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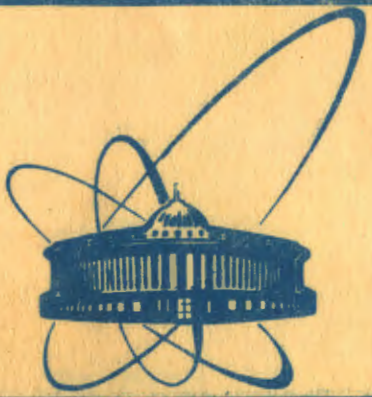

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E4-83-778

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TABLES OF THE EFFECTIVE POTENTIALS FOR THE THREE-BODY PROBLEM WITH THE COULOMB INTERACTION IN THE ADIABATIC REPRESENTATION

1983

1. Introduction

The adiabatic representation in the three-body problem with a Coulomb interaction is an effective tool for calculating the energy levels of the three charged particles system and for describing slow collisions of atoms and mesic atoms with nuclei (see the reviews[1,2] and references therein).

The Schrödinger equation for the wave function $\Psi(\vec{r},\vec{R})$ of the system of three charged particles (two nuclei with charges $Z_a = Z_\ell = 1$ and masses M_a and M_ℓ and electron or μ^- meson with mass m_e) in the coordinates $\vec{R}$ (distance between the nuclei Z_a and Z_ℓ) and $\vec{r}$ (destance between the midpoint of R and electron (meson)) is

$$(\hat{H}-E)\Psi(r,\vec{R}) = 0,$$

$$\hat{H} = -\frac{\hbar^2}{2M_0}\left(\nabla_{\vec{R}} + \frac{\varkappa}{2}\nabla_{\vec{r}}\right)^2 + \left(-\frac{\hbar^2}{2m_0}\Delta_{\vec{r}} - \frac{Z_a e^2}{r_a} - \frac{Z_\ell e^2}{r_\ell}\right) + \frac{Z_a Z_\ell e^2}{R} \qquad (1)$$

where

$$M_0^{-1} = M_a^{-1} + M_\ell^{-1}, \quad m_0^{-1} = m_e^{-1} + (M_a + M_\ell)^{-1},$$

$$\varkappa = (M_\ell - M_a)/(M_\ell + M_a), \quad \vec{r}_a = |\vec{r} + \vec{R}/2|, \quad r_\ell = |\vec{r} - \vec{R}/2|,$$

$$\left(\nabla_{\vec{R}} + \frac{\varkappa}{2}\nabla_{\vec{r}}\right)^2 = \mathcal{P}_{\vec{R}}^2 + R^{-2}\left(\vec{J} - \vec{\mathcal{L}}\right)^2, \qquad (2)$$

$\vec{J}$ is the total momentum operator of the three-body system, and the operators $\mathcal{P}_{\vec{R}}$ and $\vec{\mathcal{L}}$ in the rotating frame of coordinates, constructed on the spherical unit vectors $\vec{e}_\Theta$, $\vec{e}_\Phi$, $\vec{e}_R$ of the vector $\vec{R} = (R,\Theta,\Phi)$, are

$$\mathcal{P}_{\vec{R}} = -i\frac{\vec{R}}{R}\left(\nabla_{\vec{R}} + \frac{\varkappa}{2}\nabla_{\vec{r}}\right), \qquad \vec{\mathcal{L}} = -i\left(\vec{r} - \frac{\varkappa}{2}\vec{R}\right)\times\nabla_{\vec{r}}.$$

In the adiabatic representation the wave function $\Psi(\vec{r},\vec{R})$ is expended over the eigenfunctions $\phi_{jm}(\vec{r};R)$ of the two-center problem of quantum mechanics (in units $e = \hbar = m_0 = 1$), which satisfy the equation[3,4]

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$$\left(-\frac{1}{2}\Delta_{\vec{r}} - \frac{Z_a}{r_a} - \frac{Z_b}{r_b}\right)\phi_{jm}(\vec{r};R) = E_{jm}(R)\,\phi_{jm}(\vec{r};R) \qquad (3)$$

and normalized by the condition

$$\int d\vec{r}\;\phi^*_{im}(\vec{r};R)\,\phi_{jm'}(\vec{r};R) = \delta_{ij}\,\delta_{mm'}, \qquad (3a)$$

where (jm) is the set of quantum numbers of the two-center problem

$$\Psi(\vec{r},\vec{R}) = \sum_{jm}\left\{2(1+\delta_{m0})\right\}^{-1/2}\left\{\phi_{jm}(\vec{r};R)\,D^J_{mm_J}(\Phi,\Theta,0) + \right.$$
$$\left. + \phi_{j(-m)}(\vec{r};R)\,D^J_{-mm_J}(\Phi,\Theta,0)\right\}R^{-1}\chi^J_{jm}(R), \qquad (4)$$

$D^J_{mm_J}(\Phi,\Theta,0)$ are the normalized Wigner functions.

Substituting expansion (3) into equation (1) and averaging over the coordinates $\vec{r}$, Θ and Φ, we get an infinite system of ordinary differential equations which, in units $e=\hbar=m_0=1$, has the form[1,2,5]

$$\left\{\frac{d^2}{dR^2} - \frac{J(J+1)-2m^2}{R^2} + 2M\left(E - \frac{Z_aZ_b}{R} - E_{im}(R)\right)\right\}\chi^J_{im}(R) =$$
$$= \sum_{jm'} U^J_{im,jm'}(R)\,\chi^J_{jm'}(R), \qquad (5)$$

where $M = M_0/m_0$,

$$U^J_{im,jm'}(R) = \delta_{mm'}\left\{H_{im,jm}(R) + \frac{d}{dR}Q_{im,jm}(R) + 2Q_{im,jm}(R)\frac{d}{dR}\right\} +$$
$$+ B^J_{im,jm'}(R),$$

$$Q_{im,jm}(R) = Q^{(+)}_{im,jm}(R) + \varkappa\,Q^{(-)}_{im,jm}(R) = -i\int d\vec{r}\;\phi^*_{im}(\vec{r};R)\,\mathcal{P}_{\vec{R}}\,\phi_{jm}(\vec{r};R),$$

$$H_{im,jm}(R) + \frac{d}{dR}Q_{im,jm}(R) = H^{(+)}_{im,jm}(R) + \varkappa H^{(-)}_{im,jm}(R) + \varkappa^2 H^{(*)}_{im,jm}(R) +$$
$$+ \frac{d}{dR}Q^{(+)}_{im,jm}(R) + \varkappa\frac{d}{dR}Q^{(-)}_{im,jm}(R) =$$
$$= \int d\vec{r}\;\phi^*_{im}(\vec{r};R)\left(\mathcal{P}^2_{\vec{R}} + R^{-2}\vec{\mathcal{L}}^2\right)\phi_{jm}(\vec{r};R),$$

$$B^J_{im,jm'}(R) = -\gamma^J_{mm'}\,b_{im,jm'}(R); \qquad \gamma^J_{mm'} = \left(1+\delta_{m0}\delta_{m'1}+\delta_{m'0}\delta_{m1}\right)^{1/2}\cdot$$
$$\cdot\left\{\left[(J-m+1)(J+m)\right]^{1/2}\delta_{m',m-1} + \left[(J+m+1)(J-m)\right]^{1/2}\delta_{m',m+1}\right\},$$

$$b_{im,jm\mp1}(R) = b^{(+)}_{im,jm\mp1}(R) + \varkappa\,b^{(-)}_{im,jm\mp1}(R) = R^{-2}\int d\vec{r}\;\phi^*_{im}(\vec{r};R)\,\mathcal{L}_{\pm}\,\phi_{jm\mp1}(\vec{r};R),$$
$$\mathcal{L}_{\pm} = \vec{e}_{\pm}\vec{\mathcal{L}}, \qquad \vec{e}_{\pm} = \vec{e}_{\Theta} \pm i\,\vec{e}_{\Phi}. \qquad (6)$$

For the solution of some physical problems, one should know the dipole moments calculated by

$$D_{im,jm}(R) = \int d\vec{r}\;\phi^*_{im}(\vec{r};R)\frac{R}{2}\xi\zeta\,\phi_{jm}(\vec{r};R)$$
$$D_{im,jm\mp1}(R) = \frac{1}{\sqrt{2}}\int d\vec{r}\;\phi^*_{im}(\vec{r};R)\frac{R}{2}\sqrt{(\xi^2-1)(1-\zeta^2)}\,\phi_{jm\mp1}. \qquad (7)$$

The tables represent the matrix elements (6), (7) as well as the terms $E_{im}(R)$ and normalizations $N_{im}(R)$ of the wave functions $\phi_{im}(\vec{r};R)$ for the system $Z_a = Z_b = 1$.

The values of the matrix elements are given with 8 decimal places; and the values of the terms $E_{im}(R)$, with 9 decimal places. The values of $E_{im}(R)$ coincide completely with the values given in the tables[6] with 12 decimal places; and the values of the dipole moments, with the values given in the tables[7] with 4 decimal places. The values of the diagonal matrix elements $H^{(+)}_{im,im}(R)$ and $H^{(*)}_{im,im}(R)$ for the state $(im) = 1s\sigma_g$ calculated in paper[8], differ from those in our tables in the seventh figure at certain values of R, mostly at $R \lesssim 0.3$. The values of the same matrix elements for the states $(im) = 2p\pi_u$ and $3d\sigma_g$ represented in paper[9] with 7 decimal places, coincide completely with the data of our tables. The first published matrix elements for six pairs of states $(1s\sigma_g, 1s\sigma_g)$, $(2s_g, 2s\sigma_g)$, $(1s\sigma_g, 2p\sigma_u)$, $(1s\sigma_g, 2s\sigma_g)$, $(2p\sigma_u, 2p\sigma_u)$ and $(2p\sigma_u, 2s\sigma_g)$ calculated in paper [10], coincide with our calculated results at $R \lesssim 0.5$; at $1 \lesssim R \lesssim 20$, differ in 5-7 figures; and at $R > 20$, in 4-6 figures.

The tables show also the values of the expansion coefficients of the effective potentials, terms and dipole moments as $R \to 0$ and $R \to \infty$ [11,12]. For $R=0$ there are given either the numerical values of the effective potentials at this point or the leading term of their asymptotics as $R \to 0$. As $R \to \infty$ the expansion coefficients A_k are given for $U_{im,jm'}(R)$, $D_{im,jm'}(R)$ and $E_{im}(R)$, $N_{im}(R)$ in powers of R^{-k} and the values of $U_{im,jm'}(R)$, $D_{im,jm'}(R)$ and $E_{im}(R)$, $N_{im}(R)$ calculated by the expansions

$$U(R) = \sum_{k=0} A_k R^{-k} \qquad (6a)$$

at R=100. These asymptotic values differ from the tabulated ones in the fourth-fifth decimal place depending on the combination of quantum numbers (im) and (jm').

The present tables are more complete in comparison with those in refs[7-10] in the types of the calculated effective potentials (6) and (7), in their number, accuracy of calculation and the range of values of R they are calculated in. The diagrams of these potentials have been presented earlier in paper[5], for which all the potentials have been calculated also by the program made by Truskova in accordance with the algorithms of refs.[13,14]. The results of these calculations differ as a rule from those given in the tables in the eight decimal place only. At $R<0.5$ and $20<R<40$ discrepancies are sometimes observed in the six-seventh decimal place.

2. Method of Calculation

The values of the effective potentials, presented in the tables, are calculated by the MATR program compiled by Puzynina in accordance with the algorithms[15-17] which have been supplemented for the case of the states (im) with $m=1$ [18] x). The initial version of the tables of effective potentials calculated according to this algorithm with an accuracy of $\sim 10^{-3}$ has been published in paper[19].

The wave functions of the two-center problem have been chosen in the form[4]

$$\Phi_{im}(\vec{r};R) = \varphi_{im}(\xi,\eta;R)\cdot\frac{e^{im\varphi}}{\sqrt{2\pi}}\begin{cases}(-1)^m & at\ m>0\\ 1 & at\ m\le 0,\end{cases} \tag{8}$$

$$\varphi_{im}(\xi,\eta;R) = N_{im}(R)\,\Pi_{mn_1}(\xi;R)\,\Xi_{mq}(\eta;R), \tag{8a}$$

where ξ, η and φ are the spheroidal coordinates, $N_{im}(R)$ is the normalization determined from the condition (3a). The radial $\Pi_{mn_1}(\xi;R)$ and angular $\Xi_{mq}(\eta;R)$ Coulomb spheroidal functions of the state with a set of spheroidal quantum numbers $(im)=\{n_1 q m\}$ satisfy the equations[4]

x) In using paper[15] one should bare in mind that the quantity λ in eqs. (9) and (11) is defined with an opposite sign. In this paper we follow the definitions of papers[4], according to which $\lim_{R\to 0}\lambda_{im}(R) = \ell(\ell+1)$.

$$\left\{\frac{d}{d\xi}(\xi^2-1)\frac{d}{d\xi} + \left[-p^2(\xi^2-1)+a\xi-\lambda-\frac{m^2}{\xi^2-1}\right]\right\}\Pi_{mn_1}(\xi;R)=0$$

$$1\le\xi<\infty,\quad \lim_{\xi\to 1}(\xi^2-1)^{-m/2}\Pi_{mn_1}(\xi;R)=1,\quad \Pi_{mn_1}(\xi;R)\xrightarrow[\xi\to\infty]{}0 \tag{9a}$$

$$\left\{\frac{d}{d\eta}(1-\eta^2)\frac{d}{d\eta} + \left[-p^2(1-\eta^2)+b\eta+\lambda-\frac{m^2}{1-\eta^2}\right]\right\}\Xi_{mq}(\eta;R)=0$$

$$-1\le\eta\le 1,\quad \Xi_{mq}(1;R)=1, \tag{9b}$$

where $a = R(Z_a+Z_b)$, $b = R(Z_b-Z_a)$ and the eigenvalues of the Sturm-Liouville problem (9) are calculated with the help of the series[20,21]

$$\Pi_{mn_1}(\xi;R) = (\xi^2-1)^{m/2}\left(\frac{\xi+1}{2}\right)^{\sigma}e^{-p(\xi-1)}\sum_{s=0}^{N_1}g_s\left(\frac{\xi-1}{\xi+1}\right)^s$$

$$\sigma\equiv\sigma_{im}(R) = -\left\{-\frac{2}{E_{im}(R)}\right\}^{1/2}-(m+1) \tag{10a}$$

$$p\equiv p_{im}(R) = \frac{R}{2}\left\{-2E_{im}(R)\right\}^{1/2},\quad g_0=1,\quad g_{-1}=0$$

$$\Xi_{mq}(\eta;R) = e^{-p(1+\eta)}\sum_{s=0}^{N_2}c_s P_{s+m}^{m}(\eta),\qquad c_0=1,\ c_{-1}=0$$

$$\Xi_{mq}(\eta;R) = (1-\eta^2)^{m/2}\begin{cases}e^{-p(1-\eta)}\sum_{s=0}^{N_2}\tilde{c}_s(1-\eta)^s, & 0\le\eta\le 1\\ e^{-p(1+\eta)}\sum_{s=0}^{N_2}\bar{c}_s(1+\eta)^s, & -1\le\eta\le 0\end{cases} \tag{10b}$$

$$\tilde{c}_0=1,\quad \bar{c}_0=(-1)^q,\quad \tilde{c}_{-1}=0,\quad \bar{c}_{-1}=0. \tag{10c}$$

The coefficients g_s[4] c_s, $\tilde{c}_s$ and $\bar{c}_s$ are calculated from the recurrence relations[4]

$$(s+1)(s+m+1)g_{s+1} - [2s(s+2p-\sigma)-(m+\sigma)(m+1)-2p\sigma+\lambda]g_s + \tag{11a}$$
$$+(s-1-\sigma)(s-m-1-\sigma)g_{s-1}=0$$

$$\frac{(s+2m+1)[b-2p(s+m+1)]}{2(s+m)+3}c_{s+1} - [(s+m)(s+m+1)-\lambda]c_s + \tag{11b}$$
$$+\frac{s[b+2p(s+m)]}{2(s+m)-1}c_{s-1}=0$$

$$2(s+1)(s+m+1)\,\tilde{c}_{s+1} - [s(s+1) + (2s+m+1)(2p+m) - \ell - \lambda]\,\tilde{c}_s + \qquad (11c)$$
$$+ [2p(s+m) - \ell]\,\tilde{c}_{s-1} = 0$$

(for $\bar{c}_s$ the relations (11c) with the change $\ell \to -\ell$ are valid).

For the calculation of the terms $E_{im}(R)$ expansions (11a) and (11b) at N_1=50 and N_2=100 have been used, whereas the functions $\varphi_{im}(\xi, \zeta; R)$ have been calculated using expansions (11a) and (11c). The number of terms N_1 and N_2 depends on the value of R and is determined within a given accuracy of calculations $\sim 10^{-8}$. The calculation of the matrix elements (6) has been reduced to algebraic operations and to the numerical calculation of three integrals by the Gauss method (other details of the algorithm can be found in papers /15,18/).

The explicit expressions of the calculated effective potentials in the spheroidal coordinates are /1,22/

$$Q^{(+)}_{im,jm}(R) = -\frac{1}{2}\int d\tau \left(\varphi_{im}\frac{\partial \varphi_{jm}}{\partial R} - \frac{\partial \varphi_{im}}{\partial R}\varphi_{jm}\right) - \qquad (12)$$
$$- \frac{R}{8}(E_{im} - E_{jm})\int d\tau\,(\xi^2+\zeta^2)\,\varphi_{im}\varphi_{jm}$$

$$Q^{(-)}_{im,jm}(R) = \frac{R}{2}(E_{im} - E_{jm})\int d\tau\,\xi\zeta\,\varphi_{im}\varphi_{jm}$$

$$H^{(+)}_{im,jm}(R) = -H^{(*)}_{im,jm}(R) + \frac{3}{R^2}\delta_{ij} + \frac{1}{4}(E_{im}+E_{jm})\int d\tau(\xi^2+\zeta^2)\varphi_{im}\varphi_{jm} +$$
$$+ \frac{1}{R}\int \frac{d\tau}{\xi^2-\zeta^2}(\xi^2+\zeta^2)\left[(Z_a+Z_b)\xi + (Z_b - Z_a)\zeta\right]\varphi_{im}\varphi_{jm} -$$
$$- \frac{1}{R}\int \frac{d\tau}{\xi^2-\zeta^2}\left[\xi(\xi^2-1)\left(\frac{\partial \varphi_{im}}{\partial \xi}\frac{\partial \varphi_{jm}}{\partial R} + \frac{\partial \varphi_{im}}{\partial R}\frac{\partial \varphi_{jm}}{\partial \xi}\right) + \right.$$
$$\left. + \zeta(1-\zeta^2)\left(\frac{\partial \varphi_{im}}{\partial \zeta}\frac{\partial \varphi_{jm}}{\partial R} + \frac{\partial \varphi_{im}}{\partial R}\frac{\partial \varphi_{jm}}{\partial \zeta}\right)\right] + \int d\tau \frac{\partial \varphi_{im}}{\partial R}\frac{\partial \varphi_{jm}}{\partial R}$$

$$H^{(-)}_{im,jm}(R) = -\frac{1}{2}(E_{im}+E_{jm})\int d\tau\,\xi\zeta\,\varphi_{im}\varphi_{jm} + \frac{1}{R}\int \frac{d\tau}{\xi^2-\zeta^2}\left\{\zeta(\xi^2-1)\cdot\right.$$
$$\left.\cdot\left(\frac{\partial \varphi_{im}}{\partial \xi}\frac{\partial \varphi_{jm}}{\partial R} + \frac{\partial \varphi_{im}}{\partial R}\frac{\partial \varphi_{jm}}{\partial \xi}\right) + \xi(1-\zeta^2)\left(\frac{\partial \varphi_{im}}{\partial \zeta}\frac{\partial \varphi_{jm}}{\partial R} + \frac{\partial \varphi_{im}}{\partial R}\frac{\partial \varphi_{jm}}{\partial \zeta}\right)\right\} -$$
$$- \frac{2}{R}\int \frac{d\tau}{\xi^2-\zeta^2}\xi\zeta\left[(Z_a+Z_b)\xi + (Z_b - Z_a)\zeta\right]\varphi_{im}\varphi_{jm}$$

$$H^{(*)}_{im,jm}(R) = \frac{1}{2}\left\{E_{im}(R)\,\delta_{ij} - V_{im,jm}(R)\right\}$$

$$V_{im,jm}(R) = -\frac{2}{R}\int \frac{d\tau}{\xi^2-\zeta^2}\left\{(Z_a+Z_b)\xi + (Z_b - Z_a)\zeta\right\}\varphi_{im}\varphi_{jm}$$

$$b^{(+)}_{im,jm\mp1}(R) = \mp\frac{1}{R^2}\int \frac{d\tau}{\xi^2-\zeta^2}\left\{(\xi^2-1)(1-\zeta^2)\right\}^{1/2}\varphi_{im}\left(\zeta\frac{\partial \varphi_{im\mp1}}{\partial \xi} - \xi\frac{\partial \varphi_{im\mp1}}{\partial \zeta}\right) +$$
$$+ \frac{(m\mp1)}{R^2}\int d\tau\,\xi\zeta\,\frac{\varphi_{im}\varphi_{jm}}{\left[(\xi^2-1)(1-\zeta^2)\right]^{1/2}}$$

$$b^{(-)}_{im,jm\mp1}(R) = \mp\frac{1}{4}(E_{im} - E_{jm\mp1})\int d\tau\left\{(\xi^2-1)(1-\zeta^2)\right\}^{1/2}\varphi_{im}\varphi_{jm\mp1}$$

$$D_{im,jm}(R) = \frac{R}{2}\int d\tau\,\xi\zeta\,\varphi_{im}\varphi_{jm}$$

$$D_{im,jm\mp1}(R) = -\frac{R}{2\sqrt{2}}\int d\tau\left\{(\xi^2-1)(1-\zeta^2)\right\}^{1/2}\varphi_{im}\varphi_{jm\mp1}$$

$$\int d\tau = \frac{R^3}{8}\int_1^\infty d\xi\int_{-1}^{1} d\zeta\,(\xi^2-\zeta^2),\quad \varphi_{im} = \varphi_{im}(\xi,\zeta;R),\quad E_{im} = E_{im}(R).$$

3. Description of the Tables

The tables contain the matrix elements

$$Q^{(+)} = Q^{(+)}_{im,jm}(R),\qquad Q^{(-)} = Q^{(-)}_{im,jm}(R)$$
$$H^{(+)} = H^{(+)}_{im,jm}(R),\qquad H^{(-)} = H^{(-)}_{im,jm}(R)$$
$$H^{(*)} = H^{(*)}_{im,jm}(R),\quad B^{(+)} = b^{(+)}_{im,jm\mp1}(R),\quad B^{(-)} = b^{(-)}_{im,jm\mp1}(R)$$

determined by the relations (12), the terms $E = E_{im}(R)$, dipole moments $RIJ = D_{im,jm}(R)$ and $D_{im,jm\mp1}(R)$ (7) and the normalizations $NORMA = N_{im}(R)$ of the wave functions $\varphi_{im}(\xi,\zeta;R)$ (8) for the system $Z_a = Z_b = 1$ in the interval of values R=0.1(0.1)2(0.2)8(0.6)20(2)30(10)100 for the states, the quantum numbers (im) of which are given in the table.

United atom		Separated atoms			
S=0	S=1	n_1	n_2	m	n
1sσ g	2pσ u	0	0	0	1
2sσ g	3pσ u	1	0	0	2
3dσ g	4fσ u	0	1	0	2
2pπ u	3dπ g	0	0	1	2

The quantity $S = \frac{1-(-1)^q}{2}$ specifies the symmetry of the wave function $\Xi_{mq}(\xi;R)$ (8) under the reflection $\xi \to -\xi$ and $q = \ell - m$ is the number of zeroes of the function $\Xi_{mq}(\xi;R)$ in the interval $-1 < \xi < 1$. The quantum number $\ell = q+m = 2n_2+m+s$. Parity of the wave function $\varphi_{\ell m}(\vec{r};R)$ under the inversion $\vec{r} \to -\vec{r}$ is characterized by the indices g, for even ℓ and u, for odd ℓ.

The following notations are used in the tables:

N is the principal quantum number N,

L is the quantum number of the orbital momentum l,

M is the azimuthal quantum number m,

Z1 is the nuclear charge Z_a,

Z2 is the nuclear charge Z_b,

N1 is the radial quantum number $n_1 = N-\ell-1$,

N2 is the parabolic quantum number $n_2 = (q-s)/2 = (\ell-m-s)/2$,

NM is the parabolic principal quantum number $n = n_1+n_2+m+1$,

1.S SIGMA G is the state of the two-center problem $1s\sigma_g$,

R is the internuclear distance in atomic units R,

R=0 This row contains the asymptotic values of the above quantities or of the leading coefficients of their expansions in powers of R^k as $R \to 0$.

Rf(0) is the expansion coefficient A_k in (6a) as $R \to \infty$ in powers of R^{-k} at $k=0$.

Rf(-1) is the expansion coefficient A_1 at R^{-1}.

Rf(-2) is the expansion coefficient A_2 at R^{-2}.

Rf(-3) is the expansion ciefficient A_3 at R^{-3}.

AS(R=100) is the value of the sum (6a) at R=100.

Acknowledgement

The authors are grateful to S.I.Vinitsky for the help and constant collaboration and to N.F.Truskova for the collaboration while preparing paper[5].

1.S SIGMA G - 1.S SIGMA G

R	H(+)	H(*)	E	NORMA
0.0	0.000000	1.000000	-2.00000000	4.000000R+L
.1	.03756585	.96956375	-1.978242058	3.56915695
.2	.08967123	.90668324	-1.928620297	3.17231945
.3	.12802502	.83601792	-1.866704078	2.83919306
.4	.15249412	.76770131	-1.800754059	2.56473660
.5	.16714854	.70533477	-1.734988000	2.33849832
.6	.17546734	.64976470	-1.671484714	2.15072709
.7	.17932784	.60074587	-1.611196266	1.99351551
.8	.18176011	.55764820	-1.554480094	1.86070959
.9	.18223292	.51975342	-1.501381599	1.74756829
1.0	.18185903	.48637425	-1.451786313	1.65043200
1.1	.18102737	.45689660	-1.405542776	1.56645601
1.2	.17998567	.43078873	-1.362307858	1.49340879
1.3	.17889185	.40759711	-1.321971391	1.42952259
1.4	.17784617	.38693744	-1.284269242	1.37338317
1.5	.17691149	.36848477	-1.248989872	1.32384826
1.6	.17612626	.35196416	-1.215937225	1.27998678
1.7	.17551288	.33714250	-1.184931564	1.24103323
1.8	.17508312	.32382154	-1.155809190	1.20635304
1.9	.17484174	.31183208	-1.128421572	1.17541614
2.0	.17478883	.30102913	-1.102634215	1.14777651
2.2	.17523439	.28250078	-1.055385081	1.10093292
2.4	.17637514	.26742645	-1.013220305	1.06340849
2.6	.17815063	.25519152	-.975448581	1.03340599
2.8	.18049336	.24532136	-.941498861	1.00955551
3.0	.18333153	.23744256	-.910896197	.99078919
3.2	.18659063	.23125554	-.883242560	.97625646
3.4	.19019393	.22651493	-.858201678	.96526551
3.6	.19406233	.22301528	-.835487074	.95724241
3.8	.19811581	.22058077	-.814852592	.95170234
4.0	.20227451	.21905773	-.796084884	.94822925
4.2	.20646063	.21832938	-.778997444	.94646170
4.4	.21060365	.21821323	-.763425867	.94608208
4.6	.21462773	.21865730	-.749224094	.94681494
4.8	.21848384	.21953131	-.736261446	.94841261
5.0	.22212158	.22075109	-.724420295	.95066222
5.2	.22550524	.22222345	-.713594253	.95337861
5.4	.22861112	.22388781	-.703686753	.95640368
5.6	.23142703	.22566281	-.694609954	.95960477
5.8	.23395133	.22749643	-.686283877	.96287298
6.0	.23619108	.22934088	-.678635715	.96612129
6.2	.23816001	.23115725	-.671599260	.96928239
6.4	.23987695	.23291502	-.665114413	.97230638
6.6	.24136367	.23459128	-.659126747	.97515837
6.8	.24264341	.23616990	-.653587092	.97781605
7.0	.24373952	.23764035	-.648451147	.98026745
7.2	.24467460	.23899778	-.643679101	.98250875
7.4	.24546979	.24024005	-.639235259	.98454239
7.6	.24614438	.24136891	-.635087689	.98637544
7.8	.24671569	.24238820	-.631207875	.98801818
8.0	.24719897	.24330338	-.627570389	.98948300

1.S SIGMA G - 1.S SIGMA G

R	H(+)	H(*)	E	NORMA
8.5	.24810496	.24518042	-.619394246	.99245656
9.0	.24870070	.24656271	-.612306564	.99461925
9.5	.24913432	.24756179	-.606089364	.99616807
10.0	.24935648	.24827411	-.600578729	.99726570
10.5	.24953295	.24877705	-.595650247	.99803848
11.0	.24965326	.24912987	-.591208320	.99858080
11.5	.24973653	.24937644	-.587178439	.99896126
12.0	.24979516	.24954855	-.583501640	.99922883
12.5	.24983722	.24966884	-.580130556	.99941797
13.0	.24986803	.24975322	-.577026573	.99955272
13.5	.24989108	.24981278	-.574157789	.99964972
14.0	.24990870	.24985519	-.571497522	.99972045
14.5	.24992244	.24988575	-.569023214	.99977280
15.0	.24993338	.24990807	-.566715605	.99981220
15.5	.24994224	.24992464	-.564558118	.99984238
16.0	.24994932	.24993716	-.562536375	.99986592
16.5	.24995559	.24994680	-.560637829	.99988461
17.0	.24996071	.24995436	-.558851465	.99989971
17.5	.24996507	.24996041	-.557167566	.99991210
18.0	.24996881	.24996533	-.555577519	.99992241
18.5	.24997215	.24996940	-.554073663	.99993110
19.0	.24997487	.24997231	-.552649154	.99993850
19.5	.24997733	.24997570	-.551297857	.99994486
20.0	.24997950	.24997818	-.550014259	.99995037
22.0	.24998594	.24998531	-.545464246	.99996640
24.0	.24999004	.24998968	-.541673501	.99997637
26.0	.24999274	.24999253	-.538466494	.99998288
28.0	.24999459	.24999446	-.535717966	.99998729
30.0	.24999599	.24999580	-.53333 6124	.99999037
32.0	.24999692	.24999676	-.531252154	.99999257
34.0	.24999760	.24999746	-.529413454	.99999417
36.0	.24999801	.24999798	-.527779122	.99999537
38.0	.24999840	.24999837	-.526316872	.99999627
40.0	.24999869	.24999868	-.525000881	.99999696
42.0	.24999892	.24999891	-.523810249	.99999750
44.0	.24999911	.24999910	-.522727874	.99999793
46.0	.24999925	.24999924	-.521739634	.99999826
48.0	.24999937	.24999936	-.520833758	.99999854
50.0	.24999946	.24999946	-.520000361	.99999876
60.0	.24999974	.24999974	-.516666840	.99999940
70.0	.24999986	.24999986	-.514285808	.99999968
80.0	.24999992	.24999992	-.512500055	.99999981
90.0	.24999995	.24999995	-.511111145	.99999988
100.0	.24999997	.24999997	-.510000023	.99999992
R+(0)	.250000	.250000	-.50000000	1.000000R+M
R+(-1)	0.000000	0.000000	-1.00000000	
R+(-2)	0.000000	0.000000	0.00000000	
R+(-3)			0.00000000	
R+(-4)			-2.25000000	
AS(R=100)	.250000	.250000	-.51000002	1.000000

2.P SIGMA U - 2.P SIGMA U

R	H(+)	H(*)	E	NORMA
0.0	2.000000/R+2	.250000	-.50000000	.707107R+L
.1	200.00148436	.25100189	-.500667445	.07105931
.2	50.00587494	.25402521	-.502677425	.14364504
.3	22.23512629	.25910179	-.506045888	.21844153
.4	12.52198050	.26623849	-.510784228	.29561406
.5	8.03214397	.27537511	-.516885465	.37486547
.6	5.59770513	.28634443	-.524310372	.45545122
.7	4.13233648	.29884419	-.532975505	.53622467
.8	3.18179664	.31243262	-.542745921	.61574035
.9	2.52913071	.32655517	-.553435154	.69241536
1.0	2.06055311	.34060056	-.564813625	.76472206
1.1	1.71217651	.35397252	-.576624343	.83136834
1.2	1.44615217	.36615777	-.588602685	.89142446
1.3	1.23894512	.37677327	-.600496075	.94437509
1.4	1.07519364	.38558510	-.612079976	.99010056
1.5	.94437504	.39250135	-.623168202	1.02880884
1.6	.83896048	.39754779	-.633617289	1.06094544
1.7	.75337493	.40083611	-.643325937	1.08710328
1.8	.68339084	.40253255	-.652231068	1.10794630
1.9	.62575504	.40283135	-.660302064	1.12415183
2.0	.57794289	.40193476	-.667534392	1.13637174
2.2	.50434234	.39732769	-.679559160	1.15120580
2.4	.45142052	.39009191	-.688575778	1.15652690
2.6	.41226197	.38130139	-.694960660	1.15542864
2.8	.38251741	.37173510	-.699114505	1.15015934
3.0	.35939628	.36193187	-.701418333	1.14231156
3.2	.34106594	.35225017	-.702213401	1.13299426
3.4	.32629231	.34291888	-.701794780	1.12296912
3.6	.31422283	.33407830	-.700412863	1.11275198
3.8	.30425349	.32579886	-.698273383	1.10268556
4.0	.29594587	.31812077	-.695550639	1.09299210
4.2	.28897440	.31104866	-.692384845	1.08380914
4.4	.28309216	.30457105	-.688891091	1.07521554
4.6	.27810816	.29866508	-.685162921	1.06724952
4.8	.27387206	.29330103	-.681276070	1.05992132
5.0	.27026362	.28844546	-.677291613	1.05322224
5.2	.26718530	.28406323	-.673258580	1.04713098
5.4	.26455699	.28011892	-.669216118	1.04161810
5.6	.26231221	.27657774	-.665195268	1.03664931
5.8	.26039523	.27340608	-.661220429	1.03218768
6.0	.25875904	.27057191	-.657310559	1.02819524
6.2	.25736367	.26804496	-.653480157	1.02463418
6.4	.25617499	.26579686	-.649740077	1.02146754
6.6	.25516376	.26380112	-.646098197	1.01865981
6.8	.25430483	.26203319	-.642559964	1.01617727
7.0	.25357652	.26047035	-.639128855	1.01398820
7.2	.25296014	.25909171	-.635806749	1.01206297
7.4	.25243955	.25787809	-.632594237	1.01037415
7.6	.25200083	.25681194	-.629490884	1.00889646
7.8	.25163196	.25587727	-.626495440	1.00760672
8.0	.25132259	.25505955	-.623606016	1.00648380

2.P SIGMA U - 2.P SIGMA U

R	H(+)	H(*)	E	NORMA
8.0	.25075398	.25344354	-.616829792	1.00428495
9.0	.25039662	.25230665	-.610654941	1.00276203
9.0	.25017706	.25151690	-.605029672	1.00172356
10.0	.25004610	.25097528	-.599901069	1.00102699
10.0	.24997124	.25060873	-.595218150	1.00056815
11.0	.24993128	.25036417	-.590933513	1.00027226
11.0	.24991256	.25020358	-.587004068	1.00008646
12.0	.24990642	.25010009	-.583391228	.99997391
12.0	.24990744	.25003496	-.580060774	.99990932
13.0	.24991228	.24999527	-.576982545	.99987555
13.0	.24991893	.24997227	-.574130054	.99986111
14.0	.24992620	.24995986	-.571480076	.99985844
14.0	.24993343	.24995425	-.569012254	.99986262
15.0	.24994027	.24995277	-.566708729	.99987051
15.0	.24994655	.24995373	-.564553809	.99988014
16.0	.24995222	.24995605	-.562533678	.99989032
16.0	.24995728	.24995903	-.560636142	.99990035
17.0	.24996176	.24996227	-.558850411	.99990984
17.0	.24996573	.24996551	-.557166908	.99991861
18.0	.24996922	.24996861	-.555577109	.99992658
18.0	.24997231	.24997151	-.554073408	.99993377
19.0	.24997503	.24997416	-.552648994	.99994021
19.0	.24997743	.24997657	-.551297758	.99994595
20.0	.24997956	.24997874	-.550014198	.99995106
22.0	.24998594	.24998540	-.545464236	.99996651
24.0	.24999004	.24998970	-.541673500	.99997639
26.0	.24999275	.24999253	-.538466494	.99998288
28.0	.24999459	.24999446	-.535717966	.99998720
30.0	.24999589	.24999580	-.533336124	.99999037
32.0	.24999682	.24999676	-.531252154	.99999257
34.0	.24999750	.24999746	-.529413454	.99999417
36.0	.24999801	.24999798	-.527779122	.99999537
38.0	.24999840	.24999837	-.526316872	.99999627
40.0	.24999869	.24999868	-.525000881	.99999696
42.0	.24999892	.24999891	-.523810249	.99999750
44.0	.24999911	.24999910	-.522727874	.99999793
46.0	.24999925	.24999924	-.521739634	.99999826
48.0	.24999937	.24999936	-.520833758	.99999854
50.0	.24999946	.24999946	-.520000361	.99999876
60.0	.24999974	.24999974	-.516666840	.99999940
70.0	.24999986	.24999986	-.514285808	.99999968
80.0	.24999992	.24999992	-.512500055	.99999981
90.0	.24999995	.24999995	-.511111145	.99999988
100.0	.24999997	.24999997	-.510000023	.99999992
R*(0)	.250000	.250000	-.50000000	1.000000R*M
R*(-1)	0.000000	0.000000	-1.00000000	
R*(-2)	0.000000	0.000000	0.00000000	
R*(-3)			0.00000000	
R*(-4)			-2.25000000	
AS(R=100)	.250000	.250000	-.51000002	1.000000

1.S SIGMA G - 2.P SIGMA U

R	Q(-)	H(-)	RIJ
1.0	-.279351	-.558702/R	.372468
.1	-.28044784	-5.62697670	.37960566
.2	-.28318048	-2.87384803	.39718349
.3	-.28681997	-1.98131652	.42159003
.4	-.29078810	-1.55118341	.45084481
.5	-.29460618	-1.30317219	.48371326
.6	-.29736015	-1.14360705	.51929360
.7	-.30013455	-1.03236824	.55683319
.8	-.30132548	-.94965249	.59566136
.9	-.30105973	-.88486428	.63518299
1.0	-.29930929	-.83209021	.67489854
1.1	-.29608651	-.78794377	.71442688
1.2	-.29149955	-.75041636	.75351583
1.3	-.28571719	-.71823417	.79203593
1.4	-.27894516	-.69050506	.82996017
1.5	-.27139312	-.66653816	.86733692
1.6	-.26328508	-.64576116	.90426263
1.7	-.25479722	-.62768656	.94085883
1.8	-.24606212	-.61189841	.97725500
1.9	-.23723768	-.59804540	1.01357740
2.0	-.22841491	-.58583448	1.04994258
2.2	-.21106431	-.56541527	1.12320253
2.4	-.19441398	-.54918515	1.19770373
2.6	-.17865988	-.53617123	1.27392210
2.8	-.16387372	-.52570186	1.35218068
3.0	-.15005808	-.51730111	1.43268678
3.2	-.13718024	-.51061162	1.51555964
3.4	-.12519192	-.50535214	1.60084910
3.6	-.11407032	-.50129167	1.68854803
3.8	-.10367394	-.49823426	1.77860080
4.0	-.09404525	-.49601002	1.87090977
4.2	-.08511165	-.49446997	1.96534114
4.4	-.07683532	-.49348309	2.06173084
4.6	-.06918253	-.49293456	2.15989103
4.8	-.06211235	-.49272483	2.25961705
5.0	-.05562822	-.49276880	2.36069482
5.2	-.04967153	-.49299509	2.46290820
5.4	-.04423662	-.49334514	2.56604591
5.6	-.03926725	-.49377214	2.66990767
5.8	-.03476683	-.49423975	2.77430905
6.0	-.03069847	-.49472071	2.87908504
6.2	-.02703454	-.49519544	2.98409214
6.4	-.02374727	-.49565057	3.08920910
6.6	-.02080379	-.49607766	3.19433653
6.8	-.01819143	-.49647203	3.29939556
7.0	-.01586306	-.49683175	3.40432593
7.2	-.01381237	-.49715682	3.50908363
7.4	-.01199313	-.49744856	3.61363847
7.6	-.01040438	-.49770904	3.71797166
7.8	-.00900564	-.49794080	3.82207351
8.0	-.00778135	-.49814652	3.92594142

1.S SIGMA G - 2.P SIGMA U

R	Q(-)	H(-)	RIJ
8.5	-.00536563	-.49856429	4.18461473
9.0	-.00366824	-.49887371	4.44197821
9.5	-.00248333	-.49910464	4.69821399
10.0	-.00167840	-.49927905	4.95350772
10.5	-.00112518	-.49941256	5.20802525
11.0	-.00075049	-.49951617	5.46190565
11.5	-.00049329	-.49959761	5.71526201
12.0	-.00032948	-.49966242	5.96818501
12.5	-.00021705	-.49971454	6.22074712
13.0	-.00014250	-.49975689	6.47300639
13.5	-.00009326	-.49979160	6.72500960
14.0	-.00006036	-.49982029	6.97679471
14.5	-.00003961	-.49984418	7.22839281
15.0	-.00002572	-.49986420	7.47982952
15.5	-.00001666	-.49988109	7.73112618
16.0	-.00001077	-.49989543	7.98230062
16.5	-.00000695	-.49990766	8.23336792
17.0	-.00000447	-.49991815	8.48434085
17.5	-.00000287	-.49992718	8.73523030
18.0	-.00000184	-.49993500	8.98604564
18.5	-.00000118	-.49994179	9.23679495
19.0	-.00000076	-.49994772	9.48748520
19.5	-.00000048	-.49995291	9.73812248
20.0	-.00000031	-.49995747	9.98871210
22.0	-.00000005	-.49997100	10.99067930
24.0	-.00000001	-.49997955	11.99217268
26.0	-.00000000	-.49998517	12.99333335
28.0	-.00000000	-.49998898	13.99425346
30.0	-.00000000	-.49999164	14.99499526
32.0	-.00000000	-.49999355	15.99560205
34.0	0.00000000	-.49999494	16.99610476
36.0	-.00000000	-.49999597	17.99652590
38.0	0.00000000	-.49999676	18.99688223
40.0	0.00000000	-.49999736	19.99718640
42.0	0.00000000	-.49999783	20.99744812
44.0	0.00000000	-.49999820	21.99767494
46.0	0.00000000	-.49999849	22.99787280
48.0	0.00000000	-.49999873	23.99804644
50.0	0.00000000	-.49999892	24.99819964
60.0	0.00000000	-.49999948	29.99874986
70.0	0.00000000	-.49999972	34.99908157
80.0	0.00000000	-.49999984	39.99929684
90.0	0.00000000	-.49999990	44.99944443
100.0	0.00000000	-.49999993	49.99954999
R+(1)	0.000000	0.000000	.500000
R+(0)	0.000000	-.500000	1.000000
R+(-1)	0.000000	0.000000	1.000000
R+(-2)	0.000000	0.000000	-4.500000
AS(R=100)	1.000000	-.500000	49.999550

1.S SIGMA G - 2.S SIGMA G

R	Q(+)	H(+)	H(*)
1.0	1.000000	.000093	.419026
.1	-.09373036	.02176844	.40881808
.2	-.14367402	.05148751	.38759958
.3	-.17022115	.07277242	.36345494
.4	-.18407615	.08572896	.33973316
.5	-.19080900	.09284853	.31767682
.6	-.19341352	.09622546	.29763814
.7	-.19358929	.09727774	.27960453
.8	-.19229646	.09691750	.26342459
.9	-.19012915	.09571534	.24890511
1.0	-.18744612	.09403061	.23585204
1.1	-.18447777	.09208943	.22408651
1.2	-.18136920	.09003417	.21344993
1.3	-.17821085	.08795422	.20380428
1.4	-.17505601	.08590508	.19503048
1.5	-.17197243	.08392049	.18702615
1.6	-.16899459	.08202010	.17970330
1.7	-.16612745	.08021440	.17299620
1.8	-.16339357	.07850796	.16680951
1.9	-.16047518	.07690135	.16111671
2.0	-.15786563	.07539351	.15585870
2.2	-.15292718	.07265911	.14648128
2.4	-.14839619	.07027129	.13839478
2.6	-.14423541	.06819261	.13138013
2.8	-.14041475	.06638665	.12526504
3.0	-.13690431	.06481999	.11991218
3.2	-.13367581	.06346291	.11521071
3.4	-.13070309	.06228932	.11107005
3.6	-.12796237	.06127660	.10741539
3.8	-.12543213	.06040525	.10418428
4.0	-.12309311	.05965856	.10132404
4.2	-.12092806	.05902234	.09878939
4.4	-.11892170	.05848458	.09654344
4.6	-.11706049	.05803514	.09455155
4.8	-.11533255	.05766553	.09278546
5.0	-.11372745	.05736857	.09122008
5.2	-.11223612	.05713813	.08983343
5.4	-.11085162	.05696892	.08860620
5.6	-.10956405	.05685625	.08752137
5.8	-.10837034	.05679586	.08656388
6.0	-.10726409	.05678377	.08572037
6.2	-.10624048	.05681618	.08497896
6.4	-.10529504	.05688943	.08432901
6.6	-.10442367	.05699935	.08376099
6.8	-.10362242	.05714434	.08326632
7.0	-.10288751	.05731891	.08283722
7.2	-.10221528	.05752064	.08246665
7.4	-.10160209	.05774623	.08214817
7.6	-.10104439	.05799262	.08187595
7.8	-.10053866	.05825698	.08164460
8.0	-.10008145	.05853622	.08144925

1.S SIGMA G - 2.S SIGMA G

R	Q(+)	H(+)	H(*)
8.5	-.03312964	.05928375	.08108986
9.0	-.03341761	.06007312	.08086856
9.5	-.03787248	.06087426	.08073843
10.0	-.03743304	.06166338	.08066365
10.5	-.03720524	.06242266	.08061791
11.0	-.03701123	.06313969	.08058279
11.5	-.03687881	.06380677	.08054616
12.0	-.03673080	.06442009	.08050078
12.5	-.03673418	.06497887	.08044295
13.0	-.03663934	.06548453	.08037143
13.5	-.03667927	.06593999	.08028663
14.0	-.03666303	.06634907	.08018988
14.5	-.03666516	.06671602	.08008305
15.0	-.03666529	.06704517	.07996916
15.5	-.03666797	.06734077	.07984724
16.0	-.03667189	.06760678	.07972213
16.5	-.03667671	.06784684	.07959451
17.0	-.03668199	.06806421	.07946578
17.5	-.03668752	.06826179	.07933715
18.0	-.03669321	.06844212	.07920957
18.5	-.03669905	.06860733	.07908382
19.0	-.03670505	.06875951	.07896049
19.5	-.03671126	.06890014	.07884005
20.0	-.03671769	.06903068	.07872290
22.0	-.03674649	.06947369	.07828912
24.0	-.03678196	.06982627	.07791290
26.0	-.03682345	.07011860	.07758928
28.0	-.03686402	.07036795	.07731078
30.0	-.03691313	.07058490	.07706999
32.0	-.03695756	.07077602	.07686049
34.0	-.03701531	.07094637	.07667696
36.0	-.03705269	.07109935	.07651510
38.0	-.03709916	.07123765	.07637143
40.0	-.03714445	.07136337	.07624315
42.0	-.03718838	.07147821	.07612799
44.0	-.03723067	.07158356	.07602408
46.0	-.03727143	.07168059	.07592990
48.0	-.03730958	.07177026	.07584416
50.0	-.03734815	.07185339	.07576580
60.0	-.03751381	.07219235	.07545771
70.0	-.03764783	.07244124	.07524328
80.0	-.03776751	.07263189	.07508578
90.0	-.03784334	.07278265	.07496535
100.0	-.03792460	.07290486	.07487036
R*(0)	-.033765	.074074	.074074
R*(-1)	.033765	-.123457	.074074
R*(-2)	-1.530864	.670782	.572016
AS(R=100)	-.037931	.072907	.074872

2.P SIGMA U - 3.P SIGMA U

R	Q(+)	H(+)	H(*)
1.0	0.000000	.000012	.122880
.1	.02456560	.00101206	.12334468
.2	.04897567	.00408189	.12474311
.3	.07281808	.00874694	.12707680
.4	.09548666	.01478381	.13032256
.5	.11581997	.02137179	.13441033
.6	.13299981	.02757837	.13920486
.7	.14590996	.03247545	.14449803
.8	.15374595	.03539553	.15001835
.9	.15611012	.03613431	.15545987
1.0	.15311369	.03499884	.16051913
1.1	.14539124	.03262735	.16494471
1.2	.13376649	.02983116	.16855871
1.3	.11946428	.02728926	.17127154
1.4	.10353242	.02546389	.17307390
1.5	.08691619	.02457845	.17401837
1.6	.07035692	.02462589	.17419719
1.7	.05438312	.02551682	.17372207
1.8	.03933448	.02707386	.17270883
1.9	.02539999	.02911132	.17126728
2.0	.01265791	.03145931	.16949574
2.2	-.00928760	.03655827	.16528666
2.4	-.02694585	.04157822	.16059625
2.6	-.04101982	.04613147	.15575768
2.8	-.05221849	.05009138	.15097380
3.0	-.06112255	.05343855	.14636107
3.2	-.06824580	.05622246	.14198115
3.4	-.07396546	.05851485	.13786201
3.6	-.07858855	.06039056	.13401129
3.8	-.08232228	.06191664	.13042483
4.0	-.08536923	.06316819	.12709184
4.2	-.08786846	.06416587	.12399811
4.4	-.08998420	.06497851	.12112798
4.6	-.09190550	.06563326	.11846547
4.8	-.09297151	.06615892	.11599495
5.0	-.09411563	.06657901	.11370153
5.2	-.09506068	.06691279	.11157125
5.4	-.09584879	.06717596	.10959113
5.6	-.09648485	.06738140	.10774920
5.8	-.09701307	.06753967	.10603446
6.0	-.09744642	.06765945	.10443681
6.2	-.09779939	.06774798	.10294705
6.4	-.09808463	.06781092	.10155673
6.6	-.09831267	.06785348	.10025815
6.8	-.09849229	.06787943	.09904427
7.0	-.09863888	.06789236	.09790866
7.2	-.09873464	.06789504	.09684543
7.4	-.09880884	.06788988	.09584920
7.6	-.09885795	.06787862	.09491505
7.8	-.09888588	.06786314	.09403845
8.0	-.09889565	.06784472	.09321527

2.P SIGMA U - 3.P SIGMA U

R	Q(+)	H(+)	H(*)
[illegible]	-.09885898	.06779288	.09136682
[illegible]	-.09876068	.06774249	.08977786
[illegible]	-.09862472	.06770159	.08840651
[illegible]	-.09846800	.06767472	.08721850
[illegible]	-.09830240	.06766409	.08618560
[illegible]	-.09813620	.06767031	.08528441
[illegible]	-.09797507	.06769293	.08449539
[illegible]	-.09782269	.06773081	.08380218
[illegible]	-.09768135	.06778243	.08319098
[illegible]	-.09755225	.06784605	.08265012
[illegible]	-.09743586	.06791988	.08216978
[illegible]	-.09733209	.06800215	.08174132
[illegible]	-.09724048	.06809118	.08135781
[illegible]	-.09716034	.06818543	.08101307
[illegible]	-.09709085	.06828350	.08070187
[illegible]	-.09703109	.06838419	.08041979
[illegible]	-.09698016	.06848642	.08016301
[illegible]	-.09693715	.06858928	.07992830
[illegible]	-.09690120	.06869203	.07971289
[illegible]	-.09687151	.06879403	.07951441
[illegible]	-.09684735	.06889476	.07933083
[illegible]	-.09682803	.06899384	.07916042
[illegible]	-.09681297	.06909095	.07900169
[illegible]	-.09680161	.06918585	.07885337
[illegible]	-.09678458	.06954081	.07834422
[illegible]	-.09679772	.06985487	.07793589
[illegible]	-.09682777	.07013064	.07759878
[illegible]	-.09686715	.07037296	.07731467
[illegible]	-.09691146	.07058687	.07707158
[illegible]	-.09695812	.07077687	.07686114
[illegible]	-.09700555	.07094672	.07667722
[illegible]	-.09705277	.07109949	.07651521
[illegible]	-.09709921	.07123771	.07637148
[illegible]	-.09714447	.07136339	.07624317
[illegible]	-.09718833	.07147822	.07612888
[illegible]	-.09723067	.07158357	.07602489
[illegible]	-.09727143	.07168059	.07592998
[illegible]	-.09731058	.07177026	.07584416
[illegible]	-.09734815	.07185339	.07576588
[illegible]	-.09751381	.07219235	.07545771
[illegible]	-.09764789	.07244124	.07524328
[illegible]	-.09775751	.07263189	.07508578
[illegible]	-.09784834	.07278265	.07496535
[illegible]	-.09792468	.07290486	.07487036
R+(0)	-.098765	.074074	.074074
R+(-1)	.098765	-.123457	.074074
R+(-2)	-1.530864	.670782	.572816
AS(R=1.0)	-.097931	.072907	.074872

1.S SIGMA G - 3.P SIGMA U

R	Q(-)	H(-)	RIJ
0.0	-.132583	-.265165/R	.149155
.1	-.13246845	-2.66618344	.15888135
.2	-.13288648	-1.33382151	.15486494
.3	-.13138827	-.92320696	.15986033
.4	-.12991057	-.71129998	.16492549
.5	-.12787828	-.58495575	.16934739
.6	-.12442888	-.49999899	.17253819
.7	-.12083599	-.43778056	.17488216
.8	-.11446258	-.38937851	.17336711
.9	-.10776389	-.35099842	.17041638
1.0	-.10089385	-.31898662	.16518674
1.1	-.09160747	-.29312498	.15755959
1.2	-.08274194	-.27228000	.14882574
1.3	-.07357243	-.25568041	.13683984
1.4	-.06438722	-.24230615	.12434586
1.5	-.05537137	-.23190011	.11490015
1.6	-.04664166	-.22363706	.09688515
1.7	-.03834947	-.21705175	.08238325
1.8	-.03048798	-.21174827	.06762421
1.9	-.02310847	-.20741220	.05288087
2.0	-.01618988	-.20388546	.03821670
2.2	-.00373389	-.19812849	.00934117
2.4	.00706698	-.19377773	-.01866165
2.6	.01644863	-.19029210	-.04568854
2.8	.02463878	-.18748282	-.07171588
3.0	.03183648	-.18499710	-.09688888
3.2	.03820782	-.18286388	-.12181473
3.4	.04388776	-.18105387	-.14437796
3.6	.04899448	-.17947528	-.16660868
3.8	.05358391	-.17808644	-.18868439
4.0	.05775483	-.17684913	-.20964291
4.2	.06154868	-.17573867	-.22979328
4.4	.06501813	-.17470270	-.24911589
4.6	.06817893	-.17374115	-.26758296
4.8	.07106211	-.17283816	-.28517815
5.0	.07370427	-.17194285	-.30189196
5.2	.07611489	-.17107785	-.31768851
5.4	.07831138	-.17022388	-.33242788
5.6	.08030813	-.16937498	-.34630315
5.8	.08211693	-.16853835	-.35934199
6.0	.08375637	-.16768988	-.37125798
6.2	.08523278	-.16680282	-.38237489
6.4	.08655977	-.16582157	-.39262168
6.6	.08774987	-.16520039	-.40203884
6.8	.08881175	-.16439148	-.41066689
7.0	.08975854	-.16359776	-.41859289
7.2	.09059975	-.16282198	-.42574456
7.4	.09134816	-.16206696	-.43229296
7.6	.09200399	-.16133352	-.43824468
7.8	.09258487	-.16062449	-.44365373
8.0	.09309584	-.15994871	-.44856088

1.S SIGMA G - 3.P SIGMA U

R	Q(-)	H(-)	RIJ
8.5	.09411439	-.15834651	-.45892547
9.0	.09483967	-.15691971	-.46705249
9.5	.09534922	-.15565645	-.47344941
10.0	.09570217	-.15454731	-.47851923
10.5	.09594283	-.15357989	-.48257508
11.0	.09611397	-.15274857	-.48585652
11.5	.09623956	-.15201554	-.48854597
12.0	.09627699	-.15139150	-.49078105
12.5	.09631863	-.15085597	-.49266567
13.0	.09634349	-.15039755	-.49427815
13.5	.09635788	-.15000598	-.49567761
14.0	.09636589	-.14967183	-.49698874
14.5	.09637075	-.14938717	-.49800548
15.0	.09637433	-.14914478	-.49899334
15.5	.09637795	-.14893844	-.49989222
16.0	.09638236	-.14876273	-.50071712
16.5	.09638804	-.14861302	-.50147970
17.0	.09639517	-.14848532	-.50218903
17.5	.09640381	-.14837620	-.50285224
18.0	.09641393	-.14828279	-.50347498
18.5	.09642541	-.14820262	-.50406181
19.0	.09643812	-.14813362	-.50461643
19.5	.09645191	-.14807484	-.50514190
20.0	.09646663	-.14802248	-.50564079
22.0	.09653197	-.14787354	-.50741015
24.0	.09660251	-.14778264	-.50888742
26.0	.09667388	-.14772353	-.51013980
28.0	.09674356	-.14768325	-.51121512
30.0	.09681075	-.14765512	-.51214911
32.0	.09687497	-.14763543	-.51296878
34.0	.09693611	-.14762192	-.51369479
36.0	.09699419	-.14761389	-.51434313
38.0	.09704933	-.14760788	-.51492628
40.0	.09710165	-.14760550	-.51545413
42.0	.09715130	-.14760535	-.51593458
44.0	.09719843	-.14760693	-.51637406
46.0	.09724318	-.14760988	-.51677783
48.0	.09728570	-.14761390	-.51715025
50.0	.09732612	-.14761875	-.51749498
60.0	.09750102	-.14764985	-.51889691
70.0	.09763982	-.14768441	-.51992455
80.0	.09775209	-.14771761	-.52071198
90.0	.09784453	-.14774796	-.52133537
100.0	.09792182	-.14777528	-.52184147
R+(0)	.098765	-.148148	-.526749
R+(-1)	-.098765	.849383	.526749
R+(-2)	1.530864	-1.242798	-3.950617
AS(R=100)	.097931	-.147779	-.521877

2.P SIGMA U - 2.S SIGMA G

R	Q(-)	H(-)	RIJ
0.0	0.000000	0.000000	-1.500000
.1	.00254669	-.02399496	-1.49876904
.2	.00875642	-.05223021	-1.49396972
.3	.01717317	-.08095853	-1.48405291
.4	.02692513	-.10827106	-1.46791480
.5	.03743265	-.13309681	-1.44495641
.6	.04825535	-.15472678	-1.41507990
.7	.05902267	-.17268657	-1.37868155
.8	.06941111	-.18674986	-1.33661611
.9	.07914624	-.19697140	-1.29010797
1.0	.08801441	-.20367717	-1.24060898
1.1	.09587305	-.20739688	-1.18962807
1.2	.10265308	-.20876088	-1.13857091
1.3	.10835194	-.20839727	-1.08862243
1.4	.11301963	-.20685761	-1.04068687
1.5	.11674193	-.20458076	-.99538118
1.6	.11962434	-.20188864	-.95306577
1.7	.12177907	-.19900152	-.91389415
1.8	.12331591	-.19606074	-.87786670
1.9	.12433651	-.19315132	-.84487939
2.0	.12493155	-.19032070	-.81476339
2.2	.12514818	-.18497641	-.76231552
2.4	.12446153	-.18008240	-.71880050
2.6	.12321610	-.17561439	-.68260073
2.8	.12164464	-.17153327	-.65233738
3.0	.11990190	-.16780349	-.62688680
3.2	.11808972	-.16439609	-.60535201
3.4	.11627442	-.16128738	-.58702271
3.6	.11449861	-.15845728	-.57133698
3.8	.11278910	-.15588801	-.55784499
4.0	.11116210	-.15356328	-.54620311
4.2	.10962676	-.15146787	-.53611388
4.4	.10818747	-.14958735	-.52735042
4.6	.10684546	-.14790798	-.51972464
4.8	.10559986	-.14641664	-.51308207
5.0	.10444841	-.14510082	-.50729487
5.2	.10338795	-.14394856	-.50225637
5.4	.10241477	-.14294842	-.49787686
5.6	.10152478	-.14208949	-.49408030
5.8	.10071376	-.14136137	-.49080168
6.0	.09997738	-.14075408	-.48798498
6.2	.09931130	-.14025811	-.48558154
6.4	.09871124	-.13986435	-.48354874
6.6	.09817299	-.13956410	-.48184897
6.8	.09769241	-.13934903	-.48044875
7.0	.09726550	-.13921117	-.47931813
7.2	.09688838	-.13914292	-.47843007
7.4	.09655730	-.13913704	-.47776007
7.6	.09626863	-.13918662	-.47728577
7.8	.09601891	-.13928512	-.47698673
8.0	.09580483	-.13942633	-.47684415

2.P SIGMA U - 2.S SIGMA G

R	Q(-)	H(-)	RIJ
8.5	.09540511	-.13992876	-.47706204
9.0	.09516363	-.14058111	-.47791883
9.5	.09504165	-.14131602	-.47922049
10.0	.09500688	-.14208814	-.48081528
10.5	.09503282	-.14283331	-.48258102
11.0	.09509905	-.14354732	-.48442480
11.5	.09518978	-.14420411	-.48627800
12.0	.09529345	-.14479385	-.48809206
12.5	.09540190	-.14531294	-.48983456
13.0	.09550960	-.14576228	-.49148554
13.5	.09561304	-.14614570	-.49303439
14.0	.09571017	-.14646879	-.49447722
14.5	.09579995	-.14673799	-.49581482
15.0	.09588208	-.14695996	-.49705101
15.5	.09595671	-.14714119	-.49819158
16.0	.09602425	-.14728769	-.49924301
16.5	.09608528	-.14740492	-.50021268
17.0	.09614046	-.14749769	-.50110765
17.5	.09619043	-.14757019	-.50193483
18.0	.09623583	-.14762601	-.50270071
18.5	.09627726	-.14766821	-.50341130
19.0	.09631526	-.14769935	-.50407208
19.5	.09635028	-.14772158	-.50468798
20.0	.09638277	-.14773666	-.50526349
22.0	.09649389	-.14775133	-.50723468
24.0	.09658566	-.14773106	-.50880839
26.0	.09666648	-.14770199	-.51010501
28.0	.09674043	-.14767434	-.51120089
30.0	.09680943	-.14765146	-.51214270
32.0	.09687442	-.14763393	-.51296608
34.0	.09693588	-.14762131	-.51369366
36.0	.09699410	-.14761284	-.51434266
38.0	.09704929	-.14760778	-.51492609
40.0	.09710163	-.14760546	-.51545405
42.0	.09715129	-.14760533	-.51593455
44.0	.09719843	-.14760692	-.51637405
46.0	.09724318	-.14760988	-.51677783
48.0	.09728570	-.14761390	-.51715025
50.0	.09732612	-.14761875	-.51749498
52.0	.09750102	-.14764985	-.51889691
70.0	.09763982	-.14768441	-.51992455
80.0	.09775209	-.14771761	-.52071198
90.0	.09784453	-.14774796	-.52133537
100.0	.09792182	-.14777520	-.52184147
R+(0)	.098765	-.148148	-.526749
R+(-1)	-.098765	.049383	.526749
R+(-2)	1.530864	-1.242798	-3.950617
AS(R=100)	.097931	-.147779	-.521877

1.S SIGMA G - 3.D SIGMA G

R	Q(+)	H(+)	H(*)
0.0	1.000000	.061237	0.000000
.1	.00205746	.06149354	.00003035
.2	.00419337	.06222497	.00012249
.3	.00644873	.06335817	.00027919
.4	.00884416	.06482486	.00050423
.5	.01138114	.06657497	.00080203
.6	.01407710	.06857477	.00117757
.7	.01696765	.07080260	.00163628
.8	.02000766	.07324517	.00218404
.9	.02322180	.07589466	.00282715
1.0	.02661464	.07874673	.00357234
1.1	.03019076	.08179888	.00442671
1.2	.03395465	.08504919	.00539774
1.3	.03791054	.08849522	.00649318
1.4	.04206220	.09213299	.00772100
1.5	.04641266	.09595605	.00908924
1.6	.05096387	.09995446	.01060588
1.7	.05571631	.10411393	.01227859
1.8	.06066853	.10841501	.01411449
1.9	.06581674	.11283238	.01611986
2.0	.07115424	.11733436	.01829971
2.2	.08235313	.12643330	.02319439
2.4	.09413745	.13533746	.02879827
2.6	.10631154	.14361269	.03506493
2.8	.11861560	.15083373	.04189308
3.0	.13074442	.15666929	.04912677
3.2	.14237950	.16095112	.05656718
3.4	.15322611	.16369579	.06399433
3.6	.16304454	.16507150	.07119286
3.8	.17165727	.16533020	.07797454
4.0	.17903048	.16473777	.08419245
4.2	.18501418	.16352591	.08974570
4.4	.18972719	.16187117	.09457673
4.6	.19313243	.15989642	.09866450
4.8	.19543515	.15768106	.10201638
5.0	.19663464	.15527533	.10466057
5.2	.19691891	.15271206	.10663968
5.4	.19626114	.15001532	.10800575
5.6	.19482709	.14720579	.10881647
5.8	.19272295	.14430359	.10913219
6.0	.19005328	.14132945	.10901371
6.2	.18691878	.13830481	.10852060
6.4	.18341499	.13525137	.10770982
6.6	.17963122	.13219042	.10663485
6.8	.17564466	.12914227	.10534492
7.0	.17152959	.12612560	.10388469
7.2	.16734705	.12315713	.10229404
7.4	.16314997	.12025136	.10060807
7.6	.15899250	.11742050	.09885725
7.8	.15488067	.11467447	.09706770
8.0	.15087317	.11202103	.09526152

1.S SIGMA G - 3.D SIGMA G

R	Q(+)	H(+)	H(*)
8.5	.14139893	.10582618	.09078634
9.0	.13284663	.10028787	.08652036
9.5	.12529107	.09548495	.08257919
10.0	.11863208	.09114721	.07901745
10.5	.11299568	.08746931	.07585141
11.0	.10813971	.08431987	.07307463
11.5	.10396791	.08164702	.07066823
12.0	.10047788	.07948137	.06860733
12.5	.09756443	.07753736	.06686485
13.0	.09516069	.07601368	.06541372
13.5	.09321778	.07479307	.06422800
14.0	.09163406	.07384187	.06328332
14.5	.09045442	.07312953	.06255703
15.0	.08956866	.07262795	.06202802
15.5	.08896079	.07231103	.06167657
16.0	.08859807	.07215424	.06148405
16.5	.08846026	.07213424	.06143268
17.0	.08843903	.07222875	.06150531
17.5	.08869749	.07241650	.06168529
18.0	.08901999	.07267724	.06195639
18.5	.08946203	.07299197	.06230283
19.0	.08993013	.07334315	.06270934
19.5	.09053232	.07371497	.06316132
20.0	.09121813	.07409364	.06364508
22.0	.09387609	.07547862	.06566622
24.0	.09610819	.07643030	.06744871
26.0	.09771086	.07694473	.06878644
28.0	.09871688	.07715932	.06972014
30.0	.09933287	.07720209	.07035630
32.0	.09964445	.07719642	.07080039
34.0	.09981721	.07706938	.07112452
36.0	.09994448	.07696576	.07137342
38.0	.10000256	.07685801	.07157357
40.0	.10003210	.07675203	.07174049
42.0	.10004346	.07665050	.07188350
44.0	.10004416	.07655439	.07200836
46.0	.10003773	.07646396	.07211886
48.0	.10002648	.07637907	.07221766
50.0	.10001203	.07629945	.07230667
60.0	.09991856	.07596783	.07264717
70.0	.09982005	.07571964	.07287712
80.0	.09973022	.07552797	.07304313
90.0	.09965139	.07537583	.07316870
100.0	.09958287	.07525230	.07326702
R*(0)	.098765	.074874	.074074
R*(-1)	.098765	.123457	-.074074
R*(-2)	-1.629630	-.547325	-.646091
AS(R=100)	.099590	.075254	.073269

2.P SIGMA U - 4.F SIGMA U

R	Q(+)	H(+)	H(*)
0.0	0.000000	.035694	0.000000
.1	.00071324	.03567910	.00000297
.2	.00142266	.03563395	.00001189
.3	.00212443	.03555862	.00002675
.4	.00281488	.03545298	.00004754
.5	.00349073	.03531685	.00007424
.6	.00414945	.03515017	.00010684
.7	.00478962	.03495352	.00014535
.8	.00541139	.03472894	.00018984
.9	.00601660	.03448089	.00024040
1.0	.00660883	.03421703	.00029726
1.1	.00719305	.03394831	.00036071
1.2	.00777525	.03368821	.00043120
1.3	.00836183	.03345142	.00050925
1.4	.00895917	.03325223	.00059553
1.5	.00957327	.03310333	.00069076
1.6	.01020956	.03301499	.00079575
1.7	.01087282	.03299480	.00091139
1.8	.01156715	.03304788	.00103860
1.9	.01229612	.03317723	.00117835
2.0	.01306278	.03338425	.00133169
2.2	.01471951	.03403144	.00168338
2.4	.01655530	.03498400	.00210276
2.6	.01858513	.03623263	.00259963
2.8	.02082230	.03776876	.00318458
3.0	.02327923	.03958628	.00386901
3.2	.02596774	.04168166	.00466517
3.4	.02889985	.04405327	.00558604
3.6	.03208365	.04670811	.00664331
3.8	.03553081	.04962037	.00785714
4.0	.03924795	.05280956	.00923592
4.2	.04323984	.05625852	.01079577
4.4	.04750743	.05995115	.01255002
4.6	.05204665	.06386223	.01451034
4.8	.05684686	.06795532	.01668580
5.0	.06188936	.07218131	.01908167
5.2	.06714601	.07647802	.02169810
5.4	.07257809	.08077132	.02452889
5.6	.07813681	.08497826	.02756026
5.8	.08375977	.08901215	.03077025
6.0	.08938075	.09278927	.03412850
6.2	.09492461	.09623626	.03759705
6.4	.10031524	.09929675	.04113183
6.6	.10547925	.10193596	.04468508
6.8	.11035040	.10414224	.04820770
7.0	.11487336	.10592553	.05165291
7.2	.11900622	.10731310	.05497805
7.4	.12272160	.10834400	.05814686
7.6	.12600639	.10906331	.06113067
7.8	.12886038	.10951721	.06390867
8.0	.13129412	.10974938	.06646776

2.P SIGMA U - 4.F SIGMA U

R	Q(+)	H(+)	H(*)
6.5	.13567822	.10960222	.07188093
7.0	.13798683	.10875843	.07594248
7.5	.13869532	.10749740	.07881554
8.0	.13823772	.10598380	.08070768
8.5	.13697017	.10432049	.08182328
9.0	.13516843	.10257764	.08234371
9.5	.13303882	.10080647	.08242003
10.0	.13073217	.09904551	.08217484
10.5	.12835670	.09732373	.08170175
11.0	.12598869	.09566243	.08107759
11.5	.12368067	.09407669	.08035855
12.0	.12146774	.09257657	.07958774
12.5	.11937228	.09116810	.07879736
13.0	.11740743	.08985422	.07801111
13.5	.11557966	.08863541	.07724611
14.0	.11389073	.08751036	.07651448
14.5	.11233902	.08647644	.07582418
15.0	.11092063	.08553001	.07518039
15.5	.10963008	.08466682	.07458617
16.0	.10846089	.08388216	.07404261
16.5	.10740597	.08317109	.07354963
17.0	.10645791	.08252854	.07310618
17.5	.10560918	.08194945	.07271052
18.0	.10485232	.08142883	.07236041
18.5	.10420088	.07983674	.07136163
19.0	.10128571	.07882998	.07086788
19.5	.10057360	.07819638	.07070519
20.0	.10022331	.07778771	.07074066
20.5	.10007354	.07750874	.07087869
21.0	.10002474	.07730277	.07105074
21.5	.10002036	.07713792	.07125015
22.0	.10003099	.07699737	.07143306
22.5	.10004275	.07687239	.07160140
23.0	.10005017	.07675851	.07175329
23.5	.10005178	.07665337	.07188931
24.0	.10004788	.07655566	.07201096
24.5	.10003937	.07646452	.07212003
25.0	.10002721	.07637931	.07221817
25.5	.10001230	.07629952	.07230686
26.0	.09991856	.07596783	.07264717
27.0	.09982005	.07571964	.07287712
28.0	.09973022	.07552797	.07304313
29.0	.09965139	.07537583	.07316878
30.0	.09958287	.07525230	.07326702
P*(0)	.098765	.074074	.074074
P*(-1)	.098765	.123457	-.074074
P*(-2)	-1.629630	-.547325	-.646091
SIG(R=15.0)	.099590	.075254	.073269

1.S SIGMA G - 4.F SIGMA U

R	Q(-)	H(-)	RIJ
0.0	0.000000	0.000000	0.000000
.1	-.00000515	-.00020533	.00000556
.2	-.00002110	-.00041710	.00002340
.3	-.00004896	-.00063972	.00005622
.4	-.00009006	-.00087613	.00010749
.5	-.00014588	-.00112843	.00018123
.6	-.00021791	-.00139831	.00028184
.7	-.00030770	-.00168722	.00041414
.8	-.00041683	-.00199653	.00058329
.9	-.00054689	-.00232763	.00079486
1.0	-.00069953	-.00268192	.00105479
1.1	-.00087643	-.00306088	.00136940
1.2	-.00107932	-.00346605	.00174544
1.3	-.00130996	-.00389911	.00219004
1.4	-.00157017	-.00436183	.00271075
1.5	-.00186183	-.00485609	.00331557
1.6	-.00218684	-.00538393	.00401292
1.7	-.00254719	-.00594752	.00481166
1.8	-.00294498	-.00654915	.00572111
1.9	-.00338207	-.00719131	.00675101
2.0	-.00386082	-.00787661	.00791160
2.2	-.00495193	-.00938797	.01066789
2.4	-.00623638	-.01110766	.01408058
2.6	-.00773304	-.01306293	.01824698
2.8	-.00946130	-.01528387	.02327858
3.0	-.01144084	-.01780325	.02926001
3.2	-.01369129	-.02065614	.03632768
3.4	-.01623170	-.02387922	.04458789
3.6	-.01908003	-.02750978	.05416439
3.8	-.02223234	-.03158374	.06513726
4.0	-.02576193	-.03613441	.07763911
4.2	-.02961818	-.04118890	.09175045
4.4	-.03382541	-.04676538	.10754429
4.6	-.03838132	-.05286927	.12506979
4.8	-.04327553	-.05948945	.14434537
5.0	-.04848799	-.06659474	.16535129
5.2	-.05398768	-.07413127	.18802240
5.4	-.05973123	-.08202157	.21224186
5.6	-.06566337	-.09016583	.23783705
5.8	-.07171683	-.09844608	.26457879
6.0	-.07781463	-.10673289	.29218530
6.2	-.08387312	-.11489423	.32033136
6.4	-.08980628	-.12280489	.34866259
6.6	-.09553054	-.13035506	.37681357
6.8	-.10096964	-.13745659	.40442764
7.0	-.10605882	-.14404601	.43117571
7.2	-.11074772	-.15008446	.45677166
7.4	-.11500182	-.15555511	.48098272
7.6	-.11880231	-.16045912	.50363424
7.8	-.12214482	-.16481115	.52468925
8.0	-.12503719	-.16863525	.54384404

1.S SIGMA G - 4.F SIGMA U

R	Q(-)	H(-)	RIJ
8.5	-.13043072	-.17688981	.58429403
9.0	-.13356032	-.18096440	.61445787
9.5	-.13492755	-.18378331	.63567654
10.0	-.13493880	-.18581544	.64951348
10.5	-.13416002	-.18585811	.65747127
11.0	-.13271101	-.18423636	.66087126
11.5	-.13087612	-.18280911	.66082144
12.0	-.12881921	-.18097817	.65822484
12.5	-.12665789	-.17889798	.65380387
13.0	-.12447512	-.17668483	.64812846
13.5	-.12232840	-.17442483	.64164301
14.0	-.12025657	-.17218065	.63469019
14.5	-.11828496	-.16999689	.62753106
15.0	-.11642902	-.16790441	.62036179
15.5	-.11468726	-.16592359	.61332720
16.0	-.11303307	-.16406698	.60653175
16.5	-.11161628	-.16234126	.60004836
17.0	-.11026423	-.16074871	.59392535
17.5	-.10903251	-.15928846	.58819204
18.0	-.10791558	-.15795727	.58286314
18.5	-.10690717	-.15675029	.57794222
19.0	-.10600057	-.15566150	.57342449
19.5	-.10518890	-.15468415	.56929890
20.0	-.10446522	-.15381105	.56554990
22.0	-.10231639	-.15121289	.55391829
24.0	-.10107003	-.14970681	.54660050
26.0	-.10041581	-.14890844	.54224312
28.0	-.10003996	-.14853333	.53975772
30.0	-.09996566	-.14839112	.53837102
32.0	-.09997617	-.14836529	.53758482
34.0	-.09998672	-.14838026	.53710429
36.0	-.09996905	-.14843216	.53676810
38.0	-.09998017	-.14847518	.53649461
40.0	-.10000548	-.14851291	.53624742
42.0	-.10001294	-.14854361	.53600613
44.0	-.10001414	-.14856739	.53577025
46.0	-.10001987	-.14858520	.53553754
48.0	-.10001127	-.14859803	.53530857
50.0	-.09999937	-.14860684	.53508446
60.0	-.09999534	-.14861523	.53406719
70.0	-.09981174	-.14859688	.53323117
80.0	-.09972467	-.14857117	.53255087
90.0	-.09964749	-.14854458	.53199261
100.0	-.09959003	-.14851934	.53152863
R+(0)	-.098765	-.148148	.526749
R+(-1)	-.098765	-.049383	.526749
R+(-2)	1.629630	1.193416	-4.477366
AS(R=100)	-.099530	-.148523	.531569

2.P SIGMA U - 3.D SIGMA G

R	Q(-)	H(-)	RIJ
0.0	-.170268	-.681070/R	1.225926
.1	-.17028292	-6.81390933	1.22322218
.2	-.17032727	-3.41181154	1.21513871
.3	-.17039577	-2.28003247	1.20179585
.4	-.17048227	-1.71593057	1.18346510
.5	-.17058185	-1.37899301	1.16062168
.6	-.17069415	-1.15571633	1.13397600
.7	-.17082686	-.99744938	1.10447055
.8	-.17099842	-.87986223	1.07323280
.9	-.17123879	-.78944600	1.04148667
1.0	-.17158756	-.71811956	1.01044134
1.1	-.17208974	-.66077702	.98117989
1.2	-.17279035	-.61405344	.95458003
1.3	-.17372917	-.57564960	.93127377
1.4	-.17493689	-.54393786	.91164894
1.5	-.17643303	-.51772214	.89587993
1.6	-.17822552	-.49608877	.88397257
1.7	-.18031134	-.47831302	.87581181
1.8	-.18267777	-.46380014	.87119843
1.9	-.18530378	-.45204793	.86988858
2.0	-.18816130	-.44262246	.87160788
2.1	-.19442960	-.42926650	.88298184
2.2	-.20115437	-.42113766	.90298961
2.4	-.20795271	-.41613951	.92931139
2.6	-.21441876	-.41261291	.95967758
2.8	-.22016483	-.40933643	.99192190
3.0	-.22486206	-.40552506	1.02407384
3.2	-.22828560	-.40078444	1.05446354
3.4	-.23032489	-.39501555	1.08180094
3.6	-.23096269	-.38829837	1.10519960
3.8	-.23035231	-.38079093	1.12414457
4.0	-.22858415	-.37266385	1.13842431
4.2	-.22585741	-.36406981	1.14805185
4.4	-.22235554	-.35513637	1.15319389
4.6	-.21825107	-.34596938	1.15411594
4.8	-.21369753	-.33665898	1.15114398
5.0	-.20882647	-.32728447	1.14463898
5.2	-.20374775	-.31791699	1.13497972
5.4	-.19855138	-.30862072	1.12255187
5.6	-.19331009	-.29945293	1.10773840
5.8	-.18808195	-.29046375	1.09091282
6.0	-.18291282	-.28169587	1.07243307
6.2	-.17783845	-.27318443	1.05263650
6.4	-.17288627	-.26495720	1.03183594
6.6	-.16807691	-.25703498	1.01031684
6.8	-.16342539	-.24943218	.98833559
7.0	-.15894221	-.24215754	.96611896
7.2	-.15463414	-.23521495	.94386434
7.4	-.15050497	-.22860418	.92174092
7.6	-.14655608	-.22232167	.89989132
7.8	-.14278693	-.21636122	.87843378

2.P SIGMA U - 3.D SIGMA G

	Q(-)	H(-)	RIJ
[illegible]	-.13413414	-.20281143	.82708657
[illegible]	-.12653024	-.19105801	.77974398
[illegible]	-.11989404	-.18091782	.73686434
[illegible]	-.11413613	-.17220846	.69854251
[illegible]	-.10916788	-.16476016	.66465038
[illegible]	-.10490576	-.15842069	.63493473
[illegible]	-.10127352	-.15305637	.60908268
[illegible]	-.09820282	-.14855113	.58676137
[illegible]	-.09563302	-.14480457	.56764214
[illegible]	-.09351061	-.14172981	.55141334
[illegible]	-.09178838	-.13925122	.53778622
[illegible]	-.09042446	-.13730245	.52649647
[illegible]	-.08938149	-.13582460	.51730334
[illegible]	-.08862577	-.13476460	.50998732
[illegible]	-.08812643	-.13407392	.50434722
[illegible]	-.08785487	-.13370751	.50019719
[illegible]	-.08778410	-.13362292	.49736387
[illegible]	-.08788842	-.13377977	.49568404
[illegible]	-.08814304	-.13413942	.49500282
[illegible]	-.08852398	-.13466490	.49517257
[illegible]	-.08900806	-.13532103	.49605258
[illegible]	-.08957299	-.13607471	.49750886
[illegible]	-.09019758	-.13689534	.49941581
[illegible]	-.09086207	-.13775522	.50165652
[illegible]	-.09358851	-.14115507	.51200912
[illegible]	-.09590076	-.14388632	.52143198
[illegible]	-.09753687	-.14573873	.52814133
[illegible]	-.09857523	-.14688378	.53225981
[illegible]	-.09919577	-.14756178	.53453894
[illegible]	-.09956628	-.14795947	.53588533
[illegible]	-.09976369	-.14819603	.53618555
[illegible]	-.09988258	-.14834090	.53633261
[illegible]	-.09994999	-.14843297	.53629168
[illegible]	-.09998675	-.14849367	.53615266
[illegible]	-.10000462	-.14853493	.53596389
[illegible]	-.10001041	-.14856352	.53575132
[illegible]	-.10000820	-.14858347	.53552904
[illegible]	-.10000054	-.14859728	.53530484
[illegible]	-.09998909	-.14860658	.53508308
[illegible]	-.09990534	-.14861523	.53406719
[illegible]	-.09981174	-.14859688	.53323117
[illegible]	-.09972467	-.14857117	.53255087
[illegible]	-.09964749	-.14854458	.53199261
[illegible]	-.09958003	-.14851934	.53152863
P*(0)	-.098765	-.148148	.526749
P*(-1)	-.098765	-.049383	.526749
P*(-2)	1.629639	1.193416	-4.477366
[illegible]	-.099590	-.148523	.531569

1.S SIGMA G -3.D PI G 2.P SIGMA U -2.P PI U

R	B(+)	B(+)
0.0	.025000	1.414214/R+2
.1	.02518468	141.42881121
.2	.02562254	35.35310742
.3	.02619887	15.70874835
.4	.02685818	8.83067649
.5	.02754038	5.64462695
.6	.02824798	3.91166766
.7	.02895365	2.86483563
.8	.02966670	2.18392792
.9	.03036320	1.71689786
1.0	.03104495	1.38091216
1.1	.03170882	1.13275392
1.2	.03235248	.94415488
1.3	.03297376	.79773296
1.4	.03357135	.68282867
1.5	.03414388	.58921354
1.6	.03469027	.51378318
1.7	.03520966	.45177126
1.8	.03570133	.40826098
1.9	.03616473	.35787028
2.0	.03659947	.32054265
2.2	.03738201	.26266553
2.4	.03804831	.21943421
2.6	.03859952	.18634199
2.8	.03903821	.16046762
3.0	.03936802	.13985962
3.2	.03959336	.12317897
3.4	.03971910	.10948447
3.6	.03975033	.09818810
3.8	.03969227	.08853874
4.0	.03955015	.08048729
4.2	.03932924	.07345018
4.4	.03903483	.06744455
4.6	.03867230	.06222312
4.8	.03824720	.05765403
5.0	.03776521	.05363223
5.2	.03723221	.05007316
5.4	.03665420	.04690814
5.6	.03603729	.04408888
5.8	.03538762	.04154492
6.0	.03471122	.03926159
6.2	.03401397	.03719851
6.4	.03330147	.03532839
6.6	.03257895	.03362809
6.8	.03185125	.03207787
7.0	.03112274	.03066881
7.2	.03039728	.02936235
7.4	.02967827	.02816986
7.6	.02896860	.02707239
7.8	.02827069	.02606037
8.0	.02758655	.02512539

	1.S SIGMA G -3.D PI G	2.P SIGMA U -2.P PI U
R	B(+)	B(+)
8.5	.02594604	.02307867
9.0	.02441659	.02137551
9.5	.02300411	.01994544
10.0	.02173776	.01873463
10.5	.02052257	.01778125
11.0	.01944136	.01681223
11.5	.01845563	.01604111
12.0	.01755702	.01536643
12.5	.01673712	.01477868
13.0	.01598836	.01423951
13.5	.01530258	.01376115
14.0	.01467406	.01332597
14.5	.01409653	.01292618
15.0	.01356465	.01255551
15.5	.01307365	.01220898
16.0	.01261928	.01188271
16.5	.01219779	.01157367
17.0	.01180583	.01127957
17.5	.01144045	.01099868
18.0	.01109901	.01072967
18.5	.01077922	.01047156
19.0	.01047900	.01022357
19.5	.01019653	.00998511
20.0	.00993121	.00975569
22.0	.00899398	.00892076
24.0	.00823803	.00828307
26.0	.00759358	.00758445
28.0	.00705510	.00704866
30.0	.00658435	.00658164
32.0	.00617284	.00617172
34.0	.00580367	.00580940
36.0	.00548723	.00548704
38.0	.00519952	.00519844
40.0	.00493966	.00493864
42.0	.00470352	.00470351
44.0	.00448374	.00448974
46.0	.00429454	.00429454
48.0	.00411560	.00411560
50.0	.00395097	.00395096
60.0	.00329241	.00329241
70.0	.00282202	.00282202
80.0	.00246923	.00246923
90.0	.00219485	.00219485
100.0	.00197535	.00197535
R+(0)	0.000001	0.000000
R+(-1)	.197531	.197531
R+(-2)	0.000000	0.000000
R+(-3)	-.000000	-.000000
AS(R=100)	.001975	.001975

	1.S SIGMA G -2.P PI U		2.P SIGMA U -3.D PI G	
R	B(-)	RIJ	B(-)	RIJ
0.0	-.395062/R	-.372468	-.208534/R	-1.061683
.1	-3.95393678	-.37818271	-2.08534040	-1.05919875
.2	-1.97909292	-.39146762	-1.04264859	-1.05173582
.3	-1.31935871	-.40869771	-.69503758	-1.03941583
.4	-.98787034	-.42795911	-.52116060	-1.02245533
.5	-.78764135	-.44819458	-.41674579	-1.00125191
.6	-.65313289	-.46879432	-.34704098	-.97640437
.7	-.55630638	-.48939484	-.29716322	-.94871878
.8	-.48315870	-.50977463	-.25968607	-.91912797
.9	-.42587580	-.52979781	-.23049858	-.88869601
1.0	-.37979729	-.54937748	-.20714603	-.85844000
1.1	-.34192353	-.56846427	-.18807369	-.82927538
1.2	-.31025066	-.58702633	-.17224625	-.80193727
1.3	-.28338355	-.60504589	-.15894378	-.77694660
1.4	-.26031931	-.62251361	-.14764593	-.75461220
1.5	-.24031754	-.63942546	-.13796396	-.73505878
1.6	-.22281898	-.65578067	-.12959955	-.71826779
1.7	-.20739294	-.67158033	-.12231897	-.70412018
1.8	-.19370208	-.68682657	-.11593622	-.69243397
1.9	-.18147825	-.70152193	-.11030164	-.68299387
2.0	-.17050551	-.71566897	-.10529382	-.67557259
2.2	-.15164086	-.74232738	-.09677987	-.66589696
2.4	-.13603659	-.76681686	-.08979529	-.66176260
2.6	-.12294327	-.78914668	-.08393130	-.66179465
2.8	-.11182112	-.80932142	-.07890511	-.66489397
3.0	-.10227173	-.82734346	-.07451855	-.67020025
3.2	-.09399492	-.84321614	-.07063094	-.67704667
3.4	-.08676049	-.85694730	-.06714100	-.68491866
3.6	-.08038928	-.86855290	-.06397481	-.69342087
3.8	-.07474003	-.87806047	-.06107756	-.70224654
4.0	-.06970012	-.88551227	-.05840795	-.71116497
4.2	-.06517889	-.89096778	-.05593431	-.71999768
4.4	-.06118279	-.89450498	-.05363189	-.72861028
4.6	-.05741165	-.89622170	-.05148100	-.73690226
4.8	-.05405594	-.89623436	-.04946566	-.74479991
5.0	-.05099462	-.89467663	-.04757269	-.75225058
5.2	-.04819347	-.89169671	-.04579099	-.75921837
5.4	-.04562373	-.88745372	-.04411110	-.76568074
5.6	-.04326108	-.88211370	-.04252486	-.77162582
5.8	-.04108474	-.87584520	-.04102507	-.77705024
6.0	-.03907687	-.86881518	-.03960542	-.78195748
6.2	-.03722194	-.86118588	-.03826025	-.78635647
6.4	-.03550637	-.85310763	-.03698446	-.79026048
6.6	-.03391814	-.84472431	-.03577346	-.79368621
6.8	-.03244653	-.83616358	-.03462306	-.79665301
7.0	-.03108194	-.82753985	-.03352946	-.79918227
7.2	-.02981568	-.81895312	-.03248914	-.80129684
7.4	-.02863988	-.81048916	-.03149889	-.80302062
7.6	-.02754734	-.80222012	-.03055575	-.80437813
7.8	-.02653150	-.79420542	-.02965696	-.80539419
8.0	-.02558634	-.78649286	-.02879999	-.80609363

R	1.S SIGMA G -2.P PI U B(-)	1.S SIGMA G -2.P PI U RIJ	2.P SIGMA U -3.D PI G B(-)	2.P SIGMA U -3.D PI G RIJ
8.5	-.02349755	-.76875627	-.02682543	-.80661729
9.0	-.02174248	-.75347286	-.02506524	-.80568367
9.5	-.02026045	-.74074714	-.02349183	-.80363101
10.0	-.01900212	-.73051930	-.02208175	-.80075839
10.5	-.01792726	-.72262847	-.02081489	-.79732215
11.0	-.01700298	-.71685554	-.01967389	-.79353592
11.5	-.01620232	-.71295107	-.01864374	-.78957301
12.0	-.01550309	-.71065347	-.01771136	-.78557025
12.5	-.01488701	-.70970121	-.01686536	-.78163248
13.0	-.01433899	-.70984150	-.01609580	-.77783726
13.5	-.01384665	-.71083696	-.01539395	-.77423943
14.0	-.01339983	-.71247068	-.01475219	-.77087523
14.5	-.01299031	-.71455014	-.01416383	-.76776604
15.0	-.01261145	-.71690965	-.01362299	-.76492155
15.5	-.01225801	-.71941140	-.01312451	-.76234247
16.0	-.01192586	-.72194513	-.01266386	-.76002281
16.5	-.01161181	-.72442641	-.01223704	-.75795171
17.0	-.01131342	-.72679413	-.01184053	-.75611499
17.5	-.01102881	-.72900721	-.01147125	-.75449632
18.0	-.01075659	-.73104113	-.01112646	-.75307819
18.5	-.01049568	-.73288445	-.01080375	-.75184266
19.0	-.01024525	-.73453562	-.01050100	-.75077190
19.5	-.01000465	-.73600819	-.01021633	-.74984864
20.0	-.00977335	-.73728847	-.00994807	-.74905646
22.0	-.00893283	-.74096019	-.00901212	-.74690835
24.0	-.00821158	-.74294993	-.00824657	-.74584131
26.0	-.00759063	-.74398314	-.00760577	-.74534820
28.0	-.00705325	-.74450844	-.00705969	-.74513836
30.0	-.00658512	-.74477323	-.00658783	-.74505859
32.0	-.00617448	-.74490637	-.00617553	-.74502387
34.0	-.00581151	-.74497306	-.00581197	-.74502911
36.0	-.00548871	-.74500589	-.00548890	-.74503029
38.0	-.00519979	-.74502115	-.00519987	-.74503167
40.0	-.00493973	-.74502711	-.00493976	-.74503160
42.0	-.00470441	-.74502803	-.00470443	-.74502994
44.0	-.00449049	-.74502621	-.00449049	-.74502701
46.0	-.00429517	-.74502290	-.00429517	-.74502324
48.0	-.00411613	-.74501882	-.00411613	-.74501896
50.0	-.00395141	-.74501438	-.00395141	-.74501445
60.0	-.00329263	-.74499311	-.00329263	-.74499311
70.0	-.00282214	-.74497717	-.00282214	-.74497717
80.0	-.00246930	-.74496614	-.00246930	-.74496614
90.0	-.00219490	-.74495852	-.00219490	-.74495852
100.0	-.00197538	-.74495316	-.00197538	-.74495316
R+(0)	0.000000	-.744936	0.000000	-.744936
R+(-1)	-.197531	0.000000	-.197531	0.000000
R+(-2)	0.000000	-.000000	0.000000	-.000000
R+(-3)	.000000	-25.493350	.000000	-25.493350
AS(R=100)	-.001975	-.744961	-.001975	-.744961

R	2.S SIGMA G - 2.S SIGMA G H(+)	2.S SIGMA G - 2.S SIGMA G H(*)	2.S SIGMA G - 2.S SIGMA G E	2.S SIGMA G - 2.S SIGMA G NORMA
0.0	0.100000	.250300	-.450000008	1.414214R+L
.1	.03339722	.24617043	-.497269065	1.26598654
.2	.07850384	.23807431	-.490955873	1.13316343
.3	.11021694	.22863420	-.482982279	1.02257910
.4	.12894466	.21909636	-.474899358	.93134196
.5	.13856359	.20996520	-.465074888	.85561179
.6	.14266662	.20142137	-.456108777	.79218776
.7	.14316997	.19350525	-.447353595	.73827137
.8	.14158188	.18619758	-.438884978	.69215229
.9	.13878254	.17945558	-.430738881	.65226492
1.0	.13532011	.17322933	-.422924589	.61746905
1.1	.13153642	.16746915	-.415442789	.58688818
1.2	.12764310	.16212861	-.408283512	.55980424
1.3	.12377114	.15716572	-.401433599	.53569820
1.4	.11999987	.15254306	-.394877982	.51409581
1.5	.11637508	.14822752	-.388600912	.49466233
1.6	.11292209	.14418992	-.382586698	.47709599
1.7	.10965260	.14040460	-.376820888	.46115399
1.8	.10656973	.13684188	-.371286580	.44663402
1.9	.10367126	.13350279	-.365972459	.43336617
2.0	.10095167	.13034863	-.360864875	.42120672
2.2	.09601848	.12455499	-.351222199	.39974113
2.4	.09170204	.11936179	-.342272378	.38145108
2.6	.08793232	.11468401	-.333941123	.36574743
2.8	.08464407	.11045281	-.326164430	.35217986
3.0	.08177912	.10661187	-.318887854	.34039811
3.2	.07928666	.10311459	-.312061152	.33012556
3.4	.07712271	.09992210	-.305645130	.32114865
3.6	.07524931	.09700169	-.299602673	.31326368
3.8	.07363367	.09432557	-.293901934	.30634721
4.0	.07224740	.09186999	-.288514867	.30026899
4.2	.07106575	.08961445	-.283416667	.29492662
4.4	.07006702	.08754121	-.278585302	.29023352
4.6	.06923207	.08563473	-.274001130	.28611582
4.8	.06854385	.08388135	-.269646567	.28251080
5.0	.06798707	.08226898	-.265505815	.27936093
5.2	.06754789	.08078683	-.261564627	.27662842
5.4	.06721369	.07942522	-.257810112	.27424602
5.6	.06697288	.07817540	-.254238568	.27220006
5.8	.06681471	.07702941	-.250815304	.27044889
6.0	.06672920	.07597997	-.247554589	.26896228
6.2	.06670703	.07502037	-.244439471	.26771287
6.4	.06673944	.07414437	-.241461715	.26667582
6.6	.06681824	.07334617	-.238613725	.26582844
6.8	.06693576	.07262031	-.235888464	.26514996
7.0	.06708479	.07196168	-.233279480	.26462127
7.2	.06725867	.07136542	-.230788447	.26422481
7.4	.06745119	.07082692	-.228385923	.26394438
7.6	.06765667	.07034182	-.226090589	.26376584
7.8	.06786994	.06990595	-.223889212	.26367305
8.0	.06808636	.06951534	-.221777333	.26365577

2.S SIGMA G - 2.S SIGMA G

R	H(+)	H(*)	E	NORMA
8.5	.06861537	.06871251	-.216868388	.26386574
9.0	.06908934	.06811547	-.212412467	.26431794
9.5	.06947708	.06767725	-.208378642	.26489217
10.0	.06976390	.06735794	-.204710626	.26549895
10.5	.06994804	.06712458	-.201365863	.26607540
11.0	.07003660	.06695079	-.198306838	.26658080
11.5	.07004187	.06681618	-.195508534	.26699204
12.0	.06997832	.06670565	-.192917963	.26729936
12.5	.06986053	.06660844	-.190533747	.26750243
13.0	.06970185	.06651725	-.188325724	.26760718
13.5	.06951383	.06642749	-.186274578	.26762322
14.0	.06930602	.06633651	-.184363498	.26756198
14.5	.06908604	.06624301	-.182577860	.26743537
15.0	.06885981	.06614664	-.180904935	.26725497
15.5	.06863185	.06604764	-.179333637	.26703143
16.0	.06840543	.06594655	-.177854288	.26677430
16.5	.06818316	.06584410	-.176458425	.26649184
17.0	.06796656	.06574106	-.175138624	.26619112
17.5	.06775685	.06563816	-.173888353	.26587805
18.0	.06755476	.06553609	-.172701845	.26555748
18.5	.06736071	.06543543	-.171573991	.26523337
19.0	.06717489	.06533669	-.170500248	.26490889
19.5	.06699731	.06524024	-.169476563	.26458653
20.0	.06682787	.06514641	-.168499303	.26426823
22.0	.06622680	.06480092	-.164993822	.26305995
24.0	.06573363	.06450510	-.162019146	.26198141
26.0	.06532786	.06425634	-.159460278	.26103640
28.0	.06499178	.06404720	-.157234338	.26021239
30.0	.06471104	.06387176	-.155279645	.25949275
32.0	.06447451	.06372364	-.153549124	.25886149
34.0	.06427355	.06359777	-.152006121	.25830469
36.0	.06410147	.06349008	-.150621621	.25781073
38.0	.06395306	.06339730	-.149372332	.25737002
40.0	.06382419	.06331686	-.148239330	.25697473
42.0	.06371162	.06324667	-.147207075	.25661840
44.0	.06361271	.06318509	-.146262682	.25629571
46.0	.06352537	.06313077	-.145395381	.25600222
48.0	.06344786	.06308263	-.144596092	.25573423
50.0	.06337877	.06303976	-.143857111	.25548863
60.0	.06312476	.06288255	-.140865741	.25451644
70.0	.06296659	.06278513	-.138693556	.25383344
80.0	.06286157	.06272046	-.137044533	.25332828
90.0	.06279833	.06267555	-.135749969	.25293992
100.0	.06273525	.06264315	-.134706666	.25263226
R+(0)	.062500	.062500	-.12500000	.250000R+M
R+(-1)	0.000000	0.000000	-1.00000000	
R+(-2)	2.500000	1.500000	3.00000000	
R+(-3)			-6.00000000	
R+(-4)			-78.00000000	
AS(R=100)	.062750	.062650	-.13470678	.250000

3.P SIGMA U - 3.P SIGMA U

R	H(+)	H(*)	E	NORMA
0.0	2.000000/R+2	.111111	-.22222222	.419026R+L
.1	200.00205436	.11140755	-.222419817	.04208322
.2	50.00813003	.11229669	-.223012753	.08490425
.3	22.24005993	.11377018	-.223998885	.12866400
.4	12.53028415	.11579703	-.225368991	.17320346
.5	8.04397948	.11830957	-.227101924	.21803758
.6	5.61250730	.12119370	-.229160508	.26238447
.7	4.14875324	.12428838	-.231489370	.30523682
.8	3.19784311	.12739832	-.234015871	.34548186
.9	2.54253825	.13031917	-.236654703	.38207019
1.0	2.06918795	.13286841	-.239315480	.41416571
1.1	1.71436933	.13491194	-.241911583	.44125988
1.2	1.44084214	.13637775	-.244368004	.46320634
1.3	1.22564570	.13725461	-.246626515	.48018374
1.4	1.05385518	.13757936	-.248647552	.49261159
1.5	.91522553	.13741942	-.250409247	.50105142
1.6	.80237377	.13685614	-.251904656	.50611857
1.7	.70978320	.13597221	-.253138215	.50841717
1.8	.63323517	.13484373	-.254122252	.50849986
1.9	.56946188	.13353641	-.254873980	.50684832
2.0	.51591519	.13210441	-.255413165	.50386802
2.2	.43195331	.12902947	-.255936143	.49518772
2.4	.36998913	.12585854	-.255849986	.48440157
2.6	.32293427	.12272657	-.255289162	.47271344
2.8	.28628078	.11970400	-.254369133	.46084133
3.0	.25709230	.11682385	-.253178033	.44919828
3.2	.23340491	.11409823	-.251785407	.43801075
3.4	.21386931	.11152797	-.250245124	.42739259
3.6	.19753426	.10910607	-.248598815	.41739066
3.8	.18371298	.10683079	-.246873657	.40801257
4.0	.17189845	.10468727	-.245109550	.39924349
4.2	.16170918	.10266851	-.243310797	.39105644
4.4	.15285284	.10076577	-.241497380	.38341842
4.6	.14510199	.09897085	-.239680942	.37629411
4.8	.13827711	.09727615	-.237870524	.36964806
5.0	.13223476	.09567468	-.236073136	.36344590
5.2	.12685899	.09416006	-.234294199	.35765504
5.4	.12205512	.09272648	-.232537877	.35224498
5.6	.11774514	.09136862	-.230807342	.34718740
5.8	.11386418	.09008164	-.229104980	.34245616
6.0	.11035796	.08886111	-.227432548	.33802720
6.2	.10718065	.08770296	-.225791304	.33387843
6.4	.10429337	.08660348	-.224182106	.32998959
6.6	.10166289	.08555923	-.222605490	.32634206
6.8	.09926069	.08456706	-.221061737	.32291879
7.0	.09706213	.08362404	-.219550919	.31970489
7.2	.09504583	.08272745	-.218072948	.31668355
7.4	.09319316	.08187478	-.216627601	.31384393
7.6	.09148780	.08106369	-.215214552	.31117299
7.8	.08991542	.08029198	-.213833391	.30865948
8.0	.08846338	.07955761	-.212483645	.30629298

3.P SIGMA U - 3.P SIGMA U

R	H(+)	H(*)	E	NORMA
8.5	.08528928	.07787273	-.209243181	.30095854
9.0	.08265667	.07638257	-.206186689	.29635269
9.5	.08045654	.07506384	-.203304136	.29236565
10.0	.07860585	.07389629	-.200585753	.28890563
10.5	.07703680	.07286218	-.198021555	.28589538
11.0	.07570021	.07194586	-.195601921	.28326961
11.5	.07455415	.07113351	-.193317625	.28097289
12.0	.07356561	.07041288	-.191159893	.27895808
12.5	.07270788	.06977310	-.189120431	.27718496
13.0	.07195928	.06920453	-.187191434	.27561920
13.5	.07130207	.06869862	-.185365580	.27423148
14.0	.07072175	.06824778	-.183636016	.27299675
14.5	.07020637	.06784532	-.181996345	.27189360
15.0	.06974609	.06748533	-.180440601	.27090375
15.5	.06933280	.06716262	-.178963231	.27001163
16.0	.06895974	.06687268	-.177559871	.26920393
16.5	.06862133	.06661127	-.176223323	.26846933
17.0	.06831289	.06637512	-.174951533	.26779817
17.5	.06803054	.06616109	-.173739568	.26718226
18.0	.06777101	.06596652	-.172583596	.26661458
18.5	.06753154	.06578909	-.171480065	.26608919
19.0	.06730982	.06562677	-.170425681	.26560100
19.5	.06710387	.06547781	-.169417394	.26514578
20.0	.06691208	.06534068	-.168452375	.26471957
22.0	.06625944	.06488659	-.164975327	.26324996
24.0	.06574623	.06454232	-.162011897	.26206853
26.0	.06533274	.06427197	-.159457450	.26106905
28.0	.06499365	.06405394	-.157233239	.26022576
30.0	.06471177	.06387458	-.155279219	.25949819
32.0	.06447479	.06372481	-.153548959	.25886369
34.0	.06427366	.06359826	-.152006057	.25830558
36.0	.06410151	.06349028	-.150621596	.25781108
38.0	.06395307	.06339738	-.149372323	.25737016
40.0	.06382420	.06331689	-.148239326	.25697479
42.0	.06371162	.06324668	-.147207073	.25661842
44.0	.06361271	.06318510	-.146262602	.25629571
46.0	.06352537	.06313077	-.145395381	.25600222
48.0	.06344786	.06308263	-.144596092	.25573423
50.0	.06337877	.06303976	-.143857111	.25548863
60.0	.06312476	.06288255	-.140865741	.25451644
70.0	.06296659	.06278503	-.138693556	.25383344
80.0	.06286157	.06272046	-.137044533	.25332828
90.0	.06278833	.06267555	-.135749969	.25293992
100.0	.06273525	.06264305	-.134706666	.25263226
R+(0)	.062500	.062500	-.12500000	.250000R+N
R+(-1)	0.000000	0.000000	-1.00000000	
R+(-2)	2.500000	1.500000	3.00000000	
R+(-3)			-6.00000000	
R+(-4)			-78.00000000	
AS(R=100)	.062750	.162650	-.13470678	.250000

2.S SIGMA G - 3.P SIGMA U

R	Q(-)	H(-)	RIJ
0.0	-.122880	-.245760/R	.884736
.1	-.12434393	-2.47542706	.90481550
.2	-.12788232	-1.26648967	.95455110
.3	-.13255552	-.87618956	1.02397667
.4	-.13773669	-.68861723	1.10751806
.5	-.14296616	-.58081494	1.20153730
.6	-.14787501	-.50894162	1.30316052
.7	-.15215877	-.45771309	1.40976370
.8	-.15557960	-.41777648	1.51881958
.9	-.15797908	-.38479415	1.62795069
1.0	-.15928784	-.35658200	1.73507554
1.1	-.15952325	-.33206903	1.83855406
1.2	-.15877417	-.31071203	1.93726849
1.3	-.15717705	-.29217281	2.03061835
1.4	-.15489057	-.27616195	2.11844516
1.5	-.15207443	-.26238556	2.20092048
1.6	-.14887495	-.25054314	2.27843803
1.7	-.14541739	-.24034296	2.35147459
1.8	-.14180378	-.23151750	2.42059639
1.9	-.13811376	-.22383263	2.48633037
2.0	-.13440747	-.21709858	2.54917577
2.2	-.12711900	-.20581353	2.66794543
2.4	-.12012266	-.19672244	2.77986451
2.6	-.11353899	-.18919646	2.88712428
2.8	-.10738111	-.18283448	2.99131323
3.0	-.10167803	-.17737118	3.09357926
3.2	-.09643318	-.17262488	3.19475710
3.4	-.09162426	-.16846634	3.29546041
3.6	-.08722827	-.16480014	3.39614590
3.8	-.08322390	-.16155340	3.49715745
4.0	-.07960258	-.15866877	3.59875641
4.2	-.07634877	-.15609997	3.70114248
4.4	-.07344991	-.15380898	3.80446819
4.6	-.07089622	-.15176350	3.90884901
4.8	-.06867041	-.14993658	4.01437054
5.0	-.06676741	-.14830463	4.12109363
5.2	-.06517411	-.14684712	4.22905810
5.4	-.06388908	-.14554998	4.33828546
5.6	-.06290238	-.14438515	4.44878105
5.8	-.06219535	-.14335025	4.56053567
6.0	-.06176045	-.14242834	4.67352692
6.2	-.06160110	-.14160768	4.78772041
6.4	-.06171657	-.14087762	4.90307088
6.6	-.06209685	-.14022844	5.01952319
6.8	-.06273255	-.13965124	5.13701344
7.0	-.06360748	-.13913792	5.25547003
7.2	-.06471502	-.13868104	5.37481479
7.4	-.06605578	-.13827382	5.49496411
7.6	-.06763876	-.13791006	5.61583018
7.8	-.06944674	-.13758415	5.73732213
8.0	-.07147747	-.13729099	5.85934733

2.S SIGMA G - 3.P SIGMA U

R	Q(-)	H(-)	RIJ
8.5	-.02348435	-.13667241	6.16613277
9.0	-.02015388	-.13617184	6.47424851
9.5	-.01720864	-.13574591	6.78239076
10.0	-.01462153	-.13536449	7.08944546
10.5	-.01236479	-.13500797	7.39452978
11.0	-.01040987	-.13466464	7.69700237
11.5	-.00872776	-.13432837	7.99644983
12.0	-.00728953	-.13399670	8.29265492
12.5	-.00606705	-.13366933	8.58555798
13.0	-.00503353	-.13334715	8.87521616
13.5	-.00416401	-.13303148	9.16176765
14.0	-.00343568	-.13272372	9.44540029
14.5	-.00282808	-.13242508	9.72632827
15.0	-.00232278	-.13213653	10.00477470
15.5	-.00190406	-.13185872	10.28095987
16.0	-.00155802	-.13159206	10.55509370
16.5	-.00127277	-.13133672	10.82737160
17.0	-.00103817	-.13109268	11.09797236
17.5	-.00084562	-.13085978	11.36705780
18.0	-.00068790	-.13063773	11.63477317
18.5	-.00055898	-.13042621	11.90124830
19.0	-.00045361	-.13022481	12.16659880
19.5	-.00036778	-.13003310	12.43092750
20.0	-.00029786	-.12985063	12.69432597
22.0	-.00012706	-.12928434	13.74012000
24.0	-.00005356	-.12867182	14.77618796
26.0	-.00002235	-.12823009	15.80515736
28.0	-.00000925	-.12786081	16.82880500
30.0	-.00000380	-.12754964	17.84837394
32.0	-.00000155	-.12728540	18.86475890
34.0	-.00000063	-.12705935	19.87861030
36.0	-.00000025	-.12686465	20.89045060
38.0	-.00000010	-.12669586	21.90063180
40.0	-.00000004	-.12654867	22.90945680
42.0	-.00000002	-.12641958	23.91715650
44.0	-.00000001	-.12630580	24.92391480
46.0	0.00000000	-.12620502	25.92987920
48.0	0.00000000	-.12611535	26.93516930
50.0	0.00000000	-.12603524	27.93988310
60.0	0.00000000	-.12573918	32.95720840
70.0	0.00000000	-.12555360	37.96880089
80.0	0.00000000	-.12542983	42.97517411
90.0	0.00000000	-.12534325	47.97918175
100.0	0.00000000	-.12528037	52.98381491
R*(1)	0.000000	0.000000	.500000
R*(0)	0.000000	-.125000	3.000000
R*(-1)	0.000000	0.000000	0.000000
R*(-2)	0.000000	-3.000000	-174.000000
AS(R=100)	0.000000	-.125000	52.982600

2.S SIGMA G - 3.D SIGMA G

R	Q(+)	H(+)	H(*)
0.0	0.000000	-.070945	0.000000
.1	-.00235423	-.07082321	-.00001519
.2	-.00465845	-.07048455	-.00005943
.3	-.00683808	-.06997823	-.00012990
.4	-.00903163	-.06934407	-.00022335
.5	-.01103326	-.06860875	-.00033656
.6	-.01303971	-.06778877	-.00046643
.7	-.01488892	-.06689363	-.00061003
.8	-.01665931	-.06592813	-.00076456
.9	-.01831946	-.06489393	-.00092733
1.0	-.01987781	-.06379052	-.00109577
1.1	-.02133275	-.06261586	-.00126735
1.2	-.02268239	-.06136695	-.00143962
1.3	-.02392456	-.06004011	-.00161012
1.4	-.02505687	-.05863145	-.00177645
1.5	-.02607673	-.05713709	-.00193619
1.6	-.02698138	-.05555362	-.00208695
1.7	-.02776798	-.05387847	-.00222635
1.8	-.02843376	-.05211036	-.00235203
1.9	-.02897615	-.05024973	-.00246168
2.0	-.02939298	-.04829930	-.00255311
2.2	-.02984450	-.04415378	-.00267313
2.4	-.02973738	-.03975579	-.00269817
2.6	-.02924210	-.03524083	-.00261964
2.8	-.02825651	-.03078779	-.00243658
3.0	-.02690736	-.02659152	-.00215722
3.2	-.02523514	-.02282501	-.00179895
3.4	-.02353284	-.01960524	-.00138643
3.6	-.02173156	-.01697676	-.00094886
3.8	-.01993752	-.01491698	-.00051196
4.0	-.01837360	-.01335677	-.00010251
4.2	-.01693675	-.01220492	.00026178
4.4	-.01563993	-.01136814	.00056903
4.6	-.01465678	-.01076313	.00081354
4.8	-.01382706	-.01032167	.00099480
5.0	-.01315175	-.00999110	.00111617
5.2	-.01264716	-.00973256	.00118360
5.4	-.01223798	-.00951835	.00120458
5.6	-.01186327	-.00932938	.00118723
5.8	-.01173737	-.00915299	.00113965
6.0	-.01169342	-.00898115	.00106950
6.2	-.01143785	-.00880912	.00098370
6.4	-.01133634	-.00863441	.00088825
6.6	-.01131679	-.00845601	.00078823
6.8	-.01123363	-.00827385	.00068773
7.0	-.01115758	-.00808839	.00058998
7.2	-.01105534	-.00790037	.00049739
7.4	-.01093929	-.00771061	.00041168
7.6	-.01083717	-.00751993	.00033395
7.8	-.01061789	-.00732906	.00026483
8.0	-.01054120	-.00713867	.00020454

2.S SIGMA G - 3.D SIGMA G

R	Q(+)	H(+)	H(*)
8.5	-.01307762	-.00666805	.00009136
9.0	-.00952797	-.00620973	.00002586
9.5	-.00891898	-.00576770	-.00000214
10.0	-.00827818	-.00534494	-.00000329
10.5	-.00763004	-.00494396	.00001301
11.0	-.00699423	-.00456692	.00003921
11.5	-.00638534	-.00421556	.00006973
12.0	-.00581325	-.00389098	.00010073
12.5	-.00528387	-.00359363	.00012972
13.0	-.00479999	-.00332327	.00015530
13.5	-.00436204	-.00307908	.00017678
14.0	-.00396881	-.00285977	.00019398
14.5	-.00361799	-.00266368	.00020704
15.0	-.00330658	-.00248896	.00021630
15.5	-.00303126	-.00233363	.00022217
16.0	-.00278857	-.00219571	.00022510
16.5	-.00257509	-.00207323	.00022553
17.0	-.00239754	-.00196433	.00022390
17.5	-.00222284	-.00186725	.00022058
18.0	-.00207812	-.00178039	.00021592
18.5	-.00195078	-.00170229	.00021022
19.0	-.00183946	-.00163165	.00020374
19.5	-.00173905	-.00156732	.00019670
20.0	-.00165070	-.00150831	.00018929
22.0	-.00137818	-.00131076	.00015881
24.0	-.00118637	-.00115284	.00013098
26.0	-.00103839	-.00102027	.00010793
28.0	-.00091771	-.00090731	.00008955
30.0	-.00081671	-.00081074	.00007503
32.0	-.00073116	-.00072799	.00006348
34.0	-.00065811	-.00065684	.00005419
36.0	-.00059537	-.00059538	.00004662
38.0	-.00054115	-.00054200	.00004040
40.0	-.00049400	-.00049540	.00003523
42.0	-.00045276	-.00045450	.00003091
44.0	-.00041648	-.00041843	.00002725
46.0	-.00038440	-.00038645	.00002415
48.0	-.00035589	-.00035799	.00002150
50.0	-.00033045	-.00033254	.00001922
60.0	-.00023655	-.00023830	.00001158
70.0	-.00017768	-.00017902	.00000750
80.0	-.00013836	-.00013936	.00000513
90.0	-.00011079	-.00011154	.00000366
100.0	-.00009067	-.00009128	.00000270
R+(0)	0.000000	0.000000	0.000000
R+(-1)	0.000000	0.000000	0.000000
R+(-2)	-1.000000	-1.000000	.000000
AS(R=100)	-.000170	-.000100	.000000

3.P SIGMA U - 4.F SIGMA U

R	Q(+)	H(+)	H(*)
.0	0.000000	-.031849	0.000000
.1	-.00063784	-.03187431	-.00000148
.2	-.00128078	-.03194960	-.00000595
.3	-.00193380	-.03207511	-.00001355
.4	-.00260153	-.03225081	-.00002446
.5	-.00328791	-.03247650	-.00003896
.6	-.00399585	-.03275141	-.00005737
.7	-.00472691	-.03307353	-.00008002
.8	-.00548104	-.03343875	-.00010724
.9	-.00625669	-.03384024	-.00013931
1.0	-.00705103	-.03426839	-.00017642
1.1	-.00786039	-.03471150	-.00021868
1.2	-.00868078	-.03515712	-.00026612
1.3	-.00950828	-.03559354	-.00031866
1.4	-.01033936	-.03601094	-.00037621
1.5	-.01117100	-.03640196	-.00043859
1.6	-.01200070	-.03676180	-.00050563
1.7	-.01282647	-.03708784	-.00057713
1.8	-.01364669	-.03737917	-.00065290
1.9	-.01446006	-.03763605	-.00073274
2.0	-.01526548	-.03785948	-.00081644
2.2	-.01684876	-.03821156	-.00099467
2.4	-.01838976	-.03844693	-.00118599
2.6	-.01988206	-.03857531	-.00138876
2.8	-.02131899	-.03860315	-.00160123
3.0	-.02269337	-.03853354	-.00182153
3.2	-.02399733	-.03836661	-.00204759
3.4	-.02522227	-.03810001	-.00227712
3.6	-.02635844	-.03772943	-.00250764
3.8	-.02739691	-.03724902	-.00273636
4.0	-.02832566	-.03665199	-.00296027
4.2	-.02913368	-.03593112	-.00317683
4.4	-.02980916	-.03507957	-.00338006
4.6	-.03034019	-.03409180	-.00356854
4.8	-.03071526	-.03296470	-.00373748
5.0	-.03092384	-.03169886	-.00388281
5.2	-.03095716	-.03029992	-.00400056
5.4	-.03080914	-.02877976	-.00408785
5.6	-.03047737	-.02715715	-.00413913
5.8	-.02996399	-.02545780	-.00415447
6.0	-.02927642	-.02371331	-.00413178
6.2	-.02842760	-.02195918	-.00407186
6.4	-.02743581	-.02023189	-.00397368
6.6	-.02632388	-.01856576	-.00384237
6.8	-.02511788	-.01698995	-.00368189
7.0	-.02384550	-.01552633	-.00349474
7.2	-.02253438	-.01418855	-.00328878
7.4	-.02121853	-.01298222	-.00306892
7.6	-.01989710	-.01190605	-.00284078
7.8	-.01861360	-.01095354	-.00260926
8.0	-.01737558	-.01011475	-.00237908

3.P SIGMA U - 4.F SIGMA U

R	Q(+)	H(+)	H(*)
8.5	-.01454657	-.00843728	-.00183199
9.0	-.01215582	-.00721415	-.00135270
9.5	-.01019878	-.00629926	-.00095546
10.0	-.00862875	-.00559238	-.00063900
10.5	-.00738023	-.00502917	-.00039419
11.0	-.00638952	-.00456863	-.00020914
11.5	-.00560108	-.00418408	-.00007203
12.0	-.00496935	-.00385747	.00002765
12.5	-.00445827	-.00357616	.00009868
13.0	-.00403993	-.00333099	.00014007
13.5	-.00369300	-.00311511	.00016134
14.0	-.00340130	-.00292332	.00020270
14.5	-.00315261	-.00275159	.00021536
15.0	-.00293774	-.00259677	.00022172
15.5	-.00274975	-.00245634	.00022357
16.0	-.00258342	-.00232830	.00022223
16.5	-.00243476	-.00221104	.00021867
17.0	-.00230076	-.00210320	.00021361
17.5	-.00217908	-.00200371	.00020755
18.0	-.00206792	-.00191163	.00020088
18.5	-.00196586	-.00182620	.00019386
19.0	-.00187175	-.00174674	.00018668
19.5	-.00178469	-.00167268	.00017947
20.0	-.00170392	-.00160353	.00017234
20.5	-.00162834	-.00136792	.00014556
21.0	-.00122374	-.00118318	.00012245
21.5	-.00106007	-.00103515	.00010307
22.0	-.00092918	-.00091426	.00008701
22.5	-.00082232	-.00081388	.00007377
23.0	-.00073379	-.00072937	.00006288
23.5	-.00065932	-.00065744	.00005391
24.0	-.00059592	-.00059563	.00004650
24.5	-.00054139	-.00054211	.00004035
25.0	-.00049418	-.00049545	.00003521
25.5	-.00045278	-.00045452	.00003090
26.0	-.00041649	-.00041844	.00002725
26.5	-.00038440	-.00038646	.00002415
27.0	-.00035590	-.00035799	.00002158
27.5	-.00033045	-.00033254	.00001922
28.0	-.00023655	-.00023830	.00001158
28.5	-.00017768	-.00017902	.00000750
29.0	-.00013834	-.00013936	.00000513
29.5	-.00011075	-.00011154	.00000366
30.0	-.00009067	-.00009128	.00000270
R*(0)	0.000000	0.000000	0.000000
R*(-1)	0.000000	0.000000	0.000000
R*(-2)	-1.000000	-1.000000	.000000
AS(R=1.0)	-.000100	-.000100	.000000

2.S SIGMA G - 4.F SIGMA U

R	Q(-)	H(-)	RIJ
0.0	0.000000	0.000000	0.000000
.1	.00001024	.00000981	-.00005502
.2	.00004092	.00001961	-.00022363
.3	.00009191	.00122952	-.00051366
.4	.00015305	.00163967	-.00093428
.5	.00025410	.00205015	-.00149484
.6	.00036481	.00246099	-.00220452
.7	.00049486	.00287222	-.00307215
.8	.00064398	.00328386	-.00410622
.9	.00081162	.00369587	-.00531485
1.0	.00099757	.00410826	-.00670582
1.1	.00120138	.00452096	-.00828656
1.2	.00142260	.00493395	-.01006420
1.3	.00166080	.00534714	-.01204553
1.4	.00191550	.00576046	-.01423705
1.5	.00218624	.00617380	-.01664494
1.6	.00247249	.00658703	-.01927507
1.7	.00277375	.00700001	-.02213298
1.8	.00308948	.00741256	-.02522389
1.9	.00341910	.00782448	-.02855267
2.0	.00376204	.00823553	-.03212383
2.2	.00448540	.00905396	-.04000939
2.4	.00525439	.00986529	-.04890857
2.6	.00606334	.01066635	-.05884192
2.8	.00690607	.01145323	-.06982143
3.0	.00777580	.01222120	-.08184913
3.2	.00866506	.01296459	-.09491548
3.4	.00956563	.01367671	-.10899742
3.6	.01046841	.01434978	-.12405623
3.8	.01136343	.01497482	-.14003510
4.0	.01223972	.01554173	-.15685660
4.2	.01309534	.01603936	-.17442006
4.4	.01389739	.01645576	-.19259922
4.6	.01463215	.01677865	-.21124047
4.8	.01530532	.01699603	-.23016205
5.0	.01583235	.01709712	-.24915498
5.2	.01637907	.01707343	-.26798620
5.4	.01675229	.01691998	-.28640463
5.6	.01701074	.01663645	-.30415027
5.8	.01711589	.01622799	-.32096643
6.0	.01703288	.01570549	-.33661396
6.2	.01693113	.01508512	-.35088621
6.4	.01663473	.01438706	-.36362244
6.6	.01621235	.01363369	-.37471763
6.8	.01567672	.01284747	-.38412712
7.0	.01504371	.01204903	-.39186525
7.2	.01433121	.01125576	-.39799858
7.4	.01355791	.01048102	-.40263520
7.6	.01274218	.00973415	-.40591198
7.8	.01191114	.00902083	-.40798183
8.0	.01108008	.00834384	-.40900244

2.S SIGMA G - 4.F SIGMA U

R	Q(-)	H(-)	RIJ
8.5	.00895886	.00681152	-.40794505
9.0	.00702405	.00549068	-.40331434
9.5	.00531524	.00435293	-.39657578
10.0	.00383243	.00337411	-.38866371
10.5	.00262765	.00253596	-.38013586
11.0	.00161948	.00182387	-.37131534
11.5	.00080150	.00122489	-.36239019
12.0	.00014675	.00072677	-.35347440
12.5	-.00037008	.00031763	-.34464219
13.0	-.00077175	-.00001395	-.33594608
13.5	-.00107918	-.00027875	-.32742582
14.0	-.00130649	-.00048670	-.31911264
14.5	-.00147121	-.00064678	-.31103113
15.0	-.00158458	-.00076695	-.30320825
15.5	-.00165672	-.00085419	-.29563386
16.0	-.00169615	-.00091448	-.28834120
16.5	-.00170978	-.00095293	-.28132740
17.0	-.00171333	-.00097384	-.27459399
17.5	-.00169142	-.00098083	-.26813935
18.0	-.00164784	-.00097688	-.26195929
18.5	-.00160564	-.00096446	-.25604749
19.0	-.00155724	-.00094559	-.25039594
19.5	-.00151463	-.00092192	-.24499535
20.0	-.00144934	-.00089479	-.23983548
22.0	-.00122232	-.00077010	-.22138104
24.0	-.00101307	-.00064525	-.20588380
26.0	-.00083542	-.00053536	-.19268751
28.0	-.00068004	-.00044383	-.18126267
30.0	-.00057297	-.00036944	-.17121443
32.0	-.00047917	-.00030953	-.16226066
34.0	-.00040390	-.00026131	-.15420187
36.0	-.00034318	-.00022233	-.14689455
38.0	-.00029385	-.00019061	-.14023156
40.0	-.00025344	-.00016460	-.13412948
42.0	-.00022008	-.00014309	-.12852078
44.0	-.00019231	-.00012516	-.12334925
46.0	-.00016901	-.00011011	-.11856735
48.0	-.00014932	-.00009737	-.11413340
50.0	-.00013258	-.00008652	-.11001217
60.0	-.00007781	-.00005095	-.09313358
70.0	-.00004949	-.00003249	-.08070204
80.0	-.00003340	-.00002197	-.07117939
90.0	-.00002360	-.00001555	-.06365744
100.0	-.00001728	-.00001140	-.05756826
R+(0)	0.000000	0.000000	0.000000
R+(-1)	0.000000	0.000000	-6.000000
R+(-2)	.000000	-.000000	24.000000
AS(R=100)	.000000	-.000000	-.057600

3.P SIGMA U - 3.O SIGMA G

R	Q(-)	H(-)	RIJ
0.0	0.000000	0.000000	-2.598076
.1	.00022003	.00293110	-2.59833824
.2	.00088035	.00585773	-2.59907743
.3	.00197816	.00878878	-2.60014637
.4	.00350898	.01174954	-2.60129248
.5	.00541975	.01477942	-2.60216964
.6	.00768271	.01792092	-2.60237118
.7	.01021207	.02119840	-2.60148240
.8	.01290525	.02459117	-2.59914155
.9	.01564164	.02801227	-2.59589107
1.0	.01829374	.03130520	-2.58920197
1.1	.02074008	.03426391	-2.58146430
1.2	.02287637	.03666948	-2.57195032
1.3	.02462245	.03832917	-2.56076605
1.4	.02592447	.03910457	-2.54800707
1.5	.02675308	.03892328	-2.53372828
1.6	.02709928	.03777587	-2.51792988
1.7	.02696955	.03570415	-2.50055699
1.8	.02638139	.03278650	-2.48150828
1.9	.02535966	.02912449	-2.46064886
2.0	.02393401	.02483237	-2.43782627
2.2	.02000416	.01483733	-2.38568021
2.4	.01487729	.00375267	-2.32403856
2.6	.00886333	-.00752894	-2.25242985
2.8	.00229115	-.01822567	-2.17120843
3.0	-.00450289	-.02772126	-2.08164937
3.2	-.01119610	-.03561440	-1.98583666
3.4	-.01750600	-.04173730	-1.88636492
3.6	-.02321547	-.04612856	-1.78594488
3.8	-.02817479	-.04897061	-1.68703828
4.0	-.03232036	-.05051710	-1.59157771
4.2	-.03564304	-.05103363	-1.50094383
4.4	-.03818143	-.05076163	-1.41591844
4.6	-.04000302	-.04990337	-1.33682677
4.8	-.04119820	-.04862844	-1.26365578
5.0	-.04183008	-.04703892	-1.19617146
5.2	-.04200780	-.04525617	-1.13401402
5.4	-.04180269	-.04334721	-1.07676512
5.6	-.04128633	-.04136987	-1.02399332
5.8	-.04052189	-.03936857	-.97528117
6.0	-.03956417	-.03737720	-.93023996
6.2	-.03846004	-.03542126	-.88851613
6.4	-.03724917	-.03351944	-.84979263
6.6	-.03596473	-.03168504	-.81378743
6.8	-.03463417	-.02992694	-.78025858
7.0	-.03327994	-.02825060	-.74896075
7.2	-.03192017	-.02665876	-.71972178
7.4	-.03056933	-.02515207	-.69235986
7.6	-.02923875	-.02372965	-.66671735
7.8	-.02793714	-.02238948	-.64265752
8.0	-.02667184	-.02112874	-.62005479

	2.S SIGMA G -3.D PI G	3.P SIGMA U -2.P PI U
R	B(+)	B(+)
8.5	-.00585120	-.00888785
9.0	-.00554624	-.00790896
9.5	-.00526174	-.00709096
10.0	-.00499396	-.00640196
10.5	-.00474052	-.00581730
11.0	-.00449394	-.00531763
11.5	-.00427135	-.00488762
12.0	-.00405431	-.00451503
12.5	-.00384846	-.00418997
13.0	-.00365358	-.00390445
13.5	-.00346944	-.00365196
14.0	-.00329575	-.00342718
14.5	-.00313219	-.00322576
15.0	-.00297836	-.00304415
15.5	-.00283385	-.00287944
16.0	-.00269820	-.00272925
16.5	-.00257092	-.00259161
17.0	-.00245152	-.00246493
17.5	-.00233953	-.00234788
18.0	-.00223447	-.00223935
18.5	-.00213586	-.00213843
19.0	-.00204328	-.00204433
19.5	-.00195630	-.00195639
20.0	-.00187454	-.00187405
22.0	-.00159255	-.00159158
24.0	-.00136368	-.00136804
26.0	-.00118842	-.00118809
28.0	-.00104131	-.00104116
30.0	-.00091977	-.00091970
32.0	-.00081824	-.00081821
34.0	-.00073256	-.00073256
36.0	-.00065963	-.00065963
38.0	-.00059703	-.00059703
40.0	-.00054292	-.00054292
42.0	-.00049582	-.00049582
44.0	-.00045458	-.00045458
46.0	-.00041827	-.00041827
48.0	-.00038614	-.00038614
50.0	-.00035756	-.00035756
60.0	-.00025306	-.00025306
70.0	-.00018845	-.00018845
80.0	-.00014574	-.00014574
90.0	-.00011606	-.00011606
100.0	-.00009459	-.00009459
R+(0)	0.000000	0.000000
R+(-1)	0.000000	0.000000
R+(-2)	-1.000000	-1.000000
R+(-3)	5.500000	5.500000
AS(R=100)	-.000095	-.000095

	2.S SIGMA G -2.P PI U		3.P SIGMA U -3.D PI G	
R	B(-)	RIJ	B(-)	RIJ
0.0	0.000000	1.500000	0.000000	2.250000
.1	-.02547238	1.50155568	.00291998	2.25047282
.2	-.04116148	1.50544582	.00584546	2.25184892
.3	-.05056536	1.51077429	.00876759	2.25399534
.4	-.05595958	1.51702948	.01166865	2.25668427
.5	-.05877078	1.52394675	.01448157	2.25960371
.6	-.05998159	1.53139084	.01717150	2.26238883
.7	-.05993308	1.53928452	.01966071	2.26466732
.8	-.05924605	1.54758266	.02187690	2.26612588
.9	-.05809453	1.55624814	.02375544	2.26655321
1.0	-.05664965	1.56524883	.02524915	2.26587112
1.1	-.05502791	1.57455392	.02633475	2.26412948
1.2	-.05330987	1.58413312	.02701436	2.26147548
1.3	-.05154779	1.59395658	.02731240	2.25811019
1.4	-.04978148	1.60399519	.02726945	2.25424682
1.5	-.04803550	1.61422084	.02693525	2.25008007
1.6	-.04632680	1.62460665	.02636248	2.24576926
1.7	-.04466637	1.63512714	.02560207	2.24143312
1.8	-.04306102	1.64575835	.02470835	2.23715238
1.9	-.04151461	1.65647786	.02369757	2.23297626
2.0	-.04002891	1.66726474	.02262758	2.22893011
2.2	-.03723982	1.68896434	.02039112	2.22125281
2.4	-.03468592	1.71071804	.01815050	2.21408632
2.6	-.03235158	1.73240853	.01600883	2.20734847
2.8	-.03021823	1.75392741	.01399383	2.20096289
3.0	-.02826691	1.77519257	.01215357	2.19487925
3.2	-.02647945	1.79612580	.01048712	2.18908079
3.4	-.02483910	1.81666083	.00899139	2.18356918
3.6	-.02333866	1.83673973	.00765761	2.17835945
3.8	-.02194852	1.85631155	.00647484	2.17347262
4.0	-.02065662	1.87533131	.00542768	2.16892936
4.2	-.01946821	1.89375921	.00450536	2.16474697
4.4	-.01836584	1.91156080	.00369430	2.16093735
4.6	-.01734114	1.92870255	.00298250	2.15750629
4.8	-.01638671	1.94515954	.00235890	2.15445352
5.0	-.01549604	1.96090726	.00181344	2.15177326
5.2	-.01466333	1.97592552	.00133705	2.14945496
5.4	-.01388347	1.99019756	.00092164	2.14748421
5.6	-.01315191	2.00371014	.00055999	2.14584359
5.8	-.01246461	2.01645356	.00024570	2.14451353
6.0	-.01181888	2.02842174	-.00002686	2.14347296
6.2	-.01120886	2.03961229	-.00026269	2.14270888
6.4	-.01063434	2.05002667	-.00046618	2.14217241
6.6	-.01009189	2.05967019	-.00064119	2.14186886
6.8	-.00957923	2.06855218	-.00079113	2.14176522
7.0	-.00909429	2.07668558	-.00091900	2.14184282
7.2	-.00863523	2.08408773	-.00102742	2.14208866
7.4	-.00820038	2.09077946	-.00111874	2.14245952
7.6	-.00778824	2.09678537	-.00119498	2.14296126
7.8	-.00739745	2.10213356	-.00125795	2.14356889
8.0	-.00702675	2.10685531	-.00130924	2.14426655

	2.S SIGMA G -2.P PI U		3.P SIGMA U -3.D PI G	
R	B(-)	RIJ	B(-)	RIJ
9.5	-.00618071	2.11614976	-.00139517	2.14631127
9.0	-.00543807	2.12234507	-.00143425	2.14863219
9.5	-.00478614	2.12609182	-.00143959	2.15107308
10.0	-.00421417	2.12804869	-.00142091	2.15351495
10.5	-.00371287	2.12883681	-.00138540	2.15587090
11.0	-.00327403	2.12900185	-.00133840	2.15808089
11.5	-.00289031	2.12898789	-.00128392	2.16010682
12.0	-.00255517	2.12912466	-.00122492	2.16192804
12.5	-.00226269	2.12962763	-.00116360	2.16353738
13.0	-.00200760	2.13060841	-.00110159	2.16493767
13.5	-.00178519	2.13209246	-.00104006	2.16613686
14.0	-.00159127	2.13404044	-.00097988	2.16715555
14.5	-.00142215	2.13637025	-.00092164	2.16800505
15.0	-.00127456	2.13897782	-.00086575	2.16870581
15.5	-.00114565	2.14174971	-.00081246	2.16927634
16.0	-.00103290	2.14458330	-.00076193	2.16973430
16.5	-.00093414	2.14738659	-.00071422	2.17009597
17.0	-.00084747	2.15008628	-.00066932	2.17037596
17.5	-.00077124	2.15262792	-.00062720	2.17058702
18.0	-.00070404	2.15497482	-.00058777	2.17074084
18.5	-.00064462	2.15710573	-.00055092	2.17084415
19.0	-.00059195	2.15901197	-.00051655	2.17090687
19.5	-.00054511	2.16069443	-.00048452	2.17093426
20.0	-.00050333	2.16216094	-.00045470	2.17093119
22.0	-.00037482	2.16614881	-.00035487	2.17067930
24.0	-.00028834	2.16790361	-.00028027	2.17013361
26.0	-.00022749	2.16829942	-.00022426	2.16936062
28.0	-.00018309	2.16791637	-.00018181	2.16840879
30.0	-.00014975	2.16710126	-.00014924	2.16732527
32.0	-.00012412	2.16605450	-.00012393	2.16615477
34.0	-.00010407	2.16489159	-.00010399	2.16493587
36.0	-.00008813	2.16367984	-.00008810	2.16369916
38.0	-.00007530	2.16245900	-.00007528	2.16246736
40.0	-.00006484	2.16125285	-.00006483	2.16125643
42.0	-.00005623	2.16007553	-.00005623	2.16007705
44.0	-.00004909	2.15893531	-.00004909	2.15893595
46.0	-.00004310	2.15783672	-.00004310	2.15783700
48.0	-.00003805	2.15678194	-.00003805	2.15678205
50.0	-.00003376	2.15577155	-.00003376	2.15577159
60.0	-.00001975	2.15135367	-.00001975	2.15135367
70.0	-.00001254	2.14783936	-.00001254	2.14783936
80.0	-.00000845	2.14501491	-.00000845	2.14501491
90.0	-.00000596	2.14271024	-.00000596	2.14271024
100.0	-.00000436	2.14080072	-.00000436	2.14080072
R+(0)	0.000000	2.121320	0.000000	2.121320
R+(-1)	0.000000	2.121320	0.000000	2.121320
R+(-2)	0.000000	-13.788582	0.000000	-13.788582
R+(-3)	-4.500000	-406.232800	-4.500000	-406.232800
AS(R=100)	-.000005	2.140748	-.000005	2.140748

	3.D SIGMA G	- 3.D SIGMA G		
R	H(+)	H(*)	E	NORMA
0.0	6.000000/R+2	.111111	-.22222222	.326881R+L
.1	600.08002405	.11115347	-.222250455	.00026907
.2	150.08009681	.11120098	-.222335318	.00107882
.3	66.66688680	.11149486	-.222477310	.00243584
.4	37.50039710	.11179723	-.222677265	.00434969
.5	24.00063212	.11219103	-.222936359	.00683252
.6	16.66759759	.11268018	-.223256115	.00989874
.7	12.24619856	.11326918	-.223638409	.01356482
.8	9.37674959	.11396390	-.224085476	.01784984
.9	7.40969505	.11477083	-.224599915	.02277127
1.0	6.00292573	.11569744	-.225184688	.02835267
1.1	4.96235350	.11675207	-.225843119	.03461536
1.2	4.17121715	.11794387	-.226578882	.04158195
1.3	3.55585837	.11928267	-.227395982	.04927492
1.4	3.06734860	.12077886	-.228298728	.05771592
1.5	2.67471265	.12244311	-.229291684	.06692480
1.6	2.35328616	.12428606	-.230379611	.07691853
1.7	2.08732303	.12631792	-.231567381	.08770979
1.8	1.86458303	.12854790	-.232859865	.09930547
1.9	1.67707457	.13098359	-.234261883	.11170483
2.0	1.51716048	.13363015	-.235777629	.12489765
2.2	1.26140002	.13955921	-.239165948	.15356327
2.4	1.06040487	.14629381	-.243046026	.18495716
2.6	.91815410	.15369684	-.247419142	.21847460
2.8	.79911206	.16151827	-.252258647	.25324300
3.0	.70231623	.16940117	-.257504304	.28817133
3.2	.62193700	.17691757	-.263061354	.32205982
3.4	.55410377	.18362874	-.268885691	.35374664
3.6	.49627663	.18915167	-.274594561	.38224992
3.8	.44673225	.19321195	-.280280299	.40686556
4.0	.40418772	.19566563	-.285723798	.42728186
4.2	.36757873	.19649714	-.290884970	.44315760
4.4	.33596396	.19579345	-.295429868	.45486493
4.6	.30858361	.19371265	-.299528661	.46262034
4.8	.28446568	.19045298	-.303062651	.46682807
5.0	.26323338	.18622723	-.306813878	.46798813
5.2	.24438389	.18124565	-.308381114	.46633862
5.4	.22727869	.17578361	-.310182829	.46255875
5.6	.21184866	.16977562	-.311445237	.45695355
5.8	.19777743	.16361249	-.312282851	.44991778
6.0	.18488533	.15734089	-.312494827	.44177286
6.2	.17303529	.15106451	-.312362694	.43288321
6.4	.16212125	.14486596	-.311848599	.42325707
6.6	.15205905	.13880920	-.310994887	.41334154
6.8	.14277962	.13294201	-.309838783	.40322989
7.0	.13422415	.12729858	-.308428563	.39386438
7.2	.12634864	.12190177	-.306774377	.38295998
7.4	.11908184	.11676527	-.304932446	.37388795
7.6	.11240382	.11189552	-.302924122	.36327931
7.8	.10626522	.10729325	-.300775923	.35382789
8.0	.10062693	.10295494	-.298511642	.34469321

3.D SIGMA G - 3.D SIGMA G

R	H(+)	H(*)	E	NORMA
8.5	.08848110	.09321470	-.292476466	.32340868
9.0	.07871028	.08492461	-.286111882	.30443927
9.5	.07086849	.07798271	-.279612827	.28779179
10.0	.06458721	.07196973	-.273117448	.27332479
10.5	.05956861	.06696395	-.266720965	.26085373
11.0	.05557566	.06274613	-.260487788	.25017988
11.5	.05242138	.05919953	-.254459644	.24111887
12.0	.04995887	.05622778	-.248662938	.23346688
12.5	.04807271	.05375152	-.243112589	.22708772
13.0	.04667181	.05170826	-.237819516	.22183388
13.5	.04568373	.05003898	-.232773685	.21758034
14.0	.04505007	.04870575	-.227985868	.21421882
14.5	.04472292	.04767050	-.223445286	.21165859
15.0	.04466190	.04690248	-.219140858	.20979210
15.5	.04483201	.04637531	-.215066497	.20856488
16.0	.04520174	.04606568	-.211252749	.20789768
16.5	.04574179	.04595234	-.207638635	.20773408
17.0	.04642412	.04601533	-.204235731	.20798129
17.5	.04722131	.04623535	-.201035456	.20860929
18.0	.04810641	.04659328	-.198029117	.20959829
18.5	.04905304	.04706994	-.195207926	.21074061
19.0	.05003574	.04764601	-.192563886	.21219004
19.5	.05103062	.04830210	-.190085408	.21378632
20.0	.05201604	.04901907	-.187766688	.21536758
22.0	.05554028	.05214110	-.179898619	.22227492
24.0	.05804228	.05501674	-.173037379	.22832111
26.0	.05959017	.05720818	-.169187516	.23202661
28.0	.06049972	.05870431	-.165315288	.23592065
30.0	.06103868	.05967485	-.162190976	.23802230
32.0	.06137194	.06030018	-.159555279	.23946663
34.0	.06159046	.06071326	-.157209784	.24050961
36.0	.06174284	.06099853	-.155314059	.24130398
38.0	.06185516	.06120602	-.153571984	.24193908
40.0	.06194173	.06136452	-.152022237	.24246718
42.0	.06201074	.06149066	-.150633548	.24291096
44.0	.06206713	.06159420	-.149381472	.24331333
46.0	.06211486	.06168114	-.148246527	.24366255
48.0	.06215364	.06175535	-.147212852	.24397503
50.0	.06218772	.06181938	-.146267391	.24425687
60.0	.06229981	.06204112	-.142536625	.24533088
70.0	.06236096	.06216898	-.139920854	.24607411
80.0	.06239785	.06224972	-.137983894	.24660788
90.0	.06242180	.06230404	-.136491317	.24701330
100.0	.06243822	.06234237	-.135387836	.24733202
R+(-1)	.062500	.062500	-.12500000	.250000R+M
R+(-1)	0.000000	0.000000	-1.00000000	
R+(-2)	-.500000	-1.500000	-3.00000000	
R+(-3)			-8.00000000	
R+(-4)			-90.00000000	
AS(R=100)	.062450	.062350	-.13538690	.250000

4.F SIGMA U - 4.F SIGMA U

R	H(+)	H(*)	E	NORMA
0.0	12.000000/R+2	.062500	-.12500000	.000466R+L
.1	1200.00000224	.06250595	-.125003969	.00000047
.2	300.00000895	.06252382	-.125015878	.00000373
.3	133.33335351	.06255364	-.125035741	.00001261
.4	75.00003595	.06259545	-.125063577	.00002995
.5	48.00005632	.06264933	-.125099413	.00005861
.6	33.33341472	.06271536	-.125143286	.00010154
.7	24.48990714	.06279367	-.125195242	.00016168
.8	18.75014595	.06288438	-.125255332	.00024209
.9	14.81500853	.06298765	-.125323628	.00034586
1.0	12.00023068	.06310368	-.125400176	.00047615
1.1	9.91763639	.06323266	-.125485083	.00063622
1.2	8.33367028	.06337483	-.125578432	.00082940
1.3	7.10099043	.06353047	-.125680324	.00105911
1.4	6.12291557	.06369987	-.125790874	.00132887
1.5	5.33387424	.06388336	-.125910205	.00164230
1.6	4.68812199	.06408130	-.126038456	.00200313
1.7	4.15295938	.06429411	-.126175776	.00241528
1.8	3.70450981	.06452223	-.126322330	.00288247
1.9	3.32500988	.06476614	-.126478297	.00340903
2.0	3.00102270	.06502639	-.126643870	.00399908
2.2	2.48061522	.06559829	-.127004698	.00538719
2.4	2.08498614	.06624328	-.127406714	.00708326
2.6	1.77706677	.06696767	-.127852131	.00912684
2.8	1.53293489	.06777886	-.128343506	.01155672
3.0	1.33612713	.06868544	-.128883780	.01441883
3.2	1.17521835	.06969728	-.129476312	.01775822
3.4	1.04204593	.07082558	-.130124989	.02162268
3.6	.93065393	.07208287	-.130833850	.02606147
3.8	.83661497	.07348285	-.131607896	.03112444
4.0	.75658258	.07504020	-.132452279	.03686079
4.2	.68798773	.07677886	-.133372658	.04331719
4.4	.62882939	.07868729	-.134375035	.05053537
4.6	.57752477	.08080543	-.135465608	.05854892
4.8	.53280189	.08313518	-.136658569	.06737939
5.0	.49362040	.08568264	-.137935888	.07703175
5.2	.45911341	.08844706	-.139326502	.08748955
5.4	.42854554	.09141865	-.140826727	.09871838
5.6	.40128447	.09457639	-.142438859	.11062171
5.8	.37678411	.09788659	-.144163073	.12311975
6.0	.35457686	.10130239	-.145996836	.13606933
6.2	.33427219	.10476486	-.147934517	.14930825
6.4	.31555733	.10820561	-.149967192	.16265439
6.6	.29819599	.11155100	-.152082693	.17591561
6.8	.28202217	.11472724	-.154265919	.18898116
7.0	.26692818	.11766572	-.156499483	.20143293
7.2	.25284859	.12030767	-.158764060	.21335512
7.4	.23974304	.12260751	-.161048037	.22454101
7.6	.22758123	.12453460	-.163307562	.23489652
7.8	.21633202	.12607337	-.165547707	.24436091
8.0	.20595745	.12722207	-.167743013	.25290257

4.F SIGMA U - 4.F SIGMA U

R	H(+)	H(*)	E	NORMA
8.5	.10352353	.12847482	-.172938493	.27825306
9.0	.10536198	.12773334	-.177588848	.28231882
9.5	.10855076	.12548959	-.181572987	.28994025
10.0	.11030570	.12222254	-.184886664	.29487967
10.5	.11203187	.11833113	-.187541887	.29557411
11.0	.11329554	.11411943	-.189583918	.29515245
11.5	.11179153	.10980592	-.191877139	.29338787
12.0	.10529531	.10554844	-.192887626	.29072163
12.5	.09964841	.10142115	-.192681378	.28748714
13.0	.09469897	.09750882	-.192920238	.28393053
13.5	.09036984	.09383798	-.192868403	.28028229
14.0	.08657091	.09042468	-.192551781	.27652209
14.5	.08323415	.08727325	-.192038879	.27289145
15.0	.08030225	.08437978	-.191357163	.26940233
15.5	.07772638	.08173503	-.190541583	.26609941
16.0	.07546448	.07932722	-.189619155	.26300563
16.5	.07340889	.07714252	-.188613536	.26013629
17.0	.07174139	.07516647	-.187544769	.25749718
17.5	.07022847	.07338445	-.186429778	.25508795
18.0	.06889274	.07178287	-.185282769	.25290377
18.5	.06773643	.07034545	-.184115695	.25093673
19.0	.06673221	.06906132	-.182938584	.24917675
19.5	.06586288	.06791711	-.181759468	.24761233
20.0	.06511386	.06690095	-.180585423	.24623114
22.0	.06385398	.06390496	-.176036497	.24228226
24.0	.06282035	.06218937	-.171860354	.24026443
26.0	.06159284	.06130323	-.168131469	.23949789
28.0	.06147816	.06092386	-.164848014	.23946998
30.0	.06149689	.06082989	-.161972691	.23983876
32.0	[illegible]	[illegible]	[illegible]	[illegible]
34.0	.06168686	.06099878	-.157244669	.24094296
36.0	.06178604	.06113575	-.155294051	.24150932
38.0	.06187427	.06127077	-.153563288	.24203401
40.0	.06195889	.06139461	-.152018421	.24251114
42.0	.06201437	.06150445	-.150631898	.24293889
44.0	.06206869	.06160844	-.149388771	.24332227
46.0	.06211476	.06168393	-.148246229	.24366656
48.0	.06215391	.06175658	-.147212727	.24397679
50.0	.06218741	.06181998	-.146267338	.24429753
60.0	.06229981	.06204112	-.142536625	.24933888
70.0	.06236096	.06216898	-.139920854	.24607411
80.0	.06239705	.06224972	-.137983894	.24660788
90.0	.06242168	.06230404	-.136491317	.24781328
100.0	.06243822	.06234237	-.135387036	.24933202
R+(0)	.062500	.062500	-.12500000	.250000R+M
R+(-1)	0.000000	0.000000	-1.00000000	
R+(-2)	-.500000	-1.500000	-3.00000000	
R+(-3)			-6.00000000	
R+(-4)			-90.00000000	
AS(R=100)	.062450	.062350	-.13538698	.250000

3.D SIGMA G - 4.F SIGMA U

R	Q(-)	H(-)	RIJ
0.0	-.126090	-.756541/R	2.593855
.1	-.12609589	-7.56627764	2.59332539
.2	-.12611306	-3.78444005	2.59173293
.3	-.12614143	-2.52440807	2.58906816
.4	-.12618107	-1.89483002	2.58531508
.5	-.12623174	-1.51743645	2.58045132
.6	-.12629320	-1.26613829	2.57444828
.7	-.12636516	-1.08689809	2.56727126
.8	-.12644723	-.95269777	2.55887976
.9	-.12653895	-.84852797	2.54922792
1.0	-.12663977	-.76538369	2.53826507
1.1	-.12674903	-.69753509	2.52593661
1.2	-.12686591	-.64116292	2.51218508
1.3	-.12699954	-.59362367	2.49695160
1.4	-.12711885	-.55302968	2.48017768
1.5	-.12726265	-.51799723	2.46180748
1.6	-.12739962	-.48748895	2.44179053
1.7	-.12752832	-.46071196	2.42008503
1.8	-.12765721	-.43704984	2.39666152
1.9	-.12781468	-.41601603	2.37150713
2.0	-.12793915	-.39722124	2.34463015
2.2	-.12813331	-.36514412	2.28587516
2.4	-.12842081	-.33890635	2.22105797
2.6	-.12863019	-.31717487	2.15143268
2.8	-.12887173	-.29899011	2.07886991
3.0	-.12898035	-.28365010	2.00575059
3.2	-.12922521	-.27064401	1.93472571
3.4	-.12955526	-.25960919	1.86839521
3.6	-.13003152	-.25029480	1.80899941
3.8	-.13063859	-.24252537	1.75820921
4.0	-.13153762	-.23616593	1.71705261
4.2	-.13271229	-.23109359	1.68596003
4.4	-.13405772	-.22717886	1.66497885
4.6	-.13563153	-.22427650	1.65340700
4.8	-.13736595	-.22222356	1.65091194
5.0	-.13922014	-.22084215	1.65662061
5.2	-.14113356	-.21994483	1.66968010
5.4	-.14303780	-.21934194	1.68919570
5.6	-.14486005	-.21885013	1.71425542
5.8	-.14662638	-.21830105	1.74394874
6.0	-.14796557	-.21755135	1.77738562
6.2	-.14911318	-.21648917	1.81371812
6.4	-.14991552	-.21503948	1.85216474
6.6	-.15033284	-.21316501	1.89203448
6.8	-.15034150	-.21086338	1.93274711
7.0	-.14993445	-.20816097	1.97384594
7.2	-.14913047	-.20510499	2.01500194
7.4	-.14793159	-.20175452	2.05600274
7.6	-.14637332	-.19817415	2.09674731
7.8	-.14451607	-.19442713	2.13721770
8.0	-.14237189	-.19057208	2.17746242

3.D SIGMA G - 4.F SIGMA U

R	Q(-)	H(-)	RIJ
8.5	-.13613981	-.18078297	2.27776670
9.0	-.12911250	-.17122755	2.37927511
9.5	-.12176509	-.16226144	2.48399204
10.0	-.11441423	-.15406548	2.59352201
10.5	-.10724962	-.14671102	2.70901202
11.0	-.10037288	-.14020422	2.83124193
11.5	-.09382949	-.13451433	2.96073797
12.0	-.08763133	-.12959117	3.09786518
12.5	-.08177134	-.12537588	3.24289090
13.0	-.07623271	-.12180723	3.39602332
13.5	-.07099438	-.11882512	3.55743143
14.0	-.06603436	-.11637239	3.72725207
14.5	-.06133165	-.11439544	3.90558801
15.0	-.05686712	-.11284433	4.09250014
15.5	-.05263425	-.11167250	4.28799603
16.0	-.04859323	-.11083634	4.49201664
16.5	-.04477106	-.11029479	4.70442296
17.0	-.04113138	-.11000894	4.92498432
17.5	-.03763425	-.10994186	5.15336990
18.0	-.03436596	-.11005845	5.38914516
18.5	-.03123447	-.11032560	5.63177440
19.0	-.02823907	-.11071229	5.88063002
19.5	-.02553983	-.11118998	6.13500872
20.0	-.02295711	-.11173282	6.39415350
22.0	-.01433141	-.11414863	7.46287305
24.0	-.00945265	-.11635721	8.55088057
26.0	-.00471037	-.11807399	9.63143970
28.0	-.00243900	-.11934372	10.69609565
30.0	-.00123197	-.12028610	11.74580965
32.0	-.00063899	-.12100171	12.78402917
34.0	-.00032105	-.12155919	13.81390533
36.0	-.00014844	-.12200344	14.83773752
38.0	-.00006954	-.12236421	15.85710774
40.0	-.00003219	-.12266180	16.87310485
42.0	-.00001469	-.12291053	17.88649468
44.0	-.00000663	-.12312078	18.89783038
46.0	-.00001296	-.12330025	19.90752520
48.0	-.00001131	-.12345477	20.91587870
50.0	-.00000957	-.12358879	21.92312750
60.0	0.00001000	-.12405293	26.94833595
70.0	0.00001000	-.12431955	31.96286404
80.0	0.00001000	-.12448716	36.97201292
90.0	0.00001000	-.12459949	41.97815044
100.0	0.00001000	-.12467849	46.98246666
R+(1)	0.000000	0.000000	.500000
R+(0)	0.000000	-.125000	-3.000000
R+(-1)	0.000000	0.000000	0.000000
R+(-2)	0.000000	3.000000	-162.000000
AS(R=100)	0.000000	-.124700	46.983800

3.D SIGMA G -3.D PI G 4.F SIGMA U -2.P PI U

R	B(+)	B(+)
0.0	2.443493/R+2	.005048
.1	244.94897360	.00505132
.2	61.23722877	.00506140
.3	27.21651303	.00507776
.4	15.31925810	.00509992
.5	9.79786212	.00512729
.6	6.80399336	.00515931
.7	4.99875878	.00519541
.8	3.82705822	.00523507
.9	3.02370802	.00527782
1.0	2.44303615	.00532322
1.1	2.02379930	.00537089
1.2	1.70032214	.00542048
1.3	1.44852573	.00547169
1.4	1.24867192	.00552426
1.5	1.08737264	.00557795
1.6	.95528690	.00563255
1.7	.84573647	.00568787
1.8	.75384420	.00574375
1.9	.67598107	.00580003
2.0	.60940173	.00585658
2.2	.50213240	.00597003
2.4	.42311353	.00608321
2.6	.36584984	.00619538
2.8	.31944260	.00630583
3.0	.28263944	.00641390
3.2	.22809317	.00651890
3.4	.19329019	.00662014
3.6	.17505289	.00671681
3.8	.15451733	.00680804
4.0	.13730504	.00689282
4.2	.12300148	.00697002
4.4	.11107329	.00703832
4.6	.10078944	.00709626
4.8	.09816591	.00714223
5.0	.07966354	.00717451
5.2	.07219854	.00719133
5.4	.06561573	.00719099
5.6	.05978726	.00717193
5.8	.05460735	.00713297
6.0	.04998808	.00707337
6.2	.04585398	.00699302
6.4	.04214923	.00689251
6.6	.03881551	.00677314
6.8	.03581024	.00663691
7.0	.03309521	.00648633
7.2	.03063747	.00632430
7.4	.02840845	.00615390
7.6	.02638325	.00597819
7.8	.02454316	.00580002
8.0	.02286303	.00562194

	3.D SIGMA G -2.P PI U		4.F SIGMA U -3.D PI G	
R	B(-)	RIJ	B(-)	RIJ
8.5	.00590757	1.75314677	-.00668069	1.82025972
9.0	.00581047	1.79998260	-.00532141	1.82552885
9.5	.00561933	1.84180982	-.00418766	1.83127577
10.0	.00536697	1.87866981	-.00325338	1.83817068
10.5	.00507689	1.91064671	-.00248963	1.84634699
11.0	.00476582	1.93786329	-.00186871	1.85565506
11.5	.00444570	1.96048593	-.00136605	1.86582525
12.0	.00412507	1.97873299	-.00096065	1.87655983
12.5	.00381004	1.99286235	-.00063496	1.88757922
13.0	.00350498	2.00327514	-.00037446	1.89864198
13.5	.00321298	2.01031370	-.00016724	1.90955072
14.0	.00293619	2.01445319	-.00000352	1.92015112
14.5	.00267599	2.01618702	.00012467	1.93032780
15.0	.00243319	2.01602762	.00022390	1.93999911
15.5	.00220813	2.01448455	.00029952	1.94911182
16.0	.00200074	2.01204253	.00035594	1.95763622
16.5	.00181066	2.00914162	.00039677	1.96556161
17.0	.00163727	2.00616152	.00042500	1.97289244
17.5	.00147978	2.00341104	.00044306	1.97964490
18.0	.00133724	2.00112333	.00045298	1.98584399
18.5	.00120867	1.99945636	.00045641	1.99152108
19.0	.00109301	1.99849828	.00045473	1.99671175
19.5	.00098921	1.99827615	.00044905	2.00145402
20.0	.00089624	1.99876722	.00044031	2.00578692
22.0	.00061347	2.00634453	.00038787	2.01978018
24.0	.00043432	2.01828788	.00032686	2.02999411
26.0	.00031963	2.03001411	.00027008	2.03794510
28.0	.00024400	2.03978761	.00022174	2.04451076
30.0	.00019206	2.04753481	.00018227	2.05013839
32.0	.00015488	2.05368451	.00015064	2.05504790
34.0	.00012725	2.05867275	.00012544	2.05936080
36.0	.00010610	2.06282449	.00010534	2.06316202
38.0	.00008953	2.06636079	.00008921	2.06652264
40.0	.00007630	2.06942946	.00007617	2.06950562
42.0	.00006559	2.07213102	.00006554	2.07216629
44.0	.00005681	2.07453607	.00005679	2.07455218
46.0	.00004954	2.07669618	.00004953	2.07670337
48.0	.00004346	2.07864998	.00004345	2.07865322
50.0	.00003834	2.08042800	.00003834	2.08042904
60.0	.00002194	2.08738831	.00002194	2.08738831
70.0	.00001371	2.09224932	.00001371	2.09224932
80.0	.00000913	2.09585650	.00000913	2.09585650
90.0	.00000639	2.09864859	.00000639	2.09864859
100.0	.00000464	2.10087826	.00000464	2.10087826
R**(0)	0.000000	2.121320	0.000000	2.121320
R**(-1)	0.000000	-2.121320	0.000000	-2.121320
R**(-2)	0.000000	11.667262	0.000000	11.667262
R**(-3)	4.500000	-399.868900	4.500000	-399.868900
AS(R=100)	.000005	2.100874	.000005	2.100874

	3.D PI G	- 3.D PI G		
R	H(+)	H(*)	E	NORMA
0.0	6.000000/R**2	.111111	-.22222222	.149383R+L
.1	600.00001253	.11113226	-.222236324	.00048585
.2	150.00004981	.11119546	-.222278537	.00191294
.3	66.66677801	.11130003	-.222348583	.00423792
.4	37.50019613	.11144481	-.222446002	.00741964
.5	24.00030293	.11162819	-.222570148	.01141826
.6	16.66703687	.11184811	-.222720191	.01619469
.7	12.24547421	.11210204	-.222895122	.02171003
.8	9.37573924	.11238707	-.223093757	.02792529
.9	7.40832477	.11269987	-.223314740	.03480101
1.0	6.00110887	.11303673	-.223556557	.04229720
1.1	4.95998985	.11339365	-.223817541	.05037315
1.2	4.16819258	.11376633	-.224095889	.05898744
1.3	3.55204491	.11415027	-.224389675	.06809801
1.4	3.06320537	.11454081	-.224696868	.07766226
1.5	2.66888771	.11493321	-.225015352	.08763721
1.6	2.34621958	.11532271	-.225342942	.09797976
1.7	2.07885141	.11570458	-.225677413	.10864690
1.8	1.85484535	.11607424	-.226016514	.11959602
1.9	1.66532033	.11642729	-.226357995	.13078518
2.0	1.50355885	.11675955	-.226699627	.14217342
2.2	1.24384408	.11734668	-.227374654	.16538983
2.4	1.04651710	.11780872	-.228024936	.18894718
2.6	.89316795	.11812560	-.228635316	.21257854
2.8	.77171598	.11828359	-.229192540	.23605294
3.0	.67396511	.11827561	-.229685513	.25917773
3.2	.59419355	.11810051	-.230105485	.28179866
3.4	.52830653	.11776222	-.230445638	.30379811
3.6	.47338951	.11726875	-.230701760	.32508185
3.8	.42697053	.11663111	-.230871380	.34562507
4.0	.38759773	.11586236	-.230953442	.36536791
4.2	.35398977	.11497678	-.230948868	.38431112
4.4	.32433226	.11398910	-.230859450	.40246183
4.6	.29962530	.11291400	-.230688016	.41983982
4.8	.27763151	.11176567	-.230438129	.43647428
5.0	.25833813	.11055749	-.230113886	.45240105
5.2	.24132946	.10930191	-.229719750	.46766836
5.4	.22626533	.10801028	-.229260480	.48229583
5.6	.21286591	.10669285	-.228740623	.49634903
5.8	.20089922	.10535874	-.228165211	.50986645
6.0	.19017183	.10401601	-.227538889	.52289061
6.2	.18052157	.10267173	-.226866263	.53546358
6.4	.17181168	.10133200	-.226151770	.54762568
6.6	.16392630	.10000209	-.225399658	.55941529
6.8	.15676676	.09868646	-.224613957	.57086865
7.0	.15024867	.09738891	-.223798475	.58201982
7.2	.14429954	.09611259	-.222956788	.59290062
7.4	.13885682	.09486012	-.222092241	.60354872
7.6	.13386634	.09363362	-.221207952	.61396769
7.8	.12928101	.09243498	-.220306817	.62420705
8.0	.12505972	.09126499	-.219391518	.63428241

3.0 PI G - 3.0 PI G

R	H(+)	H(*)	E	NORMA
8.5	.11587363	.03847342	-.21705789	.65889205
9.0	.10829488	.08587784	-.21468271	.68290388
9.5	.10198810	.08347981	-.21229545	.70655717
10.0	.09670155	.08127585	-.20991687	.73004408
10.5	.09224305	.07925920	-.20756390	.75351788
11.0	.08846365	.07742109	-.20524969	.77709967
11.5	.08524623	.07575159	-.20298429	.80088398
12.0	.08249754	.07424014	-.20077521	.82494333
12.5	.08014236	.07287603	-.19862790	.84933192
13.0	.07811943	.07164858	-.19654616	.87408866
13.5	.07637831	.07054737	-.19453244	.89923968
14.0	.07487710	.06956232	-.19258811	.92480043
14.5	.07358074	.06868377	-.19071366	.95077744
15.0	.07245968	.06790251	-.18890890	.97716984
15.5	.07148885	.06720934	-.18717307	1.00397070
16.0	.07064692	.06659754	-.18550500	1.03116817
16.5	.06991566	.06605790	-.18390315	1.05874651
17.0	.06927943	.06558372	-.18236574	1.08668704
17.5	.06872480	.06516829	-.18089080	1.11496886
18.0	.06824025	.06480541	-.17947621	1.14356966
18.5	.06781584	.06448935	-.17811975	1.17246626
19.0	.06744307	.06421485	-.17681917	1.20163518
19.5	.06711453	.06397710	-.17557217	1.23105311
20.0	.06682414	.06377174	-.17437646	1.26069723
22.0	.06594593	.06320078	-.17006173	1.38111245
24.0	.06536256	.06289645	-.16639532	1.50360606
26.0	.06494606	.06273796	-.16325853	1.62731138
28.0	.06462962	.06265583	-.16055327	1.75167468
30.0	.06437781	.06261234	-.15820064	1.87637247
32.0	.06417098	.06258831	-.15613798	2.00122918
34.0	.06399753	.06257312	-.15431575	2.12615563
36.0	.06384989	.06256310	-.15269463	2.25110937
38.0	.06372297	.06255542	-.15124323	2.37607173
40.0	.06361297	.06254933	-.14993630	2.50103540
42.0	.06351699	.06254420	-.14875330	2.62599815
44.0	.06343276	.06253978	-.14767743	2.75095981
46.0	.06335845	.06253592	-.14669474	2.87592092
48.0	.06329257	.06253253	-.14579364	3.00088208
50.0	.06323392	.06252952	-.14496437	3.12584384
60.0	.06301897	.06251834	-.14164487	3.75067246
70.0	.06288589	.06251266	-.13927145	4.37553963
80.0	.06279797	.06250988	-.13749818	5.00043941
90.0	.06273692	.06250646	-.13610407	5.62536336
100.0	.06269284	.06250433	-.13499478	6.25030483

R+(0)	.062500	.062500	-.12500000	.062500R+M
R+(-1)	0.000000	0.000000	-1.00000000	
R+(-2)	2.000000	0.000000	0.00000000	
R+(-3)			6.00000000	
R+(-4)			-78.00000000	
AS(R=100)	.062700	.062500	-.13499478	6.250000

2.P PI U - 2.P PI U

R	H(+)	H(*)	E	NORMA
0.0	2.000000/R+2	.250000	-.50000000	.500000R+L
.1	200.00040071	.24950362	-.49966136	.04744332
.2	50.00153085	.24805288	-.49868479	.08977524
.3	22.22544638	.24574404	-.49710232	.12721824
.4	12.50528971	.24270242	-.49496610	.16014210
.5	8.00755336	.23906167	-.49234346	.18897749
.6	5.56543107	.23495075	-.48929965	.21416821
.7	4.09378692	.23048669	-.48589789	.23614338
.8	3.13932142	.22577141	-.48219719	.25530220
.9	2.48547155	.22089107	-.47825124	.27200685
1.0	2.01817615	.21591685	-.47410795	.28658033
1.1	1.67272826	.21090640	-.46980951	.29930742
1.2	1.41020582	.20590568	-.46539265	.31043718
1.3	1.20606026	.20095070	-.46088908	.32018630
1.4	1.04418983	.19606921	-.45632598	.32874261
1.5	.91367944	.19128215	-.45172653	.33626858
1.6	.80691899	.18660494	-.44711036	.34290462
1.7	.71847229	.18204856	-.44249402	.34877199
1.8	.64437294	.17762043	-.43789141	.35397547
1.9	.58167246	.17332517	-.43331414	.35860563
2.0	.52814245	.16916515	-.42877182	.36274084
2.2	.44213729	.16125216	-.41992230	.36978980
2.4	.37669465	.15387251	-.41109022	.37556257
2.6	.32572912	.14700456	-.41260589	.38039653
2.8	.28525414	.14061994	-.39438737	.38454607
3.0	.25256987	.13468728	-.38644385	.38820690
3.2	.22579517	.12917451	-.37877826	.39153007
3.4	.20358666	.12405024	-.37138910	.39463301
3.6	.18496413	.11928455	-.36427173	.39760754
3.8	.16919892	.11484942	-.35741964	.40052600
4.0	.15573967	.11071886	-.35082464	.40344568
4.2	.14416336	.10686898	-.34447789	.40641233
4.4	.13414076	.10327793	-.33837005	.40946268
4.6	.12541255	.09992576	-.33249159	.41262645
4.8	.11777219	.09679436	-.32683297	.41592787
5.0	.11105353	.09386722	-.32138481	.41938685
5.2	.10512162	.09112939	-.31613794	.42301990
5.4	.09986598	.08856727	-.31108351	.42684082
5.6	.09519539	.08616852	-.30621301	.43086127
5.8	.09103402	.08392194	-.30151829	.43509118
6.0	.08731840	.08181732	-.29699156	.43953910
6.2	.08399505	.07984540	-.29262543	.44421250
6.4	.08101868	.07799772	-.28841285	.44911789
6.6	.07835066	.07626660	-.28434717	.45426187
6.8	.07595792	.07464499	-.28042208	.45964721
7.0	.07381198	.07312647	-.27663158	.46528091
7.2	.07188820	.07170517	-.27297004	.47116633
7.4	.07016512	.07037569	-.26943209	.47730721
7.6	.06862404	.06913308	-.26601268	.48370690
7.8	.06724850	.06797279	-.26270704	.49036835
8.0	.06602399	.06689061	-.25951063	.49729419

	2.P PI U	- 2.P PI U		
	H(+)	H(*)	E	NORMA
9.[illegible]	.06354249	.06450212	-.251970008	.51577917
9.[illegible]	.06176165	.06252488	-.245025143	.53595367
9.[illegible]	.06055232	.06091380	-.238622822	.55782500
10.[illegible]	.05981069	.05962993	-.232716290	.58138090
10.[illegible]	.05945046	.05863867	-.227264207	.60658666
11.[illegible]	.05939547	.05790830	-.222229744	.63338276
11.[illegible]	.05958023	.05740891	-.217579805	.66168344
12.[illegible]	.05994421	.05711164	-.213284364	.69137685
12.[illegible]	.06043307	.05698829	-.209315920	.72232702
13.[illegible]	.06099847	.05701122	-.205649054	.75437790
13.[illegible]	.06159860	.05715348	-.202260089	.78735905
14.[illegible]	.06219884	.05738928	-.199126845	.82109279
14.[illegible]	.06277217	.05769442	-.196228472	.85540174
15.[illegible]	.06329917	.05804687	-.193545360	.89011629
15.[illegible]	.06376749	.05842722	-.191059088	.92508091
16.[illegible]	.06417095	.05881898	-.188752414	.96015897
16.[illegible]	.06450834	.05920873	-.186609281	.99523559
17.[illegible]	.06478209	.05958607	-.184614819	1.03021870
17.[illegible]	.06499711	.05994341	-.182755347	1.06503849
18.[illegible]	.06515966	.06027566	-.181018353	1.09964556
18.[illegible]	.06527659	.06057983	-.179392460	1.13400833
19.[illegible]	.06535471	.06085464	-.177867380	1.16811008
19.[illegible]	.06540043	.06110012	-.176433847	1.20194591
20.[illegible]	.06541957	.06131724	-.175083549	1.23551988
22.[illegible]	.06532170	.06193953	-.170377466	1.36746367
24.[illegible]	.06509009	.06227334	-.166533484	1.49650918
26.[illegible]	.06482882	.06243924	-.163318043	1.62373883
28.[illegible]	.06457978	.06251600	-.160578580	1.74992256
30.[illegible]	.06435684	.06254816	-.158211286	1.87553152
32.[illegible]	.06416224	.06255982	-.156142409	2.00063269
34.[illegible]	.06399388	.06256021	-.154317591	2.12597180
36.[illegible]	.06384840	.06255732	-.152695389	2.25102526
38.[illegible]	.06372236	.06255295	-.151243547	2.37603371
40.[illegible]	.06361272	.06254826	-.149936430	2.50101839
42.[illegible]	.06351689	.06254374	-.148753360	2.62599062
44.[illegible]	.06343272	.06253959	-.147677446	2.75095651
46.[illegible]	.06335843	.06253584	-.146694746	2.87591948
48.[illegible]	.06329257	.06253249	-.145793643	3.00088146
50.[illegible]	.06323391	.06252951	-.144964375	3.12584360
60.[illegible]	.06301897	.06251884	-.141644869	3.75067246
70.[illegible]	.06288589	.06251266	-.139271454	4.37553963
80.[illegible]	.06279797	.06250888	-.137490178	5.00043941
90.[illegible]	.06273692	.06250646	-.136104066	5.62536336
100.[illegible]	.06269284	.06250483	-.134994778	6.25030483
R+(0)	.062500	.062500	-.12500000	.062500R+M
R+(-1)	0.000000	0.000000	-1.00000000	
R+(-2)	2.000000	0.000000	0.00000000	
R+(-3)			6.00000000	
R+(-4)			-78.00000000	
AS(R=1.0)	.062700	.062500	-.13499478	6.250000

	3.D PI G	- 2.P PI U	
R	Q(-)	H(-)	RIJ
0.0	.147456	-.589824/R	1.061683
.1	.14747115	-5.90070111	1.06311637
.2	.14751466	-2.95402797	1.06736145
.3	.14758124	-1.97340511	1.07428008
.4	.14766324	-1.48425658	1.08368693
.5	.14775161	-1.19165482	1.09537597
.6	.14783662	-.99728160	1.10913733
.7	.14791848	-.85899434	1.12476746
.8	.14795773	-.75571735	1.14207458
.9	.14797550	-.67574159	1.16088119
1.0	.14795371	-.61203852	1.18102481
1.1	.14783517	-.56013711	1.20235767
1.2	.14776361	-.51705728	1.22474588
1.3	.14758373	-.48073729	1.24806848
1.4	.14734117	-.44978615	1.27221628
1.5	.14703250	-.42288696	1.29709089
1.6	.14665521	-.39947392	1.32260390
1.7	.14620762	-.37885269	1.34867551
1.8	.14568887	-.36054724	1.37523482
1.9	.14509884	-.34416340	1.40221820
2.0	.14443809	-.32946334	1.42956920
2.2	.14290975	-.30404038	1.48518051
2.4	.14111952	-.28284107	1.54173984
2.6	.13909963	-.26488301	1.59900173
2.8	.13684668	-.24947299	1.65679134
3.0	.13441969	-.23610792	1.71499256
3.2	.13183840	-.22441323	1.77353690
3.4	.12913195	-.21410362	1.83239361
3.6	.12632791	-.20495731	1.89156084
3.8	.12345160	-.19679879	1.95105821
4.0	.12052574	-.18948699	2.01092067
4.2	.11757030	-.18290702	2.07119356
4.4	.11460248	-.17696422	2.13192880
4.6	.11163689	-.17157990	2.19318200
4.8	.10868569	-.16668803	2.25501039
5.0	.10575888	-.16223284	2.31747130
5.2	.10286449	-.15816691	2.38062117
5.4	.10001891	-.15444966	2.44451485
5.6	.09723707	-.15104621	2.50920526
5.8	.09451267	-.14792638	2.57474310
6.0	.09171839	-.14506397	2.64117678
6.2	.08905607	-.14243607	2.70855238
6.4	.08644682	-.14002262	2.77691365
6.6	.08389122	-.13780592	2.84630209
6.8	.08139936	-.13577032	2.91675691
7.0	.07896199	-.13390187	2.98831512
7.2	.07658557	-.13218814	3.06101151
7.4	.07426234	-.13061797	3.13487865
7.6	.07199041	-.12918128	3.20994684
7.8	.06976874	-.12786895	3.28624407
8.0	.06759625	-.12667268	3.36379595

3.0 PI G - 2.P PI U

R	Q(-)	H(-)	RIJ
8.5	.06220277	-.12414150	3.56330990
9.0	.05721201	-.12218669	3.77108929
9.5	.05243761	-.12072226	3.98730408
10.0	.04801547	-.11967451	4.21199162
10.5	.04373433	-.11897861	4.44504150
11.0	.03973581	-.11857639	4.68618420
11.5	.03601432	-.11841493	4.93498646
12.0	.03246661	-.11844591	5.19085618
12.5	.02914119	-.11862543	5.45305842
13.0	.02603764	-.11891411	5.72074273
13.5	.02313580	-.11927743	5.99298022
14.0	.02043502	-.11968596	6.26880697
14.5	.01803346	-.12011552	6.54726929
15.0	.01582762	-.12054713	6.82746582
15.5	.01381201	-.12096664	7.10858220
16.0	.01199905	-.12136423	7.38991543
16.5	.01037921	-.12173376	7.67088684
17.0	.00894125	-.12207203	7.95104429
17.5	.00767266	-.12237808	8.23005549
18.0	.00655006	-.12265254	8.50769518
18.5	.00555962	-.12289707	8.78382867
19.0	.00470754	-.12311396	9.05839434
19.5	.00400030	-.12330577	9.33138661
20.0	.00338502	-.12347514	9.60284073
22.0	.00163518	-.12397671	10.67475707
24.0	.00081024	-.12428754	11.72875420
26.0	.00037995	-.12448743	12.77001076
28.0	.00017461	-.12462101	13.80226412
30.0	.00007891	-.12471332	14.82802101
32.0	.00003516	-.12477804	15.84896356
34.0	.00001547	-.12482671	16.86624924
36.0	.00000674	-.12486218	17.88069841
38.0	.00000291	-.12488899	18.89290846
40.0	.00000124	-.12490957	19.90332448
42.0	.00000053	-.12492559	20.91228462
44.0	.00000022	-.12493820	21.92005001
46.0	.00000009	-.12494825	22.92682520
48.0	.00000004	-.12495633	23.93277243
50.0	.00000002	-.12496289	24.93802182
61.0	0.00000001	-.12498207	29.95689518
73.0	0.00000000	-.12499031	34.96429582
80.0	0.00000000	-.12499431	39.97570660
90.0	0.00000000	-.12499645	44.98079353
100.0	0.00000000	-.12499767	49.98443558

R+(1)	0.000000	0.000000	.500000
R+(0)	0.000000	-.125000	0.000000
R+(-1)	0.000000	0.000000	0.000000
R+(-2)	0.000000	0.000000	-156.000000
AS(R=100)	0.000000	-.125000	49.984400

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Received by Publishing Department
on November 18,1983.

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Таблицы эффективных потенциалов задачи трех тел
с кулоновским взаимодействием в адиабатическом представлении

Использован метод адиабатического представления в задаче трех тел с кулоновским взаимодействием. Вычислены матричные элементы $U_{im,jm'}(R)$ для восьми уровней состояний в квантовомеханической задаче двух центров. В таблицах приведены значения $U_{im,jm}(R)$ и нормировок $N_{im}(R)$ волновых функций системы $z_a = z_b = 1$ для состояний $(im) = [n_1 n_2 mp]$, $n_1 + n_2 + m + 1 \leq 2$, $p = q$ с абсолютной точностью 10^{-8}, а также значения энергии $E_{im}(R)$ с точностью 10^{-9} в интервале $R = 0,1/0,1/ 2/0,2/ 8/0,6/ 20/2/ 30/10/100$. Представленные таблицы являются наиболее полными по сравнению с известными в литературе как по типам представленных эффективных потенциалов, так и по их количеству, точности и области значений R, в которой они вычислены.

Работа выполнена в Лаборатории теоретической физики и Лаборатории вычислительной техники и автоматизации ОИЯИ.

Сообщение Объединенного института ядерных исследований. Дубна 1983

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Tables of the Effective Potentials for the Three-Body Problem
with the Coulomb Interaction in the Adiabatic Representation

The adiabatic representation in the three-body problem with the Coulomb interaction is used. Nonadiabatic matrix elements $U_{im,jm'}(R)$ are calculated, which connect 8 lower states of the two-center problem in quantum mechanics. The tables exemplify the values of $U_{im,jm'}(R)$ and normalization $N_{im}(R)$ of the wave functions for the system $z_a = z_b = 1$ for the states $(im) = [n_1 n_2 mp]$. $n_1 + n_2 + m + 1 < 2$, $p = q$ with an absolute accuracy $\sim 10^{-8}$ and the terms $E_{im}(R)$ with an accuracy $\sim 10^{-9}$ in the interval of values $R = 0.1/0.1/ 2/0.2/ 8/0.6/ 20/2/ 30/10/100$. The present tables are more complete in comparison with the known ones in the types of the calculated effective potentials, in their number, accuracy of calculation and the range of values R they are calculated in.

The investigation has been performed at the Laboratory of Theoretical Physics and the Laboratory of Computing Techniques and Automation, JINR.

Communication of the Joint Institute for Nuclear Research. Dubna 1983

0.5
2.5
4.5
14.5