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MODELS OF THE TRAPPED RADIATION ENVIRONMENT

Volume IV: Low Energy Protons

KING

1967

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NASA SP-3024

MODELS OF THE TRAPPED RADIATION ENVIRONMENT

Volume IV: Low Energy Protons

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A study sponsored by the National Aeronautics and Space Administration and the United States Air Force and prepared under Air Force contract by Aerospace Corporation, El Segundo, California.

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Preface

A program sponsored jointly by the National Aeronautics and Space Administration and the United States Air Force has been in progress under the direction of Dr. Vette for the purpose of defining a model radiation environment of the Earth. In Volumes I and II of NASA SP-3024, the environment was given for the lower altitude region where trapping is relatively stable and changes in radiation flux occur only slowly and are generally small. In Volume III, the electron environment was described which is found at 19,300 n. miles, the altitude of the Earth synchronous orbit. The present report contains a model of the low energy proton flux for energies below 4 MeV.

Since low energy protons are stopped very easily, their contribution to radiation damage can be neglected in most cases. Over a large region of space, however, their flux is intense, thus they may be the prime cause of deterioration of sensitive surfaces. These effects may be particularly important to temperature control surfaces, optical windows, or the first element in a counter telescope for studying nuclear radiation.

This compilation would not have been possible without the assistance given by the investigator who performed the original measurements. All users of this model environment will greatly appreciate these efforts. Clearly, no model can be better than the data available for deriving it.

A. W. Schardt
Physics and Astronomy Programs
NASA Headquarters

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INTRODUCTION

This report is the continuation of a series of model environments of the particle radiations trapped in the geomagnetic field. Preceding environments have described protons of energies greater than 4 MeV trapped in the inner zone and electrons trapped in the inner and outer zones and at synchronous altitudes (References 1, 2, 3). The four previous proton environments are distinguished by the energy range over which each is applicable. The omnidirectional, integral fluxes are presented in the form

$$J(>E; B, L) = J(>E_1; B, L)\, e^{-(E-E_1)/E_0(B,L)} ,$$

where E_1 is the reference energy for each environment. The spectral parameter E_0 (B, L) is different in the various environments, or equivalently, E_0 (B, L) is a discontinuous function of energy. The criterion for determining the energy range over which an environment may be applied has been the existence of an exponential parameter E_0 which represents the data over that range with the desired accuracy. It was found necessary to construct previous environments over the energy ranges 4 - 15 MeV, 15 - 30 MeV, 30 - 50 MeV, and >50 MeV.

The present environment, AP5, describes protons of energies below 4.0 MeV trapped between L = 1.2 and L = 6.6. The general approach is the same as in the preceding proton environments, but there are two main differences. Again the energy range of validity is that over which a simple spectral representation suffices, but we inquire into whether a power law dependence or an exponential dependence is more representative of the data below 4 MeV. (Neither representation will be more accurate than the approximate factor of two uncertainty associated with the temporal fluctuations in the data.) It is found that, over the complete region of B-L space of interest, neither representation provides a significantly better fit to the data than the other. Consequently the exponential representation is chosen for the sake of continuity with the preceding environments.

The second difference between this and previous environments is that in this case there is not a unique energy which may be assigned as the lower energy limit. As will be discussed more fully, there is an L-dependent peak in the differential energy spectrum which leads to an L-dependent lower energy limit of the model. This lower limit may be taken as 0.1 MeV for L > 3.5, and gradually increases as L decreases. (See Figure 3.)

The distribution function J(>0.4 MeV; B, L) and spectral function E_0 (B, L) are presented in tabular form. Many graphical comparisons of the model with the data are given. Orbital integration tables are presented for circular orbits up to 18,000 n. miles and for 15 energies and 14 energy bands.

TEMPORAL VARIATIONS

In Table 1 is presented a list of the data employed in the construction of this environment. All the experiments involved the measurement of unidirectional proton fluxes. Scintillation detectors were utilized on the P-11 and the three Explorer experiments, while solid state detectors were used on the Relay 1 and Injun 1 experiments. During the period over which the data coverage extends (July 1961 - April 1965), temporal variations of up to a factor of two occur in the measured fluxes, at least for $L \leq 4.5$. The growth and decay factors involved in these changes are position- and energy-dependent. That the temporal changes are fluctuations and not monotonic processes as in the case of Starfish electron decay is indicated by the data. Between December 1962 and May 1963, Fillius and McIlwain observe a slight decay in the fluxes of protons with energies greater than 1.1 MeV (Reference 5). Two years later White, and Davis and Williamson observed an increase in the fluxes of these particles and a decrease in the fluxes of lower energy protons (References 9, 11). Detailed discussions of the observed temporal dependence of low energy proton fluxes are presented in References 6, 9 and 11.

As larger L values are considered, fluctuation amplitudes also become larger. Davis and Williamson have reported on rapid (ten minutes) order of magnitude changes of proton fluxes at $L = 4.9$ associated with the 17 April 1965 magnetic storm (Reference 9). Also, the 1962 Davis-Williamson data (flux greater than 0.5 MeV) are in apparent disagreement with the corresponding data obtained two years later on Mariner IV (Reference 12). The latter is about two orders of magnitude smaller than the former for $L \gtrsim 6.0$.

This model environment is presented with no explicit time dependence, despite the foregoing discussion. At $L \lesssim 4.5$ there are not yet sufficient data to determine the long term (say, eleven years) temporal behavior of the proton fluxes, but there are sufficient data to establish the fluctuating character of the temporal variations and to establish the factor of two as an approximate upper limit to the fluctuation amplitude. Thus the fluxes predicted by the model should be within a factor of two of any of the observed fluxes. Graphs to be considered later will demonstrate the validity of this statement.

At $L \gtrsim 4.5$, we have chosen to utilize the 1962 Davis-Williamson data near the equator rather than the Krimigis-Armstrong Mariner IV data. The former are more extensive and indicate higher flux values, which are perhaps more appropriate for applications purposes. At large B values the Mihalov-White data are utilized, and interpolated flux values are assigned to intermediate B values. When sufficient low energy proton data are available in this high L region, a time-statistical analysis of the proton fluxes (comparable to that performed on synchronous electrons in AE3) may be warranted. It is in the region $L \gtrsim 5.0$ that the ability of the B-L coordinate system to order the data begins to fail due to the neglect of magnetospheric distortion. These factors should be borne in mind in using the environment at very large L values.

Table 1

Data Used in Making AP5 Environment.

Experimental Group	Satellite	Time Period	Nominal Energy Range	Used L Range	Text Code	Reference
Goddard Space Flight Center Davis - Williamson	Explorer 12 1961 and Explorer 14 1962 BΓ1	Aug. - Dec. 1961 Oct. - Dec. 1962	>0.27 MeV >0.51 >1.00 >1.70	4.2 - 6.6 2.1 - 6.0 2.0 - 4.6 2.1 - 3.9	P 1 P 2 P 3 P 4	Davis and Williamson Reference 4
State University of Iowa - Fillius and University of California at San Diego - McIlwain	Relay 1 1962 BT1	Dec. 62 - May 63	1.1 - 14 MeV 1.6 - 7.1 2.25 - 4.7	1.5 - 3.5 1.5 - 3.4 1.5 - 3.5	P 5 P 6 P 7	Fillius and McIlwain Reference 5; Fillius Reference 6
Bell Telephone Laboratory - Brown - Davidson - Medford	Relay 1 1962 BT1	Dec. 62 - May 63	2.5 - 3.8 MeV	1.5 - 3.0	P 8	Brown, Davidson and Medford Reference 7
Aerospace Corporation Mihalov - White	P 11 1964 45 A	Aug. 1964	0.17 - 0.21 MeV 0.21 - 0.29 0.29 - 0.42 0.42 - 0.55 0.55 - 1.20 1.20 - 1.50 1.50 - 1.90 1.90 - 2.40 2.40 - 3.40	5.2 - 6.0 4.5 - 6.6 4.1 - 6.6 2.2 - 6.6 2.2 - 3.6 3.1 - 3.7 2.0 - 3.7 2.3 - 4.0 2.2 - 3.1	P 9 P 10 P 11 P 12 P 13 P 14 P 15 P 16 P 17	Mihalov and White Reference 8
Goddard Space Flight Center Davis - Williamson	Explorer 26 1964 86 A	April 1965	>0.135 MeV >0.180 >0.513 >0.775 >1.140 >1.700	5.4 - 5.8 5.0 - 5.4 2.2 - 5.4 2.2 - 4.6 2.0 - 4.7 2.0 - 4.1	P 18 P 19 P 20 P 21 P 22 P 23	Davis and Williamson Reference 9
Applied Physics Lab John Hopkins University Pieper - Bostrom - Zmuda	Injun 1 1961 - 02	July - Dec. 1961	1.0 - 15 MeV	1.5 - 2.0	P 24	Pieper, Zmuda and Bostrom Reference 10

AP5 ENERGY LIMITS

Peaked differential energy spectra of low energy proton fluxes have been observed by Mihalov and White (Reference 8) and by Davis and Williamson (Reference 9). As L increases, the energy at which the peak occurs decreases. This behavior is also theoretically predicted by diffusion theory in which the first two adiabatic invariants, but not the third, are conserved in particle motion (Reference 13). Shown in Figure 1 is a plot of the energies at which this peak was observed at different L values. At a given L value, the peak occurs at larger energy as B decreases (i.e., as the equator is approached).

It is desired to include in this environment only that energy range in which the data can be represented by a simple spectral function (power law or exponential) to within the desired degree of accuracy. Because the accuracy of the model has been limited to a factor of two by the time fluctuations in the data, the lower energy limit of this model may be extended to energies somewhat (but not arbitrarily) lower than the peak energy of the differential spectrum.

In Table 1 are presented the L values over which the various sets of data have been used. Curves to be presented later show that, at any given L value, the data do agree with the model to within a factor of two. The lower energy limit to be assigned to the model at given L is lower than that of the data utilized at that L value, as listed in Table 1. To illustrate this, we present in Figure 2 the environment flux at the equator, where the inclusion of very low energy data is least likely to match the environment. A comparison of the 1962 and 1965 Davis-Williamson fluxes of protons ($E > 0.1$ MeV) with the environment is presented. It is clear that, except near $L = 4.5$, the $E > 0.1$ MeV data agree with the model beyond $L \approx 3.5$. We take 0.1 MeV to be the low energy limit of the environment beyond $L = 3.5$. Data on protons of energies lower than 0.1 MeV are not yet available.

In the region $L \leq 2.0$ only the Relay 1 data and the Injun I data were available at the time the environment was constructed. Neither of these involves proton energies less than 1.0 MeV. The data of Fillius and McIlwain suggest that the differential spectral peak occurs at energies above 1.1 MeV in this region (Reference 5), as may have been expected by an extension to $L < 2.0$ of the curve determined by the Davis equatorial points of Figure 1. The nested character of the energy intervals in the Fillius-McIlwain experiment renders impossible a more accurate determination of peak energy. Despite this, a single spectral representation is assumed as appropriate for this data, and as shown in Figure 27 that even with this approximation, the model is representative of the data to within a factor of two. Below $L = 1.5$ there are no comprehensive data available in the energy range of interest; as such the flux values attributed to the model for $L < 1.5$ are extrapolated from the data available at $L \geq 1.5$.

Presented in Figure 3 is a curve of the L-dependent energies which may be assigned as the lower energy limit of the model while yielding an accuracy of a factor of two for the environment.

PROTON ENERGY SPECTRUM

The environment is presented in terms of integral, omnidirectional fluxes $J(>E; B, L, t) = J(>E; B, L)$. The function $J(>E; B, L)$ is presented as the product of a distribution function of fluxes above the reference energy, E_1, and a spectral function, $N(>E; B, L)$:

$$J(>E; B, L) = J(>E_1; B, L)\, N(>E; B, L) .$$

It is assumed that the spectral function is of a simple form. Both a power law representation,

$$N(>E; B, L) = (E/E_1)^{-p(B,L)} ,$$

and an exponential representation,

$$N(>E; B, L) = e^{-(E-E_1)/E_0(B,L)} ,$$

were examined. That representation which better fit all the data over the entire B-L range of the environment was to be chosen. However, as will be shown, the spread of the data does not clearly dictate the choice of one representation over the other, even though some of the data favors an exponential spectrum (Reference 4) while other data favors a power law spectrum (Reference 8). The temporal fluctuations in the data indicate that the consideration of a spectral function of any greater complexity is unwarranted.

The manner of determining the better representation and best parameter (p, E_0) at a given point in B-L space is as follows. Let $J_i(E_{i\ell} - E_{iu}; B, L)$ be the i^{th} observed flux value at the B, L point, representing a flux of particles lying in the energy interval $E_{i\ell}$ to E_{iu} (where E_{iu} may be infinity). If an exponential spectrum is assumed, such that

$$J(>E; B, L) = J(>E_1; B, L)\, e^{-(E-E_1)/E_0(B,L)} ,$$

then the flux at the reference energy, E_1, corresponding to the i^{th} data value and j^{th} possible E_0 is given by

$$J_{ij}(>E_1; B, L) = J_i(E_{i\ell} - E_{iu}; B, L)\, \frac{e^{-E_1/E_{0j}(B,L)}}{\left(e^{-E_{i\ell}/E_{0j}(B,L)} - e^{-E_{iu}/E_{0j}(B,L)}\right)} .$$

Alternatively, if a power law spectrum is assumed, such that $J(>E; B, L) = J(> E_1; B, L) \cdot (E/E_1)^{-p(B,L)}$, then the flux at the reference energy corresponding to the i^{th} data value and j^{th} possible p is

$$J_{ij}\ (>E_1; B, L) = J_i\ (E_{i\ell} - E_{iu}; B, L)\ \frac{E_1^{-p_j(B,L)}}{\left(E_\ell^{-p_j(B,L)} - E_u^{-p_j(B,L)}\right)} \cdot$$

If we assume that there are n observed data values at the B, L point of interest, then the flux chosen at the reference energy (i.e., the distribution function) is the geometric mean of the J_{ij}; that is

$$J_j\ (>E_1; B, L) = \left[\prod_{i=1}^{n} J_{ij}\ (>E_1; B, L)\right]^{1/n} \cdot$$

This, of course, is equivalent to

$$\log J_j\ (>E_i; B, L) = \frac{1}{n} \sum_{i=1}^{n} \log J_{ij}\ (>E_1; B, L) \cdot$$

We determine the better representation and best spectral function as those which minimize the logarithmic root mean square deviation of the fluxes at the reference energy,

$$\sigma_j = \left[\sum_{i=1}^{n} \frac{1}{n-1} \left(\log J_j\ (>E_1; B, L) - \log J_{ij}\ (>E_1; B, L)\right)^2\right]^{1/2} \cdot$$

Minimizing σ_j for each representation yields the best spectral parameter for each spectral representation. The better representation is that one giving the smaller minimum σ. Thus the spectral representation and parameter which best describes all the data are selected at each of a sufficiently fine grid of points in B-L space. A computer program was generated by A. B. Lucero to perform the preceding analysis.

After the best E_0 and best p are chosen at each B-L point, curves of E_0 versus B and of p versus B are drawn at fixed L values. Because the various sets of data overlap only partially in B-L space, a certain amount of smoothing of these curves is necessary. Presented in Figures 4 - 21 are the E_0 and p values at selected L values. The dots are obtained from the pointwise consideration of the data, while the solid lines are the smoothed values.

It is possible to determine spectral parameters by a consideration of data obtained on one experiment only. Such parameters have been determined and are represented by the various symbols shown in Figures 4 - 21. The differences among these values may be due in part to the differing

energies or observation times involved. They are included to give the reader an estimate of the disagreement among the various experiments.

The procedure actually followed was to consider both the power law and exponential spectral representations, with the smoothed values of E_0 and p used to determine distribution functions. The logarithmic root mean square deviations (σ) were again obtained for each representation, and the values of σ were averaged over B for fixed L (i.e., along a line of force). The results of this calculation are shown in Figure 22. A calculation of

$$I = \sum_{i=1}^{20} (\sigma_{av})_i \quad ,$$

where $(\sigma_{av})_i$ is the average value of σ at $L = 2 + .2i$, yields the result that $I = .78$ for the exponential representation, while $I = .80$ for the power law representation. It is clear that over the complete range of interest, neither representation gives results significantly better than the other. As such, we have elected to present the details of this environment using an exponential spectrum, because preceding environments have utilized exponential spectra. The values of E_0 which constitute the spectral part of this environment are presented in Figure 23 and in Table II. It is clear that the spectrum softens as L increases and that, at a fixed L value, the spectrum generally softens as B increases.

DISTRIBUTION FUNCTION

After the distribution function $J(>E_1 = 0.4$ MeV; B, L) is obtained as described previously, a log B-L plot of isoflux contours is drawn and smoothed. The result is a distribution function smoothed in both B and L. This log B-L plot is shown in Figure 24, while the distribution function is given in tabular form in Table 2. Figure 25 shows the distribution function in the more physically intuitive R-λ representation. It is apparent that there is a sharp decrease in the flux levels as the atmosphere is approached along a given magnetic field line. In Figure 26 the equatorial fluxes of protons with energies above 0.4 MeV and 1.0 MeV are presented. Maxima in these curves occur near $L = 3.0$ and $L = 2.8$ respectively. The $E > 0.4$ MeV fluxes are based in part on data taken near 0.4 MeV for $L > 2.0$ but are based on extrapolations from data taken on $E > 1.0$ MeV proton fluxes for $L < 2.0$. This discontinuity in the data leads to the slight irregularity near $L = 2.0$ in the $E > 0.4$ MeV curve of Figure 26. Data on protons with energies above 1.0 MeV were incorporated into the model for $L \gtrsim 1.5$, and this is reflected in the smoothness of the $E > 1.0$ MeV curve of Figure 26.

Figures 27 - 37 show the distribution function at selected L values, along with the values of the experimentally observed fluxes as reduced to the reference energy by means of the model exponential spectrum. It may be observed that the environment agrees with the data to within a factor of two or better, nearly everywhere. Shown in Figures 38 - 42 are the distribution function and corresponding experimental fluxes obtained at integer L values using a power law spectral

representation. Comparison of Figures 27 - 37 with Figures 38 - 42 again illustrates the fact that neither spectral representation is significantly preferred by the data.

Fluxes of ($E > 0.4$ MeV) protons circulating perpendicular to the magnetic field direction have been obtained by conversion from the AP5 omnidirectional fluxes. These unidirectional fluxes are presented in graphical form in Figure 43 and in tabular form in Table 2.

ORBITAL INTEGRATIONS

Fluxes accumulated in various satellite orbits have been obtained by orbital integrations discussed in detail in Reference 1. Orbital integrations have been performed for circular orbits up to 18,000 n. miles in altitude and at inclinations of 0°, 30°, 60° and 90°. Fluxes accumulated in 14 energy bands and the integral fluxes above the 15 associated energy levels have been calculated on a computer. These results are presented in Table 3, with the flux values in units of protons/cm^2-day. The time interval between successive orbit points and the total running time are shown; however, the total accumulated fluxes have been divided by the running time, in days, to obtain the average flux per day. (The symbol * is to be read "greater than.") Figure 44 illustrates the accumulated daily fluxes of protons with energies above 0.4 MeV.

DISCUSSION

A model environment of the fluxes of protons having energies below 4.0 MeV has been presented. Because of the peaked character of the differential energy spectrum, it was necessary to assign an L-dependent lower energy limit to the model. This is shown in Figure 3. The data coverage was best in the region $2.4 \leq L \leq 4.0$, and only limited in the regions $1.2 \leq L \leq 2.0$ and $5.2 \leq L \leq 6.6$. Because of the temporal fluctuations in the data, the accuracy of the model is given approximately by a factor of two over much of the region of B, L space. Larger amplitude temporal variations and a relative shortage of data render the environment somewhat less accurate at $L \geq 5.0$.

It was determined that over the energy and B-L ranges of interest, neither the exponential nor the power law spectral dependence was significantly more representative of the data than the other. An exponential representation was chosen because previous proton environments have utilized exponential spectra. Individual experiments (e.g. Reference 8) have indicated that a power law representation may permit the construction of individual environments valid over greater energy ranges than has been possible using exponential spectra. This will be investigated after all the proton environments have been updated.

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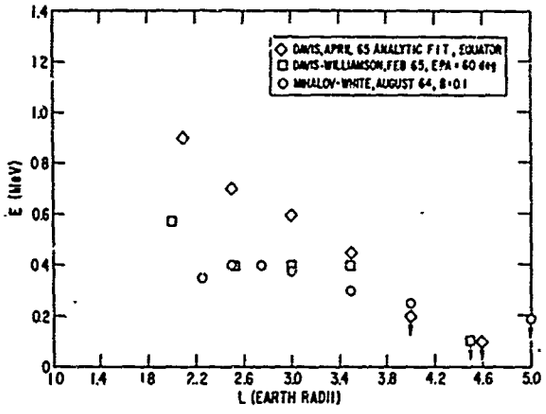

Figure 1—Locations of peak in differential energy spectrum as observed by the indicated experimenters.

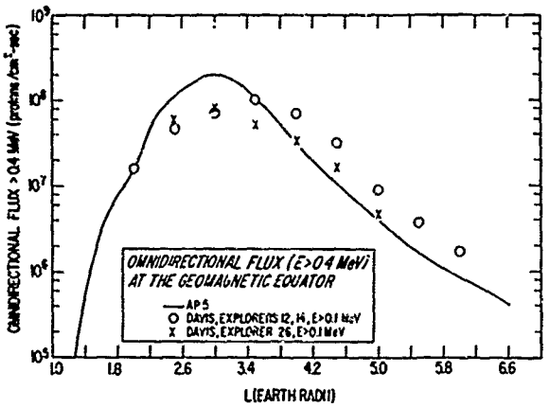

Figure 2—Comparison of AP5 equatorial flux with fluxes of E > 0.1 MeV protons observed in 1962 and 1965; the AP5 spectrum has been used.

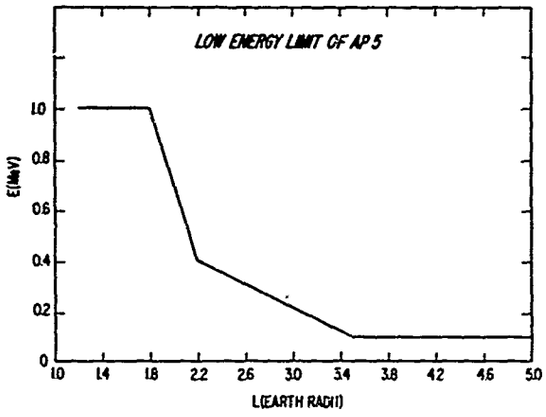

Figure 3—Recommended low energy limit of proton map AP5.

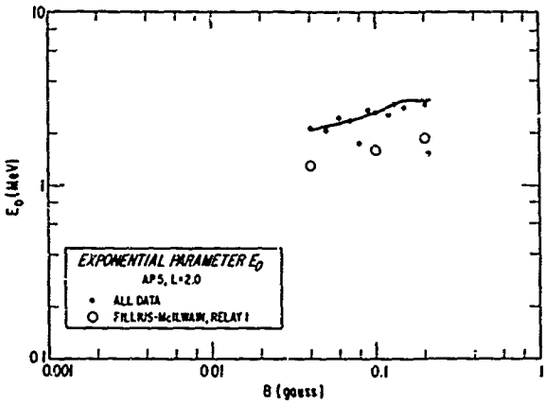

Figure 4—Comparison of exponential parameter E_0 with data at L = 2.0. Heavy dots indicate the value of E_0 which best fits all the data at fixed B. Special symbols indicate the value of E_0 which best fits data obtained from one experiment. Solid line is E_0 (B) used in AP5.

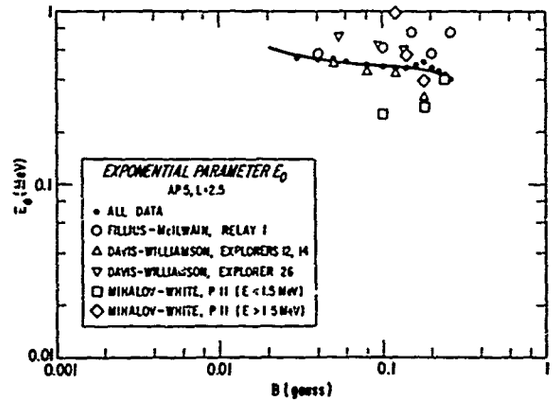

Figure 5—Comparison of spectral parameter E_0 with data at L = 2.5.

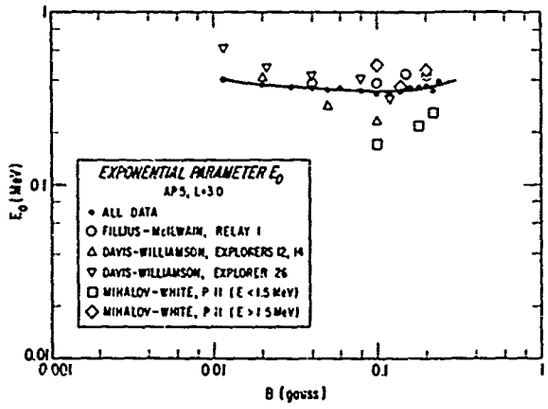

Figure 6—Comparison of spectral parameter E_0 with data at L = 3.0.

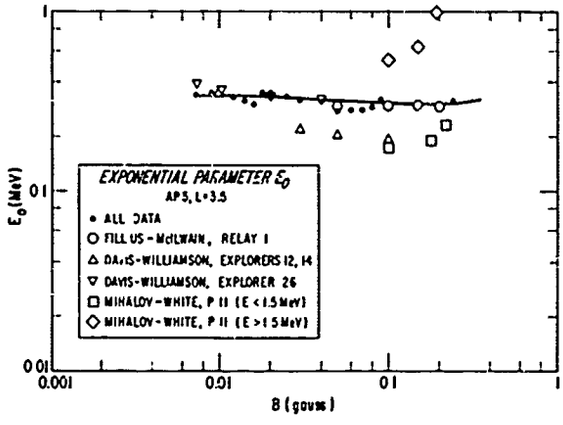

Figure 7—Comparison of spectral parameter E_0 with data at L = 3.5.

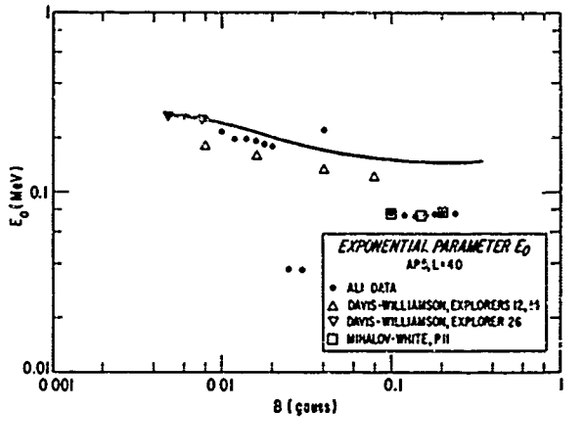

Figure 8—Comparison of spectral parameter E_0 with data at L = 4.0.

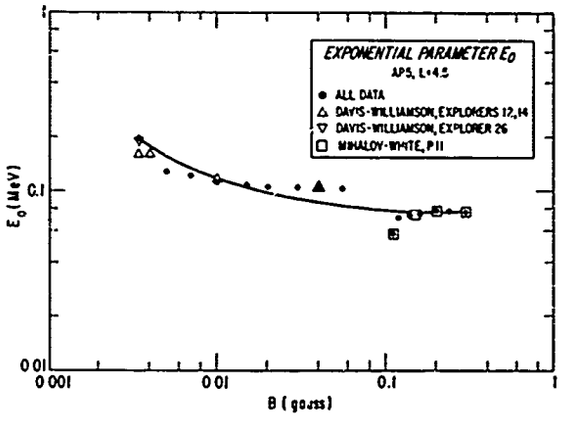

Figure 9—Comparison of spectral parameter E_0 with data at L = 4.5.

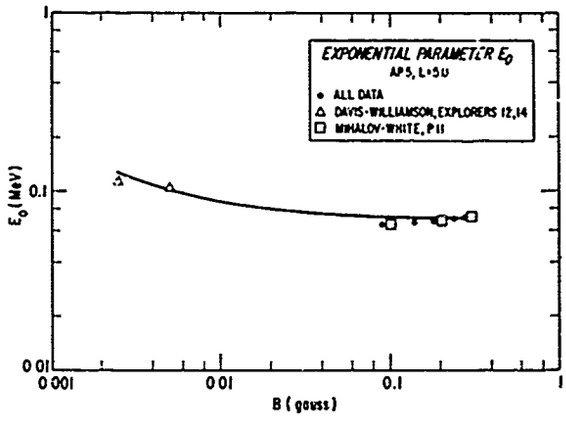

Figure 10—Comparison of spectral parameter E_0 with data at L = 5.0.

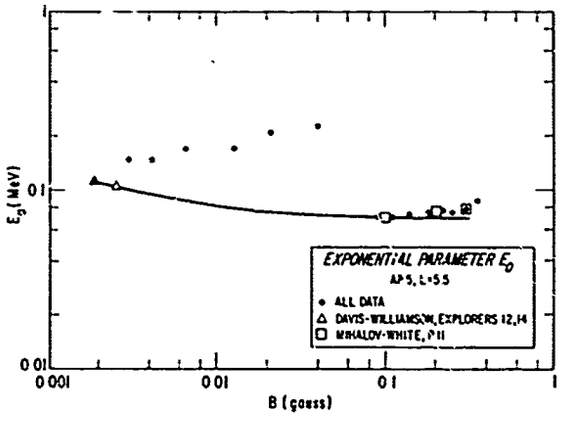

Figure 11—Comparison of spectral parameter E_0 with data at L = 5.5.

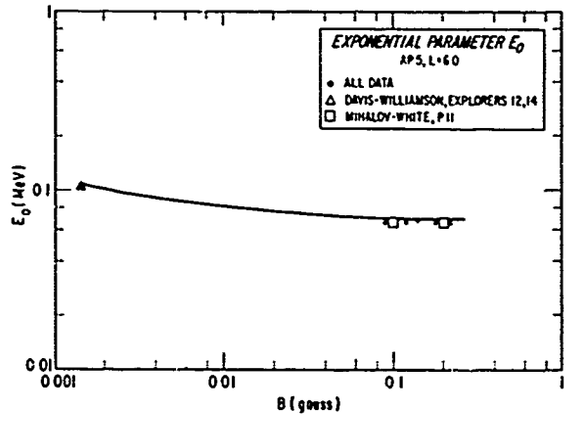

Figure 12—Comparison of spectral parameter E_0 with data at L = 6.0.

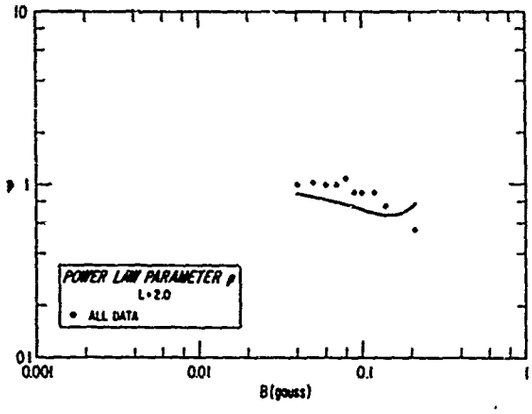

Figure 13—Comparison of power law parameter p with data at L = 2.0.

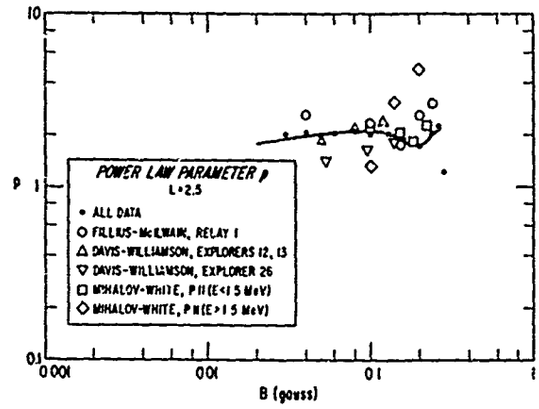

Figure 14—Comparison of power law parameter p with data at L = 2.5.

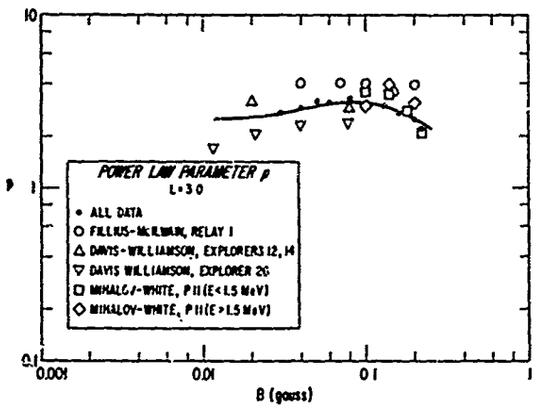

Figure 15—Comparison of power law parameter p with data at L = 3.0.

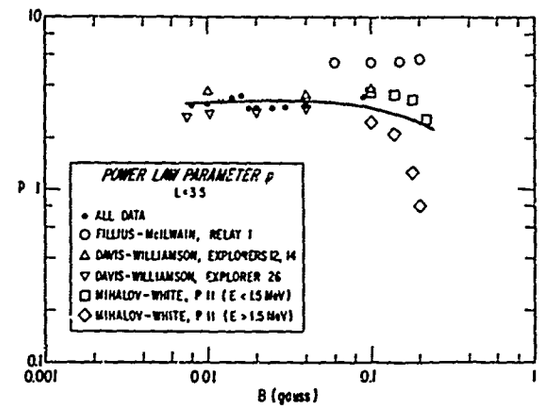

Figure 16—Comparison of power law parameter p with data at L = 3.5.

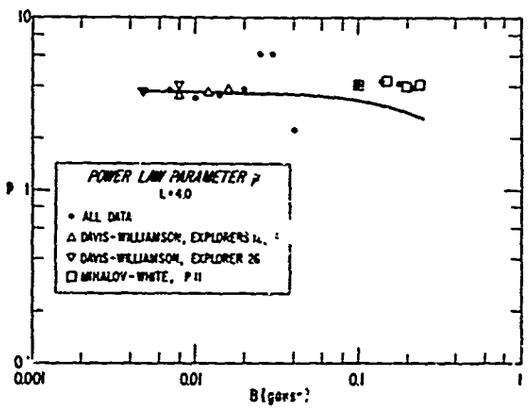

Figure 17—Comparison of power law parameter p with data at L = 4.0.

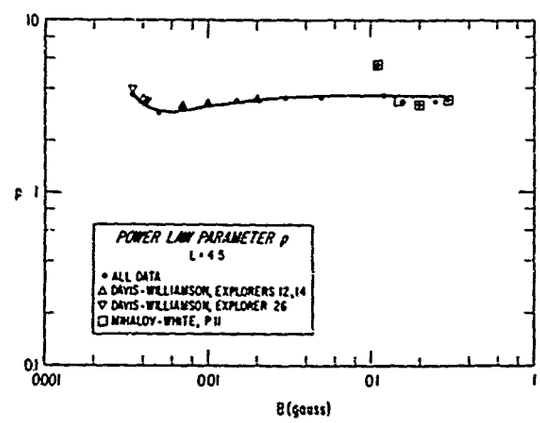

Figure 18—Comparison of power law parameter p with data at L = 4.5.

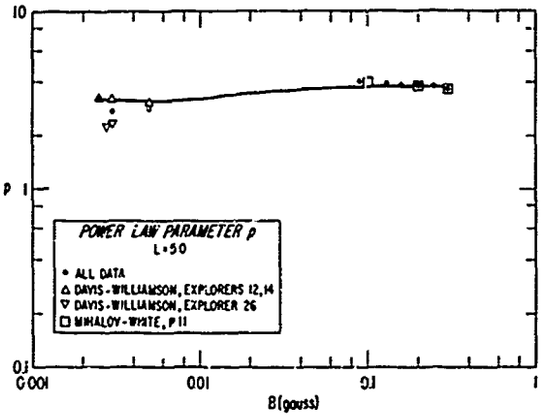

Figure 19—Comparison of power law parameter p with data at L = 5.0.

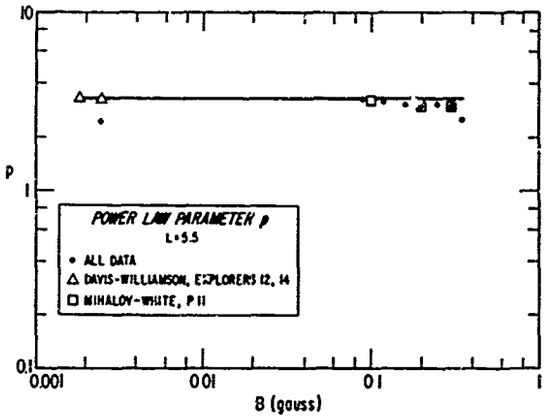

Figure 20—Comparison of power law parameter p with data at L = 5.5.

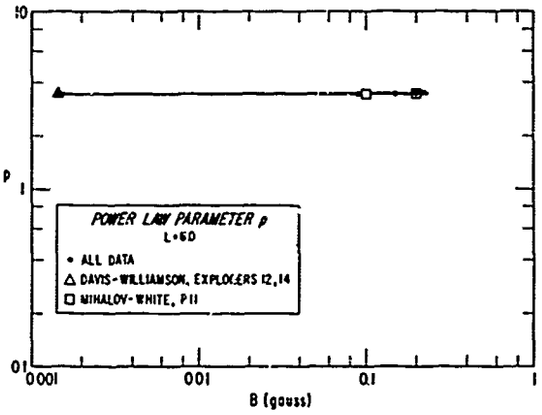

Figure 21—Comparison of power law parameter p with data at L = 6.0.

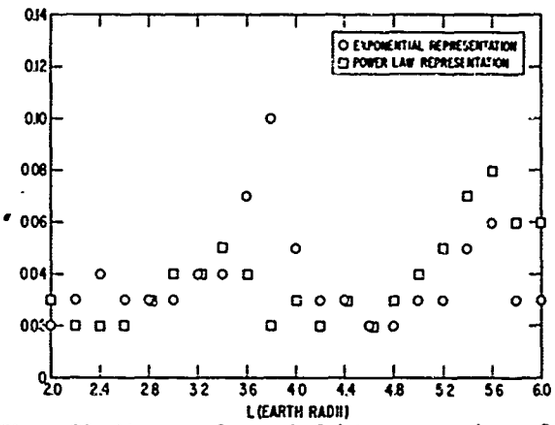

Figure 22—Measure of spread of data, averaged over B for fixed L, using the two spectral representations. See text for definition of σ.

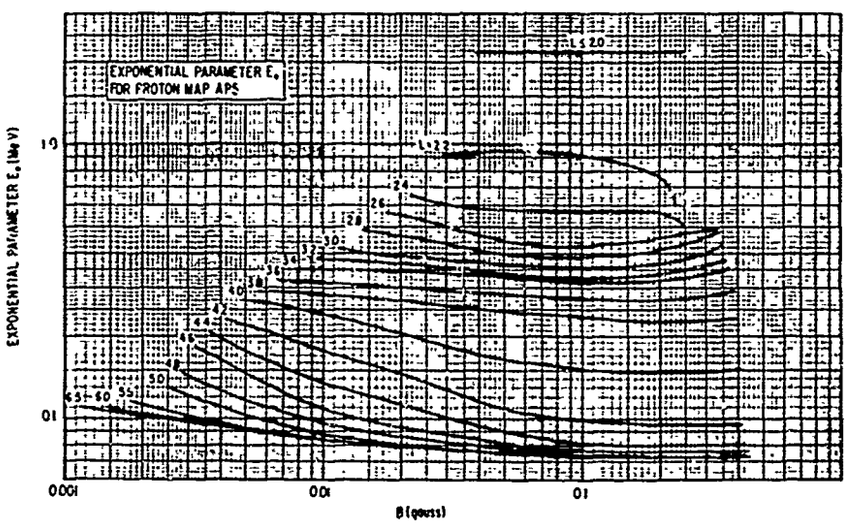

Figure 23—Spectral parameter E_0 used in the proton environment AP5.

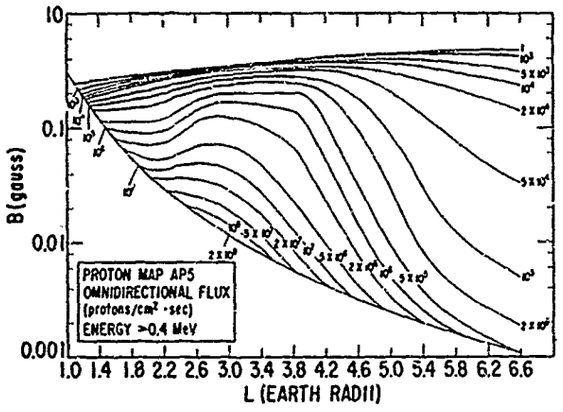

Figure 24—Log B-L flux map of the AP5 environment.

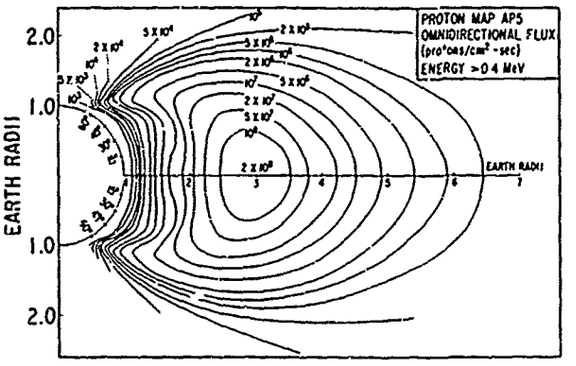

Figure 25—R-λ flux map of the AP5 environment.

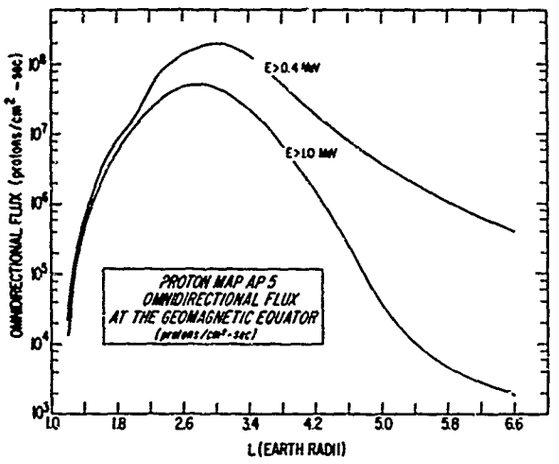

Figure 26—Omnidirectional proton flux at the geomagnetic equator.

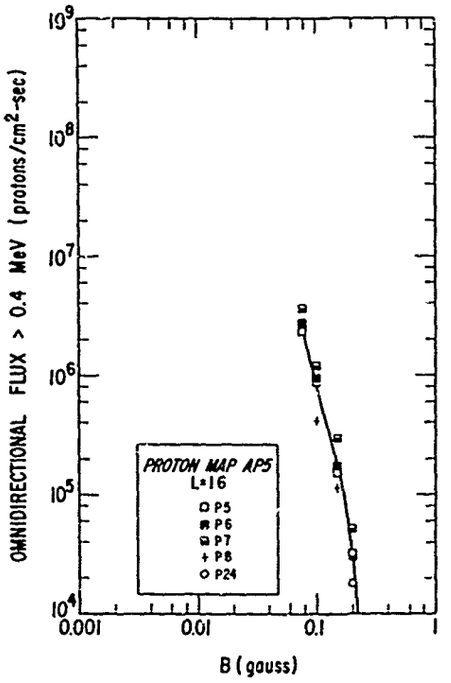

Figure 27—Comparison of proton map AP5 with data at L = 1.6.

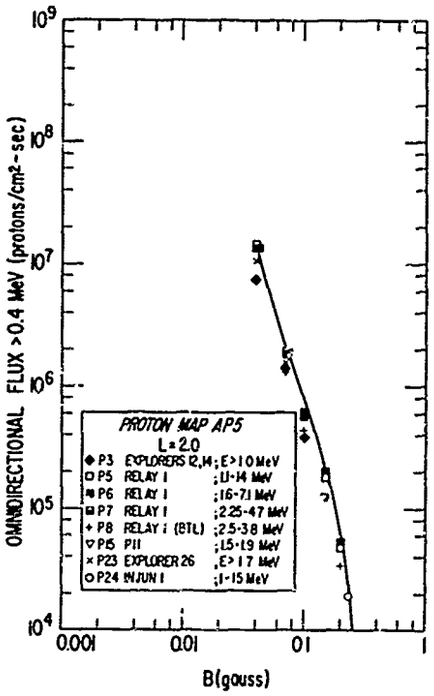

Figure 28—Comparison of proton map AP5 with data at L = 2.0.

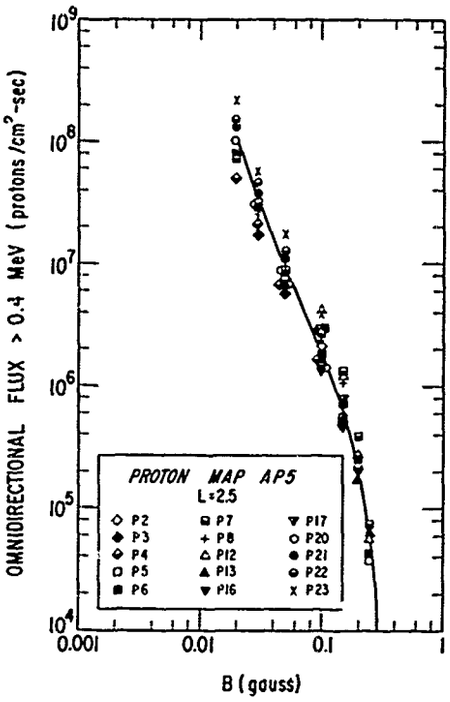

Figure 29—Comparison of proton map AP5 with data at L = 2.5.

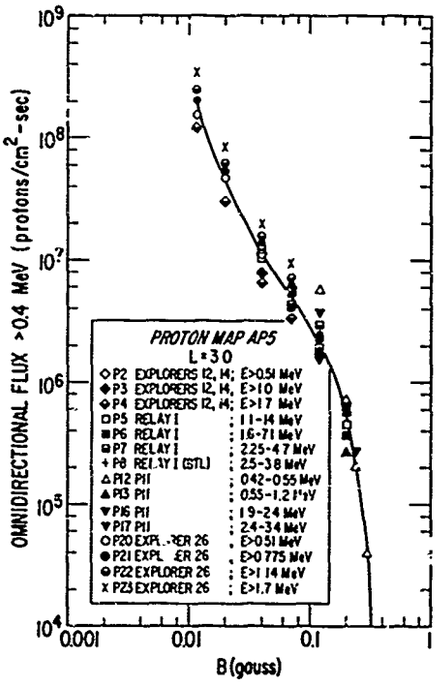

Figure 30—Comparison of proton map AP5 with data at L = 3.0.

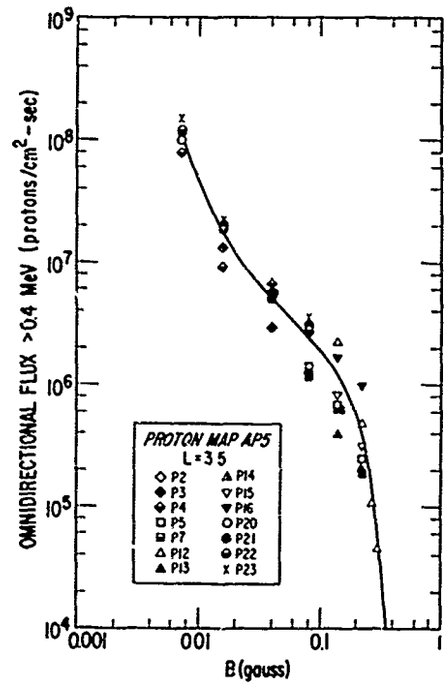

Figure 31—Comparison of proton map AP5 with data at L = 3.5.

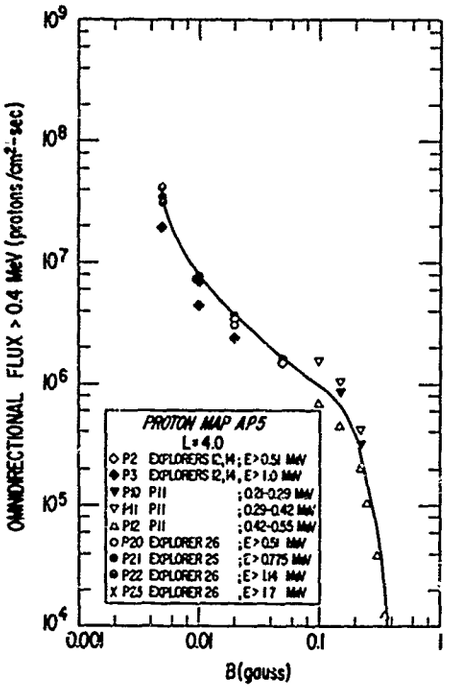

Figure 32—Comparison of proton map AP5 with data at L = 4.0.

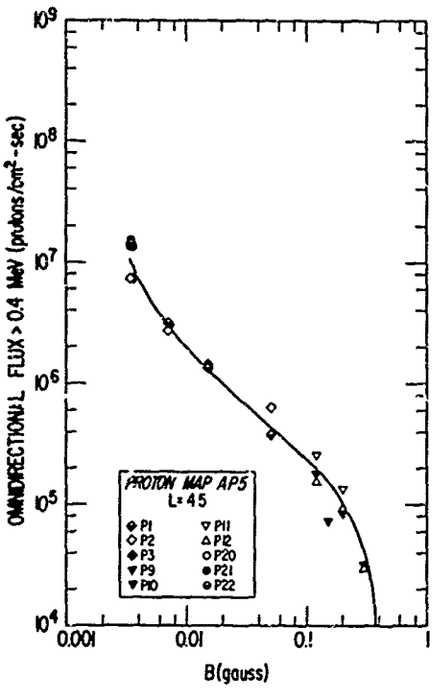

Figure 33—Comparison of proton map AP5 with data at L = 4.5.

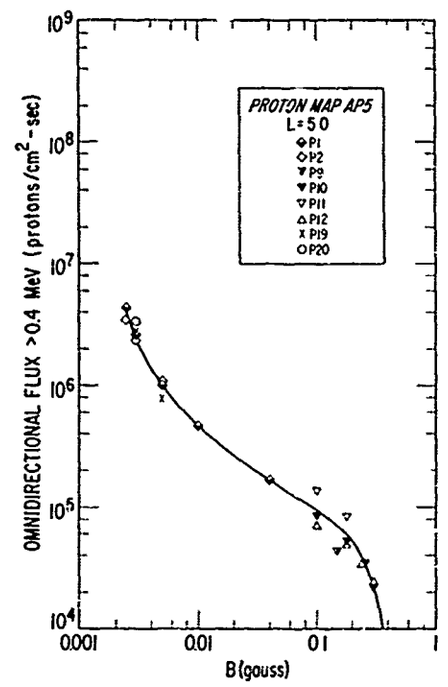

Figure 34—Comparison of proton map AP5 with data at L = 5.0.

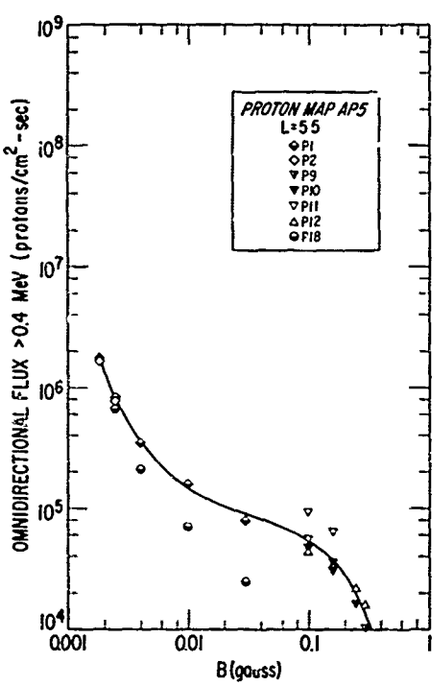

Figure 35—Comparison of proton map AP5 with data at L = 5.5.

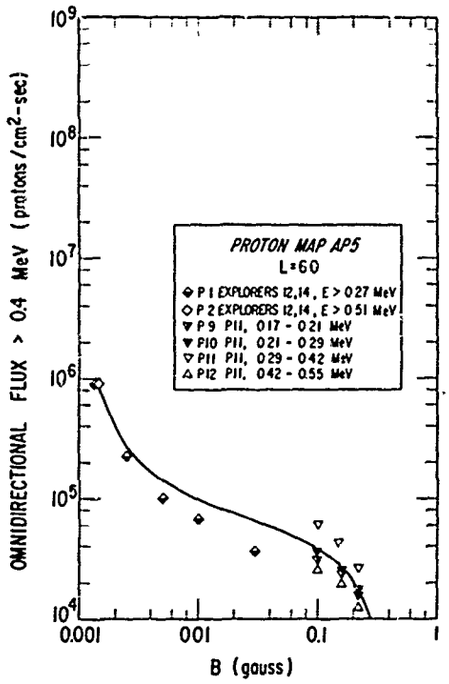

Figure 36—Comparison of proton map AP5 with data at L = 6.0.

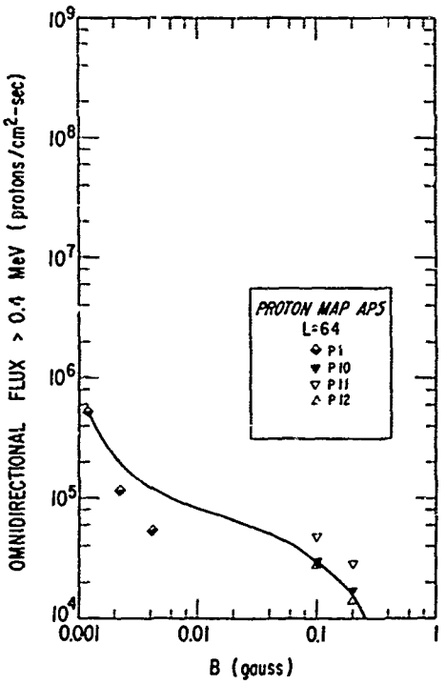

Figure 37—Comparison of proton map AP5 with data at L = 6.4.

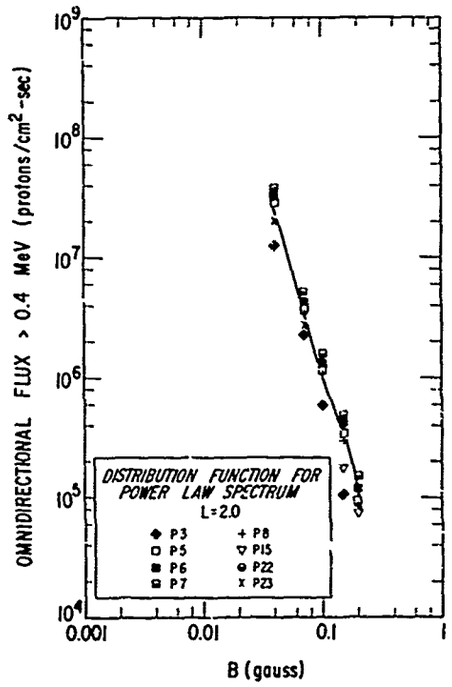

Figure 38—Comparison of data with distribution function obtained at L = 2.0 using power law energy spectrum.

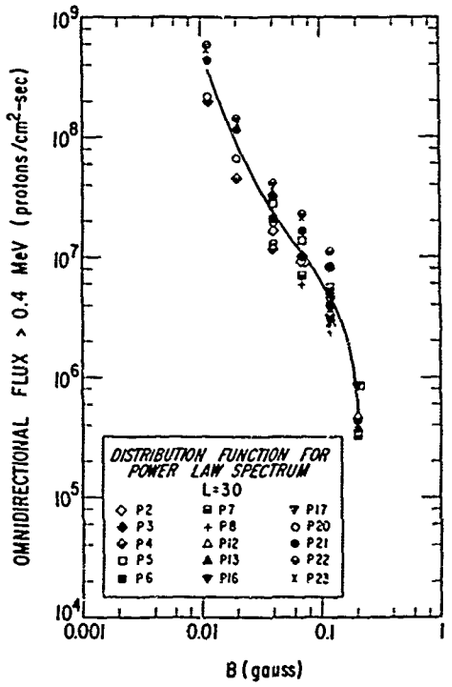

Figure 39—Comparison of data with distribution function obtained at L = 3.0 using power law energy spectrum.

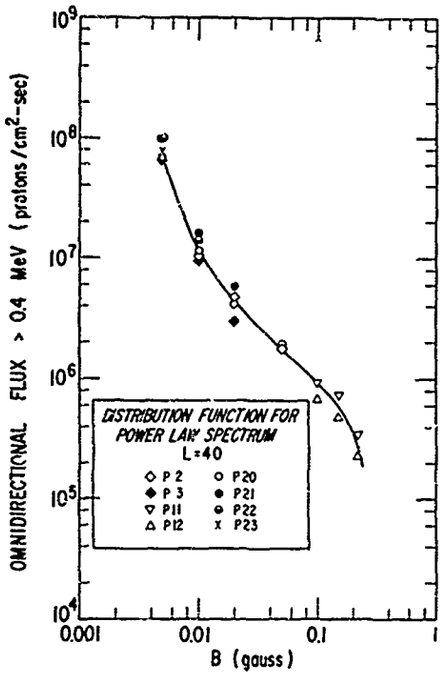

Figure 40—Comparison of data with distribution function obtained at L = 4.0 using power law energy spectrum.

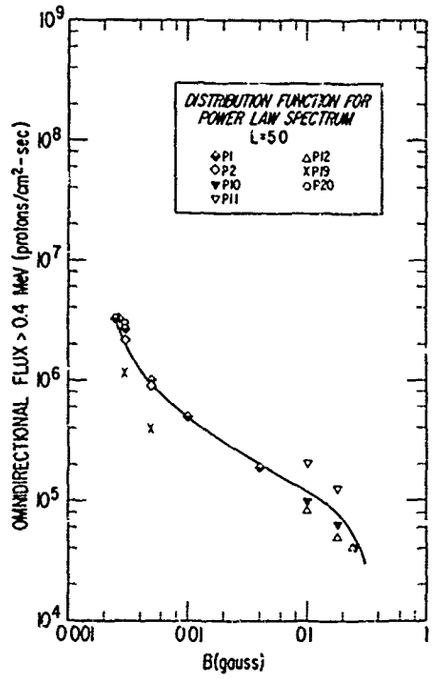

Figure 41—Comparison of data with distribution function obtained at L = 5.0 using power law energy spectrum.

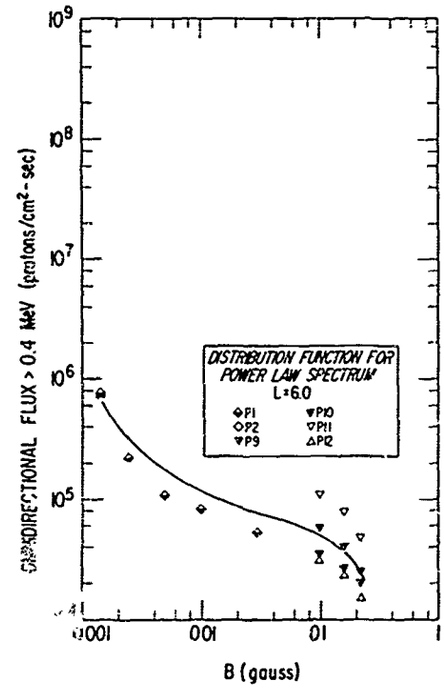

Figure 42—Comparison of data with distribution function obtained at L = 6.0 using power law energy spectrum.

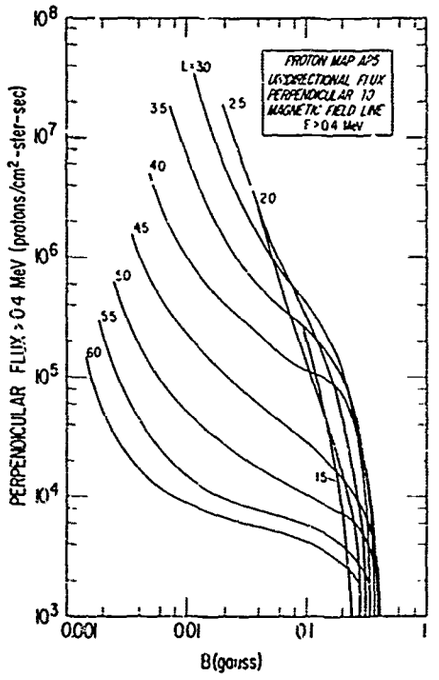

Figure 43—Unidirectional flux perpendicular to magnetic field obtained from AP5 distribution function.

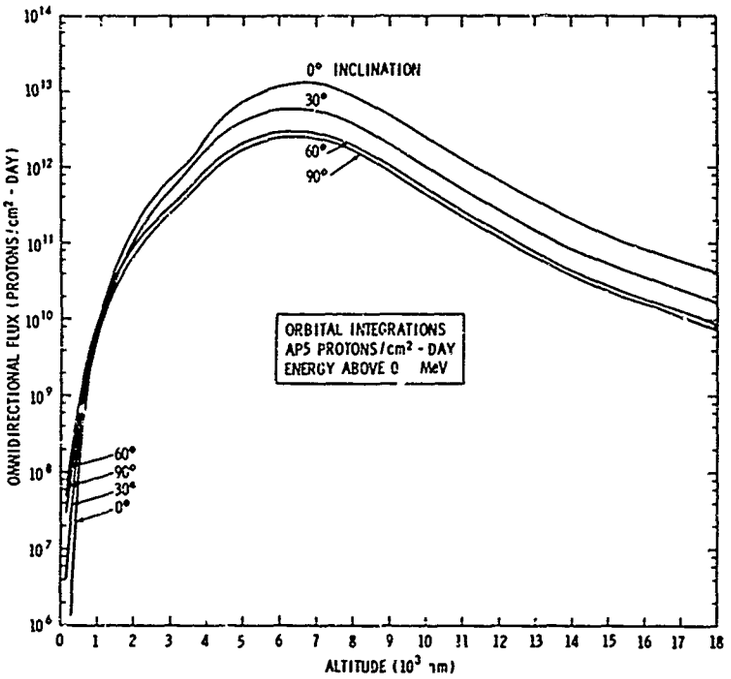

Figure 44—Orbital integrations with AP5, E > 0.4 MeV.

Table 2
PROTON MAP AP5
ENERGY ABOVE 0.4 MEV

L = 1.20

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.13500	2.17E+00	1.30E+05	6.43E+04		.22000	2.17E+00	1.08E+03	1.77E+03
.17500	2.17E+00	2.40E+04	7.50E+03		.23000	2.17E+00	4.20E+03	3.85E+03
.18035	2.17E+00	1.80E+04	5.65E+03		.24000	2.17E+00	1.00E+02	2.13E+02
.19000	2.17E+00	1.00E+04	3.39E+03		.24400	2.17E+00	1.00E+00	7.52E-02
.20000	2.17E+00	5.00E+03	1.74E+03		.99900	2.17E+00	1.00E+00	0
.21000	2.17E+00	2.40E+03	8.13E+02					

L = 1.30

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.10800	2.17E+00	3.90E+05	5.43E+04		.20000	2.17E+00	1.00E+04	3.28E+03
.14000	2.17E+00	1.50E+05	3.09E+04		.21000	2.17E+00	5.50E+03	1.91E+03
.14185	2.17E+00	1.40E+05	2.99E+04		.22000	2.17E+00	2.90E+03	1.12E+03
.15000	2.17E+00	1.09E+05	2.59E+04		.23000	2.17E+00	1.37E+03	6.16E+02
.16000	2.17E+00	7.40E+04	1.89E+04		.24000	2.17E+00	5.10E+02	3.57E+02
.17000	2.17E+00	4.80E+04	1.31E+04		.25000	2.17E+00	5.00E+01	1.78E+02
.18000	2.17E+00	3.00E+04	8.81E+03		.25200	2.17E+00	1.00E+00	7.50E-02
.19000	2.17E+00	1.77E+04	5.51E+03		.99900	2.17E+00	1.00E+00	0

L = 1.40

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.08800	2.17E+00	9.10E+05	1.30E+05		.19000	2.17E+00	2.48E+04	7.39E+03
.11000	2.17E+00	5.16E+05	8.96E+04		.20000	2.17E+00	1.48E+04	4.68E+03
.11358	2.17E+00	4.70E+05	8.43E+04		.21000	2.17E+00	8.50E+03	2.85E+03
.12000	2.17E+00	4.00E+05	7.56E+04		.22000	2.17E+00	4.70E+03	1.67E+03
.13000	2.17E+00	3.05E+05	6.36E+04		.23000	2.17E+00	2.45E+03	9.84E+02
.14000	2.17E+00	2.20E+05	4.96E+04		.24000	2.17E+00	1.12E+03	5.36E+02
.15000	2.17E+00	1.52E+05	3.68E+04		.25000	2.17E+00	3.95E+02	5.21E+02
.16000	2.17E+00	1.01E+05	2.59E+04		.26000	2.17E+00	1.00E+00	7.47E-02
.17000	2.17E+00	6.50E+04	1.77E+04		.99900	2.17E+00	1.00E+00	6.88-286
.18000	2.17E+00	4.05E+04	1.15E+04					

Table 2 (Cont.)

PROTON MAP AP5
ENERGY ABOVE 0.4 MEV

L = 1.50

B	E ZERO	OMNI FLUX	PERP FLUX	B	E ZERO	OMNI FLUX	PERP FLUX
.07200	2.17E+00	3.00E+06	5.11E+05	.17000	2.17E+00	8.20E+04	2.16E+04
.09000	2.17E+00	1.45E+06	2.72E+05	.18000	2.17E+00	5.30E+04	1.47E+04
.09234	2.17E+00	1.30E+06	2.51E+05	.19000	2.17E+00	3.30E+04	9.45E+03
.10000	2.17E+00	9.60E+05	1.92E+05	.20000	2.17E+00	2.05E+04	6.07E+03
.11000	2.17E+00	6.40E+05	1.29E+05	.22000	2.17E+00	7.80E+03	2.56E+03
.12000	2.17E+00	4.40E+05	8.82E+04	.24000	2.17E+00	2.60E+03	1.15E+03
.13000	2.17E+00	3.15E+05	6.42E+04	.25000	2.17E+00	1.05E+03	6.41E+02
.14000	2.17E+00	2.30E+05	4.90E+04	.26000	2.17E+00	2.00E+02	2.92E+02
.15000	2.17E+00	1.66E+05	3.68E+04	.26800	2.17E+00	1.00E+00	7.45E-02
.16000	2.17E+00	1.20E+05	2.90E+04	.99900	2.17E+00	1.00E+00	0

L = 1.60

B	E ZERO	OMNI FLUX	PERP FLUX	B	E ZERO	OMNI FLUX	PERP FLUX
.06000	2.17E+00	9.00E+06	3.15E+06	.18000	2.17E+00	7.40E+04	1.88E+04
.07400	2.17E+00	3.40E+06	7.77E+05	.19000	2.17E+00	5.10E+04	1.44E+04
.07609	2.17E+00	2.86E+06	6.30E+05	.20000	2.17E+00	3.25E+04	9.96E+03
.08000	2.17E+00	2.15E+06	4.26E+05	.22000	2.17E+00	1.13E+04	3.31E+03
.09000	2.17E+00	1.30E+06	2.55E+05	.24000	2.17E+00	4.80E+03	1.81E+03
.10000	2.17E+00	8.40E+05	1.61E+05	.25000	2.17E+00	2.50E+03	1.18E+03
.11000	2.17E+00	5.80E+05	1.09E+05	.26000	2.17E+00	9.20E+02	5.96E+02
.12000	2.17E+00	4.25E+05	8.09E+04	.27000	2.17E+00	1.55E+02	2.80E+02
.14000	2.17E+00	2.36E+05	4.70E+04	.27600	2.17E+00	1.00E+00	7.42E-02
.16000	2.17E+00	1.36E+05	2.99E+04	.99900	2.17E+00	1.00E+00	0

L = 1.70

B	E ZERO	OMNI FLUX	PERP FLUX	B	E ZERO	OMNI FLUX	PERP FLUX
.05000	2.17E+00	1.60E+07	3.81E+06	.16000	2.17E+00	1.48E+05	3.18E+04
.06200	2.17E+00	5.70E+06	1.21E+06	.18000	2.17E+00	8.30E+04	1.99E+04
.06343	2.17E+00	5.00E+06	1.06E+06	.19000	2.17E+00	6.00E+04	1.55E+04
.07000	2.17E+00	3.00E+06	5.67E+05	.20000	2.17E+00	4.15E+04	1.18E+04
.08000	2.17E+00	1.80E+06	3.31E+05	.22000	2.17E+00	1.70E+04	5.05E+03
.09000	2.17E+00	1.19E+06	2.25E+05	.25000	2.17E+00	4.50E+03	1.93E+03
.10000	2.17E+00	8.00E+05	1.50E+05	.26800	2.17E+00	1.00E+03	7.48E+02
.11000	2.17E+00	5.60E+05	1.01E+05	.27800	2.17E+00	1.00E+02	2.42E+02
.12000	2.17E+00	4.20E+05	7.64E+04	.28200	2.17E+00	1.00E+00	7.40E-02
.14000	2.17E+00	2.50E+05	4.87E+04	.99900	2.17E+00	1.00E+00	0

Table 2 (Cont.)

PROTON MAP AP5
ENERGY ABOVE 0.4 MEV

L = 1.80

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.04000	2.17E+00	1.90E+07	3.09E+06		.16000	2.17E+00	1.57E+05	3.28E+04
.05200	2.17E+00	8.60E+06	1.54E+06		.18000	2.17E+00	9.10E+04	2.09E+04
.05344	2.17E+00	7.60E+06	1.42E+06		.20000	2.17E+00	5.00E+04	1.24E+04
.06000	2.17E+00	5.00E+06	9.72E+05		.21000	2.17E+00	3.65E+04	9.93E+03
.07000	2.17E+00	2.65E+06	4.98E+05		.22000	2.17E+00	2.50E+04	7.50E+03
.08000	2.17E+00	1.60E+06	2.93E+05		.24000	2.17E+00	1.00E+04	3.16E+03
.09000	2.17E+00	1.05E+06	1.85E+05		.26600	2.17E+00	3.00E+03	1.69E+03
.10000	2.17E+00	7.50E+05	1.29E+05		.28000	2.17E+00	4.60E+02	7.97E+02
.12000	2.17E+00	4.34E+05	7.84E+04		.28800	2.17E+00	1.00E+00	7.38E-02
.14000	2.17E+00	2.60E+05	4.98E+04		.99900	2.17E+00	1.00E+00	0

L = 1.90

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.03500	2.17E+00	3.15E+07	6.52E+06		.16000	2.17E+00	1.60E+05	3.14E+04
.04200	2.17E+00	1.58E+07	3.14E+06		.18000	2.17E+00	1.00E+05	2.10E+04
.04544	2.17E+00	1.12E+07	2.19E+06		.20000	2.17E+00	6.20E+04	1.47E+04
.05000	2.17E+00	7.50E+06	1.36E+06		.21000	2.17E+00	4.70E+04	1.20E+04
.06000	2.17E+00	4.00E+06	7.46E+05		.22000	2.17E+00	3.40E+04	9.70E+03
.07000	2.17E+00	2.25E+06	3.99E+05		.24000	2.17E+00	1.50E+04	4.67E+03
.08000	2.17E+00	1.45E+06	2.43E+05		.27000	2.17E+00	3.80E+03	2.15E+03
.10000	2.17E+00	7.60E+05	1.31E+05		.28600	2.17E+00	4.40E+02	7.70E+02
.12000	2.17E+00	4.35E+05	7.84E+04		.29400	2.17E+00	1.00E+00	7.37E-02
.14000	2.17E+00	2.60E+05	4.88E+04		.99900	2.17E+00	1.00E+00	0

Table 2 (Cont.)

PROTON MAP AP5
ENERGY ABOVE 0.4 MEV

L = 2.00

B	E ZERO	OMNI FLUX	PERP FLUX	B	E ZERO	OMNI FLUX	PERP FLUX
.03000	2.02E+00	4.30E+07	6.62E+06	.13000	2.94E+00	3.45E+05	6.30E+04
.03200	2.04E+00	3.40E+07	5.54E+06	.14000	3.03E+00	2.70E+05	5.04E+04
.03400	2.06E+00	2.70E+07	4.64E+06	.15000	3.12E+00	2.12E+05	3.97E+04
.03600	2.07E+00	1.74E+07	3.88E+06	.16000	3.12E+00	1.70E+05	3.37E+04
.03896	2.10E+00	1.60E+07	2.98E+06	.17000	3.12E+00	1.33E+05	2.66E+04
.04500	2.15E+00	9.40E+06	1.74E+06	.18000	3.12E+00	1.06E+05	2.23E+04
.05000	2.20E+00	6.40E+06	1.13E+06	.19000	3.12E+00	8.30E+04	1.75E+04
.06000	2.28E+00	3.50E+06	6.12E+05	.20000	3.12E+00	6.60E+04	1.52E+04
.07000	2.36E+00	2.15E+06	3.67E+05	.22000	3.12E+00	3.80E+04	8.64E+03
.08000	2.45E+00	1.45E+06	2.43E+05	.24000	3.12E+00	2.40E+04	7.46E+03
.09000	2.54E+00	1.05E+06	1.81E+05	.26000	3.12E+00	1.00E+04	3.92E+03
.10000	2.64E+00	7.70E+05	1.33E+05	.28000	3.12E+00	2.70E+03	3.00E+03
.11000	2.74E+00	5.80E+05	1.02E+05	.29900	3.12E+00	1.00E+00	7.35E-02
.12000	2.85E+00	4.44E+05	7.93E+04	.99900	3.12E+00	1.00E+00	9.85-172

L = 2.10

B	E ZERO	OMNI FLUX	PERP FLUX	B	E ZERO	OMNI FLUX	PERP FLUX
.02600	8.27E-01	5.35E+07	1.09E+07	.13000	2.32E+00	3.50E+05	6.07E+04
.02800	8.69E-01	4.40E+07	8.81E+06	.14000	2.34E+00	2.81E+05	4.82E+04
.03000	9.13E-01	3.60E+07	7.14E+06	.15000	2.36E+00	2.32E+05	3.89E+04
.03200	9.60E-01	3.00E+07	5.78E+06	.16000	2.38E+00	2.00E+05	3.76E+04
.03365	1.00E+00	2.60E+07	4.86E+06	.17000	2.37E+00	1.63E+05	3.24E+04
.04000	1.17E+00	1.36E+07	2.49E+06	.18000	2.36E+00	1.30E+05	2.67E+04
.05000	1.50E+00	6.00E+06	1.06E+06	.19000	2.35E+00	1.03E+05	2.21E+04
.06000	1.71E+00	3.30E+06	5.54E+05	.20000	2.34E+00	8.10E+04	1.82E+04
.07000	1.86E+00	2.13E+06	3.50E+05	.21000	2.33E+00	6.30E 04	1.50E+04
.08000	2.03E+00	1.50E+06	2.55E+05	.25000	2.29E+00	2.00E+04	5.76E+03
.09000	2.12E+00	1.07E+06	1.85E+05	.27000	2.27E+00	1.00E+04	4.92E+03
.10000	2.21E+00	7.80E+05	1.35E+05	.29000	2.25E+00	1.30E+03	1.75E+03
.11000	2.25E+00	5.85E+05	1.02E+05	.30350	2.24E+00	1.00E+00	7.33E-02
.12000	2.30E+00	4.50E+05	7.91E+04	.99900	1.67E+00	1.00E+00	2.09-227

Table 2 (Cont.)

PROTON MAP AP5
ENERGY ABOVE 0.4 MEV

L = 2.20

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.02200	8.90E-01	1.52E+08	2.34E+07		.13000	8.66E-01	4.00E+05	6.81E+04
.02400	8.96E-01	1.08E+08	1.78E+07		.14000	8.53E-01	3.25E+05	5.56E+04
.02600	9.01E-01	7.40E+07	1.36E+07		.15000	8.40E-01	2.70E+05	4.80E+04
.02800	9.07E-01	5.40E+07	1.03E+07		.16000	8.26E-01	2.22E+05	4.00E+04
.02927	9.10E-01	4.50E+07	8.71E+06		.17000	8.13E-01	1.85E+05	3.50E+04
.03500	9.26E-01	2.15E+07	4.00E+06		.18000	8.00E-01	1.52E+05	2.99E+04
.04000	9.40E-01	1.31E+07	2.36E+06		.19000	7.79E-01	1.25E+05	2.64E+04
.05000	9.42E-01	6.00E+06	1.03E+06		.20000	7.58E-01	1.00E+05	2.32E+04
.06000	9.45E-01	3.44E+05	5.82E+05		.21000	7.23E-01	7.60E+04	1.67E+04
.07000	9.37E-01	2.20E+06	3.67E+05		.22000	6.90E-01	5.65E+04	1.43E+04
.08000	9.30E-01	1.52E+06	2.53E+05		.230	5.99E-01	4.30E+04	1.36E+04
.09000	9.17E-01	1.10E+06	1.82E+05		.30000	2.23E-01	1.40E+03	2.79E+03
.10000	9.05E-01	8.30E+05	1.39E+05		.30850	1.97E-01	1.00E+00	7.32E-02
.11000	8.92E-01	6.40E+05	1.09E+05		.99900	1.13E-05	1.00E+00	0
.12000	8.80E-01	5.00E+05	8.47E+04					

L = 2.30

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.01800	6.88E-01	1.62E+08	2.74E+07		.13000	6.78E-01	5.00E+05	8.55E+04
.02000	6.91E-01	1.30E+08	2.19E+07		.14000	6.66E-01	4.05E+05	6.95E+04
.02200	6.94E-01	1.02E+08	1.74E+07		.15000	6.54E-01	3.34E+05	5.77E+04
.02400	6.97E-01	8.10E+07	1.39E+07		.16000	6.43E-01	2.80E+05	5.12E+04
.02561	7.00E-01	6.60E+07	1.16E+07		.17000	6.35E-01	2.30E+05	4.26E+04
.03000	7.07E-01	4.00E+07	7.06E+06		.18000	6.26E-01	1.91E+05	3.64E+04
.04000	7.24E-01	1.49E+07	2.59E+06		.19000	6.18E-01	1.59E+05	3.22E+04
.05000	7.27E-01	7.30E+06	1.23E+06		.20000	6.05E-01	1.30E+05	2.85E+04
.06000	7.30E-01	4.30E+06	7.16E+05		.21000	5.92E-01	1.02E+05	2.33E+04
.07000	7.25E-01	2.80E+06	4.54E+05		.22000	5.80E-01	8.00E+04	2.05E+04
.08000	7.20E-01	2.00E+06	3.34E+05		.23000	5.60E-01	5.90E+04	1.75E+04
.09000	7.11E-01	1.45E+06	2.47E+05		.30000	4.26E-01	3.00E+03	4.50E+03
.10000	7.02E-01	1.07E+06	1.85E+05		.31350	4.03E-01	1.00E+00	7.30E-02
.11000	6.94E-01	8.00E+05	1.37E+05		.99900	2.60E-02	1.00E+00	4.40-245
.12000	6.86E-01	6.20E+05	1.04E+05					

Table 2 (Cont.)

PROTON MAP AP5
ENERGY ABOVE 0.4 MEV

L = 2.40

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.01600	6.90E-01	2.40E+08	3.43E+07		.14000	5.70E-01	5.40E+05	9.72E+04
.01800	6.77E-01	1.80E+08	2.69E+07		.15000	5.69E-01	4.30E+05	7.60E+04
.02000	6.63E-01	1.32E+08	2.11E+07		.16000	5.69E-01	3.55E+05	6.37E+04
.02200	6.50E-01	1.00E+08	1.66E+07		.17000	5.68E-01	2.95E+05	5.46E+04
.02254	6.47E-01	9.10E+07	1.55E+07		.18000	5.68E-01	2.45E+05	4.76E+04
.03000	6.01E-01	3.75E+07	6.26E+06		.19000	5.64E-01	2.00E+05	3.94E+04
.04000	5.82E-01	1.60E+07	2.71E+06		.20000	5.60E-01	1.65E+05	3.44E+04
.05000	5.80E-01	8.20E+06	1.32E+06		.21000	5.51E-01	1.34E+05	2.98E+04
.06000	5.78E-01	5.10E+06	8.10E+05		.22000	5.43E-01	1.07E+05	2.56E+04
.07000	5.75E-01	3.50E+06	5.52E+05		.23000	5.31E-01	8.20E+04	2.05E+04
.08000	5.72E-01	2.56E+06	4.16E+05		.24000	5.20E-01	6.20E+04	1.59E+04
.09000	5.72E-01	1.90E+06	3.12E+05		.25000	5.00E-01	4.80E+04	1.58E+04
.10000	5.71E-01	1.45E+06	2.45E+05		.30600	3.34E-01	3.00E+03	4.84E+03
.11000	5.71E-01	1.11E+06	1.89E+05		.31850	3.03E-01	1.00E+00	7.28E-02
.12000	5.70E-01	8.70E+05	1.53E+05		.99900	1.42E-03	1.00E+00	2.06-264
.13000	5.70E-01	6.80E+05	1.21E+05					

L = 2.50

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.01200	6.78E-01	5.00E+08	5.20E+07		.14000	4.72E-01	7.90E+05	1.47E+05
.01400	6.62E-01	3.20E+08	4.01E+07		.15000	4.70E-01	6.20E+05	1.16E+05
.01600	6.47E-01	2.10E+08	3.09E+07		.16000	4.67E-01	5.00E+05	9.78E+04
.01800	6.32E-01	1.50E+08	2.38E+07		.17000	4.63E-01	3.95E+05	7.86E+04
.01995	6.18E-01	1.11E+08	1.85E+07		.18000	4.60E-01	3.15E+05	6.43E+04
.02500	5.83E-01	5.80E+07	9.59E+06		.19000	4.55E-01	2.50E+05	5.21E+04
.03000	5.50E-01	3.50E+07	5.65E+06		.20000	4.50E-01	2.00E+05	4.44E+04
.04000	5.20E-01	1.60E+07	2.52E+06		.21000	4.43E-01	1.55E+05	3.51E+04
.05000	5.07E-01	9.20E+06	1.40E+06		.22000	4.37E-01	1.21E+05	2.77E+04
.06000	4.95E-01	6.20E+06	9.54E+05		.23000	4.30E-01	9.80E+04	2.53E+04
.07000	4.90E-01	4.40E+06	6.83E+05		.24000	4.23E-01	7.40E+04	2.04E+04
.08000	4.85E-01	3.25E+06	5.10E+05		.25000	4.17E-01	5.70E+04	2.66E+04
.09000	4.80E-01	2.48E+06	3.94E+05		.28000	3.95E-01	2.70E+03	4.40E+02
.10000	4.79E-01	1.94E+06	3.18E+05		.31500	3.70E-01	2.50E+03	5.29E+03
.11000	4.78E-01	1.52E+06	2.51E+05		.32400	3.64E-01	1.00E+00	7.26E-02
.12000	4.77E-01	1.22E+06	2.03E+05		.99900	1.03E-01	1.00E+00	0
.13000	4.75E-01	1.00E+06	1.80E+05					

Table 2 (Cont.)

PROTON MAP AP5
ENERGY ABOVE 0.4 MEV

L = 2.60

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.01000	6.28E-01	3.60E+08	9.46E+07		.14000	4.35E-01	1.11E+06	2.05E+05
.01400	5.97E-01	2.10E+08	4.61E+07		.16000	4.41E-01	7.00E+05	1.60E+05
.01773	5.70E-01	1.37E+08	2.36E+07		.18000	4.48E-01	3.40E+05	5.63E+04
.02000	5.54E-01	9.50E+07	1.57E+07		.20000	4.56E-01	2.70E+05	5.91E+04
.02500	5.20E-01	5.00E+07	8.26E+06		.22000	4.61E-01	1.65E+05	3.79E+04
.03000	5.00E-01	3.00E+07	4.60E+06		.24000	4.66E-01	1.00E+05	2.39E+04
.04000	4.67E-01	1.51E+07	2.22E+06		.26000	4.70E-01	6.00E+04	1.58E+04
.05000	4.43E-01	9.60E+06	1.42E+06		.29000	4.78E-01	2.60E+04	1.15E+04
.06000	4.36E-01	6.60E+06	9.33E+05		.32000	4.85E-01	2.40E+03	5.12E+03
.08000	4.22E-01	3.90E+06	5.61E+05		.32900	4.87E-01	1.00E+00	7.25E-02
.10000	4.22E-01	2.60E+06	4.01E+05		.99900	6.84E-01	1.00E+00	0
.12000	4.29E-01	1.77E+06	3.09E+05					

L = 2.70

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.00800	5.91E-01	4.80E+08	8.78E+07		.14000	4.21E-01	1.42E+06	2.59E+05
.01200	5.59E-01	2.60E+08	4.67E+07		.16000	4.25E-01	9.10E+05	1.85E+05
.01583	5.30E-01	1.56E+08	2.55E+07		.18000	4.30E-01	5.40E+05	1.14E+05
.02000	5.00E-01	8.20E+07	1.32E+07		.20000	4.35E-01	3.25E+05	7.11E+04
.02500	4.79E-01	4.50E+07	7.23E+06		.22000	4.39E-01	2.00E+05	4.69E+04
.03000	4.59E-01	2.80E+07	4.21E+06		.24000	4.42E-01	1.21E+05	3.99E+04
.04000	4.39E-01	1.46E+07	2.08E+06		.26000	4.49E-01	4.00E+04	6.83E+03
.05000	4.20E-01	9.60E+06	1.35E+06		.29000	4.60E-01	3.30E+04	1.31E+04
.06000	4.19E-01	7.00E+06	9.92E+05		.32400	4.73E-01	3.65E+03	7.52E+03
.08000	4.18E-01	4.10E+06	5.74E+05		.33400	4.77E-01	1.00E+00	7.23E-02
.10000	4.18E-01	2.80E+06	4.08E+05		.99900	8.17E-01	1.00E+00	0
.12000	4.20E-01	2.01E+06	3.20E+05					

Table 2 (Cont.)

PROTON MAP AP5
ENERGY ABOVE 0.4 MEV

L = 2.80

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.00800	5.23E-01	8.20E+08	9.78E+07		.12000	3.93E-01	2.15E+06	3.28E+05
.01200	5.01E-01	3.20E+08	4.58E+07		.13000	3.95E-01	1.84E+06	2.89E+05
.01420	4.90E-01	1.80E+08	3.02E+07		.14000	3.97E-01	1.59E+06	2.73E+05
.01800	4.71E-01	8.90E+07	1.47E+07		.15000	3.98E-01	1.32E+06	2.35E+05
.02000	4.61E-01	6.70E+07	1.06E+07		.16000	4.00E-01	1.10E+06	2.16E+05
.02500	4.47E-01	3.80E+07	5.87E+06		.18000	4.06E-01	6.90E+05	1.50E+05
.03000	4.33E-01	2.48E+07	3.58E+06		.20000	4.14E-01	4.00E+05	9.11E+04
.04000	4.16E-01	1.39E+07	1.93E+06		.22000	4.19E-01	2.32E+05	5.39E+04
.05000	4.06E-01	9.50E+06	1.35E+06		.24000	4.26E-01	1.40E+05	3.82E+04
.06000	3.94E-01	6.80E+06	9.63E+05		.26000	4.37E-01	6.80E+04	1.50E+04
.07000	3.88E-01	5.16E+06	7.14E+05		.29000	4.53E-01	4.00E+04	1.53E+04
.08000	3.88E-01	4.15E+06	5.81E+05		.33000	4.74E-01	4.00E+03	9.25E+03
.09000	3.89E-01	3.40E+06	4.68E+05		.33900	4.79E-01	1.00E+00	7.21E-02
.10000	3.90E-01	2.90E+06	4.07E+05		.99900	1.04E+00	1.00E+00	0
.11000	3.92E-01	2.50E+06	3.66E+05					

L = 2.90

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.00800	4.54E-01	8.40E+08	1.02E+08		.12000	3.81E-01	2.21E+06	3.34E+05
.01100	4.45E-01	3.25E+08	4.98E+07		.14000	3.84E-01	1.63E+06	2.67E+05
.01278	4.40E-01	1.90E+08	3.25E+07		.16000	3.86E-01	1.18E+06	2.21E+05
.01600	4.31E-01	9.40E+07	1.50E+07		.18000	3.89E-01	7.80E+05	1.59E+05
.02000	4.20E-01	5.25E+07	7.96E+06		.19000	3.91E-01	6.22E+05	1.31E+05
.02500	4.12E-01	3.15E+07	4.70E+06		.20000	3.92E-01	4.95E+05	1.12E+05
.03000	4.05E-01	2.13E+07	2.93E+06		.22000	3.96E-01	2.93E+05	6.97E+04
.04000	3.97E-01	1.30E+07	1.78E+06		.24000	4.00E-01	1.70E+05	4.22E+04
.05000	3.90E-01	9.00E+06	1.23E+06		.28000	4.13E-01	5.70E+04	1.99E+04
.06000	3.85E-01	6.70E+06	9.26E+05		.33800	4.34E-01	3.00E+03	8.59E+03
.07000	3.80E-01	5.20E+06	7.18E+05		.34500	4.37E-01	1.00E+00	7.19E-02
.08000	3.80E-01	4.17E+06	5.58E+05		.99900	7.75E-01	1.00E+00	0
.10000	3.80E-01	3.00E+06	4.24E+05					

Table 2 (Cont.)

PROTON MAP AP5
ENERGY ABOVE 0.4 MEV

L = 3.00

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.00800	4.27E-01	9.50E+08	8.97E+07		.10000	3.52E-01	2.90E+06	4.15E+05
.01000	4.20E-01	3.80E+08	5.20E+07		.12000	3.54E-01	2.10E+06	3.15E+05
.01154	4.15E-01	2.00E+08	3.42E+07		.14000	3.57E-01	1.55E+06	2.46E+05
.01400	4.07E-01	1.10E+08	1.75E+07		.16000	3.59E-01	1.15E+06	2.05E+05
.01700	3.97E-01	6.70E+07	1.05E+07		.18000	3.62E-01	8.00E+05	1.54E+05
.02000	3.88E-01	4.55E+07	6.86E+06		.20000	3.65E-01	5.40E+05	1.19E+05
.02500	3.84E-01	2.75E+07	4.09E+06		.22000	3.69E-01	3.25E+05	7.37E+04
.03000	3.79E-01	1.86E+07	2.53E+06		.24000	3.75E-01	2.00E+05	4.82E+04
.04000	3.70E-01	1.15E+07	1.53E+06		.26000	3.82E-01	1.20E+05	3.15E+04
.05000	3.62E-01	8.20E+06	1.09E+06		.29000	3.95E-01	5.10E+04	1.59E+04
.06000	3.60E-01	6.30E+06	8.49E+05		.32000	4.09E-01	1.65E+04	6.74E+03
.07000	3.57E-01	5.00E+06	6.83E+05		.34400	4.21E-01	3.30E+03	1.12E+04
.08000	3.55E-01	4.05E+06	5.50E+05		.35000	4.24E-01	1.00E+00	7.17E-02
.09000	3.53E-01	3.40E+06	4.69E+05		.99900	8.94E-01	1.00E+00	0

L = 3.10

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.00700	4.08E-01	6.30E+08	8.08E+07		.10000	3.40E-01	2.68E+06	3.68E+05
.00900	4.03E-01	3.00E+08	4.71E+07		.12000	3.40E-01	2.02E+06	2.92E+05
.01046	4.00E-01	1.91E+08	3.17E+07		.15000	3.40E-01	1.36E+06	2.33E+05
.01200	3.96E-01	1.30E+08	2.09E+07		.17000	3.40E-01	9.60E+05	1.78E+05
.01500	3.89E-01	7.20E+07	1.14E+07		.18500	3.14E-01	7.30E+05	1.55E+05
.01700	3.85E-01	5.30E+07	8.12E+06		.20000	2.47E-01	5.00E+05	1.07E+05
.02000	3.78E-01	3.66E+07	5.35E+06		.22000	2.39E-01	3.15E+05	6.98E+04
.02500	3.73E-01	2.31E+07	3.28E+06		.24000	3.11E-01	2.00E+05	4.69E+04
.03000	3.69E-01	1.65E+07	2.24E+06		.28000	3.60E-01	7.70E+04	2.54E+04
.04000	3.60E-01	1.02E+07	1.34E+06		.35000	3.74E-01	3.30E+03	1.14E+04
.05000	3.56E-01	7.40E+06	9.74E+05		.35600	3.76E-01	1.00E+00	7.15E-02
.06000	3.51E-01	5.70E+06	7.50E+05		.99900	5.37E-01	1.00E+00	0
.08000	3.45E-01	3.74E+06	5.01E+05					

Table 2 (Cont.)

PROTON MAP AP5
ENERGY ABOVE 0.4 MEV

L = 3.20

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.00700	3.84E-01	4.20E+08	6.71E+07		.08000	3.[illegible]E-01	3.40E+06	4.44E+05
.00850	3.82E-01	2.45E+08	4.21E+07		.10000	3.26E-01	2.50E+06	3.33E+05
.00951	3.81E-01	1.80E+08	3.07E+07		.12000	3.27E-01	1.96E+06	2.85E+05
.01100	3.79E-01	1.16E+08	1.93E+07		.14000	3.28E-01	1.50E+06	2.42E+05
.01200	3.78E-01	9.10E+07	1.49E+07		.16000	3.30E-01	1.10E+06	1.99E+05
.01400	3.75E-01	6.00E+07	9.59E+06		.18000	3.32E-01	7.50E+05	1.45E+05
.01600	3.73E-01	4.25E+07	6.47E+06		.20000	3.37E-01	5.00E+05	1.01E+05
.01800	3.70E-01	3.25E+07	4.86E+06		.22000	3.43E-01	3.35E+05	7.19E+04
.02000	3.68E-01	2.60E+07	3.67E+06		.24000	3.50E-01	2.22E+05	5.23E+04
.02500	3.60E-01	1.70E+07	2.27E+06		.28000	3.58E-01	8.50E+04	2.34E+04
.03000	3.52E-01	1.29E+07	1.66E+06		.31000	3.64E-01	3.50E+04	1.29E+04
.04000	3.46E-01	8.60E+06	1.10E+06		.35700	3.76E-01	3.00E+03	1.54E+04
.05000	3.40E-01	6.40E+06	8.27E+05		.36100	3.77E-01	1.00E+00	7.13E-02
.06000	3.36E-01	5.00E+06	6.41E+05		.99900	5.71E-01	1.00E+00	0

L = 3.30

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.00600	3.68E-01	4.70E+08	7.75E+07		.08000	3.23E-01	3.00E+06	3.84E+05
.00800	3.66E-01	1.95E+08	3.58E+07		.10000	3.19E-01	2.26E+06	3.06E+05
.00867	3.65E-01	1.58E+08	2.76E+07		.12000	3.18E-01	1.72E+06	2.41E+05
.01000	3.64E-01	1.00E+08	1.65E+07		.14000	3.19E-01	1.36E+06	2.15E+05
.01200	3.61E-01	6.00E+07	9.23E+06		.16000	3.20E-01	1.01E+06	1.70E+05
.01400	3.59E-01	4.20E+07	6.30E+06		.18000	3.22E-01	7.40E+05	1.37E+05
.01700	3.55E-01	2.74E+07	3.94E+06		.20000	3.25E-01	5.20E+05	1.07E+05
.02000	3.52E-01	2.00E+07	2.68E+06		.22000	3.30E-01	3.40E+05	7.31E+04
.02500	3.49E-01	1.40E+07	1.85E+06		.28000	3.46E-01	9.50E+04	2.95E+04
.03000	3.46E-01	1.07E+07	1.36E+06		.36000	3.71E-01	4.20E+03	1.32E+04
.04000	3.40E-01	7.25E+06	9.09E+05		.36700	3.74E-01	1.00E+00	7.10E-02
.05000	3.35E-01	5.50E+06	6.93E+05		.99900	6.55E-01	1.00E+00	0
.06000	3.30E-01	4.40E+06	5.62E+05					

Table 2 (Cont.)

PROTON MAP AP5
ENERGY ABOVE 0.4 MEV

L = 3.40

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.00600	3.53E-01	3.70E+08	7.51E+07		.08000	3.18E-01	2.70E+06	3.44E+05
.00700	3.52E-01	2.10E+08	4.24E+07		.10000	3.15E-01	2.04E+06	2.69E+05
.00793	3.52E-01	1.32E+08	2.49E+07		.12000	3.13E-01	1.60E+06	2.25E+05
.00900	3.52E-01	8.00E+07	1.35E+07		.14000	3.12E-01	1.25E+06	1.89E+05
.01000	3.51E-01	5.80E+07	9.09E+06		.16000	3.11E-01	9.60E+05	1.55E+05
.01200	3.51E-01	3.70E+07	5.41E+06		.18000	3.12E-01	7.30E+05	1.28E+05
.01400	3.50E-01	2.70E+07	3.65E+06		.20000	3.13E-01	5.40E+05	1.05E+05
.01600	3.49E-01	2.20E+07	2.96E+06		.22000	3.18E-01	3.80E+05	8.38E+04
.02000	3.48E-01	1.53E+07	2.00E+06		.28000	3.32E-01	1.00E+05	3.10E+04
.02500	3.44E-01	1.10E+07	1.41E+06		.36800	3.52E-01	3.20E+03	1.37E+04
.03000	3.40E-01	8.60E+06	1.07E+06		.37300	3.54E-01	1.00E+00	7.08E-02
.04000	3.32E-01	6.00E+06	7.25E+05		.99900	5.49E-01	1.00E+00	0
.06000	3.24E-01	3.75E+06	4.60E+05					

L = 3.50

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.00500	3.41E-01	3.10E+08	5.69E+07		.06000	3.18E-01	3.30E+06	4.00E+05
.00600	3.41E-01	1.84E+08	3.46E+07		.08000	3.14E-01	2.40E+06	2.95E+05
.00727	3.40E-01	1.08E+08	1.84E+07		.10000	3.10E-01	1.88E+06	2.43E+05
.00800	3.40E-01	8.10E+07	1.28E+07		.12000	3.07E-01	1.50E+06	2.05E+05
.00900	3.39E-01	6.10E+07	9.85E+06		.14000	3.04E-01	1.20E+06	1.79E+05
.01000	3.39E-01	4.60E+07	7.00E+06		.16000	3.02E-01	9.30E+05	1.49E+05
.01200	3.38E-01	3.05E+07	4.50E+06		.18000	3.03E-01	7.10E+05	1.22E+05
.01400	3.37E-01	2.22E+07	3.19E+06		.20000	3.03E-01	5.35E+05	9.95E+04
.01600	3.36E-01	1.71E+07	2.32E+06		.22000	3.06E-01	3.90E+05	8.30E+04
.01800	3.35E-01	1.41E+07	1.89E+06		.28000	3.16E-01	1.12E+05	3.06E+04
.02000	3.34E-01	1.20E+07	1.56E+06		.32000	3.23E-01	3.40E+04	1.15E+04
.02500	3.31E-01	8.60E+06	1.07E+06		.37300	3.32E-01	3.50E+03	1.54E+04
.03000	3.28E-01	6.90E+06	8.25E+05		.37800	3.33E-01	1.00E+00	7.06E-02
.04000	3.22E-01	5.05E+06	5.94E+05		.99900	4.52E-01	1.00E+00	0

Table 2 (Cont.)

PROTON MAP AP5
ENERGY ABOVE 0.4 MEV

L = 3.60

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.00500	3.25E-01	1.91E+08	2.53E+07		.06000	2.83E-01	2.80E+06	3.23E+05
.00600	3.22E-01	1.02E+08	1.76E+07		.08000	2.78E-01	2.17E+06	2.65E+05
.00668	3.20E-01	8.60E+07	1.38E+07		.10000	2.75E-01	1.71E+06	2.16E+05
.00800	3.16E-01	5.40E+07	8.58E+06		.12000	2.73E-01	1.39E+06	1.91E+05
.00900	3.13E-01	4.00E+07	6.20E+06		.14000	2.71E-01	1.10E+06	1.54E+05
.01000	3.10E-01	3.10E+07	4.52E+06		.16000	2.70E-01	9.00E+05	1.41E+05
.01200	3.08E-01	2.15E+07	2.99E+06		.18000	2.70E-01	7.00E+05	1.16E+05
.01400	3.06E-01	1.65E+07	2.28E+06		.20000	2.70E-01	5.40E+05	9.82E+04
.01600	3.03E-01	1.31E+07	1.73E+06		.22000	2.71E-01	4.00E+05	7.71E+04
.01800	3.01E-01	1.10E+07	1.48E+06		.24000	2.72E-01	3.00E+05	7.45E+04
.02000	2.99E-01	9.30E+06	1.16E+06		.28000	2.77E-01	1.00E+05	2.87E+04
.02500	2.96E-01	7.00E+06	8.67E+05		.37000	2.91E-01	5.00E+03	9.55E+03
.03000	2.94E-01	5.60E+06	6.54E+05		.38300	2.93E-01	1.00E+00	7.04E-02
.04000	2.89E-01	4.20E+06	4.87E+05		.99900	4.15E-01	1.00E+00	4.46-245

L = 3.70

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.00400	3.03E-01	2.05E+08	2.43E+07		.06000	2.65E-01	2.50E+06	8.68E+05
.00500	3.02E-01	1.15E+08	1.65E+07		.08000	2.62E-01	1.95E+04	4.06E+05
.00615	3.00E-01	6.65E+07	1.06E+07		.10000	2.59E-01	1.58E+06	1.90E+05
.00700	2.99E-01	4.80E+07	7.63E+06		.12000	2.56E-01	1.30E+06	1.13E+05
.00800	2.98E-01	3.40E+07	5.04E+06		.14000	2.54E-01	1.50E+06	2.87E+05
.01000	2.95E-01	2.10E+07	2.98E+06		.16000	2.53E-01	8.70E+05	1.31E+05
.01200	2.93E-01	1.50E+07	2.04E+06		.18000	2.52E-01	7.00E+05	1.17E+05
.01400	2.91E-01	1.17E+07	1.56E+06		.20000	2.52E-01	5.40E+05	1.02E+05
.01600	2.90E-01	9.50E+06	1.22E+06		.22000	2.53E-01	3.90E+05	8.58E+04
.01800	2.88E-01	8.10E+06	1.02E+06		.28000	2.57E-01	1.00E+05	2.67E+04
.02000	2.86E-01	7.05E+06	8.42E+05		.33800	2.61E-01	2.00E+04	6.83E+03
.02500	2.82E-01	5.60E+06	6.80E+05		.37500	2.64E-01	5.00E+03	9.66E+03
.03000	2.79E-01	4.60E+06	5.29E+05		.38800	2.65E-01	1.00E+00	7.02E-02
.04000	2.72E-01	3.55E+06	4.18E+05		.99900	3.20E-01	1.00E+00	2.14-243

Table 2 (Cont.)

PROTON MAP AP5
ENERGY ABOVE 0.4 MEV

L = 3.80

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.00400	2.93E-01	1.30E+08	1.86E+07		.06000	2.42E-01	2.22E+06	2.46E+05
.00500	2.91E-01	7.30E+07	1.17E+07		.08000	2.36E-01	1.78E+06	2.04E+05
.00568	2.90E-01	5.30E+07	8.50E+06		.10000	2.32E-01	1.46E+06	1.76E+05
.00700	2.88E-01	3.06E+07	4.60E+06		.12000	2.30E-01	1.20E+06	1.48E+05
.00800	2.86E-01	2.28E+07	3.31E+06		.14000	2.27E-01	1.00E+06	1.28E+05
.00900	2.85E-01	1.80E+07	2.54E+06		.16000	2.26E-01	8.10E+05	9.48E+04
.01000	2.83E-01	1.48E+07	2.00E+06		.18000	2.25E-01	6.50E+05	4.38E+04
.01200	2.80E-01	1.10E+07	1.45E+06		.20000	2.25E-01	5.20E+05	2.98E+05
.01400	2.77E-01	8.70E+06	1.07E+06		.22000	2.25E-01	4.15E+06	2.03E+06
.01600	2.75E-01	7.50E+06	9.26E+05		.24000	2.26E-01	3.30E+05	8.45E+04
.01800	2.72E-01	6.50E+06	7.83E+05		.28000	2.27E-01	1.00E+05	2.63E+04
.02000	2.69E-01	5.80E+06	6.81E+05		.33900	2.30E-01	2.00E+04	6.45E+03
.02500	2.64E-01	4.60E+06	5.25E+05		.38000	2.31E-01	5.00E+03	9.76E+03
.03000	2.59E-01	3.90E+06	4.35E+05		.39300	2.32E-01	1.00E+00	7.00E-02
.04000	2.50E-01	3.05E+06	3.34E+05		.99900	2.58E-01	1.00E+00	1.09-241

L = 3.90

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.00400	2.82E-01	9.00E+07	1.31E+07		.06000	2.15E-01	1.85E+06	2.05E+05
.00500	2.80E-01	4.60E+07	7.50E+06		.08000	2.07E-01	1.49E+06	1.72E+05
.00525	2.80E-01	4.10E+07	6.53E+06		.10000	2.04E-01	1.23E+06	1.45E+05
.00600	2.79E-01	2.90E+07	4.31E+06		.13000	2.02E-01	9.70E+05	1.26E+05
.00700	2.78E-01	2.10E+07	3.14E+06		.15000	2.00E-01	8.20E+05	1.14E+05
.00800	2.77E-01	1.55E+07	2.08E+06		.18000	2.00E-01	6.20E+05	9.33E+04
.01000	2.74E-01	1.08E+07	1.40E+06		.20000	2.00E-01	5.00E+05	9.19E+04
.01200	2.70E-01	8.30E+06	1.01E+06		.22000	2.00E-01	3.70E+05	7.61E+04
.01500	2.64E-01	6.40E+06	7.78E+05		.24000	2.01E-01	2.55E+05	6.15E+04
.01700	2.60E-01	5.55E+06	6.57E+05		.27600	2.04E-01	1.00E+05	2.52E+04
.02000	2.54E-01	4.70E+06	5.44E+05		.34000	2.07E-01	2.00E+04	6.56E+03
.02500	2.47E-01	3.78E+06	4.33E+05		.38000	2.10E-01	5.00E+03	7.56E+03
.03000	2.41E-01	3.20E+06	3.56E+05		.39800	2.11E-01	1.00E+00	6.98E-02
.04000	2.28E-01	2.52E+06	2.74E+05		.99900	2.51E-01	1.00E+00	5.52-170

Table 2 (Cont.)

PROTON MAP AP5
ENERGY ABOVE 0.4 MEV

L = 4.00

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.00350	2.79E-01	1.00E+08	1.11E+07		.06000	1.62E-01	1.43E+06	1.56E+05
.00400	2.74E-01	6.20E+07	8.37E+06		.08000	1.56E-01	1.16E+06	1.29E+05
.00487	2.70E-01	3.20E+07	5.11E+06		.10000	1.52E-01	9.90E+05	1.16E+05
.00600	2.63E-01	1.85E+07	2.69E+06		.12000	1.49E-01	8.[illegible]E+05	1.04E+05
.00700	2.57E-01	1.35E+07	1.83E+06		.14000	1.48E-01	7.40E+05	1.00E+05
.00800	2.51E-01	1.08E+07	1.37E+06		.16000	1.48E-01	6.20E+05	9.30E+04
.01000	2.39E-01	8.00E+06	9.93E+05		.18000	1.47E-01	5.00E+05	8.32E+04
.01200	2.31E-01	6.40E+06	7.67E+05		.20000	1.47E-01	3.85E+05	7.17E+04
.01500	2.19E-01	5.00E+06	5.83E+05		.22000	1.47E-01	2.80E+05	5.84E+04
.01800	2.07E-01	4.20E+06	4.91E+05		.24000	1.48E-01	1.85E+05	3.61E+04
.02000	2.00E-01	3.80E+06	4.34E+05		.32200	1.49E-01	5.00E+04	1.62E+04
.02500	1.92E-01	3.10E+06	3.57E+05		.38200	1.51E-01	5.00E+03	6.77E+03
.03000	1.84E-01	2.62E+06	2.98E+05		.40300	1.51E-01	1.00E+00	6.96E-02
.04000	1.70E-01	2.02E+06	2.25E+05		.99900	1.64E-01	1.00E+00	1.90-143

L = 4.10

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.00350	2.66E-01	5.20E+07	7.54E+06		.08000	1.37E-01	9.30E+05	1.07E+05
.00400	2.63E-01	3.55E+07	5.51E+06		.10000	1.30E-01	7.70E+05	9.30E+04
.00452	2.60E-01	2.56E+07	3.98E+06		.12000	1.27E-01	6.50E+05	8.47E+04
.00500	2.57E-01	2.00E+07	2.95E+06		.14000	1.24E-01	5.40E+05	7.76E+04
.00600	2.51E-01	1.36E+07	1.82E+06		.16000	1.22E-01	4.30E+05	6.62E+04
.00800	2.40E-01	8.40E+06	1.05E+06		.18000	1.21E-01	3.36E+05	5.43E+04
.01000	2.30E-01	6.20E+06	6.16E+05		.20000	1.19E-01	2.64E+05	4.66E+04
.01200	2.20E-01	6.00E+06	8.14E+05		.22000	1.19E-01	2.00E+05	3.76E+04
.01500	2.09E-01	4.00E+06	3.73E+05		.26500	1.18E-01	1.00E+05	2.28E+04
.02000	1.92E-01	3.98E+06	5.85E+05		.34200	1.18E-01	2.00E+04	6.45E+03
.02500	1.83E-01	2.40E+06	2.80E+05		.38400	1.18E-01	5.00E+03	6.19E+03
.03000	1.75E-01	2.00E+06	2.22E+05		.40800	1.18E-01	1.00E+00	6.94E-02
.04000	1.60E-01	1.58E+06	1.72E+05		.99900	1.18E-01	1.00E+00	8.70-124
.06000	1.46E-01	1.16E+06	1.29E+05					

Table 2 (Cont.)

PROTON MAP AP5
ENERGY ABOVE 0.4 MEV

L = 4.20

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.00300	2.49E-01	5.10E+07	6.95E+06		.08000	1.00E-01	6.60E+05	7.67E+04
.00350	2.41E-01	3.40E+07	4.97E+06		.10000	9.90E-02	5.40E+05	6.40E+04
.00421	2.30E-01	2.00E+07	3.08E+06		.12000	9.78E-02	4.60E+05	5.92E+04
.00500	2.18E-01	1.32E+07	1.81E+06		.15000	9.60E-02	3.50E+05	5.04E+04
.00600	2.04E-01	9.70E+06	1.25E+06		.18000	9.49E-02	2.55E+05	4.13E+04
.00800	1.89E-01	6.40E+06	8.02E+05		.20000	9.42E-02	2.00E+05	3.50E+04
.01000	1.76E-01	4.80E+06	5.86E+05		.22000	9.41E-02	1.50E+05	2.84E+04
.01200	1.69E-01	3.90E+06	4.74E+05		.24000	9.40E-02	1.08E+05	1.80E+04
.01500	1.59E-01	3.00E+06	3.46E+05		.31800	9.40E-02	5.00E+04	1.58E+04
.02000	1.43E-01	2.28E+06	2.61E+05		.34300	9.40E-02	2.00E+04	6.11E+03
.02500	1.35E-01	1.86E+06	2.14E+05		.39000	9.40E-02	5.00E+03	6.65E+03
.03000	1.28E-01	1.58E+06	1.81E+05		.41200	9.40E-02	1.00E+00	6.92E-02
.04000	1.14E-01	1.21E+06	1.35E+05		.99900	9.40E-02	1.00E+00	7.80-135
.06000	1.05E-01	8.55E+05	9.82E+04					

L = 4.30

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.00300	2.34E-01	3.50E+07	4.10E+06		.06000	9.75E-02	6.60E+05	7.72E+04
.00350	2.26E-01	2.24E+07	3.06E+06		.08000	9.07E-02	5.00E+05	6.03E+04
.00392	2.20E-01	1.61E+07	2.39E+06		.10000	8.64E-02	3.96E+05	4.89E+04
.00500	2.05E-01	9.40E+06	1.27E+06		.12000	8.52E-02	3.25E+05	4.21E+04
.00600	1.92E-01	7.00E+06	8.86E+05		.15000	8.35E-02	2.43E+05	3.35E+04
.00700	1.84E-01	5.76E+06	7.44E+05		.18000	8.26E-02	1.82E+05	2.65E+04
.00800	1.76E-01	4.76E+06	5.84E+05		.20000	8.20E-02	1.51E+05	2.36E+04
.01000	1.62E-01	3.65E+06	4.40E+05		.24000	8.20E-02	1.00E+05	1.68E+04
.01200	1.55E-01	3.00E+06	3.64E+05		.31000	8.20E-02	5.00E+04	1.41E+04
.01500	1.45E-01	2.32E+06	2.73E+05		.34200	8.20E-02	2.00E+04	6.16E+03
.02000	1.30E-01	1.72E+06	1.97E+05		.40000	8.20E-02	3.00E+03	4.70E+03
.02500	1.24E-01	1.40E+06	1.60E+05		.41700	8.20E-02	1.00E+00	6.90E-02
.03000	1.18E-01	1.19E+06	1.34E+05		.99900	8.20E-02	1.00E+00	2.35-167
.04000	1.07E-01	9.30E+05	1.04E+05					

Table 2 (Cont.)

PROTON MAP AP5

ENERGY ABOVE 0.4 MEV

L = 4.40

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.00300	2.24E-01	2.20E+07	3.49E+06		.04000	9.30E-02	7.20E+05	4.75E+04
.00350	2.12E-01	1.52E+07	2.34E+06		.06000	8.68E-02	4.95E+05	1.46E+05
.00366	2.08E-01	1.35E+07	2.06E+06		.08000	8.25E-02	3.75E+06	4.48E+05
.00400	2.00E-01	1.10E+07	1.57E+06		.10000	8.00E-02	3.00E+06	3.63E+05
.00500	1.79E-01	7.15E+06	9.73E+05		.12000	8.00E-02	2.50E+06	3.17E+05
.00600	1.60E-01	5.30E+06	7.01E+05		.15000	8.00E-02	1.92E+06	2.68E+05
.00700	1.53E-01	4.20E+06	5.43E+05		.18000	8.00E-02	1.45E+06	2.22E+05
.00800	1.46E-01	3.45E+06	4.21E+05		.20000	8.00E-02	1.20E+06	2.01E+05
.01000	1.33E-01	2.65E+06	3.12E+05		.24000	8.00E-02	7.70E+05	2.40E+05
.01200	1.28E-01	2.20E+06	2.55E+05		.30000	8.00E-02	5.00E+04	1.27E+04
.01500	1.22E-01	1.76E+06	1.97E+05		.34000	8.00E-02	2.00E+04	5.53E+03
.02000	1.11E-01	1.36E+06	1.48E+05		.40000	8.00E-02	4.00E+03	5.50E+03
.02500	1.06E-01	1.10E+06	1.14E+05		.42100	8.00E-02	1.00E+00	6.88E-02
.03000	1.02E-01	9.35E+05	9.12E+04		.99900	8.00E-02	1.00E+00	7.84-137

L = 4.50

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.00250	2.22E-01	2.10E+07	2.92E+06		.05000	8.56E-02	4.40E+05	5.03E+04
.00300	2.09E-01	1.40E+07	2.08E+06		.06000	8.33E-02	3.75E+05	4.29E+04
.00342	1.98E-01	1.05E+07	1.56E+06		.08000	8.01E-02	2.90E+05	3.36E+04
.00400	1.84E-01	7.50E+06	1.05E+06		.10000	7.82E-02	2.37E+05	2.83E+04
.00500	1.63E-01	5.00E+06	6.70E+05		.12000	7.81E-02	1.98E+05	2.45E+04
.00600	1.44E-01	3.75E+06	4.77E+05		.15000	7.80E-02	1.53E+05	1.98E+04
.00800	1.30E-01	2.52E+06	3.05E+05		.18000	7.80E-02	1.20E+05	1.64E+04
.01000	1.18E-01	1.95E+06	2.34E+05		.20000	7.80E-02	1.02E+05	1.42E+04
.01200	1.14E-01	1.60E+06	1.84E+05		.29000	7.80E-02	5.00E+04	7.90E+03
.01500	1.08E-01	1.30E+06	1.49E+05		.38800	7.80E-02	2.00E+04	6.17E+03
.02000	9.90E-02	1.00E+06	1.15E+05		.37500	7.80E-02	1.00E+04	7.21E+03
.02500	9.61E-02	8.10E+05	9.16E+04		.42000	7.80E-02	1.00E+03	4.20E+03
.03000	9.33E-02	6.96E+05	7.90E+04		.42500	7.80E-02	1.00E+00	6.87E-02
.04000	8.80E-02	5.40E+05	6.21E+04		.99900	7.80E-02	1.00E+00	0

Table 2 (Cont.)

PROTON MAP AP5
ENERGY ABOVE 0.4 MEV

L = 4.60

B	E ZERO	OMNI FLUX	PERP FLUX	B	E ZERO	OMNI FLUX	PERP FLUX
.00250	1.98E-01	1.60E+07	1.10E+06	.08000	7.73E-02	2.30E+05	2.64E+04
.00300	1.86E-01	1.02E+07	1.15E+06	.10000	7.60E-02	1.90E+05	2.28E+04
.00320	1.82E-01	8.80E+06	1.17E+06	.12000	7.59E-02	1.58E+05	1.96E+04
.00350	1.76E-01	7.90E+06	1.20E+06	.15000	7.58E-02	1.22E+05	1.54E+04
.00400	1.65E-01	5.80E+06	8.22E+05	.17000	7.58E-02	1.06E+05	1.39E+04
.00500	1.47E-01	3.80E+06	5.17E+05	.20000	7.58E-02	8.60E+04	1.19E+04
.00600	1.30E-01	2.80E+06	3.52E+05	.28000	7.58E-02	5.00E+04	1.08E+04
.00800	1.18E-01	1.91E+06	2.27E+05	.33400	7.58E-02	2.00E+04	4.68E+03
.01000	1.08E-01	1.50E+06	1.72E+05	.37600	7.58E-02	1.00E+04	3.40E+03
.01500	1.00E-01	1.00E+06	1.14E+05	.39700	7.58E-02	5.00E+03	2.39E+03
.02000	9.30E-02	7.70E+05	8.58E+04	.42200	7.58E-02	1.00E+03	3.07E+03
.03000	8.81E-02	5.40E+05	6.09E+04	.42900	7.58E-02	1.00E+00	6.85E-02
.04000	8.35E-02	4.20E+05	4.66E+04	.99900	7.58E-02	1.00E+00	0
.06000	7.98E-02	3.00E+05	3.45E+04				

L = 4.70

B	E ZERO	OMNI FLUX	PERP FLUX	B	E ZERO	OMNI FLUX	PERP FLUX
.00200	1.81E-01	1.80E+07	2.25E+06	.04000	8.00E-02	3.32E+05	3.70E+04
.00250	1.71E-01	1.10E+07	1.54E+06	.06000	7.74E-02	2.35E+05	2.70E+04
.00300	1.62E-01	7.10E+06	1.06E+06	.08000	7.57E-02	1.80E+05	2.03E+04
.00350	1.53E-01	5.10E+06	7.28E+05	.10000	7.46E-02	1.50E+05	1.73E+04
.00400	1.45E-01	3.95E+06	5.39E+05	.15000	7.40E-02	1.02E+05	1.21E+04
.00500	1.30E-01	2.70E+06	3.52E+05	.20000	7.40E-02	7.80E+04	1.08E+04
.00600	1.17E-01	2.08E+06	2.64E+05	.26600	7.40E-02	5.00E+04	9.80E+03
.00800	1.08E-01	1.40E+06	1.71E+05	.33000	7.40E-02	2.00E+04	4.47E+03
.01000	1.00E-01	1.07E+06	1.22E+05	.37700	7.40E-02	1.00E+04	3.42E+03
.01500	9.37E-02	7.20E+05	7.98E+04	.39800	7.40E-02	5.00E+03	2.21E+03
.02000	8.78E-02	5.70E+05	6.26E+04	.42400	7.40E-02	1.00E+03	2.45E+03
.02500	8.58E-02	4.80E+05	5.28E+04	.43300	7.40E-02	1.00E+00	6.83E-02
.03000	8.38E-02	4.20E+05	4.67E+04	.99900	7.40E-02	1.00E+00	2.46-288

Table 2 (Cont.)

PROTON MAP AP5
ENERGY ABOVE 0.4 MEV

L = 4.80

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.00200	1.66E-01	1.30E+07	1.48E+06		.06000	7.69E-02	1.88E+05	2.08E+04
.00250	1.55E-01	8.00E+06	1.07E+06		.08000	7.51E-02	1.50E+05	1.69E+04
.00282	1.48E-01	6.00E+06	8.73E+05		.10000	7.38E-02	1.26E+05	1.45E+04
.00350	1.34E-01	3.90E+06	5.62E+05		.12000	7.34E-02	1.08E+05	1.28E+04
.00400	1.25E-01	3.00E+06	4.10E+05		.15000	7.29E-02	8.70E+04	1.07E+04
.00500	1.18E-01	2.05E+06	2.77E+05		.20000	7.20E-02	6.35E+04	8.26E+03
.00600	1.11E-01	1.52E+06	1.89E+05		.24000	7.20E-02	5.20E+04	8.63E+03
.00800	1.02E-01	1.05E+06	1.25E+05		.28000	7.20E-02	3.50E+04	6.95E+03
.01000	9.60E-02	8.20E+05	9.27E+04		.32000	7.20E-02	2.00E+04	4.15E+03
.01500	9.09E-02	5.60E+05	6.24E+04		.37500	7.20E-02	1.00E+04	3.72E+03
.02000	8.60E-02	4.40E+05	4.81E+04		.43000	7.20E-02	1.00E+03	3.12E+03
.02500	8.42E-02	3.72E+05	4.14E+04		.43700	7.20E-02	1.00E+00	6.81E-02
.03000	8.25E-02	3.22E+05	3.56E+04		.99900	7.20E-02	1.00E+00	0
.04000	7.92E-02	2.55E+05	2.76E+04					

L = 4.90

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.00200	1.51E-01	9.60E+06	1.26E+06		.04000	7.58E-02	2.10E+05	2.25E+04
.00250	1.41E-01	5.60E+06	8.30E+05		.06000	7.39E-02	1.58E+05	1.74E+04
.00265	1.38E-01	4.80E+06	7.32E+05		.08000	7.27E-02	1.27E+05	1.43E+04
.00300	1.32E-01	3.64E+06	5.46E+05		.10000	7.20E-02	1.06E+05	1.22E+04
.00350	1.23E-01	2.60E+06	3.74E+05		.12000	7.18E-02	9.05E+04	1.06E+04
.00400	1.15E-01	2.00E+06	2.71E+05		.15000	7.15E-02	7.40E+04	8.73E+03
.00500	1.09E-01	1.38E+06	1.83E+05		.20000	7.10E-02	5.70E+04	7.53E+03
.00600	1.03E-01	1.04E+06	1.27E+05		.22600	7.10E-02	5.00E+04	8.33E+03
.00800	9.53E-02	7.30E+05	8.44E+04		.31200	7.10E-02	2.00E+04	3.95E+03
.01000	9.00E-02	5.85E+05	6.39E+04		.37100	7.10E-02	1.00E+04	2.82E+03
.01500	8.49E-02	4.20E+05	4.51E+04		.40000	7.10E-02	5.00E+03	2.09E+03
.02000	8.00E-02	3.43E+05	3.70E+04		.43300	7.10E-02	1.00E+03	2.78E+03
.02500	7.89E-02	2.92E+05	3.14E+04		.44100	7.10E-02	1.00E+00	6.80E-02
.03000	7.79E-02	2.58E+05	2.78E+04		.99900	7.10E-02	1.00E+00	0

Table 2 (Cont.)

PROTON MAP AP5
ENERGY ABOVE 0.4 MEV

L = 5.00

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.00180	1.41E-01	1.10E+07	1.39E+06		.04000	7.58E-02	1.66E+05	1.72E+04
.00230	1.33E-01	5.20E+06	7.90E+05		.06000	7.39E-02	1.30E+05	1.37E+04
.00249	1.30E-01	4.00E+06	6.38E+05		.08000	7.27E-02	1.09E+05	1.19E+04
.00300	1.22E-01	2.46E+06	3.59E+05		.10000	7.20E-02	9.30E+04	1.02E+04
.00350	1.16E-01	1.80E+06	2.54E+05		.12000	7.18E-02	8.25E+04	9.30E+03
.00400	1.09E-01	1.40E+06	1.85E+05		.15000	7.15E-02	7.00E+04	8.49E+03
.00500	1.04E-01	9.90E+05	1.25E+05		.20000	7.10E-02	5.20E+04	7.29E+03
.00600	9.88E-02	7.80E+05	9.14E+04		.24000	7.10E-02	3.95E+04	6.73E+03
.00800	9.20E-02	5.80E+05	6.64E+04		.30200	7.10E-02	2.00E+04	3.78E+03
.01000	8.80E-02	4.70E+05	5.21E+04		.36800	7.10E-02	1.00E+04	2.72E+03
.01500	8.39E-02	3.30E+05	3.59E+04		.40200	7.10E-02	5.00E+03	2.05E+03
.02000	8.00E-02	2.65E+05	2.84E+04		.43600	7.10E-02	1.00E+03	2.79E+03
.02500	7.89E-02	2.26E+05	2.41E+04		.44400	7.10E-02	1.00E+00	6.78E-02
.03000	7.79E-02	2.00E+05	2.10E+04		.99900	7.10E-02	1.00E+00	0

L = 5.10

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.00150	1.38E-01	1.00E+07	1.36E+07		.06000	7.37E-02	1.10E+05	1.15E+04
.00200	1.31E-01	5.00E+06	4.70E+06		.08000	7.27E-02	9.25E+04	9.94E+03
.00235	1.26E-01	3.30E+06	2.24E+06		.10000	7.20E-02	8.00E+04	8.85E+03
.00300	1.18E-01	1.91E+00	5.65E+05		.12000	7.18E-02	7.00E+04	7.78E+03
.00350	1.12E-01	1.40E+06	1.96E+05		.15000	7.15E-02	6.00E+04	7.14E+03
.00400	1.06E-01	1.10E+06	1.48E+05		.20000	7.10E-02	4.56E+04	6.31E+03
.00500	1.01E-01	7.60E+05	9.58E+04		.24000	7.06E-02	3.50E+04	5.79E+03
.00600	9.71E-02	6.00E+05	7.35E+04		.29500	7.00E-02	2.00E+04	3.65E+03
.00800	9.06E-02	4.20E+05	4.79E+04		.36200	6.94E-02	1.00E+04	2.48E+03
.01000	8.60E-02	3.40E+05	3.68E+04		.40000	6.90E-02	5.00E+03	1.78E+03
.01500	8.34E-02	2.46E+05	2.56E+04		.44000	6.86E-02	1.00E+03	2.82E+03
.02000	8.08E-02	2.06E+05	2.10E+04		.44800	6.86E-02	1.00E+00	6.76E-02
.03000	7.60E-02	1.63E+05	1.66E+04		.99900	6.34E-02	1.00E+00	0
.04000	7.52E-02	1.40E+05	1.44E+04					

Table 2 (Cont.)

PROTON MAP AP5
ENERGY ABOVE 0.4 MEV

L = 5.20

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.09150	1.29E-01	7.40E+06	1.18E+06		.06000	7.35E-02	9.40E+04	9.49E+03
.00200	1.23E-01	3.55E+06	6.01E+05		.08000	7.20E-02	8.20E+04	8.52E+03
.00222	1.20E-01	2.75E+06	4.46E+05		.10000	7.17E-02	7.30E+04	7.91E+03
.00250	1.17E-01	1.99E+06	3.05E+05		.13000	7.13E-02	6.20E+04	7.42E+03
.00300	1.11E-01	1.30E+06	1.83E+05		.15000	7.10E-02	5.43E+04	6.77E+03
.00400	1.01E-01	7.50E+05	9.39E+04		.20000	7.07E-02	3.90E+04	5.56E+03
.00500	9.68E-02	5.60E+05	6.71E+04		.24000	7.04E-02	2.85E+04	4.43E+03
.00600	9.28E-02	4.60E+05	5.40E+04		.28300	7.01E-02	2.00E+04	3.66E+03
.00800	8.73E-02	3.40E+05	3.81E+04		.34500	6.97E-02	1.00E+04	2.09E+03
.01000	8.40E-02	2.80E+05	3.04E+04		.40000	6.93E-02	5.00E+03	1.80E+03
.01500	8.19E-02	2.01E+05	2.06E+04		.44000	6.91E-02	1.00E+03	2.13E+03
.02000	7.98E-02	1.70E+05	1.72E+04		.45100	6.90E-02	1.00E+00	6.75E-02
.03000	7.58E-02	1.36E+05	1.38E+04		.99900	6.55E-02	1.00E+00	4.94-226
.04000	7.50E-02	1.16E+05	1.17E+04					

L = 5.30

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.00150	1.21E-01	6.20E+06	7.62E+05		.04000	7.50E-02	1.02E+05	1.01E+04
.00200	1.16E-01	2.80E+06	4.15E+05		.06000	7.35E-02	8.50E+04	8.75E+03
.00219	1.15E-01	2.35E+06	3.72E+05		.08000	7.20E-02	7.30E+04	7.73E+03
.00250	1.11E-01	1.50E+06	2.26E+05		.10000	7.17E-02	6.40E+04	6.97E+03
.00300	1.06E-01	1.00E+06	1.38E+05		.15000	7.10E-02	4.80E+04	6.03E+03
.00400	9.70E-02	6.00E+05	7.80E+04		.20000	7.07E-02	3.40E+04	4.77E+03
.00500	9.39E-02	4.30E+05	5.29E+04		.24000	7.04E-02	2.55E+04	3.92E+03
.00600	9.09E-02	3.45E+05	4.04E+04		.27000	7.02E-02	2.00E+04	3.26E+03
.00800	8.66E-02	2.54E+05	2.81E+04		.34800	6.97E-02	1.00E+04	2.18E+03
.01000	8.38E-02	2.10E+05	2.17E+04		.39700	6.94E-02	5.00E+03	1.77E+03
.01500	8.17E-02	1.62E+05	1.62E+04		.44200	6.91E-02	1.00E+03	1.99E+03
.02000	7.97E-02	1.40E+05	1.38E+04		.45400	6.90E-02	1.00E+00	6.74E-02
.03000	7.58E-02	1.15E+05	1.12E+04		.99900	6.55E-02	1.00E+00	6.42-205

Table 2 (Cont.)

PROTON MAP AP5
ENERGY ABOVE 0.4 MEV

L = 5.40

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.00140	1.20E-01	6.50E+06	7.91E+05		.04000	7.50E-02	8.90E+04	8.59E+03
.00180	1.16E-01	2.85E+06	4.31E+05		.06000	7.35E-02	7.60E+04	7.51E+03
.00198	1.14E-01	2.00E+06	3.28E+05		.08000	7.20E-02	6.76E+04	7.04E+03
.00250	1.09E-01	1.03E+06	1.49E+05		.10000	7.17E-02	6.00E+04	6.48E+03
.00300	1.05E-01	7.15E+05	9.33E+04		.15000	7.10E-02	4.56E+04	5.75E+03
.00400	9.60E-02	4.65E+05	5.79E+04		.20000	7.07E-02	3.25E+04	4.63E+03
.00500	9.31E-02	3.50E+05	4.31E+04		.24000	7.04E-02	2.45E+04	3.80E+03
.00600	9.02E-02	2.80E+05	3.25E+04		.26000	7.03E-02	2.05E+04	3.25E+03
.00800	8.62E-02	2.08E+05	2.26E+04		.34000	6.97E-02	1.00E+04	2.12E+03
.01000	8.36E-02	1.74E+05	1.76E+04		.39200	6.94E-02	5.00E+03	1.57E+03
.01500	8.16E-02	1.38E+05	1.38E+04		.44300	6.91E-02	1.00E+03	1.86E+03
.02000	7.96E-02	1.19E+05	1.15E+04		.45600	6.90E-02	1.00E+00	6.73E-02
.03000	7.58E-02	1.00E+05	9.68E+03		.99900	6.55E-02	1.00E+00	2.04-187

L = 5.50

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.00140	1.17E-01	4.40E+06	9.36E+05		.03000	7.58E-02	9.00E+04	8.56E+03
.00180	1.14E-01	1.96E+06	3.55E+05		.04000	7.50E-02	8.15E+04	7.89E+03
.00187	1.13E-01	1.75E+06	3.00E+05		.06000	7.35E-02	6.95E+04	7.02E+03
.00200	1.12E-01	1.41E+06	2.19E+05		.08000	7.20E-02	6.05E+04	6.28E+03
.00250	1.07E-01	8.10E+05	1.17E+05		.10000	7.17E-02	5.40E+04	5.93E+03
.00300	1.03E-01	5.65E+05	7.46E+04		.15000	7.10E-02	4.00E+04	4.99E+03
.00400	9.50E-02	3.60E+05	4.40E+04		.20000	7.07E-02	2.85E+04	3.98E+03
.00500	9.23E-02	2.75E+05	3.33E+04		.25000	7.03E-02	2.00E+04	3.16E+03
.00600	8.96E-02	2.22E+05	2.50E+04		.33200	6.98E-02	1.00E+04	2.02E+03
.00800	8.58E-02	1.70E+05	1.80E+04		.39000	6.94E-02	5.00E+03	1.63E+03
.01000	8.34E-02	1.45E+05	1.44E+04		.44400	6.91E-02	1.00E+03	1.67E+03
.01500	8.14E-02	1.17E+05	1.14E+04		.45900	6.90E-02	1.00E+00	6.71E-02
.02000	7.95E-02	1.03E+05	9.64E+03		.99900	6.55E-02	1.00E+00	3.72-160

Table 2 (Cont.)

PROTON MAP AP5

ENERGY ABOVE 0.4 MEV

L = 5.60

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.00140	1.15E-01	3.15E+06	5.08E+05		.04000	7.50E-02	7.30E+04	7.01E+03
.00170	1.13E-01	1.70E+06	2.88E+05		.07000	7.27E-02	5.82E+04	5.80E+03
.00177	1.12E-01	1.50E+06	2.52E+05		.10000	7.17E-02	5.00E+04	5.49E+03
.00200	1.10E-01	1.05E+06	1.63E+05		.15000	7.10E-02	3.70E+04	4.63E+03
.00250	1.06E-01	6.00E+05	8.57E+04		.20000	7.07E-02	2.62E+04	3.63E+03
.00300	1.02E-01	4.20E+05	5.46E+04		.24000	7.04E-02	2.00E+04	3.09E+03
.00400	9.40E-02	2.72E+05	3.09E+04		.32200	6.99E-02	1.00E+04	1.99E+03
.00600	8.89E-02	1.82E+05	1.91E+04		.38200	6.95E-02	5.00E+03	1.51E+03
.00800	8.54E-02	1.50E+05	1.53E+04		.44400	6.91E-02	1.00E+03	1.45E+03
.01000	8.32E-02	1.31E+05	1.25E+04		.46200	6.89E-02	1.00E+00	6.70E-02
.02000	7.94E-02	9.60E+04	9.03E+03		.99900	6.55E-02	1.00E+00	3.09-131

L = 5.70

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.00130	1.14E-01	3.25E+06	4.61E+05		.04000	7.50E-02	6.80E+04	6.52E+03
.00160	1.12E-01	1.56E+06	2.55E+05		.07000	7.27E-02	5.45E+04	5.53E+03
.00168	1.11E-01	1.30E+06	2.18E+05		.10000	7.17E-02	4.60E+04	5.18E+03
.00200	1.08E-01	7.70E+05	1.16E+05		.15000	7.10E-02	3.30E+04	4.11E+03
.00250	1.04E-01	4.60E+05	6.30E+04		.20000	7.07E-02	2.36E+04	3.12E+03
.00300	1.00E-01	3.35E+05	4.11E+04		.23000	7.05E-02	2.00E+04	3.06E+03
.00400	9.30E-02	2.33E+05	2.62E+04		.31500	6.99E-02	1.00E+04	1.93E+03
.00500	9.06E-02	1.90E+05	2.04E+04		.37500	6.95E-02	5.00E+03	1.36E+03
.00600	8.83E-02	1.67E+05	1.75E+04		.44400	6.91E-02	1.00E+03	1.34E+03
.00800	8.50E-02	1.38E+05	1.41E+04		.46400	6.89E-02	1.00E+00	6.69E-02
.01000	8.29E-02	1.21E+05	1.16E+04		.99900	6.55E-02	1.00E+00	5.70-117
.02000	7.93E-02	8.80E+04	8.22E+03					

Table 2 (Cont.)

PROTON MAP AP5
ENERGY ABOVE 0.4 MEV

L = 5.00

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.00130	1.12E-01	2.65E+06	3.59E+05		.04000	7.50E-02	6.64E+04	6.41E+03
.00150	1.11E-01	1.52E+06	2.36E+05		.07000	7.27E-02	5.26E+04	5.43E+03
.00160	1.10E-01	1.15E+06	1.91E+05		.10000	7.17E-02	4.32E+04	4.72E+03
.00200	1.07E-01	5.90E+05	8.23E+04		.15000	7.10E-02	3.22E+04	3.98E+03
.00250	1.03E-01	3.90E+05	5.04E+04		.20000	7.07E-02	2.35E+04	3.37E+03
.00300	9.91E-02	3.00E+05	3.65E+04		.22000	7.05E-02	2.00E+04	2.98E+03
.00400	9.20E-02	2.11E+05	2.32E+04		.30500	7.00E-02	1.00E+04	1.85E+03
.00500	8.97E-02	1.76E+05	1.90E+04		.37000	6.95E-02	5.00E+03	1.38E+03
.00600	8.75E-02	1.54E+05	1.59E+04		.44200	6.91E-02	1.00E+03	1.15E+03
.00800	8.45E-02	1.29E+05	1.31E+04		.46700	6.89E-02	1.00E+00	6.67E-02
.01000	8.20E-02	1.13E+05	1.07E+04		.99900	6.55E-02	1.00E+00	4.68E-02
.02000	7.91E-02	8.50E+04	7.91E+03					

L = 5.90

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.00120	1.13E-01	2.46E+06	3.69E+05		.04000	7.50E-02	6.15E+04	5.88E+03
.00140	1.11E-01	1.42E+06	2.26E+05		.07000	7.27E-02	4.95E+04	5.09E+03
.00152	1.10E-01	1.00E+06	1.69E+05		.10000	7.17E-02	4.10E+04	4.52E+03
.00170	1.08E-01	7.10E+05	1.09E+05		.15000	7.10E-02	3.03E+04	3.77E+03
.00200	1.06E-01	4.80E+05	6.62E+04		.18000	7.08E-02	2.50E+04	3.41E+03
.00250	1.02E-01	3.20E+05	4.07E+04		.21000	7.06E-02	2.00E+04	2.91E+03
.00300	9.76E-02	2.48E+05	2.86E+04		.29600	7.00E-02	1.00E+04	2.11E+03
.00400	9.00E-02	1.86E+05	1.97E+04		.34000	6.97E-02	5.00E+03	1.16E+03
.00600	8.61E-02	1.39E+05	1.43E+04		.44000	6.91E-02	1.00E+03	1.02E+03
.00800	8.35E-02	1.17E+05	1.18E+04		.47000	6.89E-02	1.00E+00	6.66E-02
.01000	8.20E-02	1.03E+05	9.70E+03		.99900	6.55E-02	1.00E+00	1.06E-75
.02000	7.88E-02	7.76E+04	7.16E+03					

Table 2 (Cont.)

PROTON MAP APS

ENERGY ABOVE 0.4 MEV

L = 6.00

B	E ZERO	OMNI FLUX	PERP FLUX	B	E ZERO	OMNI FLUX	PERP FLUX
.00120	1.12E-01	1.60E+06	2.53E+05	.04000	7.50E-02	5.84E+04	5.66E+03
.00140	1.10E-01	9.80E+05	1.63E+05	.07000	7.27E-02	4.60E+04	4.73E+03
.00144	1.10E-01	9.00E+05	1.49E+05	.10000	7.17E-02	3.80E+04	4.12E+03
.00170	1.08E-01	5.60E+05	8.41E+04	.15000	7.10E-02	2.90E+04	3.68E+03
.00200	1.05E-01	3.85E+05	5.08E+04	.20000	7.07E-02	2.04E+04	2.95E+03
.00250	1.01E-01	2.70E+05	3.27E+04	.28600	7.01E-02	1.00E+04	1.83E+03
.00300	9.73E-02	2.18E+05	2.47E+04	.35000	6.97E-02	5.00E+03	1.19E+03
.00400	9.00E-02	1.66E+05	1.70E+04	.43800	6.91E-02	1.00E+03	9.37E+02
.00700	8.42E-02	1.16E+05	1.16E+04	.47200	6.89E-02	1.00E+00	6.65E-02
.01000	8.20E-02	9.60E+04	8.95E+03	.99900	6.55E-02	1.00E+00	3.27E-66
.02000	7.88E-02	7.40E+04	6.85E+03				

L = 6.10

B	E ZERO	OMNI FLUX	PERP FLUX	B	E ZERO	OMNI FLUX	PERP FLUX
.00110	1.12E-01	1.60E+06	2.12E+05	.02000	7.88E-02	7.76E+04	6.89E+03
.00130	1.11E-01	9.60E+05	1.43E+05	.04000	7.50E-02	5.70E+04	5.61E+03
.00137	1.10E-01	8.00E+05	1.25E+05	.07000	7.27E-02	4.38E+04	4.64E+03
.00170	1.07E-01	4.64E+05	6.56E+04	.10000	7.17E-02	3.50E+04	3.87E+03
.00200	1.05E-01	3.40E+05	4.39E+04	.15000	7.10E-02	2.55E+04	3.12E+03
.00250	1.01E-01	2.45E+05	3.00E+04	.20000	7.07E-02	1.88E+04	2.65E+03
.00300	9.71E-02	1.96E+05	2.22E+04	.25000	7.03E-02	1.31E+04	2.11E+03
.00400	9.00E-02	1.50E+05	1.56E+04	.30000	7.00E-02	8.60E+03	1.73E+03
.00600	8.61E-02	1.14E+05	1.11E+04	.40000	6.93E-02	2.30E+03	1.40E+03
.00800	8.35E-02	1.00E+05	9.37E+03	.47400	6.89E-02	1.00E+00	6.64E-02
.01000	8.20E-02	9.30E+04	8.70E+03	.99900	6.55E-02	1.00E+00	1.40E-32
.01500	8.04E-02	8.10E+04	7.62E+03				

Table 2 (Cont.)

PROTON MAP AP5
ENERGY ABOVE 0.4 MEV

L = 6.20

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.00100	1.13E-01	1.60E+06	2.43E+05		.02000	7.88E-02	6.90E+04	6.42E+03
.00120	1.11E-01	9.40E+05	1.49E+05		.04000	7.50E-02	5.40E+04	5.31E+03
.00131	1.10E-01	7.20E+05	1.14E+05		.07000	7.27E-02	4.15E+04	4.38E+03
.00160	1.08E-01	4.20E+05	5.61E+04		.10000	7.17E-02	3.33E+04	3.70E+03
.00200	1.04E-01	2.92E+05	3.61E+04		.15000	7.10E-02	2.42E+04	3.03E+03
.00250	1.01E-01	2.20E+05	2.61E+04		.20000	7.07E-02	1.73E+04	2.43E+03
.00300	9.70E-02	1.80E+05	2.01E+04		.25000	7.03E-02	1.20E+04	1.96E+03
.00400	9.00E-02	1.39E+05	1.41E+04		.30000	7.00E-02	7.70E+03	1.46E+03
.00600	8.61E-02	1.09E+05	1.06E+04		.35000	6.97E-02	4.50E+03	1.09E+03
.00800	8.35E-02	9.60E+04	9.24E+03		.40000	6.93E-02	2.00E+03	1.19E+03
.01000	8.20E-02	8.75E+04	8.20E+03		.47600	6.88E-02	1.00E+00	6.63E-02
.01500	8.04E-02	7.60E+04	7.15E+03		.99900	6.55E-02	1.00E+00	3.52E-31

L = 6.30

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.00100	1.12E-01	1.12E+06	1.46E+05		.04000	7.50E-02	5.10E+04	5.08E+03
.00120	1.10E-01	7.20E+05	1.01E+05		.06000	7.35E-02	4.20E+04	4.39E+03
.00125	1.10E-01	6.30E+05	9.27E+04		.08000	7.20E-02	3.55E+04	3.79E+03
.00160	1.07E-01	3.70E+05	4.93E+04		.10000	7.17E-02	3.10E+04	3.44E+03
.00200	1.04E-01	2.60E+05	3.25E+04		.15000	7.10E-02	2.25E+04	2.79E+03
.00250	1.00E-01	1.96E+05	2.36E+04		.20000	7.07E-02	1.63E+04	2.32E+03
.00300	9.68E-02	1.63E+05	1.90E+04		.25000	7.03E-02	1.11E+04	1.82E+03
.00400	9.00E-02	1.32E+05	2.80E+04		.30000	7.00E-02	7.10E+03	1.35E+03
.00600	8.61E-02	1.08E+04	1.59E+04		.35000	6.97E-02	4.10E+03	9.72E+02
.00800	8.35E-02	9.50E+04	9.08E+03		.40000	6.93E-02	1.90E+03	1.11E+03
.01000	8.20E-02	8.70E+04	8.08E+03		.47800	6.88E-02	1.00E+00	6.62E-02
.02000	7.88E-02	6.80E+04	6.46E+03		.99900	6.55E-02	1.00E+00	4.01E-30

Table 2 (Cont.)

PROTON MAP AP5
ENERGY ABOVE 0.4 MEV

L = 6.40

B	E ZERO	OMNI FLUX	PERP FLUX	B	E ZERO	OMNI FLUX	PERP FLUX
.00100	1.12E-01	7.70E+05	1.08E+05	.04000	7.50E-02	5.00E+04	4.95E+03
.00110	1.11E-01	6.30E+05	9.05E+04	.07000	7.27E-02	3.75E+04	4.05E+03
.00119	1.10E-01	5.40E+05	7.70E+04	.10000	7.17E-02	2.90E+04	3.19E+03
.00150	1.08E-01	3.45E+05	4.42E+04	.15000	7.10E-02	2.10E+04	2.52E+03
.00200	1.04E-01	2.28E+05	2.70E+04	.20000	7.07E-02	1.55E+04	2.10E+03
.00250	1.00E-01	1.78E+05	2.02E+04	.25000	7.03E-02	1.06E+04	1.38E+03
.00300	9.67E-02	1.50E+05	1.59E+04	.30000	7.00E-02	6.70E+03	4.79E+03
.00400	9.00E-02	1.22E+05	1.20E+04	.35000	6.97E-02	3.85E+04	1.66E+04
.00600	8.61E-02	1.00E+05	9.38E+03	.40000	6.93E-02	1.80E+03	1.03E+03
.01000	8.20E-02	8.30E+04	7.68E+03	.48000	6.88E-02	1.00E+00	6.61E-02
.02000	7.88E-02	6.50E+04	6.10E+03	.99900	6.55E-02	1.00E+00	4.17E-29

L = 6.50

B	E ZERO	OMNI FLUX	PERP FLUX	B	E ZERO	OMNI FLUX	PERP FLUX
.00100	1.11E-01	4.30E+05	5.02E+04	.04000	7.50E-02	4.80E+04	4.83E+03
.00110	1.10E-01	3.82E+05	4.56E+04	.07000	7.27E-02	3.55E+04	3.80E+03
.00113	1.10E-01	3.70E+05	4.43E+04	.10000	7.17E-02	2.80E+04	3.13E+03
.00150	1.07E-01	2.70E+05	3.11E+04	.15000	7.10E-02	2.02E+04	2.55E+03
.00200	1.04E-01	2.04E+05	2.28E+04	.20000	7.07E-02	1.43E+04	2.04E+03
.00250	1.00E-01	1.68E+05	1.84E+04	.25000	7.03E-02	9.70E+03	1.59E+03
.00300	9.65E-02	1.45E+05	1.54E+04	.30000	7.00E-02	6.20E+03	1.16E+03
.00400	9.00E-02	1.18E+05	1.15E+04	.35000	6.97E-02	3.65E+03	8.51E+02
.00700	8.42E-02	9.00E+04	8.59E+03	.40000	6.93E-02	1.75E+03	9.89E+02
.01000	8.20E-02	7.80E+04	7.18E+03	.48200	6.88E-02	1.00E+00	6.60E-02
.02000	7.88E-02	6.20E+04	5.81E+03	.99900	6.55E-02	1.00E+00	3.11E-28

Table 2 (Cont.)

PROTON MAP AP5
ENERGY ABOVE 0.4 MEV

L = 6.60

B	E ZERO	OMNI FLUX	PERP FLUX		B	E ZERO	OMNI FLUX	PERP FLUX
.00090	1.11E-01	4.00E+05	4.20E+04		.07000	7.27E-02	3.40E+04	3.67E+03
.00100	1.11E-01	3.40E+05	3.89E+04		.10000	7.17E-02	2.65E+04	2.97E+03
.00108	1.10E-01	3.23E+05	3.66E+04		.15000	7.10E-02	1.90E+04	2.37E+03
.00150	1.07E-01	2.40E+05	2.65E+04		.20000	7.07E-02	1.37E+04	1.96E+03
.00200	1.03E-01	1.90E+05	2.03E+04		.25000	7.03E-02	9.30E+03	1.53E+03
.00300	9.64E-02	1.40E+05	1.47E+04		.30000	7.00E-02	5.90E+03	1.09E+03
.00400	9.00E-02	1.15E+05	1.14E+04		.35000	6.97E-02	3.55E+03	8.28E+02
.00700	8.42E-02	8.50E+04	8.08E+03		.40000	6.93E-02	1.70E+03	9.47E+02
.01000	8.20E-02	7.40E+04	6.77E+03		.48400	6.88E-02	1.00E+00	6.59E-02
.02000	7.88E-02	5.95E+04	5.57E+03		.99900	6.55E-02	1.00E+00	2.14E-27
.04000	7.50E-02	4.62E+04	4.66E+03					

Table 3

ORBIT ALTITUDE.. 150 N MI — ORBITAL INTEGRATION MAP AP5 — TOTAL TIME.. 24HOURS — TIME INTERVAL.. 1MINUTES

ENERGY MEV		ORBITAL FLUX 0 DEG		ORBITAL FLUX 30 DEG		ORBITAL FLUX 60 DEG		ORBITAL FLUX 90 DEG	
E1	E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2
.10	.15	0.	0.	4.58E+06	1.04E+05	3.14E+08	1.16E+08	3.42E+08	1.49E+08
.15	.20	0.	0.	4.48E+06	1.02E+05	1.98E+08	6.46E+07	1.93E+08	7.80E+07
.20	.30	0.	0.	4.38E+06	1.97E+05	1.33E+08	6.01E+07	1.15E+08	6.48E+07
.30	.40	0.	0.	4.18E+06	1.88E+05	7.30E+07	2.45E+07	5.04E+07	2.11E+07
.40	.60	0.	0.	3.99E+06	3.51E+05	4.85E+07	2.03E+07	2.93E+07	1.31E+07
.60	.80	0.	0.	3.64E+06	3.20E+05	2.82E+07	9.33E+06	1.62E+07	5.00E+06
.80	1.00	0.	0.	3.32E+06	2.92E+05	1.88E+07	5.36E+06	1.12E+07	2.83E+06
1.00	1.50	0.	0.	3.03E+06	6.23E+05	1.35E+07	6.29E+06	8.37E+06	3.41E+06
1.50	2.00	0.	0.	2.40E+06	4.95E+05	7.19E+06	2.46E+06	4.96E+06	1.46E+06
2.00	3.00	0.	0.	1.91E+06	7.05E+05	4.72E+06	2.03E+06	3.49E+06	1.40E+06
3.00	4.00	0.	0.	1.20E+06	4.45E+05	2.69E+06	9.88E+05	2.09E+06	7.62E+05
4.00	6.00	0.	0.	7.50E+05	4.57E+05	1.70E+06	9.86E+05	1.33E+06	7.80E+05
6.00	8.00	0.	0.	3.02E+05	1.82E+05	7.17E+05	4.09E+05	5.49E+05	3.21E+05
8.00	10.00	0.	0.	1.20E+05	7.24E+04	3.08E+05	1.74E+05	2.28E+05	1.33E+05
10.00		0.	0.	4.78E+04	4.78E+04	1.35E+05	1.35E+05	9.54E+04	9.54E+04

ORBIT ALTITUDE.. 300 N MI — TOTAL TIME.. 24HOURS — TIME INTERVAL.. 1MINUTES

ENERGY MEV		ORBITAL FLUX 0 DEG		ORBITAL FLUX 30 DEG		ORBITAL FLUX 60 DEG		ORBITAL FLUX 90 DEG	
E1	E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2
.10	.15	1.56E+06	3.55E+04	4.27E+07	9.72E+05	1.31E+09	5.05E+08	1.35E+09	5.79E+08
.15	.20	1.52E+06	3.47E+04	4.17E+07	9.50E+05	8.02E+08	2.74E+08	7.71E+08	3.03E+08
.20	.30	1.49E+06	6.70E+04	4.08E+07	1.84E+06	5.28E+08	2.44E+08	4.68E+08	2.52E+08
.30	.40	1.42E+06	6.40E+04	3.89E+07	1.75E+06	2.85E+08	9.35E+07	2.16E+08	8.39E+07
.40	.60	1.36E+06	1.19E+05	3.72E+07	3.27E+06	1.91E+08	7.52E+07	1.32E+08	5.54E+07
.60	.80	1.24E+06	1.09E+05	3.39E+07	2.99E+06	1.16E+08	3.51E+07	7.63E+07	2.25E+07
.80	1.00	1.13E+06	9.93E+04	3.09E+07	2.72E+06	8.07E+07	2.07E+07	5.38E+07	1.30E+07
1.00	1.50	1.03E+06	2.12E+05	2.82E+07	5.80E+06	6.00E+07	2.51E+07	4.08E+07	1.61E+07
1.50	2.00	8.17E+05	1.68E+05	2.24E+07	4.61E+06	3.50E+07	1.06E+07	2.48E+07	7.17E+06
2.00	3.00	6.49E+05	2.40E+05	1.78E+07	6.57E+06	2.43E+07	9.93E+06	1.76E+07	7.03E+06
3.00	4.00	4.09E+05	1.51E+05	1.12E+07	4.14E+06	1.44E+07	5.26E+05	1.06E+07	3.83E+06
4.00	6.00	2.58E+05	1.55E+05	7.08E+06	4.26E+06	9.14E+06	5.32E+06	6.73E+06	3.92E+06
6.00	8.00	1.03E+05	6.18E+04	2.82E+06	1.70E+06	3.82E+06	2.20E+06	2.81E+06	1.62E+06
8.00	10.00	4.09E+04	2.46E+04	1.12E+06	6.74E+05	1.62E+06	9.23E+05	1.19E+06	6.81E+05
10.00		1.63E+04	1.63E+04	4.46E+05	4.46E+05	6.97E+05	6.97E+05	5.07E+05	5.07E+05

Table 3 (Cont.)

ORBIT ALTITUDE.. 450 N MI — ORBITAL INTEGRATION MAP AP5 — TOTAL TIME.. 24HOURS — TIME INTERVAL.. 1MINUTES

ENERGY MEV		ORBITAL FLUX 0 DEG		ORBITAL FLUX 30 DEG		ORBITAL FLUX 60 DEG		ORBITAL FLUX 90 DEG	
E1	E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2
.10	.15	5.25E+07	1.20E+06	2.28E+08	5.19E+06	4.10E+09	1.60E+09	4.13E+09	1.77E+09
.15	.20	5.13E+07	1.17E+06	2.23E+08	5.07E+06	2.50E+09	8.70E+08	2.36E+09	9.27E+08
.20	.30	5.01E+07	2.26E+06	2.17E+08	9.79E+06	1.63E+09	7.70E+08	1.44E+09	7.71E+08
.30	.40	4.79E+07	2.16E+06	2.08E+08	9.35E+06	8.60E+08	2.87E+08	6.67E+08	2.55E+08
.40	.60	4.57E+07	4.03E+06	1.98E+08	1.75E+07	5.73E+08	2.19E+08	4.11E+08	1.66E+08
.60	.80	4.17E+07	3.67E+06	1.81E+08	1.59E+07	3.54E+08	9.88E+07	2.46E+08	6.70E+07
.80	1.00	3.80E+07	3.35E+06	1.65E+08	1.45E+07	2.55E+08	5.88E+07	1.79E+08	3.92E+07
1.00	1.50	3.47E+07	7.14E+06	1.50E+08	3.10E+07	1.96E+08	7.47E+07	1.39E+08	5.06E+07
1.50	2.00	2.75E+07	5.67E+06	1.19E+08	2.46E+07	1.22E+08	3.46E+07	8.88E+07	2.43E+07
2.00	3.00	2.19E+07	8.08E+06	9.49E+07	3.50E+07	8.70E+07	3.50E+07	6.45E+07	2.56E+07
3.00	4.00	1.38E+07	5.10E+06	5.98E+07	2.21E+07	5.20E+07	1.92E+07	3.89E+07	1.43E+07
4.00	6.00	8.70E+06	5.24E+06	3.77E+07	2.27E+07	3.28E+07	1.94E+07	2.46E+07	1.45E+07
6.00	8.00	3.46E+06	2.09E+06	1.50E+07	9.04E+06	1.34E+07	7.88E+06	1.01E+07	5.92E+06
8.00	10.00	1.38E+06	8.30E+05	5.98E+06	3.60E+06	5.55E+06	3.24E+06	4.20E+06	2.44E+06
10.00		5.48E+05	5.48E+05	2.38E+06	2.38E+06	2.31E+06	2.31E+06	1.76E+06	1.76E+06

ORBIT ALTITUDE.. 400 N MI — TOTAL TIME.. 24HOURS — TIME INTERVAL.. 1MINUTES

ENERGY MEV		ORBITAL FLUX 0 DEG		ORBITAL FLUX 30 DEG		ORBITAL FLUX 60 DEG		ORBITAL FLUX 90 DEG	
E1	E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2
.10	.15	5.90E+08	1.34E+07	8.26E+08	1.88E+07	8.69E+09	3.21E+09	8.60E+09	3.51E+09
.15	.20	5.77E+08	1.31E+07	8.08E+08	1.84E+07	5.48E+09	1.77E+09	5.10E+09	1.87E+09
.20	.30	5.64E+08	2.54E+07	7.89E+08	3.55E+07	3.71E+09	1.61E+09	3.23E+09	1.60E+09
.30	.40	5.38E+08	2.42E+07	7.54E+08	3.39E+07	2.10E+09	6.39E+08	1.62E+09	5.65E+08
.40	.60	5.14E+08	4.52E+07	7.20E+08	6.33E+07	1.46E+09	5.26E+08	1.06E+09	3.97E+08
.60	.80	4.69E+08	4.13E+07	6.56E+08	5.77E+07	9.37E+08	2.48E+08	6.61E+08	1.68E+08
.80	1.00	4.27E+08	3.76E+07	5.99E+08	5.27E+07	6.89E+08	1.49E+08	4.92E+08	9.94E+07
1.00	1.50	3.90E+08	8.02E+07	5.46E+08	1.12E+08	5.40E+08	1.93E+08	3.93E+08	1.32E+08
1.50	2.00	3.10E+08	6.37E+07	4.34E+08	8.92E+07	3.47E+08	9.39E+07	2.61E+08	6.75E+07
2.00	3.00	2.46E+08	9.08E+07	3.45E+08	1.27E+08	2.53E+08	1.00E+08	1.94E+08	7.57E+07
3.00	4.00	1.55E+08	5.73E+07	2.18E+08	8.02E+07	1.53E+08	5.64E+07	1.18E+08	4.35E+07
4.00	6.00	9.78E+07	5.89E+07	1.37E+08	8.26E+07	9.65E+07	5.72E+07	7.47E+07	4.43E+07
6.00	8.00	3.89E+07	2.34E+07	5.47E+07	3.29E+07	3.93E+07	2.31E+07	3.04E+07	1.79E+07
8.00	10.00	1.55E+07	9.32E+06	2.18E+07	1.31E+07	1.62E+07	9.46E+06	1.25E+07	7.33E+06
10.00		6.16E+06	6.16E+06	8.69E+06	8.69E+06	6.69E+06	6.69E+06	5.20E+06	5.20E+06

Table 3 (Cont.)

ORBIT ALTITUDE.. 800 N MI — ORBITAL INTEGRATION MAP AP5 — TOTAL TIME.. 24HOURS — TIME INTERVAL.. 1MINUTES

ENERGY MEV		ORBITAL FLUX 0 DEG		ORBITAL FLUX 30 DEG		ORBITAL FLUX 60 DEG		ORBITAL FLUX 90 DEG	
E1	E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2
.10	.15	3.45E+09	7.87E+07	3.32E+09	7.72E+07	2.09E+10	6.97E+09	1.95E+10	7.34E+09
.15	.20	3.37E+09	7.69E+07	3.24E+09	7.53E+07	1.40E+10	3.96E+09	1.21E+10	4.01E+09
.20	.30	3.30E+09	1.49E+08	3.17E+09	1.45E+08	1.00E+10	3.83E+09	8.14E+09	3.60E+09
.30	.40	3.15E+09	1.42E+08	3.02E+09	1.38E+08	6.19E+09	1.68E+09	4.53E+09	1.38E+09
.40	.60	3.01E+09	2.65E+08	2.89E+09	2.56E+08	4.51E+09	1.54E+09	3.16E+09	1.07E+09
.60	.80	2.74E+09	2.41E+08	2.63E+09	2.32E+08	2.97E+09	7.66E+08	2.08E+09	4.91E+08
.80	1.00	2.50E+09	2.20E+08	2.40E+09	2.11E+08	2.21E+09	4.62E+08	1.59E+09	2.98E+08
1.00	1.50	2.28E+09	4.69E+08	2.19E+09	4.49E+08	1.75E+09	6.03E+08	1.29E+09	4.09E+08
1.50	2.00	1.81E+09	3.73E+08	1.74E+09	3.56E+08	1.14E+09	3.01E+08	8.86E+08	2.21E+08
2.00	3.00	1.44E+09	5.31E+08	1.38E+09	5.07E+08	8.42E+08	3.32E+08	6.65E+08	2.57E+08
3.00	4.00	9.08E+08	3.35E+08	8.76E+08	3.21E+08	5.10E+08	1.89E+08	4.07E+08	1.50E+08
4.00	6.00	5.72E+08	3.45E+08	5.55E+08	3.32E+08	3.21E+08	1.91E+08	2.57E+08	1.53E+08
6.00	8.00	2.28E+08	1.37E+08	2.23E+08	1.33E+08	1.30E+08	7.69E+07	1.04E+08	6.15E+07
8.00	10.00	9.06E+07	5.46E+07	9.01E+07	5.37E+07	5.32E+07	3.13E+07	4.24E+07	2.50E+07
10.00		3.61E+07	3.61E+07	3.65E+07	3.65E+07	2.19E+07	2.19E+07	1.74E+07	1.74E+07

ORBIT ALTITUDE.. 1000 N MI — TOTAL TIME.. 24HOURS — TIME INTERVAL.. 1MINUTES

ENERGY MEV		ORBITAL FLUX 0 DEG		ORBITAL FLUX 30 DEG		ORBITAL FLUX 60 DEG		ORBITAL FLUX 90 DEG	
E1	E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2
.10	.15	1.07E+10	2.44E+08	9.18E+09	2.23E+08	4.15E+10	1.30E+10	3.70E+10	1.30E+10
.15	.20	1.04E+10	2.38E+08	8.96E+09	2.17E+08	2.85E+10	7.48E+09	2.40E+10	7.26E+09
.20	.30	1.02E+10	4.60E+08	8.74E+09	4.16E+08	2.10E+10	7.42E+09	1.68E+10	6.73E+09
.30	.40	9.75E+09	4.39E+08	8.32E+09	3.93E+08	1.36E+10	3.38E+09	1.00E+10	2.72E+09
.40	.60	9.31E+09	8.20E+08	7.93E+09	7.25E+08	1.02E+10	3.23E+09	7.32E+09	2.28E+09
.60	.80	8.49E+09	7.48E+08	7.21E+09	6.53E+08	7.00E+09	1.68E+09	5.04E+09	1.10E+09
.80	1.00	7.74E+09	6.82E+08	6.55E+09	5.89E+08	5.32E+09	1.04E+09	3.94E+09	6.92E+08
1.00	1.50	7.06E+09	1.45E+09	5.96E+09	1.24E+09	4.28E+09	1.42E+09	3.25E+09	9.83E+08
1.50	2.00	5.61E+09	1.15E+09	4.72E+09	9.75E+08	2.86E+09	7.36E+08	2.26E+09	5.51E+08
2.00	3.00	4.46E+09	1.64E+09	3.75E+09	1.38E+09	2.12E+09	8.30E+08	1.71E+09	6.58E+08
3.00	4.00	2.81E+09	1.04E+09	2.37E+09	8.69E+08	1.29E+09	4.79E+08	1.05E+09	3.89E+08
4.00	6.00	1.77E+09	1.07E+09	1.50E+09	8.97E+08	8.16E+08	4.86E+08	6.65E+08	3.96E+08
6.00	8.00	7.05E+08	4.25E+08	6.03E+08	3.60E+08	3.30E+08	1.95E+08	2.68E+08	1.59E+08
8.00	10.00	2.81E+08	1.69E+08	2.44E+08	1.45E+08	1.34E+08	7.93E+07	1.09E+08	6.45E+07
10.00		1.12E+08	1.12E+08	9.87E+07	9.87E+07	5.52E+07	5.52E+07	4.47E+07	4.47E+07

Table 3 (Cont.)

ORBIT ALTITUDE.. 1250 N MI — ORBITAL INTEGRATION MAP AP5 — TOTAL TIME.. 24HOURS — TIME INTERVAL.. 1MINUTES

ENERGY MEV		ORBITAL FLUX 0 DEG		ORBITAL FLUX 30 DEG		ORBITAL FLUX 60 DEG		ORBITAL FLUX 90 DEG	
E1	E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2
.10	.15	2.83E+10	6.45E+08	2.31E+10	6.09E+08	8.87E+10	2.59E+10	6.97E+10	2.24E+10
.15	.20	2.77E+10	6.31E+08	2.25E+10	5.88E+08	6.28E+10	1.54E+10	4.72E+10	1.28E+10
.20	.30	2.71E+10	1.22E+09	2.19E+10	1.12E+09	4.74E+10	1.60E+10	3.44E+10	1.24E+10
.30	.40	2.58E+10	1.16E+09	2.08E+10	1.05E+09	3.14E+10	7.68E+09	2.20E+10	5.41E+09
.40	.60	2.47E+10	2.17E+09	1.98E+10	1.90E+09	2.37E+10	7.57E+09	1.66E+10	4.90E+09
.60	.80	2.25E+10	1.98E+09	1.78E+10	1.69E+09	1.62E+10	3.91E+09	1.17E+10	2.49E+09
.80	1.00	2.05E+10	1.81E+09	1.62E+10	1.50E+09	1.22E+10	2.40E+09	9.18E+09	1.58E+09
1.00	1.50	1.87E+10	3.85E+09	1.47E+10	3.12E+09	9.85E+09	3.22E+09	7.60E+09	2.26E+09
1.50	2.00	1.49E+10	3.06E+09	1.15E+10	2.41E+09	6.63E+09	1.68E+09	5.34E+09	1.29E+09
2.00	3.00	1.18E+10	4.36E+09	9.12E+09	3.38E+09	4.95E+09	1.93E+09	4.05E+09	1.56E+09
3.00	4.00	7.45E+09	2.75E+09	5.75E+09	2.11E+09	3.02E+09	1.12E+09	2.49E+09	9.22E+08
4.00	6.00	4.70E+09	2.83E+09	3.63E+09	2.17E+09	1.90E+09	1.13E+09	1.57E+09	9.39E+08
6.00	8.00	1.87E+09	1.13E+09	1.46E+09	8.72E+08	7.66E+08	4.58E+08	6.33E+08	3.77E+08
8.00	10.00	7.43E+08	4.48E+08	5.90E+08	3.51E+08	3.11E+08	1.84E+08	2.57E+08	1.52E+08
10.00		2.96E+08	2.96E+08	2.39E+08	2.39E+08	1.27E+08	1.27E+08	1.05E+08	1.05E+08

ORBIT ALTITUDE.. 1500 N MI — TOTAL TIME.. 24HOURS — TIME INTERVAL.. 1MINUTES

ENERGY MEV		ORBITAL FLUX 0 DEG		ORBITAL FLUX 30 DEG		ORBITAL FLUX 60 DEG		ORBITAL FLUX 90 DEG	
E1	E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2
.10	.15	6.02E+10	1.37E+09	4.70E+10	1.39E+09	1.32E+11	3.53E+10	1.00E+11	2.87E+10
.15	.20	5.88E+10	1.34E+09	4.56E+10	1.33E+09	9.69E+10	2.13E+10	7.13E+10	1.68E+10
.20	.30	5.75E+10	2.59E+09	4.43E+10	2.49E+09	7.55E+10	2.28E+10	5.46E+10	1.70E+10
.30	.40	5.49E+10	2.47E+09	4.18E+10	2.29E+09	5.28E+10	1.15E+10	3.76E+10	7.99E+09
.40	.60	5.24E+10	4.62E+09	3.95E+10	4.08E+09	4.12E+10	1.21E+10	2.96E+10	7.98E+09
.60	.80	4.78E+10	4.21E+09	3.54E+10	3.53E+09	2.91E+10	6.64E+09	2.16E+10	4.39E+09
.80	1.00	4.36E+10	3.84E+09	3.19E+10	3.09E+09	2.25E+10	4.21E+09	1.72E+10	2.87E+09
1.00	1.50	3.98E+10	8.18E+09	2.88E+10	6.28E+09	1.83E+10	5.84E+09	1.44E+10	4.23E+09
1.50	2.00	3.16E+10	6.50E+09	2.25E+10	4.77E+09	1.24E+10	3.13E+09	1.01E+10	2.44E+09
2.00	3.00	2.51E+10	9.26E+09	1.78E+10	6.61E+09	9.30E+09	3.62E+09	7.68E+09	2.95E+09
3.00	4.00	1.58E+10	5.84E+09	1.11E+10	4.11E+09	5.68E+09	2.11E+09	4.72E+09	1.75E+09
4.00	6.00	9.98E+09	6.01E+09	7.06E+09	4.22E+09	3.57E+09	2.14E+09	2.98E+09	1.78E+09
6.00	8.00	3.97E+09	2.39E+09	2.82E+09	1.69E+09	1.44E+09	8.55E+08	1.20E+09	7.12E+08
8.00	10.00	1.58E+09	9.51E+08	1.14E+09	6.78E+08	5.82E+08	3.45E+08	4.85E+08	2.88E+08
10.00		6.28E+08	6.28E+08	4.59E+08	4.59E+08	2.37E+08	2.37E+08	1.97E+08	1.97E+08

Table 3 (Cont.)

ORBIT ALTITUDE.. 1750 N MI — ORBITAL INTEGRATION MAP APS — TOTAL TIME.. 24HOURS — TIME INTERVAL.. 1MINUTES

ENERGY MEV		ORBITAL FLUX 0 DEG		ORBITAL FLUX 30 DEG		ORBITAL FLUX 60 DEG		ORBITAL FLUX 90 DEG	
E1	E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2
.10	.15	1.14E+11	2.59E+09	8.79E+10	3.06E+09	2.01E+11	5.13E+10	1.29E+11	3.03E+10
.15	.20	1.11E+11	2.53E+09	8.49E+10	2.89E+09	1.50E+11	3.14E+10	9.89E+10	1.85E+10
.20	.30	1.08E+11	4.88E+09	8.20E+10	5.31E+09	1.19E+11	3.40E+10	8.03E+10	2.03E+10
.30	.40	1.04E+11	4.66E+09	7.67E+10	4.77E+09	8.47E+10	1.76E+10	6.00E+10	1.08E+10
.40	.60	9.89E+10	8.71E+09	7.19E+10	8.24E+09	6.72E+10	1.88E+10	4.92E+10	1.20E+10
.60	.80	9.02E+10	7.94E+09	6.36E+10	6.89E+09	4.84E+10	1.05E+10	3.72E+10	7.09E+09
.80	1.00	8.22E+10	7.24E+09	5.68E+10	5.86E+09	3.79E+10	6.76E+09	3.01E+10	4.79E+09
1.00	1.50	7.50E+10	1.54E+10	5.09E+10	1.15E+10	3.11E+10	9.63E+09	2.53E+10	7.27E+09
1.50	2.00	5.96E+10	1.23E+10	3.94E+10	8.51E+09	2.15E+10	5.33E+09	1.81E+10	4.31E+09
2.00	3.00	4.73E+10	1.75E+10	3.09E+10	1.16E+10	1.62E+10	6.28E+09	1.37E+10	5.28E+09
3.00	4.00	2.98E+10	1.10E+10	1.93E+10	7.14E+09	9.90E+09	3.68E+09	8.47E+09	3.14E+09
4.00	6.00	1.88E+10	1.13E+10	1.21E+10	7.29E+09	6.22E+09	3.73E+09	5.33E+09	3.19E+09
6.00	8.00	7.49E+09	4.51E+09	4.86E+09	2.91E+09	2.49E+09	1.49E+09	2.14E+09	1.27E+09
8.00	10.00	2.98E+09	1.79E+09	1.95E+09	1.17E+09	1.01E+09	5.99E+08	8.62E+08	5.13E+08
10.00		1.19E+09	1.19E+09	7.84E+08	7.84E+08	4.08E+08	4.08E+08	3.49E+08	3.49E+08

ORBIT ALTITUDE.. 2000 N MI — TOTAL TIME.. 24HOURS — TIME INTERVAL.. 1MINUTES

ENERGY MEV		ORBITAL FLUX 0 DEG		ORBITAL FLUX 30 DEG		ORBITAL FLUX 60 DEG		ORBITAL FLUX 90 DEG	
E1	E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2
.10	.15	1.94E+11	4.43E+09	1.49E+11	6.06E+09	2.66E+11	6.17E+10	1.85E+11	4.18E+10
.15	.20	1.90E+11	4.33E+09	1.43E+11	5.64E+09	2.04E+11	3.86E+10	1.43E+11	2.57E+10
.20	.30	1.86E+11	8.36E+09	1.37E+11	1.02E+10	1.65E+11	4.34E+10	1.18E+11	2.84E+10
.30	.40	1.77E+11	7.99E+09	1.27E+11	8.96E+09	1.22E+11	2.35E+10	8.93E+10	1.53E+10
.40	.60	1.69E+11	1.49E+10	1.18E+11	1.50E+10	9.86E+10	2.60E+10	7.40E+10	1.74E+10
.60	.80	1.54E+11	1.36E+10	1.03E+11	1.21E+10	7.26E+10	1.49E+10	5.66E+10	1.04E+10
.80	1.00	1.41E+11	1.24E+10	9.10E+10	1.00E+10	5.77E+10	9.80E+09	4.62E+10	7.16E+09
1.00	1.50	1.28E+11	2.64E+10	8.09E+10	1.90E+10	4.79E+10	1.44E+10	3.90E+10	1.11E+10
1.50	2.00	1.02E+11	2.10E+10	6.19E+10	1.36E+10	3.36E+10	8.22E+09	2.80E+10	6.67E+09
2.00	3.00	8.10E+10	2.99E+10	4.83E+10	1.83E+10	2.53E+10	9.84E+09	2.13E+10	8.21E+09
3.00	4.00	5.11E+10	1.89E+10	3.00E+10	1.12E+10	1.55E+10	5.78E+09	1.31E+10	4.87E+09
4.00	6.00	3.22E+10	1.94E+10	1.89E+10	1.14E+10	9.72E+09	5.84E+09	8.22E+09	4.94E+09
6.00	8.00	1.28E+10	7.72E+09	7.53E+09	4.51E+09	3.88E+09	2.32E+09	3.28E+09	1.96E+09
8.00	10.00	5.10E+09	3.07E+09	3.01E+09	1.80E+09	1.56E+09	9.31E+08	1.32E+09	7.87E+08
10.00		2.03E+09	2.03E+09	1.21E+09	1.21E+09	6.27E+08	6.27E+08	5.30E+08	5.30E+08

Table 8 (Cont.)

ORBIT ALTITUDE.. 2250 N MI — ORBITAL INTEGRATION MAP AP5 — TOTAL TIME.. 24HOURS — TIME INTERVAL.. 1MINUTES

ENERGY MEV		ORBITAL FLUX 0 DEG		ORBITAL FLUX 30 DEG		ORBITAL FLUX 60 DEG		ORBITAL FLUX 90 DEG	
E1	E2	*E1	E1-E2	*F1	E1-E2	*E1	F1-E2	*E1	E1-E2
.10	.15	3.09E+11	7.04E+09	2.45E+11	1.11E+10	3.62E+11	8.28E+10	2.45E+11	4.93E+10
.15	.20	3.02E+11	6.88E+09	2.34E+11	1.03E+10	2.79E+11	5.13E+10	1.95E+11	3.10E+10
.20	.30	2.95E+11	1.33E+10	2.24E+11	1.84E+10	2.27E+11	5.68E+10	1.64E+11	3.56E+10
.30	.40	2.82E+11	1.27E+10	2.06E+11	1.59E+10	1.71E+11	3.05E+10	1.29E+11	2.01E+10
.40	.60	2.69E+11	2.37E+10	1.90E+11	2.60E+10	1.40E+11	3.43E+10	1.09E+11	2.40E+10
.60	.80	2.46E+11	2.16E+10	1.64E+11	2.04E+10	1.06E+11	2.04E+10	8.47E+10	1.49E+10
.80	1.00	2.24E+11	1.97E+10	1.43E+11	1.65E+10	8.54E+10	1.38E+10	6.98E+10	1.05E+10
1.00	1.50	2.04E+11	4.20E+10	1.27E+11	3.06E+10	7.16E+10	2.09E+10	5.93E+10	1.66E+10
1.50	2.00	1.62E+11	3.34E+10	9.63E+10	2.14E+10	5.07E+10	1.23E+10	4.28E+10	1.02E+10
2.00	3.00	1.29E+11	4.76E+10	7.48E+10	2.84E+10	3.84E+10	1.49E+10	3.26E+10	1.26E+10
3.00	4.00	8.12E+10	3.00E+10	4.64E+10	1.73E+10	2.35E+10	8.78E+09	2.00E+10	7.47E+09
4.00	6.00	5.12E+10	3.09E+10	2.92E+10	1.75E+10	1.47E+10	8.84E+09	1.25E+10	7.54E+09
6.00	8.00	2.04E+10	1.23E+10	1.16E+10	6.98E+09	5.83E+09	3.50E+09	4.97E+09	2.99E+09
8.00	10.00	8.11E+09	4.88E+09	4.65E+09	2.79E+09	2.33E+09	1.40E+09	1.99E+09	1.19E+09
10.00		3.23E+09	3.23E+09	1.87E+09	1.87E+09	9.32E+08	9.32E+08	7.95E+08	7.95E+08

ORBIT ALTITUDE.. 2500 N MI — TOTAL TIME.. 24HOURS — TIME INTERVAL.. 1MINUTES

ENERGY MEV		ORBITAL FLUX 0 DEG		ORBITAL FLUX 30 DEG		ORBITAL FLUX 60 DEG		ORBITAL FLUX 90 DEG	
E1	E2	*F1	F1-E2	*F1	F1-F2	*E1	F1-E2	*E1	E1-E2
.10	.15	4.54E+11	1.03E+10	3.68E+11	1.83E+10	5.10E+11	1.23E+11	3.16E+11	5.95E+10
.15	.20	4.44E+11	1.01E+10	3.50E+11	1.68E+10	3.87E+11	7.48E+10	2.57E+11	3.79E+10
.20	.30	4.34E+11	1.95E+10	3.33E+11	2.97E+10	3.12E+11	8.04E+10	2.19E+11	4.45E+10
.30	.40	4.14E+11	1.87E+10	3.03E+11	2.53E+10	2.31E+11	4.14E+10	1.74E+11	2.39E+10
.40	.60	3.96E+11	3.48E+10	2.78E+11	4.08E+10	1.90E+11	4.55E+10	1.48E+11	3.18E+10
.60	.80	3.61E+11	3.18E+10	2.37E+11	3.14E+10	1.44E+11	2.71E+10	1.17E+11	2.03E+10
.80	1.00	3.29E+11	2.90E+10	2.06E+11	2.49E+10	1.17E+11	1.86E+10	9.64E+10	1.44E+10
1.00	1.50	3.00E+11	6.17E+10	1.81E+11	4.51E+10	9.87E+10	2.88E+10	8.20E+10	2.30E+10
1.50	2.00	2.38E+11	4.90E+10	1.36E+11	3.09E+10	6.99E+10	1.72E+10	5.89E+10	1.42E+10
2.00	3.00	1.89E+11	6.99E+10	1.05E+11	4.03E+10	5.28E+10	2.07E+10	4.47E+10	1.75E+10
3.00	4.00	1.19E+11	4.41E+10	6.47E+10	2.42E+10	3.20E+10	1.21E+10	2.72E+10	1.03E+10
4.00	6.00	7.53E+10	4.53E+10	4.04E+10	2.44E+10	1.99E+10	1.21E+10	1.70E+10	1.03E+10
6.00	8.00	3.00E+10	1.80E+10	1.60E+10	9.63E+09	7.86E+09	4.74E+09	6.70E+09	4.04E+09
8.00	10.00	1.19E+10	7.18E+09	6.37E+09	3.83E+09	3.12E+09	1.88E+09	2.66E+09	1.60E+09
10.00		4.74E+09	4.74E+09	2.54E+09	2.54E+09	1.24E+09	1.24E+09	1.06E+09	1.06E+09

Table 3 (Cont.)

ORBIT ALTITUDE.. 2750 N MI — ORBITAL INTEGRATION MAP APS — TOTAL TIME.. 24HOURS — TIME INTERVAL.. 1MINUTES

ENERGY MEV		ORBITAL FLUX 0 DEG		ORBITAL FLUX 30 DEG		ORBITAL FLUX 60 DEG		ORBITAL FLUX 90 DEG	
E1	E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2
.10	.15	6.25E+11	1.42E+10	5.29E+11	2.86E+10	5.77E+11	1.19E+11	4.02E+11	6.84E+10
.15	.20	6.11E+11	1.39E+10	5.01E+11	2.61E+10	4.58E+11	7.49E+10	3.34E+11	4.48E+10
.20	.30	5.97E+11	2.69E+10	4.75E+11	4.59E+10	3.83E+11	8.55E+10	2.89E+11	5.45E+10
.30	.40	5.70E+11	2.57E+10	4.29E+11	3.88E+10	2.98E+11	4.80E+10	2.35E+11	3.32E+10
.40	.60	5.45E+11	4.79E+10	3.90E+11	6.17E+10	2.50E+11	5.68E+10	2.01E+11	4.23E+10
.60	.80	4.97E+11	4.37E+10	3.28E+11	4.66E+10	1.93E+11	3.55E+10	1.59E+11	2.77E+10
.80	1.00	4.53E+11	3.98E+10	2.82E+11	3.65E+10	1.58E+11	2.49E+10	1.31E+11	1.99E+10
1.00	1.50	4.13E+11	8.49E+10	2.45E+11	6.44E+10	1.33E+11	3.92E+10	1.11E+11	3.21E+10
1.50	2.00	3.28E+11	6.75E+10	1.81E+11	4.29E+10	9.36E+10	2.35E+10	7.93E+10	1.96E+10
2.00	3.00	2.61E+11	9.62E+10	1.38E+11	5.43E+10	7.01E+10	2.81E+10	5.97E+10	2.38E+10
3.00	4.00	1.65E+11	6.07E+10	8.37E+10	3.19E+10	4.20E+10	1.61E+10	3.59E+10	1.37E+10
4.00	6.00	1.04E+11	6.25E+10	5.18E+10	3.16E+10	2.60E+10	1.58E+10	2.22E+10	1.35E+10
6.00	8.00	4.13E+10	2.49E+10	2.03E+10	1.23E+10	1.01E+10	6.13E+09	8.66E+09	5.25E+09
8.00	10.00	1.65E+10	9.91E+09	8.02E+09	4.84E+09	3.99E+09	2.41E+09	3.42E+09	2.06E+09
10.00		6.56E+09	6.56E+09	3.18E+09	3.18E+09	1.58E+09	1.58E+09	1.35E+09	1.35E+09

ORBIT ALTITUDE.. 3000 N MI — TOTAL TIME.. 24HOURS — TIME INTERVAL.. 1MINUTES

ENERGY MEV		ORBITAL FLUX 0 DEG		ORBITAL FLUX 30 DEG		ORBITAL FLUX 60 DEG		ORBITAL FLUX 90 DEG	
E1	E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2
.10	.15	8.25E+11	1.89E+10	7.37E+11	4.31E+10	7.14E+11	1.38E+11	5.04E+11	7.95E+10
.15	.20	8.06E+11	1.85E+10	6.98E+11	3.93E+10	5.76E+11	8.91E+10	4.24E+11	5.33E+10
.20	.30	7.88E+11	3.57E+10	6.54E+11	6.88E+10	4.87E+11	1.05E+11	3.71E+11	6.70E+10
.30	.40	7.52E+11	3.41E+10	5.85E+11	5.79E+10	3.82E+11	6.11E+10	3.04E+11	4.24E+10
.40	.60	7.18E+11	6.36E+10	5.27E+11	9.12E+10	3.21E+11	7.43E+10	2.61E+11	5.55E+10
.60	.80	6.55E+11	5.80E+10	4.36E+11	6.80E+10	2.46E+11	4.70E+10	2.06E+11	3.69E+10
.80	1.00	5.97E+11	5.28E+10	3.68E+11	5.23E+10	1.99E+11	3.31E+10	1.69E+11	2.66E+10
1.00	1.50	5.44E+11	1.13E+11	3.16E+11	8.98E+10	1.66E+11	5.16E+10	1.42E+11	4.27E+10
1.50	2.00	4.31E+11	8.92E+10	2.26E+11	5.75E+10	1.15E+11	3.03E+10	9.98E+10	2.57E+10
2.00	3.00	3.42E+11	1.27E+11	1.69E+11	6.97E+10	8.45E+10	3.50E+10	7.41E+10	3.04E+10
3.00	4.00	2.15E+11	7.98E+10	9.89E+10	3.91E+10	4.94E+10	1.94E+10	4.37E+10	1.71E+10
4.00	6.00	1.35E+11	8.18E+10	5.98E+10	3.72E+10	3.00E+10	1.86E+10	2.66E+10	1.64E+10
6.00	8.00	5.36E+10	3.24E+10	2.26E+10	1.39E+10	1.15E+10	7.01E+09	1.02E+10	6.23E+09
8.00	10.00	2.12E+10	1.28E+10	8.73E+09	5.33E+09	4.45E+09	2.71E+09	3.97E+09	2.41E+09
10.00		8.41E+09	8.41E+09	3.40E+09	3.40E+09	1.74E+09	1.74E+09	1.55E+09	1.55E+09

Table 3 (Cont.)

ORBIT ALTITUDE.. 3501 N MI — ORBITAL INTEGRATION MAP AP5 — TOTAL TIME.. 24HOURS — TIME INTERVAL.. 1MINUTES

ENERGY MEV		ORBITAL FLUX 0 DEG		ORBITAL FLUX 30 DEG		ORBITAL FLUX 60 DEG		ORBITAL FLUX 90 DEG	
E1	E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2
.10	.15	1.63E+12	5.70E+10	1.51E+12	1.05E+11	1.05E+12	1.44E+11	8.13E+11	9.88E+10
.15	.20	1.58E+12	5.48E+10	1.41E+12	9.60E+10	9.03E+11	1.04E+11	7.14E+11	7.41E+10
.20	.30	1.52E+12	1.04E+11	1.31E+12	1.68E+11	7.99E+11	1.45E+11	6.40E+11	1.07E+11
.30	.40	1.42E+12	9.60E+10	1.14E+12	1.41E+11	6.54E+11	1.00E+11	5.33E+11	7.75E+10
.40	.60	1.32E+12	1.72E+11	1.00E+12	2.21E+11	5.54E+11	1.38E+11	4.55E+11	1.10E+11
.60	.80	1.15E+12	1.48E+11	7.79E+11	1.61E+11	4.16E+11	9.30E+10	3.45E+11	7.54E+10
.80	1.00	1.00E+12	1.27E+11	6.20E+11	1.20E+11	3.23E+11	6.62E+10	2.70E+11	5.43E+10
1.00	1.50	8.75E+11	2.48E+11	5.00E+11	1.93E+11	2.57E+11	1.01E+11	2.15E+11	8.37E+10
1.50	2.00	6.27E+11	1.74E+11	3.07E+11	1.08E+11	1.56E+11	5.44E+10	1.32E+11	4.56E+10
2.00	3.00	4.54E+11	2.11E+11	2.00E+11	1.06E+11	1.01E+11	5.31E+10	8.61E+10	4.49E+10
3.00	4.00	2.43E+11	1.09E+11	9.35E+10	4.59E+10	4.82E+10	2.32E+10	4.12E+10	1.98E+10
4.00	6.00	1.34E+11	9.05E+10	4.76E+10	3.34E+10	2.50E+10	1.73E+10	2.14E+10	1.49E+10
6.00	8.00	4.31E+10	2.84E+10	1.42E+10	9.48E+09	7.63E+09	5.07E+09	6.57E+09	4.36E+09
8.00	10.00	1.47E+10	9.52E+09	4.72E+09	3.06E+09	2.56E+09	1.66E+09	2.21E+09	1.43E+09
10.00		5.20E+09	5.20E+09	1.66E+09	1.66E+09	9.07E+08	9.07E+08	7.79E+08	7.79E+08

ORBIT ALTITUDE.. 4001 N MI — TOTAL TIME.. 48HOURS — TIME INTERVAL.. 2MINUTES

ENERGY MEV		ORBITAL FLUX 0 DEG		ORBITAL FLUX 30 DEG		ORBITAL FLUX 60 DEG		ORBITAL FLUX 90 DEG	
E1	E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2
.10	.15	4.02E+12	2.29E+11	3.11E+12	2.48E+11	1.83E+12	2.18E+11	1.48E+12	1.59E+11
.15	.20	3.79E+12	2.15E+11	2.87E+12	2.26E+11	1.61E+12	1.70E+11	1.32E+12	1.28E+11
.20	.30	3.54E+12	3.94E+11	2.64E+12	3.94E+11	1.44E+12	2.55E+11	1.19E+12	2.00E+11
.30	.40	3.18E+12	3.50E+11	2.25E+12	3.30E+11	1.19E+12	1.91E+11	9.89E+11	1.54E+11
.40	.60	2.83E+12	5.88E+11	1.92E+12	5.10E+11	9.98E+11	2.77E+11	8.35E+11	2.28E+11
.60	.80	2.24E+12	4.64E+11	1.41E+12	3.64E+11	7.22E+11	1.90E+11	6.07E+11	1.58E+11
.80	1.00	1.78E+12	3.67E+11	1.04E+12	2.63E+11	5.31E+11	1.35E+11	4.48E+11	1.13E+11
1.00	1.50	1.41E+12	6.17E+11	7.79E+11	3.91E+11	3.96E+11	1.98E+11	3.35E+11	1.67E+11
1.50	2.00	7.95E+11	3.46E+11	3.88E+11	1.88E+11	1.97E+11	9.48E+10	1.68E+11	8.04E+10
2.00	3.00	4.49E+11	3.04E+11	2.00E+11	1.43E+11	1.02E+11	7.26E+10	8.75E+10	6.20E+10
3.00	4.00	1.45E+11	9.76E+10	6.71E+10	3.98E+10	2.98E+10	2.06E+10	2.56E+10	1.77E+10
4.00	6.00	4.74E+10	4.22E+10	1.73E+10	1.56E+10	9.18E+09	8.22E+09	7.91E+09	7.08E+09
6.00	8.00	5.21E+09	4.62E+09	1.76E+09	1.57E+09	9.56E+08	8.50E+08	8.26E+08	7.34E+08
8.00	10.00	5.89E+08	5.21E+08	1.94E+08	1.71E+08	1.06E+08	9.41E+07	9.19E+07	8.13E+07
10.00		6.78E+07	6.78E+07	2.22E+07	2.22E+07	1.23E+07	1.23E+07	1.06E+07	1.06E+07

Table 3 (Cont.)

ORBIT ALTITUDE.. 4501 N MI — ORBITAL INTEGRATION MAP AP5 — TOTAL TIME.. 48HOURS — TIME INTERVAL.. 2MINUTES

ENERGY MEV		ORBITAL FLUX 0 DEG		ORBITAL FLUX 30 DEG		ORBITAL FLUX 60 DEG		ORBITAL FLUX 90 DEG	
E1	E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2
.10	.15	8.19E+12	5.95E+11	5.29E+12	4.65E+11	2.89E+12	3.24E+11	2.39E+12	2.50E+11
.15	.20	7.60E+12	5.51E+11	4.82E+12	4.21E+11	2.57E+12	2.64E+11	2.14E+12	2.10E+11
.20	.30	7.05E+12	9.85E+11	4.40E+12	7.28E+11	2.31E+12	4.17E+11	1.93E+12	3.39E+11
.30	.40	6.06E+12	8.47E+11	3.68E+12	6.01E+11	1.89E+12	3.22E+11	1.59E+12	2.67E+11
.40	.60	5.22E+12	1.35E+12	3.07E+12	9.11E+11	1.57E+12	4.72E+11	1.32E+12	3.95E+11
.60	.80	3.86E+12	1.00E+12	2.16E+12	6.31E+11	1.10E+12	3.21E+11	9.29E+11	2.71E+11
.80	1.00	2.86E+12	7.41E+11	1.53E+12	4.41E+11	7.74E+11	2.23E+11	6.58E+11	1.69E+11
1.00	1.50	2.12E+12	1.12E+12	1.09E+12	6.15E+11	5.51E+11	3.10E+11	4.69E+11	2.63E+11
1.50	2.00	1.00E+12	5.27E+11	4.77E+11	2.64E+11	2.41E+11	1.33E+11	2.06E+11	1.13E+11
2.00	3.00	4.75E+11	3.68E+11	2.13E+11	1.68E+11	1.08E+11	8.54E+10	9.29E+10	7.31E+10
3.00	4.00	1.07E+11	8.29E+10	4.45E+10	3.48E+10	2.31E+10	1.79E+10	1.98E+10	1.54E+10
4.00	6.00	2.44E+10	2.32E+10	9.77E+09	9.25E+09	5.13E+09	4.85E+09	4.43E+09	4.19E+09
6.00	8.00	1.30E+09	1.23E+09	5.19E+08	4.88E+08	2.79E+08	2.62E+08	2.42E+08	2.27E+08
8.00	10.00	7.05E+07	6.66E+07	3.03E+07	2.84E+07	1.65E+07	1.55E+07	1.44E+07	1.35E+07
10.00		3.93E+06	3.93E+06	1.90E+06	1.90E+06	1.04E+06	1.04E+06	9.13E+05	9.13E+05

ORBIT ALTITUDE.. 5001 N MI — TOTAL TIME.. 48HOURS — TIME INTERVAL.. 2MINUTES

ENERGY MEV		ORBITAL FLUX 0 DEG		ORBITAL FLUX 30 DEG		ORBITAL FLUX 60 DEG		ORBITAL FLUX 90 DEG	
E1	E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2
.10	.15	1.25E+13	1.00E+12	7.44E+12	7.03E+11	3.89E+12	4.30E+11	3.25E+12	3.44E+11
.15	.20	1.15E+13	9.23E+11	6.74E+12	6.31E+11	3.46E+12	3.59E+11	2.90E+12	2.92E+11
.20	.30	1.06E+13	1.63E+12	6.11E+12	1.08E+12	3.10E+12	5.78E+11	2.61E+12	4.78E+11
.30	.40	8.98E+12	1.38E+12	5.03E+12	8.79E+11	2.52E+12	4.51E+11	2.13E+12	3.77E+11
.40	.60	7.60E+12	2.15E+12	4.15E+12	1.31E+12	2.07E+12	6.57E+11	1.76E+12	5.54E+11
.60	.80	5.45E+12	1.54E+12	2.84E+12	8.86E+11	1.41E+12	4.40E+11	1.20E+12	3.73E+11
.80	1.00	3.90E+12	1.10E+12	1.95E+12	6.03E+11	9.74E+11	2.99E+11	8.31E+11	2.54E+11
1.00	1.50	2.80E+12	1.58E+12	1.35E+12	8.06E+11	6.75E+11	4.00E+11	5.76E+11	3.41E+11
1.50	2.00	1.22E+12	6.88E+11	5.46E+11	3.21E+11	2.74E+11	1.61E+11	2.35E+11	1.37E+11
2.00	3.00	5.33E+11	4.31E+11	2.24E+11	1.85E+11	1.14E+11	9.35E+10	9.78E+10	8.03E+10
3.00	4.00	1.02E+11	8.24E+10	3.95E+10	3.23E+10	2.04E+10	1.66E+10	1.76E+10	1.43E+10
4.00	6.00	1.97E+10	1.89E+10	7.22E+09	6.94E+09	3.79E+09	3.65E+09	3.27E+09	3.15E+09
6.00	8.00	7.41E+08	7.13E+08	2.58E+08	2.48E+08	1.38E+08	1.33E+08	1.20E+08	1.15E+08
8.00	10.00	2.84E+07	2.73E+07	9.73E+06	9.35E+06	5.29E+06	5.08E+06	4.58E+06	4.40E+06
10.00		1.10E+06	1.10E+06	3.80E+05	3.80E+05	2.08E+05	2.08E+05	1.80E+05	1.80E+05

Table 3 (Cont.)

ORBITAL INTEGRATION MAP AP5

ORBIT ALTITUDE.. 5501 N MI TOTAL TIME.. 48HOURS TIME INTERVAL.. 2MINUTES

ENERGY MEV		ORBITAL FLUX 0 DEG		ORBITAL FLUX 30 DEG		ORBITAL FLUX 60 DEG		ORBITAL FLUX 90 DEG	
E1	E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2
.10	.15	1.72E+13	1.53E+12	9.57E+12	9.83E+11	5.03E+12	5.68E+11	4.24E+12	4.64E+11
.15	.20	1.57E+13	1.39E+12	8.59E+12	8.72E+11	4.46E+12	4.81E+11	3.78E+12	3.98E+11
.20	.30	1.43E+13	2.42E+12	7.71E+12	1.47E+12	3.98E+12	7.79E+11	3.38E+12	6.53E+11
.30	.40	1.19E+13	2.01E+12	6.24E+12	1.18E+12	3.20E+12	6.08E+11	2.73E+12	5.14E+11
.40	.60	9.88E+12	3.06E+12	5.07E+12	1.71E+12	2.60E+12	8.74E+11	2.21E+12	7.42E+11
.60	.80	6.82E+12	2.11E+12	3.36E+12	1.12E+12	1.74E+12	5.72E+11	1.47E+12	4.87E+11
.80	1.00	4.71E+12	1.46E+12	2.43E+12	7.40E+11	1.15E+12	3.78E+11	9.83E+11	3.23E+11
1.00	1.50	3.26E+12	1.96E+12	1.49E+12	9.39E+11	7.73E+11	4.83E+11	6.61E+11	4.12E+11
1.50	2.00	1.30E+12	7.79E+11	5.54E+11	3.45E+11	2.90E+11	1.79E+11	2.48E+11	1.53E+11
2.00	3.00	5.17E+11	4.34E+11	2.10E+11	1.78E+11	1.11E+11	9.39E+10	9.49E+10	8.05E+10
3.00	4.00	8.26E+10	6.93E+10	3.12E+10	2.64E+10	1.67E+10	1.41E+10	1.44E+10	1.21E+10
4.00	6.00	1.33E+10	1.29E+10	4.83E+09	4.71E+09	2.66E+09	2.56E+09	2.26E+09	2.20E+09
6.00	8.00	3.52E+08	3.43E+08	1.25E+08	1.22E+08	6.89E+07	6.70E+07	5.95E+07	5.78E+07
8.00	10.00	9.54E+06	9.28E+06	3.44E+06	3.34E+06	1.91E+06	1.86E+06	1.66E+06	1.61E+06
10.00		2.64E+05	2.64E+05	9.86E+04	9.86E+04	5.51E+04	5.51E+04	4.79E+04	4.79E+04

ORBIT ALTITUDE.. 6001 N MI TOTAL TIME.. 48HOURS TIME INTERVAL.. 2MINUTES

ENERGY MEV		ORBITAL FLUX 0 DEG		ORBITAL FLUX 30 DEG		ORBITAL FLUX 60 DEG		ORBITAL FLUX 90 DEG	
E1	E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2
.10	.15	2.21E+13	2.18E+12	1.16E+13	1.29E+12	5.96E+12	7.03E+11	5.06E+12	5.83E+11
.15	.20	2.00E+13	1.96E+12	1.03E+13	1.13E+12	5.26E+12	5.98E+11	4.47E+12	5.01E+11
.20	.30	1.80E+13	3.36E+12	9.21E+12	1.88E+12	4.66E+12	9.68E+11	3.97E+12	8.17E+11
.30	.40	1.46E+13	2.73E+12	7.33E+12	1.48E+12	3.69E+12	7.48E+11	3.15E+12	6.36E+11
.40	.60	1.19E+13	4.03E+12	5.85E+12	2.11E+12	2.94E+12	1.06E+12	2.52E+12	9.01E+11
.60	.80	7.87E+12	2.66E+12	3.74E+12	1.34E+12	1.89E+12	6.69E+11	1.62E+12	5.73E+11
.80	1.00	5.21E+12	1.76E+12	2.41E+12	8.54E+11	1.22E+12	4.29E+11	1.04E+12	3.67E+11
1.00	1.50	3.45E+12	2.22E+12	1.55E+12	1.03E+12	7.88E+11	5.19E+11	6.77E+11	4.45E+11
1.50	2.00	1.24E+12	7.92E+11	5.25E+11	3.45E+11	2.70E+11	1.76E+11	2.32E+11	1.51E+11
2.00	3.00	4.43E+11	3.86E+11	1.81E+11	1.58E+11	9.38E+10	8.20E+10	8.08E+10	7.07E+10
3.00	4.00	5.77E+10	5.01E+10	2.22E+10	1.93E+10	1.17E+10	1.02E+10	1.01E+10	8.82E+09
4.00	6.00	7.58E+09	7.44E+09	2.82E+09	2.78E+09	1.52E+09	1.49E+09	1.31E+09	1.29E+09
6.00	8.00	1.34E+08	1.32E+08	4.98E+07	4.88E+07	2.73E+07	2.68E+07	2.37E+07	2.32E+07
8.00	10.00	2.45E+06	2.40E+06	9.39E+05	9.21E+05	5.21E+05	5.11E+05	4.53E+05	4.44E+05
10.00		4.56E+04	4.56E+04	1.85E+04	1.85E+04	1.04E+04	1.04E+04	9.02E+03	9.02E+03

Table 3 (Cont.)

ORBITAL INTEGRATION MAP AP5

ORBIT ALTITUDE.. 7000 N MI TOTAL TIME.. 96HOURS TIME INTERVAL.. 6MINUTES

ENERGY MEV		ORBITAL FLUX 0 DEG		ORBITAL FLUX 30 DEG		ORBITAL FLUX 60 DEG		ORBITAL FLUX 90 DEG	
E1	E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2
.10	.15	2.79E+13	3.29E+12	1.25E+13	1.56E+12	6.50E+12	8.58E+11	5.53E+12	7.21E+11
.15	.20	2.46E+13	2.90E+12	1.09E+13	1.37E+12	5.64E+12	7.26E+11	4.81E+12	6.13E+11
.20	.30	2.17E+13	4.81E+12	9.57E+12	2.23E+12	4.92E+12	1.16E+12	4.20E+12	9.82E+11
.30	.40	1.69E+13	3.75E+12	7.34E+12	1.69E+12	3.76E+12	8.69E+11	3.21E+12	7.41E+11
.40	.60	1.32E+13	5.19E+12	5.65E+12	2.29E+12	2.89E+12	1.17E+12	2.47E+12	9.99E+11
.60	.80	7.99E+12	3.15E+12	3.36E+12	1.36E+12	1.72E+12	6.92E+11	1.47E+12	5.92E+11
.80	1.00	4.85E+12	1.91E+12	2.01E+12	8.07E+11	1.03E+12	4.12E+11	8.82E+11	3.53E+11
1.00	1.50	2.94E+12	2.10E+12	1.20E+12	8.66E+11	6.17E+11	4.44E+11	5.29E+11	3.81E+11
1.50	2.00	8.43E+11	6.01E+11	3.35E+11	2.41E+11	1.73E+11	1.24E+11	1.48E+11	1.06E+11
2.00	3.00	2.42E+11	2.22E+11	9.39E+10	8.64E+10	4.88E+10	4.49E+10	4.19E+10	3.85E+10
3.00	4.00	2.00E+10	1.83E+10	7.50E+09	6.89E+09	3.94E+09	3.62E+09	3.39E+09	3.11E+09
4.00	6.00	1.66E+09	1.65E+09	6.10E+08	6.06E+08	3.23E+08	3.21E+08	2.78E+08	2.76E+08
6.00	8.00	1.15E+07	1.14E+07	4.17E+06	4.14E+06	2.24E+06	2.22E+06	1.93E+06	1.92E+06
8.00	10.00	8.09E+04	8.03E+04	2.95E+04	2.93E+04	1.60E+04	1.59E+04	1.38E+04	1.37E+04
10.00		5.75E+02	5.75E+02	2.14E+02	2.14E+02	1.17E+02	1.17E+02	1.01E+02	1.01E+02

ORBIT ALTITUDE.. 8000 N MI TOTAL TIME.. 96HOURS TIME INTERVAL.. 6MINUTES

ENERGY MEV		ORBITAL FLUX 0 DEG		ORBITAL FLUX 30 DEG		ORBITAL FLUX 60 DEG		ORBITAL FLUX 90 DEG	
E1	E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2
.10	.15	2.08E+13	2.74E+12	9.34E+12	1.36E+12	4.90E+12	7.37E+11	4.18E+12	6.22E+11
.15	.20	1.81E+13	2.38E+12	7.97E+12	1.14E+12	4.17E+12	6.09E+11	3.55E+12	5.15E+11
.20	.30	1.57E+13	3.86E+12	6.83E+12	1.79E+12	3.56E+12	9.39E+11	3.04E+12	7.98E+11
.30	.40	1.18E+13	2.91E+12	5.04E+12	1.30E+12	2.62E+12	6.76E+11	2.24E+12	5.77E+11
.40	.60	8.91E+12	3.85E+12	3.74E+12	1.66E+12	1.94E+12	8.62E+11	1.66E+12	7.37E+11
.60	.80	5.07E+12	2.19E+12	2.08E+12	9.17E+11	1.08E+12	4.75E+11	9.26E+11	4.07E+11
.80	1.00	2.88E+12	1.24E+12	1.16E+12	5.10E+11	6.05E+11	2.65E+11	5.19E+11	2.27E+11
1.00	1.50	1.64E+12	1.24E+12	6.49E+11	4.95E+11	3.40E+11	2.59E+11	2.92E+11	2.22E+11
1.50	2.00	4.00E+11	3.02E+11	1.54E+11	1.17E+11	8.12E+10	6.16E+10	6.97E+10	5.29E+10
2.00	3.00	9.78E+10	9.19E+10	3.68E+10	3.46E+10	1.96E+10	1.84E+10	1.68E+10	1.58E+10
3.00	4.00	5.86E+09	5.51E+09	2.14E+09	2.02E+09	1.15E+09	1.08E+09	9.91E+08	9.31E+08
4.00	6.00	3.53E+08	3.51E+08	1.27E+08	1.27E+08	6.91E+07	6.88E+07	5.94E+07	5.91E+07
6.00	8.00	1.29E+06	1.29E+06	4.68E+05	4.65E+05	2.55E+05	2.54E+05	2.20E+05	2.19E+05
8.00	10.00	4.79E+03	4.77E+03	1.76E+03	1.75E+03	9.70E+02	9.67E+02	8.35E+02	8.32E+02
10.00		1.79E+01	1.79E+01	6.80E+00	6.80E+00	3.76E+00	3.75E+00	3.24E+00	3.24E+00

Table 3 (Cont.)

ORBITAL INTEGRATION MAP AP5

ORBIT ALTITUDE.. 9000 N MI TOTAL TIME.. 96HOURS TIME INTERVAL.. 4MINUTES

ENERGY MEV		ORBITAL FLUX 0 DEG		ORBITAL FLUX 30 DEG		ORBITAL FLUX 60 DEG		ORBITAL FLUX 90 DEG	
E1	E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2
.10	.15	1.33E+13	2.01E+12	6.01E+12	1.04E+12	3.14E+12	5.55E+11	2.67E+12	4.67E+11
.15	.20	1.13E+13	1.70E+12	4.97E+12	8.37E+11	2.58E+12	4.42E+11	2.20E+12	3.74E+11
.20	.30	9.58E+12	2.67E+12	4.13E+12	1.24E+12	2.14E+12	6.48E+11	1.83E+12	5.51E+11
.30	.40	6.91E+12	1.93E+12	2.89E+12	8.51E+11	1.49E+12	4.39E+11	1.27E+12	3.75E+11
.40	.60	4.98E+12	2.39E+12	2.04E+12	1.01E+12	1.05E+12	5.19E+11	9.00E+11	4.43E+11
.60	.80	2.59E+12	1.24E+12	1.03E+12	5.04E+11	5.32E+11	2.60E+11	4.56E+11	2.22E+11
.80	1.00	1.35E+12	6.47E+11	5.26E+11	2.56E+11	2.73E+11	1.32E+11	2.34E+11	1.13E+11
1.00	1.50	7.03E+11	5.55E+11	2.70E+11	2.18E+11	1.41E+11	1.13E+11	1.21E+11	9.73E+10
1.50	2.00	1.38E+11	1.11E+11	5.17E+10	4.17E+10	2.72E+10	2.19E+10	2.34E+10	1.88E+10
2.00	3.00	2.71E+10	2.61E+10	1.00E+10	9.66E+09	5.33E+09	5.12E+09	4.58E+09	4.40E+09
3.00	4.00	1.06E+09	1.02E+09	3.90E+08	3.74E+08	2.09E+08	2.01E+08	1.80E+08	1.73E+08
4.00	6.00	4.17E+07	4.16E+07	1.56E+07	1.55E+07	8.41E+06	8.39E+06	7.25E+06	7.24E+06
6.00	8.00	6.68E+04	6.66E+04	2.62E+04	2.62E+04	1.43E+04	1.43E+04	1.24E+04	1.24E+04
8.00	10.00	1.11E+02	1.11E+02	4.69E+01	4.68E+01	2.58E+01	2.57E+01	2.23E+01	2.22E+01
10.00		1.90E-01	1.90E-01	8.72E-02	8.72E-02	4.81E-02	4.81E-02	4.17E-02	4.17E-02

ORBIT ALTITUDE.. 10000 N MI TOTAL TIME.. 96HOURS TIME INTERVAL.. 4MINUTES

ENERGY MEV		ORBITAL FLUX 0 DEG		ORBITAL FLUX 30 DEG		ORBITAL FLUX 60 DEG		ORBITAL FLUX 90 DEG	
E1	E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2
.10	.15	7.40E+12	1.25E+12	3.70E+12	7.79E+11	1.91E+12	3.99E+11	1.63E+12	3.38E+11
.15	.20	6.15E+12	1.04E+12	2.93E+12	5.96E+11	1.51E+12	3.05E+11	1.29E+12	2.59E+11
.20	.30	5.11E+12	1.58E+12	2.33E+12	8.24E+11	1.20E+12	4.21E+11	1.03E+12	3.59E+11
.30	.40	3.53E+12	1.09E+12	1.51E+12	5.15E+11	7.81E+11	2.64E+11	6.71E+11	2.26E+11
.40	.60	2.44E+12	1.27E+12	9.91E+11	5.47E+11	5.17E+11	2.83E+11	4.45E+11	2.43E+11
.60	.80	1.16E+12	6.08E+11	4.44E+11	2.40E+11	2.35E+11	1.26E+11	2.02E+11	1.08E+11
.80	1.00	5.56E+11	2.90E+11	2.04E+11	1.09E+11	1.09E+11	5.77E+10	9.40E+10	4.98E+10
1.00	1.50	2.66E+11	2.24E+11	9.51E+10	8.05E+10	5.11E+10	4.32E+10	4.42E+10	3.73E+10
1.50	2.00	4.22E+10	3.55E+10	1.46E+10	1.23E+10	7.94E+09	6.68E+09	6.87E+09	5.78E+09
2.00	3.00	6.71E+09	6.54E+09	2.29E+09	2.23E+09	1.26E+09	1.23E+09	1.09E+09	1.06E+09
3.00	4.00	1.72E+08	1.67E+08	5.87E+07	5.72E+07	3.25E+07	3.17E+07	2.82E+07	2.75E+07
4.00	6.00	4.45E+06	4.44E+06	1.54E+06	1.54E+06	8.59E+05	8.58E+05	7.47E+05	7.46E+05
6.00	8.00	3.06E+03	3.06E+03	1.11E+03	1.11E+03	6.23E+02	6.22E+02	5.42E+02	5.42E+02
8.00	10.00	2.17E+00	2.16E+00	8.28E-01	8.28E-01	4.67E-01	4.67E-01	4.08E-01	4.07E-01
10.00		1.57E-03	1.57E-03	6.35E-04	6.35E-04	3.60E-04	3.60E-04	3.14E-04	3.14E-04

Table 3 (Cont.)

ORBITAL INTEGRATION MAP AP5

ORBIT ALTITUDE.. 11000 N MI TOTAL TIME.. 96HOURS TIME INTERVAL.. 4MINUTES

ENERGY MEV		ORBITAL FLUX 0 DEG		ORBITAL FLUX 30 DEG		ORBITAL FLUX 60 DEG		ORBITAL FLUX 90 DEG	
E1	E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2
.10	.15	5.00E+12	1.03E+12	2.68E+12	6.65E+11	1.32E+12	3.25E+11	1.11E+12	2.72E+11
.15	.20	3.97E+12	8.15E+11	2.02E+12	4.89E+11	9.91E+11	2.36E+11	8.34E+11	2.00E+11
.20	.30	3.15E+12	1.16E+12	1.53E+12	6.34E+11	7.53E+11	3.09E+11	6.34E+11	2.60E+11
.30	.40	1.99E+12	7.33E+11	8.94E+11	3.60E+11	4.44E+11	1.77E+11	3.74E+11	1.49E+11
.40	.60	1.26E+12	7.55E+11	5.34E+11	3.35E+11	2.67E+11	1.66E+11	2.25E+11	1.40E+11
.60	.80	5.04E+11	3.02E+11	1.99E+11	1.22E+11	1.01E+11	6.15E+10	8.50E+10	5.18E+10
.80	1.00	2.03E+11	1.21E+11	7.69E+10	4.65E+10	3.94E+10	2.37E+10	3.31E+10	2.00E+10
1.00	1.50	8.17E+10	7.32E+10	3.04E+10	2.72E+10	1.57E+10	1.40E+10	1.32E+10	1.18E+10
1.50	2.00	8.52E+09	7.61E+09	3.15E+09	2.81E+09	1.63E+09	1.46E+09	1.37E+09	1.22E+09
2.00	3.00	9.01E+08	8.90E+08	3.42E+08	3.37E+08	1.77E+08	1.75E+08	1.48E+08	1.46E+08
3.00	4.00	1.04E+07	1.03E+07	4.31E+06	4.25E+06	2.23E+06	2.20E+06	1.85E+06	1.83E+06
4.00	6.00	1.26E+05	1.26E+05	5.80E+04	5.80E+04	2.99E+04	2.99E+04	2.46E+04	2.46E+04
6.00	8.00	2.03E+01	2.03E+01	1.19E+01	1.19E+01	6.08E+00	6.08E+00	4.91E+00	4.91E+00
8.00	10.00	3.61E-03	3.61E-03	2.75E-03	2.75E-03	1.39E-03	1.39E-03	1.10E-03	1.10E-03
10.00		6.91E-07	6.91E-07	6.88E-07	6.88E-07	3.43E-07	3.43E-07	2.66E-07	2.66E-07

ORBIT ALTITUDE.. 12000 N MI TOTAL TIME.. 96HOURS TIME INTERVAL.. 4MINUTES

ENERGY MEV		ORBITAL FLUX 0 DEG		ORBITAL FLUX 30 DEG		ORBITAL FLUX 60 DEG		ORBITAL FLUX 90 DEG	
E1	E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2
.10	.15	3.69E+12	9.07E+11	1.94E+12	5.63E+11	9.84E+11	2.81E+11	8.41E+11	2.39E+11
.15	.20	2.78E+12	6.82E+11	1.38E+12	3.92E+11	7.03E+11	1.97E+11	6.02E+11	1.68E+11
.20	.30	2.10E+12	9.01E+11	9.89E+11	4.71E+11	5.07E+11	2.38E+11	4.34E+11	2.03E+11
.30	.40	1.20E+12	5.12E+11	5.18E+11	2.40E+11	2.69E+11	1.23E+11	2.31E+11	1.05E+11
.40	.60	6.86E+11	4.59E+11	2.78E+11	1.93E+11	1.46E+11	1.01E+11	1.25E+11	8.64E+10
.60	.80	2.27E+11	1.51E+11	8.46E+10	5.75E+10	4.52E+10	3.05E+10	3.90E+10	2.63E+10
.80	1.00	7.56E+10	5.02E+10	2.71E+10	1.82E+10	1.47E+10	9.78E+09	1.27E+10	8.43E+09
1.00	1.50	2.54E+10	2.37E+10	8.99E+09	8.38E+09	4.90E+09	4.56E+09	4.23E+09	3.94E+09
1.50	2.00	1.72E+09	1.60E+09	6.14E+08	5.69E+08	3.38E+08	3.13E+08	2.92E+08	2.70E+08
2.00	3.00	1.20E+08	1.20E+08	4.44E+07	4.42E+07	2.45E+07	2.44E+07	2.12E+07	2.11E+07
3.00	4.00	6.34E+05	6.31E+05	2.53E+05	2.52E+05	1.40E+05	1.39E+05	1.21E+05	1.20E+05
4.00	6.00	3.59E+03	3.59E+03	1.54E+03	1.54E+03	8.54E+02	8.54E+02	7.35E+02	7.35E+02
6.00	8.00	1.31E-01	1.31E-01	6.40E-02	6.40E-02	3.54E-02	3.53E-02	3.03E-02	3.03E-02
8.00	10.00	5.34E-06	5.34E-06	2.90E-06	2.90E-06	1.60E-06	1.60E-06	1.37E-06	1.37E-06
10.00		2.32E-10	2.32E-10	1.38E-10	1.38E-10	7.60E-11	7.60E-11	6.50E-11	6.50E-11

Table 3 (Cont.)

ORBITAL INTEGRATION MAP AP5

ORBIT ALTITUDE.. 13000 N MI TOTAL TIME.. 96HOURS TIME INTERVAL.. 4MINUTES

ENERGY MEV		ORBITAL FLUX 0 DEG		ORBITAL FLUX 30 DEG		ORBITAL FLUX 60 DEG		ORBITAL FLUX 90 DEG	
E1	E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2
.10	.15	3.00E+12	9.09E+11	1.33E+12	4.29E+11	6.93E+11	2.21E+11	5.92E+11	1.88E+11
.15	.20	2.09E+12	6.33E+11	9.05E+11	2.89E+11	4.72E+11	1.49E+11	4.04E+11	1.27E+11
.20	.30	1.46E+12	7.49E+11	6.17E+11	3.28E+11	3.23E+11	1.70E+11	2.76E+11	1.46E+11
.30	.40	7.11E+11	3.04E+11	2.89E+11	1.52E+11	1.52E+11	7.97E+10	1.31E+11	6.81E+10
.40	.60	3.47E+11	2.64E+11	1.37E+11	1.05E+11	7.28E+10	5.58E+10	6.24E+10	4.77E+10
.60	.80	8.31E+10	6.31E+10	3.18E+10	2.42E+10	1.71E+10	1.30E+10	1.46E+10	1.11E+10
.80	1.00	2.00E+10	1.52E+10	7.62E+09	5.76E+09	4.12E+09	3.11E+09	3.53E+09	2.66E+09
1.00	1.50	4.86E+09	4.72E+09	1.87E+09	1.81E+09	1.01E+09	9.82E+08	8.69E+08	8.42E+08
1.50	2.00	1.45E+08	1.41E+08	5.92E+07	5.72E+07	3.23E+07	3.12E+07	2.76E+07	2.67E+07
2.00	3.00	4.49E+06	4.49E+06	1.99E+06	1.99E+06	1.09E+06	1.08E+06	9.27E+05	9.26E+05
3.00	4.00	4.75E+03	4.75E+03	2.51E+03	2.51E+03	1.37E+03	1.36E+03	1.16E+03	1.16E+03
4.00	6.00	5.58E+00	5.58E+00	3.49E+00	3.49E+00	1.89E+00	1.89E+00	1.60E+00	1.60E+00
6.00	8.00	9.42E-06	9.42E-06	8.00E-06	8.00E-06	4.32E-06	4.32E-06	3.62E-06	3.62E-06
8.00	10.00	1.86E-11	1.86E-11	2.10E-11	2.10E-11	1.13E-11	1.13E-11	9.46E-12	9.46E-12
10.00		3.97E-17	3.97E-17	5.93E-17	5.93E-17	3.21E-17	3.21E-17	2.68E-17	2.68E-17

ORBIT ALTITUDE.. 14000 N MI TOTAL TIME.. 432HOURS TIME INTERVAL.. 18MINUTES

ENERGY MEV		ORBITAL FLUX 0 DEG		ORBITAL FLUX 30 DEG		ORBITAL FLUX 60 DEG		ORBITAL FLUX 90 DEG	
E1	E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2
.10	.15	1.63E+12	5.60E+11	8.48E+11	3.03E+11	4.30E+11	1.53E+11	3.70E+11	1.31E+11
.15	.20	1.07E+12	3.67E+11	5.45E+11	1.94E+11	2.78E+11	9.83E+10	2.39E+11	8.45E+10
.20	.30	7.03E+11	3.99E+11	3.51E+11	2.05E+11	1.80E+11	1.04E+11	1.55E+11	8.98E+10
.30	.40	3.03E+11	1.72E+11	1.46E+11	8.50E+10	7.53E+10	4.36E+10	6.49E+10	3.75E+10
.40	.60	1.31E+11	1.06E+11	6.10E+10	5.02E+10	3.17E+10	2.60E+10	2.73E+10	2.24E+10
.60	.80	2.46E+10	2.00E+10	1.08E+10	8.86E+09	5.69E+09	4.65E+09	4.92E+09	4.02E+09
.80	1.00	4.64E+09	3.76E+09	1.95E+09	1.59E+09	1.04E+09	8.47E+08	9.08E+08	7.33E+08
1.00	1.50	8.82E+08	8.68E+08	3.58E+08	3.52E+08	1.93E+08	1.90E+08	1.67E+08	1.64E+08
1.50	2.00	1.42E+07	1.39E+07	5.47E+06	5.38E+06	3.01E+06	2.96E+06	2.62E+06	2.58E+06
2.00	3.00	2.35E+05	2.35E+05	8.98E+04	8.97E+04	5.01E+04	5.01E+04	4.37E+04	4.37E+04
3.00	4.00	6.98E+01	6.97E+01	2.76E+01	2.76E+01	1.57E+01	1.57E+01	1.37E+01	1.37E+01
4.00	6.00	2.24E-02	2.24E-02	9.41E-03	9.41E-03	5.39E-03	5.39E-03	4.83E-03	4.76E-03
6.00	8.00	2.66E-09	2.66E-09	1.28E-09	1.28E-09	7.45E-10	7.45E-10	6.72E-10	6.72E-10
8.00	10.00	3.57E-16	3.57E-16	1.93E-16	1.93E-16	1.15E-16	1.15E-16	1.06E-16	1.06E-16
10.00		5.17E-23	5.17E-23	3.11E-23	3.11E-23	1.88E-23	1.88E-23	1.78E-23	1.78E-23

Table 3 (Cont.)

ORBITAL INTEGRATION MAP AP5

ORBIT ALTITUDE.. 15000 N MI TOTAL TIME.. 576HOURS TIME INTERVAL.. 24MINUTES

ENERGY MEV		ORBITAL FLUX 0 DEG		ORBITAL FLUX 30 DEG		ORBITAL FLUX 60 DEG		ORBITAL FLUX 90 DEG	
E1	E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2
.10	.15	1.85E+12	6.66E+11	8.21E+11	2.99E+11	4.23E+11	1.54E+11	3.62E+11	1.32E+11
.15	.20	1.18E+12	4.26E+11	5.22E+11	1.90E+11	2.69E+11	9.78E+10	2.31E+11	8.37E+10
.20	.30	7.59E+11	4.48E+11	3.32E+11	1.98E+11	1.72E+11	1.02E+11	1.47E+11	8.73E+10
.30	.40	3.11E+11	1.83E+11	1.34E+11	7.99E+10	6.97E+10	4.14E+10	5.97E+10	3.54E+10
.40	.60	1.28E+11	1.00E+11	5.44E+10	4.55E+10	2.83E+10	2.36E+10	2.43E+10	2.03E+10
.60	.80	2.15E+10	1.78E+10	8.96E+09	7.48E+09	4.69E+09	3.91E+09	4.02E+09	3.36E+09
.80	1.00	3.61E+09	3.01E+09	1.48E+09	1.24E+09	7.80E+08	6.50E+08	6.69E+08	5.58E+08
1.00	1.50	6.09E+08	6.02E+08	2.46E+08	2.43E+08	1.30E+08	1.28E+08	1.12E+08	1.10E+08
1.50	2.00	7.13E+06	7.05E+06	2.79E+06	2.76E+06	1.49E+06	1.47E+06	1.28E+06	1.27E+06
2.00	3.00	8.39E+04	8.38E+04	3.22E+04	3.22E+04	1.73E+04	1.73E+04	1.49E+04	1.49E+04
3.00	4.00	1.18E+01	1.18E+01	4.45E+00	4.45E+00	2.42E+00	2.42E+00	2.09E+00	2.09E+00
4.00	6.00	1.68E-03	1.68E-03	6.37E-04	6.37E-04	3.48E-04	3.48E-04	3.00E-04	3.00E-04
6.00	8.00	3.54E-11	3.54E-11	1.38E-11	1.38E-11	7.62E-12	7.62E-12	6.55E-12	6.55E-12
8.00	10.00	7.83E-19	7.83E-19	3.15E-19	3.15E-19	1.74E-19	1.74E-19	1.49E-19	1.49E-19
10.00		1.79E-26	1.79E-26	7.42E-27	7.42E-27	4.11E-27	4.11E-27	3.51E-27	3.51E-27

ORBIT ALTITUDE.. 16000 N MI TOTAL TIME.. 864HOURS TIME INTERVAL.. 36MINUTES

ENERGY MEV		ORBITAL FLUX 0 DEG		ORBITAL FLUX 30 DEG		ORBITAL FLUX 60 DEG		ORBITAL FLUX 90 DEG	
E1	E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2
.10	.15	1.28E+12	4.69E+11	5.67E+11	2.08E+11	2.92E+11	1.07E+11	2.50E+11	9.18E+10
.15	.20	8.12E+11	2.97E+11	3.58E+11	1.32E+11	1.85E+11	6.77E+10	1.58E+11	5.81E+10
.20	.30	5.15E+11	3.08E+11	2.27E+11	1.36E+11	1.17E+11	7.00E+10	1.00E+11	6.01E+10
.30	.40	2.07E+11	1.24E+11	9.08E+10	5.44E+10	4.69E+10	2.81E+10	4.02E+10	2.41E+10
.40	.60	8.30E+10	6.96E+10	3.64E+10	3.05E+10	1.88E+10	1.58E+10	1.61E+10	1.35E+10
.60	.80	1.34E+10	1.12E+10	5.84E+09	4.90E+09	3.03E+09	2.54E+09	2.60E+09	2.18E+09
.80	1.00	2.16E+09	1.82E+09	9.39E+08	7.88E+08	4.89E+08	4.10E+08	4.19E+08	3.52E+08
1.00	1.50	3.50E+08	3.46E+08	1.51E+08	1.50E+08	7.90E+07	7.81E+07	6.77E+07	6.70E+07
1.50	2.00	3.68E+06	3.64E+06	1.58E+06	1.56E+06	8.31E+05	8.22E+05	7.13E+05	7.05E+05
2.00	3.00	3.89E+04	3.88E+04	1.67E+04	1.67E+04	8.80E+03	8.80E+03	7.55E+03	7.55E+03
3.00	4.00	4.37E+00	4.37E+00	1.88E+00	1.88E+00	1.00E+00	1.00E+00	8.61E-01	8.60E-01
4.00	6.00	4.97E-04	4.97E-04	2.18E-04	2.18E-04	1.17E-04	1.17E-04	1.00E-04	1.00E-04
6.00	8.00	6.65E-12	6.65E-12	3.06E-12	3.06E-12	1.64E-12	1.64E-12	1.41E-12	1.41E-12
8.00	10.00	9.25E-20	9.25E-20	4.50E-20	4.50E-20	2.42E-20	2.42E-20	2.08E-20	2.08E-20
10.00		1.33E-27	1.33E-27	6.56E-28	6.86E-28	3.68E-28	3.68E-28	3.16E-28	3.16E-28

Table 3 (Cont.)
ORBITAL INTEGRATION MAP APS

ORBIT ALTITUDE.. 17000 N MI TOTAL TIME.. 1152HOURS TIME INTERVAL.. 48MINUTES

ENERGY MEV		ORBITAL FLUX 0 DEG		ORBITAL FLUX 30 DEG		ORBITAL FLUX 60 DEG		ORBITAL FLUX 90 DEG	
E1	E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2
.10	.15	9.25E+11	3.40E+11	3.91E+11	1.43E+11	2.02E+11	7.39E+10	1.74E+11	6.36E+10
.15	.20	5.85E+11	2.15E+11	2.48E+11	9.07E+10	1.28E+11	4.68E+10	1.10E+11	4.03E+10
.20	.30	3.70E+11	2.22E+11	1.57E+11	9.39E+10	8.10E+10	4.85E+10	6.96E+10	4.17E+10
.30	.40	1.48E+11	8.88E+10	6.30E+10	3.77E+10	3.25E+10	1.95E+10	2.79E+10	1.67E+10
.40	.60	5.92E+10	4.97E+10	2.53E+10	2.12E+10	1.31E+10	1.09E+10	1.12E+10	9.41E+09
.60	.80	9.47E+09	7.95E+09	4.08E+09	3.42E+09	2.10E+09	1.76E+09	1.81E+09	1.52E+09
.80	1.00	1.51E+09	1.27E+09	6.59E+08	5.52E+08	3.39E+08	2.85E+08	2.91E+08	2.44E+08
1.00	1.50	2.42E+08	2.40E+08	1.06E+08	1.05E+08	5.48E+07	5.42E+07	4.69E+07	4.64E+07
1.50	2.00	2.48E+06	2.46E+06	1.12E+07	10E+06	5.73E+05	5.67E+05	4.90E+05	4.85E+05
2.00	3.00	2.55E+04	2.55E+04	1.17E+(	.17E+04	6.02E+03	6.02E+03	5.13E+03	5.13E+03
3.00	4.00	2.69E+00	2.69E+00	1.31E+0	..31E+00	6.68E-01	6.68E-01	5.66E-01	5.66E-01
4.00	6.00	2.84E-04	2.84E-04	1.48E-04	1.48E-04	7.49E-05	7.49E-05	6.29E-05	6.29E-05
6.00	8.00	3.21E-12	3.21E-12	1.99E-12	1.99E-12	9.72E-13	9.72E-13	8.01E-13	8.01E-13
8.00	10.00	3.67E-20	3.67E-20	2.69E-20	2.69E-20	1.32E-20	1.32E-20	1.06E-20	1.06E-20
10.00		4.24E-28	4.24E-28	3.90E-28	3.90E-28	1.89E-28	1.89E-28	1.46E-28	1.46E-28

ORBIT ALTITUDE.. 18000 N MI TOTAL TIME.. 2304HOURS TIME INTERVAL.. 96MINUTES

ENERGY MEV		ORBITAL FLUX 0 DEG		ORBITAL FLUX 30 DEG		ORBITAL FLUX 60 DEG		ORBITAL FLUX 90 DEG	
E1	E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2	*E1	E1-E2
.10	.15	6.30E+11	2.29E+11	2.49E+11	9.05E+10	1.31E+11	4.75E+10	1.12E+11	4.07E+10
.15	.20	4.02E+11	1.46E+11	1.59E+11	5.76E+10	8.33E+10	3.03E+10	7.14E+10	2.59E+10
.20	.30	2.56E+11	1.56E+11	1.01E+11	6.01E+10	5.30E+10	3.15E+10	4.55E+10	2.70E+10
.30	.40	1.04E+11	6.17E+10	4.10E+10	2.44E+10	2.15E+10	1.28E+10	1.84E+10	1.10E+10
.40	.60	4.22E+10	3.52E+10	1.66E+10	1.39E+10	8.72E+09	7.29E+09	7.48E+09	6.25E+09
.60	.80	6.96E+09	5.81E+09	2.73E+09	2.28E+09	1.43E+09	1.20E+09	1.23E+09	1.03E+09
.80	1.00	1.15E+09	9.59E+08	4.50E+08	3.76E+08	2.36E+08	1.97E+08	2.02E+08	1.69E+08
1.00	1.50	1.90E+08	1.87E+08	7.40E+07	7.32E+07	3.88E+07	3.84E+07	3.33E+07	3.30E+07
1.50	2.00	2.10E+06	2.08E+06	8.15E+05	8.06E+05	4.27E+05	4.23E+05	3.67E+05	3.63E+05
2.00	3.00	2.34E+04	2.34E+04	8.98E+03	8.98E+03	4.71E+03	4.71E+03	4.04E+03	4.04E+03
3.00	4.00	2.91E+00	2.91E+00	1.10E+00	1.10E+00	5.76E-01	5.76E-01	4.95E-01	4.95E-01
4.00	6.00	3.65E-04	3.65E-04	1.35E-04	1.35E-04	7.10E-05	7.10E-05	6.10E-05	6.10E-05
6.00	8.00	5.92E-12	5.92E-12	2.09E-12	2.09E-12	1.11E-12	1.11E-12	9.49E-13	9.49E-13
8.00	10.00	9.96E-20	9.96E-20	3.34E-20	3.34E-20	1.78E-20	1.78E-20	1.52E-20	1.52E-20
10.00		1.73E-27	1.73E-27	5.49E-28	5.49E-28	2.95E-28	2.95E-28	2.52E-28	2.52E-28