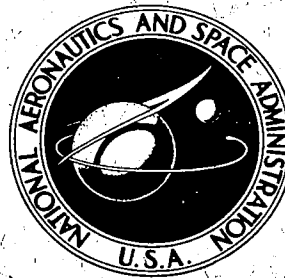


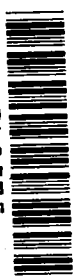
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**ATOMIC ELECTRON ENERGIES INCLUDING  
RELATIVISTIC EFFECTS AND QUANTUM  
ELECTRODYNAMIC CORRECTIONS**

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16. Abstract  Atomic electron energies have been calculated relativistically. Hartree-Fock-Slater wave functions served as zeroth-order eigenfunctions to compute the expectation of the total Hamiltonian. A first-order correction to the local approximation was thus included. Quantum-electrodynamic corrections were made. For all orbitals in all atoms with $2 \leq Z \leq 106$ , the following quantities are listed: total energies, electron kinetic energies, electron-nucleus potential energies, electron-electron potential energies consisting of electrostatic and Breit interaction (magnetic and retardation) terms, and vacuum polarization energies. These results will serve for detailed comparison of calculations based on other approaches. The magnitude of quantum-electrodynamic corrections is exhibited quantitatively for each state.					
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## NOTATION

LEVEL	orbital (e.g., $1s_{1/2} = 1s_{1/2}$ )
(ELECTRONS)	number of electrons in orbital
E(KIN)	kinetic energy (eq. (5))
E(E-N)	electron-nucleus potential energy (eq. (7))
E(E-E)	electrostatic electron-electron interaction (eqs. (8) and (9))
E(MAG)	magnetic interaction energy (eqs. (16) and (17))
E(RET)	retardation energy
E(V-P)	Uehling vacuum-polarization energy
E(H-VP)	higher-order vacuum polarization correction terms
HELIUM, etc.	element
$1s_2$ , etc.	ground-state configuration
$Z=2$ , etc.	atomic number
$A=4$ , etc.	mass number of most abundant isotope for which nuclear radius is computed
R	nuclear radius in atomic units of length
ETOT	total energy for the element

All energies are listed in atomic units (a.u.);  $1 \text{ a.u.} = 27.2116 \text{ eV} = 2 \text{ Ry}$

ATOMIC ELECTRON ENERGIES INCLUDING RELATIVISTIC EFFECTS  
AND QUANTUM ELECTRODYNAMIC CORRECTIONS

Michio Aoyagi, Mau Hsiung Chen,\* Bernd Crasemann,<sup>†</sup>  
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INTRODUCTION

An enhanced need for accurate and extensive calculations of atomic electron energies has arisen as experimental techniques (notably x-ray photoelectron spectrometry) are being refined and as interest in the physics of heavy atoms and of highly ionized species is growing. Here, we report on some results of relativistic calculations (ref. 1) based on an improved form of the Hartree-Fock-Slater formalism (refs. 2-8). The total energy of electrons in each orbital of neutral atoms with  $2 \leq Z \leq 106$  is listed and broken down into contributions due to electron kinetic energy, electron-nucleus potential energy, and electron-electron potential energy consisting of electrostatic and Breit interaction (magnetic and retardation) terms. A vacuum polarization correction is also computed; the leading term (Uehling potential) is listed separately from contributions due to terms of higher order.

THEORY

It is well-known that the Slater exchange potential has the wrong asymptotic form at large radii, going to zero exponentially rather than as  $r^{-1}$ . If the variational process is performed after making the statistical approximation for the exchange term in the total energy, an effective exchange potential equal to  $2/3$  of the Slater potential is found (refs. 4-6). Results are thus improved, but the wrong asymptotic form remains. The problem is often remedied by applying Latter's tail correction (ref. 7). The reasons why the local approximation fails at large radii have been noted by several authors (refs. 7-9). The local approximation involves the assumption that the electron wavelength is small compared with the distance over which the potential undergoes a substantial fractional change; this requirement is not fulfilled in atoms at large radii. Furthermore, it is assumed in the Hartree-Fock expression for the exchange energy that the antisymmetry of the wave function is more important than electrostatic repulsion in keeping the electrons apart; this is true for high electron densities but not for low densities. To account for these factors, Liberman *et al.* (refs. 9,10) constructed a modified Kohn-Sham potential, which is essentially a Kohn-Sham potential with a tail

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correction, but formulated in a more consistent manner. The Liberman *et al.* version (ref. 10) of the Hartree-Fock-Slater method is used in the present computations, with a modified finite-nucleus routine.

It has been pointed out by Rosén and Lindgren (ref. 2) that the exchange energy calculated by the Hartree-Fock-Slater method introduces non-negligible errors in the total energy. We use the wave-function output of the Hartree-Fock-Slater program (ref. 10) as zeroth-order eigenfunctions to compute the expectation value of the total Hamiltonian. Thus, an effective first-order correction to the local approximation is made.

### Zeroth-Order Wave Functions

In the Hartree-Fock-Slater formalism, the total wave function is taken to be a single Slater determinant of orbital functions. These orbital functions satisfy a set of Dirac equations with a local spherically symmetric potential

$$[c\vec{\alpha} \cdot \vec{p} + \beta c^2 + U(r)]\psi_{n\kappa m}(r) = E_{n\kappa}\psi_{n\kappa m}(r) \quad (1)$$

We take the potential  $U(r)$  to be that of a finite nucleus, consisting of a uniformly charged sphere, and the electron Coulomb potential with modified Kohn-Sham exchange (refs. 4, 9, 10). The orbital wave functions have the form

$$\psi_{n\kappa m}(r) = \frac{1}{r} \begin{cases} P_{n\kappa}(r)\chi_{\kappa m} \\ iQ_{n\kappa}(r)\chi_{-\kappa m} \end{cases} \quad (2)$$

where the  $\chi_{\kappa m}$  are normalized spinors.

### Total Hamiltonian

Using Dirac single-electron theory, the total Hamiltonian for a many-electron atom can be written

$$H = \sum_{i=1}^N \left[ c\vec{\alpha}_i \cdot \vec{p}_i + \beta_i c^2 + V_n(r_i) \right] + \sum_{i<j}^N \frac{1}{r_{ij}} \quad (3)$$

in atomic units.

The expectation value of the total Hamiltonian consists of kinetic energy and electrostatic interaction energy.

### Kinetic Energy

The kinetic energy of each orbital electron can be expressed as the integral of radial components  $P_{n\kappa}(r)$  and  $Q_{n\kappa}(r)$ :

$$E_k(A) = \int_0^\infty dr \left[ c^2(P_A^2 - Q_A^2) + cQ_A \left( \frac{dP_A}{dr} + \frac{\kappa}{r} P_A \right) - cP_A \left( \frac{dQ_A}{dr} - \frac{\kappa}{r} Q_A \right) \right] - c^2 \quad (4)$$

Here we denote a set of quantum numbers  $(n, \kappa)$  by  $A$ . By using the Dirac equation satisfied by  $P_A$  and  $Q_A$ , the kinetic energy can be rewritten as

$$E_k = E_A - \int_0^\infty dr U(r)(P_A^2 + Q_A^2) \quad (5)$$

where  $E_A$  is the eigenvalue of the orbital  $A$ , and  $U(r)$  is the effective potential in equation (2). Kinetic energies computed from equation (5) for each orbital are included in Table I.

### Electron-Nucleus Energy

We take the nucleus to be a homogeneously charged sphere, with a radius (ref. 11)  $R = 1.20 \times 10^{-13} \alpha^{1/3} \text{ cm} = 2.2677 \times 10^{-5} \alpha^{1/3} \text{ atomic units (a.u.)}$ , where  $\alpha$  is the mass number. The nuclear radius of the most abundant isotope of each element is used in the calculations. The nuclear potential experienced by the electrons is

$$V_n(r) = \begin{cases} -\frac{Z}{R_n} \left[ \frac{3}{2} - \frac{1}{2} \left( \frac{r}{R_n} \right)^2 \right], & r \leq R_n \\ -\frac{Z}{r}, & r > R_n \end{cases} \quad (6)$$

The electron-nucleus potential energy (Table I) is

$$E_n(A) = \int_0^\infty dr V_n(r)(P_A^2 + Q_A^2) \quad (7)$$

### Electrostatic Energy

The average electrostatic interaction energy (Table I) between two electrons in the same shell  $A$  is

$$E_e(A,A) = F_0^E(A,A) - \frac{2j_A + 1}{4j_A} \sum_{k>0} \Gamma_{j_A k j_A} G_k^E(A,A) \quad (8)$$

For two electrons from different shells  $(A,B)$  we have

$$E_e(A,B) = F_0^E(A,B) - \frac{1}{2} \sum_k \Gamma_{j_A k j_B} G_k^E(A,B) \quad (9)$$

Here, the electric Slater integrals\*  $F_k^E$ ,  $G_k^E$ , and the coefficients  $\Gamma_{j_A k j_B}$  are defined as follows (ref. 12):

$$F_k^E(A,B) = \int_0^\infty \int_0^\infty [P_A^2(1) + Q_A^2(1)][P_B^2(2) + Q_B^2(2)] \frac{r_{<}^k}{r_{>}^{k+1}} dr_1 dr_2 \quad (10)$$

$$G_k^E(A,B) = \int_0^\infty \int_0^\infty [P_A(1)P_B(1) + Q_A(1)Q_B(1)] \times [P_A(2)P_B(2) + Q_A(2)Q_B(2)] \frac{r_{<}^k}{r_{>}^{k+1}} dr_1 dr_2 \quad (11)$$

and

$$\Gamma_{j_A k j_B} = \frac{2}{2j_A + 1} \left[ C(j_B k j_A; \frac{1}{2} 0) \right]^2 \quad (12)$$

where the  $C[j_A k j_A; (1/2)0]$  are Clebsch-Gordan coefficients (ref. 13).

#### Breit Interaction Energy

The interaction between any two atomic electrons due to the exchange of a single transverse photon is approximated by the Breit interaction (ref. 14). The expectation value of the Breit interaction has traditionally been treated as a sum of two terms (refs. 12, 14-17):

$$H_{Br} = H_m + H_r, \quad (13)$$

where

$$H_m = - \frac{\vec{\alpha}_1 \cdot \vec{\alpha}_2}{r_{12}} \quad (14)$$

and

$$H_r = \frac{1}{2} \left[ \frac{\vec{\alpha}_1 \cdot \vec{\alpha}_2}{r_{12}} - \frac{(\vec{\alpha}_1 \cdot \vec{r}_{12})(\vec{\alpha}_2 \cdot \vec{r}_{12})}{r_{12}^3} \right] \quad (15)$$

The appropriate interaction energies  $E_m$  and  $E_r$  are as follows:

(i) The magnetic interaction energy for electrons in the same shell is (ref. 12)

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\*Complete tables of Slater integrals calculated in the course of this work are contained in NASA Technical Report No. NASA TR R-464, available from National Technical Information Service, Springfield, Virginia 22161.



$$E_m(A,A) = \frac{2j_A + 1}{4j_A} \sum_k \Gamma_{j_A k j_A}^M F_k^M(A,A) \quad (16)$$

For electrons from different shells, the magnetic interaction energy is

$$E_m(A,B) = \frac{1}{2} \sum_{k,\gamma} \Gamma_{j_A k j_B}^{a_A a_B}(\gamma) G_k^M(A,B;\gamma) \quad (17)$$

Here, we have

$$F_k^M(A,A) = \int_0^\infty \int_0^\infty P_A(1) Q_A(1) P_A(2) Q_A(2) \left( \frac{r_{<}^k}{r_{>}^{k+1}} \right) dr_1 dr_2 \quad (18)$$

$$G_k^M(A,B;1) = \int_0^\infty \int_0^\infty P_A(1) Q_B(1) P_A(2) Q_B(2) \left( \frac{r_{<}^k}{r_{>}^{k+1}} \right) dr_1 dr_2 \quad (19)$$

$$G_k^M(A,B;0) = \int_0^\infty \int_0^\infty P_A(1) Q_B(1) Q_A(2) P_B(2) \left( \frac{r_{<}^k}{r_{>}^{k+1}} \right) dr_1 dr_2 \quad (20)$$

$$G_k^M(A,B;-1) = \int_0^\infty \int_0^\infty Q_A(1) P_B(1) Q_A(2) P_B(2) \left( \frac{r_{<}^k}{r_{>}^{k+1}} \right) dr_1 dr_2 \quad (21)$$

The  $\Gamma$  coefficients are defined as

$$\Gamma_{j k j}^{a a'}(\gamma) = \frac{12}{2k+1} \sum_{\mu} (2\mu+1) \left[ W\left(\frac{1}{2} 1 \lambda j; \frac{1}{2} \mu\right) C\left(j' \mu k; \frac{1}{2}, -\frac{1}{2}\right) \right]^2 \quad (22)$$

$$\Gamma_{j k j}^M = \sum_{\gamma} \Gamma_{j k j}^{a a}(\gamma) \quad (23)$$

where the  $W[(1/2)1\lambda j; (1/2)\mu]$  are Racah coefficients (ref. 13).

(ii) The retardation energy  $E_r$  is given by expressions of the form of equations (16) and (17) with the  $\Gamma$  coefficients replaced by their  $\Lambda$ -coefficient equivalents (ref. 12). The retardation contribution within one and the same shell vanishes.

Both the magnetic energy  $E_m$  and the retardation energy  $E_r$  are listed in Table I.

## Vacuum Polarization Energy

We use first-order perturbation theory to calculate the vacuum polarization correction. The terms of order  $\alpha(Z\alpha)$ ,  $\alpha^2(Z\alpha)$ ,  $\alpha(Z\alpha)^3$ ,  $\alpha(Z\alpha)^5$ , and  $\alpha(Z\alpha)^7$  are computed according to the method suggested by Huang and Hughes (ref. 18). The leading term proportional to  $\alpha(Z\alpha)$ , known as the Uehling potential (ref. 19), is listed under "E(V-P)" in Table I, while all the terms of higher order are combined under "E(H-VP)."

### Total Energy

For a configuration consisting of closed shells, or for the statistical average over the multiplets of a configuration, the total energy is

$$\begin{aligned}
 E_{\text{tot}} = & \sum_A q_A [E_k(A) + E_n(A) + E_{\text{VP}}(A)] \\
 & + \sum_A \frac{q_A(q_A - 1)}{2} [E_e(A,A) + E_m(A,A)] \\
 & + \sum_{A < B} q_A q_B [E_e(A,B) + E_m(A,B) + E_r(A,B)] \quad (24)
 \end{aligned}$$

where the first two terms are summed over all shells, while the last is summed over distinct pairs only;  $q_A$  and  $q_B$  are the numbers of electrons in shells A and B, respectively. Total energies for each atom with  $2 \leq Z \leq 106$  are included in Table I.

The principal source of error in the present total-energy calculations is the neglect of electron-electron Coulomb correlation energies. At this time there is no efficient and reliable method for calculating correlation energies for large atoms. The contribution to the total energy due to electron correlations can be estimated by the semiempirical approach of Cowan (ref. 20), which yields, e.g., -1.394 a.u. for Kr.

Ames Research Center

National Aeronautics and Space Administration  
Moffett Field, Calif. 94035, June 22, 1976

## REFERENCES

1. Huang, K.-N.; Aoyagi, M.; Chen, M. H.; Crasemann, B.; and Mark, H.: Atomic Electron Binding Energies from Relaxed-Orbital Relativistic Hartree-Fock-Slater Calculations. Atomic Data Nuclear Data Tables (to be published), 1976.
2. Rosén, A.; and Lindgren, I.: Relativistic Calculations of Electron Binding Energies by a Modified Hartree-Fock-Slater Method. Phys. Rev., vol. 176, no. 1, 1968, p. 114.
3. Slater, J. C.: A Simplification of the Hartree-Fock Method. Phys. Rev., vol. 81, no. 3, 1951, p. 385.
4. Kohn, W.; and Sham, L. J.: Self-Consistent Equations Including Exchange and Correlation Effects. Phys. Rev., vol. 140, no. 4A, 1965, p. A1133.
5. Gáspár, R.: Über eine Approximation des Hartree-Fock'schen Potentials durch eine Universelle Potentialfunktion (On an Approximation of the Hartree-Fock Potential by a Universal Potential Function). Acta Phys. Acad. Hung., vol. 3, 1954, p. 263.
6. Cowan, R. D.; Larson, A. C.; Liberman, D. A.; and Waber, J. T.: Statistical Approximation for Exchange in Self-Consistent Field Calculations of the Ground State of Neutral Argon. Phys. Rev., vol. 144, no. 1, 1966, p. 5.
7. Latter, R.: Atomic Energy Levels for the Thomas-Fermi and Thomas-Fermi-Dirac Potential. Phys. Rev., vol. 99, no. 2, 1955, p. 510.
8. Maslen, V. W.: The Fermi, or Exchange, Hole in Atoms. Proc. Phys. Soc. (London), vol. A69, no. 442A, 1956, p. 734.
9. Liberman, D. A.: New Potential Function for Atomic and Solid-State Calculations. Phys. Rev. B, vol. 2, no. 2, 1970, p. 244.
10. Liberman, D. A.; Cromer, D. T.; and Waber, J. T.: Relativistic Self-Consistent Field Program for Atoms and Ions. Comp. Phys. Commun., vol. 2, no. 2, 1971, p. 107.
11. Hofstadter, R.; and Collard, H. R.: Nuclear Radii Determined by Electron Scattering. Numerical Data and Functional Relationships in Science and Technology, K.-H. Hellwege, ed., New Series, vol. I/2, Springer, Berlin, 1967, p. 21.
12. Grant, I. P.: Relativistic Self-Consistent Fields. Proc. Roy. Soc. (London), vol. A262, no. 1311, 1961, p. 555; Relativistic Calculations of Atomic Structures, Adv. Phys., vol. 19, no. 82, 1970, p. 747.

13. Rose, M. E.: Elementary Theory of Angular Momentum. Wiley, New York, 1957.
14. Breit, G.: The Effect of Retardation on the Interaction of Two Electrons. Phys. Rev., vol. 34, no. 4, 1929, p. 553. The Fine Structure of He as a Test of the Spin Interactions of Two Electrons. Phys. Rev., vol. 36, no. 3, 1930, p. 383. Dirac's Equation and the Spin-Spin Interactions of Two Electrons. Phys. Rev., vol. 39, no. 4, 1932, p. 616.
15. Kim, Y.-K.: Relativistic Self-Consistent-Field Theory for Closed-Shell Atoms. Phys. Rev., vol. 154, no. 1, 1967, p. 17.
16. Smith, F. C.; and Johnson, W. R.: Relativistic Self-Consistent Fields with Exchange. Phys. Rev., vol. 160, no. 1, 1967, p. 136.
17. Mann, J. B.; and Johnson, W. R.: Breit Interaction in Multielectron Atoms. Phys. Rev. A, vol. 4, no. 1, 1971, p. 41.
18. Huang, K.-N.: Calculation of the Vacuum Polarization Potential. Phys. Rev. A, (in press).
19. Uehling, E. A.: Polarization Effects in the Positron Theory. Phys. Rev., vol. 48, no. 1, 1935, p. 55.
20. Cowan, R. D.: Atomic Self-Consistent-Field Calculations Using Statistical Approximations for Exchange and Correlation. Phys. Rev., vol. 163, no. 1, 1967, p. 54.

TABLE 1.- ATOMIC ELECTRON ENERGIES

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
HELIUM	1S2	Z=2	A=4	R=3.59975E-05	A.U.			
1S1/2 -- ( 2)	1.399113	-3.332865	1.005476833	6.15373E-05		-3.62956E-07	-3.14608E-09	
ETOT	-2.86197	2.79823	-6.66573	1.00548	6.15373E-05	0.	-7.25913E-07	-6.29216E-09
LITHIUM	2S1	Z=3	A=7	R=4.33795E-05	A.U.			
1S1/2 -- ( 2)	3.481398	-7.901181	1.607406680	2.42695E-04		-2.00967E-06	-1.72895E-08	
2S1/2	2S1/2		0.322372661	3.83182E-06	-3.05155E-07			
2S1/2 -- ( 1)	0.248107	-1.089902	0.000000000	0.		-6.88331E-08	-5.92176E-10	
ETOT	-7.42896	7.21090	-16.89226	2.25215	2.50359E-04	-6.10309E-07	-4.08818E-06	-3.51713E-08
BERYLLIUM	2S2	Z=4	A=9	R=4.71701E-05	A.U.			
1S1/2 -- ( 2)	6.568166	-14.482875	2.222896254	6.30378E-04		-6.68802E-06	-5.69685E-08	
2S1/2	2S1/2		0.472108434	1.20987E-05	-1.05149E-06			
2S1/2 -- ( 2)	0.560647	-2.157798	0.342626679	2.48914E-06		-2.80211E-07	-2.38678E-09	
ETOT	-14.56910	14.25763	-33.28134	4.45396	6.81262E-04	-4.20598E-06	-1.39365E-05	-1.18711E-07
BORON	2P1	Z=5	A=11	R=5.04332E-05	A.U.			
1S1/2 -- ( 2)	10.649863	-23.062266	2.841325803	1.30274E-03		-1.68292E-05	-1.41580E-07	
2S1/2	2S1/2		0.633654018	2.87030E-05	-2.62587E-06			
2P1/2	2P1/2		0.573145021	2.74252E-05	-4.34923E-06			
2S1/2 -- ( 2)	1.039686	-3.656090	0.460065688	6.22700E-06		-8.12752E-07	-6.83724E-09	
2P1/2	2P1/2		0.380873443	2.74294E-06	-2.47815E-07			
2P1/2 -- ( 1)	0.713880	-2.931436	0.000000000	0.		-7.21991E-11	-6.43092E-13	
ETOT	-24.52970	24.09298	-56.36815	7.74404	1.48411E-03	-1.96976E-05	-3.52840E-05	-2.96835E-07
CARBON	2P2	Z=6	A=12	R=5.19174E-05	A.U.			
1S1/2 -- ( 2)	15.714185	-33.625679	3.459377374	2.33567E-03		-3.55304E-05	-2.94468E-07	
2S1/2	2S1/2		0.790386623	5.51520E-05	-5.20134E-06			
2P1/2	2P1/2		0.741369105	6.05837E-05	-9.60423E-06			

TABLE 1.- CONTINUED.

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CARBON	2P2	Z=6	A=12	R=5.19174E-05	A.U.		
2S1/2 -- ( 2)	1.644134	-5.500418	0.573644645	1.22850E-05		-1.84380E-06	-1.52802E-08
2P1/2 -- ( 2)	1.205555	-4.565420	0.509573712	1.57080E-05	-4.16906E-07	-2.91424E-10	-2.54998E-12
ETOT	-37.64532	37.12775	-87.38303	12.60726	2.84726E-03	-6.08883E-05	-7.47490E-05
NITROGEN	2P3	Z=7	A=14	R=5.46548E-05	A.U.		
1S1/2 -- ( 2)	21.765278	-46.178484	4.077685880	3.80714E-03		-6.65728E-05	-5.42128E-07
2S1/2 -- ( 2)	2.364469	-7.686022	0.684714982	2.11074E-05	-8.98820E-06	-3.59595E-06	-2.92812E-08
2P1/2 -- ( 2)	1.811271	-6.526040	0.623177391	2.89636E-05	-1.77499E-05	-8.88074E-10	-7.60803E-12
2P3/2 -- ( 1)	1.806411	-6.516559	0.000000000	0.	-1.77140E-05	-1.83776E-10	-1.84101E-12
ETOT	-54.30335	53.68845	-127.29765	19.30128	4.86732E-03	-1.46244E-04	-1.40339E-04
OXYGEN	2P4	Z=8	A=16	R=5.71425E-05	A.U.		
1S1/2 -- ( 2)	28.807539	-60.726268	4.696545458	5.79545E-03		-1.14404E-04	-9.12931E-07
2S1/2 -- ( 2)	3.201341	-10.211238	0.794043931	3.31392E-05	-1.42006E-05	-6.33028E-06	-5.05110E-08
2P1/2 -- ( 2)	2.528834	-8.807699	0.734853814	4.77561E-05	-2.93273E-05	-2.25075E-09	-1.88118E-11
2P3/2 -- ( 2)	2.519469	-8.789934	0.712142342	3.16801E-05	-2.92466E-05	-4.61717E-10	-4.45215E-12
ETOT	-74.80112	74.11437	-177.07028	28.14754	7.78958E-03	-2.98599E-04	-2.41473E-04

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
FLUORINE 2P5 Z=9 A=19 R=6.05113E-05 A.U.							
1S1/2 -- ( 2)	36.844193	-77.273439	5.315995943	8.37873E-03		-1.84123E-04	-1.43573E-06
2S1/2			1.246795134	2.13622E-04	-2.10911E-05		
2P1/2			1.229902494	2.84021E-04	-4.49728E-05		
2P3/2			1.226885980	1.56753E-04	-4.48106E-05		
2S1/2 -- ( 2)	4.161257	-13.088200	0.903047825	4.89812E-05		-1.03646E-05	-8.08124E-08
2P1/2			0.783877369	1.94684E-05	-1.30113E-06		
2P3/2			0.782898266	2.34501E-05	-1.31112E-06		
2P1/2 -- ( 2)	3.361647	-11.417808	0.845616225	7.31362E-05		-5.01774E-09	-4.07626E-11
2P3/2			0.807748727	1.29738E-05	-1.79479E-12		
2P3/2 -- ( 3)	3.345206	-11.387201	0.818995494	4.84384E-05		-1.02001E-09	-9.40507E-12
ETOT	-99.47060	98.76981	-237.72050	39.46914	1.18737E-02	-5.46191E-04	-3.88988E-04
NEON 2P6 Z=10 A=20 R=6.15548E-05 A.U.							
1S1/2 -- ( 2)	45.880703	-95.826917	5.936224729	1.16359E-02		-2.81492E-04	-2.13849E-06
2S1/2			1.397073755	2.99830E-04	-2.98616E-05		
2P1/2			1.390007988	4.12068E-04	-6.52196E-05		
2P3/2			1.385636021	2.26988E-04	-6.49208E-05		
2S1/2 -- ( 2)	5.237321	-16.308192	1.011229071	6.90182E-05		-1.60327E-05	-1.21788E-07
2P1/2			0.881842017	2.72045E-05	-1.75069E-06		
2P3/2			0.880424713	3.34257E-05	-1.76848E-06		
2P1/2 -- ( 2)	4.304881	-14.351226	0.955411297	1.05915E-04		-1.01497E-08	-7.98207E-11
2P3/2			0.912351536	1.87625E-05	-4.18815E-12		
2P3/2 -- ( 4)	4.277978	-14.301866	0.924694171	7.00159E-05		-2.04382E-09	-1.78874E-11
ETOT	-128.65249	127.95772	-310.18013	53.55402	1.74208E-02	-9.20842E-04	-5.95079E-04
SODIUM 3S1 Z=11 A=23 R=6.44904E-05 A.U.							
1S1/2 -- ( 2)	55.925477	-116.397017	6.557722886	1.56474E-02		-4.12926E-04	-3.04662E-06
2S1/2			1.583046025	4.28375E-04	-4.30613E-05		
2P1/2			1.642083355	6.43433E-04	-1.01805E-04		
2P3/2			1.636647609	3.94004E-04	-1.01358E-04		
3S1/2			0.312141801	1.42680E-05	-1.47603E-06		
2S1/2 -- ( 2)	6.794411	-20.426480	1.151861657	1.02094E-04		-2.50219E-05	-1.84597E-07
2P1/2			1.032771933	3.98502E-05	-2.25536E-06		
2P3/2			1.031151787	5.19652E-05	-2.28831E-06		
3S1/2			0.294280173	1.75117E-06	-3.05841E-07		
2P1/2 -- ( 2)	5.946633	-18.698941	1.153039891	1.75912E-04		-2.14807E-08	-1.62827E-10
2P3/2			1.100050579	3.13770E-05	-1.06566E-11		
3S1/2			0.296948088	1.46648E-06	-1.00579E-07		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
SODIUM 3S1 Z=11 A=23 R=6.44904E-05 A.U.							
2P3/2 -- ( 4)	5.906914	-18.630146	1.115295391	1.16267E-04		-4.28880E-09	-3.53278E-11
3S1/2 -- ( 1)	0.354905	-3.533250	0.000000000	0.	-1.01141E-07	-8.38109E-07	-6.18305E-09
ETOT	-162.03769	161.31560	65.72311	2.46110E-02	-1.42183E-03	-8.76795E-04	-6.46908E-06
MAGNESIUM 3S2 Z=12 A=24 R=6.54118E-05 A.U.							
1S1/2 -- ( 2)	66.986331	-138.993250	7.180546675	2.04940E-02		-5.85523E-04	-4.18145E-06
2S1/2 -- ( 2)	8.626006	-25.094046	1.296263682	1.46122E-04	-6.02097E-05	-3.76116E-05	-2.68578E-07
2P1/2 -- ( 2)	7.817557	-23.482360	1.180754178	5.57218E-05	-2.77032E-06	-4.16151E-08	-3.02605E-10
2P3/2 -- ( 4)	7.759299	-23.385003	1.296809564	1.77523E-04	-2.41293E-11	-8.23420E-09	-6.32116E-11
3S1/2 -- ( 2)	0.668494	-5.054308	0.381154912	3.15918E-06	-2.21841E-07	-1.90874E-06	-1.36300E-08
ETOT	-199.88575	199.23397	79.63788	3.36807E-02	-2.08000E-03	-1.25020E-03	-8.92817E-06
ALUMINUM 3P1 Z=13 A=27 R=6.80310E-05 A.U.							
1S1/2 -- ( 2)	79.072955	-163.627264	7.804866514	2.62579E-02		-8.07068E-04	-5.55835E-06
2S1/2 -- ( 2)	10.718015	-30.287146	1.442646506	2.02419E-04	-7.49419E-06	-5.45908E-05	-3.75957E-07
2P1/2 -- ( 2)	9.939147	-28.760577	1.528421895	3.89007E-04	-5.01155E-11	-7.54136E-08	-5.23276E-10
2P3/2 -- ( 4)			1.456254727	6.99414E-05			
3S1/2 -- ( 2)			0.472590204	5.87951E-06	-4.15720E-07		



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ALUMINUM	3P1	Z=13 A=27 R=6.80310E-05 A.U.					
2P3/2 -- ( 4)	9.856079	-28.625396	0.346627254 1.476459244 0.472443118	5.67988E-06 2.56678E-04 7.65788E-06	-4.79753E-07		
3S1/2 -- ( 2)	1.118271	-6.914191	0.353103781 0.354464429	2.10751E-06 2.52034E-06	-4.09953E-08	-3.75929E-06	-2.58894E-08
3P1/2 -- ( 1)	0.606873	-4.893224	0.262436780 0.000000000	1.84655E-06 0.	-2.50072E-07	-2.85833E-09	-1.98333E-11
ETOT	-242.27341	241.72796	94.53156	4.48996E-02	-2.92739E-03	-1.73105E-03	-1.19219E-05
SILICON	3P2	Z=14 A=28 R=6.88607E-05 A.U.					
1S1/2 -- ( 2)	92.192850	-190.308570	8.430692599 2.162252198 2.367018685	3.30209E-02 1.05082E-03 1.79683E-03		-1.08076E-04	-7.18446E-06
2S1/2 -- ( 2)	13.058266	-35.985571	0.598935335 0.470862595 1.589516956	8.57701E-05 8.68026E-05 2.72183E-04	-9.17895E-06 -1.37595E-05	-7.68120E-05	-5.08161E-07
2P1/2 -- ( 2)	12.298012	-34.515235	1.475479896 1.472477303 0.542872001	9.91561E-05 1.46646E-04 1.16338E-05	-3.85313E-06 -3.98228E-06 -2.39360E-06		
2P3/2 -- ( 4)	12.182456	-34.330950	0.437413409 1.712579613 1.630847586	5.09394E-06 5.38979E-04 9.71220E-05	-6.28087E-07 -9.68878E-11	-1.29298E-07	-8.51059E-10
3S1/2 -- ( 2)	1.622344	-8.847232	0.554790007 0.431783445 1.653278512	9.34870E-06 1.05564E-05 3.55237E-04	-6.67155E-07 -9.87768E-07	-2.51052E-08	-1.61173E-10
3P1/2 -- ( 2)	0.989826	-6.659312	0.554582616 0.441059270 0.417364341	1.22276E-05 3.94186E-06 4.25967E-06	-6.73808E-07 -8.60232E-08	-6.32214E-06	-4.18251E-08
ETOT	-289.37845	289.05242	0.320372562 0.316322628	3.04058E-06 3.78335E-06	-3.90839E-07	-6.71162E-09	-4.41772E-11
PHOSPHORUS	3P3	Z=15 A=31 R=7.12371E-05 A.U.					
1S1/2 -- ( 2)	106.351017	-219.044247	9.057918697 2.357406815 2.604547323	4.08635E-02 1.34987E-03 2.36437E-03		-1.43141E-03	-9.05638E-06
ETOT			2.590816905	1.29344E-03	-1.39690E-04 -3.73428E-04 -3.71563E-04		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PHOSPHORUS	3P3	Z=15	A=31	R=7.12371E-05	A.U.		
	3S1/2			0.684912633	1.23752E-04	-1.33600E-05	
	3P1/2			0.562232808	1.38258E-04	-2.19130E-05	
	3P3/2			0.559475861	7.48405E-05	-2.17967E-05	
2S1/2 -- ( 2)	15.644875	-42.186375	1.736660861	3.56827E-04		-1.05237E-04	-6.65900E-07
	2P1/2		1.621734153	1.27512E-04	-4.42293E-06		
	2P3/2		1.618067520	1.93941E-04	-4.60908E-06		
	3S1/2		0.617032460	1.72020E-05	-3.63876E-06		
	3P1/2		0.517982240	8.93910E-06	-1.16991E-06		
	3P3/2		0.515774973	1.35098E-05	-1.13491E-06		
2P1/2 -- ( 2)	14.896594	-40.754632	1.895118517	7.22019E-04		-2.11840E-07	-1.31383E-09
	2P3/2		1.803792398	1.30293E-04	-1.76688E-10		
	3S1/2		0.632126205	1.36356E-05	-9.79527E-07		
	3P1/2		0.511359598	1.69985E-05	-1.71123E-06		
	3P3/2		0.521231689	7.74042E-06	-1.47689E-07		
2P3/2 -- ( 4)	14.739495	-40.508091	1.828281882	4.75280E-04		-4.07292E-08	-2.33145E-10
	3S1/2		0.631849309	1.79079E-05	-9.90682E-07		
	3P1/2		0.523260180	6.37757E-06	-1.51086E-07		
	3P3/2		0.515016496	1.63723E-05	-9.18986E-07		
3S1/2 -- ( 2)	2.178827	-10.893345	0.476174900	6.49681E-06		-9.73581E-06	-6.16052E-08
	3P1/2		0.374249955	4.46192E-06	-5.48134E-07		
	3P3/2		0.373278623	3.26666E-06	-5.54554E-07		
3P1/2 -- ( 2)	1.430159	-8.533330	0.376346375	6.48891E-06		-1.34283E-08	-8.32841E-11
	3P3/2		0.357166925	1.22881E-06	-3.20705E-12		
3P3/2 -- ( 1)	1.414923	-8.489425	0.000000000	0.		-2.57838E-09	-1.47605E-11
ETOT	-341.40090	341.37585	-813.34565	130.50246	7.48693E-02	-5.31290E-03	-3.09337E-03
SULFUR	3P4	Z=16	A=32	R=7.19950E-05	A.U.		
1S1/2 -- ( 2)	121.555104	-249.844297	9.686568887	4.98675E-02		-1.85307E-03	-1.11584E-05
	2S1/2		2.553038894	1.70160E-03	-1.77069E-04		
	2P1/2		2.841097857	3.03839E-03	-4.79605E-04		
	2P3/2		2.824280763	1.65984E-03	-4.77096E-04		
	3S1/2		0.767397996	1.69259E-04	-1.84149E-05		
	3P1/2		0.649561570	2.02585E-04	-3.21006E-05		
	3P3/2		0.645873138	1.09359E-04	-3.19101E-05		
2S1/2 -- ( 2)	18.477893	-48.889596	1.884015598	4.57810E-04		-1.40917E-04	-8.48759E-07
	2P1/2		1.767656323	1.60892E-04	-5.01307E-06		
	2P3/2		1.763216138	2.50457E-04	-5.27346E-06		
	3S1/2		0.688317379	2.40332E-05	-5.19224E-06		
	3P1/2		0.594782641	1.42080E-05	-1.93522E-06		
	3P3/2		0.591893200	2.06642E-05	-1.87092E-06		
2P1/2 -- ( 2)	17.737374	-47.484982	2.076665490	9.41479E-04		-3.34142E-07	-1.93758E-09
	2P3/2		1.975674321	1.70040E-04	-3.06951E-10		
	3S1/2		0.706504881	1.88163E-05	-1.35853E-06		

TABLE 1.-- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
SULFUR	3P4	Z=16 A=32	R=7.19950E-05	A.U.			
	3P1/2			0.587384899	2.51519E-05	-2.67563E-06	
	3P3/2			0.599114700	1.15345E-05	-2.32769E-07	
2P3/2 -- ( 4)	17.528145	-47.160930	2.002057804	6.18890E-04		-6.35992E-08	-3.17000E-10
	3S1/2			0.706147961	2.48044E-05	-1.37596E-06	
	3P1/2			0.601767735	9.47070E-06	-2.38716E-07	
	3P3/2			0.591559783	2.41430E-05	-1.43565E-06	
3S1/2 -- ( 2)	2.788252	-13.070087	0.532517484	9.27823E-06		-1.41544E-05	-8.52554E-08
	3P1/2			0.425574464	6.12295E-06	-7.21468E-07	
	3P3/2			0.424319654	4.72769E-06	-7.32919E-07	
3P1/2 -- ( 2)	1.924792	-10.530048	0.433735153	1.00623E-05		-2.43372E-08	-1.41129E-10
	3P3/2			0.411455922	1.90304E-06	-6.92032E-12	
3P3/2 -- ( 2)	1.901122	-10.467020	0.417365614	6.60080E-06		-4.62329E-09	-2.30473E-11
ETDT	-398.49065	398.88165	-949.21578	151.76028	9.41531E-02	-6.91869E-03	-4.01726E-03
CHLORINE	3P5	Z=17 A=35	R=7.41780E-05	A.U.			
1S1/2 -- ( 2)	137.812837	-282.718958	10.316668049	6.01152E-02		-2.36147E-03	-1.34599E-05
	2S1/2			2.749101928	2.11026E-03	-2.20706E-04	
	2P1/2			3.077104953	3.82810E-03	-6.03879E-04	
	2P3/2			3.056740108	2.08832E-03	-6.00567E-04	
	3S1/2			0.847708060	2.23020E-04	-2.44328E-05	
	3P1/2			0.734219178	2.80943E-04	-4.45017E-05	
	3P3/2			0.729440858	1.51256E-04	-4.42085E-05	
2S1/2 -- ( 2)	21.558115	-56.096433	2.031569304	5.76606E-04		-1.84992E-04	-1.05489E-06
	2P1/2			1.913419860	1.99748E-04	-5.62430E-06	
	2P3/2			1.908090129	3.17025E-04	-5.97960E-06	
	3S1/2			0.757838970	3.22618E-05	-7.08654E-06	
	3P1/2			0.669132472	2.11068E-05	-2.95720E-06	
	3P3/2			0.665453378	2.97127E-05	-2.84860E-06	
2P1/2 -- ( 2)	20.822626	-54.711151	2.257611177	1.20074E-03		-5.10318E-07	-2.74164E-09
	2P3/2			2.146854109	2.16945E-04	-5.11812E-10	
	3S1/2			0.779061027	2.49809E-05	-1.81089E-06	
	3P1/2			0.661112568	3.51882E-05	-3.90878E-06	
	3P3/2			0.674491515	1.62209E-05	-3.41945E-07	
2P3/2 -- ( 4)	20.549008	-54.292031	2.174964853	7.88142E-04		-9.61348E-08	-4.03806E-10
	3S1/2			0.778612257	3.30390E-05	-1.83683E-06	
	3P1/2			0.677869931	1.32866E-05	-3.51647E-07	
	3P3/2			0.665634705	3.36649E-05	-2.09482E-06	
3S1/2 -- ( 2)	3.452804	-15.389996	0.587350194	1.26609E-05		-1.97542E-05	-1.12650E-07
	3P1/2			0.475279402	8.04475E-06	-9.10643E-07	
	3P3/2			0.473697159	6.51309E-06	-9.29286E-07	
3P1/2 -- ( 2)	2.473327	-12.660598	0.489372274	1.45946E-05		-4.11900E-08	-2.21305E-10
	3P3/2			0.464047757	2.75497E-06	-1.34707E-11	
3P3/2 -- ( 3)	2.438555	-12.573420	0.470539053	9.55231E-06		-7.73949E-09	-3.25172E-11

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CHLORINE	3P5	Z=17 A=35	R=7.41780E-05	A.U.			
ETOT	-460.81321	461.75112	-1098.04266	175.37562	1.16724E-01	-8.84827E-03	-5.13394E-03 -2.92625E-05
ARGON	3P6	Z=18 A=40	R=7.75542E-05	A.U.			
1S1/2 -- ( 2)	155.132542	-317.679254	10.948255183	7.16892E-02		-2.96778E-03	-1.59127E-05
2S1/2			2.945596766	2.58021E-03	-2.71103E-04		
2P1/2			3.312882782	4.74279E-03	-7.47663E-04		
2P3/2			3.288477397	2.58367E-03	-7.43365E-04		
3S1/2			0.926515650	2.85704E-04	-3.14960E-05		
3P1/2			0.817183436	3.74698E-04	-5.93271E-05		
3P3/2			0.811135365	2.01211E-04	-5.88953E-05		
2S1/2 -- ( 2)	24.887117	-63.809147	2.179337527	7.14724E-04		-2.38695E-04	-1.28075E-06
2P1/2			2.059153111	2.44543E-04	-6.25734E-06		
2P3/2			2.052810354	3.94483E-04	-6.73205E-06		
3S1/2			0.826159733	4.20150E-05	-9.35296E-06		
3P1/2			0.741927607	2.98556E-05	-4.27097E-06		
3P3/2			0.737339003	4.08649E-05	-4.09828E-06		
2P1/2 -- ( 2)	24.154796	-62.437639	2.438225674	1.50323E-03		-7.58030E-07	-3.73222E-09
2P3/2			2.317577848	2.71594E-04	-8.23882E-10		
3S1/2			0.850369977	3.22135E-05	-2.34301E-06		
3P1/2			0.733392674	4.73060E-05	-5.44162E-06		
3P3/2			0.748229022	2.18891E-05	-4.77863E-07		
2P3/2 -- ( 4)	23.802715	-61.903391	2.347243741	9.85121E-04		-1.41301E-07	-4.76583E-10
3S1/2			0.849816447	4.27258E-05	-2.38016E-06		
3P1/2			0.752449296	1.79001E-05	-4.92890E-07		
3P3/2			0.738090305	4.51092E-05	-2.91203E-06		
3S1/2 -- ( 2)	4.173348	-17.858922	0.641152063	1.66976E-05		-2.67207E-05	-1.43384E-07
3P1/2			0.523930955	1.02496E-05	-1.11707E-06		
3P3/2			0.521969543	8.65673E-06	-1.14565E-06		
3P1/2 -- ( 2)	3.077547	-14.934679	0.543891933	2.01933E-05		-6.62621E-08	-3.26284E-10
3P3/2			0.515533620	3.80299E-06	-2.44591E-11		
3P3/2 -- ( 4)	3.028501	-14.817371	0.522532029	1.31839E-05		-1.23114E-08	-4.15426E-11
ETOT	-528.53143	530.17556	-1260.32233	201.49008	1.42908E-01	-1.11408E-02	-6.46865E-03 -3.46838E-05
POTASSIUM	4S1	Z=19 A=39	R=7.69025E-05	A.U.			
1S1/2 -- ( 2)	173.523868	-354.737814	11.581428783	8.46729E-02		-3.68396E-03	-1.84489E-05
2S1/2			3.143291089	3.11769E-03	-3.28988E-04		
2P1/2			3.549831436	5.79659E-03	-9.13121E-04		
2P3/2			3.520863776	3.15329E-03	-9.07633E-04		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
<b>POTASSIUM 4S1</b>							
Z=19 A=39 R=7.69025E-05 A.U.							
3S1/2			1.023655601	3.73644E-04	-4.14354E-05		
3P1/2			0.943188860	5.35754E-04	-8.47872E-05		
3P3/2			0.936442588	2.87689E-04	-8.43296E-05		
4S1/2			0.250036298	1.92035E-05	-2.13965E-06		
2S1/2 -- ( 2)	28.484085	-72.051956	2.327995386	8.74497E-04		-3.03538E-04	-1.52174E-06
2P1/2			2.205712175	2.95929E-04	-6.90122E-06		
2P3/2			2.198228024	4.84151E-04	-7.52402E-06		
3S1/2			0.908362170	5.57777E-05	-1.25741E-05		
3P1/2			0.849104930	4.50890E-05	-6.56805E-06		
3P3/2			0.844186820	6.02498E-05	-6.29469E-06		
4S1/2			0.244261301	2.85603E-06	-6.64317E-07		
2P1/2 -- ( 2)	27.755046	-70.693518	2.619802185	1.85444E-03		-1.10010E-06	-4.89818E-09
2P3/2			2.489059961	3.34947E-04	-1.28815E-09		
3S1/2			0.936652166	4.23678E-05	-3.09519E-06		
3P1/2			0.839315201	6.80750E-05	-8.09464E-06		
3P3/2			0.858315699	3.16932E-05	-7.16226E-07		
4S1/2			0.245629769	2.14526E-06	-1.62368E-07		
2P3/2 -- ( 4)	27.308404	-70.021395	2.520124504	1.21323E-03		-2.02869E-07	-5.07554E-10
3S1/2			0.935952121	5.63186E-05	-3.14889E-06		
3P1/2			0.862700483	2.58124E-05	-7.39017E-07		
3P3/2			0.845752331	6.48580E-05	-4.33679E-06		
4S1/2			0.245594681	2.83344E-06	-1.64850E-07		
3S1/2 -- ( 2)	5.171576	-20.910642	0.708847789	2.29008E-05		-3.67988E-05	-1.84505E-07
3P1/2			0.593830120	1.36931E-05	-1.40164E-06		
3P3/2			0.591801495	1.23582E-05	-1.44974E-06		
4S1/2			0.231352604	6.74345E-07	-1.94878E-07		
3P1/2 -- ( 2)	4.108453	-18.226130	0.631133197	3.12914E-05		-1.13198E-07	-5.04102E-10
3P3/2			0.597936884	5.92085E-06	-4.96655E-11		
4S1/2			0.231454969	8.55046E-07	-9.86856E-08		
3P3/2 -- ( 4)	4.044649	-18.085904	0.606372535	2.04529E-05		-2.08459E-08	-5.21974E-11
4S1/2			0.231325732	9.65079E-07	-1.00041E-07		
4S1/2 -- ( 1)	0.363579	-4.825708	0.000000000	0.		-1.89348E-06	-9.49379E-09
ETOT	-601.35306	603.86185	-1430.49502	225.12906	1.72960E-01	-1.37995E-02	-8.05380E-03
<b>CALCIUM 4S2</b>							
Z=20 A=40 R=7.75542E-05 A.U.							
1S1/2 -- ( 2)	192.996524	-393.907382	12.216241408	9.91502E-02		-4.52264E-03	-2.09774E-05
2S1/2			3.341899696	3.72697E-03	-3.94861E-04		
2P1/2			3.787595344	6.99845E-03	-1.10159E-03		
2P3/2			3.753507537	3.80167E-03	-1.09468E-03		
3S1/2			1.122033246	4.79066E-04	-5.34200E-05		
3P1/2			1.062135785	7.27036E-04	-1.14996E-04		
3P3/2			1.054265023	3.90082E-04	-1.14496E-04		
4S1/2			0.313720781	3.59661E-05	-4.03277E-06		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CALCIUM 4S2 Z=20 A=40 R=7.75542E-05 A.U.							
2S1/2 -- ( 2)	32.347228	-80.822348	2.477295140	1.05744E-03		-3.80956E-04	-1.76980E-06
2P1/2			2.352835939	3.54369E-04	-7.55802E-06		
2P3/2			2.344072297	5.86838E-04	-8.36222E-06		
3S1/2			0.991173775	7.25000E-05	-1.65248E-05		
3P1/2			0.949544301	6.42268E-05	-9.49128E-06		
3P3/2			0.943979198	8.39500E-05	-9.07578E-06		
4S1/2			0.304178634	5.42349E-06	-1.27860E-06		
2P1/2 -- ( 2)	31.620877	-79.475076	2.801980037	2.25768E-03		-1.56356E-06	-6.19083E-09
2P3/2			2.660948880	4.07552E-04	-1.96199E-09		
3S1/2			1.023743724	5.46037E-05	-4.00641E-06		
3P1/2			0.938749917	9.29340E-05	-1.13704E-05		
3P3/2			0.961410145	4.34599E-05	-1.01168E-06		
4S1/2			0.306462183	4.03295E-06	-3.08481E-07		
2P3/2 -- ( 4)	31.061448	-78.639398	2.693236507	1.47442E-03		-2.85187E-07	-4.52849E-10
3S1/2			1.022871643	7.27155E-05	-4.08209E-06		
3P1/2			0.966265476	3.52974E-05	-1.04530E-06		
3P3/2			0.946489007	8.83900E-05	-6.09262E-06		
4S1/2			0.306398478	5.32950E-06	-3.13507E-07		
3S1/2 -- ( 2)	6.300115	-24.217748	0.776946040	3.06369E-05		-4.95627E-05	-2.30289E-07
3P1/2			0.660303466	1.76016E-05	-1.69053E-06		
3P3/2			0.658029554	1.68729E-05	-1.76398E-06		
4S1/2			0.284196200	1.33662E-06	-4.06078E-07		
3P1/2 -- ( 2)	5.232019	-21.637089	0.711416311	4.50073E-05		-1.81876E-07	-7.20329E-10
3P3/2			0.673730778	8.52858E-06	-9.18363E-11		
4S1/2			0.285130578	1.65655E-06	-1.94985E-07		
3P3/2 -- ( 4)	5.148128	-21.462940	0.683280999	2.94078E-05		-3.31615E-08	-5.27503E-11
4S1/2			0.284941762	1.87581E-06	-1.98301E-07		
4S1/2 -- ( 2)	0.639050	-6.407666	0.221383869	5.67638E-07		-3.72612E-06	-1.73135E-08
ETOT	-679.50734	683.10993	-1613.34397	250.54637	2.07157E-01	-1.68647E-02	-9.91854E-03 -4.60053E-05
SCANDIUM 3D1 Z=21 A=45 R=8.06597E-05 A.U.							
1S1/2 -- ( 2)	213.575263	-435.216421	12.853290051	0.115217224		-0.005497610	-0.000023383
2S1/2			3.541959641	0.004415019	-0.000469584		
2P1/2			4.027377516	0.008366330	-0.001315813		
2P3/2			3.987545809	0.004538146	-0.001307218		
3S1/2			1.207908939	0.000588107	-0.000065916		
3P1/2			1.157593577	0.000916215	-0.000144825		
3P3/2			1.148174236	0.000490718	-0.000144202		
3D3/2			0.752382123	0.000003493	-0.000000466		
4S1/2			0.339201613	0.000044614	-0.000005030		
2S1/2 -- ( 2)	36.495238	-90.142426	2.627572824	0.001266058		-0.000472759	-0.000002015
2P1/2			2.501068682	0.000420552	-0.000008207		
2P3/2			2.490869875	0.000704045	-0.000009231		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
SCANDIUM	3D1	Z=21 A=45 R=8.06597E-05 A.U.						
	3S1/2		1.064640512	0.000090139	-0.000020716			
	3P1/2		1.031489525	0.000084420	-0.000012608			
	3P3/2		1.024923948	0.000108162	-0.000012013			
	3D3/2		0.737785685	0.000030135	-0.000004158			
	4S1/2		0.328653482	0.000006812	-0.000001620			
2P1/2 -- ( 2)	35.777929	-88.814281	2.985673902	0.002719517		-0.000002184	-0.000000008	
	2P3/2		2.834095917	0.000490531	-0.000000003			
	3S1/2		1.100788938	0.000067365	-0.000004954			
	3P1/2		1.020254388	0.000117877	-0.000014746			
	3P3/2		1.044972037	0.000059246	-0.000001315			
	3D3/2		0.734218382	0.000086859	-0.000020426			
	4S1/2		0.331210579	0.000005028	-0.000000386			
2P3/2 -- ( 4)	35.084467	-87.785410	2.867419251	0.001772696		-0.000000394	-0.000000000	
	3S1/2		1.099743466	0.000089883	-0.000005056			
	3P1/2		1.050677374	0.000044819	-0.000001362			
	3P3/2		1.028330198	0.000111813	-0.000007891			
	3D3/2		0.741893656	0.000025043	-0.000002610			
	4S1/2		0.331133405	0.000006654	-0.000000393			
3S1/2 -- ( 2)	7.363987	-27.441287	0.835883528	0.000038562		-0.000063772	-0.000000272	
	3P1/2		0.715035297	0.000021433	-0.000001966			
	3P3/2		0.712357851	0.000021385	-0.000002068			
	3D3/2		0.600423278	0.000010298	-0.000001056			
	4S1/2		0.307068806	0.000001707	-0.000000522			
3P1/2 -- ( 2)	6.230472	-24.783456	0.774949246	0.000058447		-0.000000269	-0.000000001	
	3P3/2		0.733655603	0.000011053	-0.000000000			
	3D3/2		0.552326067	0.000021479	-0.000003795			
	4S1/2		0.308451539	0.000002077	-0.000000244			
3P3/2 -- ( 4)	6.121159	-24.563548	0.743842154	0.000038119		-0.000000049	-0.000000000	
	3D3/2		0.588015758	0.000007591	-0.000000475			
	4S1/2		0.308233496	0.000002371	-0.000000249			
3D3/2 -- ( 1)	2.839255	-15.802004	0.000000000	0.000000000		-0.000000000	0.000000000	
	4S1/2		0.287072836	0.000000620	-0.000000001			
4S1/2 -- ( 2)	0.753854	-7.280457	0.238948655	0.000000719		-0.000004845	-0.000000021	
ETOT	-763.13913	768.05525	-1812.55449	281.14710	0.245485614	-0.020331826	-0.012084647	-0.000051399
TITANIUM	3D2	Z=22 A=48 R=8.24137E-05 A.U.						
1S1/2 -- ( 2)	235.262365	-478.670373	13.492259547	0.132953229		-0.006622990	-0.000025518	
	2S1/2		3.742608246	0.005184136	-0.000553419			
	2P1/2		4.267805434	0.009903894	-0.001556268			
	2P3/2		4.221581819	0.005364245	-0.001545686			
	3S1/2		1.290277188	0.000707652	-0.000079691			
	3P1/2		1.247452847	0.001123321	-0.000177433			
	3P3/2		1.236257337	0.000600512	-0.000176649			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TITANIUM	3D2	Z=22 A=48 R=8.24137E-05 A.U.					
	3D3/2		0.859401400	0.000005313	-0.000000708		
	4S1/2		0.359237672	0.000052323	-0.000005928		
2S1/2 --	( 2)	40.910089	-99.990566	2.778161489	0.001501088	-0.000580398	-0.000002243
	2P1/2		2.649602846	0.000494778	-0.000008865		
	2P3/2		2.637806660	0.000836077	-0.000010152		
	3S1/2		1.135512165	0.000109719	-0.000025382		
	3P1/2		1.109069272	0.000107389	-0.000016171		
	3P3/2		1.101341765	0.000135158	-0.000015345		
	3D3/2		0.840355076	0.000043548	-0.000006016		
	4S1/2		0.348134620	0.000008082	-0.000001934		
2P1/2 --	( 2)	40.205164	-98.684118	3.169698336	0.003241315	-0.000003000	-0.000000009
	2P3/2		3.007368699	0.000584042	-0.000000004		
	3S1/2		1.175041230	0.000081429	-0.000005998		
	3P1/2		1.097545127	0.000145428	-0.000018526		
	3P3/2		1.123850056	0.000068243	-0.000001653		
	3D3/2		0.836696221	0.000125711	-0.000029593		
	4S1/2		0.350859190	0.000005927	-0.000006047		
2P3/2 --	( 4)	39.354247	-97.429361	3.041513859	0.062108631	-0.000000535	0.000000000
	3S1/2		1.173807769	0.000108841	-0.000006131		
	3P1/2		1.130561261	0.000055332	-0.000001718		
	3P3/2		1.105627459	0.000137553	-0.000009899		
	3D3/2		0.845859771	0.000036320	-0.000003762		
	4S1/2		0.350770411	0.000007852	-0.000000466		
3S1/2 --	( 2)	8.456968	-30.767617	0.892383994	0.000047307	-0.000080268	-0.000000310
	3P1/2		0.766951046	0.000025574	-0.000002254		
	3P3/2		0.763802980	0.000026359	-0.000002391		
	3D3/2		0.672819700	0.000013506	-0.000001329		
	4S1/2		0.325718056	0.000002046	-0.000000625		
3P1/2 --	( 2)	7.248244	-27.999615	0.834699770	0.000073286	-0.000000385	-0.000000001
	3P3/2		0.789950659	0.000013823	-0.000000000		
	3D3/2		0.619390083	0.000028029	-0.000004751		
	4S1/2		0.327435623	0.000002448	-0.000000285		
3P3/2 --	( 4)	7.108408	-27.724864	0.800634431	0.000047692	-0.000000069	0.000000000
	3D3/2		0.660093837	0.000010009	-0.000000593		
	4S1/2		0.327189907	0.000002817	-0.000000292		
3D3/2 --	( 2)	3.653851	-18.909696	0.563594535	0.000025384	-0.000000000	0.000000000
	4S1/2		0.309769477	0.000000791	-0.000000000		
4S1/2 --	( 2)	0.844911	-8.079083	0.253103256	0.000000854	-0.000005944	-0.000000023
ETOT	-852.54257	859.01380	-2026.81903	315.01310	0.288462463	-0.024259810	-0.014588381



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
VANADIUM	3D3	Z=23	A=51	R=8.40961E-05	A.U.		
1S1/2 -- ( 2)	258.068313	-524.283299	14.133162710	0.152443558		-0.007913824	-0.000027206
2S1/2			3.943795035	0.006038732	-0.000646887		
2P1/2			4.508819352	0.011620464	-0.001824312		
2P3/2			4.455521410	0.006284537	-0.001811408		
3S1/2			1.370667879	0.000839209	-0.000094921		
3P1/2			1.334376142	0.001351956	-0.000213375		
3P3/2			1.321184564	0.000721350	-0.000212391		
3D3/2			0.953964754	0.000007470	-0.000000996		
4S1/2			0.376787870	0.000059981	-0.000006826		
2S1/2 -- ( 2)	45.592460	-110.368168	2.929031986	0.001764104		-0.000705625	-0.000002437
2P1/2			2.798404138	0.000577539	-0.000009536		
2P3/2			2.734839718	0.000983752	-0.000011136		
3S1/2			1.204928743	0.000131490	-0.000030582		
3P1/2			1.194370105	0.000133530	-0.000020241		
3P3/2			1.175331074	0.000165368	-0.000019124		
3D3/2			0.930707536	0.000058626	-0.000008106		
4S1/2			0.305294483	0.000009362	-0.000002252		
2P1/2 -- ( 2)	44.902779	-109.085401	3.354003397	0.003826657		-0.000004058	-0.000000010
2P3/2			3.180708343	0.000688643	-0.000000006		
3S1/2			1.247725337	0.000096978	-0.000007149		
3P1/2			1.172639287	0.000176071	-0.000022774		
3P3/2			1.200215427	0.000082669	-0.000002032		
3D3/2			0.925911477	0.000169525	-0.000039939		
4S1/2			0.368146357	0.000006827	-0.000000527		
2P3/2 -- ( 4)	43.868379	-107.568531	3.215450188	0.002484222		-0.000000715	0.000000001
3S1/2			1.246286544	0.000129826	-0.000007321		
3P1/2			1.208071992	0.000067015	-0.000002119		
3P3/2			1.180476547	0.000166041	-0.000012147		
3D3/2			0.937575593	0.000049062	-0.000005105		
4S1/2			0.368046202	0.000009055	-0.000000538		
3S1/2 -- ( 2)	9.593021	-34.225445	0.947529423	0.000056998		-0.000099396	-0.000000343
3P1/2			0.817372828	0.000030094	-0.000002558		
3P3/2			0.813693322	0.000031878	-0.000002738		
3D3/2			0.736429132	0.000016883	-0.000001602		
4S1/2			0.342295213	0.000002386	-0.000000726		
3P1/2 -- ( 2)	8.304752	-31.331576	0.892504470	0.000089816		-0.000000536	-0.000000001
3P3/2			0.844347774	0.000016891	-0.000000000		
3D3/2			0.678896116	0.000034993	-0.000005726		
4S1/2			0.344287395	0.000002814	-0.000000326		
3P3/2 -- ( 4)	8.128734	-30.992242	0.855430144	0.000058308		-0.000000094	0.000000000
3D3/2			0.723697354	0.000012580	-0.000000711		
4S1/2			0.344013093	0.000003262	-0.000000334		
3D3/2 -- ( 3)	4.468917	-21.945033	0.629577544	0.000034812		-0.000000000	0.000000000
4S1/2			0.328831890	0.000000962	-0.000000000		
4S1/2 -- ( 2)	0.926215	-8.858849	0.265339877	0.000000983		-0.000007116	-0.000000025
ETOT	-947.87849	956.17029	-2256.38367	352.04465	0.336452550	-0.028687503	-0.017464346

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CHROMIUM 3D5 4S1 Z=24 A=52 R=8.46422E-05 A.U.							
1S1/2 -- ( 2)	282.013053	-572.079229	14.776316408	0.173782105			
2S1/2			4.145943142	0.006985390	-0.000750801		-0.000028234
2P1/2			4.751244580	0.013532569	-0.002122422		
2P3/2			4.690135313	0.007307411	-0.002106822		
3S1/2			1.443476709	0.000974225	-0.000110645		
3P1/2			1.408698316	0.001578702	-0.000248942		
3P3/2			1.393046722	0.000840212	-0.000247591		
3D3/2			0.960500356	0.000008595	-0.000001146		
3D5/2			0.954467417	0.000003592	-0.000001139		
4S1/2			0.366960403	0.000056388	-0.000006442		
2S1/2 -- ( 2)	50.557615	-121.293738	3.080499042	0.002057553			
2P1/2			2.947903837	0.000669535	-0.000010204		
2P3/2			2.932386577	0.001148475	-0.000012174		
3S1/2			1.268803394	0.000154139	-0.000035994		
3P1/2			1.250054367	0.000160515	-0.000024457		
3P3/2			1.239324834	0.000195786	-0.000022985		
3D3/2			0.936967671	0.000065229	-0.000009019		
3D5/2			0.931389139	0.000028620	-0.000008916		
4S1/2			0.357139034	0.000008889	-0.000002143		
2P1/2 -- ( 2)	49.890661	-120.043025	3.539271703	0.004481827			
2P3/2			3.354745363	0.000805372	-0.000000009		
3S1/2			1.314377767	0.000113037	-0.000008332		
3P1/2			1.238341592	0.000206837	-0.000027084		
3P3/2			1.266097563	0.000097043	-0.000002412		
3D3/2			0.932450973	0.000188899	-0.000044513		
3D5/2			0.940098916	0.000005896	-0.000001351		
4S1/2			0.359606135	0.000006451	-0.000000498		
2P3/2 -- ( 4)	48.643389	-118.223423	3.389850562	0.002903163			
3S1/2			1.312730311	0.000151556	-0.000008548		
3P1/2			1.275503127	0.000078726	-0.000002526		
3P3/2			1.245207622	0.000194346	-0.000014406		
3D3/2			0.944047889	0.000054727	-0.000005689		
3D5/2			0.931613859	0.000095889	-0.000026997		
4S1/2			0.359513127	0.000008570	-0.000000509		
3S1/2 -- ( 2)	10.670687	-37.646613	0.997157692	0.000066698			
3P1/2			0.861329324	0.000034601	-0.000002871		
3P3/2			0.856959122	0.000037291	-0.000003098		
3D3/2			0.744407350	0.000018303	-0.000001709		
3D5/2			0.741165639	0.000016303	-0.000001705		
4S1/2			0.337299517	0.000002253	-0.000000671		
3P1/2 -- ( 2)	9.264027	-34.527557	0.941295022	0.000105646			
3P3/2			0.890124473	0.000019779	-0.000000000		
3D3/2			0.688309796	0.000038303	-0.000006221		
3D5/2			0.736991887	0.000009619	-0.000000195		
4S1/2			0.339113646	0.000002630	-0.000000299		
3P3/2 -- ( 4)	9.043916	-34.107561	0.901270094	0.000068351			
3D3/2			0.732118983	0.000013711	-0.000000769		
3D5/2			0.703291238	0.000027127	-0.000003676		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CHROMIUM      3D5 4S1      Z=24    A=52    R=8.46422E-05 A.U.							
3D3/2 -- ( 4)	4.669558	-23.056235	0.338844882	0.00000375	-0.000000308	-0.000000000	0.000000000
4S1/2			0.616226692	0.000035790			
3D5/2 -- ( 1)	4.618921	-22.911321	0.620315425	0.000006372	-0.000000000	-0.000000000	0.000000000
4S1/2			0.319778529	0.000000872	-0.000000001		
4S1/2 -- ( 1)	0.836508	-8.980652	0.000000000	0.000000000	-0.000000001	-0.000000000	0.000000000
ETOT	-1049.23938	1059.67497	-2504.62118	395.37202	0.389238453	-0.033623699	-0.020737879
MANGANESE      3D5      Z=25    A=55    R=8.62396E-05 A.U.							
1S1/2 -- ( 2)	307.081551	-622.046305	15.420901176	0.197030520		-0.011056292	-0.000028344
2S1/2			4.347899965	0.008023117	-0.000864961		
2P1/2			4.992949846	0.015631687	-0.002449122		
2P3/2			4.923308336	0.008427735	-0.002430413		
3S1/2			1.528292180	0.001142722	-0.000130276		
3P1/2			1.503780170	0.001883209	-0.000296680		
3P3/2			1.485901410	0.001000880	-0.000295165		
3D3/2			1.124873815	0.000012954	-0.000001726		
3D5/2			1.119241003	0.000005423	-0.000001722		
4S1/2			0.408543799	0.000075609	-0.000008674		
2S1/2 -- ( 2)	55.771375	-132.728250	3.231739090	0.002380915		-0.001016544	-0.000002630
2P1/2			3.096982167	0.000770760	-0.000010914		
2P3/2			3.079331752	0.001329570	-0.000013320		
3S1/2			1.341455910	0.000182389	-0.000042770		
3P1/2			1.331521790	0.000196604	-0.000030100		
3P3/2			1.319396242	0.000236640	-0.000028169		
3D3/2			1.093571659	0.000094726	-0.000013111		
3D5/2			1.088499724	0.000041750	-0.000012992		
4S1/2			0.396546914	0.000012022	-0.000002914		
2P1/2 -- ( 2)	55.122156	-131.500969	3.723742333	0.005203911		-0.000007134	-0.000000008
2P3/2			3.527811767	0.000933576	-0.000000012		
3S1/2			1.390608806	0.000133078	-0.000009818		
3P1/2			1.319515083	0.000247983	-0.000032866		
3P3/2			1.348904474	0.000116384	-0.000002926		
3D3/2			1.087985706	0.000274872	-0.000064831		
3D5/2			1.100244624	0.000008677	-0.000001976		
4S1/2			0.399581998	0.000008681	-0.000000672		
2P3/2 -- ( 4)	53.631276	-129.335777	3.563030715	0.003363178		-0.000001228	0.000000004
3S1/2			1.388699927	0.000178596	-0.000010091		
3P1/2			1.359476212	0.000094382	-0.000003074		
3P3/2			1.326199691	0.000232394	-0.000017455		
3D3/2			1.103119104	0.000079764	-0.000008286		
3D5/2			1.089052457	0.000139853	-0.000039403		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
MANGANESE 3D5 Z=25 A=55 R=8.62396E-05 A.U.							
3S1/2 -- ( 2)	12.021417	-41.589390	0.399458864 1.055665410	0.000011536 0.000079597	-0.000000688	-0.000146882	-0.000000380
3P1/2			0.915907419	0.000040440	-0.000003227		
3P3/2			0.910977326	0.000044779	-0.000003520		
3D3/2			0.851134512	0.000024480	-0.000002183		
3D5/2			0.848526402	0.000022877	-0.000002185		
4S1/2			0.372787831	0.000003087	-0.000000932		
3P1/2 -- ( 2)	10.567976	-38.419765	1.005172044	0.000128732		-0.000000982	-0.000000001
3P3/2			0.950169907	0.000024049	-0.000000001		
3D3/2			0.787176941	0.000050845	-0.000007851		
3D5/2			0.846103686	0.000013891	-0.000000250		
4S1/2			0.375217000	0.000003553	-0.000000405		
3P3/2 -- ( 4)	10.299840	-37.917916	0.961800176	0.000083128		-0.000000169	0.000000001
3D3/2			0.838766555	0.000018417	-0.000000967		
3D5/2			0.805756581	0.000037094	-0.000004627		
4S1/2			0.374881932	0.000004176	-0.000000418		
3D3/2 -- ( 4)	6.170224	-28.127948	0.746767726	0.000057301		-0.000000000	0.000000000
3D5/2			0.752689421	0.000010357	-0.000000000		
4S1/2			0.362205975	0.000001313	-0.000000001		
3D5/2 -- ( 1)	6.114300	-27.986952	0.000000000	0.000000000		-0.000000000	0.000000000
4S1/2 -- ( 2)	1.075016	-10.437076	0.361893272	0.000001829	-0.000000001	-0.0000009735	-0.000000025
4S1/2 -- ( 2)			0.287890731	0.000001248			
ETOT	-1156.92217	1169.79864	-2762.95702	435.85158	0.448385581	-0.039199011	-0.024480724
IRON 3D6 Z=26 A=56 R=8.67591E-05 A.U.							
1S1/2 -- ( 2)	333.314435	-674.230224	16.067860413	0.222301729		-0.012942399	-0.000027243
2S1/2			4.550878828	0.009162428	-0.000990706		
2P1/2			5.236168652	0.017946593	-0.002808788		
2P3/2			5.157184154	0.009660361	-0.002786516		
3S1/2			1.606160206	0.001316378	-0.000150612		
3P1/2			1.587197177	0.002189233	-0.000344541		
3P3/2			1.566604200	0.001161206	-0.000342682		
3D3/2			1.205777526	0.000016359	-0.000002179		
3D5/2			1.199070436	0.000006837	-0.000002172		
4S1/2			0.423352195	0.000083821	-0.000009651		
2S1/2 -- ( 2)	61.274289	-144.719683	3.383629716	0.002738192		-0.001206400	-0.000002573
2P1/2			3.246817140	0.000882289	-0.000011625		
2P3/2			3.226830310	0.001529458	-0.000014539		
3S1/2			1.409034247	0.000211841	-0.000049835		
3P1/2			1.404095293	0.000234072	-0.000035972		
3P3/2			1.390181228	0.000278146	-0.000033492		
3D3/2			1.170543014	0.000116174	-0.000016085		
3D5/2			1.164529521	0.000051251	-0.000015925		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
IRON 3D6 Z=26 A=56 R=8.67591E-05 A.U.							
2P1/2 -- ( 2)	60.649582	-143.523529	0.411168743	0.000013438	-0.000003266	-0.000009293	-0.000000005
2P3/2			3.909252450	0.006003763			
3S1/2			3.701623994	0.001075098	-0.000000016		
3P1/2			1.461311719	0.000153852	-0.000011351		
3P3/2			1.391993604	0.000289766	-0.000038784		
3D3/2			1.421960196	0.000135883	-0.000003447		
3D5/2			1.164654341	0.000337687	-0.000079680		
4S1/2			1.177883034	0.000010721	-0.000002428		
2P3/2 -- ( 4)	58.879622	-140.963931	0.414277136	0.000009663	-0.000000749	-0.000001580	0.000000008
3S1/2			3.736702260	0.003870811			
3P1/2			1.459135319	0.000206669	-0.000011689		
3P3/2			1.434112770	0.000110250	-0.000003636		
3D3/2			1.397778255	0.000270657	-0.000020550		
3D5/2			1.181421127	0.000098101	-0.000010183		
4S1/2			1.165383415	0.000171675	-0.000048381		
3S1/2 -- ( 2)	13.319844	-45.507700	0.414141965	0.000012850	-0.000000768	-0.0000175907	-0.000000376
3P1/2			1.109078513	0.000092649			
3P3/2			0.964485489	0.000046331	-0.000003594		
3D3/2			0.958831183	0.000052243	-0.000003961		
3D5/2			0.905397012	0.000028809	-0.000002501		
4S1/2			0.902344668	0.000027466	-0.000002505		
3P1/2 -- ( 2)	11.781788	-42.192160	0.387116141	0.000003458	-0.000001040	-0.000001299	-0.000000001
3P3/2			1.060639556	0.000151410			
3D3/2			1.002160129	0.000028182	-0.000000001		
3D5/2			0.838675831	0.000059964	-0.000009037		
4S1/2			0.901235186	0.000016873	-0.000000289		
3P3/2 -- ( 4)	11.456232	-41.590074	0.389727490	0.000003938	-0.000000446	-0.000000220	0.000000001
3D3/2			1.013945224	0.000097489			
3D5/2			0.893265834	0.000021761	-0.000001108		
4S1/2			0.857830627	0.000044163	-0.000005305		
3D3/2 -- ( 4)	7.076050	-31.357611	0.389359637	0.000004657	-0.000000462	-0.000000000	0.000000000
3D5/2			0.801736775	0.000070676			
4S1/2			0.807858642	0.000012783	-0.000000000		
3D5/2 -- ( 2)	7.005041	-31.182994	0.377486444	0.000001499	-0.000000001	-0.000000000	0.000000000
4S1/2			0.800364961	0.000062653			
			0.377139048	0.000002078	-0.000000001	-0.000011221	-0.000000024
4S1/2 -- ( 2)	1.145937	-11.245469	0.298386147	0.000001386		-0.000011221	-0.000000024
ETOT	-1270.92906	1286.62945	-3040.84998	482.85276	0.512836198	-0.045361596	-0.028700239
COBALT 3D7 Z=27 A=59 R=8.82815E-05 A.U.							
1S1/2 -- ( 2)	360.716207	-728.639578	16.716972356	0.249675476	-0.001128376	-0.015062847	-0.000024587
2S1/2			4.754531910	0.010406357			
2P1/2			5.480273118	0.020481895	-0.003201970		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
COBALT	3D7	Z=27 A=59 R=8.82815E-05 A.U.					
			5.391110493	0.011007076	-0.003175637		
			1.683642165	0.001505667	-0.000172853		
			1.670103188	0.002524219	-0.000396831		
			1.646532893	0.001336184	-0.000394568		
			1.284732295	0.000020244	-0.000002695		
			1.276818753	0.000008447	-0.000002686		
			0.437662293	0.000092344	-0.000010669		
2S1/2 -- ( 2)	67.058056	-157.259146	3.535920054	0.003130463		-0.001422186	-0.000002369
			3.397071347	0.001004499	-0.000012349		
			3.374538359	0.001748533	-0.000015854		
			1.476334955	0.000244167	-0.000057597		
			1.476267472	0.000275834	-0.000042527		
			1.460391278	0.000323827	-0.000039383		
			1.245612696	0.000140066	-0.000019397		
			1.238542656	0.000061833	-0.000019187		
			0.425318969	0.000014918	-0.000003635		
2P1/2 -- ( 2)	66.460932	-156.096766	4.095274122	0.006883374		-0.000011981	0.000000001
			3.875672358	0.001230148	-0.000000022		
			1.531716481	0.000176580	-0.000013027		
			1.464089830	0.000335757	-0.000045332		
			1.494422197	0.000157266	-0.000004021		
			1.239467650	0.000407804	-0.000096258		
			1.253497580	0.000013008	-0.000002933		
			0.428492621	0.000010687	-0.000000828		
2P3/2 -- ( 4)	64.373544	-153.089964	3.910341310	0.004426839		-0.000002011	0.000000012
			1.529249090	0.000237380	-0.000013441		
			1.508313036	0.000127686	-0.000004259		
			1.468755888	0.000312547	-0.000023959		
			1.257812861	0.000118586	-0.000012300		
			1.239707129	0.000207135	-0.000058386		
			0.428344952	0.000014219	-0.000000851		
3S1/2 -- ( 2)	14.676898	-49.588516	1.162217358	0.000106958		-0.000208923	-0.000000349
			1.012778117	0.000052739	-0.000003985		
			1.006329686	0.000060431	-0.000004439		
			0.958372175	0.000033535	-0.000002842		
			0.954820023	0.000032516	-0.000002848		
			0.401007613	0.000003845	-0.000001151		
3P1/2 -- ( 2)	13.053175	-46.122985	1.115752223	0.000176414		-0.000001697	0.000000000
			1.053742288	0.000032711	-0.000000001		
			0.889075056	0.000069968	-0.000010319		
			0.955072243	0.000020175	-0.000000330		
			0.403783448	0.000004337	-0.000000488		
3P3/2 -- ( 4)	12.661581	-45.406372	1.065602776	0.000113243		-0.000000284	0.000000002
			0.946477466	0.000025418	-0.000001259		
			0.908635831	0.000051926	-0.000006032		
			0.403381126	0.000005159	-0.000000567		
3D3/2 -- ( 4)	8.022316	-34.696570	0.855150066	0.000085589		-0.000000000	0.000000000
			0.861402298	0.000015485	-0.000000000		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
COBALT            3D7            Z=27   A=59   R=8.82815E-05   A.U.							
3D5/2 -- ( 3)	7.933462	-34.482602	0.392133677	0.000001692	-0.000000001	-0.000000000	0.000000000
4S1/2 -- ( 2)	1.217547	-12.069858	0.853124222	0.000075753	-0.000000001	-0.000012837	-0.000000021
ETOT	-1391.46657	1410.39578	-3335.77312	533.41291	0.583551591	-0.052183645	-0.000054596
NICKEL            3D8            Z=28   A=58   R=8.77799E-05   A.U.							
1S1/2 -- ( 2)	389.301720	-785.294000	17.368315951	0.279240992	-0.017437447	-0.000019981	
2S1/2			4.958898652	0.011759865	-0.001278570		
2P1/2			5.725328737	0.023248195	-0.003630149		
2P3/2			5.625114410	0.012472837	-0.003599209		
3S1/2			1.760881599	0.001711407	-0.000197103		
3P1/2			1.752693809	0.002889758	-0.000453776		
3P3/2			1.725869065	0.001526542	-0.000451039		
3D3/2			1.362248024	0.000024640	-0.000003278		
3D5/2			1.352986398	0.000010264	-0.000003266		
4S1/2			0.451592631	0.000101214	-0.000011731		
2S1/2 -- ( 2)	73.126759	-170.352227	3.688640777	0.003559577	-0.001666356	-0.000001975	
2P1/2			3.547779079	0.001137957	-0.000013089		
2P3/2			3.522480496	0.001987690	-0.000017276		
3S1/2			1.543463573	0.000279530	-0.000066095		
3P1/2			1.548187476	0.000322165	-0.000049807		
3P3/2			1.530166595	0.000373886	-0.000045867		
3D3/2			1.319280783	0.000166544	-0.000023067		
3D5/2			1.311030895	0.000073554	-0.000022795		
4S1/2			0.439106850	0.000016470	-0.000004021		
2P1/2 -- ( 2)	72.560106	-169.226106	4.281854014	0.007846992	-0.000015299	0.000000011	
2P3/2			4.049988921	0.001399333	-0.000000029		
3S1/2			1.601937302	0.000201373	-0.000014852		
3P1/2			1.535948371	0.000386209	-0.000052547		
3P3/2			1.566435639	0.000180630	-0.000004649		
3D3/2			1.312917434	0.000485657	-0.000114670		
3D5/2			1.327580578	0.000015550	-0.000003492		
4S1/2			0.442340077	0.000011758	-0.000000911		
2P3/2 -- ( 4)	70.113453	-165.714622	4.083969317	0.005033447	-0.000002536	0.000000018	
3S1/2			1.599154170	0.000270869	-0.000015357		
3P1/2			1.582230173	0.000146778	-0.000004946		
3P3/2			1.539271671	0.000358246	-0.000027698		
3D3/2			1.332793731	0.000141350	-0.000014651		
3D5/2			1.312509768	0.000246437	-0.000069476		
4S1/2			0.442179389	0.000015649	-0.000000938		
3S1/2 -- ( 2)	16.094538	-53.835421	1.215175304	0.000122598	-0.000246315	-0.000000293	
3P1/2			1.060882892	0.000059692	-0.000004400		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
NICKEL 308 Z=28 A=58 R=8.77799E-05 A.U.								
3P3/2			1.053566862	0.000069381	-0.000004958			
3D3/2			1.010411262	0.000038684	-0.000003206			
3D5/2			1.006299769	0.000038054	-0.000003215			
4S1/2			0.41458420	0.000004248	-0.000001266			
3P1/2 -- ( 2)	14.384217	-50.216443	1.170632419	0.000203885		-0.000002191	0.000000002	
3P3/2			1.105028347	0.000037653	-0.000000002			
3D3/2			0.938678746	0.000080921	-0.000011705			
3D5/2			1.007953765	0.000023816	-0.000000375			
4S1/2			0.417484909	0.000004751	-0.000000530			
3P3/2 -- ( 4)	13.917095	-49.369648	1.116883308	0.000130459		-0.000000362	0.000000003	
3D3/2			0.998736273	0.000029408	-0.000001420			
3D5/2			0.938484044	0.000060424	-0.000006813			
4S1/2			0.417046307	0.000005682	-0.000000554			
3D3/2 -- ( 4)	9.010710	-38.153254	0.907408271	0.000102135		-0.000000000	0.000000000	
3D5/2			0.913721704	0.000018478	-0.000000000			
4S1/2			0.406298051	0.000001894	-0.000000002			
3D5/2 -- ( 4)	8.900897	-37.893544	0.904613766	0.000090241		-0.000000000	0.000000000	
4S1/2 -- ( 2)	1.286577	-12.912200	0.405869372	0.000002610	-0.000000002			
ETOT	-1518.69890	1541.27645	-3648.19706	587.65932	0.660914200	-0.059707514	-0.038775996	-0.000044424
COPPER 4S1 Z=29 A=63 R=9.02331E-05 A.U.								
1S1/2 -- ( 2)	419.095048	-844.222369	18.022211548	0.311098088		-0.020086817	-0.000012971	
2S1/2			5.164356454	0.013230407	-0.001442228			
2P1/2			5.972004473	0.026264073	-0.004096033			
2P3/2			5.859802909	0.014066774	-0.004059897			
3S1/2			1.832276026	0.001921185	-0.000221940			
3P1/2			1.825641791	0.003252487	-0.000510113			
3P3/2			1.794905720	0.001713470	-0.000506532			
3D3/2			1.372518309	0.000027150	-0.000003610			
3D5/2			1.359474370	0.000011251	-0.000003582			
4S1/2			0.431153724	0.000090181	-0.000010482			
2S1/2 -- ( 2)	79.497966	-184.019840	3.842068911	0.004028428		-0.001941801	-0.000001344	
2P1/2			3.699300649	0.001283492	-0.000013829			
2P3/2			3.671000936	0.002248509	-0.000018801			
3S1/2			1.606329153	0.000315944	-0.000074839			
3P1/2			1.612783903	0.000369359	-0.000057230			
3P3/2			1.592084813	0.000423709	-0.000052359			
3D3/2			1.329512056	0.000180132	-0.000024941			
3D5/2			1.317712561	0.000079292	-0.000024538			
4S1/2			0.420842754	0.000014778	-0.000003610			
2P1/2 -- ( 2)	78.968448	-182.937504	4.469544332	0.008901951		-0.000019372	0.000000027	
2P3/2			4.225077259	0.001583798	-0.000000039			



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ZINC	4S2	Z=30 A=64 R=9.07080E-05 A.U.					
			1.883268145	0.001956252	-0.000578591		
			1.514265422	0.000035083	-0.000004662		
			1.501852452	0.000014562	-0.000004639		
			0.478588328	0.000120076	-0.000014001		
2S1/2 -- ( 2)	86.136564	-198.223068	3.995487420	0.004535948		-0.002250265	-0.000000419
			3.850693339	0.001440939	-0.000014616		
			3.819161149	0.002529866	-0.000020491		
			1.677508094	0.000360025	-0.000085457		
			1.691693840	0.000429648	-0.000066719		
			1.668802525	0.000487928	-0.000060713		
			1.463690275	0.000227825	-0.000031558		
			1.452684568	0.000100644	-0.000031120		
			0.465851720	0.000019798	-0.000004849		
2P1/2 -- ( 2)	85.639596	-197.177296	4.656887395	0.010043873		-0.000024313	0.000000051
			4.399560071	0.001782558	-0.000000050		
			1.742158291	0.000257598	-0.000018985		
			1.679363478	0.000501526	-0.000069134		
			1.709521831	0.000233681	-0.000006080		
			1.456982055	0.000666276	-0.0000157395		
			1.472404153	0.000021448	-0.000004785		
			0.469191998	0.000014049	-0.000001089		
2P3/2 -- ( 4)	82.333695	-192.463709	4.431277123	0.006407220		-0.000003926	0.000000039
			1.738663778	0.000346748	-0.000019716		
			1.729648964	0.000190283	-0.000006530		
			1.679303388	0.000461780	-0.000036233		
			1.479797486	0.000194217	-0.000020101		
			1.454786831	0.000337344	-0.000095127		
			0.469003555	0.000018704	-0.000001124		
3S1/2 -- ( 2)	19.118466	-62.839644	1.320817228	0.000158162		-0.000335877	-0.000000065
			1.156807505	0.000075354	-0.000005308		
			1.147522602	0.000089719	-0.000006129		
			1.112576565	0.000050359	-0.000004016		
			1.107155829	0.000050702	-0.000004033		
			0.440872864	0.000005111	-0.000001511		
3P1/2 -- ( 2)	17.232540	-58.905168	1.280043293	0.000266814		-0.000003547	0.000000007
			1.207026930	0.000048853	-0.000000003		
			1.036278741	0.000105920	-0.000014822		
			1.111714704	0.000032187	-0.000000476		
			0.444068427	0.000005630	-0.000000621		
3P3/2 -- ( 4)	16.582233	-57.745364	1.218620974	0.000169565		-0.000000570	0.000000006
			1.101247802	0.000038458	-0.000001778		
			1.056102426	0.000079781	-0.000008549		
			0.443551691	0.000006801	-0.000000653		
3D3/2 -- ( 4)	11.120261	-45.441628	1.009485504	0.000140492		-0.000000000	0.000000000
			1.015713374	0.000025397	-0.000000000		
			0.433539421	0.000002325	-0.000000003		
3D5/2 -- ( 6)	10.957848	-45.068642	1.004790286	0.000123664		-0.000000000	0.000000000
			0.433013378	0.000003192	-0.000000002		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
COPPER	4S1	Z=29 A=63 R=9.02331E-05 A.U.					
	3S1/2		1.667495340	0.000226791	-0.000016715		
	3P1/2		1.600610893	0.000436778	-0.000059812		
	3P3/2		1.630161134	0.000203770	-0.000005271		
	3D3/2		1.323480263	0.000525933	-0.000124184		
	3D5/2		1.334340622	0.000016810	-0.000003764		
	4S1/2		0.423534799	0.000010519	-0.000000814		
2P3/2 -- ( 4)	76.116166	-178.858026	4.258077255	0.005694714		-0.000003169	0.000000027
	3S1/2		1.664391238	0.000305227	-0.000017320		
	3P1/2		1.648425347	0.000165859	-0.000005638		
	3P3/2		1.601789623	0.000403427	-0.000031418		
	3D3/2		1.343139767	0.000153163	-0.000015862		
	3D5/2		1.319350822	0.000265705	-0.000074899		
	4S1/2		0.423392386	0.000014011	-0.000000839		
3S1/2 -- ( 2)	17.450518	-58.051914	1.263753348	0.000138132		-0.000286510	-0.000000200
	3P1/2		1.103899655	0.000066639	-0.000004834		
	3P3/2		1.095492141	0.000078088	-0.000005506		
	3D3/2		1.022164078	0.000041532	-0.000003423		
	3D5/2		1.015826086	0.000040678	-0.000003425		
	4S1/2		0.400342393	0.000003785	-0.000001105		
3P1/2 -- ( 2)	15.614551	-54.187922	1.218366007	0.000230199		-0.000002771	0.000000004
	3P3/2		1.149389649	0.000042288	-0.000000002		
	3D3/2		0.951041571	0.000087527	-0.000012682		
	3D5/2		1.017809480	0.000025428	-0.000000402		
	4S1/2		0.402844530	0.000004211	-0.000000462		
3P3/2 -- ( 4)	15.057916	-53.183728	1.160870911	0.000146666		-0.000000451	0.000000004
	3D3/2		1.010276600	0.000031626	-0.000001530		
	3D5/2		0.968096700	0.000064819	-0.000007340		
	4S1/2		0.402436377	0.000005068	-0.000000485		
3D3/2 -- ( 4)	9.334746	-39.813983	0.896332705	0.000104958		-0.000000000	0.000000000
	3D5/2		0.900707996	0.000018803	-0.000000000		
	4S1/2		0.389405828	0.000001637	-0.000000000		
3D5/2 -- ( 6)	9.182238	-39.435230	0.890121957	0.000092030		-0.000000000	0.000000000
	4S1/2		0.388720994	0.000002293	-0.000000000		
4S1/2 -- ( 1)	1.111398	-12.733930	0.000000000	0.000000000		-0.000013474	-0.000000009
ETOT	-1652.75662	1679.49320	-3983.60736	650.72552	0.744694399	-0.067933375	-0.044702500
ZINC	4S2	Z=30 A=64 R=9.07080E-05 A.U.					
1S1/2 -- ( 2)	450.083934	-905.417087	18.677992973	0.345305733		-0.023031685	-0.000003048
	2S1/2		5.369930889	0.014813809	-0.001618989		
	2P1/2		6.218577279	0.029517259	-0.004597497		
	2P3/2		6.093470318	0.015781490	-0.004555509		
	3S1/2		1.915047456	0.002175499	-0.000252048		
	3P1/2		1.917486001	0.003718843	-0.000582512		

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TABLE 1.— CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ZINC	4S2	Z=30 A=64 R=9.07080E-05 A.U.					
4S1/2 -- ( 2)	1.427210	-14.654679	0.337271584	0.000001982		-0.000018574	-0.000000004
ETOT	-1793.84105	1825.16847	-4327.44854	707.73023	0.837189792	-0.077036375	-0.051346508 -0.000006776
GALLIUM	4P1	Z=31 A=69 R=9.30112E-05 A.U.					
1S1/2 -- ( 2)	482.301965	-968.917181	19.336212451	0.381973354		-0.026295092	0.000010368
2S1/2			5.576349385	0.016525732	-0.001810077		
2P1/2			6.466271977	0.033032241	-0.005138134		
2P3/2			6.327269804	0.017629166	-0.005089602		
3S1/2			2.000170621	0.002457307	-0.000285492		
3P1/2			2.012833278	0.004241908	-0.000663556		
3P3/2			1.975000756	0.002228569	-0.000659443		
3D3/2			1.653266752	0.000044458	-0.000005903		
3D5/2			1.640811385	0.000018467	-0.000005886		
4S1/2			0.546340247	0.000170867	-0.000019985		
4P1/2			0.375527067	0.000129248	-0.000020229		
2S1/2 -- ( 2)	93.073134	-212.997899	4.149443875	0.005085994		-0.002595231	0.000000862
2P1/2			4.002644678	0.001611366	-0.000015422		
2P3/2			3.967630657	0.002833895	-0.000022330		
3S1/2			1.750397102	0.000409100	-0.000097296		
3P1/2			1.773201743	0.000498064	-0.000077497		
3P3/2			1.748086682	0.000560243	-0.000070147		
3D3/2			1.594714711	0.000282928	-0.000039208		
3D5/2			1.583873664	0.000125317	-0.000038721		
4S1/2			0.529486619	0.000028337	-0.000006961		
4P1/2			0.368325890	0.000015595	-0.000002472		
2P1/2 -- ( 2)	92.609592	-211.989092	4.844915019	0.011282520		-0.000030284	0.000000085
2P3/2			4.574393097	0.001997169	-0.000000065		
3S1/2			1.818709223	0.000291837	-0.000021511		
3P1/2			1.760696247	0.000574404	-0.000079672		
3P3/2			1.791621869	0.000267313	-0.000006992		
3D3/2			1.587358981	0.000828779	-0.000195875		
3D5/2			1.606859440	0.000026839	-0.000005968		
4S1/2			0.533922303	0.000020046	-0.000001558		
4P1/2			0.368044981	0.000017202	-0.000002496		
2P3/2 -- ( 4)	88.796837	-206.568625	4.604516792	0.007176506		-0.000004825	0.000000054
3S1/2			1.814782427	0.000392836	-0.000022389		
3P1/2			1.813594259	0.000217726	-0.000007540		
3P3/2			1.759406547	0.000527290	-0.000041669		
3D3/2			1.613434814	0.000241806	-0.000025011		
3D5/2			1.586477933	0.000420175	-0.000118530		
4S1/2			0.533655716	0.000026671	-0.000001611		
4P1/2			0.369527760	0.000006564	-0.000000245		
3S1/2 -- ( 2)	20.919171	-67.904187	1.379572840	0.000180762		-0.000392431	0.000000127

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
GALLIUM      4P1      Z=31   A=69   R=9.30112E-05   A.U.								
			1.211556530	0.000085050	-0.000005809			
			1.201383807	0.000102910	-0.000006805			
			1.199921565	0.000060077	-0.000004623			
			1.194963353	0.000062124	-0.000004656			
			0.497005651	0.000007388	-0.000002221			
			0.355281252	0.000002046	-0.000000296			
3P1/2 -- ( 2)	18.996788	-63.928056	1.344217402	0.000308758		-0.000004514	0.000000013	
			1.266996079	0.000056355	-0.000000004			
			1.119512254	0.000126167	-0.000016999			
			1.202716146	0.000040048	-0.000000553			
			0.501335863	0.000008051	-0.000000895			
			0.351823060	0.000004240	-0.000000663			
3P3/2 -- ( 4)	18.242658	-62.598627	1.278738370	0.000195769		-0.000000716	0.000000008	
			1.189775552	0.000046034	-0.000002026			
			1.141472039	0.000096607	-0.000009755			
			0.500644228	0.000009756	-0.000000945			
			0.355332465	0.000001662	-0.000000067			
3D3/2 -- ( 4)	13.047240	-51.268012	1.119767456	0.000182781		-0.000000000	0.000000000	
			1.127497940	0.000033298	-0.000000000			
			0.492643880	0.000003505	-0.000000012			
			0.349757231	0.000003027	-0.000000113			
			1.115942510	0.000161244		-0.000000000	0.000000000	
			0.492154352	0.000004696	-0.000000012			
			0.351996859	0.000001340	-0.000000004			
3D5/2 -- ( 6)	12.868590	-50.881150	1.115942510	0.000161244		-0.000000000	0.000000000	
			0.492154352	0.000004696	-0.000000012			
			0.351996859	0.000001340	-0.000000004			
4S1/2 -- ( 2)	1.961212	-17.346194	0.385487626	0.000003018		-0.000027344	0.000000009	
			0.275744255	0.000002461	-0.000000351			
4P1/2 -- ( 1)	0.880122	-11.688108	0.000000000	0.000000000		-0.000000139	0.000000000	
ETOT	-1941.71718	1978.16232	-4684.88128	764.20973	0.937746890	-0.087010701	-0.058712099	0.000023179
GERMANIUM      4P2      Z=32   A=74   R=9.52057E-05   A.U.								
1S1/2 -- ( 2)	515.764643	-1034.743739	19.996909973	0.421190324		-0.029900983	0.000027925	
			5.783650915	0.018365359	-0.002016115			
			6.715117589	0.036819204	-0.005719280			
			6.561192701	0.019614253	-0.005663459			
			2.087967550	0.002770168	-0.000322706			
			2.111721263	0.004828178	-0.000754210			
			2.070070881	0.002533741	-0.000750080			
			1.785623553	0.000055187	-0.000007321			
			1.772558071	0.000022926	-0.000007311			
			0.606408790	0.000226373	-0.000026557			
			0.447718993	0.000206957	-0.000032348			
2S1/2 -- ( 2)	100.312823	-228.351300	4.303974309	0.005680603		-0.002979795	0.000002571	
			4.155182338	0.001795383	-0.000016250			



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
GERMANIUM	4P2	Z=32 A=74 R=9.52057E-05 A.U.						
	4S1/2		0.544284068	0.000006398	-0.000000028			
	4P1/2		0.414800867	0.000002192	-0.000000010			
4S1/2 -- ( 2)	2.512517	-19.931737	0.427073580	0.000004189		-0.000037449	0.000000032	
	4P1/2		0.318548631	0.000003585	-0.000000501			
4P1/2 -- ( 2)	1.324261	-14.399897	0.309009848	0.000003237		-0.000000249	0.000000001	
ETOT	-2096.53065	2138.75841	-5059.47671	823.30547	1.046890424	-0.097910245	-0.066864943	0.000062489
ARSENIC	4P3	Z=33 A=75 R=9.56326E-05 A.U.						
1S1/2 -- ( 2)	550.491758	-1102.922526	20.660209631	0.463050849		-0.033874900	0.000050347	
	2S1/2		5.991912594	0.020340356	-0.002237802			
	2P1/2		6.965237938	0.040890131	-0.006342527			
	2P3/2		6.795317930	0.021742070	-0.006278620			
	3S1/2		2.177870637	0.003119026	-0.000363824			
	3P1/2		2.213195415	0.005478797	-0.000854595			
	3P3/2		2.167472247	0.002872192	-0.000850635			
	3D3/2		1.913382961	0.000067352	-0.000008927			
	3D5/2		1.899404950	0.000027975	-0.000008926			
	4S1/2		0.664008767	0.000289150	-0.000034021			
	4P1/2		0.513564381	0.000297484	-0.000046431			
	4P3/2		0.500850137	0.000153126	-0.000045467			
2S1/2 -- ( 2)	107.862718	-244.292420	4.459134105	0.006322001		-0.003407325	0.000004788	
	2P1/2		4.308371640	0.001993661	-0.000017100			
	2P3/2		4.265604841	0.003513595	-0.000026526			
	3S1/2		1.901477904	0.000524436	-0.000125201			
	3P1/2		1.943151064	0.000662744	-0.000103482			
	3P3/2		1.913309243	0.000732157	-0.000092674			
	3D3/2		1.838569682	0.000413046	-0.000057291			
	3D5/2		1.826743098	0.000183592	-0.000056656			
	4S1/2		0.639168266	0.000048475	-0.000011980			
	4P1/2		0.499127522	0.000037069	-0.000005907			
	4P3/2		0.487495927	0.000039376	-0.000005227			
2P1/2 -- ( 2)	107.463920	-243.353608	5.223186698	0.014068202		-0.000046033	0.000000198	
	2P3/2		4.925212164	0.002476296	-0.000000105			
	3S1/2		1.977707825	0.000372110	-0.000027447			
	3P1/2		1.930264176	0.000747649	-0.000104904			
	3P3/2		1.962992836	0.000347095	-0.000009171			
	3D3/2		1.830103345	0.001213867	-0.000287154			
	3D5/2		1.856410468	0.000039691	-0.000008773			
	4S1/2		0.645742690	0.000034103	-0.000002665			
	4P1/2		0.498652991	0.000039806	-0.000005875			
	4P3/2		0.490079673	0.000018423	-0.000000529			
2P3/2 -- ( 4)	102.460941	-236.278548	4.951177186	0.008893948		-0.000007135	0.000000101	
	3S1/2		1.972773628	0.000500636	-0.000028701			



TABLE 1.-- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
SELENIUM	4P4	Z=34 A=80 R=9.77122E-05 A.U.					
1S1/2 -- ( 2)	586.500941	-1173.476742	21.326191747	0.507647103		-0.038242268	0.000078444
2S1/2			6.201189200	0.022456308	-0.002475829		
2P1/2			7.216723714	0.045256806	-0.007009424		
2P3/2			7.029691311	0.024017748	-0.006936581		
3S1/2			2.269466249	0.003492906	-0.000408991		
3P1/2			2.316620429	0.006195307	-0.000964885		
3P3/2			2.266536381	0.003244577	-0.000961308		
3D3/2			2.037782196	0.000081041	-0.000010731		
3D5/2			2.022675873	0.000033648	-0.000010741		
4S1/2			0.719127966	0.000358505	-0.000042302		
4P1/2			0.574619238	0.000399507	-0.000062262		
4P3/2			0.560001471	0.000205558	-0.000061070		
2S1/2 -- ( 2)	115.729339	-260.829737	4.614962039	0.007012427		-0.003881250	0.000007605
2P1/2			4.462258992	0.002206867	-0.000017970		
2P3/2			4.415197680	0.003891240	-0.000028915		
3S1/2			1.978939259	0.000591171	-0.000141390		
3P1/2			2.030368611	0.000759841	-0.000118825		
3P3/2			1.997959210	0.000832189	-0.000105833		
3D3/2			1.954717949	0.000488689	-0.000067811		
3D5/2			1.942082648	0.000217499	-0.000067082		
4S1/2			0.690287578	0.000060409	-0.000014971		
4P1/2			0.556458505	0.000050527	-0.000008070		
4P3/2			0.543245360	0.000053196	-0.000007112		
2P1/2 -- ( 2)	115.361541	-259.923835	5.413589124	0.015625358		-0.000056228	0.000000285
2P3/2			5.101319142	0.002742112	-0.000000132		
3S1/2			2.059361754	0.000418449	-0.000030880		
3P1/2			2.017297614	0.000848576	-0.000119704		
3P3/2			2.050906958	0.000393428	-0.000010443		
3D3/2			1.945779719	0.001438430	-0.000340426		
3D5/2			1.975152804	0.000047224	-0.000010411		
4S1/2			0.697938293	0.000042394	-0.000003323		
4P1/2			0.555912987	0.000053598	-0.000007973		
4P3/2			0.546513114	0.000024809	-0.000000719		
2P3/2 -- ( 4)	109.665933	-251.888769	5.124695406	0.009846826		-0.000008594	0.000000134
3S1/2			2.053849535	0.000562715	-0.000032370		
3P1/2			2.078723847	0.000320582	-0.000011395		
3P3/2			2.011837766	0.000772051	-0.000062233		
3D3/2			1.981431205	0.000420732	-0.000043435		
3D5/2			1.946266207	0.000730033	-0.000206172		
4S1/2			0.697387085	0.000056225	-0.000003454		
4P1/2			0.559489897	0.000020413	-0.000000794		
4P3/2			0.544229230	0.000047876	-0.000004091		
3S1/2 -- ( 2)	27.203378	-84.851326	1.565095320	0.000266838		-0.000614684	0.000001197
3P1/2			1.384929768	0.000120702	-0.000007438		
3P3/2			1.371801542	0.000153290	-0.000009168		
3D3/2			1.440168075	0.000093907	-0.000006418		
3D5/2			1.435105421	0.000104154	-0.000006506		
4S1/2			0.637644048	0.000016302	-0.000005139		



TABLE 1.-- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
SELENIUM      4P4      Z=34   A=80   R=9.77122E-05 A.U.								
			0.525365287	0.000007360	-0.000001156			
			0.513520743	0.000010873	-0.000001000			
3P1/2 -- ( 2)	25.207769	-80.831171	1.548076012	0.000471446		-0.000008996	0.000000045	
3P3/2			1.457316003	0.000085215	-0.000000010			
3D3/2			1.352837127	0.000197120	-0.000023498			
3D5/2			1.454529319	0.000069876	-0.000000789			
4S1/2			0.645450397	0.000017258	-0.000001966			
4P1/2			0.518151258	0.000013708	-0.000002397			
4P3/2			0.514750387	0.000006210	-0.000000219			
3P3/2 -- ( 4)	24.063288	-78.879885	1.469390735	0.000296970		-0.000001372	0.000000021	
3D3/2			1.435827244	0.000072747	-0.000002734			
3D5/2			1.378348634	0.000157510	-0.000013211			
4S1/2			0.644225485	0.000021126	-0.000002101			
4P1/2			0.525794890	0.000005400	-0.000000249			
4P3/2			0.510022446	0.000012225	-0.000001228			
3D3/2 -- ( 4)	19.345965	-69.312370	1.416967617	0.000344198		-0.000000001	0.000000000	
3D5/2			1.427634139	0.000063686	-0.000000000			
4S1/2			0.641837202	0.000008301	-0.000000081			
4P1/2			0.520502752	0.000010332	-0.000000524			
4P3/2			0.512077951	0.000004013	-0.000000071			
3D5/2 -- ( 6)	19.082775	-68.797361	1.413330921	0.000304084		-0.000000000	0.000000000	
4S1/2			0.641285138	0.000010604	-0.000000080			
4P1/2			0.523666156	0.000004411	-0.000000026			
4P3/2			0.510126978	0.000008778	-0.000000300			
4S1/2 -- ( 2)	3.736406	-25.238489	0.503549888	0.000007144		-0.0000063248	0.000000123	
4P1/2			0.392642585	0.000006149	-0.000000827			
4P3/2			0.387235325	0.000004018	-0.000000879			
4P1/2 -- ( 2)	2.326471	-19.670838	0.394468992	0.000006886		-0.000000590	0.000000003	
4P3/2			0.369825304	0.000001254	-0.000000000			
4P3/2 -- ( 2)	2.193874	-19.155760	0.371739599	0.000004257		-0.000000089	0.000000001	
ETOT	-2427.45983	2483.31683	-5861.06407	949.20358	1.292102813	-0.122678807	-0.085774580	0.000176029
BROMINE      4P5      Z=35   A=79   R=9.73034E-05 A.U.								
1S1/2 -- ( 2)	623.815271	-1246.436306	21.994998454	0.555076869		-0.043032142	0.000113107	
2S1/2			6.411538287	0.024719066	-0.002730921			
2P1/2			7.469668764	0.049931456	-0.007721538			
2P3/2			7.2644358708	0.026446539	-0.007638849			
3S1/2			2.362457309	0.003904953	-0.000458362			
3P1/2			2.421579296	0.006979640	-0.001085318			
3P3/2			2.366822027	0.003651767	-0.001082366			
3D3/2			2.159698535	0.000096339	-0.000012744			
3D5/2			2.143289725	0.000039981	-0.000012768			
4S1/2			0.772647208	0.000434967	-0.000051467			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
BROMINE 4P5 Z=35 A=79 R=9.73034E-05 A.U.							
2S1/2 -- ( 2)	123.919830	-277.972518	0.632636356 0.615717861 4.771493863 4.616887789 4.565236486 2.057360585 2.118606346 2.083468371 2.068315852 2.054730552 0.739811729 0.610711964 0.595579040	0.000513740 0.000263755 0.007754196 0.002435699 0.004295399 0.000664296 0.000867392 0.000941961 0.000571844 0.000254794 0.000073655 0.000065895 0.000068658	-0.000079940 -0.000078404 -0.000018859 -0.000031522 -0.000159160 -0.000135834 -0.000120306 -0.000079379 -0.000078545 -0.000018303 -0.000010547 -0.000009239	-0.004405447	0.000011123
2P1/2 -- ( 2)	123.581790	-277.097844	5.604919112 5.277949458 2.142102787 2.105362539 2.139777232 2.058955404 2.091238354 0.748540519 0.610111960 0.599535986	0.017299014 0.003026291 0.000469146 0.000959510 0.000444221 0.001685765 0.000055544 0.000051570 0.000069104 0.000031929	-0.000000166 -0.000034640 -0.000136041 -0.000011843 -0.000399128 -0.000012216 -0.000004055 -0.000010356 -0.000000934	-0.000068297	0.000000400
2P3/2 -- ( 4)	117.121933	-268.005549	5.298380400 2.135960516 2.169734591 2.098196640 2.097716788 2.059440425 0.747874364 0.614365546 0.596774693	0.010865616 0.000630517 0.000362032 0.000870297 0.000493444 0.000855937 0.000068305 0.000026297 0.000061455	-0.000036403 -0.000012975 -0.000070582 -0.000050908 -0.000241700 -0.000004222 -0.000001036 -0.000005297	-0.000010291	0.000000176
3S1/2 -- ( 2)	29.579343	-91.056248	1.628947264 1.444578529 1.430328313 1.516592410 1.511300254 0.680889067 0.573828305 0.560406039	0.000302058 0.000134867 0.000173884 0.000107043 0.000121060 0.000020108 0.000009935 0.000014390	-0.000008018 -0.000010074 -0.000007024 -0.000007136 -0.000006421 -0.000001589 -0.000001361	-0.000708913	0.000001781
3P1/2 -- ( 2)	27.562343	-87.027998	1.618179249 1.522661601 1.427910002 1.534942392 0.689882175 0.565588011 0.561996737	0.000538689 0.000097021 0.000224840 0.000082098 0.000021096 0.000017897 0.000008096	-0.000000013 -0.000025732 -0.000000872 -0.000002421 -0.000003218 -0.000000295	-0.000011182	0.000000065
3P3/2 -- ( 4)	26.256594	-84.824057	1.534738609	0.000338560	-0.000000295	-0.000001683	0.000000029

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
BROMINE      4P5      Z=35   A=79   R=9.73034E-05   A.U.								
			1.514462727	0.000083183	-0.000002964			
			1.454067845	0.000181775	-0.000014351			
			0.688465145	0.000025916	-0.000002597			
			0.574444940	0.000007058	-0.000000337			
			0.556453102	0.000015887	-0.000001646			
303/2 -- ( 4)	21.630844	-75.621513	1.509809046	0.000410576		-0.000000002	0.000000000	
			1.521210918	0.000076237	-0.000000000			
			0.687790329	0.000010361	-0.000000117			
			0.569658925	0.000013566	-0.000000716			
			0.559916037	0.000005286	-0.000000097			
305/2 -- ( 6)	21.329836	-75.045521	1.505880335	0.000362672		-0.000000000	0.000000000	
			0.687193867	0.000013112	-0.000000116			
			0.573078110	0.000005781	-0.000000038			
			0.557777159	0.000011459	-0.000000408			
4S1/2 -- ( 2)	4.401052	-27.973688	0.539492548	0.000008938		-0.000079175	0.000000199	
			0.426276428	0.000007591	-0.000001002			
			0.420227370	0.000005097	-0.000001077			
4P1/2 -- ( 2)	2.875755	-22.310313	0.432978512	0.000009210		-0.000000838	0.000000005	
			0.405604348	0.000001670	-0.000000000			
4P3/2 -- ( 3)	2.703302	-21.694253	0.407522957	0.000005672		-0.000000124	0.000000002	
ETOT	-2603.78973	2667.59717	-6288.91019	1016.32724	1.429100432	-0.136648891	-0.096660265	0.000254186
KRYPTON      4P6      Z=36   A=84   R=9.93144E-05   A.U.								
1S1/2 -- ( 2)	662.453035	-1321.825184	22.666704180	0.605433384		-0.048271685	0.000155337	
			6.622999009	0.027134295	-0.003003791			
			7.724146593	0.054926183	-0.008480411			
			7.499347675	0.029033557	-0.008386914			
			2.456624206	0.004352351	-0.000512103			
			2.527792445	0.007833980	-0.001216156			
			2.468029744	0.004094765	-0.001214109			
			2.279712431	0.000113333	-0.000014976			
			2.261847294	0.000047007	-0.000015019			
			0.824997558	0.000518901	-0.000061565			
			0.688577360	0.000640874	-0.000099560			
			0.669281248	0.000328371	-0.000097664			
2S1/2 -- ( 2)	132.440596	-295.729137	4.928754592	0.008549619		-0.004983680	0.000015458	
			4.772290687	0.002680853	-0.000019769			
			4.715741927	0.004727050	-0.000034369			
			2.136582979	0.000744086	-0.000178579			
			2.207657764	0.000985913	-0.000154590			
			2.169617613	0.001061779	-0.000136131			
			2.179952762	0.000662852	-0.000092044			
			2.165296795	0.000295631	-0.000091091			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
KRYPTON	4P6	Z=36 A=84 R=9.93144E-05 A.U.					
			0.788166087	0.000088289	-0.000021996		
			0.662846603	0.000083311	-0.000013360		
			0.645749183	0.000085940	-0.000011633		
2P1/2 -- ( 2)	132.131224	-294.884307	5.797225337	0.019094460		-0.000082519	0.000000549
			5.455134328	0.003329466	-0.000000206		
			2.225756685	0.000524382	-0.000038741		
			2.194255685	0.001080859	-0.000153982		
			2.229369883	0.000499619	-0.000013374		
			2.170216492	0.001956930	-0.000463512		
			2.205272434	0.000064686	-0.000014195		
			0.797976065	0.000061681	-0.000004863		
			0.662207300	0.000086433	-0.000013043		
			0.650405797	0.000039864	-0.000001175		
2P3/2 -- ( 4)	124.830326	-284.630712	5.472251473	0.011952639		-0.000012255	0.000000229
			2.218930473	0.000704260	-0.000040817		
			2.261587061	0.000407270	-0.000014714		
			2.185180177	0.000977269	-0.000079722		
			2.212042376	0.000573218	-0.000059097		
			2.170522574	0.000993031	-0.000280635		
			0.797184132	0.000081583	-0.000005073		
			0.667124299	0.000032861	-0.000001310		
			0.647158120	0.000076535	-0.000006652		
3S1/2 -- ( 2)	32.092562	-97.531129	1.693488242	0.000340789		-0.0000814639	0.000002515
			1.504837048	0.000150241	-0.000008615		
			1.489385971	0.000196496	-0.000011045		
			1.592043162	0.000121239	-0.000007640		
			1.586465862	0.000139559	-0.000007779		
			0.723137737	0.000024374	-0.000007873		
			0.620277780	0.000012980	-0.000002108		
			0.605248580	0.000018446	-0.000001788		
3P1/2 -- ( 2)	30.053765	-93.493896	1.688945963	0.000612903		-0.000013815	0.000000092
			1.588562158	0.000109970	-0.000000017		
			1.502264592	0.000254876	-0.000028026		
			1.614399026	0.000095560	-0.000000958		
			0.733324491	0.000025352	-0.000002929		
			0.611092935	0.000022660	-0.000004176		
			0.607227844	0.000010233	-0.000000383		
3P3/2 -- ( 4)	28.568833	-91.011169	1.600569150	0.000384300		-0.000002050	0.000000038
			1.592139397	0.000094473	-0.000003195		
			1.528872798	0.000208233	-0.000015498		
			0.731705668	0.000031256	-0.000003154		
			0.621101325	0.000008943	-0.000000440		
			0.600885992	0.000020027	-0.000002132		
3D3/2 -- ( 4)	24.013049	-82.106312	1.600794018	0.000483795		-0.000000003	0.000000000
			1.612854111	0.000090102	-0.000000000		
			0.732687619	0.000012667	-0.000000160		
			0.616906635	0.000017220	-0.000000934		
			0.605803936	0.000006731	-0.000000129		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
KRYPTON 4P6 Z=36 A=84 R=9.93144E-05 A.U.								
3D5/2 -- ( 6)	23.669358	-81.461150	1.596458003	0.000427222		-0.000000001	0.000000000	
4S1/2			0.732039492	0.000015912	-0.000000158			
4P1/2			0.620573718	0.000007339	-0.000000052			
4P3/2			0.603475179	0.000014481	-0.000000531			
4S1/2 -- ( 2)	5.103876	-30.782424	0.574528726	0.000010966		-0.000097397	0.000000300	
4P1/2			0.458620370	0.000009147	-0.000001186			
4P3/2			0.451905432	0.000006306	-0.000001291			
4P1/2 -- ( 2)	3.461431	-24.993758	0.469840039	0.000011897		-0.000001152	0.000000008	
4P3/2			0.439820441	0.000002146	-0.000000000			
4P3/2 -- ( 4)	3.244501	-24.268458	0.441690554	0.000007301		-0.000000168	0.000000003	
ETOT	-2787.49663	2860.11596	-6735.31318	1086.38430	1.576274229	-0.151746546	-0.108587681	0.000349599
RUBIDIUM 5S1 Z=37 A=85 R=9.97069E-05 A.U.								
1S1/2 -- ( 2)	702.439539	-1399.676142	23.341459844	0.658817038		-0.053993138	0.000206221	
2S1/2			6.835680454	0.029708676	-0.003295278			
2P1/2			7.980331463	0.060255405	-0.009287900			
2P3/2			7.734778660	0.031785027	-0.009182575			
3S1/2			2.552054669	0.004837415	-0.000570513			
3P1/2			2.635440090	0.008763244	-0.001358081			
3P3/2			2.570343567	0.004576113	-0.001357299			
3D3/2			2.399155318	0.000132223	-0.000017453			
3D5/2			2.379710305	0.000054809	-0.000017518			
4S1/2			0.889965782	0.000632325	-0.000075222			
4P1/2			0.774600239	0.000855631	-0.000132698			
4P3/2			0.755018118	0.000441639	-0.000131421			
5S1/2			0.235556008	0.000036720	-0.000004372			
2S1/2 -- ( 2)	141.302174	-314.112740	5.086822816	0.009401440		-0.005620459	0.000020736	
2P1/2			4.928561859	0.002943139	-0.000020694			
2P3/2			4.866793789	0.005187385	-0.000037475			
3S1/2			2.216674222	0.000831021	-0.000199768			
3P1/2			2.297664665	0.001116315	-0.000175239			
3P3/2			2.256558403	0.001192371	-0.000153406			
3D3/2			2.290883678	0.000762646	-0.000105933			
3D5/2			2.275067655	0.000340437	-0.000104851			
4S1/2			0.847690676	0.000108088	-0.000026997			
4P1/2			0.742220519	0.000112683	-0.000018105			
4P3/2			0.725261774	0.000116167	-0.000015816			
5S1/2			0.233109991	0.000006273	-0.000001572			
2P1/2 -- ( 2)	141.020464	-313.296566	5.990643078	0.021018026		-0.000099216	0.000000742	
2P3/2			5.632983934	0.003652422	-0.000000254			
3S1/2			2.310398867	0.000584475	-0.000043206			
3P1/2			2.284119508	0.001213422	-0.000173657			
3P3/2			2.319845344	0.000559960	-0.000015046			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RUBIDIUM	5S1	Z=37 A=85 R=9.97069E-05 A.U.					
			2.280809447	0.002254759	-0.000534253		
			2.318572309	0.000074747	-0.000016371		
			0.858969354	0.000075358	-0.000005959		
			0.741496653	0.000115689	-0.000017580		
			0.731189740	0.000053758	-0.000001598		
			0.233759474	0.000004370	-0.000000348		
2P3/2 -- ( 4)	132.795991	-301.770098	5.646405211	0.013110757		-0.000014520	0.000000294
			2.302831080	0.000784344	-0.000045642		
			2.354426863	0.000456571	-0.000016625		
			2.272939962	0.001093591	-0.000089715		
			2.325684984	0.000660893	-0.000068089		
			2.280799609	0.001143961	-0.000323388		
			0.858007364	0.000099519	-0.000006227		
			0.747586797	0.000043940	-0.000001773		
			0.727055781	0.000102945	-0.000009023		
			0.233703765	0.000005761	-0.000000363		
3S1/2 -- ( 2)	34.750014	-104.285085	1.758789520	0.000383321		-0.000933051	0.000003427
			1.565802389	0.000166911	-0.000009228		
			1.549076077	0.000221294	-0.000012086		
			1.667293099	0.000136639	-0.000008270		
			1.661396978	0.000159858	-0.000008440		
			0.774264803	0.000030171	-0.000009855		
			0.689550231	0.000018162	-0.000002992		
			0.674804483	0.000025539	-0.000002539		
			0.228977803	0.000001751	-0.000000587		
3P1/2 -- ( 2)	32.690058	-100.240260	1.760524358	0.000694710		-0.000016974	0.000000126
			1.655160967	0.000124154	-0.000000021		
			1.576619197	0.000287527	-0.000030392		
			1.693723598	0.000110422	-0.000001047		
			0.786027063	0.000031102	-0.000003618		
			0.678595632	0.000030684	-0.000005796		
			0.677436031	0.000013962	-0.000000539		
			0.229598748	0.000001762	-0.000000211		
3P3/2 -- ( 4)	31.006879	-97.451300	1.667033745	0.000434552		-0.000002484	0.000000050
			1.669645991	0.000106727	-0.000003425		
			1.603531729	0.000237169	-0.000016653		
			0.784134938	0.000038478	-0.000003911		
			0.690689040	0.000012122	-0.000000616		
			0.669600381	0.000027249	-0.000002982		
			0.229493325	0.000002171	-0.000000227		
3D3/2 -- ( 4)	26.511982	-88.810363	1.691207986	0.000564845		-0.000000003	0.000000000
			1.703882971	0.000105472	-0.000000000		
			0.786869503	0.000015769	-0.000000218		
			0.686886651	0.000023296	-0.000001294		
			0.676671524	0.000009226	-0.000000182		
			0.229659409	0.000000896	-0.000000015		
3D5/2 -- ( 6)	26.120799	-88.088499	1.686388868	0.000498609		-0.000000001	0.000000000
			0.786142436	0.000019678	-0.000000216		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
RUBIDIUM	5S1	Z=37 A=85 R=9.97069E-05 A.U.						
	4P1/2		0.691124476	0.000009946	-0.000000076			
	4P3/2		0.673910466	0.000019696	-0.000000739			
	5S1/2		0.229619720	0.000001099	-0.000000015			
4S1/2 -- ( 2)	6.055293	-34.215613	0.618807911	0.000013935		-0.000122327	0.000000449	
	4P1/2		0.505604310	0.000011571	-0.000001458			
	4P3/2		0.499289338	0.000008341	-0.000001625			
	5S1/2		0.217569721	0.000000496	-0.000000179			
4P1/2 -- ( 2)	4.456544	-28.928077	0.529220952	0.000017028		-0.000001692	0.000000013	
	4P3/2		0.495889012	0.000003092	-0.000000001			
	5S1/2		0.216636723	0.000000819	-0.000000108			
4P3/2 -- ( 4)	4.202316	-28.163652	0.499028686	0.000010547		-0.000000245	0.000000005	
	5S1/2		0.216095441	0.000000893	-0.000000113			
5S1/2 -- ( 1)	0.445235	-8.790292	0.000000000	0.000000000		-0.0000007106	0.000000026	
ETOT	-2978.31888	3060.66688	-7191.61191	1151.18136	1.733937125	-0.167963165	-0.121649836	0.000464852
STRONTIUM	5S2	Z=38 A=88 R=1.00866E-04 A.U.						
1S1/2 -- ( 2)	743.796302	-1480.017202	24.019356554	0.715324648		-0.060227320	0.000266967	
	2S1/2		7.049599856	0.032447978	-0.003606113			
	2P1/2		8.238255756	0.065931122	-0.010145460			
	2P3/2		7.970635154	0.034705780	-0.010027228			
	3S1/2		2.648588406	0.005361495	-0.000633778			
	3P1/2		2.744302616	0.009769874	-0.001511387			
	3P3/2		2.673519381	0.005096933	-0.001512276			
	3D3/2		2.517801097	0.000153065	-0.000020180			
	3D5/2		2.496643049	0.000063409	-0.000020275			
	4S1/2		0.955242015	0.000760891	-0.000090754			
	4P1/2		0.853869072	0.001092580	-0.000169148			
	4P3/2		0.832877655	0.000565734	-0.000168435			
	5S1/2		0.287960997	0.000063726	-0.000007609			
2S1/2 -- ( 2)	150.510680	-333.131470	5.245705487	0.010312041		-0.006320097	0.000027099	
	2P1/2		5.085709924	0.003223279	-0.000021635			
	2P3/2		5.018387615	0.005677349	-0.000040866			
	3S1/2		2.297516499	0.000925412	-0.000222806			
	3P1/2		2.388461246	0.001259158	-0.000197870			
	3P3/2		2.344108996	0.001334058	-0.000172172			
	3D3/2		2.400927667	0.000871393	-0.000121072			
	3D5/2		2.383853498	0.000389283	-0.000119847			
	4S1/2		0.907242593	0.000130655	-0.000032713			
	4P1/2		0.814824758	0.000145691	-0.000023449			
	4P3/2		0.796977030	0.000149503	-0.000020464			
	5S1/2		0.283958251	0.000010935	-0.000002749			
2P1/2 -- ( 2)	150.255432	-332.342591	6.185183216	0.023075116		-0.000118743	0.000000987	
	2P3/2		5.811492314	0.003995755	-0.000000312			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
STRONTIUM 5S2 Z=38 A=88 R=1.00866E-04 A.U.							
3S1/2			2.395900262	0.000649631	-0.000048051		
3P1/2			2.374789219	0.001357659	-0.000195141		
3P3/2			2.411009666	0.000625402	-0.000016864		
3D3/2			2.390554496	0.002579796	-0.000611485		
3D5/2			2.430928665	0.000085743	-0.000018747		
4S1/2			0.920068137	0.000090914	-0.000007211		
4P1/2			0.814044473	0.000148106	-0.000022654		
4P3/2			0.804175178	0.000069039	-0.000002068		
5S1/2			0.285021809	0.000007601	-0.000000608		
2P3/2 -- ( 4)	141.019142	-319.424140	5.820822472	0.014342171		-0.000017120	0.000000375
3S1/2			2.387530964	0.000871013	-0.000050897		
3P1/2			2.448074282	0.000510079	-0.000018715		
3P3/2			2.361286766	0.001219543	-0.000100591		
3D3/2			2.438445855	0.000756635	-0.000077897		
3D5/2			2.390074323	0.001308572	-0.0000370029		
4S1/2			0.918913797	0.000119868	-0.000007548		
4P1/2			0.821271196	0.000056193	-0.000002294		
4P3/2			0.799151853	0.000131875	-0.000011651		
5S1/2			0.284925450	0.000010002	-0.000000635		
3S1/2 -- ( 2)	37.551240	-111.316123	1.824734534	0.000429832		-0.001065180	0.000004547
3P1/2			1.627353743	0.000184927	-0.000009855		
3P3/2			1.609270583	0.000248361	-0.000013201		
3D3/2			1.742238963	0.000153283	-0.000008914		
3D5/2			1.735985349	0.000182005	-0.000009120		
4S1/2			0.825182741	0.000036861	-0.000012165		
4P1/2			0.752335731	0.000024256	-0.000004044		
4P3/2			0.736952830	0.000033623	-0.000003420		
5S1/2			0.277327804	0.000003084	-0.000001048		
3P1/2 -- ( 2)	35.469838	-107.263230	1.832754824	0.000784445		-0.000020742	0.000000172
3P3/2			1.722300430	0.000139608	-0.000000027		
3D3/2			1.650826623	0.000322890	-0.000032836		
3D5/2			1.772767565	0.000126717	-0.000001140		
4S1/2			0.838596460	0.000037670	-0.000004411		
4P1/2			0.739781911	0.000039727	-0.000007671		
4P3/2			0.740270376	0.000018130	-0.000000719		
5S1/2			0.278335884	0.000003068	-0.000000372		
3P3/2 -- ( 4)	33.567722	-104.138228	1.733964463	0.000489474		-0.000002993	0.000000065
3D3/2			1.746833169	0.000119970	-0.000003655		
3D5/2			1.677888673	0.000268648	-0.000017818		
4S1/2			0.836406067	0.000046765	-0.000004788		
4P1/2			0.753815434	0.000015706	-0.000000820		
4P3/2			0.731008060	0.000035302	-0.000003960		
5S1/2			0.278160583	0.000003790	-0.000000400		
3D3/2 -- ( 4)	29.121547	-95.723351	1.780808498	0.000653849		-0.000000005	0.000000000
3D5/2			1.794046060	0.000122370	-0.000000000		
4S1/2			0.840965344	0.000019336	-0.000000287		
4P1/2			0.750650919	0.000030093	-0.000001702		
4P3/2			0.740346494	0.000012019	-0.000000244		



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
STRONTIUM 5S2 Z=38 A=88 R=1.00866E-04 A.U.							
3D5/2 -- 5S1/2 ( 6)	28.677631	-94.916514	0.278541982	0.000001580	-0.000000029	-0.000000001	0.000000000
4S1/2			1.775418322	0.000576921			
4P1/2			0.840149926	0.000024000	-0.000000285		
4P3/2			0.755400783	0.000012880	-0.000000106		
5S1/2			0.737183563	0.000025487	-0.000000974		
4S1/2 -- ( 2)	7.099639	-37.811234	0.278477808	0.000001928	-0.000000029	-0.000151644	0.000000647
4P1/2			0.662814434	0.000017430			
4P3/2			0.548999176	0.000014152	-0.000001733		
5S1/2			0.542472780	0.000010619	-0.000001971		
4P1/2 -- ( 2)	5.500795	-32.782165	0.260357385	0.000000915	-0.000000348	-0.000002371	0.000000020
4P3/2			0.581867375	0.000022918			
5S1/2			0.545272201	0.000004162	-0.000000001		
4P3/2 -- ( 4)	5.196503	-31.933523	0.259721326	0.000001494	-0.000000203	-0.000000340	0.000000007
5S1/2			0.549068631	0.000014235			
5S1/2 -- ( 2)	0.746306	-11.069131	0.259004892	0.000001627	-0.000000214	-0.000012705	0.000000054
ETOT	-3176.45792	3269.54590	-7665.84234	1218.25673	1.902473729	-0.185360946	-0.135919441
YTTRIUM 4D1 Z=39 A=89 R=1.01247E-04 A.U.							
1S1/2 -- ( 2)	786.553484	-1562.886239	24.700609108	0.775063851		-0.067009260	0.000338898
2S1/2			7.264858790	0.035359190	-0.003937202		
2P1/2			8.498114107	0.071969552	-0.011055173		
2P3/2			8.207046855	0.037802729	-0.010922887		
3S1/2			2.746055689	0.005925652	-0.000702055		
3P1/2			2.854164968	0.010855718	-0.001676263		
3P3/2			2.777335517	0.005658089	-0.001679301		
3D3/2			2.635561242	0.000175901	-0.000023162		
3D5/2			2.612546493	0.000072820	-0.000023292		
4S1/2			1.015871985	0.000895394	-0.000107072		
4P1/2			0.922556961	0.001331013	-0.000205684		
4P3/2			0.899407971	0.000689365	-0.000205343		
4D3/2			0.506962253	0.000007629	-0.000001007		
5S1/2			0.315523206	0.000080665	-0.000009658		
2S1/2 -- ( 2)	160.076919	-352.798777	5.405466954	0.011284301		-0.007087605	0.000034706
2P1/2			5.243823966	0.003522144	-0.000022588		
2P3/2			5.170594889	0.006198203	-0.000044564		
3S1/2			2.378997416	0.001027527	-0.000247753		
3P1/2			2.479904549	0.001414962	-0.000222564		
3P3/2			2.432122524	0.001487099	-0.000192459		
3D3/2			2.510042711	0.000989220	-0.000137475		
3D5/2			2.491603525	0.000442214	-0.000136094		
4S1/2			0.962485508	0.000154435	-0.000038754		
4P1/2			0.877560172	0.000179615	-0.000028953		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
YTTRIUM	401	Z=39 A=89 R=1.01247E-04 A.U.					
			0.858137403	0.000182958	-0.000025164		
			0.501951892	0.000037357	-0.000005311		
			0.310736346	0.000013902	-0.000003505		
2P1/2 -- ( 2)	159.848724	-352.037910	6.380986021	0.025272783		-0.000141508	0.000001296
2P3/2			5.990770462	0.004360306	-0.000000381		
3S1/2			2.482136673	0.000720021	-0.000053285		
3P1/2			2.466125543	0.001513977	-0.000218492		
3P3/2			2.502704563	0.000696077	-0.000018832		
3D3/2			2.499413122	0.002932438	-0.000695300		
3D5/2			2.542272288	0.000097682	-0.000021325		
4S1/2			0.976771942	0.000107265	-0.000008530		
4P1/2			0.876761456	0.000180908	-0.000027840		
4P3/2			0.866464113	0.000084333	-0.000002545		
4D3/2			0.501607368	0.000112828	-0.000027096		
5S1/2			0.312009474	0.000009645	-0.000000774		
2P3/2 -- ( 4)	149.505674	-337.599718	5.995596584	0.015649969		-0.000020095	0.000000475
3S1/2			2.472903599	0.000964475	-0.000056600		
3P1/2			2.542372572	0.000567915	-0.000020992		
3P3/2			2.450067800	0.001355359	-0.000112371		
3D3/2			2.550266840	0.000860561	-0.000088532		
3D5/2			2.498290190	0.001487025	-0.000420607		
4S1/2			0.975416769	0.000141187	-0.000008946		
4P1/2			0.884957326	0.000068557	-0.000002829		
4P3/2			0.860644017	0.000140700	-0.000014305		
4D3/2			0.503523968	0.000033401	-0.000003453		
5S1/2			0.311887823	0.000012667	-0.000000810		
3S1/2 -- ( 2)	40.494147	-118.620684	1.891224342	0.000480474		-0.001212090	0.000005910
3P1/2			1.689393332	0.000204339	-0.000010498		
3P3/2			1.669870139	0.000277766	-0.000014397		
3D3/2			1.816869773	0.000171228	-0.000009577		
3D5/2			1.810217576	0.000206049	-0.000009822		
4S1/2			0.872569084	0.000044019	-0.000014662		
4P1/2			0.806635472	0.000030821	-0.000005189		
4P3/2			0.790027803	0.000042021	-0.000004359		
4D3/2			0.480099225	0.000004773	-0.000000305		
5S1/2			0.302940453	0.000003961	-0.000001360		
3P1/2 -- ( 2)	38.390413	-114.558085	1.905519433	0.000882401		-0.000025213	0.000000230
3P3/2			1.789865905	0.000156360	-0.000000034		
3D3/2			1.724835058	0.000361101	-0.000035377		
3D5/2			1.851495024	0.000144480	-0.000001237		
4S1/2			0.887545862	0.000044620	-0.000005257		
4P1/2			0.792828569	0.000049060	-0.000009657		
4P3/2			0.793996462	0.000022376	-0.000000909		
4D3/2			0.479310160	0.000010435	-0.000000961		
5S1/2			0.304143264	0.000003903	-0.000000477		
3P3/2 -- ( 4)	36.247452	-111.065502	1.801243957	0.000549203		-0.000003586	0.000000084
3D3/2			1.823664853	0.000134240	-0.000003887		
3D5/2			1.751895818	0.000302749	-0.000019002		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
<b>YTTRIUM 401 Z=39 A=89 R=1.01247E-04 A.U.</b>								
			0.885058307	0.000055580	-0.000005729			
			0.808448175	0.000019406	-0.000001039			
			0.783524340	0.000043497	-0.000004986			
			0.479952422	0.000003743	-0.000000198			
			0.303929438	0.000004834	-0.000000515			
3D3/2 -- ( 4)	31.836859	-102.839421	1.869551676	0.000750956		-0.000000006	0.000000000	
			1.883295696	0.000140819	-0.000000000			
			0.891425949	0.000023143	-0.000000365			
			0.806111062	0.000037062	-0.000002127			
			0.795004143	0.000014869	-0.000000308			
			0.476719785	0.000016267	-0.000000871			
			0.304490296	0.000002032	-0.000000040			
3D5/2 -- ( 6)	31.334421	-101.938526	1.863495717	0.000662257		-0.000000001	0.000000000	
			0.890521560	0.000028600	-0.000000362			
			0.811257089	0.000015903	-0.000000138			
			0.791511418	0.000031358	-0.000001215			
			0.481310157	0.000004281	-0.000000040			
			0.304413568	0.000002469	-0.000000040			
4S1/2 -- ( 2)	8.144435	-41.357895	0.703173586	0.000021148		-0.000183760	0.000000895	
			0.586920662	0.000016702	-0.000001994			
			0.579948902	0.000012949	-0.000002310			
			0.424577090	0.000005816	-0.000000753			
			0.283900144	0.000001211	-0.000000469			
4P1/2 -- ( 2)	6.495172	-36.380124	0.626515257	0.000028991		-0.000003163	0.000000029	
			0.586947968	0.000005241	-0.000000002			
			0.392441742	0.000013409	-0.000002970			
			0.283635403	0.000001954	-0.000000268			
4P3/2 -- ( 4)	6.129718	-35.414077	0.590980967	0.000017989		-0.000000448	0.000000011	
			0.412909419	0.000004157	-0.000000360			
			0.282840190	0.000002139	-0.000000285			
4D3/2 -- ( 1)	2.105925	-19.773809	0.000000000	0.000000000		-0.000000000	0.000000000	
			0.248971549	0.000000414	-0.000000003			
5S1/2 -- ( 2)	0.920317	-12.462028	0.224159232	0.000000576		-0.000016562	0.000000081	
ETOT	-3381.99417	3486.83848	-8161.28332	1290.72329	2.082022206	-0.203955413	-0.151454870	0.000766369
<b>ZIRCONIUM 402 Z=40 A=90 R=1.01625E-04 A.U.</b>								
1S1/2 -- ( 2)	830.734123	-1648.313606	25.385288256	0.838132920		-0.074373720	0.000423463	
			7.481441707	0.038447941	-0.004289261			
			8.759882419	0.078382003	-0.012018311			
			8.443939771	0.041080086	-0.011870757			
			2.844279955	0.006530901	-0.000775488			
			2.964793211	0.012022399	-0.001852862			
			2.881524977	0.006260200	-0.001858563			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ZIRCONIUM	4D2	Z=40 A=90 R=1.01625E-04 A.U.					
			2.752310640	0.000200765	-0.000026402		
			2.727300030	0.000083055	-0.000026574		
			1.073629807	0.001037224	-0.000124344		
			0.986184878	0.001579642	-0.000243642		
			0.960536300	0.000817544	-0.000243636		
			0.592249640	0.000011375	-0.000001499		
			0.335126387	0.000094421	-0.000011335		
2S1/2 -- ( 2)	170.005914	-373.121713	5.566088527	0.012320573		-0.007927866	0.000043729
			5.402880176	0.003840455	-0.000023555		
			5.323378243	0.006750796	-0.000048603		
			2.460984435	0.001137617	-0.000274674		
			2.571816030	0.001584165	-0.000249388		
			2.520397370	0.001651644	-0.000214278		
			2.618139892	0.001116240	-0.000155157		
			2.598232679	0.000499277	-0.000153606		
			1.015083280	0.000179678	-0.000045184		
			0.935579408	0.000215615	-0.000034804		
			0.914287857	0.000217834	-0.000030091		
			0.585297797	0.000054445	-0.000007758		
			0.329823446	0.000016342	-0.000004130		
2P1/2 -- ( 2)	169.804752	-372.388842	6.578013172	0.027616307		-0.000167953	0.000001684
			6.170765065	0.004746584	-0.000000462		
			2.568962697	0.000795813	-0.000058920		
			2.557949048	0.001682735	-0.000243770		
			2.594713976	0.000772078	-0.000020950		
			2.607295192	0.003313042	-0.000785785		
			2.652502045	0.000110969	-0.000024107		
			1.030773906	0.000124583	-0.000009932		
			0.934787339	0.000215293	-0.000033320		
			0.923675713	0.000100250	-0.000003045		
			0.584853364	0.000164967	-0.000039671		
			0.331235355	0.000011318	-0.000000911		
2P3/2 -- ( 4)	158.253783	-356.294959	6.170660544	0.017036062		-0.000023487	0.000000595
			2.558801661	0.001064918	-0.000062766		
			2.637128039	0.000630179	-0.000023460		
			2.539072765	0.001501192	-0.000125076		
			2.661043902	0.000972781	-0.000100002		
			2.605354766	0.001679480	-0.000475164		
			1.029207195	0.000163700	-0.000010436		
			0.943858056	0.000081482	-0.000003398		
			0.917098042	0.000190587	-0.000017086		
			0.587470242	0.000048885	-0.000005052		
			0.331093275	0.000014836	-0.000000956		
3S1/2 -- ( 2)	43.576333	-126.194392	1.958120641	0.000535375		-0.001374869	0.000007552
			1.751781988	0.000225185	-0.000011155		
			1.730725715	0.000309558	-0.000015680		
			1.891107572	0.000190508	-0.000010260		
			1.884017282	0.000232021	-0.000010550		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ZIRCONIUM	402	Z=40	A=90	R=1.01625E-04	A.U.		
4S1/2			0.917845257	0.000051715	-0.000017366		
4P1/2			0.856948905	0.000038049	-0.000006456		
4P3/2			0.838872794	0.000051007	-0.000005381		
4D3/2			0.555807002	0.000007198	-0.000000481		
5S1/2			0.321318237	0.000004700	-0.000001628		
3P1/2 -- ( 2)	41.448330	-122.118498	1.978637041	0.000988806		-0.000030491	0.000000305
3P3/2			1.857677167	0.000174418	-0.000000042		
3D3/2			1.798526314	0.000402237	-0.000038025		
3D5/2			1.929794037	0.000163731	-0.000001339		
4S1/2			0.934326774	0.000052018	-0.000006161		
4P1/2			0.842073142	0.000059001	-0.000011809		
4P3/2			0.843482068	0.000026855	-0.000001113		
4D3/2			0.554921190	0.000016046	-0.000001582		
5S1/2			0.322650462	0.000004593	-0.000000565		
3P3/2 -- ( 4)	39.040661	-118.223915	1.868678215	0.000613813		-0.000004274	0.000000108
3D3/2			1.900016839	0.000149553	-0.000004120		
3D5/2			1.825428607	0.000339509	-0.000020206		
4S1/2			0.931536277	0.000065013	-0.000006743		
4P1/2			0.859089104	0.000023344	-0.000001277		
4P3/2			0.831901827	0.000052143	-0.000006090		
4D3/2			0.555658682	0.000005647	-0.000000322		
5S1/2			0.322408236	0.000005706	-0.000000612		
3D3/2 -- ( 4)	34.652332	-110.150897	1.957313677	0.000856231		-0.000000008	0.000000000
3D5/2			1.971507600	0.000160826	-0.000000000		
4S1/2			0.939668658	0.000027220	-0.000000450		
4P1/2			0.857654841	0.000044431	-0.000002579		
4P3/2			0.845442150	0.000017877	-0.000000378		
4D3/2			0.551808380	0.000023827	-0.000001351		
5S1/2			0.323123605	0.000002413	-0.000000049		
3D5/2 -- ( 6)	34.085396	-109.146606	1.950499238	0.000754657		-0.000000002	0.000000000
4S1/2			0.938672159	0.000033518	-0.000000448		
4P1/2			0.863141411	0.000019114	-0.000000174		
4P3/2			0.841649315	0.000037525	-0.000001468		
4D3/2			0.557828260	0.000006295	-0.000000064		
5S1/2			0.323037972	0.000002923	-0.000000049		
4S1/2 -- ( 2)	9.203770	-44.915372	0.741459518	0.000025143		-0.000219114	0.000001203
4P1/2			0.622292077	0.000019321	-0.000002253		
4P3/2			0.614713468	0.000015411	-0.000002657		
4D3/2			0.483160398	0.000008096	-0.000001037		
5S1/2			0.301238765	0.000001469	-0.000000575		
4P1/2 -- ( 2)	7.486759	-39.913840	0.667571483	0.000035489		-0.000004104	0.000000041
4P3/2			0.625162731	0.000006377	-0.000000002		
4D3/2			0.444763438	0.000018349	-0.000004013		
5S1/2			0.301294606	0.000002342	-0.000000323		
4P3/2 -- ( 4)	7.051511	-38.811041	0.629257797	0.000021970		-0.000000572	0.000000014
4D3/2			0.469736298	0.000005727	-0.000000482		
5S1/2			0.300441712	0.000002579	-0.000000346		
4D3/2 -- ( 2)	2.871532	-23.693303	0.383718106	0.000007796		-0.000000000	0.000000000

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ZIRCONIUM	4D2	Z=40 A=90 R=1.01625E-04 A.U.					
5S1/2 -- ( 2)	1.050545	-13.584370	0.272729935 0.237739404	0.000000549 0.000000691	-0.000000001	-0.000019956	0.000000110
ETDT	-3595.16507	3712.86964	-8677.29076	1367.37407	2.273176666	-0.223813085	-0.168349526
NIOBIUM	4D4 5S1	Z=41 A=93 R=1.02742E-04 A.U.					
1S1/2 -- ( 2)	876.366998	-1736.335659	26.073560192	0.904638567		-0.082357271	0.000522251
2S1/2			7.699418511	0.041721045	-0.004663186		
2P1/2			9.023699506	0.085184068	-0.013036794		
2P3/2			8.681388108	0.044544176	-0.012872686		
3S1/2			2.943143954	0.007178254	-0.000854230		
3P1/2			3.076053477	0.013271691	-0.002041340		
3P3/2			2.985942744	0.006904043	-0.002050291		
3D3/2			2.868071259	0.000227694	-0.000029903		
3D5/2			2.840922147	0.000094126	-0.000030126		
4S1/2			1.126447983	0.001180486	-0.000141868		
4P1/2			1.041167011	0.001820857	-0.000280291		
4P3/2			1.012327609	0.000939974	-0.000280241		
4D3/2			0.622784454	0.000013492	-0.000001776		
5S1/2			0.333605009	0.000093089	-0.000011203		
2S1/2 -- ( 2)	180.307369	-394.112558	5.727613164	0.013423724		-0.008846240	0.000054361
2P1/2			5.562939127	0.004179089	-0.000024532		
2P3/2			5.476780644	0.007336310	-0.000053011		
3S1/2			2.543401112	0.001255948	-0.000303625		
3P1/2			2.664109741	0.001767275	-0.000278422		
3P3/2			2.608840755	0.001827903	-0.000237652		
3D3/2			2.725269623	0.001252604	-0.000174139		
3D5/2			2.703788710	0.000560528	-0.000172401		
4S1/2			1.063267953	0.000205372	-0.000051743		
4P1/2			0.985798353	0.000251274	-0.000040609		
4P3/2			0.962005962	0.000251361	-0.000034855		
4D3/2			0.615087194	0.000063285	-0.000009034		
5S1/2			0.328648213	0.000016181	-0.000004097		
2P1/2 -- ( 2)	180.134747	-393.409440	6.776360759	0.030112697		-0.000198583	0.000002166
2P3/2			6.351544868	0.005155359	-0.000000559		
3S1/2			2.656293237	0.000877179	-0.000064967		
3P1/2			2.650175626	0.001864341	-0.000271031		
3P3/2			2.686936730	0.000853521	-0.000023222		
3D3/2			2.714252188	0.003722062	-0.000883047		
3D5/2			2.761654377	0.000124413	-0.000027096		
4S1/2			1.080226153	0.000142171	-0.000011360		
4P1/2			0.985040461	0.000248883	-0.000038717		
4P3/2			0.972281578	0.000115525	-0.000003529		
4D3/2			0.614629215	0.000192318	-0.000046303		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NIOBIUM 404 5S1 Z=41 A=93 R=1.02742E-04 A.U.							
2P3/2 -- ( 4)	167.267491	-375.514614	0.329969812	0.000011188	-0.000000903	-0.000027340	0.000000741
3S1/2			6.346065718	0.018503297			
3P1/2			2.645137655	0.001172543	-0.000069413		
3P3/2			2.732244089	0.000696985	-0.000026128		
3D3/2			2.628203621	0.001657249	-0.000138724		
3D5/2			2.770816889	0.001093428	-0.000112319		
4S1/2			2.711311096	0.001886131	-0.000533756		
4P1/2			1.078445831	0.000186481	-0.000011960		
4P3/2			0.994807461	0.000094063	-0.000003961		
4D3/2			0.965058522	0.000219142	-0.000019774		
5S1/2			0.617482561	0.000057035	-0.000005892		
3S1/2 -- ( 2)	46.796044	-134.034624	0.329829961	0.000014639	-0.000000949	-0.001554655	0.000009514
3P1/2			2.025354284	0.000594677			
3P3/2			1.814455712	0.000247513	-0.000011827		
3D3/2			1.791770736	0.000343793	-0.000017057		
3D5/2			1.964976648	0.000211178	-0.000010967		
4S1/2			1.957408762	0.000259969	-0.000011307		
4P1/2			0.959686820	0.000059657	-0.000020175		
4P3/2			0.900907074	0.000045493	-0.000007767		
4D3/2			0.880838223	0.000059897	-0.000006410		
5S1/2			0.583207582	0.000008651	-0.000000599		
3P1/2 -- ( 2)	44.641560	-129.941390	0.320800051	0.000004696	-0.000001636	-0.000036693	0.000000399
3P3/2			2.052035050	0.001103934			
3D3/2			1.925661597	0.000193801	-0.000000053		
3D5/2			1.871898108	0.000446428	-0.000040801		
4S1/2			2.007678580	0.000184501	-0.000001447		
4P1/2			0.977534385	0.000059574	-0.000007089		
4P3/2			0.885250438	0.000068892	-0.000013989		
4D3/2			0.886020316	0.000031219	-0.000001316		
5S1/2			0.582413953	0.000019576	-0.000002037		
3P3/2 -- ( 4)	41.943834	-125.608289	0.322050946	0.000004558	-0.000000564	-0.000005068	0.000000137
3D3/2			1.936191431	0.000683415			
3D5/2			1.975898438	0.000165941	-0.000004356		
4S1/2			1.898488331	0.000378997	-0.000021439		
4P1/2			0.974449016	0.000074705	-0.000007792		
4P3/2			0.903341871	0.000027258	-0.000001519		
4D3/2			0.873543343	0.000060579	-0.000007191		
5S1/2			0.583097501	0.000006789	-0.000000410		
3D3/2 -- ( 4)	37.564995	-117.655639	0.321818713	0.000005680	-0.000000613	-0.000000010	0.000000000
3D5/2			2.044139436	0.000969827			
4S1/2			2.058726784	0.000182416	-0.000000000		
4P1/2			0.984238226	0.000031411	-0.000000540		
4P3/2			0.902840589	0.000051712	-0.000003030		
4D3/2			0.888886223	0.000020813	-0.000000446		
5S1/2			0.579387672	0.000027875	-0.000001653		
3D5/2 -- ( 6)	36.927176	-116.538049	0.322560432	0.000002413	-0.000000051	-0.000000002	0.000000000
4S1/2			2.036472935	0.000854229			
			0.983151171	0.000038566	-0.000000538		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
NIOBIUM      404 5S1      Z=41   A=93   R=1.02742E-04   A.U.								
			0.908572842	0.000022298	-0.000000211			
			0.884856748	0.000043519	-0.000001716			
			0.585760023	0.000007386	-0.000000079			
			0.322479226	0.000002917	-0.000000051			
4S1/2 -- ( 2)	10.224409	-48.379261	0.776219921	0.000029184		-0.000256601	0.000001569	
			0.653369005	0.000021854	-0.000002498			
			0.644931501	0.000017819	-0.000002994			
			0.505431109	0.000009277	-0.000001175			
			0.302547682	0.000001481	-0.000000576			
4P1/2 -- ( 2)	8.397139	-43.216068	0.702596299	0.000041801		-0.000005162	0.000000056	
			0.657516299	0.000007447	-0.000000003			
			0.465759269	0.000020972	-0.000004542			
			0.302770756	0.000002338	-0.000000321			
4P3/2 -- ( 4)	7.878936	-41.942116	0.661329730	0.000025753		-0.000000708	0.000000019	
			0.491725003	0.000006548	-0.000000541			
			0.301941918	0.000002595	-0.000000346			
4D3/2 -- ( 4)	3.210472	-25.538004	0.399431577	0.000009077		-0.000000001	0.000000000	
			0.274699991	0.000000559	-0.000000001			
5S1/2 -- ( 1)	1.013186	-13.850853	0.000000000	0.000000000		-0.000020245	0.000000124	
ETOT	-3816.08226	3947.77568	-9216.97179	1451.06812	2.476158738	-0.244957564	-0.186663179	0.001184345
MOLYBDENUM      405 5S1      Z=42   A=98   R=1.04551E-04   A.U.								
1S1/2 -- ( 2)	923.471587	-1826.979739	26.765400543	0.974672505		-0.090997748	0.000636986	
			7.918742268	0.045183649	-0.005059604			
			9.289435968	0.092383698	-0.014111312			
			8.919225603	0.048197274	-0.013929302			
			3.042715840	0.007869905	-0.000938564			
			3.188064730	0.014608016	-0.002242273			
			3.090675828	0.007591692	-0.002255111			
			2.983307199	0.000256844	-0.000033683			
			2.953872790	0.000106097	-0.000033966			
			1.181139652	0.001339990	-0.000161427			
			1.100117315	0.002099212	-0.000322478			
			1.068254174	0.001082111	-0.000322750			
			0.689712768	0.000017674	-0.000002323			
			0.678727246	0.000007166	-0.000002304			
			0.345973332	0.000102157	-0.000012324			
2S1/2 -- ( 2)	190.984876	-415.776981	5.890009016	0.014596023		-0.009848101	0.000066813	
			5.723940227	0.004538725	-0.000025529			
			5.630731215	0.007955374	-0.000057835			
			2.626284856	0.001382985	-0.000334736			
			2.756854584	0.001965116	-0.000309795			
			2.697505162	0.002016405	-0.000262640			

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TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
MOLYBDENUM 4D5 5S1 Z=42 A=98 R=1.04551E-04 A.U.							
3D3/2			2.831851162	0.001399025	-0.000194519		
3D5/2			2.808689194	0.000626284	-0.000192578		
4S1/2			1.113036085	0.000234104	-0.000059089		
4P1/2			1.039435009	0.000292758	-0.000047364		
4P3/2			1.013359151	0.000290330	-0.000040398		
4D3/2			0.680282570	0.000081293	-0.000011626		
4D5/2			0.669841863	0.000036462	-0.000011346		
5S1/2			0.340809035	0.000017831	-0.000004524		
2P1/2 -- ( 2)	190.838652	-415.101236	6.975914704	0.032766271		-0.000233933	0.000002761
2P3/2			6.532988771	0.005586923	-0.000000672		
3S1/2			2.744169483	0.000964437	-0.000071452		
3P1/2			2.742868970	0.002059538	-0.000300404		
3P3/2			2.779427692	0.000940676	-0.000025656		
3D3/2			2.820694377	0.004161671	-0.000987606		
3D5/2			2.870160924	0.000139287	-0.000030308		
4S1/2			1.131341545	0.000161817	-0.000012957		
4P1/2			1.038717554	0.000287771	-0.000044985		
4P3/2			1.024628558	0.000133284	-0.000004094		
4D3/2			0.679761375	0.000247761	-0.000059721		
4D5/2			0.673491917	0.000008912	-0.000001869		
5S1/2			0.342187621	0.000012310	-0.000000996		
2P3/2 -- ( 4)	176.540712	-395.252109	6.521682502	0.020052845		-0.000031701	0.000000916
3S1/2			2.731949307	0.001287718	-0.000076576		
3P1/2			2.827788747	0.000768576	-0.000029007		
3P3/2			2.717508159	0.001824007	-0.000153370		
3D3/2			2.880013798	0.001223151	-0.000125546		
3D5/2			2.816572795	0.002108049	-0.000596690		
4S1/2			1.129323182	0.000211865	-0.000013670		
4P1/2			1.049249673	0.000108597	-0.000004616		
4P3/2			1.016671717	0.000252284	-0.000022908		
4D3/2			0.683203677	0.000073530	-0.000007593		
4D5/2			0.670415832	0.000122777	-0.000035318		
5S1/2			0.342034359	0.000016075	-0.000001049		
3S1/2 -- ( 2)	50.159029	-142.148517	2.092944374	0.000658648		-0.001752921	0.000011843
3P1/2			1.877444485	0.000271401	-0.000012514		
3P3/2			1.853028122	0.000380601	-0.000018536		
3D3/2			2.038689102	0.000233321	-0.000011698		
3D5/2			2.030605168	0.000290032	-0.000012094		
4S1/2			1.002759463	0.000068597	-0.000023346		
4P1/2			0.947577328	0.000054298	-0.000009319		
4P3/2			0.925702468	0.000070321	-0.000007624		
4D3/2			0.642097211	0.000011507	-0.000000826		
4D5/2			0.633000912	0.000015620	-0.000000782		
5S1/2			0.332737665	0.000005219	-0.000001830		
3P1/2 -- ( 2)	47.976143	-138.034610	2.125753425	0.001228331		-0.000043956	0.000000517
3P3/2			1.993851598	0.000214570	-0.000000065		
3D3/2			1.945155151	0.000493844	-0.000043698		
3D5/2			2.085367792	0.000206897	-0.000001560		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
MOLYBDENUM 4D5 5S1 Z=42 A=98 R=1.04551E-04 A.U.							
4S1/2			1.022049626	0.000068023	-0.000008129		
4P1/2			0.931039701	0.000080415	-0.000016541		
4P3/2			0.931522352	0.000036310	-0.000001554		
4D3/2			0.641327077	0.000026375	-0.000002881		
4D5/2			0.634373901	0.000011128	-0.000000251		
5S1/2			0.334042789	0.000005031	-0.000000626		
3P3/2 -- ( 4)	44.960616	-133.223270	2.003808637	0.000758275		-0.000005981	0.000000172
3D3/2			2.051514742	0.000183461	-0.000004594		
3D5/2			1.971275207	0.000421377	-0.000022692		
4S1/2			1.018638501	0.000085581	-0.000008975		
4P1/2			0.950325419	0.000031815	-0.000001804		
4P3/2			0.918022338	0.000070433	-0.000008485		
4D3/2			0.642017931	0.000009028	-0.000000574		
4D5/2			0.631917763	0.000023680	-0.000001927		
5S1/2			0.333794556	0.000006286	-0.000000683		
3D3/2 -- ( 4)	40.583732	-125.370196	2.130407001	0.001092391		-0.000000013	0.000000000
3D5/2			2.145335181	0.000205709	-0.000000000		
4S1/2			1.030105443	0.000036106	-0.000000643		
4P1/2			0.950770102	0.000060136	-0.000003552		
4P3/2			0.935314109	0.000024232	-0.000000527		
4D3/2			0.638070374	0.000036010	-0.000002225		
4D5/2			0.636806515	0.000011268	-0.000000102		
5S1/2			0.334630719	0.000002681	-0.000000058		
3D5/2 -- ( 6)	39.868159	-124.128796	2.121795198	0.000961516		-0.000000003	0.000000000
4S1/2			1.028916331	0.000044219	-0.000000641		
4P1/2			0.956788758	0.000025993	-0.000000255		
4P3/2			0.931004381	0.000050486	-0.000002003		
4D3/2			0.645542297	0.000009569	-0.000000107		
4D5/2			0.631232710	0.000033889	-0.000001461		
5S1/2			0.334544665	0.000003233	-0.000000058		
4S1/2 -- ( 2)	11.338295	-52.048353	0.812378716	0.000033824		-0.000299604	0.000002023
4P1/2			0.686319888	0.000024713	-0.000002766		
4P3/2			0.677116583	0.000020630	-0.000003375		
4D3/2			0.550693698	0.000011552	-0.000001447		
4D5/2			0.544541944	0.000006766	-0.000001427		
5S1/2			0.314356809	0.000001669	-0.000000652		
4P1/2 -- ( 2)	9.429337	-46.803697	0.740440297	0.000049377		-0.000000648	0.000000076
4P3/2			0.692571366	0.000008733	-0.000000004		
4D3/2			0.506723752	0.000025903	-0.000005542		
4D5/2			0.538240260	0.000003136	-0.000000181		
5S1/2			0.314792760	0.000002604	-0.000000358		
4P3/2 -- ( 4)	8.822683	-45.357057	0.696237487	0.000030317		-0.000000876	0.000000025
4D3/2			0.535863289	0.000008113	-0.000000654		
4D5/2			0.511518140	0.000014257	-0.000003086		
5S1/2			0.313928283	0.000002911	-0.000000388		
4D3/2 -- ( 4)	3.932928	-28.972851	0.443522237	0.000012337		-0.000000001	0.000000000
4D5/2			0.444567455	0.000002296	-0.000000000		
5S1/2			0.290169311	0.000000666	-0.000000000		

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TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
MOLYBDENUM 4D5 5S1 Z=42 A=98 R=1.04551E-04 A.U.							
4D5/2 -- ( 1)	3.810110	-28.511022	0.000000000	0.000000000		-0.000000000	0.000000000
5S1/2			0.288931134	0.000001007	-0.000000000		
5S1/2 -- ( 1)	1.085533	-14.716911	0.000000000	0.000000000		-0.000022854	0.000000154
ETDT -4044.90010	4191.86312	-9774.48890	1535.50664	2.691646154	-0.267505305	-0.206542657	0.001446651
TECHNETIUM 4D6 5S1 Z=43 A=99 R=1.04905E-04 A.U.							
1S1/2 -- ( 2)	972.083788	-1920.291142	27.461026231	1.048348882		-0.100339472	0.000769550
2S1/2			8.139497523	0.048843024	-0.005479462		
2P1/2			9.557245267	0.099996952	-0.015243784		
2P3/2			9.157537535	0.052045687	-0.015042450		
3S1/2			3.142918272	0.008607016	-0.001328661		
3P1/2			3.300743698	0.016033440	-0.002455847		
3P3/2			3.195631721	0.008324064	-0.002473293		
3D3/2			3.098001762	0.000288257	-0.000037747		
3D5/2			3.066134973	0.000118980	-0.000038101		
4S1/2			1.234922826	0.001509774	-0.000182313		
4P1/2			1.157764183	0.002395940	-0.000367280		
4P3/2			1.122648860	0.001233072	-0.000367919		
4D3/2			0.751917957	0.000022288	-0.000002926		
4D5/2			0.739759499	0.000009031	-0.000002905		
5S1/2			0.357087685	0.000110758	-0.000013395		
2S1/2 -- ( 2)	202.049557	-438.129066	6.053329119	0.015840551		-0.010939911	0.000081317
2P1/2			5.885953254	0.004920300	-0.000026541		
2P3/2			5.785280995	0.008609194	-0.000063112		
3S1/2			2.709589437	0.001519026	-0.000368072		
3P1/2			2.850002981	0.002178254	-0.000343595		
3P3/2			2.786338176	0.002217381	-0.000289266		
3D3/2			2.937893619	0.001555691	-0.000216323		
3D5/2			2.912943246	0.000696619	-0.000214161		
4S1/2			1.161962837	0.000264862	-0.000066963		
4P1/2			1.091825872	0.000337556	-0.000054664		
4P3/2			1.063280646	0.000331836	-0.000046316		
4D3/2			0.740770583	0.000100668	-0.000014421		
4D5/2			0.729274626	0.000045239	-0.000014079		
5S1/2			0.351764363	0.000019412	-0.000004934		
2P1/2 -- ( 2)	201.928587	-437.479411	7.176781301	0.035584416		-0.000274632	0.000003492
2P3/2			6.715173797	0.006042042	-0.000000805		
3S1/2			2.832539078	0.001057784	-0.000078387		
3P1/2			2.835982853	0.002268797	-0.000331955		
3P3/2			2.872128418	0.001033676	-0.000028255		
3D3/2			2.926632197	0.004632424	-0.001099595		
3D5/2			2.978020867	0.000159199	-0.000033747		
4S1/2			1.181603318	0.000182818	-0.000014667		

TABLE 1.-- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TECHNETIUM 4D6 5S1 Z=43 A=99 R=1.04905E-04 A.U.							
4P1/2			1.091162503	0.000329438	-0.000051731		
4P3/2			1.075542163	0.000152197	-0.000004699		
4D3/2			0.740198872	0.000307661	-0.000074239		
4D5/2			0.733589236	0.000011134	-0.000002329		
5S1/2			0.353187157	0.000013382	-0.000001085		
2P3/2 -- ( 4)	186.077699	-415.512498	6.697570177	0.021687565		-0.000036623	0.000001126
3S1/2			2.819181561	0.001410671	-0.000084274		
3P1/2			2.923705577	0.000845084	-0.000032106		
3P3/2			2.806929343	0.002001703	-0.000169034		
3D3/2			2.988634054	0.001362114	-0.000139698		
3D5/2			2.921144739	0.002345486	-0.000664036		
4S1/2			1.179331260	0.000238917	-0.000015506		
4P1/2			1.102420969	0.000124122	-0.000005324		
4P3/2			1.066849801	0.000287481	-0.000026259		
4D3/2			0.744206614	0.000091362	-0.000009430		
4D5/2			0.729949351	0.000152340	-0.000043868		
5S1/2			0.353021156	0.000017441	-0.000001145		
3S1/2 -- ( 2)	53.664574	-150.535149	2.160853829	0.000727452		-0.001971057	0.000014589
3P1/2			1.940715017	0.000296907	-0.000013216		
3P3/2			1.914462858	0.000420048	-0.000020125		
3D3/2			2.112251372	0.000256997	-0.000012456		
3D5/2			2.103613502	0.000322265	-0.000012914		
4S1/2			1.045184387	0.000078249	-0.000026780		
4P1/2			0.993213875	0.000064030	-0.000011038		
4P3/2			0.969395758	0.000081590	-0.000008947		
4D3/2			0.696550068	0.000014740	-0.000001092		
4D5/2			0.686641612	0.000019543	-0.000001030		
5S1/2			0.343544517	0.000005728	-0.000002019		
3P1/2 -- ( 2)	51.451245	-146.397070	2.199758763	0.001362321		-0.000052427	0.000000664
3P3/2			2.062211973	0.000236747	-0.000000080		
3D3/2			2.018289244	0.000544625	-0.000046736		
3D5/2			2.162865720	0.000230959	-0.000001680		
4S1/2			1.065901294	0.000077079	-0.000009246		
4P1/2			0.975853128	0.000092888	-0.000019328		
4P3/2			0.975856821	0.000041771	-0.000001813		
4D3/2			0.695846015	0.000034146	-0.000003886		
4D5/2			0.688335475	0.000013833	-0.000000327		
5S1/2			0.344892056	0.000005485	-0.000000685		
3P3/2 -- ( 4)	48.088549	-141.065538	2.071493253	0.000838526		-0.000007026	0.000000215
3D3/2			2.126866324	0.000202150	-0.000004835		
3D5/2			2.043784712	0.000466730	-0.000023975		
4S1/2			1.062149123	0.000097286	-0.000010255		
4P1/2			0.996266746	0.000036741	-0.000002116		
4P3/2			0.961350553	0.000081021	-0.000009890		
4D3/2			0.696512074	0.000011562	-0.000000767		
4D5/2			0.685474137	0.000030175	-0.000002608		
5S1/2			0.344629269	0.000000687	-0.000000751		
3D3/2 -- ( 4)	43.706095	-133.292267	2.216127431	0.001224119		-0.000000016	0.000000001

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
TECHNETIUM 4D6 5S1 Z=43 A=99 R=1.04905E-04 A.U.								
3D5/2			2.231344599	0.000230739	-0.000000001			
4S1/2			1.075261421	0.000041151	-0.000000754			
4P1/2			0.997668297	0.000069197	-0.000004115			
4P3/2			0.980555573	0.000027899	-0.000000614			
4D3/2			0.692447014	0.000044846	-0.000002872			
4D5/2			0.691451554	0.000014106	-0.000000132			
5S1/2			0.345546506	0.000002940	-0.000000066			
3D5/2 -- ( 6)	42.905561	-131.916089	2.206478131	0.001076669		-0.000000004	0.000000000	
4S1/2			1.073964275	0.000050291	-0.000000753			
4P1/2			1.003955526	0.000029977	-0.000000303			
4P3/2			0.975968197	0.000057941	-0.000002310			
4D3/2			0.700937807	0.000011946	-0.000000139			
4D5/2			0.685073095	0.000042144	-0.000001885			
5S1/2			0.345456002	0.000003540	-0.000000066			
4S1/2 -- ( 2)	12.488548	-55.797483	0.847914466	0.000038840		-0.000347124	0.000002567	
4P1/2			0.718582786	0.000027728	-0.000003040			
4P3/2			0.708550815	0.000023653	-0.000003778			
4D3/2			0.592343454	0.000013929	-0.000001724			
4D5/2			0.585798686	0.000008386	-0.000001704			
5S1/2			0.325147406	0.000001853	-0.000000725			
4P1/2 -- ( 2)	10.494490	-50.456362	0.777389666	0.000057615		-0.000008049	0.000000102	
4P3/2			0.726725786	0.000010113	-0.000000005			
4D3/2			0.544631176	0.000031052	-0.000006565			
4D5/2			0.579715879	0.000003998	-0.000000216			
5S1/2			0.325765803	0.000002858	-0.000000393			
4P3/2 -- ( 4)	9.789480	-48.819279	0.730167636	0.000035243		-0.000001070	0.000000033	
4D3/2			0.576561853	0.000009745	-0.000000767			
4D5/2			0.549898859	0.000017253	-0.000003629			
5S1/2			0.324866571	0.000003217	-0.000000429			
4D3/2 -- ( 4)	4.671333	-32.338530	0.484197030	0.000015995		-0.000000001	0.000000000	
4D5/2			0.485322576	0.000002986	-0.000000000			
5S1/2			0.303711916	0.000000773	-0.000000000			
4D5/2 -- ( 2)	4.523135	-31.815159	0.478202659	0.000013741		-0.000000000	0.000000000	
5S1/2			0.302501235	0.000001160	-0.000000000			
5S1/2 -- ( 1)	1.152084	-15.552498	0.000000000	0.000000000		-0.0000025480	0.000000186	
ETDT	-4281.70933	4445.28592	-10352.96316	1623.56568	2.920040308	-0.291479377	-0.228069795	0.001750251
RUTHENIUM 4D7 5S1 Z=44 A=102 R=1.05954E-04 A.U.								
1S1/2 -- ( 2)	1022.230340	-2016.304350	28.160536738	1.125771240		-0.110422359	0.000921998	
2S1/2			8.361717332	0.052705695	-0.005923621			
2P1/2			9.827193767	0.108037819	-0.016435743			
2P3/2			9.396329031	0.056094500	-0.016213589			
3S1/2			3.243744734	0.009391197	-0.001124747			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RUTHENIUM 4D7 5S1 Z=44 A=102 R=1.05954E-04 A.U.							
3P1/2			3.414097638	0.017551024	-0.002682392		
3P3/2			3.300801667	0.009102569	-0.002705254		
3D3/2			3.212254327	0.000322004	-0.000042102		
3D5/2			3.177806351	0.000132803	-0.000042538		
4S1/2			1.287944176	0.001690118	-0.000204567		
4P1/2			1.214340611	0.002711589	-0.000414753		
4P3/2			1.175735364	0.001393038	-0.000415802		
4D3/2			0.811255779	0.000027384	-0.000003590		
4D5/2			0.797836910	0.000011085	-0.000003567		
5S1/2			0.366697343	0.000118825	-0.000014405		
2S1/2 -- ( 2)	213.509819	-461.179790	6.217590904	0.017160174		-0.012127715	0.000098128
2P1/2			6.049002632	0.005324688	-0.000027570		
2P3/2			5.940437538	0.009298801	-0.000368885		
3S1/2			2.793309680	0.001664450	-0.000403726		
3P1/2			2.943560453	0.002407380	-0.000379927		
3P3/2			2.875337319	0.002431170	-0.000317560		
3D3/2			3.043499929	0.001722952	-0.000239596		
3D5/2			3.016652938	0.000771676	-0.000237196		
4S1/2			1.210176515	0.000297715	-0.000075385		
4P1/2			1.143194451	0.000385801	-0.000062529		
4P3/2			1.112005347	0.000375920	-0.000052612		
4D3/2			0.798390492	0.000121608	-0.000017448		
4D5/2			0.785761200	0.000054733	-0.000017037		
5S1/2			0.361260267	0.000020910	-0.000005323		
2P1/2 -- ( 2)	213.413429	-460.555562	7.378997576	0.038573851		-0.000321360	0.000004383
2P3/2			6.898113512	0.006521334	-0.000000960		
3S1/2			2.921397425	0.001157473	-0.000085790		
3P1/2			2.929521853	0.002492729	-0.000365777		
3P3/2			2.965035716	0.001132713	-0.000031023		
3D3/2			3.032167286	0.005135353	-0.001219259		
3D5/2			3.085334244	0.000172177	-0.000037419		
4S1/2			1.231141554	0.000205221	-0.000016493		
4P1/2			1.142597343	0.000373994	-0.000058975		
4P3/2			1.125240250	0.000172290	-0.000005344		
4D3/2			0.797779077	0.000372635	-0.000090008		
4D5/2			0.790739290	0.000013555	-0.000002829		
5S1/2			0.362715299	0.000014396	-0.000001170		
2P3/2 -- ( 4)	195.879533	-436.297258	6.873726730	0.023409795		-0.000042161	0.000001375
3S1/2			2.906826563	0.001541696	-0.000092532		
3P1/2			3.019995980	0.000926692	-0.000035432		
3P3/2			2.896460948	0.002190684	-0.000185753		
3D3/2			3.096777110	0.001510624	-0.000154802		
3D5/2			3.025125431	0.002598930	-0.000735933		
4S1/2			1.228599552	0.000267686	-0.000017475		
4P1/2			1.154545466	0.000140671	-0.000006086		
4P3/2			1.115808994	0.000324774	-0.000029832		
4D3/2			0.802335357	0.000110711	-0.000011422		
4D5/2			0.786532700	0.000184315	-0.000053128		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RUTHENIUM 4D7 5S1 Z=44 A=102 R=1.05954E-04 A.U.							
3S1/2 -- ( 2)	57.314854	-159.197306	0.362537326 2.229076730	0.000018724 0.000801301	-0.000001237	-0.002210520	0.000017810
3P1/2			2.004266113	0.000324097	-0.000013933		
3P3/2			1.976070238	0.000462228	-0.000021834		
3D3/2			2.185718588	0.000282272	-0.000013244		
3D5/2			2.176489156	0.000356753	-0.000013772		
4S1/2			1.087067960	0.000088640	-0.000030488		
4P1/2			1.038013479	0.000074732	-0.000012930		
4P3/2			1.012110358	0.000093716	-0.000010382		
4D3/2			0.748305345	0.000018396	-0.000001401		
4D5/2			0.737521659	0.000023842	-0.000001318		
5S1/2			0.352959543	0.000006217	-0.000002202		
3P1/2 -- ( 2)	55.069028	-155.031676	2.274053973	0.001506334		-0.000062275	0.000000846
3P3/2			2.130741409	0.000260370	-0.000000097		
3D3/2			2.091347225	0.000598923	-0.000049928		
3D5/2			2.240228520	0.000256751	-0.00001806		
4S1/2			1.109197403	0.000086759	-0.000010442		
4P1/2			1.019877693	0.000106352	-0.000022358		
4P3/2			1.019214622	0.000047608	-0.000002092		
4D3/2			0.747700780	0.000042985	-0.000005066		
4D5/2			0.739553578	0.000016772	-0.000000413		
5S1/2			0.354338307	0.000005917	-0.000000742		
3P3/2 -- ( 4)	51.327834	-149.135347	2.139240786	0.000924358		-0.000008218	0.000000267
3D3/2			2.202003710	0.000222051	-0.000005078		
3D5/2			2.116063540	0.000515163	-0.000025287		
4S1/2			1.105087945	0.000109851	-0.000011637		
4P1/2			1.041360206	0.000042053	-0.000002457		
4P3/2			1.003714054	0.000092363	-0.000011408		
4D3/2			0.748315284	0.000014427	-0.000000993		
4D5/2			0.736282418	0.000037442	-0.000003410		
5S1/2			0.354062410	0.000007433	-0.000000816		
3D3/2 -- ( 4)	46.932952	-141.424601	2.301392904	0.001365348		-0.000000020	0.000000001
3D5/2			2.316848310	0.000257564	-0.000000001		
4S1/2			1.119814355	0.000046559	-0.000000875		
4P1/2			1.043723233	0.000078918	-0.000004721		
4P3/2			1.024795879	0.000031821	-0.000000707		
4D3/2			0.744221129	0.000054479	-0.000003600		
4D5/2			0.743376977	0.000017210	-0.000000167		
5S1/2			0.355047536	0.000003188	-0.000000073		
3D5/2 -- ( 6)	46.039863	-139.902155	2.290614202	0.001199955		-0.000000005	0.000000000
4S1/2			1.118403157	0.000056792	-0.000000874		
4P1/2			1.050262983	0.000034260	-0.000000356		
4P3/2			1.019932419	0.000065893	-0.000002638		
4D3/2			0.753676154	0.000014543	-0.000000176		
4D5/2			0.736224501	0.000051114	-0.000002362		
5S1/2			0.354953025	0.000003832	-0.000000073		
4S1/2 -- ( 2)	13.675453	-59.630079	0.882924555	0.000044244		-0.000399474	0.000003216
4P1/2			0.750279979	0.000030903	-0.000003322		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
RUTHENIUM      4D7 5S1      Z=44    A=102 R=1.05954E-04 A.U.								
4P3/2			0.739355981	0.000026894	-0.000004205			
4D3/2			0.631806615	0.000016439	-0.000002011			
4D5/2			0.624822791	0.000010151	-0.000001992			
5S1/2			0.334649461	0.000002030	-0.000000794			
4P1/2 -- ( 2)	11.593337	-54.180527	0.813612693	0.000066534		-0.000009894	0.000000134	
4P3/2			0.760135248	0.000011587	-0.000000007			
4D3/2			0.580696517	0.000036496	-0.000007628			
4D5/2			0.619055151	0.000004958	-0.000000252			
5S1/2			0.335423648	0.000003096	-0.000000426			
4P3/2 -- ( 4)	10.779246	-52.334006	0.763278351	0.000040535		-0.000001295	0.000000042	
4D3/2			0.615158016	0.000011464	-0.000000882			
4D5/2			0.586262068	0.000020445	-0.000004185			
5S1/2			0.334491849	0.000003510	-0.000000468			
4D3/2 -- ( 4)	5.433410	-35.702533	0.522894243	0.000020100		-0.000000002	0.000000000	
4D5/2			0.524046661	0.000003760	-0.000000000			
5S1/2			0.315485371	0.000000879	-0.000000000			
4D5/2 -- ( 3)	5.257079	-35.111410	0.516292513	0.000017252		-0.000000000	0.000000000	
5S1/2			0.314291319	0.000001306	-0.000000000			
5S1/2 -- ( 1)	1.209026	-16.342785	0.000000000	0.000000000		-0.000028103	0.000000226	
ETOT	-4526.63700	4708.24386	-10952.82351	1715.34701	3.161812051	-0.316933555	-0.251342110	0.002100001
RHODIUM      4D8 5S1      Z=45    A=103 R=1.06300E-04 A.U.								
1S1/2 -- ( 2)	1073.945621	-2115.063502	28.864085524	1.207051048		-0.121294214	0.001096552	
2S1/2			8.585448925	0.056778609	-0.006392980			
2P1/2			10.099350887	0.116520409	-0.017688709			
2P3/2			9.635606721	0.060348726	-0.017444162			
3S1/2			3.345194251	0.010224107	-0.001227049			
3P1/2			3.528139811	0.019163877	-0.002922255			
3P3/2			3.406181560	0.009928626	-0.002951430			
3D3/2			3.326163094	0.000358162	-0.000046755			
3D5/2			3.288980621	0.000147595	-0.000047286			
4S1/2			1.340473044	0.001881845	-0.000228296			
4P1/2			1.270243868	0.003047904	-0.000465135			
4P3/2			1.227915281	0.001562880	-0.000466660			
4D3/2			0.867838816	0.000032949	-0.000004313			
4D5/2			0.853042050	0.000013321	-0.000004289			
5S1/2			0.376160040	0.000126867	-0.000015416			
2S1/2 -- ( 2)	225.375383	-484.941807	6.382823386	0.018557930		-0.013418588	0.000117527	
2P1/2			6.213119709	0.005752808	-0.000028615			
2P3/2			6.096214701	0.010025240	-0.000075202			
3S1/2			2.877446477	0.001819650	-0.00041794			
3P1/2			3.037538116	0.002653205	-0.000418902			
3P3/2			2.964504989	0.002658112	-0.000347555			



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RHODIUM 4D8 5S1 Z=45 A=103 R=1.06300E-04 A.U.							
3D3/2			3.148769666	0.001901180	-0.000264390		
3D5/2			3.119914533	0.000851611	-0.000261732		
4S1/2			1.257921358	0.000332829	-0.000084397		
4P1/2			1.193899672	0.000437799	-0.000071009		
4P3/2			1.159892859	0.000422610	-0.000059315		
4D3/2			0.853269963	0.000144025	-0.000020694		
4D5/2			0.839400156	0.000064897	-0.000020204		
5S1/2			0.370626265	0.000022415	-0.000005715		
2P1/2 -- ( 2)	225.302363	-484.341704	7.582603450	0.041741483		-0.000374879	0.000005465
2P3/2			7.081823490	0.007025408	-0.000001141		
3S1/2			3.010745101	0.001263768	-0.000093677		
3P1/2			3.023496219	0.002731958	-0.000401964		
3P3/2			3.058150744	0.001237981	-0.000033965		
3D3/2			3.137397668	0.005671572	-0.001346861		
3D5/2			3.192195852	0.000190250	-0.000041332		
4S1/2			1.280208261	0.000229140	-0.000018444		
4P1/2			1.193379610	0.000421717	-0.000066760		
4P3/2			1.174095464	0.000193672	-0.000006032		
4D3/2			0.852629537	0.000442429	-0.000106967		
4D5/2			0.845034084	0.000016165	-0.000003367		
5S1/2			0.372109081	0.000015413	-0.000001255		
2P3/2 -- ( 4)	205.947251	-457.607847	7.050152216	0.025221868		-0.000048375	0.000001671
3S1/2			2.994881489	0.001681098	-0.000101378		
3P1/2			3.116666295	0.001013583	-0.000038998		
3P3/2			2.986101357	0.002391293	-0.000203560		
3D3/2			3.204539430	0.001669013	-0.000170890		
3D5/2			3.128607439	0.002868907	-0.000812531		
4S1/2			1.277378633	0.000298306	-0.000019587		
4P1/2			1.205987155	0.000158337	-0.000006907		
4P3/2			1.163916030	0.000364362	-0.000033646		
4D3/2			0.857712527	0.000131500	-0.000013559		
4D5/2			0.840262576	0.000218534	-0.000063050		
5S1/2			0.371919125	0.000020005	-0.000001329		
3S1/2 -- ( 2)	61.112250	-168.138133	2.297612440	0.000880418		-0.002472976	0.000021567
3P1/2			2.068100925	0.000353044	-0.000014666		
3P3/2			2.037849801	0.000507234	-0.000023672		
3D3/2			2.259142873	0.000309217	-0.000014064		
3D5/2			2.249283366	0.000393582	-0.000014670		
4S1/2			1.128600403	0.000099825	-0.000034487		
4P1/2			1.082269392	0.000086486	-0.000015010		
4P3/2			1.054145067	0.000106756	-0.000011933		
4D3/2			0.797523551	0.000022473	-0.000001755		
4D5/2			0.785776978	0.000028502	-0.000001645		
5S1/2			0.362267739	0.000006712	-0.000002388		
3P1/2 -- ( 2)	58.831852	-163.941660	2.348646985	0.001660812		-0.000073685	0.000001069
3P3/2			2.199443168	0.000285475	-0.000000118		
3D3/2			2.164375067	0.000656897	-0.000053286		
3D5/2			2.317509050	0.000284336	-0.000001939		

TABLE 1.-- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RHODIUM      4D8 5S1      Z=45    A=103 R=1.06300E-04 A.U.							
			1.152135477	0.000097112	-0.000011724		
			1.063392538	0.000120894	-0.000025650		
			1.061896625	0.000053851	-0.000002394		
			0.797046881	0.000052888	-0.000006423		
			0.788159633	0.000019933	-0.000000509		
			0.363673576	0.000006351	-0.000000800		
3P3/2 -- ( 4)	54.678739	-157.433114	2.207051369	0.001015962		-0.000009572	0.000000329
			2.276975321	0.000243210	-0.000005324		
			2.188155799	0.000566786	-0.000026633		
			1.147650569	0.000123344	-0.000013128		
			1.085898425	0.000047782	-0.000002828		
			1.045403430	0.000104522	-0.000013048		
			0.797584933	0.000017624	-0.000001252		
			0.784475229	0.000045463	-0.000004333		
			0.363384770	0.000008000	-0.000000883		
3D3/2 -- ( 4)	50.265568	-149.770293	2.386291717	0.001516435		-0.000000026	0.000000001
			2.401934376	0.000286249	-0.000000001		
			1.163966404	0.000052353	-0.000001007		
			1.089225571	0.000089358	-0.000005374		
			1.068335543	0.000036018	-0.000000808		
			0.793537342	0.000064879	-0.000004408		
			0.792699821	0.000020568	-0.000000206		
			0.364429781	0.000003438	-0.000000080		
3D5/2 -- ( 6)	49.271862	-148.089434	2.374289487	0.001331657		-0.000000006	0.000000000
			1.162434445	0.000063754	-0.000001006		
			1.096005140	0.000038865	-0.000000415		
			1.063194554	0.000074386	-0.000002988		
			0.803899752	0.000017352	-0.000000217		
			0.784806611	0.000060757	-0.000002890		
			0.364331252	0.000004126	-0.000000080		
4S1/2 -- ( 2)	14.903607	-63.557299	0.917592877	0.000050067		-0.000457139	0.000003983
			0.781610496	0.000034256	-0.000003612		
			0.769732865	0.000030375	-0.000004661		
			0.669300825	0.000019074	-0.000002307		
			0.661817655	0.000012053	-0.000002288		
			0.344055312	0.000002209	-0.000000865		
4P1/2 -- ( 2)	12.731364	-57.991311	0.849366619	0.000076198		-0.000012062	0.000000175
			0.793041579	0.000013161	-0.000000008		
			0.615121944	0.000042224	-0.000008727		
			0.656449651	0.000006010	-0.000000290		
			0.344966889	0.000003333	-0.000000458		
4P3/2 -- ( 4)	11.796828	-55.915652	0.795816941	0.000046227		-0.000001552	0.000000053
			0.651860917	0.000013265	-0.000000999		
			0.620802875	0.000023823	-0.000004750		
			0.344000419	0.000003805	-0.000000507		
4D3/2 -- ( 4)	6.214244	-39.061318	0.559591568	0.000024617		-0.000000002	0.000000000
			0.560709528	0.000004610	-0.000000000		
			0.326657317	0.000000986	-0.000000001		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RHODIUM      408 5S1      Z=45    A=103 R=1.06300E-04 A.U.							
4D5/2 -- ( 4)	6.006449	-38.394615	0.552301373	0.000021102		-0.000000001	0.000000000
5S1/2			0.325464582	0.000001452	-0.000000001		
5S1/2 -- ( 1)	1.263221	-17.145321	0.000000000	0.000000000		-0.000030839	0.000000269
ETOT	-4779.80449	4980.93559	-11574.36411	1810.82448	3.417450033	-0.343922862	0.002501168
PALLADIUM      4D10      Z=46    A=106 R=1.07322E-04 A.U.							
1S1/2 -- ( 2)	1127.262540	-2216.610059	29.571834420	1.292300583		-0.132999947	0.001295636
2S1/2			8.810774939	0.061069394	-0.006888570		
2P1/2			10.373874881	0.125462279	-0.019004691		
2P3/2			9.875454515	0.064814991	-0.018736104		
3S1/2			3.447238786	0.011107110	-0.001335773		
3P1/2			3.642845164	0.020874489	-0.003175655		
3P3/2			3.511734411	0.010803352	-0.003212149		
3D3/2			3.439724418	0.000396776	-0.000051710		
3D5/2			3.399652247	0.000163371	-0.000052352		
4S1/2			1.390312708	0.002078004	-0.000252665		
4P1/2			1.321454865	0.003383503	-0.000515136		
4P3/2			1.274641026	0.001729535	-0.000516590		
4D3/2			0.886743629	0.000036203	-0.000004732		
4D5/2			0.867657987	0.000014513	-0.000004675		
2S1/2 -- ( 2)	237.658376	-509.430309	6.549080142	0.020037224		-0.014819595	0.000139822
2P1/2			6.378377097	0.006205703	-0.000029672		
2P3/2			6.252664580	0.010789809	-0.000082108		
3S1/2			2.961986951	0.001984980	-0.000482354		
3P1/2			3.131927797	0.002916415	-0.000460625		
3P3/2			3.053826718	0.002898474	-0.000379274		
3D3/2			3.253715827	0.002090610	-0.000290736		
3D5/2			3.222739605	0.000936514	-0.000287800		
4S1/2			1.303300978	0.000368997	-0.000093689		
4P1/2			1.240443767	0.000490515	-0.000079608		
4P3/2			1.202943022	0.000468957	-0.000065924		
4D3/2			0.871645935	0.000156010	-0.000022445		
4D5/2			0.853657506	0.000069858	-0.000021752		
2P1/2 -- ( 2)	237.609325	-508.855157	7.787711734	0.045095669		-0.000436041	0.000006772
2P3/2			7.266384021	0.007555071	-0.000001350		
3S1/2			3.100567828	0.001376902	-0.000102064		
3P1/2			3.117899425	0.002987060	-0.000440597		
3P3/2			3.151457045	0.001349639	-0.000037084		
3D3/2			3.242338051	0.006241744	-0.001482563		
3D5/2			3.298611324	0.000209427	-0.000045489		
4S1/2			1.326826590	0.000253742	-0.000020453		
4P1/2			1.240012996	0.000469687	-0.000074621		
4P3/2			1.217992954	0.000214729	-0.000006713		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PALLADIUM	4D10	Z=46	A=106	R=1.07322E-04	A.U.		
4D3/2			0.871032850	0.000480341	-0.000116230		
4D5/2			0.859450850	0.000017486	-0.000003636		
2P3/2 -- ( 4)	216.285643	-479.449909	7.226908171	0.027126826		-0.000055331	0.000002019
3S1/2			3.083328870	0.001829149	-0.000110835		
3P1/2			3.213703014	0.001105920	-0.000042811		
3P3/2			3.075833209	0.002603816	-0.000222482		
3D3/2			3.311927869	0.001837477	-0.000187979		
3D5/2			3.231599758	0.003155717	-0.000893916		
4S1/2			1.323701837	0.000329684	-0.000021770		
4P1/2			1.253165805	0.000176015	-0.000007739		
4P3/2			1.207137665	0.000403209	-0.000037420		
4D3/2			0.876223413	0.000142808	-0.000014717		
4D5/2			0.854530176	0.000235220	-0.000067920		
3S1/2 -- ( 2)	65.057627	-177.358971	2.366451766	0.000964997		-0.002760006	0.000025927
3P1/2			2.132212638	0.000383814	-0.000015414		
3P3/2			2.099792147	0.000555147	-0.000025652		
3D3/2			2.332533401	0.000337893	-0.000014921		
3D5/2			2.322005073	0.000432819	-0.000015613		
4S1/2			1.168333411	0.000111443	-0.000038653		
4P1/2			1.123221329	0.000098685	-0.000017170		
4P3/2			1.092324888	0.000119793	-0.000013496		
4D3/2			0.814762380	0.000025041	-0.000001995		
4D5/2			0.799405257	0.000030923	-0.000001852		
3P1/2 -- ( 2)	62.740563	-173.128409	2.423534621	0.001826145		-0.000086864	0.000001343
3P3/2			2.268310228	0.000312087	-0.000000143		
3D3/2			2.237374627	0.000718702	-0.000056832		
3D5/2			2.394716816	0.000313763	-0.000002081		
4S1/2			1.193186113	0.000107789	-0.000013048		
4P1/2			1.103749650	0.000135681	-0.000029023		
4P3/2			1.100665400	0.000060045	-0.000002696		
4D3/2			0.814456477	0.000059265	-0.000007374		
4D5/2			0.801938118	0.000021516	-0.000000566		
3P3/2 -- ( 4)	58.140181	-165.957598	2.274916118	0.001113496		-0.000011107	0.000000404
3D3/2			2.351787775	0.000265668	-0.000005574		
3D5/2			2.260064261	0.000621687	-0.000028018		
4S1/2			1.188323374	0.000137328	-0.000014684		
4P1/2			1.127095646	0.000053597	-0.000003210		
4P3/2			1.083305034	0.000116631	-0.000014699		
4D3/2			0.814868272	0.000019643	-0.000001431		
4D5/2			0.798149745	0.000050014	-0.0000004950		
3D3/2 -- ( 4)	53.702514	-158.328136	2.470832307	0.001677609		-0.000000032	0.000000001
3D5/2			2.486611251	0.000316831	-0.000000001		
4S1/2			1.206141801	0.000058346	-0.000001144		
4P1/2			1.131354317	0.000099912	-0.000006038		
4P3/2			1.107877721	0.000040191	-0.000000909		
4D3/2			0.811189357	0.000070688	-0.000004917		
4D5/2			0.806788819	0.000022309	-0.000000229		
3D5/2 -- ( 6)	52.599735	-156.476170	2.457512242	0.001471946		-0.000000007	0.000000001

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
PALLADIUM	4D10	Z=46	A=106	R=1.07322E-04	A.U.			
	4S1/2		1.204487837	0.000070946	-0.000001144			
	4P1/2		1.138320230	0.000043525	-0.000000475			
	4P3/2		1.102496165	0.000082810	-0.000003335			
	4D3/2		0.821631975	0.000018933	-0.000000244			
	4D5/2		0.798836662	0.000065603	-0.000003197			
4S1/2 -- ( 2)	16.114901	-67.464567	0.950317709	0.000056011		-0.000518677	0.000004868	
	4P1/2		0.810606663	0.000037600	-0.000003899			
	4P3/2		0.797514940	0.000033844	-0.000005123			
	4D3/2		0.684205437	0.000020543	-0.000002459			
	4D5/2		0.674158969	0.000013084	-0.000002427			
4P1/2 -- ( 2)	13.820027	-61.696040	0.881799866	0.000085793		-0.000014504	0.000000224	
	4P3/2		0.822598359	0.000014674	-0.000000011			
	4D3/2		0.629821439	0.000045585	-0.000009347			
	4D5/2		0.669243649	0.000006585	-0.000000308			
4P3/2 -- ( 4)	12.745234	-59.346801	0.824695712	0.000051732		-0.000001833	0.000000067	
	4D3/2		0.666562976	0.000014272	-0.000001059			
	4D5/2		0.632894408	0.000025621	-0.000005024			
4D3/2 -- ( 4)	6.553457	-40.799429	0.565990461	0.000026316		-0.000000003	0.000000000	
	4D5/2		0.565404525	0.000004870	-0.000000000			
4D5/2 -- ( 6)	6.285594	-39.920481	0.555350786	0.000022264		-0.000000001	0.000000000	
ETOT	-5041.32348	5263.54681	-12222.99442	1915.11032	3.686861516	-0.372468880	-0.303544541	0.002959152
SILVER	5S1	Z=47	A=107	R=1.07658E-04	A.U.			
1S1/2 -- ( 2)	1182.208298	-2320.981659	30.283777757	1.381617409		-0.145591683	0.001521853	
	2S1/2		9.037622324	0.065583001	-0.007410983			
	2P1/2		10.650985570	0.134868890	-0.020383811			
	2P3/2		10.115655449	0.069493572	-0.020089457			
	3S1/2		3.549924774	0.012042397	-0.001451199			
	3P1/2		3.758298891	0.022687219	-0.003443103			
	3P3/2		3.617507993	0.011728646	-0.003487981			
	3D3/2		3.553185494	0.000437988	-0.000056983			
	3D5/2		3.510061506	0.000180187	-0.000057751			
	4S1/2		1.444388546	0.002300996	-0.000280403			
	4P1/2		1.380534508	0.003785450	-0.000574933			
	4P3/2		1.330005574	0.001933218	-0.000577611			
	4D3/2		0.976083748	0.000045641	-0.000005956			
	4D5/2		0.958227792	0.000018400	-0.000005929			
	5S1/2		0.393547784	0.000142574	-0.000017404			
2S1/2 -- ( 2)	250.361584	-534.650572	6.716307958	0.021600336		-0.016338244	0.000165342	
	2P1/2		6.544685108	0.006684055	-0.000030755			
	2P3/2		6.409686510	0.011592874	-0.000089679			
	3S1/2		3.046950970	0.002160922	-0.000525540			
	3P1/2		3.226768474	0.003197835	-0.000505224			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
SILVER	5S1	Z=47 A=107 R=1.07658E-04 A.U.					
			3.143322114	0.003152670	-0.000412754		
			3.358551829	0.002291937	-0.000318729		
			3.325337011	0.001026687	-0.000315494		
			1.352315131	0.000410214	-0.000104283		
			1.293792487	0.000553742	-0.000089920		
			1.253588831	0.000525255	-0.000073971		
			0.958110585	0.000193902	-0.000027933		
			0.941488677	0.000087507	-0.000027253		
			0.387876043	0.000025390	-0.000006491		
2P1/2 -- ( 2)	250.331848	-534.095222	7.994161771	0.048640253		-0.000505740	0.000008343
			7.451629367	0.008110358	-0.000001591		
			3.190886738	0.001497212	-0.000110978		
			3.212764162	0.003258810	-0.000481809		
			3.244974015	0.001467925	-0.000040389		
			3.347193312	0.006847977	-0.001626867		
			3.404798423	0.000229778	-0.000049908		
			1.377244523	0.000281773	-0.000022742		
			1.293455411	0.000527230	-0.000084050		
			1.269712538	0.000240451	-0.000007544		
			0.957439510	0.000598392	-0.000144922		
			0.948427538	0.000022015	-0.000004571		
			0.389399834	0.000017419	-0.000001423		
2P3/2 -- ( 4)	226.885101	-501.813091	7.403821888	0.029124990		-0.000063092	0.000002428
			3.172185959	0.001986214	-0.000120945		
			3.311141235	0.001203938	-0.000046885		
			3.165669719	0.002828666	-0.000242570		
			3.419159809	0.002016646	-0.000206128		
			3.334305640	0.003460385	-0.000980380		
			1.373783387	0.000365365	-0.000024265		
			1.307295300	0.000197192	-0.000008738		
			1.258003476	0.000450658	-0.000042026		
			0.963525927	0.000177949	-0.000018327		
			0.942514813	0.000294608	-0.000085141		
			0.389186306	0.000022514	-0.000001514		
3S1/2 -- ( 2)	69.156199	-186.866264	2.435599855	0.001055314		-0.003073626	0.000030967
			2.196613297	0.000416491	-0.000016177		
			2.161901356	0.000606079	-0.000027784		
			2.405983957	0.000368381	-0.000015813		
			2.394746972	0.000474592	-0.000016600		
			1.210855934	0.000124706	-0.000043408		
			1.169548000	0.000113360	-0.000019768		
			1.136543802	0.000135643	-0.000015395		
			0.891410241	0.000032033	-0.000002606		
			0.877524139	0.000039037	-0.000002429		
			0.379476145	0.000007705	-0.000002760		
3P1/2 -- ( 2)	66.800745	-182.598958	2.498731836	0.002002908		-0.000102047	0.000001675
			2.337350182	0.000340256	-0.000000172		
			2.310443191	0.000784494	-0.000060557		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
SILVER	5S1	Z=47	A=107	R=1.07658E-04	A.U.		
	3D5/2		2.471947992	0.000345132	-0.000002231		
	4S1/2		1.237187227	0.000119938	-0.000014554		
	4P1/2		1.149269753	0.000153406	-0.000033065		
	4P3/2		1.145599518	0.000067588	-0.000003064		
	4D3/2		0.891255859	0.000076202	-0.000009712		
	4D5/2		0.880646790	0.000027013	-0.000000733		
	5S1/2		0.380922144	0.000007213	-0.000000914		
3P3/2 --	( 4)	61.714661	-174.711764	2.342834055	0.001217201	-0.000012839	0.000000492
	3D3/2		2.426526795	0.000289467	-0.000005826		
	3D5/2		2.331874492	0.000680008	-0.000029432		
	4S1/2		1.231892749	0.000153267	-0.000016462		
	4P1/2		1.173700200	0.000060563	-0.000003669		
	4P3/2		1.127114623	0.000131387	-0.000016709		
	4D3/2		0.891574022	0.000025131	-0.000001877		
	4D5/2		0.876105182	0.000064023	-0.000006580		
	5S1/2		0.380608587	0.000009132	-0.000001018		
3D3/2 --	( 4)	57.250391	-167.108727	2.555201387	0.001849498	-0.000000039	0.000000002
	3D5/2		2.571065529	0.000349424	-0.000000001		
	4S1/2		1.251322622	0.000065161	-0.000001301		
	4P1/2		1.178956673	0.000112517	-0.000006832		
	4P3/2		1.153671279	0.000045267	-0.000001032		
	4D3/2		0.887781901	0.000088276	-0.000006289		
	4D5/2		0.886633941	0.000028135	-0.000000297		
	5S1/2		0.381750246	0.000003934	-0.000000095		
3D5/2 --	( 6)	56.029494	-165.072161	2.540465510	0.001621336	-0.000000009	0.000000001
	4S1/2		1.249528267	0.000079123	-0.000001301		
	4P1/2		1.186180693	0.000049093	-0.000000547		
	4P3/2		1.147968508	0.000093050	-0.000003758		
	4D3/2		0.899845654	0.000023683	-0.000000314		
	4D5/2		0.877315012	0.000082330	-0.000004114		
	5S1/2		0.381643908	0.000004709	-0.000000095		
4S1/2 --	( 2)	17.486988	-71.706893	0.986119571	0.000063033	-0.000590022	0.000005940
	4P1/2		0.843420116	0.000041527	-0.000004220		
	4P3/2		0.829440855	0.000038086	-0.000005664		
	4D3/2		0.740771001	0.000024803	-0.000002933		
	4D5/2		0.732153781	0.000016329	-0.000002919		
	5S1/2		0.361530431	0.000002568	-0.000001003		
4P1/2 --	( 2)	15.129083	-65.889014	0.919793975	0.000097885	-0.000017555	0.000000288
	4P3/2		0.857640305	0.000016620	-0.000000013		
	4D3/2		0.681061533	0.000054732	-0.000011075		
	4D5/2		0.727747508	0.000008423	-0.000000370		
	5S1/2		0.362669495	0.000003796	-0.000000520		
4P3/2 --	( 4)	13.915735	-63.289946	0.859469950	0.000058845	-0.000002184	0.000000084
	4D3/2		0.721818364	0.000017165	-0.000001240		
	4D5/2		0.686544887	0.000031243	-0.000005928		
	5S1/2		0.361631943	0.000004394	-0.000000584		
4D3/2 --	( 4)	7.853391	-45.887327	0.629551933	0.000035049	-0.000000004	0.000000000
	4D5/2		0.630460769	0.000006567	-0.000000000		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
SILVER	5S1	Z=47	A=107	R=1.07658E-04	A.U.			
4D5/2 -- ( 6)	7.572221	-45.046877	0.346852278	0.000001201	-0.000000003	-0.000000001	0.000000000	
5S1/2 -- ( 1)	1.363239	-18.733437	0.620676627	0.000029946	-0.000000002	-0.000003658	0.000000368	
ETOT	-5311.33467	5556.40013	-12884.26825	2013.29298	3.972293329	-0.402729073	-0.332787110	0.003481214
CADMIUM	5S2	Z=48	A=114	R=1.09956E-04	A.U.			
1S1/2 -- ( 2)	1238.814748	-2428.218031	31.000076568	1.475113552		-0.159113611	0.001778043	
2S1/2			9.266107061	0.070327733	-0.007961366			
2P1/2			10.929706538	0.144760160	-0.021828337			
2P3/2			10.356351824	0.074392023	-0.021506423			
3S1/2			3.653320984	0.013032102	-0.001573637			
3P1/2			3.874600384	0.024606286	-0.003725045			
3P3/2			3.723592961	0.012706552	-0.003779520			
3D3/2			3.666645249	0.000481893	-0.000062585			
3D5/2			3.620305543	0.000198079	-0.000063497			
4S1/2			1.499528378	0.002542531	-0.000310522			
4P1/2			1.441212332	0.004225525	-0.000640162			
4P3/2			1.386918144	0.002156694	-0.000644574			
4D3/2			1.060719338	0.000056189	-0.000007320			
4D5/2			1.043024838	0.000022722	-0.000007324			
5S1/2			0.432677772	0.000183558	-0.000022458			
2S1/2 -- ( 2)	263.499671	-560.620574	6.884586022	0.023251096		-0.017981995	0.000194458	
2P1/2			6.712151401	0.007189030	-0.000031855			
2P3/2			6.567365780	0.012435924	-0.000097964			
3S1/2			3.132394277	0.002347994	-0.000571473			
3P1/2			3.322142045	0.003498471	-0.000552852			
3P3/2			3.233071404	0.003421229	-0.000448051			
3D3/2			3.463377736	0.002505604	-0.000348430			
3D5/2			3.427806013	0.001122316	-0.000344874			
4S1/2			1.402197984	0.000455056	-0.000115816			
4P1/2			1.348436818	0.000623564	-0.000101307			
4P3/2			1.305544978	0.000587048	-0.000082804			
4D3/2			1.039792581	0.000235523	-0.000033971			
4D5/2			1.023501826	0.000106844	-0.000033282			
5S1/2			0.425693765	0.000032815	-0.000008401			
2P1/2 -- ( 2)	263.487519	-560.083414	8.202121786	0.052384817		-0.000585008	0.000010224	
2P3/2			7.637689662	0.008692197	-0.000001869			
3S1/2			3.281765557	0.001625041	-0.000120441			
3P1/2			3.308174949	0.003548068	-0.000525725			
3P3/2			3.338788556	0.001593124	-0.000043885			
3D3/2			3.452066355	0.007491578	-0.001780084			
3D5/2			3.510857730	0.000251335	-0.000054595			



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CADMIUM 5S2 Z=48 A=114 R=1.09956E-04 A.U.							
4S1/2			1.428587655	0.000312250	-0.000025232		
4P1/2			1.348203378	0.000590519	-0.000094442		
4P3/2			1.322802207	0.000268715	-0.000008459		
4D3/2			1.039076925	0.000728457	-0.000176570		
4D5/2			1.031609088	0.000027005	-0.000005599		
5S1/2			0.427572076	0.000022488	-0.000001840		
2P3/2 -- ( 4)	237.753051	-524.706027	7.581003802	0.031219868		-0.000071732	0.000002907
3S1/2			3.261511974	0.002152707	-0.000131740		
3P1/2			3.409064221	0.001307898	-0.000051233		
3P3/2			3.255691293	0.003066362	-0.000263871		
3D3/2			3.526334860	0.002206908	-0.000225374		
3D5/2			3.436823978	0.003783535	-0.001072100		
4S1/2			1.424761046	0.000404047	-0.000026988		
4P1/2			1.362744333	0.000220412	-0.000009840		
4P3/2			1.310178989	0.000502697	-0.000047098		
4D3/2			1.046056448	0.000216664	-0.000022300		
4D5/2			1.024675217	0.000359638	-0.000104022		
5S1/2			0.427297062	0.000029001	-0.000001962		
3S1/2 -- ( 2)	73.413275	-196.667260	2.505114670	0.001151676		-0.003415711	0.000036772
3P1/2			2.261363762	0.000451170	-0.000016955		
3P3/2			2.224237108	0.000660174	-0.000030081		
3D3/2			2.479574762	0.000400774	-0.000016743		
3D5/2			2.467589391	0.000519019	-0.000017635		
4S1/2			1.254036177	0.000139205	-0.000048614		
4P1/2			1.216854621	0.000129780	-0.000022676		
4P3/2			1.181762972	0.000153145	-0.000017501		
4D3/2			0.963224830	0.000039995	-0.000003316		
4D5/2			0.949862085	0.000048024	-0.000003097		
5S1/2			0.415456888	0.000010019	-0.000003603		
3P1/2 -- ( 2)	71.018032	-192.361314	2.574320708	0.002191732		-0.000119495	0.000002078
3P3/2			2.406638021	0.000370041	-0.000000206		
3D3/2			2.383662510	0.000854497	-0.000064482		
3D5/2			2.549295244	0.000378533	-0.000002390		
4S1/2			1.281897295	0.000133154	-0.000016195		
4P1/2			1.195738816	0.000173004	-0.000037553		
4P3/2			1.191572983	0.000075893	-0.000003472		
4D3/2			0.963267494	0.000095552	-0.000012440		
4D5/2			0.953609023	0.000033058	-0.000000924		
5S1/2			0.417233723	0.000009324	-0.000001186		
3P3/2 -- ( 4)	65.405653	-183.700826	2.410881430	0.001327376		-0.000014790	0.000000596
3D3/2			2.501283092	0.000314677	-0.000006080		
3D5/2			2.403672242	0.000741910	-0.000030879		
4S1/2			1.276137866	0.000170661	-0.000018413		
4P1/2			1.221282457	0.000068257	-0.000004180		
4P3/2			1.171892146	0.000147672	-0.000018940		
4D3/2			0.963448365	0.000031388	-0.000002398		
4D5/2			0.948284785	0.000079798	-0.000008484		
5S1/2			0.416836654	0.000011831	-0.000001326		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
CADMIUM 5S2 Z=48 A=114 R=1.09956E-04 A.U.								
3D3/2 -- ( 4)	60.911659	-176.116519	2.639499094	0.002032565		-0.000000048	0.000000003	
3D5/2			2.659398830	0.000384113	-0.000000002			
4S1/2			1.297210752	0.000072581	-0.000001474			
4P1/2			1.227568877	0.000126389	-0.000007710			
4P3/2			1.200515043	0.000050861	-0.000001168			
4D3/2			0.959650217	0.000107715	-0.000007846			
4D5/2			0.960775513	0.000034571	-0.000000374			
5S1/2			0.418276125	0.000005103	-0.000000126			
3D5/2 -- ( 6)	59.563161	-173.881283	2.623250177	0.001780204		-0.000000011	0.000000001	
4S1/2			1.295264752	0.000088019	-0.000001474			
4P1/2			1.235057845	0.000055223	-0.000000628			
4P3/2			1.194468494	0.000104313	-0.000004223			
4D3/2			0.973301530	0.000028942	-0.000000394			
4D5/2			0.950103123	0.000100698	-0.000005150			
5S1/2			0.418141760	0.000006098	-0.000000126			
4S1/2 -- ( 2)	18.946186	-76.129658	1.022617085	0.000070788		-0.000669609	0.000007202	
4P1/2			0.876977569	0.000045783	-0.000004556			
4P3/2			0.862120432	0.000042784	-0.000006255			
4D3/2			0.793169771	0.000029294	-0.000003418			
4D5/2			0.785205982	0.000019882	-0.000003421			
5S1/2			0.393998975	0.000003380	-0.000001334			
4P1/2 -- ( 2)	16.535311	-70.285005	0.958787192	0.000111437		-0.000021175	0.000000368	
4P3/2			0.893624219	0.000018784	-0.000000017			
4D3/2			0.728947645	0.000064365	-0.000012842			
4D5/2			0.781635620	0.000010498	-0.000000435			
5S1/2			0.395522842	0.000004931	-0.000000680			
4P3/2 -- ( 4)	15.172880	-67.423017	0.895210052	0.000066815		-0.000002592	0.000000104	
4D3/2			0.773309728	0.000020214	-0.000001420			
4D5/2			0.735981060	0.000037236	-0.000006823			
5S1/2			0.394271645	0.000005742	-0.000000769			
4D3/2 -- ( 4)	9.216556	-50.928275	0.688227318	0.000044997		-0.000000006	0.000000000	
4D5/2			0.690069366	0.000008502	-0.000000000			
5S1/2			0.380743417	0.000001662	-0.000000010			
4D5/2 -- ( 6)	8.911564	-50.077465	0.680135872	0.000038646		-0.000000001	0.000000000	
5S1/2			0.379641513	0.000002336	-0.000000008			
5S1/2 -- ( 2)	1.717997	-21.068256	0.307441468	0.000001482		-0.000048379	0.000000520	
ETOT	-5589.78202	5859.55302	-13566.11817	2113.30470	4.273312575	-0.434705735	-0.364266719	0.004073777
INDIUM 5P1 Z=49 A=115 R=1.10277E-04 A.U.								
1S1/2 -- ( 2)	1297.135278	-2538.386362	31.721008490	1.572923095		-0.173634943	0.002067270	
2S1/2			9.496299218	0.075311734	-0.008540757			
2P1/2			11.211333057	0.155151828	-0.023339849			
2P3/2			10.997562918	0.079515496	-0.022988490			

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TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
INDIUM	5P1	Z=49 A=115 R=1.10277E-04 A.U.					
			3.757425781	0.014077993	-0.001703329		
			3.991741603	0.026634625	-0.004021762		
			3.829972659	0.013738424	-0.004087190		
			3.780123475	0.000928946	-0.000068518		
			3.730402555	0.000217066	-0.000069596		
			1.555528240	0.002802890	-0.000343068		
			1.503153322	0.004703940	-0.000710798		
			1.445046529	0.002400105	-0.000717528		
			1.145083204	0.000068193	-0.000008869		
			1.127296862	0.000027641	-0.000008913		
			0.484928028	0.000247536	-0.000030355		
			0.342877169	0.000202127	-0.000030546		
2S1/2 -- ( 2)	277.085590	-587.357019	7.053955997	0.024993081		-0.019761073	0.000227570
			6.880819195	0.007721706	-0.000032975		
			6.725724004	0.013320080	-0.000107035		
			3.218319113	0.002546625	-0.000620252		
			3.418046527	0.003819051	-0.000603625		
			3.323069891	0.003704417	-0.000485181		
			3.568222047	0.002731962	-0.000379886		
			3.530174049	0.001223538	-0.000375987		
			1.452772477	0.000503613	-0.000128311		
			1.404083653	0.000700142	-0.000113794		
			1.358521498	0.000654369	-0.000092422		
			1.121028121	0.000282223	-0.000040756		
			1.104834699	0.000128591	-0.000040067		
			0.475911135	0.000044422	-0.000011387		
			0.338631933	0.000030207	-0.000004925		
2P1/2 -- ( 2)	277.087926	-586.834659	8.411645132	0.056337380		-0.000675014	0.000012466
			7.824588040	0.009301202	-0.000002189		
			3.373205691	0.001760677	-0.000130472		
			3.404128671	0.003855499	-0.000572439		
			3.432893648	0.001725415	-0.000047576		
			3.556984780	0.008173540	-0.001942453		
			3.616812558	0.000274117	-0.000059557		
			1.480671766	0.000345230	-0.000027927		
			1.403964236	0.000659655	-0.000105816		
			1.376963680	0.000299547	-0.000009458		
			1.120278052	0.000874757	-0.000212201		
			1.114179158	0.000032642	-0.000006760		
			0.478338522	0.000030411	-0.000002492		
			0.338638249	0.000028230	-0.000004570		
2P3/2 -- ( 4)	248.891011	-548.130734	7.758458822	0.033413865		-0.000081330	0.000003464
			3.351304315	0.002328952	-0.000143252		
			3.507462908	0.001417982	-0.000055867		
			3.345888292	0.003317225	-0.000286417		
			3.633475872	0.002408560	-0.000245744		
			3.539177920	0.004125634	-0.001169211		
			1.476449864	0.000445780	-0.000029947		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
INDIUM	5P1	Z=49 A=115 R=1.10277E-04 A.U.					
			1.419210710	0.000245694	-0.000011049		
			1.363370001	0.000559352	-0.000052642		
			1.128178625	0.000260202	-0.000026764		
			1.106154070	0.000432736	-0.000125266		
			0.477967430	0.000039127	-0.000002664		
			0.339278483	0.000010532	-0.000000481		
3S1/2 -- ( 2)	77.831482	-206.765592	2.575001696	0.001254332		-0.003788607	0.000043430
			2.326466179	0.000487938	-0.000017749		
			2.286800407	0.000717528	-0.000032558		
			2.553325592	0.000435147	-0.000017715		
			2.540552007	0.000566192	-0.000018722		
			1.297742328	0.000154980	-0.000054286		
			1.264913722	0.000148028	-0.000025910		
			1.227757899	0.000172330	-0.000019817		
			1.034177176	0.000049198	-0.000004150		
			1.021125716	0.000058223	-0.000003880		
			0.462830024	0.000013641	-0.000004923		
			0.332770263	0.000006619	-0.000001188		
3P1/2 -- ( 2)	75.394411	-202.418265	2.650303302	0.002393088		-0.000139500	0.000002563
			2.476173520	0.000401475	-0.000000246		
			2.457044599	0.000928883	-0.000068624		
			2.626775475	0.000414033	-0.000002559		
			1.327175289	0.000147467	-0.000017974		
			1.242941059	0.000194526	-0.000042500		
			1.238356439	0.000084971	-0.000003921		
			1.034459891	0.000117964	-0.000015654		
			1.025551877	0.000039880	-0.000001146		
			0.465116643	0.000012621	-0.000001612		
			0.331953040	0.000008245	-0.000001876		
3P3/2 -- ( 4)	69.213039	-192.924772	2.479057931	0.001444214		-0.000016982	0.000000720
			2.576072142	0.000341344	-0.000006337		
			2.475470957	0.000807504	-0.000032364		
			1.320918145	0.000189557	-0.000020544		
			1.269610884	0.000076697	-0.000004746		
			1.217417367	0.000165915	-0.000021397		
			1.034460090	0.000038631	-0.000003011		
			1.019381637	0.000097942	-0.000010739		
			0.464589593	0.000016048	-0.000001809		
			0.332951087	0.000003274	-0.000000219		
3D3/2 -- ( 4)	64.688634	-185.352474	2.723753956	0.002227167		-0.000000059	0.000000003
			2.739639670	0.000420961	-0.000000002		
			1.343661883	0.000080622	-0.000001663		
			1.276958930	0.000141554	-0.000008674		
			1.248175692	0.000056983	-0.000001319		
			1.030737197	0.000129638	-0.000009639		
			1.033974317	0.000041859	-0.000000463		
			0.466485265	0.000006929	-0.000000174		
			0.333291937	0.000005804	-0.000000368		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
INDIUM	5P1	Z=49	A=115	R=1.10277E-04	A.U.			
3D5/2 -- ( 6)	63.200636	-182.903922	2.705894494	0.001948828		-0.000000014	0.000000001	
4S1/2			1.341553183	0.000097649	-0.000001664			
4P1/2			1.284714851	0.000061926	-0.000000718			
4P3/2			1.241765659	0.000116615	-0.000004732			
4D3/2			1.046009122	0.000034881	-0.000000487			
4D5/2			1.021896931	0.000121392	-0.000006344			
5S1/2			0.466307230	0.000008266	-0.000000174			
5P1/2			0.333579173	0.000002593	-0.000000036			
4S1/2 -- ( 2)	20.490016	-80.725836	1.059670369	0.000079300		-0.000758068	0.000008682	
4P1/2			0.911123254	0.000050371	-0.000004907			
4P3/2			0.895402067	0.000047954	-0.000006897			
4D3/2			0.844508048	0.000034170	-0.000003932			
4D5/2			0.837003061	0.000023883	-0.000003956			
5S1/2			0.435970248	0.000004661	-0.000001865			
5P1/2			0.321747603	0.000001331	-0.000000247			
4P1/2 -- ( 2)	18.034786	-74.872314	0.998570533	0.000126501		-0.000025444	0.000000467	
4P3/2			0.930360174	0.000021172	-0.000000021			
4D3/2			0.776171711	0.000074819	-0.000014709			
4D5/2			0.834524336	0.000012891	-0.000000505			
5S1/2			0.438060424	0.000006708	-0.000000932			
5P1/2			0.318319089	0.000002612	-0.000000614			
4P3/2 -- ( 4)	16.512508	-71.734104	0.931728632	0.000075672		-0.000003066	0.000000130	
4D3/2			0.824000107	0.000023526	-0.000001605			
4D5/2			0.784520066	0.000043843	-0.000007748			
5S1/2			0.436489782	0.000007854	-0.000001061			
5P1/2			0.320956172	0.000001067	-0.000000070			
4D3/2 -- ( 4)	10.689791	-56.125440	0.746298585	0.000056661		-0.000000008	0.000000000	
4D5/2			0.748945732	0.000010783	-0.000000000			
5S1/2			0.423514682	0.000002392	-0.000000024			
5P1/2			0.312906257	0.000002643	-0.000000194			
4D5/2 -- ( 6)	10.357882	-55.252140	0.738762271	0.000048855		-0.000000002	0.000000000	
5S1/2			0.422422694	0.000003255	-0.000000021			
5P1/2			0.315379869	0.000000910	-0.000000008			
5S1/2 -- ( 2)	2.269658	-24.159257	0.344706866	0.000002126		-0.000067004	0.000000767	
5P1/2			0.251510547	0.000002042	-0.000000299			
5P1/2 -- ( 1)	1.050077	-16.853384	0.000000000	0.000000000		-0.000000198	0.000000020	
ETOT	-5876.65149	6173.03141	-14265.89846	2212.48692	4.590484842	-0.468479503	-0.398106275	0.004743727
TIN	5P2	Z=50	A=118	R=1.11228E-04	A.U.			
1S1/2 -- ( 2)	1357.197454	-2651.522604	32.446628071	1.675149597		-0.189204029	0.002392844	
2S1/2			9.728240389	0.080542265	-0.009150154			
2P1/2			11.495536324	0.166058957	-0.024919751			
2P3/2			10.839292532	0.084868693	-0.024536993			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TIN	5P2	Z=50 A=118 R=1.11228E-04 A.U.					
			3.862296361	0.015182392	-0.001840600		
			4.109814788	0.028776910	-0.004333760		
			3.936710247	0.014826377	-0.004411620		
			3.893721766	0.000578063	-0.000074796		
			3.840447644	0.000237194	-0.000076060		
			1.612523603	0.003083821	-0.000378270		
			1.566313579	0.005223272	-0.000787167		
			1.504246984	0.002664603	-0.000796820		
			1.225522775	0.000081294	-0.000010554		
			1.207177218	0.000032994	-0.000010643		
			0.529546069	0.000312436	-0.000038400		
			0.397898275	0.000300038	-0.000045221		
2S1/2 -- ( 2)	291.130244	-614.873922	7.224446283	0.026829794		-0.021683625	0.000265114
			7.050722086	0.008283146	-0.000034114		
			6.884775729	0.014246447	-0.000116964		
			3.304763058	0.002757373	-0.000672018		
			3.514542461	0.004160636	-0.000657699		
			3.413363664	0.004002744	-0.000524192		
			3.673176359	0.002971563	-0.000413170		
			3.632527990	0.001330586	-0.000408906		
			1.504145021	0.000556241	-0.000141862		
			1.460676979	0.000783996	-0.000127466		
			1.412376147	0.000727532	-0.000102869		
			1.198323341	0.000332425	-0.000048059		
			1.181783304	0.000151961	-0.000047362		
			0.518639012	0.000056282	-0.000014446		
			0.391848115	0.000045229	-0.000007379		
2P1/2 -- ( 2)	291.144087	-614.363353	8.622777764	0.060505988		-0.000776990	0.000015130
			8.012343143	0.009937959	-0.000002555		
			3.465250838	0.001904498	-0.000141098		
			3.500685600	0.004182034	-0.000622097		
			3.527339834	0.001865085	-0.000051470		
			3.662039488	0.008895505	-0.002114362		
			3.722753149	0.000298171	-0.000064807		
			1.533611382	0.000380953	-0.000030846		
			1.460682415	0.000735074	-0.000118248		
			1.432055054	0.000333099	-0.000010548		
			1.197554230	0.001032459	-0.000250649		
			1.192366438	0.000038728	-0.000008012		
			0.521578055	0.000038494	-0.000003160		
			0.391865924	0.000042040	-0.000006829		
2P3/2 -- ( 4)	260.300008	-572.088739	7.936190820	0.035709311		-0.000091968	0.000004111
			3.441601967	0.002515385	-0.000155521		
			3.606397511	0.001534469	-0.000060800		
			3.436304700	0.003581765	-0.000310262		
			3.740675088	0.002622091	-0.000267281		
			3.641452234	0.004487463	-0.001271933		
			1.528961427	0.000490850	-0.000033165		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TIN	5P2	Z=50	A=118	R=1.11228E-04	A.U.		
	4P1/2		1.476637825	0.000273182	-0.000012373		
	4P3/2		1.417432577	0.000620885	-0.000058686		
	4D3/2		1.206349912	0.000307118	-0.000031568		
	4D5/2		1.183236115	0.000511232	-0.000148103		
	5S1/2		0.921109272	0.000049407	-0.000003385		
	5P1/2		0.392759697	0.000015652	-0.000000721		
3S1/2 --	( 2)	82.416652	-217.168706	2.645289628	0.001363605	-0.004194487	0.000051044
	3P1/2		2.391954841	0.000526891	-0.000018558		
	3P3/2		2.349619222	0.000778280	-0.000035229		
	3D3/2		2.627289454	0.000471592	-0.000018729		
	3D5/2		2.613686166	0.000616235	-0.000019865		
	4S1/2		1.342042250	0.000172155	-0.000060470		
	4P1/2		1.313660490	0.000168261	-0.000029496		
	4P3/2		1.274391722	0.000193296	-0.000022358		
	4D3/2		1.101339476	0.000059410	-0.000005090		
	4D5/2		1.088206638	0.000069293	-0.000004759		
	5S1/2		0.502973091	0.000017378	-0.000006293		
	5P1/2		0.383580214	0.000010074	-0.000001813		
3P1/2 --	( 2)	79.936230	-212.778136	2.726725168	0.002607658	-0.000162384	0.000003145
	3P3/2		2.545993508	0.000434614	-0.000000293		
	3D3/2		2.530646927	0.001007861	-0.000072994		
	3D5/2		2.704447603	0.000451728	-0.000002738		
	4S1/2		1.373097931	0.000162979	-0.000019904		
	4P1/2		1.290811164	0.000218122	-0.000047947		
	4P3/2		1.285813824	0.000094867	-0.000004415		
	4D3/2		1.101902060	0.000142882	-0.000019285		
	4D5/2		1.093335433	0.000047242	-0.000001392		
	5S1/2		0.505729850	0.000015988	-0.000002050		
	5P1/2		0.382456584	0.000012348	-0.000002832		
3P3/2 --	( 4)	73.140060	-202.387873	2.547394807	0.001568008	-0.000019438	0.000000864
	3D3/2		2.650947091	0.000369526	-0.000006596		
	3D5/2		2.547321171	0.000876942	-0.000033884		
	4S1/2		1.366306821	0.000210098	-0.000022872		
	4P1/2		1.318619563	0.000085941	-0.000005371		
	4P3/2		1.263552847	0.000185016	-0.000024099		
	4D3/2		1.101676708	0.000046683	-0.000003704		
	4D5/2		1.086296080	0.000117916	-0.000013297		
	5S1/2		0.505074384	0.000020370	-0.000002310		
	5P1/2		0.383833969	0.000004901	-0.000000333		
3D3/2 --	( 4)	68.578697	-194.821739	2.808040997	0.002433824	-0.000000072	0.000000004
	3D5/2		2.823863090	0.000460059	-0.000000003		
	4S1/2		1.390758231	0.000089341	-0.000001870		
	4P1/2		1.327064504	0.000158107	-0.000009731		
	4P3/2		1.296517063	0.000063664	-0.000001483		
	4D3/2		1.098128508	0.000153343	-0.000011622		
	4D5/2		1.103024656	0.000049750	-0.000000563		
	5S1/2		0.507406786	0.000008802	-0.000000226		
	5P1/2		0.384353878	0.000008645	-0.000000553		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
TIN                    5P2                    Z=50    A=118   R=1.11228E-04   A.U.								
3D5/2 -- ( 6)	66.944700	-192.144397	2.788471006	0.002127621		-0.000000016	0.000000001	
4S1/2			1.388474713	0.000108081	-0.000001872			
4P1/2			1.335088407	0.000069243	-0.000000817			
4P3/2			1.289723786	0.000130016	-0.000005289			
4D3/2			1.114956879	0.000041312	-0.000000590			
4D5/2			1.089573405	0.000143679	-0.000007660			
5S1/2			0.507185702	0.000010484	-0.000000226			
5P1/2			0.384747308	0.000003870	-0.000000056			
4S1/2 -- ( 2)	22.126676	-85.506933	1.097322610	0.000088651		-0.0000856381	0.000010412	
4P1/2			0.945824408	0.000055312	-0.000005272			
4P3/2			0.929212122	0.000053631	-0.000007595			
4D3/2			0.893039805	0.000039268	-0.000004452			
4D5/2			0.885686149	0.000028209	-0.000004498			
5S1/2			0.471436586	0.000006017	-0.000002437			
5P1/2			0.368376226	0.000002060	-0.000000390			
4P1/2 -- ( 2)	19.631761	-79.653108	1.039016986	0.000143198		-0.000030464	0.000000589	
4P3/2			0.967694501	0.000023793	-0.000000026			
4D3/2			0.821202599	0.000085790	-0.000016611			
4D5/2			0.884498461	0.000015534	-0.000000576			
5S1/2			0.474092672	0.000008550	-0.000001197			
5P1/2			0.363820373	0.000003970	-0.000000962			
4P3/2 -- ( 4)	17.936274	-76.219802	0.968827496	0.000085469		-0.000003613	0.000000160	
4D3/2			0.872146485	0.000026993	-0.000001786			
4D5/2			0.830452619	0.000050860	-0.000008663			
5S1/2			0.472238223	0.000010071	-0.000001372			
5P1/2			0.367332378	0.000001626	-0.000000111			
4D3/2 -- ( 4)	12.209275	-61.295281	0.800716934	0.000069542		-0.000000010	0.000000001	
4D5/2			0.803917647	0.000013300	-0.000000000			
5S1/2			0.460075235	0.000003193	-0.000000044			
5P1/2			0.358308893	0.000004120	-0.000000332			
4D5/2 -- ( 6)	11.843483	-60.375898	0.793324722	0.000060091		-0.000000002	0.000000000	
5S1/2			0.458967602	0.000004232	-0.000000041			
5P1/2			0.361082828	0.000001376	-0.000000014			
5S1/2 -- ( 2)	2.805698	-26.971712	0.375708036	0.000002799		-0.0000086841	0.000001056	
5P1/2			0.283990060	0.000002830	-0.000000410			
5P1/2 -- ( 2)	1.500088	-19.971859	0.278999362	0.000002302		-0.000001758	0.000000034	
ETOT	-6172.09530	6497.16413	-14987.99617	2314.74536	4.924448719	-0.504109460	-0.434454436	0.005499306
ANTIMONY                    5P3                    Z=51    A=121   R=1.12162E-04   A.U.								
1S1/2 -- ( 2)	1419.044956	-2767.682155	33.177117528	1.781915857		-0.205884469	0.002758337	
2S1/2			9.961991562	0.086027342	-0.009790623			
2P1/2			11.782416835	0.177498046	-0.026569647			
2P3/2			11.081562118	0.090456807	-0.026153451			







TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ANTIMONY	5P3	Z=51	A=121	R=1.12162E-04	A.U.		
4S1/2			1.438356102	0.000098755	-0.000002095		
4P1/2			1.377657876	0.000176066	-0.000010885		
4P3/2			1.345281356	0.000070908	-0.000001663		
4D3/2			1.163073436	0.000178956	-0.000013807		
4D5/2			1.169400795	0.000058294	-0.000000673		
5S1/2			0.546498077	0.000010882	-0.000000284		
5P1/2			0.430899761	0.000011866	-0.000000764		
5P3/2			0.408425056	0.000004673	-0.000000122		
3D5/2 -- ( 6)	70.795799	-201.603595	2.871000972	0.002316896		-0.000000020	0.000000002
4S1/2			1.435885717	0.000119333	-0.000002098		
4P1/2			1.385946550	0.000077179	-0.000000927		
4P3/2			1.338087921	0.000144518	-0.000005893		
4D3/2			1.181406555	0.000048268	-0.000000705		
4D5/2			1.154593855	0.000167694	-0.0000009109		
5S1/2			0.546230477	0.000012941	-0.000000284		
5P1/2			0.431397052	0.000005321	-0.000000079		
5P3/2			0.407986565	0.000009273	-0.000000399		
4S1/2 -- ( 2)	23.853537	-90.465592	1.135428172	0.000098864		-0.0000965235	0.000012423
4P1/2			0.980919495	0.000060604	-0.000005649		
4P3/2			0.963377621	0.000059826	-0.000008350		
4D3/2			0.939802624	0.000044633	-0.000004983		
4D5/2			0.932457495	0.000032899	-0.000005054		
5S1/2			0.505141279	0.000007558	-0.000003096		
5P1/2			0.410473396	0.000002944	-0.000000567		
5P3/2			0.389567482	0.000003372	-0.000000470		
4P1/2 -- ( 2)	21.321275	-84.614316	1.079903143	0.000161558		-0.000036336	0.000000739
4P3/2			1.005408084	0.000026645	-0.000000032		
4D3/2			0.864882249	0.000097385	-0.000018570		
4D5/2			0.932694235	0.000018444	-0.000000650		
5S1/2			0.508396143	0.000010612	-0.000001497		
5P1/2			0.404865174	0.000005557	-0.000001383		
5P3/2			0.389634918	0.000002264	-0.000000118		
4P3/2 -- ( 4)	19.437949	-80.864550	1.006272828	0.000096212		-0.0000004240	0.000000197
4D3/2			0.918683969	0.000030645	-0.000001967		
4D5/2			0.874796344	0.000058359	-0.000009581		
5S1/2			0.506254829	0.000012576	-0.000001727		
5P1/2			0.409200767	0.000002284	-0.000000161		
5P3/2			0.386196895	0.000004420	-0.000000645		
4D3/2 -- ( 4)	13.782225	-66.493538	0.852844429	0.000083745		-0.000000014	0.000000001
4D5/2			0.856477141	0.000016075	-0.000000000		
5S1/2			0.494885917	0.000004116	-0.000000070		
5P1/2			0.399542133	0.000005871	-0.000000505		
5P3/2			0.383183698	0.000001720	-0.000000060		
4D5/2 -- ( 6)	13.377701	-65.514926	0.845408564	0.000072462		-0.000000003	0.000000000
5S1/2			0.493741486	0.000005341	-0.000000066		
5P1/2			0.402546343	0.000001922	-0.000000023		
5P3/2			0.381141685	0.000004098	-0.000000261		
5S1/2 -- ( 2)	3.379886	-29.791540	0.404957921	0.000003566		-0.000109565	0.000001410

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
ANTIMONY	5P3	Z=51	A=121	R=1.12162E-04	A.U.			
	5P1/2			0.313506175	0.000003683	-0.000000526		
	5P3/2			0.303724614	0.000002278	-0.000000592		
5P1/2 -- ( 2)	1.989349	-22.980967	0.313999495	0.000003306		-0.000002592	0.000000053	
	5P3/2			0.289214319	0.000000536	-0.000000001		
5P3/2 -- ( 1)	1.727046	-21.643638	0.000000000	0.000000000		-0.000000286	0.000000013	
ETDT	-6476.21766	6832.12804	-15732.05464	2419.44226	5.275449542	-0.541651638	-0.473470610	0.006349161
TELLURIUM	5P4	Z=52	A=130	R=1.14877E-04	A.U.			
1S1/2 -- ( 2)	1482.708911	-2886.905029	33.912562804	1.893330480		-0.223728261	0.003167587	
	2S1/2		10.197601650	0.091774691	-0.010463243			
	2P1/2		12.072069301	0.189485820	-0.028291078			
	2P3/2		11.324389997	0.096284993	-0.027839335			
	3S1/2		4.074360934	0.017574322	-0.002138978			
	3P1/2		4.348809380	0.033417253	-0.005004807			
	3P3/2		4.151234718	0.017176669	-0.005112556			
	3D3/2		4.121340622	0.000685968	-0.000088407			
	3D5/2		4.060429118	0.000280968	-0.000090122			
	4S1/2		1.728796264	0.003708809	-0.000456882			
	4P1/2		1.695131697	0.006385024	-0.000956878			
	4P3/2		1.624553592	0.003256485	-0.000974313			
	4D3/2		1.379017716	0.000111017	-0.000014358			
	4D5/2		1.358897382	0.000045111	-0.000014561			
	5S1/2		0.613106722	0.000460445	-0.000056846			
	5P1/2		0.494496694	0.000528717	-0.000079243			
	5P3/2		0.466356861	0.000255622	-0.000076541			
2S1/2 -- ( 2)	320.646417	-672.313988	7.568931258	0.030802396		-0.025998485	0.000355443	
	2P1/2		7.394407320	0.009496893	-0.000036448			
	2P3/2		7.205044467	0.016230494	-0.000139714			
	3S1/2		3.479231681	0.003217161	-0.000784972			
	3P1/2		3.709347370	0.004910400	-0.000776305			
	3P3/2		3.594838418	0.004646099	-0.000607945			
	3D3/2		3.883497366	0.003492081	-0.000485440			
	3D5/2		3.837264518	0.001562788	-0.000480371			
	4S1/2		1.608670042	0.000674146	-0.000172244			
	4P1/2		1.575691811	0.000974156	-0.000158463			
	4P3/2		1.521577911	0.000891235	-0.000126218			
	4D3/2		1.345467683	0.000444092	-0.000064335			
	4D5/2		1.327634867	0.000204000	-0.000063622			
	5S1/2		0.598301031	0.000083574	-0.000021501			
	5P1/2		0.484638808	0.000081050	-0.000013235			
	5P3/2		0.458301153	0.000070029	-0.000010025			
2P1/2 -- ( 2)	320.675277	-671.819228	9.050117464	0.069526339		-0.001022539	0.000022002	
	2P3/2		8.390540794	0.011297221	-0.000003449			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TELLURIUM	5P4	Z=52 A=130 R=1.14877E-04 A.U.					
			3.651184681	0.002218004	-0.000164216		
			3.695648103	0.004895568	-0.000730706		
			3.717256234	0.002167391	-0.000059886		
			3.872640837	0.010463993	-0.002487894		
			3.934653454	0.000350186	-0.000076197		
			1.641419724	0.000460922	-0.000037381		
			1.575980416	0.000905142	-0.000146356		
			1.543852093	0.000408353	-0.000012996		
			1.344703824	0.001384518	-0.000336598		
			1.340711812	0.000052350	-0.000010815		
			0.602298271	0.000057059	-0.000004698		
			0.484694866	0.000074580	-0.000012193		
			0.460039462	0.000032020	-0.000003039		
2P3/2 -- ( 4)	283.936507	-621.614323	8.292530903	0.040614460		-0.000116721	0.000005724
			3.623724004	0.002920292	-0.000182460		
			3.835893404	0.001787526	-0.000071610		
			3.617782787	0.004153356	-0.000362000		
			3.955314919	0.003066152	-0.000313982		
			3.845620777	0.005272432	-0.001494826		
			1.635811720	0.000591263	-0.000040412		
			1.593330649	0.000334627	-0.000015370		
			1.527014453	0.000758470	-0.000072281		
			1.355215293	0.000411776	-0.000042262		
			1.329313437	0.000685812	-0.000198969		
			0.601605763	0.000072876	-0.000005057		
			0.486089883	0.000027644	-0.000001294		
			0.458738923	0.000059209	-0.000005711		
3S1/2 -- ( 2)	92.101356	-238.907026	2.787087139	0.001603116		-0.0005114769	0.0000069588
			2.524111273	0.000611715	-0.000020220		
			2.476027944	0.000910412	-0.000041219		
			2.775905708	0.000551016	-0.000020901		
			2.760914753	0.000725319	-0.000022332		
			1.431954487	0.000210887	-0.000074442		
			1.412428889	0.000215008	-0.000037784		
			1.368682683	0.000240580	-0.000028118		
			1.228535499	0.000083095	-0.000007315		
			1.214734085	0.000094280	-0.000006832		
			0.577438133	0.000026071	-0.000009499		
			0.471432126	0.000018607	-0.000003361		
			0.446572621	0.000019384	-0.000002397		
3P1/2 -- ( 2)	89.529364	-234.424129	2.880915755	0.003078670		-0.000218252	0.000004668
			2.686495681	0.000506142	-0.000000409		
			2.678550050	0.001180348	-0.000082488		
			2.860414147	0.000533989	-0.000003132		
			1.466381317	0.000197732	-0.000024236		
			1.387801902	0.000271736	-0.000060389		
			1.381837717	0.000117115	-0.000005536		
			1.229762104	0.000200761	-0.000027889		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TELLURIUM	5P4	Z=52 A=130 R=1.14877E-04 A.U.					
			1.221338670	0.000063737	-0.000001964		
			0.581154659	0.000023732	-0.000003065		
			0.469723252	0.000022138	-0.000005150		
			0.447531424	0.000009197	-0.000000478		
3P3/2 -- ( 4)	81.355117	-222.034415	2.684545621	0.001837331		-0.000025244	0.000001231
			2.800987765	0.000430630	-0.000007120		
			2.691201523	0.001027820	-0.000037040		
			1.458412676	0.000256341	-0.000028160		
			1.417874245	0.000106905	-0.000006806		
			1.356774521	0.000229044	-0.000030248		
			1.228953563	0.000065424	-0.000005351		
			1.212471491	0.000163842	-0.000019398		
			0.580214294	0.000030351	-0.000003483		
			0.471829330	0.000008778	-0.000000612		
			0.445758090	0.000017653	-0.000002458		
3D3/2 -- ( 4)	76.716791	-214.464870	2.976775822	0.002884846		-0.000000105	0.000000007
			2.992315645	0.000545272	-0.000000004		
			1.486373619	0.000108888	-0.000002340		
			1.428608585	0.000195470	-0.000012140		
			1.394305106	0.000078722	-0.000001859		
			1.226001980	0.000206502	-0.000016198		
			1.233579418	0.000067499	-0.000000793		
			0.583468100	0.000013126	-0.000000349		
			0.472771376	0.000015336	-0.000000995		
			0.448475706	0.000006071	-0.000000160		
3D5/2 -- ( 6)	74.753232	-211.280658	2.953474669	0.002516902		-0.000000024	0.000000002
			1.483704092	0.000131430	-0.000002344		
			1.437156304	0.000085749	-0.000001047		
			1.386696176	0.000160130	-0.000006545		
			1.245788522	0.000055756	-0.000000832		
			1.217434325	0.000193454	-0.000010693		
			0.583151656	0.000015585	-0.000000349		
			0.473364103	0.000006889	-0.000000105		
			0.447934285	0.000012009	-0.000000521		
4S1/2 -- ( 2)	25.670128	-95.598841	1.173903112	0.000109976		-0.001085367	0.000014752
			1.016315920	0.000066254	-0.000006038		
			0.997792599	0.000066551	-0.000009165		
			0.985185691	0.000030282	-0.000005526		
			0.977746445	0.000037965	-0.000005625		
			0.536967408	0.000009259	-0.000003833		
			0.448121457	0.000003964	-0.000000773		
			0.425662269	0.000004494	-0.000000631		
4P1/2 -- ( 2)	23.101161	-89.749246	1.121098957	0.000181638		-0.000043171	0.000000922
			1.043366505	0.000029727	-0.000000040		
			0.907500782	0.000109650	-0.000020591		
			0.979495478	0.000021628	-0.000000728		
			0.540833755	0.000012853	-0.000001826		
			0.441583095	0.000007322	-0.000001865		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
TELLURIUM	5P4	Z=52	A=130	R=1.14877E-04	A.U.			
4P3/2 -- ( 4)	21.013547	-85.658409	0.425823902 1.043914816 0.963935292 0.917882696 0.538407865 0.446653653 0.421709832	0.000002982 0.000107917 0.000034489 0.000066363 0.000015329 0.000003017 0.000005824	-0.000000161 -0.000002147 -0.000010503 -0.000002121 -0.000000219 -0.000000873	-0.000004956	0.000000241	
4D3/2 -- ( 4)	15.406800	-71.734130	0.907078268 0.527835318 0.436646619 0.419036765	0.000019109 0.000005145 0.000007828 0.000002304	-0.000000000 -0.000000103 -0.000000705 -0.000000085	-0.000000017	0.000000001	
4D5/2 -- ( 6)	14.958761	-70.684967	0.895486010 0.526641745 0.439823558 0.416825107	0.000006562 0.000002528 0.000005428 0.000004413	-0.000000098 -0.000000033 -0.000000364	-0.000000004	0.000000000	
5S1/2 -- ( 2)	3.975948	-32.589270	0.432382050 0.340120212 0.329806574	0.000004572 0.000002909 0.000004435	-0.000000646 -0.000000748	-0.000134885	0.000001833	
5P1/2 -- ( 2)	2.494481	-25.846768	0.345231508 0.317940083	0.000004435 0.000000715	-0.0000003594 -0.000000001	-0.0000003594	0.000000077	
5P3/2 -- ( 2)	2.168273	-24.343453	0.314938162	0.000002487	-0.000000001	-0.000000391	0.000000019	
ETOT	-6789.11174	7178.13764	-16498.81229	2527.00791	5.644144643	-0.581164685	-0.515287769	0.007302612
IODINE	5P5	Z=53	A=127	R=1.13987E-04	A.U.			
1S1/2 -- ( 2)	1548.267514	-3009.289194	34.653346197 10.435155011 12.364573743 11.567774196 4.181600619 4.469792939 4.259037509 4.235438082 4.170432133 1.787843826 1.760435973 1.685248849 1.452905950 1.431660366 0.652751723 0.537932796 0.506910045	2.009554711 0.097793776 0.202037889 0.102357547 0.018866228 0.035923026 0.018442388 0.000744521 0.000304675 0.004053819 0.007028290 0.003584056 0.000127683 0.000051892 0.000543134 0.000657356 0.000318044	-0.011169183 -0.030085400 -0.029595902 -0.002300689 -0.005364571 -0.005490089 -0.000095755 -0.000097737 -0.000500437 -0.001050203 -0.001072575 -0.000016481 -0.000016754 -0.000067203 -0.000098235 -0.000095259	-0.242840042	0.003624799	
2S1/2 -- ( 2)	336.146730	-702.274117	7.743010038	0.032946272		-0.028415190	0.000409315	

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
IODINE	5P5	Z=53 A=127 R=1.13987E-04 A.U.					
			7.568273523	0.010151597	-0.000037648		
			7.366299883	0.017290473	-0.000152725		
			3.567289501	0.003467283	-0.000846412		
			3.807697837	0.005320502	-0.000841129		
			3.686038084	0.004991810	-0.000652728		
			3.988941610	0.003773936	-0.000524552		
			3.939716789	0.001688318	-0.000519041		
			1.661624008	0.000739690	-0.000189141		
			1.633808900	0.001080871	-0.000175852		
			1.576572646	0.000981792	-0.000139114		
			1.416164156	0.000505673	-0.000073325		
			1.397474443	0.000232726	-0.000072607		
			0.635967415	0.000098954	-0.000025485		
			0.526129957	0.000101596	-0.000016596		
			0.497300984	0.000087216	-0.000012499		
2P1/2 -- ( 2)	336.175544	-701.779078	9.266423521	0.074395733		-0.001169386	0.000026376
			8.581018701	0.012020861	-0.000003991		
			3.745109604	0.002388419	-0.000176759		
			3.794093805	0.005284283	-0.000789904		
			3.812744735	0.002330478	-0.000064419		
			3.978263037	0.011313220	-0.002690166		
			4.040680742	0.000378210	-0.000082355		
			1.696081638	0.000505342	-0.000041010		
			1.634255632	0.001000087	-0.000162083		
			1.600193461	0.000450092	-0.000014356		
			1.415423692	0.001579270	-0.000384203		
			1.411801126	0.000059899	-0.000012369		
			0.640503238	0.000067505	-0.000005565		
			0.526212280	0.000093049	-0.000015257		
			0.499384208	0.000039895	-0.000001299		
2P3/2 -- ( 4)	296.170139	-647.185051	8.471139993	0.043228858		-0.000131027	0.000006717
			3.715574919	0.003139582	-0.000197253		
			3.906485525	0.001924575	-0.000077526		
			3.708854699	0.004461202	-0.000389973		
			4.062826519	0.003337491	-0.000339217		
			3.947977427	0.005696844	-0.001615358		
			1.689941342	0.000646772	-0.000044463		
			1.652279416	0.000369049	-0.000017059		
			1.582174638	0.000834548	-0.000079841		
			1.426750561	0.000469613	-0.000048161		
			1.399241883	0.000782051	-0.000227047		
			0.639685100	0.000086001	-0.000006006		
			0.527845584	0.000034410	-0.000001623		
			0.497812088	0.000073622	-0.000007134		
3S1/2 -- ( 2)	97.209957	-250.254039	2.858620481	0.001733973		-0.005635071	0.000080769
			2.590802408	0.000657785	-0.000021073		
			2.539631524	0.000982026	-0.000044576		
			2.850601110	0.000594169	-0.000022063		



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
IODINE	5P5	Z=53	A=127	R=1.13987E-04	A.U.		
	3D5/2		2.834249423	0.0C0784580	-0.000023664		
	4S1/2		1.477417697	0.000232553	-0.000082269		
	4P1/2		1.462219673	0.000241698	-0.000042516		
	4P3/2		1.416070718	0.000266914	-0.000031339		
	4D3/2		1.289432143	0.000096632	-0.000008606		
	4D5/2		1.275127382	0.000108241	-0.000008031		
	5S1/2		0.612531081	0.000031017	-0.000011331		
	5P1/2		0.510467492	0.000023650	-0.000004280		
	5P3/2		0.483396793	0.000024335	-0.000003029		
3P1/2 -- ( 2)	94.589088	-245.721281	2.958712512	0.003336342		-0.000252084	0.000005651
	3P3/2		2.757193686	0.000544605	-0.000000482		
	3D3/2		2.752889554	0.001274260	-0.000087647		
	3D5/2		2.938749169	0.000578719	-0.000003347		
	4S1/2		1.513583893	0.000217052	-0.000026647		
	4P1/2		1.436701305	0.000301881	-0.000067418		
	4P3/2		1.430128108	0.000129476	-0.000006165		
	4D3/2		1.291036020	0.000233858	-0.000032884		
	4D5/2		1.282499898	0.000072901	-0.000002290		
	5S1/2		0.616730119	0.000028094	-0.000003640		
	5P1/2		0.508487652	0.000027757	-0.000006498		
	5P3/2		0.484552331	0.000011496	-0.000000604		
3P3/2 -- ( 4)	85.645373	-232.220773	2.753367201	0.001983332		-0.000028649	0.000001460
	3D3/2		2.876185981	0.000463654	-0.000007385		
	3D5/2		2.763260497	0.001109517	-0.000038677		
	4S1/2		1.504970337	0.000282170	-0.000031139		
	4P1/2		1.467882651	0.000118673	-0.000007622		
	4P3/2		1.403594091	0.000253621	-0.000033706		
	4D3/2		1.289870212	0.000076180	-0.000006313		
	4D5/2		1.272672024	0.000189910	-0.000022967		
	5S1/2		0.615634267	0.000035995	-0.000004154		
	5P1/2		0.510931497	0.000011000	-0.000000776		
	5P3/2		0.482438142	0.000022078	-0.000003099		
3D3/2 -- ( 4)	80.966112	-224.643661	3.061281333	0.003130104		-0.000000125	0.000000008
	3D5/2		3.076600515	0.000591541	-0.000000004		
	4S1/2		1.534728441	0.000119758	-0.000002605		
	4P1/2		1.479805854	0.000216348	-0.000013497		
	4P3/2		1.443466562	0.000087112	-0.000002070		
	4D3/2		1.287322893	0.000236037	-0.000018803		
	4D5/2		1.296011069	0.000077385	-0.000000925		
	5S1/2		0.619363966	0.000015569	-0.000000421		
	5P1/2		0.512108042	0.000019132	-0.000001250		
	5P3/2		0.485691984	0.000007590	-0.000000203		
3D5/2 -- ( 6)	78.819824	-221.179750	3.035954337	0.002728076		-0.000000028	0.000000003
	4S1/2		1.531847403	0.000144394	-0.000002610		
	4P1/2		1.488604387	0.000094965	-0.000001177		
	4P3/2		1.435428195	0.000176863	-0.000007246		
	4D3/2		1.308514769	0.000063789	-0.000000970		
	4D5/2		1.278542221	0.000221008	-0.000012417		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
IODINE	5P5	Z=53	A=127	R=1.13987E-04	A.U.			
	5S1/2			0.618995544	0.000018458	-0.000000421		
	5P1/2			0.512790767	0.000008607	-0.00000134		
	5P3/2			0.485047190	0.000014967	-0.000000653		
4S1/2 -- ( 2)	27.574892	-100.902423	1.212665015	0.000122014		-0.001217735	0.000017436	
	4P1/2			1.051931320	0.000072267	-0.000006439		
	4P3/2			1.032371043	0.000073821	-0.000010045		
	4D3/2			1.029516110	0.000056236	-0.000006084		
	4D5/2			1.021910767	0.000043426	-0.000006214		
	5S1/2			0.567832916	0.000011150	-0.000004658		
	5P1/2			0.483330427	0.000005150	-0.000001015		
	5P3/2			0.459065653	0.000005756	-0.000000814		
4P1/2 -- ( 2)	24.968516	-95.050980	1.162498228	0.000203482		-0.000051099	0.000001144	
	4P3/2			1.081466346	0.000033037	-0.000000049		
	4D3/2			0.949302867	0.000122637	-0.000022687		
	4D5/2			1.025227493	0.000025094	-0.000008088		
	5S1/2			0.572326284	0.000015308	-0.000002188		
	5P1/2			0.475934746	0.000009305	-0.000002419		
	5P3/2			0.459343370	0.000003774	-0.000000210		
4P3/2 -- ( 4)	22.659186	-90.592861	1.081644711	0.000120598		-0.000005770	0.000000294	
	4D3/2			1.008180189	0.000038535	-0.000002327		
	4D5/2			0.959993676	0.000074900	-0.000011433		
	5S1/2			0.569609776	0.000018377	-0.000002560		
	5P1/2			0.481687110	0.000003844	-0.000000285		
	5P3/2			0.454580179	0.000007381	-0.000001133		
4D3/2 -- ( 4)	17.083322	-77.032506	0.951906884	0.000116217		-0.000000022	0.000000001	
	4D5/2			0.956152429	0.000022409	-0.000000000		
	5S1/2			0.559805196	0.000006292	-0.000000142		
	5P1/2			0.471476002	0.000010025	-0.000000934		
	5P3/2			0.452344471	0.000002955	-0.000000112		
4D5/2 -- ( 6)	16.587189	-75.903117	0.944002714	0.000100675		-0.000000005	0.000000000	
	5S1/2			0.558551338	0.000007913	-0.000000136		
	5P1/2			0.474804061	0.000003209	-0.000000046		
	5P3/2			0.449974117	0.000006899	-0.000000479		
5S1/2 -- ( 2)	4.603488	-35.419266	0.458935682	0.000005360		-0.000163331	0.000002338	
	5P1/2			0.365190199	0.000005517	-0.000000771		
	5P3/2			0.354188883	0.000003603	-0.000000913		
5P1/2 -- ( 2)	3.026655	-28.674256	0.374326469	0.000005714		-0.000004807	0.000000108	
	5P3/2			0.344571196	0.000000913	-0.000000001		
5P3/2 -- ( 3)	2.626973	-26.979533	0.341288647	0.000003198		-0.000000515	0.000000026	
ETOT	-7110.89895	7535.54429	-17288.86448	2637.56458	6.031154241	-0.622714324	-0.560161609	0.008369889

TABLE 1.-- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
XENON            5P6            Z=54    A=132   R=1.15463E-04   A.U.							
1S1/2 -- ( 2)	1615.728779	-3134.846078	35.399393480	2.130671506		-0.263248926	0.004134388
2S1/2			10.674675717	0.104091604	-0.011909522		
2P1/2			12.660038500	0.215172534	-0.031954242		
2P3/2			11.811738259	0.108679946	-0.031424706		
3S1/2			4.289641185	0.020224489	-0.002471118		
3P1/2			4.591778750	0.038557174	-0.005740849		
3P3/2			4.367181742	0.019770447	-0.005886237		
3D3/2			4.349698436	0.000806207	-0.000103467		
3D5/2			4.280408375	0.000329617	-0.000105749		
4S1/2			1.847399901	0.004421181	-0.000546933		
4P1/2			1.826222634	0.007714206	-0.001149228		
4P3/2			1.746173663	0.003933161	-0.001177316		
4D3/2			1.525425617	0.000145610	-0.000018756		
4D5/2			1.502930549	0.000059177	-0.000019112		
5S1/2			0.691353056	0.000631734	-0.000078337		
5P1/2			0.579524829	0.000796237	-0.000118632		
5P3/2			0.545480980	0.000385192	-0.000115403		
2S1/2 -- ( 2)	352.157611	-733.081046	7.918342746	0.035200379		-0.031016800	0.000469789
2P1/2			7.743539937	0.010839803	-0.000038865		
2P3/2			7.528321613	0.018397365	-0.000166950		
3S1/2			3.655891871	0.003731549	-0.000911324		
3P1/2			3.906685686	0.005755359	-0.000909824		
3P3/2			3.777535667	0.005353917	-0.000699465		
3D3/2			4.094557665	0.004070632	-0.000565705		
3D5/2			4.042202803	0.001820296	-0.000559727		
4S1/2			1.714954340	0.000809820	-0.000207228		
4P1/2			1.692235986	0.001195702	-0.000194555		
4P3/2			1.631720867	0.001078249	-0.000152828		
4D3/2			1.485480459	0.000571290	-0.000082911		
4D5/2			1.465827847	0.000263352	-0.000082194		
5S1/2			0.672574682	0.000115530	-0.000029784		
5P1/2			0.565744382	0.000124053	-0.000020270		
5P3/2			0.534314551	0.000105717	-0.000015165		
2P1/2 -- ( 2)	352.184817	-732.584698	9.484574393	0.079517454		-0.001334632	0.000031504
2P3/2			8.772455707	0.012774672	-0.000004606		
3S1/2			3.839672438	0.002568389	-0.000189983		
3P1/2			3.893188566	0.005695433	-0.000852534		
3P3/2			3.908577983	0.002501793	-0.000069173		
3D3/2			4.084084154	0.012206985	-0.002903057		
3D5/2			4.146732953	0.000407594	-0.000088829		
4S1/2			1.751161082	0.000552850	-0.000044889		
4P1/2			1.692851851	0.001101921	-0.000178973		
4P3/2			1.656717001	0.000494641	-0.000015809		
4D3/2			1.484776766	0.001787156	-0.000435053		
4D5/2			1.481406787	0.000067960	-0.000014031		
5S1/2			0.677654445	0.000078753	-0.000006500		
5P1/2			0.565857536	0.000113112	-0.000018597		
5P3/2			0.536746732	0.000048385	-0.000001580		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
XENON	5P6	Z=54 A=132 R=1.15463E-04 A.U.					
2P3/2 -- ( 4)	308.679363	-673.297870	8.650056007	0.045954462		-0.000146758	0.000007855
3S1/2			3.807945314	0.003370602	-0.000212940		
3P1/2			4.007640534	0.002068940	-0.000083788		
3P3/2			3.800134464	0.004784235	-0.000419400		
3D3/2			4.170442886	0.003602071	-0.000365740		
3D5/2			4.050090493	0.006143085	-0.001742102		
4S1/2			1.744451278	0.000705944	-0.000048813		
4P1/2			1.711527918	0.000405606	-0.000018871		
4P3/2			1.637468821	0.000915580	-0.000087923		
4D3/2			1.496890399	0.000531300	-0.000054442		
4D5/2			1.467666780	0.000884551	-0.000256976		
5S1/2			0.676701160	0.000100075	-0.000007033		
5P1/2			0.567721173	0.000041729	-0.000001983		
5P3/2			0.534894698	0.000089109	-0.000008673		
3S1/2 -- ( 2)	102.500049	-261.924794	2.930571513	0.001872609		-0.0006198557	0.000093409
3P1/2			2.657900557	0.000706415	-0.000021942		
3P3/2			2.603493046	0.001057481	-0.000048200		
3D3/2			2.925545876	0.000639721	-0.000023282		
3D5/2			2.908186888	0.000847104	-0.000025069		
4S1/2			1.523155386	0.000255827	-0.000090685		
4P1/2			1.512210795	0.000270735	-0.000047664		
4P3/2			1.463540195	0.000295070	-0.000034793		
4D3/2			1.349040155	0.000111360	-0.000010023		
4D5/2			1.334151744	0.000123237	-0.000009343		
5S1/2			0.646584578	0.000036379	-0.000013323		
5P1/2			0.547626425	0.000029262	-0.000005303		
5P3/2			0.518250765	0.000029718	-0.000003721		
3P1/2 -- ( 2)	99.828804	-257.340507	3.036978436	0.003609579		-0.000290461	0.000006813
3P3/2			2.828183482	0.000584904	-0.000000565		
3D3/2			2.827477652	0.001373541	-0.000093110		
3D5/2			3.017309472	0.000625935	-0.000003577		
4S1/2			1.561093383	0.000237722	-0.000029228		
4P1/2			1.485802452	0.000334359	-0.000075013		
4P3/2			1.478521548	0.000142678	-0.000006841		
4D3/2			1.351048312	0.000269859	-0.000038364		
4D5/2			1.342311336	0.000082712	-0.000002645		
5S1/2			0.651267201	0.000032795	-0.000004263		
5P1/2			0.545387447	0.000033903	-0.000007983		
5P3/2			0.519606999	0.000013983	-0.000000742		
3P3/2 -- ( 4)	90.057750	-242.649564	2.822340962	0.002137173		-0.000032429	0.000001725
3D3/2			2.951489187	0.000498388	-0.000007652		
3D5/2			2.835382505	0.001195525	-0.000040358		
4S1/2			1.551796149	0.000309897	-0.000034355		
4P1/2			1.518071000	0.000131335	-0.000008507		
4P3/2			1.450472535	0.000279958	-0.000037430		
4D3/2			1.349481003	0.000087918	-0.000007372		
4D5/2			1.331487856	0.000218165	-0.000026903		
5S1/2			0.650006911	0.000042092	-0.000004886		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
XENON	5P6	Z=54	A=132	R=1.15463E-04	A.U.		
3D3/2 -- ( 4 )	85.334947	-235.059795	0.548153401 0.517149030 3.145857432 3.160900896	0.000013428 0.000026873 0.003388955 0.000640319	-0.000000958 -0.000003800 -0.000000005 -0.000000005	-0.000000150	0.000000010
3D5/2			1.583375163 1.531208451 1.492717055 1.347396479 1.357082819 0.654220084 0.549578314 0.520942878	0.000131388 0.000238752 0.000096094 0.000267649 0.000087981 0.000018205 0.000023254 0.000009235	-0.000002891 -0.000014962 -0.000002297 -0.000021632 -0.000010669 -0.000000500 -0.000001531 -0.000000250		
3D5/2 -- ( 6 )	82.993214	-231.297617	3.118394247 1.580269888 1.540248354 1.484235568 1.369951556 1.338299243 0.653796735 0.550345278 0.520193896	0.002950582 0.000158250 0.000104845 0.000194743 0.000072392 0.000250433 0.000021551 0.000010474 0.000018158	-0.000002897 -0.000001319 -0.000007998 -0.000001120 -0.000014287 -0.000000501 -0.000000167 -0.000000797	-0.000000034	0.000000003
4S1/2 -- ( 2 )	29.567829	-106.375176	1.251674542 1.087734512 1.067079353 1.073064780 1.065237921 0.597800789 0.516775996 0.490626332	0.000135016 0.000078653 0.000081653 0.000062524 0.000049304 0.000013228 0.000006515 0.000007165	-0.000006850 -0.000010993 -0.000006659 -0.000006824 -0.000005573 -0.000001294 -0.000001020	-0.001363032	0.000020518
4P1/2 -- ( 2 )	26.923250	-100.518303	1.204067406 1.119673174 0.990502203 1.070161654 0.602930307 0.508587123 0.491038988	0.000227163 0.000036579 0.000136409 0.000028854 0.000017973 0.000011513 0.000004644	-0.000000059 -0.000024866 -0.000000892 -0.000002584 -0.000003047 -0.000000265	-0.000060257	0.000001412
4P3/2 -- ( 4 )	24.373549	-95.664907	1.119425126 1.051661114 1.001365848 0.599917469 0.514973005 0.485645878 0.999594727	0.000134284 0.000042797 0.000084005 0.000021719 0.000004767 0.000009100 0.000134595	-0.000002507 -0.000012374 -0.000003044 -0.000000362 -0.000001426	-0.000006690	0.000000355
4D3/2 -- ( 4 )	18.814422	-82.404926	1.004059853 0.590866708 0.504662379 0.483911936	0.000025987 0.000007554 0.000012463 0.000003673	-0.000000000 -0.000000186 -0.000001193 -0.000000144	-0.000000028	0.000000002
4D5/2 -- ( 6 )	18.265564	-81.186302	0.991324894	0.000116609	-0.000000006	0.000000001	

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
XENON	5P6	Z=54	A=132	R=1.15463E-04	A.U.			
	5S1/2			0.589544546	0.000009392	-0.000000180		
	5P1/2			0.508127210	0.000003965	-0.000000060		
	5P3/2			0.481387348	0.000008516	-0.000000608		
5S1/2 -- ( 2)	5.258024	-38.278232	0.484658172	0.000006405		-0.000194987	0.000002935	
	5P1/2		0.389113977	0.000006518	-0.000000900			
	5P3/2		0.377365833	0.000004359	-0.000001092			
5P1/2 -- ( 2)	3.583078	-31.491131	0.401928539	0.000007150		-0.000006258	0.000000147	
	5P3/2		0.369771254	0.000001131	-0.000000002			
5P3/2 -- ( 4)	3.102554	-29.590531	0.366146326	0.000003990		-0.000000659	0.000000035	
ETOT	-7441.67660	7904.46749	-18102.45382	2751.13773	6.436968990	-0.666358242	-0.608174911	0.009561783
CESIUM	6S1	Z=55	A=134	R=1.16043E-04	A.U.			
1S1/2 -- ( 2)	1685.164190	-3263.665169	36.151028758	2.256835295		-0.285055428	0.004701214	
	2S1/2		10.916268789	0.110678383	-0.012685574			
	2P1/2		12.958598359	0.228908634	-0.033899296			
	2P3/2		12.056324948	0.115257727	-0.033327357			
	3S1/2		4.398553994	0.021651977	-0.002650659			
	3P1/2		4.714854497	0.041324714	-0.006134097			
	3P3/2		4.475730841	0.021163131	-0.006301663			
	3D3/2		4.464215297	0.000871140	-0.000111556			
	3D5/2		4.390446611	0.000355837	-0.000114172			
	4S1/2		1.907595164	0.004812517	-0.000596588			
	4P1/2		1.892702666	0.008446146	-0.001254368			
	4P3/2		1.807561054	0.004305680	-0.001289098			
	4D3/2		1.597698755	0.000165021	-0.000021211			
	4D5/2		1.573896299	0.000067061	-0.000021664			
	5S1/2		0.739126660	0.000749807	-0.000093183			
	5P1/2		0.641705336	0.001023052	-0.000151952			
	5P3/2		0.608223404	0.000504269	-0.000151120			
	6S1/2		0.212923910	0.000049555	-0.000006160			
2S1/2 -- ( 2)	368.698255	-764.758911	8.094999112	0.037569492		-0.033819065	0.000537539	
	2P1/2		7.920277189	0.011562925	-0.000040101			
	2P3/2		7.691153599	0.019552542	-0.000182506			
	3S1/2		3.745089961	0.004010655	-0.000979869			
	3P1/2		4.006372645	0.006216199	-0.000982575			
	3P3/2		3.869382199	0.005732912	-0.000748189			
	3D3/2		4.200431622	0.004382788	-0.000608984			
	3D5/2		4.144805272	0.001958977	-0.000602509			
	4S1/2		1.768771303	0.000884885	-0.000226592			
	4P1/2		1.751152907	0.001319333	-0.000214681			
	4P3/2		1.687227907	0.001181097	-0.000167424			
	4D3/2		1.554493032	0.000641766	-0.000093215			
	4D5/2		1.533888029	0.000296285	-0.000092511			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CESIUM	6S1	Z=55 A=134 R=1.16043E-04 A.U.					
	5S1/2		0.717670442	0.000137640	-0.000035517		
	5P1/2		0.624623467	0.000160662	-0.000026258		
	5P3/2		0.594186649	0.000138493	-0.000019883		
	6S1/2		0.211507247	0.000009095	-0.000002349		
2P1/2 -- ( 2)	368.719519	-764.256789	9.704656363	0.084901970		-0.001520402	0.000037502
	2P3/2		8.964899142	0.013559327	-0.000005301		
	3S1/2		3.934929964	0.002758380	-0.000203921		
	3P1/2		3.992993824	0.006130110	-0.000918752		
	3P3/2		4.004810226	0.002681640	-0.000074156		
	3D3/2		4.190189529	0.013147080	-0.003126999		
	3D5/2		4.252895196	0.000438383	-0.000095631		
	4S1/2		1.806773918	0.000603681	-0.000049037		
	4P1/2		1.751949214	0.001211228	-0.000197123		
	4P3/2		1.713634426	0.000542243	-0.000017362		
	4D3/2		1.553838498	0.002010781	-0.000489787		
	4D5/2		1.550690902	0.000076637	-0.000015821		
	5S1/2		0.723480316	0.000093757	-0.000007746		
	5P1/2		0.624784439	0.000145863	-0.000024046		
	5P3/2		0.597258226	0.000063427	-0.000002078		
	6S1/2		0.211890333	0.000006194	-0.000000513		
2P3/2 -- ( 4)	321.469158	-699.956492	8.829306736	0.048794059		-0.000164026	0.000009157
	3S1/2		3.900885829	0.003613882	-0.000229592		
	3P1/2		4.109416619	0.002220935	-0.000090419		
	3P3/2		3.891669571	0.005122998	-0.000450335		
	3D3/2		4.278249189	0.003880428	-0.000393598		
	3D5/2		4.152239621	0.006612012	-0.001875303		
	4S1/2		1.799454418	0.000769046	-0.000053487		
	4P1/2		1.771257843	0.000444688	-0.000020821		
	4P3/2		1.693102102	0.001001992	-0.000096572		
	4D3/2		1.566723140	0.000597598	-0.000061183		
	4D5/2		1.535732066	0.000994656	-0.000289149		
	5S1/2		0.722346624	0.000118831	-0.000008405		
	5P1/2		0.627040052	0.000053678	-0.000002570		
	5P3/2		0.594897632	0.000116574	-0.000011396		
	6S1/2		0.211815461	0.000007846	-0.000000556		
3S1/2 -- ( 2)	107.979283	-273.929172	3.002983168	0.002019429		-0.006809097	0.000107668
	3P1/2		2.725447545	0.000757732	-0.000022825		
	3P3/2		2.667649528	0.001136937	-0.000052114		
	3D3/2		3.000796837	0.000687783	-0.000024560		
	3D5/2		2.982382933	0.000913038	-0.000026550		
	4S1/2		1.569253310	0.000280834	-0.000099735		
	4P1/2		1.562545778	0.000302325	-0.000053264		
	4P3/2		1.511256475	0.000325192	-0.000038496		
	4D3/2		1.408273341	0.000127470	-0.000011585		
	4D5/2		1.392780516	0.000139468	-0.000010786		
	5S1/2		0.688231732	0.000043532	-0.000015980		
	5P1/2		0.602370436	0.000038384	-0.000006965		
	5P3/2		0.574108281	0.000039208	-0.000004939		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CESIUM	6S1	Z=55	A=134	R=1.16043E-04	A.U.		
3P1/2 -- ( 2)	105.255550	-269.291038	0.209573395	0.000002875	-0.000001059	-0.000333944	0.000008183
3P3/2			3.115763684	0.003899179			
3D3/2			2.899507351	0.000627093	-0.000000660		
3D5/2			2.902371142	0.001478448	-0.000098897		
4S1/2			3.096154523	0.000675745	-0.000003822		
4P1/2			1.609000399	0.000259846	-0.000031993		
4P3/2			1.535243905	0.000369370	-0.000083222		
4D3/2			1.527186828	0.000156790	-0.000007569		
4D5/2			1.410713727	0.000309214	-0.000044395		
5S1/2			1.401755394	0.000093307	-0.000003034		
5P1/2			0.693562979	0.000039060	-0.000005093		
5P3/2			0.599683116	0.000043917	-0.000010400		
6S1/2			0.575828587	0.000018379	-0.000000985		
3P3/2 -- ( 4)	94.595735	-253.325457	0.209919759	0.000002570	-0.000000337	-0.000036617	0.000002031
3D3/2			2.891505900	0.002299179			
3D5/2			3.026952401	0.000534900	-0.000007920		
4S1/2			2.907620502	0.001286018	-0.000042083		
4P1/2			1.598978042	0.000339671	-0.000037828		
4P3/2			1.568582121	0.000144968	-0.000009466		
4D3/2			1.497570978	0.000308211	-0.000041444		
4D5/2			1.408697755	0.000100799	-0.000008543		
5S1/2			1.389886369	0.000248993	-0.000031262		
5P1/2			0.692083107	0.000050219	-0.000005862		
5P3/2			0.603003335	0.000017383	-0.000001254		
6S1/2			0.572737147	0.000035345	-0.000005037		
3D3/2 -- ( 4)	89.827196	-245.718920	0.209822511	0.000003299	-0.000000387	-0.000000178	0.000000013
3D5/2			3.230578877	0.003662000			
4S1/2			3.245291289	0.000691714	-0.000000006		
4P1/2			1.632407502	0.000143836	-0.000003200		
4P3/2			1.582963128	0.000262809	-0.000016546		
4D3/2			1.542228198	0.000105718	-0.000002542		
4D5/2			1.407129092	0.000301734	-0.000024720		
5S1/2			1.417792442	0.000099429	-0.000001227		
5P1/2			0.696936840	0.000021716	-0.000000606		
5P3/2			0.604827586	0.000029973	-0.000001988		
6S1/2			0.577517567	0.000012143	-0.000000332		
3D5/2 -- ( 6)	87.276676	-241.639063	0.210140693	0.000001430	-0.000000041	-0.000000040	0.000000004
4S1/2			3.200867272	0.003184895			
4P1/2			1.629064490	0.000173061	-0.000003207		
4P3/2			1.592235954	0.000115442	-0.000001473		
4D3/2			1.533287701	0.000213868	-0.000008805		
4D5/2			1.431032155	0.000081672	-0.000001286		
5S1/2			1.397678443	0.000282116	-0.000016327		
5P1/2			0.696440110	0.000025669	-0.000000607		
5P3/2			0.605741223	0.000013517	-0.000000221		
6S1/2			0.576576175	0.000023801	-0.000001052		
4S1/2 -- ( 2)	31.655885	-112.027820	0.210108028	0.000001687	-0.000000041	-0.001522653	0.000024050
			1.291018178	0.000149066			



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
CESIUM	6S1	Z=55 A=134 R=1.16043E-04 A.U.						
	4P1/2		1.123828147	0.000085442	-0.000007272			
	4P3/2		1.102031715	0.000090102	-0.000012016			
	4D3/2		1.116438572	0.000069219	-0.000007256			
	4D5/2		1.108375847	0.000055678	-0.000007461			
	5S1/2		0.633849809	0.000016008	-0.000006801			
	5P1/2		0.565131694	0.000008753	-0.000001752			
	5P3/2		0.540182967	0.000009643	-0.000001384			
	6S1/2		0.206111900	0.000001059	-0.000000461			
4P1/2 --	( 2)	28.973470	-106.165121	1.245950841	0.000252861	-0.000070825	0.000001733	
	4P3/2		1.158133629	0.000040373	-0.000000072			
	4D3/2		1.031638817	0.000151128	-0.000027153			
	4D5/2		1.114958753	0.000032961	-0.000000982			
	5S1/2		0.639791164	0.000021516	-0.000003113			
	5P1/2		0.555521608	0.000015097	-0.000004068			
	5P3/2		0.540794435	0.000006174	-0.000000363			
	6S1/2		0.206448775	0.000001372	-0.000000205			
4P3/2 --	( 4)	26.164098	-100.888446	1.157416838	0.000149079	-0.000007731	0.000000428	
	4D3/2		1.094984386	0.000047326	-0.000002689			
	4D5/2		1.042603436	0.000093799	-0.000013335			
	5S1/2		0.636377610	0.000026172	-0.000003692			
	5P1/2		0.563020426	0.000006267	-0.000000487			
	5P3/2		0.534203877	0.000012116	-0.000001941			
	6S1/2		0.206236774	0.000001652	-0.000000239			
4D3/2 --	( 4)	20.621991	-87.909036	1.047058173	0.000154731	-0.000000035	0.000000002	
	4D5/2		1.051729891	0.000029906	-0.000000001			
	5S1/2		0.627894429	0.000009223	-0.000000246			
	5P1/2		0.551969397	0.000016354	-0.000001603			
	5P3/2		0.532923377	0.000004917	-0.000000197			
	6S1/2		0.205735978	0.000000585	-0.000000020			
4D5/2 --	( 6)	20.016664	-86.595440	1.038403409	0.000134060	-0.000000008	0.000000001	
	5S1/2		0.626465691	0.000011348	-0.000000239			
	5P1/2		0.555798690	0.000005186	-0.000000084			
	5P3/2		0.530010710	0.000011314	-0.000000828			
	6S1/2		0.205651944	0.000000697	-0.000000019			
5S1/2 --	( 2)	6.134632	-41.759619	0.516918243	0.000007899	-0.000237527	0.000003751	
	5P1/2		0.422956603	0.000008044	-0.000001091			
	5P3/2		0.412247671	0.000005625	-0.000001383			
	6S1/2		0.196268932	0.000000347	-0.000000147			
5P1/2 --	( 2)	4.499981	-35.544711	0.444668831	0.000009744	-0.000008636	0.000000211	
	5P3/2		0.410523553	0.000001554	-0.000000003			
	6S1/2		0.195314276	0.000000680	-0.000000098			
5P3/2 --	( 4)	3.959221	-33.625080	0.408227645	0.000005558	-0.000000911	0.000000050	
	6S1/2		0.194166569	0.000000763	-0.000000107			
6S1/2 --	( 1)	0.489097	-11.784020	0.000000000	0.000000000	-0.000015701	0.000000248	
ETOT	-7781.22455	8284.96027	-18929.68146	2857.99542	6.862035493	-0.712085167	-0.659609132	0.010890707

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
BARIUM 6S2 Z=56 A=138 R=1.17187E-04 A.U.							
1S1/2 -- ( 2)	1756.612375	-3395.795597	36.908359608	2.388163172		-0.308325017	0.005330432
2S1/2			11.159979342	0.117562441	-0.013498528		
2P1/2			13.260343103	0.243263870	-0.035921955		
2P3/2			12.301536619	0.122095589	-0.035305173		
3S1/2			4.508338344	0.023150661	-0.002839601		
3P1/2			4.839027340	0.044229251	-0.006544618		
3P3/2			4.584667496	0.022621931	-0.006736858		
3D3/2			4.578979756	0.000939375	-0.000120022		
3D5/2			4.500532831	0.000383353	-0.000123010		
4S1/2			1.968361446	0.005228400	-0.000649490		
4P1/2			1.959778037	0.009224893	-0.001365655		
4P3/2			1.869286700	0.004701903	-0.001408016		
4D3/2			1.669367831	0.000185880	-0.000023840		
4D5/2			1.644160143	0.000075527	-0.000024405		
5S1/2			0.786701255	0.000880162	-0.000109621		
5P1/2			0.698510857	0.001264647	-0.000187236		
5P3/2			0.663610680	0.000628933	-0.000188528		
6S1/2			0.257009563	0.000083087	-0.000010392		
2S1/2 -- ( 2)	385.782362	-797.325215	8.273005684	0.04057862		-0.036833762	0.000613290
2P1/2			8.098520725	0.012322276	-0.000041355		
2P3/2			7.854806041	0.020757209	-0.000199509		
3S1/2			3.834882330	0.004305145	-0.001052180		
3P1/2			4.106760977	0.006704046	-0.001059533		
3P3/2			3.961567525	0.006129044	-0.000798904		
3D3/2			4.306560447	0.004710796	-0.000654439		
3D5/2			4.247516904	0.002104504	-0.000647438		
4S1/2			1.823016474	0.000965050	-0.000247274		
4P1/2			1.810475365	0.001452053	-0.000236279		
4P3/2			1.742988211	0.001290389	-0.000182908		
4D3/2			1.622869675	0.000716946	-0.000104214		
4D5/2			1.601134001	0.000331435	-0.000103534		
5S1/2			0.762435374	0.000162178	-0.000041886		
5P1/2			0.678121473	0.000200168	-0.000032721		
5P3/2			0.646787798	0.000172825	-0.000024829		
6S1/2			0.254721531	0.000015306	-0.000003957		
2P1/2 -- ( 2)	385.794441	-796.814320	9.926721918	0.090559403		-0.001728912	0.000044497
2P3/2			9.158365203	0.014375384	-0.000006087		
3S1/2			4.030882500	0.002958763	-0.000218595		
3P1/2			4.093511814	0.006589232	-0.000988691		
3P3/2			4.101431256	0.002870221	-0.000079373		
3D3/2			4.296576481	0.014134576	-0.003362243		
3D5/2			4.359157537	0.000470591	-0.000102768		
4S1/2			1.862859530	0.000657944	-0.000053463		
4P1/2			1.811463306	0.001328237	-0.000216571		
4P3/2			1.770836657	0.000592943	-0.000019016		
4D3/2			1.622276999	0.002249668	-0.000548292		
4D5/2			1.619271657	0.000085904	-0.000017736		
5S1/2			0.769012657	0.000110397	-0.000009130		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
BARIUM 6S2 Z=56 A=138 R=1.17187E-04 A.U.							
2P3/2 -- ( 4)	334.540707	-727.162636	0.678337445 0.650486139 0.255340718 9.008890082	0.000180985 0.0C0079210 0.000010417 0.051750019	-0.000029910 -0.000002603 -0.000000864	-0.000182947	0.000010641
3S1/2			3.994391577	0.003869833	-0.000247255		
3P1/2			4.211810488	0.002380799	-0.000097434		
3P3/2			3.983446069	0.005477852	-0.000482817		
3D3/2			4.386238208	0.004172887	-0.000422818		
3D5/2			4.254414667	0.007104112	-0.002015099		
4S1/2			1.854888661	0.000836182	-0.000058497		
4P1/2			1.831380426	0.000486349	-0.000022913		
4P3/2			1.748966306	0.001093843	-0.000105798		
4D3/2			1.635908261	0.000668351	-0.000068366		
4D5/2			1.603064088	0.001112045	-0.000323475		
5S1/2			0.767678959	0.000139551	-0.000009934		
5P1/2			0.680964291	0.000066432	-0.000003204		
5P3/2			0.647616642	0.000145289	-0.000014264		
6S1/2			0.255214925	0.000013157	-0.000000939		
3S1/2 -- ( 2)	113.651214	-286.271771	3.075852273	0.002174743	-0.0007469645	0.000123714	
3P1/2			2.793441377	0.000811835	-0.000023723		
3P3/2			2.732093858	0.001220504	-0.000056341		
3D3/2			3.076350366	0.000738439	-0.000025902		
3D5/2			3.056832279	0.000982480	-0.000028114		
4S1/2			1.615667372	0.000307637	-0.000109443		
4P1/2			1.613160376	0.000336578	-0.000059335		
4P3/2			1.559138306	0.000357290	-0.000042451		
4D3/2			1.466874884	0.000144950	-0.000013290		
4D5/2			1.450723925	0.000156904	-0.000012358		
5S1/2			0.729423571	0.000051509	-0.000018949		
5P1/2			0.651797588	0.000048407	-0.000008795		
5P3/2			0.622854062	0.000049249	-0.000006239		
6S1/2			0.251627246	0.000004858	-0.000001794		
3P1/2 -- ( 2)	110.873060	-281.577710	3.195066667	0.004205779	-0.000383116	0.000009793	
3P3/2			2.971157961	0.000671198	-0.000000769		
3D3/2			2.977564759	0.001589190	-0.000105033		
3D5/2			3.175278673	0.000728222	-0.000004083		
4S1/2			1.657258206	0.000283471	-0.000034946		
4P1/2			1.584963771	0.000406999	-0.000092067		
4P3/2			1.576040930	0.000171821	-0.000008349		
4D3/2			1.469772813	0.000351881	-0.000050973		
4D5/2			1.460536140	0.000104663	-0.000003455		
5S1/2			0.735431440	0.000046010	-0.000006017		
5P1/2			0.648689447	0.000054727	-0.000013029		
5P3/2			0.624933816	0.0C0023007	-0.000001246		
6S1/2			0.252183180	0.000004322	-0.000000570		
3P3/2 -- ( 4)	99.259497	-264.248631	2.960850259	0.002469562	-0.0000041248	0.000002383	
3D3/2			3.102566573	0.000573235	-0.000008191		
3D5/2			2.979963882	0.001381105	-0.000043853		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
BARIUM	6S2	Z=56 A=138 R=1.17187E-04 A.U.					
	4S1/2		1.646468155	0.000371572	-0.000041572		
	4P1/2		1.619348913	0.000159603	-0.000010504		
	4P3/2		1.544808209	0.000338416	-0.000045754		
	4D3/2		1.467260609	0.000114825	-0.000009827		
	4D5/2		1.447576547	0.000282357	-0.000036044		
	5S1/2		0.733711690	0.000099253	-0.000006957		
	5P1/2		0.652527055	0.000021647	-0.000001579		
	5P3/2		0.621223809	0.000044282	-0.000006356		
	6S1/2		0.252021912	0.000005554	-0.000000656		
3D3/2 -- ( 4)	94.443031	-256.621303	3.315437593	0.003949612		-0.000000212	0.000000016
	3D5/2		3.329761887	0.000745785	-0.000000007		
	4S1/2		1.681775211	0.000157125	-0.000003533		
	4P1/2		1.635000639	0.000288567	-0.000018252		
	4P3/2		1.591912269	0.000115997	-0.000002805		
	4D3/2		1.466257211	0.000338231	-0.000028067		
	4D5/2		1.477830444	0.000111702	-0.000001398		
	5S1/2		0.739240242	0.000025614	-0.000000725		
	5P1/2		0.654767310	0.000037168	-0.000002483		
	5P3/2		0.626964955	0.000015208	-0.000000421		
	6S1/2		0.252538855	0.000002408	-0.000000070		
3D5/2 -- ( 6)	91.669758	-252.203482	3.283362252	0.003431283		-0.000000047	0.000000005
	4S1/2		1.678180617	0.000188856	-0.000003541		
	4P1/2		1.644496375	0.000126775	-0.000001639		
	4P3/2		1.582497509	0.000234256	-0.000009669		
	4D3/2		1.491481901	0.000091611	-0.000001465		
	4D5/2		1.456380072	0.000315975	-0.000018537		
	5S1/2		0.738663405	0.000030231	-0.000000726		
	5P1/2		0.655815074	0.000016779	-0.000000280		
	5P3/2		0.625835778	0.000029719	-0.000001323		
	6S1/2		0.252484714	0.000002835	-0.000000070		
4S1/2 -- ( 2)	33.838938	-117.858845	1.330648440	0.000164205		-0.001697561	0.000028084
	4P1/2		1.160161877	0.000092644	-0.000007704		
	4P3/2		1.137169419	0.000099186	-0.000013119		
	4D3/2		1.159482646	0.000076318	-0.000007875		
	4D5/2		1.151148922	0.000062543	-0.000008125		
	5S1/2		0.669366314	0.000019148	-0.000008198		
	5P1/2		0.608466728	0.000011303	-0.000002277		
	5P3/2		0.583082717	0.000012346	-0.000001787		
	6S1/2		0.246194678	0.000001809	-0.000000795		
4P1/2 -- ( 2)	31.118261	-111.988262	1.288080163	0.000280645		-0.000082982	0.000002118
	4P3/2		1.196774983	0.000044419	-0.000000087		
	4D3/2		1.072555371	0.000166795	-0.000029548		
	4D5/2		1.159424318	0.000037410	-0.000001076		
	5S1/2		0.676156323	0.000025469	-0.000003706		
	5P1/2		0.597576169	0.000019037	-0.000005214		
	5P3/2		0.583917957	0.000007811	-0.000000471		
	6S1/2		0.246734413	0.000002310	-0.000000348		
4P3/2 -- ( 4)	28.028352	-106.257746	1.195537400	0.000165007		-0.000008902	0.000000514

TABLE 1.-- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
BARIUM 6S2 Z=56 A=138 R=1.17187E-04 A.U.								
4D3/2			1.137975627	0.000052113	-0.000002872			
4D5/2			1.083521049	0.000104268	-0.000014314			
5S1/2			0.672319924	0.000031184	-0.000004425			
5P1/2			0.606076676	0.000007921	-0.000000628			
5P3/2			0.576216345	0.000015360	-0.000002510			
6S1/2			0.246395964	0.000002795	-0.000000408			
4D3/2 -- ( 4)	22.496571	-93.524059	1.094000655	0.000176578		-0.000000043	0.000000003	
4D5/2			1.098845118	0.000034152	-0.000000001			
5S1/2			0.664452797	0.000011104	-0.000000317			
5P1/2			0.594568274	0.000020611	-0.000002060			
5P3/2			0.575557759	0.000006256	-0.000000257			
6S1/2			0.245735134	0.000001001	-0.000000036			
4D5/2 -- ( 6)	21.830058	-92.107341	1.084906265	0.000152973		-0.000000010	0.000000001	
5S1/2			0.662909304	0.000013545	-0.000000309			
5P1/2			0.598698144	0.000006523	-0.000000112			
5P3/2			0.572309582	0.000014307	-0.000001066			
6S1/2			0.245605755	0.000001183	-0.000000036			
5S1/2 -- ( 2)	7.080854	-45.339704	0.548591820	0.000009607		-0.000286146	0.000004733	
5P1/2			0.453871259	0.000009635	-0.000001284			
5P3/2			0.443172392	0.000006987	-0.000001688			
6S1/2			0.231837186	0.000000620	-0.000000276			
5P1/2 -- ( 2)	5.443833	-39.424600	0.482105013	0.000012604		-0.000011456	0.000000292	
5P3/2			0.445545561	0.000002002	-0.000000004			
6S1/2			0.231005344	0.000001202	-0.000000177			
5P3/2 -- ( 4)	4.819441	-37.373660	0.443667848	0.000007246		-0.000001199	0.000000069	
6S1/2			0.229518818	0.000001354	-0.000000198			
6S1/2 -- ( 2)	0.801432	-14.513784	0.184717898	0.000000313		-0.000027017	0.000000447	
ETOT	-8129.75620	8677.34283	-19780.43670	2967.49304	7.306863552	-0.759973531	-0.714629773	0.012369339
LANTHANUM 5D1 Z=57 A=139 R=1.17469E-04 A.U.								
1S1/2 -- ( 2)	1830.143671	-3531.324578	37.671694794	2.524811007		-0.333158744	0.006027675	
2S1/2			11.405899072	0.124754026	-0.014349746			
2P1/2			13.565419785	0.258258906	-0.038024044			
2P3/2			12.547413389	0.129199329	-0.037359869			
3S1/2			4.618992563	0.024722641	-0.003038258			
3P1/2			4.964291782	0.047274136	-0.006972541			
3P3/2			4.693960729	0.024148182	-0.007192157			
3D3/2			4.693941459	0.001010927	-0.000128864			
3D5/2			4.610612416	0.000412166	-0.000132266			
4S1/2			2.029584413	0.005668991	-0.000705678			
4P1/2			2.027316532	0.010050468	-0.001482985			
4P3/2			1.931213837	0.005121797	-0.001534051			
4D3/2			1.740341743	0.000208175	-0.000026639			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LANTHANUM	5D1	Z=57	A=139 R=1.17469E-04 A.U.				
			4D5/2	1.713628318	0.000084566	-0.000027332	
			5S1/2	0.830480506	0.001012742	-0.000126467	
			5P1/2	0.747323110	0.001499289	-0.000221245	
			5P3/2	0.709869130	0.000747541	-0.000224137	
			5D3/2	0.438067379	0.000013122	-0.000001680	
			6S1/2	0.278249047	0.000101928	-0.000012728	
2S1/2 --	( 2) 403.428881	-830.803789	8.452418095	0.042670398		-0.040077390	0.000697835
			8.278335695	0.013119348		-0.000042627	
			8.019312939	0.022012764		-0.000218092	
			3.925269001	0.004615585		-0.001128376	
			4.207847410	0.007219888		-0.001140848	
			4.054074223	0.006542488		-0.000851600	
			4.412908556	0.005054929		-0.000702104	
			4.350298150	0.002256964		-0.000694548	
			1.877596239	0.001050402		-0.000269296	
			1.870095430	0.001594031		-0.000259367	
			1.798890391	0.001406075		-0.000199258	
			1.690534838	0.000796792		-0.000115901	
			1.667637441	0.000368779		-0.000115295	
			0.803558810	0.000187313		-0.000048416	
			0.723962330	0.000239153		-0.000039098	
			0.690640950	0.000205499		-0.000029535	
			0.434927561	0.000048488		-0.000007097	
			0.275542966	0.000018847		-0.000004877	
2P1/2 --	( 2) 403.428087	-830.280384	10.150861622	0.096501244		-0.001962726	0.000052635
			9.352898774	0.015223515		-0.000006973	
			4.127530923	0.003169919		-0.000234026	
			4.194739421	0.007073706		-0.001062470	
			4.198422283	0.003067715		-0.000084826	
			4.403210108	0.015170147		-0.003608949	
			4.465474361	0.000504217		-0.000110243	
			1.919319104	0.000715700		-0.000058169	
			1.871285831	0.001453075		-0.000237335	
			1.828207283	0.000646744		-0.000020772	
			1.690016659	0.002503692		-0.0000610540	
			1.687064566	0.000095750		-0.000019774	
			0.810863568	0.000127426		-0.000010547	
			0.724235916	0.000215393		-0.000035678	
			0.694887748	0.000094268		-0.000003105	
			0.434904953	0.000153333		-0.000037513	
			0.276275925	0.000012818		-0.000001064	
2P3/2 --	( 4) 347.897152	-754.920164	9.188827031	0.054825147		-0.000203649	0.000012329
			4.088457668	0.004138878		-0.000265974	
			4.314811482	0.002548759		-0.000104845	
			4.075441980	0.005849118		-0.000516875	
			4.494367321	0.004479656		-0.000453416	
			4.356572456	0.007619675		-0.002161574	
			1.910654243	0.000907394		-0.000063852	



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LANTHANUM	5D1	Z=57	A=139	R=1.17469E-04	A.U.		
3D3/2 -- ( 4)	99.180884	-267.764808	3.400392152	0.004252043	-0.000000250	0.000000019	
5P3/2			0.661571195	0.000052865	-0.000007639		
5D3/2			0.424941053	0.000008337	-0.000000761		
6S1/2			0.272373593	0.000006843	-0.000000814		
3D5/2			3.414269446	0.000802567	-0.000000008		
4S1/2			1.731399340	0.000171266	-0.000003889		
4P1/2			1.687235331	0.000316053	-0.000020084		
4P3/2			1.641679373	0.000126932	-0.000003086		
4D3/2			1.524732951	0.000377130	-0.000031675		
4D5/2			1.537141987	0.000124796	-0.000001583		
5S1/2			0.778088668	0.000029608	-0.000000850		
5P1/2			0.697501299	0.000044210	-0.000002975		
5P3/2			0.668146094	0.000018149	-0.000000508		
5D3/2			0.425065956	0.000022384	-0.000002017		
6S1/2			0.272988300	0.000002966	-0.000000088		
3D5/2 -- ( 6)	96.170294	-262.987886	3.365835192	0.003689907	-0.000000055	0.000000006	
4S1/2			1.727539230	0.000205644	-0.000003899		
4P1/2			1.696942215	0.000138849	-0.000001818		
4P3/2			1.631776021	0.000253910	-0.000010590		
4D3/2			1.551248554	0.000102205	-0.000001660		
4D5/2			1.514352744	0.000351989	-0.000020915		
5S1/2			0.777431583	0.000034895	-0.000000852		
5P1/2			0.698654733	0.000019975	-0.000000340		
5P3/2			0.666852958	0.000035366	-0.000001585		
5D3/2			0.426504232	0.000006148	-0.000000114		
6S1/2			0.272922578	0.000003487	-0.000000088		
4S1/2 -- ( 2)	36.114366	-123.863312	1.370503349	0.000180456	-0.001888795	0.000032672	
4P1/2			1.196677425	0.000100266	-0.000008147		
4P3/2			1.172433359	0.000108917	-0.000014309		
4D3/2			1.202176839	0.000083828	-0.000008518		
4D5/2			1.193536020	0.000069901	-0.000008817		
5S1/2			0.702092497	0.000022436	-0.000009672		
5P1/2			0.645602508	0.000013974	-0.000002828		
5P3/2			0.618888723	0.000015033	-0.000002193		
5D3/2			0.408352676	0.000002819	-0.000000326		
6S1/2			0.265650293	0.000002259	-0.000001000		
4P1/2 -- ( 2)	33.354694	-117.982043	1.330387983	0.000310561	-0.000096918	0.000002577	
4P3/2			1.235531479	0.000048715	-0.000000104		
4D3/2			1.113216620	0.000183436	-0.000032057		
4D5/2			1.203526046	0.000042200	-0.000001175		
5S1/2			0.709692983	0.000029552	-0.000004324		
5P1/2			0.633708095	0.000023011	-0.000006392		
5P3/2			0.619955419	0.000009409	-0.000000581		
5D3/2			0.406148718	0.000005031	-0.000000767		
6S1/2			0.266288897	0.000002851	-0.000000433		
4P3/2 -- ( 4)	29.962466	-111.765754	1.233719411	0.000182079	-0.000010216	0.000000613	
4D3/2			1.180602556	0.000057160	-0.000003056		
4D5/2			1.124083163	0.000115421	-0.000015310		



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
LANTHANUM 5D1 Z=57 A=139 R=1.17469E-04 A.U.								
			0.705452504	0.000036425	-0.000005199			
			0.642996066	0.000009595	-0.000000774			
			0.611336444	0.000018551	-0.000003084			
			0.407068186	0.000001989	-0.000000135			
			0.265890900	0.000003469	-0.000000510			
4D3/2 -- ( 4)	24.433386	-99.242980	1.140376587	0.000200136		-0.000000053	0.000000004	
			1.145357963	0.000038724	-0.000000001			
			0.698297397	0.000013077	-0.000000394			
			0.631373460	0.000024894	-0.000002528			
			0.611406619	0.000007573	-0.000000317			
			0.401608489	0.000007387	-0.000000688			
			0.265249534	0.000001253	-0.000000048			
4D5/2 -- ( 6)	23.700714	-97.714541	1.130784292	0.000173342		-0.000000012	0.000000001	
			0.696644840	0.000015838	-0.000000385			
			0.635710972	0.000007869	-0.000000142			
			0.607903020	0.000017239	-0.000001304			
			0.404890510	0.000001997	-0.000000038			
			0.265101524	0.000001473	-0.000000047			
5S1/2 -- ( 2)	8.012607	-48.798068	0.577331054	0.000011374		-0.000337894	0.000005843	
			0.480701438	0.000011168	-0.000001465			
			0.469513427	0.000008333	-0.000001985			
			0.366014384	0.000004240	-0.000000576			
			0.249828115	0.000000797	-0.000000361			
5P1/2 -- ( 2)	6.326409	-42.960201	0.513584894	0.000015458		-0.000014565	0.000000387	
			0.474628776	0.000002431	-0.000000006			
			0.338311198	0.000010191	-0.000002361			
			0.249245234	0.000001531	-0.000000228			
5P3/2 -- ( 4)	5.601234	-40.709229	0.472679064	0.000008888		-0.000001502	0.000000090	
			0.353155995	0.000002845	-0.000000266			
			0.247638507	0.000001740	-0.000000259			
5D3/2 -- ( 1)	2.169203	-24.969165	0.000000000	0.000000000		-0.000000003	0.000000000	
			0.222808368	0.000000310	-0.000000000			
6S1/2 -- ( 2)	0.966523	-16.007205	0.199516519	0.000000399		-0.000034015	0.000000588	
ETOT	-8487.40063	9081.84786	-20658.83205	3083.38130	7.771741866	-0.810049720	-0.773436037	0.014010674
CERIUM 4F2 Z=58 A=140 R=1.17750E-04 A.U.								
1S1/2 -- ( 2)	1905.819469	-3670.326153	38.441357848	2.666934254		-0.359638636	0.006798968	
			11.655074486	0.132289298	-0.015243985			
			13.875149409	0.273970008	-0.040215357			
			12.795187408	0.136606606	-0.039502449			
			4.731725779	0.026386337	-0.003249098			
			5.092414404	0.050503002	-0.007424016			
			4.805074160	0.025762303	-0.007673832			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CERIUM	4F2	Z=58 A=140 R=1.17750E-04 A.U.					
			4.811578076	0.001088169	-0.000138380		
			4.723045994	0.000443236	-0.000142249		
			2.081312205	0.006069335	-0.000757088		
			2.081790179	0.010772024	-0.001584081		
			1.978438936	0.005475060	-0.001640169		
			1.785496572	0.000224823	-0.000028703		
			1.756555960	0.000091166	-0.000129471		
			1.092983362	0.000000163	-0.000000019		
			0.835260185	0.001032753	-0.000129173		
			0.745468425	0.001496208	-0.000220041		
			0.704955286	0.000739146	-0.000221661		
			0.270180477	0.000094700	-0.000011849		
2S1/2 -- ( 2)	421.741657	-865.309477	8.634120618	0.045426379		-0.043573273	0.000792195
			8.460655805	0.013959235	-0.000043838		
			8.185588716	0.023327893	-0.000238251		
			4.017140484	0.004946357	-0.001209706		
			4.310901958	0.007773996	-0.001228191		
			4.148615806	0.006980561	-0.000907423		
			4.521540606	0.005423415	-0.000753130		
			4.455134359	0.002420181	-0.000744981		
			1.924276605	0.001129100	-0.000289634		
			1.918607705	0.001721832	-0.000280127		
			1.842314585	0.001503671	-0.000213004		
			1.734006728	0.000854556	-0.000124366		
			1.709186272	0.000395335	-0.000123606		
			1.092494696	0.000015668	-0.000002072		
			0.808763478	0.000191783	-0.000049595		
			0.722918188	0.000240501	-0.000039312		
			0.686657822	0.000203277	-0.000029201		
			0.267753672	0.000017581	-0.000004552		
2P1/2 -- ( 2)	421.713223	-864.759522	10.378294353	0.102767449		-0.002225115	0.000062097
			9.549628088	0.016109306	-0.000007972		
			4.225862371	0.003394620	-0.000250466		
			4.297976695	0.007590921	-0.001141519		
			4.296990772	0.003277063	-0.000090625		
			4.512168402	0.016280196	-0.003873464		
			4.573999730	0.000540247	-0.000118252		
			1.967451631	0.000768843	-0.000062497		
			1.920191825	0.001564155	-0.000255909		
			1.872622634	0.000692316	-0.000022264		
			1.733589051	0.002688624	-0.000655938		
			1.729241430	0.000102768	-0.000021234		
			1.092569660	0.000019177	-0.000004008		
			0.815964602	0.000130390	-0.000010794		
			0.723202061	0.000215898	-0.000035817		
			0.690719177	0.000093343	-0.000003078		
			0.268412144	0.000011951	-0.000000992		
2P3/2 -- ( 4)	361.612836	-783.311995	9.370252153	0.058040165		-0.000226328	0.000014249

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CERIUM	4F2	Z=58	A=140	R=1.17750E-04	A.U.		
	3S1/2		4.184051356	0.004424445	-0.000286038		
	3P1/2		4.419771480	0.002727514	-0.000112800		
	3P3/2		4.168807310	0.006241994	-0.000553151		
	3D3/2		4.604830782	0.004808535	-0.000486162		
	3D5/2		4.460733087	0.008171687	-0.002318430		
	4S1/2		1.958150994	0.000972420	-0.000068832		
	4P1/2		1.940943559	0.000569571	-0.000027157		
	4P3/2		1.848324083	0.001272996	-0.000123962		
	4D3/2		1.748162898	0.000798026	-0.000081473		
	4D5/2		1.711062804	0.001324893	-0.000385812		
	4F5/2		1.092640909	0.000010848	-0.000001074		
	5S1/2		0.814391767	0.000163977	-0.000011814		
	5P1/2		0.725967098	0.000078815	-0.000003850		
	5P3/2		0.687502425	0.000170597	-0.000016870		
	6S1/2		0.268268045	0.000015017	-0.000001085		
3S1/2 -- ( 2)	125.664219	-312.084494	3.223650031	0.002514325	-0.008961596	0.000162030	
	3P1/2		2.931532580	0.000929323	-0.000025522		
	3P3/2		2.862519743	0.001401662	-0.000065811		
	3D3/2		3.229438285	0.000848541	-0.000028744		
	3D5/2		3.207531420	0.001133555	-0.000031465		
	4S1/2		1.703364095	0.000362961	-0.000129428		
	4P1/2		1.706794604	0.000407631	-0.000071895		
	4P3/2		1.645797836	0.000420330	-0.000050212		
	4D3/2		1.563974447	0.000178306	-0.000016578		
	4D5/2		1.545692062	0.000189189	-0.000015345		
	4F5/2		1.073023385	0.000070182	-0.000009750		
	5S1/2		0.773234538	0.000061415	-0.000022644		
	5P1/2		0.694271512	0.000059369	-0.000010791		
	5P3/2		0.660848597	0.000058511	-0.000007455		
	6S1/2		0.264518941	0.000005626	-0.000002082		
3P1/2 -- ( 2)	122.782114	-307.288668	3.356206128	0.004877635	-0.000501700	0.000013899	
	3P3/2		3.116281257	0.000765947	-0.000001038		
	3D3/2		3.130080292	0.001830475	-0.000118275		
	3D5/2		3.335578258	0.000842547	-0.000004653		
	4S1/2		1.748313044	0.000331771	-0.000040959		
	4P1/2		1.677183455	0.000483795	-0.000110109		
	4P3/2		1.664428611	0.000201330	-0.000009887		
	4D3/2		1.567738966	0.000433128	-0.000063620		
	4D5/2		1.556882564	0.000125618	-0.000004243		
	4F5/2		1.069916235	0.000119081	-0.000025955		
	5S1/2		0.779793747	0.000054447	-0.000007139		
	5P1/2		0.690993781	0.000065888	-0.000015786		
	5P3/2		0.663162814	0.000027223	-0.000001492		
	6S1/2		0.265108529	0.000004968	-0.000000656		
3P3/2 -- ( 4)	109.033880	-286.926622	3.100838874	0.002838927	-0.000052033	0.000003252	
	3D3/2		3.255374089	0.000656098	-0.000008717		
	3D5/2		3.126056575	0.001587186	-0.000047447		
	4S1/2		1.735977736	0.000437406	-0.000049352		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CERIUM	4F2	Z=58 A=140 R=1.17750E-04 A.U.					
	4P1/2		1.713133463	0.000189362	-0.000012632		
	4P3/2		1.630330996	0.000398382	-0.000054331		
	4D3/2		1.564205939	0.000141837	-0.000012332		
	4D5/2		1.542080429	0.000345274	-0.000045314		
	4F5/2		1.073169263	0.000061379	-0.000006202		
	5S1/2		0.777806791	0.000070410	-0.000008339		
	5P1/2		0.695023818	0.000026006	-0.000001924		
	5P3/2		0.659074735	0.000052588	-0.000007616		
	6S1/2		0.264927538	0.000006410	-0.000000764		
3D3/2 -- ( 4)	104.147870	-279.294207	3.487214702	0.004576864		-0.000000295	0.000000024
	3D5/2		3.500562029	0.000863485	-0.000000010		
	4S1/2		1.774756884	0.000184393	-0.000004216		
	4P1/2		1.731183312	0.000340754	-0.000021718		
	4P3/2		1.681658008	0.000136349	-0.000003323		
	4D3/2		1.564426791	0.000406200	-0.000034414		
	4D5/2		1.576046211	0.000134388	-0.000001719		
	4F5/2		1.067428843	0.000261989	-0.000064494		
	5S1/2		0.783939218	0.000030380	-0.000000876		
	5P1/2		0.697623904	0.000044431	-0.000002998		
	5P3/2		0.665384925	0.000018045	-0.000000505		
	6S1/2		0.265484503	0.000002774	-0.000000082		
3D5/2 -- ( 6)	100.879358	-274.129577	3.449978334	0.003967150		-0.000000064	0.000000008
	4S1/2		1.770656550	0.000221238	-0.000004227		
	4P1/2		1.740966960	0.000149706	-0.000001978		
	4P3/2		1.671405509	0.000274565	-0.000011361		
	4D3/2		1.591430749	0.000110103	-0.000001806		
	4D5/2		1.552626197	0.000378241	-0.000022681		
	4F5/2		1.078182295	0.000053840	-0.000004080		
	5S1/2		0.783273725	0.000035783	-0.000000877		
	5P1/2		0.698706713	0.000020064	-0.000000343		
	5P3/2		0.664142397	0.000035141	-0.000001574		
	6S1/2		0.265423825	0.000003260	-0.000000082		
4S1/2 -- ( 2)	38.065548	-129.372361	1.404314253	0.000194691		-0.002075074	0.000037473
	4P1/2		1.226959345	0.000107057	-0.000008571		
	4P3/2		1.200929490	0.000117202	-0.000015448		
	4D3/2		1.232512704	0.000089834	-0.000009064		
	4D5/2		1.223148767	0.000075343	-0.000009400		
	4F5/2		0.938155728	0.000038057	-0.000004235		
	5S1/2		0.709440597	0.000023026	-0.000009876		
	5P1/2		0.647821030	0.000014089	-0.000002834		
	5P3/2		0.618563120	0.000014850	-0.000002157		
	6S1/2		0.258912750	0.000002113	-0.000000930		
4P1/2 -- ( 2)	35.199555	-123.327203	1.364669952	0.000335834		-0.000111289	0.000003078
	4P3/2		1.266192384	0.000052086	-0.000000121		
	4D3/2		1.141874830	0.000197074	-0.000034289		
	4D5/2		1.233932025	0.000045558	-0.000001259		
	4F5/2		0.914469830	0.000060000	-0.000010161		
	5S1/2		0.717050323	0.000030149	-0.000004393		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
CERIUM	4F2	Z=58	A=140	R=1.17750E-04	A.U.			
	5P1/2			0.636387712	0.000023181	-0.000006385		
	5P3/2			0.619679050	0.000009295	-0.000000569		
	6S1/2			0.259504165	0.000002660	-0.000000401		
4P3/2 -- ( 4)	31.458290	-116.519254	1.263158066	0.000195665		-0.000011495	0.000000717	
	4D3/2		1.209866308	0.000061021	-0.000003217			
	4D5/2		1.151534294	0.000123747	-0.000016183			
	4F5/2		0.920746265	0.000029364	-0.000002164			
	5S1/2		0.712691394	0.000037415	-0.000005328			
	5P1/2		0.645254031	0.000009646	-0.000000775			
	5P3/2		0.611304763	0.000018453	-0.000003037			
	6S1/2		0.259130086	0.000003259	-0.000000478			
4D3/2 -- ( 4)	25.710139	-103.605061	1.169510256	0.000215935		-0.000000063	0.000000005	
	4D5/2		1.174172601	0.000041674	-0.000000001			
	4F5/2		0.855947791	0.000090180	-0.000016237			
	5S1/2		0.705821189	0.000013408	-0.000003398			
	5P1/2		0.634110726	0.000025004	-0.000002518			
	5P3/2		0.611527660	0.000007514	-0.000000309			
	6S1/2		0.258568325	0.000011175	-0.000000044			
4D5/2 -- ( 6)	24.896943	-101.920124	1.158807439	0.000186605		-0.000000014	0.000000002	
	4F5/2		0.894280789	0.000022890	-0.000000990			
	5S1/2		0.704100318	0.000016266	-0.000000389			
	5P1/2		0.638287379	0.000007928	-0.000000140			
	5P3/2		0.608100465	0.000017124	-0.000001277			
	6S1/2		0.258427337	0.000001385	-0.000000043			
4F5/2 -- ( 2)	10.988751	-63.393067	0.714146254	0.000067782		-0.000000000	0.000000000	
	5S1/2		0.609322728	0.000005991	-0.000000163			
	5P1/2		0.554411569	0.000007030	-0.000000204			
	5P3/2		0.541784104	0.000003482	-0.000000038			
	6S1/2		0.249245574	0.000000510	-0.000000000			
5S1/2 -- ( 2)	8.043911	-49.917959	0.581755603	0.000011525		-0.0000353592	0.000006384	
	5P1/2		0.482499512	0.000011286	-0.000001486			
	5P3/2		0.470158172	0.000008351	-0.000002012			
	6S1/2		0.244123235	0.000000724	-0.000000321			
5P1/2 -- ( 2)	6.233407	-43.597038	0.513687494	0.000015313		-0.000015573	0.000000431	
	5P3/2		0.473747211	0.000002375	-0.000000006			
	6S1/2		0.243404320	0.000001385	-0.000000204			
5P3/2 -- ( 4)	5.457985	-41.126848	0.470836426	0.000008688		-0.000001563	0.000000098	
	6S1/2		0.241742016	0.000001578	-0.000000231			
6S1/2 -- ( 2)	0.884558	-15.805524	0.194275715	0.000000364		-0.000032430	0.000000585	
ETOT	-8854.38568	9498.61463	-21589.79710	3230.22818	8.250207265	-0.861288923	-0.836144137	0.015827716

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PRAESEODYMIUM 4F3 Z=59 A=141 R=1.18030E-04 A.U.							
1S1/2 -- ( 2)	1983.676886	-3812.851872	39.217272552	2.814630186		-0.387854396	0.007650691
2S1/2			11.906209715	0.140142226	-0.016178010		
2P1/2			14.187949338	0.290339702	-0.042486064		
2P3/2			13.043169308	0.144278317	-0.041721385		
3S1/2			4.844725747	0.028120293	-0.003469340		
3P1/2			5.220810140	0.053862845	-0.007890879		
3P3/2			4.915735803	0.027438127	-0.008173895		
3D3/2			4.928270715	0.001168004	-0.000148168		
3D5/2			4.834352220	0.000475296	-0.000152547		
4S1/2			2.136746537	0.006512340	-0.000814022		
4P1/2			2.141368060	0.011583358	-0.001697473		
4P3/2			2.030976560	0.005877300	-0.001760980		
4D3/2			1.840122634	0.000245035	-0.000031208		
4D5/2			1.809127973	0.000099245	-0.000032089		
4F5/2			1.173768688	0.000000202	-0.000000024		
5S1/2			0.856062033	0.001103788	-0.000138347		
5P1/2			0.764550614	0.001598511	-0.000234267		
5P3/2			0.721029446	0.000786252	-0.000235833		
6S1/2			0.273980784	0.000098443	-0.000012343		
2S1/2 -- ( 2)	440.620628	-900.737694	8.816986219	0.048311680		-0.047326218	0.000897103
2P1/2			8.644299999	0.014838674	-0.000045093		
2P3/2			8.392411535	0.024694111	-0.000260328		
3S1/2			4.109170528	0.005292716	-0.001294765		
3P1/2			4.414063936	0.008354893	-0.001319650		
3P3/2			4.241683804	0.007433406	-0.000964744		
3D3/2			4.629443461	0.005805884	-0.000806055		
3D5/2			4.559101348	0.002589225	-0.000797278		
4S1/2			1.974010546	0.001216323	-0.000312153		
4P1/2			1.971714271	0.001865639	-0.000303473		
4P3/2			1.890251371	0.001614422	-0.000228556		
4D3/2			1.786343971	0.000925452	-0.000134749		
4D5/2			1.759808802	0.000428152	-0.000133932		
4F5/2			1.173194525	0.000019141	-0.000002532		
5S1/2			0.828712017	0.000205782	-0.000053243		
5P1/2			0.741228583	0.000258904	-0.000042314		
5P3/2			0.702285833	0.000216279	-0.000031056		
6S1/2			0.271544384	0.000018348	-0.000004753		
2P1/2 -- ( 2)	440.564103	-900.160661	10.607481230	0.109331344		-0.002518410	0.000073049
2P3/2			9.747042761	0.017026633	-0.000009094		
3S1/2			4.324407045	0.003629907	-0.000267621		
3P1/2			4.401321901	0.008132900	-0.001224195		
3P3/2			4.395283966	0.003494520	-0.000096625		
3D3/2			4.620421627	0.017431057	-0.004147690		
3D5/2			4.681560322	0.000577357	-0.000126540		
4S1/2			2.018821664	0.000827771	-0.000067286		
4P1/2			1.973304201	0.001689365	-0.000276804		
4P3/2			1.921737480	0.000744155	-0.000023956		
4D3/2			1.786027646	0.002915103	-0.000711510		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PRAESEODYMIUM 4F3 Z=59 A=141 R=1.18030E-04 A.U.							
4D5/2			1.780736772	0.000111404	-0.000023034		
4F5/2			1.173284272	0.000023394	-0.000004892		
5S1/2			0.836155855	0.000139832	-0.000011577		
5P1/2			0.741543484	0.000231662	-0.000038494		
5P3/2			0.706466492	0.000099422	-0.000003283		
6S1/2			0.272206425	0.000012465	-0.000001035		
2P3/2 -- ( 4)	375.590457	-812.230422	9.551600094	0.061373286		-0.000251041	0.000016422
3S1/2			4.279718829	0.004722724	-0.000307162		
3P1/2			4.524692939	0.002913895	-0.000121132		
3P3/2			4.261770316	0.006649818	-0.000590830		
3D3/2			4.714418713	0.005149598	-0.000520059		
3D5/2			4.563915365	0.008743403	-0.002480892		
4S1/2			2.008813468	0.001044394	-0.000074363		
4P1/2			1.994383754	0.000613394	-0.000029415		
4P3/2			1.896222922	0.001366145	-0.000133457		
4D3/2			1.800975927	0.000864779	-0.000088198		
4D5/2			1.761622439	0.001433971	-0.000417786		
4F5/2			1.173363864	0.000013303	-0.000001317		
5S1/2			0.834470031	0.000175397	-0.000012711		
5P1/2			0.744330501	0.000084327	-0.000004144		
5P3/2			0.703119398	0.000181397	-0.000017998		
6S1/2			0.272056201	0.000015623	-0.0000001135		
3S1/2 -- ( 2)	131.977928	-325.521006	3.298205709	0.002698280		-0.009798213	0.000184686
3P1/2			3.001233722	0.000992697	-0.000026441		
3P3/2			2.928107457	0.001498895	-0.000071124		
3D3/2			3.306407597	0.000907880	-0.000030274		
3D5/2			3.283218405	0.001214830	-0.000033285		
4S1/2			1.746593123	0.000392510	-0.000140083		
4P1/2			1.752695415	0.000445975	-0.000078659		
4P3/2			1.687843997	0.000453058	-0.000054236		
4D3/2			1.610006897	0.000195823	-0.000018311		
4D5/2			1.590520385	0.000205926	-0.000016906		
4F5/2			1.150797532	0.000083860	-0.000011659		
5S1/2			0.792283455	0.000066150	-0.000024408		
5P1/2			0.711827472	0.000064506	-0.000011723		
5P3/2			0.675945408	0.000062507	-0.000007981		
6S1/2			0.268318306	0.000005894	-0.0000002183		
3P1/2 -- ( 2)	129.042755	-320.673237	3.437542636	0.005242105		-0.000572486	0.000016480
3P3/2			3.189277236	0.000816284	-0.000001200		
3D3/2			3.206765349	0.001960869	-0.000125515		
3D5/2			3.416110353	0.000904069	-0.000004967		
4S1/2			1.793186569	0.000357415	-0.000044141		
4P1/2			1.722426870	0.000524805	-0.000119737		
4P3/2			1.707315888	0.000216688	-0.000010691		
4D3/2			1.614204907	0.000475640	-0.000070257		
4D5/2			1.602368480	0.000136482	-0.000004652		
4F5/2			1.147346618	0.000142290	-0.000031036		
5S1/2			0.799058086	0.000058444	-0.000007669		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PRAESEODYMIUM 4F3 Z=59 A=141 R=1.18030E-04 A.U.							
5P1/2			0.708509100	0.000071008	-0.000017053		
5P3/2			0.678343385	0.000029043	-0.000001599		
6S1/2			0.268910757	0.000005187	-0.000000686		
3P3/2 -- ( 4)	114.109636	-298.635623	3.171005420	0.003037051		-0.000058250	0.000003782
3D3/2			3.331934677	0.000700475	-0.000008982		
3D5/2			3.199180769	0.001697645	-0.000049318		
4S1/2			1.780035826	0.000472598	-0.000053543		
4P1/2			1.759051897	0.000205210	-0.000013774		
4P3/2			1.671800757	0.000429869	-0.000058843		
4D3/2			1.610119859	0.000156130	-0.000013665		
4D5/2			1.5866649897	0.000378169	-0.0000050227		
4F5/2			1.150940249	0.000073325	-0.000007410		
5S1/2			0.796947910	0.000075740	-0.000009006		
5P1/2			0.712574644	0.000027995	-0.000002084		
5P3/2			0.674120871	0.000056225	-0.000008172		
6S1/2			0.268723785	0.000006706	-0.000000802		
3D3/2 -- ( 4)	109.192729	-291.003351	3.573270736	0.004914426		-0.000000347	0.000000029
3D5/2			3.586026771	0.000926679	-0.000000012		
4S1/2			1.820508890	0.000198879	-0.000004580		
4P1/2			1.778281689	0.000368482	-0.000023570		
4P3/2			1.725140998	0.000147020	-0.000003594		
4D3/2			1.610967273	0.000441491	-0.000037741		
4D5/2			1.622350217	0.000146128	-0.000001886		
4F5/2			1.144635071	0.000313359	-0.000077168		
5S1/2			0.803322280	0.000032640	-0.000000948		
5P1/2			0.715318934	0.000047731	-0.000003234		
5P3/2			0.680620467	0.000019284	-0.000000542		
6S1/2			0.269286937	0.000002899	-0.000000087		
3D5/2 -- ( 6)	105.651789	-285.429637	3.533249328	0.004254693		-0.000000075	0.000000009
4S1/2			1.816142130	0.000238420	-0.000004593		
4P1/2			1.788175883	0.000161855	-0.000002158		
4P3/2			1.714473396	0.000295667	-0.000012245		
4D3/2			1.638740697	0.000119694	-0.000001985		
4D5/2			1.598021891	0.000410369	-0.000024842		
4F5/2			1.156824563	0.000064474	-0.000004881		
5S1/2			0.802616053	0.000038410	-0.000000949		
5P1/2			0.716402256	0.000021550	-0.000000372		
5P3/2			0.679337866	0.000037501	-0.000001684		
6S1/2			0.269224302	0.000003403	-0.000000087		
4S1/2 -- ( 2)	40.227924	-135.256238	1.440449567	0.000210872		-0.002284725	0.000043012
4P1/2			1.259633628	0.000114641	-0.000009018		
4P3/2			1.231929032	0.000126711	-0.000016725		
4D3/2			1.267409085	0.000096902	-0.000009687		
4D5/2			1.257453753	0.000081993	-0.000010069		
4F5/2			0.999596012	0.000043821	-0.000004814		
5S1/2			0.727160817	0.000024863	-0.000010660		
5P1/2			0.664402564	0.000015381	-0.000003088		
5P3/2			0.632991001	0.000015912	-0.000002314		



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
PRAESEODYMIUM 4F3 Z=59 A=141 R=1.18030E-04 A.U.								
4P1/2 -- ( 2)	37.280402	-129.103416	0.262749353	0.000002220	-0.000000976	-0.000128127	0.000003683	
4P3/2			1.402027760	0.000365100				
4D3/2			1.299854102	0.000056022	-0.000000142			
4D5/2			1.174993461	0.000213040	-0.000036810			
4F5/2			1.269394541	0.000049767	-0.000001357			
4F5/2			0.974120668	0.000069068	-0.000011535			
5S1/2			0.735106580	0.000032327	-0.000004709			
5P1/2			0.652815350	0.000025077	-0.000006909			
5P3/2			0.634230312	0.000009923	-0.000000609			
6S1/2			0.263352643	0.000002777	-0.000000419			
4P3/2 -- ( 4)	33.174468	-121.693045	1.295753943	0.000211634		-0.000012977	0.000000841	
4D3/2			1.243999745	0.000065613	-0.000003393			
4D5/2			1.183751881	0.000133829	-0.000017146			
4F5/2			0.980242889	0.000033675	-0.000002437			
5S1/2			0.730492156	0.000040385	-0.000005757			
5P1/2			0.661751826	0.000010432	-0.000000841			
5P3/2			0.625607271	0.000019805	-0.000003261			
6S1/2			0.262967098	0.000003424	-0.000000502			
4D3/2 -- ( 4)	27.294896	-108.616901	1.205006050	0.000236254		-0.000000076	0.000000006	
4D5/2			1.209496082	0.000045528	-0.000000001			
4F5/2			0.911123221	0.000103037	-0.000018224			
5S1/2			0.724032255	0.000014489	-0.000000435			
5P1/2			0.650797500	0.000026990	-0.000002721			
5P3/2			0.626190195	0.000008059	-0.000000331			
6S1/2			0.262453043	0.000001236	-0.000000046			
4D5/2 -- ( 6)	26.399736	-106.781128	1.193376821	0.000203859		-0.000000016	0.000000002	
4F5/2			0.952382180	0.000026302	-0.000001108			
5S1/2			0.722218652	0.000017551	-0.000000424			
5P1/2			0.654972169	0.000008567	-0.000000152			
5P3/2			0.622693126	0.000018345	-0.000001364			
6S1/2			0.262308126	0.000001456	-0.000000046			
4F5/2 -- ( 3)	12.456820	-69.252392	0.778875365	0.000083619		-0.000000000	0.000000000	
5S1/2			0.639431454	0.000006718	-0.000000160			
5P1/2			0.581190250	0.000007866	-0.000000191			
5P3/2			0.566055251	0.000003884	-0.000000034			
6S1/2			0.255071092	0.000000557	-0.000000000			
5S1/2 -- ( 2)	8.464122	-52.064944	0.596143255	0.000012410		-0.000038787	0.000007299	
5P1/2			0.494588848	0.000012038	-0.000001578			
5P3/2			0.481320578	0.000008967	-0.000002163			
6S1/2			0.247968342	0.000000756	-0.000000334			
5P1/2 -- ( 2)	6.559578	-45.490897	0.526717970	0.000016510		-0.000017817	0.000000512	
5P3/2			0.485160492	0.000002529	-0.000000007			
6S1/2			0.247274580	0.000001439	-0.000000211			
5P3/2 -- ( 4)	5.705897	-42.790839	0.481613226	0.000009293		-0.000001749	0.000000113	
6S1/2			0.245529614	0.000001648	-0.000000240			
6S1/2 -- ( 2)	0.904511	-16.303754	0.197027727	0.000000379		-0.000034594	0.000000651	
ETOT	-9231.17480	9928.58962	-22537.22993	3370.51348	8.752574170	-0.915225111	-0.903143897	0.017839172

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NEODYMIUM	4F4	Z=60	A=144	R=1.18861E-04	A.U.		
1S1/2 -- ( 2)	2063.774526	-3958.973792	39.999685311	2.968044323		-0.417894506	0.008589747
2S1/2			12.159775384	0.148333300	-0.017154575		
2P1/2			14.504443331	0.307411457	-0.044841061		
2P3/2			13.291878845	0.152232587	-0.044022002		
3S1/2			4.958582358	0.029934150	-0.003700306		
3P1/2			5.350323960	0.057375447	-0.008375920		
3P3/2			5.026655047	0.029185812	-0.008695366		
3D3/2			5.045153464	0.001251461	-0.000158356		
3D5/2			4.945615789	0.000508760	-0.000163298		
4S1/2			2.191946569	0.006973282	-0.000873428		
4P1/2			2.200628415	0.012426294	-0.001814485		
4P3/2			2.082824081	0.006293450	-0.001885973		
4D3/2			1.893668419	0.000265997	-0.000033794		
4D5/2			1.860516886	0.000107602	-0.000034797		
4F5/2			1.240573633	0.000000241	-0.000000028		
5S1/2			0.876204453	0.001175672	-0.000147663		
5P1/2			0.782866748	0.001700969	-0.000248388		
5P3/2			0.736213789	0.000832855	-0.000249855		
6S1/2			0.277843687	0.000102146	-0.0000012834		
2S1/2 -- ( 2)	460.118893	-937.148904	9.001403452	0.051337221		-0.051355892	0.001013631
2P1/2			8.829685454	0.015760700	-0.000046362		
2P3/2			8.520170843	0.026115760	-0.000284430		
3S1/2			4.201787814	0.005656976	-0.001384184		
3P1/2			4.517935436	0.008967723	-0.001416055		
3P3/2			4.335613712	0.007904365	-0.001024057		
3D3/2			4.737567923	0.006206122	-0.000861407		
3D5/2			4.663116623	0.002765826	-0.000851963		
4S1/2			2.023531838	0.001307608	-0.000335716		
4P1/2			2.024313266	0.002016554	-0.000327950		
4P3/2			1.937609814	0.001728799	-0.000244555		
4D3/2			1.837669318	0.000998799	-0.000145490		
4D5/2			1.809329108	0.000462040	-0.000144608		
4F5/2			1.239919870	0.000022648	-0.000002997		
5S1/2			0.848049984	0.000220053	-0.000056961		
5P1/2			0.758824432	0.000277582	-0.000045357		
5P3/2			0.717081131	0.000229117	-0.000032879		
6S1/2			0.275400372	0.000019114	-0.000004953		
2P1/2 -- ( 2)	460.030541	-936.541530	10.838974256	0.116216750		-0.002846115	0.000085709
2P3/2			9.945627904	0.017978088	-0.000010352		
3S1/2			4.423642825	0.003877276	-0.000285617		
3P1/2			4.505389764	0.008703550	-0.001311208		
3P3/2			4.493883724	0.003721519	-0.000102875		
3D3/2			4.728926001	0.018634685	-0.004434493		
3D5/2			4.789148663	0.000615974	-0.000135195		
4S1/2			2.069979758	0.000889429	-0.000072288		
4P1/2			2.026114314	0.001820470	-0.000298683		
4P3/2			1.970260494	0.000797869	-0.000025707		
4D3/2			1.837461972	0.003149523	-0.000769048		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NEODYMIUM 4F4 Z=60 A=144 R=1.18861E-04 A.U.							
4D5/2			1.831100742	0.000120297	-0.000024893		
4F5/2			1.240023898	0.000027641	-0.000005782		
5S1/2			0.855724331	0.000149453	-0.000012374		
5P1/2			0.759169982	0.000247611	-0.000041204		
5P3/2			0.721369489	0.000105452	-0.000003485		
6S1/2			0.276065300	0.000012979	-0.000001077		
2P3/2 -- ( 4)	389.861554	-841.710921	9.733345069	0.064834410		-0.000277961	0.000018876
3S1/2			4.375924618	0.005035535	-0.000329508		
3P1/2			4.630213140	0.003109253	-0.000129914		
3P3/2			4.354881214	0.007075148	-0.000630215		
3D3/2			4.824137985	0.005506386	-0.000555453		
3D5/2			4.667050672	0.009340700	-0.002650636		
4S1/2			2.059230173	0.001119421	-0.000080174		
4P1/2			2.047474449	0.000659044	-0.000031782		
4P3/2			1.943511523	0.001462472	-0.000143307		
4D3/2			1.852741021	0.000933766	-0.000095133		
4D5/2			1.811058535	0.001546452	-0.000450770		
4F5/2			1.240109758	0.000015801	-0.000001564		
5S1/2			0.853923203	0.000186978	-0.000013631		
5P1/2			0.761967707	0.000089867	-0.000004441		
5P3/2			0.717898111	0.000192076	-0.000019118		
6S1/2			0.275908946	0.000016224	-0.000001186		
3S1/2 -- ( 2)	138.500552	-339.316502	3.373187808	0.002892087		-0.010700427	0.000209983
3P1/2			3.071358721	0.001059298	-0.000027373		
3P3/2			2.993925603	0.001600685	-0.000076866		
3D3/2			3.383634818	0.000970185	-0.000031885		
3D5/2			3.359103106	0.001300028	-0.000035212		
4S1/2			1.789687499	0.000423513	-0.000151251		
4P1/2			1.798381006	0.000486492	-0.000085800		
4P3/2			1.729463815	0.000486807	-0.000058382		
4D3/2			1.655258628	0.000214101	-0.000020123		
4D5/2			1.634499491	0.000223291	-0.000018529		
4F5/2			1.214911001	0.000097260	-0.000013531		
5S1/2			0.810790721	0.000070995	-0.000026210		
5P1/2			0.728740422	0.000069765	-0.000012675		
5P3/2			0.690285912	0.000066453	-0.000008499		
6S1/2			0.272185664	0.000006162	-0.000002283		
3P1/2 -- ( 2)	135.511394	-334.415767	3.519373190	0.005626434		-0.000652069	0.000019483
3P3/2			3.262538713	0.000868594	-0.000001385		
3D3/2			3.283702445	0.002098041	-0.000133214		
3D5/2			3.496864837	0.000968560	-0.000005303		
4S1/2			1.837920878	0.000384225	-0.000047463		
4P1/2			1.767470013	0.000567881	-0.000129845		
4P3/2			1.749772365	0.000232562	-0.000011525		
4D3/2			1.659892774	0.000519878	-0.000077168		
4D5/2			1.646997274	0.000147764	-0.000005077		
4F5/2			1.211185116	0.000165034	-0.0000336019		
5S1/2			0.817769957	0.000062519	-0.000008208		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NEODYMIUM 4F4 Z=60 A=144 R=1.18861E-04 A.U.							
5P1/2			0.725388374	0.000076214	-0.000018341		
5P3/2			0.692761406	0.000030844	-0.000001705		
6S1/2			0.272780436	0.000005406	-0.000000715		
3P3/2 -- ( 4)	119.309486	-310.589356	3.241257913	0.003244336		-0.000065074	0.000004385
3D3/2			3.408563691	0.000746864	-0.000009249		
3D5/2			3.272319375	0.001813143	-0.000051244		
4S1/2			1.823919960	0.000509551	-0.000057967		
4P1/2			1.804718373	0.000221829	-0.000014978		
4P3/2			1.712827597	0.000462607	-0.000063540		
4D3/2			1.655224033	0.000171122	-0.000015067		
4D5/2			1.630345947	0.000412435	-0.000055380		
4F5/2			1.215035153	0.000085027	-0.000008592		
5S1/2			0.815534980	0.000081197	-0.000009693		
5P1/2			0.729476675	0.000030011	-0.000002247		
5P3/2			0.688412250	0.000059853	-0.000008728		
6S1/2			0.272587502	0.000007004	-0.000000841		
3D3/2 -- ( 4)	114.363276	-302.957657	3.659388965	0.005268259		-0.000000407	0.000000035
3D5/2			3.671483695	0.000992808	-0.000000013		
4S1/2			1.866074214	0.000214024	-0.000004962		
4P1/2			1.825123723	0.000397519	-0.000025518		
4P3/2			1.768146982	0.000158105	-0.000003876		
4D3/2			1.656703399	0.000478134	-0.000041212		
4D5/2			1.667743106	0.000158297	-0.000002060		
4F5/2			1.208296767	0.000363822	-0.000089621		
5S1/2			0.822138710	0.000034943	-0.000001021		
5P1/2			0.732357779	0.000051073	-0.000003475		
5P3/2			0.695082533	0.000020519	-0.000000579		
6S1/2			0.273155919	0.000003024	-0.000000091		
3D5/2 -- ( 6)	110.532557	-296.949935	3.616444454	0.004555489		-0.000000088	0.000000011
4S1/2			1.861430052	0.000256368	-0.000004976		
4P1/2			1.835111793	0.000174551	-0.000002348		
4P3/2			1.757060099	0.000317567	-0.000013162		
4D3/2			1.685203225	0.000129644	-0.000002171		
4D5/2			1.642524877	0.000443612	-0.000027090		
4F5/2			1.221728931	0.000074938	-0.000005667		
5S1/2			0.821391300	0.000041083	-0.000001023		
5P1/2			0.733437891	0.000023050	-0.000000401		
5P3/2			0.693762187	0.000039851	-0.000001792		
6S1/2			0.273091336	0.000003547	-0.000000091		
4S1/2 -- ( 2)	42.440186	-141.253947	1.476410241	0.000227815		-0.002510300	0.000049199
4P1/2			1.292125131	0.000122535	-0.000009478		
4P3/2			1.262656032	0.000136643	-0.000018088		
4D3/2			1.301817227	0.000104264	-0.000010335		
4D5/2			1.291234446	0.000088900	-0.000010768		
4F5/2			1.049800548	0.000049234	-0.000005345		
5S1/2			0.744430077	0.000026735	-0.000011454		
5P1/2			0.680431837	0.000016699	-0.000003346		
5P3/2			0.646760427	0.000016950	-0.000002469		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
NEODYMIUM	4F4	Z=60	A=144	R=1.18861E-04	A.U.			
4P1/2 -- ( 2)	39.408115	-134.986854	0.266654541	0.000002325	-0.000001021			
4P3/2			1.439147177	0.000395773		-0.000147073	0.000004387	
4D3/2			1.333194847	0.000060064	-0.000000166			
4D5/2			1.207653342	0.000229751	-0.000039461			
4F5/2			1.304309082	0.000054125	-0.000001459			
5S1/2			1.023005342	0.000077611	-0.000012798			
5P1/2			0.752695607	0.000034529	-0.000005026			
5P3/2			0.668706423	0.000027000	-0.000007438			
6S1/2			0.648118465	0.000010539	-0.000000649			
4P3/2 -- ( 4)	34.910376	-126.931295	0.267268515	0.000002893	-0.000000436			
4D3/2			1.327937585	0.000228196		-0.000014602	0.000000982	
4D5/2			1.277551256	0.000070356	-0.000003573			
4F5/2			1.215385516	0.000144272	-0.000018138			
5S1/2			1.028750169	0.000037697	-0.000002683			
5P1/2			0.747817457	0.000043424	-0.000006196			
5P3/2			0.677689202	0.000011228	-0.000000909			
6S1/2			0.639256903	0.000021150	-0.000003483			
4D3/2 -- ( 4)	28.893546	-113.673233	0.266871084	0.000003589	-0.000000526			
4D5/2			1.239801005	0.000257341		-0.000000090	0.000000008	
4F5/2			1.244082057	0.000049512	-0.000000001			
5S1/2			0.956497611	0.000115386	-0.000020032			
5P1/2			0.741730748	0.000015586	-0.000000471			
5P3/2			0.666903284	0.000028997	-0.000002924			
6S1/2			0.640169780	0.000008598	-0.000000352			
4D5/2 -- ( 6)	27.910673	-111.676300	0.266399124	0.000001297	-0.000000048			
4F5/2			1.227185196	0.000221704		-0.000000019	0.000000002	
5S1/2			0.999987149	0.000029511	-0.000001215			
5P1/2			0.739820097	0.000018857	-0.000000460			
5P3/2			0.671073980	0.000009214	-0.000000164			
6S1/2			0.636602709	0.000019556	-0.000001449			
4F5/2 -- ( 4)	13.789743	-74.434464	0.266253052	0.000001527	-0.000000048			
5S1/2			0.829808627	0.000098686		-0.000000000	0.000000000	
5P1/2			0.663699596	0.000007396	-0.000000158			
5P3/2			0.602832280	0.000008645	-0.000000182			
6S1/2			0.585321661	0.000004253	-0.000000032			
5S1/2 -- ( 2)	8.878920	-54.213920	0.259967668	0.000000600	-0.000000000			
5P1/2			0.610115363	0.000013307		-0.000423865	0.000008305	
5P3/2			0.506275551	0.000012797	-0.000001672			
6S1/2			0.492031117	0.000009591	-0.000002318			
5P1/2 -- ( 2)	6.878540	-47.376969	0.251872079	0.000000788	-0.000000346			
5P3/2			0.539263292	0.000017714		-0.000020289	0.000000605	
6S1/2			0.496068201	0.000002678	-0.000000008			
5P3/2 -- ( 4)	5.942603	-44.433035	0.251195772	0.000001492	-0.000000218			
6S1/2			0.491837254	0.000009889		-0.000001947	0.000000131	
6S1/2 -- ( 2)	0.924446	-16.813253	0.249361032	0.000001718	-0.000000250			
			0.199978296	0.000000395		-0.0000036834	0.000000722	
ETOT	-9617.79170	10371.87394	-23512.76013	3515.74406	9.276449247	-0.971458652	-0.974615701	0.020061290

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PROMETHIUM	4F5	Z=61	A=145	R=1.19136E-04	A.U.		
1S1/2 -- ( 2)	2146.193554	-4108.792441	40.788904611	3.127342917		-0.449884864	0.009623666
2S1/2			12.415849977	0.156873563	-0.018175160		
2P1/2			14.824741952	0.325205169	-0.047281611		
2P3/2			13.541313277	0.160473646	-0.046405458		
3S1/2			5.073315728	0.031830335	-0.003942331		
3P1/2			5.480981014	0.061044640	-0.008879399		
3P3/2			5.137826870	0.031006762	-0.009238738		
3D3/2			5.162220090	0.001338561	-0.000168939		
3D5/2			5.056826790	0.000543631	-0.000174498		
4S1/2			2.247040225	0.007453268	-0.000935454		
4P1/2			2.259735890	0.013302861	-0.001935337		
4P3/2			2.134138774	0.006724412	-0.002015430		
4D3/2			1.946385088	0.000287757	-0.000036465		
4D5/2			1.910972363	0.000116255	-0.000037601		
4F5/2			1.300617138	0.000000283	-0.000000033		
5S1/2			0.895855644	0.001248781	-0.000157170		
5P1/2			0.800633329	0.001804302	-0.000262504		
5P3/2			0.750744913	0.000879347	-0.000263846		
6S1/2			0.281533602	0.000106069	-0.000013355		
2S1/2 -- ( 2)	480.257547	-974.569709	9.187418408	0.054508551		-0.055683662	0.001142888
2P1/2			9.016860095	0.016726978	-0.000047647		
2P3/2			8.688880655	0.027594177	-0.000310747		
3S1/2			4.295005559	0.006039806	-0.001478117		
3P1/2			4.622531407	0.009613629	-0.001517566		
3P3/2			4.429804833	0.008393550	-0.001085327		
3D3/2			4.845915352	0.006624505	-0.000919233		
3D5/2			4.767178141	0.002950107	-0.000909082		
4S1/2			2.072947352	0.001403212	-0.000360386		
4P1/2			2.076742189	0.002175028	-0.000353622		
4P3/2			1.984525098	0.001846999	-0.000261017		
4D3/2			1.888220705	0.001074831	-0.000156620		
4D5/2			1.857984350	0.000497099	-0.000155666		
4F5/2			1.299886538	0.000026288	-0.000003479		
5S1/2			0.866933069	0.000234670	-0.000060767		
5P1/2			0.775907788	0.000296652	-0.000048460		
5P3/2			0.731266509	0.000241895	-0.000034684		
6S1/2			0.279079775	0.000019927	-0.000005166		
2P1/2 -- ( 2)	480.131181	-973.925787	11.072831720	0.123436046		-0.003211964	0.000100311
2P3/2			10.145394160	0.018964159	-0.000011760		
3S1/2			4.523585294	0.004137180	-0.000304482		
3P1/2			4.610193404	0.009303965	-0.001402710		
3P3/2			4.592788732	0.003958246	-0.000109379		
3D3/2			4.837681872	0.019892014	-0.004734096		
3D5/2			4.896758819	0.000656102	-0.000144221		
4S1/2			2.121038551	0.000953991	-0.000077516		
4P1/2			2.078759369	0.001957879	-0.000321612		
4P3/2			2.018331581	0.000853574	-0.000027521		
4D3/2			1.888129330	0.003392591	-0.000828721		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PROMETHIUM 4F5 Z=61 A=145 R=1.19136E-04 A.U.							
4D5/2			1.880575629	0.000129468	-0.000026818		
4F5/2			1.300004803	0.000032036	-0.000006704		
5S1/2			0.874829057	0.000159305	-0.000013188		
5P1/2			0.776283667	0.000263857	-0.000043963		
5P3/2			0.735653892	0.000111479	-0.000003688		
6S1/2			0.279748612	0.000013525	-0.000001122		
2P3/2 -- ( 4)	404.426846	-871.754744	9.915475041	0.068425826		-0.000307242	0.000021643
3S1/2			4.472677485	0.005363373	-0.000353133		
3P1/2			4.736339023	0.003313855	-0.000139163		
3P3/2			4.448133860	0.007518314	-0.000671343		
3D3/2			4.933984019	0.005879191	-0.000592365		
3D5/2			4.770132719	0.009963991	-0.002827778		
4S1/2			2.109511317	0.001197691	-0.000086287		
4P1/2			2.100355108	0.000706639	-0.000034264		
4P3/2			1.990325246	0.001562178	-0.000153531		
4D3/2			1.903699399	0.001005185	-0.000102297		
4D5/2			1.859608344	0.001662652	-0.000484858		
4F5/2			1.300095329	0.000018414	-0.000001822		
5S1/2			0.872909644	0.000198781	-0.000014577		
5P1/2			0.779082796	0.000095473	-0.000004745		
5P3/2			0.732062120	0.000202721	-0.000020239		
6S1/2			0.279585717	0.000016862	-0.000001239		
3S1/2 -- ( 2)	145.237454	-353.478049	3.448606698	0.003096120		-0.011673337	0.000238183
3P1/2			3.141916364	0.001129254	-0.000028321		
3P3/2			3.059976701	0.001707150	-0.000083076		
3D3/2			3.461125868	0.001035551	-0.000033583		
3D5/2			3.435190117	0.001389252	-0.000037253		
4S1/2			1.832725329	0.000456055	-0.000162959		
4P1/2			1.843953588	0.000529310	-0.000093337		
4P3/2			1.770758547	0.000521608	-0.000062654		
4D3/2			1.699916815	0.000233182	-0.000022017		
4D5/2			1.677816788	0.000241334	-0.000020217		
4F5/2			1.272437736	0.000110853	-0.000015430		
5S1/2			0.828894945	0.000075973	-0.000028059		
5P1/2			0.745193316	0.000075176	-0.000013653		
5P3/2			0.704073134	0.000070374	-0.000009012		
6S1/2			0.275871050	0.000006446	-0.000002389		
3P1/2 -- ( 2)	142.192869	-348.522654	3.601707655	0.006031368		-0.000741439	0.000022968
3P3/2			3.336067457	0.000922890	-0.000001594		
3D3/2			3.360894078	0.002242233	-0.000141409		
3D5/2			3.577844863	0.001036091	-0.000005662		
4S1/2			1.882598572	0.000412276	-0.000050932		
4P1/2			1.812410439	0.000613154	-0.000140462		
4P3/2			1.791901490	0.000248977	-0.000012391		
4D3/2			1.704989619	0.000565923	-0.000084360		
4D5/2			1.690958150	0.000159499	-0.000005519		
4F5/2			1.268478773	0.000188111	-0.000041077		
5S1/2			0.836070585	0.000066691	-0.000008759		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PROMETHIUM	4F5	Z=61 A=145 R=1.19136E-04 A.U.					
	5P1/2		0.741812422	0.000081538	-0.000019657		
	5P3/2		0.706621345	0.000032640	-0.000001812		
	6S1/2		0.276469053	0.000005638	-0.000000746		
3P3/2 -- ( 4)	124.633534	-322.788135	3.311593224	0.003460981		-0.000072550	0.000005069
	3D3/2		3.485259505	0.000795309	-0.000009518		
	3D5/2		3.345469490	0.001933777	-0.000053230		
	4S1/2		1.867710158	0.000548379	-0.000062641		
	4P1/2		1.850234222	0.000239269	-0.000016247		
	4P3/2		1.753509594	0.000496664	-0.000068431		
	4D3/2		1.699704211	0.000186854	-0.000016543		
	4D5/2		1.673353817	0.000448157	-0.000060783		
	4F5/2		1.272527822	0.000096895	-0.000009791		
	5S1/2		0.833708431	0.000086805	-0.000010403		
	5P1/2		0.745913259	0.000032067	-0.000002413		
	5P3/2		0.702150687	0.000063497	-0.000009287		
	6S1/2		0.276269688	0.000007320	-0.000000883		
3D3/2 -- ( 4)	119.659464	-315.157308	3.745568071	0.005638714		-0.000000476	0.000000043
	3D5/2		3.756930529	0.001061925	-0.000000016		
	4S1/2		1.911537466	0.000229865	-0.000005362		
	4P1/2		1.871813226	0.000427949	-0.000027570		
	4P3/2		1.810781161	0.000169628	-0.000004169		
	4D3/2		1.701819566	0.000516234	-0.000044836		
	4D5/2		1.712417944	0.000170927	-0.000002241		
	4F5/2		1.265435472	0.000415140	-0.000102289		
	5S1/2		0.840531559	0.000037300	-0.000001096		
	5P1/2		0.748925270	0.000054479	-0.000003722		
	5P3/2		0.708977260	0.000021758	-0.000000616		
	6S1/2		0.276843915	0.000003155	-0.000000095		
3D5/2 -- ( 6)	115.520940	-308.689723	3.699560733	0.004869772		-0.000000102	0.000000013
	4S1/2		1.906604274	0.000275122	-0.000005378		
	4P1/2		1.881879659	0.000187825	-0.000002547		
	4P3/2		1.799269308	0.000340309	-0.000014113		
	4D3/2		1.731010162	0.000139981	-0.000002366		
	4D5/2		1.686321870	0.000478058	-0.000029431		
	4F5/2		1.280001799	0.000085592	-0.000006467		
	5S1/2		0.839742279	0.000043815	-0.000001098		
	5P1/2		0.749999183	0.000024575	-0.000000431		
	5P3/2		0.707620703	0.000042207	-0.000001902		
	6S1/2		0.276777234	0.000003698	-0.000000095		
4S1/2 -- ( 2)	44.707557	-147.374228	1.512272697	0.000245572		-0.0002753212	0.000056103
	4P1/2		1.324509950	0.000130761	-0.000009950		
	4P3/2		1.293186153	0.000147029	-0.000019547		
	4D3/2		1.335863203	0.000111946	-0.000011011		
	4D5/2		1.324617294	0.000096083	-0.000011501		
	4F5/2		1.094742354	0.000054583	-0.000005860		
	5S1/2		0.761363749	0.000028651	-0.000012264		
	5P1/2		0.696066467	0.000018052	-0.000003609		
	5P3/2		0.660047599	0.000017973	-0.000002623		



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
PROMETHIUM 4F5	Z=61	A=145	R=1.19136E-04	A.U.				
4P1/2 -- ( 2)	41.588188	-140.987282	0.270365672	0.000002436	-0.000001069			
4P3/2			1.476122213	0.000427954		-0.000168378	0.000005207	
4D3/2			1.366302506	0.000064219	-0.000000193			
4D5/2			1.239974447	0.000247270	-0.000042253			
4F5/2			1.338808775	0.000058646	-0.000001568			
5S1/2			1.066878907	0.000086080	-0.000014031			
5P1/2			0.769936394	0.000036768	-0.000005347			
5P3/2			0.684213651	0.000028962	-0.000007973			
6S1/2			0.661520615	0.000011148	-0.000000689			
4P3/2 -- ( 4)	36.669937	-132.241729	0.270990632	0.000003015	-0.000000453			
4D3/2			1.359798164	0.000245390		-0.000016381	0.000001143	
4D5/2			1.313650221	0.000075263	-0.000003756			
4F5/2			1.246558787	0.000155103	-0.000019162			
5S1/2			1.072092849	0.000041651	-0.000002919			
5P1/2			0.764785424	0.000046549	-0.000006648			
5P3/2			0.693223356	0.000012041	-0.000000978			
6S1/2			0.652426664	0.000022497	-0.000003703			
4D3/2 -- ( 4)	30.511243	-118.786146	0.270580018	0.000003763	-0.000000552			
4D5/2			1.274053149	0.000279263		-0.000000106	0.000000010	
4F5/2			1.278089927	0.000053638	-0.000000002			
5S1/2			0.997308697	0.000126997	-0.000021786			
5P1/2			0.759041795	0.000016703	-0.000000508			
5P3/2			0.682587418	0.000031037	-0.000003130			
6S1/2			0.653644710	0.000009136	-0.000000372			
4D5/2 -- ( 6)	29.434606	-116.617326	0.270144708	0.000001360	-0.000000051			
4F5/2			1.260390910	0.000240194		-0.000000023	0.000000003	
5S1/2			1.042666701	0.000032684	-0.000001318			
5P1/2			0.757029578	0.000020190	-0.000000495			
5P3/2			0.686752458	0.000009871	-0.000000176			
6S1/2			0.650006681	0.000020766	-0.000001533			
4F5/2 -- ( 5)	15.068038	-79.337699	0.269990903	0.000001601	-0.000000050			
5S1/2			0.874454000	0.000113758		-0.000000000	0.000000000	
5P1/2			0.685387193	0.000008063	-0.000000157			
5P3/2			0.622201802	0.000009412	-0.000000175			
6S1/2			0.602358688	0.000004610	-0.000000030			
5S1/2 -- ( 2)	9.291436	-56.373788	0.264315670	0.000000641	-0.000000000			
5P1/2			0.623776270	0.000014220		-0.000462010	0.000009412	
5P3/2			0.517671699	0.000013569	-0.000001766			
6S1/2			0.502414030	0.000010228	-0.000002478			
5P1/2 -- ( 2)	7.193577	-49.266370	0.255548371	0.000000821	-0.000000359			
5P3/2			0.551468811	0.000018934		-0.000023019	0.000000712	
6S1/2			0.506618336	0.000002826	-0.000000009			
5P3/2 -- ( 4)	6.171384	-46.065344	0.254884730	0.000001547	-0.000000226			
6S1/2			0.501670624	0.000010482		-0.000000218	0.000000150	
6S1/2 -- ( 2)	0.946185	-17.320204	0.252955489	0.000001790	-0.000000259			
ETOT	-10014.38584	10828.84219	-24516.92544	3665.93330	9.822517737	-1.030052017	-1.050878671	0.022512826

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
SAMARIUM 4F6 Z=62 A=152 R=1.21288E-04 A.U.							
1S1/2 -- ( 2)	2230.952333	-4262.332974	41.584903365	3.292617242		-0.483874121	0.010760127
2S1/2			12.674478887	0.165771597	-0.019241156		
2P1/2			15.148981443	0.343743569	-0.049809448		
2P3/2			13.791498370	0.169007241	-0.048873472		
3S1/2			5.188934285	0.033810706	-0.004195749		
3P1/2			5.612811074	0.064874335	-0.009401419		
3P3/2			5.249249972	0.032902420	-0.009804363		
3D3/2			5.279479412	0.001429367	-0.000179921		
3D5/2			5.167987612	0.000579929	-0.000186157		
4S1/2			2.302117702	0.007953115	-0.001000224		
4P1/2			2.318817805	0.014214811	-0.002060186		
4P3/2			2.185042293	0.007170966	-0.002149573		
4D3/2			1.998475946	0.000310364	-0.000039227		
4D5/2			1.960696269	0.000125223	-0.000040508		
4F5/2			1.356209627	0.000000327	-0.000000038		
5S1/2			0.915211516	0.001323660	-0.000166937		
5P1/2			0.818048454	0.001909418	-0.000276743		
5P3/2			0.764778602	0.000926094	-0.000277915		
6S1/2			0.285308930	0.000109942	-0.000013871		
2S1/2 -- ( 2)	501.052007	-1013.019435	9.375060272	0.057830884		-0.060321940	0.001286038
2P1/2			9.205876735	0.017739214	-0.000948938		
2P3/2			8.858561344	0.029130880	-0.000339447		
3S1/2			4.388830634	0.006441838	-0.001576708		
3P1/2			4.727871963	0.010294039	-0.001624396		
3P3/2			4.524260761	0.008901187	-0.001148553		
3D3/2			4.954496499	0.007061465	-0.000979588		
3D5/2			4.871291249	0.003142216	-0.000968687		
4S1/2			2.122333003	0.001503355	-0.000386215		
4P1/2			2.129107870	0.002341522	-0.000380570		
4P3/2			2.031102477	0.001969206	-0.000277968		
4D3/2			1.938190288	0.001153772	-0.000168173		
4D5/2			1.905965919	0.000533423	-0.000167139		
4F5/2			1.355404066	0.000030091	-0.000003983		
5S1/2			0.885542023	0.000249740	-0.000064689		
5P1/2			0.792661425	0.000316277	-0.000051650		
5P3/2			0.744986266	0.000254709	-0.000036484		
6S1/2			0.282847376	0.000020738	-0.000005377		
2P1/2 -- ( 2)	500.887857	-1012.340616	11.309146881	0.131003019		-0.003619762	0.000117122
2P3/2			10.346384631	0.019985493	-0.000013334		
3S1/2			4.624245494	0.004410064	-0.000324237		
3P1/2			4.715756851	0.009935306	-0.001498848		
3P3/2			4.692005352	0.004204897	-0.000116141		
3D3/2			4.946702884	0.021204188	-0.005046775		
3D5/2			5.004396422	0.000697750	-0.000153625		
4S1/2			2.172078671	0.001021612	-0.000382979		
4P1/2			2.131346994	0.002101978	-0.000345647		
4P3/2			2.066060267	0.000911371	-0.000029399		
4D3/2			1.938221942	0.003644982	-0.000890693		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
SAMARIUM 4F6 Z=62 A=152 R=1.21288E-04 A.U.							
4D5/2			1.929357492	0.000138933	-0.000028812		
4F5/2			1.355536647	0.000036615	-0.000007666		
5S1/2			0.893654985	0.000169462	-0.000014026		
5P1/2			0.793067581	0.000280541	-0.000046796		
5P3/2			0.749466554	0.000117551	-0.000003891		
6S1/2			0.283519412	0.000014069	-0.000001167		
2P3/2 -- ( 4)	419.289561	-902.365904	10.098011193	0.072150443		-0.000339049	0.000024755
3S1/2			4.569982015	0.005706731	-0.000378093		
3P1/2			4.843087008	0.003527999	-0.000148895		
3P3/2			4.541530793	0.007979669	-0.000714244		
3D3/2			5.043966163	0.006268368	-0.000630825		
3D5/2			4.873166534	0.010613783	-0.003012467		
4S1/2			2.159735425	0.001279369	-0.000092719		
4P1/2			2.153134414	0.000756291	-0.000036867		
4P3/2			2.036770057	0.001665442	-0.000164146		
4D3/2			1.954046314	0.001079222	-0.000109708		
4D5/2			1.907463765	0.001782871	-0.000520140		
4F5/2			1.355630361	0.000021163	-0.000002093		
5S1/2			0.891613364	0.000210897	-0.000015556		
5P1/2			0.795860683	0.000101193	-0.000005056		
5P3/2			0.745756424	0.000213418	-0.000021369		
6S1/2			0.283349976	0.000017494	-0.000001293		
3S1/2 -- ( 2)	152.192554	-368.010850	3.524466767	0.003310732		-0.012720178	0.000269561
3P1/2			3.212915906	0.001202676	-0.000029282		
3P3/2			3.126263242	0.001818414	-0.000089787		
3D3/2			3.538885873	0.001104075	-0.000035374		
3D5/2			3.511482498	0.001482603	-0.000039418		
4S1/2			1.875761419	0.000490209	-0.000175233		
4P1/2			1.889492814	0.000574562	-0.000101295		
4P3/2			1.811807056	0.000557490	-0.000067053		
4D3/2			1.744131894	0.000253103	-0.000023996		
4D5/2			1.720622768	0.000260097	-0.000021971		
4F5/2			1.325639103	0.000124796	-0.000017379		
5S1/2			0.846756413	0.000081117	-0.000029967		
5P1/2			0.761349117	0.000080779	-0.000014665		
5P3/2			0.717434986	0.000074295	-0.000009525		
6S1/2			0.279647665	0.000006731	-0.000002495		
3P1/2 -- ( 2)	149.092488	-363.000928	3.684562124	0.006457692		-0.000841617	0.000027004
3P3/2			3.409870564	0.000979180	-0.000001830		
3D3/2			3.438348569	0.002393716	-0.000150140		
3D5/2			3.659058896	0.001106736	-0.000006047		
4S1/2			1.927279051	0.000441626	-0.000054556		
4P1/2			1.857329148	0.000660747	-0.000151614		
4P3/2			1.833784867	0.000265953	-0.000013290		
4D3/2			1.749646847	0.000613835	-0.000091841		
4D5/2			1.734404165	0.000171722	-0.000005977		
4F5/2			1.321478924	0.000211791	-0.000046268		
5S1/2			0.854123917	0.000070992	-0.000009325		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
SAMARIUM 4F6 Z=62 A=152 R=1.21288E-04 A.U.							
5P1/2			0.757942294	0.000087024	-0.000021011		
5P3/2			0.720052544	0.000034444	-0.00001919		
6S1/2			0.280248274	0.000005870	-0.000000777		
3P3/2 -- ( 4)	130.082121	-335.232629	3.382013156	0.003687189		-0.000080729	0.000005845
3D3/2			3.562026021	0.000845861	-0.000009790		
3D5/2			3.418632698	0.002059657	-0.000055281		
4S1/2			1.911463501	0.000589183	-0.000067579		
4P1/2			1.895679012	0.000257575	-0.000017586		
4P3/2			1.793923742	0.000532101	-0.000073526		
4D3/2			1.743710402	0.000203365	-0.000018095		
4D5/2			1.715823000	0.000485410	-0.000066448		
4F5/2			1.325679238	0.000109069	-0.000011019		
5S1/2			0.851631046	0.000092607	-0.000011142		
5P1/2			0.762047916	0.000034181	-0.000002585		
5P3/2			0.715463247	0.000067182	-0.000009852		
6S1/2			0.280042508	0.000007637	-0.000000924		
3D3/2 -- ( 4)	125.081985	-327.603408	3.831813354	0.006026190		-0.000000554	0.000000051
3D5/2			3.842370583	0.001134986	-0.000000018		
4S1/2			1.956959134	0.000246432	-0.000005781		
4P1/2			1.918431731	0.000459854	-0.000029732		
4P3/2			1.853126322	0.000181611	-0.000004474		
4D3/2			1.746464531	0.000555891	-0.000048623		
4D5/2			1.756530808	0.000184048	-0.000002430		
4F5/2			1.318291209	0.000467905	-0.000115316		
5S1/2			0.858666997	0.000039726	-0.000001173		
5P1/2			0.765186662	0.000057976	-0.000003977		
5P3/2			0.722435385	0.000023011	-0.000000653		
6S1/2			0.280621625	0.000003286	-0.000000100		
3D5/2 -- ( 6)	120.616813	-320.648990	3.782599744	0.005197805		-0.000000118	0.000000016
4S1/2			1.951724586	0.000294719	-0.000005799		
4P1/2			1.928561781	0.000201705	-0.000002755		
4P3/2			1.841182397	0.000363934	-0.000015102		
4D3/2			1.776316465	0.000150730	-0.000002570		
4D5/2			1.729563337	0.000513793	-0.000031869		
4F5/2			1.333913787	0.000096559	-0.000007289		
5S1/2			0.857834782	0.000046625	-0.000001175		
5P1/2			0.766252070	0.000026136	-0.000000462		
5P3/2			0.721043454	0.000044585	-0.000002012		
6S1/2			0.280552865	0.000003849	-0.000000100		
4S1/2 -- ( 2)	47.033825	-153.623465	1.548092724	0.000264189		-0.003014400	0.000063795
4P1/2			1.356846645	0.000139338	-0.000010434		
4P3/2			1.323577569	0.000157897	-0.000021108		
4D3/2			1.369647478	0.000119973	-0.000011719		
4D5/2			1.357702993	0.000103560	-0.000012269		
4F5/2			1.136284730	0.000059968	-0.000006372		
5S1/2			0.778092623	0.000030626	-0.000013094		
5P1/2			0.711442583	0.000019450	-0.000003880		
5P3/2			0.672958727	0.000018986	-0.000002777		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
SAMARIUM 4F6 Z=62 A=152 R=1.21288E-04 A.U.								
4P1/2 -- ( 2)	43.825215	-147.112785	0.274171012	0.000002547	-0.000001116			
4P3/2			1.513028644	0.000461739		-0.000192299	0.000006159	
4D3/2			1.399247538	0.000068494	-0.000000223			
4D5/2			1.272054634	0.000265660	-0.000045199			
4F5/2			1.373002229	0.000063338	-0.000001683			
5S1/2			1.107525793	0.000094632	-0.000015261			
5P1/2			0.786964163	0.000039063	-0.000005676			
5P3/2			0.699468487	0.000030979	-0.000008521			
6S1/2			0.674543863	0.000011753	-0.000000728			
4P3/2 -- ( 4)	38.456248	-137.630466	0.274805826	0.000003135	-0.000000471			
4D3/2			1.391407273	0.000263252		-0.000018326	0.000001324	
4D5/2			1.343402220	0.000080345	-0.000003944			
4F5/2			1.277372411	0.000166349	-0.000020220			
5S1/2			1.112082672	0.000045610	-0.000003150			
5P1/2			0.781529844	0.000049785	-0.000007117			
5P3/2			0.708489960	0.000012876	-0.000001049			
6S1/2			0.665220683	0.000023855	-0.000003923			
4D3/2 -- ( 4)	32.152414	-123.965767	0.274381879	0.000003938	-0.000000578			
4D5/2			1.307893537	0.000302085		-0.000000125	0.000000012	
4F5/2			1.311651820	0.000057916	-0.000000002			
5S1/2			1.035163983	0.000138992	-0.000023527			
5P1/2			0.776104762	0.000017851	-0.000000545			
5P3/2			0.697987067	0.000033130	-0.000003341			
6S1/2			0.666723761	0.000009678	-0.000000393			
4D5/2 -- ( 6)	30.975662	-121.613927	0.273979983	0.000001422	-0.000000053			
4F5/2			1.293125151	0.000259380		-0.000000026	0.000000004	
5S1/2			1.082143742	0.000035877	-0.000001419			
5P1/2			0.773986159	0.000021561	-0.000000532			
5P3/2			0.702145353	0.000010545	-0.000000188			
6S1/2			0.663013438	0.000021984	-0.000001617			
4F5/2 -- ( 6)	16.318072	-84.085058	0.273821329	0.000001674	-0.000000052			
5S1/2			0.914979889	0.000129063		-0.000000030	0.000000000	
5P1/2			0.705471427	0.000008734	-0.000000157			
5P3/2			0.640147389	0.000010182	-0.000000171			
6S1/2			0.617953489	0.000004964	-0.000000028			
5S1/2 -- ( 2)	9.705959	-58.556030	0.268568639	0.000000681	-0.000000000			
5P1/2			0.637246676	0.000015157		-0.000502495	0.000010631	
5P3/2			0.528878924	0.000014358	-0.000001863			
6S1/2			0.512553350	0.000010881	-0.000002645			
5P1/2 -- ( 2)	7.508416	-51.169987	0.259322654	0.000000854	-0.000000371			
5P3/2			0.563441203	0.000020182		-0.000026039	0.000000834	
6S1/2			0.516894768	0.00002972	-0.000000011			
5P3/2 -- ( 4)	6.394946	-47.695596	0.258668053	0.000001601	-0.000000233			
6S1/2			0.511182351	0.000011076		-0.000002385	0.000000172	
6S1/2 -- ( 2)	0.966489	-17.839734	0.256663811	0.000001862	-0.000000269			
ETOT	-10421.08088	11299.72667	-25550.07654	3821.07551	10.391413487	-1.091072370	-1.132074733	0.025213065

TABLE 1.-- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
EUROPIUM 4F7 Z=63 A=153 R=1.21288E-04 A.U.							
1S1/2 -- ( 2)	2318.201989	-4419.779638	42.388331630	3.464116274		-0.520082917	0.012008233
2S1/2			12.935791366	0.175042040	-0.020354287		
2P1/2			15.477280981	0.363046592	-0.052425569		
2P3/2			14.042422285	0.177836583	-0.051426866		
3S1/2			5.305518938	0.035879088	-0.004461032		
3P1/2			5.745889361	0.068869730	-0.009942383		
3P3/2			5.360970553	0.034874882	-0.010392936		
3D3/2			5.396956949	0.001523882	-0.000191294		
3D5/2			5.279121934	0.000617652	-0.000198271		
4S1/2			2.357403100	0.008475089	-0.001068027		
4P1/2			2.378148172	0.015166297	-0.002189541		
4P3/2			2.235798177	0.007635134	-0.002289017		
4D3/2			2.050331113	0.000333940	-0.000042093		
4D5/2			2.010082595	0.000134555	-0.000043532		
4F5/2			1.410474186	0.000000374	-0.000000043		
4F7/2			1.387547314	0.000000140	-0.000000046		
5S1/2			0.934538219	0.001401243	-0.000177083		
5P1/2			0.835447165	0.002018051	-0.000291346		
5P3/2			0.778667177	0.000973992	-0.000292331		
6S1/2			0.288956787	0.000114068	-0.000014421		
2S1/2 -- ( 2)	522.532759	-1052.536256	9.564404366	0.061310918		-0.065305114	0.001444431
2P1/2			9.396794878	0.018799288	-0.000050254		
2P3/2			9.029232514	0.030727229	-0.000370786		
3S1/2			4.483315799	0.006863986	-0.001680159		
3P1/2			4.834004057	0.011010169	-0.001736718		
3P3/2			4.619015902	0.009427444	-0.001213690		
3D3/2			5.063342450	0.007517470	-0.001042532		
3D5/2			4.975485064	0.003342309	-0.001030838		
4S1/2			2.171873054	0.001608508	-0.000413323		
4P1/2			2.181634700	0.002516828	-0.000408911		
4P3/2			2.077565183	0.002095898	-0.000295457		
4D3/2			1.987943793	0.001236140	-0.000180223		
4D5/2			1.953644817	0.000571247	-0.000179101		
4F5/2			1.409592806	0.000034162	-0.000004522		
4F7/2			1.386730988	0.000012377	-0.000004367		
5S1/2			0.904121962	0.000265444	-0.000068774		
5P1/2			0.809396129	0.000336749	-0.000054972		
5P3/2			0.758571672	0.000267799	-0.000038313		
6S1/2			0.286483509	0.000021603	-0.000005603		
2P1/2 -- ( 2)	522.320310	-1051.811134	11.547968484	0.138930707		-0.004074342	0.000136441
2P3/2			10.548595066	0.021042462	-0.000015090		
3S1/2			4.725681695	0.004696531	-0.000344922		
3P1/2			4.822120594	0.010598925	-0.001599811		
3P3/2			4.791568125	0.004461736	-0.000123165		
3D3/2			5.056015660	0.022572341	-0.005372787		
3D5/2			5.112085857	0.000740923	-0.000163413		
4S1/2			2.223294559	0.001092608	-0.000088703		
4P1/2			2.184100993	0.002253502	-0.000370907		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
EUROPIUM	4F7	Z=63	A=153	R=1.21288E-04	A.U.		
	4P3/2		2.113678132	0.000971518	-0.000031349		
	4D3/2		1.988104702	0.003908295	-0.000955357		
	4D5/2		1.977826601	0.000148750	-0.000030888		
	4F5/2		1.409740187	0.000041506	-0.000008692		
	4F7/2		1.387151173	0.000002334	-0.000000879		
	5S1/2		0.912452774	0.000180046	-0.000014896		
	5P1/2		0.899832753	0.000297928	-0.000049746		
	5P3/2		0.763143328	0.000123780	-0.000004099		
	6S1/2		0.287159863	0.000014650	-0.000001215		
2P3/2 --	( 4)	434.449148	-933.544282	10.280924189	0.076010214	-0.000373552	0.000028250
	3S1/2		4.667887386	0.006066281	-0.000404466		
	3P1/2		4.950493559	0.003752022	-0.000159131		
	3P3/2		4.635097588	0.008459702	-0.000758971		
	3D3/2		5.154107416	0.006674273	-0.000670859		
	3D5/2		4.976173792	0.011290608	-0.003204852		
	4S1/2		2.210092735	0.001364812	-0.000099500		
	4P1/2		2.206040085	0.000808228	-0.000039605		
	4P3/2		2.083069039	0.001772718	-0.000175201		
	4D3/2		2.004152867	0.001156337	-0.000117411		
	4D5/2		1.954995462	0.001907872	-0.000556837		
	4F5/2		1.409835918	0.000024126	-0.000002386		
	4F7/2		1.386768767	0.000021031	-0.000006749		
	5S1/2		0.910283505	0.000223472	-0.000016581		
	5P1/2		0.812615002	0.000107122	-0.000005381		
	5P3/2		0.759313076	0.000224371	-0.000022529		
	6S1/2		0.286983417	0.000018168	-0.000001351		
3S1/2 --	( 2)	159.376504	-382.928547	3.600814913	0.003536454	-0.013849152	0.000304442
	3P1/2		3.284394626	0.001279744	-0.000030261		
	3P3/2		3.192817159	0.001934654	-0.000097049		
	3D3/2		3.616953770	0.001175886	-0.000037266		
	3D5/2		3.588018248	0.001580225	-0.000041716		
	4S1/2		1.918932321	0.000526140	-0.000188133		
	4P1/2		1.935166203	0.000622477	-0.000109712		
	4P3/2		1.852777945	0.000594573	-0.000071597		
	4D3/2		1.788189567	0.000273981	-0.000026071		
	4D5/2		1.763209349	0.000279702	-0.000023802		
	4F5/2		1.377529391	0.000139520	-0.000019437		
	4F7/2		1.356304428	0.000061789	-0.000018832		
	5S1/2		0.864594037	0.000086488	-0.000031957		
	5P1/2		0.777489341	0.000086651	-0.000015723		
	5P3/2		0.730674071	0.000078286	-0.000010046		
	6S1/2		0.283287242	0.000007033	-0.000002608		
3P1/2 --	( 2)	156.218091	-377.860708	3.767973469	0.006906372	-0.000953897	0.000031667
	3P3/2		3.483976733	0.001037499	-0.000002096		
	3D3/2		3.516095401	0.002552782	-0.000159446		
	3D5/2		3.740538285	0.001180589	-0.000006458		
	4S1/2		1.972106850	0.000047248	-0.000058351		
	4P1/2		1.902373882	0.000710903	-0.000163361		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
EUROPIUM	4F7	Z=63	A=153	R=1.21288E-04	A.U.		
4P3/2			1.875594979	0.000283558	-0.000014226		
4D3/2			1.794150989	0.000663884	-0.000099649		
4D5/2			1.777631205	0.000184513	-0.000006455		
4F5/2			1.373182954	0.000236806	-0.000051754		
4F7/2			1.362348158	0.000024994	-0.000005431		
5S1/2			0.872153243	0.000075472	-0.000009914		
5P1/2			0.774056497	0.000092752	-0.000022424		
5P3/2			0.733359994	0.000036287	-0.000002029		
6S1/2			0.283891384	0.000006117	-0.000000809		
3P3/2 -- ( 4)	135.657910	-347.926420	3.452543276	0.003923270		-0.000089663	0.000006722
3D3/2			3.638890941	0.000898580	-0.000010064		
3D5/2			3.491835772	0.002190925	-0.000057398		
4S1/2			1.955320664	0.000632171	-0.000072810		
4P1/2			1.941219239	0.000276842	-0.000019002		
4P3/2			1.834233462	0.000569077	-0.000078849		
4D3/2			1.787526252	0.000220763	-0.000019733		
4D5/2			1.758041964	0.000524427	-0.000072408		
4F5/2			1.377502780	0.000121924	-0.000012316		
4F7/2			1.350524569	0.000114462	-0.000034535		
5S1/2			0.869524501	0.000098669	-0.000011917		
5P1/2			0.778162597	0.000036384	-0.000002765		
5P3/2			0.728650626	0.000070973	-0.000010434		
6S1/2			0.283678708	0.000007975	-0.000000969		
3D3/2 -- ( 4)	130.632181	-340.298129	3.918154663	0.006431159		-0.000000644	0.000000062
3D5/2			3.927833960	0.001209370	-0.000000021		
4S1/2			2.002488487	0.000263798	-0.000006221		
4P1/2			1.965151160	0.000493388	-0.000032017		
4P3/2			1.895359019	0.000194106	-0.000004791		
4D3/2			1.790923493	0.000597349	-0.000052598		
4D5/2			1.800386055	0.000197742	-0.000002628		
4F5/2			1.369847172	0.000523744	-0.000129104		
4F7/2			1.366821630	0.000016260	-0.000002051		
5S1/2			0.876771310	0.000042249	-0.000001254		
5P1/2			0.781426830	0.000061617	-0.000004243		
5P3/2			0.735764436	0.000024299	-0.000000692		
6S1/2			0.284263367	0.000003426	-0.000000104		
3D5/2 -- ( 6)	125.820892	-332.829056	3.865591344	0.005539928		-0.000000136	0.000000019
4S1/2			1.996939190	0.000315238	-0.000006241		
4P1/2			1.975331754	0.000216254	-0.000002975		
4P3/2			1.882973403	0.000388540	-0.000016133		
4D3/2			1.821418183	0.000161957	-0.000002784		
4D5/2			1.772543421	0.000551032	-0.000034422		
4F5/2			1.386505744	0.000108174	-0.000008158		
4F7/2			1.352416089	0.000324866	-0.000090220		
5S1/2			0.875894579	0.000049543	-0.000001256		
5P1/2			0.782482317	0.000027756	-0.000000494		
5P3/2			0.734336677	0.000047028	-0.000002125		
6S1/2			0.284192365	0.000004008	-0.000000105		



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
EUROPIUM	4F7	Z=63	A=153	R=1.21288E-04	A.U.		
4S1/2 -- ( 2)	49.430186	-160.019057	1.584002124	0.000283770		-0.003296381	0.000072364
4P1/2			1.389262633	0.000148305	-0.000010934		
4P3/2			1.353957745	0.000169311	-0.000022783		
4D3/2			1.403365810	0.000128389	-0.000012462		
4D5/2			1.390691073	0.000111377	-0.000013077		
4F5/2			1.176782539	0.000065571	-0.000006899		
4F7/2			1.162452357	0.000054709	-0.000006819		
5S1/2			0.794801013	0.000032685	-0.000013958		
5P1/2			0.726804145	0.000020917	-0.000004163		
5P3/2			0.685758611	0.000020012	-0.000002935		
6S1/2			0.277828948	0.000002664	-0.000001166		
4P1/2 -- ( 2)	46.130436	-153.381723	1.550019690	0.000497331		-0.000219193	0.000007263
4P3/2			1.432174646	0.000072907	-0.000000258		
4D3/2			1.304082077	0.000285027	-0.000048315		
4D5/2			1.407099434	0.000068234	-0.000001804		
4F5/2			1.147204895	0.000103552	-0.000016532		
4F7/2			1.162023438	0.000036375	-0.000001829		
5S1/2			0.803969081	0.000041443	-0.000006015		
5P1/2			0.714707753	0.000033083	-0.000009091		
5P3/2			0.687454809	0.000012368	-0.000000768		
6S1/2			0.278474076	0.000003263	-0.000000490		
4P3/2 -- ( 4)	40.278390	-143.113350	1.422912046	0.000281881		-0.000020455	0.000001531
4D3/2			1.376008286	0.000085630	-0.0000004137		
4D5/2			1.308022409	0.000178076	-0.000021316		
4F5/2			1.150996617	0.000049709	-0.000003386		
4F7/2			1.123233851	0.000070393	-0.000009610		
5S1/2			0.798238800	0.000053174	-0.000007609		
5P1/2			0.723731910	0.000013748	-0.000001123		
5P3/2			0.677898772	0.000025251	-0.000004149		
6S1/2			0.278035635	0.000004124	-0.000000606		
4D3/2 -- ( 4)	33.828374	-129.234816	1.341568075	0.000325981		-0.000000147	0.000000014
4D5/2			1.345018441	0.000062380	-0.000000002		
4F5/2			1.072114749	0.000151454	-0.000025312		
4F7/2			1.117594917	0.000030340	-0.000000433		
5S1/2			0.793117617	0.000019044	-0.000000583		
5P1/2			0.713348520	0.000035312	-0.000003560		
5P3/2			0.679675016	0.000010233	-0.000000413		
6S1/2			0.277664127	0.000001488	-0.000000056		
4D5/2 -- ( 6)	32.544916	-126.688747	1.325639476	0.000279408		-0.000000031	0.000000004
4F5/2			1.120610799	0.000039195	-0.000001523		
4F7/2			1.069571415	0.000115691	-0.000017146		
5S1/2			0.790888060	0.000022987	-0.000000569		
5P1/2			0.717500246	0.000011245	-0.000000201		
5P3/2			0.675889931	0.000023234	-0.000001702		
6S1/2			0.277500241	0.000001751	-0.000000055		
4F5/2 -- ( 6)	17.589398	-88.859942	0.954409504	0.000145272		-0.000000000	0.000000000
4F7/2			0.959520757	0.000021907	-0.000000000		
5S1/2			0.725062660	0.000009430	-0.000000157		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
EUROPIUM	4F7	Z=63	A=153	R=1.21288E-04	A.U.			
	5P1/2			0.657681019	0.000010981	-0.000000167		
	5P3/2			0.633070236	0.000005327	-0.000000027		
	6S1/2			0.272599182	0.000000723	-0.000000000		
4F7/2 -- ( 1)	17.106446	-87.415543	0.000000000	0.000000000		-0.000000000	0.000000000	
	5S1/2			0.720295216	0.000011977	-0.000000166		
	5P1/2			0.662373930	0.000007124	-0.000000021		
	5P3/2			0.625807028	0.000009770	-0.000000085		
	6S1/2			0.272146767	0.000000890	-0.000000000		
5S1/2 -- ( 2)	10.129123	-60.777881	0.650693310	0.060016133		-0.000545905	0.000011980	
	5P1/2			0.540071191	0.000015177	-0.000001964		
	5P3/2			0.522637203	0.000011564	-0.000002820		
	6S1/2			0.262928871	0.000000889	-0.000000385		
5P1/2 -- ( 2)	7.829730	-53.108309	0.575402132	0.000021481		-0.000029405	0.000000974	
	5P3/2			0.527118371	0.000003120	-0.000000012		
	6S1/2			0.262283034	0.000001658	-0.000000240		
5P3/2 -- ( 4)	6.619478	-49.344768	0.520609609	0.000011686		-0.000002630	0.000000197	
	6S1/2			0.260149302	0.000001938	-0.000000279		
6S1/2 -- ( 2)	0.987203	-18.359109	0.208022196	0.000000443		-0.000044449	0.000000975	
ETOT	-10837.95253	11785.01226	-26612.65380	3981.05227	10.981886314	-1.154590735	-1.218750868	0.028184785
GADOLINIUM	4F7 5D1	Z=64	A=158	R=1.22595E-04	A.U.			
1S1/2 -- ( 2)	2407.934793	-4581.127361	43.198978513	3.641893910		-0.558535545	0.013376633	
	2S1/2		13.199479289	0.184681546		-0.021514493		
	2P1/2		15.809356546	0.383113579		-0.055128171		
	2P3/2		14.293687186	0.186953210		-0.054063192		
	3S1/2		5.422612287	0.038029678		-0.004737521		
	3P1/2		5.879600392	0.073017184		-0.010499809		
	3P3/2		5.472426667	0.036916884		-0.011002139		
	3D3/2		5.513816216	0.001621189		-0.000202940		
	3D5/2		5.389424288	0.000656419		-0.000210719		
	4S1/2		2.415567127	0.009041687		-0.001141722		
	4P1/2		2.441364406	0.016209077		-0.002330729		
	4P3/2		2.290613718	0.008149396		-0.002443481		
	4D3/2		2.109048986	0.000361105		-0.000045391		
	4D5/2		2.066517211	0.000145377		-0.000047039		
	4F5/2		1.526752726	0.000000462		-0.000000053		
	4F7/2		1.507494264	0.000000173		-0.000000057		
	5S1/2		0.969594239	0.001543035		-0.000195404		
	5P1/2		0.874430074	0.002264675		-0.000325639		
	5P3/2		0.814742747	0.001095959		-0.000328985		
	5D3/2		0.471203690	0.000016898		-0.000002125		
	6S1/2		0.308958157	0.000136118		-0.000017244		
2S1/2 -- ( 2)	544.679946	-1093.101576	9.755185252	0.064947813		-0.070639376	0.001619319	

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
GADOLINIUM 4F7 5D1 Z=64 A=158 R=1.22595E-04 A.U.							
2P1/2			9.589362835	0.019907434	-0.000051611		
2P3/2			9.200606265	0.032381721	-0.000405019		
3S1/2			4.578128973	0.007305141	-0.001788127		
3P1/2			4.940485208	0.011759445	-0.001854081		
3P3/2			4.713648306	0.009969385	-0.001280231		
3D3/2			5.171757628	0.007989663	-0.001107659		
3D5/2			5.079081855	0.003548982	-0.0010995123		
4S1/2			2.223761904	0.001722960	-0.000442803		
4P1/2			2.237308391	0.002709573	-0.000440039		
4P3/2			2.127468452	0.002235803	-0.000314696		
4D3/2			2.044104578	0.001331657	-0.000194190		
4D5/2			2.007949005	0.000615358	-0.000193063		
4F5/2			1.525713799	0.000041757	-0.000005528		
4F7/2			1.506527915	0.000015212	-0.000005370		
5S1/2			0.937139649	0.000293472	-0.000076056		
5P1/2			0.846026451	0.000380691	-0.000062124		
5P3/2			0.792901949	0.000301190	-0.000043040		
5D3/2			0.468226034	0.000059977	-0.000008807		
6S1/2			0.306098570	0.000025881	-0.000006715		
2P1/2 -- ( 2)	544.422378	-1092.334443	11.789001281	0.147221632		-0.004579827	0.000158590
2P3/2			10.751693797	0.022133605	-0.000017044		
3S1/2			4.827528499	0.004995946	-0.000366459		
3P1/2			4.928836573	0.011293158	-0.001705192		
3P3/2			4.891022724	0.004727711	-0.000130408		
3D3/2			5.164922546	0.023986944	-0.005709845		
3D5/2			5.219092986	0.000785225	-0.000173511		
4S1/2			2.277012733	0.001169919	-0.000094920		
4P1/2			2.240015654	0.002420263	-0.000398657		
4P3/2			2.164889632	0.001038125	-0.000033505		
4D3/2			2.044403119	0.004213236	-0.001030230		
4D5/2			2.033107072	0.000160161	-0.000033307		
4F5/2			1.525890204	0.000050659	-0.000010613		
4F7/2			1.507026584	0.000002865	-0.000001080		
5S1/2			0.946042403	0.000198985	-0.000016458		
5P1/2			0.846524944	0.000335942	-0.000056151		
5P3/2			0.797895277	0.000139438	-0.000004621		
5D3/2			0.468249043	0.000191146	-0.000046905		
6S1/2			0.306881687	0.000017545	-0.000001455		
2P3/2 -- ( 4)	449.881007	-965.263339	10.463853285	0.080000373		-0.000410897	0.000032163
3S1/2			4.766028754	0.006441159	-0.000432201		
3P1/2			5.058082872	0.003985144	-0.000169830		
3P3/2			4.728399488	0.008956551	-0.000805290		
3D3/2			5.263668777	0.007094130	-0.000712184		
3D5/2			5.078467037	0.011989716	-0.003403578		
4S1/2			2.262872646	0.001457643	-0.000106901		
4P1/2			2.262134337	0.000865200	-0.000042614		
4P3/2			2.132797983	0.001891480	-0.000187429		
4D3/2			2.060762906	0.001245597	-0.000126324		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
GADOLINIUM 4F7 5D1 Z=64 A=158 R=1.22595E-04 A.U.							
4D5/2			2.009139868	0.002053588	-0.000599610		
4F5/2			1.525994826	0.000029617	-0.000002928		
4F7/2			1.506566250	0.000025954	-0.000008333		
5S1/2			0.943644315	0.000246297	-0.000018386		
5P1/2			0.849463858	0.000120398	-0.000006081		
5P3/2			0.793662975	0.000252328	-0.000025410		
5D3/2			0.468984843	0.000056524	-0.000005741		
6S1/2			0.306670324	0.000021697	-0.000001624		
3S1/2 -- ( 2)	166.760199	-398.196539	3.677372353	0.003772559		-0.015060142	0.000343076
3P1/2			3.356058272	0.001360309	-0.000031273		
3P3/2			3.259356474	0.002055398	-0.000104914		
3D3/2			3.694915169	0.001250759	-0.000039286		
3D5/2			3.664388386	0.001681608	-0.000044177		
4S1/2			1.963792856	0.000565231	-0.000202179		
4P1/2			1.983143948	0.000675222	-0.000118979		
4P3/2			1.896301307	0.000635325	-0.000076598		
4D3/2			1.837190030	0.000297991	-0.000028457		
4D5/2			1.810956927	0.000302481	-0.000025919		
4F5/2			1.488513930	0.000167707	-0.000023383		
4F7/2			1.471047341	0.000074932	-0.000022793		
5S1/2			0.895225119	0.000095894	-0.000035449		
5P1/2			0.811488070	0.000098700	-0.000017909		
5P3/2			0.762668453	0.000088244	-0.000011346		
5D3/2			0.458963855	0.000014243	-0.000001447		
6S1/2			0.302427216	0.000008450	-0.000003135		
3P1/2 -- ( 2)	163.538641	-393.064069	3.851572682	0.007375781		-0.001079186	0.000037035
3P3/2			3.558045515	0.001097506	-0.000002395		
3D3/2			3.593668441	0.002719020	-0.000169449		
3D5/2			3.821816542	0.001257205	-0.000006901		
4S1/2			2.018754595	0.000505912	-0.000062484		
4P1/2			1.949630539	0.000766004	-0.000176281		
4P3/2			1.920046893	0.000302967	-0.000015265		
4D3/2			1.843646604	0.000721310	-0.000108592		
4D5/2			1.826131647	0.000199402	-0.000007011		
4F5/2			1.483628717	0.000284704	-0.000062271		
4F7/2			1.478157373	0.000030418	-0.000006578		
5S1/2			0.903283079	0.000083425	-0.000010966		
5P1/2			0.807824420	0.000104913	-0.000025413		
5P3/2			0.765613271	0.000040887	-0.000032298		
5D3/2			0.459277814	0.000034736	-0.000005524		
6S1/2			0.303124383	0.000007325	-0.000000970		
3P3/2 -- ( 4)	141.331096	-360.831887	3.522853318	0.004168115		-0.000099379	0.000007709
3D3/2			3.715405721	0.000953247	-0.000010349		
3D5/2			3.564638613	0.002326865	-0.000059626		
4S1/2			2.000911313	0.000679010	-0.000078546		
4P1/2			1.989035857	0.000298004	-0.000020565		
4P3/2			1.876995766	0.000609930	-0.000084748		
4D3/2			1.836240242	0.000240806	-0.000021621		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
GADOLINIUM 4F7 5D1 Z=64 A=158 R=1.22595E-04 A.U.							
4D5/2			1.805344952	0.000569610	-0.000079298		
4F5/2			1.488394248	0.000146518	-0.000014804		
4F7/2			1.464253335	0.000138545	-0.000041756		
5S1/2			0.900399955	0.000109278	-0.000013258		
5P1/2			0.812169271	0.000041107	-0.000003144		
5P3/2			0.760448600	0.000080162	-0.000011826		
5D3/2			0.458925850	0.000011410	-0.000001075		
6S1/2			0.302671705	0.00009567	-0.000001168		
3D3/2 -- ( 4)	136.269677	-353.188413	4.003965762	0.006850827		-0.000000746	0.000000074
3D5/2			4.012698409	0.001287222	-0.000000024		
4S1/2			2.049854430	0.000282632	-0.000006703		
4P1/2			2.014216600	0.000530183	-0.000034546		
4P3/2			1.940257783	0.000207913	-0.000005145		
4D3/2			1.840315200	0.000645132	-0.0000057189		
4D5/2			1.849643006	0.000213634	-0.000002858		
4F5/2			1.479860609	0.000630411	-0.000155462		
4F7/2			1.483388753	0.000019832	-0.000002487		
5S1/2			0.908156238	0.000046710	-0.000001396		
5P1/2			0.815770372	0.000069459	-0.000004808		
5P3/2			0.768202575	0.000027436	-0.000000785		
5D3/2			0.459244616	0.000028355	-0.000002693		
6S1/2			0.303549459	0.000004103	-0.000000126		
3D5/2 -- ( 6)	131.094067	-345.178136	3.947929514	0.005893686		-0.000000156	0.000000023
4S1/2			2.043963082	0.000337460	-0.000006725		
4P1/2			2.024463615	0.000232168	-0.000003218		
4P3/2			1.927373008	0.000415691	-0.000017281		
4D3/2			1.871644355	0.000174899	-0.000003032		
4D5/2			1.820710202	0.000594216	-0.000037388		
4F5/2			1.498978215	0.000130344	-0.000009822		
4F7/2			1.466664969	0.000393362	-0.000109263		
5S1/2			0.907195616	0.000054715	-0.000001399		
5P1/2			0.816876033	0.000031273	-0.000000562		
5P3/2			0.766637020	0.000053008	-0.000002403		
5D3/2			0.460495445	0.000007795	-0.000000155		
6S1/2			0.303465181	0.000004795	-0.000000126		
4S1/2 -- ( 2)	52.027154	-166.762761	1.621700125	0.000305488		-0.003608739	0.000082093
4P1/2			1.423494175	0.000158111	-0.000011454		
4P3/2			1.386258376	0.000182064	-0.000024635		
4D3/2			1.440419684	0.000137911	-0.000013281		
4D5/2			1.427146782	0.000120461	-0.000013977		
4F5/2			1.260762446	0.000076130	-0.000007898		
4F7/2			1.249884644	0.000065083	-0.000007860		
5S1/2			0.821701903	0.000036379	-0.000015571		
5P1/2			0.757010265	0.000024081	-0.000004796		
5P3/2			0.714323825	0.000022701	-0.000003352		
5D3/2			0.443915464	0.000003525	-0.000000388		
6S1/2			0.296207800	0.000003213	-0.000001410		
4P1/2 -- ( 2)	48.655246	-160.039997	1.589322952	0.000537275		-0.000250141	0.000008568

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
GADOLINIUM 4F7 5D1 Z=64 A=158 R=1.22595E-04 A.U.							
4P3/2			1.467380562	0.000077876	-0.000000299		
4D3/2			1.339386883	0.000306890	-0.000051749		
4D5/2			1.444941313	0.000074011	-0.000001942		
4F5/2			1.228677019	0.000120174	-0.000018884		
4F7/2			1.249948986	0.000043616	-0.000002111		
5S1/2			0.831511113	0.000045820	-0.000006663		
5P1/2			0.744177896	0.000037586	-0.000010384		
5P3/2			0.716244756	0.000013969	-0.000000878		
5D3/2			0.442164870	0.000006494	-0.000000939		
6S1/2			0.296951525	0.000003905	-0.000000588		
4P3/2 -- ( 4)	42.299973	-148.968560	1.456831536	0.000303033		-0.000022870	0.000001771
4D3/2			1.412195896	0.000091648	-0.000004341		
4D5/2			1.342215157	0.000191626	-0.000022490		
4F5/2			1.231721159	0.000057420	-0.000003826		
4F7/2			1.205856338	0.000082955	-0.000010919		
5S1/2			0.825302064	0.000059174	-0.000008496		
5P1/2			0.753661799	0.000015637	-0.000001289		
5P3/2			0.705880283	0.000028650	-0.000004742		
5D3/2			0.442657209	0.000002541	-0.000000172		
6S1/2			0.296437721	0.000004960	-0.000000732		
4D3/2 -- ( 4)	35.773135	-135.047378	1.379909587	0.000354616		-0.000000173	0.000000017
4D5/2			1.383189015	0.000067785	-0.000000002		
4F5/2			1.147240644	0.000173961	-0.000028373		
4F7/2			1.201431833	0.000036435	-0.000000493		
5S1/2			0.820587706	0.0000921200	-0.000000662		
5P1/2			0.743107809	0.000040036	-0.000004062		
5P3/2			0.708182137	0.0000611605	-0.000000471		
5D3/2			0.438248703	0.000009785	-0.000000913		
6S1/2			0.296067973	0.000001792	-0.000000069		
4D5/2 -- ( 6)	34.382130	-132.313906	1.363011881	0.000303615		-0.000000036	0.000000005
4F5/2			1.199870221	0.000045366	-0.000001702		
4F7/2			1.148348460	0.000134710	-0.000019261		
5S1/2			0.818205115	0.000025521	-0.000000647		
5P1/2			0.747414320	0.000012743	-0.000000232		
5P3/2			0.704138926	0.000026296	-0.000001934		
5D3/2			0.441154558	0.000002625	-0.000000050		
6S1/2			0.295878288	0.000002103	-0.000000068		
4F5/2 -- ( 6)	20.160546	-97.712257	1.055073787	0.000183979		-0.000000000	0.000000000
4F7/2			1.064283343	0.000028131	-0.000000000		
5S1/2			0.767865763	0.000010934	-0.000000131		
5P1/2			0.699776547	0.0000612925	-0.000000115		
5P3/2			0.672059069	0.000006310	-0.000000017		
5D3/2			0.426392484	0.000004926	-0.000000021		
6S1/2			0.292056867	0.000000914	-0.000000000		
4F7/2 -- ( 1)	19.706661	-96.479708	0.000000000	0.000000000		-0.000000000	0.000000000
5S1/2			0.764819724	0.000014083	-0.000000139		
5P1/2			0.705953763	0.000008513	-0.000000015		
5P3/2			0.666346397	0.000011598	-0.000000052		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
GADOLINIUM 4F7 501 Z=64 A=158 R=1.22595E-04 A.U.								
5D3/2			0.430136354	0.000002014	-0.000000000			
6S1/2			0.291806781	0.000001119	-0.000000000			
5S1/2 -- ( 2)	10.997525	-64.130576	0.674056640	0.000018080		-0.000616907	0.000014029	
5P1/2			0.561816428	0.000016800	-0.000002150			
5P3/2			0.543788306	0.000013078	-0.000003175			
5D3/2			0.401898039	0.000005668	-0.000000769			
6S1/2			0.279704750	0.000001091	-0.000000480			
5P1/2 -- ( 2)	8.652346	-56.495363	0.600941677	0.000024644		-0.000035244	0.000001207	
5P3/2			0.550449849	0.000003543	-0.000000015			
5D3/2			0.373616310	0.000013855	-0.000003210			
6S1/2			0.279221678	0.000002024	-0.000000296			
5P3/2 -- ( 4)	7.312611	-52.462943	0.543666347	0.000013402		-0.000003100	0.000000240	
5D3/2			0.387307213	0.000003744	-0.000000346			
6S1/2			0.276895316	0.000002385	-0.000000348			
5D3/2 -- ( 1)	2.448301	-30.160233	0.000000000	0.000000000		-0.000000008	0.000000001	
6S1/2			0.244016459	0.000000395	-0.000000003			
6S1/2 -- ( 2)	1.160358	-19.956506	0.222028334	0.000000544		-0.000054433	0.000001238	
ETOT	-11265.26696	12285.10259	-27691.33420	4131.86432	11.601141356	-1.221189628	-1.311068901	0.031451646
TERBIUM 4F9 Z=65 A=158 R=1.22595E-04 A.U.								
1S1/2 -- ( 2)	2500.311345	-4746.567948	44.017631162	3.826227985		-0.599453654	0.014875814	
2S1/2			13.466669834	0.194738235	-0.022727953			
2P1/2			16.146603459	0.404038741	-0.057928659			
2P3/2			14.546542744	0.196402332	-0.056795640			
3S1/2			5.541594809	0.040287853	-0.005028583			
3P1/2			6.015886231	0.077373492	-0.011081461			
3P3/2			5.585247353	0.039055438	-0.011640280			
3D3/2			5.632571708	0.001724229	-0.000215218			
3D5/2			5.501288827	0.000697421	-0.000223884			
4S1/2			2.468425279	0.009585469	-0.001212831			
4P1/2			2.497357537	0.017187307	-0.002461233			
4P3/2			2.336615761	0.008615016	-0.002583388			
4D3/2			2.152973086	0.000383850	-0.000048112			
4D5/2			2.107464404	0.000194239	-0.000049912			
4F5/2			1.512487394	0.000000478	-0.000000055			
4F7/2			1.486236192	0.000000178	-0.000000059			
5S1/2			0.972863308	0.001563630	-0.000198409			
5P1/2			0.869831451	0.002243775	-0.000321303			
5P3/2			0.805560697	0.001071845	-0.000321780			
6S1/2			0.296345869	0.000122479	-0.000015547			
2S1/2 -- ( 2)	567.625161	-1134.861424	9.948327587	0.068767031		-0.076373320	0.001812579	
2P1/2			9.784546648	0.021070350	-0.000052927			
2P3/2			9.373612207	0.034104976	-0.000442239			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TERBIUM	4F9	Z=65	A=158	R=1.22595E-04	A.U.		
	3S1/2		4.674271599	0.007771349	-0.001902280		
	3P1/2		5.048697057	0.012555488	-0.001978687		
	3P3/2		4.809394917	0.010536335	-0.001349598		
	3D3/2		5.281842996	0.008488334	-0.001176403		
	3D5/2		5.184105219	0.003767009	-0.001162978		
	4S1/2		2.271276344	0.001834149	-0.000471442		
	4P1/2		2.287010644	0.002894555	-0.000469866		
	4P3/2		2.169940186	0.002362209	-0.000331939		
	4D3/2		2.086472953	0.001410828	-0.000205758		
	4D5/2		2.047746792	0.000651180	-0.000204438		
	4F5/2		1.511457231	0.000042930	-0.000005683		
	4F7/2		1.485287338	0.000015506	-0.000005476		
	5S1/2		0.940973405	0.000298624	-0.000077396		
	5P1/2		0.842470579	0.000379955	-0.000061971		
	5P3/2		0.784916268	0.000294406	-0.000041996		
	6S1/2		0.293850627	0.000023385	-0.000006067		
2P1/2 --	( 2)	567.305352	-1134.035055	12.033488222	0.155927232	-0.005143005	0.000183984
	2P3/2		10.956812287	0.023265529	-0.000019221		
	3S1/2		4.930901310	0.005312127	-0.000389182		
	3P1/2		5.037314421	0.012028006	-0.001816879		
	3P3/2		4.991710503	0.005006683	-0.000138012		
	3D3/2		5.275539805	0.025480938	-0.006065863		
	3D5/2		5.327609660	0.000831864	-0.000184164		
	4S1/2		2.326107908	0.001244953	-0.000100937		
	4P1/2		2.289947947	0.002579354	-0.000425166		
	4P3/2		2.208367336	0.001098712	-0.000035462		
	4D3/2		2.086911604	0.004466489	-0.001092455		
	4D5/2		2.073466808	0.000169350	-0.000035275		
	4F5/2		1.511634785	0.000052000	-0.000010896		
	4F7/2		1.485778299	0.000002916	-0.000001099		
	5S1/2		0.949737721	0.000202411	-0.000016727		
	5P1/2		0.842968413	0.000334561	-0.000055951		
	5P3/2		0.789660504	0.000136534	-0.000004523		
	6S1/2		0.294535341	0.000015848	-0.000001313		
2P3/2 --	( 4)	465.668300	-997.615009	10.647924793	0.084145945	-0.000451380	0.000036547
	3S1/2		4.865491098	0.006836055	-0.000461702		
	3P1/2		5.167315162	0.004230934	-0.000181186		
	3P3/2		4.822703486	0.009477076	-0.000854036		
	3D3/2		5.374872862	0.007537646	-0.000755753		
	3D5/2		5.182695389	0.012727280	-0.003613261		
	4S1/2		2.311057148	0.001547140	-0.000114148		
	4P1/2		2.312059189	0.000919008	-0.000045491		
	4P3/2		2.175019986	0.001998997	-0.000198598		
	4D3/2		2.103306322	0.001319393	-0.000133642		
	4D5/2		2.048738478	0.002171434	-0.000634248		
	4F5/2		1.511730250	0.000030583	-0.000003022		
	4F7/2		1.485318436	0.000026568	-0.000008534		
	5S1/2		0.947297652	0.000249877	-0.000018760		



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TERBIUM      4F9      Z=65    A=158    R=1.22595E-04    A.U.							
5P1/2			0.845711425	0.000119498	-0.000006064		
5P3/2			0.785589598	0.000246724	-0.000024904		
6S1/2			0.294344361	0.000019548	-0.000001471		
3S1/2 -- ( 2)	174.447807	-413.940717	3.754964003	0.004022721		-0.016370532	0.000386045
3P1/2			3.428798437	0.001445301	-0.000032267		
3P3/2			3.326702846	0.002182562	-0.000113394		
3D3/2			3.774001844	0.001329766	-0.000041377		
3D5/2			3.741798972	0.001788678	-0.000046748		
4S1/2			2.005574863	0.000603434	-0.000215833		
4P1/2			2.026796427	0.000726524	-0.000127959		
4P3/2			1.934330361	0.000672059	-0.000081076		
4D3/2			1.875582871	0.000318473	-0.000030493		
4D5/2			1.847457358	0.000321328	-0.000027672		
4F5/2			1.475012708	0.000170670	-0.000023790		
4F7/2			1.450832901	0.000075767	-0.000023009		
5S1/2			0.899999520	0.000097866	-0.000036164		
5P1/2			0.809415163	0.000099136	-0.000017969		
5P3/2			0.756394176	0.000086342	-0.000011095		
6S1/2			0.290662026	0.000007658	-0.000002839		
3P1/2 -- ( 2)	171.169494	-408.753781	3.936494646	0.007874115		-0.001219923	0.000043237
3P3/2			3.633085675	0.001160219	-0.000002732		
3D3/2			3.672467145	0.002894779	-0.000179957		
3D5/2			3.904288793	0.001338204	-0.000007371		
4S1/2			2.062095724	0.000538388	-0.000066460		
4P1/2			1.992760832	0.000819083	-0.000198661		
4P3/2			1.958835666	0.000320559	-0.000016207		
4D3/2			1.882447384	0.000769943	-0.000116159		
4D5/2			1.863154996	0.000211756	-0.000007466		
4F5/2			1.470354702	0.000289748	-0.000063368		
4F7/2			1.457810299	0.000030789	-0.000006640		
5S1/2			0.907937709	0.000084929	-0.000011153		
5P1/2			0.805933231	0.000104858	-0.000025403		
5P3/2			0.759210881	0.000040037	-0.000002253		
6S1/2			0.291272853	0.000006624	-0.000000876		
3P3/2 -- ( 4)	147.190260	-374.061463	3.593893788	0.004425779		-0.000110017	0.000008825
3D3/2			3.792888356	0.001010697	-0.000010619		
3D5/2			3.638326389	0.002470006	-0.000061845		
4S1/2			2.043233350	0.000724885	-0.000084191		
4P1/2			2.032460380	0.000318318	-0.000022071		
4P3/2			1.914384837	0.000647565	-0.000090162		
4D3/2			1.874333635	0.000258156	-0.000023264		
4D5/2			1.841461865	0.000607510	-0.000085176		
4F5/2			1.474798109	0.000149112	-0.000015056		
4F7/2			1.444145461	0.000140005	-0.000042141		
5S1/2			0.905022721	0.000111532	-0.000013576		
5P1/2			0.810023326	0.000041026	-0.000003147		
5P3/2			0.754262614	0.000078770	-0.000011632		
6S1/2			0.291045887	0.000008675	-0.000001062		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TERBIUM	4F9	Z=65 A=158 R=1.22595E-04 A.U.					
3D3/2 -- ( 4)	142.117459	-366.436391	4.091110555	0.007295101		-0.000000863	0.000000089
3D5/2			4.098806307	0.001369511	-0.000000027		
4S1/2			2.093751971	0.000300954	-0.000007167		
4P1/2			2.058763445	0.000565442	-0.000036968		
4P3/2			1.979319372	0.000220605	-0.000005465		
4D3/2			1.879023755	0.000685499	-0.000061092		
4D5/2			1.887035544	0.000226772	-0.000003048		
4F5/2			1.466714071	0.000642230	-0.000158365		
4F7/2			1.462897241	0.000020091	-0.000002513		
5S1/2			0.912681404	0.000047562	-0.000001424		
5P1/2			0.813531818	0.000069277	-0.0000034808		
5P3/2			0.761639887	0.000026946	-0.000000770		
6S1/2			0.291640575	0.000003711	-0.000000114		
3D5/2 -- ( 6)	136.552079	-357.849800	4.031400477	0.006267403		-0.000000179	0.000000027
4S1/2			2.087532078	0.000359072	-0.000007192		
4P1/2			2.069002885	0.000247374	-0.000003448		
4P3/2			1.966023078	0.000440647	-0.000018317		
4D3/2			1.910737707	0.000185793	-0.000003242		
4D5/2			1.857440750	0.000629817	-0.000039852		
4F5/2			1.485310828	0.000132852	-0.000010002		
4F7/2			1.446664136	0.000397623	-0.0000110423		
5S1/2			0.911711296	0.000055679	-0.000001427		
5P1/2			0.814962257	0.000031149	-0.000000561		
5P3/2			0.760140817	0.000052040	-0.000002358		
6S1/2			0.291564966	0.000004335	-0.000000114		
4S1/2 -- ( 2)	54.427298	-173.240654	1.655986119	0.000325856		-0.003926353	0.000092456
4P1/2			1.454235533	0.000167429	-0.000011975		
4P3/2			1.414572824	0.000193795	-0.000026501		
4D3/2			1.470439428	0.000146408	-0.000014057		
4D5/2			1.456199118	0.000128000	-0.000014821		
4F5/2			1.253004065	0.000077243	-0.000007983		
4F7/2			1.236937100	0.000065538	-0.000007894		
5S1/2			0.827990409	0.000037032	-0.000015775		
5P1/2			0.757217168	0.000024033	-0.000004762		
5P3/2			0.710682680	0.000022063	-0.000003257		
6S1/2			0.285238328	0.000002905	-0.000001267		
4P1/2 -- ( 2)	50.939874	-166.341061	1.624142143	0.000574002		-0.000283120	0.000010014
4P3/2			1.497849907	0.000082117	-0.000000341		
4D3/2			1.367816636	0.000326778	-0.000055090		
4D5/2			1.474819531	0.000078597	-0.000002070		
4F5/2			1.222065804	0.000122203	-0.000019163		
4F7/2			1.237320753	0.000043911	-0.000002124		
5S1/2			0.837739543	0.000046436	-0.000006725		
5P1/2			0.744881985	0.000037521	-0.000010286		
5P3/2			0.712595873	0.000013603	-0.000000849		
6S1/2			0.285902535	0.000003525	-0.000000527		
4P3/2 -- ( 4)	44.018099	-154.342700	1.485469489	0.000321366		-0.000025309	0.000002026
4D3/2			1.440601219	0.000096791	-0.000004538		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TERBIUM	4F9	Z=65	A=158	R=1.22595E-04	A.U.		
	4D5/2			1.368647740	0.000202921	-0.000023623	
	4F5/2			1.224016228	0.000058181	-0.000003861	
	4F7/2			1.193657385	0.000083463	-0.000010966	
	5S1/2			0.831379964	0.000060388	-0.000008660	
	5P1/2			0.753876369	0.000015589	-0.000001281	
	5P3/2			0.702572984	0.000028114	-0.000004610	
	6S1/2			0.285433766	0.000004509	-0.000000664	
4D3/2 -- ( 4)	37.269623	-140.014854		1.408191678	0.000376840		
	4D5/2			1.410928823	0.000071827	-0.000000003	-0.000000200
	4F5/2			1.141804080	0.000177380	-0.000028973	0.000000021
	4F7/2			1.189766331	0.000036615	-0.000000497	
	5S1/2			0.826817934	0.000021553	-0.000000663	
	5P1/2			0.743692613	0.000039906	-0.000004021	
	5P3/2			0.704654345	0.000011369	-0.000000455	
	6S1/2			0.285116147	0.000001623	-0.000000061	
4D5/2 -- ( 6)	35.751834	-137.044375		1.389766595	0.000321823		
	4F5/2			1.192932250	0.000046083	-0.000001732	-0.000000041
	4F7/2			1.137763714	0.000136133	-0.000019538	0.000000006
	5S1/2			0.824351397	0.000025988	-0.000000646	
	5P1/2			0.747828696	0.000012714	-0.000000228	
	5P3/2			0.700914702	0.000025793	-0.000001874	
	6S1/2			0.284941208	0.000001909	-0.000000060	
4F5/2 -- ( 6)	20.132731	-98.311765		1.027389744	0.000179357		
	4F7/2			1.032297517	0.000027074	-0.000000000	-0.000000000
	5S1/2			0.762137739	0.000010873	-0.000000160	0.000000000
	5P1/2			0.690876790	0.000012636	-0.000000165	
	5P3/2			0.661245150	0.000006062	-0.000000025	
	6S1/2			0.280527870	0.000000805	-0.000000000	
4F7/2 -- ( 3)	19.541597	-96.605428		1.010232430	0.000162707		
	5S1/2			0.756992161	0.000013838	-0.000000171	-0.000000000
	5P1/2			0.695292775	0.000008220	-0.000000021	0.000000000
	5P3/2			0.653818418	0.000011097	-0.000000081	
	6S1/2			0.280072291	0.000000989	-0.000000000	
5S1/2 -- ( 2)	10.994585	-65.323281		0.677361917	0.000018185		
	5P1/2			0.562225944	0.000016894	-0.000002174	-0.0000641592
	5P3/2			0.542408880	0.000013003	-0.000003194	0.000015103
	6S1/2			0.270230644	0.000000959	-0.000000412	
5P1/2 -- ( 2)	8.483959	-57.064861		0.599031836	0.000024206		
	5P3/2			0.547123992	0.000003418	-0.000000015	-0.0000037273
	6S1/2			0.269596384	0.000001774	-0.000000256	0.000001318
5P3/2 -- ( 4)	7.062431	-52.668588		0.538886836	0.000012927		
	6S1/2			0.267238145	0.000002095	-0.000000300	-0.0000003174
6S1/2 -- ( 2)	1.031432	-19.425973		0.213366566	0.000000477		0.000000254
ETOT	-11702.99532	12800.02195	-28828.71745	4316.12895	12.234904553	-1.289346925	-1.409363175
							0.035034712

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
DYSPROSIUM 4F10 Z=66 A=164 R=1.24127E-04 A.U.							
1S1/2 -- ( 2)	2595.312985	-4916.085744	44.843949498	4.017146679		-0.642860597	0.016515573
2S1/2			13.736394475	0.205186960	-0.023991813		
2P1/2			16.487915528	0.425774962	-0.060818311		
2P3/2			14.799761881	0.206147801	-0.059613547		
3S1/2			5.661148279	0.042633563	-0.005331652		
3P1/2			6.152896993	0.081890963	-0.011679996		
3P3/2			5.697821002	0.041266739	-0.012300066		
3D3/2			5.750727814	0.001830118	-0.000227760		
3D5/2			5.612328968	0.000739479	-0.000237384		
4S1/2			2.524264886	0.010175618	-0.001290087		
4P1/2			2.557368628	0.018259889	-0.002603789		
4P3/2			2.386781630	0.009131859	-0.002738663		
4D3/2			2.203910747	0.000410229	-0.000051268		
4D5/2			2.155603440	0.000164604	-0.000053271		
4F5/2			1.561229365	0.000000535	-0.000000061		
4F7/2			1.533024629	0.000000199	-0.000000066		
5S1/2			0.991983087	0.001648917	-0.000209655		
5P1/2			0.886957118	0.002361661	-0.000336750		
5P3/2			0.818687911	0.001122093	-0.000336903		
6S1/2			0.300104991	0.000126763	-0.000016124		
2S1/2 -- ( 2)	591.283205	-1177.727649	10.143003448	0.072759555		-0.082505810	0.002025487
2P1/2			9.981500979	0.022285331	-0.000054284		
2P3/2			9.547361259	0.035889514	-0.000482862		
3S1/2			4.770783316	0.008258169	-0.002021312		
3P1/2			5.157314713	0.013387702	-0.002108777		
3P3/2			4.905036864	0.011119236	-0.001420306		
3D3/2			5.391522866	0.009004082	-0.001247442		
3D5/2			5.288546598	0.003991899	-0.001233075		
4S1/2			2.321223976	0.001955111	-0.000502569		
4P1/2			2.339966717	0.003097860	-0.000502613		
4P3/2			2.215942326	0.002502020	-0.000350937		
4D3/2			2.135391910	0.001503442	-0.000219284		
4D5/2			2.094306782	0.000693396	-0.000217849		
4F5/2			1.560125978	0.000047646	-0.000006307		
4F7/2			1.532011454	0.000017179	-0.000006069		
5S1/2			0.959356573	0.000316209	-0.000081961		
5P1/2			0.858939652	0.000402856	-0.000065672		
5P3/2			0.797789665	0.000307993	-0.000043858		
6S1/2			0.297599443	0.000024303	-0.000006306		
2P1/2 -- ( 2)	590.906727	-1176.849281	12.280359982	0.165026906		-0.005768211	0.000213006
2P3/2			11.162874327	0.024432634	-0.000021638		
3S1/2			5.034735804	0.005642364	-0.000412816		
3P1/2			5.146202049	0.012796243	-0.001933350		
3P3/2			5.092312048	0.005295208	-0.000145842		
3D3/2			5.385777537	0.027023551	-0.006433434		
3D5/2			5.435456238	0.000879635	-0.000195137		
4S1/2			2.377795653	0.001326631	-0.000107472		
4P1/2			2.343148244	0.002754458	-0.000454279		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
DYSPROSIUM 4F10 Z=66 A=164 R=1.24127E-04 A.U.							
4P3/2			2.255532372	0.001165908	-0.000037627		
4D3/2			2.135978947	0.004762211	-0.001165098		
4D5/2			2.120777707	0.000180145	-0.000037590		
4F5/2			1.560318917	0.000057622	-0.000012077		
4F7/2			1.532537059	0.000003225	-0.000001216		
5S1/2			0.968339275	0.000214266	-0.000017694		
5P1/2			0.859468417	0.000353955	-0.000059230		
5P3/2			0.802616919	0.000143095	-0.000004740		
6S1/2			0.298288217	0.000016465	-0.000001363		
2P3/2 -- ( 4)	481.731556	-1030.512445	10.832018182	0.088427004		-0.000495095	0.000041438
3S1/2			4.965223655	0.007247507	-0.000492712		
3P1/2			5.276773029	0.004486505	-0.000193046		
3P3/2			4.916752741	0.010015190	-0.000904453		
3D3/2			5.485514757	0.007995811	-0.000800664		
3D5/2			5.285019513	0.013488106	-0.003829565		
4S1/2			2.361749801	0.001644360	-0.000122052		
4P1/2			2.365278676	0.000978050	-0.000048691		
4P3/2			2.220760817	0.002118250	-0.000210968		
4D3/2			2.152497597	0.001405553	-0.000142189		
4D5/2			2.095086153	0.002310313	-0.000675056		
4F5/2			1.560412077	0.000034096	-0.000003368		
4F7/2			1.532037351	0.000029563	-0.000009500		
5S1/2			0.955755040	0.000263791	-0.000019923		
5P1/2			0.862183938	0.000125991	-0.000006425		
5P3/2			0.798424042	0.000258189	-0.000026127		
6S1/2			0.298089705	0.000020253	-0.000001533		
3S1/2 -- ( 2)	182.348712	-430.052679	3.832797019	0.004284171		-0.017774716	0.000433523
3P1/2			3.501756869	0.001534088	-0.000033293		
3P3/2			3.394652190	0.002314539	-0.000122578		
3D3/2			3.853006477	0.001412065	-0.000043612		
3D5/2			3.8190664129	0.001899746	-0.000049502		
4S1/2			2.049108749	0.000644963	-0.000230688		
4P1/2			2.072833013	0.000782925	-0.000137834		
4P3/2			1.974979389	0.000712463	-0.000086013		
4D3/2			1.919031371	0.000342132	-0.000032844		
4D5/2			1.889227309	0.000343405	-0.000029712		
4F5/2			1.521576297	0.000187201	-0.000026100		
4F7/2			1.495645324	0.000083161	-0.000025214		
5S1/2			0.917666857	0.000103909	-0.000038393		
5P1/2			0.825317217	0.000105794	-0.000019165		
5P3/2			0.768978282	0.000090423	-0.000011625		
6S1/2			0.294415062	0.000007980	-0.000002958		
3P1/2 -- ( 2)	179.009240	-424.805134	4.021646235	0.008395068		-0.001376674	0.000050351
3P3/2			3.708109249	0.001224639	-0.000003110		
3D3/2			3.751115623	0.003078327	-0.000191260		
3D5/2			3.986582792	0.001422126	-0.0000907876		
4S1/2			2.107323694	0.000573698	-0.000070787		
4P1/2			2.038175834	0.000877363	-0.000202270		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
DYSPROSIUM 4F10 Z=66 A=164 R=1.24127E-04 A.U.							
4P3/2			2.000335937	0.000339977	-0.000017253		
4D3/2			1.926352836	0.000826002	-0.000124859		
4D5/2			1.905561577	0.000226256	-0.000008000		
4F5/2			1.516787380	0.000317854	-0.000069535		
4F7/2			1.503077997	0.000033858	-0.000007280		
5S1/2			0.925794536	0.000089937	-0.000011807		
5P1/2			0.821811031	0.000111283	-0.000026981		
5P3/2			0.771858394	0.000041951	-0.000002369		
6S1/2			0.295029040	0.000006885	-0.000000910		
3P3/2 -- ( 4)	153.148634	-387.505410	3.664723000	0.004692671		-0.000121558	0.000010076
3D3/2			3.870033209	0.001070198	-0.000010901		
3D5/2			3.711622646	0.002618046	-0.000064183		
4S1/2			2.087351187	0.000774844	-0.000090374		
4P1/2			2.078238241	0.000340623	-0.000023732		
4P3/2			1.954291149	0.000689175	-0.000096167		
4D3/2			1.9174335746	0.000278213	-0.000025162		
4D5/2			1.882769109	0.000651673	-0.000091997		
4F5/2			1.521238824	0.000163538	-0.000016509		
4F7/2			1.488493646	0.000153509	-0.000046153		
5S1/2			0.922728132	0.000118378	-0.000014466		
5P1/2			0.825885905	0.000043482	-0.000003350		
5P3/2			0.766789680	0.000082796	-0.000012251		
6S1/2			0.294794698	0.000009037	-0.000001110		
3D3/2 -- ( 4)	148.054152	-379.882493	4.177740678	0.007754909		-0.000000995	0.000000106
3D5/2			4.184327400	0.001454487	-0.000000031		
4S1/2			2.139552705	0.000320809	-0.000007674		
4P1/2			2.105735936	0.000604123	-0.000039650		
4P3/2			2.021116737	0.000234643	-0.000005822		
4D3/2			1.922775100	0.000732324	-0.000065624		
4D5/2			1.929940643	0.000242146	-0.000003272		
4F5/2			1.512982369	0.000705278	-0.000173937		
4F7/2			1.508442581	0.000022128	-0.000002758		
5S1/2			0.930590074	0.000050368	-0.00001514		
5P1/2			0.829514547	0.000073325	-0.000005109		
5P3/2			0.774291402	0.000028312	-0.000000811		
6S1/2			0.295393908	0.000003857	-0.000000119		
3D5/2 -- ( 6)	142.079126	-370.690754	4.114227154	0.006653295		-0.000000205	0.000000032
4S1/2			2.132975760	0.000382460	-0.000007701		
4P1/2			2.115983731	0.000264001	-0.000003701		
4P3/2			2.027350074	0.000468207	-0.000019474		
4D3/2			1.955069513	0.000198434	-0.000003486		
4D5/2			1.899464832	0.000671456	-0.000042736		
4F5/2			1.532496768	0.000145998	-0.000010982		
4F7/2			1.491329687	0.000436142	-0.000121117		
5S1/2			0.929570798	0.000058913	-0.000001517		
5P1/2			0.830530193	0.000032933	-0.000000597		
5P3/2			0.772756372	0.000054623	-0.000002477		
6S1/2			0.295315934	0.000004502	-0.000000119		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
DYSPROSIUM 4F10 Z=66 A=164 R=1.24127E-04 A.U.							
4S1/2 -- ( 2)	57.034708	-180.076897	1.692119262	0.000348455		-0.004277486	0.000104173
4P1/2			1.486850467	0.000177620	-0.000012518		
4P3/2			1.444860677	0.000206925	-0.000028562		
4D3/2			1.503874098	0.000156050	-0.000014915		
4D5/2			1.488796130	0.000136828	-0.000015762		
4F5/2			1.289505904	0.000083371	-0.000008546		
4F7/2			1.272366353	0.000071225	-0.000008452		
5S1/2			0.844554783	0.000039336	-0.000016734		
5P1/2			0.772368863	0.000025696	-0.000005081		
5P3/2			0.722895888	0.000023092	-0.000003423		
6S1/2			0.289008144	0.000003029	-0.000001319		
4P1/2 -- ( 2)	53.451076	-173.042582	1.661344476	0.000615268		-0.000320911	0.000011712
4P3/2			1.530658916	0.000086918	-0.000000391		
4D3/2			1.399600415	0.000349276	-0.000058774		
4D5/2			1.508524067	0.000084076	-0.000002215		
4F5/2			1.257989073	0.000132031	-0.000020540		
4F7/2			1.273185206	0.000047880	-0.000002278		
5S1/2			0.854591480	0.000049064	-0.000007097		
5P1/2			0.759914302	0.000039873	-0.000010916		
5P3/2			0.724915866	0.000014227	-0.000000891		
6S1/2			0.289681178	0.000003658	-0.000000547		
4P3/2 -- ( 4)	45.938625	-160.094777	1.516579906	0.000342273		-0.000028065	0.000002321
4D3/2			1.472666468	0.000102683	-0.000004746		
4D5/2			1.398696123	0.000216072	-0.000024840		
4F5/2			1.258872704	0.000062593	-0.000004105		
4F7/2			1.227063914	0.000090279	-0.000011658		
5S1/2			0.847896742	0.000064242	-0.000009223		
5P1/2			0.768878285	0.000016567	-0.000001365		
5P3/2			0.714656452	0.000029588	-0.000004845		
6S1/2			0.289196590	0.000004710	-0.000000694		
4D3/2 -- ( 4)	39.038471	-145.533668	1.441234095	0.000403887		-0.000000232	0.000000025
4D5/2			1.443564769	0.000076822	-0.000000003		
4F5/2			1.175204541	0.000190964	-0.000030869		
4F7/2			1.224089119	0.000039913	-0.000000530		
5S1/2			0.843594587	0.000022876	-0.000000705		
5P1/2			0.758776323	0.000042338	-0.000004266		
5P3/2			0.717173550	0.000011952	-0.000000476		
6S1/2			0.288903157	0.000001691	-0.000000063		
4D5/2 -- ( 6)	37.392334	-142.331876	1.421469280	0.000344267		-0.000000048	0.000000008
4F5/2			1.227497495	0.000049683	-0.000001840		
4F7/2			1.170172810	0.000146794	-0.000020766		
5S1/2			0.841001409	0.000027573	-0.000000686		
5P1/2			0.762903481	0.000013489	-0.000000241		
5P3/2			0.713153614	0.000027110	-0.000001962		
6S1/2			0.288722440	0.000001989	-0.000000062		
4F5/2 -- ( 6)	21.417088	-103.041231	1.061856591	0.000197381		-0.000000000	0.000000000
4F7/2			1.066474210	0.000029794	-0.000000000		
5S1/2			0.780008652	0.000011629	-0.000000162		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
DYSPROSIUM 4F10 Z=66 A=164 R=1.24127E-04 A.U.							
			0.706888737	0.000013502	-0.000000165		
			0.674625489	0.000006438	-0.000000025		
4F7/2 -- ( 4)	20.763217	-101.179709	0.284486212	0.000000847	-0.000000000	-0.000000000	0.000000000
			1.043201648	0.000178708			
			0.774588694	0.000014804	-0.000000174		
			0.711112991	0.000008789	-0.000000021		
			0.667045540	0.000011770	-0.000000080		
5S1/2 -- ( 2)	11.440028	-67.654909	0.284017931	0.000001040	-0.000000000	-0.000694376	0.000016905
			0.690659420	0.000019269			
			0.573260811	0.000017797	-0.000002284		
			0.552163611	0.000013766	-0.000003395		
			0.273947817	0.000000995	-0.000000425		
5P1/2 -- ( 2)	8.819813	-59.091769	0.610787010	0.000025643		-0.000041861	0.000001527
			0.556981415	0.000003569	-0.000000017		
			0.273317727	0.000001834	-0.000000264		
5P3/2 -- ( 4)	7.282853	-54.349629	0.547809685	0.000013562		-0.000003476	0.000000287
			0.270838751	0.000002176	-0.000000310		
6S1/2 -- ( 2)	1.053176	-19.974834	0.216176032	0.000000495		-0.000053394	0.000001300
ETOT	-12151.46190	13330.48067	-29983.33865	4491.33295	12.898832605	-1.360713725	0.038964367
HOLMIUM 4F11 Z=67 A=165 R=1.24379E-04 A.U.							
1S1/2 -- ( 2)	2693.115577	-5089.892791	45.678673875	4.214932006		-0.689022466	0.018308098
			14.009150123	0.216055926	-0.025309550		
			16.833881393	0.448370365	-0.063801816		
			15.053776259	0.216207256	-0.062522118		
			5.781774762	0.045077969	-0.005648217		
			6.291317875	0.086591930	-0.012297970		
			5.810699312	0.043560894	-0.012984445		
			5.869132509	0.001939832	-0.000240684		
			5.723349460	0.000782985	-0.000251350		
			2.580385122	0.010790379	-0.001370761		
			2.617720487	0.019375799	-0.002750912		
			2.436834849	0.009667300	-0.002899507		
			2.254664406	0.000437574	-0.000054520		
			2.203447334	0.000175324	-0.000056744		
			1.608886794	0.000000595	-0.000000068		
			1.578561435	0.000000221	-0.000000073		
			1.011124528	0.001737191	-0.000221323		
			0.904096309	0.002483253	-0.000352544		
			0.831663477	0.001173363	-0.000392331		
			0.303864770	0.000131162	-0.000016717		
2S1/2 -- ( 2)	615.725788	-1221.783040	10.339597275	0.076928972		-0.009084836	0.002260034
			10.180614397	0.023556269	-0.000055663		



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
HOLMIUM 4F11 Z=67 A=165 R=1.24379E-04 A.U.							
2P3/2			9.722196153	0.037740098	-0.000527160		
3S1/2			4.868027013	0.008768326	-0.002145932		
3P1/2			5.266823464	0.014261621	-0.002245212		
3P3/2			5.000996213	0.011721194	-0.001492771		
3D3/2			5.501511676	0.009540671	-0.001321294		
3D5/2			5.393091518	0.004225344	-0.001305931		
4S1/2			2.371386174	0.002081845	-0.000535155		
4P1/2			2.393157716	0.003311358	-0.000536951		
4P3/2			2.261863963	0.002646353	-0.000370429		
4D3/2			2.184149303	0.001599749	-0.000233339		
4D5/2			2.140609604	0.000737177	-0.000231780		
4F5/2			1.607710931	0.000052593	-0.000006961		
4F7/2			1.577485197	0.000018925	-0.000006689		
5S1/2			0.977757573	0.000334519	-0.000086709		
5P1/2			0.875416904	0.000426702	-0.000069521		
5P3/2			0.810521605	0.000321800	-0.000045736		
6S1/2			0.301348124	0.000025251	-0.000006552		
2P1/2 -- ( 2)	615.282450	-1220.841984	12.530097041	0.174549335		-0.006462857	0.000246144
2P3/2			11.370276718	0.025637421	-0.000024319		
3S1/2			5.139434952	0.005988396	-0.000437504		
3P1/2			5.255990589	0.013602250	-0.002055372		
3P3/2			5.193282598	0.005594717	-0.000153947		
3D3/2			5.496352602	0.028626533	-0.006815379		
3D5/2			5.543370961	0.000928940	-0.000206516		
4S1/2			2.429724318	0.001412211	-0.000114297		
4P1/2			2.396588741	0.002938198	-0.000484794		
4P3/2			2.302622056	0.001235592	-0.000039866		
4D3/2			2.184890565	0.005069506	-0.001240580		
4D5/2			2.167820198	0.000191277	-0.000039989		
4F5/2			1.607919443	0.000063504	-0.000013313		
4F7/2			1.578044964	0.000003547	-0.000001338		
5S1/2			0.986960795	0.000226612	-0.000018698		
5P1/2			0.875976811	0.000374141	-0.000062638		
5P3/2			0.815430449	0.000149797	-0.000004961		
6S1/2			0.302041214	0.000017103	-0.000001415		
2P3/2 -- ( 4)	498.099591	-1063.987867	11.016509483	0.092853554		-0.000542286	0.000046889
3S1/2			5.065612194	0.007677591	-0.000525429		
3P1/2			5.386958584	0.004753297	-0.000205488		
3P3/2			5.010973147	0.010573444	-0.000956846		
3D3/2			5.596343743	0.008472111	-0.000847255		
3D5/2			5.387928627	0.014277943	-0.004054133		
4S1/2			2.412632902	0.001745849	-0.000130371		
4P1/2			2.418692192	0.001039657	-0.000051964		
4P3/2			2.266386720	0.002241722	-0.000223801		
4D3/2			2.201500360	0.001494925	-0.000151034		
4D5/2			2.141153798	0.002454112	-0.000717320		
4F5/2			1.608008804	0.000037811	-0.000003733		
4F7/2			1.577504590	0.000032715	-0.000010517		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
HOLMIUM 4F11 Z=67 A=165 R=1.24379E-04 A.U.							
5S1/2			0.984225971	0.000278221	-0.000021138		
5P1/2			0.878659786	0.000132709	-0.000006800		
5P3/2			0.811113810	0.000269880	-0.000027376		
6S1/2			0.301834886	0.000020979	-0.000001597		
3S1/2 -- ( 2)	190.505164	-446.583966	3.911167585	0.004558523		-0.019285979	0.000486027
3P1/2			3.575246647	0.001627110	-0.000034339		
3P3/2			3.461688465	0.002452089	-0.000132514		
3D3/2			3.932354058	0.001498106	-0.000045978		
3D5/2			3.896598924	0.002015545	-0.000052431		
4S1/2			2.092822551	0.000688529	-0.000246252		
4P1/2			2.119059629	0.000842412	-0.000148238		
4P3/2			2.015576219	0.000753953	-0.000091077		
4D3/2			1.962369590	0.000366753	-0.000035288		
4D5/2			1.930817753	0.000366357	-0.000031821		
4F5/2			1.567104437	0.000204421	-0.000028506		
4F7/2			1.539266632	0.000090845	-0.000027504		
5S1/2			0.935352114	0.000110209	-0.000040714		
5P1/2			0.841227504	0.000112752	-0.000020412		
5P3/2			0.781431326	0.000094544	-0.000012160		
6S1/2			0.298166712	0.000008313	-0.000003081		
3P1/2 -- ( 2)	187.101782	-441.272676	4.107419690	0.008942073		-0.001551633	0.000058512
3P3/2			3.783459034	0.001291107	-0.000003533		
3D3/2			3.830088858	0.003270675	-0.000203331		
3D5/2			4.069171839	0.001509567	-0.000008419		
4S1/2			2.152747323	0.000610653	-0.000075308		
4P1/2			2.083778482	0.000938608	-0.000216554		
4P3/2			2.041789116	0.000360014	-0.000018339		
4D3/2			1.970150802	0.000884095	-0.000133851		
4D5/2			1.947787607	0.000241370	-0.000008553		
4F5/2			1.562198273	0.000347137	-0.000075961		
4F7/2			1.547147789	0.000037047	-0.000007943		
5S1/2			0.943669986	0.000095147	-0.000012486		
5P1/2			0.837696731	0.000117979	-0.000028622		
5P3/2			0.784373879	0.000043896	-0.000002487		
6S1/2			0.298783986	0.000007155	-0.000000946		
3P3/2 -- ( 4)	159.236463	-401.202230	3.735660065	0.004970304		-0.000134093	0.000011479
3D3/2			3.947283821	0.001132064	-0.000011186		
3D5/2			3.784959237	0.002771905	-0.000066602		
4S1/2			2.131613447	0.000827372	-0.000096914		
4P1/2			2.124160246	0.000364037	-0.000025483		
4P3/2			1.994114668	0.000732419	-0.000102413		
4D3/2			1.960389487	0.000299215	-0.000027151		
4D5/2			1.923862121	0.000697639	-0.000099118		
4F5/2			1.566623360	0.000178562	-0.000018020		
4F7/2			1.531640308	0.000167539	-0.000050316		
5S1/2			0.940446090	0.000125525	-0.000015399		
5P1/2			0.841751899	0.000046038	-0.000003561		
5P3/2			0.779183302	0.000086918	-0.000012885		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
HOLMIUM 4F11 Z=67 A=165 R=1.24379E-04 A.U.							
3D3/2 -- ( 4)	154.121526	-393.581909	0.298541998	0.000009412	-0.000001161	-0.000001144	0.000000126
3D5/2			4.264483991	0.008233852			
4S1/2			4.269881587	0.001542817	-0.000000035		
4P1/2			2.185505635	0.000341562	-0.000008205		
4P3/2			2.152860280	0.000644677	-0.000042478		
4D3/2			2.062824979	0.000249225	-0.000006193		
4D5/2			1.966379777	0.000781062	-0.000070353		
4F5/2			1.972622668	0.000258113	-0.000003504		
4F7/2			1.958217132	0.000771061	-0.000190186		
5S1/2			1.552770633	0.000024251	-0.000003013		
5P1/2			0.948510465	0.000053281	-0.000001608		
5P3/2			0.845499976	0.000077532	-0.000005424		
5P3/2			0.786805864	0.000029709	-0.000000852		
6S1/2			0.299145714	0.000004008	-0.000000124		
3D5/2 -- ( 6)	147.714011	-383.752580	4.197010081	0.007054330		-0.000000235	0.000000038
4S1/2			2.178556362	0.000406879	-0.000008235		
4P1/2			2.163102290	0.000281374	-0.000003967		
4P3/2			2.048577221	0.000496806	-0.000020676		
4D3/2			1.999237036	0.000211577	-0.000003741		
4D5/2			1.941260446	0.000714649	-0.000045738		
4F5/2			1.578621474	0.000159723	-0.000012004		
4F7/2			1.534794650	0.000476199	-0.000132237		
5S1/2			0.947440219	0.000062266	-0.000001611		
5P1/2			0.846499403	0.000034781	-0.000000633		
5P3/2			0.785234457	0.000057263	-0.000002600		
6S1/2			0.299065299	0.000004674	-0.000000124		
4S1/2 -- ( 2)	59.719417	-187.070537	1.728381723	0.000372159		-0.0004655661	0.000117150
4P1/2			1.519583191	0.000188259	-0.000013076		
4P3/2			1.475163527	0.000220688	-0.000030774		
4D3/2			1.537281652	0.000166143	-0.000015816		
4D5/2			1.521330108	0.000146016	-0.000016753		
4F5/2			1.325270113	0.000089725	-0.000009128		
4F7/2			1.306945574	0.000077116	-0.000009027		
5S1/2			0.861135009	0.000041734	-0.000017730		
5P1/2			0.787527358	0.000027434	-0.000005413		
5P3/2			0.734990155	0.000024125	-0.000003592		
6S1/2			0.292773962	0.000003156	-0.000001373		
4P1/2 -- ( 2)	56.037532	-179.898633	1.698677777	0.000658611		-0.000363186	0.000013666
4P3/2			1.563478771	0.000091850	-0.000000446		
4D3/2			1.431366373	0.000372933	-0.000062675		
4D5/2			1.542167061	0.000089759	-0.000002369		
4F5/2			1.293225346	0.000142244	-0.000021966		
4F7/2			1.308215359	0.000051998	-0.000002438		
5S1/2			0.871458186	0.000051790	-0.000007482		
5P1/2			0.774952454	0.000042321	-0.000011570		
5P3/2			0.737116068	0.000014856	-0.000000933		
6S1/2			0.293455658	0.000003795	-0.000000566		
4P3/2 -- ( 4)	47.894330	-165.941126	1.547605253	0.000363987		-0.000031060	0.000002653

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
HOLMIUM 4F11 Z=67 A=165 R=1.24379E-04 A.U.								
4D3/2 -- ( 4)	40.841174	-151.142118	1.474141852	0.000432060	-0.000000269	0.000000030		
4D5/2 -- ( 6)	39.058956	-147.695904	1.452978063	0.000367568	-0.000000055	0.000000009		
4F5/2 -- ( 6)	22.715203	-107.795518	1.095371386	0.000216134	-0.000000000	0.000000000		
4F7/2 -- ( 5)	21.992840	-105.763707	1.075050867	0.000195263	-0.000000000	0.000000000		
5S1/2 -- ( 2)	11.895400	-70.029490	0.703964162	0.000020395	-0.000750896	0.000018889		
5P1/2 -- ( 2)	9.162758	-61.154927	0.622541643	0.000027135	-0.000046952	0.000001766		
5P3/2 -- ( 4)	7.503530	-56.046722	0.556631192	0.000014210	-0.000003800	0.000000324		
6S1/2 -- ( 2)	1.075354	-20.531403	0.218974319	0.000000514	-0.000056708	0.000001426		
ETOT	-12610.78705	13876.92213	-31170.00933	4671.72837	13.588751090	-1.434825439	-1.625414691	0.043269712

TABLE 1.-- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ERBIUM            4F12            Z=68    A=166   R=1.24630E-04   A.U.							
1S1/2 -- ( 2)	2793.770559	-5268.053554	46.521909876	4.419712746		-0.738042759	0.020265264
2S1/2			14.284996921	0.227356013	-0.026682888		
2P1/2			17.184653555	0.471850288	-0.066880428		
2P3/2			15.308594484	0.226585131	-0.065522541		
3S1/2			5.903500431	0.047623652	-0.005978677		
3P1/2			6.431199534	0.091481217	-0.012935672		
3P3/2			5.923892278	0.045939553	-0.013694052		
3D3/2			5.987797461	0.002053402	-0.000253984		
3D5/2			5.834355783	0.000827946	-0.000265778		
4S1/2			2.636820546	0.011430563	-0.001454978		
4P1/2			2.678461126	0.020536515	-0.002902698		
4P3/2			2.468608851	0.010221847	-0.003066093		
4D3/2			2.305275205	0.000465901	-0.000057870		
4D5/2			2.251032987	0.000186401	-0.000060333		
4F5/2			1.655686491	0.000000658	-0.000000075		
4F7/2			1.623110362	0.000000244	-0.000000081		
5S1/2			1.030301901	0.001828548	-0.000233429		
5P1/2			0.921274422	0.002608714	-0.000368696		
5P3/2			0.844519044	0.001225701	-0.000368080		
6S1/2			0.307532930	0.000135886	-0.000017353		
2S1/2 -- ( 2)	640.975034	-1267.055167	10.538145177	0.081292794		-0.096133651	0.002518125
2P1/2			10.381944341	0.024885324	-0.000057060		
2P3/2			9.898130989	0.039658387	-0.000575431		
3S1/2			4.966019054	0.009302668	-0.002276333		
3P1/2			5.377253275	0.015178989	-0.002388246		
3P3/2			5.097282095	0.012342334	-0.001566959		
3D3/2			5.611822273	0.010098563	-0.001398019		
3D5/2			5.497747228	0.004467489	-0.001381599		
4S1/2			2.421790747	0.002214592	-0.000569257		
4P1/2			2.446621399	0.003535525	-0.000572964		
4P3/2			2.307733875	0.002795288	-0.000390424		
4D3/2			2.232784212	0.001699877	-0.000247942		
4D5/2			2.186690490	0.000782565	-0.000246247		
4F5/2			1.654438896	0.000057774	-0.000007645		
4F7/2			1.621972289	0.000020747	-0.000007335		
5S1/2			0.996189455	0.000353581	-0.000091648		
5P1/2			0.891925985	0.000451544	-0.000073524		
5P3/2			0.823142395	0.000335833	-0.000047632		
6S1/2			0.305000533	0.000026269	-0.000006816		
2P1/2 -- ( 2)	640.459992	-1266.047221	12.782794922	0.184511718		-0.007233827	0.000283927
2P3/2			11.579049220	0.026880360	-0.000027289		
3S1/2			5.249021444	0.006350822	-0.000463275		
3P1/2			5.366712312	0.014447582	-0.002183146		
3P3/2			5.294634986	0.005905419	-0.000162333		
3D3/2			5.607279852	0.030290986	-0.007211960		
3D5/2			5.651361239	0.000979778	-0.000218306		
4S1/2			2.481924364	0.001501864	-0.000121426		
4P1/2			2.450307835	0.003130989	-0.000516769		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ERBIUM	4F12	Z=68	A=166	R=1.24630E-04	A.U.		
4P3/2			2.349666914	0.061307829	-0.000042181		
4D3/2			2.233685812	0.005388726	-0.001318994		
4D5/2			2.214630401	0.000202748	-0.000042474		
4F5/2			1.654663171	0.000069648	-0.000014603		
4F7/2			1.622565754	0.000003882	-0.000001465		
5S1/2			1.005615771	0.000239469	-0.000019739		
5P1/2			0.892517348	0.000395163	-0.000066181		
5P3/2			0.828131755	0.000156646	-0.000005187		
6S1/2			0.305699266	0.000017788	-0.000001470		
2P3/2 -- ( 4)	514.774385	-1098.043998	11.201402953	0.097428170		-0.000593174	0.000052956
3S1/2			5.166670125	0.008126973	-0.000559934		
3P1/2			5.497895759	0.005031689	-0.000218534		
3P3/2			5.105371227	0.011152239	-0.001011257		
3D3/2			5.707370387	0.008966912	-0.000895550		
3D5/2			5.490828802	0.015097293	-0.004287104		
4S1/2			2.463734378	0.001851777	-0.000139126		
4P1/2			2.472336734	0.001103929	-0.000055436		
4P3/2			2.311926110	0.002369525	-0.000237110		
4D3/2			2.250353864	0.001587598	-0.000160184		
4D5/2			2.186976490	0.002602952	-0.000761077		
4F5/2			1.654747203	0.000041734	-0.000004118		
4F7/2			1.621983848	0.000036031	-0.000011588		
5S1/2			1.002723616	0.000293189	-0.000022409		
5P1/2			0.895162688	0.000139662	-0.000007191		
5P3/2			0.823689293	0.000281805	-0.000028652		
6S1/2			0.305484502	0.000021760	-0.000001667		
3S1/2 -- ( 2)	198.923953	-463.543261	3.990088323	0.004846264		-0.020910291	0.000544017
3P1/2			3.649284101	0.001724526	-0.000035402		
3P3/2			3.529619488	0.002595386	-0.000143263		
3D3/2			4.012055134	0.001588012	-0.000048483		
3D5/2			3.974411527	0.002136197	-0.000055548		
4S1/2			2.136736623	0.000734218	-0.000262553		
4P1/2			2.165504263	0.000905136	-0.000159195		
4P3/2			2.056142381	0.000796523	-0.000096268		
4D3/2			2.005628252	0.000392355	-0.000037828		
4D5/2			1.972256612	0.000390207	-0.000033999		
4F5/2			1.611819272	0.000222364	-0.000031013		
4F7/2			1.581954928	0.000098831	-0.000029883		
5S1/2			0.953066983	0.000116775	-0.000043129		
5P1/2			0.857167835	0.000120026	-0.000021715		
5P3/2			0.793781804	0.000098704	-0.000012698		
6S1/2			0.301816027	0.000008670	-0.000003212		
3P1/2 -- ( 2)	195.455100	-458.166648	4.193838178	0.009516189		-0.001746676	0.000067858
3P3/2			3.859146753	0.001359629	-0.000004006		
3D3/2			3.909400104	0.003472172	-0.000216227		
3D5/2			4.152068410	0.001600613	-0.000009000		
4S1/2			2.198389314	0.000649321	-0.000080028		
4P1/2			2.129596482	0.001002954	-0.000231543		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ERBIUM	4F12	Z=68	A=166 R=1.24630E-04 A.U.				
4P3/2			2.083218144	0.000380677	-0.000019464		
4D3/2			2.013872687	0.000944229	-0.000143134		
4D5/2			1.989861926	0.000257120	-0.000009125		
4F5/2			1.606808450	0.000377652	-0.000082659		
4F7/2			1.590278823	0.000040361	-0.000008633		
5S1/2			0.961576183	0.000100567	-0.000013191		
5P1/2			0.853612173	0.000124960	-0.000030331		
5P3/2			0.796786135	0.000045873	-0.000002607		
6S1/2			0.302437720	0.000007444	-0.000000983		
3P3/2 -- ( 4)	165.454840	-415.153508	3.806710356	0.005258920		-0.000147692	0.000013050
3D3/2			4.024647313	0.001196350	-0.000011474		
3D5/2			3.858341341	0.002931700	-0.000069107		
4S1/2			2.176040382	0.000882593	-0.000103829		
4P1/2			2.170253187	0.000388613	-0.000027328		
4P3/2			2.033876195	0.000777345	-0.000108906		
4D3/2			2.003224907	0.000321191	-0.000029236		
4D5/2			1.964768328	0.000745449	-0.000106545		
4F5/2			1.611173272	0.000194212	-0.000019594		
4F7/2			1.573841818	0.000182122	-0.000054639		
5S1/2			0.958188397	0.000132986	-0.000016379		
5P1/2			0.857643118	0.000048698	-0.000003783		
5P3/2			0.791471971	0.000091140	-0.000013534		
6S1/2			0.302187413	0.000009814	-0.000001215		
3D3/2 -- ( 4)	160.320598	-407.536180	4.351349452	0.008732369		-0.000001313	0.000000149
3D5/2			4.355475888	0.001634561	-0.000000040		
4S1/2			2.231632676	0.000363246	-0.000008761		
4P1/2			2.200164462	0.000687192	-0.000045462		
4P3/2			2.104466626	0.000264367	-0.000006578		
4D3/2			2.009867804	0.000831770	-0.000075286		
4D5/2			2.015110212	0.000274689	-0.000003745		
4F5/2			1.602637068	0.000839705	-0.000207143		
4F7/2			1.596140389	0.000026464	-0.000003278		
5S1/2			0.966454676	0.000056306	-0.000001705		
5P1/2			0.861510176	0.000081906	-0.000005753		
5P3/2			0.799212225	0.000031140	-0.000000895		
6S1/2			0.302796560	0.000004169	-0.000000130		
3D5/2 -- ( 6)	153.456844	-397.035584	4.279754595	0.007470788		-0.000000267	0.000000045
4S1/2			2.224295164	0.000432365	-0.000008793		
4P1/2			2.210386302	0.000299521	-0.000004246		
4P3/2			2.089726475	0.000526472	-0.000021924		
4D3/2			2.043271139	0.000225235	-0.000004007		
4D5/2			1.982855062	0.000759434	-0.000048859		
4F5/2			1.623907079	0.000174053	-0.000013070		
4F7/2			1.577314451	0.000517872	-0.000143806		
5S1/2			0.965331584	0.000065743	-0.000001708		
5P1/2			0.862491957	0.000036695	-0.000000672		
5P3/2			0.797603943	0.000059963	-0.000002726		
6S1/2			0.302713497	0.000004857	-0.000000130		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ERBIUM	4F12	Z=68	A=166	R=1.24630E-04	A.U.		
4S1/2 -- ( 2)	62.484379	-194.225945	1.764792286	0.000397015		-0.005062487	0.000131505
4P1/2			1.552453248	0.000199364	-0.000013651		
4P3/2			1.505498278	0.000235117	-0.000033146		
4D3/2			1.570684430	0.000176705	-0.000016762		
4D5/2			1.553821828	0.000155574	-0.000017797		
4F5/2			1.360476104	0.000096324	-0.000009730		
4F7/2			1.340883918	0.000083228	-0.000009621		
5S1/2			0.877741993	0.000044232	-0.000018765		
5P1/2			0.802712899	0.000029253	-0.000005760		
5P3/2			0.746992193	0.000025164	-0.000003765		
6S1/2			0.296426971	0.000003293	-0.000001430		
4P1/2 -- ( 2)	58.702545	-186.914228	1.736166609	0.000704131		-0.000410421	0.000015908
4P3/2			1.596329479	0.000096916	-0.000000509		
4D3/2			1.463137045	0.000397810	-0.000066805		
4D5/2			1.575771306	0.000095649	-0.000002533		
4F5/2			1.327946358	0.000152872	-0.000023447		
4F7/2			1.342619736	0.000056275	-0.000002603		
5S1/2			0.888351196	0.000054616	-0.000007881		
5P1/2			0.790016576	0.000044871	-0.000012250		
5P3/2			0.749223496	0.000015490	-0.000000976		
6S1/2			0.297118205	0.000003942	-0.000000987		
4P3/2 -- ( 4)	49.886289	-171.883729	1.578563821	0.000386533		-0.000034312	0.000003025
4D3/2			1.536468967	0.000115122	-0.000005179		
4D5/2			1.458394026	0.000243901	-0.000027405		
4F5/2			1.326414589	0.000071838	-0.000004607		
4F7/2			1.291477285	0.000104569	-0.000013087		
5S1/2			0.880941761	0.000072504	-0.000010435		
5P1/2			0.798890084	0.000018650	-0.000001545		
5P3/2			0.738481276	0.000032638	-0.000005331		
6S1/2			0.296599320	0.000005140	-0.000000759		
4D3/2 -- ( 4)	42.678790	-156.842451	1.506939468	0.000461396		-0.000000311	0.000000035
4D5/2			1.508360019	0.000087380	-0.000000004		
4F5/2			1.240119234	0.000219584	-0.000034829		
4F7/2			1.290396088	0.000046876	-0.000000600		
5S1/2			0.877128828	0.000025676	-0.000000792		
5P1/2			0.788920312	0.000047506	-0.000004785		
5P3/2			0.741442835	0.000013158	-0.000000519		
6S1/2			0.296349157	0.000001837	-0.000000068		
4D5/2 -- ( 6)	40.752369	-153.138082	1.484315276	0.000391748		-0.000000063	0.000000011
4F5/2			1.294515954	0.000057246	-0.000002063		
4F7/2			1.232730501	0.000169149	-0.000023310		
5S1/2			0.874265856	0.000030928	-0.000000770		
5P1/2			0.793027618	0.000015126	-0.000000270		
5P3/2			0.737256111	0.000029830	-0.000002142		
6S1/2			0.296155911	0.000002160	-0.000000067		
4F5/2 -- ( 6)	24.029884	-112.586793	1.128154628	0.000235662		-0.000000000	0.000000000
4F7/2			1.131910678	0.000035544	-0.000000000		
5S1/2			0.814990930	0.000013219	-0.000000169		



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
ERBIUM      4F12      Z=68    A=166 R=1.24630E-04 A.U.								
	5P1/2		0.738267510	0.000015325	-0.000000169			
	5P3/2		0.700486007	0.000007212	-0.000000024			
	6S1/2		0.292188709	0.000000933	-0.000000000			
4F7/2 -- ( 6)	23.233646	-110.371603	1.106045218	0.000212419		-0.000000000	0.000000000	
	5S1/2		0.808908492	0.000016824	-0.000000183			
	5P1/2		0.742046591	0.000009977	-0.000000022			
	5P3/2		0.692508059	0.000013151	-0.000000080			
	6S1/2		0.291682432	0.000001144	-0.000000000			
5S1/2 -- ( 2)	12.361180	-72.448212	0.717284699	0.000021566		-0.000811353	0.000021069	
	5P1/2		0.595353471	0.000019703	-0.000002516			
	5P3/2		0.571531422	0.000015391	-0.000003828			
	6S1/2		0.281230596	0.000001072	-0.000000455			
5P1/2 -- ( 2)	9.513357	-63.256184	0.634316302	0.000028686		-0.000052594	0.000002038	
	5P3/2		0.576546426	0.000003874	-0.000000021			
	6S1/2		0.280607272	0.000001960	-0.000000281			
5P3/2 -- ( 4)	7.724796	-57.761578	0.565382094	0.000014872		-0.000004148	0.000000365	
	6S1/2		0.277871355	0.000002349	-0.000000333			
6S1/2 -- ( 2)	1.098708	-21.089683	0.221515527	0.000000532		-0.0000060309	0.000001566	
ETOT	-13081.11070	14439.68487	-32389.27835	4857.38526	14.305347334	-1.511748632	-1.744054513	0.047981211
THULIUM      4F13      Z=69    A=169 R=1.25376E-04 A.U.								
1S1/2 -- ( 2)	2897.348445	-5450.655428	47.373850989	4.631639449		-0.790052659	0.022399895	
	2S1/2		14.564011585	0.239099236	-0.028113630			
	2P1/2		17.540391271	0.496240530	-0.070055406			
	2P3/2		15.564222560	0.237285475	-0.0688616011			
	3S1/2		6.026358639	0.050273478	-0.006323507			
	3P1/2		6.572596405	0.096563850	-0.013593097			
	3P3/2		6.037409914	0.048404348	-0.014429220			
	3D3/2		6.106733530	0.002170847	-0.000267657			
	3D5/2		5.945353160	0.000874363	-0.000280673			
	4S1/2		2.693607656	0.012097061	-0.001542878			
	4P1/2		2.739640053	0.021743609	-0.003059212			
	4P3/2		2.536736504	0.010796035	-0.003238558			
	4D3/2		2.355792758	0.000495231	-0.000061318			
	4D5/2		2.298406922	0.000197842	-0.000064040			
	4F5/2		1.701738705	0.000000725	-0.000000082			
	4F7/2		1.666704573	0.000000269	-0.000000089			
	5S1/2		1.049588168	0.001923360	-0.000246023			
	5P1/2		0.938558958	0.002738631	-0.000385274			
	5P3/2		0.857276865	0.001279262	-0.000384195			
	6S1/2		0.311356349	0.000140570	-0.000017987			
2S1/2 -- ( 2)	667.056302	-1313.575538	10.738693970	0.085854613		-0.103679873	0.002801836	
	2P1/2		10.585554295	0.026274780	-0.000058472			



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
THULIUM 4F13 Z=69 A=169 R=1.25376E-04 A.U.							
			1.021315881	0.000308759	-0.000023741		
			0.911754397	0.000146885	-0.000007597		
			0.836169852	0.000294000	-0.000029960		
			0.309291062	0.000022536	-0.000001737		
3S1/2 -- ( 2)	207.612867	-480.940486	4.069575476	0.005147911		-0.022654649	0.000607994
3P1/2			3.723887489	0.001826505	-0.000036482		
3P3/2			3.597854103	0.002744618	-0.000154886		
3D3/2			4.092122000	0.001681912	-0.000051137		
3D5/2			4.052511961	0.002261831	-0.000058863		
4S1/2			2.180872988	0.000782123	-0.000279621		
4P1/2			2.212196138	0.000971254	-0.000170733		
4P3/2			2.096699395	0.000840165	-0.000101588		
4D3/2			2.048845104	0.000418959	-0.000040464		
4D5/2			2.013579761	0.000414983	-0.000036246		
4F5/2			1.655827472	0.000241059	-0.000033625		
4F7/2			1.623742505	0.000107124	-0.000032352		
5S1/2			0.970871188	0.000123636	-0.000045650		
5P1/2			0.873192516	0.000127652	-0.000023078		
5P3/2			0.806045058	0.000102913	-0.000013241		
6S1/2			0.305625731	0.00009027	-0.000003344		
3P1/2 -- ( 2)	204.077690	-475.497900	4.280925489	0.010118526		-0.001963891	0.000078545
3P3/2			3.939183671	0.001430210	-0.000004534		
3D3/2			3.989062693	0.003683179	-0.000230011		
3D5/2			4.235285103	0.001695347	-0.000009624		
4S1/2			2.244273565	0.000689772	-0.000084956		
4P1/2			2.175658175	0.001070550	-0.000247268		
4P3/2			2.124645439	0.000401974	-0.000020631		
4D3/2			2.057556480	0.001006419	-0.000152703		
4D5/2			2.031820977	0.000273530	-0.000009717		
4F5/2			1.650723420	0.000409451	-0.000089639		
4F7/2			1.632503207	0.000043799	-0.000009348		
5S1/2			0.979574222	0.000106222	-0.000013925		
5P1/2			0.869611001	0.000132260	-0.000032115		
5P3/2			0.809110865	0.000047884	-0.000002730		
6S1/2			0.306251232	0.000007733	-0.000001021		
3P3/2 -- ( 4)	171.804883	-429.360836	3.877878022	0.005558768		-0.000162427	0.000014805
3D3/2			4.102129884	0.001263107	-0.000011765		
3D5/2			3.931773520	0.003097547	-0.000071700		
4S1/2			2.220653364	0.000940641	-0.000111139		
4P1/2			2.216544464	0.000414407	-0.000029273		
4P3/2			2.073596965	0.000824000	-0.000115654		
4D3/2			2.045978549	0.000344173	-0.000031417		
4D5/2			2.005522567	0.000795148	-0.000114283		
4F5/2			1.654994403	0.000210515	-0.000021232		
4F7/2			1.615129465	0.000197267	-0.000059122		
5S1/2			0.976015400	0.000140795	-0.000017410		
5P1/2			0.873613790	0.000051475	-0.000004014		
5P3/2			0.803670749	0.000095472	-0.000014201		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
THULIUM	4F13	Z=69	A=169	R=1.25376E-04	A.U.		
3D3/2 -- ( 4)	166.652372	-421.746836	0.305992618 4.438345616 4.441117160 2.277956956 2.247677163 2.146063732 2.053275884 2.057439783 1.646345732 1.638583369 0.984484509 0.877600225 0.811526564 0.306606454	0.000010219 0.009250902 0.001729781 0.000385897 0.000731755 0.000280085 0.000884514 0.000291891 0.000911326 0.000028767 0.000059453 0.000086468 0.000032608 0.000004329	-0.000001270 -0.000000045 -0.000009343 -0.000048609 -0.000006977 -0.000080430 -0.000003996 -0.000224836 -0.000003553 -0.000001807 -0.000006098 -0.000000938 -0.000000135	-0.000001503	0.000000176
3D5/2 -- ( 6)	159.307736	-410.540075	4.362466126 2.270214690 2.2578664239 2.130819377 2.087209590 2.024283872 1.668459926 1.618919355 0.983306466 0.878563069 0.809880721 0.306520762	0.007902945 0.000458957 0.000318473 0.000557233 0.000239425 0.000809855 0.000189013 0.000561188 0.000069358 0.000038684 0.000062729 0.000005040	-0.000009378 -0.000004538 -0.000023219 -0.000004284 -0.000052103 -0.000014181 -0.000155829 -0.000001810 -0.000000712 -0.000002855 -0.000000135	-0.000000304	0.000000053
4S1/2 -- ( 2)	65.332870	-201.547931	1.801371467 1.585481476 1.535882545 1.604109447 1.586297237 1.395199068 1.374197459 0.894424669 0.817970275 0.758912255 0.300244820	0.000423077 0.000210952 0.000250246 0.000187760 0.000165515 0.000103183 0.000089566 0.000046838 0.000031162 0.000026211 0.000003429	-0.000014243 -0.000035690 -0.000017757 -0.000018897 -0.000010354 -0.000010236 -0.000019844 -0.000006123 -0.000003944 -0.000001487	-0.005499838	0.000147368
4P1/2 -- ( 2)	61.449678	-194.094727	1.773836991 1.629231641 1.494939187 1.609364835 1.362222573 1.376413923 0.905321296 0.805149783 0.761248786 0.300944702	0.000751933 0.000102116 0.000423973 0.000101754 0.000163942 0.000060715 0.000057556 0.000047537 0.000016131 0.000004088	-0.000000579 -0.000071179 -0.000002707 -0.000024988 -0.000002775 -0.000008295 -0.000012959 -0.000001020 -0.000000608	-0.000463147	0.000018480
4P3/2 -- ( 4)	51.915651	-177.924659	1.609473940	0.000409937		-0.000037839	0.000003441

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
THULIUM	4F13	Z=69	A=169	R=1.25376E-04	A.U.			
	4D3/2			1.568254315	0.000121682	-0.000005404		
	4D5/2			1.488087587	0.000258610	-0.000028758		
	4F5/2			1.359343301	0.000076691	-0.000004867		
	4F7/2			1.322694871	0.000112066	-0.000013827		
	5S1/2			0.897530368	0.000076943	-0.000011088		
	5P1/2			0.813964118	0.000019765	-0.000001642		
	5P3/2			0.750258876	0.000034218	-0.000005581		
	6S1/2			0.300407911	0.000005365	-0.000000793		
4D3/2 -- ( 4)	44.552774	-162.637664	1.539659067	0.000491938		-0.000000358	0.000000042	
	4D5/2		1.540574353	0.000092954		-0.000000005		
	4F5/2		1.271847115	0.000234679		-0.000036901		
	4F7/2		1.322586375	0.000050549		-0.000000636		
	5S1/2		0.893949683	0.000027161		-0.000000838		
	5P1/2		0.804045651	0.000050263		-0.000005063		
	5P3/2		0.753431511	0.000013782		-0.000000542		
	6S1/2		0.300177590	0.000001912		-0.000000071		
4D5/2 -- ( 6)	42.473666	-158.660845	1.515511480	0.000416835		-0.000000072	0.000000013	
	4F5/2		1.327198499	0.000061223		-0.000002178		
	4F7/2		1.263069964	0.000180875		-0.000024629		
	5S1/2		0.890942779	0.000032707		-0.000000814		
	5P1/2		0.808142036	0.000015995		-0.000000286		
	5P3/2		0.749157965	0.000031239		-0.000002235		
	6S1/2		0.299977808	0.000002248		-0.000000070		
4F5/2 -- ( 6)	25.362914	-117.420092	1.160262621	0.000255995		-0.000000000	0.000000000	
	4F7/2		1.163427204	0.000038584		-0.000000000		
	5S1/2		0.832235335	0.000014059		-0.000000173		
	5P1/2		0.753756226	0.000016287		-0.000000172		
	5P3/2		0.713058170	0.000007612		-0.000000024		
	6S1/2		0.296114869	0.000000977		-0.000000000		
4F7/2 -- ( 7)	24.485782	-115.002722	1.136149354	0.000230167		-0.000000000	0.000000000	
	5S1/2		0.825751869	0.000017885		-0.000000189		
	5P1/2		0.757268000	0.000010602		-0.000000023		
	5P3/2		0.704828064	0.000013861		-0.000000080		
	6S1/2		0.295582250	0.000001197		-0.000000000		
5S1/2 -- ( 2)	12.839664	-74.916739	0.730667060	0.000022787		-0.0000876107	0.000023467	
	5P1/2		0.606458443	0.000020711		-0.000002639		
	5P3/2		0.581176045	0.000016258		-0.0000004061		
	6S1/2		0.284982409	0.000001111		-0.000000469		
5P1/2 -- ( 2)	9.873573	-65.400498	0.646141552	0.000030303		-0.000058855	0.000002347	
	5P3/2		0.586286362	0.000004029		-0.000000024		
	6S1/2		0.284362042	0.000002026		-0.000000289		
5P3/2 -- ( 4)	7.947476	-59.495411	0.574051802	0.000015548		-0.0000004520	0.000000411	
	6S1/2		0.281488336	0.000002439		-0.000000344		
6S1/2 -- ( 2)	1.122208	-21.665954	0.224347818	0.000000551		-0.0000064046	0.000001715	
ETOT	-13562.57865	15019.15193	-33641.73097	5048.35969	15.049346208	-1.591547431	-1.870224458	0.053131864

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
YTTERBIUM 4F14 Z=70 A=174 R=1.26600E-04 A.U.							
1S1/2 -- ( 2)	3003.939821	-5637.809729	48.234778183	4.850885550		-0.845214552	0.024725890
2S1/2			14.846304176	0.251299446	-0.029603784		
2P1/2			17.901288948	0.521569368	-0.073328145		
2P3/2			15.820689878	0.248313174	-0.071803858		
3S1/2			6.150383958	0.053030457	-0.006683138		
3P1/2			6.715559957	0.101844772	-0.014270507		
3P3/2			6.151260692	0.050956906	-0.015190602		
3D3/2			6.225954702	0.002292193	-0.000281694		
3D5/2			6.056349227	0.000922240	-0.000296030		
4S1/2			2.750776827	0.012790773	-0.001634592		
4P1/2			2.801295253	0.022998541	-0.003220534		
4P3/2			2.586636617	0.011390305	-0.003417061		
4D3/2			2.406240580	0.000525574	-0.000064863		
4D5/2			2.345587357	0.000209649	-0.000067864		
4F5/2			1.747213159	0.000000794	-0.000000090		
4F7/2			1.709587747	0.000000295	-0.000000097		
5S1/2			1.068964625	0.002021614	-0.000259107		
5P1/2			0.955945587	0.002872969	-0.000402261		
5P3/2			0.869967216	0.001334056	-0.000400680		
6S1/2			0.315073574	0.000145583	-0.000018666		
2S1/2 -- ( 2)	694.000311	-1361.381845	10.941313452	0.090622537		-0.111756484	0.003113444
2P1/2			10.791529963	0.027727170	-0.000059895		
2P3/2			10.253386166	0.043705127	-0.000685234		
3S1/2			5.164335678	0.010447621	-0.002555317		
3P1/2			5.601005540	0.017151300	-0.002695148		
3P3/2			5.290871642	0.013642503	-0.001720324		
3D3/2			5.833464997	0.011280153	-0.001560315		
3D5/2			5.707424658	0.004978449	-0.001541596		
4S1/2			2.523439704	0.002499181	-0.000642272		
4P1/2			2.554512992	0.004017892	-0.000650275		
4P3/2			2.399420297	0.003107230	-0.000431883		
4D3/2			2.329850822	0.001912155	-0.000278861		
4D5/2			2.278337595	0.000878355	-0.000276858		
4F5/2			1.745824436	0.000068857	-0.000039108		
4F7/2			1.708329951	0.000024617	-0.000008709		
5S1/2			1.033329462	0.000394229	-0.000102164		
5P1/2			0.925220141	0.000504607	-0.000082054		
5P3/2			0.848138381	0.000364687	-0.000051484		
6S1/2			0.312509956	0.000028383	-0.000007363		
2P1/2 -- ( 2)	693.338789	-1360.241397	13.297486143	0.205829599		-0.009036253	0.000375868
2P3/2			12.000831648	0.029482508	-0.000034205		
3S1/2			5.458968578	0.007127446	-0.000518201		
3P1/2			5.591089461	0.016262824	-0.0002456803		
3P3/2			5.498534459	0.006561244	-0.000179956		
3D3/2			5.830250589	0.033808693	-0.008050048		
3D5/2			5.867599228	0.001086037	-0.000243138		
4S1/2			2.587261301	0.001694129	-0.000136640		
4P1/2			2.558729542	0.003545483	-0.000585358		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
YTTERBIUM 4F14 Z=70 A=174 R=1.26600E-04 A.U.							
4P3/2			2.443729569	0.001460239	-0.000047046		
4D3/2			2.331092005	0.006064506	-0.001484987		
4D5/2			2.307708270	0.000226720	-0.000047710		
4F5/2			1.746080735	0.000082736	-0.000017353		
4F7/2			1.708989245	0.000004589	-0.000001733		
5S1/2			1.043214566	0.000266897	-0.000021950		
5P1/2			0.925875861	0.000440057	-0.000073727		
5P3/2			0.853287792	0.000170844	-0.000005651		
6S1/2			0.313220052	0.000019212	-0.000001584		
2P3/2 -- ( 4)	549.052311	-1167.909490	11.572413970	0.107031921		-0.000706969	0.000067174
3S1/2			5.370865634	0.009086514	-0.000634661		
3P1/2			5.722122646	0.005624859	-0.000246533		
3P3/2			5.294723098	0.012373048	-0.001126297		
3D3/2			5.930058027	0.010013481	-0.000997360		
3D5/2			5.696626980	0.016826564	-0.004778849		
4S1/2			2.566704181	0.002077684	-0.000158028		
4P1/2			2.580459904	0.001240902	-0.000062884		
4P3/2			2.402844303	0.002638576	-0.000265203		
4D3/2			2.347777192	0.001783241	-0.000179429		
4D5/2			2.278036726	0.002916307	-0.000853234		
4F5/2			1.746149375	0.000050235	-0.000004952		
4F7/2			1.708321675	0.000043167	-0.000013893		
5S1/2			1.039985962	0.000324934	-0.000025136		
5P1/2			0.928431272	0.000154377	-0.000008021		
5P3/2			0.848585501	0.000306467	-0.000031298		
6S1/2			0.312987657	0.000023369	-0.000001812		
3S1/2 -- ( 2)	216.580225	-498.786261	4.149646375	0.005464006		-0.024527179	0.000678504
3P1/2			3.799074989	0.001933224	-0.000037579		
3P3/2			3.666401878	0.002899977	-0.000167454		
3D3/2			4.172567244	0.001779942	-0.000053950		
3D5/2			4.130910389	0.002392577	-0.000062393		
4S1/2			2.225249778	0.000832334	-0.000297487		
4P1/2			2.259157034	0.001040922	-0.000182875		
4P3/2			2.137259629	0.000884859	-0.000107033		
4D3/2			2.092037622	0.000446575	-0.000043197		
4D5/2			2.054800991	0.000440704	-0.000038562		
4F5/2			1.699296691	0.000260535	-0.000036346		
4F7/2			1.664868668	0.000115735	-0.000034916		
5S1/2			0.988749665	0.000130795	-0.000048276		
5P1/2			0.889299793	0.000135636	-0.000024504		
5P3/2			0.818250723	0.000107165	-0.000013790		
6S1/2			0.309319282	0.000009410	-0.000003484		
3P1/2 -- ( 2)	212.978142	-493.277413	4.368704283	0.010750212		-0.002205603	0.000090747
3P3/2			4.011580884	0.001502849	-0.000005123		
3D3/2			4.069089038	0.003904082	-0.000244749		
3D5/2			4.318833664	0.001793856	-0.000010293		
4S1/2			2.290419745	0.000732081	-0.000090099		
4P1/2			2.221984793	0.001141538	-0.000263758		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
YTTERBIUM 4F14 Z=70 A=174 R=1.26600E-04 A.U.							
4P3/2			2.166084032	0.000423905	-0.000021839		
4D3/2			2.101219691	0.001070653	-0.000162551		
4D5/2			2.073678767	0.000290619	-0.000010329		
4F5/2			1.694109955	0.000442578	-0.000096912		
4F7/2			1.674060904	0.000047366	-0.000010092		
5S1/2			0.997648652	0.000112112	-0.000014688		
5P1/2			0.885691702	0.000139885	-0.000033975		
5P3/2			0.821377769	0.000049931	-0.000002856		
6S1/2			0.309949622	0.000008043	-0.000001061		
3P3/2 -- ( 4)	178.287576	-443.825690	3.949168088	0.005870084		-0.000178373	0.000016763
3D3/2			4.179738120	0.001332393	-0.000012059		
3D5/2			4.005260478	0.003269565	-0.000074387		
4S1/2			2.265469602	0.001001656	-0.000118867		
4P1/2			2.263053979	0.000441474	-0.000031322		
4P3/2			2.113285698	0.000872424	-0.000122662		
4D3/2			2.088666780	0.000368186	-0.000033699		
4D5/2			2.046137827	0.000846766	-0.000122336		
4F5/2			1.698253667	0.000227493	-0.000022937		
4F7/2			1.655740919	0.000213000	-0.000063776		
5S1/2			0.993911591	0.000148960	-0.000018494		
5P1/2			0.889661988	0.000054371	-0.000004257		
5P3/2			0.815809261	0.000099915	-0.000014885		
6S1/2			0.309682029	0.000010653	-0.000001330		
3D3/2 -- ( 4)	173.118090	-436.215666	4.525480752	0.009789908		-0.000001718	0.000000208
3D5/2			4.526811817	0.001828538	-0.000000051		
4S1/2			2.324497177	0.000409549	-0.000009952		
4P1/2			2.295419283	0.000778458	-0.000051930		
4P3/2			2.187628790	0.000296394	-0.000007391		
4D3/2			2.096620227	0.000939348	-0.000085789		
4D5/2			2.099624904	0.000309732	-0.000004257		
4F5/2			1.689508063	0.000986027	-0.000243291		
4F7/2			1.680339426	0.000031165	-0.000003839		
5S1/2			1.002584108	0.000062725	-0.000001912		
5P1/2			0.893768099	0.000091220	-0.000006459		
5P3/2			0.823778642	0.000034114	-0.000000983		
6S1/2			0.310301436	0.000004501	-0.000000141		
3D5/2 -- ( 6)	165.266975	-424.266550	4.445149566	0.008351087		-0.000000345	0.000000062
4S1/2			2.316332996	0.000486695	-0.000009990		
4P1/2			2.305556714	0.000338258	-0.000004843		
4P3/2			2.171867968	0.000589116	-0.000024564		
4D3/2			2.131069122	0.000254158	-0.000004573		
4D5/2			2.065559620	0.000853944	-0.000055473		
4F5/2			1.712446992	0.000204625	-0.000015340		
4F7/2			1.659846304	0.000606221	-0.000168328		
5S1/2			1.001349010	0.000073109	-0.000001916		
5P1/2			0.894710610	0.000040748	-0.000000753		
5P3/2			0.822094529	0.000065563	-0.000002987		
6S1/2			0.310212906	0.000005235	-0.000000141		



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
YTTERBIUM      4F14      Z=70    A=174 R=1.26600E-04 A.U.							
4S1/2 -- ( 2)	68.268081	-209.041098	1.838135293	0.000450396		-0.005969864	0.000164878
4P1/2			1.618683335	0.000223043	-0.000014853		
4P3/2			1.566327828	0.000266113	-0.000038419		
4D3/2			1.637570744	0.000199329	-0.000018803		
4D5/2			1.618768257	0.000175848	-0.000020056		
4F5/2			1.429580580	0.000110319	-0.000011002		
4F7/2			1.407086077	0.000096146	-0.000010873		
5S1/2			0.911172666	0.000049557	-0.000020966		
5P1/2			0.833301014	0.000033164	-0.000006503		
5P3/2			0.770779974	0.000027266	-0.000004127		
6S1/2			0.303937101	0.000003575	-0.000001548		
4P1/2 -- ( 2)	64.282173	-201.444888	1.811707175	0.000802122		-0.000521955	0.000021423
4P3/2			1.662197805	0.000197451	-0.000000657		
4D3/2			1.526786531	0.000451488	-0.000075814		
4D5/2			1.642960082	0.000108074	-0.000002891		
4F5/2			1.396189921	0.000175482	-0.000026594		
4F7/2			1.409797098	0.000065329	-0.000002953		
5S1/2			0.922357785	0.000060611	-0.000008724		
5P1/2			0.820354405	0.000050320	-0.000013697		
5P3/2			0.773221735	0.000016778	-0.000001065		
6S1/2			0.304646502	0.000004245	-0.000000631		
4P3/2 -- ( 4)	53.983058	-184.065098	1.640345123	0.000434219		-0.000041659	0.000003905
4D3/2			1.599982463	0.000128478	-0.000005635		
4D5/2			1.517694902	0.000273866	-0.000030161		
4F5/2			1.391869444	0.000081709	-0.000005134		
4F7/2			1.353446284	0.000119815	-0.000014586		
5S1/2			0.914168550	0.000081601	-0.000011776		
5P1/2			0.829099718	0.000020932	-0.000001743		
5P3/2			0.761979464	0.000035838	-0.000005838		
6S1/2			0.304090379	0.000005607	-0.000000830		
4D3/2 -- ( 4)	46.463814	-168.529125	1.572313019	0.000523717		-0.000000411	0.000000050
4D5/2			1.572687817	0.000098730	-0.000000006		
4F5/2			1.303230007	0.000250337	-0.000039041		
4F7/2			1.354324667	0.000054360	-0.000000674		
5S1/2			0.910813441	0.000028706	-0.000000886		
5P1/2			0.819223762	0.000053142	-0.000005353		
5P3/2			0.765356755	0.000014421	-0.000003056		
6S1/2			0.303878531	0.000001992	-0.000000074		
4D5/2 -- ( 6)	44.223085	-164.264830	1.546576019	0.000442845		-0.000000082	0.000000015
4F5/2			1.359479900	0.000065339	-0.000002297		
4F7/2			1.292960763	0.000192997	-0.000025986		
5S1/2			0.907656234	0.000034558	-0.000000860		
5P1/2			0.823308262	0.000016898	-0.000000301		
5P3/2			0.760993927	0.000032682	-0.000002329		
6S1/2			0.303671699	0.000002342	-0.000000072		
4F5/2 -- ( 6)	26.716261	-122.305052	1.191886971	0.000277179		-0.000000000	0.000000000
4F7/2			1.194386732	0.000041741	-0.000003000		
5S1/2			0.849390224	0.000014931	-0.000000178		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
YTTERBIUM 4F14 Z=70 A=174 R=1.26600E-04 A.U.								
			0.769185574	0.000017287	-0.000000176			
			0.725477002	0.000008022	-0.000000024			
4F7/2 -- ( 8)	25.752250	-119.671257	0.299896211	0.000001023	-0.000000000	-0.000000000	0.000000000	
			1.165644770	0.000248562				
			0.842479237	0.000018983	-0.000000195			
			0.772417333	0.000011248	-0.000000024			
			0.716975739	0.000014586	-0.000000081			
			0.299334833	0.000001253	-0.000000000			
5S1/2 -- ( 2)	13.330493	-77.434115	0.744099240	0.000024058		-0.0000945394	0.000026101	
			0.617612610	0.000021758	-0.000002766			
			0.590815926	0.000017165	-0.000004306			
			0.288588398	0.000001154	-0.000000486			
5P1/2 -- ( 2)	10.243244	-67.587924	0.658026300	0.000031989		-0.000065792	0.000002699	
			0.596026483	0.000004187	-0.000000027			
			0.287971049	0.000002095	-0.000000299			
5P3/2 -- ( 4)	8.171700	-61.250048	0.582684280	0.000016240		-0.000004919	0.000000461	
			0.284954514	0.000002536	-0.000000357			
6S1/2 -- ( 2)	1.147895	-22.242867	0.226892488	0.000000570		-0.000068098	0.000001880	
ETOT	-14055.34999	15615.78047	-34928.06419	5244.73209	15.821534062	-1.674293142	-2.004361106	0.058757569
LUTETIUM 5D1 Z=71 A=175 R=1.26843E-04 A.U.								
1S1/2 -- ( 2)	3113.714493	-5829.722363	49.105253430	5.077709766		-0.903821336	0.027259218	
			15.131777507	0.263964370	-0.031154191			
			18.267204589	0.547840435	-0.076696514			
			16.077681465	0.259657881	-0.075083077			
			6.275267567	0.055891234	-0.007057144			
			6.859632658	0.107311987	-0.014965381			
			6.265010885	0.053590173	-0.015975807			
			6.344816333	0.002416443	-0.000295970			
			6.166726287	0.000971169	-0.000311723			
			2.810208291	0.013532191	-0.001732743			
			2.865946649	0.024346647	-0.003392794			
			2.639610344	0.012034991	-0.003610656			
			2.461725087	0.000559360	-0.000068802			
			2.397996935	0.000222886	-0.000072151			
			1.842685100	0.000000913	-0.000000103			
			1.809830621	0.000000341	-0.000000112			
			1.103413367	0.002196273	-0.000282056			
			0.994982477	0.003176262	-0.000442562			
			0.905727801	0.001481891	-0.000445115			
			0.472397177	0.000018158	-0.000002235			
			0.339705329	0.000177875	-0.000022852			
2S1/2 -- ( 2)	721.820259	-1410.495013	11.145885120	0.095600067		-3.120410542	0.003455414	



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LUTETIUM	5D1	Z=71	A=175	R=1.26843E-04	A.U.		
			2.328373731	0.003095908	-0.000906056		
			1.841499200	0.000057684	-0.000005683		
			1.808414284	0.000049818	-0.000016040		
			1.072693527	0.000353422	-0.000027509		
			0.965198606	0.000170988	-0.000008925		
			0.882644706	0.000340244	-0.000034827		
			0.470468357	0.000059572	-0.000005995		
			0.337218583	0.000028583	-0.000002230		
3S1/2 -- ( 2)	225.807693	-517.060015	4.230106554	0.005794032		-0.026536703	0.000756069
			3.874628203	0.002044613	-0.000038715		
			3.735049757	0.003061963	-0.000181063		
			4.253080840	0.001881917	-0.000056955		
			4.209300092	0.002527951	-0.000066172		
			2.270950090	0.000886163	-0.000316637		
			2.307866396	0.001116171	-0.000195986		
			2.179760479	0.000932839	-0.000112889		
			2.138871464	0.000477288	-0.000046233		
			2.099882683	0.000469625	-0.000041149		
			1.790231984	0.000295017	-0.000041173		
			1.760648705	0.000131995	-0.000039783		
			1.018897986	0.000142988	-0.000052767		
			0.923335967	0.000151889	-0.000027428		
			0.850099018	0.000118851	-0.000015366		
			0.462309747	0.000015784	-0.000001621		
			0.332888247	0.000011569	-0.000004284		
3P1/2 -- ( 2)	222.131848	-511.476124	4.456888389	0.011409845		-0.002474094	0.000104642
			4.088069663	0.001577200	-0.000005777		
			4.149117007	0.004134549	-0.000260590		
			4.402350231	0.001895691	-0.000011013		
			2.337995743	0.000777424	-0.000095610		
			2.269989607	0.001218135	-0.000281549		
			2.209538136	0.000447562	-0.000023152		
			2.148566715	0.001141889	-0.000173443		
			2.119486953	0.000309875	-0.000011017		
			1.784707252	0.000501235	-0.000109805		
			1.770831121	0.000054098	-0.000011503		
			1.028295826	0.000122270	-0.000016015		
			0.919512283	0.000155871	-0.000037882		
			0.853493737	0.000055446	-0.000003186		
			0.462631026	0.000038079	-0.000006095		
			0.333636229	0.000009863	-0.000001301		
3P3/2 -- ( 4)	184.876752	-458.515746	4.020316737	0.006191761		-0.000195574	0.000018940
			4.257120125	0.001403979	-0.000012364		
			4.078457487	0.003447025	-0.000077209		
			2.311617270	0.001067242	-0.000127222		
			2.311258308	0.000470676	-0.000033541		
			2.154819834	0.000924858	-0.000130266		
			2.134931573	0.000394969	-0.000036244		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-NI)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LUTETIUM	501	Z=71 A=175 R=1.26843E-04 A.U.					
			2.090526695	0.000904638	-0.000131352		
			1.788889772	0.000257536	-0.000225964		
			1.750427649	0.000242718	-0.000072612		
			1.024239962	0.000162812	-0.000020304		
			0.923648065	0.000060509	-0.000004760		
			0.847426238	0.000111327	-0.000016622		
			0.462192247	0.000012929	-0.000001239		
			0.333309708	0.000013089	-0.000001641		
3D3/2 -- ( 4)	179.682407	-450.897579	4.612269067	0.010346601		-0.000001957	0.000000244
			4.612077661	0.001930280	-0.000000058		
			2.372455619	0.000434822	-0.000010605		
			2.344917283	0.000828796	-0.000055537		
			2.231207455	0.000314056	-0.000007842		
			2.143580149	0.001000538	-0.000091778		
			2.145833021	0.000329777	-0.000004550		
			1.779620734	0.001117823	-0.000275874		
			1.777668325	0.000035673	-0.000004381		
			1.033414219	0.000068369	-0.000002095		
			0.928103902	0.000101345	-0.000007212		
			0.856029691	0.000037999	-0.000001098		
			0.462568987	0.000030510	-0.000002991		
			0.334046275	0.000005516	-0.000000174		
3D5/2 -- ( 6)	171.300394	-438.170997	4.527336096	0.008812757		-0.000000390	0.000000072
			2.363839840	0.000516294	-0.000010647		
			2.355006492	0.000359503	-0.000005173		
			2.214878994	0.000623599	-0.000026028		
			2.178672630	0.000270597	-0.000004897		
			2.110688103	0.000907936	-0.000059261		
			1.804567908	0.000232139	-0.000017388		
			1.755109256	0.000691172	-0.000191932		
			1.032075945	0.000079604	-0.000002098		
			0.929071635	0.000045209	-0.000000842		
			0.854194999	0.000072929	-0.000003330		
			0.463537423	0.000008366	-0.000000172		
			0.333938418	0.000006408	-0.000000174		
4S1/2 -- ( 2)	71.398407	-216.866915	1.876283603	0.000480101		-0.006485034	0.000184461
			1.653270305	0.000236057	-0.000015480		
			1.598245014	0.000283497	-0.000041410		
			1.673522673	0.000212096	-0.000019941		
			1.653862593	0.000187473	-0.000021326		
			1.498582072	0.000122649	-0.000012122		
			1.480408038	0.000108607	-0.000012059		
			0.937735149	0.000054289	-0.000022993		
			0.863620471	0.000037412	-0.000007337		
			0.799308050	0.000030336	-0.000004633		
			0.450049034	0.000003824	-0.000000410		
			0.326566972	0.000004405	-0.000001911		
4P1/2 -- ( 2)	67.322807	-209.156011	1.851322141	0.000857109		-0.000588589	0.000024831

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LUTETIUM	5D1	Z=71 A=175 R=1.26843E-04 A.U.					
			1.696889621	0.000113297	-0.000000747		
			1.561075874	0.000481834	-0.000080861		
			1.679382030	0.000115265	-0.000003095		
			1.463586418	0.000195193	-0.000029297		
			1.483856491	0.000074125	-0.000003282		
			0.949555529	0.000066050	-0.000009515		
			0.849953251	0.000056204	-0.000015348		
			0.802003248	0.000018633	-0.000001196		
			0.448729572	0.000007141	-0.000001025		
			0.327405317	0.000005196	-0.000000774		
4P3/2 -- ( 4)	56.226547	-190.532857	1.673049055	0.000461088		-0.000045906	0.000004434
			1.634376255	0.000136008	-0.000005875		
			1.549970478	0.000290975	-0.000031644		
			1.457461016	0.000090413	-0.000005593		
			1.422104850	0.0003134486	-0.000015982		
			0.940735266	0.000089533	-0.000012960		
			0.859019174	0.000023415	-0.000001964		
			0.789853059	0.000040028	-0.000006553		
			0.448868698	0.000002768	-0.000000186		
			0.326733298	0.000006900	-0.000001025		
4D3/2 -- ( 4)	48.606390	-174.879601	1.608436818	0.000560305		-0.000000474	0.000000059
			1.608401939	0.000105446	-0.000000006		
			1.365164952	0.000276436	-0.000042404		
			1.424601071	0.000061710	-0.000000741		
			0.937702429	0.000031416	-0.000000981		
			0.848908870	0.000059261	-0.000005999		
			0.793724138	0.000016096	-0.000000632		
			0.445516934	0.000010781	-0.000000992		
			0.326519404	0.000002448	-0.000000092		
4D5/2 -- ( 6)	46.203151	-170.334832	1.581307387	0.000473072		-0.000000094	0.000000017
			1.424242212	0.000072422	-0.000002486		
			1.358841764	0.000215220	-0.000028285		
			0.934335332	0.000037756	-0.000000953		
			0.853130426	0.000018817	-0.000000340		
			0.789055159	0.000036427	-0.000002603		
			0.447830110	0.000002865	-0.000000055		
			0.326271840	0.000002870	-0.000000091		
4F5/2 -- ( 6)	29.299635	-130.830791	1.274383009	0.000324472		-0.000000000	0.000000000
			1.281421806	0.000049364	-0.000000000		
			0.886379493	0.000016749	-0.000000157		
			0.806859234	0.000019697	-0.000000134		
			0.760262512	0.000009199	-0.000000016		
			0.436793690	0.000005621	-0.000000026		
			0.322936332	0.000001294	-0.000000000		
4F7/2 -- ( 8)	28.384152	-128.498104	1.254323145	0.000293993		-0.000000000	0.000000000
			0.881505198	0.000021479	-0.000000174		
			0.811612078	0.000012937	-0.000000019		
			0.753393528	0.000016740	-0.000000055		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
LUTETIUM	5D1	Z=71	A=175	R=1.26843E-04	A.U.			
	5D3/2			0.439541177	0.000002293	-0.000000000		
	6S1/2			0.322566888	0.000001581	-0.000000000		
5S1/2 -- ( 2)	14.307651	-81.157974		0.767178168	0.000026532	-0.001054640	0.000029988	
	5P1/2			0.639337106	0.000023780	-0.000002994		
	5P3/2			0.611969474	0.000019184	-0.000004806		
	5D3/2			0.413272880	0.000006470	-0.000000878		
	6S1/2			0.309025884	0.000001446	-0.000000620		
5P1/2 -- ( 2)	11.181263	-71.387279		0.683811354	0.000036078	-0.0000077498	0.000003268	
	5P3/2			0.619502701	0.000004676	-0.000000033		
	5D3/2			0.387371824	0.000016248	-0.000003770		
	6S1/2			0.338557974	0.000002613	-0.000000376		
5P3/2 -- ( 4)	8.929677	-64.691934		0.605840844	0.000018346	-0.000005699	0.000000550	
	5D3/2			0.398035599	0.000004237	-0.000000392		
	6S1/2			0.305207534	0.000003190	-0.000000456		
5D3/2 -- ( 1)	2.412873	-33.543356		0.000000000	0.000000000	-0.000000015	0.000000002	
	6S1/2			0.257606492	0.000000476	-0.000000010		
6S1/2 -- ( 2)	1.383162	-24.347126		0.244293858	0.000000720	-0.0000085438	0.000002429	
ETOT	-14559.64256	16230.42548	-36232.31212	5429.45979	16.627356847	-1.760647285	-2.147322192	0.064902724
HAFNIUM	5D2	Z=72	A=180	R=1.28039E-04	A.U.			
1S1/2 -- ( 2)	3226.680594	-6026.406006		49.985224369	5.312192874	-0.965912088	0.030014652	
	2S1/2			15.420644365	0.277109920	-0.032767562		
	2P1/2			18.638555676	0.575098946	-0.080163974		
	2P3/2			16.335440178	0.271333160	-0.078457516		
	3S1/2			6.401322699	0.058863543	-0.007446666		
	3P1/2			7.005281865	0.112983336	-0.015679774		
	3P3/2			6.379042203	0.056312428	-0.016787547		
	3D3/2			6.463836862	0.002544289	-0.000310557		
	3D5/2			6.276977854	0.001021425	-0.000327834		
	4S1/2			2.870846021	0.014312440	-0.001836252		
	4P1/2			2.932143208	0.025766890	-0.003572847		
	4P3/2			2.693806632	0.012715039	-0.003814865		
	4D3/2			2.518946860	0.000595272	-0.000072967		
	4D5/2			2.452114624	0.000236969	-0.000076710		
	4F5/2			1.932104412	0.000001040	-0.000000117		
	4F7/2			1.900642891	0.000000389	-0.000000128		
	5S1/2			1.140053616	0.002391990	-0.000307806		
	5P1/2			1.035836513	0.003514543	-0.000487248		
	5P3/2			0.942480080	0.001644924	-0.000494120		
	5D3/2			0.542715697	0.000025445	-0.000003121		
	6S1/2			0.358173285	0.000020460	-0.000026351		
2S1/2 -- ( 2)	750.554068	-1460.958857		11.352581035	0.100798022	-0.129662721	0.003830328	
	2P1/2			11.210382106	0.030827771	-0.000062867		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
HAFNIUM 5D2 Z=72 A=180 R=1.28039E-04 A.U.							
2P3/2			10.612833110	0.048038159	-0.000815532		
3S1/2			5.365372613	0.011697091	-0.002858891		
3P1/2			5.828039927	0.019309437	-0.003029930		
3P3/2			5.485158342	0.015012942	-0.001878792		
3D3/2			6.055357011	0.012545200	-0.001733754		
3D5/2			5.916489910	0.005922382	-0.001712450		
4S1/2			2.630004586	0.002820490	-0.000724526		
4P1/2			2.668715654	0.004567682	-0.000738156		
4P3/2			2.497365410	0.003458013	-0.000477964		
4D3/2			2.437901898	0.002163080	-0.000315361		
4D5/2			2.381300357	0.000992058	-0.000313281		
4F5/2			1.930423550	0.000089086	-0.000011778		
4F7/2			1.899113513	0.000032083	-0.000011359		
5S1/2			1.100136468	0.000470435	-0.000121879		
5P1/2			1.000022686	0.000626410	-0.000101718		
5P3/2			0.917183951	0.000448395	-0.000062991		
5D3/2			0.539323506	0.000088810	-0.000013043		
6S1/2			0.354761255	0.000040245	-0.000010438		
2P1/2 -- ( 2)	749.737499	-1459.680784	13.824623358	0.229108163		-0.011247447	0.000494417
2P3/2			12.427829213	0.032237961	-0.000042622		
3S1/2			5.676192222	0.007975297	-0.000577661		
3P1/2			5.818779776	0.018249033	-0.002754742		
3P3/2			5.703311808	0.007261529	-0.000198635		
3D3/2			6.053584082	0.037560986	-0.008943872		
3D5/2			6.082966758	0.001197460	-0.000269488		
4S1/2			2.697888652	0.001911376	-0.000153717		
4P1/2			2.673506633	0.004018366	-0.000663296		
4P3/2			2.544386100	0.001633071	-0.000052534		
4D3/2			2.439522744	0.006861200	-0.001680630		
4D5/2			2.412411477	0.000254891	-0.000053910		
4F5/2			1.930741637	0.000106686	-0.000022382		
4F7/2			1.899919242	0.000005958	-0.000002251		
5S1/2			1.111251536	0.000318406	-0.000026122		
5P1/2			1.000829988	0.000544513	-0.000091246		
5P3/2			0.923215855	0.000211050	-0.000006976		
5D3/2			0.539401913	0.000283964	-0.000069816		
6S1/2			0.355709785	0.000027235	-0.000002240		
2P3/2 -- ( 4)	584.526579	-1240.071504	11.944420578	0.117241865		-0.000838345	0.000084607
3S1/2			5.577354629	0.010129211	-0.000717411		
3P1/2			5.948792049	0.006266803	-0.000277094		
3P3/2			5.484101920	0.013675858	-0.001249287		
3D3/2			6.152378480	0.011131375	-0.001105609		
3D5/2			5.901286002	0.018668086	-0.005302561		
4S1/2			2.674637139	0.002331388	-0.000179542		
4P1/2			2.694814911	0.001395635	-0.000071346		
4P3/2			2.499883385	0.002943219	-0.000297038		
4D3/2			2.456257304	0.002013381	-0.000202007		
4D5/2			2.380301458	0.003287542	-0.0000962429		



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
HAFNIUM 502 Z=72 A=180 R=1.28039E-04 A.U.							
4F5/2			1.930792920	0.000065676	-0.000006467		
4F7/2			1.899075649	0.000056840	-0.000018308		
5S1/2			1.107389209	0.000385377	-0.000030185		
5P1/2			1.003548041	0.000189552	-0.000009940		
5P3/2			0.917565737	0.000377457	-0.000038724		
5D3/2			0.540086493	0.000083254	-0.000008366		
6S1/2			0.355379543	0.000032929	-0.000002585		
3S1/2 -- ( 2)	235.324437	-535.796944	4.311146825	0.006139358		-0.028690704	0.000841364
3P1/2			3.950759333	0.002161048	-0.000039871		
3P3/2			3.803992672	0.003228556	-0.000195777		
3D3/2			4.333933775	0.001988213	-0.000060147		
3D5/2			4.287946954	0.002668530	-0.000070203		
4S1/2			2.317364364	0.000943145	-0.000336894		
4P1/2			2.357462067	0.001196340	-0.000209945		
4P3/2			2.223042651	0.000982947	-0.000119013		
4D3/2			2.186963241	0.000510010	-0.000049465		
4D5/2			2.146241263	0.000500543	-0.000043898		
4F5/2			1.875131477	0.000331335	-0.000046261		
4F7/2			1.847128924	0.000148872	-0.000044830		
5S1/2			1.050741528	0.000156697	-0.000057817		
5P1/2			0.958704712	0.000170216	-0.000030725		
5P3/2			0.882658153	0.000131676	-0.000016975		
5D3/2			0.529073785	0.000022213	-0.000002288		
6S1/2			0.350563064	0.000013395	-0.000004960		
3P1/2 -- ( 2)	231.573967	-530.137397	4.545754861	0.012100548		-0.002772242	0.000120456
3P3/2			4.164894182	0.001653526	-0.000006503		
3D3/2			4.229459375	0.004375527	-0.000277559		
3D5/2			4.486150366	0.002001321	-0.000011786		
4S1/2			2.386346727	0.000825350	-0.000101428		
4P1/2			2.318852799	0.001299504	-0.000300436		
4P3/2			2.253811916	0.000472388	-0.000024540		
4D3/2			2.197193638	0.001217454	-0.000184963		
4D5/2			2.166608599	0.000330514	-0.000011750		
4F5/2			1.869292193	0.000563035	-0.000123401		
4F7/2			1.858285364	0.000061099	-0.000012968		
5S1/2			1.060692622	0.000133675	-0.000017507		
5P1/2			0.954648693	0.000173822	-0.000042273		
5P3/2			0.886341284	0.000061513	-0.000003553		
5D3/2			0.529519551	0.000053491	-0.000008575		
6S1/2			0.351399210	0.000011391	-0.000001503		
3P3/2 -- ( 4)	191.595411	-473.460092	4.091556345	0.006525091		-0.000214138	0.000021359
3D3/2			4.334575090	0.001478128	-0.000012675		
3D5/2			4.151656191	0.003630661	-0.0000380145		
4S1/2			2.358458438	0.001136869	-0.000136142		
4P1/2			2.360293027	0.000501686	-0.000035907		
4P3/2			2.197075043	0.000980240	-0.000138312		
4D3/2			2.182399437	0.000423653	-0.000038971		
4D5/2			2.136132467	0.000966489	-0.000141002		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
HAFNIUM 5D2 Z=72 A=180 R=1.28039E-04 A.U.							
4F5/2			1.873445444	0.000289154	-0.000029150		
4F7/2			1.835797434	0.000273522	-0.000081760		
5S1/2			1.056278913	0.000178384	-0.000022347		
5P1/2			0.958954273	0.000067394	-0.000005328		
5P3/2			0.879732293	0.000123931	-0.000018546		
5D3/2			0.528894435	0.000018254	-0.000001754		
6S1/2			0.351023885	0.000015145	-0.000001908		
3D3/2 -- ( 4)	186.373093	-465.828948	4.699110232	0.010923703		-0.000002226	0.000000286
3D5/2			4.697311198	0.002035503	-0.000000065		
4S1/2			2.421155489	0.000461476	-0.000011297		
4P1/2			2.395281842	0.000882173	-0.000059391		
4P3/2			2.275576819	0.000332707	-0.000008320		
4D3/2			2.191765014	0.001065812	-0.000098186		
4D5/2			2.193349273	0.000351184	-0.000004865		
4F5/2			1.863694045	0.001256879	-0.0000310269		
4F7/2			1.865639509	0.000040384	-0.000004945		
5S1/2			1.066008599	0.000074696	-0.000002301		
5P1/2			0.963793155	0.000112672	-0.000008060		
5P3/2			0.889014101	0.000042290	-0.000001226		
5D3/2			0.529426787	0.000042707	-0.000004212		
6S1/2			0.351848881	0.000006366	-0.000000202		
3D5/2 -- ( 6)	177.433606	-452.287187	4.609411608	0.009290176		-0.000000440	0.000000084
4S1/2			2.412064148	0.000547470	-0.000011343		
4P1/2			2.405312283	0.000381943	-0.000005523		
4P3/2			2.258651634	0.000659965	-0.000027579		
4D3/2			2.227533461	0.000288120	-0.000005244		
4D5/2			2.157656609	0.000965522	-0.000063316		
4F5/2			1.890621356	0.000261199	-0.000019549		
4F7/2			1.841061182	0.000779327	-0.0000216434		
5S1/2			1.064554767	0.000086873	-0.000002305		
5P1/2			0.964785061	0.000050191	-0.000000942		
5P3/2			0.887016012	0.000081044	-0.000003711		
5D3/2			0.530718820	0.000011711	-0.000000244		
6S1/2			0.351725109	0.000007386	-0.000000202		
4S1/2 -- ( 2)	74.671462	-224.944478	1.915120201	0.000511728		-0.007042814	0.000206182
4P1/2			1.688530707	0.000249802	-0.000016127		
4P3/2			1.630791079	0.000302066	-0.000044648		
4D3/2			1.710384805	0.000225714	-0.000021149		
4D5/2			1.689881526	0.000199916	-0.000022682		
4F5/2			1.562304883	0.000135225	-0.000013238		
4F7/2			1.545801402	0.000121354	-0.000013218		
5S1/2			0.965634141	0.000059650	-0.000025304		
5P1/2			0.894977599	0.000042293	-0.000008299		
5P3/2			0.828364745	0.000033748	-0.000005205		
5D3/2			0.512604010	0.000005347	-0.000000574		
6S1/2			0.343570820	0.000005113	-0.000002223		
4P1/2 -- ( 2)	70.510194	-217.128390	1.891759403	0.000915862		-0.000663355	0.000028748
4P3/2			1.732304196	0.000119455	-0.000000849		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
HAFNIUM 5D2 Z=72 A=180 R=1.28039E-04 A.U.							
4D3/2			1.596269155	0.000514309	-0.000086259		
4D5/2			1.716804869	0.000122974	-0.000003315		
4F5/2			1.525967306	0.000215322	-0.000031987		
4F7/2			1.550059495	0.000083205	-0.000003606		
5S1/2			0.978150970	0.000072191	-0.000010414		
5P1/2			0.880552337	0.000062854	-0.000017234		
5P3/2			0.831333263	0.000020685	-0.000001345		
5D3/2			0.510883843	0.000010016	-0.000001439		
6S1/2			0.344504143	0.000005994	-0.000000895		
4P3/2 -- ( 4)	58.570325	-197.199614	1.706443381	0.000489700		-0.000050553	0.000005029
4D3/2			1.669679602	0.000143999	-0.000006122		
4D5/2			1.583134684	0.000309241	-0.000033188		
4F5/2			1.517874387	0.000099207	-0.000006033		
4F7/2			1.483166269	0.000149312	-0.000017293		
5S1/2			0.968645058	0.000098538	-0.000014313		
5P1/2			0.889943693	0.000026234	-0.000002217		
5P3/2			0.818224537	0.000044694	-0.000007362		
5D3/2			0.510989680	0.000003904	-0.000000268		
6S1/2			0.343740415	0.000008003	-0.000001195		
4D3/2 -- ( 4)	50.865144	-181.466402	1.645699425	0.000599782		-0.000000545	0.000000070
4D5/2			1.645271762	0.000112694	-0.000000007		
4F5/2			1.422745633	0.000302721	-0.000045605		
4F7/2			1.487591157	0.000069321	-0.000000806		
5S1/2			0.965993642	0.000034486	-0.000001092		
5P1/2			0.879636155	0.000066185	-0.000006739		
5P3/2			0.822648306	0.000017962	-0.000000709		
5D3/2			0.506621829	0.000015156	-0.000001422		
6S1/2			0.343544277	0.000002835	-0.000000109		
4D5/2 -- ( 6)	48.292496	-176.632802	1.617192717	0.000505712		-0.000000107	0.000000020
4F5/2			1.484285994	0.000079629	-0.000002664		
4F7/2			1.417910501	0.000237408	-0.000030394		
5S1/2			0.962405672	0.000041366	-0.000001062		
5P1/2			0.883994039	0.000020978	-0.000000385		
5P3/2			0.817665004	0.000040590	-0.000002912		
5D3/2			0.509663720	0.000004028	-0.000000079		
6S1/2			0.343265868	0.000003317	-0.000000107		
4F5/2 -- ( 6)	31.889575	-139.111684	1.349566592	0.000374164		-0.000000000	0.000000000
4F7/2			1.359019551	0.000057331	-0.000000000		
5S1/2			0.921841845	0.000018730	-0.000000134		
5P1/2			0.843278576	0.000022359	-0.000000095		
5P3/2			0.793595487	0.000010495	-0.000000009		
5D3/2			0.497905311	0.000008078	-0.000000069		
6S1/2			0.340335780	0.000001534	-0.000000001		
4F7/2 -- ( 8)	30.961862	-136.846435	1.331805332	0.000340624		-0.000000000	0.000000000
5S1/2			0.917718081	0.000024109	-0.000000150		
5P1/2			0.848437145	0.000014736	-0.000000014		
5P3/2			0.787380669	0.000019031	-0.000000033		
5D3/2			0.501013759	0.000003242	-0.000000001		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
HAFNIUM 5D2 Z=72 A=180 R=1.28039E-04 A.U.								
5S1/2 -- ( 2)	15.397316	-85.134057	0.340021714	0.000001868	-0.000000000	-0.001179491	0.000034518	
5P1/2			0.791416205	0.000029346				
5P3/2			0.661896194	0.000026004	-0.000003240			
5D3/2			0.633689768	0.000021457	-0.000005367			
6S1/2			0.464907188	0.000008781	-0.000001192			
5P1/2 -- ( 2)	12.216747	-75.404363	0.324672258	0.000001706	-0.000000742	-0.000091339	0.000003956	
5P3/2			0.710334791	0.000040706				
5D3/2			0.643438757	0.000005213	-0.000000040			
6S1/2			0.433528190	0.000021809	-0.000005056			
5P3/2 -- ( 4)	9.751360	-68.279585	0.324388635	0.000003068	-0.000000446	-0.000006596	0.000006656	
5D3/2			0.629234000	0.000020687				
6S1/2			0.446524754	0.000005627	-0.000000514			
5D3/2 -- ( 2)	3.220847	-39.079906	0.320817060	0.000003784	-0.000000548	-0.000000023	0.000000003	
6S1/2			0.356680713	0.000006025				
6S1/2 -- ( 2)	1.571638	-26.049506	0.281566309	0.000006066	-0.000000005	-0.000100962	0.000002954	
ETOT	-15075.30999	16863.03415	-37569.62747	5617.89715	17.464019987	-1.850262555	-2.299179265	0.071603812
TANTALUM 5D3 Z=73 A=181 R=1.28276E-04 A.U.								
1S1/2 -- ( 2)	3343.065490	-6228.132996	50.875503954	5.554666309		-1.031869729	0.033011183	
2S1/2			15.713132348	0.290758564	-0.034446554			
2P1/2			19.015594103	0.603375730	-0.083731815			
2P3/2			16.594013943	0.283342856	-0.081928350			
3S1/2			6.528659726	0.061952812	-0.007852426			
3P1/2			7.152616160	0.118865719	-0.016413710			
3P3/2			6.493407698	0.059125987	-0.017626279			
3D3/2			6.583080409	0.002675744	-0.000325454			
3D5/2			6.387161064	0.001073010	-0.000344370			
4S1/2			2.932591993	0.015132238	-0.001945225			
4P1/2			2.999724554	0.027259103	-0.003760417			
4P3/2			2.749000117	0.013429760	-0.004029445			
4D3/2			2.577499280	0.000633177	-0.000077340			
4D5/2			2.507458239	0.000251836	-0.000081523			
4F5/2			2.017315544	0.000001175	-0.000000131			
4F7/2			1.986204086	0.000000441	-0.000000145			
5S1/2			1.177876778	0.002604855	-0.000335866			
5P1/2			1.077522131	0.003881044	-0.000535291			
5P3/2			0.979443060	0.001820030	-0.000546753			
5D3/2			0.599474423	0.000032699	-0.000003996			
6S1/2			0.373932302	0.000229117	-0.000029555			
2S1/2 -- ( 2)	780.256864	-1512.839881	11.561546974	0.106227856		-0.139580176	0.004241331	
2P1/2			11.423617153	0.032482662	-0.000064396			
2P3/2			10.794319979	0.050318262	-0.000889456			

TABLE 1.-- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TANTALUM	503	Z=73 A=181 R=1.28276E-04 A.U.					
3S1/2			5.467149163	0.012364681	-0.003020743		
3P1/2			5.943099330	0.020465105	-0.003208795		
3P3/2			5.582809123	0.015726112	-0.001960012		
3D3/2			6.166750362	0.013211724	-0.001825010		
3D5/2			6.021126522	0.005807763	-0.001802301		
4S1/2			2.684645595	0.002994958	-0.000769115		
4P1/2			2.727472685	0.004867669	-0.000786006		
4P3/2			2.547713613	0.003646042	-0.000502427		
4D3/2			2.493948527	0.002300634	-0.000335348		
4D5/2			2.434760558	0.001054343	-0.000333279		
4F5/2			2.015487443	0.000100120	-0.000013233		
4F7/2			1.984541091	0.000036100	-0.000012786		
5S1/2			1.135551119	0.000514503	-0.000133270		
5P1/2			1.038885013	0.000696843	-0.000113070		
5P3/2			0.952292068	0.000495328	-0.000069399		
5D3/2			0.595254347	0.000113958	-0.000016737		
6S1/2			0.370213769	0.000045241	-0.000011732		
2P1/2 -- ( 2)	779.356544	-1511.487869	14.093311964	0.241540695		-0.012533562	0.000565815
2P3/2			12.643516702	3.033674981	-0.000974483		
3S1/2			5.786307242	0.008428418	-0.000609239		
3P1/2			5.934183330	0.019312447	-0.002913677		
3P3/2			5.806300455	0.007629531	-0.000208402		
3D3/2			6.165742632	0.039532485	-0.009413449		
3D5/2			6.190679200	0.001255264	-0.000283279		
4S1/2			2.754676368	0.002029400	-0.000162948		
4P1/2			2.732567149	0.004276447	-0.000705708		
4P3/2			2.596140775	0.001726372	-0.000055485		
4D3/2			2.495774455	0.007297136	-0.001787678		
4D5/2			2.466796113	3.000270188	-0.000057300		
4F5/2			2.015837610	0.000119696	-0.000025114		
4F7/2			1.985419430	0.000006691	-0.000002529		
5S1/2			1.147359690	0.000348203	-0.000028529		
5P1/2			1.039778488	0.000604841	-0.000101352		
5P3/2			0.958801768	0.000233724	-0.000007722		
5D3/2			0.595360120	0.000364471	-0.000089634		
6S1/2			0.371249425	0.000030613	-0.000002515		
2P3/2 -- ( 4)	602.728538	-1277.032979	12.130955549	0.122583621		-0.000911308	0.000094717
3S1/2			5.681698380	0.010684594	-0.000762119		
3P1/2			6.063340657	0.006607719	-0.000293428		
3P3/2			5.579037322	0.014360242	-0.001314003		
3D3/2			6.263759968	0.011719400	-0.001162351		
3D5/2			6.003517532	0.019634592	-0.005577456		
4S1/2			2.729953204	0.002468528	-0.000191301		
4P1/2			2.753591404	0.001479393	-0.000075949		
4P3/2			2.549716852	0.003107418	-0.000314225		
4D3/2			2.512505079	0.002139029	-0.000214297		
4D5/2			2.433365360	0.003490489	-0.001022142		
4F5/2			2.015875388	0.000074212	-0.000007303		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TANTALUM	503	Z=73 A=181 R=1.28276E-04 A.U.					
4F7/2			1.984483858	0.000064300	-0.000020719		
5S1/2			1.143129866	0.000420181	-0.000333119		
5P1/2			1.042566757	0.000209717	-0.000011048		
5P3/2			0.952625295	0.000417384	-0.000042915		
5D3/2			0.596185394	0.000106723	-0.000010709		
6S1/2			0.370877697	0.000036899	-0.000002915		
3S1/2 -- ( 2)	245.147473	-555.018237	4.392825538	0.006500800		-0.031005384	0.000935147
3P1/2			4.027517540	0.002282794	-0.000041054		
3P3/2			3.873268991	0.003402752	-0.000211698		
3D3/2			4.415177448	0.002099026	-0.000063541		
3D5/2			4.366899440	0.002814512	-0.000074502		
4S1/2			2.364434803	0.001003376	-0.000358286		
4P1/2			2.407843135	0.001281543	-0.000224767		
4P3/2			2.266963383	0.001035045	-0.000125390		
4D3/2			2.235988934	0.000544648	-0.000052884		
4D5/2			2.193522483	0.000533368	-0.000046798		
4F5/2			1.955856323	0.000369470	-0.000051608		
4F7/2			1.928433897	0.000166528	-0.000050108		
5S1/2			1.083462160	0.000171690	-0.000063338		
5P1/2			0.994604884	0.000190347	-0.000034344		
5P3/2			0.915288692	0.000145365	-0.000018760		
5D3/2			0.582543155	0.000028664	-0.000002960		
6S1/2			0.365664612	0.000015085	-0.000005585		
3P1/2 -- ( 2)	241.317468	-549.277503	4.635353964	0.012823797		-0.003103483	0.000138438
3P3/2			4.242089755	0.001731848	-0.000007310		
3D3/2			4.310159667	0.004627504	-0.000295736		
3D5/2			4.570277127	0.002110869	-0.000012616		
4S1/2			2.435409244	0.000875933	-0.000107561		
4P1/2			2.368476711	0.001385754	-0.000320437		
4P3/2			2.298757341	0.000498342	-0.000026002		
4D3/2			2.246772098	0.001297084	-0.000197066		
4D5/2			2.214680924	0.000352483	-0.000012527		
4F5/2			1.949725123	0.000627946	-0.000137694		
4F7/2			1.940558727	0.000068431	-0.000014500		
5S1/2			1.094000182	0.000146124	-0.000019135		
5P1/2			0.990309436	0.000193446	-0.000047075		
5P3/2			0.919272588	0.000068010	-0.000003949		
5D3/2			0.583110270	0.000068893	-0.000011061		
6S1/2			0.366574038	0.000012797	-0.000001689		
3P3/2 -- ( 4)	198.447046	-488.663319	4.162914983	0.006870440		-0.000234156	0.000024045
3D3/2			4.412139235	0.001554917	-0.000012991		
3D5/2			4.224890857	0.003820652	-0.000083196		
4S1/2			2.405927877	0.001210692	-0.000145655		
4P1/2			2.410051662	0.000534548	-0.000038424		
4P3/2			2.239909497	0.001038542	-0.000146795		
4D3/2			2.230742892	0.000454197	-0.000041879		
4D5/2			2.182600072	0.001032154	-0.000151266		
4F5/2			1.953779202	0.000322326	-0.000032493		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TANTALUM 5D3 Z=73 A=181 R=1.28276E-04 A.U.							
4F7/2			1.915959852	0.000305716	-0.000091311		
5S1/2			1.089196668	0.000195418	-0.000024596		
5P1/2			0.994776738	0.000074912	-0.000005952		
5P3/2			0.912093414	0.000137499	-0.000020625		
5D3/2			0.582293982	0.000023632	-0.000002278		
6S1/2			0.366154308	0.000017046	-0.000002158		
3D3/2 -- ( 4)	193.193923	-481.014925	4.786052273	0.011521875		-0.000002527	0.000000334
3D5/2			4.782558894	0.002144309	-0.000000073		
4S1/2			2.470528486	0.000489539	-0.000012029		
4P1/2			2.446404289	0.000938648	-0.000063500		
4P3/2			2.320583563	0.000352335	-0.000008824		
4D3/2			2.240845712	0.001135007	-0.000104999		
4D5/2			2.241798062	0.000373886	-0.000005200		
4F5/2			1.943585342	0.001403134	-0.000346461		
4F7/2			1.948394103	0.000045341	-0.000005536		
5S1/2			1.099515225	0.000081586	-0.000002527		
5P1/2			1.000020691	0.000125007	-0.000008991		
5P3/2			0.922076559	0.000046910	-0.000001365		
5D3/2			0.582982335	0.000054830	-0.000005440		
6S1/2			0.367053229	0.000007146	-0.000000228		
3D5/2 -- ( 6)	183.669366	-466.618902	4.691420550	0.009783802		-0.000000496	0.000000098
4S1/2			2.460937386	0.000580253	-0.000012078		
4P1/2			2.456363129	0.000405587	-0.000005894		
4P3/2			2.303034615	0.000698186	-0.000029215		
4D3/2			2.277308860	0.000306679	-0.000005613		
4D5/2			2.204302425	0.001026508	-0.000067626		
4F5/2			1.972460677	0.000291793	-0.000021821		
4F7/2			1.921814151	0.000871562	-0.000242075		
5S1/2			1.097935898	0.000094778	-0.000002531		
5P1/2			1.001032677	0.000055604	-0.000001052		
5P3/2			0.919906483	0.000089757	-0.000004123		
5D3/2			0.584563793	0.000015035	-0.000000315		
6S1/2			0.366915062	0.000008280	-0.000000228		
4S1/2 -- ( 2)	78.087037	-233.271786	1.954572123	0.000545318		-0.007647431	0.000230253
4P1/2			1.724382913	0.000264295	-0.000016791		
4P3/2			1.663865962	0.000321845	-0.000048151		
4D3/2			1.747948261	0.000240177	-0.000022429		
4D5/2			1.726598050	0.000213147	-0.000024125		
4F5/2			1.622575852	0.000148112	-0.000014356		
4F7/2			1.606942121	0.000134556	-0.000014376		
5S1/2			0.994225265	0.000065552	-0.000027862		
5P1/2			0.926722781	0.000047744	-0.000009374		
5P3/2			0.857433078	0.000037429	-0.000005833		
5D3/2			0.562244063	0.000006864	-0.000000740		
6S1/2			0.358139679	0.000005775	-0.000002517		
4P1/2 -- ( 2)	73.841501	-225.355461	1.932905218	0.000978432		-0.000747194	0.000033240
4P3/2			1.768315615	0.000125905	-0.000000963		
4D3/2			1.632159910	0.000548925	-0.000092019		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TANTALUM	5D3	Z=73 A=181 R=1.28276E-04 A.U.					
			1.754980431	0.000131171	-0.000003551		
			1.585109713	0.000235985	-0.000034688		
			1.612073266	0.000092674	-0.00003931		
			1.007475538	0.000078923	-0.000011404		
			0.911530987	0.000070171	-0.000019327		
			0.860689148	0.000022892	-0.000001509		
			0.560187224	0.000012895	-0.000001857		
			0.359150862	0.000006729	-0.000001008		
4P3/2 -- ( 4)	61.007241	-204.052087	1.740382392	0.000520019		-0.000055626	0.000005696
			1.705655425	0.000152431	-0.0000306374		
			1.616945942	0.000328612	-0.000034789		
			1.574900690	0.000108147	-0.000006460		
			1.540164243	0.000164521	-0.000018557		
			0.997241985	0.000108487	-0.000015817		
			0.921231096	0.000029350	-0.000002499		
			0.846594755	0.000049757	-0.000008252		
			0.560219706	0.000005058	-0.000000354		
			0.358307146	0.000009034	-0.000001355		
4D3/2 -- ( 4)	53.226934	-188.262109	1.683779303	0.000642006		-0.000000626	0.000000083
			1.682958562	0.000120442	-0.000000008		
			1.477566527	0.000329430	-0.000048702		
			1.546727713	0.000077276	-0.000000869		
			0.995020937	0.000037863	-0.000001218		
			0.910770551	0.000073808	-0.000007563		
			0.851614045	0.000019986	-0.000000793		
			0.555000117	0.000019551	-0.000001871		
			0.358139805	0.000003195	-0.000000125		
4D5/2 -- ( 6)	50.476760	-183.128637	1.653882642	0.000540617		-0.000000122	0.000000024
			1.541289933	0.000087004	-0.000002833		
			1.473438495	0.000260002	-0.000032396		
			0.991203310	0.000045327	-0.000001184		
			0.915257618	0.000023346	-0.000000436		
			0.846314149	0.000045099	-0.000003249		
			0.558673240	0.000005196	-0.000000104		
			0.357835529	0.000003729	-0.000000123		
4F5/2 -- ( 6)	34.495884	-147.264221	1.420094244	0.000426396		-0.000000000	0.000000000
			1.431298467	0.000065714	-0.000000000		
			0.956441291	0.000020877	-0.000000112		
			0.878896395	0.000025267	-0.000000061		
			0.825957935	0.000011904	-0.000000004		
			0.546769142	0.000010629	-0.000000131		
			0.355276374	0.000001761	-0.000000001		
4F7/2 -- ( 8)	33.535102	-144.993061	1.403497253	0.000389282		-0.000000000	0.000000000
			0.952708408	0.000026899	-0.000000127		
			0.884182246	0.000016660	-0.000000010		
			0.820120043	0.000021474	-0.000000017		
			0.550064804	0.000004205	-0.000000002		
			0.354989397	0.000002140	-0.000000001		



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
<b>TANTALUM 503 Z=73 A=181 R=1.28276E-04 A.U.</b>							
5S1/2 -- ( 2)	16.571365	-89.290261	0.816229378	0.000032452		-0.001319257	0.000039706
5P1/2			0.684806343	0.000028392	-0.000003500		
5P3/2			0.655568696	0.000023958	-0.000005984		
5D3/2			0.505257523	0.000011008	-0.000001493		
6S1/2			0.338296038	0.000001957	-0.000000860		
5P1/2 -- ( 2)	13.325258	-79.571255	0.737091669	0.000045811		-0.000107418	0.000004776
5P3/2			0.667425486	0.000005786	-0.000000050		
5D3/2			0.469807546	0.000027159	-0.000006287		
6S1/2			0.338200752	0.000003500	-0.000000512		
5P3/2 -- ( 4)	10.617151	-71.958029	0.652514087	0.000023231		-0.000007604	0.000000778
5D3/2			0.484511936	0.000006934	-0.000000625		
6S1/2			0.334448861	0.000004365	-0.000000638		
5D3/2 -- ( 3)	3.979994	-43.767197	0.396153573	0.000008109		-0.000000033	0.000000004
6S1/2			0.300030782	0.000000737	-0.000000003		
6S1/2 -- ( 2)	1.736691	-27.587799	0.268043285	0.000000963		-0.000116075	0.000003493
ETOT	-15602.56166	17514.36757	-38940.91653	5809.98015	18.323337270	-1.943185417	0.078910119
<b>TUNGSTEN 504 Z=74 A=184 R=1.28981E-04 A.U.</b>							
1S1/2 -- ( 2)	3462.897719	-6434.941020	51.776085263	5.805227570		-1.101775239	0.036266065
2S1/2			16.009299782	0.304921395	-0.036193188		
2P1/2			19.398522526	0.632702257	-0.087401178		
2P3/2			16.853420517	0.295691263	-0.085496665		
3S1/2			6.657306294	0.065161953	-0.008274910		
3P1/2			7.301722465	0.124965412	-0.017167559		
3P3/2			6.638137631	0.062032894	-0.018492841		
3D3/2			6.702589028	0.002810862	-0.000340652		
3D5/2			6.497310415	0.001125938	-0.000361327		
4S1/2			2.995376264	0.015992126	-0.002059773		
4P1/2			3.068601096	0.028824011	-0.003955405		
4P3/2			2.805058567	0.014179155	-0.004254432		
4D3/2			2.637009302	0.000673024	-0.000081910		
4D5/2			2.563763509	0.000267465	-0.000086581		
4F5/2			2.099347839	0.000001318	-0.000000147		
4F7/2			2.068058306	0.000000496	-0.000000163		
5S1/2			1.216421426	0.002833161	-0.000366031		
5P1/2			1.119636766	0.004272991	-0.000586237		
5P3/2			1.016312340	0.002005870	-0.000602616		
5D3/2			0.649591697	0.000040171	-0.000004892		
6S1/2			0.387989414	0.000252185	-0.000032596		
2S1/2 -- ( 2)	810.953107	-1566.168307	11.772821202	0.111897727		-0.150188897	0.004691410
2P1/2			11.639511066	0.034211147	-0.000065943		
2P3/2			10.977024046	0.052676956	-0.000969851		
3S1/2			5.569813625	0.013062406	-0.003189668		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TUNGSTEN 5D4 Z=74 A=184 R=1.28981E-04 A.U.							
			6.059263047	0.021675040	-0.003395754		
			5.680836228	0.016458124	-0.002042495		
			6.278498700	0.013901745	-0.001919391		
			6.125880646	0.006102352	-0.001895195		
			2.740104212	0.003178980	-0.000816097		
			2.787208721	0.005185040	-0.000836541		
			2.598802645	0.003842291	-0.000527774		
			2.550967297	0.002446052	-0.000356460		
			2.489141508	0.001120122	-0.000354434		
			2.097372267	0.000111766	-0.000014767		
			2.066262569	0.000040325	-0.000014288		
			1.171576246	0.000562027	-0.000145545		
			1.078055090	0.000772911	-0.000125313		
			0.987273087	0.000544957	-0.000076139		
			0.644569774	0.000139839	-0.000020536		
			0.334032477	0.000050012	-0.000012967		
2P1/2 -- ( 2)	809.973147	-1564.748839	14.365599206	0.254532786		-0.013955940	0.000646633
			12.860728099	0.035152099	-0.000052823		
			5.897486845	0.008902112	-0.000642105		
			6.050705530	0.020425631	-0.003079630		
			5.919734959	0.008009796	-0.000218463		
			6.278289038	0.041569499	-0.009898590		
			6.298462436	0.001314467	-0.000297490		
			2.812356276	0.002153941	-0.000172653		
			2.792618234	0.004549507	-0.000750491		
			2.648704728	0.001824241	-0.000058573		
			2.553009147	0.007757392	-0.001900690		
			2.522126774	0.000286238	-0.000060875		
			2.097755225	0.000133386	-0.000027990		
			2.067213429	0.000007458	-0.000002821		
			1.184112543	0.000380345	-0.000031118		
			1.079040442	0.000669935	-0.000112245		
			0.994274240	0.000257810	-0.000008513		
			0.644705444	0.000447332	-0.000110041		
			0.385115002	0.000033839	-0.000002777		
2P3/2 -- ( 4)	621.244425	-1314.586714	12.317869242	0.128086978		-0.000989503	0.000105867
			5.786819799	0.011263915	-0.000809201		
			6.178764061	0.006962632	-0.000310502		
			5.674172182	0.015067318	-0.001380941		
			6.375344411	0.012327483	-0.001220889		
			6.105730338	0.020632560	-0.005861316		
			2.786074389	0.002612737	-0.000203761		
			2.813301243	0.001567503	-0.000080808		
			2.600246560	0.003279470	-0.000332256		
			2.569707474	0.002271475	-0.000227223		
			2.487316396	0.003704500	-0.001089125		
			2.097776049	0.000083306	-0.000008193		
			2.066182730	0.000072222	-0.000023280		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TUNGSTEN	5D4	Z=74 A=184 R=1.28981E-04 A.U.					
	5S1/2		1.179485365	0.000457579	-0.000036297		
	5P1/2		1.081883748	0.000231345	-0.000012243		
	5P3/2		0.987545177	0.000459713	-0.000047371		
	5D3/2		0.645655520	0.000130817	-0.000013108		
	6S1/2		0.364703466	0.000040662	-0.000003233		
3S1/2 -- ( 2)	255.285696	-574.735J18	4.475161796	0.0006878993		-0.033487831	0.001038149
	3P1/2		4.104930952	0.002410054	-0.000042258		
	3P3/2		3.942894797	0.003583919	-0.000228909		
	3D3/2		4.496834372	0.002214516	-0.000067148		
	3D5/2		4.446177180	0.002966056	-0.000079087		
	4S1/2		2.412117266	0.001066954	-0.000380849		
	4P1/2		2.458950519	0.001371982	-0.000240484		
	4P3/2		2.311437410	0.001089073	-0.000132015		
	4D3/2		2.285763930	0.000581173	-0.000056485		
	4D5/2		2.241531660	0.000568076	-0.000049843		
	4F5/2		2.033439052	0.000409467	-0.000057220		
	4F7/2		2.006094860	0.000185016	-0.000055634		
	5S1/2		1.116688220	0.000187876	-0.000069297		
	5P1/2		1.030715862	0.000212199	-0.000038273		
	5P3/2		0.947750332	0.000159794	-0.000020646		
	5D3/2		0.629487839	0.000035357	-0.000003660		
	6S1/2		0.379152753	0.000016704	-0.000006184		
3P1/2 -- ( 2)	251.374653	-568.911878	4.725727645	0.013581083		-0.003471047	0.000158857
	3P3/2		4.319681592	0.001812177	-0.000008204		
	3D3/2		4.391249644	0.004890973	-0.000315205		
	3D5/2		4.654760767	0.002224443	-0.000013507		
	4S1/2		2.485138377	0.000929241	-0.000114014		
	4P1/2		2.418806110	0.001477045	-0.000341590		
	4P3/2		2.344288416	0.000525404	-0.000027539		
	4D3/2		2.297117266	0.001380635	-0.000209721		
	4D5/2		2.263506785	0.000375780	-0.000013346		
	4F5/2		2.027038212	0.000696042	-0.000152699		
	4F7/2		2.019185463	0.000076114	-0.000016106		
	5S1/2		1.127837531	0.000159536	-0.000020889		
	5P1/2		1.026178462	0.000214645	-0.000052265		
	5P3/2		0.952043831	0.000074884	-0.000004372		
	5D3/2		0.630177214	0.000084808	-0.000013633		
	6S1/2		0.380125770	0.000014137	-0.000001867		
3P3/2 -- ( 4)	205.434227	-504.128827	4.234408902	0.007228128		-0.000255722	0.000027021
	3D3/2		4.489834773	0.001634414	-0.000013312		
	3D5/2		4.298181615	0.004017149	-0.000086365		
	4S1/2		2.453978032	0.001288870	-0.000155786		
	4P1/2		2.460472436	0.000569323	-0.000041097		
	4P3/2		2.283239229	0.001099786	-0.000155721		
	4D3/2		2.279776042	0.000486603	-0.000044967		
	4D5/2		2.229735029	0.001101589	-0.000162141		
	4F5/2		2.030921986	0.000357088	-0.000035996		
	4F7/2		1.992441277	0.000339403	-0.000101296		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TUNGSTEN	504	Z=74	A=184	R=1.28981E-04	A.U.		
5S1/2			1.122615040	0.000213814	-0.000027038		
5P1/2			1.030793348	0.000083020	-0.000006630		
5P3/2			0.944271699	0.000151938	-0.000022845		
5D3/2			0.629159091	0.000029248	-0.000002827		
6S1/2			0.379664084	0.000018866	-0.000002400		
3D3/2 -- ( 4)	200.147653	-496.459303	4.873125984	0.012141710		-0.000002863	0.000000390
3D5/2			4.867849377	0.002256784	-0.000000082		
4S1/2			2.520525308	0.000319047	-0.000012801		
4P1/2			2.498221988	0.0000998310	-0.000067873		
4P3/2			2.366137515	0.000372948	-0.000009354		
4D3/2			2.290635398	0.001208084	-0.000112217		
4D5/2			2.290973945	0.000397863	-0.000005555		
4F5/2			2.020322973	0.001556756	-0.000384489		
4F7/2			2.027466185	0.000050559	-0.000006155		
5S1/2			1.133546292	0.000088993	-0.000002772		
5P1/2			1.036459239	0.000138274	-0.000010001		
5P3/2			0.954969452	0.000051824	-0.000001514		
5D3/2			0.630008336	0.000067307	-0.000006716		
6S1/2			0.380627410	0.000007886	-0.000000253		
3D5/2 -- ( 6)	190.009359	-481.168491	4.773389334	0.010294021		-0.000000558	0.000000113
4S1/2			2.510409677	0.000614679	-0.000012854		
4P1/2			2.508094587	0.000430461	-0.000006286		
4P3/2			2.347938514	0.000738268	-0.000030938		
4D3/2			2.327804034	0.000326262	-0.000006005		
4D5/2			2.252226534	0.001090831	-0.000072188		
4F5/2			2.051115185	0.000323957	-0.000024207		
4F7/2			1.998893537	0.000968180	-0.000268940		
5S1/2			1.131832522	0.000103259	-0.000002776		
5P1/2			1.037485688	0.000061410	-0.000001171		
5P3/2			0.952620609	0.000099003	-0.000004562		
5D3/2			0.631859757	0.000018457	-0.000000391		
6S1/2			0.380475714	0.000009126	-0.000000253		
4S1/2 -- ( 2)	81.645280	-241.847759	1.994588903	0.000580928		-0.0008301098	0.000256885
4P1/2			1.760776893	0.000279548	-0.000017472		
4P3/2			1.697407955	0.000342875	-0.000051935		
4D3/2			1.786092205	0.000255495	-0.000023782		
4D5/2			1.763884930	0.000227158	-0.000025658		
4F5/2			1.680360115	0.000161368	-0.000015485		
4F7/2			1.665200771	0.000148279	-0.000015542		
5S1/2			1.023218347	0.000071965	-0.000030651		
5P1/2			0.958602907	0.000053757	-0.000010561		
5P3/2			0.886327015	0.000041347	-0.000006514		
5D3/2			0.605554824	0.000008432	-0.000000912		
6S1/2			0.371186647	0.000006415	-0.000002803		
4P1/2 -- ( 2)	77.316896	-233.835652	1.974695351	0.001044928		-0.000841042	0.000038383
4P3/2			1.804851126	0.000132640	-0.000001093		
4D3/2			1.668632058	0.000585735	-0.000098160		
4D5/2			1.793773066	0.000139848	-0.000003804		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TUNGSTEN	5D4	Z=74 A=184 R=1.26981E-34 A.U.					
			1.541944709	0.000257285	-0.000037418		
			1.671263186	0.000102573	-0.000004261		
			1.037228474	0.000086200	-0.000012477		
			0.942648438	0.000078123	-0.000021618		
			0.889882392	0.000025236	-0.000001688		
			0.63202162	0.000015886	-0.000002294		
			0.372264600	0.000007431	-0.000001117		
4P3/2 -- ( 4)	63.593755	-211.083262	1.774780911	0.000552049		-0.0000061153	0.000006443
			1.742169328	0.000161298	-0.000006630		
			1.651270598	0.000349077	-0.000036447		
			1.629479101	0.000117275	-0.000006877		
			1.594408693	0.000180202	-0.000019788		
			1.026230322	0.000119342	-0.000017465		
			0.952631318	0.000032752	-0.000002810		
			0.874785265	0.000005186	-0.000009216		
			0.603127566	0.000006273	-0.000000448		
			0.371348300	0.000010034	-0.000001512		
4D3/2 -- ( 4)	55.684886	-195.251854	1.722496002	0.000686941		-0.000000717	0.000000098
			1.721275685	0.000128675	-0.000000009		
			1.530434490	0.000356727	-0.0000051730		
			1.603302918	0.000085607	-0.000000931		
			1.024481317	0.000041528	-0.000001356		
			0.942061530	0.000082098	-0.000008467		
			0.880433288	0.000022154	-0.000000884		
			0.597161172	0.000024125	-0.000002354		
			0.371216673	0.000003542	-0.000000141		
4D5/2 -- ( 6)	52.748602	-189.806440	1.691187736	0.000577741		-0.000000139	0.000000028
			1.596118824	0.000094584	-0.000002996		
			1.526606739	0.000283179	-0.000034323		
			1.020426653	0.000049615	-0.000001320		
			0.946668899	0.000025910	-0.000000492		
			0.874816960	0.000049924	-0.000003613		
			0.601407743	0.000006412	-0.000000132		
			0.370889780	0.000004125	-0.000000139		
4F5/2 -- ( 6)	37.126669	-155.351946	1.487254189	0.000481301		-0.000000000	0.000000000
			1.499867229	0.000074541	-0.000000000		
			0.990449085	0.000023191	-0.000000091		
			0.913909679	0.000028419	-0.000000035		
			0.857555358	0.000013422	-0.000000001		
			0.589623117	0.000013341	-0.000000211		
			0.368667971	0.000001983	-0.000000002		
4F7/2 -- ( 8)	36.120827	-153.036495	1.471267443	0.000440232		-0.000000000	0.000000000
			0.986939407	0.000029860	-0.000000105		
			0.919213787	0.000018712	-0.000000006		
			0.851958809	0.000024070	-0.000000006		
			0.593035131	0.000005214	-0.000000004		
			0.368396470	0.000002403	-0.000000002		
5S1/2 -- ( 2)	17.816962	-93.593769	0.841359422	0.000035833		-0.001473894	0.000045593

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TUNGSTEN 504 Z=74 A=184 R=1.28981E-04 A.U.							
			0.707871267	0.000030928	-0.000003771		
			0.677448764	0.000026679	-0.000006658		
			0.540202571	0.000013261	-0.000001795		
			0.350652742	0.000002204	-0.000000978		
5P1/2 -- ( 2)	14.496422	-83.860200	0.763894140	0.0000051376		-0.000125925	0.000005744
			0.691317385	0.000006394	-0.000000060		
			0.501431759	0.0000032580	-0.0000007529		
			0.350739828	0.000003920	-0.000000576		
5P3/2 -- ( 4)	11.518224	-75.704945	0.675566742	0.000025966		-0.000008728	0.000000919
			0.517474495	0.000008229	-0.000000733		
			0.346826877	0.000004945	-0.000000728		
5D3/2 -- ( 4)	4.728630	-48.076551	0.430185413	0.000019303		-0.000000043	0.000000006
			0.315712072	0.0000009872	-0.000000001		
6S1/2 -- ( 2)	1.889624	-29.029777	0.277814475	0.000001077		-0.000131238	0.000004059
ETOT	-16141.50631	18184.74048	-40346.76349	6005.86914	19.232952225	-2.039479198	0.086867383
RHENIUM 505 Z=75 A=187 R=1.29678E-04 A.U.							
1S1/2 -- ( 2)	3586.331668	-6647.016091	52.687461071	6.064120041		-1.175908648	0.039799696
			16.309312072	0.319617242	-0.038009981		
			19.787588761	0.663111595	-0.091173362		
			17.113697263	0.308382392	-0.089163726		
			6.787341410	0.068495310	-0.008714780		
			7.452687997	0.131288823	-0.017941147		
			6.723263799	0.065035151	-0.019387547		
			6.822402327	0.002949658	-0.000356152		
			6.607459323	0.001180212	-0.000378716		
			3.059156634	0.016893110	-0.002180055		
			3.138709344	0.030462678	-0.004157678		
			2.861875217	0.014963331	-0.004489811		
			2.697415271	0.000714776	-0.000086669		
			2.620834499	0.000283834	-0.000091879		
			2.179025414	0.000001470	-0.000000163		
			2.147248737	0.000000554	-0.000000183		
			1.255813428	0.003078255	-0.000398487		
			1.162577103	0.004694568	-0.000640575		
			1.053660678	0.002205290	-0.000662557		
			0.698342006	0.000048371	-0.000005869		
			0.665247781	0.000018116	-0.000005872		
			0.402052957	0.000276540	-0.000035816		
2S1/2 -- ( 2)	842.688702	-1620.999616	11.986509568	0.117818551		-0.161544473	0.005184069
			11.858180018	0.036016522	-0.000067513		
			11.160995906	0.055116665	-0.001057276		
			5.673412120	0.013791615	-0.003365952		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RHENIUM	505	Z=75	A=187	R=1.29678E-04	A.U.		
3P1/2			6.176586902	0.022941599	-0.003591139		
3P3/2			5.779268074	0.017209026	-0.002126171		
3D3/2			6.390641090	0.014615885	-0.002016973		
3D5/2			6.230785406	0.006406341	-0.001991207		
4S1/2			2.796343528	0.003372903	-0.000865544		
4P1/2			2.847866888	0.005520376	-0.000889865		
4P3/2			2.650542786	0.004046666	-0.000553987		
4D3/2			2.608789781	0.002599335	-0.000378695		
4D5/2			2.544260763	0.001189362	-0.000376743		
4F5/2			2.176902157	0.000124043	-0.000016383		
4F7/2			2.145320961	0.000044769	-0.000015867		
5S1/2			1.208326810	0.000613325	-0.000158785		
5P1/2			1.117896997	0.000855499	-0.000138590		
5P3/2			1.022665462	0.000598021	-0.000083308		
5D3/2			0.692481201	0.000168245	-0.000024710		
5D5/2			0.660472066	0.000073293	-0.000023245		
6S1/2			0.397792253	0.000055081	-0.000014279		
2P1/2 -- ( 2 )	841.629472	-1619.514822	14.641636705	0.268109273		-0.015528837	0.000738031
2P3/2			13.079517168	0.036669739	-0.000058693		
3S1/2			6.009784961	0.009397299	-0.000676309		
3P1/2			6.168401834	0.021590849	-0.003252882		
3P3/2			6.013646452	0.008402578	-0.000228823		
3D3/2			6.391262056	0.043673426	-0.010399624		
3D5/2			6.406349231	0.001375068	-0.000312127		
4S1/2			2.870890600	0.002285237	-0.000182844		
4P1/2			2.853602996	0.004838073	-0.000797716		
4P3/2			2.701965112	0.001926697	-0.000061797		
4D3/2			2.611058452	0.008241857	-0.002019632		
4D5/2			2.578215335	0.000303017	-0.000064634		
4F5/2			2.177318616	0.000147778	-0.000031012		
4F7/2			2.146344348	0.000008262	-0.000003127		
5S1/2			1.221628409	0.000415049	-0.000033905		
5P1/2			1.118980792	0.000740559	-0.000124050		
5P3/2			1.030180341	0.000283677	-0.000009362		
5D3/2			0.692650978	0.000538268	-0.000132444		
5D5/2			0.662574694	0.000019134	-0.000004042		
6S1/2			0.398983490	0.000037268	-0.000003054		
2P3/2 -- ( 4 )	640.077688	-1352.737126	12.505183261	0.133754879		-0.001073233	0.000118149
3S1/2			5.892758441	0.011868208	-0.000858767		
3P1/2			6.295105297	0.007332083	-0.000328347		
3P3/2			5.769527793	0.015797597	-0.001450155		
3D3/2			6.487166468	0.012956119	-0.001281258		
3D5/2			6.207953915	0.021662696	-0.006154342		
4S1/2			2.842959185	0.002764231	-0.000216953		
4P1/2			2.873881575	0.001660066	-0.000085931		
4P3/2			2.651379881	0.003459391	-0.000351137		
4D3/2			2.627690986	0.002410657	-0.000240776		
4D5/2			2.541970316	0.003929430	-0.001151336		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RHENIUM	5D5	Z=75 A=187 R=1.29678E-04 A.U.					
			2.177318881	0.000092987	-0.000009140		
			2.145215116	0.000080635	-0.000026002		
			1.216570217	0.000497802	-0.000039741		
			1.121864147	0.000254674	-0.000013537		
			1.022863208	0.000505090	-0.000052158		
			0.693721659	0.000157200	-0.000015728		
			0.660347165	0.000241251	-0.000070973		
			0.398529495	0.000044642	-0.000003573		
3S1/2 -- ( 2)	265.752633	-594.964144	4.558190507	0.007274698		-0.036151737	0.001151217
			4.183033328	0.002543076	-0.000043484		
			4.012893214	0.003772355	-0.000247518		
			4.578934706	0.002334868	-0.000070981		
			4.525807779	0.003123336	-0.000083977		
			2.460386342	0.001134003	-0.000404620		
			2.510742255	0.001467854	-0.000257132		
			2.356397907	0.001144959	-0.000138883		
			2.336158798	0.000619567	-0.000060266		
			2.290127853	0.000604659	-0.000053029		
			2.108697612	0.000451428	-0.000063111		
			2.081141971	0.000204400	-0.000061427		
			1.150523140	0.000205366	-0.000075732		
			1.067367216	0.000236033	-0.000042554		
			0.980534305	0.000175167	-0.000022659		
			0.674928343	0.000042744	-0.000004436		
			0.645028911	0.000037173	-0.000003701		
			0.392638996	0.000018427	-0.000006822		
3P1/2 -- ( 2)	261.758225	-589.056422	4.816915308	0.014373926		-0.003878829	0.000182022
			4.397694270	0.001894521	-0.000009194		
			4.472758480	0.005166458	-0.000336060		
			4.739629881	0.002342155	-0.000014464		
			2.535506801	0.000985367	-0.000120798		
			2.469801198	0.001573555	-0.000363928		
			2.390336535	0.000553559	-0.000029153		
			2.348098276	0.001468007	-0.000222906		
			2.312942118	0.000400408	-0.000014206		
			2.102047534	0.000767497	-0.000168456		
			2.095198238	0.000084171	-0.000017790		
			1.162310756	0.000173999	-0.000022779		
			1.062582165	0.000237666	-0.000057901		
			0.985151532	0.000082235	-0.000004828		
			0.675749495	0.000102306	-0.000016464		
			0.646407522	0.000024108	-0.000000986		
			0.393676534	0.000015559	-0.000002055		
3P3/2 -- ( 4)	212.559495	-519.860015	4.306055611	0.007598478		-0.000278935	0.000030316
			4.567683799	0.001716689	-0.000013637		
			4.371548934	0.004220311	-0.000089656		
			2.502578842	0.001371596	-0.000166568		
			2.511509439	0.000606080	-0.000043933		



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RHENIUM	5D5	Z=75 A=167 R=1.29678E-04 A.U.					
			2.326997560	0.001163999	-0.000165095		
			2.329366999	0.000520888	-0.000048236		
			2.277395283	0.001174780	-0.000173626		
			2.105689320	0.000393525	-0.000039668		
			2.066266402	0.000374700	-0.000111747		
			1.156637422	0.000233703	-0.000029694		
			1.067332260	0.000091814	-0.000007369		
			0.976753434	0.000167467	-0.000025239		
			0.674505636	0.000035479	-0.000003439		
			0.644278731	0.000073864	-0.000011737		
			0.393170470	0.000020802	-0.000002660		
3D3/2 -- ( 4 )	207.237040	-512.165849	4.960360030	0.012783802		-0.000003238	0.000000454
			4.953209918	0.002373013	-0.000000091		
			2.571114692	0.000550040	-0.000013615		
			2.550688347	0.001061266	-0.000072524		
			2.412166399	0.000394553	-0.000009911		
			2.341001480	0.001285035	-0.000119842		
			2.340726109	0.000423108	-0.000005929		
			2.094718715	0.001718145	-0.000424453		
			2.103888504	0.000056057	-0.000006806		
			1.168207661	0.000096960	-0.000003037		
			1.073441183	0.000152625	-0.000011102		
			0.988191808	0.000057108	-0.000001675		
			0.675530914	0.000080997	-0.000008129		
			0.648077531	0.000025771	-0.000000415		
			0.394199146	0.000008670	-0.000000280		
3D5/2 -- ( 6 )	196.455330	-495.938350	4.855343791	0.010821224		-0.000000626	0.000000131
			2.560449276	0.000650792	-0.000013672		
			2.560458612	0.000456594	-0.000006699		
			2.393291847	0.000780224	-0.000032748		
			2.378880284	0.000346863	-0.000006419		
			2.300683316	0.001158456	-0.000077002		
			2.127401927	0.000357775	-0.000026712		
			2.073323637	0.001069523	-0.000297122		
			1.166349746	0.000112369	-0.000003042		
			1.074476782	0.000067674	-0.000001301		
			0.985654380	0.000108922	-0.000005035		
			0.677656279	0.000022210	-0.000000475		
			0.645837497	0.000068774	-0.000004934		
			0.394033200	0.000010020	-0.000000281		
4S1/2 -- ( 2 )	85.348291	-250.674167	2.035137271	0.000618625		-0.000007744	0.000286325
			1.797677126	0.000295582	-0.000018170		
			1.731371046	0.000365207	-0.000056023		
			1.824733064	0.000271686	-0.000025213		
			1.801651988	0.000241951	-0.000027284		
			1.736372863	0.000175063	-0.000016630		
			1.721464069	0.000162590	-0.000016726		
			1.052695392	0.000078934	-0.000033691		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RHENIUM 5D5 Z=75 A=187 R=1.29678E-04 A.U.							
5P1/2			0.990895146	0.000060409	-0.000011875		
5P3/2			0.915463489	0.000045558	-0.000007257		
5D3/2			0.647253093	0.000010162	-0.000001103		
5D5/2			0.619908108	0.000013402	-0.000001081		
6S1/2			0.384234642	0.000007100	-0.000003110		
4P1/2 -- ( 2)	80.937578	-242.569090	2.017081463	0.001115476		-0.0000946013	0.000044265
4P3/2			1.841854028	0.000139654	-0.000001238		
4D3/2			1.705602846	0.000624815	-0.000104703		
4D5/2			1.833084261	0.000148995	-0.000004075		
4F5/2			1.697154908	0.000279335	-0.000040197		
4F7/2			1.728509994	0.000112944	-0.000004597		
5S1/2			1.067494564	0.000094068	-0.000013641		
5P1/2			0.974169360	0.000086807	-0.000024134		
5P3/2			0.919333899	0.000027749	-0.000001883		
5D3/2			0.644613895	0.000019198	-0.000002782		
5D5/2			0.620535879	0.000009821	-0.000000325		
6S1/2			0.385379793	0.000008178	-0.000001233		
4P3/2 -- ( 4)	66.146994	-218.287496	1.809571341	0.000585802		-0.000067165	0.000007278
4D3/2			1.779123670	0.000170596	-0.000006892		
4D5/2			1.686009772	0.000370632	-0.000038162		
4F5/2			1.682229390	0.000126639	-0.000007287		
4F7/2			1.646733277	0.000196436	-0.000020999		
5S1/2			1.055688989	0.000131190	-0.000019272		
5P1/2			0.984414192	0.000036484	-0.000003154		
5P3/2			0.903197045	0.000061065	-0.000010270		
5D3/2			0.644398899	0.000007634	-0.000000556		
5D5/2			0.616127271	0.000018335	-0.000001424		
6S1/2			0.384388448	0.000011106	-0.000001681		
4D3/2 -- ( 4)	58.234142	-202.425116	1.761723102	0.000734579		-0.000000821	0.000000115
4D5/2			1.760090569	0.000137388	-0.000000011		
4F5/2			1.581928621	0.000384773	-0.000054717		
4F7/2			1.658106371	0.000094346	-0.000000993		
5S1/2			1.054447923	0.000045503	-0.000001509		
5P1/2			0.973765850	0.000091151	-0.000009463		
5P3/2			0.909509789	0.000024499	-0.000000984		
5D3/2			0.637710584	0.000029189	-0.000002902		
5D5/2			0.616754236	0.000008617	-0.000000137		
6S1/2			0.384296403	0.000003913	-0.000000158		
4D5/2 -- ( 6)	55.102471	-196.654389	1.728971302	0.000617061		-0.000000158	0.000000033
4F5/2			1.649396529	0.000102404	-0.000003155		
4F7/2			1.578153769	0.000307082	-0.000036200		
5S1/2			1.050146012	0.000054258	-0.000001470		
5P1/2			0.978487935	0.000028698	-0.000000554		
5P3/2			0.903568929	0.000055136	-0.000004009		
5D3/2			0.642527766	0.000007758	-0.000000164		
5D5/2			0.612095661	0.000024828	-0.000001745		
6S1/2			0.383946429	0.000004547	-0.000000156		
4F5/2 -- ( 6)	39.792148	-163.427133	1.551997198	0.000539101		-0.000000000	0.000000000

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
RHENIUM	505	Z=75 A=187 R=1.29678E-04 A.U.						
			1.565817865	0.000083851	-0.000000000			
			1.024269085	0.000025694	-0.000000072			
			0.948819931	0.000031853	-0.000000016			
			0.888988924	0.000015072	-0.000000000			
			0.630932340	0.000016375	-0.000000308			
			0.609179375	0.000005088	-0.000000020			
			0.382019071	0.000002220	-0.000000002			
4F7/2 -- ( 8)	38.733093	-161.043853	1.536309130	0.000493745		-0.000000000	0.000000000	
			1.020890225	0.000033021	-0.000000084			
			0.954098513	0.000020922	-0.000000003			
			0.883550001	0.000026861	-0.000000001			
			0.634451056	0.000006336	-0.000000007			
			0.605623193	0.000014166	-0.000000195			
			0.381755401	0.000002683	-0.000000002			
5S1/2 -- ( 2)	19.140805	-98.057953	0.866920492	0.000039523		-0.001645167	0.000052273	
			0.731279279	0.000033634	-0.000004056			
			0.699592848	0.000029665	-0.000007398			
			0.573626103	0.000015695	-0.000002121			
			0.554102511	0.000007300	-0.000001994			
			0.363040641	0.000002473	-0.000001106			
5P1/2 -- ( 2)	15.742999	-88.303432	0.791046964	0.000057490		-0.000147284	0.000006887	
			0.715462910	0.000007046	-0.000000073			
			0.531797881	0.000038453	-0.000008870			
			0.548706207	0.000002510	-0.000000291			
			0.363308682	0.000004370	-0.000000645			
5P3/2 -- ( 4)	12.469019	-79.563624	0.698799999	0.000028946		-0.000009989	0.000001082	
			0.549033513	0.000009605	-0.000000846			
			0.5133378704	0.000016027	-0.000003962			
			0.359228348	0.000005579	-0.000000827			
5D3/2 -- ( 4)	5.522231	-52.383715	0.462890100	0.000012785		-0.000000056	0.000000008	
			0.456479116	0.000002263	-0.000000000			
			0.330788854	0.000001023	-0.000000000			
5D5/2 -- ( 1)	4.975838	-49.899449	0.000000000	0.000000000		-0.000000010	0.000000002	
			0.326038031	0.000001558	-0.000000001			
6S1/2 -- ( 2)	2.046601	-30.501844	0.287614711	0.000001199		-0.000147848	0.000004697	
ETOT	-16692.28339	18874.68066	-41787.37643	6205.10549	20.166130563	-2.139214592	-2.815551619	0.095529560
OSMIUM	506	Z=76 A=190 R=1.30368E-04 A.U.						
1S1/2 -- ( 2)	3713.498503	-6864.516655	53.610021281	6.331558916		-1.254518571	0.043633497	
			16.613300506	0.334863182	-0.039899409			
			20.183025083	0.694636636	-0.095049247			
			17.374857771	0.321419353	-0.092930259			
			6.918812629	0.071956843	-0.009172587			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
OSMIUM	5D6	Z=76 A=190 R=1.30368E-04 A.U.					
			7.605585388	0.137841987	-0.018734742		
			6.838798305	0.068134475	-0.020311168		
			6.942532581	0.003092102	-0.000371932		
			6.717612837	0.001235815	-0.000396520		
			3.123915513	0.017836398	-0.002306252		
			3.210021925	0.032176737	-0.004367238		
			2.919392899	0.015782848	-0.004735789		
			2.758561120	0.000758416	-0.000091610		
			2.678540215	0.000300935	-0.000097411		
			2.256637389	0.000001631	-0.000000180		
			2.224140239	0.000000016	-0.000000203		
			1.295579898	0.003338093	-0.000432980		
			1.2056922697	0.005140616	-0.000697521		
			1.090740749	0.002414922	-0.000725569		
			0.743911250	0.000056933	-0.000006882		
			0.709171800	0.000021372	-0.000006927		
			0.415136179	0.000300323	-0.000038974		
2S1/2 -- ( 2)	875.505178	-1677.384308	12.202693708	0.124000795	-0.173699288	0.005723036	
			12.079722642	0.037902070	-0.000069105		
			11.346265862	0.057639677	-0.001152317		
			5.777978055	0.014553599	-0.003549877		
			6.295114143	0.024267140	-0.003795277		
			5.878116416	0.017978734	-0.002210958		
			6.503192808	0.015354623	-0.002117813		
			6.335848807	0.006719847	-0.002090387		
			2.853346436	0.003577120	-0.000917556		
			2.909419430	0.005874389	-0.000946049		
			2.792885742	0.004259171	-0.000581020		
			2.667308622	0.002760582	-0.000402063		
			2.599996587	0.001262078	-0.000400212		
			2.234366752	0.000136944	-0.000018080		
			2.222081566	0.000049428	-0.000017524		
			1.245370985	0.000668042	-0.000172896		
			1.157817224	0.000943807	-0.000152762		
			1.057776348	0.000653566	-0.000090763		
			0.737221610	0.000197934	-0.000029069		
			0.703724903	0.000086445	-0.000027448		
			0.410624798	0.000060082	-0.000015571		
2P1/2 -- ( 2)	874.368162	-1675.837650	14.921563827	0.282295478	-0.017267577	0.000841298	
			13.299920397	0.038228175	-0.000065136		
			6.123243239	0.009914887	-0.000711893		
			6.287315962	0.022810377	-0.003433709		
			6.118049550	0.008808077	-0.000239486		
			6.504677350	0.045845171	-0.010916757		
			6.514346150	0.001437047	-0.000327193		
			2.930262996	0.002423566	-0.000193541		
			2.915493889	0.005142782	-0.000847469		
			2.755872580	0.002033815	-0.000065160		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
OSMIUM	5D6	Z=76	A=190	R=1.30368E-04	A.U.		
4D3/2			2.669815195	0.008750721	-0.002144567		
4D5/2			2.634936268	0.000320510	-0.000068575		
4F5/2			2.254817300	0.000162853	-0.000034178		
4F7/2			2.223177239	0.000009102	-0.000003446		
5S1/2			1.259464313	0.000452079	-0.000036870		
5P1/2			1.159004715	0.000816020	-0.000136646		
5P3/2			1.065814418	0.000310894	-0.000010253		
5D3/2			0.737428459	0.000633283	-0.000155860		
5D5/2			0.706130256	0.000022512	-0.000004769		
6S1/2			0.411888646	0.000040652	-0.000003326		
2P3/2 -- ( 4)	659.230240	-1391.486979	12.692900386	0.139589779		-0.001162811	0.000131661
3S1/2			5.999541005	0.012498491	-0.000911006		
3P1/2			6.412394693	0.007716597	-0.000346991		
3P3/2			5.865110134	0.016551506	-0.001521688		
3D3/2			6.599236491	0.013605671	-0.001343481		
3D5/2			6.310193131	0.022725466	-0.006456670		
4S1/2			2.900586887	0.002923266	-0.000230912		
4P1/2			2.935299350	0.001757214	-0.000091325		
4P3/2			2.703065814	0.003647300	-0.000370881		
4D3/2			2.686344342	0.002556602	-0.000254954		
4D5/2			2.597203692	0.004165276	-0.001220780		
4F5/2			2.254793259	0.000103261	-0.000010143		
4F7/2			2.221946169	0.000089545	-0.000028885		
5S1/2			1.253944937	0.000540536	-0.000043432		
5P1/2			1.161907372	0.000279438	-0.000014918		
5P3/2			1.057885164	0.000552739	-0.000057199		
5D3/2			0.738606207	0.000184695	-0.000018451		
5D5/2			0.703552864	0.000284171	-0.000083634		
6S1/2			0.411392548	0.000048541	-0.000003911		
3S1/2 -- ( 2)	276.560553	-615.720919	4.641936747	0.007688644		-0.039010176	0.001275259
3P1/2			4.261849814	0.002682100	-0.000044732		
3P3/2			4.083276835	0.003968350	-0.000267637		
3D3/2			4.661494728	0.002460258	-0.000075056		
3D5/2			4.605804088	0.003286505	-0.000089193		
4S1/2			2.509229813	0.001204662	-0.000429647		
4P1/2			2.563197183	0.001569395	-0.000274744		
4P3/2			2.401808085	0.001202661	-0.000145991		
4D3/2			2.387090354	0.000659829	-0.000064225		
4D5/2			2.339216261	0.000643131	-0.000056353		
4F5/2			2.181931548	0.000495355	-0.000069281		
4F7/2			2.153948220	0.000224678	-0.000067489		
5S1/2			1.184586609	0.000224043	-0.000082601		
5P1/2			1.104032358	0.000261646	-0.000047151		
5P3/2			1.013021128	0.000191190	-0.000024763		
5D3/2			0.717237480	0.000050508	-0.000005253		
5D5/2			0.686117492	0.000043941	-0.000004386		
6S1/2			0.405199247	0.000020131	-0.000007452		
3P1/2 -- ( 2)	272.480428	-609.726453	4.908946865	0.015203842		-0.004331022	0.000208273

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
OSMIUM	5D6	Z=76 A=190 R=1.30368E-04 A.U.					
			4.476140915	0.001978870	-0.000010290		
			4.554701514	0.005454475	-0.000358406		
			4.824897868	0.002464092	-0.000015491		
			2.586501805	0.001044421	-0.000127924		
			2.521441569	0.001675498	-0.000387497		
			2.436864149	0.000582803	-0.000030844		
			2.399630802	0.001559132	-0.000236602		
			2.362889976	0.000426390	-0.000015108		
			2.175052259	0.000842314	-0.000184963		
			2.168967944	0.00092599	-0.000019552		
			1.197029295	0.000189410	-0.000024793		
			1.099000153	0.000262291	-0.000063929		
			1.017968302	0.000089933	-0.000005311		
			0.718193301	0.000120613	-0.000019428		
			0.687706525	0.000028518	-0.000001169		
			0.406295328	0.000016959	-0.000002240		
3P3/2 -- ( 4)	219.824297	-535.858878	4.377859309	0.007981766	-0.0000303897	0.0000033958	
			4.645692431	0.001801798	-0.000013967		
			4.444996782	0.004430256	-0.000093073		
			2.551713931	0.001459093	-0.000178037		
			2.563137023	0.000644904	-0.000046939		
			2.371146443	0.001231244	-0.000174927		
			2.379429537	0.000557087	-0.000051692		
			2.325484032	0.001251751	-0.000185728		
			2.178378682	0.000431634	-0.000043507		
			2.137807063	0.000411611	-0.000122666		
			1.190876763	0.000254959	-0.000032551		
			1.103865334	0.000101207	-0.000008162		
			1.008924716	0.000183835	-0.000027770		
			0.716708718	0.000042068	-0.000004089		
			0.685218020	0.000087488	-0.000013977		
			0.405745859	0.000022718	-0.000002919		
3D3/2 -- ( 4)	214.463338	-528.136403	5.047763053	0.013448617	-0.000003655	0.000000527	
			5.038646683	0.002493054	-0.000000102		
			2.622280019	0.000582569	-0.000014473		
			2.603777560	0.001127643	-0.000077466		
			2.458629334	0.000417170	-0.000010495		
			2.391857119	0.001365901	-0.000127880		
			2.390952055	0.000449625	-0.000006324		
			2.167069063	0.001887308	-0.000466355		
			2.178629158	0.000061836	-0.000007488		
			1.203102056	0.000105428	-0.000003321		
			1.110430308	0.000167910	-0.000012285		
			1.021109896	0.000062678	-0.000001845		
			0.717916786	0.000095298	-0.000009617		
			0.689579723	0.000030428	-0.000000493		
			0.406833956	0.000009439	-0.000000307		
3D5/2 -- ( 6)	203.007451	-510.928851	4.937288076	0.011365679	-0.000000702	0.000000151	

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
OSMIUM	506	Z=76	A=190	R=1.30368E-04	A.U.		
4S1/2			2.611038698	0.000688646	-0.000014534		
4P1/2			2.613428050	0.000484023	-0.000007134		
4P3/2			2.439053695	0.000824085	-0.000034648		
4D3/2			2.430446666	0.000368489	-0.000006856		
4D5/2			2.349573204	0.001229387	-0.000082071		
4F5/2			2.201614784	0.000393250	-0.000029336		
4F7/2			2.145473697	0.001175608	-0.0000326626		
5S1/2			1.201091526	0.000122031	-0.000003326		
5P1/2			1.111467932	0.000074323	-0.000001441		
5P3/2			1.018378171	0.000119349	-0.000005536		
5D3/2			0.720303012	0.000026129	-0.000000563		
5D5/2			0.687012476	0.000081028	-0.000005849		
6S1/2			0.406654151	0.000010895	-0.000000307		
4S1/2 -- ( 2)	89.199459	-259.754728	2.076200328	0.000658496		-0.009771345	0.000318841
4P1/2			1.835065225	0.000312426	-0.000018884		
4P3/2			1.765730137	0.000388906	-0.000060436		
4D3/2			1.863818005	0.000288779	-0.000026724		
4D5/2			1.839839490	0.000257535	-0.000029007		
4F5/2			1.790910615	0.000189220	-0.000017796		
4F7/2			1.776089403	0.000177504	-0.000017930		
5S1/2			1.082360431	0.000086417	-0.000036964		
5P1/2			1.023173613	0.000067660	-0.000013307		
5P3/2			0.944334059	0.000049985	-0.000008054		
5D3/2			0.685930851	0.000011983	-0.000001306		
5D5/2			0.657634371	0.000015892	-0.000001281		
6S1/2			0.396413888	0.000007783	-0.0000003417		
4P1/2 -- ( 2)	84.706479	-251.558611	2.060037850	0.001190238		-0.001063339	0.000050981
4P3/2			1.879292749	0.000146944	-0.000001401		
4D3/2			1.743020222	0.000666259	-0.00011670		
4D5/2			1.872848908	0.000158615	-0.000004365		
4F5/2			1.751019473	0.000302182	-0.000043032		
4F7/2			1.784165083	0.000123796	-0.000004941		
5S1/2			1.097965953	0.000102474	-0.000014888		
5P1/2			1.005687261	0.000096149	-0.000026854		
5P3/2			0.948529291	0.000030386	-0.000002092		
5D3/2			0.683033323	0.000022695	-0.000003301		
5D5/2			0.658377965	0.000011648	-0.000000390		
6S1/2			0.397619505	0.000008915	-0.000001348		
4P3/2 -- ( 4)	68.846190	-225.662613	1.844715078	0.000621314		-0.000073696	0.000008210
4D3/2			1.816456941	0.000180332	-0.000007157		
4D5/2			1.721098872	0.000393289	-0.000039935		
4F5/2			1.733629667	0.000136255	-0.000007691		
4F7/2			1.697474526	0.000213242	-0.000022193		
5S1/2			1.085317387	0.000143981	-0.000021232		
5P1/2			1.016160260	0.000040517	-0.000003528		
5P3/2			0.931340148	0.000067309	-0.000011400		
5D3/2			0.682647708	0.000009090	-0.000000675		
5D5/2			0.653330829	0.000021903	-0.000001723		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
OSMIUM	506	Z=76	A=190	R=1.30368E-04	A.U.		
4D3/2 -- ( 4)	60.872071	-209.775634	0.396557056	0.000012180	-0.000031852	-0.000000939	0.000000135
4D5/2			1.801376597	0.000784951			
4F5/2			1.799312823	0.000146582	-0.000000012		
4F7/2			1.632269713	0.000413626	-0.000057676		
5S1/2			1.711443541	0.000103498	-0.000001055		
5P1/2			1.084616084	0.000049764	-0.000001675		
5P3/2			1.005470912	0.000100893	-0.000010543		
5D3/2			0.938340668	0.000026984	-0.000001091		
5D5/2			0.675310117	0.000034536	-0.000003496		
6S1/2			0.654147864	0.000010230	-0.000000166		
4D5/2 -- ( 6)	57.534968	-203.664814	0.396508179	0.000004280	-0.000000176	-0.000000179	0.000000039
4F5/2			1.767139976	0.000658583			
4F7/2			1.701363430	0.000110476	-0.000003310		
5S1/2			1.628356721	0.000331755	-0.000038035		
5P1/2			1.080058522	0.000059226	-0.000001633		
5P3/2			1.010297593	0.000031685	-0.000000621		
5D3/2			0.932075042	0.000060659	-0.000004431		
5D5/2			0.680660280	0.000009179	-0.000000199		
6S1/2			0.648894398	0.000029411	-0.000002108		
4F5/2 -- ( 6)	42.492268	-171.504690	0.396136890	0.000004964	-0.000000174	-0.000000000	0.000000000
4F7/2			1.614639834	0.000599781			
5S1/2			1.629513428	0.000093639	-0.000000000		
5P1/2			1.057762252	0.000028372	-0.000000055		
5P3/2			0.983344747	0.000035542	-0.000000065		
5D3/2			0.919876171	0.000016831	-0.000000001		
5D5/2			0.669372189	0.000019610	-0.000000421		
6S1/2			0.646799309	0.000006124	-0.000000028		
4F7/2 -- ( 8)	41.372911	-169.034874	0.394480952	0.000002457	-0.000000003	-0.000000000	0.000000000
5S1/2			1.599019957	0.000549812			
5P1/2			1.054451518	0.000036371	-0.000000066		
5P3/2			0.988574417	0.000023274	-0.000000001		
5D3/2			0.914538374	0.000029813	-0.000000001		
5D5/2			0.672975615	0.000007527	-0.000000010		
6S1/2			0.643116926	0.000016929	-0.000000268		
5S1/2 -- ( 2)	20.528237	-102.646933	0.394221620	0.000002962	-0.000000003	-0.001833069	0.000059788
5P1/2			0.892615041	0.000043495			
5P3/2			0.754719628	0.000036484	-0.000004350		
5D3/2			0.721648672	0.000032888	-0.000008199		
5D5/2			0.604575623	0.000018219	-0.000002456		
6S1/2			0.584728467	0.000008577	-0.000002323		
5P1/2 -- ( 2)	17.046922	-92.853009	0.374700965	0.000002745	-0.000001237	-0.000171670	0.000008225
5P3/2			0.818147342	0.000064089			
5D3/2			0.739445500	0.000007729	-0.000000088		
5D5/2			0.560072997	0.000044572	-0.000010262		
6S1/2			0.579473106	0.000002994	-0.000000340		
5P3/2 -- ( 4)	13.449469	-83.477788	0.375140579	0.000004819	-0.000000715	-0.0000011381	0.000001267
5D3/2			0.721763292	0.000032120			
			0.578274999	0.000011008	-0.000000958		



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
OSMIUM	506	Z=76	A=190	R=1.30368E-04	A.U.			
	5D5/2			0.540906378	0.000018503	-0.000004524		
	6S1/2			0.370898925	0.000006226	-0.000000928		
5D3/2 -- ( 4)	6.324156	-56.546654		0.493012657	0.000015436	-0.000000071	0.000000010	
	5D5/2			0.486499156	0.000002742	-0.000000000		
	6S1/2			0.344523911	0.000001181	-0.000000000		
5D5/2 -- ( 2)	5.707447	-53.903865		0.472092548	0.000012099	-0.000000013	0.000000003	
	6S1/2			0.339897213	0.000001790	-0.000000000		
6S1/2 -- ( 2)	2.198333	-31.926710		0.296740347	0.000001320	-0.000164980	0.000005381	
ETOT	-17255.07184	19584.82986	-43264.30860	6408.42119	21.133115928	-2.242461265	-3.009893182	0.104953377
IRIDIUM	509	Z=77	A=193	R=1.31050E-04	A.U.			
1S1/2 -- ( 2)	3844.543150	-7087.616056		54.544232568	6.607782217	-1.337872122	0.047790549	
	2S1/2			16.921440406	0.350678840	-0.041864303		
	2P1/2			20.585161554	0.727319409	-0.099030872		
	2P3/2			17.636973309	0.334808578	-0.096798224		
	3S1/2			7.051760369	0.075550305	-0.009648962		
	3P1/2			7.760474346	0.144630365	-0.019547922		
	3P3/2			6.954744960	0.071332387	-0.021263847		
	3D3/2			7.062954851	0.003238110	-0.000387982		
	3D5/2			6.827742294	0.001292705	-0.000414735		
	4S1/2			3.189642464	0.018823164	-0.002438554		
	4P1/2			3.282531863	0.033967937	-0.004584018		
	4P3/2			2.977598204	0.016638573	-0.004992576		
	4D3/2			2.820420043	0.000803961	-0.000096733		
	4D5/2			2.736859878	0.000318774	-0.000103182		
	4F5/2			2.332132607	0.000001799	-0.000000198		
	4F7/2			2.298668875	0.000000680	-0.000000224		
	5S1/2			1.332893943	0.0003596798	-0.000467459		
	5P1/2			1.243729621	0.005561389	-0.000750279		
	5P3/2			1.120047939	0.002596076	-0.000780019		
	5D3/2			0.742617522	0.000058278	-0.000007017		
	5D5/2			0.698086133	0.000021285	-0.000006899		
2S1/2 -- ( 2)	909.450882	-1735.380280		12.421484072	0.130456380	-0.186710731	0.006312392	
	2P1/2			12.304261426	0.039871579	-0.000070711		
	2P3/2			11.532896443	0.060248905	-0.001255595		
	3S1/2			5.883540338	0.015349667	-0.003741699		
	3P1/2			6.414884600	0.025654147	-0.004008512		
	3P3/2			5.977390765	0.018767113	-0.002296758		
	3D3/2			6.616140258	0.016118220	-0.002221936		
	3D5/2			6.441052412	0.007042883	-0.002192755		
	4S1/2			2.911103920	0.003792032	-0.000972217		
	4P1/2			2.971858055	0.006247860	-0.001005225		
	4P3/2			2.755822971	0.004479902	-0.000608878		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
IRIDIUM	509	Z=77 A=193 R=1.31050E-04 A.U.					
4D3/2			2.726500694	0.002930052	-0.000426598		
4D5/2			2.656331678	0.001338373	-0.000424883		
4F5/2			2.329715755	0.000150435	-0.000019853		
4F7/2			2.296481303	0.000054287	-0.000019253		
5S1/2			1.280121888	0.000723039	-0.000187061		
5P1/2			1.193020368	0.001028764	-0.000166360		
5P3/2			1.085618068	0.000701105	-0.000097046		
5D3/2			0.735972534	0.000202632	-0.000029755		
5D5/2			0.692838728	0.000086110	-0.000027374		
2P1/2 -- ( 2)	908.242248	-1733.780357	15.205594128	0.297121733		-0.019189359	0.000957889
2P3/2			13.522026953	0.039828062	-0.000072202		
3S1/2			6.237899538	0.010455793	-0.000748895		
3P1/2			6.407490620	0.024086568	-0.003622373		
3P3/2			6.222957684	0.009226481	-0.000250453		
3D3/2			6.618524012	0.048084887	-0.011450024		
3D5/2			6.622431460	0.001500348	-0.000342684		
4S1/2			2.990465646	0.002569211	-0.000204754		
4P1/2			2.978283401	0.005464337	-0.000899844		
4P3/2			2.810419144	0.002145712	-0.000068662		
4D3/2			2.729257004	0.009284650	-0.002275629		
4D5/2			2.692271367	0.000338723	-0.000072703		
4F5/2			2.330200839	0.000178565	-0.000037477		
4F7/2			2.297648588	0.000009974	-0.000003778		
5S1/2			1.294966339	0.000489313	-0.000039837		
5P1/2			1.194305203	0.000888492	-0.000148717		
5P3/2			1.094062404	0.000334477	-0.000011023		
5D3/2			0.736190904	0.000648264	-0.000159579		
5D5/2			0.695163230	0.000022362	-0.000004751		
2P3/2 -- ( 4)	678.708756	-1430.844136	12.881065794	0.145595595		-0.001258583	0.000146510
3S1/2			6.107189349	0.013155793	-0.000965985		
3P1/2			6.530659112	0.008116705	-0.000366463		
3P3/2			5.960923802	0.017329468	-0.001595572		
3D3/2			6.711535158	0.014276293	-0.001407562		
3D5/2			6.412427880	0.023820999	-0.006768339		
4S1/2			2.958944951	0.003090107	-0.000245671		
4P1/2			2.997541297	0.001859095	-0.000097000		
4P3/2			2.755293357	0.003843393	-0.000391509		
4D3/2			2.745641812	0.002709477	-0.000269768		
4D5/2			2.652997562	0.004412337	-0.001293541		
4F5/2			2.330148577	0.000114116	-0.000011202		
4F7/2			2.296312711	0.000098938	-0.000031926		
5S1/2			1.288980894	0.000583227	-0.000047167		
5P1/2			1.197178798	0.000302943	-0.000016242		
5P3/2			1.085622534	0.000593811	-0.000061574		
5D3/2			0.737315995	0.000188800	-0.000018831		
5D5/2			0.692643371	0.000282697	-0.000083232		
3S1/2 -- ( 2)	287.721007	-637.019870	4.726420283	0.008121549		-0.042077041	0.001411252
3P1/2			4.341401666	0.002827367	-0.000046003		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
IRIDIUM	509	Z=77 A=193 R=1.31050E-04 A.U.					
3P3/2			4.154054949	0.004172196	-0.000289384		
3D3/2			4.744515247	0.002590856	-0.000079394		
3D5/2			4.686164513	0.003455679	-0.000094762		
4S1/2			2.558642994	0.001279070	-0.000455972		
4P1/2			2.616310098	0.001676853	-0.000293365		
4P3/2			2.447663273	0.001262154	-0.000153343		
4D3/2			2.438541347	0.000701981	-0.000068364		
4D5/2			2.388784661	0.000683546	-0.000059814		
4F5/2			2.253110147	0.000541175	-0.000075719		
4F7/2			2.224470925	0.000245804	-0.000073806		
5S1/2			1.216581030	0.000242855	-0.000089512		
5P1/2			1.136428393	0.000286520	-0.000051611		
5P3/2			1.038922212	0.000204783	-0.000026557		
5D3/2			0.716165612	0.000051895	-0.000005406		
5D5/2			0.675875356	0.000043865	-0.000004384		
3P1/2 -- ( 2)	283.552934	-630.936711	5.001849712	0.016072318		-0.004832256	0.000237993
3P3/2			4.555032484	0.002065205	-0.000011501		
3D3/2			4.637078242	0.005755583	-0.000382375		
3D5/2			4.910564753	0.002590313	-0.000016595		
4S1/2			2.638118527	0.001106512	-0.000135403		
4P1/2			2.573723158	0.001783095	-0.000412343		
4P3/2			2.483867153	0.000613144	-0.000032616		
4D3/2			2.451697658	0.001653973	-0.000250794		
4D5/2			2.413338411	0.000453776	-0.000016053		
4F5/2			2.246022711	0.000920363	-0.000202195		
4F7/2			2.240447447	0.000101377	-0.000021389		
5S1/2			1.229636606	0.000204879	-0.000026812		
5P1/2			1.131196344	0.000286901	-0.000069733		
5P3/2			1.044127990	0.000096531	-0.000005734		
5D3/2			0.717133010	0.000123622	-0.000019922		
5D5/2			0.677422627	0.000028497	-0.000001169		
3P3/2 -- ( 4)	227.229467	-552.126743	4.449822871	0.008378232		-0.000330717	0.000037979
3D3/2			4.723854304	0.001889798	-0.000014302		
3D5/2			4.518516822	0.004647070	-0.000096629		
4S1/2			2.601374611	0.001551585	-0.000190229		
4P1/2			2.615345951	0.000685885	-0.000050122		
4P3/2			2.415679702	0.001301602	-0.000185230		
4D3/2			2.429943462	0.000595251	-0.000055338		
4D5/2			2.373986646	0.001332591	-0.000198459		
4F5/2			2.248958338	0.000471344	-0.000047506		
4F7/2			2.207023065	0.000450055	-0.000134029		
5S1/2			1.223005319	0.000276393	-0.000035458		
5P1/2			1.136111364	0.000110225	-0.000008932		
5P3/2			1.034561242	0.000198099	-0.000029992		
5D3/2			0.715592535	0.000043380	-0.000004226		
5D5/2			0.674964453	0.000087487	-0.000014044		
3D3/2 -- ( 4)	221.825566	-544.369983	5.135314064	0.014136396		-0.000004119	0.000000611
3D5/2			5.124137660	0.002616924	-0.000000114		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
IRIDIUM	5D9	Z=77	A=193	R=1.31050E-04	A.U.		
4S1/2			2.674010087	0.000616681	-0.000015375		
4P1/2			2.657478163	0.001197582	-0.000082716		
4P3/2			2.505517356	0.000440826	-0.000011108		
4D3/2			2.443180066	0.001450783	-0.000136344		
4D5/2			2.441634485	0.000477448	-0.000006739		
4F5/2			2.237341388	0.002063966	-0.000510127		
4F7/2			2.249835567	0.000067884	-0.000008200		
5S1/2			1.235842880	0.000113895	-0.000003608		
5P1/2			1.143081697	0.000182518	-0.000013432		
5P3/2			1.047308845	0.000067527	-0.000001996		
5D3/2			0.716827576	0.000097568	-0.000009896		
5D5/2			0.679195568	0.000030342	-0.000000495		
3D5/2 -- ( 6)	209.663872	-526.137779	5.019200130	0.011927470		-0.000000785	0.000000174
4S1/2			2.662165997	0.000728290	-0.000015441		
4P1/2			2.666990433	0.000512785	-0.000007593		
4P3/2			2.485214694	0.000869899	-0.000036640		
4D3/2			2.482479382	0.000391166	-0.000007316		
4D5/2			2.398878670	0.001303709	-0.000087402		
4F5/2			2.273714250	0.000430323	-0.000032075		
4F7/2			2.215298303	0.001286213	-0.0000357392		
5S1/2			1.233680801	0.000131668	-0.000003613		
5P1/2			1.144104850	0.000080642	-0.000001576		
5P3/2			1.044420039	0.000128375	-0.000005975		
5D3/2			0.719160974	0.000026747	-0.000000581		
5D5/2			0.676707743	0.000080637	-0.000005854		
4S1/2 -- ( 2)	93.202267	-269.093653	2.117774697	0.000700632		-0.010596143	0.000354724
4P1/2			1.872937969	0.000330112	-0.000019614		
4P3/2			1.800483419	0.000414049	-0.000065200		
4D3/2			1.903337495	0.000306818	-0.000028322		
4D5/2			1.878440148	0.000273936	-0.000030836		
4F5/2			1.844000054	0.000203835	-0.000018981		
4F7/2			1.829097615	0.000193001	-0.000019156		
5S1/2			1.110392588	0.000094015	-0.000040299		
5P1/2			1.051915357	0.000074856	-0.000014727		
5P3/2			0.967704879	0.000053814	-0.000008773		
5D3/2			0.685318774	0.000012307	-0.000001345		
5D5/2			0.648568054	0.000015911	-0.000001283		
4P1/2 -- ( 2)	88.627300	-260.808623	2.103561967	0.001269400		-0.001194390	0.000058643
4P3/2			1.917165330	0.000154515	-0.000001584		
4D3/2			1.780875205	0.000710206	-0.000119095		
4D5/2			1.913059881	0.000168716	-0.000004675		
4F5/2			1.803559294	0.000325821	-0.000045926		
4F7/2			1.838244891	0.000135115	-0.000005293		
5S1/2			1.126751667	0.000110946	-0.000016149		
5P1/2			1.033833284	0.000105234	-0.000029520		
5P3/2			0.972172140	0.000032657	-0.000002281		
5D3/2			0.682537856	0.000023356	-0.000003412		
5D5/2			0.649315641	0.000011661	-0.000000395		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
IRIDIUM	509	Z=77	A=193	R=1.31050E-04	A.U.		
4P3/2 -- ( 4)	71.632236	-233.209645	1.880211392	0.000658648		-0.000080783	0.000009247
4D3/2 -- ( 4)	63.599363	-217.303565	1.854161386	0.000190520	-0.000007428		
4D5/2			1.756532060	0.000417088	-0.000041769		
4F5/2			1.783521157	0.000146117	-0.000008089		
4F7/2			1.746661083	0.000230598	-0.000023369		
5S1/2			1.113283813	0.000157084	-0.000023252		
5P1/2			1.044414826	0.000044471	-0.000003899		
5P3/2			0.954176707	0.000072845	-0.000012418		
5D3/2			0.682031800	0.000009417	-0.000000710		
5D5/2			0.644420266	0.000022081	-0.000001755		
4D3/2 -- ( 4)	63.599363	-217.303565	1.841441795	0.0000838154		-0.000001072	0.000000159
4D5/2			1.838929764	0.000156272	-0.000000014		
4F5/2			1.681464882	0.000443279	-0.000086065		
4F7/2			1.763322225	0.000113051	-0.000001116		
5S1/2			1.113150897	0.000054084	-0.000001846		
5P1/2			1.033804936	0.000110403	-0.000011611		
5P3/2			0.961779345	0.000029184	-0.000001186		
5D3/2			0.674995245	0.000035583	-0.000003654		
5D5/2			0.645310759	0.000010258	-0.000000170		
4D5/2 -- ( 6)	60.046804	-210.838014	1.805681642	0.000702389		-0.000000203	0.000000045
4F5/2			1.752037181	0.000118796	-0.000003460		
4F7/2			1.677223968	0.000357175	-0.000039828		
5S1/2			1.108350085	0.000064253	-0.000001802		
5P1/2			1.038690026	0.000034574	-0.000000688		
5P3/2			0.955279771	0.000065549	-0.000004810		
5D3/2			0.680197294	0.000009453	-0.000000208		
5D5/2			0.640281616	0.000029456	-0.000002144		
4F5/2 -- ( 6)	45.219750	-179.574482	1.675060596	0.000663123		-0.000000000	0.000000000
4F7/2			1.690816764	0.000103865	-0.000000000		
5S1/2			1.089189936	0.000031090	-0.000000041		
5P1/2			1.014238488	0.000039145	-0.000000000		
5P3/2			0.945278589	0.000018426	-0.000000003		
5D3/2			0.670426201	0.000020434	-0.000000480		
5D5/2			0.639192035	0.000006215	-0.000000031		
4F7/2 -- ( 8)	44.032049	-176.997738	1.659255017	0.000608189		-0.000000000	0.000000000
5S1/2			1.085897105	0.000039740	-0.000000051		
5P1/2			1.019371044	0.000025549	-0.000000030		
5P3/2			0.940044306	0.000032461	-0.000000005		
5D3/2			0.673733755	0.000007793	-0.000000012		
5D5/2			0.635866009	0.000017110	-0.000000297		
5S1/2 -- ( 2)	21.877745	-107.124479	0.916386868	0.000047423		-0.002029736	0.000067919
5P1/2			0.775653863	0.000039200	-0.000004628		
5P3/2			0.740182478	0.000035910	-0.000008965		
5D3/2			0.605893914	0.000018767	-0.000002522		
5D5/2			0.579252331	0.000008647	-0.000002331		
5P1/2 -- ( 2)	18.244276	-97.093294	0.841501744	0.000070265		-0.000197663	0.000009698
5P3/2			0.758994712	0.000008289	-0.000000103		
5D3/2			0.562631421	0.000046179	-0.000010611		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
IRIDIUM	5D9	Z=77	A=193	R=1.31050E-04	A.U.			
5D5/2			0.574497850	0.000003016	-0.000000343			
5P3/2 -- ( 4)	14.248208	-86.859528	0.739430262	0.000034757	-0.000012724	0.000001456		
5D3/2			0.579673781	0.000011282	-0.000000976			
5D5/2			0.536800739	0.000018615	-0.000004531			
5D3/2 -- ( 4)	6.371358	-57.191079	0.486692205	0.000015344	-0.000000078	0.000000012		
5D5/2			0.475900263	0.000002639	-0.000000000			
5D5/2 -- ( 5)	5.603096	-53.759304	0.457925528	0.000011541	-0.000000014	0.000000003		
ETDT	-17829.98761	20315.23786	-44789.40544	6627.49730	22.132829624	-2.349188164	-3.216157175	0.115187339
PLATINUM	5D9 6S1	Z=78	A=195	R=1.31501E-04	A.U.			
1S1/2 -- ( 2)	3979.620728	-7316.503227	55.490466627	6.893008877	-0.043906809	-1.426289687	0.052295903	
2S1/2			17.233819182	0.367080641	-0.103116801			
2P1/2			20.994078922	0.761178622	-0.100766059			
2P3/2			17.899947984	0.348545540	-0.010144584			
3S1/2			7.186277800	0.079281160	-0.020381314			
3P1/2			7.917489041	0.074631281	-0.022246619			
3P3/2			7.071154225	0.003387812	-0.000404296			
3D3/2			7.183793983	0.001350934	-0.000433366			
3D5/2			6.937961425	0.019854532	-0.002577118			
4S1/2			3.256289652	0.035837005	-0.004807880			
4P1/2			3.356152909	0.017529585	-0.005259945			
4P3/2			3.036296017	0.000851276	-0.000102016			
4D3/2			2.882690032	0.000337288	-0.000109169			
4D5/2			2.795459147	0.000001976	-0.000000217			
4F5/2			2.406746020	0.000000748	-0.000000247			
4F7/2			2.372283838	0.000389193	-0.000506811			
5S1/2			1.374316347	0.006076097	-0.000814879			
5P1/2			1.289355539	0.002841243	-0.000853706			
5P3/2			1.159800858	0.000071149	-0.000008532			
5D3/2			0.807357962	0.000026433	-0.000008568			
5D5/2			0.765330518	0.000312332	-0.000040693			
6S1/2			0.422263404	0.137195764	-0.200644167	0.006956556		
2S1/2 -- ( 2)	944.568126	-1795.039928	12.642933847	0.041928127	-0.000072353			
2P1/2			12.531893434	0.062945926	-0.001367839			
2P3/2			11.720866316	0.016181448	-0.003941816			
3S1/2			5.990154845	0.027105381	-0.004231215			
3P1/2			6.535970709	0.019574217	-0.0023383492			
3P3/2			6.077124517	0.016907858	-0.002329494			
3D3/2			6.729587849	0.007375894	-0.002298459			
3D5/2			6.546491555	0.004018026	-0.001029624			
4S1/2			2.969569876	0.006641318	-0.001067447			
4P1/2			3.035101516	0.004708448	-0.000637466			
4P3/2			2.809184754					

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PLATINUM 5D9 6S1 Z=78 A=195 R=1.31501E-04 A.U.							
4D3/2			2.786084710	0.003107399	-0.000452246		
4D5/2			2.712952654	0.001418030	-0.000450690		
4F5/2			2.404183038	0.000164598	-0.000021712		
4F7/2			2.369968085	0.000059384	-0.000021067		
5S1/2			1.318592240	0.000785909	-0.000203244		
5P1/2			1.235085677	0.001132510	-0.000182962		
5P3/2			1.123177383	0.000765595	-0.000105611		
5D3/2			0.799482494	0.000247420	-0.000036327		
5D5/2			0.759024951	0.000106960	-0.000034044		
6S1/2			0.417797456	0.000063048	-0.000016328		
2P1/2 -- ( 2)	943.283537	-1793.383949	15.493745208	0.312608787		-0.021312568	0.001089387
2P3/2			13.745774911	0.041468815	-0.000079941		
3S1/2			6.353817778	0.011021151	-0.000787390		
3P1/2			6.528993502	0.025422187	-0.003819255		
3P3/2			6.328405822	0.009658067	-0.000261736		
3D3/2			6.732901793	0.050395696	-0.012000168		
3D5/2			6.730705455	0.001565043	-0.000358620		
4S1/2			3.051451445	0.002722443	-0.000216503		
4P1/2			3.041889275	0.005803243	-0.000954911		
4P3/2			2.865428698	0.002262265	-0.000072301		
4D3/2			2.789101466	0.009842422	-0.002412537		
4D5/2			2.749897438	0.000357586	-0.000077006		
4F5/2			2.404703288	0.000195009	-0.000040929		
4F7/2			2.371206973	0.000010884	-0.000004125		
5S1/2			1.334301254	0.000531892	-0.000043224		
5P1/2			1.236489024	0.000977098	-0.000163463		
5P3/2			1.132212747	0.000366340	-0.000012064		
5D3/2			0.799756767	0.000791479	-0.000194875		
5D5/2			0.761826918	0.000027698	-0.000005903		
6S1/2			0.419053865	0.000042662	-0.000003479		
2P3/2 -- ( 4)	698.505953	-1470.801587	13.069603509	0.151771970		-0.001360853	0.000162803
3S1/2			6.215750939	0.013841378	-0.001023900		
3P1/2			6.649954799	0.008533083	-0.000386801		
3P3/2			6.056993486	0.018132030	-0.001671889		
3D3/2			6.824164181	0.014969005	-0.001473986		
3D5/2			6.514746734	0.024950866	-0.007089800		
4S1/2			3.017982242	0.003264986	-0.000261269		
4P1/2			3.060519151	0.001965787	-0.000102962		
4P3/2			2.807889642	0.004047434	-0.000413005		
4D3/2			2.805295346	0.002868897	-0.000285176		
4D5/2			2.709037203	0.004669841	-0.001369398		
4F5/2			2.404618737	0.000125631	-0.000012324		
4F7/2			2.369762399	0.000108892	-0.000035149		
5S1/2			1.327781758	0.000631973	-0.000051443		
5P1/2			1.239346000	0.000331687	-0.000017858		
5P3/2			1.123062633	0.000649447	-0.000067479		
5D3/2			0.801035737	0.000230177	-0.000022922		
5D5/2			0.758753551	0.000350664	-0.000103285		

TABLE 1.-- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PLATINUM 5D9 6S1 Z=78 A=195 R=1.31501E-04 A.U.							
3S1/2 -- ( 2)	299.252103	-658.883000	0.418531182	0.000050615	-0.000004131		
6S1/2			4.811684983	0.008574388		-0.045369501	0.001560303
3P1/2			4.421732882	0.002979190	-0.000047297		
3P3/2			4.225256352	0.004384291	-0.000312895		
3D3/2			4.828058526	0.002726899	-0.000084003		
3D5/2			4.766947454	0.003631133	-0.000100699		
4S1/2			2.608589566	0.001357371	-0.000483641		
4P1/2			2.670017411	0.001790425	-0.000313023		
4P3/2			2.493831522	0.001323279	-0.000160923		
4D3/2			2.490296562	0.000745941	-0.000072674		
4D5/2			2.438591062	0.000725807	-0.000063401		
4F5/2			2.323429861	0.000589213	-0.000082472		
4F7/2			2.294112733	0.000267955	-0.000080433		
5S1/2			1.251860862	0.000264355	-0.000097406		
5P1/2			1.174921668	0.000316838	-0.000057046		
5P3/2			1.073555160	0.000223236	-0.000028990		
5D3/2			0.776059541	0.000063598	-0.000006638		
5D5/2			0.738639506	0.000054598	-0.000005466		
6S1/2			0.412486033	0.000021186	-0.000007839		
3P1/2 -- ( 2)	294.993712	-652.709034	5.095674872	0.016981392		-0.005387778	0.000271611
3P3/2			4.634399773	0.002153555	-0.000012838		
3D3/2			4.719955223	0.006070382	-0.000408035		
3D5/2			4.996691664	0.002721007	-0.000017779		
4S1/2			2.690319855	0.001171745	-0.000143246		
4P1/2			2.626584216	0.001896544	-0.000438501		
4P3/2			2.531210262	0.000644526	-0.000034468		
4D3/2			2.504080804	0.001752297	-0.000265440		
4D5/2			2.464039442	0.000482509	-0.000017037		
4F5/2			2.316150771	0.001002199	-0.000220272		
4F7/2			2.311049127	0.000110572	-0.000023317		
5S1/2			1.265622186	0.000222554	-0.000029118		
5P1/2			1.169425855	0.000314952	-0.000076814		
5P3/2			1.079133513	0.000105466	-0.000006303		
5D3/2			0.777227233	0.000151122	-0.000024368		
5D5/2			0.740518244	0.000035503	-0.000001459		
6S1/2			0.413566523	0.000017772	-0.000002348		
3P3/2 -- ( 4)	234.779209	-568.668843	4.521965920	0.008788302		-0.000359509	0.000042412
3D3/2			4.802218538	0.001980770	-0.000014640		
3D5/2			4.592157646	0.004871000	-0.000100310		
4S1/2			2.651520038	0.001649303	-0.000203180		
4P1/2			2.668068102	0.000729097	-0.000053489		
4P3/2			2.460466699	0.001375031	-0.000195999		
4D3/2			2.480691920	0.000635352	-0.000059172		
4D5/2			2.422661558	0.001417138	-0.000211801		
4F5/2			2.318620325	0.000512935	-0.000051694		
4F7/2			2.275303362	0.000490360	-0.000145932		
5S1/2			1.258443071	0.000300912	-0.000038790		
5P1/2			1.174429240	0.000121239	-0.000009871		



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PLATINUM	5D9 6S1	Z=78	A=195	R=1.31501E-04	A.U.		
	5P3/2		1.068825749	0.000217307	-0.000032975		
	5D3/2		0.775321875	0.000053354	-0.000005210		
	5D5/2		0.737489819	0.000109083	-0.000017601		
	6S1/2		0.412994798	0.000023900	-0.000003102		
3D3/2 --	( 4)	229.331960	-560.877224	5.223107341	0.014848318	-0.000004634	0.000000707
	3D5/2		5.209774061	0.002744815	-0.000000126		
	4S1/2		2.726268329	0.000652427	-0.000016324		
	4P1/2		2.711726203	0.001271179	-0.000088283		
	4P3/2		2.552694469	0.000465506	-0.000011748		
	4D3/2		2.494755589	0.001539530	-0.000145219		
	4D5/2		2.492519971	0.000506511	-0.000007174		
	4F5/2		2.306723355	0.002249362	-0.000556074		
	4F7/2		2.320726520	0.000074250	-0.000008948		
	5S1/2		1.271983857	0.000123554	-0.000003936		
	5P1/2		1.181904302	0.000200359	-0.000014833		
	5P3/2		1.082405351	0.000074061	-0.000002197		
	5D3/2		0.776828193	0.000119110	-0.000012147		
	5D5/2		0.742608334	0.000037721	-0.000000620		
	6S1/2		0.414669284	0.000009865	-0.000000325		
3D5/2 --	( 6)	216.431418	-541.573944	5.101166876	0.012507460	-0.000000876	0.000000200
	4S1/2		2.713793927	0.000769780	-0.000016394		
	4P1/2		2.721080027	0.000542910	-0.000008075		
	4P3/2		2.531640594	0.000917629	-0.000038722		
	4D3/2		2.534754527	0.000414849	-0.000007799		
	4D5/2		2.448356088	0.001381224	-0.000092983		
	4F5/2		2.344906547	0.000469254	-0.000034948		
	4F7/2		2.284193294	0.001402283	-0.000389680		
	5S1/2		1.269648740	0.000142653	-0.000003942		
	5P1/2		1.182918034	0.00088358	-0.000001740		
	5P3/2		1.079294441	0.000140563	-0.000006566		
	5D3/2		0.779547427	0.000032649	-0.000000716		
	5D5/2		0.739602481	0.000100032	-0.000007305		
	6S1/2		0.413883051	0.000011355	-0.000000325		
4S1/2 --	( 2)	97.359124	-278.692434	2.159803879	0.000745098	-0.011486994	0.000394292
	4P1/2		1.911235555	0.000348656	-0.000020362		
	4P3/2		1.835539536	0.000440677	-0.000070341		
	4D3/2		1.943149447	0.000325793	-0.000030005		
	4D5/2		1.917297541	0.000291118	-0.000032770		
	4F5/2		1.896564410	0.000219058	-0.000020202		
	4F7/2		1.881569958	0.000209233	-0.000020420		
	5S1/2		1.141050996	0.000102708	-0.000004415		
	5P1/2		1.085680847	0.000083635	-0.000016459		
	5P3/2		0.998362066	0.000058973	-0.000009730		
	5D3/2		0.739818370	0.000015075	-0.000001655		
	5D5/2		0.706007173	0.000019869	-0.000001604		
	6S1/2		0.404000834	0.000008248	-0.000003636		
4P1/2 --	( 2)	92.700323	-270.317170	2.147568665	0.001353057	-0.001340650	0.000067369
	4P3/2		1.955359025	0.000162345	-0.000001788		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PLATINUM 5D9 6S1 Z=78 A=195 R=1.31501E-04 A.U.							
			1.819025752	0.000756667	-0.000126991		
			1.953543641	0.000179265	-0.000005006		
			1.855649021	0.000350495	-0.000048917		
			1.891824164	0.000147001	-0.000005658		
			1.158271115	0.000120619	-0.000017589		
			1.066794551	0.000116314	-0.000032768		
			1.003197159	0.000035725	-0.000002532		
			0.736647565	0.000028667	-0.000004208		
			0.706935843	0.000014560	-0.000000500		
			0.405184873	0.000009354	-0.000001421		
4P3/2 -- ( 4)	74.497691	-240.914994	1.915916368	0.000697736		-0.000088455	0.000010401
			1.892056192	0.000201130	-0.000007701		
			1.792125301	0.000441959	-0.000043659		
			1.832809621	0.000156319	-0.000008488		
			1.795262501	0.000248673	-0.000024550		
			1.143863644	0.000172105	-0.000025569		
			1.077569209	0.000049297	-0.000004350		
			0.984016527	0.000080248	-0.000013772		
			0.735888186	0.000011651	-0.000000894		
			0.701025240	0.000027790	-0.000002241		
			0.404106407	0.000012946	-0.000001984		
4D3/2 -- ( 4)	66.404675	-224.987465	1.881699209	0.000894017		-0.000001221	0.000000186
			1.878709025	0.000166414	-0.000000016		
			1.730224892	0.000474018	-0.000063556		
			1.814680651	0.000123077	-0.000001179		
			1.144318959	0.000059012	-0.000002042		
			1.066939855	0.000121955	-0.000012908		
			0.992382229	0.000032121	-0.000001314		
			0.727871710	0.000043680	-0.000004563		
			0.702201710	0.000012821	-0.000000217		
			0.404145468	0.000004522	-0.000000191		
4D5/2 -- ( 6)	62.625147	-218.149728	1.844356278	0.000748295		-0.000000229	0.000000052
			1.802176522	0.000127430	-0.000003610		
			1.725603925	0.000383598	-0.000041617		
			1.139236610	0.000069985	-0.000001945		
			1.071926909	0.000038090	-0.000000770		
			0.985517430	0.000072065	-0.000005311		
			0.733869723	0.000011604	-0.000000262		
			0.6968223785	0.000036735	-0.000002724		
			0.403775673	0.000005227	-0.000000188		
4F5/2 -- ( 6)	48.002330	-187.726484	1.734763901	0.000729920		-0.000000000	0.000000000
			1.751393165	0.000114668	-0.000000000		
			1.122985421	0.000034181	-0.000000029		
			1.049650199	0.000043490	-0.000000002		
			0.977466908	0.000020511	-0.000000007		
			0.723907243	0.000025278	-0.000000646		
			0.695908194	0.000007848	-0.000000043		
			0.402710044	0.000002644	-0.000000005		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
PLATINUM 5D9 6S1 Z=78 A=195 R=1.31501E-04 A.U.								
4F7/2 -- ( 8)	46.743418	-185.038394	1.718774510	0.000669751		-0.000000000	0.000000000	
5S1/2			1.119691320	0.00043551	-0.000000038			
5P1/2			1.054739764	0.000028287	-0.000000000			
5P3/2			0.972242221	0.000035923	-0.000000014			
5D3/2			0.727474777	0.000009590	-0.000000017			
5D5/2			0.692205395	0.000021453	-0.000000408			
6S1/2			0.402477880	0.000003175	-0.000000005			
5S1/2 -- ( 2)	23.425748	-112.042144	0.943097902	0.000052100		-0.002257442	0.000077452	
5P1/2			0.800213880	0.000042451	-0.000004951			
5P3/2			0.763544914	0.000039816	-0.000009940			
5D3/2			0.648821567	0.000022512	-0.000003020			
5D5/2			0.625232660	0.000010658	-0.000002849			
6S1/2			0.383632580	0.000002961	-0.000001339			
5P1/2 -- ( 2)	19.726859	-102.025802	0.870127732	0.000078241		-0.000229822	0.000011541	
5P3/2			0.784553415	0.000009097	-0.000000124			
5D3/2			0.601409358	0.000055232	-0.000012671			
5D5/2			0.620529788	0.000003789	-0.000000421			
6S1/2			0.384291434	0.000005138	-0.000000764			
5P3/2 -- ( 4)	15.369165	-91.128540	0.764114689	0.000038611		-0.000014476	0.000001701	
5D3/2			0.620060008	0.000013327	-0.000001137			
5D5/2			0.577699675	0.000022447	-0.000005391			
6S1/2			0.380049402	0.000006808	-0.000001018			
5D3/2 -- ( 4)	7.563862	-62.985448	0.531971292	0.000019688		-0.000000103	0.000000016	
5D5/2			0.523235474	0.000003455	-0.000000000			
6S1/2			0.355880105	0.000001317	-0.000000001			
5D5/2 -- ( 5)	6.754286	-59.703934	0.506218928	0.000015186		-0.000000018	0.000000004	
6S1/2			0.350760788	0.000001985	-0.000000000			
6S1/2 -- ( 1)	2.236784	-33.325444	0.000000000	0.000000000		-0.000181237	0.000006218	
ETOT	-18417.42463	21067.97950	-46337.50297	6834.69736	23.171016954	-2.459727144	-3.436142181	0.126329482
GOLD 6S1 Z=79 A=197 R=1.31949E-04 A.U.								
1S1/2 -- ( 2)	4118.876146	-7551.350159	56.449201627	7.187481074		-1.520041310	0.057175852	
2S1/2			17.550637548	0.384089935	-0.046030122			
2P1/2			21.410193731	0.796265185	-0.107309831			
2P3/2			18.163894946	0.362639127	-0.104836523			
3S1/2			7.322393540	0.083152954	-0.010660114			
3P1/2			8.076676299	0.158944343	-0.021234217			
3P3/2			7.188016384	0.078032441	-0.023259445			
3D3/2			7.304987156	0.003541063	-0.000420861			
3D5/2			7.048203800	0.001410437	-0.000452405			
4S1/2			3.323874427	0.020931846	-0.002722169			
4P1/2			3.430928195	0.037786334	-0.005038793			
4P3/2			3.095559432	0.018457473	-0.005538300			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
GOLD	6S1	Z=79 A=197 R=1.31949E-04 A.U.					
			2.945494048	0.000900444	-0.000107465		
			2.854477659	0.000356515	-0.000115385		
			2.480001485	0.000002162	-0.000000236		
			2.444391362	0.000000820	-0.000000270		
			1.414809441	0.004195446	-0.000547405		
			1.332866895	0.006594431	-0.000879020		
			1.195997955	0.003079675	-0.000925360		
			0.848483868	0.000080802	-0.000009650		
			0.804267704	0.000030333	-0.000009735		
			0.432488860	0.000332303	-0.000043342		
2S1/2 -- ( 2)	980.910384	-1856.426628	12.867170218	0.144232341		-0.215561702	0.007660312
2P1/2			12.762735179	0.044076072	-0.000074012		
2P3/2			11.910258814	0.065734254	-0.001489749		
3S1/2			6.097844038	0.017050303	-0.004150487		
3P1/2			6.658406572	0.028623586	-0.004463760		
3P3/2			6.177319702	0.020399817	-0.002471048		
3D3/2			6.843491829	0.017723584	-0.002440478		
3D5/2			6.652117053	0.007718779	-0.002407485		
4S1/2			3.028760015	0.004255566	-0.001089873		
4P1/2			3.099184812	0.007055748	-0.001132878		
4P3/2			2.863038235	0.004945089	-0.000666813		
4D3/2			2.846178078	0.003293149	-0.000479081		
4D5/2			2.769993552	0.001501285	-0.000477717		
4F5/2			2.477293595	0.000179380	-0.000023651		
4F7/2			2.441949382	0.000064692	-0.000022957		
5S1/2			1.356164980	0.000851077	-0.000219997		
5P1/2			1.275142253	0.001238523	-0.000199890		
5P3/2			1.157401865	0.000827874	-0.000113794		
5D3/2			0.839796295	0.000281158	-0.000041273		
5D5/2			0.797331734	0.000121600	-0.000038752		
6S1/2			0.427854421	0.000067324	-0.000017428		
2P1/2 -- ( 2)	979.556508	-1854.724052	15.786295715	0.328792741		-0.023658037	0.001237609
2P3/2			13.971293969	0.043151346	-0.000088413		
3S1/2			6.471031014	0.011611925	-0.000827406		
3P1/2			6.651864015	0.026819792	-0.004024625		
3P3/2			6.434401144	0.010102994	-0.000273335		
3D3/2			6.847771932	0.052776988	-0.012567021		
3D5/2			6.839113782	0.001631039	-0.000374990		
4S1/2			3.113238933	0.002883592	-0.000228803		
4P1/2			3.106347896	0.006160381	-0.001012786		
4P3/2			2.920972137	0.002383687	-0.000076081		
4D3/2			2.849467298	0.010425523	-0.002555637		
4D5/2			2.807951871	0.000377136	-0.000081493		
4F5/2			2.477849442	0.000212113	-0.000044520		
4F7/2			2.443259217	0.000011828	-0.000004485		
5S1/2			1.372734375	0.000576050	-0.000046720		
5P1/2			1.276664319	0.001067576	-0.000178486		
5P3/2			1.166981106	0.000397373	-0.000013074		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E (KIN)	E (E-N)	E (E-E)	E (MAG)	E (RET)	E (V-P)	E (H-VP)
GOLD	6S1	Z=79	A=197	R=1.31949E-04	A.U.		
	5D3/2			0.840115913	0.000899229	-0.000221446	
	5D5/2			0.800423734	0.000031391	-0.000006711	
	6S1/2			0.429161082	0.000045560	-0.000003708	
2P3/2 -- ( 4)	718.632186	-1511.371150	13.258590109	0.158123955		-0.001470009	0.000180665
	3S1/2			6.325241083	0.014556338	-0.001084877	
	3P1/2			6.770302513	0.008966288	-0.000408033	
	3P3/2			6.153317308	0.018959599	-0.001750664	
	3D3/2			6.937073510	0.015683765	-0.001541533	
	3D5/2			6.617100530	0.026114841	-0.007420979	
	4S1/2			3.077711726	0.003448215	-0.000277743	
	4P1/2			3.124263627	0.002077486	-0.000109223	
	4P3/2			2.860919682	0.004259797	-0.000435406	
	4D3/2			2.865422016	0.003035268	-0.000301213	
	4D5/2			2.765455030	0.004938531	-0.001448568	
	4F5/2			2.477728394	0.000137781	-0.000013506	
	4F7/2			2.441702658	0.000119375	-0.000038546	
	5S1/2			1.365658484	0.000682251	-0.000055901	
	5P1/2			1.279467399	0.000360771	-0.000019504	
	5P3/2			1.157151325	0.000703467	-0.000073236	
	5D3/2			0.841465512	0.000261128	-0.000025962	
	5D5/2			0.796991410	0.000398106	-0.000117305	
3S1/2 -- ( 2)	311.164895	-681.324269	0.428601700	0.000053876	-0.000004427	-0.0048902431	0.001723555
	3P1/2			4.897744826	0.009047893		
	3P3/2			4.502859911	0.003137814	-0.000048614	
	3D3/2			4.296884865	0.004604954	-0.000338304	
	3D5/2			4.912109623	0.002868558	-0.000088910	
	4S1/2			4.848135120	0.003812956	-0.000107037	
	4P1/2			2.659084216	0.001439721	-0.0000512705	
	4P3/2			2.724347642	0.001910412	-0.0000333767	
	4D3/2			2.540367268	0.001386060	-0.000168741	
	4D5/2			2.542448586	0.000791777	-0.000077159	
	4F5/2			2.488742519	0.000770035	-0.000067118	
	4F7/2			2.392444181	0.000639337	-0.000089521	
	5S1/2			2.362314323	0.000291042	-0.000087346	
	5P1/2			1.286315953	0.000286672	-0.000105593	
	5P3/2			1.211572397	0.000348012	-0.000062627	
	5D3/2			1.105152328	0.000240926	-0.000031331	
	5D5/2			0.814008132	0.000072494	-0.000007580	
	6S1/2			0.774899824	0.000062195	-0.000006232	
3P1/2 -- ( 2)	306.814555	-675.058352	0.422373332	0.000022653	-0.000008379	-0.006003161	0.000309602
	3P3/2			5.190445278	0.017932606		
	3D3/2			4.714248189	0.002243882	-0.000014312	
	3D5/2			4.803315287	0.006399494	-0.000435555	
	4S1/2			5.083262438	0.002856204	-0.000019051	
	4P1/2			2.743121284	0.001240244	-0.000151464	
	4P3/2			2.680053228	0.002016112	-0.000466029	
	4D3/2			2.578950159	0.000676976	-0.000036402	
	4D5/2			2.556873990	0.001854159	-0.000280534	

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
GOLD	6S1	Z=79 A=197 R=1.31949E-04 A.U.					
			2.515103089	0.000512689	-0.000018062		
			2.384991967	0.001037589	-0.000239144		
			2.380206327	0.000120146	-0.000025327		
			1.300772264	0.000240855	-0.000031503		
			1.205834258	0.000344555	-0.000084051		
			1.111074780	0.000114099	-0.000006862		
			0.815319138	0.000171806	-0.000027712		
			0.776988189	0.000040488	-0.000001665		
			0.423492029	0.000018963	-0.000002505		
3P3/2 -- ( 4)	242.473540	-585.485542	4.594285703	0.009212177		-0.000390391	0.000047295
			4.880763793	0.002074765	-0.000014983		
			4.665895053	0.005102093	-0.000104136		
			2.702161343	0.001752507	-0.000216933		
			2.721327758	0.000774651	-0.000057048		
			2.505558845	0.001451667	-0.000207255		
			2.531763959	0.000677483	-0.000063203		
			2.471612122	0.001505593	-0.000225780		
			2.386917632	0.000556286	-0.000056058		
			2.342094337	0.000532369	-0.000158328		
			1.293027490	0.000326399	-0.000042280		
			1.210882590	0.000132479	-0.000010836		
			1.100068686	0.000236075	-0.000035902		
			0.813127515	0.000061044	-0.000005975		
			0.773571886	0.000124451	-0.000020176		
			0.422883964	0.000025553	-0.000003333		
3D3/2 -- ( 4)	236.979379	-577.654391	5.311092595	0.015584417		-0.000005206	0.000000816
			5.295504247	0.002876700	-0.000000140		
			2.779062558	0.000689860	-0.000017321		
			2.766542852	0.001348612	-0.000094187		
			2.600212255	0.000491254	-0.000012417		
			2.546670198	0.001632363	-0.000154530		
			2.543715208	0.000536891	-0.000007630		
			2.374767827	0.002442982	-0.000604073		
			2.390127762	0.00080912	-0.000009729		
			1.307259424	0.000133519	-0.000004277		
			1.218846423	0.000218502	-0.000016273		
			1.114401417	0.000080443	-0.000002396		
			0.814834010	0.000135316	-0.000013871		
			0.779240939	0.000042919	-0.000000710		
			0.423997224	0.000010510	-0.000000349		
3D5/2 -- ( 6)	223.306062	-557.232340	5.183136993	0.013105541		-0.000000977	0.000000229
			2.765929325	0.000813173	-0.000017396		
			2.775717315	0.000574447	-0.000008582		
			2.578381520	0.000967357	-0.000040900		
			2.587361194	0.000439593	-0.000008306		
			2.498107986	0.001462137	-0.000098829		
			2.414733356	0.000509939	-0.000037946		
			2.351597707	0.001523375	-0.000423368		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
GOLD	6S1	Z=79 A=197 R=1.31949E-04 A.U.					
	5S1/2		1.304746616	0.000153961	-0.000004283		
	5P1/2		1.219838658	0.000096167	-0.000001909		
	5P3/2		1.111680658	0.000152422	-0.000007145		
	5D3/2		0.817784578	0.000037085	-0.000000820		
	5D5/2		0.775914079	0.000113580	-0.000008342		
	6S1/2		0.423799640	0.000012082	-0.000000349		
4S1/2 -- ( 2)	101.674838	-288.557589	2.202311522	0.000792005		-0.012448617	0.000437892
	4P1/2		1.949983977	0.000368099	-0.000021125		
	4P3/2		1.870938135	0.000468896	-0.000075887		
	4D3/2		1.983316219	0.000345775	-0.000031784		
	4D5/2		1.956481541	0.000309134	-0.000034820		
	4F5/2		1.948285831	0.000234848	-0.000021454		
	4F7/2		1.933104867	0.000226145	-0.000021718		
	5S1/2		1.171666618	0.000111786	-0.000048106		
	5P1/2		1.117915863	0.000092802	-0.000018266		
	5P3/2		1.026483661	0.000063978	-0.000010687		
	5D3/2		0.774353293	0.000017194	-0.000001895		
	5D5/2		0.739178819	0.000022703	-0.000001837		
	6S1/2		0.413677958	0.000008850	-0.000003909		
4P1/2 -- ( 2)	96.931622	-280.092668	2.192096975	0.001441453		-0.001503800	0.000077300
	4P3/2		1.993923113	0.000170448	-0.000002016		
	4D3/2		1.857534319	0.000805845	-0.000135401		
	4D5/2		1.994378300	0.000190290	-0.000005359		
	4F5/2		1.906982464	0.000376143	-0.000051997		
	4F7/2		1.944500416	0.000159418	-0.000006034		
	5S1/2		1.189131772	0.000130660	-0.000019087		
	5P1/2		1.098301738	0.000127719	-0.000036127		
	5P3/2		1.031667822	0.000038695	-0.000002784		
	5D3/2		0.770979985	0.000032751	-0.000004833		
	5D5/2		0.740236638	0.000016634	-0.000000579		
	6S1/2		0.414900427	0.000009987	-0.000001521		
4P3/2 -- ( 4)	77.447019	-248.786050	1.951892004	0.000738693		-0.000096759	0.000011682
	4D3/2		1.930221138	0.000212196	-0.000007979		
	4D5/2		1.827960396	0.000467985	-0.000045611		
	4F5/2		1.881212504	0.000166832	-0.000008883		
	4F7/2		1.842923806	0.000267400	-0.000025725		
	5S1/2		1.173771263	0.000187909	-0.000028019		
	5P1/2		1.109195335	0.000054297	-0.000004821		
	5P3/2		1.011401383	0.000087558	-0.000015122		
	5D3/2		0.769978036	0.000013415	-0.000001046		
	5D5/2		0.733691464	0.000031997	-0.000002614		
	6S1/2		0.413767601	0.000013911	-0.000002141		
4D3/2 -- ( 4)	69.294375	-232.838294	1.922245350	0.000952756		-0.000001388	0.000000217
	4D5/2		1.918753975	0.000177051	-0.000000018		
	4F5/2		1.778295135	0.000505753	-0.0000366509		
	4F7/2		1.865162231	0.000133550	-0.000001242		
	5S1/2		1.174837498	0.000064145	-0.000002249		
	5P1/2		1.098610616	0.000133868	-0.000014256		

TABLE 1.-- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
GOLD	6S1	Z=79 A=197 R=1.31949E-04 A.U.					
	5P3/2		1.020497799	0.000035014	-0.000001440		
	5D3/2		0.761455679	0.000049914	-0.000005294		
	5D5/2		0.735103492	0.000014666	-0.000000253		
4D5/2 --	6S1/2	65.276726	-225.611831	0.413849067	0.000004843	-0.000000207	
	( 6)		1.883271908	0.000796490		-0.000000259	0.000000061
	4F5/2		1.851518409	0.000136359	-0.000003757		
	4F7/2		1.773174048	0.000410930	-0.000043386		
	5S1/2		1.169472970	0.000075949	-0.000002198		
	5P1/2		1.103674619	0.000041691	-0.000000855		
	5P3/2		1.013306071	0.000078485	-0.000005809		
	5D3/2		0.767913049	0.000013257	-0.000000305		
	5D5/2		0.728580285	0.000041951	-0.000003162		
4F5/2 --	6S1/2	50.824993	-195.920435	0.413464104	0.000005588	-0.000000205	
	( 6)		1.793080090	0.000799765		-0.000000000	0.000000000
	4F7/2		1.810483790	0.000125972	-0.000000000		
	5S1/2		1.155871674	0.000037401	-0.000000019		
	5P1/2		1.083433191	0.000047958	-0.000000010		
	5P3/2		1.007089354	0.000022586	-0.000000013		
	5D3/2		0.758359720	0.000029083	-0.000000793		
	5D5/2		0.729138532	0.000009057	-0.000000053		
4F7/2 --	6S1/2	49.488615	-193.107191	0.412593098	0.000002853	-0.000000006	
	( 8)		1.776762857	0.000734014		-0.000000000	0.000000000
	5S1/2		1.152548356	0.000047498	-0.000000026		
	5P1/2		1.088462423	0.000031087	-0.000000001		
	5P3/2		1.001868764	0.000039348	-0.000000027		
	5D3/2		0.762001029	0.000010988	-0.000000021		
	5D5/2		0.725297024	0.000024626	-0.000000500		
5S1/2 --	6S1/2	24.993175	-116.979410	0.412361204	0.000003418	-0.000000006	
	( 2)		0.969019681	0.000056942		-0.002501688	0.000087959
	5P1/2		0.823701284	0.000045732	-0.000005273		
	5P3/2		0.785321136	0.000043802	-0.000010945		
	5D3/2		0.676573583	0.000025376	-0.000003397		
	5D5/2		0.652322833	0.000012119	-0.000003217		
5P1/2 --	6S1/2	21.196541	-106.885515	0.393132641	0.000003208	-0.000001456	
	( 2)		0.897116693	0.000086356		-0.000265422	0.000013634
	5P3/2		0.808102419	0.000009867	-0.000000146		
	5D3/2		0.627028391	0.000062305	-0.000014270		
	5D5/2		0.647889450	0.000004355	-0.000000477		
5P3/2 --	6S1/2	16.424878	-95.193119	0.393922071	0.000005528	-0.000000824	
	( 4)		0.786350227	0.000042343		-0.000016304	0.000001967
	5D3/2		0.646199147	0.000014851	-0.000001252		
	5D5/2		0.602042668	0.000025163	-0.000005982		
	6S1/2		0.389548091	0.000007418	-0.000001113		
5D3/2 --	( 4)	8.404283	-67.043198	0.558627822	0.000022829	-0.000000126	0.000000020
	5D5/2		0.549553862	0.000004008	-0.000000000		
	6S1/2		0.366789894	0.000001466	-0.000000002		
5D5/2 --	( 6)	7.504200	-63.546267	0.531778088	0.000017613	-0.000000022	0.000000005
	6S1/2		0.361724910	0.000002197	-0.000000000		



TABLE 1.-- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
GOLD								
	6S1	Z=79	A=197	R=1.31949E-04	A.U.			
6S1/2 -- ( 1)	2.353750	-34.578918	0.000000000	0.000000000		-0.000198055	0.000006963	
ETOT	-19017.33681	21842.59452	-47929.58595	7051.51518	24.244861057	-2.573951488	-3.669898673	0.138426811
MERCURY								
	6S2	Z=80	A=200	R=1.32616E-04	A.U.			
1S1/2 -- ( 2)	4262.430496	-7792.304526	57.420721045	7.491386065		-1.619388071	0.062458020	
2S1/2			17.871999182	0.401723410	-0.048236749			
2P1/2			21.833705046	0.832610278	-0.111609751			
2P3/2			18.428783505	0.377089024	-0.109009347			
3S1/2			7.460174761	0.087170312	-0.011196217			
3P1/2			8.238144865	0.166482870	-0.022106882			
3P3/2			7.305363831	0.081537965	-0.024303139			
3D3/2			7.426600906	0.003697918	-0.000437664			
3D5/2			7.158526802	0.001471232	-0.000471850			
4S1/2			3.392400750	0.022056636	-0.002873936			
4P1/2			3.506860470	0.039818122	-0.005276769			
4P3/2			3.155333815	0.019422673	-0.005827800			
4D3/2			3.008751777	0.000951446	-0.000113074			
4D5/2			2.913823618	0.000376443	-0.000121826			
4F5/2			2.552456562	0.000002356	-0.000000256			
4F7/2			2.515624013	0.000000894	-0.000000295			
5S1/2			1.457237635	0.004525662	-0.000591644			
5P1/2			1.379575677	0.007171613	-0.000949983			
5P3/2			1.236371753	0.003354683	-0.001007999			
5D3/2			0.908760474	0.000095392	-0.000011345			
5D5/2			0.865539018	0.000035833	-0.000011614			
6S1/2			0.461684836	0.000393611	-0.000051486			
2S1/2 -- ( 2)	1018.520841	-1919.593101	13.094258115	0.151577688		-0.231524488	0.008428720	
2P1/2			12.996886468	0.046319116	-0.000075690			
2P3/2			12.101080232	0.068616228	-0.001622104			
3S1/2			6.206649218	0.017957819	-0.004368078			
3P1/2			6.782252960	0.030211864	-0.004706580			
3P3/2			6.278000312	0.021243912	-0.002559359			
3D3/2			6.957909657	0.018566245	-0.002554995			
3D5/2			6.757978154	0.008071819	-0.002519933			
4S1/2			3.088673227	0.004505155	-0.001153093			
4P1/2			3.164102178	0.007492079	-0.001201632			
4P3/2			2.917335917	0.005189777	-0.0000696875			
4D3/2			2.906706619	0.003487400	-0.000507111			
4D5/2			2.827369144	0.001588149	-0.000505971			
4F5/2			2.549604502	0.000194829	-0.000025674			
4F7/2			2.513057211	0.000079233	-0.000024930			
5S1/2			1.395452999	0.000922318	-0.0000238296			
5P1/2			1.318620048	0.001357315	-0.0000218834			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
MERCURY	6S2	Z=80 A=200 R=1.32616E-04 A.U.					
	5P3/2		1.195480860	0.000899551	-0.000123185		
	5D3/2		0.898793720	0.000332199	-0.000048756		
	5D5/2		0.857524642	0.000145189	-0.000046330		
	6S1/2		0.456318871	0.000080186	-0.000020749		
2P1/2 -- ( 2)	1017.107662	-1917.857669	16.083358074	0.345701691		-0.026247626	0.001404540
	2P3/2		14.198585741	0.044875497	-0.000097676		
	3S1/2		6.589590893	0.012229250	-0.000869003		
	3P1/2		6.776163526	0.028282311	-0.004238850		
	3P3/2		6.540972010	0.010561502	-0.000285258		
	3D3/2		6.963191744	0.055230741	-0.013151053		
	3D5/2		6.947708607	0.001698355	-0.000391804		
	4S1/2		3.175829285	0.003053021	-0.000241679		
	4P1/2		3.171653930	0.006536581	-0.001073582		
	4P3/2		2.977001130	0.002510030	-0.000080005		
	4D3/2		2.910280376	0.011034119	-0.002704987		
	4D5/2		2.866346519	0.000397356	-0.000086166		
	4F5/2		2.550196453	0.000229929	-0.000048259		
	4F7/2		2.514437615	0.000012808	-0.000004860		
	5S1/2		1.412949874	0.000624347	-0.000050533		
	5P1/2		1.319673851	0.001168991	-0.000195299		
	5P3/2		1.205691652	0.000433162	-0.000014239		
	5D3/2		0.899180137	0.001062213	-0.000261632		
	5D5/2		0.861109032	0.000037358	-0.000008013		
	6S1/2		0.457835123	0.000054270	-0.000004409		
2P3/2 -- ( 4)	739.085993	-1552.552058	13.448000217	0.164652944		-0.001586409	0.000200224
	3S1/2		6.435693409	0.015301946	-0.001149085		
	3P1/2		6.891748191	0.009417013	-0.000430196		
	3P3/2		6.249913321	0.019812696	-0.001831962		
	3D3/2		7.050317904	0.016421285	-0.001611459		
	3D5/2		6.719535076	0.027313967	-0.007762181		
	4S1/2		3.138129054	0.003640131	-0.000295143		
	4P1/2		3.188763591	0.002194366	-0.000115794		
	4P3/2		2.914333483	0.004480568	-0.000458726		
	4D3/2		2.925944416	0.003208610	-0.000317879		
	4D5/2		2.822164494	0.005218392	-0.001531056		
	4F5/2		2.550034532	0.000150619	-0.000014753		
	4F7/2		2.512765279	0.000130439	-0.000042131		
	5S1/2		1.405263469	0.000737061	-0.000060791		
	5P1/2		1.322407626	0.000393231	-0.000021344		
	5P3/2		1.195074250	0.000765755	-0.000079875		
	5D3/2		0.900656539	0.000307992	-0.000030570		
	5D5/2		0.857081552	0.000474657	-0.000139917		
	6S1/2		0.457167314	0.000063962	-0.000005291		
3S1/2 -- ( 2)	323.474902	-704.362656	4.984631856	0.009542994		-0.052691798	0.001902261
	3P1/2		4.584817956	0.003303542	-0.000049951		
	3P3/2		4.368961326	0.004834598	-0.000365758		
	3D3/2		4.996705603	0.003016061	-0.000094128		
	3D5/2		4.929760912	0.004001371	-0.000113799		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
MERCURY	652	Z=80	A=200	R=1.32616E-04	A.U.		
4S1/2			2.710125457	0.001526303	-0.000543224		
4P1/2			2.779295024	0.002037133	-0.000355649		
4P3/2			2.587233697	0.001450443	-0.000176796		
4D3/2			2.594942414	0.000839498	-0.000081820		
4D5/2			2.539175477	0.000816245	-0.000070962		
4F5/2			2.460691340	0.000691752	-0.000096895		
4F7/2			2.429686237	0.000315167	-0.000094577		
5S1/2			1.322261282	0.000311081	-0.000114538		
5P1/2			1.250681738	0.000383016	-0.000068891		
5P3/2			1.140168231	0.000261226	-0.000034023		
5D3/2			0.869262288	0.000085899	-0.000008996		
5D5/2			0.831591436	0.000074403	-0.000007462		
6S1/2			0.450008724	0.000027015	-0.000009991		
3P1/2 -- ( 2)	319.032700	-698.005742	5.286205143	0.018927994		-0.006684536	0.000352501
3P3/2			4.794602165	0.002336198	-0.000015937		
3D3/2			4.887199861	0.006743588	-0.000465048		
3D5/2			5.170315097	0.002996048	-0.000020415		
4S1/2			2.796522647	0.001312149	-0.000160073		
4P1/2			2.734125221	0.002142087	-0.000494984		
4P3/2			2.627049841	0.000710485	-0.000038423		
4D3/2			2.610021702	0.001959511	-0.000296064		
4D5/2			2.566464534	0.000544335	-0.000019129		
4F5/2			2.453082314	0.001176881	-0.000258888		
4F7/2			2.448534280	0.000130137	-0.000027430		
5S1/2			1.337463412	0.000260845	-0.000034104		
5P1/2			1.244675550	0.000377735	-0.000092156		
5P3/2			1.146489265	0.000124028	-0.000007507		
5D3/2			0.870792324	0.000203018	-0.000032754		
5D5/2			0.834029760	0.000048493	-0.000001997		
6S1/2			0.451300513	0.000022567	-0.000002981		
3P3/2 -- ( 4)	250.315564	-602.580822	4.666796901	0.009650240		-0.000423491	0.000052666
3D3/2			4.959518873	0.002171858	-0.000015330		
3D5/2			4.739756356	0.005340545	-0.000108103		
4S1/2			2.753293683	0.001861487	-0.000231533		
4P1/2			2.775114892	0.000822660	-0.000060809		
4P3/2			2.550918628	0.001531570	-0.000219007		
4D3/2			2.583102337	0.000721692	-0.000067437		
4D5/2			2.520773434	0.001597999	-0.000240409		
4F5/2			2.454385223	0.000601567	-0.000060615		
4F7/2			2.407998931	0.000576273	-0.000171274		
5S1/2			1.329100975	0.000354308	-0.000046118		
5P1/2			1.249765789	0.000145067	-0.000011920		
5P3/2			1.134673274	0.000257721	-0.000039281		
5D3/2			0.868172783	0.000072606	-0.000007123		
5D5/2			0.829981132	0.000149094	-0.000024286		
6S1/2			0.450579167	0.000030467	-0.000003994		
3D3/2 -- ( 4)	244.772718	-594.707883	5.399320198	0.016345556		-0.000005839	0.000000940
3D5/2			5.381375944	0.003012708	-0.000000156		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
MERCURY	6S2	Z=80	A=200	R=1.32616E-04	A.U.		
	4S1/2		2.832391133	0.000729048	-0.000018367		
	4P1/2		2.821921132	0.001430046	-0.000100445		
	4P3/2		2.648032446	0.000518091	-0.000013116		
	4D3/2		2.598868329	0.001729331	-0.000164285		
	4D5/2		2.595152701	0.000568596	-0.000008107		
	4F5/2		2.442007322	0.002645610	-0.000654315		
	4F7/2		2.458656715	0.000087899	-0.000010547		
	5S1/2		1.344072972	0.000144375	-0.000004650		
	5P1/2		1.258268939	0.000238786	-0.000017892		
	5P3/2		1.149879596	0.000087803	-0.000002625		
	5D3/2		0.870181643	0.000159814	-0.000016466		
	5D5/2		0.836576668	0.000051281	-0.000000854		
	6S1/2		0.451865660	0.000012487	-0.000000417		
3D5/2 --	( 6)	230.291385	-573.117631	5.265155246	0.013722298	-0.000001087	0.000000262
	4S1/2		2.818569521	0.000858540	-0.000018448		
	4P1/2		2.830894032	0.000607446	-0.000009113		
	4P3/2		2.625399278	0.001019114	-0.000043176		
	4D3/2		2.640240507	0.000465410	-0.000008837		
	4D5/2		2.548066668	0.001546456	-0.000104944		
	4F5/2		2.483736655	0.000552540	-0.000041081		
	4F7/2		2.418117433	0.001650043	-0.000458611		
	5S1/2		1.341366859	0.000166264	-0.000004657		
	5P1/2		1.259235467	0.000104877	-0.000002098		
	5P3/2		1.146316220	0.000166090	-0.000007814		
	5D3/2		0.873509759	0.000043792	-0.000000976		
	5D5/2		0.832708255	0.000135421	-0.000010003		
	6S1/2		0.451631862	0.000014334	-0.000000417		
4S1/2 --	( 2)	106.154515	-298.695007	2.245286540	0.000841461	-0.013486031	0.000485899
	4P1/2		1.989172454	0.000388472	-0.000021905		
	4P3/2		1.906654662	0.000498790	-0.000081870		
	4D3/2		2.023801743	0.000366793	-0.000033661		
	4D5/2		1.995951761	0.000327991	-0.000036990		
	4F5/2		1.999569007	0.000251289	-0.000022745		
	4F7/2		1.984162208	0.000243824	-0.000023059		
	5S1/2		1.202267261	0.000121744	-0.000052489		
	5P1/2		1.152146490	0.000103173	-0.000020309		
	5P3/2		1.057424973	0.000069734	-0.000011797		
	5D3/2		0.824137588	0.000020394	-0.000002259		
	5D5/2		0.790516351	0.000027244	-0.000002210		
	6S1/2		0.440073786	0.000010591	-0.000004689		
4P1/2 --	( 2)	101.326065	-290.140545	2.237130299	0.001534794	-0.001685666	0.000088589
	4P3/2		2.032827281	0.000178821	-0.000002271		
	4D3/2		1.896365413	0.000857852	-0.000144353		
	4D5/2		2.035519125	0.000201789	-0.000005737		
	4F5/2		1.957943823	0.000402904	-0.000055187		
	4F7/2		1.996732138	0.000172427	-0.000006425		
	5S1/2		1.221234116	0.000141631	-0.000020725		
	5P1/2		1.131724874	0.000140534	-0.000039906		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
MERCURY	6S2	Z=80	A=200	R=1.32616E-04	A.U.		
	5P3/2		1.063007225	0.000042110	-0.000003076		
	5D3/2		0.820408623	0.000038905	-0.000005774		
	5D5/2		0.791777809	0.000019955	-0.000000704		
	6S1/2		0.441478160	0.000011885	-0.000001816		
4P3/2 --	( 4)	80.479058	-256.820035	1.988095516	0.000781540	-0.000105733	0.000013103
	4D3/2		1.968605371	0.000223718	-0.000008261		
	4D5/2		1.863985613	0.000495170	-0.000047624		
	4F5/2		1.929098736	0.000177705	-0.000009279		
	4F7/2		1.890056776	0.000286871	-0.000026904		
	5S1/2		1.204839843	0.000205327	-0.000030725		
	5P1/2		1.142743071	0.000059936	-0.000005354		
	5P3/2		1.041478143	0.000096001	-0.000016684		
	5D3/2		0.819068377	0.000016069	-0.000001274		
	5D5/2		0.784164520	0.000038705	-0.000003208		
	6S1/2		0.440151804	0.000016656	-0.000002575		
4D3/2 --	( 4)	72.266199	-240.851223	1.963020580	0.001014388	-0.000001576	0.000000253
	4D5/2		1.959001360	0.000188178	-0.000000020		
	4F5/2		1.825992448	0.000538635	-0.000069483		
	4F7/2		1.915169465	0.000144516	-0.000001306		
	5S1/2		1.206542291	0.000069762	-0.000002477		
	5P1/2		1.132183548	0.000147237	-0.000015776		
	5P3/2		1.051389252	0.000038349	-0.000001586		
	5D3/2		0.809695283	0.000059280	-0.000006384		
	5D5/2		0.785922356	0.000017615	-0.000000310		
	6S1/2		0.440290031	0.000005779	-0.000000251		
4D5/2 --	( 6)	67.998492	-233.218228	1.922363035	0.000846968	-0.000000292	0.000000070
	4F5/2		1.900401645	0.000145620	-0.000003902		
	4F7/2		1.820300250	0.000439304	-0.000045148		
	5S1/2		1.200872575	0.000082469	-0.000002422		
	5P1/2		1.137335353	0.000045723	-0.000000951		
	5P3/2		1.043812992	0.000085879	-0.000006383		
	5D3/2		0.816874135	0.000015743	-0.000000370		
	5D5/2		0.778451676	0.000050291	-0.000003856		
	6S1/2		0.439843407	0.000006656	-0.000000248		
4F5/2 --	( 6)	53.701259	-204.196867	1.850641100	0.000873081	-0.000000000	0.000000000
	4F7/2		1.868778445	0.000137852	-0.000000000		
	5S1/2		1.189757597	0.000040918	-0.000000011		
	5P1/2		1.118967542	0.000052949	-0.000000025		
	5P3/2		1.039323141	0.000024968	-0.000000021		
	5D3/2		0.807373273	0.000034714	-0.000001001		
	5D5/2		0.780005536	0.000010962	-0.000000068		
	6S1/2		0.439073491	0.000003429	-0.000000008		
4F7/2 --	( 8)	52.282960	-201.250215	1.833940971	0.000801421	-0.000000000	0.000000000
	5S1/2		1.186385202	0.000051790	-0.000000017		
	5P1/2		1.123955363	0.000034207	-0.000000002		
	5P3/2		1.034058828	0.000043273	-0.000000045		
	5D3/2		0.811241839	0.000013075	-0.000000028		
	5D5/2		0.775807517	0.000029627	-0.000000638		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E (MAG)	E (RET)	E (V-P)	E (H-VP)	
MERCURY 6S2 Z=80 A=200 R=1.32616E-04 A.U.								
5S1/2 -- ( 2)	26.692009	-122.185658	0.438814169	0.000004096	-0.000000008	-0.002774639	0.000099923	
5P1/2			0.996231867	0.000062346				
5P3/2			0.848672927	0.000049351	-0.000005620			
5D3/2			0.809025205	0.000048405	-0.000012104			
5D5/2			0.715356956	0.000029548	-0.000003948			
6S1/2			0.692876531	0.000014396	-0.000003791			
5P1/2 -- ( 2)	22.830859	-112.104689	0.417088338	0.000003891	-0.000001784	-0.000307138	0.000016129	
5P3/2			0.926185322	0.000095686				
5D3/2			0.833999145	0.000010774	-0.000000174			
5D5/2			0.662331130	0.000072472	-0.000016570			
6S1/2			0.688745893	0.000005258	-0.000000565			
5P3/2 -- ( 4)	17.644102	-99.671148	0.418124761	0.000006644	-0.000000996	-0.000018446	0.000002284	
5D3/2			0.811297811	0.000046799				
5D5/2			0.682791097	0.000017055	-0.000001417			
6S1/2			9.638212041	0.000029328	-0.000006878			
5D3/2 -- ( 4)	9.686451	-72.716019	0.413240361	0.000009019	-0.000001364	-0.000000159	0.000000026	
5D5/2			0.599589141	0.000028026				
6S1/2			0.591794836	0.000004981	-0.000000001			
5D5/2 -- ( 6)	8.728977	-69.253830	0.392112553	0.000001868	-0.000000006	-0.000000028	0.000000007	
6S1/2			0.574418460	0.000021943				
6S1/2 -- ( 2)	2.758433	-37.422482	0.387516860	0.000002755	-0.000000002	-0.000241431	0.000008694	
6S1/2			0.329489614	0.000001814				
ETOT	-19629.90296	22640.24166	-49553.66196	7264.61905	25.357407085	-2.692051311	-3.918637910	0.151570572
THALLIUM 6P1 Z=81 A=205 R=1.33712E-04 A.U.								
1S1/2 -- ( 2)	4410.412761	-8039.521456	58.405395649	7.804933741		-1.724591401	0.068171828	
2S1/2			18.198052065	0.420000046	-0.050529647			
2P1/2			22.264942270	0.870257844	-0.116017795			
2P3/2			18.694652938	0.391899463	-0.113285665			
3S1/2			7.599669818	0.091337374	-0.011753538			
3P1/2			8.401977984	0.174285163	-0.022999293			
3P3/2			7.423206021	0.085149570	-0.025378362			
3D3/2			7.548629007	0.003858320	-0.000454685			
3D5/2			7.268919584	0.001533292	-0.000491686			
4S1/2			3.461869481	0.023230154	-0.003032620			
4P1/2			3.583962638	0.041934339	-0.005521757			
4P3/2			3.215623646	0.020426106	-0.006128743			
4D3/2			3.072474285	0.001004301	-0.000118841			
4D5/2			2.973504672	0.000397078	-0.000128494			
4F5/2			2.624115114	0.000002559	-0.000000277			
4F7/2			2.585966195	0.000000973	-0.000000320			
5S1/2			1.500249441	0.004875075	-0.000638565			
5P1/2			1.427022019	0.007784096	-0.001024491			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
THALLIUM	6P1	Z=81 A=205 R=1.33712E-04 A.U.					
			1.277469832	0.003648223	-0.001096203		
			0.970700999	0.000111788	-0.000013238		
			0.928617630	0.000042416	-0.000013747		
			0.504166251	0.000494102	-0.000064759		
			0.356716797	0.000391193	-0.000051483		
2S1/2 -- ( 2)	1057.448349	-1984.598079	13.324289924	0.159244793		-0.248596166	0.009267256
2P1/2			13.234479297	0.048661575	-0.000077375		
2P3/2			12.293371884	0.071594924	-0.001765719		
3S1/2			6.316602309	0.018905544	-0.004594904		
3P1/2			6.907559763	0.031873451	-0.004960118		
3P3/2			6.379177475	0.022106363	-0.002648332		
3D3/2			7.072840763	0.019436243	-0.002673086		
3D5/2			6.864068846	0.008435083	-0.002635841		
4S1/2			3.149309388	0.004767259	-0.001219387		
4P1/2			3.229860523	0.007951279	-0.001273828		
4P3/2			2.972083926	0.005442586	-0.000727621		
4D3/2			2.967682632	0.003690440	-0.000536373		
4D5/2			2.885088681	0.001678726	-0.000535492		
4F5/2			2.621120054	0.000210936	-0.000027781		
4F7/2			2.583276417	0.000075999	-0.000026984		
5S1/2			1.435220725	0.000998191	-0.000257761		
5P1/2			1.361476902	0.001484710	-0.000239113		
5P3/2			1.234204581	0.000975698	-0.000133091		
5D3/2			0.959345290	0.000389744	-0.000057189		
5D5/2			0.919426481	0.000172030	-0.000054967		
6S1/2			0.497585177	0.000101128	-0.000026156		
6P1/2			0.353424093	0.000074675	-0.000012035		
2P1/2 -- ( 2)	1055.997616	-1982.856946	16.385143339	0.363370623		-0.029105695	0.001592413
2P3/2			14.427717831	0.046641605	-0.000107798		
3S1/2			6.709541105	0.012874252	-0.000912228		
3P1/2			6.901946570	0.029812724	-0.004462266		
3P3/2			6.648135384	0.011033784	-0.000297509		
3D3/2			7.079164140	0.057757444	-0.013752381		
3D5/2			7.056483199	0.001766946	-0.000409061		
4S1/2			3.239224634	0.003231070	-0.000255142		
4P1/2			3.237815522	0.006932706	-0.001137413		
4P3/2			3.033523310	0.002641416	-0.000084074		
4D3/2			2.971553905	0.011668938	-0.002860736		
4D5/2			2.925090501	0.000418249	-0.000091028		
4F5/2			2.621748564	0.000248436	-0.000052142		
4F7/2			2.584726809	0.000013823	-0.000005248		
5S1/2			1.453680123	0.000675814	-0.000054580		
5P1/2			1.363270070	0.001277742	-0.000213290		
5P3/2			1.245075543	0.000471385	-0.000015481		
5D3/2			0.959808231	0.001245812	-0.000306906		
5D5/2			0.923550886	0.000044112	-0.000009493		
6S1/2			0.499448999	0.000068455	-0.000005550		
6P1/2			0.353516430	0.000064148	-0.000010734		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
THALLIUM	6P1	Z=81	A=205	R=1.33712E-04	A.U.		
2P3/2 -- ( 4)	759.871856	-1594.349888	13.637858005	0.171362169		-0.001710450	0.000221618
3S1/2			6.547132010	0.016079466	-0.001216683		
3P1/2			7.014327236	0.009885933	-0.000453324		
3P3/2			6.346788226	0.020691784	-0.001915822		
3D3/2			7.163892560	0.017181862	-0.001683379		
3D5/2			6.822043292	0.028548601	-0.008113514		
4S1/2			3.199230625	0.003841041	-0.000313503		
4P1/2			3.254020761	0.002316603	-0.000122686		
4P3/2			2.968134940	0.004709956	-0.000482987		
4D3/2			2.986872931	0.003389109	-0.000335183		
4D5/2			2.879173523	0.005509716	-0.001616938		
4F5/2			2.621541222	0.000164155	-0.000016067		
4F7/2			2.582934997	0.000142088	-0.000045908		
5S1/2			1.445340461	0.000795211	-0.000066023		
5P1/2			1.365904931	0.000427801	-0.000023312		
5P3/2			1.233620863	0.000832180	-0.000086969		
5D3/2			0.961406597	0.000360672	-0.000035739		
5D5/2			0.918859240	0.000561586	-0.000165607		
6S1/2			0.498604677	0.000080406	-0.000006696		
6P1/2			0.353646221	0.000021484	-0.000001175		
3S1/2 -- ( 2)	336.195864	-728.015151	5.072368787	0.010060569		-0.056753673	0.002097762
3P1/2			4.667633945	0.003476666	-0.000051305		
3P3/2			4.441497167	0.005073625	-0.000395411		
3D3/2			5.081854169	0.003169620	-0.000099682		
3D5/2			5.011829726	0.004196535	-0.000121016		
4S1/2			2.761714743	0.001617281	-0.000575250		
4P1/2			2.834865955	0.002170900	-0.000378720		
4P3/2			2.634437076	0.001516402	-0.000185094		
4D3/2			2.647790028	0.000889128	-0.000086657		
4D5/2			2.589899982	0.000864493	-0.000074933		
4F5/2			2.528183068	0.000746476	-0.000104596		
4F7/2			2.496221719	0.000340327	-0.000102125		
5S1/2			1.358601242	0.000337098	-0.000124065		
5P1/2			1.290251607	0.000420700	-0.000075627		
5P3/2			1.175720654	0.000282676	-0.000036876		
5D3/2			0.925753665	0.000101031	-0.000010597		
5D5/2			0.889663472	0.000088322	-0.000008862		
6S1/2			0.489890392	0.000034112	-0.000012612		
6P1/2			0.349858254	0.000021245	-0.000003833		
3P1/2 -- ( 2)	331.663982	-721.570754	5.382990626	0.019969500		-0.007438594	0.000400902
3P3/2			4.875476536	0.002430485	-0.000017725		
3D3/2			4.971618634	0.007103375	-0.000496674		
3D5/2			5.257858662	0.003140621	-0.000021881		
4S1/2			2.850526590	0.001387585	-0.000169085		
4P1/2			2.788807400	0.002274745	-0.000525420		
4P3/2			2.675516941	0.000745056	-0.000040533		
4D3/2			2.663536476	0.002068312	-0.000312010		
4D5/2			2.618134793	0.000577504	-0.000020239		



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
THALLIUM	6P1	Z=81 A=205 R=1.33712E-04 A.U.					
			2.520434079	0.061270102	-0.000279511		
			2.516024708	0.000140539	-0.000029625		
			1.374571716	0.000282114	-0.000036870		
			1.283973997	0.000413334	-0.000100844		
			1.182458558	0.000134574	-0.000008199		
			0.927526287	0.000238095	-0.000038415		
			0.892489258	0.000057639	-0.000002375		
			0.491470227	0.000028436	-0.000003757		
			0.349556335	0.000020709	-0.000005085		
3P3/2 -- ( 4)	258.306809	-619.956803	4.739503841	0.010102778		-0.000458939	0.000058568
			5.038483677	0.002272114	-0.000015680		
			4.813739800	0.005586472	-0.000112220		
			2.804914875	0.001976521	-0.000247024		
			2.829431500	0.000873238	-0.000064761		
			2.596550502	0.001614832	-0.000231270		
			2.634716232	0.000768044	-0.000071878		
			2.570153246	0.001694452	-0.000255703		
			2.521033192	0.000648789	-0.000065365		
			2.473010149	0.000622072	-0.000184769		
			1.365552838	0.000384100	-0.000050236		
			1.289080938	0.000158554	-0.000013085		
			1.169787142	0.000280875	-0.000042902		
			0.924419125	0.000085724	-0.000008428		
			0.887726311	0.000177216	-0.000029000		
			0.490563988	0.000038462	-0.000005067		
			0.349798443	0.000007944	-0.000000665		
3D3/2 -- ( 4)	252.712402	-612.038451	5.487782923	0.017132137		-0.000006540	0.000001081
			5.467380670	0.003152883	-0.000000172		
			2.886250914	0.000770047	-0.000019466		
			2.877862181	0.001515652	-0.000107076		
			2.696158642	0.000546045	-0.000013845		
			2.651358054	0.001830555	-0.000174495		
			2.646839329	0.000601662	-0.000008605		
			2.508450691	0.002857316	-0.000706820		
			2.526301678	0.000095212	-0.000011401		
			1.381285200	0.000155889	-0.000005049		
			1.298143419	0.000260461	-0.000019636		
			1.185898553	0.000095675	-0.000002872		
			0.926764823	0.000187399	-0.000019406		
			0.895342895	0.000060800	-0.000001019		
			0.492138379	0.000015708	-0.000000528		
			0.350253967	0.000012959	-0.000000986		
3D5/2 -- ( 6)	237.386795	-589.229165	5.347212696	0.014357938		-0.000001208	0.000000300
			2.871710547	0.000905944	-0.000019552		
			2.886610438	0.000641955	-0.000009671		
			2.672696919	0.001072953	-0.000045551		
			2.693400387	0.000492328	-0.000009394		
			2.598240952	0.001634269	-0.000111333		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
THALLIUM	6P1	Z=81	A=205	R=1.33712E-04	A.U.		
			2.551923427	0.000597075	-0.000044354		
			2.483742832	0.001782298	-0.000495410		
			1.378374676	0.000179289	-0.000005055		
			1.299075464	0.000114150	-0.000002301		
			1.182079351	0.000180676	-0.000008532		
			0.930492593	0.000051342	-0.000001154		
			0.890876744	0.000160218	-0.000011902		
			0.491845440	0.000018004	-0.000000529		
			0.350296722	0.000005705	-0.000000119		
4S1/2 -- ( 2)	110.802418	-309.109991	2.288731731	0.000893572		-0.014604247	0.000538716
			2.028805332	0.000409810	-0.000022700		
			1.942694537	0.000530460	-0.000088323		
			2.064614521	0.000388899	-0.000035642		
			2.035715440	0.000347719	-0.000039290		
			2.050433230	0.000268403	-0.000024078		
			2.034748791	0.000262284	-0.000024445		
			1.233788981	0.000132403	-0.000057185		
			1.186736123	0.000114460	-0.000022531		
			1.088797180	0.000075857	-0.000013001		
			0.874743980	0.000024026	-0.000002673		
			0.842770350	0.000032440	-0.000002640		
			0.477869284	0.000013419	-0.000005955		
			0.344774484	0.000006010	-0.000001211		
4P1/2 -- ( 2)	105.888693	-300.467121	2.282676753	0.001633304		-0.001888248	0.000101409
			2.072078949	0.000187469	-0.000002554		
			1.935528300	0.000912858	-0.000153890		
			2.076975337	0.000213772	-0.000006141		
			2.008549543	0.000430818	-0.000058493		
			2.048525638	0.000186037	-0.000006831		
			1.253679362	0.000153318	-0.000022472		
			1.165500587	0.000154340	-0.000043988		
			1.094797226	0.000045739	-0.000003392		
			0.870647684	0.000045889	-0.000006852		
			0.844262050	0.000023753	-0.000000849		
			0.479576634	0.000014975	-0.000002295		
			0.343839266	0.000007682	-0.000002271		
4P3/2 -- ( 4)	83.595150	-265.018838	2.024535127	0.000826345		-0.000115426	0.000014677
			2.007220034	0.000235713	-0.000008546		
			1.900210130	0.000523556	-0.000049702		
			1.976490133	0.000188946	-0.000009676		
			1.936670615	0.000307096	-0.000028088		
			1.236199155	0.000224091	-0.000033649		
			1.176608136	0.000066043	-0.000005933		
			1.071949657	0.000105081	-0.000018373		
			0.868908087	0.000019117	-0.000001539		
			0.835465673	0.000046458	-0.000003906		
			0.477932282	0.000021110	-0.000003278		
			0.344262891	0.000003279	-0.000000315		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
THALLIUM	6P1	Z=81	A=205	R=1.33712E-04	A.U.		
4D3/2 -- ( 4)	75.321691	-249.028512	2.004037997	0.001079023		-0.000001787	0.000000294
4D5/2			1.999463123	0.000199812	-0.000000023		
4F5/2			1.873328382	0.000572693	-0.0000072481		
4F7/2			1.964705962	0.000155981	-0.000001371		
5S1/2			1.238561845	0.000075758	-0.000002723		
5P1/2			1.166093230	0.000161645	-0.000017423		
5P3/2			1.082707884	0.000041929	-0.000001744		
5D3/2			0.858576585	0.000069900	-0.000007640		
5D5/2			0.837620973	0.000020992	-0.000000376		
6S1/2			0.478151724	0.000007300	-0.000000322		
6P1/2			0.343835635	0.000007511	-0.000000836		
4D5/2 -- ( 6)	70.791529	-240.970519	1.961640300	0.000899813		-0.000000328	0.000000081
4F5/2			1.948840815	0.000155219	-0.000004047		
4F7/2			1.866983732	0.000468735	-0.000046904		
5S1/2			1.232573244	0.000089423	-0.000002664		
5P1/2			1.171325939	0.000050048	-0.000001055		
5P3/2			1.074731492	0.000093812	-0.000007001		
5D3/2			0.866595214	0.000018560	-0.000000445		
5D5/2			0.829122702	0.000059823	-0.000004662		
6S1/2			0.477602885	0.000008390	-0.000000319		
6P1/2			0.344015075	0.000002411	-0.000000062		
4F5/2 -- ( 6)	56.629456	-212.553692	1.907413456	0.000949866		-0.000000000	0.000000000
4F7/2			1.926230175	0.000150303	-0.000000000		
5S1/2			1.223800871	0.000044669	-0.000000005		
5P1/2			1.154731247	0.000058304	-0.000000047		
5P3/2			1.071899090	0.000027530	-0.000000030		
5D3/2			0.857201194	0.000041094	-0.000001242		
5D5/2			0.831804615	0.000013151	-0.000000086		
6S1/2			0.476912179	0.000004358	-0.000000012		
6P1/2			0.343387069	0.000002761	-0.000000017		
4F7/2 -- ( 8)	55.123974	-209.463577	1.890251281	0.000871939		-0.000000000	0.000000000
5S1/2			1.220361090	0.000056351	-0.000000010		
5P1/2			1.159680058	0.000037545	-0.000000005		
5P3/2			1.066567741	0.000047480	-0.000000068		
5D3/2			0.861308641	0.000015443	-0.000000036		
5D5/2			0.827217169	0.000035342	-0.000000799		
6S1/2			0.476603248	0.000005190	-0.000000012		
6P1/2			0.343512573	0.000001753	-0.000000003		
5S1/2 -- ( 2)	28.473732	-127.548113	1.023757329	0.000068162		-0.003073453	0.000113317
5P1/2			0.873943347	0.000053177	-0.000005979		
5P3/2			0.833084137	0.000053433	-0.000013373		
5D3/2			0.754436722	0.000034181	-0.000004558		
5D5/2			0.733722102	0.000016977	-0.000004435		
6S1/2			0.450660625	0.000004997	-0.000002316		
6P1/2			0.333760436	0.000001444	-0.000000311		
5P1/2 -- ( 2)	24.552434	-117.488452	0.955624890	0.000105814		-0.000354689	0.000019034
5P3/2			0.860294794	0.000011746	-0.000000207		
5D3/2			0.697959772	0.000083787	-0.000019125		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
THALLIUM	6P1	Z=81	A=205	R=1.33712E-04	A.U.		
	5D5/2			0.730003639	0.000006301	-0.00000665	
	6S1/2			0.452050184	0.000008441	-0.000001276	
	6P1/2			0.330154609	0.000002660	-0.000000779	
5P3/2 -- ( 4)	18.928154	-104.291161		0.836686514	0.000051646		0.000002646
	5D3/2			0.719729836	0.000019464	-0.000001593	
	5D5/2			0.674663562	0.000033950	-0.000007847	
	6S1/2			0.446311462	0.000011586	-0.000001768	
	6P1/2			0.331363347	0.000001220	-0.000000109	
5D3/2 -- ( 4)	11.098702	-78.644420		0.641552357	0.000034139		0.000000033
	5D5/2			0.635076004	0.000006137	-0.000000001	
	6S1/2			0.425922144	0.000002514	-0.000000017	
	6P1/2			0.318326438	0.000003261	-0.000000249	
5D5/2 -- ( 6)	10.089324	-75.230506		0.618132638	0.000027101		0.000000009
	6S1/2			0.421571926	0.000003623	-0.000000009	
	6P1/2			0.321479283	0.000001036	-0.000000008	
6S1/2 -- ( 2)	3.426150	-41.448506		0.359942044	0.000002394		0.000011490
	6P1/2			0.262707893	0.000002489	-0.000000372	
6P1/2 -- ( 1)	1.547711	-28.989621		0.000000000	0.000000000		0.000000958
ETOT	-20255.07121	23460.98519	-51211.16296	7475.42879	26.508745024	-2.814086784	0.165827218
LEAD	6P2	Z=82	A=208	R=1.34361E-04	A.U.		
1S1/2 -- ( 2)	4563.139976	-8293.374729		59.404208388	8.128540773		0.074353508
	2S1/2			18.529076817	0.438950669	-0.052912548	
	2P1/2			22.704259113	0.909250304	-0.120534573	
	2P3/2			18.961539453	0.407072040	-0.117665959	
	3S1/2			7.740967093	0.095660705	-0.012332973	
	3P1/2			8.568271957	0.182358701	-0.023910925	
	3P3/2			7.541594918	0.088868770	-0.026485161	
	3D3/2			7.671084659	0.004022157	-0.000471908	
	3D5/2			7.379387086	0.001596569	-0.000511909	
	4S1/2			3.532311258	0.024454601	-0.003198524	
	4P1/2			3.662261115	0.044137610	-0.005773707	
	4P3/2			3.276413854	0.021468560	-0.006441298	
	4D3/2			3.136644369	0.001058997	-0.000124758	
	4D5/2			3.033506143	0.000418417	-0.000135387	
	4F5/2			2.695132542	0.000002771	-0.000000298	
	4F7/2			2.655587450	0.000001055	-0.000000347	
	5S1/2			1.544027757	0.005245987	-0.000688478	
	5P1/2			1.475356930	0.008435573	-0.001102892	
	5P3/2			1.319262718	0.003961643	-0.001190367	
	5D3/2			1.029277351	0.000128962	-0.000015204	
	5D5/2			0.987108281	0.000049249	-0.000015961	
	6S1/2			0.541157271	0.000594103	-0.000078018	

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LEAD	6P2	Z=82 A=208 R=1.34361E-04 A.U.					
2S1/2 --	6P1/2 ( 2)	1097.776125	-2051.540142	0.404761673	0.000543570	-0.000071062	
	2P1/2			13.557441123	0.167251094		0.010182571
	2P3/2			13.475686243	0.051108457	-0.000079089	
	3S1/2			12.487204016	0.074673835	-0.001921632	
	3P1/2			6.427762146	0.019895487	-0.004831387	
	3P3/2			7.034386404	0.033611191	-0.005224727	
	3D3/2			6.480867080	0.022986744	-0.002737786	
	3D5/2			7.188306729	0.020334130	-0.002794809	
	4S1/2			6.970401490	0.008808676	-0.002755256	
	4P1/2			3.210690342	0.005042532	-0.001288899	
	4P3/2			3.296475133	0.008434336	-0.001349634	
	4D3/2			3.027270684	0.005703510	-0.000759041	
	4D5/2			3.029092511	0.003902535	-0.000566902	
	4F5/2			2.943140860	0.001773107	-0.000566316	
	4F7/2			2.691995763	0.000227707	-0.000029972	
	5S1/2			2.652776620	0.000081993	-0.000029119	
	5P1/2			1.475629663	0.001079242	-0.000278529	
	5P3/2			1.405639977	0.001621610	-0.000260865	
	5D3/2			1.273537318	0.001056603	-0.000143541	
	5D5/2			1.016534452	0.000450291	-0.000066054	
	6S1/2			0.976764811	0.000199992	-0.000063988	
	6P1/2			0.533423185	0.000122171	-0.000031583	
2P1/2 --	6P1/2 ( 2)	1096.290127	-2049.797902	0.400271077	0.000104583	-0.000016837	
	2P3/2			16.691850979	0.381835510		-0.032262300
	3S1/2			14.658741896	0.048449805	-0.000118849	0.001803760
	3P1/2			6.830949063	0.013548273	-0.000957148	
	3P3/2			7.029266467	0.031414212	-0.004695244	
	3D3/2			6.755905929	0.011520008	-0.000310092	
	3D5/2			7.195706565	0.060357898	-0.014371165	
	4S1/2			7.165444080	0.001836774	-0.000426760	
	4P1/2			3.303449526	0.003418181	-0.000269222	
	4P3/2			3.304846909	0.007349745	-0.001204410	
	4D3/2			3.090526632	0.002777945	-0.000088292	
	4D5/2			3.033273668	0.012330568	-0.003023041	
	4F5/2			2.984170777	0.000439812	-0.000096081	
	4F7/2			2.692661259	0.000267636	-0.000056169	
	5S1/2			2.654296373	0.000014873	-0.000005651	
	5P1/2			1.495092965	0.000730823	-0.000058887	
	5P3/2			1.407580667	0.001394630	-0.000232585	
	5D3/2			1.285099195	0.000512218	-0.000016806	
	5D5/2			1.017079514	0.001438766	-0.000354496	
	6S1/2			0.981422104	0.000051093	-0.000011034	
	6P1/2			0.535618666	0.000082714	-0.000006692	
2P3/2 --	6P1/2 ( 4)	780.992627	-1636.768487	0.400399375	0.000089769	-0.000015010	
	3S1/2			13.828173051	0.178254364		-0.001842537
	3P1/2			6.659602327	0.016890408	-0.001287868	0.000244995
	3P3/2			7.138073777	0.010373752	-0.000477453	
				6.443945640	0.021597319	-0.002002299	

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LEAD	6P2	Z=82 A=208 R=1.34361E-04 A.U.					
			7.277808278	0.017965907	-0.001757314		
			6.924629832	0.029819240	-0.008475106		
			3.261034036	0.004051361	-0.000332880		
			3.320043012	0.002444401	-0.000129909		
			3.022308465	0.004948141	-0.000508213		
			3.048190383	0.003576910	-0.000353137		
			2.936468305	0.005812752	-0.001706293		
			2.692403780	0.000178417	-0.000017449		
			2.652381264	0.000154343	-0.000349882		
			1.486052220	0.000857094	-0.000071636		
			1.410085000	0.000464705	-0.000025421		
			1.272753505	0.000903042	-0.000094550		
			1.018776974	0.000415881	-0.000041139		
			0.976057619	0.000651896	-0.000192314		
			0.534595977	0.000096821	-0.000308118		
			0.400556933	0.000029921	-0.000001644		
3S1/2 -- ( 2)	349.349735	-752.308557	5.160997821	0.010601728		-0.061116805	0.002311669
3P1/2			4.751342653	0.003657556	-0.000052685		
3P3/2			4.514511040	0.005322499	-0.000427458		
3D3/2			5.167579923	0.003329488	-0.000105597		
3D5/2			5.094361697	0.004398642	-0.000128722		
4S1/2			2.813868220	0.001712874	-0.000608853		
4P1/2			2.891070203	0.002312010	-0.000403027		
4P3/2			2.681967983	0.001583866	-0.000193636		
4D3/2			2.700982027	0.000940679	-0.000091669		
4D5/2			2.640909137	0.000914832	-0.000079028		
4F5/2			2.595074029	0.000803598	-0.000112636		
4F7/2			2.562088919	0.000366559	-0.000110005		
5S1/2			1.395474246	0.000364910	-0.000134238		
5P1/2			1.330386619	0.000461338	-0.000082886		
5P3/2			1.211764704	0.000305336	-0.000039902		
5D3/2			0.978894142	0.000116973	-0.000012287		
5D5/2			0.943237968	0.000102864	-0.000010321		
6S1/2			0.524431921	0.000041257	-0.000015249		
6P1/2			0.395441505	0.000029880	-0.000005388		
3P1/2 -- ( 2)	344.725864	-745.774761	5.480836089	0.021059190		-0.008273573	0.000455477
3P3/2			4.956884100	0.002526723	-0.000019693		
3D3/2			5.056587768	0.007479594	-0.000530597		
3D5/2			5.345906430	0.003290018	-0.000023454		
4S1/2			2.905149855	0.001466728	-0.000178517		
4P1/2			2.844107902	0.002414406	-0.000557405		
4P3/2			2.724341515	0.000780683	-0.000042734		
4D3/2			2.717407262	0.002180509	-0.000328352		
4D5/2			2.670105754	0.000612247	-0.000021392		
4F5/2			2.587200428	0.001367398	-0.000301045		
4F7/2			2.582845407	0.000151364	-0.000031916		
5S1/2			1.412240372	0.000304812	-0.000039817		
5P1/2			1.323832252	0.000451610	-0.000110176		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(L-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LEAD	6P2	Z=82	A=208	R=1.34361E-04	A.U.		
	5P3/2		1.218939019	0.000145776	-0.000008942		
	5D3/2		0.980915850	0.000274839	-0.000044338		
	5D5/2		0.946451650	0.000067224	-0.000002770		
	6S1/2		0.526283284	0.000034323	-0.000004534		
	6P1/2		0.395038710	0.000029007	-0.000007125		
3P3/2 --	( 4)	266.448747	-637.615514	4.812408825	0.010570085	-0.000496873	0.000065046
	3D3/2		5.117662950	0.002375595	-0.000016034		
	3D5/2		4.887848003	0.005839999	-0.000116494		
	4S1/2		2.857035661	0.002097966	-0.000263462		
	4P1/2		2.884280613	0.000926515	-0.000068974		
	4P3/2		2.642441965	0.001701536	-0.000244059		
	4D3/2		2.686591559	0.000816597	-0.000076533		
	4D5/2		2.619740674	0.001795043	-0.000271673		
	4F5/2		2.587012741	0.000698022	-0.000070316		
	4F7/2		2.537292108	0.000669839	-0.000198835		
	5S1/2		1.402521521	0.000415998	-0.000054671		
	5P1/2		1.328929856	0.000173036	-0.000014342		
	5P3/2		1.205362929	0.000305647	-0.000046786		
	5D3/2		0.977288401	0.000099642	-0.000009816		
	5D5/2		0.940952054	0.000206632	-0.000033963		
	6S1/2		0.525192503	0.000046513	-0.000006159		
	6P1/2		0.395346336	0.000011114	-0.000000934		
3D3/2 --	( 4)	260.800085	-629.648401	5.976489226	0.017944708	-0.000007314	0.000001241
	3D5/2		5.553524088	0.003297289	-0.000000191		
	4S1/2		2.940654743	0.000812932	-0.000020619		
	4P1/2		2.934370306	0.001605624	-0.000114102		
	4P3/2		2.744578017	0.000575145	-0.000014605		
	4D3/2		2.704125378	0.001936142	-0.000185176		
	4D5/2		2.698763914	0.000636122	-0.000009126		
	4F5/2		2.574247868	0.003078432	-0.000761671		
	4F7/2		2.593229192	0.000102864	-0.000012294		
	5S1/2		1.419039431	0.000168136	-0.000005475		
	5P1/2		1.338574714	0.000283676	-0.000021519		
	5P3/2		1.222413482	0.000104096	-0.000003137		
	5D3/2		0.979983087	0.000216374	-0.000022516		
	5D5/2		0.949584148	0.000070722	-0.000001194		
	6S1/2		0.527038434	0.000018925	-0.000000641		
	6P1/2		0.395967902	0.000018084	-0.000001386		
3D5/2 --	( 6)	244.592679	-605.567535	5.429312847	0.015012757	-0.000001340	0.000000342
	4S1/2		2.925363812	0.000955464	-0.000020709		
	4P1/2		2.942869660	0.000678028	-0.000010256		
	4P3/2		2.720260994	0.001128917	-0.000048029		
	4D3/2		2.746824721	0.000520370	-0.000009976		
	4D5/2		2.648618252	0.001725653	-0.000118006		
	4F5/2		2.619445409	0.000643614	-0.000047769		
	4F7/2		2.548637485	0.001920353	-0.0000533826		
	5S1/2		1.415911997	0.000193119	-0.000005482		
	5P1/2		1.339463109	0.000124045	-0.000002520		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LEAD	6P2	Z=82 A=208 R=1.34361E-04 A.U.					
			1.218324172	0.000196246	-0.000009301		
			0.984095122	0.000059268	-0.000001343		
			0.944522235	0.000185972	-0.000013892		
			0.526686817	0.000021658	-0.000000642		
4S1/2 -- ( 2)	115.626446	-319.812355	0.396019272	0.000007946	-0.000000168	-0.015811829	0.000596829
			2.332657444	0.000948475			
			2.068888986	0.000432166	-0.000023512		
			1.979056511	0.000564023	-0.000095285		
			2.105751492	0.000412145	-0.000037736		
			2.075770851	0.000368343	-0.000041726		
			2.101000807	0.000286232	-0.000025457		
			2.084997116	0.000281565	-0.000025880		
			1.265732182	0.000143842	-0.000062229		
			1.221759877	0.000126758	-0.000024949		
			1.120544581	0.000082370	-0.000014307		
			0.922085638	0.000027879	-0.000003117		
			0.890685462	0.000037892	-0.000003096		
			0.510493476	0.000016285	-0.000007243		
4P1/2 -- ( 2)	110.625874	-311.080129	0.388609682	0.000008548	-0.000001724	-0.002114000	0.000115959
			2.328739209	0.001737232			
			2.111671860	0.000196396	-0.000002870		
			1.975017232	0.000971027	-0.000164050		
			2.118741332	0.000226245	-0.000006572		
			2.058911267	0.000459955	-0.000061928		
			2.100009164	0.000200277	-0.000007254		
			1.286575588	0.000165802	-0.000024341		
			1.199697872	0.000169243	-0.000048403		
			1.126982839	0.000049595	-0.000003735		
			0.917650066	0.000053300	-0.000008009		
			0.892415102	0.000027733	-0.000001005		
			0.512482484	0.000018073	-0.000002779		
4P3/2 -- ( 4)	86.795811	-273.382661	0.387374204	0.000010795	-0.000003207	-0.000125882	0.000016418
			2.061197229	0.000873160			
			2.046051484	0.000248191	-0.000008835		
			1.936622445	0.000553170	-0.000051845		
			2.023492314	0.000200576	-0.000010073		
			1.982877787	0.000328110	-0.000029278		
			1.267948960	0.000244357	-0.000036816		
			1.210859030	0.000072670	-0.000006563		
			1.102756002	0.000114847	-0.000020200		
			0.915464390	0.000022400	-0.000001830		
			0.882433018	0.000054704	-0.000004665		
			0.510528870	0.000025632	-0.000003999		
			0.387904675	0.000004619	-0.000000448		
4D3/2 -- ( 4)	78.461272	-257.370141	2.045282885	0.001146743	-0.000002022	0.000000342	
			2.040126147	0.000211965	-0.000000026		
			1.920390069	0.000607985	-0.000075507		
			2.013878971	0.000167965	-0.000001437		



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LEAD	6P2	Z=82	A=208	R=1.34361E-04	A.U.		
	5S1/2		1.270996982	0.000082176	-0.000002988		
	5P1/2		1.200405601	0.000177202	-0.000019212		
	5P3/2		1.114394995	0.000045772	-0.000001914		
	5D3/2		0.904288276	0.000081156	-0.000008996		
	5D5/2		0.885010498	0.000024540	-0.000000448		
	6S1/2		0.510841394	0.000008832	-0.000000396		
	6P1/2		0.387369805	0.000010511	-0.000001179		
4D5/2 -- ( 6)	73.656056	-248.868497	2.001092378	0.000955081		-0.000000369	0.000000094
	4F5/2		1.996932825	0.000165174	-0.000004190		
	4F7/2		1.913323786	0.000499275	-0.000048656		
	5S1/2		1.264674159	0.000096858	-0.000002925		
	5P1/2		1.205713496	0.000054697	-0.000001168		
	5P3/2		1.106002042	0.000102320	-0.000007667		
	5D3/2		0.913066666	0.000021545	-0.000000526		
	5D5/2		0.875515534	0.000069818	-0.000005526		
	6S1/2		0.510194891	0.000010130	-0.000000393		
	6P1/2		0.387596064	0.000003371	-0.000000089		
4F5/2 -- ( 6)	59.612807	-221.001263	1.963551858	0.001030266		-0.000000001	0.000000000
	4F7/2		1.983004331	0.000163351	-0.000000000		
	5S1/2		1.258133776	0.000048679	-0.000000002		
	5P1/2		1.190815532	0.000064059	-0.000000075		
	5P3/2		1.104779640	0.000030286	-0.000000042		
	5D3/2		0.903920803	0.000047861	-0.000001505		
	5D5/2		0.879419651	0.000015464	-0.000000106		
	6S1/2		0.509642788	0.000005302	-0.000000017		
	6P1/2		0.386892721	0.000003881	-0.000000027		
4F7/2 -- ( 8)	58.015113	-217.758507	1.945863866	0.000945707		-0.000000000	0.000000000
	5S1/2		1.254611026	0.000061209	-0.000000005		
	5P1/2		1.195728899	0.000041123	-0.000000008		
	5P3/2		1.099361560	0.000051991	-0.000000095		
	5D3/2		0.908241103	0.000017955	-0.000000046		
	5D5/2		0.874468155	0.000041340	-0.000000973		
	6S1/2		0.509288495	0.000006295	-0.000000017		
	6P1/2		0.387050169	0.000002459	-0.000000005		
5S1/2 -- ( 2)	30.349956	-133.086821	1.051696207	0.000074443		-0.003401783	0.000128339
	5P1/2		0.899577341	0.000057235	-0.000006351		
	5P3/2		0.857483183	0.000058935	-0.000014766		
	5D3/2		0.790899112	0.000039000	-0.000005190		
	5D5/2		0.771036331	0.000019672	-0.000005099		
	6S1/2		0.479600709	0.000006146	-0.000002878		
	6P1/2		0.374160875	0.000002071	-0.000000453		
5P1/2 -- ( 2)	26.371326	-123.052765	0.985477103	0.000116829		-0.000408964	0.000022414
	5P3/2		0.886948343	0.000012787	-0.000000245		
	5D3/2		0.731434460	0.000095640	-0.000021792		
	5D5/2		0.767864914	0.000007408	-0.000000769		
	6S1/2		0.481353866	0.000010279	-0.000001565		
	6P1/2		0.369567152	0.000003790	-0.000001137		
5P3/2 -- ( 4)	20.280696	-109.053067	0.862400512	0.000056907		-0.000023473	0.000003059

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
LEAD	6P2	Z=82 A=208 R=1.34361E-04 A.U.						
	503/2		0.754327523	0.000021928	-0.000001766			
	505/2		0.708149149	0.000038683	-0.000008810			
	6S1/2		0.474868607	0.000014275	-0.000002196			
	6P1/2		0.371048475	0.000001757	-0.000000160			
503/2 -- ( 4)	12.538314	-84.420923	0.680253449	0.000040687		-0.000000248	0.000000042	
	505/2		0.674472947	0.000007365	-0.000000001			
	6S1/2		0.455302845	0.000003218	-0.000000033			
	6P1/2		0.356600811	0.000004847	-0.000000412			
505/2 -- ( 6)	11.458849	-80.957142	0.657483237	0.000032563		-0.000000044	0.000000011	
	6S1/2		0.451026564	0.000004536	-0.000000021			
	6P1/2		0.360081855	0.000001466	-0.000000014			
6S1/2 -- ( 2)	4.076357	-45.108486	0.385774192	0.000002982		-0.000385455	0.000014541	
	6P1/2		0.291013982	0.000003291	-0.000000486			
6P1/2 -- ( 2)	2.108930	-33.324210	0.285582021	0.000002429		-0.000026402	0.000001447	
ETOT	-20893.16069	24306.19489	-52909.99317	7690.16001	27.700314762	-2.940132541	-4.463901911	0.181300276
BISMUTH	6P3	Z=83 A=209 R=1.34576E-04 A.U.						
1S1/2 -- ( 2)	4720.822485	-8554.113742	60.417745467	8.462496990		-1.954802461	0.081039261	
	2S1/2		18.865263165	0.458598942	-0.055388776			
	2P1/2		23.151986500	0.949630484	-0.125160537			
	2P3/2		19.229457378	0.422608139	-0.122150480			
	3S1/2		7.884156073	0.100146246	-0.012935296			
	3P1/2		8.737149766	0.190712114	-0.024842123			
	3P3/2		7.660445996	0.092697854	-0.027624643			
	3D3/2		7.794008870	0.004189417	-0.000489308			
	3D5/2		7.439962413	0.001661055	-0.000532502			
	4S1/2		3.603734943	0.025731596	-0.003371873			
	4P1/2		3.741769993	0.046430042	-0.006032576			
	4P3/2		3.337687796	0.022350694	-0.006765726			
	4D3/2		3.201236480	0.001115527	-0.000130820			
	4D5/2		3.093792601	0.000440454	-0.000142502			
	4F5/2		2.765572135	0.000002992	-0.000000321			
	4F7/2		2.724548526	0.000001140	-0.000000375			
	5S1/2		1.588427999	0.005638206	-0.000741371			
	5P1/2		1.524372153	0.009124763	-0.001184886			
	5P3/2		1.361511114	0.004294048	-0.001290231			
	5D3/2		1.086390705	0.000147166	-0.000017271			
	5D5/2		1.043779605	0.000056486	-0.000018306			
	6S1/2		0.579217123	0.000708969	-0.000093284			
	6P1/2		0.454348418	0.000730629	-0.000094866			
	6P3/2		0.378631613	0.000278690	-0.000083757			
2S1/2 -- ( 2)	1139.569175	-2120.496887	13.793831377	0.175611994		-0.286517134	0.011181478	
	2P1/2		13.720649198	0.053664599	-0.000080831			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
BISMUTH 6P3 Z=83 A=209 R=1.34576E-04 A.u.							
2P3/2			12.682617462	0.077856249	-0.002090869		
3S1/2			6.540188650	0.020929646	-0.005077918		
3P1/2			7.162807422	0.035428781	-0.005500937		
3P3/2			6.583099949	0.023884986	-0.002827646		
3D3/2			7.304347650	0.021260628	-0.002920257		
3D5/2			7.077008194	0.009192805	-6.002878267		
4S1/2			3.272821833	0.005331537	-0.001361752		
4P1/2			3.363952552	0.008942299	-0.001429161		
4P3/2			3.082884342	0.005972517	-0.000791071		
4D3/2			3.090914600	0.004123887	-0.000598719		
4D5/2			3.001494598	0.001871345	-0.000598468		
4F5/2			2.762295203	0.000245140	-0.000032247		
4F7/2			2.721618847	0.000088213	-0.000031336		
5S1/2			1.516547079	0.001165515	-0.000300604		
5P1/2			1.450318806	0.001768010	-0.000284081		
5P3/2			1.313259633	0.001141951	-0.000154476		
5D3/2			1.072238966	0.000514799	-0.000075493		
5D5/2			1.032276453	0.000229731	-0.000073605		
6S1/2			0.570193007	0.000146490	-6.000037849		
6P1/2			0.448421347	0.000141696	-0.000022786		
6P3/2			0.375502567	0.000074156	-0.000010062		
2P1/2 -- ( 2)	1138.050174	-2118.758080	17.003679968	0.401133366		-0.035748684	0.002041385
2P3/2			14.891703007	0.050300108	-0.000130906		
3S1/2			6.953886600	0.014252731	-0.001003831		
3P1/2			7.158199896	0.033090263	-0.004938173		
3P3/2			6.864318929	0.012020427	-0.000323018		
3D3/2			7.312859597	0.063033522	-0.015007785		
3D5/2			7.274623465	0.001907831	-0.000444908		
4S1/2			3.368511539	0.003614757	-0.000283937		
4P1/2			3.372755326	0.007788643	-0.001274689		
4P3/2			3.147999190	0.002919697	-0.000092660		
4D3/2			3.095418183	0.013019439	-0.003191994		
4D5/2			3.043554375	0.000462037	-0.000101328		
4F5/2			2.762997986	0.000287520	-0.000060339		
4F7/2			2.723207125	0.000015957	-0.000006066		
5S1/2			1.537052714	0.000789411	-0.000063455		
5P1/2			1.452414838	0.001519660	-0.000253173		
5P3/2			1.325538829	0.000555546	-0.000018209		
5D3/2			1.072872819	0.001644081	-0.000040514		
5D5/2			1.037473875	0.000058462	-0.000012671		
6S1/2			0.572760819	0.000099200	-0.000008008		
6P1/2			0.448593747	0.000121540	-0.000020305		
6P3/2			0.376298367	0.000036051	-6.000001187		
2P3/2 -- ( 4)	802.450210	-1679.810733	14.018948763	0.185331957		-0.001983092	0.000270514
3S1/2			6.773151971	0.017736367	-0.001362851		
3P1/2			7.263042208	0.010881291	-0.000502625		
3P3/2			6.541409033	0.022529862	-0.002091441		
3D3/2			7.392099467	0.018774310	-0.001833313		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E (KIN)	E (E-N)	E (E-E)	E (MAG)	E (RET)	E (V-P)	E (H-VP)
BISMUTH	6P3	Z=83	A=209	R=1.34576E-04	A.U.		
	3D5/2		7.027322615	0.031126750	-0.008847239		
	4S1/2		3.323540309	0.004271450	-0.000353325		
	4P1/2		3.386830062	0.002577950	-0.000137476		
	4P3/2		3.076839322	0.005195259	-0.000534417		
	4D3/2		3.109872035	0.003772109	-0.000371744		
	4D5/2		2.994016093	0.006127620	-0.001799162		
	4F5/2		2.762685499	0.000193422	-0.000018901		
	4F7/2		2.721164898	0.000167219	-0.000054060		
	5S1/2		1.527262061	0.000922707	-0.000077637		
	5P1/2		1.454753112	0.000503897	-0.000027668		
	5P3/2		1.312251318	0.000978126	-0.000102599		
	5D3/2		1.074648672	0.000474471	-0.000046852		
	5D5/2		1.031410695	0.000747705	-0.000220663		
	6S1/2		0.571531164	0.000115715	-0.000009768		
	6P1/2		0.448775622	0.000040313	-0.000002224		
	6P3/2		0.375438471	0.000063375	-0.000006667		
3S1/2 -- ( 2)	362.957256	-777.268050	5.250565443	0.011167621	-0.065805427	0.002545668	
	3P1/2		4.835990275	0.003846586	-0.000054088		
	3P3/2		4.588031771	0.005581749	-0.000462093		
	3D3/2		5.253919114	0.003495940	-0.000111898		
	3D5/2		5.177389101	0.004607923	-0.000136952		
	4S1/2		2.866593798	0.001813286	-0.000644091		
	4P1/2		2.947915599	0.002460821	-0.000428626		
	4P3/2		2.729820974	0.001652785	-0.000202427		
	4D3/2		2.754507324	0.000994164	-0.000096857		
	4D5/2		2.692184643	0.000967296	-0.000083246		
	4F5/2		2.661432352	0.000863165	-0.000121023		
	4F7/2		2.627353763	0.000393875	-0.000118222		
	5S1/2		1.432763706	0.000394535	-0.000145061		
	5P1/2		1.370919425	0.000504955	-0.000090667		
	5P3/2		1.248107243	0.000329094	-0.000043086		
	5D3/2		1.030490340	0.000133965	-0.000014089		
	5D5/2		0.994946406	0.000118369	-0.000011871		
	6S1/2		0.559762004	0.000049523	-0.000018298		
	6P1/2		0.442090974	0.000040650	-0.000007328		
	6P3/2		0.371292225	0.000021477	-0.000002836		
3P1/2 -- ( 2)	358.238757	-770.642619	5.579796572	0.022199431	-0.009198164	0.000516980	
	3P3/2		5.038855499	0.002624920	-0.000021856		
	3D3/2		5.142142983	0.007873090	-0.000566986		
	3D5/2		5.434492622	0.003444372	-0.000025143		
	4S1/2		2.960400447	0.001549739	-0.000188387		
	4P1/2		2.900035235	0.002561388	-0.000590992		
	4P3/2		2.773517987	0.000817360	-0.000045031		
	4D3/2		2.771622183	0.002296047	-0.000345074		
	4D5/2		2.722358191	0.000648600	-0.000022588		
	4F5/2		2.653449153	0.001468845	-0.000323509		
	4F7/2		2.649060948	0.000162612	-0.000034304		
	5S1/2		1.450349656	0.000328950	-0.000042946		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
BISMUTH	6P3	Z=83	A=209	R=1.34576E-04	A.U.		
	5P1/2		1.364085385	0.000492568	-0.000120149		
	5P3/2		1.255734773	0.000157590	-0.00009734		
	5D3/2		1.032771210	0.000313777	-0.000050604		
	5D5/2		0.998558311	0.000077474	-0.000003193		
	6S1/2		0.561915927	0.000041119	-0.000005432		
	6P1/2		0.441570931	0.000039305	-0.000009658		
	6P3/2		0.371781522	0.000010242	-0.000000642		
3P3/2 --	( 4)	274.744764	-655.561344	4.885531200	0.011052565	-0.000537442	0.000072149
	3D3/2		5.197080767	0.002482387	-0.000016391		
	3D5/2		4.962102667	0.006101320	-0.000120927		
	4S1/2		2.909658811	0.002226162	-0.000280902		
	4P1/2		2.939664418	0.000982623	-0.000073399		
	4P3/2		2.688585891	0.001791761	-0.000257383		
	4D3/2		2.738714022	0.000867417	-0.000081408		
	4D5/2		2.669515008	0.001899843	-0.000288336		
	4F5/2		2.652389644	0.000749300	-0.000075471		
	4F7/2		2.600909148	0.000719604	-0.000213480		
	5S1/2		1.439887139	0.000450035	-0.000059430		
	5P1/2		1.369143303	0.000188512	-0.000015690		
	5P3/2		1.241208748	0.000331978	-0.000050922		
	5D3/2		1.028582833	0.000114577	-0.000011309		
	5D5/2		0.992281669	0.000238022	-0.000039290		
	6S1/2		0.560612662	0.000055828	-0.000007431		
	6P1/2		0.441947109	0.000015040	-0.000001271		
	6P3/2		0.370652255	0.000021460	-0.000003319		
3D3/2 --	( 4)	269.039320	-647.542416	5.665469985	0.018784002	-0.000008169	0.000001422
	3D5/2		5.639834882	0.003446028	-0.000000211		
	4S1/2		2.995606216	0.000857772	-0.000021828		
	4P1/2		2.991448604	0.001700152	-0.000121544		
	4P3/2		2.793282066	0.000605415	-0.000015396		
	4D3/2		2.757156449	0.002046174	-0.000196335		
	4D5/2		2.750903555	0.000671996	-0.000009669		
	4F5/2		2.639464570	0.003309137	-0.000818912		
	4F7/2		2.659501988	0.000110859	-0.000013226		
	5S1/2		1.457212598	0.000181114	-0.000005929		
	5P1/2		1.379390772	0.000308417	-0.000023542		
	5P3/2		1.259225332	0.000113046	-0.000003419		
	5D3/2		1.031643372	0.000247191	-0.000025846		
	5D5/2		1.001950620	0.000081280	-0.000001380		
	6S1/2		0.562761135	0.000022628	-0.000000772		
	6P1/2		0.442767651	0.000024412	-0.000001884		
	6P3/2		0.372005673	0.000007316	-0.000000227		
3D5/2 --	( 6)	251.911294	-622.135702	5.511482307	0.015687227	-0.000001485	0.000000389
	4S1/2		2.979532042	0.001007175	-0.000021923		
	4P1/2		2.999673635	0.000715719	-0.000010869		
	4P3/2		2.768082944	0.001187051	-0.000050613		
	4D3/2		2.800498294	0.000549558	-0.000010585		
	4D5/2		2.699177116	0.001820648	-0.000124965		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
BISMUTH	6P3	Z=83	A=209 R=1.34576E-04 A.U.				
			2.686367370	0.000692194	-0.000051330		
			2.612864903	0.002064305	-0.000573886		
			1.453855969	0.000207746	-0.000005936		
			1.380225514	0.000134548	-0.000002753		
			1.254852989	0.000212756	-0.000010121		
			1.036132019	0.000067694	-0.000001546		
			0.996278736	0.000213288	-0.000016019		
			0.562342251	0.000025856	-0.000000772		
			0.442826344	0.000010705	-0.000000228		
			0.371725441	0.000013692	-0.000000662		
4S1/2 --	( 2)	120.632384	-330.809207	2.377066544	0.001006289	-0.017116020	0.000660738
				2.109426054	0.000455580	-0.000024340	
				2.015738626	0.000599597	-0.000102798	
				2.147206911	0.000436582	-0.000039949	
				2.116108385	0.000389881	-0.000044308	
				2.151330795	0.000304811	-0.000026886	
				2.134966117	0.000301691	-0.000027370	
				1.298008635	0.000156071	-0.000067627	
				1.257084589	0.000140090	-0.000027568	
				1.152512833	0.000089246	-0.000015716	
				0.967858133	0.000032015	-0.000003597	
				0.936723221	0.000043726	-0.000003589	
				0.543715654	0.000019614	-0.000008741	
				0.433205774	0.000011758	-0.000002374	
				0.365240327	0.000005969	-0.000001065	
4P1/2 --	( 2)	115.543237	-321.986446	2.375320569	0.001846818	-0.002365504	0.000132457
				2.151602715	0.000205603	-0.000003221	
				2.014826474	0.001032530	-0.000174876	
				2.160806543	0.000239210	-0.000007033	
				2.109682418	0.000490376	-0.000065501	
				2.151239965	0.000215162	-0.000007694	
				1.319828148	0.000179087	-0.000026331	
				1.234190017	0.000185250	-0.000053155	
				1.159407650	0.000053662	-0.000004105	
				0.963100549	0.000061251	-0.000009265	
				0.938703814	0.000031988	-0.000001175	
				0.546015869	0.000021649	-0.000003339	
				0.431626122	0.000014673	-0.000004379	
				0.365635691	0.000003533	-0.000000291	
4P3/2 --	( 4)	90.081233	-281.911532	2.098074326	0.000922032	-0.000137153	0.000018341
				2.085089657	0.000261162	-0.000009127	
				1.973209581	0.000584038	-0.000054057	
				2.070157396	0.000212610	-0.000010472	
				2.028728730	0.000349933	-0.000030476	
				1.299995478	0.000266173	-0.000040235	
				1.245363363	0.000079829	-0.000007245	
				1.133748522	0.000125284	-0.000022162	
				0.960418805	0.000025971	-0.000002151	

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
BISMUTH 6P3 Z=83 A=209 R=1.34576E-04 A.U.							
4D3/2 -- ( 4)	81.684701	-265.875328	0.927499651 0.543711340 0.432265258 0.364095035 2.086741628	0.000063635 0.000030889 0.000006294 0.000008026 0.001217615	-0.000055503 -0.000004840 -0.000000616 -0.000001486	-0.000002284	0.000000396
4D5/2			2.080973531	0.000224642	-0.000000029		
4F5/2			1.967213445	0.000644561	-0.000078568		
4F7/2			2.062731440	0.000180479	-0.000001505		
5S1/2			1.303752849	0.000089019	-0.000003273		
5P1/2			1.234990230	0.000193921	-0.000021146		
5P3/2			1.146296941	0.000049869	-0.000002097		
5D3/2			0.948444881	0.000093227	-0.000010473		
5D5/2			0.930529923	0.000028343	-0.000000526		
6S1/2			0.544135208	0.000010603	-0.000000483		
6P1/2			0.431618606	0.000014229	-0.000001608		
6P3/2			0.364807652	0.000003160	-0.000000144		
4D5/2 -- ( 6)	76.591059	-256.910175	2.040699581	0.001012813	-0.000000414	0.000000108	
4F5/2			2.044716565	0.000175493	-0.000004332		
4F7/2			1.959355157	0.000530956	-0.000050408		
5S1/2			1.297080605	0.000104778	-0.000003205		
5P1/2			1.240365674	0.000059668	-0.000001290		
5P3/2			1.137473585	0.000111387	-0.000008379		
5D3/2			0.957962154	0.000024744	-0.000000615		
5D5/2			0.920036683	0.000080510	-0.000006467		
6S1/2			0.543378941	0.000012138	-0.000000479		
6P1/2			0.431893926	0.000004559	-0.000000124		
6P3/2			0.364290207	0.000006836	-0.000000532		
4F5/2 -- ( 6)	62.651753	-229.542908	2.019114662	0.001114345	-0.000000001	0.000000000	
4F7/2			2.039159424	0.000177004	-0.000000001		
5S1/2			1.292680740	0.000052949	-0.000000000		
5P1/2			1.227103965	0.000070211	-0.000000110		
5P3/2			1.137823802	0.000033230	-0.000000055		
5D3/2			0.949161227	0.000055111	-0.000001791		
5D5/2			0.925246624	0.000017953	-0.000000128		
6S1/2			0.542999815	0.000006396	-0.000000023		
6P1/2			0.431142563	0.000005275	-0.000000041		
6P3/2			0.364319103	0.000002110	-0.000000009		
4F7/2 -- ( 8)	60.956472	-226.137884	2.000835687	0.001022772	-0.000000000	0.000000000	
5S1/2			1.289060459	0.000066368	-0.000000001		
5P1/2			1.231983722	0.000044940	-0.000000012		
5P3/2			1.132301949	0.000056798	-0.000000127		
5D3/2			0.953680995	0.000020651	-0.000000057		
5D5/2			0.919934811	0.000047755	-0.000001164		
6S1/2			0.542594723	0.000007574	-0.000000023		
6P1/2			0.431333450	0.000003335	-0.000000008		
6P3/2			0.364025147	0.000003451	-0.000000021		
5S1/2 -- ( 2)	32.317638	-138.792257	1.079949764	0.000081195	-0.003761623	0.000145137	
5P1/2			0.925474059	0.000061519	-0.000006736		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
BISMUTH 6P3 Z=83 A=209 R=1.34576E-04 A.U.								
5P3/2			0.882115163	0.000064926	-0.000016290			
5D3/2			0.826113474	0.000044094	-0.000005855			
5D5/2			0.806821877	0.000022548	-0.000005800			
6S1/2			0.508869983	0.000007501	-0.000003547			
6P1/2			0.414845274	0.000002883	-0.000000639			
6P3/2			0.352506435	0.000002070	-0.000000624			
5P1/2 -- ( 2)	28.282653	-128.783229	1.015611125	0.000128735		-0.000470703	0.000026334	
5P3/2			0.913832654	0.000013892	-0.000000289			
5D3/2			0.763923961	0.000108259	-0.000024625			
5D5/2			0.804286767	0.000008604	-0.000000881			
6S1/2			0.511029594	0.000012420	-0.000001904			
6P1/2			0.409172730	0.000005222	-0.000001602			
6P3/2			0.352679653	0.000001209	-0.000000097			
5P3/2 -- ( 4)	21.695047	-113.938755	0.888308288	0.000062576		-0.000026395	0.000003527	
5D3/2			0.787819368	0.000024494	-0.000001941			
5D5/2			0.740372840	0.000043655	-0.000009794			
6S1/2			0.503739652	0.000017452	-0.000002706			
6P1/2			0.410927033	0.000002446	-0.000000228			
6P3/2			0.348592347	0.000002854	-0.000000517			
5D3/2 -- ( 4)	14.031013	-90.193271	0.717524788	0.000047828		-0.000000304	0.000000053	
5D5/2			0.712261037	0.000008700	-0.000000001			
6S1/2			0.484836272	0.000004064	-0.000000056			
6P1/2			0.395110539	0.000006911	-0.000000638			
6P3/2			0.344128862	0.000001282	-0.000000057			
5D5/2 -- ( 6)	12.875022	-86.649813	0.695099694	0.000038515		-0.000000054	0.000000014	
6S1/2			0.480544700	0.000005608	-0.000000040			
6P1/2			0.398892457	0.000002007	-0.000000023			
6P3/2			0.340963066	0.000003258	-0.000000243			
6S1/2 -- ( 2)	4.813185	-48.949452	0.411944173	0.000003680		-0.000473272	0.000018259	
6P1/2			0.319507690	0.000004233	-0.000000622			
6P3/2			0.288766117	0.000002773	-0.000000788			
6P1/2 -- ( 2)	2.785543	-37.892116	0.320798562	0.000003444		-0.000003776	0.000002113	
6P3/2			0.276339276	0.000000338	-0.000000005			
6P3/2 -- ( 1)	1.767789	-31.487032	0.000000000	0.000000000		-0.000001716	0.000000229	
ETOT	-21544.33803	25176.52447	-54648.33938	7906.17988	28.932571015	-3.070268512	-4.763386308	0.198088522
POLONIUM 6P4 Z=84 A=209 R=1.34576E-04 A.U.								
1S1/2 -- ( 2)	4883.641361	-8821.953358	61.446496075	8.807059708		-2.080623847	0.088266892	
2S1/2			19.206792728	0.478968504	-0.057961742			
2P1/2			23.608490106	0.991446198	-0.129896497			
2P3/2			19.498437202	0.438510349	-0.126740057			
3S1/2			8.029278181	0.104798634	-0.013561316			
3P1/2			8.908693444	0.199352402	-0.025792034			



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
POLONIUM	6P4	Z=84 A=209 R=1.34576E-04 A.U.					
			7.779869760	0.096637841	-0.028796547		
			7.917386368	0.004359984	-0.000506876		
			7.600623898	0.001726699	-0.000553463		
			3.676151639	0.027062806	-0.003552939		
			3.822509809	0.048814003	-0.006298219		
			3.399433461	0.023673274	-0.007102159		
			3.266240027	0.001173879	-0.000137022		
			3.154356448	0.000463184	-0.000149840		
			2.835520183	0.000003221	-0.000000343		
			2.792944964	0.000001229	-0.000000405		
			1.633434692	0.006052451	-0.000797355		
			1.574019132	0.009852310	-0.001270399		
			1.404070977	0.004645233	-0.001395715		
			1.141609552	0.000166198	-0.000019414		
			1.098156467	0.000064033	-0.000020750		
			0.615171246	0.000829324	-0.000109331		
			0.497073865	0.000918865	-0.000118470		
			0.417660631	0.000360206	-0.000108254		
2S1/2 -- ( 2)	1182.891593	-2191.544403	14.033572584	0.184343517		-0.307553271	0.012271250
			13.969517458	0.056335160	-0.000082597		
			12.879654754	0.081145773	-0.002274494		
			6.653906426	0.022009800	-0.005334887		
			7.292868517	0.037329639	-0.005789179		
			6.685872889	0.024800645	-0.002917756		
			7.420956065	0.022216090	-0.003049454		
			7.183873864	0.009587487	-0.003004889		
			3.335709685	0.005634867	-0.001438081		
			3.432302881	0.009476265	-0.001512590		
			3.138915333	0.006249607	-0.000823707		
			3.153140821	0.004354768	-0.000631860		
			3.060144537	0.001973533	-0.000631984		
			2.832104931	0.000263230	-0.000034603		
			2.789898862	0.000094657	-0.000033633		
			1.557956553	0.001257249	-0.000324043		
			1.495465563	0.001924275	-0.0000308810		
			1.352327752	0.001231611	-0.000165868		
			1.126048805	0.000582655	-0.000085412		
			1.085507767	0.000260891	-0.000083707		
			0.604846158	0.000172190	-0.000044463		
			0.489750725	0.000179639	-0.000028854		
			0.413722295	0.000095563	-0.000012913		
2P1/2 -- ( 2)	1181.349103	-2189.822001	17.320856968	0.421305025		-0.039598690	0.002308413
			15.126661438	0.052192670	-0.000144051		
			7.078390764	0.014988893	-0.001052326		
			7.288793879	0.034844335	-0.005191459		
			6.973375465	0.012535144	-0.000336287		
			7.430617808	0.065784458	-0.015662202		
			7.384003955	0.001980051	-0.000463499		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
POLONIUM 6P4 Z=84 A=209 R=1.34576E-04 A.U.							
4S1/2			3.434420178	0.003821225	-0.000299315		
4P1/2			3.441551425	0.008250455	-0.001348392		
4P3/2			3.205932674	0.003066771	-0.000097182		
4D3/2			3.157979936	0.013736145	-0.003367747		
4D5/2			3.103235385	0.000484918	-0.000106770		
4F5/2			2.832845300	0.000308073	-0.000064648		
4F7/2			2.791554762	0.000017074	-0.000006495		
5S1/2			1.579543927	0.000851749	-0.000068294		
5P1/2			1.497724874	0.001653168	-0.000275099		
5P3/2			1.366258841	0.000601345	-0.000019689		
5D3/2			1.126777364	0.001859724	-0.000458339		
5D5/2			1.091243033	0.000066117	-0.000014384		
6S1/2			0.607791415	0.000116631	-0.000009394		
6P1/2			0.489967429	0.000153993	-0.000025702		
6P3/2			0.414730443	0.000046624	-0.000001534		
2P3/2 -- ( 4)	824.248416	-1723.481510	14.210200293	0.192597979		-0.002132561	0.000298343
3S1/2			6.887796028	0.018618766	-0.001441807		
3P1/2			7.389258669	0.011409291	-0.000528875		
3P3/2			6.639168542	0.023489800	-0.002183298		
3D3/2			7.506752752	0.019606425	-0.001911375		
3D5/2			7.130104533	0.032471340	-0.009229938		
4S1/2			3.386751766	0.004501697	-0.000374889		
4P1/2			3.454385765	0.002717455	-0.000145399		
4P3/2			3.131715135	0.005451500	-0.000561623		
4D3/2			3.171907369	0.003974857	-0.000391014		
4D5/2			3.051809970	0.006454583	-0.001895620		
4F5/2			2.832472758	0.000209189	-0.000020425		
4F7/2			2.789381554	0.000180730	-0.000058444		
5S1/2			1.568951815	0.000992198	-0.000084047		
5P1/2			1.499858484	0.000545437	-0.000030059		
5P3/2			1.351979157	0.001057381	-0.000111112		
5D3/2			1.128607020	0.000535836	-0.000052817		
5D5/2			1.084465541	0.000847817	-0.000250303		
6S1/2			0.606341836	0.000135569	-0.000011522		
6P1/2			0.490159428	0.000050823	-0.000002815		
6P3/2			0.413626532	0.000081843	-0.000008627		
3S1/2 -- ( 2)	377.034405	-802.913195	5.341085767	0.011759231		-0.070842172	0.002801527
3P1/2			4.921596210	0.004044092	-0.000055516		
3P3/2			4.662060226	0.005851852	-0.000499514		
3D3/2			5.340870743	0.003669206	-0.000118613		
3D5/2			5.260907140	0.004824528	-0.000145745		
4S1/2			2.919893296	0.001918714	-0.000681031		
4P1/2			3.005406291	0.002617666	-0.000455571		
4P3/2			2.777986314	0.001723094	-0.000211471		
4D3/2			2.808358327	0.001049583	-0.000102217		
4D5/2			2.743721669	0.001021937	-0.000087583		
4F5/2			2.727346261	0.000925242	-0.000129765		
4F7/2			2.692113027	0.000422296	-0.000126785		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
POLONIUM 6P4 Z=84 A=209 R=1.34576E-04 A.U.							
			1.470453642	0.000426055	-0.000156561		
			1.411805910	0.000551672	-0.000098995		
			1.284627218	0.000353887	-0.000046427		
			1.080193081	0.000151831	-0.000015985		
			1.044401957	0.000134655	-0.000013492		
			0.592979461	0.000058271	-0.000021522		
			0.481983476	0.000051740	-0.000009323		
			0.408426367	0.000027606	-0.000003654		
3P1/2 -- ( 2)	372.220609	-796.196248	5.679899832	0.023392423		-0.010221658	0.000586241
			5.121393492	0.002725039	-0.000024231		
			5.228286094	0.008284668	-0.000606036		
			5.523615923	0.003603752	-0.000026957		
			3.016282665	0.001636769	-0.000198709		
			2.956593325	0.002716322	-0.000626255		
			2.823038080	0.000855076	-0.000047426		
			2.826173959	0.002414816	-0.000362142		
			2.774888249	0.000686620	-0.000023828		
			2.719268526	0.001574542	-0.000346923		
			2.714768239	0.000174286	-0.000036792		
			1.488883978	0.000354589	-0.000046265		
			1.404688967	0.000536313	-0.000130787		
			1.292723782	0.000169995	-0.000010575		
			1.082739882	0.000354461	-0.000057137		
			1.048416073	0.000088277	-0.000003636		
			0.595436830	0.000048289	-0.000006378		
			0.481354919	0.000049837	-0.000012247		
			0.409046440	0.000013202	-0.000000834		
3P3/2 -- ( 4)	283.195117	-673.794827	4.958861099	0.011550448		-0.000580792	0.000079928
			5.276725109	0.002592537	-0.000016752		
			5.036490319	0.006370515	-0.000125529		
			2.962782162	0.002361452	-0.000299396		
			2.995581556	0.001041696	-0.000078065		
			2.734970258	0.001885587	-0.000271258		
			2.791072696	0.000920552	-0.000086508		
			2.719468698	0.002008927	-0.000305699		
			2.717249730	0.000802672	-0.000080834		
			2.663955593	0.000771417	-0.000228719		
			1.477631899	0.000486316	-0.000064529		
			1.409675055	0.000205018	-0.000017133		
			1.277203606	0.000359860	-0.000055312		
			1.077954432	0.000130394	-0.000012894		
			1.041331697	0.000271012	-0.000044918		
			0.593910396	0.000065689	-0.000008788		
			0.481782812	0.000019046	-0.000001617		
			0.407861126	0.000027785	-0.000004308		
3D3/2 -- ( 4)	277.430031	-665.720612	5.754709998	0.019650394		-0.000009111	0.000001627
			5.726295568	0.003599130	-0.000000232		
			3.051104001	0.000904636	-0.000023095		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
POLONIUM 6P4 Z=84 A=209 R=1.34576E-04 A.U.							
4P1/2			3.049095994	0.001799437	-0.000129423		
4P3/2			2.842258519	0.000636882	-0.000016221		
4D3/2			2.810439318	0.002160761	-0.000207986		
4D5/2			2.803250393	0.000709317	-0.000010236		
4F5/2			2.704185071	0.003549661	-0.000878601		
4F7/2			2.725214560	0.000119205	-0.000014197		
5S1/2			1.495786747	0.000194848	-0.000006413		
5P1/2			1.420544820	0.000334733	-0.000025711		
5P3/2			1.296209510	0.000122521	-0.000003719		
5D3/2			1.081392851	0.000279543	-0.000029365		
5D5/2			1.052041481	0.000092345	-0.000001578		
6S1/2			0.596361869	0.000026519	-0.000000911		
6P1/2			0.482796492	0.000030837	-0.000002396		
6P3/2			0.409313580	0.000009472	-0.000000295		
3D5/2 -- ( 6)	259.341382	-638.932156	5.593702460	0.016381489		-0.000001643	0.000000442
4S1/2			3.034212579	0.001061150	-0.000023195		
4P1/2			3.057020304	0.000755082	-0.000011511		
4P3/2			2.816149739	0.001247399	-0.000053306		
4D3/2			2.854408539	0.000579913	-0.000011220		
4D5/2			2.749908457	0.001919333	-0.000132219		
4F5/2			2.752774185	0.000742867	-0.000055039		
4F7/2			2.676517983	0.002214299	-0.000615630		
5S1/2			1.492188135	0.000223198	-0.000006420		
5P1/2			1.421315238	0.000145673	-0.000003003		
5P3/2			1.291541620	0.000230197	-0.000010992		
5D3/2			1.086243727	0.000076534	-0.000001761		
5D5/2			1.045755002	0.000241823	-0.000018258		
6S1/2			0.595872661	0.000030256	-0.000000912		
6P1/2			0.482857829	0.000013494	-0.000000291		
6P3/2			0.408956383	0.000017689	-0.000000859		
4S1/2 -- ( 2)	125.826302	-342.107884	2.421959596	0.001667145		-0.018523979	0.000730984
4P1/2			2.150417909	0.000480095	-0.000025186		
4P3/2			2.052736766	0.000637306	-0.000110902		
4D3/2			2.188976091	0.000462264	-0.000042289		
4D5/2			2.156724666	0.000412358	-0.000047046		
4F5/2			2.201493368	0.000324177	-0.000028369		
4F7/2			2.184732021	0.000322698	-0.000028917		
5S1/2			1.330604155	0.000169130	-0.000073393		
5P1/2			1.292674057	0.000154910	-0.000030398		
5P3/2			1.184601070	0.000096477	-0.000017232		
5D3/2			1.011801713	0.000036401	-0.000004111		
5D5/2			0.980598189	0.000049874	-0.000004114		
6S1/2			0.574862975	0.000023155	-0.000010339		
6P1/2			0.471165382	0.000015128	-0.000000305		
6P3/2			0.400870494	0.000007719	-0.000001396		
4P1/2 -- ( 2)	120.647132	-333.193735	2.422422518	0.001962320		-0.002645571	0.000151148
4P3/2			2.191866354	0.000215095	-0.000003612		
4D3/2			2.054952023	0.001097553	-0.000186417		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
POLONIUM	6P4	Z=84 A=209 R=1.34576E-04 A.U.					
			2.203167221	0.000252673	-0.000007525		
			2.159127965	0.000522145	-0.000369224		
			2.202293356	0.000230716	-0.000008154		
			1.353423536	0.000193209	-0.000028449		
			1.268942274	0.000202411	-0.000058258		
			1.191969757	0.000057933	-0.000004501		
			1.006744430	0.000069670	-0.000010612		
			0.982839378	0.000036467	-0.000001358		
			0.577471815	0.000025422	-0.000003933		
			0.469273717	0.000018662	-0.000005593		
			0.401372983	0.000004562	-0.000000382		
4P3/2 -- ( 4)	93.452018	-290.605836	2.135155620	0.000973014		-0.000149291	0.000020464
			2.124324670	0.000274637	-0.000009423		
			2.009963396	0.000616190	-0.000056338		
			2.116546294	0.000225062	-0.000010872		
			2.074288230	0.000372594	-0.000031684		
			1.332322617	0.000289637	-0.000043922		
			1.280083028	0.000087549	-0.000007982		
			1.164828753	0.000136395	-0.000024261		
			1.003520882	0.000029809	-0.000002502		
			0.970394273	0.000073165	-0.000006414		
			0.574805718	0.000036494	-0.000005743		
			0.469990621	0.000008026	-0.000000792		
			0.399432530	0.000010432	-0.000001945		
4D3/2 -- ( 4)	84.992573	-274.544448	2.128404395	0.001291724		-0.000002577	0.000000459
			2.121996838	0.000237855	-0.000000032		
			2.013847649	0.000682465	-0.000081666		
			2.111324594	0.000193538	-0.000001573		
			1.336813474	0.000096306	-0.000003578		
			1.269809122	0.000211856	-0.000023231		
			1.178312298	0.000054222	-0.000002292		
			0.990808980	0.000106008	-0.000012061		
			0.973901349	0.000032356	-0.000000611		
			0.575353701	0.000012477	-0.000000577		
			0.469259920	0.000018029	-0.000002052		
			0.400343002	0.000004100	-0.000000189		
4D5/2 -- ( 6)	79.596963	-265.095765	2.080455013	0.001073070		-0.000000463	0.000000124
			2.092247679	0.000186189	-0.000000473		
			2.005134794	0.000563815	-0.000032161		
			1.329776696	0.000113206	-0.000003506		
			1.275244357	0.000064973	-0.000001421		
			1.169046440	0.000121015	-0.000009139		
			1.001032676	0.000028129	-0.000000711		
			0.962424907	0.000091779	-0.000000747		
			0.574485978	0.000014256	-0.000000573		
			0.469573034	0.000005770	-0.000000160		
			0.399696011	0.000008850	-0.000000693		
4F5/2 -- ( 6)	65.747799	-238.184143	2.074188794	0.001202215		-0.000000001	0.000000000



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
POLONIUM 6P4 Z=84 A=209 R=1.34576E-04 A.U.								
6S1/2 -- ( 2)	5.573091	-52.696490	0.436196818	0.000004432		-0.000569759	0.000022469	
6P1/2			0.344045380	0.000005173	-0.000000753			
6P3/2			0.313420481	0.000003615	-0.000001023			
6P1/2 -- ( 2)	3.453890	-41.984010	0.350440259	0.000004509		-0.000050547	0.000002885	
6P3/2			0.303378606	0.000000441	-0.000000007			
6P3/2 -- ( 2)	2.239841	-35.160723	0.285600332	0.000001795		-0.000002300	0.000000315	
ETOT	-22208.79274	26072.88517	-56429.56834	8125.75409	30.206900396	-3.204574045	-5.082286657	0.216297056
ASTATINE 6P5 Z=85 A=210 R=1.34790E-04 A.U.								
1S1/2 -- ( 2)	5051.716919	-9097.038969	62.490740068	9.162411839		-2.213998291	0.096074824	
2S1/2			19.553798749	0.500078704	-0.060634643			
2P1/2			24.074108519	1.034744281	-0.134742744			
2P3/2			19.768489286	0.454780483	-0.131434939			
3S1/2			8.176391276	0.109622508	-0.014211711			
3P1/2			9.083008220	0.208287565	-0.026760885			
3P3/2			7.899845139	0.100690622	-0.030001959			
3D3/2			8.041238719	0.004533838	-0.000524580			
3D5/2			7.711386775	0.001793491	-0.000574773			
4S1/2			3.749562478	0.028449582	-0.003741935			
4P1/2			3.904495211	0.051291571	-0.006570560			
4P3/2			3.461631617	0.024836893	-0.007450857			
4D3/2			3.331626293	0.001234040	-0.000143355			
4D5/2			3.215161828	0.000486601	-0.000157395			
4F5/2			2.905017058	0.000003458	-0.000000367			
4F7/2			2.860815302	0.000001321	-0.000000435			
5S1/2			1.678956204	0.006488698	-0.000856444			
5P1/2			1.624175503	0.010617516	-0.001359203			
5P3/2			1.446777416	0.005014509	-0.001506625			
5D3/2			1.195189102	0.000186016	-0.000021626			
5D5/2			1.150610407	0.000071874	-0.000023289			
6S1/2			0.650365142	0.000957737	-0.000126502			
6P1/2			0.537292437	0.001119904	-0.000143347			
6P3/2			0.453042592	0.0000446150	-0.000134082			
2S1/2 -- ( 2)	1227.796931	-2264.746918	14.276749321	0.193460641		-0.330081452	0.013459435	
2P1/2			14.222420146	0.059125248	-0.000084372			
2P3/2			13.078340971	0.084545893	-0.002473589			
3S1/2			6.768951968	0.023137821	-0.005602700			
3P1/2			7.424629212	0.039317888	-0.006090009			
3P3/2			6.789202540	0.025733589	-0.003068033			
3D3/2			7.538152762	0.023201100	-0.003182463			
3D5/2			7.291012538	0.009992860	-0.003135181			
4S1/2			3.399352648	0.005953073	-0.001518019			
4P1/2			3.501531984	0.010037419	-0.001600044			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ASTATINE 6P5 Z=85 A=210 R=1.34790E-04 A.U.							
4P3/2			3.195348781	0.006534731	-0.000856880		
4D3/2			3.215745937	0.004595365	-0.000666344		
4D5/2			3.119058553	0.002079718	-0.000666885		
4F5/2			2.901465556	0.000281971	-0.000037041		
4F7/2			2.857655425	0.000101321	-0.000036009		
5S1/2			1.599774317	0.001354535	-0.000348865		
5P1/2			1.540968596	0.002090536	-0.000335063		
5P3/2			1.393321347	0.001325325	-0.000177667		
5D3/2			1.178224055	0.000653794	-0.000095800		
5D5/2			1.136833661	0.000293442	-0.000094287		
6S1/2			0.638697840	0.000199832	-0.000051567		
6P1/2			0.528519718	0.000220728	-0.000035410		
6P3/2			0.448290930	0.000117998	-0.000015875		
2P1/2 -- ( 2)	1226.258674	-2263.074918	17.643595361	0.442391821		-0.043848066	0.002608302
2P3/2			15.363664025	0.054127460	-0.000158370		
3S1/2			7.204512600	0.015758153	-0.001102690		
3P1/2			7.421113855	0.036680158	-0.005455509		
3P3/2			7.083099390	0.013064348	-0.000349908		
3D3/2			7.549005416	0.068611622	-0.016334658		
3D5/2			7.493601223	0.002053403	-0.000482533		
4S1/2			3.501177185	0.004037999	-0.000315366		
4P1/2			3.511242696	0.008736227	-0.001425648		
4P3/2			3.264313131	0.003219240	-0.000101858		
4D3/2			3.220934523	0.014481060	-0.003550361		
4D5/2			3.163180420	0.000508439	-0.000112409		
4F5/2			2.902243787	0.000329276	-0.000069091		
4F7/2			2.859377935	0.000018221	-0.000006936		
5S1/2			1.622481341	0.000917910	-0.000073404		
5P1/2			1.543399152	0.001795278	-0.000298372		
5P3/2			1.407105964	0.000649526	-0.000021243		
5D3/2			1.179053169	0.002085414	-0.000514018		
5D5/2			1.143103074	0.000074043	-0.000016170		
6S1/2			0.642034475	0.000135391	-0.000010878		
6P1/2			0.528783670	0.000189118	-0.000031530		
6P3/2			0.449515363	0.000057782	-0.000001900		
2P3/2 -- ( 4)	846.389732	-1767.784336	14.401934077	0.200055024		-0.002291401	0.000328664
3S1/2			7.003561373	0.019539166	-0.001524934		
3P1/2			7.516765061	0.011958601	-0.000556243		
3P3/2			6.737236535	0.024477645	-0.002277920		
3D3/2			7.621786042	0.020463636	-0.001991533		
3D5/2			7.232988868	0.033853666	-0.009623402		
4S1/2			3.450663227	0.004742465	-0.000397626		
4P1/2			3.522709891	0.002863117	-0.000153688		
4P3/2			3.186918913	0.005716998	-0.000589847		
4D3/2			3.234268804	0.004185240	-0.000410950		
4D5/2			3.109816868	0.006793752	-0.001995707		
4F5/2			2.901806012	0.000225735	-0.000022021		
4F7/2			2.857069920	0.000194887	-0.0000063039		



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ASTATINE      6P5      Z=85    A=210   R=1.34790E-04   A.U.							
5S1/2			1.611034697	0.001065603	-0.000090874		
5P1/2			1.545286046	0.000589314	-0.000032592		
5P3/2			1.391785683	0.001140645	-0.000120073		
5D3/2			1.180910597	0.000599879	-0.000059022		
5D5/2			1.135596800	0.000952118	-0.000281201		
6S1/2			0.640347088	0.000156813	-0.000013419		
6P1/2			0.528973887	0.000062098	-0.000003452		
6P3/2			0.448156682	0.000101286	-0.000010697		
3S1/2 -- ( 2)	391.597931	-829.264386	5.432586053	0.012377646		-0.076247242	0.003081112
3P1/2			5.008193208	0.004250430	-0.000056961		
3P3/2			4.736612346	0.006133366	-0.000539926		
3D3/2			5.428453579	0.003849551	-0.000125769		
3D5/2			5.344931147	0.005048662	-0.000155136		
4S1/2			2.973766830	0.002029357	-0.000719736		
4P1/2			3.063547109	0.002782945	-0.000483926		
4P3/2			2.826454130	0.001794748	-0.000220777		
4D3/2			2.862518467	0.001106939	-0.000107750		
4D5/2			2.795498564	0.001078785	-0.000092037		
4F5/2			2.792860506	0.000989871	-0.000138869		
4F7/2			2.756409767	0.000451833	-0.000135700		
5S1/2			1.508471060	0.000459503	-0.000168749		
5P1/2			1.452949124	0.000601553	-0.000107875		
5P3/2			1.321193161	0.000379618	-0.000049912		
5D3/2			1.128274687	0.000170540	-0.000017972		
5D5/2			1.091988259	0.000151710	-0.000015180		
6S1/2			0.625364849	0.000067692	-0.000024991		
6P1/2			0.519279550	0.000063821	-0.000011495		
6P3/2			0.441904710	0.000033993	-0.000004512		
3P1/2 -- ( 2)	386.692042	-822.460688	5.781189422	0.024640622		-0.011353991	0.000664187
3P3/2			5.204518006	0.002827073	-0.000026837		
3D3/2			5.315039770	0.008715237	-0.000647947		
3D5/2			5.613297046	0.003768267	-0.000028904		
4S1/2			3.072798034	0.001727965	-0.000209495		
4P1/2			3.013788376	0.002878646	-0.000663254		
4P3/2			2.872892774	0.000893815	-0.000049922		
4D3/2			2.881046158	0.002536712	-0.000379528		
4D5/2			2.827674469	0.000726345	-0.000025112		
4F5/2			2.784703671	0.001684556	-0.000371304		
4F7/2			2.780009660	0.000186386	-0.000039381		
5S1/2			1.527768631	0.000381751	-0.000049774		
5P1/2			1.445548491	0.000582885	-0.000142096		
5P3/2			1.329772834	0.000182954	-0.000011465		
5D3/2			1.131093435	0.000396779	-0.000063914		
5D5/2			1.096407770	0.000099632	-0.000004101		
6S1/2			0.628133825	0.000055989	-0.000007394		
6P1/2			0.518542947	0.000061245	-0.000015051		
6P3/2			0.442658073	0.000016305	-0.000001039		
3P3/2 -- ( 4)	291.802225	-692.319161	5.032408159	0.012064085		-0.000627085	0.000088442

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ASTATINE 6P5 Z=85 A=210 R=1.34790E-04 A.U.							
3D3/2			5.356607824	0.002706122	-0.000017117		
3D5/2			5.111021160	0.006647742	-0.000130305		
4S1/2			3.016401811	0.002504186	-0.000319001		
4P1/2			3.052031968	0.001103877	-0.000082984		
4P3/2			2.781584168	0.001983088	-0.000285694		
4D3/2			2.843648827	0.000976057	-0.000091837		
4D5/2			2.769578694	0.002122350	-0.000323774		
4F5/2			2.781636164	0.000858167	-0.000086409		
4F7/2			2.726473664	0.000825304	-0.000244559		
5S1/2			1.515680370	0.000524893	-0.000069979		
5P1/2			1.450426515	0.000222567	-0.000018672		
5P3/2			1.313216969	0.000389247	-0.000059949		
5D3/2			1.125675052	0.000147081	-0.000014570		
5D5/2			1.088485588	0.000305571	-0.000050845		
6S1/2			0.626367692	0.000076315	-0.000010260		
6P1/2			0.519011330	0.000023376	-0.000001994		
6P3/2			0.441208389	0.000034474	-0.000005359		
3D3/2 -- ( 4)	285.974586	-684.186185	5.844224266	0.020544511		-0.000010148	0.000001858
3D5/2			5.812919442	0.003756675	-0.000000256		
4S1/2			3.107144735	0.000953589	-0.000024422		
4P1/2			3.107313095	0.001903685	-0.000137763		
4P3/2			2.891495195	0.000669570	-0.000017078		
4D3/2			2.863955058	0.002279978	-0.000220138		
4D5/2			2.855779211	0.000748102	-0.000010826		
4F5/2			2.768452199	0.003800163	-0.000940777		
4F7/2			2.790407350	0.000127906	-0.000015206		
5S1/2			1.534684265	0.000209343	-0.000006926		
5P1/2			1.461936369	0.000362635	-0.000028031		
5P3/2			1.333230266	0.000132507	-0.000004037		
5D3/2			1.129501956	0.000313388	-0.000033069		
5D5/2			1.100237697	0.000103907	-0.000001786		
6S1/2			0.629130593	0.000030681	-0.000001061		
6P1/2			0.520225134	0.000037752	-0.000002953		
6P3/2			0.442961713	0.000011751	-0.000000368		
3D5/2 -- ( 6)	266.884093	-655.958446	5.675985356	0.017095921		-0.000001816	0.000000501
3D5/2			3.089401117	0.001117462	-0.000024527		
4P1/2			3.114909219	0.000796172	-0.000012182		
4P3/2			2.864449017	0.001309999	-0.000056109		
4D3/2			2.908534736	0.000611454	-0.000011884		
4D5/2			2.800788034	0.002021745	-0.000139770		
4F5/2			2.818707706	0.000795664	-0.000058899		
4F7/2			2.739637847	0.002370418	-0.000659080		
5S1/2			1.530830898	0.000239477	-0.000006933		
5P1/2			1.462631137	0.000157417	-0.000003269		
5P3/2			1.328255258	0.000248534	-0.000011912		
5D3/2			1.134699451	0.000085775	-0.000001989		
5D5/2			1.093332978	0.000271543	-0.000020607		
6S1/2			0.628566490	0.000034951	-0.000001062		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ASTATINE 6P5 Z=85 A=210 R=1.34790E-04 A.U.							
4S1/2 -- ( 2)	131.213184	-353.714362	0.520285316 0.442525198 2.467333500 2.191864023 2.090044916 2.231048195 2.197606131 2.251526291 2.234332362 1.363462405 1.328452658 1.216704600 1.054202922 1.022702794 0.605162041 0.506507971 0.432859850	0.000016484 0.000021900 0.001131163 0.000505748 0.000677280 0.000489242 0.000435792 0.000344361 0.000344607 0.000183036 0.000170055 0.000104042 0.000041033 0.000056331 0.000026985 0.000018854 0.000009561	-0.000000359 -0.000001069 -0.000026047 -0.000119642 -0.000044761 -0.000049947 -0.000029909 -0.000030527 -0.000079536 -0.000033444 -0.000018856 -0.000004657 -0.000004672 -0.000012070 -0.000003809 -0.000001754	-0.020042100	0.000808130
4P1/2 -- ( 2)	125.943642	-344.709357	2.470046243 2.232455935 2.095385253 2.245810353 2.209082945 2.253207083 1.387303408 1.303882893 1.224563106 1.048867347 1.025213890 0.608084858 0.504310528 0.433472136	0.002083996 0.000224875 0.001166287 0.000266632 0.000555322 0.000246955 0.000208177 0.000220746 0.000062394 0.000078550 0.000041166 0.000029473 0.000023003 0.000005643	-0.000004044 -0.000198721 -0.000008051 -0.000073108 -0.000008635 -0.000030694 -0.000063717 -0.000004925 -0.000012050 -0.000001553 -0.000004573 -0.000006922 -0.000000481	-0.002957201	0.000172307
4P3/2 -- ( 4)	96.908184	-299.465288	2.172430151 2.163742375 2.046867997 2.162691256 2.119587239 1.364871616 1.314942147 1.195895692 1.045058014 1.011509154 0.605038164 0.505084965 0.431127780	0.001026153 0.000208625 0.000649647 0.000237946 0.000396110 0.000314811 0.000095848 0.000148169 0.000033917 0.000083294 0.000042575 0.000009920 0.000012992	-0.000009722 -0.000038692 -0.000011275 -0.000032903 -0.000047886 -0.000008777 -0.000026495 -0.000002881 -0.000007398 -0.000006728 -0.000000985 -0.000002439	-0.000162349	0.000022803
4D3/2 -- ( 4)	88.384406	-283.376294	2.170252863 2.163175419 2.060311539 2.159682083	0.001369132 0.000251609 0.000721739 0.000207192	-0.000000036 -0.000084806 -0.000001643	-0.000002903	0.000000530

TABLE 1.-- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ASTATINE	6P5	Z=85	A=210	R=1.34790E-04	A.U.		
5S1/2			1.370118798	0.000104045	-0.000003905		
5P1/2			1.304786381	0.000231035	-0.000025474		
5P3/2			1.210335739	0.000058824	-0.000002499		
5D3/2			1.031665518	0.000119492	-0.000013759		
5D5/2			1.015514453	0.000036579	-0.000000701		
6S1/2			0.605723587	0.000014494	-0.000000680		
6P1/2			0.504285898	0.000022143	-0.000002538		
6P3/2			0.432241646	0.000005099	-0.000000237		
4D5/2 -- ( 6)	82.672616	-273.423046	2.120336211	0.001135885	-0.000004613	-0.000000518	0.000000143
4F5/2			2.139546918	0.000197270	-0.000004613		
4F7/2			2.050680631	0.000597878	-0.000053916		
5S1/2			1.362701877	0.000122148	-0.000003827		
5P1/2			1.310272246	0.000070616	-0.000001562		
5P3/2			1.200616584	0.000131192	-0.000009944		
5D3/2			1.042562699	0.000031697	-0.000000815		
5D5/2			1.003069373	0.000103619	-0.000008555		
6S1/2			0.604739806	0.000016530	-0.000000675		
6P1/2			0.504630240	0.000007077	-0.000000200		
6P3/2			0.431465329	0.000010981	-0.000000865		
4F5/2 -- ( 6)	68.901027	-246.926926	2.128812298	0.001293937	-0.000000001	-0.000000001	0.000000000
4F7/2			2.149930390	0.000206186	-0.000000001		
5S1/2			1.362376892	0.000062302	-0.000000003		
5P1/2			1.300152403	0.000083750	-0.000000199		
5P3/2			1.204032599	0.000039684	-0.000000088		
5D3/2			1.034715054	0.000070855	-0.000002430		
5D5/2			1.011061286	0.000023370	-0.000000179		
6S1/2			0.604816780	0.000008816	-0.000000039		
6P1/2			0.503950090	0.000008254	-0.000000077		
6P3/2			0.431750704	0.000003447	-0.000000018		
4F7/2 -- ( 8)	66.994615	-243.169701	2.199182853	0.001187140	-0.000000000	-0.000000000	0.000000000
5S1/2			1.358524139	0.000077627	-0.000000001		
5P1/2			1.304968872	0.000053318	-0.000000024		
5P3/2			1.198262678	0.000067292	-0.000000205		
5D3/2			1.039584805	0.000026519	-0.000000082		
5D5/2			1.005057351	0.000061607	-0.000001584		
6S1/2			0.604308860	0.000010384	-0.000000038		
6P1/2			0.504188831	0.000005202	-0.000000016		
6P3/2			0.431326823	0.000005591	-0.000000040		
5S1/2 -- ( 2)	36.533200	-150.703388	1.137283570	0.000096193	-0.000007542	-0.004585711	0.000184803
5P1/2			0.977912913	0.000070779	-0.0000019759		
5P3/2			0.931819526	0.000078491	-0.000007271		
5D3/2			0.892736818	0.000055017	-0.000007297		
5D5/2			0.873827182	0.000028775	-0.000005091		
6S1/2			0.562916998	0.000010582	-0.000001073		
6P1/2			0.481209776	0.000004756	-0.000001036		
6P3/2			0.414659421	0.000003371	-0.000001036		
5P1/2 -- ( 2)	32.383482	-140.730652	1.076507683	0.000153351	-0.0000620172	0.000036102	
5P3/2			0.967972549	0.000016294	-0.000000397		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
ASTATINE 6P5 Z=85 A=210 R=1.34790E-04 A.U.								
503/2			0.825855706	0.000135675	-0.000030757			
505/2			0.872747119	0.000011223	-0.000001124			
6S1/2			0.565933790	0.000017191	-0.000002671			
6P1/2			0.473776244	0.000008406	-0.000002675			
6P3/2			0.415009375	0.000001977	-0.000000172			
5P3/2 -- ( 4)	24.694030	-124.035424	0.940277867	0.000075130		-0.000033141	0.000004651	
5D3/2			0.851308060	0.000029869	-0.000002292			
5D5/2			0.800962805	0.000054198	-0.000011801			
6S1/2			0.557077916	0.000024762	-0.000003891			
6P1/2			0.475881284	0.000004019	-0.000000386			
6P3/2			0.409210298	0.000004750	-0.000000906			
5D3/2 -- ( 4)	17.118270	-101.619503	0.787239517	0.000063635		-0.000000442	0.000000081	
5D5/2			0.782500986	0.000011632	-0.000000002			
6S1/2			0.539409970	0.000006045	-0.000000121			
6P1/2			0.458600878	0.000011706	-0.000001200			
6P3/2			0.404697084	0.000002215	-0.000000108			
5D5/2 -- ( 6)	15.783882	-97.821754	0.764645110	0.000051625		-0.000000077	0.000000021	
6S1/2			0.534947116	0.000008058	-0.000000095			
6P1/2			0.462689765	0.000003207	-0.000000047			
6P3/2			0.401033771	0.000005533	-0.000000466			
6S1/2 -- ( 2)	6.372178	-56.460955	0.459762958	0.000005261		-0.000677297	0.000027292	
6P1/2			0.366983998	0.000006164	-0.000000890			
6P3/2			0.335715135	0.000004540	-0.000001283			
6P1/2 -- ( 2)	4.155022	-45.952471	0.377697668	0.000005692		-0.000065566	0.000003816	
6P3/2			0.327684442	0.000000551	-0.000000011			
6P3/2 -- ( 3)	2.722735	-38.602934	0.309099580	0.000002292		-0.000002954	0.000000414	
ETOT	-22886.70326	26995.98698	-58254.80634	8349.12034	31.524358001	-3.343143444	-5.421487390	0.236033967
RADON 6P6 Z=86 A=222 R=1.37310E-04 A.U.								
1S1/2 -- ( 2)	5224.667388	-9378.939244	63.549191459	9.528174875		-2.354278532	0.104487601	
2S1/2			19.906073974	0.521918309	-0.063408568			
2P1/2			24.549080935	1.079574185	-0.139700433			
2P3/2			20.039594456	0.471423976	-0.136236949			
3S1/2			8.325433480	0.114615714	-0.014886858			
3P1/2			9.260169415	0.217524191	-0.027747759			
3P3/2			8.020377557	0.104857969	-0.031240850			
3D3/2			8.165581238	0.004711143	-0.000542448			
3D5/2			7.822257132	0.001861487	-0.000596467			
4S1/2			3.823933012	0.029891679	-0.003938998			
4P1/2			3.987743455	0.053864684	-0.006849400			
4P3/2			3.524269322	0.026042260	-0.007811941			
4D3/2			3.397388557	0.001296063	-0.000149823			
4D5/2			3.276193735	0.000510722	-0.000165176			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RADON 6P6 Z=86 A=222 R=1.37310E-04 A.U.							
4F5/2			2.974118579	0.000003704	-0.000000391		
4F7/2			2.928220561	0.060001417	-0.000000467		
5S1/2			1.724956839	0.006947066	-0.000918697		
5P1/2			1.674831568	0.011420987	-0.001451217		
5P3/2			1.489610307	0.005402107	-0.001623013		
5D3/2			1.247557705	0.000206679	-0.000023910		
5D5/2			1.201640807	0.000080037	-0.000025932		
6S1/2			0.684472448	0.001092803	-0.000144622		
6P1/2			0.575018580	0.001329425	-0.000168901		
6P3/2			0.485436848	0.000534128	-0.000160518		
2S1/2 -- ( 2)	1274.249127	-2340.065838	14.523235312	0.202967985		-0.354031126	0.014751600
2P1/2			14.479371261	0.062038662	-0.000086060		
2P3/2			13.278613893	0.088059147	-0.002688808		
3S1/2			6.885277602	0.024314402	-0.005881598		
3P1/2			7.558120458	0.041399070	-0.006404227		
3P3/2			6.893085676	0.026684267	-0.003098565		
3D3/2			7.655937366	0.024216130	-0.003319333		
3D5/2			7.398416511	0.010409056	-0.003269184		
4S1/2			3.463720542	0.006286443	-0.001601645		
4P1/2			3.571646388	0.010627278	-0.001691797		
4P3/2			3.252172628	0.006828024	-0.000890650		
4D3/2			3.278721711	0.004845879	-0.000702197		
4D5/2			3.178221023	0.002189967	-0.000703198		
4F5/2			2.970432865	0.000301366	-0.000039560		
4F7/2			2.924949514	0.000108206	-0.000038464		
5S1/2			1.641967208	0.001457511	-0.000375107		
5P1/2			1.586817189	0.002267262	-0.000362910		
5P3/2			1.433493522	0.001423104	-0.000189871		
5D3/2			1.229188652	0.000728470	-0.000106694		
5D5/2			1.186749062	0.000327512	-0.000105388		
6S1/2			0.671440855	0.000229154	-0.000059094		
6P1/2			0.564777845	0.000264195	-0.000042330		
6P3/2			0.479893838	0.000140815	-0.000018860		
2P1/2 -- ( 2)	1272.846360	-2338.597237	17.972104880	0.464436264		-0.048524143	0.002944707
2P3/2			15.602759261	0.056104568	-0.000173954		
3S1/2			7.332226789	0.016561375	-0.001154917		
3P1/2			7.555218984	0.038601481	-0.005730759		
3P3/2			7.193510409	0.013608218	-0.000363889		
3D3/2			7.668041357	0.071519787	-0.017025318		
3D5/2			7.603422536	0.002127847	-0.000502009		
4S1/2			3.568758198	0.004265401	-0.000332105		
4P1/2			3.581842719	0.009247061	-0.001506598		
4P3/2			3.323133801	0.003377190	-0.000106691		
4D3/2			3.284277900	0.019254748	-0.003739996		
4D5/2			3.223376166	0.000532593	-0.000118246		
4F5/2			2.971249417	0.000351115	-0.000073665		
4F7/2			2.926737723	0.000019399	-0.000007389		
5S1/2			1.665832926	0.000988021	-0.000078790		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RADON	6P6	Z=86	A=222	R=1.37310E-04	A.U.		
	5P1/2		1.589428459	0.001946355	-0.000323040		
	5P3/2		1.448063950	0.000700120	-0.000022872		
	5D3/2		1.230125041	0.002321921	-0.000572367		
	5D5/2		1.193551304	0.000082262	-0.000018037		
	6S1/2		0.675177712	0.000155310	-0.000012446		
	6P1/2		0.565091117	0.000226256	-0.000037677		
	6P3/2		0.481331965	0.000069215	-0.000002274		
2P3/2 -- ( 4 )	868.877818	-1812.723978	14.594164790	0.207706073		-0.002460098	0.000361668
	3S1/2		7.120404889	0.020498503	-0.001612333		
	3P1/2		7.645598218	0.012530091	-0.000584770		
	3P3/2		6.835622603	0.025493908	-0.002375359		
	3D3/2		7.737212669	0.021346095	-0.002073814		
	3D5/2		7.335981982	0.035274287	-0.010027798		
	4S1/2		3.515244510	0.004994011	-0.000421556		
	4P1/2		3.591808653	0.003015159	-0.000162356		
	4P3/2		3.242440652	0.005991922	-0.000619109		
	4D3/2		3.296949567	0.004403400	-0.000431558		
	4D5/2		3.168023189	0.007145322	-0.002099473		
	4F5/2		2.970741100	0.000243077	-0.000023692		
	4F7/2		2.924291068	0.000209705	-0.000067850		
	5S1/2		1.653476468	0.001143018	-0.000098133		
	5P1/2		1.591023589	0.000635595	-0.000035272		
	5P3/2		1.431653691	0.001227965	-0.000129489		
	5D3/2		1.231983801	0.000666804	-0.000065485		
	5D5/2		1.185298973	0.001060994	-0.000313472		
	6S1/2		0.673236539	0.000179234	-0.000015443		
	6P1/2		0.565266027	0.000073907	-0.000004124		
	6P3/2		0.479714907	0.000121159	-0.000012820		
3S1/2 -- ( 2 )	406.641483	-856.314708	5.525029006	0.013023364		-0.082006161	0.003385840
	3P1/2		5.095783625	0.004465771	-0.000058393		
	3P3/2		4.811675724	0.006426750	-0.000583453		
	3D3/2		5.516649639	0.004037145	-0.000133380		
	3D5/2		5.429439942	0.005280452	-0.000165148		
	4S1/2		3.028189315	0.002145338	-0.000760251		
	4P1/2		3.122340526	0.002957250	-0.000513785		
	4P3/2		2.875214580	0.001867792	-0.000230364		
	4D3/2		2.916980098	0.001166269	-0.000113457		
	4D5/2		2.847502448	0.001137878	-0.000096608		
	4F5/2		2.858029621	0.001057109	-0.000148342		
	4F7/2		2.820303484	0.000482508	-0.000144974		
	5S1/2		1.546786410	0.000494934	-0.000181645		
	5P1/2		1.494340243	0.000654774	-0.000117335		
	5P3/2		1.357792170	0.000406279	-0.000053543		
	5D3/2		1.175145221	0.000190150	-0.000020055		
	5D5/2		1.138184770	0.000169601	-0.000016940		
	6S1/2		0.656633205	0.000077697	-0.000028671		
	6P1/2		0.554066422	0.000076679	-0.000013804		
	6P3/2		0.472447298	0.000040447	-0.000005383		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RADON 6P6 Z=86 A=222 R=1.37310E-04 A.U.							
3P1/2 -- ( 2)	401.671881	-849.458955	5.883705059	0.025946501		-0.012602886	0.000751794
3P3/2			5.288245676	0.002931018	-0.000029694		
3D3/2			5.402422830	0.009165740	-0.0000692929		
3D5/2			5.703550950	0.003938018	-0.000030995		
4S1/2			3.129927301	0.001823390	-0.000220745		
4P1/2			3.071629595	0.003049619	-0.000702062		
4P3/2			2.923077504	0.000933569	-0.000052523		
4D3/2			2.936237025	0.002661650	-0.000397206		
4D5/2			2.880709772	0.000767825	-0.000026441		
4F5/2			2.849812946	0.001798977	-0.000396671		
4F7/2			2.844847978	0.000198913	-0.000042073		
5S1/2			1.566974944	0.000410474	-0.000053478		
5P1/2			1.486656466	0.000632402	-0.000154098		
5P3/2			1.366869798	0.000196464	-0.000012405		
5D3/2			1.178243410	0.000440817	-0.000070946		
5D5/2			1.143015127	0.000111589	-0.000004588		
6S1/2			0.659717610	0.000064146	-0.000008469		
6P1/2			0.553225368	0.000073317	-0.000018017		
6P3/2			0.473332465	0.000019461	-0.000001250		
3P3/2 -- ( 4)	300.568233	-711.137215	5.106179560	0.012593818		-0.000676488	0.000097748
3D3/2			5.436737405	0.002823214	-0.000017485		
3D5/2			5.185700847	0.006933147	-0.000135263		
4S1/2			3.070494624	0.002654612	-0.000339748		
4P1/2			3.109019490	0.001169320	-0.000088166		
4P3/2			2.828420910	0.002084348	-0.000300705		
4D3/2			2.896438148	0.001033996	-0.000097402		
4D5/2			2.819835856	0.002240184	-0.000342569		
4F5/2			2.845605562	0.000915828	-0.000092199		
4F7/2			2.788525021	0.000881308	-0.000261012		
5S1/2			1.554002496	0.000565845	-0.000075794		
5P1/2			1.491388255	0.000241201	-0.000020312		
5P3/2			1.349236286	0.000420168	-0.000064839		
5D3/2			1.172153895	0.000164699	-0.000016342		
5D5/2			1.134221598	0.000341828	-0.000057092		
6S1/2			0.657698470	0.000087609	-0.000011837		
6P1/2			0.553720552	0.000027947	-0.000002395		
6P3/2			0.471617781	0.000041342	-0.000006442		
3D3/2 -- ( 4)	294.675040	-702.941923	5.934023163	0.021466956		-0.000011290	0.000002119
3D5/2			5.899713652	0.003918731	-0.000000281		
4S1/2			3.163704534	0.001004685	-0.000025811		
4P1/2			3.166104462	0.002013117	-0.000146589		
4P3/2			2.940984697	0.000703505	-0.000017969		
4D3/2			2.917699238	0.002403935	-0.000232804		
4D5/2			2.908479869	0.000788379	-0.000011439		
4F5/2			2.832321917	0.004060853	-0.001005495		
4F7/2			2.855141620	0.000136970	-0.000016261		
5S1/2			1.573874369	0.000224618	-0.000007470		
5P1/2			1.503555730	0.000392177	-0.000030506		



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RADON 6P6 Z=86 A=222 R=1.37310E-04 A.U.							
			1.370273881	0.000143011	-0.000004373		
			1.176380464	0.000348842	-0.000036972		
			1.147021295	0.000116009	-0.000002006		
			0.660775675	0.000035073	-0.000001222		
			0.555136452	0.000045022	-0.000003546		
			0.473664245	0.000014092	-0.000000443		
3D5/2 -- ( 6)	274.540032	-673.215424	5.758335659	0.017830838	-0.000002004	0.000000568	
			3.145072789	0.001176164	-0.000025920		
			3.173343636	0.000839048	-0.000012884		
			2.912972770	0.001374896	-0.000059027		
			2.962871255	0.000644204	-0.000012575		
			2.851805526	0.002127946	-0.000147626		
			2.884223590	0.000850632	-0.000062911		
			2.802285071	0.002532794	-0.000704274		
			1.569753147	0.000256598	-0.000007477		
			1.504162933	0.000169795	-0.000003551		
			1.364980097	0.000267779	-0.000012883		
			1.181910356	0.000095448	-0.000002229		
			1.139491996	0.000302559	-0.000023076		
			0.660132891	0.000039893	-0.000001222		
			0.555191288	0.000019614	-0.000000431		
			0.473148385	0.000026207	-0.000001285		
4S1/2 -- ( 2)	136.792238	-365.627244	2.513166101	0.001198425	-0.021667769	0.000892633	
			2.233757734	0.000532534	-0.000026915		
			2.127650578	0.000719623	-0.000129046		
			2.273411896	0.000517553	-0.000047372		
			2.238738774	0.000460204	-0.000053018		
			2.301465459	0.000365394	-0.000031510		
			2.283806746	0.000367445	-0.000032202		
			1.396559268	0.000197816	-0.000086067		
			1.364414828	0.000186796	-0.000036720		
			1.248815757	0.000111945	-0.000020593		
			1.095448259	0.000045930	-0.000005239		
			1.063488990	0.000063120	-0.000005267		
			0.634361159	0.000031072	-0.000013921		
			0.539372664	0.000022881	-0.000004624		
			0.461976421	0.000011443	-0.000002129		
4P1/2 -- ( 2)	131.439081	-356.541070	2.518197903	0.002212124	-0.003302875	0.000196224	
			2.273370151	0.000234951	-0.000004524		
			2.136126114	0.001238940	-0.000211840		
			2.288731947	0.000281092	-0.000008613		
			2.258990485	0.000589972	-0.000077165		
			2.304030835	0.000263901	-0.000009137		
			1.421445297	0.000224004	-0.000033070		
			1.339008579	0.000240306	-0.000069547		
			1.257181223	0.000067042	-0.000005377		
			1.089853617	0.000087919	-0.000013588		
			1.066281164	0.000046100	-0.000001762		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RADON	6P6	Z=86	A=222 R=1.37310E-04 A.U.				
4P3/2 -- ( 4)	100.450221	-308.490290	2.209890684 2.203337239 2.083915568 2.208631700 2.164667112 1.397618435 1.349934657 1.226942565 1.085413909 1.051291402 0.634156938 0.537692784 0.459957646	0.000033764 0.000027619 0.000006745 0.001081500 0.000303139 0.000684439 0.000251275 0.000420504 0.000341769 0.000104758 0.000160623 0.000038315 0.000094068 0.000049083 0.000011942 0.000015640	-0.000005253 -0.000008341 -0.000000586 -0.000010024 -0.000061121 -0.000011681 -0.000034136 -0.000052140 -0.000009630 -0.000028870 -0.000003292 -0.000008461 -0.000007787 -0.000001194 -0.000002955	-0.000176386	0.000025379
4D3/2 -- ( 4)	91.860792	-292.371447	2.212282400 2.204502029 2.106636544 2.207843421 1.403644946 1.339915754 1.242359382 1.071390233 1.055816221 0.634991452 0.536843184 0.461274063	0.001449923 0.000265914 0.000762428 0.000221334 0.000112250 0.000251518 0.000063682 0.000133730 0.000041028 0.000016636 0.000026496 0.000006129	-0.000000040 -0.000087992 -0.000001714 -0.000004254 -0.000027881 -0.000002718 -0.000015575 -0.000000798 -0.000000791 -0.000003058 -0.000000288	-0.000003265	0.000000611
4D5/2 -- ( 6)	85.817852	-281.891455	2.160333716 2.186647217 2.096025782 1.395831893 1.345442680 1.232176164 1.082932825 1.042411063 0.633888572 0.537211171 0.460372590 2.183039175 2.204642155 1.397464863 1.336844790 1.237094105 1.075662529 1.051856600 0.634237635 0.536626044	0.001201309 0.000208748 0.000633178 0.000131622 0.000076610 0.000141928 0.000035462 0.000116079 0.000018939 0.000008456 0.000013170 0.001389601 0.000221739 0.000067396 0.000091151 0.000043194 0.000079365 0.000026306 0.000010154 0.000009896	-0.000004752 -0.000055678 -0.000004169 -0.000001713 -0.000010798 -0.000000926 -0.000009706 -0.000000786 -0.000000243 -0.000001043 -0.000000001 -0.000000007 -0.000000254 -0.000000107 -0.000002782 -0.000000207 -0.000000049 -0.000000100	-0.000000578	0.000000163
4F5/2 -- ( 6)	72.112324	-255.774703	2.183039175 2.204642155 1.397464863 1.336844790 1.237094105 1.075662529 1.051856600 0.634237635 0.536626044	0.001389601 0.000221739 0.000067396 0.000091151 0.000043194 0.000079365 0.000026306 0.000010154 0.000009896	-0.000000001 -0.000000007 -0.000000254 -0.000000107 -0.000002782 -0.000000207 -0.000000049 -0.000000100	-0.000000001	0.000000000

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
RADON 6P6 Z=86 A=222 R=1.37310E-04 A.U.								
4F7/2 -- ( 8)	70.092115	-251.827391	0.460823176 2.162654822	0.000004165 0.001274567	-0.000000024	-0.000000000	0.000000000	
5S1/2			1.393478824	0.000083740	-0.000000003			
5P1/2			1.341630273	0.000057889	-0.000000031			
5P3/2			1.231182780	0.000072980	-0.000000251			
5D3/2			1.080687383	0.000029698	-0.000000097			
5D5/2			1.045514020	0.000069064	-0.000001815			
6S1/2			0.633676619	0.000011931	-0.000000048			
6P1/2			0.536882130	0.000006227	-0.000000021			
6P3/2			0.460338906	0.000006730	-0.000000052			
5S1/2 -- ( 2)	38.779472	-156.902007	1.166279296	0.000104467		-0.005052307	0.000208021	
5P1/2			1.004383235	0.000075750	-0.000007959			
5P3/2			0.956807521	0.000086117	-0.000021721			
5D3/2			0.924703767	0.000060885	-0.000008027			
5D5/2			0.905754768	0.000032146	-0.000008100			
6S1/2			0.588591799	0.000012329	-0.000005976			
6P1/2			0.510823651	0.000005861	-0.000001331			
6P3/2			0.441327399	0.000004079	-0.000001265			
5P1/2 -- ( 2)	34.572073	-146.941093	1.107188548	0.000170118		-0.000709699	0.000042122	
5P3/2			0.995137342	0.000017590	-0.000000466			
5D3/2			0.855756722	0.000150603	-0.000034089			
5D5/2			0.905462455	0.000012651	-0.000001257			
6S1/2			0.592056219	0.000019847	-0.000003101			
6P1/2			0.502619285	0.000010220	-0.000003302			
6P3/2			0.441782680	0.000002389	-0.000000216			
5P3/2 -- ( 4)	26.272842	-129.231761	0.966236610	0.000082019		-0.000037002	0.000005319	
5D3/2			0.881783145	0.000032690	-0.000002468			
5D5/2			0.829900642	0.000059805	-0.000012832			
6S1/2			0.582413970	0.000028955	-0.000004575			
6P1/2			0.504831598	0.000004936	-0.000000480			
6P3/2			0.435206880	0.000005795	-0.000001128			
5D3/2 -- ( 4)	18.715232	-107.321317	0.820347805	0.000072337		-0.000000526	0.000000098	
5D5/2			0.815716111	0.000013233	-0.000000003			
6S1/2			0.565311812	0.000007189	-0.000000163			
6P1/2			0.487085076	0.000014502	-0.000001542			
6P3/2			0.430836975	0.000002735	-0.000000138			
5D5/2 -- ( 6)	17.280531	-103.362899	0.797409692	0.000058816		-0.000000091	0.000000026	
6S1/2			0.560717903	0.000009449	-0.000000131			
6P1/2			0.491270145	0.000003889	-0.000000063			
6P3/2			0.426976201	0.000006795	-0.000000595			
6S1/2 -- ( 2)	7.201040	-60.210826	0.482372724	0.000006156		-0.000795301	0.000032741	
6P1/2			0.388433203	0.000007188	-0.000001029			
6P3/2			0.356279795	0.000005541	-0.000001561			
6P1/2 -- ( 2)	4.875698	-49.790311	0.402874973	0.000006972		-0.000082814	0.000004914	
6P3/2			0.349961425	0.000000664	-0.000000015			
6P3/2 -- ( 4)	3.205594	-41.858907	0.330521267	0.000002820		-0.000003666	0.000000527	
TDOT	-23578.04668	27945.21613	-60123.17043	8576.03071	32.885188034	-3.486046487	-5.779598155	0.257374819

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
FRANCIUM	7S1	Z=87	A=223 R=1.37516E-04 A.U.				
1S1/2 -- ( 2)	5403.967877	-9669.358368	64.626433988	9.906046555		-2.504244225	0.113591272
2S1/2			20.264700802	0.544591738	-0.066292811		
2P1/2			25.034154626	1.125991621	-0.144768559		
2P3/2			20.311869912	0.488433960	-0.141143592		
3S1/2			8.476757901	0.119800592	-0.015588703		
3P1/2			9.440377442	0.227074839	-0.028753017		
3P3/2			8.141499489	0.109141116	-0.032514097		
3D3/2			8.290424528	0.004891309	-0.000560374		
3D5/2			7.933239295	0.001930463	-0.000618449		
4S1/2			3.899399665	0.031395365	-0.004144718		
4P1/2			4.072317811	0.056537222	-0.007134760		
4P3/2			3.587357073	0.027290283	-0.008185756		
4D3/2			3.463532129	0.001359810	-0.000156401		
4D5/2			3.337463617	0.000535497	-0.000173164		
4F5/2			3.042914360	0.000003958	-0.000000416		
4F7/2			2.995249737	0.000001516	-0.000000499		
5S1/2			1.771542342	0.007429876	-0.000984375		
5P1/2			1.726087413	0.012265223	-0.001546585		
5P3/2			1.532686914	0.005809342	-0.001745285		
5D3/2			1.299632504	0.000228411	-0.000026292		
5D5/2			1.252361036	0.000088636	-0.000028715		
6S1/2			0.724536196	0.001262011	-0.000167331		
6P1/2			0.626099001	0.001637652	-0.000206468		
6P3/2			0.539243465	0.000694339	-0.000208659		
7S1/2			0.216450219	0.000087555	-0.000011610		
2S1/2 -- ( 2)	1322.551314	-2417.852041	14.773700297	0.212911663		-0.379889654	0.016163212
2P1/2			14.740858664	0.065085518	-0.000087845		
2P3/2			13.480745672	0.091692624	-0.002922707		
3S1/2			7.003127642	0.025544729	-0.006172436		
3P1/2			7.693486234	0.043574585	-0.006731901		
3P3/2			6.997575960	0.027650770	-0.003188793		
3D3/2			7.774364843	0.025261876	-0.003460140		
3D5/2			7.506128053	0.010836110	-0.003406961		
4S1/2			3.528920984	0.006636454	-0.001689244		
4P1/2			3.642692622	0.011246641	-0.001787860		
4P3/2			3.309402741	0.007129138	-0.000924819		
4D3/2			3.342083407	0.005106747	-0.000739468		
4D5/2			3.237651855	0.002304406	-0.000740975		
4F5/2			3.039097107	0.000321397	-0.000042157		
4F7/2			2.991870695	0.000115303	-0.000040995		
5S1/2			1.684627602	0.001566739	-0.000402888		
5P1/2			1.633097647	0.002455078	-0.000392432		
5P3/2			1.473864554	0.001525141	-0.000202473		
5D3/2			1.279840401	0.000807677	-0.000118234		
5D5/2			1.236346978	0.000363638	-0.000117189		
6S1/2			0.709799990	0.000265977	-0.000068540		
6P1/2			0.613688197	0.000328169	-0.000052510		
6P3/2			0.532220391	0.000182439	-0.000024320		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
FRANCIUM	751	Z=87	A=223	R=1.37516E-04	A.U.		
2P1/2 -- ( 2)	1321.222361	-2416.517411	0.215428103	0.000018452	-0.000004756		
2P3/2			18.306712879	0.487491687		-0.053701251	0.003322456
3S1/2			15.844024611	0.058123715	-0.000190912		
3P1/2			7.461774885	0.017401535	-0.001209214		
3P3/2			7.691201902	0.040613061	-0.006017698		
3D3/2			7.304629594	0.014166870	-0.000378235		
3D5/2			7.787744623	0.074497339	-0.017734266		
4S1/2			7.713475039	0.062203322	-0.000521925		
4P1/2			3.637270394	0.004504273	-0.000349585		
4P3/2			3.653386157	0.009784357	-0.001591409		
4D3/2			3.382402959	0.003540730	-0.000111685		
4D5/2			3.348018050	0.016057852	-0.003936775		
4F5/2			3.283835217	0.000557373	-0.000124285		
4F7/2			3.039951922	0.000373579	-0.000078369		
5S1/2			2.993723187	0.000020607	-0.000007855		
5P1/2			1.709693120	0.001062428	-0.000084477		
5P3/2			1.635897266	0.002107085	-0.000349199		
5D3/2			1.489243888	0.000753297	-0.000024581		
5D5/2			1.280890872	0.002572252	-0.000634125		
6S1/2			1.243689626	0.000090896	-0.000020012		
6P1/2			0.714037201	0.000180329	-0.000014412		
6P3/2			0.614073849	0.000280944	-0.000046723		
7S1/2			0.534055131	0.000090024	-0.000002956		
2P3/2 -- ( 4)	891.714715	-1858.303499	0.215721884	0.000012510	-0.000001000		
3S1/2			14.786893477	0.215553562		-0.002639142	0.000397561
3P1/2			7.238521632	0.021500167	-0.001704478		
3P3/2			7.775817596	0.013124751	-0.000614502		
3D3/2			6.934329970	0.026539045	-0.002475661		
3D5/2			7.853039502	0.022254215	-0.002158239		
4S1/2			7.439086776	0.036733719	-0.010443276		
4P1/2			3.580589669	0.005257141	-0.000446803		
4P3/2			3.661706612	0.003173839	-0.000171417		
4D3/2			3.298282673	0.006276483	-0.000649433		
4D5/2			3.359953612	0.004629504	-0.000452850		
4F5/2			3.226439560	0.007509600	-0.002207018		
4F7/2			3.039367533	0.000261245	-0.000025440		
5S1/2			2.991133920	0.000225206	-0.000072884		
5P1/2			1.696366401	0.001224775	-0.000105865		
5P3/2			1.637151874	0.000684438	-0.000038109		
5D3/2			1.471689580	0.001319632	-0.000139392		
5D5/2			1.282725286	0.000737455	-0.000072286		
6S1/2			1.234661027	0.001176149	-0.000347621		
6P1/2			0.711776639	0.000207343	-0.000017987		
6P3/2			0.614227728	0.000091284	-0.000005112		
7S1/2			0.531964497	0.000157368	-0.000016684		
3S1/2 -- ( 2)	422.242511	-884.156509	0.215565080	0.000014379	-0.000001248		
3P1/2			5.618595781	0.013699100		-0.088234533	0.003719416
			5.184475393	0.004691015	-0.000059874		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E (KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
FRANCIUM 751 Z=87 A=223 R=1.37516E-04 A.U.							
3P3/2			4.887326953	0.006732950	-0.000630568		
3D3/2			5.605555727	0.004232530	-0.000141513		
3D5/2			5.514522786	0.005520268	-0.000175867		
4S1/2			3.083247706	0.002267117	-0.000802702		
4P1/2			3.181824557	0.003140642	-0.000545153		
4P3/2			2.924282766	0.001941961	-0.000240220		
4D3/2			2.971764199	0.001227520	-0.000119329		
4D5/2			2.899758564	0.001199290	-0.000101286		
4F5/2			2.922950981	0.001127050	-0.000158197		
4F7/2			2.883890640	0.000514345	-0.000154619		
5S1/2			1.585480668	0.000532528	-0.000195303		
5P1/2			1.536054565	0.000711498	-0.000127410		
5P3/2			1.394523499	0.000433877	-0.000057329		
5D3/2			1.221640636	0.000210887	-0.000022257		
5D5/2			1.184013151	0.000188611	-0.000018797		
6S1/2			0.693150619	0.000090262	-0.000033289		
6P1/2			0.600797686	0.000095597	-0.000017201		
6P3/2			0.522788911	0.000052239	-0.000006973		
7S1/2			0.214274717	0.000006260	-0.000002310		
3P1/2 -- ( 2)	417.190508	-877.227312	5.987507428	0.027313103		-0.013988572	0.000850354
3P3/2			5.372598519	0.003036839	-0.000032825		
3D3/2			5.490459721	0.009637271	-0.000741242		
3D5/2			5.794400719	0.004113108	-0.000033241		
4S1/2			3.187750923	0.001923468	-0.000232514		
4P1/2			3.130141242	0.003229382	-0.000742755		
4P3/2			2.973599175	0.000974322	-0.000055234		
4D3/2			2.991754830	0.002789515	-0.000415148		
4D5/2			2.934008491	0.000811123	-0.000027816		
4F5/2			2.914685372	0.001917955	-0.000423059		
4F7/2			2.909372189	0.000211874	-0.000044870		
5S1/2			1.606583910	0.000440907	-0.000057395		
5P1/2			1.528084756	0.000685082	-0.000166844		
5P3/2			1.404113685	0.000210556	-0.000013398		
5D3/2			1.225027455	0.000487074	-0.000078308		
5D5/2			1.189265384	0.000124341	-0.000005104		
6S1/2			0.696628738	0.000074385	-0.000009817		
6P1/2			0.599800736	0.000091086	-0.000022380		
6P3/2			0.523918414	0.000025218	-0.000001634		
7S1/2			0.214515076	0.000005156	-0.000000682		
3P3/2 -- ( 4)	309.494805	-730.251258	5.180177265	0.013139966		-0.000729174	0.000107912
3D3/2			5.517117180	0.002943882	-0.000017856		
3D5/2			5.260531363	0.007226863	-0.000140410		
4S1/2			3.125128261	0.002813460	-0.000361760		
4P1/2			3.166560019	0.001238203	-0.000093624		
4P3/2			2.875482179	0.002189465	-0.000316306		
4D3/2			2.949443947	0.001094438	-0.000103209		
4D5/2			2.870249212	0.002362541	-0.000362105		
4F5/2			2.909243489	0.000975729	-0.000098210		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
FRANCIUM	7S1	Z=87	A=223	R=1.37516E-04	A.U.		
	4F7/2		2.850194592	0.000939499	-0.000278100		
	5S1/2		1.592674780	0.000609392	-0.000082011		
	5P1/2		1.532629763	0.000260998	-0.000022059		
	5P3/2		1.385356165	0.000452731	-0.000069998		
	5D3/2		1.218219885	0.000183471	-0.000018234		
	5D5/2		1.179552273	0.000380341	-0.000063754		
	6S1/2		0.694291988	0.000101796	-0.000013822		
	6P1/2		0.600338008	0.000034675	-0.000002985		
	6P3/2		0.521715294	0.000053832	-0.000008409		
	7S1/2		0.214353189	0.000007047	-0.000000958		
3D3/2 --	( 4)	303.533019	-721.990097	6.024111937	0.022418291	-0.000012544	0.000002414
	3D5/2		5.986681726	0.004085363	-0.000000309		
	4S1/2		3.220856997	0.001058058	-0.000027265		
	4P1/2		3.225487598	0.002127993	-0.000155929		
	4P3/2		2.990729128	0.000738721	-0.000018895		
	4D3/2		2.971675303	0.002532754	-0.000245998		
	4D5/2		2.961362021	0.000830186	-0.000012077		
	4F5/2		2.895878922	0.004332083	-0.001072839		
	4F7/2		2.919504130	0.000146407	-0.000017357		
	5S1/2		1.613436001	0.000240730	-0.000008047		
	5P1/2		1.545473836	0.000423474	-0.000033152		
	5P3/2		1.407437938	0.000154073	-0.000004728		
	5D3/2		1.222862010	0.000386354	-0.000041123		
	5D5/2		1.193423812	0.000128842	-0.000002241		
	6S1/2		0.697761325	0.000040575	-0.000001423		
	6P1/2		0.602052236	0.000055719	-0.000004419		
	6P3/2		0.524309441	0.000018348	-0.000000580		
	7S1/2		0.214593373	0.000002812	-0.000000099		
3D5/2 --	( 6)	282.309601	-690.703693	5.840755895	0.018586546	-0.000002209	0.000000642
	4S1/2		3.201299021	0.001237404	-0.000027378		
	4P1/2		3.232340101	0.000883782	-0.000013617		
	4P3/2		2.961722490	0.001442146	-0.000062061		
	4D3/2		3.017420912	0.000678192	-0.000013296		
	4D5/2		2.902969732	0.002238027	-0.000155795		
	4F5/2		2.949408134	0.000907845	-0.000067082		
	4F7/2		2.864544331	0.002701635	-0.000751271		
	5S1/2		1.609032878	0.000274624	-0.000008054		
	5P1/2		1.545981105	0.000182847	-0.000003851		
	5P3/2		1.401812656	0.000287998	-0.000013908		
	5D3/2		1.228716252	0.000105675	-0.000002486		
	5D5/2		1.185252360	0.000335353	-0.000025703		
	6S1/2		0.697020003	0.000046078	-0.000001423		
	6P1/2		0.602100067	0.000024218	-0.000000537		
	6P3/2		0.523647273	0.000034050	-0.000001677		
	7S1/2		0.214542000	0.000003192	-0.000000099		
4S1/2 --	( 2)	142.587272	-377.876792	2.559527272	0.001269208	-0.023432979	0.000985568
	4P1/2		2.276137420	0.000560610	-0.000027807		
	4P3/2		2.165586017	0.000764585	-0.000139207		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
FRANCIUM	751	Z=87	A=223	R=1.37516E-04	A.U.		
	4D3/2		2.316098504	0.000547311	-0.000050138		
	4D5/2		2.280155786	0.000485631	-0.0000356278		
	4F5/2		2.351400388	0.000387338	-0.000033178		
	4F7/2		2.333244683	0.000391264	-0.000033950		
	5S1/2		1.429961048	0.000213547	-0.000093020		
	5P1/2		1.400623782	0.000204793	-0.000040237		
	5P3/2		1.281019709	0.000120198	-0.000022456		
	5D3/2		1.136280578	0.000051155	-0.000005865		
	5D5/2		1.103866111	0.000070343	-0.000005909		
	6S1/2		0.668292398	0.000036209	-0.000016247		
	6P1/2		0.583248035	0.000028808	-0.000005822		
	6P3/2		0.509623101	0.000014866	-0.000002806		
	7S1/2		0.212562342	0.000002511	-0.000001130		
4P1/2 --	( 2)	137.143582	-368.701399	2.566893273	0.002347042	-0.003688432	0.000223279
	4P3/2		2.314617186	0.000245327	-0.000005055		
	4D3/2		2.177183966	0.001315760	-0.000225839		
	4D5/2		2.331944121	0.000296057	-0.000009214		
	4F5/2		2.308913825	0.000626178	-0.000081410		
	4F7/2		2.354832062	0.000281583	-0.000009663		
	5S1/2		1.455913288	0.000240782	-0.000035589		
	5P1/2		1.374376427	0.000261183	-0.000075774		
	5P3/2		1.289907842	0.000071889	-0.000005860		
	5D3/2		1.130436168	0.000097893	-0.000015247		
	5D5/2		1.106952368	0.000051345	-0.000001988		
	6S1/2		0.671922711	0.000039148	-0.000006107		
	6P1/2		0.580322883	0.000034412	-0.000010429		
	6P3/2		0.510545864	0.000008753	-0.000000774		
	7S1/2		0.212808288	0.000002701	-0.000000424		
4P3/2 --	( 4)	104.079452	-317.682542	2.247539403	0.001139122	-0.000191464	0.000028212
	4D3/2		2.243112536	0.000318193	-0.000010329		
	4D5/2		2.121111886	0.000720603	-0.000063627		
	4F5/2		2.254424412	0.000265069	-0.000012091		
	4F7/2		2.209584115	0.000445812	-0.000035384		
	5S1/2		1.430620439	0.000370696	-0.000056714		
	5P1/2		1.385115529	0.000114330	-0.000010548		
	5P3/2		1.258047290	0.000173806	-0.000031394		
	5D3/2		1.125315732	0.000043063	-0.000003740		
	5D5/2		1.090628077	0.000105654	-0.000009620		
	6S1/2		0.667985540	0.000057271	-0.000009121		
	6P1/2		0.581188463	0.000014920	-0.000001502		
	6P3/2		0.507066542	0.000020440	-0.000003888		
	7S1/2		0.212537630	0.000003930	-0.000000629		
4D3/2 --	( 4)	95.422901	-301.531467	2.254496687	0.001534198	-0.000003667	0.000000703
	4D5/2		2.245983346	0.000280783	-0.000000045		
	4F5/2		2.152871579	0.000804588	-0.000091229		
	4F7/2		2.255863328	0.000236106	-0.000001787		
	5S1/2		1.437450233	0.000120957	-0.000004627		
	5P1/2		1.375250823	0.000273404	-0.000030466		



TABLE 1.— CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
FRANCIUM	7S1	Z=87	A=223	R=1.37516E-04	A.U.		
	5P3/2		1.274462530	0.000068814	-0.000002951		
	5D3/2		1.110691719	0.000148904	-0.000017532		
	5D5/2		1.095698932	0.000045772	-0.000000903		
	6S1/2		0.669001624	0.000019322	-0.000000932		
	6P1/2		0.580254293	0.000032896	-0.000003822		
	6P3/2		0.508753049	0.000007997	-0.000000379		
	7S1/2		0.212606790	0.000001331	-0.000000066		
4D5/2 --	( 6)	89.033792	-290.502641	2.200456950	0.001269420	-0.000000644	0.000000187
	4F5/2		2.233604050	0.000220636	-0.000004891		
	4F7/2		2.141223330	0.000669763	-0.000057445		
	5S1/2		1.429224579	0.000141669	-0.000004535		
	5P1/2		1.380810290	0.000082977	-0.000001874		
	5P3/2		1.263803588	0.000153264	-0.000011702		
	5D3/2		1.122865781	0.000039470	-0.000001046		
	5D5/2		1.081322064	0.000129353	-0.000010948		
	6S1/2		0.667749827	0.000021958	-0.000000925		
	6P1/2		0.580660222	0.000010482	-0.000000307		
	6P3/2		0.507616112	0.000017146	-0.000001366		
	7S1/2		0.212520859	0.000001509	-0.000000065		
4F5/2 --	( 6)	75.384338	-264.734083	2.236954323	0.001489362	-0.000000001	0.000000000
	4F7/2		2.259010746	0.000237962	-0.000000001		
	5S1/2		1.432778940	0.000072789	-0.000000014		
	5P1/2		1.373712539	0.000099006	-0.000000317		
	5P3/2		1.270210545	0.000046906	-0.000000129		
	5D3/2		1.116220103	0.000088411	-0.000003159		
	5D5/2		1.092268347	0.000029442	-0.000000238		
	6S1/2		0.668409298	0.000011829	-0.000000062		
	6P1/2		0.580177095	0.000012303	-0.000000133		
	6P3/2		0.508319863	0.000005461	-0.000000034		
	7S1/2		0.212566163	0.000000816	-0.000000005		
4F7/2 --	( 8)	73.244606	-260.587172	2.215764379	0.001365649	-0.000000000	0.000000000
	5S1/2		1.428648676	0.000090203	-0.000000007		
	5P1/2		1.378467028	0.000062734	-0.000000040		
	5P3/2		1.264446776	0.000078982	-0.000000301		
	5D3/2		1.121393758	0.000033084	-0.000000114		
	5D5/2		1.085581482	0.000076993	-0.000002062		
	6S1/2		0.667780687	0.000013866	-0.000000060		
	6P1/2		0.580461204	0.000007732	-0.000000028		
	6P3/2		0.507717990	0.000008792	-0.000000073		
	7S1/2		0.212522964	0.000000953	-0.000000005		
5S1/2 --	( 2)	41.128140	-163.277645	1.195545811	0.000113309	-0.005564313	0.000233896
	5P1/2		1.031069079	0.000080982	-0.000008390		
	5P3/2		0.981950878	0.000094389	-0.000023860		
	5D3/2		0.956417977	0.000067116	-0.000008828		
	5D5/2		0.937423030	0.000035750	-0.000008955		
	6S1/2		0.618071032	0.000014532	-0.000007095		
	6P1/2		0.549790514	0.000007505	-0.000001714		
	6P3/2		0.484181321	0.000005357	-0.000001678		

TABLE 1.-- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
FRANCIUM 7S1 Z=87 A=223 R=1.37516E-04 A.U.							
5P1/2 -- ( 2)	36.360324	-153.321464	0.209219046	0.000001010	-0.000000504		
5P3/2			1.138080223	0.000185949		-0.000811136	0.000049053
5D3/2			1.022432520	0.000018956	-0.000000540		
5D5/2			0.885494195	0.000166578	-0.000037652		
6S1/2			0.937945084	0.000014180	-0.000001400		
6P1/2			0.622066993	0.000023175	-0.000003642		
6P3/2			0.540393763	0.000012887	-0.000004225		
7S1/2			0.484801488	0.000003135	-0.000000295		
5P3/2 -- ( 4)	27.909021	-134.536937	0.209442068	0.000001541	-0.000000250		
5D3/2			0.992258729	0.000089354		-0.000041225	0.000006068
5D5/2			0.912000809	0.000035637	-0.000002647		
6S1/2			0.858604690	0.000065728	-0.000013897		
6P1/2			0.611426633	0.000034235	-0.000005438		
6P3/2			0.542780612	0.000006284	-0.000000619		
7S1/2			0.476713730	0.000007670	-0.000001525		
5D3/2 -- ( 4)	20.371479	-113.102431	0.208772026	0.000002194	-0.000000360		
5D5/2			0.853151967	0.000081734		-0.000000622	0.000000119
6S1/2			0.848631335	0.000014958	-0.000000003		
6P1/2			0.594650876	0.000008622	-0.000000218		
6P3/2			0.523853428	0.000018547	-0.000002038		
7S1/2			0.472142480	0.000003650	-0.000000190		
5D5/2 -- ( 6)	18.833094	-108.979174	0.207776212	0.000000564	-0.000000021		
6S1/2			0.829886541	0.000066593		-0.000000108	0.000000031
6P1/2			0.589855438	0.000011182	-0.000000179		
6P3/2			0.528285108	0.000004881	-0.000000085		
7S1/2			0.467735415	0.000009011	-0.000000819		
6S1/2 -- ( 2)	8.240964	-64.589858	0.207503664	0.000000679	-0.000000019		
6P1/2			0.509215051	0.000007347		-0.0000945830	0.000039753
6P3/2			0.416223552	0.000008619	-0.000001221		
7S1/2			0.387439749	0.000007245	-0.000002035		
6P1/2 -- ( 2)	5.939041	-54.892118	0.199544067	0.000000358	-0.000000166		
6P3/2			0.437745619	0.000009008		-0.000108588	0.000006565
7S1/2			0.384870695	0.000000879	-0.000000022		
6P3/2 -- ( 4)	4.095414	-47.056903	0.198427156	0.000000779	-0.000000116		
7S1/2			0.367327391	0.000003880		-0.000004938	0.000000727
7S1/2 -- ( 1)	0.662731	-18.939070	0.194442542	0.000001000	-0.000000136		
ETOT	-24283.22327	28924.61554	-62026.51636	8793.90180	34.292280121	-3.633293465	-6.163793538
RADIUM 7S2 Z=88 A=226 R=1.38130E-04 A.U.							
1S1/2 -- ( 2)	5589.141329	-9967.753875	65.720842473	10.295533968		-2.663098759	0.123414087
2S1/2			20.629399666	0.568082885	-0.069288318		
2P1/2			25.529573786	1.174049955	-0.149947978		

TABLE 1.— CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RADIUM            7S2            Z=88    A=226    R=1.38130E-04    A.U.							
2P3/2			20.585281842	0.505815370	-0.146156553		
3S1/2			8.630272604	0.125173766	-0.016317602		
3P1/2			9.623701365	0.236946009	-0.029775435		
3P3/2			8.263204510	0.113541467	-0.033821466		
3D3/2			8.415768934	0.005074491	-0.000578388		
3D5/2			8.044325684	0.002000469	-0.000640761		
4S1/2			3.975917562	0.032960117	-0.004359230		
4P1/2			4.158235693	0.059311137	-0.007426366		
4P3/2			3.650883104	0.028581671	-0.008572386		
4D3/2			3.530047743	0.001425328	-0.000163091		
4D5/2			3.398951941	0.000560941	-0.000181364		
4F5/2			3.111434641	0.000004220	-0.000000441		
4F7/2			3.061937825	0.000001619	-0.000000533		
5S1/2			1.818659294	0.007937051	-0.001053520		
5P1/2			1.777913189	0.013150543	-0.001645167		
5P3/2			1.575953554	0.006236261	-0.001873430		
5D3/2			1.351101838	0.000251102	-0.000028755		
5D5/2			1.302341057	0.000097610	-0.000031619		
6S1/2			0.764426988	0.001445160	-0.000191976		
6P1/2			0.673650742	0.001961627	-0.000245362		
6P3/2			0.584878408	0.000854656	-0.000256826		
7S1/2			0.256985422	0.000139949	-0.000018593		
2S1/2 -- ( 2)	1372.654892	-2498.052260	15.027972060	0.223295791		-0.407571126	0.017700951
2P1/2			15.006877045	0.068269930	-0.000089616		
2P3/2			13.684649367	0.095449037	-0.003176037		
3S1/2			7.122430783	0.026829400	-0.006475483		
3P1/2			7.830747858	0.045850510	-0.007073874		
3P3/2			7.102657987	0.028633503	-0.003278814		
3D3/2			7.893418561	0.026338674	-0.003604903		
3D5/2			7.614124202	0.011274084	-0.003548524		
4S1/2			3.594914494	0.007003384	-0.001780910		
4P1/2			3.714675837	0.011897171	-0.001888521		
4P3/2			3.367027073	0.007438202	-0.000959447		
4D3/2			3.405819846	0.005378161	-0.000778180		
4D5/2			3.297330561	0.002423091	-0.000780241		
4F5/2			3.107488514	0.000342062	-0.000044832		
4F7/2			3.058453934	0.000122613	-0.000043602		
5S1/2			1.727706675	0.001682332	-0.000432242		
5P1/2			1.679780953	0.002654444	-0.000423691		
5P3/2			1.514387123	0.001631391	-0.000215463		
5D3/2			1.329879273	0.000891099	-0.000130374		
5D5/2			1.285210394	0.000401602	-0.000129620		
6S1/2			0.747897436	0.000306144	-0.000078829		
6P1/2			0.659018670	0.000396419	-0.000063342		
6P3/2			0.576450374	0.000223781	-0.000029686		
7S1/2			0.255385151	0.000029644	-0.000007636		
2P1/2 -- ( 2)	1371.462303	-2496.925128	18.647641941	0.511605703		-0.059413829	0.003746140
2P3/2			16.087503823	0.060184859	-0.000209347		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RADIUM	752	Z=88 A=226 R=1.38130E-04 A.U.					
3S1/2			7.593111752	0.018279500	-0.001265562		
3P1/2			7.829116159	0.042719060	-0.006316825		
3P3/2			7.416468389	0.014740424	-0.000392953		
3D3/2			7.908121302	0.077556529	-0.018461493		
3D5/2			7.823753092	0.062279765	-0.000542272		
4S1/2			3.706681293	0.064754954	-0.000367821		
4P1/2			3.725886154	0.010349351	-0.001680244		
4P3/2			3.442115119	0.003709947	-0.000116842		
4D3/2			3.412148685	0.016890885	-0.004140844		
4D5/2			3.344539903	0.000582762	-0.000130525		
4F5/2			3.108381749	0.000396643	-0.000083195		
4F7/2			3.060369415	0.000021842	-0.000008331		
5S1/2			1.754014017	0.001141249	-0.000090468		
5P1/2			1.682777464	0.002277833	-0.000376897		
5P3/2			1.530598838	0.000809062	-0.000026370		
5D3/2			1.331050897	0.002835334	-0.000699026		
5D5/2			1.293095567	0.000099879	-0.000022083		
6S1/2			0.752663804	0.000207641	-0.000016548		
6P1/2			0.659480339	0.000339283	-0.000056346		
6P3/2			0.578667741	0.000110866	-0.000003637		
7S1/2			0.255846381	0.000020106	-0.000001604		
2P3/2 -- ( 4)	914.903807	-1904.527399	14.980131100	0.223600385		-0.002829057	0.000436562
3S1/2			7.357847240	0.022545091	-0.001801455		
3P1/2			7.907453145	0.013743507	-0.000645477		
3P3/2			7.033359428	0.027613537	-0.002578889		
3D3/2			7.969267092	0.023188349	-0.002244816		
3D5/2			7.542298205	0.038232321	-0.010869908		
4S1/2			3.646659829	0.005532115	-0.000473388		
4P1/2			3.732409129	0.003339391	-0.000180882		
4P3/2			3.354435681	0.006570866	-0.000680845		
4D3/2			3.423271906	0.004863689	-0.000474830		
4D5/2			3.285048212	0.007886762	-0.002318383		
4F5/2			3.107715652	0.000280254	-0.000027266		
4F7/2			3.057633605	0.000241402	-0.000078146		
5S1/2			1.739654378	0.001310952	-0.000114082		
5P1/2			1.683640200	0.000735899	-0.000041105		
5P3/2			1.511845832	0.001415658	-0.000149786		
5D3/2			1.332832742	0.000811506	-0.000079390		
5D5/2			1.283266853	0.001296844	-0.000383429		
6S1/2			0.750052880	0.000237858	-0.000020776		
6P1/2			0.659592206	0.000109641	-0.000006161		
6P3/2			0.576107320	0.000193543	-0.000020558		
7S1/2			0.255593594	0.000023022	-0.000002012		
3S1/2 -- ( 2)	438.391083	-912.778495	5.713230224	0.014405313		-0.094914585	0.004083535
3P1/2			5.274260117	0.004926324	-0.000061366		
3P3/2			4.963541971	0.007052480	-0.000681411		
3D3/2			5.695138291	0.004435868	-0.000150186		
3D5/2			5.600143303	0.005768213	-0.000187319		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RADIUM	752	Z=88	A=226	R=1.38130E-04	A.U.		
4S1/2			3.138907747	0.002394814	-0.000847141		
4P1/2			3.241998624	0.003333761	-0.000578133		
4P3/2			2.973647027	0.002017313	-0.000250373		
4D3/2			3.026858829	0.001290720	-0.000125367		
4D5/2			2.952248296	0.001263054	-0.000106072		
4F5/2			2.987653865	0.001199745	-0.000168441		
4F7/2			2.947204908	0.000547362	-0.000164644		
5S1/2			1.624510782	0.000572331	-0.000209745		
5P1/2			1.578067070	0.000771903	-0.000138119		
5P3/2			1.431346319	0.000462384	-0.000061267		
5D3/2			1.267494169	0.000232656	-0.000024568		
5D5/2			1.229097478	0.000208629	-0.000020737		
6S1/2			0.729327930	0.000103978	-0.000038326		
6P1/2			0.643927527	0.000115892	-0.000020840		
6P3/2			0.565135060	0.000063865	-0.000008552		
7S1/2			0.253589982	0.000010066	-0.000003713		
3P1/2 -- ( 2 )	433.268257	-905.790449	6.092630363	0.028743124		-0.015520755	0.000961093
3P3/2			5.457585827	0.003144525	-0.000036254		
3D3/2			5.579160788	0.010130861	-0.000793129		
3D5/2			5.885851996	0.004293622	-0.000035653		
4S1/2			3.246242155	0.002028252	-0.000244796		
4P1/2			3.189330289	0.003418326	-0.000785420		
4P3/2			3.024452830	0.001016059	-0.000058059		
4D3/2			3.047594806	0.002920179	-0.000433313		
4D5/2			2.987559169	0.000856289	-0.000029236		
4F5/2			2.979355030	0.002041563	-0.000450483		
4F7/2			2.973619894	0.000225267	-0.000047776		
5S1/2			1.646553348	0.000473077	-0.000061524		
5P1/2			1.569810400	0.000741037	-0.000180357		
5P3/2			1.441464455	0.000225217	-0.000014447		
5D3/2			1.271177952	0.000535270	-0.000085947		
5D5/2			1.234779672	0.000137824	-0.000005647		
6S1/2			0.733218654	0.000085537	-0.000011284		
6P1/2			0.642777940	0.000110051	-0.000027032		
6P3/2			0.566500389	0.000030935	-0.000002022		
7S1/2			0.253965038	0.000008275	-0.000001094		
3P3/2 -- ( 4 )	318.583426	-749.663341	5.254400845	0.013702831		-0.000785325	0.000119003
3D3/2			5.597746372	0.003068187	-0.000018231		
3D5/2			5.335509779	0.007529005	-0.000145752		
4S1/2			3.180271535	0.002980994	-0.000385070		
4P1/2			3.224654988	0.001310693	-0.000099371		
4P3/2			2.9222759944	0.002298527	-0.000332514		
4D3/2			3.002658632	0.001157441	-0.000109264		
4D5/2			2.920804894	0.002489476	-0.000382385		
4F5/2			2.972582009	0.001037907	-0.000104448		
4F7/2			2.911519025	0.000999913	-0.000295832		
5S1/2			1.631653666	0.000655606	-0.000088639		
5P1/2			1.574125474	0.000281996	-0.000023916		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RADIUM	752	Z=88	A=226	R=1.38130E-04	A.U.		
5P3/2			1.421536462	0.000486950	-0.000075432		
5D3/2			1.263607525	0.000203330	-0.000020237		
5D5/2			1.224104535	0.000420877	-0.000070794		
6S1/2			0.730536435	0.000117298	-0.000016005		
6P1/2			0.643337189	0.000041838	-0.000003618		
6P3/2			0.563818613	0.000066370	-0.000010392		
7S1/2			0.253705722	0.000011330	-0.000001548		
3D3/2 -- ( 4)	312.549602	-741.332294	6.114489415	0.023399025		-0.000013921	0.000002745
3D5/2			6.073819593	0.004256621	-0.000000339		
4S1/2			3.278569851	0.001113759	-0.000028787		
4P1/2			3.285464467	0.002248552	-0.000165809		
4P3/2			3.040720197	0.000775244	-0.000019857		
4D3/2			3.025874987	0.002666544	-0.000259733		
4D5/2			3.014410658	0.000873550	-0.000012740		
4F5/2			2.959154533	0.004614031	-0.001142854		
4F7/2			2.983530551	0.000156222	-0.000018495		
5S1/2			1.653324345	0.000257693	-0.000008657		
5P1/2			1.587664506	0.000456578	-0.000035972		
5P3/2			1.444680413	0.000165694	-0.000005102		
5D3/2			1.268678178	0.000425766	-0.000045506		
5D5/2			1.239061290	0.000142326	-0.000002489		
6S1/2			0.734415947	0.000046544	-0.000001643		
6P1/2			0.645355674	0.000067059	-0.000005355		
6P3/2			0.566933339	0.000022620	-0.000000719		
7S1/2			0.254080482	0.000004502	-0.000000160		
3D5/2 -- ( 6)	290.192483	-708.422952	5.923240110	0.019363276		-0.000002431	0.000000725
4S1/2			3.258046582	0.001301237	-0.000028903		
4P1/2			3.291899402	0.000930436	-0.000014384		
4P3/2			3.010689188	0.001511794	-0.000065216		
4D3/2			3.072174725	0.000713441	-0.000014046		
4D5/2			2.954265253	0.002352048	-0.000164282		
4F5/2			3.014292043	0.000967341	-0.000071412		
4F7/2			2.926451001	0.002877051	-0.000080098		
5S1/2			1.648625033	0.000293565	-0.000008664		
5P1/2			1.588058859	0.000196586	-0.000004169		
5P3/2			1.438710987	0.000309193	-0.000014987		
5D3/2			1.274845060	0.000116410	-0.000002758		
5D5/2			1.230235062	0.000369712	-0.000028472		
6S1/2			0.733568091	0.000052773	-0.000001643		
6P1/2			0.645390259	0.000029077	-0.000000651		
6P3/2			0.566128165	0.000041889	-0.000002074		
7S1/2			0.253998485	0.000009101	-0.000000160		
4S1/2 -- ( 2)	148.596674	-390.460403	2.606388137	0.001343597		-0.025334531	0.001087484
4P1/2			2.318993082	0.000589968	-0.000028712		
4P3/2			2.203835745	0.000812290	-0.000150159		
4D3/2			2.359092175	0.000578555	-0.000053064		
4D5/2			2.321837822	0.000512093	-0.000059735		
4F5/2			2.401346466	0.000410222	-0.000034918		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RADIUM            7S2            Z=88   A=226   R=1.38130E-04   A.U.							
			2.382664572	0.000416089	-0.000035775		
			1.463633859	0.000230254	-0.000100403		
			1.437061010	0.000224125	-0.000044008		
			1.313284713	0.000128805	-0.000024449		
			1.176480541	0.000056691	-0.000006533		
			1.143519071	0.000077958	-0.000006595		
			0.701804174	0.000041837	-0.000018799		
			0.623535369	0.000035259	-0.000007126		
			0.549452462	0.000018280	-0.000003502		
			0.250946365	0.000004049	-0.000001826		
4P1/2 -- ( 2)	143.064105	-381.198800	2.616139243	0.002489055		-0.004117002	0.000253841
			2.356193998	0.000256016	-0.000005643		
			2.218556936	0.001396982	-0.000240775		
			2.375439596	0.000311528	-0.000009856		
			2.358878884	0.000664007	-0.000085855		
			2.405641555	0.000300021	-0.000010215		
			1.490675131	0.000258520	-0.000038253		
			1.409971177	0.000283427	-0.000082413		
			1.322712471	0.000076929	-0.000006375		
			1.170399201	0.000108435	-0.000017024		
			1.146911582	0.000056868	-0.000002231		
			0.705842377	0.000045011	-0.000007039		
			0.620189147	0.000041694	-0.000012676		
			0.550570249	0.000010752	-0.000000969		
			0.251326871	0.000004331	-0.000000682		
4P3/2 -- ( 4)	107.796478	-327.042555	2.285368558	0.001199074		-0.000207647	0.000031325
			2.283060952	0.000333798	-0.000010637		
			2.158446665	0.000758166	-0.000066212		
			2.300091742	0.000279340	-0.000012504		
			2.254362325	0.000472056	-0.000036647		
			1.463844332	0.000401671	-0.000061620		
			1.420466460	0.000124598	-0.000011533		
			1.289180146	0.000187731	-0.000034070		
			1.164550033	0.000048152	-0.000004224		
			1.129213530	0.000118000	-0.000010872		
			0.701374478	0.000066271	-0.000010594		
			0.621078458	0.000018127	-0.000001836		
			0.546383666	0.000025293	-0.000004841		
			0.250898730	0.000006337	-0.000001019		
4D3/2 -- ( 4)	99.071206	-310.856696	2.296888138	0.001622040		-0.000004113	0.000000808
			2.287608246	0.000296225	-0.000000050		
			2.199032578	0.000848258	-0.000094517		
			2.303763379	0.000251481	-0.000001862		
			1.471501117	0.000130179	-0.000005023		
			1.410772996	0.000296754	-0.000033238		
			1.306613678	0.000074222	-0.000003198		
			1.149362266	0.000164964	-0.000019626		
			1.134852338	0.000050784	-0.000001016		

TABLE 1.-- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RADIUM 7S2 Z=88 A=226 R=1.38130E-04 A.U.							
4D5/2 -- ( 6)	92.320022	-299.255605	2.240691775	0.001340266	0.000000108	-0.000000717	0.000000213
6S1/2			0.702589868	0.000022251	-0.000001087		
6P1/2			0.620082520	0.000039722	-0.000004646		
6P3/2			0.548428576	0.000009881	-0.000000473		
7S1/2			0.251013901	0.000002138	-0.000000108		
4F5/2			2.280432445	0.000232945	-0.000005030		
4F7/2			2.186289118	0.000707661	-0.000059219		
5S1/2			1.462845355	0.000152303	-0.000004923		
5P1/2			1.416355264	0.000089732	-0.000002046		
5P3/2			1.295467010	0.000165207	-0.000012659		
5D3/2			1.162147309	0.000043709	-0.000001174		
5D5/2			1.119501415	0.000143369	-0.000012275		
6S1/2			0.701179980	0.000025244	-0.000001080		
6P1/2			0.620516005	0.000012636	-0.000000377		
6P3/2			0.547069259	0.000021138	-0.000001693		
7S1/2			0.250878998	0.000002418	-0.000000107		
4F5/2 -- ( 6)	78.717368	-273.806811	2.290588053	0.001593301	-0.000000092	0.000000001	
4F7/2			2.313069448	0.000254869	-0.000000001		
5S1/2			1.468292357	0.000078489	-0.000000022		
5P1/2			1.410741212	0.000107326	-0.000000386		
5P3/2			1.303352904	0.000050823	-0.000000152		
5D3/2			1.156171707	0.000097959	-0.000003560		
5D5/2			1.131983258	0.000032759	-0.000000272		
6S1/2			0.702184924	0.000013658	-0.000000077		
6P1/2			0.620184068	0.000014870	-0.000000171		
6P3/2			0.548056992	0.000006777	-0.000000045		
7S1/2			0.250975104	0.00001315	-0.000000009		
4F7/2 -- ( 8)	76.452438	-269.450996	2.268546585	0.001460460	-0.000000000	0.000000000	
5S1/2			1.464007848	0.000097023	-0.000000014		
5P1/2			1.415464578	0.000067860	-0.000000049		
5P3/2			1.297126776	0.000085304	-0.000000357		
5D3/2			1.161485750	0.000036664	-0.000000132		
5D5/2			1.124950606	0.000085349	-0.000002324		
6S1/2			0.701485014	0.000015975	-0.000000075		
6P1/2			0.620490261	0.000009333	-0.000000036		
6P3/2			0.547346768	0.000010873	-0.000000096		
7S1/2			0.250908046	0.000001530	-0.000000008		
5S1/2 -- ( 2)	43.578303	-169.827166	1.225051634	0.000122738	-0.000000000	-0.000122032	0.000262635
5P1/2			1.057949567	0.000086468	-0.000008831		
5P3/2			1.007221866	0.000103342	-0.000026183		
5D3/2			0.987732238	0.000073697	-0.000009672		
5D5/2			0.968616069	0.000039571	-0.000009858		
6S1/2			0.647096213	0.000016976	-0.000008343		
6P1/2			0.585352716	0.000009346	-0.000002144		
6P3/2			0.519722395	0.000006668	-0.000002110		
7S1/2			0.245888000	0.000001646	-0.000000828		
5P1/2 -- ( 2)	39.249351	-159.871851	1.169166393	0.000202887	-0.000025612	0.000057010	
5P3/2			1.049834071	0.000020393	-0.000000627		



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
<b>RADIUM</b> 7S2      Z=88    A=226    R=1.38130E-04    A.U.								
	5D3/2		0.914938966	0.000183596	-0.000041446			
	5D5/2		0.969976580	0.000015803	-0.000001553			
	6S1/2		0.651648332	0.000026825	-0.000004239			
	6P1/2		0.574858088	0.000015795	-0.000005248			
	6P3/2		0.520516511	0.000003891	-0.000000379			
	7S1/2		0.246234878	0.000002477	-0.000000405			
5P3/2 --	{ 4 }	29.601123	-139.947015	1.018312889	0.000097142	-0.000045836	0.000006907	
	5D3/2		0.941819064	0.000038699	-0.000002828			
	5D5/2		0.886884273	0.000071940	-0.000014991			
	6S1/2		0.639972995	0.000040133	-0.000006406			
	6P1/2		0.577355195	0.000007777	-0.000000774			
	6P3/2		0.511067395	0.000009609	-0.000001948			
	7S1/2		0.245217010	0.000003555	-0.000000588			
5D3/2 --	{ 4 }	22.076524	-118.934520	0.885393510	0.000091782	-0.000000732	0.000000144	
	5D5/2		0.880931894	0.000016794	-0.000000004			
	6S1/2		0.623544848	0.000010224	-0.000000282			
	6P1/2		0.557530167	0.000023011	-0.000002598			
	6P3/2		0.506527907	0.000004602	-0.000000246			
	7S1/2		0.243861022	0.000000926	-0.000000038			
5D5/2 --	{ 6 }	20.428046	-114.631787	0.861714003	0.000074899	-0.000000126	0.000000037	
	6S1/2		0.618529944	0.000013103	-0.000000236			
	6P1/2		0.562149893	0.000005959	-0.000000112			
	6P3/2		0.501691135	0.000011305	-0.000001060			
	7S1/2		0.243465200	0.000001101	-0.000000035			
6S1/2 --	{ 2 }	9.353389	-69.051777	0.535585620	0.000008677	-0.001115557	0.000047851	
	6P1/2		0.442006014	0.000010112	-0.000001416			
	6P3/2		0.413979898	0.000009060	-0.000002536			
	7S1/2		0.232195433	0.000000608	-0.000000293			
6P1/2 --	{ 2 }	7.039686	-59.791615	0.469032680	0.000011225	-0.000138457	0.000008526	
	6P3/2		0.414260613	0.000001096	-0.000000032			
	7S1/2		0.231107259	0.000001314	-0.000000200			
6P3/2 --	{ 4 }	4.958519	-51.642543	0.396919648	0.000004958	-0.000006296	0.000000949	
	7S1/2		0.226146266	0.000001726	-0.000000246			
7S1/2 --	{ 2 }	1.045047	-22.787313	0.185696003	0.000000314	-0.000108043	0.000004634	
ETOT	-25002.28014	29933.41860	-63976.67461	9015.28183	35.745718142	-3.784974987	-6.572351937	0.305655204
<b>ACTINIUM</b> 6D1      Z=89    A=227    R=1.38334E-04    A.U.								
1S1/2 --	{ 2 }	5780.726764	-10274.751410	66.833975760	10.697274214	-2.831937970	0.134020499	
	2S1/2		21.000613242	0.592439299	-0.072400565			
	2P1/2		26.035902412	1.223810525	-0.155238934			
	2P3/2		20.859885581	0.523568146	-0.151275674			
	3S1/2		8.786129546	0.130745607	-0.017074702			
	3P1/2		9.810295768	0.247148041	-0.030814949			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ACTINIUM	6D1	Z=89 A=227 R=1.38334E-04 A.U.					
			8.385516654	0.118060752	-0.035163631		
			8.541634242	0.005260501	-0.000596442		
			8.155528389	0.002071433	-0.000663365		
			4.053525876	0.034588735	-0.004582861		
			4.245528735	0.062188961	-0.007724060		
			3.714834998	0.029916980	-0.008972055		
			3.596916017	0.001492555	-0.000169879		
			3.460641713	0.000587031	-0.000189769		
			3.179682244	0.000004489	-0.000000466		
			3.128285250	0.000001724	-0.000000568		
			1.866280474	0.008469152	-0.001126204		
			1.830280127	0.014077205	-0.001746811		
			1.619378405	0.006682918	-0.002007473		
			1.401994730	0.000274724	-0.000031293		
			1.351597980	0.000106947	-0.000034639		
			0.802446391	0.001634318	-0.000217508		
			0.716710450	0.002284857	-0.000283469		
			0.623912056	0.001008603	-0.000303072		
			0.365729186	0.000016466	-0.000301876		
			0.281056132	0.000176083	-0.000023438		
2S1/2 -- ( 2)	1424.700952	-2580.830747	15.286328143	0.234148180		-0.437302406	0.019377548
			15.277700511	0.071599891	-0.000091404		
			13.890431829	0.099333974	-0.003450659		
			7.243291426	0.028171659	-0.006791315		
			7.970003940	0.048231341	-0.007430734		
			7.208362119	0.029631815	-0.003368424		
			8.013130405	0.027447148	-0.003753695		
			7.722426910	0.011723081	-0.003693936		
			3.661731104	0.007388142	-0.001876819		
			3.787616919	0.012580193	-0.001993910		
			3.425039128	0.007755023	-0.000994423		
			3.469917229	0.005660377	-0.000818361		
			3.357244979	0.002546092	-0.000821026		
			3.175610366	0.000363333	-0.000047580		
			3.124700064	0.000130122	-0.000046282		
			1.771179602	0.001804525	-0.000463212		
			1.726840228	0.002865715	-0.000456734		
			1.555033852	0.001741754	-0.000228807		
			1.379337866	0.000978781	-0.000143116		
			1.333360162	0.000441393	-0.000142683		
			0.784129579	0.000348023	-0.000089538		
			0.699927966	0.000465699	-0.000074305		
			0.614212461	0.000263132	-0.000034729		
			0.364377991	0.000058154	-0.000008517		
			0.279083274	0.000037493	-0.000009649		
2P1/2 -- ( 2)	1423.672264	-2579.944048	18.995212649	0.536835042		-0.065726038	0.004221356
			16.333274435	0.062287851	-0.000229380		
			7.726354511	0.019197467	-0.001324070		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ACTINIUM	6D1	Z=89 A=227 R=1.38334E-04 A.U.					
3P1/2			7.969054215	0.044924403	-0.006628601		
3P3/2			7.529054731	0.015329025	-0.000408053		
3D3/2			8.029197405	0.080693976	-0.019207220		
3D5/2			7.934270781	0.002357129	-0.000563052		
4S1/2			3.777023510	0.005018061	-0.000386831		
4P1/2			3.799361526	0.010943391	-0.001773249		
4P3/2			3.502262565	0.003884897	-0.000122163		
4D3/2			3.476654927	0.017754221	-0.004352253		
4D5/2			3.405475384	0.000608746	-0.000136967		
4F5/2			3.176542079	0.000420271	-0.000088138		
4F7/2			3.126677046	0.000023102	-0.000088818		
5S1/2			1.798770372	0.001224646	-0.000096770		
5P1/2			1.730042588	0.002458959	-0.000406170		
5P3/2			1.572100423	0.000867420	-0.000028239		
5D3/2			1.380637524	0.003111182	-0.000767070		
5D5/2			1.341788313	0.000109194	-0.000024249		
6S1/2			0.789426816	0.000236143	-0.000018763		
6P1/2			0.700465349	0.000398508	-0.000066080		
6P3/2			0.616782816	0.000130899	-0.000004290		
6D3/2			0.364455463	0.000185198	-0.000045698		
7S1/2			0.279653532	0.000025439	-0.000002023		
2P3/2 -- ( 4)	938.449117	-1951.400887	15.173893683	0.231849625		-0.003030392	0.000478905
3S1/2			7.478461649	0.023635729	-0.001903591		
3P1/2			8.040561916	0.014387465	-0.000677747		
3P3/2			7.132724231	0.028717888	-0.002689072		
3D3/2			8.085911442	0.024148990	-0.002333584		
3D5/2			7.645627008	0.039770769	-0.011307932		
4S1/2			3.713477125	0.005819473	-0.000501395		
4P1/2			3.803924147	0.003512062	-0.000190766		
4P3/2			3.410887847	0.006875198	-0.000713353		
4D3/2			3.486885595	0.005106046	-0.000497504		
4D5/2			3.343833719	0.008276980	-0.002433633		
4F5/2			3.175788389	0.000300114	-0.000029170		
4F7/2			3.123790738	0.000258299	-0.000083636		
5S1/2			1.783312162	0.001401666	-0.000122806		
5P1/2			1.730457396	0.000790026	-0.000044265		
5P3/2			1.552093205	0.001516049	-0.000160671		
5D3/2			1.382336866	0.000888941	-0.000086795		
5D5/2			1.331136456	0.001423018	-0.000420882		
6S1/2			0.786448964	0.000269487	-0.000023701		
6P1/2			0.700512591	0.000128067	-0.000007221		
6P3/2			0.613775049	0.000228219	-0.000024286		
6D3/2			0.364555812	0.000052869	-0.000005164		
7S1/2			0.279332671	0.000029017	-0.000002554		
3S1/2 -- ( 2)	455.125411	-942.226343	5.809009251	0.015143791		-0.102101904	0.004481311
3P1/2			5.365200125	0.005172291	-0.000062880		
3P3/2			5.040357426	0.007386199	-0.000736328		
3D3/2			5.785440371	0.004647568	-0.000159446		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ACTINIUM	6D1	Z=89 A=227 R=1.38334E-04 A.U.					
3D5/2			5.686339045	0.006024561	-0.000199567		
4S1/2			3.195195601	0.002528733	-0.000893649		
4P1/2			3.302879911	0.003536998	-0.000612788		
4P3/2			3.023305531	0.002093734	-0.000260831		
4D3/2			3.082258809	0.001355839	-0.000131565		
4D5/2			3.004968067	0.001329210	-0.000110959		
4F5/2			3.052150194	0.001275220	-0.000179078		
4F7/2			3.010255558	0.000581555	-0.000175050		
5S1/2			1.663856852	0.000614421	-0.000224989		
5P1/2			1.620356260	0.000836106	-0.000149490		
5P3/2			1.468239463	0.000491744	-0.000065360		
5D3/2			1.312745921	0.000255443	-0.000026985		
5D5/2			1.273467709	0.000229653	-0.000022756		
6S1/2			0.763668916	0.000118294	-0.000043575		
6P1/2			0.682740520	0.000136617	-0.000024552		
6P3/2			0.601191882	0.000074833	-0.000010056		
6D3/2			0.360423053	0.000015337	-0.000001637		
7S1/2			0.276883043	0.000012740	-0.000004697		
3P1/2 -- ( 2)	449.933965	-935.182896	6.199134631	0.030239749		-0.017217119	0.001085508
3P3/2			5.543233376	0.003254065	-0.000040005		
3D3/2			5.668553039	0.010647755	-0.000848886		
3D5/2			5.977929966	0.004479666	-0.000038243		
4S1/2			3.305426416	0.002137990	-0.000257618		
4P1/2			3.249212042	0.003616880	-0.000830119		
4P3/2			3.075635170	0.001058754	-0.000061001		
4D3/2			3.103748502	0.003053473	-0.000451665		
4D5/2			3.041355816	0.000903372	-0.000030703		
4F5/2			3.043832359	0.002169833	-0.000478952		
4F7/2			3.037597249	0.000239083	-0.000050790		
5S1/2			1.686862128	0.000507046	-0.000065876		
5P1/2			1.611812016	0.000800382	-0.000194655		
5P3/2			1.478900209	0.000240434	-0.000015551		
5D3/2			1.316734094	0.000585321	-0.000093848		
5D5/2			1.279586843	0.000152045	-0.000006217		
6S1/2			0.767968746	0.000097146	-0.000012808		
6P1/2			0.681450834	0.000129313	-0.000031751		
6P3/2			0.602774899	0.000036376	-0.000002400		
6D3/2			0.360661859	0.000035224	-0.000005701		
7S1/2			0.277343967	0.000010454	-0.000001382		
3P3/2 -- ( 4)	327.836532	-769.376719	5.328860373	0.014282786		-0.000845134	0.000131095
3D3/2			5.678635962	0.003196211	-0.000018610		
3D5/2			5.410644687	0.007839738	-0.000151301		
4S1/2			3.235941003	0.003157745	-0.000409764		
4P1/2			3.283310855	0.001386975	-0.000105420		
4P3/2			2.970248054	0.002411606	-0.000349336		
4D3/2			3.056070495	0.001223059	-0.000115571		
4D5/2			2.971493793	0.002621053	-0.000403424		
4F5/2			3.035629047	0.001102377	-0.000110912		

TABLE 1.-- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ACTINIUM	601	Z=89 A=227 R=1.38334E-04 A.U.					
4F7/2			2.972504871	0.001062564	-0.000314214		
5S1/2			1.670916054	0.000704595	-0.000095699		
5P1/2			1.615850902	0.000304236	-0.000025888		
5P3/2			1.457754995	0.000522840	-0.000081141		
5D3/2			1.308355238	0.000224285	-0.000022354		
5D5/2			1.267907222	0.000463425	-0.000078211		
6S1/2			0.764927546	0.000133493	-0.000018302		
6P1/2			0.682007122	0.000049094	-0.000004262		
6P3/2			0.599643345	0.000078452	-0.000012313		
6D3/2			0.360163317	0.000013421	-0.000001346		
7S1/2			0.277016905	0.000014341	-0.000001969		
3D3/2 -- ( 4)	321.727204	-760.971752	6.205167475	0.024409795		-0.000015432	0.000003116
3D5/2			6.161136991	0.004432577	-0.000000372		
4S1/2			3.336861441	0.001171881	-0.000030378		
4P1/2			3.346042177	0.002375056	-0.000176261		
4P3/2			3.090950153	0.000813100	-0.000020855		
4D3/2			3.080286249	0.002805383	-0.000274017		
4D5/2			3.067615064	0.000918492	-0.000013428		
4F5/2			3.022156373	0.004906784	-0.001215568		
4F7/2			3.047224450	0.000166418	-0.000019677		
5S1/2			1.693515265	0.000275523	-0.000009302		
5P1/2			1.630102466	0.000491537	-0.000038975		
5P3/2			1.481977300	0.000177881	-0.000005496		
5D3/2			1.313866518	0.000467079	-0.000050124		
5D5/2			1.283960205	0.000156458	-0.000002751		
6S1/2			0.769212800	0.000052725	-0.000001874		
6P1/2			0.684318719	0.000078491	-0.000006312		
6P3/2			0.603230108	0.000026737	-0.000000854		
6D3/2			0.360500135	0.000027614	-0.000002998		
7S1/2			0.277477323	0.000005673	-0.000000203		
3D5/2 -- ( 6)	298.189695	-726.374565	6.005796595	0.020161381		-0.000002673	0.000000818
4S1/2			3.315332393	0.001367764	-0.000030496		
4P1/2			3.352027499	0.000979075	-0.000015183		
4P3/2			3.059864870	0.001583881	-0.000068493		
4D3/2			3.127118902	0.000749968	-0.000014827		
4D5/2			3.005681871	0.002470054	-0.000173091		
4F5/2			3.078881139	0.001029140	-0.000075905		
4F7/2			2.988010158	0.003059080	-0.000850770		
5S1/2			1.688505252	0.000313438	-0.000009308		
5P1/2			1.630370386	0.000211023	-0.000004505		
5P3/2			1.475651219	0.000331367	-0.000016123		
5D3/2			1.320333433	0.000127654	-0.000003045		
5D5/2			1.274468415	0.000405619	-0.000031383		
6S1/2			0.768255092	0.000059686	-0.000001874		
6P1/2			0.684333589	0.000033948	-0.000000767		
6P3/2			0.602291015	0.000049409	-0.000002458		
6D3/2			0.360872693	0.000007570	-0.000000185		
7S1/2			0.277374292	0.000006417	-0.000000203		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ACTINIUM	6D1	Z=89	A=227	R=1.38334E-04	A.U.		
4S1/2 -- ( 2)	154.831566	-403.391911	2.653767207	0.001421774		-0.027388591	0.001199311
4P1/2			2.362336733	0.000620682	-0.000329635		
4P3/2			2.242405591	0.000862942	-0.000161972		
4D3/2			2.402394641	0.000611366	-0.000056163		
4D5/2			2.363787332	0.000539613	-0.000063403		
4F5/2			2.451323839	0.000434086	-0.000036734		
4F7/2			2.432085130	0.000441944	-0.000037683		
5S1/2			1.497565290	0.000247972	-0.000108232		
5P1/2			1.473713160	0.000244840	-0.000048043		
5P3/2			1.345597658	0.000137762	-0.000026580		
5D3/2			1.216096203	0.000062540	-0.000007245		
5D5/2			1.182487955	0.000085962	-0.000007327		
6S1/2			0.733559030	0.000047738	-0.000021476		
6P1/2			0.659687118	0.000041948	-0.000008477		
6P3/2			0.583272377	0.000021542	-0.000004190		
6D3/2			0.354764837	0.000003751	-0.000000447		
7S1/2			0.273668132	0.000005139	-0.000002321		
4P1/2 -- ( 2)	149.209034	-394.043527	2.665943719	0.002638482		-0.004593861	0.000288354
4P3/2			2.398100256	0.000267023	-0.000006293		
4D3/2			2.260242857	0.001482871	-0.000256720		
4D5/2			2.419215991	0.000327904	-0.000010542		
4F5/2			2.408898384	0.000703529	-0.000090515		
4F7/2			2.456472684	0.000319230	-0.000010794		
5S1/2			1.525716422	0.000277249	-0.000041066		
5P1/2			1.445779852	0.000307086	-0.000089475		
5P3/2			1.355581141	0.000082156	-0.000006922		
5D3/2			1.209789418	0.000119544	-0.000018924		
5D5/2			1.186198055	0.000062666	-0.000002490		
6S1/2			0.737997432	0.000051111	-0.000008012		
6P1/2			0.655961159	0.000049126	-0.000014978		
6P3/2			0.584571329	0.000012659	-0.000001162		
6D3/2			0.354437526	0.000007197	-0.000001150		
7S1/2			0.274132186	0.000005469	-0.000000864		
4P3/2 -- ( 4)	111.601372	-336.570313	2.323372161	0.001261403		-0.000225001	0.000034741
4D3/2			2.323174301	0.000349966	-0.000010949		
4D5/2			2.195912941	0.000797155	-0.000068881		
4F5/2			2.345643340	0.000294100	-0.000012921		
4F7/2			2.299009629	0.000499249	-0.000037928		
5S1/2			1.497273303	0.000434804	-0.000066875		
5P1/2			1.455971090	0.000135597	-0.000012587		
5P3/2			1.320327257	0.000202407	-0.000036903		
5D3/2			1.203163802	0.000053592	-0.000004746		
5D5/2			1.167087168	0.000131114	-0.000012219		
6S1/2			0.732987684	0.000075744	-0.000012153		
6P1/2			0.656835124	0.000021418	-0.000002182		
6P3/2			0.579736588	0.000030008	-0.000005778		
6D3/2			0.353997394	0.000003302	-0.000000313		
7S1/2			0.273598628	0.000008046	-0.000001299		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ACTINIUM	6D1	Z=89	A=227	R=1.38334E-04	A.U.		
4D3/2 -- ( 4)	102.805467	-320.346516	2.339445599	0.001713518		-0.000004607	0.000000927
4D5/2			2.329366868	0.000312247	-0.000000056		
4F5/2			2.245120445	0.000893478	-0.000097865		
4F7/2			2.351546473	0.000267464	-0.000001938		
5S1/2			1.505779924	0.000139933	-0.000005445		
5P1/2			1.446464838	0.000321629	-0.000036205		
5P3/2			1.338796984	0.000079910	-0.000003459		
5D3/2			1.187447158	0.000181918	-0.000021858		
5D5/2			1.173313806	0.000056065	-0.000001136		
6S1/2			0.734412592	0.000025304	-0.000001251		
6P1/2			0.655805762	0.000046653	-0.000005491		
6P3/2			0.582113323	0.000011705	-0.000000565		
6D3/2			0.353176015	0.000010599	-0.000001348		
7S1/2			0.273748566	0.000002702	-0.000000138		
4D5/2 -- ( 6)	95.676089	-308.149478	2.281029736	0.001413890		-0.000000797	0.000000243
4F5/2			2.327137462	0.000245682	-0.000005167		
4F7/2			2.231225543	0.000746894	-0.000061003		
5S1/2			1.496676799	0.000163543	-0.000005336		
5P1/2			1.452060436	0.000096884	-0.000002229		
5P3/2			1.327151212	0.000177766	-0.000013668		
5D3/2			1.200822755	0.000048179	-0.000001312		
5D5/2			1.156987415	0.000158126	-0.000013689		
6S1/2			0.732843396	0.000028660	-0.000001243		
6P1/2			0.656253858	0.000014813	-0.000000450		
6P3/2			0.580553271	0.000024988	-0.000002013		
6D3/2			0.353858223	0.000002834	-0.000000087		
7S1/2			0.273581675	0.000003050	-0.000000137		
4F5/2 -- ( 6)	82.110563	-282.992314	2.343945273	0.001701457		-0.000000002	0.000000001
4F7/2			2.366822244	0.000272463	-0.000000001		
5S1/2			1.503990517	0.000084502	-0.000000033		
5P1/2			1.447914447	0.000116121	-0.000000462		
5P3/2			1.336505423	0.000054946	-0.000000178		
5D3/2			1.195555358	0.000108011	-0.000003986		
5D5/2			1.171031893	0.000036258	-0.000000307		
6S1/2			0.734219612	0.000015568	-0.000000094		
6P1/2			0.656116217	0.000017472	-0.000000212		
6P3/2			0.581838452	0.000008060	-0.000000056		
6D3/2			0.353622103	0.000006060	-0.000000235		
7S1/2			0.273727849	0.000001666	-0.000000012		
4F7/2 -- ( 8)	79.714495	-278.417878	2.321004481	0.001559019		-0.000000000	0.000000000
5S1/2			1.499541519	0.000104209	-0.000000022		
5P1/2			1.452605893	0.000073274	-0.000000060		
5P3/2			1.330107181	0.000091948	-0.000000418		
5D3/2			1.201001281	0.000040439	-0.000000151		
5D5/2			1.163651639	0.000094130	-0.000002601		
6S1/2			0.733448404	0.000018169	-0.000000091		
6P1/2			0.656436746	0.000010954	-0.000000046		
6P3/2			0.581032706	0.000012891	-0.000000120		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ACTINIUM	6D1	Z=89	A=227	R=1.38334E-04	A.U.		
5S1/2 -- ( 2)	46.131594	-176.551552	0.353875789 0.273645695 1.254783677	0.000002325 0.000001934 0.000132774	-0.000000012 -0.000000012	-0.006730266	0.000294533
5P1/2			1.085013442	0.000092219	-0.000009283		
5P3/2			1.032611421	0.000113025	-0.000028707		
5D3/2			1.018687915	0.000080642	-0.000010560		
5D5/2			0.999371646	0.000043616	-0.000010811		
6S1/2			0.674629377	0.000019575	-0.000009678		
6P1/2			0.617248695	0.000011311	-0.000002603		
6P3/2			0.549903787	0.000007966	-0.000002546		
6D3/2			0.344577082	0.000002950	-0.000000460		
7S1/2			0.267626550	0.000002111	-0.000001069		
5P1/2 -- ( 2)	41.740165	-166.592399	1.200434568	0.000220972		-0.001054754	0.000066134
5P3/2			1.077331390	0.000021905	-0.000000725		
5D3/2			0.944120882	0.000201716	-0.000045485		
5D5/2			1.001588528	0.000017519	-0.000001717		
6S1/2			0.679737041	0.000030659	-0.000004870		
6P1/2			0.605814021	0.000018818	-0.000006327		
6P3/2			0.550875550	0.000004627	-0.000000466		
6D3/2			0.342286087	0.000005800	-0.000001477		
7S1/2			0.268054122	0.000003139	-0.000000517		
5P3/2 -- ( 4)	31.347948	-145.459498	1.044389195	0.000105395		-0.000050858	0.000007844
5D3/2			0.971270338	0.000041878	-0.000003010		
5D5/2			0.914765490	0.000078445	-0.000016113		
6S1/2			0.667048498	0.000046465	-0.000007449		
6P1/2			0.608350390	0.000009356	-0.000000940		
6P3/2			0.540252262	0.000011540	-0.000002380		
6D3/2			0.342385784	0.000001306	-0.000000114		
7S1/2			0.266829321	0.000004549	-0.000000757		
5D3/2 -- ( 4)	23.828791	-124.818347	0.917102412	0.000102486		-0.000000857	0.000000172
5D5/2			0.912642196	0.000018741	-0.000000005		
6S1/2			0.651046321	0.000011942	-0.000000355		
6P1/2			0.587946480	0.000027718	-0.000003201		
6P3/2			0.535923954	0.000005553	-0.000000303		
6D3/2			0.337415369	0.000003717	-0.000000451		
7S1/2			0.265359548	0.000001198	-0.000000053		
5D5/2 -- ( 6)	22.063082	-120.320034	0.892910337	0.000083733		-0.000000147	0.000000045
6S1/2			0.645811755	0.000015149	-0.000000301		
6P1/2			0.592692673	0.000007080	-0.000000140		
6P3/2			0.530756688	0.000013596	-0.000001306		
6D3/2			0.339284743	0.000001002	-0.000000027		
7S1/2			0.264900258	0.000001410	-0.000000049		
6S1/2 -- ( 2)	10.484988	-73.435467	0.560364357	0.000010080		-0.001299833	0.000056876
6P1/2			0.465399858	0.000011599	-0.000001608		
6P3/2			0.437671567	0.000010933	-0.000003050		
6D3/2			0.319161257	0.000003256	-0.000000442		
7S1/2			0.252038380	0.000000803	-0.000000397		
6P1/2 -- ( 2)	8.121637	-64.388461	0.496760420	0.000013514		-0.000171703	0.000010764



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
ACTINIUM	6D1	Z=89	A=227 R=1.38334E-04 A.U.					
	6P3/2		0.439499330	0.000001306	-0.000000043			
	6D3/2		0.300437072	0.000009063	-0.000002120			
	7S1/2		0.251144866	0.000001728	-0.000000267			
6P3/2 -- ( 4)	5.763953	-55.729801	0.421683957	0.000006022		-0.000007694	0.000001186	
	6D3/2		0.303334428	0.000002029	-0.000000202			
	7S1/2		0.245732928	0.000002321	-0.000000339			
6D3/2 -- ( 1)	1.916045	-32.552345	0.000000000	0.000000000		-0.000000051	0.000000010	
	7S1/2		0.212514312	0.000000283	-0.000000004			
7S1/2 -- ( 2)	1.302133	-25.231400	0.202618553	0.000000414		-0.000140064	0.000006129	
ETDT	-25735.50948	30973.27105	-65978.74937	9243.33833	37.246889267	-3.941159255	-7.008070678	0.332855239
THORIUM	6D2	Z=90	A=232 R=1.39342E-04 A.U.					
1S1/2 -- ( 2)	5978.531444	-10590.138494	67.965164716	11.111091226		-3.010477574	0.145452326	
	2S1/2		21.378267890	0.617662614	-0.075631917			
	2P1/2		26.553497567	1.275331353	-0.160641502			
	2P3/2		21.135667494	0.541694994	-0.156501469			
	3S1/2		8.944305655	0.136516521	-0.017860477			
	3P1/2		10.000261705	0.257688875	-0.031871245			
	3P3/2		8.508436595	0.122700404	-0.036541527			
	3D3/2		8.668027001	0.005449388	-0.000614522			
	3D5/2		8.266845447	0.002143369	-0.000686255			
	4S1/2		4.132203231	0.036281573	-0.004815781			
	4P1/2		4.334219077	0.065172778	-0.008027630			
	4P3/2		3.779191316	0.031296677	-0.009384950			
	4D3/2		3.664115983	0.001561495	-0.000176759			
	4D5/2		3.522500965	0.000613764	-0.000198376			
	4F5/2		3.247677537	0.000004766	-0.000000492			
	4F7/2		3.194310568	0.000001833	-0.000000603			
	5S1/2		1.914342760	0.009026026	-0.001202443			
	5P1/2		1.883119278	0.015044765	-0.001851283			
	5P3/2		1.662832241	0.007148568	-0.002147197			
	5D3/2		1.452152947	0.000299169	-0.000033893			
	5D5/2		1.399971003	0.000116597	-0.000037760			
	6S1/2		0.839139547	0.001830081	-0.000244012			
	6P1/2		0.757276920	0.002614461	-0.000321645			
	6P3/2		0.659566358	0.001162659	-0.000349345			
	6D3/2		0.413933928	0.000022510	-0.000002550			
	7S1/2		0.299741683	0.000207290	-0.000027643			
2S1/2 -- ( 2)	1478.693542	-2666.195347	15.548723599	0.245480198		-0.469083902	0.021202341	
	2P1/2		15.553407630	0.075081016	-0.000093136			
	2P3/2		14.098057564	0.103351137	-0.003747761			
	3S1/2		7.365687470	0.029572911	-0.007120294			
	3P1/2		8.111300539	0.050723221	-0.007803326			

TABLE 1.-- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
THORIUM	602	Z=90	A=232	R=1.39342E-04	A.U.		
3P3/2			7.314684161	0.030645778	-0.003457641		
3D3/2			8.133497849	0.028587712	-0.003906548		
3D5/2			7.831025666	0.012183166	-0.003843222		
4S1/2			3.729300547	0.007791197	-0.001977031		
4P1/2			3.861522128	0.013297384	-0.002104325		
4P3/2			3.483420086	0.008079586	-0.001029784		
4D3/2			3.544355276	0.005953368	-0.000386032		
4D5/2			3.417304440	0.002673442	-0.0000963349		
4F5/2			3.243463039	0.000385204	-0.000050399		
4F7/2			3.190627640	0.000137829	-0.000049031		
5S1/2			1.814939100	0.001933421	-0.000495822		
5P1/2			1.774211909	0.003089208	-0.000491601		
5P3/2			1.595687787	0.001855962	-0.000242465		
5D3/2			1.428067554	0.001070438	-0.000156416		
5D5/2			1.380644280	0.000482852	-0.000156330		
6S1/2			0.819034375	0.000391777	-0.000100706		
6P1/2			0.738358457	0.000537519	-0.000085636		
6P3/2			0.648659056	0.000302185	-0.000039674		
6D3/2			0.412130296	0.000079773	-0.000011677		
7S1/2			0.297465174	0.000044371	-0.000011410		
2P1/2 -- ( 2 )	1477.944181	-2665.682344	19.349689689	0.563234556		-0.072687684	0.004753946
2P3/2			16.581385207	0.064432460	-0.000251132		
3S1/2			7.861504555	0.020156771	-0.001384754		
3P1/2			8.111083978	0.047233906	-0.006953575		
3P3/2			7.642403140	0.015932768	-0.000423544		
3D3/2			8.150984870	0.083909894	-0.019971444		
3D5/2			8.045027532	0.002435350	-0.000584256		
4S1/2			3.848282904	0.005294042	-0.000406639		
4P1/2			3.873826865	0.011567853	-0.001870590		
4P3/2			3.562830606	0.004065630	-0.000127651		
4D3/2			3.541519701	0.018648193	-0.004571106		
4D5/2			3.466611869	0.000635299	-0.000143612		
4F5/2			3.244453366	0.000444431	-0.000093188		
4F7/2			3.192664630	0.000024385	-0.000009315		
5S1/2			1.843905029	0.001312726	-0.000103384		
5P1/2			1.777629880	0.002650732	-0.000437046		
5P3/2			1.613629958	0.000928274	-0.000030185		
5D3/2			1.429502219	0.003398803	-0.000838009		
5D5/2			1.389612134	0.000118790	-0.000026499		
6S1/2			0.824866657	0.000265955	-0.000021065		
6P1/2			0.738973106	0.000459922	-0.000076136		
6P3/2			0.651570806	0.000150961	-0.000004944		
6D3/2			0.412238909	0.000253816	-0.000062636		
7S1/2			0.298125192	0.000030120	-0.000002388		
2P3/2 -- ( 4 )	962.353611	-1998.928053	15.368188949	0.240303991		-0.003243709	0.000524840
3S1/2			7.600340201	0.024773522	-0.002011044		
3P1/2			8.175182856	0.015057687	-0.000711354		
3P3/2			7.232426789	0.029852576	-0.002794270		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(L-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
THORIUM 6D2 Z=90 A=232 R=1.34342E-J4 A.U.							
3D3/2			8.232978310	0.025136543	-0.002424553		
3D5/2			7.749072524	0.041349495	-0.011757458		
4S1/2			3.781019459	0.006119567	-0.000530867		
4P1/2			3.876257094	0.003692100	-0.000201079		
4P3/2			3.467621020	0.007189604	-0.000746975		
4D3/2			3.550774618	0.005356663	-0.000520873		
4D5/2			3.402766782	0.008680344	-0.002552798		
4F5/2			3.243606228	0.000320843	-0.000031155		
4F7/2			3.189624048	0.000275908	-0.000089359		
5S1/2			1.827280479	0.001496971	-0.000132044		
5P1/2			1.777537441	0.000846835	-0.000047588		
5P3/2			1.592314615	0.001620635	-0.000172031		
5D3/2			1.431087239	0.000969461	-0.000094467		
5D5/2			1.378118603	0.001554122	-0.000459817		
6S1/2			0.821500871	0.000302346	-0.000026773		
6P1/2			0.738933572	0.000146966	-0.000008313		
6P3/2			0.648118072	0.000262868	-0.000028024		
6D3/2			0.412356091	0.000072323	-0.000007050		
7S1/2			0.297744051	0.000034223	-0.000003033		
3S1/2 -- ( 2)	472.448909	-972.504730	5.905913633	0.015915410		-0.109798940	0.004915081
3P1/2			5.457307690	0.005429225	-0.000064392		
3P3/2			5.117765395	0.007734782	-0.000795541		
3D3/2			5.876450000	0.004867876	-0.000169321		
3D5/2			5.773094089	0.006289467	-0.000212651		
4S1/2			3.252093610	0.002669051	-0.000942284		
4P1/2			3.364472063	0.003750979	-0.000649214		
4P3/2			3.073242963	0.002171225	-0.000271618		
4D3/2			3.137947559	0.001422878	-0.000137924		
4D5/2			3.057893656	0.001397782	-0.000115946		
4F5/2			3.116460628	0.001353523	-0.000190114		
4F7/2			3.073061557	0.000616937	-0.000185844		
5S1/2			1.703468996	0.000658838	-0.000241050		
5P1/2			1.662867244	0.000904241	-0.000161535		
5P3/2			1.505101294	0.000521863	-0.000069597		
5D3/2			1.357274080	0.000279154	-0.000029497		
5D5/2			1.316999272	0.000251601	-0.000024844		
6S1/2			0.796702981	0.000133264	-0.000049055		
6P1/2			0.719119891	0.000158220	-0.000028416		
6P3/2			0.634018262	0.000085622	-0.000011547		
6D3/2			0.406858102	0.000021043	-0.000002249		
7S1/2			0.294941003	0.000015088	-0.000005559		
3P1/2 -- ( 2)	467.212613	-965.434702	6.307064152	0.031806091		-0.019091562	0.001225159
3P3/2			5.629554650	0.003365452	-0.000044107		
3D3/2			5.758652652	0.011189168	-0.000908803		
3D5/2			6.070646004	0.004671331	-0.000041026		
4S1/2			3.365291312	0.002252793	-0.000270984		
4P1/2			3.309795146	0.003825475	-0.000876940		
4P3/2			3.127135060	0.001102379	-0.000064067		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
THORIUM	6D2	Z=90	A=232	R=1.39342E-04	A.U.		
4D3/2			3.160203495	0.003189224	-0.000470164		
4D5/2			3.095378484	0.000952414	-0.000032216		
4F5/2			3.108141130	0.002302837	-0.0000508481		
4F7/2			3.191325406	0.000253319	-0.000053912		
5S1/2			1.727469301	0.002542838	-0.000070447		
5P1/2			1.654036549	0.0008663197	-0.000029753		
5P3/2			1.516319576	0.000256162	-0.000016714		
5D3/2			1.361573120	0.000636953	-0.000011957		
5D5/2			1.323565329	0.000166959	-0.000006809		
6S1/2			0.801410482	0.000109256	-0.000014396		
6P1/2			0.717697918	0.000149291	-0.000036637		
6P3/2			0.535621985	0.000041774	-0.000002781		
6D3/2			0.407181202	0.000048136	-0.000001785		
7S1/2			0.295471286	0.000012360	-0.000001633		
3P3/2 -- ( 4)	337.255785	-789.393673	5.403557002	0.014880147		-0.000908800	0.000144266
3D3/2			5.759788056	0.003328023	-0.000018992		
3D5/2			5.485935858	0.008159188	-0.000157064		
4S1/2			3.292118312	0.003344073	-0.000435891		
4P1/2			3.342529417	0.001467239	-0.000111783		
4P3/2			3.017932846	0.002528771	-0.000366785		
4D3/2			3.109664498	0.001291343	-0.000122136		
4D5/2			3.022293965	0.002757302	-0.000425220		
4F5/2			3.098406343	0.001169174	-0.000117607		
4F7/2			3.033172656	0.001127481	-0.000333253		
5S1/2			1.710410792	0.000756426	-0.000103203		
5P1/2			1.657750236	0.000327745	-0.000027976		
5P3/2			1.493911561	0.000560351	-0.000087120		
5D3/2			1.352342307	0.000246273	-0.000024578		
5D5/2			1.310837788	0.000507811	-0.000085976		
6S1/2			0.797995277	0.000150450	-0.000020725		
6P1/2			0.718229012	0.000056602	-0.000004933		
6P3/2			0.632238121	0.000090584	-0.000014249		
6D3/2			0.406492274	0.000018493	-0.000001858		
7S1/2			0.295085227	0.000016986	-0.000002344		
3D3/2 -- ( 4)	331.067377	-780.910645	6.296149711	0.025451171		-0.000017087	0.000003534
3D5/2			6.248634458	0.004613289	-0.000000407		
4S1/2			3.395713418	0.001232491	-0.000032042		
4P1/2			3.407223428	0.002507769	-0.000187313		
4P3/2			3.141404332	0.000852310	-0.000021889		
4D3/2			3.134893575	0.002949357	-0.000288859		
4D5/2			3.120951476	0.000965029	-0.000014142		
4F5/2			3.084905778	0.005210521	-0.001291019		
4F7/2			3.110605342	0.000176998	-0.000020904		
5S1/2			1.733956093	0.000294231	-0.000009982		
5P1/2			1.672730686	0.000528382	-0.000042167		
5P3/2			1.519224118	0.000190617	-0.000005909		
5D3/2			1.358303702	0.000510149	-0.000054961		
5D5/2			1.327990601	0.000171179	-0.000003025		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
THORIUM	6D2	Z=90	A=232	R=1.39342E-04	A.U.		
	6S1/2		0.802683510	0.000059140	-0.000002115		
	6P1/2		0.720830180	0.000090264	-0.000007309		
	6P3/2		0.636274017	0.000030871	-0.000000991		
	6D3/2		0.406950070	0.000037812	-0.000004125		
	7S1/2		0.295614643	0.000006689	-0.000000241		
3D5/2 -- ( 6)	306.301303	-744.558711	6.088423816	0.020981132		-0.000002935	0.000000921
	4S1/2		3.373136878	0.001437055	-0.000032160		
	4P1/2		3.412725772	0.001029767	-0.000016017		
	4P3/2		3.109234367	0.001658439	-0.000071896		
	4D3/2		3.182236622	0.000787790	-0.000015638		
	4D5/2		3.057196098	0.002592076	-0.000182225		
	4F5/2		3.143196082	0.001093280	-0.000080560		
	4F7/2		3.049241249	0.003247819	-0.000903310		
	5S1/2		1.728620711	0.000334247	-0.000009987		
	5P1/2		1.672858078	0.000226159	-0.000004860		
	5P3/2		1.512529611	0.000354486	-0.000017312		
	5D3/2		1.365055337	0.000139364	-0.000003347		
	5D5/2		1.317826015	0.000442917	-0.000034425		
	6S1/2		0.801612215	0.000066841	-0.000002115		
	6P1/2		0.720819223	0.000038938	-0.000000887		
	6P3/2		0.635203667	0.000056927	-0.000002845		
	6D3/2		0.407436318	0.000010365	-0.000000255		
	7S1/2		0.295493496	0.000007553	-0.000000241		
4S1/2 -- ( 2)	161.293779	-416.673196	2.701647736	0.001503853		-0.029597311	0.001321782
	4P1/2		2.406163513	0.000652767	-0.000030567		
	4P3/2		2.281282385	0.000916701	-0.000174693		
	4D3/2		2.445990773	0.000645797	-0.000059442		
	4D5/2		2.405985126	0.000568210	-0.000067292		
	4F5/2		2.501342529	0.000458962	-0.000038631		
	4F7/2		2.481515777	0.000468855	-0.000039678		
	5S1/2		1.531716105	0.000266721	-0.000116515		
	5P1/2		1.510537464	0.000266998	-0.000052351		
	5P3/2		1.377877327	0.000147053	-0.000028853		
	5D3/2		1.255041715	0.000068684	-0.000007998		
	5D5/2		1.220686206	0.000094319	-0.000008103		
	6S1/2		0.764071064	0.000053933	-0.000024290		
	6P1/2		0.693503241	0.000049013	-0.000009903		
	6P3/2		0.614007357	0.000024787	-0.000004897		
	6D3/2		0.399358730	0.000005175	-0.000000621		
	7S1/2		0.291280617	0.000006103	-0.000002760		
4P1/2 -- ( 2)	155.586254	-407.245106	2.716310719	0.002795654		-0.005123355	0.000327287
	4P3/2		2.440329311	0.000278360	-0.000007010		
	4D3/2		2.302235907	0.001573687	-0.000273743		
	4D5/2		2.4632260950	0.000343980	-0.000011276		
	4F5/2		2.458988510	0.000744812	-0.000095405		
	4F7/2		2.507342313	0.000339228	-0.000011402		
	5S1/2		1.560998269	0.000296974	-0.000044028		
	5P1/2		1.481762936	0.000332197	-0.000096971		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
THORIUM	602	Z=90	A=232	R=1.39342E-04	A.U.		
5P3/2			1.388432384	0.000087555	-0.000007502		
5D3/2			1.248522865	0.000131184	-0.000020945		
5D5/2			1.224724657	0.000068712	-0.000002766		
6S1/2			0.768904726	0.000057473	-0.000009029		
6P1/2			0.689423626	0.000056868	-0.000017384		
6P3/2			0.615482838	0.000014554	-0.000001360		
6D3/2			0.398939883	0.000009919	-0.000001599		
7S1/2			0.291810741	0.000006461	-0.000001024		
4P3/2 -- ( 4)	115.493941	-346.265201	2.361536335	0.001326150		-0.000243595	0.000038486
4D3/2			2.363438357	0.000366705	-0.000011264		
4D5/2			2.233493615	0.000837589	-0.000071636		
4F5/2			2.391088699	0.000309359	-0.000013343		
4F7/2			2.343534615	0.000527407	-0.000039228		
5S1/2			1.530866729	0.000470173	-0.000072493		
5P1/2			1.491586043	0.000147355	-0.000013714		
5P3/2			1.351410725	0.000217822	-0.000039888		
5D3/2			1.241075355	0.000059372	-0.000005305		
5D5/2			1.204167846	0.000144953	-0.000013656		
6S1/2			0.763339345	0.000085737	-0.000013803		
6P1/2			0.690248871	0.000024863	-0.000002546		
6P3/2			0.610023674	0.000034775	-0.000006733		
6D3/2			0.398319674	0.000004602	-0.000000441		
7S1/2			0.291188132	0.000009562	-0.000001549		
4D3/2 -- ( 4)	106.625387	-330.000102	2.382153706	0.001808693		-0.000005153	0.000001061
4D5/2			2.371240122	0.000328851	-0.000000062		
4F5/2			2.291139233	0.000940278	-0.000101273		
4F7/2			2.399218080	0.000284066	-0.000002017		
5S1/2			1.540245456	0.000150226	-0.000005892		
5P1/2			1.482282545	0.000348075	-0.000039373		
5P3/2			1.370930935	0.000085872	-0.000003733		
5D3/2			1.224867491	0.000199719	-0.000024223		
5D5/2			1.210998454	0.000061596	-0.000001263		
6S1/2			0.764983368	0.000028493	-0.000001425		
6P1/2			0.689207415	0.000053845	-0.000006377		
6P3/2			0.612721591	0.000013544	-0.000000660		
6D3/2			0.397270011	0.000014574	-0.000001876		
7S1/2			0.291369725	0.000003197	-0.000000165		
4D5/2 -- ( 6)	99.100739	-317.181985	2.321448721	0.001490318		-0.000000884	0.000000276
4F5/2			2.373720927	0.000258853	-0.000005305		
4F7/2			2.276033221	0.000787481	-0.000062798		
5S1/2			1.530677077	0.000175399	-0.000005773		
5P1/2			1.487881187	0.000104440	-0.000002423		
5P3/2			1.358775742	0.000190925	-0.000014730		
5D3/2			1.238809168	0.000052868	-0.000001458		
5D5/2			1.193700626	0.000173573	-0.000015184		
6S1/2			0.763252835	0.000032220	-0.000001417		
6P1/2			0.689659998	0.000017061	-0.000000526		
6P3/2			0.610970693	0.000028659	-0.000002336		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
THORIUM	602	Z=90	A=232 R=1.39342E-04 A.U.				
4F5/2 -- ( 6)	85.564034	-292.291603	0.398150529 0.291176399 2.397042123 2.420284817 1.539836440 1.485190767 1.369587827 1.234284097 1.209324619 0.765021559 0.689749665 0.612566690 0.397913575 0.291373606	0.000003898 0.000003601 0.001813899 0.000290755 0.000090832 0.000125398 0.000059273 0.000118534 0.000039926 0.000017965 0.000020164 0.000009362 0.000008313 0.000001975	-0.000000122 -0.000000165 -0.000000002 -0.000000001 -0.000000045 -0.000000545 -0.000000206 -0.000004435 -0.000000345 -0.000000112 -0.000000258 -0.000000069 -0.000000328 -0.000000015		0.000000001
4F7/2 -- ( 8)	83.030629	-287.488465	2.373152970 1.535212907 1.489848919 1.363008768 1.239852106 1.20197057 0.764178537 0.690078803 0.611671568 0.398234658 0.291279251	0.001661379 0.000111765 0.000078978 0.000098906 0.000044397 0.000103302 0.000020458 0.000012629 0.000014926 0.000003197 0.000002287	-0.000000032 -0.000000072 -0.000000483 -0.000000173 -0.000002892 -0.000000109 -0.000000056 -0.000000147 -0.000000018 -0.000000015		0.000000000
5S1/2 -- ( 2)	48.786574	-183.446695	1.284699645 1.112222056 1.058061981 1.049237789 1.029645272 0.701130748 0.647094235 0.577361288 0.386111340 0.284514756	0.000143429 0.000098228 0.000123471 0.000087946 0.000047874 0.000022338 0.000013440 0.000009304 0.000003940 0.000002531	-0.000009745 -0.000031441 -0.000011492 -0.000011815 -0.000011104 -0.000003098 -0.000003003 -0.000000620 -0.000001289		0.000329843
5P1/2 -- ( 2)	44.331923	-173.479385	1.231838812 1.104860265 0.972992312 1.032728684 0.706794341 0.634816151 0.578518111 0.383262247 0.285009238	0.000240229 0.000023492 0.000220952 0.000019321 0.000034688 0.000022017 0.000005368 0.000007717 0.000003725	-0.000000836 -0.000049774 -0.00001891 -0.000005537 -0.000007480 -0.000000558 -0.000001979 -0.000000618		0.000076570
5P3/2 -- ( 4)	33.144480	-151.063047	1.070406217 1.000289905 0.942189279 0.693095462	0.000114101 0.000045165 0.000085226 0.000053266	-0.000003194 -0.000017261 -0.000008571		0.000008887

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
THORIUM 6D2 Z=90 A=232 R=1.39342E-04 A.U.								
5D3/2 -- ( 4)	25.619791	-130.737925	0.637336131 0.566811743 0.383276294 0.283623677 0.948202354	0.000011053 0.000013530 0.000001753 0.000005452 0.000113809	-0.000001119 -0.000002833 -0.000000155 -0.000000913	-0.000000998	0.000000205	
5D5/2 -- ( 6)	23.729224	-126.027258	0.943688082 0.677549413 0.616511108 0.562780422 0.377160099 0.282120243	0.000020789 0.000013777 0.000032740 0.000006533 0.000005191 0.000001446	-0.000000005 -0.000000435 -0.000003852 -0.000000363 -0.000000656 -0.000000067	-0.000000170	0.000000053	
6S1/2 -- ( 2)	11.640486	-77.785287	0.923404111 0.672087416 0.621354584 0.557323277 0.379489551 0.281616198	0.000017325 0.000008264 0.000015956 0.000001402 0.000001690 0.000011568	-0.000000373 -0.000000172 -0.000001564 -0.000000040 -0.000000062	-0.001499747	0.000066926	
6P1/2 -- ( 2)	9.212091	-68.851161	0.487432389 0.458395081 0.354190408 0.267711050 0.522570044	0.000013111 0.000012922 0.000004484 0.000000986 0.000015932	-0.000001799 -0.000003594 -0.000000610 -0.000000496	-0.000209182	0.000013344	
6P3/2 -- ( 4)	6.550829	-59.590178	0.462630821 0.332282777 0.267024630 0.444073320	0.000001520 0.000012351 0.000002109 0.000007117	-0.000000056 -0.000002889 -0.000000329	-0.0000009182	0.000001449	
6D3/2 -- ( 2)	2.533146	-37.257378	0.335699513 0.261280351 3.279239673 0.231835121	0.000002692 0.000002893 0.000002686 0.000000373	-0.000000266 -0.000000429	-0.000000075	0.000000015	
7S1/2 -- ( 2)	1.519132	-27.233062	0.215698030	0.000000504	-0.000000062	-0.000169899	0.000007582	
ETOT	-26483.06830	32044.32978	-68031.67412	9476.68967	38.796672429	-4.101956346	-7.470622433	0.362282819
PROTDACTINIUM 5F2 6D1 Z=91 A=231 R=1.39141E-04 A.U.								
1S1/2 -- ( 2)	6183.718335	-10915.250687	69.117812365 21.763463861 27.083453564 21.413032564 9.105254341 10.194108181 8.632139261 8.795340422	11.538305705 0.643857454 1.328715994 0.560210820 0.142511249 0.268597356 0.127466337 0.005641782	-0.078993226 -0.166159023 -0.161838491 -0.018677811 -0.032945020 -0.037956094 -0.000632700	-3.201039426	0.157806329	



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PROTOACTINIUM 5F2 6D1 Z=91 A=231 R=1.39141E-04 A.U.							
3D5/2			8.378606051	0.002216522	-0.000709532		
4S1/2			4.211765130	0.038037720	-0.005057758		
4P1/2			4.424014286	0.068253719	-0.008335276		
4P3/2			3.843671835	0.032715754	-0.009809431		
4D3/2			3.731285472	0.001631714	-0.000183676		
4D5/2			3.584191956	0.000640977	-0.000207135		
4F5/2			3.314714680	0.000005046	-0.000000518		
4F7/2			3.259306048	0.000001944	-0.000000640		
5S1/2			1.960882636	0.009588930	-0.001279710		
5P1/2			1.933364114	0.016002408	-0.001952152		
5P3/2			1.701262307	0.007585008	-0.002278092		
5D3/2			1.491000938	0.000319376	-0.000035980		
5D5/2			1.435804226	0.000124275	-0.000040241		
5F5/2			0.851589395	0.000000411	-0.000000042		
6S1/2			0.852607672	0.001906464	-0.000254652		
6P1/2			0.766799974	0.002690801	-0.000328178		
6P3/2			0.661461122	0.001171992	-0.000352121		
6D3/2			0.393321571	0.00019706	-0.000002220		
7S1/2			0.294852364	0.000197879	-0.000026435		
2S1/2 -- ( 2)	1534.938389	-2754.493450	15.815894594	0.257346653		-0.503374958	0.023194682
2P1/2			15.834658514	0.078726953	-0.000094895		
2P3/2			14.307955604	0.107512639	-0.004070031		
3S1/2			7.489943251	0.031040051	-0.007463873		
3P1/2			8.254990508	0.053335190	-0.008192887		
3P3/2			7.421796794	0.031676180	-0.003546437		
3D3/2			8.254880454	0.029764622	-0.004064012		
3D5/2			7.940227110	0.012655948	-0.003996907		
4S1/2			3.797638292	0.008212805	-0.002081713		
4P1/2			3.936178756	0.014047957	-0.002219492		
4P3/2			3.541953620	0.008410317	-0.001065202		
4D3/2			3.598812562	0.006256648	-0.000903014		
4D5/2			3.477384117	0.002804621	-0.000907042		
4F5/2			3.310404627	0.000407343	-0.000053247		
4F7/2			3.255532488	0.000145609	-0.000051807		
5S1/2			1.857386048	0.002065137	-0.000529058		
5P1/2			1.819196287	0.003314754	-0.000526650		
5P3/2			1.631744177	0.001961441	-0.000254769		
5D3/2			1.465890492	0.001148174	-0.000167653		
5D5/2			1.415779376	0.000516579	-0.000167515		
5F5/2			0.851248422	0.000031932	-0.000004202		
6S1/2			0.832070935	0.000410338	-0.000105373		
6P1/2			0.747609619	0.000558090	-0.000088772		
6P3/2			0.650733063	0.000303413	-0.000039610		
6D3/2			0.391779545	0.000070167	-0.000010263		
7S1/2			0.292721462	0.000042586	-0.000010940		
2P1/2 -- ( 2)	1534.448008	-2754.332731	19.711753119	0.590892180		-0.080396665	0.005351418
2P3/2			16.832203340	0.066621168	-0.000274760		
3S1/2			7.998909842	0.021161590	-0.001447898		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PROTOACTINIUM 5F2 6D1 Z=91 A=231 R=1.39141E-04 A.U.							
3P1/2			8.255533833	0.049656933	-0.007293076		
3P3/2			7.756676672	0.016552566	-0.000439472		
3D3/2			8.273828388	0.087216140	-0.020756998		
3D5/2			8.156331778	0.002514730	-0.000605959		
4S1/2			3.920306720	0.005582931	-0.000427229		
4P1/2			3.949057706	0.012222332	-0.001972168		
4P3/2			3.623583669	0.004251532	-0.000133289		
4D3/2			3.606415877	0.019568885	-0.004796399		
4D5/2			3.527627348	0.000662264	-0.000150425		
4F5/2			3.311412555	0.000468748	-0.000098268		
4F7/2			3.257625909	0.000025669	-0.000009813		
5S1/2			1.887605808	0.001402823	-0.000110097		
5P1/2			1.822826157	0.002844517	-0.000468084		
5P3/2			1.650462013	0.000985370	-0.000032003		
5D3/2			1.467441841	0.003641205	-0.000897778		
5D5/2			1.425107862	0.000126345	-0.000028315		
5F5/2			0.851328525	0.000036901	-0.000007777		
6S1/2			0.838047553	0.000278690	-0.000022000		
6P1/2			0.748241271	0.000477553	-0.000078907		
6P3/2			0.653618789	0.000152240	-0.000004980		
6D3/2			0.391875815	0.000222984	-0.000055028		
7S1/2			0.293341261	0.000028923	-0.000002285		
2P3/2 -- ( 4)	986.650749	-2047.145741	15.563308043	0.248977972		-0.003469749	0.000574655
3S1/2			7.723776151	0.025963286	-0.002124409		
3P1/2			8.311606382	0.015756652	-0.000746422		
3P3/2			7.332608847	0.031019550	-0.002906769		
3D3/2			8.320807462	0.026154803	-0.002518067		
3D5/2			7.852916174	0.042974333	-0.012220141		
4S1/2			3.849132935	0.006432251	-0.000561831		
4P1/2			3.949172199	0.003879170	-0.000211804		
4P3/2			3.524413095	0.007513070	-0.000781624		
4D3/2			3.614606335	0.005614411	-0.000544815		
4D5/2			3.461541295	0.009095125	-0.002675350		
4F5/2			3.310466693	0.000342203	-0.000033195		
4F7/2			3.254429845	0.000294017	-0.000095246		
5S1/2			1.869780572	0.001593768	-0.000141538		
5P1/2			1.822165583	0.000903508	-0.000050915		
5P3/2			1.627926860	0.001718538	-0.000182711		
5D3/2			1.468857424	0.001036833	-0.000100824		
5D5/2			1.412975612	0.001659960	-0.000491291		
5F5/2			0.851254583	0.000026712	-0.000002606		
6S1/2			0.834508784	0.000315608	-0.000028138		
6P1/2			0.748106139	0.000151716	-0.000008607		
6P3/2			0.650150920	0.000264802	-0.000028276		
6D3/2			0.391961481	0.000063426	-0.000006170		
7S1/2			0.292974048	0.000032737	-0.000002921		
3S1/2 -- ( 2)	490.451157	-1003.718242	6.004182334	0.016723872		-0.118118564	0.005389623
3P1/2			5.550798134	0.005698282	-0.000065924		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PROTOACTINIUM 5F2 6D1 Z=91 A=231 R=1.39141E-04 A.U.							
3P3/2			5.195912196	0.008099766	-0.000859551		
3D3/2			5.968404767	0.005097662	-0.000179859		
3D5/2			5.860624393	0.006563852	-0.000226643		
4S1/2			3.309530869	0.002815796	-0.000992983		
4P1/2			3.426647944	0.003975337	-0.000687328		
4P3/2			3.123318957	0.002249184	-0.000282676		
4D3/2			3.193716430	0.001491449	-0.000144396		
4D5/2			3.110821011	0.001468490	-0.000120990		
4F5/2			3.179983229	0.001433836	-0.000201431		
4F7/2			3.135013837	0.000653076	-0.000196904		
5S1/2			1.741837893	0.000704247	-0.000257417		
5P1/2			1.703274487	0.000973297	-0.000173717		
5P3/2			1.537926673	0.000549149	-0.000073503		
5D3/2			1.392061942	0.000299056	-0.000031600		
5D5/2			1.349613873	0.000269577	-0.000026504		
5F5/2			0.841923411	0.000093014	-0.000013541		
6S1/2			0.809384818	0.000139676	-0.000051369		
6P1/2			0.728229724	0.000164790	-0.000029571		
6P3/2			0.636328592	0.000085610	-0.000011586		
6D3/2			0.387270875	0.000018487	-0.000001975		
7S1/2			0.290371496	0.000014491	-0.000006535		
3P1/2 -- ( 2)	485.169030	-996.621211	6.416654204	0.033448727		-0.021171891	0.001382113
3P3/2			5.716692560	0.003478866	-0.000048596		
3D3/2			5.849687453	0.011757259	-0.000973148		
3D5/2			6.164212136	0.004869224	-0.000044013		
4S1/2			3.425752409	0.002372640	-0.000284873		
4P1/2			3.370954269	0.004044320	-0.000925780		
4P3/2			3.178802972	0.001146709	-0.000067243		
4D3/2			3.216740809	0.003326517	-0.000488647		
4D5/2			3.149410978	0.001003257	-0.000033766		
4F5/2			3.171681457	0.002439131	-0.000538745		
4F7/2			3.164171660	0.000267774	-0.000057108		
5S1/2			1.766787770	0.000579347	-0.000075092		
5P1/2			1.694185030	0.000926686	-0.000224950		
5P3/2			1.549640264	0.000270663	-0.000017810		
5D3/2			1.396605630	0.000679356	-0.000108530		
5D5/2			1.356495905	0.000179328	-0.000007290		
5F5/2			0.841470944	0.000160406	-0.000036432		
6S1/2			0.814184010	0.000114335	-0.000015049		
6P1/2			0.726815968	0.000155071	-0.000038021		
6P3/2			0.638107821	0.000041939	-0.000002816		
6D3/2			0.387550900	0.000042105	-0.000006797		
7S1/2			0.290866993	0.000011853	-0.000001564		
3P3/2 -- ( 4)	346.855326	-809.731376	5.478582324	0.015496018		-0.000976590	0.000158610
3D3/2			5.841362189	0.003463924	-0.000019372		
3D5/2			5.561528238	0.008488177	-0.000163021		
4S1/2			3.348712177	0.003540151	-0.000463478		
4P1/2			3.402168416	0.001551443	-0.000118491		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PROTOACTINIUM 5F2 6D1 Z=91 A=231 R=1.39141E-04 A.U.							
4P3/2			3.065671555	0.002649688	-0.000384786		
4D3/2			3.163225747	0.001362057	-0.000128933		
4D5/2			3.072997641	0.002897641	-0.000447678		
4F5/2			3.160314900	0.001237618	-0.000124461		
4F7/2			3.092931254	0.001193959	-0.000352747		
5S1/2			1.748610931	0.000809592	-0.000110948		
5P1/2			1.697511477	0.000351451	-0.000030086		
5P3/2			1.526072722	0.000595732	-0.000092774		
5D3/2			1.386633849	0.000265139	-0.000026492		
5D5/2			1.342936568	0.000544114	-0.000092390		
5F5/2			0.840630654	0.000077826	-0.000008094		
6S1/2			0.810614319	0.000157812	-0.000021837		
6P1/2			0.727259854	0.000058713	-0.000005134		
6P3/2			0.634536537	0.000091483	-0.000014416		
6D3/2			0.386940663	0.000016325	-0.000001642		
7S1/2			0.290497202	0.000016328	-0.000002263		
3D3/2 -- ( 4)	340.601091	-801.186416	6.387699823	0.026527052		-0.000018902	0.000004002
3D5/2			6.336555288	0.004799374	-0.000000445		
4S1/2			3.455036936	0.001295551	-0.000033771		
4P1/2			3.468869385	0.002646574	-0.000198947		
4P3/2			3.191933036	0.000892777	-0.000022954		
4D3/2			3.189483887	0.003097995	-0.000304184		
4D5/2			3.174199547	0.001012987	-0.000014876		
4F5/2			3.146818331	0.005521987	-0.001368395		
4F7/2			3.173033978	0.000187819	-0.000022160		
5S1/2			1.773072853	0.000313205	-0.000010675		
5P1/2			1.713189653	0.000565393	-0.000045407		
5P3/2			1.552324289	0.000202628	-0.000006300		
5D3/2			1.392954750	0.000546493	-0.000059087		
5D5/2			1.360868352	0.000183166	-0.000003252		
5F5/2			0.840055075	0.000361929	-0.000091204		
6S1/2			0.815389119	0.000061720	-0.000002219		
6P1/2			0.729893678	0.000093421	-0.000007613		
6P3/2			0.638512370	0.000031174	-0.000001004		
6D3/2			0.387338488	0.000033214	-0.000003637		
7S1/2			0.290991340	0.000006397	-0.000000232		
3D5/2 -- ( 6)	314.552326	-763.005730	6.171342651	0.021825315		-0.000003220	0.000001035
4S1/2			3.431370348	0.001509073	-0.000033888		
4P1/2			3.473851746	0.001082445	-0.000016882		
4P3/2			3.158650328	0.001735298	-0.000075404		
4D3/2			3.237303770	0.000826766	-0.000016475		
4D5/2			3.108598264	0.002717695	-0.000191635		
4F5/2			3.206611298	0.001159067	-0.000085328		
4F7/2			3.109546262	0.003441178	-0.000957139		
5S1/2			1.767408145	0.000355301	-0.000010679		
5P1/2			1.713162003	0.000241249	-0.000005216		
5P3/2			1.545293309	0.000376197	-0.000018436		
5D3/2			1.399869964	0.000149215	-0.000003606		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PROTOACTINIUM 5F2 6D1 Z=91 A=231 R=1.39141E-04 A.U.							
5D5/2			1.350214977	0.000473058	-0.000036921		
5F5/2			0.843828540	0.000076992	-0.000005691		
6S1/2			0.814273930	0.000069652	-0.000002218		
6P1/2			0.729855420	0.000040183	-0.000000922		
6P3/2			0.637444375	0.000057385	-0.000002879		
6D3/2			0.387746613	0.000009100	-0.000000226		
7S1/2			0.290875771	0.000007213	-0.000000232		
4S1/2 -- ( 2)	167.977938	-430.296922	2.749944551	0.001589750		-0.031986243	0.001456005
4P1/2			2.450371107	0.000686252	-0.000031522		
4P3/2			2.320366108	0.000973662	-0.000188396		
4D3/2			2.489740147	0.000681854	-0.000062916		
4D5/2			2.448292528	0.000597775	-0.000071416		
4F5/2			2.551047730	0.000484791	-0.000040623		
4F7/2			2.530593733	0.000496625	-0.000041774		
5S1/2			1.564918102	0.000285933	-0.000124998		
5P1/2			1.545691329	0.000289656	-0.000056746		
5P3/2			1.406926899	0.000155654	-0.000031077		
5D3/2			1.285932489	0.000073961	-0.000008657		
5D5/2			1.249820827	0.000101164	-0.000008767		
5F5/2			0.806588796	0.000018600	-0.000001179		
6S1/2			0.776435128	0.000056683	-0.000025543		
6P1/2			0.702591994	0.000051430	-0.000010381		
6P3/2			0.616753725	0.000024899	-0.000004997		
6D3/2			0.380885700	0.000004570	-0.000000551		
7S1/2			0.286983245	0.000005878	-0.000002659		
4P1/2 -- ( 2)	162.180043	-420.782265	2.767106339	0.002960244		-0.005712262	0.000371161
4P3/2			2.482751338	0.000289976	-0.000007799		
4D3/2			2.344382150	0.001669498	-0.000291905		
4D5/2			2.507412570	0.000360855	-0.000012059		
4F5/2			2.508772767	0.000787764	-0.000100564		
4F7/2			2.557862410	0.000359839	-0.000012043		
5S1/2			1.595290085	0.000317089	-0.000047048		
5P1/2			1.516160221	0.000357642	-0.000104566		
5P3/2			1.418001771	0.000092520	-0.000008062		
5D3/2			1.279303444	0.000141126	-0.000022734		
5D5/2			1.254122964	0.000073650	-0.000003002		
5F5/2			0.805955707	0.000029678	-0.000002375		
6S1/2			0.781349957	0.000060167	-0.000009463		
6P1/2			0.698551367	0.000059231	-0.000018132		
6P3/2			0.618227215	0.000014617	-0.000001387		
6D3/2			0.380536992	0.000008745	-0.000001421		
7S1/2			0.287477913	0.000006200	-0.000000983		
4P3/2 -- ( 4)	119.455759	-356.101426	2.399732910	0.001393059		-0.000263462	0.000042582
4D3/2			2.403696959	0.000383968	-0.000011583		
4D5/2			2.271038584	0.000879323	-0.000074484		
4F5/2			2.436086200	0.000325056	-0.000013776		
4F7/2			2.387588166	0.000556337	-0.000040567		
5S1/2			1.563451771	0.000506884	-0.000078333		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PROTOACTINIUM 5F2 6D1 Z=91 A=231 R=1.39141E-04 A.U.							
5P1/2			1.525525086	0.000159396	-0.000014866		
5P3/2			1.379396693	0.000232502	-0.000042750		
5D3/2			1.271126831	0.000064459	-0.000005803		
5D5/2			1.232466509	0.000156592	-0.000014892		
5F5/2			0.800612011	0.000014842	-0.000000672		
6S1/2			0.775587836	0.000090434	-0.000014597		
6P1/2			0.699247931	0.000025979	-0.000002667		
6P3/2			0.612814501	0.000035260	-0.000006852		
6D3/2			0.379982714	0.000004097	-0.000000395		
7S1/2			0.286886921	0.000009246	-0.000001502		
4D3/2 -- ( 4)	110.509562	-339.785422	2.424824984	0.001907098		-0.000005756	0.000001214
4D5/2			2.413043146	0.000345951	-0.000000069		
4F5/2			2.336709416	0.000988577	-0.000104815		
4F7/2			2.446392682	0.000301139	-0.000002098		
5S1/2			1.573697291	0.000160744	-0.000006351		
5P1/2			1.516454032	0.000374994	-0.000042618		
5P3/2			1.399855963	0.000091533	-0.000003994		
5D3/2			1.254690900	0.000215032	-0.000026298		
5D5/2			1.239787776	0.000066169	-0.000001370		
5F5/2			0.799578570	0.000045470	-0.000004063		
6S1/2			0.777346347	0.000029872	-0.000001506		
6P1/2			0.698293538	0.000056044	-0.000006670		
6P3/2			0.615505835	0.000013718	-0.000003671		
6D3/2			0.379111156	0.000012869	-0.000001669		
7S1/2			0.287065158	0.000003072	-0.000000160		
4D5/2 -- ( 6)	102.574205	-326.322849	2.361768612	0.001569160		-0.000000980	0.000000314
4F5/2			2.419815764	0.000272406	-0.000005446		
4F7/2			2.320338013	0.000829226	-0.000064652		
5S1/2			1.563664013	0.000187508	-0.000006220		
5P1/2			1.522033447	0.000112057	-0.000002620		
5P3/2			1.387254796	0.000203435	-0.000015746		
5D3/2			1.268975717	0.000056886	-0.000001566		
5D5/2			1.221826511	0.000186354	-0.000016454		
5F5/2			0.799580524	0.000012814	-0.000000479		
6S1/2			0.775567287	0.000033738	-0.000001496		
6P1/2			0.698711038	0.000017696	-0.000000551		
6P3/2			0.613779017	0.000029215	-0.000002373		
6D3/2			0.379850917	0.000003440	-0.000000108		
7S1/2			0.286882936	0.000003457	-0.000000159		
4F5/2 -- ( 6)	89.041182	-301.639690	2.449279509	0.001929368		-0.000000002	0.000000001
4F7/2			2.472843934	0.000309526	-0.000000002		
5S1/2			1.574568322	0.000097269	-0.000000059		
5P1/2			1.520724471	0.000134725	-0.000000631		
5P3/2			1.399396925	0.000063394	-0.000000234		
5D3/2			1.265224813	0.000127593	-0.000004830		
5D5/2			1.238721667	0.000042983	-0.000000378		
5F5/2			0.795774476	0.000072516	-0.000003258		
6S1/2			0.777603341	0.000018439	-0.000000122		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PROTDACTINIUM 5F2 6D1 Z=91 A=231 R=1.39141E-04 A.U.							
6P1/2			0.699009786	0.0C0020955	-0.0C0000276		
6P3/2			0.615483241	0.000009512	-0.000000072		
6D3/2			0.379701233	0.0C0007345	-0.000000293		
7S1/2			0.287091068	0.000001901	-0.000000015		
4F7/2 -- ( 8)	86.364376	-296.597385	2.424385902	0.001766351		-0.000000001	0.000000000
5S1/2			1.569765555	0.000119447	-0.000000043		
5P1/2			1.525340682	0.000084707	-0.000000084		
5P3/2			1.392661862	0.000105519	-0.000000549		
5D3/2			1.270834782	0.000047801	-0.000000192		
5D5/2			1.230773875	0.000110900	-0.0000003139		
5F5/2			0.801805123	0.000015353	-0.000000099		
6S1/2			0.776743001	0.0C0021447	-0.000000119		
6P1/2			0.699319392	0.000013111	-0.000000060		
6P3/2			0.614607179	0.000015143	-0.000000153		
6D3/2			0.379967729	0.000002824	-0.000000016		
7S1/2			0.287002771	0.000002198	-0.000000014		
5S1/2 -- ( 2)	51.436433	-190.314112	1.313445595	0.000154210		-0.008094083	0.000368209
5P1/2			1.138112352	0.000104221	-0.000010202		
5P3/2			1.081432160	0.000134004	-0.000034230		
5D3/2			1.074482175	0.000094511	-0.000012330		
5D5/2			1.053905560	0.000051543	-0.000012694		
5F5/2			0.743613810	0.000025568	-0.000003259		
6S1/2			0.713422418	0.000023614	-0.000011741		
6P1/2			0.656609695	0.000014186	-0.000003260		
6P3/2			0.581223635	0.0C0009551	-0.000003105		
6D3/2			0.369702812	0.000003490	-0.000000548		
7S1/2			0.280762193	0.000002453	-0.000001248		
5P1/2 -- ( 2)	46.874525	-180.242633	1.261384494	0.000259427		-0.001359235	0.000088215
5P3/2			1.129872473	0.0C0024955	-0.000000954		
5D3/2			0.997046125	0.000238657	-0.000053741		
5D5/2			1.057623761	0.000020801	-0.000002046		
5F5/2			0.729888982	0.0C0042220	-0.000008586		
6S1/2			0.719296841	0.000036435	-0.000005819		
6P1/2			0.644491539	0.0C0023091	-0.000007843		
6P3/2			0.582464351	0.000005398	-0.000000570		
6D3/2			0.367315008	0.0C0006904	-0.000001767		
7S1/2			0.281240989	0.0C0003597	-0.000000596		
5P3/2 -- ( 4)	34.768685	-156.288403	1.093253564	0.000122132		-0.000061831	0.000009981
5D3/2			1.023668139	0.000047978	-0.000003350		
5D5/2			0.963748832	0.0C00090961	-0.000018246		
5F5/2			0.723834711	0.0C0019433	-0.000001782		
6S1/2			0.735149536	0.000056730	-0.0000039127		
6P1/2			0.646746235	0.000011691	-0.000001181		
6P3/2			0.570891501	0.000013807	-0.000002886		
6D3/2			0.367282370	0.000001541	-0.000000135		
7S1/2			0.279925601	0.0C0005342	-0.000000893		
5D3/2 -- ( 4)	27.050970	-135.727930	0.971876063	0.0C0123062		-0.000001139	0.000000240
5D5/2			0.966795969	0.000022382	-0.000000006		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PROTOACTINIUM 5F2 6D1 Z=91 A=231 R=1.39141E-04 A.U.							
5D5/2 -- ( 6)	25.000015	-130.689540	0.673071736	0.000066228	-0.000014853		
5F5/2			0.690058373	0.000014613	-0.000000466		
6S1/2			0.626321556	0.000034467	-0.000004062		
6P1/2			0.567262117	0.000006660	-0.000000369		
6P3/2			0.362154579	0.000004629	-0.000000580		
6D3/2			0.278583882	0.000001410	-0.000000065		
7S1/2			0.945618942	0.000100341		-0.000000192	0.000000061
5F5/2 -- ( 2)	9.648047	-77.494688	0.698358330	0.000014740	-0.000000872		
6S1/2			0.684403382	0.000018353	-0.000000399		
6P1/2			0.631066676	0.000008679	-0.000000180		
6P3/2			0.561871231	0.000016283	-0.000001595		
6D3/2			0.364132674	0.000001246	-0.000000036		
7S1/2			0.278103457	0.000001650	-0.000000060		
6S1/2 -- ( 2)	12.028093	-79.948937	0.557677818	0.000029130		-0.000000000	0.000000000
6P1/2			0.565682527	0.000005731	-0.000000323		
6P3/2			0.522287003	0.000007150	-0.000000433		
6D3/2			0.490559329	0.000002719	-0.000000048		
7S1/2			0.331738161	0.000002431	-0.000000000		
6S1/2 -- ( 2)	9.429100	-70.504404	0.265982667	0.000000524	-0.000000000		
6P1/2			0.593564598	0.000012120		-0.001610714	0.000073262
6P3/2			0.494538886	0.000013583	-0.000001860		
6D3/2			0.462812393	0.000013373	-0.000003723		
7S1/2			0.341896962	0.000004055	-0.000000552		
6P1/2 -- ( 2)	6.539558	-60.420857	0.264927534	0.000000936	-0.000000464		
6P3/2			0.529426101	0.000016522		-0.000229288	0.000014877
6D3/2			0.466517959	0.000001535	-0.000000060		
7S1/2			0.321907030	0.000011262	-0.000002635		
6P3/2 -- ( 4)	2.234015	-35.795155	0.264208551	0.000001990	-0.000000308		
6D3/2			0.446112741	0.000007175		-0.0000009578	0.000001546
7S1/2			0.324412311	0.000002452	-0.000000242		
6D3/2 -- ( 1)	1.437857	-27.076704	0.258317580	0.000002739	-0.000000400		
7S1/2			0.000000000	0.000000000		-0.000000070	0.000000015
ETDT	-27245.58124	33149.35610	0.224887930	0.000000336	-0.000000004		
			0.212600659	0.000000478		-0.000167207	0.000007605
ETDT	-27245.58124	33149.35610	-70166.22535	9742.73589	40.389963159	-4.266253584	-7.965775541
URANIUM 5F3 6D1 Z=92 A=238 R=1.40533E-04 A.U.							
1S1/2 -- ( 2)	6395.281662	-11248.950787	70.288832054	11.977833744		-3.401779568	0.171099140
2S1/2			22.155263970	0.670953431	-0.082480389		
2P1/2			27.625507713	1.383978793	-0.171786494		
2P3/2			21.691478034	0.579095658	-0.167280424		
3S1/2			9.268531114	0.148711147	-0.019525093		
3P1/2			10.391462372	0.279857296	-0.034033597		



TABLE 1.— CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
URANIUM 5F3 6D1 Z=92 A=238 R=1.40533E-04 A.U.							
3P3/2			8.756383154	0.132352795	-0.039406402		
3D3/2			8.923041910	0.005836548	-0.000650817		
3D5/2			8.490342629	0.002290444	-0.000733023		
4S1/2			4.292456800	0.039861684	-0.005309638		
4P1/2			4.515332976	0.071447396	-0.008648555		
4P3/2			3.908560144	0.034180738	-0.010247591		
4D3/2			3.798792861	0.001703597	-0.000190668		
4D5/2			3.646038640	0.000668808	-0.000216085		
4F5/2			3.381642953	0.000005333	-0.000000544		
4F7/2			3.324122764	0.000002057	-0.000000677		
5S1/2			2.008252455	0.010179860	-0.001361003		
5P1/2			1.984880941	0.017011547	-0.002056845		
5P3/2			1.741176949	0.068051310	-0.002417932		
5D3/2			1.533375012	0.000341929	-0.000038303		
5D5/2			1.475527899	0.000132968	-0.000043049		
5F5/2			0.909921306	0.000000485	-0.000000050		
6S1/2			0.875303179	0.002037947	-0.000272706		
6P1/2			0.788873411	0.062880423	-0.000348181		
6P3/2			0.676766332	0.001243222	-0.000373492		
6D3/2			0.400649541	0.060020594	-0.000002307		
7S1/2			0.299963759	0.000205862	-0.000027551		
2S1/2 -- ( 2)	1593.235202	-2845.505954	16.087192096	0.269727828		-0.539900413	0.025359653
2P1/2			16.121041329	0.082537774	-0.000096534		
2P3/2			14.519647899	0.111814699	-0.004418087		
3S1/2			7.615726093	0.032570016	-0.007821397		
3P1/2			8.400771850	0.056068565	-0.008599506		
3P3/2			7.529474572	0.032720740	-0.003634563		
3D3/2			8.376804219	0.030973226	-0.004225433		
3D5/2			8.049603967	0.013139328	-0.004154341		
4S1/2			3.866767572	0.008654232	-0.002191053		
4P1/2			4.011879507	0.014836338	-0.002340168		
4P3/2			3.603856385	0.008748651	-0.001100928		
4D3/2			3.663616690	0.006571257	-0.000947546		
4D5/2			3.537596144	0.002940274	-0.000952328		
4F5/2			3.377220386	0.000430076	-0.000056164		
4F7/2			3.320261989	0.000153582	-0.000054651		
5S1/2			1.900475042	0.002204481	-0.000564162		
5P1/2			1.865210565	0.003555325	-0.000563939		
5P3/2			1.669152526	0.002073461	-0.000267725		
5D3/2			1.537110107	0.001235465	-0.000180260		
5D5/2			1.454685049	0.000554915	-0.000180235		
5F5/2			0.909531113	0.000037585	-0.000004942		
6S1/2			0.853769482	0.000441048	-0.000113147		
6P1/2			0.768617448	0.000602781	-0.000095724		
6P3/2			0.665659198	0.000320550	-0.000041606		
6D3/2			0.399075395	0.000073673	-0.000010769		
7S1/2			0.297789245	0.000044548	-0.000011433		
2P1/2 -- ( 2)	1593.220474	-2845.945157	20.081239563	0.619838015		-0.088887437	0.006020385

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
URANIUM      5F3 6D1      Z=92    A=238    R=1.40533E-04    A.U.							
2P3/2			17.085376771	0.068849829	-0.000300378		
3S1/2			8.138251059	0.022210954	-0.001513278		
3P1/2			8.402147077	0.052193767	-0.007646669		
3P3/2			7.871677155	0.017187264	-0.000455796		
3D3/2			8.397279966	0.090596852	-0.021560036		
3D5/2			8.267750368	0.002594684	-0.000628043		
4S1/2			3.993301703	0.005885930	-0.000448669		
4P1/2			4.025363192	0.012910572	-0.002078470		
4P3/2			3.684764455	0.004443362	-0.000139100		
4D3/2			3.671679863	0.020521196	-0.005029367		
4D5/2			3.588831994	0.000689755	-0.000157440		
4F5/2			3.378266200	0.000493559	-0.000103440		
4F7/2			3.322410514	0.000026974	-0.000010320		
5S1/2			1.932052511	0.001498291	-0.000117161		
5P1/2			1.869065782	0.003051424	-0.000501090		
5P3/2			1.688697151	0.001046359	-0.000033944		
5D3/2			1.508792769	0.003912960	-0.000964773		
5D5/2			1.464438722	0.000134897	-0.000030376		
5F5/2			0.909623809	0.000043324	-0.000009131		
6S1/2			0.860057331	0.000299713	-0.000023576		
6P1/2			0.769293203	0.000515850	-0.000085067		
6P3/2			0.668670219	0.000161558	-0.000005279		
6D3/2			0.399177293	0.000233842	-0.000057708		
7S1/2			0.298423854	0.000030271	-0.000002384		
2P3/2 -- ( 4)	1011.303030	-2096.014599	15.758873208	0.257858849		-0.003708925	0.000628602
3S1/2			7.848439183	0.027203645	-0.002243521		
3P1/2			8.449542344	0.016483817	-0.000782895		
3P3/2			7.433068610	0.032217154	-0.003022286		
3D3/2			8.438935488	0.027199596	-0.002613705		
3D5/2			7.956759189	0.044638433	-0.012694042		
4S1/2			3.918003179	0.006758708	-0.000594383		
4P1/2			4.022968960	0.004074232	-0.000222986		
4P3/2			3.581482087	0.007846981	-0.000817424		
4D3/2			3.678716452	0.005880711	-0.000569467		
4D5/2			3.520449175	0.009523411	-0.002801921		
4F5/2			3.377215396	0.000364480	-0.000035320		
4F7/2			3.319054849	0.000312875	-0.000101377		
5S1/2			1.912948135	0.001695809	-0.000151614		
5P1/2			1.867772853	0.000963524	-0.000054441		
5P3/2			1.664853098	0.001823108	-0.000194128		
5D3/2			1.510018673	0.001112313	-0.000107939		
5D5/2			1.451575811	0.001780214	-0.00027051		
5F5/2			0.909532251	0.000031705	-0.000003090		
6S1/2			0.856238456	0.000338088	-0.000030346		
6P1/2			0.769048427	0.000162912	-0.000009268		
6P3/2			0.665003552	0.000280703	-0.000030024		
6D3/2			0.399249465	0.000066394	-0.000006445		
7S1/2			0.298038186	0.000034129	-0.000003065		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
URANIUM      5F3 6D1      Z=92    A=238    R=1.40533E-04    A.U.							
3S1/2 -- ( 2)	509.068806	-1035.794924	6.103563176	0.017567690		-0.126995229	0.005906173
3P1/2			5.645466484	0.005979108	-0.000067434		
3P3/2			5.274622725	0.008481127	-0.000928465		
3D3/2			6.061008982	0.005336598	-0.000191099		
3D5/2			5.948650237	0.006846977	-0.000241587		
4S1/2			3.367597046	0.002969472	-0.001045991		
4P1/2			3.489579092	0.004211667	-0.000727410		
4P3/2			3.173666184	0.002328174	-0.000294119		
4D3/2			3.249769636	0.001561915	-0.000151022		
4D5/2			3.163937572	0.001541688	-0.000126127		
4F5/2			3.243453135	0.001517151	-0.000213173		
4F7/2			3.196854540	0.000690462	-0.000208375		
5S1/2			1.780790969	0.000752300	-0.000274713		
5P1/2			1.744538875	0.001047149	-0.000186721		
5P3/2			1.571914355	0.000577939	-0.000077664		
5D3/2			1.429850956	0.000321297	-0.000033946		
5D5/2			1.385607222	0.000290005	-0.000028381		
5F5/2			0.898897431	0.000109080	-0.000015901		
6S1/2			0.830113058	0.000150230	-0.000055201		
6P1/2			0.748304491	0.000178541	-0.000032011		
6P3/2			0.650741274	0.000090063	-0.000012237		
6D3/2			0.394471585	0.000019389	-0.000002072		
7S1/2			0.295404432	0.000015169	-0.000005579		
3P1/2 -- ( 2)	503.786471	-1028.724991	6.527702666	0.035167017		-0.023466727	0.001558060
3P3/2			5.804480859	0.003594021	-0.000053494		
3D3/2			5.941382753	0.012352341	-0.001042351		
3D5/2			6.258363438	0.005072722	-0.000047223		
4S1/2			3.486921586	0.002497959	-0.000299342		
4P1/2			3.432860809	0.004273623	-0.000976940		
4P3/2			3.230785201	0.001191924	-0.000070554		
4D3/2			3.273577152	0.003465894	-0.000507190		
4D5/2			3.203656786	0.001056162	-0.000035364		
4F5/2			3.235187192	0.002580429	-0.000570130		
4F7/2			3.226905207	0.000282657	-0.000060418		
5S1/2			1.806731832	0.000617932	-0.000079984		
5P1/2			1.735185911	0.000994425	-0.000241125		
5P3/2			1.584157114	0.000286040	-0.000018992		
5D3/2			1.434669156	0.000726516	-0.000115812		
5D5/2			1.392858405	0.000193411	-0.000007836		
5F5/2			0.898404576	0.000188210	-0.000042798		
6S1/2			0.835135154	0.000122782	-0.000016143		
6P1/2			0.746843143	0.000167551	-0.000041043		
6P3/2			0.652599027	0.000044299	-0.000003002		
6D3/2			0.394761408	0.000043960	-0.000007084		
7S1/2			0.295909032	0.000012388	-0.000001633		
3P3/2 -- ( 4)	356.618286	-830.369994	5.553800473	0.016129565		-0.001048641	0.000174204
3D3/2			5.923132161	0.003603655	-0.000019758		
3D5/2			5.637209887	0.008825862	-0.000169221		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
URANIUM 5F3 6D1 Z=92 A=238 R=1.40533E-04 A.U.							
4S1/2			3.405824466	0.003746813	-0.000492648		
4P1/2			3.462401769	0.001640071	-0.000125462		
4P3/2			3.113596228	0.002774859	-0.000403445		
4D3/2			3.216960239	0.001435542	-0.000135998		
4D5/2			3.123793325	0.003042744	-0.000470903		
4F5/2			3.222084045	0.001308528	-0.000131560		
4F7/2			3.152500981	0.001262835	-0.000372938		
5S1/2			1.787361826	0.000866010	-0.000119196		
5P1/2			1.738076120	0.000376715	-0.000032337		
5P3/2			1.559347738	0.000633593	-0.000098833		
5D3/2			1.423865456	0.000286299	-0.000028637		
5D5/2			1.378344319	0.000585315	-0.000099663		
5F5/2			0.897338547	0.000090987	-0.000009472		
6S1/2			0.831305750	0.000169865	-0.000023610		
6P1/2			0.747210266	0.000063350	-0.000005557		
6P3/2			0.648842684	0.000097217	-0.000015347		
6D3/2			0.394116287	0.000017203	-0.000001733		
7S1/2			0.295522966	0.000017103	-0.000002381		
3D3/2 -- ( 4)	350.289538	-821.752710	6.479452171	0.027633474		-0.000020887	0.000004527
3D5/2			6.424553736	0.004990114	-0.000000486		
4S1/2			3.514932435	0.001361278	-0.000035578		
4P1/2			3.531150360	0.002792218	-0.0000211256		
4P3/2			3.242672409	0.000934649	-0.000024058		
4D3/2			3.244258026	0.003251960	-0.0000320096		
4D5/2			3.227557048	0.001062582	-0.000015637		
4F5/2			3.208603293	0.005845100	-0.001448676		
4F7/2			3.235282913	0.000199049	-0.000023463		
5S1/2			1.812764574	0.007333173	-0.000011408		
5P1/2			1.754477898	0.000604734	-0.000048877		
5P3/2			1.586590966	0.000215478	-0.000006720		
5D3/2			1.430586077	0.000587231	-0.000063716		
5D5/2			1.397170402	0.000196781	-0.000003509		
5F5/2			0.896724700	0.000424477	-0.000107045		
6S1/2			0.836296552	0.000066093	-0.000002390		
6P1/2			0.749984502	0.000100563	-0.000008249		
6P3/2			0.652964399	0.000033126	-0.000001071		
6D3/2			0.394529158	0.000034818	-0.000003827		
7S1/2			0.296025607	0.000006667	-0.000000243		
3D5/2 -- ( 6)	322.908248	-781.673855	6.254232939	0.022690726		-0.000003528	0.000001163
4S1/2			3.490131250	0.001584045	-0.000035693		
4P1/2			3.535577840	0.001137335	-0.000017784		
4P3/2			3.208245515	0.001814708	-0.000079046		
4D3/2			3.292531918	0.000867079	-0.000017344		
4D5/2			3.160074599	0.002847411	-0.000201382		
4F5/2			3.269883458	0.001227336	-0.000090269		
4F7/2			3.169649969	0.003641640	-0.001012946		
5S1/2			1.806753902	0.000377418	-0.000011409		
5P1/2			1.754281097	0.000257207	-0.000005595		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
URANIUM            5F3 6D1        Z=92    A=238   R=1.40533E-04   A.U.							
			1.579201095	0.000399389	-0.000019642		
			1.437689866	0.000160252	-0.000003896		
			1.385954708	0.000507283	-0.000039756		
			0.901002725	0.000090353	-0.000006674		
			0.835105275	0.000074472	-0.000002388		
			0.749915404	0.000043128	-0.000000997		
			0.651842822	0.000060864	-0.000003066		
			0.394937546	0.000009535	-0.000000238		
			0.295905462	0.000007505	-0.000000243		
4S1/2 --	( 2)	174.905194	-444.289725	2.798757222	0.001679898		
				2.495086383	0.000721201	-0.000032480	
				2.359758740	0.001034157	-0.000203137	
				2.533781141	0.000719676	-0.000066591	
				2.490839319	0.000628464	-0.000075787	
				2.600879887	0.000511712	-0.000042703	
				2.579768215	0.000525523	-0.000043965	
				1.598599118	0.000306310	-0.000133988	
				1.581540668	0.000314038	-0.000061466	
				1.436920085	0.000164825	-0.000033499	
				1.319290006	0.000079885	-0.000009400	
				1.281748678	0.000108926	-0.000009526	
				0.858946097	0.000021830	-0.000001380	
				0.795968803	0.000061127	-0.000027562	
				0.721611380	0.000056147	-0.000011324	
				0.630590365	0.000026327	-0.000005371	
				0.387982629	0.000004819	-0.000000584	
				0.291987476	0.000006169	-0.000002792	
4P1/2 --	( 2)	169.028604	-434.703935	2.818499826	0.003133381		
				2.525502208	0.000301953	-0.000008669	
				2.386843619	0.001770846	-0.000311303	
				2.551829013	0.000378224	-0.000012896	
				2.558716419	0.000832634	-0.000105978	
				2.608513637	0.000381292	-0.000012717	
				1.630094252	0.000338323	-0.000050232	
				1.551233464	0.000384847	-0.000112676	
				1.448547971	0.000097780	-0.000008668	
				1.312524367	0.000152270	-0.000024756	
				1.286349804	0.000079246	-0.000003271	
				0.858307015	0.000034873	-0.000002782	
				0.801094234	0.000064618	-0.000010177	
				0.717453090	0.000064163	-0.000019671	
				0.632136668	0.000015448	-0.000001490	
				0.387637452	0.000009205	-0.000001509	
				0.292489531	0.000006480	-0.000001029	
4P3/2 --	( 4)	123.507286	-366.106976	2.438076101	0.001462494		
				2.444091716	0.000401823	-0.000011905	
				2.308679273	0.000922546	-0.000077424	
				2.481043531	0.000341273	-0.000014213	

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
URANIUM 5F3 6D1 Z=92 A=238 R=1.40533E-04 A.U.							
4F7/2			2.431586023	0.000586279	-0.000041924		
5S1/2			1.596455738	0.000546155	-0.000084583		
5P1/2			1.560079086	0.000172359	-0.000016103		
5P3/2			1.408250096	0.000248252	-0.000045823		
5D3/2			1.303535608	0.000070190	-0.000006365		
5D5/2			1.263427284	0.000169814	-0.000016299		
5F5/2			0.852050192	0.000017643	-0.000000817		
6S1/2			0.794971476	0.000097841	-0.000015836		
6P1/2			0.718035336	0.000028231	-0.000002907		
6P3/2			0.626491378	0.000037612	-0.000007338		
6D3/2			0.387045394	0.000004358	-0.000000423		
7S1/2			0.291878400	0.000009732	-0.000001585		
4D3/2 -- ( 4)	114.481121	-349.736346	2.467630212	0.002009353		-0.000006420	0.000001385
4D5/2			2.454938298	0.000363643	-0.000000076		
4F5/2			2.382266880	0.001038504	-0.000108412		
4F7/2			2.493516134	0.000318858	-0.000002181		
5S1/2			1.637591784	0.000171871	-0.000006837		
5P1/2			1.551244139	0.000403815	-0.0000046103		
5P3/2			1.429690585	0.000097597	-0.000004274		
5D3/2			1.286807667	0.000232209	-0.000028627		
5D5/2			1.271291668	0.000071359	-0.000001493		
5F5/2			0.851041680	0.000054565	-0.000005066		
6S1/2			0.796891678	0.000032125	-0.000001633		
6P1/2			0.717132814	0.000060626	-0.000007252		
6P3/2			0.629309801	0.000014615	-0.000000719		
6D3/2			0.386184667	0.000013555	-0.000001773		
7S1/2			0.292067837	0.000003215	-0.000000169		
4D5/2 -- ( 6)	106.116079	-335.601412	2.402142490	0.001650878		-0.000001084	0.000000356
4F5/2			2.465840441	0.000286403	-0.000005586		
4F7/2			2.364565837	0.000872362	-0.000066510		
5S1/2			1.597070315	0.000200316	-0.000006694		
5P1/2			1.556798103	0.000120167	-0.000002829		
5P3/2			1.416611969	0.000216829	-0.000016836		
5D3/2			1.301490993	0.000061393	-0.000001731		
5D5/2			1.252556261	0.000200859	-0.000017893		
5F5/2			0.850952885	0.000015243	-0.000000592		
6S1/2			0.795014436	0.000036235	-0.000001623		
6P1/2			0.717527433	0.000019082	-0.000000601		
6P3/2			0.627518505	0.000031096	-0.000002536		
6D3/2			0.386922991	0.000003622	-0.000000116		
7S1/2			0.291880707	0.000003613	-0.000000168		
4F5/2 -- ( 6)	92.582928	-311.111837	2.501374159	0.002049356		-0.000000003	0.000000001
4F7/2			2.525232855	0.000329028	-0.000000002		
5S1/2			1.609719417	0.000104062	-0.000000074		
5P1/2			1.556867934	0.000144633	-0.000000725		
5P3/2			1.430095843	0.000067805	-0.000000265		
5D3/2			1.298507992	0.000137709	-0.000005269		
5D5/2			1.270825791	0.000046444	-0.000000415		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
URANIUM 5F3 6D1 Z=92 A=238 R=1.40533E-04 A.U.							
			0.847036807	0.000085044	-0.000003922		
			0.797367365	0.000019851	-0.000000137		
			0.718044561	0.000022632	-0.000000308		
			0.629409317	0.000010164	-0.000000080		
			0.386822344	0.000007730	-0.000000311		
			0.292114765	0.000001991	-0.000000016		
4F7/2 -- ( 8)	89.756146	-305.819852	2.475428283	0.001875314		-0.000000001	0.000000000
			1.604726335	0.000127548	-0.000000056		
			1.561443317	0.000090791	-0.000000097		
			1.423186506	0.000112592	-0.000000619		
			1.304180957	0.000051611	-0.000000214		
			1.262607654	0.000119503	-0.000003417		
			0.853747559	0.000018047	-0.000000120		
			0.796465488	0.000023056	-0.000000133		
			0.718344281	0.000014147	-0.000000067		
			0.628507214	0.000016150	-0.000000169		
			0.387084546	0.000002975	-0.000000018		
			0.292024663	0.000002300	-0.000000016		
5S1/2 -- ( 2)	54.207160	-197.392010	1.342698941	0.000165722		-0.008857021	0.000410650
			1.164542688	0.000110539	-0.000010670		
			1.105494733	0.000145526	-0.000037286		
			1.101403983	0.000101813	-0.000013262		
			1.080074442	0.000055681	-0.000013685		
			0.788059171	0.000029935	-0.000003818		
			0.731315415	0.000025635	-0.000012769		
			0.674272929	0.000015634	-0.000003587		
			0.594408041	0.000010304	-0.000003377		
			0.376747809	0.000003649	-0.000000574		
			0.285773935	0.000002592	-0.000001321		
5P1/2 -- ( 2)	49.553463	-187.247335	1.291655600	0.000280113		-0.001538585	0.000101541
			1.155695448	0.000026545	-0.000001088		
			1.022663754	0.000258409	-0.000058168		
			1.084511137	0.000022485	-0.000002223		
			0.772976600	0.000049305	-0.000010021		
			0.737539239	0.000039273	-0.000006285		
			0.661906359	0.000025201	-0.000008586		
			0.595775134	0.000005726	-0.000000618		
			0.374395721	0.000007259	-0.000001861		
			0.286270932	0.000003777	-0.000000627		
5P3/2 -- ( 4)	36.495248	-161.730979	1.117622329	0.000130872		-0.000067899	0.000011209
			1.048754410	0.000051088	-0.000003523		
			0.987102093	0.000097389	-0.000019328		
			0.765759720	0.000022443	-0.000002046		
			0.722666636	0.000061988	-0.000009982		
			0.663961278	0.000012875	-0.000001302		
			0.583825510	0.000014839	-0.000003114		
			0.374297835	0.000001606	-0.000000141		
			0.284924687	0.000005680	-0.000000950		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
URANIUM      5F3 6D1      Z=92    A=238    R=1.40533E-04    A.U.								
5D3/2 -- ( 4)	28.652272	-141.120350	0.997877711	0.000133733		-0.000001303	0.000000281	
5D5/2			0.992397948	0.000024244	-0.000030007			
5F5/2			0.710837142	0.000075772	-0.000016874			
6S1/2			0.707981643	0.000015941	-0.000000521			
6P1/2			0.643548034	0.000037800	-0.000004486			
6P3/2			0.580524739	0.000007158	-0.000000399			
6D3/2			0.369264277	0.000004928	-0.000000622			
7S1/2			0.283651281	0.000001497	-0.000000070			
5D5/2 -- ( 6)	26.444953	-135.781613	0.970440682	0.000108873		-0.000000218	0.000000071	
5F5/2			0.738303378	0.000016913	-0.000000985			
6S1/2			0.702101465	0.000019952	-0.000000446			
6P1/2			0.648284324	0.000009469	-0.000000200			
6P3/2			0.575042184	0.000017496	-0.000001724			
6D3/2			0.371226210	0.000001325	-0.000000038			
7S1/2			0.283163945	0.000001748	-0.000000064			
5F5/2 -- ( 3)	10.958723	-83.712823	0.598808749	0.000035498		-0.000000000	0.000000000	
6S1/2			0.592856097	0.000006411	-0.000000329			
6P1/2			0.547148778	0.000008014	-0.000000422			
6P3/2			0.510859215	0.000003012	-0.000000043			
6D3/2			0.342458073	0.000002689	-0.000000001			
7S1/2			0.272697154	0.000000574	-0.000000000			
6S1/2 -- ( 2)	12.755267	-83.057929	0.608681034	0.000013122		-0.001774792	0.000082274	
6P1/2			0.507613142	0.000014526	-0.000001979			
6P3/2			0.473932028	0.000014558	-0.000004050			
6D3/2			0.348704701	0.000004324	-0.000000588			
7S1/2			0.269966334	0.000000987	-0.000000488			
6P1/2 -- ( 2)	10.030012	-73.363386	0.543906964	0.000017974		-0.000261381	0.000017246	
6P3/2			0.478063068	0.000001637	-0.000000068			
6D3/2			0.328593487	0.000012031	-0.000032814			
7S1/2			0.269309177	0.000002086	-0.000000323			
6P3/2 -- ( 4)	6.859684	-62.500944	0.456206487	0.000007684		-0.000010512	0.000001735	
6D3/2			0.330731612	0.000002589	-0.000000255			
7S1/2			0.263172611	0.000002901	-0.000000422			
6D3/2 -- ( 1)	2.315230	-36.862762	0.000000900	0.000000000		-0.000000079	0.000000017	
7S1/2			0.228851593	0.000000353	-0.000000004			
7S1/2 -- ( 2)	1.483796	-27.852253	0.216502116	0.000000504		-0.000179307	0.000008312	
ETOT	-28023.03662	34287.49189	-72342.56071	10032.49232	42.036707716	-4.435742470	-8.489730915	0.428659161
NEPTUNIUM      5F4 6D1      Z=93    A=237    R=1.40336E-04    A.U.								
1S1/2 -- ( 2)	6615.175706	-11593.473511	71.483812996	12.431827311		-3.616640546	0.185471470	
2S1/2			22.555128276	0.699096595	-0.086106772			
2P1/2			28.180842259	1.441211897	-0.177523801			
2P3/2			21.971263798	0.598344711	-0.172826181			





TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-WP)
NEPTUNIUM 5F4 6D1 Z=93 A=237 R=1.40336E-04 A.U.							
2P1/2 -- ( 2)	1654.449012	-2940.733220	20.458751603	0.650161313	-0.000011947	-0.098300660	0.006770601
2P3/2			17.341123019	0.071118850	-0.000328160		
3S1/2			8.279893872	0.023309583	-0.001581215		
3P1/2			8.551149346	0.054852980	-0.008015354		
3P3/2			7.987490575	0.017837215	-0.000472540		
3D3/2			8.521498576	0.094056541	-0.022381638		
3D5/2			8.379417907	0.002675272	-0.000650529		
4S1/2			4.067312183	0.006203900	-0.000470996		
4P1/2			4.102696604	0.013633797	-0.002189617		
4P3/2			3.746295499	0.004640926	-0.000145077		
4D3/2			3.737204147	0.021503950	-0.005269648		
4D5/2			3.650123850	0.000717699	-0.000164644		
4F5/2			3.444787464	0.000518697	-0.000108690		
4F7/2			3.386791351	0.000028289	-0.000010831		
5S1/2			1.976645848	0.001598448	-0.000124520		
5P1/2			1.915348269	0.003268696	-0.000535582		
5P3/2			1.726482279	0.001108841	-0.000035929		
5D3/2			1.549233791	0.004190875	-0.001033262		
5D5/2			1.502711902	0.000143484	-0.000032469		
5F5/2			0.961121406	0.000049605	-0.000010454		
6S1/2			0.881274923	0.000321068	-0.000025163		
6P1/2			0.789347882	0.000554510	-0.000091248		
6P3/2			0.682543031	0.000170449	-0.000005564		
6D3/2			0.405343505	0.000243362	-0.000060057		
7S1/2			0.303288092	0.000031687	-0.000002486		
2P3/2 -- ( 4)	1036.324989	-2145.551206	15.955001487	0.266953804	-0.000000000	-0.003961922	0.000686989
3S1/2			7.974623994	0.028500011	-0.002369088		
3P1/2			8.589166943	0.017241130	-0.000820860		
3P3/2			7.533867199	0.033446453	-0.003140973		
3D3/2			8.557508961	0.028272730	-0.002711618		
3D5/2			8.060721325	0.046344475	-0.013179912		
4S1/2			3.987660427	0.007099674	-0.000628649		
4P1/2			4.097586159	0.004277383	-0.000234631		
4P3/2			3.638750473	0.008191074	-0.000854357		
4D3/2			3.742992089	0.006155236	-0.000594787		
4D5/2			3.579392818	0.009964746	-0.002932370		
4F5/2			3.443625652	0.000387598	-0.000037521		
4F7/2			3.383272934	0.000332411	-0.000107730		
5S1/2			1.956191534	0.001802225	-0.000162218		
5P1/2			1.913355103	0.001025912	-0.000058111		
5P3/2			1.701293718	0.001930180	-0.000205840		
5D3/2			1.550238613	0.001189289	-0.000115163		
5D5/2			1.489117761	0.001902491	-0.000563429		
5F5/2			0.961011161	0.000036711	-0.000003575		
6S1/2			0.877169357	0.000360738	-0.000032599		
6P1/2			0.789031617	0.000174060	-0.000009928		
6P3/2			0.678686951	0.000295846	-0.000031694		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NEPTUNIUM 5F4 6D1 Z=93 A=237 R=1.40336E-04 A.U.							
3S1/2 -- ( 2)	528.419868	-1068.872897	0.405400709 0.302882956 6.204318997	0.000068972 0.000035581 0.018451157	-0.000006681 -0.000003217	-0.136609609	0.006471349
3P1/2			5.741501605	0.006273071	-0.0000068993		
3P3/2			5.354026404	0.008880610	-0.001003008		
3D3/2			6.154446840	0.005585587	-0.000203137		
3D5/2			6.037339699	0.007139548	-0.000257606		
4S1/2			3.426348018	0.003130554	-0.001101400		
4P1/2			3.553258183	0.004459793	-0.000769415		
4P3/2			3.224249263	0.002407715	-0.000305930		
4D3/2			3.306055640	0.001634042	-0.000157770		
4D5/2			3.217196406	0.001617319	-0.000131329		
4F5/2			3.306690472	0.001603206	-0.000225299		
4F7/2			3.258401631	0.000728933	-0.000220217		
5S1/2			1.819829337	0.000802662	-0.000292794		
5P1/2			1.785802375	0.001124722	-0.000200360		
5P3/2			1.605491440	0.000606773	-0.000081900		
5D3/2			1.466812622	0.000343929	-0.000036327		
5D5/2			1.420664592	0.000310884	-0.000030268		
5F5/2			0.949181933	0.000124884	-0.000018227		
6S1/2			0.850106581	0.000160940	-0.000059079		
6P1/2			0.767487271	0.000192451	-0.000034475		
6P3/2			0.664052192	0.000094160	-0.000012848		
6D3/2			0.400569862	0.000020173	-0.000002156		
3P1/2 -- ( 2)	523.123788	-1061.814619	0.300217162 6.640366045	0.000015879 0.036966625	-0.000005834	-0.026014849	0.001755632
3P3/2			5.892999264	0.003710971	-0.000058842		
3D3/2			6.033856278	0.012976411	-0.001116803		
3D5/2			6.353209651	0.005282135	-0.000050672		
4S1/2			3.548844014	0.002629172	-0.000314434		
4P1/2			3.495495195	0.004514673	-0.001030448		
4P3/2			3.293035764	0.001237913	-0.000073999		
4D3/2			3.330645480	0.003606870	-0.000525698		
4D5/2			3.258054738	0.001111115	-0.000037008		
4F5/2			3.298471581	0.002726247	-0.000602527		
4F7/2			3.289327496	0.000297889	-0.000063830		
5S1/2			1.846774527	0.000658320	-0.000085089		
5P1/2			1.776188000	0.001065514	-0.000258041		
5P3/2			1.618265898	0.000301616	-0.000020213		
5D3/2			1.471903201	0.000773973	-0.000123084		
5D5/2			1.428279008	0.000207889	-0.000008390		
5F5/2			0.948658087	0.000215578	-0.000049076		
6S1/2			0.855342661	0.000131337	-0.000017248		
6P1/2			0.765983248	0.000180145	-0.000044080		
6P3/2			0.665981467	0.000046512	-0.000003182		
6D3/2			0.4008667453	0.000045524	-0.000007321		
7S1/2			0.300731215	0.000012948	-0.000001705		
3P3/2 -- ( 4)	366.551609	-851.318145	5.629252026	0.016781445		-0.001125202	0.000191149

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NEPTUNIUM 5F4 6D1 Z=93 A=237 R=1.40336E-04 A.U.							
3D3/2			6.005167343	0.003747383	-0.000020148		
3D5/2			5.713043243	0.009172662	-0.000175662		
4S1/2			3.463484308	0.003964884	-0.000523534		
4P1/2			3.523195175	0.001733282	-0.000132826		
4P3/2			3.161658560	0.002904220	-0.000422743		
4D3/2			3.270798054	0.001511755	-0.000143324		
4D5/2			3.174618081	0.003192459	-0.000494872		
4F5/2			3.283524485	0.001381682	-0.000138879		
4F7/2			3.211696329	0.001333878	-0.000393759		
5S1/2			1.826153745	0.000925321	-0.000127904		
5P1/2			1.778585899	0.000403187	-0.000034697		
5P3/2			1.592188555	0.000672501	-0.000105069		
5D3/2			1.460238545	0.000308070	-0.000030846		
5D5/2			1.412792095	0.000627352	-0.000107103		
5F5/2			0.947348650	0.000103841	-0.000010821		
6S1/2			0.851250049	0.000182130	-0.000025426		
6P1/2			0.766262177	0.000068015	-0.000005983		
6P3/2			0.662051108	0.000102714	-0.000016244		
6D3/2			0.400190706	0.000017988	-0.000001814		
7S1/2			0.300328059	0.000017917	-0.000002505		
3D3/2 -- ( 4)	360.146617	-842.626570	6.571521407	0.028772401		-0.000023055	0.000005113
3D5/2			6.512734823	0.005185799	-0.000000531		
4S1/2			3.575436468	0.001429784	-0.000037463		
4P1/2			3.594035366	0.002944896	-0.000224258		
4P3/2			3.293572398	0.000977911	-0.000025199		
4D3/2			3.299147370	0.003411157	-0.000336574		
4D5/2			3.280957574	0.001113773	-0.000016422		
4F5/2			3.270076897	0.006178798	-0.001531598		
4F7/2			3.297149621	0.000210636	-0.000024808		
5S1/2			1.852506454	0.000353955	-0.000012173		
5P1/2			1.795720140	0.000645829	-0.000052531		
5P3/2			1.620412962	0.000228683	-0.000007151		
5D3/2			1.467358052	0.000628914	-0.000068470		
5D5/2			1.432492823	0.000210662	-0.000003773		
5F5/2			0.946711107	0.000485940	-0.000122631		
6S1/2			0.856446983	0.000070490	-0.000002562		
6P1/2			0.769170102	0.000107717	-0.000008894		
6P3/2			0.666300909	0.000034997	-0.000001135		
6D3/2			0.400615755	0.000036224	-0.000003996		
7S1/2			0.300839468	0.000006947	-0.000000255		
3D5/2 -- ( 6)	331.379680	-800.576063	6.337189744	0.023578687		-0.000003862	0.000001304
4S1/2			3.549453627	0.001662099	-0.000037573		
4P1/2			3.597870879	0.001194471	-0.000018722		
4P3/2			3.257970242	0.001896639	-0.000082817		
4D3/2			3.347847991	0.000908692	-0.000018244		
4D5/2			3.211561860	0.002981127	-0.000211453		
4F5/2			3.332813737	0.001297863	-0.000095365		
4F7/2			3.229364449	0.003848516	-0.001070541		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NEPTUNIUM 5F4 6D1 Z=93 A=237 R=1.40336E-04 A.U.							
			1.846136053	0.000400388	-0.000012173		
			1.795339592	0.000273775	-0.000005991		
			1.612658550	0.000423162	-0.000020884		
			1.474631043	0.000171528	-0.000004195		
			1.420720704	0.000542080	-0.000042652		
			0.951446738	0.000103493	-0.000007638		
			0.855179433	0.000079304	-0.000002560		
			0.769067618	0.000046055	-0.000001072		
			0.665129373	0.000064183	-0.000003246		
			0.401021328	0.000009916	-0.000000249		
			0.300714557	0.000007809	-0.000000255		
4S1/2 -- ( 2)	182.098723	-458.680261	2.848120698	0.001774536		-0.037327060	0.001763866
			2.540309417	0.000757784	-0.000033463		
			2.399455543	0.001098512	-0.000219046		
			2.578094896	0.000759382	-0.000070491		
			2.533608427	0.000660266	-0.000080429		
			2.650757896	0.000539762	-0.000044886		
			2.628955163	0.000555515	-0.000046266		
			1.632373603	0.000327707	-0.000143417		
			1.617403924	0.000339808	-0.000066444		
			1.466598582	0.000174169	-0.000036054		
			1.351963877	0.000085986	-0.000010172		
			1.312902363	0.000116839	-0.000010317		
			0.905054859	0.000025036	-0.000001581		
			0.814850181	0.000065652	-0.000029615		
			0.739822129	0.000060961	-0.000012284		
			0.643417409	0.000027668	-0.000005740		
			0.394021925	0.000005042	-0.000000615		
			0.296769657	0.000006473	-0.000002931		
4P1/2 -- ( 2)	176.136491	-449.014975	2.870462959	0.003315254		-0.007092809	0.000476312
			2.568544786	0.000314285	-0.000009626		
			2.429576994	0.001878016	-0.000332026		
			2.596466203	0.000396050	-0.000013790		
			2.638708276	0.000879457	-0.000111679		
			2.659182810	0.000403538	-0.000013426		
			1.664999658	0.000360535	-0.000053559		
			1.586327591	0.000413451	-0.000121192		
			1.478783791	0.000103100	-0.000009300		
			1.345070014	0.000163717	-0.000026873		
			1.317804143	0.000084942	-0.000003551		
			0.904427762	0.000040033	-0.000003189		
			0.820176439	0.000069127	-0.000010900		
			0.735559655	0.000069157	-0.000021228		
			0.645031347	0.000016226	-0.000001591		
			0.393682080	0.000009612	-0.000001590		
			0.297279491	0.000006774	-0.000001077		
4P3/2 -- ( 4)	127.642391	-376.273376	2.476523675	0.001534396		-0.000307427	0.000051958
			2.484572816	0.000420261	-0.000012231		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NEPTUNIUM 5F4 6D1 Z=93 A=237 R=1.40336E-04 A.U.							
4D5/2			2.346369761	0.000967227	-0.000080460		
4F5/2			2.525856686	0.000358000	-0.000014657		
4F7/2			2.475421643	0.000617179	-0.000043307		
5S1/2			1.629482627	0.000587828	-0.000091218		
5P1/2			1.594580558	0.000186103	-0.000017411		
5P3/2			1.436772298	0.000264515	-0.000049004		
5D3/2			1.335240859	0.000076152	-0.000006952		
5D5/2			1.293605988	0.000183431	-0.000017759		
5F5/2			0.897277456	0.000020477	-0.000000968		
6S1/2			0.813692495	0.000105454	-0.000017110		
6P1/2			0.736013959	0.000030527	-0.000003151		
6P3/2			0.639171882	0.000039887	-0.000007810		
6D3/2			0.393055662	0.000004598	-0.000000449		
7S1/2			0.296647144	0.000010247	-0.000001673		
4D3/2 -- ( 4)	118.532938	-359.842418	2.510510590	0.002115348		-0.000007152	0.000001579
4D5/2			2.496870101	0.000381904	-0.000000085		
4F5/2			2.427693231	0.001090066	-0.000112094		
4F7/2			2.540470890	0.000337179	-0.000002266		
5S1/2			1.641524735	0.000183520	-0.000007347		
5P1/2			1.585991168	0.000434195	-0.000049790		
5P3/2			1.459187582	0.000103844	-0.000004564		
5D3/2			1.318252955	0.000249900	-0.000031040		
5D5/2			1.302012714	0.000076674	-0.000001619		
5F5/2			0.896328550	0.000063874	-0.000006141		
6S1/2			0.815773071	0.000034407	-0.000001763		
6P1/2			0.735168405	0.000065267	-0.000007846		
6P3/2			0.642106034	0.000015481	-0.000000765		
6D3/2			0.392210739	0.000014168	-0.000001868		
7S1/2			0.296847733	0.000003364	-0.000000178		
4D5/2 -- ( 6)	109.719880	-345.008014	2.442518645	0.001735375		-0.000001198	0.000000403
4F5/2			2.511685257	0.000300835	-0.000005727		
4F7/2			2.408603650	0.000916844	-0.000068391		
5S1/2			1.630498052	0.000213722	-0.000007190		
5P1/2			1.591509413	0.000128656	-0.000003048		
5P3/2			1.445629285	0.000230632	-0.000017962		
5D3/2			1.333306609	0.000066027	-0.000001880		
5D5/2			1.282520423	0.000215718	-0.000019379		
5F5/2			0.896136616	0.000017701	-0.000000710		
6S1/2			0.813798850	0.000038760	-0.000001751		
6P1/2			0.735536787	0.000020473	-0.000000651		
6P3/2			0.640256629	0.000032909	-0.000002693		
6D3/2			0.392942956	0.000003784	-0.000000122		
7S1/2			0.296655419	0.000000376	-0.000000177		
4F5/2 -- ( 6)	96.176714	-320.686519	2.553138678	0.002173467		-0.000000003	0.000000001
4F7/2			2.577260429	0.000349193	-0.000000002		
5S1/2			1.644866415	0.000111147	-0.000000091		
5P1/2			1.592935641	0.000154974	-0.000000823		
5P3/2			1.460424056	0.000072353	-0.000000297		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NEPTUNIUM 5F4 6D1 Z=93 A=237 R=1.40336E-04 A.U.							
5D3/2			1.331691289	0.000148100	-0.000005722		
5D5/2			1.302136656	0.000049991	-0.000000454		
5F5/2			0.892205195	0.000097383	-0.000004598		
6S1/2			0.816461159	0.000021279	-0.000000152		
6P1/2			0.736269691	0.000024315	-0.000000341		
6P3/2			0.642322093	0.000010795	-0.000000087		
6D3/2			0.392889103	0.000008073	-0.000000328		
7S1/2			0.296914187	0.000002086	-0.000000017		
4F7/2 -- ( 8)	93.193355	-315.134157	2.526091652	0.001987894	-0.000000001	0.000000000	
5S1/2			1.639673817	0.000135996	-0.000000070		
5P1/2			1.597468362	0.000097137	-0.000000111		
5P3/2			1.453335903	0.000119874	-0.000000693		
5D3/2			1.336817829	0.000055527	-0.000000236		
5D5/2			1.293652375	0.000128292	-0.000003701		
5F5/2			0.899509855	0.000020709	-0.000000142		
6S1/2			0.815518164	0.000024681	-0.000000148		
6P1/2			0.736557703	0.000015186	-0.000000075		
6P3/2			0.641396816	0.000017122	-0.000000184		
6D3/2			0.393145603	0.000003110	-0.000000019		
7S1/2			0.296822111	0.000002406	-0.000000017		
5S1/2 -- ( 2)	57.068551	-204.620319	1.371990360	0.000177815	-0.000000001	0.000457457	
5P1/2			1.190978068	0.000117107	-0.000011150		
5P3/2			1.129426192	0.000157843	-0.000040568		
5D3/2			1.127922662	0.000109420	-0.000014234		
5D5/2			1.105779145	0.000059964	-0.000014718		
5F5/2			0.827074749	0.000034236	-0.000004368		
6S1/2			0.748695778	0.000027699	-0.000013815		
6P1/2			0.691268171	0.000017124	-0.000003921		
6P3/2			0.606729947	0.000011062	-0.000003655		
6D3/2			0.382802899	0.000003796	-0.000000598		
7S1/2			0.290555467	0.000002736	-0.000001396		
5P1/2 -- ( 2)	52.316501	-194.389484	1.321893661	0.000301863	-0.000000000	0.000116676	
5P3/2			1.181328583	0.000028190	-0.000001238		
5D3/2			1.047936033	0.0000279175	-0.000062833		
5D5/2			1.110913098	0.000024207	-0.000002408		
5F5/2			0.810843381	0.000056280	-0.000011431		
6S1/2			0.755254603	0.000042143	-0.000006755		
6P1/2			0.678682047	0.000027348	-0.000009339		
6P3/2			0.608219583	0.000006034	-0.000000664		
6D3/2			0.380493832	0.000007599	-0.000001951		
7S1/2			0.291070516	0.000003964	-0.000000659		
5P3/2 -- ( 4)	38.238226	-167.207302	1.140476688	0.000139888	-0.000074393	0.000012557	
5D3/2			1.073338064	0.000054256	-0.000003689		
5D5/2			1.009937824	0.000103970	-0.000020429		
5F5/2			0.802429749	0.000025346	-0.000002298		
6S1/2			0.739639537	0.000067431	-0.000010864		
6P1/2			0.680505960	0.000014100	-0.000001426		
6P3/2			0.595921354	0.000015844	-0.000003335		

TABLE 1.— CONTINUED

LEVEL (ELECTRONS)	E (KIN)	E (E-N)	E (E-E)	E (MAG)	E (RET)	E (V-P)	E (H-VP)	
NEPTUNIUM 5F4 6D1 Z=93 A=237 R=1.40336E-04 A.U.								
5D3/2 -- ( 4)	30.259395	-146.509187	0.380332473 0.289689041 1.023268484 1.017344380 0.744032688 0.725332473 0.660093710 0.592931081 0.375405812 0.288474495	0.000001665 0.000006936 0.000144728 0.000026146 0.000084942 0.000017290 0.000041188 0.00007638 0.00005201 0.00001587	-0.000000146 -0.000001010 -0.000001485 -0.000000008 -0.000018788 -0.000000576 -0.000004914 -0.00000427 -0.00000661 -0.00000075	-0.000001485	0.000000328	
5D5/2 -- ( 6)	27.886824	-140.852201	0.994577088 0.773328075 0.719215939 0.664821142 0.587360418 0.377342998 0.287978216	0.000117617 0.000019004 0.000021580 0.000010272 0.000018669 0.000001396 0.000001850	-0.000001090 -0.000000494 -0.000000219 -0.000001848 -0.000000041 -0.000000069	-0.000000246	0.000000083	
5F5/2 -- ( 4)	12.196923	-89.415137	0.634451255 0.616630051 0.568986456 0.528251405 0.351182155 0.278593771	0.000041860 0.000007070 0.000008859 0.000003291 0.000002927 0.00000622	-0.000000332 -0.000000411 -0.000000038 -0.000000004 -0.000000000	-0.000000000	0.000000000	
6S1/2 -- ( 2)	13.475206	-86.138582	0.623288076 0.520178596 0.484453157 0.354655019 0.274728683	0.000014136 0.000015468 0.000015758 0.000004573 0.000001039	-0.000002097 -0.000004381 -0.000000623 -0.000000512	-0.001949216	0.000092034	
6P1/2 -- ( 2)	10.619469	-76.176171	0.557776004 0.488934633 0.334483963 0.274121099	0.000019435 0.000001736 0.000012750 0.000002182	-0.000000077 -0.000002982 -0.000000337	-0.000296601	0.000019888	
6P3/2 -- ( 4)	7.156309	-64.497466	0.465578447 0.336214619 0.267713258	0.000008172 0.000002714 0.000003064	-0.000000267 -0.000000444	-0.000011467	0.000001935	
6D3/2 -- ( 1)	2.383508	-37.838416	0.000000000 0.232336461	0.000000000 0.000000369	-0.000000005	-0.000000087	0.000000019	
7S1/2 -- ( 2)	1.531872	-28.618381	0.220051487	0.000000529	-0.000000005	-0.000192426	0.000009085	
ETDT	-28816.22124	35463.99169	-74579.15348	10268.39961	43.737460110	-4.610008666	-9.052597200	0.466075042

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TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PLUTONIUM	5F6	Z=94 A=244 R=1.41704E-34 A.U.					
1S1/2 -- ( 2)	6841.976809	-11947.208097	72.698632172	12.898778034		-3.842904610	0.200927231
2S1/2			22.962309163	0.728219083	-0.089870544		
2P1/2			28.749716951	1.500497738	-0.183373567		
2P3/2			22.252429367	0.617978893	-0.178481412		
3S1/2			9.603419850	0.161809771	-0.021318857		
3P1/2			10.798079303	0.303512976	-0.036253825		
3P3/2			9.006847446	0.142498693	-0.042415423		
3D3/2			9.180278645	0.006233120	-0.000686843		
3D5/2			8.714291500	0.002440581	-0.000780703		
4S1/2			4.457232860	0.043724975	-0.005844232		
4P1/2			4.702340474	0.078170595	-0.009288686		
4P3/2			4.039220045	0.037243145	-0.011162907		
4D3/2			3.934383940	0.001851451	-0.000204751		
4D5/2			3.769802061	0.000725988	-0.000234461		
4F5/2			3.514364155	0.000005920	-0.000000597		
4F7/2			3.452409311	0.000002291	-0.000000753		
5S1/2			2.102971214	0.011424235	-0.001532674		
5P1/2			2.087551402	0.019116000	-0.002268488		
5P3/2			1.818016209	0.009001939	-0.002702842		
5D3/2			1.612067364	0.000386080	-0.000042730		
5D5/2			1.548098084	0.000149761	-0.000048468		
5F5/2			0.963105512	0.000000578	-0.000000058		
6S1/2			0.909353022	0.002246827	-0.000301708		
6P1/2			0.817521392	0.003133006	-0.000371683		
6P3/2			0.689028732	0.001303869	-0.000391632		
7S1/2			0.295385991	0.000196040	-0.000026328		
2S1/2 -- ( 2)	1717.104126	-3036.953920	16.644497822	0.296234130		-0.621497786	0.030294009
2P1/2			16.711306932	0.090705720	-0.000099809		
2P3/2			14.949516960	0.120880831	-0.003203634		
3S1/2			7.872808865	0.035842212	-0.008582835		
3P1/2			8.699531689	0.061926798	-0.009467328		
3P3/2			7.746900160	0.034850048	-0.003807887		
3D3/2			8.622950627	0.033493739	-0.004561141		
3D5/2			8.269442747	0.014140434	-0.004481379		
4S1/2			4.007565639	0.009600821	-0.002424638		
4P1/2			4.166259968	0.016529758	-0.002598085		
4P3/2			3.719524094	0.009445065	-0.001172482		
4D3/2			3.793898980	0.007234611	-0.001041124		
4D5/2			3.658256962	0.003224562	-0.001047565		
4F5/2			3.509731936	0.003476768	-0.000062135		
4F7/2			3.448389900	0.000169899	-0.000060473		
5S1/2			1.986486373	0.002501953	-0.000638822		
5P1/2			1.956639592	0.004068593	-0.000643098		
5P3/2			1.741241575	0.002298160	-0.000293031		
5D3/2			1.583726055	0.001410869	-0.000205499		
5D5/2			1.525817105	0.000630575	-0.000205477		
5F5/2			0.962668025	0.000044572	-0.000005851		
6S1/2			0.886489293	0.000491747	-0.000125874		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PLUTONIUM	5F6	Z=94 A=244 R=1.41704E-04 A.U.					
2P1/2 -- ( 2)	1718.238108	-3038.818340	20.844663551	0.681935303	-0.000042902	-0.108672104	0.007610449
6P1/2			0.796071615	0.000667714	-0.000105668		
6P3/2			0.677923248	0.000333307	-0.000042733		
7S1/2			0.293391693	0.000042902	-0.000010986		
2P3/2			17.599588202	0.073429197	-0.000358264		
3S1/2			8.423754694	0.024458236	-0.001651627		
3P1/2			8.732692273	0.057641532	-0.000400018		
3P3/2			8.104193114	0.018502862	-0.000489737		
3D3/2			8.646620480	0.097600046	-0.023222949		
3D5/2			8.491450574	0.002756583	-0.000673443		
4S1/2			4.142205413	0.006536823	-0.000494188		
4P1/2			4.181018473	0.014393011	-0.002305711		
4P3/2			3.808132545	0.004844129	-0.000151223		
4D3/2			3.802928172	0.022516573	-0.005517150		
4D5/2			3.711435022	0.000746048	-0.000172030		
4F5/2			3.510852036	0.000544043	-0.000113972		
4F7/2			3.450641055	0.000029608	-0.000011345		
5S1/2			2.020860618	0.001702485	-0.000132098		
5P1/2			1.960964117	0.003493997	-0.000571161		
5P3/2			1.762413748	0.001170716	-0.000037891		
5D3/2			1.585673992	0.004455467	-0.001098441		
5D5/2			1.536365696	0.000151306	-0.000034412		
5F5/2			0.962774303	0.000051102	-0.000010768		
6S1/2			0.893213012	0.000334568	-0.000026119		
6P1/2			0.796805482	0.000571725	-0.000093867		
6P3/2			0.680982623	0.000169562	-0.000005529		
7S1/2			0.293977860	0.000029188	-0.000002281		
2P3/2 -- ( 4)	1061.733654	-2195.774765	16.151820733	0.276271000	-0.004229488	0.000750150	
3S1/2			8.102231305	0.029853026	-0.002501098		
3P1/2			8.730599690	0.018030412	-0.000860391		
3P3/2			7.635070701	0.034708624	-0.003262976		
3D3/2			8.676663489	0.029375999	-0.002811949		
3D5/2			8.164911766	0.048095098	-0.013678514		
4S1/2			4.057970722	0.007454935	-0.000664598		
4P1/2			4.172574975	0.004488753	-0.000246740		
4P3/2			3.696175723	0.008545255	-0.000892422		
4D3/2			3.807370724	0.006437828	-0.000620753		
4D5/2			3.638308710	0.010418877	-0.003066627		
4F5/2			3.509573376	0.000411505	-0.000039793		
4F7/2			3.446957497	0.000352576	-0.000114289		
5S1/2			1.998995371	0.001912046	-0.000173257		
5P1/2			1.958202318	0.001089882	-0.0000061879		
5P3/2			1.735891958	0.002036129	-0.000217460		
5D3/2			1.586423212	0.001262241	-0.000121963		
5D5/2			1.522114190	0.002016267	-0.000597306		
5F5/2			0.962655177	0.000038259	-0.000003723		
6S1/2			0.888919218	0.000374394	-0.000034060		
6P1/2			0.796324849	0.000178352	-0.000010198		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)		
PLUTONIUM	5F6	Z=94 A=244 R=1.41704E-04 A.U.							
3S1/2 -- ( 2)	548.459738	-1102.900562	0.677157054 0.293603305 6.306344632	0.000294034 0.000032645 0.019374256	-0.000031548 -0.000002972	-0.146870405	0.007086499		
3P1/2			5.838909830 5.434103566 6.248707648 6.126676311 3.485681426 3.617646804 3.275031673 3.362523250 3.270542507 3.369582769 3.319539101 1.858912736 1.826456195 1.637473130 1.500224004 1.451660142 0.950803613 0.861645079 0.774861556 0.662992063 0.291228180	0.006580211 0.009298901 0.005844315 0.007441818 0.003298909 0.004720802 0.002487997 0.001707849 0.001695332 0.001691824 0.000768395 0.000854895 0.001205375 0.000634555 0.000365350 0.000330485 0.000128857 0.000167698 0.000198941 0.000092791 0.000014626	-0.000070501 -0.001083217 -0.000215962 -0.000274701 -0.001159170 -0.000813509 -0.000318148 -0.000164643 -0.000136598 -0.000237785 -0.000232402 -0.000311500 -0.000214513 -0.000086063 -0.000038573 -0.000031995 -0.000018826 -0.000061493 -0.000035602 -0.000012714 -0.000005368				
3P1/2 -- ( 2)	543.216191	-1095.931768	6.754751694 5.982310270 6.127201226 6.448833511 3.611428971 3.558840509 3.33530650 3.387910641 3.312564636 3.361435015 3.351328752 1.886465412 1.816594336 1.650761721 1.505564573 1.459593886 0.950302650 0.866958542 0.773375831 0.664882883 0.291689427	0.038852335 0.003829847 0.013631329 0.005497757 0.002766042 0.004767511 0.001284616 0.003749157 0.001168117 0.002876260 0.000313414 0.000700131 0.001139193 0.000316810 0.000818056 0.000221615 0.000222316 0.000136653 0.000185770 0.000046037 0.000011909	-0.000064677 -0.001196852 -0.000054376 -0.000330098 -0.001086345 -0.000077581 -0.000544120 -0.000038695 -0.000635863 -0.000067336 -0.000090351 -0.000275506 -0.000021436 -0.000129753 -0.000089006 -0.000050704 -0.000017920 -0.000045397 -0.000003179 -0.000001566	-0.028827443	0.001977091		
3P3/2 -- ( 4)	376.662964	-872.585311	5.704981816 6.087536665 5.789089659	0.017452373 0.003895286 0.009529010	-0.000020539 -0.000182343	-0.001206544	0.000209552		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PLUTONIUM	5F6	Z=94	A=244	R=1.41704E-04	A.U.		
4S1/2			3.521600983	0.004194296	-0.000556105		
4P1/2			3.584522912	0.001831241	-0.000140548		
4P3/2			3.209834627	0.003037762	-0.000442670		
4D3/2			3.324704289	0.001590696	-0.000150912		
4D5/2			3.225433001	0.003346691	-0.000519562		
4F5/2			3.344537266	0.001456940	-0.000146403		
4F7/2			3.270418204	0.001406932	-0.000415167		
5S1/2			1.864546416	0.000987039	-0.000137005		
5P1/2			1.818440863	0.000430576	-0.000037140		
5P3/2			1.623437667	0.000711200	-0.000111282		
5D3/2			1.493064312	0.000329013	-0.000032973		
5D5/2			1.443200886	0.000666732	-0.000114105		
5F5/2			0.948863636	0.000106813	-0.000011139		
6S1/2			0.862703031	0.000189973	-0.000026633		
6P1/2			0.773550073	0.000070039	-0.000006177		
6P3/2			0.661002069	0.000102341	-0.000016209		
7S1/2			0.291318829	0.000016522	-0.000002320		
3D3/2 -- ( 4)	370.185783	-863.824402	6.664012830	0.029945808		-0.000125425	0.000005769
3D5/2			6.631194279	0.005386715	-0.000000579		
4S1/2			3.636455260	0.001501049	-0.000039426		
4P1/2			3.657501434	0.003104812	-0.000237973		
4P3/2			3.344608834	0.001022566	-0.000026376		
4D3/2			3.354118443	0.003575575	-0.000353607		
4D5/2			3.334360055	0.001166542	-0.000017232		
4F5/2			3.331143968	0.006522380	-0.001616984		
4F7/2			3.358523699	0.000222546	-0.000026191		
5S1/2			1.891844528	0.000375366	-0.000012965		
5P1/2			1.836303502	0.000688205	-0.000356333		
5P3/2			1.652582448	0.000241815	-0.000007582		
5D3/2			1.500548898	0.000668647	-0.000073028		
5D5/2			1.463651459	0.000223645	-0.000004021		
5F5/2			0.948267462	0.000501266	-0.000126576		
6S1/2			0.867968603	0.000073124	-0.000002671		
6P1/2			0.776473840	0.000110676	-0.000009197		
6P3/2			0.665136576	0.000034867	-0.000001134		
7S1/2			0.291776933	0.000006371	-0.000000235		
3D5/2 -- ( 6)	339.976641	-819.724547	6.420299181	0.024490505		-0.000004223	0.000001460
4S1/2			3.609243521	0.001743214	-0.000039528		
4P1/2			3.660705763	0.001253900	-0.000019695		
4P3/2			3.307800084	0.001981096	-0.000086712		
4D3/2			3.403215301	0.000951595	-0.000019174		
4D5/2			3.263020907	0.003118800	-0.000221838		
4F5/2			3.395296890	0.001370496	-0.000100605		
4F7/2			3.288589012	0.004061339	-0.001129794		
5S1/2			1.885104104	0.000424003	-0.000012962		
5P1/2			1.835724695	0.000290743	-0.000006398		
5P3/2			1.644471886	0.000446732	-0.000022121		
5D3/2			1.507940754	0.000182251	-0.000004482		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E (KIN)	E (E-N)	E (E-E)	E (MAG)	E (RET)	E (V-P)	E (H-VP)
PLUTONIUM	5F6	Z=94	A=244	R=1.41704E-04	A.U.		
5D5/2			1.451391380	0.000574473	-0.000045371		
5F5/2			0.952992918	0.000106805	-0.000007876		
6S1/2			0.866656591	0.000082142	-0.000002668		
6P1/2			0.776340949	0.000047168	-0.000001105		
6P3/2			0.663981928	0.000063836	-0.000003239		
7S1/2			0.291662632	0.000007151	-0.000000234		
4S1/2 -- ( 2)	189.536922	-473.441480	2.897944852	0.001873571		-0.040301835	0.001939703
4P1/2			2.585990529	0.000795880	-0.000034446		
4P3/2			2.439406145	0.001166786	-0.000236132		
4D3/2			2.622626437	0.000800962	-0.000074617		
4D5/2			2.576543201	0.000693167	-0.000085345		
4F5/2			2.700592793	0.000568932	-0.000047175		
4F7/2			2.678063546	0.000586557	-0.000048681		
5S1/2			1.665897445	0.000349942	-0.000153206		
5P1/2			1.652798824	0.000366787	-0.000071642		
5P3/2			1.495019336	0.000183378	-0.000038680		
5D3/2			1.381731981	0.000091859	-0.000010926		
5D5/2			1.340716477	0.000124246	-0.000011084		
5F5/2			0.906838069	0.000025894	-0.000001635		
6S1/2			0.826208590	0.000068577	-0.000030940		
6P1/2			0.747344904	0.000063438	-0.000012767		
6P3/2			0.643049021	0.000027403	-0.000005784		
7S1/2			0.288163650	0.000005977	-0.000002706		
4P1/2 -- ( 2)	183.504477	-463.716223	2.922973132	0.003506042		-0.007898543	0.000538982
4P3/2			2.611855508	0.000326983	-0.000010678		
4D3/2			2.472556379	0.001991282	-0.000354159		
4D5/2			2.641292834	0.000414306	-0.000014745		
4F5/2			2.658686486	0.000928283	-0.000117692		
4F7/2			2.709806081	0.000426548	-0.000014174		
5S1/2			1.699651488	0.000383492	-0.000056994		
5P1/2			1.620988291	0.000443148	-0.000130020		
5P3/2			1.507748852	0.000108280	-0.000009940		
5D3/2			1.374747979	0.000174702	-0.000028963		
5D5/2			1.345898546	0.000090258	-0.000003822		
5F5/2			0.906285087	0.000041438	-0.000003303		
6S1/2			0.831601166	0.000071941	-0.000011351		
6P1/2			0.743145036	0.000071491	-0.000021959		
6P3/2			0.644641202	0.000016063	-0.000001600		
7S1/2			0.288620708	0.000006234	-0.000000992		
4P3/2 -- ( 4)	131.857552	-386.595921	2.515053369	0.001608750		-0.000331663	0.000057300
4D3/2			2.525114515	0.000439282	-0.000012561		
4D5/2			2.384082385	0.001013357	-0.000083599		
4F5/2			2.570473767	0.000375235	-0.000015110		
4F7/2			2.519039788	0.000649008	-0.000044725		
5S1/2			1.662196957	0.000631619	-0.000098192		
5P1/2			1.628569530	0.000200509	-0.000018778		
5P3/2			1.464076358	0.000280793	-0.000052197		
5D3/2			1.364100292	0.000081979	-0.000007530		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PLUTONIUM	5F6	Z=94	A=244	R=1.41704E-04	A.U.		
5D5/2			1.320542632	0.000196387	-0.000019164		
5F5/2			0.898923174	0.000021400	-0.000001030		
6S1/2			0.824916323	0.000110619	-0.000017986		
6P1/2			0.743453200	0.000031666	-0.000003274		
6P3/2			0.638895224	0.000039894	-0.000007834		
7S1/2			0.288044090	0.000009507	-0.000001555		
4D3/2 -- ( 4)	122.660891	-370.097800	2.553435800	0.002225038		-0.000007957	0.000001797
4D5/2			2.538805988	0.000400718	-0.000000093		
4F5/2			2.472925920	0.001143293	-0.000115889		
4F7/2			2.587195598	0.000356077	-0.000002354		
5S1/2			1.675152483	0.000195595	-0.000007877		
5P1/2			1.620238015	0.000465844	-0.000053646		
5P3/2			1.487420111	0.000110082	-0.000004853		
5D3/2			1.346948320	0.000266950	-0.000033388		
5D5/2			1.329445609	0.000081686	-0.000001739		
5F5/2			0.898127569	0.000067227	-0.000006651		
6S1/2			0.827103479	0.000035851	-0.000001848		
6P1/2			0.742694146	0.000067450	-0.000008145		
6P3/2			0.641780384	0.000015467	-0.000000766		
7S1/2			0.288230738	0.000003100	-0.000000165		
4D5/2 -- ( 6)	113.381087	-354.536066	2.482862880	0.001822594		-0.000001322	0.000000456
4F5/2			2.557290486	0.000315699	-0.000005869		
4F7/2			2.452387411	0.000962655	-0.000070312		
5S1/2			1.663608621	0.000227616	-0.000007703		
5P1/2			1.625706986	0.000137429	-0.000003274		
5P3/2			1.473402507	0.000244424	-0.000019093		
5D3/2			1.362285441	0.000070482	-0.000002026		
5D5/2			1.309310494	0.000229742	-0.000020799		
5F5/2			0.897852733	0.000018505	-0.000000763		
6S1/2			0.825081895	0.000040342	-0.000001835		
6P1/2			0.743023940	0.000021073	-0.000000675		
6P3/2			0.639975852	0.000032872	-0.000002698		
7S1/2			0.288656541	0.000003476	-0.000000164		
4F5/2 -- ( 6)	99.814621	-330.350978	2.604472326	0.002301452		-0.000000004	0.000000002
4F7/2			2.628822546	0.000369975	-0.000000002		
5S1/2			1.679652273	0.000118461	-0.000000110		
5P1/2			1.628452646	0.000165627	-0.000000926		
5P3/2			1.489441478	0.000076898	-0.000000330		
5D3/2			1.360828463	0.000158095	-0.000006162		
5D5/2			1.330134940	0.000053345	-0.000000490		
5F5/2			0.894279915	0.000100580	-0.000004843		
6S1/2			0.827973598	0.000022183	-0.000000163		
6P1/2			0.743930396	0.000025059	-0.000000359		
6P3/2			0.642088233	0.000010812	-0.000000089		
7S1/2			0.288305171	0.000001923	-0.000000016		
4F7/2 -- ( 8)	96.667866	-324.527077	2.576272090	0.002103837		-0.000000001	0.000000000
5S1/2			1.674252815	0.000144716	-0.000000085		
5P1/2			1.632938644	0.000103670	-0.000000126		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PLUTONIUM	5F6	Z=94	A=244	R=1.41704E-04	A.U.		
5P3/2			1.482180701	0.000127143	-0.000000769		
5D3/2			1.366578859	0.000059295	-0.000000259		
5D5/2			1.321429055	0.000136579	-0.000003970		
5F5/2			0.901477147	0.000021423	-0.000000150		
6S1/2			0.827012892	0.000025701	-0.000000158		
6P1/2			0.744197068	0.000015636	-0.000000079		
6P3/2			0.641190417	0.000017127	-0.000000188		
7S1/2			0.288222211	0.000002216	-0.000000016		
5S1/2 -- ( 2)	59.983841	-211.935116	1.400924351	0.000190330		-0.010573314	0.000508547
5P1/2			1.217015596	0.000123810	-0.000011630		
5P3/2			1.152588183	0.000170715	-0.000044017		
5D3/2			1.152556509	0.000116949	-0.000015197		
5D5/2			1.129299977	0.000064106	-0.000015729		
5F5/2			0.829307503	0.000035490	-0.000004524		
6S1/2			0.760164848	0.000029059	-0.000014487		
6P1/2			0.699442077	0.000017901	-0.000004084		
6P3/2			0.607831632	0.000011234	-0.000003735		
7S1/2			0.282666265	0.000002538	-0.000001293		
5P1/2 -- ( 2)	55.121232	-201.590136	1.351568941	0.000324312		-0.001962046	0.000133713
5P3/2			1.206035941	0.000029827	-0.000001400		
5D3/2			1.071514920	0.000300058	-0.000067541		
5D5/2			1.135048431	0.000025823	-0.000002593		
5F5/2			0.813382914	0.000058342	-0.000011833		
6S1/2			0.766903549	0.000043943	-0.000003704		
6P1/2			0.687058077	0.000028422	-0.000009693		
6P3/2			0.609374832	0.000005976	-0.000000668		
7S1/2			0.283141945	0.000003666	-0.000000609		
5P3/2 -- ( 4)	39.925832	-172.571514	1.162672711	0.000148786		-0.000081189	0.000014008
5D3/2			1.095844525	0.000057288	-0.000003851		
5D5/2			1.030584373	0.000110239	-0.000021486		
5F5/2			0.804423007	0.000026074	-0.000002351		
6S1/2			0.750794139	0.000071306	-0.000011478		
6P1/2			0.688567963	0.000014787	-0.000001491		
6P3/2			0.597322941	0.000015919	-0.000003340		
7S1/2			0.281877608	0.000005666	-0.000000945		
5D3/2 -- ( 4)	31.741370	-151.589972	1.045958134	0.000155080		-0.000001679	0.000000379
5D5/2			1.039371145	0.000027888	-0.000000009		
5F5/2			0.746972806	0.000087369	-0.000019235		
6S1/2			0.736872655	0.000018164	-0.000000608		
6P1/2			0.668508526	0.000042917	-0.000005119		
6P3/2			0.594666370	0.000007662	-0.000000426		
7S1/2			0.280829534	0.000001479	-0.000000069		
5D5/2 -- ( 6)	29.182451	-145.557336	1.015641657	0.000125642		-0.000000276	0.000000095
5F5/2			0.775782605	0.000019534	-0.000001110		
6S1/2			0.730543063	0.000022668	-0.000000518		
6P1/2			0.673142356	0.000010688	-0.000000226		
6P3/2			0.589197471	0.000018753	-0.000001851		
7S1/2			0.280373422	0.000001727	-0.000000063		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PLUTONIUM 5F6 Z=94 A=244 R=1.41704E-04 A.U.							
5F5/2 -- ( 6)	12.386938	-90.531991	0.627976076	0.000042204		-0.000000000	0.000000000
6S1/2			0.617740364	0.000007230	-0.000000341		
6P1/2			0.569023301	0.000009013	-0.000000434		
6P3/2			0.524790947	0.000003259	-0.000000041		
7S1/2			0.270604464	0.000000566	-0.000000000		
6S1/2 -- ( 2)	13.848839	-88.284183	0.631874791	0.000014696		-0.002081573	0.000100101
6P1/2			0.526285387	0.000015919	-0.000002155		
6P3/2			0.487075355	0.000016116	-0.000004484		
7S1/2			0.258276269	0.000000943	-0.000000456		
6P1/2 -- ( 2)	10.796154	-77.727551	0.563265885	0.000019957		-3.000322697	0.000021985
6P3/2			0.490805607	0.000001729	-0.000000081		
7S1/2			0.267635344	0.000001971	-0.000000302		
6P3/2 -- ( 4)	7.053255	-65.011993	0.465154044	0.000008101		-0.000011791	0.000002034
7S1/2			0.251196595	0.000002770	-0.000000393		
7S1/2 -- ( 2)	1.391111	-28.011042	0.213689124	0.000000347		-0.0000181650	0.000008735
ETOT	-29624.81494	36675.43366	-76885.66567	10553.85890	45.488162521	-4.788647938	-9.647805911
AMERICIUM 5F7 Z=95 A=243 R=1.41510E-04 A.U.							
1S1/2 -- ( 2)	7078.018437	-12312.815120	73.939742680	13.381193255		-4.085390995	0.217640435
2S1/2			23.378198710	0.758473268	-0.093784492		
2P1/2			29.333097551	1.561895496	-0.189329708		
2P3/2			22.534866424	0.637962649	-0.184235927		
3S1/2			9.775218847	0.168725944	-0.022267602		
3P1/2			11.007605979	0.315927353	-0.037383126		
3P3/2			9.133051074	0.147758338	-0.043973992		
3D3/2			9.309700793	0.006434087	-0.000704631		
3D5/2			8.826395185	0.002516476	-0.000804788		
4S1/2			4.541481002	0.045771813	-0.006127939		
4P1/2			4.798245869	0.081710261	-0.009615394		
4P3/2			4.105055340	0.038842894	-0.011640705		
4D3/2			4.002558518	0.001927349	-0.000211820		
4D5/2			3.831794410	0.000755308	-0.000243875		
4F5/2			3.580428328	0.000006221	-0.000000623		
4F7/2			3.516152037	0.000002411	-0.000000793		
5S1/2			2.151123489	0.012087446	-0.001624362		
5P1/2			2.139925601	0.020233473	-0.002377668		
5P3/2			1.856888441	0.009505784	-0.002853760		
5D3/2			1.652497923	0.000409636	-0.000045056		
5D5/2			1.585516568	0.000158757	-0.000051369		
5F5/2			1.013023763	0.000000654	-0.000000066		
5F7/2			0.971874638	0.000000241	-0.000000079		
6S1/2			0.930541496	0.002382220	-0.000320428		
6P1/2			0.837734218	0.003320213	-0.000390040		



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
AMERICIUM	5F7	Z=95	A=243	R=1.41510E-04	A.U.		
2S1/2 -- ( 2)	1782.949820	-3137.707661				-0.667081659	0.033101545
6P3/2			0.701398747	0.001365544	-0.000410108		
7S1/2			0.299290821	0.000201902	-0.000027161		
2P1/2			16.930885369	0.310419252			
2P3/2			17.015665702	0.095082244	-0.000101467		
3S1/2			15.167744148	0.125657240	-0.005646245		
3P1/2			8.004218486	0.037591135	-0.008987967		
3P3/2			8.852644860	0.065062810	-0.009929848		
3D3/2			7.856641587	0.035932522	-0.003892633		
3D5/2			8.747098436	0.034805228	-0.004735310		
4S1/2			8.379822917	0.014657576	-0.004650843		
4P1/2			4.079352976	0.010108482	-0.002549387		
4P3/2			4.245084727	0.017439183	-0.002735982		
4D3/2			3.779343400	0.009802972	-0.001208261		
4D5/2			3.859465852	0.007584300	-0.001090287		
4F5/2			3.718780139	0.003373467	-0.001097629		
4F7/2			3.575698383	0.000500765	-0.000065191		
5S1/2			3.512060599	0.000178257	-0.000063455		
5P1/2			2.030119781	0.002662482	-0.000678959		
5P3/2			2.003118965	0.004346679	-0.000685787		
5D3/2			1.777699307	0.002415625	-0.000305977		
5D5/2			1.623083947	0.001506374	-0.000219203		
5F5/2			1.562580292	0.000671742	-0.000219257		
5F7/2			1.012542454	0.000050425	-0.000006613		
6S1/2			0.971480039	0.000017053	-0.000006115		
6P1/2			0.906741416	0.000524383	-0.000134066		
6P3/2			0.815290420	0.000714239	-0.000112824		
6D3/2			0.693038346	0.000347488	-0.000044263		
6D5/2			0.297274290	0.000044439	-0.000011366		
2P1/2 -- ( 2)	1784.764516	-3140.405039	21.239296910	0.715236743		-0.120179966	0.008552170
2P3/2			17.860660115	0.075777404	-0.000390873		
3S1/2			8.570068291	0.025661072	-0.001724756		
3P1/2			8.856758252	0.060565044	-0.008800891		
3P3/2			8.221710387	0.019183494	-0.000507367		
3D3/2			8.772431449	0.101217592	-0.024081586		
3D5/2			8.603635260	0.002838214	-0.000696708		
4S1/2			4.218251204	0.006886546	-0.000518354		
4P1/2			4.260515219	0.015191705	-0.002427162		
4P3/2			3.870379949	0.005053303	-0.000157545		
4D3/2			3.869001556	0.023561407	-0.005772372		
4D5/2			3.772908137	0.000774829	-0.000179610		
4F5/2			3.576854952	0.000569740	-0.000119324		
4F7/2			3.514359571	0.000030938	-0.000011865		
5S1/2			2.065961780	0.001812888	-0.000140083		
5P1/2			2.007692533	0.003734484	-0.000608956		
5P3/2			1.799719671	0.001236605	-0.00039979		
5D3/2			1.625175774	0.004749330	-0.001170809		
5D5/2			1.573459171	0.000160072	-0.000036594		
5F5/2			1.012660690	0.000057649	-0.000012146		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
AMERICIUM	5F7	Z=95	A=243	R=1.41510E-04	A.U.		
	5F7/2		0.971700913	0.000002989	-0.000001150		
	6S1/2		0.913766501	0.000357007	-0.000027759		
	6P1/2		0.816067641	0.000611818	-0.000100208		
	6P3/2		0.693194003	0.000177637	-0.000005786		
	7S1/2		0.297869192	0.000030254	-0.000002355		
2P3/2 -- ( 4)	1087.506117	-2246.661738	16.349105778	0.285803020		-0.004512150	0.000818397
	3S1/2		8.231416031	0.031267370	-0.002640226		
	3P1/2		8.873762471	0.018852317	-0.000901493		
	3P3/2		7.736578865	0.036002997	-0.003388168		
	3D3/2		8.796162105	0.030507245	-0.002914478		
	3D5/2		8.269128459	0.049886695	-0.014188814		
	4S1/2		4.129173067	0.007826264	-0.000702462		
	4P1/2		4.249303364	0.004709043	-0.000259349		
	4P3/2		3.753844112	0.008910203	-0.000931677		
	4D3/2		3.871996501	0.006729196	-0.000647428		
	4D5/2		3.697328956	0.010886868	-0.003205021		
	4F5/2		3.575452874	0.000436362	-0.000042150		
	4F7/2		3.510506879	0.000373511	-0.000121099		
	5S1/2		2.042590748	0.002027944	-0.000184990		
	5P1/2		2.004083859	0.001157556	-0.000065865		
	5P3/2		1.771768528	0.002149001	-0.000229848		
	5D3/2		1.625642298	0.001343235	-0.000129503		
	5D5/2		1.558461269	0.002144332	-0.000635436		
	5F5/2		1.012520031	0.000043676	-0.000004246		
	5F7/2		0.971335279	0.000035455	-0.000011583		
	6S1/2		0.909167481	0.000397859	-0.000036437		
	6P1/2		0.815445808	0.000189648	-0.000010869		
	6P3/2		0.689195482	0.000307761	-0.000033071		
	7S1/2		0.297479499	0.000033697	-0.000003088		
3S1/2 -- ( 2)	569.304376	-1138.014230	6.409832341	0.020340775		-0.157996070	0.007759635
	3P1/2		5.937756146	0.006901787	-0.000072068		
	3P3/2		5.514893866	0.009737655	-0.001169983		
	3D3/2		6.343798996	0.006114950	-0.000229719		
	3D5/2		6.216665784	0.007753884	-0.000293043		
	4S1/2		3.545781003	0.003475519	-0.001219625		
	4P1/2		3.682878760	0.004994981	-0.000859743		
	4P3/2		3.326086257	0.002568802	-0.000330826		
	4D3/2		3.419288034	0.001783320	-0.000171635		
	4D5/2		3.324088156	0.001775942	-0.000141930		
	4F5/2		3.432490819	0.001783550	-0.000250707		
	4F7/2		3.380633212	0.000809090	-0.000245009		
	5S1/2		1.897894458	0.000910253	-0.000331284		
	5P1/2		1.868023837	0.001291382	-0.000229570		
	5P3/2		1.670589697	0.000663688	-0.000090492		
	5D3/2		1.536322399	0.000389031	-0.000041050		
	5D5/2		1.485683449	0.000352551	-0.000033924		
	5F5/2		0.999513352	0.000145622	-0.000021299		
	5F7/2		0.960120898	0.000066556	-0.000019898		

TABLE 1.-- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-V-P)
AMERICIUM	5F7	Z=95	A=243	R=1.41510E-04	A.U.		
6S1/2			0.881021562	0.000178920	-0.000065536		
6P1/2			0.793254219	0.000213405	-0.000038152		
6P3/2			0.674754333	0.000096274	-0.000013264		
7S1/2			0.295098661	0.000015158	-0.000005557		
3P1/2 -- ( 2)	564.097940	-1131.117070	6.870831055	0.040827140		-0.031952159	0.002225661
3P3/2			6.072356594	0.003950467	-0.000071039		
3D3/2			6.221305172	0.014318469	-0.001283051		
3D5/2			6.545128089	0.005719295	-0.000058357		
4S1/2			3.674856676	0.002909500	-0.000346456		
4P1/2			3.623003897	0.005033173	-0.001144861		
4P3/2			3.388332522	0.001332071	-0.000081315		
4D3/2			3.445470041	0.003892795	-0.000562445		
4D5/2			3.367285205	0.001227329	-0.000040431		
4F5/2			3.424422230	0.003031389	-0.000670345		
4F7/2			3.413272777	0.000329336	-0.000070958		
5S1/2			1.926889008	0.000744406	-0.000095902		
5P1/2			1.857905137	0.001217759	-0.000294072		
5P3/2			1.684424020	0.000332862	-0.000022748		
5D3/2			1.541938195	0.000866563	-0.000137056		
5D5/2			1.493979619	0.000237095	-0.000009486		
5F5/2			0.998989414	0.000251557	-0.000057379		
5F7/2			0.962804814	0.000029302	-0.000005945		
6S1/2			0.886542845	0.000145590	-0.000019065		
6P1/2			0.791731226	0.000198812	-0.000048519		
6P3/2			0.676706162	0.000047981	-0.000003347		
7S1/2			0.295564222	0.000012325	-0.000001618		
3P3/2 -- ( 4)	386.944944	-894.163003	5.780924776	0.018142095		-0.001292862	0.000229515
3D3/2			6.170128431	0.004047255	-0.000020935		
3D5/2			5.865245281	0.009894512	-0.000189293		
4S1/2			3.580330438	0.004436638	-0.000590611		
4P1/2			3.646483295	0.001934380	-0.000148660		
4P3/2			3.258175865	0.003175761	-0.000463289		
4D3/2			3.378766392	0.001672560	-0.000158779		
4D5/2			3.276324555	0.003505809	-0.000545032		
4F5/2			3.405460249	0.001534742	-0.000154178		
4F7/2			3.329003555	0.001482450	-0.000437292		
5S1/2			1.903593200	0.001052638	-0.000146713		
5P1/2			1.859141795	0.000459743	-0.000039740		
5P3/2			1.655766250	0.000752501	-0.000117920		
5D3/2			1.528507958	0.000352282	-0.000035335		
5D5/2			1.476561483	0.000710997	-0.000121971		
5F5/2			0.997266640	0.000120311	-0.000012557		
5F7/2			0.956179839	0.000114171	-0.000033700		
6S1/2			0.882011564	0.000202889	-0.000028563		
6P1/2			0.791800211	0.000074847	-0.000006618		
6P3/2			0.672669576	0.000107381	-0.000017035		
7S1/2			0.295180920	0.000017139	-0.000002416		
3D3/2 -- ( 4)	380.386947	-885.322620	6.756743555	0.031151769		-0.000028009	0.000006501



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
AMERICIUM	5F7	Z=95	A=243	R=1.41510E-04	A.U.		
	5D3/2		1.413699082	0.000098389	-0.000011768		
	5D5/2		1.371024154	0.000132556	-0.000011953		
	5F5/2		0.951527813	0.000029345	-0.000001855		
	5F7/2		0.916286459	0.000039577	-0.000001783		
	6S1/2		0.844552125	0.000073338	-0.000033094		
	6P1/2		0.764848929	0.000068507	-0.000013773		
	6P3/2		0.654454707	0.000028591	-0.000006144		
	7S1/2		0.292035034	0.000006209	-0.000002812		
4P1/2 -- ( 2)	191.164980	-478.847765	2.976129395	0.003706669		-0.008797313	0.000609621
	4P3/2		2.655500574	0.000340100	-0.000011834		
	4D3/2		2.515862146	0.002111200	-0.000377823		
	4D5/2		2.686389741	0.000433032	-0.000015765		
	4F5/2		2.738874529	0.000979296	-0.000124025		
	4F7/2		2.760615947	0.000450451	-0.000014962		
	5S1/2		1.734901992	0.000407777	-0.000060623		
	5P1/2		1.656358977	0.000474855	-0.000139427		
	5P3/2		1.537661750	0.000113751	-0.000010632		
	5D3/2		1.406597038	0.000186914	-0.000031313		
	5D5/2		1.376517718	0.000096220	-0.000004129		
	5F5/2		0.951001701	0.000046991	-0.000003750		
	5F7/2		0.917529201	0.000031226	-0.000000772		
	6S1/2		0.850138164	0.000076644	-0.000012103		
	6P1/2		0.760558050	0.000076684	-0.000023572		
	6P3/2		0.650106294	0.000016746	-0.000001696		
	7S1/2		0.292495022	0.000006452	-0.000001627		
4P3/2 -- ( 4)	136.162001	-397.087054	2.553710120	0.001685748		-0.000357532	0.000063128
	4D3/2		2.565775383	0.000458922	-0.000012894		
	4D5/2		2.421874926	0.001061036	-0.000086840		
	4F5/2		2.615078251	0.000393022	-0.000015569		
	4F7/2		2.562629851	0.000681897	-0.000046167		
	5S1/2		1.695396238	0.000678533	-0.000105661		
	5P1/2		1.663195106	0.000216003	-0.000020243		
	5P3/2		1.492212323	0.000298199	-0.000055615		
	5D3/2		1.395043755	0.000088475	-0.000008174		
	5D5/2		1.349839437	0.000210946	-0.000020744		
	5F5/2		0.942698870	0.000024518	-0.000001203		
	5F7/2		0.907529242	0.000042836	-0.000002403		
	6S1/2		0.843080525	0.000118763	-0.000019352		
	6P1/2		0.760718942	0.000034082	-0.000003530		
	6P3/2		0.650173945	0.000042009	-0.000008276		
	7S1/2		0.291903675	0.000009913	-0.000001625		
4D3/2 -- ( 4)	126.875799	-380.518109	2.596478905	0.002338762		-0.000008841	0.000002042
	4D5/2		2.580819072	0.000420137	-0.000000103		
	4F5/2		2.518164149	0.001198259	-0.000119755		
	4F7/2		2.633894887	0.000375646	-0.000002445		
	5S1/2		1.709293027	0.000208372	-0.000008438		
	5P1/2		1.655123796	0.000499690	-0.000057779		
	5P3/2		1.516526185	0.000116743	-0.000005163		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
AMERICIUM	5F7	Z=95	A=243	R=1.41510E-04	A.U.		
	5D3/2		1.377671781	0.000285891	-0.000035998		
	5D5/2		1.359288426	0.000087316	-0.000001874		
	5F5/2		0.941990622	0.000077567	-0.000007903		
	5F7/2		0.909859863	0.000024522	-0.000000396		
	6S1/2		0.845426643	0.000038233	-0.000001984		
	6P1/2		0.760019911	0.000072281	-0.000008769		
	6P3/2		0.653155656	0.000016268	-0.000000810		
	7S1/2		0.292098191	0.000003211	-0.000000172		
4D5/2 --	( 6)	117.109028	-364.199468	2.523247782	0.001912785	-0.000001457	0.000000514
	4F5/2		2.602849946	0.000331029	-0.000006011		
	4F7/2		2.496116783	0.001009920	-0.000072244		
	5S1/2		1.697206038	0.000242316	-0.000008245		
	5P1/2		1.660538145	0.000146758	-0.000003515		
	5P3/2		1.502017949	0.000259145	-0.000020301		
	5D3/2		1.393340384	0.000075429	-0.000002188		
	5D5/2		1.338408031	0.000245498	-0.000022393		
	5F5/2		0.941598074	0.000021206	-0.000000898		
	5F7/2		0.905563894	0.000066814	-0.000005867		
	6S1/2		0.843307114	0.000042971	-0.000001970		
	6P1/2		0.760319710	0.000022499	-0.000000727		
	6P3/2		0.651302374	0.000034550	-0.000002845		
	7S1/2		0.291920796	0.000003597	-0.000000171		
4F5/2 --	( 6)	103.516887	-340.141470	2.655708816	0.002434126	-0.000000004	0.000000002
	4F7/2		2.680262482	0.000391510	-0.000000003		
	5S1/2		1.714937550	0.000126175	-0.000000130		
	5P1/2		1.664609013	0.000176922	-0.000001035		
	5P3/2		1.519319152	0.000081747	-0.000000366		
	5D3/2		1.392643838	0.000169159	-0.000006647		
	5D5/2		1.360541484	0.000057107	-0.000000532		
	5F5/2		0.938071475	0.000113685	-0.000005586		
	5F7/2		0.912449449	0.000027310	-0.000000157		
	6S1/2		0.846493076	0.000023665	-0.000000179		
	6P1/2		0.761430276	0.000026780	-0.000000394		
	6P3/2		0.653562747	0.000011397	-0.000000096		
	7S1/2		0.292186877	0.000001992	-0.000000017		
4F7/2 --	( 8)	100.199772	-334.035067	2.626310756	0.002223900	-0.000000001	0.000000000
	5S1/2		1.709319430	0.000153911	-0.000000102		
	5P1/2		1.669048690	0.000110596	-0.000000142		
	5P3/2		1.511868440	0.000134893	-0.000000851		
	5D3/2		1.398434764	0.000063471	-0.000000284		
	5D5/2		1.351568629	0.000145861	-0.000004271		
	5F5/2		0.945825422	0.000024258	-0.000000175		
	5F7/2		0.904647730	0.000101935	-0.000003855		
	6S1/2		0.845490334	0.000027384	-0.000000174		
	6P1/2		0.761683246	0.000016696	-0.000000087		
	6P3/2		0.652645516	0.000018026	-0.000000203		
	7S1/2		0.292102743	0.000002294	-0.000000017		
5S1/2 --	( 2)	63.042356	-219.491544	1.430433858	0.000203696	-0.011546028	0.000565234

TABLE 1.-- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
AMERICIUM	5F7	Z=95	A=243	R=1.41510E-04	A.U.		
	5P1/2		1.243631014	0.000130905	-0.000012128		
	5P3/2		1.176452417	0.000184820	-0.000047801		
	5D3/2		1.178711003	0.000125276	-0.000016264		
	5D5/2		1.154549497	0.000068741	-0.000016861		
	5F5/2		0.867221316	0.000040069	-0.000005107		
	5F7/2		0.838691492	0.000019796	-0.000004741		
	6S1/2		0.777128287	0.000031237	-0.000015585		
	6P1/2		0.715855881	0.000019484	-0.000004435		
	6P3/2		0.618915868	0.000012001	-0.000004020		
	7S1/2		0.286581367	0.000002651	-0.000001351		
5P1/2 --	( 2)	58.077891	-209.052320	1.381982686	0.000348446	-0.002213496	0.000153182
	5P3/2		1.231534465	0.00031609	-0.000001584		
	5D3/2		1.096514067	0.000323216	-0.000072765		
	5D5/2		1.160978604	0.000027642	-0.000002800		
	5F5/2		0.859254555	0.000065788	-0.000013333		
	5F7/2		0.837018862	0.000010329	-0.000001414		
	6S1/2		0.784187861	0.000046924	-0.000007530		
	6P1/2		0.703276169	0.000030666	-0.000010474		
	6P3/2		0.620570871	0.000006247	-0.000000713		
	7S1/2		0.287068176	0.000003807	-0.000000633		
5P3/2 --	( 4)	41.716934	-178.152082	1.185747397	0.000158429	-0.000088628	0.000015627
	5D3/2		1.119877390	0.000060614	-0.000004023		
	5D5/2		1.052837853	0.000117207	-0.000022639		
	5F5/2		0.839947148	0.000029096	-0.000002609		
	5F7/2		0.804931203	0.000030313	-0.000007060		
	6S1/2		0.767288054	0.000077198	-0.000012426		
	6P1/2		0.704509871	0.000016107	-0.000001623		
	6P3/2		0.608213987	0.000016859	-0.000003544		
	7S1/2		0.285779440	0.000005958	-0.000000994		
5D3/2 --	( 4)	33.386179	-157.046015	1.070701877	0.000166874	-0.000001902	0.000000439
	5D5/2		1.063603160	0.000029897	-0.000000010		
	5F5/2		0.779258813	0.000096935	-0.000021203		
	5F7/2		0.795358878	0.000009759	-0.000000363		
	6S1/2		0.753705248	0.000019575	-0.000000665		
	6P1/2		0.684415156	0.000046458	-0.000005563		
	6P3/2		0.605831931	0.000008106	-0.000000452		
	7S1/2		0.284784504	0.000001548	-0.000000072		
5D5/2 --	( 6)	30.643902	-150.661787	1.039015166	0.000134928	-0.000000310	0.000000109
	5F5/2		0.809746235	0.000021710	-0.000001216		
	5F7/2		0.759236714	0.000060547	-0.000013270		
	6S1/2		0.747119572	0.000024381	-0.000000566		
	6P1/2		0.689044571	0.000011528	-0.000000246		
	6P3/2		0.600284088	0.000019843	-0.000001965		
	7S1/2		0.284322747	0.000001806	-0.000000066		
5F5/2 --	( 6)	13.645913	-96.237339	0.662891815	0.000049061	-0.000000000	0.000000000
	5F7/2		0.657510943	0.000007397	-0.000000000		
	6S1/2		0.640812665	0.000007925	-0.000000346		
	6P1/2		0.590121130	0.000009898	-0.000000427		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
AMERICIUM 5F7 Z=95 A=243 R=1.41510E-04 A.U.							
5F7/2 -- ( 1)	12.645940	-92.328153	0.000000000	0.000000000	-0.000000000	-0.000000000	0.000000000
6P3/2			0.540907852	0.000003528	-0.000006037		
7S1/2			0.275623159	0.00000605	-0.000000000		
6S1/2			0.627025306	0.000009516	-0.000000368		
6P1/2			0.591590332	0.000005870	-0.000000055		
6P3/2			0.526796567	0.000006810	-0.000000127		
7S1/2			0.273935145	0.000000754	-0.000000000		
6S1/2 -- ( 2)	14.575441	-91.385681	0.646040545	0.000015750	-0.000015750	-0.002277896	0.000111495
6P1/2			0.538401709	0.000016878	-0.000002274		
6P3/2			0.496792383	0.000017336	-0.000004820		
7S1/2			0.272268188	0.000000981	-0.000000473		
6P1/2 -- ( 2)	11.381749	-80.532095	0.576560187	0.000021451	-0.000021451	-0.000364536	0.000025220
6P3/2			0.500791430	0.000001822	-0.000000091		
7S1/2			0.271668020	0.000002038	-0.000000031		
6P3/2 -- ( 4)	7.310667	-66.884204	0.473435030	0.000008543	-0.000008543	-0.000012767	0.000002250
7S1/2			0.264959054	0.000002891	-0.000000407		
7S1/2 -- ( 2)	1.421978	-28.685572	0.216699496	0.000000498	-0.000000498	-0.000193091	0.000009451
ETDT	-30449.73823	37929.13070	-79243.36344	10831.90796	47.298178108	-4.972768970	-10.288309748
CURIUM 5F7 6D1 Z=96 A=247 R=1.42282E-04 A.U.							
1S1/2 -- ( 2)	7322.001670	-12688.830443	75.203449783	13.877697841	-4.341614154	0.235626762	
2S1/2			23.802055241	0.789793126	-0.097846537		
2P1/2			29.931212599	1.625480607	-0.195392845		
2P3/2			22.818502036	0.658306238	-0.190092481		
3S1/2			9.949786939	0.175881664	-0.023251095		
3P1/2			11.221344116	0.328738889	-0.038523351		
3P3/2			9.259833669	0.153141677	-0.045568538		
3D3/2			9.439555148	0.006636658	-0.000722229		
3D5/2			8.938485489	0.002592847	-0.000829005		
4S1/2			4.626972467	0.047896084	-0.006422907		
4P1/2			4.895852757	0.085373699	-0.009946298		
4P3/2			4.171251229	0.040489818	-0.012132397		
4D3/2			4.071024113	0.002004618	-0.000218907		
4D5/2			3.893883997	0.000785131	-0.000253445		
4F5/2			3.646397237	0.000006526	-0.000000649		
4F7/2			3.579730808	0.000002534	-0.000000833		
5S1/2			2.200053200	0.012781169	-0.001720442		
5P1/2			2.193431208	0.021403475	-0.002489843		
5P3/2			1.896916862	0.010038641	-0.003013321		
5D3/2			1.695463333	0.000435205	-0.000047562		
5D5/2			1.625781899	0.000168640	-0.000054556		
5F5/2			1.096365630	0.000000782	-0.000000078		
5F7/2			1.062363599	0.000000293	-0.000000096		



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CURIUM	5F7 6D1	Z=96	A=247	R=1.42282E-04	A.U.		
2S1/2 -- ( 2)	1851.363047	-3241.775898	17.222253340	0.325239049		-0.715796861	0.036154322
6S1/2			0.960566583	0.002580122	-0.000347630		
6P1/2			0.870712283	0.003641180	-0.000423429		
6P3/2			0.728921829	0.001506621	-0.000452420		
6D3/2			0.418332527	0.000022709	-0.000002482		
7S1/2			0.318877546	0.000238533	-0.000032143		
2P1/2			17.326239877	0.099663358	-0.000102986		
2P3/2			15.388028052	0.130601268	-0.006124282		
3S1/2			8.137434105	0.039416518	-0.009409730		
3P1/2			9.008251125	0.068347099	-0.010412842		
3P3/2			7.967004259	0.037026463	-0.003976187		
3D3/2			8.871857924	0.036150109	-0.004913548		
3D5/2			8.490406056	0.015185289	-0.004824120		
4S1/2			4.152061133	0.010639899	-0.002679688		
4P1/2			4.325059314	0.018393987	-0.002880253		
4P3/2			3.839501531	0.010167490	-0.001244011		
4D3/2			3.925348267	0.007946460	-0.001141081		
4D5/2			3.779450377	0.003527006	-0.001149364		
4F5/2			3.641573810	0.000525216	-0.000068298		
4F7/2			3.575571715	0.000186753	-0.000066487		
5S1/2			2.074391056	0.002831808	-0.000721208		
5P1/2			2.050485923	0.004641792	-0.000730950		
5P3/2			1.815209789	0.002538920	-0.000319408		
5D3/2			1.664884059	0.001611010	-0.000234196		
5D5/2			1.602057941	0.000717243	-0.000234501		
5F5/2			1.095806823	0.000060191	-0.000007886		
5F7/2			1.061899074	0.000020685	-0.000007419		
6S1/2			0.935250228	0.000571271	-0.000145874		
6P1/2			0.846399446	0.000790762	-0.000124676		
6P3/2			0.716676190	0.000381597	-0.000048288		
6D3/2			0.416745351	0.000083151	-0.000012112		
7S1/2			0.316537780	0.000052809	-0.000013490		
2P1/2 -- ( 2)	1854.138022	-3245.621908	21.642962574	0.750140269		-0.132880738	0.009606392
2P3/2			18.124380962	0.078163014	-0.000426161		
3S1/2			8.718693584	0.026918537	-0.001800472		
3P1/2			9.013402635	0.063629453	-0.009218568		
3P3/2			8.340032754	0.019878954	-0.000525443		
3D3/2			8.898923299	0.104908075	-0.024957265		
3D5/2			8.715951304	0.002920068	-0.000720306		
4S1/2			4.295370714	0.007253356	-0.000543486		
4P1/2			4.341197293	0.016031642	-0.002554158		
4P3/2			3.933029341	0.005268467	-0.000164050		
4D3/2			3.935412619	0.024638668	-0.006035420		
4D5/2			3.834519204	0.000804008	-0.000187383		
4F5/2			3.642766788	0.000595719	-0.000124729		
4F7/2			3.577916578	0.000032276	-0.000012388		
5S1/2			2.111759658	0.001929558	-0.000148455		
5P1/2			2.055323079	0.003990105	-0.000648928		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CURIUM 5F7 6D1 Z=96 A=247 R=1.42282E-04 A.U.							
			1.838125534	0.001306254	-0.000042186		
			1.667134009	0.005070478	-0.001249876		
			1.613363629	0.000169691	-0.000039000		
			1.095945675	0.000068615	-0.000014455		
			1.062159945	0.000003612	-0.000001390		
			0.942751914	0.000389211	-0.000030137		
			0.847251955	0.000677689	-0.000110718		
			0.720106853	0.000196042	-0.000006380		
			0.416863260	0.000262340	-0.000064732		
			0.317230702	0.000035978	-0.000002789		
2P3/2 -- ( 4)	1113.646869	-2298.217959	16.546876243	0.295552952		-0.004810622	0.000892090
			8.362019060	0.032743228	-0.002786419		
			9.018672213	0.019708176	-0.000944202		
			7.838376107	0.037329779	-0.003516567		
			8.915993318	0.031666651	-0.003019202		
			8.373355173	0.051719317	-0.014710839		
			4.201181778	0.008213739	-0.000742216		
			4.326569769	0.004938556	-0.000272465		
			3.811743811	0.009286054	-0.000972141		
			3.936855190	0.007029437	-0.000674811		
			3.756430335	0.011368806	-0.003347553		
			3.641234729	0.000462167	-0.000044593		
			3.573891006	0.000395208	-0.000128159		
			2.086788044	0.002149711	-0.000197400		
			2.050784619	0.001228817	-0.000070059		
			1.808653848	0.002268372	-0.000242958		
			1.667285833	0.001431681	-0.000137721		
			1.597539095	0.002285777	-0.000677552		
			1.095770791	0.000052621	-0.000005111		
			1.061717793	0.000043410	-0.000014189		
			0.937718645	0.000431920	-0.000039820		
			0.846447134	0.000208701	-0.000011987		
			0.715702465	0.000339354	-0.000036522		
			0.416869870	0.000073955	-0.000007117		
			0.316765487	0.000039901	-0.000003681		
3S1/2 -- ( 2)	590.902851	-1174.155918	6.514625505	0.021350279		-0.169902021	0.008492616
			6.037991718	0.007237759	-0.000073606		
			5.596329663	0.010197470	-0.001263404		
			6.439634967	0.006396061	-0.000244417		
			6.307221257	0.008075703	-0.000312655		
			3.606570591	0.003660375	-0.001282760		
			3.748940199	0.005283552	-0.000908314		
			3.377392732	0.002650368	-0.000344024		
			3.476324707	0.001860497	-0.000178750		
			3.377801381	0.001859153	-0.000147332		
			3.495382134	0.001878375	-0.000264067		
			3.441650713	0.000851006	-0.000258037		
			1.937811079	0.000968643	-0.000352109		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E (MAG)	E (RET)	E (V-P)	E (H-VP)
CURIUM	5F7 6D1	Z=96	A=247	R=1.42282E-04	A.U.		
	5P1/2		1.910319521	0.001382865	-0.000245564		
	5P3/2		1.7J4603507	0.000694042	-0.000095188		
	5D3/2		1.574564626	0.000414799	-0.000043741		
	5D5/2		1.522174463	0.000376947	-0.000036040		
	5F5/2		1.080704001	0.000173684	-0.000025432		
	5F7/2		1.048530161	0.000080761	-0.000024171		
	6S1/2		0.9J8642784	0.000195010	-0.000071350		
	6P1/2		0.822698299	0.000236932	-0.000042316		
	6P3/2		0.700189546	0.000105212	-0.000014579		
	6D3/2		0.412087433	0.000021692	-0.000002316		
	7S1/2		0.314027574	0.000018021	-0.000006600		
3P1/2 --	( 2)	585.793951	-1167.400713	6.988632520	0.042894696	-0.035404709	0.002504142
	3P3/2		6.163132752	0.004072843	-0.000077967		
	3D3/2		6.316166103	0.015039534	-0.001375853		
	3D5/2		6.642084109	0.005946759	-0.000062635		
	4S1/2		3.739063958	0.003059441	-0.000363474		
	4P1/2		3.687988886	0.005312179	-0.001206083		
	4P3/2		3.441433222	0.001380245	-0.000085209		
	4D3/2		3.503312819	0.004037548	-0.0000580626		
	4D5/2		3.422198805	0.001288792	-0.000042218		
	4F5/2		3.487411208	0.003191601	-0.000705965		
	4F7/2		3.475134359	0.000345634	-0.000074695		
	5S1/2		1.967880904	0.000791055	-0.000101734		
	5P1/2		1.899941191	0.001301176	-0.0000313716		
	5P3/2		1.719014360	0.000349681	-0.000024146		
	5D3/2		1.580480285	0.000918967	-0.000144908		
	5D5/2		1.530873374	0.000254258	-0.000010126		
	5F5/2		1.080127532	0.000300142	-0.000068532		
	5F7/2		1.051707083	0.000035546	-0.000007224		
	6S1/2		0.913905386	0.000158457	-0.000020719		
	6P1/2		0.821083257	0.000220211	-0.000053667		
	6P3/2		0.702312811	0.000052671	-0.000003713		
	6D3/2		0.412395689	0.000048208	-0.000007694		
	7S1/2		0.314566663	0.000014631	-0.000001918		
3P3/2 --	( 4)	397.396608	-916.050514	5.857065365	0.018850750	-0.001384403	0.000251151
	3D3/2		6.252927333	0.004203326	-0.000021338		
	3D5/2		5.941492884	0.010269205	-0.000196526		
	4S1/2		3.639605374	0.004692956	-0.0000627062		
	4P1/2		3.7J9070287	0.002042945	-0.000157176		
	4P3/2		3.306670967	0.003318275	-0.000484604		
	4D3/2		3.432970846	0.001757381	-0.000166929		
	4D5/2		3.327272582	0.003669803	-0.0000571277		
	4F5/2		3.466269920	0.001615082	-0.000162202		
	4F7/2		3.387428761	0.001560423	-0.000460132		
	5S1/2		1.943130895	0.001122038	-0.000157014		
	5P1/2		1.900505066	0.000490671	-0.000042495		
	5P3/2		1.688941635	0.000796266	-0.000124960		
	5D3/2		1.566029428	0.000377750	-0.000037920		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CURIUM      5F7 6D1      Z=96    A=247 R=1.42282E-04 A.U.							
5D5/2			1.512317991	0.000759864	-0.000130652		
5F5/2			1.077961007	0.000142998	-0.000014939		
5F7/2			1.043762066	0.000138255	-0.000040785		
6S1/2			0.908975596	0.000221353	-0.000031292		
6P1/2			0.821033807	0.000082780	-0.000007337		
6P3/2			0.697888426	0.000118688	-0.000018861		
6D3/2			0.411648932	0.000019650	-0.000001987		
7S1/2			0.314111831	0.000020391	-0.000002867		
3D3/2 -- ( 4)	390.749881	-907.121297	6.849698111	0.032390574		-0.000030822	0.000007316
3D5/2			6.778414025	0.005803145	-0.000000685		
4S1/2			3.760459325	0.001652756	-0.000043614		
4P1/2			3.786462627	0.003448588	-0.000267807		
4P3/2			3.447233149	0.001116306	-0.000028851		
4D3/2			3.464543347	0.003921215	-0.000389523		
4D5/2			3.4441418193	0.001277166	-0.000018933		
4F5/2			3.453018645	0.007245588	-0.001796744		
4F7/2			3.480853250	0.000247602	-0.000029102		
5S1/2			1.972400622	0.000421542	-0.000014683		
5P1/2			1.919904116	0.000780798	-0.0000364730		
5P3/2			1.720075516	0.000270673	-0.000008531		
5D3/2			1.574353089	0.0000761030	-0.0000083638		
5D5/2			1.534573741	0.000254388	-0.000004609		
5F5/2			1.077312131	0.000675087	-0.000170695		
5F7/2			1.052370583	0.000026251	-0.000002852		
6S1/2			0.914766176	0.000084249	-0.0000033109		
6P1/2			0.824328772	0.000130189	-0.000010961		
6P3/2			0.702461378	0.000040431	-0.000001323		
6D3/2			0.412091677	0.000039027	-0.000004349		
7S1/2			0.314645508	0.000007777	-0.000000290		
3D5/2 -- ( 6)	357.491166	-858.693433	6.586482370	0.026380870		-0.000005032	0.000001825
4S1/2			3.730636174	0.001915595	-0.000043690		
4P1/2			3.788287372	0.001380231	-0.000021761		
4P3/2			3.407912655	0.002157996	-0.000094929		
4D3/2			3.514354049	0.001041565	-0.000021134		
4D5/2			3.366086196	0.003406809	-0.000243659		
4F5/2			3.519947727	0.001523447	-0.000111616		
4F7/2			3.406559111	0.004508870	-0.001254396		
5S1/2			1.964863614	0.000474789	-0.000014672		
5P1/2			1.918881029	0.000327505	-0.000007286		
5P3/2			1.711184725	0.000498408	-0.000024848		
5D3/2			1.582036542	0.000207161	-0.000005150		
5D5/2			1.521136698	0.000651135	-0.000051809		
5F5/2			1.083269967	0.000143972	-0.000010599		
5F7/2			1.045816045	0.000404185	-0.000114221		
6S1/2			0.913260893	0.000094342	-0.000003105		
6P1/2			0.824111064	0.000055121	-0.000001309		
6P3/2			0.701150290	0.000073750	-0.000003371		
6D3/2			0.412471514	0.000010665	-0.000000273		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CURIUM 5F7 6D1 Z=96 A=247 R=1.42282E-04 A.U.							
4S1/2 -- ( 2)	205.297253	-504.261237	0.314506573	0.000008701	-0.000000289		
4P1/2			2.999391778	0.002086772		-0.047011858	0.002343865
4P3/2			2.679051735	0.000877463	-0.000036468		
4D3/2			2.520320418	0.001317031	-0.000274421		
4D5/2			2.712633398	0.000890494	-0.000083645		
4F5/2			2.663190373	0.000762602	-0.000096113		
4F7/2			2.800856989	0.000631078	-0.000052097		
5S1/2			2.776781717	0.000652347	-0.000053881		
5P1/2			1.734517850	0.000398468	-0.000174521		
5P3/2			1.725653575	0.000426592	-0.000083129		
5D3/2			1.554423348	0.000203599	-0.000044658		
5D5/2			1.447415752	0.000105543	-0.000012696		
5F5/2			1.403359204	0.000141718	-0.000012924		
5F7/2			1.025414539	0.000035113	-0.000002224		
6S1/2			0.997199004	0.000048043	-0.000002169		
6P1/2			0.869696613	0.000080114	-0.000036159		
6P3/2			0.792346759	0.000076575	-0.000015379		
6D3/2			0.678420170	0.000031436	-0.000006881		
7S1/2			0.405632506	0.000005514	-0.000000683		
4P1/2 -- ( 2)	199.126461	-494.419742	0.310515267	0.000007398	-0.000003351		
4P3/2			3.029933120	0.003917537		-0.009794477	0.000689088
4D3/2			2.699473884	0.000353664	-0.000013105		
4D5/2			2.559489357	0.002238152	-0.000403122		
4F5/2			2.731744491	0.000452219	-0.000016856		
4F7/2			2.759261818	0.001032574	-0.000130696		
5S1/2			2.811601111	0.000475259	-0.000015792		
5P1/2			1.770624274	0.000433318	-0.000064434		
5P3/2			1.692305774	0.000508567	-0.000149407		
5D3/2			1.568333242	0.000119484	-0.000011373		
5D5/2			1.440177229	0.000200293	-0.000033913		
5F5/2			1.409196479	0.000102765	-0.000004470		
5F7/2			1.024897404	0.000056259	-0.000004500		
6S1/2			0.998707723	0.000037920	-0.000000946		
6P1/2			0.875605899	0.000083397	-0.000013181		
6P3/2			0.787813490	0.000085119	-0.000026185		
6D3/2			0.680223144	0.000018391	-0.000001896		
7S1/2			0.405319336	0.000010445	-0.000001777		
4P3/2 -- ( 4)	140.555742	-407.746585	0.311045379	0.000007655	-0.000001220		
4D3/2			2.592484449	0.001765433		-0.000385123	0.000069480
4D5/2			2.606545305	0.000479192	-0.000013230		
4F5/2			2.459734018	0.001110285	-0.000090188		
4F7/2			2.659658383	0.000411367	-0.000016034		
5S1/2			2.606179053	0.000715852	-0.000047635		
5P1/2			1.728957676	0.000728564	-0.000113621		
5P3/2			1.698317344	0.000232608	-0.000021806		
5D3/2			1.521001841	0.000316689	-0.000059248		
5D5/2			1.427634283	0.000095620	-0.000008883		
			1.381045393	0.000227046	-0.000022495		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CURIUM 5F7 6D1 Z=96 A=247 R=1.42282E-04 A.U.							
			1.015014099	0.000029670	-0.000001485		
			0.986738672	0.000052104	-0.000003023		
			0.867992717	0.000130206	-0.000021262		
			0.787809061	0.000037957	-0.000003939		
			0.673772132	0.000046592	-0.000009211		
			0.404615375	0.000005153	-0.000000512		
			0.310349958	0.000011843	-0.000001946		
4D3/2 -- ( 4)	131.177480	-391.102852	2.639628652	0.002456584		-0.000009813	0.000002318
			2.622894148	0.000440163	-0.000000114		
			2.563392682	0.001254984	-0.000123695		
			2.680553499	0.000395888	-0.000002537		
			1.743821635	0.000221835	-0.000009029		
			1.690509992	0.000535745	-0.000062192		
			1.546320735	0.000123808	-0.000005492		
			1.410001641	0.000306628	-0.000038859		
			1.391085481	0.000093536	-0.000002024		
			1.014377038	0.000094500	-0.000009914		
			0.989581847	0.000029657	-0.000000492		
			0.870556092	0.000041639	-0.000002177		
			0.787151882	0.000080113	-0.000009765		
			0.677012695	0.000018020	-0.000000901		
			0.403844978	0.000015474	-0.000002082		
			0.310581553	0.000003813	-0.000000206		
4D5/2 -- ( 6)	120.902461	-373.996144	2.563654908	0.002005970		-0.000001604	0.000000580
			2.648345525	0.000346826	-0.000006152		
			2.539772826	0.001058646	-0.000074188		
			1.731165780	0.000257807	-0.000008814		
			1.695862127	0.000156637	-0.000003769		
			1.531293390	0.000274754	-0.000021585		
			1.426035961	0.000080842	-0.000002367		
			1.369371636	0.000262902	-0.000024155		
			1.013817911	0.000025660	-0.000001117		
			0.984516074	0.000082246	-0.000007507		
			0.868285450	0.000046738	-0.000002161		
			0.787425991	0.000024851	-0.000000810		
			0.675008163	0.000038229	-0.000003160		
			0.404531971	0.000004125	-0.000000137		
			0.310374368	0.000004264	-0.000000205		
4F5/2 -- ( 6)	107.281494	-350.054944	2.706826202	0.002571491		-0.000000005	0.000000002
			2.731557360	0.000413800	-0.000000003		
			1.750595504	0.000134276	-0.000000151		
			1.701263916	0.000188843	-0.000001151		
			1.549871934	0.000086888	-0.000000404		
			1.426108430	0.000181232	-0.000007175		
			1.392904056	0.000061257	-0.000000577		
			1.010175760	0.000135538	-0.000006798		
			0.992865518	0.000033228	-0.000000196		
			0.871844060	0.000025779	-0.000000201		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CURIUM 5F7 601 Z=96 A=247 R=1.42282E-04 A.U.							
			0.788790544	0.000029598	-0.000000447		
			0.677542275	0.000012651	-0.000000110		
			0.404600165	0.000008793	-0.000000366		
			0.310698317	0.000002367	-0.000000021		
4F7/2 -- ( 8)	103.786886	-343.654802	2.676184604	0.002348073		-0.000000001	0.000000001
			1.744747631	0.000163567	-0.000000120		
			1.705656741	0.000117904	-0.000000158		
			1.542216070	0.000143102	-0.000000938		
			1.431951348	0.000068035	-0.000000312		
			1.383625686	0.000156088	-0.000004600		
			1.018984245	0.000028977	-0.000000214		
			0.983770486	0.000123487	-0.000004771		
			0.870774256	0.000029791	-0.000000195		
			0.789035509	0.000018440	-0.000000099		
			0.676555217	0.000019971	-0.000000231		
			0.404831532	0.000003394	-0.000000022		
			0.310600433	0.000002720	-0.000000021		
5S1/2 -- ( 2)	66.232045	-227.268023	1.460386552	0.000217889		-0.012599759	0.000627747
			1.270701429	0.000138350	-0.000012637		
			1.200876143	0.000200179	-0.000051925		
			1.206076875	0.000134376	-0.000017432		
			1.181205648	0.000073853	-0.000018112		
			0.928743278	0.000047545	-0.000006064		
			0.906734014	0.000024080	-0.000005731		
			0.799439155	0.000034319	-0.000017155		
			0.740523599	0.000022009	-0.000005003		
			0.640692141	0.000013489	-0.000004555		
			0.394867723	0.000004132	-0.000000653		
			0.304326912	0.000003176	-0.000001623		
5P1/2 -- ( 2)	61.178446	-216.757863	1.412987829	0.000374246		-0.002495757	0.000175346
			1.257668122	0.000033537	-0.000001792		
			1.122658669	0.000348654	-0.000078510		
			1.188378009	0.000029655	-0.000003032		
			0.909781355	0.000077911	-0.000015783		
			0.905063591	0.000012659	-0.000001707		
			0.806967853	0.000051184	-0.000008232		
			0.727355995	0.000034250	-0.000011743		
			0.642535959	0.000006896	-0.000000807		
			0.392741471	0.000008460	-0.000002179		
			0.304890460	0.000004524	-0.000000755		
5P3/2 -- ( 4)	43.600894	-183.924517	1.209520624	0.000168788		-0.000096734	0.000017427
			1.145130712	0.000064213	-0.000004205		
			1.076399207	0.000124842	-0.000023883		
			0.897398249	0.000034022	-0.000003032		
			0.867466623	0.000036436	-0.000008351		
			0.788958074	0.000085346	-0.000013748		
			0.728320458	0.000018165	-0.000001832		
			0.629262220	0.000018820	-0.000003982		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CURIUM	5F7 6D1	Z=96	A=247	R=1.42282E-04	A.U.		
	6D3/2			0.392405269	0.000001786	-0.000000157	
	7S1/2			0.303397319	0.000007155	-0.000001196	
5D3/2 --	( 4)	35.175845	-162.826530	1.097105044	0.000180057	-0.000000000	0.000000509
	5D5/2			1.089637572	0.000032165	-0.000000012	
	5F5/2			0.830693847	0.000112290	-0.000024364	
	5F7/2			0.857502843	0.000011995	-0.000000428	
	6S1/2			0.775662847	0.000021574	-0.000000750	
	6P1/2			0.707798414	0.000052069	-0.000000280	
	6P3/2			0.627109899	0.000009040	-0.000000508	
	6D3/2			0.387900491	0.000005819	-0.000000749	
5D5/2 --	7S1/2			0.302335103	0.000001857	-0.000000089	
	( 6)	32.253972	-156.114526	1.064293117	0.000145436	-0.000000349	0.000000126
	5F5/2			0.864344215	0.000025237	-0.000001388	
	5F7/2			0.816554504	0.000071490	-0.000015409	
	6S1/2			0.768768976	0.000026781	-0.000000639	
	6P1/2			0.712513035	0.000012850	-0.000000278	
	6P3/2			0.621276718	0.000022112	-0.000002207	
	6D3/2			0.389706184	0.000001555	-0.000000046	
	7S1/2			0.301800896	0.000002158	-0.000000081	
5F5/2 --	( 6)	15.776912	-105.251198	0.726604707	0.000062053	-0.000000000	0.000000000
	5F7/2			0.725736225	0.000009577	-0.000000000	
	6S1/2			0.678663770	0.000009094	-0.000000341	
	6P1/2			0.626317703	0.000011485	-0.000000386	
	6P3/2			0.571988557	0.000004108	-0.000000028	
	6D3/2			0.369024876	0.000003000	-0.000000000	
5F7/2 --	7S1/2			0.294358149	0.000000762	-0.000000000	
	( 1)	14.842763	-101.986980	0.000000000	0.000000000	-0.000000000	0.000000000
	6S1/2			0.669233500	0.000011376	-0.000000370	
	6P1/2			0.631910931	0.000007096	-0.000000051	
	6P3/2			0.561193583	0.000008092	-0.000000097	
	6D3/2			0.373136214	0.000001332	-0.000000000	
	7S1/2			0.293414052	0.000000946	-0.000000000	
6S1/2 --	( 2)	15.673664	-95.458654	0.665695269	0.000017358	-0.000000000	0.000126838
	6P1/2			0.556529832	0.000018386	-0.000002458	
	6P3/2			0.514030707	0.000019605	-0.000005440	
	6D3/2			0.367367510	0.000005160	-0.000000703	
	7S1/2			0.288437014	0.000001191	-0.000000562	
6P1/2 --	( 2)	12.410711	-84.643798	0.597770294	0.000024068	-0.000000000	0.000029932
	6P3/2			0.519383189	0.00002032	-0.000000109	
	6D3/2			0.347594358	0.000014527	-0.000003396	
	7S1/2			0.287951684	0.000002458	-0.000000378	
6P3/2 --	( 4)	7.971724	-70.250016	0.491126593	0.000009593	-0.000014559	0.000002622
	6D3/2			0.347891354	0.000020998	-0.000000293	
	7S1/2			0.280629880	0.000003547	-0.000000505	
6D3/2 --	( 1)	2.496587	-40.163163	0.000000000	0.000000000	-0.000000000	0.000000027
	7S1/2			0.240981210	0.000000413	-0.000000007	
7S1/2 --	( 2)	1.666107	-30.912202	0.230511890	0.000000605	-0.000023544	0.0000011728



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
CURIUM            5F7 6D1        Z=96    A=247 R=1.42282E-04 A.U.								
ETDT	-31290.81706	39222.53909	-81648.02390	11101.03146	49.169405668	-5.162481647	-10.968395420	0.597764429
BERKELIUM        5F9                Z=97    A=247 R=1.42282E-04 A.U.								
1S1/2 -- ( 2)	7575.694941	-13077.265201	76.494583128	14.390188101		-4.615325002	0.255051653	
2S1/2			24.235371043	0.822329601	-0.102072100			
2P1/2			30.545602685	1.691392869	-0.201565121			
2P3/2			23.103797040	0.679022040	-0.196054168			
3S1/2			10.127769555	0.183314187	-0.024273296			
3P1/2			11.440006259	0.341988699	-0.039676680			
3P3/2			9.387458907	0.158657226	-0.047202172			
3D3/2			9.570310643	0.006841471	-0.000739666			
3D5/2			9.050956650	0.002669950	-0.000853416			
4S1/2			4.713667335	0.050100598	-0.006729253			
4P1/2			4.995028903	0.089155963	-0.010279953			
4P3/2			4.237663172	0.042180495	-0.012637048			
4D3/2			4.139588582	0.002082897	-0.000225960			
4D5/2			3.955906583	0.000815332	-0.000263126			
4F5/2			3.711878884	0.000006832	-0.000030675			
4F7/2			3.642750358	0.000002657	-0.000000873			
5S1/2			2.248433991	0.013491443	-0.001818970			
5P1/2			2.245925277	0.022585620	-0.002600042			
5P3/2			1.933870753	0.010553367	-0.003167390			
5D3/2			1.731938073	0.000457795	-0.000049702			
5D5/2			1.658581221	0.000177072	-0.000057271			
5F5/2			1.103088931	0.000000810	-0.000000080			
5F7/2			1.060953422	0.000000300	-0.000000099			
6S1/2			0.972195308	0.002662213	-0.000359269			
6P1/2			0.877352897	0.003703012	-0.000426132			
6P3/2			0.724432132	0.001485217	-0.000445932			
7S1/2			0.336810703	0.000214050	-0.000026890			
2S1/2 -- ( 2)	1922.809902	-3349.684156	17.519578531	0.340775212		-0.768425887	0.039487319	
2P1/2			17.643915318	0.104469454	-0.000104496			
2P3/2			15.610888024	0.135730364	-0.006642269			
3S1/2			8.272918495	0.041328881	-0.009850211			
3P1/2			9.166829140	0.071792620	-0.010918008			
3P3/2			8.078234289	0.038132871	-0.004058517			
3D3/2			8.997664961	0.037533740	-0.005096545			
3D5/2			8.601564765	0.015725561	-0.005001868			
4S1/2			4.225670666	0.011196339	-0.002815706			
4P1/2			4.406093561	0.019394481	-0.003030944			
4P3/2			3.899898442	0.010537369	-0.001279569			
4D3/2			3.991383953	0.008320496	-0.001193407			
4D5/2			3.840126149	0.003684892	-0.001202694			
4F5/2			3.706968829	0.000549861	-0.000071418			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
BERKELIUM	5F9	Z=97	A=247	R=1.42282E-04	A.U.		
4F7/2			3.638530311	0.000195292	-0.000069533		
5S1/2			2.118123950	0.003007039	-0.000764793		
5P1/2			2.096868575	0.004945612	-0.000777250		
5P3/2			1.849928798	0.002655999	-0.000331790		
5D3/2			1.700450231	0.001706631	-0.000247833		
5D5/2			1.634319322	0.000757257	-0.000248002		
5F5/2			1.102526816	0.000062253	-0.000038148		
5F7/2			1.060493476	0.000021104	-0.000007572		
6S1/2			0.946533147	0.000592965	-0.000151212		
6P1/2			0.852918646	0.000811986	-0.000127769		
6P3/2			0.712635261	0.000374346	-0.000047041		
7S1/2			0.304747999	0.000047671	-0.000012161		
2P1/2 -- ( 2)	1926.622131	-3354.764649	22.056584008	0.786777542		-0.146967726	0.010788379
2P3/2			18.391177681	0.080588423	-0.000464372		
3S1/2			8.870118582	0.028237087	-0.001879193		
3P1/2			9.173069494	0.066849031	-0.009654922		
3P3/2			8.459398224	0.020590483	-0.000544036		
3D3/2			9.026512206	0.108685887	-0.025853438		
3D5/2			8.828770553	0.003002503	-0.000744328		
4S1/2			4.373533146	0.007637913	-0.000569601		
4P1/2			4.422963769	0.016913705	-0.002686767		
4P3/2			3.995965317	0.005489211	-0.000170729		
4D3/2			4.001992495	0.025745735	-0.006305566		
4D5/2			3.896113257	0.000833480	-0.000195325		
4F5/2			3.708197224	0.000621702	-0.000130129		
4F7/2			3.640917672	0.000033606	-0.000012909		
5S1/2			2.157032283	0.002050479	-0.000157050		
5P1/2			2.101972175	0.004253885	-0.000689912		
5P3/2			1.873678091	0.001373535	-0.000044314		
5D3/2			1.702845739	0.005361514	-0.001321473		
5D5/2			1.645937238	0.000177821	-0.000041092		
5F5/2			1.102668096	0.000070750	-0.000014902		
5F7/2			1.060752644	0.000003669	-0.000001414		
6S1/2			0.954168073	0.000404296	-0.000031166		
6P1/2			0.853785400	0.000696306	-0.000113450		
6P3/2			0.715969193	0.000193303	-0.000006285		
7S1/2			0.305361359	0.000032503	-0.000002508		
2P3/2 -- ( 4)	1140.194560	-2350.485830	16.745448494	0.305537808		-0.005125871	0.000971651
3S1/2			8.494438067	0.034287940	-0.002940560		
3P1/2			9.165708559	0.020601604	-0.000988684		
3P3/2			7.940663669	0.038691793	-0.003648560		
3D3/2			9.036562553	0.032859029	-0.003126536		
3D5/2			8.477929039	0.053600396	-0.015246711		
4S1/2			4.273955514	0.008617779	-0.000783965		
4P1/2			4.404657067	0.005177227	-0.000286082		
4P3/2			3.869765937	0.009672212	-0.001013773		
4D3/2			4.001773287	0.007337824	-0.000702821		
4D5/2			3.819467818	0.011863715	-0.003493947		



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
BERKELIUM	5F9	Z=97 A=247 R=1.42282E-04 A.U.					
			1.941117396	0.001387193	-0.000333875		
			1.751140408	0.000365609	-0.000025517		
			1.613471183	0.000964716	-0.000151616		
			1.561266617	0.000269644	-0.000010684		
			1.086791739	0.000310835	-0.000071031		
			1.050412021	0.000036296	-0.000007395		
			0.925038134	0.000164327	-0.000021448		
			0.827676953	0.000226255	-0.000055047		
			0.698803269	0.000051647	-0.000003679		
			0.303021572	0.000013197	-0.000001727		
3P3/2 -- ( 4)	408.040101	-938.274449	5.933546236	0.019580052		-0.001481545	0.000274604
			6.336148171	0.004363933	-0.000021738		
			6.018029292	0.010654237	-0.000204017		
			3.699421358	0.004961242	-0.000665553		
			3.772232768	0.002157087	-0.000166097		
			3.355264630	0.003465150	-0.000506568		
			3.487226791	0.001845069	-0.000175353		
			3.378197250	0.00388392	-0.000598254		
			3.526645652	0.001697498	-0.000170428		
			3.445376453	0.001640358	-0.000483548		
			1.982138121	0.001194103	-0.000167750		
			1.940941018	0.000522496	-0.000045328		
			1.719708431	0.000838801	-0.000131816		
			1.598070967	0.000401147	-0.000040297		
			1.541713768	0.000802921	-0.000138344		
			1.084437791	0.000147570	-0.000015426		
			1.042379868	0.000141103	-0.000041603		
			0.919926573	0.000230143	-0.000032663		
			0.827503733	0.000084924	-0.000007541		
			0.694466020	0.000117235	-0.000018656		
			0.302611380	0.000018441	-0.000002621		
3D3/2 -- ( 4)	401.313546	-929.267287	6.943202329	0.033667370		-0.000033892	0.000008225
			6.867458609	0.006019476	-0.000000745		
			3.823379552	0.001733294	-0.000045838		
			3.851909954	0.003632914	-0.000283968		
			3.498754684	0.001165376	-0.000030144		
			3.519898899	0.004102300	-0.000408362		
			3.494969626	0.001334952	-0.000019820		
			3.513494898	0.007622908	-0.001890546		
			3.541434834	0.000260634	-0.000030619		
			2.012397490	0.000445802	-0.000015590		
			1.961110585	0.000829587	-0.000092009		
			1.751760156	0.000285100	-0.000009007		
			1.606769605	0.000804859	-0.000088709		
			1.564707282	0.000268581	-0.000004883		
			1.083836515	0.000698523	-0.000176718		
			1.050981899	0.000026933	-0.000002920		
			0.925776827	0.000087078	-0.000003228		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
BERKELIUM	5F9	Z=97	A=247	R=1.42282E-04	A.U.		
	6P1/2		0.830805000	0.000133262	-0.000011291		
	6P3/2		0.698880570	0.000039933	-0.000001310		
	7S1/2		0.303080365	0.000006991	-0.000000261		
305/2 -- ( 6)	366.438617	-878.550077	6.669813287	0.027363121		-0.000005485	0.000002037
	4S1/2		3.792170691	0.002006977	-0.000045894		
	4P1/2		3.852981071	0.001447232	-0.000022852		
	4P3/2		3.458128871	0.002250414	-0.000099237		
	4D3/2		3.570017363	0.001088575	-0.000022162		
	4D5/2		3.417593811	0.003556984	-0.000255061		
	4F5/2		3.581753692	0.001603273	-0.000117349		
	4F7/2		3.464960514	0.004742070	-0.001319327		
	5S1/2		2.004442623	0.000501387	-0.000015574		
	5P1/2		1.959842004	0.000346673	-0.000007751		
	5P3/2		1.742487972	0.000524128	-0.000026216		
	5D3/2		1.614533677	0.000218935	-0.000005471		
	5D5/2		1.550771118	0.000686293	-0.000054794		
	5F5/2		1.089804186	0.000149019	-0.000010961		
	5F7/2		1.044429100	0.000412794	-0.000116696		
	6S1/2		0.924224002	0.000097360	-0.000003222		
	6P1/2		0.800553340	0.000056222	-0.000001343		
	6P3/2		0.697598195	0.000072720	-0.000003731		
	7S1/2		0.302955710	0.000007810	-0.000000261		
4S1/2 -- ( 2)	213.618780	-520.318690	3.050948442	0.002201073		-0.050774629	0.002575065
	4P1/2		2.726377677	0.000920986	-0.000037499		
	4P3/2		2.561226015	0.001399490	-0.000295789		
	4D3/2		2.758029716	0.000938572	-0.000088576		
	4D5/2		2.706824587	0.000799104	-0.000101997		
	4F5/2		2.851076162	0.000664083	-0.000054755		
	4F7/2		2.826174765	0.000686985	-0.000056690		
	5S1/2		1.768706535	0.000424290	-0.000185839		
	5P1/2		1.761700661	0.000458683	-0.000089270		
	5P3/2		1.582573630	0.000213644	-0.000047821		
	5D3/2		1.476643649	0.000112122	-0.000013566		
	5D5/2		1.430432571	0.000149766	-0.000013822		
	5F5/2		1.031987177	0.000036476	-0.000002315		
	5F7/2		0.996529004	0.000049190	-0.000002227		
	6S1/2		0.880655153	0.000083373	-0.000037624		
	6P1/2		0.799164902	0.000079308	-0.000015906		
	6P3/2		0.675852894	0.000030864	-0.000006885		
	7S1/2		0.299482540	0.000006696	-0.000000302		
4P1/2 -- ( 2)	207.387077	-510.429410	3.084334289	0.004138647		-0.010904482	0.000778502
	4P3/2		2.743723041	0.000367670	-0.000014497		
	4D3/2		2.603373813	0.002372452	-0.000430169		
	4D5/2		2.777294744	0.000471799	-0.000018021		
	4F5/2		2.809651397	0.001088143	-0.000137761		
	4F7/2		2.862559274	0.000500853	-0.000016670		
	5S1/2		1.805991710	0.000459658	-0.000068357		
	5P1/2		1.727617466	0.000543356	-0.000159684		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
BERKELIUM	5F9	Z=97	A=247	R=1.42282E-04	A.U.		
5P3/2			1.597056561	0.000124907	-0.000012112		
5D3/2			1.469319759	0.000212580	-0.000036399		
5D5/2			1.436567633	0.000108527	-0.000004784		
5F5/2			1.031547814	0.000058468	-0.000004691		
5F7/2			0.998076347	0.000038845	-0.000000976		
6S1/2			0.886623337	0.000086487	-0.000013673		
6P1/2			0.794707253	0.000087640	-0.000026963		
6P3/2			0.677617516	0.000018933	-0.000001889		
7S1/2			0.299948986	0.000006907	-0.000001104		
4P3/2 -- ( 4)	145.027820	-418.560282	2.631325939	0.001847660		-0.000414505	0.000076392
4D3/2			2.647361460	0.000500071	-0.000013570		
4D5/2			2.497602185	0.001161032	-0.000093651		
4F5/2			2.704043186	0.000430247	-0.000016512		
4F7/2			2.649509824	0.000750758	-0.000049148		
5S1/2			1.762098770	0.000781045	-0.000121968		
5P1/2			1.732714399	0.000249930	-0.000023428		
5P3/2			1.547948720	0.000334785	-0.000062816		
5D3/2			1.455852748	0.000102307	-0.000009551		
5D5/2			1.407167397	0.000241502	-0.000024087		
5F5/2			1.021336972	0.000031104	-0.000001581		
5F7/2			0.985977831	0.000053410	-0.000003183		
6S1/2			0.878790084	0.000136144	-0.000022268		
6P1/2			0.794536870	0.000039227	-0.000004072		
6P3/2			0.671332411	0.000046188	-0.000009153		
7S1/2			0.299326347	0.000010777	-0.000001773		
4D3/2 -- ( 4)	135.553056	-401.834206	2.682807740	0.002578225		-0.000010878	0.000002626
4D5/2			2.664959815	0.000460744	-0.000000125		
4F5/2			2.608415707	0.001313501	-0.000127785		
4F7/2			2.726977752	0.000416710	-0.000002633		
5S1/2			1.777935805	0.000235739	-0.000009639		
5P1/2			1.725182035	0.000573107	-0.000066782		
5P3/2			1.574194426	0.000130704	-0.000005813		
5D3/2			1.438095530	0.000325723	-0.000041523		
5D5/2			1.417710907	0.000099061	-0.000002158		
5F5/2			1.020860899	0.000099592	-0.000010683		
5F7/2			0.988902156	0.000030266	-0.000000512		
6S1/2			0.881456045	0.000043221	-0.000002271		
6P1/2			0.793964280	0.000082480	-0.000010094		
6P3/2			0.674489315	0.000017845	-0.000000895		
7S1/2			0.299536088	0.000003444	-0.000000187		
4D5/2 -- ( 6)	124.750246	-383.910414	2.604018857	0.002101930		-0.000001763	0.000000652
4F5/2			2.693599281	0.000363077	-0.000006297		
4F7/2			2.583168355	0.001108749	-0.000076191		
5S1/2			1.764700114	0.000273806	-0.000009401		
5P1/2			1.730458463	0.000166784	-0.000004028		
5P3/2			1.558686035	0.000290010	-0.000022846		
5D3/2			1.454368362	0.000085810	-0.000002532		
5D5/2			1.395354921	0.000278392	-0.000025748		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
BERKELIUM	5F9	Z=97 A=247 R=1.42282E-04 A.U.					
			1.020206489	0.000026903	-0.000001196		
			0.983850237	0.000085145	-0.000008004		
			0.879135690	0.000048464	-0.000002253		
			0.794196776	0.000025474	-0.000000835		
			0.672545970	0.000037854	-0.000003137		
			0.299351807	0.000003848	-0.000000185		
4F5/2 -- ( 6)	111.085720	-360.053092	2.757498670	0.002712692		-0.000000006	0.000000002
			2.782373318	0.000436691	-0.000000003		
			1.785780363	0.000142601	-0.000000173		
			1.737147303	0.000201040	-0.000001270		
			1.578447426	0.000091912	-0.000000442		
			1.455182271	0.000192331	-0.000007667		
			1.420050296	0.000064960	-0.000000619		
			1.016917284	0.000140442	-0.000007157		
			0.992373196	0.000034082	-0.000000204		
			0.882897419	0.000026754	-0.000000213		
			0.795708495	0.000030359	-0.000000467		
			0.675076945	0.000012551	-0.000000111		
			0.299649877	0.000002137	-0.000000019		
4F7/2 -- ( 8)	107.406375	-353.347451	2.725563134	0.002475540		-0.000000001	0.000000001
			1.779695873	0.000173493	-0.000000138		
			1.741488189	0.000125376	-0.000000175		
			1.570601340	0.000151113	-0.000001024		
			1.461033904	0.000072227	-0.000000338		
			1.410543084	0.000165183	-0.000004897		
			1.025652372	0.000030063	-0.000000226		
			0.983391991	0.000126265	-0.000004958		
			0.881808209	0.000030889	-0.000000207		
			0.795930633	0.000018899	-0.000000103		
			0.674123961	0.000019794	-0.000000232		
			0.299563155	0.000002455	-0.000000019		
5S1/2 -- ( 2)	69.474980	-235.124354	1.489835742	0.000232489		-0.013733927	0.000696029
			1.297195836	0.000145928	-0.000013148		
			1.224125286	0.000216092	-0.000056221		
			1.230528995	0.000143119	-0.000018557		
			1.204415327	0.000078579	-0.000019291		
			0.935393435	0.000049432	-0.000006298		
			0.907286267	0.000024805	-0.000005884		
			0.810610152	0.000035838	-0.000017898		
			0.748121636	0.000022885	-0.000005182		
			0.639857081	0.000013629	-0.000004627		
			0.294103447	0.000002886	-0.000001472		
5P1/2 -- ( 2)	64.306788	-224.492546	1.443160449	0.000400619		-0.002808487	0.000200220
			1.282382308	0.000035423	-0.000002014		
			1.146165254	0.000037373	-0.0000084164		
			1.212184561	0.000031429	-0.000003253		
			0.916683335	0.0000081048	-0.000016398		
			0.905855710	0.000013067	-0.000001753		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
BERKELIUM	5F9	Z=97	A=247	R=1.42282E-04	A.U.		
	6S1/2		0.818300396	0.000053139	-0.000008544		
	6P1/2		0.735177683	0.000035417	-0.000012119		
	6P3/2		0.641728738	0.000006764	-0.000000805		
	7S1/2		0.294611740	0.000004098	-0.000000682		
5P3/2 -- ( 4)	45.371765	-189.473186	1.231372554	0.000178685		-0.000105081	0.000019337
	5D3/2		1.167161234	0.000067509	-0.000004373		
	5D5/2		1.096509647	0.000131750	-0.000025032		
	5F5/2		0.903491977	0.000035116	-0.000003113		
	5F7/2		0.867952033	0.000037379	-0.000008490		
	6S1/2		0.799723124	0.000089881	-0.000014456		
	6P1/2		0.735776925	0.000018969	-0.000001905		
	6P3/2		0.628789028	0.000018722	-0.000003946		
	7S1/2		0.293267489	0.000006580	-0.000001097		
5D3/2 -- ( 4)	36.732375	-168.062935	1.119260211	0.000191708		-0.000002420	0.000000584
	5D5/2		1.111034346	0.000034381	-0.000000013		
	5F5/2		0.837330954	0.000115976	-0.000002505		
	5F7/2		0.808586756	0.000012388	-0.000006435		
	6S1/2		0.786770390	0.000022533	-0.000000782		
	6P1/2		0.71555320	0.000053952	-0.000006497		
	6P3/2		0.626914938	0.000008976	-0.000000501		
	7S1/2		0.292364784	0.000001692	-0.000000080		
5D5/2 -- ( 6)	33.594886	-160.923197	1.084654006	0.000154337		-0.000000388	0.000000143
	5F5/2		0.870627578	0.000026035	-0.000001420		
	5F7/2		0.817822576	0.000073067	-0.000015637		
	6S1/2		0.779635916	0.000027988	-0.000000663		
	6P1/2		0.720183105	0.000013304	-0.000000285		
	6P3/2		0.621209805	0.000021989	-0.000002188		
	7S1/2		0.291889080	0.000001971	-0.000000073		
5F5/2 -- ( 6)	16.093076	-106.999726	0.724718687	0.000063284		-0.000000001	0.000000000
	5F7/2		0.720545350	0.000039616	-0.000000000		
	6S1/2		0.682328190	0.000009338	-0.000000355		
	6P1/2		0.628268470	0.000011710	-0.000000415		
	6P3/2		0.568978379	0.000004052	-0.000000031		
	7S1/2		0.284583272	0.000000682	-0.000000000		
5F7/2 -- ( 3)	14.962296	-102.912557	0.697375801	0.000053953		-0.000000000	0.000000000
	6S1/2		0.669572874	0.000011520	-0.000000385		
	6P1/2		0.631046080	0.000007116	-0.000000055		
	6P3/2		0.556047920	0.000007908	-0.000000110		
	7S1/2		0.283270862	0.000000849	-0.000000000		
6S1/2 -- ( 2)	16.060410	-97.664469	0.673901764	0.000017961		-0.0002713092	0.000137474
	6P1/2		0.562184463	0.000018856	-0.000002519		
	6P3/2		0.515446507	0.000019907	-0.000003526		
	7S1/2		0.279893165	0.000001058	-0.000000507		
6P1/2 -- ( 2)	12.575626	-86.194329	0.602612740	0.000024584		-0.000462221	0.000032941
	6P3/2		0.519907115	0.000002008	-0.000000113		
	7S1/2		0.279363797	0.000002175	-0.000000331		
6P3/2 -- ( 4)	7.793802	-70.535876	0.488967171	0.000009407		-0.000014831	0.000002728
	7S1/2		0.272065733	0.000003135	-0.000000436		



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
BERKELIUM 5F9 Z=97 A=247 R=1.42282E-04 A.U.								
7S1/2 -- ( 2)	1.486172	-30.030937	0.222274486	0.000000535		-0.000218178	0.000011055	
ETOT	-32148.68507	40559.69300	-84148.81785	11405.75289	51.091557988	-5.356337708	-11.697516624	0.649180728
CALIFORNIUM 5F10 Z=98 A=251 R=1.43046E-04 A.U.								
1S1/2 -- ( 2)	7838.218415	-13477.136847	77.810663067	14.917725498		-4.904877117	0.275954740	
2S1/2			24.677414897	0.856024895	-0.106458336			
2P1/2			31.176310095	1.759675735	-0.207841919			
2P3/2			23.390344496	0.7C0090139	-0.202115810			
3S1/2			10.308772255	0.191005860	-0.025333018			
3P1/2			11.663301304	0.355662280	-0.040838152			
3P3/2			9.515689151	0.164297781	-0.048871360			
3D3/2			9.701516712	0.007047445	-0.000756857			
3D5/2			9.163414035	0.002747362	-0.000877926			
4S1/2			4.801696356	0.052388291	-0.007047665			
4P1/2			5.096048111	0.093068987	-0.010616975			
4P3/2			4.304440004	0.043919221	-0.013155681			
4D3/2			4.208452462	0.002162401	-0.000233004			
4D5/2			4.018027705	0.000845981	-0.000272947			
4F5/2			3.777311309	0.000007142	-0.000000700			
4F7/2			3.705651413	0.000002783	-0.000000914			
5S1/2			2.297677700	0.014234388	-0.001922193			
5P1/2			2.299673015	0.023823216	-0.002713064			
5P3/2			1.972060234	0.011097732	-0.003330248			
5D3/2			1.771C96706	0.000482394	-0.000052019			
5D5/2			1.694380806	0.000186389	-0.000060270			
5F5/2			1.144913898	0.000000889	-0.000000087			
5F7/2			1.101619284	0.000000330	-0.000000109			
6S1/2			0.992844994	0.002807872	-0.000379532			
6P1/2			0.896984977	0.003900412	-0.000444017			
6P3/2			0.735298690	0.001543852	-0.000463467			
7S1/2			0.310492270	0.000220475	-0.000029805			
2S1/2 -- ( 2)	1997.127010	-3461.257295	17.822360250	0.357017261		-0.824742220	0.043111996	
2P1/2			17.968438859	0.109504400	-0.000105844			
2P3/2			15.835937487	0.141043519	-0.007201709			
3S1/2			8.410368081	0.043325803	-0.010308912			
3P1/2			9.328136531	0.075403201	-0.011445747			
3P3/2			8.190118798	0.039249400	-0.004139461			
3D3/2			9.124116514	0.038951550	-0.005283645			
3D5/2			8.712934924	0.016276318	-0.005183434			
4S1/2			4.300266396	0.011778920	-0.002957774			
4P1/2			4.488367528	0.020445124	-0.003188602			
4P3/2			3.960642180	0.010913396	-0.001314975			
4D3/2			4.057748763	0.008707578	-0.001247416			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E (KIN)	E (E-N)	E (E-E)	E (MAG)	E (RET)	E (V-P)	E (H-VP)
CALIFORNIUM 5F10 Z=98 A=251 R=1.43046E-04 A.U.							
4D5/2			3.900954354	0.003847527	-0.001257748		
4F5/2			3.772319178	0.000574896	-0.000074579		
4F7/2			3.701374982	0.000203946	-0.000072620		
5S1/2			2.162567992	0.003191902	-0.000810670		
5P1/2			2.144238629	0.005268106	-0.000826238		
5P3/2			1.885775655	0.002778859	-0.000344629		
5D3/2			1.738605041	0.001811687	-0.000262796		
5D5/2			1.669500485	0.000801701	-0.000263005		
5F5/2			1.144314151	0.000068283	-0.000008928		
5F7/2			1.101129724	0.000023145	-0.000008306		
6S1/2			0.966246497	0.000629202	-0.000160233		
6P1/2			0.871540211	0.000863727	-0.000135633		
6P3/2			0.723312435	0.000387178	-0.000048308		
7S1/2			0.308404367	0.000049400	-0.000012585		
2P1/2 -- ( 2)	2002.315494	-3467.952566	22.480212188	0.825211466		-0.162531217	0.012111644
2P3/2			18.660780859	0.083049358	-0.000505686		
3S1/2			9.024073214	0.029616386	-0.001960699		
3P1/2			9.335562805	0.070226330	-0.010109713		
3P3/2			8.579617326	0.021316689	-0.000563110		
3D3/2			9.154817671	0.112534998	-0.026766212		
3D5/2			8.941724659	0.003084951	-0.000768653		
4S1/2			4.452851169	0.008041397	-0.000596750		
4P1/2			4.506009718	0.017841733	-0.002825430		
4P3/2			4.059315796	0.005715983	-0.000177598		
4D3/2			4.068924808	0.026885745	-0.006583629		
4D5/2			3.957848877	0.000863287	-0.000203455		
4F5/2			3.773582833	0.000647865	-0.000135561		
4F7/2			3.703802773	0.000034936	-0.000013432		
5S1/2			2.203081328	0.002178308	-0.000166057		
5P1/2			2.149624763	0.004534399	-0.000733259		
5P3/2			1.910408335	0.001444637	-0.000046565		
5D3/2			1.741160812	0.005680457	-0.001399912		
5D5/2			1.681473793	0.000186800	-0.000043409		
5F5/2			1.144466661	0.000077357	-0.000016290		
5F7/2			1.101406536	0.000004007	-0.000001545		
6S1/2			0.974193463	0.000429358	-0.000032946		
6P1/2			0.872453712	0.000741174	-0.000120416		
6P3/2			0.726730429	0.000200973	-0.000006528		
7S1/2			0.309027845	0.000033709	-0.000002589		
2P3/2 -- ( 4)	1167.117303	-2403.432269	16.944520314	0.315746190		-0.005458439	0.001057447
3S1/2			8.628379568	0.035900642	-0.003102511		
3P1/2			9.314627296	0.021532511	-0.001034882		
3P3/2			8.043249540	0.040087209	-0.003783864		
3D3/2			9.157477841	0.034080428	-0.003236095		
3D5/2			8.982513404	0.055523389	-0.015794553		
4S1/2			4.347584520	0.000903931	-0.000827791		
4P1/2			4.483743526	0.005425887	-0.000300235		
4P3/2			3.928019137	0.010069599	-0.001056649		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CALIFORNIUM 5F10 Z=98 A=251 R=1.43046E-04 A.U.							
4D3/2			4.066930951	0.007655330	-0.000731548		
4D5/2			3.874588266	0.012372943	-0.003644601		
4F5/2			3.771772168	0.000516308	-0.000049702		
4F7/2			3.699424048	0.000440603	-0.000142933		
5S1/2			2.174663741	0.002406613	-0.000223903		
5P1/2			2.142975280	0.001377856	-0.000078826		
5P3/2			1.877890667	0.002505593	-0.000269106		
5D3/2			1.740580804	0.001598719	-0.000153082		
5D5/2			1.664187294	0.002546514	-0.000755266		
5F5/2			1.144252554	0.000060863	-0.000005900		
5F7/2			1.100914115	0.000049534	-0.000016203		
6S1/2			0.968596419	0.000472369	-0.000044123		
6P1/2			0.871330310	0.000225189	-0.000012980		
6P3/2			0.722225911	0.000347410	-0.000037495		
7S1/2			0.308588464	0.000037063	-0.000003464		
3S1/2 -- ( 2)	636.723656	-1249.943278	6.728931302	0.023514437		-0.196584143	0.010167038
3P1/2			6.243356291	0.007958080	-0.000076659		
3P3/2			5.761609196	0.011188549	-0.001472968		
3D3/2			6.634220569	0.006994940	-0.000276962		
3D5/2			6.490640623	0.008751789	-0.000356130		
4S1/2			3.730307863	0.004056380	-0.001417396		
4P1/2			3.883555798	0.005905380	-0.001012625		
4P3/2			3.480672805	0.002814877	-0.000372080		
4D3/2			3.591068205	0.002019324	-0.000193267		
4D5/2			3.485598077	0.002033174	-0.000158272		
4F5/2			3.620524971	0.002076261	-0.000291934		
4F7/2			3.562850607	0.000937863	-0.000285167		
5S1/2			2.017292332	0.001092796	-0.000396191		
5P1/2			1.993975302	0.001577821	-0.000279524		
5P3/2			1.768740274	0.000751688	-0.000104492		
5D3/2			1.642313141	0.000463123	-0.000348749		
5D5/2			1.584921835	0.000422473	-0.000039815		
5F5/2			1.128117541	0.000197510	-0.000028970		
5F7/2			1.087011011	0.000090715	-0.000027224		
6S1/2			0.937971398	0.000214965	-0.000078450		
6P1/2			0.847087603	0.000260166	-0.000046360		
6P3/2			0.707143493	0.000105645	-0.000014826		
7S1/2			0.306188485	0.000016872	-0.000006163		
3P1/2 -- ( 2)	631.923596	-1243.603234	7.230211132	0.047338802		-0.043481779	0.003166906
3P3/2			6.347330140	0.004323600	-0.000093739		
3D3/2			6.538800608	0.016594489	-0.001583349		
3D5/2			6.838574504	0.006421258	-0.000072173		
4S1/2			3.869894770	0.003379923	-0.000399569		
4P1/2			3.820421624	0.005912401	-0.001336860		
4P3/2			3.548431253	0.001478356	-0.000093485		
4D3/2			3.619680795	0.004328721	-0.000616264		
4D5/2			3.532453579	0.001418446	-0.000045935		
4F5/2			3.612802393	0.003525287	-0.000780170		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CALIFORNIUM 5F10 Z=98 A=251 R=1.43046E-04 A.U.							
4F7/2			3.597967410	0.060379031	-0.000082459		
5S1/2			2.049544007	0.060890029	-0.000114010		
5P1/2			1.983102841	0.061478546	-0.000355205		
5P3/2			1.784263469	0.060382292	-0.000026981		
5D3/2			1.648765395	0.061014281	-0.000158849		
5D5/2			1.594308839	0.060286768	-0.000011303		
5F5/2			1.127562465	0.060341460	-0.000078095		
5F7/2			1.090408330	0.060039842	-0.000038139		
6S1/2			0.944114002	0.060174206	-0.000022696		
6P1/2			0.845464996	0.0600240803	-0.000058485		
6P3/2			0.709263116	0.060053390	-0.000003845		
7S1/2			0.306668359	0.0600013663	-0.000001784		
3P3/2 -- ( 4)	418.857341	-960.813768	6.010230908	0.020329000		-0.001584466	0.000299988
3D3/2			6.419583627	0.004528794	-0.000022146		
3D5/2			6.094659924	0.011048733	-0.000211815		
4S1/2			3.759812680	0.005245010	-0.0000706195		
4P1/2			3.836060281	0.002277286	-0.000175456		
4P3/2			3.404012198	0.003616711	-0.0000529256		
4D3/2			3.541630623	0.001935835	-0.0000184069		
4D5/2			3.429181250	0.004011956	-0.0000626014		
4F5/2			3.586953863	0.001782528	-0.0000178910		
4F7/2			3.503209388	0.001722813	-0.0000507699		
5S1/2			2.021694669	0.001270343	-0.0000179138		
5P1/2			1.982116876	0.000556248	-0.000048327		
5P3/2			1.751386498	0.000883876	-0.0000139086		
5D3/2			1.632321727	0.000426805	-0.000042903		
5D5/2			1.573642349	0.000850668	-0.0000146865		
5F5/2			1.124859004	0.000161510	-0.000016895		
5F7/2			1.081676251	0.000154801	-0.000045617		
6S1/2			0.938695283	0.000244595	-0.000034849		
6P1/2			0.845154417	0.000090246	-0.000008028		
6P3/2			0.704778594	0.000122100	-0.0000019458		
7S1/2			0.306243706	0.000019139	-0.000002731		
3D3/2 -- ( 4)	412.042777	-951.719030	7.036939852	0.034978275		-0.000037229	0.000009235
3D5/2			6.956594224	0.006240779	-0.000000809		
4S1/2			3.886945044	0.001817153	-0.000048156		
4P1/2			3.918072781	0.003826291	-0.0000301045		
4P3/2			3.550452417	0.001215993	-0.000031480		
4D3/2			3.575411066	0.004289256	-0.000427845		
4D5/2			3.548593833	0.001394490	-0.000020736		
4F5/2			3.573913615	0.008012566	-0.001987424		
4F7/2			3.601904169	0.000274083	-0.000032184		
5S1/2			2.052969512	0.000471233	-0.000016545		
5P1/2			2.003082823	0.000881183	-0.000073979		
5P3/2			1.784401300	0.000300386	-0.000009511		
5D3/2			1.641428949	0.000852917	-0.0000094271		
5D5/2			1.597467975	0.000284336	-0.000005187		
5F5/2			1.124272425	0.009766595	-0.000194051		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CALIFORNIUM 5F10 Z=98 A=251 R=1.43046E-04 A.U.							
5F7/2			1.090918255	0.000029711	-0.000003215		
6S1/2			0.944737877	0.000091995	-0.000003426		
6P1/2			0.848580738	0.000141281	-0.000012048		
6P3/2			0.709272533	0.000041587	-0.000001368		
7S1/2			0.306716757	0.000007213	-0.000000271		
3D5/2 -- ( 6)	375.492100	-898.630001	6.753118264	0.028368157		-0.000005972	0.000002270
4S1/2			3.854294464	0.002102030	-0.000048187		
4P1/2			3.918347548	0.001516987	-0.000023984		
4P3/2			3.508486466	0.002345605	-0.000103695		
4D3/2			3.625809304	0.001137026	-0.000023225		
4D5/2			3.469137553	0.003711501	-0.000266824		
4F5/2			3.643481820	0.001685729	-0.000123262		
4F7/2			3.523229451	0.004982733	-0.001386336		
5S1/2			2.044576954	0.000529217	-0.000016522		
5P1/2			2.001551350	0.000366823	-0.000008243		
5P3/2			1.774725273	0.000551339	-0.000027667		
5D3/2			1.649287845	0.000231836	-0.000005822		
5D5/2			1.582969104	0.000725315	-0.000058107		
5F5/2			1.130613208	0.000163595	-0.000012022		
5F7/2			1.083873791	0.000453173	-0.000128162		
6S1/2			0.943100396	0.000102696	-0.000003419		
6P1/2			0.848284481	0.000059392	-0.000001428		
6P3/2			0.707949737	0.000075600	-0.000003892		
7S1/2			0.306588384	0.000008045	-0.000000270		
4S1/2 -- ( 2)	222.252655	-536.829845	3.103100234	0.002320921		-0.054819249	0.002827686
4P1/2			2.774291242	0.000966417	-0.000038529		
4P3/2			2.602466399	0.001487345	-0.000318766		
4D3/2			2.803735405	0.000989025	-0.000093804		
4D5/2			2.750707332	0.000836891	-0.000108238		
4F5/2			2.901511943	0.000698477	-0.000057544		
4F7/2			2.875752116	0.000722932	-0.000059642		
5S1/2			1.803384155	0.000451564	-0.000197774		
5P1/2			1.798406095	0.000492982	-0.000095819		
5P3/2			1.611506563	0.000224351	-0.000051263		
5D3/2			1.507734759	0.000119345	-0.000014527		
5D5/2			1.459651611	0.000158676	-0.000014829		
5F5/2			1.069319514	0.000040202	-0.000002559		
5F7/2			1.033135960	0.000054142	-0.000002460		
6S1/2			0.898560331	0.000088686	-0.000040016		
6P1/2			0.816157840	0.000085093	-0.000017044		
6P3/2			0.686015112	0.000031969	-0.000007271		
7S1/2			0.303120893	0.000006956	-0.000003149		
4P1/2 -- ( 2)	215.979349	-526.916728	3.139429796	0.004371066		-0.012136620	0.000879039
4P3/2			2.788316173	0.000382200	-0.000016024		
4D3/2			2.647600792	0.002514737	-0.000459099		
4D5/2			2.823116828	0.000491824	-0.000019266		
4F5/2			2.860282577	0.001146195	-0.000145216		
4F7/2			2.913736435	0.000527394	-0.000017597		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CALIFORNIUM 5F10 Z=98 A=251 R=1.43046E-04 A.U.							
			1.841883606	0.000487354	-0.000072475		
			1.763570377	0.000580340	-0.000170582		
			1.626594839	0.000130595	-0.000012906		
			1.500304915	0.000226098	-0.000039167		
			1.466117581	0.000114873	-0.000005135		
			1.068936859	0.000064461	-0.000005192		
			1.034839942	0.000042775	-0.000001083		
			0.904719652	0.000091665	-0.000014497		
			0.811621766	0.000093459	-0.000028757		
			0.687834292	0.000018646	-0.000001988		
			0.303591120	0.000007150	-0.000001140		
4P3/2 -- ( 4)	149.590628	-429.544360	2.670284081	0.001932680		-0.000445804	0.000083912
			2.688288276	0.000521603	-0.000013914		
			2.535537022	0.001213400	-0.000097229		
			2.748429878	0.000449710	-0.000016997		
			2.692825435	0.000786770	-0.000050690		
			1.795642555	0.000837001	-0.000130858		
			1.767665294	0.000268494	-0.000025157		
			1.575599373	0.000354000	-0.000066606		
			1.485826802	0.000109663	-0.0000310287		
			1.435311431	0.000257523	-0.000025852		
			1.057745339	0.000034608	-0.000001787		
			1.021688141	0.000058863	-0.000003609		
			0.896479631	0.000145457	-0.000023830		
			0.811266907	0.000041983	-0.000004360		
			0.681379029	0.000048269	-0.000009590		
			0.302951493	0.000011242	-0.000001853		
4D3/2 -- ( 4)	140.016858	-412.732164	2.726096939	0.002704127		-0.000012045	0.000002972
			2.707089505	0.000481943	-0.000000137		
			2.653452447	0.001373857	-0.0000131958		
			2.773387570	0.000438228	-0.000002732		
			1.812481436	0.000250386	-0.000010282		
			1.760410373	0.000612904	-0.000071679		
			1.602807680	0.000138016	-0.000006154		
			1.467899615	0.000346665	-0.000044444		
			1.446403646	0.000105187	-0.000002308		
			1.057407801	0.000111387	-0.000012222		
			1.024913942	0.000033192	-0.000003574		
			0.899307327	0.000045846	-0.000002423		
			0.810760010	0.000087899	-0.000010802		
			0.684616322	0.000018628	-0.000000937		
			0.303168772	0.000003567	-0.000000194		
4D5/2 -- ( 6)	128.663667	-393.958325	2.644406059	0.002200971		-0.000001936	0.000000733
			2.738813277	0.000379811	-0.000006441		
			2.626513458	0.001160359	-0.000078209		
			1.798638291	0.000290662	-0.000010016		
			1.765604356	0.000177529	-0.000004302		
			1.586788699	0.000306182	-0.000024185		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CALIFORNIUM 5F10 Z=98 A=251 R=1.43046E-04 A.U.							
5D3/2			1.484448206	0.000091255	-0.000002715		
5D5/2			1.423313741	0.000295564	-0.000027512		
5F5/2			1.056610586	0.000029932	-0.000001360		
5F7/2			1.019495841	0.000094795	-0.000009184		
6S1/2			0.896883279	0.000051348	-0.000002402		
6P1/2			0.810955564	0.000027036	-0.000000893		
6P3/2			0.682630627	0.000039495	-0.000003282		
7S1/2			0.302980756	0.000003981	-0.000000193		
4F5/2 -- ( 6)	114.953357	-370.177380	2.838094046	0.002858737		-0.000000007	0.000000003
4F7/2			2.833087088	0.000460358	-0.000000004		
5S1/2			1.821386727	0.000151339	-0.000000197		
5P1/2			1.773590843	0.000213910	-0.000001395		
5P3/2			1.607751434	0.000097235	-0.000000482		
5D3/2			1.486011030	0.000204467	-0.000008203		
5D5/2			1.449264693	0.000069059	-0.000000665		
5F5/2			1.053493305	0.000154265	-0.000007992		
5F7/2			1.028828177	0.000037565	-0.000000229		
6S1/2			0.900927913	0.000028372	-0.000000231		
6P1/2			0.812664819	0.000032233	-0.000000505		
6P3/2			0.685285603	0.000013124	-0.000000118		
7S1/2			0.333293743	0.000002213	-0.000000020		
4F7/2 -- ( 8)	111.081787	-363.154525	2.774819173	0.002607234		-0.000000001	0.000000001
5S1/2			1.815053984	0.000183913	-0.000000158		
5P1/2			1.777879082	0.000133259	-0.000000193		
5P3/2			1.599699719	0.000159595	-0.000001117		
5D3/2			1.491883522	0.000076815	-0.000000366		
5D5/2			1.439488792	0.000175241	-0.000005223		
5F5/2			1.062670909	0.000033068	-0.000000254		
5F7/2			1.019300387	0.000138695	-0.000005540		
6S1/2			0.899793835	0.000032722	-0.000000224		
6P1/2			0.812869957	0.000020051	-0.000000112		
6P3/2			0.684315728	0.000020670	-0.000000247		
7S1/2			0.303205558	0.000002540	-0.000000020		
5S1/2 -- ( 2)	72.860140	-243.216846	1.519775111	0.000247988		-0.014962997	0.000771262
5P1/2			1.324193423	0.000153881	-0.000013671		
5P3/2			1.247978756	0.000233423	-0.000060900		
5D3/2			1.256273306	0.000152689	-0.000019790		
5D5/2			1.229115698	0.000083804	-0.000020596		
5F5/2			0.967042068	0.000054285	-0.000006913		
5F7/2			0.938589771	0.000027396	-0.000006471		
6S1/2			0.827246313	0.000038278	-0.000019120		
6P1/2			0.764125621	0.000024720	-0.000005582		
6P3/2			0.649858833	0.000014504	-0.000004954		
7S1/2			0.297770549	0.000003010	-0.000001535		
5P1/2 -- ( 2)	67.591684	-232.489486	1.473985793	0.000428807		-0.003159392	0.000228494
5P3/2			1.307781352	0.000037474	-0.000002264		
5D3/2			1.170894825	0.000400974	-0.0000390388		
5D5/2			1.237546627	0.000033401	-0.000003499		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CALIFORNIUM	5F10	Z=98	A=251	R=1.43046E-04	A.U.		
	5F5/2		0.947588320	0.000088978	-0.000017987		
	5F7/2		0.937317869	0.000014489	-0.000001928		
	6S1/2		0.835249583	0.000056395	-0.000009074		
	6P1/2		0.751007206	0.000037946	-0.000012991		
	6P3/2		0.651835940	0.000007013	-0.000000852		
	7S1/2		0.298289585	0.000004251	-0.000000708		
5P3/2 -- ( 4)	47.237868	-195.219972	1.253969927	0.000189318		-0.000114157	0.000021454
	5D3/2		1.190488162	0.000071088	-0.000004551		
	5D5/2		1.118002689	0.000139341	-0.000026276		
	5F5/2		0.932844748	0.000038162	-0.000003364		
	5F7/2		0.896568931	0.000040985	-0.000009199		
	6S1/2		0.815777815	0.000096730	-0.000015546		
	6P1/2		0.751247311	0.000020529	-0.000002057		
	6P3/2		0.638612319	0.000019651	-0.000004145		
	7S1/2		0.296913614	0.000006915	-0.000001152		
5D3/2 -- ( 4)	38.437565	-173.635579	1.143168036	0.000204780		-0.000002721	0.000000671
	5D5/2		1.134329622	0.000036257	-0.000000015		
	5F5/2		0.864291060	0.000125618	-0.000026977		
	5F7/2		0.887409149	0.000013758	-0.000000471		
	6S1/2		0.803121331	0.000024090	-0.000000843		
	6P1/2		0.730931641	0.000057940	-0.000006991		
	6P3/2		0.636973594	0.000009406	-0.000000526		
	7S1/2		0.296051130	0.000001767	-0.000000084		
5D5/2 -- ( 6)	35.087770	-166.091645	1.107016765	0.000164480		-0.000000432	0.000000163
	5F5/2		0.898794876	0.000028220	-0.000001519		
	5F7/2		0.844496421	0.000079360	-0.000016792		
	6S1/2		0.795693116	0.000029894	-0.000000713		
	6P1/2		0.735563016	0.000014250	-0.000000306		
	6P3/2		0.631188956	0.000023054	-0.000002297		
	7S1/2		0.295566997	0.000002057	-0.000000076		
5F5/2 -- ( 6)	17.303500	-112.201671	0.753098421	0.000070739		-0.000000001	0.000000000
	5F7/2		0.749135591	0.000010771	-0.000000000		
	6S1/2		0.701680519	0.000010069	-0.000000360		
	6P1/2		0.646128268	0.000012654	-0.000000412		
	6P3/2		0.581666219	0.000004311	-0.000000028		
	7S1/2		0.288749982	0.000000721	-0.000000000		
5F7/2 -- ( 4)	16.093757	-107.958771	0.725362052	0.000060381		-0.000000000	0.000000000
	6S1/2		0.689061451	0.000012542	-0.000000394		
	6P1/2		0.649200676	0.000007751	-0.000000055		
	6P3/2		0.569037825	0.000008438	-0.000000102		
	7S1/2		0.287531098	0.000000896	-0.000000000		
6S1/2 -- ( 2)	16.825450	-100.860257	0.687709640	0.000019128		-0.002955006	0.0000152287
	6P1/2		0.573962377	0.000019883	-0.000002645		
	6P3/2		0.524492830	0.000021272	-0.000005899		
	7S1/2		0.283589851	0.000001098	-0.0000000524		
6P1/2 -- ( 2)	13.190869	-89.073599	0.615507076	0.000026238		-0.000519291	0.000037543
	6P3/2		0.529158611	0.000002104	-0.000000125		
	7S1/2		0.283088318	0.000002245	-0.000000341		



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CALIFORNIUM	5F10	Z=98	A=251	R=1.43046E-04	A.U.		
6P3/2 -- ( 4)	8.023465	-72.331973	0.496341821	0.000009834		-0.000015927	0.000002992
7S1/2			0.275471117	0.000003262	-0.000000450		
7S1/2 -- ( 2)	1.519027	-30.707912	0.224899569	0.000000554		-0.000232068	0.000011959
ETOT	-33023.38839	41940.38160	-86701.11765	11701.59294	53.078679338	-5.555987829	-12.472735449
							0.704774902

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
EINSTEINIUM 5F11 Z=99 A=254 R=1.43614E-04 A.U.							
1S1/2 -- ( 2)	8110.991619	-13889.946826	79.155199679	15.461694081		-5.213180715	0.298512866
2S1/2			25.129208428	0.890989524	-0.111017088		
2P1/2			31.824583135	1.830448543	-0.214221846		
2P3/2			23.678333960	0.721507525	-0.208275596		
3S1/2			10.493178030	0.198981744	-0.026432772		
3P1/2			11.891656777	0.369784701	-0.042008644		
3P3/2			9.644622484	0.170066040	-0.050578210		
3D3/2			9.833331195	0.007254452	-0.000773725		
3D5/2			9.275986815	0.002825346	-0.000902475		
4S1/2			4.891107085	0.054763632	-0.007378543		
4P1/2			5.198927227	0.097114030	-0.010956683		
4P3/2			4.371532619	0.045704920	-0.013688200		
4D3/2			4.277549691	0.002242897	-0.000240000		
4D5/2			4.080193543	0.000876997	-0.030282875		
4F5/2			3.842572471	0.000007454	-0.000000725		
4F7/2			3.768309635	0.000002909	-0.000000955		
5S1/2			2.347382565	0.015006568	-0.002029599		
5P1/2			2.354002696	0.025103999	-0.002827203		
5P3/2			2.010094593	0.011656186	-0.003497275		
5D3/2			1.809965960	0.000507320	-0.000054327		
5D5/2			1.729774926	0.000195807	-0.000063300		
5F5/2			1.185170176	0.000000969	-0.000000094		
5F7/2			1.140395672	0.000000361	-0.000000119		
6S1/2			1.013511972	0.002958273	-0.000400483		
6P1/2			0.916648368	0.004103272	-0.000461914		
6P3/2			0.745776049	0.0061601871	-0.000480810		
7S1/2			0.314303098	0.000226763	-0.000030703		
2S1/2 -- ( 2)	2074.669004	-3576.897610	18.131247142	0.374030354		-0.885388234	0.047066405
2P1/2			18.300441390	0.114786140	-0.000107116		
2P3/2			16.063450898	0.146554292	-0.007807012		
3S1/2			8.550046367	0.045415022	-0.010787278		
3P1/2			9.492445188	0.079188835	-0.011997263		
3P3/2			8.302758844	0.040375381	-0.004218828		
3D3/2			9.251374707	0.040405523	-0.005475074		
3D5/2			8.824649508	0.016838120	-0.005369023		
4S1/2			4.375887095	0.012389268	-0.003106152		
4P1/2			4.571890714	0.021547670	-0.003353518		
4P3/2			4.021701757	0.011294838	-0.001350155		
4D3/2			4.124391111	0.009107722	-0.001303099		
4D5/2			3.961891985	0.004014852	-0.001314527		
4F5/2			3.837503962	0.000600196	-0.000077762		
4F7/2			3.763982379	0.000212668	-0.000075730		
5S1/2			2.207365181	0.003385841	-0.000858661		
5P1/2			2.192005831	0.005607103	-0.000877545		
5P3/2			1.921487781	0.002903427	-0.000357403		
5D3/2			1.776491608	0.001920243	-0.000278215		
5D5/2			1.704304794	0.000847328	-0.000278451		
5F5/2			1.184534472	0.000074403	-0.000009717		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
EINSTEINIUM	5F11	Z=99	A=254	R=1.43614E-04	A.U.		
	5F7/2		1.139878332	0.000025200	-0.000009045		
	6S1/2		0.985965067	0.000666993	-0.000169614		
	6P1/2		0.890172339	0.000917790	-0.000143818		
	6P3/2		0.733616778	0.000399651	-0.000049500		
	7S1/2		0.312192142	0.000051122	-0.000013005		
2P1/2 -- ( 2)	2081.465890	-3585.465885	22.914570529	0.865566738		-0.179777811	0.013594859
	2P3/2		18.933396726	0.085545672	-0.000550358		
	3S1/2		9.180849090	0.031061491	-0.002045244		
	3P1/2		9.5J1133890	0.073773052	-0.010584207		
	3P3/2		8.700785713	0.022057846	-0.000582704		
	3D3/2		9.283988134	0.116459984	-0.027696453		
	3D5/2		9.054937276	0.003167441	-0.000793295		
	4S1/2		4.533365124	0.008464863	-0.000624964		
	4P1/2		4.590339283	0.018817943	-0.002970369		
	4P3/2		4.123044056	0.005948626	-0.000184656		
	4D3/2		4.136154266	0.028057839	-0.006869311		
	4D5/2		4.019676262	0.000893365	-0.000211761		
	4F5/2		3.838802242	0.000674071	-0.000140996		
	4F7/2		3.766447872	0.000636261	-0.000013953		
	5S1/2		2.249535770	0.002312661	-0.000175436		
	5P1/2		2.197686421	0.004829980	-0.000778654		
	5P3/2		1.947017669	0.001517532	-0.000348874		
	5D3/2		1.779213178	0.006008363	-0.001480509		
	5D5/2		1.716624358	0.000195846	-0.000045773		
	5F5/2		1.184698045	0.000084013	-0.000017688		
	5F7/2		1.140171890	0.000004343	-0.000001677		
	6S1/2		J.994231548	0.000455547	-0.000034788		
	6P1/2		0.891134210	0.000788177	-0.000127668		
	6P3/2		0.737116150	0.000208557	-0.000006770		
	7S1/2		0.312825273	0.000034915	-0.000002669		
2P3/2 -- ( 4)	1194.429757	-2457.074040	17.144197921	0.326185425		-0.005809194	0.001149920
	3S1/2		8.764052220	0.037586879	-0.003272939		
	3P1/2		9.465609979	0.022503501	-0.001382891		
	3P3/2		8.146200851	0.041517258	-0.003922637		
	3D3/2		9.278874324	0.035332097	-0.003348023		
	3D5/2		8.687218701	0.057491017	-0.016355150		
	4S1/2		4.422090729	0.009479336	-0.000873808		
	4P1/2		4.563813933	0.005684802	-0.000314931		
	4P3/2		3.986463833	0.010478098	-0.001100767		
	4D3/2		4.132267986	0.007981771	-0.000760963		
	4D5/2		3.933744367	0.012896278	-0.003799456		
	4F5/2		3.836842318	0.000544788	-0.000052381		
	4F7/2		3.761887698	0.000464421	-0.000150687		
	5S1/2		2.219239736	0.002544016	-0.000238221		
	5P1/2		2.189838591	0.001457513	-0.000083501		
	5P3/2		1.912876333	0.002630731	-0.000282923		
	5D3/2		1.778215236	0.001688345	-0.000161283		
	5D5/2		1.698554807	0.002687029	-0.000797161		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
EINSTEINIUM 5F11 Z=99 A=254 R=1.43614E-04 A.U.							
5F5/2			1.184456226	0.000066988	-0.000006487		
5F7/2			1.139636626	0.000054487	-0.000017829		
6S1/2			0.988268414	0.000498941	-0.000046907		
6P1/2			0.889815016	0.000237797	-0.000013728		
6P3/2			0.732444125	0.000360310	-0.000038941		
7S1/2			0.312368279	0.000038217	-0.000003595		
3S1/2 -- ( 2)	660.986440	-1289.638548	6.838408598	0.024672087		-0.211462885	0.011120534
3P1/2			6.348472956	0.008343598	-0.000078157		
3P3/2			5.845390254	0.011722442	-0.001590153		
3D3/2			6.732847168	0.007313450	-0.000294972		
3D5/2			6.583379509	0.009106019	-0.000380199		
4S1/2			3.793325927	0.004268460	-0.001489211		
4P1/2			3.952220793	0.006240673	-0.001068691		
4P3/2			3.532688767	0.002898036	-0.000387103		
4D3/2			3.648849481	0.002101005	-0.000200670		
4D5/2			3.539746593	0.002124187	-0.000163819		
4F5/2			3.683053892	0.002179813	-0.000306513		
4F7/2			3.623311868	0.000983012	-0.000299379		
5S1/2			2.057622589	0.001159636	-0.000419837		
5P1/2			2.036516079	0.001683683	-0.000297900		
5P3/2			1.801163739	0.000781166	-0.000109433		
5D3/2			1.677086696	0.000488848	-0.000051400		
5D5/2			1.617272944	0.000447110	-0.000041810		
5F5/2			1.167363109	0.000215658	-0.000031658		
5F7/2			1.124933672	0.000099026	-0.000029764		
6S1/2			0.956841849	0.000227956	-0.000083079		
6P1/2			0.864911695	0.000277163	-0.000049329		
6P3/2			0.717196151	0.000108469	-0.000015334		
7S1/2			0.309964032	0.000017466	-0.000006371		
3P1/2 -- ( 2)	656.428591	-1283.606657	7.353993941	0.049723520		-0.048186809	0.003559648
3P3/2			6.440681102	0.004451874	-0.000102682		
3D3/2			6.606453457	0.017432303	-0.001699300		
3D5/2			6.937983211	0.006667950	-0.000077483		
4S1/2			3.936604054	0.003551215	-0.000418714		
4P1/2			3.887978641	0.006235383	-0.001406761		
4P3/2			3.602378071	0.001528291	-0.000097893		
4D3/2			3.678283067	0.004474875	-0.000063660		
4D5/2			3.587867091	0.001486836	-0.000047873		
4F5/2			3.675481209	0.003699559	-0.000081893		
4F7/2			3.659226678	0.000396199	-0.000086505		
5S1/2			2.091009171	0.000943227	-0.000120563		
5P1/2			2.025396187	0.001574681	-0.000337753		
5P3/2			1.817269514	0.000399172	-0.000028500		
5D3/2			1.683821482	0.001064104	-0.000166027		
5D5/2			1.627026740	0.000304494	-0.000011937		
5F5/2			1.166808139	0.000372892	-0.000085351		
5F7/2			1.128553125	0.000043434	-0.000008898		
6S1/2			0.963195299	0.000184495	-0.000023989		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
EINSTEINIUM 5F11 Z=99 A=254 R=1.43614E-04 A.U.							
6P1/2			0.863258255	0.060256023	-0.000062065		
6P3/2			0.719368287	0.000055080	-0.000004013		
7S1/2			0.310448587	0.000014126	-0.000001841		
3P3/2 -- ( 4)	429.856754	-983.678842	6.087166640	0.021098382		-0.001693493	0.000327450
3D3/2			6.503304785	0.004698100	-0.000022557		
3D5/2			6.171449200	0.011453156	-0.000219919		
4S1/2			3.820801045	0.005544289	-0.000749121		
4P1/2			3.900550401	0.002403843	-0.000185267		
4P3/2			3.452892824	0.003772955	-0.000552659		
4D3/2			3.596150423	0.002029683	-0.000193079		
4D5/2			3.480199793	0.004190431	-0.000654546		
4F5/2			3.647096684	0.001870039	-0.000187634		
4F7/2			3.560829770	0.001807639	-0.000532545		
5S1/2			2.061486358	0.001350549	-0.000191150		
5P1/2			2.023526843	0.000591705	-0.000051470		
5P3/2			1.782905691	0.000930283	-0.000146579		
5D3/2			1.666292796	0.000453319	-0.000045596		
5D5/2			1.605212907	0.000899660	-0.000155620		
5F5/2			1.163731447	0.000175723	-0.000018394		
5F7/2			1.119118849	0.000168722	-0.000049694		
6S1/2			0.957455767	0.000259699	-0.000037140		
6P1/2			0.862798866	0.000095799	-0.000008535		
6P3/2			0.714737633	0.000126939	-0.000020257		
7S1/2			0.310009491	0.000019836	-0.000002841		
3D3/2 -- ( 4)	422.951476	-974.493479	7.131018402	0.036325380		-0.000040859	0.000010359
3D5/2			7.045919935	0.006467357	-0.000000878		
4S1/2			3.951184354	0.001904467	-0.000050570		
4P1/2			3.984952847	0.004029091	-0.000319078		
4P3/2			3.602305384	0.001268159	-0.000032857		
4D3/2			3.631049970	0.004482073	-0.000447963		
4D5/2			3.602264126	0.001455768	-0.000021678		
4F5/2			3.634180911	0.008413897	-0.002087213		
4F7/2			3.662153191	0.000287912	-0.000033796		
5S1/2			2.093793077	0.000497715	-0.000017542		
5P1/2			2.045304466	0.000935215	-0.000079011		
5P3/2			1.816882153	0.000316123	-0.000010032		
5D3/2			1.675810979	0.000902397	-0.000100011		
5D5/2			1.629865006	0.000300506	-0.000005500		
5F5/2			1.163166376	0.000836281	-0.000211810		
5F7/2			1.128985378	0.000032552	-0.000003515		
6S1/2			0.963691666	0.000097082	-0.000003632		
6P1/2			0.866351436	0.000149621	-0.000012840		
6P3/2			0.719305512	0.000043232	-0.000001426		
7S1/2			0.310486062	0.000007430	-0.000000280		
3D5/2 -- ( 6)	384.662060	-918.945927	6.836487652	0.029397362		-0.000006497	0.000002528
4S1/2			3.917033486	0.002200909	-0.000050569		
4P1/2			3.984386546	0.001589583	-0.000025158		
4P3/2			3.558964407	0.002443575	-0.000108299		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
EINSTEINIUM 5F11 Z=99 A=254 R=1.43614E-04 A.U.							
4D3/2			3.681696471	0.001186906	-0.000024322		
4D5/2			3.520692378	0.003870335	-0.000278940		
4F5/2			3.75028952	0.001770675	-0.000129344		
4F7/2			3.581267232	0.005230414	-0.001455303		
5S1/2			2.084945119	0.000558140	-0.000017511		
5P1/2			2.043492761	0.000387784	-0.00008755		
5P3/2			1.806793471	0.000579289	-0.000029164		
5D3/2			1.683750919	0.000245097	-0.000006185		
5D5/2			1.614799840	0.000765272	-0.000061511		
5F5/2			1.169864827	0.000178518	-0.000013106		
5F7/2			1.121459051	0.000494245	-0.000139829		
6S1/2			0.961966688	0.000108203	-0.000003623		
6P1/2			0.866007927	0.000062667	-0.000001515		
6P3/2			0.717943025	0.000078454	-0.000004053		
7S1/2			0.310354042	0.000008274	-0.000000280		
4S1/2 -- ( 2)	231.219316	-553.819646	3.155873424	0.002446588		-0.059189577	0.003104375
4P1/2			2.822803489	0.001013893	-0.000039569		
4P3/2			2.644044539	0.001581047	-0.000343500		
4D3/2			2.849744998	0.001041995	-0.000099356		
4D5/2			2.794835257	0.000875975	-0.000114864		
4F5/2			2.952123838	0.000734317	-0.000060481		
4F7/2			2.925470023	0.000760179	-0.000062752		
5S1/2			1.838314149	0.000480195	-0.000210282		
5P1/2			1.835370420	0.000529280	-0.000102731		
5P3/2			1.640355019	0.000235430	-0.000054934		
5D3/2			1.538636764	0.000126822	-0.000015532		
5D5/2			1.488611725	0.000167793	-0.000015888		
5F5/2			1.105247753	0.000044052	-0.000002814		
5F7/2			1.068046518	0.000059221	-0.000002701		
6S1/2			0.916473780	0.000094232	-0.000042509		
6P1/2			0.833157727	0.000091179	-0.000018237		
6P3/2			0.695851168	0.000033062	-0.000007671		
7S1/2			0.306896492	0.000007215	-0.0000003265		
4P1/2 -- ( 2)	224.915697	-543.896429	3.195221806	0.004615214		-0.013507462	0.000992152
4P3/2			2.833241025	0.000397284	-0.000017697		
4D3/2			2.692155849	0.002665496	-0.000490052		
4D5/2			2.869196021	0.000512266	-0.000020596		
4F5/2			2.911101434	0.001206823	-0.000153098		
4F7/2			2.965076503	0.000554855	-0.000018577		
5S1/2			1.878048188	0.000516306	-0.000076770		
5P1/2			1.799781607	0.000619285	-0.000182027		
5P3/2			1.656059404	0.000136358	-0.000013738		
5D3/2			1.531102247	0.000240124	-0.000042103		
5D5/2			1.495415259	0.000121349	-0.000005504		
5F5/2			1.134928935	0.000070652	-0.000005715		
5F7/2			1.069910398	0.000046810	-0.000001195		
6S1/2			0.922825921	0.000097049	-0.000015352		
6P1/2			0.828544620	0.000099552	-0.000030630		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
EINSTEINIUM 5F11 Z=99 A=254 R=1.43614E-04 A.U.							
4P3/2 -- ( 4)	154.240701	-440.694344	2.709339947	0.002020476	-0.000020476	-0.000479113	0.000092987
6P3/2			0.697723813	0.000019241	-0.000002088		
7S1/2			0.307370042	0.000007390	-0.000001178		
4D3/2			2.729303114	0.000543790	-0.000014261		
4D5/2			2.573518976	0.001267383	-0.000100929		
4F5/2			2.792766036	0.000469753	-0.000017492		
4F7/2			2.736070606	0.000823859	-0.000052267		
5S1/2			1.829346051	0.000896372	-0.000140277		
5P1/2			1.802779831	0.000288223	-0.000026985		
5P3/2			1.603132111	0.000373851	-0.000070526		
5D3/2			1.515574507	0.000117326	-0.000011054		
5D5/2			1.463169066	0.000274054	-0.000027680		
5F5/2			1.092733292	0.000038269	-0.000002006		
5F7/2			1.055694018	0.000064454	-0.000004061		
6S1/2			0.914163182	0.000155253	-0.000025473		
6P1/2			0.827991982	0.000044886	-0.000004663		
6P3/2			0.691101147	0.000050351	-0.000010029		
7S1/2			0.306713586	0.000011712	-0.000001933		
4D3/2 -- ( 4)	144.564754	-423.791049	2.769469006	0.002834242	-0.000001332	0.000003359	
4D5/2			2.749259373	0.000503746	-0.000000151		
4F5/2			2.698441291	0.001436086	-0.000136242		
4F7/2			2.819722216	0.000460416	-0.000002833		
5S1/2			1.847210276	0.000265718	-0.000010955		
5P1/2			1.795806785	0.000654924	-0.000076860		
5P3/2			1.631302214	0.000145558	-0.000006500		
5D3/2			1.497489766	0.000368325	-0.000047476		
5D5/2			1.474811905	0.000111488	-0.000002462		
5F5/2			1.092546425	0.000123746	-0.000013863		
5F7/2			1.059224719	0.000036171	-0.000000638		
6S1/2			0.917154597	0.000048573	-0.000002581		
6P1/2			0.827552069	0.000093572	-0.000011545		
6P3/2			0.694414597	0.000019409	-0.000000979		
7S1/2			0.306937999	0.000003689	-0.000000202		
4D5/2 -- ( 6)	132.639078	-404.134818	2.684796080	0.002303046	-0.000002124	0.000000823	
4F5/2			2.783933912	0.000397029	-0.000006586		
4F7/2			2.669750573	0.001213462	-0.000080257		
5S1/2			1.832736613	0.000308311	-0.000010657		
5P1/2			1.800910395	0.000188798	-0.000004588		
5P3/2			1.614765312	0.000322865	-0.000025571		
5D3/2			1.514298448	0.000096878	-0.000002904		
5D5/2			1.450987961	0.000313243	-0.000029336		
5F5/2			1.091599152	0.000033096	-0.000001533		
5F7/2			1.053444631	0.000104808	-0.000010441		
6S1/2			0.914624049	0.000054342	-0.000002556		
6P1/2			0.827708692	0.000028666	-0.000000952		
6P3/2			0.692388049	0.000041133	-0.000003428		
7S1/2			0.306746406	0.000004113	-0.000000200		
4F5/2 -- ( 6)	118.876941	-380.415577	2.858512457	0.003009386	-0.000000007	0.000000003	

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
EINSTEINIUM 5F11 Z=99 A=254 R=1.43614E-04 A.U.							
4F7/2 -- ( 8)	114.805453	-373.063360	2.883595741 1.857153625 1.810189755 1.636912060 1.516605466 1.478179130 1.088680936 1.063581698 0.918949539 0.829614081 0.695160059 0.307073162	0.000484754 0.000160449 0.000227353 0.000102723 0.000216987 0.000073279 0.000168450 0.000041131 0.000030047 0.000034177 0.000013696 0.000072288	-0.000000004 -0.000000222 -0.000001525 -0.000000525 -0.000008758 -0.000000712 -0.0000038862 -0.000000255 -0.000000250 -0.000000545 -0.000000125 -0.000000022		
5S1/2			2.823850272	0.002742913		-0.000000002	0.000000001
5P1/2			1.850561900	0.000194778			
5P3/2			1.814422895	0.000141490			
5D3/2			1.628649143	0.000168333			
5D5/2			1.522492690	0.000081550			
5F5/2			1.468132698	0.000185576			
5F7/2			1.098275929	0.000036155			
6S1/2			1.053528237	0.000151366			
6P1/2			0.917769092	0.000034620			
6P3/2			0.829801158	0.000021244			
7S1/2			0.694173724	0.000021543			
5S1/2 -- ( 2)	76.367577	-251.507171	0.306983536 1.549910547	0.000002623 0.000264279		-0.016295366	0.000854028
5P1/2			1.351368581	0.000162155			
5P3/2			1.271873805	0.000252014			
5D3/2			1.281956558	0.000162731			
5D5/2			1.253709436	0.000089251			
5F5/2			0.997528898	0.000059280			
5F7/2			0.968472647	0.000030057			
6S1/2			0.843898506	0.000040828			
6P1/2			0.780141525	0.000026660			
6P3/2			0.659571209	0.000015429			
7S1/2			0.301578832	0.000003135			
5P1/2 -- ( 2)	70.999659	-240.684622	1.505008527	0.000458505		-0.003551970	0.000260505
5P3/2			1.333193657	0.000039638			
5D3/2			1.195606059	0.000430005			
5D5/2			1.262795812	0.000035428			
5F5/2			0.977399957	0.000097158			
5F7/2			0.967378879	0.000015951			
6S1/2			0.852215095	0.000059772			
6P1/2			0.766849481	0.000040598			
6P3/2			0.661651692	0.000007257			
7S1/2			0.302107744	0.000004403			
5P3/2 -- ( 4)	49.131239	-201.027943	1.276450169	0.000200300		-0.000123844	0.000023765
5D3/2			1.213647555	0.000074758			
5D5/2			1.139307515	0.000147158			



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E (KIN)	E (E-N)	E (E-E)	E (MAG)	E (RET)	E (V-P)	E (H-VP)	
EINSTEINIUM	5F11	Z=99	A=254	R=1.43614E-04	A.U.			
	5F5/2			0.961024083	0.000041249	-0.000003615		
	5F7/2			0.923798841	0.000044658	-0.000009907		
	6S1/2			0.831805043	0.000103969	-0.000016694		
	6P1/2			0.766701223	0.000022190	-0.000002217		
	6P3/2			0.648147443	0.000020581	-0.000004343		
	7S1/2			0.300699832	0.000007254	-0.000001207		
5D3/2 -- ( 4)	40.166528	-179.257921	1.166880743	0.000218312		-0.000003052	0.000000768	
	5D5/2		1.157397298	0.000038493		-0.000000017		
	5F5/2		0.890249716	0.000135402		-0.000028910		
	5F7/2		0.914884575	0.000015170		-0.000000507		
	6S1/2		0.819434729	0.000025709		-0.000000906		
	6P1/2		0.746268810	0.000062120		-0.000007506		
	6P3/2		0.646733210	0.000009834		-0.000000549		
	7S1/2		0.299875840	0.000001842		-0.000000087		
5D5/2 -- ( 6)	36.594134	-171.291518	1.129127219	0.000174928		-0.000000480	0.000000186	
	5F5/2		0.925855971	0.000030432		-0.000001618		
	5F7/2		0.869913644	0.000085717		-0.000017939		
	6S1/2		0.811698337	0.000031881		-0.000000763		
	6P1/2		0.750907254	0.000015240		-0.000000327		
	6P3/2		0.640868625	0.000024116		-0.000002406		
	7S1/2		0.299383255	0.000002143		-0.000000079		
5F5/2 -- ( 6)	18.512937	-117.331965	0.780234919	0.000078451		-0.000000001	0.000000000	
	5F7/2		0.776296613	0.000011960		-0.000000000		
	6S1/2		0.720406322	0.000010823		-0.000000365		
	6P1/2		0.663456607	0.000013632		-0.000000410		
	6P3/2		0.593654617	0.000004570		-0.000000025		
	7S1/2		0.292971507	0.000000759		-0.000000000		
5F7/2 -- ( 5)	17.216005	-112.899259	0.751791936	0.000066979		-0.000000000	0.000000000	
	6S1/2		0.707755604	0.000013584		-0.000000403		
	6P1/2		0.666670814	0.000008401		-0.000000056		
	6P3/2		0.581207716	0.000008959		-0.000000096		
	7S1/2		0.291811999	0.000000942		-0.000000000		
6S1/2 -- ( 2)	17.611317	-104.108347	0.701517967	0.000020343		-0.003216162	0.000168525	
	6P1/2		0.585739120	0.000020943		-0.000002774		
	6P3/2		0.533379193	0.000022697		-0.000006287		
	7S1/2		0.287427445	0.000001139		-0.000000541		
6P1/2 -- ( 2)	13.823735	-92.000134	0.628397842	0.000027966		-0.000582903	0.000042735	
	6P3/2		0.538234922	0.000002201		-0.000000139		
	7S1/2		0.286960528	0.000002315		-0.000000351		
6P3/2 -- ( 4)	8.246457	-74.110930	0.503451563	0.000010256		-0.000017070	0.000003274	
	7S1/2		0.279000122	0.000003389		-0.000000464		
7S1/2 -- ( 2)	1.551715	-31.405067	0.227792569	0.000000575		-0.000246575	0.000012920	
ETOT	-33915.50590	43368.44634	-89324.19008	12003.40652	55.129263358	-5.761031373	-13.301947393	0.765044288

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
FERMIUM	5F12	Z=100 A=257 R=1.44177E-04 A.U.					
1S1/2 -- ( 2)	8394.052708	-14316.087464	80.529035858	16.022433224		-5.541141347	0.322821102
2S1/2			25.591068473	0.927265120	-0.115754515		
2P1/2			32.491304952	1.903816624	-0.220703487		
2P3/2			23.967781507	0.743269864	-0.214532920		
3S1/2			10.681090001	0.207250417	-0.027574080		
3P1/2			12.125306656	0.384370375	-0.043185496		
3P3/2			9.774270846	0.175962272	-0.052321227		
3D3/2			9.965763767	0.007462309	-0.000790284		
3D5/2			9.388673279	0.002902934	-0.000927093		
4S1/2			4.981939701	0.057229267	-0.007722314		
4P1/2			5.303748429	0.101294918	-0.011298489		
4P3/2			4.438950677	0.047538103	-0.014234452		
4D3/2			4.346890741	0.002324324	-0.000246940		
4D5/2			4.142402712	0.000908355	-0.000292907		
4F5/2			3.907681665	0.000007767	-0.000000750		
4F7/2			3.830745128	0.000003037	-0.000000997		
5S1/2			2.397577566	0.015808935	-0.002141333		
5P1/2			2.408963175	0.026429305	-0.002942304		
5P3/2			2.047993193	0.012228859	-0.003668438		
5D3/2			1.848574514	0.000532555	-0.000056622		
5D5/2			1.764795539	0.000205319	-0.000066357		
5F5/2			1.224215832	0.000001050	-0.000000102		
5F7/2			1.177826169	0.000000392	-0.000000129		
6S1/2			1.034200351	0.003113479	-0.000422131		
6P1/2			0.936354502	0.004311605	-0.000479783		
6P3/2			0.755978286	0.001659521	-0.000498027		
7S1/2			0.318017414	0.000233550	-0.000031670		
2S1/2 -- ( 2)	2155.578467	-3696.769997	18.446439197	0.391851856		-0.950643915	0.051374341
2P1/2			18.640247351	0.120328503	-0.000108271		
2P3/2			16.293470818	0.152271945	-0.008461600		
3S1/2			8.692016320	0.047600748	-0.011286141		
3P1/2			9.659881327	0.083159969	-0.012573914		
3P3/2			8.416167576	0.041510380	-0.004296671		
3D3/2			9.379451829	0.041895967	-0.005670840		
3D5/2			8.936707040	0.017410885	-0.005558625		
4S1/2			4.452560676	0.013028649	-0.003261146		
4P1/2			4.656714585	0.022705066	-0.003525921		
4P3/2			4.083086817	0.011681497	-0.001384981		
4D3/2			4.191322590	0.009521225	-0.001360474		
4D5/2			4.022938794	0.004186909	-0.001373041		
4F5/2			3.902542515	0.000625729	-0.000080964		
4F7/2			3.826372595	0.000221446	-0.000078860		
5S1/2			2.252539557	0.003589286	-0.000908860		
5P1/2			2.240208092	0.005963546	-0.000931281		
5P3/2			1.957083896	0.003029632	-0.000370081		
5D3/2			1.814138644	0.002032384	-0.000294098		
5D5/2			1.738763913	0.000894155	-0.000294347		
5F5/2			1.223545760	0.000080615	-0.000010516		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-ε)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
FERMIUM 5F12 Z=100 A=257 R=1.44177E-04 A.U.							
			1.177282693	0.000027276	-0.000009792		
			1.005692657	0.000706391	-0.000179364		
			0.908825691	0.000974272	-0.000152335		
			0.743659579	0.000411824	-0.000050624		
			0.315879593	0.000052983	-0.000013459		
2P1/2 -- ( 2)	2164.288886	-3707.550228	23.360223391	0.907959331		-0.198886920	0.015256665
2P3/2			19.209106744	0.088076127	-0.000598639		
3S1/2			9.340546331	0.032575782	-0.002132911		
3P1/2			9.669924092	0.077499182	-0.011079350		
3P3/2			8.822929999	0.022813794	-0.000602840		
3D3/2			9.414042088	0.120456817	-0.028643793		
3D5/2			9.168408383	0.003249855	-0.000818233		
4S1/2			4.615113676	0.008909361	-0.000654300		
4P1/2			4.676008455	0.019845152	-0.003121867		
4P3/2			4.187163914	0.006187157	-0.000191912		
4D3/2			4.203694173	0.029262256	-0.007162743		
4D5/2			4.081595129	0.000923677	-0.000220241		
4F5/2			3.903874827	0.000700264	-0.000146420		
4F7/2			3.828873084	0.000037575	-0.000014472		
5S1/2			2.296423289	0.002453888	-0.000185201		
5P1/2			2.246196430	0.005141534	-0.000826195		
5P3/2			1.983526110	0.001592222	-0.000051242		
5D3/2			1.817031934	0.006345311	-0.001563287		
5D5/2			1.751420817	0.000204947	-0.000048183		
5F5/2			1.223720257	0.000090718	-0.000019095		
5F7/2			1.177592208	0.000004679	-0.000001808		
6S1/2			1.014286606	0.000482910	-0.000036693		
6P1/2			0.909837733	0.000837411	-0.000135212		
6P3/2			0.747238460	0.000216085	-0.000007009		
7S1/2			0.316523716	0.000036220	-0.000002755		
2P3/2 -- ( 4)	1222.135446	-2511.416004	17.344489123	0.336858324		-0.006178963	0.001249528
3S1/2			8.901491530	0.039350098	-0.003452214		
3P1/2			9.618731161	0.023516642	-0.001132764		
3P3/2			8.249523178	0.042982450	-0.004064934		
3D3/2			9.400759321	0.036616268	-0.003462334		
3D5/2			8.792044047	0.059503691	-0.016928618		
4S1/2			4.497493844	0.009938393	-0.000922113		
4P1/2			4.644904748	0.005954417	-0.000330183		
4P3/2			4.045106451	0.010897912	-0.001146149		
4D3/2			4.197793472	0.008317295	-0.000791076		
4D5/2			3.992935077	0.013433899	-0.003958581		
4F5/2			3.901758985	0.000574206	-0.000055142		
4F7/2			3.824128462	0.000488978	-0.000158681		
5S1/2			2.264140058	0.002687433	-0.000253261		
5P1/2			2.237047831	0.001540519	-0.000088363		
5P3/2			1.947706343	0.002759110	-0.000297116		
5D3/2			1.815579849	0.001780295	-0.000169659		
5D5/2			1.732556995	0.002830907	-0.000840072		

TABLE 1.— CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
FERMIUM	5F12	Z=100 A=257 R=1.44177E-04 A.U.					
	5F5/2		1.223449013	0.000073338	-0.000007094		
	5F7/2		1.177013535	0.000059597	-0.000019509		
	6S1/2		1.007938389	0.000526487	-0.000049813		
	6P1/2		0.998307932	0.000250840	-0.000014500		
	6P3/2		0.742398178	0.000373133	-0.000040382		
	7S1/2		0.316047626	0.000039463	-0.000003736		
3S1/2 -- ( 2)	686.222532	-1330.618699	6.949541737	0.025883944		-0.227490263	0.012160560
	3P1/2		6.455328408	0.008747339	-0.000079628		
	3P3/2		5.929984375	0.012284434	-0.001716478		
	3D3/2		6.832427118	0.007645593	-0.000314259		
	3D5/2		6.676855446	0.009471558	-0.000405978		
	4S1/2		3.857143780	0.004490526	-0.001564186		
	4P1/2		4.021831602	0.006593371	-0.001127537		
	4P3/2		3.584958444	0.002981809	-0.000402885		
	4D3/2		3.706906897	0.002184111	-0.000208157		
	4D5/2		3.594058172	0.002217901	-0.000169410		
	4F5/2		3.745543462	0.002286423	-0.000321518		
	4F7/2		3.683668547	0.001029271	-0.000313978		
	5S1/2		2.098263768	0.001229729	-0.000444561		
	5P1/2		2.079394756	0.001795235	-0.000317232		
	5P3/2		1.833477045	0.000810699	-0.000114543		
	5D3/2		1.711647538	0.000515073	-0.000054093		
	5D5/2		1.649327962	0.000472440	-0.000043818		
	5F5/2		1.205433279	0.000234327	-0.000034424		
	5F7/2		1.161548932	0.000107521	-0.000032370		
	6S1/2		0.975718529	0.000241495	-0.000087889		
	6P1/2		0.882750561	0.000294961	-0.000052431		
	6P3/2		0.727603179	0.000111171	-0.000015843		
	7S1/2		0.313635466	0.000018107	-0.000006596		
3P1/2 -- ( 2)	681.975249	-1324.972732	7.479919961	0.052225486		-0.053405419	0.003999902
	3P3/2		6.534921884	0.064582210	-0.000112408		
	3D3/2		6.705066342	0.018313947	-0.001824274		
	3D5/2		7.038225410	0.006921108	-0.000083191		
	4S1/2		4.004215055	0.003730327	-0.000438622		
	4P1/2		3.956471162	0.006574695	-0.001479841		
	4P3/2		3.656628910	0.001578750	-0.000102495		
	4D3/2		3.737166529	0.000462105	-0.000065071		
	4D5/2		3.643468901	0.001557665	-0.000049865		
	4F5/2		3.738138615	0.003878710	-0.000858789		
	4F7/2		3.720367069	0.000413645	-0.000090658		
	5S1/2		2.132812876	0.000998957	-0.000127399		
	5P1/2		2.068029266	0.001675868	-0.000400966		
	5P3/2		1.850176593	0.000416236	-0.000030079		
	5D3/2		1.718666902	0.001114098	-0.000173142		
	5D5/2		1.659451159	0.000322840	-0.000012584		
	5F5/2		1.204883170	0.000405214	-0.000092819		
	5F7/2		1.165385117	0.000047083	-0.000009676		
	6S1/2		0.982285895	0.000195206	-0.000025329		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
FERMIUM 5F12 Z=100 A=257 R=1.44177E-04 A.U.							
6P1/2			0.881067216	0.000271942	-0.000065792		
6P3/2			0.729226854	0.000056724	-0.000004182		
7S1/2			0.314125622	0.000014626	-0.000001902		
3P3/2 -- ( 4)	441.040529	-1006.872667	6.164357556	0.021888567		-0.001808936	0.000357142
3D3/2			6.587316245	0.004871931	-0.000022971		
3D5/2			6.248398263	0.011867642	-0.000228342		
4S1/2			3.882397310	0.005859905	-0.000794435		
4P1/2			3.965725932	0.002537133	-0.000195547		
4P3/2			3.501911113	0.003933984	-0.000576793		
4D3/2			3.650792982	0.002126682	-0.000202388		
4D5/2			3.531250543	0.004373863	-0.000683851		
4F5/2			3.707093111	0.001960070	-0.000196603		
4F7/2			3.618257357	0.001894871	-0.000358096		
5S1/2			2.101531101	0.001434915	-0.000203813		
5P1/2			2.065198756	0.000628958	-0.000054765		
5P3/2			1.814282147	0.000978048	-0.000154299		
5D3/2			1.700010344	0.000480708	-0.000048376		
5D5/2			1.636454888	0.000949907	-0.000164605		
5F5/2			1.201408775	0.000190246	-0.000019927		
5F7/2			1.155242345	0.000182933	-0.000053853		
6S1/2			0.976211304	0.000275477	-0.000039540		
6P1/2			0.880447087	0.000101590	-0.000009063		
6P3/2			0.724450262	0.000131771	-0.000021057		
7S1/2			0.313670847	0.000020589	-0.000002960		
3D3/2 -- ( 4)	434.041635	-997.593422	7.225443330	0.037709336		-0.000044803	0.000011606
3D5/2			7.135436774	0.006699260	-0.000000951		
4S1/2			4.016111762	0.001995369	-0.000053083		
4P1/2			4.052575254	0.004241809	-0.000338117		
4P3/2			3.654318705	0.001321909	-0.000034275		
4D3/2			3.686822375	0.004680875	-0.000468727		
4D5/2			3.655979974	0.001518812	-0.000022648		
4F5/2			3.694315314	0.008827085	-0.002189961		
4F7/2			3.722201701	0.000302125	-0.000035453		
5S1/2			2.134886967	0.000525287	-0.000018583		
5P1/2			2.087804125	0.000991801	-0.000084319		
5P3/2			1.849219230	0.000332317	-0.000010568		
5D3/2			1.709941791	0.000953327	-0.000105933		
5D5/2			1.661928186	0.000317096	-0.000005821		
5F5/2			1.200871467	0.000907752	-0.000230036		
5F7/2			1.165722089	0.000035470	-0.000003824		
6S1/2			0.982641505	0.000102341	-0.000003846		
6P1/2			0.884127102	0.000158292	-0.000013671		
6P3/2			0.729087653	0.000044875	-0.000001484		
7S1/2			0.314151734	0.000007665	-0.000000290		
3D5/2 -- ( 6)	393.948530	-939.498024	6.919919658	0.030450985		-0.000007061	0.000002811
4S1/2			3.980399555	0.002303761	-0.000053043		
4P1/2			4.051121565	0.001665145	-0.000026374		
4P3/2			3.609566825	0.002544378	-0.000113053		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
FERMIUM 5F12 Z=100 A=257 R=1.44177E-04 A.U.							
			3.737684868	0.001238241	-0.000025454		
			3.572257165	0.004033536	-0.000291412		
			3.766413495	0.001858150	-0.000135596		
			3.639092899	0.005485216	-0.001526254		
			2.125565178	0.000588194	-0.000018543		
			2.085694236	0.000409588	-0.000009290		
			1.838708691	0.000607991	-0.000030707		
			1.717949087	0.000258723	-0.000006560		
			1.646292725	0.000806178	-0.000065006		
			1.207913885	0.000193823	-0.000014217		
			1.157720350	0.000536198	-0.000151753		
			0.980826134	0.000113884	-0.000003835		
			0.883733650	0.000066048	-0.000001606		
			0.727685956	0.000081294	-0.000004215		
			0.314015772	0.000008522	-0.000000290		
4S1/2 -- ( 2)	240.532082	-571.304211	3.209283130	0.002578343		-0.063907734	0.003406958
			2.871934293	0.001063494	-0.000040613		
			2.685970056	0.001681030	-0.000370111		
			2.896066944	0.001097611	-0.000105251		
			2.839212064	0.000916395	-0.000121898		
			3.002928252	0.000771663	-0.000063574		
			2.975344940	0.000798763	-0.000066029		
			1.873512630	0.000510245	-0.000223385		
			1.872618806	0.000567702	-0.000110029		
			1.669133427	0.000246930	-0.000058856		
			1.569373262	0.000134561	-0.000016583		
			1.517339020	0.000177117	-0.000017005		
			1.140108251	0.000048036	-0.000003080		
			1.101768642	0.000064452	-0.000002953		
			0.934398887	0.000100017	-0.000045103		
			0.850174728	0.000097579	-0.000019490		
			0.705463399	0.000034152	-0.000008087		
			0.310562703	0.000007494	-0.000003390		
4P1/2 -- ( 2)	234.214450	-561.390583	3.251738273	0.004871720		-0.015032305	0.001119330
			2.878509308	0.000412977	-0.000019529		
			2.737053207	0.002825302	-0.000523178		
			2.915539101	0.000533115	-0.000022018		
			2.962127664	0.001270149	-0.000161438		
			3.016600022	0.000583259	-0.000019613		
			1.914503526	0.000546562	-0.000081250		
			1.836276362	0.000660298	-0.000194044		
			1.685465537	0.000142198	-0.000014610		
			1.561735276	0.000254697	-0.000045224		
			1.524487430	0.000127951	-0.000005890		
			1.139859889	0.000077054	-0.000006263		
			1.103796592	0.000050971	-0.000001312		
			0.940945739	0.000102642	-0.000016238		
			0.845486101	0.000105928	-0.000032584		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
FERMIUM	5F12	Z=100 A=257 R=1.44177E-04 A.U.					
4P3/2 -- ( 4)	158.979344	-452.012065	0.707388838 0.311040442 2.748497332	0.000019821 0.000007649 0.002111112	-0.000002190 -0.000001220 0.000000000	-0.000514544	0.000100966
4D3/2 -- ( 4)	149.197926	-435.012608	2.770410622 2.611549031 2.837064063 2.779258004 1.863221368 1.838078474 1.630560866 1.545118348 1.490765328 1.126633519 1.088497370 0.931843716 0.844721880 0.700600116 0.310365457	0.000566645 0.001323009 0.000490391 0.000862048 0.000959353 0.000309194 0.000394352 0.000125304 0.000291098 0.000042095 0.000070210 0.000165550 0.000047941 0.000052440 0.000012220	-0.000014613 -0.000104754 -0.000017996 -0.000053883 -0.000150253 -0.000028914 -0.000074580 -0.000011855 -0.000029571 -0.000002239 -0.000004539 -0.000027198 -0.000004980 -0.000010469 -0.000002020	-0.000014719	0.000003792
4D5/2 -- ( 6)	136.676436	-414.439884	2.812929184 2.791470855 2.743393373 2.865994426 1.882135933 1.831391255 1.659691267 1.526887355 1.502957812 1.126607967 1.092337090 0.935000901 0.844350229 0.703986212 0.310597259	0.002968668 0.000526161 0.001500231 0.000483287 0.000281765 0.000699293 0.000153333 0.000390718 0.000117967 0.000136696 0.000039217 0.000051406 0.000099510 0.000020192 0.000003821	-0.000000165 -0.000140641 -0.000002938 -0.000011657 -0.000082339 -0.000006869 -0.000050621 -0.000002621 -0.000015610 -0.000000705 -0.000002745 -0.000012325 -0.000001022 -0.000000210	-0.000002327	0.000000922
4F5/2 -- ( 6)	122.857009	-390.769100	2.725187035 2.828969321 2.712888009 1.867006459 1.836395753 1.642627873 1.543940128 1.478401027 1.125503123 1.086195866 0.932360630 0.844465627 0.701919650 0.310401631	0.002408201 0.000414738 0.001268082 0.000326788 0.000200618 0.000340069 0.000102683 0.000331434 0.000036402 0.000115224 0.000057449 0.000030347 0.000042774 0.000004255	-0.000006732 -0.000082338 -0.000011323 -0.000004886 -0.000027004 -0.000003100 -0.000031221 -0.000001717 -0.000011779 -0.000002717 -0.000001014 -0.000003575 -0.000000208	-0.000000009	0.000000004

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
FERMIUM	5F12	Z=100 A=257 R=1.44177E-04 A.U.					
			2.933917020	0.000509892	-0.000000004		
			1.893096263	0.000169941	-0.000000248		
			1.846966075	0.000241393	-0.000001661		
			1.665943068	0.000108380	-0.000000569		
			1.546986999	0.000229900	-0.000009332		
			1.506817955	0.000077619	-0.000000761		
			1.122806997	0.000183033	-0.000009770		
			1.097135710	0.000044793	-0.000000283		
			0.936965382	0.000031781	-0.000000269		
			0.846566088	0.000036191	-0.000000587		
			0.704802597	0.000014269	-0.000000133		
			0.310742043	0.000002368	-0.000000023		
4F7/2 --	( 8)	118.577789	-383.075239	2.872674527	0.002882640	-0.000000002	0.000000001
			1.886234806	0.000206106	-0.000000200		
			1.851141827	0.000150086	-0.000000231		
			1.657463576	0.000177332	-0.000001313		
			1.552883045	0.000086434	-0.000000428		
			1.496499128	0.000196191	-0.000005904		
			1.132798005	0.000039331	-0.000000313		
			1.086571898	0.000164336	-0.000006770		
			0.935737126	0.000036583	-0.000000262		
			0.846734092	0.000022481	-0.000000131		
			0.703800098	0.000022417	-0.000000278		
			0.310650769	0.000002713	-0.000000022		
5S1/2 --	( 2)	80.002436	-260.002387	1.580256564	0.000281398	-0.017738487	0.000944938
			1.378737760	0.000170759	-0.000014743		
			1.295822955	0.000271960	-0.000071321		
			1.307596290	0.000173271	-0.000022451		
			1.278215505	0.000094929	-0.000023405		
			1.027155499	0.000064434	-0.000008198		
			0.997388589	0.000032800	-0.000007689		
			0.860570305	0.000043489	-0.000021723		
			0.796179632	0.000028710	-0.000006447		
			0.669087867	0.000016411	-0.000005662		
			0.305267083	0.000003268	-0.000001666		
5P1/2 --	( 2)	74.537392	-249.087244	1.536250834	0.000489794	-0.003991002	0.000296713
			1.358633818	0.000041928	-0.000002845		
			1.220318152	0.000460774	-0.000104015		
			1.287952436	0.000037513	-0.000004038		
			1.006411211	0.000105620	-0.000021318		
			0.996490122	0.000017458	-0.000002292		
			0.869201013	0.0000063270	-0.000010191		
			0.782715289	0.000043376	-0.000014852		
			0.671270132	0.000007500	-0.000000950		
			0.305806440	0.000004565	-0.000000761		
5P3/2 --	( 4)	51.052341	-206.898544	1.298824902	0.000211637	-0.000134174	0.000026285
			1.236655363	0.000078523	-0.000004914		
			1.160440661	0.000155205	-0.000028866		



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
FERMIUM	5F12	Z=100 A=257 R=1.44177E-04 A.U.						
	5F5/2		0.988318491	0.000044389	-0.000003869			
	5F7/2		0.950069771	0.000048417	-0.000010622			
	6S1/2		0.847807557	0.000111616	-0.000017900			
	6P1/2		0.782148303	0.000023958	-0.000002386			
	6P3/2		0.657485873	0.000021514	-0.000004540			
	7S1/2		0.304362584	0.000007619	-0.000001266			
5D3/2 -- ( 4)	41.919722	-184.931958	1.190416089	0.000232311		-0.000003416	0.000000879	
	5D5/2		1.180256624	0.000040789	-0.000000019			
	5F5/2		0.915459805	0.000145369	-0.000030864			
	5F7/2		0.941440961	0.000016630	-0.000000543			
	6S1/2		0.835715398	0.000027390	-0.000000970			
	6P1/2		0.761577349	0.000066498	-0.000008043			
	6P3/2		0.656285636	0.000010261	-0.000000573			
	7S1/2		0.303573430	0.000001921	-0.000000091			
5D5/2 -- ( 6)	38.114313	-176.524796	1.151005790	0.000185684		-0.000000532	0.000000211	
	5F5/2		0.952081029	0.000032680	-0.000001717			
	5F7/2		0.894462729	0.000092177	-0.000019086			
	6S1/2		0.827656796	0.000033951	-0.000000814			
	6P1/2		0.766226777	0.000016278	-0.000000349			
	6P3/2		0.650339962	0.000025179	-0.000002514			
	7S1/2		0.303071117	0.000002235	-0.000000082			
5F5/2 -- ( 6)	19.725845	-122.421710	0.806473947	0.000086447		-0.000000001	0.000000001	
	5F7/2		0.802483826	0.000013190	-0.000000000			
	6S1/2		0.738690529	0.000011602	-0.000000372			
	6P1/2		0.680418314	0.000014646	-0.000000409			
	6P3/2		0.605157782	0.000004830	-0.000000023			
	7S1/2		0.296998017	0.000000798	-0.000000000			
5F7/2 -- ( 6)	18.336574	-117.782711	0.777208117	0.000073789		-0.000000000	0.000000000	
	6S1/2		0.725940324	0.000014656	-0.000000413			
	6P1/2		0.683718038	0.000009070	-0.000000056			
	6P3/2		0.592843692	0.000009477	-0.000000090			
	7S1/2		0.295882300	0.000000990	-0.000000000			
6S1/2 -- ( 2)	18.418467	-107.409572	0.715327207	0.000021608		-0.0003497781	0.000186293	
	6P1/2		0.597520350	0.000022037	-0.000002906			
	6P3/2		0.542167152	0.000024188	-0.000006693			
	7S1/2		0.291123166	0.000001182	-0.000000056			
6P1/2 -- ( 2)	14.474800	-94.975513	0.641296969	0.000029768		-0.0000653757	0.000048586	
	6P3/2		0.547203173	0.000002303	-0.000000153			
	7S1/2		0.290685455	0.000002389	-0.000000362			
6P3/2 -- ( 4)	8.464462	-75.883040	0.510409760	0.000010679		-0.000018263	0.000003576	
	7S1/2		0.282367293	0.000003522	-0.000000478			
7S1/2 -- ( 2)	1.587643	-32.101035	0.230402451	0.000000594		-0.0000262425	0.000013976	
ETDT	-34825.35138	44845.67041	-92020.23981	12311.30239	57.245141963	-5.971562733	-14.188238982	0.830297526

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
MENDELEVIUM	5F13	Z=101 A=256 R=1.43990E-04 A.U.					
1S1/2 -- ( 2)	8689.275654	-14757.339954	81.936178369	16.601531035		-5.892354995	0.349092075
2S1/2			26.064072328	0.964974555	-0.120683261		
2P1/2			33.177804539	1.979901518	-0.227283157		
2P3/2			24.258761643	0.765361489	-0.220882564		
3S1/2			10.872855463	0.215837860	-0.028759458		
3P1/2			12.364598748	0.399439692	-0.044367973		
3P3/2			9.904655186	0.181985513	-0.054100753		
3D3/2			10.098820623	0.007670329	-0.000806415		
3D5/2			9.501473239	0.002980778	-0.000951670		
4S1/2			5.074315893	0.059792271	-0.008079675		
4P1/2			5.410615883	0.105616622	-0.011641940		
4P3/2			4.506683505	0.049418434	-0.014794433		
4D3/2			4.416465110	0.002406443	-0.000253786		
4D5/2			4.204649161	0.000939969	-0.000303012		
4F5/2			3.972645639	0.000008079	-0.000000774		
4F7/2			3.892963008	0.000003166	-0.000001039		
5S1/2			2.448345024	0.016644004	-0.002257667		
5P1/2			2.464633068	0.027801437	-0.003058294		
5P3/2			2.085794299	0.012816105	-0.003843863		
5D3/2			1.886985341	0.000558067	-0.000058898		
5D5/2			1.799502042	0.000214912	-0.000069439		
5F5/2			1.262208286	0.000001132	-0.000000109		
5F7/2			1.213991724	0.000000423	-0.000000139		
6S1/2			1.055022981	0.003274502	-0.000444601		
6P1/2			0.956217505	0.004526751	-0.000497725		
6P3/2			0.765869583	0.001716744	-0.000515103		
7S1/2			0.321914367	0.000240292	-0.000032631		
2S1/2 -- ( 2)	2240.268254	-3821.341817	18.768597197	0.410554855		-1.021317937	0.056082391
2P1/2			18.988495506	0.126151539	-0.000109425		
2P3/2			16.526209838	0.158210685	-0.009170984		
3S1/2			8.836504401	0.049891126	-0.011806874		
3P1/2			9.830655049	0.087325095	-0.013176589		
3P3/2			8.530384357	0.042652373	-0.004372637		
3D3/2			9.508386307	0.043423174	-0.005870932		
3D5/2			9.049131036	0.017994404	-0.005752212		
4S1/2			4.530378001	0.013699328	-0.003423131		
4P1/2			4.742907252	0.023919794	-0.003706201		
4P3/2			4.144795046	0.012072668	-0.001419380		
4D3/2			4.258542622	0.009948414	-0.001419572		
4D5/2			4.084096068	0.004363731	-0.001433326		
4F5/2			3.967442147	0.000651422	-0.000084174		
4F7/2			3.888551187	0.000230254	-0.000082000		
5S1/2			2.298160371	0.003803023	-0.000961419		
5P1/2			2.288907489	0.006338431	-0.000987567		
5P3/2			1.992600581	0.003157376	-0.000382640		
5D3/2			1.851609047	0.002148332	-0.000310472		
5D5/2			1.772937071	0.000942242	-0.000310717		
5F5/2			1.261505441	0.000086918	-0.000011324		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
MENDELEVIUM 5F13 Z=101 A=256 R=1.43990E-04 A.U.							
5F7/2			1.213423802	0.000029368	-0.000010545		
6S1/2			1.025534402	0.000747664	-0.000189543		
6P1/2			0.927605322	0.001033543	-0.000161234		
6P3/2			0.753404734	0.000423669	-0.000051675		
7S1/2			0.319751032	0.000054860	-0.000013913		
2P1/2 -- ( 2)	2251.067815	-3834.525607	23.817893180	0.952526783		-0.220136542	0.017120937
2P3/2			19.488022846	0.090639035	-0.000650817		
3S1/2			9.503421943	0.034164606	-0.002223947		
3P1/2			9.842115890	0.081416601	-0.011596203		
3P3/2			8.946078168	0.023584262	-0.000623543		
3D3/2			9.544999479	0.124526186	-0.029607761		
3D5/2			9.282141139	0.003332044	-0.000843444		
4S1/2			4.698195383	0.009376374	-0.000684798		
4P1/2			4.763079054	0.020926574	-0.003280255		
4P3/2			4.251669543	0.006431491	-0.000199365		
4D3/2			4.271539723	0.030498796	-0.007453744		
4D5/2			4.143601265	0.000954171	-0.000228888		
4F5/2			3.968807499	0.000726370	-0.000151820		
4F7/2			3.891083577	0.000038876	-0.000014986		
5S1/2			2.343818852	0.002602518	-0.000195376		
5P1/2			2.295215561	0.005470210	-0.000876010		
5P3/2			2.019970496	0.001668742	-0.000053672		
5D3/2			1.854679235	0.006691676	-0.001648319		
5D5/2			1.785922036	0.000214102	-0.000050639		
5F5/2			1.261690683	0.000097468	-0.000020510		
5F7/2			1.213748436	0.000005014	-0.000001939		
6S1/2			1.034466008	0.000511626	-0.000038672		
6P1/2			0.928669350	0.000889239	-0.000143100		
6P3/2			0.757061175	0.000223549	-0.000007247		
7S1/2			0.320405920	0.000037540	-0.000002840		
2P3/2 -- ( 4)	1250.236919	-2566.462008	17.545393719	0.347767314		-0.006568595	0.001356753
3S1/2			9.046858371	0.041196031	-0.003641028		
3P1/2			9.774089827	0.024574272	-0.001184565		
3P3/2			8.353216281	0.044483220	-0.004210795		
3D3/2			9.523135765	0.037931533	-0.003579038		
3D5/2			8.896988871	0.061561817	-0.017515081		
4S1/2			4.573865934	0.010417720	-0.000972838		
4P1/2			4.727053898	0.006235190	-0.000346004		
4P3/2			4.103933337	0.011329104	-0.001192804		
4D3/2			4.263496894	0.008661953	-0.000821875		
4D5/2			4.052155129	0.013985903	-0.004121973		
4F5/2			3.966528975	0.000604569	-0.000057987		
4F7/2			3.886151556	0.000514278	-0.000166920		
5S1/2			2.309428573	0.002837272	-0.000269080		
5P1/2			2.284656125	0.001627056	-0.000093418		
5P3/2			1.992413900	0.002890846	-0.000311700		
5D3/2			1.852735358	0.001874686	-0.000178219		
5D5/2			1.766251322	0.002978319	-0.000884050		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
MENDELEVIUM	5F13	Z=101 A=256 R=1.43990E-04 A.U.					
	5F5/2		1.261388247	0.000079922	-0.000007722		
	5F7/2		1.213125792	0.000064868	-0.000021242		
	6S1/2		1.027710946	0.000555173	-0.000052860		
	6P1/2		0.926909980	0.000264405	-0.000015301		
	6P3/2		0.752051775	0.000385871	-0.000041816		
	7S1/2		0.319910326	0.000040708	-0.000003878		
3S1/2 --	( 2)	712.539030	-1373.007523	7.062493840	0.027154404	-0.244864657	0.013298475
	3P1/2		6.564048964	0.009170755	-0.000081117		
	3P3/2		6.015456863	0.012877069	-0.001852918		
	3D3/2		6.933036795	0.007992328	-0.000334960		
	3D5/2		6.771134320	0.009848879	-0.000433639		
	4S1/2		3.921832690	0.004723290	-0.001642509		
	4P1/2		4.092438720	0.006964062	-0.001189240		
	4P3/2		3.637483374	0.003066070	-0.000419511		
	4D3/2		3.765248298	0.002268496	-0.000215710		
	4D5/2		3.648542631	0.002314351	-0.000175035		
	4F5/2		3.808010714	0.002396109	-0.000336952		
	4F7/2		3.743934975	0.001076615	-0.000328983		
	5S1/2		2.139275210	0.001303324	-0.000470443		
	5P1/2		2.122662630	0.001912760	-0.000337537		
	5P3/2		1.865712211	0.000840244	-0.000119831		
	5D3/2		1.746052969	0.000541793	-0.000056823		
	5D5/2		1.681141661	0.000498500	-0.000045836		
	5F5/2		1.242483797	0.000253564	-0.000037275		
	5F7/2		1.196937716	0.000116201	-0.000035046		
	6S1/2		0.994699111	0.000255669	-0.000092908		
	6P1/2		0.900701295	0.000313668	-0.000055683		
	6P3/2		0.736527909	0.000113741	-0.000016353		
	7S1/2		0.317492578	0.000018753	-0.000006821		
3P1/2 --	( 2)	708.638187	-1367.787333	7.608104868	0.054852036	-0.059211832	0.004494010
	3P3/2		6.630084442	0.004714679	-0.000122986		
	3D3/2		6.804676846	0.019242439	-0.001959064		
	3D5/2		7.139332841	0.007180799	-0.000089329		
	4S1/2		4.072798681	0.003917863	-0.000459354		
	4P1/2		4.025940744	0.006931295	-0.001556247		
	4P3/2		3.711181337	0.001629672	-0.000107302		
	4D3/2		3.796330354	0.004766916	-0.000667364		
	4D5/2		3.699263052	0.001630986	-0.000051914		
	4F5/2		3.800786682	0.004062732	-0.000899732		
	4F7/2		3.781397058	0.000431350	-0.000094916		
	5S1/2		2.175015439	0.001057414	-0.000134528		
	5P1/2		2.111050757	0.001782451	-0.000425509		
	5P3/2		1.883016450	0.000433477	-0.000031720		
	5D3/2		1.753357601	0.001164212	-0.000180168		
	5D5/2		1.691636292	0.000341838	-0.000013247		
	5F5/2		1.241942540	0.000438497	-0.000100512		
	5F7/2		1.200984854	0.000050788	-0.000010474		
	6S1/2		1.001484817	0.000206409	-0.000026723		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
MENDELEVIUM 5F13 Z=101 A=256 R=1.43990E-04 A.U.							
6P1/2			0.898988157	0.000288673	-0.000069689		
6P3/2			0.738802030	0.000058320	-0.000004353		
7S1/2			0.317988039	0.000015130	-0.000001964		
3P3/2 -- ( 4)	452.410268	-1030.397534	6.241802522	0.022699894		-0.001931112	0.000389223
3D3/2			6.671618075	0.005050357	-0.000023390		
3D5/2			6.325506035	0.012292318	-0.000237095		
4S1/2			3.944648889	0.006193116	-0.000842320		
4P1/2			4.031610042	0.002677564	-0.000206318		
4P3/2			3.551057631	0.004099849	-0.000601663		
4D3/2			3.705551165	0.002226875	-0.000212000		
4D5/2			3.582332524	0.004562275	-0.000713937		
4F5/2			3.766951941	0.002052646	-0.000205821		
4F7/2			3.675498761	0.001984527	-0.000584359		
5S1/2			2.141882158	0.001523753	-0.000217175		
5P1/2			2.107176148	0.000668119	-0.000058218		
5P3/2			1.845544218	0.001027219	-0.000162255		
5D3/2			1.733527538	0.000509909	-0.000051249		
5D5/2			1.667419539	0.001001466	-0.000173833		
5F5/2			1.238045036	0.000205107	-0.000021496		
5F7/2			1.190126465	0.000197439	-0.000058096		
6S1/2			0.995058596	0.000292029	-0.000042063		
6P1/2			0.898194499	0.000107660	-0.000009615		
6P3/2			0.733879547	0.000136595	-0.000021856		
7S1/2			0.317517394	0.000021351	-0.000003080		
3D3/2 -- ( 4)	445.314918	-1021.021238	7.320216410	0.039130756		-0.000049085	0.000012990
3D5/2			7.225144885	0.006936538	-0.000001030		
4S1/2			4.081782344	0.002090052	-0.000055700		
4P1/2			4.120965991	0.004464978	-0.000358221		
4P3/2			3.706482053	0.001377260	-0.000035735		
4D3/2			3.742720998	0.004885737	-0.000490146		
4D5/2			3.709737975	0.001583637	-0.000023645		
4F5/2			3.754324663	0.009252232	-0.002295694		
4F7/2			3.782055694	0.000316721	-0.000037158		
5S1/2			2.176306850	0.000554016	-0.000019671		
5P1/2			2.130626798	0.001051095	-0.000089919		
5P3/2			1.881442185	0.000348987	-0.000011120		
5D3/2			1.743875083	0.001005782	-0.000112044		
5D5/2			1.693710350	0.000334128	-0.000006152		
5F5/2			1.237541354	0.000981145	-0.000248765		
5F7/2			1.201208719	0.000038463	-0.000004140		
6S1/2			1.001685732	0.000107802	-0.000004068		
6P1/2			0.902004273	0.000167350	-0.000014545		
6P3/2			0.738582181	0.000046515	-0.000001542		
7S1/2			0.318002232	0.000007898	-0.000000301		
3D5/2 -- ( 6)	403.351597	-960.286545	7.003414035	0.031529280		-0.000007668	0.000003123
4S1/2			4.044444680	0.002410803	-0.000055611		
4P1/2			4.118577493	0.001743801	-0.000027633		
4P3/2			3.660283207	0.002648037	-0.0000117959		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
MENDELEVIUM	5F13	Z=101 A=256 R=1.43990E-04 A.U.						
			4D3/2	3.793766414	0.001291042	-0.000026621		
			4D5/2	3.623828428	0.004201138	-0.000304244		
			4F5/2	3.827642912	0.001948175	-0.000142021		
			4F7/2	3.696712809	0.005747186	-0.001599202		
			5S1/2	2.166491734	0.000619447	-0.000019621		
			5P1/2	2.128200170	0.000432279	-0.000009848		
			5P3/2	1.870500111	0.000637469	-0.000032298		
			5D3/2	1.751936564	0.000272733	-0.000006946		
			5D5/2	1.677499534	0.000848080	-0.000068598		
			5F5/2	1.244915360	0.000209539	-0.000015355		
			5F7/2	1.192737448	0.000579347	-0.000163938		
			6S1/2	0.999776564	0.000119770	-0.000004056		
			6P1/2	0.901558014	0.000069557	-0.000001701		
			6P3/2	0.737141758	0.000084120	-0.0000034376		
			7S1/2	0.317862355	0.000008767	-0.000000300		
4S1/2 --	( 2)	250.223240	-589.322520	3.263384877	0.002716607	-0.069031669	0.003738798	
				4P1/2	2.921721507	0.001115414	-0.000041675	
				4P3/2	2.728264632	0.001787903	-0.000398788	
				4D3/2	2.942719798	0.001156068	-0.000111521	
				4D5/2	2.883856895	0.000958193	-0.000129374	
				4F5/2	3.053954097	0.000810603	-0.000066838	
				4F7/2	3.025403778	0.000838729	-0.000069488	
				5S1/2	1.909026866	0.000541815	-0.000237122	
				5P1/2	1.910191929	0.000608337	-0.000117728	
				5P3/2	1.697867774	0.000258907	-0.000063058	
				5D3/2	1.599991418	0.000142578	-0.000017686	
				5D5/2	1.545878929	0.000186653	-0.000018183	
				5F5/2	1.174043415	0.000052161	-0.000003358	
				5F7/2	1.134376448	0.000069844	-0.000003216	
				6S1/2	0.952423406	0.000106077	-0.000047815	
				6P1/2	0.867296423	0.000104329	-0.000020807	
				6P3/2	0.714814219	0.000035244	-0.000008521	
				7S1/2	0.314416875	0.000007775	-0.000003516	
4P1/2 --	( 2)	243.898039	-579.425913	3.309009417	0.005141274	-0.016733346	0.001262464	
				4P3/2	2.924126191	0.000429338	-0.000021534	
				4D3/2	2.782301965	0.002994795	-0.000558646	
				4D5/2	2.962153124	0.000554358	-0.000023537	
				4F5/2	3.013376236	0.001336311	-0.000170269	
				4F7/2	3.068321354	0.000612623	-0.000020710	
				5S1/2	1.951296281	0.000578232	-0.000085928	
				5P1/2	1.873091061	0.000703510	-0.000206665	
				5P3/2	1.714838084	0.000148121	-0.000015527	
				5D3/2	1.592248207	0.000269873	-0.000048550	
				5D5/2	1.553378261	0.000134678	-0.000006295	
				5F5/2	1.173870429	0.000083680	-0.000006837	
				5F7/2	1.136571675	0.000055264	-0.000001434	
				6S1/2	0.959167812	0.000108482	-0.000017162	
				6P1/2	0.862532060	0.000112631	-0.000034630	

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
MENDELEVIUM 5F13 Z=101 A=256 R=1.43990E-04 A.U.							
4P3/2 -- ( 4)	163.806012	-463.496790	0.716791511 0.314898461 2.787747659	0.000020387 0.000007909 0.002204618	-0.000002293 -0.000001261	-0.000552206	0.000110601
4D3/2			2.811603542	0.000590176	-0.000014968		
4D5/2			2.649622102	0.001380297	-0.000108709		
4F5/2			2.881325210	0.000511630	-0.000018510		
4F7/2			2.822388074	0.000901348	-0.000055538		
5S1/2			1.897303667	0.001026238	-0.000160827		
5P1/2			1.873590782	0.000331498	-0.000030952		
5P3/2			1.657905727	0.000415523	-0.000078770		
5D3/2			1.574499764	0.000133609	-0.000012690		
5D5/2			1.518140285	0.000308671	-0.000031528		
5F5/2			1.159583628	0.000046094	-0.000002484		
5F7/2			1.120169129	0.000076132	-0.000005045		
6S1/2			0.949606740	0.000176415	-0.000029015		
6P1/2			0.861541421	0.000051171	-0.000005313		
6P3/2			0.709837347	0.000054536	-0.000010912		
7S1/2			0.314204850	0.000012737	-0.000002107		
4D3/2 -- ( 4)	153.916076	-446.396474	2.856471289	0.003107457	-0.000016245	0.000004275	
4D5/2			2.833719962	0.000549189	-0.000000181		
4F5/2			2.788309546	0.001566323	-0.000145161		
4F7/2			2.912205327	0.000506848	-0.000003046		
5S1/2			1.917296712	0.000298569	-0.000012391		
5P1/2			1.867192870	0.000746160	-0.000088134		
5P3/2			1.687995922	0.000161349	-0.000007244		
5D3/2			1.556132157	0.000413876	-0.000053883		
5D5/2			1.530884483	0.000124631	-0.000002786		
5F5/2			1.159728939	0.000150255	-0.000017465		
5F7/2			1.124321460	0.000042333	-0.000000775		
6S1/2			0.952932562	0.000054360	-0.000002916		
6P1/2			0.861239192	0.000105750	-0.000013147		
6P3/2			0.713293141	0.000020976	-0.000001064		
7S1/2			0.314443745	0.000003953	-0.000000219		
4D5/2 -- ( 6)	140.775309	-424.873015	2.765577156	0.002516462	-0.000002546	0.000001032	
4F5/2			2.873923428	0.000432945	-0.000006878		
4F7/2			2.755928569	0.001324236	-0.000084452		
5S1/2			1.901485228	0.000346147	-0.000012016		
5P1/2			1.872090832	0.000213020	-0.000005196		
5P3/2			1.670397361	0.000357813	-0.000028485		
5D3/2			1.573414533	0.000108677	-0.000003304		
5D5/2			1.505592098	0.000350159	-0.000033168		
5F5/2			1.158459208	0.000039858	-0.000001912		
5F7/2			1.117819479	0.000126045	-0.000013198		
6S1/2			0.950178812	0.000060684	-0.000002884		
6P1/2			0.861311186	0.000032108	-0.000001079		
6P3/2			0.711187496	0.000044417	-0.000003723		
7S1/2			0.314244114	0.000004396	-0.000000216		
4F5/2 -- ( 6)	126.893397	-401.238173	2.958876462	0.003324780	-0.000000010	0.000000005	

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
MENDELEVIUM	5F13	Z=101 A=256 R=1.4399CE-04 A.U.					
			2.984058325	0.000535777	-0.000000005		
			1.929255715	0.000179838	-0.000000275		
			1.883952030	0.000256060	-0.000001801		
			1.694866691	0.000114210	-0.000000615		
			1.577196802	0.000243221	-0.000009925		
			1.535221808	0.000082087	-0.000000812		
			1.156004696	0.000198041	-0.000010716		
			1.129559089	0.000048554	-0.000000311		
			0.955062456	0.000033582	-0.000000290		
			0.863606356	0.000038287	-0.000000631		
			0.714175392	0.000014842	-0.000000140		
			0.314597320	0.000002448	-0.000000024		
4F7/2 -- ( 8)	122.398385	-393.190008	2.921298322	0.003026445		-0.000000002	0.000000001
			1.922113042	0.000217922	-0.000000222		
			1.888068003	0.000159064	-0.000000251		
			1.686164975	0.000186600	-0.000001416		
			1.583095945	0.000091473	-0.000000460		
			1.524628076	0.000207098	-0.0000006259		
			1.166373002	0.000042603	-0.000000344		
			1.118498611	0.000177610	-0.0000007421		
			0.953784637	0.000038621	-0.000000282		
			0.863754277	0.000023767	-0.000000141		
			0.713157037	0.000023291	-0.000000293		
			0.314504423	0.000002802	-0.000000023		
5S1/2 -- ( 2)	83.777106	-268.719555	1.610855981	0.000299407		-0.019310311	0.001045058
			1.406335053	0.000179731	-0.000015295		
			1.319855832	0.000293399	-0.000077122		
			1.333231588	0.000184349	-0.000023889		
			1.302671592	0.000100856	-0.000024919		
			1.056042221	0.000069764	-0.000008872		
			1.025400385	0.000035626	-0.000003825		
			0.877334590	0.000046280	-0.000023112		
			0.812313868	0.000030883	-0.000006914		
			0.678371145	0.000017459	-0.0000006048		
			0.309145910	0.000003402	-0.0000001734		
5P1/2 -- ( 2)	78.214465	-257.710658	1.567746764	0.000522778		-0.004483315	0.000337706
			1.384125773	0.000044359	-0.000003182		
			1.245065404	0.000493416	-0.000111476		
			1.313050365	0.000039657	-0.000004332		
			1.034735050	0.000114389	-0.000023072		
			1.024710790	0.000019011	-0.000002483		
			0.886281080	0.000066915	-0.000010782		
			0.798675140	0.000046299	-0.000015850		
			0.680653082	0.000007740	-0.000001002		
			0.309695044	0.000004728	-0.0000000788		
5P3/2 -- ( 4)	53.002769	-212.835138	1.321113477	0.000223342		-0.000145187	0.000029030
			1.259541007	0.000082387	-0.000005099		
			1.181429538	0.000163492	-0.0000030216		



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
MENDELEVIUM	5F13	Z=101 A=256 R=1.43990E-04 A.U.						
	5F5/2		1.014837070	0.000047586	-0.000004125			
	5F7/2		0.975436332	0.000052264	-0.000011341			
	6S1/2		0.863851964	0.000119724	-0.000019174			
	6P1/2		0.797656924	0.000025847	-0.000002564			
	6P3/2		0.666589793	0.000022451	-0.000004738			
	7S1/2		0.308214531	0.000007993	-0.000001326			
5D3/2 --	( 4)	43.699424	-190.663266	1.213810251	0.000246800	-0.000003816	0.000001003	
	5D5/2		1.202943180	0.000043146	-0.000000021			
	5F5/2		0.940013958	0.000155538	-0.000032842			
	5F7/2		0.967125595	0.000018136	-0.000000580			
	6S1/2		0.852031810	0.000029143	-0.000001036			
	6P1/2		0.776923686	0.000071102	-0.000008605			
	6P3/2		0.665594450	0.000010688	-0.000000596			
	7S1/2		0.307458989	0.000002001	-0.000000095			
5D5/2 --	( 6)	39.650102	-181.796353	1.172687097	0.000196762	-0.000000589	0.000000239	
	5F5/2		0.977570201	0.000034967	-0.000001815			
	5F7/2		0.918189854	0.000098742	-0.000020234			
	6S1/2		0.843634841	0.000036116	-0.000000866			
	6P1/2		0.781588167	0.000017370	-0.000000371			
	6P3/2		0.659566948	0.000026243	-0.000002622			
	7S1/2		0.306946729	0.000002327	-0.000000086			
5F5/2 --	( 6)	20.944741	-127.483172	0.831892777	0.000094732	-0.000000001	0.000000001	
	5F7/2		0.827732302	0.000014458	-0.000000000			
	6S1/2		0.756627328	0.000012411	-0.000000379			
	6P1/2		0.697098246	0.000015703	-0.000000410			
	6P3/2		0.616170250	0.000005089	-0.000000021			
	7S1/2		0.301164439	0.000000837	-0.000000000			
5F7/2 --	( 7)	19.455935	-122.613264	0.801605483	0.000080799	-0.000000000	0.000000000	
	6S1/2		0.743676625	0.000015759	-0.000000424			
	6P1/2		0.700398440	0.000009761	-0.000000057			
	6P3/2		0.603921653	0.000009990	-0.000000084			
	7S1/2		0.300075378	0.000001038	-0.000000000			
6S1/2 --	( 2)	19.252688	-110.777468	0.729207324	0.000022932	-0.003803867	0.000205821	
	6P1/2		0.609364779	0.000023172	-0.000003043			
	6P3/2		0.550843249	0.000025753	-0.000007116			
	7S1/2		0.295015613	0.000001225	-0.000000578			
6P1/2 --	( 2)	15.148925	-98.012229	0.654266700	0.000031658	-0.000733063	0.000055197	
	6P3/2		0.556046679	0.000002407	-0.000000169			
	7S1/2		0.294606528	0.000002463	-0.000000372			
6P3/2 --	( 4)	8.677204	-77.643841	0.517148409	0.000011100	-0.000019507	0.000003899	
	7S1/2		0.285902578	0.000003657	-0.000000493			
7S1/2 --	( 2)	1.622850	-32.823066	0.233339223	0.000000616	-0.000279190	0.000015106	
ETOT	-35753.63762	46377.17637	-94795.12891	12625.31324	59.429956899	-6.187706330	-15.141729366	0.901153572

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NOBELIUM	5F14	Z=102 A=254 R=1.43614E-04 A.U.					
1S1/2 -- ( 2)	8996.622804	-15213.783210	83.376699190	17.199009186		-6.267228908	0.377449456
2S1/2			26.548370093	1.004143476	-0.125808763		
2P1/2			33.889009330	2.058821546	-0.233958601		
2P3/2			24.551271818	0.787779359	-0.227323069		
3S1/2			11.068521586	0.224749078	-0.029989818		
3P1/2			12.609771162	0.415007118	-0.045555151		
3P3/2			10.035782456	0.188136089	-0.055917679		
3D3/2			10.232509352	0.007878429	-0.000822074		
3D5/2			9.614382677	0.003058552	-0.000976170		
4S1/2			5.168257779	0.062454415	-0.008450947		
4P1/2			5.519621249	0.110083148	-0.011986593		
4P3/2			4.574746413	0.051346525	-0.015368468		
4D3/2			4.486288035	0.002489229	-0.000260529		
4D5/2			4.266936360	0.000971830	-0.000313182		
4F5/2			4.037482470	0.000008392	-0.000000797		
4F7/2			3.954982001	0.000003295	-0.000001081		
5S1/2			2.499696865	0.017512411	-0.002378710		
5P1/2			2.521054110	0.029221595	-0.003175002		
5P3/2			2.123506609	0.013417935	-0.004023583		
5D3/2			1.925210776	0.000583835	-0.000061150		
5D5/2			1.833902616	0.000224579	-0.000072541		
5F5/2			1.299349443	0.000001215	-0.000000116		
5F7/2			1.249221365	0.000000455	-0.000000150		
6S1/2			1.075973671	0.003441371	-0.000467899		
6P1/2			0.976241945	0.004748747	-0.000515699		
6P3/2			0.775569195	0.001773840	-0.000532133		
7S1/2			0.325702318	0.000247557	-0.000033663		
2S1/2 -- ( 2)	2328.836934	-3950.727946	19.097821156	0.430173927		-1.097628846	0.061221725
2P1/2			19.345479787	0.132270132	-0.000110484		
2P3/2			16.761663021	0.164380257	-0.009938717		
3S1/2			8.983534510	0.052290013	-0.012350307		
3P1/2			10.004886945	0.091697089	-0.013806945		
3P3/2			8.645413684	0.043801394	-0.004446922		
3D3/2			9.638179958	0.044987325	-0.006075330		
3D5/2			9.161910345	0.018588563	-0.005949747		
4S1/2			4.609352246	0.014402509	-0.003592401		
4P1/2			4.830525090	0.025195441	-0.003894707		
4P3/2			4.206839456	0.012468287	-0.001453282		
4D3/2			4.326065201	0.010389572	-0.001480411		
4D5/2			4.145366282	0.004545363	-0.001495390		
4F5/2			4.032220832	0.000677246	-0.000087387		
4F7/2			3.950536742	0.000239081	-0.000085146		
5S1/2			2.344236536	0.004027455	-0.001016427		
5P1/2			2.338134814	0.006732845	-0.001046544		
5P3/2			2.028046546	0.003286585	-0.000395063		
5D3/2			1.888915373	0.002268140	-0.000327338		
5D5/2			1.806832498	0.000991582	-0.000327561		
5F5/2			1.298615402	0.000093308	-0.000012140		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NOBELIUM 5F14 Z=102 A=254 R=1.43614E-04 A.U.							
5F7/2			1.248630575	0.000031478	-0.000011305		
6S1/2			1.045484134	0.000790866	-0.000200162		
6P1/2			0.946514925	0.001095735	-0.000170533		
6P3/2			0.762968561	0.000435261	-0.000052663		
7S1/2			0.323509654	0.000056885	-0.000014403		
2P1/2 -- ( 2)	2342.048026	-3966.670345	24.288210103	0.999402797		-0.243737895	0.019211905
2P3/2			19.770226019	0.093232928	-0.000707177		
3S1/2			9.669546384	0.035831430	-0.002318396		
3P1/2			10.017860469	0.085536681	-0.012135822		
3P3/2			9.070257395	0.024369008	-0.000644842		
3D3/2			9.676876687	0.128665325	-0.030587854		
3D5/2			9.396132850	0.003413878	-0.000868903		
4S1/2			4.782637226	0.009867018	-0.000716508		
4P1/2			4.851616089	0.022065471	-0.003445855		
4P3/2			4.316581041	0.006681640	-0.000207027		
4D3/2			4.339708655	0.031767669	-0.007772440		
4D5/2			4.205698941	0.000984807	-0.000237697		
4F5/2			4.033618396	0.000752328	-0.000157181		
4F7/2			3.953098076	0.000040160	-0.000015495		
5S1/2			2.391729599	0.002758914	-0.000205971		
5P1/2			2.344777007	0.005817023	-0.000928207		
5P3/2			2.056361249	0.001747076	-0.000056165		
5D3/2			1.892168417	0.007047435	-0.001735602		
5D5/2			1.820136474	0.000223294	-0.000053140		
5F5/2			1.298811230	0.000104252	-0.000021930		
5F7/2			1.248969560	0.000005347	-0.000002070		
6S1/2			1.054764206	0.000541751	-0.000040726		
6P1/2			0.947633110	0.000943788	-0.000151343		
6P3/2			0.766701576	0.000230985	-0.000007484		
7S1/2			0.324176676	0.000038967	-0.000002932		
2P3/2 -- ( 4)	1278.738010	-2622.217279	17.746921186	0.358915284		-0.006978983	0.001472108
3S1/2			9.182154111	0.043128018	-0.003839699		
3P1/2			9.931761030	0.025678724	-0.001238346		
3P3/2			8.457285937	0.046020080	-0.004360277		
3D3/2			9.646009397	0.039278911	-0.003698148		
3D5/2			9.032050580	0.063665757	-0.018114640		
4S1/2			4.651213314	0.010918038	-0.001026069		
4P1/2			4.810304114	0.006527623	-0.000362408		
4P3/2			4.162956425	0.011771913	-0.001240760		
4D3/2			4.329391697	0.009015918	-0.000853372		
4D5/2			4.111407896	0.014552511	-0.004289716		
4F5/2			4.031170373	0.000635891	-0.000060914		
4F7/2			3.947975739	0.000540329	-0.000175404		
5S1/2			2.355111693	0.002993748	-0.000285699		
5P1/2			2.332689582	0.001717269	-0.000098670		
5P3/2			2.017007389	0.003025966	-0.000326678		
5D3/2			1.889694012	0.001971529	-0.000186962		
5D5/2			1.799646288	0.003129255	-0.000929093		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NOBELIUM	5F14	Z=102 A=254 R=1.43614E-04 A.U.					
	5F5/2		1.298475799	0.000086749	-0.000008373		
	5F7/2		1.248302277	0.000070312	-0.000023032		
	6S1/2		1.047579463	0.000585023	-0.000056051		
	6P1/2		0.945626902	0.000278504	-0.000016131		
	6P3/2		0.761521141	0.000398593	-0.000043251		
	7S1/2		0.323659952	0.000042050	-0.000004031		
3S1/2 -- ( 2)	739.963595	-1416.837650	7.177277793	0.028485735		-0.263642383	0.014541977
	3P1/2		6.674684355	0.009614693	-0.000082587		
	3P3/2		6.101813245	0.013502312	-0.002000091		
	3D3/2		7.034676076	0.008354262	-0.000357163		
	3D5/2		6.866207955	0.010238239	-0.000463297		
	4S1/2		3.987399335	0.004967169	-0.001724304		
	4P1/2		4.164078528	0.007354037	-0.001253996		
	4P3/2		3.690272583	0.003151022	-0.000437089		
	4D3/2		3.823883551	0.002354148	-0.000223326		
	4D5/2		3.703201769	0.002413580	-0.000180698		
	4F5/2		3.870472005	0.002508911	-0.000352819		
	4F7/2		3.804127706	0.001125046	-0.000344400		
	5S1/2		2.180663721	0.001380561	-0.000497516		
	5P1/2		2.166344438	0.002036639	-0.000358903		
	5P3/2		1.897877417	0.000869819	-0.000125331		
	5D3/2		1.780315336	0.000568988	-0.000059589		
	5D5/2		1.712722700	0.000525288	-0.000047863		
	5F5/2		1.278715096	0.000273399	-0.000040215		
	5F7/2		1.231425218	0.000125089	-0.000037799		
	6S1/2		1.013777572	0.000270497	-0.000098143		
	6P1/2		0.918767377	0.000333334	-0.000059095		
	6P3/2		0.745882738	0.000116209	-0.000016871		
	7S1/2		0.321233166	0.000019450	-0.000007063		
3P1/2 -- ( 2)	736.480535	-1412.123462	7.738642763	0.057610222		-0.065666166	0.005048364
	3P3/2		6.726194669	0.004849415	-0.000134481		
	3D3/2		6.905314483	0.020220836	-0.002104466		
	3D5/2		7.241324720	0.007447073	-0.000095928		
	4S1/2		4.142370815	0.004114112	-0.000480923		
	4P1/2		4.096429335	0.007306157	-0.001636140		
	4P3/2		3.766050363	0.001681031	-0.000112328		
	4D3/2		3.855788932	0.004912269	-0.000683569		
	4D5/2		3.755257435	0.001706861	-0.000054023		
	4F5/2		3.863445332	0.004251654	-0.000941770		
	4F7/2		3.842336034	0.000449298	-0.000099279		
	5S1/2		2.217626222	0.001118706	-0.000141967		
	5P1/2		2.154486866	0.001894728	-0.000451233		
	5P3/2		1.915798728	0.000450880	-0.000033427		
	5D3/2		1.787906756	0.001214337	-0.000187097		
	5D5/2		1.723591942	0.000361501	-0.000013925		
	5F5/2		1.278186869	0.000472786	-0.000108443		
	5F7/2		1.235678657	0.000054555	-0.000011294		
	6S1/2		1.020786396	0.000218120	-0.000028172		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NOBELIUM	5F14	Z=102 A=254 R=1.43614E-04 A.U.					
			0.917024827	0.000306252	-0.000073764		
			0.748206848	0.000059877	-0.000004526		
			0.321734836	0.000015673	-0.000002029		
3P3/2 -- ( 4)	463.968199	-1054.256507	6.319505966	0.023532733		-0.002060356	0.000423863
			6.756214316	0.005233459	-0.000023812		
			6.402772919	0.012727316	-0.000246194		
			4.007556168	0.006544752	-0.000892866		
			4.098229175	0.002825568	-0.000217599		
			3.600340519	0.004270666	-0.000627292		
			3.760434455	0.002330337	-0.000221920		
			3.633447677	0.004755719	-0.000744797		
			3.826688066	0.002147807	-0.000215289		
			3.732572161	0.002076642	-0.000611344		
			2.182544443	0.001617249	-0.000231262		
			2.149480750	0.000709286	-0.000061834		
			1.876699923	0.001077815	-0.000170448		
			1.766856528	0.000538235	-0.000054214		
			1.698115779	0.001054328	-0.000183298		
			1.273840287	0.000220325	-0.000023104		
			1.224095023	0.000212281	-0.000062435		
			1.013991342	0.000309379	-0.000044713		
			0.916044243	0.000114018	-0.000010191		
			0.743137480	0.000141434	-0.000022658		
			0.321246995	0.000022172	-0.000003209		
3D3/2 -- ( 4)	456.773211	-1044.779591	7.415341169	0.040590276		-0.000053731	0.000014524
			7.315043325	0.007179235	-0.000001115		
			4.148199347	0.002188650	-0.000058424		
			4.190153975	0.004699159	-0.000379445		
			3.758804471	0.001434248	-0.000037238		
			3.798755227	0.005096798	-0.000512235		
			3.763540673	0.001650271	-0.000024670		
			3.814225912	0.009689529	-0.002404457		
			3.841733359	0.000331706	-0.000038909		
			2.218058143	0.000583937	-0.000020808		
			2.173794853	0.001113223	-0.000095827		
			1.913559052	0.000366137	-0.000011689		
			1.777622771	0.001059779	-0.000118348		
			1.725220140	0.000351600	-0.000006492		
			1.273375696	0.001056549	-0.000268019		
			1.235771505	0.000041540	-0.000004464		
			1.020818004	0.000113468	-0.000004300		
			0.919986074	0.000176810	-0.000015464		
			0.747902154	0.000048159	-0.000001600		
			0.321736574	0.000008149	-0.000000312		
3D5/2 -- ( 6)	412.871103	-981.311430	7.086967012	0.032632470		-0.000008318	0.000003466
			4.109169460	0.002522186	-0.000058275		
			4.186781452	0.001825694	-0.000028936		
			3.711121301	0.002754614	-0.000123022		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E (KIN)	E (E-N)	E (E-E)	E (MAG)	E (RET)	E (V-P)	E (H-VP)
NOBELIUM	5F14	Z=102 A=254 R=1.43614E-04 A.U.					
			3.849949710	0.001345339	-0.000027824		
			3.675407728	0.004373201	-0.000317441		
			3.888734034	0.002040791	-0.000148620		
			3.754144138	0.006016435	-0.001674180		
			2.207729450	0.000651933	-0.000020744		
			2.171032191	0.000455891	-0.000010430		
			1.902175489	0.000667733	-0.000033939		
			1.785725112	0.000287129	-0.000007346		
			1.708428808	0.000890973	-0.000072285		
			1.281069685	0.000225684	-0.000016522		
			1.226834501	0.000622913	-0.000176417		
			1.018811533	0.000125864	-0.000004285		
			0.919484041	0.000073196	-0.000001799		
			0.746423173	0.000086946	-0.000004538		
			0.321592469	0.000009032	-0.000000310		
4S1/2 -- ( 2)	260.303400	-607.887200	3.318183581	0.002861649		-0.074580142	0.004102273
			2.972183002	0.001169714	-0.000042746		
			2.770935003	0.001902148	-0.000429654		
			2.989708712	0.001217502	-0.000118188		
			2.928770332	0.001001411	-0.000137317		
			3.105211416	0.000851198	-0.000070281		
			3.075656568	0.000880113	-0.000073139		
			1.944862097	0.000574964	-0.000251513		
			1.948109631	0.000651339	-0.000125856		
			1.726565445	0.000271429	-0.000067565		
			1.630502599	0.000150884	-0.000018843		
			1.574239777	0.000196398	-0.000019428		
			1.207244431	0.000056432	-0.000003649		
			1.166177539	0.000075413	-0.000003491		
			0.970541702	0.000112419	-0.000050647		
			0.884526398	0.000111448	-0.000022193		
			0.724010760	0.000036350	-0.000008977		
			0.318149496	0.000008077	-0.000003650		
4P1/2 -- ( 2)	253.987544	-598.027678	3.367068001	0.005424603		-0.018629087	0.001423486
			2.970106731	0.000446439	-0.000023727		
			2.827919484	0.003174643	-0.000596628		
			3.009047420	0.000575985	-0.000025160		
			3.064867160	0.001405448	-0.000179626		
			3.120260899	0.000642972	-0.000021872		
			1.988434975	0.000611349	-0.000090808		
			1.910247112	0.000749037	-0.000219918		
			1.744186158	0.000154130	-0.000016490		
			1.622653910	0.000285705	-0.000052100		
			1.582097539	0.000141523	-0.000006720		
			1.207152044	0.000090536	-0.000007438		
			1.168544447	0.000059705	-0.000001561		
			0.977487907	0.000114573	-0.000018123		
			0.879686522	0.000119674	-0.000036773		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NOBELIUM 5F14 Z=102 A=254 R=1.43614E-04 A.U.							
4P3/2 -- ( 4)	168.722544	-475.151086	0.726039613 0.318635779 2.827097895	0.000020943 0.000008189 0.002301068	-0.000002400 -0.000001306	-0.000592220	0.000121051
4D3/2			2.852889131	0.000614400	-0.000015327		
4D5/2			2.687741801	0.001439279	-0.000112800		
4F5/2			2.925562246	0.000533485	-0.000019036		
4F7/2			2.865473744	0.000941783	-0.000057235		
5S1/2			1.931595783	0.001097223	-0.000172023		
5P1/2			1.909332925	0.000355221	-0.000033104		
5P3/2			1.685173889	0.000437375	-0.000083099		
5D3/2			1.603730322	0.000142246	-0.000013560		
5D5/2			1.545302746	0.000326769	-0.000033549		
5F5/2			1.191773082	0.000050270	-0.000002744		
5F7/2			1.151013416	0.000082239	-0.000005579		
6S1/2			0.967446452	0.000187869	-0.000030929		
6P1/2			0.878453955	0.000054582	-0.000005662		
6P3/2			0.718920898	0.000056647	-0.000011357		
7S1/2			0.317921765	0.000013294	-0.000002202		
4D3/2 -- ( 4)	158.720759	-457.944909	2.900102634 2.876010284 2.833201080	0.003250716 0.000572836 0.001634406	-0.000000198 -0.000149805	-0.000017911	0.000004813
4D5/2			2.958367381	0.000531110	-0.000003158		
4F7/2			1.952696620	0.000316160	-0.000013158		
5S1/2			1.903227155	0.000795662	-0.000094261		
5P3/2			1.716223292	0.000169610	-0.000007630		
5D3/2			1.585234827	0.000437810	-0.000057264		
5D5/2			1.558599284	0.000131478	-0.000002956		
5F5/2			1.192097420	0.000164438	-0.000019429		
5F7/2			1.155482163	0.000045528	-0.000000848		
6S1/2			0.970943813	0.000057437	-0.000003095		
6P1/2			0.878222275	0.000112304	-0.000014012		
6P3/2			0.722442352	0.000021764	-0.000001107		
7S1/2			0.318168028	0.000004094	-0.000000227		
4D5/2 -- ( 6)	144.935988	-435.434680	2.805966825 2.918804436 2.798880631	0.002627881 0.000451657 0.001381947	-0.000007026 -0.000086600	-0.000002784	0.000001154
4F5/2			1.936175317	0.000366422	-0.000012736		
4F7/2			1.908010893	0.000226035	-0.000005519		
5S1/2			1.698080275	0.000376103	-0.000030018		
5P1/2			1.602732220	0.000114863	-0.000003516		
5P3/2			1.532569078	0.000369419	-0.000035178		
5D3/2			1.190655778	0.000043467	-0.000002117		
5D5/2			1.148617942	0.000137300	-0.000014702		
5F5/2			0.968072751	0.000064051	-0.000003058		
5F7/2			0.878248661	0.000033944	-0.000001146		
6S1/2			0.720298134	0.000046070	-0.000003872		
6P1/2			0.317963991	0.000004548	-0.000000225		
6P3/2			3.008844915	0.003489658			
4F5/2 -- ( 6)	130.986695	-411.824205	0.726039613 0.318635779 2.827097895	0.000020943 0.000008189 0.002301068	-0.000002400 -0.000001306	-0.000000011	0.000000005

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NOBELIUM	5F14	Z=102 A=254 R=1.43614E-04 A.U.					
			3.034034753	0.000562420	-0.000000005		
			1.965637154	0.000190152	-0.000000302		
			1.921165057	0.000271379	-0.000001945		
			1.723690444	0.000120215	-0.000000663		
			1.607245484	0.000256957	-0.000010538		
			1.563398607	0.000086680	-0.000000864		
			1.188459627	0.000213496	-0.000011702		
			1.161195743	0.000052424	-0.000000340		
			0.973235117	0.000035451	-0.000000311		
			0.880738352	0.000040468	-0.000000676		
			0.723385764	0.000015418	-0.000000148		
			0.318329996	0.000002533	-0.000000025		
4F7/2 -- ( 8)	126.267704	-403.408927	2.969737912	0.003174394		-0.000000002	0.000000001
			1.958201641	0.000230243	-0.000000245		
			1.925218886	0.000168439	-0.000000271		
			1.714760953	0.000196138	-0.000001524		
			1.613142011	0.000096669	-0.000000494		
			1.552527538	0.000218297	-0.000006624		
			1.199188534	0.000045974	-0.000000377		
			1.149608775	0.000191227	-0.000008097		
			0.971905960	0.000040735	-0.000000302		
			0.880865138	0.000025104	-0.000000151		
			0.722351640	0.000024168	-0.000000308		
			0.318235266	0.000002897	-0.000000025		
5S1/2 -- ( 2)	87.695569	-277.663760	1.641713338	0.000318342		-0.021017631	0.001155172
			1.434170756	0.000189074	-0.000015857		
			1.343977776	0.000316434	-0.000083352		
			1.358870038	0.000195992	-0.000025403		
			1.327083127	0.000107041	-0.000026509		
			1.084361032	0.000075282	-0.000009568		
			1.052781810	0.000038543	-0.000008982		
			0.894186620	0.000049202	-0.000024564		
			0.828548258	0.000033185	-0.000007408		
			0.687519307	0.000018583	-0.000006459		
			0.312893563	0.000003546	-0.000001806		
5P1/2 -- ( 2)	82.037996	-266.564352	1.599514467	0.000557547		-0.005034760	0.000384082
			1.409679160	0.000046948	-0.000003552		
			1.269860198	0.000528053	-0.000119409		
			1.338098182	0.000041864	-0.000004644		
			1.062539723	0.000123490	-0.000024892		
			1.052314307	0.000020611	-0.000002681		
			0.903451511	0.000070707	-0.000011396		
			0.814733834	0.000049374	-0.000016897		
			0.689899510	0.000007982	-0.000001055		
			0.313453068	0.000004901	-0.000000817		
5P3/2 -- ( 4)	54.982587	-218.838302	1.343222086	0.000235420		-0.000156919	0.000032019
			1.282312607	0.000086352	-0.000005286		
			1.202280443	0.000172022	-0.000031605		



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
NOBELIUM	5F14	Z=102 A=254 R=1.43614E-04 A.U.						
	5F5/2		1.040744758	0.060050850	-0.000004383			
	5F7/2		1.030156527	0.000056211	-0.000012070			
	6S1/2		0.879933147	0.000128313	-0.000020517			
	6P1/2		0.813230492	0.000027865	-0.000002753			
	6P3/2		0.675555208	0.000023394	-0.000004936			
	7S1/2		0.311931842	0.000008393	-0.000001391			
5D3/2 --	( 4)	45.505588	-196.452509	1.237071761	0.000261783	-0.000004256	0.000001142	
	5D5/2		1.225464224	0.000045565	-0.000000023			
	5F5/2		0.964055806	0.000165936	-0.000034852			
	5F7/2		0.992188961	0.000019694	-0.000000617			
	6S1/2		0.868380469	0.000030970	-0.000001104			
	6P1/2		0.792311651	0.000075942	-0.000009193			
	6P3/2		0.674755804	0.000011116	-0.000000620			
	7S1/2		0.311207125	0.000002085	-0.000000099			
5D5/2 --	( 6)	41.201018	-187.106079	1.194177314	0.000208161	-0.000000651	0.000000270	
	5F5/2		1.002476240	0.000037298	-0.000001914			
	5F7/2		0.941327314	0.000105439	-0.000021389			
	6S1/2		0.859628630	0.000038377	-0.000000918			
	6P1/2		0.796995379	0.000018519	-0.000000394			
	6P3/2		0.668644678	0.000027312	-0.000002731			
	7S1/2		0.310683700	0.000002424	-0.000000089			
5F5/2 --	( 6)	22.171895	-132.533787	0.856694662	0.000103324	-0.000000032	0.000000001	
	5F7/2		0.852320052	0.000015770	-0.000000000			
	6S1/2		0.774318939	0.000013252	-0.000000386			
	6P1/2		0.713590618	0.000016805	-0.000000413			
	6P3/2		0.626853626	0.000005351	-0.000000019			
	7S1/2		0.305150426	0.000000878	-0.000000000			
5F7/2 --	( 8)	20.578721	-127.420685	0.825322756	0.000088040	-0.000000000	0.000000000	
	6S1/2		0.761131459	0.000016899	-0.000000436			
	6P1/2		0.716867974	0.000010476	-0.000000058			
	6P3/2		0.614647491	0.000010503	-0.000000079			
	7S1/2		0.304081015	0.000001088	-0.000000000			
6S1/2 --	( 2)	20.114284	-114.212085	0.743151164	0.000024316	-0.004135556	0.000227253	
	6P1/2		0.621272194	0.000024348	-0.000003184			
	6P3/2		0.559470822	0.000027308	-0.000007559			
	7S1/2		0.298755073	0.000001271	-0.000000598			
6P1/2 --	( 2)	15.846851	-101.111652	0.667313078	0.000033639	-0.000821708	0.000062660	
	6P3/2		0.564834848	0.00002517	-0.000000186			
	7S1/2		0.298374084	0.00002542	-0.000000384			
6P3/2 --	( 4)	8.886590	-79.404630	0.523788057	0.000011522	-0.000020808	0.000004244	
	7S1/2		0.289270651	0.000003799	-0.000000507			
7S1/2 --	( 2)	1.660252	-33.542700	0.235989608	0.000000638	-0.000297549	0.000016350	
ETOT	-36700.59746	47964.15712	-97650.38131	12945.53748	61.685257902	-6.409574897	-16.164452613	0.978013847

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LAWRENCIUM	6D1	Z=103 A=257 R=1.44177E-04 A.U.					
1S1/2 -- ( 2)	9314.916664	-15684.111901	84.847642042	17.813653573		-6.663410577	0.407944204
2S1/2			27.043292383	1.044709635	-0.131128985		
2P1/2			34.613376990	2.140675209	-0.240727892		
2P3/2			24.845136108	0.810521671	-0.233854854		
3S1/2			11.267823692	0.233968218	-0.031264605		
3P1/2			12.860830867	0.431073262	-0.046742930		
3P3/2			10.167573471	0.194412523	-0.057769818		
3D3/2			10.366696472	0.008086533	-0.000837302		
3D5/2			9.727283350	0.003136218	-0.001000639		
4S1/2			5.263743786	0.065214135	-0.008836316		
4P1/2			5.630878871	0.114699632	-0.012332041		
4P3/2			4.643170622	0.053323938	-0.015956687		
4D3/2			4.556414476	0.002572819	-0.000267183		
4D5/2			4.329316012	0.001003986	-0.000323441		
4F5/2			4.102323330	0.000008704	-0.000000820		
4F7/2			4.016932223	0.000003425	-0.000001123		
5S1/2			2.552064375	0.018419993	-0.002505366		
5P1/2			2.578938230	0.030706182	-0.003293890		
5P3/2			2.162617114	0.014054476	-0.004213555		
5D3/2			1.966168003	0.000611765	-0.000063577		
5D5/2			1.871418321	0.000235237	-0.000075961		
5F5/2			1.363740637	0.000001353	-0.000000128		
5F7/2			1.317347919	0.000000512	-0.000000168		
6S1/2			1.107167651	0.003695036	-0.000503071		
6P1/2			1.011413640	0.005157583	-0.000552956		
6P3/2			0.804865764	0.001949053	-0.000584574		
6D3/2			0.421503369	0.000022699	-0.000002359		
7S1/2			0.352645932	0.000305671	-0.000041623		
2S1/2 -- ( 2)	2421.092200	-4084.721345	19.433697591	0.450704633		-1.179243108	0.066809669
2P1/2			19.711133216	0.138693274	-0.000111203		
2P3/2			16.999579969	0.170784255	-0.010766556		
3S1/2			9.132918613	0.054796422	-0.012916480		
3P1/2			10.182531730	0.096289352	-0.014466764		
3P3/2			8.761169870	0.044957972	-0.004519921		
3D3/2			9.768688314	0.046586791	-0.006283770		
3D5/2			9.274912564	0.019192613	-0.006150966		
4S1/2			4.689459191	0.015138628	-0.003769113		
4P1/2			4.919634475	0.026536633	-0.004092209		
4P3/2			4.269237902	0.012868801	-0.001486908		
4D3/2			4.393933439	0.010845102	-0.001543043		
4D5/2			4.206791156	0.004731949	-0.001559290		
4F5/2			4.097008682	0.000703272	-0.000090612		
4F7/2			4.012458393	0.000247953	-0.000088307		
5S1/2			2.391144399	0.004264194	-0.001074309		
5P1/2			2.388495168	0.007151631	-0.001108934		
5P3/2			2.064767603	0.003422154	-0.000407963		
5D3/2			1.928857713	0.002399240	-0.000345765		
5D5/2			1.843762280	0.001046229	-0.000346220		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LAWRENCIUM 601 Z=103 A=257 R=1.44177E-04 A.U.							
			1.362945376	0.000103900	-0.000013500		
			1.316704560	0.000035318	-0.000012686		
			1.074950508	0.000854767	-0.000215971		
			0.979422966	0.001202996	-0.000186772		
			0.791317183	0.000475464	-0.000057063		
			0.420126875	0.000087970	-0.000012705		
			0.349981562	0.000070702	-0.000017872		
2P1/2 -- ( 2)	2437.419774	-4104.203744	24.771607259	1.048706426		-0.269854947	0.021554113
			20.055662858	0.095855248	-0.000767990		
			9.838780981	0.037577416	-0.002416086		
			10.197185300	0.089868182	-0.012698828		
			9.195423842	0.025167334	-0.000666750		
			9.809563673	0.132866990	-0.031582307		
			9.510271463	0.003495085	-0.000894548		
			4.868436586	0.010382182	-0.000749403		
			4.941706444	0.023265450	-0.003619057		
			4.381931743	0.006937681	-0.000214905		
			4.408253676	0.033069720	-0.008088932		
			4.267938273	0.001015571	-0.000246669		
			4.098438284	0.000778153	-0.000162507		
			4.019046456	0.000041427	-0.000015999		
			2.440560817	0.002924363	-0.000217060		
			2.395494959	0.006186092	-0.000983382		
			2.094089531	0.001829811	-0.000058806		
			1.932312369	0.007435552	-0.001830780		
			1.857430752	0.000233417	-0.000055900		
			1.363160221	0.000115642	-0.000024318		
			1.317075166	0.000005968	-0.000002313		
			1.084807041	0.000586192	-0.000043816		
			0.980641084	0.001037376	-0.000165739		
			0.795372191	0.000253786	-0.000008222		
			0.420255331	0.000273365	-0.000067381		
			0.350796241	0.000048487	-0.000003628		
2P3/2 -- ( 4)	1307.630650	-2678.674361	17.948983304	0.370300008		-0.007410955	0.001596118
			9.325199142	0.045146496	-0.004048149		
			10.091703950	0.026831620	-0.001294107		
			8.561676746	0.047592733	-0.004513312		
			9.769264583	0.040657267	-0.003819534		
			9.107129227	0.065813470	-0.018726714		
			4.729514830	0.011439816	-0.001081824		
			4.894720156	0.006832326	-0.000379410		
			4.222199220	0.012226700	-0.001290047		
			4.395526684	0.009379567	-0.000885595		
			4.170739768	0.015134295	-0.004461989		
			4.095813651	0.000668248	-0.000063932		
			4.009730328	0.000567195	-0.000184154		
			2.401569490	0.003158068	-0.000303224		
			2.381748510	0.001812213	-0.000104176		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LAWRENCIUM	6D1	Z=103 A=257 R=1.44177E-04 A.U.					
5P3/2			2.052817274	0.003169003	-0.000342539		
5D3/2			1.929258273	0.002077252	-0.000196492		
5D5/2			1.836025344	0.003296484	-0.000978994		
5F5/2			1.362774693	0.000097691	-0.000009418		
5F7/2			1.316326270	0.000079797	-0.000026149		
6S1/2			1.076997456	0.000629860	-0.000060717		
6P1/2			0.978286484	0.000303745	-0.000017604		
6P3/2			0.789673182	0.000437847	-0.000047574		
6D3/2			0.420141820	0.000076185	-0.000007209		
7S1/2			0.350150345	0.000052060	-0.000005021		
3S1/2 -- ( 2)	768.443330	-1462.050789	7.293748567	0.029877631		-0.283743281	0.015895330
3P1/2			6.787170558	0.010079309	-0.000083950		
3P3/2			6.188971376	0.014161283	-0.002158281		
3D3/2			7.137221175	0.008731534	-0.000380918		
3D5/2			6.961955910	0.010639427	-0.000495021		
4S1/2			4.053810346	0.009222376	-0.001809688		
4P1/2			4.236781557	0.007765207	-0.001322112		
4P3/2			3.743330801	0.003237104	-0.000455750		
4D3/2			3.882829932	0.002441165	-0.000231019		
4D5/2			3.758055184	0.002515680	-0.000186416		
4F5/2			3.933032795	0.002625079	-0.000369155		
4F7/2			3.8643352318	0.001174680	-0.000360263		
5S1/2			2.222746921	0.001462003	-0.000526004		
5P1/2			2.210949230	0.002168482	-0.000381576		
5P3/2			1.931127296	0.000900782	-0.000131249		
5D3/2			1.816886576	0.000598517	-0.000062586		
5D5/2			1.747006314	0.000554955	-0.000050096		
5F5/2			1.341343214	0.000305844	-0.000345016		
5F7/2			1.297903630	0.000140981	-0.000042685		
6S1/2			1.041633009	0.000292401	-0.000135924		
6P1/2			0.949783504	0.000366843	-0.000064945		
6P3/2			0.772918169	0.000126258	-0.000018526		
6D3/2			0.416025848	0.000022270	-0.000002361		
7S1/2			0.347230910	0.000024177	-0.000008767		
3P1/2 -- ( 2)	765.538305	-1458.024095	7.871533695	0.060505003		-0.072810913	0.005669297
3P3/2			6.823215307	0.004986496	-0.000146957		
3D3/2			7.006920052	0.021251814	-0.002261313		
3D5/2			7.344136477	0.007719706	-0.000103023		
4S1/2			4.212914519	0.004319168	-0.000503316		
4P1/2			4.167981256	0.007700310	-0.001719721		
4P3/2			3.821252267	0.001732837	-0.000117589		
4D3/2			3.915572297	0.005057028	-0.000699383		
4D5/2			3.811486120	0.001785385	-0.000056198		
4F5/2			3.926227920	0.004445873	-0.000984990		
4F7/2			3.903301110	0.000467522	-0.000103757		
5S1/2			2.260980004	0.001183276	-0.000149757		
5P1/2			2.198844779	0.002013989	-0.000478435		
5P3/2			1.949707032	0.000469101	-0.000035255		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LAWRENCIUM	6D1	Z=103 A=257 R=1.44177E-04 A.U.					
			1.824793462	0.001268320	-0.000194507		
			1.758299779	0.000383321	-0.000014676		
			1.340812758	0.000528876	-0.000121389		
			1.302585302	0.000061349	-0.000012749		
			1.049031850	0.000235502	-0.000030343		
			0.947949709	0.000336442	-0.000080845		
			0.775444976	0.000065363	-0.000005009		
			0.416318934	0.000047365	-0.000007365		
			0.347839764	0.000019459	-0.000002514		
3P3/2 --	( 4)	475.709921 -1078.444850	6.397428135	0.024386986		-0.002196973	0.000461235
			6.841044107	0.005421186	-0.000024241		
			6.480141345	0.013172420	-0.000255665		
			4.071091939	0.006915347	-0.000946131		
			4.165614650	0.002981620	-0.000229412		
			3.649770232	0.004446586	-0.000653707		
			3.815467949	0.002437175	-0.000232159		
			3.684623362	0.004954356	-0.000776458		
			3.886413747	0.002245764	-0.000225030		
			3.789584564	0.002171428	-0.000639113		
			2.223837124	0.001716091	-0.000246170		
			2.192612483	0.000752931	-0.000065653		
			1.908874310	0.001131456	-0.000179139		
			1.802406625	0.000570158	-0.000057452		
			1.731420777	0.001112808	-0.000193760		
			1.335793157	0.000245515	-0.000025760		
			1.289644060	0.000238941	-0.000070245		
			1.041689606	0.000334851	-0.000048554		
			0.946724562	0.000125029	-0.000011183		
			0.769891919	0.000155724	-0.000024981		
			0.415497373	0.000021062	-0.000002139		
			0.347233655	0.0000027589	-0.000004007		
3D3/2 --	( 4)	468.406110 -1068.856675	7.510724063	0.042086933		-0.000058764	0.000016222
			7.405043179	0.007427135	-0.000001205		
			4.215333422	0.002291264	-0.000061257		
			4.260170380	0.004944988	-0.000401860		
			3.811295344	0.001492917	-0.000038786		
			3.854948136	0.005314262	-0.000535026		
			3.817416215	0.001718775	-0.000025724		
			3.874124344	0.010139991	-0.002516505		
			3.901350357	0.000347120	-0.000040713		
			2.260471427	0.000615284	-0.000022001		
			2.217820435	0.001178893	-0.000102109		
			1.946747355	0.000384318	-0.000012293		
			1.813628617	0.001118763	-0.000125235		
			1.759442290	0.000370947	-0.000006868		
			1.335357065	0.001180324	-0.000299575		
			1.302526470	0.000046976	-0.000006504		
			1.048875209	0.000122016	-0.000004645		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LAWRENCIUM	601	Z=103 A=257 R=1.44177E-04 A.U.					
3D5/2 -- ( 6)	422.497008	-1302.560862	0.950947885 0.775025710 0.415921059 0.347826146 7.170496644 4.174543391 4.255764141 3.762089734 3.906259130 3.727620773 3.949800307 3.811493609 2.249604941 2.214700405 1.934895633 1.821782941 1.741998444 1.343686065 1.292652902 1.046720730 0.950366476 0.773410658 0.416204011 0.347648219	0.000193405 0.000053023 0.000040711 0.000010077 0.033759618 0.002638020 0.001910986 0.002864177 0.001401181 0.004549857 0.002136217 0.006293591 0.000685905 0.000480693 0.000699771 0.000302845 0.000938466 0.000252167 0.000701514 0.000135123 0.000079745 0.000095552 0.000011068 0.000011148	-0.000017023 -0.000001766 -0.000004626 -0.000000387 -0.000061038 -0.000030285 -0.000128251 -0.000029064 -0.000331022 -0.000155408 -0.001751359 -0.000021923 -0.000011042 -0.000035680 -0.000007782 -0.000076366 -0.000018443 -0.000198749 -0.000004626 -0.000001971 -0.000005005 -0.000000293 -0.000000385	-0.000009016	0.000003841
4S1/2 -- ( 2)	270.768165	-626.992896	3.373657202 3.023329975 2.813977057 3.037036145 2.973956429 3.156749249 3.126153091 1.981257978 1.986767778 1.756137097 1.662888694 1.604811934 1.263894657 1.226646580 0.996452892 0.913438095 0.749489403 0.410474700 0.343526903 3.425954113 3.016470552 2.873934640 3.056248340 3.116675267	0.003013655 0.001226363 0.002024139 0.001282010 0.001046110 0.000893502 0.000922993 0.000609945 0.000697298 0.000284982 0.000159983 0.000207162 0.000063347 0.000085250 0.000121719 0.000123303 0.000039905 0.000005910 0.000010056 0.005722579 0.000464374 0.003365568 0.000598010 0.001477725	-0.000043793 -0.000462788 -0.000125261 -0.000145738 -0.000073905 -0.000076983 -0.000266675 -0.000134518 -0.000072498 -0.000020117 -0.000020821 -0.000004117 -0.000003968 -0.000054808 -0.000024518 -0.000010067 -0.000000764 -0.000004543	-0.080536113	0.004498974
4P1/2 -- ( 2)	264.505980	-617.223448	0.950947885 0.775025710 0.415921059 0.347826146 7.170496644 4.174543391 4.255764141 3.762089734 3.906259130 3.727620773 3.949800307 3.811493609 2.249604941 2.214700405 1.934895633 1.821782941 1.741998444 1.343686065 1.292652902 1.046720730 0.950366476 0.773410658 0.416204011 0.347648219	0.000193405 0.000053023 0.000040711 0.000010077 0.033759618 0.002638020 0.001910986 0.002864177 0.001401181 0.004549857 0.002136217 0.006293591 0.000685905 0.000480693 0.000699771 0.000302845 0.000938466 0.000252167 0.000701514 0.000135123 0.000079745 0.000095552 0.000011068 0.000011148	-0.000017023 -0.000001766 -0.000004626 -0.000000387 -0.000061038 -0.000030285 -0.000128251 -0.000029064 -0.000331022 -0.000155408 -0.001751359 -0.000021923 -0.000011042 -0.000035680 -0.000007782 -0.000076366 -0.000018443 -0.000198749 -0.000004626 -0.000001971 -0.000005005 -0.000000293 -0.000000385	-0.020734026	0.001604394

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LAWRENCIUM	6D1	Z=103 A=257 R=1.44177E-04 A.U.					
			3.172494182	0.000674373	-0.000023100		
			2.026180239	0.000646122	-0.000095918		
			1.948127239	0.000797409	-0.000233951		
			1.774448430	0.000160465	-0.000017528		
			1.654914733	0.000303184	-0.000056067		
			1.613069369	0.000149063	-0.000007196		
			1.263892528	0.000101630	-0.000008400		
			1.229317698	0.000067532	-0.000001781		
			1.003758392	0.000123603	-0.000019550		
			0.908352855	0.000131656	-0.000040432		
			0.751701139	0.000022883	-0.000002674		
			0.410236396	0.000011064	-0.000002042		
			0.344114373	0.000010156	-0.000001620		
4P3/2 -- ( 4)	173.732666	-486.979749	2.866557457	0.002400574		-0.000634719	0.000132378
4D3/2			2.894282637	0.000639338	-0.000015689		
4D5/2			2.725924575	0.001500012	-0.000117029		
4F5/2			2.969831623	0.000555979	-0.000019569		
4F7/2			2.908572599	0.000983414	-0.000058967		
5S1/2			1.966334250	0.001172825	-0.000183917		
5P1/2			1.945679291	0.000380643	-0.000035391		
5P3/2			1.713218919	0.000460573	-0.000087696		
5D3/2			1.634707338	0.000151705	-0.000014512		
5D5/2			1.574529993	0.000346766	-0.000035781		
5F5/2			1.246713987	0.000056900	-0.000003147		
5F7/2			1.209694222	0.000093011	-0.000006468		
6S1/2			0.992984428	0.000204311	-0.000033668		
6P1/2			0.906802726	0.000060272	-0.000006249		
6P3/2			0.743953323	0.000062556	-0.000012573		
6D3/2			0.409447629	0.000005816	-0.000000593		
7S1/2			0.343233868	0.000016607	-0.000002754		
4D3/2 -- ( 4)	163.616651	-469.664356	2.943844801	0.003398647		-0.000019728	0.000005413
4D5/2			2.918364626	0.000597129	-0.000000216		
4F5/2			2.878132747	0.001704520	-0.000154553		
4F7/2			3.004544704	0.000556121	-0.000003272		
5S1/2			1.988582018	0.000334672	-0.000013962		
5P1/2			1.939868137	0.000848348	-0.000100783		
5P3/2			1.745270279	0.000178371	-0.000008040		
5D3/2			1.616041825	0.000463953	-0.000060957		
5D5/2			1.588431339	0.000139050	-0.000003144		
5F5/2			1.247249342	0.000186759	-0.000022435		
5F7/2			1.214722546	0.000051248	-0.000000972		
6S1/2			0.996736640	0.000061985	-0.000003357		
6P1/2			0.906640364	0.000123406	-0.000015454		
6P3/2			0.747764068	0.000024007	-0.000001225		
6D3/2			0.408884353	0.000016613	-0.000002316		
7S1/2			0.343537332	0.000005078	-0.000000284		
4D5/2 -- ( 6)	149.162296	-446.130347	2.846379979	0.002742593		-0.000003040	0.000001289
4F5/2			2.963675344	0.000470890	-0.000007173		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LAWRENCIUM	601	Z=103 A=257 R=1.44177E-04 A.U.					
4F7/2			2.841808840	0.001441275	-0.000088768		
5S1/2			1.971317869	0.000387772	-0.000013488		
5P1/2			1.944532281	0.000239813	-0.000005858		
5P3/2			1.726548924	0.000395494	-0.000031645		
5D3/2			1.633788659	0.000121616	-0.000003748		
5D5/2			1.561563336	0.000390713	-0.000037400		
5F5/2			1.245559677	0.000049194	-0.000002434		
5F7/2			1.207133549	0.000156618	-0.000017155		
6S1/2			0.993678466	0.000069042	-0.000003314		
6P1/2			0.906614916	0.000037143	-0.000001261		
6P3/2			0.745443425	0.000050776	-0.000004281		
6D3/2			0.409412805	0.000004405	-0.000000154		
7S1/2			0.343287581	0.000005634	-0.000000281		
4F5/2 -- ( 6)	135.144642	-422.540326	3.058787932	0.003659760		-0.000000012	0.000000006
4F7/2			3.083960882	0.000589891	-0.000000006		
5S1/2			2.002504133	0.000200966	-0.000000330		
5P1/2			1.959002225	0.000287523	-0.000002096		
5P3/2			1.753331139	0.000126578	-0.000000714		
5D3/2			1.639054248	0.000271924	-0.000011206		
5D5/2			1.593703830	0.000091754	-0.000000922		
5F5/2			1.243577329	0.000238675	-0.000013257		
5F7/2			1.221137281	0.000059242	-0.000000391		
6S1/2			0.999241173	0.000038224	-0.000000342		
6P1/2			0.909398445	0.000044262	-0.000000752		
6P3/2			0.748829046	0.000017025	-0.000000166		
6D3/2			0.409648341	0.000009369	-0.000000407		
7S1/2			0.343740742	0.000003140	-0.000000032		
4F7/2 -- ( 8)	130.193195	-413.744799	3.018104919	0.003326848		-0.000000003	0.000000002
5S1/2			1.994762034	0.000243166	-0.000000268		
5P1/2			1.962992038	0.000178320	-0.000000292		
5P3/2			1.744156928	0.000206238	-0.000001638		
5D3/2			1.644957227	0.000102334	-0.000000531		
5D5/2			1.582513066	0.000230656	-0.000007025		
5F5/2			1.255084811	0.000051455	-0.000000429		
5F7/2			1.208522193	0.000215442	-0.000009250		
6S1/2			0.997828307	0.000043878	-0.000000332		
6P1/2			0.909504798	0.000027441	-0.000000169		
6P3/2			0.747712788	0.000026648	-0.000000346		
6D3/2			0.409810422	0.000003627	-0.000000026		
7S1/2			0.343624984	0.000003586	-0.000000031		
5S1/2 -- ( 2)	91.789820	-286.887493	1.673122398	0.000338427		-0.022864713	0.001276276
5P1/2			1.462567322	0.000198861	-0.000016425		
5P3/2			1.368779554	0.000341548	-0.000090130		
5D3/2			1.385822490	0.000208708	-0.000027060		
5D5/2			1.353044642	0.000113873	-0.000028265		
5F5/2			1.131229783	0.000084022	-0.000010679		
5F7/2			1.103210178	0.000043573	-0.000010117		
6S1/2			0.917203243	0.000053474	-0.000026716		



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LAWRENCIUM	6D1	Z=103 A=257 R=1.44177E-04 A.U.					
			0.854475289	0.0G0037027	-0.000008248		
			0.710697743	0.000020990	-0.000007327		
			0.401657386	0.000004601	-0.000000727		
			0.337265229	0.000004431	-0.000002261		
5P1/2 -- ( 2)	86.058878	-275.731851	1.631999207	0.000594670		-0.005652934	0.000436682
5P3/2			1.435990107	0.000049801	-0.000003967		
5D3/2			1.295915019	0.000566102	-0.000128129		
5D5/2			1.364764924	0.000044315	-0.000004991		
5F5/2			1.108165187	0.000137819	-0.000027771		
5F7/2			1.102985720	0.000023385	-0.000003023		
6S1/2			0.926978489	0.000076335	-0.000012318		
6P1/2			0.840050708	0.0C0054536	-0.000018695		
6P3/2			0.713310952	0.000008778	-0.000001189		
6D3/2			0.400021626	0.000010089	-0.000002612		
7S1/2			0.337940078	0.0C0006077	-0.000001016		
5P3/2 -- ( 4)	57.073611	-225.064329	1.366349699	0.000248404		-0.000169647	0.000035318
5D3/2			1.306404182	0.000090646	-0.000005483		
5D5/2			1.224565575	0.000181384	-0.000033105		
5F5/2			1.083607611	0.000056054	-0.000004802		
5F7/2			1.045553731	0.000063024	-0.000013352		
6S1/2			0.901924027	0.000140449	-0.000022438		
6P1/2			0.837973583	0.000031111	-0.000003066		
6P3/2			0.697839591	0.000025941	-0.000005499		
6D3/2			0.399376655	0.000001878	-0.000000163		
7S1/2			0.336084761	0.000010511	-0.000001743		
5D3/2 -- ( 4)	47.477929	-202.599868	1.262086466	0.000278512		-0.000004753	0.000001302
5D5/2			1.249912429	0.000048301	-0.000000026		
5F5/2			1.003036380	0.000182147	-0.000037989		
5F7/2			1.037868719	0.000022402	-0.000000683		
6S1/2			0.890621052	0.000033665	-0.000001213		
6P1/2			0.816450635	0.000084019	-0.000010204		
6P3/2			0.697247931	0.000012302	-0.000000689		
6D3/2			0.395948320	0.0C0006498	-0.000000842		
7S1/2			0.335269401	0.000002599	-0.000000126		
5D5/2 -- ( 6)	42.924557	-192.805623	1.217721568	0.000221108		-0.000000721	0.000000305
5F5/2			1.043460702	0.0C0040998	-0.000002071		
5F7/2			0.983235321	0.0G0116895	-0.000023375		
6S1/2			0.881437348	0.000041658	-0.000001006		
6P1/2			0.821250947	0.0C0020416	-0.000000437		
6P3/2			0.690765108	0.000030215	-0.000003037		
6D3/2			0.397340028	0.000003171	-0.000000052		
7S1/2			0.334640569	0.000003012	-0.000000113		
5F5/2 -- ( 6)	24.258952	-140.465445	0.904333968	0.000119358		-0.000000002	0.000000001
5F7/2			0.903002858	0.000018432	-0.000000000		
6S1/2			0.804601232	0.000014684	-0.000000379		
6P1/2			0.744003494	0.000018873	-0.000000377		
6P3/2			0.653290608	0.0C0006069	-0.000000013		
6D3/2			0.384179915	0.000004247	-0.000000067		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
LAWRENCIUM 6D1 Z=103 A=257 R=1.44177E-04 A.U.								
5F7/2 -- ( 8)	22.682972	-135.686952	0.329104767 0.877284574	0.000001122 0.000103118	-0.000000001	-0.000000000	0.000000000	
6S1/2			0.793610451	0.000019069	-0.000000434			
6P1/2			0.749345289	0.000011958	-0.000000055			
6P3/2			0.642590523	0.000011949	-0.000000057			
6D3/2			0.386839268	0.000001544	-0.000000001			
7S1/2			0.328209063	0.000001386	-0.000000000			
6S1/2 -- ( 2)	21.474802	-118.861068	0.763473937	0.000026531		-0.004592802	0.000256311	
6P1/2			0.640243833	0.000026285	-0.000003408			
6P3/2			0.577899556	0.000030903	-0.000008503			
6D3/2			0.378263850	0.000005933	-0.000000807			
7S1/2			0.320797953	0.000001611	-0.000000770			
6P1/2 -- ( 2)	17.155720	-105.877623	0.689775829	0.000037364		-0.000953696	0.000073641	
6P3/2			0.584711205	0.000002821	-0.000000223			
6D3/2			0.361223965	0.000017248	-0.000004022			
7S1/2			0.320538345	0.000003199	-0.000000487			
6P3/2 -- ( 4)	9.662591	-83.222587	0.542802783	0.000012885		-0.000023600	0.000004911	
6D3/2			0.357732484	0.000003335	-0.000000322			
7S1/2			0.310306071	0.000004872	-0.000000661			
6D3/2 -- ( 1)	2.473175	-43.417987	0.000000000	0.000000000		-0.000000177	0.000000048	
7S1/2			0.254457893	0.000000511	-0.000000017			
7S1/2 -- ( 2)	2.035847	-36.721539	0.255350978	0.000000817		-0.000380015	0.000021207	
ETOT	-37665.92812	49605.04673	-100562.73030	13250.56748	64.016495899	-6.637939622	-17.251707762	1.061124506
RUTHERFORDIUM 6D2 Z=104 A=257 R=1.44177E-04 A.U.								
1S1/2 -- ( 2)	9647.184115	-16171.731797	86.356610198	18.448465693		-7.087816915	0.440901514	
2S1/2			27.550866450	1.086898819	-0.136665407			
2P1/2			35.365016802	2.225632904	-0.247585704			
2P3/2			25.140578202	0.833564677	-0.240469608			
3S1/2			11.471450472	0.243544509	-0.032588203			
3P1/2			13.118404678	0.447673823	-0.047931789			
3P3/2			10.300129073	0.200814358	-0.059658692			
3D3/2			10.501498005	0.008293732	-0.000851920			
3D5/2			9.840267442	0.003213460	-0.001024913			
4S1/2			5.360991122	0.068083792	-0.009236865			
4P1/2			5.744539056	0.119472798	-0.012677711			
4P3/2			4.711969251	0.055350190	-0.016559232			
4D3/2			4.626844484	0.002656831	-0.000273692			
4D5/2			4.391782969	0.001036302	-0.000333735			
4F5/2			4.167137615	0.000009015	-0.000000842			
4F7/2			4.078783623	0.000003555	-0.000001166			
5S1/2			2.605323069	0.019367978	-0.002637640			
5P1/2			2.637974737	0.032250122	-0.003413930			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RUTHERFORDIUM 602 Z=104 A=257 R=1.44177E-04 A.U.							
5P3/2			2.202207689	0.014714490	-0.004410466		
5D3/2			2.007821709	0.000640543	-0.000066032		
5D5/2			1.909621444	0.000246255	-0.000079493		
5F5/2			1.424511498	0.000001492	-0.000000140		
5F7/2			1.379554255	0.000000569	-0.000000187		
6S1/2			1.139785100	0.003972156	-0.000541489		
6P1/2			1.047820999	0.005601505	-0.000592614		
6P3/2			0.833906674	0.002133914	-0.000639884		
6D3/2			0.481826341	0.000031131	-0.000003210		
7S1/2			0.372887594	0.000354406	-0.000048321		
2S1/2 -- ( 2)	2517.798610	-4224.180101	19.777477535	0.472271816		-1.267677901	0.072918276
2P1/2			20.086565975	0.145452031	-0.000111850		
2P3/2			17.240418594	0.177445967	-0.011663189		
3S1/2			9.285112468	0.057424515	-0.013507699		
3P1/2			10.363987393	0.101112477	-0.015157116		
3P3/2			8.877777833	0.046119435	-0.004591208		
3D3/2			9.900072686	0.048223010	-0.006496392		
3D5/2			9.388265019	0.019806687	-0.006355981		
4S1/2			4.770865176	0.015911356	-0.003953923		
4P1/2			5.010339739	0.027946160	-0.004298788		
4P3/2			4.332016136	0.013273141	-0.001519907		
4D3/2			4.462164718	0.011315489	-0.001607494		
4D5/2			4.268379187	0.004923523	-0.001625044		
4F5/2			4.161776265	0.000729367	-0.000093832		
4F7/2			4.074287058	0.000256822	-0.000091466		
5S1/2			2.438767557	0.004513812	-0.001135122		
5P1/2			2.439709322	0.007594177	-0.001174579		
5P3/2			2.101932893	0.003561003	-0.000420909		
5D3/2			1.969483628	0.002537196	-0.000365101		
5D5/2			1.881377532	0.001103624	-0.000365858		
5F5/2			1.423657392	0.000114691	-0.000014881		
5F7/2			1.378862075	0.000039153	-0.000014065		
6S1/2			1.105693191	0.000925044	-0.000233312		
6P1/2			1.013379633	0.001320992	-0.000204575		
6P3/2			0.819387805	0.000517425	-0.000061583		
6D3/2			0.479973962	0.000121805	-0.000017566		
7S1/2			0.369846748	0.000082525	-0.000020824		
2P1/2 -- ( 2)	2537.610968	-4247.603412	25.269191185	1.100633379		-0.298935147	0.024183586
2P3/2			20.344567783	0.098504344	-0.000833640		
3S1/2			10.011620193	0.039411293	-0.002517479		
3P1/2			10.380420882	0.094428808	-0.013286884		
3P3/2			9.321672317	0.025979138	-0.000689315		
3D3/2			9.943181325	0.137131770	-0.032591206		
3D5/2			9.624648731	0.003575588	-0.000920372		
4S1/2			4.955766182	0.010924112	-0.000783632		
4P1/2			5.033437734	0.024530830	-0.003800253		
4P3/2			4.447738061	0.007199530	-0.000223010		
4D3/2			4.477182256	0.034404656	-0.0008413235		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RUTHERFORDIUM 602                    Z=104 A=257 R=1.44177E-04 A.U.							
4D5/2			4.330316777	0.001046399	-0.000255797		
4F5/2			4.163236920	0.000803734	-0.000167772		
4F7/2			4.076898815	0.000042672	-0.000016495		
5S1/2			2.490189538	0.003099190	-0.000228652		
5P1/2			2.447084419	0.006577412	-0.001041451		
5P3/2			2.132298001	0.001915476	-0.000061552		
5D3/2			1.973149941	0.007841633	-0.001930310		
5D5/2			1.895416801	0.000243860	-0.000058780		
5F5/2			1.423891075	0.000127147	-0.000026728		
5F7/2			1.379262408	0.00006580	-0.000002553		
6S1/2			1.116179019	0.000635145	-0.000047195		
6P1/2			1.014706995	0.001140588	-0.000181525		
6P3/2			0.823778833	0.000277826	-0.000009000		
6D3/2			0.480152491	0.000377515	-0.000093034		
7S1/2			0.370781483	0.000056663	-0.000004215		
2P3/2 -- ( 4)	1336.925794	-2735.846145	18.151650178	0.381927339		-0.007865517	0.001729368
3S1/2			9.470339018	0.047260884	-0.004267504		
3P1/2			10.254131186	0.028036489	-0.001351947		
3P3/2			8.666440379	0.049202274	-0.004670035		
3D3/2			9.892998548	0.042068107	-0.003943305		
3D5/2			9.212302845	0.068007096	-0.019351919		
4S1/2			4.808904782	0.011984803	-0.001140332		
4P1/2			4.980356577	0.007149867	-0.000397025		
4P3/2			4.281667007	0.012693622	-0.001340689		
4D3/2			4.461901776	0.009752978	-0.000918537		
4D5/2			4.230147201	0.015731375	-0.004638810		
4F5/2			4.160428517	0.000701632	-0.000067039		
4F7/2			4.071385676	0.000594865	-0.000193167		
5S1/2			2.448673800	0.003330319	-0.000321694		
5P1/2			2.431539654	0.001911644	-0.000109918		
5P3/2			2.089015334	0.003317493	-0.000359020		
5D3/2			1.969467900	0.002187842	-0.000206425		
5D5/2			1.873054547	0.003471886	-0.001031346		
5F5/2			1.423452132	0.000109099	-0.000010506		
5F7/2			1.378431542	0.000089512	-0.000029343		
6S1/2			1.107677745	0.000678950	-0.000065845		
6P1/2			1.011957214	0.000331299	-0.000019209		
6P3/2			0.817529150	0.000479273	-0.000052143		
6D3/2			0.479973510	0.000105053	-0.000009915		
7S1/2			0.370023158	0.000060521	-0.000005873		
3S1/2 -- ( 2)	798.179391	-1508.877277	7.412238824	0.031337705		-0.305539506	0.017376106
3P1/2			6.901757877	0.010567016	-0.000085304		
3P3/2			6.277085423	0.014858064	-0.002329017		
3D3/2			7.240866103	0.009125740	-0.0000406437		
3D5/2			7.058551669	0.011053370	-0.0000529074		
4S1/2			4.121202760	0.005490042	-0.001898921		
4P1/2			4.310633584	0.008197986	-0.001393633		
4P3/2			3.796687507	0.003324143	-0.000475622		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RUTHERFORDIUM ED2 Z=104 A=257 R=1.44177E-04 A.U.							
4D3/2			3.942122150	0.002529339	-0.000238763		
4D5/2			3.813130266	0.002620708	-0.000192177		
4F5/2			3.995687321	0.002744566	-0.000385951		
4F7/2			3.924601378	0.001225446	-0.000376563		
5S1/2			2.265424874	0.001547811	-0.000555919		
5P1/2			2.256235822	0.002308018	-0.000405529		
5P3/2			1.964745355	0.000932295	-0.000137517		
5D3/2			1.854051085	0.000629150	-0.000065682		
5D5/2			1.781906270	0.000586159	-0.000052403		
5F5/2			1.400400299	0.000339408	-0.000049986		
5F7/2			1.358554589	0.000157074	-0.000047657		
6S1/2			1.070633447	0.000316475	-0.000114457		
6P1/2			0.981707703	0.000403767	-0.000071381		
6P3/2			0.799639026	0.000136665	-0.000020288		
6D3/2			0.474438763	0.000030669	-0.000003248		
7S1/2			0.366725196	0.000028223	-0.000010217		
3P1/2 -- ( 2 )	795.931804	-1505.625934	8.006998769	0.063547531		-0.080769501	0.006366388
3P3/2			6.921237639	0.005126141	-0.000160507		
3D3/2			7.109609669	0.022339724	-0.002430660		
3D5/2			7.447874102	0.007998944	-0.000110653		
4S1/2			4.284562112	0.004534006	-0.000526633		
4P1/2			4.240664049	0.008115060	-0.001807171		
4P3/2			3.876807962	0.001785034	-0.000123101		
4D3/2			3.975698287	0.005200896	-0.000714702		
4D5/2			3.867963499	0.001866623	-0.000058441		
4F5/2			3.989118839	0.004645248	-0.001029361		
4F7/2			3.964272190	0.000485980	-0.000108344		
5S1/2			2.304970183	0.001251258	-0.000157920		
5P1/2			2.243881865	0.002140195	-0.000507067		
5P3/2			1.984007575	0.000487738	-0.000037181		
5D3/2			1.862282442	0.001323474	-0.000201986		
5D5/2			1.793641664	0.000406395	-0.000015465		
5F5/2			1.399875296	0.000586862	-0.000134784		
5F7/2			1.363648895	0.000068181	-0.000014228		
6S1/2			1.078455582	0.000254598	-0.000032719		
6P1/2			0.979777572	0.000369688	-0.000088612		
6P3/2			0.802377568	0.000071083	-0.000005524		
6D3/2			0.474838463	0.000064762	-0.000010028		
7S1/2			0.367419274	0.000022688	-0.000002924		
3P3/2 -- ( 4 )	487.642815	-1102.971703	6.475606751	0.025263402		-0.002341356	0.000501537
3D3/2			6.926161394	0.005613713	-0.000024675		
3D5/2			6.557659661	0.013628030	-0.000265511		
4S1/2			4.135352851	0.007306800	-0.001002376		
4P1/2			4.233807942	0.003146256	-0.000241781		
4P3/2			3.699355954	0.004627712	-0.000680920		
4D3/2			3.870659961	0.002547466	-0.000242724		
4D5/2			3.735864082	0.005158239	-0.000808926		
4F5/2			3.946106982	0.002346494	-0.000235041		

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TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RUTHERFORDIUM 6D2 Z=104 A=257 R=1.44177E-04 A.U.							
			3.846516281	0.002268855	-0.000667659		
			2.265648977	0.001820475	-0.000261934		
			2.236321899	0.000799009	-0.000069667		
			1.941362759	0.001187285	-0.000188191		
			1.838482086	0.000603710	-0.000060855		
			1.765279899	0.001174181	-0.000204746		
			1.394135133	0.000271378	-0.000028490		
			1.349350894	0.000265892	-0.000078135		
			1.070510728	0.000362866	-0.000052783		
			0.978274095	0.000137122	-0.000012270		
			0.796313559	0.000170851	-0.000027444		
			0.473694867	0.000029203	-0.000002967		
			0.366711984	0.000032236	-0.000004697		
3D3/2 -- ( 4)	480.224546	-1093.265893	7.606444094	0.043622527		-0.000064216	0.000018100
			7.495216330	0.007680480	-0.000001301		
			4.283295883	0.002398185	-0.000064207		
			4.331062689	0.005203145	-0.000425532		
			3.863966149	0.001553304	-0.000040379		
			3.911310076	0.005538259	-0.000558527		
			3.871370149	0.001789174	-0.000026807		
			3.934001355	0.010603491	-0.002631808		
			3.960883650	0.000362952	-0.000042567		
			2.303433126	0.000648053	-0.000023253		
			2.262449405	0.001247999	-0.000108761		
			1.980271044	0.000403237	-0.000012922		
			1.850174302	0.001180615	-0.000132467		
			1.794248861	0.000391265	-0.000007263		
			1.393738378	0.001307917	-0.000332132		
			1.363404486	0.000052511	-0.000005626		
			1.078084388	0.000131355	-0.000005022		
			0.982799906	0.000211579	-0.000018740		
			0.801826734	0.000058171	-0.000001942		
			0.474273200	0.000056232	-0.000006408		
			0.367385394	0.000011699	-0.000000452		
3D5/2 -- ( 6)	432.237059	-1024.044297	7.254068217	0.034911850		-0.000009763	0.000004254
			4.240672736	0.002758636	-0.000363902		
			4.325571068	0.001999849	-0.000031678		
			3.813198998	0.002976789	-0.000133647		
			3.962703429	0.001458592	-0.000030343		
			3.778673027	0.004731169	-0.000344989		
			4.010818950	0.002234423	-0.000162383		
			3.868741761	0.006578561	-0.001830719		
			2.292004737	0.000721353	-0.000023156		
			2.258950320	0.000506619	-0.000011682		
			1.967933762	0.000733049	-0.000037494		
			1.858373492	0.000319301	-0.000008240		
			1.776125181	0.000988257	-0.000080654		
			1.402683032	0.000279467	-0.000020420		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RUTHERFORDIUM 602      Z=104 A=257 R=1.44177E-04 A.U.							
5F7/2			1.352616927	0.000781028	-0.000221353		
6S1/2			1.075768225	0.000145225	-0.000049999		
6P1/2			0.982130123	0.000086881	-0.000002159		
6P3/2			0.800068888	0.000104638	-0.000005501		
6D3/2			0.474644399	0.000015277	-0.000000407		
7S1/2			0.367179107	0.000012921	-0.000000449		
4S1/2 -- ( 2)	281.674141	-646.707683	3.429912947	0.003173282		-0.087006429	0.004934021
4P1/2			3.075230350	0.001285698	-0.000044850		
4P3/2			2.857444323	0.002154815	-0.000498476		
4D3/2			3.084749704	0.001349894	-0.000132791		
4D5/2			3.019457887	0.001092357	-0.000154692		
4F5/2			3.208602311	0.000937649	-0.000077733		
4F7/2			3.176926177	0.000967423	-0.000081046		
5S1/2			2.018141829	0.000646816	-0.000282618		
5P1/2			2.025978099	0.000746119	-0.000143696		
5P3/2			1.786017058	0.000299422	-0.000077850		
5D3/2			1.695755682	0.000169589	-0.000021478		
5D5/2			1.635888332	0.000218426	-0.000022323		
5F5/2			1.317123198	0.000070534	-0.000004607		
5F7/2			1.281594165	0.000095293	-0.000004463		
6S1/2			1.023355935	0.000131942	-0.000059376		
6P1/2			0.943116064	0.000136417	-0.000027084		
6P3/2			0.774624311	0.000043688	-0.000011260		
6D3/2			0.466971178	0.000008196	-0.000001068		
7S1/2			0.362546484	0.000011756	-0.000005308		
4P1/2 -- ( 2)	275.485164	-637.050904	3.485717363	0.006036100		-0.023084639	0.001808028
4P3/2			3.063239771	0.000483234	-0.000028741		
4D3/2			2.920371374	0.003568437	-0.000680892		
4D5/2			3.103773565	0.000620416	-0.000028750		
4F5/2			3.168806009	0.001553324	-0.000200036		
4F7/2			3.225027200	0.000706839	-0.000024403		
5S1/2			2.064448058	0.000682635	-0.000101270		
5P1/2			1.986547104	0.000848597	-0.000248749		
5P3/2			1.805041212	0.000166999	-0.000018632		
5D3/2			1.687649123	0.000321812	-0.000060381		
5D5/2			1.644563347	0.000156920	-0.000007706		
5F5/2			1.317223435	0.000113156	-0.000009412		
5F7/2			1.284573226	0.000075534	-0.000002009		
6S1/2			1.031050319	0.000133501	-0.000021113		
6P1/2			0.937771815	0.000144853	-0.000044453		
6P3/2			0.777026982	0.000024915	-0.000002970		
6D3/2			0.466656857	0.000015329	-0.000002868		
7S1/2			0.363213041	0.000011827	-0.000001887		
4P3/2 -- ( 4)	178.837108	-498.984150	2.906135541	0.002503197		-0.000679837	0.000144646
4D3/2			2.935793465	0.000665307	-0.000016055		
4D5/2			2.764177133	0.001562531	-0.000121404		
4F5/2			3.014130418	0.000579124	-0.000020114		
4F7/2			2.951681008	0.001026256	-0.000060740		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RUTHERFORDIUM 6D2      Z=104 A=257 R=1.44177E-04 A.U.							
5S1/2			2.001429851	0.001253318	-0.000196545		
5P1/2			1.982436950	0.000407794	-0.000037814		
5P3/2			1.741503088	0.000484776	-0.000092496		
5D3/2			1.666085183	0.000161705	-0.000015521		
5D5/2			1.604184725	0.000367818	-0.000038138		
5F5/2			1.298185392	0.000063871	-0.000003577		
5F7/2			1.262843659	0.000104000	-0.000007406		
6S1/2			1.019471696	0.000222441	-0.000036686		
6P1/2			0.935861930	0.000066560	-0.000006895		
6P3/2			0.768620295	0.000068832	-0.000013867		
6D3/2			0.465556004	0.000008126	-0.000000832		
7S1/2			0.362193081	0.000019479	-0.000003234		
4D3/2 -- ( 4)	168.604082	-481.555668	2.987707191	0.003551334		-0.000021709	0.000006081
4D5/2			2.960790414	0.000622073	-0.000000236		
4F5/2			2.923098009	0.001776732	-0.000159423		
4F7/2			3.050733670	0.000581885	-0.000003390		
5S1/2			2.024864366	0.000354120	-0.000014804		
5P1/2			1.976924107	0.000904213	-0.000107701		
5P3/2			1.774573468	0.000187499	-0.000008468		
5D3/2			1.647245193	0.000491445	-0.000064851		
5D5/2			1.618709068	0.000147008	-0.000003342		
5F5/2			1.298952722	0.000210297	-0.000025660		
5F7/2			1.268432984	0.000057035	-0.000001101		
6S1/2			1.023498629	0.000066964	-0.000003645		
6P1/2			0.935776331	0.000135603	-0.000017043		
6P3/2			0.772728634	0.000026385	-0.000001352		
6D3/2			0.464818389	0.000023023	-0.000003227		
7S1/2			0.362543943	0.000005913	-0.000000333		
4D5/2 -- ( 6)	153.453761	-456.959715	2.886822190	0.002860643		-0.000003316	0.000001437
4F5/2			3.008530993	0.000490656	-0.000007320		
4F7/2			2.884706345	0.001502250	-0.000090964		
5S1/2			2.006824005	0.000410214	-0.000014270		
5P1/2			1.981461951	0.000254336	-0.000006211		
5P3/2			1.755254263	0.000415699	-0.000033346		
5D3/2			1.665239848	0.000128711	-0.000003992		
5D5/2			1.590970455	0.000413105	-0.000039743		
5F5/2			1.296999280	0.000055216	-0.000002773		
5F7/2			1.260131533	0.000176572	-0.000019762		
6S1/2			1.020236507	0.000074500	-0.000003594		
6P1/2			0.935691924	0.000040641	-0.000001388		
6P3/2			0.770224958	0.000055759	-0.000004716		
6D3/2			0.465513836	0.000006101	-0.000000216		
7S1/2			0.362256785	0.000006552	-0.000000329		
4F5/2 -- ( 6)	139.365118	-433.383364	3.108683337	0.003835062		-0.000000014	0.000000007
4F7/2			3.133814450	0.000618182	-0.000000007		
5S1/2			2.039762885	0.000212276	-0.000000360		
5P1/2			1.997264156	0.000304457	-0.000002252		
5P3/2			1.783216005	0.000133204	-0.000000768		



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RUTHERFORDIUM 6D2 Z=104 A=257 R=1.44177E-04 A.U.							
5D3/2			1.671267220	0.000287626	-0.000011909		
5D5/2			1.624451260	0.000097089	-0.000000983		
5F5/2			1.295278946	0.000264661	-0.000014890		
5F7/2			1.275584730	0.000066180	-0.000000443		
6S1/2			1.026226442	0.000041252	-0.000000376		
6P1/2			0.938790596	0.000048404	-0.000000836		
6P3/2			0.773919282	0.000018729	-0.000000186		
6D3/2			0.465859523	0.000012956	-0.000000566		
7S1/2			0.362782669	0.000003653	-0.000000038		
4F7/2 -- ( 8)	134.172626	-424.194294	3.066378243	0.003483779		-0.000000003	0.000000002
5S1/2			2.031700864	0.000256692	-0.000000291		
5P1/2			2.001187570	0.000188682	-0.000000313		
5P3/2			1.773787368	0.000216748	-0.000001758		
5D3/2			1.677174264	0.000108280	-0.000000570		
5D5/2			1.612926451	0.000243629	-0.000007447		
5F5/2			1.307528508	0.000057119	-0.000000484		
5F7/2			1.261950102	0.000239957	-0.000010441		
6S1/2			1.024722317	0.000047308	-0.000000365		
6P1/2			0.938873375	0.000029991	-0.000000188		
6P3/2			0.772717986	0.000029273	-0.000000387		
6D3/2			0.466069239	0.000005020	-0.000000037		
7S1/2			0.362649798	0.000004168	-0.000000037		
5S1/2 -- ( 2)	96.064113	-296.389980	1.704964229	0.000359658		-0.024881081	0.001409838
5P1/2			1.491371513	0.000209109	-0.000017005		
5P3/2			1.393916461	0.000368752	-0.000097461		
5D3/2			1.413182574	0.000222253	-0.000028828		
5D5/2			1.379431856	0.000121140	-0.000030141		
5F5/2			1.175022872	0.000093027	-0.000011822		
5F7/2			1.148724745	0.000048694	-0.000011267		
6S1/2			0.940994993	0.000058189	-0.000029094		
6P1/2			0.880992071	0.000041329	-0.000009188		
6P3/2			0.733525897	0.000023650	-0.000008287		
6D3/2			0.455215306	0.000006371	-0.000001011		
7S1/2			0.355539514	0.000005200	-0.000000266		
5P1/2 -- ( 2)	90.266362	-285.187885	1.664963799	0.000634040		-0.006347959	0.000496318
5P3/2			1.462633430	0.000052894	-0.000004426		
5D3/2			1.322396693	0.000060972	-0.000137508		
5D5/2			1.391870098	0.000046901	-0.000005365		
5F5/2			1.150842508	0.000152603	-0.000030740		
5F7/2			1.148783946	0.000026221	-0.000003370		
6S1/2			0.951314664	0.000082512	-0.000013332		
6P1/2			0.865931825	0.000060245	-0.000020691		
6P3/2			0.736380314	0.000009627	-0.000001337		
6D3/2			0.453075912	0.000014070	-0.000003657		
7S1/2			0.356304009	0.000007077	-0.000001186		
5P3/2 -- ( 4)	59.228565	-231.419698	1.389618620	0.000262009		-0.000183298	0.000038927
5D3/2			1.330813934	0.000095127	-0.000005685		
5D5/2			1.247171466	0.000191216	-0.000034669		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RUTHERFORDIUM 6D2 Z=104 A=257 R=1.44177E-04 A.U.							
			1.123442115	0.000061292	-0.000005217		
			1.086262156	0.000069865	-0.000014600		
			0.924605889	0.000153926	-0.000024568		
			0.863216606	0.000034746	-0.000003415		
			0.719754080	0.000028669	-0.000006107		
			0.452123861	0.000002598	-0.000000229		
			0.354179376	0.000012364	-0.000002052		
5D3/2 -- ( 4)	49.525225	-208.901681	1.287499240	0.000296227		-0.000005304	0.000001483
			1.274772136	0.000051191	-0.000000029		
			1.039471714	0.000198417	-0.000041080		
			1.079048398	0.000025190	-0.000000747		
			0.913587899	0.000036639	-0.000001335		
			0.841096664	0.000092983	-0.000011331		
			0.719400916	0.000013570	-0.000000764		
			0.447661237	0.000009055	-0.000001193		
			0.353320912	0.000003042	-0.000000150		
5D5/2 -- ( 6)	44.715509	-198.651704	1.241683706	0.000234832		-0.000000798	0.000000346
			1.081701097	0.000044721	-0.000002223		
			1.021004237	0.000128208	-0.000025260		
			0.903954050	0.000045273	-0.000001105		
			0.846017013	0.000022511	-0.000000485		
			0.712592674	0.000033321	-0.000003368		
			0.449465511	0.000002393	-0.000000075		
			0.352611919	0.000003515	-0.000000135		
5F5/2 -- ( 6)	26.346832	-148.149370	0.948156443	0.000136027		-0.000000002	0.000000001
			0.948570178	0.000021173	-0.000000000		
			0.833593658	0.000016209	-0.000000369		
			0.773330113	0.000021109	-0.000000340		
			0.678307414	0.000006840	-0.000000007		
			0.434525300	0.000006064	-0.000000134		
			0.347238526	0.000001341	-0.000000001		
			0.923105248	0.000118441		-0.000000000	0.000000000
			0.823664809	0.000021322	-0.000000427		
			0.779698153	0.000013511	-0.000000052		
			0.668364445	0.000013444	-0.000000037		
			0.437626614	0.000002142	-0.000000002		
			0.346419645	0.000001651	-0.000000001		
6S1/2 -- ( 2)	22.958374	-123.758261	0.784497951	0.000028986		-0.005109906	0.000289481
			0.659717173	0.000028377	-0.000003647		
			0.596299627	0.000034814	-0.000009549		
			0.424863557	0.000008137	-0.000001108		
			0.337505162	0.000001918	-0.000000928		
6P1/2 -- ( 2)	18.577294	-110.862090	0.712673949	0.000041487		-0.001107584	0.000086560
			0.604472021	0.000003157	-0.000000265		
			0.404024788	0.000023556	-0.000005493		
			0.337398516	0.000003779	-0.000000580		
6P3/2 -- ( 4)	10.470178	-87.073360	0.561341195	0.000014333		-0.000026667	0.000005661
			0.399580786	0.000004403	-0.000000422		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
RUTHERFORDIUM 6D2            Z=104 A=257 R=1.44177E-04 A.U.								
6D3/2 -- ( 2)	7S1/2	3.299496	-50.114231	0.326375229	0.000005873	-0.000000806		
	( 2)			0.320498980	0.000004253	-0.000000258	0.000000072	
	7S1/2			0.279559117	0.000000650	-0.000000013		
7S1/2 -- ( 2)	2.344676	-39.246162	0.269474721	0.000000968		-0.000456019	0.000025833	
ETOT	-38650.76285	51308.59350	-103563.21983	13561.58161	66.425185882	-6.872422367	-18.422300696	1.151411546
HAHNIIUM            6D3            Z=105 A=261 R=1.44921E-04 A.U.								
1S1/2 -- ( 2)	9991.728991	-16674.760336	87.899462832	19.101722927		-7.536940994	0.476355006	
2S1/2			28.070234939	1.130624267	-0.142414837			
2P1/2			36.140506597	2.313823113	-0.254532143			
2P3/2			25.437531370	0.856921765	-0.247172387			
3S1/2			11.679137281	0.253458833	-0.033960130			
3P1/2			13.382636771	0.464817472	-0.049118080			
3P3/2			10.433447546	0.207343883	-0.061583006			
3D3/2			10.636940723	0.008500681	-0.000866057			
3D5/2			9.953348401	0.003290523	-0.001049135			
4S1/2			5.459892569	0.071058265	-0.009652436			
4P1/2			5.860648330	0.124404064	-0.013022730			
4P3/2			4.781144781	0.057426116	-0.017175973			
4D3/2			4.697589045	0.002741451	-0.000280079			
4D5/2			4.454349287	0.001068849	-0.000344098			
4F5/2			4.231939920	0.000009325	-0.000000864			
4F7/2			4.140550084	0.000003686	-0.000001208			
5S1/2			2.659403564	0.020354966	-0.002775491			
5P1/2			2.698149279	0.033853507	-0.003534780			
5P3/2			2.242196347	0.015397478	-0.004614078			
5D3/2			2.049981610	0.000670098	-0.000068508			
5D5/2			1.948292396	0.000257598	-0.000083127			
5F5/2			1.482685464	0.000001634	-0.000000151			
5F7/2			1.438229489	0.000000627	-0.000000206			
6S1/2			1.173338089	0.004269400	-0.000582736			
6P1/2			1.085063600	0.006076004	-0.000634019			
6P3/2			0.862703166	0.002327766	-0.000697853			
6D3/2			0.528853354	0.000039007	-0.000003988			
7S1/2			0.390636756	0.000400301	-0.000054647			
2S1/2 -- ( 2)	2618.672797	-4368.795077	20.128660355	0.494865465		-1.362394036	0.079563888	
2P1/2			20.471727271	0.152557056	-0.000112085			
2P3/2			17.483952162	0.184370510	-0.012629970			
3S1/2			9.439934368	0.060173248	-0.014124231			
3P1/2			10.549294229	0.106186787	-0.015880816			
3P3/2			8.995209661	0.047288460	-0.004661599			
3D3/2			10.032311629	0.049896236	-0.006713184			
3D5/2			9.501939885	0.020430883	-0.006564774			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
HAHNIIUM	6D3	Z=105 A=261 R=1.44921E-04 A.U.					
4S1/2			4.853485226	0.016720513	-0.004146887		
4P1/2			5.102661164	0.029429036	-0.004515303		
4P3/2			4.395170177	0.013681893	-0.001552594		
4D3/2			4.530759614	0.011800799	-0.001673774		
4D5/2			4.330133229	0.005120132	-0.001692672		
4F5/2			4.226537425	0.000755552	-0.000097048		
4F7/2			4.136035930	0.000265695	-0.000094625		
5S1/2			2.487044397	0.004776327	-0.001198907		
5P1/2			2.491757666	0.008061937	-0.001243673		
5P3/2			2.139466426	0.003703044	-0.000433934		
5D3/2			2.010608519	0.002681706	-0.000385296		
5D5/2			1.919464257	0.001163590	-0.000386417		
5F5/2			1.481774769	0.000125683	-0.000016284		
5F7/2			1.437491311	0.000043023	-0.000015457		
6S1/2			1.137256634	0.001001065	-0.000252030		
6P1/2			1.048013467	0.001449128	-0.000223834		
6P3/2			0.847197930	0.000560953	-0.000066202		
6D3/2			0.526575243	0.000154134	-0.000022196		
7S1/2			0.387254805	0.000093849	-0.000023639		
2P1/2 -- ( 2)	2642.851679	-4397.131435	25.781575632	1.155333327		-0.331165855	0.027131165
2P3/2			20.636997408	0.101178904	-0.000904445		
3S1/2			10.187952475	0.041334716	-0.002622399		
3P1/2			10.567708487	0.099230974	-0.013901149		
3P3/2			9.449033874	0.026804182	-0.000712581		
3D3/2			10.077756760	0.141458090	-0.033614198		
3D5/2			9.739275362	0.003655290	-0.000946354		
4S1/2			5.044561507	0.011493451	-0.000819120		
4P1/2			5.126857350	0.025865071	-0.003989816		
4P3/2			4.514012755	0.007467159	-0.000231350		
4D3/2			4.546507442	0.035772506	-0.008745199		
4D5/2			4.392846462	0.001077261	-0.000265075		
4F5/2			4.228028860	0.000829016	-0.000172968		
4F7/2			4.138668984	0.000043891	-0.000016983		
5S1/2			2.540559998	0.003283645	-0.000240736		
5P1/2			2.499533179	0.006992069	-0.001102521		
5P3/2			2.170913388	0.002003967	-0.000064402		
5D3/2			2.014498961	0.008264620	-0.002033905		
5D5/2			1.933879117	0.000254560	-0.000061765		
5F5/2			1.482027228	0.000138751	-0.000029157		
5F7/2			1.437920041	0.000007190	-0.000002793		
6S1/2			1.148416987	0.000688240	-0.000050825		
6P1/2			1.049459719	0.001252917	-0.000198595		
6P3/2			0.851938129	0.000303009	-0.000009818		
6D3/2			0.526802083	0.000476401	-0.000117377		
7S1/2			0.388300229	0.000064522	-0.000004770		
2P3/2 -- ( 4)	1366.630052	-2793.740870	18.354950930	0.393801210		-0.008343694	0.001872473
3S1/2			9.617418183	0.049471872	-0.004497644		
3P1/2			10.419105448	0.029296017	-0.001411904		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
HAHNIIUM	6D3	Z=105 A=261 R=1.44921E-04 A.U.					
3P3/2			8.771593211	0.050849371	-0.004830516		
3D3/2			10.017235365	0.043512047	-0.004069489		
3D5/2			9.317584937	0.070247312	-0.019990452		
4S1/2			4.889304264	0.012553092	-0.001201574		
4P1/2			5.067237625	0.007480763	-0.000415262		
4P3/2			4.341366643	0.013172905	-0.001392712		
4D3/2			4.528526947	0.010136322	-0.000952210		
4D5/2			4.289642042	0.016344061	-0.004820302		
4F5/2			4.225029570	0.000736061	-0.000070235		
4F7/2			4.132955707	0.000623348	-0.000202447		
5S1/2			2.496363521	0.003510543	-0.000341097		
5P1/2			2.482042620	0.002015696	-0.000115895		
5P3/2			2.125528263	0.003471332	-0.000376110		
5D3/2			2.010139030	0.002303027	-0.000216729		
5D5/2			1.910522734	0.003654913	-0.001085987		
5F5/2			1.481531473	0.000120991	-0.000011637		
5F7/2			1.437005920	0.000099557	-0.000032647		
6S1/2			1.139161229	0.000731804	-0.000071389		
6P1/2			1.046266213	0.000360942	-0.000020930		
6P3/2			0.845106960	0.000522729	-0.000056943		
6D3/2			0.526548570	0.000132381	-0.000012462		
7S1/2			0.387432621	0.000068546	-0.000006691		
3S1/2 -- ( 2)	829.104104	-1557.241757	7.532612161	0.032865799		-0.328903326	0.018988493
3P1/2			7.018426062	0.011078076	-0.000086516		
3P3/2			6.366102655	0.015594021	-0.002512511		
3D3/2			7.345541600	0.009537147	-0.000433749		
3D5/2			7.155922951	0.011480135	-0.000565505		
4S1/2			4.189506212	0.005770205	-0.001992065		
4P1/2			4.385641893	0.008654683	-0.001468915		
4P3/2			3.850337854	0.003412705	-0.000496845		
4D3/2			4.001753481	0.002618786	-0.000246573		
4D5/2			3.868422766	0.002728707	-0.000198000		
4F5/2			4.058438495	0.002867411	-0.000403212		
4F7/2			3.984877525	0.001277361	-0.000393303		
5S1/2			2.308642121	0.001638017	-0.000587288		
5P1/2			2.302184485	0.002455903	-0.000430834		
5P3/2			1.998665238	0.000964418	-0.000144152		
5D3/2			1.891644926	0.000660808	-0.000068869		
5D5/2			1.817231333	0.000618810	-0.000054773		
5F5/2			1.456906330	0.000374152	-0.000055132		
5F7/2			1.415739622	0.000173549	-0.000052771		
6S1/2			1.100357872	0.000342509	-0.000123665		
6P1/2			1.014198503	0.000443973	-0.000078372		
6P3/2			0.826071098	0.000147385	-0.000022157		
6D3/2			0.519746214	0.000038589	-0.000004082		
7S1/2			0.383802745	0.000032097	-0.000011601		
3P1/2 -- ( 2)	827.717641	-1554.994863	8.145124753	0.066745531		-0.089591958	0.007147641
3P3/2			7.020286024	0.005268639	-0.000175206		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
HAHNIIUM	6D3	Z=105 A=261 R=1.44921E-04 A.U.					
			7.213415401	0.023488202	-0.002613442		
			7.552556227	0.008284838	-0.000118858		
			4.357262111	0.004758516	-0.000550826		
			4.314507731	0.008551436	-0.001898665		
			3.932727726	0.001837622	-0.000128881		
			4.036178090	0.005343798	-0.000729561		
			3.924703803	0.001950638	-0.000060758		
			4.052133679	0.004849801	-0.001074887		
			4.025263166	0.000504658	-0.000113041		
			2.349546245	0.001322654	-0.000166434		
			2.289584778	0.002273661	-0.000537190		
			2.018636929	0.000506755	-0.000039207		
			1.900212327	0.001379493	-0.000209470		
			1.829427971	0.000430681	-0.000016289		
			1.456395911	0.000646846	-0.000148649		
			1.421238668	0.000075127	-0.000015747		
			1.108630562	0.000275230	-0.000035275		
			1.012170130	0.000405811	-0.000097015		
			0.829030073	0.000077006	-0.000006073		
			0.520244535	0.000080876	-0.000012468		
			0.384573954	0.000025772	-0.000003313		
3P3/2 -- ( 4)	499.770394	-1127.841662	6.554053702	0.026162452		-0.002493895	0.000544976
			7.011580482	0.005811143	-0.000025113		
			6.635338070	0.014094338	-0.000275748		
			4.200280321	0.007719375	-0.001061597		
			4.302823682	0.003319957	-0.000254723		
			3.749103361	0.004814158	-0.000708949		
			3.926018879	0.002661294	-0.000253623		
			3.787180141	0.005367453	-0.000842211		
			4.005782503	0.002450045	-0.000245325		
			3.903381509	0.002368966	-0.000696995		
			2.307926910	0.001930462	-0.000278548		
			2.280590567	0.000847622	-0.000073880		
			1.974102490	0.001245280	-0.000197602		
			1.874923347	0.000638836	-0.000064415		
			1.799507137	0.001238263	-0.000216216		
			1.449886410	0.000297954	-0.000031298		
			1.405567349	0.000293447	-0.000086198		
			1.100032539	0.000393190	-0.000057366		
			1.010352925	0.000150221	-0.000013445		
			0.822429341	0.000186769	-0.000030041		
			0.518789803	0.000037001	-0.000003761		
			0.383769684	0.000036696	-0.000005363		
3D3/2 -- ( 4)	492.232189	-1118.012061	7.702519279	0.045197932		-0.000070117	0.000020176
			7.585575933	0.007939352	-0.000001404		
			4.352025824	0.002509465	-0.000067272		
			4.402847973	0.005474229	-0.000450517		
			3.916823232	0.001615446	-0.000042019		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
HAHNIIUM 6D3 Z=105 A=261 R=1.44921E-04 A.U.							
4D3/2			3.967849677	0.005768937	-0.000582752		
4D5/2			3.925413508	0.001861507	-0.000027920		
4F5/2			3.993871613	0.011080250	-0.002750423		
4F7/2			4.020347383	0.000379206	-0.000044473		
5S1/2			2.346888965	0.000682262	-0.000024562		
5P1/2			2.307663403	0.001320668	-0.000115797		
5P3/2			2.014064690	0.000422888	-0.000013576		
5D3/2			1.887098213	0.001245210	-0.000140033		
5D5/2			1.829447339	0.000412493	-0.000007677		
5F5/2			1.449539267	0.001439525	-0.000365739		
5F7/2			1.420774775	0.000058205	-0.000006228		
6S1/2			1.108016927	0.000141390	-0.000005429		
6P1/2			1.015197982	0.000231203	-0.000020607		
6P3/2			0.828329867	0.000063588	-0.000002128		
6D3/2			0.519511181	0.000670979	-0.000008111		
7S1/2			0.384515488	0.000013231	-0.000000513		
3D5/2 -- ( 6)	442.092601	-1045.763499	7.337691547	0.036089555		-0.000010563	0.000004705
4S1/2			4.307495441	0.002884100	-0.000066866		
4P1/2			4.396217538	0.002092441	-0.000033118		
4P3/2			3.864454336	0.003092513	-0.000139214		
4D3/2			4.019290253	0.001517605	-0.000031661		
4D5/2			3.830374323	0.004917225	-0.000359347		
4F5/2			4.071804154	0.002335458	-0.000169546		
4F7/2			3.925902220	0.006871469	-0.001912292		
5S1/2			2.334874240	0.000758289	-0.000024444		
5P1/2			2.303762732	0.000533699	-0.000012352		
5P3/2			2.001224810	0.000767546	-0.000039383		
5D3/2			1.895332905	0.000336462	-0.000008719		
5D5/2			1.810620049	0.001040190	-0.000085137		
5F5/2			1.459081522	0.000307625	-0.000022455		
5F7/2			1.409082145	0.000862372	-0.000244492		
6S1/2			1.105526211	0.000156061	-0.000005401		
6P1/2			1.014430852	0.000094544	-0.000002362		
6P3/2			0.826423045	0.000114173	-0.000006024		
6D3/2			0.519955850	0.000019268	-0.000000516		
7S1/2			0.384282479	0.000014588	-0.000000511		
4S1/2 -- ( 2)	293.002667	-667.009314	3.486893771	0.003340579		-0.093957570	0.005408848
4P1/2			3.127870799	0.001347612	-0.000045874		
4P3/2			2.901313859	0.002294494	-0.000536771		
4D3/2			3.132628502	0.001421218	-0.000140785		
4D5/2			3.065255451	0.001140192	-0.000164187		
4F5/2			3.260750997	0.000983669	-0.000081771		
4F7/2			3.227956330	0.001013423	-0.000085333		
5S1/2			2.055466675	0.000685601	-0.000299357		
5P1/2			2.065722165	0.000798089	-0.000153438		
5P3/2			1.816151043	0.000314838	-0.000083643		
5D3/2			1.728968748	0.000179695	-0.000022924		
5D5/2			1.667311106	0.000230158	-0.000023934		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
HAHNIIUM      6D3      Z=105 A=261 R=1.44921E-04 A.U.							
5F5/2			1.367932855	0.000078006	-0.000005123		
5F7/2			1.333275667	0.000105659	-0.000004979		
6S1/2			1.050877872	0.000143005	-0.000064312		
6P1/2			0.973257622	0.000150765	-0.000029887		
6P3/2			0.799451755	0.000047701	-0.000012563		
6D3/2			0.510562733	0.000010387	-0.000001364		
7S1/2			0.379208703	0.000013389	-0.000006042		
4P1/2 -- ( 2)	286.943195	-657.531660	3.546379516	0.006365931		-0.025696954	0.002036826
4P3/2			3.110422615	0.000503127	-0.000031599		
4D3/2			2.967242229	0.003784016	-0.000727598		
4D5/2			3.151632290	0.000643199	-0.000030731		
4F5/2			3.221272501	0.001632406	-0.000211181		
4F7/2			3.277872501	0.000740391	-0.000025783		
5S1/2			2.103198351	0.000720837	-0.000106853		
5P1/2			2.025496630	0.000902727	-0.000264340		
5P3/2			1.835914038	0.000173738	-0.000019805		
5D3/2			1.720728324	0.000341636	-0.000065064		
5D5/2			1.676424782	0.000165060	-0.000008251		
5F5/2			1.368149797	0.000125134	-0.000010478		
5F7/2			1.336572930	0.000083806	-0.000002248		
6S1/2			1.058984302	0.000144165	-0.000022794		
6P1/2			0.967647649	0.000159197	-0.000048814		
6P3/2			0.802053409	0.000027031	-0.000003288		
6D3/2			0.510183747	0.000019417	-0.000003684		
7S1/2			0.379945864	0.000013418	-0.000002141		
4P3/2 -- ( 4)	184.037343	-511.166331	2.945836388	0.002609012		-0.000727712	0.000157928
4D3/2			2.977427149	0.000691424	-0.000016425		
4D5/2			2.802505622	0.001626876	-0.000125929		
4F5/2			3.058468225	0.000602937	-0.000020669		
4F7/2			2.994808152	0.001070335	-0.000062556		
5S1/2			2.036841450	0.001338800	-0.000209913		
5P1/2			2.019589661	0.000436773	-0.000040376		
5P3/2			1.769978317	0.000509983	-0.000097499		
5D3/2			1.697737161	0.000172240	-0.000016586		
5D5/2			1.634118687	0.000389874	-0.000040613		
5F5/2			1.347188818	0.000071196	-0.000004035		
5F7/2			1.312695576	0.000115329	-0.000008402		
6S1/2			1.046538101	0.000242133	-0.000039961		
6P1/2			0.965334388	0.000073423	-0.000007597		
6P3/2			0.792960362	0.000075459	-0.000015238		
6D3/2			0.508780192	0.000010374	-0.000001067		
7S1/2			0.378794423	0.000022258	-0.000003699		
4D3/2 -- ( 4)	173.684496	-493.620958	3.031696566	0.003708891		-0.000023866	0.000006823
4D5/2			3.003295385	0.000647678	-0.000000257		
4F5/2			2.968106401	0.001851097	-0.000164421		
4F7/2			3.096944550	0.000608417	-0.000003512		
5S1/2			2.061502784	0.000374518	-0.000015684		
5P1/2			2.014379171	0.000963402	-0.0000115030		



TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
HAHNIIUM      6D3      Z=105 A=261 R=1.44921E-04 A.U.							
5P3/2			1.804082687	0.000196992	-0.000008913		
5D3/2			1.678721968	0.000520244	-0.000068940		
5D5/2			1.649281279	0.000155333	-0.000003550		
5F5/2			1.348207323	0.000235088	-0.000029109		
5F7/2			1.318853096	0.000062958	-0.000001236		
6S1/2			1.050856356	0.000072327	-0.000003955		
6P1/2			0.965333513	0.000148827	-0.000018770		
6P3/2			0.797373010	0.000028892	-0.000001485		
6D3/2			0.507897149	0.000029157	-0.000004109		
7S1/2			0.379189353	0.000006708	-0.000000380		
4D5/2 -- ( 6)	157.811390	-467.924341	2.927302140	0.002982101		-0.000003614	0.000001601
4F5/2			3.053382858	0.000510968	-0.0000307468		
4F7/2			2.927583880	0.001564906	-0.000093190		
5S1/2			2.042653486	0.000433770	-0.000015082		
5P1/2			2.018784683	0.000269637	-0.000006580		
5P3/2			1.784147559	0.000436715	-0.000035120		
5D3/2			1.696959394	0.000136133	-0.000004249		
5D5/2			1.620645274	0.000436540	-0.000042204		
5F5/2			1.345974882	0.000061544	-0.000033134		
5F7/2			1.309840536	0.000197371	-0.000022543		
6S1/2			1.047376267	0.000080373	-0.000003896		
6P1/2			0.965182822	0.000044415	-0.000001526		
6P3/2			0.794680594	0.000061005	-0.000005177		
6D3/2			0.508733478	0.000007722	-0.000000276		
7S1/2			0.378867615	0.000007422	-0.000000375		
4F5/2 -- ( 6)	143.648887	-444.354772	3.158544284	0.004015668		-0.000000016	0.000000008
4F7/2			3.183608691	0.000647308	-0.000000007		
5S1/2			2.077372668	0.000224090	-0.000000390		
5P1/2			2.035936583	0.000322206	-0.000002413		
5P3/2			1.813294835	0.000140092	-0.000000824		
5D3/2			1.703757352	0.000304038	-0.000012645		
5D5/2			1.655488770	0.000102670	-0.0000061048		
5F5/2			1.344560109	0.000291500	-0.000016603		
5F7/2			1.326743272	0.000073315	-0.000000498		
6S1/2			1.053815137	0.000044507	-0.000000414		
6P1/2			0.968615408	0.000052863	-0.000000927		
6P3/2			0.798692567	0.000020527	-0.000000208		
6D3/2			0.509192440	0.000016371	-0.000000720		
7S1/2			0.379461206	0.000004141	-0.000000044		
4F7/2 -- ( 8)	138.206557	-434.758572	3.114570766	0.003645264		-0.000000003	0.000000002
5S1/2			2.068977576	0.000270827	-0.000000315		
5P1/2			2.039791006	0.000199544	-0.000000335		
5P3/2			1.803602742	0.000227663	-0.000001884		
5D3/2			1.709664784	0.000114493	-0.000000612		
5D5/2			1.643618093	0.000257183	-0.000007889		
5F5/2			1.357518708	0.000062976	-0.000000542		
5F7/2			1.312117757	0.000265061	-0.000011683		
6S1/2			1.052213525	0.000050991	-0.000000401		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E( $\bar{\epsilon}$ -N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
HAHNIIUM	6D3	Z=105 A=261 R=1.44921E-04 A.U.					
			0.968671235	0.000032736	-0.000000209		
			0.797403757	0.000032037	-0.000000431		
			0.509440280	0.000006350	-0.000000048		
			0.379312593	0.000004718	-0.000000043		
5S1/2 -- ( 2)	100.512939	-306.162515	1.737193102	0.000382050		-0.027059187	0.001556440
			1.520556509	0.000219777	-0.000017586		
			1.419341894	0.000398122	-0.000105360		
			1.440853620	0.000236625	-0.000030707		
			1.406132301	0.000128836	-0.000032135		
			1.216701828	0.000102332	-0.000013003		
			1.191384580	0.000053967	-0.000012447		
			0.965270117	0.000063310	-0.000031682		
			0.907858351	0.000046090	-0.000010225		
			0.756053958	0.000026579	-0.000009342		
			0.496231940	0.000008070	-0.000001287		
			0.371566814	0.000005945	-0.000003040		
5P1/2 -- ( 2)	94.665695	-294.937623	1.698390609	0.000675751		-0.007125597	0.000563790
			1.489571177	0.000056250	-0.000004935		
			1.349230168	0.000650774	-0.000147573		
			1.419308074	0.000049618	-0.000005766		
			1.191522429	0.000167910	-0.000033813		
			1.191768358	0.000029149	-0.000003728		
			0.976162859	0.000089171	-0.000014426		
			0.892151839	0.000066476	-0.000022873		
			0.759158606	0.000010529	-0.000001498		
			0.493672834	0.000017960	-0.000004685		
			0.372411036	0.000008029	-0.000001349		
5P3/2 -- ( 4)	61.444227	-237.897239	1.413076016	0.000276229		-0.000197915	0.000042870
			1.355448310	0.000099786	-0.000005892		
			1.269997217	0.000201499	-0.000036295		
			1.161188222	0.000066589	-0.000005630		
			1.124238730	0.000076832	-0.000015834		
			0.947696361	0.000168679	-0.000026895		
			0.888730832	0.000038766	-0.000003799		
			0.741351686	0.000031570	-0.000006760		
			0.492401010	0.000003289	-0.000000293		
			0.370040230	0.000014171	-0.000002353		
5D3/2 -- ( 4)	51.639997	-215.340053	1.313182605	0.000314886		-0.000005913	0.000001688
			1.299904092	0.000054225	-0.000000033		
			1.074194825	0.000214863	-0.000044154		
			1.117636230	0.000028086	-0.000000811		
			0.936998078	0.000039869	-0.000001468		
			0.866025116	0.000102796	-0.000012569		
			0.741262406	0.000014916	-0.000000844		
			0.487087763	0.000011534	-0.000001544		
			0.369161907	0.000003470	-0.000000174		
5D5/2 -- ( 6)	46.565257	-204.623322	1.265916098	0.000249287		-0.000000882	0.000000390
			1.118072409	0.000048490	-0.000002371		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
HAHNIIUM 6D3 Z=105 A=261 R=1.44921E-04 A.U.								
5F7/2			1.056411292	0.000139587	-0.000327090			
6S1/2			0.926897747	0.000049195	-0.000061213			
6P1/2			0.871068273	0.000024794	-0.000000538			
6P3/2			0.734052673	0.000036621	-0.000003722			
6D3/2			0.489229890	0.000003048	-0.000000097			
7S1/2			0.368383075	0.000003999	-0.000000156			
5F5/2 -- ( 6)	28.444076	-155.682163	0.989448802	0.000153413		-0.000000003	0.000000001	
5F7/2			0.991084566	0.000024021	-0.000000000			
6S1/2			0.851787067	0.000017834	-0.000000357			
6P1/2			0.801983205	0.000023525	-0.000000303			
6P3/2			0.732405696	0.000007666	-0.000000003			
6D3/2			0.473316555	0.000007895	-0.000000219			
7S1/2			0.363207974	0.000001556	-0.000000002			
5F7/2 -- ( 8)	26.785412	-151.014235	0.965494974	0.000134278		-0.000000001	0.000000000	
6S1/2			0.892475019	0.000023687	-0.000000418			
6P1/2			0.808982917	0.000015155	-0.000000048			
6P3/2			0.692931583	0.000015009	-0.000000022			
6D3/2			0.476654289	0.000002721	-0.000000064			
7S1/2			0.362430335	0.000001910	-0.000000002			
6S1/2 -- ( 2)	24.545459	-128.852389	0.805952127	0.000031661		-0.0005683713	0.000326855	
6P1/2			0.679493153	0.000030597	-0.000003896			
6P3/2			0.614649677	0.000039138	-0.000010699			
6D3/2			0.460146068	0.000010244	-0.000001396			
7S1/2			0.352297526	0.000002222	-0.000001087			
6P1/2 -- ( 2)	20.098437	-116.026470	0.735829540	0.000045996		-0.001284872	0.000101616	
6P3/2			0.624118332	0.000003529	-0.000000315			
6D3/2			0.436577002	0.000029629	-0.000006907			
7S1/2			0.352355238	0.000004347	-0.000000672			
6P3/2 -- ( 4)	11.306128	-90.957232	0.579515567	0.000015869		-0.000030019	0.000006499	
6D3/2			0.431209233	0.000005371	-0.000000511			
7S1/2			0.340638889	0.000006894	-0.000000954			
6D3/2 -- ( 3)	4.052420	-55.534962	0.353872372	0.000005613		-0.000000345	0.000000098	
7S1/2			0.298834521	0.000000788	-0.000000009			
7S1/2 -- ( 2)	2.630660	-41.546851	0.281783874	0.000001114		-0.000533032	0.000030652	
ETOT	-39654.82276	53071.39410	-106647.16212	13877.56709	68.910524893	-7.113092354	-19.668338245	1.249076728
ELEMENT 106 6D4 Z=106 A=263 R=1.45291E-04 A.U.								
1S1/2 -- ( 2)	10351.435556	-17196.436975	89.483308741	19.776215342		-8.017559894	0.514655575	
2S1/2			28.603266015	1.176099941	-0.148397781			
2P1/2			36.942002165	2.405424589	-0.261560122			
2P3/2			25.736115749	0.880561311	-0.253952998			
3S1/2			11.891476471	0.263756171	-0.035384424			
3P1/2			13.654082414	0.482535255	-0.050300598			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ELEMENT 106	6D4	Z=106	A=263	R=1.45291E-04	A.U.		
	3P3/2		10.567561861	0.213997539	-0.063542499		
	3D3/2		10.773030586	0.008706186	-0.000879532		
	3D5/2		19.066523946	0.003366978	-0.001073133		
	4S1/2		5.560668966	0.074150124	-0.010084178		
	4P1/2		5.979389252	0.129501780	-0.013366504		
	4P3/2		4.850700607	0.059551003	-0.017806817		
	4D3/2		4.768644416	0.002826280	-0.000286288		
	4D5/2		4.517010396	0.001101484	-0.000354476		
	4F5/2		4.296724596	0.000009632	-0.000000884		
	4F7/2		4.202224880	0.000003816	-0.000001250		
	5S1/2		2.714395086	0.021384880	-0.002919296		
	5P1/2		2.759514079	0.035518801	-0.003656189		
	5P3/2		2.282545411	0.016103121	-0.004824315		
	5D3/2		2.092547573	0.000700279	-0.000070982		
	5D5/2		1.987309016	0.000269203	-0.000086842		
	5F5/2		1.538854369	0.000001777	-0.000000163		
	5F7/2		1.494384287	0.000000686	-0.000000225		
	6S1/2		1.207654444	0.004586383	-0.000626730		
	6P1/2		1.122989995	0.006579690	-0.000676834		
	6P3/2		0.891277597	0.002530302	-0.000758387		
	6D3/2		0.569137345	0.000046666	-0.000004731		
	7S1/2		0.406767763	0.000444197	-0.000060710		
2S1/2 --	( 2)	2724.459307	-4519.401572	29.488386247	0.518609974	-1.464932302	0.086826610
	2P1/2		20.867678483	0.160041164	-0.000112145		
	2P3/2		17.730541840	0.191581368	-0.013676216		
	3S1/2		9.597768944	0.063056252	-0.014768241		
	3P1/2		10.738789226	0.111523593	-0.016638931		
	3P3/2		9.113530733	0.048461897	-0.004730725		
	3D3/2		10.165466928	0.051606472	-0.006934080		
	3D5/2		9.615976096	0.021064724	-0.006777254		
	4S1/2		4.937483706	0.017569946	-0.004348699		
	4P1/2		5.196719378	0.030988874	-0.004741924		
	4P3/2		4.458713785	0.014093947	-0.001584631		
	4D3/2		4.599722920	0.012301510	-0.001741903		
	4D5/2		4.392060462	0.005321798	-0.001762188		
	4F5/2		4.291287417	0.000781709	-0.000100246		
	4F7/2		4.197699001	0.000274531	-0.000097770		
	5S1/2		2.536046945	0.005052975	-0.001265880		
	5P1/2		2.544674189	0.008556161	-0.001316343		
	5P3/2		2.177336590	0.003847891	-0.000446940		
	5D3/2		2.052140091	0.002832801	-0.000406343		
	5D5/2		1.957907256	0.001226057	-0.000407881		
	5F5/2		1.537889475	0.000136860	-0.000017705		
	5F7/2		1.493602776	0.000046934	-0.000016865		
	6S1/2		1.169478597	0.001082872	-0.000272109		
	6P1/2		1.083181145	0.001587396	-0.000244529		
	6P3/2		0.874773641	0.000605895	-0.000070890		
	6D3/2		0.566461334	0.000186318	-0.000026788		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(L-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ELEMENT 106	6D4	Z=106 A=263 R=1.45291E-04 A.U.					
2P1/2 --	7S1/2 ( 2)	2753.614775	-4553.315023	0.403071577	0.000104864	-0.000026364	
	2P3/2			26.309900072	1.213023512		-0.367075768
	3S1/2			20.933109863	0.103875958	-0.000980827	0.030441865
	3P1/2			10.368206460	0.043356421	-0.002731244	
	3P3/2			10.759327905	0.104293307	-0.014543182	
	3D3/2			9.577547356	0.027641845	-0.000736588	
	3D5/2			10.213315612	0.145841783	-0.034650192	
	4S1/2			9.854153867	0.003733980	-0.000972450	
	4P1/2			5.134998725	0.012092685	-0.000856022	
	4P3/2			5.222072369	0.027273355	-0.004188203	
	4D3/2			4.580762583	0.007740420	-0.000239937	
	4D5/2			4.616232391	0.037172774	-0.009084807	
	4F5/2			4.455524980	0.001108086	-0.000274494	
	4F7/2			4.292808679	0.000853898	-0.000178070	
	5S1/2			4.200350318	0.000045080	-0.000017460	
	5P1/2			2.591748425	0.003478542	-0.000253352	
	5P3/2			2.552871931	0.007431721	-0.001166751	
	5D3/2			2.209901815	0.002095225	-0.000067357	
	5D5/2			2.056265081	0.008703998	-0.002141441	
	5F5/2			1.972698420	0.000265472	-0.000064849	
	5F7/2			1.538160544	0.000150436	-0.000031599	
	6S1/2			1.494058629	0.000007798	-0.000003032	
	6P1/2			1.181356003	0.000745508	-0.000054699	
	6P3/2			1.084755093	0.001374490	-0.000216939	
	6D3/2			0.879875311	0.000329292	-0.000010673	
	6D5/2			0.566736603	0.000574204	-0.000141440	
2P3/2 --	7S1/2 ( 4)	1396.745302	-2852.361782	0.404220807	0.000072195	-0.000005304	
	3S1/2			18.558880864	0.405923639		-0.008846485
	3P1/2			9.766707255	0.051788517	-0.004739667	0.002026073
	3P3/2			10.586773647	0.030613637	-0.001474042	
	3D3/2			8.877133219	0.052534444	-0.004994802	
	3D5/2			10.141976606	0.044989449	-0.004198088	
	4S1/2			9.422972557	0.072534409	-0.020642394	
	4P1/2			4.970845554	0.013146521	-0.001265756	
	4P3/2			5.155432232	0.007825690	-0.000434131	
	4D3/2			4.401292325	0.013664672	-0.001446133	
	4D5/2			4.595397399	0.010529689	-0.000986605	
	4F5/2			4.349220026	0.016972480	-0.005006463	
	4F7/2			4.289611235	0.000771540	-0.000073522	
	5S1/2			4.194433806	0.000652648	-0.000211994	
	5P1/2			2.544700493	0.003699302	-0.000361510	
	5P3/2			2.533275515	0.002124571	-0.000122114	
	5D3/2			2.162318619	0.003630524	-0.000393812	
	5D5/2			2.051174385	0.002422698	-0.000227390	
	5F5/2			1.948312253	0.003845324	-0.001142845	
	5F7/2			1.537604465	0.000133383	-0.000012814	
	6S1/2			1.493059622	0.000109976	-0.000036075	
				1.171281334	0.000788347	-0.000077350	

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ELEMENT 106	6D4	Z=106 A=263 R=1.45291E-04 A.U.					
			1.081065809	0.000392619	-0.000022763		
			0.872431639	0.000568158	-0.000061971		
			0.566398106	0.000159341	-0.000014961		
			0.403245314	0.000076271	-0.000007488		
3S1/2 --	( 2)	861.407773	-1607.361957	7.655144199	0.034469213	-0.354211639	0.020751933
				7.137379147	0.011614866	-0.000087677	
				6.456132531	0.016373463	-0.002710369	
				7.451374950	0.009967300	-0.000463090	
				7.254180008	0.011920419	-0.000604601	
				4.258848049	0.006064050	-0.002089409	
				4.461894168	0.009135984	-0.001548042	
				3.904296758	0.003502737	-0.000519587	
				4.061745645	0.002709280	-0.000254421	
				3.923951753	0.002839733	-0.000203875	
				4.121297671	0.002993619	-0.000420937	
				4.045189214	0.001330381	-0.000410481	
				2.352460022	0.001733003	-0.000620204	
				2.348820593	0.002612430	-0.000457571	
				2.032859396	0.000997067	-0.000151204	
				1.929588995	0.000693387	-0.000072135	
				1.852881876	0.000652884	-0.000057197	
				1.511453240	0.000410147	-0.000060466	
				1.470461819	0.000190475	-0.000058051	
				1.130656871	0.000370508	-0.000133539	
				1.047124293	0.000487455	-0.000085917	
				0.852244540	0.000158378	-0.000024139	
				3.558411703	0.000046363	-0.000004898	
				0.399320211	0.000035864	-0.000012941	
3P1/2 --	( 2)	861.018552	-1606.270086	8.286087175	0.070110275	-0.099422725	0.008024890
				7.120406577	0.005414206	-0.000191155	
				7.318391888	0.024701941	-0.002810913	
				7.658227766	0.008577417	-0.000127684	
				4.431139967	0.004993720	-0.000575999	
				4.389582503	0.009010945	-0.001994422	
				3.989018801	0.001890548	-0.000134948	
				4.097017750	0.005485417	-0.000743924	
				3.981715002	0.002037492	-0.000063153	
				4.115274475	0.005059478	-0.001121553	
				4.086272016	0.000523525	-0.000117846	
				2.394769247	0.001397780	-0.000175342	
				2.335974708	0.002414864	-0.000568876	
				2.053565345	0.000526122	-0.000041339	
				1.938499904	0.001436113	-0.000216926	
				1.865555463	0.000456175	-0.000017147	
				1.510965187	0.000708931	-0.000163008	
				1.476358802	0.000082206	-0.000017312	
				1.139404279	0.000297401	-0.000038007	
				1.044996068	0.000444836	-0.000106050	

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ELEMENT 106	ED4	Z=106 A=263 R=1.45291E-04 A.U.					
6P3/2			0.855432026	0.000083114	-0.000006656		
6D3/2			0.559005120	0.000096417	-0.000014795		
7S1/2			0.400162366	0.000028765	-0.000003687		
3P3/2 -- ( 4)	512.094216	-1153.057002	6.632766572	0.027084479		-0.002654978	0.000591769
3D3/2			7.097300421	0.006013545	-0.000025556		
3D5/2			6.713173912	0.014571459	-0.000286390		
4S1/2			4.265960889	0.008155081	-0.001124065		
4P1/2			4.372703542	0.003503341	-0.000268263		
4P3/2			3.799007931	0.005006005	-0.000737804		
4D3/2			3.981540313	0.002778714	-0.000264859		
4D5/2			3.838568464	0.005582032	-0.000876318		
4F5/2			4.065436183	0.002556442	-0.000255885		
4F7/2			3.960175421	0.002471776	-0.000727128		
5S1/2			2.350721244	0.002046504	-0.000296078		
5P1/2			2.325431102	0.000898912	-0.000078298		
5P3/2			2.007060739	0.001305455	-0.000207375		
5D3/2			1.911645400	0.000675522	-0.000068131		
5D5/2			1.833998495	0.001304976	-0.000228161		
5F5/2			1.503635410	0.000325284	-0.000034187		
5F7/2			1.459290364	0.000321732	-0.000094469		
6S1/2			1.130102112	0.000425828	-0.000062303		
6P1/2			1.042827099	0.000164323	-0.000014706		
6P3/2			0.848268779	0.000203465	-0.000032769		
6D3/2			0.557237425	0.000044776	-0.000004554		
7S1/2			0.399263649	0.000041040	-0.000006016		
3D3/2 -- ( 4)	504.430646	-1143.097546	7.798950885	0.046813759		-0.000076502	0.000022468
3D5/2			7.676120687	0.008203788	-0.000001514		
4S1/2			4.421623562	0.002625410	-0.000070460		
4P1/2			4.475572519	0.005759028	-0.000476894		
4P3/2			3.969862108	0.001679370	-0.000043706		
4D3/2			4.024563162	0.006006399	-0.000607714		
4D5/2			3.979543286	0.001935795	-0.000029063		
4F5/2			4.053731189	0.011570368	-0.002872374		
4F7/2			4.079735970	0.000395881	-0.000346431		
5S1/2			2.390892024	0.000717997	-0.000025933		
5P1/2			2.353476096	0.001397081	-0.000123238		
5P3/2			2.048094456	0.000443276	-0.000014254		
5D3/2			1.924314333	0.001312509	-0.000147927		
5D5/2			1.864930283	0.000434609	-0.000308108		
5F5/2			1.503347723	0.001575350	-0.000400447		
5F7/2			1.475640594	0.000064083	-0.000006848		
6S1/2			1.138514538	0.000152101	-0.000005865		
6P1/2			1.048006474	0.000252258	-0.000022624		
6P3/2			0.854563498	0.000069270	-0.000002324		
6D3/2			0.558096880	0.000085580	-0.000009806		
7S1/2			0.400075277	0.000014701	-0.000000573		
3D5/2 -- ( 6)	452.063442	-1067.718399	7.421364318	0.037292941		-0.000011419	0.000005200
4S1/2			4.375106685	0.003014757	-0.000069934		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ELEMENT 106	604	Z=106 A=263 R=1.45291E-04 A.U.					
4P1/2			4.467748439	0.002188960	-0.000034604		
4P3/2			3.915850657	0.003211388	-0.000144955		
4D3/2			4.076015038	0.001578236	-0.000033018		
4D5/2			3.882121230	0.0005108070	-0.000374103		
4F5/2			4.132751190	0.002439344	-0.000176900		
4F7/2			3.982969859	0.0007172359	-0.001996091		
5S1/2			2.378265075	0.000796799	-0.000025790		
5P1/2			2.349150389	0.000561981	-0.000013052		
5P3/2			2.034734926	0.000803265	-0.000041346		
5D3/2			1.932573869	0.000354312	-0.000092220		
5D5/2			1.845377372	0.001094193	-0.000089809		
5F5/2			1.513470783	0.000336680	-0.000024552		
5F7/2			1.463046486	0.000945910	-0.000268266		
6S1/2			1.135839491	0.000167601	-0.000005831		
6P1/2			1.047132787	0.000102715	-0.000002579		
6P3/2			0.852501722	0.000124146	-0.000006574		
6D3/2			0.558605257	0.000023214	-0.000000625		
7S1/2			0.399816704	0.000016181	-0.000000570		
4S1/2 -- ( 2)	304.812263	-687.967572	3.544699958	0.003516254		-0.101500134	0.005929244
4P1/2			3.181318949	0.001412446	-0.000046894		
4P3/2			2.945630319	0.002444220	-0.000577977		
4D3/2			3.181310199	0.001496301	-0.000149296		
4D5/2			3.111384475	0.001189689	-0.000174278		
4F5/2			3.313235059	0.001031697	-0.000086039		
4F7/2			3.279280672	0.001061059	-0.000089866		
5S1/2			2.093283983	0.000726451	-0.000316946		
5P1/2			2.176022015	0.000853299	-0.000163759		
5P3/2			1.846519245	0.000331342	-0.000089931		
5D3/2			1.762464849	0.000190313	-0.000024462		
5D5/2			1.699060110	0.000242337	-0.000025663		
5F5/2			1.416902563	0.000085774	-0.000005665		
5F7/2			1.382653980	0.000116404	-0.000005521		
6S1/2			1.078888701	0.000154908	-0.000069614		
6P1/2			1.003748149	0.000166351	-0.000032923		
6P3/2			0.824007404	0.000051958	-0.000013982		
6D3/2			0.547620400	0.000012573	-0.000001664		
7S1/2			0.394357080	0.000014980	-0.000006756		
4P1/2 -- ( 2)	298.918404	-678.710643	3.607993676	0.006713166		-0.028614430	0.002294346
4P3/2			3.158034774	0.000524169	-0.000034719		
4D3/2			3.014567068	0.004013307	-0.000777677		
4D5/2			3.199838044	0.000666344	-0.000032849		
4F5/2			3.274090159	0.001715164	-0.000223015		
4F7/2			3.331044284	0.000775051	-0.000027248		
5S1/2			2.142479752	0.000760904	-0.000112691		
5P1/2			2.064992374	0.000959980	-0.000280767		
5P3/2			1.867043774	0.000180687	-0.000021052		
5D3/2			1.754086041	0.000362748	-0.000070152		
5D5/2			1.708569925	0.000173459	-0.000008832		

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TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ELEMENT 106	6D4	Z=106 A=263 R=1.45291E-04 A.U.					
5F5/2			1.417247616	0.000137584	-0.000011601		
5F7/2			1.386279249	0.000092394	-0.000002499		
6S1/2			1.087426692	0.000155597	-0.000024594		
6P1/2			0.997867428	0.000174698	-0.000053512		
6P3/2			0.826815397	0.000029228	-0.000033629		
6D3/2			0.547183521	0.000023503	-0.000004525		
7S1/2			0.395158269	0.000014956	-0.000002386		
4P3/2 -- ( 4)	189.333699	-523.526751	2.985656100	0.002718069		-0.000778486	0.000172295
4D3/2			3.019180021	0.000718600	-0.000016798		
4D5/2			2.840966923	0.001693070	-0.000130610		
4F5/2			3.102841771	0.000627427	-0.000021235		
4F7/2			3.037950213	0.001115664	-0.000064417		
5S1/2			2.072600376	0.001429720	-0.000224081		
5P1/2			2.057142889	0.000467710	-0.000043085		
5P3/2			1.798618192	0.000536202	-0.000102709		
5D3/2			1.729594749	0.000183310	-0.000017706		
5D5/2			1.664248000	0.000412912	-0.000043204		
5F5/2			1.394294905	0.000078887	-0.000004523		
5F7/2			1.360198613	0.000127049	-0.000009460		
6S1/2			1.074050355	0.000263412	-0.000043495		
6P1/2			0.995104362	0.000080869	-0.000008356		
6P3/2			0.817008722	0.000082434	-0.000016684		
6D3/2			0.545474655	0.000012647	-0.000001306		
7S1/2			0.393880740	0.000024985	-0.000004156		
4D3/2 -- ( 4)	178.858254	-505.860711	3.075809310	0.003871396		-0.000026213	0.000007648
4D5/2			3.045876397	0.000673948	-0.000000280		
4F5/2			3.013153871	0.001927646	-0.000169552		
4F7/2			3.143173055	0.000635724	-0.000003637		
5S1/2			2.098533192	0.000395929	-0.000016604		
5P1/2			2.052238347	0.001026112	-0.000122791		
5P3/2			1.833770642	0.000206854	-0.000009375		
5D3/2			1.710405321	0.000550341	-0.000073224		
5D5/2			1.680062470	0.000164014	-0.000003768		
5F5/2			1.395582331	0.000261171	-0.000032786		
5F7/2			1.366933331	0.000069047	-0.000001377		
6S1/2			1.078675604	0.000078069	-0.000004289		
6P1/2			0.995196451	0.000163076	-0.000020636		
6P3/2			0.821731553	0.000031527	-0.000001627		
6D3/2			0.544464490	0.000035268	-0.000004997		
7S1/2			0.394317200	0.000007475	-0.000000426		
4D5/2 -- ( 6)	162.234998	-479.023998	2.967817369	0.003107004		-0.000003934	0.000001782
4F5/2			3.098227941	0.000531830	-0.000007616		
4F7/2			2.970437883	0.001629259	-0.000095448		
5S1/2			2.078840180	0.000458517	-0.000015924		
5P1/2			2.056506560	0.000285758	-0.000006963		
5P3/2			1.813201965	0.000458550	-0.000036969		
5D3/2			1.728878615	0.000143881	-0.000004519		
5D5/2			1.650505269	0.000460995	-0.000044781		

TABLE 1.-- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ELEMENT 106	6D4	Z=106 A=263 R=1.45291E-04 A.U.					
			1.393055857	0.000068190	-0.000003519		
			1.357206407	0.000219101	-0.000025508		
			1.074964314	0.000086651	-0.000004219		
			0.994971885	0.000048459	-0.000001674		
			0.818845037	0.000066510	-0.000005662		
			0.545425103	0.000009336	-0.000000336		
			0.393962961	0.000008259	-0.000000420		
4F5/2 -- ( 6)	147.995449	-455.453916	3.208365542	0.004201623		-0.000000018	0.000000009
			3.233337839	0.000677274	-0.000000008		
			2.115370697	0.000236434	-0.000000421		
			2.075026236	0.000340806	-0.000002578		
			1.843539948	0.000147243	-0.000000883		
			1.736455254	0.000321150	-0.000013415		
			1.686729832	0.000108494	-0.000001115		
			1.391985246	0.000319237	-0.000018398		
			1.375564010	0.000080679	-0.000000556		
			1.081871932	0.000047982	-0.000000454		
			0.998756010	0.000057631	-0.000001026		
			0.823182560	0.000022417	-0.000000231		
			0.546002438	0.000019759	-0.000000874		
			0.394620290	0.000004610	-0.000000050		
4F7/2 -- ( 8)	142.294263	-445.436666	3.162676501	0.003811331		-0.000000004	0.000000002
			2.106628362	0.00285610	-0.000000339		
			2.078809013	0.000210926	-0.000000357		
			1.833575408	0.000238985	-0.000002015		
			1.742358503	0.000120972	-0.000000655		
			1.674502568	0.000271303	-0.000008350		
			1.405623602	0.000069037	-0.000000603		
			1.359967638	0.000290870	-0.000012980		
			1.080166904	0.000054921	-0.000000440		
			0.998781239	0.000035669	-0.000000232		
			0.821803857	0.000034936	-0.000000478		
			0.546281981	0.000007671	-0.000000059		
			0.394456933	0.000005246	-0.000000049		
5S1/2 -- ( 2)	105.155675	-316.229855	1.769849394	0.000405695		-0.029433287	0.001717950
			1.550144351	0.000230926	-0.000018175		
			1.445062242	0.000429897	-0.000113884		
			1.468806412	0.000251876	-0.0000032705		
			1.433104365	0.000136980	-0.000034253		
			1.256817674	0.000111969	-0.000014225		
			1.232076628	0.000059418	-0.000013664		
			0.989932592	0.000068842	-0.000034479		
			0.934986972	0.000051321	-0.000011361		
			0.778325168	0.000029806	-0.000010502		
			0.530925328	0.000009776	-0.000001566		
			0.386166128	0.000006676	-0.0000003419		
5P1/2 -- ( 2)	99.269331	-304.995867	1.732288596	0.000719941		-0.007999439	0.000640232
			1.516792410	0.000059899	-0.000005496		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ELEMENT 106	6D4	Z=106 A=263 R=1.45291E-04 A.U.					
5D3/2			1.376383735	0.000697693	-0.000158367		
5D5/2			1.447024836	0.000052467	-0.000006196		
5F5/2			1.230738944	0.000183803	-0.000037003		
5F7/2			1.232817356	0.000032180	-0.000004099		
6S1/2			1.001421391	0.000096313	-0.000015602		
6P1/2			0.918628609	0.000073235	-0.000025245		
6P3/2			0.781687812	0.000011486	-0.000001674		
6D3/2			0.527998410	0.000021936	-0.000005742		
7S1/2			0.387082257	0.000008950	-0.000001507		
5P3/2 -- ( 4)	63.719415	-244.493799	1.436693528	0.000291067		-0.000213552	0.000047171
5D3/2			1.380257161	0.000104620	-0.000006102		
5D5/2			1.292986750	0.000212227	-0.000037984		
5F5/2			1.197369186	0.000071965	-0.000006043		
5F7/2			1.160314679	0.000083966	-0.000017066		
6S1/2			0.971092546	0.000184752	-0.000029423		
6P1/2			0.914429467	0.000043189	-0.000004218		
6P3/2			0.762674133	0.000034644	-0.000007458		
6D3/2			0.526387650	0.000003981	-0.000000359		
7S1/2			0.384482197	0.000015960	-0.000002650		
5D3/2 -- ( 4)	53.818629	-221.905865	1.339067789	0.000334481		-0.000006584	0.000001918
5D5/2			1.325231184	0.000057396	-0.000000036		
5F5/2			1.107657656	0.000231560	-0.000047228		
5F7/2			1.154434370	0.000031101	-0.000000876		
6S1/2			0.960747473	0.000043353	-0.000001612		
6P1/2			0.891147744	0.000113470	-0.000013916		
6P3/2			0.762870475	0.000016338	-0.000000929		
6D3/2			0.520339075	0.000014034	-0.000001907		
7S1/2			0.383601378	0.000003889	-0.000000198		
5D5/2 -- ( 6)	48.469171	-210.708913	1.290335418	0.000264454		-0.000000974	0.000000441
5F5/2			1.153052625	0.000052318	-0.000002516		
5F7/2			1.090196316	0.000151123	-0.000028887		
6S1/2			0.950162918	0.000053425	-0.000001330		
6P1/2			0.896316996	0.000027267	-0.000000594		
6P3/2			0.755301419	0.000040114	-0.000004100		
6D3/2			0.522772688	0.000003709	-0.000000121		
7S1/2			0.382760578	0.000004470	-0.000000178		
5F5/2 -- ( 6)	30.556589	-163.118768	1.028878739	0.000171569		-0.000000003	0.000000062
5F7/2			1.031448900	0.000026990	-0.000000000		
6S1/2			0.899458227	0.000019569	-0.000000344		
6P1/2			0.830183089	0.000026129	-0.000000268		
6P3/2			0.725835928	0.000008549	-0.000000001		
6D3/2			0.506293226	0.000009796	-0.000000321		
7S1/2			0.377803452	0.000001769	-0.000000003		
5F7/2 -- ( 8)	28.833087	-158.404883	1.005543142	0.000150732		-0.000000001	0.000000000
6S1/2			0.880524696	0.000026180	-0.000000409		
6P1/2			0.837615114	0.000016899	-0.000000044		
6P3/2			0.716676412	0.000016653	-0.000000011		
6D3/2			0.509764247	0.000003305	-0.000000006		

TABLE 1.- CONCLUDED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
ELEMENT 106 6D4 Z=106 A=263 R=1.45291E-04 A.U.								
6S1/2 -- ( 2)	26.232892	-134.129572	0.377050731	0.000002166	-0.000000003	-0.006321830	0.000368907	
6P1/2			0.827746011	0.000034559				
6P3/2			0.699504823	0.000032945	-0.000004155			
6D3/2			0.632964089	0.000043910	-0.000011960			
7S1/2			0.489853589	0.000012356	-0.000001683			
6P1/2 -- ( 2)	21.716175	-121.358223	0.365909511	0.000002528	-0.000001248	-0.001488972	0.000119114	
6P3/2			0.759181966	0.000050898				
6D3/2			0.643667752	0.000003942	-0.000000372			
7S1/2			0.464172610	0.000035779	-0.000008335			
6P3/2 -- ( 4)	12.168990	-94.875717	0.366135293	0.000004909	-0.000000763	-0.000033668	0.000007433	
6D3/2			0.597394383	0.000017495				
7S1/2			0.457834217	0.000006301	-0.000000594			
6D3/2 -- ( 4)	4.774102	-60.334951	0.353784793	0.000007945	-0.000001106	-0.000000440	0.000000128	
7S1/2			0.381694957	0.000006981				
7S1/2 -- ( 2)	2.901728	-43.710020	0.315229128	0.000000930	-0.000000007	-0.0000612430	0.000035737	
ETOT	-40679.23107	54902.59456	-109824.70758	14198.41757	71.478302532	-7.360092622	-21.008991460	1.355165050