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Informal Report

SPECTRA-IV, Benchmark Spectra Based on LIB-IV

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R. B. Kidman

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SPECTRA-IV,
BENCHMARK SPECTRA BASED ON LIB-IV

by

R. B. Kidman

ABSTRACT

Flux and adjoint spectra for each of the Cross Section Evaluation Working Group fast reactor benchmarks are numerically and graphically presented in this handbook. The spectra were computed using a 50-group cross-section library (LIB-IV) that was generated with the MINX processing code using ENDF/B-IV data. The numerical tables show the computed group numbers and allow one to observe the effects of 1-D and 2-D diffusion theory and S_{16}^P transport theory on the spectra. The graphical figures compare smooth interpolated curves for the central flux, edge flux, central adjoint, transport reaction rate, and original cross-section averaging weighting function.

I. INTRODUCTION

The Cross Section Evaluation Working Group (CSEWG) fast reactor benchmarks¹ are extensively used by various laboratories for methods and data testing. The latest most comprehensive use of these 17 benchmarks at the Los Alamos Scientific Laboratory (LASL) has been documented in Ref. 2.

The flux and adjoint spectra from those calculations are numerically and graphically presented in this handbook. This handbook represents a further investigation of our data and methods and provides a convenient opportunity to collectively consider and study the spectra of all the benchmarks.

II. CODES AND DATA

A brief outline of the calculational procedure will provide adequate background for understanding the spectra.

The computer code MINX³ was used to generate a 50-group library (LIB-IV⁴) from the ENDF/B-IV⁵ data. LIB-IV and the benchmark specifications¹ were used in the computer code 1DX⁶ to compute one-dimensional (1-D) diffusion theory flux and adjoint spectra. The effective cross sections generated with 1DX were also used in the computer code 2DB⁷ to compute two-dimensional (2-D) diffusion theory flux and adjoint spectra. 1DX was also used to generate effective cross sections for the computer code ONETRAN.⁸ ONETRAN was then used to compute 1-D, S_{16}^P $1/2$ transport theory flux and adjoint spectra.

The 50-group structure is shown in every table of this report. All other calculational details and data, including the fission sources utilized, are described in Ref. 2.

III. GRAPHICAL RESULTS

Most of the figures and tables in this report are organized into appendixes to avoid long interruptions of the short text.

Appendix A contains two figures (at different scales) for each benchmark. Five curves are displayed in each figure: the central flux, edge flux, transport reaction rate, central adjoint, and LIB-IV weighting function. These curves are generated in the following manner.

Beginning with a 50-group spectrum (50 numbers) calculated with 1DX, the spectrum is first normalized so that the group sum is equal to 100. Each group flux is then converted to flux per unit lethargy by dividing by the group lethargy width. If $\phi_{i,0}$ is the original flux in group i and Δu_i is the lethargy width of group i , this renormalizing can be written as

$$\phi_i = \frac{100}{\Delta u_i} \frac{\phi_{i,0}}{\sum_{j=1}^{50} \phi_{j,0}} .$$

Each group flux per unit lethargy ϕ_i is associated with the mid-lethargy energy of the group, and an interpolation formula is used to draw a smooth curve through these energy-flux points. This procedure is used for the central flux, edge flux, and transport reaction rate.

When such curves are compared, they reveal trends and differences much more easily than if histograms were plotted on top of each other. However, if you

desire histograms or have doubts about the interpolation, you have access to the raw data in Appendix B.

The adjoint spectra do not lend themselves to simple interpolations so they are plotted as histograms. This has the benefit of showing the group structure on the figures. The adjoint spectra are normalized differently than above. First of all, the group order of the adjoint from LDX is inverted to obtain the proper correspondence between adjoint and energy. Then, if $\phi_{i,0}^+$ is the original adjoint (after it has been inverted) in group i , and χ_i is the fission source in group i , the normalized adjoint ϕ_i^+ is given by

$$\phi_i^+ = \frac{\phi_{i,0}^+}{\sum_{j=1}^{50} \chi_j \phi_{j,0}^+} .$$

The adjoint spectra are plotted according to an expanded linear ordinate scale placed on the right side of the figures. This allows the adjoint variations to be displayed more clearly.

The LIB-IV weighting-function curve is normalized so that integrating it over the group-structure energy range will give 100. This curve is provided so that you can compare the cross-section averaging function with the spectra produced by the averaged cross sections. As an aid to judging potential trouble areas, I call your attention to the slope differences between 0.8 and 2 MeV. Similar differences have been shown⁹ to cause ~5% errors in the pertinent group absorption cross sections for Fe and ¹⁰B. Smaller (larger) errors occur with flatter (steeper) cross-section behavior.

Such difficulties with the LIB-IV weighting function has led to the adoption of a new weighting function (PRE-V) for the processing of ENDF/B-V data. The LIB-IV and PRE-V weighting functions are compared in Figs. 1 and 2. The Pre-V weighting function does not have the discontinuous slope changes of the LIB-IV weighting function, and a fusion peak has been added to the PRE-V weighting function.

The normalized edge flux is included in the figures to show how the spectral shape changes as one proceeds from the core center to the reactor edge. Compared to the central flux, the edge flux has more structure because it has been influenced by more materials.

The computer code MINX³ was used to generate a 50-group library (LIB-IV⁴) from the ENDF/B-IV⁵ data. LIB-IV and the benchmark specifications¹ were used in the computer code LDX⁶ to compute one-dimensional (1-D) diffusion theory flux and adjoint spectra. The effective cross sections generated with LDX were also used in the computer code 2DB⁷ to compute two-dimensional (2-D) diffusion theory flux and adjoint spectra. LDX was also used to generate effective cross sections for the computer code ONETRAN.⁸ ONETRAN was then used to compute 1-D, $S_{16}P_{1/2}$ transport theory flux and adjoint spectra.

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$$\phi_i = \frac{100}{\Delta u_i} \frac{\phi_{i,0}}{\sum_{j=1}^{50} \phi_{j,0}} .$$

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When such curves are compared, they reveal trends and differences much more easily than if histograms were plotted on top of each other. However, if you

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$$\phi_i^+ = \frac{\phi_{i,0}^+}{\sum_{j=1}^{50} \chi_j \phi_{j,0}^+} .$$

The adjoint spectra are plotted according to an expanded linear ordinate scale placed on the right side of the figures. This allows the adjoint variations to be displayed more clearly.

The LIB-IV weighting-function curve is normalized so that integrating it over the group-structure energy range will give 100. This curve is provided so that you can compare the cross-section averaging function with the spectra produced by the averaged cross sections. As an aid to judging potential trouble areas, I call your attention to the slope differences between 0.8 and 2 MeV. Similar differences have been shown⁹ to cause ~5% errors in the pertinent group absorption cross sections for Fe and ¹⁰B. Smaller (larger) errors occur with flatter (steeper) cross-section behavior.

Such difficulties with the LIB-IV weighting function has led to the adoption of a new weighting function (PRE-V) for the processing of FNDF/B-V data. The LIB-IV and PRE-V weighting functions are compared in Figs. 1 and 2. The Pre-V weighting function does not have the discontinuous slope changes of the LIB-IV weighting function, and a fusion peak has been added to the PRE-V weighting function.

The normalized edge flux is included in the figures to show how the spectral shape changes as one proceeds from the core center to the reactor edge. Compared to the central flux, the edge flux has more structure because it has been influenced by more materials.

Fig. 1. Weighting functions.

Fig. 2. Weighting functions.

In the formulation of the shielding-factor method, the cross-section averaging weighting function is actually an approximation to the collision density, so it is somewhat unfair to compare the LIB-IV weighting function with the flux spectra. The product of the central flux and the central macroscopic transport cross section is included in the figures to provide a more valid comparison to the LIB-IV weighting function. The figures show that the transport reaction rate is generally smoother than the flux alone. This is encouraging because the smoother reaction rate is more easily approximated or represented with a smooth weighting function.

Occasionally it is useful to see the central flux spectra from all benchmarks plotted on the same graph, as in Figs. 3 and 4. No attempt was made to label each curve. These figures may answer some questions about the collective behavior of the spectra, or certain hypotheses can be roughly tested against the collection.

IV. NUMERICAL RESULTS

Appendix B contains three tables of 50-group numerical spectra for each benchmark. The first table for each benchmark contains three versions of the central flux spectrum as calculated with 1-D diffusion theory, 1-D transport theory, and 2-D diffusion theory. The second table contains the same versions of the edge-flux spectrum, and similarly, the third table contains the central adjoint spectrum. (No 2-D calculations were made for JEZEBEL or GODIVA, and no adjoint calculations were made for SEFOR.)

The number at the bottom of the "Energy Boundary" column is the lowest energy of the 50-group structure. The numbers at the bottom of the other columns are the sums of the respective columns. All of the flux spectra have been normalized to sum to 100. All of the adjoint spectra have been normalized as described in Sec. III above.

The numerical spectra are presented to provide a precise record of the points used in drawing the curves, to allow independent curve drawing, and to compare precisely with other calculations of the spectra. More importantly, you can observe how the various modes of calculation affect the spectra.

Fig. 3. Central flux spectra.

Fig. 4. Central flux spectra.

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APPENDIX A

GRAPHICAL DATA

This appendix contains the spectra curves described in the text. There are two figures for each benchmark. The first figure is scaled so that the entire curve for each spectrum is contained in the figure, i.e., an overall view. The second figure is scaled so that the more structured, more important high-energy end of each spectrum is magnified, i.e., details are more clearly revealed.

There are a few places where some of the curves show unrealistic behavior. They are not caused by errors in the physics codes; they are caused by using too simple an interpolation formula in regions where the spectra change greatly.

Fig. A-1. JEZEBEL spectra.

Fig. A-2. JEZEBEL spectra.

Fig. A-3. VERA-11A spectra.

Fig. A-4. VERA-11A spectra.

Fig. A-5. ZPR-3-48 spectra.

Fig. A-6. ZPR-3-48 spectra.

Fig. A-7. ZEBRA-3 spectra.

Fig. A-8. ZEBRA-3 spectra.

Fig. A-9. GODIVA spectra.

Fig. A-10. GODIVA spectra.

Fig. A-11. VERA-1B spectra.

Fig. A-12. VERA-1B spectra.

Fig. A-13. ZPR-3-6F spectra.

Fig. A-14. ZPR-3-6F spectra.

Fig. A-15. ZPR-3-11 spectra.

Fig. A-16. ZPR-3-11 spectra.

Fig. A-17. ZPR-3-12 spectra.

Fig. A-18. ZPR-3-12 spectra.

Fig. A-19. ZEBRA-2 spectra.

Fig. A-20. ZEBRA-2 spectra.

Fig. A-21. ZPPR-2 spectra.

Fig. A-22. ZPPR-2 spectra.

Fig. A-23. ZPR-6-7 spectra.

Fig. A-24. ZPR-6-7 spectra.

Fig. A-25. ZPR-3-56B spectra.

Fig. A-26. ZPR-3-56B spectra.

Fig. A-27. SEFOR spectra.

Fig. A-28. SEFOR spectra.

Fig. A-29. ZPR-6-6A spectra.

Fig. A-30. ZPR-6-6A spectra.

Fig. A-31. SNEAK-7A spectra.

Fig. A-32. SNEAK-7A spectra.

Fig. A-33. SNEAK-7B spectra.

Fig. A-34. SNEAK-7B spectra.

APPENDIX B

NUMERICAL DATA

This appendix contains the numerical spectra described in the text. There are three tables for each benchmark. The first table features the central flux spectrum, the second features the edge flux spectrum, and the third contains the central adjoint spectrum. Each table shows the spectrum as calculated in three different ways: with 1-D diffusion theory, with 1-D transport theory, and with 2-D diffusion theory.

The energy boundaries are given in units of electron volts (eV). The flux units are neutrons per square centimeter per second ($\text{n/cm}^2/\text{s}$). The adjoint units are proportional to reactivity gain per neutron insertion per second ($\rho/\text{n/s}$).

TABLE B-1

JEZEHEL CENTRAL FLUX SPECTRA

GROUP	ENERGY BOUNDARY (EV)	1-D DIFFUSION THEORY (N/CM2/S)	1-D TRANSPORT THEORY (N/CM2/S)
1	1.9971E+07	1.8763E-01	2.0315E-01
2	1.0000E+07	2.3033E+00	2.4375E+00
3	6.0653E+06	8.6792E+00	8.9037E+00
4	3.6788E+06	1.5628E+01	1.5783E+01
5	2.2313E+06	1.8436E+01	1.8555E+01
6	1.3534E+06	1.7457E+01	1.7608E+01
7	8.2085E+05	1.4251E+01	1.4233E+01
8	4.9787E+05	5.5659E+00	5.4899E+00
9	3.8774E+05	4.4882E+00	4.3878E+00
10	3.0197E+05	3.4990E+00	3.3937E+00
11	2.3518E+05	2.6630E+00	2.5630E+00
12	1.8316E+05	2.0207E+00	1.9265E+00
13	1.4264E+05	1.5360E+00	1.4529E+00
14	1.1109E+05	1.1321E+00	1.0631E+00
15	8.6517E+04	7.6106E-01	7.0941E-01
16	6.7379E+04	4.8181E-01	4.4570E-01
17	5.2475E+04	3.3246E-01	3.0610E-01
18	4.0868E+04	2.0739E-01	1.8955E-01
19	3.1828E+04	1.3168E-01	1.1983E-01
20	2.4788E+04	8.0612E-02	7.6793E-02
21	1.9305E+04	5.4468E-02	5.2315E-02
22	1.5034E+04	3.6564E-02	3.5185E-02
23	1.1709E+04	2.3032E-02	2.2081E-02
24	9.1188E+03	1.5234E-02	1.4645E-02
25	7.1017E+03	1.0052E-02	9.7080E-03
26	5.5308E+03	6.6089E-03	6.4154E-03
27	4.3074E+03	4.2402E-03	4.1192E-03
28	3.3546E+03	2.5570E-03	2.4821E-03
29	2.6126E+03	1.7946E-03	1.7576E-03
30	2.0347E+03	1.2180E-03	1.1856E-03
31	1.5846E+03	8.0717E-04	7.7419E-04
32	1.2341E+03	4.6629E-04	4.5950E-04
33	9.6112E+02	3.2398E-04	3.1435E-04
34	7.4852E+02	2.5032E-04	2.4490E-04
35	5.8295E+02	1.2008E-04	1.2148E-04
36	4.5400E+02	7.5761E-05	7.3007E-05
37	3.5358E+02	5.5298E-05	5.3570E-05
38	2.7536E+02	4.2980E-05	4.0727E-05
39	1.6702E+02	2.8450E-07	2.6944E-07
40	1.0130E+02	9.9056E-10	9.3957E-10
41	6.1442E+01	5.1158E-12	4.9846E-12
42	3.7267E+01	4.0988E-14	4.1433E-14
43	2.2603E+01	1.0899E-16	1.1252E-16
44	1.3710E+01	3.0418E-19	3.1763E-19
45	8.3153E+00	1.1218E-21	1.1822E-21
46	5.0435E+00	6.8302E-24	7.1621E-24
47	3.0590E+00	3.0071E-26	3.1428E-26
48	1.8554E+00	5.2426E-29	5.4874E-29
49	1.1254E+00	3.8119E-32	3.9928E-32
50	6.8256E-01	1.2817E-35	1.3426E-35
	1.0000E-05	1.0000E+02	1.0000E+02

TABLE B-11

JEZEBEL EDGE FLUX SPECTRA

GROUP	ENERGY BOUNDARY (eV)	1-D DIFFUSION THEORY (N/CM ² /S)	1-D TRANSPORT THEORY (N/CM ² /S)
1	1.9971E+07	2.3823E-01	2.2772E-01
2	1.0000E+07	2.7792E+00	2.6725E+00
3	6.0653E+06	9.7425E+00	9.4516E+00
4	3.6788E+06	1.6794E+01	1.6416E+01
5	2.2313E+06	1.9390E+01	1.9106E+01
6	1.3534E+06	1.8046E+01	1.7985E+01
7	8.2085E+05	1.3898E+01	1.4104E+01
8	4.9787E+05	5.1055E+00	5.2590E+00
9	3.8774E+05	3.9465E+00	4.1012E+00
10	3.0197E+05	2.9593E+00	3.0986E+00
11	2.3518E+05	2.1677E+00	2.2855E+00
12	1.8316E+05	1.5659E+00	1.6650E+00
13	1.4264E+05	1.1365E+00	1.2179E+00
14	1.1109E+05	8.0361E-01	8.6662E-01
15	8.6517E+04	5.2074E-01	5.6389E-01
16	6.7379E+04	3.1962E-01	3.4666E-01
17	5.2475E+04	2.1484E-01	2.3370E-01
18	4.0868E+04	1.3132E-01	1.4255E-01
19	3.1828E+04	8.2450E-02	8.9173E-02
20	2.4788E+04	5.3779E-02	5.6948E-02
21	1.9305E+04	3.6412E-02	3.8520E-02
22	1.5034E+04	2.4358E-02	2.5752E-02
23	1.1709E+04	1.5294E-02	1.6104E-02
24	9.1188E+03	1.0131E-02	1.0624E-02
25	7.1017E+03	6.6956E-03	6.9876E-03
26	5.5308E+03	4.4175E-03	4.5833E-03
27	4.3074E+03	2.8565E-03	2.9466E-03
28	3.3546E+03	1.7105E-03	1.7478E-03
29	2.6126E+03	1.2267E-03	1.2467E-03
30	2.0347E+03	8.2723E-04	8.4350E-04
31	1.5846E+03	5.3960E-04	5.5301E-04
32	1.2341E+03	3.2825E-04	3.2596E-04
33	9.6112E+02	2.2247E-04	2.2441E-04
34	7.4852E+02	1.7446E-04	1.7534E-04
35	5.8295E+02	9.0792E-05	8.5875E-05
36	4.5400E+02	5.2167E-05	5.2650E-05
37	3.5358E+02	3.7995E-05	3.7096E-05
38	2.7536E+02	2.8410E-05	2.8404E-05
39	1.6702E+02	1.5557E-07	1.6013E-07
40	1.0130E+02	4.4760E-10	4.7275E-10
41	6.1442E+01	2.5398E-12	2.5124E-12
42	3.7267E+01	2.2124E-14	2.4573E-14
43	2.2603E+01	5.0286E-17	5.4782E-17
44	1.3710E+01	1.2530E-19	1.4287E-19
45	8.3153E+00	4.5200E-22	5.5247E-22
46	5.0435E+00	2.7029E-24	3.5892E-24
47	3.0590E+00	1.0368E-26	1.4404E-26
48	1.8554E+00	1.4847E-29	2.0891E-29
49	1.1254E+00	9.5964E-33	1.3340E-32
50	6.8256E-01	3.1501E-36	4.2876E-36
	1.0000E-05	1.0000E+02	1.0000E+02

TABLE B-III

JEZEBEL CENTRAL ADJOINT SPECTRA

GROUP	ENERGY BOUNDARY (EV)	1-D DIFFUSION THEORY (RHO/N/S)	1-D TRANSPORT THEORY (RHO/N/S)
1	1.9971E+07	1.4787E+00	1.5934E+00
2	1.0000E+07	1.2279E+00	1.2958E+00
3	6.0653E+06	1.0123E+00	1.0408E+00
4	3.6788E+06	1.0318E+00	1.0432E+00
5	2.2313E+06	1.0207E+00	1.0241E+00
6	1.3534E+06	9.5194E-01	9.5070E-01
7	8.2085E+05	9.2211E-01	9.0474E-01
8	4.9787E+05	9.2239E-01	8.8942E-01
9	3.8774E+05	9.2980E-01	8.8685E-01
10	3.0197E+05	9.3514E-01	8.8377E-01
11	2.3518E+05	9.5404E-01	8.9390E-01
12	1.8316E+05	9.9725E-01	9.2467E-01
13	1.4264E+05	1.0562E+00	9.7029E-01
14	1.1109E+05	1.0850E+00	9.9022E-01
15	8.6517E+04	1.1078E+00	1.0055E+00
16	6.7379E+04	1.1231E+00	1.0152E+00
17	5.2475E+04	1.1226E+00	1.0117E+00
18	4.0868E+04	1.1392E+00	1.0250E+00
19	3.1828E+04	1.1317E+00	1.0220E+00
20	2.4788E+04	1.0446E+00	9.8845E-01
21	1.9305E+04	1.0247E+00	9.7435E-01
22	1.5034E+04	1.0194E+00	9.6961E-01
23	1.1709E+04	1.0311E+00	9.7885E-01
24	9.1188E+03	1.0617E+00	1.0104E+00
25	7.1017E+03	9.9921E-01	9.5585E-01
26	5.5308E+03	1.0090E+00	9.6995E-01
27	4.3074E+03	1.0736E+00	1.0331E+00
28	3.3546E+03	1.1853E+00	1.1408E+00
29	2.6126E+03	1.0137E+00	9.8428E-01
30	2.0347E+03	1.0665E+00	1.0285E+00
31	1.5846E+03	1.3639E+00	1.2985E+00
32	1.2341E+03	1.3750E+00	1.3447E+00
33	9.6112E+02	1.3177E+00	1.2690E+00
34	7.4852E+02	1.1828E+00	1.1506E+00
35	5.8295E+02	1.6728E+00	1.6790E+00
36	4.5400E+02	1.5035E+00	1.4374E+00
37	3.5358E+02	1.4968E+00	1.4415E+00
38	2.7536E+02	1.6185E+00	1.5265E+00
39	1.6702E+02	1.6989E+00	1.6048E+00
40	1.0130E+02	2.2248E+00	2.1114E+00
41	6.1442E+01	1.4832E+00	1.4274E+00
42	3.7267E+01	1.3083E+00	1.2299E+00
43	2.2603E+01	1.9241E+00	1.8389E+00
44	1.3710E+01	1.9246E+00	1.8278E+00
45	8.3153E+00	2.0721E+00	1.9449E+00
46	5.0435E+00	2.4511E+00	2.2458E+00
47	3.0590E+00	2.3577E+00	2.1968E+00
48	1.8554E+00	1.4069E+00	1.3348E+00
49	1.1254E+00	8.8686E-01	8.4258E-01
50	6.8256E-01	2.0502E+00	1.9457E+00
	1.0000E-05	6.4998E+01	6.2103E+01

TABLE B-IV

VERA-11A CENTRAL FLUX SPECTRA

GROUP	ENERGY BOUNDARY (EV)	1-D DIFFUSION THEORY (N/CM2/S)	1-D TRANSPORT THEORY (N/CM2/S)	2-D DIFFUSION THEORY (N/CM2/S)
1	1.9971E+07	7.1900E-02	7.9041E-02	7.1681E-02
2	1.0000E+07	8.0021E-01	8.5282E-01	7.9765E-01
3	6.0653E+06	3.7532E+00	3.9184E+00	3.7383E+00
4	3.6788E+06	8.3851E+00	8.6096E+00	8.3457E+00
5	2.2313E+06	1.1323E+01	1.1772E+01	1.1276E+01
6	1.3534E+06	1.2190E+01	1.2567E+01	1.2153E+01
7	8.2085E+05	1.2274E+01	1.2429E+01	1.2265E+01
8	4.9787E+05	5.8597E+00	5.8813E+00	5.8616E+00
9	3.8774E+05	5.5170E+00	5.4911E+00	5.5244E+00
10	3.0197E+05	5.0626E+00	4.9964E+00	5.0730E+00
11	2.3518E+05	4.5927E+00	4.4981E+00	4.6041E+00
12	1.8316E+05	4.1685E+00	4.0549E+00	4.1802E+00
13	1.4264E+05	3.7453E+00	3.6238E+00	3.7568E+00
14	1.1109E+05	3.3064E+00	3.1834E+00	3.3174E+00
15	8.6517E+04	2.9429E+00	2.8236E+00	2.9537E+00
16	6.7379E+04	2.6098E+00	2.4930E+00	2.6201E+00
17	5.2475E+04	2.2985E+00	2.1852E+00	2.3082E+00
18	4.0868E+04	1.9090E+00	1.8056E+00	1.9169E+00
19	3.1828E+04	1.6257E+00	1.5365E+00	1.6320E+00
20	2.4788E+04	1.5203E+00	1.4340E+00	1.5257E+00
21	1.9305E+04	1.2679E+00	1.1954E+00	1.2722E+00
22	1.5034E+04	1.0653E+00	1.0048E+00	1.0687E+00
23	1.1709E+04	8.5830E-01	8.1101E-01	8.6081E-01
24	9.1188E+03	6.8785E-01	6.5173E-01	6.8974E-01
25	7.1017E+03	5.6846E-01	5.4155E-01	5.7167E-01
26	5.5308E+03	4.4411E-01	4.2630E-01	4.4776E-01
27	4.3074E+03	3.4834E-01	3.3666E-01	3.5207E-01
28	3.3546E+03	2.4908E-01	2.4224E-01	2.5233E-01
29	2.6126E+03	1.7687E-01	1.7407E-01	1.7957E-01
30	2.0347E+03	1.3322E-01	1.3261E-01	1.3550E-01
31	1.5846E+03	9.3312E-02	9.3610E-02	9.4891E-02
32	1.2341E+03	5.8678E-02	5.9431E-02	5.9655E-02
33	9.6112E+02	3.8213E-02	3.9098E-02	3.8840E-02
34	7.4852E+02	2.4739E-02	2.5576E-02	2.5138E-02
35	5.8295E+02	1.2956E-02	1.3565E-02	1.3163E-02
36	4.5400E+02	8.2932E-03	8.7706E-03	8.4247E-03
37	3.5358E+02	4.4877E-03	4.7932E-03	4.5588E-03
38	2.7536E+02	3.0931E-03	3.3411E-03	3.1416E-03
39	1.6702E+02	8.3912E-04	9.1703E-04	8.5211E-04
40	1.0130E+02	1.4465E-04	1.5939E-04	1.4686E-04
41	6.1442E+01	2.6190E-05	2.9196E-05	2.6583E-05
42	3.7267E+01	1.0782E-05	1.2197E-05	1.0932E-05
43	2.2603E+01	1.5538E-06	1.7768E-06	1.5749E-06
44	1.3710E+01	2.4662E-07	2.8470E-07	2.4984E-07
45	8.3153E+00	5.9083E-08	6.9040E-08	5.9800E-08
46	5.0435E+00	2.3191E-08	2.7299E-08	2.3439E-08
47	3.0590E+00	7.0328E-09	8.3243E-09	7.1020E-09
48	1.8554E+00	8.3029E-10	9.8646E-10	8.3828E-10
49	1.1254E+00	3.2743E-11	3.8978E-11	3.3057E-11
50	6.8256E-01	4.4542E-13	5.3036E-13	4.4968E-13
	1.0000E-05	1.0000E+02	1.0000E+02	1.0000E+02

TABLE B-V

VERA-11A EDGE FLUX SPECTRA

GROUP	ENERGY BOUNDARY (EV)	1-D DIFFUSION THEORY (N/CM ² /S)	1-D TRANSPORT THEORY (N/CM ² /S)	2-D DIFFUSION THEORY (N/CM ² /S)
1	1.9971E+07	9.3732E-03	1.0297E-02	9.0423E-03
2	1.0000E+07	9.6387E-02	1.0108E-01	9.2660E-02
3	6.0653E+06	3.4554E-01	3.5753E-01	3.3382E-01
4	3.6788E+06	6.7357E-01	6.9058E-01	6.5825E-01
5	2.2313E+06	1.0108E+00	1.0472E+00	1.0053E+00
6	1.3534E+06	2.5851E+00	2.7044E+00	2.6569E+00
7	8.2085E+05	9.5054E+00	9.5069E+00	9.5966E+00
8	4.9787E+05	6.4394E+00	6.4265E+00	6.5539E+00
9	3.8774E+05	7.9028E+00	7.8547E+00	7.9915E+00
10	3.0197E+05	8.1604E+00	8.1227E+00	8.2410E+00
11	2.3518E+05	7.5986E+00	7.5923E+00	7.7043E+00
12	1.8316E+05	7.1533E+00	7.1712E+00	7.2439E+00
13	1.4264E+05	6.9823E+00	7.0090E+00	7.0354E+00
14	1.1109E+05	6.5672E+00	6.6360E+00	6.6434E+00
15	8.6517E+04	7.0448E+00	7.1106E+00	7.0698E+00
16	6.7379E+04	6.3456E+00	6.4487E+00	6.3304E+00
17	5.2475E+04	6.0901E+00	6.1076E+00	6.0004E+00
18	4.0868E+04	4.2310E+00	4.1718E+00	4.1055E+00
19	3.1828E+04	2.5873E+00	2.5198E+00	2.5589E+00
20	2.4788E+04	3.9269E+00	3.7962E+00	3.6820E+00
21	1.9305E+04	1.8456E+00	1.8001E+00	1.7383E+00
22	1.5034E+04	1.2127E+00	1.1850E+00	1.1383E+00
23	1.1709E+04	7.0491E-01	6.8842E-01	6.6057E-01
24	9.1188E+03	3.1163E-01	3.0810E-01	3.0036E-01
25	7.1017E+03	2.3953E-01	2.3652E-01	2.3006E-01
26	5.5308E+03	1.4538E-01	1.4354E-01	1.4003E-01
27	4.3074E+03	1.1999E-01	1.1611E-01	1.1681E-01
28	3.3546E+03	6.5930E-02	6.4444E-02	6.4375E-02
29	2.6126E+03	4.1011E-02	3.4267E-02	3.9409E-02
30	2.0347E+03	3.0918E-02	1.8977E-02	3.0040E-02
31	1.5846E+03	1.3781E-02	9.9254E-03	1.4478E-02
32	1.2341E+03	5.3810E-03	3.8697E-03	5.8316E-03
33	9.6112E+02	3.5178E-03	2.4898E-03	3.8943E-03
34	7.4852E+02	1.5950E-03	1.1819E-03	1.8544E-03
35	5.8295E+02	9.2453E-04	7.4379E-04	1.1056E-03
36	4.5400E+02	5.0590E-04	4.5010E-04	6.2798E-04
37	3.5358E+02	3.3798E-04	2.9992E-04	4.1817E-04
38	2.7536E+02	3.8117E-04	2.2415E-04	4.3878E-04
39	1.6702E+02	5.4537E-05	3.8893E-05	6.6886E-05
40	1.0130E+02	1.0620E-05	7.1630E-06	1.2340E-05
41	6.1442E+01	1.7485E-06	1.3512E-06	2.1659E-06
42	3.7267E+01	1.9686E-07	1.5412E-07	2.3732E-07
43	2.2603E+01	1.1065E-08	8.6634E-09	1.3418E-08
44	1.3710E+01	1.7112E-09	1.5687E-09	2.2290E-09
45	8.3153E+00	3.3120E-11	2.9121E-11	4.4313E-11
46	5.0435E+00	2.2387E-11	3.1721E-11	3.9509E-11
47	3.0590E+00	4.8682E-11	7.5976E-11	8.4244E-11
48	1.8554E+00	2.8071E-11	4.2598E-11	4.4668E-11
49	1.1254E+00	5.8584E-12	8.7487E-12	8.9229E-12
50	6.8256E-01	3.5988E-13	5.3623E-13	5.6147E-13
	1.0000E-05	1.0000E+02	1.0000E+02	1.0000E+02

TABLE B-VI

VERA-11A CENTRAL ADJOINT SPECTRA

GROUP	ENERGY BOUNDARY (EV)	1-D DIFFUSION THEORY (RHO/N/S)	1-D TRANSPORT THEORY (RHO/N/S)	2-D DIFFUSION THEORY (RHO/N/S)
1	1.9971E+07	1.2679E+00	1.2791E+00	1.2711E+00
2	1.0000E+07	1.0692E+00	1.0938E+00	1.0714E+00
3	6.0653E+06	9.9075E-01	1.0096E+00	9.9216E-01
4	3.6788E+06	1.0230E+00	1.0277E+00	1.0238E+00
5	2.2313E+06	9.7985E-01	9.8834E-01	9.8030E-01
6	1.3534E+06	9.5466E-01	9.5605E-01	9.5403E-01
7	8.2085E+05	9.8598E-01	9.6937E-01	9.8479E-01
8	4.9787E+05	1.0206E+00	9.9187E-01	1.0190E+00
9	3.8774E+05	1.0343E+00	1.0021E+00	1.0326E+00
10	3.0197E+05	1.0537E+00	1.0177E+00	1.0517E+00
11	2.3518E+05	1.0743E+00	1.0358E+00	1.0720E+00
12	1.8316E+05	1.0895E+00	1.0498E+00	1.0870E+00
13	1.4264E+05	1.1009E+00	1.0608E+00	1.0981E+00
14	1.1109E+05	1.1101E+00	1.0696E+00	1.1069E+00
15	8.6517E+04	1.1122E+00	1.0728E+00	1.1087E+00
16	6.7379E+04	1.1142E+00	1.0748E+00	1.1102E+00
17	5.2475E+04	1.1180E+00	1.0793E+00	1.1136E+00
18	4.0868E+04	1.1283E+00	1.0900E+00	1.1236E+00
19	3.1828E+04	1.1314E+00	1.0950E+00	1.1266E+00
20	2.4788E+04	1.1146E+00	1.0766E+00	1.1097E+00
21	1.9305E+04	1.1284E+00	1.0894E+00	1.1233E+00
22	1.5034E+04	1.1390E+00	1.0990E+00	1.1337E+00
23	1.1709E+04	1.1569E+00	1.1159E+00	1.1513E+00
24	9.1188E+03	1.1739E+00	1.1319E+00	1.1682E+00
25	7.1017E+03	1.1732E+00	1.1304E+00	1.1673E+00
26	5.5308E+03	1.1989E+00	1.1559E+00	1.1926E+00
27	4.3074E+03	1.2338E+00	1.1876E+00	1.2272E+00
28	3.3546E+03	1.2591E+00	1.2123E+00	1.2523E+00
29	2.6126E+03	1.2658E+00	1.2192E+00	1.2592E+00
30	2.0347E+03	1.3323E+00	1.2760E+00	1.3256E+00
31	1.5846E+03	1.4317E+00	1.3685E+00	1.4249E+00
32	1.2341E+03	1.4314E+00	1.3690E+00	1.4248E+00
33	9.6112E+02	1.4354E+00	1.3727E+00	1.4290E+00
34	7.4852E+02	1.4508E+00	1.3886E+00	1.4445E+00
35	5.8295E+02	1.5973E+00	1.5296E+00	1.5905E+00
36	4.5400E+02	1.5719E+00	1.4826E+00	1.5452E+00
37	3.5358E+02	1.5337E+00	1.4664E+00	1.5273E+00
38	2.7536E+02	1.5873E+00	1.5165E+00	1.5809E+00
39	1.6702E+02	1.7114E+00	1.6354E+00	1.7048E+00
40	1.0130E+02	2.0273E+00	1.9372E+00	2.0196E+00
41	6.1442E+01	1.5475E+00	1.4816E+00	1.5414E+00
42	3.7267E+01	1.5727E+00	1.5012E+00	1.5657E+00
43	2.2603E+01	1.9903E+00	1.8091E+00	1.8832E+00
44	1.3710E+01	1.9434E+00	1.8580E+00	1.9359E+00
45	8.3153E+00	1.9500E+00	1.8587E+00	1.9420E+00
46	5.0435E+00	2.1317E+00	2.0207E+00	2.1227E+00
47	3.0590E+00	1.9047E+00	1.8102E+00	1.8975E+00
48	1.8554E+00	1.1728E+00	1.1185E+00	1.1684E+00
49	1.1254E+00	8.3568E-01	7.9700E-01	8.3246E-01
50	6.8256E-01	2.0431E+00	1.9465E+00	2.0352E+00
	1.0000E-05	6.6285E+01	6.3926E+01	6.6054E+01

TABLE B-VII

ZPR-3-48 CENTRAL FLUX SPECTRA

GROUP	ENERGY BOUNDARY (EV)	1-D DIFFUSION THEORY (N/CM2/S)	1-D TRANSPORT THEORY (N/CM2/S)	2-D DIFFUSION THEORY (N/CM2/S)
1	1.9971E+07	3.5278E-02	3.5256E-02	3.5322E-02
2	1.0000E+07	3.8344E-01	3.8206E-01	3.8403E-01
3	6.0653E+06	1.7067E+00	1.6970E+00	1.7093E+00
4	3.6788E+06	3.9565E+00	3.9312E+00	3.9617E+00
5	2.2313E+06	6.0906E+00	6.0582E+00	6.0957E+00
6	1.3534E+06	7.7415E+00	7.7115E+00	7.7443E+00
7	8.2085E+05	1.0247E+01	1.0225E+01	1.0247E+01
8	4.9787E+05	5.6878E+00	5.6783E+00	5.6871E+00
9	3.8774E+05	5.8219E+00	5.8168E+00	5.8205E+00
10	3.0197E+05	5.5697E+00	5.5672E+00	5.5680E+00
11	2.3518E+05	5.2095E+00	5.2094E+00	5.2079E+00
12	1.8316E+05	5.0695E+00	5.0705E+00	5.0680E+00
13	1.4264E+05	4.7649E+00	4.7680E+00	4.7635E+00
14	1.1109E+05	4.3732E+00	4.3759E+00	4.3720E+00
15	8.6517E+04	4.1214E+00	4.1276E+00	4.1204E+00
16	6.7379E+04	3.6774E+00	3.6832E+00	3.6766E+00
17	5.2475E+04	3.4879E+00	3.4937E+00	3.4874E+00
18	4.0868E+04	2.9293E+00	2.9330E+00	2.9290E+00
19	3.1828E+04	2.6131E+00	2.6265E+00	2.6130E+00
20	2.4788E+04	2.7887E+00	2.8025E+00	2.7887E+00
21	1.9305E+04	2.3106E+00	2.3228E+00	2.3107E+00
22	1.5034E+04	2.0540E+00	2.0649E+00	2.0541E+00
23	1.1709E+04	1.6935E+00	1.7026E+00	1.6935E+00
24	9.1188E+03	1.3098E+00	1.3170E+00	1.3097E+00
25	7.1017E+03	1.1819E+00	1.1885E+00	1.1817E+00
26	5.5308E+03	9.6315E-01	9.6847E-01	9.6296E-01
27	4.3074E+03	6.1041E-01	6.1405E-01	6.1025E-01
28	3.3546E+03	2.0884E-01	2.1001E-01	2.0878E-01
29	2.6126E+03	5.2292E-01	5.2560E-01	5.2275E-01
30	2.0347E+03	6.9762E-01	7.0247E-01	6.9727E-01
31	1.5846E+03	6.1702E-01	6.2142E-01	6.1654E-01
32	1.2341E+03	4.5075E-01	4.5423E-01	4.5027E-01
33	9.6112E+02	3.4713E-01	3.5005E-01	3.4662E-01
34	7.4852E+02	2.6062E-01	2.6302E-01	2.6012E-01
35	5.8295E+02	1.7210E-01	1.7380E-01	1.7170E-01
36	4.5400E+02	1.2347E-01	1.2471E-01	1.2313E-01
37	3.5358E+02	7.7597E-02	7.8421E-02	7.7355E-02
38	2.7536E+02	8.3594E-02	8.4697E-02	8.3275E-02
39	1.6702E+02	2.9701E-02	3.0148E-02	2.9569E-02
40	1.0130E+02	7.5046E-03	7.6325E-03	7.4674E-03
41	6.1442E+01	1.7859E-03	1.8189E-03	1.7763E-03
42	3.7267E+01	7.9496E-04	8.1196E-04	7.8986E-04
43	2.2603E+01	1.2650E-04	1.2948E-04	1.2564E-04
44	1.3710E+01	2.9537E-05	3.0281E-05	2.9320E-05
45	8.3153E+00	4.2358E-06	4.3516E-06	4.2034E-06
46	5.0435E+00	2.3337E-06	2.3989E-06	2.3125E-06
47	3.0590E+00	1.1955E-06	1.2299E-06	1.1830E-06
48	1.8554E+00	2.4879E-07	2.5621E-07	2.4605E-07
49	1.1254E+00	1.6489E-08	1.6997E-08	1.6305E-08
50	6.8256E-01	5.0378E-10	5.1940E-10	4.9816E-10
	1.0000E-05	1.0000E+02	1.0000E+02	1.0000E+02

TABLE B-VIII
ZPR-3-48 EDGE FLUX SPECTRA

GROUP	ENERGY BOUNDARY (EV)	1-D DIFFUSION THEORY (N/CM2/S)	1-D TRANSPORT THEORY (N/CM2/S)	2-D DIFFUSION THEORY (N/CM2/S)
1	1.9971E+07	5.5165E-03	7.3405E-03	4.6785E-03
2	1.0000E+07	5.3197E-02	6.7967E-02	4.5479E-02
3	6.0653E+06	1.8807E-01	2.3695E-01	1.6114E-01
4	3.6788E+06	3.7096E-01	4.5773E-01	3.1621E-01
5	2.2313E+06	6.0099E-01	7.3442E-01	5.0946E-01
6	1.3534E+06	1.9550E+00	2.1924E+00	1.7281E+00
7	8.2085E+05	8.4677E+00	8.5640E+00	8.0695E+00
8	4.9787E+05	6.0130E+00	6.0259E+00	5.7992E+00
9	3.8774E+05	7.4163E+00	7.3925E+00	7.2831E+00
10	3.0197E+05	7.8147E+00	7.7887E+00	7.7853E+00
11	2.3518E+05	7.4813E+00	7.4724E+00	7.5589E+00
12	1.8316E+05	7.1322E+00	7.1411E+00	7.3673E+00
13	1.4264E+05	7.0125E+00	7.0303E+00	7.3816E+00
14	1.1109E+05	6.9178E+00	6.9607E+00	7.4424E+00
15	8.6517E+04	7.3443E+00	7.3901E+00	7.8697E+00
16	6.7379E+04	6.7153E+00	6.7894E+00	7.2033E+00
17	5.2475E+04	6.5554E+00	6.5463E+00	6.7084E+00
18	4.0868E+04	4.7762E+00	4.7151E+00	4.8738E+00
19	3.1828E+04	3.0698E+00	2.9985E+00	3.5728E+00
20	2.4788E+04	3.9314E+00	3.7978E+00	3.4730E+00
21	1.9305E+04	2.0890E+00	2.0176E+00	1.9505E+00
22	1.5034E+04	1.4091E+00	1.3556E+00	1.2526E+00
23	1.1709E+04	8.7510E-01	8.3593E-01	7.1417E-01
24	9.1188E+03	4.3156E-01	4.1468E-01	3.6367E-01
25	7.1017E+03	3.3471E-01	3.1822E-01	2.4214E-01
26	5.5308E+03	2.2355E-01	2.1083E-01	1.4505E-01
27	4.3074E+03	1.9626E-01	1.7931E-01	1.0229E-01
28	3.3546E+03	8.6375E-02	7.9437E-02	2.4669E-02
29	2.6126E+03	5.9954E-02	4.7368E-02	1.8273E-02
30	2.0347E+03	1.6050E-01	5.4301E-02	1.2262E-02
31	1.5846E+03	1.0101E-01	4.8965E-02	8.4306E-03
32	1.2341E+03	4.9211E-02	2.6289E-02	4.1781E-03
33	9.6112E+02	5.3171E-02	3.0563E-02	3.0725E-03
34	7.4852E+02	3.1035E-02	1.9756E-02	1.7710E-03
35	5.8295E+02	2.4107E-02	1.7877E-02	1.3245E-03
36	4.5400E+02	1.4704E-02	1.2366E-02	8.5170E-04
37	3.5358E+02	9.3990E-03	7.9427E-03	4.6984E-04
38	2.7536E+02	2.4924E-02	1.0531E-02	5.6574E-04
39	1.6702E+02	3.7435E-03	2.1283E-03	8.8100E-05
40	1.0130E+02	8.3825E-04	4.5884E-04	1.3922E-05
41	6.1442E+01	2.3118E-04	1.5960E-04	5.8707E-06
42	3.7267E+01	2.9905E-05	2.1734E-05	7.5449E-07
43	2.2603E+01	1.7134E-06	1.2494E-06	2.2470E-08
44	1.3710E+01	9.3499E-07	8.7583E-07	1.8068E-07
45	8.3153E+00	1.6120E-08	1.4766E-08	1.7721E-09
46	5.0435E+00	2.3815E-08	2.6948E-08	1.0486E-08
47	3.0590E+00	5.9401E-08	6.6632E-08	3.9224E-08
48	1.8554E+00	3.5951E-08	3.9799E-08	2.5584E-08
49	1.1254E+00	8.7187E-09	9.5734E-09	6.1415E-09
50	6.8256E-01	7.9613E-10	8.7085E-10	5.2919E-10
	1.0000E-05	1.0000E+02	1.0000E+02	1.0000E+02

TABLE B-1x

ZPR-3-48 CENTRAL ADJOINT SPECTRA

GROUP	ENERGY BOUNDARY (eV)	1-D		2-D	
		DIFFUSION THEORY (RHO/N/S)	TRANSPORT THEORY (RHO/N/S)	DIFFUSION THEORY (RHO/N/S)	
1	1.9971E+07	1.4839E+00	1.4962E+00	1.4859E+00	
2	1.0000E+07	1.2413E+00	1.2480E+00	1.2424E+00	
3	6.0653E+06	1.0960E+00	1.0984E+00	1.0965E+00	
4	3.6788E+06	1.0680E+00	1.0884E+00	1.0885E+00	
5	2.2313E+06	1.0075E+00	1.0075E+00	1.0075E+00	
6	1.3534E+06	9.0905E-01	9.0845E-01	9.0855E-01	
7	8.2085E+05	9.0524E-01	9.0347E-01	9.0470E-01	
8	4.9787E+05	8.9952E-01	8.9698E-01	8.9897E-01	
9	3.8774E+05	8.9217E-01	8.8960E-01	8.9166E-01	
10	3.0197E+05	8.8824E-01	8.8546E-01	8.8783E-01	
11	2.3518E+05	8.8398E-01	8.8134E-01	8.8369E-01	
12	1.8316E+05	8.7627E-01	8.7371E-01	8.7609E-01	
13	1.4264E+05	8.6760E-01	8.6525E-01	8.6753E-01	
14	1.1109E+05	8.5872E-01	8.5646E-01	8.5881E-01	
15	8.6517E+04	8.4605E-01	8.4423E-01	8.4624E-01	
16	6.7379E+04	8.3549E-01	8.3333E-01	8.3583E-01	
17	5.2475E+04	8.2755E-01	8.2566E-01	8.2602E-01	
18	4.0868E+04	8.2373E-01	8.2218E-01	8.2436E-01	
19	3.1828E+04	8.2164E-01	8.2052E-01	8.2240E-01	
20	2.4788E+04	8.1969E-01	8.1566E-01	8.2056E-01	
21	1.9305E+04	8.2992E-01	8.2586E-01	8.3106E-01	
22	1.5034E+04	8.3872E-01	8.3444E-01	8.4005E-01	
23	1.1709E+04	8.5237E-01	8.4810E-01	8.5389E-01	
24	9.1188E+03	8.6886E-01	8.6463E-01	8.7056E-01	
25	7.1017E+03	8.7936E-01	8.7512E-01	8.8113E-01	
26	5.5308E+03	9.0168E-01	8.9745E-01	9.0358E-01	
27	4.3074E+03	9.2466E-01	9.2055E-01	9.2667E-01	
28	3.3546E+03	9.3746E-01	9.3337E-01	9.3951E-01	
29	2.6126E+03	9.4212E-01	9.3793E-01	9.4417E-01	
30	2.0347E+03	9.7073E-01	9.6601E-01	9.7287E-01	
31	1.5846E+03	1.0260E+00	1.0204E+00	1.0283E+00	
32	1.2341E+03	1.0279E+00	1.0224E+00	1.0303E+00	
33	9.6112E+02	1.0739E+00	1.0679E+00	1.0764E+00	
34	7.4852E+02	1.1137E+00	1.1073E+00	1.1164E+00	
35	5.8295E+02	1.2245E+00	1.2170E+00	1.2276E+00	
36	4.5400E+02	1.1561E+00	1.1492E+00	1.1589E+00	
37	3.5358E+02	1.1751E+00	1.1687E+00	1.1780E+00	
38	2.7536E+02	1.2296E+00	1.2227E+00	1.2327E+00	
39	1.6702E+02	1.2202E+00	1.2128E+00	1.2232E+00	
40	1.0130E+02	1.4955E+00	1.4855E+00	1.4994E+00	
41	6.1442E+01	1.1743E+00	1.1665E+00	1.1773E+00	
42	3.7267E+01	9.9009E-01	9.8446E-01	9.9257E-01	
43	2.2603E+01	1.3272E+00	1.3182E+00	1.3306E+00	
44	1.3710E+01	1.5604E+00	1.5493E+00	1.5644E+00	
45	8.3153E+00	7.576E-01	7.5231E-01	7.5968E-01	
46	5.0435E+00	1.4262E+00	1.4140E+00	1.4297E+00	
47	3.0590E+00	1.3145E+00	1.3075E+00	1.3178E+00	
48	1.8554E+00	8.5607E-01	8.4928E-01	8.5829E-01	
49	1.1254E+00	6.6938E-01	6.6402E-01	6.7113E-01	
50	6.8256E-01	1.9231E+00	1.9058E+00	1.9282E+00	
	1.0000E-05	5.1559E+01	5.1346E+01	5.1640E+01	

TABLE B-X
ZEBRA-3 CENTRAL FLUX SPECTRA

GROUP	ENERGY BOUNDARY (EV)	1-D DIFFUSION THEORY (N/CM2/S)	1-D TRANSPORT THEORY (N/CM2/S)	2-D DIFFUSION THEORY (N/CM2/S)
1	1.9971E+07	4.5193E-02	4.5130E-02	4.5121E-02
2	1.0000E+07	5.3042E-01	5.2739E-01	5.2966E-01
3	6.0653E+06	2.0233E+00	2.0064E+00	2.0206E+00
4	3.6788E+06	3.9774E+00	3.9404E+00	3.9719E+00
5	2.2313E+06	5.5183E+00	5.4725E+00	5.5093E+00
6	1.3534E+06	8.8812E+00	8.8566E+00	8.8617E+00
7	8.2085E+05	1.5184E+01	1.5215E+01	1.5158E+01
8	4.9787E+05	8.7378E+00	8.7584E+00	8.7264E+00
9	3.8774E+05	8.8822E+00	8.9047E+00	8.8749E+00
10	3.0197E+05	8.2207E+00	8.2384E+00	8.2180E+00
11	2.3518E+05	7.1885E+00	7.1997E+00	7.1895E+00
12	1.8316E+05	6.2002E+00	6.2057E+00	6.2040E+00
13	1.4264E+05	5.3677E+00	5.3703E+00	5.3740E+00
14	1.1109E+05	4.6836E+00	4.6826E+00	4.6921E+00
15	8.6517E+04	4.0406E+00	4.0403E+00	4.0513E+00
16	6.7379E+04	3.3715E+00	3.3667E+00	3.3827E+00
17	5.2475E+04	2.7322E+00	2.7331E+00	2.7444E+00
18	4.0868E+04	1.5441E+00	1.5488E+00	1.5533E+00
19	3.1828E+04	9.3213E-01	9.3616E-01	9.3815E-01
20	2.4788E+04	8.7264E-01	8.7823E-01	8.7949E-01
21	1.9305E+04	4.4535E-01	4.4832E-01	4.4903E-01
22	1.5034E+04	2.7706E-01	2.7898E-01	2.7936E-01
23	1.1709E+04	1.4845E-01	1.4950E-01	1.4968E-01
24	9.1188E+03	8.0841E-02	8.1351E-02	8.1491E-02
25	7.1017E+03	5.2859E-02	5.3215E-02	5.3300E-02
26	5.5308E+03	2.5336E-02	2.5516E-02	2.5542E-02
27	4.3074E+03	2.2933E-02	2.3098E-02	2.3114E-02
28	3.3546E+03	7.3740E-03	7.4262E-03	7.4373E-03
29	2.6126E+03	2.6746E-03	2.6889E-03	2.6963E-03
30	2.0347E+03	1.6789E-03	1.7259E-03	1.6910E-03
31	1.5846E+03	8.1299E-04	8.2867E-04	8.1695E-04
32	1.2341E+03	3.2323E-04	3.2637E-04	3.2409E-04
33	9.6112E+02	1.9840E-04	2.0002E-04	1.9864E-04
34	7.4852E+02	1.4315E-04	1.4353E-04	1.4331E-04
35	5.8295E+02	6.1161E-05	6.0980E-05	6.1168E-05
36	4.5400E+02	3.9193E-05	3.8873E-05	3.9184E-05
37	3.5358E+02	2.6769E-05	2.6519E-05	2.6759E-05
38	2.7536E+02	2.4187E-05	2.4177E-05	2.4176E-05
39	1.6702E+02	1.1642E-06	1.1700E-06	1.1635E-06
40	1.0130E+02	3.9788E-08	4.0191E-08	3.9767E-08
41	6.1442E+01	1.2095E-09	1.2262E-09	1.2091E-09
42	3.7267E+01	6.9464E-11	7.0877E-11	6.9606E-11
43	2.2603E+01	1.2174E-12	1.2462E-12	1.2211E-12
44	1.3710E+01	3.2519E-14	3.3378E-14	3.2689E-14
45	8.3153E+00	4.6819E-16	4.8139E-16	4.7118E-16
46	5.0435E+00	3.9793E-17	4.1308E-17	4.1034E-17
47	3.0590E+00	3.2388E-18	3.3904E-18	3.4350E-18
48	1.8554E+00	8.9044E-20	9.3072E-20	9.5165E-20
49	1.1254E+00	7.8263E-22	8.1602E-22	8.3783E-22
50	6.8256E-01	3.1254E-24	3.2577E-24	3.3463E-24
	1.0000E-05	1.0000E+02	1.0000E+02	1.0000E+02

TABLE B-X1

ZEBRA-3 EDGE FLUX SPECTRA

GROUP	ENERGY BOUNDARY (eV)	1-D		1-D		2-D	
		DIFFUSION THEORY (N/CM ² /S)	TRANSPORT THEORY (N/CM ² /S)	DIFFUSION THEORY (N/CM ² /S)	TRANSPORT THEORY (N/CM ² /S)	DIFFUSION THEORY (N/CM ² /S)	TRANSPORT THEORY (N/CM ² /S)
1	1.9971E+07	9.8399E-03	1.1046E-02	8.9050E-03	8.9050E-03	8.9050E-03	8.9050E-03
2	1.0000E+07	1.0069E-01	1.1040E-01	9.1838E-02	9.1838E-02	9.1838E-02	9.1838E-02
3	6.0653E+06	3.5732E-01	3.8496E-01	3.2838E-01	3.2838E-01	3.2838E-01	3.2838E-01
4	3.6788E+06	6.7650E-01	7.1957E-01	6.2820E-01	6.2820E-01	6.2820E-01	6.2820E-01
5	2.2313E+06	1.0015E+00	1.0661E+00	9.3742E-01	9.3742E-01	9.3742E-01	9.3742E-01
6	1.3534E+06	2.5723E+00	2.7135E+00	2.4251E+00	2.4251E+00	2.4251E+00	2.4251E+00
7	8.2085E+05	9.7478E+00	9.7529E+00	9.2627E+00	9.2627E+00	9.2627E+00	9.2627E+00
8	4.9787E+05	6.7015E+00	6.6765E+00	6.4814E+00	6.4814E+00	6.4814E+00	6.4814E+00
9	3.8774E+05	8.0005E+00	7.9466E+00	7.8047E+00	7.8047E+00	7.8047E+00	7.8047E+00
10	3.0197E+05	8.2794E+00	8.2331E+00	8.1667E+00	8.1667E+00	8.1667E+00	8.1667E+00
11	2.3518E+05	7.8374E+00	7.8183E+00	7.8331E+00	7.8331E+00	7.8331E+00	7.8331E+00
12	1.8316E+05	7.3103E+00	7.3138E+00	7.3722E+00	7.3722E+00	7.3722E+00	7.3722E+00
13	1.4264E+05	7.0107E+00	7.0318E+00	7.1224E+00	7.1224E+00	7.1224E+00	7.1224E+00
14	1.1109E+05	6.9103E+00	6.9616E+00	7.0943E+00	7.0943E+00	7.0943E+00	7.0943E+00
15	8.6517E+04	7.0092E+00	7.0751E+00	7.2320E+00	7.2320E+00	7.2320E+00	7.2320E+00
16	6.7379E+04	6.3110E+00	6.3969E+00	6.5401E+00	6.5401E+00	6.5401E+00	6.5401E+00
17	5.2475E+04	6.1252E+00	6.1103E+00	6.3173E+00	6.3173E+00	6.3173E+00	6.3173E+00
18	4.0868E+04	4.5379E+00	4.4301E+00	4.6328E+00	4.6328E+00	4.6328E+00	4.6328E+00
19	3.1828E+04	2.8056E+00	2.7450E+00	2.9171E+00	2.9171E+00	2.9171E+00	2.9171E+00
20	2.4788E+04	2.9554E+00	2.8650E+00	2.9927E+00	2.9927E+00	2.9927E+00	2.9927E+00
21	1.9305E+04	1.5117E+00	1.4730E+00	1.5411E+00	1.5411E+00	1.5411E+00	1.5411E+00
22	1.5034E+04	9.6410E-01	9.3958E-01	9.8129E-01	9.8129E-01	9.8129E-01	9.8129E-01
23	1.1709E+04	5.5284E-01	5.3825E-01	5.6138E-01	5.6138E-01	5.6138E-01	5.6138E-01
24	9.1188E+03	2.7225E-01	2.6724E-01	2.8073E-01	2.8073E-01	2.8073E-01	2.8073E-01
25	7.1017E+03	1.8380E-01	1.7976E-01	1.8846E-01	1.8846E-01	1.8846E-01	1.8846E-01
26	5.5308E+03	9.2791E-02	9.0605E-02	9.4972E-02	9.4972E-02	9.4972E-02	9.4972E-02
27	4.3074E+03	9.3374E-02	8.9071E-02	9.5576E-02	9.5576E-02	9.5576E-02	9.5576E-02
28	3.3546E+03	3.6963E-02	3.5605E-02	3.7729E-02	3.7729E-02	3.7729E-02	3.7729E-02
29	2.6126E+03	1.6677E-02	1.4007E-02	1.6085E-02	1.6085E-02	1.6085E-02	1.6085E-02
30	2.0347E+03	1.0970E-02	7.0364E-03	9.5984E-03	9.5984E-03	9.5984E-03	9.5984E-03
31	1.5846E+03	2.7095E-03	2.2808E-03	2.5716E-03	2.5716E-03	2.5716E-03	2.5716E-03
32	1.2341E+03	7.0084E-04	6.1581E-04	6.7508E-04	6.7508E-04	6.7508E-04	6.7508E-04
33	9.6112E+02	3.1399E-04	2.6995E-04	2.9621E-04	2.9621E-04	2.9621E-04	2.9621E-04
34	7.4852E+02	1.0584E-04	9.3799E-05	1.0397E-04	1.0397E-04	1.0397E-04	1.0397E-04
35	5.8295E+02	5.3546E-05	4.9493E-05	5.3459E-05	5.3459E-05	5.3459E-05	5.3459E-05
36	4.5400E+02	2.2367E-05	2.1650E-05	2.3170E-05	2.3170E-05	2.3170E-05	2.3170E-05
37	3.5358E+02	1.4102E-05	1.3189E-05	1.4611E-05	1.4611E-05	1.4611E-05	1.4611E-05
38	2.7536E+02	2.8984E-05	1.5262E-05	2.6342E-05	2.6342E-05	2.6342E-05	2.6342E-05
39	1.6702E+02	2.1720E-06	1.4794E-06	2.2053E-06	2.2053E-06	2.2053E-06	2.2053E-06
40	1.0130E+02	2.6757E-07	1.6931E-07	2.5050E-07	2.5050E-07	2.5050E-07	2.5050E-07
41	6.1442E+01	2.1597E-08	1.6126E-08	2.2062E-08	2.2062E-08	2.2062E-08	2.2062E-08
42	3.7267E+01	1.5271E-08	1.1538E-09	1.4942E-09	1.4942E-09	1.4942E-09	1.4942E-09
43	2.2603E+01	5.2701E-11	4.0245E-11	5.1510E-11	5.1510E-11	5.1510E-11	5.1510E-11
44	1.3710E+01	3.7830E-12	3.1939E-12	3.7804E-12	3.7804E-12	3.7804E-12	3.7804E-12
45	8.3153E+00	5.1238E-14	4.1898E-14	5.2430E-14	5.2430E-14	5.2430E-14	5.2430E-14
46	5.0435E+00	5.4071E-15	4.8007E-15	5.2942E-15	5.2942E-15	5.2942E-15	5.2942E-15
47	3.0590E+00	8.0684E-16	7.4965E-16	7.8246E-16	7.8246E-16	7.8246E-16	7.8246E-16
48	1.8554E+00	1.0816E-16	1.0324E-16	1.0466E-16	1.0466E-16	1.0466E-16	1.0466E-16
49	1.1254E+00	9.8200E-18	9.5185E-18	9.5264E-18	9.5264E-18	9.5264E-18	9.5264E-18
50	6.8256E-01	4.0181E-19	3.9260E-19	4.0460E-19	4.0460E-19	4.0460E-19	4.0460E-19
	1.0000E-05	1.0000E+02	1.0000E+02	1.0000E+02	1.0000E+02	1.0000E+02	1.0000E+02

TABLE B-x11

ZEBRA-3 CENTRAL ADJOINT SPECTRA

GROUP	ENERGY BOUNDARY (eV)	1-D DIFFUSION THEORY (RHO/N/S)	1-D TRANSPORT THEORY (RHO/N/S)	2-D DIFFUSION THEORY (RHO/N/S)
1	1.9971E+07	2.0870E+00	2.1017E+00	2.0884E+00
2	1.0000E+07	1.5745E+00	1.5793E+00	1.5752E+00
3	6.0653E+06	1.1709E+00	1.1730E+00	1.1713E+00
4	3.6788E+06	1.1444E+00	1.1447E+00	1.1447E+00
5	2.2313E+06	1.0279E+00	1.0273E+00	1.0279E+00
6	1.3534E+06	8.2032E-01	8.2155E-01	8.2005E-01
7	8.2085E+05	8.0447E-01	8.0495E-01	8.0445E-01
8	4.9787E+05	8.1758E-01	8.1424E-01	8.1720E-01
9	3.8774E+05	8.1357E-01	8.0873E-01	8.1292E-01
10	3.0197E+05	8.0740E-01	8.0124E-01	8.0650E-01
11	2.3518E+05	8.0020E-01	7.9329E-01	7.9914E-01
12	1.8316E+05	7.9191E-01	7.8471E-01	7.9078E-01
13	1.4264E+05	7.7958E-01	7.7249E-01	7.7846E-01
14	1.1109E+05	7.5723E-01	7.5048E-01	7.5614E-01
15	8.6517E+04	7.3096E-01	7.2506E-01	7.2993E-01
16	6.7379E+04	6.9167E-01	6.8619E-01	6.9072E-01
17	5.2475E+04	6.5888E-01	6.5595E-01	6.5795E-01
18	4.0868E+04	6.3915E-01	6.3834E-01	6.3828E-01
19	3.1828E+04	6.1895E-01	6.1860E-01	6.1821E-01
20	2.4788E+04	5.9460E-01	5.9431E-01	5.9385E-01
21	1.9305E+04	5.8208E-01	5.8148E-01	5.8142E-01
22	1.5034E+04	5.7702E-01	5.7641E-01	5.7641E-01
23	1.1709E+04	5.8239E-01	5.8159E-01	5.8186E-01
24	9.1188E+03	5.9605E-01	5.9475E-01	5.9562E-01
25	7.1017E+03	5.8629E-01	5.8515E-01	5.8587E-01
26	5.5308E+03	6.1488E-01	6.1443E-01	6.1449E-01
27	4.3074E+03	6.6328E-01	6.6342E-01	6.6290E-01
28	3.3546E+03	6.8451E-01	6.8452E-01	6.8415E-01
29	2.6126E+03	6.4813E-01	6.5582E-01	6.4764E-01
30	2.0347E+03	7.0768E-01	7.2282E-01	7.0696E-01
31	1.5846E+03	8.7970E-01	8.8174E-01	8.7927E-01
32	1.2341E+03	8.7290E-01	8.7307E-01	8.7268E-01
33	9.6112E+02	8.6212E-01	8.6396E-01	8.6185E-01
34	7.4852E+02	8.3492E-01	8.3302E-01	8.3483E-01
35	5.8295E+02	1.1697E+00	1.1631E+00	1.1697E+00
36	4.5400E+02	1.0822E+00	1.0740E+00	1.0822E+00
37	3.5358E+02	1.0743E+00	1.0686E+00	1.0743E+00
38	2.7536E+02	1.1152E+00	1.1153E+00	1.1152E+00
39	1.6702E+02	1.0918E+00	1.0839E+00	1.0918E+00
40	1.0130E+02	1.4936E+00	1.4823E+00	1.4937E+00
41	6.1442E+01	1.2744E+00	1.2629E+00	1.2745E+00
42	3.7267E+01	7.3253E-01	7.2787E-01	7.3257E-01
43	2.2603E+01	1.1776E+00	1.1670E+00	1.1777E+00
44	1.3710E+01	1.6258E+00	1.6096E+00	1.6259E+00
45	8.3153E+00	5.0187E-01	4.9677E-01	5.0189E-01
46	5.0435E+00	1.3158E+00	1.2994E+00	1.3156E+00
47	3.0590E+00	1.5980E+00	1.5782E+00	1.5980E+00
48	1.8554E+00	1.0101E+00	9.9836E-01	1.0101E+00
49	1.1254E+00	6.7933E-01	6.7138E-01	6.7934E-01
50	6.8256E-01	1.9027E+00	1.8782E+00	1.9027E+00
	1.0000E-05	4.6668E+01	4.6485E+01	4.6653E+01

TABLE B-xiii

GODIVA CENTRAL FLUX SPECTRA

GROUP	ENERGY BOUNDARY (EV)	1-D DIFFUSION THEORY (N/CM2/S)	1-D TRANSPORT THEORY (N/CM2/S)
1	1.9971E+07	1.1711E-01	1.2692E-01
2	1.0000E+07	1.6462E+00	1.7457E+00
3	6.0653E+06	6.7743E+00	6.9544E+00
4	3.6788E+06	1.3780E+01	1.3953E+01
5	2.2313E+06	1.7617E+01	1.7767E+01
6	1.3534E+06	1.7414E+01	1.7531E+01
7	8.2085E+05	1.5664E+01	1.5620E+01
8	4.9787E+05	6.6334E+00	6.5524E+00
9	3.8774E+05	5.4668E+00	5.3651E+00
10	3.0197E+05	4.2277E+00	4.1249E+00
11	2.3518E+05	3.1925E+00	3.0980E+00
12	1.8316E+05	2.3612E+00	2.2797E+00
13	1.4264E+05	1.7307E+00	1.6637E+00
14	1.1109E+05	1.2364E+00	1.1833E+00
15	8.6517E+04	8.1062E-01	7.7228E-01
16	6.7379E+04	4.9120E-01	4.6576E-01
17	5.2475E+04	3.4239E-01	3.2409E-01
18	4.0868E+04	1.9677E-01	1.8563E-01
19	3.1828E+04	1.1080E-01	1.0430E-01
20	2.4788E+04	7.7582E-02	7.5248E-02
21	1.9305E+04	4.1992E-02	4.0694E-02
22	1.5034E+04	2.6176E-02	2.5421E-02
23	1.1709E+04	1.5385E-02	1.5000E-02
24	9.1188E+03	1.0270E-02	1.0026E-02
25	7.1017E+03	5.7630E-03	5.6440E-03
26	5.5308E+03	3.8476E-03	3.7582E-03
27	4.3074E+03	2.2308E-03	2.1881E-03
28	3.3546E+03	1.3946E-03	1.3711E-03
29	2.6126E+03	8.8628E-04	8.7298E-04
30	2.0347E+03	5.3952E-04	5.3521E-04
31	1.5846E+03	3.3639E-04	3.3500E-04
32	1.2341E+03	1.9766E-04	1.9819E-04
33	9.6112E+02	1.2986E-04	1.2994E-04
34	7.4852E+02	8.4714E-05	8.5854E-05
35	5.8295E+02	5.4054E-05	5.5464E-05
36	4.5400E+02	2.7752E-05	2.8020E-05
37	3.5358E+02	2.6649E-05	2.6914E-05
38	2.7536E+02	2.1717E-05	2.1879E-05
39	1.6702E+02	2.3685E-05	2.3992E-05
40	1.0130E+02	1.6122E-07	1.6707E-07
41	6.1442E+01	4.5823E-10	4.8574E-10
42	3.7267E+01	1.5480E-12	1.6098E-12
43	2.2603E+01	5.5623E-15	5.7997E-15
44	1.3710E+01	1.3178E-17	1.3753E-17
45	8.3153E+00	5.0341E-20	5.2639E-20
46	5.0435E+00	3.0036E-22	3.1521E-22
47	3.0590E+00	1.6224E-24	1.6994E-24
48	1.8554E+00	6.4256E-27	6.7278E-27
49	1.1254E+00	1.0251E-29	1.0732E-29
50	6.8256E-01	7.9702E-33	8.3450E-33
	1.0000E-05	1.0000E+02	1.0000E+02

TABLE B-XIV

GODIVA EDGE FLUX SPECTRA

GROUP	ENERGY BOUNDARY (eV)	1-D DIFFUSION THEORY	1-D TRANSPORT THEORY
		(N/CM ² /S)	(N/CM ² /S)
1	1.9971E+07	1.6121E-01	1.5073E-01
2	1.0000E+07	2.1371E+00	2.0168E+00
3	6.0653E+06	7.9975E+00	7.6669E+00
4	3.6788E+06	1.5383E+01	1.4945E+01
5	2.2313E+06	1.9075E+01	1.8724E+01
6	1.3534E+06	1.8309E+01	1.8182E+01
7	8.2085E+05	1.5219E+01	1.5448E+01
8	4.9787E+05	5.9731E+00	6.1730E+00
9	3.8774E+05	4.6777E+00	4.8842E+00
10	3.0197E+05	3.4505E+00	3.6330E+00
11	2.3518E+05	2.4877E+00	2.6400E+00
12	1.8316E+05	1.7453E+00	1.8679E+00
13	1.4264E+05	1.2181E+00	1.3130E+00
14	1.1109E+05	8.3005E-01	9.0076E-01
15	8.6517E+04	5.2174E-01	5.6902E-01
16	6.7379E+04	3.0532E-01	3.3388E-01
17	5.2475E+04	2.0729E-01	2.2744E-01
18	4.0868E+04	1.1724E-01	1.2840E-01
19	3.1828E+04	6.5862E-02	7.1674E-02
20	2.4788E+04	4.8514E-02	5.1240E-02
21	1.9305E+04	2.6411E-02	2.7682E-02
22	1.5034E+04	1.6588E-02	1.7246E-02
23	1.1709E+04	9.9082E-03	1.0164E-02
24	9.1188E+03	6.6165E-03	6.7610E-03
25	7.1017E+03	3.8134E-03	3.8358E-03
26	5.5308E+03	2.5356E-03	2.5554E-03
27	4.3074E+03	1.5088E-03	1.4939E-03
28	3.3546E+03	9.6336E-04	9.4407E-04
29	2.6126E+03	6.1896E-04	6.0034E-04
30	2.0347E+03	3.9111E-04	3.6842E-04
31	1.5846E+03	2.4884E-04	2.3171E-04
32	1.2341E+03	1.5173E-04	1.3689E-04
33	9.6112E+02	9.9398E-05	9.0056E-05
34	7.4852E+02	6.9314E-05	5.9710E-05
35	5.8295E+02	4.6446E-05	3.8702E-05
36	4.5400E+02	2.2462E-05	1.9539E-05
37	3.5358E+02	2.1774E-05	1.8793E-05
38	2.7536E+02	1.8146E-05	1.5290E-05
39	1.6702E+02	1.9953E-05	1.6787E-05
40	1.0130E+02	1.1424E-07	9.8853E-08
41	6.1442E+01	2.6148E-10	2.4778E-10
42	3.7267E+01	7.7899E-13	7.5971E-13
43	2.2603E+01	2.6162E-15	2.6197E-15
44	1.3710E+01	5.5448E-18	5.7650E-18
45	8.3153E+00	2.1110E-20	2.2373E-20
46	5.0435E+00	1.3076E-22	1.4101E-22
47	3.0590E+00	6.3111E-25	7.3953E-25
48	1.8554E+00	2.2438E-27	2.7084E-27
49	1.1254E+00	3.1457E-30	3.8597E-30
50	6.8256E-01	2.3559E-33	2.8253E-33
	1.0000E-05	1.0000E+02	1.0000E+02

TABLE B-XV

GODIVA CENTRAL ADJOINT SPECTRA

GROUP	ENERGY BOUNDARY (EV)	1-D DIFFUSION THEORY (RHO/N/S)	1-D TRANSPORT THEORY (RHO/N/S)
1	1.9971E+07	1.5862E+00	1.7158E+00
2	1.0000E+07	1.2705E+00	1.3465E+00
3	6.0653E+06	9.7718E-01	1.0072E+00
4	3.6788E+06	9.9492E-01	1.0094E+00
5	2.2313E+06	9.7797E-01	9.8364E-01
6	1.3534E+06	9.4692E-01	9.4395E-01
7	8.2085E+05	9.5100E-01	9.3179E-01
8	4.9787E+05	1.0084E+00	9.7319E-01
9	3.8774E+05	1.0495E+00	1.0047E+00
10	3.0197E+05	1.0935E+00	1.0402E+00
11	2.3518E+05	1.1333E+00	1.0723E+00
12	1.8316E+05	1.1927E+00	1.1228E+00
13	1.4264E+05	1.2427E+00	1.1658E+00
14	1.1109E+05	1.2798E+00	1.1983E+00
15	8.6517E+04	1.3225E+00	1.2375E+00
16	6.7379E+04	1.3547E+00	1.2675E+00
17	5.2475E+04	1.3570E+00	1.2688E+00
18	4.0868E+04	1.3779E+00	1.2896E+00
19	3.1828E+04	1.3977E+00	1.3133E+00
20	2.4788E+04	1.3579E+00	1.3100E+00
21	1.9305E+04	1.3820E+00	1.3332E+00
22	1.5034E+04	1.4201E+00	1.3741E+00
23	1.1709E+04	1.4224E+00	1.3825E+00
24	9.1188E+03	1.4204E+00	1.3826E+00
25	7.1017E+03	1.4972E+00	1.4620E+00
26	5.5308E+03	1.5804E+00	1.5403E+00
27	4.3074E+03	1.6213E+00	1.5868E+00
28	3.3546E+03	1.6187E+00	1.5875E+00
29	2.6126E+03	1.5958E+00	1.5686E+00
30	2.0347E+03	1.6177E+00	1.6013E+00
31	1.5846E+03	1.6069E+00	1.5964E+00
32	1.2341E+03	1.4953E+00	1.4954E+00
33	9.6112E+02	1.4979E+00	1.4959E+00
34	7.4852E+02	1.6470E+00	1.6660E+00
35	5.8295E+02	1.7245E+00	1.7634E+00
36	4.5400E+02	1.6662E+00	1.6764E+00
37	3.5358E+02	1.5840E+00	1.5962E+00
38	2.7536E+02	1.6182E+00	1.6265E+00
39	1.6702E+02	1.5241E+00	1.5402E+00
40	1.0130E+02	1.6043E+00	1.5823E+00
41	6.1442E+01	1.7324E+00	1.6736E+00
42	3.7267E+01	1.6164E+00	1.5639E+00
43	2.2603E+01	1.5005E+00	1.4521E+00
44	1.3710E+01	1.6185E+00	1.5636E+00
45	8.3153E+00	1.0634E+00	1.0284E+00
46	5.0435E+00	1.3111E+00	1.2694E+00
47	3.0590E+00	1.6913E+00	1.6289E+00
48	1.8554E+00	1.8922E+00	1.8252E+00
49	1.1254E+00	2.1943E+00	2.1171E+00
50	6.8256E-01	2.1092E+00	2.0340E+00
	1.0000E-05	7.1746E+01	7.0216E+01

TABLE B-XVI
VERA-1B CENTRAL FLUX SPECTRA

GROUP	ENERGY BOUNDARY (EVI)	1-D DIFFUSION THEORY (N/CM2/S)	1-D TRANSPORT THEORY (N/CM2/S)	2-D DIFFUSION THEORY (N/CM2/S)
1	1.9971E+07	4.9335E-02	5.1945E-02	4.9093E-02
2	1.0000E+07	5.6612E-01	5.8373E-01	5.6368E-01
3	6.0653E+06	3.1309E+00	3.1826E+00	3.1122E+00
4	3.6788E+06	8.0221E+00	8.0744E+00	7.9612E+00
5	2.2313E+06	1.1852E+01	1.2027E+01	1.1756E+01
6	1.3534E+06	1.2360E+01	1.2506E+01	1.2282E+01
7	8.2085E+05	1.1378E+01	1.2059E+01	1.1946E+01
8	4.9787E+05	5.6611E+00	5.6861E+00	5.6563E+00
9	3.8774E+05	5.3289E+00	5.3412E+00	5.3348E+00
10	3.0197E+05	4.9013E+00	4.9005E+00	4.9156E+00
11	2.3518E+05	4.4803E+00	4.4673E+00	4.5002E+00
12	1.8316E+05	4.0951E+00	4.0713E+00	4.1184E+00
13	1.4264E+05	3.7117E+00	3.6801E+00	3.7367E+00
14	1.1109E+05	3.3261E+00	3.2886E+00	3.3513E+00
15	8.6517E+04	2.9912E+00	2.9507E+00	3.0161E+00
16	6.7379E+04	2.6821E+00	2.6392E+00	2.7064E+00
17	5.2475E+04	2.3800E+00	2.3359E+00	2.4031E+00
18	4.0868E+04	2.0310E+00	1.9884E+00	2.0517E+00
19	3.1828E+04	1.7715E+00	1.7334E+00	1.7899E+00
20	2.4788E+04	1.6162E+00	1.5771E+00	1.6327E+00
21	1.9305E+04	1.3594E+00	1.3242E+00	1.3728E+00
22	1.5034E+04	1.1822E+00	1.1493E+00	1.1932E+00
23	1.1709E+04	9.9286E-01	9.6339E-01	1.0013E+00
24	9.1188E+03	8.1021E-01	7.8521E-01	8.1640E-01
25	7.1017E+03	6.6913E-01	6.4774E-01	6.7359E-01
26	5.5308E+03	5.4048E-01	5.2274E-01	5.4353E-01
27	4.3074E+03	4.2671E-01	4.1252E-01	4.2869E-01
28	3.3546E+03	3.3121E-01	3.2008E-01	3.3241E-01
29	2.6126E+03	2.4828E-01	2.3999E-01	2.4895E-01
30	2.0347E+03	1.7698E-01	1.7124E-01	1.7730E-01
31	1.5846E+03	1.2405E-01	1.2015E-01	1.2417E-01
32	1.2341E+03	8.0482E-02	7.8070E-02	8.0502E-02
33	9.6112E+02	5.2398E-02	5.0920E-02	5.2371E-02
34	7.4852E+02	3.1484E-02	3.0664E-02	3.1446E-02
35	5.8295E+02	1.7874E-02	1.7453E-02	1.7841E-02
36	4.5400E+02	1.0505E-02	1.0285E-02	1.0479E-02
37	3.5358E+02	5.9133E-03	5.8068E-03	5.8951E-03
38	2.7536E+02	4.0922E-03	4.0396E-03	4.0771E-03
39	1.6702E+02	1.1397E-03	1.1317E-03	1.1349E-03
40	1.0130E+02	3.1885E-04	3.1836E-04	3.1732E-04
41	6.1442E+01	5.5302E-05	5.5359E-05	5.5023E-05
42	3.7267E+01	9.6596E-06	9.7042E-06	9.6083E-06
43	2.2603E+01	1.8300E-06	1.8458E-06	1.8197E-06
44	1.3710E+01	2.7217E-07	2.7534E-07	2.7058E-07
45	8.3153E+00	5.5766E-08	5.6675E-08	5.5418E-08
46	5.0435E+00	1.5894E-08	1.6227E-08	1.5784E-08
47	3.0590E+00	5.3049E-09	5.4325E-09	5.2632E-09
48	1.8554E+00	1.3179E-09	1.3534E-09	1.3066E-09
49	1.1254E+00	1.5187E-10	1.5608E-10	1.5054E-10
50	6.8256E-01	6.2347E-12	6.4101E-12	6.1796E-12
	1.0000E-05	1.0000E+02	1.0000E+02	1.0000E+02

TABLE B-XVII

VERA-1B EDGE FLUX SPECTRA

GROUP	ENERGY BOUNDARY (EV)	1-D DIFFUSION THEORY (N/CM2/S)	1-D TRANSPORT THEORY (N/CM2/S)	2-D DIFFUSION THEORY (N/CM2/S)
1	1.9971E+07	6.9360E-03	8.1395E-03	5.9977E-03
2	1.0000E+07	7.9899E-02	8.8685E-02	7.0089E-02
3	6.0653E+06	3.1076E-01	3.4281E-01	2.7535E-01
4	3.6788E+06	6.4032E-01	7.0039E-01	5.7233E-01
5	2.2313E+06	1.0003E+00	1.1049E+00	8.9507E-01
6	1.3534E+06	2.6967E+00	2.9198E+00	2.3853E+00
7	8.2085E+05	9.9760E+00	1.0040E+01	9.0541E+00
8	4.9787E+05	6.7032E+00	6.7060E+00	6.2461E+00
9	3.8774E+05	8.0959E+00	8.0485E+00	7.6590E+00
10	3.0197E+05	8.2320E+00	8.2444E+00	7.9921E+00
11	2.3518E+05	7.7116E+00	7.6887E+00	7.6005E+00
12	1.8316E+05	7.2934E+00	7.2847E+00	7.2967E+00
13	1.4264E+05	7.0607E+00	7.0562E+00	7.1576E+00
14	1.1109E+05	6.6856E+00	6.7179E+00	6.9110E+00
15	8.6517E+04	6.7012E+00	6.7273E+00	7.0321E+00
16	6.7379E+04	6.2541E+00	6.3122E+00	6.6395E+00
17	5.2475E+04	6.1282E+00	6.0977E+00	6.5408E+00
18	4.0868E+04	3.9687E+00	3.8870E+00	4.2622E+00
19	3.1828E+04	2.4153E+00	2.3372E+00	2.6807E+00
20	2.4788E+04	3.4239E+00	3.2926E+00	3.6822E+00
21	1.9305E+04	1.4561E+00	1.4168E+00	1.6157E+00
22	1.5034E+04	1.1318E+00	1.1043E+00	1.2561E+00
23	1.1709E+04	8.2049E-01	7.9305E-01	9.0028E-01
24	9.1188E+03	3.8560E-01	3.7642E-01	4.3295E-01
25	7.1017E+03	2.8287E-01	2.7462E-01	3.1527E-01
26	5.5308E+03	1.6136E-01	1.5671E-01	1.8006E-01
27	4.3074E+03	1.2876E-01	1.2219E-01	1.4304E-01
28	3.3546E+03	6.9450E-02	6.6419E-02	7.6829E-02
29	2.6126E+03	4.5274E-02	3.6800E-02	4.7385E-02
30	2.0347E+03	3.7073E-02	2.1807E-02	3.6319E-02
31	1.5846E+03	1.7907E-02	1.2231E-02	1.8387E-02
32	1.2341E+03	7.4764E-03	5.1063E-03	7.6862E-03
33	9.6112E+02	5.1922E-03	3.5268E-03	5.1601E-03
34	7.4852E+02	2.4244E-03	1.7226E-03	2.4520E-03
35	5.8295E+02	1.4748E-03	1.1400E-03	1.4825E-03
36	4.5400E+02	8.1295E-04	6.8848E-04	8.3274E-04
37	3.5358E+02	5.4409E-04	4.5866E-04	5.4588E-04
38	2.7536E+02	5.7800E-04	3.4183E-04	5.4099E-04
39	1.6702E+02	9.1678E-05	6.5267E-05	9.2719E-05
40	1.0130E+02	1.8789E-05	1.2562E-05	1.7866E-05
41	6.1442E+01	3.3626E-06	2.5301E-06	3.4382E-06
42	3.7267E+01	3.8706E-07	2.9103E-07	3.8078E-07
43	2.2603E+01	2.3139E-08	1.7298E-08	2.2763E-08
44	1.3710E+01	3.7303E-09	3.1766E-09	3.7383E-09
45	8.3153E+00	7.6375E-11	6.2263E-11	7.8471E-11
46	5.0435E+00	3.4558E-11	3.8007E-11	3.3146E-11
47	3.0590E+00	4.9031E-11	6.1399E-11	4.5674E-11
48	1.8554E+00	3.0006E-11	3.7279E-11	2.8143E-11
49	1.1254E+00	6.7183E-12	8.2623E-12	6.3616E-12
50	6.8256E-01	4.3812E-13	5.3815E-13	4.3159E-13
	1.0000E-05	1.0000E+02	1.0000E+02	1.0000E+02

TABLE B-XVIII

VERA-1B CENTRAL ADJOINT SPECTRA

GROUP	ENERGY BOUNDARY (EV)	1-D DIFFUSION THEORY (RHO/N/S)	1-D TRANSPORT THEORY (RHO/N/S)	2-D DIFFUSION THEORY (RHO/N/S)
1	1.9971E+07	1.1819E+00	1.1992E+00	1.1935E+00
2	1.0000E+07	9.9962E-01	1.0266E+00	1.0072E+00
3	6.0653E+06	9.3914E-01	9.5529E-01	9.4378E-01
4	3.6788E+06	9.6111E-01	9.6785E-01	9.6429E-01
5	2.2313E+06	9.4253E-01	9.4937E-01	9.4374E-01
6	1.3534E+06	9.7585E-01	9.7317E-01	9.7365E-01
7	8.2085E+05	1.0438E+00	1.0301E+00	1.0400E+00
8	4.9787E+05	1.1212E+00	1.1002E+00	1.1163E+00
9	3.8774E+05	1.1556E+00	1.1322E+00	1.1501E+00
10	3.0197E+05	1.1900E+00	1.1644E+00	1.1839E+00
11	2.3518E+05	1.2216E+00	1.1943E+00	1.2148E+00
12	1.8316E+05	1.2491E+00	1.2205E+00	1.2417E+00
13	1.4264E+05	1.2747E+00	1.2449E+00	1.2667E+00
14	1.1109E+05	1.3007E+00	1.2696E+00	1.2922E+00
15	8.6517E+04	1.3238E+00	1.2919E+00	1.3149E+00
16	6.7379E+04	1.3448E+00	1.3116E+00	1.3357E+00
17	5.2475E+04	1.3663E+00	1.3323E+00	1.3569E+00
18	4.0868E+04	1.3908E+00	1.3563E+00	1.3813E+00
19	3.1828E+04	1.4126E+00	1.3780E+00	1.4032E+00
20	2.4788E+04	1.4251E+00	1.3871E+00	1.4157E+00
21	1.9305E+04	1.4558E+00	1.4171E+00	1.4465E+00
22	1.5034E+04	1.4769E+00	1.4371E+00	1.4678E+00
23	1.1709E+04	1.4981E+00	1.4579E+00	1.4892E+00
24	9.1188E+03	1.5276E+00	1.4869E+00	1.5190E+00
25	7.1017E+03	1.5574E+00	1.5159E+00	1.5488E+00
26	5.5308E+03	1.5816E+00	1.5399E+00	1.5734E+00
27	4.3074E+03	1.5915E+00	1.5499E+00	1.5835E+00
28	3.3546E+03	1.5912E+00	1.5501E+00	1.5837E+00
29	2.6126E+03	1.5910E+00	1.5507E+00	1.5840E+00
30	2.0347E+03	1.5978E+00	1.5581E+00	1.5912E+00
31	1.5846E+03	1.5937E+00	1.5549E+00	1.5874E+00
32	1.2341E+03	1.5806E+00	1.5430E+00	1.5745E+00
33	9.6112E+02	1.6390E+00	1.6006E+00	1.6328E+00
34	7.4852E+02	1.7030E+00	1.6637E+00	1.6965E+00
35	5.8295E+02	1.7114E+00	1.6724E+00	1.7049E+00
36	4.5400E+02	1.6493E+00	1.6120E+00	1.6431E+00
37	3.5358E+02	1.6144E+00	1.5786E+00	1.6083E+00
38	2.7536E+02	1.6103E+00	1.5753E+00	1.6042E+00
39	1.6702E+02	1.5684E+00	1.5346E+00	1.5625E+00
40	1.0130E+02	1.6092E+00	1.5728E+00	1.6031E+00
41	6.1442E+01	1.6703E+00	1.6310E+00	1.6638E+00
42	3.7267E+01	1.5619E+00	1.5262E+00	1.5559E+00
43	2.2603E+01	1.4720E+00	1.4383E+00	1.4663E+00
44	1.3710E+01	1.4717E+00	1.4376E+00	1.4660E+00
45	8.3153E+00	9.9782E-01	9.7509E-01	9.9400E-01
46	5.0435E+00	1.4021E+00	1.3690E+00	1.3969E+00
47	3.0590E+00	1.6779E+00	1.6364E+00	1.6717E+00
48	1.8554E+00	1.9113E+00	1.8648E+00	1.9039E+00
49	1.1254E+00	2.1512E+00	2.0983E+00	2.1426E+00
50	6.8256E-01	2.0907E+00	2.0393E+00	2.0822E+00
	1.0000E-05	7.1975E+01	7.0472E+01	7.1687E+01

TABLE B-XIX

ZPR-3-6F CENTRAL FLUX SPECTRA

GROUP	ENERGY BOUNDARY (eV)	1-D DIFFUSION THEORY (N/CM ² /S)	1-D TRANSPORT THEORY (N/CM ² /S)	2-D DIFFUSION THEORY (N/CM ² /S)
1	1.9971E+07	4.8131E-02	4.8933E-02	4.8041E-02
2	1.0000E+07	6.6928E-01	6.7383E-01	6.6813E-01
3	6.0653E+06	2.9367E+00	2.9349E+00	2.9315E+00
4	3.6788E+06	6.7520E+00	6.7477E+00	6.7354E+00
5	2.2313E+06	9.8729E+00	9.8891E+00	9.8406E+00
6	1.3534E+06	1.2789E+01	1.2925E+01	1.2743E+01
7	8.2085E+05	1.5834E+01	1.6017E+01	1.5865E+01
8	4.9787E+05	8.2557E+00	8.2824E+00	8.2481E+00
9	3.8774E+05	8.3396E+00	8.3612E+00	8.3401E+00
10	3.0197E+05	7.1390E+00	7.1406E+00	7.1467E+00
11	2.3518E+05	5.2252E+00	5.2048E+00	5.2358E+00
12	1.8316E+05	4.1535E+00	4.1290E+00	4.1649E+00
13	1.4264E+05	4.6554E+00	4.6141E+00	4.6718E+00
14	1.1109E+05	2.6735E+00	2.6489E+00	2.6846E+00
15	8.6517E+04	3.1860E+00	3.1502E+00	3.2037E+00
16	6.7379E+04	3.0624E+00	2.9996E+00	3.0813E+00
17	5.2475E+04	1.4342E+00	1.4035E+00	1.4458E+00
18	4.0868E+04	4.9199E-01	4.7988E-01	4.9610E-01
19	3.1828E+04	9.9373E-01	9.6877E-01	1.0039E+00
20	2.4788E+04	8.5814E-01	8.2986E-01	8.6720E-01
21	1.9305E+04	2.7694E-01	2.6753E-01	2.8028E-01
22	1.5034E+04	1.4198E-01	1.3709E-01	1.4393E-01
23	1.1709E+04	7.0345E-02	6.7915E-02	7.1379E-02
24	9.1188E+03	3.3513E-02	3.2395E-02	3.3977E-02
25	7.1017E+03	2.0731E-02	2.0026E-02	2.1033E-02
26	5.5308E+03	1.2674E-02	1.2256E-02	1.2854E-02
27	4.3074E+03	7.4110E-03	7.1677E-03	7.5216E-03
28	3.3546E+03	3.3764E-03	3.2681E-03	3.4285E-03
29	2.6126E+03	1.5068E-03	1.4589E-03	1.5261E-03
30	2.0347E+03	7.6110E-04	7.4188E-04	7.6840E-04
31	1.5846E+03	3.9455E-04	3.8651E-04	3.9711E-04
32	1.2341E+03	1.9252E-04	1.8898E-04	1.9333E-04
33	9.6112E+02	1.2014E-04	1.1824E-04	1.2050E-04
34	7.4852E+02	7.1417E-05	7.0305E-05	7.1593E-05
35	5.8295E+02	4.2280E-05	4.1646E-05	4.2379E-05
36	4.5400E+02	2.2330E-05	2.1963E-05	2.2382E-05
37	3.5358E+02	1.8595E-05	1.8276E-05	1.8637E-05
38	2.7536E+02	1.6135E-05	1.5919E-05	1.6171E-05
39	1.6702E+02	1.3947E-05	1.3747E-05	1.3978E-05
40	1.0130E+02	6.1110E-07	6.0524E-07	6.1250E-07
41	6.1442E+01	1.4978E-08	1.4852E-08	1.5013E-08
42	3.7267E+01	3.8725E-10	3.8473E-10	3.8822E-10
43	2.2603E+01	9.8759E-12	9.8333E-12	9.9065E-12
44	1.3710E+01	2.1553E-13	2.1521E-13	2.1639E-13
45	8.3153E+00	4.7113E-15	4.7096E-15	4.7394E-15
46	5.0435E+00	2.4689E-16	2.5325E-16	2.5684E-16
47	3.0590E+00	1.9251E-17	2.1863E-17	2.1580E-17
48	1.8554E+00	9.8901E-19	1.1697E-18	1.1582E-18
49	1.1254E+00	1.7011E-20	2.0130E-20	2.0098E-20
50	6.8256E-01	1.1209E-22	1.3220E-22	1.3255E-22
	1.0000E-05	1.0000E+02	1.0000E+02	1.0000E+02

TABLE B-XX

ZPR-3-6F EDGE FLUX SPECTRA

GROUP	ENERGY BOUNDARY (EV)	1-D DIFFUSION THEORY (N/CM2/S)	1-D TRANSPORT THEORY (N/CM2/S)	2-D DIFFUSION THEORY (N/CM2/S)
1	1.9971E+07	4.4610E-03	6.2439E-03	4.0610E-03
2	1.0000E+07	4.8694E-02	6.6833E-02	4.4665E-02
3	6.0653E+06	1.8401E-01	2.4568E-01	1.6985E-01
4	3.6788E+06	3.7883E-01	4.9250E-01	3.5176E-01
5	2.2313E+06	6.2088E-01	7.9029E-01	5.7771E-01
6	1.3534E+06	2.1128E+00	2.4357E+00	1.9648E+00
7	8.2085E+05	9.3591E+00	9.4808E+00	8.8669E+00
8	4.9787E+05	6.5427E+00	6.5441E+00	6.2950E+00
9	3.8774E+05	8.0795E+00	8.0151E+00	7.8431E+00
10	3.0197E+05	8.4907E+00	8.4106E+00	8.3278E+00
11	2.3518E+05	7.9550E+00	7.8955E+00	7.8977E+00
12	1.8316E+05	7.2458E+00	7.2081E+00	7.2643E+00
13	1.4264E+05	7.3535E+00	7.3178E+00	7.4213E+00
14	1.1109E+05	6.5446E+00	6.5438E+00	6.6797E+00
15	8.6517E+04	7.3234E+00	7.3191E+00	7.5196E+00
16	6.7379E+04	6.9526E+00	6.9747E+00	7.1767E+00
17	5.2475E+04	6.1901E+00	6.1168E+00	6.4022E+00
18	4.0868E+04	3.6420E+00	3.5511E+00	3.7754E+00
19	3.1828E+04	3.0316E+00	2.9374E+00	3.1808E+00
20	2.4788E+04	3.6496E+00	3.5018E+00	3.7668E+00
21	1.9305E+04	1.7861E+00	1.7251E+00	1.8569E+00
22	1.5034E+04	1.0997E+00	1.0640E+00	1.1445E+00
23	1.1709E+04	6.1603E-01	5.9635E-01	6.4130E-01
24	9.1188E+03	2.9433E-01	2.8791E-01	3.1023E-01
25	7.1017E+03	2.0253E-01	1.9756E-01	2.1288E-01
26	5.5308E+03	1.0844E-01	1.0558E-01	1.1383E-01
27	4.3074E+03	1.0136E-01	9.6637E-02	1.0620E-01
28	3.3546E+03	4.3518E-02	4.1935E-02	4.5695E-02
29	2.6126E+03	2.0815E-02	1.7710E-02	2.1228E-02
30	2.0347E+03	1.2317E-02	8.7071E-03	1.2017E-02
31	1.5846E+03	3.3199E-03	3.0201E-03	3.4072E-03
32	1.2341E+03	9.0831E-04	8.6388E-04	9.4120E-04
33	9.6112E+02	3.9803E-04	3.7665E-04	4.0645E-04
34	7.4852E+02	1.2721E-04	1.2423E-04	1.3207E-04
35	5.8295E+02	6.2821E-05	6.2789E-05	6.5103E-05
36	4.5400E+02	2.5609E-05	2.6361E-05	2.6908E-05
37	3.5358E+02	1.5522E-05	1.5146E-05	1.6123E-05
38	2.7536E+02	2.6198E-05	1.4762E-05	2.5052E-05
39	1.6702E+02	6.4824E-06	5.3904E-06	6.5803E-06
40	1.0130E+02	1.1988E-06	8.3684E-07	1.1603E-06
41	6.1442E+01	1.8678E-07	1.4994E-07	1.9195E-07
42	3.7267E+01	1.8577E-08	1.4759E-08	1.8640E-08
43	2.2603E+01	8.5364E-10	6.7832E-10	8.5965E-10
44	1.3710E+01	1.1660E-10	1.0299E-10	1.2004E-10
45	8.3153E+00	1.8381E-12	1.5648E-12	1.9262E-12
46	5.0435E+00	2.5709E-13	2.3470E-13	2.6449E-13
47	3.0590E+00	4.9233E-14	4.6490E-14	5.1005E-14
48	1.8554E+00	9.0298E-15	8.7119E-15	9.4299E-15
49	1.1254E+00	1.2375E-15	1.2090E-15	1.3013E-15
50	6.8256E-01	9.4095E-17	9.2841E-17	1.0080E-16
	1.0000E-05	1.0000E+02	1.0000E+02	1.0000E+02

TABLE B-XXI

ZPR-3-6F CENTRAL ADJOINT SPECTRA

GROUP	ENERGY BOUNDARY (eV)	1-D DIFFUSION THEORY (RHO/N/S)	1-D TRANSPORT THEORY (RHO/N/S)	2-D DIFFUSION THEORY (RHO/N/S)
1	1.9971E+07	1.5661E+00	1.5806E+00	1.5715E+00
2	1.0000E+07	1.2827E+00	1.2925E+00	1.2857E+00
3	6.0653E+06	1.0483E+00	1.0545E+00	1.0496E+00
4	3.6788E+06	1.0478E+00	1.0503E+00	1.0489E+00
5	2.2313E+06	9.9496E-01	9.9563E-01	9.9515E-01
6	1.3534E+06	9.0714E-01	9.0921E-01	9.0617E-01
7	8.2085E+05	9.0993E-01	9.0601E-01	9.0878E-01
8	4.9787E+05	9.7012E-01	9.5986E-01	9.6882E-01
9	3.8774E+05	9.8281E-01	9.7396E-01	9.8147E-01
10	3.0197E+05	1.0212E+00	1.0097E+00	1.0196E+00
11	2.3518E+05	1.0789E+00	1.0630E+00	1.0771E+00
12	1.8316E+05	1.1058E+00	1.0918E+00	1.1042E+00
13	1.4264E+05	1.0948E+00	1.0822E+00	1.0931E+00
14	1.1109E+05	1.1284E+00	1.1157E+00	1.1269E+00
15	8.6517E+04	1.1148E+00	1.1015E+00	1.1133E+00
16	6.7379E+04	1.1042E+00	1.0843E+00	1.1027E+00
17	5.2475E+04	1.1244E+00	1.1108E+00	1.1230E+00
18	4.0868E+04	1.1370E+00	1.1335E+00	1.1363E+00
19	3.1828E+04	1.1101E+00	1.1094E+00	1.1092E+00
20	2.4788E+04	1.0634E+00	1.0498E+00	1.0622E+00
21	1.9305E+04	1.1251E+00	1.1070E+00	1.1241E+00
22	1.5034E+04	1.1629E+00	1.1422E+00	1.1621E+00
23	1.1709E+04	1.1928E+00	1.1712E+00	1.1924E+00
24	9.1188E+03	1.2506E+00	1.2268E+00	1.2508E+00
25	7.1017E+03	1.2987E+00	1.2748E+00	1.2991E+00
26	5.5308E+03	1.3580E+00	1.3325E+00	1.3586E+00
27	4.3074E+03	1.3980E+00	1.3729E+00	1.3990E+00
28	3.3546E+03	1.3900E+00	1.3655E+00	1.3910E+00
29	2.6126E+03	1.3962E+00	1.3745E+00	1.3974E+00
30	2.0347E+03	1.4221E+00	1.4017E+00	1.4235E+00
31	1.5846E+03	1.4298E+00	1.4065E+00	1.4317E+00
32	1.2341E+03	1.3325E+00	1.3118E+00	1.3347E+00
33	9.6112E+02	1.3954E+00	1.3746E+00	1.3976E+00
34	7.4852E+02	1.5528E+00	1.5299E+00	1.5557E+00
35	5.8295E+02	1.6367E+00	1.6130E+00	1.6399E+00
36	4.5400E+02	1.5486E+00	1.5237E+00	1.5517E+00
37	3.5358E+02	1.4957E+00	1.4725E+00	1.4987E+00
38	2.7536E+02	1.5209E+00	1.5008E+00	1.5240E+00
39	1.6702E+02	1.4220E+00	1.4034E+00	1.4249E+00
40	1.0130E+02	1.4413E+00	1.4202E+00	1.4443E+00
41	6.1442E+01	1.6155E+00	1.5864E+00	1.6190E+00
42	3.7267E+01	1.4526E+00	1.4283E+00	1.4557E+00
43	2.2603E+01	1.2819E+00	1.2606E+00	1.2846E+00
44	1.3710E+01	1.4951E+00	1.4687E+00	1.4933E+00
45	8.3153E+00	6.4637E-01	6.3545E-01	6.4775E-01
46	5.0435E+00	1.2195E+00	1.1985E+00	1.2219E+00
47	3.0590E+00	1.5073E+00	1.4776E+00	1.5104E+00
48	1.8554E+00	1.7638E+00	1.7305E+00	1.7676E+00
49	1.1254E+00	2.0881E+00	2.0478E+00	2.0925E+00
50	6.8256E-01	2.0216E+00	1.9826E+00	2.0259E+00
	1.0000E-05	6.4655E+01	6.3816E+01	6.4708E+01

TABLE B-XXII

ZPR-3-11 CENTRAL FLUX SPECTRA

GROUP	ENERGY BOUNDARY (EV)	1-D DIFFUSION THEORY (N/CM2/S)	1-D TRANSPORT THEORY (N/CM2/S)	2-D DIFFUSION THEORY (N/CM2/S)
1	1.9971E+07	2.9903E-02	2.9828E-02	2.9904E-02
2	1.0000E+07	3.9670E-01	3.9514E-01	3.9673E-01
3	6.0653E+06	1.6444E+00	1.6365E+00	1.6446E+00
4	3.6788E+06	3.4591E+00	3.4417E+00	3.4595E+00
5	2.2313E+06	4.9939E+00	4.9702E+00	4.9940E+00
6	1.3534E+06	8.3223E+00	8.2979E+00	8.3208E+00
7	8.2085E+05	1.5076E+01	1.5069E+01	1.5071E+01
8	4.9787E+05	8.8648E+00	8.8648E+00	8.8619E+00
9	3.8774E+05	9.2148E+00	9.2192E+00	9.2121E+00
10	3.0197E+05	8.5259E+00	8.5315E+00	8.5239E+00
11	2.3518E+05	7.4736E+00	7.4794E+00	7.4723E+00
12	1.8316E+05	6.4628E+00	6.4680E+00	6.4623E+00
13	1.4264E+05	5.6054E+00	5.6110E+00	5.6057E+00
14	1.1109E+05	4.9732E+00	4.9780E+00	4.9742E+00
15	8.6517E+04	4.2905E+00	4.2973E+00	4.2922E+00
16	6.7379E+04	3.5239E+00	3.5276E+00	3.5259E+00
17	5.2475E+04	2.7944E+00	2.8021E+00	2.7969E+00
18	4.0868E+04	1.5487E+00	1.5567E+00	1.5506E+00
19	3.1828E+04	9.6820E-01	9.7541E-01	9.6957E-01
20	2.4788E+04	8.5847E-01	8.6639E-01	8.6016E-01
21	1.9305E+04	4.4506E-01	4.4948E-01	4.4611E-01
22	1.5034E+04	2.4351E-01	2.4581E-01	2.4411E-01
23	1.1709E+04	1.2782E-01	1.2889E-01	1.2810E-01
24	9.1188E+03	5.9727E-02	6.0134E-02	5.9845E-02
25	7.1017E+03	4.5936E-02	4.6296E-02	4.6035E-02
26	5.5308E+03	2.3377E-02	2.3571E-02	2.3429E-02
27	4.3074E+03	1.7936E-02	1.8071E-02	1.7971E-02
28	3.3546E+03	4.8195E-03	4.8598E-03	4.8294E-03
29	2.6126E+03	1.6868E-03	1.6916E-03	1.6900E-03
30	2.0347E+03	2.1479E-03	2.1685E-03	2.1523E-03
31	1.5846E+03	9.0497E-04	9.1429E-04	9.0691E-04
32	1.2341E+03	2.4264E-04	2.4421E-04	2.4303E-04
33	9.6112E+02	1.4760E-04	1.4821E-04	1.4776E-04
34	7.4852E+02	7.3111E-05	7.3078E-05	7.3149E-05
35	5.8295E+02	4.1618E-05	4.1486E-05	4.1631E-05
36	4.5400E+02	1.4948E-05	1.4880E-05	1.4951E-05
37	3.5358E+02	1.2326E-05	1.2272E-05	1.2328E-05
38	2.7536E+02	2.1861E-05	2.1832E-05	2.1865E-05
39	1.6702E+02	1.2796E-05	1.2747E-05	1.2798E-05
40	1.0130E+02	5.3330E-07	5.3345E-07	5.3341E-07
41	6.1442E+01	1.2450E-08	1.2469E-08	1.2453E-08
42	3.7267E+01	3.1018E-10	3.1113E-10	3.1025E-10
43	2.2603E+01	5.8046E-12	5.8321E-12	5.8060E-12
44	1.3710E+01	1.1534E-13	1.1621E-13	1.1537E-13
45	8.3153E+00	1.3747E-15	1.3858E-15	1.3751E-15
46	5.0435E+00	5.8860E-17	5.9822E-17	5.8906E-17
47	3.0590E+00	3.4003E-18	3.4928E-18	3.4313E-18
48	1.8554E+00	1.3806E-19	1.4327E-19	1.4106E-19
49	1.1254E+00	2.5548E-21	2.6593E-21	2.6245E-21
50	6.8256E-01	1.9055E-23	1.9839E-23	1.9587E-23
	1.0000E-05	1.0000E+02	1.0000E+02	1.0000E+02

TABLE B-xxiii

ZPR-3-11 EDGE FLUX SPECTRA

GROUP	ENERGY BOUNDARY (EV)	1-D DIFFUSION THEORY (N/CM2/S)	1-D TRANSPORT THEORY (N/CM2/S)	2-D DIFFUSION THEORY (N/CM2/S)
1	1.9971E+07	3.6140E-03	4.9115E-03	2.9877E-03
2	1.0000E+07	3.9601E-02	5.2161E-02	3.3243E-02
3	6.0653E+06	1.4969E-01	1.9068E-01	1.2685E-01
4	3.6788E+06	3.0606E-01	3.7722E-01	2.5946E-01
5	2.2313E+06	4.9497E-01	6.0044E-01	4.1416E-01
6	1.3534E+06	1.6399E+00	1.8628E+00	1.3468E+00
7	8.2085E+05	8.2809E+00	8.3976E+00	7.3811E+00
8	4.9727E+05	5.9977E+00	6.0129E+00	5.4704E+00
9	3.8774E+05	7.5441E+00	7.5066E+00	7.0315E+00
10	3.0197E+05	8.0459E+00	7.9946E+00	7.6477E+00
11	2.3518E+05	7.7607E+00	7.7229E+00	7.5114E+00
12	1.8316E+05	7.4130E+00	7.3901E+00	7.2969E+00
13	1.4264E+05	7.2766E+00	7.2627E+00	7.2795E+00
14	1.1109E+05	7.2168E+00	7.2309E+00	7.3392E+00
15	8.6517E+04	7.5975E+00	7.6147E+00	7.8640E+00
16	6.7379E+04	6.9539E+00	7.0005E+00	7.3191E+00
17	5.2475E+04	6.8155E+00	6.7698E+00	7.2955E+00
18	4.0868E+04	4.9215E+00	4.8043E+00	5.3601E+00
19	3.1828E+04	3.0685E+00	2.9883E+00	3.3873E+00
20	2.4788E+04	3.8025E+00	3.6754E+00	4.2673E+00
21	1.9305E+04	1.9154E+00	1.8607E+00	2.1822E+00
22	1.5034E+04	1.1983E+00	1.1661E+00	1.3766E+00
23	1.1709E+04	6.7512E-01	6.5728E-01	7.7970E-01
24	9.1188E+03	3.1329E-01	3.0803E-01	3.6292E-01
25	7.1017E+03	2.3141E-01	2.2694E-01	2.6912E-01
26	5.5308E+03	1.2390E-01	1.2126E-01	1.4442E-01
27	4.3074E+03	1.1708E-01	1.1261E-01	1.3526E-01
28	3.3546E+03	5.0552E-02	4.9019E-02	5.9527E-02
29	2.6126E+03	2.2205E-02	1.9937E-02	2.6555E-02
30	2.0347E+03	1.6267E-02	1.1860E-02	1.9818E-02
31	1.5846E+03	5.0710E-03	4.4919E-03	6.4095E-03
32	1.2341E+03	1.3872E-03	1.2776E-03	1.7802E-03
33	9.6112E+02	6.3241E-04	5.8067E-04	8.1284E-04
34	7.4852E+02	1.9569E-04	1.8651E-04	2.5199E-04
35	5.8295E+02	8.8131E-05	8.6980E-05	1.1144E-04
36	4.5400E+02	3.1478E-05	3.2204E-05	3.9217E-05
37	3.5358E+02	1.4633E-05	1.4645E-05	1.7624E-05
38	2.7536E+02	2.6198E-05	1.6326E-05	2.8506E-05
39	1.6702E+02	6.1316E-06	5.1784E-06	6.3477E-06
40	1.0130E+02	1.0606E-06	7.7129E-07	1.0549E-06
41	6.1442E+01	1.7337E-07	1.4160E-07	1.8107E-07
42	3.7267E+01	1.6894E-08	1.3716E-08	1.7749E-08
43	2.2603E+01	7.8218E-10	6.3496E-10	8.3253E-10
44	1.3710E+01	1.0931E-10	9.7257E-11	1.2229E-10
45	8.3153E+00	1.7595E-12	1.5215E-12	1.9877E-12
46	5.0435E+00	2.4281E-13	2.2303E-13	2.8416E-13
47	3.0590E+00	4.6720E-14	4.4227E-14	5.8006E-14
48	1.8554E+00	8.6062E-15	8.3017E-15	1.1251E-14
49	1.1254E+00	1.1831E-15	1.1535E-15	1.6045E-15
50	6.8256E-01	9.1385E-17	8.9709E-17	1.2603E-16
	1.0000E-05	1.0000E+02	1.0000E+02	1.0000E+02

TABLE B-xxiv
ZPR-3-11 CENTRAL ADJOINT SPECTRA

GROUP	ENERGY BOUNDARY (EV)	1-D DIFFUSION THEORY (RHO/N/S)	1-D TRANSPORT THEORY (RHO/N/S)	2-D DIFFUSION THEORY (RHO/N/S)
1	1.9971E+07	2.1818E+00	2.1869E+00	2.1822E+00
2	1.0000E+07	1.6240E+00	1.6251E+00	1.6241E+00
3	5.0653E+06	1.1884E+00	1.1888E+00	1.1885E+00
4	3.6788E+06	1.1563E+00	1.1562E+00	1.1564E+00
5	2.2313E+06	1.0281E+00	1.0278E+00	1.0281E+00
6	1.3534E+06	8.2166E-01	8.2239E-01	8.2159E-01
7	8.2085E+05	7.9257E-01	7.9335E-01	7.9257E-01
8	4.9787E+05	8.2765E-01	8.2659E-01	8.2748E-01
9	3.8774E+05	8.3531E-01	8.3361E-01	8.3508E-01
10	3.0197E+05	8.3967E-01	8.3743E-01	8.3942E-01
11	2.3518E+05	8.3855E-01	8.3609E-01	8.3832E-01
12	1.8316E+05	8.3543E-01	8.3291E-01	8.3523E-01
13	1.4264E+05	8.2804E-01	8.2564E-01	8.2788E-01
14	1.1109E+05	8.1403E-01	8.1177E-01	8.1390E-01
15	8.6517E+04	8.0267E-01	8.0084E-01	8.0258E-01
16	6.7379E+04	7.7383E-01	7.7199E-01	7.7377E-01
17	5.2475E+04	7.4440E-01	7.4409E-01	7.4435E-01
18	4.0868E+04	7.3905E-01	7.4008E-01	7.3903E-01
19	3.1828E+04	7.3411E-01	7.3551E-01	7.3410E-01
20	2.4788E+04	7.2349E-01	7.2435E-01	7.2347E-01
21	1.9305E+04	7.2851E-01	7.2910E-01	7.2852E-01
22	1.5034E+04	7.5182E-01	7.5207E-01	7.5185E-01
23	1.1709E+04	7.7475E-01	7.7460E-01	7.7481E-01
24	9.1188E+03	8.0287E-01	8.0236E-01	8.0295E-01
25	7.1017E+03	8.4532E-01	8.4490E-01	8.4541E-01
26	5.5308E+03	8.9632E-01	8.9581E-01	8.9642E-01
27	4.3074E+03	9.4281E-01	9.4249E-01	9.4293E-01
28	3.3546E+03	9.4378E-01	9.4286E-01	9.4390E-01
29	2.6126E+03	9.8361E-01	9.8397E-01	9.8374E-01
30	2.0347E+03	1.0447E+00	1.0464E+00	1.0448E+00
31	1.5846E+03	1.0627E+00	1.0629E+00	1.0628E+00
32	1.2341E+03	9.7457E-01	9.7448E-01	9.7470E-01
33	9.6112E+02	1.0933E+00	1.0931E+00	1.0934E+00
34	7.4852E+02	1.2437E+00	1.2412E+00	1.2439E+00
35	5.8295E+02	1.3337E+00	1.3297E+00	1.3339E+00
36	4.5400E+02	1.1633E+00	1.1604E+00	1.1635E+00
37	3.5358E+02	1.1166E+00	1.1150E+00	1.1167E+00
38	2.7536E+02	1.2647E+00	1.2629E+00	1.2648E+00
39	1.6702E+02	1.1686E+00	1.1654E+00	1.1687E+00
40	1.0130E+02	1.1298E+00	1.1281E+00	1.1299E+00
41	6.1442E+01	1.4802E+00	1.4738E+00	1.4804E+00
42	3.7267E+01	1.1855E+00	1.1812E+00	1.1857E+00
43	2.2603E+01	9.6441E-01	9.6103E-01	9.6452E-01
44	1.3710E+01	1.3605E+00	1.3546E+00	1.3607E+00
45	8.3153E+00	3.3008E-01	3.2867E-01	3.3011E-01
46	5.0435E+00	9.9649E-01	9.9219E-01	9.9661E-01
47	3.0590E+00	1.2532E+00	1.2470E+00	1.2534E+00
48	1.8554E+00	1.5685E+00	1.5608E+00	1.5687E+00
49	1.1254E+00	1.9425E+00	1.9319E+00	1.9427E+00
50	6.8256E-01	1.9085E+00	1.8976E+00	1.9087E+00
	1.0000E-05	5.2384E+01	5.2298E+01	5.2387E+01

TABLE B-xxv

ZPR-3-12 CENTRAL FLUX SPECTRA

GROUP	ENERGY BOUNDARY (EV)	1-D DIFFUSION THEORY (N/CM2/S)	1-D TRANSPORT THEORY (N/CM2/S)	2-D DIFFUSION THEORY (N/CM2/S)
1	1.9971E+07	3.6523E-02	3.6719E-02	3.6514E-02
2	1.0000E+07	4.5374E-01	4.5368E-01	4.5378E-01
3	6.0653E+06	2.1385E+00	2.1306E+00	2.1385E+00
4	3.6788E+06	4.8206E+00	4.7931E+00	4.8199E+00
5	2.2313E+06	6.9507E+00	6.9197E+00	6.9473E+00
6	1.3534E+06	9.3268E+00	9.3080E+00	9.3188E+00
7	8.2085E+05	1.2725E+01	1.2726E+01	1.2714E+01
8	4.9787E+05	6.8785E+00	6.8819E+00	6.8735E+00
9	3.8774E+05	6.9121E+00	6.9186E+00	6.9079E+00
10	3.0197E+05	6.5577E+00	6.5652E+00	6.5550E+00
11	2.3518E+05	6.0390E+00	6.0462E+00	6.0376E+00
12	1.8316E+05	5.5227E+00	5.5289E+00	5.5226E+00
13	1.4264E+05	4.9970E+00	5.0025E+00	4.9980E+00
14	1.1109E+05	4.4832E+00	4.4872E+00	4.4851E+00
15	8.6517E+04	4.0555E+00	4.0595E+00	4.0581E+00
16	6.7379E+04	3.5938E+00	3.5960E+00	3.5971E+00
17	5.2475E+04	3.1120E+00	3.1139E+00	3.1157E+00
18	4.0868E+04	2.4784E+00	2.4805E+00	2.4822E+00
19	3.1828E+04	2.0073E+00	2.0126E+00	2.0109E+00
20	2.4788E+04	1.8083E+00	1.8137E+00	1.8122E+00
21	1.9305E+04	1.3804E+00	1.3851E+00	1.3837E+00
22	1.5034E+04	1.0715E+00	1.0755E+00	1.0741E+00
23	1.1709E+04	7.8574E-01	7.8901E-01	7.8775E-01
24	9.1188E+03	5.5791E-01	5.6042E-01	5.5933E-01
25	7.1017E+03	4.1984E-01	4.2190E-01	4.2087E-01
26	5.5308E+03	3.0279E-01	3.0442E-01	3.0349E-01
27	4.3074E+03	2.1360E-01	2.1497E-01	2.1404E-01
28	3.3546E+03	1.4450E-01	1.4546E-01	1.4476E-01
29	2.6126E+03	9.3648E-02	9.4395E-02	9.3785E-02
30	2.0347E+03	5.8548E-02	5.9234E-02	5.8611E-02
31	1.5846E+03	3.5370E-02	3.5837E-02	3.5393E-02
32	1.2341E+03	1.8931E-02	1.9214E-02	1.8936E-02
33	9.6112E+02	1.0402E-02	1.0580E-02	1.0400E-02
34	7.4852E+02	5.1443E-03	5.2421E-03	5.1411E-03
35	5.8295E+02	2.4208E-03	2.4706E-03	2.4183E-03
36	4.5400E+02	1.1729E-03	1.1982E-03	1.1712E-03
37	3.5358E+02	5.4343E-04	5.5578E-04	5.4251E-04
38	2.7536E+02	3.0985E-04	3.1789E-04	3.0923E-04
39	1.6702E+02	7.0124E-05	7.1723E-05	6.9993E-05
40	1.0130E+02	1.3296E-05	1.3653E-05	1.3267E-05
41	6.1442E+01	1.6585E-06	1.7056E-06	1.6546E-06
42	3.7267E+01	1.9295E-07	1.9890E-07	1.9246E-07
43	2.2603E+01	2.1067E-08	2.1774E-08	2.1009E-08
44	1.3710E+01	2.2594E-09	2.3395E-09	2.2530E-09
45	8.3153E+00	1.8153E-10	1.8836E-10	1.8099E-10
46	5.0435E+00	3.7073E-11	3.8550E-11	3.6951E-11
47	3.0590E+00	9.5362E-12	9.9306E-12	9.5007E-12
48	1.8554E+00	1.7976E-12	1.8747E-12	1.7904E-12
49	1.1254E+00	1.5966E-13	1.6658E-13	1.5900E-13
50	6.8256E-01	5.1047E-15	5.3277E-15	5.0834E-15
	1.0000E-05	1.0000E+02	1.0000E+02	1.0000E+02

TABLE B-XXVI

ZPR-3-12 EDGE FLUX SPECTRA

GROUP	ENERGY BOUNDARY (EV)	1-D DIFFUSION THEORY (N/CM2/S)	1-D TRANSPORT THEORY (N/CM2/S)	2-D DIFFUSION THEORY (N/CM2/S)
1	1.9971E+07	4.3381E-03	6.2161E-03	4.3521E-03
2	1.0000E+07	4.6568E-02	6.3795E-02	4.6774E-02
3	6.0653E+06	1.7686E-01	2.3743E-01	1.7812E-01
4	3.6788E+06	3.6150E-01	4.6881E-01	3.6552E-01
5	2.2313E+06	5.9234E-01	7.5473E-01	6.0164E-01
6	1.3534E+06	1.9946E+00	2.3076E+00	2.0262E+00
7	8.2085E+05	9.0371E+00	9.1872E+00	9.0366E+00
8	4.9787E+05	6.3525E+00	6.3737E+00	6.3642E+00
9	3.8774E+05	7.8020E+00	7.7595E+00	7.8057E+00
10	3.0197E+05	8.1460E+00	8.0893E+00	8.1518E+00
11	2.3518E+05	7.7102E+00	7.6706E+00	7.7285E+00
12	1.8316E+05	7.2850E+00	7.2606E+00	7.3044E+00
13	1.4264E+05	7.0887E+00	7.0716E+00	7.1050E+00
14	1.1109E+05	6.9293E+00	6.9415E+00	6.9543E+00
15	8.6517E+04	7.2317E+00	7.2411E+00	7.2489E+00
16	6.7379E+04	6.6180E+00	6.6580E+00	6.6264E+00
17	5.2475E+04	6.4008E+00	6.3374E+00	6.3852E+00
18	4.0868E+04	4.6520E+00	4.5132E+00	4.6169E+00
19	3.1828E+04	2.9179E+00	2.8176E+00	2.9116E+00
20	2.4788E+04	3.7206E+00	3.5528E+00	3.6653E+00
21	1.9305E+04	1.9048E+00	1.8269E+00	1.8786E+00
22	1.5034E+04	1.2366E+00	1.1855E+00	1.2194E+00
23	1.1709E+04	7.2437E-01	6.9258E-01	7.1479E-01
24	9.1188E+03	3.4606E-01	3.3434E-01	3.4407E-01
25	7.1017E+03	2.5665E-01	2.4646E-01	2.5507E-01
26	5.5308E+03	1.5401E-01	1.4733E-01	1.5325E-01
27	4.3074E+03	1.3001E-01	1.2120E-01	1.2961E-01
28	3.3546E+03	6.4323E-02	6.0358E-02	6.4232E-02
29	2.6126E+03	3.9806E-02	3.1102E-02	3.9420E-02
30	2.0347E+03	4.4218E-02	2.1437E-02	4.3042E-02
31	1.5846E+03	1.7240E-02	1.0883E-02	1.7194E-02
32	1.2341E+03	6.1873E-03	4.0653E-03	6.2147E-03
33	9.6112E+02	4.1280E-03	2.7420E-03	4.1401E-03
34	7.4852E+02	1.6508E-03	1.1781E-03	1.6753E-03
35	5.8295E+02	9.0772E-04	7.2249E-04	9.2514E-04
36	4.5400E+02	4.0874E-04	3.5800E-04	4.2060E-04
37	3.5358E+02	2.0478E-04	1.7816E-04	2.1052E-04
38	2.7536E+02	3.0418E-04	1.6278E-04	2.9891E-04
39	1.6702E+02	3.6636E-05	2.6592E-05	3.7044E-05
40	1.0130E+02	6.2991E-06	4.2189E-06	6.2375E-06
41	6.1442E+01	1.0394E-06	8.2652E-07	1.0546E-06
42	3.7267E+01	1.0682E-07	8.5039E-08	1.0716E-07
43	2.2603E+01	5.1177E-09	4.0849E-09	5.1368E-09
44	1.3710E+01	8.4396E-10	7.6686E-10	8.5441E-10
45	8.3153E+00	1.3628E-11	1.1896E-11	1.3902E-11
46	5.0435E+00	2.8471E-12	2.8178E-12	2.9072E-12
47	3.0590E+00	1.2793E-12	1.3783E-12	1.3343E-12
48	1.8554E+00	4.8319E-13	5.3124E-13	5.0554E-13
49	1.1254E+00	1.0116E-13	1.1132E-13	1.0548E-13
50	6.8256E-01	8.6057E-15	9.5045E-15	9.0284E-15
	1.0000E-05	1.0000E-02	1.0000E-02	1.0000E-02

TABLE B-xxvii

ZPR-3-12 CENTRAL ADJOINT SPECTRA

GROUP	ENERGY BOUNDARY (EV)	1-D DIFFUSION THEORY (RHO/N/S)	1-D TRANSPORT THEORY (RHO/N/S)	2-D DIFFUSION THEORY (RHO/N/S)
1	1.9971E+07	1.8015E+00	1.8242E+00	1.8039E+00
2	1.0000E+07	1.3893E+00	1.4011E+00	1.3906E+00
3	6.0653E+06	1.1222E+00	1.1272E+00	1.1228E+00
4	3.6788E+06	1.0994E+00	1.1007E+00	1.0998E+00
5	2.2313E+06	9.9748E-01	9.9789E-01	9.9753E-01
6	1.3534E+06	8.7077E-01	8.7035E-01	8.7036E-01
7	8.2085E+05	8.7335E-01	8.7049E-01	8.7284E-01
8	4.9787E+05	9.1537E-01	9.0975E-01	9.1471E-01
9	3.8774E+05	9.3073E-01	9.2428E-01	9.3004E-01
10	3.0197E+05	9.4432E-01	9.3721E-01	9.4364E-01
11	2.3518E+05	9.5384E-01	9.4645E-01	9.5321E-01
12	1.8316E+05	9.5976E-01	9.5232E-01	9.5921E-01
13	1.4264E+05	9.6147E-01	9.5418E-01	9.6099E-01
14	1.1109E+05	9.6169E-01	9.5461E-01	9.6129E-01
15	8.6517E+04	9.5850E-01	9.5190E-01	9.5819E-01
16	6.7379E+04	9.5173E-01	9.4545E-01	9.5151E-01
17	5.2475E+04	9.4795E-01	9.4260E-01	9.4781E-01
18	4.0868E+04	9.5439E-01	9.4970E-01	9.5435E-01
19	3.1828E+04	9.6267E-01	9.5837E-01	9.6272E-01
20	2.4788E+04	9.6695E-01	9.6142E-01	9.6705E-01
21	1.9305E+04	9.8793E-01	9.8210E-01	9.8817E-01
22	1.5034E+04	1.0120E+00	1.0059E+00	1.0124E+00
23	1.1709E+04	1.0374E+00	1.0310E+00	1.0379E+00
24	9.1188E+03	1.0680E+00	1.0613E+00	1.0686E+00
25	7.1017E+03	1.1048E+00	1.0980E+00	1.1055E+00
26	5.5308E+03	1.1398E+00	1.1328E+00	1.1406E+00
27	4.3074E+03	1.1675E+00	1.1606E+00	1.1684E+00
28	3.3546E+03	1.1762E+00	1.1690E+00	1.1771E+00
29	2.6126E+03	1.2000E+00	1.1935E+00	1.2010E+00
30	2.0347E+03	1.2286E+00	1.2217E+00	1.2297E+00
31	1.5846E+03	1.2383E+00	1.2296E+00	1.2394E+00
32	1.2341E+03	1.2256E+00	1.2170E+00	1.2267E+00
33	9.6112E+02	1.3069E+00	1.2974E+00	1.3081E+00
34	7.4852E+02	1.4085E+00	1.3973E+00	1.4098E+00
35	5.8295E+02	1.4542E+00	1.4422E+00	1.4556E+00
36	4.5400E+02	1.3980E+00	1.3863E+00	1.3994E+00
37	3.5358E+02	1.3772E+00	1.3667E+00	1.3785E+00
38	2.7536E+02	1.3900E+00	1.3803E+00	1.3913E+00
39	1.6702E+02	1.2915E+00	1.2816E+00	1.2927E+00
40	1.0130E+02	1.3220E+00	1.3117E+00	1.3233E+00
41	6.1442E+01	1.5263E+00	1.5119E+00	1.5277E+00
42	3.7267E+01	1.3006E+00	1.2893E+00	1.3019E+00
43	2.2603E+01	1.1235E+00	1.1138E+00	1.1245E+00
44	1.3710E+01	1.3491E+00	1.3365E+00	1.3504E+00
45	8.3153E+00	4.9684E-01	4.9243E-01	4.9731E-01
46	5.0435E+00	1.1892E+00	1.1781E+00	1.1903E+00
47	3.0590E+00	1.4705E+00	1.4555E+00	1.4719E+00
48	1.8554E+00	1.7481E+00	1.7304E+00	1.7497E+00
49	1.1254E+00	2.0374E+00	2.0158E+00	2.0393E+00
50	6.8256E-01	1.9932E+00	1.9718E+00	1.9950E+00
	1.0000E-05	5.9293E+01	5.8942E+01	5.9325E+01

TABLE B-xxviii

ZEBRA-2 CENTRAL FLUX SPECTRA

GROUP	ENERGY BOUNDARY (EV)	1-D DIFFUSION THEORY (N/CM2/S)	1-D TRANSPORT THEORY (N/CM2/S)	2-D DIFFUSION THEORY (N/CM2/S)
1	1.9971E+07	2.9143E-02	2.9165E-02	2.9149E-02
2	1.0000E+07	3.4911E-01	3.4899E-01	3.4921E-01
3	6.0653E+06	1.7292E+00	1.7263E+00	1.7296E+00
4	3.6788E+06	3.9474E+00	3.9381E+00	3.9484E+00
5	2.2313E+06	5.8077E+00	5.7949E+00	5.8088E+00
6	1.3534E+06	7.7535E+00	7.7398E+00	7.7541E+00
7	8.2085E+05	1.0219E+01	1.0236E+01	1.0249E+01
8	4.9787E+05	5.5454E+00	5.5394E+00	5.5451E+00
9	3.8774E+05	5.6181E+00	5.6130E+00	5.6176E+00
10	3.0197E+05	5.4706E+00	5.4664E+00	5.4700E+00
11	2.3518E+05	5.2138E+00	5.2106E+00	5.2131E+00
12	1.8316E+05	4.9311E+00	4.9288E+00	4.9304E+00
13	1.4264E+05	4.6435E+00	4.6419E+00	4.6428E+00
14	1.1109E+05	4.3646E+00	4.3637E+00	4.3640E+00
15	8.6517E+04	4.1029E+00	4.1028E+00	4.1023E+00
16	6.7379E+04	3.8245E+00	3.8250E+00	3.8240E+00
17	5.2475E+04	3.5034E+00	3.5048E+00	3.5030E+00
18	4.0868E+04	3.1199E+00	3.1221E+00	3.1194E+00
19	3.1828E+04	2.8256E+00	2.8295E+00	2.8253E+00
20	2.4788E+04	2.6106E+00	2.6153E+00	2.6105E+00
21	1.9305E+04	2.2951E+00	2.3001E+00	2.2951E+00
22	1.5034E+04	2.0221E+00	2.0275E+00	2.0222E+00
23	1.1709E+04	1.7421E+00	1.7475E+00	1.7423E+00
24	9.1188E+03	1.4915E+00	1.4968E+00	1.4917E+00
25	7.1017E+03	1.2938E+00	1.2990E+00	1.2941E+00
26	5.5308E+03	1.1057E+00	1.1107E+00	1.1060E+00
27	4.3074E+03	9.3500E-01	9.3978E-01	9.3531E-01
28	3.3546E+03	7.7731E-01	7.8183E-01	7.7762E-01
29	2.6126E+03	6.3872E-01	6.4304E-01	6.3901E-01
30	2.0347E+03	5.2072E-01	5.2436E-01	5.2099E-01
31	1.5846E+03	4.1436E-01	4.1749E-01	4.1460E-01
32	1.2341E+03	3.1474E-01	3.1731E-01	3.1494E-01
33	9.6112E+02	2.4030E-01	2.4239E-01	2.4046E-01
34	7.4852E+02	1.7573E-01	1.7734E-01	1.7585E-01
35	5.8295E+02	1.2609E-01	1.2730E-01	1.2618E-01
36	4.5400E+02	9.0673E-02	9.1572E-02	9.0740E-02
37	3.5358E+02	6.3746E-02	6.4423E-02	6.3794E-02
38	2.7536E+02	6.8734E-02	6.9532E-02	6.8784E-02
39	1.6702E+02	2.8247E-02	2.8605E-02	2.8266E-02
40	1.0130E+02	1.1456E-02	1.1615E-02	1.1463E-02
41	6.1442E+01	3.5912E-03	3.6433E-03	3.5934E-03
42	3.7267E+01	1.0001E-03	1.0156E-03	1.0007E-03
43	2.2603E+01	2.5541E-04	2.5964E-04	2.5554E-04
44	1.3710E+01	6.8704E-05	6.9888E-05	6.8735E-05
45	8.3153E+00	1.3061E-05	1.3299E-05	1.3066E-05
46	5.0435E+00	5.6949E-06	5.8005E-06	5.6964E-06
47	3.0590E+00	2.9969E-06	3.0529E-06	2.9971E-06
48	1.8554E+00	1.2900E-06	1.3144E-06	1.2898E-06
49	1.1254E+00	3.2734E-07	3.3358E-07	3.2727E-07
50	6.8256E-01	2.7548E-08	2.8080E-08	2.7542E-08
	1.0000E-05	1.0000E+02	1.0000E+02	1.0000E+02

TABLE B-XXIX

ZEBRA-2 EDGE FLUX SPECTRA

GROUP	ENERGY BOUNDARY (eV)	1-D DIFFUSION THEORY (N/CM2/S)	1-D TRANSPORT THEORY (N/CM2/S)	2-D DIFFUSION THEORY (N/CM2/S)
1	1.9971E+07	7.4117E-03	8.7751E-03	6.4439E-03
2	1.0000E+07	8.5737E-02	9.6872E-02	7.5496E-02
3	6.0653E+06	3.3348E-01	3.7293E-01	2.9648E-01
4	3.6788E+06	6.6574E-01	7.3302E-01	5.9796E-01
5	2.2313E+06	1.0150E+00	1.1219E+00	9.1457E-01
6	1.3534E+06	2.6632E+00	2.8874E+00	2.3872E+00
7	8.2085E+05	9.6957E+00	9.8282E+00	8.9174E+00
8	4.9787E+05	6.6084E+00	6.6508E+00	6.2262E+00
9	3.8774E+05	7.8295E+00	7.8384E+00	7.4915E+00
10	3.0197E+05	8.0635E+00	8.0885E+00	7.8502E+00
11	2.3518E+05	7.6139E+00	7.6315E+00	7.5534E+00
12	1.8316E+05	7.0966E+00	7.1241E+00	7.1420E+00
13	1.4264E+05	6.8125E+00	6.8469E+00	6.9426E+00
14	1.1109E+05	6.7416E+00	6.7954E+00	6.9788E+00
15	8.6517E+04	6.8317E+00	6.8882E+00	7.1480E+00
16	6.7379E+04	6.2605E+00	6.3327E+00	6.6126E+00
17	5.2475E+04	6.0381E+00	6.0045E+00	6.3811E+00
18	4.0868E+04	4.5183E+00	4.3869E+00	4.7550E+00
19	3.1828E+04	2.9380E+00	2.8455E+00	3.1599E+00
20	2.4788E+04	3.1418E+00	3.0017E+00	3.3012E+00
21	1.9305E+04	1.7135E+00	1.6374E+00	1.8150E+00
22	1.5034E+04	1.1534E+00	1.0975E+00	1.2180E+00
23	1.1709E+04	7.0657E-01	6.6743E-01	7.4214E-01
24	9.1188E+03	3.7278E-01	3.5371E-01	3.9636E-01
25	7.1017E+03	2.6692E-01	2.5046E-01	2.8097E-01
26	5.5308E+03	1.6818E-01	1.5682E-01	1.7563E-01
27	4.3074E+03	1.4143E-01	1.2637E-01	1.4700E-01
28	3.3546E+03	7.4095E-02	6.6332E-02	7.6290E-02
29	2.6126E+03	6.2502E-02	4.1452E-02	5.9913E-02
30	2.0347E+03	1.8647E-01	4.6829E-02	1.6469E-01
31	1.5846E+03	7.9832E-02	3.2709E-02	7.7193E-02
32	1.2341E+03	3.2464E-02	1.5116E-02	3.1691E-02
33	9.6112E+02	3.1637E-02	1.6126E-02	2.9763E-02
34	7.4852E+02	1.5045E-02	8.6594E-03	1.4572E-02
35	5.8295E+02	1.0423E-02	7.3165E-03	1.0118E-02
36	4.5400E+02	5.3891E-03	4.4129E-03	5.3931E-03
37	3.5358E+02	3.2309E-03	2.6300E-03	3.2111E-03
38	2.7536E+02	1.3648E-02	3.7036E-03	1.2122E-02
39	1.6702E+02	1.4539E-03	6.1582E-04	1.4570E-03
40	1.0130E+02	4.0273E-04	1.6766E-04	3.6746E-04
41	6.1442E+01	7.3379E-05	4.3139E-05	7.3343E-05
42	3.7267E+01	8.3653E-06	5.3251E-06	7.9553E-06
43	2.2603E+01	4.3384E-07	2.8723E-07	4.1204E-07
44	1.3710E+01	1.8130E-07	1.9354E-07	1.7334E-07
45	8.3153E+00	2.7955E-09	2.7632E-09	2.7364E-09
46	5.0435E+00	1.6938E-08	2.345E-08	1.5980E-08
47	3.0590E+00	6.5279E-08	7.9711E-08	6.3240E-08
48	1.8554E+00	4.235E-08	5.0054E-08	4.1573E-08
49	1.1254E+00	8.4233E-09	9.8689E-09	8.3400E-09
50	6.8256E-01	3.8640E-10	4.5063E-10	3.9823E-10
	1.0000E-05	1.0000E+02	1.0000E+02	1.0000E+02

TABLE B-XXX
ZEBRA-2 CENTRAL ADJOINT SPECTRA

GROUP	ENERGY BOUNDARY (EV)	1-D DIFFUSION THEORY (RHO/N/S)	1-D TRANSPORT THEORY (RHO/N/S)	2-D DIFFUSION THEORY (RHO/N/S)
1	1.9971E+07	1.8050E+00	1.8138E+00	1.8057E+00
2	1.0000E+07	1.3990E+00	1.4039E+00	1.3993E+00
3	6.0653E+06	1.1577E+00	1.1596E+00	1.1578E+00
4	3.6788E+06	1.1159E+00	1.1162E+00	1.1160E+00
5	2.2313E+06	9.9754E-01	9.9737E-01	9.9750E-01
6	1.3534E+06	8.6781E-01	8.6749E-01	8.6766E-01
7	8.2085E+05	8.6822E-01	8.6718E-01	8.6806E-01
8	4.9787E+05	8.8614E-01	8.8455E-01	8.8606E-01
9	3.8774E+05	8.9011E-01	8.8844E-01	8.9009E-01
10	3.0197E+05	8.9233E-01	8.9064E-01	8.9237E-01
11	2.3518E+05	8.9287E-01	8.9123E-01	8.9296E-01
12	1.8316E+05	8.9288E-01	8.9132E-01	8.9302E-01
13	1.4264E+05	8.9154E-01	8.9009E-01	8.9171E-01
14	1.1109E+05	8.8987E-01	8.8854E-01	8.9007E-01
15	8.6517E+04	8.8785E-01	8.8668E-01	8.8807E-01
16	6.7379E+04	8.8540E-01	8.8437E-01	8.8564E-01
17	5.2475E+04	8.8684E-01	8.8606E-01	8.8710E-01
18	4.0868E+04	8.9482E-01	8.9419E-01	8.9510E-01
19	3.1828E+04	9.0474E-01	9.0417E-01	9.0504E-01
20	2.4788E+04	9.1540E-01	9.1457E-01	9.1570E-01
21	1.9305E+04	9.3245E-01	9.3156E-01	9.3276E-01
22	1.5034E+04	9.5245E-01	9.5148E-01	9.5277E-01
23	1.1709E+04	9.7385E-01	9.7280E-01	9.7418E-01
24	9.1188E+03	9.9767E-01	9.9653E-01	9.9801E-01
25	7.1017E+03	1.0251E+00	1.0239E+00	1.0255E+00
26	5.5308E+03	1.0521E+00	1.0508E+00	1.0525E+00
27	4.3074E+03	1.0767E+00	1.0753E+00	1.0771E+00
28	3.3546E+03	1.0937E+00	1.0921E+00	1.0940E+00
29	2.6126E+03	1.1203E+00	1.1188E+00	1.1207E+00
30	2.0347E+03	1.1485E+00	1.1467E+00	1.1489E+00
31	1.5846E+03	1.1683E+00	1.1658E+00	1.1687E+00
32	1.2341E+03	1.1812E+00	1.1785E+00	1.1816E+00
33	9.6112E+02	1.2390E+00	1.2358E+00	1.2394E+00
34	7.4852E+02	1.2931E+00	1.2894E+00	1.2936E+00
35	5.8295E+02	1.3143E+00	1.3102E+00	1.3147E+00
36	4.5400E+02	1.2852E+00	1.2814E+00	1.2856E+00
37	3.5358E+02	1.2770E+00	1.2735E+00	1.2774E+00
38	2.7536E+02	1.2838E+00	1.2805E+00	1.2842E+00
39	1.6702E+02	1.2193E+00	1.2156E+00	1.2197E+00
40	1.0130E+02	1.2693E+00	1.2651E+00	1.2697E+00
41	6.1442E+01	1.4175E+00	1.4117E+00	1.4179E+00
42	3.7267E+01	1.1853E+00	1.1809E+00	1.1857E+00
43	2.2603E+01	1.0338E+00	1.0300E+00	1.0341E+00
44	1.3710E+01	1.1831E+00	1.1782E+00	1.1835E+00
45	8.3153E+00	5.3851E-01	5.3649E-01	5.3868E-01
46	5.0435E+00	1.2837E+00	1.2781E+00	1.2841E+00
47	3.0590E+00	1.5596E+00	1.5524E+00	1.5601E+00
48	1.8554E+00	1.7965E+00	1.7881E+00	1.7971E+00
49	1.1254E+00	2.0069E+00	1.9971E+00	2.0076E+00
50	6.8256E-01	1.9833E+00	1.9733E+00	1.9839E+00
	1.0000E-05	5.6713E+01	5.6602E+01	5.6729E+01

TABLE B-XXXI

ZPPR-2 CENTRAL FLUX SPECTRA

GROUP	ENERGY BOUNDARY (EV)	1-D DIFFUSION THEORY (N/CM2/S)	1-D TRANSPORT THEORY (N/CM2/S)	2-D DIFFUSION THEORY (N/CM2/S)
1	1.9971E+07	2.2513E-02	2.2196E-02	2.2570E-02
2	1.0000E+07	2.6473E-01	2.6062E-01	2.6542E-01
3	6.0653E+06	1.1482E+00	1.1295E+00	1.1512E+00
4	3.6788E+06	2.7489E+00	2.7089E+00	2.7555E+00
5	2.2313E+06	4.1640E+00	4.1067E+00	4.1733E+00
6	1.3534E+06	5.5018E+00	5.4317E+00	5.5126E+00
7	8.2085E+05	9.3801E+00	9.3083E+00	9.3885E+00
8	4.9787E+05	3.4902E+00	3.4623E+00	3.4932E+00
9	3.8774E+05	5.0810E+00	5.0473E+00	5.0835E+00
10	3.0197E+05	5.6350E+00	5.6057E+00	5.6352E+00
11	2.3518E+05	5.4746E+00	5.4526E+00	5.4725E+00
12	1.8316E+05	5.7602E+00	5.7443E+00	5.7552E+00
13	1.4264E+05	5.6436E+00	5.6403E+00	5.6360E+00
14	1.1109E+05	5.1358E+00	5.1350E+00	5.1271E+00
15	8.6517E+04	5.0959E+00	5.1086E+00	5.0857E+00
16	6.7379E+04	4.2517E+00	4.2660E+00	4.2426E+00
17	5.2475E+04	4.3037E+00	4.3264E+00	4.2942E+00
18	4.0868E+04	3.4769E+00	3.4903E+00	3.4693E+00
19	3.1828E+04	2.9931E+00	3.0201E+00	2.9868E+00
20	2.4788E+04	3.8297E+00	3.8719E+00	3.8237E+00
21	1.9305E+04	2.9333E+00	2.9701E+00	2.9302E+00
22	1.5034E+04	2.6197E+00	2.6556E+00	2.6187E+00
23	1.1709E+04	2.0882E+00	2.1190E+00	2.0890E+00
24	9.1188E+03	1.4013E+00	1.4227E+00	1.4024E+00
25	7.1017E+03	1.3288E+00	1.3498E+00	1.3305E+00
26	5.5308E+03	1.0394E+00	1.0562E+00	1.0412E+00
27	4.3074E+03	6.0038E-01	6.1025E-01	6.0157E-01
28	3.3546E+03	1.3783E-01	1.4009E-01	1.3810E-01
29	2.6126E+03	4.5227E-01	4.5978E-01	4.5324E-01
30	2.0347E+03	8.7894E-01	8.9434E-01	8.8146E-01
31	1.5846E+03	8.9586E-01	9.1241E-01	8.9942E-01
32	1.2341E+03	6.3919E-01	6.5172E-01	6.4239E-01
33	9.6112E+02	5.0563E-01	5.1615E-01	5.0887E-01
34	7.4852E+02	3.8163E-01	3.9001E-01	3.8465E-01
35	5.8295E+02	2.4813E-01	2.5384E-01	2.5046E-01
36	4.5400E+02	1.6829E-01	1.7224E-01	1.7011E-01
37	3.5358E+02	9.6740E-02	9.9121E-02	9.7877E-02
38	2.7536E+02	1.2584E-01	1.2916E-01	1.2767E-01
39	1.6702E+02	4.3003E-02	4.4210E-02	4.3740E-02
40	1.0130E+02	1.0516E-02	1.0825E-02	1.0721E-02
41	6.1442E+01	2.3239E-03	2.3948E-03	2.3742E-03
42	3.7267E+01	9.6620E-04	9.9756E-04	9.9322E-04
43	2.2603E+01	1.3771E-04	1.4233E-04	1.4191E-04
44	1.3710E+01	3.0529E-05	3.1585E-05	3.1614E-05
45	8.3153E+00	3.5514E-06	3.6781E-06	3.6881E-06
46	5.0435E+00	1.8360E-06	1.9026E-06	1.9700E-06
47	3.0590E+00	8.8049E-07	9.1281E-07	1.0096E-06
48	1.8554E+00	1.3988E-07	1.4508E-07	1.6465E-07
49	1.1254E+00	6.6783E-09	6.9294E-09	7.9141E-09
50	6.8256E-01	2.3201E-10	2.4074E-10	2.7539E-10
	1.0000E-05	1.0000E+02	1.0000E+02	1.0000E+02

TABLE B-xxxII

ZPPR-2 EDGE FLUX SPECTRA

GROUP	ENERGY BOUNDARY (EV)	1-D DIFFUSION THEORY (N/CM2/S)	1-D TRANSPORT THEORY (N/CM2/S)	2-D DIFFUSION THEORY (N/CM2/S)
1	1.9971E+07	1.4373E-03	2.9546E-03	1.4413E-03
2	1.0000E+07	1.2345E-02	2.6262E-02	1.2384E-02
3	6.0653E+06	4.4946E-02	8.5572E-02	4.5088E-02
4	3.6788E+06	2.2639E-01	3.4092E-01	2.2692E-01
5	2.2313E+06	5.7969E-01	7.3545E-01	5.8082E-01
6	1.3534E+06	1.0742E+00	1.1311E+00	1.0759E+00
7	8.2085E+05	6.5018E+00	6.5232E+00	6.5013E+00
8	4.9787E+05	2.0094E+00	1.9824E+00	2.0090E+00
9	3.8774E+05	3.7433E+00	3.5348E+00	3.7423E+00
10	3.0197E+05	3.5140E+00	3.3658E+00	3.5120E+00
11	2.3518E+05	3.4258E+00	2.9097E+00	3.4225E+00
12	1.8316E+05	4.7808E+00	4.3229E+00	4.7746E+00
13	1.4264E+05	5.4893E+00	5.0150E+00	5.4816E+00
14	1.1109E+05	2.7548E+00	2.9020E+00	2.7503E+00
15	8.6517E+04	5.8721E+00	5.1454E+00	5.8611E+00
16	6.7379E+04	3.2153E+00	3.3079E+00	3.2088E+00
17	5.2475E+04	2.7592E+00	3.2063E+00	2.7531E+00
18	4.0868E+04	1.7991E+00	1.8284E+00	1.7950E+00
19	3.1828E+04	7.4259E+00	5.0369E+00	7.4120E+00
20	2.4788E+04	1.1613E+01	1.2301E+01	1.1615E+01
21	1.9305E+04	4.7255E+00	5.2054E+00	4.7262E+00
22	1.5034E+04	3.4155E+00	3.7507E+00	3.4156E+00
23	1.1709E+04	2.1517E+00	2.3600E+00	2.1516E+00
24	9.1188E+03	6.9091E-01	7.3989E-01	6.9085E-01
25	7.1017E+03	1.3147E+00	1.4175E+00	1.3145E+00
26	5.5308E+03	2.0367E+00	2.2133E+00	2.0366E+00
27	4.3074E+03	1.9142E+00	2.0747E+00	1.9145E+00
28	3.3546E+03	1.4567E+00	1.5901E+00	1.4571E+00
29	2.6126E+03	9.0612E-01	9.9866E-01	9.0643E-01
30	2.0347E+03	1.0539E+00	1.1587E+00	1.0544E+00
31	1.5846E+03	1.1770E+00	1.2906E+00	1.1778E+00
32	1.2341E+03	8.4430E-01	9.1895E-01	8.4503E-01
33	9.6112E+02	9.3047E-01	1.0163E+00	9.3154E-01
34	7.4852E+02	8.5743E-01	9.3793E-01	8.5870E-01
35	5.8295E+02	8.6454E-01	9.4695E-01	8.6614E-01
36	4.5400E+02	7.1743E-01	7.8557E-01	7.1898E-01
37	3.5358E+02	4.7613E-01	5.1437E-01	4.7726E-01
38	2.7536E+02	1.4355E+00	1.5770E+00	1.4404E+00
39	1.6702E+02	1.3671E+00	1.5039E+00	1.3733E+00
40	1.0130E+02	1.1885E+00	1.3081E+00	1.1953E+00
41	6.1442E+01	1.0026E+00	1.1031E+00	1.0096E+00
42	3.7267E+01	8.3899E-01	9.2086E-01	8.4593E-01
43	2.2603E+01	6.0749E-01	6.6770E-01	6.1322E-01
44	1.3710E+01	4.6204E-01	5.0622E-01	4.6695E-01
45	8.3153E+00	3.0660E-01	3.3589E-01	3.1018E-01
46	5.0435E+00	1.9428E-01	2.1271E-01	1.9674E-01
47	3.0590E+00	1.1474E-01	1.2534E-01	1.1629E-01
48	1.8554E+00	6.6138E-02	7.2059E-02	6.7091E-02
49	1.1254E+00	2.8586E-02	3.1086E-02	2.9021E-02
50	6.8256E-01	1.1334E-02	1.2293E-02	1.1512E-02
	1.0000E-05	1.0000E+02	1.0000E+02	1.0000E+02

TABLE B-XXXIII

ZPPR-2 CENTRAL ADJOINT SPECTRA

GROUP	ENERGY BOUNDARY (EVI)	1-D DIFFUSION THEORY (RHO/N/S)	1-D TRANSPORT THEORY (RHO/N/S)	2-D DIFFUSION THEORY (RHO/N/S)
1	1.9971E+07	1.4185E+00	1.4202E+00	1.4210E+00
2	1.0000E+07	1.2312E+00	1.2326E+00	1.2329E+00
3	6.0653E+06	1.0941E+00	1.0959E+00	1.0951E+00
4	3.6788E+06	1.0989E+00	1.1005E+00	1.0998E+00
5	2.2313E+06	1.0194E+00	1.0197E+00	1.0194E+00
6	1.3534E+06	9.2072E-01	9.2107E-01	9.2001E-01
7	8.2085E+05	9.0042E-01	9.0005E-01	8.9937E-01
8	4.9787E+05	8.7624E-01	8.7219E-01	8.7480E-01
9	3.8774E+05	8.6045E-01	8.5607E-01	8.5901E-01
10	3.0197E+05	8.4480E-01	8.3951E-01	8.4348E-01
11	2.3518E+05	8.3035E-01	8.2415E-01	8.2922E-01
12	1.8316E+05	8.1543E-01	8.0870E-01	8.1448E-01
13	1.4264E+05	7.9952E-01	7.9230E-01	7.9880E-01
14	1.1109E+05	7.8366E-01	7.7556E-01	7.8323E-01
15	8.6517E+04	7.6616E-01	7.5805E-01	7.6595E-01
16	6.7379E+04	7.5020E-01	7.4116E-01	7.5025E-01
17	5.2475E+04	7.3870E-01	7.2945E-01	7.3896E-01
18	4.0868E+04	7.3042E-01	7.2097E-01	7.3090E-01
19	3.1828E+04	7.2618E-01	7.1673E-01	7.2681E-01
20	2.4788E+04	7.2428E-01	7.1289E-01	7.2503E-01
21	1.9305E+04	7.3054E-01	7.1795E-01	7.3155E-01
22	1.5034E+04	7.3617E-01	7.2288E-01	7.3730E-01
23	1.1709E+04	7.4716E-01	7.3321E-01	7.4838E-01
24	9.1188E+03	7.6042E-01	7.4574E-01	7.6170E-01
25	7.1017E+03	7.7040E-01	7.5544E-01	7.7169E-01
26	5.5308E+03	7.8923E-01	7.7379E-01	7.9055E-01
27	4.3074E+03	8.0654E-01	7.9072E-01	8.0788E-01
28	3.3546E+03	8.1611E-01	8.0011E-01	8.1747E-01
29	2.6126E+03	8.1993E-01	8.0387E-01	8.2130E-01
30	2.0347E+03	8.3827E-01	8.2181E-01	8.3967E-01
31	1.5846E+03	8.8225E-01	8.6465E-01	8.8372E-01
32	1.2341E+03	8.7803E-01	8.6031E-01	8.7948E-01
33	9.6112E+02	9.4092E-01	9.2174E-01	9.4247E-01
34	7.4852E+02	9.7756E-01	9.5723E-01	9.7913E-01
35	5.8295E+02	1.0769E+00	1.0540E+00	1.0786E+00
36	4.5400E+02	1.0084E+00	9.8699E-01	1.0100E+00
37	3.5358E+02	1.0348E+00	1.0127E+00	1.0363E+00
38	2.7536E+02	1.1044E+00	1.0807E+00	1.1061E+00
39	1.6702E+02	1.0610E+00	1.0377E+00	1.0625E+00
40	1.0130E+02	1.3381E+00	1.3080E+00	1.3399E+00
41	6.1442E+01	1.0427E+00	1.0193E+00	1.0442E+00
42	3.7267E+01	8.8431E-01	8.6515E-01	8.8558E-01
43	2.2603E+01	1.2153E+00	1.1876E+00	1.2169E+00
44	1.3710E+01	1.5275E+00	1.4926E+00	1.5295E+00
45	8.3153E+00	6.3193E-01	6.1756E-01	6.3279E-01
46	5.0435E+00	1.1299E+00	1.1047E+00	1.1316E+00
47	3.0590E+00	9.4583E-01	9.2433E-01	9.4718E-01
48	1.8554E+00	5.5496E-01	5.4208E-01	5.5568E-01
49	1.1254E+00	4.4716E-01	4.3669E-01	4.4772E-01
50	6.8256E-01	1.8410E+00	1.7973E+00	1.8433E+00
	1.0000E-05	4.6267E+01	4.5575E+01	4.6309E+01

TABLE B-XXXIV
ZPR-6-7 CENTRAL FLUX SPECTRA

GROUP	ENERGY BOUNDARY (EV)	1-D DIFFUSION THEORY (N/CM2/S)	1-D TRANSPORT THEORY (N/CM2/S)	2-D DIFFUSION THEORY (N/CM2/S)
1	1.9971E+07	2.2480E-02	2.2378E-02	2.2800E-02
2	1.0000E+07	2.6455E-01	2.6330E-01	2.6855E-01
3	6.0653E+06	1.1471E+00	1.1416E+00	1.1661E+00
4	3.6788E+06	2.7510E+00	2.7389E+00	2.7886E+00
5	2.2313E+06	4.1703E+00	4.1523E+00	4.2091E+00
6	1.3534E+06	5.4674E+00	5.4466E+00	5.4953E+00
7	8.2085E+05	9.3414E+00	9.3172E+00	9.3451E+00
8	4.9787E+05	3.4870E+00	3.4784E+00	3.4835E+00
9	3.8774E+05	5.0815E+00	5.0701E+00	5.0743E+00
10	3.0197E+05	5.6433E+00	5.6316E+00	5.6381E+00
11	2.3518E+05	5.4900E+00	5.4808E+00	5.4892E+00
12	1.8316E+05	5.7456E+00	5.7372E+00	5.7387E+00
13	1.4264E+05	5.6262E+00	5.6214E+00	5.6166E+00
14	1.1109E+05	5.1115E+00	5.1073E+00	5.1075E+00
15	8.6517E+04	5.0816E+00	5.0838E+00	5.0677E+00
16	6.7379E+04	4.2363E+00	4.2391E+00	4.2258E+00
17	5.2475E+04	4.2916E+00	4.2962E+00	4.2860E+00
18	4.0868E+04	3.4705E+00	3.4722E+00	3.4785E+00
19	3.1828E+04	2.9846E+00	2.9972E+00	2.9888E+00
20	2.4788E+04	3.8380E+00	3.8547E+00	3.8177E+00
21	1.9305E+04	2.9408E+00	2.9553E+00	2.9347E+00
22	1.5034E+04	2.6285E+00	2.6421E+00	2.6217E+00
23	1.1709E+04	2.0994E+00	2.1108E+00	2.0989E+00
24	9.1188E+03	1.4078E+00	1.4158E+00	1.4125E+00
25	7.1017E+03	1.3387E+00	1.3466E+00	1.3379E+00
26	5.5308E+03	1.0488E+00	1.0550E+00	1.0443E+00
27	4.3074E+03	6.0578E-01	6.0954E-01	6.0036E-01
28	3.3546E+03	1.3925E-01	1.4012E-01	1.3786E-01
29	2.6126E+03	4.5782E-01	4.6030E-01	4.5482E-01
30	2.0347E+03	8.8921E-01	8.9514E-01	8.8460E-01
31	1.5846E+03	9.0910E-01	9.1539E-01	9.0419E-01
32	1.2341E+03	6.5019E-01	6.5499E-01	6.4717E-01
33	9.6112E+02	5.1640E-01	5.2048E-01	5.1270E-01
34	7.4852E+02	3.9121E-01	3.9451E-01	3.8754E-01
35	5.8295E+02	2.5624E-01	2.5849E-01	2.5323E-01
36	4.5400E+02	1.7465E-01	1.7620E-01	1.7257E-01
37	3.5358E+02	1.0086E-01	1.0179E-01	9.9535E-02
38	2.7536E+02	1.3229E-01	1.3368E-01	1.2889E-01
39	1.6702E+02	4.5779E-02	4.6290E-02	4.4283E-02
40	1.0130E+02	1.1306E-02	1.1442E-02	1.0851E-02
41	6.1442E+01	2.5292E-03	2.5606E-03	2.4076E-03
42	3.7267E+01	1.0716E-03	1.0859E-03	1.0138E-03
43	2.2603E+01	1.5474E-04	1.5691E-04	1.4498E-04
44	1.3710E+01	3.4859E-05	3.5361E-05	3.2416E-05
45	8.3153E+00	4.1290E-06	4.1914E-06	3.7959E-06
46	5.0435E+00	2.1723E-06	2.2045E-06	1.9966E-06
47	3.0590E+00	1.1605E-06	1.1774E-06	9.9369E-07
48	1.8554E+00	1.8874E-07	1.9155E-07	1.5860E-07
49	1.1254E+00	8.9968E-09	9.1338E-09	7.5687E-09
50	6.8256E-01	3.1635E-10	3.2119E-10	2.6268E-10
	1.0000E-05	1.0000E+02	1.0000E+02	1.0000E+02

TABLE B-xxxv
ZPR-6-7 EDGE FLUX SPECTRA

GROUP	ENERGY BOUNDARY (EV)	1-D DIFFUSION THEORY (N/CM2/S)	1-D TRANSPORT THEORY (N/CM2/S)	2-D DIFFUSION THEORY (N/CM2/S)
1	1.9971E+07	5.0846E-03	7.1287E-03	4.4871E-03
2	1.0000E+07	5.0144E-02	6.7128E-02	4.4794E-02
3	6.0653E+06	1.7626E-01	2.2971E-01	1.5923E-01
4	3.6788E+06	3.4306E-01	4.4104E-01	3.1322E-01
5	2.2313E+06	5.3679E-01	6.8546E-01	4.9356E-01
6	1.3534E+06	1.6301E+00	1.9487E+00	1.4962E+00
7	8.2085E+05	8.4101E+00	8.8226E+00	7.7343E+00
8	4.9787E+05	5.6503E+00	5.8040E+00	5.3334E+00
9	3.8774E+05	6.9764E+00	7.0735E+00	6.6372E+00
10	3.0197E+05	7.3720E+00	7.4412E+00	7.1301E+00
11	2.3518E+05	7.0418E+00	7.0995E+00	6.9636E+00
12	1.8316E+05	6.7228E+00	6.7738E+00	6.7351E+00
13	1.4264E+05	6.7546E+00	6.7941E+00	6.8355E+00
14	1.1109E+05	6.6145E+00	6.6716E+00	6.8406E+00
15	8.6517E+04	7.4297E+00	7.4575E+00	7.7197E+00
16	6.7379E+04	6.7035E+00	6.7532E+00	7.0128E+00
17	5.2475E+04	6.8935E+00	6.7832E+00	7.2057E+00
18	4.0868E+04	5.3486E+00	5.1619E+00	5.5883E+00
19	3.1828E+04	3.3002E+00	3.1260E+00	3.5535E+00
20	2.4788E+04	4.5933E+00	4.2776E+00	4.5925E+00
21	1.9305E+04	2.4786E+00	2.3059E+00	2.5261E+00
22	1.5034E+04	1.7067E+00	1.5808E+00	1.7318E+00
23	1.1709E+04	1.0972E+00	1.0092E+00	1.1147E+00
24	9.1188E+03	5.0749E-01	4.7110E-01	5.3647E-01
25	7.1017E+03	3.9651E-01	3.6470E-01	4.1131E-01
26	5.5308E+03	2.6520E-01	2.4262E-01	2.7306E-01
27	4.3074E+03	2.2530E-01	1.9890E-01	2.3286E-01
28	3.3546E+03	1.0053E-01	3.9031E-02	1.0245E-01
29	2.6126E+03	5.1419E-02	4.1230E-02	5.0070E-02
30	2.0347E+03	1.8543E-01	5.6762E-02	1.7693E-01
31	1.5846E+03	1.2629E-01	5.6231E-02	1.3204E-01
32	1.2341E+03	6.1587E-02	2.9394E-02	6.5516E-02
33	9.6112E+02	7.7491E-02	3.9742E-02	7.9449E-02
34	7.4852E+02	4.5483E-02	2.6126E-02	4.7907E-02
35	5.8295E+02	3.6479E-02	2.5191E-02	3.8612E-02
36	4.5400E+02	2.0242E-02	1.6045E-02	2.2421E-02
37	3.5358E+02	1.0876E-02	8.5480E-03	1.2222E-02
38	2.7536E+02	4.6162E-02	1.5471E-02	4.3931E-02
39	1.6702E+02	6.2423E-03	3.0428E-03	6.5669E-03
40	1.0130E+02	1.4988E-03	7.0031E-04	1.4187E-03
41	6.1442E+01	3.5870E-04	2.2341E-04	3.8009E-04
42	3.7267E+01	4.7057E-05	3.0513E-05	4.6168E-05
43	2.2603E+01	2.5700E-06	1.6961E-06	2.4502E-06
44	1.3710E+01	1.0853E-06	1.0199E-06	1.2077E-06
45	8.3153E+00	1.7858E-08	1.5792E-08	1.9651E-08
46	5.0435E+00	1.8829E-08	2.2975E-08	2.3685E-08
47	3.0590E+00	5.3365E-08	6.2658E-08	6.7059E-08
48	1.8554E+00	3.3060E-08	3.7140E-08	3.9638E-08
49	1.1254E+00	8.1164E-09	8.9047E-09	9.3657E-09
50	6.8256E-01	7.0603E-10	7.7262E-10	8.1180E-10
	1.0000E-05	1.0000E+02	1.0000E+02	1.0000E+02

TABLE B-XXXVI
ZPR-6-7 CENTRAL ADJOINT SPECTRA

GROUP	ENERGY BOUNDARY (EV)	1-D DIFFUSION THEORY (RHO/N/S)	1-D TRANSPORT THEORY (RHO/N/S)	2-D DIFFUSION THEORY (RHO/N/S)
1	1.9971E+07	1.4152E+00	1.4143E+00	1.4197E+00
2	1.0000E+07	1.2297E+00	1.2289E+00	1.2326E+00
3	6.0653E+06	1.0932E+00	1.0928E+00	1.0944E+00
4	3.6788E+06	1.0986E+00	1.0983E+00	1.0992E+00
5	2.2313E+06	1.0192E+00	1.0191E+00	1.0191E+00
6	1.3534E+06	9.2098E-01	9.2155E-01	9.2014E-01
7	8.2085E+05	9.0087E-01	9.0138E-01	8.9958E-01
8	4.9787E+05	8.7712E-01	8.7733E-01	8.7634E-01
9	3.8774E+05	8.6146E-01	8.6146E-01	8.6076E-01
10	3.0197E+05	8.4604E-01	8.4598E-01	8.4551E-01
11	2.3518E+05	8.3186E-01	8.3186E-01	8.3152E-01
12	1.8316E+05	8.1714E-01	8.1709E-01	8.1696E-01
13	1.4264E+05	8.0144E-01	8.0146E-01	8.0146E-01
14	1.1109E+05	7.8581E-01	7.8572E-01	7.8598E-01
15	8.6517E+04	7.6851E-01	7.6870E-01	7.6876E-01
16	6.7379E+04	7.5275E-01	7.5241E-01	7.5309E-01
17	5.2475E+04	7.4140E-01	7.4110E-01	7.4176E-01
18	4.0868E+04	7.3319E-01	7.3305E-01	7.3361E-01
19	3.1828E+04	7.2898E-01	7.2908E-01	7.2937E-01
20	2.4788E+04	7.2715E-01	7.2511E-01	7.2749E-01
21	1.9305E+04	7.3350E-01	7.3142E-01	7.3386E-01
22	1.5034E+04	7.3918E-01	7.3687E-01	7.3959E-01
23	1.1709E+04	7.5024E-01	7.4791E-01	7.5064E-01
24	9.1188E+03	7.6354E-01	7.6120E-01	7.6404E-01
25	7.1017E+03	7.7353E-01	7.7112E-01	7.7405E-01
26	5.5308E+03	7.9234E-01	7.8990E-01	7.9298E-01
27	4.3074E+03	8.0960E-01	8.0717E-01	8.1039E-01
28	3.3546E+03	8.1916E-01	8.1670E-01	8.1997E-01
29	2.6126E+03	8.2297E-01	8.2048E-01	8.2377E-01
30	2.0347E+03	8.4131E-01	8.3861E-01	8.4221E-01
31	1.5846E+03	8.8530E-01	8.8226E-01	8.8625E-01
32	1.2341E+03	8.8130E-01	8.7830E-01	8.8241E-01
33	9.6112E+02	9.4499E-01	9.4161E-01	9.4437E-01
34	7.4852E+02	9.8200E-01	9.7837E-01	9.8164E-01
35	5.8295E+02	1.0814E+00	1.0772E+00	1.0823E+00
36	4.5400E+02	1.0112E+00	1.0075E+00	1.0115E+00
37	3.5358E+02	1.0374E+00	1.0338E+00	1.0379E+00
38	2.7536E+02	1.1073E+00	1.1031E+00	1.1072E+00
39	1.6702E+02	1.0649E+00	1.0607E+00	1.0643E+00
40	1.0130E+02	1.3418E+00	1.3360E+00	1.3433E+00
41	6.1442E+01	1.0455E+00	1.0410E+00	1.0451E+00
42	3.7267E+01	8.8389E-01	8.8044E-01	8.7995E-01
43	2.2603E+01	1.2189E+00	1.2135E+00	1.2180E+00
44	1.3710E+01	1.5296E+00	1.5225E+00	1.5299E+00
45	8.3153E+00	6.3338E-01	6.3049E-01	6.2469E-01
46	5.0435E+00	1.1747E+00	1.1687E+00	1.1314E+00
47	3.0590E+00	1.0361E+00	1.0308E+00	9.6253E-01
48	1.8554E+00	5.6260E-01	5.5988E-01	5.5763E-01
49	1.1254E+00	4.4492E-01	4.4273E-01	4.4914E-01
50	6.8256E-01	1.8471E+00	1.8373E+00	1.8498E+00
	1.0000E-05	4.6510E+01	4.6394E+01	4.6398E+01

TABLE B-XXXVII

ZPR-3-56B CENTRAL FLUX SPECTRA

GROUP	ENERGY BOUNDARY (EVI)	1-D DIFFUSION THEORY (N/CM2/S)	1-D TRANSPORT THEORY (N/CM2/S)	2-D DIFFUSION THEORY (N/CM2/S)
1	1.9371E+07	2.7001E-02	2.5950E-02	2.7320E-02
2	1.0000E+07	3.1913E-01	3.0615E-01	3.2304E-01
3	6.0653E+06	1.3793E+00	1.3228E+00	1.3962E+00
4	3.6788E+06	3.2048E+00	3.0828E+00	3.2410E+00
5	2.2313E+06	4.7430E+00	4.5727E+00	4.7932E+00
6	1.3534E+06	6.4434E+00	6.2350E+00	6.5036E+00
7	8.2085E+05	1.0353E+01	1.0126E+01	1.0416E+01
8	4.9787E+05	3.9397E+00	3.8563E+00	3.9638E+00
9	3.8774E+05	5.5927E+00	5.4937E+00	5.6202E+00
10	3.0197E+05	6.0983E+00	6.0176E+00	6.1197E+00
11	2.3518E+05	5.8771E+00	5.8182E+00	5.8908E+00
12	1.8316E+05	5.9923E+00	5.9593E+00	5.9979E+00
13	1.4264E+05	5.7498E+00	5.7493E+00	5.7463E+00
14	1.1193E+05	5.1988E+00	5.2210E+00	5.1890E+00
15	8.6517E+04	4.9767E+00	5.0226E+00	4.9599E+00
16	6.7379E+04	4.1645E+00	4.2243E+00	4.1457E+00
17	5.2475E+04	4.1025E+00	4.1818E+00	4.0786E+00
18	4.0868E+04	3.2564E+00	3.3265E+00	3.2339E+00
19	3.1877E+04	2.7430E+00	2.8261E+00	2.7216E+00
20	2.4788E+04	3.3637E+00	3.4841E+00	3.3310E+00
21	1.9305E+04	2.5635E+00	2.6728E+00	2.5351E+00
22	1.5034E+04	2.1565E+00	2.2587E+00	2.1298E+00
23	1.1709E+04	1.6606E+00	1.7457E+00	1.6382E+00
24	9.1188E+03	1.1257E+00	1.1858E+00	1.1099E+00
25	7.1017E+03	1.0465E+00	1.1051E+00	1.0311E+00
26	5.5308E+03	7.9803E-01	8.4451E-01	7.8584E-01
27	4.3074E+03	4.5984E-01	4.8720E-01	4.5269E-01
28	3.3546E+03	1.1039E-01	1.1697E-01	1.0867E-01
29	2.6126E+03	3.3735E-01	3.5777E-01	3.3203E-01
30	2.0347E+03	5.8553E-01	6.2275E-01	5.7590E-01
31	1.5846E+03	5.4860E-01	5.8557E-01	5.3911E-01
32	1.2341E+03	3.6796E-01	3.9398E-01	3.6137E-01
33	9.6112E+02	2.6671E-01	2.8648E-01	2.6177E-01
34	7.4852E+02	1.8540E-01	1.9975E-01	1.8190E-01
35	5.8295E+02	1.0798E-01	1.1659E-01	1.0592E-01
36	4.5400E+02	6.5207E-02	7.0620E-02	6.3959E-02
37	3.5358E+02	3.5227E-02	3.8158E-02	3.4555E-02
38	2.7536E+02	3.9358E-02	4.2751E-02	3.8625E-02
39	1.6702E+02	1.1415E-02	1.2414E-02	1.1210E-02
40	1.0130E+02	2.6517E-03	2.8899E-03	2.6063E-03
41	6.1442E+01	4.5130E-04	4.9093E-04	4.4388E-04
42	3.7267E+01	2.8275E-04	3.0826E-04	2.8088E-04
43	2.2603E+01	3.9339E-05	4.2717E-05	3.9251E-05
44	1.3710E+01	9.9850E-06	1.0831E-05	1.0071E-05
45	8.3153E+00	1.2568E-06	1.3482E-06	1.2780E-06
46	5.0435E+00	2.4322E-06	1.8475E-06	3.8071E-06
47	3.0590E+00	4.6947E-06	2.5978E-06	8.2685E-06
48	1.8554E+00	8.2249E-07	4.2969E-07	1.4593E-06
49	1.1254E+00	3.4851E-08	1.7749E-08	6.1912E-08
50	6.8256E-01	9.3934E-10	4.7698E-10	1.6692E-09
	1.0000E-05	1.0000E+02	1.0000E+02	1.0000E+02

TABLE B-XXXVIII

ZPR-3-56B EDGE FLUX SPECTRA

GROUP	ENERGY BOUNDARY (EV)	1-D DIFFUSION THEORY (N/CM2/S)	1-D TRANSPORT THEORY (N/CM2/S)	2-D DIFFUSION THEORY (N/CM2/S)
1	1.9971E+07	1.3902E-03	3.8792E-03	1.8180E-03
2	1.0000E+07	1.0900E-02	3.4824E-02	1.4664E-02
3	6.0653E+06	3.0443E-02	1.0502E-01	4.1267E-02
4	3.6788E+06	1.4361E-01	3.5736E-01	1.8746E-01
5	2.2313E+06	9.5235E-01	1.4866E+00	1.1731E+00
6	1.3534E+06	2.6620E+00	3.3808E+00	3.3087E+00
7	8.2085E+05	1.0536E+01	1.1061E+01	1.1928E+01
8	4.9787E+05	4.9984E+00	5.0054E+00	5.3544E+00
9	3.8774E+05	4.9519E+00	4.9590E+00	5.1013E+00
10	3.0197E+05	4.3924E+00	4.2966E+00	4.4714E+00
11	2.3518E+05	4.2428E+00	4.1654E+00	4.3390E+00
12	1.8316E+05	6.3052E+00	5.7153E+00	6.4755E+00
13	1.4264E+05	8.8901E+00	7.9652E+00	9.0234E+00
14	1.1109E+05	5.7331E+00	5.3599E+00	5.6204E+00
15	8.6517E+04	4.0359E+00	3.9213E+00	3.8924E+00
16	6.7379E+04	5.7098E+00	4.9514E+00	5.7699E+00
17	5.2475E+04	4.7879E+00	4.6085E+00	4.6261E+00
18	4.0868E+04	2.8154E+00	2.8037E+00	2.6384E+00
19	3.1828E+04	1.5910E+00	1.5606E+00	1.4636E+00
20	2.4788E+04	1.4675E+00	1.4728E+00	1.3078E+00
21	1.9305E+04	5.0538E-01	4.8065E-01	4.4364E-01
22	1.5034E+04	5.1555E-01	4.9426E-01	4.5684E-01
23	1.1709E+04	1.6580E+00	1.6498E+00	1.5389E+00
24	9.1188E+03	1.6366E+00	1.6773E+00	1.5503E+00
25	7.1017E+03	1.1838E+00	1.2150E+00	1.0949E+00
26	5.5308E+03	6.0142E-01	6.0468E-01	5.5635E-01
27	4.3074E+03	5.9292E-01	6.0204E-01	5.9246E-01
28	3.3546E+03	1.8469E-01	1.8413E-01	1.9527E-01
29	2.6126E+03	4.8240E-01	4.9370E-01	4.7091E-01
30	2.0347E+03	9.1521E-01	9.6056E-01	8.3956E-01
31	1.5846E+03	1.0749E+00	1.1351E+00	9.6856E-01
32	1.2341E+03	9.5862E-01	1.0129E+00	8.6264E-01
33	9.6112E+02	9.9755E-01	1.0598E+00	8.9388E-01
34	7.4852E+02	9.3672E-01	9.9815E-01	8.3830E-01
35	5.8295E+02	9.3655E-01	1.0011E+00	8.3965E-01
36	4.5400E+02	8.3899E-01	8.9645E-01	7.5879E-01
37	3.5358E+02	6.3214E-01	6.6840E-01	5.7489E-01
38	2.7536E+02	1.6097E+00	1.7288E+00	1.4429E+00
39	1.6702E+02	1.5407E+00	1.6552E+00	1.3774E+00
40	1.0130E+02	1.4494E+00	1.5514E+00	1.2917E+00
41	6.1442E+01	1.3268E+00	1.4121E+00	1.1780E+00
42	3.7267E+01	1.2013E+00	1.2669E+00	1.0616E+00
43	2.2603E+01	1.0478E+00	1.0942E+00	9.2088E-01
44	1.3710E+01	8.8502E-01	9.1283E-01	7.7290E-01
45	8.3153E+00	7.0827E-01	7.2119E-01	6.1421E-01
46	5.0435E+00	5.3688E-01	5.3925E-01	4.6199E-01
47	3.0590E+00	3.7243E-01	3.6899E-01	3.1781E-01
48	1.8554E+00	2.4900E-01	2.4325E-01	2.1051E-01
49	1.1254E+00	1.1794E-01	1.1400E-01	9.8811E-02
50	6.8256E-01	4.5278E-02	4.3296E-02	3.7436E-02
	1.0000E-05	1.0000E+02	1.0000E+02	1.0000E+02

TABLE B-XXXIX

ZPR-3-56B CENTRAL ADJOINT SPECTRA

GROUP	ENERGY BOUNDARY (EV)	1-D DIFFUSION THEORY (RHO/N/S)	1-D TRANSPORT THEORY (RHO/N/S)	2-D DIFFUSION THEORY (RHO/N/S)
1	1.9971E+07	1.4379E+00	1.4341E+00	1.4392E+00
2	1.0000E+07	1.2183E+00	1.2163E+00	1.2190E+00
3	6.0653E+06	1.0839E+00	1.0850E+00	1.0836E+00
4	3.6788E+06	1.0873E+00	1.0884E+00	1.0870E+00
5	2.2313E+06	1.0221E+00	1.0227E+00	1.0219E+00
6	1.3534E+06	9.3663E-01	9.3909E-01	9.3588E-01
7	8.2085E+05	9.1662E-01	9.1827E-01	9.1602E-01
8	4.9787E+05	9.0175E-01	8.9738E-01	9.0302E-01
9	3.8774E+05	8.8498E-01	8.7973E-01	8.8649E-01
10	3.0197E+05	8.7079E-01	8.6365E-01	8.7298E-01
11	2.3518E+05	8.5824E-01	8.4918E-01	8.6123E-01
12	1.8316E+05	8.4337E-01	8.3303E-01	8.4688E-01
13	1.4264E+05	8.2728E-01	8.1581E-01	8.3132E-01
14	1.1109E+05	8.1044E-01	7.9755E-01	8.1503E-01
15	8.6517E+04	7.8999E-01	7.7682E-01	7.9484E-01
16	6.7379E+04	7.7135E-01	7.5648E-01	7.7655E-01
17	5.2475E+04	7.5601E-01	7.4059E-01	7.6140E-01
18	4.0868E+04	7.4363E-01	7.2766E-01	7.4927E-01
19	3.1828E+04	7.3460E-01	7.1849E-01	7.4040E-01
20	2.4788E+04	7.2800E-01	7.0881E-01	7.3387E-01
21	1.9305E+04	7.3293E-01	7.1105E-01	7.3962E-01
22	1.5034E+04	7.3712E-01	7.1327E-01	7.4438E-01
23	1.1709E+04	7.4682E-01	7.2094E-01	7.5474E-01
24	9.1188E+03	7.5987E-01	7.3187E-01	7.6850E-01
25	7.1017E+03	7.6761E-01	7.3884E-01	7.7649E-01
26	5.5308E+03	7.8755E-01	7.5724E-01	7.9694E-01
27	4.3074E+03	8.0727E-01	7.7560E-01	8.1715E-01
28	3.3546E+03	8.1744E-01	7.8526E-01	8.2749E-01
29	2.6126E+03	8.2057E-01	7.8840E-01	8.3060E-01
30	2.0347E+03	8.4179E-01	8.0868E-01	8.5205E-01
31	1.5846E+03	8.9054E-01	8.5444E-01	9.0166E-01
32	1.2341E+03	8.7454E-01	8.3812E-01	8.8580E-01
33	9.6112E+02	9.0784E-01	8.6967E-01	9.1959E-01
34	7.4852E+02	9.4388E-01	9.0311E-01	9.5645E-01
35	5.8295E+02	1.0606E+00	1.0129E+00	1.0754E+00
36	4.5400E+02	9.7873E-01	9.3480E-01	9.9234E-01
37	3.5358E+02	1.0667E+00	1.0181E+00	1.0819E+00
38	2.7536E+02	1.1394E+00	1.0870E+00	1.1556E+00
39	1.6702E+02	1.0402E+00	9.9115E-01	1.0554E+00
40	1.0130E+02	1.3778E+00	1.3108E+00	1.3984E+00
41	6.1442E+01	9.4956E-01	9.0367E-01	9.6371E-01
42	3.7267E+01	9.2814E-01	8.8562E-01	9.4127E-01
43	2.2603E+01	1.3025E+00	1.2387E+00	1.3223E+00
44	1.3710E+01	1.5234E+00	1.4496E+00	1.5462E+00
45	8.3153E+00	7.3928E-01	7.0608E-01	7.4996E-01
46	5.0435E+00	1.2759E+00	1.2181E+00	1.2930E+00
47	3.0590E+00	1.1717E+00	1.1162E+00	1.1883E+00
48	1.8554E+00	6.1438E-01	5.8349E-01	6.2381E-01
49	1.1254E+00	4.6197E-01	4.3823E-01	4.6921E-01
50	6.8256E-01	1.9064E+00	1.8071E+00	1.9364E+00
	1.0000E-05	4.7196E+01	4.5767E+01	4.7640E+01

TABLE B-XL
SEFOR CENTRAL FLUX SPECTRA

GROUP	ENERGY BOUNDARY (EV)	1-D DIFFUSION THEORY (N/CM2/S)	1-D TRANSPORT THEORY (N/CM2/S)	2-D DIFFUSION THEORY (N/CM2/S)
1	1.9971E+07	2.1226E-02	1.7069E-02	2.3322E-03
2	1.0000E+07	2.4006E-01	1.9370E-01	1.9387E-02
3	6.0653E+06	1.0384E+00	8.7136E-01	6.7080E-01
4	3.6788E+06	2.7006E+00	2.3930E+00	2.8503E-01
5	2.2313E+06	4.4253E+00	4.1270E+00	1.0064E+00
6	1.3534E+06	5.8931E+00	5.6251E+00	1.9735E+00
7	8.2085E+05	9.5198E+00	9.3903E+00	6.2805E+00
8	4.9787E+05	4.0153E+00	4.0394E+00	3.6659E+00
9	3.8774E+05	5.0735E+00	5.0675E+00	4.8142E+00
10	3.0197E+05	5.4575E+00	5.4440E+00	4.6031E+00
11	2.3518E+05	5.2634E+00	5.2639E+00	4.1074E+00
12	1.8316E+05	5.6769E+00	5.7311E+00	4.8770E+00
13	1.4264E+05	5.3562E+00	5.4230E+00	6.2775E+00
14	1.1109E+05	4.8038E+00	4.8556E+00	4.7878E+00
15	8.6517E+04	4.7212E+00	4.7925E+00	4.3475E+00
16	6.7379E+04	3.8632E+00	3.9042E+00	3.7482E+00
17	5.2475E+04	4.0308E+00	4.0945E+00	4.4374E+00
18	4.0868E+04	3.3058E+00	3.3524E+00	3.0694E+00
19	3.1828E+04	2.9960E+00	3.0909E+00	2.3766E+00
20	2.4788E+04	3.5537E+00	3.6707E+00	5.5368E+00
21	1.9305E+04	2.5307E+00	2.6062E+00	2.7324E+00
22	1.5034E+04	2.4356E+00	2.5027E+00	1.6619E+00
23	1.1709E+04	2.0422E+00	2.1000E+00	1.9398E+00
24	9.1188E+03	1.3523E+00	1.3923E+00	1.3727E+00
25	7.1017E+03	1.3152E+00	1.3537E+00	1.2430E+00
26	5.5308E+03	9.9279E-01	1.0226E+00	6.3517E-01
27	4.3074E+03	5.3752E-01	5.5328E-01	3.3714E-01
28	3.3546E+03	9.6993E-02	9.7550E-02	8.4417E-02
29	2.6126E+03	4.8970E-01	5.0153E-01	3.6224E-01
30	2.0347E+03	1.3374E+00	1.3669E+00	1.1233E+00
31	1.5846E+03	1.4332E+00	1.4792E+00	1.6850E+00
32	1.2341E+03	1.0069E+00	1.0535E+00	1.5378E+00
33	9.6112E+02	7.3325E-01	7.7262E-01	1.5846E+00
34	7.4852E+02	5.3961E-01	5.7032E-01	1.5412E+00
35	5.8295E+02	3.7760E-01	4.0005E-01	1.4667E+00
36	4.5400E+02	2.7496E-01	2.9147E-01	1.3872E+00
37	3.5358E+02	1.9451E-01	2.0653E-01	1.3073E+00
38	2.7536E+02	2.1254E-01	2.2774E-01	2.4037E+00
39	1.6702E+02	9.1504E-02	9.9210E-02	2.1016E+00
40	1.0130E+02	3.3106E-02	3.6471E-02	1.7623E+00
41	6.1442E+01	1.0632E-02	1.1906E-02	1.4657E+00
42	3.7267E+01	4.2052E-03	4.7762E-03	1.2385E+00
43	2.2603E+01	1.2698E-03	1.4735E-03	8.6387E-01
44	1.3710E+01	3.8186E-04	4.5237E-04	7.1612E-01
45	8.3153E+00	9.7344E-05	1.1879E-04	4.5959E-01
46	5.0435E+00	3.1267E-05	3.8600E-05	3.0884E-01
47	3.0590E+00	1.1974E-05	1.4741E-05	1.9421E-01
48	1.8554E+00	3.6825E-06	4.5017E-06	1.2025E-01
49	1.1254E+00	7.7340E-07	9.4455E-07	5.5699E-02
50	6.8256E-01	2.1999E-07	2.6636E-07	2.4723E-02
	1.0000E-05	1.0000E+02	1.0000E+02	1.0000E+02

TABLE B-XLI

SEFOR EDGE FLUX SPECTRA

GROUP	ENERGY BOUNDARY (eV)	1-D	1-D	2-D
		DIFFUSION THEORY (N/CM ² /S)	TRANSPORT THEORY (N/CM ² /S)	DIFFUSION THEORY (N/CM ² /S)
1	1.9971E+07	5.1424E-03	8.2528E-03	5.4158E-03
2	1.0000E+07	4.1373E-02	7.3149E-02	3.9969E-02
3	6.0653E+06	1.1999E-01	2.2010E-01	1.1547E-01
4	3.6788E+06	4.0904E-01	6.2702E-01	3.9869E-01
5	2.2313E+06	1.7880E+00	2.1518E+00	1.5669E+00
6	1.3534E+06	3.6240E+00	3.9361E+00	3.2878E+00
7	8.2085E+05	1.1049E+01	1.1177E+01	1.0634E+01
8	4.9787E+05	4.7488E+00	4.7794E+00	4.5044E+00
9	3.8774E+05	6.7453E+00	6.6575E+00	6.5873E+00
10	3.0197E+05	6.6274E+00	6.5024E+00	6.7714E+00
11	2.3518E+05	5.9155E+00	5.8405E+00	6.1379E+00
12	1.8316E+05	5.5128E+00	5.4644E+00	5.6265E+00
13	1.4264E+05	6.2583E+00	6.1879E+00	6.2393E+00
14	1.1109E+05	5.6931E+00	5.5889E+00	5.6208E+00
15	8.6517E+04	5.8911E+00	5.7169E+00	5.6953E+00
16	6.7379E+04	6.0115E+00	5.8536E+00	5.9302E+00
17	5.2475E+04	5.3646E+00	5.2473E+00	5.2935E+00
18	4.0868E+04	4.0261E+00	3.9519E+00	4.0209E+00
19	3.1828E+04	4.0375E+00	3.8571E+00	3.9461E+00
20	2.4788E+04	3.9211E+00	3.7963E+00	3.8036E+00
21	1.9305E+04	3.0842E+00	3.0286E+00	3.1718E+00
22	1.5034E+04	2.3652E+00	2.3481E+00	2.5281E+00
23	1.1709E+04	1.8356E+00	1.8503E+00	2.0581E+00
24	9.1188E+03	1.2972E+00	1.3243E+00	1.5263E+00
25	7.1017E+03	1.0270E+00	1.0618E+00	1.2091E+00
26	5.5308E+03	7.7816E-01	8.1114E-01	9.2492E-01
27	4.3074E+03	5.3096E-01	5.5190E-01	6.9918E-01
28	3.3546E+03	2.9537E-01	3.0875E-01	4.9949E-01
29	2.6126E+03	2.9666E-01	3.0883E-01	3.5974E-01
30	2.0347E+03	2.2744E-01	2.4080E-01	2.5320E-01
31	1.5846E+03	1.6172E-01	1.7588E-01	1.7933E-01
32	1.2341E+03	1.0988E-01	1.2185E-01	1.2196E-01
33	9.6112E+02	7.5615E-02	8.5642E-02	8.4026E-02
34	7.4852E+02	5.0313E-02	5.7946E-02	5.7099E-02
35	5.8295E+02	3.2192E-02	3.7525E-02	3.8157E-02
36	4.5400E+02	1.9706E-02	2.3044E-02	2.4933E-02
37	3.5358E+02	1.1521E-02	1.3305E-02	1.5888E-02
38	2.7536E+02	9.0188E-03	9.7407E-03	1.5010E-02
39	1.6702E+02	2.5960E-03	2.4618E-03	5.5938E-03
40	1.0130E+02	5.8602E-04	4.3141E-04	1.8077E-03
41	6.1442E+01	1.0450E-04	5.3678E-05	5.2696E-04
42	3.7267E+01	1.4596E-05	5.0764E-06	1.4446E-04
43	2.2603E+01	1.4927E-06	4.7905E-07	3.2784E-05
44	1.3710E+01	1.2762E-07	3.2068E-08	7.9204E-06
45	8.3153E+00	7.7893E-09	1.3224E-09	1.5274E-06
46	5.0435E+00	3.9202E-10	4.2172E-11	2.8544E-07
47	3.0590E+00	1.6109E-11	1.0291E-12	4.8543E-08
48	1.8554E+00	5.6746E-13	1.9212E-14	7.7536E-09
49	1.1254E+00	1.5912E-14	2.6515E-16	9.0309E-10
50	6.8256E-01	7.0341E-17	1.1124E-18	4.3582E-12
	1.0000E-05	1.0000E+02	1.0000E+02	1.0000E+02

TABLE B-XLII

ZPR-6-6A CENTRAL FLUX SPECTRA

GROUP	ENERGY BOUNDARY (eV)	1-D DIFFUSION THEORY (N/CM ² /S)	1-D TRANSPORT THEORY (N/CM ² /S)	2-D DIFFUSION THEORY (N/CM ² /S)
1	1.9971E+07	1.7292E-02	1.7232E-02	1.7332E-02
2	1.0000E+07	2.2892E-01	2.2808E-01	2.2949E-01
3	6.0653E+06	1.0858E+00	1.0818E+00	1.0887E+00
4	3.6788E+06	2.7687E+00	2.7593E+00	2.7755E+00
5	2.2313E+06	4.3236E+00	4.3093E+00	4.3322E+00
6	1.3534E+06	5.6968E+00	5.6803E+00	5.7061E+00
7	8.2085E+05	9.8037E+00	9.7851E+00	9.8063E+00
8	4.9787E+05	3.6708E+00	3.6642E+00	3.6713E+00
9	3.8774E+05	5.3477E+00	5.3390E+00	5.3451E+00
10	3.0197E+05	5.9233E+00	5.9145E+00	5.9173E+00
11	2.3518E+05	5.7516E+00	5.7448E+00	5.7440E+00
12	1.8316E+05	5.9930E+00	5.9869E+00	5.9834E+00
13	1.4264E+05	5.8373E+00	5.8343E+00	5.8271E+00
14	1.1109E+05	5.2704E+00	5.2676E+00	5.2611E+00
15	8.6517E+04	5.2027E+00	5.2004E+00	5.1939E+00
16	6.7379E+04	4.3083E+00	4.3112E+00	4.3018E+00
17	5.2475E+04	4.3201E+00	4.3244E+00	4.3149E+00
18	4.0868E+04	3.4599E+00	3.4617E+00	3.4568E+00
19	3.1828E+04	2.9359E+00	2.9400E+00	2.9337E+00
20	2.4788E+04	3.7140E+00	3.7279E+00	3.7134E+00
21	1.9305E+04	2.8010E+00	2.8127E+00	2.8026E+00
22	1.5034E+04	2.4501E+00	2.4608E+00	2.4536E+00
23	1.1709E+04	1.9084E+00	1.9172E+00	1.9130E+00
24	9.1188E+03	1.2568E+00	1.2629E+00	1.2604E+00
25	7.1017E+03	1.1641E+00	1.1699E+00	1.1678E+00
26	5.5308E+03	8.9552E-01	9.0000E-01	8.9871E-01
27	4.3074E+03	5.0692E-01	5.0958E-01	5.0880E-01
28	3.3546E+03	1.1625E-01	1.1686E-01	1.1668E-01
29	2.6126E+03	3.8066E-01	3.8238E-01	3.8209E-01
30	2.0347E+03	7.1325E-01	7.1728E-01	7.1630E-01
31	1.5846E+03	6.9147E-01	6.9550E-01	6.9501E-01
32	1.2341E+03	4.7218E-01	4.7512E-01	4.7496E-01
33	9.6112E+02	3.5598E-01	3.5835E-01	3.5841E-01
34	7.4852E+02	2.3850E-01	2.4019E-01	2.4032E-01
35	5.8295E+02	1.5282E-01	1.5394E-01	1.5404E-01
36	4.5400E+02	9.3671E-02	9.4361E-02	9.4401E-02
37	3.5358E+02	5.3501E-02	5.3911E-02	5.3939E-02
38	2.7536E+02	6.1400E-02	6.1931E-02	6.1917E-02
39	1.6702E+02	1.9656E-02	1.9834E-02	1.9788E-02
40	1.0130E+02	6.1531E-03	6.2131E-03	6.1892E-03
41	6.1442E+01	1.4187E-03	1.4328E-03	1.4192E-03
42	3.7267E+01	2.7077E-04	2.7358E-04	2.7036E-04
43	2.2603E+01	4.5418E-05	4.5915E-05	4.5523E-05
44	1.3710E+01	6.0758E-06	8.1661E-06	8.1205E-06
45	8.3153E+00	9.6758E-07	9.7894E-07	9.0149E-07
46	5.0435E+00	3.1632E-07	3.2002E-07	2.9576E-07
47	3.0590E+00	1.3433E-07	1.3589E-07	1.2721E-07
48	1.8554E+00	4.3429E-08	4.3929E-08	4.1569E-08
49	1.1254E+00	7.1765E-09	7.2592E-09	6.9049E-09
50	6.8256E-01	4.7532E-10	4.8084E-10	4.5702E-10
	1.0000E-05	1.0000E+02	1.0000E+02	1.0000E+02

TABLE B-XLIII

ZPR-6-6A EDGE FLUX SPECTRA

GROUP	ENERGY BOUNDARY (eV)	1-D	1-D	2-D
		DIFFUSION THEORY (N/CM ² /S)	TRANSPORT THEORY (N/CM ² /S)	DIFFUSION THEORY (N/CM ² /S)
1	1.9971E+07	2.3366E-03	3.6533E-03	3.8682E-03
2	1.0000E+07	2.5166E-02	3.7720E-02	4.3246E-02
3	6.0653E+06	9.6048E-02	1.3907E-01	1.6717E-01
4	3.6788E+06	2.0123E-01	2.8458E-01	3.5423E-01
5	2.2313E+06	3.3843E-01	4.6714E-01	5.8690E-01
6	1.3534E+06	1.2071E+00	1.4813E+00	1.8192E+00
7	8.2085E+05	7.3941E+00	7.7513E+00	8.6056E+00
8	4.9787E+05	5.1534E+00	5.2907E+00	5.7240E+00
9	3.8774E+05	6.5082E+00	6.6015E+00	6.9613E+00
10	3.0197E+05	7.0447E+00	7.1126E+00	7.3329E+00
11	2.3518E+05	6.9035E+00	6.9572E+00	7.0421E+00
12	1.8316E+05	6.7170E+00	6.7635E+00	6.7468E+00
13	1.4264E+05	6.8617E+00	6.8965E+00	6.7887E+00
14	1.1109E+05	6.8824E+00	6.9286E+00	6.6930E+00
15	8.6517E+04	7.8335E+00	7.8556E+00	7.4904E+00
16	6.7379E+04	7.1679E+00	7.2118E+00	6.7431E+00
17	5.2475E+04	7.4000E+00	7.3153E+00	6.7760E+00
18	4.0868E+04	5.7688E+00	5.6257E+00	5.0986E+00
19	3.1828E+04	3.6693E+00	3.5171E+00	3.2469E+00
20	2.4788E+04	4.8955E+00	4.6251E+00	4.3775E+00
21	1.9305E+04	2.6851E+00	2.5275E+00	2.3918E+00
22	1.5034E+04	1.8436E+00	1.7262E+00	1.6700E+00
23	1.1709E+04	1.1771E+00	1.0934E+00	1.0852E+00
24	9.1188E+03	5.6057E-01	5.2325E-01	5.2311E-01
25	7.1017E+03	4.3134E-01	3.9930E-01	4.1516E-01
26	5.5308E+03	2.8446E-01	2.6149E-01	2.8317E-01
27	4.3074E+03	2.4100E-01	2.1536E-01	2.4250E-01
28	3.3546E+03	1.0676E-01	9.5327E-02	1.1050E-01
29	2.6126E+03	5.2921E-02	4.4438E-02	5.5212E-02
30	2.0347E+03	1.7228E-01	5.6375E-02	1.8402E-01
31	1.5846E+03	1.1943E-01	5.2950E-02	1.3770E-01
32	1.2341E+03	5.7520E-02	2.7403E-02	6.8682E-02
33	9.6112E+02	6.7917E-02	3.4801E-02	8.1199E-02
34	7.4852E+02	3.8556E-02	2.1980E-02	4.6938E-02
35	5.8295E+02	3.0364E-02	2.0582E-02	3.6377E-02
36	4.5400E+02	1.6649E-02	1.2805E-02	1.9897E-02
37	3.5358E+02	8.9063E-03	6.9137E-03	1.0473E-02
38	2.7536E+02	2.9578E-02	1.1166E-02	3.0420E-02
39	1.6702E+02	4.2714E-03	2.1767E-03	4.6762E-03
40	1.0130E+02	9.3145E-04	4.5752E-04	1.0608E-03
41	6.1442E+01	2.8464E-04	1.8162E-04	3.1605E-04
42	3.7267E+01	3.4726E-05	2.3005E-05	3.8642E-05
43	2.2603E+01	1.8910E-06	1.2797E-06	2.2170E-06
44	1.3710E+01	7.5785E-07	6.5665E-07	8.1690E-07
45	8.3153E+00	1.2645E-08	1.0835E-08	1.4502E-08
46	5.0435E+00	6.3492E-09	6.4689E-09	9.8662E-09
47	3.0590E+00	9.2790E-09	9.9348E-09	1.4963E-08
48	1.8554E+00	6.5893E-09	7.0358E-09	9.5141E-09
49	1.1254E+00	2.0051E-09	2.1293E-09	2.5494E-09
50	6.8256E-01	2.2370E-10	2.3676E-10	2.3627E-10
	1.0000E-05	1.0000E+02	1.0000E+02	1.0000E+02

TABLE B-XLIV
ZPR-6-6A CENTRAL ADJOINT SPECTRA

GROUP	ENERGY BOUNDARY (EVI)	1-D DIFFUSION THEORY (RHO/N/S)	1-D TRANSPORT THEORY (RHO/N/S)	2-D DIFFUSION THEORY (RHO/N/S)
1	1.9971E+07	1.3931E+00	1.3921E+00	1.3924E+00
2	1.0000E+07	1.2106E+00	1.2098E+00	1.2104E+00
3	6.0653E+06	1.0735E+00	1.0731E+00	1.0736E+00
4	3.6788E+06	1.0762E+00	1.0760E+00	1.0764E+00
5	2.2313E+06	1.0065E+00	1.0065E+00	1.0068E+00
6	1.3534E+06	9.2745E-01	9.2799E-01	9.2760E-01
7	8.2085E+05	9.2080E-01	9.2123E-01	9.2060E-01
8	4.9787E+05	9.3227E-01	9.3231E-01	9.3160E-01
9	3.8774E+05	9.2871E-01	9.2852E-01	9.2797E-01
10	3.0197E+05	9.2741E-01	9.2711E-01	9.2664E-01
11	2.3518E+05	9.2615E-01	9.2588E-01	9.2537E-01
12	1.8316E+05	9.2325E-01	9.2290E-01	9.2247E-01
13	1.4264E+05	9.1938E-01	9.1906E-01	9.1858E-01
14	1.1109E+05	9.1720E-01	9.1673E-01	9.1637E-01
15	8.6517E+04	9.1261E-01	9.1238E-01	9.1173E-01
16	6.7379E+04	9.0861E-01	9.0781E-01	9.0766E-01
17	5.2475E+04	9.0701E-01	9.0623E-01	9.0596E-01
18	4.0868E+04	9.1076E-01	9.1012E-01	9.0959E-01
19	3.1828E+04	9.1745E-01	9.1704E-01	9.1615E-01
20	2.4788E+04	9.2431E-01	9.2155E-01	9.2290E-01
21	1.9305E+04	9.4389E-01	9.4104E-01	9.4231E-01
22	1.5034E+04	9.6044E-01	9.5732E-01	9.5872E-01
23	1.1709E+04	9.7990E-01	9.7671E-01	9.7803E-01
24	9.1188E+03	1.0001E+00	9.9692E-01	9.9814E-01
25	7.1017E+03	1.0203E+00	1.0169E+00	1.0182E+00
26	5.5308E+03	1.0398E+00	1.0364E+00	1.0375E+00
27	4.3074E+03	1.0525E+00	1.0491E+00	1.0500E+00
28	3.3546E+03	1.0576E+00	1.0542E+00	1.0551E+00
29	2.6126E+03	1.0627E+00	1.0593E+00	1.0601E+00
30	2.0347E+03	1.0747E+00	1.0711E+00	1.0721E+00
31	1.5846E+03	1.0903E+00	1.0865E+00	1.0874E+00
32	1.2341E+03	1.0799E+00	1.0761E+00	1.0768E+00
33	9.6112E+02	1.1861E+00	1.1818E+00	1.1824E+00
34	7.4852E+02	1.2460E+00	1.2413E+00	1.2417E+00
35	5.8295E+02	1.2632E+00	1.2584E+00	1.2581E+00
36	4.5400E+02	1.2146E+00	1.2102E+00	1.2091E+00
37	3.5358E+02	1.2013E+00	1.1972E+00	1.1963E+00
38	2.7536E+02	1.2554E+00	1.2507E+00	1.2493E+00
39	1.6702E+02	1.1707E+00	1.1663E+00	1.1624E+00
40	1.0130E+02	1.2324E+00	1.2275E+00	1.2230E+00
41	6.1442E+01	1.4420E+00	1.4359E+00	1.4291E+00
42	3.7267E+01	1.1876E+00	1.1828E+00	1.1819E+00
43	2.2603E+01	1.0040E+00	9.9997E-01	1.0043E+00
44	1.3710E+01	1.2339E+00	1.2286E+00	1.2284E+00
45	8.3153E+00	4.4408E-01	4.4226E-01	4.0993E-01
46	5.0435E+00	1.1239E+00	1.1189E+00	1.1170E+00
47	3.0590E+00	1.3261E+00	1.3201E+00	1.3249E+00
48	1.8554E+00	1.5944E+00	1.5872E+00	1.5932E+00
49	1.1254E+00	1.8717E+00	1.8631E+00	1.8706E+00
50	6.8256E-01	1.8673E+00	1.8587E+00	1.8655E+00
	1.0000E-05	5.4790E+01	5.4647E+01	5.4632E+01

TABLE B-XLV

SNEAK-7A CENTRAL FLUX SPECTRA

GROUP	ENERGY BOUNDARY (EVI)	1-D DIFFUSION THEORY (N/CM2/S)	1-D TRANSPORT THEORY (N/CM2/S)	2-D DIFFUSION THEORY (N/CM2/S)
1	1.9971E+07	4.1850E-02	4.2158E-02	4.1613E-02
2	1.0000E+07	4.5770E-01	4.5900E-01	4.5517E-01
3	6.0653E+06	2.2295E+00	2.2272E+00	2.2165E+00
4	3.6788E+06	5.0662E+00	5.0591E+00	5.0376E+00
5	2.2313E+06	6.8340E+00	6.8163E+00	6.7983E+00
6	1.3554E+06	8.5730E+00	8.5591E+00	8.5326E+00
7	8.2085E+05	1.0331E+01	1.0333E+01	1.0299E+01
8	4.9787E+05	4.1180E+00	4.1208E+00	4.1060E+00
9	3.8774E+05	5.0349E+00	5.0378E+00	5.0232E+00
10	3.0197E+05	5.2318E+00	5.2354E+00	5.2238E+00
11	2.3518E+05	5.0214E+00	5.0255E+00	5.0175E+00
12	1.8316E+05	4.7956E+00	4.7993E+00	4.7953E+00
13	1.4264E+05	4.5194E+00	4.5229E+00	4.5224E+00
14	1.1109E+05	4.1949E+00	4.1970E+00	4.2004E+00
15	8.6517E+04	3.9530E+00	3.9555E+00	3.9608E+00
16	6.7379E+04	3.6773E+00	3.6776E+00	3.6873E+00
17	5.2475E+04	3.3776E+00	3.3767E+00	3.3895E+00
18	4.0868E+04	2.9139E+00	2.9114E+00	2.9260E+00
19	3.1828E+04	2.6124E+00	2.6159E+00	2.6246E+00
20	2.4788E+04	2.6031E+00	2.6052E+00	2.6172E+00
21	1.9305E+04	2.2384E+00	2.2399E+00	2.2520E+00
22	1.5034E+04	2.0164E+00	2.0169E+00	2.0299E+00
23	1.1709E+04	1.7325E+00	1.7324E+00	1.7452E+00
24	9.1188E+03	1.4354E+00	1.4351E+00	1.4464E+00
25	7.1017E+03	1.2971E+00	1.2966E+00	1.3076E+00
26	5.5308E+03	1.1253E+00	1.1246E+00	1.1348E+00
27	4.3074E+03	9.7536E-01	9.7506E-01	9.8379E-01
28	3.3546E+03	8.1530E-01	8.1472E-01	8.2249E-01
29	2.6126E+03	6.6471E-01	6.6410E-01	6.7065E-01
30	2.0347E+03	5.5080E-01	5.5177E-01	5.5577E-01
31	1.5846E+03	4.4425E-01	4.4533E-01	4.4829E-01
32	1.2341E+03	3.2436E-01	3.2553E-01	3.2731E-01
33	9.6112E+02	2.4769E-01	2.4896E-01	2.4994E-01
34	7.4852E+02	1.8646E-01	1.8774E-01	1.8915E-01
35	5.8295E+02	1.2391E-01	1.2497E-01	1.2503E-01
36	4.5400E+02	9.0193E-02	9.1059E-02	9.1002E-02
37	3.5358E+02	5.7335E-02	5.7970E-02	5.7845E-02
38	2.7536E+02	5.9313E-02	6.0238E-02	5.9827E-02
39	1.6702E+02	2.1561E-02	2.1980E-02	2.1743E-02
40	1.0130E+02	5.4740E-03	5.6005E-03	5.5189E-03
41	6.1442E+01	1.3618E-03	1.3975E-03	1.3726E-03
42	3.7267E+01	6.2187E-04	6.4167E-04	6.2626E-04
43	2.2603E+01	1.0424E-04	1.0795E-04	1.0494E-04
44	1.3710E+01	2.4509E-05	2.5464E-05	2.4653E-05
45	8.3153E+00	4.0668E-06	4.2410E-06	4.0879E-06
46	5.0435E+00	2.2303E-06	2.3310E-06	2.2317E-06
47	3.0590E+00	1.1097E-06	1.1622E-06	1.1041E-06
48	1.8554E+00	2.0382E-07	2.1390E-07	2.0239E-07
49	1.1254E+00	1.1871E-08	1.2474E-08	1.1782E-08
50	6.8256E-01	3.4205E-10	3.5951E-10	3.3949E-10
	1.0000E-05	1.0000E+02	1.0000E+02	1.0000E+02

TABLE B-XLVI

SNEAK-7A EDGE FLUX SPECTRA

GROUP	ENERGY BOUNDARY (eV)	1-D DIFFUSION THEORY (N/CM ² /S)	1-D TRANSPORT THEORY (N/CM ² /S)	2-D DIFFUSION THEORY (N/CM ² /S)
1	1.9971E+07	7.9442E-03	9.8140E-03	7.9817E-03
2	1.0000E+07	7.8314E-02	9.3745E-02	7.8681E-02
3	6.0653E+06	2.7923E-01	3.3425E-01	2.8104E-01
4	3.6788E+06	5.4324E-01	6.4084E-01	5.4821E-01
5	2.2313E+06	8.4890E-01	9.8733E-01	8.5960E-01
6	1.3534E+06	2.4921E+00	2.7106E+00	2.5330E+00
7	8.2085E+05	9.8921E+00	9.9099E+00	9.9462E+00
8	4.9787E+05	6.6005E+00	6.5563E+00	6.6260E+00
9	3.8774E+05	7.8082E+00	7.7299E+00	7.8209E+00
10	3.0197E+05	8.0159E+00	7.9522E+00	8.0187E+00
11	2.3518E+05	7.5549E+00	7.5261E+00	7.5529E+00
12	1.8316E+05	7.0664E+00	7.0666E+00	7.0594E+00
13	1.4264E+05	6.8377E+00	6.8570E+00	6.8254E+00
14	1.1109E+05	6.7167E+00	6.7679E+00	6.7009E+00
15	8.6517E+04	6.8852E+00	6.9507E+00	6.8619E+00
16	6.7379E+04	6.3102E+00	6.4026E+00	6.2845E+00
17	5.2475E+04	6.1435E+00	6.1531E+00	6.1088E+00
18	4.0868E+04	4.4946E+00	4.4318E+00	4.4598E+00
19	3.1828E+04	2.8718E+00	2.8199E+00	2.8514E+00
20	2.4788E+04	3.2434E+00	3.1539E+00	3.2191E+00
21	1.9305E+04	1.6555E+00	1.6158E+00	1.6474E+00
22	1.5034E+04	1.2105E+00	1.1791E+00	1.2093E+00
23	1.1709E+04	8.1790E-01	7.8943E-01	8.2176E-01
24	9.1188E+03	4.1718E-01	4.0428E-01	4.2143E-01
25	7.1017E+03	3.0593E-01	2.9389E-01	3.1111E-01
26	5.5308E+03	1.9221E-01	1.8385E-01	1.9698E-01
27	4.3074E+03	1.6329E-01	1.5064E-01	1.6811E-01
28	3.3546E+03	9.3201E-02	8.5937E-02	9.7211E-02
29	2.6126E+03	7.0579E-02	5.3403E-02	7.4818E-02
30	2.0347E+03	1.6203E-01	5.9579E-02	1.7149E-01
31	1.5846E+03	8.6045E-02	4.5262E-02	9.1731E-02
32	1.2341E+03	3.7347E-02	2.1452E-02	3.9989E-02
33	9.6112E+02	3.6110E-02	2.1988E-02	3.8730E-02
34	7.4852E+02	1.9212E-02	1.2850E-02	2.0678E-02
35	5.8295E+02	1.3810E-02	1.0733E-02	1.4870E-02
36	4.5400E+02	7.5563E-03	6.6455E-03	8.1462E-03
37	3.5358E+02	4.2802E-03	3.7479E-03	4.6121E-03
38	2.7536E+02	1.3938E-02	5.6814E-03	1.4502E-02
39	1.6702E+02	1.8973E-03	1.0743E-03	1.9865E-03
40	1.0130E+02	4.3361E-04	2.3595E-04	4.5495E-04
41	6.1442E+01	9.4918E-05	6.6280E-05	1.0069E-04
42	3.7267E+01	1.1935E-05	8.6833E-06	1.2634E-05
43	2.2603E+01	6.6271E-07	4.8078E-07	6.9944E-07
44	1.3710E+01	3.0093E-07	3.0564E-07	2.9785E-07
45	8.3153E+00	5.0649E-09	4.8071E-09	5.0038E-09
46	5.0435E+00	1.3555E-08	1.7558E-08	1.2112E-08
47	3.0590E+00	4.0450E-08	4.9472E-08	3.4443E-08
48	1.8554E+00	2.1784E-08	2.5868E-08	1.8354E-08
49	1.1254E+00	4.4378E-09	5.1962E-09	3.7191E-09
50	6.8256E-01	3.0194E-10	3.5305E-10	2.5307E-10
	1.0000E-05	1.0000E+02	1.0000E+02	1.0000E+02

TABLE B-XLVII

SNEAK-7A CENTRAL ADJOINT SPECTRA

GROUP	ENERGY BOUNDARY (eV)	1-D	1-D	2-D
		DIFFUSION THEORY (RHO/N/S)	TRANSPORT THEORY (RHO/N/S)	DIFFUSION THEORY (RHO/N/S)
1	1.9971E+07	1.3874E+00	1.4095E+00	1.3877E+00
2	1.0000E+07	1.1743E+00	1.1909E+00	1.1747E+00
3	6.0653E+06	1.0592E+00	1.0676E+00	1.0594E+00
4	3.6788E+06	1.0641E+00	1.0683E+00	1.0641E+00
5	2.2313E+06	1.0037E+00	1.0031E+00	1.0036E+00
6	1.3534E+06	9.4138E-01	9.3761E-01	9.4134E-01
7	8.2085E+05	9.2537E-01	9.1945E-01	9.2554E-01
8	4.9787E+05	9.3851E-01	9.3055E-01	9.3851E-01
9	3.8774E+05	9.2723E-01	9.1862E-01	9.2726E-01
10	3.0197E+05	9.2175E-01	9.1317E-01	9.2170E-01
11	2.3518E+05	9.1953E-01	9.1104E-01	9.1931E-01
12	1.8316E+05	9.1593E-01	9.0754E-01	9.1554E-01
13	1.4264E+05	9.1106E-01	9.0285E-01	9.1049E-01
14	1.1109E+05	9.0521E-01	8.9711E-01	9.0444E-01
15	8.6517E+04	8.9649E-01	8.8878E-01	8.9557E-01
16	6.7379E+04	8.8905E-01	8.8124E-01	8.8795E-01
17	5.2475E+04	8.8449E-01	8.7714E-01	8.8320E-01
18	4.0868E+04	8.8332E-01	8.7627E-01	8.8181E-01
19	3.1828E+04	8.8256E-01	8.7589E-01	8.8087E-01
20	2.4788E+04	8.7976E-01	8.7087E-01	8.7795E-01
21	1.9305E+04	8.8922E-01	8.8017E-01	8.8709E-01
22	1.5034E+04	8.9713E-01	8.8779E-01	8.9475E-01
23	1.1709E+04	9.0923E-01	8.9974E-01	9.0655E-01
24	9.1188E+03	9.2460E-01	9.1494E-01	9.2160E-01
25	7.1017E+03	9.3246E-01	9.2275E-01	9.2930E-01
26	5.5308E+03	9.5327E-01	9.4338E-01	9.4986E-01
27	4.3074E+03	9.7743E-01	9.6736E-01	9.7377E-01
28	3.3546E+03	9.9641E-01	9.8612E-01	9.9253E-01
29	2.6126E+03	1.0067E+00	9.9667E-01	1.0027E+00
30	2.0347E+03	1.0503E+00	1.0397E+00	1.0460E+00
31	1.5846E+03	1.1090E+00	1.0969E+00	1.1043E+00
32	1.2341E+03	1.1126E+00	1.1006E+00	1.1078E+00
33	9.6112E+02	1.1450E+00	1.1324E+00	1.1399E+00
34	7.4852E+02	1.1833E+00	1.1701E+00	1.1780E+00
35	5.8295E+02	1.2908E+00	1.2759E+00	1.2848E+00
36	4.5400E+02	1.2204E+00	1.2064E+00	1.2147E+00
37	3.5358E+02	1.2283E+00	1.2149E+00	1.2224E+00
38	2.7536E+02	1.2805E+00	1.2665E+00	1.2743E+00
39	1.6702E+02	1.2953E+00	1.2807E+00	1.2890E+00
40	1.0130E+02	1.5530E+00	1.5341E+00	1.5452E+00
41	6.1442E+01	1.2572E+00	1.2423E+00	1.2510E+00
42	3.7267E+01	1.0940E+00	1.0821E+00	1.0889E+00
43	2.2603E+01	1.3886E+00	1.3719E+00	1.3815E+00
44	1.3710E+01	1.5887E+00	1.5687E+00	1.5806E+00
45	8.3153E+00	8.8277E-01	8.7157E-01	8.7830E-01
46	5.0435E+00	1.5087E+00	1.4863E+00	1.5013E+00
47	3.0590E+00	1.3294E+00	1.3101E+00	1.3229E+00
48	1.8554E+00	7.9925E-01	7.8835E-01	7.9514E-01
49	1.1254E+00	6.1597E-01	6.0744E-01	6.1274E-01
50	6.8256E-01	1.9178E+00	1.8894E+00	1.9077E+00
	1.0000E-05	5.3648E+01	5.3183E+01	5.3486E+01

TABLE B-XLVIII

SNEAK-7B CENTRAL FLUX SPECTRA

GROUP	ENERGY BOUNDARY (eV)	1-D	1-D	2-D
		DIFFUSION THEORY (N/CM ² /S)	TRANSPORT THEORY (N/CM ² /S)	DIFFUSION THEORY (N/CM ² /S)
1	1.9971E+07	3.1966E-02	3.1867E-02	3.1866E-02
2	1.0000E+07	3.8288E-01	3.8147E-01	3.8165E-01
3	6.0653E+06	1.6935E+00	1.6867E+00	1.6881E+00
4	3.6788E+06	3.6730E+00	3.6633E+00	3.6621E+00
5	2.2313E+06	4.6961E+00	4.6755E+00	4.6822E+00
6	1.3534E+06	6.8998E+00	6.8822E+00	6.8813E+00
7	8.2085E+05	1.0797E+01	1.0779E+01	1.0779E+01
8	4.9787E+05	3.5216E+00	3.5175E+00	3.5154E+00
9	3.8774E+05	5.2925E+00	5.2855E+00	5.2844E+00
10	3.0197E+05	6.0692E+00	6.0613E+00	6.0620E+00
11	2.3518E+05	5.9754E+00	5.9688E+00	5.9704E+00
12	1.8316E+05	5.8392E+00	5.8036E+00	5.8064E+00
13	1.4264E+05	5.6027E+00	5.5993E+00	5.6025E+00
14	1.1109E+05	5.1333E+00	5.1305E+00	5.1350E+00
15	8.6517E+04	4.9903E+00	4.9910E+00	4.9942E+00
16	6.7379E+04	4.6799E+00	4.6802E+00	4.6858E+00
17	5.2475E+04	4.1938E+00	4.1956E+00	4.2011E+00
18	4.0868E+04	3.2628E+00	3.2642E+00	3.2699E+00
19	3.1828E+04	2.9034E+00	2.9139E+00	2.9107E+00
20	2.4788E+04	3.0668E+00	3.0802E+00	3.0765E+00
21	1.9305E+04	2.3606E+00	2.3729E+00	2.3691E+00
22	1.5034E+04	2.0193E+00	2.0310E+00	2.0276E+00
23	1.1709E+04	1.6020E+00	1.6125E+00	1.6093E+00
24	9.1188E+03	1.1568E+00	1.1650E+00	1.1625E+00
25	7.1017E+03	9.9792E-01	1.0055E+00	1.0031E+00
26	5.5308E+03	8.0611E-01	8.1255E-01	8.1058E-01
27	4.3074E+03	6.5610E-01	6.6198E-01	6.5993E-01
28	3.3546E+03	5.1303E-01	5.1773E-01	5.1620E-01
29	2.6126E+03	3.7899E-01	3.8261E-01	3.8144E-01
30	2.0347E+03	2.8058E-01	2.8431E-01	2.8248E-01
31	1.5846E+03	2.0461E-01	2.0753E-01	2.0605E-01
32	1.2341E+03	1.2816E-01	1.3015E-01	1.2908E-01
33	9.6112E+02	8.6503E-02	8.7981E-02	8.7149E-02
34	7.4852E+02	5.6760E-02	5.7812E-02	5.7195E-02
35	5.8295E+02	3.2442E-02	3.3079E-02	3.2695E-02
36	4.5400E+02	2.0879E-02	2.1298E-02	2.1045E-02
37	3.5358E+02	1.1453E-02	1.1692E-02	1.1546E-02
38	2.7536E+02	9.3602E-03	9.5868E-03	9.4373E-03
39	1.6702E+02	2.4656E-03	2.5305E-03	2.4863E-03
40	1.0130E+02	4.6101E-04	4.7412E-04	4.6493E-04
41	6.1442E+01	8.1405E-05	8.3838E-05	8.2105E-05
42	3.7267E+01	2.246E-05	2.3172E-05	2.2643E-05
43	2.2603E+01	2.4308E-06	2.5139E-06	2.4523E-06
44	1.3710E+01	3.7593E-07	3.8927E-07	3.7929E-07
45	8.3153E+00	3.3870E-08	3.5128E-08	3.4174E-08
46	5.0435E+00	1.3635E-08	1.4148E-08	1.3762E-08
47	3.0590E+00	5.4095E-09	5.6165E-09	5.4610E-09
48	1.8554E+00	7.7398E-10	8.0431E-10	7.8142E-10
49	1.1254E+00	3.4406E-11	3.5782E-11	3.4738E-11
50	6.8256E-01	8.0901E-13	8.4145E-13	8.1680E-13
	1.0000E-05	1.0000E+02	1.0000E+02	1.0000E+02

TABLE B-XLIX
SNEAK-7B EDGE FLUX SPECTRA

GROUP	ENERGY BOUNDARY (EV)	1-D DIFFUSION THEORY (N/CM ² /S)	1-D TRANSPORT THEORY (N/CM ² /S)	2-D DIFFUSION THEORY (N/CM ² /S)
1	1.9971E+07	7.3510E-03	9.0492E-03	7.3590E-03
2	1.0000E+07	7.3678E-02	8.8906E-02	7.3740E-02
3	6.0653E+06	2.6166E-01	3.1224E-01	2.6206E-01
4	3.6788E+06	5.0901E-01	5.9891E-01	5.1060E-01
5	2.2313E+06	7.8362E-01	9.0435E-01	7.8805E-01
6	1.3534E+06	2.2354E+00	2.4433E+00	2.2590E+00
7	8.2085E+05	9.6590E+00	9.7537E+00	9.7099E+00
8	4.9787E+05	6.3203E+00	6.3044E+00	6.3481E+00
9	3.8774E+05	7.4766E+00	7.4228E+00	7.4979E+00
10	3.0197E+05	7.7161E+00	7.6719E+00	7.7309E+00
11	2.3518E+05	7.3216E+00	7.3048E+00	7.3233E+00
12	1.8316E+05	6.9025E+00	6.9085E+00	6.9089E+00
13	1.4264E+05	6.7845E+00	6.8050E+00	6.7866E+00
14	1.1109E+05	6.7035E+00	6.7517E+00	6.7024E+00
15	8.6517E+04	7.0291E+00	7.0848E+00	7.0207E+00
16	6.7379E+04	6.5123E+00	6.5955E+00	6.4977E+00
17	5.2475E+04	6.5130E+00	6.4996E+00	6.4858E+00
18	4.0868E+04	4.8323E+00	4.7432E+00	4.8005E+00
19	3.1828E+04	3.0713E+00	2.9945E+00	3.0508E+00
20	2.4788E+04	3.5965E+00	3.4665E+00	3.5635E+00
21	1.9305E+04	1.8440E+00	1.7825E+00	1.8275E+00
22	1.5034E+04	1.3527E+00	1.3044E+00	1.3414E+00
23	1.1709E+04	9.2236E-01	8.8125E-01	9.1586E-01
24	9.1188E+03	4.6009E-01	4.4164E-01	4.5788E-01
25	7.1017E+03	3.3382E-01	3.1800E-01	3.3296E-01
26	5.5308E+03	2.0399E-01	1.9363E-01	2.0407E-01
27	4.3074E+03	1.6982E-01	1.5628E-01	1.7036E-01
28	3.3546E+03	9.2839E-02	8.5449E-02	9.3637E-02
29	2.6126E+03	6.4551E-02	4.9556E-02	6.5647E-02
30	2.0347E+03	1.1901E-01	4.7965E-02	1.2171E-01
31	1.5846E+03	5.8894E-02	3.2251E-02	6.0692E-02
32	1.2341E+03	2.3838E-02	1.4015E-02	2.4679E-02
33	9.6112E+02	2.0045E-02	1.2309E-02	2.0851E-02
34	7.4852E+02	9.5976E-03	6.4221E-03	1.0035E-02
35	5.8295E+02	6.1139E-03	4.6805E-03	6.4188E-03
36	4.5400E+02	3.0609E-03	2.6224E-03	3.2251E-03
37	3.5358E+02	1.5842E-03	1.3548E-03	1.6725E-03
38	2.7536E+02	3.8301E-03	1.7258E-03	3.9938E-03
39	1.6702E+02	4.7184E-04	2.8287E-04	4.9457E-04
40	1.0130E+02	8.8541E-05	5.0889E-05	9.2773E-05
41	6.1442E+01	1.5267E-05	1.0763E-05	1.6110E-05
42	3.7267E+01	1.6118E-06	1.1704E-06	1.7028E-06
43	2.2603E+01	7.8903E-08	5.7831E-08	8.3517E-08
44	1.3710E+01	1.6155E-08	1.4598E-08	1.7330E-08
45	8.3153E+00	2.6317E-10	2.2473E-10	2.8269E-10
46	5.0435E+00	1.7462E-10	2.0090E-10	1.9182E-10
47	3.0590E+00	2.9654E-10	3.4664E-10	3.2519E-10
48	1.8554E+00	1.4066E-10	1.6107E-10	1.5306E-10
49	1.1254E+00	2.7353E-11	3.0966E-11	2.9612E-11
50	6.8256E-01	1.8484E-12	2.0897E-12	2.0007E-12
	1.0000E-05	1.0000E+02	1.0000E+02	1.0000E+02

TABLE B-L

SNEAK-7B CENTRAL ADJOINT SPECTRA

GROUP	ENERGY BOUNDARY (EV)	1-D DIFFUSION THEORY (RHO/N/S)	1-D TRANSPORT THEORY (RHO/N/S)	2-D DIFFUSION THEORY (RHO/N/S)
1	1.9971E+07	1.6680E+00	1.6725E+00	1.6675E+00
2	1.0000E+07	1.3568E+00	1.3596E+00	1.3565E+00
3	6.0653E+06	1.1284E+00	1.1302E+00	1.1284E+00
4	3.6788E+06	1.1210E+00	1.1229E+00	1.1211E+00
5	2.2313E+06	1.0129E+00	1.0119E+00	1.0128E+00
6	1.3534E+06	8.8988E-01	8.8953E-01	8.9015E-01
7	8.2085E+05	8.6383E-01	8.6236E-01	8.6411E-01
8	4.9787E+05	8.5491E-01	8.5271E-01	8.5449E-01
9	3.8774E+05	8.3936E-01	8.3656E-01	8.3891E-01
10	3.0197E+05	8.2383E-01	8.2114E-01	8.2326E-01
11	2.3518E+05	8.0979E-01	8.0733E-01	8.0906E-01
12	1.8316E+05	7.9553E-01	7.9327E-01	7.9467E-01
13	1.4264E+05	7.7962E-01	7.7762E-01	7.7866E-01
14	1.1109E+05	7.6240E-01	7.6063E-01	7.6132E-01
15	8.6517E+04	7.4294E-01	7.4159E-01	7.4181E-01
16	6.7379E+04	7.2344E-01	7.2215E-01	7.2226E-01
17	5.2475E+04	7.0843E-01	7.0778E-01	7.0719E-01
18	4.0868E+04	6.9937E-01	6.9918E-01	6.9806E-01
19	3.1828E+04	6.9264E-01	6.9286E-01	6.9129E-01
20	2.4788E+04	6.8730E-01	6.8596E-01	6.8595E-01
21	1.9305E+04	6.9218E-01	6.9072E-01	6.9068E-01
22	1.5034E+04	6.9826E-01	6.9663E-01	6.9667E-01
23	1.1709E+04	7.0998E-01	7.0831E-01	7.0828E-01
24	9.1188E+03	7.2577E-01	7.2398E-01	7.2392E-01
25	7.1017E+03	7.3678E-01	7.3506E-01	7.3487E-01
26	5.5308E+03	7.6206E-01	7.6034E-01	7.6003E-01
27	4.3074E+03	7.9049E-01	7.8882E-01	7.8833E-01
28	3.3546E+03	8.1139E-01	8.0966E-01	8.0912E-01
29	2.6126E+03	8.2463E-01	8.2335E-01	8.2231E-01
30	2.0347E+03	8.7542E-01	8.7370E-01	8.7288E-01
31	1.5846E+03	9.4354E-01	9.4045E-01	9.4067E-01
32	1.2341E+03	9.4638E-01	9.4316E-01	9.4339E-01
33	9.6112E+02	9.9893E-01	9.9533E-01	9.9576E-01
34	7.4852E+02	1.0526E+00	1.0483E+00	1.0491E+00
35	5.8295E+02	1.1922E+00	1.1865E+00	1.1881E+00
36	4.5400E+02	1.1107E+00	1.1056E+00	1.1069E+00
37	3.5358E+02	1.1245E+00	1.1198E+00	1.1204E+00
38	2.7536E+02	1.1735E+00	1.1689E+00	1.1692E+00
39	1.6702E+02	1.1388E+00	1.1335E+00	1.1346E+00
40	1.0130E+02	1.4242E+00	1.4167E+00	1.4187E+00
41	6.1442E+01	1.2024E+00	1.1958E+00	1.1978E+00
42	3.7267E+01	9.3721E-01	9.3271E-01	9.3370E-01
43	2.2603E+01	1.2183E+00	1.2115E+00	1.2134E+00
44	1.3710E+01	1.5266E+00	1.5175E+00	1.5206E+00
45	8.3153E+00	6.0519E-01	6.0163E-01	6.0283E-01
46	5.0435E+00	1.3120E+00	1.3028E+00	1.3075E+00
47	3.0590E+00	1.2736E+00	1.2648E+00	1.2690E+00
48	1.8554E+00	7.8323E-01	7.7813E-01	7.8010E-01
49	1.1254E+00	5.8976E-01	5.8589E-01	5.8732E-01
50	6.8256E-01	1.8914E+00	1.8777E+00	1.8836E+00
	1.0000E-05	4.8033E+01	4.7885E+01	4.7917E+01