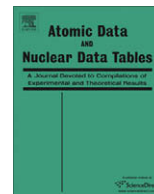




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Cross sections for ionization of K, L and M shells of atoms by impact of electrons and positrons with energies up to 1 GeV: Analytical formulas

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ARTICLE INFO

Article history:

Available online 17 September 2009

ABSTRACT

Analytical formulas are presented for the easy calculation of cross sections for ionization of K, L and M shells of neutral atoms by impact of electrons and positrons with kinetic energies up to 1 GeV. Each formula contains a number of parameters that are characteristic of the element, the active electron shell and the projectile particle. The values of these parameters were determined by fitting the cross section values in an extensive database that was calculated recently by means of a composite algorithm that combines the distorted-wave and plane-wave Born approximations. Tables of parameter values are given for all elements, from hydrogen ($Z = 1$) to einsteinium ($Z = 99$). The proposed analytical expressions yield ionization cross sections that agree with those in the numerical database to within about 1%, except for projectiles with near-threshold energies.

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1. Introduction

When fast electrons or positrons penetrate a material medium, they undergo inelastic collisions which reduce their kinetic energies by producing electronic excitations of the medium. Most of these excitations involve electrons in the outer (less tightly bound) shells of atoms; the ionization of inner electron shells occurs with much smaller probabilities. Inner-shell ionization, however, is the mechanism that triggers the emission of characteristic X-rays and Auger electrons. Consequently, accurate cross sections for the ionization of inner shells of atoms by electron and positron impact are needed for theoretical studies (e.g., through Monte Carlo simulation) of coupled electron–photon transport. A reliable description of inner-shell ionization is necessary for describing X-ray emission from samples irradiated by electron beams, for quantitative electron-probe microanalysis and for quantitative Auger electron spectroscopy.

In spite of the practical need for accurate ionization cross sections, the experimental information available is rather scarce and, very frequently, it is affected by considerable uncertainties. For instance, measurements of K-shell ionization cross sections by electron impact have been performed only for a few elements and for a limited set of energies (see Ref. [1]). For L and M shells, and for positron collisions, the amount of information is even more scarce. The lack of experimental information has motivated the development and the use of various empirical and semi-empirical formulas (see, e.g., Refs. [2,3]), based on simple physical models and/or fitted to available experimental data. The cross sections from these formulas, however, are affected by the same uncertainties as the data.

Theoretical calculations of ionization cross sections have been traditionally performed by using the relativistic plane-wave Born approximation (PWBA), which is also the foundation of the conventional theory of stopping fast charged particles [4]. Scofield [5] did the first systematic calculations of inner-shell ionization by electron impact using the relativistic PWBA, and proposed a simple parameterization of the total cross section that avoided the use of extensive numerical tables. Also, various authors have proposed simplifications of the PWBA, which usually combine some analytical approximate form of the generalized oscillator strength (GOS) with phenomenological low-energy corrections (see, e.g., Ref. [6]).

The PWBA provides reliable values of the ionization cross section for projectile electrons with kinetic energy E greater than about 20 times the ionization energy $E_{n\ell j}$ of the active electron shell $n\ell j$. The approximation worsens when the energy of the projectile decreases, mainly because it neglects the distortion of the projectile wavefunctions caused by the electrostatic field of the target atom and, in the case of electron collisions, it does not account for exchange effects (which arise from the indistinguishability of the projectile and the target electrons).

A more elaborate theoretical description of total ionization cross sections is obtained from the relativistic distorted-wave Born approximation (DWBA), which consistently accounts for the effects of both distortion and exchange [7–9]. DWBA calculations yield total cross sections in fairly good agreement with experimental data for ionization of K and L shells [10–12]. The calculation of ionization cross sections from this approximation involves the expansion of free-state wavefunctions as partial-wave series and the subsequent evaluation of multiple radial integrals. Since the convergence of partial-wave series worsens with increasing kinetic energies, DWBA calculations are feasible only for projectiles with relatively small energies.

Recently, Bote and Salvat [9] have calculated an extensive numerical database of ionization cross sections for K, L and M shells of all the elements from hydrogen ($Z = 1$) to einsteinium ($Z = 99$). The theoretical model adopted in these calculations combines the DWBA and the PWBA as described in Section 2. The resulting ionization cross sections have been compared to available experimental data [9], to other theoretical calculations and to empirical and semi-empirical formulas [10–12], showing that the DWBA provides a better description of recent measurements. The database has already been implemented in the general-purpose Monte Carlo code PENELOPE [13] and will be made publicly available in due course. For occasional users, however, a numerical database is awkward to handle and, for many practical applications, analytical approximations would be preferred. In the present article we provide analytical parameterizations (Tables 1 and 2) of the calculated ionization cross sections, which are judged to be consistent with the theoretical models. That is, the differences between the analytical formulas and the numerical cross sections are less than the uncertainties of the latter, which arise from simplifications in the theoretical models. Fortran subroutines that calculate ionization cross sections for electrons and positrons using the present analytical formulas are available as Supplementary material in the on-line version of the present publication.

2. Theory

For the sake of completeness, we summarize here the theoretical models, approximations and numerical strategies used in the calculations by Bote and Salvat; a more detailed description can be found in Refs. [7,9]. A fundamental assumption is that states of the target atom can be described by means of the independent-electron approximation, i.e., by assuming that electrons move in a common central potential $V(r)$. This potential is set equal to the Dirac–Fock–Slater potential [7] (with the usual Latter tail correction [14,15]), which yields one-electron energy eigenvalues that are close to the experimental ionization energies. To ensure orthogonality of one-electron wavefunctions, the same potential is used for the initial and final atomic states. This choice allows

important simplifications in the calculation of transition matrix elements, as well as a consistent description of exchange effects in the case of electron collisions.

As indicated above, ionization cross sections were calculated using the PWBA and the DWBA. In both approximations, the initial and final states of the target atom are described as single Slater determinants. The allowed final states differ from the initial state in that the active target electron has “jumped” to a free orbital which is described as a distorted-plane wave, that is, as an exact solution of the Dirac equation for the potential $V(r)$. In the PWBA, the initial and final wavefunctions of the projectile are represented as plane waves and the interaction \mathcal{H}' between the projectile and the target atom is treated as a first-order perturbation. In the DWBA, the projectile wavefunctions are described as distorted-plane waves of the potential $V(r)$, which amounts to treating the effect of this potential on the projectile exactly, and the difference $\mathcal{H}'' = \mathcal{H}' - V(r)$ is introduced as a perturbation. The success of the DWBA arises from the fact that \mathcal{H}'' is usually weaker than \mathcal{H}' and, consequently, first-order perturbation theory is expected to yield more accurate results.

Calculations of ionization cross sections for inner shells of atoms using the PWBA are quite straightforward. As described in Ref. [9], the differential cross section (DCS) obtained from the PWBA can be expressed in terms of the GOS and the transverse generalized oscillator strength (TGOS). For closed atomic electron shells, these are rapidly varying functions of the energy transfer W and the magnitude of the momentum transfer q , which can be calculated numerically for a discrete grid of W and q values. A simple transformation allows accurate interpolation of the GOS and the TGOS in both W and q . Ionization cross sections are obtained by numerical integration of the DCS over the kinematically allowed ranges of q and W .

The calculation of ionization cross sections within the DWBA is feasible only for projectiles with relatively low kinetic energies, up to about $10E_{nj}$, where, as mentioned above, E_{nj} is the ionization energy of the active electron shell [7–9]. When the energy of the projectile increases, the calculation becomes difficult because of the slower convergence of the partial-wave series and also because of numerical instabilities. DWBA calculations can be extended to slightly higher energies by noting that the atomic potential $V(r)$ produces a distortion of only partial waves with relatively small orbital angular momentum. For partial waves with large angular momenta, the centrifugal barrier prevents the projectile from sensing the atomic potential, and the PWBA gives the correct contribution of these waves to the partial-wave series. Bote and Salvat [9] have devised a composite algorithm to compute DWBA ionization cross sections by adding to the PWBA cross section the correction due to the distorting effect of the potential $V(r)$ on the partial waves with small and moderate angular momenta. Also accounted for are electron collisions exchange effects. This algorithm allows the numerical calculation of DWBA ionization cross sections for projectiles with kinetic energies up to about $25E_{nj}$, but calculation time increases very rapidly with the kinetic energy of the projectile. DWBA cross sections have been calculated for the K shell and the L and M sub-shells of the elements ($Z = 1$ to $Z = 99$), for electrons and positrons with kinetic energies E ranging from $1.02E_{nj}$ ($1.05E_{nj}$ for positrons) up to $16E_{nj}$. Calculations for energies E closer to the ionization threshold are very difficult because the Dirac equation for slow electrons has to be integrated outwards to very large radial distances to ensure accurate normalization of radial functions.

It is worth bearing in mind that these theoretical calculations pertain to free, isolated atoms. The calculated cross sections should also be appropriate for describing ionization in condensed media whenever the wavefunctions of the projectile and of the active atomic electron are not appreciably affected by the presence of

the medium. This is expected to be the case for inner electron shells (with ionization energies larger than, say, about 100 eV) whenever all free particles involved in the process have relatively large kinetic energies, that is, for collisions in which both the energy E of the projectile and the energy loss W are appreciably higher than E_{nj} .

For $E > 16E_{nj}$, the difference between DWBA and PWBA cross sections is mainly due to the distortion of the projectile wavefunction by the atomic potential. In the case of electron collisions, the exchange correction decreases rapidly with increasing E and is negligible at these energies. The effect of wave distortion can be partially accounted for by considering that the projectile electron (–) or positron (+) gains or loses a certain kinetic energy when it enters the atomic potential [16]. Thus, Bote and Salvat [9] assumed that the ionization cross section for $E > 16E_{nj}$ can be obtained by multiplying the PWBA cross section by an empirical scaling factor,

$$\sigma_{\pm}(E) = \frac{E}{E + b_{\pm}E_{nj}} \sigma^{(PWBA)}(E), \quad (1)$$

where b_{-} and b_{+} are energy-independent parameters, characteristic of each element and atomic shell, that are given in Table 3. The numerical value of b_{\pm} was fixed by requiring that at $E = 16E_{nj}$ the scaled PWBA cross section, Eq. (1), be equal to the cross section obtained from the DWBA. For high energies, the scaling factor tends to unity, leaving the PWBA cross section unaltered in the energy range where that approximation is expected to be reliable. The range of kinetic energies covered by the numerical database extends from threshold, E_{nj} , up to 1 GeV.

3. Analytical formulas

As indicated above, the ionization cross sections in the numerical database of Bote and Salvat [9] were calculated from the DWBA for $E < 16E_{nj}$ and obtained from the scaled PWBA, Eq. (1), at higher energies. The variation of these cross sections with E does not seem to allow a simple parameterization that is valid in the whole energy range, from E_{nj} up to 1 GeV. Consequently, we use two different analytical expressions for the energy intervals below and above the cutoff value $16E_{nj}$.

In the lower interval, we consider the ionization cross sections for electrons and positrons as functions of the overvoltage, $U \equiv E/E_{nj}$, with the ionization energies given in Tables 1 and 2. We represent these functions by analytical expressions that are natural generalizations of those proposed, for example, by Kim and Rudd [6]. In the case of projectile electrons, the numerical cross sections calculated from the DWBA (i.e., for $U < 16$) can be closely approximated by the following expression

$$\sigma_{-} = 4\pi a_0^2 \frac{U-1}{U^2} \left(a_1 + a_2 U + \frac{a_3}{1+U} + \frac{a_4}{(1+U)^3} + \frac{a_5}{(1+U)^5} \right)^2, \quad (2)$$

where a_0 is the Bohr radius and a_1, \dots, a_5 are parameters characteristic of each element and electron shell. In Table 1 we give the values of these parameters obtained from a least-squares fit of the cross sections in the numerical database, $\sigma_{\pm}^{(DWBA)}$. In general, the analytical expression (2), with the parameter values given in Table 1, yields cross sections that differ from those in the numerical database by less than about 1% for $U > 1.3$. For smaller overvoltages, the relative differences are somewhat larger, but always less than about 5%. Note that the ionization cross section reaches its maximum value when U is near 3, and that when U is around 1.3 the cross section takes values about 10 times smaller. These features are illustrated in Fig. 1. The lefthand plot displays the cross sections

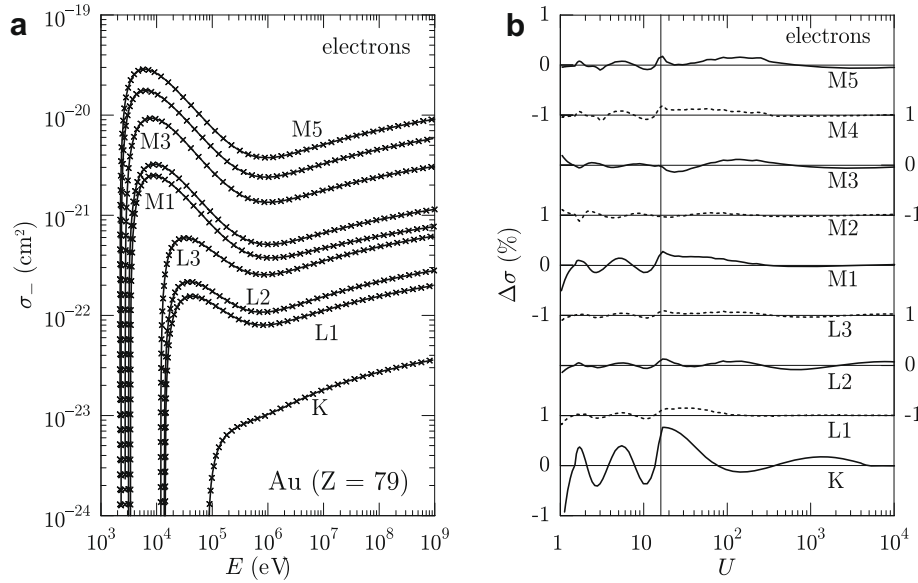


Fig. 1. Comparison of cross sections for ionization of the K, L and M shells of gold atoms by electron impact from the numerical database [9] (crosses) and from the analytical formulas described in the text (solid lines). The lefthand plot displays the cross sections, in cm^2 , for electron impact. The righthand plot shows the relative differences between the cross sections in the database and those obtained from the analytical formulas. The vertical line marks the cutoff overvoltage $U = 16$, which separates the intervals where the low- and high-energy formulas apply. Note that, for all the shells considered, the vertical axis ranges from -1% to 1% ; that is, the error of the analytical formulas is usually less than 1% .

from the numerical database [9], $\sigma_{\pm}^{(\text{DWBA})}$, and the analytical fits, σ_{\pm} , for the inner shells of gold atoms. The relative differences

$$\Delta\sigma = 100 \frac{\sigma_{\pm}^{(\text{DWBA})} - \sigma_{\pm}}{\sigma_{\pm}^{(\text{DWBA})}} \quad (3)$$

between these cross sections are displayed in the righthand plot.

Within the DWBA, cross sections for positrons and electrons are different. Since the distorting potential is attractive for electrons and repulsive for positrons, ionization cross sections for low-energy positrons are smaller than those for electrons. This is at variance with the PWBA, which predicts that the cross section is independent of the sign of the projectile charge. On the other hand, positrons are not affected by exchange effects. Hence, it is not surprising that expression (2) is not suited to approximate DWBA cross sections for positrons. To approximate the calculated DWBA cross sections for low-energy positrons (with $U < 16$), we use the following analytical expression

$$\sigma_{+} = 4\pi a_0^2 \frac{U-1}{U^2} \left(d_1 + d_2 U + \frac{d_3}{1+U} + d_4 \frac{\sqrt{U}}{(1+U)^3} + d_5 \frac{U}{(1+U)^6} \right)^4, \quad (4)$$

where the parameters d_1, \dots, d_5 are characteristic of each element and shell. The values of these parameters listed in Table 2 were obtained from least-squares fits of the DWBA cross sections in the database. The analytical formula (4) gives values that differ from those in the database by less than 1% for $U > 2.5$. At lower overvoltages, the error of the analytical formula is larger, typically of the order of $5\text{--}10\%$ for $U = 1.5$, but for these overvoltages the ionization cross section takes values much smaller than its maximum (see Fig. 2).

It is worth mentioning that the numerical database was generated by assuming that the shell ionization energies are equal to the energy eigenvalues of the Dirac–Fock–Slater equations. This is approximately correct only for those shells whose experimental ionization energies [17] are larger than about 200 eV . In practice, errors in the ionization energy would propagate to the calculated ionization cross sections, causing a global shift of the cross section versus energy curve. To correct partially for this shift we can use

the analytical formulas (2) and (4) with the experimental value of the ionization energy in the definition of the overvoltage.

For overvoltages greater than 16, the ionization cross section is obtained from the PWBA by means of Eq. (1). The PWBA cross section can be closely approximated by the following analytical expression, which is a generalization of the formula proposed by Scofield [5],

$$\sigma^{(\text{PWBA})} = 4\pi a_0^2 \frac{A_{n\ell j}}{\beta^2} \left\{ [\ln X^2 - \beta^2] (1 + g_1 X^{-1}) + g_2 + g_3 (1 - \beta^2)^{1/4} + g_4 X^{-1} \right\}, \quad (5)$$

where

$$\beta = \frac{v}{c} = \frac{\sqrt{E(E + 2m_e c^2)}}{E + m_e c^2} \quad (6)$$

is the velocity of the projectile in units of the speed of light c , m_e is the electron mass and

$$X \equiv \frac{p}{m_e c} = \frac{\sqrt{E(E + 2m_e c^2)}}{m_e c^2} \quad (7)$$

is the momentum of the projectile in units of $m_e c$. The parameter $A_{n\ell j}$ is defined by

$$A_{n\ell j} \equiv \frac{\alpha^4 m_e c^2}{2} \int_{E_{n\ell j}}^{\infty} \frac{1}{W} \frac{df_{n\ell j}(0, W)}{dW} dW = \alpha^2 M_{n\ell j}^2, \quad (8)$$

where $df_{n\ell j}(0, W)/dW$ is the optical oscillator strength (i.e., the GOS for $q = 0$) for ionization from the active shell, and $\alpha = e^2/\hbar c \approx 1/137$ is the fine-structure constant. The quantity $M_{n\ell j}^2$, an integral property of the optical oscillator strength, is the squared dipole-matrix element for ionization [4]. The values $A_{n\ell j}$ obtained from the generalized oscillator strength corresponding to the Dirac–Fock–Slater atomic potential are given in Table 3. The parameters g_1, \dots, g_4 in expression (5) were determined by fitting the ionization cross sections obtained from the PWBA, which are the same for electrons and positrons. Their values for the shells considered of the elements with $Z = 1$ to $Z = 99$ are also given in Table 3. Finally, the ionization cross sections for electrons and positrons are obtained by means of Eq. (1). With the given parameters values, formula (5) approximates the cross sections in the numerical database to within less than 1% (see Figs. 1 and 2).

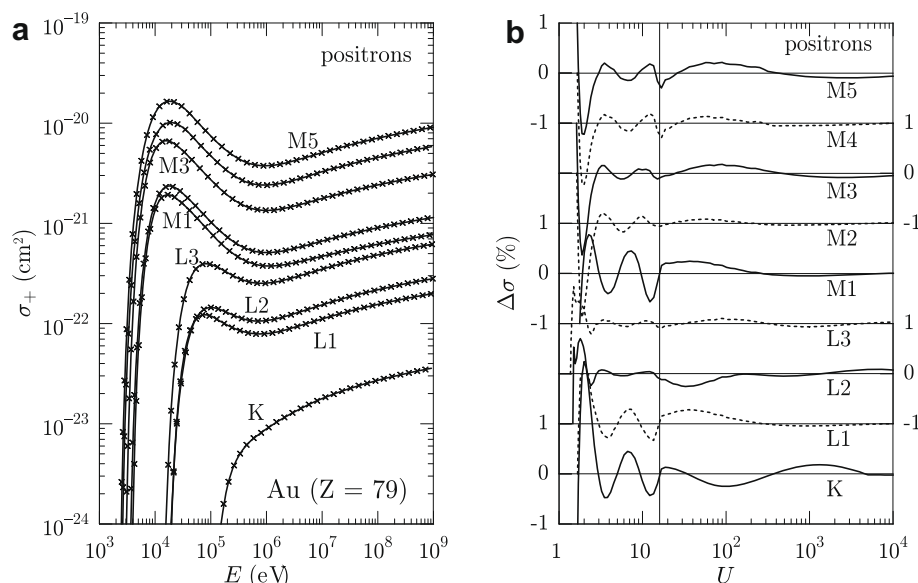


Fig. 2. Comparison of cross sections for ionization of the K, L and M shells of gold atoms by positron impact from the numerical database [9] (crosses) and from the analytical formulas described in the text (solid lines). Details are the same as in Fig. 1. For near-threshold energies, the error of the analytical formulas is typically greater than for electrons, but less than 1% for $U > 2.5$.

For both electrons and positrons, the errors introduced by the analytical approximations are considered to be less than the uncertainties arising from simplifications and approximations in the theoretical calculations. That is, the use of the analytical approximations does not necessarily imply a loss in accuracy.

Acknowledgments

Financial support from the Spanish Ministerio de Educación y Ciencia (Project No. FPA2006-12066) and FEDER is gratefully acknowledged. David Bote also acknowledges support from the “Comissionat per a Universitats i Recerca del Departament d’Innovació, Universitats i Empresa de la Generalitat de Catalunya” and the European Social Fund.

Appendix A. Supplementary data

Fortran subroutines, which give ionization cross sections calculated using the present analytical formulas and parameter sets, can be found, in the online version, at [doi:10.1016/j.adt.2009.08.001](https://doi.org/10.1016/j.adt.2009.08.001).

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Explanation of Tables

Table 1.	Parameters of the analytical formula (2) for the ionization cross sections of K, L and M shells of the elements $Z=1-99$ by impact of electrons with overvoltages $U = E/E_{nj}$ less than 16.
Z	Atomic number
S	Active shell
E_{nj}	Ionization energy, in eV (Dirac–Fock–Slater eigenvalues)
a_i	Parameters of the analytical formula (2) for electrons

We use computer notation to indicate numerical values, e.g., 1.234E–1 means 1.234×10^{-1}

Table 2.	Parameters of the analytical formula (4) for the ionization cross sections of K, L and M shells of the elements $Z=1-99$ by impact of positrons with overvoltages $U = E/E_{nj}$ less than 16.
Z	Atomic number
S	Active shell
E_{nj}	Ionization energy, in eV (Dirac–Fock–Slater eigenvalues)
d_i	Parameters of the analytical formula (4) for positrons

We use computer notation to indicate numerical values, e.g., 1.234E–1 means 1.234×10^{-1}

Table 3.	Parameters of the high-energy analytical formula, Eqs. (1) and (5), for the ionization cross sections of K, L and M shells of the elements $Z=1-99$ by impact of electrons and positrons with kinetic energies larger than $16E_{nj}$.
Z	Atomic number
S	Active shell
b_{\pm}	Matching parameters for electrons (–) and positrons (+), Eq. (1)
A_{nj}	Squared dipole-matrix element of the active shell, Eq. (8)
g_i	Parameters of the analytical formula (5)

We use computer notation to indicate numerical values, e.g., 1.234E–1 means 1.234×10^{-1}

Table 1

Parameters of the analytical formula (2) for the ionization cross sections of K, L and M shells of the elements $Z = 1-99$ by impact of electrons with overvoltages $U = E/E_{nj}$ less than 16. See page 876 for Explanation of Tables.

Z	S	E_{nj} (eV)	a_1	a_2	a_3	a_4	a_5
1	K	1.361E+1	1.381E+0	4.611E-3	-1.417E+0	1.481E+0	-1.306E+0
2	K	2.498E+1	1.113E+0	4.781E-3	-1.483E+0	1.495E+0	-2.124E+0
3	K	5.985E+1	4.825E-1	2.164E-3	-7.372E-1	9.963E-1	-2.412E+0
4	K	1.184E+2	2.468E-1	1.177E-3	-3.540E-1	3.895E-1	-5.390E-1
5	K	1.956E+2	1.488E-1	7.157E-4	-2.091E-1	2.234E-1	-3.021E-1
6	K	2.910E+2	9.994E-2	4.881E-4	-1.391E-1	1.487E-1	-2.024E-1
7	K	4.048E+2	7.176E-2	3.621E-4	-9.912E-2	1.048E-1	-1.399E-1
8	K	5.373E+2	5.405E-2	2.812E-4	-7.430E-2	7.819E-2	-1.022E-1
9	K	6.884E+2	4.214E-2	2.282E-4	-5.764E-2	5.950E-2	-7.382E-2
10	K	8.582E+2	3.376E-2	1.916E-4	-4.594E-2	4.659E-2	-5.567E-2
11	K	1.064E+3	2.713E-2	1.593E-4	-3.639E-2	3.722E-2	-4.244E-2
	L1	6.449E+1	3.395E-1	1.018E-3	-5.439E-1	4.686E-1	-1.779E+0
12	K	1.295E+3	2.221E-2	1.363E-4	-2.936E-2	2.994E-2	-3.340E-2
	L1	8.947E+1	2.584E-1	7.908E-4	-3.923E-1	3.783E-1	-1.396E+0
	L2	5.655E+1	4.594E-1	2.758E-3	-7.718E-1	6.510E-1	-1.603E+0
	L3	5.623E+1	6.538E-1	3.923E-3	-1.098E+0	9.197E-1	-2.249E+0
13	K	1.550E+3	1.845E-2	1.192E-4	-2.405E-2	2.420E-2	-2.657E-2
	L1	1.190E+2	2.023E-1	5.956E-4	-2.945E-1	3.259E-1	-1.059E+0
	L2	8.119E+1	3.420E-1	1.813E-3	-5.546E-1	8.140E-1	-2.562E+0
	L3	8.071E+1	4.868E-1	2.588E-3	-7.885E-1	1.149E+0	-3.613E+0
14	K	1.829E+3	1.556E-2	1.060E-4	-2.007E-2	2.020E-2	-2.253E-2
	L1	1.515E+2	1.623E-1	5.205E-4	-2.236E-1	2.076E-1	-5.010E-1
	L2	1.086E+2	2.644E-1	1.405E-3	-4.085E-1	6.416E-1	-1.827E+0
	L3	1.079E+2	3.765E-1	2.008E-3	-5.809E-1	9.041E-1	-2.565E+0
15	K	2.130E+3	1.329E-2	9.575E-5	-1.694E-2	1.655E-2	-1.726E-2
	L1	1.871E+2	1.335E-1	4.551E-4	-1.764E-1	1.378E-1	-1.945E-1
	L2	1.391E+2	2.106E-1	1.167E-3	-3.100E-1	4.647E-1	-1.093E+0
	L3	1.381E+2	3.003E-1	1.662E-3	-4.419E-1	6.598E-1	-1.539E+0
16	K	2.456E+3	1.149E-2	8.737E-5	-1.452E-2	1.423E-2	-1.509E-2
	L1	2.260E+2	1.120E-1	3.966E-4	-1.437E-1	1.012E-1	-3.771E-2
	L2	1.727E+2	1.721E-1	9.909E-4	-2.432E-1	3.414E-1	-6.045E-1
	L3	1.714E+2	2.457E-1	1.412E-3	-3.472E-1	4.887E-1	-8.654E-1
17	K	2.805E+3	1.001E-2	8.116E-5	-1.253E-2	1.203E-2	-1.227E-2
	L1	2.680E+2	9.516E-2	3.579E-4	-1.180E-1	5.834E-2	1.318E-1
	L2	2.095E+2	1.436E-1	8.535E-4	-1.963E-1	2.619E-1	-3.148E-1
	L3	2.077E+2	2.051E-1	1.219E-3	-2.804E-1	3.743E-1	-4.450E-1
18	K	3.178E+3	8.804E-3	7.581E-5	-1.093E-2	1.042E-2	-1.053E-2
	L1	3.135E+2	8.190E-2	3.245E-4	-9.867E-2	3.341E-2	2.096E-1
	L2	2.494E+2	1.216E-1	7.483E-4	-1.612E-1	1.981E-1	-9.910E-2
	L3	2.471E+2	1.738E-1	1.070E-3	-2.302E-1	2.797E-1	-1.212E-1
19	K	3.583E+3	7.780E-3	7.102E-5	-9.583E-3	9.228E-3	-9.270E-3
	L1	3.712E+2	6.928E-2	2.937E-4	-7.987E-2	1.612E-2	2.334E-1
	L2	3.017E+2	1.007E-1	6.212E-4	-1.279E-1	1.571E-1	-3.141E-2
	L3	2.986E+2	1.441E-1	8.919E-4	-1.825E-1	2.187E-1	-1.568E-2
20	K	4.015E+3	6.915E-3	6.725E-5	-8.446E-3	8.198E-3	-8.636E-3
	L1	4.341E+2	5.914E-2	2.463E-4	-6.937E-2	3.727E-2	5.399E-2
	L2	3.591E+2	8.339E-2	4.792E-4	-1.060E-1	1.625E-1	-2.460E-1
	L3	3.552E+2	1.194E-1	6.855E-4	-1.516E-1	2.313E-1	-3.458E-1
	M1	5.317E+1	3.550E-1	1.486E-3	-3.505E-1	-5.167E-2	4.602E-1
21	K	4.466E+3	6.202E-3	6.357E-5	-7.563E-3	7.686E-3	-9.045E-3
	L1	4.943E+2	5.206E-2	2.215E-4	-6.080E-2	3.448E-2	3.768E-2
	L2	4.137E+2	7.234E-2	4.162E-4	-9.103E-2	1.428E-1	-2.222E-1
	L3	4.088E+2	1.037E-1	5.966E-4	-1.302E-1	2.029E-1	-3.112E-1
	M1	6.091E+1	3.090E-1	1.396E-3	-3.118E-1	-1.661E-1	7.936E-1
22	K	4.941E+3	5.575E-3	6.139E-5	-6.715E-3	6.474E-3	-6.794E-3
	L1	5.574E+2	4.625E-2	2.017E-4	-5.378E-2	3.087E-2	2.999E-2
	L2	4.712E+2	6.344E-2	3.687E-4	-7.903E-2	1.245E-1	-1.939E-1
	L3	4.652E+2	9.106E-2	5.273E-4	-1.134E-1	1.791E-1	-2.790E-1
	M1	6.861E+1	2.746E-1	1.274E-3	-2.857E-1	-2.077E-1	9.468E-1

(continued on next page)

Table 1 (continued)

Z	S	E_{nj} (eV)	a_1	a_2	a_3	a_4	a_5
23	K	5.440E+3	5.045E-3	5.907E-5	-6.040E-3	5.807E-3	-6.108E-3
	L1	6.238E+2	4.140E-2	1.851E-4	-4.796E-2	2.764E-2	2.468E-2
	L2	5.319E+2	5.614E-2	3.305E-4	-6.938E-2	1.102E-1	-1.740E-1
	L3	5.245E+2	8.068E-2	4.727E-4	-9.964E-2	1.577E-1	-2.467E-1
	M1	7.641E+1	2.490E-1	1.089E-3	-2.778E-1	-1.188E-1	7.220E-1
	M2	5.064E+1	4.025E-1	1.606E-3	-5.231E-1	3.208E-1	2.509E-1
24	K	5.963E+3	4.585E-3	5.707E-5	-5.456E-3	5.227E-3	-5.496E-3
	L1	6.934E+2	3.730E-2	1.703E-4	-4.313E-2	2.502E-2	2.062E-2
	L2	5.957E+2	5.010E-2	2.969E-4	-6.163E-2	9.897E-2	-1.581E-1
	L3	5.867E+2	7.209E-2	4.261E-4	-8.861E-2	1.419E-1	-2.252E-1
	M1	8.438E+1	2.244E-1	1.066E-3	-2.481E-1	-2.062E-1	1.001E+0
	M2	5.628E+1	3.606E-1	1.474E-3	-4.864E-1	3.576E-1	7.667E-2
	M3	5.518E+1	5.217E-1	2.123E-3	-7.127E-1	5.479E-1	3.916E-2
25	K	6.511E+3	4.184E-3	5.532E-5	-4.949E-3	4.714E-3	-4.926E-3
	L1	7.664E+2	3.378E-2	1.582E-4	-3.899E-2	2.277E-2	1.665E-2
	L2	6.629E+2	4.497E-2	2.705E-4	-5.500E-2	8.849E-2	-1.420E-1
	L3	6.521E+2	6.480E-2	3.880E-4	-7.918E-2	1.270E-1	-2.025E-1
	M1	9.257E+1	2.048E-1	9.822E-4	-2.313E-1	-2.135E-1	1.056E+0
	M2	6.208E+1	3.262E-1	1.319E-3	-4.538E-1	3.695E-1	-1.124E-2
	M3	6.073E+1	4.731E-1	1.908E-3	-6.667E-1	5.655E-1	-8.708E-2
26	K	7.083E+3	3.832E-3	5.376E-5	-4.509E-3	4.293E-3	-4.511E-3
	L1	8.429E+2	3.074E-2	1.475E-4	-3.543E-2	2.089E-2	1.319E-2
	L2	7.335E+2	4.061E-2	2.476E-4	-4.946E-2	8.020E-2	-1.308E-1
	L3	7.206E+2	5.861E-2	3.550E-4	-7.136E-2	1.154E-1	-1.866E-1
	M1	1.010E+2	1.882E-1	8.949E-4	-2.178E-1	-2.033E-1	1.049E+0
	M2	6.804E+1	2.970E-1	1.187E-3	-4.245E-1	3.761E-1	-7.507E-2
	M3	6.641E+1	4.320E-1	1.723E-3	-6.259E-1	5.786E-1	-1.868E-1
27	K	7.681E+3	3.521E-3	5.237E-5	-4.122E-3	3.919E-3	-4.127E-3
	L1	9.230E+2	2.811E-2	1.378E-4	-3.237E-2	1.932E-2	1.020E-2
	L2	8.075E+2	3.685E-2	2.278E-4	-4.471E-2	7.271E-2	-1.194E-1
	L3	7.922E+2	5.327E-2	3.274E-4	-6.455E-2	1.045E-1	-1.701E-1
	M1	1.097E+2	1.735E-1	8.255E-4	-2.038E-1	-2.103E-1	1.099E+0
	M2	7.417E+1	2.720E-1	1.073E-3	-3.985E-1	3.856E-1	-1.499E-1
	M3	7.222E+1	3.968E-1	1.558E-3	-5.899E-1	5.953E-1	-2.997E-1
28	K	8.303E+3	3.245E-3	5.114E-5	-3.783E-3	3.634E-3	-3.993E-3
	L1	1.007E+3	2.578E-2	1.299E-4	-2.964E-2	1.750E-2	9.038E-3
	L2	8.850E+2	3.360E-2	2.107E-4	-4.064E-2	6.633E-2	-1.097E-1
	L3	8.670E+2	4.864E-2	3.035E-4	-5.872E-2	9.527E-2	-1.562E-1
	M1	1.187E+2	1.606E-1	7.635E-4	-1.918E-1	-2.050E-1	1.097E+0
	M2	8.050E+1	2.502E-1	9.768E-4	-3.742E-1	3.862E-1	-1.944E-1
	M3	7.819E+1	3.662E-1	1.420E-3	-5.569E-1	6.081E-1	-4.023E-1
29	K	8.950E+3	3.000E-3	5.003E-5	-3.480E-3	3.339E-3	-3.683E-3
	L1	1.094E+3	2.374E-2	1.226E-4	-2.727E-2	1.625E-2	6.884E-3
	L2	9.660E+2	3.074E-2	1.965E-4	-3.699E-2	5.997E-2	-9.878E-2
	L3	9.449E+2	4.459E-2	2.827E-4	-5.365E-2	8.719E-2	-1.440E-1
	M1	1.279E+2	1.492E-1	7.057E-4	-1.810E-1	-1.965E-1	1.080E+0
	M2	8.704E+1	2.311E-1	8.922E-4	-3.522E-1	3.872E-1	-2.402E-1
	M3	8.431E+1	3.392E-1	1.302E-3	-5.260E-1	6.090E-1	-4.641E-1
30	K	9.623E+3	2.779E-3	4.908E-5	-3.203E-3	3.002E-3	-3.112E-3
	L1	1.185E+3	2.193E-2	1.160E-4	-2.518E-2	1.521E-2	4.880E-3
	L2	1.051E+3	2.825E-2	1.832E-4	-3.394E-2	5.545E-2	-9.247E-2
	L3	1.026E+3	4.104E-2	2.644E-4	-4.921E-2	7.991E-2	-1.323E-1
	M1	1.375E+2	1.390E-1	6.562E-4	-1.709E-1	-1.894E-1	1.063E+0
	M2	9.379E+1	2.145E-1	7.988E-4	-3.347E-1	4.090E-1	-3.553E-1
	M3	9.059E+1	3.154E-1	1.191E-3	-4.988E-1	6.172E-1	-5.491E-1
31	K	1.033E+4	2.576E-3	4.821E-5	-2.940E-3	2.610E-3	-2.254E-3
	L1	1.291E+3	2.010E-2	1.092E-4	-2.297E-2	1.480E-2	-8.090E-4
	L2	1.150E+3	2.571E-2	1.683E-4	-3.061E-2	5.061E-2	-8.654E-2
	L3	1.122E+3	3.742E-2	2.422E-4	-4.449E-2	7.342E-2	-1.256E-1
	M1	1.577E+2	1.233E-1	5.910E-4	-1.489E-1	-1.657E-1	7.536E-1
	M2	1.110E+2	1.864E-1	6.486E-4	-2.941E-1	3.450E-1	-3.456E-1
	M3	1.072E+2	2.751E-1	9.442E-4	-4.423E-1	5.478E-1	-6.108E-1
32	K	1.107E+4	2.395E-3	4.735E-5	-2.721E-3	2.437E-3	-2.193E-3
	L1	1.402E+3	1.847E-2	1.030E-4	-2.101E-2	1.429E-2	-4.747E-3
	L2	1.255E+3	2.350E-2	1.558E-4	-2.775E-2	4.679E-2	-8.279E-2
	L3	1.223E+3	3.422E-2	2.252E-4	-4.027E-2	6.681E-2	-1.158E-1
	M1	1.791E+2	1.100E-1	5.537E-4	-1.274E-1	-1.744E-1	6.403E-1
	M2	1.293E+2	1.640E-1	5.689E-4	-2.569E-1	2.769E-1	-3.342E-1
	M3	1.248E+2	2.420E-1	8.506E-4	-3.841E-1	4.107E-1	-4.647E-1

Table 1 (continued)

Z	S	E_{nif} (eV)	a_1	a_2	a_3	a_4	a_5
33	K	1.183E+4	2.232E-3	4.655E-5	-2.520E-3	2.226E-3	-1.881E-3
	L1	1.519E+3	1.701E-2	9.825E-5	-1.917E-2	1.284E-2	-4.186E-3
	L2	1.366E+3	2.155E-2	1.444E-4	-2.528E-2	4.352E-2	-7.890E-2
	L3	1.328E+3	3.146E-2	2.081E-4	-3.684E-2	6.332E-2	-1.151E-1
	M1	2.019E+2	9.912E-2	5.086E-4	-1.126E-1	-1.358E-1	3.782E-1
	M2	1.489E+2	1.458E-1	5.099E-4	-2.263E-1	2.113E-1	-2.270E-1
	M3	1.436E+2	2.159E-1	7.496E-4	-3.410E-1	3.304E-1	-3.683E-1
	M4	5.117E+1	6.015E-1	3.533E-3	-1.445E+0	4.595E+0	-9.857E+0
	M5	5.037E+1	7.465E-1	4.413E-3	-1.799E+0	5.773E+0	-1.247E+1
34	K	1.262E+4	2.085E-3	4.577E-5	-2.347E-3	2.132E-3	-1.988E-3
	L1	1.642E+3	1.571E-2	9.390E-5	-1.755E-2	1.152E-2	-3.190E-3
	L2	1.481E+3	1.982E-2	1.349E-4	-2.306E-2	4.000E-2	-7.257E-2
	L3	1.438E+3	2.898E-2	1.944E-4	-3.366E-2	5.824E-2	-1.056E-1
	M1	2.261E+2	8.990E-2	4.647E-4	-1.004E-1	-1.067E-1	2.104E-1
	M2	1.697E+2	1.306E-1	4.663E-4	-2.001E-1	1.717E-1	-2.164E-1
	M3	1.636E+2	1.938E-1	6.877E-4	-3.020E-1	2.676E-1	-3.407E-1
	M4	6.480E+1	5.037E-1	2.673E-3	-1.148E+0	3.006E+0	-5.192E+0
	M5	6.382E+1	6.259E-1	3.295E-3	-1.434E+0	3.808E+0	-6.640E+0
35	K	1.344E+4	1.950E-3	4.510E-5	-2.182E-3	1.954E-3	-1.703E-3
	L1	1.769E+3	1.456E-2	8.950E-5	-1.616E-2	1.088E-2	-4.044E-3
	L2	1.602E+3	1.829E-2	1.265E-4	-2.112E-2	3.695E-2	-6.690E-2
	L3	1.554E+3	2.678E-2	1.826E-4	-3.083E-2	5.364E-2	-9.675E-2
	M1	2.515E+2	8.216E-2	4.171E-4	-9.150E-2	-7.197E-2	5.995E-2
	M2	1.918E+2	1.177E-1	4.317E-4	-1.772E-1	1.404E-1	-2.148E-1
	M3	1.847E+2	1.749E-1	6.474E-4	-2.666E-1	2.030E-1	-2.721E-1
	M4	7.952E+1	4.231E-1	2.402E-3	-8.928E-1	1.734E+0	-1.739E+0
	M5	7.835E+1	5.258E-1	2.956E-3	-1.117E+0	2.205E+0	-2.263E+0
36	K	1.428E+4	1.828E-3	4.444E-5	-2.037E-3	1.834E-3	-1.616E-3
	L1	1.902E+3	1.352E-2	8.566E-5	-1.490E-2	1.000E-2	-3.466E-3
	L2	1.729E+3	1.689E-2	1.204E-4	-1.924E-2	3.290E-2	-5.720E-2
	L3	1.673E+3	2.479E-2	1.729E-4	-2.823E-2	4.879E-2	-8.627E-2
	M1	2.783E+2	7.527E-2	3.823E-4	-8.307E-2	-4.742E-2	-4.301E-1
	M2	2.152E+2	1.070E-1	3.939E-4	-1.597E-1	1.315E-1	-2.605E-1
	M3	2.069E+2	1.594E-1	5.870E-4	-2.415E-1	1.977E-1	-3.718E-1
	M4	9.533E+1	3.619E-1	2.166E-3	-7.123E-1	9.972E-1	-1.111E-1
	M5	9.393E+1	4.492E-1	2.697E-3	-8.882E-1	1.263E+0	-1.748E-1
37	K	1.516E+4	1.716E-3	4.378E-5	-1.909E-3	1.789E-3	-1.758E-3
	L1	2.048E+3	1.253E-2	8.237E-5	-1.363E-2	8.937E-3	-1.634E-3
	L2	1.867E+3	1.560E-2	1.133E-4	-1.751E-2	2.930E-2	-4.700E-2
	L3	1.805E+3	2.292E-2	1.632E-4	-2.568E-2	4.292E-2	-6.869E-2
	M1	3.133E+2	6.812E-2	3.452E-4	-7.287E-2	-2.056E-2	-1.070E-1
	M2	2.468E+2	9.650E-2	3.270E-4	-1.423E-1	1.569E-1	-4.018E-1
	M3	2.373E+2	1.439E-1	4.928E-4	-2.147E-1	2.332E-1	-5.852E-1
	M4	1.192E+2	3.011E-1	2.077E-3	-5.157E-1	3.470E-1	8.730E-1
	M5	1.175E+2	3.743E-1	2.558E-3	-6.450E-1	4.606E-1	1.029E+0
38	K	1.607E+4	1.613E-3	4.320E-5	-1.787E-3	1.683E-3	-1.670E-3
	L1	2.200E+3	1.164E-2	7.838E-5	-1.267E-2	9.477E-3	-7.266E-3
	L2	2.012E+3	1.442E-2	1.058E-4	-1.615E-2	2.831E-2	-4.994E-2
	L3	1.942E+3	2.124E-2	1.519E-4	-2.376E-2	4.218E-2	-7.593E-2
	M1	3.504E+2	6.200E-2	3.037E-4	-6.608E-2	1.509E-2	-2.309E-1
	M2	2.804E+2	8.746E-2	2.605E-4	-1.284E-1	1.836E-1	-5.594E-1
	M3	2.695E+2	1.305E-1	3.946E-4	-1.933E-1	2.703E-1	-8.135E-1
	M4	1.449E+2	2.602E-1	1.738E-3	-4.297E-1	3.807E-1	-5.883E-1
	M5	1.429E+2	3.231E-1	2.153E-3	-5.351E-1	4.765E-1	-7.167E-1
39	K	1.700E+4	1.520E-3	4.259E-5	-1.684E-3	1.658E-3	-1.809E-3
	L1	2.355E+3	1.084E-2	7.576E-5	-1.168E-2	8.311E-3	-5.153E-3
	L2	2.160E+3	1.338E-2	1.009E-4	-1.479E-2	2.545E-2	-4.384E-2
	L3	2.081E+3	1.973E-2	1.452E-4	-2.175E-2	3.740E-2	-6.460E-2
	M1	3.859E+2	5.686E-2	2.829E-4	-5.953E-2	2.413E-2	-2.419E-1
	M2	3.123E+2	8.001E-2	2.267E-4	-1.166E-1	1.839E-1	-5.719E-1
	M3	2.999E+2	1.197E-1	3.383E-4	-1.766E-1	2.786E-1	-8.586E-1
	M4	1.687E+2	2.317E-1	1.459E-3	-3.782E-1	4.769E-1	-1.368E+0
	M5	1.664E+2	2.877E-1	1.808E-3	-4.708E-1	5.940E-1	-1.689E+0
40	K	1.796E+4	1.434E-3	4.204E-5	-1.586E-3	1.606E-3	-1.847E-3
	L1	2.515E+3	1.013E-2	7.320E-5	-1.085E-2	7.761E-3	-5.119E-3
	L2	2.312E+3	1.246E-2	9.622E-5	-1.366E-2	2.345E-2	-4.023E-2
	L3	2.225E+3	1.841E-2	1.384E-4	-2.012E-2	3.462E-2	-5.976E-2
	M1	4.221E+2	5.243E-2	2.638E-4	-5.399E-2	2.633E-2	-2.207E-1
	M2	3.450E+2	7.358E-2	2.000E-4	-1.065E-1	1.762E-1	-5.356E-1
	M3	3.308E+2	1.104E-1	2.976E-4	-1.619E-1	2.729E-1	-8.293E-1
	M4	1.930E+2	2.084E-1	1.246E-3	-3.374E-1	5.340E-1	-1.777E+0
	M5	1.903E+2	2.588E-1	1.546E-3	-4.200E-1	6.652E-1	-2.208E+0

(continued on next page)

Table 1 (continued)

Z	S	E_{nj} (eV)	a_1	a_2	a_3	a_4	a_5
41	K	1.895E+4	1.353E-3	4.158E-5	-1.490E-3	1.481E-3	-1.583E-3
	L1	2.680E+3	9.490E-3	7.077E-5	-1.010E-2	7.282E-3	-5.101E-3
	L2	2.470E+3	1.164E-2	9.175E-5	-1.269E-2	2.209E-2	-3.860E-2
	L3	2.372E+3	1.722E-2	1.320E-4	-1.871E-2	3.252E-2	-5.689E-2
	M1	4.593E+2	4.851E-2	2.481E-4	-4.910E-2	2.504E-2	-1.883E-1
	M2	3.786E+2	6.780E-2	1.846E-4	-9.697E-2	1.624E-1	-4.778E-1
	M3	3.625E+2	1.018E-1	2.796E-4	-1.467E-1	2.408E-1	-6.966E-1
	M4	2.181E+2	1.888E-1	1.079E-3	-3.038E-1	5.604E-1	-1.947E+0
	M5	2.150E+2	2.347E-1	1.334E-3	-3.788E-1	7.021E-1	-2.435E+0
42	K	1.997E+4	1.281E-3	4.105E-5	-1.410E-3	1.450E-3	-1.642E-3
	L1	2.850E+3	8.904E-3	6.863E-5	-9.421E-3	6.801E-3	-4.885E-3
	L2	2.633E+3	1.089E-2	8.792E-5	-1.179E-2	2.055E-2	-3.593E-2
	L3	2.525E+3	1.614E-2	1.267E-4	-1.737E-2	2.990E-2	-5.148E-2
	M1	4.978E+2	4.510E-2	2.315E-4	-4.528E-2	2.797E-2	-1.763E-1
	M2	4.133E+2	6.262E-2	1.750E-4	-8.814E-2	1.455E-1	-4.106E-1
	M3	3.951E+2	9.427E-2	2.633E-4	-1.340E-1	2.192E-1	-6.095E-1
	M4	2.440E+2	1.720E-1	9.526E-4	-2.747E-1	5.591E-1	-1.954E+0
	M5	2.405E+2	2.141E-1	1.172E-3	-3.436E-1	7.096E-1	-2.479E+0
43	K	2.101E+4	1.216E-3	4.047E-5	-1.349E-3	1.522E-3	-2.044E-3
	L1	3.022E+3	8.388E-3	6.649E-5	-8.848E-3	6.499E-3	-4.999E-3
	L2	2.798E+3	1.023E-2	8.453E-5	-1.103E-2	1.927E-2	-3.361E-2
	L3	2.677E+3	1.519E-2	1.221E-4	-1.626E-2	2.801E-2	-4.805E-2
	M1	5.334E+2	4.222E-2	2.224E-4	-4.190E-2	2.401E-2	-1.518E-1
	M2	4.452E+2	5.853E-2	1.635E-4	-8.240E-2	1.375E-1	-3.816E-1
	M3	4.248E+2	8.830E-2	2.499E-4	-1.253E-1	2.047E-1	-5.572E-1
	M4	2.669E+2	1.592E-1	8.328E-4	-2.578E-1	5.913E-1	-2.115E+0
	M5	2.629E+2	1.981E-1	1.030E-3	-3.218E-1	7.417E-1	-2.652E+0
44	K	2.209E+4	1.153E-3	4.002E-5	-1.280E-3	1.482E-3	-2.048E-3
	L1	3.204E+3	7.898E-3	6.464E-5	-8.290E-3	6.117E-3	-4.844E-3
	L2	2.972E+3	9.605E-3	8.148E-5	-1.028E-2	1.779E-2	-3.054E-2
	L3	2.839E+3	1.429E-2	1.175E-4	-1.521E-2	2.626E-2	-4.518E-2
	M1	5.741E+2	3.939E-2	2.120E-4	-3.850E-2	2.080E-2	-1.209E-1
	M2	4.821E+2	5.447E-2	1.526E-4	-7.603E-2	1.269E-1	-3.344E-1
	M3	4.592E+2	8.224E-2	2.396E-4	-1.151E-1	1.818E-1	-4.622E-1
	M4	2.944E+2	1.463E-1	7.553E-4	-2.349E-1	5.646E-1	-1.986E+0
	M5	2.899E+2	1.822E-1	9.331E-4	-2.935E-1	7.104E-1	-2.500E+0
45	K	2.319E+4	1.096E-3	3.956E-5	-1.219E-3	1.478E-3	-2.181E-3
	L1	3.391E+3	7.449E-3	6.288E-5	-7.784E-3	5.787E-3	-4.748E-3
	L2	3.152E+3	9.038E-3	7.856E-5	-9.629E-3	1.688E-2	-2.951E-2
	L3	3.004E+3	1.347E-2	1.134E-4	-1.425E-2	2.459E-2	-4.232E-2
	M1	6.160E+2	3.691E-2	1.991E-4	-3.600E-2	2.328E-2	-1.148E-1
	M2	5.202E+2	5.071E-2	1.476E-4	-6.976E-2	1.121E-1	-2.755E-1
	M3	4.946E+2	7.685E-2	2.280E-4	-1.063E-1	1.643E-1	-3.875E-1
	M4	3.229E+2	1.349E-1	6.957E-4	-2.141E-1	5.283E-1	-1.822E+0
	M5	3.178E+2	1.682E-1	8.523E-4	-2.686E-1	6.696E-1	-2.295E+0
46	K	2.433E+4	1.043E-3	3.909E-5	-1.162E-3	1.443E-3	-2.138E-3
	L1	3.585E+3	7.034E-3	6.136E-5	-7.313E-3	5.412E-3	-4.396E-3
	L2	3.337E+3	8.513E-3	7.616E-5	-9.000E-3	1.558E-2	-2.676E-2
	L3	3.175E+3	1.272E-2	1.097E-4	-1.337E-2	2.307E-2	-3.968E-2
	M1	6.593E+2	3.458E-2	1.913E-4	-3.318E-2	1.981E-2	-9.017E-2
	M2	5.597E+2	4.728E-2	1.451E-4	-6.387E-2	9.627E-2	-2.148E-1
	M3	5.310E+2	7.181E-2	2.257E-4	-9.743E-2	1.386E-1	-2.874E-1
	M4	3.525E+2	1.245E-1	6.539E-4	-1.944E-1	4.751E-1	-1.579E+0
	M5	3.467E+2	1.553E-1	8.067E-4	-2.437E-1	6.040E-1	-2.010E+0
47	K	2.549E+4	9.930E-4	3.866E-5	-1.109E-3	1.421E-3	-2.160E-3
	L1	3.784E+3	6.651E-3	5.995E-5	-6.878E-3	5.045E-3	-3.976E-3
	L2	3.528E+3	8.036E-3	7.369E-5	-8.467E-3	1.484E-2	-2.598E-2
	L3	3.350E+3	1.204E-2	1.061E-4	-1.261E-2	2.204E-2	-3.868E-2
	M1	7.040E+2	3.247E-2	1.834E-4	-3.075E-2	1.742E-2	-7.135E-2
	M2	6.004E+2	4.420E-2	1.417E-4	-5.875E-2	8.294E-2	-1.632E-1
	M3	5.685E+2	6.730E-2	2.211E-4	-8.983E-2	1.189E-1	-2.115E-1
	M4	3.830E+2	1.155E-1	6.126E-4	-1.780E-1	4.338E-1	-1.389E+0
	M5	3.765E+2	1.441E-1	7.579E-4	-2.229E-1	5.474E-1	-1.747E+0
48	K	2.669E+4	9.462E-4	3.824E-5	-1.059E-3	1.383E-3	-2.112E-3
	L1	3.994E+3	6.285E-3	5.866E-5	-6.457E-3	4.707E-3	-3.671E-3
	L2	3.731E+3	7.574E-3	7.165E-5	-7.903E-3	1.362E-2	-2.330E-2
	L3	3.535E+3	1.137E-2	1.030E-4	-1.180E-2	2.028E-2	-3.465E-2
	M1	7.556E+2	3.023E-2	1.803E-4	-2.741E-2	8.257E-2	-2.079E-1
	M2	6.480E+2	4.095E-2	1.451E-4	-5.218E-2	5.988E-2	-7.081E-1
	M3	6.126E+2	6.251E-2	2.249E-4	-8.010E-2	8.653E-2	-8.207E-1
	M4	4.201E+2	1.058E-1	6.134E-4	-1.550E-1	3.366E-1	-9.420E-1
	M5	4.128E+2	1.320E-1	7.641E-4	-1.935E-1	4.177E-1	-1.163E+0

Table 1 (continued)

Z	S	$E_{n\ell j}$ (eV)	a_1	a_2	a_3	a_4	a_5
49	K	2.792E+4	9.035E-4	3.778E-5	-1.017E-3	1.405E-3	-2.276E-3
	L1	4.214E+3	5.947E-3	5.725E-5	-6.083E-3	4.544E-3	-3.771E-3
	L2	3.943E+3	7.152E-3	6.951E-5	-7.420E-3	1.290E-2	-2.219E-2
	L3	3.728E+3	1.076E-2	1.002E-4	-1.106E-2	1.887E-2	-3.169E-2
	M1	8.113E+2	2.815E-2	1.762E-4	-2.437E-2	1.390E-3	1.894E-2
	M2	6.997E+2	3.808E-2	1.411E-4	-4.713E-2	4.916E-2	-2.702E-2
	M3	6.605E+2	5.817E-2	2.229E-4	-7.183E-2	6.449E-2	8.651E-3
	M4	4.609E+2	9.715E-2	6.077E-4	-1.345E-1	2.514E-1	-5.433E-1
	M5	4.527E+2	1.213E-1	7.516E-4	-1.688E-1	3.189E-1	-6.868E-1
50	K	2.918E+4	8.630E-4	3.737E-5	-9.755E-4	1.380E-3	-2.239E-3
	L1	4.440E+3	5.630E-3	5.613E-5	-5.712E-3	4.137E-3	-2.905E-3
	L2	4.161E+3	6.758E-3	6.770E-5	-6.949E-3	1.191E-2	-1.986E-2
	L3	3.926E+3	1.019E-2	9.740E-5	-1.040E-2	1.765E-2	-2.911E-2
	M1	8.689E+2	2.630E-2	1.713E-4	-2.193E-2	-1.795E-3	4.216E-2
	M2	7.532E+2	3.539E-2	1.420E-4	-4.195E-2	3.170E-2	4.369E-2
	M3	7.099E+2	5.422E-2	2.223E-4	-6.425E-2	4.109E-2	1.037E-1
	M4	5.032E+2	8.965E-2	5.946E-4	-1.183E-1	1.930E-1	-2.732E-1
	M5	4.941E+2	1.120E-1	7.371E-4	-1.482E-1	2.428E-1	-3.360E-1
51	K	3.048E+4	8.254E-4	3.694E-5	-9.376E-4	1.367E-3	-2.245E-3
	L1	4.674E+3	5.339E-3	5.496E-5	-5.386E-3	3.923E-3	-2.660E-3
	L2	4.386E+3	6.394E-3	6.605E-5	-6.520E-3	1.108E-2	-1.809E-2
	L3	4.130E+3	9.672E-3	9.465E-5	-9.818E-3	1.689E-2	-2.816E-2
	M1	9.289E+2	2.468E-2	1.630E-4	-2.020E-2	-1.089E-3	4.912E-2
	M2	8.091E+2	3.299E-2	1.412E-4	-3.768E-2	2.185E-2	7.832E-2
	M3	7.614E+2	5.074E-2	2.169E-4	-5.830E-2	2.950E-2	1.497E-1
	M4	5.475E+2	8.297E-2	5.817E-4	-1.043E-1	1.455E-1	-6.102E-2
	M5	5.374E+2	1.039E-1	7.129E-4	-1.318E-1	1.917E-1	-9.977E-2
52	K	3.181E+4	7.901E-4	3.654E-5	-9.028E-4	1.368E-3	-2.308E-3
	L1	4.914E+3	5.066E-3	5.394E-5	-5.078E-3	3.658E-3	-2.199E-3
	L2	4.618E+3	6.058E-3	6.449E-5	-6.131E-3	1.035E-2	-1.658E-2
	L3	4.339E+3	9.185E-3	9.237E-5	-9.254E-3	1.586E-2	-2.598E-2
	M1	9.911E+2	2.314E-2	1.581E-4	-1.828E-2	-3.533E-3	6.699E-2
	M2	8.671E+2	3.088E-2	1.365E-4	-3.427E-2	1.478E-2	1.072E-1
	M3	8.146E+2	4.761E-2	2.100E-4	-5.317E-2	2.034E-2	1.855E-1
	M4	5.935E+2	7.717E-2	5.605E-4	-9.322E-2	1.132E-1	8.697E-2
	M5	5.824E+2	9.641E-2	7.014E-4	-1.163E-1	1.385E-1	1.267E-1
53	K	3.317E+4	7.580E-4	3.610E-5	-8.748E-4	1.396E-3	-2.440E-3
	L1	5.162E+3	4.815E-3	5.286E-5	-4.807E-3	3.559E-3	-2.319E-3
	L2	4.858E+3	5.748E-3	6.294E-5	-5.786E-3	9.816E-3	-1.564E-2
	L3	4.554E+3	8.730E-3	9.039E-5	-8.710E-3	1.464E-2	-2.294E-2
	M1	1.056E+3	2.180E-2	1.506E-4	-1.699E-2	-2.401E-3	7.102E-2
	M2	9.273E+2	2.899E-2	1.312E-4	-3.148E-2	1.192E-2	1.172E-1
	M3	8.697E+2	4.465E-2	2.086E-4	-4.789E-2	5.401E-2	2.431E-1
	M4	6.413E+2	7.199E-2	5.396E-4	-8.384E-2	8.922E-2	1.926E-1
	M5	6.290E+2	9.029E-2	6.630E-4	-1.065E-1	1.252E-1	2.046E-1
54	K	3.456E+4	7.274E-4	3.569E-5	-8.477E-4	1.429E-3	-2.619E-3
	L1	5.417E+3	4.577E-3	5.205E-5	-4.530E-3	3.164E-3	-1.162E-3
	L2	5.104E+3	5.442E-3	6.213E-5	-5.381E-3	8.803E-3	-1.342E-2
	L3	4.775E+3	8.308E-3	8.852E-5	-8.215E-3	1.363E-2	-2.063E-2
	M1	1.122E+3	2.059E-2	1.426E-4	-1.591E-2	-5.921E-4	6.979E-2
	M2	9.897E+2	2.719E-2	1.289E-4	-2.856E-2	5.108E-3	1.423E-1
	M3	9.265E+2	4.192E-2	2.072E-4	-4.313E-2	-6.964E-3	2.860E-1
	M4	6.909E+2	6.743E-2	5.148E-4	-7.646E-2	7.799E-2	2.366E-1
	M5	6.774E+2	8.441E-2	6.421E-4	-9.566E-2	9.459E-2	3.282E-1
55	K	3.599E+4	6.986E-4	3.527E-5	-8.204E-4	1.418E-3	-2.592E-3
	L1	5.685E+3	4.349E-3	5.125E-5	-4.267E-3	2.932E-3	-9.391E-4
	L2	5.364E+3	5.176E-3	6.041E-5	-5.119E-3	8.485E-3	-1.280E-2
	L3	5.006E+3	7.903E-3	8.666E-5	-7.741E-3	1.274E-2	-1.886E-2
	M1	1.197E+3	1.930E-2	1.390E-4	-1.423E-2	-3.973E-3	9.048E-2
	M2	1.060E+3	2.541E-2	1.266E-4	-2.540E-2	-3.095E-3	1.716E-1
	M3	9.906E+2	3.929E-2	2.022E-4	-3.869E-2	-1.237E-2	2.953E-1
	M4	7.477E+2	6.341E-2	4.726E-4	-7.127E-2	7.687E-2	2.731E-1
	M5	7.328E+2	7.948E-2	5.899E-4	-8.973E-2	1.054E-1	3.074E-1
56	K	3.745E+4	6.725E-4	3.483E-5	-8.017E-4	1.484E-3	-2.865E-3
	L1	5.961E+3	4.141E-3	5.020E-5	-4.060E-3	2.942E-3	-1.640E-3
	L2	5.631E+3	4.919E-3	5.897E-5	-4.850E-3	8.176E-3	-1.285E-2
	L3	5.243E+3	7.528E-3	8.456E-5	-7.348E-3	1.228E-2	-1.896E-2
	M1	1.274E+3	1.819E-2	1.222E-4	-1.542E-2	-1.665E-3	1.665E-2
	M2	1.133E+3	2.358E-2	1.081E-4	-2.573E-2	1.984E-2	2.384E-2
	M3	1.057E+3	3.658E-2	1.698E-4	-3.978E-2	2.632E-2	5.485E-2
	M4	8.066E+2	5.603E-2	3.820E-4	-6.539E-2	1.141E-1	-1.498E-1
	M5	7.903E+2	7.022E-2	4.736E-4	-8.212E-2	1.445E-1	-1.905E-1

(continued on next page)

Table 1 (continued)

Z	S	E_{nif} (eV)	a_1	a_2	a_3	a_4	a_5
57	K	3.894E+4	6.474E-4	3.442E-5	-7.809E-4	1.509E-3	-2.971E-3
	L1	6.242E+3	3.948E-3	4.935E-5	-3.856E-3	2.860E-3	-1.800E-3
	L2	5.903E+3	4.680E-3	5.782E-5	-4.588E-3	7.735E-3	-1.214E-2
	L3	5.484E+3	7.182E-3	8.287E-5	-6.966E-3	1.164E-2	-1.796E-2
	M1	1.351E+3	1.716E-2	1.159E-4	-1.476E-2	1.661E-2	-3.079E-2
	M2	1.205E+3	2.211E-2	1.027E-4	-2.409E-2	2.055E-2	7.598E-3
	M3	1.123E+3	3.440E-2	1.600E-4	-3.748E-2	2.916E-2	2.235E-2
	M4	8.648E+2	5.197E-2	3.457E-4	-6.061E-2	1.157E-1	-2.043E-1
	M5	8.470E+2	6.513E-2	4.287E-4	-7.606E-2	1.456E-1	-2.547E-1
58	K	4.046E+4	6.240E-4	3.401E-5	-7.619E-4	1.531E-3	-3.064E-3
	L1	6.522E+3	3.772E-3	4.862E-5	-3.672E-3	2.736E-3	-1.747E-3
	L2	6.173E+3	4.468E-3	5.674E-5	-4.373E-3	7.491E-3	-1.208E-2
	L3	5.720E+3	6.874E-3	8.144E-5	-6.634E-3	1.107E-2	-1.701E-2
	M1	1.419E+3	1.635E-2	1.116E-4	-1.411E-2	1.671E-2	-3.262E-2
	M2	1.269E+3	2.099E-2	9.920E-5	-2.284E-2	1.998E-2	4.276E-3
	M3	1.179E+3	3.277E-2	1.546E-4	-3.568E-2	2.852E-2	1.626E-2
	M4	9.144E+2	4.912E-2	3.278E-4	-5.708E-2	1.103E-1	-1.987E-1
	M5	8.949E+2	6.158E-2	4.081E-4	-7.158E-2	1.384E-1	-2.473E-1
59	K	4.202E+4	6.015E-4	3.364E-5	-7.419E-4	1.539E-3	-3.117E-3
	L1	6.808E+3	3.608E-3	4.791E-5	-3.503E-3	2.632E-3	-1.727E-3
	L2	6.451E+3	4.266E-3	5.589E-5	-4.147E-3	6.983E-3	-1.093E-2
	L3	5.962E+3	6.585E-3	8.008E-5	-6.328E-3	1.056E-2	-1.623E-2
	M1	1.489E+3	1.559E-2	1.075E-4	-1.351E-2	1.680E-2	-3.436E-2
	M2	1.335E+3	1.995E-2	9.631E-5	-2.165E-2	1.887E-2	3.688E-3
	M3	1.237E+3	3.127E-2	1.499E-4	-3.400E-2	2.761E-2	1.243E-2
	M4	9.647E+2	4.654E-2	3.115E-4	-5.396E-2	1.059E-1	-1.949E-1
	M5	9.434E+2	5.835E-2	3.899E-4	-6.747E-2	1.313E-1	-2.385E-1
60	K	4.361E+4	5.809E-4	3.324E-5	-7.270E-4	1.578E-3	-3.276E-3
	L1	7.102E+3	3.453E-3	4.725E-5	-3.343E-3	2.529E-3	-1.694E-3
	L2	6.736E+3	4.078E-3	5.502E-5	-3.948E-3	6.646E-3	-1.039E-2
	L3	6.208E+3	6.317E-3	7.872E-5	-6.057E-3	1.026E-2	-1.615E-2
	M1	1.561E+3	1.488E-2	1.040E-4	-1.291E-2	1.646E-2	-3.447E-2
	M2	1.402E+3	1.900E-2	9.318E-5	-2.060E-2	1.825E-2	1.952E-3
	M3	1.296E+3	2.987E-2	1.456E-4	-3.244E-2	2.656E-2	9.728E-3
	M4	1.016E+3	4.414E-2	2.984E-4	-5.087E-2	9.937E-2	-1.819E-1
	M5	9.928E+2	5.542E-2	3.722E-4	-6.388E-2	1.250E-1	-2.278E-1
61	K	4.523E+4	5.610E-4	3.286E-5	-7.094E-4	1.575E-3	-3.269E-3
	L1	7.402E+3	3.307E-3	4.663E-5	-3.192E-3	2.428E-3	-1.651E-3
	L2	7.027E+3	3.902E-3	5.419E-5	-3.765E-3	6.350E-3	-9.947E-3
	L3	6.459E+3	6.063E-3	7.753E-5	-5.790E-3	9.803E-3	-1.542E-2
	M1	1.634E+3	1.422E-2	1.005E-4	-1.238E-2	1.651E-2	-3.594E-2
	M2	1.471E+3	1.810E-2	9.062E-5	-1.959E-2	1.742E-2	1.057E-3
	M3	1.356E+3	2.857E-2	1.419E-4	-3.096E-2	2.532E-2	8.073E-3
	M4	1.068E+3	4.194E-2	2.863E-4	-4.813E-2	9.437E-2	-1.742E-1
	M5	1.043E+3	5.269E-2	3.580E-4	-6.035E-2	1.173E-1	-2.126E-1
62	K	4.688E+4	5.429E-4	3.245E-5	-6.977E-4	1.611E-3	-3.393E-3
	L1	7.710E+3	3.171E-3	4.599E-5	-3.059E-3	2.414E-3	-1.916E-3
	L2	7.326E+3	3.736E-3	5.343E-5	-3.590E-3	6.042E-3	-9.426E-3
	L3	6.715E+3	5.821E-3	7.653E-5	-5.522E-3	9.190E-3	-1.401E-2
	M1	1.709E+3	1.360E-2	9.761E-5	-1.182E-2	1.579E-2	-3.442E-2
	M2	1.541E+3	1.727E-2	8.817E-5	-1.866E-2	1.665E-2	2.931E-4
	M3	1.416E+3	2.736E-2	1.384E-4	-2.960E-2	2.423E-2	6.681E-3
	M4	1.121E+3	3.992E-2	2.749E-4	-4.562E-2	8.942E-2	-1.652E-1
	M5	1.094E+3	5.021E-2	3.430E-4	-5.736E-2	1.121E-1	-2.048E-1
63	K	4.858E+4	5.251E-4	3.209E-5	-6.826E-4	1.617E-3	-3.428E-3
	L1	8.026E+3	3.041E-3	4.546E-5	-2.920E-3	2.255E-3	-1.599E-3
	L2	7.633E+3	3.579E-3	5.269E-5	-3.429E-3	5.781E-3	-9.040E-3
	L3	6.976E+3	5.595E-3	7.549E-5	-5.286E-3	8.783E-3	-1.334E-2
	M1	1.786E+3	1.303E-2	9.414E-5	-1.141E-2	1.617E-2	-3.671E-2
	M2	1.613E+3	1.648E-2	8.607E-5	-1.776E-2	1.567E-2	4.606E-4
	M3	1.478E+3	2.623E-2	1.352E-4	-2.832E-2	2.309E-2	5.967E-3
	M4	1.176E+3	3.808E-2	2.632E-4	-4.348E-2	8.633E-2	-1.623E-1
	M5	1.146E+3	4.792E-2	3.296E-4	-5.460E-2	1.074E-1	-1.979E-1
64	K	5.030E+4	5.090E-4	3.169E-5	-6.720E-4	1.646E-3	-3.525E-3
	L1	8.350E+3	2.918E-3	4.491E-5	-2.796E-3	2.176E-3	-1.571E-3
	L2	7.947E+3	3.432E-3	5.200E-5	-3.277E-3	5.529E-3	-8.648E-3
	L3	7.242E+3	5.385E-3	7.441E-5	-5.081E-3	8.583E-3	-1.342E-2
	M1	1.864E+3	1.247E-2	9.167E-5	-1.090E-2	1.546E-2	-3.533E-2
	M2	1.687E+3	1.576E-2	8.385E-5	-1.696E-2	1.513E-2	-5.513E-4
	M3	1.541E+3	2.516E-2	1.321E-4	-2.715E-2	2.220E-2	4.554E-3
	M4	1.231E+3	3.636E-2	2.525E-4	-4.151E-2	8.372E-2	-1.604E-1
	M5	1.199E+3	4.578E-2	3.174E-4	-5.204E-2	1.032E-1	-1.928E-1

Table 1 (continued)

Z	S	$E_{n\ell j}$ (eV)	a_1	a_2	a_3	a_4	a_5
65	K	5.207E+4	4.936E-4	3.130E-5	-6.625E-4	1.684E-3	-3.669E-3
	L1	8.681E+3	2.803E-3	4.439E-5	-2.679E-3	2.102E-3	-1.550E-3
	L2	8.269E+3	3.292E-3	5.135E-5	-3.132E-3	5.283E-3	-8.251E-3
	L3	7.513E+3	5.182E-3	7.357E-5	-4.858E-3	8.060E-3	-1.219E-2
	M1	1.945E+3	1.195E-2	8.909E-5	-1.045E-2	1.504E-2	-3.468E-2
	M2	1.763E+3	1.507E-2	8.195E-5	-1.617E-2	1.425E-2	-9.558E-5
	M3	1.605E+3	2.417E-2	1.291E-4	-2.605E-2	2.140E-2	3.086E-3
	M4	1.288E+3	3.474E-2	2.436E-4	-3.954E-2	7.996E-2	-1.540E-1
	M5	1.253E+3	4.380E-2	3.058E-4	-4.970E-2	9.931E-2	-1.871E-1
66	K	5.387E+4	4.787E-4	3.093E-5	-6.513E-4	1.699E-3	-3.727E-3
	L1	9.021E+3	2.693E-3	4.389E-5	-2.568E-3	2.031E-3	-1.527E-3
	L2	8.599E+3	3.159E-3	5.078E-5	-2.992E-3	5.007E-3	-7.718E-3
	L3	7.789E+3	4.992E-3	7.269E-5	-4.663E-3	7.734E-3	-1.169E-2
	M1	2.028E+3	1.147E-2	8.670E-5	-1.002E-2	1.462E-2	-3.471E-2
	M2	1.840E+3	1.442E-2	7.980E-5	-1.549E-2	1.389E-2	-1.266E-3
	M3	1.671E+3	2.324E-2	1.259E-4	-2.506E-2	2.080E-2	1.924E-3
	M4	1.345E+3	3.325E-2	2.346E-4	-3.779E-2	7.697E-2	-1.495E-1
	M5	1.308E+3	4.193E-2	2.956E-4	-4.743E-2	9.487E-2	-1.793E-1
67	K	5.571E+4	4.644E-4	3.058E-5	-6.396E-4	1.700E-3	-3.732E-3
	L1	9.369E+3	2.589E-3	4.343E-5	-2.466E-3	2.009E-3	-1.699E-3
	L2	8.937E+3	3.036E-3	5.010E-5	-2.877E-3	4.917E-3	-7.841E-3
	L3	8.070E+3	4.814E-3	7.173E-5	-4.495E-3	7.589E-3	-1.182E-2
	M1	2.112E+3	1.100E-2	8.444E-5	-9.620E-3	1.420E-2	-3.351E-2
	M2	1.920E+3	1.381E-2	7.810E-5	-1.480E-2	1.317E-2	-1.076E-3
	M3	1.737E+3	2.236E-2	1.233E-4	-2.410E-2	2.015E-2	6.754E-4
	M4	1.404E+3	3.183E-2	2.271E-4	-3.605E-2	7.324E-2	-1.420E-1
	M5	1.364E+3	4.021E-2	2.850E-4	-4.545E-2	9.162E-2	-1.746E-1
68	K	5.758E+4	4.509E-4	3.021E-5	-6.290E-4	1.701E-3	-3.728E-3
	L1	9.725E+3	2.488E-3	4.303E-5	-2.354E-3	1.803E-3	-1.114E-3
	L2	9.284E+3	2.916E-3	4.962E-5	-2.748E-3	4.638E-3	-7.251E-3
	L3	8.355E+3	4.640E-3	7.112E-5	-4.294E-3	7.017E-3	-1.028E-2
	M1	2.199E+3	1.057E-2	8.228E-5	-9.237E-3	1.380E-2	-3.289E-2
	M2	2.001E+3	1.324E-2	7.624E-5	-1.418E-2	1.270E-2	-1.458E-3
	M3	1.805E+3	2.153E-2	1.210E-4	-2.315E-2	1.917E-2	6.436E-4
	M4	1.464E+3	3.051E-2	2.200E-4	-3.446E-2	7.027E-2	-1.371E-1
	M5	1.421E+3	3.859E-2	2.757E-4	-4.356E-2	8.834E-2	-1.696E-1
69	K	5.950E+4	4.384E-4	2.985E-5	-6.206E-4	1.719E-3	-3.790E-3
	L1	1.009E+4	2.396E-3	4.255E-5	-2.266E-3	1.793E-3	-1.266E-3
	L2	9.638E+3	2.804E-3	4.907E-5	-2.635E-3	4.438E-3	-6.896E-3
	L3	8.646E+3	4.478E-3	7.037E-5	-4.129E-3	6.759E-3	-9.953E-3
	M1	2.287E+3	1.015E-2	8.021E-5	-8.862E-3	1.327E-2	-3.169E-2
	M2	2.085E+3	1.271E-2	7.435E-5	-1.362E-2	1.245E-2	-2.504E-3
	M3	1.874E+3	2.074E-2	1.185E-4	-2.230E-2	1.852E-2	-8.469E-5
	M4	1.525E+3	2.927E-2	2.133E-4	-3.296E-2	6.684E-2	-1.292E-1
	M5	1.479E+3	3.707E-2	2.670E-4	-4.177E-2	8.476E-2	-1.625E-1
70	K	6.145E+4	4.264E-4	2.948E-5	-6.128E-4	1.737E-3	-3.850E-3
	L1	1.046E+4	2.307E-3	4.210E-5	-2.183E-3	1.787E-3	-1.436E-3
	L2	1.000E+4	2.694E-3	4.871E-5	-2.508E-3	4.110E-3	-6.124E-3
	L3	8.942E+3	4.328E-3	6.951E-5	-3.990E-3	6.620E-3	-9.939E-3
	M1	2.378E+3	9.758E-3	7.844E-5	-8.497E-3	1.279E-2	-3.080E-2
	M2	2.171E+3	1.219E-2	7.291E-5	-1.306E-2	1.203E-2	-2.874E-3
	M3	1.945E+3	2.000E-2	1.163E-4	-2.148E-2	1.780E-2	-2.652E-4
	M4	1.587E+3	2.811E-2	2.068E-4	-3.160E-2	6.424E-2	-1.244E-1
	M5	1.538E+3	3.565E-2	2.590E-4	-4.013E-2	8.214E-2	-1.591E-1
71	K	6.344E+4	4.151E-4	2.912E-5	-6.056E-4	1.755E-3	-3.911E-3
	L1	1.085E+4	2.223E-3	4.165E-5	-2.104E-3	1.782E-3	-1.591E-3
	L2	1.037E+4	2.597E-3	4.805E-5	-2.426E-3	4.086E-3	-6.320E-3
	L3	9.243E+3	4.183E-3	6.880E-5	-3.851E-3	6.460E-3	-9.877E-3
	M1	2.471E+3	9.390E-3	7.641E-5	-8.198E-3	1.264E-2	-3.076E-2
	M2	2.259E+3	1.171E-2	7.126E-5	-1.253E-2	1.159E-2	-3.055E-3
	M3	2.016E+3	1.930E-2	1.142E-4	-2.071E-2	1.710E-2	-4.826E-4
	M4	1.651E+3	2.702E-2	2.008E-4	-3.033E-2	6.188E-2	-1.204E-1
	M5	1.597E+3	3.431E-2	2.514E-4	-3.857E-2	7.923E-2	-1.542E-1
72	K	6.548E+4	4.043E-4	2.876E-5	-5.989E-4	1.774E-3	-3.975E-3
	L1	1.125E+4	2.141E-3	4.121E-5	-2.023E-3	1.751E-3	-1.651E-3
	L2	1.076E+4	2.498E-3	4.757E-5	-2.326E-3	3.928E-3	-6.111E-3
	L3	9.558E+3	4.038E-3	6.815E-5	-3.695E-3	6.128E-3	-9.207E-3
	M1	2.576E+3	9.003E-3	7.408E-5	-7.893E-3	1.275E-2	-3.232E-2
	M2	2.359E+3	1.119E-2	6.949E-5	-1.194E-2	1.128E-2	-4.879E-3
	M3	2.099E+3	1.852E-2	1.116E-4	-1.981E-2	1.668E-2	-3.697E-3
	M4	1.725E+3	2.580E-2	1.919E-4	-2.891E-2	6.057E-2	-1.245E-1
	M5	1.668E+3	3.279E-2	2.399E-4	-3.687E-2	7.827E-2	-1.618E-1

(continued on next page)

Table 1 (continued)

Z	S	E_{nj} (eV)	a_1	a_2	a_3	a_4	a_5
73	K	6.757E+4	3.944E-4	2.837E-5	-5.946E-4	1.805E-3	-4.071E-3
	L1	1.166E+4	2.062E-3	4.080E-5	-1.945E-3	1.719E-3	-1.694E-3
	L2	1.116E+4	2.403E-3	4.711E-5	-2.231E-3	3.775E-3	-5.896E-3
	L3	9.879E+3	3.904E-3	6.736E-5	-3.572E-3	6.064E-3	-9.473E-3
	M1	2.685E+3	8.632E-3	7.207E-5	-7.586E-3	1.270E-2	-3.297E-2
	M2	2.462E+3	1.070E-2	6.800E-5	-1.136E-2	1.069E-2	-4.991E-3
	M3	2.184E+3	1.778E-2	1.088E-4	-1.898E-2	1.650E-2	-7.258E-3
	M4	1.802E+3	2.466E-2	1.838E-4	-2.761E-2	5.952E-2	-1.279E-1
	M5	1.741E+3	3.136E-2	2.299E-4	-3.518E-2	7.650E-2	-1.650E-1
74	K	6.969E+4	3.840E-4	2.804E-5	-5.851E-4	1.793E-3	-4.029E-3
	L1	1.208E+4	1.987E-3	4.041E-5	-1.872E-3	1.696E-3	-1.774E-3
	L2	1.157E+4	2.314E-3	4.663E-5	-2.142E-3	3.639E-3	-5.703E-3
	L3	1.021E+4	3.772E-3	6.677E-5	-3.429E-3	5.718E-3	-8.642E-3
	M1	2.797E+3	8.280E-3	7.016E-5	-7.288E-3	1.260E-2	-3.341E-2
	M2	2.568E+3	1.023E-2	6.642E-5	-1.083E-2	1.035E-2	-5.981E-3
	M3	2.271E+3	1.709E-2	1.063E-4	-1.820E-2	1.643E-2	-1.114E-2
	M4	1.881E+3	2.358E-2	1.767E-4	-2.630E-2	5.743E-2	-1.264E-1
	M5	1.815E+3	3.002E-2	2.206E-4	-3.358E-2	7.429E-2	-1.648E-1
75	K	7.186E+4	3.748E-4	2.768E-5	-5.803E-4	1.814E-3	-4.093E-3
	L1	1.251E+4	1.915E-3	4.003E-5	-1.801E-3	1.662E-3	-1.791E-3
	L2	1.199E+4	2.228E-3	4.622E-5	-2.056E-3	3.512E-3	-5.557E-3
	L3	1.054E+4	3.648E-3	6.614E-5	-3.303E-3	5.511E-3	-8.314E-3
	M1	2.912E+3	7.948E-3	6.823E-5	-7.014E-3	1.255E-2	-3.380E-2
	M2	2.678E+3	9.796E-3	6.489E-5	-1.034E-2	1.019E-2	-7.647E-3
	M3	2.360E+3	1.642E-2	1.041E-4	-1.742E-2	1.590E-2	-1.253E-2
	M4	1.961E+3	2.257E-2	1.703E-4	-2.506E-2	5.521E-2	-1.232E-1
	M5	1.892E+3	2.874E-2	2.130E-4	-3.197E-2	7.118E-2	-1.604E-1
76	K	7.407E+4	3.657E-4	2.733E-5	-5.740E-4	1.821E-3	-4.115E-3
	L1	1.295E+4	1.846E-3	3.968E-5	-1.730E-3	1.585E-3	-1.628E-3
	L2	1.242E+4	2.147E-3	4.579E-5	-1.976E-3	3.385E-3	-5.374E-3
	L3	1.088E+4	3.531E-3	6.554E-5	-3.190E-3	5.411E-3	-8.420E-3
	M1	3.030E+3	7.635E-3	6.633E-5	-6.765E-3	1.264E-2	-3.468E-2
	M2	2.791E+3	9.379E-3	6.359E-5	-9.856E-3	9.755E-3	-7.821E-3
	M3	2.451E+3	1.579E-2	1.023E-4	-1.666E-2	1.528E-2	-1.339E-2
	M4	2.044E+3	2.161E-2	1.652E-4	-2.381E-2	5.266E-2	-1.190E-1
	M5	1.970E+3	2.754E-2	2.060E-4	-3.044E-2	6.826E-2	-1.560E-1
77	K	7.632E+4	3.570E-4	2.700E-5	-5.675E-4	1.826E-3	-4.134E-3
	L1	1.340E+4	1.781E-3	3.931E-5	-1.667E-3	1.559E-3	-1.654E-3
	L2	1.287E+4	2.070E-3	4.536E-5	-1.901E-3	3.277E-3	-5.236E-3
	L3	1.122E+4	3.417E-3	6.501E-5	-3.068E-3	5.115E-3	-7.691E-3
	M1	3.152E+3	7.334E-3	6.469E-5	-6.500E-3	1.243E-2	-3.434E-2
	M2	2.907E+3	8.986E-3	6.229E-5	-9.404E-3	9.370E-3	-7.947E-3
	M3	2.545E+3	1.520E-2	1.002E-4	-1.598E-2	1.483E-2	-1.414E-2
	M4	2.129E+3	2.073E-2	1.592E-4	-2.280E-2	5.133E-2	-1.180E-1
	M5	2.050E+3	2.641E-2	1.998E-4	-2.898E-2	6.471E-2	-1.472E-1
78	K	7.862E+4	3.488E-4	2.665E-5	-5.629E-4	1.843E-3	-4.191E-3
	L1	1.386E+4	1.719E-3	3.895E-5	-1.608E-3	1.536E-3	-1.686E-3
	L2	1.331E+4	1.998E-3	4.489E-5	-1.838E-3	3.244E-3	-5.368E-3
	L3	1.157E+4	3.313E-3	6.432E-5	-2.981E-3	5.110E-3	-8.033E-3
	M1	3.274E+3	7.051E-3	6.336E-5	-6.234E-3	1.201E-2	-3.348E-2
	M2	3.023E+3	8.637E-3	6.042E-5	-9.088E-3	9.841E-3	-1.120E-2
	M3	2.637E+3	1.466E-2	9.830E-5	-1.539E-2	1.454E-2	-1.588E-2
	M4	2.212E+3	1.990E-2	1.545E-4	-2.181E-2	4.933E-2	-1.147E-1
	M5	2.129E+3	2.538E-2	1.934E-4	-2.777E-2	6.255E-2	-1.457E-1
79	K	8.096E+4	3.417E-4	2.628E-5	-5.614E-4	1.874E-3	-4.282E-3
	L1	1.434E+4	1.660E-3	3.860E-5	-1.551E-3	1.512E-3	-1.709E-3
	L2	1.378E+4	1.927E-3	4.450E-5	-1.769E-3	3.137E-3	-5.213E-3
	L3	1.192E+4	3.210E-3	6.382E-5	-2.871E-3	4.847E-3	-7.392E-3
	M1	3.402E+3	6.777E-3	6.194E-5	-5.987E-3	1.174E-2	-3.284E-2
	M2	3.145E+3	8.286E-3	5.917E-5	-8.695E-3	9.568E-3	-1.143E-2
	M3	2.734E+3	1.412E-2	9.652E-5	-1.477E-2	1.402E-2	-1.611E-2
	M4	2.301E+3	1.910E-2	1.504E-4	-2.080E-2	4.721E-2	-1.104E-1
	M5	2.212E+3	2.439E-2	1.877E-4	-2.661E-2	6.094E-2	-1.439E-1
80	K	8.335E+4	3.334E-4	2.597E-5	-5.529E-4	1.861E-3	-4.248E-3
	L1	1.483E+4	1.603E-3	3.825E-5	-1.497E-3	1.495E-3	-1.746E-3
	L2	1.426E+4	1.859E-3	4.414E-5	-1.699E-3	2.981E-3	-4.848E-3
	L3	1.229E+4	3.110E-3	6.331E-5	-2.770E-3	4.668E-3	-7.068E-3
	M1	3.538E+3	6.513E-3	6.047E-5	-5.752E-3	1.156E-2	-3.210E-2
	M2	3.275E+3	7.925E-3	5.887E-5	-8.176E-3	8.186E-3	-7.511E-3
	M3	2.837E+3	1.361E-2	9.436E-5	-1.420E-2	1.404E-2	-1.735E-2
	M4	2.395E+3	1.834E-2	1.458E-4	-1.986E-2	4.520E-2	-1.039E-1
	M5	2.300E+3	2.343E-2	1.824E-4	-2.534E-2	5.773E-2	-1.336E-1

Table 1 (continued)

Z	S	$E_{n\ell j}$ (eV)	a_1	a_2	a_3	a_4	a_5
81	K	8.580E+4	3.264E−4	2.562E−5	−5.497E−4	1.879E−3	−4.307E−3
	L1	1.533E+4	1.547E−3	3.793E−5	−1.444E−3	1.493E−3	−1.860E−3
	L2	1.475E+4	1.792E−3	4.383E−5	−1.630E−3	2.857E−3	−4.636E−3
	L3	1.266E+4	3.014E−3	6.281E−5	−2.674E−3	4.518E−3	−6.843E−3
	M1	3.679E+3	6.248E−3	5.952E−5	−5.444E−3	1.056E−2	−2.786E−2
	M2	3.410E+3	7.597E−3	5.778E−5	−7.782E−3	7.696E−3	−6.253E−3
	M3	2.944E+3	1.308E−2	9.366E−5	−1.343E−2	1.215E−2	−1.151E−2
	M4	2.493E+3	1.758E−2	1.435E−4	−1.873E−2	4.179E−2	−9.246E−2
	M5	2.393E+3	2.249E−2	1.784E−4	−2.404E−2	5.426E−2	−1.213E−1
82	K	8.829E+4	3.192E−4	2.530E−5	−5.440E−4	1.882E−3	−4.322E−3
	L1	1.585E+4	1.495E−3	3.757E−5	−1.393E−3	1.455E−3	−1.779E−3
	L2	1.525E+4	1.731E−3	4.339E−5	−1.579E−3	2.840E−3	−4.764E−3
	L3	1.304E+4	2.926E−3	6.218E−5	−2.600E−3	4.517E−3	−7.129E−3
	M1	3.824E+3	6.009E−3	5.805E−5	−5.242E−3	1.061E−2	−2.837E−2
	M2	3.549E+3	7.279E−3	5.708E−5	−7.372E−3	6.992E−3	−4.405E−3
	M3	3.054E+3	1.261E−2	9.207E−5	−1.284E−2	1.140E−2	−9.438E−3
	M4	2.594E+3	1.689E−2	1.400E−4	−1.784E−2	3.977E−2	−8.537E−2
	M5	2.488E+3	2.162E−2	1.748E−4	−2.285E−2	5.131E−2	−1.112E−1
83	K	9.083E+4	3.126E−4	2.497E−5	−5.396E−4	1.884E−3	−4.319E−3
	L1	1.638E+4	1.445E−3	3.724E−5	−1.346E−3	1.444E−3	−1.811E−3
	L2	1.577E+4	1.671E−3	4.309E−5	−1.515E−3	2.691E−3	−4.391E−3
	L3	1.342E+4	2.838E−3	6.171E−5	−2.512E−3	4.357E−3	−6.810E−3
	M1	3.974E+3	5.772E−3	5.703E−5	−4.995E−3	1.012E−2	−2.642E−2
	M2	3.693E+3	6.980E−3	5.620E−5	−7.001E−3	6.431E−3	−2.874E−3
	M3	3.166E+3	1.214E−2	9.122E−5	−1.219E−2	9.930E−3	−4.930E−3
	M4	2.697E+3	1.623E−2	1.366E−4	−1.696E−2	3.715E−2	−7.527E−2
	M5	2.585E+3	2.079E−2	1.706E−4	−2.174E−2	4.832E−2	−9.999E−2
84	K	9.342E+4	3.057E−4	2.466E−5	−5.332E−4	1.880E−3	−4.321E−3
	L1	1.692E+4	1.396E−3	3.693E−5	−1.300E−3	1.443E−3	−1.905E−3
	L2	1.630E+4	1.613E−3	4.274E−5	−1.460E−3	2.605E−3	−4.248E−3
	L3	1.382E+4	2.754E−3	6.130E−5	−2.426E−3	4.198E−3	−6.491E−3
	M1	4.128E+3	5.549E−3	5.600E−5	−4.766E−3	9.638E−3	−2.446E−2
	M2	3.841E+3	6.697E−3	5.541E−5	−6.657E−3	6.000E−3	−1.835E−3
	M3	3.281E+3	1.170E−2	8.966E−5	−1.166E−2	9.385E−3	−3.162E−3
	M4	2.803E+3	1.562E−2	1.333E−4	−1.619E−2	3.561E−2	−6.971E−2
	M5	2.684E+3	2.002E−2	1.665E−4	−2.075E−2	4.607E−2	−9.152E−2
85	K	9.607E+4	3.001E−4	2.431E−5	−5.318E−4	1.904E−3	−4.392E−3
	L1	1.747E+4	1.350E−3	3.658E−5	−1.259E−3	1.428E−3	−1.892E−3
	L2	1.684E+4	1.559E−3	4.235E−5	−1.412E−3	2.550E−3	−4.188E−3
	L3	1.421E+4	2.673E−3	6.090E−5	−2.338E−3	3.970E−3	−5.873E−3
	M1	4.286E+3	5.339E−3	5.487E−5	−4.568E−3	9.382E−3	−2.338E−2
	M2	3.993E+3	6.430E−3	5.449E−5	−6.346E−3	5.658E−3	−9.983E−4
	M3	3.398E+3	1.128E−2	8.887E−5	−1.110E−2	8.344E−3	8.045E−5
	M4	2.911E+3	1.501E−2	1.314E−4	−1.528E−2	3.223E−2	−5.716E−2
	M5	2.785E+3	1.925E−2	1.640E−4	−1.957E−2	4.128E−2	−7.294E−2
86	K	9.876E+4	2.942E−4	2.398E−5	−5.281E−4	1.910E−3	−4.412E−3
	L1	1.804E+4	1.305E−3	3.630E−5	−1.214E−3	1.397E−3	−1.858E−3
	L2	1.740E+4	1.507E−3	4.201E−5	−1.366E−3	2.523E−3	−4.269E−3
	L3	1.462E+4	2.597E−3	6.039E−5	−2.269E−3	3.886E−3	−5.757E−3
	M1	4.449E+3	5.136E−3	5.392E−5	−4.362E−3	8.974E−3	−2.179E−2
	M2	4.149E+3	6.172E−3	5.383E−5	−6.025E−3	5.142E−3	3.760E−4
	M3	3.518E+3	1.089E−2	8.767E−5	−1.060E−2	7.645E−3	2.145E−3
	M4	3.022E+3	1.447E−2	1.280E−4	−1.465E−2	3.121E−2	−5.346E−2
	M5	2.889E+3	1.853E−2	1.615E−4	−1.852E−2	3.757E−2	−5.940E−2
87	K	1.015E+5	2.860E−4	2.380E−5	−5.119E−4	1.838E−3	−4.205E−3
	L1	1.863E+4	1.263E−3	3.594E−5	−1.178E−3	1.409E−3	−1.938E−3
	L2	1.797E+4	1.456E−3	4.168E−5	−1.316E−3	2.416E−3	−3.992E−3
	L3	1.503E+4	2.523E−3	5.993E−5	−2.199E−3	3.784E−3	−5.581E−3
	M1	4.620E+3	4.937E−3	5.296E−5	−4.145E−3	8.346E−3	−1.880E−2
	M2	4.314E+3	5.958E−3	5.116E−5	−5.888E−3	5.654E−3	−5.591E−4
	M3	3.645E+3	1.064E−2	8.017E−5	−1.097E−2	1.437E−2	−2.068E−2
	M4	3.139E+3	1.416E−2	1.169E−4	−1.552E−2	4.484E−2	−1.022E−1
	M5	2.999E+3	1.787E−2	1.578E−4	−1.773E−2	3.670E−2	−5.534E−2
88	K	1.043E+5	2.799E−4	2.352E−5	−5.064E−4	1.848E−3	−4.272E−3
	L1	1.923E+4	1.222E−3	3.566E−5	−1.138E−3	1.390E−3	−1.966E−3
	L2	1.856E+4	1.408E−3	4.134E−5	−1.272E−3	2.359E−3	−3.950E−3
	L3	1.546E+4	2.451E−3	5.951E−5	−2.130E−3	3.687E−3	−5.504E−3
	M1	4.796E+3	4.751E−3	5.179E−5	−4.023E−3	8.626E−3	−2.123E−2
	M2	4.483E+3	5.678E−3	5.201E−5	−5.485E−3	4.779E−3	−3.507E−4
	M3	3.774E+3	1.012E−2	8.501E−5	−9.718E−3	7.140E−3	4.418E−4
	M4	3.259E+3	1.333E−2	1.211E−4	−1.329E−2	2.849E−2	−4.947E−2
	M5	3.111E+3	1.717E−2	1.515E−4	−1.708E−2	3.676E−2	−6.308E−2

(continued on next page)

Table 1 (continued)

Z	S	E_{nif} (eV)	a_1	a_2	a_3	a_4	a_5
89	K	1.072E+5	2.751E-4	2.318E-5	-5.050E-4	1.865E-3	-4.316E-3
	L1	1.985E+4	1.184E-3	3.528E-5	-1.109E-3	1.441E-3	-2.213E-3
	L2	1.916E+4	1.361E-3	4.105E-5	-1.230E-3	2.333E-3	-4.039E-3
	L3	1.588E+4	2.384E-3	5.901E-5	-2.072E-3	3.634E-3	-5.513E-3
	M1	4.975E+3	4.574E-3	5.067E-5	-3.890E-3	8.629E-3	-2.202E-2
	M2	4.656E+3	5.450E-3	5.106E-5	-5.258E-3	4.783E-3	-1.738E-3
	M3	3.904E+3	9.761E-3	8.342E-5	-9.377E-3	7.381E-3	-2.925E-3
	M4	3.379E+3	1.281E-2	1.169E-4	-1.279E-2	2.836E-2	-5.413E-2
	M5	3.223E+3	1.649E-2	1.458E-4	-1.641E-2	3.646E-2	-6.954E-2
90	K	1.101E+5	2.677E-4	2.300E-5	-4.902E-4	1.803E-3	-4.147E-3
	L1	2.047E+4	1.145E-3	3.503E-5	-1.070E-3	1.386E-3	-2.073E-3
	L2	1.978E+4	1.317E-3	4.072E-5	-1.189E-3	2.249E-3	-3.831E-3
	L3	1.631E+4	2.319E-3	5.865E-5	-2.009E-3	3.532E-3	-5.353E-3
	M1	5.153E+3	4.408E-3	4.982E-5	-3.737E-3	8.374E-3	-2.144E-2
	M2	4.827E+3	5.243E-3	5.031E-5	-5.037E-3	4.614E-3	-1.858E-3
	M3	4.031E+3	9.442E-3	8.234E-5	-9.025E-3	7.105E-3	-3.120E-3
	M4	3.497E+3	1.237E-2	1.139E-4	-1.232E-2	2.778E-2	-5.426E-2
	M5	3.333E+3	1.592E-2	1.421E-4	-1.582E-2	3.576E-2	-6.989E-2
91	K	1.131E+5	2.629E-4	2.268E-5	-4.878E-4	1.818E-3	-4.205E-3
	L1	2.111E+4	1.111E-3	3.466E-5	-1.045E-3	1.437E-3	-2.304E-3
	L2	2.040E+4	1.275E-3	4.041E-5	-1.152E-3	2.206E-3	-3.794E-3
	L3	1.674E+4	2.258E-3	5.820E-5	-1.957E-3	3.478E-3	-5.326E-3
	M1	5.335E+3	4.250E-3	4.904E-5	-3.586E-3	8.078E-3	-2.067E-2
	M2	5.003E+3	5.045E-3	4.960E-5	-4.825E-3	4.426E-3	-1.854E-3
	M3	4.159E+3	9.141E-3	8.130E-5	-8.695E-3	6.845E-3	-3.228E-3
	M4	3.616E+3	1.193E-2	1.117E-4	-1.181E-2	2.645E-2	-5.124E-2
	M5	3.443E+3	1.538E-2	1.392E-4	-1.518E-2	3.409E-2	-6.615E-2
92	K	1.161E+5	2.582E-4	2.236E-5	-4.846E-4	1.818E-3	-4.195E-3
	L1	2.177E+4	1.076E-3	3.440E-5	-1.011E-3	1.418E-3	-2.302E-3
	L2	2.104E+4	1.233E-3	4.015E-5	-1.113E-3	2.142E-3	-3.699E-3
	L3	1.718E+4	2.200E-3	5.778E-5	-1.906E-3	3.423E-3	-5.287E-3
	M1	5.522E+3	4.100E-3	4.825E-5	-3.449E-3	7.871E-3	-2.026E-2
	M2	5.182E+3	4.856E-3	4.901E-5	-4.613E-3	4.183E-3	-1.578E-3
	M3	4.289E+3	8.849E-3	8.048E-5	-8.353E-3	6.355E-3	-2.375E-3
	M4	3.736E+3	1.153E-2	1.094E-4	-1.136E-2	2.556E-2	-4.977E-2
	M5	3.554E+3	1.488E-2	1.358E-4	-1.467E-2	3.354E-2	-6.647E-2
93	K	1.192E+5	2.544E-4	2.200E-5	-4.853E-4	1.847E-3	-4.283E-3
	L1	2.244E+4	1.043E-3	3.407E-5	-9.834E-4	1.409E-3	-2.287E-3
	L2	2.170E+4	1.194E-3	3.985E-5	-1.079E-3	2.104E-3	-3.668E-3
	L3	1.763E+4	2.143E-3	5.741E-5	-1.854E-3	3.350E-3	-5.193E-3
	M1	5.712E+3	3.957E-3	4.751E-5	-3.314E-3	7.621E-3	-1.963E-2
	M2	5.366E+3	4.675E-3	4.839E-5	-4.418E-3	3.955E-3	-1.287E-3
	M3	4.421E+3	8.576E-3	7.957E-5	-8.054E-3	6.122E-3	-2.519E-3
	M4	3.859E+3	1.115E-2	1.071E-4	-1.094E-2	2.476E-2	-4.848E-2
	M5	3.667E+3	1.440E-2	1.331E-4	-1.413E-2	3.244E-2	-6.455E-2
94	K	1.223E+5	2.494E-4	2.173E-5	-4.797E-4	1.840E-3	-4.271E-3
	L1	2.313E+4	1.010E-3	3.381E-5	-9.523E-4	1.385E-3	-2.260E-3
	L2	2.238E+4	1.157E-3	3.949E-5	-1.051E-3	2.091E-3	-3.704E-3
	L3	1.808E+4	2.090E-3	5.699E-5	-1.812E-3	3.365E-3	-5.424E-3
	M1	5.908E+3	3.820E-3	4.680E-5	-3.185E-3	7.392E-3	-1.908E-2
	M2	5.555E+3	4.505E-3	4.777E-5	-4.238E-3	3.794E-3	-1.230E-3
	M3	4.555E+3	8.317E-3	7.863E-5	-7.779E-3	5.893E-3	-2.422E-3
	M4	3.983E+3	1.078E-2	1.051E-4	-1.054E-2	2.393E-2	-4.702E-2
	M5	3.781E+3	1.394E-2	1.307E-4	-1.360E-2	3.100E-2	-6.109E-2
95	K	1.256E+5	2.452E-4	2.140E-5	-4.758E-4	1.832E-3	-4.242E-3
	L1	2.383E+4	9.797E-4	3.352E-5	-9.239E-4	1.355E-3	-2.171E-3
	L2	2.307E+4	1.121E-3	3.920E-5	-1.020E-3	2.060E-3	-3.686E-3
	L3	1.853E+4	2.035E-3	5.670E-5	-1.753E-3	3.157E-3	-4.769E-3
	M1	6.108E+3	3.688E-3	4.613E-5	-3.060E-3	7.154E-3	-1.850E-2
	M2	5.748E+3	4.342E-3	4.710E-5	-4.073E-3	3.684E-3	-1.300E-3
	M3	4.690E+3	8.071E-3	7.771E-5	-7.520E-3	5.722E-3	-2.550E-3
	M4	4.108E+3	1.044E-2	1.032E-4	-1.017E-2	2.320E-2	-4.577E-2
	M5	3.897E+3	1.351E-2	1.282E-4	-1.313E-2	3.011E-2	-5.964E-2
96	K	1.288E+5	2.416E-4	2.105E-5	-4.754E-4	1.848E-3	-4.288E-3
	L1	2.455E+4	9.505E-4	3.321E-5	-8.996E-4	1.365E-3	-2.251E-3
	L2	2.378E+4	1.073E-3	3.980E-5	-9.264E-4	1.665E-3	-2.683E-3
	L3	1.899E+4	1.986E-3	5.631E-5	-1.711E-3	3.127E-3	-4.800E-3
	M1	6.313E+3	3.562E-3	4.548E-5	-2.940E-3	6.911E-3	-1.789E-2
	M2	5.946E+3	4.186E-3	4.651E-5	-3.909E-3	3.563E-3	-1.374E-3
	M3	4.828E+3	7.835E-3	7.684E-5	-7.281E-3	5.616E-3	-2.913E-3
	M4	4.236E+3	1.010E-2	1.017E-4	-9.811E-3	2.256E-2	-4.462E-2
	M5	4.014E+3	1.310E-2	1.257E-4	-1.272E-2	2.967E-2	-5.989E-2

Table 1 (continued)

Z	S	$E_{n\ell j}$ (eV)	a_1	a_2	a_3	a_4	a_5
97	K	1.322E+5	2.367E−4	2.082E−5	−4.687E−4	1.835E−3	−4.263E−3
	L1	2.529E+4	9.225E−4	3.291E−5	−8.775E−4	1.398E−3	−2.427E−3
	L2	2.450E+4	1.048E−3	3.887E−5	−9.404E−4	1.850E−3	−3.195E−3
	L3	1.946E+4	1.936E−3	5.601E−5	−1.664E−3	3.040E−3	−4.648E−3
	M1	6.523E+3	3.441E−3	4.487E−5	−2.822E−3	6.666E−3	−1.728E−2
	M2	6.149E+3	4.037E−3	4.591E−5	−3.757E−3	3.434E−3	−1.288E−3
	M3	4.968E+3	7.606E−3	7.610E−5	−7.026E−3	5.321E−3	−2.493E−3
	M4	4.366E+3	9.794E−3	9.964E−5	−9.471E−3	2.177E−2	−4.322E−2
	M5	4.133E+3	1.270E−2	1.236E−4	−1.229E−2	2.874E−2	−5.812E−2
98	K	1.356E+5	2.310E−4	2.065E−5	−4.584E−4	1.806E−3	−4.202E−3
	L1	2.605E+4	8.951E−4	3.262E−5	−8.531E−4	1.376E−3	−2.364E−3
	L2	2.525E+4	1.012E−3	3.885E−5	−8.957E−4	1.744E−3	−3.020E−3
	L3	1.993E+4	1.892E−3	5.558E−5	−1.636E−3	3.084E−3	−4.891E−3
	M1	6.739E+3	3.325E−3	4.430E−5	−2.708E−3	6.424E−3	−1.668E−2
	M2	6.358E+3	3.894E−3	4.530E−5	−3.614E−3	3.348E−3	−1.386E−3
	M3	5.109E+3	7.390E−3	7.532E−5	−6.799E−3	5.144E−3	−2.461E−3
	M4	4.498E+3	9.494E−3	9.802E−5	−9.148E−3	2.111E−2	−4.202E−2
	M5	4.253E+3	1.232E−2	1.218E−4	−1.184E−2	2.741E−2	−5.468E−2
99	K	1.391E+5	2.268E−4	2.036E−5	−4.533E−4	1.795E−3	−4.172E−3
	L1	2.683E+4	8.700E−4	3.228E−5	−8.376E−4	1.441E−3	−2.644E−3
	L2	2.601E+4	9.851E−4	3.828E−5	−8.887E−4	1.806E−3	−3.203E−3
	L3	2.041E+4	1.848E−3	5.517E−5	−1.603E−3	3.114E−3	−5.171E−3
	M1	6.960E+3	3.214E−3	4.370E−5	−2.603E−3	6.224E−3	−1.619E−2
	M2	6.572E+3	3.757E−3	4.474E−5	−3.476E−3	3.255E−3	−1.423E−3
	M3	5.253E+3	7.182E−3	7.457E−5	−6.581E−3	4.958E−3	−2.330E−3
	M4	4.632E+3	9.208E−3	9.652E−5	−8.838E−3	2.045E−2	−4.076E−2
	M5	4.375E+3	1.197E−2	1.196E−4	−1.150E−2	2.708E−2	−5.500E−2

Table 2
Parameters of the analytical formula (4) for the ionization cross sections of K, L and M shells of the elements $Z = 1$ –99 by impact of positrons with overvoltages $U = E/E_{nj}$ less than 16. See page 876 for Explanation of Tables.

Z	S	E_{nj} (eV)	d_1	d_2	d_3	d_4	d_5
1	K	1.361E+1	1.075E+0	5.977E−3	6.653E−1	−1.255E+1	1.222E+1
2	K	2.498E+1	1.106E+0	8.496E−4	−8.196E−1	−2.820E+0	−2.528E+1
3	K	5.985E+1	7.329E−1	4.764E−4	−6.647E−1	−1.398E+0	−9.538E+0
4	K	1.184E+2	5.217E−1	4.593E−4	−4.236E−1	−1.264E+0	−5.051E+0
5	K	1.956E+2	4.043E−1	3.857E−4	−3.132E−1	−1.077E+0	−3.720E+0
6	K	2.910E+2	3.305E−1	3.537E−4	−2.468E−1	−9.432E−1	−2.753E+0
7	K	4.048E+2	2.798E−1	3.215E−4	−2.047E−1	−8.298E−1	−2.138E+0
8	K	5.373E+2	2.424E−1	3.101E−4	−1.735E−1	−7.449E−1	−1.699E+0
9	K	6.884E+2	2.140E−1	2.956E−4	−1.517E−1	−6.664E−1	−1.435E+0
10	K	8.582E+2	1.914E−1	2.890E−4	−1.339E−1	−6.097E−1	−1.186E+0
11	K	1.064E+3	1.715E−1	2.777E−4	−1.168E−1	−5.613E−1	−1.185E+0
	L1	6.449E+1	5.941E−1	4.298E−4	−3.827E−1	−3.091E+0	1.026E+0
12	K	1.295E+3	1.549E−1	2.778E−4	−1.020E−1	−5.253E−1	−1.147E+0
	L1	8.947E+1	5.132E−1	5.430E−4	−2.730E−1	−2.752E+0	4.109E−2
	L2	5.655E+1	7.505E−1	1.938E−4	−1.286E+0	1.002E−1	−5.920E+0
	L3	5.623E+1	8.951E−1	2.358E−4	−1.533E+0	1.160E−1	−7.076E+0
13	K	1.550E+3	1.411E−1	2.705E−4	−9.103E−2	−4.882E−1	−1.140E+0
	L1	1.190E+2	4.490E−1	6.241E−4	−1.910E−1	−2.506E+0	−2.912E−1
	L2	8.119E+1	6.439E−1	9.221E−5	−1.033E+0	−2.166E−1	−4.551E+0
	L3	8.071E+1	7.680E−1	1.217E−4	−1.229E+0	−2.673E−1	−5.413E+0
14	K	1.829E+3	1.295E−1	2.718E−4	−8.146E−2	−4.591E−1	−1.101E+0
	L1	1.515E+2	4.005E−1	6.554E−4	−1.424E−1	−2.286E+0	−3.967E−1
	L2	1.086E+2	5.668E−1	3.642E−5	−8.719E−1	−3.213E−1	−3.783E+0
	L3	1.079E+2	6.763E−1	5.191E−5	−1.039E+0	−3.899E−1	−4.499E+0
15	K	2.130E+3	1.195E−1	2.782E−4	−7.272E−2	−4.381E−1	−1.026E+0
	L1	1.871E+2	3.619E−1	6.690E−4	−1.083E−1	−2.119E+0	−1.714E−1
	L2	1.391E+2	5.073E−1	5.346E−6	−7.554E−1	−3.854E−1	−2.896E+0
	L3	1.381E+2	6.050E−1	3.697E−5	−8.970E−1	−4.823E−1	−3.366E+0
16	K	2.456E+3	1.109E−1	2.842E−4	−6.572E−2	−4.159E−1	−9.851E−1
	L1	2.260E+2	3.310E−1	6.434E−4	−8.995E−2	−1.937E+0	−2.244E−1
	L2	1.727E+2	4.593E−1	2.036E−6	−6.654E−1	−4.217E−1	−2.294E+0
	L3	1.714E+2	5.487E−1	3.759E−6	−7.942E−1	−5.025E−1	−2.770E+0
17	K	2.805E+3	1.035E−1	2.883E−4	−6.022E−2	−3.935E−1	−9.529E−1
	L1	2.680E+2	3.048E−1	6.322E−4	−7.331E−2	−1.804E+0	−1.021E−1
	L2	2.095E+2	4.194E−1	2.358E−5	−5.907E−1	−4.626E−1	−1.664E+0
	L3	2.077E+2	5.013E−1	2.770E−5	−7.055E−1	−5.519E−1	−2.000E+0
18	K	3.178E+3	9.698E−2	2.924E−4	−5.549E−2	−3.737E−1	−9.135E−1
	L1	3.135E+2	2.822E−1	6.319E−4	−5.846E−2	−1.699E+0	5.762E−2
	L2	2.494E+2	3.863E−1	3.277E−5	−5.335E−1	−4.654E−1	−1.333E+0
	L3	2.471E+2	4.618E−1	4.285E−5	−6.371E−1	−5.517E−1	−1.726E+0
19	K	3.583E+3	9.113E−2	2.956E−4	−5.168E−2	−3.519E−1	−9.138E−1
	L1	3.712E+2	2.583E−1	6.615E−4	−3.752E−2	−1.633E+0	−7.369E−2
	L2	3.017E+2	3.512E−1	3.479E−5	−4.648E−1	−5.567E−1	−9.418E−1
	L3	2.986E+2	4.201E−1	4.297E−5	−5.549E−1	−6.694E−1	−1.111E+0
20	K	4.015E+3	8.580E−2	3.040E−4	−4.746E−2	−3.368E−1	−8.961E−1
	L1	4.341E+2	2.372E−1	6.649E−4	−2.695E−2	−1.587E+0	−2.570E−1
	L2	3.591E+2	3.181E−1	2.454E−5	−4.070E−1	−6.728E−1	−5.127E−1
	L3	3.552E+2	3.807E−1	2.590E−5	−4.869E−1	−8.022E−1	−6.404E−1
	M1	5.317E+1	6.019E−1	1.008E−3	−1.363E−1	−5.286E+0	1.405E+1
21	K	4.466E+3	8.116E−2	3.093E−4	−4.440E−2	−3.211E−1	−8.638E−1
	L1	4.943E+2	2.220E−1	6.541E−4	−2.082E−2	−1.518E+0	−1.104E−1
	L2	4.137E+2	2.961E−1	2.823E−5	−3.726E−1	−6.759E−1	−2.214E−1
	L3	4.088E+2	3.544E−1	3.298E−5	−4.456E−1	−8.088E−1	−2.840E−1
	M1	6.091E+1	5.639E−1	9.572E−4	−1.588E−1	−4.918E+0	1.315E+1
22	K	4.941E+3	7.692E−2	3.181E−4	−4.115E−2	−3.097E−1	−8.168E−1
	L1	5.574E+2	2.086E−1	6.501E−4	−1.460E−2	−1.464E+0	9.007E−2
	L2	4.712E+2	2.771E−1	3.347E−5	−3.443E−1	−6.685E−1	3.125E−3
	L3	4.652E+2	3.319E−1	4.124E−5	−4.112E−1	−8.078E−1	4.944E−2
	M1	6.861E+1	5.334E−1	8.888E−4	−1.808E−1	−4.551E+0	1.209E+1

Table 2 (continued)

Z	S	E_{n0} (eV)	d_1	d_2	d_3	d_4	d_5
23	K	5.440E+3	7.310E-2	3.260E-4	-3.849E-2	-2.975E-1	-7.868E-1
	L1	6.238E+2	1.970E-1	6.365E-4	-1.141E-2	-1.403E+0	2.038E-1
	L2	5.319E+2	2.605E-1	4.328E-5	-3.194E-1	-6.644E-1	2.267E-1
	L3	5.245E+2	3.123E-1	4.780E-5	-3.828E-1	-7.944E-1	2.560E-1
	M1	7.641E+1	5.069E-1	8.346E-4	-1.933E-1	-4.273E+0	1.163E+1
	M2	5.064E+1	7.175E-1	-1.397E-3	-1.013E+0	-1.830E+0	6.724E+0
24	K	5.963E+3	6.962E-2	3.343E-4	-3.619E-2	-2.852E-1	-7.657E-1
	L1	6.934E+2	1.869E-1	6.168E-4	-1.018E-2	-1.339E+0	2.485E-1
	L2	5.957E+2	2.459E-1	4.741E-5	-2.993E-1	-6.455E-1	3.218E-1
	L3	5.867E+2	2.952E-1	4.778E-5	-3.599E-1	-7.670E-1	3.425E-1
	M1	8.438E+1	4.835E-1	7.879E-4	-2.032E-1	-4.011E+0	1.097E+1
	M2	5.628E+1	6.785E-1	-1.281E-3	-9.787E-1	-1.640E+0	6.426E+0
25	K	6.511E+3	6.647E-2	3.416E-4	-3.419E-2	-2.739E-1	-7.422E-1
	L1	7.664E+2	1.777E-1	6.026E-4	-8.266E-3	-1.286E+0	3.355E-1
	L2	6.629E+2	2.331E-1	4.764E-5	-2.826E-1	-6.215E-1	3.793E-1
	L3	6.521E+2	2.799E-1	5.093E-5	-3.394E-1	-7.433E-1	4.399E-1
	M1	9.257E+1	4.625E-1	7.515E-4	-2.095E-1	-3.785E+0	1.045E+1
	M2	6.208E+1	6.454E-1	-1.227E-3	-9.561E-1	-1.431E+0	5.992E+0
26	K	7.083E+3	6.360E-2	3.479E-4	-3.261E-2	-2.622E-1	-7.233E-1
	L1	8.429E+2	1.692E-1	5.952E-4	-6.099E-3	-1.239E+0	4.051E-1
	L2	7.335E+2	2.214E-1	5.226E-5	-2.670E-1	-6.033E-1	4.496E-1
	L3	7.206E+2	2.660E-1	5.893E-5	-3.203E-1	-7.268E-1	5.596E-1
	M1	1.010E+2	4.438E-1	7.077E-4	-2.156E-1	-3.577E+0	1.001E+1
	M2	6.804E+1	6.148E-1	-1.127E-3	-9.258E-1	-1.294E+0	5.788E+0
27	K	7.681E+3	6.091E-2	3.568E-4	-3.082E-2	-2.531E-1	-6.985E-1
	L1	9.230E+2	1.617E-1	5.808E-4	-5.284E-3	-1.191E+0	4.512E-1
	L2	8.075E+2	2.109E-1	5.716E-5	-2.532E-1	-5.843E-1	5.013E-1
	L3	7.922E+2	2.535E-1	6.705E-5	-3.035E-1	-7.065E-1	6.330E-1
	M1	1.097E+2	4.266E-1	6.687E-4	-2.190E-1	-3.402E+0	9.765E+0
	M2	7.417E+1	5.880E-1	-1.069E-3	-9.023E-1	-1.149E+0	5.490E+0
28	K	8.303E+3	5.844E-2	3.646E-4	-2.931E-2	-2.441E-1	-6.741E-1
	L1	1.007E+3	1.547E-1	5.733E-4	-3.537E-3	-1.152E+0	5.177E-1
	L2	8.850E+2	2.014E-1	5.893E-5	-2.413E-1	-5.639E-1	5.305E-1
	L3	8.670E+2	2.423E-1	6.786E-5	-2.899E-1	-6.782E-1	6.388E-1
	M1	1.187E+2	4.110E-1	6.259E-4	-2.230E-1	-3.230E+0	9.411E+0
	M2	8.050E+1	5.636E-1	-1.011E-3	-8.797E-1	-1.019E+0	5.174E+0
29	K	8.950E+3	5.616E-2	3.718E-4	-2.807E-2	-2.347E-1	-6.583E-1
	L1	1.094E+3	1.483E-1	5.608E-4	-3.040E-3	-1.110E+0	5.533E-1
	L2	9.660E+2	1.926E-1	6.761E-5	-2.292E-1	-5.521E-1	6.085E-1
	L3	9.449E+2	2.319E-1	7.701E-5	-2.757E-1	-6.634E-1	7.232E-1
	M1	1.279E+2	3.960E-1	6.081E-4	-2.221E-1	-3.092E+0	9.182E+0
	M2	8.704E+1	5.412E-1	-9.580E-4	-8.574E-1	-9.077E-1	4.901E+0
30	K	8.431E+1	6.539E-1	-1.106E-3	-1.038E+0	-1.037E+0	5.601E+0
	L1	9.623E+3	5.405E-2	3.797E-4	-2.694E-2	-2.257E-1	-6.468E-1
	L2	1.185E+3	1.426E-1	5.458E-4	-3.333E-3	-1.067E+0	5.479E-1
	L3	1.051E+3	1.846E-1	7.005E-5	-2.196E-1	-5.304E-1	5.951E-1
	M1	1.026E+3	2.224E-1	8.272E-5	-2.638E-1	-6.423E-1	7.365E-1
	M2	1.375E+2	3.826E-1	5.740E-4	-2.232E-1	-2.956E+0	8.948E+0
31	K	9.379E+1	5.199E-1	-8.741E-4	-8.322E-1	-8.272E-1	4.739E+0
	L1	9.059E+1	6.293E-1	-1.014E-3	-1.011E+0	-9.306E-1	5.361E+0
	L2	1.033E+4	5.204E-2	3.871E-4	-2.583E-2	-2.175E-1	-6.361E-1
	L3	1.291E+3	1.361E-1	5.460E-4	-4.129E-4	-1.037E+0	5.019E-1
	M1	1.150E+3	1.759E-1	7.665E-5	-2.059E-1	-5.323E-1	6.141E-1
	M2	1.122E+3	2.121E-1	9.163E-5	-2.471E-1	-6.477E-1	7.763E-1
32	K	1.577E+2	3.581E-1	6.270E-4	-1.833E-1	-2.827E+0	6.691E+0
	L1	1.110E+2	4.787E-1	-7.341E-4	-7.083E-1	-1.229E+0	5.485E+0
	L2	1.072E+2	5.799E-1	-8.458E-4	-8.618E-1	-1.420E+0	6.292E+0
	L3	1.107E+4	5.019E-2	3.937E-4	-2.500E-2	-2.084E-1	-6.360E-1
	M1	1.402E+3	1.304E-1	5.374E-4	9.234E-4	-1.002E+0	4.358E-1
	M2	1.255E+3	1.680E-1	8.344E-5	-1.937E-1	-5.307E-1	6.100E-1
32	K	1.223E+3	2.028E-1	9.364E-5	-2.335E-1	-6.404E-1	7.393E-1
	L1	1.791E+2	3.364E-1	6.877E-4	-1.467E-1	-2.722E+0	5.386E+0
	L2	1.293E+2	4.453E-1	-6.071E-4	-6.169E-1	-1.427E+0	5.535E+0
	L3	1.248E+2	5.397E-1	-6.851E-4	-7.498E-1	-1.676E+0	6.450E+0
	M1	1.107E+4	5.019E-2	3.937E-4	-2.500E-2	-2.084E-1	-6.360E-1
	M2	1.402E+3	1.304E-1	5.374E-4	9.234E-4	-1.002E+0	4.358E-1

(continued on next page)

Table 2 (continued)

Z	S	E_{nj} (eV)	d_1	d_2	d_3	d_4	d_5
33	K	1.183E+4	4.845E-2	4.003E-4	-2.417E-2	-2.006E-1	-6.264E-1
	L1	1.519E+3	1.250E-1	5.310E-4	2.125E-3	-9.686E-1	3.627E-1
	L2	1.366E+3	1.608E-1	8.471E-5	-1.835E-1	-5.214E-1	5.697E-1
	L3	1.328E+3	1.942E-1	9.734E-5	-2.210E-1	-6.322E-1	7.001E-1
	M1	2.019E+2	3.186E-1	6.844E-4	-1.266E-1	-2.564E+0	4.244E+0
	M2	1.489E+2	4.166E-1	-4.896E-4	-5.419E-1	-1.544E+0	5.446E+0
	M3	1.436E+2	5.057E-1	-5.517E-4	-6.615E-1	-1.810E+0	6.289E+0
	M4	5.117E+1	8.249E-1	1.585E-3	-2.180E+0	3.896E+0	-1.217E+1
	M5	5.037E+1	9.190E-1	1.769E-3	-2.432E+0	4.361E+0	-1.364E+1
34	K	1.262E+4	4.684E-2	4.064E-4	-2.353E-2	-1.925E-1	-6.222E-1
	L1	1.642E+3	1.199E-1	5.318E-4	4.369E-3	-9.429E-1	3.344E-1
	L2	1.481E+3	1.539E-1	9.633E-5	-1.724E-1	-5.233E-1	5.986E-1
	L3	1.438E+3	1.862E-1	1.052E-4	-2.082E-1	-6.340E-1	7.373E-1
	M1	2.261E+2	3.011E-1	7.318E-4	-9.796E-2	-2.492E+0	3.894E+0
	M2	1.697E+2	3.923E-1	-4.080E-4	-4.858E-1	-1.575E+0	5.123E+0
	M3	1.636E+2	4.763E-1	-4.357E-4	-5.909E-1	-1.869E+0	6.028E+0
	M4	6.480E+1	7.613E-1	1.178E-3	-1.982E+0	3.213E+0	-8.659E+0
	M5	6.382E+1	8.479E-1	1.321E-3	-2.210E+0	3.588E+0	-9.605E+0
35	K	1.344E+4	4.532E-2	4.125E-4	-2.300E-2	-1.843E-1	-6.235E-1
	L1	1.769E+3	1.153E-1	5.274E-4	5.697E-3	-9.150E-1	2.900E-1
	L2	1.602E+3	1.477E-1	1.022E-4	-1.632E-1	-5.175E-1	5.902E-1
	L3	1.554E+3	1.788E-1	1.097E-4	-1.976E-1	-6.260E-1	7.165E-1
	M1	2.515E+2	2.868E-1	7.244E-4	-8.418E-2	-2.361E+0	3.297E+0
	M2	1.918E+2	3.706E-1	-3.264E-4	-4.360E-1	-1.600E+0	4.975E+0
	M3	1.847E+2	4.507E-1	-3.492E-4	-5.338E-1	-1.883E+0	5.719E+0
	M4	7.952E+1	7.090E-1	8.541E-4	-1.822E+0	2.754E+0	-6.743E+0
	M5	7.835E+1	7.877E-1	1.027E-3	-2.015E+0	2.959E+0	-6.800E+0
36	K	1.428E+4	4.390E-2	4.185E-4	-2.252E-2	-1.765E-1	-6.235E-1
	L1	1.902E+3	1.110E-1	5.209E-4	6.303E-3	-8.853E-1	2.377E-1
	L2	1.729E+3	1.418E-1	1.104E-4	-1.540E-1	-5.171E-1	6.180E-1
	L3	1.673E+3	1.718E-1	1.247E-4	-1.860E-1	-6.282E-1	7.541E-1
	M1	2.783E+2	2.731E-1	7.416E-4	-6.728E-2	-2.272E+0	3.009E+0
	M2	2.152E+2	3.513E-1	-2.528E-4	-3.946E-1	-1.599E+0	4.777E+0
	M3	2.069E+2	4.270E-1	-2.352E-4	-4.795E-1	-1.914E+0	5.699E+0
	M4	9.533E+1	6.610E-1	7.328E-4	-1.658E+0	2.207E+0	-4.446E+0
	M5	9.393E+1	7.365E-1	8.148E-4	-1.851E+0	2.476E+0	-4.966E+0
37	K	1.516E+4	4.254E-2	4.247E-4	-2.202E-2	-1.693E-1	-6.235E-1
	L1	2.048E+3	1.066E-1	5.227E-4	8.839E-3	-8.660E-1	2.122E-1
	L2	1.867E+3	1.360E-1	1.223E-4	-1.438E-1	-5.236E-1	6.640E-1
	L3	1.805E+3	1.649E-1	1.393E-4	-1.739E-1	-6.357E-1	8.028E-1
	M1	3.133E+2	2.585E-1	7.520E-4	-4.811E-2	-2.131E+0	2.086E+0
	M2	2.468E+2	3.289E-1	-1.241E-4	-3.296E-1	-1.658E+0	4.289E+0
	M3	2.373E+2	4.008E-1	-1.128E-4	-4.058E-1	-1.959E+0	4.919E+0
	M4	1.192E+2	6.146E-1	4.830E-4	-1.463E+0	1.537E+0	-3.192E+0
	M5	1.175E+2	6.840E-1	5.613E-4	-1.626E+0	1.678E+0	-3.295E+0
38	K	1.607E+4	4.132E-2	4.289E-4	-2.194E-2	-1.605E-1	-6.327E-1
	L1	2.200E+3	1.025E-1	5.220E-4	9.975E-3	-8.420E-1	1.424E-1
	L2	2.012E+3	1.305E-1	1.286E-4	-1.357E-1	-5.201E-1	6.267E-1
	L3	1.942E+3	1.584E-1	1.439E-4	-1.642E-1	-6.321E-1	7.586E-1
	M1	3.504E+2	2.403E-1	9.331E-4	4.549E-3	-2.240E+0	2.816E+0
	M2	2.804E+2	3.093E-1	-4.666E-5	-2.802E-1	-1.667E+0	3.671E+0
	M3	2.695E+2	3.773E-1	-2.887E-5	-3.467E-1	-1.968E+0	4.111E+0
	M4	1.449E+2	5.733E-1	3.308E-4	-1.305E+0	1.045E+0	-2.779E+0
	M5	1.429E+2	6.384E-1	3.831E-4	-1.452E+0	1.150E+0	-2.995E+0
39	K	1.700E+4	4.012E-2	4.346E-4	-2.159E-2	-1.538E-1	-6.322E-1
	L1	2.355E+3	9.884E-2	5.189E-4	1.071E-2	-8.182E-1	9.515E-2
	L2	2.160E+3	1.255E-1	1.394E-4	-1.276E-1	-5.218E-1	6.524E-1
	L3	2.081E+3	1.524E-1	1.577E-4	-1.543E-1	-6.356E-1	7.892E-1
	M1	3.859E+2	2.334E-1	7.789E-4	-1.890E-2	-1.935E+0	1.147E+0
	M2	3.123E+2	2.937E-1	4.239E-6	-2.482E-1	-1.651E+0	3.474E+0
	M3	2.999E+2	3.581E-1	5.416E-5	-3.041E-1	-1.973E+0	3.979E+0
	M4	1.687E+2	5.412E-1	2.236E-4	-1.204E+0	8.377E-1	-2.459E+0
	M5	1.664E+2	6.029E-1	2.543E-4	-1.341E+0	9.261E-1	-2.678E+0
40	K	1.796E+4	3.900E-2	4.397E-4	-2.140E-2	-1.466E-1	-6.340E-1
	L1	2.515E+3	9.537E-2	5.184E-4	1.190E-2	-7.993E-1	8.132E-2
	L2	2.312E+3	1.210E-1	1.468E-4	-1.210E-1	-5.178E-1	6.533E-1
	L3	2.225E+3	1.470E-1	1.674E-4	-1.460E-1	-6.338E-1	8.049E-1
	M1	4.221E+2	2.234E-1	7.790E-4	-1.028E-2	-1.860E+0	9.782E-1
	M2	3.450E+2	2.799E-1	5.166E-5	-2.222E-1	-1.628E+0	3.333E+0
	M3	3.308E+2	3.417E-1	1.054E-4	-2.732E-1	-1.945E+0	3.800E+0
	M4	1.930E+2	5.134E-1	1.458E-4	-1.122E+0	7.007E-1	-2.279E+0
	M5	1.903E+2	5.720E-1	1.655E-4	-1.250E+0	7.782E-1	-2.510E+0

Table 2 (continued)

Z	S	$E_{n\bar{q}}$ (eV)	d_1	d_2	d_3	d_4	d_5
41	K	1.895E+4	3.796E-2	4.439E-4	-2.138E-2	-1.389E-1	-6.437E-1
	L1	2.680E+3	9.227E-2	5.124E-4	1.183E-2	-7.743E-1	2.640E-2
	L2	2.470E+3	1.167E-1	1.550E-4	-1.149E-1	-5.124E-1	6.429E-1
	L3	2.372E+3	1.421E-1	1.730E-4	-1.395E-1	-6.234E-1	7.700E-1
	M1	4.593E+2	2.140E-1	7.894E-4	-1.281E-3	-1.803E+0	9.161E-1
	M2	3.786E+2	2.676E-1	8.298E-5	-2.015E-1	-1.595E+0	3.203E+0
	M3	3.625E+2	3.273E-1	1.341E-4	-2.500E-1	-1.898E+0	3.589E+0
	M4	2.181E+2	4.886E-1	9.212E-5	-1.051E+0	5.908E-1	-2.039E+0
	M5	2.150E+2	5.445E-1	1.054E-4	-1.172E+0	6.532E-1	-2.228E+0
42	K	1.997E+4	3.698E-2	4.482E-4	-2.136E-2	-1.318E-1	-6.466E-1
	L1	2.850E+3	8.922E-2	5.126E-4	1.284E-2	-7.575E-1	2.399E-2
	L2	2.633E+3	1.128E-1	1.619E-4	-1.094E-1	-5.063E-1	6.373E-1
	L3	2.525E+3	1.372E-1	1.855E-4	-1.317E-1	-6.249E-1	8.141E-1
	M1	4.978E+2	2.057E-1	7.867E-4	4.324E-3	-1.740E+0	8.433E-1
	M2	4.133E+2	2.562E-1	1.165E-4	-1.821E-1	-1.575E+0	3.210E+0
	M3	3.951E+2	3.140E-1	1.653E-4	-2.284E-1	-1.866E+0	3.530E+0
	M4	2.440E+2	4.665E-1	5.156E-5	-9.913E-1	5.112E-1	-1.882E+0
	M5	2.405E+2	5.200E-1	5.929E-5	-1.105E+0	5.639E-1	-2.052E+0
43	K	2.101E+4	3.607E-2	4.516E-4	-2.149E-2	-1.243E-1	-6.529E-1
	L1	3.022E+3	8.653E-2	5.084E-4	1.283E-2	-7.366E-1	6.098E-3
	L2	2.798E+3	1.092E-1	1.676E-4	-1.049E-1	-4.977E-1	6.342E-1
	L3	2.677E+3	1.331E-1	1.878E-4	-1.273E-1	-6.094E-1	7.746E-1
	M1	5.334E+2	1.990E-1	7.680E-4	5.673E-3	-1.688E+0	9.226E-1
	M2	4.452E+2	2.471E-1	1.322E-4	-1.724E-1	-1.537E+0	3.270E+0
	M3	4.248E+2	3.032E-1	1.874E-4	-2.166E-1	-1.824E+0	3.648E+0
	M4	2.669E+2	4.483E-1	2.015E-5	-9.535E-1	5.035E-1	-1.747E+0
	M5	2.629E+2	4.999E-1	2.169E-5	-1.064E+0	5.639E-1	-1.953E+0
44	K	2.209E+4	3.480E-2	4.699E-4	-1.847E-2	-1.368E-1	-5.364E-1
	L1	3.204E+3	8.386E-2	5.070E-4	1.331E-2	-7.191E-1	-6.634E-3
	L2	2.972E+3	1.057E-1	1.758E-4	-1.002E-1	-4.912E-1	6.267E-1
	L3	2.839E+3	1.291E-1	1.940E-4	-1.221E-1	-5.991E-1	7.480E-1
	M1	5.741E+2	1.917E-1	7.706E-4	1.103E-2	-1.643E+0	9.322E-1
	M2	4.821E+2	2.381E-1	1.360E-4	-1.623E-1	-1.484E+0	3.069E+0
	M3	4.592E+2	2.921E-1	2.075E-4	-2.014E-1	-1.779E+0	3.508E+0
	M4	2.944E+2	4.302E-1	-1.378E-5	-9.074E-1	4.586E-1	-1.689E+0
	M5	2.899E+2	4.801E-1	-2.175E-5	-1.013E+0	5.146E-1	-1.902E+0
45	K	2.319E+4	3.393E-2	4.749E-4	-1.820E-2	-1.328E-1	-5.213E-1
	L1	3.391E+3	8.135E-2	5.050E-4	1.366E-2	-7.022E-1	-1.585E-2
	L2	3.152E+3	1.024E-1	1.826E-4	-9.604E-2	-4.824E-1	6.065E-1
	L3	3.004E+3	1.251E-1	2.048E-4	-1.162E-1	-5.963E-1	7.684E-1
	M1	6.160E+2	1.852E-1	7.613E-4	1.379E-2	-1.591E+0	8.935E-1
	M2	5.202E+2	2.291E-1	1.646E-4	-1.483E-1	-1.462E+0	3.016E+0
	M3	4.946E+2	2.816E-1	2.340E-4	-1.858E-1	-1.751E+0	3.512E+0
	M4	3.229E+2	4.137E-1	-4.262E-5	-8.659E-1	4.185E-1	-1.588E+0
	M5	3.178E+2	4.614E-1	-3.809E-5	-9.647E-1	4.555E-1	-1.707E+0
46	K	2.433E+4	3.258E-2	4.991E-4	-1.384E-2	-1.545E-1	-3.488E-1
	L1	3.585E+3	7.897E-2	5.040E-4	1.401E-2	-6.859E-1	-2.676E-2
	L2	3.337E+3	9.921E-2	1.917E-4	-9.140E-2	-4.800E-1	6.309E-1
	L3	3.175E+3	1.214E-1	2.134E-4	-1.110E-1	-5.914E-1	7.809E-1
	M1	6.593E+2	1.789E-1	7.596E-4	1.760E-2	-1.550E+0	8.720E-1
	M2	5.597E+2	2.211E-1	1.750E-4	-1.386E-1	-1.426E+0	2.944E+0
	M3	5.310E+2	2.722E-1	2.429E-4	-1.753E-1	-1.699E+0	3.290E+0
	M4	3.525E+2	3.986E-1	-6.712E-5	-8.295E-1	3.967E-1	-1.640E+0
	M5	3.467E+2	4.450E-1	-7.746E-5	-9.269E-1	4.468E-1	-1.843E+0
47	K	2.549E+4	3.201E-2	4.957E-4	-1.545E-2	-1.387E-1	-4.197E-1
	L1	3.784E+3	7.672E-2	5.023E-4	1.418E-2	-6.696E-1	-3.856E-2
	L2	3.528E+3	9.624E-2	1.992E-4	-8.750E-2	-4.739E-1	6.284E-1
	L3	3.350E+3	1.180E-1	2.181E-4	-1.071E-1	-5.799E-1	7.519E-1
	M1	7.040E+2	1.733E-1	7.454E-4	1.840E-2	-1.498E+0	8.119E-1
	M2	6.004E+2	2.133E-1	1.953E-4	-1.276E-1	-1.406E+0	2.959E+0
	M3	5.685E+2	2.632E-1	2.613E-4	-1.634E-1	-1.669E+0	3.280E+0
	M4	3.830E+2	3.846E-1	-8.574E-5	-7.954E-1	3.685E-1	-1.581E+0
	M5	3.765E+2	4.294E-1	-9.182E-5	-8.886E-1	4.135E-1	-1.766E+0
48	K	2.669E+4	3.097E-2	5.108E-4	-1.305E-2	-1.487E-1	-3.275E-1
	L1	3.994E+3	7.368E-2	5.323E-4	2.113E-2	-6.967E-1	2.322E-1
	L2	3.731E+3	9.331E-2	2.062E-4	-8.331E-2	-4.708E-1	6.372E-1
	L3	3.535E+3	1.143E-1	2.356E-4	-1.004E-1	-5.868E-1	8.167E-1
	M1	7.556E+2	1.676E-1	7.309E-4	1.930E-2	-1.428E+0	5.376E-1
	M2	6.480E+2	2.054E-1	2.094E-4	-1.157E-1	-1.373E+0	2.755E+0
	M3	6.126E+2	2.534E-1	2.885E-4	-1.465E-1	-1.647E+0	3.179E+0
	M4	4.201E+2	3.697E-1	-7.744E-5	-7.487E-1	2.801E-1	-1.325E+0
	M5	4.128E+2	4.130E-1	-9.164E-5	-8.369E-1	3.131E-1	-1.468E+0

(continued on next page)

Table 2 (continued)

Z	S	E_{nj} (eV)	d_1	d_2	d_3	d_4	d_5
49	K	2.792E+4	3.012E-2	5.197E-4	-1.188E-2	-1.515E-1	-2.717E-1
	L1	4.214E+3	7.133E-2	5.403E-4	2.318E-2	-6.920E-1	2.757E-1
	L2	3.943E+3	9.063E-2	2.104E-4	-8.029E-2	-4.605E-1	5.983E-1
	L3	3.728E+3	1.111E-1	2.397E-4	-9.667E-2	-5.758E-1	7.764E-1
	M1	8.113E+2	1.612E-1	7.468E-4	2.652E-2	-1.399E+0	4.943E-1
	M2	6.997E+2	1.975E-1	2.338E-4	-1.022E-1	-1.348E+0	2.608E+0
	M3	6.605E+2	2.443E-1	3.034E-4	-1.326E-1	-1.603E+0	2.852E+0
	M4	4.609E+2	3.558E-1	-8.278E-5	-7.048E-1	2.033E-1	-1.246E+0
	M5	4.527E+2	3.972E-1	-8.342E-5	-7.844E-1	2.035E-1	-1.236E+0
50	K	2.918E+4	3.024E-2	4.935E-4	-1.817E-2	-1.085E-1	-4.926E-1
	L1	4.440E+3	6.922E-2	5.426E-4	2.421E-2	-6.830E-1	2.996E-1
	L2	4.161E+3	8.800E-2	2.172E-4	-7.682E-2	-4.545E-1	5.879E-1
	L3	3.926E+3	1.080E-1	2.482E-4	-9.233E-2	-5.702E-1	7.675E-1
	M1	8.689E+2	1.559E-1	7.323E-4	2.772E-2	-1.346E+0	4.093E-1
	M2	7.532E+2	1.903E-1	2.508E-4	-9.083E-2	-1.323E+0	2.491E+0
	M3	7.099E+2	2.351E-1	3.434E-4	-1.145E-1	-1.599E+0	2.840E+0
	M4	5.032E+2	3.435E-1	-1.010E-4	-6.690E-1	1.576E-1	-1.201E+0
	M5	4.941E+2	3.839E-1	-1.194E-4	-7.489E-1	1.841E-1	-1.386E+0
51	K	3.048E+4	2.950E-2	5.005E-4	-1.729E-2	-1.105E-1	-4.344E-1
	L1	4.674E+3	6.642E-2	5.750E-4	3.138E-2	-7.125E-1	5.665E-1
	L2	4.386E+3	8.547E-2	2.253E-4	-7.336E-2	-4.495E-1	5.786E-1
	L3	4.130E+3	1.050E-1	2.567E-4	-8.821E-2	-5.648E-1	7.583E-1
	M1	9.289E+2	1.510E-1	7.226E-4	2.833E-2	-1.287E+0	1.848E-1
	M2	8.091E+2	1.831E-1	2.832E-4	-7.721E-2	-1.316E+0	2.459E+0
	M3	7.614E+2	2.277E-1	3.365E-4	-1.073E-1	-1.537E+0	2.537E+0
	M4	5.475E+2	3.310E-1	-8.220E-5	-6.295E-1	7.992E-2	-9.352E-1
	M5	5.374E+2	3.701E-1	-9.740E-5	-7.043E-1	9.471E-2	-1.091E+0
52	K	3.181E+4	2.888E-2	5.038E-4	-1.725E-2	-1.070E-1	-4.257E-1
	L1	4.914E+3	6.547E-2	5.421E-4	2.459E-2	-6.555E-1	2.855E-1
	L2	4.618E+3	8.306E-2	2.335E-4	-7.015E-2	-4.442E-1	5.728E-1
	L3	4.339E+3	1.021E-1	2.681E-4	-8.386E-2	-5.619E-1	7.668E-1
	M1	9.911E+2	1.459E-1	7.259E-4	3.184E-2	-1.254E+0	1.957E-1
	M2	8.671E+2	1.770E-1	2.891E-4	-6.969E-2	-1.281E+0	2.327E+0
	M3	8.146E+2	2.195E-1	3.764E-4	-9.123E-2	-1.535E+0	2.551E+0
	M4	5.935E+2	3.199E-1	-8.142E-5	-5.977E-1	3.530E-2	-7.996E-1
	M5	5.824E+2	3.576E-1	-9.272E-5	-6.679E-1	3.735E-2	-8.860E-1
53	K	3.317E+4	2.816E-2	5.117E-4	-1.627E-2	-1.092E-1	-3.851E-1
	L1	5.162E+3	6.351E-2	5.500E-4	2.642E-2	-6.526E-1	3.329E-1
	L2	4.858E+3	8.072E-2	2.431E-4	-6.674E-2	-4.415E-1	5.822E-1
	L3	4.554E+3	9.948E-2	2.748E-4	-8.047E-2	-5.552E-1	7.555E-1
	M1	1.056E+3	1.419E-1	7.011E-4	2.917E-2	-1.185E+0	-9.627E-2
	M2	9.273E+2	1.708E-1	3.110E-4	-5.954E-2	-1.268E+0	2.292E+0
	M3	8.697E+2	2.122E-1	4.003E-4	-7.932E-2	-1.517E+0	2.506E+0
	M4	6.413E+2	3.101E-1	-1.006E-4	-5.733E-1	3.083E-2	-9.343E-1
	M5	6.290E+2	3.468E-1	-1.163E-4	-6.413E-1	3.557E-2	-1.060E+0
54	K	3.456E+4	2.775E-2	5.090E-4	-1.745E-2	-9.871E-2	-4.156E-1
	L1	5.417E+3	6.144E-2	5.641E-4	2.983E-2	-6.623E-1	4.888E-1
	L2	5.104E+3	7.856E-2	2.505E-4	-6.453E-2	-4.297E-1	5.234E-1
	L3	4.775E+3	9.698E-2	2.809E-4	-7.750E-2	-5.468E-1	7.328E-1
	M1	1.122E+3	1.377E-1	6.913E-4	2.902E-2	-1.134E+0	-2.918E-1
	M2	9.897E+2	1.657E-1	3.042E-4	-5.657E-2	-1.211E+0	1.966E+0
	M3	9.265E+2	2.058E-1	4.028E-4	-7.327E-2	-1.463E+0	2.185E+0
	M4	6.909E+2	2.998E-1	-7.750E-5	-5.428E-1	-2.356E-2	-7.610E-1
	M5	6.774E+2	3.351E-1	-7.732E-5	-6.040E-1	-4.797E-2	-7.430E-1
55	K	3.599E+4	2.680E-2	5.269E-4	-1.431E-2	-1.145E-1	-3.027E-1
	L1	5.685E+3	5.965E-2	5.700E-4	3.108E-2	-6.560E-1	5.068E-1
	L2	5.364E+3	7.665E-2	2.486E-4	-6.302E-2	-4.206E-1	5.160E-1
	L3	5.006E+3	9.497E-2	2.696E-4	-7.792E-2	-5.206E-1	6.226E-1
	M1	1.197E+3	1.335E-1	6.835E-4	2.900E-2	-1.076E+0	-6.067E-1
	M2	1.060E+3	1.589E-1	3.614E-4	-4.203E-2	-1.203E+0	1.698E+0
	M3	9.906E+2	1.951E-1	5.572E-4	-3.317E-2	-1.614E+0	2.941E+0
	M4	7.477E+2	2.920E-1	-1.575E-4	-5.275E-1	9.915E-3	-9.760E-1
	M5	7.328E+2	3.260E-1	-1.482E-4	-5.837E-1	-2.689E-2	-8.883E-1
56	K	3.745E+4	2.633E-2	5.278E-4	-1.468E-2	-1.092E-1	-3.068E-1
	L1	5.961E+3	5.802E-2	5.721E-4	3.159E-2	-6.476E-1	5.077E-1
	L2	5.631E+3	7.436E-2	2.647E-4	-5.878E-2	-4.244E-1	5.337E-1
	L3	5.243E+3	9.198E-2	2.982E-4	-7.058E-2	-5.391E-1	7.140E-1
	M1	1.274E+3	1.273E-1	7.137E-4	4.042E-2	-1.185E+0	6.049E-2
	M2	1.133E+3	1.516E-1	3.726E-4	-3.558E-2	-1.286E+0	2.471E+0
	M3	1.057E+3	1.888E-1	4.840E-4	-4.889E-2	-1.554E+0	2.801E+0
	M4	8.066E+2	2.720E-1	-1.124E-4	-4.858E-1	-2.190E-1	4.123E-1
	M5	7.903E+2	3.044E-1	-1.292E-4	-5.430E-1	-2.504E-1	5.015E-1

Table 2 (continued)

Z	S	$E_{n\bar{q}}$ (eV)	d_1	d_2	d_3	d_4	d_5
57	K	3.894E+4	2.638E-2	5.093E-4	-1.903E-2	-8.034E-2	-4.367E-1
	L1	6.242E+3	5.645E-2	5.756E-4	3.232E-2	-6.404E-1	5.191E-1
	L2	5.903E+3	7.242E-2	2.717E-4	-5.637E-2	-4.193E-1	5.250E-1
	L3	5.484E+3	8.978E-2	3.034E-4	-6.828E-2	-5.293E-1	6.746E-1
	M1	1.351E+3	1.206E-1	8.079E-4	6.343E-2	-1.311E+0	9.985E-1
	M2	1.205E+3	1.461E-1	3.901E-4	-2.919E-2	-1.284E+0	2.479E+0
	M3	1.123E+3	1.822E-1	5.015E-4	-4.191E-2	-1.549E+0	2.797E+0
	M4	8.648E+2	2.616E-1	-1.156E-4	-4.625E-1	-2.758E-1	6.926E-1
	M5	8.470E+2	2.928E-1	-1.343E-4	-5.172E-1	-3.120E-1	7.905E-1
58	K	4.046E+4	2.587E-2	5.130E-4	-1.877E-2	-7.927E-2	-4.179E-1
	L1	6.522E+3	5.510E-2	5.752E-4	3.214E-2	-6.287E-1	5.137E-1
	L2	6.173E+3	7.067E-2	2.772E-4	-5.443E-2	-4.135E-1	5.242E-1
	L3	5.720E+3	8.767E-2	3.126E-4	-6.550E-2	-5.251E-1	6.854E-1
	M1	1.419E+3	1.173E-1	8.057E-4	6.449E-2	-1.297E+0	1.069E+0
	M2	1.269E+3	1.421E-1	3.952E-4	-2.638E-2	-1.265E+0	2.496E+0
	M3	1.179E+3	1.777E-1	5.007E-4	-3.997E-2	-1.520E+0	2.788E+0
	M4	9.144E+2	2.545E-1	-1.168E-4	-4.496E-1	-2.734E-1	7.240E-1
	M5	8.949E+2	2.849E-1	-1.336E-4	-5.025E-1	-3.129E-1	8.531E-1
59	K	4.202E+4	2.541E-2	5.152E-4	-1.873E-2	-7.721E-2	-4.036E-1
	L1	6.808E+3	5.385E-2	5.731E-4	3.170E-2	-6.164E-1	5.060E-1
	L2	6.451E+3	6.909E-2	2.798E-4	-5.341E-2	-4.022E-1	4.922E-1
	L3	5.962E+3	8.570E-2	3.197E-4	-6.320E-2	-5.191E-1	6.875E-1
	M1	1.489E+3	1.147E-1	7.851E-4	6.165E-2	-1.259E+0	1.007E+0
	M2	1.335E+3	1.384E-1	3.964E-4	-2.455E-2	-1.242E+0	2.486E+0
	M3	1.237E+3	1.734E-1	5.035E-4	-3.762E-2	-1.495E+0	2.796E+0
	M4	9.647E+2	2.479E-1	-1.200E-4	-4.383E-1	-2.668E-1	7.348E-1
	M5	9.434E+2	2.775E-1	-1.325E-4	-4.888E-1	-3.132E-1	9.041E-1
60	K	4.361E+4	2.502E-2	5.155E-4	-1.911E-2	-7.267E-2	-4.034E-1
	L1	7.102E+3	5.246E-2	5.783E-4	3.262E-2	-6.122E-1	5.378E-1
	L2	6.736E+3	6.736E-2	2.907E-4	-5.088E-2	-4.006E-1	5.110E-1
	L3	6.208E+3	8.379E-2	3.278E-4	-6.083E-2	-5.141E-1	6.908E-1
	M1	1.561E+3	1.122E-1	7.643E-4	5.865E-2	-1.222E+0	9.450E-1
	M2	1.402E+3	1.349E-1	3.949E-4	-2.330E-2	-1.217E+0	2.465E+0
	M3	1.296E+3	1.693E-1	5.041E-4	-3.599E-2	-1.467E+0	2.781E+0
	M4	1.016E+3	2.416E-1	-1.204E-4	-4.273E-1	-2.612E-1	7.457E-1
	M5	9.928E+2	2.707E-1	-1.367E-4	-4.775E-1	-3.027E-1	8.969E-1
61	K	4.523E+4	2.468E-2	5.141E-4	-1.980E-2	-6.633E-2	-4.143E-1
	L1	7.402E+3	5.136E-2	5.749E-4	3.176E-2	-5.978E-1	5.143E-1
	L2	7.027E+3	6.580E-2	2.973E-4	-4.920E-2	-3.947E-1	5.069E-1
	L3	6.459E+3	8.198E-2	3.347E-4	-5.874E-2	-5.087E-1	6.966E-1
	M1	1.634E+3	1.095E-1	7.584E-4	5.876E-2	-1.205E+0	9.867E-1
	M2	1.471E+3	1.315E-1	3.983E-4	-2.121E-2	-1.198E+0	2.472E+0
	M3	1.356E+3	1.654E-1	5.068E-4	-3.392E-2	-1.444E+0	2.784E+0
	M4	1.068E+3	2.355E-1	-1.137E-4	-4.156E-1	-2.652E-1	8.147E-1
	M5	1.043E+3	2.641E-1	-1.347E-4	-4.658E-1	-2.987E-1	9.255E-1
62	K	4.688E+4	2.433E-2	5.136E-4	-2.024E-2	-6.175E-2	-4.156E-1
	L1	7.710E+3	5.009E-2	5.796E-4	3.252E-2	-5.934E-1	5.415E-1
	L2	7.326E+3	6.346E-2	3.351E-4	-4.100E-2	-4.295E-1	7.444E-1
	L3	6.715E+3	8.026E-2	3.411E-4	-5.700E-2	-5.010E-1	6.824E-1
	M1	1.709E+3	1.090E-1	6.756E-4	4.153E-2	-1.075E+0	2.537E-1
	M2	1.541E+3	1.285E-1	3.942E-4	-2.066E-2	-1.172E+0	2.442E+0
	M3	1.416E+3	1.617E-1	5.060E-4	-3.276E-2	-1.417E+0	2.762E+0
	M4	1.121E+3	2.298E-1	-1.085E-4	-4.049E-1	-2.652E-1	8.533E-1
	M5	1.094E+3	2.578E-1	-1.290E-4	-4.541E-1	-2.975E-1	9.563E-1
63	K	4.858E+4	2.390E-2	5.164E-4	-1.999E-2	-6.138E-2	-3.952E-1
	L1	8.026E+3	4.901E-2	5.789E-4	3.210E-2	-5.822E-1	5.314E-1
	L2	7.633E+3	6.211E-2	3.380E-4	-4.014E-2	-4.203E-1	7.250E-1
	L3	6.976E+3	7.864E-2	3.460E-4	-5.551E-2	-4.933E-1	6.734E-1
	M1	1.786E+3	1.066E-1	6.654E-4	4.085E-2	-1.056E+0	2.894E-1
	M2	1.613E+3	1.254E-1	3.947E-4	-1.947E-2	-1.150E+0	2.417E+0
	M3	1.478E+3	1.583E-1	5.040E-4	-3.199E-2	-1.389E+0	2.731E+0
	M4	1.176E+3	2.246E-1	-1.084E-4	-3.961E-1	-2.553E-1	8.247E-1
	M5	1.146E+3	2.519E-1	-1.232E-4	-4.432E-1	-2.966E-1	9.957E-1
64	K	5.030E+4	2.367E-2	5.124E-4	-2.112E-2	-5.282E-2	-4.192E-1
	L1	8.350E+3	4.787E-2	5.814E-4	3.245E-2	-5.763E-1	5.486E-1
	L2	7.947E+3	6.077E-2	3.426E-4	-3.909E-2	-4.123E-1	7.103E-1
	L3	7.242E+3	7.706E-2	3.518E-4	-5.403E-2	-4.853E-1	6.586E-1
	M1	1.864E+3	1.043E-1	6.589E-4	4.042E-2	-1.036E+0	3.019E-1
	M2	1.687E+3	1.225E-1	3.952E-4	-1.819E-2	-1.131E+0	2.409E+0
	M3	1.541E+3	1.551E-1	5.007E-4	-3.149E-2	-1.361E+0	2.698E+0
	M4	1.231E+3	2.192E-1	-9.653E-5	-3.853E-1	-2.620E-1	8.987E-1
	M5	1.199E+3	2.463E-1	-1.219E-4	-4.337E-1	-2.884E-1	9.873E-1

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Table 2 (continued)

Z	S	E_{nj} (eV)	d_1	d_2	d_3	d_4	d_5
65	K	5.207E+4	2.146E-2	5.807E-4	-6.057E-3	-1.510E-1	3.254E-1
	L1	8.681E+3	4.701E-2	5.755E-4	3.098E-2	-5.595E-1	5.061E-1
	L2	8.269E+3	5.954E-2	3.446E-4	-3.863E-2	-4.012E-1	6.773E-1
	L3	7.513E+3	7.372E-2	4.262E-4	-3.839E-2	-5.627E-1	1.086E+0
	M1	1.945E+3	1.019E-1	6.576E-4	4.119E-2	-1.025E+0	3.641E-1
	M2	1.763E+3	1.197E-1	3.961E-4	-1.701E-2	-1.111E+0	2.392E+0
	M3	1.605E+3	1.516E-1	5.104E-4	-2.839E-2	-1.349E+0	2.743E+0
	M4	1.288E+3	2.146E-1	-9.947E-5	-3.785E-1	-2.460E-1	8.377E-1
	M5	1.253E+3	2.410E-1	-1.186E-4	-4.248E-1	-2.793E-1	9.645E-1
66	K	5.387E+4	2.120E-2	5.784E-4	-6.727E-3	-1.457E-1	3.223E-1
	L1	9.021E+3	4.580E-2	5.839E-4	3.242E-2	-5.605E-1	5.580E-1
	L2	8.599E+3	5.808E-2	3.571E-4	-3.602E-2	-4.038E-1	7.179E-1
	L3	7.789E+3	7.404E-2	3.645E-4	-5.082E-2	-4.741E-1	6.583E-1
	M1	2.028E+3	9.980E-2	6.480E-4	4.007E-2	-1.003E+0	3.607E-1
	M2	1.840E+3	1.170E-1	3.958E-4	-1.587E-2	-1.093E+0	2.388E+0
	M3	1.671E+3	1.485E-1	5.108E-4	-2.717E-2	-1.328E+0	2.751E+0
	M4	1.345E+3	2.098E-1	-9.078E-5	-3.695E-1	-2.451E-1	8.394E-1
	M5	1.308E+3	2.359E-1	-1.148E-4	-4.157E-1	-2.755E-1	9.741E-1
67	K	5.571E+4	2.092E-2	5.770E-4	-7.213E-3	-1.414E-1	3.206E-1
	L1	9.369E+3	4.507E-2	5.758E-4	3.036E-2	-5.404E-1	4.936E-1
	L2	8.937E+3	5.690E-2	3.610E-4	-3.532E-2	-3.949E-1	6.948E-1
	L3	8.070E+3	7.163E-2	4.072E-4	-4.159E-2	-5.166E-1	9.487E-1
	M1	2.112E+3	9.772E-2	6.410E-4	3.961E-2	-9.862E-1	3.834E-1
	M2	1.920E+3	1.145E-1	3.918E-4	-1.571E-2	-1.070E+0	2.349E+0
	M3	1.737E+3	1.456E-1	5.101E-4	-2.626E-2	-1.307E+0	2.741E+0
	M4	1.404E+3	2.054E-1	-8.748E-5	-3.617E-1	-2.408E-1	8.568E-1
	M5	1.364E+3	2.310E-1	-1.072E-4	-4.066E-1	-2.729E-1	9.855E-1
68	K	5.758E+4	2.088E-2	5.670E-4	-9.446E-3	-1.269E-1	2.680E-1
	L1	9.725E+3	4.412E-2	5.772E-4	3.035E-2	-5.332E-1	4.986E-1
	L2	9.284E+3	5.575E-2	3.646E-4	-3.459E-2	-3.872E-1	6.795E-1
	L3	8.355E+3	7.013E-2	4.181E-4	-3.932E-2	-5.157E-1	9.710E-1
	M1	2.199E+3	9.566E-2	6.363E-4	3.962E-2	-9.724E-1	4.197E-1
	M2	2.001E+3	1.121E-1	3.911E-4	-1.485E-2	-1.052E+0	2.334E+0
	M3	1.805E+3	1.429E-1	5.064E-4	-2.637E-2	-1.278E+0	2.678E+0
	M4	1.464E+3	2.011E-1	-8.130E-5	-3.539E-1	-2.383E-1	8.692E-1
	M5	1.421E+3	2.263E-1	-1.016E-4	-3.982E-1	-2.693E-1	9.953E-1
69	K	5.950E+4	2.059E-2	5.667E-4	-9.603E-3	-1.248E-1	2.794E-1
	L1	1.009E+4	4.326E-2	5.761E-4	2.985E-2	-5.237E-1	4.936E-1
	L2	9.638E+3	5.469E-2	3.669E-4	-3.436E-2	-3.763E-1	6.462E-1
	L3	8.646E+3	6.872E-2	4.273E-4	-3.740E-2	-5.135E-1	9.875E-1
	M1	2.287E+3	9.371E-2	6.308E-4	3.917E-2	-9.555E-1	4.288E-1
	M2	2.085E+3	1.096E-1	3.947E-4	-1.312E-2	-1.040E+0	2.352E+0
	M3	1.874E+3	1.402E-1	5.071E-4	-2.525E-2	-1.260E+0	2.673E+0
	M4	1.525E+3	1.970E-1	-7.589E-5	-3.466E-1	-2.340E-1	8.610E-1
	M5	1.479E+3	2.219E-1	-9.879E-5	-3.909E-1	-2.610E-1	9.764E-1
70	K	6.145E+4	2.003E-2	5.766E-4	-7.653E-3	-1.354E-1	3.568E-1
	L1	1.046E+4	4.235E-2	5.787E-4	2.997E-2	-5.173E-1	4.972E-1
	L2	1.000E+4	5.340E-2	3.788E-4	-3.198E-2	-3.792E-1	6.859E-1
	L3	8.942E+3	6.772E-2	4.230E-4	-3.831E-2	-4.948E-1	9.131E-1
	M1	2.378E+3	9.180E-2	6.262E-4	3.888E-2	-9.401E-1	4.431E-1
	M2	2.171E+3	1.072E-1	3.957E-4	-1.223E-2	-1.022E+0	2.332E+0
	M3	1.945E+3	1.376E-1	5.063E-4	-2.466E-2	-1.239E+0	2.653E+0
	M4	1.587E+3	1.930E-1	-6.815E-5	-3.391E-1	-2.342E-1	8.928E-1
	M5	1.538E+3	2.175E-1	-9.024E-5	-3.827E-1	-2.608E-1	1.004E+0
71	K	6.344E+4	1.966E-2	5.798E-4	-7.067E-3	-1.379E-1	3.912E-1
	L1	1.085E+4	4.151E-2	5.792E-4	2.971E-2	-5.092E-1	4.948E-1
	L2	1.037E+4	5.238E-2	3.819E-4	-3.156E-2	-3.704E-1	6.632E-1
	L3	9.243E+3	6.640E-2	4.318E-4	-3.649E-2	-4.930E-1	9.302E-1
	M1	2.471E+3	8.998E-2	6.204E-4	3.854E-2	-9.259E-1	4.687E-1
	M2	2.259E+3	1.051E-1	3.916E-4	-1.221E-2	-1.001E+0	2.291E+0
	M3	2.016E+3	1.350E-1	5.065E-4	-2.382E-2	-1.220E+0	2.637E+0
	M4	1.651E+3	1.892E-1	-6.287E-5	-3.324E-1	-2.312E-1	9.028E-1
	M5	1.597E+3	2.134E-1	-8.447E-5	-3.753E-1	-2.578E-1	1.014E+0
72	K	6.548E+4	2.227E-2	4.734E-4	-3.015E-2	9.359E-3	-5.375E-1
	L1	1.125E+4	4.068E-2	5.794E-4	2.941E-2	-5.011E-1	4.886E-1
	L2	1.076E+4	5.136E-2	3.856E-4	-3.100E-2	-3.625E-1	6.394E-1
	L3	9.558E+3	6.501E-2	4.435E-4	-3.405E-2	-4.948E-1	9.574E-1
	M1	2.576E+3	8.797E-2	6.163E-4	3.848E-2	-9.115E-1	4.473E-1
	M2	2.359E+3	1.025E-1	3.964E-4	-1.002E-2	-9.919E-1	2.274E+0
	M3	2.099E+3	1.320E-1	5.112E-4	-2.164E-2	-1.207E+0	2.600E+0
	M4	1.725E+3	1.849E-1	-6.215E-5	-3.240E-1	-2.368E-1	9.051E-1
	M5	1.668E+3	2.085E-1	-8.398E-5	-3.657E-1	-2.675E-1	1.045E+0

Table 2 (continued)

Z	S	$E_{n\bar{q}}$ (eV)	d_1	d_2	d_3	d_4	d_5
73	K	6.757E+4	2.209E-2	4.697E-4	-3.091E-2	1.481E-2	-5.467E-1
	L1	1.166E+4	3.982E-2	5.821E-4	2.951E-2	-4.950E-1	4.889E-1
	L2	1.116E+4	5.016E-2	3.966E-4	-2.892E-2	-3.640E-1	6.665E-1
	L3	9.879E+3	6.392E-2	4.449E-4	-3.375E-2	-4.843E-1	9.219E-1
	M1	2.685E+3	8.604E-2	6.121E-4	3.838E-2	-8.975E-1	4.302E-1
	M2	2.462E+3	1.000E-1	4.003E-4	-8.135E-3	-9.807E-1	2.244E+0
	M3	2.184E+3	1.291E-1	5.157E-4	-1.938E-2	-1.195E+0	2.571E+0
	M4	1.802E+3	1.806E-1	-5.648E-5	-3.149E-1	-2.486E-1	9.504E-1
	M5	1.741E+3	2.038E-1	-7.748E-5	-3.556E-1	-2.802E-1	1.086E+0
74	K	6.969E+4	2.190E-2	4.666E-4	-3.153E-2	1.932E-2	-5.512E-1
	L1	1.208E+4	3.912E-2	5.795E-4	2.862E-2	-4.837E-1	4.661E-1
	L2	1.157E+4	4.921E-2	3.998E-4	-2.852E-2	-3.559E-1	6.427E-1
	L3	1.021E+4	6.285E-2	4.472E-4	-3.332E-2	-4.746E-1	8.883E-1
	M1	2.797E+3	8.243E-2	6.716E-4	5.229E-2	-9.739E-1	1.025E+0
	M2	2.568E+3	9.771E-2	4.021E-4	-6.666E-3	-9.676E-1	2.204E+0
	M3	2.271E+3	1.264E-1	5.191E-4	-1.759E-2	-1.180E+0	2.525E+0
	M4	1.881E+3	1.764E-1	-4.645E-5	-3.050E-1	-2.662E-1	1.026E+0
	M5	1.815E+3	1.993E-1	-7.205E-5	-3.458E-1	-2.926E-1	1.132E+0
75	K	7.186E+4	1.865E-2	5.766E-4	-7.638E-3	-1.311E-1	4.366E-1
	L1	1.251E+4	3.829E-2	5.829E-4	2.887E-2	-4.791E-1	4.736E-1
	L2	1.199E+4	4.827E-2	4.035E-4	-2.805E-2	-3.483E-1	6.206E-1
	L3	1.054E+4	6.144E-2	4.633E-4	-3.010E-2	-4.822E-1	9.494E-1
	M1	2.912E+3	8.081E-2	6.602E-4	5.053E-2	-9.500E-1	9.607E-1
	M2	2.678E+3	9.542E-2	4.052E-4	-4.966E-3	-9.563E-1	2.175E+0
	M3	2.360E+3	1.236E-1	5.252E-4	-1.512E-2	-1.170E+0	2.502E+0
	M4	1.961E+3	1.725E-1	-4.239E-5	-2.970E-1	-2.741E-1	1.054E+0
	M5	1.892E+3	1.948E-1	-6.224E-5	-3.356E-1	-3.093E-1	1.199E+0
76	K	7.407E+4	2.185E-2	4.491E-4	-3.525E-2	4.493E-2	-6.866E-1
	L1	1.295E+4	3.953E-2	5.113E-4	1.268E-2	-3.686E-1	-2.481E-1
	L2	1.242E+4	4.819E-2	3.767E-4	-3.416E-2	-2.996E-1	3.315E-1
	L3	1.088E+4	6.166E-2	4.204E-4	-3.941E-2	-4.127E-1	5.460E-1
	M1	3.030E+3	8.058E-2	6.003E-4	3.814E-2	-8.568E-1	3.815E-1
	M2	2.791E+3	9.317E-2	4.097E-4	-3.097E-3	-9.461E-1	2.148E+0
	M3	2.451E+3	1.211E-1	5.291E-4	-1.326E-2	-1.157E+0	2.461E+0
	M4	2.044E+3	1.686E-1	-3.081E-5	-2.879E-1	-2.882E-1	1.108E+0
	M5	1.970E+3	1.906E-1	-5.652E-5	-3.267E-1	-3.186E-1	1.229E+0
77	K	7.632E+4	2.166E-2	4.466E-4	-3.567E-2	4.814E-2	-6.840E-1
	L1	1.340E+4	3.880E-2	5.126E-4	1.255E-2	-3.621E-1	-2.497E-1
	L2	1.287E+4	4.725E-2	3.824E-4	-3.339E-2	-2.942E-1	3.181E-1
	L3	1.122E+4	6.060E-2	4.258E-4	-3.846E-2	-4.070E-1	5.289E-1
	M1	3.152E+3	7.875E-2	6.021E-4	3.894E-2	-8.480E-1	3.847E-1
	M2	2.907E+3	9.103E-2	4.129E-4	-1.609E-3	-9.343E-1	2.113E+0
	M3	2.545E+3	1.186E-1	5.325E-4	-1.159E-2	-1.144E+0	2.418E+0
	M4	2.129E+3	1.650E-1	-2.511E-5	-2.801E-1	-2.972E-1	1.144E+0
	M5	2.050E+3	1.865E-1	-4.499E-5	-3.169E-1	-3.359E-1	1.308E+0
78	K	7.862E+4	2.148E-2	4.438E-4	-3.609E-2	5.117E-2	-6.802E-1
	L1	1.386E+4	3.809E-2	5.142E-4	1.238E-2	-3.555E-1	-2.541E-1
	L2	1.331E+4	4.638E-2	3.870E-4	-3.280E-2	-2.886E-1	3.093E-1
	L3	1.157E+4	5.958E-2	4.321E-4	-3.752E-2	-4.018E-1	5.184E-1
	M1	3.274E+3	7.718E-2	5.971E-4	3.857E-2	-8.350E-1	3.755E-1
	M2	3.023E+3	8.901E-2	4.154E-4	-1.842E-4	-9.249E-1	2.105E+0
	M3	2.637E+3	1.163E-1	5.346E-4	-1.037E-2	-1.131E+0	2.393E+0
	M4	2.212E+3	1.617E-1	-2.440E-5	-2.745E-1	-2.938E-1	1.112E+0
	M5	2.129E+3	1.828E-1	-3.917E-5	-3.096E-1	-3.404E-1	1.325E+0
79	K	8.096E+4	2.124E-2	4.444E-4	-3.604E-2	5.182E-2	-6.648E-1
	L1	1.434E+4	3.739E-2	5.161E-4	1.231E-2	-3.497E-1	-2.524E-1
	L2	1.378E+4	4.553E-2	3.913E-4	-3.232E-2	-2.823E-1	2.908E-1
	L3	1.192E+4	5.862E-2	4.360E-4	-3.677E-2	-3.962E-1	5.070E-1
	M1	3.402E+3	7.556E-2	5.948E-4	3.858E-2	-8.230E-1	3.676E-1
	M2	3.145E+3	8.703E-2	4.176E-4	1.097E-3	-9.132E-1	2.072E+0
	M3	2.734E+3	1.140E-1	5.366E-4	-8.998E-3	-1.117E+0	2.349E+0
	M4	2.301E+3	1.583E-1	-1.358E-5	-2.665E-1	-3.060E-1	1.163E+0
	M5	2.212E+3	1.791E-1	-3.224E-5	-3.016E-1	-3.487E-1	1.349E+0
80	K	8.335E+4	1.864E-2	5.298E-4	-1.673E-2	-7.329E-2	2.196E-1
	L1	1.483E+4	3.496E-2	5.815E-4	2.629E-2	-4.356E-1	3.846E-1
	L2	1.426E+4	4.387E-2	4.262E-4	-2.523E-2	-3.175E-1	5.329E-1
	L3	1.229E+4	5.674E-2	4.746E-4	-2.877E-2	-4.357E-1	7.700E-1
	M1	3.538E+3	7.198E-2	6.648E-4	5.460E-2	-9.141E-1	1.075E+0
	M2	3.275E+3	8.503E-2	4.213E-4	2.754E-3	-9.026E-1	2.035E+0
	M3	2.837E+3	1.116E-1	5.442E-4	-6.317E-3	-1.109E+0	2.326E+0
	M4	2.395E+3	1.548E-1	-4.090E-5	-2.578E-1	-3.214E-1	1.220E+0
	M5	2.300E+3	1.753E-1	-2.278E-5	-2.926E-1	-3.623E-1	1.397E+0

(continued on next page)

Table 2 (continued)

Z	S	E_{nj} (eV)	d_1	d_2	d_3	d_4	d_5
81	K	8.580E+4	1.825E-2	5.353E-4	-1.538E-2	-8.069E-2	2.754E-1
	L1	1.533E+4	3.435E-2	5.810E-4	2.566E-2	-4.263E-1	3.630E-1
	L2	1.475E+4	4.309E-2	4.293E-4	-2.508E-2	-3.095E-1	5.067E-1
	L3	1.266E+4	5.571E-2	4.832E-4	-2.727E-2	-4.347E-1	7.803E-1
	M1	3.679E+3	7.104E-2	6.392E-4	4.957E-2	-8.685E-1	8.362E-1
	M2	3.410E+3	8.306E-2	4.259E-4	4.509E-3	-8.921E-1	1.997E+0
	M3	2.944E+3	1.093E-1	5.490E-4	-4.215E-3	-1.097E+0	2.275E+0
	M4	2.493E+3	1.515E-1	1.385E-5	-2.492E-1	-3.344E-1	1.248E+0
	M5	2.393E+3	1.715E-1	-5.148E-6	-2.824E-1	-3.817E-1	1.457E+0
82	K	8.829E+4	1.779E-2	5.436E-4	-1.342E-2	-9.207E-2	3.540E-1
	L1	1.585E+4	3.368E-2	5.836E-4	2.576E-2	-4.221E-1	3.708E-1
	L2	1.525E+4	4.217E-2	4.387E-4	-2.359E-2	-3.097E-1	5.254E-1
	L3	1.304E+4	5.485E-2	4.861E-4	-2.695E-2	-4.267E-1	7.540E-1
	M1	3.824E+3	6.869E-2	6.678E-4	5.614E-2	-8.969E-1	1.086E+0
	M2	3.549E+3	8.117E-2	4.293E-4	5.977E-3	-8.805E-1	1.952E+0
	M3	3.054E+3	1.071E-1	5.519E-4	-2.548E-3	-1.083E+0	2.212E+0
	M4	2.594E+3	1.485E-1	1.533E-5	-2.433E-1	-3.342E-1	1.218E+0
	M5	2.488E+3	1.681E-1	3.905E-6	-2.743E-1	-3.898E-1	1.456E+0
83	K	9.083E+4	1.759E-2	5.423E-4	-1.345E-2	-9.125E-2	3.651E-1
	L1	1.638E+4	3.305E-2	5.848E-4	2.562E-2	-4.167E-1	3.726E-1
	L2	1.577E+4	4.138E-2	4.434E-4	-2.310E-2	-3.042E-1	5.122E-1
	L3	1.342E+4	5.391E-2	4.929E-4	-2.584E-2	-4.239E-1	7.545E-1
	M1	3.974E+3	6.779E-2	6.444E-4	5.142E-2	-8.539E-1	8.628E-1
	M2	3.693E+3	7.936E-2	4.321E-4	7.357E-3	-8.691E-1	1.914E+0
	M3	3.166E+3	1.049E-1	5.576E-4	-5.414E-4	-1.072E+0	2.159E+0
	M4	2.697E+3	1.454E-1	2.575E-5	-2.354E-1	-3.467E-1	1.251E+0
	M5	2.585E+3	1.648E-1	8.638E-6	-2.669E-1	-3.957E-1	1.452E+0
84	K	9.342E+4	1.725E-2	5.476E-4	-1.241E-2	-9.631E-2	4.034E-1
	L1	1.692E+4	3.253E-2	5.829E-4	2.476E-2	-4.068E-1	3.481E-1
	L2	1.630E+4	4.068E-2	4.460E-4	-2.303E-2	-2.967E-1	4.898E-1
	L3	1.382E+4	5.289E-2	5.036E-4	-2.390E-2	-4.263E-1	7.846E-1
	M1	4.128E+3	6.633E-2	6.435E-4	5.163E-2	-8.429E-1	8.564E-1
	M2	3.841E+3	7.755E-2	4.367E-4	9.008E-3	-8.597E-1	1.878E+0
	M3	3.281E+3	1.028E-1	5.614E-4	1.206E-3	-1.059E+0	2.111E+0
	M4	2.803E+3	1.428E-1	2.400E-5	-2.308E-1	-3.397E-1	1.190E+0
	M5	2.684E+3	1.617E-1	1.329E-5	-2.602E-1	-3.986E-1	1.440E+0
85	K	9.607E+4	2.032E-2	4.255E-4	-3.843E-2	6.885E-2	-6.482E-1
	L1	1.747E+4	3.190E-2	5.858E-4	2.485E-2	-4.028E-1	3.549E-1
	L2	1.684E+4	3.988E-2	4.526E-4	-2.214E-2	-2.943E-1	4.952E-1
	L3	1.421E+4	5.189E-2	5.140E-4	-2.198E-2	-4.294E-1	8.217E-1
	M1	4.286E+3	6.489E-2	6.438E-4	5.203E-2	-8.334E-1	8.578E-1
	M2	3.993E+3	7.582E-2	4.406E-4	1.044E-2	-8.497E-1	1.848E+0
	M3	3.398E+3	1.007E-1	5.704E-4	3.933E-3	-1.054E+0	2.104E+0
	M4	2.911E+3	1.400E-1	3.228E-5	-2.242E-1	-3.463E-1	1.202E+0
	M5	2.785E+3	1.586E-1	2.110E-5	-2.529E-1	-4.053E-1	1.442E+0
86	K	9.876E+4	1.954E-2	4.523E-4	-3.452E-2	4.946E-2	-5.352E-1
	L1	1.804E+4	3.138E-2	5.851E-4	2.423E-2	-3.949E-1	3.429E-1
	L2	1.740E+4	3.872E-2	4.733E-4	-1.806E-2	-3.133E-1	6.577E-1
	L3	1.462E+4	5.124E-2	5.126E-4	-2.270E-2	-4.161E-1	7.647E-1
	M1	4.449E+3	6.346E-2	6.451E-4	5.257E-2	-8.251E-1	8.658E-1
	M2	4.149E+3	7.417E-2	4.431E-4	1.147E-2	-8.375E-1	1.803E+0
	M3	3.518E+3	9.867E-2	5.767E-4	5.856E-3	-1.044E+0	2.066E+0
	M4	3.022E+3	1.372E-1	4.146E-5	-2.174E-1	-3.573E-1	1.247E+0
	M5	2.889E+3	1.556E-1	2.801E-5	-2.457E-1	-4.155E-1	1.489E+0
87	K	1.015E+5	1.668E-2	5.414E-4	-1.209E-2	-9.821E-2	4.670E-1
	L1	1.863E+4	3.081E-2	5.866E-4	2.410E-2	-3.899E-1	3.439E-1
	L2	1.797E+4	3.799E-2	4.785E-4	-1.749E-2	-3.093E-1	6.500E-1
	L3	1.503E+4	5.045E-2	5.166E-4	-2.209E-2	-4.118E-1	7.562E-1
	M1	4.620E+3	6.253E-2	6.265E-4	4.982E-2	-8.005E-1	8.145E-1
	M2	4.314E+3	7.264E-2	4.435E-4	1.144E-2	-8.151E-1	1.676E+0
	M3	3.645E+3	9.660E-2	5.871E-4	8.259E-3	-1.033E+0	1.980E+0
	M4	3.139E+3	1.326E-1	1.158E-4	-1.946E-1	-4.633E-1	1.704E+0
	M5	2.999E+3	1.504E-1	1.140E-4	-2.187E-1	-5.501E-1	2.174E+0
88	K	1.043E+5	2.004E-2	4.090E-4	-4.028E-2	8.018E-2	-6.567E-1
	L1	1.923E+4	3.021E-2	5.900E-4	2.427E-2	-3.868E-1	3.547E-1
	L2	1.856E+4	3.774E-2	4.668E-4	-2.073E-2	-2.803E-1	4.691E-1
	L3	1.546E+4	4.972E-2	5.193E-4	-2.187E-2	-4.046E-1	7.317E-1
	M1	4.796E+3	6.046E-2	6.531E-4	5.499E-2	-8.199E-1	9.225E-1
	M2	4.483E+3	7.072E-2	4.530E-4	1.471E-2	-8.255E-1	1.770E+0
	M3	3.774E+3	9.442E-2	5.955E-4	1.163E-2	-1.044E+0	2.098E+0
	M4	3.259E+3	1.308E-1	7.855E-5	-1.995E-1	-4.092E-1	1.495E+0
	M5	3.111E+3	1.484E-1	7.731E-5	-2.233E-1	-4.959E-1	1.945E+0

Table 2 (continued)

Z	S	$E_{n\bar{q}}$ (eV)	d_1	d_2	d_3	d_4	d_5
89	K	1.072E+5	1.993E-2	4.054E-4	-4.076E-2	8.349E-2	-6.590E-1
	L1	1.985E+4	2.978E-2	5.873E-4	2.325E-2	-3.767E-1	3.270E-1
	L2	1.916E+4	3.660E-2	4.883E-4	-1.657E-2	-3.000E-1	6.288E-1
	L3	1.588E+4	4.883E-2	5.287E-4	-2.026E-2	-4.063E-1	7.539E-1
	M1	4.975E+3	5.876E-2	6.663E-4	5.827E-2	-8.335E-1	1.076E+0
	M2	4.656E+3	6.921E-2	4.530E-4	1.488E-2	-8.111E-1	1.698E+0
	M3	3.904E+3	9.287E-2	5.875E-4	9.641E-3	-1.012E+0	1.904E+0
	M4	3.379E+3	1.284E-1	7.124E-5	-1.966E-1	-3.944E-1	1.350E+0
	M5	3.223E+3	1.457E-1	6.342E-5	-2.215E-1	-4.647E-1	1.636E+0
90	K	1.101E+5	1.981E-2	4.019E-4	-4.113E-2	8.606E-2	-6.579E-1
	L1	2.047E+4	2.925E-2	5.890E-4	2.313E-2	-3.722E-1	3.292E-1
	L2	1.978E+4	3.639E-2	4.767E-4	-1.978E-2	-2.719E-1	4.562E-1
	L3	1.631E+4	4.795E-2	5.384E-4	-1.859E-2	-4.089E-1	7.855E-1
	M1	5.153E+3	5.786E-2	6.546E-4	5.573E-2	-8.074E-1	9.485E-1
	M2	4.827E+3	6.775E-2	4.555E-4	1.576E-2	-8.021E-1	1.676E+0
	M3	4.031E+3	9.125E-2	5.885E-4	1.017E-2	-9.989E-1	1.858E+0
	M4	3.497E+3	1.260E-1	7.760E-5	-1.917E-1	-3.979E-1	1.355E+0
	M5	3.333E+3	1.432E-1	6.596E-5	-2.169E-1	-4.635E-1	1.620E+0
91	K	1.131E+5	1.967E-2	3.989E-4	-4.130E-2	8.740E-2	-6.490E-1
	L1	2.111E+4	2.876E-2	5.893E-4	2.282E-2	-3.670E-1	3.313E-1
	L2	2.040E+4	3.570E-2	4.831E-4	-1.901E-2	-2.700E-1	4.644E-1
	L3	1.674E+4	4.738E-2	5.378E-4	-1.909E-2	-3.985E-1	7.459E-1
	M1	5.335E+3	5.662E-2	6.563E-4	5.623E-2	-8.015E-1	9.638E-1
	M2	5.003E+3	6.633E-2	4.579E-4	1.658E-2	-7.932E-1	1.656E+0
	M3	4.159E+3	8.955E-2	5.947E-4	1.175E-2	-9.924E-1	1.849E+0
	M4	3.616E+3	1.236E-1	8.825E-5	-1.861E-1	-4.061E-1	1.395E+0
	M5	3.443E+3	1.405E-1	7.674E-5	-2.107E-1	-4.739E-1	1.674E+0
92	K	1.161E+5	1.954E-2	3.957E-4	-4.157E-2	8.937E-2	-6.448E-1
	L1	2.177E+4	2.830E-2	5.896E-4	2.237E-2	-3.606E-1	3.210E-1
	L2	2.104E+4	3.515E-2	4.846E-4	-1.928E-2	-2.619E-1	4.373E-1
	L3	1.718E+4	4.667E-2	5.429E-4	-1.847E-2	-3.949E-1	7.396E-1
	M1	5.522E+3	5.546E-2	6.561E-4	5.639E-2	-7.942E-1	9.730E-1
	M2	5.182E+3	6.495E-2	4.605E-4	1.742E-2	-7.848E-1	1.639E+0
	M3	4.289E+3	8.798E-2	5.977E-4	1.266E-2	-9.824E-1	1.820E+0
	M4	3.736E+3	1.213E-1	9.649E-5	-1.812E-1	-4.113E-1	1.416E+0
	M5	3.554E+3	1.382E-1	7.818E-5	-2.069E-1	-4.680E-1	1.629E+0
93	K	1.192E+5	1.940E-2	3.927E-4	-4.170E-2	9.055E-2	-6.370E-1
	L1	2.244E+4	2.783E-2	5.905E-4	2.209E-2	-3.555E-1	3.224E-1
	L2	2.170E+4	3.452E-2	4.900E-4	-1.876E-2	-2.587E-1	4.376E-1
	L3	1.763E+4	4.608E-2	5.445E-4	-1.855E-2	-3.874E-1	7.154E-1
	M1	5.712E+3	5.434E-2	6.559E-4	5.649E-2	-7.866E-1	9.799E-1
	M2	5.366E+3	6.362E-2	4.629E-4	1.821E-2	-7.765E-1	1.626E+0
	M3	4.421E+3	8.651E-2	5.992E-4	1.328E-2	-9.719E-1	1.796E+0
	M4	3.859E+3	1.193E-1	9.959E-5	-1.777E-1	-4.075E-1	1.387E+0
	M5	3.667E+3	1.355E-1	9.559E-5	-1.997E-1	-4.861E-1	1.720E+0
94	K	1.223E+5	1.928E-2	3.895E-4	-4.191E-2	9.214E-2	-6.314E-1
	L1	2.313E+4	2.633E-2	6.307E-4	2.966E-2	-3.944E-1	4.831E-1
	L2	2.238E+4	3.390E-2	4.952E-4	-1.829E-2	-2.553E-1	4.366E-1
	L3	1.808E+4	4.543E-2	5.486E-4	-1.814E-2	-3.831E-1	7.076E-1
	M1	5.908E+3	5.326E-2	6.558E-4	5.653E-2	-7.786E-1	9.821E-1
	M2	5.555E+3	6.237E-2	4.633E-4	1.854E-2	-7.659E-1	1.596E+0
	M3	4.555E+3	8.507E-2	6.011E-4	1.394E-2	-9.616E-1	1.768E+0
	M4	3.983E+3	1.171E-1	1.115E-4	-1.726E-1	-4.144E-1	1.420E+0
	M5	3.781E+3	1.334E-1	9.922E-5	-1.958E-1	-4.839E-1	1.704E+0
95	K	1.256E+5	1.941E-2	3.803E-4	-4.426E-2	1.068E-1	-7.010E-1
	L1	2.383E+4	2.699E-2	5.891E-4	2.099E-2	-3.426E-1	3.049E-1
	L2	2.307E+4	3.343E-2	4.952E-4	-1.887E-2	-2.458E-1	4.025E-1
	L3	1.853E+4	4.471E-2	5.560E-4	-1.700E-2	-3.834E-1	7.246E-1
	M1	6.108E+3	5.227E-2	6.530E-4	5.613E-2	-7.689E-1	9.791E-1
	M2	5.748E+3	6.110E-2	4.659E-4	1.931E-2	-7.583E-1	1.587E+0
	M3	4.690E+3	8.256E-2	6.446E-4	2.339E-2	-1.006E+0	2.070E+0
	M4	4.108E+3	1.150E-1	1.208E-4	-1.681E-1	-4.190E-1	1.443E+0
	M5	3.897E+3	1.311E-1	1.072E-4	-1.911E-1	-4.878E-1	1.727E+0
96	K	1.288E+5	1.930E-2	3.768E-4	-4.447E-2	1.084E-1	-6.962E-1
	L1	2.455E+4	2.546E-2	6.321E-4	2.901E-2	-3.840E-1	4.774E-1
	L2	2.378E+4	3.261E-2	5.136E-4	-1.706E-2	-2.486E-1	4.244E-1
	L3	1.899E+4	4.415E-2	5.580E-4	-1.706E-2	-3.765E-1	7.035E-1
	M1	6.313E+3	5.110E-2	6.581E-4	5.714E-2	-7.667E-1	1.008E+0
	M2	5.946E+3	5.996E-2	4.651E-4	1.941E-2	-7.469E-1	1.554E+0
	M3	4.828E+3	8.109E-2	6.515E-4	2.490E-2	-1.001E+0	2.077E+0
	M4	4.236E+3	1.131E-1	1.247E-4	-1.645E-1	-4.197E-1	1.451E+0
	M5	4.014E+3	1.289E-1	1.170E-4	-1.861E-1	-4.944E-1	1.764E+0

(continued on next page)

Table 2 (continued)

Z	S	E_{nj} (eV)	d_1	d_2	d_3	d_4	d_5
97	K	1.322E+5	1.917E-2	3.739E-4	-4.458E-2	1.094E-1	-6.885E-1
	L1	2.529E+4	2.617E-2	5.894E-4	2.008E-2	-3.308E-1	2.921E-1
	L2	2.450E+4	3.217E-2	5.106E-4	-1.751E-2	-2.411E-1	4.030E-1
	L3	1.946E+4	4.342E-2	5.664E-4	-1.568E-2	-3.789E-1	7.356E-1
	M1	6.523E+3	5.018E-2	6.549E-4	5.652E-2	-7.555E-1	9.920E-1
	M2	6.149E+3	5.878E-2	4.665E-4	1.995E-2	-7.387E-1	1.540E+0
	M3	4.968E+3	7.969E-2	6.565E-4	2.621E-2	-9.971E-1	2.094E+0
	M4	4.366E+3	1.112E-1	1.338E-4	-1.606E-1	-4.209E-1	1.451E+0
	M5	4.133E+3	1.269E-1	1.223E-4	-1.824E-1	-4.924E-1	1.750E+0
98	K	1.356E+5	1.875E-2	3.777E-4	-4.226E-2	9.569E-2	-5.965E-1
	L1	2.605E+4	2.779E-2	5.158E-4	3.330E-3	-2.192E-1	-4.520E-1
	L2	2.525E+4	3.287E-2	4.707E-4	-2.735E-2	-1.715E-1	-4.628E-2
	L3	1.993E+4	4.438E-2	5.138E-4	-2.773E-2	-2.956E-1	2.033E-1
	M1	6.739E+3	5.191E-2	5.557E-4	3.467E-2	-6.059E-1	-9.083E-3
	M2	6.358E+3	5.759E-2	4.697E-4	2.071E-2	-7.315E-1	1.529E+0
	M3	5.109E+3	7.973E-2	6.096E-4	1.641E-2	-9.236E-1	1.685E+0
	M4	4.498E+3	1.094E-1	1.383E-4	-1.577E-1	-4.166E-1	1.424E+0
	M5	4.253E+3	1.247E-1	1.332E-4	-1.775E-1	-4.990E-1	1.781E+0
99	K	1.391E+5	1.863E-2	3.745E-4	-4.238E-2	9.681E-2	-5.901E-1
	L1	2.683E+4	2.742E-2	5.148E-4	2.708E-3	-2.126E-1	-4.645E-1
	L2	2.601E+4	3.247E-2	4.684E-4	-2.807E-2	-1.621E-1	-8.164E-2
	L3	2.041E+4	4.385E-2	5.161E-4	-2.770E-2	-2.893E-1	1.771E-1
	M1	6.960E+3	5.098E-2	5.549E-4	3.442E-2	-5.970E-1	-1.644E-2
	M2	6.572E+3	5.652E-2	4.691E-4	2.073E-2	-7.206E-1	1.501E+0
	M3	5.253E+3	7.850E-2	6.114E-4	1.680E-2	-9.133E-1	1.657E+0
	M4	4.632E+3	1.075E-1	1.496E-4	-1.531E-1	-4.245E-1	1.469E+0
	M5	4.375E+3	1.228E-1	1.415E-4	-1.733E-1	-5.025E-1	1.804E+0

Table 3

Parameters of the high-energy analytical formula, Eqs. (1) and (5), for the ionization cross sections of K, L and M shells of the elements $Z = 1$ –99 by impact of electrons and positrons with kinetic energies larger than $16E_{nj}$. See page 876 for Explanation of Tables.

Z	S	b_-	b_+	A_{nj}	g_1	g_2	g_3	g_4
1	K	1.513E+0	−5.756E−2	1.509E−5	4.882E−3	1.426E+1	−3.163E−2	2.426E−2
2	K	1.331E+0	1.681E−2	2.567E−5	4.821E−3	1.143E+1	−2.959E−2	2.160E−2
3	K	1.253E+0	4.259E−2	1.304E−5	6.617E−3	9.888E+0	−3.302E−2	2.482E−2
4	K	1.206E+0	3.591E−2	6.679E−6	9.973E−3	9.308E+0	−4.437E−2	3.308E−2
5	K	1.210E+0	3.964E−2	3.932E−6	1.366E−2	8.912E+0	−5.541E−2	3.989E−2
6	K	1.206E+0	4.547E−2	2.610E−6	1.764E−2	8.570E+0	−6.750E−2	4.667E−2
7	K	1.196E+0	6.410E−2	1.864E−6	2.295E−2	8.271E+0	−8.227E−2	5.777E−2
8	K	1.188E+0	6.445E−2	1.399E−6	2.577E−2	8.009E+0	−8.980E−2	5.708E−2
9	K	1.178E+0	7.393E−2	1.089E−6	3.046E−2	7.778E+0	−1.051E−1	6.340E−2
10	K	1.164E+0	8.345E−2	8.717E−7	3.522E−2	7.570E+0	−1.199E−1	6.906E−2
11	K	1.164E+0	9.817E−2	6.870E−7	4.274E−2	7.445E+0	−1.466E−1	8.146E−2
	L1	1.518E+0	6.176E−1	4.881E−6	1.290E−2	1.156E+1	−6.870E−2	4.395E−2
12	K	1.156E+0	1.040E−1	5.524E−7	4.856E−2	7.331E+0	−1.649E−1	8.554E−2
	L1	1.387E+0	5.770E−1	4.069E−6	1.409E−2	1.100E+1	−7.484E−2	4.587E−2
	L2	1.016E+0	8.310E−1	1.375E−5	7.356E−3	9.280E+0	−4.254E−2	2.784E−2
	L3	1.014E+0	8.349E−1	2.768E−5	7.528E−3	9.282E+0	−4.014E−2	2.894E−2
13	K	1.146E+0	1.235E−1	4.506E−7	5.507E−2	7.234E+0	−1.831E−1	8.972E−2
	L1	1.315E+0	5.508E−1	3.316E−6	1.560E−2	1.068E+1	−7.772E−2	4.758E−2
	L2	1.017E+0	6.427E−1	1.048E−5	8.418E−3	8.985E+0	−4.279E−2	2.994E−2
	L3	1.015E+0	6.420E−1	2.111E−5	8.386E−3	8.987E+0	−3.872E−2	2.986E−2
14	K	1.136E+0	1.377E−1	3.743E−7	6.205E−2	7.142E+0	−2.066E−1	9.527E−2
	L1	1.252E+0	5.392E−1	2.749E−6	1.736E−2	1.043E+1	−8.262E−2	5.026E−2
	L2	9.997E−1	5.333E−1	8.300E−6	9.557E−3	8.738E+0	−4.620E−2	3.241E−2
	L3	9.982E−1	5.313E−1	1.674E−5	9.489E−3	8.740E+0	−4.121E−2	3.218E−2
15	K	1.127E+0	1.515E−1	3.156E−7	7.222E−2	7.057E+0	−2.434E−1	1.106E−1
	L1	1.205E+0	5.329E−1	2.315E−6	1.938E−2	1.022E+1	−8.912E−2	5.407E−2
	L2	9.774E−1	4.629E−1	6.758E−6	1.055E−2	8.521E+0	−4.725E−2	3.392E−2
	L3	9.786E−1	4.541E−1	1.364E−5	1.032E−2	8.522E+0	−4.071E−2	3.296E−2
16	K	1.114E+0	1.668E−1	2.695E−7	8.037E−2	6.975E+0	−2.722E−1	1.174E−1
	L1	1.169E+0	5.278E−1	1.975E−6	2.108E−2	1.003E+1	−9.275E−2	5.564E−2
	L2	9.601E−1	4.126E−1	5.619E−6	1.158E−2	8.329E+0	−5.075E−2	3.549E−2
	L3	9.592E−1	4.110E−1	1.135E−5	1.145E−2	8.330E+0	−4.370E−2	3.506E−2
17	K	1.093E+0	1.819E−1	2.327E−7	8.711E−2	6.899E+0	−2.977E−1	1.188E−1
	L1	1.136E+0	5.264E−1	1.705E−6	2.306E−2	9.864E+0	−9.774E−2	5.833E−2
	L2	9.441E−1	3.767E−1	4.751E−6	1.273E−2	8.155E+0	−5.383E−2	3.751E−2
	L3	9.431E−1	3.742E−1	9.611E−6	1.247E−2	8.155E+0	−4.470E−2	3.649E−2
18	K	1.075E+0	2.039E−1	2.028E−7	1.030E−1	6.828E+0	−3.568E−1	1.494E−1
	L1	1.109E+0	5.251E−1	1.485E−6	2.513E−2	9.712E+0	−1.043E−1	6.119E−2
	L2	9.295E−1	3.464E−1	4.072E−6	1.387E−2	7.996E+0	−5.747E−2	3.942E−2
	L3	9.277E−1	3.431E−1	8.248E−6	1.357E−2	7.996E+0	−4.683E−2	3.816E−2
19	K	1.053E+0	2.197E−1	1.773E−7	1.086E−1	6.764E+0	−3.707E−1	1.430E−1
	L1	1.093E+0	5.219E−1	1.268E−6	2.762E−2	9.561E+0	−1.111E−1	6.467E−2
	L2	9.401E−1	3.091E−1	3.294E−6	1.586E−2	7.926E+0	−6.340E−2	4.308E−2
	L3	9.380E−1	3.058E−1	6.680E−6	1.543E−2	7.924E+0	−4.925E−2	4.132E−2
20	K	1.032E+0	2.420E−1	1.560E−7	1.290E−1	6.713E+0	−4.398E−1	1.824E−1
	L1	1.115E+0	5.279E−1	1.090E−6	2.953E−2	9.325E+0	−1.167E−1	6.593E−2
	L2	9.899E−1	3.061E−1	2.525E−6	1.954E−2	7.970E+0	−7.924E−2	5.084E−2
	L3	9.881E−1	3.039E−1	5.118E−6	1.901E−2	7.970E+0	−6.268E−2	4.876E−2
	M1	1.840E+0	9.102E−1	3.696E−6	1.669E−2	1.392E+1	−1.004E−1	6.193E−2
21	K	1.012E+0	2.615E−1	1.387E−7	1.461E−1	6.656E+0	−5.033E−1	2.114E−1
	L1	1.106E+0	5.313E−1	9.665E−7	3.157E−2	9.170E+0	−1.219E−1	6.769E−2
	L2	9.927E−1	3.019E−1	2.161E−6	2.172E−2	7.884E+0	−8.635E−2	5.473E−2
	L3	9.909E−1	2.978E−1	4.385E−6	2.108E−2	7.884E+0	−6.784E−2	5.226E−2
	M1	1.820E+0	9.314E−1	3.438E−6	1.706E−2	1.328E+1	−9.937E−2	6.144E−2
22	K	9.790E−1	2.768E−1	1.241E−7	1.467E−1	6.594E+0	−5.069E−1	1.897E−1
	L1	1.096E+0	5.384E−1	8.649E−7	3.357E−2	9.025E+0	−1.269E−1	6.919E−2
	L2	9.909E−1	2.987E−1	1.877E−6	2.357E−2	7.799E+0	−9.174E−2	5.672E−2
	L3	9.901E−1	2.942E−1	3.812E−6	2.295E−2	7.798E+0	−7.155E−2	5.467E−2
	M1	1.804E+0	9.430E−1	3.202E−6	1.658E−2	1.281E+1	−7.459E−2	5.549E−2

(continued on next page)

Table 3 (continued)

Z	S	b_-	b_+	A_{njl}	g_1	g_2	g_3	g_4
23	K	9.527E-1	2.985E-1	1.117E-7	1.653E-1	6.540E+0	-5.728E-1	2.216E-1
	L1	1.085E+0	5.431E-1	7.793E-7	3.594E-2	8.890E+0	-1.343E-1	7.211E-2
	L2	9.877E-1	2.978E-1	1.648E-6	2.588E-2	7.714E+0	-1.007E-1	6.095E-2
	L3	9.886E-1	2.923E-1	3.352E-6	2.478E-2	7.713E+0	-7.559E-2	5.674E-2
	M1	1.788E+0	9.659E-1	2.986E-6	1.807E-2	1.245E+1	-9.887E-2	6.182E-2
	M2	1.382E+0	8.697E-1	4.215E-6	1.968E-2	1.415E+1	-1.164E-1	7.247E-2
24	K	9.238E-1	3.174E-1	1.010E-7	1.822E-1	6.487E+0	-6.295E-1	2.461E-1
	L1	1.076E+0	5.494E-1	7.061E-7	3.808E-2	8.764E+0	-1.403E-1	7.385E-2
	L2	9.870E-1	2.994E-1	1.460E-6	2.815E-2	7.631E+0	-1.072E-1	6.449E-2
	L3	9.846E-1	2.935E-1	2.973E-6	2.676E-2	7.629E+0	-7.894E-2	5.922E-2
	M1	1.753E+0	9.867E-1	2.789E-6	1.866E-2	1.215E+1	-9.934E-2	6.237E-2
	M2	1.360E+0	9.225E-1	3.868E-6	2.049E-2	1.378E+1	-1.181E-1	7.376E-2
25	K	8.942E-1	3.407E-1	9.177E-8	2.028E-1	6.437E+0	-6.982E-1	2.804E-1
	L1	1.065E+0	5.550E-1	6.430E-7	3.990E-2	8.644E+0	-1.441E-1	7.410E-2
	L2	9.809E-1	3.011E-1	1.303E-6	3.003E-2	7.550E+0	-1.120E-1	6.616E-2
	L3	9.812E-1	2.934E-1	2.658E-6	2.772E-2	7.548E+0	-7.674E-2	5.707E-2
	M1	1.735E+0	1.001E+0	2.607E-6	1.892E-2	1.188E+1	-9.190E-2	6.094E-2
	M2	1.355E+0	9.756E-1	3.568E-6	2.111E-2	1.346E+1	-1.148E-1	7.385E-2
26	K	8.633E-1	3.626E-1	8.371E-8	2.246E-1	6.389E+0	-7.702E-1	3.165E-1
	L1	1.055E+0	5.548E-1	5.880E-7	3.863E-2	8.526E+0	-1.254E-1	6.123E-2
	L2	9.755E-1	3.055E-1	1.170E-6	3.286E-2	7.476E+0	-1.266E-1	7.173E-2
	L3	9.760E-1	2.970E-1	2.391E-6	3.030E-2	7.471E+0	-8.532E-2	6.189E-2
	M1	1.722E+0	1.015E+0	2.441E-6	1.949E-2	1.166E+1	-9.168E-2	6.128E-2
	M2	1.350E+0	1.016E+0	3.303E-6	2.193E-2	1.319E+1	-1.167E-1	7.517E-2
27	K	8.318E-1	3.811E-1	7.665E-8	2.483E-1	6.345E+0	-8.498E-1	3.575E-1
	L1	1.045E+0	5.653E-1	5.398E-7	4.425E-2	8.426E+0	-1.558E-1	7.697E-2
	L2	9.711E-1	3.092E-1	1.057E-6	3.484E-2	7.400E+0	-1.322E-1	7.336E-2
	L3	9.713E-1	2.993E-1	2.164E-6	3.131E-2	7.393E+0	-8.315E-2	5.983E-2
	M1	1.712E+0	1.033E+0	2.288E-6	2.048E-2	1.146E+1	-1.001E-1	6.405E-2
	M2	1.346E+0	1.060E+0	3.067E-6	2.284E-2	1.295E+1	-1.211E-1	7.694E-2
28	K	7.986E-1	4.020E-1	7.042E-8	2.733E-1	6.302E+0	-9.306E-1	4.007E-1
	L1	1.034E+0	5.718E-1	4.972E-7	4.699E-2	8.326E+0	-1.654E-1	8.039E-2
	L2	9.657E-1	3.090E-1	9.602E-7	3.347E-2	7.319E+0	-1.120E-1	6.103E-2
	L3	9.650E-1	3.055E-1	1.968E-6	3.438E-2	7.320E+0	-9.346E-2	6.618E-2
	M1	1.700E+0	1.044E+0	2.147E-6	2.051E-2	1.127E+1	-8.739E-2	6.104E-2
	M2	1.343E+0	1.097E+0	2.854E-6	2.388E-2	1.273E+1	-1.281E-1	7.945E-2
29	K	7.650E-1	4.262E-1	6.490E-8	3.024E-1	6.261E+0	-1.024E+0	4.543E-1
	L1	1.023E+0	5.778E-1	4.594E-7	4.938E-2	8.231E+0	-1.726E-1	8.225E-2
	L2	9.586E-1	3.209E-1	8.758E-7	4.007E-2	7.257E+0	-1.513E-1	8.131E-2
	L3	9.586E-1	3.096E-1	1.799E-6	3.611E-2	7.248E+0	-9.564E-2	6.680E-2
	M1	1.689E+0	1.060E+0	2.018E-6	2.185E-2	1.112E+1	-1.023E-1	6.569E-2
	M2	1.341E+0	1.133E+0	2.661E-6	2.451E-2	1.254E+1	-1.238E-1	7.930E-2
30	K	7.299E-1	4.423E-1	5.999E-8	3.351E-1	6.223E+0	-1.128E+0	5.167E-1
	L1	1.013E+0	5.855E-1	4.257E-7	5.131E-2	8.140E+0	-1.772E-1	8.219E-2
	L2	9.516E-1	3.273E-1	8.021E-7	4.250E-2	7.189E+0	-1.594E-1	8.424E-2
	L3	9.518E-1	3.148E-1	1.651E-6	3.778E-2	7.181E+0	-1.008E-1	6.720E-2
	M1	1.678E+0	1.074E+0	1.898E-6	2.283E-2	1.098E+1	-1.088E-1	6.806E-2
	M2	1.344E+0	1.148E+0	2.486E-6	2.566E-2	1.237E+1	-1.322E-1	8.225E-2
31	K	6.932E-1	4.638E-1	5.543E-8	3.576E-1	6.192E+0	-1.207E+0	5.513E-1
	L1	1.009E+0	5.874E-1	3.894E-7	5.369E-2	8.063E+0	-1.830E-1	8.253E-2
	L2	9.553E-1	3.321E-1	7.178E-7	4.678E-2	7.164E+0	-1.749E-1	9.184E-2
	L3	9.591E-1	3.188E-1	1.478E-6	4.155E-2	7.156E+0	-1.103E-1	7.318E-2
	M1	1.666E+0	1.016E+0	1.720E-6	2.391E-2	1.082E+1	-1.088E-1	6.850E-2
	M2	1.305E+0	1.111E+0	2.267E-6	2.606E-2	1.193E+1	-1.307E-1	8.035E-2
32	K	6.581E-1	4.906E-1	5.135E-8	4.316E-1	6.171E+0	-1.416E+0	7.142E-1
	L1	1.004E+0	5.949E-1	3.571E-7	5.615E-2	7.993E+0	-1.895E-1	8.278E-2
	L2	9.537E-1	3.351E-1	6.456E-7	5.139E-2	7.141E+0	-1.944E-1	1.007E-1
	L3	9.538E-1	3.204E-1	1.331E-6	4.485E-2	7.135E+0	-1.231E-1	7.773E-2
	M1	1.638E+0	9.712E-1	1.568E-6	2.460E-2	1.070E+1	-1.039E-1	6.665E-2
	M2	1.254E+0	1.061E+0	2.123E-6	2.581E-2	1.147E+1	-1.246E-1	7.619E-2
33	K	6.281E-1	5.074E-1	4.855E-8	4.659E-1	6.128E+0	-1.616E+0	7.635E-1
	L1	1.000E+0	6.000E-1	3.000E-7	6.000E-2	9.000E+0	-2.000E-1	1.000E-1
	L2	9.500E-1	3.500E-1	7.000E-7	5.000E-2	7.500E+0	-1.500E-1	8.500E-2
	L3	9.500E-1	3.500E-1	7.000E-7	5.000E-2	7.500E+0	-1.500E-1	8.500E-2
	M1	1.600E+0	1.000E+0	2.000E-6	2.000E-2	1.000E+1	-1.000E-1	6.000E-2
	M2	1.200E+0	1.000E+0	2.000E-6	2.000E-2	1.000E+1	-1.000E-1	6.000E-2

Table 3 (continued)

Z	S	b_-	b_+	A_{nif}	g_1	g_2	g_3	g_4
33	K	6.187E-1	5.072E-1	4.768E-8	4.293E-1	6.137E+0	-1.426E+0	6.821E-1
	L1	9.954E-1	5.985E-1	3.284E-7	5.883E-2	7.927E+0	-1.970E-1	8.351E-2
	L2	9.528E-1	3.396E-1	5.834E-7	5.527E-2	7.119E+0	-2.107E-1	1.060E-1
	L3	9.542E-1	3.227E-1	1.204E-6	4.680E-2	7.113E+0	-1.270E-1	7.620E-2
	M1	1.607E+0	9.289E-1	1.435E-6	2.657E-2	1.059E+1	-1.223E-1	7.197E-2
	M2	1.206E+0	1.023E+0	2.004E-6	2.594E-2	1.106E+1	-1.240E-1	7.451E-2
	M3	1.182E+0	1.031E+0	4.361E-6	2.419E-2	1.087E+1	-1.095E-1	6.986E-2
	M4	5.086E-1	3.718E+0	2.422E-5	9.456E-3	8.770E+0	-5.403E-2	3.499E-2
	M5	5.102E-1	3.737E+0	3.680E-5	9.363E-3	8.777E+0	-4.896E-2	3.468E-2
34	K	5.811E-1	5.304E-1	4.437E-8	4.567E-1	6.109E+0	-1.516E+0	7.267E-1
	L1	9.868E-1	6.019E-1	3.027E-7	6.121E-2	7.866E+0	-2.046E-1	8.296E-2
	L2	9.493E-1	3.433E-1	5.295E-7	5.959E-2	7.096E+0	-2.261E-1	1.125E-1
	L3	9.515E-1	3.313E-1	1.094E-6	5.038E-2	7.091E+0	-1.375E-1	8.068E-2
	M1	1.582E+0	9.899E-1	1.317E-6	2.767E-2	1.050E+1	-1.235E-1	7.212E-2
	M2	1.160E+0	9.855E-1	1.897E-6	2.580E-2	1.069E+1	-1.200E-1	7.142E-2
	M3	1.135E+0	9.890E-1	4.146E-6	2.400E-2	1.051E+1	-1.045E-1	6.684E-2
	M4	5.437E-1	3.334E+0	2.079E-5	1.032E-2	8.591E+0	-5.565E-2	3.687E-2
	M5	5.483E-1	3.349E+0	3.158E-5	1.022E-2	8.598E+0	-4.982E-2	3.659E-2
35	K	5.433E-1	5.505E-1	4.137E-8	5.019E-1	6.090E+0	-1.665E+0	8.226E-1
	L1	9.794E-1	6.084E-1	2.797E-7	6.348E-2	7.808E+0	-2.102E-1	8.171E-2
	L2	9.459E-1	3.480E-1	4.824E-7	6.375E-2	7.073E+0	-2.422E-1	1.181E-1
	L3	9.475E-1	3.354E-1	9.975E-7	5.191E-2	7.070E+0	-1.408E-1	7.734E-2
	M1	1.563E+0	8.645E-1	1.213E-6	2.906E-2	1.041E+1	-1.293E-1	7.372E-2
	M2	1.118E+0	9.599E-1	1.797E-6	2.600E-2	1.038E+1	-1.187E-1	7.002E-2
	M3	1.090E+0	9.644E-1	3.945E-6	2.413E-2	1.020E+1	-1.029E-1	6.545E-2
	M4	5.433E-1	3.025E+0	1.811E-5	1.120E-2	8.435E+0	-5.837E-2	3.894E-2
	M5	5.479E-1	3.037E+0	2.752E-5	1.105E-2	8.441E+0	-5.202E-2	3.836E-2
36	K	5.051E-1	5.717E-1	3.865E-8	5.468E-1	6.069E+0	-1.803E+0	9.116E-1
	L1	9.715E-1	6.140E-1	2.590E-7	6.618E-2	7.753E+0	-2.184E-1	8.180E-2
	L2	9.358E-1	3.588E-1	4.411E-7	6.868E-2	7.049E+0	-2.590E-1	1.258E-1
	L3	9.409E-1	3.379E-1	9.132E-7	5.580E-2	7.047E+0	-1.503E-1	8.221E-2
	M1	1.540E+0	8.381E-1	1.120E-6	3.059E-2	1.033E+1	-1.349E-1	7.582E-2
	M2	1.084E+0	9.336E-1	1.703E-6	2.619E-2	1.011E+1	-1.174E-1	6.850E-2
	M3	1.056E+0	9.271E-1	3.753E-6	2.411E-2	9.924E+0	-9.880E-2	6.321E-2
	M4	5.429E-1	2.764E+0	1.598E-5	1.190E-2	8.294E+0	-5.768E-2	3.989E-2
	M5	5.429E-1	2.777E+0	2.428E-5	1.178E-2	8.299E+0	-5.089E-2	3.953E-2
37	K	4.658E-1	5.920E-1	3.613E-8	5.759E-1	6.049E+0	-1.898E+0	9.564E-1
	L1	9.632E-1	6.218E-1	2.392E-7	6.918E-2	7.707E+0	-2.281E-1	8.223E-2
	L2	9.349E-1	3.655E-1	4.017E-7	7.611E-2	7.041E+0	-2.871E-1	1.408E-1
	L3	9.387E-1	3.391E-1	8.324E-7	6.037E-2	7.038E+0	-1.619E-1	8.783E-2
	M1	1.519E+0	7.912E-1	1.014E-6	3.293E-2	1.032E+1	-1.425E-1	7.990E-2
	M2	1.056E+0	8.738E-1	1.588E-6	2.669E-2	9.892E+0	-1.178E-1	6.757E-2
	M3	1.026E+0	8.739E-1	3.510E-6	2.447E-2	9.711E+0	-9.700E-2	6.199E-2
	M4	5.437E-1	2.279E+0	1.414E-5	1.246E-2	8.143E+0	-5.845E-2	4.031E-2
	M5	5.459E-1	2.286E+0	2.149E-5	1.226E-2	8.148E+0	-4.963E-2	3.947E-2
38	K	4.256E-1	6.130E-1	3.383E-8	6.171E-1	6.036E+0	-2.035E+0	1.038E+0
	L1	9.582E-1	6.274E-1	2.212E-7	7.035E-2	7.650E+0	-2.288E-1	7.614E-2
	L2	9.338E-1	3.732E-1	3.632E-7	8.282E-2	7.057E+0	-3.148E-1	1.515E-1
	L3	9.395E-1	3.499E-1	7.530E-7	6.547E-2	7.056E+0	-1.795E-1	9.398E-2
	M1	1.512E+0	7.527E-1	9.196E-7	3.474E-2	1.030E+1	-1.480E-1	8.147E-2
	M2	1.047E+0	8.387E-1	1.453E-6	2.817E-2	9.780E+0	-1.225E-1	6.948E-2
	M3	1.018E+0	8.385E-1	3.212E-6	2.588E-2	9.609E+0	-1.025E-1	6.410E-2
	M4	5.945E-1	1.892E+0	1.263E-5	1.293E-2	7.980E+0	-5.856E-2	4.035E-2
	M5	5.964E-1	1.893E+0	1.919E-5	1.266E-2	7.982E+0	-4.638E-2	3.913E-2
39	K	3.882E-1	6.326E-1	3.174E-8	6.608E-1	6.018E+0	-2.175E+0	1.125E+0
	L1	9.472E-1	6.313E-1	2.055E-7	7.060E-2	7.600E+0	-2.296E-1	6.757E-2
	L2	9.258E-1	3.812E-1	3.325E-7	9.018E-2	7.054E+0	-3.432E-1	1.649E-1
	L3	9.316E-1	3.560E-1	6.899E-7	6.916E-2	7.054E+0	-1.914E-1	9.585E-2
	M1	1.492E+0	7.282E-1	8.461E-7	3.648E-2	1.026E+1	-1.537E-1	8.325E-2
	M2	1.036E+0	8.222E-1	1.352E-6	2.939E-2	9.645E+0	-1.264E-1	7.097E-2
	M3	1.009E+0	8.151E-1	2.995E-6	2.693E-2	9.476E+0	-1.050E-1	6.528E-2
	M4	6.208E-1	1.695E+0	1.139E-5	1.347E-2	7.855E+0	-5.737E-2	4.060E-2
	M5	6.236E-1	1.696E+0	1.731E-5	1.318E-2	7.858E+0	-4.572E-2	3.943E-2
40	K	3.479E-1	6.529E-1	2.983E-8	6.966E-1	6.004E+0	-2.294E+0	1.187E+0
	L1	9.371E-1	6.414E-1	1.915E-7	7.440E-2	7.553E+0	-2.414E-1	7.023E-2
	L2	9.185E-1	3.926E-1	3.057E-7	9.773E-2	7.049E+0	-3.738E-1	1.786E-1
	L3	9.247E-1	3.636E-1	6.347E-7	7.328E-2	7.049E+0	-2.034E-1	9.897E-2
	M1	1.475E+0	7.093E-1	7.828E-7	3.813E-2	1.021E+1	-1.587E-1	8.461E-2
	M2	1.023E+0	7.993E-1	1.260E-6	3.024E-2	9.524E+0	-1.306E-1	7.092E-2
	M3	9.942E-1	7.975E-1	2.799E-6	2.758E-2	9.354E+0	-1.047E-1	6.444E-2
	M4	6.443E-1	1.548E+0	1.034E-5	1.407E-2	7.744E+0	-5.802E-2	4.128E-2
	M5	6.457E-1	1.548E+0	1.573E-5	1.378E-2	7.747E+0	-4.587E-2	4.011E-2

(continued on next page)

Table 3 (continued)

Z	S	b_-	b_+	$A_{n\beta j}$	g_1	g_2	g_3	g_4
41	K	3.071E-1	6.713E-1	2.808E-8	7.501E-1	5.992E+0	-2.464E+0	1.302E+0
	L1	9.262E-1	6.497E-1	1.788E-7	7.541E-2	7.505E+0	-2.414E-1	6.325E-2
	L2	9.106E-1	4.024E-1	2.820E-7	1.071E-1	7.043E+0	-4.094E-1	1.974E-1
	L3	9.177E-1	3.718E-1	5.860E-7	7.850E-2	7.044E+0	-2.205E-1	1.055E-1
	M1	1.458E+0	6.931E-1	7.271E-7	3.978E-2	1.015E+1	-1.640E-1	8.602E-2
	M2	1.007E+0	7.894E-1	1.176E-6	3.125E-2	9.414E+0	-1.321E-1	7.118E-2
	M3	9.794E-1	7.856E-1	2.622E-6	2.785E-2	9.242E+0	-9.898E-2	6.165E-2
	M4	6.669E-1	1.423E+0	9.445E-6	1.280E-2	7.630E+0	-2.989E-2	3.188E-2
	M5	6.668E-1	1.433E+0	1.437E-5	1.440E-2	7.644E+0	-4.594E-2	4.090E-2
42	K	2.692E-1	6.939E-1	2.647E-8	7.942E-1	5.981E+0	-2.590E+0	1.369E+0
	L1	9.134E-1	6.575E-1	1.673E-7	7.731E-2	7.461E+0	-2.476E-1	5.958E-2
	L2	9.015E-1	4.141E-1	2.608E-7	1.160E-1	7.036E+0	-4.429E-1	2.144E-1
	L3	9.085E-1	3.815E-1	5.427E-7	8.256E-2	7.039E+0	-2.347E-1	1.080E-1
	M1	1.445E+0	6.807E-1	6.776E-7	4.148E-2	1.010E+1	-1.696E-1	8.760E-2
	M2	9.925E-1	7.842E-1	1.100E-6	3.275E-2	9.316E+0	-1.388E-1	7.359E-2
	M3	9.633E-1	7.815E-1	2.460E-6	2.956E-2	9.144E+0	-1.078E-1	6.570E-2
	M4	6.773E-1	1.337E+0	8.669E-6	1.543E-2	7.546E+0	-6.078E-2	4.337E-2
	M5	6.820E-1	1.338E+0	1.320E-5	1.497E-2	7.547E+0	-4.456E-2	4.142E-2
43	K	2.331E-1	7.082E-1	2.500E-8	8.342E-1	5.969E+0	-2.743E+0	1.462E+0
	L1	9.018E-1	6.661E-1	1.572E-7	7.854E-2	7.415E+0	-2.508E-1	5.382E-2
	L2	8.906E-1	4.282E-1	2.430E-7	1.257E-1	7.018E+0	-4.785E-1	2.339E-1
	L3	8.965E-1	3.926E-1	5.063E-7	8.778E-2	7.024E+0	-2.538E-1	1.147E-1
	M1	1.426E+0	6.814E-1	6.396E-7	4.324E-2	1.001E+1	-1.759E-1	9.012E-2
	M2	9.799E-1	7.842E-1	1.042E-6	3.379E-2	9.194E+0	-1.420E-1	7.456E-2
	M3	9.481E-1	7.830E-1	2.342E-6	3.039E-2	9.016E+0	-1.095E-1	6.647E-2
	M4	6.900E-1	1.314E+0	7.999E-6	1.629E-2	7.463E+0	-6.232E-2	4.505E-2
	M5	6.928E-1	1.312E+0	1.219E-5	1.563E-2	7.465E+0	-4.468E-2	4.221E-2
44	K	1.942E-1	7.245E-1	2.362E-8	8.868E-1	5.958E+0	-2.916E+0	1.578E+0
	L1	8.878E-1	6.729E-1	1.476E-7	7.390E-2	7.370E+0	-2.336E-1	2.951E-2
	L2	8.808E-1	4.370E-1	2.260E-7	1.380E-1	7.010E+0	-5.249E-1	2.612E-1
	L3	8.874E-1	4.025E-1	4.713E-7	9.401E-2	7.018E+0	-2.759E-1	1.242E-1
	M1	1.411E+0	6.752E-1	5.989E-7	4.612E-2	9.961E+0	-1.872E-1	9.656E-2
	M2	9.693E-1	7.809E-1	9.769E-7	3.511E-2	9.110E+0	-1.458E-1	7.581E-2
	M3	9.336E-1	7.792E-1	2.204E-6	3.164E-2	8.930E+0	-1.127E-1	6.802E-2
	M4	6.960E-1	1.245E+0	7.401E-6	1.701E-2	7.380E+0	-6.549E-2	4.616E-2
	M5	6.996E-1	1.246E+0	1.128E-5	1.647E-2	7.380E+0	-4.693E-2	4.397E-2
45	K	1.543E-1	7.422E-1	2.235E-8	9.226E-1	5.949E+0	-3.049E+0	1.649E+0
	L1	8.749E-1	6.836E-1	1.388E-7	7.914E-2	7.331E+0	-2.520E-1	3.591E-2
	L2	8.687E-1	4.462E-1	2.106E-7	1.483E-1	7.000E+0	-5.608E-1	2.803E-1
	L3	8.760E-1	4.109E-1	4.398E-7	9.843E-2	7.011E+0	-2.901E-1	1.268E-1
	M1	1.401E+0	6.680E-1	5.620E-7	4.757E-2	9.907E+0	-1.928E-1	9.711E-2
	M2	9.548E-1	7.790E-1	9.171E-7	3.685E-2	9.034E+0	-1.540E-1	7.894E-2
	M3	9.219E-1	7.762E-1	2.078E-6	3.274E-2	8.850E+0	-1.147E-1	6.887E-2
	M4	6.996E-1	1.188E+0	6.870E-6	1.765E-2	7.297E+0	-6.443E-2	4.678E-2
	M5	7.051E-1	1.185E+0	1.048E-5	1.689E-2	7.299E+0	-4.472E-2	4.353E-2
46	K	1.198E-1	7.612E-1	2.117E-8	9.814E-1	5.941E+0	-3.232E+0	1.772E+0
	L1	8.590E-1	6.929E-1	1.307E-7	7.917E-2	7.291E+0	-2.525E-1	2.616E-2
	L2	8.538E-1	4.570E-1	1.967E-7	1.541E-1	6.987E+0	-5.758E-1	2.834E-1
	L3	8.641E-1	4.230E-1	4.112E-7	1.031E-1	7.003E+0	-3.057E-1	1.302E-1
	M1	1.384E+0	6.630E-1	5.284E-7	4.923E-2	9.854E+0	-1.977E-1	9.810E-2
	M2	9.396E-1	7.755E-1	8.621E-7	3.848E-2	8.963E+0	-1.602E-1	8.122E-2
	M3	9.049E-1	7.747E-1	1.961E-6	3.408E-2	8.774E+0	-1.189E-1	7.069E-2
	M4	6.990E-1	1.139E+0	6.396E-6	1.853E-2	7.221E+0	-6.750E-2	4.859E-2
	M5	7.030E-1	1.137E+0	9.761E-6	1.782E-2	7.222E+0	-4.677E-2	4.568E-2
47	K	8.182E-2	7.810E-1	2.008E-8	1.008E+0	5.930E+0	-3.326E+0	1.804E+0
	L1	8.430E-1	7.019E-1	1.233E-7	7.739E-2	7.251E+0	-2.477E-1	1.104E-2
	L2	8.424E-1	4.719E-1	1.841E-7	1.717E-1	6.980E+0	-6.422E-1	3.258E-1
	L3	8.517E-1	4.333E-1	3.853E-7	1.062E-1	6.994E+0	-3.135E-1	1.279E-1
	M1	1.370E+0	6.592E-1	4.976E-7	5.103E-2	9.802E+0	-2.034E-1	9.955E-2
	M2	9.257E-1	7.775E-1	8.114E-7	4.022E-2	8.896E+0	-1.662E-1	8.377E-2
	M3	8.904E-1	7.732E-1	1.854E-6	3.543E-2	8.703E+0	-1.223E-1	7.231E-2
	M4	6.993E-1	1.097E+0	5.972E-6	1.936E-2	7.149E+0	-7.007E-2	4.986E-2
	M5	7.037E-1	1.091E+0	9.119E-6	1.862E-2	7.148E+0	-4.711E-2	4.703E-2
48	K	4.601E-2	8.019E-1	1.905E-8	1.070E+0	5.926E+0	-3.508E+0	1.921E+0
	L1	8.258E-1	7.087E-1	1.162E-7	7.655E-2	7.216E+0	-2.471E-1	-1.507E-3
	L2	8.289E-1	4.936E-1	1.719E-7	1.875E-1	6.982E+0	-7.006E-1	3.605E-1
	L3	8.417E-1	4.433E-1	3.601E-7	1.153E-1	6.999E+0	-3.473E-1	1.443E-1
	M1	1.348E+0	6.480E-1	4.649E-7	5.270E-2	9.777E+0	-2.084E-1	9.926E-2
	M2	9.055E-1	7.729E-1	7.559E-7	4.278E-2	8.869E+0	-1.769E-1	8.856E-2
	M3	8.707E-1	7.659E-1	1.732E-6	3.729E-2	8.673E+0	-1.271E-1	7.485E-2
	M4	6.864E-1	1.016E+0	5.585E-6	2.026E-2	7.074E+0	-7.271E-2	5.172E-2
	M5	6.891E-1	1.014E+0	8.534E-6	1.942E-2	7.073E+0	-4.919E-2	4.847E-2

Table 3 (continued)

Z	S	b_-	b_+	A_{nif}	g_1	g_2	g_3	g_4
49	K	1.033E-2	8.194E-1	1.808E-8	1.128E+0	5.924E+0	-3.697E+0	2.044E+0
	L1	8.105E-1	7.181E-1	1.095E-7	7.426E-2	7.185E+0	-2.417E-1	-1.864E-2
	L2	8.148E-1	5.074E-1	1.608E-7	2.053E-1	6.983E+0	-7.617E-1	3.991E-1
	L3	8.265E-1	4.545E-1	3.370E-7	1.182E-1	7.000E+0	-3.540E-1	1.401E-1
	M1	1.330E+0	6.315E-1	4.327E-7	5.546E-2	9.774E+0	-2.175E-1	1.030E-1
	M2	8.934E-1	7.628E-1	7.042E-7	4.482E-2	8.844E+0	-1.838E-1	9.079E-2
	M3	8.558E-1	7.587E-1	1.618E-6	3.932E-2	8.648E+0	-1.332E-1	7.787E-2
	M4	6.770E-1	9.389E-1	5.233E-6	2.141E-2	7.000E+0	-7.519E-2	5.460E-2
	M5	6.816E-1	9.333E-1	8.003E-6	2.025E-2	6.998E+0	-4.783E-2	4.988E-2
50	K	-2.786E-2	8.314E-1	1.718E-8	1.156E+0	5.920E+0	-3.832E+0	2.113E+0
	L1	7.927E-1	7.283E-1	1.033E-7	7.128E-2	7.156E+0	-2.360E-1	-3.764E-2
	L2	7.985E-1	5.246E-1	1.506E-7	2.141E-1	6.979E+0	-7.775E-1	4.037E-1
	L3	8.134E-1	4.657E-1	3.159E-7	1.244E-1	7.004E+0	-3.757E-1	1.461E-1
	M1	1.131E+0	6.172E-1	4.037E-7	5.736E-2	9.771E+0	-2.244E-1	1.032E-1
	M2	8.768E-1	7.534E-1	6.572E-7	4.783E-2	8.823E+0	-1.949E-1	9.669E-2
	M3	8.405E-1	7.495E-1	1.515E-6	4.162E-2	8.624E+0	-1.397E-1	8.164E-2
	M4	6.685E-1	8.721E-1	4.914E-6	2.212E-2	6.930E+0	-7.443E-2	5.525E-2
	M5	6.743E-1	8.663E-1	7.521E-6	2.105E-2	6.929E+0	-4.926E-2	5.111E-2
51	K	-6.098E-2	8.472E-1	1.634E-8	1.211E+0	5.920E+0	-4.020E+0	2.233E+0
	L1	7.757E-1	7.372E-1	9.753E-8	6.904E-2	7.128E+0	-2.320E-1	-5.453E-2
	L2	7.831E-1	5.378E-1	1.413E-7	2.357E-1	6.979E+0	-8.588E-1	4.572E-1
	L3	8.006E-1	4.784E-1	2.966E-7	1.309E-1	7.008E+0	-3.987E-1	1.529E-1
	M1	1.304E+0	6.078E-1	3.773E-7	6.016E-2	9.768E+0	-2.342E-1	1.064E-1
	M2	8.630E-1	7.490E-1	6.141E-7	5.099E-2	8.804E+0	-2.087E-1	1.031E-1
	M3	8.287E-1	7.427E-1	1.420E-6	4.397E-2	8.602E+0	-1.483E-1	8.580E-2
	M4	6.569E-1	8.103E-1	4.624E-6	2.318E-2	6.863E+0	-7.780E-2	5.761E-2
	M5	6.682E-1	8.013E-1	7.083E-6	2.162E-2	6.862E+0	-4.894E-2	5.128E-2
52	K	-9.681E-2	8.623E-1	1.556E-8	1.273E+0	5.920E+0	-4.230E+0	2.377E+0
	L1	7.565E-1	7.465E-1	9.222E-8	6.477E-2	7.100E+0	-2.230E-1	-7.696E-2
	L2	7.666E-1	5.509E-1	1.328E-7	2.556E-1	6.979E+0	-9.242E-1	4.995E-1
	L3	7.849E-1	4.869E-1	2.790E-7	1.371E-1	7.014E+0	-4.210E-1	1.575E-1
	M1	1.289E+0	5.975E-1	3.532E-7	6.277E-2	9.763E+0	-2.416E-1	1.087E-1
	M2	8.537E-1	7.395E-1	5.748E-7	5.246E-2	8.787E+0	-2.163E-1	1.030E-1
	M3	8.204E-1	7.337E-1	1.333E-6	4.544E-2	8.581E+0	-1.511E-1	8.591E-2
	M4	6.516E-1	7.526E-1	4.359E-6	2.363E-2	6.797E+0	-7.674E-2	5.726E-2
	M5	6.536E-1	7.437E-1	6.682E-6	2.205E-2	6.793E+0	-4.426E-2	5.102E-2
53	K	-1.265E-1	8.862E-1	1.482E-8	1.329E+0	5.919E+0	-4.382E+0	2.455E+0
	L1	7.389E-1	7.572E-1	8.729E-8	6.111E-2	7.073E+0	-2.161E-1	-9.765E-2
	L2	7.507E-1	5.676E-1	1.250E-7	2.810E-1	6.980E+0	-1.007E+0	5.567E-1
	L3	7.697E-1	5.013E-1	2.628E-7	1.463E-1	7.017E+0	-4.520E-1	1.722E-1
	M1	1.278E+0	5.911E-1	3.312E-7	6.561E-2	9.760E+0	-2.523E-1	1.118E-1
	M2	8.436E-1	7.366E-1	5.387E-7	5.625E-2	8.771E+0	-2.296E-1	1.108E-1
	M3	8.039E-1	7.282E-1	1.254E-6	4.775E-2	8.562E+0	-1.580E-1	8.934E-2
	M4	6.471E-1	7.123E-1	4.115E-6	2.538E-2	6.739E+0	-8.730E-2	6.246E-2
	M5	6.552E-1	7.000E-1	6.313E-6	2.337E-2	6.732E+0	-4.899E-2	5.451E-2
54	K	-1.625E-1	8.940E-1	1.413E-8	1.383E+0	5.922E+0	-4.598E+0	2.603E+0
	L1	7.179E-1	7.683E-1	8.270E-8	5.420E-2	7.047E+0	-2.009E-1	-1.272E-1
	L2	7.256E-1	5.743E-1	1.178E-7	2.874E-1	6.978E+0	-1.031E+0	5.542E-1
	L3	7.533E-1	5.145E-1	2.480E-7	1.547E-1	7.021E+0	-4.812E-1	1.836E-1
	M1	1.276E+0	5.839E-1	3.110E-7	6.840E-2	9.757E+0	-2.605E-1	1.145E-1
	M2	8.305E-1	7.326E-1	5.056E-7	5.877E-2	8.757E+0	-2.410E-1	1.141E-1
	M3	7.912E-1	7.210E-1	1.181E-6	4.915E-2	8.543E+0	-1.607E-1	8.874E-2
	M4	6.417E-1	6.634E-1	3.890E-6	2.581E-2	6.676E+0	-8.404E-2	6.200E-2
	M5	6.455E-1	6.493E-1	5.973E-6	2.326E-2	6.669E+0	-4.124E-2	5.154E-2
55	K	-1.911E-1	9.089E-1	1.347E-8	1.438E+0	5.922E+0	-4.783E+0	2.722E+0
	L1	6.975E-1	7.828E-1	7.831E-8	5.013E-2	7.024E+0	-1.955E-1	-1.491E-1
	L2	7.143E-1	5.987E-1	1.108E-7	3.320E-1	6.993E+0	-1.174E+0	6.681E-1
	L3	7.373E-1	5.259E-1	2.334E-7	1.655E-1	7.035E+0	-5.152E-1	1.997E-1
	M1	1.258E+0	5.711E-1	2.908E-7	7.179E-2	9.765E+0	-2.717E-1	1.188E-1
	M2	8.229E-1	7.293E-1	4.704E-7	6.346E-2	8.778E+0	-2.572E-1	1.238E-1
	M3	7.803E-1	7.132E-1	1.102E-6	5.310E-2	8.561E+0	-1.724E-1	9.692E-2
	M4	6.553E-1	6.368E-1	3.677E-6	2.764E-2	6.615E+0	-8.532E-2	6.632E-2
	M5	6.514E-1	6.209E-1	5.652E-6	2.462E-2	6.607E+0	-3.962E-2	5.441E-2
56	K	-2.210E-1	9.233E-1	1.286E-8	1.509E+0	5.927E+0	-5.009E+0	2.875E+0
	L1	6.798E-1	7.897E-1	7.421E-8	4.347E-2	6.997E+0	-1.823E-1	-1.777E-1
	L2	6.952E-1	6.137E-1	1.043E-7	3.513E-1	6.996E+0	-1.226E+0	6.997E-1
	L3	7.213E-1	5.412E-1	2.197E-7	1.699E-1	7.047E+0	-5.331E-1	1.975E-1
	M1	1.286E+0	5.717E-1	2.720E-7	7.410E-2	9.597E+0	-2.816E-1	1.188E-1
	M2	8.629E-1	7.680E-1	4.377E-7	6.150E-2	8.512E+0	-2.429E-1	1.128E-1
	M3	8.264E-1	7.560E-1	1.027E-6	5.039E-2	8.292E+0	-1.544E-1	8.417E-2
	M4	7.092E-1	6.859E-1	2.830E-6	3.293E-2	6.822E+0	-1.106E-1	7.377E-2
	M5	7.184E-1	6.700E-1	4.344E-6	2.970E-2	6.815E+0	-6.174E-2	6.132E-2

(continued on next page)

Table 3 (continued)

Z	S	b_-	b_+	$A_{n\bar{f}}$	g_1	g_2	g_3	g_4
57	K	-2.505E-1	9.399E-1	1.228E-8	1.556E+0	5.933E+0	-5.183E+0	2.968E+0
	L1	6.600E-1	8.026E-1	7.044E-8	3.603E-2	6.972E+0	-1.670E-1	-2.085E-1
	L2	6.786E-1	6.370E-1	9.849E-8	3.935E-1	7.002E+0	-1.340E+0	7.909E-1
	L3	7.037E-1	5.544E-1	2.077E-7	1.776E-1	7.059E+0	-5.632E-1	2.051E-1
	M1	1.283E+0	5.661E-1	2.556E-7	7.605E-2	9.551E+0	-2.882E-1	1.174E-1
	M2	8.661E-1	7.766E-1	4.101E-7	6.374E-2	8.439E+0	-2.504E-1	1.151E-1
	M3	8.324E-1	7.658E-1	9.657E-7	5.193E-2	8.215E+0	-1.576E-1	8.493E-2
	M4	7.243E-1	6.777E-1	2.536E-6	3.583E-2	6.849E+0	-1.200E-1	7.830E-2
	M5	7.325E-1	6.622E-1	3.888E-6	3.226E-2	6.843E+0	-6.708E-2	6.450E-2
58	K	-2.781E-1	9.528E-1	1.175E-8	1.620E+0	5.936E+0	-5.402E+0	3.118E+0
	L1	6.383E-1	8.136E-1	6.711E-8	2.910E-2	6.945E+0	-1.534E-1	-2.373E-1
	L2	6.585E-1	6.576E-1	9.355E-8	4.244E-1	6.996E+0	-1.457E+0	8.713E-1
	L3	6.864E-1	5.679E-1	1.975E-7	1.907E-1	7.053E+0	-6.035E-1	2.291E-1
	M1	1.274E+0	5.675E-1	2.434E-7	7.741E-2	9.502E+0	-2.888E-1	1.147E-1
	M2	8.593E-1	7.833E-1	3.900E-7	6.571E-2	8.380E+0	-2.569E-1	1.168E-1
	M3	8.253E-1	7.721E-1	9.233E-7	5.272E-2	8.148E+0	-1.562E-1	8.331E-2
	M4	7.229E-1	6.774E-1	2.380E-6	3.772E-2	6.818E+0	-1.271E-1	8.181E-2
	M5	7.289E-1	6.595E-1	3.652E-6	3.356E-2	6.812E+0	-6.999E-2	6.588E-2
59	K	-3.092E-1	9.673E-1	1.124E-8	1.662E+0	5.937E+0	-5.558E+0	3.197E+0
	L1	6.174E-1	8.268E-1	6.400E-8	2.242E-2	6.918E+0	-1.416E-1	-2.650E-1
	L2	6.369E-1	6.761E-1	8.897E-8	4.524E-1	6.986E+0	-1.541E+0	9.305E-1
	L3	6.679E-1	5.829E-1	1.881E-7	2.008E-1	7.048E+0	-6.379E-1	2.443E-1
	M1	1.266E+0	5.712E-1	2.320E-7	8.091E-2	9.459E+0	-3.046E-1	1.207E-1
	M2	8.512E-1	7.898E-1	3.714E-7	6.802E-2	8.323E+0	-2.654E-1	1.198E-1
	M3	8.176E-1	7.783E-1	8.842E-7	5.378E-2	8.084E+0	-1.574E-1	8.283E-2
	M4	7.212E-1	6.776E-1	2.241E-6	3.931E-2	6.786E+0	-1.325E-1	8.405E-2
	M5	7.251E-1	6.597E-1	3.442E-6	3.457E-2	6.778E+0	-7.014E-2	6.598E-2
60	K	-3.346E-1	9.859E-1	1.076E-8	1.742E+0	5.941E+0	-5.783E+0	3.339E+0
	L1	5.953E-1	8.385E-1	6.108E-8	1.451E-2	6.893E+0	-1.279E-1	-2.958E-1
	L2	6.141E-1	6.890E-1	8.472E-8	4.857E-1	6.977E+0	-1.633E+0	9.979E-1
	L3	6.496E-1	5.974E-1	1.793E-7	2.133E-1	7.044E+0	-6.801E-1	2.660E-1
	M1	1.256E+0	5.749E-1	2.214E-7	8.440E-2	9.417E+0	-3.180E-1	1.260E-1
	M2	8.442E-1	7.967E-1	3.540E-7	7.034E-2	8.269E+0	-2.739E-1	1.227E-1
	M3	8.094E-1	7.845E-1	8.478E-7	5.498E-2	8.023E+0	-1.597E-1	8.289E-2
	M4	7.171E-1	6.788E-1	2.116E-6	4.073E-2	6.753E+0	-1.365E-1	8.562E-2
	M5	7.219E-1	6.601E-1	3.252E-6	3.542E-2	6.744E+0	-6.998E-2	6.548E-2
61	K	-3.630E-1	9.927E-1	1.031E-8	1.770E+0	5.942E+0	-5.941E+0	3.430E+0
	L1	5.728E-1	8.507E-1	5.833E-8	8.684E-3	6.867E+0	-1.184E-1	-3.212E-1
	L2	6.001E-1	7.207E-1	8.076E-8	5.507E-1	6.967E+0	-1.787E+0	1.140E+0
	L3	6.303E-1	6.123E-1	1.712E-7	2.235E-1	7.038E+0	-7.144E-1	2.811E-1
	M1	1.246E+0	5.783E-1	2.115E-7	8.663E-2	9.376E+0	-3.260E-1	1.267E-1
	M2	8.355E-1	8.035E-1	3.378E-7	7.242E-2	8.217E+0	-2.817E-1	1.245E-1
	M3	8.007E-1	7.909E-1	8.139E-7	5.581E-2	7.963E+0	-1.597E-1	8.154E-2
	M4	7.123E-1	6.803E-1	2.002E-6	4.238E-2	6.721E+0	-1.430E-1	8.806E-2
	M5	7.173E-1	6.615E-1	3.080E-6	3.711E-2	6.712E+0	-7.612E-2	6.843E-2
62	K	-3.864E-1	1.008E+0	9.885E-9	1.846E+0	5.949E+0	-6.172E+0	3.578E+0
	L1	5.507E-1	8.624E-1	5.575E-8	-6.618E-6	6.843E+0	-1.037E-1	-3.538E-1
	L2	5.705E-1	7.294E-1	7.707E-8	5.611E-1	6.955E+0	-1.844E+0	1.159E+0
	L3	6.096E-1	6.261E-1	1.636E-7	2.334E-1	7.035E+0	-7.504E-1	2.947E-1
	M1	1.236E+0	5.806E-1	2.021E-7	8.823E-2	9.338E+0	-3.321E-1	1.250E-1
	M2	8.271E-1	8.110E-1	3.226E-7	7.469E-2	8.167E+0	-2.897E-1	1.270E-1
	M3	7.909E-1	7.971E-1	7.822E-7	5.699E-2	7.905E+0	-1.622E-1	8.162E-2
	M4	7.073E-1	6.818E-1	1.899E-6	4.302E-2	6.684E+0	-1.399E-1	8.629E-2
	M5	7.147E-1	6.615E-1	2.923E-6	3.666E-2	6.675E+0	-6.665E-2	6.268E-2
63	K	-4.121E-1	1.018E+0	9.481E-9	1.925E+0	5.955E+0	-6.433E+0	3.764E+0
	L1	5.276E-1	8.745E-1	5.332E-8	-6.068E-3	6.820E+0	-9.491E-2	-3.799E-1
	L2	5.470E-1	7.486E-1	7.361E-8	6.029E-1	6.949E+0	-1.976E+0	1.257E+0
	L3	5.900E-1	6.425E-1	1.565E-7	2.468E-1	7.026E+0	-7.913E-1	3.180E-1
	M1	1.228E+0	5.853E-1	1.933E-7	9.106E-2	9.303E+0	-3.442E-1	1.275E-1
	M2	8.181E-1	8.179E-1	3.083E-7	7.727E-2	8.118E+0	-2.992E-1	1.304E-1
	M3	7.819E-1	8.030E-1	7.524E-7	5.816E-2	7.848E+0	-1.639E-1	8.151E-2
	M4	7.050E-1	6.878E-1	1.804E-6	4.588E-2	6.655E+0	-1.556E-1	9.364E-2
	M5	7.106E-1	6.652E-1	2.779E-6	3.899E-2	6.641E+0	-7.378E-2	6.809E-2
64	K	-4.328E-1	1.030E+0	9.098E-9	1.960E+0	5.959E+0	-6.588E+0	3.839E+0
	L1	5.047E-1	8.878E-1	5.102E-8	-1.394E-2	6.796E+0	-8.148E-2	-4.106E-1
	L2	5.246E-1	7.675E-1	7.038E-8	6.405E-1	6.938E+0	-2.101E+0	1.348E+0
	L3	5.704E-1	6.583E-1	1.499E-7	2.619E-1	7.022E+0	-8.411E-1	3.456E-1
	M1	1.217E+0	5.894E-1	1.850E-7	9.399E-2	9.267E+0	-3.527E-1	1.299E-1
	M2	8.087E-1	8.241E-1	2.948E-7	7.972E-2	8.072E+0	-3.080E-1	1.333E-1
	M3	7.724E-1	8.094E-1	7.243E-7	5.879E-2	7.794E+0	-1.642E-1	7.939E-2
	M4	7.006E-1	6.903E-1	1.715E-6	4.714E-2	6.622E+0	-1.589E-1	9.439E-2
	M5	7.054E-1	6.694E-1	2.646E-6	4.005E-2	6.610E+0	-7.820E-2	6.848E-2

Table 3 (continued)

Z	S	b_-	b_+	A_{nij}	g_1	g_2	g_3	g_4
65	K	-4.530E-1	1.041E+0	8.735E-9	2.044E+0	5.964E+0	-6.815E+0	3.976E+0
	L1	4.816E-1	9.006E-1	4.885E-8	-2.201E-2	6.774E+0	-6.874E-2	-4.417E-1
	L2	5.007E-1	7.878E-1	6.734E-8	6.868E-1	6.927E+0	-2.234E+0	1.452E+0
	L3	5.494E-1	6.738E-1	1.436E-7	2.765E-1	7.015E+0	-8.877E-1	3.714E-1
	M1	1.207E+0	5.934E-1	1.771E-7	9.685E-2	9.236E+0	-3.658E-1	1.325E-1
	M2	7.992E-1	8.307E-1	2.821E-7	8.227E-2	8.028E+0	-3.184E-1	1.364E-1
	M3	7.626E-1	8.183E-1	6.978E-7	6.020E-2	7.741E+0	-1.677E-1	8.018E-2
	M4	6.952E-1	6.946E-1	1.634E-6	4.853E-2	6.589E+0	-1.625E-1	9.561E-2
	M5	7.000E-1	6.696E-1	2.523E-6	4.001E-2	6.575E+0	-7.346E-2	6.458E-2
66	K	-4.796E-1	1.045E+0	8.390E-9	2.124E+0	5.974E+0	-7.101E+0	4.188E+0
	L1	4.579E-1	9.133E-1	4.680E-8	-3.049E-2	6.753E+0	-5.609E-2	-4.735E-1
	L2	4.744E-1	8.090E-1	6.449E-8	7.309E-1	6.916E+0	-2.347E+0	1.539E+0
	L3	5.287E-1	6.891E-1	1.378E-7	2.957E-1	7.010E+0	-9.475E-1	4.098E-1
	M1	1.198E+0	5.980E-1	1.696E-7	9.966E-2	9.206E+0	-3.767E-1	1.344E-1
	M2	7.908E-1	8.385E-1	2.700E-7	8.440E-2	7.985E+0	-3.253E-1	1.377E-1
	M3	7.543E-1	8.242E-1	6.728E-7	6.110E-2	7.689E+0	-1.684E-1	7.902E-2
	M4	6.906E-1	6.983E-1	1.559E-6	5.083E-2	6.557E+0	-1.715E-1	1.003E-1
	M5	6.944E-1	6.755E-1	2.409E-6	4.222E-2	6.544E+0	-8.169E-2	6.932E-2
67	K	-4.991E-1	1.061E+0	8.062E-9	2.210E+0	5.980E+0	-7.337E+0	4.330E+0
	L1	4.325E-1	9.255E-1	4.485E-8	-3.759E-2	6.731E+0	-4.346E-2	-5.032E-1
	L2	4.715E-1	8.524E-1	6.181E-8	8.231E-1	6.897E+0	-2.542E+0	1.735E+0
	L3	5.087E-1	7.044E-1	1.323E-7	3.024E-1	7.000E+0	-9.712E-1	4.142E-1
	M1	1.187E+0	6.032E-1	1.625E-7	1.023E-1	9.178E+0	-3.873E-1	1.356E-1
	M2	7.810E-1	8.462E-1	2.586E-7	8.768E-2	7.945E+0	-3.384E-1	1.431E-1
	M3	7.441E-1	8.307E-1	6.492E-7	6.192E-2	7.638E+0	-1.691E-1	7.760E-2
	M4	6.840E-1	7.043E-1	1.489E-6	5.266E-2	6.526E+0	-1.785E-1	1.032E-1
	M5	6.899E-1	6.786E-1	2.304E-6	4.281E-2	6.510E+0	-8.059E-2	6.785E-2
68	K	-5.200E-1	1.069E+0	7.750E-9	2.241E+0	5.982E+0	-7.485E+0	4.399E+0
	L1	4.088E-1	9.388E-1	4.300E-8	-4.262E-2	6.712E+0	-3.875E-2	-5.278E-1
	L2	4.241E-1	8.473E-1	5.928E-8	8.186E-1	6.893E+0	-2.615E+0	1.742E+0
	L3	4.857E-1	7.202E-1	1.271E-7	3.230E-1	6.995E+0	-1.037E+0	4.561E-1
	M1	1.177E+0	6.081E-1	1.557E-7	1.049E-1	9.153E+0	-3.983E-1	1.362E-1
	M2	7.721E-1	8.533E-1	2.478E-7	9.025E-2	7.905E+0	-3.474E-1	1.457E-1
	M3	7.339E-1	8.369E-1	6.268E-7	6.246E-2	7.589E+0	-1.686E-1	7.495E-2
	M4	6.776E-1	7.086E-1	1.423E-6	5.445E-2	6.494E+0	-1.842E-1	1.057E-1
	M5	6.839E-1	6.822E-1	2.205E-6	4.398E-2	6.477E+0	-8.233E-2	6.850E-2
69	K	-5.418E-1	1.073E+0	7.453E-9	2.331E+0	5.993E+0	-7.794E+0	4.632E+0
	L1	3.869E-1	9.522E-1	4.125E-8	-4.806E-2	6.693E+0	-3.229E-2	-5.527E-1
	L2	3.981E-1	8.667E-1	5.690E-8	8.634E-1	6.877E+0	-2.724E+0	1.826E+0
	L3	4.630E-1	7.330E-1	1.222E-7	3.213E-1	6.985E+0	-1.042E+0	4.401E-1
	M1	1.169E+0	6.139E-1	1.493E-7	1.084E-1	9.130E+0	-4.115E-1	1.395E-1
	M2	7.631E-1	8.605E-1	2.376E-7	9.347E-2	7.868E+0	-3.595E-1	1.505E-1
	M3	7.246E-1	8.421E-1	6.056E-7	6.298E-2	7.541E+0	-1.693E-1	7.273E-2
	M4	6.720E-1	7.144E-1	1.363E-6	5.658E-2	6.463E+0	-1.922E-1	1.095E-1
	M5	6.786E-1	6.883E-1	2.114E-6	4.492E-2	6.445E+0	-8.320E-2	6.832E-2
70	K	-5.605E-1	1.082E+0	7.171E-9	2.425E+0	6.002E+0	-8.077E+0	4.827E+0
	L1	3.627E-1	9.654E-1	3.959E-8	-5.317E-2	6.675E+0	-2.939E-2	-5.759E-1
	L2	3.834E-1	9.098E-1	5.465E-8	9.440E-1	6.858E+0	-2.893E+0	1.989E+0
	L3	4.448E-1	7.519E-1	1.176E-7	3.532E-1	6.981E+0	-1.132E+0	5.075E-1
	M1	1.159E+0	6.189E-1	1.432E-7	1.126E-1	9.108E+0	-4.274E-1	1.453E-1
	M2	7.527E-1	8.694E-1	2.279E-7	9.677E-2	7.832E+0	-3.724E-1	1.554E-1
	M3	7.145E-1	8.478E-1	5.854E-7	6.321E-2	7.494E+0	-1.685E-1	6.928E-2
	M4	6.644E-1	7.194E-1	1.306E-6	5.824E-2	6.432E+0	-1.980E-1	1.115E-1
	M5	6.716E-1	6.899E-1	2.028E-6	4.521E-2	6.413E+0	-8.179E-2	6.587E-2
71	K	-5.787E-1	1.088E+0	6.901E-9	2.456E+0	6.005E+0	-8.230E+0	4.900E+0
	L1	3.375E-1	9.780E-1	3.801E-8	-6.462E-2	6.657E+0	-1.054E-2	-6.153E-1
	L2	3.444E-1	9.043E-1	5.253E-8	9.457E-1	6.854E+0	-2.993E+0	2.021E+0
	L3	4.220E-1	7.680E-1	1.133E-7	3.701E-1	6.974E+0	-1.185E+0	5.386E-1
	M1	1.149E+0	6.244E-1	1.374E-7	1.156E-1	9.089E+0	-4.389E-1	1.466E-1
	M2	7.441E-1	8.765E-1	2.186E-7	9.989E-2	7.798E+0	-3.836E-1	1.591E-1
	M3	7.046E-1	8.545E-1	5.663E-7	6.429E-2	7.448E+0	-1.709E-1	6.881E-2
	M4	6.570E-1	7.250E-1	1.253E-6	6.043E-2	6.401E+0	-2.052E-1	1.155E-1
	M5	6.652E-1	6.959E-1	1.947E-6	4.654E-2	6.380E+0	-8.413E-2	6.712E-2
72	K	-5.959E-1	1.099E+0	6.642E-9	2.538E+0	6.013E+0	-8.462E+0	5.028E+0
	L1	3.153E-1	9.936E-1	3.644E-8	-6.533E-2	6.644E+0	-1.665E-2	-6.316E-1
	L2	3.176E-1	9.253E-1	5.039E-8	1.008E+0	6.849E+0	-3.161E+0	2.158E+0
	L3	3.985E-1	7.797E-1	1.088E-7	3.727E-1	6.973E+0	-1.203E+0	5.323E-1
	M1	1.142E+0	6.265E-1	1.310E-7	1.189E-1	9.076E+0	-4.527E-1	1.482E-1
	M2	7.369E-1	8.827E-1	2.083E-7	1.020E-1	7.764E+0	-3.909E-1	1.594E-1
	M3	6.976E-1	8.613E-1	5.431E-7	6.429E-2	7.406E+0	-1.682E-1	6.392E-2
	M4	6.575E-1	7.287E-1	1.180E-6	6.320E-2	6.400E+0	-2.155E-1	1.193E-1
	M5	6.653E-1	6.979E-1	1.835E-6	4.790E-2	6.379E+0	-8.725E-2	6.668E-2

(continued on next page)

Table 3 (continued)

Z	S	b_-	b_+	A_{njl}	g_1	g_2	g_3	g_4
73	K	-6.124E-1	1.103E+0	6.395E-9	2.637E+0	6.025E+0	-8.778E+0	5.260E+0
	L1	2.910E-1	1.006E+0	3.495E-8	-7.332E-2	6.631E+0	-6.738E-3	-6.641E-1
	L2	2.885E-1	9.503E-1	4.837E-8	1.067E+0	6.841E+0	-3.302E+0	2.271E+0
	L3	3.777E-1	7.970E-1	1.046E-7	4.037E-1	6.979E+0	-1.297E+0	5.971E-1
	M1	1.134E+0	6.286E-1	1.250E-7	1.233E-1	9.067E+0	-4.711E-1	1.526E-1
	M2	7.293E-1	8.909E-1	1.985E-7	1.058E-1	7.735E+0	-4.043E-1	1.645E-1
	M3	6.923E-1	8.683E-1	5.211E-7	6.414E-2	7.365E+0	-1.646E-1	5.820E-2
	M4	6.562E-1	7.311E-1	1.114E-6	6.684E-2	6.398E+0	-2.289E-1	1.260E-1
	M5	6.649E-1	6.972E-1	1.732E-6	4.935E-2	6.378E+0	-8.963E-2	6.604E-2
74	K	-6.293E-1	1.111E+0	6.159E-9	2.736E+0	6.038E+0	-9.079E+0	5.466E+0
	L1	2.655E-1	1.020E+0	3.353E-8	-8.074E-2	6.619E+0	2.301E-3	-6.961E-1
	L2	2.608E-1	9.644E-1	4.646E-8	1.103E+0	6.835E+0	-3.437E+0	2.363E+0
	L3	3.559E-1	8.151E-1	1.007E-7	4.313E-1	6.982E+0	-1.378E+0	6.540E-1
	M1	1.126E+0	6.313E-1	1.192E-7	1.269E-1	9.059E+0	-4.839E-1	1.537E-1
	M2	7.222E-1	8.988E-1	1.892E-7	1.089E-1	7.708E+0	-4.148E-1	1.669E-1
	M3	6.855E-1	8.753E-1	5.002E-7	6.492E-2	7.327E+0	-1.644E-1	5.561E-2
	M4	6.540E-1	7.311E-1	1.053E-6	6.734E-2	6.394E+0	-2.279E-1	1.215E-1
	M5	6.639E-1	6.999E-1	1.637E-6	5.137E-2	6.376E+0	-9.466E-2	6.739E-2
75	K	-6.453E-1	1.118E+0	5.933E-9	2.831E+0	6.044E+0	-9.361E+0	5.662E+0
	L1	2.408E-1	1.033E+0	3.218E-8	-8.577E-2	6.609E+0	5.014E-3	-7.225E-1
	L2	2.332E-1	9.944E-1	4.464E-8	1.180E+0	6.826E+0	-3.604E+0	2.508E+0
	L3	3.335E-1	8.312E-1	9.688E-8	4.564E-1	6.985E+0	-1.454E+0	7.035E-1
	M1	1.119E+0	6.332E-1	1.138E-7	1.311E-1	9.055E+0	-5.003E-1	1.568E-1
	M2	7.143E-1	9.074E-1	1.804E-7	1.126E-1	7.683E+0	-4.279E-1	1.712E-1
	M3	6.783E-1	8.818E-1	4.803E-7	6.564E-2	7.292E+0	-1.644E-1	5.271E-2
	M4	6.515E-1	7.356E-1	9.973E-7	7.331E-2	6.393E+0	-2.530E-1	1.364E-1
	M5	6.604E-1	6.984E-1	1.550E-6	5.260E-2	6.374E+0	-9.706E-2	6.622E-2
76	K	-6.567E-1	1.128E+0	5.718E-9	2.862E+0	6.050E+0	-9.483E+0	5.671E+0
	L1	2.158E-1	1.048E+0	3.089E-8	-8.920E-2	6.599E+0	2.962E-3	-7.449E-1
	L2	2.000E-1	1.004E+0	4.292E-8	1.221E+0	6.825E+0	-3.775E+0	2.625E+0
	L3	3.084E-1	8.452E-1	9.330E-8	4.722E-1	6.989E+0	-1.509E+0	7.296E-1
	M1	1.112E+0	6.381E-1	1.086E-7	1.363E-1	9.054E+0	-5.207E-1	1.625E-1
	M2	7.057E-1	9.151E-1	1.721E-7	1.167E-1	7.661E+0	-4.427E-1	1.765E-1
	M3	6.693E-1	8.873E-1	4.614E-7	6.526E-2	7.258E+0	-1.606E-1	4.617E-2
	M4	6.464E-1	7.367E-1	9.455E-7	7.754E-2	6.391E+0	-2.688E-1	1.448E-1
	M5	6.570E-1	7.004E-1	1.470E-6	5.479E-2	6.372E+0	-1.024E-1	6.793E-2
77	K	-6.735E-1	1.129E+0	5.511E-9	2.971E+0	6.065E+0	-9.834E+0	5.934E+0
	L1	1.912E-1	1.063E+0	2.966E-8	-9.201E-2	6.591E+0	-4.971E-4	-7.663E-1
	L2	1.696E-1	1.023E+0	4.128E-8	1.254E+0	6.814E+0	-3.862E+0	2.678E+0
	L3	2.853E-1	8.615E-1	8.990E-8	4.986E-1	6.994E+0	-1.589E+0	7.819E-1
	M1	1.104E+0	6.408E-1	1.036E-7	1.421E-1	9.057E+0	-5.450E-1	1.698E-1
	M2	6.973E-1	9.215E-1	1.642E-7	1.188E-1	7.639E+0	-4.491E-1	1.750E-1
	M3	6.611E-1	8.937E-1	4.435E-7	6.526E-2	7.225E+0	-1.575E-1	4.097E-2
	M4	6.433E-1	7.398E-1	8.976E-7	8.124E-2	6.389E+0	-2.823E-1	1.511E-1
	M5	6.529E-1	7.018E-1	1.395E-6	5.773E-2	6.370E+0	-1.113E-1	7.225E-2
78	K	-6.884E-1	1.135E+0	5.315E-9	3.085E+0	6.078E+0	-1.016E+1	6.161E+0
	L1	1.663E-1	1.076E+0	2.849E-8	-9.806E-2	6.583E+0	1.921E-3	-7.955E-1
	L2	1.430E-1	1.040E+0	3.976E-8	1.310E+0	6.804E+0	-4.038E+0	2.817E+0
	L3	2.649E-1	8.713E-1	8.676E-8	5.105E-1	6.989E+0	-1.626E+0	7.967E-1
	M1	1.095E+0	6.462E-1	9.911E-8	1.481E-1	9.056E+0	-5.675E-1	1.776E-1
	M2	6.921E-1	9.318E-1	1.570E-7	1.241E-1	7.616E+0	-4.684E-1	1.840E-1
	M3	6.535E-1	8.997E-1	4.276E-7	6.480E-2	7.186E+0	-1.537E-1	3.466E-2
	M4	6.344E-1	7.453E-1	8.534E-7	8.540E-2	6.390E+0	-3.015E-1	1.592E-1
	M5	6.470E-1	7.024E-1	1.327E-6	5.822E-2	6.368E+0	-1.108E-1	6.828E-2
79	K	-6.761E-1	1.145E+0	5.126E-9	3.132E+0	6.068E+0	-1.019E+1	6.048E+0
	L1	1.416E-1	1.090E+0	2.737E-8	-9.608E-2	6.577E+0	-1.273E-2	-8.063E-1
	L2	1.124E-1	1.059E+0	3.829E-8	1.368E+0	6.798E+0	-4.207E+0	2.946E+0
	L3	2.421E-1	8.944E-1	8.369E-8	5.542E-1	6.998E+0	-1.755E+0	8.937E-1
	M1	1.085E+0	6.488E-1	9.465E-8	1.530E-1	9.062E+0	-5.857E-1	1.810E-1
	M2	6.830E-1	9.401E-1	1.499E-7	1.286E-1	7.599E+0	-4.845E-1	1.895E-1
	M3	6.452E-1	9.069E-1	4.114E-7	6.466E-2	7.156E+0	-1.511E-1	2.887E-2
	M4	6.279E-1	7.473E-1	8.121E-7	8.946E-2	6.387E+0	-3.160E-1	1.665E-1
	M5	6.403E-1	7.032E-1	1.263E-6	6.045E-2	6.368E+0	-1.200E-1	7.030E-2
80	K	-7.141E-1	1.140E+0	4.945E-9	3.227E+0	6.096E+0	-1.065E+1	6.451E+0
	L1	1.165E-1	1.103E+0	2.628E-8	-1.018E-1	6.572E+0	-1.080E-2	-8.363E-1
	L2	8.068E-2	1.075E+0	3.686E-8	1.407E+0	6.793E+0	-4.336E+0	3.030E+0
	L3	2.181E-1	9.080E-1	8.069E-8	5.691E-1	7.003E+0	-1.804E+0	9.157E-1
	M1	1.076E+0	6.521E-1	9.026E-8	1.592E-1	9.075E+0	-6.095E-1	1.879E-1
	M2	6.689E-1	9.465E-1	1.429E-7	1.332E-1	7.589E+0	-5.009E-1	1.952E-1
	M3	6.381E-1	9.116E-1	3.950E-7	6.495E-2	7.134E+0	-1.503E-1	2.413E-2
	M4	6.256E-1	7.475E-1	7.734E-7	9.488E-2	6.382E+0	-3.334E-1	1.778E-1
	M5	6.381E-1	7.051E-1	1.203E-6	6.438E-2	6.366E+0	-1.328E-1	7.765E-2

Table 3 (continued)

Z	S	b_-	b_+	A_{nif}	g_1	g_2	g_3	g_4
81	K	-7.242E-1	1.147E+0	4.770E-9	3.342E+0	6.110E+0	-1.097E+1	6.657E+0
	L1	8.906E-2	1.117E+0	2.524E-8	-9.751E-2	6.570E+0	-3.112E-2	-8.432E-1
	L2	4.530E-2	1.094E+0	3.549E-8	1.468E+0	6.788E+0	-4.495E+0	3.151E+0
	L3	1.928E-1	9.195E-1	7.782E-8	5.912E-1	7.010E+0	-1.875E+0	9.562E-1
	M1	1.065E+0	6.545E-1	8.600E-8	1.649E-1	9.096E+0	-6.303E-1	1.921E-1
	M2	6.593E-1	9.519E-1	1.362E-7	1.384E-1	7.583E+0	-5.205E-1	2.023E-1
	M3	6.261E-1	9.176E-1	3.793E-7	6.372E-2	7.114E+0	-1.438E-1	1.438E-2
	M4	6.144E-1	7.420E-1	7.373E-7	9.912E-2	6.380E+0	-3.508E-1	1.855E-1
	M5	6.319E-1	6.986E-1	1.147E-6	6.579E-2	6.363E+0	-1.354E-1	7.647E-2
82	K	-7.366E-1	1.149E+0	4.603E-9	3.467E+0	6.124E+0	-1.133E+1	6.912E+0
	L1	6.624E-2	1.130E+0	2.424E-8	-9.830E-2	6.570E+0	-4.394E-2	-8.616E-1
	L2	1.664E-2	1.112E+0	3.419E-8	1.531E+0	6.784E+0	-4.679E+0	3.292E+0
	L3	1.723E-1	9.357E-1	7.509E-8	6.300E-1	7.023E+0	-1.993E+0	1.040E+0
	M1	1.057E+0	6.568E-1	8.196E-8	1.716E-1	9.120E+0	-6.575E-1	1.994E-1
	M2	6.470E-1	9.585E-1	1.299E-7	1.427E-1	7.577E+0	-5.356E-1	2.061E-1
	M3	6.180E-1	9.225E-1	3.643E-7	6.320E-2	7.096E+0	-1.411E-1	6.934E-3
	M4	6.061E-1	7.429E-1	7.036E-7	1.036E-1	6.375E+0	-3.642E-1	1.934E-1
	M5	6.209E-1	6.939E-1	1.095E-6	6.709E-2	6.358E+0	-1.354E-1	7.455E-2
83	K	-7.484E-1	1.148E+0	4.443E-9	3.513E+0	6.131E+0	-1.154E+1	7.025E+0
	L1	4.007E-2	1.146E+0	2.328E-8	-9.988E-2	6.570E+0	-5.267E-2	-8.832E-1
	L2	-1.696E-2	1.131E+0	3.295E-8	1.594E+0	6.778E+0	-4.857E+0	3.430E+0
	L3	1.481E-1	9.498E-1	7.249E-8	6.483E-1	7.030E+0	-2.052E+0	1.070E+0
	M1	1.045E+0	6.584E-1	7.811E-8	1.803E-1	9.148E+0	-6.913E-1	2.119E-1
	M2	6.366E-1	9.639E-1	1.239E-7	1.469E-1	7.573E+0	-5.516E-1	2.091E-1
	M3	6.064E-1	9.271E-1	3.501E-7	6.340E-2	7.078E+0	-1.412E-1	1.753E-3
	M4	6.010E-1	7.456E-1	6.719E-7	1.110E-1	6.373E+0	-3.911E-1	2.105E-1
	M5	6.149E-1	6.954E-1	1.046E-6	7.064E-2	6.355E+0	-1.460E-1	8.036E-2
84	K	-7.391E-1	1.147E+0	4.289E-9	3.610E+0	6.125E+0	-1.165E+1	6.952E+0
	L1	1.347E-2	1.161E+0	2.236E-8	-9.807E-2	6.572E+0	-6.982E-2	-8.974E-1
	L2	-4.877E-2	1.142E+0	3.177E-8	1.623E+0	6.769E+0	-4.982E+0	3.510E+0
	L3	1.212E-1	9.660E-1	7.001E-8	6.796E-1	7.041E+0	-2.142E+0	1.126E+0
	M1	1.033E+0	6.609E-1	7.445E-8	1.873E-1	9.177E+0	-7.178E-1	2.188E-1
	M2	6.240E-1	9.699E-1	1.182E-7	1.528E-1	7.570E+0	-5.741E-1	2.181E-1
	M3	5.986E-1	9.329E-1	3.367E-7	6.240E-2	7.060E+0	-1.344E-1	-7.872E-3
	M4	5.943E-1	7.453E-1	6.423E-7	1.171E-1	6.371E+0	-4.130E-1	2.233E-1
	M5	6.092E-1	6.914E-1	9.997E-7	7.297E-2	6.352E+0	-1.534E-1	8.203E-2
85	K	-7.674E-1	1.140E+0	4.142E-9	3.742E+0	6.157E+0	-1.218E+1	7.425E+0
	L1	-8.680E-3	1.175E+0	2.148E-8	-9.470E-2	6.575E+0	-9.099E-2	-9.085E-1
	L2	-7.814E-2	1.160E+0	3.064E-8	1.687E+0	6.764E+0	-5.170E+0	3.653E+0
	L3	9.728E-2	9.798E-1	6.765E-8	7.092E-1	7.053E+0	-2.248E+0	1.195E+0
	M1	1.023E+0	6.646E-1	7.098E-8	1.968E-1	9.209E+0	-7.525E-1	2.323E-1
	M2	6.129E-1	9.778E-1	1.128E-7	1.579E-1	7.569E+0	-5.917E-1	2.226E-1
	M3	5.857E-1	9.363E-1	3.239E-7	6.052E-2	7.043E+0	-1.272E-1	-1.928E-2
	M4	5.838E-1	7.507E-1	6.145E-7	1.238E-1	6.369E+0	-4.373E-1	2.380E-1
	M5	6.001E-1	6.939E-1	9.566E-7	7.514E-2	6.350E+0	-1.594E-1	8.300E-2
86	K	-7.723E-1	9.410E-1	4.000E-9	3.881E+0	6.170E+0	-1.257E+1	7.694E+0
	L1	-3.688E-2	1.186E+0	2.064E-8	-9.139E-2	6.580E+0	-1.129E-1	-9.200E-1
	L2	-1.114E-1	1.176E+0	2.957E-8	1.750E+0	6.758E+0	-5.358E+0	3.796E+0
	L3	7.541E-2	9.953E-1	6.540E-8	7.424E-1	7.065E+0	-2.348E+0	1.261E+0
	M1	1.011E+0	6.667E-1	6.769E-8	2.061E-1	9.244E+0	-7.870E-1	2.445E-1
	M2	5.995E-1	9.857E-1	1.077E-7	1.638E-1	7.569E+0	-6.129E-1	2.299E-1
	M3	5.761E-1	9.398E-1	3.118E-7	5.827E-2	7.026E+0	-1.189E-1	-3.217E-2
	M4	5.778E-1	7.508E-1	5.883E-7	1.283E-1	6.365E+0	-4.525E-1	2.452E-1
	M5	5.909E-1	6.947E-1	9.161E-7	7.835E-2	6.348E+0	-1.697E-1	8.731E-2
87	K	-8.043E-1	1.193E+0	3.864E-9	4.012E+0	6.181E+0	-1.293E+1	7.946E+0
	L1	-6.007E-2	1.199E+0	1.982E-8	-9.071E-2	6.587E+0	-1.333E-1	-9.364E-1
	L2	-1.433E-1	1.190E+0	2.852E-8	1.787E+0	6.751E+0	-5.483E+0	3.877E+0
	L3	5.222E-2	1.009E+0	6.320E-8	7.742E-1	7.074E+0	-2.442E+0	1.324E+0
	M1	1.004E+0	6.805E-1	6.448E-8	2.129E-1	9.287E+0	-8.179E-1	2.490E-1
	M2	6.183E-1	9.852E-1	1.026E-7	1.724E-1	7.578E+0	-6.489E-1	2.470E-1
	M3	5.862E-1	9.301E-1	2.996E-7	4.335E-2	7.017E+0	-8.899E-2	-7.689E-2
	M4	5.648E-1	7.314E-1	5.637E-7	1.338E-1	6.360E+0	-4.701E-1	2.553E-1
	M5	5.813E-1	6.800E-1	8.779E-7	7.851E-2	6.343E+0	-1.666E-1	8.136E-2
88	K	-8.220E-1	1.203E+0	3.733E-9	4.186E+0	6.194E+0	-1.335E+1	8.229E+0
	L1	-8.711E-2	1.212E+0	1.904E-8	-8.363E-2	6.594E+0	-1.637E-1	-9.412E-1
	L2	-1.768E-1	1.210E+0	2.751E-8	1.844E+0	6.746E+0	-5.647E+0	3.994E+0
	L3	2.648E-2	1.027E+0	6.106E-8	8.189E-1	7.090E+0	-2.572E+0	1.419E+0
	M1	9.894E-1	6.770E-1	6.142E-8	2.261E-1	9.312E+0	-8.634E-1	2.711E-1
	M2	5.770E-1	1.002E+0	9.775E-8	1.742E-1	7.555E+0	-6.498E-1	2.395E-1
	M3	5.549E-1	9.499E-1	2.877E-7	5.290E-2	6.987E+0	-9.986E-2	-6.066E-2
	M4	5.641E-1	7.557E-1	5.263E-7	1.434E-1	6.413E+0	-5.066E-1	2.738E-1
	M5	5.796E-1	6.861E-1	8.249E-7	7.333E-2	6.366E+0	-1.357E-1	5.537E-2

(continued on next page)

Table 3 (continued)

Z	S	b_-	b_+	$A_{n\bar{n}j}$	g_1	g_2	g_3	g_4
89	K	-8.283E-1	1.186E+0	3.607E-9	4.300E+0	6.209E+0	-1.370E+1	8.450E+0
	L1	-1.084E-1	1.225E+0	1.829E-8	-7.980E-2	6.602E+0	-1.894E-1	-9.525E-1
	L2	-2.132E-1	1.224E+0	2.656E-8	1.916E+0	6.740E+0	-5.870E+0	4.172E+0
	L3	4.731E-3	1.041E+0	5.906E-8	8.354E-1	7.100E+0	-2.635E+0	1.447E+0
	M1	9.797E-1	6.847E-1	5.853E-8	2.401E-1	9.344E+0	-9.155E-1	2.951E-1
	M2	5.653E-1	1.014E+0	9.324E-8	1.795E-1	7.543E+0	-6.692E-1	2.445E-1
	M3	5.462E-1	9.635E-1	2.768E-7	5.000E-2	6.955E+0	-9.051E-2	-7.470E-2
	M4	5.617E-1	7.702E-1	4.961E-7	1.566E-1	6.453E+0	-5.563E-1	3.042E-1
	M5	5.812E-1	7.055E-1	7.727E-7	9.027E-2	6.437E+0	-2.118E-1	9.907E-2
90	K	-8.568E-1	1.183E+0	3.486E-9	4.450E+0	6.222E+0	-1.409E+1	8.706E+0
	L1	-1.370E-1	1.237E+0	1.759E-8	-7.842E-2	6.611E+0	-2.087E-1	-9.707E-1
	L2	-2.438E-1	1.243E+0	2.567E-8	1.970E+0	6.732E+0	-6.028E+0	4.282E+0
	L3	-2.130E-2	1.055E+0	5.721E-8	8.696E-1	7.110E+0	-2.740E+0	1.517E+0
	M1	9.679E-1	6.886E-1	5.589E-8	2.514E-1	9.383E+0	-9.585E-1	3.109E-1
	M2	5.519E-1	1.022E+0	8.914E-8	1.848E-1	7.538E+0	-6.886E-1	2.494E-1
	M3	5.346E-1	9.698E-1	2.672E-7	4.754E-2	6.932E+0	-8.255E-2	-8.765E-2
	M4	5.548E-1	7.787E-1	4.736E-7	1.652E-1	6.465E+0	-5.865E-1	3.219E-1
	M5	5.747E-1	7.126E-1	7.376E-7	9.382E-2	6.450E+0	-2.240E-1	1.026E-1
91	K	-8.635E-1	1.188E+0	3.370E-9	4.479E+0	6.223E+0	-1.426E+1	8.771E+0
	L1	-1.580E-1	1.251E+0	1.691E-8	-7.239E-2	6.622E+0	-2.414E-1	-9.783E-1
	L2	-2.765E-1	1.257E+0	2.482E-8	2.000E+0	6.717E+0	-6.139E+0	4.349E+0
	L3	-4.290E-2	1.070E+0	5.544E-8	9.104E-1	7.119E+0	-2.859E+0	1.602E+0
	M1	9.545E-1	6.943E-1	5.338E-8	2.657E-1	9.426E+0	-1.010E+0	3.343E-1
	M2	5.368E-1	1.031E+0	8.525E-8	1.868E-1	7.535E+0	-6.940E-1	2.415E-1
	M3	5.228E-1	9.766E-1	2.582E-7	4.332E-2	6.908E+0	-6.943E-2	-1.055E-1
	M4	5.452E-1	7.850E-1	4.528E-7	1.720E-1	6.473E+0	-6.068E-1	3.337E-1
	M5	5.665E-1	7.163E-1	7.053E-7	9.676E-2	6.462E+0	-2.340E-1	1.042E-1
92	K	-8.670E-1	1.182E+0	3.259E-9	4.594E+0	6.232E+0	-1.458E+1	8.968E+0
	L1	-1.862E-1	1.262E+0	1.625E-8	-5.604E-2	6.637E+0	-2.993E-1	-9.618E-1
	L2	-3.127E-1	1.271E+0	2.401E-8	2.070E+0	6.708E+0	-6.363E+0	4.526E+0
	L3	-6.611E-2	1.084E+0	5.376E-8	9.387E-1	7.131E+0	-2.956E+0	1.660E+0
	M1	9.397E-1	6.995E-1	5.099E-8	2.720E-1	9.471E+0	-1.033E+0	3.309E-1
	M2	5.230E-1	1.041E+0	8.155E-8	1.976E-1	7.535E+0	-7.354E-1	2.645E-1
	M3	5.116E-1	9.836E-1	2.496E-7	3.891E-2	6.885E+0	-5.558E-2	-1.238E-1
	M4	5.364E-1	7.938E-1	4.335E-7	1.820E-1	6.483E+0	-6.413E-1	3.552E-1
	M5	5.599E-1	7.249E-1	6.752E-7	1.015E-1	6.473E+0	-2.503E-1	1.112E-1
93	K	-8.564E-1	1.191E+0	3.151E-9	4.792E+0	6.246E+0	-1.506E+1	9.282E+0
	L1	-2.091E-1	1.273E+0	1.562E-8	-4.656E-2	6.652E+0	-3.417E-1	-9.622E-1
	L2	-3.456E-1	1.286E+0	2.323E-8	2.131E+0	6.697E+0	-6.550E+0	4.667E+0
	L3	-9.043E-2	1.098E+0	5.214E-8	9.744E-1	7.138E+0	-3.061E+0	1.732E+0
	M1	9.261E-1	7.066E-1	4.871E-8	2.854E-1	9.520E+0	-1.082E+0	3.502E-1
	M2	5.084E-1	1.051E+0	7.803E-8	2.031E-1	7.535E+0	-7.566E-1	2.691E-1
	M3	4.989E-1	9.901E-1	2.415E-7	3.340E-2	6.863E+0	-3.902E-2	-1.451E-1
	M4	5.275E-1	8.045E-1	4.155E-7	1.935E-1	6.492E+0	-6.793E-1	3.806E-1
	M5	5.510E-1	7.288E-1	6.472E-7	1.030E-1	6.479E+0	-2.511E-1	1.078E-1
94	K	-8.727E-1	1.192E+0	3.048E-9	4.913E+0	6.254E+0	-1.539E+1	9.479E+0
	L1	-2.363E-1	1.284E+0	1.502E-8	-4.141E-2	6.669E+0	-3.750E-1	-9.734E-1
	L2	-3.742E-1	1.302E+0	2.249E-8	2.195E+0	6.683E+0	-6.740E+0	4.813E+0
	L3	-1.133E-1	1.113E+0	5.060E-8	9.929E-1	7.143E+0	-3.129E+0	1.766E+0
	M1	9.113E-1	7.136E-1	4.654E-8	3.007E-1	9.573E+0	-1.124E+0	3.665E-1
	M2	4.928E-1	1.061E+0	7.466E-8	2.131E-1	7.538E+0	-7.909E-1	2.859E-1
	M3	4.864E-1	9.978E-1	2.337E-7	3.132E-2	6.842E+0	-3.341E-2	-1.564E-1
	M4	5.175E-1	8.079E-1	3.986E-7	2.006E-1	6.499E+0	-7.032E-1	3.930E-1
	M5	5.420E-1	7.363E-1	6.211E-7	1.050E-1	6.487E+0	-2.569E-1	1.063E-1
95	K	-8.553E-1	1.056E+0	2.948E-9	5.078E+0	6.264E+0	-1.581E+1	9.738E+0
	L1	-2.612E-1	1.297E+0	1.444E-8	-2.321E-2	6.689E+0	-4.387E-1	-9.563E-1
	L2	-4.066E-1	1.317E+0	2.177E-8	2.219E+0	6.665E+0	-6.844E+0	4.872E+0
	L3	-1.379E-1	1.127E+0	4.913E-8	1.037E+0	7.154E+0	-3.263E+0	1.863E+0
	M1	8.996E-1	7.248E-1	4.446E-8	3.412E-1	9.638E+0	-1.274E+0	4.700E-1
	M2	4.784E-1	1.070E+0	7.145E-8	2.212E-1	7.543E+0	-8.202E-1	2.970E-1
	M3	4.737E-1	1.006E+0	2.263E-7	2.630E-2	6.820E+0	-1.914E-2	-1.760E-1
	M4	5.079E-1	8.162E-1	3.828E-7	2.124E-1	6.507E+0	-7.435E-1	4.193E-1
	M5	5.336E-1	7.435E-1	5.965E-7	1.105E-1	6.496E+0	-2.766E-1	1.157E-1
96	K	-8.427E-1	1.052E+0	2.852E-9	5.085E+0	6.261E+0	-1.593E+1	9.770E+0
	L1	-2.850E-1	1.307E+0	1.388E-8	-5.337E-3	6.712E+0	-5.024E-1	-9.409E-1
	L2	-4.479E-1	1.318E+0	2.109E-8	2.360E+0	6.624E+0	-7.054E+0	5.104E+0
	L3	-1.608E-1	1.140E+0	4.771E-8	1.077E+0	7.165E+0	-3.387E+0	1.947E+0
	M1	8.852E-1	7.317E-1	4.247E-8	3.629E-1	9.700E+0	-1.348E+0	5.096E-1
	M2	4.622E-1	1.081E+0	6.838E-8	2.296E-1	7.549E+0	-8.503E-1	3.083E-1
	M3	4.589E-1	1.013E+0	2.193E-7	2.003E-2	6.799E+0	-7.623E-4	-1.992E-1
	M4	4.933E-1	8.322E-1	3.679E-7	2.256E-1	6.516E+0	-7.881E-1	4.494E-1
	M5	5.248E-1	7.500E-1	5.733E-7	1.131E-1	6.503E+0	-2.845E-1	1.157E-1

Table 3 (continued)

Z	S	b_-	b_+	A_{nij}	g_1	g_2	g_3	g_4
97	K	-8.665E-1	1.052E+0	2.760E-9	5.232E+0	6.269E+0	-1.632E+1	1.000E+1
	L1	-3.080E-1	1.316E+0	1.334E-8	1.332E-2	6.737E+0	-5.705E-1	-9.228E-1
	L2	-4.526E-1	1.367E+0	2.043E-8	2.433E+0	6.626E+0	-7.299E+0	5.268E+0
	L3	-1.849E-1	1.156E+0	4.635E-8	1.111E+0	7.173E+0	-3.489E+0	2.014E+0
	M1	8.695E-1	7.400E-1	4.057E-8	3.883E-1	9.770E+0	-1.435E+0	5.578E-1
	M2	4.457E-1	1.090E+0	6.544E-8	2.411E-1	7.558E+0	-8.900E-1	3.276E-1
	M3	4.463E-1	1.019E+0	2.126E-7	1.332E-2	6.778E+0	1.807E-2	-2.234E-1
	M4	4.874E-1	8.384E-1	3.538E-7	2.394E-1	6.525E+0	-8.345E-1	4.809E-1
	M5	5.146E-1	7.581E-1	5.515E-7	1.159E-1	6.513E+0	-2.961E-1	1.167E-1
98	K	-9.117E-1	1.209E+0	2.670E-9	5.424E+0	6.279E+0	-1.677E+1	1.028E+1
	L1	-3.324E-1	1.325E+0	1.282E-8	3.601E-2	6.764E+0	-6.507E-1	-8.941E-1
	L2	-4.974E-1	1.365E+0	1.979E-8	2.456E+0	6.598E+0	-7.379E+0	5.316E+0
	L3	-2.059E-1	1.168E+0	4.505E-8	1.160E+0	7.185E+0	-3.633E+0	2.121E+0
	M1	8.539E-1	7.508E-1	3.875E-8	4.163E-1	9.843E+0	-1.528E+0	6.113E-1
	M2	4.301E-1	1.100E+0	6.262E-8	2.479E-1	7.568E+0	-9.159E-1	3.342E-1
	M3	4.325E-1	1.029E+0	2.061E-7	9.653E-3	6.759E+0	2.632E-2	-2.388E-1
	M4	4.763E-1	8.480E-1	3.405E-7	2.485E-1	6.530E+0	-8.639E-1	4.981E-1
	M5	5.045E-1	7.651E-1	5.309E-7	1.205E-1	6.519E+0	-3.100E-1	1.228E-1
99	K	-9.054E-1	1.211E+0	2.584E-9	5.609E+0	6.287E+0	-1.722E+1	1.055E+1
	L1	-3.557E-1	1.340E+0	1.231E-8	3.262E-2	6.790E+0	-6.341E-1	-9.674E-1
	L2	-5.170E-1	1.397E+0	1.918E-8	2.516E+0	6.589E+0	-7.585E+0	5.460E+0
	L3	-2.282E-1	1.181E+0	4.380E-8	1.180E+0	7.192E+0	-3.711E+0	2.161E+0
	M1	8.381E-1	7.636E-1	3.700E-8	4.394E-1	9.909E+0	-1.539E+0	6.150E-1
	M2	4.125E-1	1.110E+0	5.991E-8	2.602E-1	7.582E+0	-9.589E-1	3.549E-1
	M3	4.190E-1	1.036E+0	2.000E-7	4.987E-3	6.740E+0	4.000E-2	-2.577E-1
	M4	4.650E-1	8.578E-1	3.280E-7	2.629E-1	6.537E+0	-9.096E-1	5.303E-1
	M5	4.951E-1	7.726E-1	5.115E-7	1.252E-1	6.526E+0	-3.263E-1	1.291E-1