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EXPERIMENTAL RESULTS OF ANGULAR NEUTRON FLUX SPECTRA LEAKING FROM SLABS OF FUSION REACTOR CANDIDATE MATERIALS (I)

June 1990

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日本原子力研究所
Japan Atomic Energy Research Institute

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Experimental Results of Angular Neutron Flux Spectra Leaking from Slabs of Fusion Reactor Candidate Materials (I)

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This report summarizes experimental data of angular neutron flux spectra measured on the slab assemblies of fusion reactor candidate materials using the neutron time-of-flight (TOF) method. These experiments have been performed for graphite (carbon), beryllium and lithium-oxide. The obtained data are very suitable for the benchmark tests to check the nuclear data and calculational code systems. For use of that purpose, the experimental conditions, definitions of key terms and results obtained are compiled in figures and numerical tables.

Keywords: Angular Neutron Flux, Fusion Blanket, Benchmark Test, Nuclear Data, DT Neutrons, Graphite, Beryllium, Lithium Oxide

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核融合炉候補材料平板から漏洩する角度中性子スペクトルに関する実験結果(I)

日本原子力研究所東海研究所原子炉工学部
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（1990年5月29日受理）

本報告書は中性子飛行時間（TOF）法を用いて測定した核融合炉用候補材からの漏洩角度中性子束スペクトルの結果をまとめたものである。測定した材料は，グラファイト（炭素），ベリリウムおよび酸化リチウムである。これらの実験結果は，核データや核計算コードの妥当性を検証するベンチマークテストに使用するのに適している。この目的のために必要な実験条件，定義および実験結果を図と数値データの表として収録した。

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1. Introduction

In a commercial D-T fueled fusion reactor design, it is important to accurately calculate nuclear characteristics such as tritium breeding, nuclear heating and radiation shielding, for the incident 14 MeV fusion reaction neutrons. The accuracy of those calculational estimations depends mainly on nuclear scattering data. Each reaction, however, contributes in a different way for each material to the neutron penetration for the bulk material. Thus, an integral experiment, i.e. measurement of neutron spectrum multiply-scattered in the bulk materials, is very useful for testing the validity of nuclear data files and the calculational codes.

For a direct comparison of measurement with the calculation by deterministic method, an angular flux is the most suitable quantity beacause it can separate the collided flux from the uncollided one and include information angle-dependence of scattreing data. A slab assembly is the only simple arrangement to measure an angular neutron flux, whereas a sphere experiment measureing an angle-integrated flux, such as the LLL pulsed sphere program[1], cannot separate the collided flux. In addition, the slab arrangement is to be able to isolate the assembly from the neutron generating target.

The integral experiments on the slabs of graphite(carbon), beryllium and lithium-oxide have been performed for the above purpose using the neutron time-of-flight technique, and already reported with the calculational analyses.[2-6] But it is very useful for benchmark test of any nuclear data and calculational codes to compile the experimental conditions and numerical data. The materials measured here are chosen because of importance for reflector, multiplier and tritium breeding, respectively. The present report describes the least experimental information to be necessary for understanding the results, in Chapter 2. Then the degital information of materials and the numerical tables of measured results are compiled in Chapter 3. Examples for MCNP[7] and DOT3.5[8] calculations are also presented in Appendices.

2. Basic Information

2.1 Experimental Arrangement

The slab assemblies used in the present experimental series were made in a pseudo-cylindrical shape. This geometry was adopted to simplify the calculation as possible, and it can be modeled by a two-dimensional code. The pseudo-cylinder was composed of blocks of a standard size of 50.6 mm side length as shown in Fig. 2.1.1, supported by square aluminum tubes of 50.8 mm unit size. The assembly was placed at a distance of 0.2 m from the neutron source. Figure 2.1.2 shows the experimental layout in the target room. The radius of the assembly was set to be 0.315 m, corresponding to 5-6 mean free paths for 14 MeV neutrons, such that the neutron flux attenuated to 1 % when passing through the material in radial direction. Effect of the rugged boundary and the light weighted supporting frame were confirmed to be small enough. The boundary of the pseudo-cylinder can, thus, be approximated as a true circle in the calculational analysis.

The detector-collimator system determined the area on the rear-surface of slab and the solid angle by which the angular neutron flux was defined. The area was designed to be about 50 mm in diameter by choosing the sizes of the detector and the collimator opening. The detector-collimator system was placed on the dual rotating deck. The system consisted of an upper and a lower deck to perform the experiments on different thick slabs with combination of their rotation. The lower deck moves centering around the target (neutron source), and then the upper deck rotates slightly relative to the lower deck to adjust the axis to the measured direction, i.e., the center of rear-face of the slab. The detector-collimator axis can be adjusted to any point around the neutron source by these two motions. This mechanism allows measurement for assembly thickness of more than 1 m. A shadow-shield made of 0.4 m-thick iron blocks was emplaced to prevent direct neutrons entering the collimator entrance and the detector.

2.2. Neutron Source

2.2.1 Neutron Target

The 14 MeV DT neutrons were generated at a 3.7 x 10^2 GBq (10 Ci) tritium-metal target. The tritium was adsorbed in a 40 g/m^2 titanium layer evaporated on a 1 mm-thick copper backing. Neutrons were produced by the reaction,

$$d + {}^3H \rightarrow {}^4He + n + 17.6\ MeV. \qquad (2.2.1)$$

Deuteron beams were accelerated to 350 keV by the electrostatic accelerator of the FNS (Fusion Neutronics Source) facility at JAERI.[9] A pulsed deuteron beam of 2 ns width (FWHM) was employed in the time-of-flight measurement, using the 80 degree beam line.

A singly-charged deuteron beam was selected by a 90° bending magnet located just after the ion source. Then, the deuteron beam was chopped by the sweeper and the deflector within the high voltage cage by a 2 MHz master oscillator, reshaped by the post-deflector after acceleration and shortened to 2 ns in a 10 m-drift tube by the two-gap buncher. Thus, the DC beam of 2 mA was bunched to a peak current of more than 35 mA at the target. The tritium target was placed at the bottom of the copper backing with a shape of Faraday cup. Two types of target assemblies were used: old one was used for graphite experiment and the other was made to prevent the neutron scattering around the source position and used for beryllium, and lithium-oxide experiments as shown in Figs. 2.2.1 and 2.2.2, respectively. Both were cooled by compressed air flow.

2.2.2 Source Neutron Characteristics

The neutron yield at the target was monitored by detecting the associated alpha-particles[10] with a silicon surface-barrier detector (SSD) emplaced in the beam line. This monitoring method was chosen because any externally located monitros detecting neutrons such as a fission chamber must be affected by neutron scattering on the experimental assembly. The conversion factor of alpha counts to total neutron

yield was calculated from kinematics considering slowing-down of deuterons in the titanium-tritium layer.[11] The error in absolute yield was estimated to be ±2 %.

For the source neutron input in the benchmark calculation, the total neutron intensity should be normalized to the flux integration of the measured source neutron spectrum described below.

The neutron source spectrum from the target, ψ, is measured and presented as follows:

$$\Psi(\Omega,E_n) = \frac{C(E_n)}{\varepsilon(E_n)\cdot\Delta\Omega\cdot S_n\cdot T(E_n)} \qquad (2.2.2)$$

[n/sr/unit lethargy/source neutron],

where $\Psi(\Omega,E_n)$: neutrons with energy E_n per unit lethargy and emitting solid angle Ω per unit source neutron,

$C(E_n)$: counts per unit lethargy for neutrons of energy E_n,

$\varepsilon(E_n)$: efficiency of neutron detector at energy E_n,

$\Delta\Omega$: solid angle subtended by the detector to the target, i.e., $\Delta\Omega = A_d/L^2$,

where A_d : counting area of the detector,

L : distance from the target to the detector,

S_n : total source neutrons obtained by the associated alpha particle monitor,

$T(E_n)$: attenuation due to air in neutron flight path [$= \exp\{-\Sigma_{air}(E_n)\cdot L\}$, Σ_{air} : macroscopic total cross section of air].

The neutron spectra obtained from the target are shown for each experimental run in Chapter 3. The angular distributions of neutron emitted from that target are shown for two types of target assemblies in Figs. 2.2.3 and 2.2.4, respectively. Forward neutron emission within the solid angle subtended by the experimental assembly is fairly isotropic, even though emission at 90 degrees is strongly distorted by scattering on the structure materials. The peak found in the source spectrum is

causeed by D(d,n)^{3}He reaction neutrons. The deuterium in the target increases with the deuteron bombardment, the intensity of this peak depends on the irradiation time for the tritium target. The amount of them is, at most, 2 % of the total source neutrons.

2.3 Definitions of Angular Neutron Flux Spectrum

2.3.1 Neutron Energy

The angular flux measurement is performed in foreground-background mode. The background is measured by blocking the collimator hole with a plug of type 304 stainless steel of 0.6 m in length and polyethylene of 0.4 m in length. Background data are subtracted from the foreground data. Measured time spectra are transformed to energy spectra by the relativistic relation,

$$E_n = 939.553 \cdot \left[\left(1.0 - 11.126496 \cdot \left(\frac{L_{eff}}{t - t_0} \right)^2 \right)^{-\frac{1}{2}} - 1.0 \right] \quad (2.3.1)$$

[MeV] ,

where E_n is the neutron energy in MeV, L_{eff} the effective flight path in m (see Appendix 1), t the neutron arrival time and t_0 the time-zero of neutron emission in ns. The time zero was determined by the peak in time spectra associated with the gamma-rays originating from the assembly.

2.3.2 Angular Neutron Flux

The measured data are reduced to the angular flux by the following equation as illustrated by Fig. 2.3.1.

$$\Phi(\Omega, E_n) = \frac{C(E_n)}{\varepsilon(E_n) \cdot \Delta\Omega \cdot A_s \cdot S_n \cdot T(E_n)} \quad (2.3.2)$$

[n/sr/m^2/unit lethargy/source neutron],

where $\Phi(\Omega,E_n)$: neutrons with energy E_n per unit lethargy and emitting angle Ω per unit area and per unit source neutrons at the rear surface center of the assembly,

$C(E_n)$: counts per unit lethargy for neutrons of energy E_n,

$\varepsilon(E_n)$: efficiency of neutron detector at energy E_n,

$\Delta\Omega$: solid angle subtended by the detector to the point on the surface center of the assembly, i.e., $\Delta\Omega = A_d/L^2$, where

A_d : counting area of the detector,

L : distance from the rear surface to the detector,

A_s : effective measured area defined by the detector collimator system on the plane perpendicular to the axis at the assembly surface,

S_n : total source neutrons obtained by the associated alpha particle monitor,

$T(E_n)$: attenuation due to air in neutron flight path [$=\exp\{-\Sigma_{air}(E_n)\cdot L\}$, Σ_{air} :macroscopic total cross section of air].

The measurement was performed at 0, 12.2, 24.9, 41.8 and 66.8 degrees which corresponding to angles of S_{16} qudrature set. For the 12.2 degree-measurement of 50.6 mm-thick slab, however, a part of the uncollided neutrons from the source enters into the detector. Since the fraction of of that could not be estimated, the measurement was not performed at 12.2d degree for the 50.6 mm-thick assmbly.

2.3.3 Effective Measured Area

The measured area for the emitted neutrons is not infinitesimally small. The obtained angular flux is averaged over the area. To obtain the angular neutron flux on absolute basis, the area on the assembly surface, from which neutrons are effectively entered into the detector, should be well-defined. To determine the 'effective measured area', the detector-collimator response function was measured experimentally. (See Appendix 2).

The effective measured area A_s in eq. (2.3.2) is defined by the equation,

$$A_s = \int_0^\infty 2\pi r \cdot f(r) dr \ [m^2], \qquad (2.3.3)$$

where r is the radial distance from the detector-collimator axis on the surface of the assembly and f(r) the detector-collimator response function. The detector-collimator response function is given by

$$f(r) = C_w(r)/C_o(r), \qquad (2.3.4)$$

where $C_w(r)$and $C_o(r)$ are the detected counts of neutrons coming from a source located at the position r on the surface with and without collimator system, respectively.

2.4 Experimental Errors

The uncertainties included in the experimental results are separated into the errors coming from the energy scale and flux. They are composed of random errors mainly related to counting statistics, and systematic errors related to normalization.

2.4.1 Energy Scale Uncertainty

The energy scale uncertainty produced in the transformation of time spectra to energy spectra is attributed to uncertainties in the flight path and flight time. The random error such as Gaussian broadening by energy resolution and the systematic error such as energy shift should be considered separately.

The energy resolution depends on the time resolution of the measuring system, which is a function of the electronics and deuteron beam pulse width, estimated to be ~2 ns; this yields 2 % resolution for 15 MeV neutrons and gets smaller for lower energy. The other causes are the flight path uncertainty, i.e., emission time spread of neutrons scattered in the assembly. This is limited to within $2(\Delta L/L)$, i.e., ~5% for the 0.4 m-thick assembly.

The systematic errors are caused by the uncertainty of the time zero and effective flight path. The time zero t_0 and the effective flight

path L_{eff} are determined by the gamma-ray peaks in the time spectrum as described in Appendix 1. The effective flight path as defined is, however, valid only for singly-scattered neutrons. The neutron emission point does not correspond to the gamma emission point if the neutron is scattered after emitting gamma rays by inelastic reaction.

The overall energy scale uncertainty of the observed neutrons is obtained by the equation:

$$\frac{\Delta E}{E} = 2\frac{\Delta t}{t} + 2\frac{\Delta \ell}{L} = 2\frac{t_1 - t_0}{t_2 - t_1} + 2\frac{\Delta \ell'_n}{L_{eff}}$$

$$\sim 2\frac{\Delta \ell'_n}{L_{eff}}\left(\sqrt{\frac{E}{E_0}} + 1\right) \quad , \qquad (2.4.1)$$

where t_0, t_1 and t_2 are the time zero obtained by the gamma-ray peak, the true time zero and the time of neutron detection, respectively, $\Delta \ell'_n$ the difference of the positions at which the gamma rays and neutrons are emitted, E_0 and E the energies of incident and scattered neutrons, respectively (See Fig. 2.4.1).

This equation shows that the energy scale uncertainty depends on the neutron energy through t; the position difference $\Delta \ell'_n$ also changes with neutron energy. The difference $\Delta \ell'_n$ is very small for the high energy region, and $\Delta E/E$ nearly equals $2\,\Delta \ell'_n/L_{eff}$ for the lower energy region; $\Delta \ell'_n$ is smaller than the effective neutron emission depth $\Delta \ell_n$. Therefore, the uncertainty does not exceed $2\,\Delta \ell'_n/L_{eff}$, which is less than 7 % even for 400 mm-thick assembly at the case of $E = E_0$.

2.4.2 Flux Uncertainty

The uncertainty of the measured flux consists mainly of the errors in the parameters shown in the equation 2.3.2. The error of source intensity can be excluded, if the measured target emission spectrum is adopted. The errors of the other parameters are estimated as follows.

Detector efficiency

The detector efficiency error is caused by the errors involved in

the efficiency calculation, neutron loss near the detector bias level, and mismatch of the applied efficiency due to instability of discrimination circuit. Figure 2.4.2 shows the estimated energy dependent error of the efficiency due to detector bias mismatching to the corresponding true efficiency.[6] The figure shows the case that the bias mismatch is 7.7 %. Since we could set the bias with 5 % accuracy, the uncertainty is less than about 10 % in the range above 50 keV. The calculational errors come from the cross section and scintillation light output efficiency. The cross section error of hydrogen is about 1 %. The error due to scintillation light output is less than 2 %.

The overall uncertainty in the detector efficiency is summarized as follows:

1) For the energy range above 200 keV, systematic error is less than 2 %.
2) For the range of 80 to 200 keV,the error is 5-10 %.
3) For the range below 80 keV, the error is typically 10-20 %.

Solid Angle

The distance of the assembly to the detector is large enough to neglect its error. Then the error of less than 1 % is solely due to that of the detecting area of less than 1 %.

Effective Measured Area

This error was estimated to be less than 2 % by confirmation experiment described in Appendix 1.

The overall errors are summarized in Table 2.4.1.

Table 2.4.1 Errors of measured flux

Error Source	Error
Systematic	
1) Efficiency	
E_n > 200 keV	< 2 %
80 < E_n < 200 keV	5-10 %
50 < E_n < 80 keV	10-20 %
2) Solid angle	<< 1 %
3) Effective measured area	< 2 %
Random	
4) Counting statistics	listed with data table

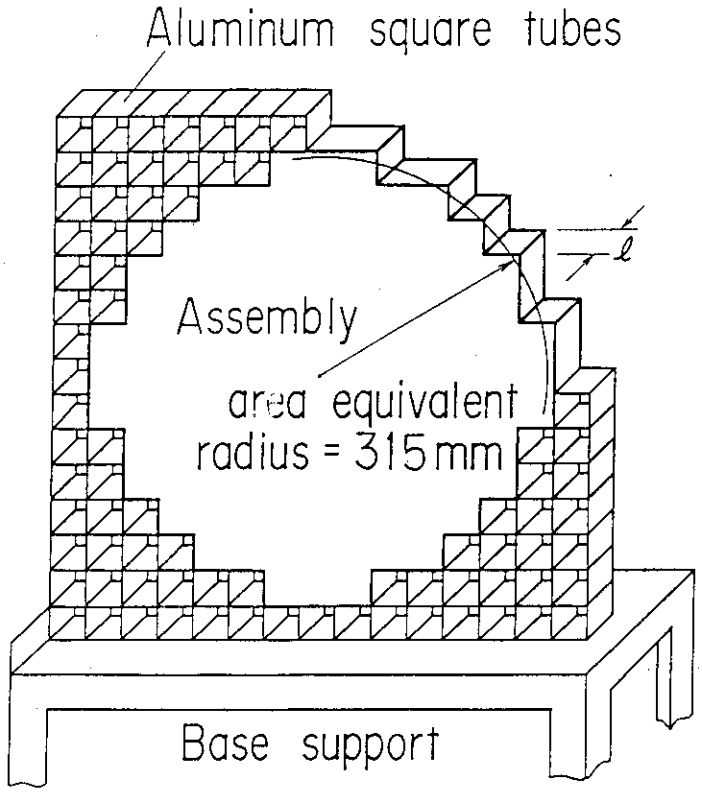


Fig. 2.1.1 Experimental assembly with pseudo-cylindrical shape made of rectangular blocks. The symbol ℓ denotes the slab thickness.

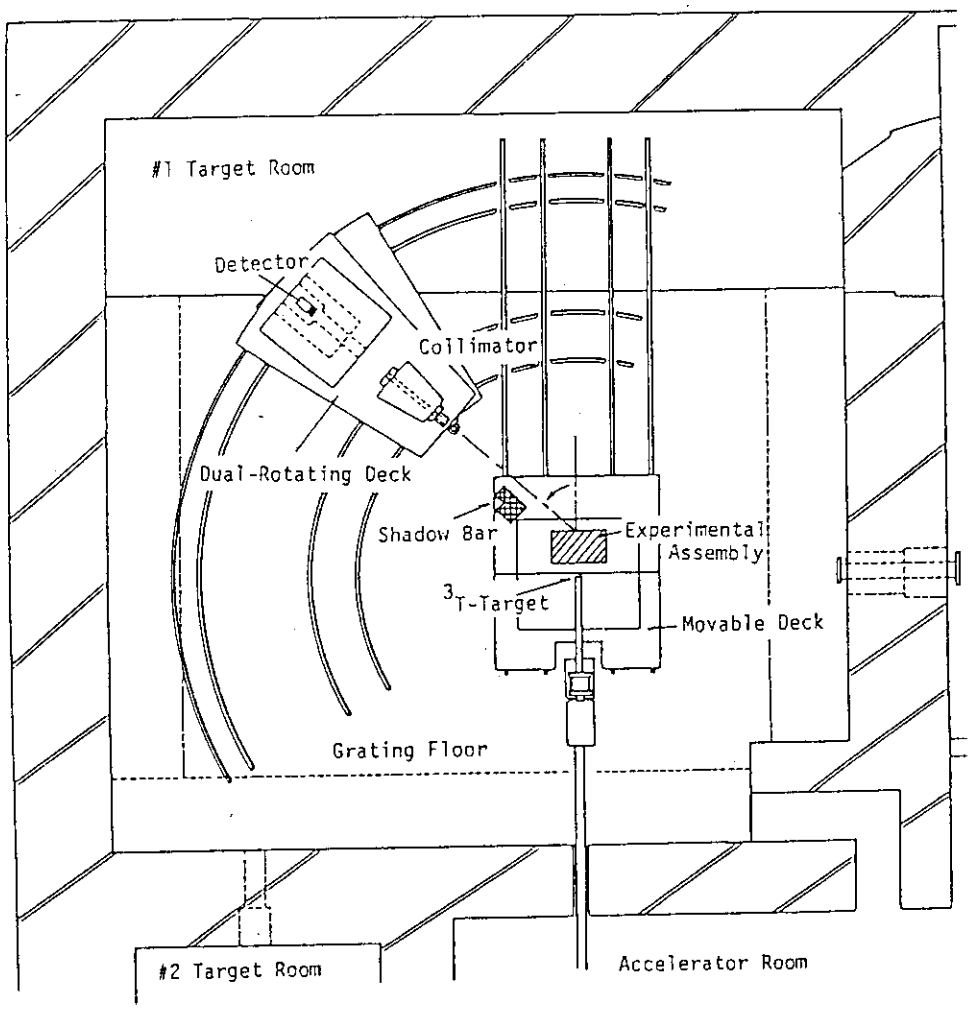


Fig. 2.1.2 Layout of target, assembly, collimator and detector

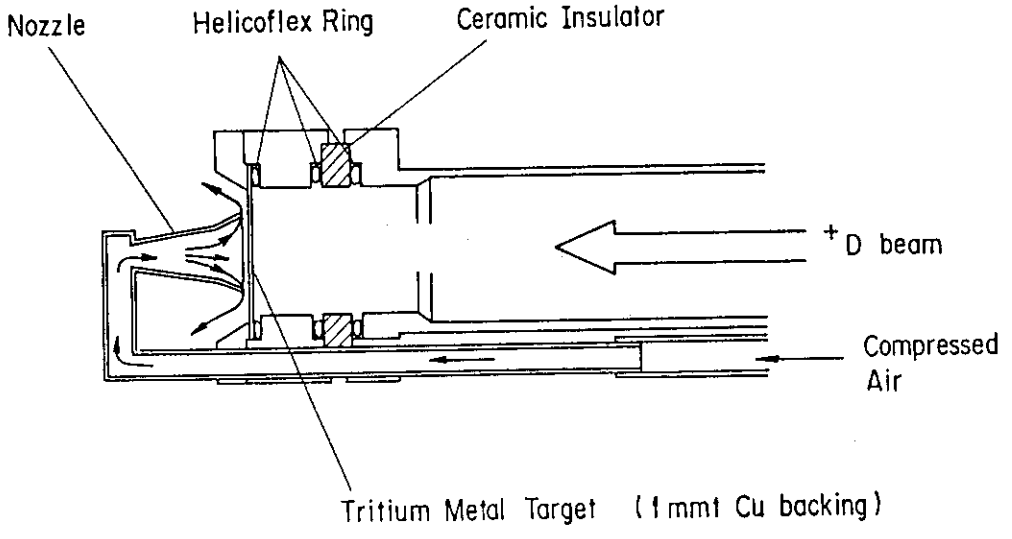


Fig. 2.2.1 Target assembly cooled by compressed air flow used for the Graphite experiment

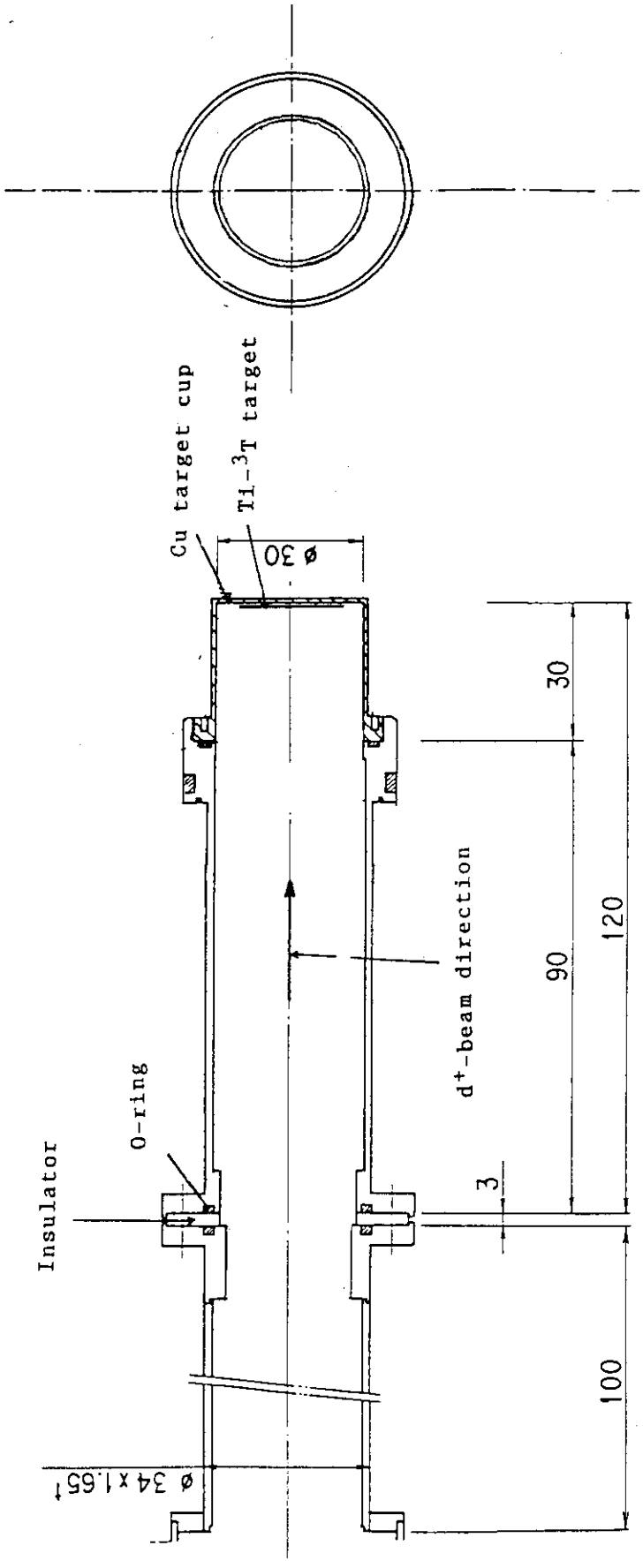


Fig. 2.2.2 Target assembly cooled by thin layered water used for the beryllium and lithium-oxide experiments

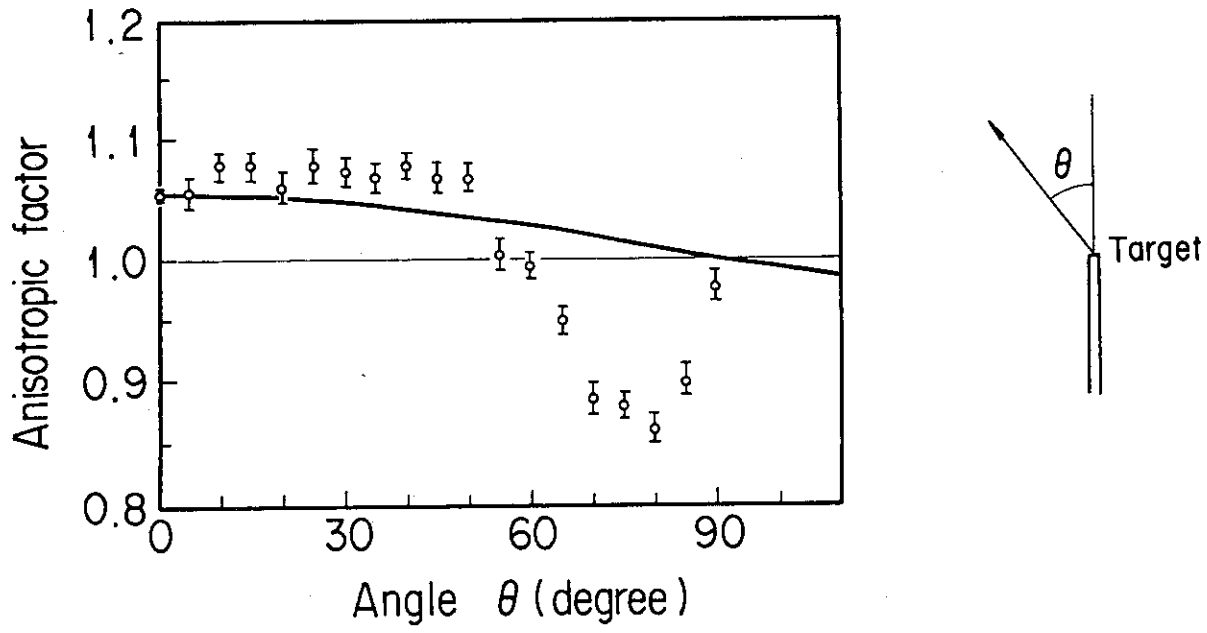


Fig. 2.2.3 Angular distribution of neutrons emitted from the target assembly for the graphite experiment(Fig. 3.1)

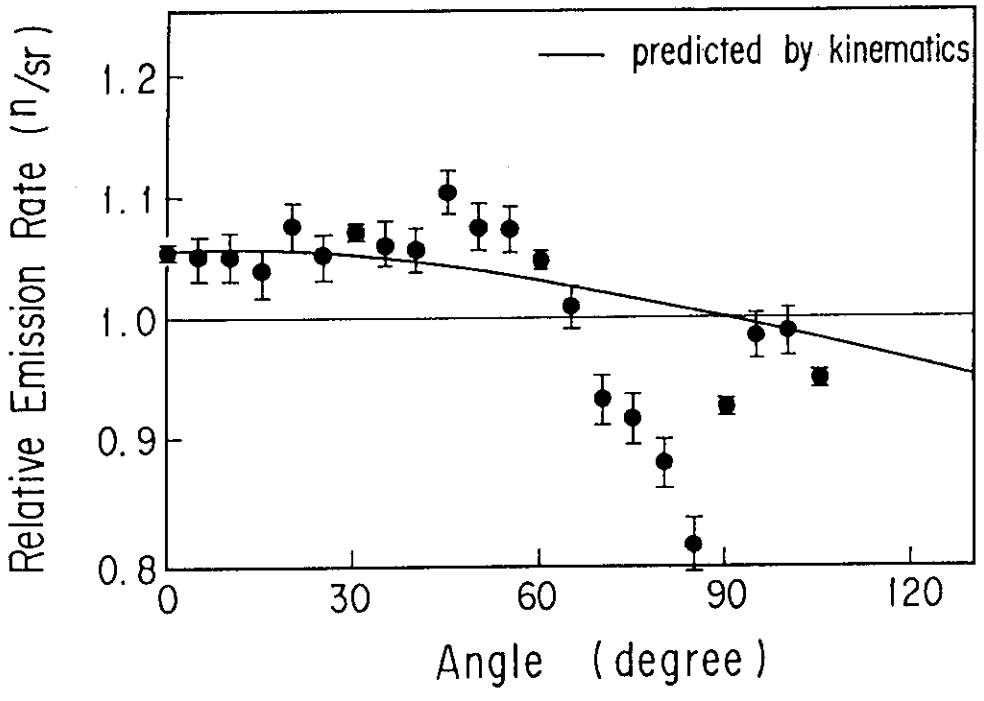


Fig. 2.2.4 Angular distribution of neutrons emitted from the target assembly for the beryllium and lithium-oxide experiments (Fig. 2.2.2)

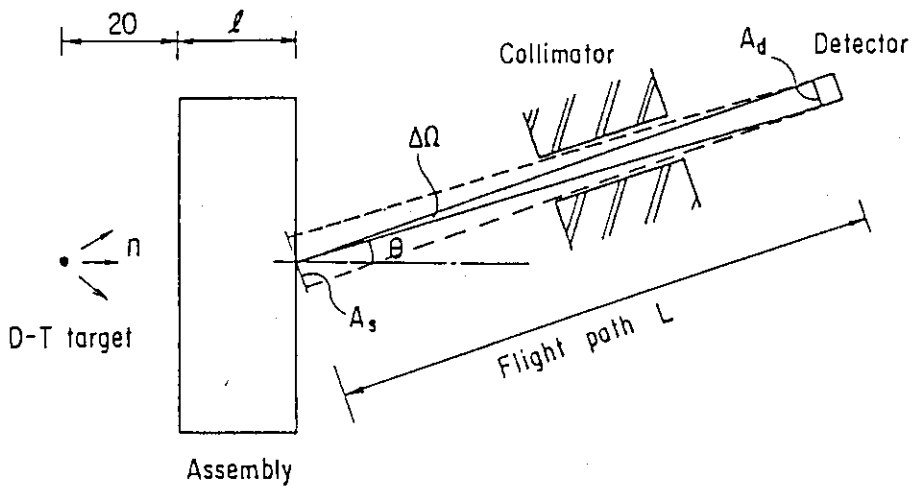


Fig. 2.3.1 Definitions of the parameters for data reduction

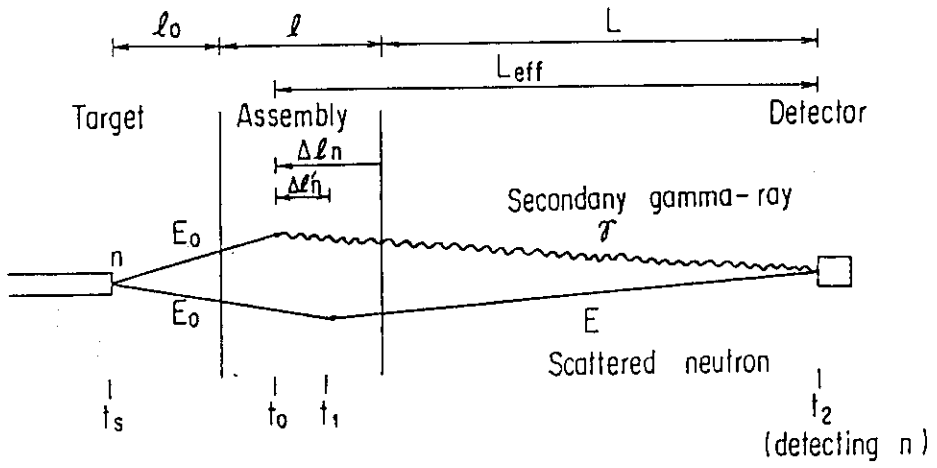


Fig. 2.4.1 Time relation of the observed neutrons and gamma-rays. The time t_s is the time origin obtained from the target by the beam pulse, t_0 and t_1 are the emission times of secondary gamma-rays and neutrons and t_2 is the arrival time of the observed neutron. E_0 and E are energies of primary and secondary neutrons.

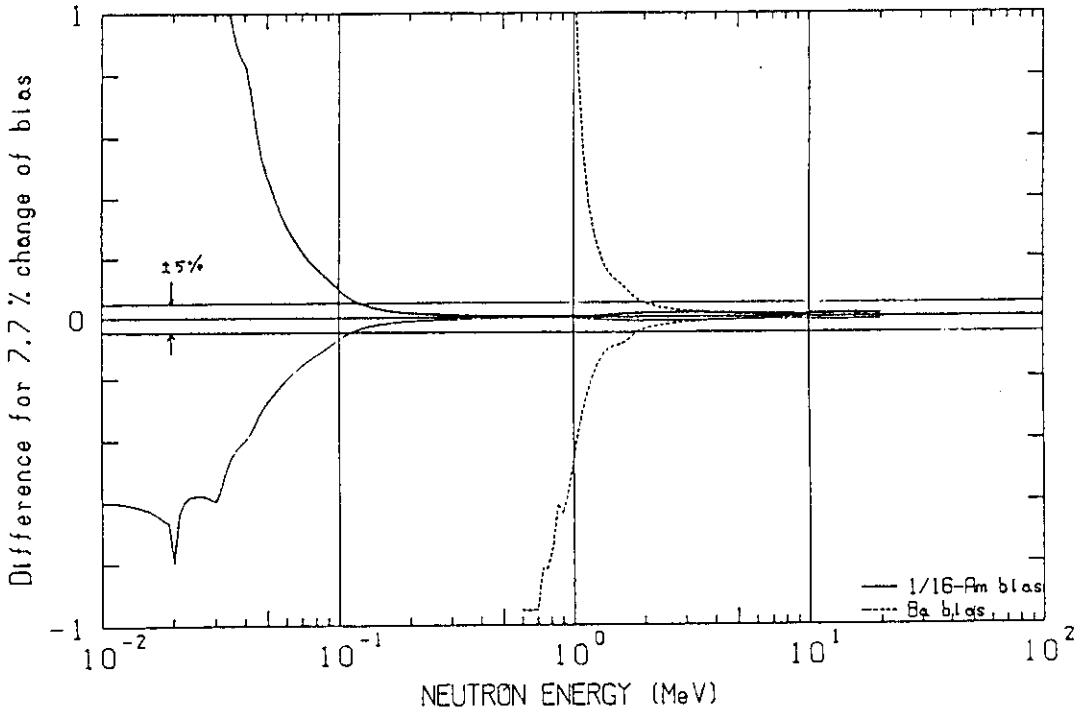


Fig. 2.4.2 Difference of the detection efficiency due to bias mismatch. Figure shows the case for a 7.7% mismatch of the dicrimination level.

3. Material Data and Measured Results

This chapter presents the experimental data necessary to perform calculational analyses. The neutron source spectra are somewhat different from each experiments due to systematic error or for use of different target assembly, so each target neutron emission spectrum is given for each experiment. The parameters required to calculate the measured angular flux are the slab thickness, effective measured area (effective collimator opening). The flight path length from the slab to the detector is needed for Monte Carlo simulation. The effective measured area A_s and flight path length L vary with the slab thickness and measuring angle as follows:

$$A_s\,(cm^2) = 0.2304 \times L\ (cm) - 84.16 \qquad (3.1)$$

The dependence of flight path length on measuring angle are given in Table 3.1 for each experiment.

The measured angular flux is given per unit lethargy in MeV unit and energy points of 150. The values below about 50 keV (about last 30 points) are out of range, i.e., meaningless because the detector efficiency has large uncertainty in that range. The slab thicknesses are given in Table 3.2 for three materials. The atomic densities for those materials are given in Table 3.3.

Table 3.1 Flight path length and measuring angle

Angle	Slab thickness (mm)			
	48(50.6,50.8)+	152.4	200(202.4)+	400(404.8)+
0	738	728	723	703
12.2	-	729	724	704
24.9	740	731	726	708
41.8	744	736	732	716
66.8	753	748	746	736

+ see Table 3.2.

Table 3.2 Slab thicknesses of measured material

Material	Thicknesses of slab (mm)
C	50.6, 202.4, 404.8
Be	50.8, 152.4
Li_2O	48, 200, 400

Table 3.3 Atomic densities of measured assemblies

(x 10^{24} atoms/cm^3)

Graphite	
C	8.280-2*
Beryllium	
Be	1.215-1
Lithium Oxide	
^{7}Li	5.338-2 (5.371-2)**
^{6}Li	4.278-3 (4.304-3)
O	2.883-2 (2.901-2)
Fe	1.557-3 (1.098-3)
Ni	1.837-4 (1.295-4)
Cr	4.223-4 (2.977-4)
Mn	3.309-5 (2.333-5)

* Read as 8.280 x 10^{-2}

** For 200/400 mm Assemblies

3.1 Graphite

Graphite assembly was constructed of bare graphite blocks with high purity of reactor grade. Three carbon slab assemblies were measured for 50.6, 202.4, 404.8 mm in thicknesses with the area equivalent radius of 314 mm. The measured energy range is from 500 keV to 15 MeV. The figures and numerical tables below are the emission spectrum of target source neutrons and leakage angular flux from the rear surface.

The tables are also presented for the running integrals which show successive integral fluxes from 20 MeV to the interested energy. These are convenient to obtain the integral flux for any energy windows.

List of Figures and Tables

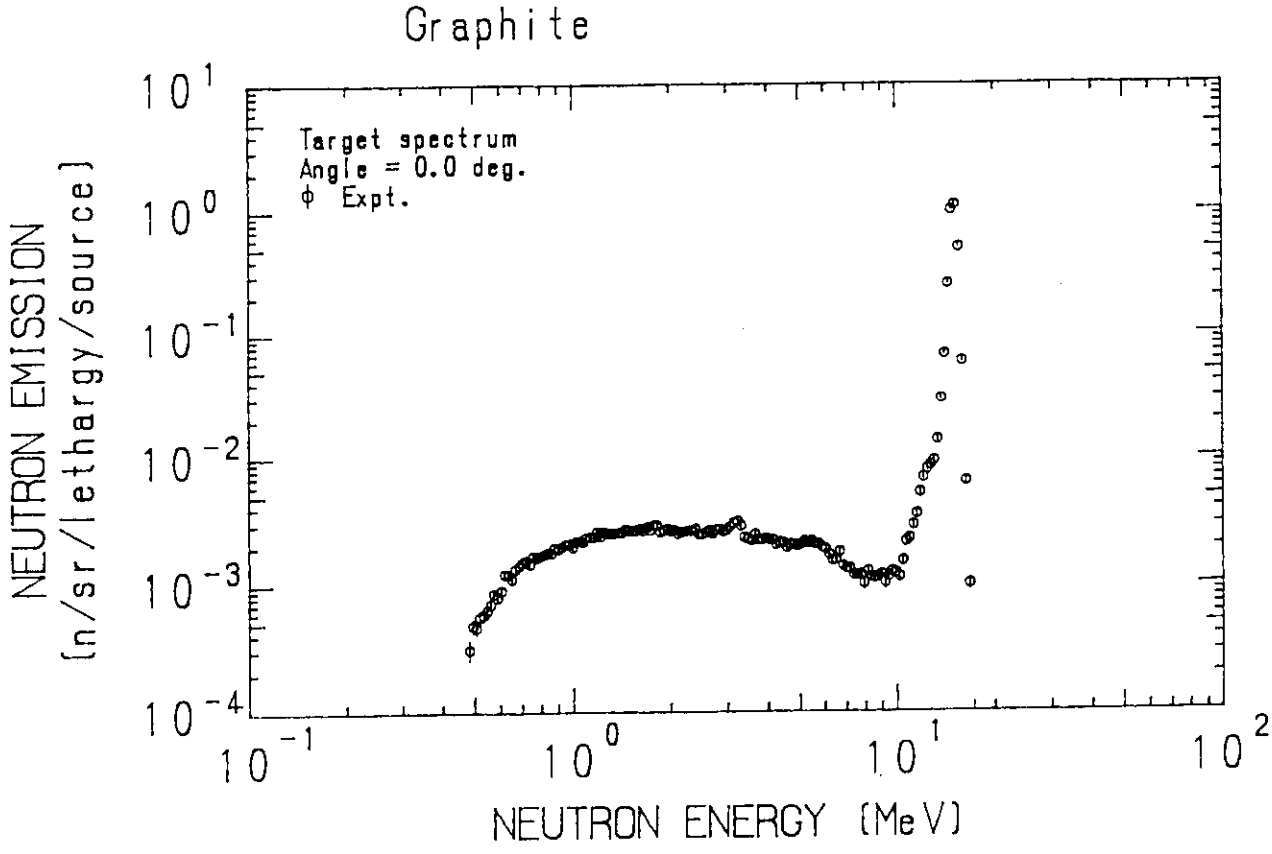

Graphite
Target spectrum
Angle = 0.0 deg.
φ Expt.
NEUTRON EMISSION
(n/sr/lethargy/source)
NEUTRON ENERGY (MeV)
10^1
10^0
10^-1
10^-2
10^-3
10^-4
10^-1
10^0
10^1
10^2

Fig. 3.1.1

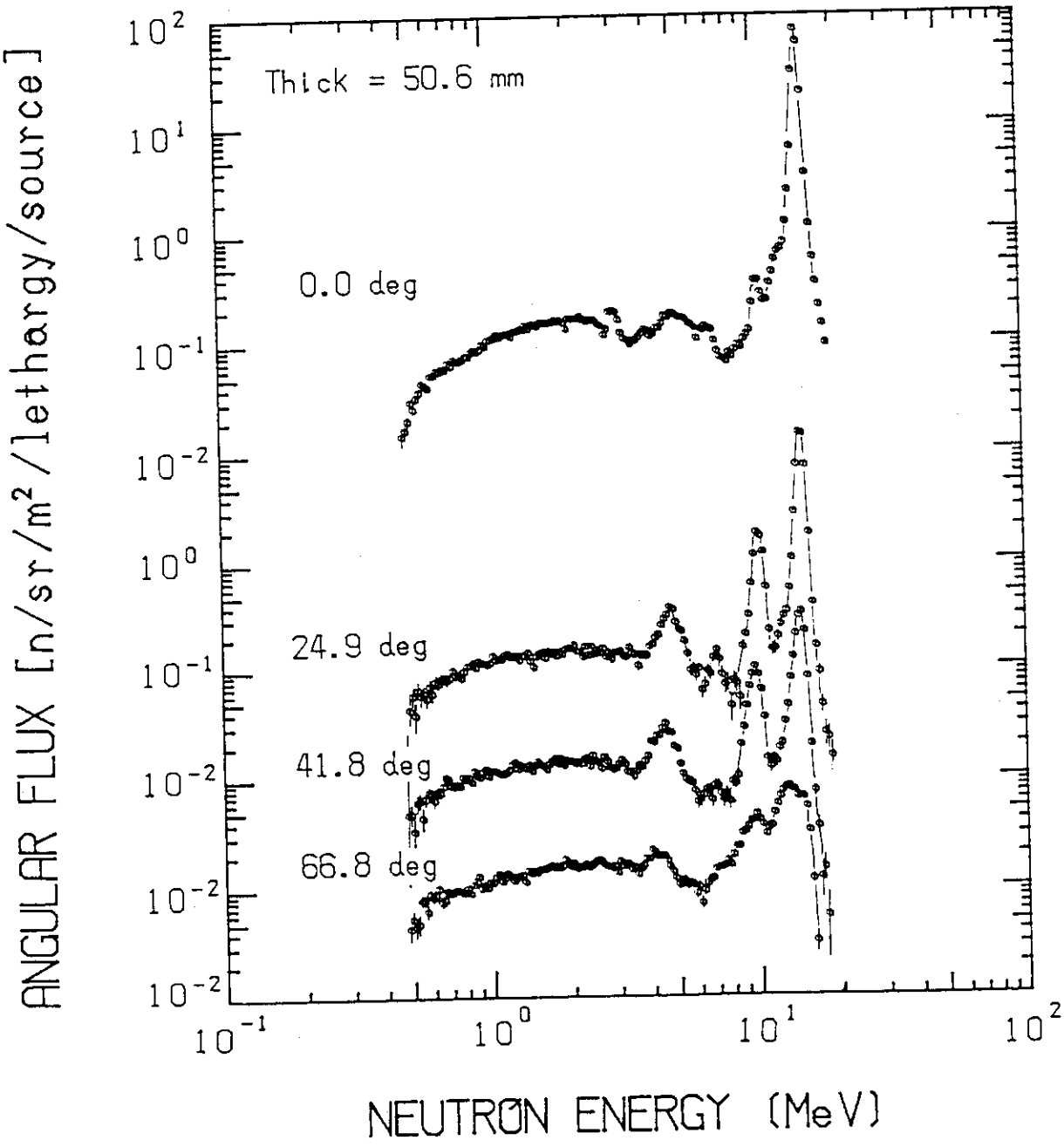

Thick = 50.6 mm
0.0 deg
24.9 deg
41.8 deg
66.8 deg
ANGULAR FLUX [n/sr/m²/lethargy/source]
NEUTRON ENERGY (MeV)
10²
10¹
10⁰
10⁻¹
10⁻²
10⁻¹
10⁰
10¹
10²

Fig. 3.1.2(a)

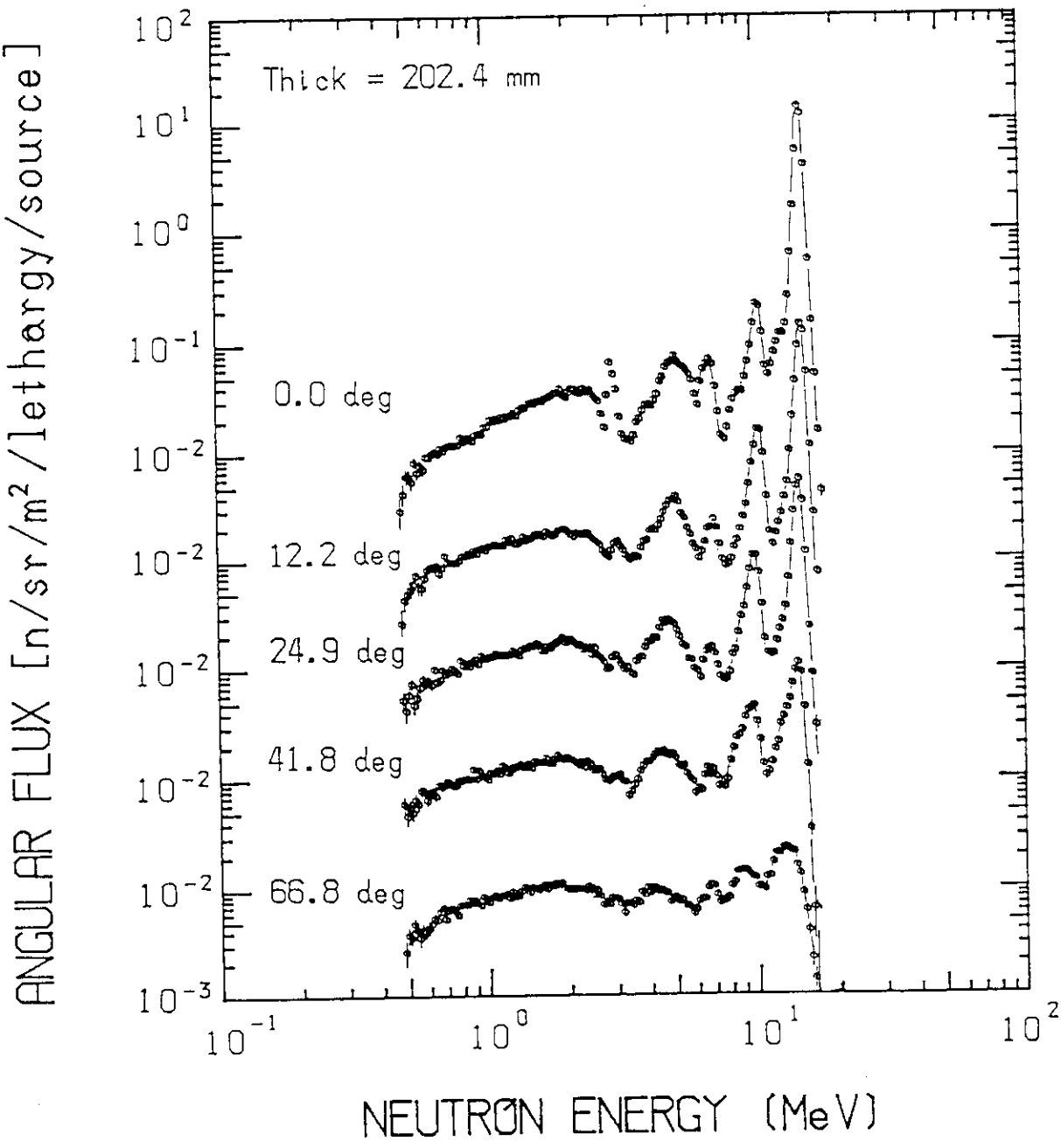

Thick = 202.4 mm
0.0 deg
12.2 deg
24.9 deg
41.8 deg
66.8 deg
ANGULAR FLUX [n/sr/m²/lethargy/source]
NEUTRON ENERGY (MeV)

Fig. 3.1.2(b)

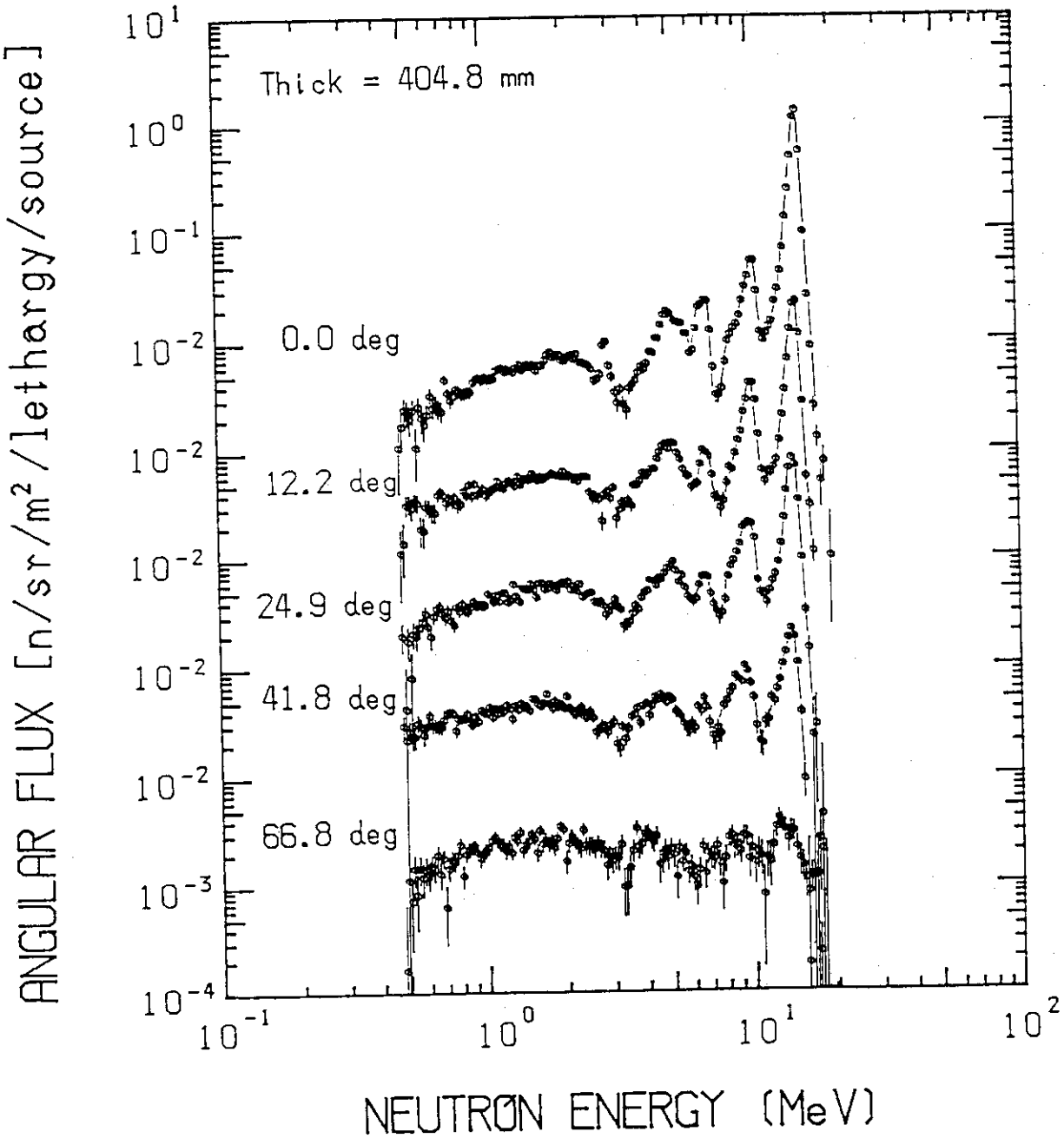

Thick = 404.8 mm
0.0 deg
12.2 deg
24.9 deg
41.8 deg
66.8 deg
ANGULAR FLUX [n/sr/m²/lethargy/source]
NEUTRON ENERGY (MeV)

Fig. 3.1.2(c)

Table 3.1.1

NEUTRON EMISSION SPECTRUM FROM THE TARGET

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.4323	3.108E-04	0.178E+00	51	1.6834	2.862E-03	0.355E-01	101	5.9756	1.954E-03	0.609E-01
2	0.4945	4.850E-04	0.125E+00	52	1.7260	2.719E-03	0.366E-01	102	6.0244	1.838E-03	0.613E-01
3	0.5070	4.649E-04	0.129E+00	53	1.7697	2.982E-03	0.349E-01	103	6.1769	1.721E-03	0.652E-01
4	0.5199	5.669E-04	0.110E+00	54	1.8145	2.964E-03	0.351E-01	104	6.3332	1.545E-03	0.702E-01
5	0.5330	5.859E-04	0.110E+00	55	1.8604	2.617E-03	0.376E-01	105	6.4936	1.561E-03	0.691E-01
6	0.5465	6.435E-04	0.103E+00	56	1.9075	2.710E-03	0.365E-01	106	6.6579	1.814E-03	0.639E-01
7	0.5604	7.164E-04	0.936E-01	57	1.9558	2.783E-03	0.361E-01	107	6.8265	1.389E-03	0.764E-01
8	0.5745	8.705E-04	0.812E-01	58	2.0053	2.664E-03	0.373E-01	108	6.9993	1.331E-03	0.766E-01
9	0.5891	8.068E-04	0.872E-01	59	2.0561	2.729E-03	0.365E-01	109	7.1765	1.323E-03	0.783E-01
10	0.6040	9.144E-04	0.759E-01	60	2.1081	2.545E-03	0.380E-01	110	7.3582	1.186E-03	0.826E-01
11	0.6193	1.222E-03	0.641E-01	61	2.1615	2.658E-03	0.369E-01	111	7.5444	1.181E-03	0.854E-01
12	0.6350	1.215E-03	0.643E-01	62	2.2162	2.643E-03	0.369E-01	112	7.7354	1.194E-03	0.866E-01
13	0.6510	1.113E-03	0.674E-01	63	2.2723	2.684E-03	0.369E-01	113	7.9312	1.009E-03	0.980E-01
14	0.6675	1.355E-03	0.596E-01	64	2.3299	2.699E-03	0.370E-01	114	8.1320	1.265E-03	0.851E-01
15	0.6844	1.431E-03	0.572E-01	65	2.3889	2.798E-03	0.365E-01	115	8.3379	1.140E-03	0.912E-01
16	0.7017	1.514E-03	0.548E-01	66	2.4493	2.536E-03	0.385E-01	116	8.5490	1.117E-03	0.914E-01
17	0.7195	1.573E-03	0.529E-01	67	2.5113	2.521E-03	0.384E-01	117	8.7654	1.145E-03	0.957E-01
18	0.7377	1.475E-03	0.534E-01	68	2.5749	2.593E-03	0.382E-01	118	8.9873	1.196E-03	0.907E-01
19	0.7564	1.707E-03	0.438E-01	69	2.6401	2.713E-03	0.377E-01	119	9.2148	1.030E-03	0.103E+00
20	0.7755	1.658E-03	0.492E-01	70	2.7069	2.553E-03	0.392E-01	120	9.4481	1.151E-03	0.960E-01
21	0.7952	1.705E-03	0.480E-01	71	2.7754	2.747E-03	0.378E-01	121	9.6872	1.256E-03	0.917E-01
22	0.8153	1.762E-03	0.466E-01	72	2.8457	2.761E-03	0.378E-01	122	9.9325	1.222E-03	0.936E-01
23	0.8360	1.816E-03	0.458E-01	73	2.9177	2.656E-03	0.396E-01	123	10.1840	1.143E-03	0.102E+00
24	0.8571	1.794E-03	0.459E-01	74	2.9916	2.724E-03	0.390E-01	124	10.4420	1.524E-03	0.868E-01
25	0.8786	1.978E-03	0.433E-01	75	3.0673	2.898E-03	0.383E-01	125	10.7060	2.171E-03	0.712E-01
26	0.9010	1.950E-03	0.438E-01	76	3.1460	3.101E-03	0.370E-01	126	10.9770	2.325E-03	0.695E-01
27	0.9239	2.004E-03	0.431E-01	77	3.2246	3.201E-03	0.366E-01	127	11.2550	2.946E-03	0.598E-01
28	0.9473	2.106E-03	0.422E-01	78	3.3062	2.939E-03	0.334E-01	128	11.5400	3.621E-03	0.547E-01
29	0.9712	2.130E-03	0.419E-01	79	3.3899	2.387E-03	0.434E-01	129	11.8320	5.285E-03	0.452E-01
30	0.9955	2.000E-03	0.443E-01	80	3.4758	2.319E-03	0.441E-01	130	12.1320	6.892E-03	0.391E-01
31	1.0210	2.213E-03	0.416E-01	81	3.5637	2.230E-03	0.454E-01	131	12.4390	8.033E-03	0.366E-01
32	1.0469	2.230E-03	0.418E-01	82	3.6540	2.504E-03	0.437E-01	132	12.7540	8.692E-03	0.350E-01
33	1.0734	2.198E-03	0.415E-01	83	3.7465	2.293E-03	0.471E-01	133	13.0760	9.413E-03	0.339E-01
34	1.1006	2.390E-03	0.394E-01	84	3.8413	2.258E-03	0.477E-01	134	13.4070	1.381E-02	0.277E-01
35	1.1284	2.403E-03	0.394E-01	85	3.9385	2.313E-03	0.473E-01	135	13.7470	2.945E-02	0.190E-01
36	1.1570	2.402E-03	0.385E-01	86	4.0382	2.235E-03	0.469E-01	136	14.0950	6.849E-02	0.125E-01
37	1.1863	2.613E-03	0.366E-01	87	4.1405	2.251E-03	0.474E-01	137	14.4520	2.555E-01	0.643E-02
38	1.2163	2.425E-03	0.381E-01	88	4.2453	2.074E-03	0.501E-01	138	14.8180	1.010E+00	0.322E-02
39	1.2471	2.615E-03	0.367E-01	89	4.3528	2.155E-03	0.493E-01	139	15.1930	1.113E+00	0.304E-02
40	1.2787	2.543E-03	0.377E-01	90	4.4630	2.145E-03	0.496E-01	140	15.5770	5.039E-01	0.446E-02
41	1.3110	2.586E-03	0.377E-01	91	4.5759	1.962E-03	0.523E-01	141	15.9720	5.967E-02	0.128E-01
42	1.3442	2.570E-03	0.377E-01	92	4.6918	2.081E-03	0.505E-01	142	16.3760	6.485E-03	0.382E-01
43	1.3782	2.603E-03	0.376E-01	93	4.8105	2.059E-03	0.517E-01	143	16.7900	1.004E-03	0.957E-01
44	1.4131	2.597E-03	0.376E-01	94	4.9323	2.008E-03	0.519E-01	144	17.2160	8.891E-05	0.317E+00
45	1.4489	2.769E-03	0.362E-01	95	5.0572	2.087E-03	0.517E-01	145	17.6510	-4.209E-06	0.315E+01
46	1.4856	2.726E-03	0.363E-01	96	5.1852	2.208E-03	0.564E-01	146	18.0980	-5.317E-06	0.127E+01
47	1.5232	2.694E-03	0.364E-01	97	5.3165	2.124E-03	0.581E-01	147	18.5560	0.000E+00	0.100E+01
48	1.5618	2.699E-03	0.366E-01	98	5.4511	2.190E-03	0.571E-01	148	19.0260	-8.441E-06	0.177E+01
49	1.6013	2.790E-03	0.358E-01	99	5.5891	2.093E-03	0.585E-01	149	19.5080	1.668E-05	0.713E+00
50	1.6418	2.692E-03	0.369E-01	100	5.7305	2.035E-03	0.582E-01	150	20.0020	-8.614E-06	0.100E+01

* ENERGY = (MEV)

** ERROR X 100 = %

Table 3.1.2

RUNNING INTEGRAL OF TARGET SPECTRUM

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.7516	-2.133E-07	1.000E+02	51	5.6589	7.863E-02	1.813E-03	101	1.6213	8.177E-02	1.758E-03
2	19.2639	2.017E-07	1.321E+00	52	5.5192	7.868E-02	1.812E-03	102	1.5813	8.184E-02	1.757E-03
3	18.7883	-9.295E-09	1.000E+02	53	5.3829	7.874E-02	1.812E-03	103	1.5422	8.191E-02	1.756E-03
4	18.3244	-9.295E-09	1.000E+02	54	5.2500	7.879E-02	1.811E-03	104	1.5042	8.198E-02	1.755E-03
5	17.8719	-1.422E-07	1.000E+02	55	5.1204	7.884E-02	1.810E-03	105	1.4670	8.205E-02	1.754E-03
6	17.4307	-2.475E-07	1.000E+02	56	4.9940	7.890E-02	1.809E-03	106	1.4308	8.211E-02	1.752E-03
7	17.0003	1.975E-06	4.827E-01	57	4.8707	7.895E-02	1.808E-03	107	1.3955	8.218E-02	1.751E-03
8	16.5806	2.709E-05	9.542E-02	58	4.7504	7.900E-02	1.807E-03	108	1.3610	8.224E-02	1.750E-03
9	16.1712	1.892E-04	3.549E-02	59	4.6331	7.905E-02	1.807E-03	109	1.3274	8.231E-02	1.749E-03
10	15.7719	1.681E-03	1.204E-02	60	4.5187	7.910E-02	1.806E-03	110	1.2946	8.237E-02	1.748E-03
11	15.3825	1.428E-02	4.186E-03	61	4.4072	7.915E-02	1.805E-03	111	1.2627	8.244E-02	1.747E-03
12	15.0027	4.211E-02	2.463E-03	62	4.2984	7.921E-02	1.804E-03	112	1.2315	8.250E-02	1.746E-03
13	14.6323	6.735E-02	1.957E-03	63	4.1922	7.926E-02	1.803E-03	113	1.2011	8.256E-02	1.745E-03
14	14.2710	7.374E-02	1.872E-03	64	4.0887	7.932E-02	1.802E-03	114	1.1714	8.263E-02	1.743E-03
15	13.9187	7.545E-02	1.852E-03	65	3.9878	7.937E-02	1.801E-03	115	1.1425	8.269E-02	1.742E-03
16	13.5750	7.619E-02	1.843E-03	66	3.8893	7.943E-02	1.800E-03	116	1.1143	8.275E-02	1.741E-03
17	13.2399	7.654E-02	1.839E-03	67	3.7933	7.949E-02	1.799E-03	117	1.0868	8.281E-02	1.740E-03
18	12.9130	7.677E-02	1.836E-03	68	3.6996	7.954E-02	1.798E-03	118	1.0600	8.286E-02	1.739E-03
19	12.5941	7.699E-02	1.834E-03	69	3.6083	7.961E-02	1.797E-03	119	1.0338	8.292E-02	1.738E-03
20	12.2832	7.719E-02	1.831E-03	70	3.5192	7.966E-02	1.796E-03	120	1.0083	8.297E-02	1.738E-03
21	11.9799	7.736E-02	1.829E-03	71	3.4323	7.972E-02	1.795E-03	121	0.9834	8.302E-02	1.737E-03
22	11.6841	7.749E-02	1.828E-03	72	3.3476	7.978E-02	1.794E-03	122	0.9591	8.308E-02	1.736E-03
23	11.3957	7.758E-02	1.827E-03	73	3.2649	7.985E-02	1.793E-03	123	0.9354	8.313E-02	1.735E-03
24	11.1143	7.766E-02	1.826E-03	74	3.1843	7.993E-02	1.791E-03	124	0.9123	8.318E-02	1.734E-03
25	10.8399	7.772E-02	1.825E-03	75	3.1057	8.001E-02	1.790E-03	125	0.8898	8.323E-02	1.733E-03
26	10.5722	7.777E-02	1.825E-03	76	3.0290	8.008E-02	1.789E-03	126	0.8678	8.328E-02	1.732E-03
27	10.3112	7.781E-02	1.824E-03	77	2.9542	8.015E-02	1.787E-03	127	0.8464	8.332E-02	1.732E-03
28	10.0566	7.784E-02	1.824E-03	78	2.8813	8.022E-02	1.786E-03	128	0.8255	8.337E-02	1.731E-03
29	9.8083	7.787E-02	1.824E-03	79	2.8101	8.029E-02	1.785E-03	129	0.8051	8.341E-02	1.730E-03
30	9.5662	7.790E-02	1.823E-03	80	2.7408	8.036E-02	1.784E-03	130	0.7852	8.346E-02	1.729E-03
31	9.3300	7.793E-02	1.823E-03	81	2.6731	8.042E-02	1.783E-03	131	0.7659	8.350E-02	1.729E-03
32	9.0996	7.795E-02	1.823E-03	82	2.6071	8.049E-02	1.781E-03	132	0.7469	8.354E-02	1.728E-03
33	8.8749	7.798E-02	1.822E-03	83	2.5427	8.055E-02	1.780E-03	133	0.7285	8.358E-02	1.727E-03
34	8.6558	7.801E-02	1.822E-03	84	2.4799	8.062E-02	1.779E-03	134	0.7105	8.362E-02	1.727E-03
35	8.4421	7.804E-02	1.822E-03	85	2.4187	8.068E-02	1.778E-03	135	0.6930	8.365E-02	1.726E-03
36	8.2337	7.807E-02	1.821E-03	86	2.3590	8.075E-02	1.777E-03	136	0.6759	8.369E-02	1.726E-03
37	8.0304	7.810E-02	1.821E-03	87	2.3007	8.082E-02	1.775E-03	137	0.6592	8.372E-02	1.725E-03
38	7.8321	7.812E-02	1.821E-03	88	2.2439	8.088E-02	1.774E-03	138	0.6429	8.375E-02	1.725E-03
39	7.6387	7.815E-02	1.820E-03	89	2.1885	8.095E-02	1.773E-03	139	0.6270	8.378E-02	1.724E-03
40	7.4501	7.818E-02	1.820E-03	90	2.1345	8.102E-02	1.772E-03	140	0.6115	8.381E-02	1.724E-03
41	7.2662	7.821E-02	1.819E-03	91	2.0818	8.108E-02	1.771E-03	141	0.5964	8.383E-02	1.723E-03
42	7.0868	7.825E-02	1.819E-03	92	2.0304	8.115E-02	1.770E-03	142	0.5817	8.385E-02	1.723E-03
43	6.9118	7.828E-02	1.818E-03	93	1.9803	8.121E-02	1.768E-03	143	0.5674	8.388E-02	1.723E-03
44	6.7412	7.831E-02	1.818E-03	94	1.9314	8.128E-02	1.767E-03	144	0.5533	8.389E-02	1.723E-03
45	6.5747	7.833E-02	1.817E-03	95	1.8837	8.135E-02	1.766E-03	145	0.5397	8.391E-02	1.722E-03
46	6.4124	7.840E-02	1.817E-03	96	1.8372	8.142E-02	1.765E-03	146	0.5264	8.393E-02	1.722E-03
47	6.2541	7.844E-02	1.816E-03	97	1.7918	8.149E-02	1.763E-03	147	0.5134	8.394E-02	1.722E-03
48	6.0997	7.848E-02	1.816E-03	98	1.7476	8.157E-02	1.762E-03	148	0.5007	8.395E-02	1.722E-03
49	5.9491	7.853E-02	1.815E-03	99	1.7044	8.163E-02	1.761E-03	149	0.4883	8.396E-02	1.722E-03
50	5.8022	7.858E-02	1.814E-03	100	1.6623	8.170E-02	1.760E-03	150	0.4763	8.397E-02	1.722E-03

* ENERGY = LOWER BOUNDARY [MEV]
** ERROR x 100 = %

Table 3.1.3

ANGULAR FLUX OF GRAPHITE SLAB TOP [THICKNESS=5 CM, ANGLE=0.0 DEG]

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.4825	1.434E-06	0.180E+00	51	1.6334	1.497E-05	0.268E-01	101	5.3756	1.404E-05	0.389E-01
2	0.4945	1.690E-06	0.141E+00	52	1.7260	1.521E-05	0.268E-01	102	6.0244	1.318E-05	0.404E-01
3	0.5070	2.054E-06	0.117E+00	53	1.7697	1.502E-05	0.270E-01	103	6.1769	1.043E-05	0.464E-01
4	0.5199	3.023E-06	0.886E-01	54	1.8145	1.587E-05	0.265E-01	104	6.3332	1.266E-05	0.418E-01
5	0.5330	2.624E-06	0.982E-01	55	1.8604	1.559E-05	0.265E-01	105	6.4936	1.243E-05	0.423E-01
6	0.5465	3.232E-06	0.822E-01	56	1.9075	1.576E-05	0.265E-01	106	6.6579	1.339E-05	0.410E-01
7	0.5604	3.736E-06	0.741E-01	57	1.9558	1.512E-05	0.270E-01	107	6.8265	1.281E-05	0.426E-01
8	0.5745	4.457E-06	0.660E-01	58	2.0053	1.331E-05	0.287E-01	108	6.9993	1.247E-05	0.433E-01
9	0.5891	4.260E-06	0.656E-01	59	2.0561	1.634E-05	0.258E-01	109	7.1765	9.975E-06	0.499E-01
10	0.6040	4.073E-06	0.642E-01	60	2.1081	1.625E-05	0.261E-01	110	7.3582	8.034E-06	0.571E-01
11	0.6193	5.203E-06	0.558E-01	61	2.1615	1.641E-05	0.261E-01	111	7.5444	6.983E-06	0.635E-01
12	0.6350	5.279E-06	0.553E-01	62	2.2162	1.616E-05	0.260E-01	112	7.7354	6.808E-06	0.641E-01
13	0.6510	5.730E-06	0.519E-01	63	2.2723	1.708E-05	0.253E-01	113	7.9312	6.422E-06	0.686E-01
14	0.6675	5.691E-06	0.520E-01	64	2.3299	1.581E-05	0.265E-01	114	8.1320	7.667E-06	0.617E-01
15	0.6844	5.973E-06	0.498E-01	65	2.3888	1.525E-05	0.271E-01	115	8.3379	7.212E-06	0.665E-01
16	0.7017	5.891E-06	0.437E-01	66	2.4493	1.592E-05	0.267E-01	116	8.5490	8.284E-06	0.616E-01
17	0.7195	6.736E-06	0.458E-01	67	2.5113	1.585E-05	0.268E-01	117	8.7654	9.085E-06	0.577E-01
18	0.7377	6.398E-06	0.463E-01	68	2.5749	1.555E-05	0.276E-01	118	8.9873	8.840E-06	0.602E-01
19	0.7564	7.207E-06	0.416E-01	69	2.6401	1.425E-05	0.291E-01	119	9.2148	1.024E-05	0.555E-01
20	0.7755	6.957E-06	0.417E-01	70	2.7069	1.394E-05	0.294E-01	120	9.4481	1.120E-05	0.530E-01
21	0.7952	7.027E-06	0.413E-01	71	2.7754	1.166E-05	0.332E-01	121	9.6872	1.236E-05	0.509E-01
22	0.8153	7.329E-06	0.411E-01	72	2.8457	1.305E-05	0.309E-01	122	9.9323	2.160E-05	0.368E-01
23	0.8360	7.306E-06	0.403E-01	73	2.9177	1.864E-05	0.258E-01	123	10.1840	3.493E-05	0.286E-01
24	0.8571	7.680E-06	0.389E-01	74	2.9916	1.893E-05	0.258E-01	124	10.4420	3.527E-05	0.286E-01
25	0.8788	8.376E-06	0.372E-01	75	3.0673	1.851E-05	0.259E-01	125	10.7060	2.696E-05	0.340E-01
26	0.9010	8.754E-06	0.366E-01	76	3.1450	1.569E-05	0.292E-01	126	10.9770	2.256E-05	0.378E-01
27	0.9239	8.510E-06	0.369E-01	77	3.2246	1.206E-05	0.337E-01	127	11.2550	2.308E-05	0.374E-01
28	0.9473	9.650E-06	0.359E-01	78	3.3062	1.060E-05	0.372E-01	128	11.5400	3.283E-05	0.307E-01
29	0.9712	9.824E-06	0.341E-01	79	3.3899	1.024E-05	0.382E-01	129	11.8320	4.152E-05	0.273E-01
30	0.9958	9.550E-06	0.355E-01	80	3.4758	9.417E-06	0.412E-01	130	12.1320	5.424E-05	0.240E-01
31	1.0210	1.068E-05	0.332E-01	81	3.5637	1.020E-05	0.396E-01	131	12.4390	6.404E-05	0.221E-01
32	1.0469	1.090E-05	0.325E-01	82	3.6540	1.028E-05	0.397E-01	132	12.7540	6.939E-05	0.212E-01
33	1.0734	1.130E-05	0.313E-01	83	3.7465	1.101E-05	0.387E-01	133	13.0760	7.867E-05	0.193E-01
34	1.1006	1.198E-05	0.302E-01	84	3.8413	1.190E-05	0.369E-01	134	13.4070	1.208E-04	0.160E-01
35	1.1284	1.145E-05	0.311E-01	85	3.9385	1.275E-05	0.355E-01	135	13.7470	2.365E-04	0.115E-01
36	1.1570	1.191E-05	0.306E-01	86	4.0382	1.242E-05	0.356E-01	136	14.0950	5.955E-04	0.722E-02
37	1.1863	1.212E-05	0.299E-01	87	4.1405	1.111E-05	0.384E-01	137	14.4520	3.042E-03	0.318E-02
38	1.2163	1.222E-05	0.296E-01	88	4.2453	1.177E-05	0.381E-01	138	14.8180	7.296E-03	0.205E-02
39	1.2471	1.154E-05	0.305E-01	89	4.3528	1.323E-05	0.356E-01	139	15.1930	5.575E-03	0.232E-02
40	1.2787	1.271E-05	0.291E-01	90	4.4630	1.336E-05	0.356E-01	140	15.5770	1.947E-03	0.383E-02
41	1.3110	1.292E-05	0.293E-01	91	4.5759	1.449E-05	0.339E-01	141	15.9720	3.360E-04	0.922E-02
42	1.3442	1.331E-05	0.290E-01	92	4.6918	1.685E-05	0.307E-01	142	16.3760	1.139E-04	0.156E-01
43	1.3782	1.323E-05	0.285E-01	93	4.8105	1.640E-05	0.315E-01	143	16.7900	5.619E-05	0.219E-01
44	1.4131	1.430E-05	0.276E-01	94	4.9323	1.787E-05	0.301E-01	144	17.2160	3.305E-05	0.281E-01
45	1.4489	1.351E-05	0.290E-01	95	5.0572	1.754E-05	0.313E-01	145	17.6510	2.021E-05	0.356E-01
46	1.4856	1.467E-05	0.272E-01	96	5.1852	1.693E-05	0.356E-01	146	18.0980	1.373E-05	0.427E-01
47	1.5232	1.441E-05	0.273E-01	97	5.3165	1.625E-05	0.357E-01	147	18.5560	9.169E-06	0.521E-01
48	1.5618	1.419E-05	0.275E-01	98	5.4511	1.603E-05	0.362E-01	148	19.0260	6.139E-06	0.635E-01
49	1.6013	1.522E-05	0.257E-01	99	5.5891	1.566E-05	0.368E-01	149	19.5080	5.146E-06	0.699E-01
50	1.6418	1.509E-05	0.257E-01	100	5.7305	1.426E-05	0.386E-01	150	20.0020	2.967E-06	0.918E-01

* ENERGY = [MEV]
** ERROR X 100 = %

Table 3.1.4

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESSES CM, ANGLE=0.0 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.7516	7.417E-08	9.177E-02	51	5.6589	5.036E-04	1.226E-03	101	1.6213	5.218E-04	1.193E-03
2	19.2639	2.028E-07	5.560E-02	52	5.5192	5.040E-04	1.226E-03	102	1.5813	5.222E-04	1.193E-03
3	18.7883	3.563E-07	4.184E-02	53	5.3829	5.044E-04	1.225E-03	103	1.5422	5.226E-04	1.192E-03
4	18.3244	5.855E-07	3.263E-02	54	5.2500	5.048E-04	1.224E-03	104	1.5042	5.229E-04	1.191E-03
5	17.8719	9.287E-07	2.593E-02	55	5.1204	5.052E-04	1.224E-03	105	1.4670	5.233E-04	1.191E-03
6	17.4307	1.434E-06	2.096E-02	56	4.9940	5.056E-04	1.223E-03	106	1.4308	5.236E-04	1.190E-03
7	17.0003	2.260E-06	1.680E-02	57	4.8707	5.061E-04	1.222E-03	107	1.3955	5.240E-04	1.189E-03
8	16.5806	3.665E-06	1.332E-02	58	4.7504	5.065E-04	1.221E-03	108	1.3610	5.243E-04	1.189E-03
9	16.1712	6.513E-06	1.014E-02	59	4.6331	5.069E-04	1.221E-03	109	1.3274	5.246E-04	1.188E-03
10	15.7719	1.491E-05	6.823E-03	60	4.5187	5.073E-04	1.220E-03	110	1.2946	5.250E-04	1.187E-03
11	15.3825	6.358E-05	3.374E-03	61	4.4072	5.076E-04	1.220E-03	111	1.2627	5.253E-04	1.187E-03
12	15.0027	2.030E-04	1.915E-03	62	4.2984	5.079E-04	1.219E-03	112	1.2315	5.256E-04	1.186E-03
13	14.6323	3.854E-04	1.399E-03	63	4.1922	5.082E-04	1.218E-03	113	1.2011	5.259E-04	1.186E-03
14	14.2710	4.614E-04	1.281E-03	64	4.0887	5.085E-04	1.218E-03	114	1.1714	5.262E-04	1.185E-03
15	13.9187	4.763E-04	1.261E-03	65	3.9878	5.088E-04	1.217E-03	115	1.1425	5.265E-04	1.185E-03
16	13.5750	4.822E-04	1.254E-03	66	3.8893	5.091E-04	1.217E-03	116	1.1143	5.268E-04	1.184E-03
17	13.2399	4.852E-04	1.250E-03	67	3.7933	5.094E-04	1.216E-03	117	1.0868	5.271E-04	1.184E-03
18	12.9130	4.872E-04	1.248E-03	68	3.6996	5.097E-04	1.216E-03	118	1.0600	5.273E-04	1.183E-03
19	12.5941	4.889E-04	1.245E-03	69	3.6083	5.100E-04	1.215E-03	119	1.0338	5.276E-04	1.183E-03
20	12.2832	4.905E-04	1.243E-03	70	3.5192	5.102E-04	1.215E-03	120	1.0083	5.279E-04	1.182E-03
21	11.9799	4.919E-04	1.242E-03	71	3.4323	5.105E-04	1.215E-03	121	0.9834	5.281E-04	1.182E-03
22	11.6841	4.929E-04	1.241E-03	72	3.3476	5.107E-04	1.214E-03	122	0.9591	5.284E-04	1.181E-03
23	11.3957	4.937E-04	1.239E-03	73	3.2649	5.110E-04	1.214E-03	123	0.9354	5.286E-04	1.181E-03
24	11.1143	4.943E-04	1.239E-03	74	3.1843	5.113E-04	1.213E-03	124	0.9123	5.288E-04	1.180E-03
25	10.8399	4.949E-04	1.238E-03	75	3.1057	5.117E-04	1.212E-03	125	0.8898	5.290E-04	1.180E-03
26	10.5722	4.956E-04	1.237E-03	76	3.0290	5.121E-04	1.211E-03	126	0.8678	5.292E-04	1.180E-03
27	10.3112	4.964E-04	1.236E-03	77	2.9542	5.126E-04	1.211E-03	127	0.8464	5.294E-04	1.179E-03
28	10.0566	4.973E-04	1.235E-03	78	2.8813	5.131E-04	1.210E-03	128	0.8255	5.296E-04	1.179E-03
29	9.8083	4.979E-04	1.234E-03	79	2.8101	5.134E-04	1.209E-03	129	0.8051	5.298E-04	1.179E-03
30	9.5662	4.982E-04	1.234E-03	80	2.7408	5.137E-04	1.209E-03	130	0.7852	5.300E-04	1.178E-03
31	9.3300	4.984E-04	1.234E-03	81	2.6731	5.140E-04	1.208E-03	131	0.7659	5.301E-04	1.178E-03
32	9.0996	4.987E-04	1.233E-03	82	2.6071	5.144E-04	1.207E-03	132	0.7469	5.303E-04	1.178E-03
33	8.8749	4.989E-04	1.233E-03	83	2.5427	5.148E-04	1.207E-03	133	0.7285	5.305E-04	1.177E-03
34	8.6558	4.991E-04	1.233E-03	84	2.4799	5.152E-04	1.206E-03	134	0.7105	5.307E-04	1.177E-03
35	8.4421	4.994E-04	1.233E-03	85	2.4187	5.156E-04	1.205E-03	135	0.6930	5.308E-04	1.177E-03
36	8.2337	4.995E-04	1.232E-03	86	2.3590	5.160E-04	1.204E-03	136	0.6759	5.310E-04	1.177E-03
37	8.0304	4.997E-04	1.232E-03	87	2.3007	5.164E-04	1.204E-03	137	0.6592	5.311E-04	1.176E-03
38	7.8321	4.999E-04	1.232E-03	88	2.2439	5.168E-04	1.203E-03	138	0.6429	5.312E-04	1.176E-03
39	7.6387	5.001E-04	1.232E-03	89	2.1885	5.172E-04	1.202E-03	139	0.6270	5.314E-04	1.176E-03
40	7.4501	5.002E-04	1.231E-03	90	2.1345	5.176E-04	1.201E-03	140	0.6115	5.315E-04	1.176E-03
41	7.2662	5.004E-04	1.231E-03	91	2.0818	5.180E-04	1.200E-03	141	0.5964	5.316E-04	1.176E-03
42	7.0868	5.007E-04	1.231E-03	92	2.0304	5.184E-04	1.200E-03	142	0.5817	5.317E-04	1.175E-03
43	6.9118	5.010E-04	1.230E-03	93	1.9803	5.188E-04	1.199E-03	143	0.5674	5.318E-04	1.175E-03
44	6.7412	5.013E-04	1.230E-03	94	1.9314	5.191E-04	1.198E-03	144	0.5533	5.319E-04	1.175E-03
45	6.5747	5.016E-04	1.229E-03	95	1.8837	5.195E-04	1.198E-03	145	0.5397	5.320E-04	1.175E-03
46	6.4124	5.020E-04	1.229E-03	96	1.8372	5.199E-04	1.197E-03	146	0.5264	5.321E-04	1.175E-03
47	6.2541	5.023E-04	1.228E-03	97	1.7918	5.203E-04	1.196E-03	147	0.5134	5.321E-04	1.175E-03
48	6.0997	5.025E-04	1.228E-03	98	1.7476	5.207E-04	1.195E-03	148	0.5007	5.322E-04	1.175E-03
49	5.9491	5.029E-04	1.227E-03	99	1.7044	5.211E-04	1.195E-03	149	0.4883	5.322E-04	1.175E-03
50	5.8022	5.032E-04	1.227E-03	100	1.6623	5.214E-04	1.194E-03	150	0.4763	5.323E-04	1.175E-03

* ENERGY = LOWER BOUNDARY [MEV]

** ERROR X 100 = %

Table 3.1.5

ANGULAR FLUX OF GRAPHITE SLAB TOP [THICKNESS=5 CM, ANGLE=24.9 DEG]

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.4823	1.367E-07	0.919E+00	51	1.6834	1.418E-06	0.775E-01	101	5.8756	8.496E-07	0.127E+00
2	0.4945	4.377E-07	0.257E+00	52	1.7260	1.489E-06	0.734E-01	102	6.0244	9.775E-07	0.114E+00
3	0.5070	5.917E-07	0.194E+00	53	1.7697	1.360E-06	0.768E-01	103	6.1769	6.168E-07	0.164E+00
4	0.5199	3.916E-07	0.298E+00	54	1.8145	1.487E-06	0.732E-01	104	6.3332	6.973E-07	0.145E+00
5	0.5330	6.683E-07	0.167E+00	55	1.8604	1.415E-06	0.763E-01	105	6.4936	9.236E-07	0.126E+00
6	0.5465	5.698E-07	0.187E+00	56	1.9075	1.572E-06	0.716E-01	106	6.6579	8.772E-07	0.136E+00
7	0.5604	6.173E-07	0.164E+00	57	1.9558	1.616E-06	0.674E-01	107	6.8265	1.246E-06	0.108E+00
8	0.5745	5.607E-07	0.179E+00	58	2.0053	1.580E-06	0.713E-01	108	6.9993	1.465E-06	0.938E-01
9	0.5891	7.218E-07	0.139E+00	59	2.0561	1.711E-06	0.663E-01	109	7.1765	1.198E-06	0.115E+00
10	0.6040	6.216E-07	0.164E+00	60	2.1081	1.488E-06	0.743E-01	110	7.3582	8.591E-07	0.152E+00
11	0.6193	7.963E-07	0.130E+00	61	2.1615	1.453E-06	0.751E-01	111	7.5444	6.890E-07	0.175E+00
12	0.6350	7.690E-07	0.118E+00	62	2.2162	1.322E-06	0.835E-01	112	7.7354	7.263E-07	0.179E+00
13	0.6510	8.497E-07	0.112E+00	63	2.2723	1.651E-06	0.693E-01	113	7.9312	4.440E-07	0.283E+00
14	0.6675	8.524E-07	0.106E+00	64	2.3299	1.366E-06	0.796E-01	114	8.1320	7.601E-07	0.174E+00
15	0.6844	8.250E-07	0.114E+00	65	2.3888	1.665E-06	0.651E-01	115	8.3379	7.220E-07	0.183E+00
16	0.7017	3.584E-07	0.106E+00	66	2.4493	1.391E-06	0.787E-01	116	8.5490	5.257E-07	0.252E+00
17	0.7195	1.010E-06	0.903E-01	67	2.5113	1.496E-06	0.745E-01	117	8.7654	1.568E-06	0.102E+00
18	0.7377	9.142E-07	0.993E-01	68	2.5749	1.418E-06	0.770E-01	118	8.9873	2.060E-06	0.853E-01
19	0.7564	9.097E-07	0.102E+00	69	2.6401	1.576E-06	0.697E-01	119	9.2148	3.113E-06	0.690E-01
20	0.7755	8.680E-07	0.102E+00	70	2.7069	1.301E-06	0.854E-01	120	9.4481	6.068E-06	0.445E-01
21	0.7952	9.950E-07	0.872E-01	71	2.7754	1.417E-06	0.802E-01	121	9.6872	1.136E-05	0.313E-01
22	0.8153	1.112E-06	0.784E-01	72	2.8457	1.231E-06	0.905E-01	122	9.9325	1.792E-05	0.247E-01
23	0.8360	1.130E-06	0.785E-01	73	2.9177	1.427E-06	0.784E-01	123	10.1840	1.670E-05	0.265E-01
24	0.8571	1.199E-06	0.752E-01	74	2.9916	1.445E-06	0.806E-01	124	10.4420	1.197E-05	0.320E-01
25	0.8788	1.067E-06	0.800E-01	75	3.0673	1.469E-06	0.799E-01	125	10.7060	5.604E-06	0.499E-01
26	0.9010	1.236E-06	0.722E-01	76	3.1450	1.316E-06	0.889E-01	126	10.9770	2.222E-06	0.101E+00
27	0.9239	1.170E-06	0.792E-01	77	3.2246	1.300E-06	0.904E-01	127	11.2550	1.468E-06	0.136E+00
28	0.9473	1.158E-06	0.760E-01	78	3.3062	1.598E-06	0.749E-01	128	11.5400	1.507E-06	0.140E+00
29	0.9712	1.134E-06	0.782E-01	79	3.3899	1.380E-06	0.843E-01	129	11.8320	1.945E-06	0.116E+00
30	0.9958	1.179E-06	0.767E-01	80	3.4758	1.369E-06	0.889E-01	130	12.1320	2.521E-06	0.930E-01
31	1.0210	1.337E-06	0.678E-01	81	3.5637	1.071E-06	0.114E+00	131	12.4390	3.010E-06	0.837E-01
32	1.0469	1.265E-06	0.746E-01	82	3.6540	1.338E-06	0.968E-01	132	12.7540	3.360E-06	0.750E-01
33	1.0734	1.273E-06	0.731E-01	83	3.7465	1.321E-06	0.918E-01	133	13.0760	5.500E-06	0.530E-01
34	1.1006	1.292E-06	0.733E-01	84	3.8413	1.336E-06	0.953E-01	134	13.4070	1.047E-05	0.359E-01
35	1.1284	1.396E-06	0.692E-01	85	3.9385	1.618E-06	0.789E-01	135	13.7470	2.747E-05	0.213E-01
36	1.1570	1.437E-06	0.651E-01	86	4.0382	1.693E-06	0.821E-01	136	14.0950	7.388E-05	0.129E-01
37	1.1863	1.326E-06	0.727E-01	87	4.1405	1.946E-06	0.676E-01	137	14.4520	1.456E-04	0.910E-02
38	1.2163	1.379E-06	0.673E-01	88	4.2453	2.083E-06	0.693E-01	138	14.8180	1.416E-04	0.921E-02
39	1.2471	1.369E-06	0.698E-01	89	4.3528	2.556E-06	0.613E-01	139	15.1930	7.207E-05	0.128E-01
40	1.2787	1.243E-06	0.760E-01	90	4.4630	2.915E-06	0.551E-01	140	15.5770	1.751E-05	0.258E-01
41	1.3110	1.387E-06	0.689E-01	91	4.5759	3.183E-06	0.514E-01	141	15.9720	3.969E-06	0.535E-01
42	1.3442	1.352E-06	0.713E-01	92	4.6918	3.741E-06	0.462E-01	142	16.3760	1.565E-06	0.854E-01
43	1.3782	1.465E-06	0.676E-01	93	4.8105	3.601E-06	0.468E-01	143	16.7900	8.963E-07	0.114E+00
44	1.4131	1.209E-06	0.815E-01	94	4.9323	2.697E-06	0.585E-01	144	17.2160	4.467E-07	0.171E+00
45	1.4489	1.075E-06	0.946E-01	95	5.0572	2.291E-06	0.678E-01	145	17.6510	2.479E-07	0.257E+00
46	1.4856	1.343E-06	0.748E-01	96	5.1852	2.217E-06	0.667E-01	146	18.0980	2.258E-07	0.243E+00
47	1.5232	1.420E-06	0.717E-01	97	5.3165	1.796E-06	0.724E-01	147	18.5560	1.516E-07	0.347E+00
48	1.5618	1.474E-06	0.707E-01	98	5.4511	1.358E-06	0.876E-01	148	19.0260	9.900E-08	0.461E+00
49	1.6013	1.297E-06	0.798E-01	99	5.5891	9.430E-07	0.118E+00	149	19.5080	3.265E-08	0.102E+01
50	1.6418	1.501E-06	0.713E-01	100	5.7305	9.926E-07	0.114E+00	150	20.0020	-1.110E-08	0.425E+01

* ENERGY = [MEV]
** ERROR X 100 = %

Table 3.1.6

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESSES C*, ANGLE=24.9 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.7516	-2.774E-10	1.000E+02	51	5.6589	1.522E-05	4.535E-03	101	1.6213	1.734E-05	4.177E-03
2	19.2639	5.389E-10	1.000E+02	52	5.5192	1.524E-05	4.532E-03	102	1.5813	1.737E-05	4.172E-03
3	18.7883	3.014E-09	1.000E+02	53	5.3829	1.527E-05	4.526E-03	103	1.5422	1.741E-05	4.166E-03
4	18.3244	6.803E-09	1.000E+02	54	5.2500	1.532E-05	4.518E-03	104	1.5042	1.744E-05	4.160E-03
5	17.8719	1.245E-08	2.125E-01	55	5.1204	1.537E-05	4.508E-03	105	1.4670	1.748E-05	4.155E-03
6	17.4307	1.864E-08	1.655E-01	56	4.9940	1.543E-05	4.498E-03	106	1.4308	1.750E-05	4.151E-03
7	17.0003	2.981E-08	1.218E-01	57	4.8707	1.550E-05	4.486E-03	107	1.3955	1.753E-05	4.146E-03
8	16.5806	5.222E-08	8.493E-02	58	4.7504	1.559E-05	4.468E-03	108	1.3610	1.757E-05	4.140E-03
9	16.1712	9.134E-08	6.079E-02	59	4.6331	1.568E-05	4.450E-03	109	1.3274	1.760E-05	4.134E-03
10	15.7719	1.906E-07	4.033E-02	60	4.5187	1.576E-05	4.435E-03	110	1.2946	1.764E-05	4.128E-03
11	15.3825	6.284E-07	2.171E-02	61	4.4072	1.583E-05	4.422E-03	111	1.2627	1.767E-05	4.123E-03
12	15.0027	2.430E-06	1.102E-02	62	4.2984	1.590E-05	4.411E-03	112	1.2315	1.770E-05	4.117E-03
13	14.6323	5.970E-06	7.066E-03	63	4.1922	1.595E-05	4.402E-03	113	1.2011	1.774E-05	4.111E-03
14	14.2710	9.609E-06	5.582E-03	64	4.0887	1.600E-05	4.394E-03	114	1.1714	1.777E-05	4.106E-03
15	13.9187	1.146E-05	5.121E-03	65	3.9878	1.604E-05	4.388E-03	115	1.1425	1.781E-05	4.100E-03
16	13.5750	1.214E-05	4.979E-03	66	3.8893	1.608E-05	4.381E-03	116	1.1143	1.784E-05	4.094E-03
17	13.2399	1.240E-05	4.932E-03	67	3.7933	1.611E-05	4.376E-03	117	1.0868	1.788E-05	4.089E-03
18	12.9130	1.254E-05	4.913E-03	68	3.6996	1.615E-05	4.371E-03	118	1.0600	1.791E-05	4.083E-03
19	12.5941	1.263E-05	4.905E-03	69	3.6083	1.618E-05	4.367E-03	119	1.0338	1.794E-05	4.078E-03
20	12.2832	1.270E-05	4.901E-03	70	3.5192	1.621E-05	4.364E-03	120	1.0083	1.797E-05	4.073E-03
21	11.9799	1.276E-05	4.899E-03	71	3.4323	1.624E-05	4.359E-03	121	0.9834	1.800E-05	4.068E-03
22	11.6841	1.281E-05	4.900E-03	72	3.3476	1.628E-05	4.353E-03	122	0.9591	1.803E-05	4.063E-03
23	11.3957	1.285E-05	4.903E-03	73	3.2649	1.632E-05	4.346E-03	123	0.9354	1.806E-05	4.059E-03
24	11.1143	1.289E-05	4.904E-03	74	3.1843	1.635E-05	4.341E-03	124	0.9123	1.809E-05	4.054E-03
25	10.8399	1.294E-05	4.903E-03	75	3.1057	1.638E-05	4.336E-03	125	0.8898	1.812E-05	4.049E-03
26	10.5722	1.303E-05	4.879E-03	76	3.0290	1.642E-05	4.330E-03	126	0.8678	1.815E-05	4.045E-03
27	10.3112	1.338E-05	4.824E-03	77	2.9542	1.646E-05	4.324E-03	127	0.8464	1.818E-05	4.040E-03
28	10.0566	1.380E-05	4.746E-03	78	2.8813	1.649E-05	4.318E-03	128	0.8255	1.821E-05	4.036E-03
29	9.8083	1.425E-05	4.662E-03	79	2.8101	1.652E-05	4.314E-03	129	0.8051	1.823E-05	4.031E-03
30	9.5662	1.453E-05	4.612E-03	80	2.7408	1.656E-05	4.308E-03	130	0.7852	1.826E-05	4.028E-03
31	9.3300	1.468E-05	4.587E-03	81	2.6731	1.659E-05	4.303E-03	131	0.7659	1.828E-05	4.025E-03
32	9.0996	1.476E-05	4.577E-03	82	2.6071	1.663E-05	4.296E-03	132	0.7469	1.830E-05	4.022E-03
33	8.8749	1.481E-05	4.571E-03	83	2.5427	1.666E-05	4.290E-03	133	0.7285	1.833E-05	4.018E-03
34	8.6558	1.485E-05	4.567E-03	84	2.4799	1.670E-05	4.283E-03	134	0.7105	1.835E-05	4.015E-03
35	8.4421	1.486E-05	4.568E-03	85	2.4187	1.674E-05	4.278E-03	135	0.6930	1.837E-05	4.012E-03
36	8.2337	1.488E-05	4.568E-03	86	2.3590	1.678E-05	4.270E-03	136	0.6759	1.839E-05	4.010E-03
37	8.0304	1.490E-05	4.568E-03	87	2.3007	1.681E-05	4.264E-03	137	0.6592	1.841E-05	4.007E-03
38	7.8321	1.491E-05	4.569E-03	88	2.2439	1.685E-05	4.257E-03	138	0.6429	1.844E-05	4.004E-03
39	7.6387	1.493E-05	4.569E-03	89	2.1885	1.689E-05	4.252E-03	139	0.6270	1.845E-05	4.002E-03
40	7.4501	1.495E-05	4.568E-03	90	2.1345	1.692E-05	4.246E-03	140	0.6115	1.847E-05	4.000E-03
41	7.2662	1.497E-05	4.567E-03	91	2.0818	1.696E-05	4.240E-03	141	0.5964	1.849E-05	3.999E-03
42	7.0868	1.500E-05	4.563E-03	92	2.0304	1.700E-05	4.233E-03	142	0.5817	1.851E-05	3.998E-03
43	6.9119	1.504E-05	4.558E-03	93	1.9803	1.704E-05	4.226E-03	143	0.5674	1.852E-05	3.997E-03
44	6.7412	1.507E-05	4.554E-03	94	1.9314	1.708E-05	4.219E-03	144	0.5533	1.854E-05	3.996E-03
45	6.5747	1.509E-05	4.552E-03	95	1.8837	1.712E-05	4.212E-03	145	0.5397	1.855E-05	3.996E-03
46	6.4124	1.511E-05	4.549E-03	96	1.8372	1.716E-05	4.207E-03	146	0.5264	1.857E-05	3.995E-03
47	6.2541	1.513E-05	4.547E-03	97	1.7918	1.719E-05	4.201E-03	147	0.5134	1.858E-05	3.996E-03
48	6.0997	1.515E-05	4.545E-03	98	1.7476	1.723E-05	4.195E-03	148	0.5007	1.859E-05	3.996E-03
49	5.9491	1.517E-05	4.542E-03	99	1.7044	1.727E-05	4.189E-03	149	0.4883	1.860E-05	3.996E-03
50	5.8022	1.519E-05	4.539E-03	100	1.6623	1.730E-05	4.183E-03	150	0.4763	1.861E-05	3.999E-03

* ENERGY = LOWER BOUNDARY [MEV]
** ERROR X 100 = %

Table 3.1.7

ANGULAR FLUX OF GRAPHITE SLAB TOF C THICKNESSES CM, ANGLE=41.8 DEG)

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.4823	4.750E-07	0.211E+00	51	1.6834	1.472E-06	0.622E-01	101	5.8756	5.835E-07	0.141E+00
2	0.4945	4.897E-07	0.202E+00	52	1.7260	1.552E-06	0.593E-01	102	6.0244	6.152E-07	0.144E+00
3	0.5070	3.407E-07	0.239E+00	53	1.7697	1.382E-06	0.682E-01	103	6.1769	6.746E-07	0.127E+00
4	0.5199	6.156E-07	0.173E+00	54	1.8145	1.542E-06	0.624E-01	104	6.3332	7.569E-07	0.118E+00
5	0.5330	6.434E-07	0.153E+00	55	1.8604	1.329E-06	0.755E-01	105	6.4936	7.607E-07	0.118E+00
6	0.5465	4.501E-07	0.217E+00	56	1.9075	1.472E-06	0.678E-01	106	6.6579	6.129E-07	0.157E+00
7	0.5604	6.716E-07	0.138E+00	57	1.9558	1.447E-06	0.681E-01	107	6.8265	8.313E-07	0.119E+00
8	0.5746	7.564E-07	0.121E+00	58	2.0053	1.447E-06	0.695E-01	108	6.9993	8.221E-07	0.117E+00
9	0.5891	7.346E-07	0.121E+00	59	2.0561	1.387E-06	0.715E-01	109	7.1765	6.953E-07	0.136E+00
10	0.6040	6.493E-07	0.131E+00	60	2.1081	1.414E-06	0.734E-01	110	7.3582	6.118E-07	0.156E+00
11	0.6193	7.702E-07	0.111E+00	61	2.1615	1.376E-06	0.726E-01	111	7.5444	6.925E-07	0.143E+00
12	0.6350	7.649E-07	0.115E+00	62	2.2162	1.520E-06	0.662E-01	112	7.7354	5.956E-07	0.163E+00
13	0.6510	8.799E-07	0.952E-01	63	2.2723	1.558E-06	0.644E-01	113	7.9312	8.965E-07	0.117E+00
14	0.6675	1.050E-06	0.829E-01	64	2.3299	1.301E-06	0.782E-01	114	8.1320	8.709E-07	0.122E+00
15	0.6844	1.014E-06	0.861E-01	65	2.3888	1.635E-06	0.623E-01	115	8.3379	1.031E-06	0.113E+00
16	0.7017	8.822E-07	0.981E-01	66	2.4493	1.450E-06	0.685E-01	116	8.5490	1.967E-06	0.708E-01
17	0.7195	8.700E-07	0.912E-01	67	2.5113	1.405E-06	0.718E-01	117	8.7654	2.828E-06	0.581E-01
18	0.7377	9.083E-07	0.889E-01	68	2.5749	1.231E-06	0.818E-01	118	8.9873	4.423E-06	0.441E-01
19	0.7564	8.813E-07	0.855E-01	69	2.6401	1.570E-06	0.642E-01	119	9.2148	6.630E-06	0.347E-01
20	0.7755	1.055E-06	0.726E-01	70	2.7069	1.431E-06	0.708E-01	120	9.4481	8.573E-06	0.299E-01
21	0.7952	1.013E-06	0.775E-01	71	2.7754	1.235E-06	0.813E-01	121	9.6872	1.015E-05	0.274E-01
22	0.8153	1.064E-06	0.747E-01	72	2.8457	1.200E-06	0.787E-01	122	9.9325	8.522E-06	0.310E-01
23	0.8360	9.546E-07	0.796E-01	73	2.9177	1.243E-06	0.761E-01	123	10.1840	6.160E-06	0.384E-01
24	0.8571	1.214E-06	0.612E-01	74	2.9916	1.345E-06	0.750E-01	124	10.4420	3.465E-06	0.543E-01
25	0.8788	1.103E-06	0.717E-01	75	3.0673	1.459E-06	0.692E-01	125	10.7060	1.460E-06	0.115E+00
26	0.9010	1.059E-06	0.739E-01	76	3.1450	1.337E-06	0.723E-01	126	10.9770	1.223E-06	0.125E+00
27	0.9239	1.184E-06	0.674E-01	77	3.2246	1.132E-06	0.861E-01	127	11.2550	1.467E-06	0.108E+00
28	0.9473	1.259E-06	0.655E-01	78	3.3062	1.129E-06	0.829E-01	128	11.5400	1.374E-06	0.115E+00
29	0.9712	1.084E-06	0.714E-01	79	3.3899	1.032E-06	0.892E-01	129	11.8320	1.808E-06	0.948E-01
30	0.9959	1.200E-06	0.660E-01	80	3.4758	1.147E-06	0.776E-01	130	12.1320	2.003E-06	0.890E-01
31	1.0210	1.206E-06	0.674E-01	81	3.5637	1.300E-06	0.712E-01	131	12.4390	3.159E-06	0.658E-01
32	1.0469	1.177E-06	0.694E-01	82	3.6540	1.263E-06	0.756E-01	132	12.7540	4.478E-06	0.507E-01
33	1.0734	1.131E-06	0.722E-01	83	3.7465	1.437E-06	0.686E-01	133	13.0760	7.929E-06	0.343E-01
34	1.1006	1.124E-06	0.733E-01	84	3.8413	1.579E-06	0.636E-01	134	13.4070	1.243E-05	0.269E-01
35	1.1284	1.157E-06	0.702E-01	85	3.9385	2.142E-06	0.496E-01	135	13.7470	2.050E-05	0.205E-01
36	1.1570	1.222E-06	0.650E-01	86	4.0382	2.106E-06	0.538E-01	136	14.0950	3.013E-05	0.167E-01
37	1.1863	1.368E-06	0.606E-01	87	4.1405	2.409E-06	0.478E-01	137	14.4520	3.296E-05	0.159E-01
38	1.2163	1.438E-06	0.558E-01	88	4.2453	2.456E-06	0.484E-01	138	14.8180	2.173E-05	0.196E-01
39	1.2471	1.244E-06	0.662E-01	89	4.3528	2.798E-06	0.447E-01	139	15.1930	8.057E-06	0.321E-01
40	1.2787	1.364E-06	0.640E-01	90	4.4630	3.108E-06	0.415E-01	140	15.5770	1.961E-06	0.652E-01
41	1.3110	1.286E-06	0.645E-01	91	4.5759	2.616E-06	0.487E-01	141	15.9720	7.261E-07	0.114E+00
42	1.3442	1.251E-06	0.662E-01	92	4.6918	2.559E-06	0.484E-01	142	16.3760	3.509E-07	0.173E+00
43	1.3782	1.361E-06	0.626E-01	93	4.8105	1.910E-06	0.624E-01	143	16.7900	1.219E-07	0.357E+00
44	1.4131	1.185E-06	0.756E-01	94	4.9323	1.814E-06	0.649E-01	144	17.2160	1.484E-07	0.260E+00
45	1.4489	1.350E-06	0.648E-01	95	5.0572	1.319E-06	0.849E-01	145	17.6510	5.464E-08	0.595E+00
46	1.4856	1.452E-06	0.623E-01	96	5.1852	1.067E-06	0.866E-01	146	18.0980	-3.326E-08	0.104E+01
47	1.5232	1.356E-06	0.640E-01	97	5.3165	9.441E-07	0.943E-01	147	18.5560	-8.509E-09	0.349E+01
48	1.5618	1.314E-06	0.690E-01	98	5.4511	9.006E-07	0.101E+00	148	19.0260	1.871E-08	0.153E+01
49	1.6013	1.224E-06	0.738E-01	99	5.5891	8.905E-07	0.100E+00	149	19.5080	-8.235E-09	0.377E+01
50	1.6418	1.376E-06	0.690E-01	100	5.7305	7.392E-07	0.122E+00	150	20.0020	2.159E-09	0.106E+02

* ENERGY = EV*E)

** ERROR X 100 = %

Table 3.1.8

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESSES CM, ANGLE=41.8 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.7516	5.398E-11	1.000E+02	51	5.6589	5.464E-06	6.504E-03	101	1.6213	7.393E-06	5.394E-03
2	19.2639	-1.519E-10	1.000E+02	52	5.5192	5.486E-06	6.490E-03	102	1.5813	7.424E-06	5.381E-03
3	18.7883	3.160E-10	1.000E+02	53	5.3829	5.509E-06	6.477E-03	103	1.5422	7.457E-06	5.366E-03
4	18.3244	1.033E-10	1.000E+02	54	5.2500	5.532E-06	6.462E-03	104	1.5042	7.490E-06	5.349E-03
5	17.8719	-7.282E-10	1.000E+02	55	5.1204	5.559E-06	6.444E-03	105	1.4670	7.527E-06	5.332E-03
6	17.4307	6.379E-10	1.000E+02	56	4.9940	5.592E-06	6.426E-03	106	1.4308	7.560E-06	5.316E-03
7	17.0003	4.348E-09	1.000E+02	57	4.8707	5.637E-06	6.395E-03	107	1.3955	7.590E-06	5.304E-03
8	16.5806	7.396E-09	1.000E+02	58	4.7504	5.685E-06	6.363E-03	108	1.3610	7.624E-06	5.287E-03
9	16.1712	1.617E-08	1.729E-01	59	4.6331	5.749E-06	6.315E-03	109	1.3274	7.655E-06	5.273E-03
10	15.7719	3.432E-08	1.014E-01	60	4.5187	5.814E-06	6.268E-03	110	1.2946	7.688E-06	5.257E-03
11	15.3825	8.333E-08	5.672E-02	61	4.4072	5.892E-06	6.210E-03	111	1.2627	7.722E-06	5.242E-03
12	15.0027	2.348E-07	2.812E-02	62	4.2984	5.962E-06	6.159E-03	112	1.2315	7.753E-06	5.228E-03
13	14.6323	5.280E-07	1.607E-02	63	4.1922	6.023E-06	6.116E-03	113	1.2011	7.789E-06	5.210E-03
14	14.2710	1.652E-06	1.130E-02	64	4.0887	6.084E-06	6.074E-03	114	1.1714	7.823E-06	5.194E-03
15	13.9187	2.405E-06	9.361E-03	65	3.9878	6.136E-06	6.040E-03	115	1.1425	7.853E-06	5.180E-03
16	13.5750	2.912E-06	8.517E-03	66	3.8893	6.190E-06	6.003E-03	116	1.1143	7.882E-06	5.167E-03
17	13.2399	3.229E-06	8.120E-03	67	3.7933	6.229E-06	5.979E-03	117	1.0868	7.910E-06	5.155E-03
18	12.9130	3.427E-06	7.903E-03	68	3.6996	6.265E-06	5.957E-03	118	1.0600	7.939E-06	5.143E-03
19	12.5941	3.539E-06	7.819E-03	69	3.6083	6.297E-06	5.940E-03	119	1.0338	7.968E-06	5.131E-03
20	12.2832	3.616E-06	7.783E-03	70	3.5192	6.329E-06	5.920E-03	120	1.0083	7.998E-06	5.118E-03
21	11.9799	3.668E-06	7.772E-03	71	3.4323	6.358E-06	5.904E-03	121	0.9834	8.028E-06	5.105E-03
22	11.6841	3.713E-06	7.764E-03	72	3.3476	6.384E-06	5.891E-03	122	0.9591	8.055E-06	5.093E-03
23	11.3957	3.747E-06	7.764E-03	73	3.2649	6.412E-06	5.877E-03	123	0.9354	8.087E-06	5.080E-03
24	11.1143	3.784E-06	7.759E-03	74	3.1843	6.440E-06	5.863E-03	124	0.9123	8.116E-06	5.067E-03
25	10.8399	3.815E-06	7.762E-03	75	3.1057	6.474E-06	5.845E-03	125	0.8898	8.143E-06	5.056E-03
26	10.5722	3.851E-06	7.765E-03	76	3.0290	6.510E-06	5.825E-03	126	0.8678	8.171E-06	5.045E-03
27	10.3112	3.938E-06	7.688E-03	77	2.9542	6.544E-06	5.808E-03	127	0.8464	8.201E-06	5.032E-03
28	10.0566	4.092E-06	7.538E-03	78	2.8813	6.575E-06	5.791E-03	128	0.8255	8.225E-06	5.022E-03
29	9.8083	4.305E-06	7.328E-03	79	2.8101	6.605E-06	5.776E-03	129	0.8051	8.251E-06	5.012E-03
30	9.5662	4.559E-06	7.087E-03	80	2.7408	6.636E-06	5.762E-03	130	0.7852	8.277E-06	5.002E-03
31	9.3300	4.773E-06	6.901E-03	81	2.6731	6.671E-06	5.743E-03	131	0.7659	8.303E-06	4.992E-03
32	9.0996	4.939E-06	6.770E-03	82	2.6071	6.711E-06	5.722E-03	132	0.7469	8.325E-06	4.984E-03
33	8.8749	5.049E-06	6.692E-03	83	2.5427	6.741E-06	5.708E-03	133	0.7285	8.348E-06	4.976E-03
34	8.6558	5.120E-06	6.648E-03	84	2.4799	6.777E-06	5.691E-03	134	0.7105	8.370E-06	4.969E-03
35	8.4421	5.169E-06	6.619E-03	85	2.4187	6.813E-06	5.672E-03	135	0.6930	8.392E-06	4.961E-03
36	8.2337	5.195E-06	6.610E-03	86	2.3590	6.854E-06	5.651E-03	136	0.6759	8.417E-06	4.953E-03
37	8.0304	5.217E-06	6.602E-03	87	2.3007	6.886E-06	5.636E-03	137	0.6592	8.443E-06	4.944E-03
38	7.8321	5.239E-06	6.593E-03	88	2.2439	6.925E-06	5.616E-03	138	0.6429	8.465E-06	4.938E-03
39	7.6387	5.254E-06	6.590E-03	89	2.1885	6.963E-06	5.597E-03	139	0.6270	8.484E-06	4.933E-03
40	7.4501	5.271E-06	6.586E-03	90	2.1345	6.998E-06	5.581E-03	140	0.6115	8.504E-06	4.928E-03
41	7.2662	5.286E-06	6.582E-03	91	2.0818	7.033E-06	5.565E-03	141	0.5964	8.520E-06	4.925E-03
42	7.0868	5.304E-06	6.576E-03	92	2.0304	7.068E-06	5.549E-03	142	0.5817	8.538E-06	4.922E-03
43	6.9118	5.324E-06	6.566E-03	93	1.9803	7.104E-06	5.532E-03	143	0.5674	8.557E-06	4.918E-03
44	6.7412	5.345E-06	6.557E-03	94	1.9314	7.140E-06	5.515E-03	144	0.5533	8.574E-06	4.916E-03
45	6.5747	5.361E-06	6.553E-03	95	1.8837	7.177E-06	5.498E-03	145	0.5397	8.585E-06	4.917E-03
46	6.4124	5.380E-06	6.544E-03	96	1.8372	7.210E-06	5.483E-03	146	0.5264	8.601E-06	4.917E-03
47	6.2541	5.398E-06	6.534E-03	97	1.7918	7.249E-06	5.464E-03	147	0.5134	8.617E-06	4.917E-03
48	6.0997	5.415E-06	6.525E-03	98	1.7476	7.283E-06	5.448E-03	148	0.5007	8.625E-06	4.921E-03
49	5.9491	5.431E-06	6.519E-03	99	1.7044	7.322E-06	5.428E-03	149	0.4883	8.637E-06	4.922E-03
50	5.8022	5.443E-06	6.513E-03	100	1.6623	7.359E-06	5.410E-03	150	0.4763	8.649E-06	4.924E-03

* ENERGY = LOWER BOUNDARY (MEV)
** ERROR X 100 = %

Table 3.1.9

ANGULAR FLUX OF GRAPHITE SLAB TOP [THICKNESSES CM, ANGLE=86.3 DEG]

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.4823	4.439E-07	0.229E+00	51	1.6334	1.561E-06	0.600E-01	101	5.8756	1.023E-06	0.943E-01
2	0.4943	5.467E-07	0.182E+00	52	1.7260	1.600E-06	0.599E-01	102	6.0244	7.253E-07	0.119E+00
3	0.5070	4.644E-07	0.208E+00	53	1.7697	1.548E-06	0.617E-01	103	6.1769	9.353E-07	0.985E-01
4	0.5199	4.943E-07	0.206E+00	54	1.8145	1.624E-06	0.593E-01	104	6.3332	1.097E-06	0.834E-01
5	0.5330	8.061E-07	0.119E+00	55	1.8604	1.832E-06	0.530E-01	105	6.4936	1.189E-06	0.916E-01
6	0.5463	8.096E-07	0.116E+00	56	1.9075	1.709E-06	0.573E-01	106	6.6579	1.215E-06	0.905E-01
7	0.5604	6.434E-07	0.143E+00	57	1.9558	1.571E-06	0.618E-01	107	6.8265	1.471E-06	0.788E-01
8	0.5745	9.294E-07	0.951E-01	58	2.0053	1.683E-06	0.576E-01	108	6.9993	1.510E-06	0.790E-01
9	0.5891	8.550E-07	0.998E-01	59	2.0561	1.502E-06	0.655E-01	109	7.1765	1.530E-06	0.823E-01
10	0.6040	9.155E-07	0.934E-01	60	2.1081	1.567E-06	0.637E-01	110	7.3582	1.571E-06	0.813E-01
11	0.6193	1.040E-06	0.838E-01	61	2.1615	1.581E-06	0.636E-01	111	7.5444	1.728E-06	0.803E-01
12	0.6350	7.776E-07	0.109E+00	62	2.2162	1.640E-06	0.608E-01	112	7.7354	1.590E-06	0.848E-01
13	0.6510	8.238E-07	0.106E+00	63	2.2723	1.562E-06	0.636E-01	113	7.9312	1.952E-06	0.743E-01
14	0.6675	9.796E-07	0.858E-01	64	2.3299	1.617E-06	0.618E-01	114	8.1320	2.319E-06	0.654E-01
15	0.6844	9.504E-07	0.856E-01	65	2.3888	1.700E-06	0.583E-01	115	8.3379	2.366E-06	0.685E-01
16	0.7017	9.551E-07	0.886E-01	66	2.4493	1.772E-06	0.574E-01	116	8.5490	3.053E-06	0.545E-01
17	0.7195	9.986E-07	0.822E-01	67	2.5113	1.791E-06	0.570E-01	117	8.7654	3.225E-06	0.558E-01
18	0.7377	9.956E-07	0.822E-01	68	2.5749	1.677E-06	0.622E-01	118	8.9873	3.482E-06	0.542E-01
19	0.7564	9.598E-07	0.807E-01	69	2.6401	1.571E-06	0.648E-01	119	9.2148	3.963E-06	0.509E-01
20	0.7755	9.423E-07	0.821E-01	70	2.7069	1.551E-06	0.644E-01	120	9.4481	4.004E-06	0.516E-01
21	0.7952	1.035E-06	0.743E-01	71	2.7754	1.511E-06	0.652E-01	121	9.6872	4.523E-06	0.484E-01
22	0.8153	9.347E-07	0.811E-01	72	2.8457	1.587E-06	0.625E-01	122	9.9325	4.029E-06	0.530E-01
23	0.8360	1.121E-06	0.659E-01	73	2.9177	1.390E-06	0.749E-01	123	10.1840	3.589E-06	0.549E-01
24	0.8571	1.207E-06	0.650E-01	74	2.9916	1.740E-06	0.619E-01	124	10.4420	2.979E-06	0.691E-01
25	0.8788	1.325E-06	0.598E-01	75	3.0673	1.572E-06	0.683E-01	125	10.7060	3.339E-06	0.622E-01
26	0.9010	1.025E-06	0.746E-01	76	3.1450	1.650E-06	0.637E-01	126	10.9770	3.559E-06	0.630E-01
27	0.9239	1.103E-06	0.679E-01	77	3.2246	1.638E-06	0.661E-01	127	11.2550	4.627E-06	0.531E-01
28	0.9473	1.052E-06	0.746E-01	78	3.3062	1.470E-06	0.726E-01	128	11.5400	5.575E-06	0.458E-01
29	0.9712	1.169E-06	0.662E-01	79	3.3899	1.549E-06	0.707E-01	129	11.8320	6.525E-06	0.438E-01
30	0.9958	1.162E-06	0.687E-01	80	3.4758	1.327E-06	0.829E-01	130	12.1320	7.342E-06	0.393E-01
31	1.0210	1.294E-06	0.639E-01	81	3.5637	1.508E-06	0.784E-01	131	12.4390	7.883E-06	0.371E-01
32	1.0469	1.390E-06	0.595E-01	82	3.6540	1.614E-06	0.743E-01	132	12.7540	8.161E-06	0.369E-01
33	1.0734	1.193E-06	0.700E-01	83	3.7465	1.840E-06	0.680E-01	133	13.0760	7.600E-06	0.379E-01
34	1.1006	1.291E-06	0.641E-01	84	3.8413	1.834E-06	0.674E-01	134	13.4070	7.444E-06	0.376E-01
35	1.1284	1.392E-06	0.598E-01	85	3.9385	2.139E-06	0.585E-01	135	13.7470	6.409E-06	0.409E-01
36	1.1570	1.318E-06	0.636E-01	86	4.0382	2.054E-06	0.628E-01	136	14.0950	6.517E-06	0.409E-01
37	1.1863	1.202E-06	0.661E-01	87	4.1405	1.922E-06	0.646E-01	137	14.4520	6.446E-06	0.396E-01
38	1.2163	1.286E-06	0.611E-01	88	4.2453	1.925E-06	0.664E-01	138	14.8180	5.221E-06	0.443E-01
39	1.2471	1.313E-06	0.634E-01	89	4.3528	1.932E-06	0.640E-01	139	15.1930	3.188E-06	0.547E-01
40	1.2787	1.340E-06	0.613E-01	90	4.4630	1.767E-06	0.686E-01	140	15.5770	1.165E-06	0.949E-01
41	1.3110	1.169E-06	0.700E-01	91	4.5759	1.545E-06	0.785E-01	141	15.9720	3.200E-07	0.213E+00
42	1.3442	1.462E-06	0.589E-01	92	4.6918	1.410E-06	0.824E-01	142	16.3760	5.699E-08	0.859E+00
43	1.3782	1.393E-06	0.609E-01	93	4.8105	1.215E-06	0.923E-01	143	16.7900	7.598E-08	0.495E+00
44	1.4131	1.443E-06	0.615E-01	94	4.9323	1.064E-06	0.103E+00	144	17.2160	3.111E-08	0.109E+01
45	1.4489	1.405E-06	0.610E-01	95	5.0572	1.090E-06	0.105E+00	145	17.6510	1.903E-08	0.158E+01
46	1.4856	1.494E-06	0.579E-01	96	5.1852	1.156E-06	0.806E-01	146	18.0980	-4.411E-08	0.681E+00
47	1.5232	1.515E-06	0.568E-01	97	5.3165	1.045E-06	0.906E-01	147	18.5560	2.053E-08	0.148E+01
48	1.5618	1.523E-06	0.580E-01	98	5.4511	1.086E-06	0.891E-01	148	19.0260	2.094E-08	0.173E+01
49	1.6013	1.576E-06	0.571E-01	99	5.5891	1.060E-06	0.909E-01	149	19.5080	1.764E-08	0.117E+01
50	1.6418	1.616E-06	0.577E-01	100	5.7305	2.787E-07	0.107E+00	150	20.0020	-1.892E-08	0.130E+01

* ENERGY = [MEV]
** ERROR X 100 = %

Table 3.1.10

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESSES CM, ANGLE=66.8 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.7516	-4.731E-10	1.000E+02	51	5.6589	3.686E-06	8.648E-03	101	1.6213	5.660E-06	6.548E-03
2	19.2639	-3.202E-11	1.000E+02	52	5.5192	3.713E-06	8.611E-03	102	1.5813	5.700E-06	6.515E-03
3	18.7883	4.915E-10	1.000E+02	53	5.3829	3.740E-06	8.573E-03	103	1.5422	5.738E-06	6.483E-03
4	18.3244	1.005E-09	1.000E+02	54	5.2500	3.766E-06	8.536E-03	104	1.5042	5.776E-06	6.452E-03
5	17.8719	-9.810E-11	1.000E+02	55	5.1204	3.795E-06	8.494E-03	105	1.4670	5.813E-06	6.421E-03
6	17.4307	3.776E-10	1.000E+02	56	4.9940	3.822E-06	8.466E-03	106	1.4308	5.848E-06	6.393E-03
7	17.0003	1.155E-09	1.000E+02	57	4.8707	3.849E-06	8.437E-03	107	1.3955	5.884E-06	6.365E-03
8	16.5806	3.055E-09	1.000E+02	58	4.7504	3.879E-06	8.402E-03	108	1.3610	5.919E-06	6.338E-03
9	16.1712	4.480E-09	1.000E+02	59	4.6331	3.914E-06	8.360E-03	109	1.3274	5.956E-06	6.309E-03
10	15.7719	1.248E-08	2.427E-01	60	4.5187	3.953E-06	8.314E-03	110	1.2946	5.985E-06	6.283E-03
11	15.3825	4.161E-08	9.857E-02	61	4.4072	3.997E-06	8.256E-03	111	1.2627	6.018E-06	6.262E-03
12	15.0027	1.213E-07	4.932E-02	62	4.2984	4.045E-06	8.194E-03	112	1.2315	6.051E-06	6.238E-03
13	14.6323	2.518E-07	3.305E-02	63	4.1922	4.094E-06	8.135E-03	113	1.2011	6.083E-06	6.213E-03
14	14.2710	4.130E-07	2.540E-02	64	4.0887	4.142E-06	8.075E-03	114	1.1714	6.113E-06	6.191E-03
15	13.9187	5.759E-07	2.158E-02	65	3.9878	4.193E-06	8.013E-03	115	1.1425	6.146E-06	6.167E-03
16	13.5750	7.361E-07	1.903E-02	66	3.8893	4.243E-06	7.946E-03	116	1.1143	6.181E-06	6.142E-03
17	13.2399	9.222E-07	1.701E-02	67	3.7933	4.293E-06	7.894E-03	117	1.0868	6.213E-06	6.119E-03
18	12.9130	1.112E-06	1.552E-02	68	3.6996	4.339E-06	7.843E-03	118	1.0600	6.243E-06	6.099E-03
19	12.5941	1.316E-06	1.431E-02	69	3.6083	4.390E-06	7.801E-03	119	1.0338	6.278E-06	6.073E-03
20	12.2832	1.513E-06	1.335E-02	70	3.5192	4.418E-06	7.764E-03	120	1.0083	6.310E-06	6.051E-03
21	11.9799	1.697E-06	1.264E-02	71	3.4323	4.451E-06	7.730E-03	121	0.9834	6.339E-06	6.032E-03
22	11.6841	1.860E-06	1.216E-02	72	3.3476	4.489E-06	7.688E-03	122	0.9591	6.369E-06	6.012E-03
23	11.3957	1.999E-06	1.175E-02	73	3.2649	4.526E-06	7.648E-03	123	0.9354	6.395E-06	5.995E-03
24	11.1143	2.113E-06	1.148E-02	74	3.1843	4.567E-06	7.603E-03	124	0.9123	6.423E-06	5.976E-03
25	10.8399	2.204E-06	1.131E-02	75	3.1057	4.608E-06	7.556E-03	125	0.8898	6.448E-06	5.960E-03
26	10.5722	2.287E-06	1.113E-02	76	3.0290	4.648E-06	7.515E-03	126	0.8678	6.481E-06	5.937E-03
27	10.3112	2.362E-06	1.100E-02	77	2.9542	4.691E-06	7.467E-03	127	0.8464	6.511E-06	5.917E-03
28	10.0566	2.452E-06	1.078E-02	78	2.8813	4.726E-06	7.433E-03	128	0.8255	6.540E-06	5.899E-03
29	9.8033	2.552E-06	1.057E-02	79	2.8101	4.766E-06	7.389E-03	129	0.8051	6.563E-06	5.885E-03
30	9.5662	2.663E-06	1.032E-02	80	2.7408	4.803E-06	7.349E-03	130	0.7852	6.589E-06	5.869E-03
31	9.3300	2.766E-06	1.012E-02	81	2.6731	4.842E-06	7.308E-03	131	0.7659	6.612E-06	5.856E-03
32	9.0996	2.865E-06	9.932E-03	82	2.6071	4.881E-06	7.268E-03	132	0.7469	6.636E-06	5.842E-03
33	8.8749	2.952E-06	9.770E-03	83	2.5427	4.923E-06	7.226E-03	133	0.7285	6.661E-06	5.828E-03
34	8.6558	3.032E-06	9.625E-03	84	2.4799	4.968E-06	7.179E-03	134	0.7105	6.686E-06	5.814E-03
35	8.4421	3.109E-06	9.484E-03	85	2.4187	5.012E-06	7.134E-03	135	0.6930	6.710E-06	5.802E-03
36	8.2337	3.168E-06	9.394E-03	86	2.3590	5.055E-06	7.091E-03	136	0.6759	6.734E-06	5.790E-03
37	8.0304	3.226E-06	9.300E-03	87	2.3007	5.095E-06	7.051E-03	137	0.6592	6.758E-06	5.777E-03
38	7.8321	3.275E-06	9.220E-03	88	2.2439	5.134E-06	7.015E-03	138	0.6429	6.779E-06	5.768E-03
39	7.6387	3.314E-06	9.174E-03	89	2.1885	5.175E-06	6.976E-03	139	0.6270	6.798E-06	5.760E-03
40	7.4501	3.357E-06	9.115E-03	90	2.1345	5.215E-06	6.940E-03	140	0.6115	6.824E-06	5.747E-03
41	7.2662	3.397E-06	9.058E-03	91	2.0818	5.254E-06	6.904E-03	141	0.5964	6.847E-06	5.738E-03
42	7.0868	3.435E-06	9.004E-03	92	2.0304	5.292E-06	6.871E-03	142	0.5817	6.869E-06	5.728E-03
43	6.9113	3.473E-06	8.948E-03	93	1.9803	5.334E-06	6.832E-03	143	0.5674	6.892E-06	5.718E-03
44	6.7412	3.510E-06	8.892E-03	94	1.9314	5.373E-06	6.797E-03	144	0.5533	6.908E-06	5.714E-03
45	6.5747	3.540E-06	8.850E-03	95	1.8837	5.416E-06	6.758E-03	145	0.5397	6.928E-06	5.708E-03
46	6.4124	3.570E-06	8.810E-03	96	1.8372	5.462E-06	6.716E-03	146	0.5264	6.948E-06	5.702E-03
47	6.2541	3.597E-06	8.768E-03	97	1.7918	5.502E-06	6.681E-03	147	0.5134	6.961E-06	5.703E-03
48	6.0997	3.620E-06	8.735E-03	98	1.7476	5.541E-06	6.648E-03	148	0.5007	6.972E-06	5.704E-03
49	5.9491	3.639E-06	8.712E-03	99	1.7044	5.581E-06	6.615E-03	149	0.4883	6.986E-06	5.704E-03
50	5.8022	3.664E-06	8.676E-03	100	1.6623	5.620E-06	6.582E-03	150	0.4763	6.997E-06	5.707E-03

* ENERGY = LOWER BOUNDARY [MEV]
** ERROR X 100 = %

Table 3.1.11

ANGULAR FLUX OF GRAPHITE SLAB TOP [THICKNESS=20 CM, ANGLE=0.0 DEG]

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.4823	4.397E-07	0.219E+00	51	1.6834	3.247E-06	0.318E-01	101	5.8756	3.203E-06	0.434E-01
2	0.4945	6.722E-07	0.140E+00	52	1.7260	3.427E-06	0.313E-01	102	6.0244	2.849E-06	0.463E-01
3	0.5070	6.742E-07	0.141E+00	53	1.7697	3.535E-06	0.300E-01	103	6.1769	4.592E-06	0.354E-01
4	0.5199	5.770E-07	0.152E+00	54	1.8145	3.592E-06	0.303E-01	104	6.3332	5.777E-06	0.318E-01
5	0.5330	9.023E-07	0.106E+00	55	1.8604	3.892E-06	0.286E-01	105	6.4936	6.255E-06	0.310E-01
6	0.5465	7.088E-07	0.120E+00	56	1.9075	3.311E-06	0.312E-01	106	6.6579	7.014E-06	0.291E-01
7	0.5604	8.593E-07	0.983E-01	57	1.9558	3.326E-06	0.315E-01	107	6.8265	6.205E-06	0.314E-01
8	0.5745	7.551E-07	0.108E+00	58	2.0053	3.601E-06	0.304E-01	108	6.9993	3.557E-06	0.429E-01
9	0.5891	9.612E-07	0.867E-01	59	2.0561	3.928E-06	0.286E-01	109	7.1765	2.187E-06	0.572E-01
10	0.6040	9.503E-07	0.844E-01	60	2.1081	3.774E-06	0.296E-01	110	7.3582	1.355E-06	0.822E-01
11	0.6193	1.067E-06	0.758E-01	61	2.1615	3.532E-06	0.310E-01	111	7.5444	1.335E-06	0.819E-01
12	0.6350	1.087E-06	0.751E-01	62	2.2162	3.571E-06	0.303E-01	112	7.7354	1.761E-06	0.687E-01
13	0.6510	1.067E-06	0.751E-01	63	2.2723	3.852E-06	0.292E-01	113	7.9312	2.468E-06	0.560E-01
14	0.6675	1.149E-06	0.680E-01	64	2.3299	3.615E-06	0.310E-01	114	8.1320	3.096E-06	0.502E-01
15	0.6844	1.128E-06	0.726E-01	65	2.3888	3.672E-06	0.303E-01	115	8.3379	3.362E-06	0.473E-01
16	0.7017	1.237E-06	0.644E-01	66	2.4493	3.335E-06	0.322E-01	116	8.5490	3.697E-06	0.448E-01
17	0.7195	1.259E-06	0.622E-01	67	2.5113	3.145E-06	0.331E-01	117	8.7654	3.613E-06	0.452E-01
18	0.7377	1.230E-06	0.632E-01	68	2.5749	2.822E-06	0.360E-01	118	8.9873	4.394E-06	0.394E-01
19	0.7564	1.262E-06	0.619E-01	69	2.6401	2.288E-06	0.404E-01	119	9.2148	6.788E-06	0.333E-01
20	0.7755	1.253E-06	0.607E-01	70	2.7069	1.648E-06	0.521E-01	120	9.4481	9.395E-06	0.280E-01
21	0.7952	1.471E-06	0.530E-01	71	2.7754	3.773E-06	0.310E-01	121	9.6872	1.527E-05	0.218E-01
22	0.8153	1.315E-06	0.574E-01	72	2.8457	6.593E-06	0.226E-01	122	9.9325	2.207E-05	0.180E-01
23	0.8360	1.450E-06	0.540E-01	73	2.9177	5.016E-06	0.262E-01	123	10.1840	1.983E-05	0.192E-01
24	0.8571	1.421E-06	0.546E-01	74	2.9916	3.563E-06	0.322E-01	124	10.4420	1.091E-05	0.267E-01
25	0.8788	1.311E-06	0.575E-01	75	3.0673	1.993E-06	0.476E-01	125	10.7060	5.643E-06	0.389E-01
26	0.9010	1.494E-06	0.513E-01	76	3.1450	1.448E-06	0.614E-01	126	10.9770	5.023E-06	0.428E-01
27	0.9239	1.600E-06	0.491E-01	77	3.2246	1.334E-06	0.649E-01	127	11.2550	6.331E-06	0.376E-01
28	0.9473	1.500E-06	0.531E-01	78	3.3062	1.278E-06	0.697E-01	128	11.5400	8.041E-06	0.324E-01
29	0.9712	1.764E-06	0.473E-01	79	3.3899	1.225E-06	0.726E-01	129	11.8320	1.003E-05	0.290E-01
30	0.9958	1.810E-06	0.459E-01	80	3.4758	1.502E-06	0.612E-01	130	12.1320	1.178E-05	0.267E-01
31	1.0210	2.137E-06	0.430E-01	81	3.5637	1.858E-06	0.532E-01	131	12.4390	1.194E-05	0.265E-01
32	1.0469	2.024E-06	0.437E-01	82	3.6540	2.147E-06	0.492E-01	132	12.7540	1.487E-05	0.235E-01
33	1.0734	2.129E-06	0.413E-01	83	3.7465	2.422E-06	0.458E-01	133	13.0760	2.839E-05	0.169E-01
34	1.1006	2.048E-06	0.425E-01	84	3.8413	2.752E-06	0.419E-01	134	13.4070	6.957E-05	0.108E-01
35	1.1284	2.259E-06	0.399E-01	85	3.9385	2.671E-06	0.436E-01	135	13.7470	1.883E-04	0.659E-02
36	1.1570	2.135E-06	0.406E-01	86	4.0382	2.633E-06	0.440E-01	136	14.0950	6.458E-04	0.357E-02
37	1.1863	2.295E-06	0.393E-01	87	4.1405	3.072E-06	0.398E-01	137	14.4520	1.452E-03	0.237E-02
38	1.2163	2.214E-06	0.400E-01	88	4.2453	3.480E-06	0.368E-01	138	14.8180	1.112E-03	0.270E-02
39	1.2471	2.317E-06	0.384E-01	89	4.3528	4.453E-06	0.318E-01	139	15.1930	3.245E-04	0.496E-02
40	1.2787	2.263E-06	0.396E-01	90	4.4630	4.981E-06	0.300E-01	140	15.5770	4.801E-05	0.127E-01
41	1.3110	2.502E-06	0.381E-01	91	4.5759	6.065E-06	0.264E-01	141	15.9720	1.367E-05	0.236E-01
42	1.3442	2.659E-06	0.370E-01	92	4.6918	6.490E-06	0.258E-01	142	16.3760	4.429E-06	0.412E-01
43	1.3782	2.637E-06	0.356E-01	93	4.8105	6.702E-06	0.256E-01	143	16.7900	1.425E-06	0.728E-01
44	1.4131	2.906E-06	0.341E-01	94	4.9323	7.488E-06	0.240E-01	144	17.2160	4.141E-07	0.141E+00
45	1.4489	3.870E-06	0.346E-01	95	5.0572	6.554E-06	0.261E-01	145	17.6510	1.626E-07	0.257E+00
46	1.4856	2.702E-06	0.340E-01	96	5.1852	6.197E-06	0.300E-01	146	18.0980	1.024E-07	0.320E+00
47	1.5232	3.054E-06	0.326E-01	97	5.3165	5.928E-06	0.309E-01	147	18.5560	-2.963E-09	0.911E+01
48	1.5618	3.020E-06	0.328E-01	98	5.4511	5.509E-06	0.323E-01	148	19.0260	-1.415E-08	0.143E+01
49	1.6013	2.979E-06	0.337E-01	99	5.5891	5.067E-06	0.335E-01	149	19.5080	-3.265E-09	0.454E+01
50	1.6418	3.187E-06	0.321E-01	100	5.7305	4.365E-06	0.362E-01	150	20.0020	1.744E-08	0.887E+00

* ENERGY = EMEV3
** ERROR X 100 = %

Table 3.1.12

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESS=20 CM, ANGLE=0.0 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.7516	4.359E-10	1.000E+02	51	5.6589	1.030E-04	1.403E-03	101	1.6213	1.076E-04	1.358E-03
2	19.2639	3.543E-10	1.000E+02	52	5.5192	1.031E-04	1.401E-03	102	1.5813	1.077E-04	1.357E-03
3	18.7883	4.100E-13	1.000E+02	53	5.3829	1.032E-04	1.400E-03	103	1.5422	1.077E-04	1.356E-03
4	18.3244	-7.380E-11	1.000E+02	54	5.2500	1.034E-04	1.399E-03	104	1.5042	1.078E-04	1.356E-03
5	17.8719	2.486E-09	1.000E+02	55	5.1204	1.035E-04	1.398E-03	105	1.4670	1.079E-04	1.355E-03
6	17.4307	6.550E-09	1.000E+02	56	4.9940	1.037E-04	1.396E-03	106	1.4308	1.080E-04	1.354E-03
7	17.0003	1.690E-08	1.308E-01	57	4.8707	1.039E-04	1.394E-03	107	1.3955	1.080E-04	1.354E-03
8	16.5806	5.253E-08	6.491E-02	58	4.7504	1.041E-04	1.393E-03	108	1.3610	1.081E-04	1.353E-03
9	16.1712	1.632E-07	3.490E-02	59	4.6331	1.042E-04	1.391E-03	109	1.3274	1.082E-04	1.352E-03
10	15.7719	5.049E-07	1.958E-02	60	4.5187	1.044E-04	1.389E-03	110	1.2946	1.082E-04	1.352E-03
11	15.3825	1.705E-06	1.068E-02	61	4.4072	1.045E-04	1.388E-03	111	1.2627	1.083E-04	1.351E-03
12	15.0027	9.817E-06	4.499E-03	62	4.2984	1.046E-04	1.387E-03	112	1.2315	1.083E-04	1.350E-03
13	14.6323	3.762E-05	2.317E-03	63	4.1922	1.047E-04	1.386E-03	113	1.2011	1.084E-04	1.350E-03
14	14.2710	7.393E-05	1.657E-03	64	4.0887	1.048E-04	1.386E-03	114	1.1714	1.084E-04	1.349E-03
15	13.9187	9.007E-05	1.503E-03	65	3.9878	1.048E-04	1.385E-03	115	1.1425	1.085E-04	1.349E-03
16	13.5750	9.473E-05	1.465E-03	66	3.8893	1.049E-04	1.384E-03	116	1.1143	1.086E-04	1.348E-03
17	13.2399	9.652E-05	1.452E-03	67	3.7933	1.050E-04	1.384E-03	117	1.0868	1.086E-04	1.348E-03
18	12.9130	9.723E-05	1.447E-03	68	3.6996	1.050E-04	1.383E-03	118	1.0600	1.087E-04	1.347E-03
19	12.5941	9.760E-05	1.444E-03	69	3.6083	1.051E-04	1.383E-03	119	1.0333	1.087E-04	1.347E-03
20	12.2832	9.790E-05	1.442E-03	70	3.5192	1.051E-04	1.382E-03	120	1.0083	1.088E-04	1.346E-03
21	11.9799	9.820E-05	1.440E-03	71	3.4323	1.052E-04	1.382E-03	121	0.9834	1.088E-04	1.346E-03
22	11.6841	9.845E-05	1.438E-03	72	3.3476	1.052E-04	1.382E-03	122	0.9591	1.089E-04	1.346E-03
23	11.3957	9.865E-05	1.436E-03	73	3.2649	1.052E-04	1.382E-03	123	0.9354	1.089E-04	1.345E-03
24	11.1143	9.881E-05	1.435E-03	74	3.1843	1.053E-04	1.381E-03	124	0.9123	1.089E-04	1.345E-03
25	10.8399	9.893E-05	1.435E-03	75	3.1057	1.053E-04	1.381E-03	125	0.8898	1.090E-04	1.344E-03
26	10.5722	9.907E-05	1.434E-03	76	3.0290	1.054E-04	1.380E-03	126	0.8678	1.090E-04	1.344E-03
27	10.3112	9.935E-05	1.432E-03	77	2.9542	1.054E-04	1.380E-03	127	0.8464	1.090E-04	1.344E-03
28	10.0566	9.984E-05	1.428E-03	78	2.8813	1.056E-04	1.378E-03	128	0.8255	1.091E-04	1.344E-03
29	9.8083	1.004E-04	1.423E-03	79	2.8101	1.057E-04	1.377E-03	129	0.8051	1.091E-04	1.343E-03
30	9.5662	1.008E-04	1.420E-03	80	2.7408	1.058E-04	1.376E-03	130	0.7852	1.091E-04	1.343E-03
31	9.3300	1.010E-04	1.418E-03	81	2.6731	1.059E-04	1.375E-03	131	0.7659	1.092E-04	1.343E-03
32	9.0996	1.012E-04	1.417E-03	82	2.6071	1.059E-04	1.375E-03	132	0.7469	1.092E-04	1.342E-03
33	8.8749	1.013E-04	1.416E-03	83	2.5427	1.060E-04	1.374E-03	133	0.7285	1.092E-04	1.342E-03
34	8.6558	1.014E-04	1.416E-03	84	2.4799	1.061E-04	1.373E-03	134	0.7105	1.093E-04	1.342E-03
35	8.4421	1.015E-04	1.415E-03	85	2.4187	1.062E-04	1.372E-03	135	0.6930	1.093E-04	1.342E-03
36	8.2337	1.016E-04	1.414E-03	86	2.3590	1.062E-04	1.371E-03	136	0.6759	1.093E-04	1.341E-03
37	8.0304	1.016E-04	1.414E-03	87	2.3007	1.063E-04	1.371E-03	137	0.6592	1.094E-04	1.341E-03
38	7.8321	1.017E-04	1.413E-03	88	2.2439	1.064E-04	1.370E-03	138	0.6429	1.094E-04	1.341E-03
39	7.6387	1.018E-04	1.413E-03	89	2.1885	1.065E-04	1.369E-03	139	0.6270	1.094E-04	1.341E-03
40	7.4501	1.018E-04	1.413E-03	90	2.1345	1.066E-04	1.368E-03	140	0.6115	1.094E-04	1.341E-03
41	7.2662	1.018E-04	1.413E-03	91	2.0818	1.067E-04	1.367E-03	141	0.5964	1.095E-04	1.340E-03
42	7.0868	1.019E-04	1.412E-03	92	2.0304	1.068E-04	1.366E-03	142	0.5817	1.095E-04	1.340E-03
43	6.9118	1.020E-04	1.411E-03	93	1.9803	1.069E-04	1.365E-03	143	0.5674	1.095E-04	1.340E-03
44	6.7412	1.021E-04	1.410E-03	94	1.9314	1.070E-04	1.364E-03	144	0.5533	1.095E-04	1.340E-03
45	6.5747	1.023E-04	1.408E-03	95	1.8837	1.071E-04	1.363E-03	145	0.5397	1.095E-04	1.340E-03
46	6.4124	1.025E-04	1.407E-03	96	1.8372	1.072E-04	1.362E-03	146	0.5264	1.096E-04	1.340E-03
47	6.2541	1.026E-04	1.406E-03	97	1.7918	1.072E-04	1.361E-03	147	0.5134	1.096E-04	1.340E-03
48	6.0997	1.027E-04	1.405E-03	98	1.7476	1.073E-04	1.360E-03	148	0.5007	1.096E-04	1.340E-03
49	5.9491	1.028E-04	1.404E-03	99	1.7044	1.074E-04	1.360E-03	149	0.4883	1.096E-04	1.340E-03
50	5.8022	1.029E-04	1.404E-03	100	1.6623	1.075E-04	1.359E-03	150	0.4763	1.096E-04	1.340E-03

* ENERGY = LOWER BOUNDARY (MEV)
** ERROR X 100 = %

Table 3.1.13

ANGULAR FLUX OF GRAPHITE SLAB FOR [THICKNESS=20 CM, ANGLE=12.2 DEG]

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.4623	2.023E-07	0.335E+00	51	1.6334	1.885E-06	0.436E-01	101	5.8756	1.373E-06	0.666E-01
2	0.4945	4.329E-07	0.200E+00	52	1.7260	1.791E-06	0.452E-01	102	6.0244	1.242E-06	0.720E-01
3	0.5070	4.899E-07	0.163E+00	53	1.7697	1.701E-06	0.473E-01	103	6.1769	1.022E-06	0.826E-01
4	0.5199	5.384E-07	0.149E+00	54	1.8145	1.769E-06	0.445E-01	104	6.3332	1.186E-06	0.746E-01
5	0.5330	6.159E-07	0.140E+00	55	1.8604	1.910E-06	0.432E-01	105	6.4936	1.446E-06	0.641E-01
6	0.5465	7.313E-07	0.105E+00	56	1.9075	1.960E-06	0.407E-01	106	6.6579	1.952E-06	0.559E-01
7	0.5604	5.640E-07	0.137E+00	57	1.9558	1.975E-06	0.422E-01	107	6.8265	2.016E-06	0.566E-01
8	0.5745	5.641E-07	0.141E+00	58	2.0053	1.876E-06	0.421E-01	108	6.9993	2.391E-06	0.510E-01
9	0.5891	6.965E-07	0.102E+00	59	2.0561	1.745E-06	0.454E-01	109	7.1765	1.965E-06	0.563E-01
10	0.6040	8.329E-07	0.940E-01	60	2.1081	1.656E-06	0.471E-01	110	7.3582	1.381E-06	0.724E-01
11	0.6193	8.720E-07	0.877E-01	61	2.1615	1.811E-06	0.444E-01	111	7.5444	9.883E-07	0.886E-01
12	0.6350	8.621E-07	0.835E-01	62	2.2162	1.775E-06	0.458E-01	112	7.7354	8.672E-07	0.974E-01
13	0.6510	9.115E-07	0.780E-01	63	2.2723	1.725E-06	0.466E-01	113	7.9312	8.998E-07	0.992E-01
14	0.6675	7.632E-07	0.947E-01	64	2.3299	1.800E-06	0.446E-01	114	8.1320	1.006E-06	0.966E-01
15	0.6844	8.611E-07	0.822E-01	65	2.3888	1.802E-06	0.438E-01	115	8.3379	1.300E-06	0.770E-01
16	0.7017	1.124E-06	0.652E-01	66	2.4493	1.630E-06	0.483E-01	116	8.5490	1.515E-06	0.730E-01
17	0.7195	9.633E-07	0.698E-01	67	2.5113	1.544E-06	0.505E-01	117	8.7654	1.915E-06	0.642E-01
18	0.7377	9.671E-07	0.699E-01	68	2.5749	1.472E-06	0.518E-01	118	8.9873	2.523E-06	0.524E-01
19	0.7564	9.589E-07	0.698E-01	69	2.6401	1.401E-06	0.545E-01	119	9.2148	3.288E-06	0.472E-01
20	0.7755	9.637E-07	0.675E-01	70	2.7069	1.212E-06	0.613E-01	120	9.4481	5.089E-06	0.370E-01
21	0.7952	1.020E-06	0.632E-01	71	2.7754	1.112E-06	0.644E-01	121	9.6872	7.986E-06	0.286E-01
22	0.8153	1.106E-06	0.625E-01	72	2.8457	1.066E-06	0.672E-01	122	9.9325	1.159E-05	0.240E-01
23	0.8360	1.127E-06	0.597E-01	73	2.9177	1.229E-06	0.593E-01	123	10.1840	1.629E-05	0.202E-01
24	0.8571	1.189E-06	0.578E-01	74	2.9916	1.440E-06	0.545E-01	124	10.4420	1.587E-05	0.206E-01
25	0.8788	1.147E-06	0.616E-01	75	3.0673	1.496E-06	0.540E-01	125	10.7060	9.790E-06	0.263E-01
26	0.9010	1.253E-06	0.567E-01	76	3.1450	1.335E-06	0.584E-01	126	10.9770	3.907E-06	0.439E-01
27	0.9239	1.173E-06	0.579E-01	77	3.2246	1.235E-06	0.621E-01	127	11.2550	1.789E-06	0.736E-01
28	0.9473	1.301E-06	0.541E-01	78	3.3062	1.083E-06	0.680E-01	128	11.5400	1.361E-06	0.926E-01
29	0.9712	1.331E-06	0.540E-01	79	3.3899	9.985E-07	0.717E-01	129	11.8320	1.737E-06	0.764E-01
30	0.9958	1.258E-06	0.548E-01	80	3.4758	1.037E-06	0.707E-01	130	12.1320	2.187E-06	0.650E-01
31	1.0210	1.372E-06	0.525E-01	81	3.5637	1.085E-06	0.703E-01	131	12.4390	2.702E-06	0.568E-01
32	1.0469	1.393E-06	0.526E-01	82	3.6540	1.058E-06	0.744E-01	132	12.7540	3.847E-06	0.455E-01
33	1.0734	1.438E-06	0.514E-01	83	3.7465	1.297E-06	0.641E-01	133	13.0760	5.321E-06	0.390E-01
34	1.1006	1.396E-06	0.523E-01	84	3.8413	1.473E-06	0.580E-01	134	13.4070	1.039E-05	0.273E-01
35	1.1284	1.391E-06	0.524E-01	85	3.9385	1.530E-06	0.577E-01	135	13.7470	2.136E-05	0.189E-01
36	1.1570	1.386E-06	0.510E-01	86	4.0382	1.860E-06	0.506E-01	136	14.0950	4.425E-05	0.130E-01
37	1.1863	1.576E-06	0.472E-01	87	4.1405	1.972E-06	0.485E-01	137	14.4520	9.139E-05	0.903E-02
38	1.2163	1.495E-06	0.487E-01	88	4.2453	1.884E-06	0.516E-01	138	14.8180	1.436E-04	0.719E-02
39	1.2471	1.632E-06	0.448E-01	89	4.3528	2.109E-06	0.482E-01	139	15.1930	1.247E-04	0.764E-02
40	1.2787	1.440E-06	0.514E-01	90	4.4630	2.406E-06	0.440E-01	140	15.5770	5.268E-05	0.116E-01
41	1.3110	1.443E-06	0.519E-01	91	4.5759	2.833E-06	0.394E-01	141	15.9720	1.158E-05	0.244E-01
42	1.3442	1.516E-06	0.495E-01	92	4.6918	3.219E-06	0.365E-01	142	16.3760	2.699E-06	0.505E-01
43	1.3782	1.636E-06	0.454E-01	93	4.8105	3.620E-06	0.342E-01	143	16.7900	7.384E-07	0.993E-01
44	1.4131	1.544E-06	0.498E-01	94	4.9323	3.710E-06	0.337E-01	144	17.2160	1.222E-07	0.315E+00
45	1.4489	1.595E-06	0.487E-01	95	5.0572	3.959E-06	0.322E-01	145	17.6510	3.294E-08	0.925E+00
46	1.4856	1.625E-06	0.469E-01	96	5.1852	3.506E-06	0.391E-01	146	18.0980	-2.546E-08	0.862E+00
47	1.5232	1.771E-06	0.447E-01	97	5.3165	2.718E-06	0.443E-01	147	18.5560	-3.149E-08	0.741E+00
48	1.5618	1.709E-06	0.466E-01	98	5.4511	2.464E-06	0.465E-01	148	19.0260	2.582E-05	0.733E+00
49	1.6013	1.762E-06	0.459E-01	99	5.5891	1.965E-06	0.524E-01	149	19.5080	-3.868E-09	0.405E+01
50	1.6419	1.634E-06	0.472E-01	100	5.7305	1.705E-06	0.587E-01	150	20.0020	-1.102E-08	0.175E+01

* ENERGY = [MEV]
** ERROR X 100 = %

Table 3.1.14

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESS=20 CM, ANGLE=12.2 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.7516	-2.755E-10	1.000E+02	51	5.6539	1.562E-05	3.425E-03	101	1.6213	1.794E-05	3.110E-03
2	19.2639	-3.722E-10	1.000E+02	52	5.5192	1.567E-05	3.418E-03	102	1.5813	1.799E-05	3.105E-03
3	18.7383	2.734E-10	1.000E+02	53	5.3829	1.573E-05	3.409E-03	103	1.5422	1.803E-05	3.099E-03
4	18.3244	-5.140E-10	1.000E+02	54	5.2500	1.580E-05	3.400E-03	104	1.5042	1.808E-05	3.094E-03
5	17.8719	-1.150E-09	1.000E+02	55	5.1204	1.589E-05	3.388E-03	105	1.4670	1.812E-05	3.088E-03
6	17.4307	-3.269E-10	1.000E+02	56	4.9940	1.599E-05	3.373E-03	106	1.4308	1.816E-05	3.084E-03
7	17.0003	2.728E-09	1.000E+02	57	4.8707	1.608E-05	3.359E-03	107	1.3955	1.819E-05	3.079E-03
8	16.5806	2.119E-08	1.170E-01	58	4.7504	1.617E-05	3.346E-03	108	1.3610	1.824E-05	3.073E-03
9	16.1712	8.866E-08	4.754E-02	59	4.6331	1.625E-05	3.334E-03	109	1.3274	1.827E-05	3.069E-03
10	15.7719	3.783E-07	2.176E-02	60	4.5187	1.632E-05	3.324E-03	110	1.2946	1.831E-05	3.064E-03
11	15.3825	1.695E-06	1.024E-02	61	4.4072	1.638E-05	3.316E-03	111	1.2627	1.835E-05	3.060E-03
12	15.0027	4.814E-06	6.122E-03	62	4.2984	1.644E-05	3.309E-03	112	1.2315	1.839E-05	3.055E-03
13	14.6323	8.403E-06	4.660E-03	63	4.1922	1.648E-05	3.303E-03	113	1.2011	1.843E-05	3.050E-03
14	14.2710	1.069E-05	4.142E-03	64	4.0887	1.653E-05	3.296E-03	114	1.1714	1.846E-05	3.046E-03
15	13.9187	1.179E-05	3.947E-03	65	3.9878	1.658E-05	3.290E-03	115	1.1425	1.850E-05	3.041E-03
16	13.5750	1.233E-05	3.864E-03	66	3.8893	1.662E-05	3.285E-03	116	1.1143	1.853E-05	3.037E-03
17	13.2399	1.259E-05	3.826E-03	67	3.7933	1.665E-05	3.280E-03	117	1.0868	1.857E-05	3.033E-03
18	12.9130	1.272E-05	3.808E-03	68	3.6996	1.669E-05	3.276E-03	118	1.0600	1.860E-05	3.029E-03
19	12.5941	1.282E-05	3.794E-03	69	3.6083	1.671E-05	3.273E-03	119	1.0338	1.864E-05	3.025E-03
20	12.2832	1.288E-05	3.786E-03	70	3.5192	1.674E-05	3.270E-03	120	1.0083	1.867E-05	3.021E-03
21	11.9799	1.294E-05	3.780E-03	71	3.4323	1.677E-05	3.267E-03	121	0.9834	1.871E-05	3.017E-03
22	11.6841	1.298E-05	3.776E-03	72	3.3476	1.679E-05	3.264E-03	122	0.9591	1.874E-05	3.013E-03
23	11.3957	1.302E-05	3.774E-03	73	3.2649	1.682E-05	3.260E-03	123	0.9354	1.877E-05	3.010E-03
24	11.1143	1.306E-05	3.770E-03	74	3.1843	1.685E-05	3.256E-03	124	0.9123	1.880E-05	3.006E-03
25	10.8399	1.316E-05	3.756E-03	75	3.1057	1.688E-05	3.252E-03	125	0.8898	1.883E-05	3.003E-03
26	10.5722	1.340E-05	3.720E-03	76	3.0290	1.692E-05	3.247E-03	126	0.8678	1.886E-05	3.000E-03
27	10.3112	1.380E-05	3.661E-03	77	2.9542	1.696E-05	3.242E-03	127	0.8464	1.889E-05	2.996E-03
28	10.0566	1.421E-05	3.603E-03	78	2.8813	1.699E-05	3.238E-03	128	0.8255	1.892E-05	2.993E-03
29	9.8083	1.460E-05	3.563E-03	79	2.8101	1.701E-05	3.235E-03	129	0.8051	1.895E-05	2.990E-03
30	9.5662	1.470E-05	3.536E-03	80	2.7408	1.704E-05	3.231E-03	130	0.7852	1.897E-05	2.987E-03
31	9.3300	1.482E-05	3.520E-03	81	2.6731	1.707E-05	3.227E-03	131	0.7659	1.900E-05	2.985E-03
32	9.0996	1.491E-05	3.511E-03	82	2.6071	1.711E-05	3.223E-03	132	0.7469	1.902E-05	2.982E-03
33	8.8749	1.497E-05	3.503E-03	83	2.5427	1.714E-05	3.218E-03	133	0.7285	1.904E-05	2.980E-03
34	8.6558	1.502E-05	3.498E-03	84	2.4799	1.718E-05	3.212E-03	134	0.7105	1.907E-05	2.978E-03
35	8.4421	1.506E-05	3.494E-03	85	2.4187	1.722E-05	3.207E-03	135	0.6930	1.910E-05	2.975E-03
36	8.2337	1.509E-05	3.490E-03	86	2.3590	1.727E-05	3.200E-03	136	0.6759	1.912E-05	2.973E-03
37	8.0304	1.511E-05	3.488E-03	87	2.3007	1.731E-05	3.194E-03	137	0.6592	1.914E-05	2.971E-03
38	7.8321	1.514E-05	3.486E-03	88	2.2439	1.736E-05	3.188E-03	138	0.6429	1.916E-05	2.969E-03
39	7.6387	1.516E-05	3.484E-03	89	2.1885	1.740E-05	3.182E-03	139	0.6270	1.918E-05	2.967E-03
40	7.4501	1.518E-05	3.481E-03	90	2.1345	1.745E-05	3.176E-03	140	0.6115	1.920E-05	2.966E-03
41	7.2662	1.522E-05	3.477E-03	91	2.0818	1.749E-05	3.171E-03	141	0.5964	1.922E-05	2.964E-03
42	7.0868	1.527E-05	3.471E-03	92	2.0304	1.753E-05	3.165E-03	142	0.5817	1.924E-05	2.963E-03
43	6.9118	1.533E-05	3.463E-03	93	1.9803	1.758E-05	3.158E-03	143	0.5674	1.925E-05	2.963E-03
44	6.7412	1.539E-05	3.456E-03	94	1.9314	1.763E-05	3.152E-03	144	0.5533	1.927E-05	2.962E-03
45	6.5747	1.542E-05	3.450E-03	95	1.8837	1.768E-05	3.145E-03	145	0.5397	1.929E-05	2.961E-03
46	6.4124	1.546E-05	3.445E-03	96	1.8372	1.772E-05	3.139E-03	146	0.5264	1.930E-05	2.961E-03
47	6.2541	1.549E-05	3.442E-03	97	1.7918	1.777E-05	3.133E-03	147	0.5134	1.932E-05	2.961E-03
48	6.0997	1.552E-05	3.439E-03	98	1.7476	1.781E-05	3.127E-03	148	0.5007	1.933E-05	2.960E-03
49	5.9491	1.555E-05	3.435E-03	99	1.7044	1.786E-05	3.122E-03	149	0.4883	1.934E-05	2.961E-03
50	5.8022	1.559E-05	3.430E-03	100	1.6623	1.790E-05	3.116E-03	150	0.4763	1.935E-05	2.962E-03

* ENERGY = LOWER BOUNDARY [MEV]
** ERROR X 100 = %

Table 3.1.15

ANGULAR FLUX OF GRAPHITE SLAB TOF [THICKNESS=20 CM, ANGLE=24.9 DEG]

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.4823	5.316E-07	0.173E+00	51	1.6834	1.623E-06	0.475E-01	101	5.8756	9.905E-07	0.798E-01
2	0.4943	4.267E-07	0.211E+00	52	1.7260	1.590E-06	0.479E-01	102	6.0244	9.449E-07	0.806E-01
3	0.5070	5.959E-07	0.147E+00	53	1.7697	1.680E-06	0.448E-01	103	6.1769	8.215E-07	0.934E-01
4	0.5199	7.486E-07	0.111E+00	54	1.8145	1.753E-06	0.454E-01	104	6.3332	1.171E-06	0.715E-01
5	0.5330	4.853E-07	0.169E+00	55	1.8604	1.827E-06	0.437E-01	105	6.4936	1.406E-06	0.623E-01
6	0.5465	5.640E-07	0.143E+00	56	1.9075	1.955E-06	0.407E-01	106	6.6579	1.522E-06	0.605E-01
7	0.5604	6.970E-07	0.110E+00	57	1.9558	1.747E-06	0.453E-01	107	6.8265	1.561E-06	0.604E-01
8	0.5745	8.232E-07	0.955E-01	58	2.0053	1.825E-06	0.431E-01	108	6.9993	1.352E-06	0.679E-01
9	0.5891	7.630E-07	0.999E-01	59	2.0561	1.846E-06	0.429E-01	109	7.1765	1.057E-06	0.811E-01
10	0.6040	7.909E-07	0.927E-01	60	2.1081	1.735E-06	0.452E-01	110	7.3582	8.289E-07	0.102E+00
11	0.6193	7.315E-07	0.101E+00	61	2.1615	1.638E-06	0.454E-01	111	7.5444	7.976E-07	0.965E-01
12	0.6350	1.011E-06	0.731E-01	62	2.2162	1.656E-06	0.450E-01	112	7.7354	7.999E-07	0.105E+00
13	0.6510	7.841E-07	0.998E-01	63	2.2723	1.499E-06	0.501E-01	113	7.9312	9.246E-07	0.950E-01
14	0.6675	8.260E-07	0.839E-01	64	2.3299	1.551E-06	0.482E-01	114	8.1320	1.320E-06	0.727E-01
15	0.6844	9.912E-07	0.695E-01	65	2.3888	1.564E-06	0.481E-01	115	8.3379	1.476E-06	0.698E-01
16	0.7017	9.208E-07	0.729E-01	66	2.4493	1.347E-06	0.553E-01	116	8.5490	2.095E-06	0.537E-01
17	0.7195	9.521E-07	0.733E-01	67	2.5113	1.561E-06	0.460E-01	117	8.7654	2.950E-06	0.443E-01
18	0.7377	1.039E-06	0.653E-01	68	2.5749	1.333E-06	0.538E-01	118	8.9873	3.587E-06	0.410E-01
19	0.7564	9.950E-07	0.653E-01	69	2.6401	1.246E-06	0.529E-01	119	9.2148	5.300E-06	0.329E-01
20	0.7755	9.314E-07	0.713E-01	70	2.7069	1.155E-06	0.559E-01	120	9.4481	7.981E-06	0.269E-01
21	0.7952	1.221E-06	0.540E-01	71	2.7754	9.956E-07	0.637E-01	121	9.6872	1.080E-05	0.229E-01
22	0.8153	1.085E-06	0.596E-01	72	2.8457	1.027E-06	0.651E-01	122	9.9325	1.074E-05	0.230E-01
23	0.8360	1.151E-06	0.582E-01	73	2.9177	1.273E-06	0.541E-01	123	10.1840	7.427E-06	0.286E-01
24	0.8571	1.032E-06	0.621E-01	74	2.9916	1.338E-06	0.525E-01	124	10.4420	3.763E-06	0.423E-01
25	0.8788	1.170E-06	0.550E-01	75	3.0673	1.193E-06	0.602E-01	125	10.7060	1.830E-06	0.665E-01
26	0.9010	1.248E-06	0.532E-01	76	3.1450	1.035E-06	0.628E-01	126	10.9770	1.371E-06	0.771E-01
27	0.9239	1.134E-06	0.569E-01	77	3.2246	9.820E-07	0.684E-01	127	11.2550	1.320E-06	0.840E-01
28	0.9473	1.347E-06	0.503E-01	78	3.3062	1.042E-06	0.655E-01	128	11.5400	1.348E-06	0.836E-01
29	0.9712	1.262E-06	0.542E-01	79	3.3899	9.107E-07	0.744E-01	129	11.8320	1.756E-06	0.680E-01
30	0.9958	1.275E-06	0.549E-01	80	3.4758	8.736E-07	0.777E-01	130	12.1320	2.222E-06	0.582E-01
31	1.0210	1.319E-06	0.526E-01	81	3.5637	1.174E-06	0.620E-01	131	12.4390	2.677E-06	0.537E-01
32	1.0469	1.327E-06	0.531E-01	82	3.6540	1.263E-06	0.603E-01	132	12.7540	3.622E-06	0.441E-01
33	1.0734	1.411E-06	0.483E-01	83	3.7465	1.289E-06	0.602E-01	133	13.0760	6.584E-06	0.318E-01
34	1.1006	1.361E-06	0.508E-01	84	3.8413	1.566E-06	0.528E-01	134	13.4070	1.387E-05	0.217E-01
35	1.1284	1.356E-06	0.515E-01	85	3.9385	1.732E-06	0.494E-01	135	13.7470	2.834E-05	0.150E-01
36	1.1570	1.356E-06	0.499E-01	86	4.0382	1.770E-06	0.478E-01	136	14.0950	4.765E-05	0.116E-01
37	1.1863	1.365E-06	0.497E-01	87	4.1405	1.907E-06	0.458E-01	137	14.4520	5.623E-05	0.107E-01
38	1.2163	1.376E-06	0.516E-01	88	4.2453	1.885E-06	0.477E-01	138	14.8180	3.541E-05	0.134E-01
39	1.2471	1.492E-06	0.469E-01	89	4.3528	2.328E-06	0.402E-01	139	15.1930	1.159E-05	0.233E-01
40	1.2787	1.398E-06	0.504E-01	90	4.4630	2.721E-06	0.371E-01	140	15.5770	2.354E-06	0.533E-01
41	1.3110	1.338E-06	0.556E-01	91	4.5759	2.579E-06	0.338E-01	141	15.9720	8.800E-07	0.834E-01
42	1.3442	1.510E-06	0.485E-01	92	4.6918	2.764E-06	0.331E-01	142	16.3760	3.017E-07	0.168E+00
43	1.3782	1.560E-06	0.473E-01	93	4.8105	2.667E-06	0.382E-01	143	16.7900	1.053E-07	0.325E+00
44	1.4131	1.579E-06	0.464E-01	94	4.9323	2.521E-06	0.403E-01	144	17.2160	5.231E-08	0.487E+00
45	1.4489	1.647E-06	0.446E-01	95	5.0572	2.206E-06	0.446E-01	145	17.6510	5.739E-09	0.407E+01
46	1.4856	1.636E-06	0.444E-01	96	5.1852	1.936E-06	0.500E-01	146	18.0980	2.714E-08	0.764E+00
47	1.5232	1.717E-06	0.436E-01	97	5.3165	1.639E-06	0.565E-01	147	18.5560	2.425E-08	0.841E+00
48	1.5618	1.689E-06	0.438E-01	98	5.4511	1.564E-06	0.565E-01	148	19.0260	2.384E-08	0.786E+00
49	1.6013	1.476E-06	0.493E-01	99	5.5891	1.206E-06	0.704E-01	149	19.5080	-2.072E-09	0.105E+02
50	1.6418	1.473E-06	0.502E-01	100	5.7305	1.202E-06	0.658E-01	150	20.0020	2.016E-08	0.107E+01

* ENERGY = [MEV]

** ERROR X 100 = %

Table 3.1.16

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESS=20 CM, ANGLE=24.9 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.7516	5.040E-10	1.000E+02	51	5.6589	7.311E-06	4.683E-03	101	1.6213	9.337E-06	3.970E-03
2	19.2639	4.522E-10	1.000E+02	52	5.5192	7.341E-06	4.672E-03	102	1.5813	9.373E-06	3.959E-03
3	18.7883	1.048E-09	1.000E+02	53	5.3829	7.380E-06	4.657E-03	103	1.5422	9.416E-06	3.946E-03
4	18.3244	1.654E-09	1.000E+02	54	5.2500	7.421E-06	4.642E-03	104	1.5042	9.459E-06	3.933E-03
5	17.8719	2.333E-09	1.000E+02	55	5.1204	7.469E-06	4.623E-03	105	1.4670	9.500E-06	3.921E-03
6	17.4307	2.476E-09	1.000E+02	56	4.9940	7.524E-06	4.601E-03	106	1.4308	9.541E-06	3.909E-03
7	17.0003	3.784E-09	1.000E+02	57	4.8707	7.587E-06	4.575E-03	107	1.3955	9.580E-06	3.897E-03
8	16.5806	6.418E-09	1.000E+02	58	4.7504	7.654E-06	4.547E-03	108	1.3610	9.619E-06	3.886E-03
9	16.1712	1.396E-08	1.505E-01	59	4.6331	7.723E-06	4.520E-03	109	1.3274	9.657E-06	3.876E-03
10	15.7719	3.596E-08	7.757E-02	60	4.5187	7.788E-06	4.494E-03	110	1.2946	9.690E-06	3.867E-03
11	15.3825	9.480E-08	4.423E-02	61	4.4072	7.856E-06	4.466E-03	111	1.2627	9.725E-06	3.857E-03
12	15.0027	3.845E-07	2.068E-02	62	4.2984	7.914E-06	4.443E-03	112	1.2315	9.763E-06	3.847E-03
13	14.6323	1.270E-06	1.123E-02	63	4.1922	7.961E-06	4.426E-03	113	1.2011	9.797E-06	3.838E-03
14	14.2710	2.675E-06	7.731E-03	64	4.0887	8.009E-06	4.408E-03	114	1.1714	9.831E-06	3.828E-03
15	13.9187	3.867E-06	6.436E-03	65	3.9878	8.053E-06	4.392E-03	115	1.1425	9.865E-06	3.819E-03
16	13.5750	4.575E-06	5.917E-03	66	3.8893	8.096E-06	4.376E-03	116	1.1143	9.899E-06	3.810E-03
17	13.2399	4.922E-06	5.708E-03	67	3.7933	8.135E-06	4.363E-03	117	1.0868	9.933E-06	3.801E-03
18	12.9130	5.086E-06	5.618E-03	68	3.6996	8.163E-06	4.352E-03	118	1.0600	9.968E-06	3.791E-03
19	12.5941	5.177E-06	5.574E-03	69	3.6083	8.199E-06	4.341E-03	119	1.0338	1.000E-05	3.783E-03
20	12.2832	5.244E-06	5.545E-03	70	3.5192	8.223E-06	4.331E-03	120	1.0083	1.003E-05	3.774E-03
21	11.9799	5.299E-06	5.521E-03	71	3.4323	8.250E-06	4.325E-03	121	0.9834	1.007E-05	3.766E-03
22	11.6841	5.343E-06	5.504E-03	72	3.3476	8.273E-06	4.318E-03	122	0.9591	1.010E-05	3.758E-03
23	11.3957	5.377E-06	5.494E-03	73	3.2649	8.299E-06	4.309E-03	123	0.9354	1.013E-05	3.750E-03
24	11.1143	5.410E-06	5.485E-03	74	3.1843	8.324E-06	4.301E-03	124	0.9123	1.016E-05	3.742E-03
25	10.8399	5.444E-06	5.472E-03	75	3.1057	8.351E-06	4.292E-03	125	0.8898	1.019E-05	3.735E-03
26	10.5722	5.490E-06	5.454E-03	76	3.0290	8.381E-06	4.282E-03	126	0.8678	1.022E-05	3.727E-03
27	10.3112	5.584E-06	5.410E-03	77	2.9542	8.414E-06	4.270E-03	127	0.8464	1.025E-05	3.721E-03
28	10.0566	5.770E-06	5.316E-03	78	2.8813	8.446E-06	4.259E-03	128	0.8255	1.028E-05	3.714E-03
29	9.8083	6.038E-06	5.181E-03	79	2.8101	8.472E-06	4.251E-03	129	0.8051	1.030E-05	3.708E-03
30	9.5662	6.308E-06	5.056E-03	80	2.7408	8.496E-06	4.242E-03	130	0.7852	1.033E-05	3.700E-03
31	9.3300	6.508E-06	4.970E-03	81	2.6731	8.525E-06	4.232E-03	131	0.7659	1.036E-05	3.695E-03
32	9.0996	6.640E-06	4.915E-03	82	2.6071	8.557E-06	4.221E-03	132	0.7469	1.038E-05	3.690E-03
33	8.8749	6.730E-06	4.880E-03	83	2.5427	8.590E-06	4.210E-03	133	0.7285	1.041E-05	3.684E-03
34	8.6558	6.804E-06	4.851E-03	84	2.4799	8.629E-06	4.196E-03	134	0.7105	1.043E-05	3.680E-03
35	8.4421	6.856E-06	4.831E-03	85	2.4187	8.663E-06	4.185E-03	135	0.6930	1.045E-05	3.675E-03
36	8.2337	6.893E-06	4.820E-03	86	2.3590	8.702E-06	4.172E-03	136	0.6759	1.048E-05	3.670E-03
37	8.0304	6.926E-06	4.809E-03	87	2.3007	8.740E-06	4.159E-03	137	0.6592	1.050E-05	3.666E-03
38	7.8321	6.949E-06	4.804E-03	88	2.2439	8.778E-06	4.147E-03	138	0.6429	1.052E-05	3.663E-03
39	7.6387	6.969E-06	4.799E-03	89	2.1885	8.819E-06	4.133E-03	139	0.6270	1.055E-05	3.659E-03
40	7.4501	6.989E-06	4.794E-03	90	2.1345	8.860E-06	4.119E-03	140	0.6115	1.056E-05	3.657E-03
41	7.2662	7.010E-06	4.789E-03	91	2.0818	8.904E-06	4.105E-03	141	0.5964	1.058E-05	3.654E-03
42	7.0868	7.036E-06	4.781E-03	92	2.0304	8.950E-06	4.090E-03	142	0.5817	1.060E-05	3.652E-03
43	6.9116	7.070E-06	4.769E-03	93	1.9803	8.995E-06	4.075E-03	143	0.5674	1.062E-05	3.649E-03
44	6.7412	7.109E-06	4.754E-03	94	1.9314	9.039E-06	4.061E-03	144	0.5533	1.064E-05	3.648E-03
45	6.5747	7.147E-06	4.740E-03	95	1.8837	9.088E-06	4.045E-03	145	0.5397	1.065E-05	3.648E-03
46	6.4124	7.182E-06	4.726E-03	96	1.8372	9.134E-06	4.031E-03	146	0.5264	1.067E-05	3.649E-03
47	6.2541	7.212E-06	4.716E-03	97	1.7918	9.177E-06	4.017E-03	147	0.5134	1.069E-05	3.648E-03
48	6.0997	7.232E-06	4.710E-03	98	1.7476	9.219E-06	4.004E-03	148	0.5007	1.070E-05	3.648E-03
49	5.9491	7.256E-06	4.702E-03	99	1.7044	9.259E-06	3.993E-03	149	0.4883	1.071E-05	3.651E-03
50	5.8022	7.281E-06	4.694E-03	100	1.6623	9.300E-06	3.980E-03	150	0.4763	1.072E-05	3.653E-03

* ENERGY = LOWER BOUNDARY [MEV]
** ERROR X 100 = %

Table 3.1.17

ANGULAR FLUX OF GRAPHITE SLAB TOF [THICKNESS=20 CM, ANGLE=41.8 DEG]

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.4823	5.959E-07	0.158E+00	51	1.6934	1.390E-06	0.573E-01	101	5.8756	7.293E-07	0.972E-01
2	0.4945	4.673E-07	0.190E+00	52	1.7260	1.403E-06	0.591E-01	102	6.0244	7.892E-07	0.933E-01
3	0.5070	5.563E-07	0.163E+00	53	1.7697	1.527E-06	0.539E-01	103	6.1769	7.803E-07	0.986E-01
4	0.5199	5.086E-07	0.172E+00	54	1.8145	1.652E-06	0.495E-01	104	6.3332	1.055E-06	0.804E-01
5	0.5330	6.564E-07	0.133E+00	55	1.8604	1.544E-06	0.543E-01	105	6.4936	1.247E-06	0.713E-01
6	0.5465	6.034E-07	0.139E+00	56	1.9075	1.502E-06	0.550E-01	106	6.6579	1.054E-06	0.847E-01
7	0.5604	7.940E-07	0.963E-01	57	1.9558	1.567E-06	0.547E-01	107	6.8265	1.214E-06	0.718E-01
8	0.5745	7.375E-07	0.953E-01	58	2.0053	1.523E-06	0.533E-01	108	6.9993	1.038E-06	0.843E-01
9	0.5891	6.524E-07	0.113E+00	59	2.0561	1.470E-06	0.554E-01	109	7.1765	8.407E-07	0.998E-01
10	0.6040	7.331E-07	0.102E+00	60	2.1081	1.402E-06	0.598E-01	110	7.3582	9.245E-07	0.941E-01
11	0.6193	7.847E-07	0.980E-01	61	2.1615	1.328E-06	0.624E-01	111	7.5444	8.342E-07	0.939E-01
12	0.6350	7.150E-07	0.101E+00	62	2.2162	1.432E-06	0.580E-01	112	7.7354	9.718E-07	0.913E-01
13	0.6510	8.859E-07	0.811E-01	63	2.2723	1.282E-06	0.648E-01	113	7.9312	1.438E-06	0.703E-01
14	0.6675	8.666E-07	0.870E-01	64	2.3299	1.443E-06	0.561E-01	114	8.1320	1.886E-06	0.584E-01
15	0.6844	8.964E-07	0.805E-01	65	2.3888	1.374E-06	0.602E-01	115	8.3379	2.328E-06	0.509E-01
16	0.7017	9.623E-07	0.743E-01	66	2.4493	1.185E-06	0.677E-01	116	8.5490	2.480E-06	0.505E-01
17	0.7195	9.248E-07	0.751E-01	67	2.5113	1.232E-06	0.656E-01	117	8.7654	2.768E-06	0.496E-01
18	0.7377	8.776E-07	0.796E-01	68	2.5749	1.235E-06	0.628E-01	118	8.9873	3.582E-06	0.417E-01
19	0.7564	8.979E-07	0.748E-01	69	2.6401	1.088E-06	0.693E-01	119	9.2148	4.158E-06	0.389E-01
20	0.7755	9.819E-07	0.706E-01	70	2.7069	9.775E-07	0.775E-01	120	9.4481	4.330E-06	0.386E-01
21	0.7952	9.814E-07	0.671E-01	71	2.7754	9.505E-07	0.755E-01	121	9.6872	4.574E-06	0.380E-01
22	0.8153	1.020E-06	0.635E-01	72	2.8457	9.812E-07	0.737E-01	122	9.9325	3.245E-06	0.487E-01
23	0.8360	1.016E-06	0.654E-01	73	2.9177	1.051E-06	0.703E-01	123	10.1840	2.240E-06	0.574E-01
24	0.8571	1.015E-06	0.638E-01	74	2.9916	1.053E-06	0.690E-01	124	10.4420	1.350E-06	0.839E-01
25	0.8788	1.233E-06	0.549E-01	75	3.0673	1.087E-06	0.661E-01	125	10.7060	1.059E-06	0.972E-01
26	0.9010	1.015E-06	0.659E-01	76	3.1450	9.491E-07	0.718E-01	126	10.9770	1.148E-06	0.914E-01
27	0.9239	1.198E-06	0.582E-01	77	3.2246	9.323E-07	0.711E-01	127	11.2550	1.404E-06	0.821E-01
28	0.9473	1.070E-06	0.626E-01	78	3.3062	6.979E-07	0.979E-01	128	11.5400	1.835E-06	0.685E-01
29	0.9712	1.067E-06	0.648E-01	79	3.3899	7.662E-07	0.798E-01	129	11.8320	2.142E-06	0.629E-01
30	0.9958	9.967E-07	0.682E-01	80	3.4758	8.755E-07	0.743E-01	130	12.1320	3.098E-06	0.490E-01
31	1.0210	1.145E-06	0.636E-01	81	3.5637	9.301E-07	0.757E-01	131	12.4390	3.637E-06	0.445E-01
32	1.0469	1.135E-06	0.619E-01	82	3.6540	1.173E-06	0.617E-01	132	12.7540	4.319E-06	0.412E-01
33	1.0734	1.210E-06	0.595E-01	83	3.7465	1.316E-06	0.586E-01	133	13.0760	5.213E-06	0.373E-01
34	1.1006	1.125E-06	0.618E-01	84	3.8413	1.419E-06	0.557E-01	134	13.4070	7.166E-06	0.314E-01
35	1.1284	1.325E-06	0.545E-01	85	3.9385	1.436E-06	0.570E-01	135	13.7470	9.570E-06	0.268E-01
36	1.1570	1.295E-06	0.523E-01	86	4.0382	1.535E-06	0.522E-01	136	14.0950	1.111E-05	0.248E-01
37	1.1863	1.148E-06	0.621E-01	87	4.1405	1.653E-06	0.519E-01	137	14.4520	9.043E-06	0.277E-01
38	1.2163	1.237E-06	0.575E-01	88	4.2453	1.755E-06	0.479E-01	138	14.8180	4.390E-06	0.408E-01
39	1.2471	1.290E-06	0.553E-01	89	4.3528	1.688E-06	0.533E-01	139	15.1930	1.309E-06	0.766E-01
40	1.2787	1.323E-06	0.562E-01	90	4.4630	1.789E-06	0.520E-01	140	15.5770	3.421E-07	0.158E+00
41	1.3110	1.372E-06	0.541E-01	91	4.5759	1.629E-06	0.558E-01	141	15.9720	6.425E-08	0.497E+00
42	1.3442	1.287E-06	0.583E-01	92	4.6918	1.594E-06	0.542E-01	142	16.3760	5.535E-09	0.564E+01
43	1.3782	1.298E-06	0.597E-01	93	4.8105	1.685E-06	0.552E-01	143	16.7900	7.156E-08	0.372E+00
44	1.4131	1.382E-06	0.550E-01	94	4.9323	1.532E-06	0.595E-01	144	17.2160	1.040E-08	0.277E+01
45	1.4489	1.272E-06	0.592E-01	95	5.0572	1.318E-06	0.677E-01	145	17.6510	1.092E-08	0.230E+01
46	1.4856	1.453E-06	0.515E-01	96	5.1852	1.267E-06	0.682E-01	146	18.0980	2.422E-08	0.895E+00
47	1.5232	1.435E-06	0.541E-01	97	5.3165	1.315E-06	0.676E-01	147	18.5560	1.141E-08	0.231E+01
48	1.5618	1.413E-06	0.536E-01	98	5.4511	1.094E-06	0.753E-01	148	19.0260	1.474E-08	0.139E+01
49	1.6013	1.430E-06	0.533E-01	99	5.5891	9.926E-07	0.776E-01	149	19.5080	2.770E-08	0.793E+00
50	1.6418	1.545E-06	0.503E-01	100	5.7305	9.354E-07	0.861E-01	150	20.0020	-3.612E-08	0.736E+00

* ENERGY = [MEV]
** ERROR X 100 = %

Table 3.1.18

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESS=20 CM, ANGLE=41.8 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.7516	-9.031E-10	1.000E+02	51	5.6589	2.845E-06	7.945E-03	101	1.6213	4.485E-06	5.951E-03
2	19.2639	-2.107E-10	1.000E+02	52	5.5192	2.869E-06	7.905E-03	102	1.5813	4.521E-06	5.919E-03
3	18.7383	1.577E-10	1.000E+02	53	5.3829	2.897E-06	7.863E-03	103	1.5422	4.556E-06	5.888E-03
4	18.3244	4.430E-10	1.000E+02	54	5.2500	2.930E-06	7.811E-03	104	1.5042	4.592E-06	5.857E-03
5	17.8719	1.049E-09	1.000E+02	55	5.1204	2.961E-06	7.762E-03	105	1.4670	4.628E-06	5.825E-03
6	17.4307	1.322E-09	1.000E+02	56	4.9940	2.994E-06	7.713E-03	106	1.4308	4.660E-06	5.800E-03
7	17.0003	1.582E-09	1.000E+02	57	4.8707	3.032E-06	7.652E-03	107	1.3955	4.695E-06	5.771E-03
8	16.5806	3.371E-09	1.000E+02	58	4.7504	3.075E-06	7.585E-03	108	1.3610	4.727E-06	5.746E-03
9	16.1712	3.509E-09	1.000E+02	59	4.6331	3.114E-06	7.520E-03	109	1.3274	4.759E-06	5.721E-03
10	15.7719	5.115E-09	1.000E+02	60	4.5187	3.155E-06	7.458E-03	110	1.2946	4.793E-06	5.693E-03
11	15.3825	1.367E-08	1.847E-01	61	4.4072	3.200E-06	7.390E-03	111	1.2627	4.827E-06	5.667E-03
12	15.0027	4.639E-08	7.666E-02	62	4.2984	3.242E-06	7.326E-03	112	1.2315	4.859E-06	5.642E-03
13	14.6323	1.561E-07	3.664E-02	63	4.1922	3.286E-06	7.257E-03	113	1.2011	4.890E-06	5.618E-03
14	14.2710	3.822E-07	2.220E-02	64	4.0887	3.327E-06	7.195E-03	114	1.1714	4.918E-06	5.597E-03
15	13.9187	6.600E-07	1.657E-02	65	3.9878	3.366E-06	7.138E-03	115	1.1425	4.951E-06	5.571E-03
16	13.5750	8.992E-07	1.410E-02	66	3.8893	3.402E-06	7.089E-03	116	1.1143	4.984E-06	5.545E-03
17	13.2399	1.075E-06	1.287E-02	67	3.7933	3.437E-06	7.039E-03	117	1.0868	5.012E-06	5.525E-03
18	12.9130	1.209E-06	1.216E-02	68	3.6996	3.470E-06	6.994E-03	118	1.0600	5.042E-06	5.504E-03
19	12.5941	1.317E-06	1.166E-02	69	3.6083	3.499E-06	6.955E-03	119	1.0338	5.071E-06	5.484E-03
20	12.2832	1.408E-06	1.128E-02	70	3.5192	3.524E-06	6.927E-03	120	1.0083	5.099E-06	5.465E-03
21	11.9799	1.485E-06	1.100E-02	71	3.4323	3.546E-06	6.899E-03	121	0.9834	5.124E-06	5.448E-03
22	11.6841	1.539E-06	1.084E-02	72	3.3476	3.565E-06	6.875E-03	122	0.9591	5.151E-06	5.430E-03
23	11.3957	1.584E-06	1.071E-02	73	3.2649	3.582E-06	6.858E-03	123	0.9354	5.178E-06	5.412E-03
24	11.1143	1.620E-06	1.063E-02	74	3.1843	3.606E-06	6.830E-03	124	0.9123	5.208E-06	5.391E-03
25	10.8399	1.648E-06	1.056E-02	75	3.1057	3.629E-06	6.801E-03	125	0.8898	5.233E-06	5.375E-03
26	10.5722	1.675E-06	1.051E-02	76	3.0290	3.656E-06	6.769E-03	126	0.8678	5.264E-06	5.353E-03
27	10.3112	1.708E-06	1.043E-02	77	2.9542	3.683E-06	6.738E-03	127	0.8464	5.289E-06	5.336E-03
28	10.0566	1.764E-06	1.026E-02	78	2.8813	3.709E-06	6.709E-03	128	0.8255	5.315E-06	5.320E-03
29	9.8083	1.846E-06	1.004E-02	79	2.8101	3.734E-06	6.682E-03	129	0.8051	5.340E-06	5.303E-03
30	9.5662	1.960E-06	9.715E-03	80	2.7408	3.757E-06	6.657E-03	130	0.7852	5.365E-06	5.288E-03
31	9.3300	2.068E-06	9.425E-03	81	2.6731	3.782E-06	6.633E-03	131	0.7659	5.389E-06	5.273E-03
32	9.0996	2.172E-06	9.165E-03	82	2.6071	3.809E-06	6.604E-03	132	0.7469	5.412E-06	5.261E-03
33	8.8749	2.262E-06	8.955E-03	83	2.5427	3.840E-06	6.571E-03	133	0.7285	5.433E-06	5.249E-03
34	8.6558	2.331E-06	8.813E-03	84	2.4799	3.871E-06	6.539E-03	134	0.7105	5.457E-06	5.237E-03
35	8.4421	2.393E-06	8.684E-03	85	2.4187	3.900E-06	6.510E-03	135	0.6930	5.481E-06	5.224E-03
36	8.2337	2.451E-06	8.564E-03	86	2.3590	3.935E-06	6.475E-03	136	0.6759	5.503E-06	5.213E-03
37	8.0304	2.498E-06	8.474E-03	87	2.3007	3.971E-06	6.436E-03	137	0.6592	5.525E-06	5.204E-03
38	7.8321	2.534E-06	8.414E-03	88	2.2439	4.003E-06	6.405E-03	138	0.6429	5.547E-06	5.193E-03
39	7.6387	2.558E-06	8.379E-03	89	2.1885	4.039E-06	6.369E-03	139	0.6270	5.565E-06	5.186E-03
40	7.4501	2.579E-06	8.346E-03	90	2.1345	4.072E-06	6.338E-03	140	0.6115	5.584E-06	5.180E-03
41	7.2662	2.602E-06	8.314E-03	91	2.0818	4.107E-06	6.305E-03	141	0.5964	5.603E-06	5.174E-03
42	7.0866	2.623E-06	8.286E-03	92	2.0304	4.144E-06	6.268E-03	142	0.5817	5.619E-06	5.169E-03
43	6.9113	2.649E-06	8.246E-03	93	1.9803	4.182E-06	6.230E-03	143	0.5674	5.639E-06	5.162E-03
44	6.7402	2.680E-06	8.193E-03	94	1.9314	4.221E-06	6.193E-03	144	0.5533	5.659E-06	5.155E-03
45	6.5732	2.706E-06	8.155E-03	95	1.8837	4.258E-06	6.157E-03	145	0.5397	5.674E-06	5.154E-03
46	6.4101	2.737E-06	8.103E-03	96	1.8372	4.297E-06	6.122E-03	146	0.5264	5.690E-06	5.154E-03
47	6.2509	2.764E-06	8.062E-03	97	1.7918	4.338E-06	6.082E-03	147	0.5134	5.703E-06	5.156E-03
48	6.0955	2.783E-06	8.036E-03	98	1.7476	4.376E-06	6.047E-03	148	0.5007	5.717E-06	5.159E-03
49	5.9439	2.803E-06	8.006E-03	99	1.7044	4.411E-06	6.017E-03	149	0.4883	5.728E-06	5.163E-03
50	5.7960	2.821E-06	7.979E-03	100	1.6623	4.446E-06	5.987E-03	150	0.4763	5.743E-06	5.166E-03

* ENERGY = LOWER BOUNDARY [MEV]

** ERROR X 100 = %

Table 3.1.19

ANGULAR FLUX OF GRAPHITE SLAB TOF [THICKNESS=20 CM, ANGLE=66.3 DEG]

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.4823	2.576E-07	0.260E+00	51	1.6834	1.099E-06	0.504E-01	101	5.8756	6.323E-07	0.847E-01
2	0.4943	3.684E-07	0.168E+00	52	1.7260	1.062E-06	0.524E-01	102	6.0244	7.482E-07	0.765E-01
3	0.5070	3.577E-07	0.163E+00	53	1.7697	1.127E-06	0.501E-01	103	6.1769	7.979E-07	0.732E-01
4	0.5199	4.716E-07	0.129E+00	54	1.8145	1.082E-06	0.525E-01	104	6.3332	7.922E-07	0.777E-01
5	0.5330	4.135E-07	0.141E+00	55	1.8604	1.137E-06	0.515E-01	105	6.4936	1.001E-06	0.662E-01
6	0.5465	3.499E-07	0.175E+00	56	1.9075	1.005E-06	0.565E-01	106	6.6579	1.074E-06	0.649E-01
7	0.5604	4.145E-07	0.137E+00	57	1.9558	9.892E-07	0.564E-01	107	6.8265	1.046E-06	0.640E-01
8	0.5745	4.005E-07	0.136E+00	58	2.0053	1.012E-06	0.567E-01	108	6.9993	8.624E-07	0.785E-01
9	0.5891	4.344E-07	0.123E+00	59	2.0561	9.804E-07	0.592E-01	109	7.1765	7.244E-07	0.885E-01
10	0.6040	4.800E-07	0.105E+00	60	2.1081	1.013E-06	0.584E-01	110	7.3582	7.533E-07	0.847E-01
11	0.6193	5.420E-07	0.963E-01	61	2.1615	9.843E-07	0.592E-01	111	7.5444	7.617E-07	0.932E-01
12	0.6350	5.253E-07	0.991E-01	62	2.2162	9.851E-07	0.585E-01	112	7.7354	8.139E-07	0.879E-01
13	0.6510	6.281E-07	0.801E-01	63	2.2723	9.617E-07	0.604E-01	113	7.9312	1.046E-06	0.753E-01
14	0.6675	6.772E-07	0.737E-01	64	2.3299	1.052E-06	0.554E-01	114	8.1320	1.138E-06	0.721E-01
15	0.6844	5.322E-07	0.913E-01	65	2.3888	1.016E-06	0.576E-01	115	8.3379	1.425E-06	0.596E-01
16	0.7017	6.361E-07	0.753E-01	66	2.4493	8.607E-07	0.664E-01	116	8.5490	1.454E-06	0.580E-01
17	0.7195	6.741E-07	0.717E-01	67	2.5113	9.706E-07	0.587E-01	117	8.7654	1.463E-06	0.600E-01
18	0.7377	6.330E-07	0.756E-01	68	2.5749	8.561E-07	0.682E-01	118	8.9873	1.454E-06	0.622E-01
19	0.7564	5.803E-07	0.733E-01	69	2.6401	7.005E-07	0.794E-01	119	9.2148	1.337E-06	0.689E-01
20	0.7755	7.184E-07	0.669E-01	70	2.7069	7.422E-07	0.767E-01	120	9.4481	1.272E-06	0.713E-01
21	0.7952	7.206E-07	0.613E-01	71	2.7754	7.153E-07	0.800E-01	121	9.6872	1.242E-06	0.758E-01
22	0.8153	7.150E-07	0.637E-01	72	2.8457	8.190E-07	0.710E-01	122	9.9325	1.021E-06	0.867E-01
23	0.8360	8.000E-07	0.563E-01	73	2.9177	8.108E-07	0.701E-01	123	10.1840	1.020E-06	0.912E-01
24	0.8571	7.418E-07	0.619E-01	74	2.9916	7.961E-07	0.744E-01	124	10.4420	9.722E-07	0.957E-01
25	0.8788	7.991E-07	0.568E-01	75	3.0673	7.101E-07	0.842E-01	125	10.7060	1.270E-06	0.807E-01
26	0.9010	7.372E-07	0.615E-01	76	3.1450	5.961E-07	0.992E-01	126	10.9770	1.305E-06	0.798E-01
27	0.9239	7.074E-07	0.644E-01	77	3.2246	7.172E-07	0.833E-01	127	11.2550	1.752E-06	0.629E-01
28	0.9473	8.567E-07	0.543E-01	78	3.3062	7.215E-07	0.839E-01	128	11.5400	2.071E-06	0.561E-01
29	0.9712	8.226E-07	0.560E-01	79	3.3899	6.944E-07	0.886E-01	129	11.8320	2.080E-06	0.569E-01
30	0.9956	7.502E-07	0.626E-01	80	3.4758	7.621E-07	0.844E-01	130	12.1320	2.255E-06	0.541E-01
31	1.0210	8.482E-07	0.578E-01	81	3.5637	7.381E-07	0.903E-01	131	12.4390	2.359E-06	0.526E-01
32	1.0469	8.314E-07	0.586E-01	82	3.6540	9.137E-07	0.745E-01	132	12.7540	2.305E-06	0.536E-01
33	1.0734	8.278E-07	0.593E-01	83	3.7465	8.732E-07	0.788E-01	133	13.0760	2.175E-06	0.532E-01
34	1.1006	8.748E-07	0.556E-01	84	3.8413	1.016E-06	0.675E-01	134	13.4070	2.142E-06	0.526E-01
35	1.1284	8.339E-07	0.537E-01	85	3.9385	9.013E-07	0.761E-01	135	13.7470	1.614E-06	0.635E-01
36	1.1570	9.113E-07	0.518E-01	86	4.0382	1.019E-06	0.687E-01	136	14.0950	1.342E-06	0.682E-01
37	1.1863	8.217E-07	0.589E-01	87	4.1405	9.962E-07	0.704E-01	137	14.4520	8.995E-07	0.917E-01
38	1.2163	9.506E-07	0.508E-01	88	4.2453	9.256E-07	0.746E-01	138	14.8180	6.122E-07	0.112E+00
39	1.2471	8.566E-07	0.561E-01	89	4.3528	9.552E-07	0.704E-01	139	15.1930	3.972E-07	0.136E+00
40	1.2787	8.688E-07	0.573E-01	90	4.4630	8.870E-07	0.755E-01	140	15.5770	2.178E-07	0.205E+00
41	1.3110	9.566E-07	0.523E-01	91	4.5759	9.020E-07	0.717E-01	141	15.9720	1.387E-07	0.239E+00
42	1.3442	1.043E-06	0.490E-01	92	4.6918	7.405E-07	0.855E-01	142	16.3760	3.319E-09	0.634E+00
43	1.3782	1.030E-06	0.502E-01	93	4.8105	7.852E-07	0.793E-01	143	16.7900	5.994E-10	0.340E+02
44	1.4131	9.396E-07	0.547E-01	94	4.9323	8.227E-07	0.757E-01	144	17.2160	6.416E-09	0.283E+01
45	1.4489	1.024E-06	0.515E-01	95	5.0572	7.410E-07	0.847E-01	145	17.6510	3.255E-08	0.590E+00
46	1.4856	1.009E-06	0.524E-01	96	5.1852	7.749E-07	0.725E-01	146	18.0980	-1.032E-08	0.178E+01
47	1.5232	9.865E-07	0.534E-01	97	5.3165	6.816E-07	0.803E-01	147	18.5560	-1.328E-09	0.960E+01
48	1.5618	1.032E-06	0.514E-01	98	5.4511	6.777E-07	0.795E-01	148	19.0260	7.388E-09	0.194E+01
49	1.6013	1.099E-06	0.493E-01	99	5.5891	6.432E-07	0.855E-01	149	19.5080	-2.234E-09	0.781E+01
50	1.6418	1.002E-06	0.542E-01	100	5.7305	5.752E-07	0.900E-01	150	20.0020	-1.357E-08	0.112E+01

* ENERGY = (MEV)
** ERROR X 100 = %

Table 3.1.20

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESS=20 CM, ANGLE=66.8 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.7516	-3.392E-10	1.000E+02	51	5.6589	1.260E-06	1.120E-02	101	1.6213	2.360E-06	7.503E-03
2	19.2639	-3.950E-10	1.000E+02	52	5.5192	1.276E-06	1.111E-02	102	1.5813	2.387E-06	7.439E-03
3	18.7883	-2.103E-10	1.000E+02	53	5.3829	1.293E-06	1.101E-02	103	1.5422	2.413E-06	7.380E-03
4	18.3244	-2.560E-10	1.000E+02	54	5.2500	1.310E-06	1.092E-02	104	1.5042	2.438E-06	7.325E-03
5	17.8719	-5.140E-10	1.000E+02	55	5.1204	1.330E-06	1.081E-02	105	1.4670	2.463E-06	7.270E-03
6	17.4307	2.997E-10	1.000E+02	56	4.9940	1.348E-06	1.073E-02	106	1.4308	2.489E-06	7.214E-03
7	17.0003	4.601E-10	1.000E+02	57	4.8707	1.369E-06	1.063E-02	107	1.3955	2.512E-06	7.165E-03
8	16.5806	4.751E-10	1.000E+02	58	4.7504	1.389E-06	1.054E-02	108	1.3610	2.538E-06	7.111E-03
9	16.1712	1.305E-09	1.000E+02	59	4.6331	1.407E-06	1.046E-02	109	1.3274	2.564E-06	7.056E-03
10	15.7719	4.773E-09	1.000E+02	60	4.5187	1.430E-06	1.035E-02	110	1.2946	2.588E-06	7.008E-03
11	15.3825	1.022E-08	1.891E-01	61	4.4072	1.452E-06	1.026E-02	111	1.2627	2.610E-06	6.966E-03
12	15.0027	2.015E-08	1.170E-01	62	4.2984	1.476E-06	1.016E-02	112	1.2315	2.631E-06	6.924E-03
13	14.6323	3.545E-08	8.215E-02	63	4.1922	1.499E-06	1.007E-02	113	1.2011	2.655E-06	6.877E-03
14	14.2710	5.794E-08	6.160E-02	64	4.0887	1.524E-06	9.970E-03	114	1.1714	2.675E-06	6.839E-03
15	13.9187	9.149E-08	4.633E-02	65	3.9878	1.549E-06	9.871E-03	115	1.1425	2.698E-06	6.795E-03
16	13.5750	1.318E-07	3.756E-02	66	3.8893	1.572E-06	9.791E-03	116	1.1143	2.720E-06	6.754E-03
17	13.2399	1.854E-07	3.073E-02	67	3.7933	1.597E-06	9.695E-03	117	1.0868	2.742E-06	6.715E-03
18	12.9130	2.398E-07	2.665E-02	68	3.6996	1.619E-06	9.623E-03	118	1.0600	2.763E-06	6.680E-03
19	12.5941	2.974E-07	2.387E-02	69	3.6033	1.642E-06	9.545E-03	119	1.0338	2.785E-06	6.641E-03
20	12.2832	3.564E-07	2.174E-02	70	3.5192	1.660E-06	9.492E-03	120	1.0083	2.806E-06	6.606E-03
21	11.9799	4.127E-07	2.017E-02	71	3.4323	1.679E-06	9.433E-03	121	0.9834	2.825E-06	6.575E-03
22	11.6841	4.648E-07	1.901E-02	72	3.3476	1.697E-06	9.381E-03	122	0.9591	2.845E-06	6.540E-03
23	11.3957	5.165E-07	1.801E-02	73	3.2649	1.715E-06	9.324E-03	123	0.9354	2.867E-06	6.504E-03
24	11.1143	5.603E-07	1.732E-02	74	3.1843	1.733E-06	9.268E-03	124	0.9123	2.884E-06	6.476E-03
25	10.8399	5.930E-07	1.694E-02	75	3.1057	1.748E-06	9.228E-03	125	0.8898	2.903E-06	6.447E-03
26	10.5722	6.247E-07	1.659E-02	76	3.0290	1.765E-06	9.174E-03	126	0.8678	2.923E-06	6.414E-03
27	10.3112	6.490E-07	1.637E-02	77	2.9542	1.785E-06	9.109E-03	127	0.8464	2.941E-06	6.386E-03
28	10.0566	6.745E-07	1.612E-02	78	2.8813	1.805E-06	9.041E-03	128	0.8255	2.961E-06	6.354E-03
29	9.8083	7.000E-07	1.585E-02	79	2.8101	1.826E-06	8.975E-03	129	0.8051	2.979E-06	6.328E-03
30	9.5662	7.311E-07	1.552E-02	80	2.7408	1.844E-06	8.922E-03	130	0.7852	2.997E-06	6.301E-03
31	9.3300	7.629E-07	1.517E-02	81	2.6731	1.862E-06	8.866E-03	131	0.7659	3.015E-06	6.276E-03
32	9.0996	7.963E-07	1.482E-02	82	2.6071	1.880E-06	8.815E-03	132	0.7469	3.030E-06	6.257E-03
33	8.8749	8.327E-07	1.443E-02	83	2.5427	1.901E-06	8.749E-03	133	0.7285	3.046E-06	6.237E-03
34	8.6558	8.693E-07	1.405E-02	84	2.4799	1.926E-06	8.671E-03	134	0.7105	3.062E-06	6.215E-03
35	8.4421	9.056E-07	1.369E-02	85	2.4187	1.947E-06	8.606E-03	135	0.6930	3.078E-06	6.195E-03
36	8.2337	9.412E-07	1.336E-02	86	2.3590	1.972E-06	8.528E-03	136	0.6759	3.092E-06	6.181E-03
37	8.0304	9.697E-07	1.314E-02	87	2.3007	1.999E-06	8.447E-03	137	0.6592	3.109E-06	6.160E-03
38	7.8321	9.958E-07	1.295E-02	88	2.2439	2.023E-06	8.377E-03	138	0.6429	3.124E-06	6.143E-03
39	7.6387	1.016E-06	1.281E-02	89	2.1885	2.047E-06	8.306E-03	139	0.6270	3.137E-06	6.131E-03
40	7.4501	1.035E-06	1.269E-02	90	2.1345	2.072E-06	8.238E-03	140	0.6115	3.151E-06	6.119E-03
41	7.2662	1.054E-06	1.255E-02	91	2.0818	2.097E-06	8.169E-03	141	0.5964	3.163E-06	6.108E-03
42	7.0868	1.072E-06	1.243E-02	92	2.0304	2.122E-06	8.103E-03	142	0.5817	3.174E-06	6.102E-03
43	6.9118	1.094E-06	1.229E-02	93	1.9803	2.147E-06	8.036E-03	143	0.5674	3.184E-06	6.098E-03
44	6.7412	1.120E-06	1.209E-02	94	1.9314	2.172E-06	7.970E-03	144	0.5533	3.194E-06	6.094E-03
45	6.5747	1.147E-06	1.191E-02	95	1.8837	2.197E-06	7.905E-03	145	0.5397	3.203E-06	6.096E-03
46	6.4124	1.172E-06	1.174E-02	96	1.8372	2.225E-06	7.832E-03	146	0.5264	3.213E-06	6.094E-03
47	6.2541	1.192E-06	1.161E-02	97	1.7918	2.252E-06	7.764E-03	147	0.5134	3.225E-06	6.090E-03
48	6.0997	1.211E-06	1.149E-02	98	1.7476	2.281E-06	7.693E-03	148	0.5007	3.234E-06	6.090E-03
49	5.9491	1.230E-06	1.137E-02	99	1.7044	2.307E-06	7.628E-03	149	0.4883	3.243E-06	6.091E-03
50	5.8022	1.246E-06	1.128E-02	100	1.6623	2.335E-06	7.562E-03	150	0.4763	3.250E-06	6.101E-03

* ENERGY = LOWER BOUNDARY [MEV]

** ERROR X 100 = %

Table 3.1.21

ANGULAR FLUX OF GRAPHITE SLAB TOF [THICKNESS=40 CM, ANGLE=0.0 DEG]

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.4823	2.583E-07	0.260E+00	51	1.6834	3.254E-07	0.616E-01	101	5.8756	1.052E-06	0.639E-01
2	0.4945	3.119E-07	0.216E+00	52	1.7260	7.760E-07	0.663E-01	102	6.0244	1.731E-06	0.501E-01
3	0.5070	1.716E-07	0.371E+00	53	1.7697	6.959E-07	0.745E-01	103	6.1769	2.016E-06	0.456E-01
4	0.5199	2.076E-07	0.318E+00	54	1.8145	7.609E-07	0.679E-01	104	6.3332	2.245E-06	0.433E-01
5	0.5330	1.696E-07	0.357E+00	55	1.8604	6.906E-07	0.739E-01	105	6.4936	2.457E-06	0.412E-01
6	0.5465	2.667E-07	0.225E+00	56	1.9075	7.267E-07	0.678E-01	106	6.6579	1.650E-06	0.513E-01
7	0.5604	2.212E-07	0.270E+00	57	1.9558	6.898E-07	0.742E-01	107	6.8265	3.244E-07	0.812E-01
8	0.5745	2.085E-07	0.284E+00	58	2.0053	7.469E-07	0.692E-01	108	6.9993	3.462E-07	0.148E+00
9	0.5891	3.240E-07	0.164E+00	59	2.0561	7.374E-07	0.684E-01	109	7.1765	3.064E-07	0.178E+00
10	0.6040	3.163E-07	0.171E+00	60	2.1081	7.533E-07	0.696E-01	110	7.3582	3.192E-07	0.173E+00
11	0.6193	2.636E-07	0.208E+00	61	2.1615	7.152E-07	0.703E-01	111	7.5444	4.915E-07	0.121E+00
12	0.6350	3.080E-07	0.176E+00	62	2.2162	6.645E-07	0.757E-01	112	7.7354	8.473E-07	0.800E-01
13	0.6510	2.432E-07	0.207E+00	63	2.2723	6.548E-07	0.794E-01	113	7.9312	1.073E-06	0.709E-01
14	0.6675	3.431E-07	0.157E+00	64	2.3299	5.658E-07	0.867E-01	114	8.1320	1.143E-06	0.699E-01
15	0.6844	4.384E-07	0.113E+00	65	2.3888	5.775E-07	0.845E-01	115	8.3379	1.342E-06	0.622E-01
16	0.7017	4.061E-07	0.120E+00	66	2.4493	5.279E-07	0.870E-01	116	8.5490	1.602E-06	0.589E-01
17	0.7195	3.084E-07	0.155E+00	67	2.5113	4.430E-07	0.982E-01	117	8.7654	1.842E-06	0.549E-01
18	0.7377	3.176E-07	0.150E+00	68	2.5749	4.138E-07	0.105E+00	118	8.9873	2.909E-06	0.421E-01
19	0.7564	4.203E-07	0.111E+00	69	2.6401	5.748E-07	0.795E-01	119	9.2148	3.283E-06	0.391E-01
20	0.7755	3.525E-07	0.129E+00	70	2.7069	1.112E-06	0.514E-01	120	9.4481	4.696E-06	0.325E-01
21	0.7952	3.472E-07	0.133E+00	71	2.7754	7.257E-07	0.726E-01	121	9.6872	5.406E-06	0.304E-01
22	0.8153	3.679E-07	0.122E+00	72	2.8457	5.583E-07	0.918E-01	122	9.9325	3.088E-06	0.373E-01
23	0.8360	3.933E-07	0.111E+00	73	2.9177	3.698E-07	0.133E+00	123	10.1840	1.480E-06	0.624E-01
24	0.8571	3.702E-07	0.121E+00	74	2.9916	3.225E-07	0.142E+00	124	10.4420	1.050E-06	0.791E-01
25	0.8788	4.783E-07	0.982E-01	75	3.0673	2.925E-07	0.152E+00	125	10.7060	1.036E-06	0.793E-01
26	0.9010	4.570E-07	0.954E-01	76	3.1450	3.104E-07	0.143E+00	126	10.9770	1.247E-06	0.766E-01
27	0.9239	4.374E-07	0.107E+00	77	3.2246	2.358E-07	0.190E+00	127	11.2550	1.336E-06	0.667E-01
28	0.9473	4.624E-07	0.103E+00	78	3.3062	2.773E-07	0.160E+00	128	11.5400	1.852E-06	0.563E-01
29	0.9712	4.935E-07	0.971E-01	79	3.3899	4.055E-07	0.113E+00	129	11.8320	2.757E-06	0.458E-01
30	0.9958	4.961E-07	0.993E-01	80	3.4758	4.225E-07	0.113E+00	130	12.1320	3.528E-06	0.406E-01
31	1.0210	4.585E-07	0.109E+00	81	3.5637	4.225E-07	0.120E+00	131	12.4390	5.683E-06	0.313E-01
32	1.0467	5.030E-07	0.932E-01	82	3.6540	5.659E-07	0.912E-01	132	12.7540	1.063E-05	0.229E-01
33	1.0734	5.620E-07	0.852E-01	83	3.7466	5.762E-07	0.922E-01	133	13.0760	1.968E-05	0.163E-01
34	1.1006	6.425E-07	0.731E-01	84	3.8413	5.295E-07	0.100E+00	134	13.4070	3.828E-05	0.121E-01
35	1.1284	5.756E-07	0.832E-01	85	3.9385	7.264E-07	0.730E-01	135	13.7470	9.174E-05	0.783E-02
36	1.1570	5.870E-07	0.820E-01	86	4.0382	7.205E-07	0.772E-01	136	14.0950	1.442E-04	0.626E-02
37	1.1863	5.372E-07	0.864E-01	87	4.1405	9.056E-07	0.646E-01	137	14.4520	8.148E-05	0.831E-02
38	1.2163	5.657E-07	0.800E-01	88	4.2453	1.055E-06	0.572E-01	138	14.8180	1.739E-05	0.180E-01
39	1.2471	5.212E-07	0.925E-01	89	4.3528	1.154E-06	0.578E-01	139	15.1930	3.791E-06	0.391E-01
40	1.2787	5.379E-07	0.807E-01	90	4.4630	1.543E-06	0.448E-01	140	15.5770	1.297E-06	0.666E-01
41	1.3110	5.931E-07	0.792E-01	91	4.5759	1.755E-06	0.425E-01	141	15.9720	3.829E-07	0.136E+00
42	1.3442	5.634E-07	0.870E-01	92	4.6918	1.803E-06	0.422E-01	142	16.3760	1.881E-07	0.176E+00
43	1.3782	6.474E-07	0.773E-01	93	4.8105	1.602E-06	0.446E-01	143	16.7900	6.388E-08	0.397E+00
44	1.4131	6.054E-07	0.813E-01	94	4.9323	1.549E-06	0.462E-01	144	17.2160	8.736E-08	0.306E+00
45	1.4489	6.572E-07	0.741E-01	95	5.0572	1.467E-06	0.493E-01	145	17.6510	1.145E-08	0.302E+01
46	1.4856	5.311E-07	0.843E-01	96	5.1852	1.425E-06	0.526E-01	146	18.0980	8.392E-09	0.192E+01
47	1.5232	5.107E-07	0.922E-01	97	5.3163	1.389E-06	0.555E-01	147	18.5560	-1.188E-08	0.146E+01
48	1.5618	6.522E-07	0.759E-01	98	5.4511	1.107E-06	0.643E-01	148	19.0260	1.894E-08	0.800E+00
49	1.6013	6.085E-07	0.830E-01	99	5.5891	7.287E-07	0.694E-01	149	19.5080	-1.157E-08	0.125E+01
50	1.6418	7.369E-07	0.682E-01	100	5.7305	7.501E-07	0.818E-01	150	20.0020	-3.544E-08	0.573E+00

* ENERGY = [MEV]
** ERROR X 100 = %

Table 3.1.22

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESS=40 CM, ANGLE=0.0 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.7516	-5.859E-10	1.000E+02	51	5.6589	1.178E-05	3.446E-03	101	1.6213	1.277E-05	3.271E-03
2	19.2639	-1.175E-09	1.000E+02	52	5.5192	1.180E-05	3.442E-03	102	1.5813	1.278E-05	3.269E-03
3	18.7883	-7.017E-10	1.000E+02	53	5.3829	1.183E-05	3.437E-03	103	1.5422	1.280E-05	3.266E-03
4	18.3244	-9.988E-10	1.000E+02	54	5.2500	1.187E-05	3.431E-03	104	1.5042	1.281E-05	3.264E-03
5	17.8719	-7.890E-10	1.000E+02	55	5.1204	1.190E-05	3.424E-03	105	1.4670	1.283E-05	3.262E-03
6	17.4307	-5.028E-10	1.000E+02	56	4.9940	1.194E-05	3.417E-03	106	1.4309	1.284E-05	3.259E-03
7	17.0003	1.681E-09	1.000E+02	57	4.8707	1.198E-05	3.409E-03	107	1.3955	1.286E-05	3.257E-03
8	16.5806	3.278E-09	1.000E+02	58	4.7504	1.202E-05	3.401E-03	108	1.3610	1.287E-05	3.254E-03
9	16.1712	7.980E-09	1.000E+02	59	4.6331	1.206E-05	3.392E-03	109	1.3274	1.289E-05	3.252E-03
10	15.7719	1.755E-08	1.201E-01	60	4.5187	1.211E-05	3.383E-03	110	1.2946	1.290E-05	3.249E-03
11	15.3825	4.997E-08	6.036E-02	61	4.4072	1.214E-05	3.375E-03	111	1.2627	1.292E-05	3.247E-03
12	15.0027	1.447E-07	3.301E-02	62	4.2984	1.217E-05	3.370E-03	112	1.2315	1.293E-05	3.245E-03
13	14.6323	5.796E-07	1.581E-02	63	4.1922	1.220E-05	3.365E-03	113	1.2011	1.295E-05	3.243E-03
14	14.2710	2.617E-06	7.355E-03	64	4.0887	1.222E-05	3.361E-03	114	1.1714	1.296E-05	3.241E-03
15	13.9187	6.222E-06	4.767E-03	65	3.9878	1.224E-05	3.358E-03	115	1.1425	1.297E-05	3.238E-03
16	13.5750	8.515E-06	4.072E-03	66	3.8893	1.226E-05	3.355E-03	116	1.1143	1.299E-05	3.236E-03
17	13.2399	9.472E-06	3.859E-03	67	3.7933	1.227E-05	3.353E-03	117	1.0868	1.300E-05	3.233E-03
18	12.9130	9.964E-06	3.761E-03	68	3.6996	1.229E-05	3.351E-03	118	1.0600	1.302E-05	3.231E-03
19	12.5941	1.023E-05	3.711E-03	69	3.6083	1.230E-05	3.349E-03	119	1.0338	1.303E-05	3.229E-03
20	12.2832	1.037E-05	3.685E-03	70	3.5192	1.231E-05	3.347E-03	120	1.0083	1.304E-05	3.228E-03
21	11.9799	1.046E-05	3.670E-03	71	3.4323	1.232E-05	3.346E-03	121	0.9834	1.305E-05	3.226E-03
22	11.6841	1.053E-05	3.659E-03	72	3.3476	1.233E-05	3.344E-03	122	0.9591	1.307E-05	3.225E-03
23	11.3957	1.058E-05	3.651E-03	73	3.2649	1.234E-05	3.344E-03	123	0.9354	1.308E-05	3.223E-03
24	11.1143	1.061E-05	3.646E-03	74	3.1843	1.234E-05	3.343E-03	124	0.9123	1.309E-05	3.222E-03
25	10.8399	1.064E-05	3.642E-03	75	3.1057	1.235E-05	3.342E-03	125	0.8898	1.310E-05	3.220E-03
26	10.5722	1.067E-05	3.638E-03	76	3.0290	1.236E-05	3.342E-03	126	0.8678	1.311E-05	3.218E-03
27	10.3112	1.069E-05	3.634E-03	77	2.9542	1.237E-05	3.341E-03	127	0.8464	1.312E-05	3.217E-03
28	10.0566	1.073E-05	3.628E-03	78	2.8813	1.238E-05	3.340E-03	128	0.8255	1.313E-05	3.216E-03
29	9.8083	1.082E-05	3.611E-03	79	2.8101	1.239E-05	3.338E-03	129	0.8051	1.314E-05	3.215E-03
30	9.5662	1.096E-05	3.586E-03	80	2.7408	1.241E-05	3.334E-03	130	0.7852	1.315E-05	3.214E-03
31	9.3300	1.107E-05	3.565E-03	81	2.6731	1.244E-05	3.329E-03	131	0.7659	1.316E-05	3.213E-03
32	9.0996	1.116E-05	3.551E-03	82	2.6071	1.245E-05	3.326E-03	132	0.7469	1.317E-05	3.211E-03
33	8.8749	1.123E-05	3.538E-03	83	2.5427	1.246E-05	3.325E-03	133	0.7285	1.318E-05	3.211E-03
34	8.6556	1.127E-05	3.531E-03	84	2.4799	1.247E-05	3.323E-03	134	0.7105	1.318E-05	3.210E-03
35	8.4421	1.131E-05	3.524E-03	85	2.4187	1.248E-05	3.321E-03	135	0.6930	1.319E-05	3.209E-03
36	8.2337	1.135E-05	3.519E-03	86	2.3590	1.250E-05	3.318E-03	136	0.6759	1.321E-05	3.208E-03
37	8.0304	1.138E-05	3.514E-03	87	2.3007	1.251E-05	3.316E-03	137	0.6592	1.321E-05	3.207E-03
38	7.8321	1.140E-05	3.510E-03	88	2.2439	1.253E-05	3.313E-03	138	0.6429	1.322E-05	3.207E-03
39	7.6387	1.142E-05	3.507E-03	89	2.1885	1.255E-05	3.310E-03	139	0.6270	1.323E-05	3.207E-03
40	7.4501	1.144E-05	3.505E-03	90	2.1345	1.256E-05	3.307E-03	140	0.6115	1.323E-05	3.207E-03
41	7.2662	1.145E-05	3.505E-03	91	2.0818	1.258E-05	3.304E-03	141	0.5964	1.324E-05	3.207E-03
42	7.0868	1.145E-05	3.505E-03	92	2.0304	1.260E-05	3.301E-03	142	0.5817	1.325E-05	3.206E-03
43	6.9118	1.146E-05	3.504E-03	93	1.9803	1.262E-05	3.297E-03	143	0.5674	1.326E-05	3.207E-03
44	6.7412	1.148E-05	3.500E-03	94	1.9314	1.264E-05	3.294E-03	144	0.5533	1.326E-05	3.208E-03
45	6.5747	1.152E-05	3.493E-03	95	1.8837	1.266E-05	3.291E-03	145	0.5397	1.327E-05	3.208E-03
46	6.4124	1.158E-05	3.481E-03	96	1.8372	1.267E-05	3.288E-03	146	0.5264	1.327E-05	3.209E-03
47	6.2541	1.164E-05	3.471E-03	97	1.7918	1.269E-05	3.285E-03	147	0.5134	1.328E-05	3.210E-03
48	6.0997	1.169E-05	3.461E-03	98	1.7476	1.271E-05	3.282E-03	148	0.5007	1.328E-05	3.211E-03
49	5.9491	1.173E-05	3.453E-03	99	1.7044	1.273E-05	3.278E-03	149	0.4883	1.329E-05	3.212E-03
50	5.8022	1.176E-05	3.449E-03	100	1.6623	1.275E-05	3.275E-03	150	0.4763	1.330E-05	3.213E-03

* ENERGY = LOWER BOUNDARY [MEV]
** ERROR X 100 = %

Table 3.1.23

ANGULAR FLUX OF GRAPHITE SLAB TOF [THICKNESS=40 CM, ANGLE=12.2 DEG]

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.4820	1.161E-07	0.642E+00	51	1.6834	5.529E-07	0.952E-01	101	5.8756	5.724E-07	0.972E-01
2	0.4945	1.441E-07	0.513E+00	52	1.7260	5.821E-07	0.885E-01	102	6.0244	4.491E-07	0.114E+00
3	0.5070	3.240E-07	0.209E+00	53	1.7697	5.997E-07	0.868E-01	103	6.1769	4.751E-07	0.110E+00
4	0.5199	3.339E-07	0.200E+00	54	1.8145	6.347E-07	0.789E-01	104	6.3332	4.862E-07	0.110E+00
5	0.5330	3.019E-07	0.214E+00	55	1.8604	6.065E-07	0.838E-01	105	6.4936	7.416E-07	0.839E-01
6	0.5465	3.490E-07	0.180E+00	56	1.9075	5.943E-07	0.853E-01	106	6.6579	1.009E-06	0.669E-01
7	0.5604	3.386E-07	0.179E+00	57	1.9558	5.826E-07	0.869E-01	107	6.8265	9.496E-07	0.731E-01
8	0.5745	1.927E-07	0.309E+00	58	2.0053	6.581E-07	0.770E-01	108	6.9993	8.692E-07	0.783E-01
9	0.5891	1.867E-07	0.311E+00	59	2.0561	5.794E-07	0.892E-01	109	7.1765	5.820E-07	0.989E-01
10	0.6040	3.106E-07	0.175E+00	60	2.1081	6.025E-07	0.873E-01	110	7.3582	3.624E-07	0.140E+00
11	0.6193	3.038E-07	0.189E+00	61	2.1615	5.438E-07	0.918E-01	111	7.5444	3.497E-07	0.146E+00
12	0.6350	2.761E-07	0.197E+00	62	2.2162	5.677E-07	0.873E-01	112	7.7354	2.822E-07	0.190E+00
13	0.6510	2.751E-07	0.198E+00	63	2.2723	5.263E-07	0.940E-01	113	7.9312	3.313E-07	0.167E+00
14	0.6675	4.007E-07	0.133E+00	64	2.3299	5.793E-07	0.855E-01	114	8.1320	4.882E-07	0.120E+00
15	0.6844	4.308E-07	0.119E+00	65	2.3888	5.823E-07	0.846E-01	115	8.3379	6.867E-07	0.946E-01
16	0.7017	4.012E-07	0.127E+00	66	2.4493	5.769E-07	0.822E-01	116	8.5490	6.595E-07	0.978E-01
17	0.7195	3.378E-07	0.144E+00	67	2.5113	4.082E-07	0.112E+00	117	8.7654	9.291E-07	0.802E-01
18	0.7377	3.682E-07	0.134E+00	68	2.5749	3.625E-07	0.127E+00	118	8.9873	1.234E-06	0.695E-01
19	0.7564	3.493E-07	0.137E+00	69	2.6401	3.756E-07	0.120E+00	119	9.2148	1.481E-06	0.628E-01
20	0.7755	3.837E-07	0.115E+00	70	2.7069	3.546E-07	0.121E+00	120	9.4481	2.224E-06	0.479E-01
21	0.7952	3.200E-07	0.141E+00	71	2.7754	2.212E-07	0.195E+00	121	9.6872	2.859E-06	0.439E-01
22	0.8153	3.321E-07	0.137E+00	72	2.8457	3.890E-07	0.105E+00	122	9.9325	4.079E-06	0.351E-01
23	0.8360	4.357E-07	0.107E+00	73	2.9177	4.185E-07	0.109E+00	123	10.1840	4.066E-06	0.355E-01
24	0.8571	5.990E-07	0.117E+00	74	2.9916	3.610E-07	0.128E+00	124	10.4420	2.808E-06	0.441E-01
25	0.8788	5.011E-07	0.934E-01	75	3.0673	4.533E-07	0.101E+00	125	10.7060	1.372E-06	0.673E-01
26	0.9010	3.896E-07	0.118E+00	76	3.1450	2.331E-07	0.193E+00	126	10.9770	6.395E-07	0.108E+00
27	0.9239	5.102E-07	0.908E-01	77	3.2246	2.793E-07	0.145E+00	127	11.2550	5.050E-07	0.131E+00
28	0.9473	4.080E-07	0.111E+00	78	3.3062	3.232E-07	0.128E+00	128	11.5400	6.125E-07	0.122E+00
29	0.9712	4.285E-07	0.111E+00	79	3.3899	3.124E-07	0.137E+00	129	11.8320	6.062E-07	0.113E+00
30	0.9958	4.565E-07	0.105E+00	80	3.4758	3.385E-07	0.124E+00	130	12.1320	6.909E-07	0.104E+00
31	1.0210	3.937E-07	0.123E+00	81	3.5637	3.075E-07	0.146E+00	131	12.4390	8.059E-07	0.101E+00
32	1.0469	4.243E-07	0.108E+00	82	3.6540	4.745E-07	0.956E-01	132	12.7540	1.226E-06	0.760E-01
33	1.0734	4.482E-07	0.110E+00	83	3.7465	4.803E-07	0.101E+00	133	13.0760	2.074E-06	0.552E-01
34	1.1006	4.648E-07	0.101E+00	84	3.8413	5.230E-07	0.939E-01	134	13.4070	3.546E-06	0.412E-01
35	1.1284	5.441E-07	0.862E-01	85	3.9385	6.191E-07	0.815E-01	135	13.7470	6.721E-06	0.296E-01
36	1.1570	4.737E-07	0.997E-01	86	4.0382	5.779E-07	0.885E-01	136	14.0950	1.243E-05	0.215E-01
37	1.1863	4.581E-07	0.100E+00	87	4.1405	6.126E-07	0.895E-01	137	14.4520	2.090E-05	0.165E-01
38	1.2163	5.072E-07	0.942E-01	88	4.2453	6.704E-07	0.730E-01	138	14.8180	2.233E-05	0.159E-01
39	1.2471	5.418E-07	0.910E-01	89	4.3528	6.723E-07	0.820E-01	139	15.1930	1.123E-05	0.223E-01
40	1.2787	5.227E-07	0.875E-01	90	4.4630	2.406E-07	0.689E-01	140	15.5770	2.741E-06	0.452E-01
41	1.3110	4.345E-07	0.102E+00	91	4.5759	9.664E-07	0.643E-01	141	15.9720	5.516E-07	0.111E+00
42	1.3442	5.920E-07	0.894E-01	92	4.6918	1.108E-06	0.590E-01	142	16.3760	2.784E-07	0.142E+00
43	1.3782	4.981E-07	0.993E-01	93	4.8105	1.164E-06	0.557E-01	143	16.7900	1.104E-07	0.235E+00
44	1.4131	5.439E-07	0.942E-01	94	4.9323	1.034E-06	0.624E-01	144	17.2160	-2.344E-08	0.109E+01
45	1.4489	5.633E-07	0.858E-01	95	5.0572	1.195E-06	0.546E-01	145	17.6510	-3.581E-09	0.311E+01
46	1.4856	5.483E-07	0.940E-01	96	5.1852	1.165E-06	0.621E-01	146	18.0920	-2.630E-08	0.918E+00
47	1.5232	6.325E-07	0.794E-01	97	5.3165	9.360E-07	0.682E-01	147	18.5560	-2.061E-08	0.304E+00
48	1.5618	5.690E-07	0.883E-01	98	5.4511	8.198E-07	0.728E-01	148	19.0260	1.644E-09	0.118E+02
49	1.6013	5.599E-07	0.936E-01	99	5.5891	6.624E-07	0.860E-01	149	19.5080	2.048E-08	0.765E+00
50	1.6419	5.811E-07	0.897E-01	100	5.7305	5.728E-07	0.965E-01	150	20.0020	-2.721E-09	0.628E+01

* ENERGY = [MEV]
** ERROR X 100 = %

Table 3.1.24

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESS=40 CM, ANGLE=12.2 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.7516	-6.802E-11	1.000E+02	51	5.6589	2.972E-06	6.983E-03	101	1.6213	3.712E-06	6.108E-03
2	19.2639	4.440E-10	1.000E+02	52	5.5192	2.989E-06	6.960E-03	102	1.5813	3.726E-06	6.095E-03
3	18.7883	4.851E-10	1.000E+02	53	5.3829	3.009E-06	6.931E-03	103	1.5422	3.740E-06	6.081E-03
4	18.3244	-3.022E-11	1.000E+02	54	5.2500	3.032E-06	6.897E-03	104	1.5042	3.756E-06	6.064E-03
5	17.8719	-7.003E-10	1.000E+02	55	5.1204	3.062E-06	6.857E-03	105	1.4670	3.769E-06	6.052E-03
6	17.4307	-9.148E-10	1.000E+02	56	4.9940	3.091E-06	6.811E-03	106	1.4308	3.784E-06	6.038E-03
7	17.0003	-1.501E-09	1.000E+02	57	4.8707	3.117E-06	6.775E-03	107	1.3955	3.797E-06	6.026E-03
8	16.5806	1.260E-09	1.000E+02	58	4.7504	3.146E-06	6.732E-03	108	1.3610	3.810E-06	6.015E-03
9	16.1712	8.719E-09	1.000E+02	59	4.6331	3.174E-06	6.693E-03	109	1.3274	3.824E-06	6.002E-03
10	15.7719	2.251E-08	1.075E-01	60	4.5187	3.198E-06	6.660E-03	110	1.2946	3.836E-06	5.991E-03
11	15.3825	9.103E-08	4.318E-02	61	4.4072	3.219E-06	6.632E-03	111	1.2627	3.850E-06	5.978E-03
12	15.0027	3.718E-07	1.986E-02	62	4.2984	3.236E-06	6.611E-03	112	1.2315	3.863E-06	5.966E-03
13	14.6323	9.301E-07	1.240E-02	63	4.1922	3.253E-06	6.589E-03	113	1.2011	3.876E-06	5.954E-03
14	14.2710	1.452E-06	9.910E-03	64	4.0887	3.268E-06	6.572E-03	114	1.1714	3.887E-06	5.944E-03
15	13.9187	1.763E-06	8.999E-03	65	3.9878	3.283E-06	6.554E-03	115	1.1425	3.899E-06	5.934E-03
16	13.5750	1.931E-06	8.610E-03	66	3.8893	3.298E-06	6.535E-03	116	1.1143	3.913E-06	5.921E-03
17	13.2399	2.020E-06	8.428E-03	67	3.7933	3.311E-06	6.520E-03	117	1.0868	3.924E-06	5.911E-03
18	12.9130	2.072E-06	8.333E-03	68	3.6996	3.323E-06	6.506E-03	118	1.0600	3.935E-06	5.902E-03
19	12.5941	2.103E-06	8.286E-03	69	3.6083	3.335E-06	6.492E-03	119	1.0338	3.946E-06	5.894E-03
20	12.2832	2.123E-06	8.263E-03	70	3.5192	3.343E-06	6.486E-03	120	1.0083	3.956E-06	5.887E-03
21	11.9799	2.140E-06	8.239E-03	71	3.4323	3.351E-06	6.477E-03	121	0.9834	3.967E-06	5.878E-03
22	11.6841	2.155E-06	8.220E-03	72	3.3476	3.359E-06	6.470E-03	122	0.9591	3.978E-06	5.869E-03
23	11.3957	2.170E-06	8.207E-03	73	3.2649	3.367E-06	6.461E-03	123	0.9354	3.988E-06	5.861E-03
24	11.1143	2.183E-06	8.195E-03	74	3.1843	3.374E-06	6.455E-03	124	0.9123	4.001E-06	5.850E-03
25	10.8399	2.199E-06	8.173E-03	75	3.1057	3.380E-06	6.452E-03	125	0.8898	4.011E-06	5.843E-03
26	10.5722	2.233E-06	8.114E-03	76	3.0290	3.391E-06	6.440E-03	126	0.8678	4.023E-06	5.832E-03
27	10.3112	2.303E-06	7.981E-03	77	2.9542	3.400E-06	6.432E-03	127	0.8464	4.033E-06	5.824E-03
28	10.0566	2.405E-06	7.789E-03	78	2.8813	3.411E-06	6.421E-03	128	0.8255	4.044E-06	5.816E-03
29	9.8083	2.507E-06	7.607E-03	79	2.8101	3.420E-06	6.409E-03	129	0.8051	4.052E-06	5.811E-03
30	9.5662	2.579E-06	7.495E-03	80	2.7408	3.426E-06	6.407E-03	130	0.7852	4.060E-06	5.806E-03
31	9.3300	2.634E-06	7.406E-03	81	2.6731	3.435E-06	6.398E-03	131	0.7659	4.070E-06	5.799E-03
32	9.0996	2.671E-06	7.356E-03	82	2.6071	3.444E-06	6.389E-03	132	0.7469	4.079E-06	5.794E-03
33	8.8749	2.702E-06	7.313E-03	83	2.5427	3.453E-06	6.381E-03	133	0.7285	4.088E-06	5.788E-03
34	8.6558	2.723E-06	7.285E-03	84	2.4799	3.463E-06	6.370E-03	134	0.7105	4.096E-06	5.784E-03
35	8.4421	2.742E-06	7.265E-03	85	2.4187	3.478E-06	6.353E-03	135	0.6930	4.106E-06	5.778E-03
36	8.2337	2.759E-06	7.243E-03	86	2.3590	3.492E-06	6.336E-03	136	0.6759	4.117E-06	5.772E-03
37	8.0304	2.771E-06	7.231E-03	87	2.3007	3.507E-06	6.320E-03	137	0.6592	4.127E-06	5.767E-03
38	7.8321	2.779E-06	7.226E-03	88	2.2439	3.520E-06	6.306E-03	138	0.6429	4.134E-06	5.766E-03
39	7.6387	2.787E-06	7.224E-03	89	2.1885	3.534E-06	6.291E-03	139	0.6270	4.141E-06	5.766E-03
40	7.4501	2.795E-06	7.216E-03	90	2.1345	3.548E-06	6.277E-03	140	0.6115	4.149E-06	5.766E-03
41	7.2662	2.804E-06	7.207E-03	91	2.0818	3.563E-06	6.261E-03	141	0.5964	4.156E-06	5.764E-03
42	7.0868	2.814E-06	7.196E-03	92	2.0304	3.577E-06	6.246E-03	142	0.5817	4.161E-06	5.769E-03
43	6.9118	2.941E-06	7.158E-03	93	1.9803	3.594E-06	6.227E-03	143	0.5674	4.166E-06	5.773E-03
44	6.7412	2.864E-06	7.124E-03	94	1.9314	3.608E-06	6.212E-03	144	0.5533	4.174E-06	5.773E-03
45	6.5747	2.890E-06	7.086E-03	95	1.8837	3.623E-06	6.197E-03	145	0.5397	4.183E-06	5.773E-03
46	6.4124	2.908E-06	7.061E-03	96	1.8372	3.638E-06	6.181E-03	146	0.5264	4.191E-06	5.775E-03
47	6.2541	2.920E-06	7.047E-03	97	1.7918	3.654E-06	6.163E-03	147	0.5134	4.199E-06	5.777E-03
48	6.0997	2.932E-06	7.032E-03	98	1.7476	3.669E-06	6.148E-03	148	0.5007	4.207E-06	5.780E-03
49	5.9491	2.943E-06	7.019E-03	99	1.7044	3.684E-06	6.134E-03	149	0.4883	4.211E-06	5.792E-03
50	5.8022	2.958E-06	7.001E-03	100	1.6623	3.698E-06	6.122E-03	150	0.4763	4.214E-06	5.805E-03

* ENERGY = LOWER BOUNDARY [MEV]

** ERROR x 100 = %

Table 3.1.25

ANGULAR FLUX OF GRAPHITE SLAB FOR [THICKNESS=40 CM, ANGLE=24.0 DEG]

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.4823	2.012E-07	0.292E+00	51	1.6834	5.206E-07	0.862E-01	101	5.8756	4.048E-07	0.109E+00
2	0.4945	4.334E-08	0.134E+01	52	1.7260	5.364E-07	0.817E-01	102	6.0244	3.890E-07	0.116E+00
3	0.5070	1.811E-07	0.331E+00	53	1.7697	5.878E-07	0.760E-01	103	6.1769	4.127E-07	0.106E+00
4	0.5199	8.290E-08	0.706E+00	54	1.8145	5.654E-07	0.782E-01	104	6.3332	5.550E-07	0.869E-01
5	0.5330	2.123E-07	0.264E+00	55	1.8604	5.085E-07	0.894E-01	105	6.4936	6.587E-07	0.760E-01
6	0.5465	2.027E-07	0.262E+00	56	1.9075	5.776E-07	0.768E-01	106	6.6579	6.741E-07	0.768E-01
7	0.5604	2.423E-07	0.207E+00	57	1.9558	6.066E-07	0.751E-01	107	6.8265	6.517E-07	0.824E-01
8	0.5745	2.708E-07	0.188E+00	58	2.0053	5.790E-07	0.799E-01	108	6.9993	4.600E-07	0.107E+00
9	0.5891	3.242E-07	0.143E+00	59	2.0561	6.228E-07	0.728E-01	109	7.1765	3.623E-07	0.121E+00
10	0.6040	2.465E-07	0.191E+00	60	2.1081	5.118E-07	0.854E-01	110	7.3582	3.176E-07	0.139E+00
11	0.6193	1.977E-07	0.230E+00	61	2.1615	5.532E-07	0.798E-01	111	7.5444	2.785E-07	0.156E+00
12	0.6350	3.049E-07	0.146E+00	62	2.2162	5.001E-07	0.883E-01	112	7.7354	3.081E-07	0.139E+00
13	0.6510	3.568E-07	0.126E+00	63	2.2723	5.848E-07	0.752E-01	113	7.9312	4.031E-07	0.119E+00
14	0.6675	3.741E-07	0.122E+00	64	2.3299	4.370E-07	0.922E-01	114	8.1320	6.644E-07	0.830E-01
15	0.6844	3.209E-07	0.128E+00	65	2.3888	4.565E-07	0.930E-01	115	8.3379	8.176E-07	0.728E-01
16	0.7017	2.907E-07	0.143E+00	66	2.4493	4.759E-07	0.839E-01	116	8.5490	9.282E-07	0.686E-01
17	0.7195	3.413E-07	0.117E+00	67	2.5113	4.860E-07	0.805E-01	117	8.7654	1.097E-06	0.637E-01
18	0.7377	2.754E-07	0.152E+00	68	2.5749	3.940E-07	0.963E-01	118	8.9873	1.319E-06	0.571E-01
19	0.7564	2.561E-07	0.149E+00	69	2.6401	3.844E-07	0.975E-01	119	9.2148	1.866E-06	0.456E-01
20	0.7755	3.662E-07	0.105E+00	70	2.7069	3.991E-07	0.895E-01	120	9.4481	1.989E-06	0.452E-01
21	0.7952	3.321E-07	0.116E+00	71	2.7754	3.641E-07	0.955E-01	121	9.6872	2.098E-06	0.448E-01
22	0.8153	3.947E-07	0.944E-01	72	2.8457	3.013E-07	0.115E+00	122	9.9325	2.017E-06	0.453E-01
23	0.8360	3.404E-07	0.115E+00	73	2.9177	3.284E-07	0.108E+00	123	10.1840	1.479E-06	0.555E-01
24	0.8571	3.358E-07	0.115E+00	74	2.9916	3.586E-07	0.992E-01	124	10.4420	6.025E-07	0.101E+00
25	0.8788	3.704E-07	0.106E+00	75	3.0673	4.160E-07	0.905E-01	125	10.7060	4.654E-07	0.120E+00
26	0.9010	4.108E-07	0.951E-01	76	3.1450	3.529E-07	0.102E+00	126	10.9770	4.453E-07	0.120E+00
27	0.9239	3.757E-07	0.101E+00	77	3.2246	3.386E-07	0.106E+00	127	11.2550	3.790E-07	0.149E+00
28	0.9473	3.736E-07	0.103E+00	78	3.3062	2.384E-07	0.149E+00	128	11.5400	4.900E-07	0.123E+00
29	0.9712	3.727E-07	0.108E+00	79	3.3899	2.481E-07	0.142E+00	129	11.8320	5.963E-07	0.108E+00
30	0.9958	3.607E-07	0.105E+00	80	3.4756	2.598E-07	0.133E+00	130	12.1320	6.901E-07	0.920E-01
31	1.0210	4.771E-07	0.887E-01	81	3.5637	3.081E-07	0.117E+00	131	12.4390	8.796E-07	0.789E-01
32	1.0469	4.440E-07	0.915E-01	82	3.6540	3.636E-07	0.104E+00	132	12.7540	1.320E-06	0.632E-01
33	1.0734	4.071E-07	0.100E+00	83	3.7465	3.396E-07	0.119E+00	133	13.0760	2.282E-06	0.452E-01
34	1.1006	4.690E-07	0.866E-01	84	3.8413	4.237E-07	0.929E-01	134	13.4070	4.089E-06	0.328E-01
35	1.1284	4.093E-07	0.939E-01	85	3.9385	4.742E-07	0.851E-01	135	13.7470	6.665E-06	0.257E-01
36	1.1570	4.903E-07	0.810E-01	86	4.0382	5.015E-07	0.867E-01	136	14.0950	8.394E-06	0.230E-01
37	1.1863	4.883E-07	0.854E-01	87	4.1405	6.179E-07	0.732E-01	137	14.4520	7.091E-06	0.250E-01
38	1.2163	4.024E-07	0.954E-01	88	4.2453	6.101E-07	0.763E-01	138	14.8180	3.340E-06	0.365E-01
39	1.2471	4.203E-07	0.975E-01	89	4.3528	5.565E-07	0.812E-01	139	15.1930	9.650E-07	0.699E-01
40	1.2787	5.849E-07	0.702E-01	90	4.4630	6.520E-07	0.707E-01	140	15.5770	3.172E-07	0.126E+00
41	1.3110	4.560E-07	0.913E-01	91	4.5759	6.274E-07	0.790E-01	141	15.9720	1.444E-07	0.219E+00
42	1.3442	4.046E-07	0.106E+00	92	4.6918	7.169E-07	0.704E-01	142	16.3760	2.292E-08	0.113E+01
43	1.3782	5.371E-07	0.799E-01	93	4.8105	7.969E-07	0.617E-01	143	16.7900	2.917E-08	0.319E+00
44	1.4131	5.268E-07	0.842E-01	94	4.9323	8.545E-07	0.593E-01	144	17.2160	-2.555E-09	0.798E+01
45	1.4489	5.223E-07	0.840E-01	95	5.0572	9.177E-07	0.569E-01	145	17.6510	4.298E-09	0.325E+01
46	1.4856	5.910E-07	0.724E-01	96	5.1852	7.515E-07	0.675E-01	146	18.0980	-2.071E-08	0.894E+00
47	1.5232	6.199E-07	0.836E-01	97	5.3165	5.292E-07	0.930E-01	147	18.5560	9.552E-09	0.180E+01
48	1.5618	4.463E-07	0.979E-01	98	5.4511	6.815E-07	0.710E-01	148	19.0260	3.815E-09	0.465E+01
49	1.6013	5.944E-07	0.767E-01	99	5.5891	5.213E-07	0.887E-01	149	19.5080	5.770E-10	0.275E+02
50	1.6418	6.006E-07	0.730E-01	100	5.7305	4.325E-07	0.103E+00	150	20.0020	1.633E-08	0.817E+00

* ENERGY = [MeV]
** ERROR X 100 = %

Table 3.1.26

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESS=40 CM, ANGLE=24.9 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.7516	4.082E-10	1.000E+02	51	5.6589	1.495E-06	8.841E-03	101	1.6213	2.130E-06	7.145E-03
2	19.2639	4.226E-10	1.000E+02	52	5.5192	1.508E-06	8.798E-03	102	1.5813	2.145E-06	7.116E-03
3	18.7883	5.180E-10	1.000E+02	53	5.3829	1.525E-06	8.735E-03	103	1.5422	2.156E-06	7.097E-03
4	18.3244	7.568E-10	1.000E+02	54	5.2500	1.540E-06	8.688E-03	104	1.5042	2.169E-06	7.072E-03
5	17.8719	2.390E-10	1.000E+02	55	5.1204	1.559E-06	8.622E-03	105	1.4670	2.184E-06	7.041E-03
6	17.4307	3.464E-10	1.000E+02	56	4.9940	1.582E-06	8.537E-03	106	1.4308	2.197E-06	7.017E-03
7	17.0003	2.826E-10	1.000E+02	57	4.8707	1.603E-06	8.460E-03	107	1.3955	2.210E-06	6.994E-03
8	16.5806	1.012E-09	1.000E+02	58	4.7504	1.623E-06	8.391E-03	108	1.3610	2.224E-06	6.968E-03
9	16.1712	1.585E-09	1.000E+02	59	4.6331	1.641E-06	8.334E-03	109	1.3274	2.234E-06	6.953E-03
10	15.7719	5.194E-09	1.000E+02	60	4.5187	1.656E-06	8.289E-03	110	1.2946	2.245E-06	6.933E-03
11	15.3825	1.312E-08	1.456E-01	61	4.4072	1.673E-06	8.237E-03	111	1.2627	2.260E-06	6.903E-03
12	15.0027	3.725E-08	6.840E-02	62	4.2984	1.687E-06	8.197E-03	112	1.2315	2.270E-06	6.886E-03
13	14.6323	1.207E-07	3.290E-02	63	4.1922	1.702E-06	8.152E-03	113	1.2011	2.280E-06	6.869E-03
14	14.2710	2.980E-07	1.998E-02	64	4.0887	1.717E-06	8.106E-03	114	1.1714	2.293E-06	6.847E-03
15	13.9187	5.079E-07	1.510E-02	65	3.9878	1.730E-06	8.071E-03	115	1.1425	2.305E-06	6.825E-03
16	13.5750	6.745E-07	1.302E-02	66	3.8893	1.742E-06	8.037E-03	116	1.1143	2.315E-06	6.808E-03
17	13.2399	7.767E-07	1.210E-02	67	3.7933	1.753E-06	8.008E-03	117	1.0868	2.327E-06	6.788E-03
18	12.9130	8.338E-07	1.169E-02	68	3.6996	1.761E-06	7.990E-03	118	1.0600	2.337E-06	6.773E-03
19	12.5941	8.669E-07	1.150E-02	69	3.6083	1.770E-06	7.967E-03	119	1.0338	2.349E-06	6.754E-03
20	12.2832	8.888E-07	1.139E-02	70	3.5192	1.778E-06	7.949E-03	120	1.0083	2.360E-06	6.735E-03
21	11.9799	9.060E-07	1.131E-02	71	3.4323	1.784E-06	7.935E-03	121	0.9834	2.369E-06	6.722E-03
22	11.6841	9.209E-07	1.126E-02	72	3.3476	1.790E-06	7.923E-03	122	0.9591	2.379E-06	6.709E-03
23	11.3957	9.332E-07	1.123E-02	73	3.2649	1.796E-06	7.912E-03	123	0.9354	2.388E-06	6.695E-03
24	11.1143	9.427E-07	1.121E-02	74	3.1843	1.805E-06	7.890E-03	124	0.9123	2.398E-06	6.680E-03
25	10.8399	9.538E-07	1.117E-02	75	3.1057	1.814E-06	7.867E-03	125	0.8898	2.408E-06	6.664E-03
26	10.5722	9.654E-07	1.113E-02	76	3.0290	1.824E-06	7.840E-03	126	0.8678	2.417E-06	6.651E-03
27	10.3112	9.805E-07	1.107E-02	77	2.9542	1.833E-06	7.816E-03	127	0.8464	2.426E-06	6.640E-03
28	10.0566	1.017E-06	1.086E-02	78	2.8813	1.841E-06	7.796E-03	128	0.8255	2.434E-06	6.629E-03
29	9.8083	1.068E-06	1.056E-02	79	2.8101	1.849E-06	7.779E-03	129	0.8051	2.444E-06	6.613E-03
30	9.5662	1.120E-06	1.028E-02	80	2.7408	1.858E-06	7.755E-03	130	0.7852	2.452E-06	6.602E-03
31	9.3300	1.170E-06	1.003E-02	81	2.6731	1.868E-06	7.728E-03	131	0.7659	2.461E-06	6.589E-03
32	9.0996	1.217E-06	9.805E-03	82	2.6071	1.878E-06	7.705E-03	132	0.7469	2.468E-06	6.584E-03
33	8.8749	1.250E-06	9.664E-03	83	2.5427	1.887E-06	7.681E-03	133	0.7285	2.475E-06	6.579E-03
34	8.6558	1.277E-06	9.555E-03	84	2.4799	1.900E-06	7.649E-03	134	0.7105	2.483E-06	6.568E-03
35	8.4421	1.300E-06	9.464E-03	85	2.4187	1.911E-06	7.619E-03	135	0.6930	2.490E-06	6.563E-03
36	8.2337	1.321E-06	9.386E-03	86	2.3590	1.923E-06	7.594E-03	136	0.6759	2.498E-06	6.555E-03
37	8.0304	1.337E-06	9.326E-03	87	2.3007	1.934E-06	7.569E-03	137	0.6592	2.508E-06	6.546E-03
38	7.8321	1.347E-06	9.299E-03	88	2.2439	1.948E-06	7.534E-03	138	0.6429	2.517E-06	6.538E-03
39	7.6387	1.355E-06	9.280E-03	89	2.1885	1.961E-06	7.507E-03	139	0.6270	2.524E-06	6.533E-03
40	7.4501	1.362E-06	9.267E-03	90	2.1345	1.975E-06	7.475E-03	140	0.6115	2.529E-06	6.536E-03
41	7.2662	1.370E-06	9.249E-03	91	2.0818	1.988E-06	7.447E-03	141	0.5964	2.535E-06	6.536E-03
42	7.0866	1.379E-06	9.222E-03	92	2.0304	2.003E-06	7.411E-03	142	0.5817	2.544E-06	6.531E-03
43	6.9113	1.391E-06	9.189E-03	93	1.9803	2.018E-06	7.380E-03	143	0.5674	2.550E-06	6.533E-03
44	6.7402	1.407E-06	9.132E-03	94	1.9314	2.033E-06	7.347E-03	144	0.5533	2.556E-06	6.536E-03
45	6.5732	1.424E-06	9.070E-03	95	1.8837	2.047E-06	7.315E-03	145	0.5397	2.561E-06	6.544E-03
46	6.4101	1.440E-06	9.008E-03	96	1.8372	2.060E-06	7.291E-03	146	0.5264	2.567E-06	6.553E-03
47	6.2509	1.454E-06	8.961E-03	97	1.7918	2.074E-06	7.261E-03	147	0.5134	2.569E-06	6.572E-03
48	6.0955	1.464E-06	8.929E-03	98	1.7476	2.089E-06	7.229E-03	148	0.5007	2.573E-06	6.587E-03
49	5.9439	1.474E-06	8.903E-03	99	1.7044	2.102E-06	7.202E-03	149	0.4883	2.574E-06	6.608E-03
50	5.7960	1.484E-06	8.873E-03	100	1.6623	2.115E-06	7.177E-03	150	0.4763	2.580E-06	6.620E-03

* ENERGY = LOWER BOUNDARY [MEV]
** ERROR X 100 = %

Table 3.1.27

ANGULAR FLUX OF GRAPHITE SLAB TOP [THICKNESS=40 CM, ANGLE=41.3 DEG]

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.4323	3.049E-07	0.211E+00	51	1.6834	5.793E-07	0.757E-01	101	5.8756	2.971E-07	0.132E+00
2	0.4945	2.225E-07	0.286E+00	52	1.7260	4.715E-07	0.950E-01	102	6.0244	2.746E-07	0.149E+00
3	0.5070	2.702E-07	0.223E+00	53	1.7697	4.286E-07	0.108E+00	103	6.1769	4.259E-07	0.103E+00
4	0.5199	2.423E-07	0.244E+00	54	1.8145	4.978E-07	0.901E-01	104	6.3332	3.888E-07	0.119E+00
5	0.5330	2.421E-07	0.224E+00	55	1.8604	4.437E-07	0.103E+00	105	6.4936	5.110E-07	0.956E-01
6	0.5465	3.207E-07	0.165E+00	56	1.9075	4.591E-07	0.103E+00	106	6.6579	4.239E-07	0.107E+00
7	0.5604	3.013E-07	0.167E+00	57	1.9558	4.310E-07	0.105E+00	107	6.8265	3.081E-07	0.141E+00
8	0.5745	2.511E-07	0.200E+00	58	2.0053	5.482E-07	0.832E-01	108	6.9993	2.298E-07	0.187E+00
9	0.5891	3.001E-07	0.164E+00	59	2.0561	4.269E-07	0.107E+00	109	7.1765	2.093E-07	0.200E+00
10	0.6040	3.786E-07	0.123E+00	60	2.1081	3.886E-07	0.118E+00	110	7.3582	2.678E-07	0.163E+00
11	0.6193	3.063E-07	0.149E+00	61	2.1615	3.783E-07	0.118E+00	111	7.5444	2.421E-07	0.185E+00
12	0.6350	3.056E-07	0.149E+00	62	2.2162	4.099E-07	0.112E+00	112	7.7354	4.396E-07	0.110E+00
13	0.6510	2.966E-07	0.148E+00	63	2.2723	4.347E-07	0.103E+00	113	7.9312	4.872E-07	0.103E+00
14	0.6675	2.992E-07	0.149E+00	64	2.3299	3.572E-07	0.122E+00	114	8.1320	5.753E-07	0.928E-01
15	0.6844	3.454E-07	0.123E+00	65	2.3888	3.544E-07	0.118E+00	115	8.3379	6.304E-07	0.941E-01
16	0.7017	3.947E-07	0.105E+00	66	2.4493	3.915E-07	0.109E+00	116	8.5490	8.110E-07	0.754E-01
17	0.7195	4.017E-07	0.104E+00	67	2.5113	3.472E-07	0.117E+00	117	8.7654	7.617E-07	0.777E-01
18	0.7377	3.981E-07	0.994E-01	68	2.5749	2.556E-07	0.156E+00	118	8.9873	7.200E-07	0.854E-01
19	0.7564	2.752E-07	0.140E+00	69	2.6401	2.668E-07	0.139E+00	119	9.2148	1.004E-06	0.686E-01
20	0.7755	3.476E-07	0.108E+00	70	2.7069	2.914E-07	0.127E+00	120	9.4481	9.024E-07	0.744E-01
21	0.7952	3.508E-07	0.105E+00	71	2.7754	2.801E-07	0.130E+00	121	9.6872	6.904E-07	0.952E-01
22	0.8153	3.590E-07	0.102E+00	72	2.8457	2.550E-07	0.142E+00	122	9.9325	5.115E-07	0.112E+00
23	0.8360	3.918E-07	0.991E-01	73	2.9177	2.951E-07	0.116E+00	123	10.1840	2.845E-07	0.191E+00
24	0.8571	3.173E-07	0.111E+00	74	2.9916	3.180E-07	0.110E+00	124	10.4420	2.030E-07	0.256E+00
25	0.8788	3.158E-07	0.117E+00	75	3.0673	1.961E-07	0.170E+00	125	10.7060	1.946E-07	0.265E+00
26	0.9010	3.668E-07	0.102E+00	76	3.1450	1.806E-07	0.185E+00	126	10.9770	3.109E-07	0.171E+00
27	0.9239	3.356E-07	0.112E+00	77	3.2246	2.844E-07	0.113E+00	127	11.2550	3.252E-07	0.179E+00
28	0.9473	4.189E-07	0.890E-01	78	3.3062	2.200E-07	0.144E+00	128	11.5400	5.139E-07	0.113E+00
29	0.9712	3.925E-07	0.974E-01	79	3.3899	2.736E-07	0.117E+00	129	11.8320	4.737E-07	0.126E+00
30	0.9958	3.952E-07	0.987E-01	80	3.4758	3.538E-07	0.981E-01	130	12.1320	6.118E-07	0.105E+00
31	1.0210	4.481E-07	0.835E-01	81	3.5637	3.717E-07	0.987E-01	131	12.4390	7.427E-07	0.910E-01
32	1.0469	3.637E-07	0.106E+00	82	3.6540	4.218E-07	0.942E-01	132	12.7540	1.039E-06	0.691E-01
33	1.0734	4.318E-07	0.903E-01	83	3.7465	3.092E-07	0.125E+00	133	13.0760	1.347E-06	0.590E-01
34	1.1006	3.966E-07	0.936E-01	84	3.8413	4.429E-07	0.916E-01	134	13.4070	1.798E-06	0.493E-01
35	1.1284	4.294E-07	0.922E-01	85	3.9385	4.660E-07	0.877E-01	135	13.7470	2.174E-06	0.442E-01
36	1.1570	4.073E-07	0.949E-01	86	4.0382	3.591E-07	0.115E+00	136	14.0950	1.352E-06	0.481E-01
37	1.1863	4.652E-07	0.853E-01	87	4.1405	4.430E-07	0.966E-01	137	14.4520	1.061E-06	0.661E-01
38	1.2163	4.349E-07	0.875E-01	88	4.2453	5.287E-07	0.849E-01	138	14.8180	3.767E-07	0.115E+00
39	1.2471	3.502E-07	0.113E+00	89	4.3528	5.032E-07	0.894E-01	139	15.1930	9.073E-08	0.330E+00
40	1.2787	4.565E-07	0.867E-01	90	4.4630	5.530E-07	0.825E-01	140	15.5770	1.808E-09	0.134E+02
41	1.3110	4.210E-07	0.956E-01	91	4.5759	5.181E-07	0.944E-01	141	15.9720	-2.488E-08	0.803E+00
42	1.3442	4.607E-07	0.875E-01	92	4.6918	4.704E-07	0.982E-01	142	16.3760	3.121E-10	0.600E+02
43	1.3782	4.447E-07	0.921E-01	93	4.8105	5.262E-07	0.897E-01	143	16.7900	1.229E-08	0.126E+01
44	1.4131	4.505E-07	0.936E-01	94	4.9323	4.997E-07	0.961E-01	144	17.2160	2.581E-08	0.686E+00
45	1.4489	4.101E-07	0.983E-01	95	5.0572	3.857E-07	0.126E+00	145	17.6510	2.065E-08	0.737E+00
46	1.4856	5.251E-07	0.798E-01	96	5.1852	3.783E-07	0.107E+00	146	18.0980	7.773E-09	0.209E+01
47	1.5232	5.213E-07	0.825E-01	97	5.3165	3.476E-07	0.116E+00	147	18.5560	-9.315E-09	0.160E+01
48	1.5619	4.693E-07	0.924E-01	98	5.4511	3.028E-07	0.137E+00	148	19.0260	-1.452E-08	0.121E+01
49	1.6013	4.519E-07	0.949E-01	99	5.5891	2.642E-07	0.152E+00	149	19.5080	1.091E-08	0.149E+01
50	1.6418	4.737E-07	0.930E-01	100	5.7305	2.585E-07	0.148E+00	150	20.0020	2.281E-09	0.646E+01

* ENERGY = EV/EV]
** ERROR X 100 = %

Table 3.1.28

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESS=40 CM, ANGLE=41.9 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.7516	5.702E-11	1.000E+02	51	5.6589	6.200E-07	1.506E-02	101	1.6213	1.105E-06	1.078E-02
2	19.2639	3.298E-10	1.000E+02	52	5.5192	6.266E-07	1.499E-02	102	1.5813	1.116E-06	1.071E-02
3	18.7883	-3.323E-11	1.000E+02	53	5.3829	6.342E-07	1.490E-02	103	1.5422	1.128E-06	1.064E-02
4	18.3244	-2.786E-10	1.000E+02	54	5.2500	6.429E-07	1.478E-02	104	1.5042	1.141E-06	1.056E-02
5	17.8719	-8.428E-11	1.000E+02	55	5.1204	6.524E-07	1.465E-02	105	1.4670	1.154E-06	1.048E-02
6	17.4307	4.318E-10	1.000E+02	56	4.9940	6.620E-07	1.455E-02	106	1.4308	1.164E-06	1.042E-02
7	17.0003	1.077E-09	1.000E+02	57	4.8707	6.745E-07	1.439E-02	107	1.3955	1.175E-06	1.036E-02
8	16.5806	1.384E-09	1.000E+02	58	4.7504	6.876E-07	1.422E-02	108	1.3610	1.187E-06	1.030E-02
9	16.1712	1.392E-09	1.000E+02	59	4.6331	6.994E-07	1.408E-02	109	1.3274	1.199E-06	1.024E-02
10	15.7719	7.703E-10	1.000E+02	60	4.5187	7.124E-07	1.393E-02	110	1.2946	1.209E-06	1.018E-02
11	15.3825	8.155E-10	1.000E+02	61	4.4072	7.262E-07	1.375E-02	111	1.2627	1.221E-06	1.012E-02
12	15.0027	3.084E-09	1.000E+02	62	4.2984	7.388E-07	1.360E-02	112	1.2315	1.229E-06	1.008E-02
13	14.6323	1.250E-08	1.574E-01	63	4.1922	7.520E-07	1.345E-02	113	1.2011	1.240E-06	1.002E-02
14	14.2710	3.904E-08	6.752E-02	64	4.0887	7.631E-07	1.333E-02	114	1.1714	1.252E-06	9.959E-03
15	13.9187	8.533E-08	4.045E-02	65	3.9878	7.720E-07	1.324E-02	115	1.1425	1.262E-06	9.908E-03
16	13.5750	1.397E-07	3.010E-02	66	3.8893	7.837E-07	1.311E-02	116	1.1143	1.273E-06	9.855E-03
17	13.2399	1.846E-07	2.574E-02	67	3.7933	7.948E-07	1.299E-02	117	1.0868	1.283E-06	9.809E-03
18	12.9130	2.183E-07	2.360E-02	68	3.6996	8.025E-07	1.292E-02	118	1.0600	1.293E-06	9.756E-03
19	12.5941	2.443E-07	2.233E-02	69	3.6083	8.130E-07	1.281E-02	119	1.0338	1.303E-06	9.716E-03
20	12.2832	2.628E-07	2.173E-02	70	3.5192	8.223E-07	1.271E-02	120	1.0083	1.314E-06	9.663E-03
21	11.9799	2.781E-07	2.133E-02	71	3.4323	8.312E-07	1.262E-02	121	0.9834	1.324E-06	9.619E-03
22	11.6841	2.900E-07	2.110E-02	72	3.3476	8.390E-07	1.256E-02	122	0.9591	1.334E-06	9.575E-03
23	11.3957	3.026E-07	2.076E-02	73	3.2649	8.435E-07	1.251E-02	123	0.9354	1.344E-06	9.525E-03
24	11.1143	3.110E-07	2.075E-02	74	3.1843	8.506E-07	1.244E-02	124	0.9123	1.352E-06	9.492E-03
25	10.8399	3.187E-07	2.067E-02	75	3.1057	8.551E-07	1.241E-02	125	0.8898	1.362E-06	9.453E-03
26	10.5722	3.236E-07	2.075E-02	76	3.0290	8.600E-07	1.238E-02	126	0.8678	1.369E-06	9.422E-03
27	10.3112	3.287E-07	2.080E-02	77	2.9542	8.680E-07	1.231E-02	127	0.8464	1.377E-06	9.390E-03
28	10.0566	3.358E-07	2.076E-02	78	2.8813	8.754E-07	1.224E-02	128	0.8255	1.387E-06	9.350E-03
29	9.8083	3.486E-07	2.042E-02	79	2.8101	8.817E-07	1.220E-02	129	0.8051	1.396E-06	9.313E-03
30	9.5662	3.658E-07	1.997E-02	80	2.7408	8.887E-07	1.215E-02	130	0.7852	1.405E-06	9.278E-03
31	9.3300	3.884E-07	1.930E-02	81	2.6731	8.960E-07	1.209E-02	131	0.7659	1.414E-06	9.245E-03
32	9.0996	4.135E-07	1.860E-02	82	2.6071	9.027E-07	1.205E-02	132	0.7469	1.421E-06	9.225E-03
33	8.8749	4.315E-07	1.813E-02	83	2.5427	9.091E-07	1.201E-02	133	0.7285	1.430E-06	9.187E-03
34	8.6558	4.505E-07	1.772E-02	84	2.4799	9.178E-07	1.195E-02	134	0.7105	1.441E-06	9.151E-03
35	8.4421	4.708E-07	1.726E-02	85	2.4187	9.276E-07	1.188E-02	135	0.6930	1.450E-06	9.117E-03
36	8.2337	4.866E-07	1.698E-02	86	2.3590	9.364E-07	1.182E-02	136	0.6759	1.459E-06	9.093E-03
37	8.0304	5.009E-07	1.670E-02	87	2.3007	9.454E-07	1.176E-02	137	0.6592	1.467E-06	9.076E-03
38	7.8321	5.131E-07	1.649E-02	88	2.2439	9.562E-07	1.169E-02	138	0.6429	1.474E-06	9.061E-03
39	7.6387	5.241E-07	1.631E-02	89	2.1885	9.665E-07	1.163E-02	139	0.6270	1.482E-06	9.046E-03
40	7.4501	5.302E-07	1.626E-02	90	2.1345	9.759E-07	1.157E-02	140	0.6115	1.489E-06	9.032E-03
41	7.2662	5.369E-07	1.619E-02	91	2.0818	9.856E-07	1.152E-02	141	0.5964	1.499E-06	9.009E-03
42	7.0868	5.421E-07	1.614E-02	92	2.0304	9.963E-07	1.145E-02	142	0.5817	1.506E-06	9.001E-03
43	6.9118	5.478E-07	1.610E-02	93	1.9803	1.010E-06	1.135E-02	143	0.5674	1.512E-06	9.002E-03
44	6.7412	5.555E-07	1.599E-02	94	1.9314	1.021E-06	1.129E-02	144	0.5533	1.520E-06	8.996E-03
45	6.5747	5.661E-07	1.582E-02	95	1.8837	1.032E-06	1.122E-02	145	0.5397	1.528E-06	8.990E-03
46	6.4124	5.789E-07	1.561E-02	96	1.8372	1.043E-06	1.115E-02	146	0.5264	1.534E-06	8.998E-03
47	6.2541	5.886E-07	1.548E-02	97	1.7918	1.056E-06	1.107E-02	147	0.5134	1.540E-06	9.014E-03
48	6.0997	5.993E-07	1.532E-02	98	1.7476	1.067E-06	1.102E-02	148	0.5007	1.547E-06	9.027E-03
49	5.9491	6.061E-07	1.524E-02	99	1.7044	1.078E-06	1.094E-02	149	0.4883	1.552E-06	9.053E-03
50	5.8022	6.136E-07	1.514E-02	100	1.6623	1.093E-06	1.085E-02	150	0.4763	1.560E-06	9.068E-03

* ENERGY = LOWER BOUNDARY [MEV]
** ERROR X 100 = %

Table 3.1.29

ANGULAR FLUX OF GRAPHITE SLAB TOF [THICKNESS=40 CM, ANGLE=66.3 DEG]

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.4823	3.815E-08	0.133E+01	51	1.6834	2.804E-07	0.132E+00	101	5.8756	1.277E-07	0.245E+00
2	0.4945	3.746E-08	0.133E+01	52	1.7260	2.204E-07	0.169E+00	102	6.0244	1.171E-07	0.279E+00
3	0.5070	5.068E-08	0.961E+00	53	1.7697	2.551E-07	0.153E+00	103	6.1769	1.264E-07	0.266E+00
4	0.5199	6.353E-08	0.725E+00	54	1.8145	2.755E-07	0.136E+00	104	6.3332	1.092E-07	0.310E+00
5	0.5330	1.250E-07	0.370E+00	55	1.8604	2.374E-07	0.163E+00	105	6.4936	1.696E-07	0.212E+00
6	0.5465	1.476E-07	0.292E+00	56	1.9075	3.073E-07	0.126E+00	106	6.6579	1.816E-07	0.204E+00
7	0.5604	4.810E-08	0.381E+00	57	1.9558	3.113E-07	0.126E+00	107	6.8265	1.633E-07	0.232E+00
8	0.5745	1.636E-07	0.246E+00	58	2.0053	2.747E-07	0.140E+00	108	6.9993	2.284E-07	0.186E+00
9	0.5891	1.126E-07	0.353E+00	59	2.0561	1.675E-07	0.235E+00	109	7.1765	1.328E-07	0.309E+00
10	0.6040	1.552E-07	0.245E+00	60	2.1081	2.736E-07	0.146E+00	110	7.3582	1.955E-07	0.210E+00
11	0.6193	1.313E-07	0.290E+00	61	2.1615	2.604E-07	0.152E+00	111	7.5444	1.830E-07	0.227E+00
12	0.6350	1.157E-07	0.316E+00	62	2.2162	2.608E-07	0.153E+00	112	7.7354	1.631E-07	0.262E+00
13	0.6510	1.340E-07	0.196E+00	63	2.2723	2.058E-07	0.195E+00	113	7.9312	1.247E-07	0.369E+00
14	0.6675	1.616E-07	0.223E+00	64	2.3299	2.978E-07	0.140E+00	114	8.1320	2.371E-07	0.209E+00
15	0.6844	1.241E-07	0.276E+00	65	2.3888	2.554E-07	0.164E+00	115	8.3379	2.606E-07	0.198E+00
16	0.7017	1.204E-07	0.281E+00	66	2.4493	2.546E-07	0.163E+00	116	8.5490	2.495E-07	0.207E+00
17	0.7195	1.040E-07	0.319E+00	67	2.5113	2.271E-07	0.186E+00	117	8.7654	2.824E-07	0.198E+00
18	0.7377	1.516E-07	0.214E+00	68	2.5749	2.447E-07	0.167E+00	118	8.9873	1.873E-07	0.278E+00
19	0.7564	1.941E-07	0.162E+00	69	2.6401	2.108E-07	0.201E+00	119	9.2148	2.300E-07	0.223E+00
20	0.7755	1.628E-07	0.192E+00	70	2.7069	2.246E-07	0.189E+00	120	9.4481	2.878E-07	0.194E+00
21	0.7952	1.993E-07	0.153E+00	71	2.7754	2.369E-07	0.179E+00	121	9.6872	2.250E-07	0.258E+00
22	0.8153	2.109E-07	0.142E+00	72	2.8457	1.762E-07	0.240E+00	122	9.9325	2.030E-07	0.281E+00
23	0.8360	1.634E-07	0.135E+00	73	2.9177	1.635E-07	0.258E+00	123	10.1840	1.834E-07	0.329E+00
24	0.8571	1.779E-07	0.173E+00	74	2.9916	1.788E-07	0.243E+00	124	10.4420	2.077E-07	0.298E+00
25	0.8788	2.460E-07	0.124E+00	75	3.0673	2.050E-07	0.215E+00	125	10.7060	1.884E-07	0.327E+00
26	0.9010	1.977E-07	0.156E+00	76	3.1450	1.514E-07	0.300E+00	126	10.9770	1.739E-07	0.362E+00
27	0.9239	2.146E-07	0.141E+00	77	3.2246	2.335E-07	0.197E+00	127	11.2550	4.842E-08	0.135E+01
28	0.9473	2.151E-07	0.144E+00	78	3.3062	1.538E-07	0.304E+00	128	11.5400	2.035E-07	0.332E+00
29	0.9712	2.003E-07	0.155E+00	79	3.3899	7.940E-08	0.575E+00	129	11.8320	1.556E-07	0.457E+00
30	0.9958	1.970E-07	0.161E+00	80	3.4758	1.617E-07	0.303E+00	130	12.1320	2.954E-07	0.239E+00
31	1.0210	2.064E-07	0.159E+00	81	3.5637	1.615E-07	0.293E+00	131	12.4390	3.959E-07	0.183E+00
32	1.0469	2.690E-07	0.121E+00	82	3.6540	2.463E-07	0.203E+00	132	12.7540	3.962E-07	0.183E+00
33	1.0734	2.569E-07	0.123E+00	83	3.7465	2.377E-07	0.173E+00	133	13.0760	3.497E-07	0.213E+00
34	1.1006	2.504E-07	0.131E+00	84	3.8413	2.414E-07	0.208E+00	134	13.4070	2.920E-07	0.237E+00
35	1.1284	2.677E-07	0.115E+00	85	3.9385	2.779E-07	0.183E+00	135	13.7470	2.877E-07	0.233E+00
36	1.1570	2.237E-07	0.141E+00	86	4.0382	3.010E-07	0.166E+00	136	14.0950	2.956E-07	0.215E+00
37	1.1863	2.351E-07	0.133E+00	87	4.1405	3.066E-07	0.166E+00	137	14.4520	2.331E-07	0.263E+00
38	1.2163	2.013E-07	0.155E+00	88	4.2453	2.179E-07	0.233E+00	138	14.8180	2.374E-07	0.227E+00
39	1.2471	1.936E-07	0.162E+00	89	4.3528	2.346E-07	0.175E+00	139	15.1930	1.545E-07	0.308E+00
40	1.2787	2.622E-07	0.122E+00	90	4.4630	2.133E-07	0.239E+00	140	15.5770	1.339E-07	0.313E+00
41	1.3110	3.165E-07	0.103E+00	91	4.5759	1.216E-07	0.412E+00	141	15.9720	7.210E-08	0.524E+00
42	1.3442	2.901E-07	0.118E+00	92	4.6918	2.160E-07	0.224E+00	142	16.3760	6.358E-08	0.574E+00
43	1.3782	2.362E-07	0.143E+00	93	4.8105	1.835E-07	0.263E+00	143	16.7900	1.595E-07	0.197E+00
44	1.4131	2.534E-07	0.137E+00	94	4.9323	2.267E-07	0.210E+00	144	17.2160	5.092E-08	0.479E+00
45	1.4489	3.047E-07	0.165E+00	95	5.0572	1.775E-07	0.259E+00	145	17.6510	1.301E-08	0.162E+01
46	1.4856	2.870E-07	0.117E+00	96	5.1852	1.547E-07	0.227E+00	146	18.0980	2.002E-09	0.742E+01
47	1.5232	3.143E-07	0.110E+00	97	5.3165	1.711E-07	0.196E+00	147	18.5560	-3.009E-08	0.525E+00
48	1.5618	1.981E-07	0.175E+00	98	5.4511	2.282E-07	0.150E+00	148	19.0260	-4.165E-08	0.394E+00
49	1.6013	2.920E-07	0.123E+00	99	5.5891	1.586E-07	0.210E+00	149	19.5090	6.653E-09	0.221E+01
50	1.6418	2.638E-07	0.137E+00	100	5.7305	1.336E-07	0.181E+00	150	20.0020	9.920E-09	0.147E+01

* ENERGY = [MEV]
** ERROR X 100 = %

Table 3.1.30

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESS=40 CM, ANGLE=66.8 DEG]

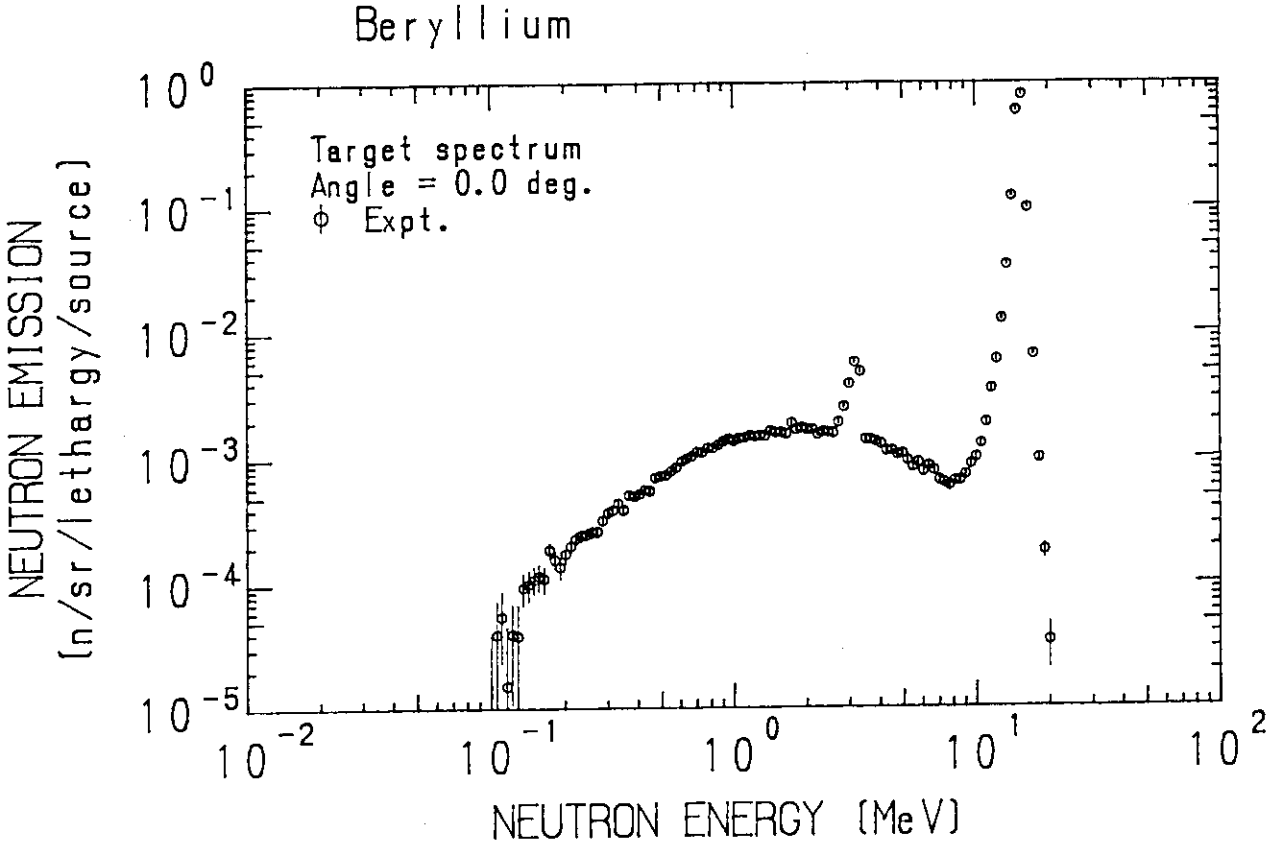
J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.7516	2.480E-10	1.000E+02	51	5.6589	2.227E-07	3.994E-02	101	1.6213	5.033E-07	2.335E-02
2	19.2639	4.143E-10	1.000E+02	52	5.5192	2.266E-07	3.941E-02	102	1.5813	5.106E-07	2.308E-02
3	18.7883	-6.270E-10	1.000E+02	53	5.3829	2.323E-07	3.862E-02	103	1.5422	5.156E-07	2.292E-02
4	18.3244	-1.379E-09	1.000E+02	54	5.2500	2.366E-07	3.809E-02	104	1.5042	5.234E-07	2.264E-02
5	17.8719	-1.329E-09	1.000E+02	55	5.1204	2.405E-07	3.765E-02	105	1.4670	5.306E-07	2.239E-02
6	17.4307	-1.004E-09	1.000E+02	56	4.9940	2.449E-07	3.726E-02	106	1.4308	5.357E-07	2.223E-02
7	17.0003	2.691E-10	1.000E+02	57	4.8707	2.506E-07	3.673E-02	107	1.3955	5.421E-07	2.203E-02
8	16.5806	4.256E-09	1.000E+02	58	4.7504	2.552E-07	3.638E-02	108	1.3610	5.480E-07	2.185E-02
9	16.1712	5.846E-09	1.000E+02	59	4.6331	2.606E-07	3.593E-02	109	1.3274	5.552E-07	2.162E-02
10	15.7719	7.648E-09	1.000E+02	60	4.5187	2.636E-07	3.583E-02	110	1.2946	5.631E-07	2.137E-02
11	15.3825	1.099E-08	2.003E-01	61	4.4072	2.690E-07	3.544E-02	111	1.2627	5.697E-07	2.117E-02
12	15.0027	1.486E-08	1.635E-01	62	4.2984	2.761E-07	3.482E-02	112	1.2315	5.745E-07	2.103E-02
13	14.6323	2.079E-08	1.367E-01	63	4.1922	2.815E-07	3.444E-02	113	1.2011	5.796E-07	2.089E-02
14	14.2710	2.662E-08	1.213E-01	64	4.0887	2.892E-07	3.381E-02	114	1.1714	5.854E-07	2.073E-02
15	13.9187	3.401E-08	1.058E-01	65	3.9873	2.967E-07	3.323E-02	115	1.1425	5.910E-07	2.058E-02
16	13.5750	4.120E-08	9.635E-02	66	3.8893	3.037E-07	3.273E-02	116	1.1143	5.977E-07	2.039E-02
17	13.2399	4.850E-08	8.927E-02	67	3.7933	3.097E-07	3.235E-02	117	1.0868	6.040E-07	2.022E-02
18	12.9130	5.724E-08	8.236E-02	68	3.6996	3.169E-07	3.186E-02	118	1.0600	6.104E-07	2.005E-02
19	12.5941	6.715E-08	7.520E-02	69	3.6083	3.230E-07	3.149E-02	119	1.0338	6.171E-07	1.987E-02
20	12.2832	7.705E-08	6.964E-02	70	3.5192	3.271E-07	3.131E-02	120	1.0083	6.223E-07	1.975E-02
21	11.9799	8.443E-08	6.691E-02	71	3.4323	3.311E-07	3.115E-02	121	0.9834	6.272E-07	1.964E-02
22	11.6841	8.832E-08	6.706E-02	72	3.3476	3.331E-07	3.115E-02	122	0.9591	6.322E-07	1.952E-02
23	11.3957	9.341E-08	6.593E-02	73	3.2649	3.370E-07	3.099E-02	123	0.9354	6.376E-07	1.940E-02
24	11.1143	9.462E-08	6.733E-02	74	3.1843	3.428E-07	3.065E-02	124	0.9123	6.430E-07	1.927E-02
25	10.8399	9.897E-08	6.630E-02	75	3.1057	3.466E-07	3.049E-02	125	0.8898	6.479E-07	1.916E-02
26	10.5722	1.037E-07	6.502E-02	76	3.0290	3.517E-07	3.021E-02	126	0.8678	6.541E-07	1.902E-02
27	10.3112	1.059E-07	6.353E-02	77	2.9542	3.562E-07	2.998E-02	127	0.8464	6.585E-07	1.893E-02
28	10.0566	1.135E-07	6.239E-02	78	2.8813	3.603E-07	2.979E-02	128	0.8255	6.626E-07	1.884E-02
29	9.8033	1.185E-07	6.092E-02	79	2.8101	3.647E-07	2.957E-02	129	0.8051	6.679E-07	1.873E-02
30	9.5562	1.242E-07	5.932E-02	80	2.7408	3.706E-07	2.924E-02	130	0.7852	6.729E-07	1.862E-02
31	9.3300	1.313E-07	5.707E-02	81	2.6731	3.762E-07	2.894E-02	131	0.7659	6.769E-07	1.855E-02
32	9.0996	1.371E-07	5.547E-02	82	2.6071	3.815E-07	2.867E-02	132	0.7469	6.818E-07	1.845E-02
33	8.8749	1.419E-07	5.442E-02	83	2.5427	3.876E-07	2.834E-02	133	0.7285	6.856E-07	1.839E-02
34	8.6558	1.486E-07	5.263E-02	84	2.4799	3.933E-07	2.806E-02	134	0.7105	6.882E-07	1.836E-02
35	8.4421	1.551E-07	5.124E-02	85	2.4187	3.996E-07	2.774E-02	135	0.6930	6.912E-07	1.832E-02
36	8.2337	1.616E-07	4.982E-02	86	2.3590	4.060E-07	2.742E-02	136	0.6759	6.943E-07	1.828E-02
37	8.0304	1.675E-07	4.862E-02	87	2.3007	4.135E-07	2.705E-02	137	0.6592	6.983E-07	1.822E-02
38	7.8321	1.706E-07	4.821E-02	88	2.2439	4.186E-07	2.682E-02	138	0.6429	7.029E-07	1.815E-02
39	7.6387	1.747E-07	4.748E-02	89	2.1885	4.251E-07	2.651E-02	139	0.6270	7.058E-07	1.812E-02
40	7.4501	1.793E-07	4.663E-02	90	2.1345	4.316E-07	2.621E-02	140	0.6115	7.091E-07	1.808E-02
41	7.2662	1.842E-07	4.573E-02	91	2.0818	4.385E-07	2.591E-02	141	0.5964	7.130E-07	1.803E-02
42	7.0869	1.875E-07	4.526E-02	92	2.0304	4.427E-07	2.576E-02	142	0.5817	7.158E-07	1.802E-02
43	6.9119	1.932E-07	4.426E-02	93	1.9803	4.495E-07	2.545E-02	143	0.5674	7.199E-07	1.797E-02
44	6.7412	1.973E-07	4.361E-02	94	1.9314	4.573E-07	2.511E-02	144	0.5533	7.211E-07	1.800E-02
45	6.5747	2.018E-07	4.289E-02	95	1.8837	4.650E-07	2.478E-02	145	0.5397	7.248E-07	1.797E-02
46	6.4124	2.061E-07	4.222E-02	96	1.8372	4.709E-07	2.456E-02	146	0.5264	7.279E-07	1.796E-02
47	6.2541	2.083E-07	4.186E-02	97	1.7918	4.778E-07	2.428E-02	147	0.5134	7.295E-07	1.799E-02
48	6.0997	2.120E-07	4.143E-02	98	1.7476	4.842E-07	2.405E-02	148	0.5007	7.307E-07	1.804E-02
49	5.9491	2.149E-07	4.104E-02	99	1.7044	4.897E-07	2.385E-02	149	0.4883	7.317E-07	1.810E-02
50	5.8022	2.181E-07	4.060E-02	100	1.6623	4.967E-07	2.359E-02	150	0.4763	7.326E-07	1.816E-02

* ENERGY = LOWER BOUNDARY [MEV]
** ERROR X 100 = %

3.2 Beryllium

The beryllium slab assemblies measured are 50.8 mm and 152.4 mm thick, and 315 mm equivalent radius. The beryllium blocks, loaned from Argonne National Laboratory, were manufactured by Brush Wellman Inc. The purity of beryllium is 98.92 wt% and the contaminant is principally BeO. The measured energy range is from 50 keV to 15 MeV. The figures and numerical tables are presented in the same manner as the graphite assembly.

List of Figures and Tables


Beryllium
Target spectrum
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φ Expt.
NEUTRON EMISSION
[n/sr/lethargy/source]
NEUTRON ENERGY [MeV]
10^0
10^-1
10^-2
10^-3
10^-4
10^-5
10^-2
10^-1
10^0
10^1
10^2

Fig. 3.2.1

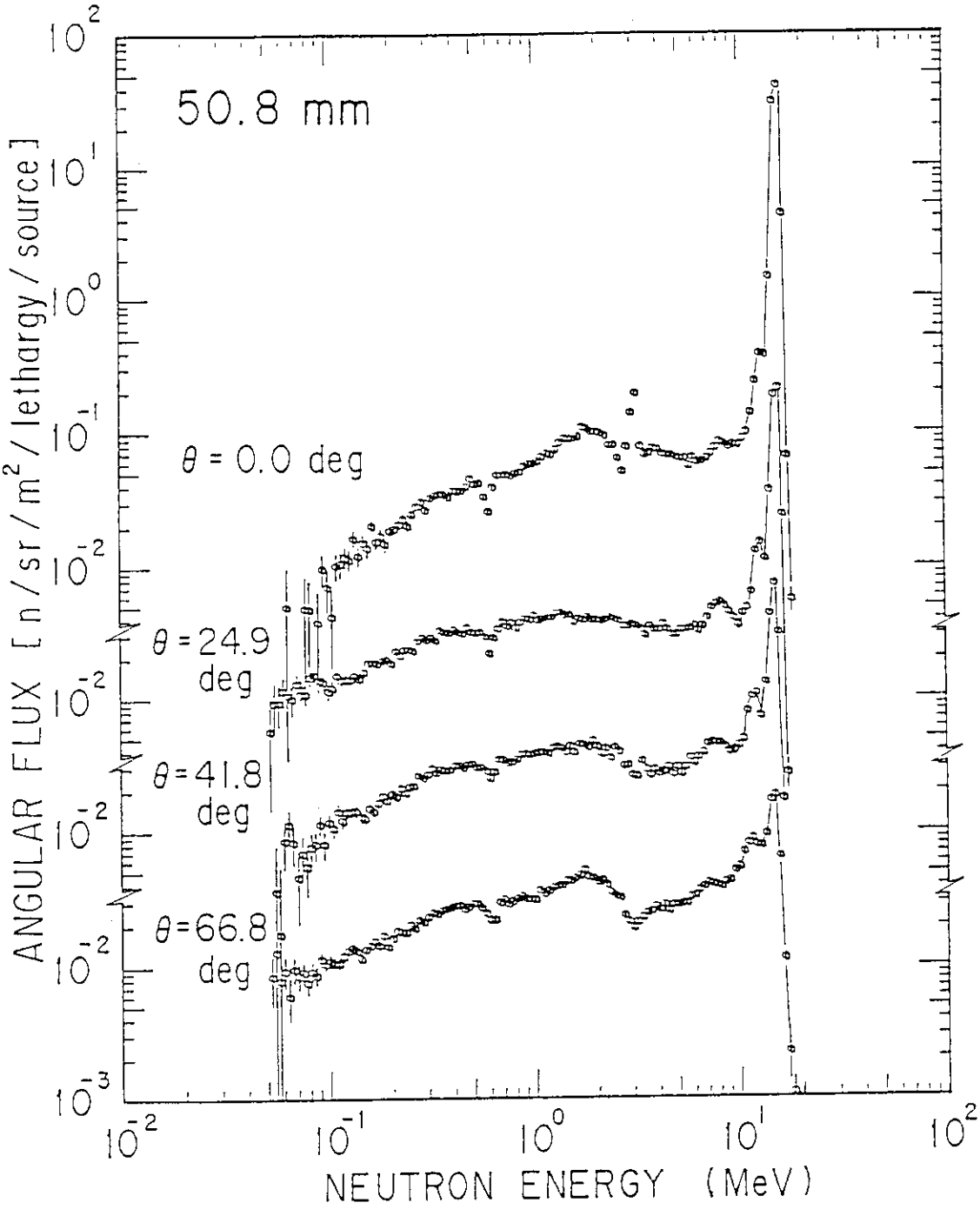
50.8 mm
θ = 0.0 deg
θ = 24.9 deg
θ = 41.8 deg
θ = 66.8 deg
ANGULAR FLUX [n/sr/m²/lethargy/source]
NEUTRON ENERGY (MeV)

Fig. 3.2.2(a)

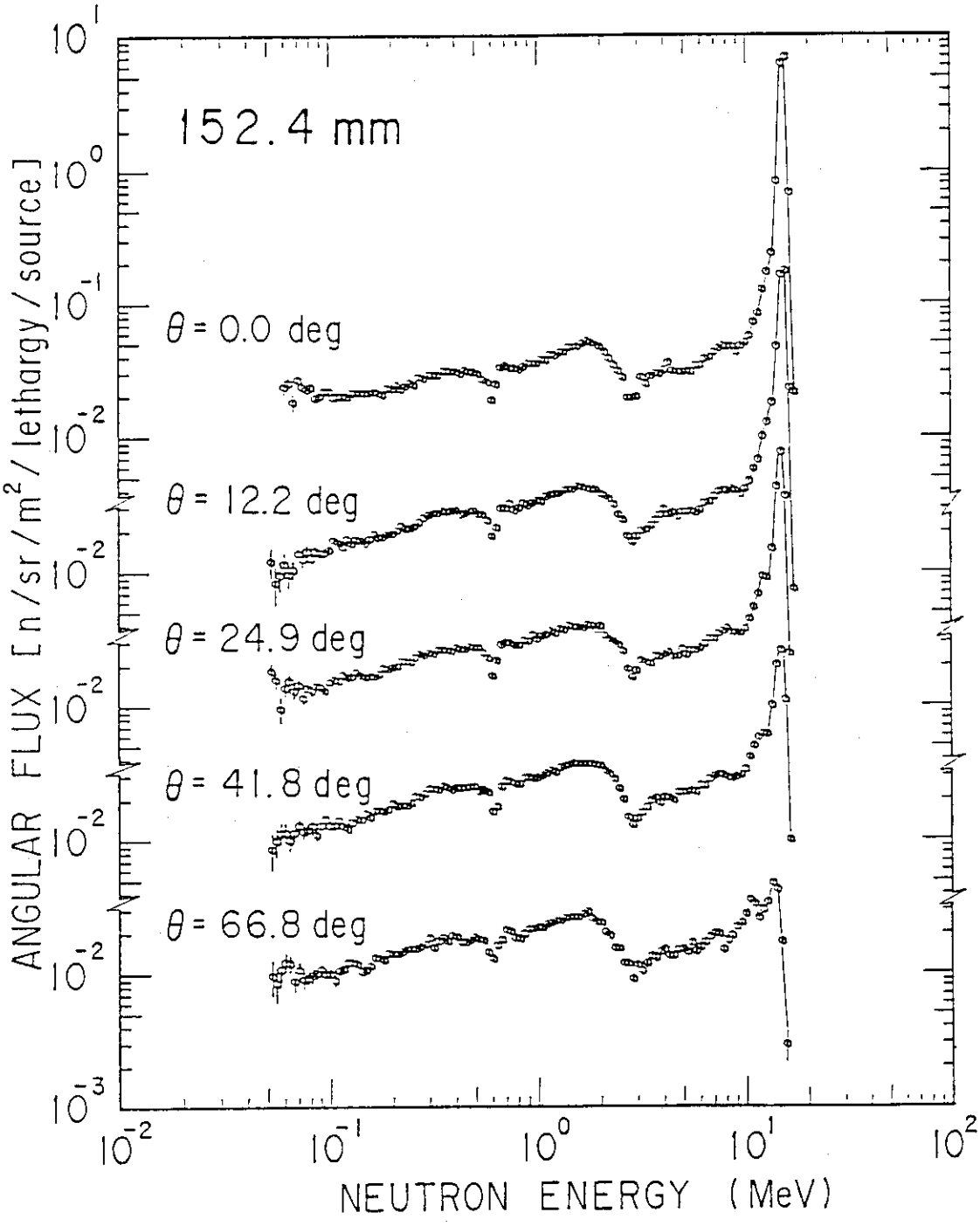
152.4 mm
θ = 0.0 deg
θ = 12.2 deg
θ = 24.9 deg
θ = 41.8 deg
θ = 66.8 deg
ANGULAR FLUX [n/sr/m²/lethargy/source]
NEUTRON ENERGY (MeV)

Fig. 3.2.2(b)

Table 3.2.1

NEUTRON EMISSION SPECTRUM FROM THE TARGET

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.0116	0.000E+00	0.100E+01	51	0.1417	9.990E-05	0.280E+00	101	1.7259	1.902E-03	0.366E-01
2	0.0122	0.000E+00	0.100E+01	52	0.1489	1.094E-04	0.247E+00	102	1.8144	1.701E-03	0.380E-01
3	0.0129	0.000E+00	0.100E+01	53	0.1566	1.166E-04	0.233E+00	103	1.9074	1.743E-03	0.369E-01
4	0.0135	0.000E+00	0.100E+01	54	0.1646	1.116E-04	0.237E+00	104	2.0052	1.704E-03	0.369E-01
5	0.0142	0.000E+00	0.100E+01	55	0.1730	1.903E-04	0.135E+00	105	2.1080	1.698E-03	0.370E-01
6	0.0149	0.000E+00	0.100E+01	56	0.1819	1.590E-04	0.154E+00	106	2.2161	1.558E-03	0.380E-01
7	0.0157	0.000E+00	0.100E+01	57	0.1912	1.377E-04	0.190E+00	107	2.3297	1.621E-03	0.371E-01
8	0.0165	0.000E+00	0.100E+01	58	0.2010	1.758E-04	0.150E+00	108	2.4491	1.616E-03	0.373E-01
9	0.0173	0.000E+00	0.100E+01	59	0.2113	2.047E-04	0.130E+00	109	2.5747	1.589E-03	0.386E-01
10	0.0182	0.000E+00	0.100E+01	60	0.2222	2.348E-04	0.112E+00	110	2.7067	1.931E-03	0.333E-01
11	0.0192	0.000E+00	0.100E+01	61	0.2336	2.481E-04	0.111E+00	111	2.8455	2.537E-03	0.287E-01
12	0.0202	0.000E+00	0.100E+01	62	0.2456	2.542E-04	0.109E+00	112	2.9914	3.879E-03	0.233E-01
13	0.0212	0.000E+00	0.100E+01	63	0.2581	2.649E-04	0.102E+00	113	3.1447	5.748E-03	0.191E-01
14	0.0223	0.000E+00	0.100E+01	64	0.2714	2.676E-04	0.103E+00	114	3.3060	4.847E-03	0.214E-01
15	0.0234	0.000E+00	0.100E+01	65	0.2853	3.289E-04	0.833E-01	115	3.4755	1.408E-03	0.415E-01
16	0.0246	0.000E+00	0.100E+01	66	0.2999	3.767E-04	0.739E-01	116	3.6537	1.393E-03	0.427E-01
17	0.0259	0.000E+00	0.100E+01	67	0.3153	3.942E-04	0.697E-01	117	3.8410	1.347E-03	0.431E-01
18	0.0272	0.000E+00	0.100E+01	68	0.3314	4.468E-04	0.644E-01	118	4.0379	1.297E-03	0.447E-01
19	0.0286	0.000E+00	0.100E+01	69	0.3485	3.958E-04	0.751E-01	119	4.2450	1.140E-03	0.497E-01
20	0.0301	0.000E+00	0.100E+01	70	0.3663	5.190E-04	0.594E-01	120	4.4626	1.142E-03	0.487E-01
21	0.0316	-1.587E-04	0.307E+00	71	0.3851	5.043E-04	0.602E-01	121	4.6914	1.067E-03	0.512E-01
22	0.0332	-1.845E-03	0.105E+00	72	0.4048	5.292E-04	0.598E-01	122	4.9319	1.082E-03	0.513E-01
23	0.0349	-7.372E-04	0.272E+00	73	0.4256	5.656E-04	0.564E-01	123	5.1848	9.604E-04	0.558E-01
24	0.0367	-6.153E-04	0.306E+00	74	0.4474	5.591E-04	0.575E-01	124	5.4506	8.473E-04	0.599E-01
25	0.0386	-1.024E-03	0.169E+00	75	0.4703	7.090E-04	0.480E-01	125	5.7301	9.266E-04	0.571E-01
26	0.0406	-6.769E-04	0.224E+00	76	0.4945	7.345E-04	0.470E-01	126	6.0239	7.833E-04	0.644E-01
27	0.0427	-3.465E-04	0.408E+00	77	0.5198	7.397E-04	0.470E-01	127	6.3327	8.703E-04	0.609E-01
28	0.0449	-5.477E-04	0.245E+00	78	0.5465	7.981E-04	0.439E-01	128	6.6574	7.956E-04	0.659E-01
29	0.0472	-4.410E-04	0.281E+00	79	0.5745	8.529E-04	0.423E-01	129	6.9988	6.649E-04	0.759E-01
30	0.0496	-3.142E-04	0.360E+00	80	0.6040	9.460E-04	0.388E-01	130	7.3576	6.339E-04	0.873E-01
31	0.0521	-3.343E-04	0.297E+00	81	0.6349	9.973E-04	0.380E-01	131	7.7348	6.039E-04	0.957E-01
32	0.0548	-2.529E-04	0.343E+00	82	0.6675	1.043E-03	0.374E-01	132	8.1314	6.581E-04	0.929E-01
33	0.0576	-3.193E-04	0.234E+00	83	0.7017	1.135E-03	0.351E-01	133	8.5483	6.631E-04	0.932E-01
34	0.0606	-1.574E-04	0.443E+00	84	0.7377	1.122E-03	0.358E-01	134	8.9866	7.374E-04	0.858E-01
35	0.0637	-5.323E-05	0.118E+01	85	0.7755	1.210E-03	0.339E-01	135	9.4473	8.986E-04	0.753E-01
36	0.0669	-2.229E-04	0.257E+00	86	0.8152	1.211E-03	0.339E-01	136	9.9317	1.020E-03	0.746E-01
37	0.0703	-1.687E-04	0.309E+00	87	0.8570	1.289E-03	0.331E-01	137	10.4410	1.309E-03	0.642E-01
38	0.0740	-9.275E-05	0.502E+00	88	0.9010	1.378E-03	0.312E-01	138	10.9760	1.913E-03	0.489E-01
39	0.0777	-8.805E-05	0.498E+00	89	0.9472	1.441E-03	0.307E-01	139	11.5390	3.517E-03	0.345E-01
40	0.0817	-9.279E-05	0.452E+00	90	0.9957	1.384E-03	0.328E-01	140	12.1310	6.018E-03	0.256E-01
41	0.0859	-4.693E-05	0.854E+00	91	1.0468	1.449E-03	0.320E-01	141	12.7530	1.258E-02	0.173E-01
42	0.0903	-7.846E-06	0.481E+01	92	1.1005	1.461E-03	0.318E-01	142	13.4060	3.435E-02	0.103E-01
43	0.0950	-5.215E-05	0.675E+00	93	1.1569	1.525E-03	0.309E-01	143	14.0940	1.211E-01	0.533E-02
44	0.0998	5.236E-06	0.645E+01	94	1.2162	1.499E-03	0.313E-01	144	14.8160	5.970E-01	0.238E-02
45	0.1050	3.935E-05	0.830E+00	95	1.2786	1.532E-03	0.315E-01	145	15.5760	7.945E-01	0.202E-02
46	0.1103	5.490E-05	0.582E+00	96	1.3441	1.521E-03	0.327E-01	146	16.3750	9.766E-02	0.567E-02
47	0.1160	1.520E-05	0.198E+01	97	1.4130	1.650E-03	0.297E-01	147	17.2140	6.602E-03	0.216E-01
48	0.1219	3.969E-05	0.726E+00	98	1.4855	1.611E-03	0.312E-01	148	18.0970	9.943E-04	0.558E-01
49	0.1282	3.854E-05	0.759E+00	99	1.5616	1.606E-03	0.311E-01	149	19.0250	1.825E-04	0.131E+00
50	0.1348	9.408E-05	0.295E+00	100	1.6417	1.569E-03	0.316E-01	150	20.0000	3.419E-05	0.404E+00

* ENERGY = [MEV]
** ERROR X 100 = %

Table 3.2.2

RUNNING INTEGRAL OF TARGET SPECTRUM

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.5062	1.710E-06	4.042E-01	51	1.6012	8.672E-02	1.379E-03	101	0.1314	8.862E-02	1.357E-03
2	18.5549	1.083E-05	1.271E-01	52	1.5231	8.680E-02	1.378E-03	102	0.1250	8.862E-02	1.357E-03
3	17.6499	6.055E-05	5.119E-02	53	1.4488	8.688E-02	1.377E-03	103	0.1189	8.863E-02	1.357E-03
4	16.7891	3.907E-04	1.987E-02	54	1.3781	8.696E-02	1.376E-03	104	0.1131	8.863E-02	1.357E-03
5	15.9703	5.274E-03	5.451E-03	55	1.3109	8.703E-02	1.375E-03	105	0.1076	8.863E-02	1.357E-03
6	15.1914	4.500E-02	1.897E-03	56	1.2470	8.711E-02	1.374E-03	106	0.1024	8.863E-02	1.358E-03
7	14.4505	7.485E-02	1.483E-03	57	1.1862	8.719E-02	1.373E-03	107	0.0974	8.863E-02	1.358E-03
8	13.7458	8.090E-02	1.429E-03	58	1.1283	8.726E-02	1.373E-03	108	0.0926	8.863E-02	1.358E-03
9	13.0754	8.262E-02	1.415E-03	59	1.0733	8.734E-02	1.372E-03	109	0.0881	8.863E-02	1.358E-03
10	12.4377	8.325E-02	1.410E-03	60	1.0209	8.741E-02	1.371E-03	110	0.0838	8.863E-02	1.358E-03
11	11.8311	8.355E-02	1.408E-03	61	0.9712	8.748E-02	1.370E-03	111	0.0797	8.862E-02	1.359E-03
12	11.2541	8.373E-02	1.407E-03	62	0.9238	8.755E-02	1.369E-03	112	0.0758	8.862E-02	1.359E-03
13	10.7052	8.382E-02	1.407E-03	63	0.8787	8.762E-02	1.368E-03	113	0.0721	8.861E-02	1.359E-03
14	10.1831	8.389E-02	1.407E-03	64	0.8359	8.768E-02	1.367E-03	114	0.0686	8.860E-02	1.360E-03
15	9.6865	8.394E-02	1.407E-03	65	0.7951	8.774E-02	1.367E-03	115	0.0653	8.859E-02	1.360E-03
16	9.2141	8.398E-02	1.406E-03	66	0.7563	8.780E-02	1.366E-03	116	0.0621	8.859E-02	1.361E-03
17	8.7647	8.402E-02	1.406E-03	67	0.7195	8.786E-02	1.365E-03	117	0.0591	8.858E-02	1.361E-03
18	8.3372	8.405E-02	1.406E-03	68	0.6844	8.792E-02	1.365E-03	118	0.0562	8.857E-02	1.362E-03
19	7.9306	8.409E-02	1.406E-03	69	0.6510	8.797E-02	1.364E-03	119	0.0534	8.855E-02	1.363E-03
20	7.5438	8.412E-02	1.406E-03	70	0.6192	8.802E-02	1.363E-03	120	0.0508	8.854E-02	1.365E-03
21	7.1759	8.415E-02	1.406E-03	71	0.5890	8.807E-02	1.363E-03	121	0.0484	8.852E-02	1.367E-03
22	6.8260	8.418E-02	1.406E-03	72	0.5603	8.811E-02	1.362E-03	122	0.0460	8.850E-02	1.369E-03
23	6.4930	8.422E-02	1.405E-03	73	0.5330	8.815E-02	1.362E-03	123	0.0437	8.847E-02	1.371E-03
24	6.1764	8.426E-02	1.405E-03	74	0.5070	8.819E-02	1.361E-03	124	0.0416	8.845E-02	1.374E-03
25	5.8752	8.430E-02	1.405E-03	75	0.4823	8.822E-02	1.361E-03	125	0.0396	8.842E-02	1.377E-03
26	5.5886	8.435E-02	1.404E-03	76	0.4587	8.826E-02	1.360E-03	126	0.0377	8.837E-02	1.381E-03
27	5.3161	8.439E-02	1.404E-03	77	0.4364	8.829E-02	1.360E-03	127	0.0358	8.834E-02	1.386E-03
28	5.0568	8.444E-02	1.403E-03	78	0.4151	8.831E-02	1.360E-03	128	0.0341	8.830E-02	1.391E-03
29	4.8102	8.449E-02	1.403E-03	79	0.3948	8.834E-02	1.360E-03	129	0.0324	8.821E-02	1.397E-03
30	4.5756	8.455E-02	1.402E-03	80	0.3756	8.837E-02	1.359E-03	130	0.0308	8.820E-02	1.397E-03
31	4.3524	8.460E-02	1.402E-03	81	0.3573	8.839E-02	1.359E-03	131	0.0293	8.820E-02	1.397E-03
32	4.1402	8.466E-02	1.401E-03	82	0.3398	8.841E-02	1.359E-03	132	0.0279	8.820E-02	1.397E-03
33	3.9382	8.473E-02	1.401E-03	83	0.3233	8.843E-02	1.359E-03	133	0.0265	8.820E-02	1.397E-03
34	3.7462	8.479E-02	1.400E-03	84	0.3075	8.845E-02	1.358E-03	134	0.0252	8.820E-02	1.397E-03
35	3.5635	8.486E-02	1.399E-03	85	0.2925	8.847E-02	1.358E-03	135	0.0240	8.820E-02	1.397E-03
36	3.3897	8.493E-02	1.398E-03	86	0.2782	8.849E-02	1.358E-03	136	0.0228	8.820E-02	1.397E-03
37	3.2244	8.518E-02	1.396E-03	87	0.2647	8.850E-02	1.358E-03	137	0.0217	8.820E-02	1.397E-03
38	3.0671	8.546E-02	1.393E-03	88	0.2518	8.852E-02	1.358E-03	138	0.0207	8.820E-02	1.397E-03
39	2.9175	8.566E-02	1.390E-03	89	0.2395	8.853E-02	1.358E-03	139	0.0197	8.820E-02	1.397E-03
40	2.7752	8.578E-02	1.389E-03	90	0.2278	8.854E-02	1.358E-03	140	0.0187	8.820E-02	1.397E-03
41	2.6399	8.588E-02	1.388E-03	91	0.2167	8.855E-02	1.357E-03	141	0.0178	8.820E-02	1.397E-03
42	2.5111	8.596E-02	1.387E-03	92	0.2061	8.856E-02	1.357E-03	142	0.0169	8.820E-02	1.397E-03
43	2.3887	8.604E-02	1.386E-03	93	0.1961	8.857E-02	1.357E-03	143	0.0161	8.820E-02	1.397E-03
44	2.2722	8.612E-02	1.385E-03	94	0.1865	8.858E-02	1.357E-03	144	0.0153	8.820E-02	1.397E-03
45	2.1613	8.620E-02	1.385E-03	95	0.1774	8.859E-02	1.357E-03	145	0.0146	8.820E-02	1.397E-03
46	2.0559	8.628E-02	1.384E-03	96	0.1688	8.860E-02	1.357E-03	146	0.0139	8.820E-02	1.397E-03
47	1.9557	8.637E-02	1.383E-03	97	0.1605	8.860E-02	1.357E-03	147	0.0132	8.820E-02	1.397E-03
48	1.8603	8.646E-02	1.382E-03	98	0.1527	8.861E-02	1.357E-03	148	0.0125	8.820E-02	1.397E-03
49	1.7696	8.654E-02	1.381E-03	99	0.1453	8.861E-02	1.357E-03	149	0.0119	8.820E-02	1.397E-03
50	1.6833	8.664E-02	1.380E-03	100	0.1382	8.862E-02	1.357E-03	150	0.0113	8.820E-02	1.397E-03

* ENERGY = LOWER BOUNDARY [MEV]
** ERROR X 100 = %

Table 3.2.3

ANGULAR FLUX OF BERYLLIUM SLAB TOF [THICKNESSES CM, ANGLE=0.0 DEG]

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.0116	0.000E+00	0.100E+01	51	0.1417	1.231E-06	0.165E+00	101	1.7259	1.100E-05	0.409E-01
2	0.0122	0.000E+00	0.100E+01	52	0.1489	1.542E-06	0.125E+00	102	1.8144	1.063E-05	0.405E-01
3	0.0129	0.000E+00	0.100E+01	53	0.1566	1.405E-06	0.141E+00	103	1.9074	1.012E-05	0.407E-01
4	0.0135	0.000E+00	0.100E+01	54	0.1646	2.060E-06	0.948E-01	104	2.0052	1.010E-05	0.403E-01
5	0.0142	0.000E+00	0.100E+01	55	0.1730	1.577E-06	0.117E+00	105	2.1080	9.905E-06	0.411E-01
6	0.0149	0.000E+00	0.100E+01	56	0.1819	1.742E-06	0.104E+00	106	2.2161	9.448E-06	0.417E-01
7	0.0157	0.000E+00	0.100E+01	57	0.1912	1.496E-06	0.123E+00	107	2.3297	8.030E-06	0.453E-01
8	0.0165	0.000E+00	0.100E+01	58	0.2010	1.894E-06	0.986E-01	108	2.4491	8.114E-06	0.439E-01
9	0.0173	0.000E+00	0.100E+01	59	0.2113	1.967E-06	0.958E-01	109	2.5747	6.448E-06	0.512E-01
10	0.0182	0.000E+00	0.100E+01	60	0.2222	2.111E-06	0.843E-01	110	2.7067	5.179E-06	0.598E-01
11	0.0192	0.000E+00	0.100E+01	61	0.2336	2.321E-06	0.802E-01	111	2.8455	7.823E-06	0.447E-01
12	0.0202	0.000E+00	0.100E+01	62	0.2456	2.044E-06	0.902E-01	112	2.9914	1.395E-05	0.332E-01
13	0.0212	0.000E+00	0.100E+01	63	0.2581	2.515E-06	0.740E-01	113	3.1447	1.942E-05	0.282E-01
14	0.0223	0.000E+00	0.100E+01	64	0.2714	2.881E-06	0.665E-01	114	3.3060	7.901E-06	0.474E-01
15	0.0234	0.000E+00	0.100E+01	65	0.2853	3.112E-06	0.615E-01	115	3.4755	6.774E-06	0.512E-01
16	0.0246	0.000E+00	0.100E+01	66	0.2999	2.687E-06	0.754E-01	116	3.6537	7.028E-06	0.522E-01
17	0.0259	0.000E+00	0.100E+01	67	0.3153	3.308E-06	0.595E-01	117	3.8410	7.584E-06	0.493E-01
18	0.0272	0.000E+00	0.100E+01	68	0.3314	3.483E-06	0.569E-01	118	4.0379	7.473E-06	0.496E-01
19	0.0286	-8.699E-06	0.141E+00	69	0.3485	3.562E-06	0.563E-01	119	4.2450	6.933E-06	0.529E-01
20	0.0301	-1.122E-05	0.192E+00	70	0.3663	3.522E-06	0.593E-01	120	4.4626	6.710E-06	0.549E-01
21	0.0316	-8.822E-06	0.236E+00	71	0.3851	3.337E-06	0.633E-01	121	4.6914	6.310E-06	0.538E-01
22	0.0332	-3.494E-06	0.523E+00	72	0.4048	3.760E-06	0.547E-01	122	4.9319	6.471E-06	0.547E-01
23	0.0349	-5.034E-06	0.319E+00	73	0.4256	3.712E-06	0.562E-01	123	5.1848	6.400E-06	0.544E-01
24	0.0367	-3.359E-06	0.434E+00	74	0.4474	3.783E-06	0.570E-01	124	5.4506	6.421E-06	0.578E-01
25	0.0386	-4.341E-06	0.276E+00	75	0.4703	4.013E-06	0.549E-01	125	5.7301	5.621E-06	0.637E-01
26	0.0406	-3.782E-06	0.317E+00	76	0.4945	4.603E-06	0.484E-01	126	6.0239	6.468E-06	0.588E-01
27	0.0427	-3.868E-06	0.287E+00	77	0.5198	4.189E-06	0.522E-01	127	6.3327	5.964E-06	0.638E-01
28	0.0449	-2.367E-06	0.451E+00	78	0.5465	4.292E-06	0.497E-01	128	6.6574	6.079E-06	0.643E-01
29	0.0472	-2.226E-06	0.425E+00	79	0.5745	3.369E-06	0.625E-01	129	6.9988	6.356E-06	0.616E-01
30	0.0496	-2.526E-06	0.328E+00	80	0.6040	2.615E-06	0.735E-01	130	7.3576	6.904E-06	0.597E-01
31	0.0521	-1.407E-06	0.537E+00	81	0.6349	3.967E-06	0.548E-01	131	7.7348	7.668E-06	0.590E-01
32	0.0548	-1.638E-06	0.404E+00	82	0.6675	4.265E-06	0.478E-01	132	8.1314	8.478E-06	0.595E-01
33	0.0576	-2.756E-07	0.654E+00	83	0.7017	4.383E-06	0.498E-01	133	8.5483	8.147E-06	0.608E-01
34	0.0606	-5.920E-07	0.876E+00	84	0.7377	4.975E-06	0.479E-01	134	8.9866	7.764E-06	0.674E-01
35	0.0637	5.033E-07	0.931E+00	85	0.7755	4.841E-06	0.477E-01	135	9.4473	7.987E-06	0.674E-01
36	0.0669	-5.253E-07	0.849E+00	86	0.8152	5.031E-06	0.477E-01	136	9.9317	7.958E-06	0.677E-01
37	0.0703	-3.952E-07	0.928E+00	87	0.8570	5.170E-06	0.469E-01	137	10.4410	8.892E-06	0.660E-01
38	0.0740	-2.790E-07	0.132E+01	88	0.9010	5.663E-06	0.433E-01	138	10.9760	9.907E-06	0.648E-01
39	0.0777	4.885E-07	0.722E+00	89	0.9472	5.883E-06	0.437E-01	139	11.5390	1.383E-05	0.512E-01
40	0.0817	4.827E-07	0.635E+00	90	0.9957	5.973E-06	0.452E-01	140	12.1310	2.349E-05	0.358E-01
41	0.0859	-1.539E-07	0.201E+01	91	1.0468	6.185E-06	0.443E-01	141	12.7530	3.771E-05	0.273E-01
42	0.0903	3.822E-07	0.708E+00	92	1.1005	6.685E-06	0.414E-01	142	13.4060	3.711E-05	0.272E-01
43	0.0950	9.869E-07	0.269E+00	93	1.1569	7.027E-06	0.398E-01	143	14.0940	1.432E-04	0.133E-01
44	0.0998	7.093E-07	0.362E+00	94	1.2162	6.829E-06	0.422E-01	144	14.8160	3.079E-03	0.282E-02
45	0.1050	4.211E-07	0.590E+00	95	1.2736	7.500E-06	0.388E-01	145	15.5760	4.058E-03	0.241E-02
46	0.1103	1.033E-06	0.225E+00	96	1.3441	8.482E-06	0.365E-01	146	16.3750	4.246E-04	0.731E-02
47	0.1160	1.074E-06	0.216E+00	97	1.4130	9.031E-06	0.353E-01	147	17.2140	6.582E-06	0.581E-01
48	0.1219	1.208E-06	0.190E+00	98	1.4855	8.961E-06	0.363E-01	148	18.0970	5.531E-07	0.201E+00
49	0.1282	1.152E-06	0.181E+00	99	1.5616	9.080E-06	0.356E-01	149	19.0250	1.931E-07	0.325E+00
50	0.1348	1.664E-06	0.122E+00	100	1.6417	9.365E-06	0.358E-01	150	20.0000	1.352E-07	0.381E+00

* ENERGY = [MEV]
** ERROR X 100 = %

Table 3.2.4

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESS=5 CM, ANGLE=0.0 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.5062	6.752E-09	1.000E+02	51	1.6012	4.072E-04	1.712E-03	101	0.1314	4.176E-04	1.681E-03
2	18.5549	1.641E-08	2.473E-01	52	1.5231	4.077E-04	1.710E-03	102	0.1250	4.176E-04	1.681E-03
3	17.6499	4.407E-08	1.563E-01	53	1.4488	4.081E-04	1.709E-03	103	0.1189	4.177E-04	1.681E-03
4	16.7891	3.732E-07	5.447E-02	54	1.3781	4.086E-04	1.708E-03	104	0.1131	4.178E-04	1.681E-03
5	15.9703	2.160E-05	7.247E-03	55	1.3109	4.090E-04	1.706E-03	105	0.1076	4.178E-04	1.681E-03
6	15.1914	2.245E-04	2.286E-03	56	1.2470	4.094E-04	1.705E-03	106	0.1024	4.178E-04	1.681E-03
7	14.4505	3.785E-04	1.775E-03	57	1.1862	4.097E-04	1.704E-03	107	0.0974	4.179E-04	1.681E-03
8	13.7458	3.856E-04	1.760E-03	58	1.1283	4.101E-04	1.703E-03	108	0.0926	4.179E-04	1.681E-03
9	13.0754	3.875E-04	1.756E-03	59	1.0733	4.104E-04	1.702E-03	109	0.0881	4.179E-04	1.681E-03
10	12.4377	3.894E-04	1.753E-03	60	1.0209	4.107E-04	1.701E-03	110	0.0838	4.179E-04	1.682E-03
11	11.8311	3.905E-04	1.751E-03	61	0.9712	4.110E-04	1.700E-03	111	0.0797	4.179E-04	1.682E-03
12	11.2541	3.912E-04	1.750E-03	62	0.9238	4.113E-04	1.699E-03	112	0.0758	4.180E-04	1.682E-03
13	10.7052	3.917E-04	1.750E-03	63	0.8787	4.116E-04	1.698E-03	113	0.0721	4.180E-04	1.683E-03
14	10.1831	3.922E-04	1.749E-03	64	0.8359	4.119E-04	1.697E-03	114	0.0686	4.179E-04	1.684E-03
15	9.6865	3.926E-04	1.749E-03	65	0.7951	4.121E-04	1.696E-03	115	0.0653	4.179E-04	1.685E-03
16	9.2141	3.930E-04	1.748E-03	66	0.7563	4.124E-04	1.696E-03	116	0.0621	4.179E-04	1.686E-03
17	8.7647	3.934E-04	1.748E-03	67	0.7195	4.126E-04	1.695E-03	117	0.0591	4.179E-04	1.687E-03
18	8.3372	3.938E-04	1.747E-03	68	0.6844	4.128E-04	1.694E-03	118	0.0562	4.179E-04	1.688E-03
19	7.9306	3.942E-04	1.746E-03	69	0.6510	4.131E-04	1.693E-03	119	0.0534	4.178E-04	1.691E-03
20	7.5438	3.946E-04	1.746E-03	70	0.6192	4.133E-04	1.693E-03	120	0.0508	4.177E-04	1.693E-03
21	7.1759	3.949E-04	1.745E-03	71	0.5890	4.134E-04	1.692E-03	121	0.0484	4.176E-04	1.697E-03
22	6.8260	3.952E-04	1.744E-03	72	0.5603	4.136E-04	1.692E-03	122	0.0460	4.175E-04	1.701E-03
23	6.4930	3.955E-04	1.744E-03	73	0.5330	4.138E-04	1.691E-03	123	0.0437	4.174E-04	1.706E-03
24	6.1764	3.958E-04	1.743E-03	74	0.5070	4.140E-04	1.691E-03	124	0.0416	4.172E-04	1.712E-03
25	5.8752	3.962E-04	1.742E-03	75	0.4823	4.142E-04	1.690E-03	125	0.0396	4.170E-04	1.719E-03
26	5.5885	3.964E-04	1.742E-03	76	0.4587	4.144E-04	1.689E-03	126	0.0377	4.167E-04	1.727E-03
27	5.3161	3.968E-04	1.741E-03	77	0.4364	4.146E-04	1.689E-03	127	0.0358	4.166E-04	1.737E-03
28	5.0563	3.971E-04	1.740E-03	78	0.4151	4.148E-04	1.688E-03	128	0.0341	4.163E-04	1.749E-03
29	4.8102	3.974E-04	1.739E-03	79	0.3948	4.150E-04	1.688E-03	129	0.0324	4.161E-04	1.763E-03
30	4.5756	3.977E-04	1.738E-03	80	0.3756	4.152E-04	1.687E-03	130	0.0308	4.157E-04	1.783E-03
31	4.3524	3.981E-04	1.737E-03	81	0.3573	4.153E-04	1.687E-03	131	0.0293	4.151E-04	1.804E-03
32	4.1402	3.984E-04	1.736E-03	82	0.3398	4.155E-04	1.686E-03	132	0.0279	4.147E-04	1.812E-03
33	3.9382	3.988E-04	1.735E-03	83	0.3233	4.157E-04	1.685E-03	133	0.0265	4.147E-04	1.812E-03
34	3.7462	3.992E-04	1.734E-03	84	0.3075	4.159E-04	1.685E-03	134	0.0252	4.147E-04	1.812E-03
35	3.5635	3.995E-04	1.734E-03	85	0.2925	4.160E-04	1.685E-03	135	0.0240	4.147E-04	1.812E-03
36	3.3897	3.999E-04	1.733E-03	86	0.2782	4.162E-04	1.684E-03	136	0.0228	4.147E-04	1.812E-03
37	3.2244	4.003E-04	1.732E-03	87	0.2647	4.163E-04	1.684E-03	137	0.0217	4.147E-04	1.812E-03
38	3.0671	4.012E-04	1.729E-03	88	0.2518	4.164E-04	1.683E-03	138	0.0207	4.147E-04	1.812E-03
39	2.9175	4.019E-04	1.727E-03	89	0.2395	4.165E-04	1.683E-03	139	0.0197	4.147E-04	1.812E-03
40	2.7752	4.023E-04	1.726E-03	90	0.2278	4.166E-04	1.683E-03	140	0.0187	4.147E-04	1.812E-03
41	2.6399	4.026E-04	1.725E-03	91	0.2167	4.167E-04	1.682E-03	141	0.0178	4.147E-04	1.812E-03
42	2.5111	4.029E-04	1.724E-03	92	0.2061	4.168E-04	1.682E-03	142	0.0169	4.147E-04	1.812E-03
43	2.3887	4.033E-04	1.723E-03	93	0.1961	4.169E-04	1.682E-03	143	0.0161	4.147E-04	1.812E-03
44	2.2722	4.037E-04	1.722E-03	94	0.1865	4.170E-04	1.682E-03	144	0.0153	4.147E-04	1.812E-03
45	2.1613	4.042E-04	1.720E-03	95	0.1774	4.171E-04	1.682E-03	145	0.0146	4.147E-04	1.812E-03
46	2.0559	4.047E-04	1.719E-03	96	0.1688	4.172E-04	1.681E-03	146	0.0139	4.147E-04	1.812E-03
47	1.9557	4.052E-04	1.718E-03	97	0.1606	4.173E-04	1.681E-03	147	0.0132	4.147E-04	1.812E-03
48	1.8603	4.057E-04	1.716E-03	98	0.1527	4.174E-04	1.681E-03	148	0.0125	4.147E-04	1.812E-03
49	1.7696	4.062E-04	1.715E-03	99	0.1453	4.174E-04	1.681E-03	149	0.0119	4.147E-04	1.812E-03
50	1.6833	4.068E-04	1.713E-03	100	0.1382	4.175E-04	1.681E-03	150	0.0113	4.147E-04	1.812E-03

* ENERGY = LOWER BOUNDARY [MEV]
** ERROR X 100 = %

Table 3.2.5

ANGULAR FLUX OF BERYLLIUM SLAB FOR 0 THICKNESS=5 CM, ANGLE=24.9 DEG)

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.0116	0.000E+00	0.100E+01	51	0.1417	1.414E-06	0.830E-01	101	1.7259	3.901E-06	0.535E-01
2	0.0122	0.000E+00	0.100E+01	52	0.1489	1.597E-06	0.792E-01	102	1.8144	4.155E-06	0.547E-01
3	0.0129	0.000E+00	0.100E+01	53	0.1566	1.874E-06	0.681E-01	103	1.9074	3.914E-06	0.567E-01
4	0.0135	0.000E+00	0.100E+01	54	0.1646	1.890E-06	0.650E-01	104	2.0052	3.963E-06	0.546E-01
5	0.0142	0.000E+00	0.100E+01	55	0.1730	1.842E-06	0.661E-01	105	2.1080	3.832E-06	0.545E-01
6	0.0149	0.000E+00	0.100E+01	56	0.1819	1.937E-06	0.599E-01	106	2.2161	3.986E-06	0.540E-01
7	0.0157	0.000E+00	0.100E+01	57	0.1912	2.000E-06	0.605E-01	107	2.3297	4.125E-06	0.519E-01
8	0.0165	0.000E+00	0.100E+01	58	0.2010	1.853E-06	0.648E-01	108	2.4491	3.961E-06	0.531E-01
9	0.0173	0.000E+00	0.100E+01	59	0.2113	2.296E-06	0.532E-01	109	2.5747	3.826E-06	0.524E-01
10	0.0182	0.000E+00	0.100E+01	60	0.2222	2.128E-06	0.578E-01	110	2.7067	3.494E-06	0.567E-01
11	0.0192	0.000E+00	0.100E+01	61	0.2336	2.346E-06	0.530E-01	111	2.8455	3.487E-06	0.552E-01
12	0.0202	0.000E+00	0.100E+01	62	0.2456	2.380E-06	0.524E-01	112	2.9914	3.650E-06	0.537E-01
13	0.0213	0.000E+00	0.100E+01	63	0.2581	2.292E-06	0.542E-01	113	3.1447	3.495E-06	0.566E-01
14	0.0223	0.000E+00	0.100E+01	64	0.2714	2.739E-06	0.479E-01	114	3.3060	3.322E-06	0.600E-01
15	0.0234	0.000E+00	0.100E+01	65	0.2853	2.915E-06	0.446E-01	115	3.4755	2.961E-06	0.662E-01
16	0.0246	0.000E+00	0.100E+01	66	0.2999	2.752E-06	0.475E-01	116	3.6537	3.486E-06	0.565E-01
17	0.0259	0.000E+00	0.100E+01	67	0.3153	2.913E-06	0.456E-01	117	3.8410	3.294E-06	0.610E-01
18	0.0272	0.000E+00	0.100E+01	68	0.3314	2.743E-06	0.463E-01	118	4.0379	3.297E-06	0.614E-01
19	0.0286	-4.345E-07	0.405E+00	69	0.3485	3.292E-06	0.413E-01	119	4.2450	3.618E-06	0.587E-01
20	0.0301	-4.473E-07	0.191E+01	70	0.3663	3.144E-06	0.429E-01	120	4.4626	3.270E-06	0.598E-01
21	0.0316	7.617E-08	0.143E+02	71	0.3851	3.161E-06	0.427E-01	121	4.6914	2.978E-06	0.655E-01
22	0.0332	-1.491E-06	0.691E+00	72	0.4049	3.332E-06	0.415E-01	122	4.9319	3.014E-06	0.629E-01
23	0.0349	7.450E-07	0.117E+01	73	0.4256	3.173E-06	0.443E-01	123	5.1848	3.297E-06	0.621E-01
24	0.0367	3.444E-07	0.223E+01	74	0.4474	3.075E-06	0.451E-01	124	5.4506	3.297E-06	0.616E-01
25	0.0386	6.340E-07	0.116E+01	75	0.4703	3.470E-06	0.412E-01	125	5.7301	3.384E-06	0.632E-01
26	0.0406	9.534E-07	0.700E+00	76	0.4945	3.201E-06	0.440E-01	126	6.0239	3.536E-06	0.613E-01
27	0.0427	5.503E-07	0.172E+01	77	0.5198	3.133E-06	0.444E-01	127	6.3327	3.191E-06	0.740E-01
28	0.0449	1.346E-06	0.427E+00	78	0.5465	3.199E-06	0.450E-01	128	6.6574	3.518E-06	0.677E-01
29	0.0472	5.988E-07	0.259E+00	79	0.5745	2.948E-06	0.466E-01	129	6.9988	4.045E-06	0.620E-01
30	0.0496	1.000E-06	0.450E+00	80	0.6040	2.199E-06	0.590E-01	130	7.3576	4.838E-06	0.567E-01
31	0.0521	5.663E-07	0.745E+00	81	0.6349	2.883E-06	0.472E-01	131	7.7343	5.138E-06	0.582E-01
32	0.0548	7.253E-07	0.406E+00	82	0.6675	3.364E-06	0.435E-01	132	8.1314	5.359E-06	0.570E-01
33	0.0576	9.365E-07	0.343E+00	83	0.7017	3.854E-06	0.400E-01	133	8.5483	4.967E-06	0.624E-01
34	0.0606	1.152E-06	0.248E+00	84	0.7377	3.529E-06	0.430E-01	134	8.9866	4.453E-06	0.723E-01
35	0.0637	1.063E-06	0.255E+00	85	0.7755	3.767E-06	0.396E-01	135	9.4473	3.969E-06	0.770E-01
36	0.0669	9.981E-07	0.247E+00	86	0.8152	3.422E-06	0.444E-01	136	9.9317	3.540E-06	0.899E-01
37	0.0703	1.309E-06	0.167E+00	87	0.8570	3.808E-06	0.414E-01	137	10.4410	4.370E-06	0.765E-01
38	0.0740	1.190E-06	0.172E+00	88	0.9010	4.055E-06	0.393E-01	138	10.9760	4.824E-06	0.743E-01
39	0.0777	1.091E-06	0.180E+00	89	0.9472	3.949E-06	0.416E-01	139	11.5390	6.380E-06	0.630E-01
40	0.0817	1.460E-06	0.127E+00	90	0.9957	4.293E-06	0.399E-01	140	12.1310	1.298E-05	0.393E-01
41	0.0859	1.521E-06	0.112E+00	91	1.0468	3.890E-06	0.438E-01	141	12.7530	1.497E-05	0.351E-01
42	0.0903	1.392E-06	0.116E+00	92	1.1005	4.009E-06	0.426E-01	142	13.4060	1.138E-05	0.400E-01
43	0.0950	1.348E-06	0.117E+00	93	1.1569	4.108E-06	0.418E-01	143	14.0940	3.708E-05	0.204E-01
44	0.0999	1.134E-06	0.134E+00	94	1.2162	4.176E-06	0.424E-01	144	14.8160	1.864E-04	0.892E-02
45	0.1050	1.206E-06	0.122E+00	95	1.2786	4.449E-06	0.395E-01	145	15.5760	2.103E-04	0.823E-02
46	0.1103	1.505E-06	0.938E-01	96	1.3441	4.516E-06	0.412E-01	146	16.3750	2.421E-05	0.238E-01
47	0.1160	1.384E-06	0.991E-01	97	1.4130	4.261E-06	0.435E-01	147	17.2140	2.687E-07	0.250E+00
48	0.1219	1.403E-06	0.964E-01	98	1.4855	4.309E-06	0.437E-01	148	18.0970	4.004E-08	0.735E+00
49	0.1282	1.401E-06	0.908E-01	99	1.5616	3.754E-06	0.496E-01	149	19.0250	8.595E-09	0.364E+01
50	0.1348	1.506E-06	0.858E-01	100	1.6417	4.028E-06	0.478E-01	150	20.0000	6.355E-09	0.383E+01

* ENERGY = [MEV]
** ERROR X 100 = %

Table 3.2.6

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESSES CM, ANGLE=24.9 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.5062	3.177E-10	1.000E+02	51	1.6012	3.264E-05	4.794E-03	101	0.1314	4.030E-05	4.087E-03
2	18.5549	7.475E-10	1.000E+02	52	1.5231	3.283E-05	4.775E-03	102	0.1250	4.037E-05	4.083E-03
3	17.6499	2.750E-09	1.000E+02	53	1.4488	3.305E-05	4.752E-03	103	0.1189	4.044E-05	4.079E-03
4	16.7891	1.619E-08	2.574E-01	54	1.3781	3.326E-05	4.730E-03	104	0.1131	4.051E-05	4.076E-03
5	15.9703	1.227E-06	2.375E-02	55	1.3109	3.348E-05	4.706E-03	105	0.1076	4.058E-05	4.072E-03
6	15.1914	1.174E-05	7.731E-03	56	1.2470	3.371E-05	4.682E-03	106	0.1024	4.064E-05	4.070E-03
7	14.4505	2.106E-05	5.864E-03	57	1.1862	3.392E-05	4.661E-03	107	0.0974	4.070E-05	4.068E-03
8	13.7456	2.292E-05	5.637E-03	58	1.1283	3.412E-05	4.640E-03	108	0.0926	4.077E-05	4.066E-03
9	13.0754	2.349E-05	5.585E-03	59	1.0733	3.432E-05	4.619E-03	109	0.0881	4.084E-05	4.064E-03
10	12.4377	2.424E-05	5.520E-03	60	1.0209	3.452E-05	4.600E-03	110	0.0838	4.091E-05	4.062E-03
11	11.8311	2.488E-05	5.473E-03	61	0.9712	3.473E-05	4.578E-03	111	0.0797	4.099E-05	4.061E-03
12	11.2541	2.520E-05	5.463E-03	62	0.9238	3.493E-05	4.558E-03	112	0.0758	4.104E-05	4.063E-03
13	10.7052	2.544E-05	5.457E-03	63	0.8787	3.513E-05	4.538E-03	113	0.0721	4.110E-05	4.064E-03
14	10.1831	2.566E-05	5.450E-03	64	0.8359	3.532E-05	4.519E-03	114	0.0686	4.117E-05	4.067E-03
15	9.6865	2.584E-05	5.447E-03	65	0.7951	3.549E-05	4.502E-03	115	0.0653	4.122E-05	4.073E-03
16	9.2141	2.604E-05	5.438E-03	66	0.7563	3.568E-05	4.483E-03	116	0.0621	4.127E-05	4.081E-03
17	8.7647	2.626E-05	5.426E-03	67	0.7195	3.586E-05	4.466E-03	117	0.0591	4.133E-05	4.090E-03
18	8.3372	2.651E-05	5.407E-03	68	0.6844	3.605E-05	4.447E-03	118	0.0562	4.137E-05	4.103E-03
19	7.9306	2.678E-05	5.383E-03	69	0.6510	3.622E-05	4.431E-03	119	0.0534	4.142E-05	4.124E-03
20	7.5438	2.703E-05	5.361E-03	70	0.6192	3.636E-05	4.418E-03	120	0.0508	4.145E-05	4.152E-03
21	7.1759	2.728E-05	5.337E-03	71	0.5890	3.647E-05	4.408E-03	121	0.0484	4.150E-05	4.184E-03
22	6.8260	2.748E-05	5.317E-03	72	0.5603	3.662E-05	4.394E-03	122	0.0460	4.153E-05	4.226E-03
23	6.4930	2.765E-05	5.301E-03	73	0.5330	3.678E-05	4.380E-03	123	0.0437	4.160E-05	4.275E-03
24	6.1764	2.781E-05	5.288E-03	74	0.5070	3.694E-05	4.365E-03	124	0.0416	4.161E-05	4.335E-03
25	5.8752	2.799E-05	5.268E-03	75	0.4823	3.710E-05	4.350E-03	125	0.0396	4.166E-05	4.404E-03
26	5.5886	2.816E-05	5.251E-03	76	0.4587	3.727E-05	4.335E-03	126	0.0377	4.169E-05	4.489E-03
27	5.3161	2.833E-05	5.232E-03	77	0.4364	3.742E-05	4.321E-03	127	0.0358	4.171E-05	4.584E-03
28	5.0568	2.849E-05	5.214E-03	78	0.4151	3.758E-05	4.306E-03	128	0.0341	4.175E-05	4.699E-03
29	4.8102	2.864E-05	5.197E-03	79	0.3948	3.775E-05	4.291E-03	129	0.0324	4.167E-05	4.867E-03
30	4.5756	2.879E-05	5.182E-03	80	0.3756	3.791E-05	4.277E-03	130	0.0308	4.168E-05	5.048E-03
31	4.3524	2.895E-05	5.163E-03	81	0.3573	3.806E-05	4.263E-03	131	0.0293	4.165E-05	5.153E-03
32	4.1402	2.913E-05	5.144E-03	82	0.3398	3.823E-05	4.249E-03	132	0.0279	4.163E-05	5.161E-03
33	3.9382	2.930E-05	5.127E-03	83	0.3233	3.837E-05	4.237E-03	133	0.0265	4.163E-05	5.161E-03
34	3.7462	2.946E-05	5.110E-03	84	0.3075	3.851E-05	4.224E-03	134	0.0252	4.163E-05	5.161E-03
35	3.5635	2.964E-05	5.091E-03	85	0.2925	3.865E-05	4.213E-03	135	0.0240	4.163E-05	5.161E-03
36	3.3897	2.979E-05	5.076E-03	86	0.2782	3.880E-05	4.200E-03	136	0.0228	4.163E-05	5.161E-03
37	3.2244	2.995E-05	5.059E-03	87	0.2647	3.893E-05	4.189E-03	137	0.0217	4.163E-05	5.161E-03
38	3.0671	3.013E-05	5.040E-03	88	0.2518	3.905E-05	4.179E-03	138	0.0207	4.163E-05	5.161E-03
39	2.9175	3.031E-05	5.020E-03	89	0.2395	3.917E-05	4.170E-03	139	0.0197	4.163E-05	5.161E-03
40	2.7752	3.048E-05	5.001E-03	90	0.2278	3.928E-05	4.160E-03	140	0.0187	4.163E-05	5.161E-03
41	2.6399	3.066E-05	4.983E-03	91	0.2167	3.939E-05	4.152E-03	141	0.0178	4.163E-05	5.161E-03
42	2.5111	3.085E-05	4.963E-03	92	0.2061	3.950E-05	4.143E-03	142	0.0169	4.163E-05	5.161E-03
43	2.3887	3.105E-05	4.943E-03	93	0.1961	3.960E-05	4.136E-03	143	0.0161	4.163E-05	5.161E-03
44	2.2722	3.125E-05	4.922E-03	94	0.1865	3.970E-05	4.128E-03	144	0.0153	4.163E-05	5.161E-03
45	2.1613	3.145E-05	4.903E-03	95	0.1774	3.979E-05	4.121E-03	145	0.0146	4.163E-05	5.161E-03
46	2.0559	3.164E-05	4.885E-03	96	0.1688	3.989E-05	4.114E-03	146	0.0139	4.163E-05	5.161E-03
47	1.9557	3.184E-05	4.866E-03	97	0.1605	3.998E-05	4.107E-03	147	0.0132	4.163E-05	5.161E-03
48	1.8603	3.204E-05	4.849E-03	98	0.1527	4.007E-05	4.101E-03	148	0.0125	4.163E-05	5.161E-03
49	1.7696	3.225E-05	4.830E-03	99	0.1453	4.015E-05	4.096E-03	149	0.0119	4.163E-05	5.161E-03
50	1.6833	3.244E-05	4.814E-03	100	0.1382	4.022E-05	4.091E-03	150	0.0113	4.163E-05	5.161E-03

* ENERGY = LOWER BOUNDARY [MEV]

** ERROR X 100 = %

Table 3.2.7

ANGULAR FLUX OF BERYLLIUM SLAB TOF [THICKNESS=5 CM, ANGLE=41.8 DEG]

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.0116	0.000E+00	0.100E+01	51	0.1417	1.305E-06	0.106E+00	101	1.7259	4.408E-06	0.563E-01
2	0.0122	0.000E+00	0.100E+01	52	0.1489	1.263E-06	0.102E+00	102	1.8144	4.203E-06	0.549E-01
3	0.0129	0.000E+00	0.100E+01	53	0.1566	1.504E-06	0.875E-01	103	1.9074	4.745E-06	0.504E-01
4	0.0135	0.000E+00	0.100E+01	54	0.1646	1.417E-06	0.888E-01	104	2.0052	4.288E-06	0.538E-01
5	0.0142	0.000E+00	0.100E+01	55	0.1730	1.648E-06	0.769E-01	105	2.1080	3.760E-06	0.601E-01
6	0.0149	0.000E+00	0.100E+01	56	0.1819	1.854E-06	0.703E-01	106	2.2161	4.151E-06	0.548E-01
7	0.0157	0.000E+00	0.100E+01	57	0.1912	1.707E-06	0.732E-01	107	2.3297	3.509E-06	0.629E-01
8	0.0165	0.000E+00	0.100E+01	58	0.2010	1.918E-06	0.659E-01	108	2.4491	4.202E-06	0.533E-01
9	0.0173	0.000E+00	0.100E+01	59	0.2113	1.817E-06	0.708E-01	109	2.5747	3.927E-06	0.537E-01
10	0.0182	0.000E+00	0.100E+01	60	0.2222	2.103E-06	0.616E-01	110	2.7067	3.043E-06	0.676E-01
11	0.0192	0.000E+00	0.100E+01	61	0.2336	1.948E-06	0.674E-01	111	2.8455	3.113E-06	0.614E-01
12	0.0202	0.000E+00	0.100E+01	62	0.2456	2.161E-06	0.608E-01	112	2.9914	2.592E-06	0.728E-01
13	0.0212	0.000E+00	0.100E+01	63	0.2581	2.180E-06	0.609E-01	113	3.1447	2.532E-06	0.750E-01
14	0.0223	0.000E+00	0.100E+01	64	0.2714	2.607E-06	0.506E-01	114	3.3060	3.310E-06	0.613E-01
15	0.0234	0.000E+00	0.100E+01	65	0.2853	2.483E-06	0.537E-01	115	3.4755	2.864E-06	0.667E-01
16	0.0246	0.000E+00	0.100E+01	66	0.2999	2.666E-06	0.509E-01	116	3.6537	2.580E-06	0.768E-01
17	0.0259	0.000E+00	0.100E+01	67	0.3153	2.967E-06	0.472E-01	117	3.8410	2.850E-06	0.643E-01
18	0.0272	0.000E+00	0.100E+01	68	0.3314	2.740E-06	0.507E-01	118	4.0379	2.666E-06	0.716E-01
19	0.0286	-5.130E-07	0.462E+00	69	0.3485	2.907E-06	0.476E-01	119	4.2450	2.757E-06	0.752E-01
20	0.0301	-2.907E-06	0.294E+00	70	0.3663	2.840E-06	0.499E-01	120	4.4626	3.008E-06	0.631E-01
21	0.0316	-1.616E-06	0.804E+00	71	0.3851	2.895E-06	0.484E-01	121	4.6914	2.619E-06	0.742E-01
22	0.0332	-4.807E-06	0.247E+00	72	0.4048	3.113E-06	0.458E-01	122	4.9319	2.984E-06	0.628E-01
23	0.0349	-8.551E-07	0.119E+01	73	0.4256	3.144E-06	0.458E-01	123	5.1848	2.650E-06	0.770E-01
24	0.0367	2.795E-07	0.321E+01	74	0.4474	2.960E-06	0.476E-01	124	5.4506	2.995E-06	0.680E-01
25	0.0386	-1.156E-06	0.731E+00	75	0.4703	3.157E-06	0.465E-01	125	5.7301	3.506E-06	0.616E-01
26	0.0406	3.878E-07	0.169E+01	76	0.4945	3.211E-06	0.468E-01	126	6.0239	3.192E-06	0.715E-01
27	0.0427	-5.984E-07	0.116E+01	77	0.5198	2.984E-06	0.509E-01	127	6.3327	3.552E-06	0.651E-01
28	0.0449	9.375E-07	0.674E+00	78	0.5465	3.020E-06	0.488E-01	128	6.6574	3.826E-06	0.640E-01
29	0.0472	1.926E-07	0.324E+01	79	0.5745	2.946E-06	0.512E-01	129	6.9988	4.445E-06	0.605E-01
30	0.0496	6.400E-07	0.834E+00	80	0.6040	2.495E-06	0.572E-01	130	7.3576	4.579E-06	0.628E-01
31	0.0521	-1.456E-07	0.318E+01	81	0.6349	2.788E-06	0.514E-01	131	7.7348	4.516E-06	0.638E-01
32	0.0548	3.595E-07	0.116E+01	82	0.6675	3.452E-06	0.447E-01	132	8.1314	4.495E-06	0.651E-01
33	0.0576	1.732E-07	0.210E+01	83	0.7017	3.423E-06	0.467E-01	133	8.5483	4.199E-06	0.725E-01
34	0.0606	8.590E-07	0.383E+00	84	0.7377	3.230E-06	0.494E-01	134	8.9866	3.867E-06	0.780E-01
35	0.0637	1.141E-06	0.256E+00	85	0.7755	3.304E-06	0.485E-01	135	9.4473	3.999E-06	0.804E-01
36	0.0669	8.329E-07	0.325E+00	86	0.8152	3.485E-06	0.463E-01	136	9.9317	4.336E-06	0.757E-01
37	0.0703	4.567E-07	0.546E+00	87	0.8570	3.784E-06	0.450E-01	137	10.4410	4.330E-06	0.759E-01
38	0.0740	6.908E-07	0.339E+00	88	0.9010	3.789E-06	0.438E-01	138	10.9760	7.794E-06	0.537E-01
39	0.0777	5.493E-07	0.339E+00	89	0.9472	3.733E-06	0.441E-01	139	11.5390	9.982E-06	0.469E-01
40	0.0817	7.728E-07	0.273E+00	90	0.9957	3.847E-06	0.450E-01	140	12.1310	1.065E-05	0.432E-01
41	0.0859	8.095E-07	0.242E+00	91	1.0463	3.894E-06	0.463E-01	141	12.7530	7.141E-06	0.595E-01
42	0.0903	1.140E-06	0.160E+00	92	1.1005	3.899E-06	0.459E-01	142	13.4060	1.301E-05	0.395E-01
43	0.0950	8.096E-07	0.225E+00	93	1.1569	3.816E-06	0.473E-01	143	14.0940	4.345E-05	0.191E-01
44	0.0998	1.176E-06	0.148E+00	94	1.2162	4.206E-06	0.435E-01	144	14.8160	7.385E-05	0.145E-01
45	0.1050	1.068E-06	0.157E+00	95	1.2786	4.327E-06	0.446E-01	145	15.5760	3.075E-05	0.219E-01
46	0.1103	1.426E-06	0.112E+00	96	1.3441	4.165E-06	0.462E-01	146	16.3750	1.712E-06	0.933E-01
47	0.1160	1.210E-06	0.122E+00	97	1.4130	3.894E-06	0.498E-01	147	17.2140	6.445E-08	0.787E+00
48	0.1219	1.402E-06	0.104E+00	98	1.4855	4.313E-06	0.465E-01	148	18.0970	-4.528E-08	0.116E+01
49	0.1282	1.420E-06	0.976E-01	99	1.5616	3.388E-06	0.527E-01	149	19.0250	3.040E-08	0.126E+01
50	0.1348	1.449E-06	0.101E+00	100	1.6417	4.494E-06	0.456E-01	150	20.0000	5.457E-10	0.669E+02

* ENERGY = [MEV]
** ERROR X 100 = %

Table 3.2.8

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESS=5 CM, ANGLE=41.8 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.5068	2.728E-11	1.000E+02	51	1.6012	1.680E-05	6.994E-03	101	0.1314	2.403E-05	5.383E-03
2	18.5549	1.547E-09	1.000E+02	52	1.5231	1.699E-05	6.941E-03	102	0.1250	2.410E-05	5.375E-03
3	17.6499	-7.167E-10	1.000E+02	53	1.4498	1.721E-05	6.878E-03	103	0.1189	2.417E-05	5.368E-03
4	16.7891	2.506E-09	1.000E+02	54	1.3781	1.740E-05	6.824E-03	104	0.1131	2.423E-05	5.363E-03
5	15.9703	8.810E-08	1.041E-01	55	1.3109	1.761E-05	6.766E-03	105	0.1076	2.430E-05	5.357E-03
6	15.1914	1.626E-06	2.151E-02	56	1.2470	1.783E-05	6.705E-03	106	0.1024	2.435E-05	5.357E-03
7	14.4505	5.318E-06	1.201E-02	57	1.1862	1.804E-05	6.647E-03	107	0.0974	2.441E-05	5.356E-03
8	13.7453	7.491E-06	1.017E-02	58	1.1283	1.823E-05	6.596E-03	108	0.0926	2.445E-05	5.360E-03
9	13.0754	8.141E-06	9.875E-03	59	1.0733	1.842E-05	6.544E-03	109	0.0881	2.451E-05	5.360E-03
10	12.4377	8.496E-06	9.735E-03	60	1.0209	1.862E-05	6.494E-03	110	0.0838	2.455E-05	5.366E-03
11	11.8311	9.031E-06	9.553E-03	61	0.9712	1.881E-05	6.444E-03	111	0.0797	2.459E-05	5.375E-03
12	11.2541	9.530E-06	9.330E-03	62	0.9238	1.900E-05	6.395E-03	112	0.0758	2.462E-05	5.386E-03
13	10.7052	9.920E-06	9.255E-03	63	0.8787	1.919E-05	6.346E-03	113	0.0721	2.465E-05	5.400E-03
14	10.1831	1.016E-05	9.214E-03	64	0.8359	1.938E-05	6.300E-03	114	0.0686	2.467E-05	5.418E-03
15	9.6865	1.038E-05	9.159E-03	65	0.7951	1.955E-05	6.257E-03	115	0.0653	2.472E-05	5.437E-03
16	9.2141	1.058E-05	9.113E-03	66	0.7563	1.972E-05	6.218E-03	116	0.0621	2.477E-05	5.456E-03
17	8.7647	1.077E-05	9.059E-03	67	0.7195	1.988E-05	6.181E-03	117	0.0591	2.482E-05	5.487E-03
18	8.3372	1.092E-05	8.993E-03	68	0.6844	2.005E-05	6.141E-03	118	0.0562	2.482E-05	5.534E-03
19	7.9306	1.121E-05	8.909E-03	69	0.6510	2.022E-05	6.100E-03	119	0.0534	2.484E-05	5.593E-03
20	7.5438	1.143E-05	8.823E-03	70	0.6192	2.036E-05	6.069E-03	120	0.0508	2.483E-05	5.672E-03
21	7.1759	1.166E-05	8.738E-03	71	0.5890	2.049E-05	6.042E-03	121	0.0484	2.487E-05	5.765E-03
22	6.8260	1.183E-05	8.649E-03	72	0.5603	2.063E-05	6.011E-03	122	0.0460	2.488E-05	5.898E-03
23	6.4930	1.207E-05	8.572E-03	73	0.5330	2.078E-05	5.977E-03	123	0.0437	2.492E-05	6.022E-03
24	6.1764	1.225E-05	8.500E-03	74	0.5070	2.093E-05	5.946E-03	124	0.0416	2.489E-05	6.187E-03
25	5.8752	1.241E-05	8.441E-03	75	0.4823	2.109E-05	5.911E-03	125	0.0396	2.491E-05	6.354E-03
26	5.5886	1.259E-05	8.368E-03	76	0.4587	2.125E-05	5.878E-03	126	0.0377	2.485E-05	6.592E-03
27	5.3161	1.274E-05	8.308E-03	77	0.4364	2.139E-05	5.846E-03	127	0.0358	2.487E-05	6.830E-03
28	5.0568	1.287E-05	8.260E-03	78	0.4151	2.155E-05	5.813E-03	128	0.0341	2.483E-05	7.144E-03
29	4.8102	1.302E-05	8.197E-03	79	0.3948	2.171E-05	5.781E-03	129	0.0324	2.459E-05	7.607E-03
30	4.5756	1.315E-05	8.149E-03	80	0.3756	2.185E-05	5.752E-03	130	0.0308	2.450E-05	8.079E-03
31	4.3524	1.330E-05	8.089E-03	81	0.3573	2.199E-05	5.723E-03	131	0.0293	2.436E-05	8.314E-03
32	4.1402	1.344E-05	8.043E-03	82	0.3398	2.214E-05	5.694E-03	132	0.0279	2.433E-05	8.337E-03
33	3.9382	1.357E-05	7.995E-03	83	0.3233	2.229E-05	5.668E-03	133	0.0265	2.433E-05	8.337E-03
34	3.7462	1.371E-05	7.940E-03	84	0.3075	2.243E-05	5.639E-03	134	0.0252	2.433E-05	8.337E-03
35	3.5635	1.384E-05	7.898E-03	85	0.2925	2.256E-05	5.614E-03	135	0.0240	2.433E-05	8.337E-03
36	3.3897	1.399E-05	7.847E-03	86	0.2782	2.268E-05	5.591E-03	136	0.0228	2.433E-05	8.337E-03
37	3.2244	1.415E-05	7.788E-03	87	0.2647	2.281E-05	5.566E-03	137	0.0217	2.433E-05	8.337E-03
38	3.0671	1.428E-05	7.743E-03	88	0.2518	2.292E-05	5.548E-03	138	0.0207	2.433E-05	8.337E-03
39	2.9175	1.441E-05	7.706E-03	89	0.2395	2.303E-05	5.529E-03	139	0.0197	2.433E-05	8.337E-03
40	2.7752	1.456E-05	7.652E-03	90	0.2278	2.313E-05	5.513E-03	140	0.0187	2.433E-05	8.337E-03
41	2.6399	1.471E-05	7.605E-03	91	0.2167	2.323E-05	5.495E-03	141	0.0178	2.433E-05	8.337E-03
42	2.5111	1.491E-05	7.538E-03	92	0.2061	2.332E-05	5.481E-03	142	0.0169	2.433E-05	8.337E-03
43	2.3887	1.512E-05	7.470E-03	93	0.1961	2.342E-05	5.465E-03	143	0.0161	2.433E-05	8.337E-03
44	2.2722	1.530E-05	7.420E-03	94	0.1865	2.350E-05	5.451E-03	144	0.0153	2.433E-05	8.337E-03
45	2.1613	1.550E-05	7.357E-03	95	0.1774	2.360E-05	5.437E-03	145	0.0146	2.433E-05	8.337E-03
46	2.0559	1.569E-05	7.304E-03	96	0.1688	2.368E-05	5.425E-03	146	0.0139	2.433E-05	8.337E-03
47	1.9557	1.591E-05	7.242E-03	97	0.1605	2.375E-05	5.415E-03	147	0.0132	2.433E-05	8.337E-03
48	1.8603	1.614E-05	7.174E-03	98	0.1527	2.383E-05	5.405E-03	148	0.0125	2.433E-05	8.337E-03
49	1.7696	1.635E-05	7.117E-03	99	0.1453	2.389E-05	5.397E-03	149	0.0119	2.433E-05	8.337E-03
50	1.6833	1.657E-05	7.062E-03	100	0.1382	2.395E-05	5.391E-03	150	0.0113	2.433E-05	8.337E-03

* ENERGY = LOWER BOUNDARY [MEV]
** ERROR X 100 = %

Table 3.2.9

ANGULAR FLUX OF BERYLLIUM SLAB TOF [THICKNESS=5 CM, ANGLE=66.3 DEG]

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.0116	0.000E+00	0.100E+01	51	0.1417	1.141E-06	0.829E-01	101	1.7259	5.116E-06	0.363E-01
2	0.0122	0.000E+00	0.100E+01	52	0.1489	1.339E-06	0.694E-01	102	1.8144	4.471E-06	0.389E-01
3	0.0129	0.000E+00	0.100E+01	53	0.1566	1.427E-06	0.644E-01	103	1.9074	4.403E-06	0.376E-01
4	0.0135	0.000E+00	0.100E+01	54	0.1646	1.541E-06	0.580E-01	104	2.0052	4.132E-06	0.383E-01
5	0.0142	0.000E+00	0.100E+01	55	0.1730	1.436E-06	0.619E-01	105	2.1080	4.295E-06	0.370E-01
6	0.0149	0.000E+00	0.100E+01	56	0.1819	1.694E-06	0.528E-01	106	2.2161	3.960E-06	0.395E-01
7	0.0157	0.000E+00	0.100E+01	57	0.1912	1.395E-06	0.615E-01	107	2.3297	3.423E-06	0.442E-01
8	0.0165	0.000E+00	0.100E+01	58	0.2010	1.623E-06	0.533E-01	108	2.4491	3.255E-06	0.448E-01
9	0.0173	0.000E+00	0.100E+01	59	0.2113	1.836E-06	0.483E-01	109	2.5747	3.170E-06	0.453E-01
10	0.0182	0.000E+00	0.100E+01	60	0.2222	1.781E-06	0.502E-01	110	2.7067	2.327E-06	0.546E-01
11	0.0192	0.000E+00	0.100E+01	61	0.2336	1.793E-06	0.495E-01	111	2.8455	2.086E-06	0.603E-01
12	0.0202	0.000E+00	0.100E+01	62	0.2456	2.040E-06	0.438E-01	112	2.9914	1.890E-06	0.639E-01
13	0.0212	0.000E+00	0.100E+01	63	0.2581	1.903E-06	0.471E-01	113	3.1447	2.095E-06	0.609E-01
14	0.0223	0.000E+00	0.100E+01	64	0.2714	2.191E-06	0.419E-01	114	3.3060	2.262E-06	0.610E-01
15	0.0234	0.000E+00	0.100E+01	65	0.2853	2.101E-06	0.436E-01	115	3.4755	2.446E-06	0.603E-01
16	0.0246	0.000E+00	0.100E+01	66	0.2999	2.307E-06	0.401E-01	116	3.6537	2.525E-06	0.571E-01
17	0.0259	0.000E+00	0.100E+01	67	0.3153	2.502E-06	0.380E-01	117	3.8410	2.730E-06	0.531E-01
18	0.0272	0.000E+00	0.100E+01	68	0.3314	2.431E-06	0.386E-01	118	4.0379	2.579E-06	0.571E-01
19	0.0285	0.000E+00	0.100E+01	69	0.3485	2.577E-06	0.365E-01	119	4.2450	2.823E-06	0.533E-01
20	0.0301	-1.472E-07	0.599E+00	70	0.3663	2.658E-06	0.357E-01	120	4.4626	2.529E-06	0.602E-01
21	0.0316	-1.213E-06	0.691E+00	71	0.3851	2.721E-06	0.363E-01	121	4.6914	2.798E-06	0.533E-01
22	0.0332	1.437E-06	0.564E+00	72	0.4048	2.797E-06	0.360E-01	122	4.9319	2.813E-06	0.535E-01
23	0.0349	1.953E-06	0.350E+00	73	0.4256	2.823E-06	0.356E-01	123	5.1843	2.883E-06	0.527E-01
24	0.0367	2.724E-07	0.234E+01	74	0.4474	2.635E-06	0.378E-01	124	5.4506	2.897E-06	0.501E-01
25	0.0386	9.121E-07	0.607E+00	75	0.4703	2.756E-06	0.375E-01	125	5.7301	3.235E-06	0.485E-01
26	0.0406	1.925E-07	0.276E+01	76	0.4945	2.922E-06	0.343E-01	126	6.0239	3.312E-06	0.496E-01
27	0.0427	8.756E-07	0.567E+00	77	0.5199	2.924E-06	0.353E-01	127	6.3327	3.617E-06	0.475E-01
28	0.0449	-1.326E-07	0.350E+01	78	0.5465	2.690E-06	0.378E-01	128	6.6574	3.841E-06	0.472E-01
29	0.0472	1.226E-06	0.350E+00	79	0.5745	2.444E-06	0.406E-01	129	6.9983	4.090E-06	0.461E-01
30	0.0496	1.077E-06	0.351E+00	80	0.6040	2.173E-06	0.419E-01	130	7.3576	3.970E-06	0.512E-01
31	0.0521	8.449E-07	0.393E+00	81	0.6349	2.208E-06	0.441E-01	131	7.7348	3.917E-06	0.533E-01
32	0.0548	1.291E-06	0.226E+00	82	0.6675	2.964E-06	0.364E-01	132	8.1314	3.799E-06	0.580E-01
33	0.0576	7.376E-07	0.333E+00	83	0.7017	3.149E-06	0.344E-01	133	8.5483	4.115E-06	0.564E-01
34	0.0606	9.318E-07	0.257E+00	84	0.7377	2.370E-06	0.384E-01	134	8.9866	4.293E-06	0.567E-01
35	0.0637	5.995E-07	0.352E+00	85	0.7755	3.019E-06	0.361E-01	135	9.4473	5.026E-06	0.519E-01
36	0.0669	9.609E-07	0.208E+00	86	0.8152	3.162E-06	0.346E-01	136	9.9317	5.337E-06	0.520E-01
37	0.0703	8.527E-07	0.212E+00	87	0.8570	3.323E-06	0.349E-01	137	10.4410	6.903E-06	0.449E-01
38	0.0740	9.091E-07	0.178E+00	88	0.9010	3.137E-06	0.364E-01	138	10.9760	8.016E-06	0.432E-01
39	0.0777	7.621E-07	0.197E+00	89	0.9472	3.097E-06	0.377E-01	139	11.5390	8.731E-06	0.401E-01
40	0.0817	9.230E-07	0.157E+00	90	0.9957	3.120E-06	0.385E-01	140	12.1310	7.738E-06	0.435E-01
41	0.0859	8.059E-07	0.152E+00	91	1.0468	3.621E-06	0.338E-01	141	12.7530	7.657E-06	0.412E-01
42	0.0903	1.136E-06	0.110E+00	92	1.1005	3.441E-06	0.362E-01	142	13.4060	9.422E-06	0.356E-01
43	0.0950	1.049E-06	0.117E+00	93	1.1569	3.606E-06	0.354E-01	143	14.0940	1.681E-05	0.228E-01
44	0.0998	1.099E-06	0.105E+00	94	1.2162	3.808E-06	0.336E-01	144	14.8160	1.817E-05	0.217E-01
45	0.1050	1.044E-06	0.112E+00	95	1.2786	3.908E-06	0.338E-01	145	15.5760	6.377E-06	0.371E-01
46	0.1103	1.056E-06	0.102E+00	96	1.3441	3.934E-06	0.352E-01	146	16.3750	1.132E-06	0.902E-01
47	0.1160	1.203E-06	0.892E-01	97	1.4130	4.238E-06	0.336E-01	147	17.2140	2.213E-07	0.248E+00
48	0.1219	1.321E-06	0.757E-01	98	1.4855	4.196E-06	0.343E-01	148	18.0970	1.089E-07	0.287E+00
49	0.1282	1.384E-06	0.715E-01	99	1.5616	4.442E-06	0.336E-01	149	19.0250	3.146E-08	0.109E+01
50	0.1348	1.312E-06	0.733E-01	100	1.6417	4.659E-06	0.330E-01	150	20.0000	1.937E-08	0.139E+01

* ENERGY = EMEV]
** ERROR X 100 = %

Table 3.2.10

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESS=5 CM, ANGLE=66.3 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.5062	9.935E-10	1.000E+02	51	1.6012	1.092E-05	6.695E-03	101	0.1314	1.748E-05	4.700E-03
2	18.5549	2.567E-09	1.000E+02	52	1.5231	1.114E-05	6.595E-03	102	0.1250	1.755E-05	4.690E-03
3	17.6499	8.014E-09	1.000E+02	53	1.4488	1.135E-05	6.504E-03	103	0.1189	1.762E-05	4.681E-03
4	16.7891	1.911E-08	2.019E-01	54	1.3781	1.157E-05	6.415E-03	104	0.1131	1.768E-05	4.675E-03
5	15.9703	7.570E-08	8.450E-02	55	1.3109	1.176E-05	6.335E-03	105	0.1076	1.773E-05	4.671E-03
6	15.1914	3.946E-07	3.412E-02	56	1.2470	1.196E-05	6.256E-03	106	0.1024	1.778E-05	4.669E-03
7	14.4505	1.303E-06	1.833E-02	57	1.1862	1.215E-05	6.180E-03	107	0.0974	1.784E-05	4.666E-03
8	13.7458	2.143E-06	1.430E-02	58	1.1283	1.233E-05	6.112E-03	108	0.0926	1.789E-05	4.664E-03
9	13.0754	2.614E-06	1.337E-02	59	1.0733	1.250E-05	6.048E-03	109	0.0881	1.794E-05	4.663E-03
10	12.4377	2.997E-06	1.279E-02	60	1.0209	1.268E-05	5.982E-03	110	0.0838	1.799E-05	4.667E-03
11	11.8311	3.384E-06	1.237E-02	61	0.9712	1.284E-05	5.927E-03	111	0.0797	1.803E-05	4.672E-03
12	11.2541	3.821E-06	1.188E-02	62	0.9238	1.299E-05	5.874E-03	112	0.0758	1.807E-05	4.681E-03
13	10.7052	4.222E-06	1.151E-02	63	0.8787	1.315E-05	5.820E-03	113	0.0721	1.812E-05	4.691E-03
14	10.1831	4.567E-06	1.117E-02	64	0.8359	1.332E-05	5.764E-03	114	0.0686	1.816E-05	4.706E-03
15	9.6865	4.834E-06	1.093E-02	65	0.7951	1.347E-05	5.711E-03	115	0.0653	1.821E-05	4.726E-03
16	9.2141	5.085E-06	1.070E-02	66	0.7563	1.362E-05	5.662E-03	116	0.0621	1.824E-05	4.753E-03
17	8.7647	5.300E-06	1.052E-02	67	0.7195	1.377E-05	5.617E-03	117	0.0591	1.829E-05	4.786E-03
18	8.3372	5.505E-06	1.035E-02	68	0.6844	1.393E-05	5.567E-03	118	0.0562	1.832E-05	4.829E-03
19	7.9306	5.695E-06	1.019E-02	69	0.6510	1.407E-05	5.522E-03	119	0.0534	1.839E-05	4.877E-03
20	7.5438	5.891E-06	1.001E-02	70	0.6192	1.418E-05	5.489E-03	120	0.0508	1.843E-05	4.948E-03
21	7.1759	6.090E-06	9.824E-03	71	0.5890	1.429E-05	5.457E-03	121	0.0484	1.848E-05	5.039E-03
22	6.8260	6.294E-06	9.622E-03	72	0.5603	1.442E-05	5.422E-03	122	0.0460	1.855E-05	5.154E-03
23	6.4930	6.486E-06	9.441E-03	73	0.5330	1.455E-05	5.383E-03	123	0.0437	1.854E-05	5.306E-03
24	6.1764	6.667E-06	9.275E-03	74	0.5070	1.470E-05	5.341E-03	124	0.0416	1.858E-05	5.459E-03
25	5.8752	6.833E-06	9.130E-03	75	0.4823	1.484E-05	5.299E-03	125	0.0396	1.859E-05	5.643E-03
26	5.5886	6.994E-06	8.989E-03	76	0.4587	1.498E-05	5.262E-03	126	0.0377	1.864E-05	5.822E-03
27	5.3161	7.139E-06	8.865E-03	77	0.4364	1.511E-05	5.226E-03	127	0.0358	1.865E-05	6.063E-03
28	5.0568	7.283E-06	8.752E-03	78	0.4151	1.525E-05	5.188E-03	128	0.0341	1.875E-05	6.305E-03
29	4.8102	7.424E-06	8.646E-03	79	0.3948	1.539E-05	5.152E-03	129	0.0324	1.882E-05	6.640E-03
30	4.5756	7.563E-06	8.543E-03	80	0.3756	1.553E-05	5.116E-03	130	0.0308	1.876E-05	7.025E-03
31	4.3524	7.690E-06	8.461E-03	81	0.3573	1.566E-05	5.082E-03	131	0.0293	1.875E-05	7.032E-03
32	4.1402	7.831E-06	8.364E-03	82	0.3398	1.579E-05	5.049E-03	132	0.0279	1.875E-05	7.032E-03
33	3.9382	7.960E-06	8.280E-03	83	0.3233	1.591E-05	5.019E-03	133	0.0265	1.875E-05	7.032E-03
34	3.7462	8.096E-06	8.190E-03	84	0.3075	1.604E-05	4.989E-03	134	0.0252	1.875E-05	7.032E-03
35	3.5635	8.223E-06	8.111E-03	85	0.2925	1.615E-05	4.962E-03	135	0.0240	1.875E-05	7.032E-03
36	3.3897	8.345E-06	8.041E-03	86	0.2782	1.626E-05	4.938E-03	136	0.0228	1.875E-05	7.032E-03
37	3.2244	8.458E-06	7.976E-03	87	0.2647	1.637E-05	4.913E-03	137	0.0217	1.875E-05	7.032E-03
38	3.0671	8.563E-06	7.913E-03	88	0.2518	1.646E-05	4.892E-03	138	0.0207	1.875E-05	7.032E-03
39	2.9175	8.657E-06	7.853E-03	89	0.2395	1.656E-05	4.869E-03	139	0.0197	1.875E-05	7.032E-03
40	2.7752	8.762E-06	7.797E-03	90	0.2278	1.665E-05	4.850E-03	140	0.0187	1.875E-05	7.032E-03
41	2.6399	8.879E-06	7.729E-03	91	0.2167	1.674E-05	4.832E-03	141	0.0178	1.875E-05	7.032E-03
42	2.5111	9.037E-06	7.634E-03	92	0.2061	1.683E-05	4.813E-03	142	0.0169	1.875E-05	7.032E-03
43	2.3887	9.199E-06	7.541E-03	93	0.1961	1.692E-05	4.796E-03	143	0.0161	1.875E-05	7.032E-03
44	2.2722	9.370E-06	7.447E-03	94	0.1865	1.699E-05	4.783E-03	144	0.0153	1.875E-05	7.032E-03
45	2.1615	9.568E-06	7.339E-03	95	0.1774	1.707E-05	4.767E-03	145	0.0146	1.875E-05	7.032E-03
46	2.0559	9.783E-06	7.223E-03	96	0.1688	1.714E-05	4.754E-03	146	0.0139	1.875E-05	7.032E-03
47	1.9557	9.990E-06	7.113E-03	97	0.1605	1.722E-05	4.740E-03	147	0.0132	1.875E-05	7.032E-03
48	1.8605	1.021E-05	7.012E-03	98	0.1527	1.729E-05	4.728E-03	148	0.0125	1.875E-05	7.032E-03
49	1.7699	1.043E-05	6.912E-03	99	0.1453	1.736E-05	4.717E-03	149	0.0119	1.875E-05	7.032E-03
50	1.6833	1.069E-05	6.802E-03	100	0.1382	1.741E-05	4.710E-03	150	0.0113	1.875E-05	7.032E-03

* ENERGY = LOWER BOUNDARY [MEV]
** ERROR X 100 = %

Table 3.2.11

ANGULAR FLUX OF BERYLLIUM SLAB FOR [THICKNESS=15 CM, ANGLE=0.0 DEG]

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.0116	0.000E+00	0.100E+01	51	0.1417	2.161E-06	0.513E-01	101	1.7259	5.241E-06	0.326E-01
2	0.0122	0.000E+00	0.100E+01	52	0.1489	2.126E-06	0.501E-01	102	1.8144	5.066E-06	0.322E-01
3	0.0129	0.000E+00	0.100E+01	53	0.1566	2.171E-06	0.475E-01	103	1.9074	4.813E-06	0.329E-01
4	0.0135	0.000E+00	0.100E+01	54	0.1646	2.218E-06	0.467E-01	104	2.0052	4.651E-06	0.328E-01
5	0.0142	0.000E+00	0.100E+01	55	0.1730	2.153E-06	0.470E-01	105	2.1080	4.273E-06	0.345E-01
6	0.0149	0.000E+00	0.100E+01	56	0.1819	2.068E-06	0.487E-01	106	2.2161	3.851E-06	0.360E-01
7	0.0157	0.000E+00	0.100E+01	57	0.1912	2.330E-06	0.418E-01	107	2.3297	3.396E-06	0.383E-01
8	0.0165	0.000E+00	0.100E+01	58	0.2010	2.313E-06	0.419E-01	108	2.4491	3.079E-06	0.397E-01
9	0.0173	0.000E+00	0.100E+01	59	0.2113	2.459E-06	0.391E-01	109	2.5747	2.757E-06	0.429E-01
10	0.0182	0.000E+00	0.100E+01	60	0.2222	2.292E-06	0.427E-01	110	2.7067	1.935E-06	0.526E-01
11	0.0192	0.000E+00	0.100E+01	61	0.2336	2.428E-06	0.395E-01	111	2.8455	1.953E-06	0.508E-01
12	0.0202	0.000E+00	0.100E+01	62	0.2456	2.562E-06	0.379E-01	112	2.9914	1.992E-06	0.510E-01
13	0.0212	0.000E+00	0.100E+01	63	0.2581	2.469E-06	0.401E-01	113	3.1447	2.785E-06	0.440E-01
14	0.0223	0.000E+00	0.100E+01	64	0.2714	2.823E-06	0.353E-01	114	3.3060	2.469E-06	0.479E-01
15	0.0234	0.000E+00	0.100E+01	65	0.2853	2.747E-06	0.356E-01	115	3.4755	2.839E-06	0.436E-01
16	0.0246	0.000E+00	0.100E+01	66	0.2999	2.939E-06	0.346E-01	116	3.6537	2.967E-06	0.428E-01
17	0.0259	0.000E+00	0.100E+01	67	0.3153	2.900E-06	0.344E-01	117	3.8410	2.941E-06	0.428E-01
18	0.0272	0.000E+00	0.100E+01	68	0.3314	2.906E-06	0.348E-01	118	4.0379	3.131E-06	0.420E-01
19	0.0286	1.236E-06	0.618E-01	69	0.3485	3.123E-06	0.334E-01	119	4.2450	3.551E-06	0.338E-01
20	0.0301	3.461E-06	0.155E+00	70	0.3663	3.139E-06	0.324E-01	120	4.4626	3.084E-06	0.430E-01
21	0.0316	8.108E-06	0.143E+00	71	0.3851	3.101E-06	0.327E-01	121	4.6914	3.019E-06	0.432E-01
22	0.0332	5.929E-06	0.176E+00	72	0.4048	3.098E-06	0.325E-01	122	4.9319	3.009E-06	0.422E-01
23	0.0349	6.059E-06	0.151E+00	73	0.4256	2.962E-06	0.337E-01	123	5.1843	3.094E-06	0.435E-01
24	0.0367	6.099E-06	0.134E+00	74	0.4474	3.193E-06	0.312E-01	124	5.4506	3.030E-06	0.438E-01
25	0.0386	4.534E-06	0.163E+00	75	0.4703	3.087E-06	0.333E-01	125	5.7301	3.365E-06	0.416E-01
26	0.0406	5.726E-06	0.114E+00	76	0.4945	3.082E-06	0.341E-01	126	6.0239	3.420E-06	0.427E-01
27	0.0427	3.560E-06	0.175E+00	77	0.5198	2.970E-06	0.340E-01	127	6.3327	3.321E-06	0.396E-01
28	0.0449	4.556E-06	0.127E+00	78	0.5463	2.712E-06	0.370E-01	128	6.6574	3.902E-06	0.403E-01
29	0.0472	4.151E-06	0.128E+00	79	0.5745	2.595E-06	0.383E-01	129	6.9983	4.245E-06	0.392E-01
30	0.0496	3.849E-06	0.126E+00	80	0.6040	1.885E-06	0.494E-01	130	7.3576	4.515E-06	0.386E-01
31	0.0521	3.143E-06	0.132E+00	81	0.6349	2.497E-06	0.388E-01	131	7.7343	4.748E-06	0.384E-01
32	0.0548	3.447E-06	0.109E+00	82	0.6675	3.314E-06	0.328E-01	132	8.1314	4.643E-06	0.410E-01
33	0.0576	5.014E-06	0.104E+00	83	0.7017	3.442E-06	0.313E-01	133	8.5483	4.699E-06	0.419E-01
34	0.0606	2.567E-06	0.122E+00	84	0.7377	3.240E-06	0.332E-01	134	8.9866	4.255E-06	0.471E-01
35	0.0637	2.543E-06	0.103E+00	85	0.7755	3.230E-06	0.325E-01	135	9.4473	4.737E-06	0.444E-01
36	0.0669	1.813E-06	0.134E+00	86	0.8152	3.192E-06	0.339E-01	136	9.9317	5.016E-06	0.423E-01
37	0.0703	2.714E-06	0.779E-01	87	0.8570	3.363E-06	0.322E-01	137	10.4410	5.634E-06	0.401E-01
38	0.0740	2.368E-06	0.826E-01	88	0.9010	3.570E-06	0.314E-01	138	10.9760	7.154E-06	0.349E-01
39	0.0777	2.266E-06	0.810E-01	89	0.9472	3.540E-06	0.316E-01	139	11.5390	8.413E-06	0.322E-01
40	0.0817	2.370E-06	0.744E-01	90	0.9957	3.580E-06	0.321E-01	140	12.1310	1.260E-05	0.255E-01
41	0.0859	1.967E-06	0.805E-01	91	1.0468	3.801E-06	0.312E-01	141	12.7530	1.714E-05	0.216E-01
42	0.0903	2.031E-06	0.759E-01	92	1.1005	3.726E-06	0.325E-01	142	13.4060	2.410E-05	0.179E-01
43	0.0950	2.209E-06	0.672E-01	93	1.1569	4.142E-06	0.295E-01	143	14.0940	8.398E-05	0.928E-02
44	0.0999	2.206E-06	0.640E-01	94	1.2162	4.065E-06	0.300E-01	144	14.8160	6.211E-04	0.337E-02
45	0.1050	1.972E-06	0.639E-01	95	1.2786	4.294E-06	0.291E-01	145	15.5760	6.944E-04	0.313E-02
46	0.1103	2.024E-06	0.648E-01	96	1.3441	4.331E-06	0.302E-01	146	16.3750	6.339E-05	0.979E-02
47	0.1160	2.041E-06	0.604E-01	97	1.4130	4.670E-06	0.282E-01	147	17.2140	2.138E-06	0.558E-01
48	0.1219	2.018E-06	0.595E-01	98	1.4855	4.746E-06	0.279E-01	148	18.0970	2.920E-07	0.153E+00
49	0.1282	2.150E-06	0.552E-01	99	1.5616	4.737E-06	0.280E-01	149	19.0250	4.903E-08	0.576E+00
50	0.1348	2.161E-06	0.539E-01	100	1.6417	5.019E-06	0.276E-01	150	20.0000	2.315E-08	0.905E+00

* ENERGY = [MEV]
** ERROR X 100 = %

Table 3.2.12

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESS=15 CM, ANGLE=0.0 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.5062	1.157E-09	1.000E+02	51	1.6012	8.403E-05	2.028E-03	101	0.1314	9.167E-05	1.905E-03
2	18.5549	3.609E-09	1.000E+02	52	1.5231	8.427E-05	2.024E-03	102	0.1250	9.178E-05	1.904E-03
3	17.6499	1.821E-08	1.592E-01	53	1.4488	8.451E-05	2.020E-03	103	0.1189	9.188E-05	1.903E-03
4	16.7891	1.251E-07	5.301E-02	54	1.3781	8.474E-05	2.015E-03	104	0.1131	9.198E-05	1.902E-03
5	15.9703	3.545E-06	9.630E-03	55	1.3109	8.496E-05	2.012E-03	105	0.1076	9.208E-05	1.901E-03
6	15.1914	3.826E-05	2.977E-03	56	1.2470	8.517E-05	2.008E-03	106	0.1024	9.218E-05	1.900E-03
7	14.4505	6.932E-05	2.232E-03	57	1.1862	8.538E-05	2.005E-03	107	0.0974	9.229E-05	1.900E-03
8	13.7458	7.352E-05	2.170E-03	58	1.1283	8.558E-05	2.001E-03	108	0.0926	9.240E-05	1.899E-03
9	13.0754	7.472E-05	2.154E-03	59	1.0733	8.577E-05	1.998E-03	109	0.0881	9.250E-05	1.899E-03
10	12.4377	7.558E-05	2.144E-03	60	1.0209	8.596E-05	1.995E-03	110	0.0838	9.260E-05	1.899E-03
11	11.8311	7.621E-05	2.137E-03	61	0.9712	8.614E-05	1.992E-03	111	0.0797	9.272E-05	1.899E-03
12	11.2541	7.663E-05	2.132E-03	62	0.9238	8.632E-05	1.989E-03	112	0.0758	9.283E-05	1.899E-03
13	10.7052	7.699E-05	2.128E-03	63	0.8787	8.649E-05	1.986E-03	113	0.0721	9.295E-05	1.899E-03
14	10.1831	7.727E-05	2.126E-03	64	0.8359	8.666E-05	1.983E-03	114	0.0686	9.309E-05	1.900E-03
15	9.6865	7.752E-05	2.123E-03	65	0.7951	8.682E-05	1.980E-03	115	0.0653	9.318E-05	1.903E-03
16	9.2141	7.776E-05	2.121E-03	66	0.7563	8.699E-05	1.977E-03	116	0.0621	9.330E-05	1.905E-03
17	8.7647	7.797E-05	2.119E-03	67	0.7195	8.715E-05	1.975E-03	117	0.0591	9.342E-05	1.909E-03
18	8.3372	7.820E-05	2.117E-03	68	0.6844	8.732E-05	1.972E-03	118	0.0562	9.357E-05	1.914E-03
19	7.9306	7.844E-05	2.114E-03	69	0.6510	8.749E-05	1.969E-03	119	0.0534	9.375E-05	1.921E-03
20	7.5432	7.867E-05	2.111E-03	70	0.6192	8.761E-05	1.967E-03	120	0.0508	9.390E-05	1.931E-03
21	7.1759	7.890E-05	2.107E-03	71	0.5890	8.771E-05	1.965E-03	121	0.0484	9.410E-05	1.944E-03
22	6.8260	7.911E-05	2.104E-03	72	0.5603	8.783E-05	1.963E-03	122	0.0460	9.430E-05	1.960E-03
23	6.4930	7.931E-05	2.102E-03	73	0.5330	8.797E-05	1.961E-03	123	0.0437	9.453E-05	1.979E-03
24	6.1764	7.950E-05	2.099E-03	74	0.5070	8.812E-05	1.959E-03	124	0.0416	9.471E-05	2.003E-03
25	5.8752	7.967E-05	2.096E-03	75	0.4823	8.827E-05	1.956E-03	125	0.0396	9.500E-05	2.026E-03
26	5.5886	7.984E-05	2.094E-03	76	0.4587	8.843E-05	1.954E-03	126	0.0377	9.522E-05	2.058E-03
27	5.3161	7.999E-05	2.091E-03	77	0.4364	8.859E-05	1.951E-03	127	0.0358	9.553E-05	2.095E-03
28	5.0568	8.014E-05	2.089E-03	78	0.4151	8.874E-05	1.948E-03	128	0.0341	9.583E-05	2.142E-03
29	4.8102	8.029E-05	2.087E-03	79	0.3948	8.889E-05	1.946E-03	129	0.0324	9.613E-05	2.205E-03
30	4.5756	8.045E-05	2.084E-03	80	0.3756	8.905E-05	1.943E-03	130	0.0308	9.654E-05	2.276E-03
31	4.3524	8.060E-05	2.082E-03	81	0.3573	8.920E-05	1.941E-03	131	0.0293	9.696E-05	2.366E-03
32	4.1402	8.078E-05	2.079E-03	82	0.3398	8.936E-05	1.938E-03	132	0.0279	9.758E-05	2.383E-03
33	3.9382	8.093E-05	2.077E-03	83	0.3233	8.950E-05	1.936E-03	133	0.0265	9.758E-05	2.383E-03
34	3.7462	8.108E-05	2.074E-03	84	0.3075	8.965E-05	1.934E-03	134	0.0252	9.758E-05	2.383E-03
35	3.5635	8.123E-05	2.072E-03	85	0.2925	8.980E-05	1.931E-03	135	0.0240	9.758E-05	2.383E-03
36	3.3897	8.137E-05	2.070E-03	86	0.2782	8.993E-05	1.929E-03	136	0.0228	9.758E-05	2.383E-03
37	3.2244	8.149E-05	2.068E-03	87	0.2647	9.007E-05	1.927E-03	137	0.0217	9.758E-05	2.383E-03
38	3.0671	8.163E-05	2.066E-03	88	0.2518	9.020E-05	1.925E-03	138	0.0207	9.758E-05	2.383E-03
39	2.9175	8.173E-05	2.064E-03	89	0.2395	9.033E-05	1.923E-03	139	0.0197	9.758E-05	2.383E-03
40	2.7752	8.183E-05	2.063E-03	90	0.2278	9.045E-05	1.921E-03	140	0.0187	9.758E-05	2.383E-03
41	2.6399	8.193E-05	2.061E-03	91	0.2167	9.056E-05	1.919E-03	141	0.0178	9.758E-05	2.383E-03
42	2.5111	8.207E-05	2.059E-03	92	0.2061	9.068E-05	1.918E-03	142	0.0169	9.758E-05	2.383E-03
43	2.3887	8.222E-05	2.056E-03	93	0.1961	9.080E-05	1.916E-03	143	0.0161	9.758E-05	2.383E-03
44	2.2722	8.239E-05	2.054E-03	94	0.1865	9.092E-05	1.914E-03	144	0.0153	9.758E-05	2.383E-03
45	2.1613	8.253E-05	2.051E-03	95	0.1774	9.102E-05	1.913E-03	145	0.0146	9.758E-05	2.383E-03
46	2.0559	8.280E-05	2.047E-03	96	0.1688	9.113E-05	1.911E-03	146	0.0139	9.758E-05	2.383E-03
47	1.9557	8.303E-05	2.044E-03	97	0.1605	9.124E-05	1.910E-03	147	0.0132	9.758E-05	2.383E-03
48	1.8603	8.327E-05	2.040E-03	98	0.1527	9.135E-05	1.908E-03	148	0.0125	9.758E-05	2.383E-03
49	1.7696	8.352E-05	2.036E-03	99	0.1453	9.145E-05	1.907E-03	149	0.0119	9.758E-05	2.383E-03
50	1.6833	8.378E-05	2.032E-03	100	0.1382	9.156E-05	1.906E-03	150	0.0113	9.758E-05	2.383E-03

* ENERGY = LOWER BOUNDARY [MEV]
** ERROR X 100 = %

Table 3.2.13

ANGULAR FLUX OF BERYLLIUM SLAB TOF [THICKNESS=15 CM, ANGLE=12.2 DEG]

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.0115	0.000E+00	0.100E+01	51	0.1417	1.741E-06	0.475E-01	101	1.7259	4.150E-06	0.317E-01
2	0.0122	0.000E+00	0.100E+01	52	0.1489	1.646E-06	0.482E-01	102	1.8144	4.106E-06	0.312E-01
3	0.0129	0.000E+00	0.100E+01	53	0.1566	1.766E-06	0.441E-01	103	1.9074	4.089E-06	0.300E-01
4	0.0135	0.000E+00	0.100E+01	54	0.1646	1.940E-06	0.402E-01	104	2.0052	3.809E-06	0.301E-01
5	0.0142	0.000E+00	0.100E+01	55	0.1730	1.823E-06	0.415E-01	105	2.1080	3.665E-06	0.305E-01
6	0.0149	0.000E+00	0.100E+01	56	0.1819	1.837E-06	0.407E-01	106	2.2161	3.455E-06	0.318E-01
7	0.0157	0.000E+00	0.100E+01	57	0.1912	1.927E-06	0.386E-01	107	2.3297	3.158E-06	0.332E-01
8	0.0165	0.000E+00	0.100E+01	58	0.2010	1.953E-06	0.378E-01	108	2.4491	2.662E-06	0.376E-01
9	0.0173	0.000E+00	0.100E+01	59	0.2113	2.043E-06	0.370E-01	109	2.5747	2.415E-06	0.385E-01
10	0.0182	0.000E+00	0.100E+01	60	0.2222	2.229E-06	0.331E-01	110	2.7067	1.846E-06	0.458E-01
11	0.0192	0.000E+00	0.100E+01	61	0.2336	2.112E-06	0.353E-01	111	2.8455	1.660E-06	0.472E-01
12	0.0202	0.000E+00	0.100E+01	62	0.2456	2.148E-06	0.352E-01	112	2.9914	1.842E-06	0.447E-01
13	0.0212	0.000E+00	0.100E+01	63	0.2581	2.229E-06	0.335E-01	113	3.1447	2.011E-06	0.431E-01
14	0.0223	0.000E+00	0.100E+01	64	0.2714	2.377E-06	0.321E-01	114	3.3060	2.067E-06	0.444E-01
15	0.0234	0.000E+00	0.100E+01	65	0.2853	2.566E-06	0.297E-01	115	3.4755	2.206E-06	0.413E-01
16	0.0246	0.000E+00	0.100E+01	66	0.2999	2.693E-06	0.291E-01	116	3.6537	2.417E-06	0.398E-01
17	0.0259	0.000E+00	0.100E+01	67	0.3153	2.758E-06	0.285E-01	117	3.8410	2.631E-06	0.376E-01
18	0.0272	0.000E+00	0.100E+01	68	0.3314	2.763E-06	0.281E-01	118	4.0379	2.919E-06	0.353E-01
19	0.0286	-6.752E-06	0.642E-01	69	0.3485	2.881E-06	0.280E-01	119	4.2450	2.649E-06	0.380E-01
20	0.0301	-1.788E-06	0.493E+00	70	0.3663	2.815E-06	0.273E-01	120	4.4626	2.751E-06	0.363E-01
21	0.0316	-1.346E-06	0.593E+00	71	0.3851	2.821E-06	0.273E-01	121	4.6914	2.564E-06	0.402E-01
22	0.0332	-1.232E-06	0.584E+00	72	0.4048	2.900E-06	0.273E-01	122	4.9319	2.788E-06	0.372E-01
23	0.0349	-7.450E-07	0.846E+00	73	0.4256	2.717E-06	0.291E-01	123	5.1848	2.793E-06	0.380E-01
24	0.0367	6.329E-08	0.907E+01	74	0.4474	2.759E-06	0.286E-01	124	5.4506	2.844E-06	0.368E-01
25	0.0386	3.240E-07	0.133E+01	75	0.4703	2.861E-06	0.278E-01	125	5.7301	2.729E-06	0.386E-01
26	0.0406	6.810E-08	0.673E+01	76	0.4945	2.875E-06	0.275E-01	126	6.0239	2.888E-06	0.385E-01
27	0.0427	1.944E-07	0.221E+01	77	0.5198	2.703E-06	0.291E-01	127	6.3327	3.246E-06	0.369E-01
28	0.0449	1.238E-07	0.327E+01	78	0.5465	2.672E-06	0.293E-01	128	6.6574	3.304E-06	0.374E-01
29	0.0472	4.295E-07	0.880E+00	79	0.5745	2.418E-06	0.316E-01	129	6.9988	3.620E-06	0.362E-01
30	0.0496	8.246E-07	0.410E+00	80	0.6040	1.850E-06	0.374E-01	130	7.3576	3.909E-06	0.355E-01
31	0.0521	1.206E-06	0.240E+00	81	0.6349	2.149E-06	0.349E-01	131	7.7348	4.010E-06	0.357E-01
32	0.0548	8.322E-07	0.318E+00	82	0.6675	2.991E-06	0.276E-01	132	8.1314	3.992E-06	0.366E-01
33	0.0576	9.591E-07	0.243E+00	83	0.7017	3.001E-06	0.282E-01	133	8.5483	4.128E-06	0.371E-01
34	0.0606	1.158E-06	0.177E+00	84	0.7377	3.255E-06	0.263E-01	134	8.9866	3.970E-06	0.379E-01
35	0.0637	9.626E-07	0.195E+00	85	0.7755	2.374E-06	0.290E-01	135	9.4473	3.732E-06	0.409E-01
36	0.0669	1.047E-06	0.162E+00	86	0.8152	3.014E-06	0.281E-01	136	9.9317	4.131E-06	0.392E-01
37	0.0703	1.383E-06	0.110E+00	87	0.8570	3.297E-06	0.263E-01	137	10.4410	4.689E-06	0.366E-01
38	0.0740	1.255E-06	0.115E+00	88	0.9010	3.136E-06	0.273E-01	138	10.9760	5.800E-06	0.328E-01
39	0.0777	1.449E-06	0.938E-01	89	0.9472	3.278E-06	0.272E-01	139	11.5390	6.803E-06	0.298E-01
40	0.0817	1.277E-06	0.101E+00	90	0.9957	3.401E-06	0.267E-01	140	12.1310	9.974E-06	0.240E-01
41	0.0859	1.440E-06	0.836E-01	91	1.0468	3.373E-06	0.275E-01	141	12.7530	1.277E-05	0.208E-01
42	0.0903	1.377E-06	0.827E-01	92	1.1005	3.669E-06	0.258E-01	142	13.4060	1.784E-05	0.173E-01
43	0.0950	1.409E-06	0.773E-01	93	1.1569	3.781E-06	0.253E-01	143	14.0940	4.683E-05	0.104E-01
44	0.0998	1.479E-06	0.699E-01	94	1.2162	3.795E-06	0.254E-01	144	14.8160	1.631E-04	0.548E-02
45	0.1050	1.733E-06	0.591E-01	95	1.2786	3.872E-06	0.255E-01	145	15.5760	1.746E-04	0.519E-02
46	0.1103	1.663E-06	0.568E-01	96	1.3441	4.062E-06	0.249E-01	146	16.3750	2.291E-05	0.141E-01
47	0.1160	1.552E-06	0.601E-01	97	1.4130	4.129E-06	0.251E-01	147	17.2140	7.397E-07	0.306E-01
48	0.1219	1.765E-06	0.512E-01	98	1.4855	4.147E-06	0.251E-01	148	18.0970	7.209E-08	0.349E+00
49	0.1282	1.652E-06	0.539E-01	99	1.5616	4.316E-06	0.242E-01	149	19.0250	-3.216E-10	0.468E+02
50	0.1346	1.762E-06	0.488E-01	100	1.6417	4.300E-06	0.247E-01	150	20.0000	4.803E-09	0.375E+01

* ENERGY = [MEV]
** ERROR X 100 = %

Table 3.2.14

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESS=15 CM, ANGLE=12.2 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.5062	2.404E-10	1.000E+02	51	1.6012	2.908E-05	2.870E-03	101	0.1314	3.599E-05	2.459E-03
2	18.5549	2.243E-10	1.000E+02	52	1.5231	2.929E-05	2.854E-03	102	0.1250	3.607E-05	2.456E-03
3	17.6499	3.829E-09	1.000E+02	53	1.4488	2.950E-05	2.840E-03	103	0.1189	3.616E-05	2.454E-03
4	16.7891	4.081E-08	8.430E-02	54	1.3781	2.971E-05	2.825E-03	104	0.1131	3.624E-05	2.452E-03
5	15.9703	1.187E-06	1.391E-02	55	1.3109	2.991E-05	2.811E-03	105	0.1076	3.632E-05	2.450E-03
6	15.1914	9.915E-06	4.866E-03	56	1.2470	3.010E-05	2.798E-03	106	0.1024	3.641E-05	2.448E-03
7	14.4505	1.807E-05	3.638E-03	57	1.1862	3.029E-05	2.785E-03	107	0.0974	3.648E-05	2.447E-03
8	13.7458	2.041E-05	3.433E-03	58	1.1283	3.048E-05	2.772E-03	108	0.0926	3.655E-05	2.447E-03
9	13.0754	2.130E-05	3.368E-03	59	1.0733	3.067E-05	2.760E-03	109	0.0881	3.662E-05	2.447E-03
10	12.4377	2.194E-05	3.325E-03	60	1.0209	3.084E-05	2.749E-03	110	0.0838	3.669E-05	2.448E-03
11	11.8311	2.244E-05	3.295E-03	61	0.9712	3.101E-05	2.738E-03	111	0.0797	3.675E-05	2.450E-03
12	11.2541	2.278E-05	3.276E-03	62	0.9238	3.117E-05	2.727E-03	112	0.0758	3.683E-05	2.452E-03
13	10.7052	2.307E-05	3.261E-03	63	0.8787	3.133E-05	2.717E-03	113	0.0721	3.689E-05	2.456E-03
14	10.1831	2.331E-05	3.249E-03	64	0.8359	3.149E-05	2.706E-03	114	0.0686	3.696E-05	2.460E-03
15	9.6865	2.351E-05	3.239E-03	65	0.7951	3.164E-05	2.697E-03	115	0.0653	3.701E-05	2.467E-03
16	9.2141	2.370E-05	3.229E-03	66	0.7563	3.179E-05	2.688E-03	116	0.0621	3.706E-05	2.477E-03
17	8.7647	2.390E-05	3.218E-03	67	0.7195	3.195E-05	2.677E-03	117	0.0591	3.712E-05	2.488E-03
18	8.3372	2.410E-05	3.206E-03	68	0.6844	3.210E-05	2.668E-03	118	0.0562	3.716E-05	2.505E-03
19	7.9306	2.430E-05	3.194E-03	69	0.6510	3.225E-05	2.659E-03	119	0.0534	3.721E-05	2.527E-03
20	7.5438	2.450E-05	3.181E-03	70	0.6192	3.235E-05	2.653E-03	120	0.0508	3.727E-05	2.553E-03
21	7.1759	2.470E-05	3.169E-03	71	0.5890	3.245E-05	2.647E-03	121	0.0484	3.731E-05	2.590E-03
22	6.8260	2.488E-05	3.157E-03	72	0.5603	3.257E-05	2.640E-03	122	0.0460	3.733E-05	2.637E-03
23	6.4930	2.504E-05	3.146E-03	73	0.5330	3.270E-05	2.632E-03	123	0.0437	3.734E-05	2.692E-03
24	6.1764	2.521E-05	3.134E-03	74	0.5070	3.284E-05	2.624E-03	124	0.0416	3.735E-05	2.752E-03
25	5.8752	2.535E-05	3.124E-03	75	0.4823	3.298E-05	2.615E-03	125	0.0396	3.735E-05	2.819E-03
26	5.5886	2.549E-05	3.114E-03	76	0.4587	3.312E-05	2.607E-03	126	0.0377	3.737E-05	2.899E-03
27	5.3161	2.563E-05	3.104E-03	77	0.4364	3.326E-05	2.598E-03	127	0.0358	3.737E-05	2.999E-03
28	5.0568	2.577E-05	3.094E-03	78	0.4151	3.340E-05	2.591E-03	128	0.0341	3.733E-05	3.119E-03
29	4.8102	2.591E-05	3.084E-03	79	0.3948	3.354E-05	2.582E-03	129	0.0324	3.727E-05	3.270E-03
30	4.5756	2.604E-05	3.075E-03	80	0.3756	3.369E-05	2.574E-03	130	0.0308	3.720E-05	3.447E-03
31	4.3524	2.618E-05	3.065E-03	81	0.3573	3.383E-05	2.566E-03	131	0.0293	3.712E-05	3.654E-03
32	4.1402	2.631E-05	3.055E-03	82	0.3398	3.397E-05	2.557E-03	132	0.0279	3.678E-05	3.734E-03
33	3.9382	2.645E-05	3.045E-03	83	0.3233	3.411E-05	2.550E-03	133	0.0265	3.678E-05	3.734E-03
34	3.7462	2.659E-05	3.035E-03	84	0.3075	3.425E-05	2.542E-03	134	0.0252	3.678E-05	3.734E-03
35	3.5635	2.671E-05	3.027E-03	85	0.2925	3.438E-05	2.535E-03	135	0.0240	3.678E-05	3.734E-03
36	3.3897	2.682E-05	3.019E-03	86	0.2782	3.451E-05	2.528E-03	136	0.0228	3.678E-05	3.734E-03
37	3.2244	2.692E-05	3.013E-03	87	0.2647	3.463E-05	2.521E-03	137	0.0217	3.678E-05	3.734E-03
38	3.0671	2.702E-05	3.006E-03	88	0.2518	3.474E-05	2.516E-03	138	0.0207	3.678E-05	3.734E-03
39	2.9175	2.711E-05	2.999E-03	89	0.2395	3.485E-05	2.510E-03	139	0.0197	3.678E-05	3.734E-03
40	2.7752	2.720E-05	2.994E-03	90	0.2278	3.495E-05	2.505E-03	140	0.0187	3.678E-05	3.734E-03
41	2.6399	2.729E-05	2.987E-03	91	0.2167	3.506E-05	2.499E-03	141	0.0178	3.678E-05	3.734E-03
42	2.5111	2.741E-05	2.979E-03	92	0.2061	3.517E-05	2.494E-03	142	0.0169	3.678E-05	3.734E-03
43	2.3887	2.754E-05	2.970E-03	93	0.1961	3.526E-05	2.489E-03	143	0.0161	3.678E-05	3.734E-03
44	2.2722	2.770E-05	2.959E-03	94	0.1865	3.536E-05	2.485E-03	144	0.0153	3.678E-05	3.734E-03
45	2.1613	2.787E-05	2.948E-03	95	0.1774	3.545E-05	2.481E-03	145	0.0146	3.678E-05	3.734E-03
46	2.0559	2.806E-05	2.935E-03	96	0.1688	3.554E-05	2.477E-03	146	0.0139	3.678E-05	3.734E-03
47	1.9557	2.825E-05	2.922E-03	97	0.1605	3.564E-05	2.472E-03	147	0.0132	3.678E-05	3.734E-03
48	1.8603	2.845E-05	2.909E-03	98	0.1527	3.573E-05	2.469E-03	148	0.0125	3.678E-05	3.734E-03
49	1.7696	2.866E-05	2.897E-03	99	0.1453	3.581E-05	2.465E-03	149	0.0119	3.678E-05	3.734E-03
50	1.6833	2.886E-05	2.885E-03	100	0.1382	3.590E-05	2.462E-03	150	0.0113	3.678E-05	3.734E-03

* ENERGY = LOWER BOUNDARY [MEV]
** ERROR X 100 = %

Table 3.2.15

ANGULAR FLUX OF BERYLLIUM SLAB TOF [THICKNESS=15 CM, ANGLE=24.9 DEG]

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.0110	0.000E+00	0.100E+01	51	0.1417	1.713E-06	0.441E-01	101	1.7259	4.019E-06	0.328E-01
2	0.0122	0.000E+00	0.100E+01	52	0.1489	1.623E-06	0.454E-01	102	1.8144	3.973E-06	0.321E-01
3	0.0129	0.000E+00	0.100E+01	53	0.1566	1.672E-06	0.438E-01	103	1.9074	3.685E-06	0.328E-01
4	0.0135	0.000E+00	0.100E+01	54	0.1646	1.665E-06	0.432E-01	104	2.0052	3.952E-06	0.306E-01
5	0.0142	0.000E+00	0.100E+01	55	0.1730	1.743E-06	0.409E-01	105	2.1080	3.334E-06	0.342E-01
6	0.0149	0.000E+00	0.100E+01	56	0.1819	1.940E-06	0.370E-01	106	2.2161	3.128E-06	0.348E-01
7	0.0157	0.000E+00	0.100E+01	57	0.1912	1.887E-06	0.368E-01	107	2.3297	2.996E-06	0.354E-01
8	0.0165	0.000E+00	0.100E+01	58	0.2010	1.953E-06	0.362E-01	108	2.4491	2.829E-06	0.366E-01
9	0.0173	0.000E+00	0.100E+01	59	0.2113	2.014E-06	0.356E-01	109	2.5747	2.530E-06	0.383E-01
10	0.0182	0.000E+00	0.100E+01	60	0.2222	2.183E-06	0.327E-01	110	2.7067	1.879E-06	0.444E-01
11	0.0192	0.000E+00	0.100E+01	61	0.2336	2.143E-06	0.330E-01	111	2.8455	1.608E-06	0.474E-01
12	0.0202	0.000E+00	0.100E+01	62	0.2456	2.151E-06	0.330E-01	112	2.9914	1.822E-06	0.454E-01
13	0.0212	0.000E+00	0.100E+01	63	0.2581	2.344E-06	0.303E-01	113	3.1447	2.175E-06	0.406E-01
14	0.0223	0.000E+00	0.100E+01	64	0.2714	2.472E-06	0.304E-01	114	3.3060	2.083E-06	0.428E-01
15	0.0234	0.000E+00	0.100E+01	65	0.2853	2.403E-06	0.295E-01	115	3.4755	2.056E-06	0.454E-01
16	0.0246	0.000E+00	0.100E+01	66	0.2999	2.518E-06	0.301E-01	116	3.6537	2.330E-06	0.408E-01
17	0.0259	0.000E+00	0.100E+01	67	0.3153	2.477E-06	0.303E-01	117	3.8410	2.310E-06	0.421E-01
18	0.0272	0.000E+00	0.100E+01	68	0.3314	2.637E-06	0.284E-01	118	4.0379	2.412E-06	0.399E-01
19	0.0286	-1.616E-06	0.120E+00	69	0.3485	2.669E-06	0.284E-01	119	4.2450	2.507E-06	0.398E-01
20	0.0301	-7.136E-07	0.944E+00	70	0.3663	2.616E-06	0.292E-01	120	4.4626	2.324E-06	0.415E-01
21	0.0316	4.128E-07	0.171E+01	71	0.3851	2.589E-06	0.293E-01	121	4.6914	2.325E-06	0.413E-01
22	0.0332	2.904E-07	0.209E+01	72	0.4048	2.748E-06	0.279E-01	122	4.9319	2.652E-06	0.374E-01
23	0.0349	1.568E-06	0.350E+00	73	0.4256	2.651E-06	0.287E-01	123	5.1848	2.376E-06	0.425E-01
24	0.0367	1.507E-06	0.330E+00	74	0.4474	2.663E-06	0.286E-01	124	5.4506	2.557E-06	0.411E-01
25	0.0386	1.736E-06	0.255E+00	75	0.4703	2.807E-06	0.276E-01	125	5.7301	2.573E-06	0.415E-01
26	0.0406	8.834E-07	0.455E+00	76	0.4945	2.730E-06	0.284E-01	126	6.0239	2.709E-06	0.404E-01
27	0.0427	1.580E-06	0.279E+00	77	0.5198	2.746E-06	0.282E-01	127	6.3327	2.876E-06	0.399E-01
28	0.0449	1.355E-06	0.265E+00	78	0.5465	2.514E-06	0.298E-01	128	6.6574	3.175E-06	0.381E-01
29	0.0472	1.830E-06	0.179E+00	79	0.5745	2.298E-06	0.322E-01	129	6.9988	3.146E-06	0.389E-01
30	0.0496	1.698E-06	0.178E+00	80	0.6040	1.673E-06	0.404E-01	130	7.3576	3.438E-06	0.378E-01
31	0.0521	1.839E-06	0.142E+00	81	0.6349	2.180E-06	0.329E-01	131	7.7348	3.596E-06	0.382E-01
32	0.0548	1.576E-06	0.143E+00	82	0.6675	2.383E-06	0.276E-01	132	8.1314	3.757E-06	0.381E-01
33	0.0576	9.574E-07	0.215E+00	83	0.7017	3.004E-06	0.270E-01	133	8.5483	3.486E-06	0.410E-01
34	0.0606	1.367E-06	0.135E+00	84	0.7377	2.961E-06	0.278E-01	134	8.9866	3.481E-06	0.428E-01
35	0.0637	1.561E-06	0.107E+00	85	0.7755	2.827E-06	0.285E-01	135	9.4473	3.455E-06	0.419E-01
36	0.0669	1.296E-06	0.120E+00	86	0.8152	2.856E-06	0.288E-01	136	9.9317	3.744E-06	0.408E-01
37	0.0703	1.448E-06	0.962E-01	87	0.8570	3.102E-06	0.274E-01	137	10.4410	4.395E-06	0.378E-01
38	0.0740	1.150E-06	0.112E+00	88	0.9010	3.057E-06	0.276E-01	138	10.9760	5.385E-06	0.336E-01
39	0.0777	1.375E-06	0.871E-01	89	0.9472	3.402E-06	0.258E-01	139	11.5390	6.780E-06	0.300E-01
40	0.0817	1.306E-06	0.888E-01	90	0.9957	3.165E-06	0.284E-01	140	12.1310	9.222E-06	0.251E-01
41	0.0859	1.426E-06	0.776E-01	91	1.0468	3.355E-06	0.272E-01	141	12.7530	8.985E-06	0.258E-01
42	0.0903	1.390E-06	0.733E-01	92	1.1005	3.434E-06	0.267E-01	142	13.4060	1.486E-05	0.195E-01
43	0.0950	1.307E-06	0.737E-01	93	1.1569	3.620E-06	0.259E-01	143	14.0940	4.302E-05	0.111E-01
44	0.0998	1.520E-06	0.634E-01	94	1.2162	3.473E-06	0.267E-01	144	14.8160	7.698E-05	0.818E-02
45	0.1050	1.584E-06	0.574E-01	95	1.2786	3.753E-06	0.258E-01	145	15.5760	3.619E-05	0.117E-01
46	0.1103	1.536E-06	0.574E-01	96	1.3441	3.701E-06	0.264E-01	146	16.3750	2.413E-06	0.453E-01
47	0.1160	1.724E-06	0.499E-01	97	1.4130	3.983E-06	0.251E-01	147	17.2140	4.809E-08	0.358E+00
48	0.1219	1.628E-06	0.500E-01	98	1.4855	3.883E-06	0.260E-01	148	18.0970	3.758E-09	0.379E+01
49	0.1282	1.677E-06	0.482E-01	99	1.5616	3.874E-06	0.267E-01	149	19.0250	-1.858E-08	0.896E+00
50	0.1348	1.801E-06	0.443E-01	100	1.6417	3.813E-06	0.271E-01	150	20.0000	2.055E-08	0.730E+00

* ENERGY = [MEV]
** ERROR X 100 = %

Table 3.2.16

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESS=15 CM, ANGLE=24.9 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.5062	1.028E-09	1.000E+02	51	1.6012	1.577E-05	3.985E-03	101	0.1314	2.240E-05	3.078E-03
2	18.5549	9.875E-11	1.000E+02	52	1.5231	1.596E-05	3.950E-03	102	0.1250	2.248E-05	3.072E-03
3	17.6499	2.866E-10	1.000E+02	53	1.4488	1.616E-05	3.915E-03	103	0.1189	2.256E-05	3.066E-03
4	16.7891	2.691E-09	1.000E+02	54	1.3781	1.636E-05	3.879E-03	104	0.1131	2.265E-05	3.060E-03
5	15.9703	1.234E-07	4.617E-02	55	1.3109	1.654E-05	3.847E-03	105	0.1076	2.273E-05	3.056E-03
6	15.1914	1.933E-06	1.136E-02	56	1.2470	1.673E-05	3.815E-03	106	0.1024	2.281E-05	3.052E-03
7	14.4505	5.782E-06	6.638E-03	57	1.1862	1.690E-05	3.786E-03	107	0.0974	2.288E-05	3.049E-03
8	13.7458	7.933E-06	5.693E-03	58	1.1283	1.708E-05	3.756E-03	108	0.0926	2.295E-05	3.048E-03
9	13.0754	8.676E-06	5.468E-03	59	1.0733	1.726E-05	3.728E-03	109	0.0881	2.302E-05	3.047E-03
10	12.4377	9.125E-06	5.351E-03	60	1.0209	1.742E-05	3.701E-03	110	0.0838	2.309E-05	3.047E-03
11	11.8311	9.586E-06	5.235E-03	61	0.9712	1.758E-05	3.677E-03	111	0.0797	2.315E-05	3.048E-03
12	11.2541	9.925E-06	5.159E-03	62	0.9238	1.775E-05	3.650E-03	112	0.0758	2.322E-05	3.050E-03
13	10.7052	1.019E-05	5.101E-03	63	0.8787	1.791E-05	3.626E-03	113	0.0721	2.328E-05	3.055E-03
14	10.1831	1.041E-05	5.056E-03	64	0.8359	1.806E-05	3.603E-03	114	0.0686	2.335E-05	3.060E-03
15	9.6865	1.060E-05	5.019E-03	65	0.7951	1.820E-05	3.582E-03	115	0.0653	2.342E-05	3.070E-03
16	9.2141	1.077E-05	4.984E-03	66	0.7563	1.834E-05	3.561E-03	116	0.0621	2.349E-05	3.080E-03
17	8.7647	1.095E-05	4.952E-03	67	0.7195	1.849E-05	3.540E-03	117	0.0591	2.356E-05	3.096E-03
18	8.3372	1.112E-05	4.916E-03	68	0.6844	1.864E-05	3.518E-03	118	0.0562	2.361E-05	3.121E-03
19	7.9306	1.131E-05	4.876E-03	69	0.6510	1.879E-05	3.497E-03	119	0.0534	2.369E-05	3.147E-03
20	7.5438	1.149E-05	4.837E-03	70	0.6192	1.890E-05	3.482E-03	120	0.0508	2.378E-05	3.182E-03
21	7.1759	1.166E-05	4.798E-03	71	0.5890	1.898E-05	3.471E-03	121	0.0484	2.387E-05	3.233E-03
22	6.8260	1.182E-05	4.762E-03	72	0.5603	1.909E-05	3.456E-03	122	0.0460	2.396E-05	3.293E-03
23	6.4930	1.198E-05	4.726E-03	73	0.5330	1.922E-05	3.439E-03	123	0.0437	2.403E-05	3.367E-03
24	6.1764	1.212E-05	4.694E-03	74	0.5070	1.936E-03	3.420E-03	124	0.0416	2.409E-05	3.451E-03
25	5.8752	1.226E-05	4.663E-03	75	0.4823	1.949E-05	3.402E-03	125	0.0396	2.414E-05	3.544E-03
26	5.5886	1.239E-05	4.633E-03	76	0.4587	1.963E-05	3.384E-03	126	0.0377	2.423E-05	3.647E-03
27	5.3161	1.251E-05	4.607E-03	77	0.4364	1.977E-05	3.366E-03	127	0.0358	2.430E-05	3.777E-03
28	5.0568	1.263E-05	4.581E-03	78	0.4151	1.990E-05	3.349E-03	128	0.0341	2.438E-05	3.937E-03
29	4.8102	1.277E-05	4.550E-03	79	0.3948	2.004E-05	3.332E-03	129	0.0324	2.439E-05	4.127E-03
30	4.5756	1.288E-05	4.524E-03	80	0.3756	2.017E-05	3.316E-03	130	0.0308	2.441E-05	4.370E-03
31	4.3524	1.300E-05	4.499E-03	81	0.3573	2.030E-05	3.300E-03	131	0.0293	2.438E-05	4.590E-03
32	4.1402	1.312E-05	4.473E-03	82	0.3398	2.043E-05	3.284E-03	132	0.0279	2.430E-05	4.622E-03
33	3.9382	1.324E-05	4.447E-03	83	0.3233	2.056E-05	3.268E-03	133	0.0265	2.430E-05	4.622E-03
34	3.7462	1.336E-05	4.423E-03	84	0.3075	2.069E-05	3.253E-03	134	0.0252	2.430E-05	4.622E-03
35	3.5635	1.348E-05	4.399E-03	85	0.2925	2.081E-05	3.239E-03	135	0.0240	2.430E-05	4.622E-03
36	3.3897	1.358E-05	4.379E-03	86	0.2782	2.093E-05	3.224E-03	136	0.0228	2.430E-05	4.622E-03
37	3.2244	1.368E-05	4.358E-03	87	0.2647	2.106E-05	3.210E-03	137	0.0217	2.430E-05	4.622E-03
38	3.0671	1.379E-05	4.336E-03	88	0.2518	2.117E-05	3.197E-03	138	0.0207	2.430E-05	4.622E-03
39	2.9175	1.388E-05	4.317E-03	89	0.2395	2.128E-05	3.185E-03	139	0.0197	2.430E-05	4.622E-03
40	2.7752	1.396E-05	4.301E-03	90	0.2278	2.139E-05	3.174E-03	140	0.0187	2.430E-05	4.622E-03
41	2.6399	1.406E-05	4.283E-03	91	0.2167	2.150E-05	3.162E-03	141	0.0178	2.430E-05	4.622E-03
42	2.5111	1.418E-05	4.258E-03	92	0.2061	2.160E-05	3.151E-03	142	0.0169	2.430E-05	4.622E-03
43	2.3887	1.432E-05	4.232E-03	93	0.1961	2.170E-05	3.142E-03	143	0.0161	2.430E-05	4.622E-03
44	2.2722	1.447E-05	4.204E-03	94	0.1865	2.179E-05	3.132E-03	144	0.0153	2.430E-05	4.622E-03
45	2.1613	1.463E-05	4.176E-03	95	0.1774	2.189E-05	3.122E-03	145	0.0146	2.430E-05	4.622E-03
46	2.0559	1.480E-05	4.147E-03	96	0.1688	2.197E-05	3.114E-03	146	0.0139	2.430E-05	4.622E-03
47	1.9557	1.500E-05	4.112E-03	97	0.1605	2.206E-05	3.107E-03	147	0.0132	2.430E-05	4.622E-03
48	1.8603	1.518E-05	4.081E-03	98	0.1527	2.214E-05	3.099E-03	148	0.0125	2.430E-05	4.622E-03
49	1.7696	1.538E-05	4.050E-03	99	0.1453	2.222E-05	3.093E-03	149	0.0119	2.430E-05	4.622E-03
50	1.6833	1.558E-05	4.020E-03	100	0.1382	2.231E-05	3.085E-03	150	0.0113	2.430E-05	4.622E-03

* ENERGY = LOWER BOUNDARY [MEV]
** ERROR X 100 = %

Table 3.2.17

ANGULAR FLUX OF BERYLLIUM SLAB TOF [THICKNESS=15 CM, ANGLE=41.8 DEG]

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.0116	0.000E+00	0.100E+01	51	0.1417	1.417E-06	0.504E-01	101	1.7259	3.671E-06	0.324E-01
2	0.0122	0.000E+00	0.100E+01	52	0.1489	1.581E-06	0.440E-01	102	1.8144	3.639E-06	0.323E-01
3	0.0129	0.000E+00	0.100E+01	53	0.1566	1.493E-06	0.449E-01	103	1.9074	3.553E-06	0.322E-01
4	0.0135	0.000E+00	0.100E+01	54	0.1646	1.659E-06	0.415E-01	104	2.0052	3.491E-06	0.318E-01
5	0.0142	0.000E+00	0.100E+01	55	0.1730	1.674E-06	0.408E-01	105	2.1080	3.219E-06	0.339E-01
6	0.0149	0.000E+00	0.100E+01	56	0.1819	1.623E-06	0.416E-01	106	2.2161	3.050E-06	0.339E-01
7	0.0157	0.000E+00	0.100E+01	57	0.1912	1.711E-06	0.391E-01	107	2.3297	2.792E-06	0.366E-01
8	0.0165	0.000E+00	0.100E+01	58	0.2010	1.881E-06	0.363E-01	108	2.4491	2.378E-06	0.402E-01
9	0.0173	0.000E+00	0.100E+01	59	0.2113	1.787E-06	0.373E-01	109	2.5747	1.971E-06	0.455E-01
10	0.0182	0.000E+00	0.100E+01	60	0.2222	1.827E-06	0.362E-01	110	2.7067	1.455E-06	0.543E-01
11	0.0192	0.000E+00	0.100E+01	61	0.2336	1.821E-06	0.361E-01	111	2.8455	1.271E-06	0.619E-01
12	0.0202	0.000E+00	0.100E+01	62	0.2456	1.899E-06	0.348E-01	112	2.9914	1.414E-06	0.556E-01
13	0.0212	0.000E+00	0.100E+01	63	0.2581	2.136E-06	0.312E-01	113	3.1447	1.569E-06	0.501E-01
14	0.0223	0.000E+00	0.100E+01	64	0.2714	2.114E-06	0.319E-01	114	3.3060	1.724E-06	0.481E-01
15	0.0234	0.000E+00	0.100E+01	65	0.2853	2.222E-06	0.311E-01	115	3.4755	1.945E-06	0.434E-01
16	0.0246	0.000E+00	0.100E+01	66	0.2999	2.425E-06	0.288E-01	116	3.6537	2.037E-06	0.410E-01
17	0.0259	0.000E+00	0.100E+01	67	0.3153	2.395E-06	0.290E-01	117	3.8410	1.860E-06	0.445E-01
18	0.0272	0.000E+00	0.100E+01	68	0.3314	2.381E-06	0.294E-01	118	4.0379	2.060E-06	0.416E-01
19	0.0286	-4.211E-07	0.250E+00	69	0.3485	2.546E-06	0.280E-01	119	4.2450	2.029E-06	0.423E-01
20	0.0301	-2.646E-06	0.175E+00	70	0.3663	2.462E-06	0.286E-01	120	4.4626	1.937E-06	0.451E-01
21	0.0316	-3.741E-07	0.187E+01	71	0.3851	2.362E-06	0.300E-01	121	4.6914	2.223E-06	0.392E-01
22	0.0332	1.042E-07	0.590E+01	72	0.4048	2.465E-06	0.286E-01	122	4.9319	2.224E-06	0.403E-01
23	0.0349	-2.326E-07	0.230E+01	73	0.4256	2.453E-06	0.280E-01	123	5.1848	2.261E-06	0.412E-01
24	0.0367	9.690E-07	0.504E+00	74	0.4474	2.471E-06	0.290E-01	124	5.4506	2.289E-06	0.422E-01
25	0.0386	3.483E-07	0.126E+01	75	0.4703	2.483E-06	0.287E-01	125	5.7301	2.245E-06	0.428E-01
26	0.0406	4.424E-07	0.890E+00	76	0.4945	2.522E-06	0.286E-01	126	6.0239	2.523E-06	0.398E-01
27	0.0427	1.144E-06	0.330E+00	77	0.5198	2.294E-06	0.309E-01	127	6.3327	2.517E-06	0.412E-01
28	0.0449	2.555E-07	0.137E+01	78	0.5465	2.373E-06	0.298E-01	128	6.6574	2.818E-06	0.385E-01
29	0.0472	8.240E-07	0.391E+00	79	0.5745	2.260E-06	0.306E-01	129	6.9988	2.947E-06	0.396E-01
30	0.0496	1.738E-06	0.167E+00	80	0.6040	1.623E-06	0.409E-01	130	7.3576	3.056E-06	0.401E-01
31	0.0521	8.561E-07	0.296E+00	81	0.6349	1.766E-06	0.383E-01	131	7.7348	2.993E-06	0.415E-01
32	0.0548	9.892E-07	0.232E+00	82	0.6675	2.490E-06	0.295E-01	132	8.1314	2.866E-06	0.445E-01
33	0.0576	1.127E-06	0.178E+00	83	0.7017	2.767E-06	0.277E-01	133	8.5483	2.798E-06	0.454E-01
34	0.0606	1.150E-06	0.155E+00	84	0.7377	2.695E-06	0.286E-01	134	8.9866	2.914E-06	0.451E-01
35	0.0637	9.954E-07	0.166E+00	85	0.7755	2.614E-06	0.292E-01	135	9.4473	3.028E-06	0.434E-01
36	0.0669	1.136E-06	0.130E+00	86	0.8152	2.606E-06	0.296E-01	136	9.9317	3.313E-06	0.431E-01
37	0.0703	1.299E-06	0.991E-01	87	0.8570	2.874E-06	0.272E-01	137	10.4410	4.082E-06	0.374E-01
38	0.0740	1.155E-06	0.109E+00	88	0.9010	2.930E-06	0.271E-01	138	10.9760	4.960E-06	0.340E-01
39	0.0777	1.206E-06	0.972E-01	89	0.9472	2.828E-06	0.287E-01	139	11.5390	5.771E-06	0.307E-01
40	0.0817	1.279E-06	0.367E-01	90	0.9957	2.901E-06	0.294E-01	140	12.1310	6.139E-06	0.297E-01
41	0.0859	1.099E-06	0.935E-01	91	1.0468	3.034E-06	0.280E-01	141	12.7530	6.059E-06	0.300E-01
42	0.0903	1.283E-06	0.779E-01	92	1.1005	3.133E-06	0.278E-01	142	13.4060	1.005E-05	0.223E-01
43	0.0950	1.442E-06	0.644E-01	93	1.1569	3.277E-06	0.269E-01	143	14.0940	2.011E-05	0.152E-01
44	0.0998	1.273E-06	0.729E-01	94	1.2162	3.158E-06	0.276E-01	144	14.8160	2.587E-05	0.132E-01
45	0.1050	1.289E-06	0.679E-01	95	1.2786	3.439E-06	0.264E-01	145	15.5760	1.091E-05	0.200E-01
46	0.1103	1.405E-06	0.604E-01	96	1.3441	3.543E-06	0.261E-01	146	16.3750	9.816E-07	0.677E-01
47	0.1160	1.268E-06	0.639E-01	97	1.4130	3.599E-06	0.266E-01	147	17.2140	3.381E-08	0.617E+00
48	0.1219	1.212E-06	0.650E-01	98	1.4855	3.715E-06	0.258E-01	148	18.0970	-1.705E-08	0.112E+01
49	0.1282	1.364E-06	0.556E-01	99	1.5616	3.635E-06	0.275E-01	149	19.0250	1.269E-08	0.140E+01
50	0.1348	1.442E-06	0.514E-01	100	1.6417	3.621E-06	0.276E-01	150	20.0000	9.283E-10	0.174E+02

* ENERGY = CMEV]

** ERROR x 100 = %

Table 3.2.18

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESS=15 CM, ANGLE=41.8 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.3062	4.641E-11	1.000E+02	51	1.6012	9.433E-06	4.915E-03	101	0.1314	1.547E-05	3.455E-03
2	18.5549	6.808E-10	1.000E+02	52	1.5231	9.614E-06	4.850E-03	102	0.1250	1.554E-05	3.448E-03
3	17.6499	-1.718E-10	1.000E+02	53	1.4488	9.800E-06	4.783E-03	103	0.1189	1.560E-05	3.444E-03
4	16.7891	1.519E-09	1.000E+02	54	1.3781	9.980E-06	4.721E-03	104	0.1131	1.566E-05	3.440E-03
5	15.9703	5.060E-08	7.521E-02	55	1.3109	1.016E-05	4.661E-03	105	0.1076	1.574E-05	3.435E-03
6	15.1914	5.959E-07	1.941E-02	56	1.2470	1.033E-05	4.605E-03	106	0.1024	1.580E-05	3.433E-03
7	14.4505	1.889E-06	1.094E-02	57	1.1862	1.049E-05	4.554E-03	107	0.0974	1.586E-05	3.431E-03
8	13.7458	2.895E-06	8.879E-03	58	1.1283	1.065E-05	4.503E-03	108	0.0926	1.594E-05	3.428E-03
9	13.0754	3.397E-06	8.255E-03	59	1.0733	1.081E-05	4.456E-03	109	0.0881	1.600E-05	3.429E-03
10	12.4377	3.700E-06	7.969E-03	60	1.0209	1.096E-05	4.411E-03	110	0.0838	1.605E-05	3.432E-03
11	11.8311	4.007E-06	7.702E-03	61	0.9712	1.110E-05	4.371E-03	111	0.0797	1.612E-05	3.436E-03
12	11.2541	4.295E-06	7.473E-03	62	0.9238	1.125E-05	4.331E-03	112	0.0758	1.618E-05	3.442E-03
13	10.7052	4.543E-06	7.307E-03	63	0.8787	1.139E-05	4.289E-03	113	0.0721	1.624E-05	3.451E-03
14	10.1831	4.748E-06	7.175E-03	64	0.8359	1.154E-05	4.249E-03	114	0.0686	1.630E-05	3.460E-03
15	9.6865	4.913E-06	7.083E-03	65	0.7951	1.167E-05	4.215E-03	115	0.0653	1.636E-05	3.478E-03
16	9.2141	5.065E-06	6.993E-03	66	0.7563	1.180E-05	4.181E-03	116	0.0621	1.641E-05	3.503E-03
17	8.7647	5.210E-06	6.913E-03	67	0.7195	1.193E-05	4.146E-03	117	0.0591	1.647E-05	3.533E-03
18	8.3372	5.350E-06	6.837E-03	68	0.6844	1.207E-05	4.111E-03	118	0.0562	1.652E-05	3.573E-03
19	7.9306	5.493E-06	6.759E-03	69	0.6510	1.219E-05	4.080E-03	119	0.0534	1.657E-05	3.629E-03
20	7.5438	5.643E-06	6.671E-03	70	0.6192	1.228E-05	4.060E-03	120	0.0508	1.661E-05	3.699E-03
21	7.1759	5.796E-06	6.581E-03	71	0.5890	1.236E-05	4.042E-03	121	0.0484	1.670E-05	3.781E-03
22	6.8260	5.943E-06	6.492E-03	72	0.5603	1.248E-05	4.015E-03	122	0.0460	1.674E-05	3.892E-03
23	6.4930	6.084E-06	6.404E-03	73	0.5330	1.260E-05	3.988E-03	123	0.0437	1.675E-05	4.027E-03
24	6.1764	6.210E-06	6.330E-03	74	0.5070	1.271E-05	3.961E-03	124	0.0416	1.681E-05	4.168E-03
25	5.8752	6.336E-06	6.254E-03	75	0.4823	1.284E-05	3.932E-03	125	0.0396	1.683E-05	4.323E-03
26	5.5886	6.449E-06	6.190E-03	76	0.4587	1.296E-05	3.904E-03	126	0.0377	1.685E-05	4.510E-03
27	5.3161	6.563E-06	6.126E-03	77	0.4364	1.308E-05	3.877E-03	127	0.0358	1.690E-05	4.724E-03
28	5.0568	6.676E-06	6.063E-03	78	0.4151	1.321E-05	3.850E-03	128	0.0341	1.689E-05	4.985E-03
29	4.8102	6.787E-06	6.000E-03	79	0.3948	1.333E-05	3.824E-03	129	0.0324	1.689E-05	5.305E-03
30	4.5756	6.898E-06	5.937E-03	80	0.3756	1.345E-05	3.799E-03	130	0.0308	1.688E-05	5.701E-03
31	4.3524	6.995E-06	5.884E-03	81	0.3573	1.357E-05	3.774E-03	131	0.0293	1.674E-05	5.911E-03
32	4.1402	7.097E-06	5.836E-03	82	0.3398	1.370E-05	3.748E-03	132	0.0279	1.672E-05	5.926E-03
33	3.9382	7.200E-06	5.788E-03	83	0.3233	1.382E-05	3.724E-03	133	0.0265	1.672E-05	5.926E-03
34	3.7462	7.293E-06	5.738E-03	84	0.3075	1.394E-05	3.700E-03	134	0.0252	1.672E-05	5.926E-03
35	3.5635	7.395E-06	5.697E-03	85	0.2925	1.406E-05	3.677E-03	135	0.0240	1.672E-05	5.926E-03
36	3.3897	7.492E-06	5.641E-03	86	0.2782	1.417E-05	3.656E-03	136	0.0228	1.672E-05	5.926E-03
37	3.2244	7.578E-06	5.604E-03	87	0.2647	1.428E-05	3.637E-03	137	0.0217	1.672E-05	5.926E-03
38	3.0671	7.656E-06	5.570E-03	88	0.2518	1.438E-05	3.617E-03	138	0.0207	1.672E-05	5.926E-03
39	2.9175	7.727E-06	5.542E-03	89	0.2395	1.448E-05	3.601E-03	139	0.0197	1.672E-05	5.926E-03
40	2.7752	7.791E-06	5.520E-03	90	0.2278	1.457E-05	3.585E-03	140	0.0187	1.672E-05	5.926E-03
41	2.6399	7.863E-06	5.492E-03	91	0.2167	1.466E-05	3.570E-03	141	0.0178	1.672E-05	5.926E-03
42	2.5111	7.962E-06	5.454E-03	92	0.2061	1.475E-05	3.556E-03	142	0.0169	1.672E-05	5.926E-03
43	2.3887	8.081E-06	5.406E-03	93	0.1961	1.484E-05	3.541E-03	143	0.0161	1.672E-05	5.926E-03
44	2.2722	8.220E-06	5.350E-03	94	0.1865	1.493E-05	3.527E-03	144	0.0153	1.672E-05	5.926E-03
45	2.1613	8.373E-06	5.289E-03	95	0.1774	1.501E-05	3.516E-03	145	0.0146	1.672E-05	5.926E-03
46	2.0559	8.534E-06	5.228E-03	96	0.1688	1.509E-05	3.503E-03	146	0.0139	1.672E-05	5.926E-03
47	1.9557	8.702E-06	5.163E-03	97	0.1605	1.518E-05	3.492E-03	147	0.0132	1.672E-05	5.926E-03
48	1.8603	8.886E-06	5.101E-03	98	0.1527	1.525E-05	3.482E-03	148	0.0125	1.672E-05	5.926E-03
49	1.7696	9.062E-06	5.040E-03	99	0.1453	1.533E-05	3.471E-03	149	0.0119	1.672E-05	5.926E-03
50	1.6833	9.252E-06	4.982E-03	100	0.1382	1.540E-05	3.463E-03	150	0.0113	1.672E-05	5.926E-03

* ENERGY = LOWER BOUNDARY [MEV]
** ERROR X 100 = %

Table 3.2.19

ANGULAR FLUX OF BERYLLIUM SLAB TOP (THICKNESS=15 CM, ANGLE=66.3 DEG)

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.0116	0.000E+00	0.100E+01	51	0.1417	1.027E-06	0.718E-01	101	1.7259	2.903E-06	0.391E-01
2	0.0122	0.000E+00	0.100E+01	52	0.1489	1.072E-06	0.664E-01	102	1.8144	2.534E-06	0.426E-01
3	0.0129	0.000E+00	0.100E+01	53	0.1566	1.141E-06	0.626E-01	103	1.9074	2.404E-06	0.431E-01
4	0.0135	0.000E+00	0.100E+01	54	0.1646	1.315E-06	0.516E-01	104	2.0052	2.375E-06	0.416E-01
5	0.0142	0.000E+00	0.100E+01	55	0.1730	1.298E-06	0.512E-01	105	2.1080	2.013E-06	0.480E-01
6	0.0149	0.000E+00	0.100E+01	56	0.1819	1.259E-06	0.525E-01	106	2.2161	1.890E-06	0.504E-01
7	0.0157	0.000E+00	0.100E+01	57	0.1912	1.424E-06	0.454E-01	107	2.3297	1.530E-06	0.580E-01
8	0.0165	0.000E+00	0.100E+01	58	0.2010	1.407E-06	0.464E-01	108	2.4491	1.514E-06	0.576E-01
9	0.0173	0.000E+00	0.100E+01	59	0.2113	1.408E-06	0.478E-01	109	2.5747	1.180E-06	0.680E-01
10	0.0182	0.000E+00	0.100E+01	60	0.2222	1.470E-06	0.443E-01	110	2.7067	1.173E-06	0.663E-01
11	0.0192	0.000E+00	0.100E+01	61	0.2336	1.524E-06	0.435E-01	111	2.8455	8.968E-07	0.874E-01
12	0.0202	0.000E+00	0.100E+01	62	0.2456	1.539E-06	0.430E-01	112	2.9914	1.134E-06	0.694E-01
13	0.0212	0.000E+00	0.100E+01	63	0.2581	1.537E-06	0.425E-01	113	3.1447	1.033E-06	0.839E-01
14	0.0223	0.000E+00	0.100E+01	64	0.2714	1.600E-06	0.424E-01	114	3.3060	1.180E-06	0.763E-01
15	0.0234	0.000E+00	0.100E+01	65	0.2853	1.665E-06	0.406E-01	115	3.4755	1.336E-06	0.694E-01
16	0.0246	0.000E+00	0.100E+01	66	0.2999	1.356E-06	0.364E-01	116	3.6537	1.294E-06	0.751E-01
17	0.0259	0.000E+00	0.100E+01	67	0.3153	1.563E-06	0.426E-01	117	3.8410	1.438E-06	0.693E-01
18	0.0272	0.000E+00	0.100E+01	68	0.3314	1.759E-06	0.387E-01	118	4.0379	1.497E-06	0.660E-01
19	0.0286	-7.191E-08	0.619E+00	69	0.3485	1.859E-06	0.375E-01	119	4.2450	1.338E-06	0.747E-01
20	0.0301	-9.309E-07	0.412E+00	70	0.3663	1.742E-06	0.396E-01	120	4.4626	1.346E-06	0.718E-01
21	0.0316	-4.088E-07	0.163E+01	71	0.3851	1.929E-06	0.365E-01	121	4.6914	1.485E-06	0.625E-01
22	0.0332	-2.320E-07	0.281E+01	72	0.4048	1.672E-06	0.360E-01	122	4.9319	1.521E-06	0.612E-01
23	0.0349	4.485E-07	0.129E+01	73	0.4256	1.709E-06	0.409E-01	123	5.1848	1.418E-06	0.626E-01
24	0.0367	-6.364E-07	0.815E+00	74	0.4474	1.707E-06	0.405E-01	124	5.4506	1.679E-06	0.531E-01
25	0.0386	7.995E-07	0.591E+00	75	0.4703	1.793E-06	0.392E-01	125	5.7301	1.449E-06	0.647E-01
26	0.0406	2.657E-07	0.150E+01	76	0.4945	1.877E-06	0.378E-01	126	6.0239	1.556E-06	0.653E-01
27	0.0427	6.249E-07	0.480E+00	77	0.5198	1.784E-06	0.393E-01	127	6.3327	1.685E-06	0.627E-01
28	0.0449	7.375E-07	0.500E+00	78	0.5465	1.760E-06	0.398E-01	128	6.6574	1.859E-06	0.580E-01
29	0.0472	7.482E-07	0.454E+00	79	0.5745	1.440E-06	0.474E-01	129	6.9988	1.959E-06	0.606E-01
30	0.0496	7.534E-07	0.418E+00	80	0.6040	1.281E-06	0.519E-01	130	7.3576	1.944E-06	0.627E-01
31	0.0521	9.634E-07	0.290E+00	81	0.6349	1.619E-06	0.445E-01	131	7.7348	1.486E-06	0.866E-01
32	0.0548	6.506E-07	0.285E+00	82	0.6675	1.795E-06	0.409E-01	132	8.1314	1.733E-06	0.821E-01
33	0.0576	1.080E-06	0.192E+00	83	0.7017	2.111E-06	0.361E-01	133	8.5483	1.893E-06	0.776E-01
34	0.0606	1.226E-06	0.153E+00	84	0.7377	2.032E-06	0.376E-01	134	8.9866	2.188E-06	0.737E-01
35	0.0637	1.191E-06	0.143E+00	85	0.7755	1.340E-06	0.406E-01	135	9.4473	2.365E-06	0.741E-01
36	0.0669	8.801E-07	0.176E+00	86	0.8152	1.797E-06	0.428E-01	136	9.9317	2.762E-06	0.679E-01
37	0.0703	1.063E-06	0.131E+00	87	0.8570	1.974E-06	0.398E-01	137	10.4410	3.543E-06	0.570E-01
38	0.0740	9.070E-07	0.145E+00	88	0.9010	2.129E-06	0.366E-01	138	10.9760	3.287E-06	0.623E-01
39	0.0777	9.325E-07	0.127E+00	89	0.9472	2.141E-06	0.379E-01	139	11.5390	2.551E-06	0.821E-01
40	0.0817	9.693E-07	0.120E+00	90	0.9957	2.205E-06	0.376E-01	140	12.1310	2.972E-06	0.678E-01
41	0.0859	1.014E-06	0.106E+00	91	1.0468	2.186E-06	0.387E-01	141	12.7530	3.406E-06	0.608E-01
42	0.0903	1.075E-06	0.968E-01	92	1.1005	2.307E-06	0.376E-01	142	13.4060	4.712E-06	0.430E-01
43	0.0950	9.902E-07	0.988E-01	93	1.1569	2.377E-06	0.367E-01	143	14.0940	4.221E-06	0.421E-01
44	0.0999	9.948E-07	0.946E-01	94	1.2162	2.466E-06	0.354E-01	144	14.8160	1.691E-06	0.748E-01
45	0.1050	8.372E-07	0.102E+00	95	1.2786	2.464E-06	0.369E-01	145	15.5760	2.847E-07	0.250E+00
46	0.1103	1.045E-06	0.831E-01	96	1.3441	2.592E-06	0.365E-01	146	16.3750	6.692E-08	0.551E+00
47	0.1160	1.085E-06	0.771E-01	97	1.4130	2.618E-06	0.371E-01	147	17.2140	-1.331E-08	0.165E+01
48	0.1219	1.219E-06	0.659E-01	98	1.4855	2.629E-06	0.377E-01	148	18.0970	-1.526E-08	0.160E+01
49	0.1282	1.217E-06	0.641E-01	99	1.5616	2.641E-06	0.384E-01	149	19.0250	2.794E-08	0.931E+00
50	0.1348	1.179E-06	0.652E-01	100	1.6417	2.774E-06	0.374E-01	150	20.0000	-3.330E-09	0.778E+01

* ENERGY = EV/EV0
** ERROR X 100 = %

Table 3.2.20

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESS=15 CM, ANGLE=66.8 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.3062	-1.665E-10	1.000E+02	51	1.6012	4.524E-06	9.567E-03	101	0.1314	9.010E-06	5.635E-03
2	18.5349	1.230E-09	1.000E+02	52	1.5231	4.656E-06	9.359E-03	102	0.1250	9.071E-06	5.614E-03
3	17.6499	4.374E-10	1.000E+02	53	1.4488	4.788E-06	9.161E-03	103	0.1189	9.132E-06	5.593E-03
4	16.7891	-4.781E-10	1.000E+02	54	1.3781	4.919E-06	8.971E-03	104	0.1131	9.186E-06	5.579E-03
5	15.9703	2.868E-09	1.000E+02	55	1.3109	5.048E-06	8.791E-03	105	0.1076	9.238E-06	5.567E-03
6	15.1914	1.710E-08	2.804E-01	56	1.2470	5.172E-06	8.626E-03	106	0.1024	9.282E-06	5.562E-03
7	14.4505	1.017E-07	7.809E-02	57	1.1862	5.295E-06	8.466E-03	107	0.0974	9.332E-06	5.556E-03
8	13.7458	3.127E-07	3.811E-02	58	1.1283	5.414E-06	8.319E-03	108	0.0926	9.382E-06	5.551E-03
9	13.0754	5.423E-07	2.651E-02	59	1.0733	5.529E-06	8.183E-03	109	0.0881	9.435E-06	5.547E-03
10	12.4377	7.186E-07	2.610E-02	60	1.0209	5.638E-06	8.060E-03	110	0.0838	9.486E-06	5.546E-03
11	11.8311	8.672E-07	2.455E-02	61	0.9712	5.749E-06	7.938E-03	111	0.0797	9.535E-06	5.551E-03
12	11.2541	9.947E-07	2.386E-02	62	0.9238	5.856E-06	7.823E-03	112	0.0758	9.581E-06	5.559E-03
13	10.7052	1.139E-06	2.230E-02	63	0.8787	5.962E-06	7.711E-03	113	0.0721	9.627E-06	5.575E-03
14	10.1831	1.336E-06	2.076E-02	64	0.8359	6.061E-06	7.614E-03	114	0.0686	9.680E-06	5.591E-03
15	9.6865	1.474E-06	1.986E-02	65	0.7951	6.151E-06	7.528E-03	115	0.0653	9.724E-06	5.622E-03
16	9.2141	1.593E-06	1.919E-02	66	0.7563	6.243E-06	7.441E-03	116	0.0621	9.783E-06	5.655E-03
17	8.7647	1.702E-06	1.858E-02	67	0.7195	6.344E-06	7.347E-03	117	0.0591	9.845E-06	5.700E-03
18	8.3372	1.797E-06	1.807E-02	68	0.6844	6.450E-06	7.251E-03	118	0.0562	9.899E-06	5.765E-03
19	7.9306	1.883E-06	1.764E-02	69	0.6510	6.539E-06	7.174E-03	119	0.0534	9.941E-06	5.868E-03
20	7.5438	1.958E-06	1.729E-02	70	0.6192	6.620E-06	7.107E-03	120	0.0508	9.989E-06	6.006E-03
21	7.1759	2.055E-06	1.674E-02	71	0.5890	6.684E-06	7.056E-03	121	0.0484	1.003E-05	6.186E-03
22	6.8260	2.153E-06	1.621E-02	72	0.5603	6.756E-06	6.999E-03	122	0.0460	1.006E-05	6.389E-03
23	6.4930	2.246E-06	1.572E-02	73	0.5330	6.844E-06	6.928E-03	123	0.0437	1.010E-05	6.623E-03
24	6.1764	2.330E-06	1.532E-02	74	0.5070	6.933E-06	6.858E-03	124	0.0416	1.014E-05	6.879E-03
25	5.8752	2.408E-06	1.498E-02	75	0.4823	7.027E-06	6.785E-03	125	0.0396	1.016E-05	7.182E-03
26	5.5886	2.480E-06	1.466E-02	76	0.4587	7.117E-06	6.718E-03	126	0.0377	1.020E-05	7.519E-03
27	5.3161	2.564E-06	1.429E-02	77	0.4364	7.202E-06	6.655E-03	127	0.0358	1.016E-05	7.989E-03
28	5.0568	2.635E-06	1.401E-02	78	0.4151	7.288E-06	6.595E-03	128	0.0341	1.019E-05	8.464E-03
29	4.8102	2.711E-06	1.372E-02	79	0.3948	7.381E-06	6.527E-03	129	0.0324	1.017E-05	9.059E-03
30	4.5756	2.785E-06	1.346E-02	80	0.3756	7.478E-06	6.460E-03	130	0.0308	1.015E-05	9.800E-03
31	4.3524	2.853E-06	1.325E-02	81	0.3573	7.565E-06	6.402E-03	131	0.0293	1.011E-05	1.003E-02
32	4.1402	2.920E-06	1.306E-02	82	0.3398	7.658E-06	6.341E-03	132	0.0279	1.010E-05	1.003E-02
33	3.9382	2.994E-06	1.284E-02	83	0.3233	7.746E-06	6.284E-03	133	0.0265	1.010E-05	1.003E-02
34	3.7462	3.066E-06	1.264E-02	84	0.3075	7.824E-06	6.236E-03	134	0.0252	1.010E-05	1.003E-02
35	3.5635	3.131E-06	1.248E-02	85	0.2925	7.917E-06	6.178E-03	135	0.0240	1.010E-05	1.003E-02
36	3.3897	3.198E-06	1.230E-02	86	0.2782	8.000E-06	6.128E-03	136	0.0228	1.010E-05	1.003E-02
37	3.2244	3.257E-06	1.216E-02	87	0.2647	8.080E-06	6.082E-03	137	0.0217	1.010E-05	1.003E-02
38	3.0671	3.308E-06	1.204E-02	88	0.2518	8.157E-06	6.038E-03	138	0.0207	1.010E-05	1.003E-02
39	2.9175	3.363E-06	1.190E-02	89	0.2395	8.234E-06	5.995E-03	139	0.0197	1.010E-05	1.003E-02
40	2.7752	3.410E-06	1.180E-02	90	0.2278	8.310E-06	5.953E-03	140	0.0187	1.010E-05	1.003E-02
41	2.6399	3.469E-06	1.165E-02	91	0.2167	8.383E-06	5.914E-03	141	0.0178	1.010E-05	1.003E-02
42	2.5111	3.528E-06	1.151E-02	92	0.2061	8.454E-06	5.878E-03	142	0.0169	1.010E-05	1.003E-02
43	2.3887	3.603E-06	1.134E-02	93	0.1961	8.524E-06	5.842E-03	143	0.0161	1.010E-05	1.003E-02
44	2.2722	3.680E-06	1.116E-02	94	0.1865	8.595E-06	5.806E-03	144	0.0153	1.010E-05	1.003E-02
45	2.1613	3.774E-06	1.096E-02	95	0.1774	8.652E-06	5.776E-03	145	0.0146	1.010E-05	1.003E-02
46	2.0559	3.875E-06	1.075E-02	96	0.1688	8.723E-06	5.746E-03	146	0.0139	1.010E-05	1.003E-02
47	1.9557	3.994E-06	1.050E-02	97	0.1605	8.789E-06	5.716E-03	147	0.0132	1.010E-05	1.003E-02
48	1.8603	4.114E-06	1.027E-02	98	0.1527	8.846E-06	5.693E-03	148	0.0125	1.010E-05	1.003E-02
49	1.7696	4.241E-06	1.004E-02	99	0.1453	8.900E-06	5.673E-03	149	0.0119	1.010E-05	1.003E-02
50	1.6833	4.380E-06	9.799E-03	100	0.1382	8.951E-06	5.656E-03	150	0.0113	1.010E-05	1.003E-02

* ENERGY = LOWER BOUNDARY [MEV]
** ERROR X 100 = %

3.3 Lithium-Oxide

The lithium-oxide is covered by thin type 304 stainless steel of 0.3 mm thickness. The density of lithium-oxide bricks contained is 75.5 % of the theoretical density of 2.02 Mg/m^3. The assembly thicknesses are 48 mm, 200 mm and 400 mm and their radius is 314 mm. The homogenized atomic densities in Table 3.3 includes stainless canning. The difference between two types of densities are caused by the use of Li2O blocks in different sizes, ecah having different fraction of stainless steel cover. The figures and numerical tables are given in the same manner as the previous materials.

List of Figures and Tables

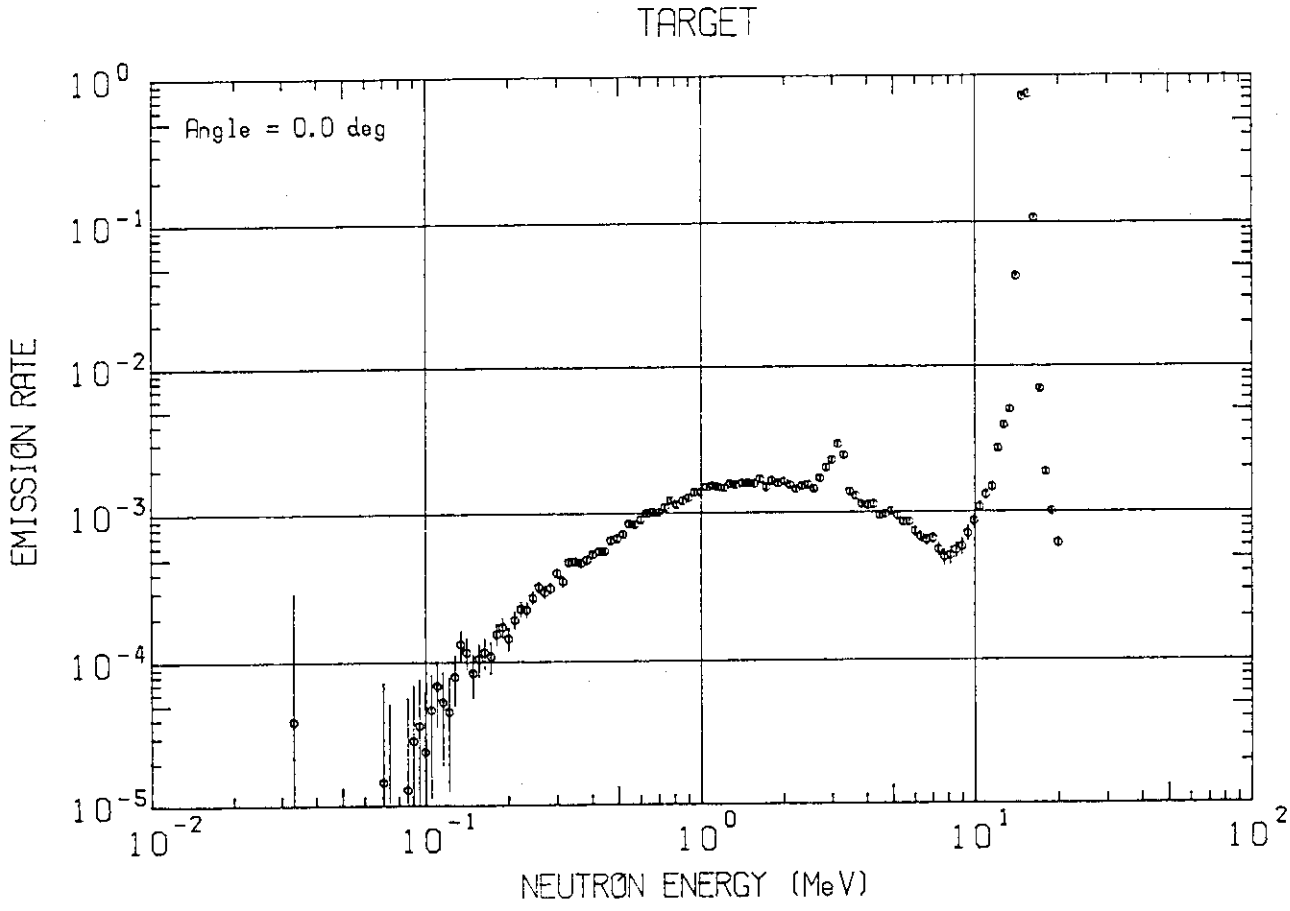
TARGET
Angle = 0.0 deg
EMISSION RATE
NEUTRON ENERGY (MeV)
10^0
10^-1
10^-2
10^-3
10^-4
10^-5
10^-2
10^-1
10^0
10^1
10^2

Fig. 3.3.1

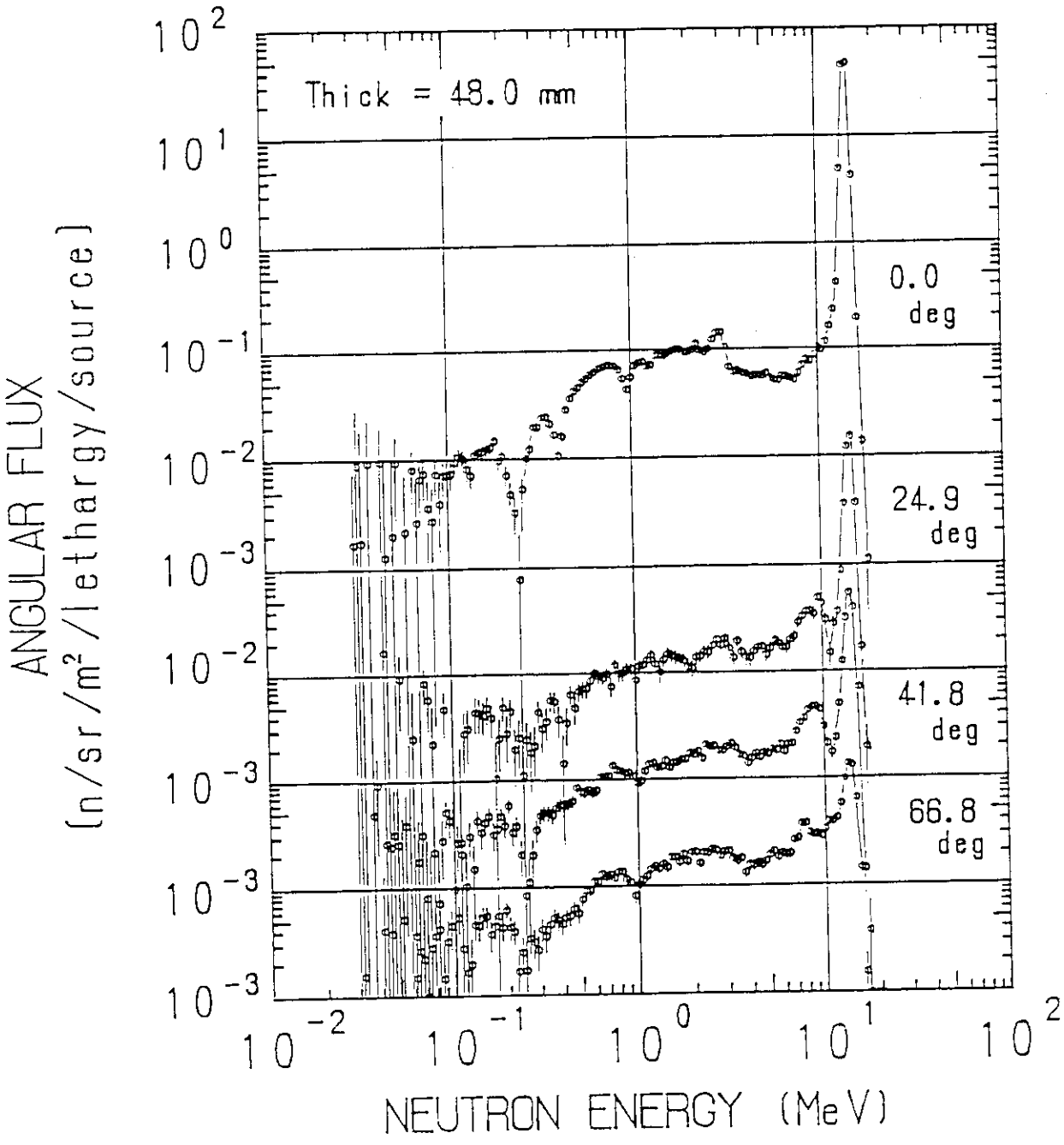
Thick = 48.0 mm
0.0 deg
24.9 deg
41.8 deg
66.8 deg
ANGULAR FLUX
(n/sr/m²/lethargy/source)
NEUTRON ENERGY (MeV)
10²
10¹
10⁰
10⁻¹
10⁻²
10⁻³
10⁻²
10⁻³
10⁻³
10⁻²
10⁻¹
10⁰
10¹
10²

Fig. 3.3.2(a)

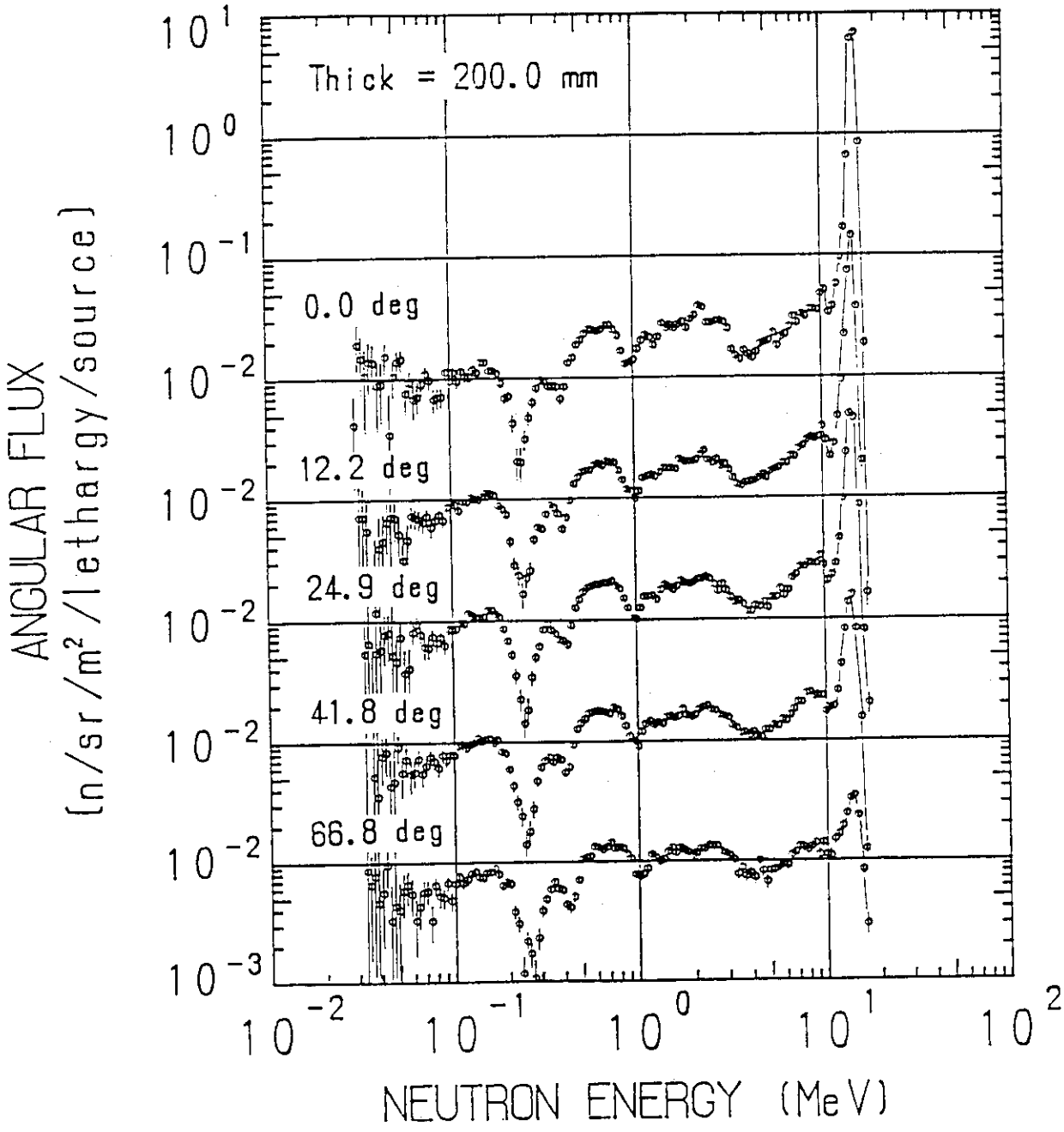
Thick = 200.0 mm
0.0 deg
12.2 deg
24.9 deg
41.8 deg
66.8 deg
ANGULAR FLUX
[n/sr/m²/lethargy/source]
NEUTRON ENERGY (MeV)

Fig. 3.3.2(b)

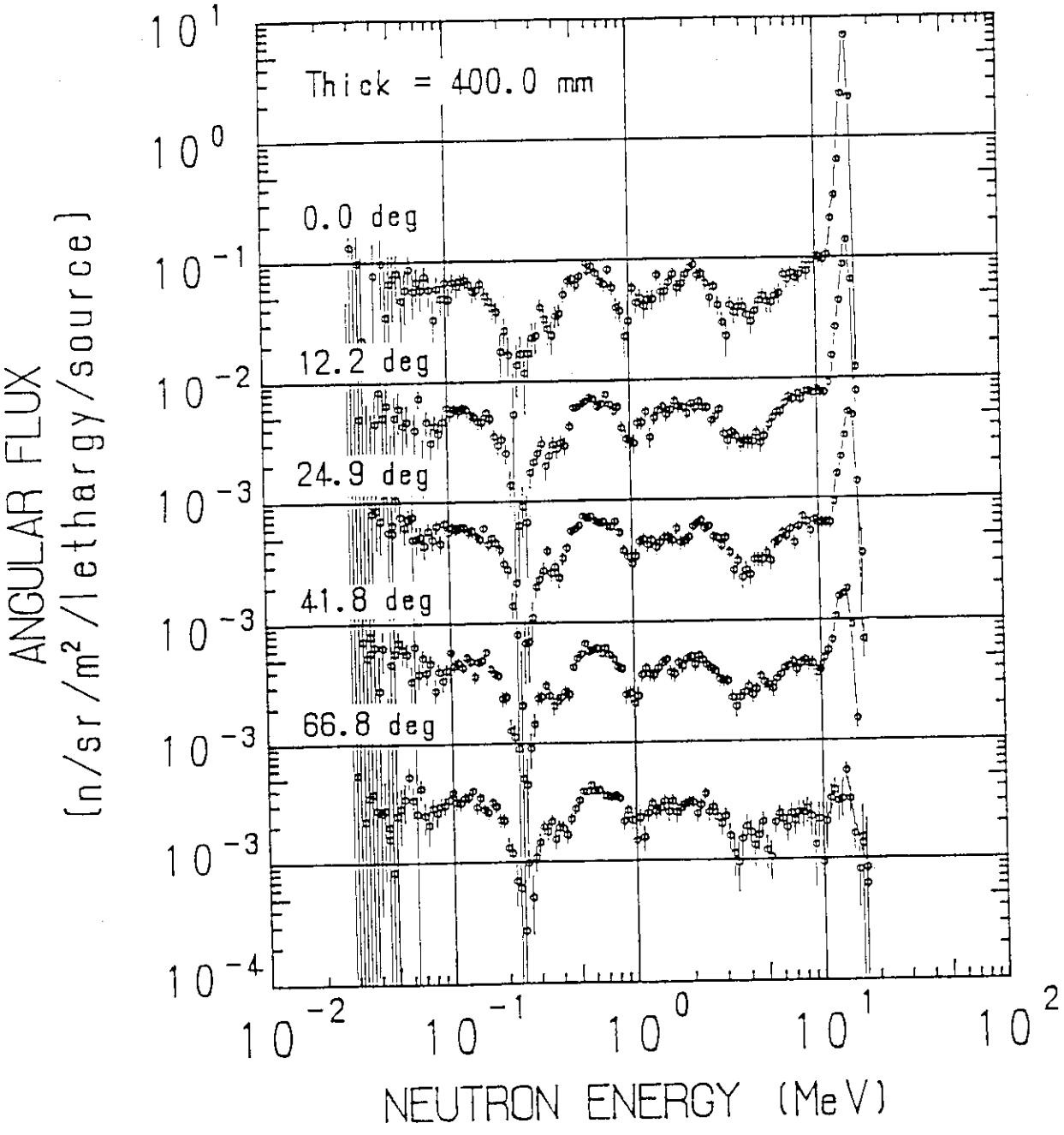
Thick = 400.0 mm
0.0 deg
12.2 deg
24.9 deg
41.8 deg
66.8 deg
ANGULAR FLUX
[n/sr/m²/lethargy/source]
NEUTRON ENERGY (MeV)

Fig. 3.3.2(c)

Table 3.3.1

NEUTRON EMISSION SPECTRUM FROM THE TARGET

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.0116	0.000E+00	0.100E+01	51	0.1417	1.165E-04	0.242E+00	101	1.7259	1.484E-03	0.463E-01
2	0.0122	0.000E+00	0.100E+01	52	0.1459	8.371E-05	0.331E+00	102	1.8144	1.639E-03	0.428E-01
3	0.0129	0.000E+00	0.100E+01	53	0.1506	1.051E-04	0.251E+00	103	1.9074	1.565E-03	0.432E-01
4	0.0135	0.000E+00	0.100E+01	54	0.1646	1.164E-04	0.233E+00	104	2.0052	1.613E-03	0.429E-01
5	0.0142	0.000E+00	0.100E+01	55	0.1730	1.092E-04	0.248E+00	105	2.1080	1.527E-03	0.435E-01
6	0.0149	0.000E+00	0.100E+01	56	0.1819	1.544E-04	0.171E+00	106	2.2161	1.433E-03	0.446E-01
7	0.0157	0.000E+00	0.100E+01	57	0.1912	1.726E-04	0.148E+00	107	2.3297	1.497E-03	0.422E-01
8	0.0165	0.000E+00	0.100E+01	58	0.2010	1.443E-04	0.181E+00	108	2.4491	1.533E-03	0.429E-01
9	0.0173	0.000E+00	0.100E+01	59	0.2113	1.935E-04	0.135E+00	109	2.5747	1.435E-03	0.436E-01
10	0.0182	0.000E+00	0.100E+01	60	0.2222	2.287E-04	0.117E+00	110	2.7067	1.691E-03	0.408E-01
11	0.0192	0.000E+00	0.100E+01	61	0.2336	2.271E-04	0.115E+00	111	2.8455	1.994E-03	0.371E-01
12	0.0202	0.000E+00	0.100E+01	62	0.2456	2.733E-04	0.978E-01	112	2.9914	2.259E-03	0.343E-01
13	0.0212	0.000E+00	0.100E+01	63	0.2581	3.223E-04	0.817E-01	113	3.1447	2.892E-03	0.307E-01
14	0.0223	0.000E+00	0.100E+01	64	0.2714	2.971E-04	0.946E-01	114	3.3060	2.435E-03	0.347E-01
15	0.0234	0.000E+00	0.100E+01	65	0.2853	3.173E-04	0.851E-01	115	3.4755	1.368E-03	0.474E-01
16	0.0246	0.000E+00	0.100E+01	66	0.2999	3.982E-04	0.702E-01	116	3.6537	1.283E-03	0.505E-01
17	0.0259	0.000E+00	0.100E+01	67	0.3153	3.512E-04	0.820E-01	117	3.8410	1.129E-03	0.530E-01
18	0.0272	0.000E+00	0.100E+01	68	0.3314	4.710E-04	0.620E-01	118	4.0379	1.113E-03	0.557E-01
19	0.0286	0.000E+00	0.100E+01	69	0.3485	4.751E-04	0.644E-01	119	4.2450	1.124E-03	0.544E-01
20	0.0301	0.000E+00	0.100E+01	70	0.3663	4.660E-04	0.667E-01	120	4.4626	9.476E-04	0.632E-01
21	0.0316	0.000E+00	0.100E+01	71	0.3851	4.851E-04	0.634E-01	121	4.6914	9.631E-04	0.605E-01
22	0.0332	3.884E-05	0.652E+01	72	0.4048	5.300E-04	0.610E-01	122	4.9319	1.008E-03	0.584E-01
23	0.0349	-2.333E-04	0.108E+01	73	0.4256	5.549E-04	0.553E-01	123	5.1848	9.419E-04	0.622E-01
24	0.0367	-4.077E-04	0.601E+00	74	0.4474	5.584E-04	0.576E-01	124	5.4506	8.514E-04	0.670E-01
25	0.0386	-3.871E-04	0.539E+00	75	0.4703	6.592E-04	0.511E-01	125	5.7301	8.557E-04	0.635E-01
26	0.0406	-2.290E-04	0.823E+00	76	0.4945	6.761E-04	0.531E-01	126	6.0239	7.365E-04	0.741E-01
27	0.0427	-2.269E-04	0.766E+00	77	0.5198	7.240E-04	0.484E-01	127	6.3327	6.777E-04	0.818E-01
28	0.0449	-4.318E-04	0.359E+00	78	0.5465	8.473E-04	0.439E-01	128	6.6574	6.480E-04	0.830E-01
29	0.0472	-3.343E-04	0.449E+00	79	0.5745	8.403E-04	0.436E-01	129	6.9988	6.602E-04	0.836E-01
30	0.0496	-1.029E-04	0.129E+01	80	0.6040	9.064E-04	0.428E-01	130	7.3576	5.577E-04	0.103E+00
31	0.0521	-1.937E-04	0.596E+00	81	0.6349	9.936E-04	0.396E-01	131	7.7348	4.931E-04	0.130E+00
32	0.0548	-1.560E-04	0.660E+00	82	0.6675	1.016E-03	0.395E-01	132	8.1314	5.063E-04	0.128E+00
33	0.0576	-2.433E-04	0.385E+00	83	0.7017	1.004E-03	0.406E-01	133	8.5483	5.539E-04	0.116E+00
34	0.0606	-1.238E-04	0.597E+00	84	0.7377	1.091E-03	0.378E-01	134	8.9866	5.830E-04	0.123E+00
35	0.0637	-1.130E-04	0.655E+00	85	0.7755	1.219E-03	0.358E-01	135	9.4473	7.139E-04	0.112E+00
36	0.0669	-8.490E-05	0.763E+00	86	0.8152	1.134E-03	0.382E-01	136	9.9317	8.623E-04	0.931E-01
37	0.0703	1.469E-05	0.390E+01	87	0.8570	1.210E-03	0.360E-01	137	10.4410	1.075E-03	0.791E-01
38	0.0740	1.355E-07	0.573E+03	88	0.9010	1.263E-03	0.359E-01	138	10.9760	1.301E-03	0.743E-01
39	0.0777	-2.510E-05	0.202E+01	89	0.9472	1.373E-03	0.337E-01	139	11.5390	1.462E-03	0.749E-01
40	0.0817	-2.355E-05	0.205E+01	90	0.9957	1.377E-03	0.349E-01	140	12.1310	2.673E-03	0.452E-01
41	0.0859	1.301E-05	0.333E+01	91	1.0468	1.488E-03	0.331E-01	141	12.7530	3.843E-03	0.363E-01
42	0.0903	2.875E-05	0.140E+01	92	1.1005	1.513E-03	0.329E-01	142	13.4060	4.923E-03	0.321E-01
43	0.0950	3.642E-05	0.110E+01	93	1.1569	1.487E-03	0.334E-01	143	14.0940	4.212E-02	0.102E-01
44	0.0998	2.422E-05	0.156E+01	94	1.2162	1.471E-03	0.345E-01	144	14.8160	7.207E-01	0.244E-02
45	0.1050	4.662E-05	0.753E+00	95	1.2786	1.572E-03	0.332E-01	145	15.5760	7.520E-01	0.235E-02
46	0.1103	6.837E-05	0.484E+00	96	1.3441	1.535E-03	0.344E-01	146	16.3750	1.067E-01	0.613E-02
47	0.1160	3.259E-05	0.631E+00	97	1.4130	1.575E-03	0.340E-01	147	17.2140	6.864E-03	0.238E-01
48	0.1219	4.520E-05	0.720E+00	98	1.4855	1.575E-03	0.338E-01	148	18.0970	1.848E-03	0.450E-01
49	0.1282	7.976E-05	0.382E+00	99	1.5616	1.573E-03	0.351E-01	149	19.0250	1.003E-03	0.605E-01
50	0.1348	1.323E-04	0.228E+00	100	1.6417	1.682E-03	0.339E-01	150	20.0000	6.128E-04	0.765E-01

* ENERGY = CMEV3
** ERROR X 100 = %

Table 3.3.2

RUNNING INTEGRAL OF TARGET SPECTRUM

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.3062	3.064E-05	7.650E-02	51	1.6012	8.462E-02	1.578E-03	101	0.1314	8.649E-02	1.551E-03
2	18.5549	8.091E-05	4.746E-02	52	1.5231	8.470E-02	1.577E-03	102	0.1250	8.649E-02	1.551E-03
3	17.6499	1.732E-04	3.264E-02	53	1.4488	8.477E-02	1.576E-03	103	0.1189	8.649E-02	1.552E-03
4	16.7891	5.164E-04	1.925E-02	54	1.3781	8.485E-02	1.574E-03	104	0.1131	8.650E-02	1.552E-03
5	15.9703	5.849E-03	5.842E-03	55	1.3109	8.493E-02	1.573E-03	105	0.1076	8.650E-02	1.552E-03
6	15.1914	4.345E-02	2.181E-03	56	1.2470	8.501E-02	1.572E-03	106	0.1024	8.650E-02	1.552E-03
7	14.4505	7.948E-02	1.628E-03	57	1.1862	8.508E-02	1.571E-03	107	0.0974	8.650E-02	1.552E-03
8	13.7458	8.159E-02	1.608E-03	58	1.1283	8.516E-02	1.570E-03	108	0.0926	8.651E-02	1.552E-03
9	13.0754	8.184E-02	1.606E-03	59	1.0733	8.523E-02	1.569E-03	109	0.0881	8.651E-02	1.552E-03
10	12.4377	8.203E-02	1.604E-03	60	1.0209	8.531E-02	1.568E-03	110	0.0838	8.651E-02	1.552E-03
11	11.8311	8.216E-02	1.603E-03	61	0.9712	8.538E-02	1.567E-03	111	0.0797	8.651E-02	1.553E-03
12	11.2541	8.224E-02	1.603E-03	62	0.9238	8.544E-02	1.566E-03	112	0.0758	8.650E-02	1.553E-03
13	10.7052	8.230E-02	1.603E-03	63	0.8787	8.551E-02	1.565E-03	113	0.0721	8.651E-02	1.553E-03
14	10.1831	8.235E-02	1.603E-03	64	0.8359	8.557E-02	1.564E-03	114	0.0686	8.651E-02	1.554E-03
15	9.6865	8.240E-02	1.603E-03	65	0.7951	8.562E-02	1.563E-03	115	0.0653	8.650E-02	1.554E-03
16	9.2141	8.243E-02	1.603E-03	66	0.7563	8.569E-02	1.562E-03	116	0.0621	8.650E-02	1.555E-03
17	8.7647	8.246E-02	1.603E-03	67	0.7195	8.574E-02	1.561E-03	117	0.0591	8.649E-02	1.556E-03
18	8.3372	8.249E-02	1.603E-03	68	0.6844	8.579E-02	1.561E-03	118	0.0562	8.648E-02	1.557E-03
19	7.9306	8.252E-02	1.603E-03	69	0.6510	8.584E-02	1.560E-03	119	0.0534	8.647E-02	1.558E-03
20	7.5438	8.254E-02	1.603E-03	70	0.6192	8.589E-02	1.559E-03	120	0.0508	8.646E-02	1.560E-03
21	7.1759	8.257E-02	1.603E-03	71	0.5890	8.594E-02	1.559E-03	121	0.0484	8.645E-02	1.562E-03
22	6.8260	8.260E-02	1.602E-03	72	0.5603	8.598E-02	1.558E-03	122	0.0460	8.644E-02	1.564E-03
23	6.4930	8.263E-02	1.602E-03	73	0.5330	8.602E-02	1.557E-03	123	0.0437	8.642E-02	1.567E-03
24	6.1764	8.267E-02	1.602E-03	74	0.5070	8.606E-02	1.557E-03	124	0.0416	8.640E-02	1.571E-03
25	5.8752	8.270E-02	1.601E-03	75	0.4823	8.609E-02	1.556E-03	125	0.0396	8.639E-02	1.575E-03
26	5.5886	8.275E-02	1.601E-03	76	0.4587	8.612E-02	1.556E-03	126	0.0377	8.637E-02	1.580E-03
27	5.3161	8.279E-02	1.601E-03	77	0.4364	8.615E-02	1.555E-03	127	0.0358	8.635E-02	1.586E-03
28	5.0568	8.284E-02	1.600E-03	78	0.4151	8.618E-02	1.555E-03	128	0.0341	8.634E-02	1.593E-03
29	4.8102	8.289E-02	1.599E-03	79	0.3948	8.621E-02	1.555E-03	129	0.0324	8.634E-02	1.600E-03
30	4.5756	8.294E-02	1.599E-03	80	0.3756	8.623E-02	1.554E-03	130	0.0308	8.634E-02	1.600E-03
31	4.3524	8.298E-02	1.598E-03	81	0.3573	8.625E-02	1.554E-03	131	0.0293	8.634E-02	1.600E-03
32	4.1402	8.304E-02	1.598E-03	82	0.3398	8.628E-02	1.554E-03	132	0.0279	8.634E-02	1.600E-03
33	3.9382	8.309E-02	1.597E-03	83	0.3233	8.630E-02	1.553E-03	133	0.0265	8.634E-02	1.600E-03
34	3.7462	8.315E-02	1.596E-03	84	0.3075	8.632E-02	1.553E-03	134	0.0252	8.634E-02	1.600E-03
35	3.5635	8.321E-02	1.596E-03	85	0.2925	8.634E-02	1.553E-03	135	0.0240	8.634E-02	1.600E-03
36	3.3897	8.328E-02	1.595E-03	86	0.2782	8.635E-02	1.553E-03	136	0.0228	8.634E-02	1.600E-03
37	3.2244	8.341E-02	1.593E-03	87	0.2647	8.637E-02	1.552E-03	137	0.0217	8.634E-02	1.600E-03
38	3.0671	8.355E-02	1.591E-03	88	0.2518	8.638E-02	1.552E-03	138	0.0207	8.634E-02	1.600E-03
39	2.9175	8.366E-02	1.590E-03	89	0.2395	8.640E-02	1.552E-03	139	0.0197	8.634E-02	1.600E-03
40	2.7752	8.376E-02	1.589E-03	90	0.2278	8.641E-02	1.552E-03	140	0.0187	8.634E-02	1.600E-03
41	2.6399	8.385E-02	1.588E-03	91	0.2167	8.642E-02	1.552E-03	141	0.0178	8.634E-02	1.600E-03
42	2.5111	8.392E-02	1.587E-03	92	0.2061	8.643E-02	1.552E-03	142	0.0169	8.634E-02	1.600E-03
43	2.3887	8.400E-02	1.586E-03	93	0.1961	8.644E-02	1.552E-03	143	0.0161	8.634E-02	1.600E-03
44	2.2722	8.407E-02	1.585E-03	94	0.1865	8.645E-02	1.552E-03	144	0.0153	8.634E-02	1.600E-03
45	2.1613	8.414E-02	1.584E-03	95	0.1774	8.645E-02	1.552E-03	145	0.0146	8.634E-02	1.600E-03
46	2.0559	8.422E-02	1.583E-03	96	0.1688	8.646E-02	1.552E-03	146	0.0139	8.634E-02	1.600E-03
47	1.9557	8.430E-02	1.582E-03	97	0.1605	8.647E-02	1.551E-03	147	0.0132	8.634E-02	1.600E-03
48	1.8603	8.438E-02	1.581E-03	98	0.1527	8.647E-02	1.551E-03	148	0.0125	8.634E-02	1.600E-03
49	1.7696	8.446E-02	1.580E-03	99	0.1453	8.648E-02	1.551E-03	149	0.0119	8.634E-02	1.600E-03
50	1.6833	8.453E-02	1.579E-03	100	0.1382	8.648E-02	1.551E-03	150	0.0113	8.634E-02	1.600E-03

* ENERGY = LOWER BOUNDARY [MEV]

** ERROR X 100 = %

Table 3.3.3

ANGULAR FLUX OF LI2O SLAB TOF [THICKNESS=4.8 CM, ANGLE=0.0 DEG]

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.0116	0.000E+00	0.100E+01	51	0.1417	1.099E-06	0.146E+00	101	1.7259	9.942E-06	0.407E-01
2	0.0122	0.000E+00	0.100E+01	52	0.1489	1.152E-06	0.136E+00	102	1.8144	1.000E-05	0.399E-01
3	0.0129	0.000E+00	0.100E+01	53	0.1566	1.182E-06	0.133E+00	103	1.9074	9.329E-06	0.403E-01
4	0.0135	0.000E+00	0.100E+01	54	0.1646	1.242E-06	0.125E+00	104	2.0052	9.362E-06	0.388E-01
5	0.0142	0.000E+00	0.100E+01	55	0.1730	1.286E-06	0.118E+00	105	2.1080	9.858E-06	0.374E-01
6	0.0149	0.000E+00	0.100E+01	56	0.1819	1.483E-06	0.100E+00	106	2.2161	1.122E-05	0.350E-01
7	0.0157	0.000E+00	0.100E+01	57	0.1912	9.544E-07	0.155E+00	107	2.3297	9.695E-06	0.381E-01
8	0.0165	0.000E+00	0.100E+01	58	0.2010	1.056E-06	0.130E+00	103	2.4491	9.233E-06	0.383E-01
9	0.0173	0.000E+00	0.100E+01	59	0.2113	7.032E-07	0.197E+00	109	2.5747	9.993E-06	0.368E-01
10	0.0182	0.000E+00	0.100E+01	60	0.2222	4.701E-07	0.272E+00	110	2.7067	1.225E-05	0.334E-01
11	0.0192	0.000E+00	0.100E+01	61	0.2336	3.191E-07	0.355E+00	111	2.8455	1.422E-05	0.307E-01
12	0.0202	0.000E+00	0.100E+01	62	0.2456	7.832E-08	0.155E+01	112	2.9914	1.426E-05	0.307E-01
13	0.0212	0.000E+00	0.100E+01	63	0.2581	5.226E-07	0.240E+00	113	3.1447	1.040E-05	0.366E-01
14	0.0223	0.000E+00	0.100E+01	64	0.2714	1.000E-06	0.132E+00	114	3.3060	6.733E-06	0.494E-01
15	0.0234	0.000E+00	0.100E+01	65	0.2853	1.224E-06	0.118E+00	115	3.4755	6.003E-06	0.546E-01
16	0.0246	0.000E+00	0.100E+01	66	0.2999	1.951E-06	0.792E-01	116	3.6537	6.153E-06	0.532E-01
17	0.0259	0.000E+00	0.100E+01	67	0.3153	1.954E-06	0.744E-01	117	3.8410	5.850E-06	0.566E-01
18	0.0272	0.000E+00	0.100E+01	68	0.3314	2.394E-06	0.660E-01	118	4.0379	5.726E-06	0.558E-01
19	0.0286	0.000E+00	0.100E+01	69	0.3485	2.437E-06	0.673E-01	119	4.2450	5.417E-06	0.587E-01
20	0.0301	1.687E-07	0.334E+01	70	0.3663	2.087E-06	0.783E-01	120	4.4626	5.574E-06	0.590E-01
21	0.0316	9.924E-07	0.215E+01	71	0.3851	1.661E-06	0.892E-01	121	4.6914	5.621E-06	0.582E-01
22	0.0332	1.728E-07	0.956E+01	72	0.4048	1.055E-06	0.133E+00	122	4.9319	5.545E-06	0.570E-01
23	0.0349	-1.325E-07	0.110E+02	73	0.4256	1.388E-06	0.954E-01	123	5.1848	5.850E-06	0.559E-01
24	0.0367	9.273E-07	0.145E+01	74	0.4474	2.316E-06	0.615E-01	124	5.4506	5.236E-06	0.599E-01
25	0.0386	-9.858E-07	0.126E+01	75	0.4703	3.554E-06	0.523E-01	125	5.7301	5.017E-06	0.654E-01
26	0.0406	-1.061E-06	0.102E+01	76	0.4945	4.163E-06	0.469E-01	126	6.0239	5.019E-06	0.656E-01
27	0.0427	9.434E-07	0.105E+01	77	0.5198	4.495E-06	0.438E-01	127	6.3327	5.537E-06	0.602E-01
28	0.0449	1.265E-07	0.724E+01	78	0.5465	5.052E-06	0.404E-01	128	6.6574	5.393E-06	0.623E-01
29	0.0472	-6.057E-07	0.144E+01	79	0.5745	5.418E-06	0.383E-01	129	6.9988	5.266E-06	0.691E-01
30	0.0496	1.982E-07	0.391E+01	80	0.6040	5.867E-06	0.362E-01	130	7.3576	5.046E-06	0.750E-01
31	0.0521	9.428E-07	0.699E+00	81	0.6349	6.237E-06	0.360E-01	131	7.7348	5.846E-06	0.711E-01
32	0.0548	-9.428E-07	0.656E+00	82	0.6675	6.637E-06	0.339E-01	132	8.1314	6.951E-06	0.643E-01
33	0.0576	2.155E-07	0.224E+01	83	0.7017	6.937E-06	0.338E-01	133	8.5483	7.817E-06	0.626E-01
34	0.0606	-1.452E-07	0.303E+01	84	0.7377	7.165E-06	0.330E-01	134	8.9866	7.556E-06	0.669E-01
35	0.0637	8.034E-07	0.499E+00	85	0.7755	7.125E-06	0.337E-01	135	9.4473	8.658E-06	0.623E-01
36	0.0669	2.635E-07	0.142E+01	86	0.8152	7.010E-06	0.345E-01	136	9.9317	1.016E-05	0.603E-01
37	0.0703	6.630E-07	0.493E+00	87	0.8570	6.456E-06	0.369E-01	137	10.4410	9.547E-06	0.616E-01
38	0.0740	7.369E-07	0.407E+00	88	0.9010	5.369E-06	0.414E-01	138	10.9760	1.144E-05	0.526E-01
39	0.0777	3.591E-07	0.750E+00	89	0.9472	4.245E-06	0.495E-01	139	11.5390	1.581E-05	0.428E-01
40	0.0817	2.710E-07	0.987E+00	90	0.9957	5.536E-06	0.417E-01	140	12.1310	2.284E-05	0.340E-01
41	0.0859	7.254E-07	0.337E+00	91	1.0468	7.068E-06	0.350E-01	141	12.7530	4.099E-05	0.243E-01
42	0.0903	3.882E-07	0.619E+00	92	1.1005	7.537E-06	0.354E-01	142	13.4060	4.877E-04	0.678E-02
43	0.0950	7.029E-07	0.329E+00	93	1.1569	7.684E-06	0.348E-01	143	14.0940	4.521E-03	0.218E-02
44	0.0998	7.189E-07	0.285E+00	94	1.2162	6.957E-06	0.371E-01	144	14.8160	4.702E-03	0.212E-02
45	0.1050	7.288E-07	0.275E+00	95	1.2786	7.165E-06	0.361E-01	145	15.5760	4.220E-04	0.694E-02
46	0.1103	9.425E-07	0.196E+00	96	1.3441	8.733E-06	0.318E-01	146	16.3750	1.391E-05	0.324E-01
47	0.1160	1.061E-06	0.173E+00	97	1.4130	8.774E-06	0.335E-01	147	17.2140	1.363E-06	0.121E+00
48	0.1219	1.012E-06	0.175E+00	98	1.4855	8.580E-06	0.350E-01	148	18.0970	1.115E-07	0.663E+00
49	0.1282	7.995E-07	0.206E+00	99	1.5616	9.169E-06	0.327E-01	149	19.0250	-1.094E-08	0.490E+01
50	0.1348	6.994E-07	0.227E+00	100	1.6417	9.662E-06	0.321E-01	150	20.0000	-2.661E-08	0.142E+01

* ENERGY = (MEV)
** ERROR X 100 = %

Table 3.3.4

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESS=4.2 CM, ANGLE=0.0 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.5062	-1.331E-09	1.000E+02	51	1.6012	5.273E-04	1.420E-03	101	0.1314	5.370E-04	1.400E-03
2	18.5549	-1.878E-09	1.000E+02	52	1.5231	5.277E-04	1.419E-03	102	0.1250	5.371E-04	1.400E-03
3	17.6499	3.698E-09	1.000E+02	53	1.4488	5.282E-04	1.418E-03	103	0.1189	5.371E-04	1.400E-03
4	16.7891	7.184E-08	1.334E-01	54	1.3781	5.286E-04	1.417E-03	104	0.1131	5.372E-04	1.400E-03
5	15.9703	1.017E-06	3.156E-02	55	1.3109	5.290E-04	1.416E-03	105	0.1076	5.372E-04	1.400E-03
6	15.1914	2.212E-05	6.781E-03	56	1.2470	5.294E-04	1.416E-03	106	0.1024	5.373E-04	1.400E-03
7	14.4505	2.572E-04	2.021E-03	57	1.1862	5.297E-04	1.415E-03	107	0.0974	5.373E-04	1.400E-03
8	13.7458	4.833E-04	1.432E-03	58	1.1283	5.301E-04	1.414E-03	108	0.0926	5.373E-04	1.400E-03
9	13.0754	5.077E-04	1.447E-03	59	1.0733	5.305E-04	1.413E-03	109	0.0881	5.373E-04	1.401E-03
10	12.4377	5.097E-04	1.445E-03	60	1.0209	5.308E-04	1.413E-03	110	0.0838	5.374E-04	1.401E-03
11	11.8311	5.109E-04	1.444E-03	61	0.9712	5.311E-04	1.412E-03	111	0.0797	5.374E-04	1.401E-03
12	11.2541	5.116E-04	1.443E-03	62	0.9238	5.313E-04	1.412E-03	112	0.0758	5.374E-04	1.401E-03
13	10.7052	5.122E-04	1.443E-03	63	0.8787	5.316E-04	1.411E-03	113	0.0721	5.375E-04	1.401E-03
14	10.1831	5.127E-04	1.442E-03	64	0.8359	5.319E-04	1.410E-03	114	0.0686	5.375E-04	1.401E-03
15	9.6865	5.132E-04	1.442E-03	65	0.7951	5.323E-04	1.410E-03	115	0.0653	5.375E-04	1.402E-03
16	9.2141	5.136E-04	1.442E-03	66	0.7563	5.326E-04	1.409E-03	116	0.0621	5.375E-04	1.402E-03
17	8.7647	5.140E-04	1.442E-03	67	0.7195	5.330E-04	1.408E-03	117	0.0591	5.375E-04	1.403E-03
18	8.3372	5.144E-04	1.441E-03	68	0.6844	5.333E-04	1.407E-03	118	0.0562	5.375E-04	1.404E-03
19	7.9306	5.148E-04	1.441E-03	69	0.6510	5.337E-04	1.407E-03	119	0.0534	5.375E-04	1.405E-03
20	7.5438	5.150E-04	1.441E-03	70	0.6192	5.340E-04	1.406E-03	120	0.0508	5.375E-04	1.406E-03
21	7.1759	5.153E-04	1.441E-03	71	0.5890	5.343E-04	1.406E-03	121	0.0484	5.376E-04	1.408E-03
22	6.8260	5.156E-04	1.440E-03	72	0.5603	5.345E-04	1.405E-03	122	0.0460	5.375E-04	1.410E-03
23	6.4930	5.156E-04	1.440E-03	73	0.5330	5.348E-04	1.404E-03	123	0.0437	5.375E-04	1.413E-03
24	6.1764	5.161E-04	1.440E-03	74	0.5070	5.350E-04	1.404E-03	124	0.0416	5.376E-04	1.416E-03
25	5.8752	5.164E-04	1.439E-03	75	0.4823	5.352E-04	1.403E-03	125	0.0396	5.375E-04	1.419E-03
26	5.5886	5.166E-04	1.439E-03	76	0.4587	5.354E-04	1.403E-03	126	0.0377	5.375E-04	1.424E-03
27	5.3161	5.169E-04	1.438E-03	77	0.4364	5.356E-04	1.403E-03	127	0.0358	5.375E-04	1.430E-03
28	5.0568	5.172E-04	1.438E-03	78	0.4151	5.356E-04	1.403E-03	128	0.0341	5.375E-04	1.436E-03
29	4.8102	5.174E-04	1.438E-03	79	0.3948	5.357E-04	1.402E-03	129	0.0324	5.375E-04	1.444E-03
30	4.5756	5.177E-04	1.437E-03	80	0.3756	5.358E-04	1.402E-03	130	0.0308	5.376E-04	1.455E-03
31	4.3524	5.180E-04	1.437E-03	81	0.3573	5.359E-04	1.402E-03	131	0.0293	5.376E-04	1.456E-03
32	4.1402	5.183E-04	1.436E-03	82	0.3398	5.360E-04	1.402E-03	132	0.0279	5.376E-04	1.456E-03
33	3.9382	5.186E-04	1.436E-03	83	0.3233	5.361E-04	1.402E-03	133	0.0265	5.376E-04	1.456E-03
34	3.7462	5.188E-04	1.435E-03	84	0.3075	5.362E-04	1.401E-03	134	0.0252	5.376E-04	1.456E-03
35	3.5635	5.192E-04	1.435E-03	85	0.2925	5.363E-04	1.401E-03	135	0.0240	5.376E-04	1.456E-03
36	3.3897	5.195E-04	1.434E-03	86	0.2782	5.364E-04	1.401E-03	136	0.0228	5.376E-04	1.456E-03
37	3.2244	5.198E-04	1.434E-03	87	0.2647	5.364E-04	1.401E-03	137	0.0217	5.376E-04	1.456E-03
38	3.0671	5.203E-04	1.433E-03	88	0.2518	5.364E-04	1.401E-03	138	0.0207	5.376E-04	1.456E-03
39	2.9175	5.210E-04	1.431E-03	89	0.2395	5.364E-04	1.401E-03	139	0.0197	5.376E-04	1.456E-03
40	2.7752	5.217E-04	1.430E-03	90	0.2278	5.365E-04	1.401E-03	140	0.0187	5.376E-04	1.456E-03
41	2.6399	5.223E-04	1.429E-03	91	0.2167	5.365E-04	1.401E-03	141	0.0178	5.376E-04	1.456E-03
42	2.5111	5.228E-04	1.428E-03	92	0.2061	5.365E-04	1.401E-03	142	0.0169	5.376E-04	1.456E-03
43	2.3887	5.233E-04	1.427E-03	93	0.1961	5.366E-04	1.401E-03	143	0.0161	5.376E-04	1.456E-03
44	2.2722	5.238E-04	1.426E-03	94	0.1865	5.366E-04	1.401E-03	144	0.0153	5.376E-04	1.456E-03
45	2.1613	5.244E-04	1.425E-03	95	0.1774	5.367E-04	1.401E-03	145	0.0146	5.376E-04	1.456E-03
46	2.0559	5.248E-04	1.424E-03	96	0.1688	5.368E-04	1.401E-03	146	0.0139	5.376E-04	1.456E-03
47	1.9557	5.253E-04	1.424E-03	97	0.1605	5.368E-04	1.401E-03	147	0.0132	5.376E-04	1.456E-03
48	1.8603	5.258E-04	1.423E-03	98	0.1527	5.369E-04	1.401E-03	148	0.0125	5.376E-04	1.456E-03
49	1.7696	5.263E-04	1.422E-03	99	0.1453	5.369E-04	1.400E-03	149	0.0119	5.376E-04	1.456E-03
50	1.6833	5.268E-04	1.421E-03	100	0.1382	5.370E-04	1.400E-03	150	0.0113	5.376E-04	1.456E-03

* ENERGY = LOWER BOUNDARY [MEV]

** ERROR X 100 = %

Table 3.3.5

ANGULAR FLUX OF LI2O SLAB TOP [THICKNESS=4.8 CM, ANGLE=24.9 DEG]

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.0110	0.000E+00	0.100E+01	51	0.1417	4.337E-07	0.331E+00	101	1.7259	1.339E-06	0.150E+00
2	0.0122	0.000E+00	0.100E+01	52	0.1489	4.104E-07	0.332E+00	102	1.8144	1.280E-06	0.166E+00
3	0.0129	0.000E+00	0.100E+01	53	0.1566	4.801E-07	0.273E+00	103	1.9074	1.119E-06	0.172E+00
4	0.0135	0.000E+00	0.100E+01	54	0.1646	3.887E-07	0.335E+00	104	2.0052	1.089E-06	0.168E+00
5	0.0142	0.000E+00	0.100E+01	55	0.1730	1.037E-07	0.126E+01	105	2.1080	1.393E-06	0.138E+00
6	0.0149	0.000E+00	0.100E+01	56	0.1819	2.506E-07	0.501E+00	106	2.2161	1.426E-06	0.137E+00
7	0.0157	0.000E+00	0.100E+01	57	0.1912	4.910E-07	0.246E+00	107	2.3297	1.580E-06	0.134E+00
8	0.0165	0.000E+00	0.100E+01	58	0.2010	2.781E-07	0.457E+00	108	2.4491	1.556E-06	0.129E+00
9	0.0173	0.000E+00	0.100E+01	59	0.2113	4.466E-07	0.283E+00	109	2.5747	1.794E-06	0.110E+00
10	0.0182	0.000E+00	0.100E+01	60	0.2222	1.957E-07	0.549E+00	110	2.7067	2.052E-06	0.982E-01
11	0.0192	0.000E+00	0.100E+01	61	0.2336	2.513E-07	0.478E+00	111	2.8455	1.815E-06	0.111E+00
12	0.0202	0.000E+00	0.100E+01	62	0.2456	1.098E-07	0.106E+01	112	2.9914	2.101E-06	0.980E-01
13	0.0212	0.000E+00	0.100E+01	63	0.2581	2.396E-07	0.442E+00	113	3.1447	1.692E-06	0.129E+00
14	0.0223	0.000E+00	0.100E+01	64	0.2714	1.824E-07	0.576E+00	114	3.3060	1.374E-06	0.142E+00
15	0.0234	0.000E+00	0.100E+01	65	0.2853	2.091E-07	0.519E+00	115	3.4755	1.964E-06	0.113E+00
16	0.0246	0.000E+00	0.100E+01	66	0.2999	4.378E-07	0.251E+00	116	3.6537	1.555E-06	0.123E+00
17	0.0259	0.000E+00	0.100E+01	67	0.3153	3.049E-07	0.390E+00	117	3.8410	1.379E-06	0.158E+00
18	0.0272	0.000E+00	0.100E+01	68	0.3314	3.567E-07	0.328E+00	118	4.0379	1.356E-06	0.165E+00
19	0.0286	0.000E+00	0.100E+01	69	0.3485	5.598E-07	0.201E+00	119	4.2450	1.584E-06	0.137E+00
20	0.0301	0.000E+00	0.100E+01	70	0.3663	5.435E-07	0.219E+00	120	4.4626	1.717E-06	0.125E+00
21	0.0316	-2.239E-06	0.765E+00	71	0.3851	3.722E-07	0.312E+00	121	4.6914	1.731E-06	0.125E+00
22	0.0332	-2.308E-06	0.731E+00	72	0.4048	1.422E-07	0.826E+00	122	4.9319	1.444E-06	0.141E+00
23	0.0349	-4.502E-06	0.336E+00	73	0.4256	3.431E-07	0.373E+00	123	5.1848	1.671E-06	0.127E+00
24	0.0367	-2.052E-06	0.645E+00	74	0.4474	6.269E-07	0.208E+00	124	5.4506	1.978E-06	0.117E+00
25	0.0386	-1.001E-06	0.114E+01	75	0.4703	4.704E-07	0.293E+00	125	5.7301	1.854E-06	0.132E+00
26	0.0406	-3.327E-07	0.236E+01	76	0.4945	6.739E-07	0.190E+00	126	6.0239	1.703E-06	0.147E+00
27	0.0427	1.665E-06	0.556E+00	77	0.5198	7.126E-07	0.179E+00	127	6.3327	1.709E-06	0.142E+00
28	0.0449	-6.193E-07	0.112E+01	78	0.5465	7.222E-07	0.196E+00	128	6.6574	2.037E-06	0.127E+00
29	0.0472	-2.223E-07	0.358E+01	79	0.5745	8.569E-07	0.159E+00	129	6.9988	2.160E-06	0.135E+00
30	0.0496	-8.051E-07	0.942E+00	80	0.6040	1.000E-06	0.129E+00	130	7.3576	2.924E-06	0.112E+00
31	0.0521	9.238E-07	0.660E+00	81	0.6349	9.295E-07	0.153E+00	131	7.7348	3.326E-06	0.109E+00
32	0.0548	-5.869E-07	0.100E+01	82	0.6675	8.987E-07	0.148E+00	132	8.1314	3.650E-06	0.103E+00
33	0.0576	-2.339E-07	0.210E+01	83	0.7017	9.829E-07	0.144E+00	133	8.5483	3.729E-06	0.974E-01
34	0.0606	2.521E-07	0.174E+01	84	0.7377	7.464E-07	0.197E+00	134	8.9866	3.464E-06	0.121E+00
35	0.0637	-2.333E-07	0.166E+01	85	0.7755	1.192E-06	0.122E+00	135	9.4473	4.928E-06	0.906E-01
36	0.0669	-3.129E-07	0.121E+01	86	0.8152	9.816E-07	0.156E+00	136	9.9317	4.366E-06	0.104E+00
37	0.0703	2.375E-07	0.351E+00	87	0.8570	9.979E-07	0.156E+00	137	10.4410	3.074E-06	0.129E+00
38	0.0740	5.869E-07	0.483E+00	88	0.9010	1.094E-06	0.143E+00	138	10.9760	1.485E-06	0.248E+00
39	0.0777	2.265E-07	0.119E+01	89	0.9472	1.094E-06	0.140E+00	139	11.5390	2.836E-06	0.142E+00
40	0.0817	-1.911E-07	0.130E+01	90	0.9957	8.518E-07	0.164E+00	140	12.1310	3.650E-06	0.106E+00
41	0.0859	-7.381E-08	0.313E+01	91	1.0468	1.161E-06	0.135E+00	141	12.7530	8.771E-06	0.600E-01
42	0.0903	4.767E-07	0.441E+00	92	1.1005	1.201E-06	0.149E+00	142	13.4060	3.585E-05	0.274E-01
43	0.0950	-1.274E-07	0.164E+01	93	1.1569	1.323E-06	0.130E+00	143	14.0940	1.214E-04	0.144E-01
44	0.0998	-2.533E-08	0.703E+01	94	1.2162	1.477E-06	0.126E+00	144	14.8160	1.517E-04	0.128E-01
45	0.1050	-3.093E-08	0.583E+01	95	1.2786	1.205E-06	0.152E+00	145	15.5760	3.673E-05	0.256E-01
46	0.1103	2.648E-08	0.662E+01	96	1.3441	1.002E-06	0.197E+00	146	16.3750	1.694E-06	0.122E+00
47	0.1160	2.803E-07	0.567E+00	97	1.4130	1.320E-06	0.143E+00	147	17.2140	1.930E-07	0.565E+00
48	0.1219	3.299E-07	0.520E+00	98	1.4855	1.516E-06	0.134E+00	148	18.0970	2.130E-07	0.457E+00
49	0.1282	-1.810E-08	0.671E+01	99	1.5616	1.446E-06	0.135E+00	149	19.0250	1.294E-07	0.472E+00
50	0.1347	4.416E-07	0.349E+00	100	1.6417	1.402E-06	0.150E+00	150	20.0000	6.947E-08	0.868E+00

* ENERGY = [MEV]

** ERROR X 100 = %

Table 3.3.6

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESS=4.2 CM, ANGLE=24.9 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.5062	3.473E-09	1.000E+02	51	1.6012	2.213E-05	7.868E-03	101	0.1314	2.388E-05	7.599E-03
2	18.5549	9.943E-09	1.000E+02	52	1.5231	2.223E-05	7.855E-03	102	0.1250	2.387E-05	7.607E-03
3	17.6499	2.059E-08	3.149E-01	53	1.4488	2.230E-05	7.842E-03	103	0.1189	2.389E-05	7.609E-03
4	16.7891	3.024E-08	2.801E-01	54	1.3781	2.237E-05	7.830E-03	104	0.1131	2.390E-05	7.612E-03
5	15.9703	1.149E-07	1.161E-01	55	1.3109	2.242E-05	7.825E-03	105	0.1076	2.391E-05	7.620E-03
6	15.1914	1.951E-06	2.507E-02	56	1.2470	2.248E-05	7.815E-03	106	0.1024	2.390E-05	7.630E-03
7	14.4505	9.536E-06	1.141E-02	57	1.1862	2.255E-05	7.800E-03	107	0.0974	2.390E-05	7.643E-03
8	13.7453	1.561E-05	8.952E-03	58	1.1283	2.262E-05	7.786E-03	108	0.0926	2.390E-05	7.657E-03
9	13.0754	1.740E-05	8.511E-03	59	1.0733	2.268E-05	7.776E-03	109	0.0881	2.392E-05	7.662E-03
10	12.4377	1.784E-05	8.431E-03	60	1.0209	2.274E-05	7.764E-03	110	0.0838	2.392E-05	7.678E-03
11	11.8311	1.802E-05	8.415E-03	61	0.9712	2.278E-05	7.757E-03	111	0.0797	2.391E-05	7.699E-03
12	11.2541	1.816E-05	8.422E-03	62	0.9238	2.283E-05	7.746E-03	112	0.0758	2.392E-05	7.716E-03
13	10.7052	1.824E-05	8.449E-03	63	0.8787	2.289E-05	7.735E-03	113	0.0721	2.395E-05	7.729E-03
14	10.1831	1.839E-05	8.447E-03	64	0.8359	2.294E-05	7.725E-03	114	0.0686	2.399E-05	7.740E-03
15	9.6865	1.861E-05	8.437E-03	65	0.7951	2.299E-05	7.716E-03	115	0.0653	2.397E-05	7.785E-03
16	9.2141	1.886E-05	8.411E-03	66	0.7563	2.305E-05	7.702E-03	116	0.0621	2.396E-05	7.831E-03
17	8.7647	1.903E-05	8.407E-03	67	0.7195	2.308E-05	7.696E-03	117	0.0591	2.397E-05	7.880E-03
18	8.3372	1.922E-05	8.379E-03	68	0.6844	2.313E-05	7.686E-03	118	0.0562	2.396E-05	7.950E-03
19	7.9306	1.940E-05	8.356E-03	69	0.6510	2.318E-05	7.677E-03	119	0.0534	2.393E-05	8.053E-03
20	7.5438	1.956E-05	8.337E-03	70	0.6192	2.322E-05	7.668E-03	120	0.0508	2.398E-05	8.138E-03
21	7.1759	1.971E-05	8.316E-03	71	0.5890	2.327E-05	7.656E-03	121	0.0484	2.394E-05	8.304E-03
22	6.8260	1.982E-05	8.304E-03	72	0.5603	2.332E-05	7.648E-03	122	0.0460	2.393E-05	8.473E-03
23	6.4930	1.992E-05	8.287E-03	73	0.5330	2.335E-05	7.642E-03	123	0.0437	2.389E-05	8.703E-03
24	6.1764	2.001E-05	8.274E-03	74	0.5070	2.339E-05	7.635E-03	124	0.0416	2.397E-05	8.885E-03
25	5.8752	2.009E-05	8.262E-03	75	0.4823	2.342E-05	7.629E-03	125	0.0396	2.395E-05	9.182E-03
26	5.5886	2.013E-05	8.246E-03	76	0.4587	2.345E-05	7.627E-03	126	0.0377	2.390E-05	9.503E-03
27	5.3161	2.022E-05	8.226E-03	77	0.4364	2.348E-05	7.622E-03	127	0.0358	2.380E-05	9.943E-03
28	5.0568	2.037E-05	8.209E-03	78	0.4151	2.349E-05	7.621E-03	128	0.0341	2.357E-05	1.054E-02
29	4.8102	2.044E-05	8.195E-03	79	0.3948	2.350E-05	7.623E-03	129	0.0324	2.346E-05	1.113E-02
30	4.5756	2.052E-05	8.177E-03	80	0.3756	2.352E-05	7.621E-03	130	0.0308	2.335E-05	1.182E-02
31	4.3524	2.061E-05	8.160E-03	81	0.3573	2.355E-05	7.616E-03	131	0.0293	2.335E-05	1.182E-02
32	4.1402	2.069E-05	8.146E-03	82	0.3398	2.358E-05	7.611E-03	132	0.0279	2.335E-05	1.182E-02
33	3.9383	2.076E-05	8.137E-03	83	0.3233	2.359E-05	7.609E-03	133	0.0265	2.335E-05	1.182E-02
34	3.7462	2.083E-05	8.127E-03	84	0.3075	2.361E-05	7.609E-03	134	0.0252	2.335E-05	1.182E-02
35	3.5635	2.090E-05	8.109E-03	85	0.2925	2.363E-05	7.605E-03	135	0.0240	2.335E-05	1.182E-02
36	3.3897	2.100E-05	8.089E-03	86	0.2782	2.364E-05	7.605E-03	136	0.0228	2.335E-05	1.182E-02
37	3.2244	2.107E-05	8.076E-03	87	0.2647	2.365E-05	7.605E-03	137	0.0217	2.335E-05	1.182E-02
38	3.0671	2.116E-05	8.060E-03	88	0.2518	2.366E-05	7.605E-03	138	0.0207	2.335E-05	1.182E-02
39	2.9175	2.126E-05	8.035E-03	89	0.2395	2.367E-05	7.607E-03	139	0.0197	2.335E-05	1.182E-02
40	2.7752	2.135E-05	8.015E-03	90	0.2278	2.368E-05	7.607E-03	140	0.0187	2.335E-05	1.182E-02
41	2.6399	2.145E-05	7.990E-03	91	0.2167	2.369E-05	7.608E-03	141	0.0178	2.335E-05	1.182E-02
42	2.5111	2.154E-05	7.970E-03	92	0.2061	2.371E-05	7.605E-03	142	0.0169	2.335E-05	1.182E-02
43	2.3887	2.162E-05	7.955E-03	93	0.1961	2.373E-05	7.605E-03	143	0.0161	2.335E-05	1.182E-02
44	2.2722	2.170E-05	7.941E-03	94	0.1865	2.375E-05	7.602E-03	144	0.0153	2.335E-05	1.182E-02
45	2.1613	2.177E-05	7.928E-03	95	0.1774	2.376E-05	7.602E-03	145	0.0146	2.335E-05	1.182E-02
46	2.0559	2.184E-05	7.915E-03	96	0.1688	2.377E-05	7.606E-03	146	0.0139	2.335E-05	1.182E-02
47	1.9557	2.190E-05	7.906E-03	97	0.1605	2.379E-05	7.604E-03	147	0.0132	2.335E-05	1.182E-02
48	1.8603	2.195E-05	7.898E-03	98	0.1527	2.381E-05	7.602E-03	148	0.0125	2.335E-05	1.182E-02
49	1.7696	2.202E-05	7.890E-03	99	0.1453	2.383E-05	7.600E-03	149	0.0119	2.335E-05	1.182E-02
50	1.6833	2.208E-05	7.879E-03	100	0.1382	2.385E-05	7.599E-03	150	0.0113	2.335E-05	1.182E-02

* ENERGY = LOWER BOUNDARY [MEV]
** ERROR X 100 = %

Table 3.3.7

ANGULAR FLUX OF LI2O SLAB TOF [THICKNESS=4.8 CM, ANGLE=41.2 DEG]

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.0116	0.000E+00	0.100E+01	51	0.1417	3.259E-07	0.282E+00	101	1.7259	1.523E-06	0.937E-01
2	0.0122	0.000E+00	0.100E+01	52	0.1489	3.990E-07	0.223E+00	102	1.8144	1.527E-06	0.924E-01
3	0.0129	0.000E+00	0.100E+01	53	0.1566	4.587E-07	0.185E+00	103	1.9074	1.743E-06	0.774E-01
4	0.0135	0.000E+00	0.100E+01	54	0.1646	3.090E-07	0.276E+00	104	2.0052	1.672E-06	0.845E-01
5	0.0142	0.000E+00	0.100E+01	55	0.1730	3.449E-07	0.245E+00	105	2.1080	1.810E-06	0.775E-01
6	0.0149	0.000E+00	0.100E+01	56	0.1819	4.521E-07	0.181E+00	106	2.2161	1.539E-06	0.919E-01
7	0.0157	0.000E+00	0.100E+01	57	0.1912	3.714E-07	0.215E+00	107	2.3297	2.098E-06	0.693E-01
8	0.0165	0.000E+00	0.100E+01	58	0.2010	5.676E-07	0.136E+00	108	2.4491	1.968E-06	0.706E-01
9	0.0173	0.000E+00	0.100E+01	59	0.2113	3.213E-07	0.231E+00	109	2.5747	2.023E-06	0.687E-01
10	0.0182	0.000E+00	0.100E+01	60	0.2222	3.680E-07	0.200E+00	110	2.7067	1.836E-06	0.755E-01
11	0.0192	0.000E+00	0.100E+01	61	0.2336	2.003E-07	0.352E+00	111	2.8455	1.840E-06	0.756E-01
12	0.0202	0.000E+00	0.100E+01	62	0.2456	8.398E-08	0.854E+00	112	2.9914	1.992E-06	0.708E-01
13	0.0212	0.000E+00	0.100E+01	63	0.2581	1.106E-07	0.645E+00	113	3.1447	2.136E-06	0.612E-01
14	0.0223	0.000E+00	0.100E+01	64	0.2714	1.924E-07	0.366E+00	114	3.3060	1.941E-06	0.636E-01
15	0.0234	0.000E+00	0.100E+01	65	0.2853	3.388E-07	0.218E+00	115	3.4755	1.650E-06	0.785E-01
16	0.0246	0.000E+00	0.100E+01	66	0.2999	4.553E-07	0.160E+00	116	3.6537	1.607E-06	0.764E-01
17	0.0259	0.000E+00	0.100E+01	67	0.3153	4.830E-07	0.154E+00	117	3.8410	1.365E-06	0.800E-01
18	0.0272	0.000E+00	0.100E+01	68	0.3314	4.800E-07	0.154E+00	118	4.0379	1.535E-06	0.765E-01
19	0.0286	0.000E+00	0.100E+01	69	0.3485	4.558E-07	0.156E+00	119	4.2450	1.714E-06	0.699E-01
20	0.0301	0.000E+00	0.100E+01	70	0.3663	5.374E-07	0.139E+00	120	4.4626	1.563E-06	0.786E-01
21	0.0316	-3.124E-07	0.327E+01	71	0.3851	5.728E-07	0.136E+00	121	4.6914	1.746E-06	0.713E-01
22	0.0332	-1.003E-06	0.104E+01	72	0.4048	5.601E-07	0.142E+00	122	4.9319	1.669E-06	0.757E-01
23	0.0349	-3.239E-07	0.277E+01	73	0.4256	5.873E-07	0.135E+00	123	5.1848	1.874E-06	0.765E-01
24	0.0367	4.810E-07	0.173E+01	74	0.4474	6.187E-07	0.128E+00	124	5.4506	1.811E-06	0.857E-01
25	0.0386	9.246E-07	0.772E+00	75	0.4703	8.319E-07	0.979E-01	125	5.7301	2.067E-06	0.723E-01
26	0.0406	-2.572E-07	0.253E+01	76	0.4945	7.562E-07	0.110E+00	126	6.0239	1.760E-06	0.856E-01
27	0.0427	2.616E-07	0.237E+01	77	0.5198	7.469E-07	0.113E+00	127	6.3327	2.070E-06	0.796E-01
28	0.0449	2.419E-07	0.229E+01	78	0.5465	7.916E-07	0.104E+00	128	6.6574	2.097E-06	0.831E-01
29	0.0472	3.165E-07	0.159E+01	79	0.5745	7.378E-07	0.112E+00	129	6.9988	2.707E-06	0.676E-01
30	0.0496	2.364E-07	0.177E+01	80	0.6040	7.843E-07	0.112E+00	130	7.3576	3.274E-06	0.606E-01
31	0.0521	5.197E-08	0.755E+01	81	0.6349	1.052E-06	0.853E-01	131	7.7348	3.650E-06	0.592E-01
32	0.0548	3.836E-07	0.903E+00	82	0.6675	1.071E-06	0.839E-01	132	8.1314	4.351E-06	0.545E-01
33	0.0576	-4.396E-07	0.703E+00	83	0.7017	1.085E-06	0.809E-01	133	8.5483	4.621E-06	0.521E-01
34	0.0606	1.495E-08	0.181E+02	84	0.7377	1.349E-06	0.645E-01	134	8.9866	4.666E-06	0.556E-01
35	0.0637	1.763E-07	0.133E+01	85	0.7755	1.220E-06	0.784E-01	135	9.4473	4.311E-06	0.590E-01
36	0.0669	3.130E-07	0.881E+00	86	0.8152	1.186E-06	0.831E-01	136	9.9317	3.028E-06	0.778E-01
37	0.0703	6.143E-08	0.241E+01	87	0.8570	1.130E-06	0.855E-01	137	10.4410	2.092E-06	0.107E+00
38	0.0740	2.802E-08	0.668E+01	88	0.9010	1.152E-06	0.836E-01	138	10.9760	1.717E-06	0.125E+00
39	0.0777	2.156E-07	0.799E+00	89	0.9472	1.060E-06	0.941E-01	139	11.5390	2.384E-06	0.960E-01
40	0.0817	7.218E-08	0.212E+01	90	0.9957	9.085E-07	0.112E+00	140	12.1310	4.896E-06	0.570E-01
41	0.0859	2.749E-07	0.549E+00	91	1.0468	9.545E-07	0.114E+00	141	12.7530	1.239E-05	0.306E-01
42	0.0903	5.030E-07	0.262E+00	92	1.1005	1.181E-06	0.926E-01	142	13.4060	3.217E-05	0.179E-01
43	0.0950	4.206E-07	0.291E+00	93	1.1569	1.388E-06	0.796E-01	143	14.0940	5.503E-05	0.132E-01
44	0.0998	9.645E-08	0.127E+01	94	1.2162	1.411E-06	0.833E-01	144	14.8160	3.959E-05	0.154E-01
45	0.1050	2.616E-07	0.440E+00	95	1.2786	1.274E-06	0.915E-01	145	15.5760	6.967E-06	0.363E-01
46	0.1103	2.032E-07	0.528E+00	96	1.3441	1.304E-06	0.924E-01	146	16.3750	1.383E-07	0.407E+00
47	0.1160	1.030E-07	0.103E+01	97	1.4130	1.497E-06	0.836E-01	147	17.2140	3.731E-03	0.880E+00
48	0.1219	2.994E-07	0.339E+00	98	1.4855	1.263E-06	0.104E+00	148	18.0970	4.599E-08	0.711E+00
49	0.1282	1.481E-07	0.642E+00	99	1.5616	1.401E-06	0.953E-01	149	19.0250	3.767E-08	0.947E+00
50	0.1348	4.182E-07	0.221E+00	100	1.6417	1.437E-06	0.940E-01	150	20.0000	7.006E-08	0.310E+00

* ENERGY = [MEV]
** ERROR X 100 = %

Table 3.3.8

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESS=4.8 CM, ANGLE=41.8 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.5062	3.503E-09	1.000E+02	51	1.6012	1.199E-05	6.791E-03	101	0.1314	1.387E-05	6.313E-03
2	18.5549	5.367E-09	1.000E+02	52	1.5231	1.206E-05	6.774E-03	102	0.1250	1.387E-05	6.319E-03
3	17.6499	7.686E-09	1.000E+02	53	1.4488	1.212E-05	6.760E-03	103	0.1189	1.389E-05	6.323E-03
4	16.7891	9.552E-09	1.000E+02	54	1.3781	1.220E-05	6.738E-03	104	0.1131	1.389E-05	6.332E-03
5	15.9703	1.647E-08	2.551E-01	55	1.3109	1.226E-05	6.721E-03	105	0.1076	1.390E-05	6.339E-03
6	15.1914	3.648E-07	3.650E-02	56	1.2470	1.233E-05	6.703E-03	106	0.1024	1.392E-05	6.347E-03
7	14.4505	2.344E-06	1.423E-02	57	1.1862	1.240E-05	6.681E-03	107	0.0974	1.392E-05	6.360E-03
8	13.7453	5.095E-06	9.696E-03	58	1.1283	1.247E-05	6.659E-03	108	0.0926	1.394E-05	6.365E-03
9	13.0754	6.704E-06	8.522E-03	59	1.0733	1.252E-05	6.642E-03	109	0.0881	1.397E-05	6.371E-03
10	12.4377	7.323E-06	8.225E-03	60	1.0209	1.257E-05	6.631E-03	110	0.0838	1.398E-05	6.388E-03
11	11.8311	7.568E-06	8.169E-03	61	0.9712	1.262E-05	6.619E-03	111	0.0797	1.399E-05	6.409E-03
12	11.2541	7.687E-06	8.179E-03	62	0.9238	1.267E-05	6.603E-03	112	0.0758	1.400E-05	6.434E-03
13	10.7052	7.773E-06	8.206E-03	63	0.8787	1.273E-05	6.584E-03	113	0.0721	1.400E-05	6.468E-03
14	10.1831	7.837E-06	8.221E-03	64	0.8359	1.279E-05	6.566E-03	114	0.0686	1.400E-05	6.504E-03
15	9.6865	8.029E-06	8.193E-03	65	0.7951	1.284E-05	6.547E-03	115	0.0653	1.402E-05	6.541E-03
16	9.2141	8.245E-06	8.132E-03	66	0.7563	1.291E-05	6.527E-03	116	0.0621	1.403E-05	6.595E-03
17	8.7647	8.478E-06	8.054E-03	67	0.7195	1.297E-05	6.501E-03	117	0.0591	1.403E-05	6.665E-03
18	8.3372	8.709E-06	7.961E-03	68	0.6844	1.303E-05	6.483E-03	118	0.0562	1.401E-05	6.766E-03
19	7.9306	8.927E-06	7.880E-03	69	0.6510	1.308E-05	6.466E-03	119	0.0534	1.402E-05	6.869E-03
20	7.5438	9.109E-06	7.813E-03	70	0.6192	1.313E-05	6.449E-03	120	0.0508	1.403E-05	7.009E-03
21	7.1759	9.273E-06	7.749E-03	71	0.5890	1.317E-05	6.438E-03	121	0.0484	1.404E-05	7.186E-03
22	6.8260	9.409E-06	7.699E-03	72	0.5603	1.321E-05	6.428E-03	122	0.0460	1.406E-05	7.396E-03
23	6.4930	9.513E-06	7.669E-03	73	0.5330	1.325E-05	6.416E-03	123	0.0437	1.407E-05	7.647E-03
24	6.1764	9.617E-06	7.635E-03	74	0.5070	1.329E-05	6.406E-03	124	0.0416	1.408E-05	7.951E-03
25	5.8752	9.703E-06	7.603E-03	75	0.4823	1.332E-05	6.395E-03	125	0.0396	1.407E-05	8.286E-03
26	5.5886	9.806E-06	7.564E-03	76	0.4587	1.337E-05	6.383E-03	126	0.0377	1.411E-05	8.637E-03
27	5.3161	9.892E-06	7.535E-03	77	0.4364	1.340E-05	6.375E-03	127	0.0358	1.414E-05	9.110E-03
28	5.0568	9.992E-06	7.499E-03	78	0.4151	1.343E-05	6.368E-03	128	0.0341	1.412E-05	9.657E-03
29	4.8102	1.008E-05	7.463E-03	79	0.3948	1.345E-05	6.361E-03	129	0.0324	1.407E-05	1.037E-02
30	4.5756	1.016E-05	7.425E-03	80	0.3756	1.348E-05	6.354E-03	130	0.0308	1.406E-05	1.100E-02
31	4.3524	1.024E-05	7.392E-03	81	0.3573	1.351E-05	6.348E-03	131	0.0293	1.406E-05	1.100E-02
32	4.1402	1.033E-05	7.354E-03	82	0.3398	1.353E-05	6.343E-03	132	0.0279	1.406E-05	1.100E-02
33	3.9383	1.040E-05	7.321E-03	83	0.3233	1.356E-05	6.337E-03	133	0.0265	1.406E-05	1.100E-02
34	3.7462	1.047E-05	7.292E-03	84	0.3075	1.358E-05	6.332E-03	134	0.0252	1.406E-05	1.100E-02
35	3.5635	1.055E-05	7.260E-03	85	0.2925	1.360E-05	6.327E-03	135	0.0240	1.406E-05	1.100E-02
36	3.3897	1.063E-05	7.229E-03	86	0.2782	1.362E-05	6.325E-03	136	0.0228	1.406E-05	1.100E-02
37	3.2244	1.073E-05	7.187E-03	87	0.2647	1.363E-05	6.326E-03	137	0.0217	1.406E-05	1.100E-02
38	3.0671	1.084E-05	7.142E-03	88	0.2518	1.364E-05	6.329E-03	138	0.0207	1.406E-05	1.100E-02
39	2.9175	1.094E-05	7.106E-03	89	0.2395	1.364E-05	6.332E-03	139	0.0197	1.406E-05	1.100E-02
40	2.7752	1.103E-05	7.075E-03	90	0.2278	1.365E-05	6.333E-03	140	0.0187	1.406E-05	1.100E-02
41	2.6399	1.112E-05	7.044E-03	91	0.2167	1.367E-05	6.330E-03	141	0.0178	1.406E-05	1.100E-02
42	2.5111	1.122E-05	7.003E-03	92	0.2061	1.368E-05	6.328E-03	142	0.0169	1.406E-05	1.100E-02
43	2.3887	1.132E-05	6.974E-03	93	0.1961	1.371E-05	6.322E-03	143	0.0161	1.406E-05	1.100E-02
44	2.2722	1.143E-05	6.939E-03	94	0.1865	1.373E-05	6.320E-03	144	0.0153	1.406E-05	1.100E-02
45	2.1613	1.150E-05	6.920E-03	95	0.1774	1.375E-05	6.316E-03	145	0.0146	1.406E-05	1.100E-02
46	2.0559	1.159E-05	6.893E-03	96	0.1688	1.377E-05	6.316E-03	146	0.0139	1.406E-05	1.100E-02
47	1.9557	1.168E-05	6.870E-03	97	0.1605	1.379E-05	6.316E-03	147	0.0132	1.406E-05	1.100E-02
48	1.8603	1.176E-05	6.844E-03	98	0.1527	1.381E-05	6.313E-03	148	0.0125	1.406E-05	1.100E-02
49	1.7696	1.184E-05	6.825E-03	99	0.1453	1.383E-05	6.313E-03	149	0.0119	1.406E-05	1.100E-02
50	1.6833	1.192E-05	6.808E-03	100	0.1382	1.385E-05	6.314E-03	150	0.0113	1.406E-05	1.100E-02

* ENERGY = LOWER BOUNDARY [MEV]
** ERROR X 100 = %

Table 3.3.9

ANGULAR FLUX OF LI2O SLAB TOP [THICKNESS=4.8 CM, ANGLE=66.8 DEG]

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.0116	0.000E+00	0.100E+01	51	0.1417	5.321E-07	0.225E+00	101	1.7259	1.964E-06	0.853E-01
2	0.0122	0.000E+00	0.100E+01	52	0.1489	5.464E-07	0.202E+00	102	1.8144	1.679E-06	0.936E-01
3	0.0129	0.000E+00	0.100E+01	53	0.1566	3.692E-07	0.308E+00	103	1.9074	2.041E-06	0.789E-01
4	0.0135	0.000E+00	0.100E+01	54	0.1646	4.412E-07	0.250E+00	104	2.0052	2.038E-06	0.782E-01
5	0.0142	0.000E+00	0.100E+01	55	0.1730	5.491E-07	0.191E+00	105	2.1080	1.600E-06	0.975E-01
6	0.0149	0.000E+00	0.100E+01	56	0.1819	4.250E-07	0.241E+00	106	2.2161	2.013E-06	0.838E-01
7	0.0157	0.000E+00	0.100E+01	57	0.1912	6.223E-07	0.153E+00	107	2.3297	2.003E-06	0.834E-01
8	0.0165	0.000E+00	0.100E+01	58	0.2010	4.274E-07	0.237E+00	108	2.4491	2.172E-06	0.751E-01
9	0.0173	0.000E+00	0.100E+01	59	0.2113	3.884E-07	0.237E+00	109	2.5747	2.134E-06	0.740E-01
10	0.0182	0.000E+00	0.100E+01	60	0.2222	1.656E-07	0.604E+00	110	2.7067	1.878E-06	0.826E-01
11	0.0192	0.000E+00	0.100E+01	61	0.2336	2.482E-07	0.363E+00	111	2.8455	2.051E-06	0.769E-01
12	0.0202	0.000E+00	0.100E+01	62	0.2456	1.703E-07	0.548E+00	112	2.9914	2.086E-06	0.750E-01
13	0.0212	0.000E+00	0.100E+01	63	0.2581	3.320E-07	0.260E+00	113	3.1447	1.761E-06	0.832E-01
14	0.0223	0.000E+00	0.100E+01	64	0.2714	3.093E-07	0.291E+00	114	3.3060	1.675E-06	0.898E-01
15	0.0234	0.000E+00	0.100E+01	65	0.2853	2.598E-07	0.352E+00	115	3.4755	1.777E-06	0.832E-01
16	0.0246	0.000E+00	0.100E+01	66	0.2999	4.069E-07	0.230E+00	116	3.6537	1.305E-06	0.117E+00
17	0.0259	0.000E+00	0.100E+01	67	0.3153	3.479E-07	0.284E+00	117	3.8410	1.544E-06	0.110E+00
18	0.0272	0.000E+00	0.100E+01	68	0.3314	4.485E-07	0.209E+00	118	4.0379	1.543E-06	0.111E+00
19	0.0286	0.000E+00	0.100E+01	69	0.3485	5.189E-07	0.182E+00	119	4.2450	1.618E-06	0.103E+00
20	0.0301	0.000E+00	0.100E+01	70	0.3663	4.856E-07	0.195E+00	120	4.4626	1.540E-06	0.107E+00
21	0.0316	1.542E-07	0.406E+01	71	0.3851	4.530E-07	0.206E+00	121	4.6914	1.673E-06	0.921E-01
22	0.0332	-1.491E-06	0.975E+00	72	0.4048	5.187E-07	0.182E+00	122	4.9319	1.906E-06	0.842E-01
23	0.0349	-3.069E-07	0.399E+01	73	0.4256	5.363E-07	0.178E+00	123	5.1848	2.064E-06	0.815E-01
24	0.0367	-4.339E-07	0.251E+01	74	0.4474	6.240E-07	0.161E+00	124	5.4506	1.824E-06	0.910E-01
25	0.0386	-2.147E-06	0.461E+00	75	0.4703	5.643E-07	0.185E+00	125	5.7301	1.967E-06	0.857E-01
26	0.0406	4.058E-07	0.217E+01	76	0.4945	7.646E-07	0.133E+00	126	6.0239	1.918E-06	0.924E-01
27	0.0427	-3.461E-08	0.231E+02	77	0.5198	9.149E-07	0.111E+00	127	6.3327	1.963E-06	0.102E+00
28	0.0449	3.317E-07	0.190E+01	78	0.5465	9.196E-07	0.110E+00	128	6.6574	2.610E-06	0.780E-01
29	0.0472	-1.119E-06	0.633E+00	79	0.5745	1.122E-06	0.930E-01	129	6.9988	2.730E-06	0.865E-01
30	0.0496	-2.580E-07	0.246E+01	80	0.6040	1.100E-06	0.974E-01	130	7.3576	3.692E-06	0.685E-01
31	0.0521	5.153E-07	0.103E+01	81	0.6349	1.308E-06	0.797E-01	131	7.7348	3.712E-06	0.700E-01
32	0.0548	-4.522E-07	0.110E+01	82	0.6675	1.211E-06	0.924E-01	132	8.1314	3.059E-06	0.869E-01
33	0.0576	-6.897E-07	0.626E+00	83	0.7017	1.273E-06	0.882E-01	133	8.5483	2.906E-06	0.849E-01
34	0.0606	3.618E-07	0.978E+00	84	0.7377	1.177E-06	0.957E-01	134	8.9866	2.955E-06	0.882E-01
35	0.0637	2.622E-07	0.123E+01	85	0.7755	1.354E-06	0.890E-01	135	9.4473	2.803E-06	0.102E+00
36	0.0669	2.190E-07	0.135E+01	86	0.8152	1.354E-06	0.855E-01	136	9.9317	3.272E-06	0.921E-01
37	0.0703	1.011E-07	0.268E+01	87	0.8570	1.143E-06	0.104E+00	137	10.4410	3.892E-06	0.799E-01
38	0.0740	-1.374E-07	0.181E+01	88	0.9010	1.068E-06	0.111E+00	138	10.9760	3.911E-06	0.855E-01
39	0.0777	3.619E-07	0.615E+00	89	0.9472	8.066E-07	0.143E+00	139	11.5390	4.173E-06	0.776E-01
40	0.0817	4.178E-07	0.480E+00	90	0.9957	1.018E-06	0.121E+00	140	12.1310	5.640E-06	0.624E-01
41	0.0859	1.445E-07	0.130E+01	91	1.0468	1.131E-06	0.109E+00	141	12.7530	9.598E-06	0.413E-01
42	0.0903	3.189E-07	0.559E+00	92	1.1005	1.223E-06	0.108E+00	142	13.4060	1.343E-05	0.322E-01
43	0.0950	4.458E-07	0.385E+00	93	1.1569	1.427E-06	0.921E-01	143	14.0940	1.286E-05	0.321E-01
44	0.0998	3.648E-08	0.470E+01	94	1.2162	1.524E-06	0.910E-01	144	14.8160	6.318E-06	0.449E-01
45	0.1050	5.286E-07	0.283E+00	95	1.2786	1.433E-06	0.984E-01	145	15.5760	1.415E-06	0.114E+00
46	0.1103	2.736E-07	0.526E+00	96	1.3441	1.596E-06	0.893E-01	146	16.3750	1.529E-07	0.492E+00
47	0.1160	1.638E-07	0.851E+00	97	1.4130	1.472E-06	0.106E+00	147	17.2140	9.780E-08	0.461E+00
48	0.1219	1.937E-07	0.727E+00	98	1.4855	1.345E-06	0.843E-01	148	18.0970	3.210E-08	0.159E+01
49	0.1282	4.554E-07	0.275E+00	99	1.5616	1.809E-06	0.865E-01	149	19.0250	9.561E-08	0.340E+00
50	0.1348	4.464E-07	0.277E+00	100	1.6417	1.660E-06	0.984E-01	150	20.0000	-6.278E-08	0.834E+00

* ENERGY = [MEV]
** ERROR x 100 = %

Table 3.3.10

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESS=4.3 CM, ANGLE=66.8 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.50e2	-3.139E-09	1.000E+02	51	1.6012	7.034E-06	1.105E-02	101	0.1314	9.091E-06	9.599E-03
2	13.5549	1.642E-09	1.000E+02	52	1.5231	7.125E-06	1.097E-02	102	0.1250	9.113E-06	9.600E-03
3	17.6499	3.250E-09	1.000E+02	53	1.4488	7.217E-06	1.088E-02	103	0.1189	9.123E-06	9.620E-03
4	16.7891	8.140E-09	1.000E+02	54	1.3781	7.290E-06	1.082E-02	104	0.1131	9.131E-06	9.642E-03
5	15.9703	1.579E-08	3.762E-01	55	1.3109	7.370E-06	1.075E-02	105	0.1076	9.145E-06	9.660E-03
6	15.1914	8.655E-08	1.157E-01	56	1.2470	7.442E-06	1.069E-02	106	0.1024	9.171E-06	9.666E-03
7	14.4503	4.024E-07	4.312E-02	57	1.1862	7.518E-06	1.062E-02	107	0.0974	9.173E-06	9.709E-03
8	13.7458	1.045E-06	2.581E-02	58	1.1283	7.589E-06	1.056E-02	108	0.0926	9.196E-06	9.731E-03
9	13.0754	1.717E-06	2.014E-02	59	1.0733	7.651E-06	1.051E-02	109	0.0881	9.212E-06	9.762E-03
10	12.4377	2.197E-06	1.814E-02	60	1.0209	7.707E-06	1.046E-02	110	0.0838	9.219E-06	9.807E-03
11	11.8311	2.479E-06	1.758E-02	61	0.9712	7.758E-06	1.042E-02	111	0.0797	9.240E-06	9.845E-03
12	11.2541	2.687E-06	1.730E-02	62	0.9238	7.798E-06	1.039E-02	112	0.0758	9.258E-06	9.899E-03
13	10.7052	2.883E-06	1.713E-02	63	0.8787	7.852E-06	1.035E-02	113	0.0721	9.251E-06	9.997E-03
14	10.1831	3.077E-06	1.683E-02	64	0.8359	7.909E-06	1.030E-02	114	0.0686	9.256E-06	1.010E-02
15	9.6865	3.241E-06	1.664E-02	65	0.7951	7.977E-06	1.024E-02	115	0.0653	9.267E-06	1.021E-02
16	9.2141	3.381E-06	1.650E-02	66	0.7563	8.044E-06	1.018E-02	116	0.0621	9.280E-06	1.035E-02
17	8.7647	3.529E-06	1.623E-02	67	0.7195	8.103E-06	1.013E-02	117	0.0591	9.298E-06	1.050E-02
18	8.3372	3.674E-06	1.595E-02	68	0.6844	8.167E-06	1.008E-02	118	0.0562	9.264E-06	1.079E-02
19	7.9306	3.827E-06	1.570E-02	69	0.6510	8.227E-06	1.003E-02	119	0.0534	9.241E-06	1.115E-02
20	7.5438	4.013E-06	1.532E-02	70	0.6192	8.293E-06	9.967E-03	120	0.0508	9.267E-06	1.148E-02
21	7.1759	4.197E-06	1.495E-02	71	0.5890	8.348E-06	9.922E-03	121	0.0484	9.254E-06	1.200E-02
22	6.8260	4.334E-06	1.474E-02	72	0.5603	8.404E-06	9.875E-03	122	0.0460	9.198E-06	1.268E-02
23	6.4930	4.464E-06	1.449E-02	73	0.5330	8.450E-06	9.840E-03	123	0.0437	9.217E-06	1.329E-02
24	6.1764	4.562E-06	1.434E-02	74	0.5070	8.496E-06	9.805E-03	124	0.0416	9.215E-06	1.393E-02
25	5.8752	4.658E-06	1.418E-02	75	0.4823	8.534E-06	9.779E-03	125	0.0396	9.236E-06	1.474E-02
26	5.5886	4.757E-06	1.400E-02	76	0.4587	8.562E-06	9.766E-03	126	0.0377	9.128E-06	1.587E-02
27	5.3161	4.848E-06	1.384E-02	77	0.4364	8.593E-06	9.748E-03	127	0.0358	9.107E-06	1.700E-02
28	5.0568	4.951E-06	1.366E-02	78	0.4151	8.620E-06	9.734E-03	128	0.0341	9.091E-06	1.831E-02
29	4.8102	5.046E-06	1.349E-02	79	0.3948	8.646E-06	9.720E-03	129	0.0324	9.017E-06	2.014E-02
30	4.5756	5.130E-06	1.336E-02	80	0.3756	8.669E-06	9.709E-03	130	0.0308	9.024E-06	2.042E-02
31	4.3524	5.207E-06	1.325E-02	81	0.3573	8.693E-06	9.697E-03	131	0.0293	9.024E-06	2.042E-02
32	4.1402	5.288E-06	1.315E-02	82	0.3398	8.719E-06	9.684E-03	132	0.0279	9.024E-06	2.042E-02
33	3.9382	5.365E-06	1.306E-02	83	0.3233	8.741E-06	9.674E-03	133	0.0265	9.024E-06	2.042E-02
34	3.7462	5.442E-06	1.296E-02	84	0.3075	8.759E-06	9.671E-03	134	0.0252	9.024E-06	2.042E-02
35	3.5635	5.508E-06	1.289E-02	85	0.2925	8.779E-06	9.663E-03	135	0.0240	9.024E-06	2.042E-02
36	3.3897	5.596E-06	1.273E-02	86	0.2782	8.792E-06	9.663E-03	136	0.0228	9.024E-06	2.042E-02
37	3.2244	5.680E-06	1.263E-02	87	0.2647	8.808E-06	9.660E-03	137	0.0217	9.024E-06	2.042E-02
38	3.0671	5.768E-06	1.250E-02	88	0.2518	8.824E-06	9.654E-03	138	0.0207	9.024E-06	2.042E-02
39	2.9175	5.872E-06	1.235E-02	89	0.2395	8.833E-06	9.659E-03	139	0.0197	9.024E-06	2.042E-02
40	2.7752	5.975E-06	1.221E-02	90	0.2278	8.845E-06	9.659E-03	140	0.0187	9.024E-06	2.042E-02
41	2.6399	6.069E-06	1.209E-02	91	0.2167	8.853E-06	9.666E-03	141	0.0178	9.024E-06	2.042E-02
42	2.5111	6.176E-06	1.195E-02	92	0.2061	8.873E-06	9.659E-03	142	0.0169	9.024E-06	2.042E-02
43	2.3887	6.284E-06	1.182E-02	93	0.1961	8.894E-06	9.653E-03	143	0.0161	9.024E-06	2.042E-02
44	2.2722	6.334E-06	1.170E-02	94	0.1865	8.925E-06	9.634E-03	144	0.0153	9.024E-06	2.042E-02
45	2.1613	6.435E-06	1.160E-02	95	0.1774	8.947E-06	9.628E-03	145	0.0146	9.024E-06	2.042E-02
46	2.0559	6.565E-06	1.152E-02	96	0.1688	8.974E-06	9.616E-03	146	0.0139	9.024E-06	2.042E-02
47	1.9557	6.667E-06	1.140E-02	97	0.1605	8.996E-06	9.612E-03	147	0.0132	9.024E-06	2.042E-02
48	1.8603	6.769E-06	1.129E-02	98	0.1527	9.014E-06	9.613E-03	148	0.0125	9.024E-06	2.042E-02
49	1.7696	6.853E-06	1.121E-02	99	0.1453	9.042E-06	9.604E-03	149	0.0119	9.024E-06	2.042E-02
50	1.6833	6.951E-06	1.112E-02	100	0.1382	9.068E-06	9.598E-03	150	0.0113	9.024E-06	2.042E-02

* ENERGY = LOWER BOUNDARY [MEV]
** ERROR X 100 = %

Table 3.3.11

ANGULAR FLUX OF LI2O SLAB TOF (THICKNESS=20 CM, ANGLE=0.0 DEG)

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.0116	0.000E+00	0.100E+01	51	0.1417	1.118E-06	0.843E-01	101	1.7259	2.709E-06	0.613E-01
2	0.0122	0.000E+00	0.100E+01	52	0.1489	1.361E-06	0.706E-01	102	1.8144	2.859E-06	0.593E-01
3	0.0129	0.000E+00	0.100E+01	53	0.1566	1.356E-06	0.680E-01	103	1.9074	2.541E-06	0.639E-01
4	0.0135	0.000E+00	0.100E+01	54	0.1646	1.158E-06	0.757E-01	104	2.0052	2.982E-06	0.563E-01
5	0.0142	0.000E+00	0.100E+01	55	0.1730	1.152E-06	0.757E-01	105	2.1080	3.213E-06	0.521E-01
6	0.0149	0.000E+00	0.100E+01	56	0.1819	1.098E-06	0.744E-01	106	2.2161	3.854E-06	0.471E-01
7	0.0157	0.000E+00	0.100E+01	57	0.1912	9.123E-07	0.865E-01	107	2.3297	3.735E-06	0.477E-01
8	0.0165	0.000E+00	0.100E+01	58	0.2010	6.840E-07	0.103E+00	108	2.4491	2.781E-06	0.560E-01
9	0.0173	0.000E+00	0.100E+01	59	0.2113	7.117E-07	0.984E-01	109	2.5747	2.774E-06	0.567E-01
10	0.0182	0.000E+00	0.100E+01	60	0.2222	4.296E-07	0.151E+00	110	2.7067	2.887E-06	0.572E-01
11	0.0192	0.000E+00	0.100E+01	61	0.2336	2.042E-07	0.293E+00	111	2.8455	2.910E-06	0.546E-01
12	0.0202	0.000E+00	0.100E+01	62	0.2456	2.017E-07	0.312E+00	112	2.9914	2.794E-06	0.572E-01
13	0.0212	0.000E+00	0.100E+01	63	0.2581	3.162E-07	0.183E+00	113	3.1447	2.495E-06	0.624E-01
14	0.0223	0.000E+00	0.100E+01	64	0.2714	4.719E-07	0.132E+00	114	3.3060	1.668E-06	0.765E-01
15	0.0234	0.000E+00	0.100E+01	65	0.2853	6.311E-07	0.106E+00	115	3.4755	1.492E-06	0.808E-01
16	0.0246	0.000E+00	0.100E+01	66	0.2999	8.207E-07	0.900E-01	116	3.6537	1.396E-06	0.914E-01
17	0.0259	0.000E+00	0.100E+01	67	0.3153	9.632E-07	0.773E-01	117	3.8410	1.638E-06	0.829E-01
18	0.0272	0.000E+00	0.100E+01	68	0.3314	9.245E-07	0.806E-01	118	4.0379	1.521E-06	0.888E-01
19	0.0286	0.000E+00	0.100E+01	69	0.3485	8.552E-07	0.888E-01	119	4.2450	1.434E-06	0.897E-01
20	0.0301	4.210E-07	0.704E+00	70	0.3663	8.584E-07	0.889E-01	120	4.4626	1.596E-06	0.855E-01
21	0.0316	1.930E-06	0.443E+00	71	0.3851	8.471E-07	0.880E-01	121	4.6914	1.878E-06	0.758E-01
22	0.0332	1.483E-06	0.493E+00	72	0.4048	6.700E-07	0.104E+00	122	4.9319	1.940E-06	0.749E-01
23	0.0349	1.063E-06	0.651E+00	73	0.4256	8.468E-07	0.911E-01	123	5.1848	1.999E-06	0.734E-01
24	0.0367	1.389E-06	0.438E+00	74	0.4474	1.330E-06	0.648E-01	124	5.4506	2.297E-06	0.675E-01
25	0.0386	1.373E-06	0.386E+00	75	0.4703	1.476E-06	0.584E-01	125	5.7301	1.206E-06	0.856E-01
26	0.0406	8.344E-07	0.371E+00	76	0.4945	1.873E-06	0.518E-01	126	6.0239	2.127E-06	0.752E-01
27	0.0427	9.027E-07	0.507E+00	77	0.5198	2.057E-06	0.482E-01	127	6.3327	2.221E-06	0.774E-01
28	0.0449	1.546E-06	0.262E+00	78	0.5465	2.308E-06	0.453E-01	128	6.6574	2.560E-06	0.698E-01
29	0.0472	3.505E-07	0.113E+01	79	0.5745	2.497E-06	0.426E-01	129	6.9988	3.107E-06	0.614E-01
30	0.0496	1.059E-06	0.323E+00	80	0.6040	2.468E-06	0.439E-01	130	7.3576	2.755E-06	0.706E-01
31	0.0521	1.390E-06	0.218E+00	81	0.6349	2.393E-06	0.460E-01	131	7.7348	3.242E-06	0.668E-01
32	0.0548	1.451E-06	0.194E+00	82	0.6675	2.482E-06	0.452E-01	132	8.1314	3.101E-06	0.724E-01
33	0.0576	7.666E-07	0.321E+00	83	0.7017	2.670E-06	0.426E-01	133	8.5483	3.573E-06	0.665E-01
34	0.0606	9.349E-07	0.233E+00	84	0.7377	2.710E-06	0.431E-01	134	8.9866	3.559E-06	0.678E-01
35	0.0637	8.765E-07	0.296E+00	85	0.7755	2.469E-06	0.454E-01	135	9.4473	3.504E-06	0.697E-01
36	0.0669	7.114E-07	0.252E+00	86	0.8152	2.203E-06	0.493E-01	136	9.9317	4.785E-06	0.563E-01
37	0.0703	9.006E-07	0.174E+00	87	0.8570	1.659E-06	0.628E-01	137	10.4410	5.163E-06	0.550E-01
38	0.0740	1.109E-06	0.134E+00	88	0.9010	1.292E-06	0.740E-01	138	10.9760	3.327E-06	0.763E-01
39	0.0777	9.716E-07	0.149E+00	89	0.9472	1.357E-06	0.719E-01	139	11.5390	3.774E-06	0.696E-01
40	0.0817	6.784E-07	0.203E+00	90	0.9957	1.402E-06	0.721E-01	140	12.1310	5.750E-06	0.549E-01
41	0.0859	7.019E-07	0.182E+00	91	1.0468	1.713E-06	0.636E-01	141	12.7530	9.582E-06	0.406E-01
42	0.0903	7.087E-07	0.171E+00	92	1.1005	2.007E-06	0.584E-01	142	13.4060	1.697E-05	0.294E-01
43	0.0950	1.133E-06	0.101E+00	93	1.1569	2.234E-06	0.531E-01	143	14.0940	6.560E-05	0.141E-01
44	0.0999	9.531E-07	0.122E+00	94	1.2162	2.129E-06	0.530E-01	144	14.8160	6.200E-04	0.450E-02
45	0.1050	1.129E-06	0.964E-01	95	1.2786	1.832E-06	0.631E-01	145	15.5760	6.933E-04	0.418E-02
46	0.1103	9.457E-07	0.112E+00	96	1.3441	2.151E-06	0.579E-01	146	16.3750	8.496E-05	0.118E-01
47	0.1160	1.150E-06	0.879E-01	97	1.4130	2.755E-06	0.462E-01	147	17.2140	1.876E-06	0.895E-01
48	0.1219	1.035E-06	0.950E-01	98	1.4855	2.527E-06	0.505E-01	148	18.0970	-1.398E-07	0.543E+00
49	0.1282	1.014E-06	0.100E+00	99	1.5616	2.673E-06	0.493E-01	149	19.0250	-1.757E-07	0.345E+00
50	0.1348	1.196E-06	0.808E-01	100	1.6417	2.500E-06	0.536E-01	150	20.0000	-7.405E-08	0.539E+00

* ENERGY = EMEV]
** ERROR X 100 = %

Table 3.3.12

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESS=20 CM, ANGLE=0.0 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.5062	-3.703E-09	1.000E+02	51	1.6012	8.031E-05	2.779E-03	101	0.1314	8.403E-05	2.686E-03
2	18.5549	-1.249E-08	1.000E+02	52	1.5231	8.044E-05	2.776E-03	102	0.1250	8.408E-05	2.685E-03
3	17.6499	-1.948E-08	1.000E+02	53	1.4488	8.057E-05	2.773E-03	103	0.1189	8.413E-05	2.684E-03
4	16.7891	7.433E-08	1.332E-01	54	1.3781	8.070E-05	2.769E-03	104	0.1131	8.419E-05	2.683E-03
5	15.9703	4.322E-06	1.173E-02	55	1.3109	8.081E-05	2.766E-03	105	0.1076	8.424E-05	2.683E-03
6	15.1914	3.899E-05	3.942E-03	56	1.2470	8.090E-05	2.764E-03	106	0.1024	8.429E-05	2.682E-03
7	14.4505	6.999E-05	2.967E-03	57	1.1862	8.101E-05	2.761E-03	107	0.0974	8.434E-05	2.681E-03
8	13.7458	7.327E-05	2.904E-03	58	1.1283	8.112E-05	2.759E-03	108	0.0926	8.440E-05	2.680E-03
9	13.0754	7.411E-05	2.890E-03	59	1.0733	8.122E-05	2.756E-03	109	0.0881	8.443E-05	2.680E-03
10	12.4377	7.459E-05	2.883E-03	60	1.0209	8.131E-05	2.754E-03	110	0.0838	8.447E-05	2.680E-03
11	11.8311	7.486E-05	2.880E-03	61	0.9712	8.138E-05	2.752E-03	111	0.0797	8.450E-05	2.680E-03
12	11.2541	7.507E-05	2.878E-03	62	0.9238	8.144E-05	2.751E-03	112	0.0758	8.455E-05	2.680E-03
13	10.7052	7.524E-05	2.877E-03	63	0.8787	8.151E-05	2.749E-03	113	0.0721	8.461E-05	2.679E-03
14	10.1831	7.549E-05	2.873E-03	64	0.8359	8.159E-05	2.747E-03	114	0.0686	8.465E-05	2.680E-03
15	9.6865	7.573E-05	2.869E-03	65	0.7951	8.170E-05	2.744E-03	115	0.0653	8.469E-05	2.681E-03
16	9.2141	7.591E-05	2.867E-03	66	0.7563	8.183E-05	2.741E-03	116	0.0621	8.472E-05	2.682E-03
17	8.7647	7.609E-05	2.865E-03	67	0.7195	8.196E-05	2.737E-03	117	0.0591	8.477E-05	2.684E-03
18	8.3372	7.626E-05	2.863E-03	68	0.6844	8.209E-05	2.734E-03	118	0.0562	8.480E-05	2.686E-03
19	7.9306	7.642E-05	2.861E-03	69	0.6510	8.222E-05	2.731E-03	119	0.0534	8.483E-05	2.689E-03
20	7.5438	7.658E-05	2.859E-03	70	0.6192	8.234E-05	2.727E-03	120	0.0508	8.495E-05	2.693E-03
21	7.1759	7.672E-05	2.856E-03	71	0.5890	8.246E-05	2.724E-03	121	0.0484	8.500E-05	2.699E-03
22	6.8260	7.687E-05	2.853E-03	72	0.5603	8.259E-05	2.721E-03	122	0.0460	8.502E-05	2.708E-03
23	6.4930	7.700E-05	2.850E-03	73	0.5330	8.270E-05	2.718E-03	123	0.0437	8.509E-05	2.716E-03
24	6.1764	7.711E-05	2.848E-03	74	0.5070	8.280E-05	2.715E-03	124	0.0416	8.514E-05	2.728E-03
25	5.8752	7.722E-05	2.846E-03	75	0.4823	8.290E-05	2.713E-03	125	0.0396	8.519E-05	2.743E-03
26	5.5886	7.731E-05	2.845E-03	76	0.4587	8.297E-05	2.711E-03	126	0.0377	8.525E-05	2.758E-03
27	5.3161	7.743E-05	2.842E-03	77	0.4364	8.304E-05	2.709E-03	127	0.0358	8.532E-05	2.779E-03
28	5.0568	7.753E-05	2.840E-03	78	0.4151	8.308E-05	2.708E-03	128	0.0341	8.537E-05	2.807E-03
29	4.8102	7.762E-05	2.838E-03	79	0.3948	8.311E-05	2.707E-03	129	0.0324	8.545E-05	2.837E-03
30	4.5756	7.772E-05	2.836E-03	80	0.3756	8.316E-05	2.706E-03	130	0.0308	8.555E-05	2.877E-03
31	4.3524	7.780E-05	2.835E-03	81	0.3573	8.320E-05	2.705E-03	131	0.0293	8.557E-05	2.882E-03
32	4.1402	7.787E-05	2.833E-03	82	0.3398	8.324E-05	2.704E-03	132	0.0279	8.557E-05	2.882E-03
33	3.9382	7.794E-05	2.832E-03	83	0.3233	8.329E-05	2.703E-03	133	0.0265	8.557E-05	2.882E-03
34	3.7462	7.803E-05	2.830E-03	84	0.3075	8.334E-05	2.702E-03	134	0.0252	8.557E-05	2.882E-03
35	3.5635	7.810E-05	2.829E-03	85	0.2925	8.338E-05	2.701E-03	135	0.0240	8.557E-05	2.882E-03
36	3.3897	7.817E-05	2.827E-03	86	0.2782	8.341E-05	2.700E-03	136	0.0228	8.557E-05	2.882E-03
37	3.2244	7.825E-05	2.825E-03	87	0.2647	8.343E-05	2.700E-03	137	0.0217	8.557E-05	2.882E-03
38	3.0671	7.833E-05	2.823E-03	88	0.2518	8.345E-05	2.699E-03	138	0.0207	8.557E-05	2.882E-03
39	2.9175	7.852E-05	2.819E-03	89	0.2395	8.346E-05	2.699E-03	139	0.0197	8.557E-05	2.882E-03
40	2.7752	7.866E-05	2.816E-03	90	0.2278	8.347E-05	2.699E-03	140	0.0187	8.557E-05	2.882E-03
41	2.6399	7.881E-05	2.813E-03	91	0.2167	8.349E-05	2.699E-03	141	0.0178	8.557E-05	2.882E-03
42	2.5111	7.895E-05	2.810E-03	92	0.2061	8.353E-05	2.698E-03	142	0.0169	8.557E-05	2.882E-03
43	2.3887	7.909E-05	2.806E-03	93	0.1961	8.356E-05	2.697E-03	143	0.0161	8.557E-05	2.882E-03
44	2.2722	7.927E-05	2.802E-03	94	0.1865	8.361E-05	2.696E-03	144	0.0153	8.557E-05	2.882E-03
45	2.1613	7.947E-05	2.798E-03	95	0.1774	8.366E-05	2.695E-03	145	0.0146	8.557E-05	2.882E-03
46	2.0559	7.963E-05	2.794E-03	96	0.1688	8.372E-05	2.693E-03	146	0.0139	8.557E-05	2.882E-03
47	1.9557	7.977E-05	2.791E-03	97	0.1605	8.378E-05	2.692E-03	147	0.0132	8.557E-05	2.882E-03
48	1.8603	7.990E-05	2.789E-03	98	0.1527	8.384E-05	2.691E-03	148	0.0125	8.557E-05	2.882E-03
49	1.7696	8.004E-05	2.785E-03	99	0.1453	8.391E-05	2.689E-03	149	0.0119	8.557E-05	2.882E-03
50	1.6833	8.018E-05	2.782E-03	100	0.1382	8.397E-05	2.688E-03	150	0.0113	8.557E-05	2.882E-03

* ENERGY = LOWER BOUNDARY [MEV]

** ERROR X 100 = %

Table 3.3.13

ANGULAR FLUX OF LI2O SLAB TOF　　(THICKNESS=20 CM, ANGLE=12.2 DEG)

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.0110	0.000E+00	0.100E+01	51	0.1417	9.948E-07	0.536E-01	101	1.7259	2.093E-06	0.463E-01
2	0.0122	0.000E+00	0.100E+01	52	0.1489	1.059E-06	0.526E-01	102	1.8144	1.989E-06	0.458E-01
3	0.0129	0.000E+00	0.100E+01	53	0.1566	1.130E-06	0.499E-01	103	1.9074	1.990E-06	0.451E-01
4	0.0135	0.000E+00	0.100E+01	54	0.1646	1.102E-06	0.510E-01	104	2.0052	1.987E-06	0.450E-01
5	0.0142	0.000E+00	0.100E+01	55	0.1730	1.075E-06	0.500E-01	105	2.1080	2.078E-06	0.420E-01
6	0.0149	0.000E+00	0.100E+01	56	0.1819	8.840E-07	0.588E-01	106	2.2161	2.266E-06	0.393E-01
7	0.0157	0.000E+00	0.100E+01	57	0.1912	8.237E-07	0.609E-01	107	2.3297	2.459E-06	0.375E-01
8	0.0165	0.000E+00	0.100E+01	58	0.2010	7.428E-07	0.634E-01	108	2.4491	2.059E-06	0.415E-01
9	0.0173	0.000E+00	0.100E+01	59	0.2113	4.459E-07	0.998E-01	109	2.5747	1.936E-06	0.425E-01
10	0.0182	0.000E+00	0.100E+01	60	0.2222	2.833E-07	0.152E+00	110	2.7067	2.094E-06	0.397E-01
11	0.0192	0.000E+00	0.100E+01	61	0.2336	2.326E-07	0.169E+00	111	2.8455	1.820E-06	0.432E-01
12	0.0202	0.000E+00	0.100E+01	62	0.2456	1.639E-07	0.231E+00	112	2.9914	1.910E-06	0.424E-01
13	0.0212	0.000E+00	0.100E+01	63	0.2581	2.212E-07	0.169E+00	113	3.1447	1.691E-06	0.462E-01
14	0.0223	0.000E+00	0.100E+01	64	0.2714	2.550E-07	0.158E+00	114	3.3060	1.446E-06	0.535E-01
15	0.0234	0.000E+00	0.100E+01	65	0.2853	4.615E-07	0.916E-01	115	3.4755	1.279E-06	0.584E-01
16	0.0246	0.000E+00	0.100E+01	66	0.2999	5.797E-07	0.810E-01	116	3.6537	1.247E-06	0.589E-01
17	0.0259	0.000E+00	0.100E+01	67	0.3153	5.572E-07	0.844E-01	117	3.8410	1.326E-06	0.568E-01
18	0.0272	0.000E+00	0.100E+01	68	0.3314	7.460E-07	0.634E-01	118	4.0379	1.358E-06	0.562E-01
19	0.0286	0.000E+00	0.100E+01	69	0.3485	8.828E-07	0.538E-01	119	4.2450	1.364E-06	0.569E-01
20	0.0301	-2.729E-08	0.644E+01	70	0.3663	8.370E-07	0.556E-01	120	4.4626	1.442E-06	0.545E-01
21	0.0316	7.088E-07	0.791E+00	71	0.3851	7.433E-07	0.626E-01	121	4.6914	1.544E-06	0.509E-01
22	0.0332	7.120E-07	0.689E+00	72	0.4048	5.602E-07	0.796E-01	122	4.9319	1.445E-06	0.546E-01
23	0.0349	5.502E-07	0.824E+00	73	0.4256	6.903E-07	0.684E-01	123	5.1842	1.644E-06	0.520E-01
24	0.0367	-2.947E-07	0.134E+01	74	0.4474	9.592E-07	0.532E-01	124	5.4506	1.727E-06	0.511E-01
25	0.0386	1.185E-07	0.295E+01	75	0.4703	1.319E-06	0.423E-01	125	5.7301	1.774E-06	0.509E-01
26	0.0406	3.991E-07	0.778E+00	76	0.4945	1.493E-06	0.383E-01	126	6.0239	1.929E-06	0.480E-01
27	0.0427	4.515E-07	0.666E+00	77	0.5198	1.662E-06	0.358E-01	127	6.3327	1.917E-06	0.491E-01
28	0.0449	6.474E-07	0.436E+00	78	0.5465	1.713E-06	0.358E-01	128	6.6574	2.213E-06	0.467E-01
29	0.0472	7.089E-07	0.364E+00	79	0.5745	1.727E-06	0.347E-01	129	6.9988	2.178E-06	0.491E-01
30	0.0496	7.006E-07	0.333E+00	80	0.6040	1.879E-06	0.330E-01	130	7.3576	2.552E-06	0.450E-01
31	0.0521	5.136E-07	0.395E+00	81	0.6349	1.955E-06	0.328E-01	131	7.7348	2.693E-06	0.452E-01
32	0.0548	3.160E-07	0.573E+00	82	0.6675	1.874E-06	0.339E-01	132	8.1314	3.026E-06	0.430E-01
33	0.0576	4.598E-07	0.746E+00	83	0.7017	2.023E-06	0.321E-01	133	8.5483	3.191E-06	0.431E-01
34	0.0606	7.283E-07	0.195E+00	84	0.7377	1.967E-06	0.331E-01	134	8.9866	3.080E-06	0.455E-01
35	0.0637	6.993E-07	0.178E+00	85	0.7755	1.971E-06	0.334E-01	135	9.4473	3.222E-06	0.440E-01
36	0.0669	6.736E-07	0.177E+00	86	0.8152	1.696E-06	0.368E-01	136	9.9317	3.894E-06	0.388E-01
37	0.0703	6.405E-07	0.166E+00	87	0.8570	1.409E-06	0.432E-01	137	10.4410	2.986E-06	0.462E-01
38	0.0740	7.243E-07	0.134E+00	88	0.9010	1.184E-06	0.503E-01	138	10.9760	2.193E-06	0.604E-01
39	0.0777	5.853E-07	0.158E+00	89	0.9472	1.129E-06	0.520E-01	139	11.5390	2.813E-06	0.492E-01
40	0.0817	6.663E-07	0.130E+00	90	0.9957	9.852E-07	0.599E-01	140	12.1310	4.730E-06	0.352E-01
41	0.0859	7.413E-07	0.110E+00	91	1.0468	1.141E-06	0.549E-01	141	12.7530	9.403E-06	0.242E-01
42	0.0903	6.085E-07	0.118E+00	92	1.1005	1.463E-06	0.467E-01	142	13.4060	2.201E-05	0.153E-01
43	0.0950	3.665E-07	0.249E-01	93	1.1569	1.515E-06	0.459E-01	143	14.0940	7.350E-05	0.816E-02
44	0.0998	9.530E-07	0.752E-01	94	1.2162	1.555E-06	0.449E-01	144	14.8160	1.447E-04	0.575E-02
45	0.1050	8.971E-07	0.749E-01	95	1.2786	1.490E-06	0.462E-01	145	15.5760	3.727E-05	0.111E-01
46	0.1103	8.032E-07	0.852E-01	96	1.3441	1.625E-06	0.443E-01	146	16.3750	1.986E-06	0.481E-01
47	0.1160	9.539E-07	0.702E-01	97	1.4130	1.769E-06	0.421E-01	147	17.2140	1.615E-07	0.218E+00
48	0.1219	9.443E-07	0.658E-01	98	1.4855	1.738E-06	0.425E-01	148	18.0970	5.927E-08	0.382E+00
49	0.1282	1.041E-06	0.582E-01	99	1.5616	1.756E-06	0.433E-01	149	19.0250	5.992E-10	0.359E+02
50	0.1348	9.992E-07	0.604E-01	100	1.6417	1.714E-06	0.455E-01	150	20.0000	2.514E-09	0.694E+01

* ENERGY = (MEV)
** ERROR X 100 = %

Table 3.3.14

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESS=20 CM, ANGLE=12.2 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.5062	1.257E-10	1.000E+02	51	1.6012	1.687E-05	3.537E-03	101	0.1314	2.174E-05	3.249E-03
2	18.5549	1.557E-10	1.000E+02	52	1.5231	1.896E-05	3.576E-03	102	0.1250	2.180E-05	3.244E-03
3	17.6499	3.119E-09	1.000E+02	53	1.4488	1.904E-05	3.565E-03	103	0.1189	2.184E-05	3.241E-03
4	16.7891	1.119E-08	2.241E-01	54	1.3781	1.913E-05	3.554E-03	104	0.1131	2.189E-05	3.237E-03
5	15.9703	1.105E-07	4.582E-02	55	1.3109	1.921E-05	3.544E-03	105	0.1076	2.193E-05	3.235E-03
6	15.1914	1.974E-06	1.087E-02	56	1.2470	1.929E-05	3.535E-03	106	0.1024	2.198E-05	3.232E-03
7	14.4505	9.209E-06	5.036E-03	57	1.1862	1.937E-05	3.525E-03	107	0.0974	2.202E-05	3.229E-03
8	13.7458	1.288E-05	4.317E-03	58	1.1283	1.944E-05	3.516E-03	108	0.0926	2.207E-05	3.227E-03
9	13.0754	1.398E-05	4.157E-03	59	1.0733	1.952E-05	3.507E-03	109	0.0881	2.210E-05	3.227E-03
10	12.4377	1.446E-05	4.098E-03	60	1.0209	1.957E-05	3.501E-03	110	0.0838	2.214E-05	3.227E-03
11	11.8311	1.469E-05	4.071E-03	61	0.9712	1.962E-05	3.495E-03	111	0.0797	2.217E-05	3.228E-03
12	11.2541	1.483E-05	4.060E-03	62	0.9238	1.968E-05	3.488E-03	112	0.0758	2.220E-05	3.231E-03
13	10.7052	1.494E-05	4.054E-03	63	0.8787	1.974E-05	3.481E-03	113	0.0721	2.224E-05	3.233E-03
14	10.1831	1.509E-05	4.040E-03	64	0.8359	1.981E-05	3.472E-03	114	0.0686	2.227E-05	3.237E-03
15	9.6865	1.529E-05	4.019E-03	65	0.7951	1.989E-05	3.461E-03	115	0.0653	2.230E-05	3.243E-03
16	9.2141	1.545E-05	4.004E-03	66	0.7563	1.999E-05	3.448E-03	116	0.0621	2.234E-05	3.250E-03
17	8.7647	1.560E-05	3.989E-03	67	0.7195	2.009E-05	3.435E-03	117	0.0591	2.237E-05	3.260E-03
18	8.3372	1.576E-05	3.973E-03	68	0.6844	2.019E-05	3.421E-03	118	0.0562	2.240E-05	3.276E-03
19	7.9306	1.591E-05	3.957E-03	69	0.6510	2.028E-05	3.409E-03	119	0.0534	2.241E-05	3.299E-03
20	7.5433	1.605E-05	3.942E-03	70	0.6192	2.038E-05	3.396E-03	120	0.0508	2.244E-05	3.326E-03
21	7.1757	1.617E-05	3.927E-03	71	0.5890	2.048E-05	3.384E-03	121	0.0484	2.247E-05	3.361E-03
22	6.8260	1.628E-05	3.914E-03	72	0.5603	2.056E-05	3.373E-03	122	0.0460	2.251E-05	3.405E-03
23	6.4930	1.639E-05	3.900E-03	73	0.5330	2.065E-05	3.362E-03	123	0.0437	2.254E-05	3.457E-03
24	6.1764	1.649E-05	3.888E-03	74	0.5070	2.073E-05	3.352E-03	124	0.0416	2.256E-05	3.517E-03
25	5.8752	1.659E-05	3.876E-03	75	0.4823	2.081E-05	3.343E-03	125	0.0396	2.258E-05	3.581E-03
26	5.5886	1.667E-05	3.865E-03	76	0.4587	2.087E-05	3.335E-03	126	0.0377	2.259E-05	3.664E-03
27	5.3161	1.676E-05	3.854E-03	77	0.4364	2.092E-05	3.330E-03	127	0.0358	2.257E-05	3.770E-03
28	5.0568	1.684E-05	3.843E-03	78	0.4151	2.095E-05	3.326E-03	128	0.0341	2.260E-05	3.896E-03
29	4.8102	1.692E-05	3.834E-03	79	0.3948	2.098E-05	3.323E-03	129	0.0324	2.264E-05	4.038E-03
30	4.5756	1.699E-05	3.824E-03	80	0.3756	2.102E-05	3.319E-03	130	0.0308	2.267E-05	4.218E-03
31	4.3524	1.706E-05	3.814E-03	81	0.3573	2.106E-05	3.314E-03	131	0.0293	2.267E-05	4.236E-03
32	4.1402	1.713E-05	3.806E-03	82	0.3398	2.111E-05	3.309E-03	132	0.0279	2.267E-05	4.236E-03
33	3.9382	1.720E-05	3.797E-03	83	0.3233	2.114E-05	3.306E-03	133	0.0265	2.267E-05	4.236E-03
34	3.7462	1.727E-05	3.789E-03	84	0.3075	2.117E-05	3.303E-03	134	0.0252	2.267E-05	4.236E-03
35	3.5635	1.733E-05	3.781E-03	85	0.2925	2.120E-05	3.300E-03	135	0.0240	2.267E-05	4.236E-03
36	3.3897	1.739E-05	3.774E-03	86	0.2782	2.122E-05	3.298E-03	136	0.0228	2.267E-05	4.236E-03
37	3.2244	1.747E-05	3.765E-03	87	0.2647	2.124E-05	3.298E-03	137	0.0217	2.267E-05	4.236E-03
38	3.0671	1.755E-05	3.753E-03	88	0.2518	2.125E-05	3.297E-03	138	0.0207	2.267E-05	4.236E-03
39	2.9175	1.765E-05	3.740E-03	89	0.2395	2.125E-05	3.297E-03	139	0.0197	2.267E-05	4.236E-03
40	2.7752	1.774E-05	3.727E-03	90	0.2278	2.127E-05	3.297E-03	140	0.0187	2.267E-05	4.236E-03
41	2.6399	1.784E-05	3.713E-03	91	0.2167	2.128E-05	3.296E-03	141	0.0178	2.267E-05	4.236E-03
42	2.5111	1.794E-05	3.700E-03	92	0.2061	2.130E-05	3.294E-03	142	0.0169	2.267E-05	4.236E-03
43	2.3887	1.804E-05	3.686E-03	93	0.1961	2.134E-05	3.290E-03	143	0.0161	2.267E-05	4.236E-03
44	2.2722	1.816E-05	3.670E-03	94	0.1865	2.138E-05	3.286E-03	144	0.0153	2.267E-05	4.236E-03
45	2.1613	1.828E-05	3.655E-03	95	0.1774	2.143E-05	3.281E-03	145	0.0146	2.267E-05	4.236E-03
46	2.0559	1.838E-05	3.642E-03	96	0.1688	2.149E-05	3.276E-03	146	0.0139	2.267E-05	4.236E-03
47	1.9557	1.848E-05	3.631E-03	97	0.1606	2.153E-05	3.270E-03	147	0.0132	2.267E-05	4.236E-03
48	1.8603	1.858E-05	3.620E-03	98	0.1527	2.159E-05	3.264E-03	148	0.0125	2.267E-05	4.236E-03
49	1.7696	1.868E-05	3.609E-03	99	0.1453	2.164E-05	3.258E-03	149	0.0119	2.267E-05	4.236E-03
50	1.6833	1.878E-05	3.598E-03	100	0.1382	2.169E-05	3.254E-03	150	0.0113	2.267E-05	4.236E-03

* ENERGY = LOWER BOUNDARY [MEV]
** ERROR X 100 = %

Table 3.3.15

ANGULAR FLUX OF LI2O SLAB TOF [THICKNESS=20 CM, ANGLE=24.9 DEG]

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.0116	0.000E+00	0.100E+01	51	0.1417	1.053E-06	0.620E-01	101	1.7259	2.073E-06	0.522E-01
2	0.0122	0.000E+00	0.100E+01	52	0.1489	1.079E-06	0.584E-01	102	1.8144	1.980E-06	0.503E-01
3	0.0129	0.000E+00	0.100E+01	53	0.1566	1.208E-06	0.522E-01	103	1.9074	1.946E-06	0.498E-01
4	0.0135	0.000E+00	0.100E+01	54	0.1646	1.228E-06	0.503E-01	104	2.0052	2.017E-06	0.473E-01
5	0.0142	0.000E+00	0.100E+01	55	0.1730	1.130E-06	0.524E-01	105	2.1080	2.123E-06	0.462E-01
6	0.0149	0.000E+00	0.100E+01	56	0.1819	1.064E-06	0.533E-01	106	2.2161	2.122E-06	0.468E-01
7	0.0157	0.000E+00	0.100E+01	57	0.1912	8.550E-07	0.652E-01	107	2.3297	2.234E-06	0.446E-01
8	0.0165	0.000E+00	0.100E+01	58	0.2010	6.809E-07	0.767E-01	108	2.4491	2.132E-06	0.440E-01
9	0.0173	0.000E+00	0.100E+01	59	0.2113	5.217E-07	0.938E-01	109	2.5747	1.921E-06	0.465E-01
10	0.0182	0.000E+00	0.100E+01	60	0.2222	3.538E-07	0.133E+00	110	2.7067	1.695E-06	0.499E-01
11	0.0192	0.000E+00	0.100E+01	61	0.2336	2.269E-07	0.197E+00	111	2.8455	1.942E-06	0.449E-01
12	0.0202	0.000E+00	0.100E+01	62	0.2456	1.426E-07	0.316E+00	112	2.9914	1.699E-06	0.488E-01
13	0.0212	0.000E+00	0.100E+01	63	0.2581	1.854E-07	0.237E+00	113	3.1447	1.500E-06	0.565E-01
14	0.0223	0.000E+00	0.100E+01	64	0.2714	3.426E-07	0.134E+00	114	3.3060	1.371E-06	0.575E-01
15	0.0234	0.000E+00	0.100E+01	65	0.2853	4.962E-07	0.959E-01	115	3.4755	1.421E-06	0.547E-01
16	0.0246	0.000E+00	0.100E+01	66	0.2999	6.078E-07	0.801E-01	116	3.6537	1.321E-06	0.613E-01
17	0.0259	0.000E+00	0.100E+01	67	0.3153	8.411E-07	0.617E-01	117	3.8410	1.148E-06	0.723E-01
18	0.0272	0.000E+00	0.100E+01	68	0.3314	9.403E-07	0.566E-01	118	4.0379	1.162E-06	0.663E-01
19	0.0286	0.000E+00	0.100E+01	69	0.3485	8.237E-07	0.645E-01	119	4.2450	1.286E-06	0.630E-01
20	0.0301	-2.910E-08	0.170E+01	70	0.3663	7.732E-07	0.672E-01	120	4.4626	1.263E-06	0.649E-01
21	0.0316	-3.733E-07	0.171E+01	71	0.3851	6.923E-07	0.726E-01	121	4.6914	1.367E-06	0.602E-01
22	0.0332	5.414E-07	0.989E+00	72	0.4048	5.713E-07	0.748E-01	122	4.9319	1.231E-06	0.678E-01
23	0.0349	6.547E-07	0.751E+00	73	0.4256	6.302E-07	0.820E-01	123	5.1848	1.504E-06	0.583E-01
24	0.0367	2.056E-07	0.211E+01	74	0.4474	9.044E-07	0.611E-01	124	5.4506	1.510E-06	0.605E-01
25	0.0386	5.433E-07	0.752E+00	75	0.4703	1.262E-06	0.483E-01	125	5.7301	1.771E-06	0.554E-01
26	0.0406	5.742E-07	0.617E+00	76	0.4945	1.466E-06	0.427E-01	126	6.0239	1.558E-06	0.629E-01
27	0.0427	7.759E-07	0.425E+00	77	0.5198	1.700E-06	0.390E-01	127	6.3327	1.718E-06	0.609E-01
28	0.0449	8.023E-07	0.406E+00	78	0.5465	1.328E-06	0.366E-01	128	6.6574	2.161E-06	0.492E-01
29	0.0472	5.211E-07	0.569E+00	79	0.5745	1.901E-06	0.353E-01	129	6.9988	2.301E-06	0.511E-01
30	0.0496	4.631E-07	0.551E+00	80	0.6040	1.959E-06	0.341E-01	130	7.3576	2.684E-06	0.472E-01
31	0.0521	7.350E-07	0.320E+00	81	0.6349	1.961E-06	0.355E-01	131	7.7349	2.666E-06	0.493E-01
32	0.0548	3.733E-07	0.526E+00	82	0.6675	2.029E-06	0.349E-01	132	8.1314	2.887E-06	0.480E-01
33	0.0576	4.068E-07	0.438E+00	83	0.7017	2.018E-06	0.362E-01	133	8.5483	2.825E-06	0.488E-01
34	0.0606	8.119E-07	0.198E+00	84	0.7377	2.086E-06	0.350E-01	134	8.9866	2.825E-06	0.512E-01
35	0.0637	9.451E-07	0.154E+00	85	0.7755	1.884E-06	0.375E-01	135	9.4473	3.271E-06	0.467E-01
36	0.0669	7.688E-07	0.166E+00	86	0.8152	1.787E-06	0.389E-01	136	9.9317	2.746E-06	0.528E-01
37	0.0703	6.093E-07	0.197E+00	87	0.8570	1.505E-06	0.459E-01	137	10.4410	2.057E-06	0.639E-01
38	0.0740	5.990E-07	0.163E+00	88	0.9010	1.246E-06	0.510E-01	138	10.9760	2.295E-06	0.588E-01
39	0.0777	7.448E-07	0.139E+00	89	0.9472	1.025E-06	0.632E-01	139	11.5390	2.839E-06	0.529E-01
40	0.0817	6.604E-07	0.147E+00	90	0.9957	1.009E-06	0.654E-01	140	12.1310	4.580E-06	0.383E-01
41	0.0859	7.326E-07	0.126E+00	91	1.0468	1.251E-06	0.564E-01	141	12.7530	9.592E-06	0.257E-01
42	0.0903	6.226E-07	0.139E+00	92	1.1005	1.539E-06	0.434E-01	142	13.4060	2.350E-05	0.160E-01
43	0.0950	8.632E-07	0.996E-01	93	1.1569	1.555E-06	0.486E-01	143	14.0940	4.912E-05	0.109E-01
44	0.0999	8.427E-07	0.953E-01	94	1.2162	1.563E-06	0.482E-01	144	14.8160	4.558E-05	0.111E-01
45	0.1050	8.615E-07	0.892E-01	95	1.2786	1.455E-06	0.522E-01	145	15.5760	8.556E-06	0.254E-01
46	0.1103	9.601E-07	0.766E-01	96	1.3441	1.748E-06	0.449E-01	146	16.3750	8.093E-07	0.868E-01
47	0.1160	9.504E-07	0.761E-01	97	1.4130	1.920E-06	0.436E-01	147	17.2140	2.031E-07	0.185E+00
48	0.1219	1.159E-06	0.617E-01	98	1.4855	1.835E-06	0.466E-01	148	18.0970	1.001E-08	0.141E+01
49	0.1282	1.107E-06	0.623E-01	99	1.5616	1.734E-06	0.476E-01	149	19.0250	1.179E-08	0.184E+01
50	0.1348	1.054E-06	0.651E-01	100	1.6417	1.866E-06	0.458E-01	150	20.0000	2.784E-09	0.442E+01

* ENERGY = [MEV]
** ERROR X 100 = %

Table 3.3.16

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESS=20 CM, ANGLE=24.9 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.5062	1.592E-10	1.000E+02	51	1.6012	1.102E-05	5.117E-03	101	0.1314	1.401E-05	4.331E-03
2	18.5549	7.287E-10	1.000E+02	52	1.5231	1.111E-05	5.090E-03	102	0.1250	1.406E-05	4.321E-03
3	17.6499	1.629E-09	1.000E+02	53	1.4488	1.120E-05	5.063E-03	103	0.1189	1.412E-05	4.311E-03
4	16.7891	1.178E-08	2.196E-01	54	1.3781	1.130E-05	5.034E-03	104	0.1131	1.417E-05	4.304E-03
5	15.9703	5.225E-08	8.349E-02	55	1.3109	1.138E-05	5.007E-03	105	0.1076	1.422E-05	4.297E-03
6	15.1914	4.801E-07	2.440E-02	56	1.2470	1.146E-05	4.986E-03	106	0.1024	1.426E-05	4.292E-03
7	14.4505	2.759E-06	1.010E-02	57	1.1862	1.153E-05	4.963E-03	107	0.0974	1.430E-05	4.289E-03
8	13.7453	5.215E-06	7.377E-03	58	1.1283	1.161E-05	4.941E-03	108	0.0926	1.435E-05	4.287E-03
9	13.0754	6.390E-06	6.699E-03	59	1.0733	1.169E-05	4.918E-03	109	0.0881	1.438E-05	4.288E-03
10	12.4377	6.870E-06	6.485E-03	60	1.0209	1.175E-05	4.901E-03	110	0.0838	1.441E-05	4.289E-03
11	11.8311	7.099E-06	6.396E-03	61	0.9712	1.180E-05	4.888E-03	111	0.0797	1.445E-05	4.292E-03
12	11.2541	7.241E-06	6.356E-03	62	0.9238	1.185E-05	4.875E-03	112	0.0758	1.448E-05	4.296E-03
13	10.7052	7.355E-06	6.324E-03	63	0.8787	1.191E-05	4.857E-03	113	0.0721	1.451E-05	4.304E-03
14	10.1831	7.458E-06	6.299E-03	64	0.8359	1.199E-05	4.835E-03	114	0.0686	1.455E-05	4.314E-03
15	9.6865	7.596E-06	6.258E-03	65	0.7951	1.208E-05	4.808E-03	115	0.0653	1.458E-05	4.326E-03
16	9.2141	7.759E-06	6.205E-03	66	0.7563	1.217E-05	4.779E-03	116	0.0621	1.463E-05	4.340E-03
17	8.7647	7.900E-06	6.162E-03	67	0.7195	1.228E-05	4.748E-03	117	0.0591	1.467E-05	4.362E-03
18	8.3372	8.042E-06	6.114E-03	68	0.6844	1.238E-05	4.719E-03	118	0.0562	1.469E-05	4.398E-03
19	7.9306	8.186E-06	6.066E-03	69	0.6510	1.248E-05	4.689E-03	119	0.0534	1.471E-05	4.443E-03
20	7.5438	8.319E-06	6.020E-03	70	0.6192	1.258E-05	4.661E-03	120	0.0508	1.475E-05	4.503E-03
21	7.1759	8.453E-06	5.972E-03	71	0.5890	1.268E-05	4.632E-03	121	0.0484	1.477E-05	4.578E-03
22	6.8260	8.569E-06	5.932E-03	72	0.5603	1.277E-05	4.605E-03	122	0.0460	1.480E-05	4.679E-03
23	6.4930	8.677E-06	5.890E-03	73	0.5330	1.286E-05	4.580E-03	123	0.0437	1.484E-05	4.793E-03
24	6.1764	8.762E-06	5.862E-03	74	0.5070	1.295E-05	4.557E-03	124	0.0416	1.488E-05	4.907E-03
25	5.8752	8.840E-06	5.837E-03	75	0.4823	1.302E-05	4.538E-03	125	0.0396	1.490E-05	5.040E-03
26	5.5886	8.929E-06	5.805E-03	76	0.4587	1.308E-05	4.522E-03	126	0.0377	1.493E-05	5.204E-03
27	5.3161	9.004E-06	5.779E-03	77	0.4364	1.313E-05	4.511E-03	127	0.0358	1.494E-05	5.400E-03
28	5.0568	9.080E-06	5.751E-03	78	0.4151	1.316E-05	4.505E-03	128	0.0341	1.497E-05	5.632E-03
29	4.8102	9.141E-06	5.731E-03	79	0.3948	1.319E-05	4.497E-03	129	0.0324	1.500E-05	5.899E-03
30	4.5756	9.209E-06	5.706E-03	80	0.3756	1.323E-05	4.489E-03	130	0.0308	1.498E-05	6.279E-03
31	4.3524	9.273E-06	5.684E-03	81	0.3573	1.327E-05	4.481E-03	131	0.0293	1.498E-05	6.281E-03
32	4.1402	9.337E-06	5.662E-03	82	0.3398	1.331E-05	4.471E-03	132	0.0279	1.498E-05	6.281E-03
33	3.9382	9.395E-06	5.642E-03	83	0.3233	1.336E-05	4.460E-03	133	0.0265	1.498E-05	6.281E-03
34	3.7462	9.452E-06	5.624E-03	84	0.3075	1.340E-05	4.450E-03	134	0.0252	1.498E-05	6.281E-03
35	3.5635	9.518E-06	5.602E-03	85	0.2925	1.343E-05	4.444E-03	135	0.0240	1.498E-05	6.281E-03
36	3.3897	9.590E-06	5.579E-03	86	0.2782	1.345E-05	4.439E-03	136	0.0228	1.498E-05	6.281E-03
37	3.2244	9.658E-06	5.560E-03	87	0.2647	1.347E-05	4.437E-03	137	0.0217	1.498E-05	6.281E-03
38	3.0671	9.733E-06	5.539E-03	88	0.2518	1.348E-05	4.437E-03	138	0.0207	1.498E-05	6.281E-03
39	2.9175	9.812E-06	5.493E-03	89	0.2395	1.349E-05	4.437E-03	139	0.0197	1.498E-05	6.281E-03
40	2.7752	9.915E-06	5.457E-03	90	0.2278	1.350E-05	4.437E-03	140	0.0187	1.498E-05	6.281E-03
41	2.6399	1.000E-05	5.427E-03	91	0.2167	1.352E-05	4.434E-03	141	0.0178	1.498E-05	6.281E-03
42	2.5111	1.010E-05	5.394E-03	92	0.2061	1.354E-05	4.430E-03	142	0.0169	1.498E-05	6.281E-03
43	2.3887	1.020E-05	5.357E-03	93	0.1961	1.358E-05	4.423E-03	143	0.0161	1.498E-05	6.281E-03
44	2.2722	1.031E-05	5.321E-03	94	0.1865	1.362E-05	4.413E-03	144	0.0153	1.498E-05	6.281E-03
45	2.1613	1.042E-05	5.289E-03	95	0.1774	1.367E-05	4.401E-03	145	0.0146	1.498E-05	6.281E-03
46	2.0559	1.053E-05	5.256E-03	96	0.1688	1.373E-05	4.388E-03	146	0.0139	1.498E-05	6.281E-03
47	1.9557	1.063E-05	5.225E-03	97	0.1605	1.379E-05	4.375E-03	147	0.0132	1.498E-05	6.281E-03
48	1.8603	1.072E-05	5.198E-03	98	0.1527	1.385E-05	4.361E-03	148	0.0125	1.498E-05	6.281E-03
49	1.7696	1.082E-05	5.171E-03	99	0.1453	1.390E-05	4.350E-03	149	0.0119	1.498E-05	6.281E-03
50	1.6833	1.093E-05	5.145E-03	100	0.1382	1.396E-05	4.340E-03	150	0.0113	1.498E-05	6.281E-03

* ENERGY = LOWER BOUNDARY [MEV]
** ERROR X 100 = %

Table 3.3.17

ANGULAR FLUX OF LI2O SLAB TOF [THICKNESS=20 CM, ANGLE=41.8 DEG]

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.0116	0.000E+00	0.100E+01	51	0.1417	1.022E-06	0.557E-01	101	1.7259	1.855E-06	0.498E-01
2	0.0122	0.000E+00	0.100E+01	52	0.1489	1.055E-06	0.543E-01	102	1.8144	1.646E-06	0.549E-01
3	0.0129	0.000E+00	0.100E+01	53	0.1566	1.076E-06	0.531E-01	103	1.9074	1.588E-06	0.551E-01
4	0.0135	0.000E+00	0.100E+01	54	0.1646	9.852E-07	0.559E-01	104	2.0052	1.653E-06	0.546E-01
5	0.0142	0.000E+00	0.100E+01	55	0.1730	1.044E-06	0.512E-01	105	2.1080	1.831E-06	0.493E-01
6	0.0149	0.000E+00	0.100E+01	56	0.1819	8.312E-07	0.603E-01	106	2.2161	1.925E-06	0.462E-01
7	0.0157	0.000E+00	0.100E+01	57	0.1912	7.996E-07	0.609E-01	107	2.3297	1.981E-06	0.456E-01
8	0.0165	0.000E+00	0.100E+01	58	0.2010	5.909E-07	0.794E-01	108	2.4491	1.819E-06	0.484E-01
9	0.0173	0.000E+00	0.100E+01	59	0.2113	4.276E-07	0.103E+00	109	2.5747	1.783E-06	0.486E-01
10	0.0182	0.000E+00	0.100E+01	60	0.2222	3.130E-07	0.137E+00	110	2.7067	1.647E-06	0.513E-01
11	0.0192	0.000E+00	0.100E+01	61	0.2336	2.391E-07	0.162E+00	111	2.8455	1.600E-06	0.500E-01
12	0.0202	0.000E+00	0.100E+01	62	0.2456	1.399E-07	0.276E+00	112	2.9914	1.549E-06	0.512E-01
13	0.0212	0.000E+00	0.100E+01	63	0.2581	1.805E-07	0.220E+00	113	3.1447	1.338E-06	0.529E-01
14	0.0223	0.000E+00	0.100E+01	64	0.2714	2.746E-07	0.150E+00	114	3.3060	1.274E-06	0.551E-01
15	0.0234	0.000E+00	0.100E+01	65	0.2853	4.697E-07	0.926E-01	115	3.4755	1.143E-06	0.602E-01
16	0.0246	0.000E+00	0.100E+01	66	0.2999	6.124E-07	0.745E-01	116	3.6537	1.169E-06	0.602E-01
17	0.0259	0.000E+00	0.100E+01	67	0.3153	6.967E-07	0.658E-01	117	3.8410	1.106E-06	0.615E-01
18	0.0272	0.000E+00	0.100E+01	68	0.3314	7.447E-07	0.641E-01	118	4.0379	1.177E-06	0.586E-01
19	0.0286	0.000E+00	0.100E+01	69	0.3485	6.762E-07	0.705E-01	119	4.2450	1.101E-06	0.617E-01
20	0.0301	0.000E+00	0.100E+01	70	0.3663	7.395E-07	0.621E-01	120	4.4626	1.060E-06	0.664E-01
21	0.0316	-1.215E-07	0.363E+01	71	0.3851	7.051E-07	0.655E-01	121	4.6914	1.237E-06	0.621E-01
22	0.0332	6.728E-03	0.572E+01	72	0.4048	5.546E-07	0.820E-01	122	4.9319	1.223E-06	0.603E-01
23	0.0349	-1.458E-07	0.301E+01	73	0.4256	6.154E-07	0.737E-01	123	5.1848	1.344E-06	0.596E-01
24	0.0367	5.180E-07	0.753E+00	74	0.4474	9.428E-07	0.528E-01	124	5.4506	1.319E-06	0.623E-01
25	0.0386	3.514E-07	0.987E+00	75	0.4703	1.268E-06	0.422E-01	125	5.7301	1.496E-06	0.558E-01
26	0.0406	7.757E-07	0.416E+00	76	0.4945	1.430E-06	0.404E-01	126	6.0239	1.451E-06	0.596E-01
27	0.0427	8.313E-07	0.345E+00	77	0.5198	1.537E-06	0.388E-01	127	6.3327	1.635E-06	0.550E-01
28	0.0449	4.320E-07	0.655E+00	78	0.5465	1.722E-06	0.350E-01	128	6.6574	1.819E-06	0.537E-01
29	0.0472	4.700E-07	0.520E+00	79	0.5745	1.770E-06	0.344E-01	129	6.9988	2.080E-06	0.503E-01
30	0.0496	9.129E-07	0.246E+00	80	0.6040	1.795E-06	0.345E-01	130	7.3576	2.069E-06	0.509E-01
31	0.0521	5.570E-07	0.370E+00	81	0.6349	1.778E-06	0.351E-01	131	7.7348	2.431E-06	0.478E-01
32	0.0548	7.240E-07	0.242E+00	82	0.6675	1.743E-06	0.367E-01	132	8.1314	2.496E-06	0.483E-01
33	0.0576	5.458E-07	0.295E+00	83	0.7017	1.697E-06	0.382E-01	133	8.5483	2.313E-06	0.521E-01
34	0.0606	5.652E-07	0.241E+00	84	0.7377	1.913E-06	0.336E-01	134	8.9866	2.351E-06	0.521E-01
35	0.0637	7.323E-07	0.176E+00	85	0.7755	1.836E-06	0.359E-01	135	9.4473	2.334E-06	0.519E-01
36	0.0669	5.513E-07	0.207E+00	86	0.8152	1.614E-06	0.391E-01	136	9.9317	1.735E-06	0.675E-01
37	0.0703	6.443E-07	0.164E+00	87	0.8570	1.341E-06	0.456E-01	137	10.4410	1.847E-06	0.660E-01
38	0.0740	7.572E-07	0.129E+00	88	0.9010	1.103E-06	0.535E-01	138	10.9760	1.919E-06	0.642E-01
39	0.0777	7.009E-07	0.133E+00	89	0.9472	9.999E-07	0.584E-01	139	11.5390	2.578E-06	0.527E-01
40	0.0817	6.122E-07	0.141E+00	90	0.9957	8.995E-07	0.670E-01	140	12.1310	4.191E-06	0.380E-01
41	0.0859	7.381E-07	0.104E+00	91	1.0465	1.202E-06	0.536E-01	141	12.7530	8.164E-06	0.261E-01
42	0.0903	7.128E-07	0.110E+00	92	1.1005	1.395E-06	0.432E-01	142	13.4060	1.359E-05	0.197E-01
43	0.0950	7.860E-07	0.951E-01	93	1.1569	1.471E-06	0.475E-01	143	14.0940	1.569E-05	0.179E-01
44	0.0998	7.809E-07	0.920E-01	94	1.2162	1.363E-06	0.510E-01	144	14.8160	8.262E-06	0.245E-01
45	0.1050	9.342E-07	0.753E-01	95	1.2786	1.432E-06	0.487E-01	145	15.5760	1.536E-06	0.560E-01
46	0.1107	9.669E-07	0.692E-01	96	1.3441	1.392E-06	0.537E-01	146	16.3750	1.239E-07	0.248E+00
47	0.1160	8.917E-07	0.722E-01	97	1.4130	1.590E-06	0.485E-01	147	17.2140	-9.047E-09	0.211E+01
48	0.1219	9.613E-07	0.667E-01	98	1.4855	1.610E-06	0.475E-01	148	18.0970	-5.501E-09	0.229E+01
49	0.1282	9.874E-07	0.639E-01	99	1.5616	1.551E-06	0.503E-01	149	19.0250	-6.503E-09	0.169E+01
50	0.1348	1.088E-06	0.556E-01	100	1.6417	1.608E-06	0.493E-01	150	20.0000	4.662E-09	0.234E+01

* ENERGY = [MEV].
** ERROR X 100 = %

Table 3.3.18

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESS=20 CM, ANGLE=41.8 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.5062	2.331E-10	1.000E+02	51	1.6012	5.954E-06	6.622E-03	101	0.1314	8.668E-06	5.115E-03
2	18.5549	-9.207E-11	1.000E+02	52	1.5231	6.031E-06	6.569E-03	102	0.1250	8.717E-06	5.099E-03
3	17.6499	-3.671E-10	1.000E+02	53	1.4488	6.112E-06	6.512E-03	103	0.1189	8.765E-06	5.084E-03
4	16.7891	-8.195E-10	1.000E+02	54	1.3781	6.191E-06	6.459E-03	104	0.1131	8.810E-06	5.072E-03
5	15.9703	5.373E-09	1.000E+02	55	1.3109	6.261E-06	6.415E-03	105	0.1076	8.858E-06	5.058E-03
6	15.1914	2.215E-08	5.806E-02	56	1.2470	6.332E-06	6.366E-03	106	0.1024	8.905E-06	5.047E-03
7	14.4505	4.952E-07	2.259E-02	57	1.1862	6.400E-06	6.322E-03	107	0.0974	8.944E-06	5.041E-03
8	13.7456	1.280E-06	1.405E-02	58	1.1283	6.474E-06	6.273E-03	108	0.0926	8.983E-06	5.036E-03
9	13.0754	1.959E-06	1.144E-02	59	1.0733	6.544E-06	6.228E-03	109	0.0881	9.019E-06	5.035E-03
10	12.4377	2.368E-06	1.049E-02	60	1.0209	6.604E-06	6.190E-03	110	0.0838	9.058E-06	5.033E-03
11	11.8311	2.577E-06	1.012E-02	61	0.9712	6.649E-06	6.165E-03	111	0.0797	9.089E-06	5.039E-03
12	11.2541	2.706E-06	9.957E-03	62	0.9238	6.699E-06	6.134E-03	112	0.0758	9.124E-06	5.046E-03
13	10.7052	2.802E-06	9.864E-03	63	0.8787	6.754E-06	6.100E-03	113	0.0721	9.162E-06	5.053E-03
14	10.1831	2.894E-06	9.779E-03	64	0.8359	6.821E-06	6.057E-03	114	0.0686	9.194E-06	5.068E-03
15	9.6865	2.981E-06	9.696E-03	65	0.7951	6.902E-06	6.003E-03	115	0.0653	9.221E-06	5.091E-03
16	9.2141	3.098E-06	9.535E-03	66	0.7563	6.994E-06	5.943E-03	116	0.0621	9.258E-06	5.118E-03
17	8.7647	3.215E-06	9.330E-03	67	0.7195	7.089E-06	5.880E-03	117	0.0591	9.286E-06	5.155E-03
18	8.3372	3.331E-06	9.233E-03	68	0.6844	7.174E-06	5.828E-03	118	0.0562	9.314E-06	5.214E-03
19	7.9306	3.456E-06	9.066E-03	69	0.6510	7.261E-06	5.775E-03	119	0.0534	9.350E-06	5.277E-03
20	7.5433	3.577E-06	8.910E-03	70	0.6192	7.350E-06	5.721E-03	120	0.0508	9.378E-06	5.375E-03
21	7.1759	3.681E-06	8.777E-03	71	0.5890	7.440E-06	5.667E-03	121	0.0484	9.424E-06	5.482E-03
22	6.8260	3.735E-06	8.647E-03	72	0.5603	7.529E-06	5.615E-03	122	0.0460	9.447E-06	5.620E-03
23	6.4930	3.876E-06	8.537E-03	73	0.5330	7.615E-06	5.566E-03	123	0.0437	9.469E-06	5.802E-03
24	6.1764	3.953E-06	8.430E-03	74	0.5070	7.692E-06	5.524E-03	124	0.0416	9.510E-06	5.971E-03
25	5.8752	4.030E-06	8.355E-03	75	0.4823	7.763E-06	5.486E-03	125	0.0396	9.549E-06	6.185E-03
26	5.5886	4.105E-06	8.266E-03	76	0.4587	7.826E-06	5.452E-03	126	0.0377	9.567E-06	6.434E-03
27	5.3161	4.171E-06	8.194E-03	77	0.4364	7.874E-06	5.429E-03	127	0.0358	9.592E-06	6.731E-03
28	5.0569	4.238E-06	8.120E-03	78	0.4151	7.904E-06	5.415E-03	128	0.0341	9.585E-06	7.115E-03
29	4.8102	4.299E-06	8.050E-03	79	0.3948	7.932E-06	5.404E-03	129	0.0324	9.590E-06	7.574E-03
30	4.5756	4.361E-06	7.985E-03	80	0.3756	7.967E-06	5.388E-03	130	0.0308	9.583E-06	7.920E-03
31	4.3524	4.414E-06	7.929E-03	81	0.3573	8.004E-06	5.371E-03	131	0.0293	9.583E-06	7.920E-03
32	4.1402	4.469E-06	7.868E-03	82	0.3398	8.038E-06	5.356E-03	132	0.0279	9.583E-06	7.920E-03
33	3.9382	4.528E-06	7.803E-03	83	0.3233	8.075E-06	5.340E-03	133	0.0265	9.583E-06	7.920E-03
34	3.7462	4.583E-06	7.745E-03	84	0.3075	8.110E-06	5.324E-03	134	0.0252	9.583E-06	7.920E-03
35	3.5635	4.642E-06	7.685E-03	85	0.2925	8.141E-06	5.312E-03	135	0.0240	9.583E-06	7.920E-03
36	3.3897	4.699E-06	7.626E-03	86	0.2782	8.164E-06	5.303E-03	136	0.0228	9.583E-06	7.920E-03
37	3.2244	4.762E-06	7.560E-03	87	0.2647	8.179E-06	5.300E-03	137	0.0217	9.583E-06	7.920E-03
38	3.0671	4.824E-06	7.491E-03	88	0.2518	8.187E-06	5.300E-03	138	0.0207	9.583E-06	7.920E-03
39	2.9176	4.907E-06	7.417E-03	89	0.2395	8.194E-06	5.301E-03	139	0.0197	9.583E-06	7.920E-03
40	2.7752	4.937E-06	7.342E-03	90	0.2278	8.206E-06	5.298E-03	140	0.0187	9.583E-06	7.920E-03
41	2.6399	5.069E-06	7.271E-03	91	0.2167	8.223E-06	5.294E-03	141	0.0178	9.583E-06	7.920E-03
42	2.5111	5.158E-06	7.194E-03	92	0.2061	8.243E-06	5.287E-03	142	0.0169	9.583E-06	7.920E-03
43	2.3887	5.249E-06	7.119E-03	93	0.1961	8.273E-06	5.276E-03	143	0.0161	9.583E-06	7.920E-03
44	2.2722	5.348E-06	7.038E-03	94	0.1865	8.313E-06	5.259E-03	144	0.0153	9.583E-06	7.920E-03
45	2.1613	5.445E-06	6.962E-03	95	0.1774	8.354E-06	5.241E-03	145	0.0146	9.583E-06	7.920E-03
46	2.0559	5.536E-06	6.895E-03	96	0.1688	8.406E-06	5.219E-03	146	0.0139	9.583E-06	7.920E-03
47	1.9557	5.619E-06	6.841E-03	97	0.1605	8.456E-06	5.198E-03	147	0.0132	9.583E-06	7.920E-03
48	1.8603	5.698E-06	6.790E-03	98	0.1527	8.509E-06	5.176E-03	148	0.0125	9.583E-06	7.920E-03
49	1.7696	5.780E-06	6.738E-03	99	0.1453	8.562E-06	5.155E-03	149	0.0119	9.583E-06	7.920E-03
50	1.6833	5.873E-06	6.679E-03	100	0.1382	8.613E-06	5.135E-03	150	0.0113	9.583E-06	7.920E-03

* ENERGY = LOWER BOUNDARY (MEV)
** ERROR X 100 = %

Table 3.3.19

ANGULAR FLUX OF LI2O SLAB TOP [THICKNESS=20 CM, ANGLE=66.8 DEG]

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.0116	0.000E+00	0.100E+01	51	0.1417	7.393E-07	0.799E-01	101	1.7259	1.238E-06	0.657E-01
2	0.0122	0.000E+00	0.100E+01	52	0.1489	8.180E-07	0.683E-01	102	1.8144	1.179E-06	0.663E-01
3	0.0129	0.000E+00	0.100E+01	53	0.1566	8.246E-07	0.681E-01	103	1.9074	1.121E-06	0.674E-01
4	0.0135	0.000E+00	0.100E+01	54	0.1646	8.839E-07	0.613E-01	104	2.0052	1.174E-06	0.646E-01
5	0.0142	0.000E+00	0.100E+01	55	0.1730	7.855E-07	0.666E-01	105	2.1080	1.275E-06	0.599E-01
6	0.0149	0.000E+00	0.100E+01	56	0.1819	6.368E-07	0.786E-01	106	2.2161	1.268E-06	0.620E-01
7	0.0157	0.000E+00	0.100E+01	57	0.1912	6.802E-07	0.718E-01	107	2.3297	1.359E-06	0.597E-01
8	0.0165	0.000E+00	0.100E+01	58	0.2010	6.533E-07	0.724E-01	108	2.4491	1.336E-06	0.596E-01
9	0.0173	0.000E+00	0.100E+01	59	0.2113	3.834E-07	0.126E+00	109	2.5747	1.342E-06	0.591E-01
10	0.0182	0.000E+00	0.100E+01	60	0.2222	3.059E-07	0.145E+00	110	2.7067	1.193E-06	0.636E-01
11	0.0192	0.000E+00	0.100E+01	61	0.2336	1.158E-07	0.377E+00	111	2.8455	1.150E-06	0.661E-01
12	0.0202	0.000E+00	0.100E+01	62	0.2456	2.169E-07	0.186E+00	112	2.9914	1.096E-06	0.668E-01
13	0.0212	0.000E+00	0.100E+01	63	0.2581	1.712E-07	0.244E+00	113	3.1447	1.023E-06	0.729E-01
14	0.0223	0.000E+00	0.100E+01	64	0.2714	1.054E-07	0.411E+00	114	3.3060	7.678E-07	0.987E-01
15	0.0234	0.000E+00	0.100E+01	65	0.2853	2.307E-07	0.194E+00	115	3.4755	8.671E-07	0.936E-01
16	0.0246	0.000E+00	0.100E+01	66	0.2999	3.912E-07	0.119E+00	116	3.6537	7.358E-07	0.105E+00
17	0.0259	0.000E+00	0.100E+01	67	0.3153	4.895E-07	0.927E-01	117	3.8410	7.767E-07	0.986E-01
18	0.0272	0.000E+00	0.100E+01	68	0.3314	5.850E-07	0.818E-01	118	4.0379	7.149E-07	0.117E+00
19	0.0286	0.000E+00	0.100E+01	69	0.3485	6.767E-07	0.699E-01	119	4.2450	9.988E-07	0.801E-01
20	0.0301	0.000E+00	0.100E+01	70	0.3663	5.940E-07	0.813E-01	120	4.4626	8.127E-07	0.101E+00
21	0.0316	0.000E+00	0.100E+01	71	0.3851	5.779E-07	0.829E-01	121	4.6914	6.612E-07	0.119E+00
22	0.0332	8.986E-08	0.394E+01	72	0.4049	4.380E-07	0.105E+00	122	4.9319	8.202E-07	0.913E-01
23	0.0349	8.534E-07	0.764E+00	73	0.4256	4.133E-07	0.112E+00	123	5.1848	8.439E-07	0.897E-01
24	0.0367	7.734E-07	0.573E+00	74	0.4474	5.067E-07	0.928E-01	124	5.4506	8.952E-07	0.847E-01
25	0.0386	4.622E-07	0.881E+00	75	0.4703	7.003E-07	0.747E-01	125	5.7301	9.403E-07	0.814E-01
26	0.0406	9.007E-07	0.644E+00	76	0.4945	1.057E-06	0.503E-01	126	6.0239	9.080E-07	0.905E-01
27	0.0427	9.656E-07	0.348E+00	77	0.5198	1.097E-06	0.518E-01	127	6.3327	1.112E-06	0.770E-01
28	0.0449	3.287E-07	0.946E+00	78	0.5465	1.121E-06	0.514E-01	128	6.6574	1.182E-06	0.785E-01
29	0.0472	4.312E-07	0.677E+00	79	0.5745	1.348E-06	0.415E-01	129	6.9988	1.323E-06	0.731E-01
30	0.0496	4.025E-07	0.650E+00	80	0.6040	1.310E-06	0.433E-01	130	7.3576	1.291E-06	0.827E-01
31	0.0521	5.796E-07	0.386E+00	81	0.6349	1.259E-06	0.465E-01	131	7.7348	1.223E-06	0.923E-01
32	0.0548	6.508E-07	0.305E+00	82	0.6675	1.328E-06	0.445E-01	132	8.1314	1.322E-06	0.909E-01
33	0.0576	5.432E-07	0.525E+00	83	0.7017	1.448E-06	0.405E-01	133	8.5483	1.400E-06	0.906E-01
34	0.0606	3.291E-07	0.491E+00	84	0.7377	1.284E-06	0.467E-01	134	8.9866	1.114E-06	0.110E+00
35	0.0637	4.290E-07	0.337E+00	85	0.7755	1.318E-06	0.457E-01	135	9.4473	1.425E-06	0.915E-01
36	0.0669	5.636E-07	0.231E+00	86	0.8152	1.294E-06	0.467E-01	136	9.9317	1.118E-06	0.121E+00
37	0.0703	5.728E-07	0.204E+00	87	0.8570	1.151E-06	0.517E-01	137	10.4410	1.086E-06	0.135E+00
38	0.0740	3.262E-07	0.328E+00	88	0.9010	1.044E-06	0.565E-01	138	10.9760	1.519E-06	0.102E+00
39	0.0777	6.411E-07	0.159E+00	89	0.9472	7.729E-07	0.756E-01	139	11.5390	1.656E-06	0.981E-01
40	0.0817	5.177E-07	0.181E+00	90	0.9957	7.473E-07	0.807E-01	140	12.1310	1.936E-06	0.843E-01
41	0.0859	5.046E-07	0.174E+00	91	1.0468	7.793E-07	0.796E-01	141	12.7530	2.449E-06	0.688E-01
42	0.0903	6.596E-07	0.124E+00	92	1.1005	9.690E-07	0.730E-01	142	13.4060	3.257E-06	0.515E-01
43	0.0950	4.736E-07	0.165E+00	93	1.1569	1.133E-06	0.560E-01	143	14.0940	3.422E-06	0.459E-01
44	0.0998	6.576E-07	0.114E+00	94	1.2162	1.068E-06	0.622E-01	144	14.8160	2.339E-06	0.533E-01
45	0.1050	7.606E-07	0.924E-01	95	1.2786	9.933E-07	0.694E-01	145	15.5760	8.274E-07	0.916E-01
46	0.1103	6.704E-07	0.103E+00	96	1.3441	1.040E-06	0.675E-01	146	16.3750	2.947E-07	0.183E+00
47	0.1160	7.151E-07	0.951E-01	97	1.4130	1.201E-06	0.605E-01	147	17.2140	1.665E-08	0.204E+01
48	0.1219	8.084E-07	0.732E-01	98	1.4855	1.297E-06	0.579E-01	148	18.0970	2.219E-08	0.132E+01
49	0.1282	8.359E-07	0.742E-01	99	1.5616	1.164E-06	0.677E-01	149	19.0250	-2.559E-08	0.112E+01
50	0.1348	7.324E-07	0.797E-01	100	1.6417	1.299E-06	0.615E-01	150	20.0000	-1.024E-08	0.232E+01

* ENERGY = EV/EV]

** ERROR X 100 = %

Table 3.3.20

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESS=20 CM, ANGLE=66.8 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.5062	-3.422E-10	1.000E+02	51	1.6012	2.955E-06	1.199E-02	101	0.1314	4.995E-06	8.123E-03
2	18.5549	-1.822E-09	1.000E+02	52	1.5231	3.013E-06	1.183E-02	102	0.1250	5.036E-06	8.079E-03
3	17.6499	-7.121E-10	1.000E+02	53	1.4488	3.078E-06	1.165E-02	103	0.1189	5.077E-06	8.038E-03
4	16.7891	1.206E-10	1.000E+02	54	1.3781	3.138E-06	1.148E-02	104	0.1131	5.113E-06	8.010E-03
5	15.9703	1.486E-08	2.689E-01	55	1.3109	3.190E-06	1.135E-02	105	0.1076	5.146E-06	7.986E-03
6	15.1914	5.622E-03	9.794E-02	56	1.2470	3.239E-06	1.122E-02	106	0.1024	5.184E-06	7.956E-03
7	14.4505	1.732E-07	4.804E-02	57	1.1862	3.293E-06	1.109E-02	107	0.0974	5.217E-06	7.939E-03
8	13.7458	3.443E-07	3.322E-02	58	1.1283	3.349E-06	1.094E-02	108	0.0926	5.241E-06	7.939E-03
9	13.0754	5.071E-07	2.796E-02	59	1.0733	3.393E-06	1.084E-02	109	0.0881	5.274E-06	7.927E-03
10	12.4377	6.295E-07	2.620E-02	60	1.0209	3.432E-06	1.076E-02	110	0.0838	5.300E-06	7.933E-03
11	11.8311	7.263E-07	2.533E-02	61	0.9712	3.469E-06	1.068E-02	111	0.0797	5.326E-06	7.943E-03
12	11.2541	8.091E-07	2.486E-02	62	0.9238	3.508E-06	1.059E-02	112	0.0758	5.358E-06	7.952E-03
13	10.7052	8.351E-07	2.434E-02	63	0.8787	3.560E-06	1.047E-02	113	0.0721	5.374E-06	7.990E-03
14	10.1831	9.394E-07	2.422E-02	64	0.8359	3.618E-06	1.034E-02	114	0.0686	5.403E-06	8.020E-03
15	9.6865	9.953E-07	2.385E-02	65	0.7951	3.682E-06	1.019E-02	115	0.0653	5.431E-06	8.069E-03
16	9.2141	1.067E-06	2.303E-02	66	0.7563	3.748E-06	1.004E-02	116	0.0621	5.452E-06	8.145E-03
17	8.7647	1.122E-06	2.260E-02	67	0.7195	3.812E-06	9.903E-03	117	0.0591	5.469E-06	8.254E-03
18	8.3372	1.192E-06	2.193E-02	68	0.6844	3.885E-06	9.748E-03	118	0.0562	5.496E-06	8.369E-03
19	7.9306	1.258E-06	2.132E-02	69	0.6510	3.951E-06	9.613E-03	119	0.0534	5.528E-06	8.511E-03
20	7.5438	1.320E-06	2.078E-02	70	0.6192	4.014E-06	9.490E-03	120	0.0508	5.557E-06	8.703E-03
21	7.1759	1.384E-06	2.018E-02	71	0.5890	4.080E-06	9.364E-03	121	0.0484	5.578E-06	8.983E-03
22	6.8260	1.450E-06	1.955E-02	72	0.5603	4.147E-06	9.236E-03	122	0.0460	5.599E-06	9.320E-03
23	6.4930	1.509E-06	1.903E-02	73	0.5330	4.203E-06	9.139E-03	123	0.0437	5.616E-06	9.696E-03
24	6.1764	1.565E-06	1.856E-02	74	0.5070	4.258E-06	9.046E-03	124	0.0416	5.664E-06	1.006E-02
25	5.8752	1.610E-06	1.821E-02	75	0.4823	4.311E-06	8.956E-03	125	0.0396	5.692E-06	1.050E-02
26	5.5886	1.657E-06	1.735E-02	76	0.4587	4.346E-06	8.904E-03	126	0.0377	5.715E-06	1.105E-02
27	5.3161	1.702E-06	1.752E-02	77	0.4364	4.371E-06	8.869E-03	127	0.0358	5.754E-06	1.163E-02
28	5.0568	1.744E-06	1.723E-02	78	0.4151	4.392E-06	8.843E-03	128	0.0341	5.786E-06	1.234E-02
29	4.8102	1.785E-06	1.697E-02	79	0.3948	4.414E-06	8.814E-03	129	0.0324	5.791E-06	1.271E-02
30	4.5756	1.818E-06	1.680E-02	80	0.3756	4.443E-06	8.774E-03	130	0.0308	5.791E-06	1.271E-02
31	4.3524	1.859E-06	1.658E-02	81	0.3573	4.472E-06	8.732E-03	131	0.0293	5.791E-06	1.271E-02
32	4.1402	1.909E-06	1.628E-02	82	0.3398	4.506E-06	8.682E-03	132	0.0279	5.791E-06	1.271E-02
33	3.9382	1.945E-06	1.613E-02	83	0.3233	4.535E-06	8.643E-03	133	0.0265	5.791E-06	1.271E-02
34	3.7462	1.984E-06	1.593E-02	84	0.3075	4.560E-06	8.611E-03	134	0.0252	5.791E-06	1.271E-02
35	3.5635	2.020E-06	1.576E-02	85	0.2925	4.579E-06	8.589E-03	135	0.0240	5.791E-06	1.271E-02
36	3.3897	2.064E-06	1.555E-02	86	0.2782	4.591E-06	8.581E-03	136	0.0228	5.791E-06	1.271E-02
37	3.2244	2.102E-06	1.537E-02	87	0.2647	4.596E-06	8.584E-03	137	0.0217	5.791E-06	1.271E-02
38	3.0671	2.153E-06	1.511E-02	88	0.2518	4.605E-06	8.580E-03	138	0.0207	5.791E-06	1.271E-02
39	2.9173	2.208E-06	1.483E-02	89	0.2395	4.616E-06	8.571E-03	139	0.0197	5.791E-06	1.271E-02
40	2.7752	2.265E-06	1.455E-02	90	0.2278	4.621E-06	8.574E-03	140	0.0187	5.791E-06	1.271E-02
41	2.6399	2.325E-06	1.427E-02	91	0.2167	4.637E-06	8.559E-03	141	0.0178	5.791E-06	1.271E-02
42	2.5111	2.392E-06	1.397E-02	92	0.2061	4.656E-06	8.539E-03	142	0.0169	5.791E-06	1.271E-02
43	2.3887	2.459E-06	1.368E-02	93	0.1961	4.689E-06	8.495E-03	143	0.0161	5.791E-06	1.271E-02
44	2.2722	2.527E-06	1.341E-02	94	0.1865	4.723E-06	8.449E-03	144	0.0153	5.791E-06	1.271E-02
45	2.1613	2.590E-06	1.317E-02	95	0.1774	4.754E-06	8.409E-03	145	0.0146	5.791E-06	1.271E-02
46	2.0559	2.654E-06	1.293E-02	96	0.1688	4.794E-06	8.358E-03	146	0.0139	5.791E-06	1.271E-02
47	1.9557	2.713E-06	1.273E-02	97	0.1605	4.838E-06	8.301E-03	147	0.0132	5.791E-06	1.271E-02
48	1.8603	2.769E-06	1.255E-02	98	0.1527	4.879E-06	8.251E-03	148	0.0125	5.791E-06	1.271E-02
49	1.7696	2.822E-06	1.236E-02	99	0.1453	4.920E-06	8.202E-03	149	0.0119	5.791E-06	1.271E-02
50	1.6833	2.890E-06	1.216E-02	100	0.1382	4.957E-06	8.162E-03	150	0.0113	5.791E-06	1.271E-02

* ENERGY = LOWER BOUNDARY [MEV]

** ERROR X 100 = %

Table 3.3.21

ANGULAR FLUX OF LI2O SLAB TOP (THICKNESS=40 CM, ANGLE=0.0 DEG)

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.0116	0.000E+00	0.100E+01	51	0.1417	5.468E-07	0.172E+00	101	1.7259	7.440E-07	0.128E+00
2	0.0122	0.000E+00	0.100E+01	52	0.1489	5.707E-07	0.155E+00	102	1.8144	5.692E-07	0.152E+00
3	0.0129	0.000E+00	0.100E+01	53	0.1566	6.397E-07	0.130E+00	103	1.9074	6.195E-07	0.145E+00
4	0.0135	0.000E+00	0.100E+01	54	0.1646	5.071E-07	0.163E+00	104	2.0052	7.374E-07	0.116E+00
5	0.0142	0.000E+00	0.100E+01	55	0.1730	4.611E-07	0.180E+00	105	2.1080	8.390E-07	0.105E+00
6	0.0149	0.000E+00	0.100E+01	56	0.1819	4.056E-07	0.195E+00	106	2.2161	8.880E-07	0.102E+00
7	0.0157	0.000E+00	0.100E+01	57	0.1912	3.754E-07	0.195E+00	107	2.3297	7.226E-07	0.117E+00
8	0.0165	0.000E+00	0.100E+01	58	0.2010	1.770E-07	0.408E+00	108	2.4491	7.476E-07	0.110E+00
9	0.0173	0.000E+00	0.100E+01	59	0.2113	2.632E-07	0.249E+00	109	2.5747	6.190E-07	0.119E+00
10	0.0182	0.000E+00	0.100E+01	60	0.2222	1.662E-07	0.397E+00	110	2.7067	4.718E-07	0.170E+00
11	0.0192	0.000E+00	0.100E+01	61	0.2336	5.182E-08	0.123E+01	111	2.8455	5.788E-07	0.113E+00
12	0.0202	0.000E+00	0.100E+01	62	0.2456	1.369E-07	0.459E+00	112	2.9914	4.040E-07	0.172E+00
13	0.0212	0.000E+00	0.100E+01	63	0.2581	1.694E-07	0.368E+00	113	3.1447	2.922E-07	0.196E+00
14	0.0223	0.000E+00	0.100E+01	64	0.2714	1.171E-07	0.557E+00	114	3.3060	2.244E-07	0.327E+00
15	0.0234	0.000E+00	0.100E+01	65	0.2853	1.703E-07	0.402E+00	115	3.4755	4.069E-07	0.159E+00
16	0.0246	0.000E+00	0.100E+01	66	0.2999	2.296E-07	0.299E+00	116	3.6537	3.499E-07	0.195E+00
17	0.0259	0.000E+00	0.100E+01	67	0.3153	2.378E-07	0.283E+00	117	3.8410	3.890E-07	0.178E+00
18	0.0272	0.000E+00	0.100E+01	68	0.3314	4.035E-07	0.164E+00	118	4.0379	3.905E-07	0.175E+00
19	0.0286	1.933E-07	0.142E+01	69	0.3485	3.223E-07	0.202E+00	119	4.2450	3.300E-07	0.170E+00
20	0.0301	1.332E-06	0.100E+01	70	0.3663	2.674E-07	0.255E+00	120	4.4626	2.939E-07	0.212E+00
21	0.0316	1.602E-07	0.723E+01	71	0.3851	2.368E-07	0.287E+00	121	4.6914	3.612E-07	0.185E+00
22	0.0332	9.836E-07	0.998E+00	72	0.4048	3.414E-07	0.194E+00	122	4.9319	4.414E-07	0.161E+00
23	0.0349	2.231E-07	0.397E+01	73	0.4256	3.565E-07	0.207E+00	123	5.1848	4.769E-07	0.154E+00
24	0.0367	-2.983E-07	0.271E+01	74	0.4474	5.144E-07	0.147E+00	124	5.4506	4.273E-07	0.189E+00
25	0.0386	-4.716E-07	0.155E+01	75	0.4703	6.667E-07	0.108E+00	125	5.7301	4.188E-07	0.180E+00
26	0.0406	7.690E-07	0.850E+00	76	0.4945	6.994E-07	0.106E+00	126	6.0239	4.813E-07	0.146E+00
27	0.0427	-6.569E-08	0.906E+01	77	0.5198	6.137E-07	0.118E+00	127	6.3327	5.005E-07	0.180E+00
28	0.0449	9.724E-07	0.574E+00	78	0.5465	7.336E-07	0.103E+00	128	6.6574	7.198E-07	0.128E+00
29	0.0472	3.424E-07	0.148E+01	79	0.5745	9.520E-07	0.774E-01	129	6.9988	6.494E-07	0.153E+00
30	0.0496	6.544E-07	0.713E+00	80	0.6040	8.144E-07	0.921E-01	130	7.3576	7.397E-07	0.131E+00
31	0.0521	7.251E-07	0.551E+00	81	0.6349	8.784E-07	0.855E-01	131	7.7348	6.741E-07	0.164E+00
32	0.0548	8.027E-07	0.435E+00	82	0.6675	7.657E-07	0.981E-01	132	8.1314	7.181E-07	0.161E+00
33	0.0576	4.679E-07	0.634E+00	83	0.7017	6.476E-07	0.113E+00	133	8.5483	8.527E-07	0.128E+00
34	0.0606	5.768E-07	0.474E+00	84	0.7377	6.192E-07	0.127E+00	134	8.9866	7.620E-07	0.162E+00
35	0.0637	8.627E-07	0.230E+00	85	0.7755	8.206E-07	0.896E-01	135	9.4473	9.331E-07	0.128E+00
36	0.0669	5.607E-07	0.397E+00	86	0.8152	5.775E-07	0.128E+00	136	9.9317	1.017E-06	0.107E+00
37	0.0703	6.635E-07	0.299E+00	87	0.8570	3.941E-07	0.188E+00	137	10.4410	9.963E-07	0.116E+00
38	0.0740	5.691E-07	0.305E+00	88	0.9010	3.700E-07	0.192E+00	138	10.9760	9.557E-07	0.132E+00
39	0.0777	7.421E-07	0.222E+00	89	0.9472	2.299E-07	0.320E+00	139	11.5390	1.050E-06	0.114E+00
40	0.0817	5.769E-07	0.268E+00	90	0.9957	3.051E-07	0.249E+00	140	12.1310	2.093E-06	0.697E-01
41	0.0859	3.239E-07	0.453E+00	91	1.0468	5.685E-07	0.125E+00	141	12.7530	3.236E-06	0.555E-01
42	0.0903	5.937E-07	0.234E+00	92	1.1005	4.341E-07	0.184E+00	142	13.4060	6.382E-06	0.388E-01
43	0.0950	4.882E-07	0.266E+00	93	1.1569	4.629E-07	0.177E+00	143	14.0940	2.278E-05	0.194E-01
44	0.0998	6.579E-07	0.193E+00	94	1.2162	4.015E-07	0.209E+00	144	14.8160	6.993E-05	0.109E-01
45	0.1050	4.769E-07	0.255E+00	95	1.2786	4.558E-07	0.181E+00	145	15.5760	2.125E-05	0.195E-01
46	0.1103	6.598E-07	0.170E+00	96	1.3441	4.620E-07	0.188E+00	146	16.3750	1.210E-07	0.499E+00
47	0.1160	6.132E-07	0.180E+00	97	1.4130	7.308E-07	0.116E+00	147	17.2140	-2.479E-08	0.189E+01
48	0.1219	6.715E-07	0.150E+00	98	1.4855	5.276E-07	0.170E+00	148	18.0970	-2.222E-08	0.128E+01
49	0.1282	6.929E-07	0.143E+00	99	1.5616	5.325E-07	0.160E+00	149	19.0250	-7.484E-10	0.331E+02
50	0.1346	6.342E-07	0.146E+00	100	1.6417	6.350E-07	0.135E+00	150	20.0000	-2.859E-08	0.914E+00

* ENERGY = [MEV]
** ERROR X 100 = %

Table 3.3.22

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESS=40 CM, ANGLE=0.0 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.5062	-1.429E-09	1.000E+02	51	1.6012	7.507E-06	7.845E-03	101	0.1314	8.656E-06	7.470E-03
2	18.5549	-1.467E-09	1.000E+02	52	1.5231	7.534E-06	7.837E-03	102	0.1250	8.690E-06	7.462E-03
3	17.6499	-2.578E-09	1.000E+02	53	1.4488	7.560E-06	7.832E-03	103	0.1189	8.724E-06	7.456E-03
4	16.7891	-3.817E-09	1.000E+02	54	1.3781	7.597E-06	7.815E-03	104	0.1131	8.755E-06	7.456E-03
5	15.9703	2.231E-09	1.000E+02	55	1.3109	7.620E-06	7.812E-03	105	0.1076	8.788E-06	7.456E-03
6	15.1914	1.065E-06	1.994E-02	56	1.2470	7.643E-06	7.807E-03	106	0.1024	8.811E-06	7.468E-03
7	14.4505	4.561E-06	9.575E-03	57	1.1862	7.663E-06	7.806E-03	107	0.0974	8.844E-06	7.473E-03
8	13.7458	5.700E-06	8.587E-03	58	1.1283	7.686E-06	7.801E-03	108	0.0926	8.869E-06	7.488E-03
9	13.0754	6.019E-06	8.387E-03	59	1.0733	7.708E-06	7.796E-03	109	0.0881	8.898E-06	7.504E-03
10	12.4377	6.181E-06	8.296E-03	60	1.0209	7.736E-06	7.781E-03	110	0.0838	8.915E-06	7.535E-03
11	11.8311	6.286E-06	8.240E-03	61	0.9712	7.751E-06	7.781E-03	111	0.0797	8.943E-06	7.560E-03
12	11.2541	6.338E-06	8.226E-03	62	0.9238	7.763E-06	7.784E-03	112	0.0758	8.981E-06	7.585E-03
13	10.7052	6.386E-06	8.224E-03	63	0.8787	7.781E-06	7.779E-03	113	0.0721	9.009E-06	7.622E-03
14	10.1831	6.436E-06	8.209E-03	64	0.8359	7.801E-06	7.774E-03	114	0.0686	9.042E-06	7.673E-03
15	9.6865	6.487E-06	8.188E-03	65	0.7951	7.830E-06	7.760E-03	115	0.0653	9.070E-06	7.747E-03
16	9.2141	6.533E-06	8.181E-03	66	0.7563	7.871E-06	7.733E-03	116	0.0621	9.113E-06	7.823E-03
17	8.7647	6.571E-06	8.187E-03	67	0.7195	7.902E-06	7.719E-03	117	0.0591	9.142E-06	7.941E-03
18	8.3372	6.614E-06	8.177E-03	68	0.6844	7.934E-06	7.701E-03	118	0.0562	9.166E-06	8.084E-03
19	7.9306	6.650E-06	8.179E-03	69	0.6510	7.973E-06	7.679E-03	119	0.0534	9.206E-06	8.267E-03
20	7.5438	6.684E-06	8.179E-03	70	0.6192	8.017E-06	7.651E-03	120	0.0508	9.242E-06	8.514E-03
21	7.1759	6.721E-06	8.166E-03	71	0.5890	8.057E-06	7.627E-03	121	0.0484	9.275E-06	8.848E-03
22	6.8260	6.753E-06	8.160E-03	72	0.5603	8.105E-06	7.595E-03	122	0.0460	9.292E-06	9.244E-03
23	6.4930	6.789E-06	8.145E-03	73	0.5330	8.142E-06	7.575E-03	123	0.0437	9.340E-06	9.668E-03
24	6.1764	6.814E-06	8.142E-03	74	0.5070	8.172E-06	7.560E-03	124	0.0416	9.337E-06	1.018E-02
25	5.8752	6.838E-06	8.129E-03	75	0.4823	8.207E-06	7.541E-03	125	0.0396	9.376E-06	1.072E-02
26	5.5886	6.859E-06	8.123E-03	76	0.4587	8.241E-06	7.524E-03	126	0.0377	9.352E-06	1.144E-02
27	5.3161	6.880E-06	8.119E-03	77	0.4364	8.266E-06	7.514E-03	127	0.0358	9.337E-06	1.225E-02
28	5.0568	6.904E-06	8.109E-03	78	0.4151	8.284E-06	7.511E-03	128	0.0341	9.348E-06	1.312E-02
29	4.8102	6.926E-06	8.099E-03	79	0.3948	8.301E-06	7.506E-03	129	0.0324	9.397E-06	1.406E-02
30	4.5756	6.944E-06	8.092E-03	80	0.3756	8.313E-06	7.507E-03	130	0.0308	9.405E-06	1.533E-02
31	4.3524	6.959E-06	8.083E-03	81	0.3573	8.326E-06	7.506E-03	131	0.0293	9.472E-06	1.678E-02
32	4.1402	6.976E-06	8.079E-03	82	0.3398	8.343E-06	7.502E-03	132	0.0279	9.482E-06	1.632E-02
33	3.9382	6.995E-06	8.071E-03	83	0.3233	8.363E-06	7.494E-03	133	0.0265	9.482E-06	1.632E-02
34	3.7462	7.015E-06	8.064E-03	84	0.3075	8.375E-06	7.494E-03	134	0.0252	9.482E-06	1.682E-02
35	3.5635	7.032E-06	8.058E-03	85	0.2925	8.386E-06	7.495E-03	135	0.0240	9.482E-06	1.682E-02
36	3.3897	7.052E-06	8.046E-03	86	0.2782	8.395E-06	7.499E-03	136	0.0228	9.482E-06	1.682E-02
37	3.2244	7.064E-06	8.052E-03	87	0.2647	8.400E-06	7.503E-03	137	0.0217	9.482E-06	1.682E-02
38	3.0671	7.078E-06	8.045E-03	88	0.2518	8.409E-06	7.505E-03	138	0.0207	9.482E-06	1.682E-02
39	2.9175	7.098E-06	8.037E-03	89	0.2395	8.416E-06	7.508E-03	139	0.0197	9.482E-06	1.682E-02
40	2.7752	7.127E-06	8.018E-03	90	0.2278	8.418E-06	7.515E-03	140	0.0187	9.482E-06	1.682E-02
41	2.6399	7.151E-06	8.011E-03	91	0.2167	8.427E-06	7.518E-03	141	0.0178	9.482E-06	1.682E-02
42	2.5111	7.182E-06	7.993E-03	92	0.2061	8.440E-06	7.516E-03	142	0.0169	9.482E-06	1.682E-02
43	2.3887	7.219E-06	7.972E-03	93	0.1961	8.449E-06	7.521E-03	143	0.0161	9.482E-06	1.682E-02
44	2.2722	7.255E-06	7.954E-03	94	0.1865	8.467E-06	7.516E-03	144	0.0153	9.482E-06	1.682E-02
45	2.1613	7.300E-06	7.929E-03	95	0.1774	8.488E-06	7.513E-03	145	0.0146	9.482E-06	1.682E-02
46	2.0559	7.342E-06	7.907E-03	96	0.1689	8.511E-06	7.502E-03	146	0.0139	9.482E-06	1.682E-02
47	1.9557	7.379E-06	7.888E-03	97	0.1605	8.536E-06	7.502E-03	147	0.0132	9.482E-06	1.682E-02
48	1.8603	7.410E-06	7.879E-03	98	0.1527	8.562E-06	7.489E-03	148	0.0125	9.482E-06	1.682E-02
49	1.7696	7.438E-06	7.870E-03	99	0.1453	8.597E-06	7.482E-03	149	0.0119	9.482E-06	1.682E-02
50	1.6833	7.475E-06	7.857E-03	100	0.1382	8.624E-06	7.478E-03	150	0.0113	9.482E-06	1.682E-02

* ENERGY = LOWER BOUNDARY [MEV]
** ERROR X 100 = %

Table 3.3.23

ANGULAR FLUX OF LI2O SLAB TOF [THICKNESS=40 CM, ANGLE=12.2 DEG]

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.0116	0.000E+00	0.100E+01	51	0.1417	4.956E-07	0.120E+00	101	1.7259	6.568E-07	0.907E-01
2	0.0122	0.000E+00	0.100E+01	52	0.1489	4.580E-07	0.127E+00	102	1.8144	5.853E-07	0.109E+00
3	0.0129	0.000E+00	0.100E+01	53	0.1566	4.546E-07	0.119E+00	103	1.9074	5.765E-07	0.981E-01
4	0.0135	0.000E+00	0.100E+01	54	0.1646	5.460E-07	0.952E-01	104	2.0052	5.107E-07	0.113E+00
5	0.0142	0.000E+00	0.100E+01	55	0.1730	4.823E-07	0.104E+00	105	2.1080	6.209E-07	0.928E-01
6	0.0149	0.000E+00	0.100E+01	56	0.1819	3.446E-07	0.147E+00	106	2.2161	5.697E-07	0.109E+00
7	0.0157	0.000E+00	0.100E+01	57	0.1912	2.893E-07	0.165E+00	107	2.3297	6.473E-07	0.983E-01
8	0.0165	0.000E+00	0.100E+01	58	0.2010	3.206E-07	0.143E+00	108	2.4491	5.688E-07	0.104E+00
9	0.0173	0.000E+00	0.100E+01	59	0.2113	2.467E-07	0.125E+00	109	2.5747	5.681E-07	0.986E-01
10	0.0182	0.000E+00	0.100E+01	60	0.2222	1.336E-07	0.319E+00	110	2.7067	4.476E-07	0.119E+00
11	0.0192	0.000E+00	0.100E+01	61	0.2336	2.130E-08	0.205E+01	111	2.8455	4.809E-07	0.107E+00
12	0.0202	0.000E+00	0.100E+01	62	0.2456	6.320E-08	0.645E+00	112	2.9914	5.501E-07	0.894E-01
13	0.0212	0.000E+00	0.100E+01	63	0.2581	9.030E-08	0.442E+00	113	3.1447	3.427E-07	0.134E+00
14	0.0223	0.000E+00	0.100E+01	64	0.2714	6.656E-08	0.643E+00	114	3.3060	2.993E-07	0.158E+00
15	0.0234	0.000E+00	0.100E+01	65	0.2853	1.709E-07	0.257E+00	115	3.4755	3.518E-07	0.118E+00
16	0.0246	0.000E+00	0.100E+01	66	0.2999	2.088E-07	0.208E+00	116	3.6537	3.285E-07	0.123E+00
17	0.0259	0.000E+00	0.100E+01	67	0.3153	2.456E-07	0.186E+00	117	3.8410	2.816E-07	0.150E+00
18	0.0272	0.000E+00	0.100E+01	68	0.3314	2.975E-07	0.149E+00	118	4.0379	2.953E-07	0.144E+00
19	0.0286	0.000E+00	0.100E+01	69	0.3485	1.919E-07	0.238E+00	119	4.2450	2.984E-07	0.140E+00
20	0.0301	5.457E-10	0.411E+03	70	0.3663	2.358E-07	0.182E+00	120	4.4626	2.950E-07	0.143E+00
21	0.0316	-3.515E-08	0.199E+02	71	0.3851	2.914E-07	0.153E+00	121	4.6914	3.498E-07	0.123E+00
22	0.0332	4.918E-07	0.124E+01	72	0.4048	2.678E-07	0.168E+00	122	4.9319	2.368E-07	0.168E+00
23	0.0349	-1.176E-06	0.493E+00	73	0.4256	3.031E-07	0.145E+00	123	5.1848	3.275E-07	0.148E+00
24	0.0367	1.515E-07	0.330E+01	74	0.4474	2.832E-07	0.165E+00	124	5.4506	4.067E-07	0.128E+00
25	0.0386	9.567E-08	0.469E+01	75	0.4703	4.079E-07	0.112E+00	125	5.7301	4.661E-07	0.120E+00
26	0.0406	4.502E-07	0.909E+00	76	0.4945	5.842E-07	0.878E-01	126	6.0239	5.142E-07	0.110E+00
27	0.0427	3.343E-07	0.444E+00	77	0.5198	5.994E-07	0.808E-01	127	6.3327	5.231E-07	0.109E+00
28	0.0449	5.004E-07	0.683E+00	78	0.5465	6.368E-07	0.794E-01	128	6.6574	6.112E-07	0.882E-01
29	0.0472	6.348E-07	0.507E+00	79	0.5745	6.692E-07	0.744E-01	129	6.9988	7.006E-07	0.816E-01
30	0.0496	6.436E-08	0.470E+01	80	0.6040	7.163E-07	0.706E-01	130	7.3576	6.568E-07	0.935E-01
31	0.0521	5.017E-07	0.495E+00	81	0.6349	6.920E-07	0.750E-01	131	7.7348	7.345E-07	0.891E-01
32	0.0548	5.971E-07	0.370E+00	82	0.6675	5.954E-07	0.880E-01	132	8.1314	6.529E-07	0.106E+00
33	0.0576	4.292E-07	0.498E+00	83	0.7017	6.333E-07	0.814E-01	133	8.5483	7.705E-07	0.904E-01
34	0.0606	4.622E-07	0.373E+00	84	0.7377	7.616E-07	0.660E-01	134	8.9866	7.716E-07	0.921E-01
35	0.0637	4.914E-08	0.320E+01	85	0.7755	6.231E-07	0.830E-01	135	9.4473	7.417E-07	0.108E+00
36	0.0669	3.935E-07	0.355E+00	86	0.8152	5.441E-07	0.948E-01	136	9.9317	8.095E-07	0.101E+00
37	0.0703	7.340E-07	0.165E+00	87	0.8570	5.894E-07	0.881E-01	137	10.4410	7.595E-07	0.106E+00
38	0.0740	2.134E-07	0.539E+00	88	0.9010	3.958E-07	0.130E+00	138	10.9760	7.498E-07	0.993E-01
39	0.0777	4.627E-07	0.230E+00	89	0.9472	3.195E-07	0.160E+00	139	11.5390	9.058E-07	0.883E-01
40	0.0817	3.087E-07	0.342E+00	90	0.9957	3.064E-07	0.163E+00	140	12.1310	1.529E-06	0.594E-01
41	0.0859	4.236E-07	0.219E+00	91	1.0468	2.926E-07	0.184E+00	141	12.7530	2.605E-06	0.450E-01
42	0.0903	3.649E-07	0.243E+00	92	1.1005	4.313E-07	0.122E+00	142	13.4060	4.307E-06	0.336E-01
43	0.0950	4.601E-07	0.176E+00	93	1.1569	4.360E-07	0.131E+00	143	14.0940	8.635E-06	0.227E-01
44	0.0998	6.017E-07	0.130E+00	94	1.2162	5.349E-07	0.106E+00	144	14.8160	1.377E-05	0.177E-01
45	0.1050	5.456E-07	0.139E+00	95	1.2786	3.283E-07	0.189E+00	145	15.5760	6.438E-06	0.255E-01
46	0.1103	5.844E-07	0.120E+00	96	1.3441	4.723E-07	0.126E+00	146	16.3750	7.634E-07	0.766E-01
47	0.1160	5.626E-07	0.123E+00	97	1.4130	5.503E-07	0.111E+00	147	17.2140	3.486E-08	0.544E+00
48	0.1219	5.971E-07	0.113E+00	98	1.4855	5.931E-07	0.103E+00	148	18.0970	1.339E-08	0.613E+00
49	0.1282	5.736E-07	0.111E+00	99	1.5616	5.062E-07	0.127E+00	149	19.0250	3.287E-10	0.502E+02
50	0.1348	5.146E-07	0.127E+00	100	1.6417	5.480E-07	0.111E+00	150	20.0000	9.951E-09	0.820E+00

* ENERGY = [MEV]
** ERROR X 100 = %

Table 3.3.24

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESS=40 CM, ANGLE=12.2 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.3052	4.975E-10	1.000E+02	51	1.6012	2.983E-06	9.328E-03	101	0.1314	3.995E-06	8.291E-03
2	18.5549	5.140E-10	1.000E+02	52	1.5231	3.008E-06	9.311E-03	102	0.1250	4.024E-06	8.270E-03
3	17.8497	1.183E-09	1.000E+02	53	1.4483	3.038E-06	9.275E-03	103	0.1189	4.054E-06	8.251E-03
4	16.7891	2.926E-09	1.000E+02	54	1.3781	3.066E-06	9.245E-03	104	0.1131	4.082E-06	8.239E-03
5	15.9703	4.110E-08	7.867E-02	55	1.3109	3.089E-06	9.225E-03	105	0.1076	4.111E-06	8.225E-03
6	15.1914	3.630E-07	2.434E-02	56	1.2470	3.106E-06	9.230E-03	106	0.1024	4.138E-06	8.222E-03
7	14.4505	1.051E-06	1.434E-02	57	1.1862	3.132E-06	9.196E-03	107	0.0974	4.169E-06	8.216E-03
8	13.7458	1.483E-06	1.212E-02	58	1.1283	3.154E-06	9.177E-03	108	0.0926	4.192E-06	8.228E-03
9	13.0754	1.698E-06	1.140E-02	59	1.0733	3.176E-06	9.152E-03	109	0.0881	4.210E-06	8.263E-03
10	12.4377	1.829E-06	1.107E-02	60	1.0209	3.190E-06	9.149E-03	110	0.0838	4.231E-06	8.294E-03
11	11.8311	1.905E-06	1.089E-02	61	0.9712	3.206E-06	9.140E-03	111	0.0797	4.246E-06	8.357E-03
12	11.2541	1.950E-06	1.083E-02	62	0.9238	3.222E-06	9.129E-03	112	0.0758	4.270E-06	8.405E-03
13	10.7052	1.988E-06	1.079E-02	63	0.8787	3.241E-06	9.108E-03	113	0.0721	4.280E-06	8.489E-03
14	10.1831	2.026E-06	1.077E-02	64	0.8359	3.271E-06	9.060E-03	114	0.0686	4.317E-06	8.534E-03
15	9.6865	2.066E-06	1.075E-02	65	0.7951	3.298E-06	9.020E-03	115	0.0653	4.337E-06	8.646E-03
16	9.2141	2.103E-06	1.073E-02	66	0.7563	3.329E-06	8.969E-03	116	0.0621	4.339E-06	8.828E-03
17	8.7647	2.142E-06	1.066E-02	67	0.7195	3.367E-06	8.899E-03	117	0.0591	4.362E-06	9.002E-03
18	8.3372	2.180E-06	1.060E-02	68	0.6844	3.399E-06	8.848E-03	118	0.0562	4.384E-06	9.234E-03
19	7.9306	2.213E-06	1.056E-02	69	0.6510	3.429E-06	8.805E-03	119	0.0534	4.413E-06	9.508E-03
20	7.5438	2.250E-06	1.049E-02	70	0.6192	3.463E-06	8.749E-03	120	0.0508	4.439E-06	9.860E-03
21	7.1759	2.283E-06	1.042E-02	71	0.5890	3.499E-06	8.690E-03	121	0.0484	4.442E-06	1.042E-02
22	6.8260	2.318E-06	1.034E-02	72	0.5603	3.533E-06	8.636E-03	122	0.0460	4.474E-06	1.096E-02
23	6.4930	2.348E-06	1.027E-02	73	0.5330	3.565E-06	8.588E-03	123	0.0437	4.499E-06	1.154E-02
24	6.1764	2.374E-06	1.023E-02	74	0.5070	3.595E-06	8.543E-03	124	0.0416	4.540E-06	1.214E-02
25	5.8752	2.400E-06	1.018E-02	75	0.4823	3.624E-06	8.504E-03	125	0.0396	4.563E-06	1.288E-02
26	5.5836	2.423E-06	1.015E-02	76	0.4587	3.644E-06	8.479E-03	126	0.0377	4.568E-06	1.378E-02
27	5.3161	2.444E-06	1.012E-02	77	0.4364	3.658E-06	8.471E-03	127	0.0358	4.575E-06	1.480E-02
28	5.0568	2.460E-06	1.010E-02	78	0.4151	3.673E-06	8.457E-03	128	0.0341	4.516E-06	1.630E-02
29	4.8102	2.474E-06	1.009E-02	79	0.3948	3.687E-06	8.448E-03	129	0.0324	4.541E-06	1.755E-02
30	4.5756	2.492E-06	1.006E-02	80	0.3756	3.701E-06	8.436E-03	130	0.0308	4.539E-06	1.918E-02
31	4.3524	2.507E-06	1.003E-02	81	0.3573	3.713E-06	8.429E-03	131	0.0293	4.539E-06	1.933E-02
32	4.1402	2.522E-06	1.001E-02	82	0.3398	3.723E-06	8.430E-03	132	0.0279	4.539E-06	1.933E-02
33	3.9382	2.536E-06	9.987E-03	83	0.3233	3.738E-06	8.417E-03	133	0.0265	4.539E-06	1.933E-02
34	3.7462	2.551E-06	9.966E-03	84	0.3075	3.750E-06	8.412E-03	134	0.0252	4.539E-06	1.933E-02
35	3.5635	2.567E-06	9.934E-03	85	0.2925	3.760E-06	8.408E-03	135	0.0240	4.539E-06	1.933E-02
36	3.3897	2.585E-06	9.899E-03	86	0.2782	3.769E-06	8.409E-03	136	0.0228	4.539E-06	1.933E-02
37	3.2244	2.599E-06	9.834E-03	87	0.2647	3.772E-06	8.421E-03	137	0.0217	4.539E-06	1.933E-02
38	3.0671	2.617E-06	9.358E-03	88	0.2518	3.777E-06	8.428E-03	138	0.0207	4.539E-06	1.933E-02
39	2.9175	2.644E-06	9.800E-03	89	0.2395	3.780E-06	8.438E-03	139	0.0197	4.539E-06	1.933E-02
40	2.7752	2.668E-06	9.759E-03	90	0.2278	3.781E-06	8.455E-03	140	0.0187	4.539E-06	1.933E-02
41	2.6399	2.691E-06	9.728E-03	91	0.2167	3.788E-06	8.459E-03	141	0.0178	4.539E-06	1.933E-02
42	2.5111	2.719E-06	9.681E-03	92	0.2061	3.800E-06	8.453E-03	142	0.0169	4.539E-06	1.933E-02
43	2.3887	2.747E-06	9.641E-03	93	0.1961	3.816E-06	8.439E-03	143	0.0161	4.539E-06	1.933E-02
44	2.2722	2.780E-06	9.597E-03	94	0.1865	3.831E-06	8.430E-03	144	0.0153	4.539E-06	1.933E-02
45	2.1613	2.808E-06	9.564E-03	95	0.1774	3.848E-06	8.418E-03	145	0.0146	4.539E-06	1.933E-02
46	2.0559	2.839E-06	9.514E-03	96	0.1688	3.872E-06	8.391E-03	146	0.0139	4.539E-06	1.933E-02
47	1.9557	2.865E-06	9.483E-03	97	0.1605	3.899E-06	8.358E-03	147	0.0132	4.539E-06	1.933E-02
48	1.8603	2.894E-06	9.439E-03	98	0.1527	3.922E-06	8.338E-03	148	0.0125	4.539E-06	1.933E-02
49	1.7696	2.923E-06	9.403E-03	99	0.1453	3.945E-06	8.323E-03	149	0.0119	4.539E-06	1.933E-02
50	1.6833	2.956E-06	9.358E-03	100	0.1382	3.970E-06	8.305E-03	150	0.0113	4.539E-06	1.933E-02

* ENERGY = LOWER BOUNDARY [MEV]
** ERROR X 100 = %

Table 3.3.25

ANGULAR FLUX OF LI2O SLAB TOP [THICKNESS=40 CM, ANGLE=24.9 DEG]

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.0116	0.000E+00	0.100E+01	51	0.1417	5.139E-07	0.995E-01	101	1.7259	5.776E-07	0.112E+00
2	0.0122	0.000E+00	0.100E+01	52	0.1439	4.856E-07	0.105E+00	102	1.8144	4.412E-07	0.130E+00
3	0.0129	0.000E+00	0.100E+01	53	0.1566	6.048E-07	0.782E-01	103	1.9074	4.580E-07	0.129E+00
4	0.0135	0.000E+00	0.100E+01	54	0.1646	4.421E-07	0.107E+00	104	2.0052	4.854E-07	0.119E+00
5	0.0142	0.000E+00	0.100E+01	55	0.1730	4.988E-07	0.932E-01	105	2.1080	5.961E-07	0.958E-01
6	0.0149	0.000E+00	0.100E+01	56	0.1819	4.546E-07	0.921E-01	106	2.2161	6.355E-07	0.918E-01
7	0.0157	0.000E+00	0.100E+01	57	0.1912	3.965E-07	0.106E+00	107	2.3297	6.739E-07	0.866E-01
8	0.0165	0.000E+00	0.100E+01	58	0.2010	3.043E-07	0.133E+00	108	2.4491	5.711E-07	0.938E-01
9	0.0173	0.000E+00	0.100E+01	59	0.2113	2.722E-07	0.141E+00	109	2.5747	5.985E-07	0.835E-01
10	0.0182	0.000E+00	0.100E+01	60	0.2222	1.379E-07	0.268E+00	110	2.7067	4.854E-07	0.981E-01
11	0.0192	0.000E+00	0.100E+01	61	0.2336	7.946E-08	0.466E+00	111	2.8455	4.777E-07	0.867E-01
12	0.0202	0.000E+00	0.100E+01	62	0.2456	2.071E-08	0.181E+01	112	2.9914	4.105E-07	0.969E-01
13	0.0212	0.000E+00	0.100E+01	63	0.2581	6.775E-09	0.535E+00	113	3.1447	4.782E-07	0.938E-01
14	0.0223	0.000E+00	0.100E+01	64	0.2714	6.953E-09	0.528E+00	114	3.3060	3.605E-07	0.103E+00
15	0.0234	0.000E+00	0.100E+01	65	0.2853	1.091E-07	0.351E+00	115	3.4755	2.577E-07	0.163E+00
16	0.0246	0.000E+00	0.100E+01	66	0.2999	1.976E-07	0.194E+00	116	3.6537	3.074E-07	0.124E+00
17	0.0259	0.000E+00	0.100E+01	67	0.3153	2.265E-07	0.174E+00	117	3.8410	2.240E-07	0.183E+00
18	0.0272	0.000E+00	0.100E+01	68	0.3314	2.690E-07	0.150E+00	118	4.0379	2.590E-07	0.155E+00
19	0.0286	0.000E+00	0.100E+01	69	0.3435	3.886E-07	0.976E-01	119	4.2450	2.365E-07	0.168E+00
20	0.0301	1.241E-07	0.259E+01	70	0.3663	2.561E-07	0.149E+00	120	4.4626	3.169E-07	0.126E+00
21	0.0316	-8.804E-07	0.685E+00	71	0.3851	2.878E-07	0.138E+00	121	4.6914	3.158E-07	0.130E+00
22	0.0332	1.492E-06	0.347E+00	72	0.4048	2.325E-07	0.171E+00	122	4.9319	3.126E-07	0.134E+00
23	0.0349	1.309E-06	0.352E+00	73	0.4256	3.360E-07	0.117E+00	123	5.1843	3.559E-07	0.122E+00
24	0.0367	7.332E-08	0.554E+01	74	0.4474	4.090E-07	0.998E-01	124	5.4506	3.076E-07	0.163E+00
25	0.0386	8.113E-07	0.467E+00	75	0.4703	5.573E-07	0.737E-01	125	5.7301	4.310E-07	0.111E+00
26	0.0406	8.551E-07	0.395E+00	76	0.4945	5.876E-07	0.754E-01	126	6.0239	4.519E-07	0.109E+00
27	0.0427	7.008E-07	0.452E+00	77	0.5198	6.223E-07	0.694E-01	127	6.3327	5.219E-07	0.101E+00
28	0.0449	1.047E-06	0.279E+00	78	0.5465	7.356E-07	0.598E-01	128	6.6574	4.895E-07	0.108E+00
29	0.0472	5.628E-07	0.477E+00	79	0.5745	7.089E-07	0.623E-01	129	6.9988	5.544E-07	0.102E+00
30	0.0496	5.523E-07	0.463E+00	80	0.6040	7.392E-07	0.601E-01	130	7.3576	4.297E-07	0.127E+00
31	0.0521	1.039E-06	0.193E+00	81	0.6349	6.702E-07	0.665E-01	131	7.7348	5.851E-07	0.107E+00
32	0.0548	7.486E-07	0.247E+00	82	0.6675	6.422E-07	0.719E-01	132	8.1314	7.037E-07	0.812E-01
33	0.0576	6.201E-07	0.265E+00	83	0.7017	6.684E-07	0.689E-01	133	8.5483	6.373E-07	0.101E+00
34	0.0606	7.172E-07	0.202E+00	84	0.7377	6.061E-07	0.763E-01	134	8.9866	5.343E-07	0.133E+00
35	0.0637	7.499E-07	0.167E+00	85	0.7755	6.033E-07	0.758E-01	135	9.4473	6.587E-07	0.101E+00
36	0.0669	4.983E-07	0.242E+00	86	0.8152	6.642E-07	0.686E-01	136	9.9317	6.198E-07	0.110E+00
37	0.0703	5.147E-07	0.211E+00	87	0.8570	5.382E-07	0.825E-01	137	10.4410	6.224E-07	0.107E+00
38	0.0740	4.378E-07	0.224E+00	88	0.9010	3.846E-07	0.115E+00	138	10.9760	6.280E-07	0.104E+00
39	0.0777	5.749E-07	0.160E+00	89	0.9472	3.402E-07	0.128E+00	139	11.5390	6.264E-07	0.114E+00
40	0.0817	4.875E-07	0.177E+00	90	0.9957	2.959E-07	0.150E+00	140	12.1310	9.231E-07	0.755E-01
41	0.0859	6.288E-07	0.124E+00	91	1.0468	3.435E-07	0.136E+00	141	12.7530	1.553E-06	0.563E-01
42	0.0903	4.525E-07	0.169E+00	92	1.1005	4.542E-07	0.105E+00	142	13.4060	2.161E-06	0.459E-01
43	0.0950	6.624E-07	0.107E+00	93	1.1569	4.754E-07	0.104E+00	143	14.0940	3.281E-06	0.360E-01
44	0.0998	5.619E-07	0.120E+00	94	1.2162	4.259E-07	0.121E+00	144	14.8160	5.092E-06	0.281E-01
45	0.1050	6.090E-07	0.105E+00	95	1.2786	4.634E-07	0.113E+00	145	15.5760	4.765E-06	0.284E-01
46	0.1103	5.909E-07	0.105E+00	96	1.3441	4.055E-07	0.136E+00	146	16.3750	1.344E-06	0.535E-01
47	0.1160	6.164E-07	0.952E-01	97	1.4130	4.448E-07	0.125E+00	147	17.2140	6.875E-08	0.295E+00
48	0.1219	6.060E-07	0.903E-01	98	1.4855	4.890E-07	0.116E+00	148	18.0970	-2.231E-08	0.771E+00
49	0.1282	5.576E-07	0.103E+00	99	1.5616	4.834E-07	0.121E+00	149	19.0250	1.238E-08	0.145E+01
50	0.1348	5.759E-07	0.940E-01	100	1.6417	4.628E-07	0.127E+00	150	20.0000	-3.467E-09	0.375E+01

* ENERGY = CMEV]
** ERROR X 100 = %

Table 3.3.26

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESS=40 CM, ANGLE=24.9 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.5062	-1.734E-10	1.000E+02	51	1.6012	1.914E-06	1.159E-02	101	0.1314	2.963E-06	9.201E-03
2	18.5549	4.459E-10	1.000E+02	52	1.5231	1.938E-06	1.155E-02	102	0.1250	2.991E-06	9.165E-03
3	17.6499	-6.698E-10	1.000E+02	53	1.4488	1.962E-06	1.150E-02	103	0.1189	3.021E-06	9.118E-03
4	16.7891	2.768E-09	1.000E+02	54	1.3781	1.985E-06	1.145E-02	104	0.1131	3.052E-06	9.077E-03
5	15.9703	6.997E-09	5.703E-02	55	1.3109	2.005E-06	1.142E-02	105	0.1076	3.082E-06	9.047E-03
6	15.1914	3.082E-07	2.550E-02	56	1.2470	2.028E-06	1.136E-02	106	0.1024	3.112E-06	9.017E-03
7	14.4505	5.628E-07	1.887E-02	57	1.1862	2.049E-06	1.131E-02	107	0.0974	3.140E-06	9.001E-03
8	13.7458	7.269E-07	1.672E-02	58	1.1283	2.073E-06	1.125E-02	108	0.0926	3.173E-06	8.976E-03
9	13.0754	8.349E-07	1.573E-02	59	1.0733	2.096E-06	1.118E-02	109	0.0881	3.196E-06	8.990E-03
10	12.4377	9.126E-07	1.516E-02	60	1.0209	2.113E-06	1.115E-02	110	0.0838	3.227E-06	8.984E-03
11	11.8311	9.587E-07	1.488E-02	61	0.9712	2.128E-06	1.112E-02	111	0.0797	3.252E-06	9.015E-03
12	11.2541	9.901E-07	1.486E-02	62	0.9238	2.145E-06	1.108E-02	112	0.0758	3.280E-06	9.046E-03
13	10.7052	1.021E-06	1.475E-02	63	0.8787	2.164E-06	1.103E-02	113	0.0721	3.302E-06	9.108E-03
14	10.1831	1.053E-06	1.466E-02	64	0.8359	2.191E-06	1.094E-02	114	0.0686	3.328E-06	9.183E-03
15	9.6865	1.084E-06	1.459E-02	65	0.7951	2.224E-06	1.082E-02	115	0.0653	3.353E-06	9.290E-03
16	9.2141	1.116E-06	1.447E-02	66	0.7563	2.254E-06	1.073E-02	116	0.0621	3.390E-06	9.372E-03
17	8.7647	1.143E-06	1.446E-02	67	0.7195	2.285E-06	1.063E-02	117	0.0591	3.426E-06	9.512E-03
18	8.3372	1.175E-06	1.434E-02	68	0.6844	2.318E-06	1.053E-02	118	0.0562	3.457E-06	9.721E-03
19	7.9306	1.210E-06	1.412E-02	69	0.6510	2.350E-06	1.043E-02	119	0.0534	3.495E-06	9.974E-03
20	7.5438	1.240E-06	1.402E-02	70	0.6192	2.384E-06	1.033E-02	120	0.0508	3.547E-06	1.022E-02
21	7.1759	1.261E-06	1.395E-02	71	0.5890	2.421E-06	1.021E-02	121	0.0484	3.574E-06	1.075E-02
22	6.8260	1.289E-06	1.382E-02	72	0.5603	2.456E-06	1.010E-02	122	0.0460	3.602E-06	1.130E-02
23	6.4930	1.313E-06	1.371E-02	73	0.5330	2.493E-06	9.992E-03	123	0.0437	3.655E-06	1.183E-02
24	6.1764	1.339E-06	1.359E-02	74	0.5070	2.524E-06	9.906E-03	124	0.0416	3.690E-06	1.248E-02
25	5.8752	1.362E-06	1.348E-02	75	0.4823	2.553E-06	9.830E-03	125	0.0396	3.733E-06	1.314E-02
26	5.5886	1.383E-06	1.339E-02	76	0.4587	2.581E-06	9.757E-03	126	0.0377	3.773E-06	1.394E-02
27	5.3161	1.399E-06	1.336E-02	77	0.4364	2.602E-06	9.712E-03	127	0.0359	3.777E-06	1.506E-02
28	5.0568	1.417E-06	1.323E-02	78	0.4151	2.618E-06	9.678E-03	128	0.0341	3.843E-06	1.597E-02
29	4.8102	1.432E-06	1.322E-02	79	0.3948	2.630E-06	9.665E-03	129	0.0324	3.917E-06	1.700E-02
30	4.5756	1.448E-06	1.315E-02	80	0.3756	2.644E-06	9.642E-03	130	0.0308	3.873E-06	1.887E-02
31	4.3524	1.464E-06	1.308E-02	81	0.3573	2.657E-06	9.622E-03	131	0.0293	3.879E-06	1.929E-02
32	4.1402	1.476E-06	1.304E-02	82	0.3398	2.677E-06	9.579E-03	132	0.0279	3.879E-06	1.929E-02
33	3.9382	1.489E-06	1.300E-02	83	0.3233	2.690E-06	9.560E-03	133	0.0265	3.879E-06	1.929E-02
34	3.7462	1.500E-06	1.298E-02	84	0.3075	2.702E-06	9.548E-03	134	0.0252	3.879E-06	1.929E-02
35	3.5635	1.515E-06	1.291E-02	85	0.2925	2.711E-06	9.540E-03	135	0.0240	3.879E-06	1.929E-02
36	3.3897	1.526E-06	1.287E-02	86	0.2782	2.717E-06	9.546E-03	136	0.0228	3.879E-06	1.929E-02
37	3.2244	1.546E-06	1.278E-02	87	0.2647	2.720E-06	9.558E-03	137	0.0217	3.879E-06	1.929E-02
38	3.0671	1.570E-06	1.266E-02	88	0.2518	2.724E-06	9.569E-03	138	0.0207	3.879E-06	1.929E-02
39	2.9175	1.591E-06	1.256E-02	89	0.2395	2.725E-06	9.590E-03	139	0.0197	3.879E-06	1.929E-02
40	2.7752	1.614E-06	1.244E-02	90	0.2278	2.729E-06	9.600E-03	140	0.0187	3.879E-06	1.929E-02
41	2.6399	1.639E-06	1.234E-02	91	0.2167	2.736E-06	9.600E-03	141	0.0178	3.879E-06	1.929E-02
42	2.5111	1.669E-06	1.222E-02	92	0.2061	2.749E-06	9.578E-03	142	0.0169	3.879E-06	1.929E-02
43	2.3887	1.697E-06	1.211E-02	93	0.1961	2.764E-06	9.553E-03	143	0.0161	3.879E-06	1.929E-02
44	2.2722	1.731E-06	1.200E-02	94	0.1865	2.784E-06	9.515E-03	144	0.0153	3.879E-06	1.929E-02
45	2.1613	1.763E-06	1.190E-02	95	0.1774	2.807E-06	9.467E-03	145	0.0146	3.879E-06	1.929E-02
46	2.0559	1.792E-06	1.181E-02	96	0.1688	2.832E-06	9.420E-03	146	0.0139	3.879E-06	1.929E-02
47	1.9557	1.817E-06	1.176E-02	97	0.1605	2.854E-06	9.384E-03	147	0.0132	3.879E-06	1.929E-02
48	1.8603	1.840E-06	1.172E-02	98	0.1527	2.874E-06	9.321E-03	148	0.0125	3.879E-06	1.929E-02
49	1.7696	1.862E-06	1.168E-02	99	0.1453	2.909E-06	9.285E-03	149	0.0119	3.879E-06	1.929E-02
50	1.6833	1.891E-06	1.163E-02	100	0.1382	2.934E-06	9.245E-03	150	0.0113	3.879E-06	1.929E-02

* ENERGY = LOWER BOUNDARY [MEV]

** ERROR X 100 = %

Table 3.3.27

ANGULAR FLUX OF LI2O SLAB TOP [THICKNESS=40 CM, ANGLE=41.8 DEG]

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.0116	0.000E+00	0.100E+01	51	0.1417	4.753E-07	0.826E-01	101	1.7259	4.520E-07	0.109E+00
2	0.0122	0.000E+00	0.100E+01	52	0.1489	4.896E-07	0.812E-01	102	1.8144	4.230E-07	0.113E+00
3	0.0129	0.000E+00	0.100E+01	53	0.1566	5.733E-07	0.633E-01	103	1.9074	4.934E-07	0.924E-01
4	0.0135	0.000E+00	0.100E+01	54	0.1646	4.161E-07	0.868E-01	104	2.0052	5.106E-07	0.874E-01
5	0.0142	0.000E+00	0.100E+01	55	0.1730	3.808E-07	0.937E-01	105	2.1080	4.365E-07	0.110E+00
6	0.0149	0.000E+00	0.100E+01	56	0.1819	3.661E-07	0.914E-01	106	2.2161	5.208E-07	0.973E-01
7	0.0157	0.000E+00	0.100E+01	57	0.1912	2.382E-07	0.140E+00	107	2.3297	4.732E-07	0.985E-01
8	0.0165	0.000E+00	0.100E+01	58	0.2010	2.444E-07	0.131E+00	108	2.4491	4.323E-07	0.110E+00
9	0.0173	0.000E+00	0.100E+01	59	0.2113	1.280E-07	0.244E+00	109	2.5747	4.038E-07	0.108E+00
10	0.0182	0.000E+00	0.100E+01	60	0.2222	1.128E-07	0.266E+00	110	2.7067	3.833E-07	0.110E+00
11	0.0192	0.000E+00	0.100E+01	61	0.2336	8.955E-08	0.321E+00	111	2.8455	3.266E-07	0.123E+00
12	0.0202	0.000E+00	0.100E+01	62	0.2456	4.959E-08	0.584E+00	112	2.9914	3.193E-07	0.114E+00
13	0.0212	0.000E+00	0.100E+01	63	0.2581	4.412E-09	0.678E+00	113	3.1447	3.195E-07	0.103E+00
14	0.0223	0.000E+00	0.100E+01	64	0.2714	9.015E-08	0.328E+00	114	3.3060	2.310E-07	0.144E+00
15	0.0234	0.000E+00	0.100E+01	65	0.2853	1.448E-07	0.209E+00	115	3.4755	1.933E-07	0.169E+00
16	0.0246	0.000E+00	0.100E+01	66	0.2999	2.381E-07	0.131E+00	116	3.6537	2.340E-07	0.134E+00
17	0.0259	0.000E+00	0.100E+01	67	0.3153	2.440E-07	0.126E+00	117	3.8410	2.558E-07	0.132E+00
18	0.0272	0.000E+00	0.100E+01	68	0.3314	3.029E-07	0.103E+00	118	4.0379	2.866E-07	0.115E+00
19	0.0286	0.000E+00	0.100E+01	69	0.3485	2.495E-07	0.127E+00	119	4.2450	2.420E-07	0.140E+00
20	0.0301	-2.995E-09	0.184E+01	70	0.3663	2.040E-07	0.155E+00	120	4.4626	2.706E-07	0.122E+00
21	0.0316	-1.224E-07	0.356E+01	71	0.3851	2.229E-07	0.136E+00	121	4.6914	3.451E-07	0.105E+00
22	0.0332	7.166E-07	0.553E+00	72	0.4048	2.398E-07	0.128E+00	122	4.9319	3.075E-07	0.117E+00
23	0.0349	5.269E-07	0.664E+00	73	0.4256	2.689E-07	0.117E+00	123	5.1848	2.902E-07	0.134E+00
24	0.0367	5.614E-07	0.539E+00	74	0.4474	2.533E-07	0.132E+00	124	5.4506	2.721E-07	0.147E+00
25	0.0386	6.402E-07	0.426E+00	75	0.4703	4.238E-07	0.780E-01	125	5.7301	3.298E-07	0.127E+00
26	0.0406	2.778E-07	0.941E+00	76	0.4945	5.047E-07	0.683E-01	126	6.0239	3.573E-07	0.116E+00
27	0.0427	6.297E-07	0.363E+00	77	0.5198	5.475E-07	0.650E-01	127	6.3327	4.037E-07	0.108E+00
28	0.0449	1.589E-06	0.144E+02	78	0.5465	6.634E-07	0.524E-01	128	6.6574	4.234E-07	0.114E+00
29	0.0472	4.618E-07	0.432E+00	79	0.5745	5.749E-07	0.623E-01	129	6.9988	4.559E-07	0.107E+00
30	0.0496	5.662E-07	0.320E+00	80	0.6040	5.940E-07	0.603E-01	130	7.3576	3.855E-07	0.130E+00
31	0.0521	6.907E-07	0.227E+00	81	0.6349	6.118E-07	0.593E-01	131	7.7348	4.402E-07	0.118E+00
32	0.0548	6.060E-07	0.229E+00	82	0.6675	5.476E-07	0.687E-01	132	8.1314	4.689E-07	0.111E+00
33	0.0576	5.603E-07	0.216E+00	83	0.7017	6.161E-07	0.609E-01	133	8.5483	4.356E-07	0.128E+00
34	0.0606	3.301E-07	0.337E+00	84	0.7377	5.337E-07	0.701E-01	134	8.9866	4.383E-07	0.129E+00
35	0.0637	6.416E-07	0.154E+00	85	0.7755	4.939E-07	0.779E-01	135	9.4473	3.613E-07	0.162E+00
36	0.0669	3.808E-07	0.235E+00	86	0.8152	4.226E-07	0.892E-01	136	9.9317	3.880E-07	0.153E+00
37	0.0703	5.208E-07	0.157E+00	87	0.8570	4.082E-07	0.898E-01	137	10.4410	4.830E-07	0.132E+00
38	0.0740	3.907E-07	0.190E+00	88	0.9010	2.492E-07	0.153E+00	138	10.9760	5.575E-07	0.117E+00
39	0.0777	4.673E-07	0.151E+00	89	0.9472	2.552E-07	0.152E+00	139	11.5390	6.812E-07	0.102E+00
40	0.0817	2.763E-07	0.245E+00	90	0.9957	2.111E-07	0.192E+00	140	12.1310	1.062E-06	0.682E-01
41	0.0859	3.977E-07	0.158E+00	91	1.0468	2.416E-07	0.177E+00	141	12.7530	1.554E-06	0.478E-01
42	0.0903	3.335E-07	0.176E+00	92	1.1005	3.617E-07	0.114E+00	142	13.4060	1.638E-06	0.433E-01
43	0.0950	4.061E-07	0.139E+00	93	1.1569	4.114E-07	0.104E+00	143	14.0940	1.789E-06	0.413E-01
44	0.0998	5.750E-07	0.919E-01	94	1.2162	3.661E-07	0.119E+00	144	14.8160	9.046E-07	0.603E-01
45	0.1050	4.458E-07	0.111E+00	95	1.2786	3.581E-07	0.124E+00	145	15.5760	1.516E-07	0.162E+00
46	0.1103	4.697E-07	0.102E+00	96	1.3441	4.120E-07	0.118E+00	146	16.3750	1.317E-08	0.108E+01
47	0.1160	4.303E-07	0.103E+00	97	1.4130	4.580E-07	0.103E+00	147	17.2140	8.320E-09	0.155E+01
48	0.1219	5.218E-07	0.345E-01	98	1.4855	4.820E-07	0.102E+00	148	18.0970	-4.222E-09	0.334E+01
49	0.1282	4.833E-07	0.391E-01	99	1.5616	3.775E-07	0.133E+00	149	19.0250	1.019E-08	0.142E+01
50	0.1348	3.599E-07	0.118E+00	100	1.6417	3.658E-07	0.141E+00	150	20.0000	1.295E-08	0.746E+00

* ENERGY = EMEV1
** ERROR x 100 = %

Table 3.3.28

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESS=40 CM, ANGLE=41.8 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.5082	6.474E-10	1.000E+02	51	1.6012	1.127E-06	1.494E-02	101	0.1314	2.005E-06	1.061E-02
2	18.5549	1.157E-09	1.000E+02	52	1.5231	1.146E-06	1.485E-02	102	0.1250	2.029E-06	1.054E-02
3	17.6499	9.458E-10	1.000E+02	53	1.4489	1.170E-06	1.470E-02	103	0.1189	2.055E-06	1.046E-02
4	16.7891	1.362E-09	1.000E+02	54	1.3781	1.193E-06	1.455E-02	104	0.1131	2.077E-06	1.041E-02
5	15.9703	2.021E-09	1.000E+02	55	1.3109	1.213E-06	1.444E-02	105	0.1076	2.100E-06	1.035E-02
6	15.1914	9.601E-09	1.000E+02	56	1.2470	1.231E-06	1.435E-02	106	0.1024	2.123E-06	1.031E-02
7	14.4505	5.483E-08	6.117E-02	57	1.1862	1.250E-06	1.424E-02	107	0.0974	2.151E-06	1.025E-02
8	13.7458	1.443E-07	3.479E-02	58	1.1283	1.270E-06	1.411E-02	108	0.0926	2.172E-06	1.023E-02
9	13.0754	2.262E-07	2.825E-02	59	1.0733	1.288E-06	1.401E-02	109	0.0881	2.188E-06	1.024E-02
10	12.4377	3.039E-07	2.432E-02	60	1.0209	1.300E-06	1.397E-02	110	0.0838	2.208E-06	1.025E-02
11	11.8311	3.570E-07	2.305E-02	61	0.9712	1.311E-06	1.395E-02	111	0.0797	2.222E-06	1.030E-02
12	11.2541	3.911E-07	2.255E-02	62	0.9238	1.324E-06	1.389E-02	112	0.0758	2.245E-06	1.031E-02
13	10.7052	4.139E-07	2.272E-02	63	0.8787	1.336E-06	1.384E-02	113	0.0721	2.265E-06	1.036E-02
14	10.1831	4.431E-07	2.265E-02	64	0.8359	1.356E-06	1.369E-02	114	0.0686	2.291E-06	1.039E-02
15	9.6868	4.625E-07	2.263E-02	65	0.7951	1.379E-06	1.355E-02	115	0.0653	2.310E-06	1.049E-02
16	9.2141	4.806E-07	2.261E-02	66	0.7563	1.402E-06	1.338E-02	116	0.0621	2.342E-06	1.056E-02
17	8.7647	5.025E-07	2.234E-02	67	0.7195	1.429E-06	1.320E-02	117	0.0591	2.359E-06	1.074E-02
18	8.3372	5.242E-07	2.206E-02	68	0.6844	1.460E-06	1.299E-02	118	0.0562	2.387E-06	1.092E-02
19	7.9306	5.477E-07	2.164E-02	69	0.6510	1.487E-06	1.281E-02	119	0.0534	2.417E-06	1.116E-02
20	7.5439	5.697E-07	2.130E-02	70	0.6192	1.518E-06	1.261E-02	120	0.0508	2.451E-06	1.145E-02
21	7.1759	5.890E-07	2.103E-02	71	0.5890	1.547E-06	1.242E-02	121	0.0484	2.480E-06	1.190E-02
22	6.8260	6.116E-07	2.064E-02	72	0.5603	1.576E-06	1.225E-02	122	0.0460	2.503E-06	1.244E-02
23	6.4930	6.329E-07	2.031E-02	73	0.5330	1.610E-06	1.204E-02	123	0.0437	2.504E-06	1.325E-02
24	6.1764	6.531E-07	1.996E-02	74	0.5070	1.637E-06	1.189E-02	124	0.0416	2.535E-06	1.384E-02
25	5.8752	6.710E-07	1.968E-02	75	0.4823	1.662E-06	1.175E-02	125	0.0396	2.549E-06	1.469E-02
26	5.5886	6.875E-07	1.944E-02	76	0.4587	1.684E-06	1.165E-02	126	0.0377	2.581E-06	1.543E-02
27	5.3161	7.011E-07	1.922E-02	77	0.4364	1.696E-06	1.160E-02	127	0.0358	2.610E-06	1.640E-02
28	5.0568	7.150E-07	1.908E-02	78	0.4151	1.710E-06	1.155E-02	128	0.0341	2.636E-06	1.754E-02
29	4.8102	7.270E-07	1.894E-02	79	0.3948	1.722E-06	1.150E-02	129	0.0324	2.672E-06	1.883E-02
30	4.5756	7.482E-07	1.857E-02	80	0.3756	1.733E-06	1.146E-02	130	0.0309	2.666E-06	2.056E-02
31	4.3524	7.618E-07	1.837E-02	81	0.3573	1.743E-06	1.143E-02	131	0.0293	2.666E-06	2.056E-02
32	4.1402	7.739E-07	1.821E-02	82	0.3398	1.756E-06	1.139E-02	132	0.0279	2.666E-06	2.056E-02
33	3.9383	7.832E-07	1.800E-02	83	0.3233	1.771E-06	1.132E-02	133	0.0265	2.666E-06	2.056E-02
34	3.7462	8.010E-07	1.784E-02	84	0.3075	1.783E-06	1.128E-02	134	0.0252	2.666E-06	2.056E-02
35	3.5635	8.127E-07	1.769E-02	85	0.2925	1.795E-06	1.124E-02	135	0.0240	2.666E-06	2.056E-02
36	3.3897	8.223E-07	1.759E-02	86	0.2782	1.802E-06	1.122E-02	136	0.0228	2.666E-06	2.056E-02
37	3.2244	8.339E-07	1.746E-02	87	0.2647	1.807E-06	1.122E-02	137	0.0217	2.666E-06	2.056E-02
38	3.0671	8.499E-07	1.724E-02	88	0.2518	1.809E-06	1.124E-02	138	0.0207	2.666E-06	2.056E-02
39	2.9175	8.658E-07	1.706E-02	89	0.2395	1.811E-06	1.125E-02	139	0.0197	2.666E-06	2.056E-02
40	2.7752	8.822E-07	1.690E-02	90	0.2278	1.816E-06	1.125E-02	140	0.0187	2.666E-06	2.056E-02
41	2.6399	9.013E-07	1.670E-02	91	0.2167	1.821E-06	1.125E-02	141	0.0178	2.666E-06	2.056E-02
42	2.5111	9.215E-07	1.651E-02	92	0.2061	1.828E-06	1.124E-02	142	0.0169	2.666E-06	2.056E-02
43	2.3887	9.431E-07	1.632E-02	93	0.1961	1.840E-06	1.120E-02	143	0.0161	2.666E-06	2.056E-02
44	2.2722	9.668E-07	1.611E-02	94	0.1865	1.852E-06	1.117E-02	144	0.0153	2.666E-06	2.056E-02
45	2.1613	9.923E-07	1.589E-02	95	0.1774	1.870E-06	1.109E-02	145	0.0146	2.666E-06	2.056E-02
46	2.0559	1.015E-06	1.573E-02	96	0.1688	1.889E-06	1.102E-02	146	0.0139	2.666E-06	2.056E-02
47	1.9557	1.040E-06	1.549E-02	97	0.1606	1.910E-06	1.094E-02	147	0.0132	2.666E-06	2.056E-02
48	1.8603	1.065E-06	1.528E-02	98	0.1527	1.939E-06	1.082E-02	148	0.0125	2.666E-06	2.056E-02
49	1.7696	1.086E-06	1.515E-02	99	0.1453	1.963E-06	1.073E-02	149	0.0119	2.666E-06	2.056E-02
50	1.6833	1.109E-06	1.500E-02	100	0.1382	1.987E-06	1.065E-02	150	0.0113	2.666E-06	2.056E-02

* ENERGY = LOWER BOUNDARY (MEV)
** ERROR × 100 = %

Table 3.3.29

ANGULAR FLUX OF LI2O SLAB TOF [THICKNESS=40 CM, ANGLE=66.8 DEG]

J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR	J	ENERGY	FLUX	ERROR
1	0.0116	0.000E+00	0.100E+01	51	0.1417	3.439E-07	0.950E-01	101	1.7259	2.692E-07	0.142E+00
2	0.0122	0.000E+00	0.100E+01	52	0.1489	2.709E-07	0.115E+00	102	1.8144	2.909E-07	0.122E+00
3	0.0129	0.000E+00	0.100E+01	53	0.1566	2.591E-07	0.121E+00	103	1.9074	3.057E-07	0.118E+00
4	0.0135	0.000E+00	0.100E+01	54	0.1646	3.133E-07	0.953E-01	104	2.0052	2.997E-07	0.122E+00
5	0.0142	0.000E+00	0.100E+01	55	0.1730	2.877E-07	0.101E+00	105	2.1080	2.430E-07	0.155E+00
6	0.0149	0.000E+00	0.100E+01	56	0.1819	2.236E-07	0.126E+00	106	2.2161	2.867E-07	0.130E+00
7	0.0157	0.000E+00	0.100E+01	57	0.1912	2.211E-07	0.125E+00	107	2.3297	3.565E-07	0.103E+00
8	0.0165	0.000E+00	0.100E+01	58	0.2010	1.307E-07	0.209E+00	108	2.4491	2.480E-07	0.151E+00
9	0.0173	0.000E+00	0.100E+01	59	0.2113	1.177E-07	0.220E+00	109	2.5747	2.727E-07	0.137E+00
10	0.0182	0.000E+00	0.100E+01	60	0.2222	6.926E-08	0.375E+00	110	2.7067	2.252E-07	0.167E+00
11	0.0192	0.000E+00	0.100E+01	61	0.2336	6.036E-08	0.416E+00	111	2.8455	1.977E-07	0.186E+00
12	0.0202	0.000E+00	0.100E+01	62	0.2456	2.695E-08	0.937E+00	112	2.9914	2.287E-07	0.154E+00
13	0.0212	0.000E+00	0.100E+01	63	0.2581	9.852E-09	0.252E+00	113	3.1447	1.569E-07	0.235E+00
14	0.0223	0.000E+00	0.100E+01	64	0.2714	5.070E-08	0.500E+00	114	3.3060	1.117E-07	0.354E+00
15	0.0234	0.000E+00	0.100E+01	65	0.2853	1.089E-07	0.234E+00	115	3.4755	9.496E-08	0.435E+00
16	0.0246	0.000E+00	0.100E+01	66	0.2999	1.444E-07	0.178E+00	116	3.6537	1.485E-07	0.281E+00
17	0.0259	0.000E+00	0.100E+01	67	0.3153	1.936E-07	0.132E+00	117	3.8410	1.895E-07	0.221E+00
18	0.0272	0.000E+00	0.100E+01	68	0.3314	1.774E-07	0.148E+00	118	4.0379	1.673E-07	0.248E+00
19	0.0286	0.000E+00	0.100E+01	69	0.3485	2.153E-07	0.121E+00	119	4.2450	1.302E-07	0.333E+00
20	0.0301	0.000E+00	0.100E+01	70	0.3663	1.525E-07	0.173E+00	120	4.4626	1.590E-07	0.255E+00
21	0.0316	0.000E+00	0.100E+01	71	0.3851	1.910E-07	0.138E+00	121	4.6914	2.050E-07	0.180E+00
22	0.0332	2.206E-07	0.145E+01	72	0.4048	1.867E-07	0.135E+00	122	4.9319	1.190E-07	0.308E+00
23	0.0349	3.470E-07	0.873E+00	73	0.4256	1.634E-07	0.161E+00	123	5.1848	1.039E-07	0.351E+00
24	0.0367	3.741E-07	0.723E+00	74	0.4474	2.256E-07	0.119E+00	124	5.4506	2.012E-07	0.175E+00
25	0.0386	2.710E-07	0.891E+00	75	0.4703	2.731E-07	0.102E+00	125	5.7301	2.381E-07	0.147E+00
26	0.0406	2.571E-07	0.857E+00	76	0.4945	3.220E-07	0.886E-01	126	6.0239	2.150E-07	0.182E+00
27	0.0427	2.723E-07	0.738E+00	77	0.5198	3.838E-07	0.760E-01	127	6.3327	1.820E-07	0.224E+00
28	0.0449	1.980E-07	0.954E+00	78	0.5465	3.794E-07	0.771E-01	128	6.6574	2.407E-07	0.182E+00
29	0.0472	8.311E-08	0.207E+01	79	0.5745	4.357E-07	0.658E-01	129	6.9988	2.078E-07	0.237E+00
30	0.0496	2.440E-07	0.651E+00	80	0.6040	3.849E-07	0.768E-01	130	7.3576	2.444E-07	0.223E+00
31	0.0521	2.799E-07	0.484E+00	81	0.6349	3.935E-07	0.760E-01	131	7.7348	2.411E-07	0.239E+00
32	0.0548	3.382E-07	0.355E+00	82	0.6675	3.517E-07	0.876E-01	132	8.1314	2.600E-07	0.241E+00
33	0.0576	5.234E-07	0.203E+00	83	0.7017	3.503E-07	0.864E-01	133	8.5483	2.246E-07	0.303E+00
34	0.0606	3.308E-07	0.284E+00	84	0.7377	3.393E-07	0.924E-01	134	8.9866	1.300E-07	0.554E+00
35	0.0637	2.524E-07	0.343E+00	85	0.7755	3.531E-07	0.858E-01	135	9.4473	2.118E-07	0.358E+00
36	0.0669	4.150E-07	0.181E+00	86	0.8152	3.312E-07	0.939E-01	136	9.9317	9.239E-08	0.845E+00
37	0.0703	2.432E-07	0.283E+00	87	0.8570	2.128E-07	0.149E+00	137	10.4410	2.033E-07	0.408E+00
38	0.0740	2.054E-07	0.314E+00	88	0.9010	2.624E-07	0.118E+00	138	10.9760	3.203E-07	0.286E+00
39	0.0777	2.926E-07	0.208E+00	89	0.9472	2.157E-07	0.148E+00	139	11.5390	3.732E-07	0.249E+00
40	0.0817	2.591E-07	0.217E+00	90	0.9957	1.466E-07	0.229E+00	140	12.1310	3.007E-07	0.317E+00
41	0.0859	2.948E-07	0.175E+00	91	1.0468	2.273E-07	0.155E+00	141	12.7530	3.144E-07	0.292E+00
42	0.0903	2.999E-07	0.163E+00	92	1.1005	1.552E-07	0.231E+00	142	13.4060	5.437E-07	0.156E+00
43	0.0950	3.316E-07	0.141E+00	93	1.1569	2.460E-07	0.144E+00	143	14.0940	3.125E-07	0.227E+00
44	0.0998	3.825E-07	0.117E+00	94	1.2162	2.922E-07	0.123E+00	144	14.8160	1.599E-07	0.357E+00
45	0.1050	3.164E-07	0.133E+00	95	1.2784	2.557E-07	0.148E+00	145	15.5760	8.038E-08	0.506E+00
46	0.1103	3.091E-07	0.123E+00	96	1.3441	2.734E-07	0.144E+00	146	16.3750	1.489E-07	0.216E+00
47	0.1160	3.443E-07	0.111E+00	97	1.4130	3.139E-07	0.129E+00	147	17.2140	6.080E-08	0.412E+00
48	0.1219	3.511E-07	0.107E+00	98	1.4855	2.516E-07	0.164E+00	148	18.0970	-3.529E-08	0.512E+00
49	0.1282	3.950E-07	0.883E-01	99	1.5616	3.112E-07	0.139E+00	149	19.0250	-2.022E-08	0.815E+00
50	0.1348	2.845E-07	0.119E+00	100	1.6417	2.478E-07	0.181E+00	150	20.0000	-2.228E-08	0.517E+00

* ENERGY = [MEV]
** ERROR X 100 = %

Table 3.3.30

RUNNING INTEGRAL OF ANGULAR FLUX [THICKNESS=40 CM, ANGLE=66.8 DEG]

J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR	J	ENERGY	INTEGRAL	ERROR
1	19.3062	-1.414E-09	1.000E+02	51	1.6012	5.241E-07	3.553E-02	101	0.1314	1.123E-06	1.917E-02
2	18.5569	-2.425E-09	1.000E+02	52	1.5231	5.396E-07	3.474E-02	102	0.1250	1.143E-06	1.890E-02
3	17.6499	-4.190E-09	1.000E+02	53	1.4482	5.522E-07	3.415E-02	103	0.1189	1.161E-06	1.869E-02
4	16.7391	-1.150E-09	1.000E+02	54	1.3781	5.679E-07	3.340E-02	104	0.1131	1.178E-06	1.849E-02
5	15.9703	6.295E-09	1.000E+02	55	1.3109	5.816E-07	3.279E-02	105	0.1076	1.193E-06	1.832E-02
6	15.1914	1.031E-08	3.113E-01	56	1.2470	5.944E-07	3.224E-02	106	0.1024	1.209E-06	1.817E-02
7	14.4505	1.831E-08	2.345E-01	57	1.1862	6.093E-07	3.160E-02	107	0.0974	1.228E-06	1.798E-02
8	13.7456	3.393E-08	1.641E-01	58	1.1283	6.216E-07	3.110E-02	108	0.0926	1.245E-06	1.784E-02
9	13.0754	6.112E-08	1.146E-01	59	1.0733	6.293E-07	3.085E-02	109	0.0881	1.260E-06	1.773E-02
10	12.4377	7.584E-08	1.090E-01	60	1.0209	6.407E-07	3.043E-02	110	0.0838	1.275E-06	1.764E-02
11	11.8311	9.167E-08	1.049E-01	61	0.9712	6.480E-07	3.019E-02	111	0.0797	1.288E-06	1.760E-02
12	11.2541	1.105E-07	9.676E-02	62	0.9238	6.588E-07	2.980E-02	112	0.0758	1.302E-06	1.755E-02
13	10.7052	1.265E-07	9.195E-02	63	0.8787	6.720E-07	2.931E-02	113	0.0721	1.312E-06	1.759E-02
14	10.1831	1.367E-07	9.037E-02	64	0.8359	6.826E-07	2.894E-02	114	0.0686	1.324E-06	1.762E-02
15	9.6865	1.413E-07	9.168E-02	65	0.7951	6.992E-07	2.834E-02	115	0.0653	1.345E-06	1.757E-02
16	9.2141	1.519E-07	8.336E-02	66	0.7563	7.168E-07	2.773E-02	116	0.0621	1.358E-06	1.770E-02
17	8.7647	1.584E-07	8.820E-02	67	0.7195	7.338E-07	2.717E-02	117	0.0591	1.374E-06	1.781E-02
18	8.3372	1.697E-07	8.477E-02	68	0.6844	7.513E-07	2.661E-02	118	0.0562	1.400E-06	1.789E-02
19	7.9306	1.826E-07	8.059E-02	69	0.6510	7.689E-07	2.608E-02	119	0.0534	1.417E-06	1.813E-02
20	7.5438	1.947E-07	7.704E-02	70	0.6192	7.885E-07	2.550E-02	120	0.0508	1.431E-06	1.861E-02
21	7.1759	2.069E-07	7.367E-02	71	0.5890	8.078E-07	2.496E-02	121	0.0484	1.443E-06	1.926E-02
22	6.8260	2.173E-07	7.105E-02	72	0.5603	8.296E-07	2.437E-02	122	0.0460	1.447E-06	2.010E-02
23	6.4930	2.294E-07	6.800E-02	73	0.5330	8.486E-07	2.388E-02	123	0.0437	1.457E-06	2.099E-02
24	6.1764	2.385E-07	6.596E-02	74	0.5070	8.677E-07	2.342E-02	124	0.0416	1.471E-06	2.189E-02
25	5.8752	2.492E-07	6.360E-02	75	0.4823	8.833E-07	2.305E-02	125	0.0396	1.484E-06	2.294E-02
26	5.5886	2.611E-07	6.107E-02	76	0.4587	8.975E-07	2.275E-02	126	0.0377	1.497E-06	2.411E-02
27	5.3161	2.712E-07	5.916E-02	77	0.4364	9.088E-07	2.252E-02	127	0.0359	1.516E-06	2.543E-02
28	5.0569	2.764E-07	5.843E-02	78	0.4151	9.170E-07	2.236E-02	128	0.0341	1.533E-06	2.703E-02
29	4.8102	2.823E-07	5.756E-02	79	0.3948	9.264E-07	2.212E-02	129	0.0324	1.545E-06	2.876E-02
30	4.5756	2.926E-07	5.590E-02	80	0.3756	9.359E-07	2.199E-02	130	0.0308	1.545E-06	2.876E-02
31	4.3524	3.005E-07	5.484E-02	81	0.3573	9.436E-07	2.186E-02	131	0.0293	1.545E-06	2.876E-02
32	4.1402	3.070E-07	5.414E-02	82	0.3398	9.543E-07	2.166E-02	132	0.0279	1.545E-06	2.876E-02
33	3.9382	3.154E-07	5.311E-02	83	0.3233	9.632E-07	2.150E-02	133	0.0265	1.545E-06	2.876E-02
34	3.7462	3.249E-07	5.196E-02	84	0.3075	9.729E-07	2.133E-02	134	0.0252	1.545E-06	2.876E-02
35	3.5635	3.323E-07	5.119E-02	85	0.2925	9.801E-07	2.121E-02	135	0.0240	1.545E-06	2.876E-02
36	3.3897	3.370E-07	5.084E-02	86	0.2782	9.855E-07	2.113E-02	136	0.0228	1.545E-06	2.876E-02
37	3.2244	3.426E-07	5.034E-02	87	0.2647	9.881E-07	2.112E-02	137	0.0217	1.545E-06	2.876E-02
38	3.0671	3.505E-07	4.949E-02	88	0.2518	9.930E-07	2.105E-02	138	0.0207	1.545E-06	2.876E-02
39	2.9175	3.619E-07	4.818E-02	89	0.2395	9.944E-07	2.106E-02	139	0.0197	1.545E-06	2.876E-02
40	2.7752	3.718E-07	4.716E-02	90	0.2278	9.974E-07	2.103E-02	140	0.0187	1.545E-06	2.876E-02
41	2.6399	3.831E-07	4.603E-02	91	0.2167	1.001E-06	2.100E-02	141	0.0178	1.545E-06	2.876E-02
42	2.5111	3.967E-07	4.470E-02	92	0.2061	1.007E-06	2.092E-02	142	0.0169	1.545E-06	2.876E-02
43	2.3887	4.091E-07	4.359E-02	93	0.1961	1.013E-06	2.083E-02	143	0.0161	1.545E-06	2.876E-02
44	2.2722	4.269E-07	4.199E-02	94	0.1865	1.024E-06	2.065E-02	144	0.0153	1.545E-06	2.876E-02
45	2.1613	4.412E-07	4.084E-02	95	0.1774	1.035E-06	2.047E-02	145	0.0146	1.545E-06	2.876E-02
46	2.0559	4.534E-07	3.996E-02	96	0.1688	1.050E-06	2.024E-02	146	0.0139	1.545E-06	2.876E-02
47	1.9557	4.684E-07	3.885E-02	97	0.1605	1.066E-06	1.999E-02	147	0.0132	1.545E-06	2.876E-02
48	1.8603	4.837E-07	3.784E-02	98	0.1527	1.078E-06	1.980E-02	148	0.0125	1.545E-06	2.876E-02
49	1.7696	4.982E-07	3.691E-02	99	0.1453	1.092E-06	1.961E-02	149	0.0119	1.545E-06	2.876E-02
50	1.6833	5.117E-07	3.613E-02	100	0.1382	1.109E-06	1.936E-02	150	0.0113	1.545E-06	2.876E-02

* ENERGY = LOWER BOUNDARY [MEV]
** ERROR X 100 = %

Acknowledgment

The authors would like to express their appreciation to Messrs. J. Kusano, C. Kutsukake, S. Tanaka and Y. Abe for excellent operation of FNS. They thank Mr. T. Nakamura for his encouragement of this work.

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Appendix 1 Determination of Time Origin

Two parameters in the energy transformation, i.e., the time zero and the flight path, are determined by the following manner. We can observe two gamma-ray peaks in the time spectra from the assembly. The first peak is due to Compton-scattering of gamma-rays emitted from the target assembly, since no time variation is observed for any detector angles. The second peak results from gamma-rays produced by inelastic scattering of incident neutrons and varies in the time spectrum. The time difference between peaks is related to the effective scattering point as shown in Fig. A.1.1. If we assume that there is no large difference in the effective scattering points compared with the flight path, the effective emission depth $\Delta\ell_n$ can be obtained from the relations

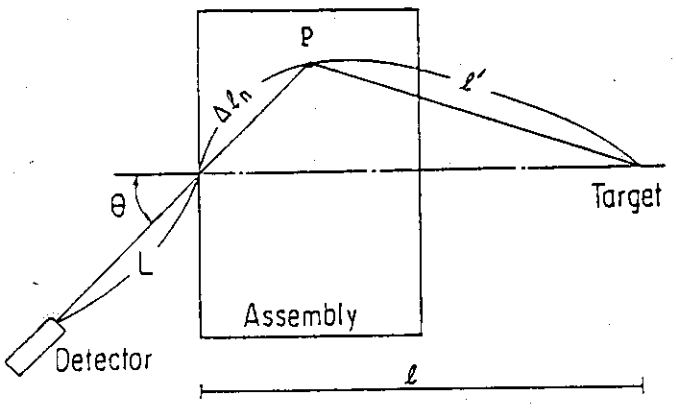
$$\ell' = \Delta T_{\gamma\gamma} / \left(\frac{72.3}{\sqrt{E_\theta}} - \frac{1}{0.3} \right), \qquad (A.1.1)$$

and

$$\Delta\ell_n = \ell\cos\theta - \sqrt{\ell'^2 - \ell^2 \sin^2\theta}\ , \qquad (A.1.2)$$

where E_θ is the incident neutron energy in MeV, $\Delta T_{\gamma\gamma}$ the time difference between two gamma-ray peaks in ns, ℓ the distance of the rear face of the assembly from the target and θ the leakage angle. Thus the effective flight path L_{eff} is

$$L_{eff} = L + \Delta\ell_n . \qquad (A.1.3)$$



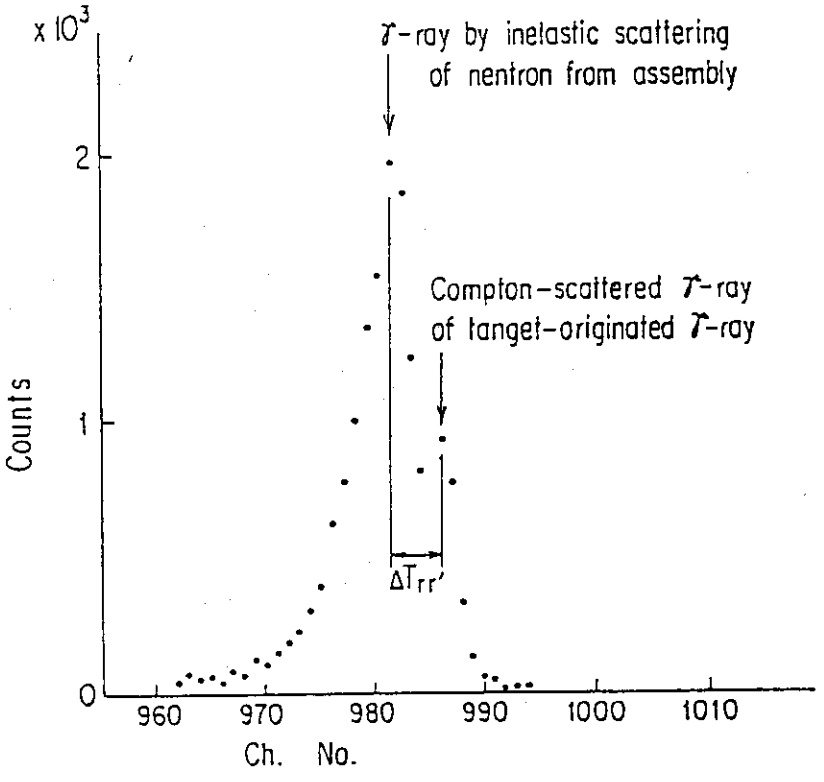


Fig. A.1.1 Effective neutron emission depth determined by two kinds of gamma-rays

Appendix 2 Collimator Response

The dependence of the response function on the distance between the source and the detector was also examined by an integrated counts measurement using a ^{252}Cf source and DT neutrons. These neutron sources, however, have finite volumes so that the measured response functions are actually smeared over their volumes, while the collimator-detector response function is defined for a point source. Therefore, the calculated response functions were adopted in the data processing. In order to confirm the calculated results, they were compared with the measured results taking into account the finite volume of source.

Since the throat scattering component can be neglected, the response calculation is performed by considering only a simple optical projection as illustrated in Fig. A.2.1. The overlapping area of the neutron projection defined by the entrance of the collimator for the position r on the source plane and the detector surface is proportional to the response function. The response function for point source is smeared with a Gauss function ($G(r)=(1/\sqrt{2\pi\sigma})\exp(-r^2/2\sigma^2)$). The source scanning includes the effect due to a possible offset between the detector collimator axis and the source-detector axis. This offset was about 5 mm for the present system. Comparisons of the smeared response functions are shown in Fig. A.2.2 for the neutron sources. The source diameters for smearing in both ^{252}Cf and DT sources are estimated to be ~30 mm (σ = 1.8 cm) for the component of source neutrons scattered by the target assembly with the nenergy below 10 MeV.

The effective measured areas obtained from the response functions are compared between calculation and the experiment in Fig. A.2.3. In the cases with offset = 5 mm and σ = 10 mm, for the most realistic conditions, good agreement is found within an experimental error of 2%. The scattered component of the TOF result below 10 MeV is also seen around σ=1.8 cm. These results suggest that the above simple calculation method is valid for the present detector-collimator system.

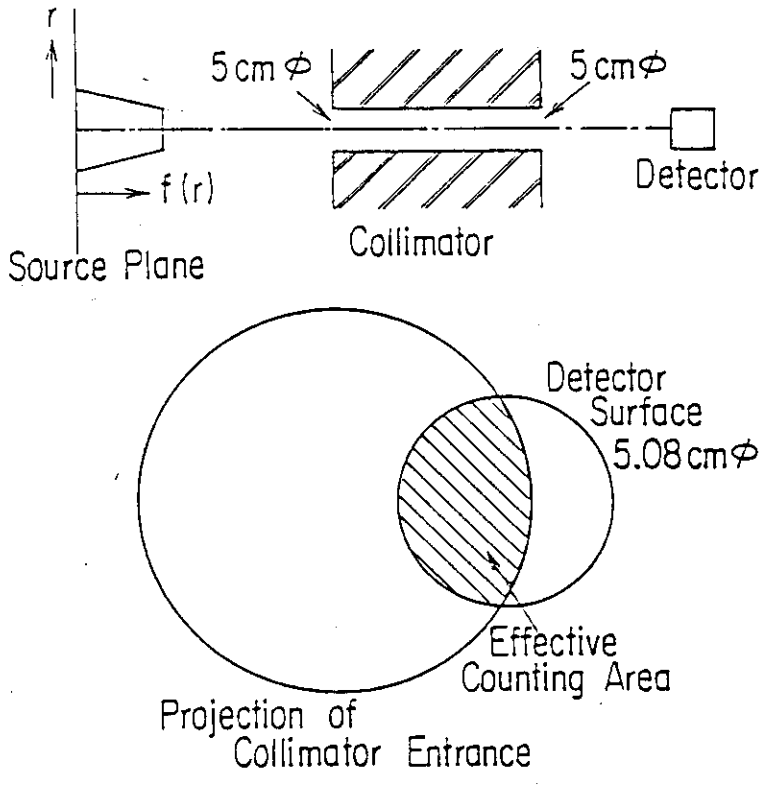


Fig. A.2.1 Illustration of concept for the detector-collimator response function

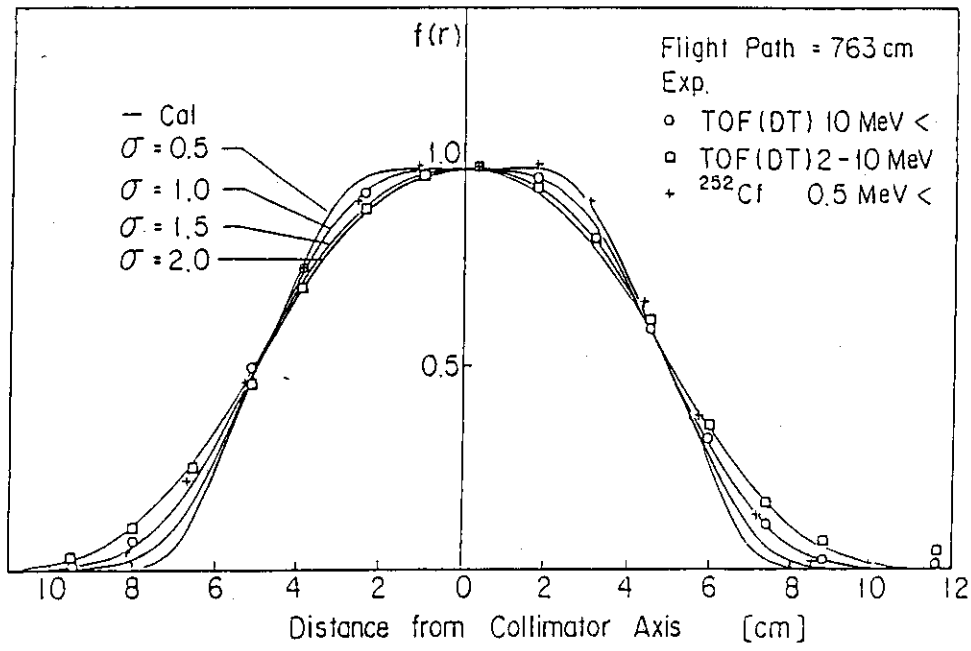


Fig. A.2.2 Comparison of the measured response function f(r) with the calculated ones.

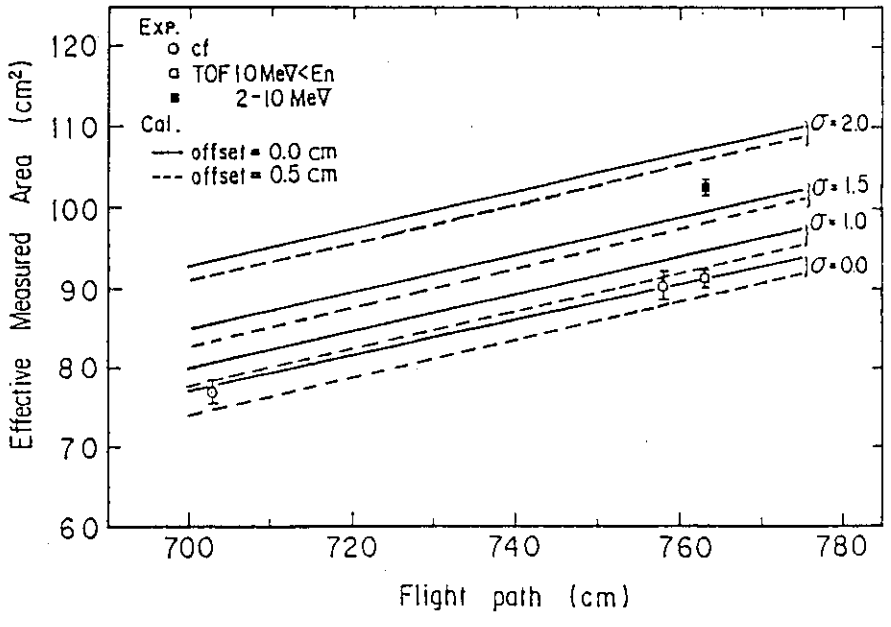


Fig. A.2.3 Comparison of the effective measured area with the calculated ones as a function of the distance between the detector and source.

Appendix 3 Example for MCNP Calculation

A point Monte Carlo method is adopted for a nuclear data test. Example of our calculation using the MCNP code is described here.

The point detector estimator is used and five detector locations are taken into account corresponding to the measured angles. The example of calculational model is shown in Fig. A.3.1. In this model, The collimator is simulated by cylindrical hole with the radius of effective measured area As. This cylindrical hole is surrounded by no-importance regions in which neutron histories are immediately terminated. The calculated flux are reduced to the measured quantity by multiplying L^2/As for each detector position.

Figure A.3.2 shows the input data of the MCNP calculation for 200 mm thick Li_2O assembly.

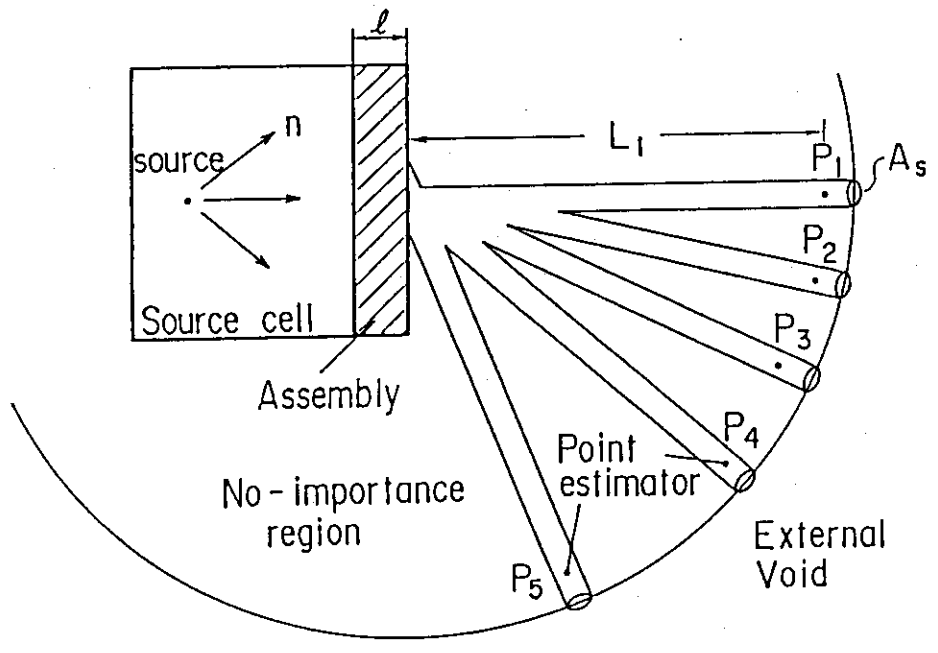


Fig. A.3.1 Model for the MCNP calculations. The five point estimators are located at the same time, and the no-importance region is applied to the collimator simulation.

```
FILE = J3240.MCNP.DATA                    DATE    90/04/13(FRIDAY)    TIME 09:24:20  PAGE 0001  *VIVAPO*

      **************
      ** LI202    **
      **************

                FNS-TOF/31.4 CM(R)*20.0 CM(Z)-LI2O CYL./FIXED CONE BIAS/5 PT DETECTORS          LI202
C               ****************************************                                        LI202
C               *   CELL CARAD                         *                                        LI202
C               ****************************************                                        LI202
C               ******* EXTERNAL VOID ****************                                        LI202
 1    0           -4 : +4 -2 +3 : +10 : +2 -10 +5 +6 +7 +8 +9                                 LI202
C               ******* SOURCE VACUUM REGION *********                                        LI202
 2    0                  -3  +4  -1                                                           LI202
C               ******* MATERIAL REGION **************                                        LI202
 3    1    8.8565E-2    -3  +1  -2                                                           LI202
C               ******* DETECTOR VACUUM REGION *******                                        LI202
 4    0  +2  -10 -5 : +2 -10 -6 : +2 -10 -7 : +2 -10 -8 : +2 -10 -9                          LI202
C               ------- THE FOLLOWING IS A BLANK DELIMETER                                    LI202
                                                                                              LI202
C               ****************************************                                        LI202
C               * SURFACE CARD                         *                                        LI202
C               ****************************************                                        LI202
 1                  PZ          -20.0                                                        LI202
 2                  PZ            0                                                          LI202
 3                  CZ           31.4                                                        LI202
 4                  PZ           -50                                                         LI202
 5                  CZ         5.1220                                                        LI202
 6               1  CZ         5.1276                                                        LI202
 7               2  CZ         5.1462                                                        LI202
 8               3  CZ         5.1887                                                        LI202
 9               4  CZ         5.2818                                                        LI202
10                  SO          1000                                                        LI202
C               -------- THE FOLLOWING IS A BLANK DELIMETER                                  LI202
                                                                                              LI202
C               ****************************************                                        LI202
C               *  MODE CARD       - NEUTRON ONLY     *                                        LI202
C               ****************************************                                        LI202
MODE   0                                                                                      LI202
C               ****************************************                                        LI202
C               *  TRANSFORMATION CARDS                *                                        LI202
C               *  ROTATION ABOUT THE Y AXIS BY THETA*                                        LI202
C               ****************************************                                        LI202
*TR1   0  0  0        12.2  90  102.2   90   0  90                                           LI202
                      77.8  90   12.2   +1                                                   LI202
*TR2   0  0  0        24.9  90  114.9   90   0  90                                           LI202
                      65.1  90   24.9   +1                                                   LI202
*TR3   0  0  0        41.8  90  131.8   90   0  90                                           LI202
                      48.2  90   41.8   +1                                                   LI202
*TR4   0  0  0        66.8  90  156.8   90   0  90                                           LI202
                      23.2  90   66.8   +1                                                   LI202
C               ****************************************                                        LI202
C               *   CELL PARAMETER CARDS               *                                        LI202
C               ****************************************                                        LI202
IN     0    1   1    1                                                                       LI202
C               ************************************************                              LI202

FILE = J3240.MCNP.DATA                    DATE    90/04/13(FRIDAY)    TIME 09:24:20  PAGE 0001
```

Fig. A.3.2 Example of the input data for MCNP calculation. This sample is used for 200 mm thick lithium-oxide assembly.

```
FILE = J3240.MCNP.DATA                    DATE    90/04/13(FRIDAY)    TIME 09:24:20  PAGE 0002  *VIVAPO*

C     *  SOURCE SPECIFICATION CARDS                                  *                    LI202
C     *  SRC1=POINT ISOTROPIC OPTION                                 *                    LI202
C     *  SDIR DIRC. BIASING - HEIGHT REDUCTION CONSIDERED            *                    LI202
C     *  SI(ENG.) AND SP(PROB.) TAKEN FROM BETOF SOURCE              *                    LI202
C     *  EXPT. DATA                                                  *                    LI202
C     ************************************************************                    LI202
SRC1  0  0  -40.00    2     1.0                                                          LI202
SDIR  0  0  1  1      0.5372231                                                        LI202
SI    4.6308-02                                                                        LI202
      5.2474-02  5.9461-02  6.7378-02  7.6349-02  8.6515-02                           LI202
      9.8035-02  1.1109-01  1.2588-01  1.4264-01  1.6163-01                           LI202
      1.8315-01  2.0754-01  2.3517-01  2.6649-01  3.0197-01                           LI202
      3.4217-01  3.8774-01  4.3936-01  4.9786-01  5.6415-01                           LI202
      6.3927-01  7.2438-01  8.2084-01  9.3013-01  1.0540+00                           LI202
      1.1943+00  1.3533+00  1.5335+00  1.7377+00  1.8498+00                           LI202
      1.9691+00  2.0961+00  2.2313+00  2.3752+00  2.5284+00                           LI202
      2.6914+00  2.8650+00  3.0498+00  3.2465+00  3.4559+00                           LI202
      3.6787+00  3.9160+00  4.1686+00  4.4374+00  4.7236+00                           LI202
      5.0282+00  5.3525+00  5.6978+00  6.0652+00  6.4564+00                           LI202
      6.8728+00  7.3161+00  7.7879+00  8.2902+00  8.8249+00                           LI202
      9.3940+00  9.9999+00  1.0157+01  1.0317+01  1.0480+01                           LI202
      1.0645+01  1.0812+01  1.0983+01  1.1156+01  1.1331+01                           LI202
      1.1510+01  1.1691+01  1.1875+01  1.2062+01  1.2252+01                           LI202
      1.2445+01  1.2641+01  1.2840+01  1.3042+01  1.3248+01                           LI202
      1.3456+01  1.3668+01  1.3883+01  1.4102+01  1.4324+01                           LI202
      1.4550+01  1.4779+01  1.5012+01  1.5248+01  1.5488+01                           LI202
      1.5732+01  1.5980+01  1.6231+01  1.6487+01                                      LI202
SP    0                                                                              LI202
      0          0          0          0          0                                  LI202
      4.600-05   6.959-05   8.399-05   1.727-04   1.554-04                           LI202
      1.932-04   2.512-04   3.390-04   4.520-04   5.189-04                           LI202
      6.487-04   7.450-04   8.417-04   9.862-04   1.215-03                           LI202
      1.421-03   1.591-03   1.810-03   1.933-03   2.203-03                           LI202
      2.353-03   2.397-03   2.468-03   2.501-03   1.255-03                           LI202
      1.238-03   1.243-03   1.162-03   1.164-03   1.193-03                           LI202
      1.185-03   1.448-03   1.718-03   2.186-03   1.653-03                           LI202
      1.040-03   9.251-04   8.761-04   8.385-04   7.505-04                           LI202
      7.832-04   7.368-04   6.683-04   6.248-04   5.473-04                           LI202
      5.120-04   4.928-04   4.124-04   3.956-04   4.339-04                           LI202
      4.881-04   6.196-04   1.714-04   2.017-04   2.109-04                           LI202
      2.134-04   2.369-04   2.547-04   2.576-04   2.685-04                           LI202
      2.849-04   2.881-04   3.445-04   5.177-04   5.260-04                           LI202
      5.417-04   7.421-04   7.535-04   7.649-04   9.229-04                           LI202
      9.597-04   9.782-04   5.512-03   8.224-03   8.337-03                           LI202
      6.554-02   1.400-01   1.424-01   1.440-01   1.456-01                           LI202
      1.480-01   1.454-01   2.054-02   2.095-02                                      LI202
C     ********************************************                                   LI202
C     *  MATERIAL SPECIFICATION CARDS                            *                   LI202
C     ********************************************                                   LI202
C     ---- LI2O/SS COVER-----------------------------                               LI202
M1    3006.32C 4.30444-3    3007.32C  5.37069-2   8016.31C   2.90057-2               LI202
      26000.04C 1.09763-3   28000.04C  1.29482-4  24000.04C  2.97692-4               LI202
      25055.04C  2.33258-5                                                          LI202
C     DRXS                                                                          LI202
C     ********************************************                                   LI202

FILE = J3240.MCNP.DATA                    DATE    90/04/13(FRIDAY)    TIME 09:24:20  PAGE 0002
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Fig. A.3.2 (Continued)

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FILE = J3240.MCNP.DATA                    DATE    90/04/13(FRIDAY)     TIME 09:24:20  PAGE 0003   *VIVAPO*

C     *  TALLY SPECIFICATION CARDS                *                                          LI202
C     ********************************************                                          LI202
FC5   --- FLUXES AT 5 PT DTS(TH=0.0, 12.2, 24.9, 41.8, 66.8 DEG)                            LI202
F5          0.0          0      723.0000          1                                        LI202
          152.9527       0      707.4341          1                                        LI202
          305.8362       0      658.8677          1                                        LI202
          488.1551       0      545.9717          1                                        LI202
          685.3716       0      293.7507          1                                        LI202
DD     0.5   100                                                                           LI202
E0     4.6308-02                                                                           LI202
       5.2474-02  5.9461-02  6.7378-02  7.6349-02  8.6515-02                               LI202
       9.8035-02  1.1109-01  1.2588-01  1.4264-01  1.6163-01                               LI202
       1.8315-01  2.0754-01  2.3517-01  2.6649-01  3.0197-01                               LI202
       3.4217-01  3.8774-01  4.3936-01  4.9786-01  5.6415-01                               LI202
       6.3927-01  7.2438-01  8.2084-01  9.3013-01  1.0540+00                               LI202
       1.1943+00  1.3533+00  1.5335+00  1.7377+00  1.8498+00                               LI202
       1.9691+00  2.0961+00  2.2313+00  2.3752+00  2.5284+00                               LI202
       2.6914+00  2.8650+00  3.0498+00  3.2465+00  3.4559+00                               LI202
       3.6787+00  3.9160+00  4.1686+00  4.4374+00  4.7236+00                               LI202
       5.0282+00  5.3525+00  5.6978+00  6.0652+00  6.4564+00                               LI202
       6.8728+00  7.3161+00  7.7879+00  8.2902+00  8.8249+00                               LI202
       9.3940+00  9.9999+00  1.0157+01  1.0317+01  1.0480+01                               LI202
       1.0645+01  1.0812+01  1.0983+01  1.1156+01  1.1331+01                               LI202
       1.1510+01  1.1691+01  1.1875+01  1.2062+01  1.2252+01                               LI202
       1.2445+01  1.2641+01  1.2840+01  1.3042+01  1.3248+01                               LI202
       1.3456+01  1.3668+01  1.3883+01  1.4102+01  1.4324+01                               LI202
       1.4550+01  1.4779+01  1.5012+01  1.5248+01  1.5488+01                               LI202
       1.5732+01  1.5980+01  1.6231+01  1.6487+01                                          LI202
FQ0    E    F    ,                                                                       LI202
C     ********************************************                                          LI202
C     * ENERGY AND THERMAL CARDS                 *                                      LI202
C     ********************************************                                          LI202
ERGN    0   16.5    0                                                                     LI202
C     ********************************************                                          LI202
C     * PROBLEM CUTOFF CARDS                     *                                      LI202
C     ********************************************                                          LI202
CUTN          0     4.6308-02   -10    -0.01                                             LI202
NPS       200000                                                                        LI202
CTME       8                                                                            LI202
C     ********************************************                                          LI202
C     * PERIPHERAL CRADS                         *                                      LI202
C     ********************************************                                          LI202
PRDMP         50000    50000                                                            LI202
LOST      10         10                                                                 LI202
PRINT                                                                                   LI202
```

Fig. A.3.2 (Continued)

Appendix 4 Example for DOT3.5 Calculation

The R-Z model, shown in Fig. A.4.1, is applied to analyze this experiment. The experimental assembly is modeled by a cylinder of area equivalent radius, and the angular flux at the rear boundary is obtained. The GRTUNCL code is also applied to calculate the first collision source in order to avoid the ray-effect. The mesh size of about 1 cm is suitable. The order of quadrature set of S_{16} gives the same angles as the measurement.

Since the measured angular flux is averaged over the effective measured area defined by the collimator-detector system, it is necessary to average the calculated angular flux for radial direction on the rear surface. The averaged angular flux directed to the detector along the circle at the distance r from the center can be obtained by averaging the calculated angular flux at the distance r with respect to the azimuthal angles $\cos^{-1}\mu$, as shown in Fig. A.4.2. This procedure is written as follows:

$$\langle\Phi(\eta,r)\rangle_{\mu} = \frac{\sum_{\mu}\omega_{\mu\eta}\Phi(\mu,\eta,r)}{\sum_{\mu}\omega_{\mu\eta}}, \qquad (A.4.1)$$

$$\langle\Phi(\eta)\rangle_{\mu,r} = \frac{\sum_{r}2\pi r\cdot\langle\Phi(\eta,r)\rangle_{\mu}\cdot\Delta r}{\sum_{r}2\pi r\cdot\Delta r}, \qquad (A.4.2)$$

where Φ : angular flux,

$\mu = \cos\phi$: azimuthal angle,

$\eta = \cos\theta$: polar angle,

$\omega_{\mu\eta}$: angular weight for S_n quadrature set,

r : radial position of calculated angular flux.

The radial averaging is usually performed up to 5 cm in radius corresponding to the approximate radius of the effective measured area. The difference of the averaged flux to the flux at the center is about 5 % for the lithium-oxide assembly.

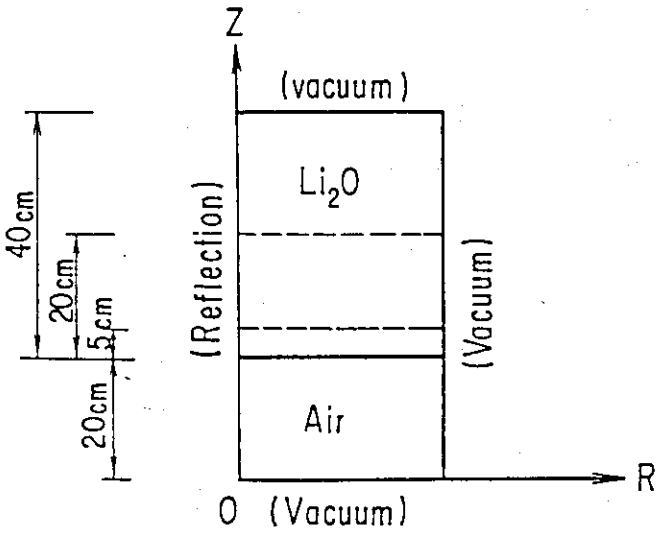
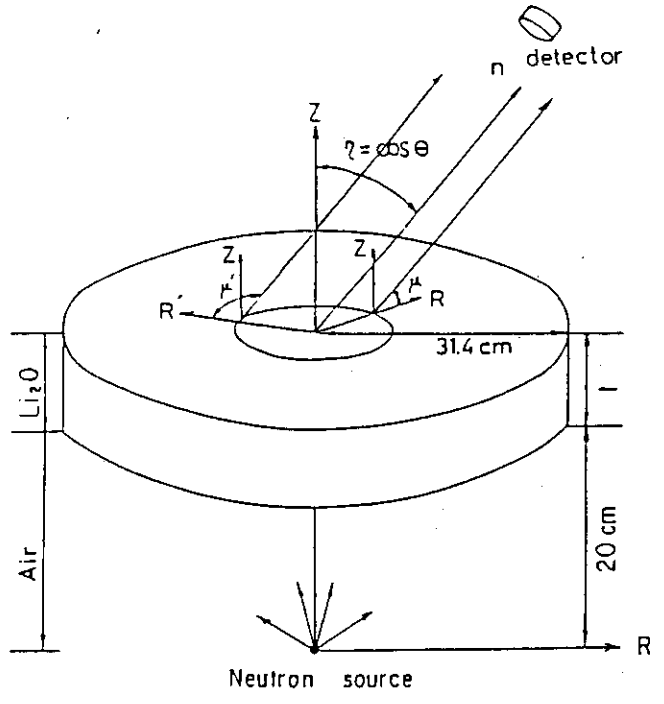


Fig. A.4.1 R-Z model for the DOT3.5 calculation.



$$\langle\phi\rangle_{\mu} = \frac{\sum^{\mu} \phi(\eta,\mu)\omega_{\mu}}{\sum^{\mu} \omega_{\mu}}$$

$$\langle\phi\rangle_{\mu\cdot R} = \frac{\sum^{r} \langle\phi\rangle_{r} 2\pi r\Delta r}{\sum^{r} 2\pi r\Delta r}$$

Fig. A.4.2 The procedure of averaging the angular flux at the boundary.