SLAC-67
UC-34, Physics
TID-4500 (48th Ed.)

TABLES OF γ SPECTRA FROM e^+ HYDROGEN ATOM COLLISIONS

by

A. Dufner, S. Swanson* and Y. Tsai

August 1966

Technical Report
Prepared Under
Contract AT(04-3)-515
for the USAEC
San Francisco Operations Office

*Institute of Theoretical Physics, Stanford University, Stanford, California

Printed in USA. Price $4.00. Available from the Clearinghouse for Federal Scientific and Technical Information (CFSTI), National Bureau of Standards, U. S. Department of Commerce, Springfield, Virginia.

TABLE OF CONTENTS

LIST OF FIGURES

I. INTRODUCTION

Some recent discussions[1] have pointed out the possibility of using the collision of a positron beam with hydrogen atoms as the production process for a quasi-monochromatic high energy photon beam. The predominant reactions are as follows:

(a) $e^+ + e^- \rightarrow 2\gamma$ and its radiative corrections

(b) $e^+ + e^- \rightarrow 3\gamma$

(c) $e^+ + e^- \rightarrow e^+ + e^- + \gamma$

(d) $e^+ + p \rightarrow e^+ + p + \gamma$

The two photons from the annihilation process (a) are expected to be sufficiently prominent against the bremsstrahlung and three-photon background that their well-defined energy may be used effectively for photoproduction experiments. A typical gamma production spectrum is expected to look like that of Fig. 1.

The processes (b), (c), and (d) constitute the unwelcome background. The hydrogen atom is chosen as a target because the process (d) is proportional to Z^2 (if screening is ignored), whereas the processes (a), (b), and (c) are proportional to Z. The most interesting region of the photon scattering angle θ (measured from the incident positron beam direction) is in the neighborhood of $\theta = (2/\gamma)^{1/2}$, where $\gamma = E/m$ and E is the incident positron energy. As has been pointed out,[2] this results from the following:

1. The ratio of the cross section for process (a) to that of process (d) increases rapidly with angle; therefore, in order to reduce the background due to (d), the larger the angle the better.

2. The processes (a), (b) and (c) are symmetric with respect to 90° in the c.m. system of the initial $e^+ e^-$ due to symmetry under charge conjugation. $\theta_{c.m.} = 90^\circ$ corresponds to $\theta = (2/\gamma)^{1/2}$ in the laboratory system. For $\theta \ll \gamma^{-1/2}$, (c) and (d) are identical to within a few percent. However, for $\theta > (2/\gamma)^{1/2}$, the process (c) dominates over process (d). Furthermore, the cross section for the process (a) decreases more rapidly than that for process (c) as the angle θ is increased beyond $\theta = (2/\gamma)^{1/2}$. Therefore, no advantage is gained for reduction of background by taking θ much beyond $(2/\gamma)^{1/2}$.

3. The angle θ must not be chosen too large because both the cross section and the energy of the photon in process (a) decrease rapidly with angle. For the three reasons given above we have concentrated our discussions in the neighborhood of angle $\theta_{c.m.} = 90^{o}$.

The tables contained in this report are intended as an aid to both the study and use of such a gamma ray source. They list, for fixed photon scattering angle and positron energy, the theoretical values of the total cross sections for the annihilation processes (a) and (b), and the differential cross sections for the bremsstrahlung processes (c) and (d). The range of positron beam energy values is from 30 BeV to 0.50 BeV, for a variety of optimal scattering angles. A sufficiently dense spectrum of photon energies is given in each table to allow the application of graphing and numerical integration techniques for obtaining total bremsstrahlung cross sections at each photon scattering angle and initial positron energy value. (Special values not included in these tables may be obtained on request.) The following sections contain discussions of the specific forms of the cross sections which were evaluated to produce the succeeding tables. Units used throughout: $\hbar = c = 1$.

II. PROCESSES (a) and (b): $e^{+} + e^{-} \rightarrow 2\gamma,\ 3\gamma$

The combined cross section for the processes (a) and (b) can be written as:[3]

$$\frac{d\sigma}{d\Omega} = \frac{d\sigma_{2\gamma}}{d\Omega} + \frac{d\sigma_{3\gamma}}{d\Omega} = \frac{d\sigma_{o}}{d\Omega}\,(1+\delta) \tag{1}$$

where $\frac{d\sigma_{o}}{d\Omega}$, the lowest order cross section for 2γ annihilation, has the form:

$$\frac{d\sigma_{o}}{d\Omega} = \frac{r_{o}^{2}}{2(1+z)^{2}}\left[\frac{2\gamma}{1+\ell} + \frac{1+\ell}{2\gamma} + \frac{4\ell}{1+\ell} - \frac{4\ell^{2}}{(1+\ell)^{2}}\right] \tag{2}$$

for $1 \gg \theta$ and $\gamma \gg 1$;

$$\simeq \frac{r_{o}^{2}}{2}\,\frac{1}{(1+z)^{2}}\left(\frac{1}{z}+z\right) \quad \text{for } 1 \gg \theta \gg \frac{1}{\gamma} \tag{3}$$

with $z = \gamma\theta^2/2$, $\ell = \gamma^2\theta^2$, $\gamma = E/m$, and $r_o = e^2/mc^2 = 2.81777$ Fermi. E is the laboratory energy of the positron, m is its rest mass, and θ is the photon laboratory scattering angle measured from the incident positron momentum direction. These quantities are given at the head of each table, where they are listed as: E(E+) ≡ E, z ≡ z, THETA (LAB) ≡ θ, and the center-of-mass angle THETA (C.M.) ≡ $\theta_{c.m.} = \cos^{-1}\left(\frac{1-z}{1+z}\right)$.

The radiative correction δ, taking into account the third photon emitted with energy in the neighborhood of the 2γ annihilation spike, can be expressed as:[2,3]

$$\delta = -\frac{2\alpha}{\pi}\left[\ell n\left(\frac{R\sqrt{z}}{1+z}\right) - \frac{3}{4}\right](\ell n\, 2\gamma - 1) + Y(z) \qquad (4)$$

where α is the fine structure constant, $\pi = 3.14\ldots$, $R = k_a/\Delta k$ (cf. Fig. 1), and the peak photon energy $k_a \approx E/(1+z)$.

Y(z) is a small term (cf. Ref. 3) having a maximum Y(1) = 0.0045, and sloping off symmetrically to minimal values at typical useful z extrema of Y(0.1) = Y(10) = 0.0019. Equation (1) represents, essentially, the area between the points A and k_a as shown in Fig. 1.

The value of the annihilation cross section [Eq. (2)] is given in column 5 of the tables. The radiative correction δ ≡ DELTA [Eq. (4)] is listed at the bottom of each tabular page for the spectrum of values of R over which the approximations used in deriving the radiative correction are valid.[4]

III. THE PROCESS (c): $e^+ + e^- \rightarrow e^+ + e^- + \gamma$

A. The Tabulated Cross Section

The energy-angle distribution of the photons produced by this process is given in column 4 of the tables. The formula used is:

$$\frac{d^2\sigma}{d\Omega dk} = f\,\frac{2\alpha\, r_o^2\, \gamma^2}{\pi k}\left(\frac{1}{\gamma^4\theta^4} + \frac{1}{4\gamma^2}\right)\left\{2(2-2y+y^2)\,\ell n\left[2\gamma(y^{-1}-1)\right] - 3 + 3y - y^2\right\} \qquad (5)$$

where $y = \frac{k}{k_{max}} = k(1+z)/E$, $z = \frac{\gamma\theta^2}{2}$, and $\gamma = E/m$. In this formula, f is

the scaling function

$$f = (1 - 0.1 \sin \theta_{c.m.}) \; S \qquad (6)$$

where $S = 1 - y\, e^{-3(1-y)^{1/3}}$ is a scaling and suppression factor designed primarily to reduce the cross section abruptly to zero at $k = k_{max}$ $(y = 1)$. The photon scattering angle in the c.m. system, $\theta_{c.m.}$, is given as before by $\theta_{c.m.} = \cos^{-1} (1-z)/(1+z)$.

It should be noted that for $m/E \to 0$ the maximum energy of the photon (k_{max}) emitted in this process is k_a, i.e., the same as the photon energy due to 2γ annihilation, in contrast to the process (d) which has the maximum energy of γ nearly equal to the incident energy E. Equation (5) without the scaling function f was derived and discussed in Ref. 2. The most accurate calculation for this process was done by Swanson (cf. Section III. B), but excessive computation time per spectral point prevented the use of his method for tabular values. Numerical comparison with Swanson's results shows that Eq. (5) with $f = 1$ has the correct spectral shape except near the tip $(k \approx k_a)$ and gives the correct angular distribution at small and large angles, but has a maximum deviation near $\theta_{c.m.} = 90^{o}$ of about 20%. Since the angular distribution must be symmetric with respect to $\theta_{c.m.} = 90^{o}$ and the cross section must go to zero at $k = k_{max}$, a scaling function was constructed in the form $f = \left(1 + a \sin \theta_{c.m.}\right) \left(1 - y e^{-M(1-y)^{N}}\right)$, where the constants were determined by a computer best fit to Swanson's exact values.

The bremsstrahlung cross section calculated by using this scaling function in Eq. (5) was tested against more than 80 cross section values as determined by Swanson's program, for z between 0.25 and 5, and E from 0.5 to 30 BeV. Except for behavior based on $k \approx k_{max}$ (to within a fraction of a percent), this cross section was found to have the following accuracy.

For $5 \leq E \leq 30$ BeV and $0.25 \leq z \leq 5$, Eq. (5) overestimates by a maximum of + 2.1%, with an average of about + 1%, with the exception of $E = 5$, $z = 1$ where it underestimates by a maximum of - 1.4% with an average of about -0.8%. For $0.5 \leq E \leq 1$ BeV and $z = 0.25$, $z = 5$ it is exact to within a small

fraction of a percent, and for $z = 1$ it underestimates by a maximum of -3.9% with an average of about -3%, for all $k \leq 0.93 \times k_{max}$.

During the testing of the exact computer integral near k_{max} it was discovered that the contribution of the matrix element from diagrams e and f of Fig. 2 produces an unexpected rise in the cross section for photon energies within 0.1% of k_{max}. The increase due to this matrix element is suppressed by the phase space factor in the region of k within 0.001% of k_{max}, such that the overall contribution integrated over photon energies is insignificantly small compared with expected radiative corrections to 2γ annihilation. The graph of a typical spectrum showing this contribution is given in Fig. 3.

For those who are interested in the problems associated with the exact numerical calculations of Swanson's computer program, the following outline of his procedures is included.

B. Swanson's Computer Evaluation

The photon spectrum for $e^+ e^-$ bremsstrahlung has been evaluated on a computer by doing phase space integrals of the exact, lowest order (α^3), differential cross section. Although the square of the matrix element for this process has been evaluated before, once by Vortruba[5] for pair production in the field of an electron and again by Hodes[6] for electron-electron bremsstrahlung, the application of the substitution rule to such long expressions is tedious and subject to error. Hence, we started anew, using a computer program to reduce the Dirac traces algebraically. The photon spectrum was then obtained by numerical integration of the differential cross section over the (unobserved) $e^+ e^-$ pair.

To lowest order (α^3), the eight Feynman diagrams of Fig. 2 define the matrix element for electron-positron bremsstrahlung. We denote the initial electron and positron four-momenta by p_1 and p_2, respectively, the final photon by k, and the final electron and positron by p_3 and p_4, respectively. There are three distinct types of traces in the absolute square of the matrix element; once these are reduced to dot products, all other necessary traces may be obtained by changing the names and signs of the appropriate momenta.

First we introduce a shorthand notation for the propagators and particle projection operators:

$$D(p_i - p_j) \equiv (p_i - p_j)^{-2} \tag{7}$$

$$S(q) \equiv (\not{q} - m)^{-1} \tag{8}$$

$$\Lambda(\pm p_i) = (m \pm \not{p}_i)/(2m) \tag{9}$$

The four possible internal electron momenta are:

$$\begin{aligned} q_1 &= p_1 - k & q_3 &= k + p_3 \\ q_2 &= k - p_2 & q_4 &= -k - p_4 \end{aligned} \tag{10}$$

We shall define the symbol $[i\mu j]$ by

$$[i\mu j] \equiv \left\{ \not{\epsilon}\ S(q_i)\ \gamma_\mu + \gamma_\mu\ S(q_j)\ \not{\epsilon} \right\} \tag{11}$$

where $\not{\epsilon}$ is the polarization of the external photon. When the photon polarization sum is taken, $\ldots\not{\epsilon}\ldots\not{\epsilon}\ldots$ is replaced by $\ldots(\gamma_\lambda)\ldots(-\gamma_\lambda)\ldots$.

Consider now the three parts of the square of the matrix element arising from graphs 2a, b combined with 2a, b; from 2a, b combined with 2c, d; and from 2a, b combined with 2e, f. Denote these by A, B, and C, respectively.

$$\begin{aligned} A \equiv \left[D(p_2 - p_4)\right]^2 \ &\text{trace}\left\{\Lambda(p_3)\left[3\mu 1\right]\Lambda(p_1)\left[1\nu 3\right]\right\} \\ &\text{trace}\left\{\Lambda(-p_2)\ \gamma_\mu\ \Lambda(-p_4)\ \gamma_\nu\right\} \end{aligned} \tag{12}$$

$$\begin{aligned} B \equiv D(p_2 - p_4)\ D(p_1 - p_3)\ &\text{trace}\left\{\Lambda(p_3)\left[3\mu 1\right]\Lambda(p_1)\ \gamma_\nu\right\} \\ &\text{trace}\left\{\Lambda(-p_2)\ \gamma_\mu\ \Lambda(-p_4)\left[4\nu 2\right]\right\} \end{aligned} \tag{13}$$

$$C \equiv -D(p_2 - p_4)\ D(p_3 + p_4)\ \text{trace}\left\{\Lambda(p_3)\left[3\mu 1\right]\Lambda(p_1)\left[1\nu 2\right]\Lambda(-p_2)\gamma_\mu\ \Lambda(-p_4)\gamma_\nu\right\} \tag{14}$$

With the following indicated substitutions, these three traces suffice to evaluate the square of the total matrix element.

$$\sum_{\substack{\text{pol}\\ \text{spins}}} |M|^2 = A + A(p_1 \longleftrightarrow -p_4,\ p_2 \longleftrightarrow -p_3) + A(p_2 \longleftrightarrow -p_3)$$

$$+ A(p_1 \longleftrightarrow -p_4) + 2B + 2B(p_2 \longleftrightarrow -p_3) + 2C \qquad (15)$$

$$+ 2C(p_1 \longleftrightarrow -p_4) + 2C(p_1 \longleftrightarrow p_3,\ p_2 \longleftrightarrow p_4,\ k \longleftrightarrow -k)$$

$$+ 2C(p_1 \longleftrightarrow -p_2,\ p_3 \longleftrightarrow -p_4,\ k \longleftrightarrow -k)$$

This may be verified by performing the substitutions and using the fact that the trace of a string of Dirac matrices is equal to the trace of the string written in reverse order.

The actual reduction of the three basic traces, A, B, and C, to dot products was done on an IBM 7090 computer by a machine language program written to do Dirac algebra symbolically.[7] When only the conditions $p_i^2 = m^2$ and $k^2 = 0$ are imposed, the full expression for Eq. (15) has almost 900 terms. Each term is a product of three dot products, divided by the four propagator denominators. Using other identities, it was possible to combine or cancel (by hand) about 30% of the terms so that the final result for the square of the matrix element contained 632 terms. After cancellations, trace A contains 42 terms, B contains 82, and C has 75 terms.

To obtain the cross section, we then multiply the squared matrix element by the phase space factor and divide by the flux as follows:

$$d\sigma = (\alpha^3/2\pi^2)\left((p_1\cdot p_2)^2 - m^4\right)^{-1/2} (m^6 \Sigma|M|^2) \times \left\{\frac{\delta^4(p_1 + p_2 - p_3 - p_4 - k)\ d^3p_3\, d^3p_4 d^3k}{m^2\,\omega\,\epsilon_3\,\epsilon_4}\right\} \qquad (16)$$

To get the photon spectrum, we integrate this expression over the possible (unobserved) final electron and positron momenta. Since the kinematical constraints on p_3 and p_4 take a complicated form in the laboratory frame, it was found most convenient to do this integration in the frame where the

three-vector part of $p_3 + p_4$ is zero. Even in this frame, relativistic kinematics lead to such extreme variation in the values of the invariants near the maxima of the propagators D and S that dot products and photon propagators had to be calculated to double precision (about 22 decimal digits on the Burroughs B-5000) if sufficient accuracy was to be retained for reliable calculation of $\Sigma|M|^2$. Moreover, where a trace appears to have a propagator (squared) type of behavior, the numerator becomes proportional to the propagator denominator in the region where this denominator is very small, leaving a dependence which goes as q^{-2} instead of q^{-4}. This q^{-2} peak is typically modified at its center by a more complete numerator cancellation (also a consequence of helicity conservation), placing a crater of several orders of magnitude in the peak.

Computational errors may enter from two principal sources: (1) The numbers are represented by finite strings of digits, so if the final answer is the result of a near cancellation of several terms there can be appreciable round-off errors. (2) A numerical integration of a rapidly varying function ($\Sigma|M|^2$) may be inaccurate because the mesh points miss important regions of variation of the integrand.

We have estimated the errors of type (1) by calculating $\Sigma|M|^2$ at various scattering angles in double precision and comparing this with $\Sigma|M|^2$ at the same angles but calculated in single precision.[8] Our conclusion is that the "single precision" calculation has, at worst, round-off errors of a few percent of the integrand values in the peak regions (which contributes about 9% to the total integral) and thus that the total contribution of round-off error to the final answers is of the order 0.1%.

Errors of type (2) have been estimated as follows: The final state integration over scattering angles was initially attempted by the use of a recursive Simpson's rule. The algorithm refined the mesh in regions of rapid variation of the integrand until a specified agreement was obtained between two successive approximations.[9] Blind application of this routine gave very poor accuracy; apparently, sometimes one of the maxima was completely missed. By requiring that the initial trial mesh contain several points in the vicinity of each maximum, we obtained much more accurate answers.

Because of the extreme variation of $\Sigma|M|^2$ with respect to angles near a maximum, the convergence of the integration routine was not completely satisfactory. It was suggested to us[10] that by a transformation of variables,

equal intervals of integration could be made to have approximately equal contributions to the final answer. In other words, by introducing a change of scale, the integrand can be made much smoother and better convergence effected. In principle, the recursive mesh refinement would also spend approximately equal times sampling the integrand in regions of equal contribution to the integral; it just turns out to be less efficient in practice. The answers obtained by using this change of variables, and a mesh size allowing reasonable computing time, are estimated to be accurate to about 1%. We base this estimate of accuracy on the small variations in the results upon successive refinements of the internal accuracy criterion which effectively increased the number of mesh points in regions where the function is varying rapidly. Subsequently, the parts of $\Sigma|M|^2$ used in the derivation of Eq. (5) (without the factor f) were analytically integrated, and the values of these parts were compared with numerical integrals of the same functions. This particular integrand has much the same behavior as that of the entire $\Sigma|M|^2$, and the above mentioned comparison indicates that the accuracy of the total numerical integral is better than 2% for the mesh size finally used in calculating the check points for Eq. (5).

IV. THE PROCESS (d): $e^+ + p \rightarrow e^+ + p + \gamma$

Two complementary cross sections are tabulated for e^+p bremsstrahlung. The first is the well-known Sommerfeld-Schiff formula derived from an integration of the Bethe-Heitler differential cross section over the angles of the (unobserved) scattered electron.[11] This expression, tabulated in column 2 of the tables, is of the form:

$$\text{EPG(SCHIFF)} \equiv \frac{d^2\sigma_s}{d\Omega dk} = \frac{2\alpha r_o^2}{\pi k}\,\gamma^2 \left\{ \frac{16\ell(1-\eta)}{(1+\ell)^4} - \frac{(2-\eta)^2}{(1+\ell)^2} + \left[\frac{2-2\eta+\eta^2}{(1+\ell)^2} - \frac{4\ell(1-\eta)}{(1+\ell)^4} \right] 2\ell n \left[2\gamma \left(\eta^{-1} - 1 \right) \right] \right\} \tag{17}$$

where $\gamma = \frac{E}{m_e}$, $\ell = \gamma^2 \theta^2$, and $\eta = \frac{k}{E}$. This cross section is expected to be most accurate for the smaller values of photon production angle and energy.

The second $e^+ p\gamma$ cross section was obtained by numerically integrating the exact matrix element,[12] with the effects of form factors, magnetic moment, and recoil of the proton included. The expression integrated by the computer, whose values are listed in column 3 of the tables, was in the following form:

$$\text{EPG(EXACT)} \equiv \frac{d^2\sigma}{d\Omega dk} = \frac{r_o^2 \alpha m^2 k}{2\pi M E_1} \frac{\left((p_3 t)^2 - m^2 t^2\right)^{1/2}}{2t^2} \tag{18}$$

$$\times \int_0^{\pi} \sin\theta_e \, d\theta_e \, \frac{1}{q^4} \left[M^2 F(q^2)\,(A_1 + B_1 + C_1) + G(q^2)(A_2 + B_2 + C_2)\right]$$

where

$$A_1 = \frac{-m^2 \Lambda}{k_s^2 \chi^3} \left[\frac{q^2}{2}\left(1 + \frac{2E_1}{M}\right) + 2E_1^2\right] \tag{19a}$$

$$B_1 = \frac{1}{k_s \chi}\left[\frac{2}{(p_1 k)}\left\{\left(m^2 - \frac{q^2}{2}\right)\left[2E_1(E_1 - k) + \frac{q^2}{2}\left(\frac{2E_1 - k}{M} + 1\right)\right] - \frac{q^2}{2} k^2\right\}\right. \tag{19b}$$

$$\left. - \frac{q^2}{M}\left(M - E_1 + k - \frac{q^2}{2M}\right)\right]$$

$$C_1 = \frac{-m^2}{(p_1 k)^2}\left\{2\left(E_1 - k + \frac{q^2}{M}\right)(E_1 - k) + \frac{q^2}{2}\right\} + \frac{1}{(p_1 k)}\left\{q^2\left(1 + \frac{E_1}{M}\right) - k_s \Lambda\right\} \tag{19c}$$

$$A_2 = \frac{m^2 \Lambda}{k_s^2 \chi^3} \quad (2m^2 + q^2) \tag{20a}$$

$$B_2 = \frac{1}{k_s \chi} \left\{ \frac{q^4 - 4m^4}{(p_1 k)} + 2q^2 + 2(p_1 k) + 4m^2 \right\} \tag{20b}$$

$$C_2 = m^2 \frac{(2m^2 + q^2)}{(p_1 k)^2} - 2 + \frac{2}{(p_1 k)} \left\{ k_s \Lambda - 2q^2 \right\} \tag{20c}$$

$$\begin{aligned} \Lambda &= E_{3s} - p_{3s} \cos\theta_e \cos\theta_{ku} \quad \text{for } \frac{\pi}{2} \leq \theta_e \leq \Pi; \\ &= \frac{m^2 + p_{3s}^2 (1 - \cos^2\theta_e \cos^2\theta_{ku})}{E_{3s} + p_{3s} \cos\theta_e \cos\theta_{ku}} \quad \text{elsewhere} \end{aligned} \tag{21}$$

$$\chi = \left\{ m^2(1 - \cos\theta_e \cos\theta_{ku}) + 4p_{3s}^2 \sin^2 \frac{(\theta_e + \theta_{ku})}{2} \sin^2 \frac{(\theta_e - \theta_{ku})}{2} \right\}^{1/2} \tag{22}$$

$$\theta_{ku} = \cos^{-1} \left\{ \frac{E_{1s} - k_s - (p_1 k)/k_s}{u} \right\} \tag{23}$$

$$\begin{aligned} u &= \left\{ p_{1s}^2 + k_s^2 - 2E_{1s}k_s + 2(p_1 k) \right\}^{1/2} \\ &= \left\{ (E_{1s} - k_s)^2 + 2(p_1 k) - m^2 \right\}^{1/2} \end{aligned} \tag{24}$$

The square of the momentum transfer is

$$q^2 = 2m^2 - 2(p_1 k) - 2E_{3s}(E_{1s} - k_s) + 2p_{3s} u \cos\theta_e \tag{25a}$$

which for the purposes of numerical calculation was used in the form:

$$q^2 = q^2_{max} - 4p_{3s}\, u \sin^2 \frac{\theta_e}{2} \tag{25b}$$

where $q^2_{max} = 2m^2 - 2(p_1k) - 2E_{3s}(E_{1s} - k_s) + 2p_{3s}u$ for $k > \frac{0.02M^2}{E_1\theta^2}$ (26)

$$= - \frac{(p_1k)^2}{(E_1 - k)^2} \quad \text{elsewhere.}$$

As before, r_o is the radius of the electron in cm and m is its mass in BeV. α is the fine structure constant, and $M = 0.938256$ is the proton mass in BeV. E_1 is the incident positron laboratory energy in BeV, θ_e is its scattering angle, and k is the photon energy observed at angle θ radians measured from the incident positron momentum direction. Using the notation of the diagrams considered in Fig. 4, we have the following parameters:

$$P_1 = \left(E_1^2 - m^2 \right)^{1/2} \simeq E_1 \left[1 - \frac{m^2}{2E_1^2} - \frac{m^4}{8E_1^4} \right] \tag{27}$$

$$(p_1k) = k(E_1 - p_1 \cos\theta) \simeq k\left[\frac{m^2}{2E_1} + \frac{m^4}{8E_1^3} + 2p_1 \sin^2 \frac{\theta}{2} \right] \tag{28}$$

$$t^2 = m^2 + M^2 + 2E_1M - 2kM - 2(p_1k) \tag{29}$$

$$tk = (p_1k) + Mk \tag{30}$$

$$tp_3 = \frac{t^2 + m^2 - M^2}{2} = m^2 + (E_1 - k)M - (p_1 k) \tag{31}$$

$$tp_1 = m^2 + E_1 M - (p_1 k) \tag{32}$$

$$k_s = \frac{tk}{\sqrt{t^2}}, \quad E_{3s} = \frac{tp_3}{\sqrt{t^2}}, \quad E_{1s} = \frac{tp_1}{\sqrt{t^2}}, \quad p_{3s} = \left(E_{3s}^2 - m^2\right)^{1/2}, \quad p_{1s} = \left(E_{1s}^2 - m^2\right)^{1/2} \tag{33}$$

The proton form factors from Ref. 13 are, in our units:

$$F(q^2) = 4(G_e^2 - q^2 G_m^2/4M^2)/(1 - q^2/4M^2) \tag{34a}$$

$$G(q^2) = -q^2 G_m^2 \tag{34b}$$

where $G_e = G_{es} + G_{ev} = 0.5(-0.8Q_a + 1.8Q_c) + 0.5(-1.68Q_a + 2.68Q_b)$ and

$G_m = G_{ms} + G_{mv} = 0.44(-1.7Q_a + 2.7Q_c) + 2.35(-1.0Q_a + 2.0Q_b)$ with

$$Q_a = \frac{1}{1 - \frac{q^2}{1.17}}, \quad Q_b = \frac{1}{1 - \frac{q^2}{0.565}}, \quad Q_c = \frac{1}{1 - \frac{q^2}{0.615}}$$

In general, due to the functional behavior of the integrand, the numerical integration of this cross section is less reliable at small θ and small k because of round-off errors. For large θ and k, however, the integrand is less singular and the results are reliable to within 1%. Thus we see that EPG(SCHIFF) and EPG(EXACT) are complementary, the former being more reliable for small photon energies and scattering angles while the latter is more exact for the larger energies and angles.

V. OPTIMAL VALUE OF z

As discussed in the Introduction, the range of optimal scattering angles may be determined from an analysis of the values of the annihilation cross section as compared to the bremsstrahlung background. The value of the annihilation cross section itself, of course, decreases fairly rapidly with increasing angle. However, the ratio of the annihilation cross section to the sum of the two background differential cross sections at low photon energies (say, for a beam hardened to $k_{min} \approx 0.02$ BeV) has a maximum within the interval $1 < z < 3$ for all positron beam energies $0.5 < E < 30$ BeV. Although the ratio of annihilation to proton background increases with increasing z, the ratio to electron background peaks in the above mentioned interval. There occurs then some value of z for which the ratio of the annihilation cross section to the sum of the two background bremstrahlung contributions is a maximum. However, since the photon annihilation energy decreases rapidly with increasing angle $k_a = E/(1 + z)$, the optimum z thus obtained may not be the most practical angle. The experimenter has to decide for himself the best value of z, taking into consideration how much energy he is willing to sacrifice and how much background he is willing to tolerate.

Angular considerations with respect to background total cross sections have not been made, but conclusions based on analyses using total cross sections are not expected to deviate radically from those discussed above.

ACKNOWLEDGEMENTS

We are indebted to the Computation Group of the Stanford Linear Accelerator Center for programming assistance. In particular we wish to acknowledge the extensive help given us by E. Burfine, J. Cook, and S. Howry.

FOOTNOTES AND REFERENCES

1. J. Ballam and Z. G. T. Guiragossian, Proceedings of the International Conference on High-Energy Physics, Dubna, 1964 (unpublished).
2. Y. S. Tsai, S. M. Swanson and C. K. Iddings, Proceedings of the International Symposium on Electron and Photon Interactions at Hamburg (1965), Springer-Verlag Vol. II, p. 380.
3. Y. S. Tsai, Phys. Rev. 137, B730 (1965). There is a minor error in the lowest order cross section for 2γ annihilation [Eq. (16)] as given in this paper. The last term should have a plus sign in the denominator, as is given in Eq. (2) above.
4. It is to be noted that the numerical values of δ given in the paper of Ref. 2 are incorrect. One of us (Y. S. Tsai) wishes to thank Dr. G. Chadwick for pointing this out to him.
5. V. Vortruba, Bull. Int. Acad. Tcheque Les Sciences 49, 19 (1948), and Phys. Rev. 73, 1468 (1948).
6. I. Hodes, Ph. D. Thesis, University of Chicago (1953) (unpublished).
7. A description of this program has been given in: S. M. Swanson, "FTRACE: A FAP Subroutine for Dirac Gamma Matrix Algebra," ITP-120, Institute of Theoretical Physics, Stanford University. Copies are available upon request.
8. Actually, in our "single precision" calculation the dot products and the propagator denominators were evaluated in double precision and then were truncated to single precision length. The $\Sigma |M|^2$ and subsequent numerical integration was then done in single precision.
9. We are indebted to C. H. Moore, formerly of the SLAC Computation Group, for this algorithm.
10. E. Allton, private communication.
11. L. I. Schiff, Phys. Rev. 83, 252 (1951), and Phys. Rev. 87, 750 (1952); A. Sommerfeld, Wellenmechanik (Ungar, New York); p. 551.
12. Y. S. Tsai, Proceedings of the International Conference on Nucleon Structure at Stanford (Stanford Press, 1963), edited by R. Hofstadter and L. I. Schiff; p. 225, Eq. 12.
13. L. N. Hand, D. G. Miller, and R. Wilson, Rev. Mod. Phys. 35, 335 (1963).

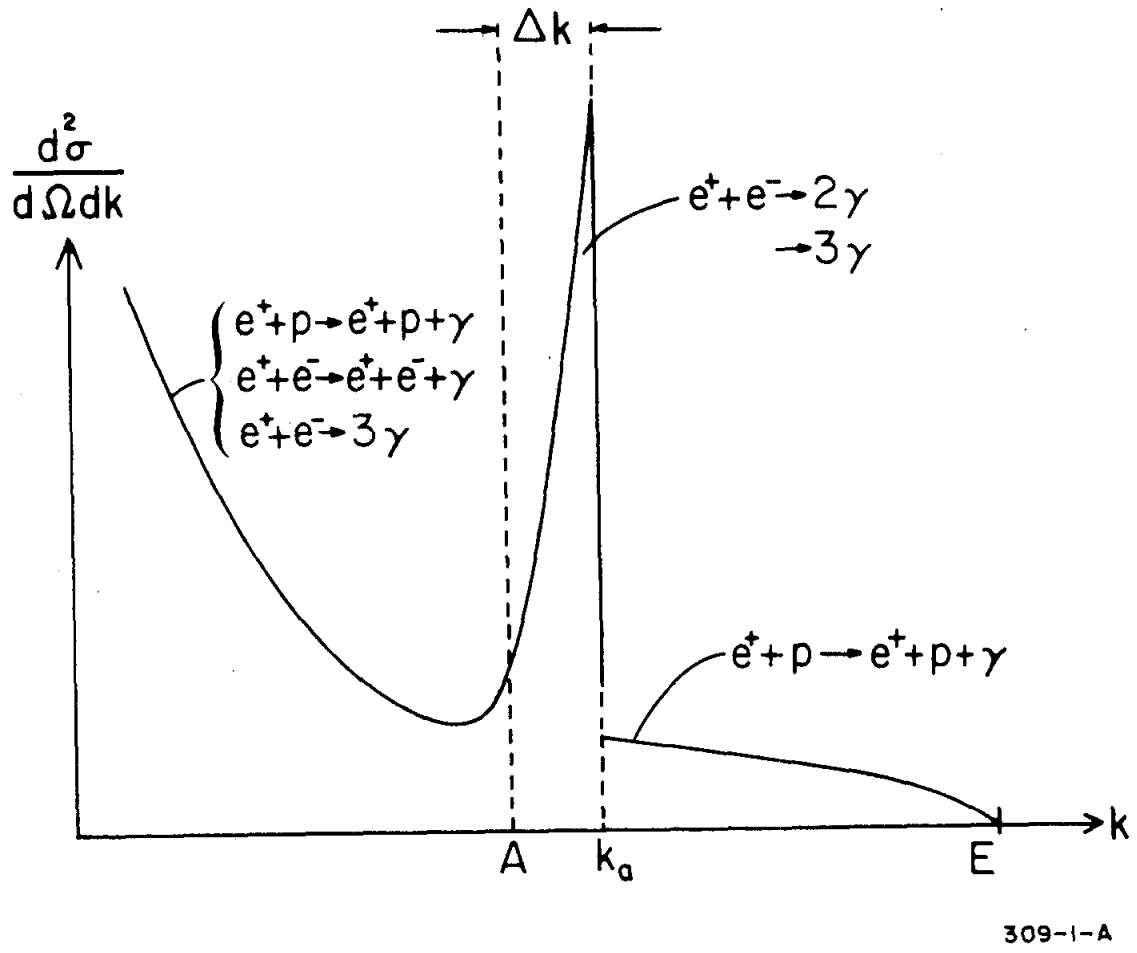

FIG. 1 -- A TYPICAL GAMMA SPECTRUM FROM A POSITRON-HYDROGEN ATOM COLLISION AT A FIXED ANGLE. k IS PHOTON ENERGY, k_a IS THE 2γ ANNIHILATION ENERGY AND THE POINT E INDICATES THE INCIDENT POSITRON ENERGY.

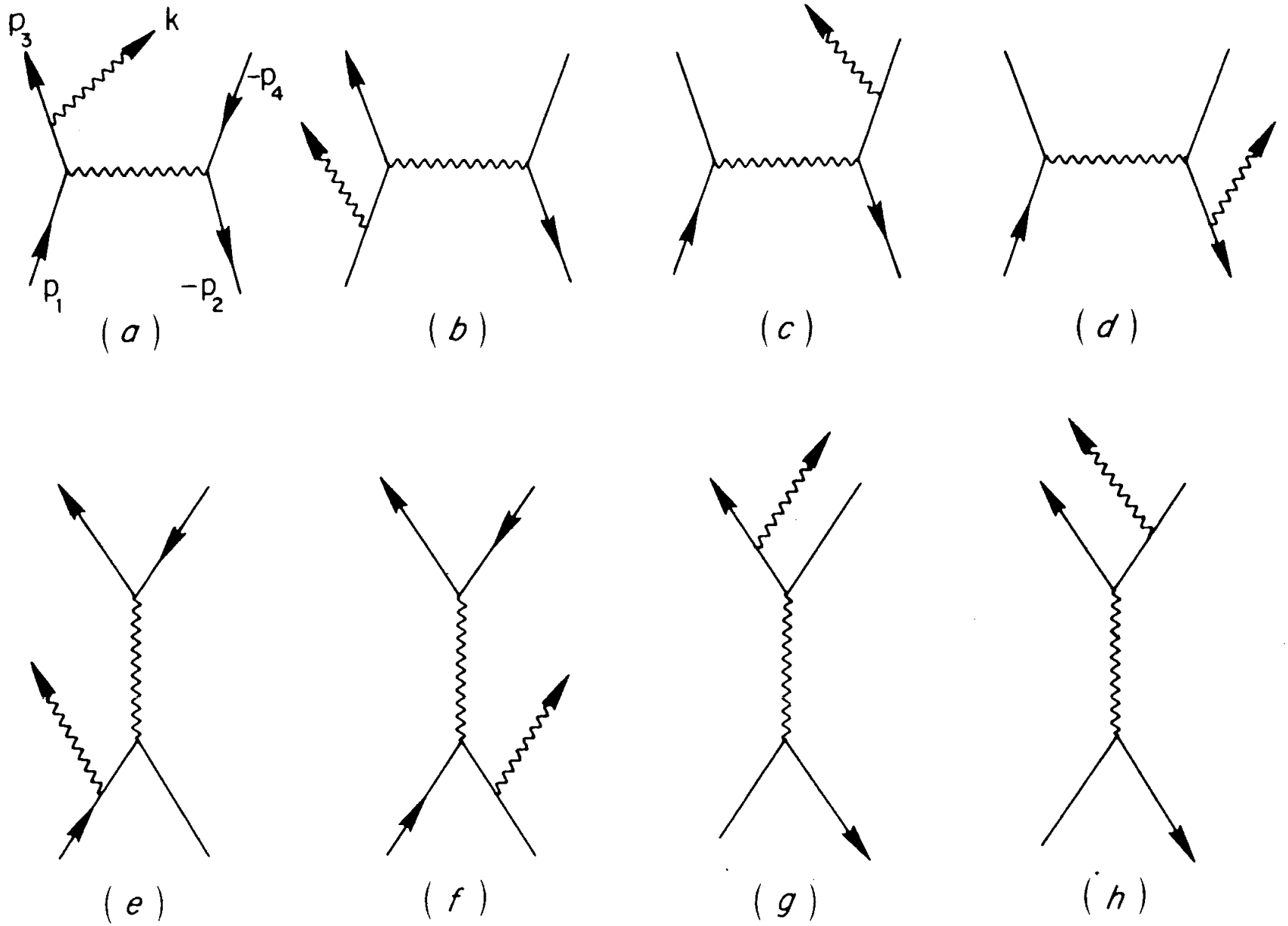

FIG. 2-- THE FEYNMAN DIAGRAMS FOR $e^+ e^-$ BREMSSTRAHLUNG

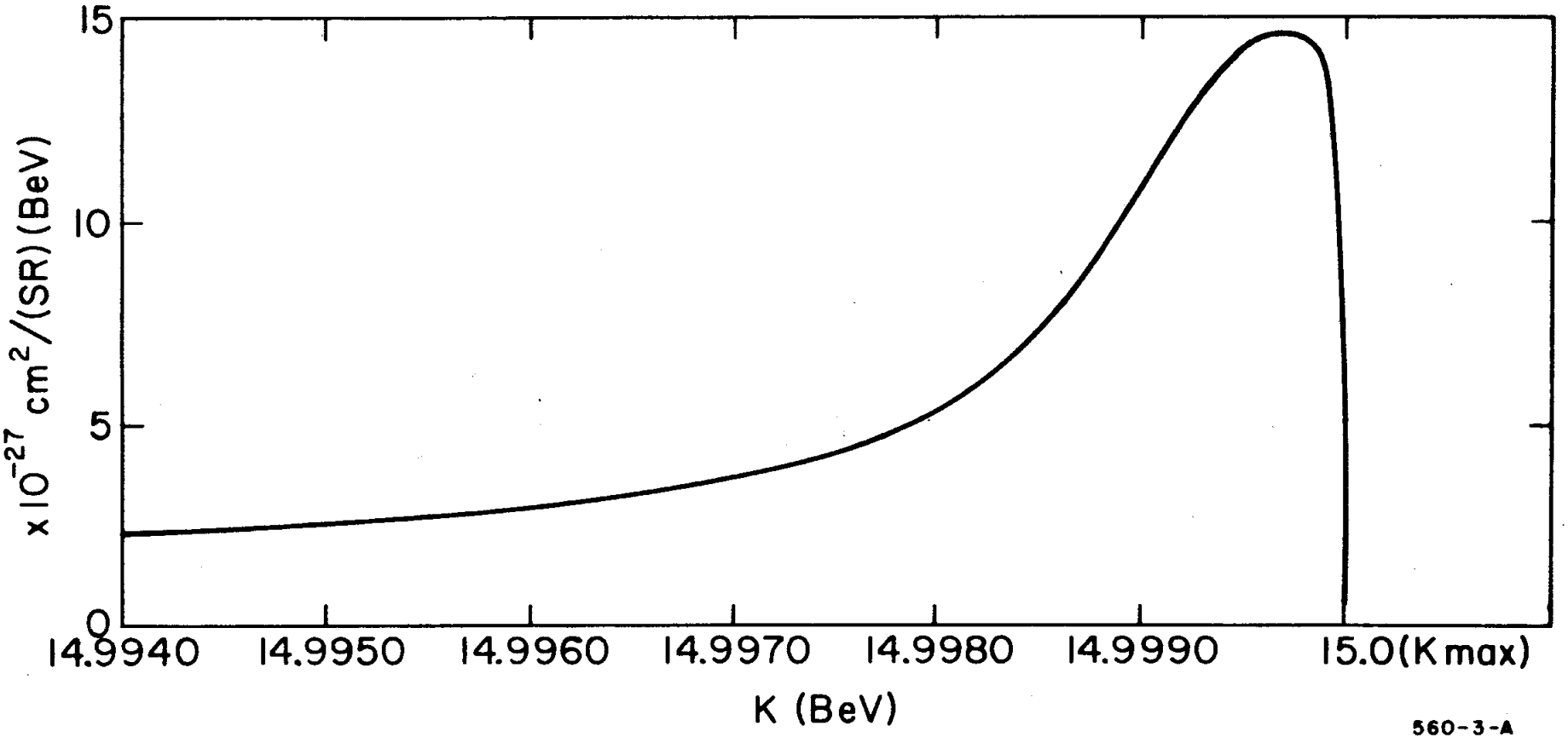

FIG. 3 -- BREMSSTRAHLUNG NEAR k_{max}, FROM DIAGRAMS 2e, f. INCIDENT POSITRON ENERGY 30 BeV, $z \equiv E\theta^2/2m = 1$

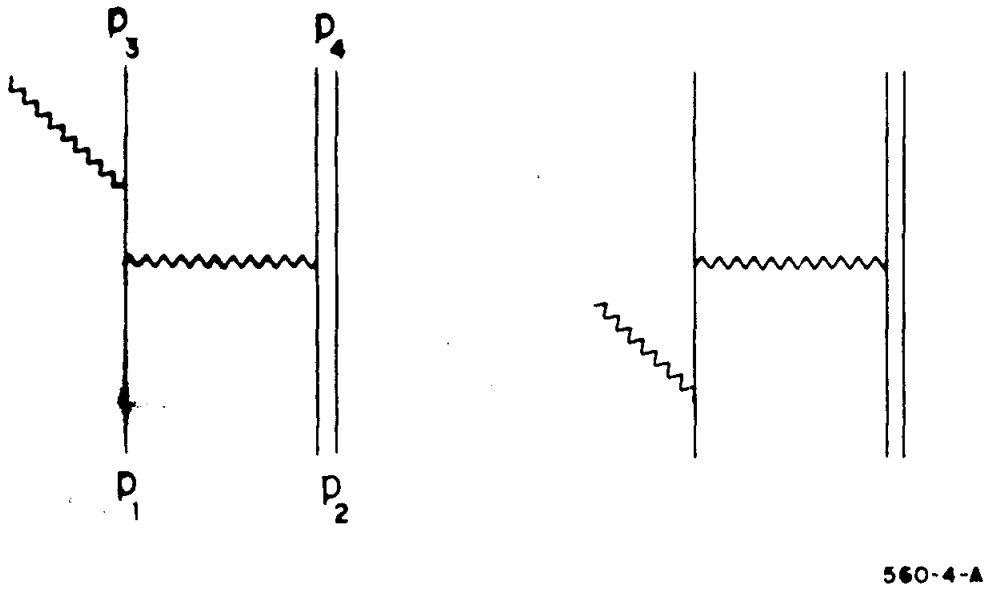

FIG. 4 -- THE FEYNMAN DIAGRAMS FOR $e^+ p$ BREMSSTRAHLUNG

EXPLANATION OF TABLES

TABULAR SYMBOL	MEANING
E (E+)	Incident positron energy in BeV.
THETA (θ)	Photon scattering angle in the laboratory (LAB) and center-of-mass (C.M.) system, in radians, as measured from the incident positron direction.
Z	$z = E\theta^2/2m$ where E and θ are as above, and m is the mass of the positron.
K	Photon energy in BeV.
EPG (SCHIFF)	Sommerfeld-Schiff cross section for the process $e^+ + p \rightarrow e^+ + p + \gamma$, in units of $cm^2/(BeV \times Steradians)$
EPG (EXACT)	Computer integrated cross section for the process $e^+ + p \rightarrow e^+ + p + \gamma$, cf. Eq. (18), same units as above.
EEG	Cross section for the process $e^+ + e^- \rightarrow e^+ + e^- + \gamma$, as calculated from Eq. (5), same units as above.
2G	Annihilation cross section $e^+ + e^- \rightarrow 2\gamma$, in units of cm^2/Steradian, calculated from Eq. (2).
R	$R = k_a/\Delta k$ radiative correction factor, cf. Eq. (4).
DELTA	The radiative correction (δ) to the process $e^+ + e^- \rightarrow 2\gamma$, cf. Eqs. (1) and (4).

E(E+) = 0.500 BEV THETA(LAB) = 2.261@-02 RAD.
Z = 0.250 THETA(C.M.) = 9.273@-01 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	2.667@-24	2.810@-24	2.675@-24	
0.030	1.690@-24	1.758@-24	1.660@-24	
0.040	1.209@-24	1.250@-24	1.172@-24	
0.050	9.253@-25	9.542@-25	8.877@-25	
0.060	7.397@-25	7.615@-25	7.032@-25	
0.070	6.096@-25	6.267@-25	5.745@-25	
0.080	5.137@-25	5.276@-25	4.801@-25	
0.090	4.403@-25	4.520@-25	4.083@-25	
0.100	3.827@-25	3.925@-25	3.519@-25	
0.150	2.169@-25	2.217@-25	1.913@-25	
0.200	1.403@-25	1.417@-25	1.183@-25	
0.250	9.787@-26	9.845@-26	7.823@-26	
0.300	7.175@-26	7.190@-26	5.312@-26	
0.350	5.442@-26	5.469@-26	3.418@-26	
0.400	4.198@-26	4.198@-26	0.000@+00	1.080@-25

R =	200	100	50	25	10	5
DELTA =	-0.109	-0.088	-0.067	-0.045	-0.017	0.004

E(E+) = 0.500 BEV THETA(LAB) = 3.197@-02 RAD.
Z = 0.500 THETA(C.M.) = 1.231@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	6.829@-25	6.989@-25	7.512@-25	
0.030	4.288@-25	4.368@-25	4.631@-25	
0.040	3.054@-25	3.105@-25	3.247@-25	
0.050	2.332@-25	2.369@-25	2.443@-25	
0.060	1.862@-25	1.890@-25	1.923@-25	
0.070	1.533@-25	1.555@-25	1.561@-25	
0.080	1.291@-25	1.309@-25	1.296@-25	
0.090	1.106@-25	1.121@-25	1.094@-25	
0.100	9.612@-26	9.733@-26	9.372@-26	
0.150	5.443@-26	5.494@-26	4.929@-26	
0.200	3.520@-26	3.581@-26	2.942@-26	
0.250	2.455@-26	2.487@-26	1.846@-26	
0.300	1.799@-26	1.815@-26	1.055@-26	
0.333	1.492@-26	1.507@-26	0.000@+00	4.416@-26
0.350	1.364@-26	1.369@-26		
0.400	1.052@-26	1.044@-26		

R =	200	100	50	25	10	5
DELTA =	-0.113	-0.091	-0.070	-0.049	-0.021	0.000

E(E+) = 0.500 BEV
Z = 1.000

THETA(LAB) = 4.521@-02 RAD.
THETA(C.M.) = 1.571@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	ZG CMSQ/SR
0.020	1.722@-25	1.766@-25	2.829@-25	
0.030	1.077@-25	1.104@-25	1.721@-25	
0.040	7.662@-26	7.851@-26	1.191@-25	
0.050	5.848@-26	5.990@-26	8.842@-26	
0.060	4.667@-26	4.780@-26	6.867@-26	
0.070	3.842@-26	3.934@-26	5.500@-26	
0.080	3.235@-26	3.311@-26	4.507@-26	
0.090	2.772@-26	2.836@-26	3.757@-26	
0.100	2.408@-26	2.463@-26	3.175@-26	
0.150	1.363@-26	1.391@-26	1.559@-26	
0.200	8.817@-27	8.956@-27	8.326@-27	
0.250	6.148@-27	6.167@-27	0.000@+00	1.987@-26
0.300	4.506@-27	4.499@-27		
0.350	3.416@-27	3.417@-27		
0.400	2.634@-27	2.616@-27		

R =	200	100	50	25	10	5
DELTA =	-0.113	-0.092	-0.071	-0.050	-0.022	-0.001

E(E+) = 0.500 BEV THETA(LAB) = 5.537@-02 RAD.
Z = 1.500 THETA(C.M.) = 1.772@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	7.666@-26	7.846@-26	1.952@-25	
0.030	4.794@-26	4.905@-26	1.172@-25	
0.040	3.409@-26	3.487@-26	8.000@-26	
0.050	2.601@-26	2.661@-26	5.863@-26	
0.060	2.076@-26	2.123@-26	4.494@-26	
0.070	1.709@-26	1.731@-26	3.553@-26	
0.080	1.439@-26	1.457@-26	2.873@-26	
0.090	1.233@-26	1.247@-26	2.364@-26	
0.100	1.071@-26	1.083@-26	1.971@-26	
0.150	6.064@-27	6.111@-27	8.850@-27	
0.200	3.921@-27	3.937@-27	0.000@+00	1.377@-26
0.250	2.734@-27	2.760@-27		
0.300	2.004@-27	2.012@-27		
0.350	1.519@-27	1.516@-27		
0.400	1.171@-27	1.159@-27		

R =	200	100	50	25	10	5
DELTA =	-0.113	-0.092	-0.071	-0.050	-0.022	0.000

E(E+) = 0.500 BEV THETA(LAB) = 6.394@-02 RAD.
Z = 2.000 THETA(C.M.) = 1.911@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	4.316@-26	4.370@-26	1.623@-25	
0.030	2.698@-26	2.731@-26	9.614@-26	
0.040	1.918@-26	1.941@-26	6.478@-26	
0.050	1.464@-26	1.480@-26	4.686@-26	
0.060	1.168@-26	1.181@-26	3.545@-26	
0.070	9.615@-27	9.725@-27	2.766@-26	
0.080	8.097@-27	8.177@-27	2.207@-26	
0.090	6.937@-27	7.002@-27	1.791@-26	
0.100	6.026@-27	6.079@-27	1.471@-26	
0.150	3.412@-27	3.470@-27	5.277@-27	
0.167	2.919@-27	2.964@-27	0.000@+00	1.103@-26
0.200	2.206@-27	2.235@-27		
0.250	1.538@-27	1.550@-27		
0.300	1.127@-27	1.130@-27		
0.350	8.547@-28	8.506@-28		
0.400	6.589@-28	6.498@-28		

R =	200	100	50	25	10	5
DELTA =	-0.113	-0.091	-0.070	-0.049	-0.021	0.000

E(E+) = 0.500 BEV THETA(LAB) = 7.148@-02 RAD.
Z = 2.500 THETA(C.M.) = 2.014@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	2.763@-26	2.822@-26	1.452@-25	
0.030	1.727@-26	1.764@-26	8.485@-26	
0.040	1.228@-26	1.254@-26	5.643@-26	
0.050	9.370@-27	9.567@-27	4.028@-26	
0.060	7.477@-27	7.633@-27	3.007@-26	
0.070	6.155@-27	6.281@-27	2.315@-26	
0.080	5.183@-27	5.287@-27	1.822@-26	
0.090	4.441@-27	4.528@-27	1.455@-26	
0.100	3.858@-27	3.931@-27	1.171@-26	
0.143	2.345@-27	2.383@-27	0.000@+00	9.402@-27
0.150	2.184@-27	2.218@-27		
0.200	1.412@-27	1.428@-27		
0.250	9.848@-28	9.910@-28		
0.300	7.216@-28	7.218@-28		
0.350	5.471@-28	5.431@-28		
0.400	4.218@-28	4.123@-28		

R =	200	100	50	25	10	5
DELTA =	-0.112	-0.091	-0.069	-0.048	-0.020	0.001

E(E+) = 0.500 BEV THETA(LAB) = 7.831@-02 RAD.
Z = 3.000 THETA(C.M.) = 2.094@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	1.919@-26	1.958@-26	1.343@-25	
0.030	1.200@-26	1.224@-26	7.743@-26	
0.040	8.529@-27	8.702@-27	5.082@-26	
0.050	6.508@-27	6.638@-27	3.580@-26	
0.060	5.193@-27	5.296@-27	2.638@-26	
0.070	4.275@-27	4.358@-27	2.002@-26	
0.080	3.600@-27	3.668@-27	1.550@-26	
0.090	3.084@-27	3.141@-27	1.211@-26	
0.100	2.679@-27	2.727@-27	9.389@-27	
0.125	1.970@-27	2.003@-27	0.000@+00	8.273@-27
0.150	1.517@-27	1.539@-27		
0.200	9.809@-28	9.910@-28		
0.250	6.839@-28	6.873@-28		
0.300	5.012@-28	5.003@-28		
0.350	3.799@-28	3.739@-28		
0.400	2.929@-28	2.873@-28		

R =	200	100	50	25	10	5
DELTA =	-0.111	-0.090	-0.068	-0.047	-0.019	0.002

E(E+) = 0.500 BEV THETA(LAB) = 1.011@-01 RAD.
Z = 5.000 THETA(C.M.) = 2.301@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	6.913@-27	7.030@-27	1.102@-25	
0.030	4.320@-27	4.393@-27	6.027@-26	
0.040	3.071@-27	3.123@-27	3.752@-26	
0.050	2.343@-27	2.382@-27	2.501@-26	
0.060	1.870@-27	1.900@-27	1.722@-26	
0.070	1.539@-27	1.563@-27	1.161@-26	
0.080	1.296@-27	1.316@-27	5.664@-27	
0.083	1.229@-27	1.248@-27	0.000@+00	5.735@-27
0.090	1.111@-27	1.127@-27		
0.100	9.648@-28	9.780@-28		
0.150	5.462@-28	5.515@-28		
0.200	3.532@-28	3.548@-28		
0.250	2.463@-28	2.436@-28		
0.300	1.805@-28	1.788@-28		
0.350	1.368@-28	1.344@-28		
0.400	1.055@-28	1.024@-28		

R =	200	100	50	25	10	5
DELTA =	-0.107	-0.086	-0.065	-0.043	-0.015	0.006

E(E+) = 0.750 BEV THETA(LAB) = 1.846@-02 RAD.
Z = 0.250 THETA(C.M.) = 9.273@-01 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	2.881@-24	3.066@-24	2.953@-24	
0.030	1.859@-24	1.939@-24	1.857@-24	
0.040	1.349@-24	1.393@-24	1.328@-24	
0.050	1.045@-24	1.073@-24	1.018@-24	
0.060	8.446@-25	8.644@-25	8.163@-25	
0.070	7.032@-25	7.181@-25	6.749@-25	
0.080	5.984@-25	6.101@-25	5.707@-25	
0.090	5.179@-25	5.273@-25	4.910@-25	
0.100	4.542@-25	4.620@-25	4.282@-25	
0.150	2.688@-25	2.726@-25	2.466@-25	
0.200	1.809@-25	1.830@-25	1.615@-25	
0.250	1.309@-25	1.336@-25	1.136@-25	
0.300	9.915@-26	9.992@-26	8.351@-26	
0.350	7.763@-26	7.803@-26	6.324@-26	
0.400	6.231@-26	6.305@-26	4.879@-26	
0.450	5.100@-26	5.146@-26	3.786@-26	
0.500	4.239@-26	4.266@-26	2.887@-26	
0.550	3.563@-26	3.575@-26	2.007@-26	
0.600	3.010@-26	3.011@-26	0.000@+00	1.080@-25

R =	200	100	50	25	10	5
DELTA =	-0.116	-0.093	-0.071	-0.048	-0.019	0.004

E(E+) = 0.750 BEV THETA(LAB) = 2.610@-02 RAD.
Z = 0.500 THETA(C.M.) = 1.231@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	7.453@-25	7.749@-25	8.338@-25	
0.030	4.749@-25	4.899@-25	5.220@-25	
0.040	3.423@-25	3.519@-25	3.715@-25	
0.050	2.642@-25	2.712@-25	2.836@-25	
0.060	2.130@-25	2.185@-25	2.264@-25	
0.070	1.771@-25	1.815@-25	1.864@-25	
0.080	1.505@-25	1.542@-25	1.569@-25	
0.090	1.302@-25	1.333@-25	1.344@-25	
0.100	1.141@-25	1.168@-25	1.167@-25	
0.150	6.742@-26	6.894@-26	6.577@-26	
0.200	4.537@-26	4.631@-26	4.217@-26	
0.250	3.281@-26	3.342@-26	2.902@-26	
0.300	2.485@-26	2.526@-26	2.084@-26	
0.350	1.945@-26	1.972@-26	1.532@-26	
0.400	1.561@-26	1.578@-26	1.123@-26	
0.450	1.278@-26	1.288@-26	7.627@-27	
0.500	1.062@-26	1.060@-26	0.000@+00	4.414@-26
0.550	8.925@-27	8.882@-27		
0.600	7.538@-27	7.523@-27		

R =	200	100	50	25	10	5
DELTA =	-0.120	-0.097	-0.075	-0.052	-0.022	0.000

E(E+) = 0.750 BEV
Z = 1.000

THETA(LAB) = 3.691@-02 RAD.
THETA(C.M.) = 1.571@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	1.889@-25	1.938@-25	3.173@-25	
0.030	1.196@-25	1.225@-25	1.969@-25	
0.040	8.599@-26	8.799@-26	1.389@-25	
0.050	6.629@-26	6.780@-26	1.051@-25	
0.060	5.341@-26	5.462@-26	8.316@-26	
0.070	4.438@-26	4.538@-26	6.787@-26	
0.080	3.771@-26	3.855@-26	5.664@-26	
0.090	3.261@-26	3.303@-26	4.810@-26	
0.100	2.858@-26	2.894@-26	4.140@-26	
0.150	1.688@-26	1.707@-26	2.235@-26	
0.200	1.136@-26	1.146@-26	1.372@-26	
0.250	8.212@-27	8.363@-27	8.984@-27	
0.300	6.220@-27	6.249@-27	5.953@-27	
0.350	4.869@-27	4.925@-27	3.319@-27	
0.375	4.350@-27	4.394@-27	0.000@+00	1.986@-26
0.400	3.908@-27	3.941@-27		
0.450	3.198@-27	3.215@-27		
0.500	2.658@-27	2.663@-27		
0.550	2.233@-27	2.229@-27		
0.600	1.886@-27	1.875@-27		

R =	200	100	50	25	10	5
DELTA =	-0.121	-0.098	-0.076	-0.053	-0.023	-0.001

E(E+) = 0.750 BEV THETA(LAB) = 4.521@-02 RAD.
Z = 1.500 THETA(C.M.) = 1.772@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	8.420@-26	8.607@-26	2.212@-25	
0.030	5.326@-26	5.440@-26	1.360@-25	
0.040	3.826@-26	3.908@-26	9.509@-26	
0.050	2.949@-26	3.011@-26	7.134@-26	
0.060	2.376@-26	2.426@-26	5.596@-26	
0.070	1.974@-26	2.015@-26	4.527@-26	
0.080	1.677@-26	1.712@-26	3.746@-26	
0.090	1.450@-26	1.480@-26	3.154@-26	
0.100	1.271@-26	1.297@-26	2.691@-26	
0.150	7.506@-27	7.650@-27	1.391@-26	
0.200	5.050@-27	5.137@-27	8.129@-27	
0.250	3.651@-27	3.706@-27	4.810@-27	
0.300	2.766@-27	2.800@-27	0.000@+00	1.377@-26
0.350	2.165@-27	2.186@-27		
0.400	1.737@-27	1.749@-27		
0.450	1.422@-27	1.426@-27		
0.500	1.182@-27	1.181@-27		
0.550	9.929@-28	9.932@-28		
0.600	8.386@-28	8.261@-28		

R =	200	100	50	25	10	5
DELTA =	-0.120	-0.098	-0.075	-0.053	-0.023	-0.001

E(E+) = 0.750 BEV
Z = 2.000

THETA(LAB) = 5.221@-02 RAD.
THETA(C.M.) = 1.911@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	4.742@-26	4.838@-26	1.857@-25	
0.030	2.998@-26	3.058@-26	1.132@-25	
0.040	2.153@-26	2.196@-26	7.846@-26	
0.050	1.659@-26	1.692@-26	5.835@-26	
0.060	1.337@-26	1.363@-26	4.538@-26	
0.070	1.111@-26	1.132@-26	3.640@-26	
0.080	9.437@-27	9.622@-27	2.986@-26	
0.090	8.158@-27	8.317@-27	2.492@-26	
0.100	7.150@-27	7.287@-27	2.109@-26	
0.150	4.223@-27	4.298@-27	1.042@-26	
0.200	2.841@-27	2.886@-27	5.616@-27	
0.250	2.054@-27	2.082@-27	0.000@+00	1.103@-26
0.300	1.556@-27	1.573@-27		
0.350	1.218@-27	1.228@-27		
0.400	9.775@-28	9.819@-28		
0.450	7.999@-28	8.006@-28		
0.500	6.648@-28	6.586@-28		
0.550	5.586@-28	5.544@-28		
0.600	4.718@-28	4.657@-28		

R =	200	100	50	25	10	5
DELTA =	-0.120	-0.097	-0.075	-0.052	-0.022	0.000

E(E+) = 0.750 BEV THETA(LAB) = 5.837@-02 RAD.
Z = 2.500 THETA(C.M.) = 2.014@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	3.036@-26	3.094@-26	1.677@-25	
0.030	1.919@-26	1.956@-26	1.013@-25	
0.040	1.378@-26	1.405@-26	6.962@-26	
0.050	1.062@-26	1.082@-26	5.133@-26	
0.060	8.557@-27	8.718@-27	3.958@-26	
0.070	7.109@-27	7.242@-27	3.147@-26	
0.080	6.040@-27	6.153@-27	2.559@-26	
0.090	5.222@-27	5.318@-27	2.118@-26	
0.100	4.576@-27	4.660@-27	1.777@-26	
0.150	2.703@-27	2.748@-27	8.329@-27	
0.200	1.819@-27	1.845@-27	3.405@-27	
0.214	1.648@-27	1.671@-27	0.000@+00	9.401@-27
0.250	1.315@-27	1.331@-27		
0.300	9.959@-28	1.005@-27		
0.350	7.796@-28	7.842@-28		
0.400	6.257@-28	6.292@-28		
0.450	5.120@-28	5.077@-28		
0.500	4.255@-28	4.231@-28		
0.550	3.575@-28	3.539@-28		
0.600	3.020@-28	2.972@-28		

R =	200	100	50	25	10	5
DELTA =	-0.119	-0.096	-0.074	-0.051	-0.022	0.001

E(L+) = 0.750 BEV
Z = 3.000

THETA(LAB) = 6.394@-02 RAD.
THETA(C.M.) = 2.094@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	2.109@-26	2.146@-26	1.566@-25	
0.030	1.333@-26	1.356@-26	9.378@-26	
0.040	9.574@-27	9.743@-27	6.388@-26	
0.050	7.377@-27	7.506@-27	4.669@-26	
0.060	5.943@-27	6.046@-27	3.569@-26	
0.070	4.937@-27	5.023@-27	2.813@-26	
0.080	4.195@-27	4.267@-27	2.269@-26	
0.090	3.627@-27	3.688@-27	1.861@-26	
0.100	3.178@-27	3.231@-27	1.547@-26	
0.150	1.877@-27	1.906@-27	6.713@-27	
0.188	1.383@-27	1.402@-27	0.000@+00	8.273@-27
0.200	1.263@-27	1.279@-27		
0.250	9.132@-28	9.226@-28		
0.300	6.917@-28	6.968@-28		
0.350	5.415@-28	5.392@-28		
0.400	4.345@-28	4.313@-28		
0.450	3.556@-28	3.544@-28		
0.500	2.955@-28	2.944@-28		
0.550	2.483@-28	2.451@-28		
0.600	2.097@-28	2.067@-28		

R =	200	100	50	25	10	5
DELTA =	-0.118	-0.095	-0.073	-0.050	-0.021	0.002

E(E+) = 0.750 BEV
Z = 5.000

THETA(LAB) = 8.254@-02 RAD.
THETA(C.M.) = 2.301@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	7.597@-27	7.634@-27	1.334@-25	
0.030	4.801@-27	4.822@-27	7.716@-26	
0.040	3.448@-27	3.462@-27	5.077@-26	
0.050	2.656@-27	2.666@-27	3.585@-26	
0.060	2.140@-27	2.147@-27	2.647@-26	
0.070	1.778@-27	1.783@-27	2.015@-26	
0.080	1.511@-27	1.514@-27	1.564@-26	
0.090	1.306@-27	1.309@-27	1.226@-26	
0.100	1.144@-27	1.146@-27	9.549@-27	
0.125	8.600@-28	8.604@-28	0.000@+00	5.735@-27
0.150	6.760@-28	6.754@-28		
0.200	4.547@-28	4.579@-28		
0.250	3.288@-28	3.301@-28		
0.300	2.490@-28	2.492@-28		
0.350	1.950@-28	1.944@-28		
0.400	1.565@-28	1.553@-28		
0.450	1.280@-28	1.265@-28		
0.500	1.064@-28	1.046@-28		
0.550	8.940@-29	8.739@-29		
0.600	7.550@-29	7.330@-29		

R =	200	100	50	25	10	5
DELTA =	-0.114	-0.091	-0.069	-0.046	-0.016	0.006

E(E+) = 1.000 BEV THETA(LAB) = 1.598@-02 RAD.
Z = 0.250 THETA(C.M.) = 9.273@-01 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	3.013@-24	3.256@-24	3.143@-24	
0.030	1.963@-24	2.071@-24	1.991@-24	
0.040	1.436@-24	1.496@-24	1.432@-24	
0.050	1.121@-24	1.158@-24	1.105@-24	
0.060	9.123@-25	9.376@-25	8.916@-25	
0.070	7.641@-25	7.826@-25	7.416@-25	
0.080	6.538@-25	6.681@-25	6.309@-25	
0.090	5.688@-25	5.802@-25	5.460@-25	
0.100	5.013@-25	5.107@-25	4.789@-25	
0.200	2.088@-25	2.114@-25	1.913@-25	
0.300	1.189@-25	1.200@-25	1.046@-25	
0.400	7.733@-26	7.859@-26	6.510@-26	
0.500	5.419@-26	5.487@-26	4.335@-26	
0.600	3.993@-26	4.027@-26	2.970@-26	
0.700	3.046@-26	3.060@-26	1.942@-26	
0.800	2.370@-26	2.359@-26	0.000@+00	1.080@-25
0.900	1.809@-26	1.789@-26		

R =	200	100	50	25	10	5
DELTA =	-0.121	-0.097	-0.074	-0.050	-0.019	0.004

E(E+) = 1.000 BEV
Z = 0.500

THETA(LAB) = 2.261@-02 RAD.
THETA(C.M.) = 1.231@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	7.849@-25	8.226@-25	8.901@-25	
0.030	5.050@-25	5.230@-25	5.617@-25	
0.040	3.666@-25	3.778@-25	4.028@-25	
0.050	2.847@-25	2.926@-25	3.098@-25	
0.060	2.308@-25	2.369@-25	2.491@-25	
0.070	1.929@-25	1.978@-25	2.065@-25	
0.080	1.648@-25	1.688@-25	1.751@-25	
0.090	1.431@-25	1.466@-25	1.510@-25	
0.100	1.261@-25	1.291@-25	1.321@-25	
0.200	5.234@-26	5.346@-26	5.108@-26	
0.300	2.980@-26	3.036@-26	2.706@-26	
0.400	1.937@-26	1.966@-26	1.628@-26	
0.500	1.357@-26	1.362@-26	1.032@-26	
0.600	9.999@-27	9.999@-27	6.034@-27	
0.667	8.322@-27	8.357@-27	0.000@+00	4.413@-26
0.700	7.627@-27	7.648@-27		
0.800	5.932@-27	5.921@-27		

R =	200	100	50	25	10	5
DELTA =	-0.125	-0.101	-0.078	-0.054	-0.024	0.000

E(E+) = 1.000 BEV THETA(LAB) = 3.197@-02 RAD.
Z = 1.000 THETA(C.M.) = 1.571@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	2.000@-25	2.039@-25	3.406@-25	
0.030	1.276@-25	1.296@-25	2.135@-25	
0.040	9.230@-26	9.356@-26	1.520@-25	
0.050	7.153@-26	7.245@-26	1.162@-25	
0.060	5.793@-26	5.865@-26	9.280@-26	
0.070	4.836@-26	4.895@-26	7.643@-26	
0.080	4.130@-26	4.178@-26	6.439@-26	
0.090	3.587@-26	3.628@-26	5.518@-26	
0.100	3.158@-26	3.193@-26	4.793@-26	
0.200	1.310@-26	1.321@-26	1.739@-26	
0.300	7.458@-27	7.581@-27	8.628@-27	
0.400	4.847@-27	4.910@-27	4.678@-27	
0.500	3.396@-27	3.426@-27	0.000@+00	1.986@-26
0.600	2.502@-27	2.513@-27		
0.700	1.908@-27	1.908@-27		
0.800	1.484@-27	1.468@-27		

R =	200	100	50	25	10	5
DELTA =	-0.126	-0.102	-0.079	-0.055	-0.025	-0.001

E(E+) = 1.000 BEV
Z = 1.500

THETA(LAB) = 3.915@-02 RAD.
THETA(C.M.) = 1.772@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	8.931@-26	9.128@-26	2.386@-25	
0.030	5.686@-26	5.803@-26	1.486@-25	
0.040	4.108@-26	4.191@-26	1.051@-25	
0.050	3.183@-26	3.246@-26	7.979@-26	
0.060	2.577@-26	2.628@-26	6.332@-26	
0.070	2.151@-26	2.193@-26	5.182@-26	
0.080	1.836@-26	1.872@-26	4.337@-26	
0.090	1.595@-26	1.626@-26	3.693@-26	
0.100	1.404@-26	1.431@-26	3.187@-26	
0.200	5.824@-27	5.926@-27	1.085@-26	
0.300	3.316@-27	3.365@-27	4.948@-27	
0.400	2.155@-27	2.179@-27	0.000@+00	1.377@-26
0.500	1.510@-27	1.520@-27		
0.600	1.112@-27	1.114@-27		
0.700	8.483@-28	8.405@-28		
0.800	6.597@-28	6.533@-28		

R =	200	100	50	25	10	5
DELTA =	-0.125	-0.102	-0.079	-0.055	-0.024	-0.001

E(E+) = 1.000 BEV THETA(LAB) = 4.521@-02 RAD.
Z = 2.000 THETA(C.M.) = 1.911@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	5.032@-26	5.131@-26	2.014@-25	
0.030	3.202@-26	3.262@-26	1.245@-25	
0.040	2.312@-26	2.355@-26	8.755@-26	
0.050	1.791@-26	1.824@-26	6.603@-26	
0.060	1.450@-26	1.477@-26	5.206@-26	
0.070	1.210@-26	1.233@-26	4.233@-26	
0.080	1.033@-26	1.052@-26	3.520@-26	
0.090	8.974@-27	9.138@-27	2.978@-26	
0.100	7.900@-27	8.043@-27	2.554@-26	
0.200	3.277@-27	3.328@-27	8.140@-27	
0.300	1.865@-27	1.889@-27	3.017@-27	
0.333	1.598@-27	1.617@-27	0.000@+00	1.103@-26
0.400	1.212@-27	1.223@-27		
0.500	8.494@-28	8.531@-28		
0.600	6.257@-28	6.209@-28		
0.700	4.772@-28	4.742@-28		
0.800	3.711@-28	3.662@-28		

R =	200	100	50	25	10	5
DELTA =	-0.125	-0.101	-0.078	-0.054	-0.024	0.000

E(E+) = 1.000 BEV
Z = 2.500

THETA(LAB) = 5.055@-02 RAD.
THETA(C.M.) = 2.014@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	3.223@-26	3.279@-26	1.828@-25	
0.030	2.050@-26	2.084@-26	1.123@-25	
0.040	1.480@-26	1.505@-26	7.841@-26	
0.050	1.146@-26	1.166@-26	5.875@-26	
0.060	9.281@-27	9.436@-27	4.603@-26	
0.070	7.748@-27	7.876@-27	3.718@-26	
0.080	6.614@-27	6.723@-27	3.072@-26	
0.090	5.744@-27	5.839@-27	2.583@-26	
0.100	5.057@-27	5.139@-27	2.201@-26	
0.200	2.097@-27	2.127@-27	6.523@-27	
0.286	1.281@-27	1.296@-27	0.000@+00	9.400@-27
0.300	1.194@-27	1.207@-27		
0.400	7.759@-28	7.812@-28		
0.500	5.437@-28	5.404@-28		
0.600	4.005@-28	3.992@-28		
0.700	3.055@-28	3.027@-28		
0.800	2.375@-28	2.336@-28		

R =	200	100	50	25	10	5
DELTA =	-0.124	-0.100	-0.077	-0.054	-0.023	0.001

E(E+) = 1.000 BEV
Z = 3.000

THETA(LAB) = 5.537@-02 RAD.
THETA(C.M.) = 2.094@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	2.240@-26	2.275@-26	1.715@-25	
0.030	1.424@-26	1.446@-26	1.046@-25	
0.040	1.028@-26	1.044@-26	7.261@-26	
0.050	7.963@-27	8.085@-27	5.405@-26	
0.060	6.446@-27	6.544@-27	4.207@-26	
0.070	5.381@-27	5.462@-27	3.377@-26	
0.080	4.594@-27	4.663@-27	2.773@-26	
0.090	3.989@-27	4.049@-27	2.316@-26	
0.100	3.512@-27	3.564@-27	1.961@-26	
0.200	1.456@-27	1.475@-27	5.276@-27	
0.250	1.074@-27	1.086@-27	0.000@+00	8.272@-27
0.300	8.292@-28	8.289@-28		
0.400	5.389@-28	5.365@-28		
0.500	3.776@-28	3.776@-28		
0.600	2.781@-28	2.766@-28		
0.700	2.121@-28	2.096@-28		
0.800	1.650@-28	1.617@-28		

R =	200	100	50	25	10	5
DELTA =	-0.123	-0.099	-0.076	-0.053	-0.022	0.002

E(E+) = 1.000 BEV
Z = 5.000

THETA(LAB) = 7.148@-02 RAD.
THETA(C.M.) = 2.301@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	8.068@-27	8.151@-27	1.489@-25	
0.030	5.128@-27	5.180@-27	8.852@-26	
0.040	3.703@-27	3.740@-27	5.985@-26	
0.050	2.867@-27	2.896@-27	4.343@-26	
0.060	2.321@-27	2.344@-27	3.295@-26	
0.070	1.937@-27	1.957@-27	2.578@-26	
0.080	1.654@-27	1.669@-27	2.063@-26	
0.090	1.436@-27	1.450@-27	1.679@-26	
0.100	1.265@-27	1.276@-27	1.384@-26	
0.167	6.666@-28	6.713@-28	0.000@+00	5.735@-27
0.200	5.244@-28	5.275@-28		
0.300	2.985@-28	2.991@-28		
0.400	1.940@-28	1.934@-28		
0.500	1.359@-28	1.348@-28		
0.600	1.001@-28	9.865@-29		
0.700	7.637@-29	7.467@-29		
0.800	5.939@-29	5.753@-29		

R =	200	100	50	25	10	5
DELTA =	-0.118	-0.095	-0.072	-0.048	-0.017	0.006

E(E+) = 3.000 BEV THETA(LAB) = 9.229@-03 RAD.
Z = 0.250 THETA(C.M.) = 9.273@-01 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	3.418@-24	3.980@-24	3.831@-24	
0.030	2.267@-24	2.566@-24	2.465@-24	
0.040	1.691@-24	1.876@-24	1.800@-24	
0.050	1.344@-24	1.469@-24	1.408@-24	
0.060	1.113@-24	1.202@-24	1.150@-24	
0.070	9.470@-25	1.014@-24	9.692@-25	
0.080	8.225@-25	8.746@-25	8.347@-25	
0.090	7.257@-25	7.671@-25	7.312@-25	
0.100	6.481@-25	6.819@-25	6.491@-25	
0.200	3.005@-25	3.095@-25	2.911@-25	
0.300	1.871@-25	1.916@-25	1.781@-25	
0.400	1.319@-25	1.337@-25	1.238@-25	
0.500	9.960@-26	1.008@-25	9.228@-26	
0.600	7.861@-26	7.947@-26	7.189@-26	
0.700	6.398@-26	6.460@-26	5.774@-26	
0.800	5.325@-26	5.372@-26	4.743@-26	
0.900	4.511@-26	4.545@-26	3.963@-26	
1.000	3.874@-26	3.938@-26	3.357@-26	
1.500	2.080@-26	2.100@-26	1.669@-26	
2.000	1.290@-26	1.295@-26	8.944@-27	
2.400	9.316@-27	9.308@-27	0.000@+00	1.080@-25
2.500	8.605@-27	8.589@-27		

R =	200	100	50	25	10	5
DELTA =	-0.139	-0.112	-0.085	-0.058	-0.023	0.004

E(E+) = 3.000 BEV
Z = 0.500

THETA(LAB) = 1.305@-02 RAD.
THETA(C.M.) = 1.231@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	9.024@-25	9.953@-25	1.092@-24	
0.030	5.961@-25	6.411@-25	7.019@-25	
0.040	4.424@-25	4.686@-25	5.117@-25	
0.050	3.501@-25	3.671@-25	3.998@-25	
0.060	2.884@-25	3.004@-25	3.263@-25	
0.070	2.445@-25	2.533@-25	2.746@-25	
0.080	2.116@-25	2.185@-25	2.362@-25	
0.090	1.860@-25	1.916@-25	2.067@-25	
0.100	1.657@-25	1.703@-25	1.833@-25	
0.200	7.573@-26	7.729@-26	8.133@-26	
0.300	4.696@-26	4.785@-26	4.924@-26	
0.400	3.305@-26	3.364@-26	3.387@-26	
0.500	2.494@-26	2.537@-26	2.498@-26	
0.600	1.968@-26	2.000@-26	1.926@-26	
0.700	1.601@-26	1.626@-26	1.531@-26	
0.800	1.333@-26	1.352@-26	1.245@-26	
0.900	1.129@-26	1.144@-26	1.030@-26	
1.000	9.693@-27	9.817@-27	8.634@-27	
1.500	5.204@-27	5.241@-27	4.016@-27	
2.000	3.227@-27	3.213@-27	0.000@+00	4.412@-26
2.500	2.152@-27	2.140@-27		

R =	200	100	50	25	10	5
DELTA =	-0.144	-0.117	-0.090	-0.063	-0.028	-0.001

E(E+) = 3.000 BEV THETA(LAB) = 1.846@-02 RAD.
Z = 1.000 THETA(C.M.) = 1.571@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	2.355@-25	2.481@-25	4.231@-25	
0.030	1.542@-25	1.599@-25	2.712@-25	
0.040	1.136@-25	1.169@-25	1.972@-25	
0.050	8.938@-26	9.152@-26	1.537@-25	
0.060	7.333@-26	7.489@-26	1.252@-25	
0.070	6.195@-26	6.316@-26	1.051@-25	
0.080	5.348@-26	5.447@-26	9.021@-26	
0.090	4.694@-26	4.777@-26	7.876@-26	
0.100	4.175@-26	4.246@-26	6.970@-26	
0.200	1.898@-26	1.926@-26	3.027@-26	
0.300	1.175@-26	1.192@-26	1.795@-26	
0.400	8.270@-27	8.382@-27	1.209@-26	
0.500	6.240@-27	6.321@-27	8.734@-27	
0.600	4.923@-27	4.983@-27	6.597@-27	
0.700	4.005@-27	4.050@-27	5.139@-27	
0.800	3.333@-27	3.340@-27	4.094@-27	
0.900	2.823@-27	2.826@-27	3.315@-27	
1.000	2.424@-27	2.408@-27	2.715@-27	
1.500	1.301@-27	1.304@-27	0.000@+00	1.985@-26
2.000	8.069@-28	8.031@-28		
2.500	5.381@-28	5.316@-28		

R =	200	100	50	25	10	5
DELTA =	-0.145	-0.118	-0.092	-0.065	-0.029	-0.002

E(E+) = 3.000 BEV THETA(LAB) = 2.261@-02 RAD.
Z = 1.500 THETA(C.M.) = 1.772@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	1.065@-25	1.100@-25	2.998@-25	
0.030	6.931@-26	7.086@-26	1.917@-25	
0.040	5.088@-26	5.179@-26	1.391@-25	
0.050	3.994@-26	4.056@-26	1.082@-25	
0.060	3.272@-26	3.319@-26	8.789@-26	
0.070	2.762@-26	2.799@-26	7.362@-26	
0.080	2.383@-26	2.413@-26	6.306@-26	
0.090	2.090@-26	2.117@-26	5.494@-26	
0.100	1.858@-26	1.881@-26	4.851@-26	
0.200	8.439@-27	8.533@-27	2.063@-26	
0.300	5.226@-27	5.281@-27	1.198@-26	
0.400	3.676@-27	3.712@-27	7.902@-27	
0.500	2.774@-27	2.799@-27	5.594@-27	
0.600	2.188@-27	2.206@-27	4.140@-27	
0.700	1.780@-27	1.793@-27	3.158@-27	
0.800	1.482@-27	1.491@-27	2.456@-27	
0.900	1.255@-27	1.261@-27	1.926@-27	
1.000	1.077@-27	1.082@-27	1.490@-27	
1.200	8.206@-28	8.217@-28	0.000@+00	1.376@-26
1.500	5.785@-28	5.770@-28		
2.000	3.587@-28	3.550@-28		
2.500	2.392@-28	2.347@-28		

R =	200	100	50	25	10	5
DELTA =	-0.145	-0.118	-0.091	-0.064	-0.029	-0.002

E(E+) = 3.000 BEV
Z = 2.000

THETA(LAB) = 2.610@-02 RAD.
THETA(C.M.) = 1.911@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	6.039@-26	6.172@-26	2.558@-25	
0.030	3.918@-26	3.975@-26	1.632@-25	
0.040	2.871@-26	2.905@-26	1.181@-25	
0.050	2.251@-26	2.275@-26	9.165@-26	
0.060	1.843@-26	1.861@-26	7.431@-26	
0.070	1.555@-26	1.570@-26	6.211@-26	
0.080	1.342@-26	1.353@-26	5.309@-26	
0.090	1.177@-26	1.187@-26	4.615@-26	
0.100	1.046@-26	1.055@-26	4.066@-26	
0.200	4.748@-27	4.784@-27	1.693@-26	
0.300	2.940@-27	2.960@-27	9.629@-27	
0.400	2.068@-27	2.081@-27	6.224@-27	
0.500	1.560@-27	1.569@-27	4.317@-27	
0.600	1.231@-27	1.236@-27	3.128@-27	
0.700	1.001@-27	1.005@-27	2.323@-27	
0.800	8.334@-28	8.352@-28	1.728@-27	
0.900	7.058@-28	7.065@-28	1.206@-27	
1.000	6.061@-28	6.059@-28	0.000@+00	1.103@-26
1.500	3.254@-28	3.231@-28		
2.000	2.018@-28	1.976@-28		
2.500	1.346@-28	1.312@-28		

R =	200	100	50	25	10	5
DELTA =	-0.144	-0.117	-0.090	-0.063	-0.028	-0.001

E(E+) = 3.000 BEV
Z = 2.500

THETA(LAB) = 2.918@-02 RAD.
THETA(C.M.) = 2.014@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	3.883@-26	3.938@-26	2.346@-25	
0.030	2.513@-26	2.537@-26	1.493@-25	
0.040	1.840@-26	1.854@-26	1.078@-25	
0.050	1.442@-26	1.452@-26	8.348@-26	
0.060	1.181@-26	1.188@-26	6.754@-26	
0.070	9.960@-27	1.002@-26	5.633@-26	
0.080	8.589@-27	8.637@-27	4.805@-26	
0.090	7.534@-27	7.574@-27	4.168@-26	
0.100	6.696@-27	6.731@-27	3.665@-26	
0.200	3.039@-27	3.052@-27	1.494@-26	
0.300	1.882@-27	1.888@-27	8.324@-27	
0.400	1.324@-27	1.327@-27	5.272@-27	
0.500	9.987@-28	1.000@-27	3.581@-27	
0.600	7.878@-28	7.883@-28	2.526@-27	
0.700	6.410@-28	6.404@-28	1.784@-27	
0.800	5.334@-28	5.324@-28	1.096@-27	
0.857	4.842@-28	4.829@-28	0.000@+00	9.399@-27
0.900	4.517@-28	4.503@-28		
1.000	3.879@-28	3.861@-28		
1.500	2.083@-28	2.058@-28		
2.000	1.291@-28	1.265@-28		
2.500	8.611@-29	8.342@-29		

R =	200	100	50	25	10	5
DELTA =	-0.143	-0.116	-0.089	-0.062	-0.026	0.000

E(L+) = 3.000 BEV THLTA(LAB) = 3.197@-02 RAD.
Z = 3.000 THETA(C.M.) = 2.094@+00 RAD.

K BEV	LPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	LEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	2.704@-26	2.727@-26	2.224@-25	
0.030	1.748@-26	1.757@-26	1.412@-25	
0.040	1.279@-26	1.284@-26	1.017@-25	
0.050	1.002@-26	1.005@-26	7.859@-26	
0.060	8.202@-27	8.223@-27	6.345@-26	
0.070	6.919@-27	6.934@-27	5.281@-26	
0.080	5.966@-27	5.978@-27	4.495@-26	
0.090	5.233@-27	5.242@-27	3.891@-26	
0.100	4.651@-27	4.659@-27	3.414@-26	
0.200	2.111@-27	2.112@-27	1.363@-26	
0.300	1.307@-27	1.306@-27	7.439@-27	
0.400	9.192@-28	9.180@-28	4.616@-27	
0.500	6.936@-28	6.919@-28	3.061@-27	
0.600	5.471@-28	5.452@-28	2.066@-27	
0.700	4.451@-28	4.435@-28	1.205@-27	
0.750	4.051@-28	4.029@-28	0.000@+00	8.271@-27
0.800	3.704@-28	3.682@-28		
0.900	3.137@-28	3.114@-28		
1.000	2.694@-28	2.670@-28		
1.500	1.446@-28	1.413@-28		
2.000	8.967@-29	8.768@-29		
2.500	5.980@-29	5.757@-29		

R =	200	100	50	25	10	5
DELTA =	-0.142	-0.115	-0.088	-0.061	-0.025	0.002

E(E+) = 3.000 BEV
Z = 5.000

THETA(LAB) = 4.127E-02 RAD.
THETA(C.M.) = 2.301E+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	9.775E-27	9.648E-27	2.008E-25	
0.030	6.305E-27	6.211E-27	1.263E-25	
0.040	4.610E-27	4.537E-27	9.026E-26	
0.050	3.611E-27	3.551E-27	6.914E-26	
0.060	2.955E-27	2.905E-27	5.535E-26	
0.070	2.492E-27	2.449E-27	4.568E-26	
0.080	2.149E-27	2.111E-27	3.855E-26	
0.090	1.884E-27	1.850E-27	3.309E-26	
0.100	1.675E-27	1.644E-27	2.879E-26	
0.200	7.599E-28	7.443E-28	1.058E-26	
0.300	4.704E-28	4.600E-28	5.318E-27	
0.400	3.309E-28	3.257E-28	2.939E-27	
0.500	2.497E-28	2.454E-28	0.000E+00	5.734E-27
0.600	1.970E-28	1.933E-28		
0.700	1.603E-28	1.570E-28		
0.800	1.334E-28	1.304E-28		
0.900	1.129E-28	1.103E-28		
1.000	9.699E-29	9.452E-29		
1.500	5.207E-29	5.025E-29		
2.000	3.228E-29	3.080E-29		
2.500	2.153E-29	2.014E-29		

R =	200	100	50	25	10	5
DELTA =	-0.137	-0.110	-0.083	-0.056	-0.020	0.007

E(E+) = 5.000 BEV THETA(LAB) = 7.148@-03 RAD.
Z = 0.250 THETA(C.M.) = 9.273@-01 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	3.582@-24	4.291@-24	4.139@-24	
0.030	2.382@-24	2.776@-24	2.674@-24	
0.040	1.781@-24	2.035@-24	1.959@-24	
0.050	1.421@-24	1.599@-24	1.537@-24	
0.060	1.180@-24	1.312@-24	1.260@-24	
0.070	1.008@-24	1.109@-24	1.065@-24	
0.080	8.787@-25	9.587@-25	9.196@-25	
0.090	7.780@-25	8.427@-25	8.077@-25	
0.100	6.974@-25	7.507@-25	7.190@-25	
0.200	3.337@-25	3.476@-25	3.305@-25	
0.300	2.128@-25	2.192@-25	2.069@-25	
0.400	1.531@-25	1.568@-25	1.471@-25	
0.500	1.177@-25	1.203@-25	1.121@-25	
0.600	9.456@-26	9.649@-26	8.922@-26	
0.700	7.825@-26	7.976@-26	7.323@-26	
0.800	6.619@-26	6.741@-26	6.146@-26	
0.900	5.695@-26	5.796@-26	5.247@-26	
1.000	4.966@-26	5.050@-26	4.540@-26	
1.500	2.857@-26	2.897@-26	2.511@-26	
2.000	1.874@-26	1.894@-26	1.579@-26	
2.500	1.324@-26	1.334@-26	1.064@-26	
3.000	9.841@-27	9.884@-27	7.397@-27	
3.500	7.585@-27	7.591@-27	4.969@-27	
4.000	5.983@-27	5.969@-27	0.000@+00	1.080@-25
4.500	4.690@-27	4.665@-27		

R =	200	100	50	25	10	5
DELTA =	-0.148	-0.119	-0.091	-0.062	-0.024	0.004

E(E+) = 5.000 BEV THETA(LAB) = 1.011@-02 RAD.
Z = 0.500 THETA(C.M.) = 1.231@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	9.455@-25	1.071@-24	1.182@-24	
0.030	6.277@-25	6.928@-25	7.630@-25	
0.040	4.684@-25	5.080@-25	5.584@-25	
0.050	3.727@-25	3.990@-25	4.379@-25	
0.060	3.087@-25	3.273@-25	3.587@-25	
0.070	2.630@-25	2.768@-25	3.028@-25	
0.080	2.286@-25	2.392@-25	2.614@-25	
0.090	2.019@-25	2.103@-25	2.294@-25	
0.100	1.805@-25	1.873@-25	2.041@-25	
0.200	8.484@-26	8.671@-26	9.318@-26	
0.300	5.369@-26	5.467@-26	5.797@-26	
0.400	3.848@-26	3.912@-26	4.094@-26	
0.500	2.955@-26	3.001@-26	3.100@-26	
0.600	2.370@-26	2.406@-26	2.453@-26	
0.700	1.960@-26	1.989@-26	2.001@-26	
0.800	1.658@-26	1.681@-26	1.669@-26	
0.900	1.426@-26	1.445@-26	1.416@-26	
1.000	1.243@-26	1.259@-26	1.218@-26	
1.500	7.148@-27	7.223@-27	6.535@-27	
2.000	4.686@-27	4.721@-27	3.984@-27	
2.500	3.312@-27	3.302@-27	2.570@-27	
3.000	2.461@-27	2.462@-27	1.558@-27	
3.333	2.062@-27	2.058@-27	0.000@+00	4.411@-26
3.500	1.897@-27	1.890@-27		
4.000	1.496@-27	1.486@-27		
4.500	1.173@-27	1.160@-27		

R =	200	100	50	25	10	5
DELTA =	-0.153	-0.125	-0.096	-0.067	-0.030	-0.001

E(E+) = 5.000 BEV THETA(LAB) = 1.430@-02 RAD.
Z = 1.000 THETA(C.M.) = 1.571@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	2.479@-25	2.668@-25	4.593@-25	
0.030	1.638@-25	1.726@-25	2.960@-25	
0.040	1.216@-25	1.265@-25	2.163@-25	
0.050	9.627@-26	9.932@-26	1.693@-25	
0.060	7.939@-26	8.151@-26	1.385@-25	
0.070	6.736@-26	6.888@-26	1.168@-25	
0.080	5.837@-26	5.953@-26	1.006@-25	
0.090	5.140@-26	5.233@-26	8.822@-26	
0.100	4.585@-26	4.661@-26	7.836@-26	
0.200	2.133@-26	2.157@-26	3.532@-26	
0.300	1.346@-26	1.360@-26	2.170@-26	
0.400	9.635@-27	9.729@-27	1.513@-26	
0.500	7.395@-27	7.463@-27	1.132@-26	
0.600	5.931@-27	5.983@-27	8.845@-27	
0.700	4.904@-27	4.945@-27	7.127@-27	
0.800	4.146@-27	4.179@-27	5.872@-27	
0.900	3.566@-27	3.592@-27	4.922@-27	
1.000	3.109@-27	3.130@-27	4.182@-27	
1.500	1.787@-27	1.794@-27	2.112@-27	
2.000	1.172@-27	1.172@-27	1.175@-27	
2.500	8.281@-28	8.253@-28	0.000@+00	1.985@-26
3.000	6.154@-28	6.109@-28		
3.500	4.743@-28	4.688@-28		
4.000	3.741@-28	3.681@-28		
4.500	2.933@-28	2.868@-28		

R =	200	100	50	25	10	5
DELTA =	-0.155	-0.126	-0.097	-0.069	-0.031	-0.002

E(E+) = 5.000 BEV THETA(LAB) = 1.751@-02 RAD.
Z = 1.500 THETA(C.M.) = 1.772@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	1.127@-25	1.181@-25	3.264@-25	
0.030	7.412@-26	7.635@-26	2.100@-25	
0.040	5.480@-26	5.597@-26	1.532@-25	
0.050	4.325@-26	4.395@-26	1.198@-25	
0.060	3.558@-26	3.606@-26	9.785@-26	
0.070	3.014@-26	3.048@-26	8.238@-26	
0.080	2.609@-26	2.634@-26	7.090@-26	
0.090	2.295@-26	2.315@-26	6.207@-26	
0.100	2.046@-26	2.062@-26	5.506@-26	
0.200	9.488@-27	9.542@-27	2.450@-26	
0.300	5.984@-27	6.013@-27	1.487@-26	
0.400	4.284@-27	4.302@-27	1.024@-26	
0.500	3.287@-27	3.300@-27	7.564@-27	
0.600	2.636@-27	2.645@-27	5.839@-27	
0.700	2.180@-27	2.186@-27	4.648@-27	
0.800	1.843@-27	1.847@-27	3.784@-27	
0.900	1.585@-27	1.588@-27	3.133@-27	
1.000	1.382@-27	1.383@-27	2.630@-27	
1.500	7.945@-28	7.925@-28	1.233@-27	
2.000	5.209@-28	5.176@-28	0.000@+00	1.376@-26
2.500	3.681@-28	3.642@-28		
3.000	2.735@-28	2.664@-28		
3.500	2.108@-28	2.066@-28		
4.000	1.663@-28	1.621@-28		
4.500	1.303@-28	1.261@-28		

R =	200	100	50	25	10	5
DELTA =	-0.154	-0.126	-0.097	-0.068	-0.031	-0.002

E(E+) = 5.000 BEV THETA(LAB) = 2.022@-02 RAD.
Z = 2.000 THETA(C.M.) = 1.911@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	6.425@-26	6.614@-26	2.792@-25	
0.030	4.207@-26	4.276@-26	1.794@-25	
0.040	3.102@-26	3.134@-26	1.307@-25	
0.050	2.444@-26	2.461@-26	1.020@-25	
0.060	2.009@-26	2.019@-26	8.323@-26	
0.070	1.700@-26	1.706@-26	6.997@-26	
0.080	1.470@-26	1.475@-26	6.015@-26	
0.090	1.293@-26	1.296@-26	5.258@-26	
0.100	1.152@-26	1.154@-26	4.659@-26	
0.200	5.339@-27	5.339@-27	2.047@-26	
0.300	3.367@-27	3.364@-27	1.227@-26	
0.400	2.410@-27	2.407@-27	8.345@-27	
0.500	1.849@-27	1.846@-27	6.089@-27	
0.600	1.483@-27	1.479@-27	4.644@-27	
0.700	1.226@-27	1.222@-27	3.652@-27	
0.800	1.037@-27	1.033@-27	2.937@-27	
0.900	8.916@-28	8.876@-28	2.403@-27	
1.000	7.772@-28	7.732@-28	1.992@-27	
1.500	4.469@-28	4.429@-28	7.791@-28	
1.667	3.841@-28	3.802@-28	0.000@+00	1.103@-26
2.000	2.930@-28	2.892@-28		
2.500	2.070@-28	2.034@-28		
3.000	1.539@-28	1.504@-28		
3.500	1.186@-28	1.153@-28		
4.000	9.353@-29	9.039@-29		
4.500	7.332@-29	7.022@-29		

R =	200	100	50	25	10	5
DELTA =	-0.153	-0.125	-0.096	-0.067	-0.030	-0.001

E(E+) = 5.000 BEV THETA(LAB) = 2.261@-02 RAD.
Z = 2.500 THETA(C.M.) = 2.014@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	4.145@-26	4.215@-26	2.567@-25	
0.030	2.706@-26	2.725@-26	1.646@-25	
0.040	1.992@-26	1.997@-26	1.198@-25	
0.050	1.568@-26	1.568@-26	9.340@-26	
0.060	1.288@-26	1.286@-26	7.609@-26	
0.070	1.089@-26	1.087@-26	6.389@-26	
0.080	9.420@-27	9.395@-27	5.484@-26	
0.090	8.283@-27	8.257@-27	4.788@-26	
0.100	7.380@-27	7.354@-27	4.237@-26	
0.200	3.418@-27	3.400@-27	1.838@-26	
0.300	2.155@-27	2.142@-27	1.088@-26	
0.400	1.542@-27	1.532@-27	7.311@-27	
0.500	1.184@-27	1.175@-27	5.270@-27	
0.600	9.492@-28	9.414@-28	3.971@-27	
0.700	7.848@-28	7.778@-28	3.086@-27	
0.800	6.635@-28	6.571@-28	2.452@-27	
0.900	5.706@-28	5.647@-28	1.979@-27	
1.000	4.974@-28	4.919@-28	1.614@-27	
1.429	3.065@-28	2.996@-28	0.000@+00	9.399@-27
1.500	2.860@-28	2.795@-28		
2.000	1.875@-28	1.838@-28		
2.500	1.325@-28	1.293@-28		
3.000	9.848@-29	9.553@-29		
3.500	7.589@-29	7.319@-29		
4.000	5.986@-29	5.734@-29		
4.500	4.692@-29	4.449@-29		

R =	200	100	50	25	10	5
DELTA =	-0.152	-0.123	-0.095	-0.066	-0.028	0.000

E(E+) = 5.000 BEV
Z = 3.000

THETA(LAB) = 2.476@-02 RAD.
THETA(C.M.) = 2.094@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	2.893@-26	2.898@-26	2.439@-25	
0.030	1.885@-26	1.872@-26	1.562@-25	
0.040	1.386@-26	1.372@-26	1.135@-25	
0.050	1.090@-26	1.077@-26	8.837@-26	
0.060	8.951@-27	8.833@-27	7.189@-26	
0.070	7.571@-27	7.466@-27	6.028@-26	
0.080	6.546@-27	6.451@-27	5.168@-26	
0.090	5.755@-27	5.669@-27	4.507@-26	
0.100	5.127@-27	5.048@-27	3.983@-26	
0.200	2.374@-27	2.333@-27	1.707@-26	
0.300	1.497@-27	1.469@-27	9.974@-27	
0.400	1.071@-27	1.050@-27	6.622@-27	
0.500	8.220@-28	8.114@-28	4.715@-27	
0.600	6.592@-28	6.502@-28	3.511@-27	
0.700	5.450@-28	5.371@-28	2.695@-27	
0.800	4.608@-28	4.537@-28	2.112@-27	
0.900	3.963@-28	3.899@-28	1.675@-27	
1.000	3.455@-28	3.396@-28	1.325@-27	
1.250	2.561@-28	2.512@-28	0.000@+00	8.271@-27
1.500	1.986@-28	1.944@-28		
2.000	1.302@-28	1.268@-28		
2.500	9.202@-29	8.912@-29		
3.000	6.839@-29	6.584@-29		
3.500	5.270@-29	5.042@-29		
4.000	4.157@-29	3.947@-29		
4.500	3.259@-29	3.059@-29		

R =	200	100	50	25	10	5
DELTA =	-0.151	-0.122	-0.093	-0.065	-0.027	0.002

E(E+) = 5.000 BEV
Z = 5.000

THETA(LAB) = 3.197@-02 RAD.
THETA(C.M.) = 2.301@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	1.051@-26	1.033@-26	2.222@-25	
0.030	6.819@-27	6.670@-27	1.415@-25	
0.040	5.005@-27	4.887@-27	1.023@-25	
0.050	3.932@-27	3.835@-27	7.921@-26	
0.060	3.227@-27	3.145@-27	6.411@-26	
0.070	2.728@-27	2.658@-27	5.349@-26	
0.080	2.358@-27	2.296@-27	4.562@-26	
0.090	2.073@-27	2.018@-27	3.958@-26	
0.100	1.847@-27	1.797@-27	3.481@-26	
0.200	8.547@-28	8.295@-28	1.419@-26	
0.300	5.388@-28	5.220@-28	7.895@-27	
0.400	3.856@-28	3.731@-28	4.995@-27	
0.500	2.959@-28	2.859@-28	3.387@-27	
0.600	2.373@-28	2.290@-28	2.383@-27	
0.700	1.962@-28	1.891@-28	1.661@-27	
0.800	1.659@-28	1.597@-28	9.022@-28	
0.833	1.575@-28	1.515@-28	0.000@+00	5.734@-27
0.900	1.427@-28	1.372@-28		
1.000	1.244@-28	1.194@-28		
1.500	7.151@-29	6.825@-29		
2.000	4.688@-29	4.446@-29		
2.500	3.313@-29	3.120@-29		
3.000	2.462@-29	2.301@-29		
3.500	1.897@-29	1.758@-29		
4.000	1.497@-29	1.372@-29		
4.500	1.173@-29	1.060@-29		

R =	200	100	50	25	10	5
DELTA =	-0.145	-0.116	-0.088	-0.059	-0.021	0.007

E(E+) = 6.000 BEV
Z = 0.250

THETA(LAB) = 6.526@-03 RAD.
THETA(C.M.) = 9.273@-01 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	3.639@-24	4.400@-24	4.248@-24	
0.030	2.421@-24	2.849@-24	2.748@-24	
0.040	1.812@-24	2.092@-24	2.015@-24	
0.050	1.446@-24	1.644@-24	1.583@-24	
0.060	1.202@-24	1.350@-24	1.298@-24	
0.070	1.027@-24	1.142@-24	1.098@-24	
0.080	8.963@-25	9.877@-25	9.489@-25	
0.090	7.944@-25	8.688@-25	8.341@-25	
0.100	7.127@-25	7.744@-25	7.430@-25	
0.200	3.441@-25	3.604@-25	3.437@-25	
0.300	2.210@-25	2.283@-25	2.165@-25	
0.400	1.599@-25	1.642@-25	1.547@-25	
0.500	1.236@-25	1.265@-25	1.186@-25	
0.600	9.976@-26	1.019@-25	9.492@-26	
0.700	8.292@-26	8.456@-26	7.833@-26	
0.800	7.045@-26	7.177@-26	6.610@-26	
0.900	6.087@-26	6.196@-26	5.673@-26	
1.000	5.329@-26	5.421@-26	4.935@-26	
1.500	3.126@-26	3.172@-26	2.802@-26	
2.000	2.086@-26	2.111@-26	1.808@-26	
2.500	1.496@-26	1.511@-26	1.252@-26	
3.000	1.126@-26	1.134@-26	9.049@-27	
3.500	8.774@-27	8.808@-27	6.691@-27	
4.000	7.021@-27	6.996@-27	4.904@-27	
4.500	5.731@-27	5.723@-27	3.142@-27	
4.800	5.103@-27	5.088@-27	0.000@+00	1.080@-25
5.000	4.724@-27	4.706@-27		
5.500	3.825@-27	3.799@-27		

R =	200	100	50	25	10	5
DELTA =	-0.151	-0.122	-0.092	-0.063	-0.025	0.005

E(E+) = 6.000 BEV THETA(LAB) = 9.229@-03 RAD.
Z = 0.500 THETA(C.M.) = 1.231@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	9.602@-25	1.098@-24	1.214@-24	
0.030	6.380@-25	7.109@-25	7.844@-25	
0.040	4.767@-25	5.217@-25	5.748@-25	
0.050	3.798@-25	4.101@-25	4.512@-25	
0.060	3.150@-25	3.367@-25	3.699@-25	
0.070	2.687@-25	2.848@-25	3.126@-25	
0.080	2.339@-25	2.463@-25	2.700@-25	
0.090	2.068@-25	2.167@-25	2.372@-25	
0.100	1.851@-25	1.931@-25	2.112@-25	
0.200	8.781@-26	8.987@-26	9.714@-26	
0.300	5.590@-26	5.693@-26	6.085@-26	
0.400	4.027@-26	4.092@-26	4.327@-26	
0.500	3.106@-26	3.153@-26	3.298@-26	
0.600	2.503@-26	2.539@-26	2.627@-26	
0.700	2.079@-26	2.108@-26	2.157@-26	
0.800	1.765@-26	1.789@-26	1.810@-26	
0.900	1.524@-26	1.544@-26	1.546@-26	
1.000	1.334@-26	1.351@-26	1.338@-26	
1.500	7.821@-27	7.903@-27	7.407@-27	
2.000	5.217@-27	5.186@-27	4.662@-27	
2.500	3.742@-27	3.762@-27	3.144@-27	
3.000	2.816@-27	2.823@-27	2.190@-27	
3.500	2.194@-27	2.193@-27	1.474@-27	
4.000	1.756@-27	1.750@-27	0.000@+00	4.411@-26
4.500	1.433@-27	1.424@-27		
5.000	1.181@-27	1.170@-27		
5.500	9.565@-28	9.398@-28		

R =	200	100	50	25	10	5
DELTA =	-0.156	-0.127	-0.098	-0.069	-0.030	-0.001

E(E+) = 6.000 BEV THETA(LAB) = 1.305@-02 RAD.
Y = 1.000 THETA(C.M.) = 1.571@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	2.519@-25	2.733@-25	4.720@-25	
0.030	1.668@-25	1.769@-25	3.046@-25	
0.040	1.241@-25	1.298@-25	2.229@-25	
0.050	9.846@-26	1.020@-25	1.747@-25	
0.060	8.134@-26	8.373@-26	1.431@-25	
0.070	6.912@-26	7.084@-26	1.208@-25	
0.080	5.997@-26	6.126@-26	1.042@-25	
0.090	5.287@-26	5.388@-26	9.142@-26	
0.100	4.721@-26	4.802@-26	8.130@-26	
0.200	2.211@-26	2.234@-26	3.699@-26	
0.300	1.403@-26	1.415@-26	2.293@-26	
0.400	1.009@-26	1.017@-26	1.614@-26	
0.500	7.777@-27	7.835@-27	1.217@-26	
0.600	6.264@-27	6.308@-27	9.595@-27	
0.700	5.201@-27	5.235@-27	7.797@-27	
0.800	4.415@-27	4.443@-27	6.479@-27	
0.900	3.813@-27	3.835@-27	5.476@-27	
1.000	3.337@-27	3.355@-27	4.691@-27	
1.500	1.956@-27	1.962@-27	2.471@-27	
2.000	1.305@-27	1.305@-27	1.475@-27	
2.500	9.357@-28	9.333@-28	9.030@-28	
3.000	7.041@-28	7.001@-28	0.000@+00	1.985@-26
3.500	5.486@-28	5.435@-28		
4.000	4.390@-28	4.314@-28		
4.500	3.583@-28	3.524@-28		
5.000	2.954@-28	2.894@-28		
5.500	2.391@-28	2.328@-28		

R =	200	100	50	25	10	5
DELTA =	-0.158	-0.129	-0.099	-0.070	-0.032	-0.003

E(E+) = 6.000 BEV THETA(LAB) = 1.598@-02 RAD.
Z = 1.500 THETA(C.M.) = 1.772@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	1.147@-25	1.208@-25	3.357@-25	
0.030	7.564@-26	7.821@-26	2.163@-25	
0.040	5.607@-26	5.738@-26	1.581@-25	
0.050	4.433@-26	4.510@-26	1.238@-25	
0.060	3.653@-26	3.702@-26	1.013@-25	
0.070	3.099@-26	3.132@-26	8.535@-26	
0.080	2.685@-26	2.708@-26	7.356@-26	
0.090	2.364@-26	2.382@-26	6.447@-26	
0.100	2.109@-26	2.123@-26	5.727@-26	
0.200	9.843@-27	9.872@-27	2.578@-26	
0.300	6.238@-27	6.250@-27	1.581@-26	
0.400	4.486@-27	4.492@-27	1.101@-26	
0.500	3.457@-27	3.460@-27	8.222@-27	
0.600	2.785@-27	2.786@-27	6.415@-27	
0.700	2.312@-27	2.312@-27	5.160@-27	
0.800	1.963@-27	1.961@-27	4.245@-27	
0.900	1.695@-27	1.693@-27	3.552@-27	
1.000	1.483@-27	1.481@-27	3.013@-27	
1.500	8.693@-28	8.656@-28	1.508@-27	
2.000	5.798@-28	5.756@-28	8.170@-28	
2.400	4.425@-28	4.381@-28	0.000@+00	1.376@-26
2.500	4.159@-28	4.115@-28		
3.000	3.129@-28	3.066@-28		
3.500	2.438@-28	2.394@-28		
4.000	1.951@-28	1.908@-28		
4.500	1.593@-28	1.551@-28		
5.000	1.313@-28	1.272@-28		
5.500	1.063@-28	1.022@-28		

R =	200	100	50	25	10	5
DELTA =	-0.157	-0.128	-0.099	-0.070	-0.031	-0.002

E(E+) = 6.000 BEV
Z = 2.000

THETA(LAB) = 1.846@-02 RAD.
THETA(C.M.) = 1.911@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	6.546@-26	6.765@-26	2.874@-25	
0.030	4.301@-26	4.378@-26	1.850@-25	
0.040	3.179@-26	3.211@-26	1.350@-25	
0.050	2.509@-26	2.524@-26	1.056@-25	
0.060	2.064@-26	2.071@-26	8.626@-26	
0.070	1.749@-26	1.752@-26	7.263@-26	
0.080	1.514@-26	1.515@-26	6.252@-26	
0.090	1.333@-26	1.333@-26	5.474@-26	
0.100	1.189@-26	1.188@-26	4.857@-26	
0.200	5.540@-27	5.521@-27	2.163@-26	
0.300	3.510@-27	3.495@-27	1.313@-26	
0.400	2.524@-27	2.511@-27	9.052@-27	
0.500	1.945@-27	1.934@-27	6.689@-27	
0.600	1.566@-27	1.557@-27	5.166@-27	
0.700	1.300@-27	1.292@-27	4.114@-27	
0.800	1.104@-27	1.096@-27	3.350@-27	
0.900	9.534@-28	9.459@-28	2.776@-27	
1.000	8.344@-28	8.274@-28	2.331@-27	
1.500	4.890@-28	4.834@-28	1.095@-27	
2.000	3.262@-28	3.194@-28	0.000@+00	1.103@-26
2.500	2.339@-28	2.296@-28		
3.000	1.760@-28	1.721@-28		
3.500	1.372@-28	1.335@-28		
4.000	1.098@-28	1.064@-28		
4.500	8.959@-29	8.639@-29		
5.000	7.385@-29	7.080@-29		
5.500	5.979@-29	5.658@-29		

R =	200	100	50	25	10	5
DELTA =	-0.156	-0.127	-0.098	-0.069	-0.030	-0.001

E(E+) = 6.000 BEV
Z = 2.500

THETA(LAB) = 2.064@-02 RAD.
THETA(C.M.) = 2.014@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	4.229@-26	4.283@-26	2.644@-25	
0.030	2.769@-26	2.771@-26	1.699@-25	
0.040	2.043@-26	2.032@-26	1.239@-25	
0.050	1.610@-26	1.597@-26	9.677@-26	
0.060	1.324@-26	1.310@-26	7.897@-26	
0.070	1.121@-26	1.108@-26	6.642@-26	
0.080	9.705@-27	9.583@-27	5.712@-26	
0.090	8.540@-27	8.427@-27	4.995@-26	
0.100	7.614@-27	7.509@-27	4.428@-26	
0.200	3.546@-27	3.488@-27	1.952@-26	
0.300	2.247@-27	2.207@-27	1.173@-26	
0.400	1.615@-27	1.585@-27	7.999@-27	
0.500	1.245@-27	1.221@-27	5.851@-27	
0.600	1.003@-27	9.901@-28	4.473@-27	
0.700	8.323@-28	8.214@-28	3.527@-27	
0.800	7.066@-28	6.969@-28	2.844@-27	
0.900	6.102@-28	6.014@-28	2.333@-27	
1.000	5.340@-28	5.260@-28	1.939@-27	
1.500	3.130@-28	3.072@-28	8.016@-28	
1.714	2.601@-28	2.549@-28	0.000@+00	9.399@-27
2.000	2.087@-28	2.041@-28		
2.500	1.497@-28	1.458@-28		
3.000	1.127@-28	1.092@-28		
3.500	8.778@-29	8.471@-29		
4.000	7.025@-29	6.746@-29		
4.500	5.734@-29	5.498@-29		
5.000	4.726@-29	4.466@-29		
5.500	3.827@-29	3.592@-29		

R =	200	100	50	25	10	5
DELTA =	-0.155	-0.126	-0.097	-0.067	-0.029	0.000

E(E+) = 6.000 BEV
Z = 3.000

THETA(LAB) = 2.261@-02 RAD.
THETA(C.M.) = 2.094@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	2.955@-26	2.978@-26	2.513@-25	
0.030	1.931@-26	1.926@-26	1.614@-25	
0.040	1.422@-26	1.413@-26	1.175@-25	
0.050	1.120@-26	1.110@-26	9.167@-26	
0.060	9.208@-27	9.111@-27	7.473@-26	
0.070	7.796@-27	7.706@-27	6.279@-26	
0.080	6.745@-27	6.663@-27	5.393@-26	
0.090	5.934@-27	5.859@-27	4.712@-26	
0.100	5.290@-27	5.221@-27	4.172@-26	
0.200	2.463@-27	2.426@-27	1.820@-26	
0.300	1.560@-27	1.535@-27	1.082@-26	
0.400	1.122@-27	1.103@-27	7.306@-27	
0.500	8.645@-28	8.490@-28	5.290@-27	
0.600	6.962@-28	6.832@-28	4.004@-27	
0.700	5.780@-28	5.668@-28	3.126@-27	
0.800	4.907@-28	4.808@-28	2.495@-27	
0.900	4.237@-28	4.149@-28	2.025@-27	
1.000	3.709@-28	3.628@-28	1.663@-27	
1.500	2.173@-28	2.118@-28	0.000@+00	8.271@-27
2.000	1.450@-28	1.407@-28		
2.500	1.040@-28	1.005@-28		
3.000	7.824@-29	7.523@-29		
3.500	6.096@-29	5.832@-29		
4.000	4.878@-29	4.642@-29		
4.500	3.982@-29	3.766@-29		
5.000	3.282@-29	3.081@-29		
5.500	2.657@-29	2.477@-29		

R =	200	100	50	25	10	5
DELTA =	-0.154	-0.124	-0.095	-0.066	-0.028	0.002

E(E+) = 6.000 BEV THETA(LAB) = 2.918@-02 RAD.
Z = 5.000 THETA(C.M.) = 2.301@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	1.076@-26	1.052@-26	2.295@-25	
0.030	6.996@-27	6.804@-27	1.467@-25	
0.040	5.142@-27	4.988@-27	1.063@-25	
0.050	4.044@-27	3.918@-27	8.258@-26	
0.060	3.321@-27	3.215@-27	6.702@-26	
0.070	2.811@-27	2.718@-27	5.607@-26	
0.080	2.431@-27	2.350@-27	4.796@-26	
0.090	2.138@-27	2.066@-27	4.172@-26	
0.100	1.906@-27	1.841@-27	3.678@-26	
0.200	8.869@-28	8.540@-28	1.539@-26	
0.300	5.618@-28	5.400@-28	8.784@-27	
0.400	4.039@-28	3.876@-28	5.696@-27	
0.500	3.112@-28	2.982@-28	3.964@-27	
0.600	2.507@-28	2.399@-28	2.881@-27	
0.700	2.081@-28	1.989@-28	2.149@-27	
0.800	1.767@-28	1.687@-28	1.607@-27	
0.900	1.525@-28	1.456@-28	1.132@-27	
1.000	1.335@-28	1.272@-28	0.000@+00	5.734@-27
1.500	7.824@-29	7.421@-29		
2.000	5.219@-29	4.917@-29		
2.500	3.743@-29	3.506@-29		
3.000	2.817@-29	2.622@-29		
3.500	2.195@-29	2.018@-29		
4.000	1.756@-29	1.612@-29		
4.500	1.433@-29	1.304@-29		
5.000	1.182@-29	1.064@-29		
5.500	9.566@-30	8.486@-30		

R =	200	100	50	25	10	5
DELTA =	-0.148	-0.119	-0.090	-0.061	-0.022	0.007

E(E+) = 7.000 BEV
Z = 0.250

THETA(LAB) = 6.042@-03 RAD.
THETA(C.M.) = 9.273@-01 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	3.687@-24	4.493@-24	4.339@-24	
0.030	2.454@-24	2.911@-24	2.809@-24	
0.040	1.837@-24	2.139@-24	2.062@-24	
0.050	1.467@-24	1.683@-24	1.621@-24	
0.060	1.220@-24	1.382@-24	1.330@-24	
0.070	1.043@-24	1.170@-24	1.126@-24	
0.080	9.106@-25	1.012@-24	9.734@-25	
0.090	8.075@-25	8.908@-25	8.561@-25	
0.100	7.249@-25	7.946@-25	7.629@-25	
0.200	3.521@-25	3.711@-25	3.546@-25	
0.300	2.275@-25	2.359@-25	2.243@-25	
0.400	1.653@-25	1.702@-25	1.610@-25	
0.500	1.284@-25	1.316@-25	1.238@-25	
0.600	1.039@-25	1.063@-25	9.954@-26	
0.700	8.669@-26	8.849@-26	8.247@-26	
0.800	7.389@-26	7.533@-26	6.986@-26	
0.900	6.404@-26	6.523@-26	6.019@-26	
1.000	5.624@-26	5.724@-26	5.256@-26	
1.500	3.346@-26	3.397@-26	3.042@-26	
2.000	2.262@-26	2.292@-26	1.999@-26	
2.500	1.642@-26	1.660@-26	1.410@-26	
3.000	1.249@-26	1.259@-26	1.039@-26	
3.500	9.814@-27	9.873@-27	7.890@-27	
4.000	7.914@-27	7.943@-27	6.093@-27	
4.500	6.513@-27	6.488@-27	4.701@-27	
5.000	5.448@-27	5.441@-27	3.458@-27	
5.500	4.607@-27	4.592@-27	1.653@-27	
5.600	4.459@-27	4.442@-27	0.000@+00	1.080@-25
6.000	3.906@-27	3.885@-27		
6.500	3.230@-27	3.204@-27		

R =	200	100	50	25	10	5
DELTA =	-0.153	-0.124	-0.094	-0.064	-0.025	0.005

E(E+) = 7.000 BEV THETA(LAB) = 8.544@-03 RAD.
Z = 0.500 THETA(C.M.) = 1.231@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	9.723@-25	1.114@-24	1.240@-24	
0.030	6.466@-25	7.217@-25	8.024@-25	
0.040	4.835@-25	5.299@-25	5.885@-25	
0.050	3.855@-25	4.167@-25	4.623@-25	
0.060	3.200@-25	3.423@-25	3.793@-25	
0.070	2.732@-25	2.898@-25	3.207@-25	
0.080	2.381@-25	2.507@-25	2.772@-25	
0.090	2.107@-25	2.206@-25	2.437@-25	
0.100	1.888@-25	1.967@-25	2.170@-25	
0.200	9.020@-26	9.184@-26	1.004@-25	
0.300	5.770@-26	5.836@-26	6.321@-26	
0.400	4.172@-26	4.209@-26	4.516@-26	
0.500	3.230@-26	3.253@-26	3.459@-26	
0.600	2.611@-26	2.627@-26	2.768@-26	
0.700	2.175@-26	2.187@-26	2.283@-26	
0.800	1.852@-26	1.862@-26	1.925@-26	
0.900	1.604@-26	1.599@-26	1.652@-26	
1.000	1.409@-26	1.414@-26	1.436@-26	
1.500	8.373@-27	8.390@-27	8.130@-27	
2.000	5.658@-27	5.658@-27	5.231@-27	
2.500	4.107@-27	4.131@-27	3.611@-27	
3.000	3.122@-27	3.134@-27	2.601@-27	
3.500	2.454@-27	2.457@-27	1.912@-27	
4.000	1.979@-27	1.976@-27	1.375@-27	
4.500	1.629@-27	1.622@-27	7.637@-28	
4.667	1.532@-27	1.525@-27	0.000@+00	4.411@-26
5.000	1.362@-27	1.353@-27		
5.500	1.152@-27	1.142@-27		
6.000	9.767@-28	9.616@-28		
6.500	8.077@-28	7.948@-28		

R =	200	100	50	25	10	5
DELTA =	-0.159	-0.129	-0.100	-0.070	-0.031	-0.001

E(E+) = 7.000 BEV THETA(LAB) = 1.208@-02 RAD.
Z = 1.000 THETA(C.M.) = 1.571@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	2.552@-25	2.786@-25	4.827@-25	
0.030	1.692@-25	1.805@-25	3.119@-25	
0.040	1.261@-25	1.325@-25	2.284@-25	
0.050	1.002@-25	1.043@-25	1.792@-25	
0.060	8.289@-26	8.561@-26	1.469@-25	
0.070	7.053@-26	7.246@-26	1.241@-25	
0.080	6.126@-26	6.270@-26	1.071@-25	
0.090	5.406@-26	5.517@-26	9.408@-26	
0.100	4.831@-26	4.921@-26	8.372@-26	
0.200	2.276@-26	2.297@-26	3.836@-26	
0.300	1.449@-26	1.460@-26	2.393@-26	
0.400	1.046@-26	1.053@-26	1.695@-26	
0.500	8.089@-27	8.136@-27	1.286@-26	
0.600	6.535@-27	6.571@-27	1.020@-26	
0.700	5.443@-27	5.470@-27	8.343@-27	
0.800	4.634@-27	4.656@-27	6.974@-27	
0.900	4.014@-27	4.031@-27	5.930@-27	
1.000	3.523@-27	3.537@-27	5.111@-27	
1.500	2.094@-27	2.098@-27	2.772@-27	
2.000	1.415@-27	1.415@-27	1.709@-27	
2.500	1.027@-27	1.024@-27	1.122@-27	
3.000	7.807@-28	7.763@-28	7.289@-28	
3.500	6.137@-28	6.085@-28	0.000@+00	1.985@-26
4.000	4.948@-28	4.892@-28		
4.500	4.072@-28	4.014@-28		
5.000	3.406@-28	3.346@-28		
5.500	2.880@-28	2.821@-28		
6.000	2.442@-28	2.382@-28		
6.500	2.020@-28	1.958@-28		

R =	200	100	50	25	10	5
DELTA =	-0.161	-0.131	-0.101	-0.072	-0.032	-0.003

E(E+) = 7.000 BEV
Z = 1.500

THETA(LAB) = 1.480@-02 RAD.
THETA(C.M.) = 1.772@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	1.163@-25	1.231@-25	3.435@-25	
0.030	7.685@-26	7.976@-26	2.217@-25	
0.040	5.708@-26	5.855@-26	1.622@-25	
0.050	4.521@-26	4.604@-26	1.271@-25	
0.060	3.730@-26	3.782@-26	1.041@-25	
0.070	3.167@-26	3.201@-26	8.782@-26	
0.080	2.747@-26	2.769@-26	7.575@-26	
0.090	2.421@-26	2.436@-26	6.646@-26	
0.100	2.161@-26	2.172@-26	5.908@-26	
0.200	1.013@-26	1.014@-26	2.682@-26	
0.300	6.447@-27	6.443@-27	1.658@-26	
0.400	4.651@-27	4.645@-27	1.164@-26	
0.500	3.596@-27	3.590@-27	8.757@-27	
0.600	2.905@-27	2.899@-27	6.885@-27	
0.700	2.419@-27	2.413@-27	5.580@-27	
0.800	2.060@-27	2.054@-27	4.624@-27	
0.900	1.784@-27	1.778@-27	3.898@-27	
1.000	1.566@-27	1.560@-27	3.331@-27	
1.500	9.307@-28	9.247@-28	1.731@-27	
2.000	6.289@-28	6.232@-28	1.015@-27	
2.500	4.564@-28	4.511@-28	5.762@-28	
2.800	3.854@-28	3.777@-28	0.000@+00	1.376@-26
3.000	3.470@-28	3.396@-28		
3.500	2.728@-28	2.679@-28		
4.000	2.199@-28	2.153@-28		
4.500	1.810@-28	1.766@-28		
5.000	1.514@-28	1.471@-28		
5.500	1.280@-28	1.239@-28		
6.000	1.065@-28	1.046@-28		
6.500	8.976@-29	8.577@-29		

R =	200	100	50	25	10	5
DELTA =	-0.160	-0.130	-0.101	-0.071	-0.032	-0.002

E(E+) = 7.000 BEV THETA(LAB) = 1.709@-02 RAD.
Z = 2.000 THETA(C.M.) = 1.911@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	6.643@-26	6.850@-26	2.942@-25	
0.030	4.375@-26	4.435@-26	1.896@-25	
0.040	3.240@-26	3.256@-26	1.386@-25	
0.050	2.561@-26	2.559@-26	1.085@-25	
0.060	2.110@-26	2.102@-26	8.876@-26	
0.070	1.790@-26	1.779@-26	7.482@-26	
0.080	1.551@-26	1.539@-26	6.448@-26	
0.090	1.366@-26	1.354@-26	5.651@-26	
0.100	1.219@-26	1.207@-26	5.020@-26	
0.200	5.705@-27	5.630@-27	2.258@-26	
0.300	3.628@-27	3.575@-27	1.384@-26	
0.400	2.617@-27	2.577@-27	9.627@-27	
0.500	2.023@-27	1.991@-27	7.179@-27	
0.600	1.634@-27	1.607@-27	5.595@-27	
0.700	1.361@-27	1.337@-27	4.495@-27	
0.800	1.159@-27	1.138@-27	3.693@-27	
0.900	1.004@-27	9.850@-28	3.087@-27	
1.000	8.810@-28	8.640@-28	2.615@-27	
1.500	5.235@-28	5.120@-28	1.301@-27	
2.000	3.537@-28	3.476@-28	6.876@-28	
2.333	2.840@-28	2.785@-28	0.000@+00	1.103@-26
2.500	2.567@-28	2.515@-28		
3.000	1.952@-28	1.906@-28		
3.500	1.534@-28	1.493@-28		
4.000	1.237@-28	1.199@-28		
4.500	1.018@-28	9.830@-29		
5.000	8.515@-29	8.187@-29		
5.500	7.202@-29	6.891@-29		
6.000	6.105@-29	5.788@-29		
6.500	5.049@-29	4.757@-29		

R =	200	100	50	25	10	5
DELTA =	-0.159	-0.129	-0.100	-0.070	-0.031	-0.001

E(E+) = 7.000 BEV THETA(LAB) = 1.911@-02 RAD.
Z = 2.500 THETA(C.M.) = 2.014@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	4.295@-26	4.385@-26	2.708@-25	
0.030	2.821@-26	2.839@-26	1.744@-25	
0.040	2.085@-26	2.084@-26	1.273@-25	
0.050	1.645@-26	1.638@-26	9.957@-26	
0.060	1.354@-26	1.345@-26	8.136@-26	
0.070	1.148@-26	1.139@-26	6.852@-26	
0.080	9.941@-27	9.849@-27	5.899@-26	
0.090	8.753@-27	8.665@-27	5.165@-26	
0.100	7.808@-27	7.725@-27	4.584@-26	
0.200	3.652@-27	3.604@-27	2.043@-26	
0.300	2.322@-27	2.288@-27	1.241@-26	
0.400	1.675@-27	1.649@-27	8.558@-27	
0.500	1.295@-27	1.274@-27	6.327@-27	
0.600	1.046@-27	1.029@-27	4.888@-27	
0.700	8.711@-28	8.560@-28	3.894@-27	
0.800	7.417@-28	7.284@-28	3.172@-27	
0.900	6.423@-28	6.304@-28	2.629@-27	
1.000	5.638@-28	5.530@-28	2.208@-27	
1.500	3.351@-28	3.276@-28	1.039@-27	
2.000	2.264@-28	2.206@-28	0.000@+00	9.398@-27
2.500	1.643@-28	1.596@-28		
3.000	1.249@-28	1.209@-28		
3.500	9.819@-29	9.464@-29		
4.000	7.918@-29	7.600@-29		
4.500	6.516@-29	6.228@-29		
5.000	5.450@-29	5.183@-29		
5.500	4.609@-29	4.344@-29		
6.000	3.907@-29	3.672@-29		
6.500	3.231@-29	3.018@-29		

R =	200	100	50	25	10	5
DELTA =	-0.158	-0.128	-0.098	-0.069	-0.029	0.000

E(E+) = 7.000 BEV
Z = 3.000

THETA(LAB) = 2.093@-02 RAD.
THETA(C.M.) = 2.094@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	3.004@-26	3.029@-26	2.576@-25	
0.030	1.968@-26	1.961@-26	1.657@-25	
0.040	1.452@-26	1.439@-26	1.208@-25	
0.050	1.145@-26	1.131@-26	9.441@-26	
0.060	9.421@-27	9.289@-27	7.707@-26	
0.070	7.982@-27	7.860@-27	6.484@-26	
0.080	6.911@-27	6.799@-27	5.578@-26	
0.090	6.084@-27	5.981@-27	4.879@-26	
0.100	5.426@-27	5.332@-27	4.326@-26	
0.200	2.537@-27	2.487@-27	1.911@-26	
0.300	1.613@-27	1.579@-27	1.151@-26	
0.400	1.163@-27	1.138@-27	7.865@-27	
0.500	8.993@-28	8.787@-28	5.763@-27	
0.600	7.265@-28	7.093@-28	4.415@-27	
0.700	6.049@-28	5.902@-28	3.487@-27	
0.800	5.151@-28	5.021@-28	2.816@-27	
0.900	4.461@-28	4.346@-28	2.314@-27	
1.000	3.916@-28	3.812@-28	1.927@-27	
1.500	2.327@-28	2.257@-28	8.219@-28	
1.750	1.891@-28	1.831@-28	0.000@+00	8.271@-27
2.000	1.572@-28	1.520@-28		
2.500	1.141@-28	1.099@-28		
3.000	8.676@-29	8.319@-29		
3.500	6.819@-29	6.512@-29		
4.000	5.499@-29	5.227@-29		
4.500	4.525@-29	4.281@-29		
5.000	3.785@-29	3.546@-29		
5.500	3.201@-29	2.994@-29		
6.000	2.713@-29	2.519@-29		
6.500	2.244@-29	2.059@-29		

R =	200	100	50	25	10	5
DELTA =	-0.156	-0.127	-0.097	-0.067	-0.028	0.002

E(E+) = 7.000 BEV
Z = 5.000

THETA(LAB) = 2.702@-02 RAD.
THETA(C.M.) = 2.301@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	1.096@-26	1.067@-26	2.357@-25	
0.030	7.142@-27	6.906@-27	1.509@-25	
0.040	5.255@-27	5.066@-27	1.096@-25	
0.050	4.137@-27	3.981@-27	8.535@-26	
0.060	3.400@-27	3.268@-27	6.941@-26	
0.070	2.879@-27	2.765@-27	5.818@-26	
0.080	2.492@-27	2.391@-27	4.986@-26	
0.090	2.193@-27	2.103@-27	4.346@-26	
0.100	1.955@-27	1.874@-27	3.839@-26	
0.200	9.135@-28	8.728@-28	1.637@-26	
0.300	5.807@-28	5.536@-28	9.513@-27	
0.400	4.188@-28	3.987@-28	6.280@-27	
0.500	3.238@-28	3.078@-28	4.447@-27	
0.600	2.615@-28	2.483@-28	3.292@-27	
0.700	2.178@-28	2.065@-28	2.512@-27	
0.800	1.854@-28	1.756@-28	1.953@-27	
0.900	1.606@-28	1.519@-28	1.527@-27	
1.000	1.410@-28	1.332@-28	1.169@-27	
1.167	1.161@-28	1.095@-28	0.000@+00	5.734@-27
1.500	8.377@-29	7.876@-29		
2.000	5.660@-29	5.295@-29		
2.500	4.108@-29	3.823@-29		
3.000	3.123@-29	2.891@-29		
3.500	2.455@-29	2.246@-29		
4.000	1.980@-29	1.811@-29		
4.500	1.629@-29	1.480@-29		
5.000	1.362@-29	1.229@-29		
5.500	1.152@-29	1.031@-29		
6.000	9.769@-30	8.642@-30		
6.500	8.079@-30	7.039@-30		

R =	200	100	50	25	10	5
DELTA =	-0.151	-0.121	-0.091	-0.062	-0.022	0.007

E(E+) = 9.000 BEV
Z = 0.250

THETA(LAB) = 5.328@-03 RAD.
THETA(C.M.) = 9.273@-01 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	3.764@-24	4.635@-24	4.487@-24	
0.030	2.506@-24	3.009@-24	2.909@-24	
0.040	1.877@-24	2.213@-24	2.137@-24	
0.050	1.500@-24	1.742@-24	1.682@-24	
0.060	1.248@-24	1.433@-24	1.382@-24	
0.070	1.068@-24	1.213@-24	1.170@-24	
0.080	9.328@-25	1.051@-24	1.013@-24	
0.090	8.277@-25	9.251@-25	8.913@-25	
0.100	7.436@-25	8.255@-25	7.949@-25	
0.200	3.642@-25	3.878@-25	3.719@-25	
0.300	2.371@-25	2.477@-25	2.366@-25	
0.400	1.736@-25	1.795@-25	1.708@-25	
0.500	1.355@-25	1.393@-25	1.321@-25	
0.600	1.103@-25	1.130@-25	1.067@-25	
0.700	9.248@-26	9.449@-26	8.889@-26	
0.800	7.918@-26	8.077@-26	7.569@-26	
0.900	6.892@-26	7.022@-26	6.556@-26	
1.000	6.079@-26	6.187@-26	5.754@-26	
1.500	3.689@-26	3.744@-26	3.415@-26	
2.000	2.540@-26	2.573@-26	2.301@-26	
2.500	1.875@-26	1.897@-26	1.663@-26	
3.000	1.448@-26	1.463@-26	1.256@-26	
3.500	1.155@-26	1.164@-26	9.782@-27	
4.000	9.425@-27	9.485@-27	7.792@-27	
4.500	7.840@-27	7.828@-27	6.308@-27	
5.000	6.623@-27	6.602@-27	5.160@-27	
6.000	4.903@-27	4.898@-27	3.437@-27	
7.000	3.761@-27	3.744@-27	1.607@-27	
7.200	3.575@-27	3.557@-27	0.000@+00	1.080@-25
8.000	2.904@-27	2.882@-27		

R =	200	100	50	25	10	5
DELTA =	-0.158	-0.127	-0.097	-0.066	-0.026	0.005

E(E+) = 9.000 BEV THETA(LAB) = 7.535@-03 RAD.
Z = 0.500 THETA(C.M.) = 1.231@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	9.919@-25	1.157@-24	1.283@-24	
0.030	6.601@-25	7.502@-25	8.315@-25	
0.040	4.940@-25	5.515@-25	6.106@-25	
0.050	3.943@-25	4.341@-25	4.801@-25	
0.060	3.278@-25	3.569@-25	3.943@-25	
0.070	2.802@-25	3.023@-25	3.337@-25	
0.080	2.444@-25	2.617@-25	2.887@-25	
0.090	2.166@-25	2.305@-25	2.540@-25	
0.100	1.943@-25	2.056@-25	2.265@-25	
0.200	9.384@-26	9.662@-26	1.055@-25	
0.300	6.048@-26	6.168@-26	6.690@-26	
0.400	4.398@-26	4.468@-26	4.811@-26	
0.500	3.421@-26	3.469@-26	3.708@-26	
0.600	2.778@-26	2.814@-26	2.986@-26	
0.700	2.324@-26	2.352@-26	2.479@-26	
0.800	1.988@-26	2.010@-26	2.103@-26	
0.900	1.729@-26	1.748@-26	1.815@-26	
1.000	1.524@-26	1.540@-26	1.588@-26	
1.500	9.234@-27	9.316@-27	9.266@-27	
2.000	6.354@-27	6.401@-27	6.140@-27	
2.500	4.691@-27	4.718@-27	4.364@-27	
3.000	3.622@-27	3.637@-27	3.243@-27	
3.500	2.887@-27	2.894@-27	2.484@-27	
4.000	2.357@-27	2.358@-27	1.941@-27	
4.500	1.961@-27	1.958@-27	1.531@-27	
5.000	1.656@-27	1.650@-27	1.194@-27	
6.000	1.226@-27	1.217@-27	0.000@+00	4.411@-26
7.000	9.404@-28	9.224@-28		
8.000	7.262@-28	7.145@-28		

R =	200	100	50	25	10	5
DELTA =	-0.163	-0.133	-0.102	-0.072	-0.032	-0.001

E(E+) = 9.000 BEV
Z = 1.000

THETA(LAB) = 1.066@-02 RAD.
THETA(C.M.) = 1.571@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	2.603@-25	2.872@-25	5.000@-25	
0.030	1.729@-25	1.863@-25	3.236@-25	
0.040	1.291@-25	1.369@-25	2.373@-25	
0.050	1.028@-25	1.077@-25	1.865@-25	
0.060	8.523@-26	8.856@-26	1.530@-25	
0.070	7.265@-26	7.501@-26	1.294@-25	
0.080	6.322@-26	6.494@-26	1.119@-25	
0.090	5.587@-26	5.718@-26	9.832@-26	
0.100	5.000@-26	5.102@-26	8.759@-26	
0.200	2.377@-26	2.395@-26	4.051@-26	
0.300	1.522@-26	1.529@-26	2.550@-26	
0.400	1.104@-26	1.108@-26	1.821@-26	
0.500	8.577@-27	8.597@-27	1.394@-26	
0.600	6.959@-27	6.972@-27	1.115@-26	
0.700	5.820@-27	5.828@-27	9.189@-27	
0.800	4.976@-27	4.981@-27	7.745@-27	
0.900	4.326@-27	4.329@-27	6.639@-27	
1.000	3.813@-27	3.814@-27	5.768@-27	
1.500	2.309@-27	2.306@-27	3.254@-27	
2.000	1.589@-27	1.584@-27	2.086@-27	
2.500	1.173@-27	1.167@-27	1.435@-27	
3.000	9.057@-28	8.996@-28	1.029@-27	
3.500	7.219@-28	7.156@-28	7.489@-28	
4.000	5.893@-28	5.829@-28	5.202@-28	
4.500	4.902@-28	4.808@-28	0.000@+00	1.985@-26
5.000	4.141@-28	4.076@-28		
6.000	3.065@-28	3.003@-28		
7.000	2.351@-28	2.291@-28		
8.000	1.816@-28	1.758@-28		

R =	200	100	50	25	10	5
DELTA =	-0.165	-0.135	-0.104	-0.074	-0.033	-0.003

E(E+) = 9.000 BEV THETA(LAB) = 1.305@-02 RAD.
Z = 1.500 THETA(C.M.) = 1.772@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	1.187@-25	1.268@-25	3.561@-25	
0.030	7.869@-26	8.223@-26	2.302@-25	
0.040	5.861@-26	6.040@-26	1.687@-25	
0.050	4.653@-26	4.754@-26	1.324@-25	
0.060	3.848@-26	3.909@-26	1.086@-25	
0.070	3.273@-26	3.309@-26	9.175@-26	
0.080	2.843@-26	2.865@-26	7.925@-26	
0.090	2.509@-26	2.522@-26	6.961@-26	
0.100	2.242@-26	2.250@-26	6.196@-26	
0.200	1.060@-26	1.056@-26	2.845@-26	
0.300	6.776@-27	6.740@-27	1.778@-26	
0.400	4.912@-27	4.848@-27	1.261@-26	
0.500	3.814@-27	3.762@-27	9.587@-27	
0.600	3.094@-27	3.050@-27	7.614@-27	
0.700	2.587@-27	2.549@-27	6.234@-27	
0.800	2.212@-27	2.178@-27	5.219@-27	
0.900	1.923@-27	1.893@-27	4.443@-27	
1.000	1.695@-27	1.667@-27	3.834@-27	
1.500	1.026@-27	1.008@-27	2.092@-27	
2.000	7.062@-28	6.865@-28	1.298@-27	
2.500	5.213@-28	5.134@-28	8.597@-28	
3.000	4.026@-28	3.956@-28	5.727@-28	
3.500	3.209@-28	3.145@-28	2.677@-28	
3.600	3.076@-28	3.014@-28	0.000@+00	1.376@-26
4.000	2.619@-28	2.561@-28		
4.500	2.179@-28	2.125@-28		
5.000	1.840@-28	1.795@-28		
6.000	1.362@-28	1.318@-28		
7.000	1.045@-28	1.004@-28		
8.000	8.070@-29	7.630@-29		

R =	200	100	50	25	10	5
DELTA =	-0.165	-0.134	-0.104	-0.073	-0.033	-0.002

E(E+) = 9.000 BEV THETA(LAB) = 1.507@-02 RAD.
Z = 2.000 THETA(C.M.) = 1.911@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	6.791@-26	7.083@-26	3.053@-25	
0.030	4.489@-26	4.592@-26	1.972@-25	
0.040	3.335@-26	3.374@-26	1.444@-25	
0.050	2.642@-26	2.655@-26	1.132@-25	
0.060	2.181@-26	2.182@-26	9.276@-26	
0.070	1.853@-26	1.848@-26	7.832@-26	
0.080	1.607@-26	1.600@-26	6.759@-26	
0.090	1.417@-26	1.408@-26	5.933@-26	
0.100	1.266@-26	1.256@-26	5.277@-26	
0.200	5.968@-27	5.893@-27	2.406@-26	
0.300	3.814@-27	3.760@-27	1.493@-26	
0.400	2.764@-27	2.722@-27	1.052@-26	
0.500	2.146@-27	2.112@-27	7.940@-27	
0.600	1.741@-27	1.713@-27	6.263@-27	
0.700	1.456@-27	1.431@-27	5.093@-27	
0.800	1.244@-27	1.223@-27	4.235@-27	
0.900	1.082@-27	1.063@-27	3.581@-27	
1.000	9.534@-28	9.360@-28	3.070@-27	
1.500	5.774@-28	5.656@-28	1.621@-27	
2.000	3.973@-28	3.882@-28	9.706@-28	
2.500	2.932@-28	2.858@-28	5.972@-28	
3.000	2.264@-28	2.201@-28	0.000@+00	1.103@-26
3.500	1.805@-28	1.750@-28		
4.000	1.473@-28	1.424@-28		
4.500	1.226@-28	1.181@-28		
5.000	1.035@-28	9.948@-29		
6.000	7.664@-29	7.316@-29		
7.000	5.878@-29	5.549@-29		
8.000	4.539@-29	4.277@-29		

R =	200	100	50	25	10	5
DELTA =	-0.163	-0.133	-0.102	-0.072	-0.032	-0.001

E(E+) = 9.000 BEV
Z = 2.500

THETA(LAB) = 1.685@-02 RAD.
THETA(C.M.) = 2.014@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	4.397@-26	4.503@-26	2.812@-25	
0.030	2.899@-26	2.919@-26	1.815@-25	
0.040	2.149@-26	2.144@-26	1.327@-25	
0.050	1.700@-26	1.687@-26	1.040@-25	
0.060	1.402@-26	1.386@-26	8.516@-26	
0.070	1.190@-26	1.174@-26	7.184@-26	
0.080	1.032@-26	1.016@-26	6.196@-26	
0.090	9.092@-27	8.945@-27	5.434@-26	
0.100	8.118@-27	7.980@-27	4.830@-26	
0.200	3.821@-27	3.742@-27	2.186@-26	
0.300	2.441@-27	2.387@-27	1.348@-26	
0.400	1.769@-27	1.728@-27	9.427@-27	
0.500	1.373@-27	1.340@-27	7.068@-27	
0.600	1.114@-27	1.087@-27	5.538@-27	
0.700	9.316@-28	9.079@-28	4.473@-27	
0.800	7.964@-28	7.757@-28	3.694@-27	
0.900	6.924@-28	6.740@-28	3.104@-27	
1.000	6.102@-28	5.936@-28	2.643@-27	
1.500	3.695@-28	3.585@-28	1.350@-27	
2.000	2.542@-28	2.460@-28	7.682@-28	
2.500	1.877@-28	1.811@-28	3.036@-28	
2.571	1.804@-28	1.740@-28	0.000@+00	9.398@-27
3.000	1.449@-28	1.394@-28		
3.500	1.155@-28	1.108@-28		
4.000	9.430@-29	9.016@-29		
4.500	7.843@-29	7.492@-29		
5.000	6.626@-29	6.291@-29		
6.000	4.905@-29	4.623@-29		
7.000	3.762@-29	3.516@-29		
8.000	2.905@-29	2.681@-29		

R =	200	100	50	25	10	5
DELTA =	-0.162	-0.132	-0.101	-0.071	-0.030	0.000

E(E+) = 9.000 BEV
Z = 3.000

THETA(LAB) = 1.846@-02 RAD.
THETA(C.M.) = 2.094@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	3.079@-26	3.106@-26	2.676@-25	
0.030	2.025@-26	2.013@-26	1.726@-25	
0.040	1.499@-26	1.479@-26	1.261@-25	
0.050	1.184@-26	1.163@-26	9.877@-26	
0.060	9.758@-27	9.559@-27	8.079@-26	
0.070	8.278@-27	8.094@-27	6.810@-26	
0.080	7.175@-27	7.006@-27	5.869@-26	
0.090	6.322@-27	6.167@-27	5.144@-26	
0.100	5.643@-27	5.500@-27	4.568@-26	
0.200	2.654@-27	2.578@-27	2.053@-26	
0.300	1.696@-27	1.644@-27	1.257@-26	
0.400	1.229@-27	1.190@-27	8.733@-27	
0.500	9.539@-28	9.230@-28	6.504@-27	
0.600	7.738@-28	7.481@-28	5.062@-27	
0.700	6.470@-28	6.250@-28	4.061@-27	
0.800	5.531@-28	5.339@-28	3.332@-27	
0.900	4.809@-28	4.639@-28	2.781@-27	
1.000	4.237@-28	4.085@-28	2.352@-27	
1.500	2.566@-28	2.467@-28	1.160@-27	
2.000	1.766@-28	1.692@-28	5.866@-28	
2.250	1.507@-28	1.441@-28	0.000@+00	8.271@-27
2.500	1.303@-28	1.245@-28		
3.000	1.006@-28	9.596@-29		
3.500	8.022@-29	7.612@-29		
4.000	6.548@-29	6.191@-29		
4.500	5.447@-29	5.131@-29		
5.000	4.601@-29	4.317@-29		
6.000	3.406@-29	3.170@-29		
7.000	2.613@-29	2.408@-29		
8.000	2.017@-29	1.833@-29		

R =	200	100	50	25	10	5
DELTA =	-0.161	-0.130	-0.100	-0.069	-0.029	0.002

E(E+) = 9.000 BEV THETA(LAB) = 2.383@-02 RAD.
Z = 5.000 THETA(C.M.) = 2.301@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	1.128@-26	1.090@-26	2.455@-25	
0.030	7.373@-27	7.058@-27	1.577@-25	
0.040	5.437@-27	5.181@-27	1.149@-25	
0.050	4.286@-27	4.075@-27	8.972@-26	
0.060	3.527@-27	3.347@-27	7.317@-26	
0.070	2.989@-27	2.833@-27	6.150@-26	
0.080	2.589@-27	2.451@-27	5.285@-26	
0.090	2.280@-27	2.157@-27	4.618@-26	
0.100	2.035@-27	1.924@-27	4.090@-26	
0.200	9.560@-28	9.002@-28	1.788@-26	
0.300	6.106@-28	5.735@-28	1.065@-26	
0.400	4.423@-28	4.147@-28	7.200@-27	
0.500	3.434@-28	3.215@-28	5.220@-27	
0.600	2.786@-28	2.604@-28	3.956@-27	
0.700	2.329@-28	2.175@-28	3.091@-27	
0.800	1.991@-28	1.857@-28	2.470@-27	
0.900	1.731@-28	1.614@-28	2.007@-27	
1.000	1.526@-28	1.419@-28	1.650@-27	
1.500	9.239@-29	8.554@-29	0.000@+00	5.734@-27
2.000	6.356@-29	5.858@-29		
2.500	4.692@-29	4.305@-29		
3.000	3.623@-29	3.309@-29		
3.500	2.888@-29	2.591@-29		
4.000	2.357@-29	2.133@-29		
4.500	1.961@-29	1.765@-29		
5.000	1.656@-29	1.483@-29		
6.000	1.226@-29	1.086@-29		
7.000	9.405@-30	8.211@-30		
8.000	7.263@-30	6.208@-30		

R =	200	100	50	25	10	5
DELTA =	-0.155	-0.124	-0.094	-0.063	-0.023	0.007

E(E+) = 11.000 BEV
Z = 0.250

THETA(LAB) = 4.819@-03 RAD.
THETA(C.M.) = 9.273@-01 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	3.825@-24	4.762@-24	4.605@-24	
0.030	2.548@-24	3.089@-24	2.989@-24	
0.040	1.909@-24	2.273@-24	2.197@-24	
0.050	1.525@-24	1.791@-24	1.730@-24	
0.060	1.270@-24	1.473@-24	1.423@-24	
0.070	1.087@-24	1.248@-24	1.205@-24	
0.080	9.498@-25	1.081@-24	1.044@-24	
0.090	8.431@-25	9.523@-25	9.190@-25	
0.100	7.578@-25	8.501@-25	8.201@-25	
0.200	3.730@-25	4.008@-25	3.853@-25	
0.300	2.441@-25	2.568@-25	2.461@-25	
0.400	1.795@-25	1.866@-25	1.783@-25	
0.500	1.408@-25	1.453@-25	1.384@-25	
0.600	1.151@-25	1.182@-25	1.122@-25	
0.700	9.677@-26	9.907@-26	9.375@-26	
0.800	8.312@-26	8.491@-26	8.010@-26	
0.900	7.257@-26	7.401@-26	6.960@-26	
1.000	6.419@-26	6.537@-26	6.129@-26	
1.500	3.947@-26	4.006@-26	3.697@-26	
2.000	2.751@-26	2.787@-26	2.532@-26	
2.500	2.055@-26	2.078@-26	1.858@-26	
3.000	1.604@-26	1.621@-26	1.425@-26	
3.500	1.292@-26	1.303@-26	1.127@-26	
4.000	1.065@-26	1.065@-26	9.118@-27	
4.500	8.931@-27	8.926@-27	7.503@-27	
5.000	7.602@-27	7.587@-27	6.258@-27	
6.000	5.701@-27	5.711@-27	4.473@-27	
7.000	4.432@-27	4.426@-27	3.233@-27	
8.000	3.540@-27	3.525@-27	2.174@-27	
8.800	2.995@-27	2.976@-27	0.000@+00	1.080@-25
9.000	2.875@-27	2.855@-27		
10.000	2.313@-27	2.291@-27		

R =	200	100	50	25	10	5
DELTA =	-0.161	-0.130	-0.099	-0.068	-0.026	0.005

E(E+) = 11.000 BEV
Z = 0.500

THETA(LAB) = 6.816@-03 RAD.
THETA(C.M.) = 1.231@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	1.007@-24	1.185@-24	1.318@-24	
0.030	6.706@-25	7.692@-25	8.546@-25	
0.040	5.022@-25	5.658@-25	6.280@-25	
0.050	4.010@-25	4.457@-25	4.943@-25	
0.060	3.336@-25	3.666@-25	4.062@-25	
0.070	2.853@-25	3.108@-25	3.440@-25	
0.080	2.491@-25	2.691@-25	2.978@-25	
0.090	2.210@-25	2.371@-25	2.622@-25	
0.100	1.984@-25	2.116@-25	2.338@-25	
0.200	9.652@-26	9.974@-26	1.095@-25	
0.300	6.255@-26	6.390@-26	6.974@-26	
0.400	4.568@-26	4.642@-26	5.037@-26	
0.500	3.566@-26	3.614@-26	3.898@-26	
0.600	2.905@-26	2.939@-26	3.152@-26	
0.700	2.437@-26	2.464@-26	2.626@-26	
0.800	2.090@-26	2.112@-26	2.238@-26	
0.900	1.823@-26	1.840@-26	1.939@-26	
1.000	1.611@-26	1.626@-26	1.703@-26	
1.500	9.885@-27	9.959@-27	1.013@-26	
2.000	6.884@-27	6.926@-27	6.840@-27	
2.500	5.140@-27	5.165@-27	4.952@-27	
3.000	4.012@-27	4.027@-27	3.748@-27	
3.500	3.231@-27	3.238@-27	2.925@-27	
4.000	2.662@-27	2.664@-27	2.335@-27	
4.500	2.233@-27	2.232@-27	1.894@-27	
5.000	1.901@-27	1.897@-27	1.554@-27	
6.000	1.426@-27	1.418@-27	1.049@-27	
7.000	1.108@-27	1.098@-27	5.718@-28	
7.333	1.026@-27	1.015@-27	0.000@+00	4.411@-26
8.000	8.851@-28	8.706@-28		
9.000	7.188@-28	7.076@-28		
10.000	5.784@-28	5.669@-28		

R =	200	100	50	25	10	5
DELTA =	-0.167	-0.136	-0.105	-0.074	-0.032	-0.001

E(L+) = 11.000 BEV THETA(LAB) = 9.639@-03 RAD.
Z = 1.000 THETA(C.M.) = 1.571@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	2.643@-25	2.938@-25	5.137@-25	
0.030	1.758@-25	1.907@-25	3.328@-25	
0.040	1.314@-25	1.403@-25	2.444@-25	
0.050	1.047@-25	1.105@-25	1.922@-25	
0.060	8.695@-26	9.084@-26	1.578@-25	
0.070	7.421@-26	7.698@-26	1.336@-25	
0.080	6.465@-26	6.668@-26	1.155@-25	
0.090	5.721@-26	5.874@-26	1.016@-25	
0.100	5.125@-26	5.242@-26	9.060@-26	
0.200	2.454@-26	2.470@-26	4.217@-26	
0.300	1.579@-26	1.582@-26	2.669@-26	
0.400	1.149@-26	1.149@-26	1.917@-26	
0.500	8.950@-27	8.943@-27	1.475@-26	
0.600	7.283@-27	7.272@-27	1.186@-26	
0.700	6.107@-27	6.095@-27	9.826@-27	
0.800	5.235@-27	5.223@-27	8.325@-27	
0.900	4.564@-27	4.552@-27	7.174@-27	
1.000	4.032@-27	4.020@-27	6.264@-27	
1.500	2.473@-27	2.462@-27	3.625@-27	
2.000	1.721@-27	1.711@-27	2.382@-27	
2.500	1.285@-27	1.276@-27	1.679@-27	
3.000	1.003@-27	9.943@-28	1.237@-27	
3.500	8.078@-28	7.993@-28	9.390@-28	
4.000	6.656@-28	6.530@-28	7.242@-28	
4.500	5.584@-28	5.432@-28	5.561@-28	
5.000	4.753@-28	4.677@-28	4.003@-28	
5.500	4.095@-28	4.022@-28	0.000@+00	1.985@-26
6.000	3.564@-28	3.494@-28		
7.000	2.771@-28	2.705@-28		
8.000	2.213@-28	2.151@-28		
9.000	1.797@-28	1.739@-28		
10.000	1.446@-28	1.389@-28		

R =	200	100	50	25	10	5
DELTA =	-0.169	-0.138	-0.106	-0.075	-0.034	-0.003

E(E+) = 11.000 BEV
Z = 1.500

THETA(LAB) = 1.181@-02 RAD.
THETA(C.M.) = 1.772@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	1.206@-25	1.296@-25	3.661@-25	
0.030	8.005@-26	8.407@-26	2.370@-25	
0.040	5.973@-26	6.184@-26	1.739@-25	
0.050	4.751@-26	4.867@-26	1.366@-25	
0.060	3.935@-26	4.003@-26	1.121@-25	
0.070	3.352@-26	3.392@-26	9.483@-26	
0.080	2.915@-26	2.939@-26	8.198@-26	
0.090	2.575@-26	2.587@-26	7.207@-26	
0.100	2.304@-26	2.309@-26	6.420@-26	
0.200	1.095@-26	1.087@-26	2.970@-26	
0.300	7.030@-27	6.962@-27	1.869@-26	
0.400	5.112@-27	5.056@-27	1.335@-26	
0.500	3.981@-27	3.935@-27	1.021@-26	
0.600	3.239@-27	3.199@-27	8.164@-27	
0.700	2.715@-27	2.681@-27	6.728@-27	
0.800	2.327@-27	2.297@-27	5.668@-27	
0.900	2.029@-27	2.001@-27	4.857@-27	
1.000	1.792@-27	1.767@-27	4.218@-27	
1.500	1.099@-27	1.082@-27	2.375@-27	
2.000	7.651@-28	7.517@-28	1.519@-27	
2.500	5.712@-28	5.602@-28	1.043@-27	
3.000	4.459@-28	4.365@-28	7.453@-28	
3.500	3.591@-28	3.508@-28	5.387@-28	
4.000	2.959@-28	2.884@-28	3.622@-28	
4.400	2.567@-28	2.499@-28	0.000@+00	1.376@-26
4.500	2.482@-28	2.415@-28		
5.000	2.112@-28	2.051@-28		
6.000	1.584@-28	1.531@-28		
7.000	1.232@-28	1.184@-28		
8.000	9.836@-29	9.409@-29		
9.000	7.988@-29	7.540@-29		
10.000	6.427@-29	6.089@-29		

R =	200	100	50	25	10	5
DELTA =	-0.168	-0.137	-0.106	-0.075	-0.034	-0.002

E(E+) = 11.000 BEV
Z = 2.000

THETA(LAB) = 1.363@-02 RAD.
THETA(C.M.) = 1.911@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	6.902@-26	7.229@-26	3.140@-25	
0.030	4.572@-26	4.690@-26	2.031@-25	
0.040	3.404@-26	3.448@-26	1.489@-25	
0.050	2.702@-26	2.715@-26	1.169@-25	
0.060	2.234@-26	2.232@-26	9.589@-26	
0.070	1.901@-26	1.892@-26	8.104@-26	
0.080	1.651@-26	1.638@-26	7.001@-26	
0.090	1.457@-26	1.443@-26	6.151@-26	
0.100	1.302@-26	1.287@-26	5.476@-26	
0.200	6.171@-27	6.060@-27	2.518@-26	
0.300	3.958@-27	3.878@-27	1.576@-26	
0.400	2.877@-27	2.816@-27	1.119@-26	
0.500	2.240@-27	2.191@-27	8.513@-27	
0.600	1.822@-27	1.781@-27	6.768@-27	
0.700	1.528@-27	1.492@-27	5.546@-27	
0.800	1.309@-27	1.278@-27	4.647@-27	
0.900	1.141@-27	1.114@-27	3.960@-27	
1.000	1.008@-27	9.835@-28	3.420@-27	
1.500	6.182@-28	6.017@-28	1.874@-27	
2.000	4.304@-28	4.180@-28	1.167@-27	
2.500	3.213@-28	3.114@-28	7.772@-28	
3.000	2.508@-28	2.425@-28	5.247@-28	
3.500	2.020@-28	1.949@-28	2.859@-28	
3.667	1.889@-28	1.821@-28	0.000@+00	1.103@-26
4.000	1.664@-28	1.602@-28		
4.500	1.396@-28	1.341@-28		
5.000	1.188@-28	1.138@-28		
6.000	8.911@-29	8.514@-29		
7.000	6.927@-29	6.563@-29		
8.000	5.533@-29	5.210@-29		
9.000	4.493@-29	4.200@-29		
10.000	3.615@-29	3.341@-29		

R =	200	100	50	25	10	5
DELTA =	-0.167	-0.136	-0.105	-0.074	-0.032	-0.001

E(E+) = 11.000 BEV
Z = 2.500

THETA(LAB) = 1.524@-02 RAD.
THETA(C.M.) = 2.014@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	4.472@-26	4.591@-26	2.894@-25	
0.030	2.956@-26	2.978@-26	1.870@-25	
0.040	2.197@-26	2.189@-26	1.370@-25	
0.050	1.741@-26	1.723@-26	1.075@-25	
0.060	1.438@-26	1.417@-26	8.812@-26	
0.070	1.222@-26	1.200@-26	7.442@-26	
0.080	1.060@-26	1.039@-26	6.425@-26	
0.090	9.353@-27	9.154@-27	5.642@-26	
0.100	8.357@-27	8.169@-27	5.020@-26	
0.200	3.952@-27	3.843@-27	2.295@-26	
0.300	2.534@-27	2.459@-27	1.428@-26	
0.400	1.841@-27	1.785@-27	1.008@-26	
0.500	1.434@-27	1.389@-27	7.628@-27	
0.600	1.166@-27	1.129@-27	6.031@-27	
0.700	9.777@-28	9.455@-28	4.915@-27	
0.800	8.380@-28	8.098@-28	4.095@-27	
0.900	7.305@-28	7.055@-28	3.470@-27	
1.000	6.453@-28	6.229@-28	2.981@-27	
1.500	3.957@-28	3.809@-28	1.590@-27	
2.000	2.755@-28	2.645@-28	9.633@-28	
2.500	2.057@-28	1.970@-28	6.108@-28	
3.000	1.605@-28	1.534@-28	3.109@-28	
3.143	1.505@-28	1.437@-28	0.000@+00	9.398@-27
3.500	1.293@-28	1.232@-28		
4.000	1.065@-28	1.012@-28		
4.500	8.935@-29	8.468@-29		
5.000	7.605@-29	7.187@-29		
6.000	5.703@-29	5.358@-29		
7.000	4.434@-29	4.100@-29		
8.000	3.541@-29	3.282@-29		
9.000	2.876@-29	2.643@-29		
10.000	2.314@-29	2.098@-29		

R =	200	100	50	25	10	5
DELTA =	-0.166	-0.134	-0.103	-0.072	-0.031	0.000

E(E+) = 11.000 BEV
Z = 3.000

THETA(LAB) = 1.670@-02 RAD.
THETA(C.M.) = 2.094@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	3.134@-26	3.163@-26	2.756@-25	
0.030	2.068@-26	2.051@-26	1.780@-25	
0.040	1.534@-26	1.508@-26	1.303@-25	
0.050	1.214@-26	1.187@-26	1.022@-25	
0.060	1.002@-26	9.756@-27	8.368@-26	
0.070	8.506@-27	8.264@-27	7.063@-26	
0.080	7.379@-27	7.156@-27	6.094@-26	
0.090	6.506@-27	6.301@-27	5.347@-26	
0.100	5.812@-27	5.623@-27	4.755@-26	
0.200	2.746@-27	2.644@-27	2.161@-26	
0.300	1.760@-27	1.691@-27	1.337@-26	
0.400	1.279@-27	1.227@-27	9.388@-27	
0.500	9.957@-28	9.547@-28	7.064@-27	
0.600	8.099@-28	7.758@-28	5.554@-27	
0.700	6.790@-28	6.498@-28	4.501@-27	
0.800	5.820@-28	5.565@-28	3.730@-27	
0.900	5.073@-28	4.848@-28	3.144@-27	
1.000	4.482@-28	4.280@-28	2.686@-27	
1.500	2.748@-28	2.616@-28	1.395@-27	
2.000	1.913@-28	1.816@-28	8.166@-28	
2.500	1.428@-28	1.353@-28	4.514@-28	
2.750	1.256@-28	1.187@-28	0.000@+00	8.271@-27
3.000	1.115@-28	1.052@-28		
3.500	8.977@-29	8.448@-29		
4.000	7.396@-29	6.941@-29		
4.500	6.205@-29	5.805@-29		
5.000	5.281@-29	4.926@-29		
6.000	3.961@-29	3.650@-29		
7.000	3.079@-29	2.832@-29		
8.000	2.459@-29	2.244@-29		
9.000	1.997@-29	1.805@-29		
10.000	1.607@-29	1.430@-29		

R =	200	100	50	25	10	5
DELTA =	-0.164	-0.133	-0.102	-0.071	-0.030	0.002

E(E+) = 11.000 BEV
Z = 5.000

THETA(LAB) = 2.155@-02 RAD.
THETA(C.M.) = 2.301@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	1.151@-26	1.100@-26	2.532@-25	
0.030	7.549@-27	7.126@-27	1.630@-25	
0.040	5.577@-27	5.233@-27	1.190@-25	
0.050	4.402@-27	4.117@-27	9.311@-26	
0.060	3.625@-27	3.383@-27	7.607@-26	
0.070	3.075@-27	2.864@-27	6.405@-26	
0.080	2.665@-27	2.479@-27	5.513@-26	
0.090	2.349@-27	2.183@-27	4.826@-26	
0.100	2.097@-27	1.947@-27	4.282@-26	
0.200	9.891@-28	9.136@-28	1.902@-26	
0.300	6.337@-28	5.836@-28	1.151@-26	
0.400	4.605@-28	4.231@-28	7.901@-27	
0.500	3.585@-28	3.288@-28	5.815@-27	
0.600	2.916@-28	2.670@-28	4.472@-27	
0.700	2.445@-28	2.235@-28	3.547@-27	
0.800	2.095@-28	1.913@-28	2.877@-27	
0.900	1.826@-28	1.665@-28	2.373@-27	
1.000	1.613@-28	1.469@-28	1.985@-27	
1.500	9.892@-29	8.962@-29	8.921@-28	
1.833	7.696@-29	6.951@-29	0.000@+00	5.734@-27
2.000	6.887@-29	6.210@-29		
2.500	5.142@-29	4.584@-29		
3.000	4.013@-29	3.614@-29		
3.500	3.232@-29	2.898@-29		
4.000	2.663@-29	2.378@-29		
4.500	2.234@-29	1.987@-29		
5.000	1.901@-29	1.684@-29		
6.000	1.426@-29	1.251@-29		
7.000	1.108@-29	9.627@-30		
8.000	8.852@-30	7.599@-30		
9.000	7.189@-30	6.081@-30		
10.000	5.785@-30	4.764@-30		

R =	200	100	50	25	10	5
DELTA =	-0.158	-0.127	-0.096	-0.065	-0.024	0.008

E(E+) = 13.000 BEV
Z = 0.250

THETA(LAB) = 4.433@-03 RAD.
THETA(C.M.) = 9.273@-01 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	3.876@-24	4.843@-24	4.703@-24	
0.030	2.582@-24	3.154@-24	3.054@-24	
0.040	1.935@-24	2.321@-24	2.247@-24	
0.050	1.546@-24	1.829@-24	1.770@-24	
0.060	1.287@-24	1.505@-24	1.456@-24	
0.070	1.102@-24	1.276@-24	1.234@-24	
0.080	9.635@-25	1.106@-24	1.069@-24	
0.090	8.556@-25	9.747@-25	9.419@-25	
0.100	7.692@-25	8.703@-25	8.408@-25	
0.200	3.798@-25	4.114@-25	3.963@-25	
0.300	2.495@-25	2.642@-25	2.538@-25	
0.400	1.841@-25	1.924@-25	1.843@-25	
0.500	1.449@-25	1.501@-25	1.434@-25	
0.600	1.187@-25	1.223@-25	1.166@-25	
0.700	1.001@-25	1.027@-25	9.763@-26	
0.800	8.621@-26	8.820@-26	8.361@-26	
0.900	7.544@-26	7.702@-26	7.282@-26	
1.000	6.686@-26	6.815@-26	6.427@-26	
1.500	4.151@-26	4.213@-26	3.921@-26	
2.000	2.918@-26	2.935@-26	2.715@-26	
2.500	2.198@-26	2.207@-26	2.015@-26	
3.000	1.730@-26	1.735@-26	1.562@-26	
3.500	1.403@-26	1.406@-26	1.249@-26	
4.000	1.165@-26	1.166@-26	1.021@-26	
4.500	9.838@-27	9.833@-27	8.488@-27	
5.000	8.426@-27	8.474@-27	7.155@-27	
7.000	5.011@-27	5.014@-27	3.950@-27	
9.000	3.317@-27	3.303@-27	2.235@-27	
10.400	2.584@-27	2.564@-27	0.000@+00	1.080@-25
11.000	2.329@-27	2.308@-27		

R =	200	100	50	25	10	5
DELTA =	-0.164	-0.132	-0.101	-0.069	-0.027	0.005

E(E+) = 13.000 BEV
Z = 0.500

THETA(LAB) = 6.270@-03 RAD.
THETA(C.M.) = 1.231@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	1.020@-24	1.208@-24	1.346@-24	
0.030	6.792@-25	7.848@-25	8.738@-25	
0.040	5.088@-25	5.776@-25	6.425@-25	
0.050	4.065@-25	4.551@-25	5.059@-25	
0.060	3.383@-25	3.745@-25	4.160@-25	
0.070	2.895@-25	3.175@-25	3.525@-25	
0.080	2.529@-25	2.751@-25	3.053@-25	
0.090	2.244@-25	2.425@-25	2.688@-25	
0.100	2.016@-25	2.165@-25	2.399@-25	
0.200	9.859@-26	1.023@-25	1.128@-25	
0.300	6.417@-26	6.568@-26	7.203@-26	
0.400	4.702@-26	4.782@-26	5.218@-26	
0.500	3.681@-26	3.730@-26	4.050@-26	
0.600	3.005@-26	3.040@-26	3.284@-26	
0.700	2.527@-26	2.553@-26	2.744@-26	
0.800	2.172@-26	2.192@-26	2.344@-26	
0.900	1.898@-26	1.914@-26	2.037@-26	
1.000	1.680@-26	1.693@-26	1.794@-26	
1.500	1.040@-26	1.047@-26	1.081@-26	
2.000	7.305@-27	7.340@-27	7.400@-27	
2.500	5.499@-27	5.520@-27	5.428@-27	
3.000	4.327@-27	4.339@-27	4.161@-27	
3.500	3.510@-27	3.516@-27	3.288@-27	
4.000	2.913@-27	2.914@-27	2.658@-27	
4.500	2.460@-27	2.459@-27	2.186@-27	
5.000	2.107@-27	2.103@-27	1.822@-27	
7.000	1.253@-27	1.243@-27	9.343@-28	
8.667	8.836@-28	8.687@-28	0.000@+00	4.411@-26
9.000	8.294@-28	8.183@-28		
11.000	5.822@-28	5.710@-28		

R =	200	100	50	25	10	5
DELTA =	-0.170	-0.138	-0.107	-0.075	-0.033	-0.001

E(E+) = 13.000 BEV
Z = 1.000

THETA(LAB) = 8.867@-03 RAD.
THETA(C.M.) = 1.571@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	2.676@-25	2.992@-25	5.251@-25	
0.030	1.780@-25	1.943@-25	3.405@-25	
0.040	1.332@-25	1.430@-25	2.502@-25	
0.050	1.063@-25	1.127@-25	1.969@-25	
0.060	8.829@-26	9.269@-26	1.618@-25	
0.070	7.543@-26	7.857@-26	1.370@-25	
0.080	6.577@-26	6.808@-26	1.186@-25	
0.090	5.825@-26	5.999@-26	1.044@-25	
0.100	5.223@-26	5.356@-26	9.307@-26	
0.200	2.516@-26	2.530@-26	4.351@-26	
0.300	1.624@-26	1.624@-26	2.765@-26	
0.400	1.185@-26	1.182@-26	1.993@-26	
0.500	9.250@-27	9.217@-27	1.540@-26	
0.600	7.542@-27	7.509@-27	1.242@-26	
0.700	6.337@-27	6.305@-27	1.033@-26	
0.800	5.442@-27	5.412@-27	8.786@-27	
0.900	4.753@-27	4.725@-27	7.598@-27	
1.000	4.207@-27	4.181@-27	6.659@-27	
1.500	2.602@-27	2.583@-27	3.922@-27	
2.000	1.827@-27	1.811@-27	2.622@-27	
2.500	1.375@-27	1.351@-27	1.880@-27	
3.000	1.082@-27	1.062@-27	1.409@-27	
3.500	8.777@-28	8.538@-28	1.089@-27	
4.000	7.284@-28	7.127@-28	8.600@-28	
4.500	6.151@-28	6.054@-28	6.888@-28	
5.000	5.268@-28	5.177@-28	5.540@-28	
6.500	3.524@-28	3.446@-28	0.000@+00	1.985@-26
7.000	3.133@-28	3.057@-28		
9.000	2.074@-28	2.009@-28		
11.000	1.456@-28	1.398@-28		

R =	200	100	50	25	10	5
DELTA =	-0.172	-0.140	-0.108	-0.077	-0.035	-0.003

E(E+) = 13.000 BEV
Z = 1.500

THETA(LAB) = 1.086@-02 RAD.
THETA(C.M.) = 1.772@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	1.221@-25	1.318@-25	3.744@-25	
0.030	8.114@-26	8.556@-26	2.426@-25	
0.040	6.061@-26	6.294@-26	1.781@-25	
0.050	4.827@-26	4.958@-26	1.401@-25	
0.060	4.003@-26	4.079@-26	1.150@-25	
0.070	3.413@-26	3.457@-26	9.735@-26	
0.080	2.971@-26	2.995@-26	8.421@-26	
0.090	2.627@-26	2.639@-26	7.407@-26	
0.100	2.353@-26	2.356@-26	6.603@-26	
0.200	1.124@-26	1.112@-26	3.071@-26	
0.300	7.236@-27	7.136@-27	1.942@-26	
0.400	5.273@-27	5.193@-27	1.393@-26	
0.500	4.116@-27	4.049@-27	1.071@-26	
0.600	3.355@-27	3.298@-27	8.600@-27	
0.700	2.818@-27	2.769@-27	7.119@-27	
0.800	2.420@-27	2.377@-27	6.025@-27	
0.900	2.113@-27	2.075@-27	5.186@-27	
1.000	1.870@-27	1.835@-27	4.523@-27	
1.500	1.157@-27	1.133@-27	2.603@-27	
2.000	8.121@-28	7.942@-28	1.701@-27	
2.500	6.112@-28	5.968@-28	1.192@-27	
3.000	4.809@-28	4.687@-28	8.736@-28	
3.500	3.901@-28	3.796@-28	6.582@-28	
4.000	3.237@-28	3.145@-28	5.013@-28	
4.500	2.734@-28	2.651@-28	3.723@-28	
5.000	2.342@-28	2.266@-28	2.225@-28	
5.200	2.208@-28	2.136@-28	0.000@+00	1.376@-26
7.000	1.392@-28	1.337@-28		
9.000	9.217@-29	8.772@-29		
11.000	6.470@-29	6.120@-29		

R =	200	100	50	25	10	5
DELTA =	-0.171	-0.139	-0.108	-0.076	-0.034	-0.003

E(E+) = 13.000 BEV
Z = 2.000

THETA(LAB) = 1.254@-02 RAD.
THETA(C.M.) = 1.911@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	6.990@-26	7.344@-26	3.213@-25	
0.030	4.637@-26	4.768@-26	2.080@-25	
0.040	3.458@-26	3.507@-26	1.526@-25	
0.050	2.749@-26	2.762@-26	1.200@-25	
0.060	2.276@-26	2.272@-26	9.845@-26	
0.070	1.938@-26	1.925@-26	8.327@-26	
0.080	1.685@-26	1.668@-26	7.199@-26	
0.090	1.488@-26	1.470@-26	6.329@-26	
0.100	1.331@-26	1.312@-26	5.638@-26	
0.200	6.336@-27	6.190@-27	2.609@-26	
0.300	4.074@-27	3.970@-27	1.642@-26	
0.400	2.968@-27	2.888@-27	1.172@-26	
0.500	2.316@-27	2.252@-27	8.968@-27	
0.600	1.888@-27	1.834@-27	7.168@-27	
0.700	1.585@-27	1.539@-27	5.906@-27	
0.800	1.361@-27	1.321@-27	4.974@-27	
0.900	1.189@-27	1.153@-27	4.262@-27	
1.000	1.052@-27	1.020@-27	3.700@-27	
1.500	6.507@-28	6.293@-28	2.080@-27	
2.000	4.568@-28	4.409@-28	1.329@-27	
2.500	3.438@-28	3.312@-28	9.109@-28	
3.000	2.705@-28	2.600@-28	6.498@-28	
3.500	2.194@-28	2.106@-28	4.672@-28	
4.000	1.821@-28	1.744@-28	3.047@-28	
4.333	1.624@-28	1.553@-28	0.000@+00	1.103@-26
4.500	1.538@-28	1.470@-28		
5.000	1.317@-28	1.256@-28		
7.000	7.832@-29	7.399@-29		
9.000	5.184@-29	4.847@-29		
11.000	3.639@-29	3.357@-29		

R =	200	100	50	25	10	5
DELTA =	-0.170	-0.138	-0.107	-0.075	-0.033	-0.001

E(E+) = 13.000 BEV
Z = 2.500

THETA(LAB) = 1.402@-02 RAD.
THETA(C.M.) = 2.014@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	4.531@-26	4.660@-26	2.962@-25	
0.030	3.001@-26	3.023@-26	1.916@-25	
0.040	2.234@-26	2.224@-26	1.405@-25	
0.050	1.773@-26	1.751@-26	1.104@-25	
0.060	1.466@-26	1.440@-26	9.054@-26	
0.070	1.247@-26	1.220@-26	7.653@-26	
0.080	1.083@-26	1.058@-26	6.613@-26	
0.090	9.563@-27	9.312@-27	5.811@-26	
0.100	8.550@-27	8.312@-27	5.174@-26	
0.200	4.059@-27	3.920@-27	2.382@-26	
0.300	2.609@-27	2.513@-27	1.492@-26	
0.400	1.900@-27	1.828@-27	1.060@-26	
0.500	1.482@-27	1.425@-27	8.072@-27	
0.600	1.208@-27	1.160@-27	6.422@-27	
0.700	1.015@-27	9.737@-28	5.266@-27	
0.800	8.713@-28	8.355@-28	4.415@-27	
0.900	7.609@-28	7.291@-28	3.764@-27	
1.000	6.734@-28	6.449@-28	3.253@-27	
1.500	4.165@-28	3.978@-28	1.788@-27	
2.000	2.924@-28	2.785@-28	1.117@-27	
2.500	2.201@-28	2.092@-28	7.463@-28	
3.000	1.731@-28	1.642@-28	5.080@-28	
3.500	1.404@-28	1.329@-28	2.955@-28	
3.714	1.293@-28	1.222@-28	0.000@+00	9.398@-27
4.000	1.165@-28	1.100@-28		
4.500	9.843@-29	9.269@-29		
5.000	8.430@-29	7.919@-29		
7.000	5.012@-29	4.636@-29		
9.000	3.318@-29	3.049@-29		
11.000	2.329@-29	2.106@-29		

R =	200	100	50	25	10	5
DELTA =	-0.169	-0.137	-0.105	-0.073	-0.032	0.000

E(E+) = 13.000 BEV
Z = 3.000

THETA(LAB) = 1.536@-02 RAD.
THETA(C.M.) = 2.094@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	3.177@-26	3.206@-26	2.821@-25	
0.030	2.101@-26	2.081@-26	1.824@-25	
0.040	1.561@-26	1.530@-26	1.337@-25	
0.050	1.238@-26	1.205@-26	1.049@-25	
0.060	1.022@-26	9.906@-27	8.604@-26	
0.070	8.689@-27	8.394@-27	7.269@-26	
0.080	7.543@-27	7.270@-27	6.277@-26	
0.090	6.656@-27	6.404@-27	5.513@-26	
0.100	5.949@-27	5.716@-27	4.906@-26	
0.200	2.821@-27	2.694@-27	2.248@-26	
0.300	1.812@-27	1.727@-27	1.401@-26	
0.400	1.320@-27	1.256@-27	9.907@-27	
0.500	1.030@-27	9.784@-28	7.509@-27	
0.600	8.391@-28	7.966@-28	5.946@-27	
0.700	7.047@-28	6.684@-28	4.853@-27	
0.800	6.051@-28	5.735@-28	4.049@-27	
0.900	5.284@-28	5.004@-28	3.437@-27	
1.000	4.677@-28	4.426@-28	2.957@-27	
1.500	2.892@-28	2.728@-28	1.589@-27	
2.000	2.030@-28	1.910@-28	9.697@-28	
2.500	1.528@-28	1.434@-28	6.248@-28	
3.000	1.202@-28	1.125@-28	3.642@-28	
3.250	1.079@-28	1.009@-28	0.000@+00	8.271@-27
3.500	9.753@-29	9.101@-29		
4.000	8.093@-29	7.533@-29		
4.500	6.835@-29	6.345@-29		
5.000	5.854@-29	5.419@-29		
7.000	3.481@-29	3.185@-29		
9.000	2.304@-29	2.081@-29		
11.000	1.617@-29	1.434@-29		

R =	200	100	50	25	10	5
DELTA =	-0.167	-0.135	-0.104	-0.072	-0.030	0.002

E(E+) = 13.000 BEV
Z = 5.000

THETA(LAB) = 1.983@-02 RAD.
THETA(C.M.) = 2.301@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	1.170@-26	1.116@-26	2.595@-25	
0.030	7.688@-27	7.234@-27	1.674@-25	
0.040	5.689@-27	5.315@-27	1.224@-25	
0.050	4.496@-27	4.183@-27	9.586@-26	
0.060	3.706@-27	3.438@-27	7.842@-26	
0.070	3.145@-27	2.912@-27	6.612@-26	
0.080	2.728@-27	2.521@-27	5.698@-26	
0.090	2.405@-27	2.220@-27	4.994@-26	
0.100	2.148@-27	1.981@-27	4.436@-26	
0.200	1.016@-27	9.319@-28	1.993@-26	
0.300	6.526@-28	5.965@-28	1.219@-26	
0.400	4.752@-28	4.333@-28	8.458@-27	
0.500	3.707@-28	3.374@-28	6.291@-27	
0.600	3.021@-28	2.745@-28	4.889@-27	
0.700	2.537@-28	2.302@-28	3.917@-27	
0.800	2.179@-28	1.974@-28	3.209@-27	
0.900	1.903@-28	1.721@-28	2.675@-27	
1.000	1.684@-28	1.522@-28	2.260@-27	
1.500	1.041@-28	9.362@-29	1.105@-27	
2.000	7.310@-29	6.543@-29	5.181@-28	
2.167	6.608@-29	5.907@-29	0.000@+00	5.734@-27
2.500	5.501@-29	4.904@-29		
3.000	4.328@-29	3.843@-29		
3.500	3.511@-29	3.106@-29		
4.000	2.914@-29	2.567@-29		
4.500	2.461@-29	2.160@-29		
5.000	2.107@-29	1.843@-29		
7.000	1.253@-29	1.078@-29		
9.000	8.295@-30	6.997@-30		
11.000	5.823@-30	4.776@-30		

R =	200	100	50	25	10	5
DELTA =	-0.161	-0.129	-0.098	-0.066	-0.024	0.008

E(E+) = 15.000 BEV
Z = 0.250

THETA(LAB) = 4.127@-03 RAD.
THETA(C.M.) = 9.273@-01 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	3.919@-24	4.903@-24	4.787@-24	
0.030	2.611@-24	3.190@-24	3.111@-24	
0.040	1.957@-24	2.352@-24	2.290@-24	
0.050	1.564@-24	1.853@-24	1.804@-24	
0.060	1.302@-24	1.525@-24	1.485@-24	
0.070	1.115@-24	1.293@-24	1.259@-24	
0.080	9.751@-25	1.121@-24	1.091@-24	
0.090	8.660@-25	9.876@-25	9.613@-25	
0.100	7.787@-25	8.822@-25	8.583@-25	
0.200	3.853@-25	4.177@-25	4.055@-25	
0.300	2.538@-25	2.687@-25	2.602@-25	
0.400	1.878@-25	1.959@-25	1.894@-25	
0.500	1.481@-25	1.530@-25	1.476@-25	
0.600	1.217@-25	1.249@-25	1.202@-25	
0.700	1.028@-25	1.050@-25	1.009@-25	
0.800	8.870@-26	9.029@-26	8.652@-26	
0.900	7.776@-26	7.895@-26	7.548@-26	
1.000	6.904@-26	6.995@-26	6.673@-26	
1.500	4.318@-26	4.351@-26	4.106@-26	
2.000	3.056@-26	3.071@-26	2.866@-26	
2.500	2.316@-26	2.324@-26	2.144@-26	
3.000	1.833@-26	1.838@-26	1.676@-26	
3.500	1.496@-26	1.510@-26	1.350@-26	
4.000	1.249@-26	1.259@-26	1.112@-26	
4.500	1.060@-26	1.068@-26	9.320@-27	
5.000	9.127@-27	9.182@-27	7.917@-27	
7.000	5.520@-27	5.530@-27	4.521@-27	
9.000	3.700@-27	3.690@-27	2.798@-27	
11.000	2.649@-27	2.630@-27	1.599@-27	
12.000	2.276@-27	2.256@-27	0.000@+00	1.080@-25
13.000	1.958@-27	1.929@-27		

R =	200	100	50	25	10	5
DELTA =	-0.166	-0.134	-0.102	-0.070	-0.027	0.005

E(E+) = 15.000 BEV
Z = 0.500

THETA(LAB) = 5.837@-03 RAD.
THETA(C.M.) = 1.231@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	1.031@-24	1.228@-24	1.370@-24	
0.030	6.866@-25	7.981@-25	8.901@-25	
0.040	5.144@-25	5.876@-25	6.549@-25	
0.050	4.111@-25	4.632@-25	5.159@-25	
0.060	3.422@-25	3.813@-25	4.244@-25	
0.070	2.929@-25	3.233@-25	3.597@-25	
0.080	2.559@-25	2.802@-25	3.116@-25	
0.090	2.272@-25	2.470@-25	2.745@-25	
0.100	2.042@-25	2.206@-25	2.451@-25	
0.200	1.002@-25	1.045@-25	1.155@-25	
0.300	6.547@-26	6.718@-26	7.395@-26	
0.400	4.811@-26	4.899@-26	5.369@-26	
0.500	3.775@-26	3.827@-26	4.176@-26	
0.600	3.088@-26	3.123@-26	3.393@-26	
0.700	2.602@-26	2.626@-26	2.841@-26	
0.800	2.239@-26	2.258@-26	2.432@-26	
0.900	1.960@-26	1.974@-26	2.118@-26	
1.000	1.738@-26	1.749@-26	1.868@-26	
1.500	1.083@-26	1.088@-26	1.138@-26	
2.000	7.653@-27	7.680@-27	7.862@-27	
2.500	5.796@-27	5.811@-27	5.822@-27	
3.000	4.587@-27	4.593@-27	4.505@-27	
3.500	3.743@-27	3.744@-27	3.594@-27	
4.000	3.123@-27	3.121@-27	2.932@-27	
4.500	2.652@-27	2.647@-27	2.434@-27	
5.000	2.282@-27	2.276@-27	2.047@-27	
7.000	1.380@-27	1.370@-27	1.119@-27	
9.000	9.250@-28	9.047@-28	5.994@-28	
10.000	7.775@-28	7.660@-28	0.000@+00	4.411@-26
11.000	6.622@-28	6.507@-28		
13.000	4.896@-28	4.784@-28		

R =	200	100	50	25	10	5
DELTA =	-0.172	-0.140	-0.108	-0.076	-0.034	-0.001

E(E+) = 15.000 BEV
Z = 1.000

THETA(LAB) = 8.254@-03 RAD.
THETA(C.M.) = 1.571@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	2.703@-25	3.022@-25	5.348@-25	
0.030	1.799@-25	1.963@-25	3.471@-25	
0.040	1.347@-25	1.445@-25	2.552@-25	
0.050	1.075@-25	1.139@-25	2.009@-25	
0.060	8.938@-26	9.369@-26	1.651@-25	
0.070	7.641@-26	7.944@-26	1.399@-25	
0.080	6.667@-26	6.885@-26	1.211@-25	
0.090	5.908@-26	6.067@-26	1.067@-25	
0.100	5.301@-26	5.418@-26	9.516@-26	
0.200	2.566@-26	2.563@-26	4.463@-26	
0.300	1.661@-26	1.648@-26	2.845@-26	
0.400	1.214@-26	1.201@-26	2.057@-26	
0.500	9.500@-27	9.378@-27	1.593@-26	
0.600	7.758@-27	7.651@-27	1.289@-26	
0.700	6.528@-27	6.432@-27	1.075@-26	
0.800	5.614@-27	5.529@-27	9.165@-27	
0.900	4.910@-27	4.833@-27	7.947@-27	
1.000	4.352@-27	4.282@-27	6.983@-27	
1.500	2.710@-27	2.680@-27	4.166@-27	
2.000	1.914@-27	1.891@-27	2.821@-27	
2.500	1.450@-27	1.430@-27	2.048@-27	
3.000	1.147@-27	1.130@-27	1.554@-27	
3.500	9.359@-28	9.212@-28	1.216@-27	
4.000	7.809@-28	7.677@-28	9.730@-28	
4.500	6.630@-28	6.509@-28	7.917@-28	
5.000	5.707@-28	5.595@-28	6.518@-28	
7.000	3.451@-28	3.364@-28	2.692@-28	
7.500	3.098@-28	3.016@-28	0.000@+00	1.985@-26
9.000	2.313@-28	2.240@-28		
11.000	1.656@-28	1.593@-28		
13.000	1.224@-28	1.168@-28		

R =	200	100	50	25	10	5
DELTA =	-0.174	-0.142	-0.110	-0.078	-0.035	-0.003

E(E+) = 15.000 BEV
Z = 1.500

THETA(LAB) = 1.011@-02 RAD.
THETA(C.M.) = 1.772@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	1.234@-25	1.336@-25	3.815@-25	
0.030	8.203@-26	8.678@-26	2.474@-25	
0.040	6.133@-26	6.386@-26	1.818@-25	
0.050	4.888@-26	5.032@-26	1.430@-25	
0.060	4.057@-26	4.141@-26	1.175@-25	
0.070	3.463@-26	3.511@-26	9.949@-26	
0.080	3.017@-26	3.043@-26	8.610@-26	
0.090	2.670@-26	2.681@-26	7.577@-26	
0.100	2.392@-26	2.394@-26	6.757@-26	
0.200	1.148@-26	1.132@-26	3.155@-26	
0.300	7.408@-27	7.277@-27	2.002@-26	
0.400	5.409@-27	5.304@-27	1.441@-26	
0.500	4.228@-27	4.141@-27	1.112@-26	
0.600	3.451@-27	3.378@-27	8.960@-27	
0.700	2.903@-27	2.840@-27	7.441@-27	
0.800	2.497@-27	2.441@-27	6.318@-27	
0.900	2.183@-27	2.133@-27	5.456@-27	
1.000	1.935@-27	1.890@-27	4.775@-27	
1.500	1.205@-27	1.174@-27	2.792@-27	
2.000	8.509@-28	8.282@-28	1.853@-27	
2.500	6.443@-28	6.261@-28	1.319@-27	
3.000	5.098@-28	4.947@-28	9.817@-28	
3.500	4.160@-28	4.030@-28	7.532@-28	
4.000	3.471@-28	3.358@-28	5.897@-28	
4.500	2.947@-28	2.846@-28	4.661@-28	
5.000	2.536@-28	2.446@-28	3.648@-28	
6.000	1.940@-28	1.865@-28	0.000@+00	1.376@-26
7.000	1.534@-28	1.469@-28		
9.000	1.028@-28	9.770@-29		
11.000	7.358@-29	6.935@-29		
13.000	5.440@-29	5.071@-29		

R =	200	100	50	25	10	5
DELTA =	-0.174	-0.142	-0.109	-0.077	-0.035	-0.003

E(E+) = 15.000 BEV
Z = 2.000

THETA(LAB) = 1.167@-02 RAD.
THETA(C.M.) = 1.911@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	7.063@-26	7.438@-26	3.274@-25	
0.030	4.691@-26	4.831@-26	2.122@-25	
0.040	3.502@-26	3.554@-26	1.558@-25	
0.050	2.787@-26	2.801@-26	1.225@-25	
0.060	2.310@-26	2.304@-26	1.006@-25	
0.070	1.969@-26	1.953@-26	8.515@-26	
0.080	1.713@-26	1.693@-26	7.365@-26	
0.090	1.514@-26	1.491@-26	6.479@-26	
0.100	1.355@-26	1.332@-26	5.775@-26	
0.200	6.475@-27	6.295@-27	2.684@-26	
0.300	4.172@-27	4.044@-27	1.697@-26	
0.400	3.045@-27	2.946@-27	1.216@-26	
0.500	2.379@-27	2.300@-27	9.342@-27	
0.600	1.942@-27	1.876@-27	7.497@-27	
0.700	1.634@-27	1.577@-27	6.201@-27	
0.800	1.405@-27	1.355@-27	5.244@-27	
0.900	1.228@-27	1.184@-27	4.510@-27	
1.000	1.089@-27	1.049@-27	3.931@-27	
1.500	6.776@-28	6.513@-28	2.253@-27	
2.000	4.786@-28	4.591@-28	1.466@-27	
2.500	3.624@-28	3.470@-28	1.024@-27	
3.000	2.868@-28	2.741@-28	7.469@-28	
3.500	2.340@-28	2.232@-28	5.595@-28	
4.000	1.952@-28	1.859@-28	4.209@-28	
4.500	1.658@-28	1.575@-28	2.997@-28	
5.000	1.427@-28	1.353@-28	0.000@+00	1.103@-26
7.000	8.628@-29	8.118@-29		
9.000	5.782@-29	5.341@-29		
11.000	4.139@-29	3.822@-29		
13.000	3.060@-29	2.787@-29		

R =	200	100	50	25	10	5
DELTA =	-0.172	-0.140	-0.108	-0.076	-0.034	-0.001

E(E+) = 15.000 BEV
Z = 2.500

THETA(LAB) = 1.305@-02 RAD.
THETA(C.M.) = 2.014@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	4.580@-26	4.712@-26	3.020@-25	
0.030	3.037@-26	3.060@-26	1.956@-25	
0.040	2.264@-26	2.251@-26	1.435@-25	
0.050	1.799@-26	1.774@-26	1.128@-25	
0.060	1.489@-26	1.459@-26	9.259@-26	
0.070	1.268@-26	1.236@-26	7.831@-26	
0.080	1.102@-26	1.071@-26	6.771@-26	
0.090	9.736@-27	9.439@-27	5.953@-26	
0.100	8.710@-27	8.430@-27	5.304@-26	
0.200	4.149@-27	3.981@-27	2.455@-26	
0.300	2.672@-27	2.557@-27	1.545@-26	
0.400	1.949@-27	1.862@-27	1.103@-26	
0.500	1.523@-27	1.453@-27	8.437@-27	
0.600	1.243@-27	1.185@-27	6.743@-27	
0.700	1.046@-27	9.959@-28	5.555@-27	
0.800	8.991@-28	8.557@-28	4.678@-27	
0.900	7.862@-28	7.478@-28	4.007@-27	
1.000	6.967@-28	6.622@-28	3.478@-27	
1.500	4.337@-28	4.110@-28	1.954@-27	
2.000	3.063@-28	2.896@-28	1.247@-27	
2.500	2.319@-28	2.188@-28	8.540@-28	
3.000	1.835@-28	1.728@-28	6.084@-28	
3.500	1.497@-28	1.407@-28	4.355@-28	
4.000	1.250@-28	1.171@-28	2.762@-28	
4.286	1.136@-28	1.063@-28	0.000@+00	9.398@-27
4.500	1.061@-28	9.922@-29		
5.000	9.131@-29	8.521@-29		
7.000	5.522@-29	5.078@-29		
9.000	3.700@-29	3.388@-29		
11.000	2.649@-29	2.397@-29		
13.000	1.958@-29	1.743@-29		

R =	200	100	50	25	10	5
DELTA =	-0.171	-0.139	-0.107	-0.075	-0.032	0.000

E(E+) = 15.000 BEV
Z = 3.000

THETA(LAB) = 1.430@-02 RAD.
THETA(C.M.) = 2.094@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	3.212@-26	3.240@-26	2.877@-25	
0.030	2.127@-26	2.103@-26	1.862@-25	
0.040	1.583@-26	1.547@-26	1.366@-25	
0.050	1.257@-26	1.218@-26	1.073@-25	
0.060	1.039@-26	1.002@-26	8.803@-26	
0.070	8.841@-27	8.495@-27	7.442@-26	
0.080	7.680@-27	7.359@-27	6.432@-26	
0.090	6.780@-27	6.486@-27	5.652@-26	
0.100	6.063@-27	5.788@-27	5.033@-26	
0.200	2.883@-27	2.733@-27	2.319@-26	
0.300	1.856@-27	1.754@-27	1.454@-26	
0.400	1.354@-27	1.277@-27	1.034@-26	
0.500	1.058@-27	9.968@-28	7.874@-27	
0.600	8.634@-28	8.126@-28	6.268@-27	
0.700	7.262@-28	6.828@-28	5.142@-27	
0.800	6.244@-28	5.866@-28	4.313@-27	
0.900	5.460@-28	5.125@-28	3.680@-27	
1.000	4.839@-28	4.538@-28	3.181@-27	
1.500	3.012@-28	2.815@-28	1.752@-27	
2.000	2.127@-28	1.983@-28	1.097@-27	
2.500	1.611@-28	1.498@-28	7.350@-28	
3.000	1.275@-28	1.182@-28	5.031@-28	
3.500	1.040@-28	9.621@-29	3.036@-28	
3.750	9.476@-29	8.756@-29	0.000@+00	8.271@-27
4.000	8.677@-29	8.008@-29		
4.500	7.367@-29	6.782@-29		
5.000	6.341@-29	5.824@-29		
7.000	3.835@-29	3.486@-29		
9.000	2.570@-29	2.310@-29		
11.000	1.840@-29	1.631@-29		
13.000	1.360@-29	1.183@-29		

R =	200	100	50	25	10	5
DELTA =	-0.169	-0.137	-0.105	-0.073	-0.031	0.002

E(E+) = 15.000 BEV
Z = 5.000

THETA(LAB) = 1.846@-02 RAD.
THETA(C.M.) = 2.301@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	1.185@-26	1.123@-26	2.649@-25	
0.030	7.802@-27	7.285@-27	1.711@-25	
0.040	5.782@-27	5.354@-27	1.252@-25	
0.050	4.574@-27	4.214@-27	9.819@-26	
0.060	3.773@-27	3.465@-27	8.040@-26	
0.070	3.204@-27	2.937@-27	6.785@-26	
0.080	2.780@-27	2.542@-27	5.853@-26	
0.090	2.452@-27	2.239@-27	5.134@-26	
0.100	2.191@-27	1.998@-27	4.564@-26	
0.200	1.039@-27	9.413@-28	2.068@-26	
0.300	6.685@-28	6.034@-28	1.275@-26	
0.400	4.876@-28	4.389@-28	8.916@-27	
0.500	3.809@-28	3.422@-28	6.683@-27	
0.600	3.109@-28	2.787@-28	5.234@-27	
0.700	2.615@-28	2.340@-28	4.226@-27	
0.800	2.248@-28	2.009@-28	3.488@-27	
0.900	1.966@-28	1.755@-28	2.929@-27	
1.000	1.742@-28	1.553@-28	2.493@-27	
1.500	1.084@-28	9.614@-29	1.270@-27	
2.000	7.658@-29	6.760@-29	7.157@-28	
2.500	5.799@-29	5.098@-29	0.000@+00	5.734@-27
3.000	4.589@-29	4.018@-29		
3.500	3.744@-29	3.266@-29		
4.000	3.124@-29	2.716@-29		
4.500	2.652@-29	2.297@-29		
5.000	2.283@-29	1.973@-29		
7.000	1.380@-29	1.174@-29		
9.000	9.251@-30	7.739@-30		
11.000	6.623@-30	5.430@-30		
13.000	4.896@-30	3.917@-30		

R =	200	100	50	25	10	5
DELTA =	-0.163	-0.131	-0.099	-0.067	-0.024	0.008

E(E+) = 20.000 BEV
Z = 0.250

THETA(LAB) = 3.574@-03 RAD.
THETA(C.M.) = 9.273@-01 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	4.006@-24	5.116@-24	4.955@-24	
0.030	2.669@-24	3.324@-24	3.223@-24	
0.040	2.001@-24	2.443@-24	2.374@-24	
0.050	1.600@-24	1.928@-24	1.873@-24	
0.060	1.332@-24	1.589@-24	1.542@-24	
0.070	1.141@-24	1.348@-24	1.308@-24	
0.080	9.980@-25	1.169@-24	1.134@-24	
0.090	8.865@-25	1.031@-24	1.000@-24	
0.100	7.974@-25	9.211@-25	8.933@-25	
0.200	3.959@-25	4.378@-25	4.238@-25	
0.300	2.617@-25	2.825@-25	2.729@-25	
0.400	1.945@-25	2.065@-25	1.992@-25	
0.500	1.541@-25	1.618@-25	1.558@-25	
0.600	1.271@-25	1.323@-25	1.272@-25	
0.700	1.078@-25	1.116@-25	1.071@-25	
0.800	9.331@-26	9.613@-26	9.211@-26	
0.900	8.206@-26	8.428@-26	8.058@-26	
1.000	7.308@-26	7.482@-26	7.144@-26	
1.500	4.632@-26	4.705@-26	4.456@-26	
2.000	3.316@-26	3.356@-26	3.152@-26	
2.500	2.539@-26	2.566@-26	2.389@-26	
3.000	2.031@-26	2.049@-26	1.892@-26	
3.500	1.674@-26	1.687@-26	1.544@-26	
4.000	1.410@-26	1.420@-26	1.289@-26	
4.500	1.208@-26	1.216@-26	1.094@-26	
5.000	1.049@-26	1.055@-26	9.407@-27	
7.000	6.552@-27	6.568@-27	5.646@-27	
9.000	4.503@-27	4.500@-27	3.718@-27	
11.000	3.287@-27	3.275@-27	2.577@-27	
13.000	2.506@-27	2.488@-27	1.807@-27	
15.000	1.972@-27	1.936@-27	1.109@-27	
16.000	1.762@-27	1.741@-27	0.000@+00	1.080@-25
17.000	1.577@-27	1.555@-27		
19.000	1.210@-27	1.188@-27		

R =	200	100	50	25	10	5
DELTA =	-0.171	-0.138	-0.105	-0.072	-0.028	0.005

E(E+) = 20.000 BEV
Z = 0.500

THETA(LAB) = 5.055E-03 RAD.
THETA(C.M.) = 1.231E+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	1.052E-24	1.265E-24	1.419E-24	
0.030	7.012E-25	8.241E-25	9.228E-25	
0.040	5.255E-25	6.070E-25	6.795E-25	
0.050	4.201E-25	4.788E-25	5.358E-25	
0.060	3.498E-25	3.942E-25	4.410E-25	
0.070	2.996E-25	3.345E-25	3.741E-25	
0.080	2.619E-25	2.901E-25	3.243E-25	
0.090	2.326E-25	2.558E-25	2.858E-25	
0.100	2.091E-25	2.285E-25	2.553E-25	
0.200	1.033E-25	1.086E-25	1.209E-25	
0.300	6.789E-26	7.004E-26	7.770E-26	
0.400	5.015E-26	5.121E-26	5.662E-26	
0.500	3.951E-26	4.010E-26	4.420E-26	
0.600	3.245E-26	3.280E-26	3.604E-26	
0.700	2.742E-26	2.765E-26	3.028E-26	
0.800	2.367E-26	2.382E-26	2.601E-26	
0.900	2.077E-26	2.088E-26	2.272E-26	
1.000	1.846E-26	1.854E-26	2.011E-26	
1.500	1.164E-26	1.165E-26	1.245E-26	
2.000	8.314E-27	8.312E-27	8.739E-27	
2.500	6.361E-27	6.353E-27	6.574E-27	
3.000	5.084E-27	5.073E-27	5.167E-27	
3.500	4.188E-27	4.176E-27	4.185E-27	
4.000	3.527E-27	3.514E-27	3.467E-27	
4.500	3.022E-27	3.008E-27	2.920E-27	
5.000	2.624E-27	2.610E-27	2.494E-27	
7.000	1.638E-27	1.624E-27	1.454E-27	
9.000	1.126E-27	1.105E-27	9.278E-28	
11.000	8.219E-28	8.088E-28	6.047E-28	
13.000	6.265E-28	6.140E-28	2.714E-28	
13.333	6.009E-28	5.885E-28	0.000E+00	4.411E-26
15.000	4.929E-28	4.829E-28		
17.000	3.943E-28	3.831E-28		
19.000	3.026E-28	2.916E-28		

R =	200	100	50	25	10	5
DELTA =	-0.178	-0.144	-0.111	-0.078	-0.035	-0.002

E(E+) = 20.000 BEV
Z = 1.000

THETA(LAB) = 7.148@-03 RAD.
THETA(C.M.) = 1.571@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	2.758@-25	3.123@-25	5.542@-25	
0.030	1.837@-25	2.032@-25	3.601@-25	
0.040	1.376@-25	1.496@-25	2.650@-25	
0.050	1.099@-25	1.180@-25	2.089@-25	
0.060	9.147@-26	9.719@-26	1.718@-25	
0.070	7.827@-26	8.242@-26	1.457@-25	
0.080	6.836@-26	7.146@-26	1.262@-25	
0.090	6.065@-26	6.301@-26	1.112@-25	
0.100	5.447@-26	5.629@-26	9.929@-26	
0.200	2.660@-26	2.673@-26	4.684@-26	
0.300	1.732@-26	1.723@-26	3.001@-26	
0.400	1.272@-26	1.259@-26	2.180@-26	
0.500	9.981@-27	9.859@-27	1.696@-26	
0.600	8.175@-27	8.062@-27	1.379@-26	
0.700	6.897@-27	6.794@-27	1.155@-26	
0.800	5.946@-27	5.853@-27	9.888@-27	
0.900	5.213@-27	5.128@-27	8.611@-27	
1.000	4.631@-27	4.553@-27	7.599@-27	
1.500	2.915@-27	2.861@-27	4.631@-27	
2.000	2.080@-27	2.039@-27	3.202@-27	
2.500	1.591@-27	1.558@-27	2.373@-27	
3.000	1.271@-27	1.244@-27	1.837@-27	
3.500	1.047@-27	1.023@-27	1.466@-27	
4.000	8.821@-28	8.610@-28	1.197@-27	
4.500	7.557@-28	7.369@-28	9.939@-28	
5.000	6.562@-28	6.392@-28	8.365@-28	
7.000	4.096@-28	3.973@-28	4.582@-28	
9.000	2.815@-28	2.717@-28	2.466@-28	
10.000	2.390@-28	2.302@-28	0.000@+00	1.985@-26
11.000	2.055@-28	1.974@-28		
13.000	1.566@-28	1.497@-28		
15.000	1.232@-28	1.162@-28		
17.000	9.857@-29	9.300@-29		
19.000	7.564@-29	7.036@-29		

R =	200	100	50	25	10	5
DELTA =	-0.179	-0.146	-0.113	-0.080	-0.036	-0.003

E(E+) = 20.000 BEV THETA(LAB) = 8.755@-03 RAD.
Z = 1.500 THETA(C.M.) = 1.772@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	1.258@-25	1.370@-25	3.956@-25	
0.030	8.376@-26	8.908@-26	2.569@-25	
0.040	6.270@-26	6.560@-26	1.890@-25	
0.050	5.005@-26	5.174@-26	1.488@-25	
0.060	4.160@-26	4.258@-26	1.224@-25	
0.070	3.556@-26	3.612@-26	1.037@-25	
0.080	3.102@-26	3.131@-26	8.984@-26	
0.090	2.749@-26	2.760@-26	7.912@-26	
0.100	2.466@-26	2.467@-26	7.061@-26	
0.200	1.194@-26	1.170@-26	3.319@-26	
0.300	7.741@-27	7.540@-27	2.120@-26	
0.400	5.671@-27	5.508@-27	1.535@-26	
0.500	4.446@-27	4.311@-27	1.190@-26	
0.600	3.639@-27	3.525@-27	9.645@-27	
0.700	3.069@-27	2.970@-27	8.054@-27	
0.800	2.645@-27	2.558@-27	6.875@-27	
0.900	2.319@-27	2.241@-27	5.969@-27	
1.000	2.059@-27	1.989@-27	5.251@-27	
1.500	1.296@-27	1.249@-27	3.152@-27	
2.000	9.247@-28	8.898@-28	2.147@-27	
2.500	7.072@-28	6.795@-28	1.567@-27	
3.000	5.651@-28	5.422@-28	1.196@-27	
3.500	4.655@-28	4.460@-28	9.407@-28	
4.000	3.920@-28	3.751@-28	7.569@-28	
4.500	3.359@-28	3.210@-28	6.195@-28	
5.000	2.916@-28	2.783@-28	5.135@-28	
7.000	1.821@-28	1.728@-28	2.459@-28	
8.000	1.495@-28	1.416@-28	0.000@+00	1.376@-26
9.000	1.251@-28	1.181@-28		
11.000	9.133@-29	8.568@-29		
13.000	6.962@-29	6.488@-29		
15.000	5.477@-29	5.067@-29		
17.000	4.381@-29	4.015@-29		
19.000	3.362@-29	3.021@-29		

R =	200	100	50	25	10	5
DELTA =	-0.179	-0.146	-0.113	-0.080	-0.036	-0.003

E(L+) = 20.000 BEV
Z = 2.000

THETA(LAB) = 1.011@-02 RAD.
THETA(C.M.) = 1.911@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	7.207@-26	7.607@-26	3.398@-25	
0.030	4.793@-26	4.944@-26	2.205@-25	
0.040	3.584@-26	3.640@-26	1.621@-25	
0.050	2.858@-26	2.869@-26	1.276@-25	
0.060	2.373@-26	2.362@-26	1.049@-25	
0.070	2.026@-26	2.003@-26	8.888@-26	
0.080	1.765@-26	1.736@-26	7.695@-26	
0.090	1.563@-26	1.531@-26	6.775@-26	
0.100	1.401@-26	1.367@-26	6.044@-26	
0.200	6.743@-27	6.483@-27	2.831@-26	
0.300	4.363@-27	4.175@-27	1.802@-26	
0.400	3.194@-27	3.050@-27	1.301@-26	
0.500	2.503@-27	2.386@-27	1.006@-26	
0.600	2.048@-27	1.950@-27	8.124@-27	
0.700	1.727@-27	1.643@-27	6.763@-27	
0.800	1.488@-27	1.415@-27	5.755@-27	
0.900	1.305@-27	1.239@-27	4.981@-27	
1.000	1.159@-27	1.100@-27	4.369@-27	
1.500	7.289@-28	6.903@-28	2.583@-27	
2.000	5.202@-28	4.916@-28	1.733@-27	
2.500	3.978@-28	3.752@-28	1.247@-27	
3.000	3.179@-28	2.993@-28	9.377@-28	
3.500	2.618@-28	2.461@-28	7.272@-28	
4.000	2.205@-28	2.070@-28	5.765@-28	
4.500	1.889@-28	1.770@-28	4.639@-28	
5.000	1.641@-28	1.535@-28	3.758@-28	
6.667	1.099@-28	1.022@-28	0.000@+00	1.103@-26
7.000	1.024@-28	9.518@-29		
9.000	7.037@-29	6.459@-29		
11.000	5.137@-29	4.708@-29		
13.000	3.916@-29	3.561@-29		
15.000	3.081@-29	2.788@-29		
17.000	2.464@-29	2.194@-29		
19.000	1.891@-29	1.642@-29		

R =	200	100	50	25	10	5
DELTA =	-0.178	-0.144	-0.111	-0.078	-0.035	-0.002

E(E+) = 20.000 BEV
Z = 2.500

THETA(LAB) = 1.130@-02 RAD.
THETA(C.M.) = 2.014@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	4.674@-26	4.808@-26	3.135@-25	
0.030	3.106@-26	3.124@-26	2.034@-25	
0.040	2.320@-26	2.299@-26	1.495@-25	
0.050	1.848@-26	1.812@-26	1.176@-25	
0.060	1.533@-26	1.491@-26	9.664@-26	
0.070	1.307@-26	1.265@-26	8.183@-26	
0.080	1.138@-26	1.096@-26	7.082@-26	
0.090	1.007@-26	9.662@-27	6.233@-26	
0.100	9.016@-27	8.629@-27	5.558@-26	
0.200	4.325@-27	4.089@-27	2.595@-26	
0.300	2.795@-27	2.633@-27	1.646@-26	
0.400	2.046@-27	1.922@-27	1.185@-26	
0.500	1.603@-27	1.503@-27	9.132@-27	
0.600	1.311@-27	1.229@-27	7.354@-27	
0.700	1.106@-27	1.035@-27	6.103@-27	
0.800	9.528@-28	8.910@-28	5.178@-27	
0.900	8.350@-28	7.802@-28	4.468@-27	
1.000	7.416@-28	6.924@-28	3.907@-27	
1.500	4.665@-28	4.342@-28	2.276@-27	
2.000	3.329@-28	3.091@-28	1.504@-27	
2.500	2.546@-28	2.358@-28	1.067@-27	
3.000	2.035@-28	1.881@-28	7.907@-28	
3.500	1.676@-28	1.546@-28	6.040@-28	
4.000	1.411@-28	1.299@-28	4.701@-28	
4.500	1.209@-28	1.111@-28	3.674@-28	
5.000	1.050@-28	9.569@-29	2.788@-28	
5.714	8.743@-29	7.946@-29	0.000@+00	9.398@-27
7.000	6.554@-29	5.966@-29		
9.000	4.504@-29	4.068@-29		
11.000	3.288@-29	2.945@-29		
13.000	2.506@-29	2.224@-29		
15.000	1.972@-29	1.731@-29		
17.000	1.577@-29	1.365@-29		
19.000	1.210@-29	1.013@-29		

R =	200	100	50	25	10	5
DELTA =	-0.176	-0.143	-0.110	-0.077	-0.033	0.000

E(E+) = 20.000 BEV
Z = 3.000

THETA(LAB) = 1.238@-02 RAD.
THETA(C.M.) = 2.094@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	3.280@-26	3.298@-26	2.989@-25	
0.030	2.178@-26	2.142@-26	1.938@-25	
0.040	1.625@-26	1.576@-26	1.423@-25	
0.050	1.293@-26	1.242@-26	1.120@-25	
0.060	1.071@-26	1.022@-26	9.197@-26	
0.070	9.128@-27	8.670@-27	7.785@-26	
0.080	7.941@-27	7.511@-27	6.735@-26	
0.090	7.019@-27	6.620@-27	5.925@-26	
0.100	6.283@-27	5.912@-27	5.282@-26	
0.200	3.007@-27	2.799@-27	2.458@-26	
0.300	1.942@-27	1.801@-27	1.555@-26	
0.400	1.421@-27	1.315@-27	1.115@-26	
0.500	1.113@-27	1.028@-27	8.569@-27	
0.600	9.107@-28	8.400@-28	6.879@-27	
0.700	7.678@-28	7.074@-28	5.692@-27	
0.800	6.617@-28	6.090@-28	4.815@-27	
0.900	5.799@-28	5.332@-28	4.142@-27	
1.000	5.150@-28	4.731@-28	3.611@-27	
1.500	3.240@-28	2.965@-28	2.072@-27	
2.000	2.312@-28	2.110@-28	1.350@-27	
2.500	1.768@-28	1.609@-28	9.433@-28	
3.000	1.413@-28	1.283@-28	6.890@-28	
3.500	1.164@-28	1.054@-28	5.167@-28	
4.000	9.801@-29	8.857@-29	3.894@-28	
4.500	8.397@-29	7.571@-29	2.780@-28	
5.000	7.291@-29	6.560@-29	0.000@+00	8.271@-27
7.000	4.551@-29	4.060@-29		
9.000	3.128@-29	2.765@-29		
11.000	2.283@-29	1.999@-29		
13.000	1.741@-29	1.508@-29		
15.000	1.369@-29	1.172@-29		
17.000	1.095@-29	9.159@-30		
19.000	8.405@-30	6.870@-30		

R =	200	100	50	25	10	5
DELTA =	-0.174	-0.141	-0.108	-0.075	-0.032	0.002

E(E+) = 20.000 BEV THETA(LAB) = 1.598@-02 RAD.
Z = 5.000 THETA(C.M.) = 2.301@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	1.212@-26	1.134@-26	2.757@-25	
0.030	8.016@-27	7.357@-27	1.784@-25	
0.040	5.958@-27	5.409@-27	1.308@-25	
0.050	4.724@-27	4.259@-27	1.028@-25	
0.060	3.903@-27	3.503@-27	8.429@-26	
0.070	3.319@-27	2.968@-27	7.124@-26	
0.080	2.883@-27	2.571@-27	6.155@-26	
0.090	2.545@-27	2.265@-27	5.407@-26	
0.100	2.276@-27	2.022@-27	4.814@-26	
0.200	1.084@-27	9.549@-28	2.211@-26	
0.300	6.999@-28	6.134@-28	1.381@-26	
0.400	5.118@-28	4.472@-28	9.786@-27	
0.500	4.009@-28	3.493@-28	7.429@-27	
0.600	3.279@-28	2.851@-28	5.892@-27	
0.700	2.765@-28	2.399@-28	4.816@-27	
0.800	2.382@-28	2.064@-28	4.025@-27	
0.900	2.088@-28	1.806@-28	3.421@-27	
1.000	1.854@-28	1.602@-28	2.947@-27	
1.500	1.166@-28	1.001@-28	1.594@-27	
2.000	8.324@-29	7.111@-29	9.802@-28	
2.500	6.366@-29	5.415@-29	6.390@-28	
3.000	5.087@-29	4.310@-29	3.955@-28	
3.333	4.457@-29	3.767@-29	0.000@+00	5.734@-27
3.500	4.190@-29	3.537@-29		
4.000	3.529@-29	2.969@-29		
4.500	3.023@-29	2.535@-29		
5.000	2.625@-29	2.194@-29		
7.000	1.639@-29	1.352@-29		
9.000	1.126@-29	9.168@-30		
11.000	8.220@-30	6.598@-30		
13.000	6.266@-30	4.932@-30		
15.000	4.930@-30	3.821@-30		
17.000	3.943@-30	2.975@-30		
19.000	3.026@-30	2.163@-30		

R =	200	100	50	25	10	5
DELTA =	-0.168	-0.135	-0.102	-0.069	-0.025	0.008

E(E+) = 25.000 BEV THETA(LAB) = 3.197@-03 RAD.
Z = 0.250 THETA(C.M.) = 9.273@-01 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	4.072@-24	5.267@-24	5.085@-24	
0.040	2.034@-24	2.513@-24	2.440@-24	
0.060	1.355@-24	1.630@-24	1.586@-24	
0.080	1.015@-24	1.201@-24	1.167@-24	
0.100	8.115@-25	9.465@-25	9.202@-25	
0.200	4.036@-25	4.510@-25	4.377@-25	
0.300	2.674@-25	2.915@-25	2.825@-25	
0.400	1.992@-25	2.135@-25	2.066@-25	
0.500	1.582@-25	1.675@-25	1.619@-25	
0.600	1.308@-25	1.372@-25	1.325@-25	
0.700	1.112@-25	1.158@-25	1.117@-25	
0.800	9.650@-26	9.995@-26	9.624@-26	
0.900	8.506@-26	8.772@-26	8.434@-26	
1.000	7.591@-26	7.800@-26	7.491@-26	
2.000	3.502@-26	3.545@-26	3.359@-26	
3.000	2.173@-26	2.191@-26	2.049@-26	
4.000	1.527@-26	1.536@-26	1.417@-26	
5.000	1.150@-26	1.155@-26	1.051@-26	
8.000	6.082@-27	6.088@-27	5.306@-27	
11.000	3.807@-27	3.796@-27	3.159@-27	
14.000	2.611@-27	2.593@-27	2.036@-27	
17.000	1.903@-27	1.874@-27	1.318@-27	
20.000	1.444@-27	1.422@-27	0.000@+00	1.080@-25
23.000	1.093@-27	1.072@-27		

R =	200	100	50	25	10	5
DELTA =	-0.175	-0.141	-0.107	-0.074	-0.029	0.005

E(E+) = 25.000 BEV
Z = 0.500

THETA(LAB) = 4.521@-03 RAD.
THETA(C.M.) = 1.231@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	1.069@-24	1.297@-24	1.457@-24	
0.040	5.341@-25	6.214@-25	6.986@-25	
0.060	3.556@-25	4.042@-25	4.539@-25	
0.080	2.664@-25	2.975@-25	3.340@-25	
0.100	2.128@-25	2.345@-25	2.631@-25	
0.200	1.055@-25	1.117@-25	1.250@-25	
0.300	6.958@-26	7.216@-26	8.054@-26	
0.400	5.158@-26	5.284@-26	5.883@-26	
0.500	4.076@-26	4.144@-26	4.602@-26	
0.600	3.356@-26	3.395@-26	3.761@-26	
0.700	2.843@-26	2.866@-26	3.166@-26	
0.800	2.460@-26	2.473@-26	2.725@-26	
0.900	2.162@-26	2.170@-26	2.386@-26	
1.000	1.925@-26	1.929@-26	2.116@-26	
2.000	8.794@-27	8.761@-27	9.373@-27	
3.000	5.444@-27	5.413@-27	5.647@-27	
4.000	3.822@-27	3.795@-27	3.860@-27	
5.000	2.876@-27	2.851@-27	2.828@-27	
8.000	1.521@-27	1.482@-27	1.379@-27	
11.000	9.519@-28	9.356@-28	7.919@-28	
14.000	6.529@-28	6.386@-28	4.731@-28	
16.667	4.917@-28	4.788@-28	0.000@+00	4.411@-26
17.000	4.758@-28	4.631@-28		
20.000	3.610@-28	3.495@-28		
23.000	2.734@-28	2.609@-28		

R =	200	100	50	25	10	5
DELTA =	-0.181	-0.148	-0.114	-0.080	-0.035	-0.002

E(E+) = 25.000 BEV
Z = 1.000

THETA(LAB) = 6.394@-03 RAD.
THETA(C.M.) = 1.571@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	2.800@-25	3.186@-25	5.693@-25	
0.040	1.398@-25	1.528@-25	2.727@-25	
0.060	9.301@-26	9.927@-26	1.770@-25	
0.080	6.958@-26	7.306@-26	1.301@-25	
0.100	5.551@-26	5.758@-26	1.025@-25	
0.200	2.727@-26	2.740@-26	4.851@-26	
0.300	1.784@-26	1.769@-26	3.118@-26	
0.400	1.314@-26	1.295@-26	2.271@-26	
0.500	1.034@-26	1.015@-26	1.772@-26	
0.600	8.482@-27	8.316@-27	1.444@-26	
0.700	7.169@-27	7.018@-27	1.213@-26	
0.800	6.191@-27	6.054@-27	1.042@-26	
0.900	5.436@-27	5.312@-27	9.094@-27	
1.000	4.836@-27	4.722@-27	8.046@-27	
2.000	2.201@-27	2.142@-27	3.478@-27	
3.000	1.362@-27	1.322@-27	2.046@-27	
4.000	9.559@-28	9.262@-28	1.365@-27	
5.000	7.192@-28	6.955@-28	9.770@-28	
8.000	3.803@-28	3.657@-28	4.444@-28	
11.000	2.380@-28	2.276@-28	2.189@-28	
12.500	1.953@-28	1.862@-28	0.000@+00	1.985@-26
14.000	1.632@-28	1.551@-28		
17.000	1.190@-28	1.122@-28		
20.000	9.026@-29	8.447@-29		
23.000	6.834@-29	6.314@-29		

R =	200	100	50	25	10	5
DELTA =	-0.183	-0.150	-0.116	-0.082	-0.037	-0.004

E(E+) = 25.000 BEV
Z = 1.500

THETA(LAB) = 7.831@-03 RAD.
THETA(C.M.) = 1.772@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	1.277@-25	1.394@-25	4.065@-25	
0.040	6.371@-26	6.678@-26	1.945@-25	
0.060	4.233@-26	4.338@-26	1.262@-25	
0.080	3.162@-26	3.192@-26	9.270@-26	
0.100	2.518@-26	2.515@-26	7.293@-26	
0.200	1.227@-26	1.196@-26	3.443@-26	
0.300	7.987@-27	7.717@-27	2.207@-26	
0.400	5.867@-27	5.647@-27	1.603@-26	
0.500	4.609@-27	4.426@-27	1.248@-26	
0.600	3.779@-27	3.624@-27	1.015@-26	
0.700	3.192@-27	3.057@-27	8.501@-27	
0.800	2.756@-27	2.637@-27	7.280@-27	
0.900	2.419@-27	2.313@-27	6.341@-27	
1.000	2.151@-27	2.056@-27	5.597@-27	
2.000	9.786@-28	9.314@-28	2.361@-27	
3.000	6.053@-28	5.744@-28	1.356@-27	
4.000	4.249@-28	4.021@-28	8.840@-28	
5.000	3.196@-28	3.018@-28	6.183@-28	
8.000	1.690@-28	1.584@-28	2.560@-28	
10.000	1.221@-28	1.139@-28	0.000@+00	1.376@-26
11.000	1.058@-28	9.842@-29		
14.000	7.255@-29	6.696@-29		
17.000	5.287@-29	4.837@-29		
20.000	4.012@-29	3.631@-29		
23.000	3.038@-29	2.700@-29		

R =	200	100	50	25	10	5
DELTA =	-0.183	-0.149	-0.115	-0.081	-0.037	-0.003

E(E+) = 25.000 BEV
Z = 2.000

THETA(LAB) = 9.042@-03 RAD.
THETA(C.M.) = 1.911@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	7.315@-26	7.720@-26	3.493@-25	
0.040	3.644@-26	3.697@-26	1.670@-25	
0.060	2.418@-26	2.401@-26	1.082@-25	
0.080	1.803@-26	1.766@-26	7.946@-26	
0.100	1.433@-26	1.391@-26	6.248@-26	
0.200	6.941@-27	6.607@-27	2.941@-26	
0.300	4.506@-27	4.263@-27	1.880@-26	
0.400	3.306@-27	3.118@-27	1.363@-26	
0.500	2.596@-27	2.443@-27	1.058@-26	
0.600	2.128@-27	2.000@-27	8.580@-27	
0.700	1.797@-27	1.687@-27	7.170@-27	
0.800	1.551@-27	1.454@-27	6.126@-27	
0.900	1.361@-27	1.276@-27	5.323@-27	
1.000	1.211@-27	1.134@-27	4.686@-27	
2.000	5.505@-28	5.129@-28	1.930@-27	
3.000	3.405@-28	3.161@-28	1.082@-27	
4.000	2.390@-28	2.211@-28	6.896@-28	
5.000	1.798@-28	1.658@-28	4.713@-28	
8.000	9.507@-29	8.583@-29	1.337@-28	
8.333	8.969@-29	8.192@-29	0.000@+00	1.103@-26
11.000	5.950@-29	5.391@-29		
14.000	4.081@-29	3.662@-29		
17.000	2.974@-29	2.640@-29		
20.000	2.257@-29	1.977@-29		
23.000	1.709@-29	1.457@-29		

R =	200	100	50	25	10	5
DELTA =	-0.181	-0.148	-0.114	-0.080	-0.035	-0.002

E(E+) = 25.000 BEV
Z = 2.500

THETA(LAB) = 1.011@-02 RAD.
THETA(C.M.) = 2.014@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	4.745@-26	4.868@-26	3.224@-25	
0.040	2.361@-26	2.330@-26	1.540@-25	
0.060	1.563@-26	1.512@-26	9.974@-26	
0.080	1.164@-26	1.112@-26	7.319@-26	
0.100	9.236@-27	8.757@-27	5.751@-26	
0.200	4.455@-27	4.156@-27	2.700@-26	
0.300	2.888@-27	2.680@-27	1.722@-26	
0.400	2.118@-27	1.960@-27	1.244@-26	
0.500	1.662@-27	1.535@-27	9.638@-27	
0.600	1.362@-27	1.256@-27	7.797@-27	
0.700	1.150@-27	1.059@-27	6.500@-27	
0.800	9.927@-28	9.132@-28	5.540@-27	
0.900	8.713@-28	8.007@-28	4.802@-27	
1.000	7.749@-28	7.115@-28	4.217@-27	
2.000	3.523@-28	3.215@-28	1.696@-27	
3.000	2.179@-28	1.980@-28	9.289@-28	
4.000	1.530@-28	1.384@-28	5.785@-28	
5.000	1.151@-28	1.037@-28	3.847@-28	
7.143	7.134@-29	6.384@-29	0.000@+00	9.398@-27
8.000	6.084@-29	5.429@-29		
11.000	3.808@-29	3.362@-29		
14.000	2.612@-29	2.280@-29		
17.000	1.903@-29	1.641@-29		
20.000	1.444@-29	1.225@-29		
23.000	1.094@-29	9.064@-30		

R =	200	100	50	25	10	5
DELTA =	-0.180	-0.146	-0.112	-0.079	-0.034	0.000

E(E+) = 25.000 BEV
Z = 3.000

THETA(LAB) = 1.107@-02 RAD.
THETA(C.M.) = 2.094@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	3.330@-26	3.333@-26	3.075@-25	
0.040	1.654@-26	1.594@-26	1.467@-25	
0.060	1.094@-26	1.034@-26	9.498@-26	
0.080	8.129@-27	7.602@-27	6.965@-26	
0.100	6.444@-27	5.985@-27	5.470@-26	
0.200	3.099@-27	2.839@-27	2.561@-26	
0.300	2.007@-27	1.829@-27	1.629@-26	
0.400	1.471@-27	1.337@-27	1.174@-26	
0.500	1.155@-27	1.047@-27	9.073@-27	
0.600	9.462@-28	8.565@-28	7.322@-27	
0.700	7.989@-28	7.222@-28	6.089@-27	
0.800	6.895@-28	6.225@-28	5.177@-27	
0.900	6.051@-28	5.457@-28	4.476@-27	
1.000	5.382@-28	4.848@-28	3.922@-27	
2.000	2.447@-28	2.188@-28	1.540@-27	
3.000	1.513@-28	1.346@-28	8.243@-28	
4.000	1.062@-28	9.404@-29	5.011@-28	
5.000	7.991@-29	7.045@-29	3.190@-28	
6.250	5.947@-29	5.217@-29	0.000@+00	8.271@-27
8.000	4.225@-29	3.681@-29		
11.000	2.644@-29	2.281@-29		
14.000	1.814@-29	1.541@-29		
17.000	1.322@-29	1.107@-29		
20.000	1.003@-29	8.241@-30		
23.000	7.594@-30	6.030@-30		

R =	200	100	50	25	10	5
DELTA =	-0.178	-0.144	-0.111	-0.077	-0.032	0.002

E(E+) = 25.000 BEV
Z = 5.000

THETA(LAB) = 1.430@-02 RAD.
THETA(C.M.) = 2.301@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	1.232@-26	1.138@-26	2.839@-25	
0.040	6.083@-27	5.429@-27	1.351@-25	
0.060	3.998@-27	3.517@-27	8.723@-26	
0.080	2.959@-27	2.582@-27	6.382@-26	
0.100	2.339@-27	2.031@-27	5.001@-26	
0.200	1.119@-27	9.604@-28	2.317@-26	
0.300	7.236@-28	6.180@-28	1.459@-26	
0.400	5.301@-28	4.508@-28	1.042@-26	
0.500	4.159@-28	3.526@-28	7.968@-27	
0.600	3.408@-28	2.882@-28	6.368@-27	
0.700	2.877@-28	2.428@-28	5.245@-27	
0.800	2.483@-28	2.091@-28	4.416@-27	
0.900	2.179@-28	1.832@-28	3.781@-27	
1.000	1.938@-28	1.626@-28	3.281@-27	
2.000	8.809@-29	7.305@-29	1.173@-27	
3.000	5.449@-29	4.479@-29	5.688@-28	
4.000	3.824@-29	3.120@-29	2.274@-28	
4.167	3.633@-29	2.961@-29	0.000@+00	5.734@-27
5.000	2.877@-29	2.332@-29		
8.000	1.521@-29	1.211@-29		
11.000	9.519@-30	7.442@-30		
14.000	6.529@-30	4.985@-30		
17.000	4.758@-30	3.566@-30		
20.000	3.611@-30	2.626@-30		
23.000	2.734@-30	1.880@-30		

R =	200	100	50	25	10	5
DELTA =	-0.172	-0.138	-0.104	-0.070	-0.026	0.008

E(E+) = 30.000 BEV
Z = 0.250

THETA(LAB) = 2.918@-03 RAD.
THETA(C.M.) = 9.273@-01 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	4.127@-24	5.280@-24	5.191@-24	
0.040	2.062@-24	2.560@-24	2.493@-24	
0.060	1.374@-24	1.666@-24	1.622@-24	
0.080	1.029@-24	1.225@-24	1.195@-24	
0.100	8.229@-25	9.667@-25	9.420@-25	
0.200	4.097@-25	4.615@-25	4.490@-25	
0.300	2.718@-25	2.987@-25	2.902@-25	
0.400	2.028@-25	2.190@-25	2.126@-25	
0.500	1.613@-25	1.720@-25	1.668@-25	
0.600	1.336@-25	1.411@-25	1.366@-25	
0.700	1.138@-25	1.192@-25	1.153@-25	
0.800	9.889@-26	1.030@-25	9.950@-26	
0.900	8.730@-26	9.044@-26	8.731@-26	
1.000	7.803@-26	8.050@-26	7.763@-26	
2.000	3.644@-26	3.690@-26	3.520@-26	
3.000	2.283@-26	2.300@-26	2.170@-26	
4.000	1.618@-26	1.626@-26	1.517@-26	
5.000	1.227@-26	1.232@-26	1.136@-26	
8.000	6.637@-27	6.636@-27	5.913@-27	
11.000	4.234@-27	4.220@-27	3.625@-27	
14.000	2.948@-27	2.929@-27	2.418@-27	
17.000	2.173@-27	2.141@-27	1.688@-27	
20.000	1.669@-27	1.646@-27	1.181@-27	
23.000	1.321@-27	1.298@-27	6.666@-28	
24.000	1.227@-27	1.205@-27	0.000@+00	1.080@-25
26.000	1.059@-27	1.038@-27		
29.000	7.917@-28	7.699@-28		

R =	200	100	50	25	10	5
DELTA =	-0.178	-0.144	-0.109	-0.075	-0.029	0.005

E(E+) = 30.000 BEV THETA(LAB) = 4.127@-03 RAD.
Z = 0.500 THETA(C.M.) = 1.231@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	1.083@-24	1.313@-24	1.488@-24	
0.040	5.410@-25	6.300@-25	7.141@-25	
0.060	3.603@-25	4.097@-25	4.643@-25	
0.080	2.700@-25	3.018@-25	3.418@-25	
0.100	2.157@-25	2.379@-25	2.695@-25	
0.200	1.072@-25	1.135@-25	1.283@-25	
0.300	7.086@-26	7.339@-26	8.281@-26	
0.400	5.265@-26	5.380@-26	6.058@-26	
0.500	4.171@-26	4.223@-26	4.747@-26	
0.600	3.441@-26	3.463@-26	3.884@-26	
0.700	2.920@-26	2.926@-26	3.275@-26	
0.800	2.530@-26	2.527@-26	2.823@-26	
0.900	2.228@-26	2.219@-26	2.474@-26	
1.000	1.986@-26	1.975@-26	2.198@-26	
2.000	9.167@-27	9.043@-27	9.864@-27	
3.000	5.724@-27	5.670@-27	6.018@-27	
4.000	4.051@-27	4.007@-27	4.165@-27	
5.000	3.072@-27	3.034@-27	3.089@-27	
8.000	1.660@-27	1.634@-27	1.561@-27	
11.000	1.059@-27	1.038@-27	9.304@-28	
14.000	7.371@-28	7.200@-28	6.003@-28	
17.000	5.432@-28	5.284@-28	3.894@-28	
20.000	4.172@-28	4.040@-28	0.000@+00	4.411@-26
23.000	3.302@-28	3.182@-28		
26.000	2.648@-28	2.539@-28		
29.000	1.979@-28	1.884@-28		

R =	200	100	50	25	10	5
DELTA =	-0.185	-0.150	-0.116	-0.082	-0.036	-0.002

E(E+) = 30.000 BEV
Z = 1.000

THETA(LAB) = 5.837@-03 RAD.
THETA(C.M.) = 1.571@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	2.835@-25	3.234@-25	5.815@-25	
0.040	1.416@-25	1.552@-25	2.789@-25	
0.060	9.423@-26	1.009@-25	1.812@-25	
0.080	7.054@-26	7.429@-26	1.333@-25	
0.100	5.631@-26	5.857@-26	1.050@-25	
0.200	2.778@-26	2.791@-26	4.985@-26	
0.300	1.823@-26	1.805@-26	3.211@-26	
0.400	1.346@-26	1.322@-26	2.344@-26	
0.500	1.061@-26	1.038@-26	1.832@-26	
0.600	8.723@-27	8.508@-27	1.496@-26	
0.700	7.382@-27	7.187@-27	1.259@-26	
0.800	6.383@-27	6.205@-27	1.083@-26	
0.900	5.611@-27	5.449@-27	9.471@-27	
1.000	4.997@-27	4.849@-27	8.395@-27	
2.000	2.296@-27	2.218@-27	3.691@-27	
3.000	1.432@-27	1.380@-27	2.207@-27	
4.000	1.013@-27	9.745@-28	1.497@-27	
5.000	7.681@-28	7.375@-28	1.089@-27	
8.000	4.150@-28	3.965@-28	5.197@-28	
11.000	2.647@-28	2.516@-28	2.900@-28	
14.000	1.843@-28	1.742@-28	1.466@-28	
15.000	1.656@-28	1.562@-28	0.000@+00	1.985@-26
17.000	1.358@-28	1.276@-28		
20.000	1.043@-28	9.742@-29		
23.000	8.254@-29	7.656@-29		
26.000	6.620@-29	6.086@-29		
29.000	4.949@-29	4.446@-29		

R =	200	100	50	25	10	5
DELTA =	-0.187	-0.152	-0.118	-0.084	-0.038	-0.004

E(E+) = 30.000 BEV
Z = 1.500

THETA(LAB) = 7.148@-03 RAD.
THETA(C.M.) = 1.772@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	1.293@-25	1.411@-25	4.154@-25	
0.040	6.452@-26	6.766@-26	1.990@-25	
0.060	4.291@-26	4.397@-26	1.292@-25	
0.080	3.208@-26	3.236@-26	9.501@-26	
0.100	2.558@-26	2.551@-26	7.481@-26	
0.200	1.253@-26	1.214@-26	3.542@-26	
0.300	8.178@-27	7.847@-27	2.276@-26	
0.400	6.020@-27	5.748@-27	1.658@-26	
0.500	4.737@-27	4.510@-27	1.293@-26	
0.600	3.890@-27	3.696@-27	1.054@-26	
0.700	3.289@-27	3.122@-27	8.849@-27	
0.800	2.843@-27	2.694@-27	7.596@-27	
0.900	2.498@-27	2.365@-27	6.630@-27	
1.000	2.224@-27	2.104@-27	5.865@-27	
2.000	1.021@-27	9.612@-28	2.527@-27	
3.000	6.365@-28	5.976@-28	1.481@-27	
4.000	4.503@-28	4.217@-28	9.852@-28	
5.000	3.414@-28	3.189@-28	7.027@-28	
8.000	1.845@-28	1.712@-28	3.161@-28	
11.000	1.176@-28	1.078@-28	1.447@-28	
12.000	1.035@-28	9.406@-29	0.000@+00	1.376@-26
14.000	8.191@-29	7.499@-29		
17.000	6.036@-29	5.486@-29		
20.000	4.636@-29	4.179@-29		
23.000	3.669@-29	3.277@-29		
26.000	2.942@-29	2.595@-29		
29.000	2.199@-29	1.871@-29		

R =	200	100	50	25	10	5
DELTA =	-0.186	-0.152	-0.117	-0.083	-0.037	-0.003

E(E+) = 30.000 BEV
Z = 2.000

THETA(LAB) = 8.254@-03 RAD.
THETA(C.M.) = 1.911@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	7.402@-26	7.801@-26	3.570@-25	
0.040	3.691@-26	3.738@-26	1.709@-25	
0.060	2.452@-26	2.427@-26	1.109@-25	
0.080	1.831@-26	1.787@-26	8.149@-26	
0.100	1.457@-26	1.407@-26	6.413@-26	
0.200	7.095@-27	6.693@-27	3.029@-26	
0.300	4.619@-27	4.323@-27	1.942@-26	
0.400	3.395@-27	3.165@-27	1.412@-26	
0.500	2.669@-27	2.482@-27	1.099@-26	
0.600	2.191@-27	2.034@-27	8.936@-27	
0.700	1.852@-27	1.717@-27	7.487@-27	
0.800	1.600@-27	1.482@-27	6.414@-27	
0.900	1.406@-27	1.301@-27	5.587@-27	
1.000	1.252@-27	1.157@-27	4.932@-27	
2.000	5.742@-28	5.277@-28	2.083@-27	
3.000	3.581@-28	3.278@-28	1.197@-27	
4.000	2.533@-28	2.311@-28	7.807@-28	
5.000	1.920@-28	1.747@-28	5.463@-28	
8.000	1.038@-28	9.362@-29	2.267@-28	
10.000	7.595@-29	6.816@-29	0.000@+00	1.103@-26
11.000	6.617@-29	5.923@-29		
14.000	4.607@-29	4.089@-29		
17.000	3.395@-29	2.987@-29		
20.000	2.608@-29	2.271@-29		
23.000	2.064@-29	1.776@-29		
26.000	1.655@-29	1.402@-29		
29.000	1.237@-29	1.011@-29		

R =	200	100	50	25	10	5
DELTA =	-0.185	-0.150	-0.116	-0.082	-0.036	-0.002

E(E+) = 30.000 BEV THETA(LAB) = 9.229@-03 RAD.
Z = 2.500 THETA(C.M.) = 2.014@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	4.801@-26	4.907@-26	3.297@-25	
0.040	2.392@-26	2.350@-26	1.577@-25	
0.060	1.587@-26	1.526@-26	1.022@-25	
0.080	1.183@-26	1.122@-26	7.510@-26	
0.100	9.404@-27	8.840@-27	5.906@-26	
0.200	4.558@-27	4.201@-27	2.783@-26	
0.300	2.962@-27	2.711@-27	1.781@-26	
0.400	2.175@-27	1.984@-27	1.291@-26	
0.500	1.710@-27	1.556@-27	1.003@-26	
0.600	1.403@-27	1.274@-27	8.142@-27	
0.700	1.186@-27	1.075@-27	6.808@-27	
0.800	1.024@-27	9.280@-28	5.820@-27	
0.900	9.000@-28	8.143@-28	5.059@-27	
1.000	8.012@-28	7.242@-28	4.457@-27	
2.000	3.675@-28	3.299@-28	1.845@-27	
3.000	2.292@-28	2.047@-28	1.039@-27	
4.000	1.621@-28	1.443@-28	6.652@-28	
5.000	1.229@-28	1.090@-28	4.567@-28	
8.000	6.641@-29	5.830@-29	1.504@-28	
8.571	6.039@-29	5.292@-29	0.000@+00	9.398@-27
11.000	4.235@-29	3.683@-29		
14.000	2.949@-29	2.539@-29		
17.000	2.173@-29	1.852@-29		
20.000	1.669@-29	1.405@-29		
23.000	1.321@-29	1.094@-29		
26.000	1.059@-29	8.664@-30		
29.000	7.918@-30	6.126@-30		

R =	200	100	50	25	10	5
DELTA =	-0.183	-0.149	-0.114	-0.080	-0.035	0.000

E(E+) = 30.000 BEV
Z = 3.000

THETA(LAB) = 1.011@-02 RAD.
THETA(C.M.) = 2.094@+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	3.370@-26	3.353@-26	3.145@-25	
0.040	1.677@-26	1.604@-26	1.503@-25	
0.060	1.111@-26	1.041@-26	9.740@-26	
0.080	8.272@-27	7.656@-27	7.150@-26	
0.100	6.567@-27	6.029@-27	5.621@-26	
0.200	3.173@-27	2.863@-27	2.643@-26	
0.300	2.059@-27	1.847@-27	1.687@-26	
0.400	1.512@-27	1.351@-27	1.221@-26	
0.500	1.188@-27	1.059@-27	9.466@-27	
0.600	9.745@-28	8.669@-28	7.666@-27	
0.700	8.236@-28	7.315@-28	6.397@-27	
0.800	7.115@-28	6.310@-28	5.457@-27	
0.900	6.251@-28	5.537@-28	4.735@-27	
1.000	5.564@-28	4.923@-28	4.163@-27	
2.000	2.552@-28	2.240@-28	1.689@-27	
3.000	1.592@-28	1.389@-28	9.331@-28	
4.000	1.126@-28	9.776@-29	5.860@-28	
5.000	8.535@-29	7.380@-29	3.939@-28	
7.500	5.034@-29	4.311@-29	0.000@+00	8.271@-27
8.000	4.612@-29	3.942@-29		
11.000	2.941@-29	2.487@-29		
14.000	2.048@-29	1.712@-29		
17.000	1.509@-29	1.246@-29		
20.000	1.159@-29	9.442@-30		
23.000	9.171@-30	7.350@-30		
26.000	7.356@-30	5.756@-30		
29.000	5.498@-30	4.055@-30		

R =	200	100	50	25	10	5
DELTA =	-0.181	-0.147	-0.113	-0.078	-0.033	0.002

E(E+) = 30.000 BEV
Z = 5.000

THETA(LAB) = 1.305E-02 RAD.
THETA(C.M.) = 2.301E+00 RAD.

K BEV	EPG(SCHIFF) CMSQ/SR×BEV	EPG(EXACT) CMSQ/SR×BEV	EEG CMSQ/SR×BEV	2G CMSQ/SR
0.020	1.248E-26	1.138E-26	2.906E-25	
0.040	6.179E-27	5.430E-27	1.386E-25	
0.060	4.071E-27	3.518E-27	8.959E-26	
0.080	3.018E-27	2.583E-27	6.564E-26	
0.100	2.389E-27	2.033E-27	5.150E-26	
0.200	1.146E-27	9.621E-28	2.400E-26	
0.300	7.427E-28	6.191E-28	1.519E-26	
0.400	5.448E-28	4.521E-28	1.090E-26	
0.500	4.279E-28	3.539E-28	8.385E-27	
0.600	3.510E-28	2.894E-28	6.735E-27	
0.700	2.966E-28	2.440E-28	5.575E-27	
0.800	2.562E-28	2.103E-28	4.718E-27	
0.900	2.251E-28	1.844E-28	4.060E-27	
1.000	2.003E-28	1.638E-28	3.541E-27	
2.000	9.188E-29	7.414E-29	1.327E-27	
3.000	5.730E-29	4.580E-29	6.794E-28	
4.000	4.053E-29	3.216E-29	3.854E-28	
5.000	3.073E-29	2.421E-29	0.000E+00	5.734E-27
8.000	1.660E-29	1.285E-29		
11.000	1.059E-29	8.060E-30		
14.000	7.372E-30	5.492E-30		
17.000	5.433E-30	3.990E-30		
20.000	4.172E-30	3.000E-30		
23.000	3.302E-30	2.312E-30		
26.000	2.648E-30	1.783E-30		
29.000	1.979E-30	1.215E-30		

R =	200	100	50	25	10	5
DELTA =	-0.175	-0.140	-0.106	-0.072	-0.026	0.008