E-03	1.5002E-05	1.5643E-05	6.8161E-02	2.0373E-02
5.000E+02	1.4248E-03	1.3549E-03	6.5419E-06	7.0132E-06	4.0380E-02	1.1453E-02
6.000E+02	8.1445E-04	7.9077E-04	3.4640E-06	3.7464E-06	2.6692E-02	7.2869E-03
8.000E+02	3.5721E-04	3.5876E-04	1.3140E-06	1.5813E-06	1.4293E-02	3.7084E-03
1.000E+03	1.9903E-04	2.0678E-04	7.2147E-07	8.3710E-07	9.0310E-03	2.2773E-03
1.500E+03	7.7017E-05	8.4131E-05	2.8152E-07	3.1189E-07	4.1460E-03	1.0181E-03

Z= 84

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	6 S 1/2	6 P 1/2	6 P 3/2
1.000E+00	3.6919E+04	3.3336E+04	4.9182E+04	2.4112E+03	9.8629E+02	2.3357E+03
1.500E+00	2.0132E+04	1.8295E+04	2.6146E+04	1.2694E+03	5.8059E+02	1.2438E+03
2.000E+00	1.2655E+04	1.0948E+04	1.5338E+04	7.9435E+02	3.8606E+02	7.7282E+02
2.682E+00	7.6473E+03	6.0521E+03	8.3190E+03	4.8649E+02	2.4699E+02	4.6303E+02
2.703E+00	7.5399E+03	5.9498E+03	8.1742E+03	4.7996E+02	2.4390E+02	4.5644E+02
2.801E+00	7.0805E+03	5.5138E+03	7.5583E+03	4.5204E+02	2.3059E+02	4.2825E+02
2.823E+00	6.9802E+03	5.4191E+03	7.4247E+03	4.4594E+02	2.2767E+02	4.2210E+02
3.000E+00	6.2555E+03	4.7407E+03	6.4703E+03	4.0199E+02	2.0644E+02	3.7777E+02
3.278E+00	5.3179E+03	3.8814E+03	5.2681E+03	3.4520E+02	1.7851E+02	3.2545E+02
3.304E+00	5.2399E+03	3.8111E+03	5.1700E+03	3.4047E+02	1.7616E+02	3.2066E+02
3.837E+00	3.9539E+03	2.6817E+03	3.6037E+03	2.6241E+02	1.3677E+02	2.4165E+02
3.868E+00	3.8939E+03	2.6307E+03	3.5334E+03	2.5876E+02	1.3490E+02	2.3798E+02
4.000E+00	3.6502E+03	2.4249E+03	3.2501E+03	2.4390E+02	1.2727E+02	2.2303E+02
4.127E+00	3.4359E+03	2.2466E+03	3.0051E+03	2.3080E+02	1.2050E+02	2.0989E+02
4.160E+00	3.3829E+03	2.2029E+03	2.9452E+03	2.2757E+02	1.1883E+02	2.0665E+02
5.000E+00	2.3478E+03	1.3837E+03	1.8283E+03	1.6376E+02	8.8665E+01	1.4328E+02
6.000E+00	1.6120E+03	8.5338E+02	1.1141E+03	1.1742E+02	6.3466E+01	9.8319E+01
8.000E+00	8.6599E+02	3.8127E+02	4.8812E+02	6.8598E+01	3.6371E+01	5.2783E+01
1.000E+01	5.2217E+02	1.9718E+02	2.4844E+02	4.5529E+01	2.3047E+01	3.1819E+01
1.380E+01	2.4238E+02	7.2418E+01	8.9026E+01	2.4283E+01	1.1491E+01	1.4768E+01
1.391E+01	2.3769E+02	7.0595E+01	8.6731E+01	2.3902E+01	1.1289E+01	1.4482E+01
1.500E+01	1.9742E+02	5.5424E+01	6.7678E+01	2.0575E+01	9.5345E+00	1.2028E+01
1.628E+01	1.6081E+02	4.2430E+01	5.1466E+01	1.7450E+01	7.9099E+00	9.7973E+00
1.641E+01	1.5762E+02	4.1341E+01	5.0105E+01	1.7172E+01	7.7664E+00	9.6024E+00
1.691E+01	1.4608E+02	3.7449E+01	4.5276E+01	1.6159E+01	7.2466E+00	8.8998E+00
1.705E+01	1.4316E+02	3.6476E+01	4.4071E+01	1.5900E+01	7.1142E+00	8.7216E+00

Z= 84

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	6 S 1/2	6 P 1/2	6 P 3/2
2.000E+01	9.4979E+01	2.1411E+01	2.5341E+01	1.1473E+01	4.8925E+00	5.7862E+00
3.000E+01	3.1989E+01	5.2612E+00	5.9586E+00	4.8816E+00	1.8081E+00	1.9486E+00
4.000E+01	1.4234E+01	1.8747E+00	2.0761E+00	2.6015E+00	8.6103E-01	8.6690E-01
5.000E+01	7.4509E+00	8.2876E-01	8.9610E-01	1.5753E+00	4.7569E-01	4.5366E-01
6.000E+01	4.3306E+00	4.2204E-01	4.4712E-01	1.0365E+00	2.8995E-01	2.6428E-01
8.000E+01	1.8142E+00	1.4423E-01	1.4784E-01	5.2723E-01	1.3073E-01	1.1074E-01
9.341E+01	1.1276E+00	8.0703E-02	8.1259E-02	3.6367E-01	8.4603E-02	6.8837E-02
9.415E+01	1.1002E+00	7.8326E-02	7.8793E-02	3.5674E-01	8.2721E-02	6.7165E-02
1.000E+02	9.1347E-01	6.2496E-02	6.2435E-02	3.0835E-01	6.9778E-02	5.5768E-02
1.500E+02	2.5931E-01	1.3794E-02	1.3194E-02	1.1388E-01	2.2056E-02	1.5837E-02
2.000E+02	1.0637E-01	4.8050E-03	4.4842E-03	5.5639E-02	9.7542E-03	6.4978E-03
3.000E+02	3.1163E-02	1.1409E-03	1.0464E-03	2.0360E-02	3.1551E-03	1.9046E-03
4.000E+02	1.3550E-02	4.3477E-04	4.0012E-04	1.0145E-02	1.4581E-03	8.2857E-04
5.000E+02	7.3144E-03	2.1254E-04	1.9842E-04	6.0104E-03	8.1976E-04	4.4762E-04
6.000E+02	4.5220E-03	1.2157E-04	1.1560E-04	3.9734E-03	5.2162E-04	2.7697E-04
8.000E+02	2.2164E-03	5.3197E-05	5.2641E-05	2.1282E-03	2.6563E-04	1.3606E-04
1.000E+03	1.3279E-03	2.9708E-05	3.0338E-05	1.3452E-03	1.6326E-04	8.1764E-05
1.500E+03	5.7089E-04	1.1442E-05	1.2418E-05	6.1870E-04	7.3328E-05	3.5572E-05

Z= 85 24 STATES, 46 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	96.1506	.98638
2 S 1/2	2.00	17.4870	.88295
2 P 1/2	2.00	16.8411	.82732
2 P 3/2	4.00	14.2142	.79565
3 S 1/2	2.00	4.2892	.68862
3 P 1/2	2.00	3.9926	.61782
3 P 3/2	4.00	3.3983	.57508
3 D 3/2	4.00	2.9113	.38562
3 D 5/2	6.00	2.7857	.37674
4 S 1/2	2.00	1.0226	.43729
4 P 1/2	2.00	.8911	.37090
4 P 3/2	4.00	.7417	.32928
4 D 3/2	4.00	.5271	.18127
4 D 5/2	6.00	.4991	.17307
4 F 5/2	6.00	.2178	.04252
4 F 7/2	8.00	.2110	.04154
5 S 1/2	2.00	.1966	.20044
5 P 1/2	2.00	.1489	.15321
5 P 3/2	4.00	.1178	.12912
5 D 3/2	4.00	.0492	.04862
5 D 5/2	6.00	.0450	.04510
6 S 1/2	2.00	.0231	.05535
6 P 1/2	1.67	.0120	.03130
6 P 3/2	3.33	.0085	.02239

Z= 85 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	2.0415E+06	.0E+00	.0E+00	.0E+00	2.0415E+06
1.0216E+00	1.9630E+06	.0E+00	.0E+00	.0E+00	1.9630E+06
1.0297E+00	1.9755E+06	.0E+00	.0E+00	.0E+00	1.9755E+06
1.5000E+00	9.4778E+05	.0E+00	.0E+00	.0E+00	9.4778E+05
2.0000E+00	5.1693E+05	.0E+00	.0E+00	.0E+00	5.1693E+05
2.7829E+00	2.4885E+05	.0E+00	.0E+00	.0E+00	2.4885E+05
2.8052E+00	7.7212E+05	.0E+00	.0E+00	5.2772E+05	2.4440E+05
2.9084E+00	5.8441E+05	.0E+00	.0E+00	3.5924E+05	2.2517E+05
2.9316E+00	9.0930E+05	.0E+00	.0E+00	6.8818E+05	2.2111E+05

Z= 85 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY (KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
3.0000E+00	7.8065E+05	.0E+00	.0E+00	5.7086E+05	2.0979E+05
3.3949E+00	5.7258E+05	.0E+00	.0E+00	4.1471E+05	1.5788E+05
3.4221E+00	6.4883E+05	.0E+00	.0E+00	4.9384E+05	1.5499E+05
3.9886E+00	4.4459E+05	.0E+00	.0E+00	3.3623E+05	1.0836E+05
4.0000E+00	4.6818E+05	.0E+00	.0E+00	3.6055E+05	1.0763E+05
4.0206E+00	4.6219E+05	.0E+00	.0E+00	3.5585E+05	1.0634E+05
4.2849E+00	3.9631E+05	.0E+00	.0E+00	3.0483E+05	9.1477E+04
4.3193E+00	4.0590E+05	.0E+00	.0E+00	3.1614E+05	8.9762E+04
5.0000E+00	2.8470E+05	.0E+00	.0E+00	2.2143E+05	6.3270E+04
6.0000E+00	1.8205E+05	.0E+00	.0E+00	1.4138E+05	4.0669E+04
8.0000E+00	8.8459E+04	.0E+00	.0E+00	6.8466E+04	1.9993E+04
1.0000E+01	5.0076E+04	.0E+00	.0E+00	3.8658E+04	1.1418E+04
1.4200E+01	2.0205E+04	.0E+00	.0E+00	1.5536E+04	4.6694E+03
1.4314E+01	4.8753E+04	.0E+00	2.8964E+04	1.5215E+04	4.5745E+03
1.5000E+01	4.3326E+04	.0E+00	2.5816E+04	1.3455E+04	4.0546E+03
1.6824E+01	3.1528E+04	.0E+00	1.8568E+04	9.9466E+03	3.0134E+03
1.6959E+01	4.3285E+04	.0E+00	3.0594E+04	9.7396E+03	2.9517E+03
1.7469E+01	4.0255E+04	.0E+00	2.8516E+04	9.0061E+03	2.7330E+03
1.7609E+01	4.5608E+04	.0E+00	3.4113E+04	8.8183E+03	2.6770E+03
2.0000E+01	3.2934E+04	.0E+00	2.4718E+04	6.2944E+03	1.9214E+03
3.0000E+01	1.1457E+04	.0E+00	8.6666E+03	2.1298E+03	6.6023E+02
4.0000E+01	5.3334E+03	.0E+00	4.0475E+03	9.7941E+02	3.0643E+02
5.0000E+01	2.9254E+03	.0E+00	2.2233E+03	5.3393E+02	1.6813E+02
6.0000E+01	1.7843E+03	.0E+00	1.3572E+03	3.2449E+02	1.0266E+02
8.0000E+01	8.1381E+02	.0E+00	6.1946E+02	1.4739E+02	4.6962E+01
9.6055E+01	4.9301E+02	.0E+00	3.7538E+02	8.9123E+01	2.8512E+01
9.6824E+01	2.2159E+03	1.7335E+03	3.6726E+02	8.7188E+01	2.7897E+01
1.0000E+02	2.0371E+03	1.5956E+03	3.3614E+02	7.9777E+01	2.5542E+01
1.5000E+02	7.1059E+02	5.6529E+02	1.1066E+02	2.6190E+01	8.4445E+00
2.0000E+02	3.3404E+02	2.6757E+02	5.0631E+01	1.1966E+01	3.8740E+00
3.0000E+02	1.1660E+02	9.3980E+01	1.7231E+01	4.0660E+00	1.3219E+00
4.0000E+02	5.6730E+01	4.5891E+01	8.2586E+00	1.9462E+00	6.3424E-01
5.0000E+02	3.3189E+01	2.6923E+01	4.7753E+00	1.1235E+00	3.6676E-01
6.0000E+02	2.1792E+01	1.7718E+01	3.1054E+00	7.2995E-01	2.3842E-01
8.0000E+02	1.1606E+01	9.4686E+00	1.6298E+00	3.8233E-01	1.2499E-01
1.0000E+03	7.3252E+00	5.9899E+00	1.0186E+00	2.3861E-01	7.8043E-02
1.5000E+03	3.3694E+00	2.7634E+00	4.6249E-01	1.0810E-01	3.5364E-02

Z= 85

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.022E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.030E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.783E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.805E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.908E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.932E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.395E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.422E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.989E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.021E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.6793E+04
4.285E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.6504E+04
4.319E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.5297E+04
4.319E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.7047E+04	2.5116E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.3984E+04	2.0971E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.0623E+04	1.5949E+04
8.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	6.8288E+03	9.8475E+03

Z= 85

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+01	.0E+00	.0E+00	.0E+00	.0E+00	4.6917E+03	6.4598E+03
1.420E+01	.0E+00	.0E+00	.0E+00	.0E+00	2.4887E+03	3.1187E+03
1.431E+01	.0E+00	.0E+00	.0E+00	2.8964E+04	2.4520E+03	3.0646E+03
1.500E+01	.0E+00	.0E+00	.0E+00	2.5816E+04	2.2462E+03	2.7633E+03
1.682E+01	.0E+00	.0E+00	.0E+00	1.8568E+04	1.8035E+03	2.1369E+03
1.696E+01	.0E+00	.0E+00	1.2415E+04	1.8179E+04	1.7759E+03	2.0986E+03
1.747E+01	.0E+00	.0E+00	1.1718E+04	1.6799E+04	1.6768E+03	1.9609E+03
1.761E+01	.0E+00	6.1892E+03	1.1480E+04	1.6443E+04	1.6511E+03	1.9253E+03
2.000E+01	.0E+00	4.9216E+03	8.2376E+03	1.1559E+04	1.2862E+03	1.4315E+03
3.000E+01	.0E+00	2.3240E+03	2.8296E+03	3.5129E+03	5.6132E+02	5.3040E+02
4.000E+01	.0E+00	1.2956E+03	1.2794E+03	1.4725E+03	3.0283E+02	2.5215E+02
5.000E+01	.0E+00	8.0410E+02	6.7596E+02	7.3928E+02	1.8468E+02	1.8399E+02
6.000E+01	.0E+00	5.3691E+02	4.0258E+02	4.1767E+02	1.2207E+02	8.4539E+01
8.000E+01	.0E+00	2.7741E+02	1.7427E+02	1.6778E+02	6.2433E+01	3.7987E+01
9.605E+01	.0E+00	1.7995E+02	1.0192E+02	9.3508E+01	4.0359E+01	2.2675E+01
9.682E+01	1.7335E+03	1.7655E+02	9.9562E+01	9.1150E+01	3.9592E+01	2.2168E+01
1.000E+02	1.5956E+03	1.6339E+02	9.0556E+01	8.2194E+01	3.6629E+01	2.0229E+01
1.500E+02	5.6529E+02	6.0729E+01	2.7515E+01	2.2421E+01	1.3586E+01	6.3733E+00
2.000E+02	2.6757E+02	2.9716E+01	1.1912E+01	9.0032E+00	6.6534E+00	2.8143E+00
3.000E+02	9.3980E+01	1.0881E+01	3.7692E+00	2.5811E+00	2.4416E+00	9.0917E-01
4.000E+02	4.5891E+01	5.4247E+00	1.7232E+00	1.1106E+00	1.2188E+00	4.1997E-01
5.000E+02	2.6923E+01	3.2163E+00	9.6290E-01	5.9607E-01	7.2303E-01	2.3609E-01
6.000E+02	1.7718E+01	2.1279E+00	6.1029E-01	3.6720E-01	4.7843E-01	1.5020E-01
8.000E+02	9.4686E+00	1.1412E+00	3.0935E-01	1.7927E-01	2.5653E-01	7.6457E-02
1.000E+03	5.9899E+00	7.2182E-01	1.8962E-01	1.0721E-01	1.6222E-01	4.7007E-02
1.500E+03	2.7634E+00	3.3185E-01	8.4640E-02	4.6003E-02	7.4489E-02	2.1037E-02

Z= 85

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.3045E+04	1.4672E+05
1.022E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.2907E+04	1.4364E+05
1.030E+00	.0E+00	.0E+00	.0E+00	4.1187E+04	3.2847E+04	1.4249E+05
1.500E+00	.0E+00	.0E+00	.0E+00	2.6541E+04	2.7637E+04	9.1224E+04
2.000E+00	.0E+00	.0E+00	.0E+00	1.8709E+04	2.1481E+04	6.0536E+04
2.783E+00	.0E+00	.0E+00	.0E+00	1.1778E+04	1.4557E+04	3.5649E+04
2.805E+00	.0E+00	.0E+00	5.2772E+05	1.1640E+04	1.4405E+04	3.5172E+04
2.908E+00	.0E+00	.0E+00	3.5924E+05	1.1033E+04	1.3723E+04	3.3073E+04
2.932E+00	.0E+00	3.3644E+05	3.5175E+05	1.0903E+04	1.3575E+04	3.2623E+04
3.000E+00	.0E+00	2.3825E+05	3.3261E+05	1.0535E+04	1.3153E+04	3.1348E+04
3.395E+00	.0E+00	1.7394E+05	2.4076E+05	8.7223E+03	1.1047E+04	2.5207E+04
3.422E+00	8.8020E+04	1.7032E+05	2.3550E+05	8.6142E+03	1.0919E+04	2.4850E+04
3.989E+00	7.1938E+04	1.1174E+05	1.5255E+05	6.7605E+03	8.6584E+03	1.8757E+04
4.000E+00	7.1596E+04	1.1085E+05	1.5131E+05	6.7296E+03	8.6201E+03	1.8658E+04
4.021E+00	7.0980E+04	1.0926E+05	1.4910E+05	6.6743E+03	8.5515E+03	1.8480E+04
4.285E+00	6.3327E+04	9.1271E+04	1.2494E+05	6.0169E+03	7.7315E+03	1.6385E+04
4.319E+00	6.2395E+04	8.9362E+04	1.2222E+05	5.9386E+03	7.6328E+03	1.6137E+04
5.000E+00	4.7383E+04	5.9310E+04	7.9780E+04	4.6581E+03	5.9915E+03	1.2137E+04
6.000E+00	3.3776E+04	3.4764E+04	4.6264E+04	3.4092E+03	4.3568E+03	8.3922E+03
8.000E+00	1.8642E+04	1.4385E+04	1.8763E+04	2.0433E+03	2.5418E+03	4.5438E+03
1.000E+01	1.1380E+04	7.0598E+03	9.0661E+03	1.3533E+03	1.6265E+03	2.7512E+03
1.420E+01	4.9628E+03	2.2063E+03	2.7595E+03	6.9104E+02	7.6967E+02	1.1966E+03
1.431E+01	4.8667E+03	2.1474E+03	2.6840E+03	6.8033E+02	7.5620E+02	1.1734E+03
1.500E+01	4.3348E+03	1.8305E+03	2.2797E+03	6.2048E+02	6.8136E+02	1.0455E+03
1.682E+01	3.2495E+03	1.2342E+03	1.5226E+03	4.9413E+02	5.2563E+02	7.8495E+02
1.696E+01	3.1845E+03	1.2006E+03	1.4801E+03	4.8632E+02	5.1613E+02	7.6931E+02
1.747E+01	2.9532E+03	1.0831E+03	1.3321E+03	4.5828E+02	4.8215E+02	7.1364E+02
1.761E+01	2.8936E+03	1.0535E+03	1.2948E+03	4.5101E+02	4.7337E+02	6.9933E+02
2.000E+01	2.0813E+03	6.7488E+02	8.2045E+02	3.4860E+02	3.5179E+02	5.0428E+02
3.000E+01	6.9597E+02	1.5759E+02	1.8455E+02	1.4951E+02	1.3084E+02	1.7025E+02
4.000E+01	3.0773E+02	5.4601E+01	6.2100E+01	8.0021E+01	6.2529E+01	7.5850E+01

Z= 85

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
5.000E+01	1.6025E+02	2.3705E+01	2.6316E+01	4.8596E+01	3.4630E+01	3.9732E+01
6.000E+01	9.2995E+01	1.1919E+01	1.2962E+01	3.2043E+01	2.1149E+01	2.3165E+01
8.000E+01	3.8748E+01	4.0064E+00	4.2134E+00	1.6349E+01	9.5631E+00	9.7184E+00
9.605E+01	2.2027E+01	2.0017E+00	2.0604E+00	1.0560E+01	5.7296E+00	5.5464E+00
9.682E+01	2.1489E+01	1.9421E+00	1.9572E+00	1.0359E+01	5.6025E+00	5.4118E+00
1.000E+02	1.9440E+01	1.7185E+00	1.7607E+00	9.5825E+00	5.1157E+00	4.8990E+00
1.500E+02	5.4899E+00	3.7409E-01	3.6661E-01	3.5523E+00	1.6231E+00	1.3935E+00
2.000E+02	2.2458E+00	1.2938E-01	1.2604E-01	1.7399E+00	7.1959E-01	5.7235E-01
3.000E+02	6.5617E-01	3.0509E-02	2.8621E-02	6.3888E-01	2.3346E-01	1.6765E-01
4.000E+02	2.8491E-01	1.1590E-02	1.0903E-02	3.1897E-01	1.0821E-01	7.2949E-02
5.000E+02	1.5368E-01	5.6533E-03	5.3916E-03	1.8924E-01	6.0921E-02	3.9397E-02
6.000E+02	9.4566E-02	3.2305E-03	3.1379E-03	1.2522E-01	3.8800E-02	2.4357E-02
8.000E+02	4.6509E-02	1.4106E-03	1.4201E-03	6.7134E-02	1.9773E-02	1.1929E-02
1.000E+03	2.7787E-02	7.8805E-04	8.1727E-04	4.2442E-02	1.2151E-02	7.1469E-03
1.500E+03	1.1938E-02	3.0524E-04	3.3083E-04	1.9485E-02	5.4389E-03	3.0663E-03

Z= 85

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	2.0563E+05	3.2053E+05	5.1274E+05	6.5926E+05	1.4714E+04	1.2540E+04
1.022E+00	2.0233E+05	3.1409E+05	4.8630E+05	6.2483E+05	1.4282E+04	1.2260E+04
1.030E+00	2.0104E+05	3.1165E+05	4.7669E+05	6.1233E+05	1.4123E+04	1.2156E+04
1.500E+00	1.2994E+05	1.9218E+05	1.7177E+05	2.1840E+05	8.1528E+03	7.8858E+03
2.000E+00	8.1112E+04	1.1667E+05	7.1975E+04	9.0867E+04	5.2364E+03	5.4337E+03
2.783E+00	4.2272E+04	5.9254E+04	2.4462E+04	3.0634E+04	3.0847E+03	3.3894E+03
2.805E+00	4.1560E+04	5.8221E+04	2.3810E+04	2.9811E+04	3.0447E+03	3.3490E+03
2.908E+00	3.8459E+04	5.3721E+04	2.1054E+04	2.6337E+04	2.8696E+03	3.1709E+03
2.932E+00	3.7800E+04	5.2766E+04	2.0488E+04	2.5623E+04	2.8322E+03	3.1326E+03
3.000E+00	3.5943E+04	5.0087E+04	1.8930E+04	2.3662E+04	2.7266E+03	3.0241E+03
3.395E+00	2.7219E+04	3.7602E+04	1.2310E+04	1.5339E+04	2.2194E+03	2.4923E+03
3.422E+00	2.6724E+04	3.6896E+04	1.1969E+04	1.4911E+04	2.1899E+03	2.4608E+03
3.989E+00	1.8594E+04	2.5398E+04	6.9225E+03	8.5889E+03	1.6888E+03	1.9168E+03
4.000E+00	1.8466E+04	2.5218E+04	6.8514E+03	8.5001E+03	1.6806E+03	1.9077E+03
4.021E+00	1.8237E+04	2.4896E+04	6.7252E+03	8.3424E+03	1.6659E+03	1.8914E+03
4.285E+00	1.5594E+04	2.1193E+04	5.3312E+03	6.6019E+03	1.4929E+03	1.6990E+03
4.319E+00	1.5287E+04	2.0766E+04	5.1775E+03	6.4101E+03	1.4725E+03	1.6761E+03
5.000E+00	1.0538E+04	1.4171E+04	3.0054E+03	3.7060E+03	1.1404E+03	1.3000E+03
6.000E+00	6.4910E+03	8.6192E+03	1.4955E+03	1.8393E+03	8.2406E+02	9.3443E+02
8.000E+00	2.8907E+03	3.7607E+03	4.8199E+02	5.8599E+02	4.8658E+02	5.3864E+02
1.000E+01	1.4907E+03	1.9078E+03	1.9410E+02	2.3423E+02	3.1957E+02	3.4274E+02
1.420E+01	4.9788E+02	6.1997E+02	4.4361E+01	5.2849E+01	1.6164E+02	1.6135E+02
1.431E+01	4.8525E+02	6.0386E+02	4.2869E+01	5.1056E+01	1.5910E+02	1.5851E+02
1.500E+01	4.1703E+02	5.1697E+02	3.5048E+01	4.1664E+01	1.4496E+02	1.4276E+02
1.682E+01	2.8637E+02	3.5162E+02	2.1309E+01	2.5213E+01	1.1518E+02	1.1004E+02
1.696E+01	2.7892E+02	3.4224E+02	2.0581E+01	2.4343E+01	1.1334E+02	1.0805E+02
1.747E+01	2.5281E+02	3.0942E+02	1.8080E+01	2.1358E+01	1.0675E+02	1.0092E+02
1.761E+01	2.4620E+02	3.0113E+02	1.7460E+01	2.0618E+01	1.0504E+02	9.9076E+01
2.000E+01	1.6065E+02	1.9432E+02	9.9693E+00	1.1707E+01	8.1019E+01	7.3592E+01
3.000E+01	3.9401E+01	4.5882E+01	1.6168E+00	1.8613E+00	3.4584E+01	2.7370E+01
4.000E+01	1.4029E+01	1.5863E+01	4.3524E-01	4.9329E-01	1.8472E+01	1.3091E+01
5.000E+01	6.2006E+00	6.8430E+00	1.5611E-01	1.7464E-01	1.1206E+01	7.2571E+00
6.000E+01	3.1577E+00	3.4139E+00	6.7346E-02	7.4490E-02	7.3856E+00	4.4360E+00
8.000E+01	1.0793E+00	1.1287E+00	1.7907E-02	1.9435E-02	3.7674E+00	2.0190E+00
9.605E+01	5.4401E-01	5.5699E-01	7.7375E-03	8.2972E-03	2.4383E+00	1.2106E+00
9.682E+01	5.2802E-01	5.4010E-01	7.4611E-03	7.9959E-03	2.3919E+00	1.1838E+00
1.000E+02	4.6788E-01	4.7682E-01	6.4371E-03	6.7960E-03	2.2126E+00	1.0811E+00
1.500E+02	1.0334E-01	1.0083E-01	1.0373E-03	1.0713E-03	8.1994E-01	3.4355E-01
2.000E+02	3.6013E-02	3.4291E-02	2.9400E-04	2.9991E-04	4.0157E-01	1.5246E-01
3.000E+02	8.5705E-03	7.9586E-03	5.3710E-05	5.4965E-05	1.4743E-01	4.9522E-02
4.000E+02	3.2689E-03	3.0435E-03	1.7700E-05	1.8270E-05	7.3616E-02	2.2940E-02
5.000E+02	1.5975E-03	1.5103E-03	7.7656E-06	8.0853E-06	4.3676E-02	1.2919E-02

Z= 85

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
6.000E+02	9.1490E-04	8.8118E-04	4.0252E-06	4.4092E-06	2.8901E-02	8.2285E-03
8.000E+02	4.0151E-04	3.9916E-04	1.5631E-06	1.8312E-06	1.5494E-02	4.1941E-03
1.000E+03	2.2368E-04	2.3068E-04	8.1398E-07	9.8849E-07	9.7947E-03	2.5778E-03
1.500E+03	8.6474E-05	9.3771E-05	2.8090E-07	3.7054E-07	4.4968E-03	1.1538E-03

Z= 85

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	6 S 1/2	6 P 1/2	6 P 3/2
1.000E+00	3.9019E+04	3.6164E+04	5.3629E+04	2.6534E+03	1.4068E+03	3.4450E+03
1.022E+00	3.7851E+04	3.5191E+04	5.2086E+04	2.5671E+03	1.3699E+03	3.3361E+03
1.030E+00	3.7421E+04	3.4830E+04	5.1515E+04	2.5355E+03	1.3563E+03	3.2962E+03
1.500E+00	2.1309E+04	1.9989E+04	2.8681E+04	1.3992E+03	8.3129E+02	1.8356E+03
2.000E+00	1.3411E+04	1.2025E+04	1.6903E+04	8.7685E+02	5.5483E+02	1.1420E+03
2.783E+00	7.6037E+03	6.1801E+03	8.4977E+03	5.0546E+02	3.3647E+02	6.4140E+02
2.805E+00	7.4965E+03	6.0753E+03	8.3492E+03	4.9868E+02	3.3226E+02	6.3224E+02
2.908E+00	7.0280E+03	5.6186E+03	7.7036E+03	4.6904E+02	3.1375E+02	5.9220E+02
2.932E+00	6.9280E+03	5.5217E+03	7.5668E+03	4.6272E+02	3.0978E+02	5.8367E+02
3.000E+00	6.6461E+03	5.2495E+03	7.1830E+03	4.4491E+02	2.9856E+02	5.5963E+02
3.395E+00	5.2992E+03	3.9751E+03	5.3958E+03	3.5991E+02	2.4406E+02	4.4515E+02
3.422E+00	5.2212E+03	3.9029E+03	5.2951E+03	3.5499E+02	2.4085E+02	4.3854E+02
3.989E+00	3.9087E+03	2.7199E+03	3.6538E+03	2.7189E+02	1.8591E+02	3.3203E+02
4.000E+00	3.8874E+03	2.7013E+03	3.6281E+03	2.7054E+02	1.8500E+02	3.3021E+02
4.021E+00	3.8493E+03	2.6680E+03	3.5822E+03	2.6811E+02	1.8337E+02	3.2696E+02
4.285E+00	3.4024E+03	2.2837E+03	3.0536E+03	2.3964E+02	1.6414E+02	2.8887E+02
4.319E+00	3.3498E+03	2.2392E+03	2.9925E+03	2.3628E+02	1.6186E+02	2.8439E+02
5.000E+00	2.5056E+03	1.5484E+03	2.0495E+03	1.8198E+02	1.2461E+02	2.1254E+02
6.000E+00	1.7234E+03	9.5835E+02	1.2531E+03	1.3069E+02	9.2248E+01	1.4608E+02
8.000E+00	9.2846E+02	4.3052E+02	5.5180E+02	7.6514E+01	5.3119E+01	7.8644E+01
1.000E+01	5.6114E+02	2.2356E+02	2.8192E+02	4.9976E+01	3.3788E+01	4.7517E+01
1.420E+01	2.4384E+02	7.5432E+01	9.2561E+01	2.5631E+01	1.5906E+01	2.0644E+01
1.431E+01	2.3912E+02	7.3534E+01	9.0175E+01	2.5229E+01	1.5627E+01	2.0244E+01
1.500E+01	2.1307E+02	6.3282E+01	7.7301E+01	2.2985E+01	1.4074E+01	1.8039E+01
1.682E+01	1.5999E+02	4.3591E+01	5.2737E+01	1.8259E+01	1.0850E+01	1.3544E+01
1.696E+01	1.5680E+02	4.2466E+01	5.1341E+01	1.7967E+01	1.0653E+01	1.3275E+01
1.747E+01	1.4547E+02	3.8519E+01	4.6453E+01	1.6921E+01	9.9505E+00	1.2315E+01
1.761E+01	1.4255E+02	3.7520E+01	4.5217E+01	1.6650E+01	9.7691E+00	1.2068E+01
2.000E+01	1.0283E+02	2.4562E+01	2.9273E+01	1.2840E+01	7.2574E+00	8.7056E+00
3.000E+01	3.4793E+01	6.0761E+00	6.9259E+00	5.4790E+00	2.7007E+00	2.9453E+00
4.000E+01	1.5531E+01	2.1744E+00	2.4065E+00	2.9258E+00	1.2923E+00	1.3145E+00
5.000E+01	8.1488E+00	9.6420E-01	1.0415E+00	1.7746E+00	7.1652E-01	6.8957E-01
6.000E+01	4.7463E+00	4.9224E-01	5.2090E-01	1.1692E+00	4.3801E-01	4.0250E-01
8.000E+01	1.9941E+00	1.6880E-01	1.7278E-01	5.9608E-01	1.9836E-01	1.6915E-01
9.605E+01	1.1390E+00	8.5242E-02	8.5402E-02	3.8487E-01	1.1895E-01	9.6634E-02
9.682E+01	1.1114E+00	8.2740E-02	8.2818E-02	3.7754E-01	1.1631E-01	9.4292E-02
1.000E+02	1.0062E+00	7.3340E-02	7.3136E-02	3.4924E-01	1.0622E-01	8.5371E-02
1.500E+02	2.8667E-01	1.6254E-02	1.5513E-02	1.2941E-01	3.3760E-02	2.4330E-02
2.000E+02	1.1785E-01	5.6753E-03	5.2829E-03	6.3379E-02	1.4983E-02	1.0004E-02
3.000E+02	3.4611E-02	1.3517E-03	1.2357E-03	2.3268E-02	4.8668E-03	2.9393E-03
4.000E+02	1.5065E-02	5.1600E-04	4.7284E-04	1.1619E-02	2.2546E-03	1.2801E-03
5.000E+02	8.1369E-03	2.5242E-04	2.3452E-04	6.8938E-03	1.2696E-03	6.9180E-04
6.000E+02	5.0319E-03	1.4460E-04	1.3675E-04	4.5619E-03	8.0876E-04	4.2807E-04
8.000E+02	2.4657E-03	6.3323E-05	6.2253E-05	2.4462E-03	4.1241E-04	2.1018E-04
1.000E+03	1.4768E-03	3.5379E-05	3.5825E-05	1.5469E-03	2.5364E-04	1.2619E-04
1.500E+03	6.3420E-04	1.3658E-05	1.4676E-05	7.1122E-04	1.1394E-04	5.4716E-05

Z= 86

24 STATES, 46 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	98.8554	.98645
2 S 1/2	2.00	18.0575	.88408
2 P 1/2	2.00	17.3974	.82890
2 P 3/2	4.00	14.6183	.79655
3 S 1/2	2.00	4.4518	.69145
3 P 1/2	2.00	4.1485	.62120
3 P 3/2	4.00	3.5177	.57740
3 D 3/2	4.00	3.0214	.38875
3 D 5/2	6.00	2.8888	.37967
4 S 1/2	2.00	1.0740	.44166
4 P 1/2	2.00	.9390	.37556
4 P 3/2	4.00	.7794	.33283
4 D 3/2	4.00	.5595	.18467
4 D 5/2	6.00	.5296	.17624
4 F 5/2	6.00	.2410	.04441
4 F 7/2	8.00	.2336	.04339
5 S 1/2	2.00	.2120	.20635
5 P 1/2	2.00	.1624	.15896
5 P 3/2	4.00	.1284	.13400
5 D 3/2	4.00	.0565	.05215
5 D 5/2	6.00	.0518	.04844
6 S 1/2	2.00	.0258	.06000
6 P 1/2	2.00	.0137	.03512
6 P 3/2	4.00	.0096	.02529

Z= 86 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	2.1430E+06	.0E+00	.0E+00	.0E+00	2.1430E+06
1.0729E+00	1.8833E+06	.0E+00	.0E+00	.0E+00	1.8833E+06
1.0815E+00	1.8946E+06	.0E+00	.0E+00	.0E+00	1.8946E+06
1.5000E+00	9.9772E+05	.0E+00	.0E+00	.0E+00	9.9772E+05
2.0000E+00	5.4501E+05	.0E+00	.0E+00	.0E+00	5.4501E+05
2.8859E+00	2.4192E+05	.0E+00	.0E+00	.0E+00	2.4192E+05
2.9090E+00	7.6855E+05	.0E+00	.0E+00	5.3097E+05	2.3759E+05
3.0000E+00	5.6894E+05	.0E+00	.0E+00	3.4743E+05	2.2151E+05
3.0184E+00	5.5958E+05	.0E+00	.0E+00	3.4114E+05	2.1844E+05
3.0426E+00	8.8066E+05	.0E+00	.0E+00	6.6616E+05	2.1451E+05
3.5142E+00	5.5116E+05	.0E+00	.0E+00	3.9721E+05	1.5395E+05
3.5423E+00	6.2498E+05	.0E+00	.0E+00	4.7385E+05	1.5113E+05
4.0000E+00	4.6339E+05	.0E+00	.0E+00	3.4963E+05	1.1376E+05
4.1443E+00	4.2376E+05	.0E+00	.0E+00	3.1911E+05	1.0465E+05
4.1775E+00	4.4061E+05	.0E+00	.0E+00	3.3792E+05	1.0269E+05
4.4474E+00	3.7864E+05	.0E+00	.0E+00	2.9009E+05	8.8546E+04
4.4830E+00	3.8772E+05	.0E+00	.0E+00	3.0084E+05	8.6883E+04
5.0000E+00	2.9787E+05	.0E+00	.0E+00	2.3094E+05	6.6930E+04
6.0000E+00	1.9040E+05	.0E+00	.0E+00	1.4735E+05	4.3050E+04
8.0000E+00	9.2705E+04	.0E+00	.0E+00	7.1516E+04	2.1189E+04
1.0000E+01	5.2529E+04	.0E+00	.0E+00	4.0417E+04	1.2112E+04
1.4604E+01	1.9730E+04	.0E+00	.0E+00	1.5115E+04	4.6147E+03
1.4721E+01	4.7371E+04	.0E+00	2.8047E+04	1.4803E+04	4.5210E+03
1.5000E+01	4.5113E+04	.0E+00	2.6715E+04	1.4091E+04	4.3074E+03
1.7380E+01	3.0247E+04	.0E+00	1.7736E+04	9.5669E+03	2.9441E+03
1.7519E+01	4.1585E+04	.0E+00	2.9333E+04	9.3679E+03	2.8838E+03
1.8039E+01	3.8709E+04	.0E+00	2.7364E+04	8.6716E+03	2.6729E+03
1.8184E+01	4.3858E+04	.0E+00	3.2749E+04	8.4908E+03	2.6181E+03
2.0000E+01	3.4326E+04	.0E+00	2.5682E+04	6.6004E+03	2.0435E+03
3.0000E+01	1.2004E+04	.0E+00	9.0627E+03	2.2379E+03	7.0338E+02
4.0000E+01	5.5980E+03	.0E+00	4.2406E+03	1.0306E+03	3.2685E+02

Z= 86 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
5.0000E+01	3.0751E+03	.0E+00	2.3331E+03	5.6247E+02	1.7950E+02
6.0000E+01	1.8777E+03	.0E+00	1.4259E+03	3.4213E+02	1.0970E+02
8.0000E+01	8.5775E+02	.0E+00	6.5188E+02	1.5563E+02	5.0241E+01
9.8757E+01	4.8212E+02	.0E+00	3.6653E+02	8.7286E+01	2.8302E+01
9.9547E+01	2.1429E+03	1.6712E+03	3.5862E+02	8.5395E+01	2.7693E+01
1.0000E+02	2.1250E+03	1.6591E+03	3.5420E+02	8.4337E+01	2.7353E+01
1.5000E+02	7.4118E+02	5.8751E+02	1.1686E+02	2.7745E+01	9.0597E+00
2.0000E+02	3.4912E+02	2.7872E+02	5.3547E+01	1.2696E+01	4.1617E+00
3.0000E+02	1.2224E+02	9.8232E+01	1.8262E+01	4.3227E+00	1.4227E+00
4.0000E+02	5.9589E+01	4.8069E+01	8.7652E+00	2.0719E+00	6.8350E-01
5.0000E+02	3.4909E+01	2.8243E+01	5.0731E+00	1.1975E+00	3.9558E-01
6.0000E+02	2.2943E+01	1.8606E+01	3.3013E+00	7.7829E-01	2.5730E-01
8.0000E+02	1.2232E+01	9.9551E+00	1.7339E+00	4.0792E-01	1.3497E-01
1.0000E+03	7.7239E+00	6.3009E+00	1.0840E+00	2.5461E-01	8.4296E-02
1.5000E+03	3.5529E+00	2.9072E+00	4.9219E-01	1.1537E-01	3.8194E-02

Z= 86

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.073E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.082E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.886E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.909E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.018E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.043E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.514E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.542E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.144E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.178E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.5353E+04
4.447E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.4135E+04
4.483E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.6258E+04	2.3960E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.3921E+04	2.1171E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.0735E+04	1.6064E+04
8.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	6.9305E+03	1.0063E+04
1.000E+01	.0E+00	.0E+00	.0E+00	.0E+00	4.7748E+03	6.6489E+03
1.460E+01	.0E+00	.0E+00	.0E+00	.0E+00	2.4145E+03	3.0464E+03
1.472E+01	.0E+00	.0E+00	.0E+00	2.8047E+04	2.3788E+03	2.9938E+03
1.500E+01	.0E+00	.0E+00	.0E+00	2.6715E+04	2.2969E+03	2.8729E+03
1.738E+01	.0E+00	.0E+00	.0E+00	1.7736E+04	1.7354E+03	2.0687E+03
1.752E+01	.0E+00	.0E+00	1.1571E+04	1.7363E+04	1.7088E+03	2.0316E+03
1.804E+01	.0E+00	.0E+00	1.1307E+04	1.6057E+04	1.6147E+03	1.9004E+03
1.818E+01	.0E+00	5.9501E+03	1.1083E+04	1.5717E+04	1.5900E+03	1.8659E+03
2.000E+01	.0E+00	4.9925E+03	8.5929E+03	1.2097E+04	1.3201E+03	1.4965E+03
3.000E+01	.0E+00	2.3813E+03	2.9862E+03	3.6953E+03	5.7826E+02	5.5896E+02
4.000E+01	.0E+00	1.3313E+03	1.3572E+03	1.5521E+03	3.1276E+02	2.6706E+02
5.000E+01	.0E+00	8.2851E+02	7.2393E+02	7.8070E+02	1.9112E+02	1.4775E+02
6.000E+01	.0E+00	5.5443E+02	4.2973E+02	4.4174E+02	1.2651E+02	9.0125E+01
8.000E+01	.0E+00	2.8724E+02	1.8678E+02	1.7786E+02	6.4865E+01	4.0675E+01
9.876E+01	.0E+00	1.7476E+02	1.0095E+02	9.0831E+01	3.9294E+01	2.2511E+01
9.955E+01	1.6712E+03	1.7146E+02	9.8619E+01	8.8544E+01	3.8549E+01	2.2010E+01
1.000E+02	1.6591E+03	1.6961E+02	9.7319E+01	8.7269E+01	3.8130E+01	2.1730E+01
1.500E+02	5.8751E+02	6.3282E+01	2.9710E+01	2.3871E+01	1.4192E+01	6.8826E+00
2.000E+02	2.7872E+02	3.1044E+01	1.2901E+01	9.6015E+00	6.9669E+00	3.0495E+00
3.000E+02	9.8232E+01	1.1407E+01	4.0973E+00	2.7578E+00	2.5652E+00	9.8924E-01
4.000E+02	4.8069E+01	5.7001E+00	1.8774E+00	1.1878E+00	1.2833E+00	4.5808E-01
5.000E+02	2.8243E+01	3.3848E+00	1.0506E+00	6.3771E-01	7.6246E-01	2.5794E-01

Z= 86

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
6.000E+02	1.8606E+01	2.2418E+00	6.6660E-01	3.9289E-01	5.0504E-01	1.6429E-01
8.000E+02	9.9551E+00	1.2037E+00	3.3837E-01	1.9178E-01	2.7113E-01	8.3752E-02
1.000E+03	6.3009E+00	7.6182E-01	2.0759E-01	1.1464E-01	1.7153E-01	5.1487E-02
1.500E+03	2.9072E+00	3.5028E-01	9.2772E-02	4.9143E-02	7.8776E-02	2.3095E-02

Z= 86

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.1784E+04	1.4877E+05
1.073E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.1387E+04	1.3848E+05
1.082E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.1328E+04	1.3734E+05
1.500E+00	.0E+00	.0E+00	.0E+00	3.9194E+04	2.7152E+04	9.3262E+04
2.000E+00	.0E+00	.0E+00	.0E+00	2.6386E+04	2.1391E+04	6.2098E+04
2.886E+00	.0E+00	.0E+00	.0E+00	1.8838E+04	2.1391E+04	6.2098E+04
2.909E+00	.0E+00	.0E+00	.0E+00	1.1304E+04	1.4000E+04	3.4508E+04
3.000E+00	.0E+00	.0E+00	5.3097E+05	1.1171E+04	1.3854E+04	3.4044E+04
3.018E+00	.0E+00	.0E+00	3.4743E+05	1.0672E+04	1.3297E+04	3.2298E+04
3.043E+00	.0E+00	.0E+00	3.4114E+05	1.0576E+04	1.3188E+04	3.1959E+04
3.514E+00	.0E+00	3.3215E+05	3.3401E+05	1.0451E+04	1.3046E+04	3.1522E+04
3.542E+00	8.5143E+04	1.6680E+05	2.3042E+05	8.3957E+03	1.0657E+04	2.4444E+04
4.000E+00	7.2861E+04	1.6333E+05	2.2537E+05	8.2917E+03	1.0535E+04	2.4096E+04
4.144E+00	6.8910E+04	1.1708E+05	1.5969E+05	6.8463E+03	8.7784E+03	1.9281E+04
4.178E+00	6.8910E+04	1.0598E+05	1.4422E+05	6.4692E+03	8.3096E+03	1.8044E+04
4.447E+00	6.7998E+04	1.0362E+05	1.4095E+05	6.3867E+03	8.2070E+03	1.7776E+04
4.483E+00	6.0809E+04	8.6769E+04	1.1838E+05	5.7678E+03	7.4345E+03	1.5787E+04
4.483E+00	5.9914E+04	8.4908E+04	1.1580E+05	5.6927E+03	7.3399E+03	1.5547E+04
5.000E+00	4.8732E+04	6.2758E+04	8.4358E+04	4.7527E+03	6.1342E+03	1.2573E+04
6.000E+00	3.4776E+04	3.6795E+04	4.8982E+04	3.4856E+03	4.4791E+03	8.7118E+03
8.000E+00	1.9270E+04	1.5309E+04	1.9943E+04	2.0955E+03	2.6293E+03	4.7321E+03
1.000E+01	1.1798E+04	7.5355E+03	9.6603E+03	1.3909E+03	1.6902E+03	2.8723E+03
1.460E+01	4.8241E+03	2.1512E+03	2.6788E+03	6.7437E+02	7.5687E+02	1.1711E+03
1.472E+01	4.7306E+03	2.0938E+03	2.6055E+03	6.6393E+02	7.4365E+02	1.1484E+03
1.500E+01	4.5165E+03	1.9641E+03	2.4404E+03	6.3990E+02	7.1332E+02	1.0965E+03
1.738E+01	3.1227E+03	1.1853E+03	1.4548E+03	4.7803E+02	5.1215E+02	7.5947E+02
1.752E+01	3.0601E+03	1.1530E+03	1.4142E+03	4.7047E+02	5.0291E+02	7.4432E+02
1.804E+01	2.8403E+03	1.0417E+03	1.2745E+03	4.4369E+02	4.7029E+02	6.9111E+02
1.818E+01	2.7829E+03	1.0132E+03	1.2388E+03	4.3665E+02	4.6174E+02	6.7723E+02
2.000E+01	2.1758E+03	7.2669E+02	8.8125E+02	3.6028E+02	3.7021E+02	5.3055E+02
3.000E+01	7.3108E+02	1.7053E+02	1.9909E+02	1.5500E+02	1.3867E+02	1.7994E+02
4.000E+01	3.2426E+02	5.9290E+01	6.7195E+01	8.3143E+01	6.6594E+01	8.0420E+01
5.000E+01	1.6926E+02	2.5806E+01	2.8541E+01	5.0578E+01	3.7016E+01	4.2226E+01
6.000E+01	9.8405E+01	1.3002E+01	1.4083E+01	3.3397E+01	2.2671E+01	2.4666E+01
8.000E+01	4.1117E+01	4.3837E+00	4.5901E+00	1.7079E+01	1.0296E+01	1.0378E+01
9.876E+01	2.1487E+01	1.9757E+00	2.0178E+00	1.0335E+01	5.7230E+00	5.4482E+00
9.955E+01	2.0963E+01	1.9171E+00	1.9560E+00	1.0139E+01	5.5965E+00	5.3162E+00
1.000E+02	2.0671E+01	1.8845E+00	1.9217E+00	1.0029E+01	5.5257E+00	5.2425E+00
1.500E+02	5.8570E+00	4.1167E-01	4.0138E-01	3.7300E+00	1.7627E+00	1.4964E+00
2.000E+02	2.4009E+00	1.4269E-01	1.3559E-01	1.8314E+00	7.8421E-01	6.1594E-01
3.000E+02	7.0310E-01	3.3735E-02	3.1449E-02	6.7467E-01	2.5550E-01	1.8086E-01
4.000E+02	3.0562E-01	1.2835E-02	1.1990E-02	3.3758E-01	1.1872E-01	7.8785E-02
5.000E+02	1.6493E-01	6.2670E-03	5.9310E-03	2.0059E-01	6.6951E-02	4.2570E-02
6.000E+02	1.0193E-01	3.5839E-03	3.4521E-03	1.3286E-01	4.2689E-02	2.6321E-02
8.000E+02	4.9916E-02	1.5672E-03	1.5626E-03	7.1317E-02	2.1785E-02	1.2891E-02
1.000E+03	2.9814E-02	8.7662E-04	8.9801E-04	4.5110E-02	1.3402E-02	7.7205E-03
1.500E+03	1.2793E-02	3.3908E-04	3.6447E-04	2.0711E-02	6.0053E-03	3.3092E-03

Z= 86

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	2.0701E+05	3.2534E+05	5.4856E+05	7.0584E+05	1.5153E+04	1.2831E+04
1.073E+00	1.9652E+05	3.0434E+05	4.6100E+05	5.9183E+05	1.3736E+04	1.1915E+04
1.082E+00	1.9519E+05	3.0183E+05	4.5183E+05	5.7987E+05	1.3582E+04	1.1813E+04
1.500E+00	1.3333E+05	1.9770E+05	1.8607E+05	2.3663E+05	8.4280E+03	8.1237E+03
2.000E+00	8.3938E+04	1.2101E+05	7.8496E+04	9.9097E+04	5.4245E+03	5.6243E+03
2.886E+00	4.0849E+04	5.7152E+04	2.3769E+04	2.9730E+04	3.0187E+03	3.3421E+03
2.909E+00	4.0158E+04	5.6152E+04	2.3134E+04	2.8930E+04	2.9796E+03	3.3023E+03
3.000E+00	3.7581E+04	5.2419E+04	2.0829E+04	2.6028E+04	2.8327E+03	3.1521E+03
3.018E+00	3.7085E+04	5.1702E+04	2.0398E+04	2.5485E+04	2.8044E+03	3.1230E+03
3.043E+00	3.6447E+04	5.0779E+04	1.9849E+04	2.4793E+04	2.7678E+03	3.0853E+03
3.514E+00	2.6370E+04	3.6357E+04	1.2029E+04	1.4968E+04	2.1785E+03	2.4653E+03
3.542E+00	2.5889E+04	3.5672E+04	1.1695E+04	1.4550E+04	2.1495E+03	2.4342E+03
4.000E+00	1.9432E+04	2.6542E+04	7.5820E+03	9.4019E+03	1.7501E+03	1.9989E+03
4.144E+00	1.7834E+04	2.4298E+04	6.6697E+03	8.2631E+03	1.6471E+03	1.8848E+03
4.178E+00	1.7491E+04	2.3816E+04	6.4795E+03	8.0256E+03	1.6248E+03	1.8599E+03
4.447E+00	1.4990E+04	2.0316E+04	5.1556E+03	6.3745E+03	1.4588E+03	1.6739E+03
4.483E+00	1.4694E+04	1.9905E+04	5.0067E+03	6.1891E+03	1.4388E+03	1.6513E+03
5.000E+00	1.1143E+04	1.4978E+04	3.3401E+03	4.1162E+03	1.1896E+03	1.3676E+03
6.000E+00	6.8879E+03	9.1404E+03	1.6721E+03	2.0497E+03	8.6085E+02	9.8626E+02
8.000E+00	3.0839E+03	4.0083E+03	5.4021E+02	6.5623E+02	5.0941E+02	5.7140E+02
1.000E+01	1.5967E+03	2.0408E+03	2.1832E+02	2.6321E+02	3.3510E+02	3.6500E+02
1.460E+01	4.9025E+02	6.0797E+02	4.4498E+01	5.2893E+01	1.6076E+02	1.6249E+02
1.472E+01	4.7783E+02	5.9217E+02	4.3002E+01	5.1100E+01	1.5824E+02	1.5964E+02
1.500E+01	4.4972E+02	5.5646E+02	3.9670E+01	4.7104E+01	1.5245E+02	1.5311E+02
1.738E+01	2.7798E+02	3.3967E+02	2.0978E+01	2.4756E+01	1.1355E+02	1.0980E+02
1.752E+01	2.7075E+02	3.3061E+02	2.0261E+01	2.3903E+01	1.1173E+02	1.0781E+02
1.804E+01	2.4573E+02	2.9929E+02	1.7831E+01	2.1009E+01	1.0532E+02	1.0080E+02
1.818E+01	2.3931E+02	2.9127E+02	1.7220E+01	2.0282E+01	1.0363E+02	9.8967E+01
2.000E+01	1.7405E+02	2.1005E+02	1.1335E+01	1.3294E+01	8.5369E+01	7.9317E+01
3.000E+01	4.2949E+01	4.9875E+01	1.8485E+00	2.1248E+00	3.6545E+01	2.9704E+01
4.000E+01	1.5355E+01	1.7306E+01	4.9927E-01	5.6486E-01	1.9560E+01	1.4275E+01
5.000E+01	6.8066E+00	7.4857E+00	1.7954E-01	2.0046E-01	1.1886E+01	7.9419E+00
6.000E+01	3.4743E+00	3.7423E+00	7.7631E-02	8.5686E-02	7.8438E+00	4.8684E+00
8.000E+01	1.1917E+00	1.2412E+00	2.0713E-02	2.2429E-02	4.0097E+00	2.2255E+00
9.876E+01	5.4263E-01	5.5139E-01	7.9026E-03	8.4368E-03	2.4313E+00	1.2381E+00
9.955E+01	5.2670E-01	5.3472E-01	7.6208E-03	8.1314E-03	2.3851E+00	1.2108E+00
1.000E+02	5.1786E-01	5.2546E-01	7.4654E-03	7.9627E-03	2.3591E+00	1.1955E+00
1.500E+02	1.1483E-01	1.1150E-01	1.2083E-03	1.2415E-03	8.7715E-01	3.8198E-01
2.000E+02	4.0114E-02	3.7994E-02	3.4326E-04	3.4848E-04	4.3061E-01	1.7011E-01
3.000E+02	9.5709E-03	8.8378E-03	6.3056E-05	6.3869E-05	1.5861E-01	5.5489E-02
4.000E+02	3.6554E-03	3.3845E-03	2.0820E-05	2.1103E-05	7.9372E-02	2.5770E-02
5.000E+02	1.7892E-03	1.6806E-03	8.9985E-06	9.4950E-06	4.7162E-02	1.4537E-02
6.000E+02	1.0263E-03	9.7891E-04	4.7127E-06	5.2196E-06	3.1239E-02	9.2690E-03
8.000E+02	4.5018E-04	4.4390E-04	1.8667E-06	2.1003E-06	1.6768E-02	4.7321E-03
1.000E+03	2.5126E-04	2.5684E-04	9.6826E-07	1.1965E-06	1.0605E-02	2.9109E-03
1.500E+03	9.7123E-05	1.0450E-04	3.8072E-07	4.5795E-07	4.8692E-03	1.3046E-03

Z= 86

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	6 S 1/2	6 P 1/2	6 P 3/2
1.000E+00	4.1156E+04	3.8983E+04	5.8090E+04	2.8959E+03	1.8626E+03	4.7698E+03
1.073E+00	3.7216E+04	3.5610E+04	5.2722E+04	2.5964E+03	1.7077E+03	4.2884E+03
1.082E+00	3.6790E+04	3.5236E+04	5.2130E+04	2.5644E+03	1.6909E+03	4.2366E+03
1.500E+00	2.2508E+04	2.1699E+04	3.1248E+04	1.5291E+03	1.1095E+03	2.5414E+03
2.000E+00	1.4182E+04	1.3121E+04	1.8498E+04	9.5934E+02	7.4522E+02	1.5817E+03
2.886E+00	7.5527E+03	6.2792E+03	8.6327E+03	5.2100E+02	4.3052E+02	8.3337E+02
2.909E+00	7.4458E+03	6.1722E+03	8.4812E+03	5.1402E+02	4.2517E+02	8.2142E+02
3.000E+00	7.0457E+03	5.7733E+03	7.9168E+03	4.8786E+02	4.0505E+02	7.7671E+02
3.018E+00	6.9685E+03	5.6967E+03	7.8085E+03	4.8281E+02	4.0114E+02	7.6809E+02
3.043E+00	6.8690E+03	5.5981E+03	7.6693E+03	4.7631E+02	3.9611E+02	7.5698E+02
3.514E+00	5.2745E+03	4.0499E+03	5.4956E+03	3.7218E+02	3.1391E+02	5.7966E+02

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	6 S 1/2	6 P 1/2	6 P 3/2
3.542E+00	5.1967E+03	3.9762E+03	5.3527E+03	3.6709E+02	3.0982E+02	5.7103E+02
4.000E+00	4.1309E+03	2.9883E+03	4.0203E+03	2.9724E+02	2.5285E+02	4.5303E+02
4.144E+00	3.8590E+03	2.7439E+03	3.6828E+03	2.7936E+02	2.3803E+02	4.2302E+02
4.178E+00	3.8001E+03	2.6914E+03	3.6104E+03	2.7548E+02	2.3480E+02	4.1651E+02
4.447E+00	3.3646E+03	2.3089E+03	3.0844E+03	2.4670E+02	2.1072E+02	3.7306E+02
4.483E+00	3.3125E+03	2.2639E+03	3.0226E+03	2.4325E+02	2.0781E+02	3.6726E+02
5.000E+00	2.6679E+03	1.7207E+03	2.2805E+03	2.0030E+02	1.7133E+02	2.9559E+02
6.000E+00	1.8382E+03	1.0687E+03	1.3989E+03	1.4405E+02	1.2273E+02	2.0350E+02
8.000E+00	9.9308E+02	4.8273E+02	6.1912E+02	8.4533E+01	7.3107E+01	1.0985E+02
1.000E+01	6.0156E+02	2.5172E+02	3.1752E+02	5.5306E+01	4.6679E+01	6.6520E+01
1.460E+01	2.4499E+02	7.8168E+01	9.5678E+01	2.6833E+01	2.0778E+01	2.7085E+01
1.472E+01	2.4025E+02	7.6203E+01	9.3212E+01	2.6412E+01	2.0414E+01	2.6560E+01
1.500E+01	2.2940E+02	7.1756E+01	8.7636E+01	2.5445E+01	1.9578E+01	2.5361E+01
1.738E+01	1.5892E+02	4.4532E+01	5.3707E+01	1.8946E+01	1.4042E+01	1.7568E+01
1.752E+01	1.5575E+02	4.3387E+01	5.2285E+01	1.8643E+01	1.3788E+01	1.7218E+01
1.804E+01	1.4462E+02	3.9408E+01	4.7371E+01	1.7572E+01	1.2892E+01	1.5988E+01
1.818E+01	1.4172E+02	3.8386E+01	4.6110E+01	1.7290E+01	1.2658E+01	1.5668E+01
2.000E+01	1.1106E+02	2.7988E+01	3.3334E+01	1.4241E+01	1.0145E+01	1.2278E+01
3.000E+01	3.7747E+01	6.9668E+00	7.9359E+00	6.0935E+00	3.8016E+00	4.1727E+00
4.000E+01	1.6902E+01	2.5036E+00	2.7679E+00	3.2606E+00	1.8278E+00	1.8683E+00
5.000E+01	8.8888E+00	1.1137E+00	1.2014E+00	1.9809E+00	1.0171E+00	9.8241E-01
6.000E+01	5.1995E+00	5.6987E-01	6.0212E-01	1.3069E+00	6.2358E-01	5.7453E-01
8.000E+01	2.1860E+00	1.9615E-01	2.0037E-01	6.6778E-01	2.8365E-01	2.4216E-01
9.876E+01	1.1487E+00	8.9514E-02	8.9206E-02	4.0393E-01	1.5782E-01	1.2728E-01
9.955E+01	1.1209E+00	8.6893E-02	8.6514E-02	3.9625E-01	1.5434E-01	1.2420E-01
1.000E+02	1.1054E+00	8.5437E-02	8.5020E-02	3.9194E-01	1.5239E-01	1.2248E-01
1.500E+02	3.1604E-01	1.9009E-02	1.8092E-02	1.4572E-01	4.8699E-02	3.5029E-02
2.000E+02	1.3020E-01	6.6539E-03	6.1737E-03	7.1534E-02	2.1688E-02	1.4435E-02
3.000E+02	3.8330E-02	1.5892E-03	1.4471E-03	2.6349E-02	7.0752E-03	4.2512E-03
4.000E+02	1.6704E-02	6.0787E-04	5.5467E-04	1.3186E-02	3.2858E-03	1.8534E-03
5.000E+02	9.0278E-03	2.9772E-04	2.7506E-04	7.8350E-03	1.8536E-03	1.0021E-03
6.000E+02	5.5832E-03	1.7059E-04	1.6039E-04	5.1900E-03	1.1820E-03	6.2014E-04
8.000E+02	2.7359E-03	7.4818E-05	7.2972E-05	2.7861E-03	6.0355E-04	3.0434E-04
1.000E+03	1.6377E-03	4.1867E-05	4.2042E-05	1.7626E-03	3.7150E-04	1.8257E-04
1.500E+03	7.0260E-04	1.6161E-05	1.7178E-05	8.1028E-04	1.6694E-04	7.8956E-05

Z= 87 25 STATES, 46 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	101.6196	.98652
2 S 1/2	2.00	18.6470	.88518
2 P 1/2	2.00	17.9724	.83046
2 P 3/2	4.00	15.0335	.79740
3 S 1/2	2.00	4.6236	.69425
3 P 1/2	2.00	4.3134	.62453
3 P 3/2	4.00	3.6443	.57967
3 D 3/2	4.00	3.1387	.39182
3 D 5/2	6.00	2.9986	.38253
4 S 1/2	2.00	1.1318	.44602
4 P 1/2	2.00	.9932	.38021
4 P 3/2	4.00	.8228	.33635
4 D 3/2	4.00	.5976	.18805
4 D 5/2	6.00	.5657	.17939
4 F 5/2	6.00	.2697	.04632
4 F 7/2	8.00	.2618	.04524
5 S 1/2	2.00	.2327	.21226
5 P 1/2	2.00	.1811	.16471
5 P 3/2	4.00	.1439	.13889
5 D 3/2	4.00	.0687	.05575
5 D 5/2	6.00	.0634	.05187
6 S 1/2	2.00	.0327	.06640
6 P 1/2	2.00	.0193	.04140
6 P 3/2	4.00	.0141	.03138
7 S 1/2	1.00	.0038	.00745

Z= 87 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	2.2481E+06	.0E+00	.0E+00	.0E+00	2.2481E+06
1.1306E+00	1.7919E+06	.0E+00	.0E+00	.0E+00	1.7919E+06
1.1397E+00	1.8024E+06	.0E+00	.0E+00	.0E+00	1.8024E+06
1.5000E+00	1.0494E+06	.0E+00	.0E+00	.0E+00	1.0494E+06
2.0000E+00	5.7397E+05	.0E+00	.0E+00	.0E+00	5.7397E+05
2.9957E+00	2.3439E+05	.0E+00	.0E+00	.0E+00	2.3439E+05
3.0000E+00	2.3362E+05	.0E+00	.0E+00	.0E+00	2.3362E+05
3.0196E+00	6.8356E+05	.0E+00	.0E+00	4.5338E+05	2.3018E+05
3.1356E+00	5.3321E+05	.0E+00	.0E+00	3.2199E+05	2.1122E+05
3.1607E+00	8.0833E+05	.0E+00	.0E+00	6.0093E+05	2.0740E+05
3.6406E+00	5.2889E+05	.0E+00	.0E+00	3.7922E+05	1.4967E+05
3.6698E+00	6.0139E+05	.0E+00	.0E+00	4.5447E+05	1.4692E+05
4.0000E+00	4.8594E+05	.0E+00	.0E+00	3.6582E+05	1.2011E+05
4.3091E+00	4.0297E+05	.0E+00	.0E+00	3.0218E+05	1.0079E+05
4.3436E+00	4.1953E+05	.0E+00	.0E+00	3.2063E+05	9.8903E+04
4.6190E+00	3.6082E+05	.0E+00	.0E+00	2.7535E+05	8.5478E+04
4.6560E+00	3.6928E+05	.0E+00	.0E+00	2.8541E+05	8.3869E+04
5.0000E+00	3.1124E+05	.0E+00	.0E+00	2.4052E+05	7.0725E+04
6.0000E+00	1.9901E+05	.0E+00	.0E+00	1.5349E+05	4.5522E+04
8.0000E+00	9.7076E+04	.0E+00	.0E+00	7.4645E+04	2.2430E+04
1.0000E+01	5.5055E+04	.0E+00	.0E+00	4.2221E+04	1.2834E+04
1.5000E+01	1.9316E+04	.0E+00	.0E+00	1.4745E+04	4.5706E+03
1.5018E+01	1.9254E+04	.0E+00	.0E+00	1.4698E+04	4.5562E+03
1.5139E+01	4.6035E+04	.0E+00	2.7178E+04	1.4394E+04	4.4637E+03
1.7954E+01	2.9014E+04	.0E+00	1.6945E+04	9.1959E+03	2.8736E+03
1.8098E+01	3.9979E+04	.0E+00	2.8160E+04	9.0047E+03	2.8148E+03
1.8628E+01	3.7206E+04	.0E+00	2.6250E+04	8.3445E+03	2.6116E+03
1.8778E+01	4.2164E+04	.0E+00	3.1435E+04	8.1706E+03	2.5581E+03
2.0000E+01	3.5834E+04	.0E+00	2.6747E+04	6.9160E+03	2.1711E+03
3.0000E+01	1.2572E+04	.0E+00	9.4734E+03	2.3498E+03	7.4869E+02

Z= 87 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
4.0000E+01	5.8723E+03	.0E+00	4.4403E+03	1.0837E+03	3.4833E+02
5.0000E+01	3.2304E+03	.0E+00	2.4468E+03	5.9209E+02	1.9150E+02
6.0000E+01	1.9748E+03	.0E+00	1.4972E+03	3.6049E+02	1.1714E+02
8.0000E+01	9.0355E+02	.0E+00	6.8562E+02	1.6423E+02	5.3707E+01
1.0000E+02	4.9136E+02	.0E+00	3.7299E+02	8.9099E+01	2.9273E+01
1.0152E+02	4.7154E+02	.0E+00	3.5795E+02	8.5493E+01	2.8096E+01
1.0233E+02	2.0719E+03	1.6105E+03	3.5024E+02	8.3644E+01	2.7493E+01
1.5000E+02	7.7276E+02	6.1033E+02	1.2334E+02	2.9373E+01	9.7166E+00
2.0000E+02	3.6461E+02	2.9008E+02	5.6600E+01	1.3461E+01	4.4699E+00
3.0000E+02	1.2807E+02	1.0260E+02	1.9345E+01	4.5928E+00	1.5315E+00
4.0000E+02	6.2547E+01	5.0312E+01	9.2953E+00	2.2036E+00	7.3645E-01
5.0000E+02	3.6695E+01	2.9606E+01	5.3869E+00	1.2753E+00	4.2670E-01
6.0000E+02	2.4140E+01	1.9525E+01	3.5078E+00	8.2935E-01	2.7771E-01
8.0000E+02	1.2884E+01	1.0460E+01	1.8438E+00	4.3500E-01	1.4578E-01
1.0000E+03	8.1398E+00	6.6240E+00	1.1531E+00	2.7158E-01	9.1072E-02
1.5000E+03	3.7444E+00	3.0565E+00	5.2356E-01	1.2306E-01	4.1263E-02

Z= 87

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.131E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.140E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.996E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.020E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.136E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.161E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.641E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.670E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.309E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.344E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.619E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.4670E+04
4.656E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.2998E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.5307E+04	2.2824E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.3827E+04	2.1237E+04
8.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.0854E+04	1.6263E+04
1.000E+01	.0E+00	.0E+00	.0E+00	.0E+00	7.0227E+03	1.0278E+04
1.500E+01	.0E+00	.0E+00	.0E+00	.0E+00	4.8509E+03	6.8376E+03
1.502E+01	.0E+00	.0E+00	.0E+00	.0E+00	2.3469E+03	2.9827E+03
1.514E+01	.0E+00	.0E+00	.0E+00	.0E+00	2.3415E+03	2.9747E+03
1.795E+01	.0E+00	.0E+00	.0E+00	2.7178E+04	2.3070E+03	2.9236E+03
1.810E+01	.0E+00	.0E+00	1.1571E+04	1.6945E+04	1.6691E+03	2.0019E+03
1.863E+01	.0E+00	.0E+00	1.0894E+04	1.6589E+04	1.6435E+03	1.9661E+03
1.878E+01	.0E+00	5.7106E+03	1.0694E+04	1.5356E+04	1.5542E+03	1.8410E+03
2.000E+01	.0E+00	5.1178E+03	8.9804E+03	1.5030E+04	1.5303E+03	1.8077E+03
3.000E+01	.0E+00	2.4368E+03	3.1509E+03	1.2648E+04	1.3536E+03	1.5628E+03
4.000E+01	.0E+00	1.3671E+03	1.4385E+03	3.8856E+03	5.9534E+02	5.8837E+02
5.000E+01	.0E+00	8.5306E+02	7.7006E+02	1.6347E+03	3.2282E+02	2.8255E+02
6.000E+01	.0E+00	5.7202E+02	4.5835E+02	8.2372E+02	1.9762E+02	1.5689E+02
8.000E+01	.0E+00	2.9721E+02	2.0003E+02	4.6679E+02	1.3102E+02	9.5987E+01
1.000E+02	.0E+00	1.7592E+02	1.0450E+02	1.8837E+02	6.7344E+01	4.3512E+01
1.015E+02	.0E+00	1.6971E+02	1.0001E+02	9.2571E+01	3.9662E+01	2.3320E+01
1.023E+02	1.6105E+03	1.6651E+02	9.7717E+01	8.8227E+01	3.8256E+01	2.2353E+01
1.500E+02	6.1033E+02	6.5892E+01	3.2054E+01	8.6010E+01	3.7531E+01	2.1858E+01
2.000E+02	2.9008E+02	3.2409E+01	1.3961E+01	2.5390E+01	1.4813E+01	7.4259E+00
3.000E+02	1.0260E+02	1.1951E+01	4.4505E+00	1.0230E+01	7.2896E+00	3.3014E+00
4.000E+02	5.0312E+01	5.9854E+00	2.0422E+00	2.9439E+00	2.6930E+00	1.0754E+00
				1.2678E+00	1.3503E+00	4.9888E-01

Z= 87

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
5.000E+02	2.9606E+01	3.5598E+00	1.1455E+00	6.8159E-01	8.0345E-01	2.8156E-01
6.000E+02	1.9525E+01	2.3602E+00	7.2755E-01	4.1997E-01	5.3276E-01	1.7954E-01
8.000E+02	1.0460E+01	1.2690E+00	3.6984E-01	2.0495E-01	2.8635E-01	9.1666E-02
1.000E+03	6.6240E+00	8.0354E-01	2.2709E-01	1.2246E-01	1.8126E-01	5.6402E-02
1.500E+03	3.0565E+00	3.6951E-01	1.0161E-01	5.2445E-02	8.3255E-02	2.5331E-02

Z= 87

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.1608E+04	1.5109E+05
1.131E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.9898E+04	1.3292E+05
1.140E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.7406E+04	1.3180E+05
1.500E+00	.0E+00	.0E+00	.0E+00	3.7406E+04	2.9840E+04	1.3180E+05
2.000E+00	.0E+00	.0E+00	.0E+00	2.6274E+04	2.6652E+04	9.5250E+04
2.996E+00	.0E+00	.0E+00	.0E+00	1.8915E+04	2.1277E+04	6.3674E+04
3.000E+00	.0E+00	.0E+00	.0E+00	1.0828E+04	1.3437E+04	3.3325E+04
3.020E+00	.0E+00	.0E+00	.0E+00	1.0804E+04	1.3411E+04	3.3243E+04
3.136E+00	.0E+00	.0E+00	4.5338E+05	1.0700E+04	1.3298E+04	3.2875E+04
3.161E+00	.0E+00	2.8549E+05	3.2199E+05	1.0117E+04	1.2648E+04	3.0816E+04
3.641E+00	.0E+00	1.5938E+05	3.1543E+05	9.9971E+03	1.2513E+04	3.0394E+04
3.670E+00	8.3340E+04	1.5610E+05	2.1983E+05	8.0673E+03	1.0263E+04	2.3655E+04
4.000E+00	7.3725E+04	1.2357E+05	2.1503E+05	7.9676E+03	1.0145E+04	2.3317E+04
4.309E+00	6.5902E+04	1.0027E+05	1.6852E+05	6.9563E+03	8.9293E+03	1.9917E+04
4.344E+00	6.5025E+04	9.8031E+04	1.3601E+05	6.1794E+03	7.9621E+03	1.7325E+04
4.619E+00	5.8239E+04	8.2239E+04	1.3290E+05	6.1007E+03	7.8637E+03	1.7066E+04
4.656E+00	5.7378E+04	8.0480E+04	1.1187E+05	5.5204E+03	7.1370E+03	1.5183E+04
5.000E+00	5.0114E+04	6.6214E+04	1.0942E+05	5.4486E+03	7.0464E+03	1.4952E+04
6.000E+00	3.5754E+04	3.8874E+04	8.9124E+04	4.8433E+03	6.2731E+03	1.3016E+04
8.000E+00	1.9906E+04	1.6266E+04	5.1746E+04	3.5600E+03	4.5996E+03	9.0363E+03
1.000E+01	1.2219E+04	8.0310E+03	2.1173E+04	2.1475E+03	2.7169E+03	4.9243E+03
1.500E+01	4.7011E+03	2.1047E+03	1.0282E+04	1.4282E+03	1.7539E+03	2.9967E+03
1.502E+01	4.6869E+03	2.0960E+03	2.6096E+03	6.5932E+02	7.4595E+02	1.4889E+03
1.514E+01	4.5961E+03	2.0401E+03	2.5985E+03	6.5774E+02	7.4394E+02	1.1455E+03
1.795E+01	2.9988E+03	1.1374E+03	2.5274E+03	6.4757E+02	7.3099E+02	1.1233E+03
1.810E+01	2.9387E+03	1.1064E+03	1.3888E+03	4.6219E+02	4.9876E+02	7.3434E+02
1.863E+01	2.7301E+03	1.0010E+03	1.3500E+03	4.5487E+02	4.8978E+02	7.1967E+02
1.878E+01	2.6748E+03	9.7360E+02	1.2183E+03	4.2931E+02	4.5850E+02	6.6885E+02
2.000E+01	2.2729E+03	7.8144E+02	1.1842E+03	4.2249E+02	4.5018E+02	6.5541E+02
3.000E+01	7.6730E+02	1.8429E+02	9.4532E+02	3.7206E+02	3.8915E+02	5.5769E+02
4.000E+01	3.4138E+02	6.4297E+01	2.1449E+02	1.6057E+02	1.4681E+02	1.9000E+02
5.000E+01	1.7861E+02	2.8057E+01	7.2618E+01	8.6317E+01	7.0844E+01	8.5180E+01
6.000E+01	1.0403E+02	1.4165E+01	3.0913E+01	5.2599E+01	3.9522E+01	4.4831E+01
8.000E+01	4.3589E+01	4.7900E+00	1.5282E+01	3.4781E+01	2.4277E+01	2.6236E+01
1.000E+02	2.1958E+01	2.0636E+00	4.9938E+00	1.7827E+01	1.1074E+01	1.1070E+01
1.015E+02	2.0959E+01	1.9497E+00	2.0947E+00	1.0487E+01	5.9623E+00	5.6040E+00
1.023E+02	2.0449E+01	1.8920E+00	1.9756E+00	1.0114E+01	5.7168E+00	5.3508E+00
1.500E+02	6.2425E+00	4.5240E-01	1.9153E+00	9.9221E+00	5.5909E+00	5.2214E+00
2.000E+02	2.5641E+00	1.5715E-01	4.3883E-01	3.9134E+00	1.9123E+00	1.6051E+00
3.000E+02	7.5262E-01	3.7250E-02	1.4851E-01	1.9260E+00	8.5372E-01	6.6209E-01
4.000E+02	3.2721E-01	1.4093E-02	3.4509E-02	7.1185E-01	2.7934E-01	1.9524E-01
5.000E+02	1.7682E-01	6.9377E-03	1.3094E-02	3.5708E-01	1.3004E-01	8.4919E-02
6.000E+02	1.0929E-01	3.9707E-03	6.5153E-03	2.1244E-01	7.3505E-02	4.5943E-02
8.000E+02	5.3514E-02	1.7383E-03	3.7925E-03	1.4086E-01	4.6919E-02	2.8409E-02
1.000E+03	3.1957E-02	9.7397E-04	1.7230E-03	7.5702E-02	2.3980E-02	1.3916E-02
1.500E+03	1.3693E-02	3.7698E-04	9.8466E-04	4.7909E-02	1.4767E-02	8.3304E-03
			4.0091E-04	2.1998E-02	6.6245E-03	3.5680E-03

Z= 87

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	2.0803E+05	3.2913E+05	5.8584E+05	7.5420E+05	1.5581E+04	1.3089E+04
1.131E+00	1.8999E+05	2.9331E+05	4.3226E+05	5.5429E+05	1.3127E+04	1.1508E+04
1.140E+00	1.8861E+05	2.9075E+05	4.2355E+05	5.4300E+05	1.2980E+04	1.1410E+04
1.500E+00	1.3675E+05	2.0324E+05	2.0107E+05	2.5568E+05	8.6986E+03	8.3446E+03
2.000E+00	8.6768E+04	1.2532E+05	8.5403E+04	1.0779E+05	5.6108E+03	5.8061E+03
2.996E+00	3.9363E+04	5.4956E+04	2.2973E+04	2.8696E+04	2.9453E+03	3.2844E+03
3.000E+00	3.9241E+04	5.4780E+04	2.2860E+04	2.8554E+04	2.9383E+03	3.2773E+03
3.020E+00	3.8694E+04	5.3991E+04	2.2358E+04	2.7923E+04	2.9071E+03	3.2453E+03
3.136E+00	3.5660E+04	4.9612E+04	1.9659E+04	2.4526E+04	2.7327E+03	3.0657E+03
3.161E+00	3.5044E+04	4.8722E+04	1.9128E+04	2.3859E+04	2.6970E+03	3.0287E+03
3.641E+00	2.5481E+04	3.5054E+04	1.1695E+04	1.4533E+04	2.1324E+03	2.4310E+03
3.670E+00	2.5015E+04	3.4393E+04	1.1371E+04	1.4127E+04	2.1040E+03	2.4004E+03
4.000E+00	2.0427E+04	2.7898E+04	8.3678E+03	1.0371E+04	1.8193E+03	2.0893E+03
4.309E+00	1.7062E+04	2.3183E+04	6.3964E+03	7.9115E+03	1.6024E+03	1.8481E+03
4.344E+00	1.6733E+04	2.2722E+04	6.2137E+03	7.6836E+03	1.5807E+03	1.8237E+03
4.619E+00	1.4374E+04	1.9427E+04	4.9628E+03	6.1263E+03	1.4219E+03	1.6444E+03
4.656E+00	1.4090E+04	1.9032E+04	4.8194E+03	5.9480E+03	1.4024E+03	1.6223E+03
5.000E+00	1.1764E+04	1.5813E+04	3.7017E+03	4.5591E+03	1.2389E+03	1.4354E+03
6.000E+00	7.2992E+03	9.6807E+03	1.8594E+03	2.2776E+03	8.9786E+02	1.0386E+03
8.000E+00	3.2857E+03	4.2661E+03	6.0375E+02	7.3282E+02	5.3246E+02	6.0483E+02
1.000E+01	1.7079E+03	2.1800E+03	2.4487E+02	2.9495E+02	3.5085E+02	3.8789E+02
1.500E+01	4.8426E+02	5.9811E+02	4.4771E+01	5.3099E+01	1.6008E+02	1.6388E+02
1.502E+01	4.8235E+02	5.9569E+02	4.4536E+01	5.2818E+01	1.5969E+02	1.6343E+02
1.514E+01	4.7013E+02	5.8020E+02	4.3041E+01	5.1028E+01	1.5719E+02	1.6057E+02
1.795E+01	2.6957E+02	3.2777E+02	2.0602E+01	2.4248E+01	1.1179E+02	1.0942E+02
1.810E+01	2.6256E+02	3.1902E+02	1.9898E+01	2.3412E+01	1.1001E+02	1.0744E+02
1.863E+01	2.3861E+02	2.8918E+02	1.7543E+01	2.0614E+01	1.0377E+02	1.0056E+02
1.878E+01	2.3238E+02	2.8143E+02	1.6943E+01	1.9901E+01	1.0211E+02	9.8730E+01
2.000E+01	1.8828E+02	2.2672E+02	1.2850E+01	1.5051E+01	8.9821E+01	8.5323E+01
3.000E+01	4.6744E+01	5.4130E+01	2.1062E+00	2.4172E+00	3.8561E+01	3.2178E+01
4.000E+01	1.6780E+01	1.8853E+01	5.7106E-01	6.4492E-01	2.0682E+01	1.5539E+01
5.000E+01	7.4602E+00	8.1762E+00	2.0588E-01	2.2942E-01	1.2588E+01	8.6766E+00
6.000E+01	3.8168E+00	4.0960E+00	8.9215E-02	9.8264E-02	8.3182E+00	5.3341E+00
8.000E+01	1.3136E+00	1.3626E+00	2.3884E-02	2.5804E-02	4.2616E+00	2.4368E+00
1.000E+02	5.7225E-01	5.7814E-01	8.6286E-03	9.1811E-03	2.5070E+00	1.3192E+00
1.015E+02	5.4105E-01	5.4564E-01	8.0573E-03	8.5649E-03	2.4180E+00	1.2650E+00
1.023E+02	5.2522E-01	5.2918E-01	7.7719E-03	8.2557E-03	2.3721E+00	1.2372E+00
1.500E+02	1.2740E-01	1.2309E-01	1.4018E-03	1.4339E-03	9.3689E-01	4.2383E-01
2.000E+02	4.4610E-02	4.2028E-02	3.9949E-04	4.0266E-04	4.6103E-01	1.8940E-01
3.000E+02	1.0670E-02	9.7998E-03	7.3550E-05	7.3849E-05	1.7038E-01	6.2049E-02
4.000E+02	4.0539E-03	3.7378E-03	2.3527E-05	2.4305E-05	8.5447E-02	2.8870E-02
5.000E+02	2.0015E-03	1.8654E-03	1.0506E-05	1.1184E-05	5.0848E-02	1.6322E-02
6.000E+02	1.1494E-03	1.0857E-03	5.5655E-06	5.9940E-06	3.3716E-02	1.0420E-02
8.000E+02	5.0384E-04	4.9343E-04	2.1239E-06	2.4740E-06	1.8119E-02	5.3278E-03
1.000E+03	2.8196E-04	2.8500E-04	1.1230E-06	1.3656E-06	1.1466E-02	3.2806E-03
1.500E+03	1.0897E-04	1.1631E-04	4.0722E-07	5.2998E-07	5.2647E-03	1.4720E-03

Z= 87

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	6 S 1/2	6 P 1/2	6 P 3/2
1.000E+00	4.3347E+04	4.1867E+04	6.2705E+04	3.2133E+03	2.1901E+03	6.0544E+03
1.131E+00	3.6340E+04	3.5722E+04	5.2889E+04	2.6573E+03	1.8837E+03	5.0283E+03
1.140E+00	3.5920E+04	3.5337E+04	5.2281E+04	2.6245E+03	1.8650E+03	4.9672E+03
1.500E+00	2.3737E+04	2.3466E+04	3.3922E+04	1.7012E+03	1.3106E+03	3.2284E+03
2.000E+00	1.4975E+04	1.4261E+04	2.0169E+04	1.0692E+03	8.8386E+02	2.0113E+03
2.996E+00	7.4764E+03	6.3431E+03	8.7193E+03	5.4683E+02	4.8489E+02	9.9269E+02
3.000E+00	7.4570E+03	6.3233E+03	8.6912E+03	5.4550E+02	4.8379E+02	9.9008E+02
3.020E+00	7.3702E+03	6.2346E+03	8.5655E+03	5.3952E+02	4.7889E+02	9.7842E+02
3.136E+00	6.8863E+03	5.7430E+03	7.8698E+03	5.0618E+02	4.5137E+02	9.1349E+02
3.161E+00	6.7876E+03	5.6432E+03	7.7288E+03	4.9937E+02	4.4572E+02	9.0024E+02
3.641E+00	5.2333E+03	4.1036E+03	5.5664E+03	3.9218E+02	3.5498E+02	6.9226E+02

Z= 87

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	6 S 1/2	6 P 1/2	6 P 3/2
3.670E+00	5.1559E+03	4.0287E+03	5.4619E+03	3.8683E+02	3.5037E+02	6.8193E+02
4.000E+00	4.3820E+03	3.2921E+03	4.4372E+03	3.3325E+02	3.0368E+02	5.7879E+02
4.309E+00	3.7984E+03	2.7532E+03	3.6921E+03	2.9266E+02	2.6772E+02	5.0117E+02
4.344E+00	3.7402E+03	2.7003E+03	3.6192E+03	2.8860E+02	2.6409E+02	4.9344E+02
4.619E+00	3.3175E+03	2.3221E+03	3.0991E+03	2.5902E+02	2.3752E+02	4.3735E+02
4.656E+00	3.2659E+03	2.2766E+03	3.0368E+03	2.5539E+02	2.3425E+02	4.3051E+02
5.000E+00	2.8357E+03	1.9040E+03	2.5273E+03	2.2504E+02	2.0668E+02	3.7351E+02
6.000E+00	1.9572E+03	1.1868E+03	1.5553E+03	1.6215E+02	1.4857E+02	2.5739E+02
8.000E+00	1.0603E+03	5.3893E+02	6.9177E+02	9.5421E+01	8.5777E+01	1.4040E+02
1.000E+01	6.4370E+02	2.8216E+02	3.5612E+02	6.2561E+01	5.6391E+01	8.5201E+01
1.500E+01	2.4651E+02	8.1007E+01	9.8927E+01	2.8343E+01	2.3816E+01	3.2619E+01
1.502E+01	2.4577E+02	8.0690E+01	9.8530E+01	2.8274E+01	2.3751E+01	3.2521E+01
1.514E+01	2.4100E+02	7.8664E+01	9.5991E+01	2.7828E+01	2.3336E+01	3.1890E+01
1.795E+01	1.5759E+02	4.5316E+01	5.4483E+01	2.0059E+01	1.5902E+01	2.0852E+01
1.810E+01	1.5444E+02	4.4151E+01	5.3041E+01	1.9739E+01	1.5615E+01	2.0436E+01
1.863E+01	1.4354E+02	4.0154E+01	4.8115E+01	1.8619E+01	1.4615E+01	1.8993E+01
1.878E+01	1.4066E+02	3.9113E+01	4.6835E+01	1.8320E+01	1.4350E+01	1.8612E+01
2.000E+01	1.1971E+02	3.1745E+01	3.7791E+01	1.6114E+01	1.2402E+01	1.5840E+01
3.000E+01	4.0867E+01	7.9573E+00	9.1092E+00	6.9139E+00	4.6795E+00	5.4076E+00
4.000E+01	1.8356E+01	2.8699E+00	3.1699E+00	3.7071E+00	2.2607E+00	2.4288E+00
5.000E+01	9.6756E+00	1.2805E+00	1.3797E+00	2.2558E+00	1.2626E+00	1.2802E+00
6.000E+01	5.6700E+00	6.5683E-01	6.9294E-01	1.4903E+00	7.7634E-01	7.5012E-01
8.000E+01	2.3913E+00	2.2688E-01	2.3136E-01	7.6317E-01	3.5469E-01	3.1708E-01
1.000E+02	1.2118E+00	9.9067E-02	9.8382E-02	4.4873E-01	1.9119E-01	1.6072E-01
1.015E+02	1.1571E+00	9.3676E-02	9.2863E-02	4.3277E-01	1.8333E-01	1.5347E-01
1.023E+02	1.1292E+00	9.0942E-02	9.0068E-02	4.2455E-01	1.7930E-01	1.4976E-01
1.500E+02	3.4766E-01	2.2136E-02	2.1010E-02	1.6738E-01	6.1438E-02	4.6126E-02
2.000E+02	1.4353E-01	7.7680E-03	7.1850E-03	8.2364E-02	2.7458E-02	1.9048E-02
3.000E+02	4.2359E-02	1.8606E-03	1.6875E-03	3.0438E-02	8.9958E-03	5.6229E-03
4.000E+02	1.8466E-02	7.0766E-04	6.4391E-04	1.5265E-02	4.1855E-03	2.4518E-03
5.000E+02	9.9924E-03	3.4957E-04	3.2137E-04	9.0840E-03	2.3664E-03	1.3272E-03
6.000E+02	6.1808E-03	2.0047E-04	1.8728E-04	6.0235E-03	1.5108E-03	8.2128E-04
8.000E+02	3.0286E-03	8.8055E-05	8.5270E-05	3.2374E-03	7.7250E-04	4.0275E-04
1.000E+03	1.8123E-03	4.9260E-05	4.9085E-05	2.0490E-03	4.7578E-04	2.4129E-04
1.500E+03	7.7671E-04	1.9066E-05	2.0054E-05	9.4156E-04	2.1377E-04	1.0388E-04

Z= 87

ENERGY	7 S 1/2
1.000E+00	1.2115E+02
1.131E+00	9.8489E+01
1.140E+00	9.7178E+01
1.500E+00	6.0661E+01
2.000E+00	3.6751E+01
2.996E+00	1.8924E+01
3.000E+00	1.8878E+01
3.020E+00	1.8673E+01
3.136E+00	1.7529E+01
3.161E+00	1.7295E+01
3.641E+00	1.3612E+01
3.670E+00	1.3428E+01
4.000E+00	1.1585E+01
4.309E+00	1.0187E+01
4.344E+00	1.0047E+01
4.619E+00	9.0268E+00
4.656E+00	8.9017E+00
5.000E+00	7.8541E+00
6.000E+00	5.6763E+00
8.000E+00	3.3559E+00
1.000E+01	2.2077E+00
1.500E+01	1.0054E+00

Z= 87

ENERGY	7 S 1/2
1.502E+01	1.0030E+00
1.514E+01	9.8724E-01
1.795E+01	7.0175E-01
1.810E+01	6.9053E-01
1.863E+01	6.5134E-01
1.878E+01	6.4090E-01
2.000E+01	5.6369E-01
3.000E+01	2.4183E-01
4.000E+01	1.2966E-01
5.000E+01	7.8894E-02
6.000E+01	5.2123E-02
8.000E+01	2.6691E-02
1.000E+02	1.5694E-02
1.015E+02	1.5137E-02
1.023E+02	1.4849E-02
1.500E+02	5.8553E-03
2.000E+02	2.8818E-03
3.000E+02	1.0658E-03
4.000E+02	5.3509E-04
5.000E+02	3.1887E-04
6.000E+02	2.1187E-04
8.000E+02	1.1447E-04
1.000E+03	7.3020E-05
1.500E+03	3.4615E-05

Z= 88 25 STATES, 48 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	104.4397	.98659
2 S 1/2	2.00	19.2513	.88627
2 P 1/2	2.00	18.5617	.83198
2 P 3/2	4.00	15.4550	.79821
3 S 1/2	2.00	4.8001	.69701
3 P 1/2	2.00	4.4830	.62783
3 P 3/2	4.00	3.7734	.58187
3 D 3/2	4.00	3.2585	.39481
3 D 5/2	6.00	3.1107	.38532
4 S 1/2	2.00	1.1913	.45037
4 P 1/2	2.00	1.0491	.38484
4 P 3/2	4.00	.8673	.33984
4 D 3/2	4.00	.6368	.19140
4 D 5/2	6.00	.6028	.18252
4 F 5/2	6.00	.2995	.04822
4 F 7/2	8.00	.2909	.04711
5 S 1/2	2.00	.2541	.21816
5 P 1/2	2.00	.2005	.17047
5 P 3/2	4.00	.1598	.14376
5 D 3/2	4.00	.0813	.05936
5 D 5/2	6.00	.0754	.05531
6 S 1/2	2.00	.0396	.07289
6 P 1/2	2.00	.0249	.04736
6 P 3/2	4.00	.0186	.03661
7 S 1/2	2.00	.0047	.01194

Z= 88 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY (KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	2.3227E+06	.0E+00	.0E+00	.0E+00	2.3227E+06
1.0480E+00	2.1331E+06	.0E+00	.0E+00	.0E+00	2.1331E+06
1.0564E+00	2.1327E+06	.0E+00	.0E+00	.0E+00	2.1327E+06
1.1901E+00	1.7053E+06	.0E+00	.0E+00	.0E+00	1.7053E+06
1.1997E+00	1.7140E+06	.0E+00	.0E+00	.0E+00	1.7140E+06
1.5000E+00	1.1026E+06	.0E+00	.0E+00	.0E+00	1.1026E+06
2.0000E+00	6.0379E+05	.0E+00	.0E+00	.0E+00	6.0379E+05
3.0000E+00	2.4612E+05	.0E+00	.0E+00	.0E+00	2.4612E+05
3.1076E+00	2.2714E+05	.0E+00	.0E+00	.0E+00	2.2714E+05
3.1325E+00	6.0315E+05	.0E+00	.0E+00	3.8011E+05	2.2304E+05
3.2553E+00	5.0866E+05	.0E+00	.0E+00	3.0438E+05	2.0428E+05
3.2813E+00	7.3852E+05	.0E+00	.0E+00	5.3793E+05	2.0058E+05
3.7696E+00	5.0767E+05	.0E+00	.0E+00	3.6216E+05	1.4551E+05
3.7998E+00	5.7817E+05	.0E+00	.0E+00	4.3533E+05	1.4284E+05
4.0000E+00	5.0937E+05	.0E+00	.0E+00	3.8268E+05	1.2669E+05
4.4785E+00	3.8330E+05	.0E+00	.0E+00	2.8624E+05	9.7056E+04
4.5143E+00	3.9886E+05	.0E+00	.0E+00	3.0362E+05	9.5239E+04
4.7953E+00	3.4394E+05	.0E+00	.0E+00	2.6144E+05	8.2504E+04
4.8337E+00	3.5208E+05	.0E+00	.0E+00	2.7114E+05	8.0949E+04
5.0000E+00	3.2486E+05	.0E+00	.0E+00	2.5020E+05	7.4660E+04
6.0000E+00	2.0779E+05	.0E+00	.0E+00	1.5970E+05	4.8090E+04
8.0000E+00	1.0154E+05	.0E+00	.0E+00	7.7818E+04	2.3720E+04
1.0000E+01	5.7639E+04	.0E+00	.0E+00	4.4057E+04	1.3582E+04
1.5000E+01	2.0261E+04	.0E+00	.0E+00	1.5416E+04	4.8455E+03
1.5440E+01	1.8796E+04	.0E+00	.0E+00	1.4297E+04	4.4989E+03
1.5563E+01	4.4748E+04	.0E+00	2.6338E+04	1.4002E+04	4.4076E+03
1.8543E+01	2.7837E+04	.0E+00	1.6193E+04	8.8404E+03	2.8040E+03
1.8692E+01	3.8430E+04	.0E+00	2.7027E+04	8.6568E+03	2.7466E+03
1.9232E+01	3.5774E+04	.0E+00	2.5193E+04	8.0305E+03	2.5511E+03
1.9386E+01	4.0539E+04	.0E+00	3.0177E+04	7.8633E+03	2.4989E+03
2.0000E+01	3.7409E+04	.0E+00	2.7862E+04	7.2419E+03	2.3044E+03
3.0000E+01	1.3159E+04	.0E+00	9.8974E+03	2.4653E+03	7.9616E+02
4.0000E+01	6.1569E+03	.0E+00	4.6473E+03	1.1386E+03	3.7093E+02
5.0000E+01	3.3917E+03	.0E+00	2.5647E+03	6.2283E+02	2.0415E+02
6.0000E+01	2.0756E+03	.0E+00	1.5711E+03	3.7958E+02	1.2499E+02
8.0000E+01	9.5126E+02	.0E+00	7.2068E+02	1.7319E+02	5.7391E+01
1.0000E+02	5.1793E+02	.0E+00	3.9255E+02	9.4067E+01	3.1317E+01
1.0434E+02	4.6133E+02	.0E+00	3.4967E+02	8.3754E+01	2.7905E+01
1.0517E+02	2.0056E+03	1.5542E+03	3.4215E+02	8.1947E+01	2.7307E+01
1.5000E+02	8.0535E+02	6.3376E+02	1.3009E+02	3.1077E+01	1.0417E+01
2.0000E+02	3.8053E+02	3.0167E+02	5.9796E+01	1.4263E+01	4.7996E+00
3.0000E+02	1.3408E+02	1.0707E+02	2.0482E+01	4.8769E+00	1.6479E+00
4.0000E+02	6.5616E+01	5.2624E+01	9.8556E+00	2.3431E+00	7.9354E-01
5.0000E+02	3.8549E+01	3.1015E+01	5.7172E+00	1.3573E+00	4.6022E-01
6.0000E+02	2.5385E+01	2.0476E+01	3.7254E+00	8.8327E-01	2.9971E-01
8.0000E+02	1.3564E+01	1.0983E+01	1.9597E+00	4.6360E-01	1.5745E-01
1.0000E+03	8.5733E+00	6.9594E+00	1.2260E+00	2.8952E-01	9.8390E-02
1.5000E+03	3.9441E+00	3.2116E+00	5.5669E-01	1.3119E-01	4.4582E-02

Z= 88

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.048E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.056E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.190E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.200E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.108E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00

Z= 88

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
3.133E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.255E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.281E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.770E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.800E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.478E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.514E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.3291E+04
4.795E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.1922E+04
4.834E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.4698E+04	2.1748E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.4027E+04	2.1078E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.0962E+04	1.6457E+04
8.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.0997E+03	1.0490E+04
1.000E+01	.0E+00	.0E+00	.0E+00	.0E+00	4.9204E+03	7.0214E+03
1.500E+01	.0E+00	.0E+00	.0E+00	.0E+00	2.3966E+03	3.0916E+03
1.544E+01	.0E+00	.0E+00	.0E+00	.0E+00	2.2711E+03	2.9057E+03
1.556E+01	.0E+00	.0E+00	.0E+00	2.6338E+04	2.2376E+03	2.8560E+03
1.854E+01	.0E+00	.0E+00	.0E+00	1.6193E+04	1.6053E+03	1.9377E+03
1.869E+01	.0E+00	.0E+00	1.1174E+04	1.5852E+04	1.5807E+03	1.9031E+03
1.923E+01	.0E+00	.0E+00	1.0504E+04	1.4688E+04	1.4958E+03	1.7839E+03
1.939E+01	.0E+00	5.4822E+03	1.0319E+04	1.4376E+04	1.4729E+03	1.7517E+03
2.000E+01	.0E+00	5.2027E+03	9.4529E+03	1.3207E+04	1.3864E+03	1.6307E+03
3.000E+01	.0E+00	2.4905E+03	3.3252E+03	4.0817E+03	6.1242E+02	6.1861E+02
4.000E+01	.0E+00	1.4032E+03	1.5233E+03	1.7209E+03	3.3291E+02	2.9861E+02
5.000E+01	.0E+00	8.7778E+02	8.1837E+02	8.6856E+02	2.0418E+02	1.6644E+02
6.000E+01	.0E+00	5.8966E+02	4.8850E+02	4.9290E+02	1.3560E+02	1.0214E+02
8.000E+01	.0E+00	3.0731E+02	2.1404E+02	1.9933E+02	6.9865E+01	4.6503E+01
1.000E+02	.0E+00	1.8231E+02	1.1213E+02	9.8109E+01	4.1225E+01	2.5003E+01
1.043E+02	.0E+00	1.6484E+02	9.9131E+01	8.5707E+01	3.7247E+01	2.2204E+01
1.052E+02	1.5542E+03	1.6173E+02	9.6863E+01	8.3557E+01	3.6542E+01	2.1714E+01
1.500E+02	6.3376E+02	6.8555E+01	3.4556E+01	2.6981E+01	1.5450E+01	8.0048E+00
2.000E+02	3.0167E+02	3.3810E+01	1.5097E+01	1.0889E+01	7.6215E+00	3.5709E+00
3.000E+02	1.0707E+02	1.2512E+01	4.8307E+00	3.1395E+00	2.8251E+00	1.1681E+00
4.000E+02	5.2624E+01	6.2808E+00	2.2216E+00	1.3532E+00	1.4197E+00	5.4322E-01
5.000E+02	3.1015E+01	3.7414E+00	1.2480E+00	7.2779E-01	8.4604E-01	3.0707E-01
6.000E+02	2.0476E+01	2.4834E+00	7.9352E-01	4.4848E-01	5.6160E-01	1.9604E-01
8.000E+02	1.0983E+01	1.3369E+00	4.0395E-01	2.1882E-01	3.0223E-01	1.0024E-01
1.000E+03	6.9594E+00	8.4704E-01	2.4826E-01	1.3070E-01	1.9141E-01	6.1736E-02
1.500E+03	3.2116E+00	3.8957E-01	1.1121E-01	5.5915E-02	8.7931E-02	2.7761E-02

Z= 88

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.5358E+05
1.048E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.4630E+05
1.056E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.4508E+05
1.190E+00	.0E+00	.0E+00	.0E+00	.0E+00	3.0528E+04	1.4508E+05
1.200E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.8458E+04	1.2760E+05
1.500E+00	.0E+00	.0E+00	.0E+00	3.4600E+04	2.8403E+04	1.2650E+05
2.000E+00	.0E+00	.0E+00	.0E+00	2.6290E+04	2.5957E+04	9.7076E+04
3.000E+00	.0E+00	.0E+00	.0E+00	1.8946E+04	2.1117E+04	6.5196E+04
3.108E+00	.0E+00	.0E+00	.0E+00	1.0929E+04	1.3492E+04	3.4191E+04
3.133E+00	.0E+00	.0E+00	.0E+00	1.0374E+04	1.2898E+04	3.2201E+04
3.255E+00	.0E+00	.0E+00	3.8011E+05	1.0251E+04	1.2765E+04	3.1764E+04
3.281E+00	.0E+00	.0E+00	3.0438E+05	9.6814E+03	1.2133E+04	2.9730E+04
3.770E+00	.0E+00	2.3965E+05	2.9828E+05	9.5671E+03	1.2004E+04	2.9321E+04
3.800E+00	.0E+00	1.5235E+05	2.0981E+05	7.7525E+03	9.8840E+03	2.2902E+04
3.800E+00	8.0855E+04	1.4924E+05	2.0524E+05	7.6568E+03	9.7712E+03	2.2574E+04
4.000E+00	7.4896E+04	1.3013E+05	1.7765E+05	7.0634E+03	9.0657E+03	2.0557E+04
4.478E+00	6.3044E+04	9.4900E+04	1.2829E+05	5.9038E+03	7.6304E+03	1.6640E+04
4.514E+00	6.2200E+04	9.2774E+04	1.2536E+05	5.8286E+03	7.5360E+03	1.6390E+04
4.795E+00	5.5787E+04	7.7981E+04	1.0575E+05	5.2835E+03	6.8517E+03	1.4604E+04

Z= 88

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
4.834E+00	5.4958E+04	7.6312E+04	1.0342E+05	5.2147E+03	6.7650E+03	1.4382E+04
5.000E+00	5.1538E+04	6.9619E+04	9.3933E+04	4.9320E+03	6.4061E+03	1.3469E+04
6.000E+00	3.6676E+04	4.1040E+04	5.4565E+04	3.6334E+03	4.7170E+03	9.3685E+03
8.000E+00	2.0533E+04	1.7253E+04	2.2443E+04	2.1984E+03	2.8029E+03	5.1211E+03
1.000E+01	1.2640E+04	8.5464E+03	1.0929E+04	1.4652E+03	1.8180E+03	3.1235E+03
1.500E+01	4.8883E+03	2.2523E+03	2.7871E+03	6.7880E+02	7.7909E+02	1.2029E+03
1.544E+01	4.5552E+03	2.0430E+03	2.5215E+03	6.4161E+02	7.3139E+02	1.1208E+03
1.556E+01	4.4670E+03	1.9886E+03	2.4525E+03	6.3169E+02	7.1870E+02	1.0990E+03
1.854E+01	2.8801E+03	1.0915E+03	1.3258E+03	4.4683E+02	4.8580E+02	7.1007E+02
1.869E+01	2.8223E+03	1.0618E+03	1.2888E+03	4.3976E+02	4.7707E+02	6.9587E+02
1.923E+01	2.6243E+03	9.6192E+02	1.1645E+03	4.1535E+02	4.4703E+02	6.4729E+02
1.939E+01	2.5712E+03	9.3563E+02	1.1319E+03	4.0876E+02	4.3895E+02	6.3427E+02
2.000E+01	2.3727E+03	8.3937E+02	1.0127E+03	3.8392E+02	4.0859E+02	5.8570E+02
3.000E+01	8.0453E+02	1.9894E+02	2.3081E+02	1.6620E+02	1.5525E+02	2.0043E+02
4.000E+01	3.5908E+02	6.9637E+01	7.8380E+01	8.9543E+01	7.5284E+01	9.0135E+01
5.000E+01	1.8830E+02	3.0465E+01	3.3441E+01	5.4656E+01	4.2152E+01	4.7549E+01
6.000E+01	1.0987E+02	1.5411E+01	1.6560E+01	3.6192E+01	2.5967E+01	2.7879E+01
8.000E+01	4.6165E+01	5.2272E+00	5.4259E+00	1.8592E+01	1.1898E+01	1.1797E+01
1.000E+02	2.3302E+01	2.2568E+00	2.2802E+00	1.0957E+01	6.4266E+00	5.9842E+00
1.043E+02	2.0445E+01	1.9241E+00	1.9342E+00	9.8975E+00	5.7119E+00	5.2551E+00
1.052E+02	1.9948E+01	1.8673E+00	1.8753E+00	9.7099E+00	5.5866E+00	5.1282E+00
1.500E+02	6.6467E+00	4.9649E-01	4.7912E-01	4.1024E+00	2.0725E+00	1.7199E+00
2.000E+02	2.7357E+00	1.7284E-01	1.6243E-01	2.0238E+00	9.2846E-01	7.1094E-01
3.000E+02	8.0480E-01	4.1075E-02	3.7816E-02	7.5048E-01	3.0510E-01	2.1013E-01
4.000E+02	3.5028E-01	1.5564E-02	1.4360E-02	3.7729E-01	1.4239E-01	9.1505E-02
5.000E+02	1.8938E-01	7.6697E-03	7.1474E-03	2.2481E-01	8.0618E-02	4.9526E-02
6.000E+02	1.1707E-01	4.3932E-03	4.1606E-03	1.4922E-01	5.1517E-02	3.0630E-02
8.000E+02	5.7313E-02	1.9252E-03	1.8899E-03	8.0295E-02	2.6372E-02	1.5005E-02
1.000E+03	3.4220E-02	1.0804E-03	1.0780E-03	5.0842E-02	1.6256E-02	8.9769E-03
1.500E+03	1.4642E-02	4.1766E-04	4.4104E-04	2.3348E-02	7.3009E-03	3.8426E-03

Z= 88

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	2.0931E+05	3.3231E+05	6.2344E+05	8.0333E+05	1.5991E+04	1.3325E+04
1.048E+00	2.0302E+05	3.2027E+05	5.5758E+05	7.1733E+05	1.4997E+04	1.2704E+04
1.056E+00	2.0192E+05	3.1816E+05	5.4694E+05	7.0342E+05	1.4833E+04	1.2600E+04
1.190E+00	1.8351E+05	2.8255E+05	4.0561E+05	5.1939E+05	1.2548E+04	1.1112E+04
1.200E+00	1.8209E+05	2.7996E+05	3.9731E+05	5.0867E+05	1.2407E+04	1.1017E+04
1.500E+00	1.4004E+05	2.0895E+05	2.1673E+05	2.7570E+05	8.5647E+03	8.5526E+03
2.000E+00	8.9650E+04	1.2966E+05	9.2677E+04	1.1695E+05	5.7936E+03	5.9804E+03
3.000E+00	4.0942E+04	5.7179E+04	2.5025E+04	3.1245E+04	3.0429E+03	3.3997E+03
3.108E+00	3.7958E+04	5.2875E+04	2.2206E+04	2.7700E+04	2.8728E+03	3.2258E+03
3.133E+00	3.7309E+04	5.1940E+04	2.1611E+04	2.6953E+04	2.8355E+03	3.1875E+03
3.255E+00	3.4311E+04	4.7631E+04	1.8949E+04	2.3609E+04	2.6623E+03	3.0078E+03
3.281E+00	3.3715E+04	4.6775E+04	1.8437E+04	2.2966E+04	2.6275E+03	2.9716E+03
3.770E+00	2.4636E+04	3.3811E+04	1.1370E+04	1.4109E+04	2.0866E+03	2.3955E+03
3.800E+00	2.4183E+04	3.3172E+04	1.1054E+04	1.3714E+04	2.0588E+03	2.3654E+03
4.000E+00	2.1442E+04	2.9297E+04	9.2114E+03	1.1411E+04	1.8883E+03	2.1788E+03
4.478E+00	1.6329E+04	2.2123E+04	6.1311E+03	7.5709E+03	1.5581E+03	1.8106E+03
4.514E+00	1.6012E+04	2.1681E+04	5.9557E+03	7.3527E+03	1.5369E+03	1.7867E+03
4.795E+00	1.3786E+04	1.8581E+04	4.7746E+03	5.8839E+03	1.3851E+03	1.6142E+03
4.834E+00	1.3513E+04	1.8201E+04	4.6364E+03	5.7123E+03	1.3661E+03	1.5925E+03
5.000E+00	1.2407E+04	1.6670E+04	4.0918E+03	5.0365E+03	1.2883E+03	1.5031E+03
6.000E+00	7.7242E+03	1.0240E+04	2.0622E+03	2.5242E+03	9.3500E+02	1.0912E+03
8.000E+00	3.4957E+03	4.5349E+03	6.7296E+02	8.1614E+02	5.5571E+02	6.3873E+02
1.000E+01	1.8242E+03	2.3257E+03	2.7393E+02	3.2963E+02	3.6677E+02	4.1125E+02
1.500E+01	5.2074E+02	6.4198E+02	5.0390E+01	5.9693E+01	1.6784E+02	1.7499E+02
1.544E+01	4.7470E+02	5.8374E+02	4.4542E+01	5.2702E+01	1.5854E+02	1.6422E+02
1.556E+01	4.6268E+02	5.6857E+02	4.3048E+01	5.0917E+01	1.5606E+02	1.6136E+02
1.854E+01	2.6139E+02	3.1625E+02	2.0210E+01	2.3722E+01	1.0998E+02	1.0891E+02

Z= 88

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.869E+01	2.5460E+02	3.0781E+02	1.9520E+01	2.2905E+01	1.0822E+02	1.0695E+02
1.923E+01	2.3167E+02	2.7936E+02	1.7240E+01	2.0202E+01	1.0216E+02	1.0020E+02
1.939E+01	2.2562E+02	2.7186E+02	1.6650E+01	1.9504E+01	1.0053E+02	9.8381E+01
2.000E+01	2.0338E+02	2.4436E+02	1.4527E+01	1.6992E+01	9.4363E+01	9.1563E+01
3.000E+01	5.0802E+01	5.8667E+01	2.3943E+00	2.7437E+00	4.0627E+01	3.4772E+01
4.000E+01	1.8310E+01	2.0507E+01	6.5136E-01	7.3430E-01	2.1834E+01	1.6873E+01
5.000E+01	8.1643E+00	8.9170E+00	2.3544E-01	2.6182E-01	1.3311E+01	9.4552E+00
6.000E+01	4.1865E+00	4.4763E+00	1.0224E-01	1.1236E-01	8.8081E+00	5.8299E+00
8.000E+01	1.4458E+00	1.4937E+00	2.7462E-02	2.9601E-02	4.5223E+00	2.6750E+00
1.000E+02	6.3139E-01	6.3511E-01	9.9455E-03	1.0555E-02	2.6650E+00	1.4527E+00
1.043E+02	5.3934E-01	5.3981E-01	8.2064E-03	8.6834E-03	2.4075E+00	1.2914E+00
1.052E+02	5.2361E-01	5.2358E-01	7.9149E-03	8.3710E-03	2.3618E+00	1.2631E+00
1.500E+02	1.4112E-01	1.3569E-01	1.6189E-03	1.6566E-03	9.9919E-01	4.6930E-01
2.000E+02	4.9532E-02	4.6418E-02	4.6217E-04	4.6606E-04	4.9285E-01	2.1046E-01
3.000E+02	1.1877E-02	1.0854E-02	8.5129E-05	8.5903E-05	1.8274E-01	6.9241E-02
4.000E+02	4.5214E-03	4.1431E-03	2.7378E-05	2.8375E-05	9.1851E-02	3.2297E-02
5.000E+02	2.2359E-03	2.0653E-03	1.2371E-05	1.2857E-05	5.4741E-02	1.8290E-02
6.000E+02	1.2846E-03	1.2015E-03	6.5272E-06	6.8683E-06	3.6336E-02	1.1691E-02
8.000E+02	5.6325E-04	5.4797E-04	2.5047E-06	2.9245E-06	1.9551E-02	5.9865E-03
1.000E+03	3.1609E-04	3.1504E-04	1.3810E-06	1.5312E-06	1.2378E-02	3.6898E-03
1.500E+03	1.2211E-04	1.2916E-04	5.5165E-07	5.8483E-07	5.6843E-03	1.6576E-03

Z= 88

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	6 S 1/2	6 P 1/2	6 P 3/2
1.000E+00	4.5589E+04	4.4784E+04	6.7412E+04	3.5384E+03	2.4711E+03	7.2065E+03
1.048E+00	4.2652E+04	4.2256E+04	6.3311E+04	3.2928E+03	2.3354E+03	6.7164E+03
1.056E+00	4.2169E+04	4.1832E+04	6.2627E+04	3.2527E+03	2.3129E+03	6.6360E+03
1.190E+00	3.5471E+04	3.5700E+04	5.2848E+04	2.7044E+03	1.9981E+03	5.5323E+03
1.200E+00	3.5056E+04	3.5306E+04	5.2227E+04	2.6710E+03	1.9784E+03	5.4646E+03
1.500E+00	2.5000E+04	2.5268E+04	3.6663E+04	1.8778E+03	1.4874E+03	3.8440E+03
2.000E+00	1.5788E+04	1.5430E+04	2.1889E+04	1.1817E+03	1.0082E+03	2.3966E+03
3.000E+00	7.8793E+03	6.8935E+03	9.4962E+03	6.0442E+02	5.5635E+02	1.1823E+03
3.108E+00	7.3971E+03	6.3892E+03	8.7797E+03	5.6958E+02	5.2683E+02	1.1090E+03
3.133E+00	7.2916E+03	6.2795E+03	8.6241E+03	5.6196E+02	5.2034E+02	1.0930E+03
3.255E+00	6.8017E+03	5.7728E+03	7.9070E+03	5.2658E+02	4.8999E+02	1.0188E+03
3.281E+00	6.7038E+03	5.6721E+03	7.7647E+03	5.1951E+02	4.8388E+02	1.0040E+03
3.770E+00	5.1892E+03	4.1452E+03	5.6198E+03	4.0994E+02	3.8744E+02	7.7525E+02
3.800E+00	5.1122E+03	4.0694E+03	5.5140E+03	4.0436E+02	3.8243E+02	7.6365E+02
4.000E+00	4.6402E+03	3.6093E+03	4.8732E+03	3.7008E+02	3.5146E+02	6.9261E+02
4.478E+00	3.7356E+03	2.7535E+03	3.6885E+03	3.0404E+02	2.9075E+02	5.5674E+02
4.514E+00	3.6782E+03	2.7005E+03	3.6154E+03	2.9982E+02	2.8683E+02	5.4812E+02
4.795E+00	3.2680E+03	2.3274E+03	3.1027E+03	2.6963E+02	2.5856E+02	4.8668E+02
4.834E+00	3.2171E+03	2.2817E+03	3.0401E+03	2.6587E+02	2.5501E+02	4.7904E+02
5.000E+00	3.0087E+03	2.0967E+03	2.7869E+03	2.5044E+02	2.4042E+02	4.4785E+02
6.000E+00	2.0800E+03	1.3114E+03	1.7206E+03	1.8074E+02	1.7355E+02	3.0912E+02
8.000E+00	1.1299E+03	5.9871E+02	7.6905E+02	1.0663E+02	1.0086E+02	1.6767E+02
1.000E+01	6.8748E+02	3.1473E+02	3.9739E+02	7.0047E+01	6.4646E+01	1.0255E+02
1.500E+01	2.6437E+02	9.0990E+01	1.1111E+02	3.1838E+01	2.8089E+01	3.9423E+01
1.544E+01	2.4633E+02	8.3011E+01	1.0111E+02	3.0062E+01	2.6360E+01	3.6733E+01
1.556E+01	2.4155E+02	8.0929E+01	9.8509E+01	2.9588E+01	2.5901E+01	3.6021E+01
1.854E+01	1.5609E+02	4.5947E+01	5.5061E+01	2.0808E+01	1.7483E+01	2.3276E+01
1.869E+01	1.5298E+02	4.4762E+01	5.3602E+01	2.0474E+01	1.7168E+01	2.2811E+01
1.923E+01	1.4231E+02	4.0765E+01	4.8685E+01	1.9571E+01	1.6085E+01	2.1220E+01
1.939E+01	1.3945E+02	3.9708E+01	4.7388E+01	1.9257E+01	1.5793E+01	2.0794E+01
2.000E+01	1.2878E+02	3.5823E+01	4.2630E+01	1.8075E+01	1.4699E+01	1.9203E+01
3.000E+01	4.4155E+01	9.0372E+00	1.0335E+01	7.7769E+00	5.5848E+00	6.5846E+00
4.000E+01	1.9893E+01	3.2731E+00	3.6114E+00	4.1784E+00	2.7110E+00	2.9667E+00
5.000E+01	1.0511E+01	1.4649E+00	1.5760E+00	2.5466E+00	1.5197E+00	1.5674E+00
6.000E+01	6.1707E+00	7.5325E-01	7.9335E-01	1.6848E+00	9.3711E-01	9.2013E-01
8.000E+01	2.6101E+00	2.6108E-01	2.6569E-01	8.6463E-01	4.3006E-01	3.9007E-01

Z= 88

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	6 S 1/2	6 P 1/2	6 P 3/2
1.000E+02	1.3255E+00	1.1430E-01	1.1323E-01	5.0927E-01	2.3258E-01	1.9813E-01
1.043E+02	1.1643E+00	9.7681E-02	9.6278E-02	4.6001E-01	2.0676E-01	1.7403E-01
1.052E+02	1.1362E+00	9.4840E-02	9.3389E-02	4.5129E-01	2.0223E-01	1.6984E-01
1.500E+02	3.8164E-01	2.5645E-02	2.4276E-02	1.9059E-01	7.5152E-02	5.7064E-02
2.000E+02	1.5790E-01	9.0207E-03	8.3195E-03	9.4007E-02	3.3705E-02	2.3615E-02
3.000E+02	4.6709E-02	2.1674E-03	1.9583E-03	3.4856E-02	1.1091E-02	6.9875E-03
4.000E+02	2.0383E-02	8.2571E-04	7.4745E-04	1.7519E-02	5.1734E-03	3.0501E-03
5.000E+02	1.1036E-02	4.0810E-04	3.7330E-04	1.0441E-02	2.9297E-03	1.6518E-03
6.000E+02	6.8284E-03	2.3442E-04	2.1771E-04	6.9306E-03	1.8726E-03	1.0222E-03
8.000E+02	3.3448E-03	1.0299E-04	9.9071E-05	3.7293E-03	9.5900E-04	5.0107E-04
1.000E+03	2.0011E-03	5.7720E-05	5.6947E-05	2.3615E-03	5.9108E-04	2.9998E-04
1.500E+03	8.5675E-04	2.2341E-05	2.3261E-05	1.0850E-03	2.6578E-04	1.2880E-04

Z= 88

ENERGY	7 S 1/2
1.000E+00	3.9897E+02
1.048E+00	3.6892E+02
1.056E+00	3.6404E+02
1.190E+00	2.9822E+02
1.200E+00	2.9423E+02
1.500E+00	2.0110E+02
2.000E+00	1.1904E+02
3.000E+00	6.1141E+01
3.108E+00	5.7641E+01
3.133E+00	5.6876E+01
3.255E+00	5.3321E+01
3.281E+00	5.2610E+01
3.770E+00	4.1594E+01
3.800E+00	4.1032E+01
4.000E+00	3.7579E+01
4.478E+00	3.0920E+01
4.514E+00	3.0494E+01
4.795E+00	2.7447E+01
4.834E+00	2.7066E+01
5.000E+00	2.5507E+01
6.000E+00	1.8455E+01
8.000E+00	1.0931E+01
1.000E+01	7.2009E+00
1.500E+01	3.2881E+00
1.544E+01	3.1055E+00
1.556E+01	3.0568E+00
1.854E+01	2.1529E+00
1.869E+01	2.1185E+00
1.923E+01	1.9998E+00
1.939E+01	1.9677E+00
2.000E+01	1.8469E+00
3.000E+01	7.9451E-01
4.000E+01	4.2683E-01
5.000E+01	2.6013E-01
6.000E+01	1.7209E-01
8.000E+01	8.8317E-02
1.000E+02	5.2021E-02
1.043E+02	4.6990E-02
1.052E+02	4.6098E-02
1.500E+02	1.9469E-02
2.000E+02	9.6048E-03
3.000E+02	3.5629E-03
4.000E+02	1.7919E-03
5.000E+02	1.0691E-03
6.000E+02	7.1055E-04

Z= 88

ENERGY 7 S 1/2
8.000E+02 3.8375E-04
1.000E+03 2.4428E-04
1.500E+03 1.1469E-04

Z= 89 27 STATES, 48 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	107.3156	.98666
2 S 1/2	2.00	19.8691	.88735
2 P 1/2	2.00	19.1644	.83348
2 P 3/2	4.00	15.8815	.79898
3 S 1/2	2.00	4.9800	.69974
3 P 1/2	2.00	4.6557	.63108
3 P 3/2	4.00	3.9036	.58402
3 D 3/2	4.00	3.3793	.39774
3 D 5/2	6.00	3.2235	.38804
4 S 1/2	2.00	1.2512	.45470
4 P 1/2	2.00	1.1053	.38945
4 P 3/2	4.00	.9114	.34329
4 D 3/2	4.00	.6755	.19473
4 D 5/2	6.00	.6393	.18561
4 F 5/2	6.00	.3287	.05013
4 F 7/2	8.00	.3194	.04898
5 S 1/2	2.00	.2746	.22403
5 P 1/2	2.00	.2189	.17620
5 P 3/2	4.00	.1747	.14860
5 D 3/2	4.00	.0928	.06295
5 D 5/2	6.00	.0863	.05872
6 S 1/2	2.00	.0453	.07889
6 P 1/2	2.00	.0293	.05263
6 P 3/2	4.00	.0219	.04094
6 D 3/2	.40	.0045	.00796
6 D 5/2	.60	.0040	.00689
7 S 1/2	2.00	.0054	.01464

Z= 89 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	2.4338E+06	.0E+00	.0E+00	.0E+00	2.4338E+06
1.1042E+00	2.0297E+06	.0E+00	.0E+00	.0E+00	2.0297E+06
1.1130E+00	2.0290E+06	.0E+00	.0E+00	.0E+00	2.0290E+06
1.2500E+00	1.6274E+06	.0E+00	.0E+00	.0E+00	1.6274E+06
1.2600E+00	1.6349E+06	.0E+00	.0E+00	.0E+00	1.6349E+06
1.5000E+00	1.1573E+06	.0E+00	.0E+00	.0E+00	1.1573E+06
2.0000E+00	6.3472E+05	.0E+00	.0E+00	.0E+00	6.3472E+05
3.0000E+00	2.5911E+05	.0E+00	.0E+00	.0E+00	2.5911E+05
3.2203E+00	2.2047E+05	.0E+00	.0E+00	.0E+00	2.2047E+05
3.2461E+00	5.5473E+05	.0E+00	.0E+00	3.3825E+05	2.1648E+05
3.3759E+00	4.8642E+05	.0E+00	.0E+00	2.8856E+05	1.9786E+05
3.4030E+00	6.9144E+05	.0E+00	.0E+00	4.9717E+05	1.9427E+05
3.8997E+00	4.8806E+05	.0E+00	.0E+00	3.4642E+05	1.4165E+05
3.9309E+00	5.5624E+05	.0E+00	.0E+00	4.1721E+05	1.3903E+05
4.0000E+00	5.3403E+05	.0E+00	.0E+00	4.0054E+05	1.3349E+05
4.6511E+00	3.6497E+05	.0E+00	.0E+00	2.7143E+05	9.3539E+04
4.6883E+00	3.7981E+05	.0E+00	.0E+00	2.8803E+05	9.1784E+04
4.9750E+00	3.2817E+05	.0E+00	.0E+00	2.4848E+05	7.9686E+04
5.0000E+00	3.3833E+05	.0E+00	.0E+00	2.5960E+05	7.8738E+04
5.0148E+00	3.3591E+05	.0E+00	.0E+00	2.5772E+05	7.8182E+04
6.0000E+00	2.1679E+05	.0E+00	.0E+00	1.6604E+05	5.0748E+04

Z= 89 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
8.0000E+00	1.0608E+05	.0E+00	.0E+00	8.1023E+04	2.5055E+04
1.0000E+01	6.0282E+04	.0E+00	.0E+00	4.5924E+04	1.4358E+04
1.5000E+01	2.1235E+04	.0E+00	.0E+00	1.6105E+04	5.1299E+03
1.5866E+01	1.8356E+04	.0E+00	.0E+00	1.3915E+04	4.4417E+03
1.5993E+01	4.3517E+04	.0E+00	2.5537E+04	1.3628E+04	4.3516E+03
1.9145E+01	2.6702E+04	.0E+00	1.5466E+04	8.5013E+03	2.7350E+03
1.9299E+01	3.6934E+04	.0E+00	2.5930E+04	8.3248E+03	2.6790E+03
1.9849E+01	3.4394E+04	.0E+00	2.4173E+04	7.7304E+03	2.4905E+03
2.0000E+01	3.9007E+04	.0E+00	2.8987E+04	7.5778E+03	2.4421E+03
2.0008E+01	3.8974E+04	.0E+00	2.8965E+04	7.5696E+03	2.4394E+03
3.0000E+01	1.3760E+04	.0E+00	1.0330E+04	2.5846E+03	8.4522E+02
4.0000E+01	6.4508E+03	.0E+00	4.8610E+03	1.1955E+03	3.9432E+02
5.0000E+01	3.5585E+03	.0E+00	2.6866E+03	6.5474E+02	2.1723E+02
6.0000E+01	2.1801E+03	.0E+00	1.6476E+03	3.9941E+02	1.3311E+02
8.0000E+01	1.0008E+03	.0E+00	7.5713E+02	1.8251E+02	6.1211E+01
1.0000E+02	5.4599E+02	.0E+00	4.1291E+02	9.9251E+01	3.3428E+01
1.0721E+02	4.5145E+02	.0E+00	3.4169E+02	8.2069E+01	2.7682E+01
1.0807E+02	1.9400E+03	1.4982E+03	3.3436E+02	8.0301E+01	2.7089E+01
1.5000E+02	8.3699E+02	6.5584E+02	1.3715E+02	3.2860E+01	1.1145E+01
2.0000E+02	3.9693E+02	3.1354E+02	6.3140E+01	1.5105E+01	5.1422E+00
3.0000E+02	1.4028E+02	1.1166E+02	2.1674E+01	5.1756E+00	1.7692E+00
4.0000E+02	6.8792E+01	5.5004E+01	1.0445E+01	2.4901E+00	8.5310E-01
5.0000E+02	4.0473E+01	3.2469E+01	6.0649E+00	1.4438E+00	4.9523E-01
6.0000E+02	2.6678E+01	2.1460E+01	3.9547E+00	9.4017E-01	3.2272E-01
8.0000E+02	1.4272E+01	1.1526E+01	2.0820E+00	4.9384E-01	1.6966E-01
1.0000E+03	9.0249E+00	7.3074E+00	1.3029E+00	3.0850E-01	1.0605E-01
1.5000E+03	4.1522E+00	3.3727E+00	5.9168E-01	1.3980E-01	4.8055E-02

Z= 89

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.104E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.113E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.250E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.260E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.220E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.246E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.376E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.403E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.900E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.931E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.651E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.688E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.2220E+04
4.975E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.0908E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.4121E+04	2.0798E+04
5.015E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.4010E+04	2.0735E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.1029E+04	1.6636E+04
8.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.1595E+03	1.0687E+04
1.000E+01	.0E+00	.0E+00	.0E+00	.0E+00	4.9853E+03	7.1947E+03
1.500E+01	.0E+00	.0E+00	.0E+00	.0E+00	2.4460E+03	3.1998E+03
1.587E+01	.0E+00	.0E+00	.0E+00	.0E+00	2.2037E+03	2.8397E+03
1.599E+01	.0E+00	.0E+00	.0E+00	2.5537E+04	2.1712E+03	2.7914E+03
1.915E+01	.0E+00	.0E+00	.0E+00	1.5466E+04	1.5442E+03	1.8762E+03
1.930E+01	.0E+00	.0E+00	1.0790E+04	1.5140E+04	1.5205E+03	1.8429E+03
1.985E+01	.0E+00	.0E+00	1.0135E+04	1.4038E+04	1.4399E+03	1.7291E+03
2.000E+01	.0E+00	5.2607E+03	9.9714E+03	1.3755E+04	1.4189E+03	1.6996E+03

Z= 89

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
2.001E+01	.0E+00	5.2643E+03	9.9616E+03	1.3739E+04	1.4178E+03	1.6980E+03
3.000E+01	.0E+00	2.5397E+03	3.5081E+03	4.2819E+03	6.2939E+02	6.4977E+02
4.000E+01	.0E+00	1.4384E+03	1.6125E+03	1.8101E+03	3.4303E+02	3.1528E+02
5.000E+01	.0E+00	9.0221E+02	8.6924E+02	9.1512E+02	2.1083E+02	1.7641E+02
6.000E+01	.0E+00	6.0720E+02	5.2031E+02	5.2004E+02	1.4023E+02	1.0857E+02
8.000E+01	.0E+00	3.1758E+02	2.2881E+02	2.1073E+02	7.2424E+01	4.9651E+01
1.000E+02	.0E+00	1.8878E+02	1.2023E+02	1.0389E+02	4.2818E+01	2.6783E+01
1.072E+02	.0E+00	1.6012E+02	9.8302E+01	8.3272E+01	3.6267E+01	2.2064E+01
1.081E+02	1.4982E+03	1.5711E+02	9.6061E+01	8.1187E+01	3.5582E+01	2.1578E+01
1.500E+02	6.5584E+02	7.1276E+01	3.7228E+01	2.8646E+01	1.6102E+01	8.6212E+00
2.000E+02	3.1354E+02	3.5247E+01	1.6313E+01	1.1580E+01	7.9625E+00	3.8592E+00
3.000E+02	1.1166E+02	1.3090E+01	5.2395E+00	3.3450E+00	2.9615E+00	1.2677E+00
4.000E+02	5.5004E+01	6.5863E+00	2.4152E+00	1.4430E+00	1.4916E+00	5.9101E-01
5.000E+02	3.2469E+01	3.9298E+00	1.3587E+00	7.7639E-01	8.9027E-01	3.3464E-01
6.000E+02	2.1460E+01	2.6114E+00	8.6488E-01	4.7847E-01	5.9160E-01	2.1389E-01
8.000E+02	1.1526E+01	1.4076E+00	4.4091E-01	2.3341E-01	3.1878E-01	1.0954E-01
1.000E+03	7.3074E+00	8.9238E-01	2.7120E-01	1.3935E-01	2.0200E-01	6.7520E-02
1.500E+03	3.3727E+00	4.1048E-01	1.2164E-01	5.9559E-02	9.2811E-02	3.0399E-02

Z= 89

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.5596E+05
1.104E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.4078E+05
1.113E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.9225E+04	1.3956E+05
1.250E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.7078E+04	1.2266E+05
1.260E+00	.0E+00	.0E+00	.0E+00	3.2687E+04	2.7023E+04	1.2156E+05
1.500E+00	.0E+00	.0E+00	.0E+00	2.6363E+04	2.5189E+04	9.8833E+04
2.000E+00	.0E+00	.0E+00	.0E+00	1.8942E+04	2.0880E+04	6.6680E+04
3.000E+00	.0E+00	.0E+00	.0E+00	1.1041E+04	1.3551E+04	3.5160E+04
3.220E+00	.0E+00	.0E+00	.0E+00	9.9507E+03	1.2391E+04	3.1160E+04
3.246E+00	.0E+00	.0E+00	3.3825E+05	9.8333E+03	1.2264E+04	3.0736E+04
3.376E+00	.0E+00	.0E+00	2.8856E+05	9.2739E+03	1.1648E+04	2.8720E+04
3.403E+00	.0E+00	2.1434E+05	2.8283E+05	9.1640E+03	1.1524E+04	2.8323E+04
3.900E+00	.0E+00	1.4586E+05	2.0056E+05	7.4565E+03	9.5268E+03	2.2200E+04
3.931E+00	7.8111E+04	1.4291E+05	1.9619E+05	7.3647E+03	9.4184E+03	2.1880E+04
4.000E+00	7.7082E+04	1.3656E+05	1.8690E+05	7.1671E+03	9.1848E+03	2.1197E+04
4.651E+00	6.0366E+04	8.9915E+04	1.2115E+05	5.6432E+03	7.3167E+03	1.5995E+04
4.688E+00	5.9551E+04	8.7895E+04	1.1836E+05	5.5715E+03	7.2263E+03	1.5754E+04
4.975E+00	5.3471E+04	7.4029E+04	1.0008E+05	5.0599E+03	6.5818E+03	1.4059E+04
5.000E+00	5.2968E+04	7.3029E+04	9.8679E+04	5.0185E+03	6.5295E+03	1.3924E+04
5.015E+00	5.2672E+04	7.2445E+04	9.7860E+04	4.9942E+03	6.4987E+03	1.3844E+04
6.000E+00	3.7555E+04	4.3338E+04	5.7484E+04	3.7049E+03	4.8289E+03	9.7045E+03
8.000E+00	2.1148E+04	1.8279E+04	2.3749E+04	2.2478E+03	2.8879E+03	5.3207E+03
1.000E+01	1.3061E+04	9.0848E+03	1.1599E+04	1.5020E+03	1.8819E+03	3.2533E+03
1.500E+01	5.0795E+03	2.4073E+03	2.9727E+03	6.9829E+02	8.1280E+02	1.2583E+03
1.587E+01	4.4298E+03	1.9929E+03	2.4485E+03	6.2606E+02	7.1939E+02	1.0972E+03
1.599E+01	4.3440E+03	1.9398E+03	2.3816E+03	6.1637E+02	7.0694E+02	1.0759E+03
1.915E+01	2.7669E+03	1.0479E+03	1.2660E+03	4.3201E+02	4.7331E+02	6.8673E+02
1.930E+01	2.7114E+03	1.0194E+03	1.2307E+03	4.2518E+02	4.6481E+02	6.7298E+02
1.985E+01	2.5233E+03	9.2468E+02	1.1134E+03	4.0188E+02	4.3597E+02	6.2653E+02
2.000E+01	2.4748E+03	9.0069E+02	1.0838E+03	3.9582E+02	4.2850E+02	6.1456E+02
2.001E+01	2.4722E+03	8.9941E+02	1.0822E+03	3.9549E+02	4.2810E+02	6.1392E+02
3.000E+01	8.4284E+02	2.1450E+02	2.4809E+02	1.7190E+02	1.6399E+02	2.1124E+02
4.000E+01	3.7734E+02	7.5333E+01	8.4492E+01	9.2815E+01	7.9913E+01	9.5287E+01
5.000E+01	1.9833E+02	3.3039E+01	3.6129E+01	5.6749E+01	4.4908E+01	5.0383E+01
6.000E+01	1.1594E+02	1.6747E+01	1.7923E+01	3.7631E+01	2.7746E+01	2.9595E+01
8.000E+01	4.8848E+01	5.6969E+00	5.8878E+00	1.9375E+01	1.2769E+01	1.2558E+01
1.000E+02	2.4706E+01	2.4649E+00	2.4790E+00	1.1438E+01	6.9198E+00	6.3835E+00
1.072E+02	1.9945E+01	1.8989E+00	1.8937E+00	9.6855E+00	5.7082E+00	5.1610E+00
1.081E+02	1.9462E+01	1.8430E+00	1.8363E+00	9.5022E+00	5.5836E+00	5.0366E+00

Z= 89

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.500E+02	7.0703E+00	5.4416E-01	5.2243E-01	4.2969E+00	2.2439E+00	1.8409E+00
2.000E+02	2.9159E+00	1.8985E-01	1.7743E-01	2.1248E+00	1.0088E+00	7.6255E-01
3.000E+02	8.5976E-01	4.5234E-02	4.1383E-02	7.9056E-01	3.3289E-01	2.2591E-01
4.000E+02	3.7459E-01	1.7166E-02	1.5728E-02	3.9830E-01	1.5577E-01	9.8490E-02
5.000E+02	2.0262E-01	8.4682E-03	7.8303E-03	2.3771E-01	8.8334E-02	5.3330E-02
6.000E+02	1.2528E-01	4.8542E-03	4.5586E-03	1.5796E-01	5.6513E-02	3.2990E-02
8.000E+02	6.1320E-02	2.1297E-03	2.0702E-03	8.5104E-02	2.8975E-02	1.6161E-02
1.000E+03	3.6603E-02	1.1966E-03	1.1793E-03	5.3916E-02	1.7877E-02	9.6629E-03
1.500E+03	1.5641E-02	4.6224E-04	4.8398E-04	2.4763E-02	8.0389E-03	4.1333E-03

Z= 89

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	2.1076E+05	3.3634E+05	6.6275E+05	8.5422E+05	1.6374E+04	1.3522E+04
1.104E+00	1.9704E+05	3.0982E+05	5.2286E+05	6.7179E+05	1.4306E+04	1.2235E+04
1.113E+00	1.9587E+05	3.0762E+05	5.1273E+05	6.5861E+05	1.4149E+04	1.2135E+04
1.250E+00	1.7732E+05	2.7230E+05	3.8208E+05	4.8858E+05	1.2013E+04	1.0730E+04
1.260E+00	1.7588E+05	2.6969E+05	3.7418E+05	4.7835E+05	1.1878E+04	1.0638E+04
1.500E+00	1.4304E+05	2.1444E+05	2.3320E+05	2.9657E+05	9.2207E+03	8.7417E+03
2.000E+00	9.2507E+04	1.3412E+05	1.0035E+05	1.2664E+05	5.9738E+03	6.1436E+03
3.000E+00	4.2658E+04	5.9644E+04	2.7326E+04	3.4107E+04	3.1462E+03	3.5179E+03
3.220E+00	3.6666E+04	5.0961E+04	2.1505E+04	2.6790E+04	2.8033E+03	3.1680E+03
3.246E+00	3.6035E+04	5.0056E+04	2.0929E+04	2.6065E+04	2.7669E+03	3.1303E+03
3.376E+00	3.3066E+04	4.5800E+04	1.8296E+04	2.2762E+04	2.5944E+03	2.9505E+03
3.403E+00	3.2489E+04	4.4974E+04	1.7801E+04	2.2141E+04	2.5605E+03	2.9150E+03
3.900E+00	2.3852E+04	3.2658E+04	1.1067E+04	1.3713E+04	2.0419E+03	2.3599E+03
3.931E+00	2.3413E+04	3.2038E+04	1.0759E+04	1.3329E+04	2.0148E+03	2.3303E+03
4.000E+00	2.2477E+04	3.0720E+04	1.0115E+04	1.2525E+04	1.9567E+03	2.2666E+03
4.651E+00	1.5644E+04	2.1133E+04	5.8814E+03	7.2502E+03	1.5148E+03	1.7731E+03
4.688E+00	1.5339E+04	2.0709E+04	5.7129E+03	7.0407E+03	1.4942E+03	1.7497E+03
4.975E+00	1.3233E+04	1.7786E+04	4.5956E+03	5.6540E+03	1.3490E+03	1.5836E+03
5.000E+00	1.3068E+04	1.7557E+04	4.5115E+03	5.5498E+03	1.3374E+03	1.5702E+03
5.015E+00	1.2971E+04	1.7422E+04	4.4625E+03	5.4890E+03	1.3306E+03	1.5624E+03
6.000E+00	8.1649E+03	1.0818E+04	2.2812E+03	2.7903E+03	9.7207E+02	1.1438E+03
8.000E+00	3.7144E+03	4.8138E+03	7.4816E+02	9.0655E+02	5.7904E+02	6.7300E+02
1.000E+01	1.9459E+03	2.4776E+03	3.0564E+02	3.6742E+02	3.8281E+02	4.3503E+02
1.500E+01	5.5920E+02	6.8814E+02	5.6564E+01	6.6926E+01	1.7570E+02	1.8643E+02
1.587E+01	4.6739E+02	5.7232E+02	4.4535E+01	5.2569E+01	1.5732E+02	1.6491E+02
1.599E+01	4.5557E+02	5.5744E+02	4.3043E+01	5.0790E+01	1.5485E+02	1.6204E+02
1.915E+01	2.5351E+02	3.0516E+02	1.9810E+01	2.3189E+01	1.0811E+02	1.0832E+02
1.930E+01	2.4692E+02	2.9701E+02	1.9135E+01	2.2390E+01	1.0639E+02	1.0638E+02
1.985E+01	2.2496E+02	2.6988E+02	1.6927E+01	1.9781E+01	1.0051E+02	9.9757E+01
2.000E+01	2.1938E+02	2.6301E+02	1.6377E+01	1.9132E+01	9.8980E+01	9.8043E+01
2.001E+01	2.1908E+02	2.6264E+02	1.6348E+01	1.9097E+01	9.8898E+01	9.7951E+01
3.000E+01	5.5133E+01	6.3493E+01	2.7146E+00	3.1060E+00	4.2737E+01	3.7493E+01
4.000E+01	1.9950E+01	2.2274E+01	7.4097E-01	8.3383E-01	2.3016E+01	1.8282E+01
5.000E+01	8.9216E+00	9.7106E+00	2.6847E-01	2.9798E-01	1.4054E+01	1.0282E+01
6.000E+01	4.5852E+00	4.8845E+00	1.1682E-01	1.2813E-01	9.3122E+00	6.3577E+00
8.000E+01	1.5889E+00	1.6348E+00	3.1486E-02	3.3859E-02	4.7915E+00	2.9299E+00
1.000E+02	6.9557E-01	6.9663E-01	1.1431E-02	1.2101E-02	2.8283E+00	1.5897E+00
1.072E+02	5.3756E-01	5.3395E-01	8.3458E-03	8.7928E-03	2.3951E+00	1.3172E+00
1.081E+02	5.2194E-01	5.1794E-01	8.0512E-03	8.4774E-03	2.3498E+00	1.2885E+00
1.500E+02	1.5608E-01	1.4933E-01	1.8671E-03	1.9085E-03	1.0639E+00	5.1852E-01
2.000E+02	5.4915E-02	5.1187E-02	5.3380E-04	5.3847E-04	5.2604E-01	2.3335E-01
3.000E+02	1.3203E-02	1.1999E-02	9.8740E-05	9.9605E-05	1.9570E-01	7.7104E-02
4.000E+02	5.0363E-03	4.5809E-03	3.1968E-05	3.2572E-05	9.8579E-02	3.6059E-02
5.000E+02	2.4937E-03	2.2829E-03	1.4424E-05	1.4724E-05	5.8841E-02	2.0456E-02
6.000E+02	1.4326E-03	1.3300E-03	7.4798E-06	8.0281E-06	3.9099E-02	1.3099E-02
8.000E+02	6.2894E-04	6.0724E-04	2.9299E-06	3.3436E-06	2.1064E-02	6.7133E-03
1.000E+03	3.5386E-04	3.4784E-04	1.5328E-06	1.7776E-06	1.3344E-02	4.1414E-03
1.500E+03	1.3672E-04	1.4270E-04	6.0959E-07	6.5689E-07	6.1283E-03	1.8628E-03

ENERGY	5 P 3/2	5 U 3/2	5 D 5/2	6 S 1/2	6 P 1/2	6 P 3/2
1.000E+00	4.7863E+04	4.7695E+04	7.2145E+04	3.8437E+03	2.7275E+03	8.2215E+03
1.104E+00	4.1563E+04	4.2148E+04	6.3116E+04	3.3022E+03	2.4206E+03	7.0795E+03
1.113E+00	4.1086E+04	4.1713E+04	6.2415E+04	3.2618E+03	2.3972E+03	6.9940E+03
1.250E+00	3.4662E+04	3.5611E+04	5.2699E+04	2.7241E+03	2.0775E+03	5.8491E+03
1.260E+00	3.4254E+04	3.5209E+04	5.2067E+04	2.6904E+03	2.0569E+03	5.7769E+03
1.500E+00	2.6288E+04	2.7091E+04	3.9450E+04	2.0439E+03	1.6471E+03	4.3855E+03
2.000E+00	1.6619E+04	1.6621E+04	2.3648E+04	1.2876E+03	1.1198E+03	2.7349E+03
3.000E+00	8.3116E+03	7.4798E+03	1.0325E+04	6.5986E+02	6.2137E+02	1.3511E+03
3.220E+00	7.3204E+03	6.4230E+03	8.8215E+03	5.8575E+02	5.5723E+02	1.1881E+03
3.246E+00	7.2156E+03	6.3124E+03	8.6646E+03	5.7792E+02	5.5037E+02	1.1709E+03
3.376E+00	6.7196E+03	5.7912E+03	7.9268E+03	5.4082E+02	5.1765E+02	1.0895E+03
3.403E+00	6.6225E+03	5.6898E+03	7.7836E+03	5.3356E+02	5.1120E+02	1.0736E+03
3.900E+00	5.1455E+03	4.1778E+03	5.6600E+03	4.2287E+02	4.1108E+02	8.3217E+02
3.931E+00	5.0689E+03	4.1012E+03	5.5531E+03	4.1711E+02	4.0577E+02	8.1968E+02
4.000E+00	4.9051E+03	3.9381E+03	5.3256E+03	4.0479E+02	3.9438E+02	7.9298E+02
4.651E+00	3.6729E+03	2.7467E+03	3.6746E+03	3.1156E+02	3.0662E+02	5.9253E+02
4.688E+00	3.6162E+03	2.6936E+03	3.6016E+03	3.0725E+02	3.0249E+02	5.8333E+02
4.975E+00	3.2182E+03	2.3264E+03	3.0974E+03	2.7682E+02	2.7319E+02	5.1878E+02
5.000E+00	3.1865E+03	2.2975E+03	3.0578E+03	2.7439E+02	2.7083E+02	5.1364E+02
5.015E+00	3.1679E+03	2.2806E+03	3.0347E+03	2.7296E+02	2.6944E+02	5.1062E+02
6.000E+00	2.2066E+03	1.4421E+03	1.8939E+03	1.9831E+02	1.9614E+02	3.5508E+02
8.000E+00	1.2018E+03	6.6182E+02	8.5062E+02	1.1727E+02	1.1456E+02	1.9307E+02
1.000E+01	7.3284E+02	3.4930E+02	4.4117E+02	7.7165E+01	7.3719E+01	1.1767E+02
1.500E+01	2.8297E+02	1.0169E+02	1.2415E+02	3.5183E+01	3.2153E+01	4.5637E+01
1.587E+01	2.4674E+02	8.5138E+01	1.0342E+02	3.1479E+01	2.8440E+01	3.9793E+01
1.599E+01	2.4195E+02	8.3004E+01	1.0076E+02	3.0984E+01	2.7946E+01	3.9021E+01
1.915E+01	1.5447E+02	4.6426E+01	5.5440E+01	2.1587E+01	1.8683E+01	2.4912E+01
1.930E+01	1.5139E+02	4.5229E+01	5.3970E+01	2.1241E+01	1.8347E+01	2.4414E+01
1.985E+01	1.4094E+02	4.1237E+01	4.9078E+01	2.0061E+01	1.7205E+01	2.2730E+01
2.000E+01	1.3826E+02	4.0223E+01	4.7838E+01	1.9754E+01	1.6910E+01	2.2296E+01
2.001E+01	1.3811E+02	4.0169E+01	4.7771E+01	1.9738E+01	1.6894E+01	2.2273E+01
3.000E+01	4.7610E+01	1.0212E+01	1.1664E+01	8.6176E+00	6.4693E+00	7.6788E+00
4.000E+01	2.1515E+01	3.7178E+00	4.1162E+00	4.6394E+00	3.1556E+00	3.4703E+00
5.000E+01	1.1394E+01	1.6673E+00	1.7910E+00	2.8321E+00	1.7753E+00	1.8378E+00
6.000E+01	6.7011E+00	8.5933E-01	9.0333E-01	1.8762E+00	1.0980E+00	1.0808E+00
8.000E+01	2.8493E+00	2.9895E-01	3.0350E-01	9.6496E-01	5.0612E-01	4.5951E-01
1.000E+02	1.4467E+00	1.3120E-01	1.2966E-01	5.6937E-01	2.7462E-01	2.3389E-01
1.072E+02	1.1700E+00	1.0146E-01	9.9448E-02	4.8206E-01	2.2662E-01	1.8918E-01
1.081E+02	1.1419E+00	9.8521E-02	9.6473E-02	4.7293E-01	2.2168E-01	1.8463E-01
1.500E+02	4.1797E-01	2.9549E-02	2.7886E-02	2.1378E-01	8.9232E-02	6.7599E-02
2.000E+02	1.7330E-01	1.0420E-02	9.5743E-03	1.0569E-01	4.0161E-02	2.8035E-02
3.000E+02	5.1385E-02	2.5103E-03	2.2589E-03	3.9319E-02	1.3272E-02	8.3149E-03
4.000E+02	2.2449E-02	9.5832E-04	8.6378E-04	1.9806E-02	6.2071E-03	3.6335E-03
5.000E+02	1.2162E-02	4.7443E-04	4.3115E-04	1.1822E-02	3.5210E-03	1.9687E-03
6.000E+02	7.5261E-03	2.7246E-04	2.5142E-04	7.8558E-03	2.2531E-03	1.2185E-03
8.000E+02	3.6862E-03	1.2000E-04	1.1442E-04	4.2323E-03	1.1557E-03	5.9713E-04
1.000E+03	2.2044E-03	6.7232E-05	6.5851E-05	2.6813E-03	7.1294E-04	3.5730E-04
1.500E+03	9.4280E-04	2.6085E-05	2.6866E-05	1.2320E-03	3.2086E-04	1.5317E-04

ENERGY	6 D 3/2	6 D 5/2	7 S 1/2
1.000E+00	3.7901E+02	5.3778E+02	4.9849E+02
1.104E+00	3.3184E+02	4.6772E+02	4.2291E+02
1.113E+00	3.2818E+02	4.6232E+02	4.1735E+02
1.250E+00	2.7759E+02	3.8813E+02	3.4358E+02
1.260E+00	2.7430E+02	3.8335E+02	3.3897E+02
1.500E+00	2.0879E+02	2.8875E+02	2.5215E+02
2.000E+00	1.2944E+02	1.7119E+02	1.5342E+02
3.000E+00	5.8068E+01	7.4544E+01	7.5625E+01
3.220E+00	4.9861E+01	6.3683E+01	6.7180E+01

ENERGY	6 D 3/2	6 D 5/2	7 S 1/2
3.246E+00	4.9002E+01	6.2550E+01	6.6290E+01
3.376E+00	4.4954E+01	5.7222E+01	6.2061E+01
3.403E+00	4.4167E+01	5.6188E+01	6.1233E+01
3.900E+00	3.2433E+01	4.0860E+01	4.8603E+01
3.931E+00	3.1839E+01	4.0088E+01	4.7945E+01
4.000E+00	3.0573E+01	3.8447E+01	4.6538E+01
4.651E+00	2.1333E+01	2.6538E+01	3.5883E+01
4.688E+00	2.0921E+01	2.6011E+01	3.5389E+01
4.975E+00	1.8073E+01	2.2373E+01	3.1907E+01
5.000E+00	1.7849E+01	2.2088E+01	3.1628E+01
5.015E+00	1.7717E+01	2.1921E+01	3.1464E+01
6.000E+00	1.1212E+01	1.3690E+01	2.2910E+01
8.000E+00	5.1524E+00	6.1565E+00	1.3594E+01
1.000E+01	2.7222E+00	3.1961E+00	8.9680E+00
1.500E+01	7.9387E-01	9.0094E-01	4.1060E+00
1.587E+01	6.6477E-01	7.5071E-01	3.6755E+00
1.599E+01	6.4812E-01	7.3139E-01	3.6179E+00
1.915E+01	3.6273E-01	4.0269E-01	2.5242E+00
1.930E+01	3.5338E-01	3.9203E-01	2.4839E+00
1.985E+01	3.2223E-01	3.5653E-01	2.3464E+00
2.000E+01	3.1431E-01	3.4752E-01	2.3106E+00
2.001E+01	3.1389E-01	3.4704E-01	2.3087E+00
3.000E+01	7.9871E-02	8.4848E-02	9.9673E-01
4.000E+01	2.9091E-02	2.9964E-02	5.3655E-01
5.000E+01	1.3066E-02	1.3121E-02	3.2752E-01
6.000E+01	6.7360E-03	6.6215E-03	2.1696E-01
8.000E+01	2.3442E-03	2.2259E-03	1.1159E-01
1.000E+02	1.0290E-03	9.5125E-04	6.5842E-02
1.072E+02	7.9588E-04	7.2972E-04	5.5746E-02
1.081E+02	7.7279E-04	7.0789E-04	5.4690E-02
1.500E+02	2.3183E-04	2.0478E-04	2.4722E-02
2.000E+02	8.1762E-05	7.0367E-05	1.2224E-02
3.000E+02	1.9702E-05	1.6625E-05	4.5490E-03
4.000E+02	7.5218E-06	6.3654E-06	2.2927E-03
5.000E+02	3.7237E-06	3.1857E-06	1.3695E-03
6.000E+02	2.1415E-06	1.8630E-06	9.1103E-04
8.000E+02	9.4461E-07	8.5358E-07	4.9225E-04
1.000E+03	5.3166E-07	4.9561E-07	3.1316E-04
1.500E+03	2.0996E-07	2.0976E-07	1.4638E-04

Z= 90 27 STATES, 48 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	110.2496	.98672
2 S 1/2	2.00	20.5020	.88840
2 P 1/2	2.00	19.7818	.83494
2 P 3/2	4.00	16.3139	.79971
3 S 1/2	2.00	5.1642	.70244
3 P 1/2	2.00	4.8327	.63429
3 P 3/2	4.00	4.0358	.58610
3 D 3/2	4.00	3.5021	.40059
3 D 5/2	6.00	3.3379	.39070
4 S 1/2	2.00	1.3125	.45900
4 P 1/2	2.00	1.1628	.39403
4 P 3/2	4.00	.9561	.34669
4 D 3/2	4.00	.7148	.19802
4 D 5/2	6.00	.6764	.18867
4 F 5/2	6.00	.3583	.05205
4 F 7/2	8.00	.3483	.05085
5 S 1/2	2.00	.2953	.22986
5 P 1/2	2.00	.2376	.18190
5 P 3/2	4.00	.1894	.15338
5 D 3/2	4.00	.1042	.06650
5 D 5/2	6.00	.0970	.06208
6 S 1/2	2.00	.0507	.08463
6 P 1/2	2.00	.0335	.05767
6 P 3/2	4.00	.0250	.04497
6 D 3/2	.80	.0056	.00996
6 D 5/2	1.20	.0050	.00872
7 S 1/2	2.00	.0060	.01675

Z= 90 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	2.5435E+06	.0E+00	.0E+00	.0E+00	2.5435E+06
1.1616E+00	1.9332E+06	.0E+00	.0E+00	.0E+00	1.9332E+06
1.1709E+00	1.9320E+06	.0E+00	.0E+00	.0E+00	1.9320E+06
1.3112E+00	1.5543E+06	.0E+00	.0E+00	.0E+00	1.5543E+06
1.3217E+00	1.5610E+06	.0E+00	.0E+00	.0E+00	1.5610E+06
1.5000E+00	1.2132E+06	.0E+00	.0E+00	.0E+00	1.2132E+06
2.0000E+00	6.6643E+05	.0E+00	.0E+00	.0E+00	6.6643E+05
3.0000E+00	2.7252E+05	.0E+00	.0E+00	.0E+00	2.7252E+05
3.3346E+00	2.1413E+05	.0E+00	.0E+00	.0E+00	2.1413E+05
3.3613E+00	5.1926E+05	.0E+00	.0E+00	3.0901E+05	2.1025E+05
3.4986E+00	4.6570E+05	.0E+00	.0E+00	2.7393E+05	1.9177E+05
3.5266E+00	6.5321E+05	.0E+00	.0E+00	4.6493E+05	1.8828E+05
4.0000E+00	4.7909E+05	.0E+00	.0E+00	3.3857E+05	1.4052E+05
4.0318E+00	4.6954E+05	.0E+00	.0E+00	3.3159E+05	1.3795E+05
4.0641E+00	5.3566E+05	.0E+00	.0E+00	4.0026E+05	1.3539E+05
4.8279E+00	3.4783E+05	.0E+00	.0E+00	2.5766E+05	9.0170E+04
4.8665E+00	3.6201E+05	.0E+00	.0E+00	2.7353E+05	8.8474E+04
5.0000E+00	3.3874E+05	.0E+00	.0E+00	2.5579E+05	8.2949E+04
5.1591E+00	3.1336E+05	.0E+00	.0E+00	2.3639E+05	7.6971E+04
5.2004E+00	3.2069E+05	.0E+00	.0E+00	2.4517E+05	7.5516E+04
6.0000E+00	2.2608E+05	.0E+00	.0E+00	1.7258E+05	5.3498E+04
8.0000E+00	1.1074E+05	.0E+00	.0E+00	8.4297E+04	2.6442E+04
1.0000E+01	6.3005E+04	.0E+00	.0E+00	4.7841E+04	1.5164E+04
1.5000E+01	2.2240E+04	.0E+00	.0E+00	1.6815E+04	5.4245E+03
1.6298E+01	1.7934E+04	.0E+00	.0E+00	1.3548E+04	4.3853E+03
1.6428E+01	4.2323E+04	.0E+00	2.4757E+04	1.3270E+04	4.2963E+03
1.9762E+01	2.5618E+04	.0E+00	1.4775E+04	8.1764E+03	2.6669E+03
1.9920E+01	3.5507E+04	.0E+00	2.4888E+04	8.0068E+03	2.6123E+03

Z= 90 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY (KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
2.0000E+01	3.5062E+04	.0E+00	2.4554E+04	7.9231E+03	2.5854E+03
2.0482E+01	3.3062E+04	.0E+00	2.3189E+04	7.4424E+03	2.4307E+03
2.0646E+01	3.7466E+04	.0E+00	2.7798E+04	7.2877E+03	2.3809E+03
3.0000E+01	1.4372E+04	.0E+00	1.0768E+04	2.7080E+03	8.9632E+02
4.0000E+01	6.7539E+03	.0E+00	5.0809E+03	1.2544E+03	4.1869E+02
5.0000E+01	3.7311E+03	.0E+00	2.8124E+03	6.8783E+02	2.3089E+02
6.0000E+01	2.2883E+03	.0E+00	1.7267E+03	4.1999E+02	1.4160E+02
8.0000E+01	1.0523E+03	.0E+00	7.9493E+02	1.9220E+02	6.5202E+01
1.0000E+02	5.7440E+02	.0E+00	4.3410E+02	1.0465E+02	3.5650E+01
1.1014E+02	4.4188E+02	.0E+00	3.3399E+02	8.0434E+01	2.7451E+01
1.1102E+02	1.8786E+03	1.4462E+03	3.2683E+02	7.8705E+01	2.6864E+01
1.5000E+02	8.7018E+02	6.7905E+02	1.4451E+02	3.4719E+01	1.1908E+01
2.0000E+02	4.1383E+02	3.2571E+02	6.6636E+01	1.5987E+01	5.5033E+00
3.0000E+02	1.4668E+02	1.1636E+02	2.2925E+01	5.4894E+00	1.8974E+00
4.0000E+02	7.2078E+01	5.7454E+01	1.1064E+01	2.6448E+00	9.1592E-01
5.0000E+02	4.2468E+01	3.3970E+01	6.4308E+00	1.5350E+00	5.3233E-01
6.0000E+02	2.8021E+01	2.2478E+01	4.1963E+00	1.0002E+00	3.4712E-01
8.0000E+02	1.5008E+01	1.2089E+01	2.2109E+00	5.2577E-01	1.8263E-01
1.0000E+03	9.4953E+00	7.6684E+00	1.3841E+00	3.2856E-01	1.1418E-01
1.5000E+03	4.3690E+00	3.5397E+00	6.2862E-01	1.4890E-01	5.1746E-02

Z= 90

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.162E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.171E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.311E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.322E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.335E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.361E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.499E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.527E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.032E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.064E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.828E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.867E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.1219E+04
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.0854E+04
5.159E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.9945E+04
5.200E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.3346E+04	1.9774E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.1004E+04	1.6779E+04
8.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.2103E+03	1.0855E+04
1.000E+01	.0E+00	.0E+00	.0E+00	.0E+00	5.0485E+03	7.3543E+03
1.500E+01	.0E+00	.0E+00	.0E+00	.0E+00	2.4938E+03	3.3080E+03
1.630E+01	.0E+00	.0E+00	.0E+00	.0E+00	2.1386E+03	2.7763E+03
1.643E+01	.0E+00	.0E+00	.0E+00	2.4757E+04	2.1071E+03	2.7292E+03
1.976E+01	.0E+00	.0E+00	.0E+00	1.4775E+04	1.4852E+03	1.8172E+03
1.992E+01	.0E+00	.0E+00	1.0426E+04	1.4462E+04	1.4625E+03	1.7850E+03
2.000E+01	.0E+00	.0E+00	1.0246E+04	1.4308E+04	1.4513E+03	1.7690E+03
2.048E+01	.0E+00	.0E+00	9.7686E+03	1.3420E+04	1.3861E+03	1.6764E+03
2.065E+01	.0E+00	5.0498E+03	9.6145E+03	1.3133E+04	1.3648E+03	1.6463E+03
3.000E+01	.0E+00	2.5860E+03	3.6946E+03	4.4869E+03	6.4637E+02	6.8191E+02
4.000E+01	.0E+00	1.4727E+03	1.7058E+03	1.9024E+03	3.5324E+02	3.3259E+02
5.000E+01	.0E+00	9.2636E+02	9.2260E+02	9.6341E+02	2.1754E+02	1.8679E+02
6.000E+01	.0E+00	6.2481E+02	5.5370E+02	5.4822E+02	1.4490E+02	1.1529E+02
8.000E+01	.0E+00	3.2794E+02	2.4440E+02	2.2259E+02	7.5025E+01	5.2965E+01
1.000E+02	.0E+00	1.9537E+02	1.2881E+02	1.0992E+02	4.4438E+01	2.8665E+01

Z= 90

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.101E+02	.0E+00	1.5555E+02	9.7525E+01	8.0914E+01	3.5315E+01	2.1932E+01
1.110E+02	1.4462E+03	1.5263E+02	9.5311E+01	7.8892E+01	3.4649E+01	2.1451E+01
1.500E+02	6.7905E+02	7.4056E+01	4.0C69E+01	3.0380E+01	1.6769E+01	9.2761E+00
2.000E+02	3.2571E+02	3.6718E+01	1.7614E+01	1.2304E+01	8.3126E+00	4.1671E+00
3.000E+02	1.1636E+02	1.3685E+01	5.6791E+00	3.5607E+00	3.1023E+00	1.3746E+00
4.000E+02	5.7454E+01	6.9023E+00	2.6238E+00	1.5374E+00	1.5660E+00	6.4249E-01
5.000E+02	3.3970E+01	4.1251E+00	1.4783E+00	8.2747E-01	9.3617E-01	3.6438E-01
6.000E+02	2.2478E+01	2.7442E+00	9.4202E-01	5.1000E-01	6.2278E-01	2.3317E-01
8.000E+02	1.2089E+01	1.4813E+00	4.8093E-01	2.4873E-01	3.3602E-01	1.1959E-01
1.000E+03	7.6684E+00	9.3962E-01	2.9608E-01	1.4844E-01	2.1304E-01	7.3788E-02
1.500E+03	3.5397E+00	4.3228E-01	1.3296E-01	6.3382E-02	9.7899E-02	3.3261E-02

Z= 90

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.5716E+05
1.162E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.3543E+05
1.171E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.3422E+05
1.311E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.7800E+04	1.1799E+05
1.322E+00	.0E+00	.0E+00	.0E+00	3.0931E+04	2.5684E+04	1.1692E+05
1.500E+00	.0E+00	.0E+00	.0E+00	2.6337E+04	2.4437E+04	1.0062E+05
2.000E+00	.0E+00	.0E+00	.0E+00	1.8949E+04	2.0553E+04	6.8153E+04
3.000E+00	.0E+00	.0E+00	.0E+00	1.1131E+04	1.3592E+04	3.6149E+04
3.335E+00	.0E+00	.0E+00	.0E+00	9.5477E+03	1.1905E+04	3.0171E+04
3.361E+00	.0E+00	.0E+00	3.0901E+05	9.4350E+03	1.1784E+04	2.9759E+04
3.499E+00	.0E+00	.0E+00	2.7393E+05	8.8876E+03	1.1184E+04	2.7762E+04
3.527E+00	.0E+00	1.9655E+05	2.6838E+05	8.7822E+03	1.1066E+04	2.7377E+04
4.000E+00	.0E+00	1.4257E+05	1.9599E+05	7.2616E+03	9.2883E+03	2.1845E+04
4.032E+00	.0E+00	1.3976E+05	1.9183E+05	7.1734E+03	9.1837E+03	2.1531E+04
4.064E+00	7.5618E+04	1.3696E+05	1.8769E+05	7.0852E+03	9.0794E+03	2.1220E+04
4.828E+00	5.7794E+04	8.5236E+04	1.1463E+05	5.3957E+03	7.0177E+03	1.5382E+04
4.867E+00	5.7017E+04	8.3315E+04	1.1198E+05	5.3272E+03	6.9309E+03	1.5149E+04
5.000E+00	5.4362E+04	7.7099E+04	1.0347E+05	5.0997E+03	6.6432E+03	1.4382E+04
5.159E+00	5.1309E+04	7.0318E+04	9.4815E+04	4.8460E+03	6.3226E+03	1.3538E+04
5.200E+00	5.0544E+04	6.8812E+04	9.2696E+04	4.7831E+03	6.2430E+03	1.3331E+04
6.000E+00	3.8454E+04	4.5783E+04	6.0558E+04	3.7726E+03	4.9357E+03	1.0043E+04
8.000E+00	2.1766E+04	1.9357E+04	2.5109E+04	2.2966E+03	2.9721E+03	5.5240E+03
1.000E+01	1.3489E+04	9.6507E+03	1.2298E+04	1.5379E+03	1.9453E+03	3.3861E+03
1.500E+01	5.2754E+03	2.5707E+03	3.1672E+03	7.1763E+02	8.4688E+02	1.3152E+03
1.630E+01	4.3102E+03	1.9449E+03	2.3786E+03	6.1094E+02	7.0779E+02	1.0744E+03
1.643E+01	4.2266E+03	1.8932E+03	2.3135E+03	6.0150E+02	6.9557E+02	1.0536E+03
1.976E+01	2.6588E+03	1.0062E+03	1.2090E+03	4.1764E+02	4.6121E+02	6.6418E+02
1.992E+01	2.6053E+03	9.7882E+02	1.1752E+03	4.1104E+02	4.5294E+02	6.5088E+02
2.000E+01	2.5789E+03	9.6538E+02	1.1586E+03	4.0777E+02	4.4886E+02	6.4430E+02
2.048E+01	2.4264E+03	8.8897E+02	1.0645E+03	3.8879E+02	4.2521E+02	6.0643E+02
2.065E+01	2.3772E+03	8.6468E+02	1.0347E+03	3.8261E+02	4.1755E+02	5.9421E+02
3.000E+01	8.8233E+02	2.3098E+02	2.6636E+02	1.7765E+02	1.7303E+02	2.2243E+02
4.000E+01	3.9621E+02	8.1397E+01	9.0975E+01	9.6128E+01	8.4734E+01	1.0064E+02
5.000E+01	2.0873E+02	3.5787E+01	3.8987E+01	5.8876E+01	4.7794E+01	5.3334E+01
6.000E+01	1.2224E+02	1.8175E+01	1.9374E+01	3.9095E+01	2.9615E+01	3.1385E+01
8.000E+01	5.1638E+01	6.1974E+00	6.3766E+00	2.0174E+01	1.3690E+01	1.3354E+01
1.000E+02	2.6170E+01	2.6888E+00	2.6916E+00	1.1931E+01	7.4433E+00	6.8024E+00
1.101E+02	1.9459E+01	1.8740E+00	1.8541E+00	9.4775E+00	5.7057E+00	5.0683E+00
1.110E+02	1.8988E+01	1.8190E+00	1.7979E+00	9.2983E+00	5.5817E+00	4.9464E+00
1.500E+02	7.5123E+00	5.9447E-01	5.6774E-01	4.4968E+00	2.4268E+00	1.9680E+00
2.000E+02	3.1051E+00	2.0826E-01	1.9356E-01	2.2290E+00	1.0949E+00	8.1705E-01
3.000E+02	9.1757E-01	4.9750E-02	4.5229E-02	8.3209E-01	3.6290E-01	2.4261E-01
4.000E+02	4.0021E-01	1.8909E-02	1.7203E-02	4.2016E-01	1.7002E-01	1.0589E-01
5.000E+02	2.1657E-01	9.3372E-03	8.5673E-03	2.5116E-01	9.6695E-02	5.7361E-02
6.000E+02	1.3392E-01	5.3568E-03	4.9879E-03	1.6707E-01	6.1934E-02	3.5493E-02
8.000E+02	6.5543E-02	2.3529E-03	2.2648E-03	9.0131E-02	3.1807E-02	1.7387E-02

Z= 90

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+03	3.9111E-02	1.3237E-03	1.2896E-03	5.7132E-02	1.9642E-02	1.0388E-02
1.500E+03	1.6695E-02	5.1181E-04	5.2930E-04	2.6244E-02	8.8439E-03	4.4409E-03

Z= 90

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	2.1032E+05	3.4066E+05	7.0195E+05	9.0612E+05	1.6743E+04	1.3682E+04
1.162E+00	1.9105E+05	2.9959E+05	4.9112E+05	6.3002E+05	1.3651E+04	1.1771E+04
1.171E+00	1.8982E+05	2.9733E+05	4.8144E+05	6.1747E+05	1.3501E+04	1.1674E+04
1.311E+00	1.7128E+05	2.6229E+05	3.6032E+05	4.6027E+05	1.1505E+04	1.0350E+04
1.322E+00	1.6984E+05	2.5968E+05	3.5281E+05	4.5054E+05	1.1374E+04	1.0261E+04
1.500E+00	1.4590E+05	2.1961E+05	2.5026E+05	3.1842E+05	9.4705E+03	8.9081E+03
2.000E+00	9.5256E+04	1.3854E+05	1.0841E+05	1.3677E+05	6.1475E+03	6.2940E+03
3.000E+00	4.4374E+04	6.2129E+04	2.9773E+04	3.7148E+04	3.2475E+03	3.6307E+03
3.335E+00	3.5449E+04	4.9161E+04	2.0838E+04	2.5924E+04	2.7350E+03	3.1085E+03
3.361E+00	3.4837E+04	4.8284E+04	2.0279E+04	2.5222E+04	2.6995E+03	3.0717E+03
3.499E+00	3.1896E+04	4.4080E+04	1.7678E+04	2.1961E+04	2.5277E+03	2.8921E+03
3.527E+00	3.1336E+04	4.3281E+04	1.7199E+04	2.1361E+04	2.4947E+03	2.8573E+03
4.000E+00	2.3542E+04	3.2175E+04	1.1082E+04	1.3714E+04	2.0241E+03	2.3518E+03
4.032E+00	2.3111E+04	3.1568E+04	1.0776E+04	1.3332E+04	1.9974E+03	2.3226E+03
4.064E+00	2.2684E+04	3.0967E+04	1.0476E+04	1.2958E+04	1.9709E+03	2.2935E+03
4.828E+00	1.4994E+04	2.0196E+04	5.6406E+03	6.9416E+03	1.4719E+03	1.7348E+03
4.867E+00	1.4701E+04	1.9790E+04	5.4788E+03	6.7409E+03	1.4520E+03	1.7119E+03
5.000E+00	1.3744E+04	1.8466E+04	4.9625E+03	6.1004E+03	1.3860E+03	1.6362E+03
5.159E+00	1.2707E+04	1.7031E+04	4.4226E+03	5.4313E+03	1.3131E+03	1.5522E+03
5.200E+00	1.2455E+04	1.6681E+04	4.2943E+03	5.2724E+03	1.2951E+03	1.5314E+03
6.000E+00	8.6181E+03	1.1415E+04	2.5171E+03	3.0767E+03	1.0089E+03	1.1960E+03
8.000E+00	3.9416E+03	5.1038E+03	8.2965E+02	1.0044E+03	6.0234E+02	7.0744E+02
1.000E+01	2.0729E+03	2.6363E+03	3.4015E+02	4.0852E+02	3.9889E+02	4.5913E+02
1.500E+01	5.9967E+02	7.3664E+02	6.3331E+01	7.4844E+01	1.8363E+02	1.9819E+02
1.630E+01	4.6032E+02	5.6126E+02	4.4505E+01	5.2406E+01	1.5600E+02	1.6548E+02
1.643E+01	4.4869E+02	5.4667E+02	4.3014E+01	5.0634E+01	1.5356E+02	1.6261E+02
1.976E+01	2.4584E+02	2.9442E+02	1.9399E+01	2.2644E+01	1.0620E+02	1.0764E+02
1.992E+01	2.3946E+02	2.8655E+02	1.8738E+01	2.1864E+01	1.0450E+02	1.0571E+02
2.000E+01	2.3632E+02	2.8268E+02	1.8415E+01	2.1483E+01	1.0366E+02	1.0476E+02
2.048E+01	2.1842E+02	2.6068E+02	1.6603E+01	1.9347E+01	9.8794E+01	9.9226E+01
2.065E+01	2.1271E+02	2.5368E+02	1.6035E+01	1.8678E+01	9.7211E+01	9.7434E+01
3.000E+01	5.9746E+01	6.8617E+01	3.0697E+00	3.5067E+00	4.4887E+01	4.0344E+01
4.000E+01	2.1706E+01	2.4158E+01	8.4067E-01	9.4437E-01	2.4224E+01	1.9768E+01
5.000E+01	9.7347E+00	1.0559E+01	3.0534E-01	3.3824E-01	1.4815E+01	1.1159E+01
6.000E+01	5.0145E+00	5.3222E+00	1.3314E-01	1.4571E-01	9.8299E+00	6.9200E+00
8.000E+01	1.7425E+00	1.7854E+00	3.5889E-02	3.8506E-02	5.0687E+00	3.2033E+00
1.000E+02	7.6509E-01	7.6294E-01	1.3101E-02	1.3834E-02	2.9971E+00	1.7437E+00
1.101E+02	5.3567E-01	5.2801E-01	8.4777E-03	8.8926E-03	2.3809E+00	1.3423E+00
1.110E+02	5.2013E-01	5.1222E-01	8.1796E-03	8.5746E-03	2.3359E+00	1.3132E+00
1.500E+02	1.7203E-01	1.6378E-01	2.1351E-03	2.1966E-03	1.1311E+00	5.7166E-01
2.000E+02	6.0786E-02	5.6360E-02	6.1608E-04	6.1822E-04	5.6057E-01	2.5820E-01
3.000E+02	1.4657E-02	1.3238E-02	1.1449E-04	1.1418E-04	2.0924E-01	8.5687E-02
4.000E+02	5.6016E-03	5.0568E-03	3.7087E-05	3.7260E-05	1.0563E-01	4.0178E-02
5.000E+02	2.7758E-03	2.5210E-03	1.6552E-05	1.7125E-05	6.3151E-02	2.2830E-02
6.000E+02	1.5947E-03	1.4700E-03	8.6659E-06	9.4155E-06	4.2009E-02	1.4626E-02
8.000E+02	7.0169E-04	6.7081E-04	3.4653E-06	3.7673E-06	2.2660E-02	7.5133E-03
1.000E+03	3.9517E-04	3.8368E-04	1.7788E-06	2.1347E-06	1.4363E-02	4.6387E-03
1.500E+03	1.5303E-04	1.5740E-04	6.3321E-07	7.8360E-07	6.5973E-03	2.0891E-03

Z= 90

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	6 S 1/2	6 P 1/2	6 P 3/2
1.000E+00	5.0164E+04	5.0580E+04	7.6877E+04	4.1386E+03	2.9630E+03	9.2068E+03
1.162E+00	4.0498E+04	4.1902E+04	6.2704E+04	3.2905E+03	2.4742E+03	7.3373E+03
1.171E+00	4.0029E+04	4.1458E+04	6.1991E+04	3.2502E+03	2.4501E+03	7.2480E+03
1.311E+00	3.3861E+04	3.5412E+04	5.2378E+04	2.7256E+03	2.1300E+03	6.0803E+03
1.322E+00	3.3459E+04	3.5005E+04	5.1739E+04	2.6918E+03	2.1088E+03	6.0047E+03
1.500E+00	2.7594E+04	2.8921E+04	4.2261E+04	2.2051E+03	1.7953E+03	4.9128E+03
2.000E+00	1.7464E+04	1.7827E+04	2.5433E+04	1.3903E+03	1.2243E+03	3.0648E+03
3.000E+00	8.7525E+03	8.0795E+03	1.1174E+04	7.1371E+02	6.8307E+02	1.5163E+03
3.335E+00	7.2414E+03	6.4407E+03	8.8386E+03	5.9765E+02	5.8112E+02	1.2516E+03
3.361E+00	7.1375E+03	6.3293E+03	8.6807E+03	5.8966E+02	5.7398E+02	1.2334E+03
3.499E+00	6.6351E+03	5.7948E+03	7.9243E+03	5.5106E+02	5.3923E+02	1.1457E+03
3.527E+00	6.5389E+03	5.6930E+03	7.7806E+03	5.4367E+02	5.3252E+02	1.1290E+03
4.000E+00	5.1755E+03	4.2770E+03	5.7919E+03	4.3857E+02	4.3557E+02	8.9159E+02
4.032E+00	5.0989E+03	4.1992E+03	5.6832E+03	4.3265E+02	4.3001E+02	8.7829E+02
4.064E+00	5.0229E+03	4.1221E+03	5.5756E+03	4.2677E+02	4.2447E+02	8.6507E+02
4.828E+00	3.6080E+03	2.7317E+03	3.6487E+03	3.1660E+02	3.1877E+02	6.1993E+02
4.867E+00	3.5522E+03	2.6788E+03	3.5760E+03	3.1221E+02	3.1447E+02	6.1027E+02
5.000E+00	3.3683E+03	2.5060E+03	3.3386E+03	2.9775E+02	3.0028E+02	5.7851E+02
5.159E+00	3.1662E+03	2.3184E+03	3.0816E+03	2.8179E+02	2.8453E+02	5.4361E+02
5.200E+00	3.1165E+03	2.2727E+03	3.0190E+03	2.7786E+02	2.8063E+02	5.3503E+02
6.000E+00	2.3363E+03	1.5783E+03	2.0744E+03	2.1550E+02	2.1817E+02	4.0055E+02
8.000E+00	1.2758E+03	7.2814E+02	9.3618E+02	1.2771E+02	1.2808E+02	2.1836E+02
1.000E+01	7.7961E+02	3.8582E+02	4.8731E+02	8.4171E+01	8.2742E+01	1.3334E+02
1.500E+01	3.0225E+02	1.1311E+02	1.3801E+02	3.8492E+01	3.5494E+01	5.1881E+01
1.630E+01	2.4691E+02	8.7044E+01	1.0542E+02	3.2664E+01	3.0267E+01	4.2381E+01
1.643E+01	2.4212E+02	8.4864E+01	1.0271E+02	3.2151E+01	2.9742E+01	4.1559E+01
1.976E+01	1.5268E+02	4.6746E+01	5.5609E+01	2.2187E+01	1.9688E+01	2.6206E+01
1.992E+01	1.4962E+02	4.5542E+01	5.4135E+01	2.1831E+01	1.9335E+01	2.5682E+01
2.000E+01	1.4811E+02	4.4949E+01	5.3410E+01	2.1655E+01	1.9160E+01	2.5423E+01
2.048E+01	1.3942E+02	4.1574E+01	4.9285E+01	2.0634E+01	1.8148E+01	2.3930E+01
2.065E+01	1.3661E+02	4.0497E+01	4.7972E+01	2.0301E+01	1.7821E+01	2.3448E+01
3.000E+01	5.1223E+01	1.1483E+01	1.3098E+01	9.4602E+00	7.3813E+00	8.7930E+00
4.000E+01	2.3218E+01	4.1976E+00	4.6396E+00	5.1034E+00	3.6180E+00	3.9860E+00
5.000E+01	1.2323E+01	1.8901E+00	2.0243E+00	3.1204E+00	2.0429E+00	2.1157E+00
6.000E+01	7.2613E+00	9.7560E-01	1.0234E+00	2.0699E+00	1.2672E+00	1.2467E+00
8.000E+01	3.0959E+00	3.4034E-01	3.4463E-01	1.0669E+00	5.8672E-01	5.3147E-01
1.000E+02	1.5754E+00	1.4984E-01	1.4763E-01	6.3060E-01	3.1941E-01	2.7110E-01
1.101E+02	1.1744E+00	1.0502E-01	1.0228E-01	5.0083E-01	2.4498E-01	2.0211E-01
1.110E+02	1.1462E+00	1.0199E-01	9.9227E-02	4.9136E-01	2.3966E-01	1.9726E-01
1.500E+02	4.5661E-01	3.3826E-02	3.1816E-02	2.3754E-01	1.0435E-01	7.8607E-02
2.000E+02	1.8976E-01	1.1979E-02	1.0970E-02	1.1772E-01	4.7139E-02	3.2675E-02
3.000E+02	5.6398E-02	2.8950E-03	2.5935E-03	4.3939E-02	1.5646E-02	9.7144E-03
4.000E+02	2.4670E-02	1.1069E-03	9.9172E-04	2.2183E-02	7.3364E-03	4.2498E-03
5.000E+02	1.3371E-02	5.4813E-04	4.9557E-04	1.3261E-02	4.1686E-03	2.3037E-03
6.000E+02	8.2748E-03	3.1539E-04	2.8926E-04	8.8215E-03	2.6708E-03	1.4260E-03
8.000E+02	4.0530E-03	1.3891E-04	1.3149E-04	4.7587E-03	1.3719E-03	6.9870E-04
1.000E+03	2.4224E-03	7.8016E-05	7.5624E-05	3.0164E-03	8.4710E-04	4.1786E-04
1.500E+03	1.0351E-03	3.0279E-05	3.0809E-05	1.3860E-03	3.8167E-04	1.7889E-04

Z= 90

ENERGY	6 D 3/2	6 D 5/2	7 S 1/2
1.000E+00	9.5867E+02	1.3760E+03	5.7657E+02
1.162E+00	7.8340E+02	1.1119E+03	4.4959E+02
1.171E+00	7.7459E+02	1.0988E+03	4.4368E+02
1.311E+00	6.5602E+02	9.2321E+02	3.6711E+02
1.322E+00	6.4813E+02	9.1160E+02	3.6220E+02
1.500E+00	5.3150E+02	7.4127E+02	2.9219E+02
2.000E+00	3.2351E+02	4.4318E+02	1.7849E+02
3.000E+00	1.4836E+02	1.9308E+02	8.7290E+01
3.335E+00	1.1824E+02	1.5270E+02	7.3166E+01

Z= 90

ENERGY	6 D 3/2	6 D 5/2	7 S 1/2
3.361E+00	1.1620E+02	1.4998E+02	7.2194E+01
3.499E+00	1.0638E+02	1.3690E+02	6.7491E+01
3.527E+00	1.0451E+02	1.3442E+02	6.6590E+01
4.000E+00	7.8523E+01	1.0007E+02	5.3783E+01
4.032E+00	7.7095E+01	9.8192E+01	5.3062E+01
4.064E+00	7.5680E+01	9.6333E+01	5.2344E+01
4.828E+00	5.0176E+01	6.3067E+01	3.8899E+01
4.867E+00	4.9205E+01	6.1811E+01	3.8363E+01
5.000E+00	4.6037E+01	5.7714E+01	3.6596E+01
5.159E+00	4.2595E+01	5.3275E+01	3.4646E+01
5.200E+00	4.1756E+01	5.2195E+01	3.4166E+01
6.000E+00	2.9017E+01	3.5886E+01	2.6539E+01
8.000E+00	1.3406E+01	1.6217E+01	1.5776E+01
1.000E+01	7.1113E+00	8.4505E+00	1.0423E+01
1.500E+01	2.0886E+00	2.3978E+00	4.7849E+00
1.630E+01	1.6079E+00	1.8322E+00	4.0633E+00
1.643E+01	1.5677E+00	1.7851E+00	3.9997E+00
1.976E+01	8.6410E-01	9.6721E-01	2.7640E+00
1.992E+01	8.4186E-01	9.4160E-01	2.7198E+00
2.000E+01	8.3095E-01	9.2901E-01	2.6979E+00
2.048E+01	7.6858E-01	8.5733E-01	2.5710E+00
2.065E+01	7.4870E-01	8.3451E-01	2.5297E+00
3.000E+01	2.1253E-01	2.2816E-01	1.1670E+00
4.000E+01	7.7740E-02	8.0887E-02	6.2945E-01
5.000E+01	3.5023E-02	3.5519E-02	3.8484E-01
6.000E+01	1.8100E-02	1.7962E-02	2.5527E-01
8.000E+01	6.3176E-03	6.0536E-03	1.3157E-01
1.000E+02	2.7819E-03	2.5946E-03	7.7768E-02
1.101E+02	1.9500E-03	1.7978E-03	6.1764E-02
1.110E+02	1.8936E-03	1.7441E-03	6.0596E-02
1.500E+02	6.2824E-04	5.5942E-04	2.9295E-02
2.000E+02	2.2250E-04	1.9298E-04	1.4519E-02
3.000E+02	5.3765E-05	4.5678E-05	5.4206E-03
4.000E+02	2.0558E-05	1.7500E-05	2.7380E-03
5.000E+02	1.0189E-05	8.7570E-06	1.6378E-03
6.000E+02	5.8606E-06	5.1183E-06	1.0904E-03
8.000E+02	2.5860E-06	2.3403E-06	5.8962E-04
1.000E+03	1.4548E-06	1.3550E-06	3.7508E-04
1.500E+03	5.7138E-07	5.6686E-07	1.7487E-04

Z= 91 29 STATES, 48 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	113.2336	.98678
2 S 1/2	2.00	21.1402	.88947
2 P 1/2	2.00	20.4041	.83641
2 P 3/2	4.00	16.7419	.80044
3 S 1/2	2.00	5.3419	.70514
3 P 1/2	2.00	5.0031	.63751
3 P 3/2	4.00	4.1590	.58816
3 D 3/2	4.00	3.6158	.40348
3 D 5/2	6.00	3.4429	.39338
4 S 1/2	2.00	1.3642	.46319
4 P 1/2	2.00	1.2107	.39852
4 P 3/2	4.00	.9906	.34998
4 D 3/2	4.00	.7438	.20123
4 D 5/2	6.00	.7029	.19165
4 F 5/2	6.00	.3774	.05392
4 F 7/2	8.00	.3667	.05267
5 S 1/2	2.00	.3058	.23485
5 P 1/2	2.00	.2461	.18666
5 P 3/2	4.00	.1941	.15674
5 D 3/2	4.00	.1061	.06870
5 D 5/2	6.00	.0983	.06400
5 F 5/2	.86	.0076	.00611
5 F 7/2	1.14	.0067	.00575
6 S 1/2	2.00	.0501	.08451
6 P 1/2	2.00	.0326	.05711
6 P 3/2	4.00	.0238	.04365
6 D 3/2	.40	.0047	.00866
6 D 5/2	.60	.0041	.00739
7 S 1/2	2.00	.0057	.01505

Z= 91 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	2.6606E+06	.0E+00	.0E+00	.0E+00	2.6606E+06
1.2095E+00	1.8776E+06	.0E+00	.0E+00	.0E+00	1.8776E+06
1.2192E+00	1.8755E+06	.0E+00	.0E+00	.0E+00	1.8755E+06
1.3629E+00	1.5107E+06	.0E+00	.0E+00	.0E+00	1.5107E+06
1.3738E+00	1.5165E+06	.0E+00	.0E+00	.0E+00	1.5165E+06
1.5000E+00	1.2714E+06	.0E+00	.0E+00	.0E+00	1.2714E+06
2.0000E+00	6.9871E+05	.0E+00	.0E+00	.0E+00	6.9871E+05
3.0000E+00	2.8571E+05	.0E+00	.0E+00	.0E+00	2.8571E+05
3.4395E+00	2.0911E+05	.0E+00	.0E+00	.0E+00	2.0911E+05
3.4670E+00	5.0651E+05	.0E+00	.0E+00	3.0121E+05	2.0530E+05
3.6122E+00	4.5035E+05	.0E+00	.0E+00	2.6359E+05	1.8676E+05
3.6411E+00	6.3248E+05	.0E+00	.0E+00	4.4912E+05	1.8335E+05
4.0000E+00	5.0055E+05	.0E+00	.0E+00	3.5320E+05	1.4735E+05
4.1549E+00	4.5504E+05	.0E+00	.0E+00	3.2024E+05	1.3481E+05
4.1881E+00	5.1926E+05	.0E+00	.0E+00	3.8695E+05	1.3231E+05
4.9981E+00	3.3296E+05	.0E+00	.0E+00	2.4589E+05	8.7068E+04
5.0000E+00	3.3263E+05	.0E+00	.0E+00	2.4564E+05	8.6988E+04
5.0381E+00	3.4647E+05	.0E+00	.0E+00	2.6104E+05	8.5426E+04
5.3366E+00	3.0047E+05	.0E+00	.0E+00	2.2603E+05	7.4438E+04
5.3793E+00	3.0744E+05	.0E+00	.0E+00	2.3441E+05	7.3028E+04
6.0000E+00	2.3541E+05	.0E+00	.0E+00	1.7930E+05	5.6116E+04
8.0000E+00	1.1539E+05	.0E+00	.0E+00	8.7640E+04	2.7752E+04
1.0000E+01	6.5739E+04	.0E+00	.0E+00	4.9816E+04	1.5923E+04
1.5000E+01	2.3252E+04	.0E+00	.0E+00	1.7549E+04	5.7026E+03
1.6725E+01	1.7534E+04	.0E+00	.0E+00	1.3219E+04	4.3146E+03
1.6859E+01	4.1195E+04	.0E+00	2.4020E+04	1.2947E+04	4.2271E+03

Z= 91 PHCTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
2.0000E+01	2.5890E+04	.0E+00	1.4890E+04	8.2786E+03	2.7206E+03
2.0384E+01	2.4618E+04	.0E+00	1.4152E+04	7.8759E+03	2.5900E+03
2.0547E+01	3.4167E+04	.0E+00	2.3917E+04	7.7128E+03	2.5370E+03
2.1119E+01	3.1853E+04	.0E+00	2.2314E+04	7.1757E+03	2.3626E+03
2.1288E+01	3.6090E+04	.0E+00	2.6749E+04	7.0267E+03	2.3143E+03
3.0000E+01	1.5003E+04	.0E+00	1.1222E+04	2.8356E+03	9.4478E+02
4.0000E+01	7.0644E+03	.0E+00	5.3070E+03	1.3155E+03	4.4191E+02
5.0000E+01	3.9084E+03	.0E+00	2.9423E+03	7.2214E+02	2.4395E+02
6.0000E+01	2.3998E+03	.0E+00	1.8087E+03	4.4138E+02	1.4974E+02
8.0000E+01	1.1056E+03	.0E+00	8.3420E+02	2.0231E+02	6.9054E+01
1.0000E+02	6.0425E+02	.0E+00	4.5617E+02	1.1029E+02	3.7799E+01
1.1312E+02	4.3260E+02	.0E+00	3.2664E+02	7.8869E+01	2.7093E+01
1.1403E+02	1.8188E+03	1.3955E+03	3.1965E+02	7.7177E+01	2.6515E+01
1.5000E+02	9.0381E+02	7.0228E+02	1.5220E+02	3.6669E+01	1.2653E+01
2.0000E+02	4.3115E+02	3.3809E+02	7.0294E+01	1.6911E+01	5.8565E+00
3.0000E+02	1.5327E+02	1.2118E+02	2.4238E+01	5.8195E+00	2.0234E+00
4.0000E+02	7.5474E+01	5.9974E+01	1.1714E+01	2.8078E+00	9.7816E-01
5.0000E+02	4.4529E+01	3.5517E+01	6.8134E+00	1.6305E+00	5.6880E-01
6.0000E+02	2.9415E+01	2.3529E+01	4.4508E+00	1.0636E+00	3.7131E-01
8.0000E+02	1.5773E+01	1.2671E+01	2.3470E+00	5.5952E-01	1.9551E-01
1.0000E+03	9.9846E+00	8.0427E+00	1.4699E+00	3.4983E-01	1.2227E-01
1.5000E+03	4.5946E+00	3.7130E+00	6.6765E-01	1.5852E-01	5.5418E-02

Z= 91

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.209E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.219E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.363E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.374E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.439E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.467E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.612E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.641E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.155E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.188E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.998E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
5.038E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.0270E+04
5.337E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.9076E+04
5.379E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.2756E+04	1.8914E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.0924E+04	1.6851E+04
8.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.2493E+03	1.0986E+04
1.000E+01	.0E+00	.0E+00	.0E+00	.0E+00	5.1099E+03	7.5026E+03
1.500E+01	.0E+00	.0E+00	.0E+00	.0E+00	2.5401E+03	3.4173E+03
1.673E+01	.0E+00	.0E+00	.0E+00	.0E+00	2.0782E+03	2.7188E+03
1.686E+01	.0E+00	.0E+00	.0E+00	2.4020E+04	2.0477E+03	2.6730E+03
2.000E+01	.0E+00	.0E+00	.0E+00	1.4890E+04	1.4835E+03	1.8387E+03
2.038E+01	.0E+00	.0E+00	.0E+00	1.4152E+04	1.4301E+03	1.7625E+03
2.055E+01	.0E+00	.0E+00	1.0065E+04	1.3852E+04	1.4083E+03	1.7313E+03
2.112E+01	.0E+00	.0E+00	9.4492E+03	1.2865E+04	1.3355E+03	1.6276E+03
2.129E+01	.0E+00	4.8573E+03	9.3017E+03	1.2590E+04	1.3150E+03	1.5984E+03
3.000E+01	.0E+00	2.6440E+03	3.8831E+03	4.6952E+03	6.6337E+02	7.1491E+02
4.000E+01	.0E+00	1.5057E+03	1.8035E+03	1.9978E+03	3.6353E+02	3.5050E+02
5.000E+01	.0E+00	9.5014E+02	9.7863E+02	1.0135E+03	2.2429E+02	1.9759E+02
6.000E+01	.0E+00	6.4245E+02	5.8876E+02	5.7746E+02	1.4964E+02	1.2234E+02

Z= 91

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
8.000E+01	.0E+00	3.3840E+02	2.6086E+02	2.3494E+02	7.7668E+01	5.6455E+01
1.000E+02	.0E+00	2.0207E+02	1.3789E+02	1.1621E+02	4.6088E+01	3.0653E+01
1.131E+02	.0E+00	1.5117E+02	9.6819E+01	7.8653E+01	3.4398E+01	2.1814E+01
1.140E+02	1.3955E+03	1.4833E+02	9.4630E+01	7.6692E+01	3.3750E+01	2.1338E+01
1.500E+02	7.0228E+02	7.6894E+01	4.3103E+01	3.2202E+01	1.7451E+01	9.9742E+00
2.000E+02	3.3809E+02	3.8224E+01	1.9007E+01	1.3063E+01	8.6721E+00	4.4962E+00
3.000E+02	1.2118E+02	1.4299E+01	6.1516E+00	3.7872E+00	3.2475E+00	1.4895E+00
4.000E+02	5.9974E+01	7.2291E+00	2.8487E+00	1.6366E+00	1.6431E+00	6.9796E-01
5.000E+02	3.5517E+01	4.3274E+00	1.6059E+00	8.8009E-01	9.8379E-01	3.9617E-01
6.000E+02	2.3529E+01	2.8823E+00	1.0254E+00	5.4314E-01	6.5520E-01	2.5402E-01
8.000E+02	1.2671E+01	1.5579E+00	5.2427E-01	2.6483E-01	3.5397E-01	1.3049E-01
1.000E+03	8.0427E+00	9.8883E-01	3.2304E-01	1.5799E-01	2.2456E-01	8.0583E-02
1.500E+03	3.7130E+00	4.5501E-01	1.4524E-01	6.7393E-02	1.0321E-01	3.6367E-02

Z= 91

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.6079E+05
1.209E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.3151E+05
1.219E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.3033E+05
1.363E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.6399E+04	1.1466E+05
1.374E+00	.0E+00	.0E+00	.0E+00	2.9537E+04	2.4426E+04	1.1361E+05
1.500E+00	.0E+00	.0E+00	.0E+00	2.5991E+04	2.3668E+04	1.0256E+05
2.000E+00	.0E+00	.0E+00	.0E+00	1.8871E+04	2.0165E+04	6.9675E+04
3.000E+00	.0E+00	.0E+00	.0E+00	1.1196E+04	1.3602E+04	3.7117E+04
3.439E+00	.0E+00	.0E+00	.0E+00	9.2081E+03	1.1485E+04	2.9393E+04
3.467E+00	.0E+00	.0E+00	3.0121E+05	9.0997E+03	1.1369E+04	2.8989E+04
3.612E+00	.0E+00	.0E+00	2.6359E+05	8.5585E+03	1.0781E+04	2.6991E+04
3.641E+00	.0E+00	1.9091E+05	2.5821E+05	8.4567E+03	1.0668E+04	2.6616E+04
4.000E+00	.0E+00	1.4833E+05	2.0487E+05	7.3421E+03	9.3779E+03	2.2498E+04
4.155E+00	.0E+00	1.3516E+05	1.8508E+05	6.9289E+03	8.8863E+03	2.0992E+04
4.188E+00	7.3428E+04	1.3244E+05	1.8108E+05	6.8443E+03	8.7858E+03	2.0687E+04
4.998E+00	5.5627E+04	8.1299E+04	1.0897E+05	5.1758E+03	6.7524E+03	1.4855E+04
5.000E+00	5.5591E+04	8.1209E+04	1.0884E+05	5.1726E+03	6.7484E+03	1.4844E+04
5.038E+00	5.4866E+04	7.9462E+04	1.0644E+05	5.1102E+03	6.6691E+03	1.4629E+04
5.337E+00	4.9380E+04	6.7216E+04	9.0356E+04	4.6562E+03	6.0931E+03	1.3090E+04
5.379E+00	4.8636E+04	6.5775E+04	8.8331E+04	4.5959E+03	6.0166E+03	1.2889E+04
6.000E+00	3.9346E+04	4.8350E+04	6.3824E+04	3.8356E+03	5.0374E+03	1.0386E+04
8.000E+00	2.2382E+04	2.0499E+04	2.6524E+04	2.3439E+03	3.0532E+03	5.7304E+03
1.000E+01	1.3925E+04	1.0249E+04	1.3029E+04	1.5729E+03	2.0080E+03	3.5203E+03
1.500E+01	5.4765E+03	2.7436E+03	3.3716E+03	7.3683E+02	8.8119E+02	1.3733E+03
1.673E+01	4.2015E+03	1.9034E+03	2.3173E+03	5.9687E+02	6.9736E+02	1.0538E+03
1.686E+01	4.1200E+03	1.8528E+03	2.2539E+03	5.8766E+02	6.8536E+02	1.0333E+03
2.000E+01	2.6849E+03	1.0337E+03	1.2377E+03	4.1962E+02	4.6955E+02	6.7477E+02
2.038E+01	2.5583E+03	9.6811E+02	1.1569E+03	4.0403E+02	4.4986E+02	6.4305E+02
2.055E+01	2.5068E+03	9.4180E+02	1.1246E+03	3.9765E+02	4.4183E+02	6.3016E+02
2.112E+01	2.3365E+03	8.5635E+02	1.0198E+03	3.7639E+02	4.1514E+02	5.8757E+02
2.129E+01	2.2890E+03	8.3297E+02	9.9124E+02	3.7041E+02	4.0768E+02	5.7572E+02
3.000E+01	9.2306E+02	2.4852E+02	2.8571E+02	1.8340E+02	1.8233E+02	2.3395E+02
4.000E+01	4.1573E+02	8.7862E+01	9.7869E+01	9.9464E+01	8.9733E+01	1.0617E+02
5.000E+01	2.1950E+02	3.8726E+01	4.2031E+01	6.1022E+01	5.0800E+01	5.6392E+01
6.000E+01	1.2877E+02	1.9706E+01	2.0923E+01	4.0577E+01	3.1571E+01	3.3245E+01
8.000E+01	5.4544E+01	6.7392E+00	6.9038E+00	2.0985E+01	1.4659E+01	1.4184E+01
1.000E+02	2.7697E+01	2.9301E+00	2.9195E+00	1.2433E+01	7.9966E+00	7.2399E+00
1.131E+02	1.8991E+01	1.8504E+00	1.8161E+00	9.2735E+00	5.7045E+00	4.9772E+00
1.140E+02	1.8532E+01	1.7962E+00	1.7613E+00	9.0985E+00	5.5809E+00	4.8577E+00
1.500E+02	7.9766E+00	6.5007E-01	6.1764E-01	4.7013E+00	2.6217E+00	2.1017E+00
2.000E+02	3.3035E+00	2.2822E-01	2.1093E-01	2.3359E+00	1.1870E+00	8.7434E-01
3.000E+02	9.7839E-01	5.4659E-02	4.9379E-02	8.7492E-01	3.9514E-01	2.6022E-01
4.000E+02	4.2718E-01	2.0807E-02	1.8797E-02	4.4278E-01	1.8561E-01	1.1370E-01
5.000E+02	2.3103E-01	1.0191E-02	9.3045E-03	2.6510E-01	1.0565E-01	6.1557E-02

Z= 91

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
6.000E+02	1.4304E-01	5.9050E-03	5.4521E-03	1.7655E-01	6.7802E-02	3.8139E-02
8.000E+02	6.9990E-02	2.5968E-03	2.4751E-03	9.5367E-02	3.4878E-02	1.8680E-02
1.000E+03	4.1822E-02	1.4622E-03	1.4080E-03	6.0485E-02	2.1556E-02	1.1155E-02
1.500E+03	1.7800E-02	5.6501E-04	5.7880E-04	2.7790E-02	9.7187E-03	4.7648E-03

Z= 91

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	2.1010E+05	3.4261E+05	7.4119E+05	9.5738E+05	1.7013E+04	1.3725E+04
1.209E+00	1.8649E+05	2.9190E+05	4.7205E+05	6.0490E+05	1.3149E+04	1.1364E+04
1.219E+00	1.8521E+05	2.8961E+05	4.6265E+05	5.9272E+05	1.3005E+04	1.1271E+04
1.363E+00	1.6676E+05	2.5520E+05	3.4707E+05	4.4294E+05	1.1110E+04	1.0016E+04
1.374E+00	1.6533E+05	2.5260E+05	3.3980E+05	4.3353E+05	1.0984E+04	9.9299E+03
1.500E+00	1.4883E+05	2.2454E+05	2.6773E+05	3.4064E+05	9.6767E+03	3.0115E+03
2.000E+00	9.7941E+04	1.4280E+05	1.1678E+05	1.4731E+05	6.2971E+03	6.4012E+03
3.000E+00	4.6106E+04	6.4599E+04	3.2331E+04	4.0323E+04	3.3356E+03	3.7198E+03
3.439E+00	3.4527E+04	4.7797E+04	2.0411E+04	2.5356E+04	2.6726E+03	3.0481E+03
3.467E+00	3.3931E+04	4.6939E+04	1.9862E+04	2.4670E+04	2.6380E+03	3.0121E+03
3.612E+00	3.0992E+04	4.2738E+04	1.7255E+04	2.1406E+04	2.4662E+03	2.8324E+03
3.641E+00	3.0446E+04	4.1961E+04	1.6787E+04	2.0821E+04	2.4340E+03	2.7984E+03
4.000E+00	2.4614E+04	3.3660E+04	1.2101E+04	1.4968E+04	2.0833E+03	2.4226E+03
4.155E+00	2.2540E+04	3.0722E+04	1.0586E+04	1.3078E+04	1.9552E+03	2.2828E+03
4.188E+00	2.2123E+04	3.0135E+04	1.0291E+04	1.2711E+04	1.9293E+03	2.2543E+03
4.998E+00	1.4452E+04	1.9410E+04	5.4491E+03	6.6941E+03	1.4300E+03	1.6938E+03
5.000E+00	1.4438E+04	1.9391E+04	5.4414E+03	6.6845E+03	1.4290E+03	1.6927E+03
5.038E+00	1.4169E+04	1.9018E+04	5.2926E+03	6.5003E+03	1.4106E+03	1.6715E+03
5.337E+00	1.2267E+04	1.6395E+04	4.2844E+03	5.2525E+03	1.2775E+03	1.5179E+03
5.379E+00	1.2023E+04	1.6058E+04	4.1601E+03	5.0987E+03	1.2600E+03	1.4976E+03
6.000E+00	9.0837E+03	1.2026E+04	2.7692E+03	3.3821E+03	1.0418E+03	1.2415E+03
8.000E+00	4.1762E+03	5.4034E+03	9.1721E+02	1.1094E+03	6.2342E+02	7.3830E+02
1.000E+01	2.2050E+03	2.8008E+03	3.7739E+02	4.5278E+02	4.1355E+02	4.8110E+02
1.500E+01	6.4212E+02	7.8736E+02	7.0686E+01	8.3432E+01	1.9097E+02	2.0920E+02
1.673E+01	4.5430E+02	5.5154E+02	4.4537E+01	5.2317E+01	1.5426E+02	1.6532E+02
1.686E+01	4.4282E+02	5.3721E+02	4.3047E+01	5.0548E+01	1.5185E+02	1.6246E+02
2.000E+01	2.5416E+02	3.0337E+02	2.0640E+01	2.4045E+01	1.0803E+02	1.1113E+02
2.038E+01	2.3873E+02	2.8443E+02	1.9007E+01	2.2121E+01	1.0397E+02	1.0646E+02
2.055E+01	2.3253E+02	2.7683E+02	1.8359E+01	2.1360E+01	1.0231E+02	1.0455E+02
2.112E+01	2.1234E+02	2.5211E+02	1.6292E+01	1.8929E+01	9.6789E+01	9.8224E+01
2.129E+01	2.0680E+02	2.4534E+02	1.5735E+01	1.8275E+01	9.5238E+01	9.6454E+01
3.000E+01	6.4643E+01	7.4038E+01	3.4601E+00	3.9463E+00	4.6913E+01	4.3102E+01
4.000E+01	2.3577E+01	2.6159E+01	9.5077E-01	1.0661E+00	2.5369E+01	2.1222E+01
5.000E+01	1.0605E+01	1.1463E+01	3.4616E-01	3.8269E-01	1.5541E+01	1.2023E+01
6.000E+01	5.4748E+00	5.7894E+00	1.5122E-01	1.6516E-01	1.0325E+01	7.4783E+00
8.000E+01	1.9088E+00	1.9479E+00	4.0892E-02	4.3773E-02	5.3354E+00	3.4771E+00
1.000E+02	8.4015E-01	8.3414E-01	1.4963E-02	1.5762E-02	3.1603E+00	1.8991E+00
1.131E+02	5.3370E-01	5.2206E-01	8.5988E-03	8.9789E-03	2.3573E+00	1.3606E+00
1.140E+02	5.1827E-01	5.0648E-01	8.2964E-03	8.6589E-03	2.3128E+00	1.3311E+00
1.500E+02	1.8964E-01	1.7967E-01	2.4479E-03	2.5109E-03	1.1966E+00	6.2605E-01
2.000E+02	6.7167E-02	6.1949E-02	7.0840E-04	7.0636E-04	5.9444E-01	2.8377E-01
3.000E+02	1.6245E-02	1.4577E-02	1.3204E-04	1.3058E-04	2.2262E-01	9.4585E-02
4.000E+02	6.2187E-03	5.5724E-03	4.2670E-05	4.2961E-05	1.1265E-01	4.4465E-02
5.000E+02	3.0556E-03	2.7632E-03	1.8468E-05	1.9454E-05	6.7447E-02	2.5286E-02
6.000E+02	1.7720E-03	1.6234E-03	1.0049E-05	1.0828E-05	4.4917E-02	1.6232E-02
8.000E+02	7.8186E-04	7.3966E-04	4.0044E-06	4.3264E-06	2.4260E-02	8.3518E-03
1.000E+03	4.4015E-04	4.2277E-04	2.1102E-06	2.4699E-06	1.5386E-02	5.1610E-03
1.500E+03	1.7112E-04	1.7297E-04	7.8305E-07	9.2507E-07	7.0682E-03	2.3273E-03

Z= 91

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	5 F 5/2	5 F 7/2	6 S 1/2
1.000E+00	5.2001E+04	5.2391E+04	7.9801E+04	7.0488E+03	8.9210E+03	4.1388E+03
1.209E+00	3.9624E+04	4.1261E+04	6.1590E+04	4.6161E+03	5.8026E+03	3.0972E+03
1.219E+00	3.9163E+04	4.0817E+04	6.0879E+04	4.5307E+03	5.6938E+03	3.0593E+03
1.363E+00	3.3183E+04	3.4875E+04	5.1456E+04	3.4657E+03	4.3391E+03	2.5728E+03
1.374E+00	3.2786E+04	3.4470E+04	5.0820E+04	3.3982E+03	4.2534E+03	2.5409E+03
1.500E+00	2.8673E+04	3.0187E+04	4.4147E+04	2.7241E+03	3.4001E+03	2.2130E+03
2.000E+00	1.8167E+04	1.8693E+04	2.6670E+04	1.2553E+03	1.5528E+03	1.3971E+03
3.000E+00	9.1210E+03	8.5297E+03	1.1788E+04	3.7292E+02	4.4743E+02	7.1803E+02
3.439E+00	7.1394E+03	6.3686E+03	8.7113E+03	2.3856E+02	2.8706E+02	5.7092E+02
3.467E+00	7.0367E+03	6.2583E+03	8.5554E+03	2.3242E+02	2.7960E+02	5.6329E+02
3.612E+00	6.5283E+03	5.7163E+03	7.7904E+03	2.0306E+02	2.4396E+02	5.2552E+02
3.641E+00	6.4334E+03	5.6157E+03	7.6487E+03	1.9777E+02	2.3755E+02	5.1846E+02
4.000E+00	5.4038E+03	4.5395E+03	6.1397E+03	1.4438E+02	1.7290E+02	4.4176E+02
4.155E+00	5.0313E+03	4.1580E+03	5.6078E+03	1.2690E+02	1.5178E+02	4.1392E+02
4.188E+00	4.9561E+03	4.0815E+03	5.5014E+03	1.2349E+02	1.4767E+02	4.0829E+02
4.998E+00	3.5259E+03	2.6736E+03	3.5564E+03	6.6750E+01	7.9361E+01	3.0049E+02
5.000E+00	3.5233E+03	2.6710E+03	3.5529E+03	6.6658E+01	7.9251E+01	3.0029E+02
5.038E+00	3.4712E+03	2.6217E+03	3.4853E+03	6.4889E+01	7.7128E+01	2.9632E+02
5.337E+00	3.0981E+03	2.2730E+03	3.0086E+03	5.2845E+01	6.2692E+01	2.6783E+02
5.379E+00	3.0493E+03	2.2280E+03	2.9474E+03	5.1354E+01	6.0907E+01	2.6409E+02
6.000E+00	2.4477E+03	1.6880E+03	2.2145E+03	3.4552E+01	4.0829E+01	2.1758E+02
8.000E+00	1.3402E+03	7.8280E+02	1.0042E+03	1.1730E+01	1.3722E+01	1.2917E+02
1.000E+01	8.2067E+02	4.1642E+02	5.2461E+02	4.9056E+00	5.6902E+00	8.5263E+01
1.500E+01	3.1945E+02	1.2292E+02	1.4952E+02	9.4005E-01	1.0723E+00	3.9093E+01
1.673E+01	2.4512E+02	8.7263E+01	1.0509E+02	5.9522E-01	6.7568E-01	3.1531E+01
1.686E+01	2.4037E+02	8.5079E+01	1.0239E+02	5.7550E-01	6.5306E-01	3.1035E+01
2.000E+01	1.5700E+02	4.9077E+01	5.8110E+01	2.7787E-01	3.1278E-01	2.2034E+01
2.038E+01	1.4963E+02	4.6123E+01	5.4513E+01	2.5607E-01	2.8797E-01	2.1202E+01
2.055E+01	1.4663E+02	4.4938E+01	5.3067E+01	2.4742E-01	2.7814E-01	2.0862E+01
2.112E+01	1.3673E+02	4.1066E+01	4.8365E+01	2.1978E-01	2.4673E-01	1.9730E+01
2.129E+01	1.3398E+02	4.0003E+01	4.7076E+01	2.1235E-01	2.3829E-01	1.9413E+01
3.000E+01	5.4527E+01	1.2617E+01	1.4332E+01	4.7240E-02	5.2047E-02	9.6594E+00
4.000E+01	2.4789E+01	4.6309E+00	5.0957E+00	1.3079E-02	1.4166E-02	5.2215E+00
5.000E+01	1.3187E+01	2.0916E+00	2.2294E+00	4.7839E-03	5.1083E-03	3.1977E+00
6.000E+01	7.7843E+00	1.0821E+00	1.1294E+00	2.0964E-03	2.2113E-03	2.1240E+00
8.000E+01	3.3281E+00	3.7880E-01	3.8152E-01	5.6935E-04	5.8847E-04	1.0971E+00
1.000E+02	1.6972E+00	1.6719E-01	1.6379E-01	2.0890E-04	2.1248E-04	6.4960E-01
1.131E+02	1.1675E+00	1.0635E-01	1.0265E-01	1.2022E-04	1.2119E-04	4.8442E-01
1.140E+02	1.1395E+00	1.0329E-01	9.9597E-02	1.1601E-04	1.1688E-04	4.7527E-01
1.500E+02	4.9359E-01	3.7895E-02	3.5423E-02	3.4327E-05	3.3972E-05	2.4549E-01
2.000E+02	2.0556E-01	1.3453E-02	1.2238E-02	9.9628E-06	9.7178E-06	1.2195E-01
3.000E+02	6.1237E-02	3.2605E-03	2.8997E-03	1.8564E-06	1.8060E-06	4.5670E-02
4.000E+02	2.6817E-02	1.2486E-03	1.1099E-03	6.0040E-07	5.9594E-07	2.3108E-02
5.000E+02	1.4526E-02	6.1365E-04	5.5139E-04	2.6174E-07	2.6745E-07	1.3836E-02
6.000E+02	9.0003E-03	3.5653E-04	3.2390E-04	1.4197E-07	1.4824E-07	9.2140E-03
8.000E+02	4.4080E-03	1.5720E-04	1.4722E-04	5.4943E-08	6.1365E-08	4.9768E-03
1.000E+03	2.6335E-03	8.8356E-05	8.4658E-05	2.8797E-08	3.3634E-08	3.1565E-03
1.500E+03	1.1242E-03	3.4331E-05	3.4466E-05	9.9221E-09	1.2983E-08	1.4506E-03

Z= 91

ENERGY	6 P 1/2	6 P 3/2	6 D 3/2	6 D 5/2	7 S 1/2
1.000E+00	2.8930E+03	9.0784E+03	4.1656E+02	5.8785E+02	5.1915E+02
1.209E+00	2.3049E+03	6.8058E+03	3.2203E+02	4.4839E+02	3.7852E+02
1.219E+00	2.2826E+03	6.7226E+03	3.1835E+02	4.4302E+02	3.7354E+02
1.363E+00	1.9893E+03	5.6506E+03	2.6966E+02	3.7241E+02	3.0974E+02
1.374E+00	1.9696E+03	5.5801E+03	2.6638E+02	3.6768E+02	3.0558E+02
1.500E+00	1.7626E+03	4.8535E+03	2.3201E+02	3.1847E+02	2.6315E+02
2.000E+00	1.2065E+03	3.0300E+03	1.4504E+02	1.9012E+02	1.6029E+02
3.000E+00	6.7669E+02	1.5010E+03	6.5902E+01	8.3733E+01	7.8975E+01
3.439E+00	5.4971E+02	1.1712E+03	4.9189E+01	6.1862E+01	6.2861E+01

ENERGY	6 P 1/2	6 P 3/2	6 D 3/2	6 D 5/2	7 S 1/2
3.467E+00	5.4297E+02	1.1541E+03	4.8337E+01	6.0754E+01	6.2026E+01
3.612E+00	5.0937E+02	1.0699E+03	4.4148E+01	5.5319E+01	5.7890E+01
3.641E+00	5.0305E+02	1.0542E+03	4.3371E+01	5.4313E+01	5.7118E+01
4.000E+00	4.3336E+02	8.8395E+02	3.5061E+01	4.3600E+01	4.8715E+01
4.155E+00	4.0762E+02	8.2251E+02	3.2116E+01	3.9825E+01	4.5664E+01
4.188E+00	4.0238E+02	8.1010E+02	3.1526E+01	3.9069E+01	4.5046E+01
4.998E+00	3.0005E+02	5.7494E+02	2.0661E+01	2.5267E+01	3.3217E+01
5.000E+00	2.9985E+02	5.7450E+02	2.0641E+01	2.5242E+01	3.3195E+01
5.038E+00	2.9601E+02	5.6596E+02	2.0260E+01	2.4763E+01	3.2760E+01
5.337E+00	2.6824E+02	5.0481E+02	1.7569E+01	2.1381E+01	2.9629E+01
5.379E+00	2.6457E+02	4.9682E+02	1.7222E+01	2.0946E+01	2.9218E+01
6.000E+00	2.1854E+02	3.9837E+02	1.3054E+01	1.5745E+01	2.4103E+01
8.000E+00	1.2892E+02	2.1772E+02	6.0624E+00	7.1493E+00	1.4358E+01
1.000E+01	8.3602E+01	1.3323E+02	3.2286E+00	3.7388E+00	9.5008E+00
1.500E+01	3.6112E+01	5.2078E+01	9.5482E-01	1.0677E+00	4.3742E+00
1.673E+01	2.9169E+01	3.9959E+01	6.7814E-01	7.5074E-01	3.5315E+00
1.686E+01	2.8664E+01	3.9184E+01	6.6119E-01	7.3144E-01	3.4762E+00
2.000E+01	1.9607E+01	2.5593E+01	3.8165E-01	4.1541E-01	2.4713E+00
2.038E+01	1.8783E+01	2.4391E+01	3.5870E-01	3.8972E-01	2.3783E+00
2.055E+01	1.8446E+01	2.3902E+01	3.4947E-01	3.7940E-01	2.3403E+00
2.112E+01	1.7330E+01	2.2289E+01	3.1939E-01	3.4582E-01	2.2137E+00
2.129E+01	1.7018E+01	2.1840E+01	3.1113E-01	3.3662E-01	2.1782E+00
3.000E+01	7.6065E+00	8.8894E+00	9.8221E-02	1.0261E-01	1.0720E+00
4.000E+01	3.7465E+00	4.0418E+00	3.6078E-02	3.6513E-02	5.7939E-01
5.000E+01	2.1232E+00	2.1503E+00	1.6302E-02	1.6077E-02	3.5480E-01
6.000E+01	1.3209E+00	1.2693E+00	8.4449E-03	8.1477E-03	2.3566E-01
8.000E+01	6.1431E-01	5.4264E-01	2.9576E-03	2.7545E-03	1.2172E-01
1.000E+02	3.3554E-01	2.7737E-01	1.3057E-03	1.1832E-03	7.2073E-02
1.131E+02	2.3952E-01	1.9082E-01	8.3061E-04	7.4163E-04	5.3746E-02
1.140E+02	2.3434E-01	1.8625E-01	8.0667E-04	7.1958E-04	5.2731E-02
1.500E+02	1.1024E-01	8.0698E-02	2.9601E-04	2.5604E-04	2.7237E-02
2.000E+02	4.9975E-02	3.3615E-02	1.0511E-04	8.8509E-05	1.3531E-02
3.000E+02	1.6659E-02	1.0017E-02	2.5473E-05	2.1002E-05	5.0691E-03
4.000E+02	7.8318E-03	4.3873E-03	9.7585E-06	8.0562E-06	2.5662E-03
5.000E+02	4.4542E-03	2.3769E-03	4.7996E-06	4.0100E-06	1.5375E-03
6.000E+02	2.8594E-03	1.4732E-03	2.7887E-06	2.3601E-06	1.0249E-03
8.000E+02	1.4711E-03	7.2173E-04	1.2328E-06	1.0805E-06	5.5506E-04
1.000E+03	9.0920E-04	4.3148E-04	6.9464E-07	6.2694E-07	3.5341E-04
1.500E+03	4.1015E-04	1.8457E-04	2.7471E-07	2.6437E-07	1.6502E-04

Z= 92

29 STATES, 50 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	116.2831	.98684
2 S 1/2	2.00	21.7989	.89051
2 P 1/2	2.00	21.0466	.83784
2 P 3/2	4.00	17.1804	.80110
3 S 1/2	2.00	5.5292	.70779
3 P 1/2	2.00	5.1828	.64068
3 P 3/2	4.00	4.2892	.59014
3 D 3/2	4.00	3.7365	.40625
3 D 5/2	6.00	3.5545	.39595
4 S 1/2	2.00	1.4223	.46739
4 P 1/2	2.00	1.2649	.40301
4 P 3/2	4.00	1.0305	.35323
4 D 3/2	4.00	.7782	.20441
4 D 5/2	6.00	.7348	.19460
4 F 5/2	6.00	.4018	.05580
4 F 7/2	8.00	.3904	.05451
5 S 1/2	2.00	.3214	.24005
5 P 1/2	2.00	.2596	.19168
5 P 3/2	4.00	.2034	.16052
5 D 3/2	4.00	.1123	.07139
5 D 5/2	6.00	.1039	.06645
5 F 5/2	1.29	.0089	.00684
5 F 7/2	1.71	.0079	.00644
6 S 1/2	2.00	.0524	.08690
6 P 1/2	2.00	.0341	.05899
6 P 3/2	4.00	.0246	.04464
6 D 3/2	.40	.0047	.00884
6 D 5/2	.60	.0041	.00749
7 S 1/2	2.00	.0058	.01514

Z= 92 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	2.6138E+06	.0E+00	.0E+00	.0E+00	2.6138E+06
1.0295E+00	2.4827E+06	.0E+00	.0E+00	.0E+00	2.4827E+06
1.0377E+00	2.6035E+06	.0E+00	.0E+00	.0E+00	2.6035E+06
1.2636E+00	1.8083E+06	.0E+00	.0E+00	.0E+00	1.8083E+06
1.2737E+00	1.8056E+06	.0E+00	.0E+00	.0E+00	1.8056E+06
1.4209E+00	1.4569E+06	.0E+00	.0E+00	.0E+00	1.4569E+06
1.4323E+00	1.4619E+06	.0E+00	.0E+00	.0E+00	1.4619E+06
1.5000E+00	1.3315E+06	.0E+00	.0E+00	.0E+00	1.3315E+06
2.0000E+00	7.3229E+05	.0E+00	.0E+00	.0E+00	7.3229E+05
3.0000E+00	2.9966E+05	.0E+00	.0E+00	.0E+00	2.9966E+05
3.5509E+00	2.0381E+05	.0E+00	.0E+00	.0E+00	2.0381E+05
3.5793E+00	4.8538E+05	.0E+00	.0E+00	2.8529E+05	2.0009E+05
3.7327E+00	4.3401E+05	.0E+00	.0E+00	2.5243E+05	1.8158E+05
3.7626E+00	6.0635E+05	.0E+00	.0E+00	4.2810E+05	1.7825E+05
4.0000E+00	5.2134E+05	.0E+00	.0E+00	3.6674E+05	1.5460E+05
4.2849E+00	4.3990E+05	.0E+00	.0E+00	3.0833E+05	1.3157E+05
4.3193E+00	5.0222E+05	.0E+00	.0E+00	3.7310E+05	1.2912E+05
5.0000E+00	3.4792E+05	.0E+00	.0E+00	2.5661E+05	9.1306E+04
5.1777E+00	3.1813E+05	.0E+00	.0E+00	2.3413E+05	8.3997E+04
5.2191E+00	3.3100E+05	.0E+00	.0E+00	2.4859E+05	8.2409E+04
5.5236E+00	2.8759E+05	.0E+00	.0E+00	2.1565E+05	7.1933E+04
5.5679E+00	2.9421E+05	.0E+00	.0E+00	2.2364E+05	7.0568E+04
6.0000E+00	2.4523E+05	.0E+00	.0E+00	1.8631E+05	5.8923E+04
8.0000E+00	1.2023E+05	.0E+00	.0E+00	9.1072E+04	2.9157E+04
1.0000E+01	6.8598E+04	.0E+00	.0E+00	5.1858E+04	1.6740E+04
1.5000E+01	2.4305E+04	.0E+00	.0E+00	1.8302E+04	6.0025E+03

Z= 92 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY (KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.7163E+01	1.7143E+04	.0E+00	.0E+00	1.2892E+04	4.2514E+03
1.7301E+01	4.0104E+04	.0E+00	2.3311E+04	1.2627E+04	4.1652E+03
2.0000E+01	2.6999E+04	.0E+00	1.5490E+04	8.6433E+03	2.8665E+03
2.1026E+01	2.3635E+04	.0E+00	1.3534E+04	7.5819E+03	2.5187E+03
2.1194E+01	3.2860E+04	.0E+00	2.2967E+04	7.4250E+03	2.4672E+03
2.1777E+01	3.0659E+04	.0E+00	2.1445E+04	6.9142E+03	2.2996E+03
2.1951E+01	3.4734E+04	.0E+00	2.5710E+04	6.7708E+03	2.2525E+03
3.0000E+01	1.5659E+04	.0E+00	1.1695E+04	2.9669E+03	9.9711E+02
4.0000E+01	7.3834E+03	.0E+00	5.5379E+03	1.3785E+03	4.6700E+02
5.0000E+01	4.0916E+03	.0E+00	3.0759E+03	7.5763E+02	2.5807E+02
6.0000E+01	2.5154E+03	.0E+00	1.8933E+03	4.6355E+02	1.5855E+02
8.0000E+01	1.1609E+03	.0E+00	8.7489E+02	2.1280E+02	7.3222E+01
1.0000E+02	6.3537E+02	.0E+00	4.7909E+02	1.1615E+02	4.0127E+01
1.1617E+02	4.2361E+02	.0E+00	3.1949E+02	7.7337E+01	2.6785E+01
1.1710E+02	1.7607E+03	1.3461E+03	3.1268E+02	7.5682E+01	2.6220E+01
1.5000E+02	9.3813E+02	7.2575E+02	1.6021E+02	3.8706E+01	1.3461E+01
2.0000E+02	4.4889E+02	3.5065E+02	7.4119E+01	1.7878E+01	6.2402E+00
3.0000E+02	1.6006E+02	1.2612E+02	2.5613E+01	6.1658E+00	2.1606E+00
4.0000E+02	7.8986E+01	6.2563E+01	1.2398E+01	2.9792E+00	1.0459E+00
5.0000E+02	4.6670E+01	3.7111E+01	7.2184E+00	1.7317E+00	6.0881E-01
6.0000E+02	3.0861E+01	2.4614E+01	4.7188E+00	1.1304E+00	3.9770E-01
8.0000E+02	1.6569E+01	1.3274E+01	2.4904E+00	5.9514E-01	2.0956E-01
1.0000E+03	1.0493E+01	8.4299E+00	1.5597E+00	3.7208E-01	1.3105E-01
1.5000E+03	4.8296E+00	3.8927E+00	7.0884E-01	1.6869E-01	5.9429E-02

Z= 92

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.029E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.038E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.264E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.274E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.421E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.432E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.551E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.579E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.733E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.763E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.285E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.319E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
5.178E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
5.219E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.9350E+04
5.524E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.8222E+04
5.568E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.2175E+04	1.8065E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.0873E+04	1.6812E+04
8.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.2674E+03	1.1085E+04
1.000E+01	.0E+00	.0E+00	.0E+00	.0E+00	5.1706E+03	7.6440E+03
1.500E+01	.0E+00	.0E+00	.0E+00	.0E+00	2.5835E+03	3.5267E+03
1.716E+01	.0E+00	.0E+00	.0E+00	.0E+00	2.0187E+03	2.6616E+03
1.730E+01	.0E+00	.0E+00	.0E+00	2.3311E+04	1.9891E+03	2.6170E+03
2.000E+01	.0E+00	.0E+00	.0E+00	1.5490E+04	1.5153E+03	1.9090E+03
2.103E+01	.0E+00	.0E+00	.0E+00	1.3534E+04	1.3763E+03	1.7087E+03
2.119E+01	.0E+00	.0E+00	9.7202E+03	1.3247E+04	1.3553E+03	1.6786E+03
2.178E+01	.0E+00	.0E+00	9.1337E+03	1.2311E+04	1.2860E+03	1.5794E+03
2.195E+01	.0E+00	4.6686E+03	8.9940E+03	1.2048E+04	1.2663E+03	1.5513E+03

Z= 92

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
3.000E+01	.0E+00	2.6946E+03	4.0903E+03	4.9101E+03	6.8039E+02	7.4855E+02
4.000E+01	.0E+00	1.5379E+03	1.9042E+03	2.0958E+03	3.7384E+02	3.6896E+02
5.000E+01	.0E+00	9.7385E+02	1.0369E+03	1.0652E+03	2.3107E+02	2.0884E+02
6.000E+01	.0E+00	6.6030E+02	6.2533E+02	6.0771E+02	1.5442E+02	1.2969E+02
8.000E+01	.0E+00	3.4885E+02	2.7826E+02	2.4778E+02	8.0338E+01	6.0117E+01
1.000E+02	.0E+00	2.0884E+02	1.4750E+02	1.2275E+02	4.7765E+01	3.2751E+01
1.162E+02	.0E+00	1.4689E+02	9.6145E+01	7.6450E+01	3.3500E+01	2.1700E+01
1.171E+02	1.3461E+03	1.4415E+02	9.3980E+01	7.4547E+01	3.2870E+01	2.1229E+01
1.500E+02	7.2575E+02	7.9777E+01	4.6335E+01	3.4103E+01	1.8148E+01	1.0716E+01
2.000E+02	3.5065E+02	3.9766E+01	2.0496E+01	1.3856E+01	9.0404E+00	4.8474E+00
3.000E+02	1.2612E+02	1.4930E+01	6.6590E+00	4.0245E+00	3.3970E+00	1.6128E+00
4.000E+02	6.2563E+01	7.5664E+00	3.0908E+00	1.7406E+00	1.7227E+00	7.5763E-01
5.000E+02	3.7111E+01	4.5370E+00	1.7451E+00	9.3635E-01	1.0331E+00	4.3076E-01
6.000E+02	2.4614E+01	3.0254E+00	1.1155E+00	5.7790E-01	6.8885E-01	2.7652E-01
8.000E+02	1.3274E+01	1.6375E+00	5.7116E-01	2.8172E-01	3.7265E-01	1.4227E-01
1.000E+03	8.4299E+00	1.0400E+00	3.5188E-01	1.6783E-01	2.3654E-01	8.7858E-02
1.500E+03	3.8927E+00	4.7868E-01	1.5857E-01	7.1593E-02	1.0874E-01	3.9733E-02

Z= 92

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.029E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.038E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.5601E+05
1.264E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.2720E+05
1.274E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.5050E+04	1.2603E+05
1.421E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.3237E+04	1.1092E+05
1.432E+00	.0E+00	.0E+00	.0E+00	2.8118E+04	2.3191E+04	1.0988E+05
1.500E+00	.0E+00	.0E+00	.0E+00	2.5637E+04	2.2856E+04	1.0407E+05
2.000E+00	.0E+00	.0E+00	.0E+00	1.8764E+04	1.9742E+04	7.1231E+04
3.000E+00	.0E+00	.0E+00	.0E+00	1.1254E+04	1.3575E+04	3.8075E+04
3.551E+00	.0E+00	.0E+00	.0E+00	8.8615E+03	1.1059E+04	2.8578E+04
3.579E+00	.0E+00	.0E+00	2.8529E+05	8.7574E+03	1.0947E+04	2.8184E+04
3.733E+00	.0E+00	.0E+00	2.5243E+05	8.2256E+03	1.0372E+04	2.6192E+04
3.763E+00	.0E+00	1.8083E+05	2.4727E+05	8.1279E+03	1.0264E+04	2.5827E+04
4.000E+00	.0E+00	1.5356E+05	2.1318E+05	7.4150E+03	9.4547E+03	2.3160E+04
4.285E+00	.0E+00	1.3029E+05	1.7804E+05	6.6813E+03	8.5846E+03	2.0430E+04
4.319E+00	7.1224E+04	1.2768E+05	1.7419E+05	6.6000E+03	8.4876E+03	2.0132E+04
5.000E+00	5.6631E+04	8.5492E+04	1.1449E+05	5.2416E+03	6.8464E+03	1.5314E+04
5.178E+00	5.3440E+04	7.7362E+04	1.0333E+05	4.9578E+03	6.4879E+03	1.4321E+04
5.219E+00	5.2699E+04	7.5609E+04	1.0093E+05	4.8949E+03	6.4080E+03	1.4103E+04
5.524E+00	4.7449E+04	6.4097E+04	8.5885E+04	4.4667E+03	5.8626E+03	1.2635E+04
5.568E+00	4.6729E+04	6.2722E+04	8.3952E+04	4.4089E+03	5.7891E+03	1.2440E+04
6.000E+00	4.0400E+04	5.0950E+04	6.7276E+04	3.8971E+03	5.1340E+03	1.0735E+04
8.000E+00	2.3018E+04	2.1693E+04	2.8009E+04	2.3894E+03	3.1316E+03	5.9398E+03
1.000E+01	1.4375E+04	1.0873E+04	1.3796E+04	1.6075E+03	2.0702E+03	3.6574E+03
1.500E+01	5.6812E+03	2.9245E+03	3.5861E+03	7.5586E+02	9.1588E+02	1.4327E+03
1.716E+01	4.0939E+03	1.8615E+03	2.2560E+03	5.8282E+02	6.8684E+02	1.0331E+03
1.730E+01	4.0145E+03	1.8121E+03	2.1943E+03	5.7384E+02	6.7507E+02	1.0131E+03
2.000E+01	2.7932E+03	1.1054E+03	1.3204E+03	4.3151E+02	4.9064E+02	7.0610E+02
2.103E+01	2.4602E+03	9.3067E+02	1.1060E+03	3.9063E+02	4.3861E+02	6.2221E+02
2.119E+01	2.4106E+03	9.0540E+02	1.0751E+03	3.8447E+02	4.3080E+02	6.0972E+02
2.178E+01	2.2486E+03	8.2420E+02	9.7603E+02	3.6415E+02	4.0514E+02	5.6894E+02
2.195E+01	2.2029E+03	8.0170E+02	9.4867E+02	3.5837E+02	3.9787E+02	5.5746E+02
3.000E+01	9.6482E+02	2.6709E+02	3.0608E+02	1.8920E+02	1.9193E+02	2.4586E+02
4.000E+01	4.3584E+02	9.4727E+01	1.0515E+02	1.0283E+02	9.4928E+01	1.1190E+02
5.000E+01	2.3062E+02	4.1854E+01	4.5256E+01	6.3198E+01	5.3942E+01	5.9572E+01
6.000E+01	1.3553E+02	2.1340E+01	2.2566E+01	4.2082E+01	3.3623E+01	3.5183E+01
8.000E+01	5.7562E+01	7.3189E+00	7.4651E+00	2.1812E+01	1.5682E+01	1.5052E+01
1.000E+02	2.9287E+01	3.1888E+00	3.1626E+00	1.2945E+01	8.5831E+00	7.6983E+00
1.162E+02	1.8532E+01	1.8265E+00	1.7784E+00	9.0725E+00	5.7039E+00	4.8868E+00

Z= 92

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.171E+02	1.8085E+01	1.7733E+00	1.7248E+00	8.9016E+00	5.5808E+00	4.7697E+00
1.500E+02	8.4617E+00	7.0993E-01	6.7104E-01	4.9113E+00	2.8297E+00	2.2422E+00
2.000E+02	3.5114E+00	2.4976E-01	2.2956E-01	2.4460E+00	1.2858E+00	9.3472E-01
3.000E+02	1.0422E+00	5.9972E-02	5.3838E-02	9.1927E-01	4.2987E-01	2.7883E-01
4.000E+02	4.5554E-01	2.2865E-02	2.0510E-02	4.6627E-01	2.0244E-01	1.2196E-01
5.000E+02	2.4647E-01	1.1211E-02	1.0156E-02	2.7963E-01	1.1543E-01	6.6064E-02
6.000E+02	1.5262E-01	6.5009E-03	5.9513E-03	1.8643E-01	7.4166E-02	4.0942E-02
8.000E+02	7.4666E-02	2.8621E-03	2.7012E-03	1.0084E-01	3.8214E-02	2.0047E-02
1.000E+03	4.4558E-02	1.5966E-03	1.5294E-03	6.3990E-02	2.3616E-02	1.1956E-02
1.500E+03	1.8962E-02	6.2316E-04	6.3271E-04	2.9406E-02	1.0672E-02	5.1067E-03

Z= 92

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	2.0907E+05	3.4375E+05	7.8223E+05	1.0106E+06	1.7266E+04	1.3756E+04
1.029E+00	2.0721E+05	3.3829E+05	7.3318E+05	9.4617E+05	1.6628E+04	1.3384E+04
1.038E+00	2.0662E+05	3.3669E+05	7.2008E+05	9.2904E+05	1.6455E+04	1.3284E+04
1.264E+00	1.8128E+05	2.8325E+05	4.4932E+05	5.7497E+05	1.2601E+04	1.0933E+04
1.274E+00	1.7999E+05	2.8093E+05	4.4028E+05	5.6327E+05	1.2463E+04	1.0844E+04
1.421E+00	1.6172E+05	2.4702E+05	3.3115E+05	4.2223E+05	1.0678E+04	9.6594E+03
1.432E+00	1.6029E+05	2.4444E+05	3.2419E+05	4.1320E+05	1.0556E+04	9.5764E+03
1.500E+00	1.5173E+05	2.2963E+05	2.8616E+05	3.6404E+05	9.8772E+03	9.1049E+03
2.000E+00	1.0068E+05	1.4705E+05	1.2553E+05	1.5836E+05	6.4468E+03	6.5050E+03
3.000E+00	4.7871E+04	6.7123E+04	3.5052E+04	4.3695E+04	3.4241E+03	3.8091E+03
3.551E+00	3.3542E+04	4.6344E+04	1.9904E+04	2.4689E+04	2.6072E+03	2.9854E+03
3.579E+00	3.2962E+04	4.5509E+04	1.9368E+04	2.4019E+04	2.5735E+03	2.9503E+03
3.733E+00	3.0038E+04	4.1333E+04	1.6768E+04	2.0771E+04	2.4024E+03	2.7709E+03
3.763E+00	2.9507E+04	4.0578E+04	1.6313E+04	2.0203E+04	2.3711E+03	2.7378E+03
4.000E+00	2.5701E+04	3.5173E+04	1.3191E+04	1.6305E+04	2.1432E+03	2.4942E+03
4.285E+00	2.1930E+04	2.9825E+04	1.0356E+04	1.2775E+04	1.9112E+03	2.2416E+03
4.319E+00	2.1524E+04	2.9253E+04	1.0067E+04	1.2416E+04	1.8859E+03	2.2137E+03
5.000E+00	1.5148E+04	2.0345E+04	5.9547E+03	7.3103E+03	1.4728E+03	1.7503E+03
5.178E+00	1.3896E+04	1.8610E+04	5.2434E+03	6.4295E+03	1.3875E+03	1.6525E+03
5.219E+00	1.3623E+04	1.8233E+04	5.0927E+03	6.2431E+03	1.3687E+03	1.6308E+03
5.524E+00	1.1816E+04	1.5746E+04	4.1343E+03	5.0594E+03	1.2414E+03	1.4833E+03
5.568E+00	1.1580E+04	1.5421E+04	4.0142E+03	4.9112E+03	1.2244E+03	1.4635E+03
6.000E+00	9.5643E+03	1.2656E+04	3.0398E+03	3.7099E+03	1.0753E+03	1.2883E+03
8.000E+00	4.4200E+03	5.7134E+03	1.0118E+03	1.2227E+03	6.4500E+02	7.7028E+02
1.000E+01	2.3426E+03	2.9721E+03	4.1781E+02	5.0077E+02	4.2862E+02	5.0399E+02
1.500E+01	6.8666E+02	8.4053E+02	7.8725E+01	9.2802E+01	1.9854E+02	2.2075E+02
1.716E+01	4.4804E+02	5.4157E+02	4.4501E+01	5.2144E+01	1.5254E+02	1.6525E+02
1.730E+01	4.3674E+02	5.2751E+02	4.3014E+01	5.0383E+01	1.5016E+02	1.6240E+02
2.000E+01	2.7300E+02	3.2514E+02	2.3082E+01	2.6852E+01	1.1255E+02	1.1787E+02
2.103E+01	2.3162E+02	2.7452E+02	1.8588E+01	2.1571E+01	1.0178E+02	1.0533E+02
2.119E+01	2.2561E+02	2.6717E+02	1.7956E+01	2.0829E+01	1.0016E+02	1.0345E+02
2.178E+01	2.0624E+02	2.4357E+02	1.5957E+01	1.8485E+01	9.4814E+01	9.7273E+01
2.195E+01	2.0086E+02	2.3703E+02	1.5412E+01	1.7847E+01	9.3296E+01	9.5524E+01
3.000E+01	6.9846E+01	7.9780E+01	3.8913E+00	4.4310E+00	4.9017E+01	4.6039E+01
4.000E+01	2.5576E+01	2.8288E+01	1.0729E+00	1.2009E+00	2.6563E+01	2.2779E+01
5.000E+01	1.1536E+01	1.2428E+01	3.9155E-01	4.3201E-01	1.6298E+01	1.2954E+01
6.000E+01	5.9692E+00	6.2889E+00	1.7138E-01	1.8677E-01	1.0842E+01	8.0801E+00
8.000E+01	2.0881E+00	2.1223E+00	4.6489E-02	4.9645E-02	5.6149E+00	3.7740E+00
1.000E+02	9.2125E-01	9.1070E-01	1.7050E-02	1.7915E-02	3.3314E+00	2.0680E+00
1.162E+02	5.3154E-01	5.1595E-01	8.7115E-03	9.0560E-03	2.3347E+00	1.3754E+00
1.171E+02	5.1621E-01	5.0061E-01	8.4062E-03	8.7343E-03	2.2908E+00	1.3507E+00
1.500E+02	2.0876E-01	1.9682E-01	2.8000E-03	2.8635E-03	1.2655E+00	6.8559E-01
2.000E+02	7.4118E-02	6.7993E-02	8.1202E-04	8.0607E-04	6.3016E-01	3.1187E-01
3.000E+02	1.7977E-02	1.6030E-02	1.5154E-04	1.4945E-04	2.3679E-01	1.0441E-01
4.000E+02	6.8923E-03	6.1326E-03	4.8880E-05	4.9399E-05	1.2009E-01	4.9209E-02
5.000E+02	3.3892E-03	3.0444E-03	2.1297E-05	2.2332E-05	7.2018E-02	2.8032E-02
6.000E+02	1.9670E-03	1.7898E-03	1.1664E-05	1.2293E-05	4.8014E-02	1.8017E-02

Z= 92

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
8.000E+02	8.6980E-04	8.1372E-04	4.4973E-06	4.9988E-06	2.5967E-02	9.2841E-03
1.000E+03	4.8467E-04	4.6375E-04	2.3033E-06	2.7999E-06	1.6478E-02	5.7378E-03
1.500E+03	1.9088E-04	1.8991E-04	9.7820E-07	1.0886E-06	7.5713E-03	2.5927E-03

Z= 92

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	5 F 5/2	5 F 7/2	6 S 1/2
1.000E+00	5.4000E+04	5.4573E+04	8.3411E+04	1.1883E+04	1.5058E+04	4.2567E+03
1.029E+00	5.1863E+04	5.2780E+04	8.0400E+04	1.1182E+04	1.4155E+04	4.0752E+03
1.038E+00	5.1288E+04	5.2290E+04	7.9581E+04	1.0995E+04	1.3914E+04	4.0266E+03
1.264E+00	3.8638E+04	4.0659E+04	6.0586E+04	7.0722E+03	8.8859E+03	2.9828E+03
1.274E+00	3.8186E+04	4.0215E+04	5.9874E+04	6.9405E+03	8.7180E+03	2.9463E+03
1.421E+00	3.2420E+04	3.4379E+04	5.0640E+04	5.3268E+03	6.6661E+03	2.4858E+03
1.432E+00	3.2031E+04	3.3974E+04	5.0005E+04	5.2223E+03	6.5337E+03	2.4549E+03
1.500E+00	2.9850E+04	3.1684E+04	4.6430E+04	4.6508E+03	5.8099E+03	2.2834E+03
2.000E+00	1.8935E+04	1.9709E+04	2.8157E+04	2.1599E+03	2.6733E+03	1.4436E+03
3.000E+00	9.5242E+03	9.0538E+03	1.2518E+04	6.4838E+02	7.9234E+02	7.4314E+02
3.551E+00	7.0410E+03	6.3212E+03	8.6270E+03	3.7802E+02	4.5155E+02	5.6034E+02
3.579E+00	6.9394E+03	6.2115E+03	8.4721E+03	3.6828E+02	4.3981E+02	5.5285E+02
3.733E+00	6.4259E+03	5.6606E+03	7.6959E+03	3.2079E+02	3.8257E+02	5.1499E+02
3.763E+00	6.3322E+03	5.5607E+03	7.5555E+03	3.1244E+02	3.7251E+02	5.0807E+02
4.000E+00	5.6530E+03	4.8436E+03	6.5505E+03	2.5304E+02	3.0316E+02	4.5788E+02
4.285E+00	4.9673E+03	4.1336E+03	5.5611E+03	2.0048E+02	2.3964E+02	4.0703E+02
4.319E+00	4.8928E+03	4.0575E+03	5.4554E+03	1.9509E+02	2.3315E+02	4.0150E+02
5.000E+00	3.6922E+03	2.8618E+03	3.8051E+03	1.1745E+02	1.3968E+02	3.1168E+02
5.178E+00	3.4480E+03	2.6273E+03	3.4839E+03	1.0383E+02	1.2333E+02	2.9324E+02
5.219E+00	3.3943E+03	2.5762E+03	3.4140E+03	1.0093E+02	1.1986E+02	2.8918E+02
5.524E+00	3.0336E+03	2.2376E+03	2.9523E+03	8.2441E+01	9.7714E+01	2.6177E+02
5.568E+00	2.9857E+03	2.1933E+03	2.8921E+03	8.0114E+01	9.4930E+01	2.5811E+02
6.000E+00	2.5690E+03	1.8146E+03	2.3790E+03	6.1131E+01	7.2249E+01	2.2613E+02
8.000E+00	1.4103E+03	8.4589E+02	1.0839E+03	2.0880E+01	2.4424E+01	1.3453E+02
1.000E+01	8.6538E+02	4.5172E+02	5.6829E+02	8.7701E+00	1.0172E+01	8.8938E+01
1.500E+01	3.3819E+02	1.3426E+02	1.6299E+02	1.6930E+00	1.9305E+00	4.0896E+01
1.716E+01	2.4384E+02	8.7978E+01	1.0547E+02	9.6311E-01	1.0915E+00	3.1361E+01
1.730E+01	2.3911E+02	8.5779E+01	1.0276E+02	9.3125E-01	1.0550E+00	3.0868E+01
2.000E+01	1.6669E+02	5.3850E+01	6.3613E+01	5.0282E-01	5.6568E-01	2.3095E+01
2.103E+01	1.4690E+02	4.5757E+01	5.3785E+01	4.0573E-01	4.5532E-01	2.0875E+01
2.119E+01	1.4396E+02	4.4579E+01	5.2358E+01	3.9204E-01	4.3979E-01	2.0541E+01
2.178E+01	1.3434E+02	4.0785E+01	4.7770E+01	3.4878E-01	3.9071E-01	1.9439E+01
2.195E+01	1.3163E+02	3.9729E+01	4.6497E+01	3.3698E-01	3.7734E-01	1.9126E+01
3.000E+01	5.8134E+01	1.3929E+01	1.5778E+01	8.6024E-02	9.4706E-02	1.0149E+01
4.000E+01	2.6508E+01	5.1339E+00	5.6308E+00	2.3909E-02	2.5871E-02	5.4975E+00
5.000E+01	1.4133E+01	2.3260E+00	2.4702E+00	8.7683E-03	9.3523E-03	3.3721E+00
6.000E+01	8.3574E+00	1.2062E+00	1.2539E+00	3.8506E-03	4.0563E-03	2.2428E+00
8.000E+01	3.5828E+00	4.2368E-01	4.2496E-01	1.0492E-03	1.0829E-03	1.1610E+00
1.000E+02	1.8311E+00	1.8744E-01	1.8283E-01	3.8592E-04	3.9187E-04	6.8860E-01
1.162E+02	1.1632E+00	1.0833E-01	1.0375E-01	1.9754E-04	1.9843E-04	4.8245E-01
1.171E+02	1.1354E+00	1.0522E-01	1.0067E-01	1.9065E-04	1.9140E-04	4.7335E-01
1.500E+02	5.3433E-01	4.2659E-02	3.9673E-02	6.3675E-05	6.2874E-05	2.6107E-01
2.000E+02	2.2298E-01	1.5182E-02	1.3734E-02	1.8522E-05	1.8016E-05	1.2999E-01
3.000E+02	6.6585E-02	3.6896E-03	3.2604E-03	3.4612E-06	3.3559E-06	4.8846E-02
4.000E+02	2.9190E-02	1.4151E-03	1.2496E-03	1.1214E-06	1.1083E-06	2.4772E-02
5.000E+02	1.5818E-02	6.9661E-04	6.2135E-04	4.8940E-07	4.9771E-07	1.4855E-02
6.000E+02	9.8030E-03	4.0502E-04	3.6472E-04	2.6565E-07	2.7542E-07	9.9040E-03
8.000E+02	4.8005E-03	1.7881E-04	1.6594E-04	1.0297E-07	1.1405E-07	5.3565E-03
1.000E+03	2.8645E-03	9.9591E-05	9.4880E-05	5.2291E-08	6.1711E-08	3.3992E-03
1.500E+03	1.2227E-03	3.9109E-05	3.8794E-05	1.8572E-08	2.3940E-08	1.5623E-03

ENERGY	6 P 1/2	6 P 3/2	6 D 3/2	6 D 5/2	7 S 1/2
1.000E+00	2.9469E+03	9.4419E+03	4.2751E+02	6.0096E+02	5.2420E+02
1.029E+00	2.8486E+03	9.0422E+03	4.1203E+02	5.7790E+02	4.9971E+02
1.038E+00	2.8221E+03	8.9351E+03	4.0782E+02	5.7166E+02	4.9317E+02
1.264E+00	2.2311E+03	6.6204E+03	3.1113E+02	4.2995E+02	3.5565E+02
1.274E+00	2.2096E+03	6.5390E+03	3.0752E+02	4.2472E+02	3.5096E+02
1.421E+00	1.9308E+03	5.5091E+03	2.6071E+02	3.5739E+02	2.9200E+02
1.432E+00	1.9117E+03	5.4399E+03	2.5750E+02	3.5279E+02	2.8808E+02
1.500E+00	1.8039E+03	5.0547E+03	2.3943E+02	3.2705E+02	2.6633E+02
2.000E+00	1.2393E+03	3.1579E+03	1.5037E+02	1.9595E+02	1.6270E+02
3.000E+00	6.9893E+02	1.5662E+03	6.8746E+01	8.6767E+01	7.9941E+01
3.551E+00	5.4173E+02	1.1533E+03	4.7973E+01	5.9774E+01	6.0352E+01
3.579E+00	5.3510E+02	1.1365E+03	4.7140E+01	5.8700E+01	5.9550E+01
3.733E+00	5.0133E+02	1.0515E+03	4.2957E+01	5.3321E+01	5.5492E+01
3.763E+00	4.9512E+02	1.0360E+03	4.2198E+01	5.2348E+01	5.4752E+01
4.000E+00	4.4960E+02	9.2382E+02	3.6757E+01	4.5387E+01	4.9373E+01
4.285E+00	4.0266E+02	8.1083E+02	3.1372E+01	3.8534E+01	4.3921E+01
4.319E+00	3.9750E+02	7.9857E+02	3.0795E+01	3.7802E+01	4.3328E+01
5.000E+00	3.1226E+02	6.0136E+02	2.1729E+01	2.6376E+01	3.3687E+01
5.178E+00	2.9439E+02	5.6134E+02	1.9950E+01	2.4152E+01	3.1706E+01
5.219E+00	2.9044E+02	5.5255E+02	1.9563E+01	2.3669E+01	3.1270E+01
5.524E+00	2.6361E+02	4.9352E+02	1.6995E+01	2.0472E+01	2.8323E+01
5.568E+00	2.6001E+02	4.8569E+02	1.6659E+01	2.0055E+01	2.7930E+01
6.000E+00	2.2830E+02	4.1759E+02	1.3788E+01	1.6502E+01	2.4489E+01
8.000E+00	1.3536E+02	2.2878E+02	6.4364E+00	7.5289E+00	1.4617E+01
1.000E+01	8.8118E+01	1.4027E+02	3.4411E+00	3.9516E+00	9.6875E+00
1.500E+01	3.8332E+01	5.5052E+01	1.0248E+00	1.1356E+00	4.4729E+00
1.716E+01	2.9312E+01	3.9691E+01	6.7190E-01	7.3527E-01	3.4341E+00
1.730E+01	2.8807E+01	3.8921E+01	6.5513E-01	7.1638E-01	3.3804E+00
2.000E+01	2.0907E+01	2.7133E+01	4.1152E-01	4.4375E-01	2.5321E+00
2.103E+01	1.8683E+01	2.3911E+01	3.4973E-01	3.7526E-01	2.2895E+00
2.119E+01	1.8349E+01	2.3432E+01	3.4074E-01	3.6532E-01	2.2529E+00
2.178E+01	1.7254E+01	2.1867E+01	3.1175E-01	3.3335E-01	2.1324E+00
2.195E+01	1.6944E+01	2.1426E+01	3.0369E-01	3.2447E-01	2.0982E+00
3.000E+01	8.1681E+00	9.4636E+00	1.0658E-01	1.1023E-01	1.1014E+00
4.000E+01	4.0428E+00	4.3157E+00	3.9311E-02	3.9376E-02	5.9652E-01
5.000E+01	2.2996E+00	2.3012E+00	1.7817E-02	1.7385E-02	3.6588E-01
6.000E+01	1.4348E+00	1.3608E+00	9.2513E-03	8.8290E-03	2.4334E-01
8.000E+01	6.7029E-01	5.8337E-01	3.2513E-03	2.9941E-03	1.2596E-01
1.000E+02	3.6734E-01	2.9880E-01	1.4390E-03	1.2889E-03	7.4707E-02
1.162E+02	2.4432E-01	1.8985E-01	8.3167E-04	7.3165E-04	5.2342E-02
1.171E+02	2.3905E-01	1.8531E-01	8.0777E-04	7.0996E-04	5.1355E-02
1.500E+02	1.2136E-01	8.7231E-02	3.2754E-04	2.7991E-04	2.8324E-02
2.000E+02	5.5217E-02	3.6412E-02	1.1659E-04	9.6960E-05	1.4104E-02
3.000E+02	1.8488E-02	1.0876E-02	2.8338E-05	2.3057E-05	5.3014E-03
4.000E+02	8.7140E-03	4.7687E-03	1.0874E-05	8.8532E-06	2.6898E-03
5.000E+02	4.9644E-03	2.5848E-03	5.3550E-06	4.4085E-06	1.6141E-03
6.000E+02	3.1908E-03	1.6023E-03	3.1131E-06	2.5951E-06	1.0770E-03
8.000E+02	1.6441E-03	7.8484E-04	1.3781E-06	1.1880E-06	5.8395E-04
1.000E+03	1.0162E-03	4.6862E-04	7.6982E-07	6.8623E-07	3.7195E-04
1.500E+03	4.5938E-04	2.0041E-04	3.0750E-07	2.9035E-07	1.7357E-04

Z= 93

29 STATES, 50 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	119.3952	.98690
2 S 1/2	2.00	22.4738	.89154
2 P 1/2	2.00	21.7049	.83924
2 P 3/2	4.00	17.6247	.80173
3 S 1/2	2.00	5.7209	.71041
3 P 1/2	2.00	5.3670	.64381
3 P 3/2	4.00	4.4212	.59207
3 D 3/2	4.00	3.8588	.40896
3 D 5/2	6.00	3.6674	.39845
4 S 1/2	2.00	1.4816	.47154
4 P 1/2	2.00	1.3202	.40745
4 P 3/2	4.00	1.0708	.35643
4 D 3/2	4.00	.8129	.20755
4 D 5/2	6.00	.7670	.19750
4 F 5/2	6.00	.4265	.05767
4 F 7/2	8.00	.4142	.05633
5 S 1/2	2.00	.3370	.24512
5 P 1/2	2.00	.2732	.19660
5 P 3/2	4.00	.2126	.16414
5 D 3/2	4.00	.1185	.07398
5 D 5/2	6.00	.1094	.06880
5 F 5/2	1.71	.0101	.00755
5 F 7/2	2.29	.0089	.00711
6 S 1/2	2.00	.0546	.08909
6 P 1/2	2.00	.0356	.06072
6 P 3/2	4.00	.0252	.04546
6 D 3/2	.40	.0047	.00896
6 D 5/2	.60	.0041	.00752
7 S 1/2	2.00	.0059	.01519

Z= 93 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	2.7307E+06	.0E+00	.0E+00	.0E+00	2.7307E+06
1.0697E+00	2.4235E+06	.0E+00	.0E+00	.0E+00	2.4235E+06
1.0783E+00	2.5411E+06	.0E+00	.0E+00	.0E+00	2.5411E+06
1.3189E+00	1.7423E+06	.0E+00	.0E+00	.0E+00	1.7423E+06
1.3295E+00	1.7389E+06	.0E+00	.0E+00	.0E+00	1.7389E+06
1.4801E+00	1.4056E+06	.0E+00	.0E+00	.0E+00	1.4056E+06
1.4920E+00	1.4100E+06	.0E+00	.0E+00	.0E+00	1.4100E+06
1.5000E+00	1.3943E+06	.0E+00	.0E+00	.0E+00	1.3943E+06
2.0000E+00	7.6722E+05	.0E+00	.0E+00	.0E+00	7.6722E+05
3.0000E+00	3.1404E+05	.0E+00	.0E+00	.0E+00	3.1404E+05
3.6637E+00	1.9875E+05	.0E+00	.0E+00	.0E+00	1.9875E+05
3.6931E+00	4.6578E+05	.0E+00	.0E+00	2.7067E+05	1.9511E+05
3.8550E+00	4.1859E+05	.0E+00	.0E+00	2.4197E+05	1.7662E+05
3.8858E+00	5.8191E+05	.0E+00	.0E+00	4.0854E+05	1.7337E+05
4.0000E+00	5.4319E+05	.0E+00	.0E+00	3.8114E+05	1.6206E+05
4.4168E+00	4.2538E+05	.0E+00	.0E+00	2.9694E+05	1.2844E+05
4.4522E+00	4.8591E+05	.0E+00	.0E+00	3.5985E+05	1.2605E+05
5.0000E+00	3.6345E+05	.0E+00	.0E+00	2.6771E+05	9.5746E+04
5.3616E+00	3.0412E+05	.0E+00	.0E+00	2.2309E+05	8.1027E+04
5.4046E+00	3.1613E+05	.0E+00	.0E+00	2.3664E+05	7.9492E+04
5.7152E+00	2.7541E+05	.0E+00	.0E+00	2.0591E+05	6.9501E+04
5.7610E+00	2.8171E+05	.0E+00	.0E+00	2.1353E+05	6.8179E+04
6.0000E+00	2.5535E+05	.0E+00	.0E+00	1.9354E+05	6.1810E+04
8.0000E+00	1.2525E+05	.0E+00	.0E+00	9.4649E+04	3.0602E+04
1.0000E+01	7.1539E+04	.0E+00	.0E+00	5.3959E+04	1.7580E+04
1.5000E+01	2.5383E+04	.0E+00	.0E+00	1.9071E+04	6.3113E+03

Z= 93 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY (KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.7607E+01	1.6766E+04	.0E+00	.0E+00	1.2577E+04	4.1885E+03
1.7748E+01	3.9054E+04	.0E+00	2.2631E+04	1.2319E+04	4.1036E+03
2.0000E+01	2.8187E+04	.0E+00	1.6151E+04	9.0185E+03	3.0171E+03
2.1683E+01	2.2693E+04	.0E+00	1.2945E+04	7.2996E+03	2.4483E+03
2.1857E+01	3.1610E+04	.0E+00	2.2063E+04	7.1486E+03	2.3983E+03
2.2451E+01	2.9500E+04	.0E+00	2.0601E+04	6.6624E+03	2.2372E+03
2.2631E+01	3.3420E+04	.0E+00	2.4704E+04	6.5243E+03	2.1914E+03
3.0000E+01	1.6315E+04	.0E+00	1.2162E+04	3.1022E+03	1.0512E+03
4.0000E+01	7.7110E+03	.0E+00	5.7745E+03	1.4435E+03	4.9299E+02
5.0000E+01	4.2807E+03	.0E+00	3.2136E+03	7.9438E+02	2.7274E+02
6.0000E+01	2.6351E+03	.0E+00	1.9809E+03	4.8651E+02	1.6771E+02
8.0000E+01	1.2184E+03	.0E+00	9.1708E+02	2.2371E+02	7.7563E+01
1.0000E+02	6.6770E+02	.0E+00	5.0289E+02	1.2226E+02	4.2556E+01
1.1928E+02	4.1490E+02	.0E+00	3.1258E+02	7.5847E+01	2.6478E+01
1.2023E+02	1.7061E+03	1.3001E+03	3.0592E+02	7.4228E+01	2.5916E+01
1.5000E+02	9.7324E+02	7.4953E+02	1.6857E+02	4.0832E+01	1.4307E+01
2.0000E+02	4.6698E+02	3.6334E+02	7.8115E+01	1.8891E+01	6.6426E+00
3.0000E+02	1.6706E+02	1.3117E+02	2.7055E+01	6.5294E+00	2.3049E+00
4.0000E+02	8.2614E+01	6.5222E+01	1.3116E+01	3.1595E+00	1.1174E+00
5.0000E+02	4.8887E+01	3.8753E+01	7.6445E+00	1.8384E+00	6.5106E-01
6.0000E+02	3.2362E+01	2.5735E+01	5.0010E+00	1.2009E+00	4.2560E-01
8.0000E+02	1.7397E+01	1.3898E+01	2.6416E+00	6.3275E-01	2.2443E-01
1.0000E+03	1.1023E+01	8.8316E+00	1.6551E+00	3.9573E-01	1.4040E-01
1.5000E+03	5.0743E+00	4.0789E+00	7.5232E-01	1.7944E-01	6.3677E-02

Z= 93

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.070E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.078E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.319E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.329E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.480E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.492E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.664E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.693E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.855E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.886E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.417E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.452E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
5.362E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
5.405E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.8466E+04
5.715E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.7404E+04
5.761E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.1620E+04	1.7253E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.0994E+04	1.6626E+04
8.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.3168E+03	1.1167E+04
1.000E+01	.0E+00	.0E+00	.0E+00	.0E+00	5.2272E+03	7.7837E+03
1.500E+01	.0E+00	.0E+00	.0E+00	.0E+00	2.6244E+03	3.6345E+03
1.761E+01	.0E+00	.0E+00	.0E+00	.0E+00	1.9613E+03	2.6063E+03
1.775E+01	.0E+00	.0E+00	.0E+00	2.2631E+04	1.9324E+03	2.5628E+03
2.000E+01	.0E+00	.0E+00	.0E+00	1.6151E+04	1.5461E+03	1.9802E+03
2.168E+01	.0E+00	.0E+00	.0E+00	1.2945E+04	1.3244E+03	1.6569E+03
2.186E+01	.0E+00	.0E+00	9.3936E+03	1.2670E+04	1.3042E+03	1.6278E+03
2.245E+01	.0E+00	.0E+00	8.8181E+03	1.1783E+04	1.2382E+03	1.5330E+03
2.263E+01	.0E+00	4.4826E+03	8.6916E+03	1.1530E+04	1.2193E+03	1.5057E+03

Z= 93

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
3.000E+01	.0E+00	2.7429E+03	4.2872E+03	5.1316E+03	6.9731E+02	7.8294E+02
4.000E+01	.0E+00	1.5703E+03	2.0C75E+03	2.1966E+03	3.8409E+02	3.8805E+02
5.000E+01	.0E+00	9.9776E+02	1.0973E+03	1.1185E+03	2.3790E+02	2.2052E+02
6.000E+01	.0E+00	6.7823E+02	6.6360E+02	6.3904E+02	1.5923E+02	1.3735E+02
8.000E+01	.0E+00	3.5935E+02	2.9660E+02	2.6113E+02	8.3043E+01	6.3964E+01
1.000E+02	.0E+00	2.1567E+02	1.5767E+02	1.2955E+02	4.9465E+01	3.4962E+01
1.193E+02	.0E+00	1.4275E+02	9.5518E+01	7.4311E+01	3.2626E+01	2.1594E+01
1.202E+02	1.3001E+03	1.4008E+02	9.3376E+01	7.2465E+01	3.2013E+01	2.1126E+01
1.500E+02	7.4953E+02	8.2709E+01	4.9776E+01	3.6086E+01	1.8858E+01	1.1503E+01
2.000E+02	3.6334E+02	4.1342E+01	2.2C87E+01	1.4686E+01	9.4174E+00	5.2218E+00
3.000E+02	1.3117E+02	1.5578E+01	7.2039E+00	4.2730E+00	3.5510E+00	5.2218E+00
4.000E+02	6.5222E+01	7.9145E+00	3.3515E+00	1.8497E+00	1.8050E+00	8.2179E-01
5.000E+02	3.8753E+01	4.7539E+00	1.8952E+00	9.9534E-01	1.0843E+00	4.6804E-01
6.000E+02	2.5735E+01	3.1738E+00	1.2128E+00	6.1434E-01	7.2376E-01	3.0080E-01
8.000E+02	1.3898E+01	1.7203E+00	6.2189E-01	2.9942E-01	3.9207E-01	1.5500E-01
1.000E+03	8.8316E+00	1.0933E+00	3.8348E-01	1.7830E-01	2.4902E-01	9.5814E-02
1.500E+03	4.0789E+00	5.0332E-01	1.7301E-01	7.5989E-02	1.1450E-01	4.3379E-02

Z= 93

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.070E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.078E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.319E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.5247E+05
1.329E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.2304E+05
1.480E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.3757E+04	1.2189E+05
1.492E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.2042E+04	1.0733E+05
1.500E+00	.0E+00	.0E+00	.0E+00	2.6776E+04	2.2002E+04	1.0631E+05
2.000E+00	.0E+00	.0E+00	.0E+00	2.6037E+04	2.1971E+04	1.0564E+05
3.000E+00	.0E+00	.0E+00	.0E+00	1.8673E+04	1.9300E+04	7.2777E+04
3.664E+00	.0E+00	.0E+00	.0E+00	1.1306E+04	1.3503E+04	3.9025E+04
3.693E+00	.0E+00	.0E+00	.0E+00	8.5299E+03	1.0649E+04	2.7801E+04
3.855E+00	.0E+00	.0E+00	2.7067E+05	8.4299E+03	1.0542E+04	2.7417E+04
3.886E+00	.0E+00	.0E+00	2.4197E+05	7.9076E+03	9.9799E+03	2.5430E+04
4.000E+00	.0E+00	1.7151E+05	2.3703E+05	7.8137E+03	9.8771E+03	2.5075E+04
4.417E+00	.0E+00	1.6018E+05	2.2C96E+05	7.4817E+03	9.5080E+03	2.3819E+04
4.452E+00	6.9122E+04	1.2553E+05	1.7140E+05	6.4432E+03	8.2927E+03	1.9892E+04
5.000E+00	5.7386E+04	1.2304E+05	1.6769E+05	6.3651E+03	8.1994E+03	1.9601E+04
5.362E+00	5.1330E+04	8.9980E+04	1.2C34E+05	5.3070E+03	6.9307E+03	1.5788E+04
5.405E+00	5.0617E+04	7.3748E+04	9.8C14E+04	4.7488E+03	6.2328E+03	1.3810E+04
5.715E+00	4.5643E+04	7.2075E+04	9.5478E+04	4.6886E+03	6.1563E+03	1.3598E+04
5.761E+00	4.4950E+04	6.1200E+04	8.1661E+04	4.2845E+03	5.6409E+03	1.2198E+04
6.000E+00	4.1535E+04	5.9888E+04	7.9817E+04	4.2292E+03	5.5704E+03	1.2010E+04
8.000E+00	2.3672E+04	5.3544E+04	7.0841E+04	3.9560E+03	5.2219E+03	1.1087E+04
1.000E+01	1.4829E+04	2.2922E+04	2.9571E+04	2.4328E+03	3.2080E+03	6.1514E+03
1.500E+01	5.8879E+03	1.1520E+04	1.4599E+04	1.6410E+03	2.1310E+03	3.7972E+03
1.761E+01	3.9911E+03	3.1136E+03	3.8109E+03	7.7460E+02	9.5061E+02	1.4936E+03
1.775E+01	3.9137E+03	1.8215E+03	2.1971E+03	5.6910E+02	6.7658E+02	1.0131E+03
2.000E+01	2.9043E+03	1.7732E+03	2.1371E+03	5.6035E+02	6.6502E+02	9.9342E+02
2.168E+01	2.3661E+03	1.1809E+03	1.4070E+03	4.4334E+02	5.1210E+02	7.3830E+02
2.186E+01	2.3183E+03	8.9476E+02	1.0574E+03	3.7761E+02	4.2765E+02	6.0198E+02
2.245E+01	2.1639E+03	8.7046E+02	1.0278E+03	3.7165E+02	4.2005E+02	5.8989E+02
2.263E+01	2.1198E+03	7.9322E+02	9.3407E+02	3.5223E+02	3.9537E+02	5.5084E+02
3.000E+01	1.0076E+03	7.7158E+02	9.0787E+02	3.4665E+02	3.8829E+02	5.3971E+02
4.000E+01	4.5653E+02	2.8673E+02	3.2758E+02	1.9502E+02	2.0181E+02	2.5814E+02
5.000E+01	2.4210E+02	1.0202E+02	1.1285E+02	1.0624E+02	1.0032E+02	1.1784E+02
6.000E+01	1.4254E+02	4.5184E+01	4.8673E+01	6.5399E+01	5.7218E+01	6.2872E+01
8.000E+01	6.0697E+01	2.3082E+01	2.4311E+01	4.3608E+01	3.5771E+01	3.7197E+01
1.000E+02	3.0941E+01	7.9394E+00	8.0626E+00	2.2653E+01	1.6759E+01	1.5957E+01
1.193E+02	1.8084E+01	3.4664E+00	3.4219E+00	1.3468E+01	9.2033E+00	8.1773E+00
		1.8029E+00	1.7413E+00	8.8748E+00	5.7C41E+00	4.7974E+00

Z= 93

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.202E+02	1.7648E+01	1.7505E+00	1.6890E+00	8.7079E+00	5.5815E+00	4.6827E+00
1.500E+02	8.9683E+00	7.7438E-01	7.2818E-01	5.1263E+00	3.0513E+00	2.3897E+00
2.000E+02	3.7289E+00	2.7301E-01	2.4953E-01	2.5592E+00	1.3914E+00	9.9821E-01
3.000E+02	1.1092E+00	6.5722E-02	5.8629E-02	9.6506E-01	4.6724E-01	2.9844E-01
4.000E+02	4.8532E-01	2.5096E-02	2.2353E-02	4.9062E-01	2.2062E-01	1.3068E-01
5.000E+02	2.6271E-01	1.2318E-02	1.1072E-02	2.9472E-01	1.2600E-01	7.0827E-02
6.000E+02	1.6269E-01	7.1483E-03	6.4885E-03	1.9672E-01	8.1057E-02	4.3902E-02
8.000E+02	7.9581E-02	3.1506E-03	2.9445E-03	1.0654E-01	4.1831E-02	2.1491E-02
1.000E+03	4.7473E-02	1.7586E-03	1.6664E-03	6.7652E-02	2.5874E-02	1.2813E-02
1.500E+03	2.0184E-02	6.8694E-04	6.8933E-04	3.1095E-02	1.1707E-02	5.4670E-03

Z= 93

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	2.0806E+05	3.4508E+05	8.2308E+05	1.0653E+06	1.7481E+04	1.3741E+04
1.070E+00	2.0382E+05	3.3244E+05	7.0926E+05	9.1431E+05	1.6029E+04	1.2904E+04
1.078E+00	2.0317E+05	3.3076E+05	6.9645E+05	8.9753E+05	1.5863E+04	1.2808E+04
1.319E+00	1.7616E+05	2.7462E+05	4.2792E+05	5.4690E+05	1.2074E+04	1.0503E+04
1.329E+00	1.7484E+05	2.7229E+05	4.1923E+05	5.3565E+05	1.1941E+04	1.0417E+04
1.480E+00	1.5679E+05	2.3918E+05	3.1615E+05	4.0267E+05	1.0258E+04	9.3026E+03
1.492E+00	1.5537E+05	2.3663E+05	3.0946E+05	3.9403E+05	1.0141E+04	9.2228E+03
1.500E+00	1.5441E+05	2.3492E+05	3.0505E+05	3.8831E+05	1.0064E+04	9.1696E+03
2.000E+00	1.0344E+05	1.5138E+05	1.3471E+05	1.6987E+05	6.5870E+03	6.5918E+03
3.000E+00	4.9640E+04	6.9706E+04	3.7912E+04	4.7248E+04	3.5091E+03	3.8901E+03
3.664E+00	3.2606E+04	4.4970E+04	1.9417E+04	2.4050E+04	2.5422E+03	2.9213E+03
3.693E+00	3.2042E+04	4.4157E+04	1.8894E+04	2.3397E+04	2.5093E+03	2.8870E+03
3.855E+00	2.9135E+04	3.9998E+04	1.6302E+04	2.0162E+04	2.3390E+03	2.7082E+03
3.886E+00	2.8619E+04	3.9265E+04	1.5859E+04	1.9610E+04	2.3085E+03	2.6760E+03
4.000E+00	2.6810E+04	3.6701E+04	1.4345E+04	1.7723E+04	2.2009E+03	2.5615E+03
4.417E+00	2.1347E+04	2.8972E+04	1.0132E+04	1.2479E+04	1.8670E+03	2.1990E+03
4.452E+00	2.0952E+04	2.8415E+04	9.8502E+03	1.2129E+04	1.8423E+03	2.1718E+03
5.000E+00	1.5869E+04	2.1321E+04	6.5016E+03	7.9760E+03	1.5152E+03	1.8054E+03
5.362E+00	1.3366E+04	1.7846E+04	5.0436E+03	6.1732E+03	1.3451E+03	1.6105E+03
5.405E+00	1.3102E+04	1.7483E+04	4.8985E+03	5.9940E+03	1.3269E+03	1.5894E+03
5.715E+00	1.1383E+04	1.5123E+04	3.9878E+03	4.8709E+03	1.2052E+03	1.4479E+03
5.761E+00	1.1155E+04	1.4811E+04	3.8718E+03	4.7281E+03	1.1888E+03	1.4286E+03
6.000E+00	1.0056E+04	1.3306E+04	3.3296E+03	4.0603E+03	1.1079E+03	1.3336E+03
8.000E+00	4.6715E+03	6.0345E+03	1.1136E+03	1.3445E+03	6.6614E+02	8.0174E+02
1.000E+01	2.4854E+03	3.1500E+03	4.6150E+02	5.5253E+02	4.4345E+02	5.2676E+02
1.500E+01	7.3337E+02	8.9613E+02	8.7472E+01	1.0298E+02	2.0605E+02	2.3244E+02
1.761E+01	4.4196E+02	5.3187E+02	4.4443E+01	5.1945E+01	1.5071E+02	1.6503E+02
1.775E+01	4.3082E+02	5.1806E+02	4.2959E+01	5.0191E+01	1.4836E+02	1.6220E+02
2.000E+01	2.9283E+02	3.4803E+02	2.5751E+01	2.9914E+01	1.1705E+02	1.2475E+02
2.168E+01	2.2469E+02	2.6488E+02	1.8161E+01	2.1012E+01	9.9537E+01	1.0411E+02
2.186E+01	2.1886E+02	2.5779E+02	1.7543E+01	2.0289E+01	9.7949E+01	1.0226E+02
2.245E+01	2.0027E+02	2.3526E+02	1.5612E+01	1.8031E+01	9.2780E+01	9.6232E+01
2.263E+01	1.9505E+02	2.2893E+02	1.5080E+01	1.7409E+01	9.1294E+01	9.4506E+01
3.000E+01	7.5364E+01	8.5848E+01	4.3656E+00	4.9630E+00	5.1130E+01	4.9074E+01
4.000E+01	2.7704E+01	3.0547E+01	1.2078E+00	1.3494E+00	2.7765E+01	2.4400E+01
5.000E+01	1.2532E+01	1.3455E+01	4.4182E-01	4.8651E-01	1.7063E+01	1.3926E+01
6.000E+01	6.4988E+00	6.8219E+00	1.9374E-01	2.1070E-01	1.1367E+01	8.7130E+00
8.000E+01	2.2809E+00	2.3089E+00	5.2715E-02	5.6162E-02	5.8990E+00	4.0876E+00
1.000E+02	1.0087E+00	9.9283E-01	1.9379E-02	2.0311E-02	3.5059E+00	2.2473E+00
1.193E+02	5.2921E-01	5.0975E-01	8.8145E-03	9.1228E-03	2.3102E+00	1.3942E+00
1.202E+02	5.1401E-01	4.9464E-01	8.5069E-03	8.7997E-03	2.2667E+00	1.3643E+00
1.500E+02	2.2947E-01	2.1530E-01	3.1945E-03	3.2574E-03	1.3362E+00	7.4927E-01
2.000E+02	8.1658E-02	7.4518E-02	9.2737E-04	9.1967E-04	6.6692E-01	3.4206E-01
3.000E+02	1.9847E-02	1.7596E-02	1.7327E-04	1.7127E-04	2.5145E-01	1.1502E-01
4.000E+02	7.6262E-03	6.7394E-03	5.6079E-05	5.6798E-05	1.2782E-01	5.4352E-02
5.000E+02	3.7530E-03	3.3504E-03	2.4537E-05	2.5578E-05	7.6776E-02	3.1016E-02
6.000E+02	2.1806E-03	1.9698E-03	1.3520E-05	1.3948E-05	5.1243E-02	1.9959E-02

Z= 93

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
8.000E+02	9.6648E-04	8.9355E-04	5.1709E-06	5.7903E-06	2.7751E-02	1.0301E-02
1.000E+03	5.3781E-04	5.1020E-04	2.6674E-06	3.1479E-06	1.7621E-02	6.3723E-03
1.500E+03	2.1272E-04	2.0809E-04	1.0802E-06	1.2682E-06	8.0977E-03	2.8829E-03

Z= 93

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	5 F 5/2	5 F 7/2	6 S 1/2
1.000E+00	5.5953E+04	5.6657E+04	8.6902E+04	1.7557E+04	2.2270E+04	4.3613E+03
1.070E+00	5.0951E+04	5.2429E+04	7.9779E+04	1.5260E+04	1.9305E+04	3.9434E+03
1.078E+00	5.0382E+04	5.1934E+04	7.8952E+04	1.5003E+04	1.8974E+04	3.8965E+03
1.319E+00	3.7650E+04	3.9983E+04	5.9468E+04	9.5251E+03	1.1957E+04	2.8671E+03
1.329E+00	3.7206E+04	3.9539E+04	5.8759E+04	9.3464E+03	1.1730E+04	2.8321E+03
1.480E+00	3.1651E+04	3.3823E+04	4.9732E+04	7.1961E+03	8.9975E+03	2.3967E+03
1.492E+00	3.1269E+04	3.3420E+04	4.9101E+04	7.0544E+03	8.8179E+03	2.3670E+03
1.500E+00	3.1014E+04	3.3151E+04	4.8681E+04	6.9606E+03	8.6991E+03	2.3473E+03
2.000E+00	1.9699E+04	2.0718E+04	2.9635E+04	3.2572E+03	4.0313E+03	1.4865E+03
3.000E+00	9.9270E+03	9.5798E+03	1.3251E+04	9.8783E+02	1.2071E+03	7.6642E+02
3.664E+00	6.9392E+03	6.2647E+03	8.5295E+03	5.2232E+02	6.3413E+02	5.4867E+02
3.693E+00	6.8388E+03	6.1558E+03	8.3759E+03	5.0887E+02	6.1765E+02	5.4134E+02
3.855E+00	6.3204E+03	5.5968E+03	7.5899E+03	4.4195E+02	5.3560E+02	5.0346E+02
3.886E+00	6.2280E+03	5.4979E+03	7.4510E+03	4.3044E+02	5.2152E+02	4.9670E+02
4.000E+00	5.9024E+03	5.1511E+03	6.9653E+03	3.9096E+02	4.6537E+02	4.7288E+02
4.417E+00	4.9001E+03	4.1026E+03	5.5049E+03	2.7997E+02	3.3208E+02	3.9925E+02
4.452E+00	4.8265E+03	4.0270E+03	5.4000E+03	2.7246E+02	3.2309E+02	3.9383E+02
5.000E+00	3.8617E+03	3.0560E+03	4.0611E+03	1.8127E+02	2.1552E+02	3.2232E+02
5.362E+00	3.3680E+03	2.5769E+03	3.4057E+03	1.4176E+02	1.6814E+02	2.8538E+02
5.405E+00	3.3154E+03	2.5266E+03	3.3372E+03	1.3780E+02	1.6340E+02	2.8143E+02
5.715E+00	2.9670E+03	2.1983E+03	2.8908E+03	1.1288E+02	1.3359E+02	2.5512E+02
5.761E+00	2.9201E+03	2.1547E+03	2.8317E+03	1.0969E+02	1.2978E+02	2.5156E+02
6.000E+00	2.6911E+03	1.9442E+03	2.5469E+03	9.4730E+01	1.1192E+02	2.3413E+02
8.000E+00	1.4811E+03	9.1094E+02	1.1659E+03	3.2551E+01	3.8056E+01	1.3958E+02
1.000E+01	9.1067E+02	4.8834E+02	6.1340E+02	1.3732E+01	1.5916E+01	9.2419E+01
1.500E+01	3.5728E+02	1.4613E+02	1.7703E+02	2.6702E+00	3.0422E+00	4.2618E+01
1.761E+01	2.4230E+02	8.8523E+01	1.0562E+02	1.3674E+00	1.5463E+00	3.1100E+01
1.775E+01	2.3760E+02	8.6312E+01	1.0290E+02	1.3223E+00	1.4947E+00	3.0612E+01
2.000E+01	1.7661E+02	5.8884E+01	6.9381E+01	7.9681E-01	8.9548E-01	2.4115E+01
2.168E+01	1.4403E+02	4.5289E+01	5.2929E+01	5.6382E-01	6.3104E-01	2.0488E+01
2.186E+01	1.4114E+02	4.4123E+01	5.1525E+01	5.4482E-01	6.0953E-01	2.0159E+01
2.245E+01	1.3181E+02	4.0408E+01	4.7057E+01	4.8538E-01	5.4226E-01	1.9090E+01
2.263E+01	1.2915E+02	3.9363E+01	4.5803E+01	4.6897E-01	5.2372E-01	1.8783E+01
3.000E+01	6.1846E+01	1.5326E+01	1.7305E+01	1.3717E-01	1.5082E-01	1.0626E+01
4.000E+01	2.8282E+01	5.6718E+00	6.1987E+00	3.8273E-02	4.1351E-02	5.7674E+00
5.000E+01	1.5113E+01	2.5770E+00	2.7425E+00	1.4073E-02	1.4986E-02	3.5433E+00
6.000E+01	8.9529E+00	1.3395E+00	1.3870E+00	6.1933E-03	6.5125E-03	2.3598E+00
8.000E+01	3.8485E+00	4.7216E-01	4.7153E-01	1.6931E-03	1.7438E-03	1.2242E+00
1.000E+02	1.9709E+00	2.0939E-01	2.0332E-01	6.2429E-04	6.3253E-04	7.2732E-01
1.193E+02	1.1573E+00	1.1007E-01	1.0458E-01	2.8461E-04	2.8467E-04	4.7908E-01
1.202E+02	1.1297E+00	1.0692E-01	1.0149E-01	2.7471E-04	2.7461E-04	4.7007E-01
1.500E+02	5.7708E-01	4.7840E-02	4.4262E-02	1.0341E-04	1.0185E-04	2.7664E-01
2.000E+02	2.4132E-01	1.7067E-02	1.5352E-02	3.0146E-05	2.9243E-05	1.3807E-01
3.000E+02	7.2229E-02	4.1591E-03	3.6528E-03	5.6497E-06	5.4573E-06	5.2055E-02
4.000E+02	3.1697E-02	1.5982E-03	1.4021E-03	1.8337E-06	1.8046E-06	2.6460E-02
5.000E+02	1.7185E-02	7.8792E-04	6.9723E-04	8.0115E-07	8.1025E-07	1.5893E-02
6.000E+02	1.0653E-02	4.5822E-04	4.0906E-04	4.3517E-07	4.4883E-07	1.0608E-02
8.000E+02	5.2154E-03	2.0269E-04	1.8626E-04	1.6879E-07	1.8564E-07	5.7448E-03
1.000E+03	3.1111E-03	1.1289E-04	1.0644E-04	8.5710E-08	1.0022E-07	3.6479E-03
1.500E+03	1.3267E-03	4.4400E-05	4.3519E-05	3.0447E-08	3.8665E-08	1.6769E-03

ENERGY	6 P 1/2	6 P 3/2	6 D 3/2	6 D 5/2	7 S 1/2
1.000E+00	2.9855E+03	9.7721E+03	4.3485E+02	6.0864E+02	5.2762E+02
1.070E+00	2.7605E+03	8.8384E+03	3.9910E+02	5.5569E+02	4.7233E+02
1.078E+00	2.7349E+03	8.7332E+03	3.9497E+02	5.4960E+02	4.6615E+02
1.319E+00	2.1518E+03	6.4176E+03	2.9829E+02	4.0895E+02	3.3369E+02
1.329E+00	2.1310E+03	6.3384E+03	2.9478E+02	4.0391E+02	3.2928E+02
1.480E+00	1.8671E+03	5.3520E+03	2.5014E+02	3.4019E+02	2.7480E+02
1.492E+00	1.8486E+03	5.2845E+03	2.4702E+02	3.3577E+02	2.7111E+02
1.500E+00	1.8363E+03	5.2397E+03	2.4495E+02	3.3283E+02	2.6866E+02
2.000E+00	1.2666E+03	3.2762E+03	1.5457E+02	2.0013E+02	1.6425E+02
3.000E+00	7.1837E+02	1.6269E+03	7.1099E+01	8.9086E+01	8.0663E+01
3.664E+00	5.3212E+02	1.1318E+03	4.6465E+01	5.7318E+01	5.7845E+01
3.693E+00	5.2563E+02	1.1152E+03	4.5658E+01	5.6286E+01	5.7076E+01
3.855E+00	4.9181E+02	1.0298E+03	4.1510E+01	5.1003E+01	5.3088E+01
3.886E+00	4.8573E+02	1.0146E+03	4.0776E+01	5.0070E+01	5.2380E+01
4.000E+00	4.6419E+02	9.6102E+02	3.8204E+01	4.6806E+01	4.9882E+01
4.417E+00	3.9644E+02	7.9645E+02	3.0431E+01	3.6997E+01	4.2158E+01
4.452E+00	3.9138E+02	7.8439E+02	2.9870E+01	3.6293E+01	4.1588E+01
5.000E+00	3.2361E+02	6.2652E+02	2.2675E+01	2.7301E+01	3.4078E+01
5.362E+00	2.8786E+02	5.4596E+02	1.9124E+01	2.2900E+01	3.0195E+01
5.405E+00	2.8400E+02	5.3738E+02	1.8751E+01	2.2440E+01	2.9779E+01
5.715E+00	2.5817E+02	4.8061E+02	1.6319E+01	1.9443E+01	2.7012E+01
5.761E+00	2.5465E+02	4.7296E+02	1.5995E+01	1.9046E+01	2.6638E+01
6.000E+00	2.3736E+02	4.3569E+02	1.4436E+01	1.7133E+01	2.4803E+01
8.000E+00	1.4145E+02	2.3927E+02	6.7734E+00	7.8536E+00	1.4835E+01
1.000E+01	9.2446E+01	1.4699E+02	3.6354E+00	4.1367E+00	9.8470E+00
1.500E+01	4.0501E+01	5.7922E+01	1.0901E+00	1.1963E+00	4.5596E+00
1.761E+01	2.9362E+01	3.9279E+01	6.6080E-01	7.1425E-01	3.3321E+00
1.775E+01	2.8857E+01	3.8516E+01	6.4432E-01	6.9591E-01	3.2800E+00
2.000E+01	2.2193E+01	2.8629E+01	4.3978E-01	4.6945E-01	2.5864E+00
2.168E+01	1.8521E+01	2.3347E+01	3.3834E-01	3.5825E-01	2.1986E+00
2.186E+01	1.8191E+01	2.2879E+01	3.2964E-01	3.4876E-01	2.1635E+00
2.245E+01	1.7120E+01	2.1366E+01	3.0191E-01	3.1856E-01	2.0491E+00
2.263E+01	1.6812E+01	2.0935E+01	2.9412E-01	3.1008E-01	2.0162E+00
3.000E+01	8.7315E+00	1.0026E+01	1.1461E-01	1.1728E-01	1.1283E+00
4.000E+01	4.3429E+00	4.5858E+00	4.2449E-02	4.2049E-02	6.1230E-01
5.000E+01	2.4795E+00	2.4507E+00	1.9297E-02	1.8616E-02	3.7615E-01
6.000E+01	1.5516E+00	1.4518E+00	1.0043E-02	9.4740E-03	2.5050E-01
8.000E+01	7.2814E-01	6.2409E-01	3.5418E-03	3.2227E-03	1.2994E-01
1.000E+02	4.0037E-01	3.2030E-01	1.5714E-03	1.3904E-03	7.7203E-02
1.193E+02	2.4839E-01	1.8811E-01	8.2629E-04	7.1555E-04	5.0854E-02
1.202E+02	2.4306E-01	1.8363E-01	8.0261E-04	6.9439E-04	4.9897E-02
1.500E+02	1.3303E-01	9.3824E-02	3.5913E-04	3.0301E-04	2.9365E-02
2.000E+02	6.0740E-02	3.9245E-02	1.2814E-04	1.0517E-04	1.4657E-02
3.000E+02	2.0428E-02	1.1749E-02	3.1236E-05	2.5064E-05	5.5275E-03
4.000E+02	9.6536E-03	5.1573E-03	1.2007E-05	9.6332E-06	2.8109E-03
5.000E+02	5.5093E-03	2.7968E-03	5.9199E-06	4.7991E-06	1.6894E-03
6.000E+02	3.5451E-03	1.7340E-03	3.4447E-06	2.8253E-06	1.1285E-03
8.000E+02	1.8296E-03	8.4923E-04	1.5265E-06	1.2934E-06	6.1270E-04
1.000E+03	1.1319E-03	5.0687E-04	8.5369E-07	7.4684E-07	3.9044E-04
1.500E+03	5.1229E-04	2.1656E-04	3.4137E-07	3.1584E-07	1.8214E-04

Z= 94 27 STATES, 50 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	122.5667	.98696
2 S 1/2	2.00	23.1603	.89257
2 P 1/2	2.00	22.3744	.84063
2 P 3/2	4.00	18.0695	.80233
3 S 1/2	2.00	5.9118	.71302
3 P 1/2	2.00	5.5502	.64692
3 P 3/2	4.00	4.5495	.59395
3 D 3/2	4.00	3.9774	.41165
3 D 5/2	6.00	3.7762	.40093
4 S 1/2	2.00	1.5367	.47564
4 P 1/2	2.00	1.3713	.41185
4 P 3/2	4.00	1.1060	.35954
4 D 3/2	4.00	.8426	.21063
4 D 5/2	6.00	.7939	.20034
4 F 5/2	6.00	.4458	.05952
4 F 7/2	8.00	.4327	.05813
5 S 1/2	2.00	.3475	.24983
5 P 1/2	2.00	.2816	.20113
5 P 3/2	4.00	.2165	.16715
5 D 3/2	4.00	.1195	.07602
5 D 5/2	6.00	.1098	.07054
5 F 5/2	2.57	.0073	.00769
5 F 7/2	3.43	.0062	.00718
6 S 1/2	2.00	.0533	.08855
6 P 1/2	2.00	.0340	.05973
6 P 3/2	4.00	.0234	.04356
7 S 1/2	2.00	.0054	.01300

Z= 94 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	2.8505E+06	.0E+00	.0E+00	.0E+00	2.8505E+06
1.1049E+00	2.3912E+06	.0E+00	.0E+00	.0E+00	2.3912E+06
1.1137E+00	2.5069E+06	.0E+00	.0E+00	.0E+00	2.5069E+06
1.3699E+00	1.6935E+06	.0E+00	.0E+00	.0E+00	1.6935E+06
1.3809E+00	1.6893E+06	.0E+00	.0E+00	.0E+00	1.6893E+06
1.5000E+00	1.4324E+06	.0E+00	.0E+00	.0E+00	1.4324E+06
1.5352E+00	1.3669E+06	.0E+00	.0E+00	.0E+00	1.3669E+06
1.5475E+00	1.3705E+06	.0E+00	.0E+00	.0E+00	1.3705E+06
2.0000E+00	8.0328E+05	.0E+00	.0E+00	.0E+00	8.0328E+05
3.0000E+00	3.2861E+05	.0E+00	.0E+00	.0E+00	3.2861E+05
3.7724E+00	1.9434E+05	.0E+00	.0E+00	.0E+00	1.9434E+05
3.8026E+00	4.5603E+05	.0E+00	.0E+00	2.6526E+05	1.9078E+05
3.9735E+00	4.0549E+05	.0E+00	.0E+00	2.3327E+05	1.7222E+05
4.0000E+00	5.6206E+05	.0E+00	.0E+00	3.9250E+05	1.6956E+05
4.0053E+00	5.6442E+05	.0E+00	.0E+00	3.9538E+05	1.6904E+05
4.5449E+00	4.1298E+05	.0E+00	.0E+00	2.8735E+05	1.2563E+05
4.5813E+00	4.7196E+05	.0E+00	.0E+00	3.4868E+05	1.2329E+05
5.0000E+00	3.7932E+05	.0E+00	.0E+00	2.7913E+05	1.0018E+05
5.5446E+00	2.9108E+05	.0E+00	.0E+00	2.1285E+05	7.8232E+04
5.5890E+00	3.0290E+05	.0E+00	.0E+00	2.2615E+05	7.6746E+04
5.9059E+00	2.6425E+05	.0E+00	.0E+00	1.9705E+05	6.7196E+04
5.9532E+00	2.7022E+05	.0E+00	.0E+00	2.0431E+05	6.5915E+04
6.0000E+00	2.6504E+05	.0E+00	.0E+00	2.0036E+05	6.4682E+04
8.0000E+00	1.3034E+05	.0E+00	.0E+00	9.8299E+04	3.2037E+04
1.0000E+01	7.4522E+04	.0E+00	.0E+00	5.6110E+04	1.8412E+04
1.5000E+01	2.6472E+04	.0E+00	.0E+00	1.9855E+04	6.6167E+03
1.8051E+01	1.6405E+04	.0E+00	.0E+00	1.2283E+04	4.1211E+03
1.8196E+01	3.8052E+04	.0E+00	2.1983E+04	1.2032E+04	4.0376E+03

Z= 94 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY (KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
2.0000E+01	2.9451E+04	.0E+00	1.6880E+04	9.4048E+03	3.1659E+03
2.2352E+01	2.1811E+04	.0E+00	1.2403E+04	7.0322E+03	2.3756E+03
2.2531E+01	3.0427E+04	.0E+00	2.1213E+04	6.8868E+03	2.3271E+03
2.3137E+01	2.8430E+04	.0E+00	1.9834E+04	6.4239E+03	2.1725E+03
2.3322E+01	3.2201E+04	.0E+00	2.3782E+04	6.2909E+03	2.1280E+03
3.0000E+01	1.6983E+04	.0E+00	1.2636E+04	3.2414E+03	1.1049E+03
4.0000E+01	8.0453E+03	.0E+00	6.0157E+03	1.5107E+03	5.1883E+02
5.0000E+01	4.4750E+03	.0E+00	3.3552E+03	8.3239E+02	2.8735E+02
6.0000E+01	2.7585E+03	.0E+00	2.0713E+03	5.1031E+02	1.7685E+02
8.0000E+01	1.2778E+03	.0E+00	9.6083E+02	2.3503E+02	8.1916E+01
1.0000E+02	7.0120E+02	.0E+00	5.2759E+02	1.2861E+02	4.4998E+01
1.2244E+02	4.0646E+02	.0E+00	3.0593E+02	7.4408E+01	2.6119E+01
1.2342E+02	1.6523E+03	1.2545E+03	2.9943E+02	7.2823E+01	2.5566E+01
1.5000E+02	1.0090E+03	7.7352E+02	1.7728E+02	4.3052E+01	1.5160E+01
2.0000E+02	4.8538E+02	3.7609E+02	8.2288E+01	1.9950E+01	7.0505E+00
3.0000E+02	1.7425E+02	1.3632E+02	2.8567E+01	6.9110E+00	2.4519E+00
4.0000E+02	8.6356E+01	6.7947E+01	1.3870E+01	3.3492E+00	1.1903E+00
5.0000E+02	5.1181E+01	4.0443E+01	8.0926E+00	1.9507E+00	6.9430E-01
6.0000E+02	3.3918E+01	2.6890E+01	5.2981E+00	1.2752E+00	4.5417E-01
8.0000E+02	1.8256E+01	1.4543E+01	2.8011E+00	6.7243E-01	2.3969E-01
1.0000E+03	1.1574E+01	9.2475E+00	1.7557E+00	4.2071E-01	1.4999E-01
1.5000E+03	5.3288E+00	4.2717E+00	7.9824E-01	1.9080E-01	6.8040E-02

Z= 94

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.105E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.114E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.370E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.381E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.535E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.548E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.772E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.803E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.973E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.005E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.545E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.581E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
5.545E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
5.589E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.7636E+04
5.906E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.6636E+04
5.953E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.1105E+04	1.6494E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.0858E+04	1.6369E+04
8.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.3632E+03	1.1208E+04
1.000E+01	.0E+00	.0E+00	.0E+00	.0E+00	5.2749E+03	7.9215E+03
1.500E+01	.0E+00	.0E+00	.0E+00	.0E+00	2.6636E+03	3.7386E+03
1.805E+01	.0E+00	.0E+00	.0E+00	.0E+00	1.9067E+03	2.5543E+03
1.820E+01	.0E+00	.0E+00	.0E+00	2.1983E+04	1.8787E+03	2.5120E+03
2.000E+01	.0E+00	.0E+00	.0E+00	1.6880E+04	1.5756E+03	2.0523E+03
2.235E+01	.0E+00	.0E+00	.0E+00	1.2403E+04	1.2750E+03	1.6077E+03
2.253E+01	.0E+00	.0E+00	9.0731E+03	1.2140E+04	1.2555E+03	1.5795E+03
2.314E+01	.0E+00	.0E+00	8.5360E+03	1.1298E+04	1.1927E+03	1.4888E+03
2.332E+01	.0E+00	4.3122E+03	8.4146E+03	1.1055E+04	1.1744E+03	1.4625E+03
3.000E+01	.0E+00	2.7867E+03	4.4882E+03	5.3614E+03	7.1394E+02	8.1823E+02
4.000E+01	.0E+00	1.6030E+03	2.1128E+03	2.2999E+03	3.9433E+02	4.0780E+02

Z= 94

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
5.000E+01	.0E+00	1.0219E+03	1.1598E+03	1.1735E+03	2.4477E+02	2.3263E+02
6.000E+01	.0E+00	6.9626E+02	7.0361E+02	6.7145E+02	1.6407E+02	1.4535E+02
8.000E+01	.0E+00	3.6990E+02	3.1593E+02	2.7501E+02	8.5783E+01	6.8000E+01
1.000E+02	.0E+00	2.2253E+02	1.6844E+02	1.3662E+02	5.1191E+01	3.7293E+01
1.224E+02	.0E+00	1.3874E+02	9.4942E+01	7.2245E+01	3.1777E+01	2.1497E+01
1.234E+02	1.2545E+03	1.3616E+02	9.2822E+01	7.0454E+01	3.1182E+01	2.1034E+01
1.500E+02	7.7352E+02	8.5690E+01	5.3440E+01	3.8154E+01	1.9583E+01	1.2339E+01
2.000E+02	3.7609E+02	4.2949E+01	2.3787E+01	1.5552E+01	9.8034E+00	5.6212E+00
3.000E+02	1.3632E+02	1.6245E+01	7.7888E+00	4.5331E+00	3.7094E+00	1.8865E+00
4.000E+02	6.7947E+01	8.2737E+00	3.6321E+00	1.9639E+00	1.8900E+00	8.9078E-01
5.000E+02	4.0443E+01	4.9782E+00	2.0572E+00	1.0572E+00	1.1372E+00	5.0820E-01
6.000E+02	2.6890E+01	3.3277E+00	1.3179E+00	6.5254E-01	7.5997E-01	3.2699E-01
8.000E+02	1.4543E+01	1.8063E+00	6.7676E-01	3.1796E-01	4.1226E-01	1.6876E-01
1.000E+03	9.2475E+00	1.1488E+00	4.1770E-01	1.8927E-01	2.6201E-01	1.0442E-01
1.500E+03	4.2717E+00	5.2897E-01	1.8868E-01	8.0588E-02	1.2050E-01	4.7329E-02

Z= 94

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.105E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.114E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.5053E+05
1.370E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.1951E+05
1.381E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.2415E+04	1.1839E+05
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.1000E+04	1.0728E+05
1.535E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.0902E+04	1.0436E+05
1.548E+00	.0E+00	.0E+00	.0E+00	2.5596E+04	2.0863E+04	1.0337E+05
2.000E+00	.0E+00	.0E+00	.0E+00	1.8602E+04	1.8740E+04	7.4255E+04
3.000E+00	.0E+00	.0E+00	.0E+00	1.1351E+04	1.3395E+04	3.9978E+04
3.772E+00	.0E+00	.0E+00	.0E+00	8.2292E+03	1.0272E+04	2.7127E+04
3.803E+00	.0E+00	.0E+00	2.6526E+05	8.1331E+03	1.0170E+04	2.6751E+04
3.973E+00	.0E+00	.0E+00	2.3327E+05	7.6185E+03	9.6183E+03	2.4761E+04
4.000E+00	.0E+00	1.6330E+05	2.2920E+05	7.5429E+03	9.5363E+03	2.4471E+04
4.005E+00	.0E+00	1.6695E+05	2.2842E+05	7.5281E+03	9.5201E+03	2.4414E+04
4.545E+00	.0E+00	1.2169E+05	1.6566E+05	6.2250E+03	8.0232E+03	1.9418E+04
4.581E+00	6.7320E+04	1.1927E+05	1.6209E+05	6.1498E+03	7.9334E+03	1.9134E+04
5.000E+00	5.8198E+04	9.4444E+04	1.2649E+05	5.3679E+03	7.0002E+03	1.6259E+04
5.545E+00	4.9430E+04	7.0405E+04	9.3013E+04	4.5551E+03	5.9958E+03	1.3343E+04
5.589E+00	4.8731E+04	6.8803E+04	9.0981E+04	4.4975E+03	5.9224E+03	1.3138E+04
5.906E+00	4.3941E+04	5.8556E+04	7.7918E+04	4.1153E+03	5.4345E+03	1.1798E+04
5.953E+00	4.3268E+04	5.7300E+04	7.6142E+04	4.0622E+03	5.3668E+03	1.1615E+04
6.000E+00	4.2615E+04	5.6091E+04	7.4425E+04	4.0107E+03	5.3010E+03	1.1438E+04
8.000E+00	2.4355E+04	2.4187E+04	3.1187E+04	2.4745E+03	3.2815E+03	6.3659E+03
1.000E+01	1.5292E+04	1.2189E+04	1.5432E+04	1.6732E+03	2.1903E+03	3.9388E+03
1.500E+01	6.0961E+03	3.3111E+03	4.0454E+03	7.9308E+02	9.8545E+02	1.5558E+03
1.805E+01	3.8945E+03	1.7849E+03	2.1430E+03	5.5598E+02	6.6694E+02	9.9428E+02
1.820E+01	3.8190E+03	1.7376E+03	2.0844E+03	5.4744E+02	6.5560E+02	9.7498E+02
2.000E+01	3.0182E+03	1.2607E+03	1.4980E+03	4.5503E+02	5.3380E+02	7.7124E+02
2.235E+01	2.2768E+03	8.6099E+02	1.0117E+03	3.6509E+02	4.1715E+02	5.8265E+02
2.253E+01	2.2309E+03	8.3762E+02	9.8336E+02	3.5933E+02	4.0976E+02	5.7094E+02
2.314E+01	2.0837E+03	7.6411E+02	8.9461E+02	3.4076E+02	3.8600E+02	5.3351E+02
2.332E+01	2.0413E+03	7.4326E+02	8.6953E+02	3.3536E+02	3.7911E+02	5.2272E+02
3.000E+01	1.0514E+03	3.0750E+02	3.5026E+02	2.0083E+02	2.1194E+02	2.7078E+02
4.000E+01	4.7782E+02	1.0976E+02	1.2100E+02	1.0965E+02	1.0589E+02	1.2397E+02
5.000E+01	2.5397E+02	4.8730E+01	5.2296E+01	6.7616E+01	6.0625E+01	6.6289E+01
6.000E+01	1.4979E+02	2.4940E+01	2.6164E+01	4.5150E+01	3.8015E+01	3.9287E+01
8.000E+01	6.3949E+01	8.6033E+00	8.6989E+00	2.3506E+01	1.7892E+01	1.6899E+01
1.000E+02	3.2661E+01	3.7640E+00	3.6986E+00	1.4000E+01	9.8581E+00	8.6771E+00
1.224E+02	1.7649E+01	1.7799E+00	1.7053E+00	8.6806E+00	5.7053E+00	4.7092E+00
1.234E+02	1.7225E+01	1.7283E+00	1.6542E+00	8.5176E+00	5.5833E+00	4.5968E+00
1.500E+02	9.4972E+00	8.4376E-01	7.8933E-01	5.3460E+00	3.2868E+00	2.5441E+00

Z= 94

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
2.000E+02	3.9565E+00	2.9810E-01	2.7095E-01	2.6753E+00	1.5043E+00	1.0649E+00
3.000E+02	1.1795E+00	7.1946E-02	6.3776E-02	1.0123E+00	5.0736E-01	3.1908E-01
4.000E+02	5.1659E-01	2.7515E-02	2.4335E-02	5.1581E-01	2.4021E-01	1.3987E-01
5.000E+02	2.7976E-01	1.3520E-02	1.2057E-02	3.1040E-01	1.3741E-01	7.5850E-02
6.000E+02	1.7327E-01	7.8514E-03	7.0664E-03	2.0740E-01	8.8509E-02	4.7023E-02
8.000E+02	8.4742E-02	3.4646E-03	3.2061E-03	1.1249E-01	4.5748E-02	2.3012E-02
1.000E+03	5.0531E-02	1.9347E-03	1.8140E-03	7.1470E-02	2.8322E-02	1.3715E-02
1.500E+03	2.1464E-02	7.5692E-04	7.4950E-04	3.2857E-02	1.2832E-02	5.8459E-03

Z= 94

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	2.0710E+05	3.4648E+05	8.6303E+05	1.1189E+06	1.7637E+04	1.3660E+04
1.105E+00	2.0092E+05	3.2782E+05	6.9430E+05	8.9456E+05	1.5529E+04	1.2461E+04
1.114E+00	2.0022E+05	3.2606E+05	6.8169E+05	8.7799E+05	1.5368E+04	1.2368E+04
1.370E+00	1.7178E+05	2.6748E+05	4.1180E+05	5.2582E+05	1.1616E+04	1.0103E+04
1.381E+00	1.7044E+05	2.6513E+05	4.0339E+05	5.1492E+05	1.1488E+04	1.0021E+04
1.500E+00	1.5664E+05	2.3993E+05	3.2439E+05	4.1303E+05	1.0224E+04	9.1932E+03
1.535E+00	1.5262E+05	2.3260E+05	3.0484E+05	3.8782E+05	9.8906E+03	8.9683E+03
1.548E+00	1.5121E+05	2.3007E+05	2.9836E+05	3.7946E+05	9.7782E+03	8.8919E+03
2.000E+00	1.0607E+05	1.5576E+05	1.4426E+05	1.8190E+05	6.7109E+03	6.6505E+03
3.000E+00	5.1387E+04	7.2295E+04	4.0913E+04	5.0961E+04	3.5866E+03	3.9567E+03
3.772E+00	3.1814E+04	4.3801E+04	1.9039E+04	2.3550E+04	2.4809E+03	2.8581E+03
3.803E+00	3.1263E+04	4.3008E+04	1.8527E+04	2.2910E+04	2.4489E+03	2.8247E+03
3.973E+00	2.8358E+04	3.8853E+04	1.5927E+04	1.9668E+04	2.2790E+03	2.6464E+03
4.000E+00	2.7938E+04	3.8255E+04	1.5565E+04	1.9217E+04	2.2542E+03	2.6202E+03
4.005E+00	2.7855E+04	3.8138E+04	1.5494E+04	1.9129E+04	2.2493E+03	2.6150E+03
4.545E+00	2.0846E+04	2.8235E+04	9.9561E+03	1.2243E+04	1.8245E+03	2.1562E+03
4.581E+00	2.0460E+04	2.7691E+04	9.6787E+03	1.1899E+04	1.8004E+03	2.1296E+03
5.000E+00	1.6607E+04	2.2313E+04	7.0827E+03	8.6826E+03	1.5545E+03	1.8549E+03
5.545E+00	1.2887E+04	1.7158E+04	4.8664E+03	5.9454E+03	1.3039E+03	1.5683E+03
5.589E+00	1.2633E+04	1.6808E+04	4.7263E+03	5.7727E+03	1.2862E+03	1.5479E+03
5.906E+00	1.0993E+04	1.4561E+04	3.8574E+03	4.7026E+03	1.1699E+03	1.4121E+03
5.953E+00	1.0772E+04	1.4260E+04	3.7452E+03	4.5647E+03	1.1539E+03	1.3934E+03
6.000E+00	1.0559E+04	1.3969E+04	3.6382E+03	4.4331E+03	1.1384E+03	1.3751E+03
8.000E+00	4.9311E+03	6.3653E+03	1.2227E+03	1.4747E+03	6.8609E+02	8.3138E+02
1.000E+01	2.6338E+03	3.3340E+03	5.0852E+02	6.0819E+02	4.5756E+02	5.4853E+02
1.500E+01	7.8220E+02	9.5418E+02	9.6957E+01	1.1400E+02	2.1328E+02	2.4386E+02
1.805E+01	4.3642E+02	5.2291E+02	4.4412E+01	5.1774E+01	1.4873E+02	1.6456E+02
1.820E+01	4.2543E+02	5.0933E+02	4.2930E+01	5.0028E+01	1.4641E+02	1.6174E+02
2.000E+01	3.1370E+02	3.7202E+02	2.8658E+01	3.3243E+01	1.2143E+02	1.3156E+02
2.235E+01	2.1807E+02	2.5569E+02	1.7740E+01	2.0463E+01	9.7192E+01	1.0272E+02
2.253E+01	2.1241E+02	2.4885E+02	1.7137E+01	1.9759E+01	9.5642E+01	1.0089E+02
2.314E+01	1.9457E+02	2.2732E+02	1.5272E+01	1.7584E+01	9.0649E+01	9.5022E+01
2.332E+01	1.8950E+02	2.2121E+02	1.4752E+01	1.6977E+01	8.9198E+01	9.3322E+01
3.000E+01	8.1206E+01	9.2253E+01	4.8855E+00	5.5448E+00	5.3197E+01	5.2125E+01
4.000E+01	2.9968E+01	3.2940E+01	1.3563E+00	1.5125E+00	2.8948E+01	2.6045E+01
5.000E+01	1.3595E+01	1.4546E+01	4.9731E-01	5.4651E-01	1.7819E+01	1.4921E+01
6.000E+01	7.0654E+00	7.3896E+00	2.1848E-01	2.3709E-01	1.1886E+01	9.3632E+00
8.000E+01	2.4879E+00	2.5082E+00	5.9619E-02	6.3369E-02	6.1815E+00	4.4126E+00
1.000E+02	1.1028E+00	1.0808E+00	2.1967E-02	2.2966E-02	3.6801E+00	2.4340E+00
1.224E+02	5.2679E-01	5.0351E-01	8.9092E-03	9.1793E-03	2.2817E+00	1.4103E+00
1.234E+02	5.1169E-01	4.8862E-01	8.5991E-03	8.8552E-03	2.2389E+00	1.3802E+00
1.500E+02	2.5185E-01	2.3515E-01	3.6346E-03	3.6956E-03	1.4055E+00	8.1615E-01
2.000E+02	8.9834E-02	8.1546E-02	1.0566E-03	1.0468E-03	7.0400E-01	3.7394E-01
3.000E+02	2.1895E-02	1.9407E-02	1.9787E-04	1.9548E-04	2.6633E-01	1.2630E-01
4.000E+02	8.4248E-03	7.3993E-03	6.4226E-05	6.4859E-05	1.3570E-01	5.9838E-02
5.000E+02	4.1507E-03	3.6804E-03	2.8211E-05	2.8933E-05	8.1642E-02	3.4207E-02
6.000E+02	2.4144E-03	2.1640E-03	1.5539E-05	1.5786E-05	5.4553E-02	2.2039E-02
8.000E+02	1.0716E-03	9.8034E-04	5.9364E-06	6.7206E-06	2.9585E-02	1.1391E-02
1.000E+03	5.9619E-04	5.6097E-04	3.1223E-06	3.5374E-06	1.8797E-02	7.0543E-03

Z= 94

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.500E+03	2.3620E-04	2.2793E-04	1.1450E-06	1.4232E-06	8.6397E-03	3.1953E-03

Z= 94

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	5 F 5/2	5 F 7/2	6 S 1/2
1.000E+00	5.7681E+04	5.8256E+04	8.9588E+04	2.6987E+04	3.4030E+04	4.3245E+03
1.105E+00	5.0229E+04	5.1972E+04	7.8958E+04	2.1964E+04	2.7587E+04	3.7291E+03
1.114E+00	4.9667E+04	5.1475E+04	7.8131E+04	2.1593E+04	2.7113E+04	3.6848E+03
1.370E+00	3.6774E+04	3.9226E+04	5.8198E+04	1.3512E+04	1.6836E+04	2.6898E+03
1.381E+00	3.6339E+04	3.8785E+04	5.7497E+04	1.3257E+04	1.6514E+04	2.6570E+03
1.500E+00	3.2076E+04	3.4374E+04	5.0531E+04	1.0840E+04	1.3464E+04	2.3372E+03
1.535E+00	3.0960E+04	3.3194E+04	4.8684E+04	1.0232E+04	1.2699E+04	2.2541E+03
1.548E+00	3.0584E+04	3.2794E+04	4.8060E+04	1.0029E+04	1.2445E+04	2.2261E+03
2.000E+00	2.0404E+04	2.1585E+04	3.0885E+04	5.1102E+03	6.2869E+03	1.4828E+03
3.000E+00	1.0301E+04	1.0045E+04	1.3886E+04	1.5657E+03	1.8652E+03	7.6577E+02
3.772E+00	6.8340E+03	6.1827E+03	8.3899E+03	7.5111E+02	8.9392E+02	5.2228E+02
3.803E+00	6.7349E+03	6.0750E+03	8.2385E+03	7.3178E+02	8.7068E+02	5.1530E+02
3.973E+00	6.2112E+03	5.5096E+03	7.4456E+03	6.3329E+02	7.5238E+02	4.7840E+02
4.000E+00	6.1351E+03	5.4280E+03	7.3315E+03	6.1949E+02	7.3582E+02	4.7303E+02
4.005E+00	6.1202E+03	5.4121E+03	7.3091E+03	6.1679E+02	7.3259E+02	4.7198E+02
4.545E+00	4.8280E+03	4.0526E+03	5.4183E+03	4.0342E+02	4.7709E+02	3.8048E+02
4.581E+00	4.7553E+03	3.9777E+03	5.3149E+03	3.9260E+02	4.6417E+02	3.7531E+02
5.000E+00	4.0204E+03	3.2333E+03	4.2902E+03	2.9054E+02	3.4247E+02	3.2280E+02
5.545E+00	3.2840E+03	2.5136E+03	3.3077E+03	2.0211E+02	2.3737E+02	2.6965E+02
5.589E+00	3.2326E+03	2.4645E+03	3.2411E+03	1.9647E+02	2.3068E+02	2.6592E+02
5.906E+00	2.8962E+03	2.1476E+03	2.8118E+03	1.6135E+02	1.8907E+02	2.4137E+02
5.953E+00	2.8503E+03	2.1050E+03	2.7542E+03	1.5679E+02	1.8368E+02	2.3800E+02
6.000E+00	2.8059E+03	2.0638E+03	2.6987E+03	1.5244E+02	1.7853E+02	2.3474E+02
8.000E+00	1.5482E+03	9.7190E+02	1.2411E+03	5.2691E+01	6.1055E+01	1.4020E+02
1.000E+01	9.5386E+02	5.2301E+02	6.5529E+02	2.2323E+01	2.5641E+01	9.2973E+01
1.500E+01	3.7567E+02	1.5756E+02	1.9029E+02	4.3718E+00	4.9350E+00	4.2989E+01
1.805E+01	2.4005E+02	8.8449E+01	1.0492E+02	2.0216E+00	2.2621E+00	2.9892E+01
1.820E+01	2.3539E+02	8.6243E+01	1.0223E+02	1.9549E+00	2.1866E+00	2.9424E+01
2.000E+01	1.8622E+02	6.3779E+01	7.4888E+01	1.3106E+00	1.4591E+00	2.4371E+01
2.235E+01	1.4072E+02	4.4484E+01	5.1641E+01	8.1518E-01	9.0235E-01	1.9481E+01
2.253E+01	1.3789E+02	4.3340E+01	5.0271E+01	7.8774E-01	8.7161E-01	1.9169E+01
2.314E+01	1.2887E+02	3.9732E+01	4.5956E+01	7.0273E-01	7.7648E-01	1.8163E+01
2.332E+01	1.2627E+02	3.8705E+01	4.4732E+01	6.7901E-01	7.4994E-01	1.7871E+01
3.000E+01	6.5480E+01	1.6701E+01	1.8783E+01	2.2702E-01	2.4722E-01	1.0778E+01
4.000E+01	3.0031E+01	6.2062E+00	6.7527E+00	6.3581E-02	6.8031E-02	5.8618E+00
5.000E+01	1.6083E+01	2.8282E+00	2.9957E+00	2.3442E-02	2.4714E-02	3.6071E+00
6.000E+01	9.5442E+00	1.4735E+00	1.5181E+00	1.0337E-02	1.0761E-02	2.4055E+00
8.000E+01	4.1138E+00	5.2119E-01	5.1765E-01	2.8344E-03	2.8899E-03	1.2506E+00
1.000E+02	2.1111E+00	2.3169E-01	2.2370E-01	1.0477E-03	1.0505E-03	7.4425E-01
1.224E+02	1.1469E+00	1.1093E-01	1.0444E-01	4.2602E-04	4.2094E-04	4.6126E-01
1.234E+02	1.1196E+00	1.0776E-01	1.0136E-01	4.1123E-04	4.0611E-04	4.5260E-01
1.500E+02	6.2019E-01	5.3148E-02	4.8868E-02	1.7419E-04	1.6981E-04	2.8398E-01
2.000E+02	2.5988E-01	1.9005E-02	1.6983E-02	5.0898E-05	4.8850E-05	1.4207E-01
3.000E+02	7.7961E-02	4.6449E-03	4.0497E-03	9.5608E-06	9.1403E-06	5.3746E-02
4.000E+02	3.4250E-02	1.7879E-03	1.5560E-03	3.1107E-06	3.0260E-06	2.7383E-02
5.000E+02	1.8578E-02	8.8246E-04	7.7392E-04	1.3599E-06	1.3612E-06	1.6474E-02
6.000E+02	1.1518E-02	5.1362E-04	4.5417E-04	7.3963E-07	7.5383E-07	1.1008E-02
8.000E+02	5.6381E-03	2.2747E-04	2.0676E-04	2.8711E-07	3.1278E-07	5.9698E-03
1.000E+03	3.3622E-03	1.2681E-04	1.1816E-04	1.4608E-07	1.6934E-07	3.7931E-03
1.500E+03	1.4324E-03	4.9932E-05	4.8283E-05	5.2072E-08	6.5950E-08	1.7439E-03

Z= 94

ENERGY	6 P 1/2	6 P 3/2	7 S 1/2
1.000E+00	2.8799E+03	9.5015E+03	4.4641E+02
1.105E+00	2.5671E+03	8.1914E+03	3.7931E+02
1.114E+00	2.5434E+03	8.0938E+03	3.7434E+02
1.370E+00	1.9904E+03	5.8916E+03	2.6503E+02
1.381E+00	1.9712E+03	5.8185E+03	2.6151E+02
1.500E+00	1.7816E+03	5.1065E+03	2.2753E+02
1.535E+00	1.7312E+03	4.9213E+03	2.1874E+02
1.548E+00	1.7141E+03	4.8590E+03	2.1579E+02
2.000E+00	1.2343E+03	3.1962E+03	1.3898E+02
3.000E+00	7.0416E+02	1.5890E+03	6.9283E+01
3.772E+00	5.0032E+02	1.0482E+03	4.7357E+01
3.803E+00	4.9423E+02	1.0328E+03	4.6728E+01
3.973E+00	4.6178E+02	9.5159E+02	4.3401E+01
4.000E+00	4.5702E+02	9.3981E+02	4.2917E+01
4.005E+00	4.5609E+02	9.3750E+02	4.2822E+01
4.545E+00	3.7346E+02	7.3786E+02	3.4569E+01
4.581E+00	3.6870E+02	7.2666E+02	3.4095E+01
5.000E+00	3.1980E+02	6.1352E+02	2.9354E+01
5.545E+00	2.6919E+02	5.0045E+02	2.4551E+01
5.589E+00	2.6558E+02	4.9257E+02	2.4213E+01
5.906E+00	2.4177E+02	4.4104E+02	2.1992E+01
5.953E+00	2.3849E+02	4.3401E+02	2.1687E+01
6.000E+00	2.3530E+02	4.2721E+02	2.1392E+01
8.000E+00	1.4094E+02	2.3516E+02	1.2822E+01
1.000E+01	9.2463E+01	1.4475E+02	8.5250E+00
1.500E+01	4.0795E+01	5.7321E+01	3.9593E+00
1.805E+01	2.8139E+01	3.6624E+01	2.7580E+00
1.820E+01	2.7657E+01	3.5913E+01	2.7149E+00
2.000E+01	2.2495E+01	2.8411E+01	2.2506E+00
2.235E+01	1.7562E+01	2.1469E+01	1.8006E+00
2.253E+01	1.7250E+01	2.1038E+01	1.7718E+00
2.314E+01	1.6247E+01	1.9661E+01	1.6791E+00
2.332E+01	1.5956E+01	1.9264E+01	1.6522E+00
3.000E+01	8.9132E+00	9.9907E+00	9.8458E-01
4.000E+01	4.4552E+00	4.5827E+00	5.3544E-01
5.000E+01	2.5531E+00	2.4544E+00	3.2946E-01
6.000E+01	1.6024E+00	1.4566E+00	2.1970E-01
8.000E+01	7.5540E-01	6.2785E-01	1.1421E-01
1.000E+02	4.1676E-01	3.2287E-01	6.7970E-02
1.224E+02	2.4147E-01	1.7545E-01	4.2126E-02
1.234E+02	2.3631E-01	1.7127E-01	4.1335E-02
1.500E+02	1.3926E-01	9.4894E-02	2.5937E-02
2.000E+02	6.3815E-02	3.9775E-02	1.2977E-02
3.000E+02	2.1557E-02	1.1935E-02	4.9107E-03
4.000E+02	1.0214E-02	5.2447E-03	2.5031E-03
5.000E+02	5.8395E-03	2.8456E-03	1.5071E-03
6.000E+02	3.7620E-03	1.7645E-03	1.0080E-03
8.000E+02	1.9446E-03	8.6410E-04	5.4824E-04
1.000E+03	1.2042E-03	5.1559E-04	3.4978E-04
1.500E+03	5.4571E-04	2.2013E-04	1.6359E-04

Z= 95 27 STATES, 50 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	125.8091	.98701
2 S 1/2	2.00	23.8693	.89357
2 P 1/2	2.00	23.0659	.84199
2 P 3/2	4.00	18.5251	.80288
3 S 1/2	2.00	6.1130	.71559
3 P 1/2	2.00	5.7434	.64998
3 P 3/2	4.00	4.6850	.59575
3 D 3/2	4.00	4.1032	.41423
3 D 5/2	6.00	3.8917	.40331
4 S 1/2	2.00	1.5986	.47973
4 P 1/2	2.00	1.4290	.41623
4 P 3/2	4.00	1.1470	.36260
4 D 3/2	4.00	.8779	.21366
4 D 5/2	6.00	.8264	.20314
4 F 5/2	6.00	.4708	.06136
4 F 7/2	8.00	.4568	.05993
5 S 1/2	2.00	.3634	.25470
5 P 1/2	2.00	.2954	.20587
5 P 3/2	4.00	.2253	.17050
5 D 3/2	4.00	.1253	.07846
5 D 5/2	6.00	.1148	.07272
5 F 5/2	3.00	.0082	.00838
5 F 7/2	4.00	.0069	.00783
6 S 1/2	2.00	.0553	.09044
6 P 1/2	2.00	.0352	.06120
6 P 3/2	4.00	.0239	.04408
7 S 1/2	2.00	.0055	.01296

Z= 95 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	2.9677E+06	.0E+00	.0E+00	.0E+00	2.9677E+06
1.1458E+00	2.3369E+06	.0E+00	.0E+00	.0E+00	2.3369E+06
1.1550E+00	2.4499E+06	.0E+00	.0E+00	.0E+00	2.4499E+06
1.4276E+00	1.6327E+06	.0E+00	.0E+00	.0E+00	1.6327E+06
1.4390E+00	1.6280E+06	.0E+00	.0E+00	.0E+00	1.6280E+06
1.5000E+00	1.4978E+06	.0E+00	.0E+00	.0E+00	1.4978E+06
1.5970E+00	1.3194E+06	.0E+00	.0E+00	.0E+00	1.3194E+06
1.6098E+00	1.3224E+06	.0E+00	.0E+00	.0E+00	1.3224E+06
2.0000E+00	8.4038E+05	.0E+00	.0E+00	.0E+00	8.4038E+05
3.0000E+00	3.4391E+05	.0E+00	.0E+00	.0E+00	3.4391E+05
3.8878E+00	1.8966E+05	.0E+00	.0E+00	.0E+00	1.8966E+05
3.9190E+00	4.3797E+05	.0E+00	.0E+00	2.5180E+05	1.8617E+05
4.0000E+00	4.1921E+05	.0E+00	.0E+00	2.4173E+05	1.7749E+05
4.0991E+00	3.9160E+05	.0E+00	.0E+00	2.2398E+05	1.6763E+05
4.1319E+00	5.4225E+05	.0E+00	.0E+00	3.7772E+05	1.6453E+05
4.6803E+00	4.0000E+05	.0E+00	.0E+00	2.7730E+05	1.2270E+05
4.7178E+00	4.5729E+05	.0E+00	.0E+00	3.3689E+05	1.2041E+05
5.0000E+00	3.9572E+05	.0E+00	.0E+00	2.9084E+05	1.0488E+05
5.7376E+00	2.7835E+05	.0E+00	.0E+00	2.0290E+05	7.5448E+04
5.7836E+00	2.8959E+05	.0E+00	.0E+00	2.1558E+05	7.4012E+04
6.0000E+00	2.6456E+05	.0E+00	.0E+00	1.9682E+05	6.7733E+04
6.1069E+00	2.5304E+05	.0E+00	.0E+00	1.8813E+05	6.4903E+04
6.1558E+00	2.5871E+05	.0E+00	.0E+00	1.9505E+05	6.3663E+04
8.0000E+00	1.3563E+05	.0E+00	.0E+00	1.0207E+05	3.3568E+04
1.0000E+01	7.7581E+04	.0E+00	.0E+00	5.8280E+04	1.9300E+04
1.5000E+01	2.7596E+04	.0E+00	.0E+00	2.0652E+04	6.9440E+03
1.8507E+01	1.6050E+04	.0E+00	.0E+00	1.1991E+04	4.0597E+03
1.8655E+01	3.7080E+04	.0E+00	2.1358E+04	1.1745E+04	3.9774E+03

Z= 95 PHOTCELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
2.0000E+01	3.0851E+04	.0E+00	1.7724E+04	9.8004E+03	3.3256E+03
2.3043E+01	2.0942E+04	.0E+00	1.1865E+04	6.7703E+03	2.3076E+03
2.3227E+01	2.9270E+04	.0E+00	2.0379E+04	6.6305E+03	2.2605E+03
2.3845E+01	2.7372E+04	.0E+00	1.9070E+04	6.1899E+03	2.1119E+03
2.4036E+01	3.0997E+04	.0E+00	2.2866E+04	6.0619E+03	2.0687E+03
3.0000E+01	1.7665E+04	.0E+00	1.3118E+04	3.3846E+03	1.1625E+03
4.0000E+01	8.3910E+03	.0E+00	6.2644E+03	1.5800E+03	5.4663E+02
5.0000E+01	4.6761E+03	.0E+00	3.5014E+03	8.7162E+02	3.0308E+02
6.0000E+01	2.8864E+03	.0E+00	2.1648E+03	5.3492E+02	1.8670E+02
8.0000E+01	1.3395E+03	.0E+00	1.0062E+03	2.4677E+02	8.6610E+01
1.0000E+02	7.3608E+02	.0E+00	5.5323E+02	1.3521E+02	4.7639E+01
1.2568E+02	3.9826E+02	.0E+00	2.9946E+02	7.2996E+01	2.5809E+01
1.2669E+02	1.6000E+03	1.2102E+03	2.9311E+02	7.1445E+01	2.5264E+01
1.5000E+02	1.0458E+03	7.9802E+02	1.8637E+02	4.5366E+01	1.6083E+01
2.0000E+02	5.0412E+02	3.8892E+02	8.6645E+01	2.1057E+01	7.4921E+00
3.0000E+02	1.8163E+02	1.4156E+02	3.0150E+01	7.3111E+00	2.6112E+00
4.0000E+02	9.0218E+01	7.0739E+01	1.4661E+01	3.5484E+00	1.2698E+00
5.0000E+02	5.3556E+01	4.2182E+01	8.5637E+00	2.0689E+00	7.4127E-01
6.0000E+02	3.5526E+01	2.8080E+01	5.6082E+00	1.3527E+00	4.8501E-01
8.0000E+02	1.9150E+01	1.5210E+01	2.9691E+00	7.1429E-01	2.5629E-01
1.0000E+03	1.2147E+01	9.6779E+00	1.8618E+00	4.4706E-01	1.6045E-01
1.5000E+03	5.5937E+00	4.4714E+00	8.4670E-01	2.0280E-01	7.2796E-02

Z= 95

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.146E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.155E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.428E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.439E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.597E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.610E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.888E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.919E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.099E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.132E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.680E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.718E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
5.738E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
5.784E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.6820E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.6256E+04
6.107E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.5883E+04
6.156E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.5747E+04
8.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.0598E+04	1.5747E+04
1.000E+01	.0E+00	.0E+00	.0E+00	.0E+00	7.4080E+03	1.1290E+04
1.500E+01	.0E+00	.0E+00	.0E+00	.0E+00	5.3095E+03	8.0497E+03
1.851E+01	.0E+00	.0E+00	.0E+00	.0E+00	2.7019E+03	3.8382E+03
1.865E+01	.0E+00	.0E+00	.0E+00	.0E+00	1.8527E+03	2.5025E+03
2.000E+01	.0E+00	.0E+00	.0E+00	2.1358E+04	1.8255E+03	2.4612E+03
2.304E+01	.0E+00	.0E+00	.0E+00	1.7724E+04	1.6040E+03	2.1242E+03
2.323E+01	.0E+00	.0E+00	8.7668E+03	1.1865E+04	1.2266E+03	1.5593E+03
2.385E+01	.0E+00	.0E+00	8.2565E+03	1.1612E+04	1.2079E+03	1.5320E+03
2.404E+01	.0E+00	.0E+00	8.1410E+03	1.0814E+04	1.1481E+03	1.4453E+03
3.000E+01	.0E+00	4.1444E+03	4.6904E+03	1.0581E+04	1.1305E+03	1.4198E+03
4.000E+01	.0E+00	2.8257E+03	2.2210E+03	5.6016E+03	7.3028E+02	8.5433E+02
		1.6364E+03		2.4069E+03	4.0458E+02	4.2809E+02

Z= 95

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
5.000E+01	.0E+00	1.0461E+03	1.2249E+03	1.2304E+03	2.5163E+02	2.4516E+02
6.000E+01	.0E+00	7.1405E+02	7.4564E+02	7.0507E+02	1.6894E+02	1.5368E+02
8.000E+01	.0E+00	3.8056E+02	3.3621E+02	2.8938E+02	8.8540E+01	7.2225E+01
1.000E+02	.0E+00	2.2943E+02	1.7982E+02	1.4398E+02	5.2938E+01	3.9746E+01
1.257E+02	.0E+00	1.3484E+02	9.4395E+01	7.0227E+01	3.0946E+01	2.1404E+01
1.267E+02	1.2102E+03	1.3233E+02	9.2296E+01	6.8489E+01	3.0367E+01	2.0945E+01
1.500E+02	7.9802E+02	8.8725E+01	5.7333E+01	4.0308E+01	2.0321E+01	1.3225E+01
2.000E+02	3.8892E+02	4.4588E+01	2.5602E+01	1.6456E+01	1.0198E+01	6.0463E+00
3.000E+02	1.4156E+02	1.6929E+01	8.4161E+00	4.8050E+00	3.8721E+00	2.0380E+00
4.000E+02	7.0739E+01	8.6437E+00	3.9340E+00	2.0834E+00	1.9776E+00	9.6487E-01
5.000E+02	4.2182E+01	5.2101E+00	2.2317E+00	1.1219E+00	1.1919E+00	5.5141E-01
6.000E+02	2.8080E+01	3.4870E+00	1.4297E+00	6.9156E-01	7.9748E-01	3.5489E-01
8.000E+02	1.5210E+01	1.8957E+00	7.3606E-01	3.3736E-01	4.3322E-01	1.8362E-01
1.000E+03	9.6779E+00	1.2064E+00	4.5472E-01	2.0074E-01	2.7551E-01	1.1372E-01
1.500E+03	4.4714E+00	5.5566E-01	2.0565E-01	8.5394E-02	1.2674E-01	5.1603E-02

Z= 95

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.146E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.155E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.4731E+05
1.428E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.1562E+05
1.439E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.1201E+04	1.1452E+05
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.0072E+04	1.0894E+05
1.597E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.9784E+04	1.0102E+05
1.610E+00	.0E+00	.0E+00	.0E+00	2.4381E+04	1.9748E+04	1.0005E+05
2.000E+00	.0E+00	.0E+00	.0E+00	1.8574E+04	1.8125E+04	7.5645E+04
3.000E+00	.0E+00	.0E+00	.0E+00	1.1384E+04	1.3259E+04	4.0950E+04
3.888E+00	.0E+00	.0E+00	.0E+00	7.9234E+03	9.8896E+03	2.6418E+04
3.919E+00	.0E+00	.0E+00	2.5180E+05	7.8313E+03	9.7913E+03	2.6050E+04
4.000E+00	.0E+00	.0E+00	2.4173E+05	7.5980E+03	9.5424E+03	2.5127E+04
4.099E+00	.0E+00	.0E+00	2.2398E+05	7.3262E+03	9.2508E+03	2.4064E+04
4.132E+00	.0E+00	1.5838E+05	2.1934E+05	7.2394E+03	9.1571E+03	2.3725E+04
4.680E+00	.0E+00	1.1759E+05	1.5971E+05	6.0036E+03	7.7500E+03	1.8922E+04
4.718E+00	6.5371E+04	1.1526E+05	1.5626E+05	5.9314E+03	7.6638E+03	1.8644E+04
5.000E+00	5.9229E+04	9.8941E+04	1.3267E+05	5.4236E+03	7.0568E+03	1.6732E+04
5.738E+00	4.7510E+04	6.7056E+04	8.8336E+04	4.3622E+03	5.7592E+03	1.2869E+04
5.784E+00	4.6827E+04	6.5526E+04	8.6403E+04	4.3071E+03	5.6891E+03	1.2671E+04
6.000E+00	4.3704E+04	5.8900E+04	7.7962E+04	4.0607E+03	5.3739E+03	1.1794E+04
6.107E+00	4.2237E+04	5.5896E+04	7.4119E+04	3.9464E+03	5.2274E+03	1.1392E+04
6.156E+00	4.1585E+04	5.4695E+04	7.2424E+04	3.8956E+03	5.1624E+03	1.1215E+04
8.000E+00	2.5046E+04	2.5465E+04	3.2856E+04	2.5148E+03	3.3512E+03	6.5845E+03
1.000E+01	1.5751E+04	1.2876E+04	1.6294E+04	1.7044E+03	2.2488E+03	4.0824E+03
1.500E+01	6.3056E+03	3.5171E+03	4.2892E+03	8.1133E+02	1.0204E+03	1.6193E+03
1.851E+01	3.7987E+03	1.7479E+03	2.0887E+03	5.4287E+02	6.5713E+02	9.7538E+02
1.865E+01	3.7250E+03	1.7017E+03	2.0316E+03	5.3454E+02	6.4600E+02	9.5645E+02
2.000E+01	3.1345E+03	1.3445E+03	1.5933E+03	4.6667E+02	5.5580E+02	8.0504E+02
2.304E+01	2.1896E+03	8.2776E+02	9.6702E+02	3.5275E+02	4.0670E+02	5.6356E+02
2.323E+01	2.1453E+03	8.0530E+02	9.3996E+02	3.4718E+02	3.9952E+02	5.5222E+02
2.385E+01	2.0052E+03	7.3538E+02	8.5596E+02	3.2943E+02	3.7666E+02	5.1637E+02
2.404E+01	1.9644E+03	7.1533E+02	8.3195E+02	3.2421E+02	3.6996E+02	5.0592E+02
3.000E+01	1.0965E+03	3.2939E+02	3.7411E+02	2.0666E+02	2.2235E+02	2.8381E+02
4.000E+01	4.9976E+02	1.1795E+02	1.2959E+02	1.1309E+02	1.1166E+02	1.3031E+02
5.000E+01	2.6621E+02	5.2492E+01	5.6126E+01	6.9855E+01	6.4172E+01	6.9831E+01
6.000E+01	1.5726E+02	2.6917E+01	2.8126E+01	4.6710E+01	4.0360E+01	4.1459E+01
8.000E+01	6.7318E+01	9.3117E+00	9.3743E+00	2.4372E+01	1.9083E+01	1.7880E+01
1.000E+02	3.4448E+01	4.0824E+00	3.9928E+00	1.4541E+01	1.0550E+01	9.1989E+00
1.257E+02	1.7221E+01	1.7567E+00	1.6694E+00	8.4889E+00	5.7070E+00	4.6215E+00
1.267E+02	1.6808E+01	1.7059E+00	1.6196E+00	8.3298E+00	5.5855E+00	4.5114E+00
1.500E+02	1.0048E+01	9.1825E-01	8.5458E-01	5.5708E+00	3.5376E+00	2.7059E+00

Z= 95

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
2.000E+02	4.1942E+00	3.2509E-01	2.9384E-01	2.7944E+00	1.6249E+00	1.1349E+00
3.000E+02	1.2531E+00	7.8661E-02	6.9287E-02	1.0610E+00	5.5049E-01	3.4082E-01
4.000E+02	5.4937E-01	3.0129E-02	2.6459E-02	5.4189E-01	2.6130E-01	1.4984E-01
5.000E+02	2.9764E-01	1.4821E-02	1.3114E-02	3.2663E-01	1.4975E-01	8.1149E-02
6.000E+02	1.8415E-01	8.5222E-03	7.6342E-03	2.1852E-01	9.6489E-02	5.0254E-02
8.000E+02	9.0155E-02	3.8053E-03	3.4867E-03	1.1868E-01	4.9993E-02	2.4615E-02
1.000E+03	5.3737E-02	2.1193E-03	1.9722E-03	7.5454E-02	3.0978E-02	1.4668E-02
1.500E+03	2.2806E-02	8.3247E-04	8.1407E-04	3.4696E-02	1.4053E-02	6.2449E-03

Z= 95

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	2.0598E+05	3.4740E+05	9.0311E+05	1.1720E+06	1.7790E+04	1.3571E+04
1.146E+00	1.9730E+05	3.2164E+05	6.7285E+05	8.6616E+05	1.4963E+04	1.1983E+04
1.155E+00	1.9655E+05	3.1982E+05	6.6055E+05	8.4997E+05	1.4808E+04	1.1894E+04
1.428E+00	1.6680E+05	2.5931E+05	3.9254E+05	5.0061E+05	1.1120E+04	9.6804E+03
1.439E+00	1.6547E+05	2.5696E+05	3.8445E+05	4.9015E+05	1.0997E+04	9.6024E+03
1.500E+00	1.5858E+05	2.4456E+05	3.4458E+05	4.3869E+05	1.0377E+04	9.2020E+03
1.597E+00	1.4796E+05	2.2511E+05	2.9125E+05	3.7008E+05	9.4925E+03	8.6146E+03
1.610E+00	1.4656E+05	2.2261E+05	2.8502E+05	3.6206E+05	9.3845E+03	8.5415E+03
2.000E+00	1.0858E+05	1.6011E+05	1.5422E+05	1.9447E+05	6.8315E+03	6.6996E+03
3.000E+00	5.3144E+04	7.4890E+04	4.4087E+04	5.4888E+04	3.6629E+03	4.0205E+03
3.888E+00	3.0964E+04	4.2549E+04	1.8587E+04	2.2957E+04	2.4166E+03	2.7922E+03
3.919E+00	3.0426E+04	4.1777E+04	1.8087E+04	2.2333E+04	2.3854E+03	2.7597E+03
4.000E+00	2.9081E+04	3.9847E+04	1.6860E+04	2.0804E+04	2.3070E+03	2.6777E+03
4.099E+00	2.7535E+04	3.7643E+04	1.5496E+04	1.9105E+04	2.2165E+03	2.5823E+03
4.132E+00	2.7045E+04	3.6948E+04	1.5074E+04	1.8581E+04	2.1877E+03	2.5518E+03
4.680E+00	2.0311E+04	2.7449E+04	9.7443E+03	1.1963E+04	1.7802E+03	2.1115E+03
4.718E+00	1.9934E+04	2.6920E+04	9.4727E+03	1.1626E+04	1.7566E+03	2.0856E+03
5.000E+00	1.7364E+04	2.3327E+04	7.7008E+03	9.4340E+03	1.5937E+03	1.9042E+03
5.738E+00	1.2398E+04	1.6457E+04	4.6773E+03	5.7035E+03	1.2621E+03	1.5257E+03
5.784E+00	1.2153E+04	1.6120E+04	4.5426E+03	5.5377E+03	1.2450E+03	1.5058E+03
6.000E+00	1.1078E+04	1.4649E+04	3.9682E+03	4.8312E+03	1.1690E+03	1.4170E+03
6.107E+00	1.0592E+04	1.3987E+04	3.7173E+03	4.5230E+03	1.1340E+03	1.3759E+03
6.156E+00	1.0379E+04	1.3697E+04	3.6091E+03	4.3901E+03	1.1185E+03	1.3576E+03
8.000E+00	5.1998E+03	6.7062E+03	1.3399E+03	1.6146E+03	7.0626E+02	8.6156E+02
1.000E+01	2.7876E+03	3.5250E+03	5.5924E+02	6.6813E+02	4.7187E+02	5.7088E+02
1.500E+01	8.3328E+02	1.0148E+03	1.0726E+02	1.2596E+02	2.2066E+02	2.5572E+02
1.851E+01	4.3065E+02	5.1370E+02	4.4315E+01	5.1528E+01	1.4675E+02	1.6413E+02
1.865E+01	4.1981E+02	5.0037E+02	4.2838E+01	4.9791E+01	1.4447E+02	1.6133E+02
2.000E+01	3.3563E+02	3.9720E+02	3.1829E+01	3.6867E+01	1.2591E+02	1.3869E+02
2.304E+01	2.1145E+02	2.4657E+02	1.7299E+01	1.9892E+01	9.4873E+01	1.0136E+02
2.323E+01	2.0596E+02	2.3997E+02	1.6712E+01	1.9208E+01	9.3361E+01	9.9558E+01
2.385E+01	1.8884E+02	2.1941E+02	1.4912E+01	1.7116E+01	8.8539E+01	9.3843E+01
2.404E+01	1.8392E+02	2.1351E+02	1.4404E+01	1.6526E+01	8.7122E+01	9.2169E+01
3.000E+01	8.7390E+01	9.9010E+01	5.4560E+00	6.1819E+00	5.5324E+01	5.5345E+01
4.000E+01	3.2376E+01	3.5476E+01	1.5199E+00	1.6919E+00	3.0169E+01	2.7793E+01
5.000E+01	1.4729E+01	1.5705E+01	5.5862E-01	6.1267E-01	1.8601E+01	1.5982E+01
6.000E+01	7.6715E+00	7.9940E+00	2.4587E-01	2.6624E-01	1.2424E+01	1.0059E+01
8.000E+01	2.7101E+00	2.7212E+00	6.7287E-02	7.1350E-02	6.4752E+00	4.7621E+00
1.000E+02	1.2041E+00	1.1750E+00	2.4847E-02	2.5912E-02	3.8614E+00	2.6357E+00
1.257E+02	5.2415E-01	4.9712E-01	8.9952E-03	9.2263E-03	2.2540E+00	1.4273E+00
1.267E+02	5.0918E-01	4.8246E-01	8.6845E-03	8.9015E-03	2.2118E+00	1.3970E+00
1.500E+02	2.7605E-01	2.5649E-01	4.1271E-03	4.1839E-03	1.4794E+00	8.8876E-01
2.000E+02	9.8690E-02	8.9116E-02	1.2013E-03	1.1888E-03	7.4282E-01	4.0870E-01
3.000E+02	2.4121E-02	2.1251E-02	2.2565E-04	2.2275E-04	2.8198E-01	1.3865E-01
4.000E+02	9.2941E-03	8.1134E-03	7.3549E-05	7.3562E-05	1.4400E-01	6.5867E-02
5.000E+02	4.5847E-03	4.0378E-03	3.2396E-05	3.2799E-05	8.6782E-02	3.7721E-02
6.000E+02	2.6430E-03	2.3566E-03	1.7043E-05	1.7661E-05	5.8055E-02	2.4311E-02
8.000E+02	1.1862E-03	1.0741E-03	6.8132E-06	7.6420E-06	3.1528E-02	1.2596E-02
1.000E+03	6.6023E-04	6.1559E-04	3.6276E-06	3.9667E-06	2.0044E-02	7.8081E-03

Z= 95

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.500E+03	2.6187E-04	2.4961E-04	1.3191E-06	1.5820E-06	9.2151E-03	3.5409E-03

Z= 95

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	5 F 5/2	5 F 7/2	6 S 1/2
1.000E+00	5.9542E+04	6.0138E+04	9.2830E+04	3.4412E+04	4.3427E+04	4.4023E+03
1.146E+00	4.9308E+04	5.1487E+04	7.8137E+04	2.6023E+04	3.2656E+04	3.5994E+03
1.155E+00	4.8754E+04	5.0988E+04	7.7307E+04	2.5581E+04	3.2091E+04	3.5567E+03
1.428E+00	3.5788E+04	3.8459E+04	5.6950E+04	1.5786E+04	1.9646E+04	2.5778E+03
1.439E+00	3.5362E+04	3.8021E+04	5.6254E+04	1.5486E+04	1.9268E+04	2.5463E+03
1.500E+00	3.3214E+04	3.5786E+04	5.2719E+04	1.4003E+04	1.7397E+04	2.3881E+03
1.597E+00	3.0184E+04	3.2563E+04	4.7669E+04	1.1988E+04	1.4860E+04	2.1662E+03
1.610E+00	2.9815E+04	3.2167E+04	4.7051E+04	1.1750E+04	1.4561E+04	2.1394E+03
2.000E+00	2.1162E+04	2.2579E+04	3.2350E+04	6.6512E+03	8.1814E+03	1.5180E+03
3.000E+00	1.0704E+04	1.0575E+04	1.4624E+04	2.0579E+03	2.4522E+03	7.8548E+02
3.888E+00	6.7289E+03	6.1158E+03	8.2780E+03	9.0017E+02	1.0701E+03	5.0978E+02
3.919E+00	6.6310E+03	6.0090E+03	8.1282E+03	8.7701E+02	1.0423E+03	5.0296E+02
4.000E+00	6.3857E+03	5.7423E+03	7.7544E+03	8.2007E+02	9.7393E+02	4.8588E+02
4.099E+00	6.1031E+03	5.4368E+03	7.3273E+03	7.5653E+02	8.9771E+02	4.6618E+02
4.132E+00	6.0134E+03	5.3403E+03	7.1926E+03	7.3683E+02	8.7410E+02	4.5993E+02
4.680E+00	4.7570E+03	4.0133E+03	5.3507E+03	4.8485E+02	5.7268E+02	3.7193E+02
4.718E+00	4.6852E+03	3.9391E+03	5.2484E+03	4.7185E+02	5.5718E+02	3.6688E+02
5.000E+00	4.1913E+03	3.4341E+03	4.5539E+03	3.8659E+02	4.5556E+02	3.3200E+02
5.738E+00	3.2023E+03	2.4583E+03	3.2234E+03	2.3882E+02	2.8005E+02	2.6143E+02
5.784E+00	3.1520E+03	2.4101E+03	3.1583E+03	2.3215E+02	2.7215E+02	2.5781E+02
6.000E+00	2.9295E+03	2.1991E+03	2.8731E+03	2.0365E+02	2.3842E+02	2.4172E+02
6.107E+00	2.8276E+03	2.1037E+03	2.7444E+03	1.9116E+02	2.2365E+02	2.3433E+02
6.156E+00	2.7826E+03	2.0618E+03	2.6880E+03	1.8576E+02	2.1727E+02	2.3106E+02
8.000E+00	1.6204E+03	1.0408E+03	1.3274E+03	7.0807E+01	8.2003E+01	1.4468E+02
1.000E+01	1.0003E+03	5.6222E+02	7.0326E+02	3.0127E+01	3.4581E+01	9.6092E+01
1.500E+01	3.9547E+02	1.7051E+02	2.0547E+02	5.9432E+00	6.7023E+00	4.4561E+01
1.851E+01	2.3816E+02	8.8746E+01	1.0475E+02	2.4831E+00	2.7721E+00	2.9536E+01
1.865E+01	2.3354E+02	8.6534E+01	1.0206E+02	2.4012E+00	2.6797E+00	2.9073E+01
2.000E+01	1.9658E+02	6.9335E+01	8.1197E+01	1.7900E+00	1.9906E+00	2.5314E+01
2.304E+01	1.3766E+02	4.3870E+01	5.0621E+01	9.7896E-01	1.0806E+00	1.9042E+01
2.323E+01	1.3489E+02	4.2742E+01	4.9278E+01	9.4603E-01	1.0438E+00	1.8737E+01
2.385E+01	1.2614E+02	3.9220E+01	4.5091E+01	8.4507E-01	9.3111E-01	1.7764E+01
2.404E+01	1.2359E+02	3.8206E+01	4.3889E+01	8.1657E-01	8.9931E-01	1.7478E+01
3.000E+01	6.9400E+01	1.8266E+01	2.0477E+01	3.1195E-01	3.3927E-01	1.1225E+01
4.000E+01	3.1920E+01	6.8151E+00	7.3887E+00	8.7713E-02	9.3709E-02	6.1176E+00
5.000E+01	1.7132E+01	3.1152E+00	3.2864E+00	3.2425E-02	3.4129E-02	3.7706E+00
6.000E+01	1.0184E+01	1.6266E+00	1.6690E+00	1.4327E-02	1.4888E-02	2.5178E+00
8.000E+01	4.4014E+00	5.7731E-01	5.7078E-01	3.9409E-03	4.0098E-03	1.3117E+00
1.000E+02	2.2681E+00	2.5727E-01	2.4722E-01	1.4602E-03	1.4609E-03	7.8198E-01
1.257E+02	1.1384E+00	1.1228E-01	1.0486E-01	5.3020E-04	5.2164E-04	4.5627E-01
1.267E+02	1.1114E+00	1.0908E-01	1.0178E-01	5.1186E-04	5.0333E-04	4.4771E-01
1.500E+02	6.6712E-01	5.9242E-02	5.4194E-02	2.4374E-04	2.3698E-04	2.9934E-01
2.000E+02	2.8012E-01	2.1234E-02	1.8871E-02	7.1388E-05	6.8307E-05	1.5011E-01
3.000E+02	8.4223E-02	5.2046E-03	4.5097E-03	1.3446E-05	1.2806E-05	5.6979E-02
4.000E+02	3.7039E-02	2.0074E-03	1.7345E-03	4.3811E-06	4.2438E-06	2.9098E-02
5.000E+02	2.0101E-02	9.9178E-04	8.6264E-04	1.9171E-06	1.9092E-06	1.7535E-02
6.000E+02	1.2450E-02	5.7163E-04	5.0322E-04	1.0084E-06	1.0372E-06	1.1730E-02
8.000E+02	6.1001E-03	2.5623E-04	2.3050E-04	4.0586E-07	4.3813E-07	6.3705E-03
1.000E+03	3.6368E-03	1.4291E-04	1.3179E-04	2.0638E-07	2.3717E-07	4.0502E-03
1.500E+03	1.5480E-03	5.6364E-05	5.3818E-05	7.3524E-08	9.2034E-08	1.8625E-03

ENERGY	6 P 1/2	6 P 3/2	7 S 1/2
1.000E+00	2.8935E+03	9.7569E+03	4.4483E+02
1.146E+00	2.4754E+03	7.9687E+03	3.5643E+02
1.155E+00	2.4526E+03	7.8734E+03	3.5177E+02
1.428E+00	1.9099E+03	5.6811E+03	2.4706E+02
1.439E+00	1.8916E+03	5.6103E+03	2.4378E+02
1.500E+00	1.7987E+03	5.2545E+03	2.2738E+02
1.597E+00	1.6655E+03	4.7551E+03	2.0449E+02
1.610E+00	1.6491E+03	4.6947E+03	2.0173E+02
2.000E+00	1.2516E+03	3.2924E+03	1.3906E+02
3.000E+00	7.1847E+02	1.6390E+03	6.9349E+01
3.888E+00	4.8938E+02	1.0235E+03	4.5118E+01
3.919E+00	4.8344E+02	1.0085E+03	4.4519E+01
4.000E+00	4.6848E+02	9.7072E+02	4.3016E+01
4.099E+00	4.5112E+02	9.2730E+02	4.1283E+01
4.132E+00	4.4557E+02	9.1353E+02	4.0732E+01
4.680E+00	3.6612E+02	7.2100E+02	3.2984E+01
4.718E+00	3.6147E+02	7.1003E+02	3.2539E+01
5.000E+00	3.2909E+02	6.3459E+02	2.9459E+01
5.738E+00	2.6204E+02	4.8394E+02	2.3234E+01
5.784E+00	2.5854E+02	4.7630E+02	2.2914E+01
6.000E+00	2.4293E+02	4.4248E+02	2.1494E+01
6.107E+00	2.3572E+02	4.2701E+02	2.0841E+01
6.156E+00	2.3252E+02	4.2019E+02	2.0552E+01
8.000E+00	1.4627E+02	2.4413E+02	1.2909E+01
1.000E+01	9.6350E+01	1.5056E+02	8.5970E+00
1.500E+01	4.2819E+01	5.9856E+01	4.0045E+00
1.851E+01	2.8074E+01	3.6043E+01	2.6597E+00
1.865E+01	2.7595E+01	3.5343E+01	2.6182E+00
2.000E+01	2.3721E+01	2.9750E+01	2.2811E+00
2.304E+01	1.7335E+01	2.0833E+01	1.7178E+00
2.323E+01	1.7027E+01	2.0414E+01	1.6903E+00
2.385E+01	1.6050E+01	1.9090E+01	1.6029E+00
2.404E+01	1.5764E+01	1.8705E+01	1.5772E+00
3.000E+01	9.4665E+00	1.0504E+01	1.0008E+00
4.000E+01	4.7553E+00	4.8318E+00	5.4538E-01
5.000E+01	2.7353E+00	2.5935E+00	3.3612E-01
6.000E+01	1.7219E+00	1.5419E+00	2.2443E-01
8.000E+01	8.1544E-01	6.6638E-01	1.1692E-01
1.000E+02	4.5140E-01	3.4337E-01	6.9700E-02
1.257E+02	2.4450E-01	1.7275E-01	4.0669E-02
1.267E+02	2.3930E-01	1.6865E-01	3.9906E-02
1.500E+02	1.5170E-01	1.0125E-01	2.6682E-02
2.000E+02	6.9771E-02	4.2526E-02	1.3381E-02
3.000E+02	2.3674E-02	1.2790E-02	5.0809E-03
4.000E+02	1.1247E-02	5.6265E-03	2.5958E-03
5.000E+02	6.4412E-03	3.0542E-03	1.5655E-03
6.000E+02	4.1513E-03	1.8919E-03	1.0483E-03
8.000E+02	2.1511E-03	9.2744E-04	5.7085E-04
1.000E+03	1.3333E-03	5.5318E-04	3.6441E-04
1.500E+03	6.0491E-04	2.3595E-04	1.7039E-04

Z= 96

29 STATES, 50 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	129.1250	.98706
2 S 1/2	2.00	24.6020	.89455
2 P 1/2	2.00	23.7804	.84330
2 P 3/2	4.00	18.9921	.80337
3 S 1/2	2.00	6.3253	.71813
3 P 1/2	2.00	5.9475	.65299
3 P 3/2	4.00	4.8284	.59749
3 D 3/2	4.00	4.2367	.41671
3 D 5/2	6.00	4.0147	.40559
4 S 1/2	2.00	1.6679	.48381
4 P 1/2	2.00	1.4941	.42059
4 P 3/2	4.00	1.1943	.36562
4 D 3/2	4.00	.9196	.21665
4 D 5/2	6.00	.8651	.20589
4 F 5/2	6.00	.5020	.06321
4 F 7/2	8.00	.4871	.06172
5 S 1/2	2.00	.3854	.25972
5 P 1/2	2.00	.3151	.21081
5 P 3/2	4.00	.2397	.17419
5 D 3/2	4.00	.1365	.08129
5 D 5/2	6.00	.1251	.07533
5 F 5/2	3.00	.0134	.00960
5 F 7/2	4.00	.0118	.00903
6 S 1/2	2.00	.0609	.09487
6 P 1/2	2.00	.0397	.06526
6 P 3/2	4.00	.0270	.04718
6 D 3/2	.40	.0046	.00902
6 D 5/2	.60	.0039	.00734
7 S 1/2	2.00	.0062	.01526

Z= 96 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	3.0875E+06	.0E+00	.0E+00	.0E+00	3.0875E+06
1.1932E+00	2.2614E+06	.0E+00	.0E+00	.0E+00	2.2614E+06
1.2027E+00	2.3705E+06	.0E+00	.0E+00	.0E+00	2.3705E+06
1.4926E+00	1.5610E+06	.0E+00	.0E+00	.0E+00	1.5610E+06
1.5000E+00	1.5662E+06	.0E+00	.0E+00	.0E+00	1.5662E+06
1.5046E+00	1.5562E+06	.0E+00	.0E+00	.0E+00	1.5562E+06
1.6662E+00	1.2638E+06	.0E+00	.0E+00	.0E+00	1.2638E+06
1.6795E+00	1.2663E+06	.0E+00	.0E+00	.0E+00	1.2663E+06
2.0000E+00	8.7824E+05	.0E+00	.0E+00	.0E+00	8.7824E+05
3.0000E+00	3.5993E+05	.0E+00	.0E+00	.0E+00	3.5993E+05
4.0000E+00	1.8585E+05	.0E+00	.0E+00	.0E+00	1.8585E+05
4.0107E+00	1.8469E+05	.0E+00	.0E+00	.0E+00	1.8469E+05
4.0428E+00	4.1420E+05	.0E+00	.0E+00	2.3292E+05	1.8129E+05
4.2325E+00	3.7697E+05	.0E+00	.0E+00	2.1412E+05	1.6285E+05
4.2664E+00	5.1709E+05	.0E+00	.0E+00	3.5726E+05	1.5983E+05
4.8236E+00	3.8638E+05	.0E+00	.0E+00	2.6672E+05	1.1966E+05
4.8622E+00	4.4185E+05	.0E+00	.0E+00	3.2444E+05	1.1741E+05
5.0000E+00	4.1306E+05	.0E+00	.0E+00	3.0319E+05	1.0987E+05
5.9416E+00	2.6563E+05	.0E+00	.0E+00	1.9296E+05	7.2671E+04
5.9891E+00	2.7632E+05	.0E+00	.0E+00	2.0504E+05	7.1285E+04
6.0000E+00	2.7508E+05	.0E+00	.0E+00	2.0411E+05	7.0974E+04
6.3190E+00	2.4189E+05	.0E+00	.0E+00	1.7928E+05	6.2618E+04
6.3695E+00	2.4727E+05	.0E+00	.0E+00	1.8585E+05	6.1420E+04
8.0000E+00	1.4105E+05	.0E+00	.0E+00	1.0585E+05	3.5198E+04
1.0000E+01	8.0703E+04	.0E+00	.0E+00	6.0454E+04	2.0249E+04
1.5000E+01	2.8763E+04	.0E+00	.0E+00	2.1469E+04	7.2944E+03

Z= 96 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY (KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.8973E+01	1.5702E+04	.0E+00	.0E+00	1.1699E+04	4.0031E+03
1.9125E+01	3.6134E+04	.0E+00	2.0751E+04	1.1460E+04	3.9226E+03
2.0000E+01	3.2214E+04	.0E+00	1.8513E+04	1.0204E+04	3.4971E+03
2.3757E+01	2.0111E+04	.0E+00	1.1353E+04	6.5140E+03	2.2437E+03
2.3947E+01	2.8166E+04	.0E+00	1.9589E+04	6.3797E+03	2.1979E+03
2.4577E+01	2.6336E+04	.0E+00	1.8321E+04	5.9603E+03	2.0550E+03
2.4774E+01	2.9819E+04	.0E+00	2.1968E+04	5.8371E+03	2.0130E+03
3.0000E+01	1.8353E+04	.0E+00	1.3597E+04	3.5316E+03	1.2245E+03
4.0000E+01	8.7487E+03	.0E+00	6.5209E+03	1.6513E+03	5.7655E+02
5.0000E+01	4.8841E+03	.0E+00	3.6520E+03	9.1206E+02	3.2002E+02
6.0000E+01	3.0188E+03	.0E+00	2.2611E+03	5.6035E+02	1.9733E+02
8.0000E+01	1.4036E+03	.0E+00	1.0530E+03	2.5893E+02	9.1677E+01
1.0000E+02	7.7239E+02	.0E+00	5.7985E+02	1.4206E+02	5.0487E+01
1.2900E+02	3.9031E+02	.0E+00	2.9315E+02	7.1612E+01	2.5547E+01
1.3003E+02	1.5492E+03	1.1671E+03	2.8696E+02	7.0094E+01	2.5009E+01
1.5000E+02	1.0840E+03	8.2329E+02	1.9582E+02	4.7778E+01	1.7083E+01
2.0000E+02	5.2326E+02	4.0188E+02	9.1195E+01	2.2213E+01	7.9709E+00
3.0000E+02	1.8922E+02	1.4690E+02	3.1807E+01	7.7304E+00	2.7843E+00
4.0000E+02	9.4204E+01	7.3599E+01	1.5492E+01	3.7576E+00	1.3560E+00
5.0000E+02	5.6013E+01	4.3969E+01	9.0588E+00	2.1932E+00	7.9241E-01
6.0000E+02	3.7199E+01	2.9308E+01	5.9371E+00	1.4350E+00	5.1886E-01
8.0000E+02	2.0078E+01	1.5899E+01	3.1461E+00	7.5842E-01	2.7440E-01
1.0000E+03	1.2744E+01	1.0123E+01	1.9738E+00	4.7488E-01	1.7186E-01
1.5000E+03	5.8688E+00	4.6778E+00	8.9758E-01	2.1540E-01	7.7963E-02

Z= 96

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.193E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.203E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.493E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.505E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.666E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.680E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.011E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.043E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.233E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.266E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.824E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.862E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
5.942E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
5.989E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.6025E+04
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.5982E+04
6.319E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.5154E+04
6.370E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.0100E+04	1.5014E+04
8.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.4448E+03	1.1380E+04
1.000E+01	.0E+00	.0E+00	.0E+00	.0E+00	5.3306E+03	8.1564E+03
1.500E+01	.0E+00	.0E+00	.0E+00	.0E+00	2.7394E+03	3.9354E+03
1.897E+01	.0E+00	.0E+00	.0E+00	.0E+00	1.7994E+03	2.4511E+03
1.913E+01	.0E+00	.0E+00	.0E+00	2.0751E+04	1.7730E+03	2.4108E+03
2.000E+01	.0E+00	.0E+00	.0E+00	1.8513E+04	1.6317E+03	2.1952E+03
2.376E+01	.0E+00	.0E+00	.0E+00	1.1353E+04	1.1793E+03	1.5118E+03
2.395E+01	.0E+00	.0E+00	8.4774E+03	1.1111E+04	1.1613E+03	1.4855E+03
2.458E+01	.0E+00	.0E+00	7.9668E+03	1.0354E+04	1.1044E+03	1.4024E+03
2.477E+01	.0E+00	3.9755E+03	7.8628E+03	1.0130E+04	1.0875E+03	1.3777E+03

Z= 96

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
3.000E+01	.0E+00	2.8557E+03	4.8868E+03	5.8544E+03	7.4647E+02	8.9093E+02
4.000E+01	.0E+00	1.6692E+03	2.3341E+03	2.5176E+03	4.1482E+02	4.4890E+02
5.000E+01	.0E+00	1.0698E+03	1.2929E+03	1.2893E+03	2.5846E+02	2.5814E+02
6.000E+01	.0E+00	7.3150E+02	7.8970E+02	7.3993E+02	1.7383E+02	1.6232E+02
8.000E+01	.0E+00	3.9127E+02	3.5750E+02	3.0426E+02	9.1320E+01	7.6649E+01
1.000E+02	.0E+00	2.3641E+02	1.9183E+02	1.5161E+02	5.4702E+01	4.2324E+01
1.290E+02	.0E+00	1.3102E+02	9.3876E+01	6.8253E+01	3.0131E+01	2.1314E+01
1.300E+02	1.1671E+03	1.2859E+02	9.1798E+01	6.6568E+01	2.9569E+01	2.0859E+01
1.500E+02	8.2329E+02	9.1798E+01	6.1470E+01	4.2551E+01	2.1070E+01	1.4163E+01
2.000E+02	4.0188E+02	4.6258E+01	2.7538E+01	1.7398E+01	1.0600E+01	6.4987E+00
3.000E+02	1.4690E+02	1.7630E+01	9.0887E+00	5.0890E+00	4.0391E+00	2.2002E+00
4.000E+02	7.3599E+01	9.0248E+00	4.2586E+00	2.2083E+00	2.0678E+00	1.0444E+00
5.000E+02	4.3969E+01	5.4496E+00	2.4197E+00	1.1895E+00	1.2484E+00	5.9789E-01
6.000E+02	2.9308E+01	3.6519E+00	1.5519E+00	7.3330E-01	8.3633E-01	3.8528E-01
8.000E+02	1.5899E+01	1.9883E+00	8.0015E-01	3.5763E-01	4.5498E-01	1.9964E-01
1.000E+03	1.0123E+01	1.2663E+00	4.9477E-01	2.1272E-01	2.8955E-01	1.2377E-01
1.500E+03	4.6778E+00	5.8339E-01	2.2384E-01	9.0345E-02	1.3323E-01	5.6188E-02

Z= 96

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.193E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.203E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.4270E+05
1.493E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.1137E+05
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.0686E+04	1.1070E+05
1.505E+00	.0E+00	.0E+00	.0E+00	.0E+00	2.0125E+04	1.1029E+05
1.666E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.8696E+04	9.7332E+04
1.680E+00	.0E+00	.0E+00	.0E+00	2.3124E+04	1.8664E+04	9.6386E+04
2.000E+00	.0E+00	.0E+00	.0E+00	1.8557E+04	1.7463E+04	7.6955E+04
3.000E+00	.0E+00	.0E+00	.0E+00	1.1396E+04	1.3101E+04	4.1937E+04
4.000E+00	.0E+00	.0E+00	.0E+00	7.6433E+03	9.5338E+03	2.5793E+04
4.011E+00	.0E+00	.0E+00	.0E+00	7.6138E+03	9.5022E+03	2.5672E+04
4.043E+00	.0E+00	.0E+00	2.3292E+05	7.5258E+03	9.4084E+03	2.5313E+04
4.233E+00	.0E+00	.0E+00	2.1412E+05	7.0329E+03	8.8821E+03	2.3338E+04
4.266E+00	.0E+00	1.4755E+05	2.0971E+05	6.9497E+03	8.7927E+03	2.3009E+04
4.824E+00	.0E+00	1.1323E+05	1.5349E+05	5.7782E+03	7.4709E+03	1.8403E+04
4.862E+00	6.3269E+04	1.1100E+05	1.5017E+05	5.7089E+03	7.3884E+03	1.8133E+04
5.000E+00	6.0953E+04	1.0332E+05	1.3892E+05	5.4713E+03	7.1041E+03	1.7212E+04
5.942E+00	4.5572E+04	6.3712E+04	8.3675E+04	4.1699E+03	5.5221E+03	1.2390E+04
5.989E+00	4.4918E+04	6.2255E+04	8.1840E+04	4.1172E+03	5.4551E+03	1.2198E+04
6.000E+00	4.4769E+04	6.1929E+04	8.1429E+04	4.1053E+03	5.4399E+03	1.2155E+04
6.319E+00	4.0579E+04	5.3227E+04	7.0316E+04	3.7778E+03	5.0201E+03	1.0981E+04
6.370E+00	3.9952E+04	5.2082E+04	6.8700E+04	3.7294E+03	4.9578E+03	1.0809E+04
8.000E+00	2.5715E+04	2.6769E+04	3.4545E+04	2.5533E+03	3.4164E+03	6.8060E+03
1.000E+01	1.6203E+04	1.3588E+04	1.7175E+04	1.7348E+03	2.3053E+03	4.2287E+03
1.500E+01	6.5192E+03	3.7331E+03	4.5419E+03	8.2913E+02	1.0551E+03	1.6841E+03
1.897E+01	3.7042E+03	1.7105E+03	2.0341E+03	5.2975E+02	6.4718E+02	9.5636E+02
1.913E+01	3.6324E+03	1.6652E+03	1.9787E+03	5.2162E+02	6.3626E+02	9.3778E+02
2.000E+01	3.2522E+03	1.4320E+03	1.6931E+03	4.7821E+02	5.7806E+02	8.3972E+02
2.376E+01	2.1044E+03	7.9505E+02	9.2338E+02	3.4058E+02	3.9631E+02	5.4469E+02
2.395E+01	2.0618E+03	7.7349E+02	8.9753E+02	3.3521E+02	3.8933E+02	5.3372E+02
2.458E+01	1.9283E+03	7.0705E+02	8.1811E+02	3.1824E+02	3.6735E+02	4.9940E+02
2.477E+01	1.8889E+03	6.8779E+02	7.9516E+02	3.1321E+02	3.6083E+02	4.8928E+02
3.000E+01	1.1426E+03	3.5248E+02	3.9910E+02	2.1247E+02	2.3302E+02	2.9722E+02
4.000E+01	5.2231E+02	1.2662E+02	1.3864E+02	1.1654E+02	1.1762E+02	1.3686E+02
5.000E+01	2.7881E+02	5.6482E+01	6.0167E+01	7.2112E+01	6.7859E+01	7.3499E+01
6.000E+01	1.6499E+02	2.9017E+01	3.0200E+01	4.8287E+01	4.2809E+01	4.3712E+01
8.000E+01	7.0807E+01	1.0067E+01	1.0090E+01	2.5251E+01	2.0334E+01	1.8901E+01
1.000E+02	3.6302E+01	4.4224E+00	4.3054E+00	1.5091E+01	1.1280E+01	9.7432E+00
1.290E+02	1.6800E+01	1.7332E+00	1.6337E+00	8.2996E+00	5.7090E+00	4.5342E+00

Z= 96

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.300E+02	1.6398E+01	1.6832E+00	1.5851E+00	8.1444E+00	5.5880E+00	4.4264E+00
1.500E+02	1.0622E+01	9.9810E-01	9.2412E-01	5.8005E+00	3.8041E+00	2.8754E+00
2.000E+02	4.4423E+00	3.5410E-01	3.1828E-01	2.9166E+00	1.7537E+00	1.2083E+00
3.000E+02	1.3300E+00	8.5897E-02	7.5184E-02	1.1112E+00	5.9682E-01	3.6369E-01
4.000E+02	5.8370E-01	3.2952E-02	2.8733E-02	5.6888E-01	2.8404E-01	1.6006E-01
5.000E+02	3.1638E-01	1.6227E-02	1.4245E-02	3.4346E-01	1.6307E-01	8.6732E-02
6.000E+02	1.9577E-01	9.3384E-03	8.2935E-03	2.3007E-01	1.0520E-01	5.3718E-02
8.000E+02	9.5826E-02	4.1744E-03	3.7872E-03	1.2513E-01	5.4589E-02	2.6304E-02
1.000E+03	5.7096E-02	2.3268E-03	2.1430E-03	7.9610E-02	3.3858E-02	1.5672E-02
1.500E+03	2.4197E-02	9.0806E-04	8.7961E-04	3.6614E-02	1.5368E-02	6.6603E-03

Z= 96

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	2.0510E+05	3.4838E+05	9.4556E+05	1.2270E+06	1.7942E+04	1.3476E+04
1.193E+00	1.9309E+05	3.1385E+05	6.4512E+05	8.2953E+05	1.4339E+04	1.1474E+04
1.203E+00	1.9230E+05	3.1196E+05	6.3326E+05	8.1386E+05	1.4191E+04	1.1390E+04
1.493E+00	1.6125E+05	2.5013E+05	3.7048E+05	4.7181E+05	1.0592E+04	9.2399E+03
1.500E+00	1.6041E+05	2.4868E+05	3.6571E+05	4.6562E+05	1.0520E+04	9.1939E+03
1.505E+00	1.5990E+05	2.4779E+05	3.6280E+05	4.6185E+05	1.0476E+04	9.1656E+03
1.666E+00	1.4279E+05	2.1675E+05	2.7567E+05	3.4983E+05	9.0684E+03	8.2442E+03
1.680E+00	1.4141E+05	2.1429E+05	2.6972E+05	3.4219E+05	8.9651E+03	8.1745E+03
2.000E+00	1.1095E+05	1.6433E+05	1.6459E+05	2.0752E+05	6.9502E+03	6.7395E+03
3.000E+00	5.4933E+04	7.7493E+04	4.7418E+04	5.9023E+04	3.7383E+03	4.0801E+03
4.000E+00	3.0229E+04	4.1471E+04	1.8228E+04	2.2481E+04	2.3597E+03	2.7338E+03
4.011E+00	3.0052E+04	4.1217E+04	1.8062E+04	2.2275E+04	2.3495E+03	2.7232E+03
4.043E+00	2.9530E+04	4.0466E+04	1.7576E+04	2.1669E+04	2.3191E+03	2.6917E+03
4.233E+00	2.6667E+04	3.6371E+04	1.5010E+04	1.8476E+04	2.1517E+03	2.5160E+03
4.266E+00	2.6192E+04	3.5697E+04	1.4601E+04	1.7968E+04	2.1238E+03	2.4864E+03
4.824E+00	1.9739E+04	2.6617E+04	9.4970E+03	1.1640E+04	1.7339E+03	2.0649E+03
4.862E+00	1.9373E+04	2.6103E+04	9.2324E+03	1.1313E+04	1.7110E+03	2.0396E+03
5.000E+00	1.8135E+04	2.4367E+04	8.3593E+03	1.0233E+04	1.6331E+03	1.9531E+03
5.942E+00	1.1898E+04	1.5744E+04	4.4780E+03	5.4495E+03	1.2199E+03	1.4824E+03
5.989E+00	1.1663E+04	1.5421E+04	4.3487E+03	5.2909E+03	1.2033E+03	1.4631E+03
6.000E+00	1.1610E+04	1.5348E+04	4.3199E+03	5.2554E+03	1.1996E+03	1.4588E+03
6.319E+00	1.0182E+04	1.3402E+04	3.5686E+03	4.3332E+03	1.0976E+03	1.3390E+03
6.370E+00	9.9770E+03	1.3123E+04	3.4646E+03	4.2058E+03	1.0826E+03	1.3213E+03
8.000E+00	5.4767E+03	7.0585E+03	1.4655E+03	1.7642E+03	7.2658E+02	8.9216E+02
1.000E+01	2.9469E+03	3.7228E+03	6.1384E+02	7.3256E+02	4.8634E+02	5.9372E+02
1.500E+01	8.8669E+02	1.0780E+03	1.1843E+02	1.3889E+02	2.2817E+02	2.6799E+02
1.897E+01	4.2464E+02	5.0424E+02	4.4153E+01	5.1203E+01	1.4475E+02	1.6371E+02
1.913E+01	4.1396E+02	4.9115E+02	4.2682E+01	4.9478E+01	1.4250E+02	1.6093E+02
2.000E+01	3.5867E+02	4.2357E+02	3.5281E+01	4.0806E+01	1.3048E+02	1.4612E+02
2.376E+01	2.0482E+02	2.3751E+02	1.6839E+01	1.9301E+01	9.2573E+01	1.0002E+02
2.395E+01	1.9951E+02	2.3115E+02	1.6267E+01	1.8638E+01	9.1097E+01	9.8247E+01
2.458E+01	1.8310E+02	2.1155E+02	1.4534E+01	1.6629E+01	8.6442E+01	9.2680E+01
2.477E+01	1.7833E+02	2.0586E+02	1.4040E+01	1.6056E+01	8.5060E+01	9.1032E+01
3.000E+01	9.3928E+01	1.0613E+02	6.0807E+00	6.8784E+00	5.7510E+01	5.8736E+01
4.000E+01	3.4932E+01	3.8159E+01	1.6998E+00	1.8887E+00	3.1428E+01	2.9644E+01
5.000E+01	1.5936E+01	1.6935E+01	6.2626E-01	6.8547E-01	1.9408E+01	1.7111E+01
6.000E+01	8.3187E+00	8.6368E+00	2.7614E-01	2.9838E-01	1.2981E+01	1.0802E+01
8.000E+01	2.9483E+00	2.9484E+00	7.5788E-02	8.0173E-02	6.7797E+00	5.1372E+00
1.000E+02	1.3130E+00	1.2757E+00	2.8048E-02	2.9176E-02	4.0498E+00	2.8299E+00
1.290E+02	5.2129E-01	4.9058E-01	9.0732E-03	9.2635E-03	2.2269E+00	1.4457E+00
1.300E+02	5.0647E-01	4.7616E-01	8.7599E-03	8.9385E-03	2.1852E+00	1.4151E+00
1.500E+02	3.0217E-01	2.7939E-01	4.6762E-03	4.7269E-03	1.5564E+00	9.6754E-01
2.000E+02	1.0828E-01	9.7259E-02	1.3686E-03	1.3618E-03	7.8343E-01	4.4656E-01
3.000E+02	2.6537E-02	2.3239E-02	2.5716E-04	2.5255E-04	2.9841E-01	1.5218E-01
4.000E+02	1.0239E-02	8.8837E-03	8.4184E-05	8.3272E-05	1.5276E-01	7.2488E-02
5.000E+02	5.0582E-03	4.4237E-03	3.6996E-05	3.7073E-05	9.2211E-02	4.1587E-02
6.000E+02	2.9200E-03	2.5806E-03	1.9290E-05	2.0243E-05	6.1761E-02	2.6835E-02

Z= 96

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
8.000E+02	1.3107E-03	1.1762E-03	7.8123E-06	8.6663E-06	3.3589E-02	1.3926E-02
1.000E+03	7.3003E-04	6.7482E-04	4.1290E-06	4.4787E-06	2.1368E-02	8.6407E-03
1.500E+03	2.8714E-04	2.7242E-04	1.6348E-06	1.7111E-06	9.8258E-03	3.9208E-03

Z= 96

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	5 F 5/2	5 F 7/2	6 S 1/2
1.000E+00	6.1552E+04	6.2311E+04	9.6664E+04	3.9501E+04	5.0182E+04	4.5987E+03
1.193E+00	4.8183E+04	5.0937E+04	7.7255E+04	2.7529E+04	3.4710E+04	3.5435E+03
1.203E+00	4.7639E+04	5.0435E+04	7.6421E+04	2.7058E+04	3.4104E+04	3.5015E+03
1.493E+00	3.4695E+04	3.7653E+04	5.5679E+04	1.6482E+04	2.0601E+04	2.5219E+03
1.500E+00	3.4437E+04	3.7383E+04	5.5251E+04	1.6287E+04	2.0352E+04	2.5028E+03
1.505E+00	3.4280E+04	3.7217E+04	5.4988E+04	1.6167E+04	2.0201E+04	2.4911E+03
1.666E+00	2.9324E+04	3.1910E+04	4.6650E+04	1.2558E+04	1.5633E+04	2.1260E+03
1.680E+00	2.8964E+04	3.1516E+04	4.6038E+04	1.2307E+04	1.5316E+04	2.0997E+03
2.000E+00	2.1977E+04	2.3701E+04	3.4037E+04	7.7939E+03	9.6395E+03	1.5940E+03
3.000E+00	1.1137E+04	1.1171E+04	1.5470E+04	2.4345E+03	2.9693E+03	8.2661E+02
4.000E+00	6.6552E+03	6.0951E+03	8.2377E+03	9.8336E+02	1.1875E+03	5.1212E+02
4.011E+00	6.6225E+03	6.0592E+03	8.1875E+03	9.7482E+02	1.1770E+03	5.0983E+02
4.043E+00	6.5259E+03	5.9533E+03	8.0389E+03	9.4985E+02	1.1464E+03	5.0302E+02
4.233E+00	5.9948E+03	5.3742E+03	7.2293E+03	8.1686E+02	9.8440E+02	4.6554E+02
4.266E+00	5.9065E+03	5.2786E+03	7.0959E+03	7.9558E+02	9.5849E+02	4.5930E+02
4.824E+00	4.6864E+03	3.9818E+03	5.2983E+03	5.2690E+02	6.3203E+02	3.7269E+02
4.862E+00	4.6156E+03	3.9082E+03	5.1969E+03	5.1278E+02	6.1492E+02	3.6763E+02
5.000E+00	4.3749E+03	3.6593E+03	4.8547E+03	4.6615E+02	5.5834E+02	3.5043E+02
5.942E+00	3.1224E+03	2.4088E+03	3.1499E+03	2.5532E+02	2.9911E+02	2.5989E+02
5.989E+00	3.0733E+03	2.3615E+03	3.0860E+03	2.4819E+02	2.9067E+02	2.5629E+02
6.000E+00	3.0622E+03	2.3509E+03	3.0717E+03	2.4666E+02	2.8878E+02	2.5548E+02
6.319E+00	2.7605E+03	2.0647E+03	2.6860E+03	2.0366E+02	2.3951E+02	2.3329E+02
6.370E+00	2.7165E+03	2.0236E+03	2.6307E+03	1.9791E+02	2.3267E+02	2.3004E+02
8.000E+00	1.6979E+03	1.1182E+03	1.4256E+03	8.5719E+01	9.9898E+01	1.5326E+02
1.000E+01	1.0503E+03	6.0629E+02	7.5789E+02	3.6629E+01	4.2304E+01	1.0198E+02
1.500E+01	4.1676E+02	1.8510E+02	2.2277E+02	7.2786E+00	8.2568E+00	4.7436E+01
1.897E+01	2.3659E+02	8.9360E+01	1.0505E+02	2.7492E+00	3.0831E+00	2.9982E+01
1.913E+01	2.3200E+02	8.7136E+01	1.0235E+02	2.6587E+00	2.9804E+00	2.9513E+01
2.000E+01	2.0774E+02	7.5607E+01	8.8394E+01	2.2025E+00	2.4633E+00	2.7007E+01
2.376E+01	1.3480E+02	4.3406E+01	4.9829E+01	1.0595E+00	1.1742E+00	1.9120E+01
2.395E+01	1.3209E+02	4.2291E+01	4.8507E+01	1.0239E+00	1.1342E+00	1.8813E+01
2.458E+01	1.2361E+02	3.8842E+01	4.4426E+01	9.1584E-01	1.0130E+00	1.7847E+01
2.477E+01	1.2111E+02	3.7839E+01	4.3241E+01	8.8498E-01	9.7847E-01	1.7560E+01
3.000E+01	7.3629E+01	2.0038E+01	2.2414E+01	3.8623E-01	4.2234E-01	1.1997E+01
4.000E+01	3.3961E+01	7.5064E+00	8.1169E+00	1.0903E-01	1.1709E-01	6.5520E+00
5.000E+01	1.8267E+01	3.4414E+00	3.6198E+00	4.0415E-02	4.2753E-02	4.0448E+00
6.000E+01	1.0878E+01	1.8027E+00	1.8424E+00	1.7894E-02	1.8686E-02	2.7045E+00
8.000E+01	4.7134E+00	6.4134E-01	6.3186E-01	4.9378E-03	5.0471E-03	1.4120E+00
1.000E+02	2.4336E+00	2.8653E-01	2.7424E-01	1.8337E-03	1.8430E-03	8.4317E-01
1.290E+02	1.1317E+00	1.1410E-01	1.0580E-01	5.9531E-04	5.8697E-04	4.6342E-01
1.300E+02	1.1049E+00	1.1087E-01	1.0270E-01	5.7479E-04	5.6643E-04	4.5475E-01
1.500E+02	7.1821E-01	6.6242E-02	6.0345E-02	3.0736E-04	2.9999E-04	3.2380E-01
2.000E+02	3.0219E-01	2.3799E-02	2.1057E-02	9.0222E-05	8.6631E-05	1.6276E-01
3.000E+02	9.1059E-02	5.8511E-03	5.0433E-03	1.7048E-05	1.6267E-05	6.1992E-02
4.000E+02	4.0088E-02	2.2606E-03	1.9400E-03	5.5640E-06	5.3951E-06	3.1732E-02
5.000E+02	2.1769E-02	1.1175E-03	9.6528E-04	2.4382E-06	2.4257E-06	1.9155E-02
6.000E+02	1.3485E-02	6.4494E-04	5.6379E-04	1.2821E-06	1.3186E-06	1.2829E-02
8.000E+02	6.6055E-03	2.8930E-04	2.5780E-04	5.1644E-07	5.5592E-07	6.9769E-03
1.000E+03	3.9371E-03	1.6165E-04	1.4760E-04	2.6269E-07	2.9988E-07	4.4387E-03
1.500E+03	1.6733E-03	6.3341E-05	6.0018E-05	9.0764E-08	1.1404E-07	2.0416E-03

ENERGY	6 P 1/2	6 P 3/2	6 D 3/2	6 D 5/2	7 S 1/2
1.000E+00	3.0261E+03	1.0603E+04	4.4111E+02	6.0699E+02	5.2909E+02
1.193E+00	2.4725E+03	8.1520E+03	3.5239E+02	4.7753E+02	3.9708E+02
1.203E+00	2.4499E+03	8.0541E+03	3.4861E+02	4.7211E+02	3.9189E+02
1.493E+00	1.8996E+03	5.7657E+03	2.5514E+02	3.3973E+02	2.7399E+02
1.500E+00	1.8883E+03	5.7208E+03	2.5321E+02	3.3704E+02	2.7173E+02
1.505E+00	1.8814E+03	5.6934E+03	2.5203E+02	3.3539E+02	2.7035E+02
1.666E+00	1.6612E+03	4.8378E+03	2.1453E+02	2.8262E+02	2.2755E+02
1.680E+00	1.6449E+03	4.7760E+03	2.1178E+02	2.7883E+02	2.2449E+02
2.000E+00	1.3196E+03	3.5886E+03	1.6221E+02	2.0516E+02	1.6673E+02
3.000E+00	7.6254E+02	1.7893E+03	7.5946E+01	9.2729E+01	8.1963E+01
4.000E+00	4.9967E+02	1.0612E+03	4.1382E+01	4.9328E+01	5.0894E+01
4.011E+00	4.9764E+02	1.0560E+03	4.1139E+01	4.9027E+01	5.0667E+01
4.043E+00	4.9163E+02	1.0404E+03	4.0419E+01	4.8137E+01	4.9994E+01
4.233E+00	4.5823E+02	9.5484E+02	3.6485E+01	4.3289E+01	4.6290E+01
4.266E+00	4.5262E+02	9.4062E+02	3.5836E+01	4.2491E+01	4.5673E+01
4.824E+00	3.7329E+02	7.4469E+02	2.7036E+01	3.1731E+01	3.7104E+01
4.862E+00	3.6857E+02	7.3334E+02	2.6536E+01	3.1124E+01	3.6596E+01
5.000E+00	3.5242E+02	6.9480E+02	2.4848E+01	2.9077E+01	3.4892E+01
5.942E+00	2.6539E+02	4.9473E+02	1.6366E+01	1.8877E+01	2.5924E+01
5.989E+00	2.6186E+02	4.8690E+02	1.6045E+01	1.8495E+01	2.5567E+01
6.000E+00	2.6106E+02	4.8514E+02	1.5973E+01	1.8409E+01	2.5487E+01
6.319E+00	2.3912E+02	4.3708E+02	1.4032E+01	1.6101E+01	2.3286E+01
6.370E+00	2.3589E+02	4.3008E+02	1.3753E+01	1.5770E+01	2.2964E+01
8.000E+00	1.5805E+02	2.6830E+02	7.6082E+00	8.5555E+00	1.5338E+01
1.000E+01	1.0455E+02	1.6577E+02	4.1302E+00	4.5536E+00	1.0230E+01
1.500E+01	4.6811E+01	6.6086E+01	1.2638E+00	1.3414E+00	4.7792E+00
1.897E+01	2.8501E+01	3.7513E+01	6.1080E-01	6.3328E-01	3.0272E+00
1.913E+01	2.8646E+01	3.6784E+01	5.9561E-01	6.1703E-01	2.9800E+00
2.000E+01	2.6009E+01	3.2937E+01	5.1690E-01	5.3303E-01	2.7280E+00
2.376E+01	1.7801E+01	2.1373E+01	2.9697E-01	3.0071E-01	1.9338E+00
2.395E+01	1.7486E+01	2.0943E+01	2.8935E-01	2.9273E-01	1.9029E+00
2.458E+01	1.6495E+01	1.9598E+01	2.6578E-01	2.6814E-01	1.8055E+00
2.477E+01	1.6201E+01	1.9202E+01	2.5893E-01	2.6100E-01	1.7765E+00
3.000E+01	1.0454E+01	1.1675E+01	1.3721E-01	1.3539E-01	1.2003E+00
4.000E+01	5.2776E+00	5.3858E+00	5.1445E-02	4.9086E-02	6.5546E-01
5.000E+01	3.0473E+00	2.8972E+00	2.3597E-02	2.1906E-02	4.0461E-01
6.000E+01	1.9241E+00	1.7254E+00	1.2366E-02	1.1217E-02	2.7052E-01
8.000E+01	9.1540E-01	7.4770E-01	4.4064E-03	3.8507E-03	1.4123E-01
1.000E+02	5.0846E-01	3.8602E-01	1.9692E-03	1.6722E-03	8.4332E-02
1.290E+02	2.5771E-01	1.7994E-01	7.8444E-04	6.4539E-04	4.6350E-02
1.300E+02	2.5225E-01	1.7567E-01	7.6224E-04	6.2648E-04	4.5483E-02
1.500E+02	1.7186E-01	1.1421E-01	4.5547E-04	3.6826E-04	3.2386E-02
2.000E+02	7.9334E-02	4.8066E-02	1.6368E-04	1.2860E-04	1.6280E-02
3.000E+02	2.7042E-02	1.4489E-02	4.0245E-05	3.0845E-05	6.2019E-03
4.000E+02	1.2882E-02	6.3803E-03	1.5552E-05	1.1891E-05	3.1759E-03
5.000E+02	7.3901E-03	3.4651E-03	7.6935E-06	5.9325E-06	1.9181E-03
6.000E+02	4.7688E-03	2.1466E-03	4.4433E-06	3.4718E-06	1.2857E-03
8.000E+02	2.4749E-03	1.0521E-03	1.9976E-06	1.6008E-06	7.0082E-04
1.000E+03	1.5356E-03	6.2725E-04	1.1200E-06	9.2417E-07	4.4732E-04
1.500E+03	6.9698E-04	2.6704E-04	4.4636E-07	3.8996E-07	2.0856E-04

Z= 97

29 STATES, 50 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	132.5060	.98711
2 S 1/2	2.00	25.3479	.89552
2 P 1/2	2.00	24.5079	.84460
2 P 3/2	4.00	19.4596	.80383
3 S 1/2	2.00	6.5370	.72065
3 P 1/2	2.00	6.1510	.65600
3 P 3/2	4.00	4.9680	.59918
3 D 3/2	4.00	4.3664	.41917
3 D 5/2	6.00	4.1334	.40784
4 S 1/2	2.00	1.7330	.48784
4 P 1/2	2.00	1.5549	.42491
4 P 3/2	4.00	1.2365	.36855
4 D 3/2	4.00	.9561	.21959
4 D 5/2	6.00	.8985	.20858
4 F 5/2	6.00	.5277	.06503
4 F 7/2	8.00	.5118	.06349
5 S 1/2	2.00	.4021	.26442
5 P 1/2	2.00	.3296	.21540
5 P 3/2	4.00	.2487	.17730
5 D 3/2	4.00	.1424	.08359
5 D 5/2	6.00	.1302	.07736
5 F 5/2	3.43	.0145	.01027
5 F 7/2	4.57	.0127	.00965
6 S 1/2	2.00	.0631	.09660
6 P 1/2	2.00	.0411	.06662
6 P 3/2	4.00	.0275	.04757
6 D 3/2	.40	.0046	.00896
6 D 5/2	.60	.0038	.00721
7 S 1/2	2.00	.0063	.01527

Z= 97 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY (KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	3.2115E+06	.0E+00	.0E+00	.0E+00	3.2115E+06
1.2353E+00	2.2119E+06	.0E+00	.0E+00	.0E+00	2.2119E+06
1.2452E+00	2.3184E+06	.0E+00	.0E+00	.0E+00	2.3184E+06
1.5000E+00	1.6157E+06	.0E+00	.0E+00	.0E+00	1.6157E+06
1.5534E+00	1.5052E+06	.0E+00	.0E+00	.0E+00	1.5052E+06
1.5658E+00	1.5000E+06	.0E+00	.0E+00	.0E+00	1.5000E+06
1.7312E+00	1.2201E+06	.0E+00	.0E+00	.0E+00	1.2201E+06
1.7451E+00	1.2220E+06	.0E+00	.0E+00	.0E+00	1.2220E+06
2.0000E+00	9.1742E+05	.0E+00	.0E+00	.0E+00	9.1742E+05
3.0000E+00	3.7621E+05	.0E+00	.0E+00	.0E+00	3.7621E+05
4.0000E+00	1.9426E+05	.0E+00	.0E+00	.0E+00	1.9426E+05
4.1293E+00	1.8036E+05	.0E+00	.0E+00	.0E+00	1.8036E+05
4.1623E+00	3.9900E+05	.0E+00	.0E+00	2.2198E+05	1.7702E+05
4.3621E+00	3.6443E+05	.0E+00	.0E+00	2.0584E+05	1.5860E+05
4.3970E+00	4.9777E+05	.0E+00	.0E+00	3.4212E+05	1.5565E+05
4.9631E+00	3.7432E+05	.0E+00	.0E+00	2.5742E+05	1.1690E+05
5.0000E+00	4.2907E+05	.0E+00	.0E+00	3.1421E+05	1.1486E+05
5.0028E+00	4.2826E+05	.0E+00	.0E+00	3.1355E+05	1.1471E+05
6.0000E+00	2.7068E+05	.0E+00	.0E+00	1.9647E+05	7.4212E+04
6.1448E+00	2.5423E+05	.0E+00	.0E+00	1.8417E+05	7.0057E+04
6.1940E+00	2.6438E+05	.0E+00	.0E+00	1.9567E+05	6.8719E+04
6.5305E+00	2.3171E+05	.0E+00	.0E+00	1.7126E+05	6.0454E+04
6.5828E+00	2.3680E+05	.0E+00	.0E+00	1.7750E+05	5.9295E+04
8.0000E+00	1.4649E+05	.0E+00	.0E+00	1.0967E+05	3.6821E+04
1.0000E+01	8.3844E+04	.0E+00	.0E+00	6.2654E+04	2.1190E+04
1.5000E+01	2.9948E+04	.0E+00	.0E+00	2.2307E+04	7.6411E+03

Z= 97 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.9440E+01	1.5369E+04	.0E+00	.0E+00	1.1426E+04	3.9430E+03
1.9596E+01	3.5229E+04	.0E+00	2.0173E+04	1.1193E+04	3.8632E+03
2.0000E+01	3.3188E+04	.0E+00	1.8905E+04	1.0617E+04	3.6666E+03
2.4483E+01	1.9308E+04	.0E+00	1.0860E+04	6.2707E+03	2.1778E+03
2.4679E+01	2.7096E+04	.0E+00	1.8822E+04	6.1415E+03	2.1334E+03
2.5323E+01	2.5356E+04	.0E+00	1.7617E+04	5.7423E+03	1.9961E+03
2.5525E+01	2.8703E+04	.0E+00	2.1124E+04	5.6238E+03	1.9553E+03
3.0000E+01	1.9053E+04	.0E+00	1.4084E+04	3.6828E+03	1.2858E+03
4.0000E+01	9.1177E+03	.0E+00	6.7867E+03	1.7247E+03	6.0631E+02
5.0000E+01	5.0983E+03	.0E+00	3.8075E+03	9.5383E+02	3.3692E+02
6.0000E+01	3.1551E+03	.0E+00	2.3605E+03	5.8663E+02	2.0796E+02
8.0000E+01	1.4699E+03	.0E+00	1.1015E+03	2.7155E+02	9.6760E+01
1.0000E+02	8.1000E+02	.0E+00	6.0748E+02	1.4917E+02	5.3352E+01
1.3237E+02	3.8259E+02	.0E+00	2.8708E+02	7.0272E+01	2.5236E+01
1.3343E+02	1.5015E+03	1.1270E+03	2.8103E+02	6.8786E+01	2.4705E+01
1.5000E+02	1.1231E+03	8.4905E+02	2.0566E+02	5.0292E+01	1.8094E+01
2.0000E+02	5.4287E+02	4.1505E+02	9.5946E+01	2.3422E+01	8.4566E+00
3.0000E+02	1.9699E+02	1.5232E+02	3.3544E+01	8.1700E+00	2.9607E+00
4.0000E+02	9.8311E+01	7.6526E+01	1.6364E+01	3.9774E+00	1.4441E+00
5.0000E+02	5.8553E+01	4.5806E+01	9.5794E+00	2.3240E+00	8.4459E-01
6.0000E+02	3.8930E+01	3.0572E+01	6.2832E+00	1.5217E+00	5.5358E-01
8.0000E+02	2.1041E+01	1.6610E+01	3.3327E+00	8.0497E-01	2.9301E-01
1.0000E+03	1.3363E+01	1.0584E+01	2.0918E+00	5.0427E-01	1.8360E-01
1.5000E+03	6.1554E+00	4.8917E+00	9.5157E-01	2.2879E-01	8.3305E-02

Z= 97

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.235E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.245E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.553E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.566E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.731E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.745E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.129E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.162E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.362E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.397E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.963E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
5.003E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
6.145E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
6.194E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.5270E+04
6.530E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.4459E+04
6.583E+00	.0E+00	.0E+00	.0E+00	.0E+00	9.6347E+03	1.4326E+04
8.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.4576E+03	1.1434E+04
1.000E+01	.0E+00	.0E+00	.0E+00	.0E+00	5.3457E+03	8.2386E+03
1.500E+01	.0E+00	.0E+00	.0E+00	.0E+00	2.7742E+03	4.0295E+03
1.944E+01	.0E+00	.0E+00	.0E+00	.0E+00	1.7482E+03	2.4023E+03
1.960E+01	.0E+00	.0E+00	.0E+00	2.0173E+04	1.7227E+03	2.3630E+03
2.000E+01	.0E+00	.0E+00	.0E+00	1.8905E+04	1.6588E+03	2.2651E+03
2.448E+01	.0E+00	.0E+00	.0E+00	1.0860E+04	1.1340E+03	1.4665E+03
2.468E+01	.0E+00	.0E+00	8.1936E+03	1.0628E+04	1.1167E+03	1.4411E+03
2.532E+01	.0E+00	.0E+00	7.7082E+03	9.9092E+03	1.0626E+03	1.3615E+03
2.553E+01	.0E+00	3.8201E+03	7.6093E+03	9.6950E+03	1.0464E+03	1.3377E+03

Z= 97

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
3.000E+01	.0E+00	2.8829E+03	5.0872E+03	6.1139E+03	7.6251E+02	9.2799E+02
4.000E+01	.0E+00	1.7015E+03	2.4528E+03	2.6324E+03	4.2495E+02	4.7024E+02
5.000E+01	.0E+00	1.0929E+03	1.3643E+03	1.3503E+03	2.6530E+02	2.7159E+02
6.000E+01	.0E+00	7.4856E+02	8.3592E+02	7.7599E+02	1.7872E+02	1.7130E+02
8.000E+01	.0E+00	4.0203E+02	3.7985E+02	3.1966E+02	9.4125E+01	8.1281E+01
1.000E+02	.0E+00	2.4346E+02	2.0448E+02	1.5954E+02	5.6486E+01	4.5035E+01
1.324E+02	.0E+00	1.2733E+02	9.3406E+01	6.6344E+01	2.9339E+01	2.1232E+01
1.334E+02	1.1270E+03	1.2497E+02	9.1347E+01	6.4709E+01	2.8793E+01	2.0781E+01
1.500E+02	8.4905E+02	9.4907E+01	6.5866E+01	4.4884E+01	2.1832E+01	1.5157E+01
2.000E+02	4.1505E+02	4.7961E+01	2.9605E+01	1.8380E+01	1.1011E+01	6.9802E+00
3.000E+02	1.5232E+02	1.8348E+01	9.8101E+00	5.3856E+00	4.2104E+00	2.3738E+00
4.000E+02	7.6526E+01	9.4170E+00	4.6077E+00	2.3388E+00	2.1609E+00	1.1298E+00
5.000E+02	4.5806E+01	5.6969E+00	2.6223E+00	1.2602E+00	1.3069E+00	6.4790E-01
6.000E+02	3.0572E+01	3.8225E+00	1.6837E+00	7.7694E-01	8.7655E-01	4.1802E-01
8.000E+02	1.6610E+01	2.0845E+00	8.6941E-01	3.7882E-01	4.7757E-01	2.1695E-01
1.000E+03	1.0584E+01	1.3285E+00	5.3810E-01	2.2523E-01	3.0413E-01	1.3462E-01
1.500E+03	4.8917E+00	6.1225E-01	2.4375E-01	9.5579E-02	1.3998E-01	6.1188E-02

Z= 97

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.235E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.245E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.3964E+05
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.1246E+05
1.553E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.0773E+05
1.566E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.9000E+04	1.0667E+05
1.731E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.7658E+04	9.4229E+04
1.745E+00	.0E+00	.0E+00	.0E+00	2.2038E+04	1.7629E+04	9.3305E+04
2.000E+00	.0E+00	.0E+00	.0E+00	1.8477E+04	1.6802E+04	7.8248E+04
3.000E+00	.0E+00	.0E+00	.0E+00	1.1375E+04	1.2910E+04	4.2918E+04
4.000E+00	.0E+00	.0E+00	.0E+00	7.6723E+03	9.5063E+03	2.6467E+04
4.129E+00	.0E+00	.0E+00	.0E+00	7.3309E+03	9.1434E+03	2.5021E+04
4.162E+00	.0E+00	.0E+00	2.2198E+05	7.2467E+03	9.0538E+03	2.4670E+04
4.362E+00	.0E+00	.0E+00	2.0584E+05	6.7637E+03	8.5402E+03	2.2698E+04
4.397E+00	.0E+00	1.4058E+05	2.0154E+05	6.6839E+03	8.4550E+03	2.2377E+04
4.963E+00	.0E+00	1.0938E+05	1.4804E+05	5.5722E+03	7.2115E+03	1.7944E+04
5.000E+00	6.1750E+04	1.0738E+05	1.4508E+05	5.5101E+03	7.1381E+03	1.7698E+04
5.003E+00	6.1461E+04	1.0723E+05	1.4486E+05	5.5055E+03	7.1326E+03	1.7680E+04
6.000E+00	4.5714E+04	6.5134E+04	8.5623E+04	4.1464E+03	5.4953E+03	1.2521E+04
6.145E+00	4.3808E+04	6.0790E+04	7.9575E+04	3.9919E+03	5.3010E+03	1.1951E+04
6.194E+00	4.3169E+04	5.9399E+04	7.7826E+04	3.9414E+03	5.2370E+03	1.1766E+04
6.530E+00	3.9007E+04	5.0877E+04	6.6917E+04	3.6211E+03	4.8264E+03	1.0602E+04
6.583E+00	3.8401E+04	4.9779E+04	6.5363E+04	3.5747E+03	4.7668E+03	1.0437E+04
8.000E+00	2.6363E+04	2.8136E+04	3.6274E+04	2.5885E+03	3.4773E+03	7.0283E+03
1.000E+01	1.6645E+04	1.4336E+04	1.8089E+04	1.7637E+03	2.3590E+03	4.3773E+03
1.500E+01	6.7367E+03	3.9598E+03	4.8063E+03	8.4644E+02	1.0895E+03	1.7503E+03
1.944E+01	3.6153E+03	1.6765E+03	1.9840E+03	5.1719E+02	6.3782E+02	9.3851E+02
1.960E+01	3.5451E+03	1.6322E+03	1.9299E+03	5.0927E+02	6.2709E+02	9.2027E+02
2.000E+01	3.3713E+03	1.5238E+03	1.7976E+03	4.8951E+02	6.0040E+02	8.7511E+02
2.448E+01	2.0236E+03	7.6428E+02	8.8233E+02	3.2887E+02	3.8635E+02	5.2663E+02
2.468E+01	1.9826E+03	7.4356E+02	8.5763E+02	3.2368E+02	3.7955E+02	5.1602E+02
2.532E+01	1.8553E+03	6.8030E+02	7.8249E+02	3.0747E+02	3.5839E+02	4.8313E+02
2.553E+01	1.8174E+03	6.6177E+02	7.6054E+02	3.0260E+02	3.5206E+02	4.7334E+02
3.000E+01	1.1900E+03	3.7687E+02	4.2539E+02	2.1826E+02	2.4390E+02	3.1100E+02
4.000E+01	5.4549E+02	1.3580E+02	1.4818E+02	1.1999E+02	1.2376E+02	1.4361E+02
5.000E+01	2.9178E+02	6.0719E+01	6.4438E+01	7.4377E+01	7.1680E+01	7.7289E+01
6.000E+01	1.7297E+02	3.1251E+01	3.2397E+01	4.9872E+01	4.5359E+01	4.6044E+01
8.000E+01	7.4421E+01	1.0872E+01	1.0850E+01	2.6138E+01	2.1646E+01	1.9962E+01
1.000E+02	3.8226E+01	4.7860E+00	4.6379E+00	1.5649E+01	1.2049E+01	1.0310E+01
1.324E+02	1.6391E+01	1.7101E+00	1.5989E+00	8.1133E+00	5.7120E+00	4.4479E+00

Z= 97

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.334E+02	1.5999E+01	1.6610E+00	1.5515E+00	7.9619E+00	5.5914E+00	4.3424E+00
1.500E+02	1.1220E+01	1.0838E+00	9.9831E-01	6.0344E+00	4.0869E+00	3.0523E+00
2.000E+02	4.7012E+00	3.8530E-01	3.4440E-01	3.0415E+00	1.8910E+00	1.2852E+00
3.000E+02	1.4105E+00	9.3702E-02	8.1498E-02	1.1628E+00	6.4644E-01	3.8768E-01
4.000E+02	6.1965E-01	3.6002E-02	3.1171E-02	5.9672E-01	3.0849E-01	1.7080E-01
5.000E+02	3.3601E-01	1.7748E-02	1.5459E-02	3.6088E-01	1.7721E-01	9.2602E-02
6.000E+02	2.0794E-01	1.0222E-02	9.0007E-03	2.4205E-01	1.1461E-01	5.7359E-02
8.000E+02	1.0177E-01	4.5744E-03	4.1095E-03	1.3184E-01	5.9558E-02	2.8080E-02
1.000E+03	6.0612E-02	2.5518E-03	2.3469E-03	8.3934E-02	3.6976E-02	1.6727E-02
1.500E+03	2.5667E-02	9.9737E-04	9.5307E-04	3.8612E-02	1.6804E-02	7.1007E-03

Z= 97

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	2.0102E+05	3.4982E+05	9.8781E+05	1.2845E+06	1.8032E+04	1.3326E+04
1.235E+00	1.8947E+05	3.0781E+05	6.2577E+05	8.0411E+05	1.3815E+04	1.1005E+04
1.245E+00	1.8863E+05	3.0586E+05	6.1419E+05	7.8883E+05	1.3672E+04	1.0924E+04
1.500E+00	1.6245E+05	2.5249E+05	3.8703E+05	4.9316E+05	1.0636E+04	9.1444E+03
1.553E+00	1.5644E+05	2.4230E+05	3.5324E+05	4.4934E+05	1.0134E+04	8.8307E+03
1.566E+00	1.5510E+05	2.3997E+05	3.4586E+05	4.3979E+05	1.0022E+04	8.7601E+03
1.731E+00	1.3837E+05	2.0969E+05	2.6348E+05	3.3389E+05	8.6951E+03	7.8984E+03
1.745E+00	1.3700E+05	2.0726E+05	2.5776E+05	3.2656E+05	8.5960E+03	7.8320E+03
2.000E+00	1.1333E+05	1.6838E+05	1.7541E+05	2.2109E+05	7.0520E+03	6.7505E+03
3.000E+00	5.6736E+04	8.0117E+04	5.0902E+04	6.3324E+04	3.8064E+03	4.1244E+03
4.000E+00	3.1388E+04	4.3105E+04	1.9671E+04	2.4243E+04	2.4077E+03	2.7804E+03
4.129E+00	2.9278E+04	4.0078E+04	1.7645E+04	2.1725E+04	2.2865E+03	2.6558E+03
4.162E+00	2.8768E+04	3.9347E+04	1.7169E+04	2.1134E+04	2.2570E+03	2.6252E+03
4.362E+00	2.5916E+04	3.5271E+04	1.4610E+04	1.7955E+04	2.0908E+03	2.4512E+03
4.397E+00	2.5454E+04	3.4615E+04	1.4212E+04	1.7461E+04	2.0637E+03	2.4225E+03
4.963E+00	1.9246E+04	2.5895E+04	9.2955E+03	1.1374E+04	1.6898E+03	2.0187E+03
5.000E+00	1.8913E+04	2.5429E+04	9.0544E+03	1.1076E+04	1.6691E+03	1.9958E+03
5.003E+00	1.8889E+04	2.5394E+04	9.0365E+03	1.1054E+04	1.6675E+03	1.9941E+03
6.000E+00	1.2150E+04	1.6065E+04	4.6935E+03	5.7049E+03	1.2280E+03	1.4965E+03
6.145E+00	1.1447E+04	1.5100E+04	4.3005E+03	5.2228E+03	1.1790E+03	1.4395E+03
6.194E+00	1.1220E+04	1.4789E+04	4.1762E+03	5.0705E+03	1.1631E+03	1.4209E+03
6.530E+00	9.8111E+03	1.2871E+04	3.4354E+03	4.1631E+03	1.0622E+03	1.3022E+03
6.583E+00	9.6127E+03	1.2603E+04	3.3352E+03	4.0405E+03	1.0477E+03	1.2850E+03
8.000E+00	5.7609E+03	7.4213E+03	1.5995E+03	1.9237E+03	7.4560E+02	9.2065E+02
1.000E+01	3.1119E+03	3.9269E+03	6.7233E+02	8.0151E+02	5.0002E+02	6.1539E+02
1.500E+01	9.4230E+02	1.1438E+03	1.3048E+02	1.5283E+02	2.3536E+02	2.7994E+02
1.944E+01	4.1916E+02	4.9547E+02	4.4023E+01	5.0916E+01	1.4264E+02	1.6308E+02
1.960E+01	4.0863E+02	4.8262E+02	4.2558E+01	4.9202E+01	1.4042E+02	1.6032E+02
2.000E+01	3.8281E+02	4.5115E+02	3.9022E+01	4.5067E+01	1.3490E+02	1.5345E+02
2.448E+01	1.9850E+02	2.2888E+02	1.6389E+01	1.8725E+01	9.0204E+01	9.8541E+01
2.468E+01	1.9335E+02	2.2275E+02	1.5833E+01	1.8082E+01	8.8766E+01	9.6803E+01
2.532E+01	1.7761E+02	2.0403E+02	1.4164E+01	1.6152E+01	8.4276E+01	9.1386E+01
2.553E+01	1.7299E+02	1.9855E+02	1.3682E+01	1.5596E+01	8.2928E+01	8.9765E+01
3.000E+01	1.0082E+02	1.1362E+02	6.7619E+00	7.6359E+00	5.9640E+01	6.2141E+01
4.000E+01	3.7641E+01	4.0993E+01	1.8969E+00	2.1037E+00	3.2661E+01	3.1521E+01
5.000E+01	1.7221E+01	1.8238E+01	7.0052E-01	7.6521E-01	2.0203E+01	1.8265E+01
6.000E+01	9.0085E+00	9.3192E+00	3.0944E-01	3.3364E-01	1.3530E+01	1.1565E+01
8.000E+01	3.2031E+00	3.1903E+00	8.5165E-02	8.9879E-02	7.0818E+00	5.5256E+00
1.000E+02	1.4298E+00	1.3831E+00	3.1585E-02	3.2773E-02	4.2374E+00	3.0790E+00
1.324E+02	5.1833E-01	4.8401E-01	9.1420E-03	9.2911E-03	2.1964E+00	1.4617E+00
1.334E+02	5.0363E-01	4.6982E-01	8.8268E-03	8.9662E-03	2.1554E+00	1.4309E+00
1.500E+02	3.3029E-01	3.0392E-01	5.2855E-03	5.3276E-03	1.6336E+00	1.0502E+00
2.000E+02	1.1863E-01	1.0600E-01	1.5503E-03	1.5377E-03	8.2434E-01	4.8652E-01
3.000E+02	2.9159E-02	2.5378E-02	2.9239E-04	2.8477E-04	3.1508E-01	1.6656E-01
4.000E+02	1.1266E-02	9.7136E-03	9.5871E-05	9.3772E-05	1.6167E-01	7.9551E-02
5.000E+02	5.5737E-03	4.8375E-03	4.2025E-05	4.2118E-05	9.7760E-02	4.5720E-02
6.000E+02	3.2212E-03	2.8206E-03	2.1940E-05	2.3055E-05	6.5557E-02	2.9537E-02

Z= 97

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
8.000E+02	1.4462E-03	1.2866E-03	8.9668E-06	9.6720E-06	3.5705E-02	1.5353E-02
1.000E+03	8.0664E-04	7.3871E-04	4.6145E-06	5.1234E-06	2.2730E-02	9.5351E-03
1.500E+03	3.1721E-04	2.9782E-04	1.9586E-06	1.9053E-06	1.0455E-02	4.3320E-03

Z= 97

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	5 F 5/2	5 F 7/2	6 S 1/2
1.000E+00	6.3320E+04	6.4000E+04	9.9684E+04	4.8416E+04	6.1529E+04	4.6570E+03
1.235E+00	4.7262E+04	5.0336E+04	7.6262E+04	3.1515E+04	3.9680E+04	3.4133E+03
1.245E+00	4.6727E+04	4.9835E+04	7.5429E+04	3.0973E+04	3.8984E+04	3.3728E+03
1.500E+00	3.5553E+04	3.8739E+04	5.7388E+04	2.0228E+04	2.5272E+04	2.5439E+03
1.553E+00	3.3724E+04	3.6813E+04	5.4327E+04	1.8593E+04	2.3198E+04	2.4107E+03
1.566E+00	3.3318E+04	3.6381E+04	5.3645E+04	1.8236E+04	2.2746E+04	2.3813E+03
1.731E+00	2.8551E+04	3.1218E+04	4.5548E+04	1.4204E+04	1.7650E+04	2.0376E+03
1.745E+00	2.8199E+04	3.0829E+04	4.4944E+04	1.3919E+04	1.7291E+04	2.0124E+03
2.000E+00	2.2728E+04	2.4683E+04	3.5497E+04	9.7525E+03	1.2055E+04	1.6238E+03
3.000E+00	1.1542E+04	1.1708E+04	1.6220E+04	3.0753E+03	3.7475E+03	8.4388E+02
4.000E+00	6.9077E+03	6.4174E+03	8.6720E+03	1.2504E+03	1.5083E+03	5.2355E+02
4.129E+00	6.5153E+03	5.9832E+03	8.0633E+03	1.1276E+03	1.3585E+03	4.9630E+02
4.162E+00	6.4200E+03	5.8784E+03	7.9167E+03	1.0986E+03	1.3232E+03	4.8969E+02
4.362E+00	5.8852E+03	5.2936E+03	7.1008E+03	9.4163E+02	1.1323E+03	4.5245E+02
4.397E+00	5.7984E+03	5.1993E+03	6.9695E+03	9.1722E+02	1.1025E+03	4.4639E+02
4.963E+00	4.6127E+03	3.9354E+03	5.2212E+03	6.1089E+02	7.3104E+02	3.6329E+02
5.000E+00	4.5478E+03	3.8676E+03	5.1280E+03	5.9566E+02	7.1263E+02	3.5871E+02
5.003E+00	4.5429E+03	3.8625E+03	5.1210E+03	5.9452E+02	7.1125E+02	3.5836E+02
6.000E+00	3.1876E+03	2.4926E+03	3.2540E+03	3.1641E+02	3.7007E+02	2.6183E+02
6.145E+00	3.0399E+03	2.3495E+03	3.0609E+03	2.9077E+02	3.3977E+02	2.5116E+02
6.194E+00	2.9919E+03	2.3033E+03	2.9986E+03	2.8264E+02	3.3017E+02	2.4768E+02
6.530E+00	2.6905E+03	2.0169E+03	2.6139E+03	2.3399E+02	2.7272E+02	2.2575E+02
6.583E+00	2.6476E+03	1.9766E+03	2.5599E+03	2.2738E+02	2.6493E+02	2.2260E+02
8.000E+00	1.7717E+03	1.1915E+03	1.5170E+03	1.1062E+02	1.2874E+02	1.6306E+02
1.000E+01	1.0980E+03	6.4841E+02	8.0921E+02	4.7470E+01	5.4741E+01	1.0490E+02
1.500E+01	4.3733E+02	1.9926E+02	2.3928E+02	9.5004E+00	1.0758E+01	4.8944E+01
1.944E+01	2.3442E+02	8.9436E+01	1.0460E+02	3.2535E+00	3.6373E+00	2.9538E+01
1.960E+01	2.2987E+02	8.7212E+01	1.0191E+02	3.1466E+00	3.5162E+00	2.9075E+01
2.000E+01	2.1859E+02	8.1756E+01	9.5333E+01	2.8881E+00	3.2240E+00	2.7924E+01
2.448E+01	1.3160E+02	4.2663E+01	4.8672E+01	1.2246E+00	1.3521E+00	1.8624E+01
2.468E+01	1.2895E+02	4.1567E+01	4.7380E+01	1.1835E+00	1.3061E+00	1.8326E+01
2.532E+01	1.2074E+02	3.8212E+01	4.3432E+01	1.0599E+00	1.1680E+00	1.7394E+01
2.553E+01	1.1830E+02	3.7226E+01	4.2274E+01	1.0242E+00	1.1282E+00	1.7114E+01
3.000E+01	7.7779E+01	2.1798E+01	2.4304E+01	5.0953E-01	5.5595E-01	1.2289E+01
4.000E+01	3.5976E+01	8.1989E+00	8.8333E+00	1.4440E-01	1.5471E-01	6.8076E+00
5.000E+01	1.9392E+01	3.7694E+00	3.9496E+00	5.3668E-02	5.6635E-02	4.2094E+00
6.000E+01	1.1567E+01	1.9789E+00	2.0255E+00	2.3811E-02	2.4798E-02	2.8183E+00
8.000E+01	5.0254E+00	7.0649E-01	6.9290E-01	6.5905E-03	6.7178E-03	1.4745E+00
1.000E+02	2.5996E+00	3.1639E-01	3.0135E-01	2.4531E-03	2.4576E-03	8.8200E-01
1.324E+02	1.1210E+00	1.1510E-01	1.0583E-01	7.1276E-04	6.9945E-04	4.5695E-01
1.334E+02	1.0945E+00	1.1184E-01	1.0273E-01	6.8831E-04	6.7505E-04	4.4842E-01
1.500E+02	7.6976E-01	7.3439E-02	6.6539E-02	4.1278E-04	4.0162E-04	3.3979E-01
2.000E+02	3.2452E-01	2.6448E-02	2.3266E-02	1.2147E-04	1.1619E-04	1.7120E-01
3.000E+02	9.8009E-02	6.5212E-03	5.5832E-03	2.3008E-05	2.1872E-05	6.5433E-02
4.000E+02	4.3195E-02	2.5233E-03	2.1496E-03	7.5214E-06	7.2539E-06	3.3574E-02
5.000E+02	2.3468E-02	1.2488E-03	1.0705E-03	3.3005E-06	3.2675E-06	2.0301E-02
6.000E+02	1.4539E-02	7.2159E-04	6.2522E-04	1.7379E-06	1.7728E-06	1.3613E-02
8.000E+02	7.1208E-03	3.2392E-04	2.8586E-04	7.0122E-07	7.4726E-07	7.4140E-03
1.000E+03	4.2426E-03	1.8125E-04	1.6360E-04	3.5688E-07	4.0282E-07	4.7200E-03
1.500E+03	1.8016E-03	7.1101E-05	6.6469E-05	1.2342E-07	1.5292E-07	2.1714E-03

ENERGY	6 P 1/2	6 P 3/2	6 D 3/2	6 D 5/2	7 S 1/2
1.000E+00	3.0198E+03	1.0836E+04	4.3909E+02	6.0035E+02	5.2835E+02
1.235E+00	2.3741E+03	7.9134E+03	3.3577E+02	4.5044E+02	3.7520E+02
1.245E+00	2.3524E+03	7.8182E+03	3.3214E+02	4.4528E+02	3.7030E+02
1.500E+00	1.8924E+03	5.8604E+03	2.5375E+02	3.3519E+02	2.7218E+02
1.553E+00	1.8150E+03	5.5453E+03	2.4047E+02	3.1600E+02	2.5672E+02
1.566E+00	1.7977E+03	5.4756E+03	2.3751E+02	3.1192E+02	2.5330E+02
1.731E+00	1.5913E+03	4.6617E+03	2.0240E+02	2.6390E+02	2.1377E+02
1.745E+00	1.5758E+03	4.6020E+03	1.9978E+02	2.6034E+02	2.1089E+02
2.000E+00	1.3287E+03	3.6811E+03	1.6343E+02	2.0483E+02	1.6726E+02
3.000E+00	7.7297E+02	1.8382E+03	7.6961E+01	9.3034E+01	8.2212E+01
4.000E+00	5.0897E+02	1.0916E+03	4.2121E+01	4.9684E+01	5.1118E+01
4.129E+00	4.8510E+02	1.0289E+03	3.9271E+01	4.6196E+01	4.8471E+01
4.162E+00	4.7927E+02	1.0137E+03	3.8583E+01	4.5356E+01	4.7828E+01
4.362E+00	4.4615E+02	9.2838E+02	3.4743E+01	4.0681E+01	4.4211E+01
4.397E+00	4.4071E+02	9.1452E+02	3.4124E+01	3.9929E+01	4.3622E+01
4.963E+00	3.6469E+02	7.2595E+02	2.5832E+01	2.9918E+01	3.5542E+01
5.000E+00	3.6042E+02	7.1564E+02	2.5387E+01	2.9384E+01	3.5096E+01
5.003E+00	3.6010E+02	7.1487E+02	2.5353E+01	2.9344E+01	3.5063E+01
6.000E+00	2.6788E+02	5.0032E+02	1.6370E+01	1.8656E+01	2.5660E+01
6.145E+00	2.5742E+02	4.7701E+02	1.5432E+01	1.7551E+01	2.4620E+01
6.194E+00	2.5401E+02	4.6943E+02	1.5129E+01	1.7194E+01	2.4282E+01
6.530E+00	2.3229E+02	4.2190E+02	1.3251E+01	1.4992E+01	2.2144E+01
6.583E+00	2.2916E+02	4.1512E+02	1.2987E+01	1.4683E+01	2.1837E+01
8.000E+00	1.6306E+02	2.7733E+02	7.8360E+00	8.7095E+00	1.5474E+01
1.000E+01	1.0831E+02	1.7167E+02	4.2698E+00	4.6513E+00	1.0338E+01
1.500E+01	4.8858E+01	6.8697E+01	1.3151E+00	1.3784E+00	4.8442E+00
1.944E+01	2.8356E+01	3.6818E+01	5.9104E-01	6.0337E-01	2.9305E+00
1.960E+01	2.7874E+01	3.6103E+01	5.7637E-01	5.8791E-01	2.8848E+00
2.000E+01	2.7275E+01	3.4331E+01	5.4036E-01	5.5000E-01	2.7711E+00
2.448E+01	1.7512E+01	2.0669E+01	2.8222E-01	2.8107E-01	1.8510E+00
2.468E+01	1.7203E+01	2.0253E+01	2.7498E-01	2.7362E-01	1.8215E+00
2.532E+01	1.6240E+01	1.8964E+01	2.5281E-01	2.5085E-01	1.7292E+00
2.553E+01	1.5952E+01	1.8580E+01	2.4630E-01	2.4417E-01	1.7015E+00
3.000E+01	1.1043E+01	1.2217E+01	1.4430E-01	1.4047E-01	1.2229E+00
4.000E+01	5.6032E+00	5.6515E+00	5.4326E-02	5.1112E-02	6.6917E-01
5.000E+01	3.2476E+00	3.0467E+00	2.4993E-02	2.2871E-02	4.1374E-01
6.000E+01	2.0568E+00	1.8176E+00	1.3127E-02	1.1735E-02	2.7699E-01
8.000E+01	9.8306E-01	7.8970E-01	4.6930E-03	4.0405E-03	1.4491E-01
1.000E+02	5.4792E-01	4.0850E-01	2.1024E-03	1.7583E-03	8.6679E-02
1.324E+02	2.6016E-01	1.7656E-01	7.6505E-04	6.1782E-04	4.4907E-02
1.334E+02	2.5468E-01	1.7238E-01	7.4340E-04	5.9978E-04	4.4068E-02
1.500E+02	1.8627E-01	1.2125E-01	4.8825E-04	3.8857E-04	3.3393E-02
2.000E+02	8.6306E-02	5.1134E-02	1.7587E-04	1.3597E-04	1.6826E-02
3.000E+02	2.9552E-02	1.5448E-02	4.3365E-05	3.2682E-05	6.4319E-03
4.000E+02	1.4116E-02	6.8101E-03	1.6788E-05	1.2612E-05	3.3015E-03
5.000E+02	8.1125E-03	3.7002E-03	8.3149E-06	6.2947E-06	1.9973E-03
6.000E+02	5.2413E-03	2.2926E-03	4.8074E-06	3.6848E-06	1.3403E-03
8.000E+02	2.7244E-03	1.1235E-03	2.1637E-06	1.6988E-06	7.3164E-04
1.000E+03	1.6921E-03	6.6956E-04	1.2145E-06	9.8085E-07	4.6727E-04
1.500E+03	7.6892E-04	2.8480E-04	4.8491E-07	4.1435E-07	2.1783E-04

Z= 98 27 STATES, 50 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	135.9536	.98716
2 S 1/2	2.00	26.1072	.89650
2 P 1/2	2.00	25.2482	.84589
2 P 3/2	4.00	19.9268	.80427
3 S 1/2	2.00	6.7478	.72316
3 P 1/2	2.00	6.3533	.65899
3 P 3/2	4.00	5.1032	.60082
3 D 3/2	4.00	4.4916	.42159
3 D 5/2	6.00	4.2472	.41006
4 S 1/2	2.00	1.7934	.49181
4 P 1/2	2.00	1.6110	.42918
4 P 3/2	4.00	1.2729	.37141
4 D 3/2	4.00	.9867	.22246
4 D 5/2	6.00	.9258	.21121
4 F 5/2	6.00	.5474	.06682
4 F 7/2	8.00	.5305	.06524
5 S 1/2	2.00	.4130	.26880
5 P 1/2	2.00	.3383	.21966
5 P 3/2	4.00	.2516	.17984
5 D 3/2	4.00	.1425	.08537
5 D 5/2	6.00	.1296	.07882
5 F 5/2	4.29	.0107	.01039
5 F 7/2	5.71	.0089	.00969
6 S 1/2	2.00	.0612	.09560
6 P 1/2	2.00	.0389	.06519
6 P 3/2	4.00	.0251	.04510
7 S 1/2	2.00	.0057	.01281

Z= 98 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	3.2849E+06	.0E+00	.0E+00	.0E+00	3.2849E+06
1.2716E+00	2.1870E+06	.0E+00	.0E+00	.0E+00	2.1870E+06
1.2818E+00	2.2923E+06	.0E+00	.0E+00	.0E+00	2.2923E+06
1.5000E+00	1.6883E+06	.0E+00	.0E+00	.0E+00	1.6883E+06
1.6094E+00	1.4638E+06	.0E+00	.0E+00	.0E+00	1.4638E+06
1.6223E+00	1.4578E+06	.0E+00	.0E+00	.0E+00	1.4578E+06
1.7916E+00	1.1870E+06	.0E+00	.0E+00	.0E+00	1.1870E+06
1.8059E+00	1.1884E+06	.0E+00	.0E+00	.0E+00	1.1884E+06
2.0000E+00	9.5804E+05	.0E+00	.0E+00	.0E+00	9.5804E+05
3.0000E+00	3.9285E+05	.0E+00	.0E+00	.0E+00	3.9285E+05
4.0000E+00	2.0274E+05	.0E+00	.0E+00	.0E+00	2.0274E+05
4.2429E+00	1.7662E+05	.0E+00	.0E+00	.0E+00	1.7662E+05
4.2769E+00	3.9023E+05	.0E+00	.0E+00	2.1688E+05	1.7335E+05
4.4871E+00	3.5390E+05	.0E+00	.0E+00	1.9905E+05	1.5485E+05
4.5231E+00	4.8301E+05	.0E+00	.0E+00	3.3105E+05	1.5196E+05
5.0000E+00	3.8261E+05	.0E+00	.0E+00	2.6276E+05	1.1985E+05
5.0981E+00	3.6432E+05	.0E+00	.0E+00	2.4989E+05	1.1443E+05
5.1389E+00	4.1693E+05	.0E+00	.0E+00	3.0466E+05	1.1228E+05
6.0000E+00	2.8207E+05	.0E+00	.0E+00	2.0464E+05	7.7438E+04
6.3470E+00	2.4368E+05	.0E+00	.0E+00	1.7609E+05	6.7596E+04
6.3978E+00	2.5332E+05	.0E+00	.0E+00	1.8702E+05	6.6302E+04
6.7411E+00	2.2232E+05	.0E+00	.0E+00	1.6392E+05	5.8400E+04
6.7950E+00	2.2716E+05	.0E+00	.0E+00	1.6988E+05	5.7279E+04
8.0000E+00	1.5187E+05	.0E+00	.0E+00	1.1346E+05	3.8420E+04
1.0000E+01	8.6997E+04	.0E+00	.0E+00	6.4878E+04	2.2119E+04
1.5000E+01	3.1153E+04	.0E+00	.0E+00	2.3170E+04	7.9830E+03
1.9907E+01	1.5052E+04	.0E+00	.0E+00	1.1172E+04	3.8799E+03
2.0000E+01	3.4490E+04	.0E+00	1.9618E+04	1.1038E+04	3.8337E+03

Z= 98 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY (KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
2.0066E+01	3.4368E+04	.0E+00	1.9623E+04	1.0944E+04	3.8013E+03
2.5223E+01	1.8546E+04	.0E+00	1.0395E+04	6.0401E+03	2.1102E+03
2.5425E+01	2.6073E+04	.0E+00	1.8090E+04	5.9158E+03	2.0671E+03
2.6081E+01	2.4428E+04	.0E+00	1.6957E+04	5.5353E+03	1.9354E+03
2.6290E+01	2.7643E+04	.0E+00	2.0326E+04	5.4212E+03	1.8959E+03
3.0000E+01	1.9759E+04	.0E+00	1.4575E+04	3.8378E+03	1.3466E+03
4.0000E+01	9.4967E+03	.0E+00	7.0608E+03	1.8001E+03	6.3578E+02
5.0000E+01	5.3182E+03	.0E+00	3.9676E+03	9.9693E+02	3.5369E+02
6.0000E+01	3.2951E+03	.0E+00	2.4628E+03	6.1378E+02	2.1852E+02
8.0000E+01	1.5382E+03	.0E+00	1.1517E+03	2.8461E+02	1.0183E+02
1.0000E+02	8.4889E+02	.0E+00	6.3611E+02	1.5656E+02	5.6221E+01
1.3582E+02	3.7508E+02	.0E+00	2.8123E+02	6.8974E+01	2.4876E+01
1.3691E+02	1.4546E+03	1.0874E+03	2.7532E+02	6.7520E+01	2.4355E+01
1.5000E+02	1.1641E+03	8.7621E+02	2.1590E+02	5.2911E+01	1.9112E+01
2.0000E+02	5.6304E+02	4.2850E+02	1.0090E+02	2.4684E+01	8.9472E+00
3.0000E+02	2.0498E+02	1.5784E+02	3.5362E+01	8.6307E+00	3.1398E+00
4.0000E+02	1.0254E+02	7.9522E+01	1.7279E+01	4.2084E+00	1.5338E+00
5.0000E+02	6.1176E+01	4.7690E+01	1.0127E+01	2.4616E+00	8.9801E-01
6.0000E+02	4.0722E+01	3.1873E+01	6.6476E+00	1.6131E+00	5.8906E-01
8.0000E+02	2.2041E+01	1.7345E+01	3.5295E+00	8.5407E-01	3.1207E-01
1.0000E+03	1.4007E+01	1.1059E+01	2.2164E+00	5.3526E-01	1.9563E-01
1.5000E+03	6.4532E+00	5.1129E+00	1.0086E+00	2.4293E-01	8.8785E-02

Z= 98

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.272E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.282E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.609E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.622E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.792E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.806E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.243E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.277E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.487E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.523E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
5.098E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
5.139E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
6.347E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
6.398E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
6.741E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
6.795E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.4558E+04
8.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	9.2034E+03	1.3801E+04
1.000E+01	.0E+00	.0E+00	.0E+00	.0E+00	7.4297E+03	1.3678E+04
1.500E+01	.0E+00	.0E+00	.0E+00	.0E+00	5.3525E+03	1.1460E+04
1.991E+01	.0E+00	.0E+00	.0E+00	.0E+00	2.8068E+03	8.2895E+03
2.000E+01	.0E+00	.0E+00	.0E+00	.0E+00	1.6999E+03	4.1229E+03
2.007E+01	.0E+00	.0E+00	.0E+00	1.9618E+04	1.6853E+03	2.3564E+03
2.522E+01	.0E+00	.0E+00	.0E+00	1.9623E+04	1.6750E+03	2.3339E+03
2.542E+01	.0E+00	.0E+00	.0E+00	1.0395E+04	1.0909E+03	2.3180E+03
2.608E+01	.0E+00	.0E+00	7.9173E+03	1.0173E+04	1.0742E+03	1.4233E+03
2.629E+01	.0E+00	.0E+00	7.4667E+03	9.4901E+03	1.0227E+03	1.0742E+03
3.000E+01	.0E+00	3.6701E+03	7.3714E+03	9.2846E+03	1.0071E+03	1.3226E+03
4.000E+01	.0E+00	2.9075E+03	5.2870E+03	6.3804E+03	7.7840E+02	1.2995E+03
	.0E+00	1.7315E+03	2.5781E+03	2.7512E+03	4.3494E+02	9.6542E+02
						4.9220E+02

Z= 98

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
5.000E+01	.0E+00	1.1151E+03	1.4391E+03	1.4134E+03	2.7216E+02	2.8546E+02
6.000E+01	.0E+00	7.6552E+02	8.8402E+02	8.1326E+02	1.8360E+02	1.8064E+02
8.000E+01	.0E+00	4.1270E+02	4.0340E+02	3.3561E+02	9.6946E+01	8.6119E+01
1.000E+02	.0E+00	2.5054E+02	2.1782E+02	1.6775E+02	5.8290E+01	4.7885E+01
1.358E+02	.0E+00	1.2375E+02	9.2985E+01	6.4494E+01	2.8569E+01	2.1160E+01
1.369E+02	1.0874E+03	1.2146E+02	9.0945E+01	6.2908E+01	2.8038E+01	2.0712E+01
1.500E+02	8.7621E+02	9.8050E+01	7.0540E+01	4.7311E+01	2.2606E+01	1.6210E+01
2.000E+02	4.2850E+02	4.9691E+01	3.1808E+01	1.9403E+01	1.1429E+01	7.4924E+00
3.000E+02	1.5784E+02	1.9084E+01	1.0583E+01	5.6951E+00	4.3862E+00	2.5595E+00
4.000E+02	7.9522E+01	9.8205E+00	4.9831E+00	2.4751E+00	2.2566E+00	1.2214E+00
5.000E+02	4.7690E+01	5.9521E+00	2.8405E+00	1.3341E+00	1.3672E+00	7.0167E-01
6.000E+02	3.1873E+01	3.9991E+00	1.8260E+00	8.2253E-01	9.1817E-01	4.5327E-01
8.000E+02	1.7345E+01	2.1843E+00	9.4426E-01	4.0095E-01	5.0101E-01	2.3562E-01
1.000E+03	1.1059E+01	1.3931E+00	5.8497E-01	2.3830E-01	3.1928E-01	1.4635E-01
1.500E+03	5.1129E+00	6.4225E-01	2.6531E-01	1.0104E-01	1.4700E-01	6.6595E-02

Z= 98

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.272E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.282E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.3822E+05
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.1408E+05
1.609E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.0466E+05
1.622E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.7831E+04	1.0363E+05
1.792E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.6664E+04	9.1674E+04
1.806E+00	.0E+00	.0E+00	.0E+00	2.1057E+04	1.6641E+04	9.0774E+04
2.000E+00	.0E+00	.0E+00	.0E+00	1.8257E+04	1.6122E+04	7.9592E+04
3.000E+00	.0E+00	.0E+00	.0E+00	1.1330E+04	1.2675E+04	4.3872E+04
4.000E+00	.0E+00	.0E+00	.0E+00	7.6877E+03	9.4546E+03	7.141E+04
4.243E+00	.0E+00	.0E+00	.0E+00	7.0731E+03	8.8102E+03	2.4459E+04
4.277E+00	.0E+00	.0E+00	2.1688E+05	6.9924E+03	8.7247E+03	2.4115E+04
4.487E+00	.0E+00	.0E+00	1.9905E+05	6.5180E+03	8.2226E+03	2.2137E+04
4.523E+00	.0E+00	1.3612E+05	1.9492E+05	6.4413E+03	8.1412E+03	2.1824E+04
5.000E+00	.0E+00	1.1151E+05	1.5126E+05	5.5423E+03	7.1549E+03	1.8186E+04
5.098E+00	.0E+00	1.0634E+05	1.4355E+05	5.3828E+03	6.9697E+03	1.7541E+04
5.139E+00	5.9958E+04	1.0425E+05	1.4045E+05	5.3185E+03	6.8944E+03	1.7282E+04
6.000E+00	4.6566E+04	6.8326E+04	8.9743E+04	4.1841E+03	5.5379E+03	1.2887E+04
6.347E+00	4.2187E+04	5.8074E+04	7.5828E+04	3.8263E+03	5.0944E+03	1.1549E+04
6.398E+00	4.1560E+04	5.6742E+04	7.4158E+04	3.7780E+03	5.0333E+03	1.1370E+04
6.741E+00	3.7552E+04	4.8718E+04	6.3854E+04	3.4749E+03	4.6452E+03	1.0255E+04
6.795E+00	3.6964E+04	4.7666E+04	6.2367E+04	3.4305E+03	4.5881E+03	1.0095E+04
8.000E+00	2.6967E+04	2.9570E+04	3.8029E+04	2.6208E+03	3.5340E+03	7.2522E+03
1.000E+01	1.7084E+04	1.5122E+04	1.9030E+04	1.7907E+03	2.4103E+03	4.5274E+03
1.500E+01	6.9604E+03	4.1979E+03	5.0825E+03	8.6332E+02	1.1237E+03	1.8175E+03
1.991E+01	3.5322E+03	1.6454E+03	1.9378E+03	5.0516E+02	6.2901E+02	9.2179E+02
2.000E+01	3.4919E+03	1.6198E+03	1.9068E+03	5.0062E+02	6.2283E+02	9.1128E+02
2.007E+01	3.4636E+03	1.6019E+03	1.8850E+03	4.9743E+02	6.1848E+02	9.0388E+02
2.522E+01	1.9468E+03	7.3527E+02	8.4379E+02	3.1759E+02	3.7677E+02	5.0935E+02
2.542E+01	1.9073E+03	7.1535E+02	8.2016E+02	3.1258E+02	3.7017E+02	4.9908E+02
2.608E+01	1.7860E+03	6.5509E+02	7.4893E+02	2.9707E+02	3.4978E+02	4.6754E+02
2.629E+01	1.7495E+03	6.3725E+02	7.2792E+02	2.9237E+02	3.4362E+02	4.5806E+02
3.000E+01	1.2383E+03	4.0260E+02	4.5304E+02	2.2399E+02	2.5501E+02	3.2513E+02
4.000E+01	5.6923E+02	1.4552E+02	1.5823E+02	1.2343E+02	1.3008E+02	1.5055E+02
5.000E+01	3.0515E+02	6.5212E+01	6.8552E+01	7.6644E+01	7.5636E+01	8.1200E+01
6.000E+01	1.8120E+02	3.3625E+01	3.4721E+01	5.1466E+01	4.8011E+01	4.8456E+01
8.000E+01	7.8157E+01	1.1731E+01	1.1657E+01	2.7033E+01	2.3019E+01	2.1062E+01
1.000E+02	4.0221E+01	5.1745E+00	4.9911E+00	1.6212E+01	1.2857E+01	1.0898E+01
1.358E+02	1.5992E+01	1.6876E+00	1.5650E+00	7.9300E+00	5.7158E+00	4.3627E+00
1.369E+02	1.5611E+01	1.6392E+00	1.5187E+00	7.7823E+00	5.5958E+00	4.2595E+00
1.500E+02	1.1842E+01	1.1757E+00	1.0774E+00	6.2722E+00	4.3866E+00	3.2369E+00

Z= 98

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
2.000E+02	4.9712E+00	4.1883E-01	3.7229E-01	3.1690E+00	2.0372E+00	1.3657E+00
3.000E+02	1.4947E+00	1.0211E-01	8.8253E-02	1.2157E+00	6.9962E-01	4.1285E-01
4.000E+02	6.5727E-01	3.9295E-02	3.3780E-02	6.2542E-01	3.3477E-01	1.8207E-01
5.000E+02	3.5656E-01	1.9392E-02	1.6758E-02	3.7889E-01	1.9264E-01	9.8765E-02
6.000E+02	2.2069E-01	1.1178E-02	9.7581E-03	2.5445E-01	1.2475E-01	6.1181E-02
8.000E+02	1.0798E-01	5.0081E-03	4.4546E-03	1.3880E-01	6.4927E-02	2.9945E-02
1.000E+03	6.4290E-02	2.7961E-03	2.5433E-03	8.8431E-02	4.0351E-02	1.7835E-02
1.500E+03	2.7206E-02	1.0953E-03	1.0318E-03	4.0691E-02	1.8359E-02	7.5627E-03

Z= 98

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	1.4517E+05	3.5038E+05	1.0281E+06	1.3409E+06	1.8063E+04	1.3134E+04
1.272E+00	1.8668E+05	3.0356E+05	6.1423E+05	7.8893E+05	1.3379E+04	1.0574E+04
1.282E+00	1.8582E+05	3.0158E+05	6.0288E+05	7.7391E+05	1.3242E+04	1.0498E+04
1.500E+00	1.6453E+05	2.5641E+05	4.0857E+05	5.2098E+05	1.0728E+04	9.0566E+03
1.609E+00	1.5240E+05	2.3578E+05	3.4027E+05	4.3236E+05	9.7351E+03	8.4519E+03
1.622E+00	1.5106E+05	2.3346E+05	3.3315E+05	4.2313E+05	9.6278E+03	8.3849E+03
1.792E+00	1.3464E+05	2.0386E+05	2.5426E+05	3.2181E+05	8.3678E+03	7.5755E+03
1.806E+00	1.3329E+05	2.0147E+05	2.4870E+05	3.1471E+05	8.2726E+03	7.5124E+03
2.000E+00	1.1573E+05	1.7233E+05	1.8660E+05	2.3518E+05	7.1366E+03	6.7333E+03
3.000E+00	5.8523E+04	8.2783E+04	5.4550E+04	6.7823E+04	3.8664E+03	4.1537E+03
4.000E+00	3.2565E+04	4.4746E+04	2.1185E+04	2.6094E+04	2.4507E+03	2.8178E+03
4.243E+00	2.8629E+04	3.9120E+04	1.7329E+04	2.1301E+04	2.2277E+03	2.5905E+03
4.277E+00	2.8129E+04	3.8406E+04	1.6861E+04	2.0721E+04	2.1990E+03	2.5609E+03
4.487E+00	2.5276E+04	3.4331E+04	1.4291E+04	1.7535E+04	2.0335E+03	2.3882E+03
4.523E+00	2.4825E+04	3.3691E+04	1.3901E+04	1.7053E+04	2.0072E+03	2.3604E+03
5.000E+00	1.9704E+04	2.6504E+04	9.7875E+03	1.1964E+04	1.7018E+03	2.0324E+03
5.098E+00	1.8826E+04	2.5276E+04	9.1375E+03	1.1163E+04	1.6479E+03	1.9732E+03
5.139E+00	1.8476E+04	2.4787E+04	8.8827E+03	1.0848E+04	1.6262E+03	1.9494E+03
6.000E+00	1.2701E+04	1.6795E+04	5.0889E+03	6.1807E+03	1.2540E+03	1.5299E+03
6.347E+00	1.1040E+04	1.4518E+04	4.1427E+03	5.0209E+03	1.1396E+03	1.3972E+03
6.398E+00	1.0821E+04	1.4219E+04	4.0229E+03	4.8744E+03	1.1242E+03	1.3791E+03
6.741E+00	9.4751E+03	1.2391E+04	3.3164E+03	4.0108E+03	1.0279E+03	1.2657E+03
6.795E+00	9.2833E+03	1.2132E+04	3.2197E+03	3.8926E+03	1.0139E+03	1.2491E+03
8.000E+00	6.0536E+03	7.7932E+03	1.7423E+03	2.0933E+03	7.6326E+02	9.4688E+02
1.000E+01	3.2822E+03	4.1375E+03	7.3488E+02	8.7509E+02	5.1286E+02	6.3580E+02
1.500E+01	1.0003E+03	1.2121E+03	1.4347E+02	1.6781E+02	2.4221E+02	2.9151E+02
1.991E+01	4.1420E+02	4.8739E+02	4.3929E+01	5.0671E+01	1.4043E+02	1.6227E+02
2.000E+01	4.0810E+02	4.7996E+02	4.3069E+01	4.9667E+01	1.3916E+02	1.6067E+02
2.007E+01	4.0381E+02	4.7475E+02	4.2469E+01	4.8966E+01	1.3826E+02	1.5954E+02
2.522E+01	1.9245E+02	2.2065E+02	1.5951E+01	1.8165E+01	8.7786E+01	9.6948E+01
2.542E+01	1.8746E+02	2.1474E+02	1.5410E+01	1.7541E+01	8.6388E+01	9.5243E+01
2.608E+01	1.7235E+02	1.9686E+02	1.3801E+01	1.5687E+01	8.2060E+01	8.9978E+01
2.629E+01	1.6787E+02	1.9156E+02	1.3332E+01	1.5147E+01	8.0749E+01	8.8387E+01
3.000E+01	1.0809E+02	1.2149E+02	7.5030E+00	8.4584E+00	6.1711E+01	6.5548E+01
4.000E+01	4.0509E+01	4.3981E+01	2.1121E+00	2.3381E+00	3.3868E+01	3.3420E+01
5.000E+01	1.8584E+01	1.9616E+01	7.8190E-01	8.5238E-01	2.0985E+01	1.9439E+01
6.000E+01	9.7430E+00	1.0042E+01	3.4601E-01	3.7227E-01	1.4072E+01	1.2346E+01
8.000E+01	3.4753E+00	3.4476E+00	9.5494E-02	1.0054E-01	7.3812E+00	5.9266E+00
1.000E+02	1.5549E+00	1.4977E+00	3.5491E-02	3.6730E-02	4.4241E+00	3.3139E+00
1.358E+02	5.1526E-01	4.7740E-01	9.2023E-03	9.3095E-03	2.1632E+00	1.4754E+00
1.369E+02	5.0068E-01	4.6345E-01	8.8861E-03	8.9849E-03	2.1230E+00	1.4445E+00
1.500E+02	3.6055E-01	3.3016E-01	5.9608E-03	5.9909E-03	1.7110E+00	1.1370E+00
2.000E+02	1.2980E-01	1.1537E-01	1.7522E-03	1.7323E-03	8.6549E-01	5.2866E-01
3.000E+02	3.1991E-02	2.7676E-02	3.3183E-04	3.2103E-04	3.3196E-01	1.8181E-01
4.000E+02	1.2381E-02	1.0607E-02	1.0877E-04	1.0593E-04	1.7075E-01	8.7075E-02
5.000E+02	6.1340E-03	5.2814E-03	4.7516E-05	4.7799E-05	1.0342E-01	5.0133E-02
6.000E+02	3.5482E-03	3.0782E-03	2.4968E-05	2.6193E-05	6.9441E-02	3.2429E-02
8.000E+02	1.5934E-03	1.4055E-03	1.0368E-05	1.0886E-05	3.7876E-02	1.6883E-02
1.000E+03	8.9014E-04	8.0673E-04	5.1985E-06	5.8197E-06	2.4129E-02	1.0495E-02

Z= 98

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.500E+03	3.5005E-04	3.2534E-04	2.1041E-06	2.1308E-06	1.1101E-02	4.7742E-03

Z= 98

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	5 F 5/2	5 F 7/2	6 S 1/2
1.000E+00	6.4838E+04	6.5211E+04	1.0190E+05	6.1380E+04	7.7586E+04	4.5762E+03
1.272E+00	4.6548E+04	4.9734E+04	7.5238E+04	3.7826E+04	4.7302E+04	3.2202E+03
1.282E+00	4.6020E+04	4.9235E+04	7.4411E+04	3.7174E+04	4.6471E+04	3.1821E+03
1.500E+00	3.6555E+04	3.9846E+04	5.9113E+04	2.5994E+04	3.2289E+04	2.5105E+03
1.609E+00	3.2872E+04	3.5972E+04	5.2948E+04	2.1950E+04	2.7192E+04	2.2539E+03
1.622E+00	3.2475E+04	3.5547E+04	5.2277E+04	2.1527E+04	2.6660E+04	2.2264E+03
1.792E+00	2.7864E+04	3.0518E+04	4.4409E+04	1.6801E+04	2.0729E+04	1.9089E+03
1.806E+00	2.7520E+04	3.0135E+04	4.3816E+04	1.6462E+04	2.0306E+04	1.8853E+03
2.000E+00	2.3416E+04	2.5520E+04	3.6722E+04	1.2624E+04	1.5513E+04	1.6062E+03
3.000E+00	1.1916E+04	1.2181E+04	1.6867E+04	4.0174E+03	4.8659E+03	8.3665E+02
4.000E+00	7.1424E+03	6.7074E+03	9.0538E+03	1.6442E+03	1.9376E+03	5.1972E+02
4.243E+00	6.4090E+03	5.8930E+03	7.9137E+03	1.3584E+03	1.5971E+03	4.7077E+02
4.277E+00	6.3152E+03	5.7897E+03	7.7695E+03	1.3235E+03	1.5555E+03	4.6450E+02
4.487E+00	5.7762E+03	5.2000E+03	6.9491E+03	1.1304E+03	1.3262E+03	4.2839E+02
4.523E+00	5.6908E+03	5.1072E+03	6.8204E+03	1.1009E+03	1.2913E+03	4.2265E+02
5.000E+00	4.7091E+03	4.0575E+03	5.3716E+03	7.8225E+02	9.1958E+02	3.5648E+02
5.098E+00	4.5376E+03	3.8775E+03	5.1246E+03	7.3236E+02	8.6030E+02	3.4484E+02
5.139E+00	4.4688E+03	3.8056E+03	5.0262E+03	7.1275E+02	8.3702E+02	3.4017E+02
6.000E+00	3.3052E+03	2.6232E+03	3.4183E+03	4.1696E+02	4.8679E+02	2.6048E+02
6.347E+00	2.9558E+03	2.2827E+03	2.9600E+03	3.4182E+02	3.9820E+02	2.3619E+02
6.398E+00	2.9090E+03	2.2378E+03	2.8997E+03	3.3226E+02	3.8695E+02	2.3292E+02
6.741E+00	2.6187E+03	1.9622E+03	2.5310E+03	2.7561E+02	3.2032E+02	2.1254E+02
6.795E+00	2.5768E+03	1.9230E+03	2.4786E+03	2.6782E+02	3.1116E+02	2.0958E+02
8.000E+00	1.8415E+03	1.2601E+03	1.6008E+03	1.4753E+02	1.7029E+02	1.5688E+02
1.000E+01	1.1435E+03	6.8828E+02	8.5672E+02	6.3570E+01	7.2697E+01	1.0473E+02
1.500E+01	4.5709E+02	2.1290E+02	2.5484E+02	1.2812E+01	1.4385E+01	4.9000E+01
1.991E+01	2.3173E+02	8.9038E+01	1.0350E+02	3.9897E+00	4.4160E+00	2.8271E+01
2.000E+01	2.2909E+02	8.7739E+01	1.0194E+02	3.9126E+00	4.3295E+00	2.8012E+01
2.007E+01	2.2723E+02	8.6827E+01	1.0085E+02	3.8587E+00	4.2691E+00	2.7830E+01
2.522E+01	1.2811E+02	4.1684E+01	4.7214E+01	1.4653E+00	1.6009E+00	1.7617E+01
2.542E+01	1.2552E+02	4.0613E+01	4.5960E+01	1.4162E+00	1.5465E+00	1.7335E+01
2.608E+01	1.1760E+02	3.7369E+01	4.2165E+01	1.2697E+00	1.3846E+00	1.6462E+01
2.629E+01	1.1522E+02	3.6405E+01	4.1041E+01	1.2270E+00	1.3374E+00	1.6197E+01
3.000E+01	8.1830E+01	2.3532E+01	2.6128E+01	6.9437E-01	7.5086E-01	1.2525E+01
4.000E+01	3.7955E+01	8.8865E+00	9.5304E+00	1.9753E-01	2.0973E-01	6.8693E+00
5.000E+01	2.0502E+01	4.0975E+00	4.2725E+00	7.3616E-02	7.6967E-02	4.2545E+00
6.000E+01	1.2250E+01	2.1560E+00	2.1955E+00	3.2726E-02	3.3765E-02	2.8522E+00
8.000E+01	5.3359E+00	7.7234E-01	7.5324E-01	9.0844E-03	9.1712E-03	1.4954E+00
1.000E+02	2.7655E+00	3.4670E-01	3.2828E-01	3.3891E-03	3.3628E-03	8.9603E-01
1.358E+02	1.1068E+00	1.1533E-01	1.0505E-01	8.8249E-04	8.5581E-04	4.3791E-01
1.369E+02	1.0806E+00	1.1208E-01	1.0199E-01	8.5228E-04	8.2606E-04	4.2974E-01
1.500E+02	8.2158E-01	8.0788E-02	7.2730E-02	5.7239E-04	5.5139E-04	3.4629E-01
2.000E+02	3.4706E-01	2.9164E-02	2.5481E-02	1.6881E-04	1.5987E-04	1.7490E-01
3.000E+02	1.0505E-01	7.2112E-03	6.1275E-03	3.2059E-05	3.0149E-05	6.7076E-02
4.000E+02	4.6347E-02	2.7951E-03	2.3615E-03	1.0499E-05	1.0020E-05	3.4500E-02
5.000E+02	2.5192E-02	1.3850E-03	1.1764E-03	4.6101E-06	4.5125E-06	2.0897E-02
6.000E+02	1.5608E-02	8.0096E-04	6.8721E-04	2.4310E-06	2.4539E-06	1.4030E-02
8.000E+02	7.6439E-03	3.5999E-04	3.1419E-04	9.8194E-07	1.0351E-06	7.6523E-03
1.000E+03	4.5525E-03	2.0160E-04	1.7978E-04	5.0050E-07	5.5871E-07	4.8751E-03
1.500E+03	1.9316E-03	7.9191E-05	7.3004E-05	1.7357E-07	2.1330E-07	2.2434E-03

Z= 98

ENERGY	6 P 1/2	6 P 3/2	7 S 1/2
1.000E+00	2.8786E+03	1.0393E+04	4.3587E+02
1.272E+00	2.1936E+03	7.2764E+03	2.9548E+02
1.282E+00	2.1737E+03	7.1886E+03	2.9162E+02
1.500E+00	1.8124E+03	5.6382E+03	2.2450E+02
1.609E+00	1.6677E+03	5.0449E+03	1.9959E+02
1.622E+00	1.6519E+03	4.9814E+03	1.9694E+02
1.792E+00	1.4654E+03	4.2469E+03	1.6646E+02
1.806E+00	1.4512E+03	4.1923E+03	1.6421E+02
2.000E+00	1.2789E+03	3.5469E+03	1.3788E+02
3.000E+00	7.4924E+02	1.7739E+03	6.9009E+01
4.000E+00	4.9571E+02	1.0546E+03	4.2973E+01
4.243E+00	4.5381E+02	9.4508E+02	3.8948E+01
4.277E+00	4.4838E+02	9.3108E+02	3.8432E+01
4.487E+00	4.1682E+02	8.5076E+02	3.5462E+01
4.523E+00	4.1176E+02	8.3802E+02	3.4990E+01
5.000E+00	3.5240E+02	6.9217E+02	2.9542E+01
5.098E+00	3.4177E+02	6.6672E+02	2.8584E+01
5.139E+00	3.3749E+02	6.5653E+02	2.8200E+01
6.000E+00	2.6279E+02	4.8448E+02	2.1631E+01
6.347E+00	2.3940E+02	4.3296E+02	1.9627E+01
6.398E+00	2.3623E+02	4.2607E+02	1.9357E+01
6.741E+00	2.1632E+02	3.8332E+02	1.7671E+01
6.795E+00	2.1341E+02	3.7715E+02	1.7427E+01
8.000E+00	1.6082E+02	2.6913E+02	1.3070E+01
1.000E+01	1.0726E+02	1.6690E+02	8.7480E+00
1.500E+01	4.8742E+01	6.7120E+01	4.1119E+00
1.991E+01	2.7665E+01	3.4021E+01	2.3791E+00
2.000E+01	2.7392E+01	3.3633E+01	2.3574E+00
2.007E+01	2.7199E+01	3.3361E+01	2.3422E+00
2.522E+01	1.6524E+01	1.8808E+01	1.4854E+00
2.542E+01	1.6234E+01	1.8429E+01	1.4617E+00
2.608E+01	1.5336E+01	1.7266E+01	1.3884E+00
2.629E+01	1.5065E+01	1.6916E+01	1.3661E+00
3.000E+01	1.1172E+01	1.2015E+01	1.0435E+00
4.000E+01	5.6975E+00	5.5735E+00	5.7222E-01
5.000E+01	3.3149E+00	3.0110E+00	3.5437E-01
6.000E+01	2.1058E+00	1.7993E+00	2.3175E-01
8.000E+01	1.0112E+00	7.8380E-01	1.2455E-01
1.000E+02	5.6554E-01	4.0623E-01	7.4625E-02
1.358E+02	2.5185E-01	1.6295E-01	3.6470E-02
1.369E+02	2.4657E-01	1.5910E-01	3.5791E-02
1.500E+02	1.9338E-01	1.2097E-01	2.8841E-02
2.000E+02	8.9934E-02	5.1116E-02	1.4568E-02
3.000E+02	3.0936E-02	1.5478E-02	5.5883E-03
4.000E+02	1.4817E-02	6.8303E-03	2.8755E-03
5.000E+02	8.5310E-03	3.7129E-03	1.7429E-03
6.000E+02	5.5186E-03	2.3009E-03	1.1712E-03
8.000E+02	2.8731E-03	1.1274E-03	6.4050E-04
1.000E+03	1.7861E-03	6.7171E-04	4.0962E-04
1.500E+03	8.1272E-04	2.8554E-04	1.9152E-04

Z= 99 27 STATES, 52 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	139.4815	.98720
2 S 1/2	2.00	26.8925	.89746
2 P 1/2	2.00	26.0139	.84715
2 P 3/2	4.00	20.4058	.80465
3 S 1/2	2.00	6.9705	.72565
3 P 1/2	2.00	6.5673	.66193
3 P 3/2	4.00	5.2465	.60240
3 D 3/2	4.00	4.6249	.42392
3 D 5/2	6.00	4.3686	.41218
4 S 1/2	2.00	1.8616	.49577
4 P 1/2	2.00	1.6748	.43343
4 P 3/2	4.00	1.3159	.37422
4 D 3/2	4.00	1.0240	.22529
4 D 5/2	6.00	.9597	.21380
4 F 5/2	6.00	.5736	.06861
4 F 7/2	8.00	.5557	.06698
5 S 1/2	2.00	.4302	.27336
5 P 1/2	2.00	.3532	.22415
5 P 3/2	4.00	.2604	.18274
5 D 3/2	4.00	.1482	.08755
5 D 5/2	6.00	.1344	.08073
5 F 5/2	4.71	.0115	.01105
5 F 7/2	6.29	.0095	.01029
6 S 1/2	2.00	.0632	.09719
6 P 1/2	2.00	.0401	.06644
6 P 3/2	4.00	.0254	.04531
7 S 1/2	2.00	.0058	.01276

Z= 99 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	3.2529E+06	.0E+00	.0E+00	.0E+00	3.2529E+06
1.0230E+00	3.1414E+06	.0E+00	.0E+00	.0E+00	3.1414E+06
1.0311E+00	3.1942E+06	.0E+00	.0E+00	.0E+00	3.1942E+06
1.3146E+00	2.1407E+06	.0E+00	.0E+00	.0E+00	2.1407E+06
1.3251E+00	2.2436E+06	.0E+00	.0E+00	.0E+00	2.2436E+06
1.5000E+00	1.7623E+06	.0E+00	.0E+00	.0E+00	1.7623E+06
1.6731E+00	1.4114E+06	.0E+00	.0E+00	.0E+00	1.4114E+06
1.6865E+00	1.4051E+06	.0E+00	.0E+00	.0E+00	1.4051E+06
1.8598E+00	1.1458E+06	.0E+00	.0E+00	.0E+00	1.1458E+06
1.8747E+00	1.1468E+06	.0E+00	.0E+00	.0E+00	1.1468E+06
2.0000E+00	9.9982E+05	.0E+00	.0E+00	.0E+00	9.9982E+05
3.0000E+00	4.1015E+05	.0E+00	.0E+00	.0E+00	4.1015E+05
4.0000E+00	2.1170E+05	.0E+00	.0E+00	.0E+00	2.1170E+05
4.3643E+00	1.7258E+05	.0E+00	.0E+00	.0E+00	1.7258E+05
4.3992E+00	3.7610E+05	.0E+00	.0E+00	2.0672E+05	1.6938E+05
4.6203E+00	3.4246E+05	.0E+00	.0E+00	1.9158E+05	1.5088E+05
4.6573E+00	4.6526E+05	.0E+00	.0E+00	3.1719E+05	1.4807E+05
5.0000E+00	3.9731E+05	.0E+00	.0E+00	2.7218E+05	1.2513E+05
5.2413E+00	3.5328E+05	.0E+00	.0E+00	2.4144E+05	1.1184E+05
5.2832E+00	4.0447E+05	.0E+00	.0E+00	2.9475E+05	1.0973E+05
6.0000E+00	2.9388E+05	.0E+00	.0E+00	2.1303E+05	8.0853E+04
6.5608E+00	2.3324E+05	.0E+00	.0E+00	1.6811E+05	6.5137E+04
6.6133E+00	2.4238E+05	.0E+00	.0E+00	1.7849E+05	6.3887E+04
6.9635E+00	2.1298E+05	.0E+00	.0E+00	1.5663E+05	5.6351E+04
7.0193E+00	2.1755E+05	.0E+00	.0E+00	1.6228E+05	5.5267E+04
8.0000E+00	1.5744E+05	.0E+00	.0E+00	1.1731E+05	4.0128E+04
1.0000E+01	9.0264E+04	.0E+00	.0E+00	6.7154E+04	2.3110E+04
1.5000E+01	3.2399E+04	.0E+00	.0E+00	2.4051E+04	8.3485E+03

Z= 99 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
2.0000E+01	1.5482E+04	.0E+00	.0E+00	1.1469E+04	4.0130E+03
2.0385E+01	1.4739E+04	.0E+00	.0E+00	1.0917E+04	3.8215E+03
2.0549E+01	3.3528E+04	.0E+00	1.9089E+04	1.0694E+04	3.7442E+03
2.5988E+01	1.7803E+04	.0E+00	9.9425E+03	5.8136E+03	2.0467E+03
2.6196E+01	2.5084E+04	.0E+00	1.7385E+04	5.6941E+03	2.0049E+03
2.6866E+01	2.3505E+04	.0E+00	1.6295E+04	5.3315E+03	1.8784E+03
2.7081E+01	2.6598E+04	.0E+00	1.9537E+04	5.2217E+03	1.8401E+03
3.0000E+01	2.0489E+04	.0E+00	1.5081E+04	3.9964E+03	1.4116E+03
4.0000E+01	9.8843E+03	.0E+00	7.3392E+03	1.8777E+03	6.6745E+02
5.0000E+01	5.5439E+03	.0E+00	4.1309E+03	1.0413E+03	3.7174E+02
6.0000E+01	3.4395E+03	.0E+00	2.5678E+03	6.4179E+02	2.2989E+02
8.0000E+01	1.6089E+03	.0E+00	1.2035E+03	2.9811E+02	1.0730E+02
1.0000E+02	8.8930E+02	.0E+00	6.6578E+02	1.6421E+02	5.9316E+01
1.3934E+02	3.6778E+02	.0E+00	2.7552E+02	6.7698E+01	2.4566E+01
1.4046E+02	1.4088E+03	1.0488E+03	2.6974E+02	6.6274E+01	2.4052E+01
1.5000E+02	1.2049E+03	9.0255E+02	2.2655E+02	5.5636E+01	2.0208E+01
2.0000E+02	5.8374E+02	4.4220E+02	1.0607E+02	2.6001E+01	9.4784E+00
3.0000E+02	2.1317E+02	1.6346E+02	3.7265E+01	9.1130E+00	3.3341E+00
4.0000E+02	1.0690E+02	8.2584E+01	1.8239E+01	4.4506E+00	1.6313E+00
5.0000E+02	6.3886E+01	4.9622E+01	1.0702E+01	2.6062E+00	9.5611E-01
6.0000E+02	4.2579E+01	3.3211E+01	7.0310E+00	1.7092E+00	6.2766E-01
8.0000E+02	2.3078E+01	1.8103E+01	3.7368E+00	9.0581E-01	3.3282E-01
1.0000E+03	1.4676E+01	1.1551E+01	2.3478E+00	5.6796E-01	2.0874E-01
1.5000E+03	6.7631E+00	5.3417E+00	1.0688E+00	2.5785E-01	9.4762E-02

Z= 99

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.023E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.031E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.315E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.325E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.673E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.687E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.860E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.875E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.364E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.399E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.620E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.657E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
5.241E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
5.283E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
6.561E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
6.613E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
6.964E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
7.019E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.3858E+04
8.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.3156E+04
1.000E+01	.0E+00	.0E+00	.0E+00	.0E+00	8.7776E+03	1.3039E+04
1.500E+01	.0E+00	.0E+00	.0E+00	.0E+00	7.3559E+03	1.1448E+04
2.000E+01	.0E+00	.0E+00	.0E+00	.0E+00	5.3491E+03	8.3163E+03
2.039E+01	.0E+00	.0E+00	.0E+00	.0E+00	2.8346E+03	4.2141E+03
2.055E+01	.0E+00	.0E+00	.0E+00	.0E+00	1.7105E+03	2.4024E+03
2.599E+01	.0E+00	.0E+00	.0E+00	.0E+00	1.6518E+03	2.3103E+03
2.620E+01	.0E+00	.0E+00	.0E+00	1.9089E+04	1.6277E+03	2.2728E+03
				9.9425E+03	1.0486E+03	1.3807E+03
			7.6558E+03	9.7295E+03	1.0326E+03	1.3569E+03

Z= 99

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
2.687E+01	.0E+00	.0E+00	7.2142E+03	9.0811E+03	9.8352E+02	1.2840E+03
2.708E+01	.0E+00	3.5256E+03	7.1268E+03	8.8842E+03	9.6849E+02	1.2617E+03
3.000E+01	.0E+00	2.9420E+03	5.4881E+03	6.6507E+03	7.9383E+02	1.0034E+03
4.000E+01	.0E+00	1.7585E+03	2.7069E+03	2.8738E+03	4.4478E+02	5.1474E+02
5.000E+01	.0E+00	1.1362E+03	1.5162E+03	1.4785E+03	2.7897E+02	2.9972E+02
6.000E+01	.0E+00	7.8228E+02	9.3383E+02	8.5168E+02	1.8850E+02	1.9031E+02
8.000E+01	.0E+00	4.2324E+02	4.2814E+02	3.5210E+02	9.9768E+01	9.1169E+01
1.000E+02	.0E+00	2.5763E+02	2.3189E+02	1.7626E+02	6.0102E+01	5.0872E+01
1.393E+02	.0E+00	1.2025E+02	9.2589E+01	6.2682E+01	2.7812E+01	2.1090E+01
1.405E+02	1.0488E+03	1.1803E+02	9.0567E+01	6.1144E+01	2.7297E+01	2.0646E+01
1.500E+02	9.0255E+02	1.0122E+02	7.5500E+01	4.9830E+01	2.3389E+01	1.7323E+01
2.000E+02	4.4220E+02	5.1445E+01	3.4157E+01	2.0467E+01	1.1855E+01	8.0366E+00
3.000E+02	1.6346E+02	1.9836E+01	1.1412E+01	6.0176E+00	4.5660E+00	2.7578E+00
4.000E+02	8.2584E+01	1.0235E+01	5.3864E+00	2.6173E+00	2.3551E+00	1.3196E+00
5.000E+02	4.9622E+01	6.2152E+00	3.0754E+00	1.4111E+00	1.4294E+00	7.5945E-01
6.000E+02	3.3211E+01	4.1816E+00	1.9793E+00	8.7008E-01	9.6118E-01	4.9121E-01
8.000E+02	1.8103E+01	2.2877E+00	1.0251E+00	4.2403E-01	5.2529E-01	2.5574E-01
1.000E+03	1.1551E+01	1.4602E+00	6.3564E-01	2.5192E-01	3.3501E-01	1.5900E-01
1.500E+03	5.3417E+00	6.7342E-01	2.8865E-01	1.0673E-01	1.5429E-01	7.2438E-02

Z= 99

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.023E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.031E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.315E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.325E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.3534E+05
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.1571E+05
1.673E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.0123E+05
1.687E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.6788E+04	1.0023E+05
1.860E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.5701E+04	8.8759E+04
1.875E+00	.0E+00	.0E+00	.0E+00	2.0064E+04	1.5679E+04	8.7882E+04
2.000E+00	.0E+00	.0E+00	.0E+00	1.7934E+04	1.5421E+04	8.1006E+04
3.000E+00	.0E+00	.0E+00	.0E+00	1.1274E+04	1.2389E+04	4.4799E+04
4.000E+00	.0E+00	.0E+00	.0E+00	7.6944E+03	9.3743E+03	2.7810E+04
4.364E+00	.0E+00	.0E+00	.0E+00	6.8098E+03	8.4702E+03	2.3858E+04
4.399E+00	.0E+00	.0E+00	2.0672E+05	6.7324E+03	8.3889E+03	2.3521E+04
4.620E+00	.0E+00	.0E+00	1.9158E+05	6.2682E+03	7.9002E+03	2.1545E+04
4.657E+00	.0E+00	1.2963E+05	1.8757E+05	6.1947E+03	7.8227E+03	2.1239E+04
5.000E+00	.0E+00	1.1527E+05	1.5692E+05	5.5705E+03	7.1527E+03	1.8674E+04
5.241E+00	.0E+00	1.0284E+05	1.3860E+05	5.1899E+03	6.7223E+03	1.7114E+04
5.283E+00	5.8293E+04	1.0083E+05	1.3562E+05	5.1280E+03	6.6504E+03	1.6860E+04
6.000E+00	4.7197E+04	7.1669E+04	9.4160E+04	4.2181E+03	5.5688E+03	1.3253E+04
6.561E+00	4.0555E+04	5.5423E+04	7.2129E+04	3.6609E+03	4.8871E+03	1.1140E+04
6.613E+00	3.9951E+04	5.4150E+04	7.0532E+04	3.6148E+03	4.8288E+03	1.0966E+04
6.964E+00	3.6137E+04	4.6577E+04	6.0757E+04	3.3287E+03	4.4629E+03	9.9013E+03
7.019E+00	3.5570E+04	4.5566E+04	5.9328E+04	3.2862E+03	4.4083E+03	9.7455E+03
8.000E+00	2.7564E+04	3.1079E+04	3.9860E+04	2.6509E+03	3.5856E+03	7.4799E+03
1.000E+01	1.7535E+04	1.5940E+04	2.0014E+04	1.8161E+03	2.4594E+03	4.6790E+03
1.500E+01	7.1865E+03	4.4449E+03	5.3705E+03	8.7969E+02	1.1573E+03	1.8859E+03
2.000E+01	3.6152E+03	1.7205E+03	2.0203E+03	5.1155E+02	6.4538E+02	9.4830E+02
2.039E+01	3.4498E+03	1.6138E+03	1.8913E+03	4.9308E+02	6.2000E+02	9.0489E+02
2.055E+01	3.3829E+03	1.5712E+03	1.8397E+03	4.8554E+02	6.0966E+02	8.8730E+02
2.599E+01	1.8717E+03	7.0664E+02	8.0596E+02	3.0644E+02	3.6722E+02	4.9224E+02
2.620E+01	1.8337E+03	6.8749E+02	7.8339E+02	3.0161E+02	3.6080E+02	4.8230E+02
2.687E+01	1.7179E+03	6.3010E+02	7.1599E+02	2.8679E+02	3.4117E+02	4.5208E+02
2.708E+01	1.6827E+03	6.1295E+02	6.9591E+02	2.8225E+02	3.3518E+02	4.4291E+02
3.000E+01	1.2875E+03	4.2960E+02	4.8202E+02	2.2967E+02	2.6633E+02	3.3966E+02
4.000E+01	5.9358E+02	1.5576E+02	1.6880E+02	1.2686E+02	1.3658E+02	1.5771E+02
5.000E+01	3.1890E+02	6.9963E+01	7.3706E+01	7.8919E+01	7.9732E+01	8.5240E+01

Z= 99

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
6.000E+01	1.8967E+02	3.6142E+01	3.7173E+01	5.3068E+01	5.0769E+01	5.0952E+01
8.000E+01	8.2019E+01	1.2644E+01	1.2510E+01	2.7937E+01	2.4457E+01	2.2203E+01
1.000E+02	4.2286E+01	5.5882E+00	5.3654E+00	1.6784E+01	1.3708E+01	1.1511E+01
1.393E+02	1.5599E+01	1.6647E+00	1.5312E+00	7.7487E+00	5.7200E+00	4.2778E+00
1.405E+02	1.5228E+01	1.6171E+00	1.4860E+00	7.6047E+00	5.6004E+00	4.1767E+00
1.500E+02	1.2488E+01	1.2739E+00	1.1614E+00	6.5143E+00	4.7046E+00	3.4297E+00
2.000E+02	5.2523E+00	4.5476E-01	4.0198E-01	3.2992E+00	2.1930E+00	1.4498E+00
3.000E+02	1.5825E+00	1.1115E-01	9.5459E-02	1.2702E+00	7.5661E-01	4.3923E-01
4.000E+02	6.9657E-01	4.2840E-02	3.6567E-02	6.5503E-01	3.6303E-01	1.9389E-01
5.000E+02	3.7804E-01	2.1164E-02	1.8146E-02	3.9753E-01	2.0928E-01	1.0524E-01
6.000E+02	2.3401E-01	1.2210E-02	1.0567E-02	2.6732E-01	1.3570E-01	6.5195E-02
8.000E+02	1.1448E-01	5.4763E-03	4.8233E-03	1.4604E-01	7.0733E-02	3.1906E-02
1.000E+03	6.8135E-02	3.0600E-03	2.7530E-03	9.3113E-02	4.4004E-02	1.9000E-02
1.500E+03	2.8814E-02	1.2006E-03	1.1151E-03	4.2857E-02	2.0044E-02	8.0482E-03

Z= 99

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	.0E+00	3.4073E+05	1.0673E+06	1.3947E+06	1.8099E+04	1.2957E+04
1.023E+00	.0E+00	3.4670E+05	1.0235E+06	1.3350E+06	1.7625E+04	1.2686E+04
1.031E+00	9.4352E+04	3.4615E+05	1.0083E+06	1.3142E+06	1.7460E+04	1.2593E+04
1.315E+00	1.8313E+05	2.9770E+05	5.9645E+05	7.6546E+05	1.2889E+04	1.0116E+04
1.325E+00	1.8224E+05	2.9570E+05	5.8537E+05	7.5084E+05	1.2757E+04	1.0043E+04
1.500E+00	1.6624E+05	2.6063E+05	4.3097E+05	5.4947E+05	1.0816E+04	8.9557E+03
1.673E+00	1.4777E+05	2.2827E+05	3.2449E+05	4.1180E+05	9.3069E+03	8.0568E+03
1.687E+00	1.4645E+05	2.2596E+05	3.1765E+05	4.0296E+05	9.2042E+03	7.9934E+03
1.860E+00	1.3043E+05	1.9717E+05	2.4303E+05	3.0716E+05	8.0160E+03	7.2388E+03
1.875E+00	1.2910E+05	1.9481E+05	2.3769E+05	3.0034E+05	7.9248E+03	7.1790E+03
2.000E+00	1.1812E+05	1.7632E+05	1.9816E+05	2.4981E+05	7.2179E+03	6.7040E+03
3.000E+00	6.0287E+04	8.5491E+04	5.8372E+04	7.2557E+04	3.9248E+03	4.1776E+03
4.000E+00	3.3763E+04	4.6414E+04	2.2779E+04	2.8043E+04	2.4931E+03	2.8526E+03
4.364E+00	2.7918E+04	3.8075E+04	1.6940E+04	2.0790E+04	2.1663E+03	2.5224E+03
4.399E+00	2.7430E+04	3.7378E+04	1.6483E+04	2.0223E+04	2.1384E+03	2.4938E+03
4.620E+00	2.4585E+04	3.3322E+04	1.3918E+04	1.7048E+04	1.9743E+03	2.3232E+03
4.657E+00	2.4147E+04	3.2699E+04	1.3538E+04	1.6579E+04	1.9487E+03	2.2963E+03
5.000E+00	2.0513E+04	2.7594E+04	1.0565E+04	1.2905E+04	1.7344E+03	2.0676E+03
5.241E+00	1.8370E+04	2.4607E+04	8.9455E+03	1.0909E+04	1.6044E+03	1.9262E+03
5.283E+00	1.8028E+04	2.4130E+04	8.6960E+03	1.0602E+04	1.5833E+03	1.9030E+03
6.000E+00	1.3267E+04	1.7539E+04	5.5089E+03	6.6851E+03	1.2798E+03	1.5627E+03
6.561E+00	1.0622E+04	1.3923E+04	3.9750E+03	4.8075E+03	1.0999E+03	1.3546E+03
6.613E+00	1.0410E+04	1.3634E+04	3.8599E+03	4.6670E+03	1.0851E+03	1.3371E+03
6.964E+00	9.1285E+03	1.1898E+04	3.1892E+03	3.8488E+03	9.9334E+02	1.2289E+03
7.019E+00	8.9433E+03	1.1649E+04	3.0961E+03	3.7353E+03	9.7982E+02	1.2128E+03
8.000E+00	6.3552E+03	8.1754E+03	1.8947E+03	2.2742E+03	7.8099E+02	9.7322E+02
1.000E+01	3.4578E+03	4.3553E+03	8.0191E+02	9.5386E+02	5.2577E+02	6.5650E+02
1.500E+01	1.0606E+03	1.2832E+03	1.5747E+02	1.8395E+02	2.4916E+02	3.0343E+02
2.000E+01	4.3455E+02	5.1004E+02	4.7455E+01	5.4643E+01	1.4348E+02	1.6817E+02
2.039E+01	4.0899E+02	4.7903E+02	4.3774E+01	5.0353E+01	1.3823E+02	1.6151E+02
2.055E+01	3.9874E+02	4.6662E+02	4.2320E+01	4.8661E+01	1.3609E+02	1.5880E+02
2.599E+01	1.8639E+02	2.1247E+02	1.5497E+01	1.7589E+01	8.5402E+01	9.5400E+01
2.620E+01	1.8157E+02	2.0678E+02	1.4572E+01	1.6986E+01	8.4043E+01	9.3727E+01
2.687E+01	1.6707E+02	1.8971E+02	1.3424E+01	1.5207E+01	7.9873E+01	8.8610E+01
2.708E+01	1.6272E+02	1.8461E+02	1.2968E+01	1.4684E+01	7.8597E+01	8.7047E+01
3.000E+01	1.1575E+02	1.2976E+02	8.3106E+00	9.3528E+00	6.3832E+01	6.9124E+01
4.000E+01	4.3545E+01	4.7133E+01	2.3477E+00	2.5940E+00	3.5108E+01	3.5426E+01
5.000E+01	2.0033E+01	2.1074E+01	8.7119E-01	9.4782E-01	2.1789E+01	2.0686E+01
6.000E+01	1.0525E+01	1.0809E+01	3.8623E-01	4.1464E-01	1.4631E+01	1.3179E+01
8.000E+01	3.7662E+00	3.7213E+00	1.0688E-01	1.1226E-01	7.6908E+00	6.3558E+00
1.000E+02	1.6889E+00	1.6197E+00	3.9806E-02	4.1090E-02	4.6174E+00	3.5662E+00
1.393E+02	5.1197E-01	4.7066E-01	9.2532E-03	9.3187E-03	2.1309E+00	1.4905E+00
1.405E+02	4.9752E-01	4.5694E-01	8.9368E-03	8.9949E-03	2.0913E+00	1.4594E+00

Z= 99

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.500E+02	3.9310E-01	3.5822E-01	6.7099E-03	6.7243E-03	1.7914E+00	1.2264E+00
2.000E+02	1.4184E-01	1.2541E-01	1.9768E-03	1.9479E-03	9.0842E-01	5.7442E-01
3.000E+02	3.5054E-02	3.0144E-02	3.7539E-04	3.6116E-04	3.4964E-01	1.9847E-01
4.000E+02	1.3590E-02	1.1567E-02	1.2300E-04	1.1967E-04	1.8028E-01	9.5312E-02
5.000E+02	6.7424E-03	5.7591E-03	5.3773E-05	5.4124E-05	1.0939E-01	5.4972E-02
6.000E+02	3.9031E-03	3.3562E-03	2.8331E-05	2.9644E-05	7.3541E-02	3.5604E-02
8.000E+02	1.7536E-03	1.5344E-03	1.1778E-05	1.2131E-05	4.0173E-02	1.8567E-02
1.000E+03	9.8140E-04	8.8000E-04	5.8698E-06	6.7044E-06	2.5611E-02	1.1553E-02
1.500E+03	3.8604E-04	3.5526E-04	2.2890E-06	2.4084E-06	1.1786E-02	5.2617E-03

Z= 99

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	5 F 5/2	5 F 7/2	6 S 1/2
1.000E+00	6.6495E+04	6.6699E+04	1.0469E+05	7.1891E+04	9.0900E+04	4.6174E+03
1.023E+00	6.4533E+04	6.5242E+04	1.0205E+05	6.8979E+04	8.7119E+04	4.4703E+03
1.031E+00	6.3854E+04	6.4727E+04	1.0113E+05	6.7971E+04	8.5813E+04	4.4196E+03
1.315E+00	4.5639E+04	4.9081E+04	7.4178E+04	4.1587E+04	5.1924E+04	3.0996E+03
1.325E+00	4.5119E+04	4.8584E+04	7.3354E+04	4.0867E+04	5.1009E+04	3.0630E+03
1.500E+00	3.7636E+04	4.1141E+04	6.1189E+04	3.0862E+04	3.8324E+04	2.5425E+03
1.673E+00	3.1920E+04	3.5106E+04	5.1568E+04	2.3758E+04	2.9375E+04	2.1519E+03
1.687E+00	3.1532E+04	3.4687E+04	5.0907E+04	2.3297E+04	2.8796E+04	2.1256E+03
1.860E+00	2.7101E+04	2.9805E+04	4.3282E+04	1.8229E+04	2.2447E+04	1.8268E+03
1.875E+00	2.6764E+04	2.9428E+04	4.2698E+04	1.7861E+04	2.1987E+04	1.8043E+03
2.000E+00	2.4159E+04	2.6486E+04	3.8171E+04	1.5100E+04	1.8543E+04	1.6305E+03
3.000E+00	1.2321E+04	1.2722E+04	1.7626E+04	4.8498E+03	5.8678E+03	8.5133E+02
4.000E+00	7.3964E+03	7.0370E+03	9.4979E+03	1.9974E+03	2.3913E+03	5.2962E+02
4.364E+00	6.3024E+03	5.8147E+03	7.7875E+03	1.5076E+03	1.7688E+03	4.5770E+02
4.399E+00	6.2099E+03	5.7126E+03	7.6453E+03	1.4688E+03	1.7228E+03	4.5160E+02
4.620E+00	5.6679E+03	5.1179E+03	6.8197E+03	1.2504E+03	1.4636E+03	4.1579E+02
4.657E+00	5.5839E+03	5.0265E+03	6.6931E+03	1.2178E+03	1.4251E+03	4.1023E+02
5.000E+00	4.8834E+03	4.2725E+03	5.6535E+03	9.6087E+02	1.1213E+03	3.6371E+02
5.241E+00	4.4634E+03	3.8284E+03	5.0447E+03	8.1428E+02	9.5443E+02	3.3565E+02
5.283E+00	4.3956E+03	3.7574E+03	4.9476E+03	7.9249E+02	9.2861E+02	3.3111E+02
6.000E+00	3.4322E+03	2.7708E+03	3.6076E+03	5.1097E+02	5.9579E+02	2.6607E+02
6.561E+00	2.8741E+03	2.2227E+03	2.8709E+03	3.7290E+02	4.3328E+02	2.2782E+02
6.613E+00	2.8285E+03	2.1788E+03	2.8123E+03	3.6247E+02	4.2103E+02	2.2467E+02
6.964E+00	2.5490E+03	1.9133E+03	2.4581E+03	3.0136E+02	3.4932E+02	2.0526E+02
7.019E+00	2.5080E+03	1.8749E+03	2.4071E+03	2.9283E+02	3.3933E+02	2.0241E+02
8.000E+00	1.9167E+03	1.3374E+03	1.6968E+03	1.8183E+02	2.0958E+02	1.6059E+02
1.000E+01	1.1925E+03	7.3321E+02	9.1115E+02	7.8677E+01	8.9834E+01	1.0738E+02
1.500E+01	4.7838E+02	2.2826E+02	2.7262E+02	1.5969E+01	1.7897E+01	5.0397E+01
2.000E+01	2.4039E+02	9.4490E+01	1.0949E+02	4.8991E+00	5.4103E+00	2.8873E+01
2.039E+01	2.2940E+02	8.8987E+01	1.0290E+02	4.5238E+00	4.9907E+00	2.7809E+01
2.055E+01	2.2494E+02	8.6779E+01	1.0026E+02	4.3754E+00	4.8250E+00	2.7375E+01
2.599E+01	1.2485E+02	4.0874E+01	4.6000E+01	1.6208E+00	1.7639E+00	1.7124E+01
2.620E+01	1.2233E+02	3.9825E+01	4.4778E+01	1.5665E+00	1.7040E+00	1.6850E+01
2.687E+01	1.1468E+02	3.6674E+01	4.1114E+01	1.4061E+00	1.5273E+00	1.6010E+01
2.708E+01	1.1235E+02	3.5728E+01	4.0017E+01	1.3588E+00	1.4752E+00	1.5753E+01
3.000E+01	8.6200E+01	2.5493E+01	2.8213E+01	8.7462E-01	9.4371E-01	1.2780E+01
4.000E+01	4.0091E+01	9.6643E+00	1.0327E+01	2.4979E-01	2.6457E-01	7.1158E+00
5.000E+01	2.1701E+01	4.4696E+00	4.6417E+00	9.3344E-02	9.7341E-02	4.4144E+00
6.000E+01	1.2989E+01	2.3572E+00	2.3900E+00	4.1578E-02	4.2784E-02	2.9634E+00
8.000E+01	5.6721E+00	8.4716E-01	8.2245E-01	1.1577E-02	1.1654E-02	1.5570E+00
1.000E+02	2.9454E+00	3.8118E-01	3.5916E-01	4.3281E-03	4.2812E-03	9.3450E-01
1.393E+02	1.0945E+00	1.1605E-01	1.0481E-01	1.0111E-03	9.7555E-04	4.3103E-01
1.405E+02	1.0687E+00	1.1278E-01	1.0176E-01	9.7654E-04	9.4173E-04	4.2302E-01
1.500E+02	8.7786E-01	8.9173E-02	7.9836E-02	7.3383E-04	7.0457E-04	3.6231E-01
2.000E+02	3.7156E-01	3.2268E-02	2.8025E-02	2.1689E-04	2.0467E-04	1.8342E-01
3.000E+02	1.1271E-01	8.0012E-03	6.7531E-03	4.1310E-05	3.8688E-05	7.0592E-02
4.000E+02	4.9782E-02	3.1060E-03	2.6050E-03	1.3550E-05	1.2860E-05	3.6397E-02
5.000E+02	2.7071E-02	1.5411E-03	1.2988E-03	5.9590E-06	5.8000E-06	2.2084E-02

Z= 99

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	5 F 5/2	5 F 7/2	6 S 1/2
6.000E+02	1.6775E-02	8.9224E-04	7.5865E-04	3.1424E-06	3.1511E-06	1.4846E-02
8.000E+02	8.2141E-03	4.0136E-04	3.4692E-04	1.2699E-06	1.3300E-06	8.1097E-03
1.000E+03	4.8903E-03	2.2503E-04	1.9835E-04	6.4753E-07	7.1790E-07	5.1703E-03
1.500E+03	2.0733E-03	8.8496E-05	8.0488E-05	2.2469E-07	2.7341E-07	2.3799E-03

Z= 99

ENERGY	6 P 1/2	6 P 3/2	7 S 1/2
1.000E+00	2.8602E+03	1.0567E+04	4.3191E+02
1.023E+00	2.7876E+03	1.0227E+04	4.1648E+02
1.031E+00	2.7625E+03	1.0109E+04	4.1119E+02
1.315E+00	2.1009E+03	7.0464E+03	2.7771E+02
1.325E+00	2.0819E+03	6.9612E+03	2.7407E+02
1.500E+00	1.8061E+03	5.7488E+03	2.2307E+02
1.673E+00	1.5892E+03	4.8378E+03	1.8589E+02
1.687E+00	1.5742E+03	4.7766E+03	1.8342E+02
1.860E+00	1.3998E+03	4.0799E+03	1.5541E+02
1.875E+00	1.3863E+03	4.0273E+03	1.5331E+02
2.000E+00	1.2806E+03	3.6222E+03	1.3724E+02
3.000E+00	7.5566E+02	1.8146E+03	6.8768E+01
4.000E+00	5.0252E+02	1.0802E+03	4.2880E+01
4.364E+00	4.4151E+02	9.1860E+02	3.7089E+01
4.399E+00	4.3625E+02	9.0496E+02	3.6598E+01
4.620E+00	4.0504E+02	8.2509E+02	3.3713E+01
4.657E+00	4.0015E+02	8.1273E+02	3.3264E+01
5.000E+00	3.5870E+02	7.0983E+02	2.9514E+01
5.241E+00	3.3323E+02	6.4823E+02	2.7250E+01
5.283E+00	3.2907E+02	6.3830E+02	2.6884E+01
6.000E+00	2.6842E+02	4.9745E+02	2.1635E+01
6.561E+00	2.3171E+02	4.1609E+02	1.8543E+01
6.613E+00	2.2865E+02	4.0945E+02	1.8288E+01
6.964E+00	2.0967E+02	3.6877E+02	1.6718E+01
7.019E+00	2.0686E+02	3.6282E+02	1.6487E+01
8.000E+00	1.6517E+02	2.7693E+02	1.3099E+01
1.000E+01	1.1064E+02	1.7205E+02	8.7825E+00
1.500E+01	5.0661E+01	6.9449E+01	4.1409E+00
2.000E+01	2.8616E+01	3.4893E+01	2.3794E+00
2.039E+01	2.7483E+01	3.3296E+01	2.2920E+00
2.055E+01	2.7021E+01	3.2649E+01	2.2564E+00
2.599E+01	1.6229E+01	1.8122E+01	1.4142E+00
2.620E+01	1.5944E+01	1.7757E+01	1.3917E+00
2.687E+01	1.5074E+01	1.6646E+01	1.3225E+00
2.708E+01	1.4808E+01	1.6308E+01	1.3013E+00
3.000E+01	1.1759E+01	1.2512E+01	1.0564E+00
4.000E+01	6.0273E+00	5.8202E+00	5.8052E-01
5.000E+01	3.5204E+00	3.1509E+00	3.6010E-01
6.000E+01	2.2433E+00	1.8861E+00	2.4173E-01
8.000E+01	1.0823E+00	8.2372E-01	1.2700E-01
1.000E+02	6.0740E-01	4.2774E-01	7.6222E-02
1.393E+02	2.5392E-01	1.5932E-01	3.5156E-02
1.405E+02	2.4862E-01	1.5556E-01	3.4502E-02
1.500E+02	2.0892E-01	1.2779E-01	2.9552E-02
2.000E+02	9.7527E-02	5.4102E-02	1.4962E-02
3.000E+02	3.3703E-02	1.6418E-02	5.7596E-03
4.000E+02	1.6187E-02	7.2529E-03	2.9708E-03
5.000E+02	9.3362E-03	3.9444E-03	1.8038E-03
6.000E+02	6.0472E-03	2.4447E-03	1.2136E-03
8.000E+02	3.1533E-03	1.1977E-03	6.6465E-04
1.000E+03	1.9622E-03	7.1333E-04	4.2533E-04
1.500E+03	8.9396E-04	3.0298E-04	1.9884E-04

Z= 100 27 STATES, 52 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	143.0865	.98725
2 S 1/2	2.00	27.6986	.89840
2 P 1/2	2.00	26.7999	.84838
2 P 3/2	4.00	20.8907	.80499
3 S 1/2	2.00	7.1990	.72811
3 P 1/2	2.00	6.7871	.66485
3 P 3/2	4.00	5.3918	.60392
3 D 3/2	4.00	4.7601	.42618
3 D 5/2	6.00	4.4916	.41424
4 S 1/2	2.00	1.9317	.49971
4 P 1/2	2.00	1.7403	.43766
4 P 3/2	4.00	1.3595	.37696
4 D 3/2	4.00	1.0617	.22807
4 D 5/2	6.00	.9939	.21633
4 F 5/2	6.00	.6002	.07039
4 F 7/2	8.00	.5811	.06870
5 S 1/2	2.00	.4479	.27787
5 P 1/2	2.00	.3685	.22859
5 P 3/2	4.00	.2692	.18554
5 D 3/2	4.00	.1539	.08969
5 D 5/2	6.00	.1392	.08258
5 F 5/2	5.14	.0122	.01170
5 F 7/2	6.86	.0101	.01089
6 S 1/2	2.00	.0652	.09875
6 P 1/2	2.00	.0413	.06766
6 P 3/2	4.00	.0258	.04546
7 S 1/2	2.00	.0059	.01271

Z= 100 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	3.1624E+06	.0E+00	.0E+00	.0E+00	3.1624E+06
1.0607E+00	3.0698E+06	.0E+00	.0E+00	.0E+00	3.0698E+06
1.0692E+00	3.1185E+06	.0E+00	.0E+00	.0E+00	3.1185E+06
1.3581E+00	2.0959E+06	.0E+00	.0E+00	.0E+00	2.0959E+06
1.3690E+00	2.1965E+06	.0E+00	.0E+00	.0E+00	2.1965E+06
1.5000E+00	1.8383E+06	.0E+00	.0E+00	.0E+00	1.8383E+06
1.7386E+00	1.3608E+06	.0E+00	.0E+00	.0E+00	1.3608E+06
1.7525E+00	1.3541E+06	.0E+00	.0E+00	.0E+00	1.3541E+06
1.9297E+00	1.1060E+06	.0E+00	.0E+00	.0E+00	1.1060E+06
1.9452E+00	1.1066E+06	.0E+00	.0E+00	.0E+00	1.1066E+06
2.0000E+00	1.0428E+06	.0E+00	.0E+00	.0E+00	1.0428E+06
3.0000E+00	4.2789E+05	.0E+00	.0E+00	.0E+00	4.2789E+05
4.0000E+00	2.2088E+05	.0E+00	.0E+00	.0E+00	2.2088E+05
4.4871E+00	1.6869E+05	.0E+00	.0E+00	.0E+00	1.6869E+05
4.5230E+00	3.6280E+05	.0E+00	.0E+00	1.9725E+05	1.6555E+05
4.7553E+00	3.3163E+05	.0E+00	.0E+00	1.8457E+05	1.4706E+05
4.7934E+00	4.4861E+05	.0E+00	.0E+00	3.0430E+05	1.4431E+05
5.0000E+00	4.1284E+05	.0E+00	.0E+00	2.8229E+05	1.3055E+05
5.3864E+00	3.4303E+05	.0E+00	.0E+00	2.3370E+05	1.0932E+05
5.4296E+00	3.9280E+05	.0E+00	.0E+00	2.8554E+05	1.0726E+05
6.0000E+00	3.0574E+05	.0E+00	.0E+00	2.2137E+05	8.4364E+04
6.7803E+00	2.2308E+05	.0E+00	.0E+00	1.6033E+05	6.2751E+04
6.8346E+00	2.3173E+05	.0E+00	.0E+00	1.7019E+05	6.1545E+04
7.1918E+00	2.0392E+05	.0E+00	.0E+00	1.4956E+05	5.4358E+04
7.2494E+00	2.0825E+05	.0E+00	.0E+00	1.5494E+05	5.3310E+04
8.0000E+00	1.6311E+05	.0E+00	.0E+00	1.2123E+05	4.1883E+04
1.0000E+01	9.3661E+04	.0E+00	.0E+00	6.9533E+04	2.4127E+04
1.5000E+01	3.3670E+04	.0E+00	.0E+00	2.4946E+04	8.7236E+03

Z= 100 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY (KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
2.0000E+01	1.6107E+04	.0E+00	.0E+00	1.1910E+04	4.1969E+03
2.0870E+01	1.4434E+04	.0E+00	.0E+00	1.0670E+04	3.7639E+03
2.1037E+01	3.2716E+04	.0E+00	1.8576E+04	1.0452E+04	3.6879E+03
2.6773E+01	1.7098E+04	.0E+00	9.5188E+03	5.5947E+03	1.9843E+03
2.6987E+01	2.4139E+04	.0E+00	1.6715E+04	5.4799E+03	1.9439E+03
2.7671E+01	2.2637E+04	.0E+00	1.5680E+04	5.1345E+03	1.8223E+03
2.7893E+01	2.5608E+04	.0E+00	1.8794E+04	5.0289E+03	1.7852E+03
3.0000E+01	2.1281E+04	.0E+00	1.5643E+04	4.1587E+03	1.4787E+03
4.0000E+01	1.0285E+04	.0E+00	7.6277E+03	1.9573E+03	7.0011E+02
5.0000E+01	5.7751E+03	.0E+00	4.2979E+03	1.0869E+03	3.9038E+02
6.0000E+01	3.5880E+03	.0E+00	2.6757E+03	6.7065E+02	2.4165E+02
8.0000E+01	1.6820E+03	.0E+00	1.2570E+03	3.1208E+02	1.1298E+02
1.0000E+02	9.3113E+02	.0E+00	6.9645E+02	1.7214E+02	6.2533E+01
1.4294E+02	3.6069E+02	.0E+00	2.6998E+02	6.6451E+01	2.4256E+01
1.4409E+02	1.3646E+03	1.0115E+03	2.6434E+02	6.5058E+01	2.3749E+01
1.5000E+02	1.2395E+03	9.2208E+02	2.3764E+02	5.8471E+01	2.1355E+01
2.0000E+02	6.0488E+02	4.5601E+02	1.1146E+02	2.7374E+01	1.0034E+01
3.0000E+02	2.2158E+02	1.6917E+02	3.9257E+01	9.6179E+00	3.5380E+00
4.0000E+02	1.1139E+02	8.5709E+01	1.9246E+01	4.7049E+00	1.7338E+00
5.0000E+02	6.6684E+01	5.1602E+01	1.1306E+01	2.7582E+00	1.0173E+00
6.0000E+02	4.4500E+01	3.4587E+01	7.4343E+00	1.8103E+00	6.6835E-01
8.0000E+02	2.4155E+01	1.8885E+01	3.9552E+00	9.6035E-01	3.5475E-01
1.0000E+03	1.5371E+01	1.2059E+01	2.4864E+00	6.0245E-01	2.2261E-01
1.5000E+03	7.0851E+00	5.5780E+00	1.1324E+00	2.7362E-01	1.0109E-01

Z= 100

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.061E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.069E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.358E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.369E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.739E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.752E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.930E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.945E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.487E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.523E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.755E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.793E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
5.386E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
5.430E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
6.780E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
6.835E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
7.192E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.3184E+04
7.249E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.2534E+04
8.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	8.3696E+03	1.2425E+04
1.000E+01	.0E+00	.0E+00	.0E+00	.0E+00	7.2624E+03	1.1370E+04
1.500E+01	.0E+00	.0E+00	.0E+00	.0E+00	5.3636E+03	8.3341E+03
2.000E+01	.0E+00	.0E+00	.0E+00	.0E+00	2.8575E+03	4.2998E+03
2.087E+01	.0E+00	.0E+00	.0E+00	.0E+00	1.7337E+03	2.4709E+03
2.087E+01	.0E+00	.0E+00	.0E+00	.0E+00	1.6049E+03	2.2655E+03
2.104E+01	.0E+00	.0E+00	.0E+00	1.8576E+04	1.5817E+03	2.2289E+03
2.677E+01	.0E+00	.0E+00	.0E+00	9.5188E+03	1.0076E+03	1.3393E+03
2.699E+01	.0E+00	.0E+00	7.4005E+03	9.3145E+03	9.9228E+02	1.3163E+03

Z= 100

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
2.767E+01	.0E+00	.0E+00	6.9821E+03	8.6978E+03	9.4556E+02	1.2465E+03
2.789E+01	.0E+00	3.3860E+03	6.8989E+03	8.5087E+03	9.3111E+02	1.2249E+03
3.000E+01	.0E+00	2.9952E+03	5.7093E+03	6.9385E+03	8.0864E+02	1.0420E+03
4.000E+01	.0E+00	1.7885E+03	2.8387E+03	3.0005E+03	4.5455E+02	5.3770E+02
5.000E+01	.0E+00	1.1566E+03	1.5956E+03	1.5456E+03	2.8568E+02	3.1443E+02
6.000E+01	.0E+00	7.9918E+02	9.8527E+02	8.9121E+02	1.9338E+02	2.0031E+02
8.000E+01	.0E+00	4.3364E+02	4.5416E+02	3.6918E+02	1.0260E+02	9.6444E+01
1.000E+02	.0E+00	2.6466E+02	2.4674E+02	1.8505E+02	6.1925E+01	5.4006E+01
1.429E+02	.0E+00	1.1684E+02	9.2226E+01	6.0916E+01	2.7072E+01	2.1026E+01
1.441E+02	1.0115E+03	1.1469E+02	9.0221E+01	5.9424E+01	2.6571E+01	2.0585E+01
1.500E+02	9.2208E+02	1.0444E+02	8.0761E+01	5.2445E+01	2.4183E+01	1.8499E+01
2.000E+02	4.5601E+02	5.3224E+01	3.6662E+01	2.1574E+01	1.2288E+01	8.6145E+00
3.000E+02	1.6917E+02	2.0605E+01	1.2299E+01	6.3535E+00	4.7500E+00	2.9697E+00
4.000E+02	8.5709E+01	1.0661E+01	5.8197E+00	2.7655E+00	2.4562E+00	1.4249E+00
5.000E+02	5.1602E+01	6.4863E+00	3.3284E+00	1.4915E+00	1.4935E+00	8.2150E-01
6.000E+02	3.4587E+01	4.3700E+00	2.1446E+00	9.1966E-01	1.0056E+00	5.3202E-01
8.000E+02	1.8885E+01	2.3948E+00	1.1124E+00	4.4808E-01	5.5045E-01	2.7743E-01
1.000E+03	1.2059E+01	1.5298E+00	6.9043E-01	2.6611E-01	3.5132E-01	1.7266E-01
1.500E+03	5.5780E+00	7.0579E-01	3.1392E-01	1.1265E-01	1.6186E-01	7.8752E-02

Z= 100

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.061E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.069E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.358E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.369E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.3255E+05
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.1720E+05
1.739E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	9.7907E+04
1.752E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.5777E+04	9.6934E+04
1.930E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.4772E+04	8.5935E+04
1.945E+00	.0E+00	.0E+00	.0E+00	1.9121E+04	1.4752E+04	8.5080E+04
2.000E+00	.0E+00	.0E+00	.0E+00	1.7927E+04	1.4670E+04	8.2153E+04
3.000E+00	.0E+00	.0E+00	.0E+00	1.1218E+04	1.2049E+04	4.5704E+04
4.000E+00	.0E+00	.0E+00	.0E+00	7.6959E+03	9.2593E+03	2.8468E+04
4.487E+00	.0E+00	.0E+00	.0E+00	6.5556E+03	8.1408E+03	2.3279E+04
4.523E+00	.0E+00	.0E+00	1.9725E+05	6.4815E+03	8.0635E+03	2.2949E+04
4.755E+00	.0E+00	.0E+00	1.8457E+05	6.0275E+03	7.5870E+03	2.0976E+04
4.793E+00	.0E+00	1.2357E+05	1.8073E+05	5.9570E+03	7.5128E+03	2.0676E+04
5.000E+00	.0E+00	1.1969E+05	1.6259E+05	5.5945E+03	7.1294E+03	1.9157E+04
5.386E+00	.0E+00	9.9686E+04	1.3402E+05	5.0033E+03	6.4802E+03	1.6700E+04
5.430E+00	5.6678E+04	9.7737E+04	1.3113E+05	4.9437E+03	6.4121E+03	1.6453E+04
6.000E+00	4.7809E+04	7.4995E+04	9.8570E+04	4.2466E+03	5.5889E+03	1.3619E+04
6.780E+00	3.8974E+04	5.2814E+04	6.8545E+04	3.5016E+03	4.6864E+03	1.0744E+04
6.835E+00	3.8384E+04	5.1598E+04	6.7022E+04	3.4575E+03	4.6310E+03	1.0576E+04
7.192E+00	3.4729E+04	4.4489E+04	5.7808E+04	3.1875E+03	4.2865E+03	9.5584E+03
7.249E+00	3.4181E+04	4.3522E+04	5.6445E+04	3.1469E+03	4.2342E+03	9.4076E+03
8.000E+00	2.8137E+04	3.2685E+04	4.1773E+04	2.6790E+03	3.6301E+03	7.7106E+03
1.000E+01	1.7997E+04	1.6796E+04	2.1043E+04	1.8400E+03	2.5056E+03	4.8325E+03
1.500E+01	7.4163E+03	4.7013E+03	5.6715E+03	8.9531E+02	1.1901E+03	1.9556E+03
2.000E+01	3.7412E+03	1.8261E+03	2.1384E+03	5.2215E+02	6.6779E+02	9.8602E+02
2.087E+01	3.3698E+03	1.5833E+03	1.8463E+03	4.8121E+02	6.1113E+02	8.8841E+02
2.104E+01	3.3044E+03	1.5415E+03	1.7960E+03	4.7387E+02	6.0100E+02	8.7114E+02
2.677E+01	1.7991E+03	6.7901E+02	7.6969E+02	2.9557E+02	3.5787E+02	4.7557E+02
2.699E+01	1.7625E+03	6.6062E+02	7.4813E+02	2.9091E+02	3.5163E+02	4.6596E+02
2.767E+01	1.6521E+03	6.0599E+02	6.8431E+02	2.7675E+02	3.3272E+02	4.3700E+02
2.789E+01	1.6183E+03	5.8950E+02	6.6511E+02	2.7237E+02	3.2689E+02	4.2813E+02
3.000E+01	1.3378E+03	4.5795E+02	5.1241E+02	2.3531E+02	2.7784E+02	3.5454E+02
4.000E+01	6.1859E+02	1.6655E+02	1.7992E+02	1.3029E+02	1.4325E+02	1.6508E+02
5.000E+01	3.3304E+02	7.4988E+01	7.8711E+01	8.1190E+01	8.3966E+01	8.9407E+01

Z= 100

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
6.000E+01	1.9839E+02	3.8809E+01	3.9758E+01	5.4674E+01	5.3634E+01	5.3532E+01
8.000E+01	8.6009E+01	1.3614E+01	1.3411E+01	2.8846E+01	2.5961E+01	2.3387E+01
1.000E+02	4.4422E+01	6.0289E+00	5.7621E+00	1.7360E+01	1.4603E+01	1.2147E+01
1.429E+02	1.5214E+01	1.6418E+00	1.4978E+00	7.5696E+00	5.7247E+00	4.1934E+00
1.441E+02	1.4853E+01	1.5950E+00	1.4538E+00	7.4293E+00	5.6055E+00	4.0946E+00
1.500E+02	1.3159E+01	1.3790E+00	1.2507E+00	6.7600E+00	5.0412E+00	3.6306E+00
2.000E+02	5.5449E+00	4.9325E-01	4.3360E-01	3.4320E+00	2.3589E+00	1.5377E+00
3.000E+02	1.6741E+00	1.2087E-01	1.0315E-01	1.3260E+00	8.1761E-01	4.6687E-01
4.000E+02	7.3761E-01	4.6655E-02	3.9542E-02	6.8552E-01	3.9339E-01	2.0630E-01
5.000E+02	4.0048E-01	2.3075E-02	1.9629E-02	4.1678E-01	2.2719E-01	1.1202E-01
6.000E+02	2.4793E-01	1.3323E-02	1.1431E-02	2.8061E-01	1.4750E-01	6.9403E-02
8.000E+02	1.2127E-01	5.9825E-03	5.2169E-03	1.5356E-01	7.7003E-02	3.3964E-02
1.000E+03	7.2149E-02	3.3458E-03	2.9768E-03	9.7980E-02	4.7956E-02	2.0220E-02
1.500E+03	3.0494E-02	1.3157E-03	1.2025E-03	4.5111E-02	2.1869E-02	8.5569E-03

Z= 100

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	.0E+00	1.2319E+05	1.1088E+06	1.4490E+06	1.8125E+04	1.2784E+04
1.061E+00	.0E+00	3.4149E+05	9.9215E+05	1.2933E+06	1.6917E+04	1.2085E+04
1.069E+00	8.9802E+04	3.4099E+05	9.7712E+05	1.2728E+06	1.6758E+04	1.1996E+04
1.358E+00	1.7961E+05	2.9195E+05	5.7930E+05	7.4299E+05	1.2417E+04	9.6664E+03
1.369E+00	1.7870E+05	2.8992E+05	5.6850E+05	7.2873E+05	1.2289E+04	9.5972E+03
1.500E+00	1.6712E+05	2.6508E+05	4.5428E+05	5.7909E+05	1.0891E+04	8.8300E+03
1.739E+00	1.4324E+05	2.2092E+05	3.0941E+05	3.9216E+05	8.8944E+03	7.6705E+03
1.752E+00	1.4193E+05	2.1864E+05	3.0286E+05	3.8369E+05	8.7962E+03	7.6106E+03
1.930E+00	1.2632E+05	1.9064E+05	2.3230E+05	2.9318E+05	7.6755E+03	6.9077E+03
1.945E+00	1.2501E+05	1.8834E+05	2.2716E+05	2.8663E+05	7.5881E+03	6.8510E+03
2.000E+00	1.2039E+05	1.8040E+05	2.1007E+05	2.6486E+05	7.2904E+03	6.6557E+03
3.000E+00	6.2022E+04	8.8200E+04	6.2348E+04	7.7481E+04	3.9785E+03	4.1902E+03
4.000E+00	3.4966E+04	4.8115E+04	2.4456E+04	3.0086E+04	2.5329E+03	2.8807E+03
4.487E+00	2.7236E+04	3.7072E+04	1.6565E+04	2.0296E+04	2.1056E+03	2.4542E+03
4.523E+00	2.6759E+04	3.6393E+04	1.6118E+04	1.9742E+04	2.0786E+03	2.4265E+03
4.755E+00	2.3923E+04	3.2356E+04	1.3558E+04	1.6579E+04	1.9159E+03	2.2582E+03
4.793E+00	2.3496E+04	3.1749E+04	1.3188E+04	1.6122E+04	1.8911E+03	2.2322E+03
5.000E+00	2.1335E+04	2.8705E+04	1.1385E+04	1.3897E+04	1.7651E+03	2.0987E+03
5.386E+00	1.7930E+04	2.3963E+04	8.7587E+03	1.0662E+04	1.5612E+03	1.8787E+03
5.430E+00	1.7596E+04	2.3498E+04	8.5142E+03	1.0361E+04	1.5407E+03	1.8562E+03
6.000E+00	1.3844E+04	1.8299E+04	5.9541E+03	7.2188E+03	1.3044E+03	1.5927E+03
6.780E+00	1.0218E+04	1.3300E+04	3.8122E+03	4.6007E+03	1.0609E+03	1.3121E+03
6.835E+00	1.0014E+04	1.3073E+04	3.7017E+03	4.4660E+03	1.0465E+03	1.2953E+03
7.192E+00	8.7935E+03	1.1423E+04	3.0652E+03	3.6911E+03	9.5920E+02	1.1921E+03
7.249E+00	8.6148E+03	1.1183E+04	2.9756E+03	3.5822E+03	9.4616E+02	1.1766E+03
8.000E+00	6.6640E+03	8.5686E+03	2.0567E+03	2.4663E+03	7.9797E+02	9.9822E+02
1.000E+01	3.6392E+03	4.5798E+03	8.7346E+02	1.0378E+03	5.3827E+02	6.7657E+02
1.500E+01	1.1233E+03	1.3570E+03	1.7254E+02	2.0128E+02	2.5596E+02	3.1527E+02
2.000E+01	4.6221E+02	5.4143E+02	5.2192E+01	6.0008E+01	1.4775E+02	1.7571E+02
2.087E+01	4.0389E+02	4.7088E+02	4.3607E+01	5.0023E+01	1.3599E+02	1.6068E+02
2.104E+01	3.9378E+02	4.5868E+02	4.2161E+01	4.8342E+01	1.3389E+02	1.5799E+02
2.677E+01	1.8047E+02	2.0451E+02	1.5042E+01	1.7016E+01	8.3016E+01	9.3816E+01
2.699E+01	1.7580E+02	1.9903E+02	1.4534E+01	1.6432E+01	8.1696E+01	9.2176E+01
2.767E+01	1.6189E+02	1.8274E+02	1.3045E+01	1.4727E+01	7.7680E+01	8.7203E+01
2.789E+01	1.5768E+02	1.7783E+02	1.2602E+01	1.4221E+01	7.6440E+01	8.5671E+01
3.000E+01	1.2382E+02	1.3843E+02	9.1878E+00	1.0322E+01	6.5941E+01	7.2778E+01
4.000E+01	4.6753E+01	5.0452E+01	2.6046E+00	2.8724E+00	3.6348E+01	3.7493E+01
5.000E+01	2.1568E+01	2.2613E+01	9.6888E-01	1.0520E+00	2.2596E+01	2.1980E+01
6.000E+01	1.1356E+01	1.1621E+01	4.3032E-01	4.6097E-01	1.5194E+01	1.4046E+01
8.000E+01	4.0764E+00	4.0118E+00	1.1940E-01	1.2511E-01	8.0036E+00	6.8066E+00
1.000E+02	1.8321E+00	1.7496E+00	4.4559E-02	4.5879E-02	4.8133E+00	3.8325E+00
1.429E+02	5.0851E-01	4.6383E-01	9.2967E-03	9.3189E-03	2.0977E+00	1.5051E+00
1.441E+02	4.9420E-01	4.5035E-01	8.9791E-03	8.9960E-03	2.0588E+00	1.4738E+00

Z= 100

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.500E+02	4.2803E-01	3.8818E-01	7.5387E-03	7.5326E-03	1.8734E+00	1.3257E+00
2.000E+02	1.5480E-01	1.3615E-01	2.2260E-03	2.1861E-03	9.5230E-01	6.2334E-01
3.000E+02	3.8365E-02	3.2792E-02	4.2353E-04	4.0576E-04	3.6783E-01	2.1638E-01
4.000E+02	1.4899E-02	1.2594E-02	1.3868E-04	1.3483E-04	1.9013E-01	1.0420E-01
5.000E+02	7.4019E-03	6.2714E-03	6.0812E-05	6.1242E-05	1.1557E-01	6.0207E-02
6.000E+02	4.2876E-03	3.6551E-03	3.2185E-05	3.3269E-05	7.7797E-02	3.9044E-02
8.000E+02	1.9277E-03	1.6734E-03	1.3319E-05	1.3700E-05	4.2564E-02	2.0394E-02
1.000E+03	1.0809E-03	9.5823E-04	6.7702E-06	7.5827E-06	2.7156E-02	1.2701E-02
1.500E+03	4.2515E-04	3.8728E-04	2.4284E-06	2.7326E-06	1.2501E-02	5.7921E-03

Z= 100

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	5 F 5/2	5 F 7/2	6 S 1/2
1.000E+00	6.8094E+04	6.8079E+04	1.0737E+05	8.3118E+04	1.0514E+05	4.6550E+03
1.061E+00	6.3012E+04	6.4305E+04	1.0049E+05	7.4707E+04	9.4213E+04	4.2808E+03
1.069E+00	6.2346E+04	6.3788E+04	9.9560E+04	7.3607E+04	9.2788E+04	4.2322E+03
1.358E+00	4.4736E+04	4.8404E+04	7.3085E+04	4.5234E+04	5.6394E+04	2.9843E+03
1.369E+00	4.4225E+04	4.7910E+04	7.2266E+04	4.4449E+04	5.5395E+04	2.9491E+03
1.500E+00	3.8698E+04	4.2403E+04	6.3236E+04	3.6172E+04	4.4907E+04	2.5719E+03
1.739E+00	3.0980E+04	3.4230E+04	5.0177E+04	2.5429E+04	3.1381E+04	2.0541E+03
1.752E+00	3.0603E+04	3.3817E+04	4.9527E+04	2.4933E+04	3.0760E+04	2.0291E+03
1.930E+00	2.6344E+04	2.9083E+04	4.2145E+04	1.9557E+04	2.4036E+04	1.7478E+03
1.945E+00	2.6016E+04	2.8712E+04	4.1571E+04	1.9160E+04	2.3541E+04	1.7262E+03
2.000E+00	2.4897E+04	2.7444E+04	3.9617E+04	1.7831E+04	2.1885E+04	1.6529E+03
3.000E+00	1.2726E+04	1.3266E+04	1.8390E+04	5.7792E+03	6.9858E+03	8.6514E+02
4.000E+00	7.6513E+03	7.3703E+03	9.9470E+03	2.3949E+03	2.8640E+03	5.3896E+02
4.487E+00	6.1964E+03	5.7354E+03	7.6600E+03	1.6547E+03	1.9375E+03	4.4479E+02
4.523E+00	6.1053E+03	5.6346E+03	7.5199E+03	1.6122E+03	1.8871E+03	4.3887E+02
4.755E+00	5.5603E+03	5.0352E+03	6.6895E+03	1.3674E+03	1.5975E+03	4.0337E+02
4.793E+00	5.4777E+03	4.9451E+03	6.5650E+03	1.3318E+03	1.5554E+03	3.9798E+02
5.000E+00	5.0587E+03	4.4911E+03	5.9397E+03	1.1576E+03	1.3494E+03	3.7056E+02
5.386E+00	4.3892E+03	3.7782E+03	4.9633E+03	9.0074E+02	1.0470E+03	3.2651E+02
5.430E+00	4.3224E+03	3.7081E+03	4.8676E+03	8.7665E+02	1.0186E+03	3.2209E+02
6.000E+00	3.5600E+03	2.9215E+03	3.8004E+03	6.1804E+02	7.1966E+02	2.7138E+02
6.780E+00	2.7929E+03	2.1624E+03	2.7818E+03	4.0208E+02	4.6590E+02	2.1956E+02
6.835E+00	2.7485E+03	2.1196E+03	2.7248E+03	3.9082E+02	4.5271E+02	2.1652E+02
7.192E+00	2.4795E+03	1.8639E+03	2.3849E+03	3.2565E+02	3.7643E+02	1.9805E+02
7.249E+00	2.4396E+03	1.8265E+03	2.3353E+03	3.1643E+02	3.6566E+02	1.9530E+02
8.000E+00	1.9926E+03	1.4170E+03	1.7953E+03	2.2118E+02	2.5455E+02	1.6412E+02
1.000E+01	1.2420E+03	7.7964E+02	9.6722E+02	9.6102E+01	1.0955E+02	1.0993E+02
1.500E+01	5.0004E+02	2.4428E+02	2.9107E+02	1.9643E+01	2.1971E+01	5.1748E+01
2.000E+01	2.5194E+02	1.0157E+02	1.1737E+02	6.0538E+00	6.6714E+00	2.9711E+01
2.087E+01	2.2700E+02	8.8881E+01	1.0223E+02	5.0701E+00	5.5744E+00	2.7328E+01
2.104E+01	2.2259E+02	8.6678E+01	9.9607E+01	4.9041E+00	5.3895E+00	2.6902E+01
2.677E+01	1.2158E+02	4.0037E+01	4.4761E+01	1.7709E+00	1.9196E+00	1.6625E+01
2.699E+01	1.1913E+02	3.9010E+01	4.3572E+01	1.7116E+00	1.8544E+00	1.6359E+01
2.767E+01	1.1173E+02	3.5952E+01	4.0037E+01	1.5380E+00	1.6638E+00	1.5551E+01
2.789E+01	1.0947E+02	3.5025E+01	3.8969E+01	1.4864E+00	1.6072E+00	1.5301E+01
3.000E+01	9.0683E+01	2.7564E+01	3.0402E+01	1.0872E+00	1.1703E+00	1.3189E+01
4.000E+01	4.2290E+01	1.0491E+01	1.1168E+01	3.1170E-01	3.2931E-01	7.3607E+00
5.000E+01	2.2939E+01	4.8659E+00	5.0324E+00	1.1679E-01	1.2147E-01	4.5738E+00
6.000E+01	1.3753E+01	2.5718E+00	2.5963E+00	5.2131E-02	5.3493E-02	3.0745E+00
8.000E+01	6.0210E+00	9.2733E-01	8.9614E-01	1.4558E-02	1.4609E-02	1.6189E+00
1.000E+02	3.1325E+00	4.1821E-01	3.9214E-01	5.4542E-03	5.3785E-03	9.7324E-01
1.429E+02	1.0816E+00	1.1662E-01	1.0443E-01	1.1441E-03	1.0981E-03	4.2391E-01
1.441E+02	1.0561E+00	1.1335E-01	1.0141E-01	1.1052E-03	1.0601E-03	4.1605E-01
1.500E+02	9.3661E-01	9.8217E-02	8.7447E-02	9.2837E-04	8.8813E-04	3.7854E-01
2.000E+02	3.9720E-01	3.5625E-02	3.0756E-02	2.7504E-04	2.5854E-04	1.9209E-01
3.000E+02	1.2076E-01	8.8581E-03	7.4261E-03	5.2526E-05	4.8959E-05	7.4190E-02
4.000E+02	5.3392E-02	3.4444E-03	2.8682E-03	1.7253E-05	1.6296E-05	3.8347E-02
5.000E+02	2.9046E-02	1.7115E-03	1.4309E-03	7.5982E-06	7.3485E-06	2.3309E-02

Z= 100

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	5 F 5/2	5 F 7/2	6 S 1/2
6.000E+02	1.8000E-02	9.9172E-04	8.3543E-04	4.0104E-06	3.9972E-06	1.5689E-02
8.000E+02	8.8137E-03	4.4661E-04	3.8229E-04	1.6235E-06	1.6868E-06	8.5837E-03
1.000E+03	5.2450E-03	2.5062E-04	2.1833E-04	8.2867E-07	9.0961E-07	5.4765E-03
1.500E+03	2.2220E-03	9.8671E-05	8.8553E-05	2.8785E-07	3.4570E-07	2.5216E-03

Z= 100

ENERGY	6 P 1/2	6 P 3/2	7 S 1/2
1.000E+00	2.8362E+03	1.0723E+04	4.2754E+02
1.061E+00	2.6525E+03	9.8511E+03	3.8911E+02
1.069E+00	2.6287E+03	9.7378E+03	3.8417E+02
1.358E+00	2.0090E+03	6.8190E+03	2.6106E+02
1.369E+00	1.9909E+03	6.7364E+03	2.5765E+02
1.500E+00	1.7946E+03	5.8512E+03	2.2143E+02
1.739E+00	1.5120E+03	4.6349E+03	1.7312E+02
1.752E+00	1.4979E+03	4.5760E+03	1.7082E+02
1.930E+00	1.3352E+03	3.9154E+03	1.4507E+02
1.945E+00	1.3224E+03	3.8648E+03	1.4311E+02
2.000E+00	1.2785E+03	3.6929E+03	1.3647E+02
3.000E+00	7.6020E+02	1.8535E+03	6.8470E+01
4.000E+00	5.0825E+02	1.1047E+03	4.2756E+01
4.487E+00	4.2918E+02	8.9224E+02	3.5324E+01
4.523E+00	4.2409E+02	8.7897E+02	3.4857E+01
4.755E+00	3.9329E+02	7.9967E+02	3.2055E+01
4.793E+00	3.8856E+02	7.8766E+02	3.1629E+01
5.000E+00	3.6432E+02	7.2681E+02	2.9463E+01
5.386E+00	3.2464E+02	6.2978E+02	2.5981E+01
5.430E+00	3.2061E+02	6.2011E+02	2.5632E+01
6.000E+00	2.7360E+02	5.0995E+02	2.1622E+01
6.780E+00	2.2408E+02	3.9945E+02	1.7517E+01
6.835E+00	2.2113E+02	3.9306E+02	1.7276E+01
7.192E+00	2.0307E+02	3.5438E+02	1.5812E+01
7.249E+00	2.0035E+02	3.4866E+02	1.5594E+01
8.000E+00	1.6933E+02	2.8450E+02	1.3118E+01
1.000E+01	1.1392E+02	1.7707E+02	8.8100E+00
1.500E+01	5.2571E+01	7.1738E+01	4.1671E+00
2.000E+01	2.9841E+01	3.6137E+01	2.3997E+00
2.087E+01	2.7285E+01	3.2559E+01	2.2081E+00
2.104E+01	2.6829E+01	3.1927E+01	2.1739E+00
2.677E+01	1.5926E+01	1.7440E+01	1.3462E+00
2.699E+01	1.5648E+01	1.7088E+01	1.3247E+00
2.767E+01	1.4804E+01	1.6027E+01	1.2594E+00
2.789E+01	1.4544E+01	1.5702E+01	1.2393E+00
3.000E+01	1.2355E+01	1.3008E+01	1.0688E+00
4.000E+01	6.3656E+00	6.0670E+00	5.8856E-01
5.000E+01	3.7326E+00	3.2913E+00	3.6569E-01
6.000E+01	2.3859E+00	1.9735E+00	2.4580E-01
8.000E+01	1.1565E+00	8.6408E-01	1.2942E-01
1.000E+02	6.5136E-01	4.4954E-01	7.7803E-02
1.429E+02	2.5587E-01	1.5557E-01	3.3888E-02
1.441E+02	2.5055E-01	1.5191E-01	3.3259E-02
1.500E+02	2.2538E-01	1.3473E-01	3.0261E-02
2.000E+02	1.0561E-01	5.7154E-02	1.5357E-02
3.000E+02	3.6667E-02	1.7382E-02	5.9326E-03
4.000E+02	1.7659E-02	7.6867E-03	3.0676E-03
5.000E+02	1.0204E-02	4.1822E-03	1.8658E-03
6.000E+02	6.6177E-03	2.5925E-03	1.2569E-03
8.000E+02	3.4562E-03	1.2698E-03	6.8940E-04
1.000E+03	2.1529E-03	7.5605E-04	4.4143E-04
1.500E+03	9.8205E-04	3.2086E-04	2.0636E-04

Z= 101 27 STATES, 54 ENERGYS

STATE	NE	E(KEV)	NORM
1 S 1/2	2.00	146.7714	.98729
2 S 1/2	2.00	28.5266	.89934
2 P 1/2	2.00	27.6070	.84959
2 P 3/2	4.00	21.3815	.80529
3 S 1/2	2.00	7.4337	.73055
3 P 1/2	2.00	7.0127	.66774
3 P 3/2	4.00	5.5392	.60537
3 D 3/2	4.00	4.8972	.42838
3 D 5/2	6.00	4.6160	.41623
4 S 1/2	2.00	2.0036	.50362
4 P 1/2	2.00	1.8076	.44187
4 P 3/2	4.00	1.4037	.37964
4 D 3/2	4.00	1.1000	.23080
4 D 5/2	6.00	1.0286	.21881
4 F 5/2	6.00	.6271	.07214
4 F 7/2	8.00	.6069	.07041
5 S 1/2	2.00	.4660	.28232
5 P 1/2	2.00	.3843	.23299
5 P 3/2	4.00	.2780	.18826
5 D 3/2	4.00	.1596	.09177
5 D 5/2	6.00	.1439	.08438
5 F 5/2	5.57	.0129	.01235
5 F 7/2	7.43	.0106	.01148
6 S 1/2	2.00	.0673	.10028
6 P 1/2	2.00	.0426	.06886
6 P 3/2	4.00	.0261	.04556
7 S 1/2	2.00	.0060	.01267

Z= 101 PHOTOELECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+00	3.1769E+06	.0E+00	.0E+00	.0E+00	3.1769E+06
1.0275E+00	3.0212E+06	.0E+00	.0E+00	.0E+00	3.0212E+06
1.0358E+00	3.1075E+06	.0E+00	.0E+00	.0E+00	3.1075E+06
1.0989E+00	3.0011E+06	.0E+00	.0E+00	.0E+00	3.0011E+06
1.1077E+00	3.0460E+06	.0E+00	.0E+00	.0E+00	3.0460E+06
1.4023E+00	2.0527E+06	.0E+00	.0E+00	.0E+00	2.0527E+06
1.4135E+00	2.1510E+06	.0E+00	.0E+00	.0E+00	2.1510E+06
1.5000E+00	1.9152E+06	.0E+00	.0E+00	.0E+00	1.9152E+06
1.8058E+00	1.3118E+06	.0E+00	.0E+00	.0E+00	1.3118E+06
1.8203E+00	1.3049E+06	.0E+00	.0E+00	.0E+00	1.3049E+06
2.0000E+00	1.0692E+06	.0E+00	.0E+00	.0E+00	1.0692E+06
2.0016E+00	1.0674E+06	.0E+00	.0E+00	.0E+00	1.0674E+06
2.0176E+00	1.0676E+06	.0E+00	.0E+00	.0E+00	1.0676E+06
3.0000E+00	4.4617E+05	.0E+00	.0E+00	.0E+00	4.4617E+05
4.0000E+00	2.3035E+05	.0E+00	.0E+00	.0E+00	2.3035E+05
4.6114E+00	1.6496E+05	.0E+00	.0E+00	.0E+00	1.6496E+05
4.6483E+00	3.5027E+05	.0E+00	.0E+00	1.8839E+05	1.6188E+05
4.8923E+00	3.2130E+05	.0E+00	.0E+00	1.7793E+05	1.4336E+05
4.9315E+00	4.3283E+05	.0E+00	.0E+00	2.9215E+05	1.4067E+05
5.0000E+00	4.2990E+05	.0E+00	.0E+00	2.9377E+05	1.3614E+05
5.5336E+00	3.3320E+05	.0E+00	.0E+00	2.2633E+05	1.0687E+05
5.5779E+00	3.8162E+05	.0E+00	.0E+00	2.7677E+05	1.0485E+05
6.0000E+00	3.1790E+05	.0E+00	.0E+00	2.2993E+05	8.7976E+04
7.0057E+00	2.1336E+05	.0E+00	.0E+00	1.5293E+05	6.0434E+04
7.0618E+00	2.2155E+05	.0E+00	.0E+00	1.6228E+05	5.9271E+04
7.4263E+00	1.9527E+05	.0E+00	.0E+00	1.4285E+05	5.2418E+04
7.4857E+00	1.9938E+05	.0E+00	.0E+00	1.4797E+05	5.1406E+04
8.0000E+00	1.6903E+05	.0E+00	.0E+00	1.2534E+05	4.3684E+04

Z= 101 PHOTOLECTRIC CROSS SECTIONS(BARNS)

ENERGY(KEV)	TOTAL	K-SHELL	L-SHELL	M-SHELL	ALL OTHER
1.0000E+01	9.7144E+04	.0E+00	.0E+00	7.1972E+04	2.5171E+04
1.5000E+01	3.4957E+04	.0E+00	.0E+00	2.5848E+04	9.1087E+03
2.0000E+01	1.6746E+04	.0E+00	.0E+00	1.2361E+04	4.3851E+03
2.1360E+01	1.4138E+04	.0E+00	.0E+00	1.0431E+04	3.7071E+03
2.1531E+01	3.1931E+04	.0E+00	1.8081E+04	1.0218E+04	3.6322E+03
2.7579E+01	1.6408E+04	.0E+00	9.1019E+03	5.3835E+03	1.9230E+03
2.7800E+01	2.3219E+04	.0E+00	1.6062E+04	5.2731E+03	1.8839E+03
2.8498E+01	2.1778E+04	.0E+00	1.5067E+04	4.9438E+03	1.7672E+03
2.8726E+01	2.4630E+04	.0E+00	1.8057E+04	4.8422E+03	1.7312E+03
3.0000E+01	2.2103E+04	.0E+00	1.6231E+04	4.3248E+03	1.5476E+03
4.0000E+01	1.0697E+04	.0E+00	7.9241E+03	2.0390E+03	7.3376E+02
5.0000E+01	6.0115E+03	.0E+00	4.4681E+03	1.1337E+03	4.0962E+02
6.0000E+01	3.7407E+03	.0E+00	2.7866E+03	7.0036E+02	2.5382E+02
8.0000E+01	1.7576E+03	.0E+00	1.3122E+03	3.2651E+02	1.1886E+02
1.0000E+02	9.7445E+02	.0E+00	7.2822E+02	1.8036E+02	6.5875E+01
1.4662E+02	3.5378E+02	.0E+00	2.6460E+02	6.5233E+01	2.3946E+01
1.4780E+02	1.3225E+03	9.7613E+02	2.5909E+02	6.3869E+01	2.3448E+01
1.5000E+02	1.2778E+03	9.4470E+02	2.4917E+02	6.1418E+01	2.2551E+01
2.0000E+02	6.2495E+02	4.6845E+02	1.1708E+02	2.8806E+01	1.0615E+01
3.0000E+02	2.3021E+02	1.7497E+02	4.1342E+01	1.0146E+01	3.7519E+00
4.0000E+02	1.1601E+02	8.8892E+01	2.0303E+01	4.9716E+00	1.8416E+00
5.0000E+02	6.9572E+01	5.3631E+01	1.1941E+01	2.9179E+00	1.0818E+00
6.0000E+02	4.6487E+01	3.6001E+01	7.8588E+00	1.9167E+00	7.1128E-01
8.0000E+02	2.5272E+01	1.9691E+01	4.1855E+00	1.0178E+00	3.7793E-01
1.0000E+03	1.6092E+01	1.2583E+01	2.6326E+00	6.3883E-01	2.3727E-01
1.5000E+03	7.4199E+00	5.8223E+00	1.1995E+00	2.9027E-01	1.0779E-01

Z= 101

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.028E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.036E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.099E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.108E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.402E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.413E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.806E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.820E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.002E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
2.018E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
3.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.611E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.648E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.892E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
4.932E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
5.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
5.534E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
5.578E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
6.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
7.006E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
7.062E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.2536E+04
7.426E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.1943E+04
7.486E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.9786E+03	1.1836E+04
8.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	7.2272E+03	1.1187E+04
1.000E+01	.0E+00	.0E+00	.0E+00	.0E+00	5.3759E+03	8.3307E+03
1.500E+01	.0E+00	.0E+00	.0E+00	.0E+00	2.8764E+03	4.3767E+03
2.000E+01	.0E+00	.0E+00	.0E+00	.0E+00	1.7546E+03	2.5377E+03

Z= 101

ENERGY	1 S 1/2	2 S 1/2	2 P 1/2	2 P 3/2	3 S 1/2	3 P 1/2
2.136E+01	.0E+00	.0E+00	.0E+00	.0E+00	1.5592E+03	2.2217E+03
2.153E+01	.0E+00	.0E+00	.0E+00	1.8081E+04	1.5367E+03	2.1860E+03
2.758E+01	.0E+00	.0E+00	.0E+00	9.1019E+03	9.6796E+02	1.2993E+03
2.780E+01	.0E+00	.0E+00	7.1560E+03	8.9061E+03	9.5323E+02	1.2771E+03
2.850E+01	.0E+00	.0E+00	6.7466E+03	8.3204E+03	9.0874E+02	1.2101E+03
2.873E+01	.0E+00	3.2481E+03	6.6697E+03	8.1392E+03	8.9486E+02	1.1892E+03
3.000E+01	.0E+00	3.0411E+03	5.9782E+03	7.2116E+03	8.2288E+02	1.0808E+03
4.000E+01	.0E+00	1.8171E+03	2.9779E+03	3.1292E+03	4.6422E+02	5.6105E+02
5.000E+01	.0E+00	1.1771E+03	1.6767E+03	1.6143E+03	2.9231E+02	3.2958E+02
6.000E+01	.0E+00	8.1592E+02	1.0388E+03	9.3186E+02	1.9821E+02	2.1065E+02
8.000E+01	.0E+00	4.4403E+02	4.8135E+02	3.8684E+02	1.0544E+02	1.0194E+02
1.000E+02	.0E+00	2.7168E+02	2.6238E+02	1.9416E+02	6.3760E+01	5.7289E+01
1.466E+02	.0E+00	1.1351E+02	9.1898E+01	5.9192E+01	2.6348E+01	2.0966E+01
1.478E+02	9.7613E+02	1.1143E+02	8.9910E+01	5.7746E+01	2.5861E+01	2.0528E+01
1.500E+02	9.4470E+02	1.0767E+02	8.6339E+01	5.5158E+01	2.4983E+01	1.9742E+01
2.000E+02	4.6845E+02	5.5029E+01	3.9330E+01	2.2723E+01	1.2727E+01	9.2281E+00
3.000E+02	1.7497E+02	2.1390E+01	1.3250E+01	6.7031E+00	4.9380E+00	3.1960E+00
4.000E+02	8.8892E+01	1.1098E+01	6.2852E+00	2.9199E+00	2.5601E+00	1.5376E+00
5.000E+02	5.3631E+01	6.7655E+00	3.6007E+00	1.5752E+00	1.5596E+00	8.8813E-01
6.000E+02	3.6001E+01	4.5646E+00	2.3228E+00	9.7132E-01	1.0515E+00	5.7590E-01
8.000E+02	1.9691E+01	2.5058E+00	1.2066E+00	4.7313E-01	5.7650E-01	3.0080E-01
1.000E+03	1.2583E+01	1.6020E+00	7.4966E-01	2.8089E-01	3.6824E-01	1.8738E-01
1.500E+03	5.8223E+00	7.3941E-01	3.4127E-01	1.1882E-01	1.6971E-01	8.5575E-02

Z= 101

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
1.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.028E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.036E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.099E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.108E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.402E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.413E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00
1.500E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.2975E+05
1.806E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.1836E+05
1.820E+00	.0E+00	.0E+00	.0E+00	.0E+00	.0E+00	9.4711E+04
2.000E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.4813E+04	9.3759E+04
2.002E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.3880E+04	8.3223E+04
2.018E+00	.0E+00	.0E+00	.0E+00	.0E+00	1.3879E+04	8.3139E+04
3.000E+00	.0E+00	.0E+00	.0E+00	1.8224E+04	1.3862E+04	8.2302E+04
4.000E+00	.0E+00	.0E+00	.0E+00	1.1170E+04	1.1679E+04	4.6614E+04
4.611E+00	.0E+00	.0E+00	.0E+00	7.6940E+03	9.1179E+03	2.9124E+04
4.648E+00	.0E+00	.0E+00	.0E+00	6.3102E+03	7.8171E+03	2.2718E+04
4.892E+00	.0E+00	.0E+00	1.8839E+05	6.2393E+03	7.7440E+03	2.2396E+04
4.932E+00	.0E+00	.0E+00	1.7793E+05	5.7953E+03	7.2823E+03	2.0428E+04
5.000E+00	.0E+00	1.1790E+05	1.7426E+05	5.7279E+03	7.2119E+03	2.0136E+04
5.534E+00	.0E+00	1.2550E+05	1.6827E+05	5.6125E+03	7.0912E+03	1.9641E+04
5.578E+00	5.5129E+04	9.6682E+04	1.2965E+05	4.8227E+03	6.2428E+03	1.6299E+04
6.000E+00	4.8494E+04	9.4793E+04	1.2685E+05	4.7653E+03	6.1781E+03	1.6057E+04
7.006E+00	3.7465E+04	7.8340E+04	1.0309E+05	4.2684E+03	5.5993E+03	1.3988E+04
7.062E+00	3.6897E+04	5.0325E+04	6.5138E+04	3.3481E+03	4.4916E+03	1.0360E+04
7.426E+00	3.3416E+04	4.9164E+04	6.3686E+04	3.3059E+03	4.4388E+03	1.0198E+04
7.486E+00	3.2887E+04	4.2495E+04	5.5000E+04	3.0511E+03	4.1146E+03	9.2266E+03
8.000E+00	2.8772E+04	4.1569E+04	5.3698E+04	3.0123E+03	4.0647E+03	9.0808E+03
1.000E+01	2.8772E+04	3.4346E+04	4.3812E+04	2.7045E+03	3.6677E+03	7.9424E+03
1.500E+01	1.8472E+04	1.7672E+04	2.2122E+04	1.8626E+03	2.5475E+03	4.9881E+03
2.000E+01	7.6455E+03	4.9662E+03	5.9835E+03	9.1023E+02	1.2223E+03	2.0265E+03
2.136E+01	3.8696E+03	1.9368E+03	2.2619E+03	5.3243E+02	6.9015E+02	1.0245E+03
2.153E+01	3.2928E+03	1.5539E+03	1.8029E+03	4.6954E+02	6.0235E+02	8.7232E+02
2.758E+01	3.2289E+03	1.5129E+03	1.7539E+03	4.6240E+02	5.9242E+02	8.5537E+02
	1.7290E+03	6.5232E+02	7.3485E+02	2.8495E+02	3.4868E+02	4.5933E+02

Z= 101

ENERGY	3 P 3/2	3 D 3/2	3 D 5/2	4 S 1/2	4 P 1/2	4 P 3/2
2.780E+01	1.6938E+03	6.3467E+02	7.1426E+02	2.8046E+02	3.4263E+02	4.5004E+02
2.850E+01	1.5884E+03	5.8266E+02	6.5382E+02	2.6693E+02	3.2442E+02	4.2228E+02
2.873E+01	1.5558E+03	5.6682E+02	6.3547E+02	2.6271E+02	3.1875E+02	4.1370E+02
3.000E+01	1.3892E+03	4.8775E+02	5.4415E+02	2.4084E+02	2.8951E+02	3.6980E+02
4.000E+01	6.4423E+02	1.7794E+02	1.9158E+02	1.3368E+02	1.5009E+02	1.7265E+02
5.000E+01	3.4754E+02	8.0302E+01	8.3975E+01	8.3456E+01	8.8330E+01	9.3701E+01
6.000E+01	2.0738E+02	4.1631E+01	4.2485E+01	5.6280E+01	5.6605E+01	5.6195E+01
8.000E+01	9.0125E+01	1.4644E+01	1.4365E+01	2.9760E+01	2.7531E+01	2.4612E+01
1.000E+02	4.6632E+01	6.4980E+00	6.1819E+00	1.7942E+01	1.5541E+01	1.2807E+01
1.466E+02	1.4836E+01	1.6189E+00	1.4649E+00	7.3926E+00	5.7298E+00	4.1096E+00
1.478E+02	1.4485E+01	1.5729E+00	1.4219E+00	7.2560E+00	5.6111E+00	4.0130E+00
1.500E+02	1.3856E+01	1.4912E+00	1.3456E+00	7.0092E+00	5.3975E+00	3.8398E+00
2.000E+02	5.8491E+00	5.3447E-01	4.6723E-01	3.5672E+00	2.5352E+00	1.6294E+00
3.000E+02	1.7696E+00	1.3129E-01	1.1134E-01	1.3832E+00	8.8289E-01	4.9577E-01
4.000E+02	7.8043E-01	5.0759E-02	4.2715E-02	7.1689E-01	4.2599E-01	2.1929E-01
5.000E+02	4.2390E-01	2.5131E-02	2.1211E-02	4.3664E-01	2.4645E-01	1.1913E-01
6.000E+02	2.6245E-01	1.4522E-02	1.2354E-02	2.9436E-01	1.6021E-01	7.3817E-02
8.000E+02	1.2835E-01	6.5288E-03	5.6369E-03	1.6135E-01	8.3774E-02	3.6119E-02
1.000E+03	7.6337E-02	3.6544E-03	3.2155E-03	1.0304E-01	5.2228E-02	2.1496E-02
1.500E+03	3.2244E-02	1.4405E-03	1.2959E-03	4.7455E-02	2.3844E-02	9.0902E-03

Z= 101

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
1.000E+00	.0E+00	.0E+00	1.1552E+06	1.5080E+06	1.8154E+04	1.2627E+04
1.028E+00	.0E+00	.0E+00	1.0962E+06	1.4303E+06	1.7585E+04	1.2281E+04
1.036E+00	.0E+00	1.3065E+05	1.0794E+06	1.4083E+06	1.7421E+04	1.2183E+04
1.099E+00	.0E+00	3.3616E+05	9.6258E+05	1.2532E+06	1.6246E+04	1.1504E+04
1.108E+00	8.5618E+04	3.3569E+05	9.4770E+05	1.2331E+06	1.6092E+04	1.1418E+04
1.402E+00	1.7613E+05	2.8630E+05	5.6302E+05	7.2147E+05	1.1964E+04	9.2248E+03
1.413E+00	1.7521E+05	2.8425E+05	5.5247E+05	7.0756E+05	1.1840E+04	9.1591E+03
1.500E+00	1.6782E+05	2.6850E+05	4.7804E+05	6.0973E+05	1.0951E+04	8.6815E+03
1.806E+00	1.3881E+05	2.1374E+05	2.9503E+05	3.7342E+05	8.4974E+03	7.2927E+03
1.820E+00	1.3751E+05	2.1149E+05	2.8874E+05	3.6530E+05	8.4035E+03	7.2362E+03
2.000E+00	1.2245E+05	1.8452E+05	2.2249E+05	2.8041E+05	7.3547E+03	6.5878E+03
2.002E+00	1.2232E+05	1.8430E+05	2.2199E+05	2.7978E+05	7.3463E+03	6.5825E+03
2.018E+00	1.2103E+05	1.8203E+05	2.1706E+05	2.7351E+05	7.2627E+03	6.5291E+03
3.000E+00	6.3752E+04	9.0879E+04	6.6510E+04	8.2609E+04	4.0278E+03	4.1916E+03
4.000E+00	3.6165E+04	4.9846E+04	2.6218E+04	3.2232E+04	2.5699E+03	2.9020E+03
4.611E+00	2.6583E+04	3.6110E+04	1.6203E+04	1.9820E+04	2.0458E+03	2.3858E+03
4.648E+00	2.6116E+04	3.5448E+04	1.5765E+04	1.9278E+04	2.0195E+03	2.3591E+03
4.892E+00	2.3288E+04	3.1429E+04	1.3211E+04	1.6126E+04	1.8585E+03	2.1932E+03
4.932E+00	2.2871E+04	3.0839E+04	1.2850E+04	1.5681E+04	1.8345E+03	2.1682E+03
5.000E+00	2.2165E+04	2.9840E+04	1.2248E+04	1.4940E+04	1.7937E+03	2.1254E+03
5.534E+00	1.7507E+04	2.3342E+04	8.5764E+03	1.0421E+04	1.5185E+03	1.8308E+03
5.578E+00	1.7180E+04	2.2888E+04	8.3369E+03	1.0127E+04	1.4986E+03	1.8091E+03
6.000E+00	1.4431E+04	1.9077E+04	6.4241E+03	7.7829E+03	1.3276E+03	1.6197E+03
7.006E+00	9.8286E+03	1.2798E+04	3.6541E+03	4.4004E+03	1.0224E+03	1.2700E+03
7.062E+00	9.6321E+03	1.2532E+04	3.5482E+03	4.2714E+03	1.0087E+03	1.2538E+03
7.426E+00	8.4696E+03	1.0965E+04	2.9443E+03	3.5377E+03	9.2553E+02	1.1554E+03
7.486E+00	8.2972E+03	1.0734E+04	2.8582E+03	3.4332E+03	9.1296E+02	1.1405E+03
8.000E+00	6.9799E+03	8.9727E+03	2.2290E+03	2.6701E+03	8.1416E+02	1.0218E+03
1.000E+01	3.8265E+03	4.8105E+03	9.4982E+02	1.1273E+03	5.5028E+02	6.9592E+02
1.500E+01	1.1885E+03	1.4336E+03	1.8871E+02	2.1986E+02	2.6259E+02	3.2701E+02
2.000E+01	4.9110E+02	5.7412E+02	5.7302E+01	6.5783E+01	1.5194E+02	1.8329E+02
2.136E+01	3.9891E+02	4.6292E+02	4.3430E+01	4.9681E+01	1.3372E+02	1.5978E+02
2.153E+01	3.8894E+02	4.5093E+02	4.1991E+01	4.8013E+01	1.3165E+02	1.5712E+02
2.758E+01	1.7467E+02	1.9676E+02	1.4588E+01	1.6445E+01	8.0632E+01	9.2203E+01
2.780E+01	1.7014E+02	1.9149E+02	1.4095E+01	1.5881E+01	7.9350E+01	9.0598E+01
2.850E+01	1.5680E+02	1.7595E+02	1.2664E+01	1.4248E+01	7.5485E+01	8.5768E+01
2.873E+01	1.5273E+02	1.7121E+02	1.2235E+01	1.3758E+01	7.4280E+01	8.4265E+01

Z= 101

ENERGY	4 D 3/2	4 D 5/2	4 F 5/2	4 F 7/2	5 S 1/2	5 P 1/2
3.000E+01	1.3229E+02	1.4752E+02	1.0139E+01	1.1371E+01	6.8036E+01	7.6507E+01
4.000E+01	5.0139E+01	5.3944E+01	2.8843E+00	3.1749E+00	3.7586E+01	3.9623E+01
5.000E+01	2.3194E+01	2.4237E+01	1.0756E+00	1.1654E+00	2.3405E+01	2.3320E+01
6.000E+01	1.2238E+01	1.2479E+01	4.7857E-01	5.1156E-01	1.5759E+01	1.4950E+01
8.000E+01	4.4070E+00	4.3199E+00	1.3314E-01	1.3918E-01	8.3193E+00	7.2794E+00
1.000E+02	1.9851E+00	1.8877E+00	4.9787E-02	5.1131E-02	5.0115E+00	4.1133E+00
1.466E+02	5.0486E-01	4.5691E-01	9.3304E-03	9.3101E-03	2.0638E+00	1.5193E+00
1.478E+02	4.9071E-01	4.4367E-01	9.0131E-03	8.9885E-03	2.0256E+00	1.4879E+00
1.500E+02	4.6551E-01	4.2015E-01	8.4532E-03	8.4219E-03	1.9567E+00	1.4313E+00
2.000E+02	1.6874E-01	1.4764E-01	2.5014E-03	2.4488E-03	9.9714E-01	6.7562E-01
3.000E+02	4.1937E-02	3.5628E-02	4.7671E-04	4.5560E-04	3.8652E-01	2.3562E-01
4.000E+02	1.6316E-02	1.3693E-02	1.5628E-04	1.5187E-04	2.0030E-01	1.1378E-01
5.000E+02	8.1152E-03	6.8191E-03	6.8692E-05	6.8956E-05	1.2198E-01	6.5864E-02
6.000E+02	4.7035E-03	3.9754E-03	3.6452E-05	3.7357E-05	8.2213E-02	4.2769E-02
8.000E+02	2.1169E-03	1.8219E-03	1.4908E-05	1.5387E-05	4.5052E-02	2.2375E-02
1.000E+03	1.1891E-03	1.0413E-03	7.6035E-06	8.6151E-06	2.8766E-02	1.3949E-02
1.500E+03	4.6803E-04	4.2209E-04	2.7299E-06	3.1156E-06	1.3247E-02	6.3690E-03

Z= 101

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	5 F 5/2	5 F 7/2	6 S 1/2
1.000E+00	6.9638E+04	6.9355E+04	1.0992E+05	9.5036E+04	1.2026E+05	4.6845E+03
1.028E+00	6.7221E+04	6.7643E+04	1.0673E+05	9.0628E+04	1.1451E+05	4.5082E+03
1.036E+00	6.6524E+04	6.7137E+04	1.0580E+05	8.9354E+04	1.1285E+05	4.4576E+03
1.099E+00	6.1519E+04	6.3335E+04	9.8878E+04	8.0198E+04	1.0098E+05	4.0974E+03
1.108E+00	6.0867E+04	6.2817E+04	9.7950E+04	7.9007E+04	9.9439E+04	4.0508E+03
1.402E+00	4.3842E+04	4.7710E+04	7.1969E+04	4.8764E+04	6.0700E+04	2.8712E+03
1.413E+00	4.3340E+04	4.7219E+04	7.1155E+04	4.7914E+04	5.9621E+04	2.8374E+03
1.500E+00	3.9742E+04	4.3630E+04	6.5250E+04	4.1932E+04	5.2043E+04	2.5966E+03
1.806E+00	3.0054E+04	3.3349E+04	4.8782E+04	2.6961E+04	3.3207E+04	1.9589E+03
1.820E+00	2.9686E+04	3.2943E+04	4.8144E+04	2.6434E+04	3.2546E+04	1.9350E+03
2.000E+00	2.5627E+04	2.8391E+04	4.1058E+04	2.0825E+04	2.5545E+04	1.6725E+03
2.002E+00	2.5595E+04	2.8355E+04	4.1002E+04	2.0783E+04	2.5493E+04	1.6705E+03
2.018E+00	2.5274E+04	2.7990E+04	4.0440E+04	2.0360E+04	2.4965E+04	1.6499E+03
3.000E+00	1.3131E+04	1.3812E+04	1.9159E+04	6.8103E+03	8.2249E+03	8.7765E+02
4.000E+00	7.9069E+03	7.7071E+03	1.0401E+04	2.8393E+03	3.3918E+03	5.4757E+02
4.611E+00	6.0911E+03	5.6554E+03	7.5321E+03	1.7992E+03	2.1377E+03	4.3193E+02
4.648E+00	6.0014E+03	5.5558E+03	7.3940E+03	1.7529E+03	2.0821E+03	4.2619E+02
4.892E+00	5.4536E+03	4.9521E+03	6.5594E+03	1.4818E+03	1.7274E+03	3.9104E+02
4.932E+00	5.3725E+03	4.8633E+03	6.4371E+03	1.4432E+03	1.6818E+03	3.8582E+02
5.000E+00	5.2347E+03	4.7131E+03	6.2303E+03	1.3787E+03	1.6058E+03	3.7694E+02
5.534E+00	4.3150E+03	3.7271E+03	4.8809E+03	9.8088E+02	1.1376E+03	3.1738E+02
5.578E+00	4.2493E+03	3.6578E+03	4.7867E+03	9.5465E+02	1.1068E+03	3.1309E+02
6.000E+00	3.6885E+03	3.0751E+03	3.9570E+03	7.3916E+02	8.5945E+02	2.7637E+02
7.006E+00	2.7124E+03	2.1019E+03	2.6931E+03	4.2924E+02	4.9593E+02	2.1140E+02
7.062E+00	2.6692E+03	2.0603E+03	2.6378E+03	4.1721E+02	4.8188E+02	2.0848E+02
7.426E+00	2.4104E+03	1.8142E+03	2.3117E+03	3.4838E+02	4.0154E+02	1.9092E+02
7.486E+00	2.3716E+03	1.7777E+03	2.2636E+03	3.3852E+02	3.9004E+02	1.8827E+02
8.000E+00	2.0692E+03	1.4986E+03	1.8962E+03	2.6604E+02	3.0567E+02	1.6748E+02
1.000E+01	1.2922E+03	8.2752E+02	1.0249E+03	1.1606E+02	1.3206E+02	1.1237E+02
1.500E+01	5.2206E+02	2.6093E+02	3.1021E+02	2.3889E+01	2.6666E+01	5.3066E+01
2.000E+01	2.6372E+02	1.0897E+02	1.2558E+02	7.3959E+00	8.1326E+00	3.0536E+01
2.136E+01	2.2454E+02	8.8717E+01	1.0149E+02	5.6269E+00	6.1648E+00	2.6844E+01
2.153E+01	2.2018E+02	8.6521E+01	9.8891E+01	5.4428E+00	5.9605E+00	2.6426E+01
2.758E+01	1.1831E+02	3.9172E+01	4.3503E+01	1.9148E+00	2.0669E+00	1.6129E+01
2.780E+01	1.1592E+02	3.8167E+01	4.2347E+01	1.8508E+00	1.9968E+00	1.5871E+01
2.850E+01	1.0878E+02	3.5200E+01	3.8940E+01	1.6648E+00	1.7934E+00	1.5094E+01
2.873E+01	1.0657E+02	3.4295E+01	3.7901E+01	1.6090E+00	1.7324E+00	1.4851E+01
3.000E+01	9.5280E+01	2.9744E+01	3.2700E+01	1.3360E+00	1.4346E+00	1.3596E+01
4.000E+01	4.4553E+01	1.1365E+01	1.2054E+01	3.8451E-01	4.0518E-01	7.6038E+00
5.000E+01	2.4216E+01	5.2863E+00	5.4456E+00	1.4447E-01	1.4985E-01	4.7328E+00

Z= 101

ENERGY	5 P 3/2	5 D 3/2	5 D 5/2	5 F 5/2	5 F 7/2	6 S 1/2
6.000E+01	1.4542E+01	2.8003E+00	2.8150E+00	6.4617E-02	6.6113E-02	3.1857E+00
8.000E+01	6.3827E+00	1.0131E+00	9.7452E-01	1.8097E-02	1.8105E-02	1.6810E+00
1.000E+02	3.3268E+00	4.5796E-01	4.2732E-01	6.7959E-03	6.6786E-03	1.0123E+00
1.466E+02	1.0679E+00	1.1706E-01	1.0394E-01	1.2810E-03	1.2229E-03	4.1660E-01
1.478E+02	1.0429E+00	1.1378E-01	1.0093E-01	1.2376E-03	1.1808E-03	4.0890E-01
1.500E+02	9.9793E-01	1.0796E-01	9.5597E-02	1.1609E-03	1.1066E-03	3.9498E-01
2.000E+02	4.2403E-01	3.9252E-02	3.3686E-02	3.4471E-04	3.2274E-04	2.0092E-01
3.000E+02	1.2920E-01	9.7869E-03	8.1505E-03	6.6001E-05	6.1246E-05	7.7873E-02
4.000E+02	5.7181E-02	3.8123E-03	3.1519E-03	2.1728E-05	2.0409E-05	4.0352E-02
5.000E+02	3.1120E-02	1.8970E-03	1.5729E-03	9.5726E-06	9.2057E-06	2.4572E-02
6.000E+02	1.9288E-02	1.1000E-03	9.1822E-04	5.0602E-06	5.0063E-06	1.6561E-02
8.000E+02	9.4435E-03	4.9607E-04	4.2039E-04	2.0503E-06	2.1111E-06	9.0752E-03
1.000E+03	5.6174E-03	2.7853E-04	2.3989E-04	1.0475E-06	1.1385E-06	5.7945E-03
1.500E+03	2.3780E-03	1.0979E-04	9.7255E-05	3.6377E-07	4.3205E-07	2.6689E-03

Z= 101

ENERGY	6 P 1/2	6 P 3/2	7 S 1/2
1.000E+00	2.8086E+03	1.0862E+04	4.2278E+02
1.028E+00	2.7220E+03	1.0449E+04	4.0488E+02
1.036E+00	2.6972E+03	1.0331E+04	3.9977E+02
1.099E+00	2.5215E+03	9.4852E+03	3.6372E+02
1.108E+00	2.4988E+03	9.3759E+03	3.5912E+02
1.402E+00	1.9186E+03	6.5951E+03	2.4547E+02
1.413E+00	1.9015E+03	6.5151E+03	2.4226E+02
1.500E+00	1.7784E+03	5.9455E+03	2.1959E+02
1.806E+00	1.4368E+03	4.4364E+03	1.6122E+02
1.820E+00	1.4234E+03	4.3799E+03	1.5906E+02
2.000E+00	1.2729E+03	3.7592E+03	1.3558E+02
2.002E+00	1.2717E+03	3.7543E+03	1.3540E+02
2.018E+00	1.2596E+03	3.7056E+03	1.3357E+02
3.000E+00	7.6283E+02	1.8905E+03	6.8125E+01
4.000E+00	5.1284E+02	1.1282E+03	4.2602E+01
4.611E+00	4.1684E+02	8.6618E+02	3.3650E+01
4.648E+00	4.1193E+02	8.5328E+02	3.3206E+01
4.892E+00	3.8156E+02	7.7458E+02	3.0483E+01
4.932E+00	3.7700E+02	7.6293E+02	3.0079E+01
5.000E+00	3.6922E+02	7.4315E+02	2.9391E+01
5.534E+00	3.1600E+02	6.1146E+02	2.4773E+01
5.578E+00	3.1211E+02	6.0206E+02	2.4441E+01
6.000E+00	2.7828E+02	5.2201E+02	2.1592E+01
7.006E+00	2.1651E+02	3.8310E+02	1.6546E+01
7.062E+00	2.1367E+02	3.7695E+02	1.6319E+01
7.426E+00	1.9649E+02	3.4022E+02	1.4953E+01
7.486E+00	1.9388E+02	3.3471E+02	1.4746E+01
8.000E+00	1.7323E+02	2.9185E+02	1.3129E+01
1.000E+01	1.1707E+02	1.8196E+02	8.8313E+00
1.500E+01	5.4456E+01	7.3989E+01	4.1904E+00
2.000E+01	3.0370E+01	3.7367E+01	2.4186E+00
2.136E+01	2.7077E+01	3.1815E+01	2.1275E+00
2.153E+01	2.6626E+01	3.1197E+01	2.0946E+00
2.758E+01	1.5620E+01	1.6763E+01	1.2811E+00
2.780E+01	1.5347E+01	1.6425E+01	1.2607E+00
2.850E+01	1.4529E+01	1.5413E+01	1.1991E+00
2.873E+01	1.4275E+01	1.5100E+01	1.1800E+00
3.000E+01	1.2960E+01	1.3501E+01	1.0806E+00
4.000E+01	6.7127E+00	6.3138E+00	5.9635E-01
5.000E+01	3.9517E+00	3.4322E+00	3.7114E-01
6.000E+01	2.5339E+00	2.0614E+00	2.4981E-01
8.000E+01	1.2342E+00	9.0486E-01	1.3181E-01
1.000E+02	6.9756E-01	4.7164E-01	7.9372E-02

Z= 101

ENERGY	6 P 1/2	6 P 3/2	7 S 1/2
1.466E+02	2.5773E-01	1.5174E-01	3.2665E-02
1.478E+02	2.5240E-01	1.4818E-01	3.2061E-02
1.500E+02	2.4281E-01	1.4180E-01	3.0969E-02
2.000E+02	1.1421E-01	6.0270E-02	1.5754E-02
3.000E+02	3.9842E-02	1.8370E-02	6.1075E-03
4.000E+02	1.9242E-02	8.1317E-03	3.1659E-03
5.000E+02	1.1139E-02	4.4264E-03	1.9291E-03
6.000E+02	7.2333E-03	2.7442E-03	1.3012E-03
8.000E+02	3.7840E-03	1.3439E-03	7.1478E-04
1.000E+03	2.3594E-03	7.9990E-04	4.5798E-04
1.500E+03	1.0775E-03	3.3919E-04	2.1409E-04

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