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Calculation of Dosimetry Parameters for Fast Neutron Radiotherapy

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ABSTRACT

Calculation of Dosimetry Parameters

for Fast Neutron Radiotherapy. (May 1978)

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A computer simulation of the interactions of 50 MeV d^+ on Be and 42 MeV p^+ on Be neutron spectra with ICRU muscle tissue and Shonka A-150 tissue equivalent plastic was performed to allow computation of the charged particle spectra that result. Nuclear data were obtained from the Evaluated Nuclear Data File (ENDF) whenever possible and from the Intranuclear Cascade and Evaporation models otherwise. The dosimetry parameters calculated are: the kerma ratio, K_{A-150} / K_{tissue} ; the energy required to form an ion pair, W ; and the stopping power ratio, S_g^W .

50 MeV d^+ on Be Neutron Spectrum

Depth (cm)	$\frac{K_{A-150}}{K_{tissue}}$	$W_{TE \text{ gas}}$ (eV/ion pair)	$S_{TE \text{ gas}}^W$	W_{Air} (eV/ion pair)	S_{Air}^W
in Air	1.09	30.13	1.011	34.05	1.189
1.00	1.07	30.13	1.011	34.05	1.189
10.0	1.04	30.13	1.011	34.05	1.189
25.0	1.00	30.13	1.011	34.05	1.189

42 MeV p^+ on Be Neutron Spectrum

(6 cm polyethylene filtration)

Depth (cm)	K_{A-150} K_{tissue}	$W_{TE\ gas}$ (eV/ion pair)	$S_{TE\ gas}^W$	W_{Air} (eV/ion pair)	S_{Air}^W
in Air	1.10	30.12	1.010	34.03	1.188
1.00	1.08	30.12	1.010	34.03	1.188
10.0	1.05	30.12	1.010	34.03	1.188
25.0	1.01	30.12	1.010	34.03	1.188

The values listed above for the kerma in air require an ionization chamber wall thickness of 0.5 cm to ensure that charged particle spectrum equilibrium will occur.

Doses given at the Texas A&M Variable Energy Cyclotron (TAMVEC) using currently accepted dosimetry parameters agree within 4% at depths of 1 cm or more with doses calculated with the parameters listed above.

Calculated values of S_g^W and W for the 50 MeV d^+ on Be and the 42 MeV p^+ on Be neutron spectra are the same, within 0.1%. The kerma ratio for the 42 MeV p^+ on Be neutron spectrum is about 1% greater than the kerma ratio for the 50 MeV d^+ on Be neutron spectrum.

CHAPTER I

INTRODUCTION

Medium energy neutrons have been used at TAMVEC and other facilities in recent years for cancer radiotherapy.¹ Proper treatment requires a knowledge of the precise dose delivered to a tissue volume by the neutron beam. The energy range of the source neutron spectra used at early facilities did not exceed 20 MeV, thus permitting the use of the Evaluated Nuclear Data File (ENDF) to perform reasonably accurate computations for the dosimetry parameters of interest.² Later facilities, such as TAMVEC, used higher energy reactions which resulted in source neutron spectra with energies extending to 54 MeV.³ Experimental nuclear data for neutron energies greater than 20 MeV are sparse and computations exceedingly expensive, thus initial dosimetry constants for this energy region were necessarily based upon extrapolations or approximations using available 0 to 20 MeV data.^{4,5} Possible errors present in these approximations could have a significant effect, if radiotherapy

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This dissertation follows the format and style of Radiation Research.

protocols developed for the 50 MeV d^+ on Be neutron beam at TAMVEC are used with a beam which has a different neutron spectrum. This is because the constants required to compute the dose delivered to tissue are dependent on the neutron spectrum and the charged particle spectrum the beam produces. If the approximate constants differ appreciably from the actual physical constants, a dose selected to achieve a given therapeutic effect with one neutron beam will give different results with a different beam. Also, comparisons between different types of radiotherapy, such as pion, neutron, proton, and heavy ion therapy, are made more difficult by dosimetry uncertainties. Thus the purpose of this research is to develop better values for the required dosimetry constants, via a unified system of computer programs and evaluated experimental data, for the 50 MeV d^+ on Be neutron therapy beam and for the 42 MeV p^+ on Be neutron spectrum. As previously mentioned, the sparsity of data for neutron energies greater than 20 MeV and the calculational complexity required have prevented the accomplishment of such an evaluation prior to this work.

CHAPTER II

DOSIMETRY PARAMETERS

The dose to tissue is computed using the free charge produced in the gas filling an ionization chamber, which is related to the dose to the chamber wall (made of Tissue Equivalent plastic⁴) via the Bragg-Gray principle:^{6,7}

$$D_{\text{wall}}^{\text{chamber}} = \frac{100 (W/e) S_{\text{gas}}^{\text{wall}} Q (C_{\text{TPC}}) (C_{\text{attn}})}{m} \quad (1)$$

$$D_{\text{tissue}} = \frac{K_{\text{tissue}}}{K_{\text{wall}}^{\text{chamber}}} D_{\text{wall}}^{\text{chamber}}$$

where: D_{tissue} = dose to tissue in rads

$D_{\text{wall}}^{\text{chamber}}$ = dose to the chamber wall in rads

W/e = energy per ion pair, eV / C

Q = charge collected, C

m = mass of gas in the chamber, kg

$S_{\text{gas}}^{\text{wall}}$ = stopping power ratio (wall to gas, S_g^w)

C_{TPC} = correction to standard temperature and pressure (22°C and 760 mm Hg)

C_{attn} = correction for attenuation of primary beam in chamber

K_{tissue} = kerma value for tissue (K_t), rad

$K_{\text{wall}}^{\text{chamber}}$ = kerma value for the chamber wall (K_w), rad

The values for W , K_t , K_w and S_g^w are particle and energy dependent, and thus vary as the neutron spectrum and its gamma component change. The kerma values and hence the kerma ratio, K_t/K_w , may be obtained from the initial charged particle spectrum produced by neutrons in tissue and in T.E. plastic, respectively.^{8,9}

The energy of these initial charged particles (including recoil nuclei) produced in a small mass element of the material being considered is the kerma⁶:

$$K = \Delta E_K / \Delta m ,$$

where ΔE_K is the sum of the initial kinetic energies of all charged particles, including recoil nuclei, produced by indirectly ionizing radiation in a volume element of a specified material with mass Δm .

The stopping power ratio, S_g^w , is obtained from the equilibrium charged particle distribution. For each charged particle of the j^{th} type and particle energy E , $S_j(E)$ is the energy lost per unit path length. $S_j(E)$ may be obtained via the continuous slowing down approximation:⁶

$$S_j(E) = \frac{4 \pi e^4}{m_e v_j^2} \sum_i N_i Z_i B_i , \quad (2)$$

$$\text{where } B_i = \left[\ln \frac{2 m_e v_j^2}{I_i} - \ln(1-\beta^2) - \beta^2 \right]$$

and I_i = ionization potential for the i^{th} element, eV

N_i = number of atoms of i^{th} type/unit volume
with atomic number Z_i

m_e = mass of the electron, kg

e = charge of the electron, coul

v_j = velocity of the j^{th} charged particle, m/s

β = v_j / c , where c is the speed of light

This expression for $S_j(E)$ may also be corrected for various effects, including shell corrections, and these corrections have been made for tabulated values¹⁰ of the stopping power for protons, $S_p(E)$, for various media. For heavy ions:¹¹

$$S_j(E) = \left[\frac{Z_j^*}{Z_p^*} \right]^2 S_p(E) \quad (3)$$

where

$$Z_j^* = Z_j \left[1 - \exp(-125 v_j/c Z_j^{2/3}) \right]$$

is the effective charge of a charged particle of the j^{th} type. Z_p^* , the effective charge for protons, is also computed with this expression.

For deuterons and tritons, whose charge is the same as the proton's:

$$S_j(E) = S_p(E^*) , \text{ where } E^* = \frac{m_p}{m_j} E. \quad (4)$$

The average stopping power, $\bar{S}$, when more than one type of charged particle is present, is:

$$\bar{S} = \sum_j \frac{N_j(E) S_j(E) dE}{N} , \quad (5)$$

where

$N_j(E)$ is the number of the j^{th} type charged particle at energy E , and N is the total number of charged particles per unit volume.

The stopping power ratio, S_g^W , is the ratio of $\bar{S}$ for the chamber wall material to $\bar{S}$ for the gas filling the chamber.

It has been customary in the past to approximate S_g^W by averaging¹² the stopping power of charged particles over the initial (also called the primary or source) charged particle spectrum, rather than the slowing down spectrum as was done in this work. The initial charged particle spectrum is the energy spectrum of the charged particles created by the interaction of radiation with nuclei, which have not been transported away from the interaction site. A Monte Carlo program was written for this work to transport these charged particles and compute the slowing down spectrum, which is the physical spectrum actually present within irradiated media.

$\bar{W}$, the average energy required to produce an ion pair in the chamber gas, is obtained from the equilibrium charged particle distribution:

$$\bar{W} = \frac{\sum_j \int W_j(E) N_j(E) dE}{\sum_j \int N_j(E) dE}, \quad (6)$$

where $W_j(E)$ is the energy per ion pair produced for a particle of type j and energy E .

Experimental data for $W_j(E)$ are sparse, although data for protons and deuterons incident on argon and T.E. gas are available.¹³

A theoretical model for calculating $W(E)$ has been developed.¹⁴

Recent absolute measurements of W for T.E. gas made at Brookhaven National Laboratory¹⁵ were used in this work. A consistent set of W values as a function of energy for air is not available.

It is possible¹⁶ to approximate the energy dependence of W for air by using the BNL energy dependence of W for T.E. gas and the electron W value for air.¹⁷ A similar synthesis of W for nitrogen agrees quite well with measured values,¹⁸ thus lending credence to the approximation for air, which is 75% nitrogen by weight. The expressions for W for T.E. gas, air, and nitrogen are listed in Table 1.

The stopping power ratio for Shonka A-150 plastic to air may be obtained from the slowing down charged particle spectrum

TABLE 1

Energy Dependences of W

Material	Function
TE gas	$W_P(E) = 29.91 + 0.57 E^{-1/2}$
	$W_\alpha(E) = 29.79 + 3.64 E^{-1/2}$
Air	$W_P(E) = 33.73 + 0.64 E^{-1/2}$
	$W_\alpha(E) = 33.73 + 4.12 E^{-1/2}$
Nitrogen	$W_P(E) = 36.4 + 0.69 E^{-1/2}$
	$W_\alpha(E) = 36.4 + 4.45 E^{-1/2}$

as described above. However, because of the large differences in composition of A-150 plastic and air and the 3-10 % uncertainties in stopping powers,¹⁹ the resulting uncertainty in S_{Air}^W is 15% or more. A more accurate method for determining S_{Air}^W is to perform a measurement of a fixed dose with a specific ionization chamber with both air and T.E. gas fillings. Since the dose is equal for both measurements, and given the W for air and T.E. gas and the $S_{TE\ gas}^W$, the value of S_{Air}^W may be obtained as follows:

$$D_{TE\ gas} = D_{Air}$$

or, upon inserting the Bragg-Gray expression:

$$\frac{100 (W/e)_{TE\ gas} S_{TE\ gas}^W Q_{TE} (C_{TPC}) (C_{attn})}{m_{TE\ gas}} = \frac{100 (W/e)_{Air} S_{Air}^W Q_{Air} (C_{TPC}) (C_{attn})}{m_{Air}}$$

Eliminating common factors and inserting measured⁵ values for the charges collected and the chamber masses yields:

$$S_{Air}^W = \frac{S_{TE\ gas}^W W_{TE\ gas} (1.32937)}{W_{Air}} \quad (7)$$

Both the above expression and the slowing down spectrum were

used to obtain S_{Air}^W in this work, for purposes of comparison.

The above expression may be rewritten to obtain a derived value of W_{Air} given the value of S_{Air}^W obtained from the slowing down spectrum:

$$W_{Air} = \frac{W_{TE \text{ gas}} S_{TE \text{ gas}}^W (1.329)}{S_{Air}^W} \quad (8)$$

This value was also calculated for purposes of comparison.

Differences in the stopping power for a mixture of elements between the solid and gas phases²⁰ were neglected in this work because their magnitude is less than the uncertainties in the stopping power itself.

CHAPTER III

SOURCE SPECTRUM AND PHANTOM GEOMETRY

The source energy spectrum for 50 MeV d^+ on beryllium neutrons is presented in Figure 1 as measured at TAMVEC.³ The evaluated neutron spectrum, shown in Figure 1, was entered in one MeV increments from 0 to 54 MeV, into a source subroutine for computer processing. The source subroutine linearly interpolates between the 55 data points entered to reproduce the source energy spectrum.

The angular dependence of the source spectrum intensity was determined for an 11 by 11 cm square field at 140 cm surface to skin distance, SSD, from an in-air scan made at TAMVEC⁵, that is presented in Figure 2. This scan was made with a polyethylene flattening filter in place, just as patients are normally treated at TAMVEC. The scan was actually made at 142 cm because of equipment limitations, and then normalized to 140 cm. The normalized scan was inserted into the source subroutine as a rectangular distribution, depicted in Figure 2 as a dashed line. A precise representation of the in-air scan was not considered necessary because the scan is different for each of the more than 30 fields that can be treated at TAMVEC. Thus, the neutrons are considered to "illuminate" evenly an 11 by

FIGURE 1

50 MeV d^+ on Be Neutron Spectrum

FIGURE 2
Distance from Beam Line Center (cm)
In-Air Scan

11 field at 140 cm SSD on the face of a cubical phantom that is 40 cm on an edge. The 40 cm cubical phantom is effectively infinite when effects near the entrance face are considered.²¹ The beryllium target is considered as a point source of neutrons. This geometry is depicted in Figure 3. The neutron spectrum as a function of energy is also angle dependent; but for the small angular range ($2\frac{1}{4}$ degrees about beam line center) of this problem the neutron energy spectrum is essentially constant.²² The 0° (beam line center) energy spectrum was therefore used for this work at all angles. Within the cubical phantom, planes perpendicular to beam line center were established at various depths, chosen by trial and error to provide finer resolution in the equilibrium or slowing down charged particle spectrum near the entry face of the phantom. In this region, the dose builds up rapidly, reaching a maximum value at 1 cm, and changes in the dosimetry parameters occur more rapidly than in the rest of the phantom. The depths used were 0.00, 0.05, 0.10, 0.15, 0.20, 0.40, 0.60, 1.00, 2.00, 4.00, 6.00, 10.0, and 14.0 cm. The dosimetry parameters W and S_g^W were evaluated at these depths, and kerma values were calculated for volume elements bounded by these 11 cm by 11 cm planes.

Plane geometry was used throughout this work partly because

FIGURE 3
Source Geometry

of the simplicity it allows, but more importantly because of the practice of irradiating patients with abdominal tumors, with the TAMVEC horizontal beam, in a restraint that reduces the patient's effective thickness and also establishes plane geometry on the patient's surface. For a cyclotron with an isocentric head, the patient would be treated in the supine position, with similar results on the geometry of the region to be treated. Plane geometry is also more appropriate for the chest area. The limbs and head are better simulated as cylinders and a sphere, but the additional computing cost to simulate these geometries as well was considered unwarranted.

The composition of the phantom was Shonka A-150 tissue equivalent plastic for a series of computer runs used to determine W and S_g^W for tissue equivalent gas and air. An identical series of computer runs with ICRU muscle tissue for the phantom composition was made to allow the evaluation of the kerma ratio, Shonka A-150 plastic to ICRU muscle tissue. The compositions of these four materials are given in Table 2.

Dosimetry parameters were also calculated for the 42 MeV p^+ on Be neutron spectrum with polyethylene filtration depicted in Figure 4. This neutron source spectrum has been selected for neutron therapy at M. D. Anderson Hospital and Tumor Institute, Houston, Texas.

TABLE 2
Material Compositions

Element	A-150 Plastic	ICRU Muscle	Dry Air	T.E. Gas
	Weight %	Weight %	Weight %	Weight %
H	10.2	10.2	0.0	10.2
C	76.8	12.3	0.0	45.63
N	3.6	3.5	75.52	3.52
O	5.9	72.9	23.19	40.73
Ca	1.8	0.0	0.0	0.0
F	1.7	0.0	0.0	0.0
Densities	1.12	1.07	1.293	1.138
g/cm ³ at			x10 ⁻³	x10 ⁻³
20 °C and				
760 mm Hg				

FIGURE 4

 $42 \text{ MeV } p^+$ on Be Neutron Spectrum

CHAPTER IV

COMPUTER SIMULATION MODELS

To generate the desired charged particle spectra and the kerma, neutron interactions with the ICRU muscle and A-150 plastic media must first be simulated. The simulation is performed via a two-phase Monte Carlo method, using a LASL code, MCNP, and an ORNL code, NMTC. Figure 5 is a flowchart of the program system used. The Nucleon-Meson Transport Code (NMTC) performs the nucleon-nucleus interaction simulation by using the Intranuclear Cascade plus Evaporation (ICE) model, and neglecting elastic scattering with nuclei other than hydrogen. The energy range treated by NMTC is 20 to 50 MeV. Source neutrons and secondary neutrons and protons of energy greater than 20 MeV are transported by NMTC. Neutrons of energy less than or equal to 20 MeV are treated by the Monte Carlo Neutron-Photon code (MCNP) by using the Evaluated Nuclear Data File (ENDF) cross sections to determine elastic and nonelastic interactions. The energy of recoil protons is determined by non-relativistic kinematics, and the energies of charged particles produced by nuclear interactions are determined via the evaporation model.

The Intranuclear Cascade model used by NMTC is based upon

IC+E: Intranuclear Cascade plus Evaporation

ENDF: Evaluated Nuclear Data File

FIGURE 5

Program Flow Diagram

the Serber model²³ of nucleon-nucleus interactions. When incident-nucleon wavelengths are short relative to internucleon distances within the nucleus, which is true for energies over about 100 Mev, the interaction may be regarded approximately as a scattering process between nucleons in free space. Differences in the free scattering cross sections for neutrons and protons caused by their electric charge difference are very small and are neglected. For energies below about 100 MeV, the nucleon wavelengths become greater than internucleon distances and the free-space Serber approximation does not strictly hold. However, recent work of Metropolis et al.²⁴ and Alsmiller and Hermann²⁵ have shown that, while not strictly correct, the cascade model does predict cross sections and secondary spectra quite well down to 20 MeV. The Intranuclear Cascade model is so named because an incident nucleon may be considered to strike a nucleon in the nucleus, and it and the struck nucleon may strike others, and so forth, thereby forming a cascade of particles moving within or leaving the nucleus. As particles are knocked out of the nucleus, the atomic mass and atomic number of the nucleus are reduced. However, this change is not included in the Intranuclear Cascade model because, for an energetic nucleon, the transit time of the nucleus is short relative to the time needed to alter the Fermi distribution of nucleons within the nucleus. This means

that the probability of striking a given nucleon is not altered by the removal of other nucleons from the nucleus.

The Intranuclear Cascade model has been implemented as a computer program by various groups. Three such programs are due to Barashenkov and Eliseev²⁶ and Barashenkov et al.²⁷⁻²⁹ at the Joint Institute of Nuclear Research (JINR), Bertini^{30,31} at the Oak Ridge National Laboratory (ORNL), and Chen et al.³² at the Brookhaven National Laboratory and Columbia University (BNL-CU). These implementations of the cascade model have been compared by Barashenkov et al.³³, Bertini³⁴, and Blann.³⁵ These comparisons show that all three versions generate basically the same results. The BNL-CU version and ORNL version are both available at LASL, but only the ORNL version was used for this work. This was in spite of the fact that the BNL-CU version treats the refraction and reflection processes in the nucleus, which the ORNL version neglects. It appears that the BNL-CU version does not yet properly handle the refraction and reflection processes, since the cross sections and spallation spectra it produces at low energies are not quite as good as the ORNL version.³⁵ Work is continuing on this failing of the BNL-CU version. The BNL-CU version does seem to have a better description of pion interactions and stopping³⁶, but that

is not relevant to this work.

The evaporation phase of the ICE model occurs because the nucleus is left in an excited and/or unstable state after the intranuclear cascade. The evaporation model is so called because the form of the statistical expression which represents the probability of emission of an elementary particle from an excited or unstable nucleus is similar to that for the evaporation of a microscopic particle from a macroscopic droplet at low temperature.³⁷ The evaporation model was incorporated into a Monte Carlo code by Dostrovsky et al.³⁸ and later modified by Dresner³⁹ and Guthrie.⁴⁰ The current version of the evaporation model is called EVAP-4. In NMTC, EVAP-4 first computes the probability of emission of particles, including protons, deuterons, tritons, helium-3, and alphas. The program chooses one of these via a Monte Carlo process and then computes the energy and direction of emission. In MCNP, the evaporation model was incorporated to determine the energy of the evaporated particle(s), the particle type having been determined by the ENDF cross-section data. MCNP does not incorporate the intranuclear cascade process, but a neutron-nucleus interaction may still leave an excited and/or unstable nucleus which can de-excite by the emission of a particle or via gamma emission. Gamma emission is neglected in both NMTC and MCNP, both because the

probability of emission of a particle is on the order of 10^5 times greater than gamma emission, if the excitation energy is greater than the particle threshold, and because recent work of Ito⁴¹ indicates that the dose to tissue due to gammas is about 1.5% of the total biological dose for the 50 MeV d^+ on Be neutron beam, as described in Appendix A.

The Intranuclear Cascade model used in NMTC at LASL is the version of Bertini without modification. However, this code sometimes generates residual nuclei with negative excitation energy, an obviously unphysical result. In the LASL version of NMTC, this condition is noted and the evaporation phase bypassed.⁴² A more appropriate response to a negative excitation energy has been implemented at LASL in a Monte Carlo cross-section code, CROIX. This program also uses Bertini's cascade model (MECC-2).¹⁹ In CROIX, if the magnitude of the negative excitation energy is more than a specified fraction of the incident particle energy, not to exceed 5 MeV, the interaction is discarded and the MECC-2 subroutine called again. If the magnitude of the negative excitation energy is less than the limit, the energies of the cascade particles are renormalized by a constant chosen so that the resulting excitation is zero. The evaporation phase is then

entered with zero excitation energy because the residual nucleus may be unstable and capable of emitting particles. This renormalization violates the conservation of momentum slightly, but is a small effect and does not justify reusing the computationally expensive MECC-2 subroutine. This technique was inserted into the modified LASL version of NMTC, called NMTC/Q.

CROIX was also built with an improved nuclear mass-excess table and a corrected computation of the direction cosines of evaporated particles. These improvements were also included in the modified version of NMTC.

The cross sections used in this work are presented in Figures 6-9 for hydrogen, carbon, nitrogen, and oxygen. For carbon, the ENDF/B-IV library used for H, N, and O was found to be inadequate, since it contains no evaluated data between 15 and 20 MeV, and also lacks (n,d) and (n,t) cross sections. A preliminary version of the ENDF/B Version V cross section data library was used instead, and both versions appear in Figure 7 for comparison. The ICE cross sections that appear in these figures were produced by CROIX⁴³, and are the same as those produced by the modified NMTC. Inspection of these figures shows good agreement between

FIGURE 6

Hydrogen Cross Section

FIGURE 7

Carbon-12 Cross Section

FIGURE 8

Nitrogen-14 Cross Section

FIGURE 9

Oxygen-16 Cross Section

the ICE and ENDF cross sections at the 20 MeV crossover point between ENDF and the ICE model. Both the total and nonelastic cross sections are plotted for the ENDF data, since MCNP treats both elastic and nonelastic collisions. The LASL version of NMTC does not treat elastic collisions with nuclei other than hydrogen, although the Oak Ridge version does. Thus elastic collisions with nuclei other than hydrogen are neglected for energies over 20 MeV. If included, these elastic collisions would contribute little to the energy loss of a nucleon in this range and would not produce light charged particles, as described in Appendix B.

CHAPTER V

CHARGED PARTICLE TRANSPORT AND KERMA ANALYSIS

NMTC and MCNP are the source programs for charged particles, but these particles must also be transported to obtain the equilibrium or slowing down spectrum needed to calculate the desired dosimetry parameters. The charged particle transport below 20 MeV is accomplished via the Continuous Slowing Down Approximation (CSDA), in which the discrete nature of charged particle collisions is neglected and particle slowing down is treated as a continuous process. Coulomb scattering is also neglected in this approach. Although this approximation would be inadequate for electrons in the energy range of this work (50 keV - 50 MeV), it suffices for the more massive protons and heavier charged particles.⁸

The CSDA was implemented in a computer program in two ways. The method used initially was to transport each charged particle created by NMTC or MCNP through the ICRU muscle or Shonka A-150 plastic medium until its energy dropped below 50 keV. However, because of the short range of charged particles in these media, relative to the spacing of the planes at which the dosimetry parameters were to be calculated, it was found that the majority of the charged particles generated by NMTC and MCNP did not con-

tribute to the slowing down spectra at the desired planes. This caused the statistics of the resulting spectra to be very poor even for large samples of neutron source particles. An alternative method was therefore substituted. This method does not transport each generated charged particle individually; instead, each particle's weight is added to the charged particle source spectrum within a volume element. The charged particle source spectra for each depth are divided into 10 equal direction cosine intervals, relative to the z-axis or depth, for each of 90 energy intervals. The energy intervals selected are those used by Williamson et al.⁴⁴ to describe the ranges and stopping powers of the elements, since these intervals are appropriate to both S and W calculations. Equal direction cosine intervals were selected since they are equiprobable intervals for isotropic particle emission. All charged particles generated by NMTC and MCNP will contribute to the charged particle source spectra, thus improving the statistics of the resulting planar slowing down spectra for a given computing cost. Each segment of the source spectrum may be transported as a single particle whose weight is the sum of all particle weights that contributed to it. This "pseudoparticle" is then transported through the medium according to the following scheme:

- 1) First, for a given energy, the range of the pseudoparticle

is found from the appropriate range-energy table.

- 2) Next, the pseudoparticle weight is normalized by the fraction of the source volume which can contribute to the spectrum at the plane, which is the range divided by the source volume thickness.
- 3) The pseudoparticle weight and the contributing subvolume are divided by twice the number of the energy interval, but not less than ten, of the pseudoparticle. This is to insure that the pseudoparticle has the opportunity to contribute to each energy interval of the planar spectrum. The pseudoparticle has now been split into many fragments, each with correspondingly reduced weight.
- 4) The pseudoparticle fragments are individually transported from the center of their respective subvolumes to the plane, and the weight of each fragment is added to the proper energy interval of the planar slowing down spectrum. If the fragment possesses enough energy after crossing the plane to reach a succeeding plane, it is transported to that plane as well.
- 5) The process is repeated for each of the ten direction cosine intervals.
- 6) The process is repeated for all energies.

The actual implementation of the CSDA is very simple. First

a range-energy table is constructed for the medium from Janni's stopping power tables.⁷ For a particle of a given energy (E), z-axis direction cosine (W), and distance to a plane (x):

- 1) First, compute the actual distance the particle must travel to reach the plane, d, where: $d = x/W$
- 2) Find the particle range, R, from the range-energy tables.
- 3) Compute the particle's remaining range, R' , after it reaches the plane: $R' = R - d$
- 4) Find the particle's remaining energy from the range-energy tables, given R' .

The range-energy tables are linearly interpolated between energy and range values.

Because of computer storage limitations and the complexity of MCNP, charged particle histories are not actually generated by MCNP. Instead, MCNP is used to generate a collision history describing all collisions of neutrons with energy less than or equal to 20 MeV with nuclei. The collision history is used to drive the EVAP-4 evaporation module described in Chapter 4. MCNP normally sums all absorption cross sections and disregards individual charged particle production mechanisms. Rather than modify this, a collision history dependent upon the total absorption cross section was accepted. The relative strengths of the

(n,alpha), (n,proton), (n,deuteron), and (n,triton) cross sections from the Evaluated Nuclear Data File are used to determine the relative production probability of each charged particle. Thus, every collision is used to contribute to the source spectrum for every allowable charged particle. To further improve the statistics of the energy and direction cosine dependence generated by the EVAP-4 module, up to four particles of the most probable type or types are generated with correspondingly reduced weights. These techniques, with proper normalization, cause up to 13 charged particles to be generated from a single collision, with relative probabilities and hence weights dictated by ENDF, and energy and direction cosine selected by EVAP-4. This particle splitting technique is used because the computer costs of the neutron transport process are an order of magnitude greater than the charged particle generation and transport costs; hence, any improvement in the charged particle generation is a good investment, since it results in a marked improvement in the accuracy of the charged particle spectrum with a small increase in cost.

CHAPTER VI

VALIDATION OF COMPUTER PROGRAMS

The computer programs involved in this work are very large and complex, and it was therefore considered desirable to perform various numerical experiments the results of which could be compared to available data. Two such tests were performed: the first was a simulation of dosimetry parameters for a deuterium-tritium (D-T) spectrum and the second was a series of calculations to obtain kerma values for monoenergetic neutrons at various energies in H, C, N, and O.

The D-T spectrum simulation results are presented in Table 3 with values accepted by various therapy groups.⁴⁵ The simulated dosimetry parameters do agree quite well with the accepted values. Neutron spectra at 1, 10, and 25 cm deep in phantom were calculated as well. Comparison with measurements made with time-of-flight techniques⁴⁶ shows reasonable agreement, even though the time-of-flight measurements do not include any neutrons with paths that do not intersect the detector, which subtends a very small solid angle. The results calculated here include neutrons with any direction. The calculated neutron spectra are presented in Figures 10-12.

TABLE 3

D-T Spectrum Parameters

	ENDIP [*] Average Value	Calculated	Difference
$W_{TE \text{ gas}}$	30.6	30.3	1 percent
$S_{TE \text{ gas}}^{A-150}$	1.023	1.021	.2 percent
$\frac{K_{A-150}}{K_{tissue}}$	1.05	1.03	2 percent

*European Neutron Dosimetry Intercomparison Program

FIGURE 10

D-T Neutron Spectrum at 1 cm Depth

FIGURE 11

D-T Neutron Spectrum at 10 cm Depth

FIGURE 12

D-T Neutron Spectrum at 25 cm depth

Kerma values for elemental materials can be obtained from NMTC/Q and MCNP by allowing monoenergetic neutrons to enter a phantom of the desired element and requiring that only the first collision of each neutron be calculated. Kerma values for H, C, N, and O were computed using this technique, and the results are presented in Figures 13-16 with the kerma values obtained by Caswell and Coyne⁴⁷ and Alsmiller and Barish⁴⁸ included for comparison. At energies less than or equal to 20 MeV, a third source of kerma values is available at LASL in the ACE (A Compact ENDF) data files used by MCNP and other Monte Carlo programs. The ACE values may be considered to be an upper bound to the kerma because they can contain a contribution from gamma rays. The kerma may be expressed as the product of the average energy released by charged particles per interaction and the macroscopic cross section. Thus, the value of the cross section used to calculate the kerma is very important. For energies less than 20 MeV, the cross sections from ENDF were used. Above 20 MeV, evaluations of the non-elastic cross sections for C, N, and O were made. For carbon, measured cross section values⁴⁹ were used in the evaluation. For nitrogen and oxygen, measured data are not available above 20 MeV. Both Intranuclear Cascade plus Evaporation and Optical model⁵⁰ calculations were made, and the evaluations are simply the ICE

FIGURE 13
Hydrogen Kerma

FIGURE 14

Carbon Kerma

FIGURE 15
Nitrogen Kerma

FIGURE 16
Oxygen Kerma

values fitted to the ENDF cross sections at 20 MeV. The kerma values obtained from NMTC/Q were normalized to agree with the MCNP values at 20 MeV so that a consistent set of values would result. Inspection of Figures 13-16 indicates that the kerma values are comparable to those calculated by others.

The tests described above allowed several technical and programming errors in this work to be discovered, and result in more credibility in the computational methods used here.

CHAPTER VII

RESULTS AND DISCUSSION

The dosimetry parameters calculated in this work are tabulated at various depths in phantom in Table 4. Inspection of this table indicates that the values of W_{Air} derived from the value of S_{Air}^W obtained from the slowing down spectrum are unphysical, since they are lower than the W value for electrons in air, 33.73 eV/ ion pair. This is due to the large differences in composition for Shonka A-150 plastic and air and the 5-10 percent uncertainties in stopping power values. The values of W_{Air} calculated with this method are all within 6% of the electron lower limit, and the stopping power uncertainties account for the unphysical results. The results for S_{Air}^W obtained from the slowing down spectrum and the results for W_{Air} derived from them were discarded. Instead, the values of W_{Air} obtained using the synthesized energy dependence as described in Chapter II, and the S_{Air}^W derived from them,

Table 4 indicates that S_g^W and W are larger in the buildup region, from 0 to 1 cm deep, than at greater depths. This is due to the reduction of the recoil proton component of the

TABLE 4

50 MeV d^+ on Be Neutron Spectrum Dosimetry Parameters

Depth (cm)	$S_{TE\ gas}^W$	$W_{TE\ gas}$	S_{Air}^W (synthesized $W_{Air}(E)$)	W_{Air}	S_{Air}^{W*} (slowing down spectra S_{Air}^W)	W_{Air}^{W*}
0.00	1.034	30.77	1.216	34.77	1.340	31.55
0.05	1.015	30.39	1.194	34.34	1.262	32.50
0.10	1.016	30.34	1.196	34.29	1.263	32.45
0.15	1.011	30.27	1.189	34.20	1.236	32.91
0.20	1.011	30.18	1.189	34.10	1.224	33.12
0.40	1.011	30.19	1.189	34.12	1.227	33.07
0.60	1.010	30.15	1.188	34.07	1.218	33.22
1.00	1.010	30.12	1.188	34.04	1.214	33.30
2.00	1.010	30.13	1.188	34.05	1.212	33.23
4.00	1.011	30.13	1.189	34.05	1.220	33.18
6.00	1.011	30.13	1.189	34.05	1.221	33.16
10.0	1.011	30.13	1.189	34.05	1.220	33.18
14.0	1.010	30.13	1.188	34.05	1.217	33.23

* Values for S_{Air}^W and W_{Air} obtained from the slowing down spectrum are subject to large uncertainties, and were discarded.

TABLE 4

(continued)

Depth (cm)	K_{A-150} (intrinsic K_{tissue} calculation)	K_{A-150} (Caswell and K_{tissue} Coyne; Alsmiller and Barish)
1.00	1.08	1.07
10.0	1.05	1.03
25.0	1.00	1.00
in Air **	--	1.09

** Chamber walls that are 0.5 cm thick are required to ensure that charged particle equilibrium will occur.

slowing down spectrum near the surface of the phantom, which is caused by the forward peaking of the recoil proton scattering angle.⁵¹ This effect may be seen in Table 5, which lists the contribution to the dose from protons and alphas as a function of depth. Deuterons and tritons are neglected in this table because they contribute less than 0.1% at all depths. The average contribution of alphas for depths greater than 1 cm is 9.7 %, which agrees very well with the 9 % estimated by Bewley.⁵²

The kerma ratios listed in Table 4 include values calculated "intrinsically" by directly summing the initial kinetic energy of all charged particles, including recoil nuclei, by the charged particle transport programs, and also include values obtained by using the neutron spectra calculated at 1, 10, and 25 cm to weight the kerma values of Caswell and Coyne⁴⁷ for energies of 30 MeV or less and the values of Alsmiller and Barish⁴⁸ for energies of more than 30 MeV. Values obtained via these two methods differ by only 2% or less.

If a fixed charge is collected in an ionization chamber, doses may be calculated using the dosimetry parameters developed in this work and those currently used at TAMVEC.⁵³ The differences between these doses were calculated with kerma ratios obtained with both methods described above, and are tabulated in Table 6.

TABLE 5

50 MeV d^+ on Be Neutron Spectrum Relative Dose Contributions

Depth (cm)	Protons (percent)	Alphas (percent)
0.00	83.08	16.86
0.05	89.41	10.58
0.10	88.06	11.92
0.15	91.20	8.73
0.20	87.60	12.37
0.40	88.50	11.48
0.60	90.80	9.17
1.00	90.76	9.18
2.00	89.10	10.87
4.00	90.24	9.73
6.00	90.11	9.84
10.0	91.19	8.75
14.0	90.26	9.69

TABLE 6

50 MeV d^+ on Be Neutron Spectrum Dose Comparisons

Depth (cm)	Difference Using "intrinsic" kerma ratio	Difference Using neutron spectrum kerma ratio
1.00	-4.3% (relative to TAMVEC)	-3.9%
10.0	-1.9%	-0.9%
25.0	+2.6%	+2.1%

The result that the dosimetry parameters change with depth in approximately the first centimeter of the phantom is due to the shift in the neutron energy spectrum that occurs. The average neutron energy in the source spectrum is 20 MeV, but this is decreased to only about 14 MeV by the first centimeter of phantom. This shift in the energy spectrum is not as strong at depths greater than 1 cm, as indicated by comparison of Figures 17-19, which depict the neutron spectra at 1, 10, and 25 cm depth. No depth dependence was noted for the D-T spectrum for the dosimetry parameters, described in Chapter 6. This is because of the overwhelming predominance of the energy deposition of 14.7 MeV source neutrons. Dosimetry parameters that are a function of depth may be characteristic of neutron source spectra that are continuous functions of energy.

The energy of heavy recoil nuclei is regarded as deposited locally in this work. The average energies of the predominant recoil species, O^{16} in ICRU muscle tissue and C^{12} in Shonka A-150 plastic, are 0.30 and 0.38 MeV respectively. With such large masses and high effective charges, the ranges of these particles in tissue and A-150 plastic are about 2×10^{-4} mm. The ranges of protons and alphas, by comparison, are

FIGURE 17

50 Mev d^+ on Be Neutron Spectrum at 1 cm

FIGURE 18

50 MeV d^+ on Be Neutron Spectrum at 10 cm

FIGURE 19

50 MeV d^+ on Be Neutron Spectrum at 25 cm

about 1 mm and 0.02 mm. Recoil nuclei may therefore be regarded as stopping locally, with a very small contribution to the slowing down spectrum and hence to the W and S_g^W parameters, although they must be included in the kerma (see Table 7).

The use of Monte Carlo programs to determine the charged particle spectra introduces statistical uncertainties into the resulting dosimetry parameters. An estimate of the size of these uncertainties may be obtained by processing a fixed number of source neutrons and calculating the desired dosimetry parameters. This process may be repeated a number of times, and the variance and standard deviation computed for S_g^W , W , K_{A-150} , K_{tissue} , and the ratio $K_{A-150}/K_{\text{tissue}}$. For this work, groups of 8,000 source neutrons were processed until a total of 56,000 source neutrons had been processed, generating over 300,000 charged particles, for A-150 plastic and ICRU muscle tissue. Each 1,000 source neutrons required approximately one minute of CDC 7600 computer time.

Statistical uncertainties in the dosimetry parameters are small, being less than 0.1% for W and S_g^W and about 2% for the kerma values, for a 1% uncertainty in the kerma ratios. The sources of uncertainty due to error in measurement of experi-

TABLE 7

50 MeV d^+ on Be Neutron Spectrum Recoil Nuclei

Recoil Nucleus	ICRU Muscle Tissue Abundance (percent)	Average Energy (MeV)	Shonka A-150 Plastic Abundance (percent)	Average Energy (MeV)
Li ⁷	0.00	--	0.05	2.29
Be ⁹	0.04	2.36	2.33	2.39
Be ¹⁰	0.00	--	0.02	1.62
Be ¹¹	0.01	1.30	0.04	1.44
B ¹⁰	0.05	2.00	0.20	2.19
B ¹¹	0.56	1.51	2.61	1.31
B ¹²	0.22	0.98	1.36	0.93
C ¹¹	0.05	0.89	0.34	1.22
C ¹²	19.34	0.78	83.35	0.38
C ¹³	2.52	1.58	0.53	1.27
C ¹⁴	0.18	0.63	0.15	0.61
C ¹⁵	0.07	0.86	0.00	0.78
N ¹³	0.02	0.62	0.01	0.50
N ¹⁴	3.41	0.60	2.99	0.39
N ¹⁵	4.57	1.04	0.40	1.07
N ¹⁶	1.18	0.68	0.12	0.99
O ¹⁵	0.36	0.85	0.03	0.77
O ¹⁶	67.27	0.30	5.44	0.28

mental data used to obtain the dosimetry parameters may be evaluated, but the uncertainty due to use of the Intra-Nuclear Cascade and Evaporation models is difficult to estimate. The very close agreement between the kerma ratios calculated via the ICE model and the optical model of Caswell and Coyne⁴⁷ indicates that the kerma ratio is not strongly affected by choice of model. The small changes of W and S_g^W with depth indicate that these values are not strong functions of the charged particle spectra, which were generated partly via the models.

The uncertainty in $W_{TE\ gas}$ is about 1%, the accuracy claimed for the experimental data. Because the compositions of TE gas and Shonka A-150 plastic are very similar, absolute error in the stopping powers is less apparent in the stopping power ratio. To determine if the choice of stopping power tables, Janni's⁷ or the tables of Williamson et al,⁴⁴ had any effect on the stopping power ratios, calculations were made with both. The change in $S_{TE\ gas}^W$ was about 0.1%, but the change in S_{Air}^W was about 3%. This demonstrates the importance of similar compositions for wall material and gas to reduce the uncertainty in S_g^W . Because of the small change in $S_{TE\ gas}^W$ incurred by changing stopping power tables, and because of the relatively high (about 11 MeV)

average energy of the protons in the slowing down spectra, an overall accuracy of about 1% will be attributed to S_{TE}^W gas. The uncertainty of the stopping power decreases with increasing particle energy, from about 10% at 50 keV to about 2% at 10 MeV⁷, so that a more energetic charged particle spectrum results in a smaller uncertainty.

Since the kerma ratios calculated by both methods described above agree within 2% and other sources of error are less than 1%, a 3% uncertainty will be attributed to the kerma ratio. A more precise estimate of the uncertainty is difficult to obtain because the kerma ratio is obtained via both experimental data and models. Even below 20 MeV where ENDF is available, a model is still required to describe (n,charged particle) reactions because the residual excitation of the nucleus after charged particle emission is unknown. An additional source of error for the kerma ratio is the approximately 10% uncertainty in the measured source neutron spectrum. However, the 30% change in mean neutron energy in the first cm of the phantom results in only a 2% change in the kerma ratio, so the source spectrum uncertainty does not affect the kerma ratio more than about 2/3%. The overall accuracy in a computed dose is therefore about 3.5%.

As stated in Chapter III, the 42 MeV p^+ on Be beam has been selected for neutron radiotherapy and is therefore of interest. A Monte Carlo simulation of the 42 MeV p^+ on Be neutron spectrum interactions with ICRU muscle tissue and Shonka A-150 tissue equivalent plastic was performed in exactly the same manner as for the 50 MeV d^+ on Be neutron spectrum. Since this neutron beam is not currently used for radiotherapy, no comparison of doses computed with accepted dosimetry parameters and the values calculated here was made. Table 8 lists the dosimetry parameters calculated for the 42 MeV p^+ on Be neutron beam. The dosimetry parameters are essentially constant for depths greater than 0.4 cm, indicating that charged particle equilibrium is achieved at a depth of approximately 0.5 cm, as for the 50 MeV d^+ on Be neutron beam. The values of S_g^W and W are equal to those calculated for the 50 MeV d^+ on Be neutron spectrum, within the statistical uncertainty quoted above. The kerma ratios are about 1% higher at all depths than those calculated for the 50 MeV d^+ on Be spectrum.

Table 9 lists the relative dose contributions from protons and alphas for the 42 MeV p^+ on Be neutron beam. As for the 50 MeV d^+ on Be spectrum, recoil protons are the primary dose component except at depths less than about 0.2 cm.

TABLE 8

42 MeV p^+ on Be Neutron Spectrum Dosimetry Parameters

Depth (cm)	$S_{TE\ gas}^W$	$W_{TE\ gas}$	S_{Air}^W (synthesized $W_{Air}^{(E)}$)	W_{Air}
0.00	1.026	30.70	1.207	34.69
0.05	1.015	30.37	1.194	34.32
0.10	1.014	30.29	1.193	34.23
0.15	1.011	30.26	1.189	34.20
0.20	1.014	30.18	1.193	34.10
0.40	1.009	30.17	1.187	34.09
0.60	1.009	30.14	1.187	34.06
1.00	1.010	30.11	1.187	34.03
2.00	1.010	30.11	1.188	34.03
4.00	1.010	30.12	1.188	34.03
6.00	1.010	30.12	1.188	34.03
10.0	1.010	30.11	1.188	34.03
14.0	1.010	30.11	1.188	34.03

TABLE 8

(continued)

Depth (cm)	$\frac{K_{A-150}}{K_{\text{tissue}}}$ (intrinsic calculation)	$\frac{K_{A-150}}{K_{\text{tissue}}}$ (Caswell and Coyne; Alsmiller and Barish)
1.00	1.07	1.085
10.0	1.04	1.05
25.0	1.00	1.01
in Air [*]	--	1.10

* Chamber walls that are 0.5 cm thick are required to ensure that charged particle **spectrum** equilibrium will occur.

TABLE 9

42 MeV p^+ on Be Neutron Spectrum Relative Dose Contributions

Depth (cm)	Protons (percent)	Alphas (percent)
0.00	85.52	14.41
0.05	85.10	14.89
0.10	86.18	13.78
0.15	96.47	3.34
0.20	88.88	11.08
0.40	86.85	13.14
0.60	87.54	12.41
1.00	91.57	8.36
2.00	89.98	9.98
4.00	89.33	10.55
6.00	90.95	8.99
10.0	89.93	10.02
14.0	90.21	9.75

Figures 20-22 depict the 42 MeV p^+ on Be neutron spectra at 1, 10, and 25 cm, respectively. Inspection of these figures indicates that the shift in neutrons in the first centimeter of the phantom is not as great as for the 50 MeV d^+ on Be neutron spectrum. The degradation of neutron energies for depths greater than 1 cm is similar to the degradation of the 50 MeV d^+ on Be neutron spectrum. This is also indicated by the constant 1% difference between the kerma ratios, listed in Tables 4 and 8.

Table 10 lists the recoil nuclei and associated average energies for the 42 MeV p^+ on Be neutron beam. As stated above for the 50 MeV d^+ on Be neutron beam, the energy of recoil nuclei may be considered to be locally deposited.

FIGURE 20

42 MeV p^+ on Be Neutron Spectrum at 1 cm

FIGURE 21

42 MeV p^+ on Be Neutron Spectrum at 10 cm

FIGURE 22

42 MeV p^+ on Be Neutron Spectrum at 25 cm

TABLE 10

42 MeV p^+ on Be Neutron Spectrum Recoil Nuclei

(6 cm polyethylene filtration)

Recoil Nucleus	ICRU Muscle Abundance (percent)	Tissue Average Energy (MeV)	Shonka A-150 Plastic Abundance (percent)	Average Energy (MeV)
Li ⁷	0.04	2.29	0.12	2.31
Be ⁹	0.35	2.20	2.04	2.22
B ¹⁰	0.07	2.32	0.33	2.02
B ¹¹	0.74	1.48	3.38	1.39
B ¹²	0.21	0.85	1.30	0.94
C ¹¹	0.08	1.43	0.53	1.15
C ¹²	19.03	0.74	82.83	0.36
C ¹³	2.26	1.54	0.48	1.11
N ¹⁴	3.95	0.72	2.84	0.38
N ¹⁵	4.76	1.06	0.41	1.14
N ¹⁶	1.19	0.64	--	--
O ¹⁵	0.55	0.92	0.05	0.56
O ¹⁶	66.48	0.28	5.30	0.28

CHAPTER VIII

CONCLUSIONS

A recommended set of dosimetry parameters is presented in Table 11. The values of S_g^W and W are constant for depths greater than or equal to $\frac{1}{2}$ cm, but the kerma ratio varies enough with depth that a constant value should not be used. Doses calculated by using the TAMVEC parameters for tumors at a depth of several centimeters or more agree to within about 1% with doses calculated with the parameters recommended here. Tumor volumes extending outward from the normal body contours, with resulting thicknesses of 2 cm or less, may be under-dosed by as much as 3.5% relative to doses calculated with the parameters recommended here. Dose accuracies previously obtained at TAMVEC are therefore within the 5% accuracy that was expected, and are in fact within 4%.

The calculated values of S_g^W and W are the same, within 0.1%, for the 50 MeV d^+ on Be and the 42 MeV p^+ on Be neutron spectra. The kerma ratio for the 42 MeV p^+ on Be neutron spectrum is about 1% higher than the kerma ratio for the 50 MeV d^+ on Be spectrum.

TABLE 11

Recommended Dosimetry Parameters

50 MeV d^+ on Be Neutron Spectrum					
Depth (cm)	K_{A-150} K_{tissue}	$W_{TE \text{ gas}}$ (eV/ion pair)	$S_{TE \text{ gas}}^W$	W_{Air} (eV/ion pair)	S_{Air}^W
in Air *	1.09	30.13	1.011	34.05	1.189
1.00	1.07	30.13	1.011	34.05	1.189
10.0	1.04	30.13	1.011	34.05	1.189
25.0	1.00	30.13	1.011	34.05	1.189

42

Depth (cm)	K_{A-150} K_{tissue}	$W_{TE \text{ gas}}$ (eV/ion pair)	$S_{TE \text{ gas}}^W$	W_{Air} (eV/ion pair)	S_{Air}^W
in Air *	1.10	30.12	1.010	34.03	1.188
1.00	1.08	30.12	1.010	34.03	1.188
10.0	1.05	30.12	1.010	34.03	1.188
25.0	1.01	30.12	1.010	34.03	1.188

* A chamber wall thickness of 0.5 cm is required to ensure that charged particle spectrum equilibrium will occur.

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APPENDIX A

Effect of Gamma Rays on the Dosimetry Parameters

The effect of gamma radiation produced by the interactions of neutrons with tissue may be estimated by simple methods, although its precise calculation is much more difficult. The biological dose from gammas is approximately 1.5%⁴¹ to 2.0%⁵⁴ of the total dose, and with a Relative Biological Effectiveness (RBE) of about 3, this produces a physical dose in rads due to gammas that is about 5% of the total dose in rads.

The average energy of gammas may be estimated to be about 2 MeV⁵⁵, with the average energy of Compton electrons about 1.6 MeV. The stopping power in water, which approximates tissue, is thus 2 MeV-cm²/gm, and in air, 1.8 MeV-cm²/gm. The average stopping power of protons in ICRU muscle tissue at 10 cm is 37.29 MeV-cm²/gm and it is 31.38 MeV-cm²/gm for air. Thus we can write:

$$S^W = 0.95 (37.29) + 0.05 (2.0) = 35.53$$

$$S^{Air} = 0.95 (31.38) + 0.05 (1.8) = 29.90$$

$$\text{and } S_{Air}^W = S^W / S^{Air} = 1.18884$$

The value calculated for S_{Air}^W by neglecting gammas is 1.18859, so including gammas has caused a change of only 0.015%.

The W value for air at 10 cm due to charged particles is 34.03 eV for each ion pair formed, and the W value for air due to the average Compton electron is 33.8. Thus we can write:

$$W_{\text{Air}} = 0.95 \times 34.03 + 0.05 \times 33.8$$

$$\text{and } W_{\text{Air}} = 34.02$$

The value for W_{Air} has changed by less than 0.03% because of the addition of gammas.

The 0.015% change in S_{Air}^W and the 0.03% change in W_{Air} due to the addition of gammas are both less than the 0.1% statistical uncertainty of S_g^W and W. Thus the effect of gammas upon the dosimetry parameters may be neglected.

APPENDIX B

Effects of Elastic Collisions of Neutrons

For energies greater than 20 MeV, neutron elastic collisions with nuclei other than hydrogen are neglected in the LASL version of NMTC. An estimate of the effect of this simplification of the neutron transport must be made for the Shonka A-150 plastic and ICRU muscle tissue materials used in this work, because they contain light nuclei other than hydrogen.

To simplify this estimate, calcium and fluorine are neglected. This causes a slight overestimate of elastic collision effects, since the mean logarithmic energy decrement per collision, ξ , decreases with increasing atomic weight.

The basis of this estimate is to consider a hypothetical collision containing elastic and nonelastic mechanisms that are averaged over all nuclei. This average collision has an energy loss $\overline{\Delta E}$ that can be written:

$$\overline{\Delta E} = \sum_{i=1}^3 P_i \overline{\Delta E}_i \quad (9)$$

where the subscript i includes elastic collisions with hydrogen, elastic collisions with C, N, and O, and nonelastic collisions with C, N, and O. P_i is the probability of

i^{th} type of collision.

The relative probability, P_i , is just:

$$P_i = \frac{\sigma_i}{\sum_{i=1}^3 \sigma_i} \quad (10)$$

where σ_i is the macroscopic cross section for the i^{th} type of collision.

For elastic collisions with C, N, and O, the average energy loss per collision is:

$$\overline{\Delta E} = E_0 - E_0 e^{-\xi} \quad (11)$$

and the average for a mixture is

$$\overline{\xi}_{\text{Mix}} = \frac{\sum_j \sigma_{e_j} \xi_j}{\sum_j \sigma_{e_j}} \quad (12)$$

where σ_{e_j} is the macroscopic elastic cross section for the j^{th} nuclide and ξ_j is the mean logarithmic energy decrement per collision for the j^{th} nuclide.

For elastic collisions with hydrogen, the average energy loss per collision is available from NMTC/Q. For nonelastic collisions with C, N, and O, NMTC/Q provides the needed information to compute $\overline{\Delta E}$ in terms of the average energies and multiplicities of secondary particles produced by the cascade

and evaporation processes.

It must be noted that only 40% of all source neutrons have energy greater than 20 MeV, so that the overall effect of the omission of elastic collisions with C, N, and O is lessened.

Table 12 contains the parameters required to estimate the effect of the omission of elastic collisions of neutrons with energies over 20 MeV with C, N, and O for Shonka A-150 plastic, and Table 13 contains the same parameters for ICRU muscle tissue. The energy dependence of ξ for C and O is depicted in Figures 23 and 24, respectively. Inspection of these figures indicates that ξ decreases with increasing energy, so that 20 MeV is the "worst case" energy for this estimate.

The energy dependence of $\bar{\mu}$, the average direction cosine after elastic scattering with C and O, is presented in Figures 25 and 26, respectively. Inspection of these figures indicates that the scattering angle diminishes with increasing energy; i.e., scattering is more forward as the energy increases above 20 MeV. At 20 MeV, for C and O, the average scattering angle is 41 degrees. This too is a "worst case" at 20 MeV.

As the energy of the neutron increases over 20 MeV, the elastic and nonelastic cross sections both decrease, but

TABLE 12

Energy Loss Parameters for Shonka A-150 Plastic

Nuclide	$\sigma_e (\text{cm}^{-1})$	$\sigma_{ne} (\text{cm}^{-1})$	$\xi (20 \text{ MeV})$
H	3.37×10^{-2}	--	--
C	4.46×10^{-2}	2.01×10^{-2}	0.04145
O	1.72×10^{-3}	9.74×10^{-4}	0.02952
N	2.67×10^{-3}	1.48×10^{-3}	0.03545

$$\bar{\xi}_{\text{C,N,O}} = 0.0406$$

Collision Type	$\overline{\Delta E_j} (\text{MeV})$	P_j	$P_j \overline{\Delta E_j} (\text{MeV})$
Elastic (C,N,O)	0.80	0.4655	0.37 (4.3%)
Elastic (H)	12.9	0.3202	4.13 (48.5%)
Nonelastic (C,N,O)	18.7	0.2143	4.01 (47.2%)

TABLE 13

Energy Loss Parameters for ICRU muscle tissue

Nuclide	$\sigma_e (\text{cm}^{-1})$	$\sigma_{ne} (\text{cm}^{-1})$	ξ (20 MeV)
H	3.22×10^{-2}	--	--
C	6.25×10^{-3}	2.82×10^{-3}	0.04145
O	3.15×10^{-2}	1.75×10^{-2}	0.02952
N	1.59×10^{-3}	9.02×10^{-4}	0.03545

$$\bar{\xi}_{\text{C,N,O}} = 0.03166$$

Collision Type	$\overline{\Delta E_j} \text{ (MeV)}$	P_j	$P_j \overline{\Delta E_j} \text{ (MeV)}$
Elastic (C,N,O)	0.62	0.4241	0.263 (2.8%)
Elastic (H)	12.8	0.3471	4.43 (49.7%)
Nonelastic (C,N,O)	18.5	0.2288	4.23 (47.5%)

FIGURE 23
 $\xi(E)$ for C^{12}

FIGURE 24
 $\xi(E)$ for O^{16}

FIGURE 25

$\bar{\mu}(E)$ for C^{12}

FIGURE 26

$\bar{\mu}$ (E) for O^{16}

their ratio, elastic/nonelastic, decreases towards unity. The relative probability of elastic scatter then decreases toward the probability of nonelastic interaction. Thus, this is also a "worst case" at 20 MeV.

The estimates performed here at 20 MeV are therefore overestimates of the effect of the omission of elastic collisions with nuclei other than hydrogen.

After making these estimates, one may reach several conclusions:

- 1) Only 40% of all source neutrons are involved.
- 2) The mean elastic scattering angle is less than 41 degrees.
- 3) Elastic scattering with C, N, and O accounts for less than 4.3% of the energy loss of neutrons with energy greater than 20 MeV in Shonka A-150 plastic, and less than 2.8% in ICRU muscle tissue.
- 4) Omission of elastic collisions of neutrons with energy greater than 20 MeV with nuclei other than hydrogen may be neglected for this work.

APPENDIX C

Elemental Kerma Values

A method of obtaining kerma values for various incident neutron energies for specified elements was described in Chapter VI. The elemental kerma values which were calculated are listed in Table 14.

TABLE 14

Elemental Kerma Values

Energy (MeV)	Hydrogen (10^{-9} rad-cm ² / n)	Carbon	Nitrogen	Oxygen
10	45.6	1.13	1.24	0.99
15	46.1	2.57	2.28	1.78
20	46.9	3.55	3.15	1.96
25	46.0	3.77	3.46	2.22
28	45.0	3.90	3.66	2.45
30	44.1	3.98	3.90	2.53
40	41.7	4.13	4.67	3.02
50	41.5	4.35	5.41	3.62
60	39.9	4.72	6.10	4.21
70	38.5	5.10	6.72	4.78
80	35.8	5.52	6.98	5.49

APPENDIX D

Charged Particle Spectra

Figures 27-30 are examples of computer generated graphs of charged particle spectra. Figures 27-30 are slowing down spectra for protons, deuterons, tritons, and alphas, respectively. A complete set of slowing down and initial spectra are included in this report for depths of 0.00 to 14.0 cm in Shonka A-150 plastic and ICRU muscle tissue, for the 50 MeV d^+ on Be, 42 MeV p^+ on Be, and D-T neutron spectra. A complete set of computer generated graphs of these spectra may be found on the microfiche located in a pocket on the inside cover of this report. Printed tabulations of the same spectra may be found immediately following Figure 30 in this appendix.

FIGURE 27

Proton Slowing Down Spectrum at 6 cm
 (42 MeV p^+ on Be Neutron Spectrum)

FIGURE 28

Deuteron Slowing Down Spectrum at 6 cm

(42 MeV p^+ on Be Neutron Spectrum)

FIGURE 29

Triton Slowing Down Spectrum at 6 cm

(42 MeV p^+ on Be Neutron Spectrum)

FIGURE 30

Alpha Slowing Down Spectrum at 6 cm

(42 MeV p^+ on Be Neutron Spectrum)

1 SLOWING DOWN SPECTRUM AT 0.00 CM. FOR SHONKA A-150 PLASTIC
 50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	8.10E+00	6.58E-05	4.12E-07	4.40E-03
0.15 MEV	5.48E-01	1.49E-04	4.12E-07	6.24E-03
0.20 MEV	7.11E-01	1.25E-04	4.12E-07	5.74E-03
0.25 MEV	1.19E+00	1.65E-04	4.12E-07	7.80E-03
0.30 MEV	1.70E+00	2.55E-04	4.12E-07	5.26E-03
0.35 MEV	1.28E+00	9.78E-05	8.24E-07	2.32E-03
0.40 MEV	2.02E+00	1.54E-04	3.28E-04	5.34E-03
0.45 MEV	1.79E+00	5.56E-05	9.31E-06	6.24E-03
0.50 MEV	1.58E+00	7.05E-05	1.24E-06	2.04E-03
0.55 MEV	1.18E+00	4.45E-05	1.24E-06	3.16E-03
0.60 MEV	2.66E+00	5.28E-05	3.30E-06	5.74E-03
0.65 MEV	2.30E+00	3.55E-05	3.27E-04	3.44E-03
0.70 MEV	1.67E+00	7.03E-05	0.	4.66E-03
0.75 MEV	1.74E+00	4.13E-05	8.49E-06	3.31E-03
0.80 MEV	7.92E-01	8.19E-05	0.	1.36E-02
0.85 MEV	4.10E+00	8.10E-06	0.	3.29E-03
0.90 MEV	7.41E-01	1.99E-05	0.	6.37E-03
0.95 MEV	1.01E+00	1.18E-05	0.	6.41E-03
1.00 MEV	8.24E-01	4.40E-05	8.49E-06	1.10E-02
1.10 MEV	9.01E-01	3.64E-04	0.	6.37E-03
1.20 MEV	4.02E-01	4.03E-05	0.	5.84E-03
1.30 MEV	7.87E-01	8.10E-06	4.25E-06	5.56E-03
1.40 MEV	1.45E+00	1.62E-05	4.25E-06	6.26E-03
1.50 MEV	4.65E-01	8.75E-05	1.84E-05	6.04E-03
1.60 MEV	8.11E-01	1.68E-04	4.25E-06	5.89E-03
1.70 MEV	3.40E-01	0.	0.	3.50E-03
1.80 MEV	1.56E-01	0.	4.25E-06	4.85E-03
1.90 MEV	1.35E-01	0.	4.25E-06	4.41E-03
2.00 MEV	4.35E-01	9.13E-05	4.25E-06	8.54E-03
2.10 MEV	8.57E-01	0.	4.25E-06	5.54E-03
2.20 MEV	6.74E-02	0.	0.	5.61E-03
2.30 MEV	6.70E-02	3.90E-04	4.25E-06	3.04E-03
2.40 MEV	1.10E-01	3.18E-05	2.27E-05	6.77E-03
2.50 MEV	3.28E-01	0.	4.25E-06	3.15E-03
2.60 MEV	6.94E-02	1.63E-04	8.49E-06	5.29E-03
2.70 MEV	2.98E-01	0.	4.25E-06	4.92E-03
2.80 MEV	4.79E-02	8.52E-05	4.25E-06	2.41E-03
2.90 MEV	4.73E-02	6.12E-06	4.25E-06	6.65E-03
3.00 MEV	6.31E-02	8.52E-05	2.69E-05	1.80E-03
3.20 MEV	9.98E-02	2.11E-04	6.37E-06	2.28E-03
3.40 MEV	2.65E-02	2.09E-04	8.49E-06	5.26E-03
3.60 MEV	7.80E-03	1.90E-05	2.19E-05	4.95E-03
3.80 MEV	1.83E-02	1.53E-04	2.76E-05	5.71E-03
4.00 MEV	9.68E-03	3.87E-05	9.21E-06	3.54E-03

1 SLOWING DOWN SPECTRUM AT 0.00 CM. FOR SHONKA A-150 PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	8.33E-03	1.54E-04	0.	4.70E-03
4.40 MEV	7.13E-02	1.71E-05	9.21E-06	2.12E-03
4.60 MEV	2.31E-03	1.90E-04	0.	6.83E-03
4.80 MEV	3.66E-03	3.31E-05	9.21E-06	4.29E-03
5.00 MEV	1.41E-02	1.77E-04	0.	2.89E-03
5.50 MEV	2.36E-03	1.46E-04	7.37E-06	3.16E-03
6.00 MEV	6.52E-03	3.30E-04	7.37E-06	8.31E-03
6.50 MEV	2.09E-02	4.12E-05	7.37E-06	4.41E-04
7.00 MEV	5.76E-03	9.51E-05	1.11E-05	8.72E-04
7.50 MEV	6.47E-03	8.51E-05	1.47E-05	1.84E-04
8.00 MEV	2.48E-02	1.68E-04	3.32E-05	4.04E-04
8.50 MEV	7.42E-03	2.25E-05	0.	1.66E-05
9.00 MEV	2.72E-02	5.07E-05	0.	5.30E-05
9.50 MEV	2.25E-02	0.	0.	2.48E-05
10.00 MEV	2.12E-02	0.	0.	2.83E-05
11.00 MEV	1.31E-02	0.	0.	3.20E-05
12.00 MEV	2.21E-02	0.	0.	4.26E-05
13.00 MEV	2.97E-02	0.	0.	4.25E-05
14.00 MEV	4.24E-02	0.	0.	9.06E-05
15.00 MEV	0.	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	1.50	4.59	3.75	3.18

1 SLOWING DOWN SPECTRUM AT 0.05 CM. FOR SHONKA A-150 PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	1.28E+00	1.12E-04	9.42E-05	1.88E-02
0.15 MEV	4.07E-01	3.31E-04	1.45E-06	2.13E-02
0.20 MEV	2.01E+00	6.94E-04	1.45E-06	3.10E-02
0.25 MEV	2.38E+00	6.06E-04	1.72E-05	2.62E-02
0.30 MEV	1.10E+00	2.31E-04	2.91E-06	2.08E-02
0.35 MEV	1.61E+00	5.42E-04	1.45E-06	9.32E-03
0.40 MEV	2.57E+00	4.02E-04	1.77E-05	3.09E-02
0.45 MEV	1.58E+00	1.48E-03	9.57E-05	3.05E-02
0.50 MEV	2.51E+00	4.69E-04	1.45E-06	1.59E-02
0.55 MEV	2.36E+00	3.91E-04	2.91E-06	1.30E-02
0.60 MEV	1.47E+00	6.37E-04	4.36E-06	2.76E-02
0.65 MEV	2.26E+00	1.30E-03	4.24E-04	3.62E-02
0.70 MEV	7.06E-01	8.97E-04	2.89E-05	1.18E-02
0.75 MEV	2.23E+00	8.50E-04	1.62E-05	1.70E-02
0.80 MEV	3.00E+00	8.68E-04	9.28E-05	9.18E-02
0.85 MEV	2.27E+00	9.92E-04	0.	2.38E-02
0.90 MEV	3.08E-01	1.45E-03	0.	2.08E-02
0.95 MEV	1.72E+00	2.72E-04	9.28E-05	3.91E-02
1.00 MEV	1.82E+00	1.04E-03	1.72E-05	5.11E-02
1.10 MEV	3.08E+00	1.16E-03	7.61E-05	2.85E-02
1.20 MEV	1.39E+00	8.77E-04	4.64E-05	2.74E-02
1.30 MEV	1.24E+00	1.52E-03	6.31E-05	2.79E-02
1.40 MEV	3.63E+00	1.60E-03	9.28E-05	3.20E-02
1.50 MEV	2.79E+00	1.04E-03	1.09E-04	4.61E-02
1.60 MEV	1.34E+00	1.68E-03	3.57E-04	2.68E-02
1.70 MEV	1.26E+00	8.03E-04	8.61E-06	2.57E-02
1.80 MEV	1.19E+00	1.74E-03	1.67E-05	2.46E-02
1.90 MEV	7.59E-01	2.73E-04	8.10E-06	3.70E-02
2.00 MEV	1.14E+00	8.33E-04	6.68E-04	2.97E-02
2.10 MEV	1.38E+00	1.72E-04	8.61E-06	3.08E-02
2.20 MEV	1.16E+00	3.50E-04	2.02E-04	4.68E-02
2.30 MEV	1.09E+00	4.40E-04	2.48E-05	2.27E-02
2.40 MEV	2.19E+00	5.70E-04	1.67E-05	4.38E-02
2.50 MEV	1.05E+00	2.76E-04	1.67E-05	1.74E-02
2.60 MEV	1.68E+00	3.59E-04	1.88E-04	3.69E-02
2.70 MEV	9.86E-01	6.87E-05	3.29E-05	3.45E-02
2.80 MEV	1.12E+00	2.68E-04	5.77E-05	3.27E-02
2.90 MEV	1.52E+00	4.74E-04	1.89E-04	5.76E-02
3.00 MEV	7.87E-01	4.73E-04	4.31E-05	2.43E-02
3.20 MEV	1.28E+00	1.00E-04	9.26E-05	1.51E-02
3.40 MEV	1.05E+00	2.33E-04	8.18E-05	3.54E-02
3.60 MEV	8.67E-01	6.15E-05	0.	3.41E-02
3.80 MEV	8.45E-01	8.25E-05	3.36E-04	3.03E-02
4.00 MEV	1.16E+00	7.00E-05	0.	3.17E-02

1 SLOWING DOWN SPECTRUM AT 0.05 CM, FOR SHONKA A-150 PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	1.15E+00	1.04E-04	0.	4.66E-02
4.40 MEV	1.01E+00	6.87E-05	1.08E-05	2.62E-02
4.60 MEV	1.17E+00	5.12E-05	0.	3.84E-02
4.80 MEV	8.04E-01	1.28E-04	1.08E-05	2.53E-02
5.00 MEV	8.20E-01	4.98E-05	3.26E-04	2.05E-02
5.50 MEV	6.94E-01	9.14E-05	4.32E-06	1.82E-02
6.00 MEV	6.20E-01	1.19E-04	1.39E-04	3.87E-02
6.50 MEV	3.73E-01	1.31E-04	8.64E-06	1.31E-02
7.00 MEV	3.47E-01	2.79E-04	1.35E-04	2.26E-02
7.50 MEV	4.05E-01	9.10E-05	1.43E-04	1.29E-02
8.00 MEV	2.92E-01	1.56E-04	1.39E-04	1.56E-02
8.50 MEV	9.76E-02	5.00E-05	1.48E-04	8.57E-03
9.00 MEV	2.38E-01	1.08E-04	1.69E-04	1.98E-02
9.50 MEV	6.75E-02	5.92E-05	2.60E-04	2.09E-03
10.00 MEV	4.73E-02	1.38E-04	5.21E-04	4.94E-03
11.00 MEV	4.45E-02	0.	0.	2.73E-03
12.00 MEV	4.26E-02	0.	1.64E-05	4.11E-03
13.00 MEV	4.55E-02	0.	0.	3.55E-03
14.00 MEV	5.38E-02	0.	0.	5.94E-03
15.00 MEV	1.80E-02	0.	0.	2.60E-03
16.00 MEV	3.37E-02	0.	0.	7.14E-03
17.00 MEV	2.48E-02	0.	0.	1.25E-05
18.00 MEV	0.	0.	0.	1.25E-05
19.00 MEV	8.03E-03	0.	0.	1.66E-05
20.00 MEV	1.80E-02	0.	0.	3.74E-05
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	8.13E-02	0.	0.	0.
24.00 MEV	1.80E-02	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	6.81E-03	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
DAVE, E(MEV)	3.60	2.75	6.51	4.98

1 SLOWING DOWN SPECTRUM AT 0.10 CM, FOR SHONKA A-150 PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	2.55E+00	7.94E-05	0.	1.56E-02
0.15 MEV	5.52E-01	2.91E-04	0.	1.88E-02
0.20 MEV	1.38E+00	2.01E-04	0.	2.78E-02
0.25 MEV	9.72E-01	2.91E-04	0.	1.93E-02
0.30 MEV	1.71E+00	1.68E-04	0.	2.57E-02
0.35 MEV	1.09E+00	1.89E-04	0.	9.31E-03
0.40 MEV	1.72E+00	2.44E-04	0.	2.08E-02
0.45 MEV	1.30E+00	5.59E-04	2.02E-04	1.40E-02
0.50 MEV	2.05E+00	1.99E-04	1.76E-04	1.24E-02
0.55 MEV	3.35E+00	7.01E-05	0.	1.14E-02
0.60 MEV	2.63E+00	1.51E-04	0.	1.76E-02
0.65 MEV	3.39E+00	3.50E-04	0.	2.76E-02
0.70 MEV	2.20E+00	2.44E-04	2.02E-04	1.04E-02
0.75 MEV	3.54E+00	1.14E-04	9.84E-06	1.25E-02
0.80 MEV	1.11E+00	4.81E-04	1.76E-04	5.30E-02
0.85 MEV	2.23E+00	2.81E-04	0.	1.79E-02
0.90 MEV	1.51E+00	4.22E-04	0.	1.30E-02
0.95 MEV	9.87E-01	7.92E-05	0.	1.96E-02
1.00 MEV	1.35E+00	6.28E-04	0.	1.47E-02
1.10 MEV	2.27E+00	3.49E-04	8.79E-05	2.44E-02
1.20 MEV	1.81E+00	7.73E-04	8.79E-05	2.12E-02
1.30 MEV	1.15E+00	3.08E-04	0.	1.92E-02
1.40 MEV	1.12E+00	5.88E-04	8.79E-05	2.73E-02
1.50 MEV	3.08E+00	2.93E-04	0.	2.48E-02
1.60 MEV	3.02E+00	4.51E-04	8.79E-05	1.09E-02
1.70 MEV	1.16E+00	1.93E-04	9.28E-05	2.17E-02
1.80 MEV	1.12E+00	2.28E-04	8.79E-05	2.34E-02
1.90 MEV	1.31E+00	2.03E-04	8.79E-05	1.91E-02
2.00 MEV	1.00E+00	3.45E-04	1.76E-04	1.75E-02
2.10 MEV	1.54E+00	5.81E-05	1.76E-04	1.88E-02
2.20 MEV	9.15E-01	2.40E-04	3.51E-04	3.37E-02
2.30 MEV	1.54E+00	1.11E-04	0.	1.28E-02
2.40 MEV	1.05E+00	8.49E-05	7.75E-05	2.40E-02
2.50 MEV	8.12E-01	6.57E-05	0.	1.51E-02
2.60 MEV	9.34E-01	1.31E-04	0.	3.13E-02
2.70 MEV	1.11E+00	1.69E-04	0.	1.30E-02
2.80 MEV	7.50E-01	2.63E-04	0.	1.90E-02
2.90 MEV	1.81E+00	0.	4.92E-06	3.69E-02
3.00 MEV	2.03E+00	0.	0.	1.01E-02
3.20 MEV	9.53E-01	2.14E-04	0.	1.58E-02
3.40 MEV	1.21E+00	1.87E-05	8.43E-05	2.36E-02
3.60 MEV	9.72E-01	9.58E-06	3.63E-05	2.05E-02
3.80 MEV	7.00E-01	2.25E-05	2.46E-06	2.30E-02
4.00 MEV	8.34E-01	1.87E-05	0.	1.56E-02

1 SLOWING DOWN SPECTRUM AT 0.10 CM. FOR SHONKA A-150 PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	9.26E-01	2.83E-05	2.46E-06	2.30E-02
4.40 MEV	1.16E+00	2.04E-04	3.88E-05	1.09E-02
4.60 MEV	1.17E+00	2.83E-05	0.	1.55E-02
4.80 MEV	1.47E+00	3.21E-05	2.46E-06	1.13E-02
5.00 MEV	7.00E-01	1.87E-05	2.46E-06	1.57E-02
5.50 MEV	1.10E+00	1.19E-04	1.65E-05	6.39E-03
6.00 MEV	9.63E-01	1.58E-04	1.75E-05	1.24E-02
6.50 MEV	8.96E-01	9.18E-06	1.85E-05	5.87E-03
7.00 MEV	4.13E-01	8.73E-05	3.89E-05	9.70E-03
7.50 MEV	1.41E-01	1.65E-04	2.90E-05	7.26E-03
8.00 MEV	2.13E-01	1.10E-04	5.81E-05	1.01E-02
8.50 MEV	1.55E-01	1.52E-04	0.	7.02E-03
9.00 MEV	1.39E-01	3.05E-04	0.	1.29E-02
9.50 MEV	4.52E-02	0.	0.	3.30E-03
10.00 MEV	2.02E-01	0.	0.	6.21E-03
11.00 MEV	2.08E-01	0.	0.	3.24E-03
12.00 MEV	1.01E-01	0.	0.	6.50E-03
13.00 MEV	2.14E-02	0.	0.	1.19E-03
14.00 MEV	1.28E-01	0.	0.	1.52E-03
15.00 MEV	2.01E-01	0.	0.	2.02E-03
16.00 MEV	0.	0.	0.	4.62E-03
17.00 MEV	3.38E-03	0.	0.	0.
18.00 MEV	7.66E-02	0.	0.	0.
19.00 MEV	1.04E-01	0.	0.	0.
20.00 MEV	5.65E-02	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	1.52E-01	0.	0.	0.
23.00 MEV	5.17E-02	0.	0.	0.
24.00 MEV	5.72E-03	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	1.33E-02	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	2.49E-02	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
DAVE. E(MEV)	4.65	3.89	3.36	5.00

1SLOWING DOWN SPECTRUM AT 0.15 CM. FOR SHONKA A-150 PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	5.76E-01	1.30E-04	0.	1.34E-02
0.15 MEV	5.27E-01	3.44E-04	8.32E-05	1.18E-02
0.20 MEV	6.50E-01	7.83E-04	5.97E-06	2.56E-02
0.25 MEV	8.10E-01	4.31E-04	0.	1.31E-02
0.30 MEV	5.34E-01	3.30E-04	0.	1.92E-02
0.35 MEV	8.93E-01	4.32E-04	0.	1.09E-02
0.40 MEV	2.48E+00	3.39E-04	0.	2.51E-02
0.45 MEV	3.01E-01	1.20E-03	5.97E-06	1.15E-02
0.50 MEV	1.89E+00	6.26E-04	2.18E-05	1.16E-02
0.55 MEV	6.10E-01	3.76E-04	8.32E-05	7.99E-03
0.60 MEV	1.45E+00	9.04E-04	2.41E-05	2.40E-02
0.65 MEV	1.08E+00	1.03E-03	5.97E-06	1.47E-02
0.70 MEV	9.05E-01	1.55E-03	0.	3.61E-03
0.75 MEV	1.31E+00	2.87E-04	2.02E-04	1.43E-02
0.80 MEV	9.89E-01	7.21E-04	5.97E-06	2.32E-02
0.85 MEV	1.06E+00	3.82E-04	8.32E-05	1.15E-02
0.90 MEV	1.42E+00	1.52E-03	0.	1.52E-02
0.95 MEV	4.10E+00	3.09E-04	3.00E-05	1.73E-02
1.00 MEV	9.10E-01	9.51E-04	1.05E-04	8.29E-03
1.10 MEV	1.47E+00	1.04E-03	1.51E-04	1.66E-02
1.20 MEV	3.82E+00	1.02E-03	4.46E-05	1.71E-02
1.30 MEV	1.43E+00	1.83E-03	1.95E-04	1.39E-02
1.40 MEV	1.90E+00	1.85E-03	5.55E-05	1.39E-02
1.50 MEV	1.08E+00	4.20E-04	1.16E-04	2.80E-02
1.60 MEV	1.53E+00	1.06E-03	2.98E-06	1.25E-02
1.70 MEV	1.96E+00	3.45E-04	3.28E-05	1.35E-02
1.80 MEV	1.67E+00	5.22E-04	2.98E-06	1.93E-02
1.90 MEV	2.47E+00	3.80E-04	1.80E-05	1.82E-02
2.00 MEV	1.29E+00	5.14E-04	2.15E-04	1.79E-02
2.10 MEV	2.23E+00	1.41E-04	1.80E-05	9.95E-03
2.20 MEV	2.38E+00	1.32E-03	1.65E-04	2.85E-02
2.30 MEV	2.52E+00	1.82E-04	2.10E-05	1.39E-02
2.40 MEV	2.38E+00	5.00E-04	1.33E-04	2.76E-02
2.50 MEV	1.23E+00	1.07E-04	2.28E-05	1.93E-02
2.60 MEV	2.01E+00	5.07E-05	1.39E-04	2.45E-02
2.70 MEV	1.37E+00	9.45E-04	1.28E-04	2.17E-02
2.80 MEV	2.10E+00	1.44E-05	2.29E-05	3.95E-02
2.90 MEV	1.15E+00	3.35E-04	1.24E-04	1.71E-02
3.00 MEV	2.77E+00	1.04E-03	2.68E-04	1.78E-02
3.20 MEV	1.91E+00	1.08E-04	1.18E-04	1.24E-02
3.40 MEV	1.67E+00	7.95E-05	1.52E-04	1.98E-02
3.60 MEV	2.79E+00	1.19E-04	8.60E-05	1.84E-02
3.80 MEV	1.42E+00	2.01E-04	6.66E-05	1.88E-02
4.00 MEV	1.17E+00	1.47E-04	6.86E-05	1.42E-02

1 SLOWING DOWN SPECTRUM AT 0.15 CM. FOR SHONKA A-15M PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	2.43E+00	2.33E-04	1.47E-04	2.13E-02
4.40 MEV	1.54E+00	1.90E-04	1.29E-04	1.74E-02
4.60 MEV	2.30E+00	1.70E-04	2.98E-04	1.78E-02
4.80 MEV	1.47E+00	1.44E-04	1.98E-06	2.56E-02
5.00 MEV	9.16E-01	2.08E-04	7.59E-05	1.73E-02
5.50 MEV	9.65E-01	1.38E-04	6.07E-05	1.01E-02
6.00 MEV	8.91E-01	1.76E-04	1.52E-04	1.64E-02
6.50 MEV	8.20E-01	1.66E-04	0.	1.54E-02
7.00 MEV	8.08E-01	3.42E-04	0.	2.61E-02
7.50 MEV	4.73E-01	9.92E-05	0.	9.99E-03
8.00 MEV	4.29E-01	2.20E-04	0.	1.24E-02
8.50 MEV	1.90E-01	2.12E-05	0.	6.31E-03
9.00 MEV	1.19E-01	4.10E-05	0.	9.34E-03
9.50 MEV	7.07E-01	6.15E-05	0.	7.00E-04
10.00 MEV	2.03E-01	1.40E-04	0.	5.49E-03
11.00 MEV	1.65E-01	3.01E-06	0.	6.47E-03
12.00 MEV	2.90E-01	1.62E-05	1.01E-05	1.11E-02
13.00 MEV	3.40E-01	0.	0.	5.02E-05
14.00 MEV	6.49E-02	0.	0.	9.13E-05
15.00 MEV	1.27E-01	0.	0.	2.85E-05
16.00 MEV	4.51E-02	0.	0.	6.39E-05
17.00 MEV	1.44E-01	0.	0.	1.43E-05
18.00 MEV	1.25E-01	0.	0.	3.57E-05
19.00 MEV	9.00E-02	0.	0.	0.
20.00 MEV	2.29E-01	0.	0.	0.
21.00 MEV	1.38E-01	0.	0.	0.
22.00 MEV	3.37E-02	0.	0.	0.
23.00 MEV	5.72E-03	0.	0.	0.
24.00 MEV	1.80E-02	0.	0.	0.
25.00 MEV	5.78E-02	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	7.18E-03	0.	0.	0.
29.00 MEV	2.49E-02	0.	0.	0.
30.00 MEV	2.49E-02	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.

BAVE, E(MEV)

5.45

3.07

3.61

5.05

1 SLOWING DOWN SPECTRUM AT 0.20 CM. FOR SHONKA A-150 PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	9.83E-01	1.10E-04	0.	1.48E-02
0.15 MEV	3.26E-01	3.92E-04	1.33E-06	1.84E-02
0.20 MEV	2.57E-01	1.83E-04	5.32E-05	2.48E-02
0.25 MEV	4.68E-01	1.20E-03	0.	1.87E-02
0.30 MEV	4.22E-01	3.04E-04	0.	1.94E-02
0.35 MEV	3.83E-01	4.97E-04	1.33E-06	7.14E-03
0.40 MEV	1.28E+00	5.93E-04	2.06E-04	2.49E-02
0.45 MEV	4.64E-01	5.50E-04	0.	2.38E-02
0.50 MEV	5.49E-01	4.08E-04	1.72E-06	1.43E-02
0.55 MEV	3.04E-01	7.98E-04	1.33E-06	9.61E-03
0.60 MEV	3.38E-01	4.52E-04	2.87E-05	2.02E-02
0.65 MEV	6.36E-01	1.35E-03	5.43E-06	2.49E-02
0.70 MEV	1.34E+00	5.81E-04	8.78E-05	1.05E-02
0.75 MEV	9.87E-01	9.62E-04	0.	1.40E-02
0.80 MEV	7.14E-01	7.06E-04	2.06E-04	4.41E-02
0.85 MEV	6.89E-01	1.34E-03	3.01E-05	1.62E-02
0.90 MEV	7.36E-01	1.45E-03	2.45E-05	1.57E-02
0.95 MEV	7.32E-01	1.96E-03	3.05E-06	1.88E-02
1.00 MEV	1.04E+00	1.78E-03	7.15E-06	1.89E-02
1.10 MEV	1.75E+00	1.16E-03	1.20E-04	2.53E-02
1.20 MEV	1.17E+00	1.96E-03	7.22E-06	2.08E-02
1.30 MEV	9.55E-01	9.13E-04	1.72E-04	1.70E-02
1.40 MEV	1.23E+00	1.38E-03	6.45E-05	2.39E-02
1.50 MEV	1.37E+00	9.19E-04	2.12E-04	2.44E-02
1.60 MEV	7.75E-01	1.52E-03	1.46E-04	1.74E-02
1.70 MEV	8.70E-01	1.64E-03	1.61E-04	1.27E-02
1.80 MEV	9.90E-01	1.59E-03	3.07E-04	1.76E-02
1.90 MEV	6.26E-01	4.82E-04	4.13E-06	2.87E-02
2.00 MEV	1.09E+00	9.68E-04	1.57E-04	1.54E-02
2.10 MEV	8.96E-01	1.72E-04	1.33E-06	1.73E-02
2.20 MEV	7.52E-01	3.63E-04	6.13E-05	3.20E-02
2.30 MEV	1.31E+00	1.04E-03	3.98E-06	9.85E-03
2.40 MEV	6.64E-01	8.97E-04	4.91E-05	2.24E-02
2.50 MEV	1.78E+00	8.83E-05	2.09E-05	1.79E-02
2.60 MEV	5.88E-01	1.30E-04	8.53E-05	3.16E-02
2.70 MEV	3.08E+00	8.55E-04	1.62E-05	9.85E-03
2.80 MEV	6.44E-01	3.46E-05	5.59E-05	4.00E-02
2.90 MEV	7.78E-01	2.87E-05	1.81E-04	2.45E-02
3.00 MEV	9.24E-01	8.76E-04	1.92E-04	1.95E-02
3.20 MEV	1.37E+00	5.72E-04	8.09E-06	1.53E-02
3.40 MEV	1.14E+00	4.56E-04	7.30E-05	1.79E-02
3.60 MEV	1.16E+00	6.72E-04	3.44E-05	1.04E-02
3.80 MEV	9.41E-01	5.09E-04	5.76E-05	1.53E-02
4.00 MEV	1.08E+00	8.70E-04	7.06E-05	1.05E-02

1 SLOWING DOWN SPECTRUM AT 0.20 CM. FOR ANKA A-150 PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	1.15E+00	1.30E-03	6.49E-05	1.59E-02
4.40 MEV	1.70E+00	1.72E-04	5.04E-05	6.21E-03
4.60 MEV	7.45E-01	2.86E-04	1.32E-06	1.10E-02
4.80 MEV	1.25E+00	8.55E-05	6.95E-05	1.79E-02
5.00 MEV	1.78E+00	5.74E-04	5.17E-05	9.43E-03
5.50 MEV	1.47E+00	1.62E-04	4.90E-05	6.67E-03
6.00 MEV	1.07E+00	1.90E-04	5.36E-05	9.97E-03
6.50 MEV	1.22E+00	3.06E-04	4.83E-05	1.01E-02
7.00 MEV	7.89E-01	2.93E-04	4.83E-05	1.11E-02
7.50 MEV	1.23E+00	4.75E-04	6.80E-05	9.46E-03
8.00 MEV	1.45E+00	4.72E-04	1.01E-04	1.13E-02
8.50 MEV	1.11E+00	2.80E-04	6.36E-05	6.00E-03
9.00 MEV	1.30E+00	3.72E-04	1.09E-04	8.27E-03
9.50 MEV	1.08E+00	5.01E-05	1.28E-04	1.66E-03
10.00 MEV	1.16E+00	2.88E-04	3.13E-04	7.49E-03
11.00 MEV	1.27E+00	2.70E-04	1.66E-05	7.85E-03
12.00 MEV	1.43E+00	4.49E-04	2.50E-05	1.46E-02
13.00 MEV	1.40E+00	0.	3.33E-05	4.25E-04
14.00 MEV	7.86E-01	0.	7.91E-05	9.57E-04
15.00 MEV	3.33E-01	0.	0.	4.48E-05
16.00 MEV	2.62E-01	0.	0.	9.24E-05
17.00 MEV	1.08E-01	0.	0.	2.21E-05
18.00 MEV	3.35E-02	0.	0.	5.18E-05
19.00 MEV	3.87E-01	0.	0.	8.93E-06
20.00 MEV	1.28E-01	0.	0.	2.17E-05
21.00 MEV	0.	0.	0.	0.
22.00 MEV	1.07E-02	0.	0.	0.
23.00 MEV	2.48E-02	0.	0.	0.
24.00 MEV	1.77E-01	0.	0.	0.
25.00 MEV	1.91E-02	0.	0.	0.
26.00 MEV	1.12E-02	0.	0.	0.
27.00 MEV	8.21E-02	0.	0.	0.
28.00 MEV	3.21E-02	0.	0.	0.
29.00 MEV	2.49E-02	0.	0.	0.
30.00 MEV	8.73E-02	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	5.32E-03	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.

NAVE, E(MEV)

8.41

4.64

7.00

5.07

1 SLOWING DOWN SPECTRUM AT 0.40 CM. FOR SHONKA A-150 PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	3.95E-01	1.67E-04	0.	1.30E-02
0.15 MEV	3.95E-01	3.39E-04	0.	1.30E-02
0.20 MEV	8.37E-01	5.76E-04	2.23E-05	2.21E-02
0.25 MEV	8.60E-01	3.27E-03	0.	1.84E-02
0.30 MEV	1.18E+00	3.10E-04	0.	2.13E-02
0.35 MEV	9.01E-01	5.69E-04	0.	6.46E-03
0.40 MEV	4.26E-01	3.62E-04	1.27E-04	1.94E-02
0.45 MEV	4.67E-01	8.93E-04	8.97E-06	1.72E-02
0.50 MEV	4.73E-01	3.38E-04	7.08E-05	9.77E-03
0.55 MEV	3.69E-01	2.96E-03	1.34E-05	1.12E-02
0.60 MEV	7.85E-01	4.18E-04	0.	1.96E-02
0.65 MEV	3.93E-01	8.98E-04	8.97E-06	1.93E-02
0.70 MEV	4.65E-01	5.93E-04	6.48E-05	9.62E-03
0.75 MEV	1.51E+00	3.03E-03	0.	9.30E-03
0.80 MEV	8.63E-01	4.89E-04	3.15E-05	5.34E-02
0.85 MEV	1.09E+00	6.44E-04	0.	1.64E-02
0.90 MEV	4.09E-01	4.24E-03	7.38E-05	9.03E-03
0.95 MEV	9.40E-01	1.57E-04	0.	2.04E-02
1.00 MEV	9.77E-01	3.38E-03	9.31E-05	2.02E-02
1.10 MEV	5.13E-01	2.10E-03	4.36E-05	1.67E-02
1.20 MEV	6.58E-01	5.13E-03	4.36E-05	2.14E-02
1.30 MEV	1.15E+00	6.62E-04	5.26E-05	1.57E-02
1.40 MEV	6.67E-01	1.00E-03	1.75E-04	2.21E-02
1.50 MEV	1.42E+00	7.74E-04	0.	3.17E-02
1.60 MEV	1.08E+00	1.27E-03	3.59E-05	1.94E-02
1.70 MEV	1.31E+00	5.25E-04	3.54E-05	1.54E-02
1.80 MEV	8.66E-01	6.22E-04	0.	2.00E-02
1.90 MEV	1.06E+00	3.25E-04	0.	2.87E-02
2.00 MEV	8.07E-01	5.22E-04	4.00E-05	1.84E-02
2.10 MEV	1.12E+00	3.72E-04	0.	2.24E-02
2.20 MEV	1.61E+00	6.46E-04	4.00E-05	3.92E-02
2.30 MEV	8.37E-01	8.94E-05	0.	1.29E-02
2.40 MEV	5.98E-01	2.59E-04	6.67E-05	2.93E-02
2.50 MEV	7.64E-01	1.37E-05	4.00E-05	1.67E-02
2.60 MEV	9.15E-01	1.01E-04	0.	3.28E-02
2.70 MEV	1.72E+00	1.43E-04	4.00E-05	2.12E-02
2.80 MEV	9.36E-01	1.97E-04	3.54E-05	3.80E-02
2.90 MEV	1.03E+00	5.07E-06	7.13E-05	4.27E-02
3.00 MEV	1.02E+00	8.61E-05	9.11E-05	2.19E-02
3.20 MEV	1.34E+00	1.46E-04	3.77E-05	1.61E-02
3.40 MEV	9.05E-01	4.44E-05	1.24E-04	3.10E-02
3.60 MEV	1.05E+00	6.69E-05	4.60E-06	2.91E-02
3.80 MEV	1.51E+00	4.41E-05	1.80E-05	2.49E-02
4.00 MEV	7.51E-01	7.81E-05	2.03E-05	1.99E-02

1 SLOWING DOWN SPECTRUM AT 0.40 CM. FOR SHONKA A-150 PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	9.85E-01	9.21E-05	2.30E-06	2.37E-02
4.40 MEV	1.40E+00	9.01E-05	2.03E-05	2.16E-02
4.60 MEV	1.33E+00	1.13E-04	2.03E-05	2.67E-02
4.80 MEV	1.07E+00	1.29E-04	3.59E-05	2.40E-02
5.00 MEV	1.51E+00	2.93E-04	7.94E-05	2.23E-02
5.50 MEV	1.03E+00	2.83E-05	7.36E-06	1.29E-02
6.00 MEV	1.18E+00	3.36E-05	1.66E-05	2.50E-02
6.50 MEV	1.04E+00	4.99E-05	1.12E-05	1.30E-02
7.00 MEV	9.26E-01	4.42E-05	0.	2.28E-02
7.50 MEV	1.05E+00	8.09E-05	1.12E-05	1.21E-02
8.00 MEV	1.10E+00	1.10E-04	0.	1.45E-02
8.50 MEV	1.12E+00	3.84E-05	1.12E-05	9.32E-03
9.00 MEV	1.07E+00	5.56E-05	1.12E-05	1.53E-02
9.50 MEV	1.61E+00	1.16E-05	0.	3.47E-03
10.00 MEV	1.13E+00	4.66E-05	1.12E-05	8.82E-03
11.00 MEV	1.12E+00	4.51E-05	1.67E-05	7.04E-03
12.00 MEV	1.03E+00	8.22E-05	2.79E-05	1.23E-02
13.00 MEV	7.43E-01	0.	0.	1.77E-03
14.00 MEV	5.79E-01	0.	0.	3.34E-03
15.00 MEV	6.75E-01	0.	0.	9.00E-04
16.00 MEV	7.46E-02	0.	0.	9.20E-04
17.00 MEV	4.32E-02	0.	0.	8.87E-04
18.00 MEV	2.32E-01	0.	0.	2.66E-03
19.00 MEV	8.37E-02	0.	0.	0.
20.00 MEV	3.05E-02	0.	0.	0.
21.00 MEV	3.24E-02	0.	0.	0.
22.00 MEV	1.98E-01	0.	0.	0.
23.00 MEV	9.86E-03	0.	0.	0.
24.00 MEV	4.66E-02	0.	0.	0.
25.00 MEV	9.51E-02	0.	0.	0.
26.00 MEV	6.67E-03	0.	0.	0.
27.00 MEV	9.88E-03	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	5.32E-03	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	4.94E-03	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	7.96	2.18	4.74	5.49

1 SLOWING DOWN SPECTRUM AT 0.60 CM. FOR SHONKA A-150 PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	4.14E-01	1.79E-04	2.63E-05	1.34E-02
0.15 MEV	3.62E-01	3.48E-04	1.30E-06	1.72E-02
0.20 MEV	3.30E-01	6.40E-04	9.24E-06	2.37E-02
0.25 MEV	3.49E-01	5.41E-04	0.	2.01E-02
0.30 MEV	4.70E-01	2.24E-04	1.30E-06	2.55E-02
0.35 MEV	3.83E-01	4.44E-04	2.61E-06	9.23E-03
0.40 MEV	3.81E-01	2.25E-04	1.25E-05	2.80E-02
0.45 MEV	3.26E-01	1.33E-03	1.12E-05	1.74E-02
0.50 MEV	5.30E-01	3.91E-04	0.	1.13E-02
0.55 MEV	3.46E-01	4.63E-04	7.93E-06	1.24E-02
0.60 MEV	4.07E-01	3.77E-04	3.49E-06	2.44E-02
0.65 MEV	4.07E-01	1.19E-03	1.12E-05	2.44E-02
0.70 MEV	6.77E-01	7.47E-04	1.59E-04	7.96E-03
0.75 MEV	3.92E-01	3.46E-04	0.	1.12E-02
0.80 MEV	4.44E-01	7.29E-04	3.42E-05	5.13E-02
0.85 MEV	1.45E+00	1.06E-03	1.83E-05	2.29E-02
0.90 MEV	5.18E-01	1.67E-03	8.60E-06	9.05E-03
0.95 MEV	4.48E-01	3.32E-04	1.47E-05	2.45E-02
1.00 MEV	6.72E-01	1.28E-03	1.40E-04	2.86E-02
1.10 MEV	5.77E-01	1.21E-03	1.66E-05	2.18E-02
1.20 MEV	5.56E-01	9.05E-04	1.35E-05	3.00E-02
1.30 MEV	5.23E-01	1.21E-03	1.05E-04	1.83E-02
1.40 MEV	7.82E-01	1.39E-03	3.81E-05	1.95E-02
1.50 MEV	1.05E+00	1.06E-03	2.10E-05	3.32E-02
1.60 MEV	5.22E-01	1.91E-03	9.93E-05	1.61E-02
1.70 MEV	8.87E-01	6.02E-04	8.39E-05	1.85E-02
1.80 MEV	8.73E-01	1.18E-03	3.07E-06	2.60E-02
1.90 MEV	3.82E-01	4.50E-04	9.61E-06	2.86E-02
2.00 MEV	9.81E-01	1.13E-03	1.51E-04	2.46E-02
2.10 MEV	6.56E-01	2.59E-04	9.61E-06	2.13E-02
2.20 MEV	9.54E-01	4.62E-04	8.33E-05	4.21E-02
2.30 MEV	8.43E-01	2.93E-04	8.02E-05	1.77E-02
2.40 MEV	9.37E-01	2.90E-04	9.89E-05	3.33E-02
2.50 MEV	7.30E-01	1.03E-04	2.76E-05	1.91E-02
2.60 MEV	6.01E-01	4.60E-04	1.59E-04	3.62E-02
2.70 MEV	1.09E+00	1.18E-04	1.70E-05	2.56E-02
2.80 MEV	1.26E+00	2.96E-04	1.44E-04	2.68E-02
2.90 MEV	6.62E-01	2.94E-05	1.62E-04	4.20E-02
3.00 MEV	9.11E-01	2.37E-04	2.42E-04	1.96E-02
3.20 MEV	7.35E-01	1.70E-04	3.94E-05	1.73E-02
3.40 MEV	7.57E-01	3.93E-04	1.47E-04	3.13E-02
3.60 MEV	8.84E-01	9.01E-05	1.92E-05	2.99E-02
3.80 MEV	1.17E+00	3.03E-04	3.00E-05	2.60E-02
4.00 MEV	8.29E-01	1.43E-05	6.61E-06	2.10E-02

1 SLOWING DOWN SPECTRUM AT 0.60 CM. FOR SHONKA A-150 PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	8.66E-01	3.55E-05	3.49E-06	2.89E-02
4.40 MEV	7.73E-01	4.33E-05	1.27E-05	2.40E-02
4.60 MEV	1.14E+00	5.84E-05	1.13E-05	2.77E-02
4.80 MEV	1.01E+00	3.44E-05	4.00E-06	2.08E-02
5.00 MEV	1.33E+00	1.56E-04	0.	2.18E-02
5.50 MEV	8.66E-01	4.21E-05	4.93E-06	1.26E-02
6.00 MEV	9.35E-01	1.38E-04	4.93E-06	2.60E-02
6.50 MEV	8.64E-01	1.67E-05	4.93E-06	1.21E-02
7.00 MEV	1.12E+00	7.41E-05	8.25E-06	2.41E-02
7.50 MEV	1.10E+00	7.83E-05	9.85E-06	1.02E-02
8.00 MEV	1.02E+00	8.85E-05	2.13E-05	1.50E-02
8.50 MEV	1.29E+00	8.13E-05	0.	7.49E-03
9.00 MEV	9.93E-01	1.06E-04	0.	1.27E-02
9.50 MEV	1.15E+00	1.19E-04	0.	2.77E-03
10.00 MEV	8.90E-01	2.21E-04	0.	6.89E-03
11.00 MEV	9.17E-01	2.19E-05	0.	4.62E-03
12.00 MEV	1.04E+00	5.75E-05	0.	9.73E-03
13.00 MEV	9.36E-01	0.	0.	7.17E-04
14.00 MEV	9.79E-01	0.	0.	1.76E-03
15.00 MEV	8.20E-01	0.	0.	1.85E-05
16.00 MEV	7.80E-01	0.	0.	4.63E-05
17.00 MEV	6.38E-01	0.	0.	0.
18.00 MEV	5.93E-01	0.	0.	0.
19.00 MEV	7.22E-01	0.	0.	0.
20.00 MEV	5.55E-01	0.	0.	0.
21.00 MEV	4.63E-01	0.	0.	0.
22.00 MEV	2.14E-01	0.	0.	0.
23.00 MEV	3.09E-02	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	3.95E-03	0.	0.	0.
26.00 MEV	2.28E-02	0.	0.	0.
27.00 MEV	4.48E-02	0.	0.	0.
28.00 MEV	1.15E-02	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	1.10E-03	0.	0.	0.
34.00 MEV	1.21E-03	0.	0.	0.
36.00 MEV	4.18E-03	0.	0.	0.
38.00 MEV	1.07E-02	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	5.74E-03	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
BAVE. E(MEV)	10.31	2.98	2.87	4.76

1 SLOWING DOWN SPECTRUM AT 1.00 CM. FOR SHONKA A-150 PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	6.06E-01	1.03E-04	1.67E-05	1.33E-02
0.15 MEV	3.40E-01	2.20E-04	1.12E-05	1.28E-02
0.20 MEV	3.52E-01	4.27E-04	3.88E-05	2.45E-02
0.25 MEV	3.61E-01	6.02E-04	1.23E-05	1.35E-02
0.30 MEV	3.53E-01	2.07E-04	7.11E-06	2.07E-02
0.35 MEV	3.76E-01	3.20E-04	1.20E-05	6.17E-03
0.40 MEV	3.85E-01	3.01E-04	1.95E-04	1.58E-02
0.45 MEV	4.21E-01	9.70E-04	4.69E-06	1.50E-02
0.50 MEV	4.68E-01	3.42E-04	8.39E-05	1.10E-02
0.55 MEV	3.35E-01	5.33E-04	4.61E-06	1.12E-02
0.60 MEV	3.98E-01	4.12E-04	9.99E-05	1.59E-02
0.65 MEV	4.33E-01	8.12E-04	2.82E-05	2.28E-02
0.70 MEV	4.42E-01	7.55E-04	4.04E-05	9.50E-03
0.75 MEV	4.64E-01	4.65E-04	1.78E-05	9.11E-03
0.80 MEV	4.33E-01	5.74E-04	1.60E-05	4.10E-02
0.85 MEV	6.61E-01	6.78E-04	3.88E-05	1.40E-02
0.90 MEV	3.22E-01	1.25E-03	5.47E-05	1.08E-02
0.95 MEV	6.68E-01	3.82E-04	1.80E-05	1.64E-02
1.00 MEV	6.12E-01	9.05E-04	1.00E-04	1.88E-02
1.10 MEV	4.34E-01	7.93E-04	9.60E-05	1.45E-02
1.20 MEV	5.65E-01	1.08E-03	3.83E-05	2.08E-02
1.30 MEV	5.18E-01	7.26E-04	5.21E-05	1.30E-02
1.40 MEV	3.64E-01	1.01E-03	6.41E-05	1.84E-02
1.50 MEV	8.15E-01	5.66E-04	6.04E-05	2.18E-02
1.60 MEV	3.89E-01	1.14E-03	1.21E-04	1.19E-02
1.70 MEV	6.93E-01	4.99E-04	1.52E-04	1.42E-02
1.80 MEV	7.69E-01	7.12E-04	8.13E-05	2.04E-02
1.90 MEV	3.56E-01	4.06E-04	5.89E-05	2.17E-02
2.00 MEV	6.21E-01	9.31E-04	1.30E-04	1.68E-02
2.10 MEV	5.25E-01	1.76E-04	1.81E-05	1.93E-02
2.20 MEV	5.50E-01	3.78E-04	1.25E-04	3.02E-02
2.30 MEV	9.91E-01	2.07E-04	9.63E-05	1.09E-02
2.40 MEV	4.84E-01	4.68E-04	8.19E-05	1.94E-02
2.50 MEV	4.27E-01	8.78E-05	3.94E-05	1.24E-02
2.60 MEV	4.68E-01	2.15E-04	1.36E-04	2.67E-02
2.70 MEV	7.53E-01	3.21E-04	1.42E-04	1.52E-02
2.80 MEV	4.43E-01	1.73E-04	1.03E-04	1.71E-02
2.90 MEV	7.75E-01	1.46E-04	1.81E-04	3.08E-02
3.00 MEV	1.31E+00	2.95E-04	1.27E-04	1.48E-02
3.20 MEV	7.46E-01	2.98E-04	7.27E-05	1.39E-02
3.40 MEV	5.17E-01	2.95E-04	1.09E-04	2.66E-02
3.60 MEV	6.13E-01	2.53E-04	7.09E-05	1.98E-02
3.80 MEV	9.88E-01	5.65E-04	1.63E-04	2.07E-02
4.00 MEV	6.38E-01	2.48E-04	6.33E-05	1.81E-02

1 SLOWING DOWN SPECTRUM AT 1.00 CM. FOR SHONKA A-150 PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	6.28E-01	3.13E-04	8.18E-05	2.07E-02
4.40 MEV	8.24E-01	2.66E-04	7.95E-05	1.27E-02
4.60 MEV	6.41E-01	3.83E-04	6.83E-05	1.42E-02
4.80 MEV	5.94E-01	1.54E-04	4.97E-05	1.51E-02
5.00 MEV	9.48E-01	3.99E-04	1.23E-04	1.78E-02
5.50 MEV	8.04E-01	2.03E-04	6.52E-05	1.01E-02
6.00 MEV	8.85E-01	3.39E-04	1.02E-04	2.10E-02
6.50 MEV	8.30E-01	1.96E-04	7.57E-05	8.21E-03
7.00 MEV	8.66E-01	4.77E-04	1.51E-04	1.33E-02
7.50 MEV	9.60E-01	2.89E-04	3.14E-05	8.48E-03
8.00 MEV	9.55E-01	3.47E-04	4.80E-05	1.21E-02
8.50 MEV	9.17E-01	2.30E-04	2.62E-05	6.04E-03
9.00 MEV	9.18E-01	4.09E-04	6.05E-05	1.30E-02
9.50 MEV	1.06E+00	1.61E-04	0.	2.66E-03
10.00 MEV	8.65E-01	3.25E-04	0.	5.72E-03
11.00 MEV	1.16E+00	4.12E-06	0.	3.30E-03
12.00 MEV	1.07E+00	9.07E-06	0.	6.67E-03
13.00 MEV	1.01E+00	0.	0.	1.79E-03
14.00 MEV	1.15E+00	0.	0.	2.92E-03
15.00 MEV	1.04E+00	0.	0.	8.10E-04
16.00 MEV	1.05E+00	0.	0.	1.41E-03
17.00 MEV	8.55E-01	0.	0.	7.76E-04
18.00 MEV	8.78E-01	0.	0.	1.77E-03
19.00 MEV	7.32E-01	0.	0.	1.48E-04
20.00 MEV	6.02E-01	0.	0.	3.70E-04
21.00 MEV	6.97E-01	0.	0.	0.
22.00 MEV	5.60E-01	0.	0.	0.
23.00 MEV	5.70E-01	0.	0.	0.
24.00 MEV	3.07E-01	0.	0.	0.
25.00 MEV	4.22E-01	0.	0.	0.
26.00 MEV	3.14E-01	0.	0.	0.
27.00 MEV	3.01E-01	0.	0.	0.
28.00 MEV	1.61E-01	0.	0.	0.
29.00 MEV	1.31E-01	0.	0.	0.
30.00 MEV	1.10E-01	0.	0.	0.
32.00 MEV	1.14E-01	0.	0.	0.
34.00 MEV	1.09E-01	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	5.74E-03	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	1.08E-02	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	13.33	4.33	4.38	5.32

1 SLOWING DOWN SPECTRUM AT 2.00 CM. FOR SHONKA A-150 PLASTIC
50 MEV D+ ON HE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	4.68E-01	1.73E-04	4.55E-06	1.43E-02
0.15 MEV	3.89E-01	2.63E-04	5.47E-06	1.33E-02
0.20 MEV	3.64E-01	4.63E-04	1.09E-05	2.30E-02
0.25 MEV	3.85E-01	4.70E-04	6.95E-05	1.47E-02
0.30 MEV	3.81E-01	2.75E-04	8.57E-06	2.02E-02
0.35 MEV	4.08E-01	2.80E-04	4.48E-06	7.60E-03
0.40 MEV	4.08E-01	2.59E-04	9.66E-05	1.97E-02
0.45 MEV	4.93E-01	7.71E-04	7.12E-05	1.42E-02
0.50 MEV	4.44E-01	4.21E-04	6.49E-05	9.73E-03
0.55 MEV	3.68E-01	4.37E-04	1.92E-05	1.16E-02
0.60 MEV	3.84E-01	4.31E-04	7.59E-05	1.83E-02
0.65 MEV	4.75E-01	7.12E-04	7.22E-05	2.04E-02
0.70 MEV	5.08E-01	1.05E-03	4.71E-05	8.07E-03
0.75 MEV	5.08E-01	7.44E-04	3.06E-05	9.58E-03
0.80 MEV	5.06E-01	4.51E-04	1.41E-04	3.99E-02
0.85 MEV	7.09E-01	6.38E-04	1.73E-05	1.66E-02
0.90 MEV	3.50E-01	1.23E-03	1.42E-04	9.25E-03
0.95 MEV	6.75E-01	2.66E-04	9.44E-06	1.84E-02
1.00 MEV	5.33E-01	8.07E-04	1.31E-04	1.52E-02
1.10 MEV	4.49E-01	8.94E-04	1.33E-04	1.62E-02
1.20 MEV	5.49E-01	9.54E-04	1.75E-04	1.95E-02
1.30 MEV	4.82E-01	9.46E-04	6.52E-05	1.51E-02
1.40 MEV	4.38E-01	1.17E-03	1.17E-04	1.86E-02
1.50 MEV	7.16E-01	7.45E-04	4.19E-05	2.45E-02
1.60 MEV	4.76E-01	1.50E-03	8.61E-05	1.45E-02
1.70 MEV	7.39E-01	6.41E-04	9.50E-05	1.44E-02
1.80 MEV	7.16E-01	8.45E-04	7.44E-05	1.96E-02
1.90 MEV	4.16E-01	6.79E-04	5.58E-05	2.16E-02
2.00 MEV	6.78E-01	1.21E-03	1.31E-04	1.61E-02
2.10 MEV	6.25E-01	2.48E-04	3.34E-05	2.02E-02
2.20 MEV	6.39E-01	4.44E-04	1.32E-04	2.99E-02
2.30 MEV	8.70E-01	5.77E-04	5.88E-05	1.32E-02
2.40 MEV	5.22E-01	4.49E-04	1.51E-04	2.28E-02
2.50 MEV	4.60E-01	2.72E-04	7.66E-05	1.49E-02
2.60 MEV	5.10E-01	4.92E-04	1.04E-04	2.78E-02
2.70 MEV	8.31E-01	3.42E-04	6.11E-05	1.73E-02
2.80 MEV	4.80E-01	3.12E-04	4.72E-05	2.21E-02
2.90 MEV	7.04E-01	4.67E-04	6.41E-05	3.06E-02
3.00 MEV	1.10E+00	7.74E-04	1.33E-04	1.54E-02
3.20 MEV	6.76E-01	2.23E-04	5.47E-05	1.44E-02
3.40 MEV	6.23E-01	3.15E-04	1.36E-04	2.26E-02
3.60 MEV	6.18E-01	2.56E-04	8.46E-05	2.20E-02
3.80 MEV	9.40E-01	4.32E-04	1.14E-04	2.17E-02
4.00 MEV	6.72E-01	2.15E-04	6.64E-05	1.76E-02

1SLOWING DOWN SPECTRUM AT 2.00 CM. FOR SHONKA A-150 PLASTIC
50 MEV D+ ON HE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	6.18E-01	2.68E-04	1.03E-04	2.05E-02
4.40 MEV	7.99E-01	2.49E-04	7.35E-05	1.25E-02
4.60 MEV	7.57E-01	3.59E-04	5.82E-05	1.76E-02
4.80 MEV	6.50E-01	1.71E-04	4.46E-05	1.72E-02
5.00 MEV	8.29E-01	4.33E-04	1.25E-04	1.47E-02
5.50 MEV	7.45E-01	2.64E-04	6.26E-05	9.64E-03
6.00 MEV	9.10E-01	4.39E-04	1.14E-04	1.98E-02
6.50 MEV	8.59E-01	3.49E-04	5.73E-05	7.92E-03
7.00 MEV	8.59E-01	7.95E-04	1.13E-04	1.50E-02
7.50 MEV	9.91E-01	1.98E-04	5.50E-05	7.61E-03
8.00 MEV	9.44E-01	2.79E-04	9.60E-05	1.09E-02
8.50 MEV	9.49E-01	1.30E-04	2.20E-05	4.51E-03
9.00 MEV	9.24E-01	2.27E-04	3.00E-05	8.58E-03
9.50 MEV	9.13E-01	1.12E-04	3.06E-05	3.16E-03
10.00 MEV	9.17E-01	2.45E-04	6.60E-05	7.35E-03
11.00 MEV	1.05E+00	5.23E-05	1.01E-05	2.09E-03
12.00 MEV	9.31E-01	9.31E-05	1.51E-05	3.69E-03
13.00 MEV	8.75E-01	2.01E-05	6.38E-06	1.49E-03
14.00 MEV	8.20E-01	4.26E-05	1.58E-05	3.01E-03
15.00 MEV	8.00E-01	3.99E-06	0.	5.30E-04
16.00 MEV	7.35E-01	1.06E-05	0.	1.23E-03
17.00 MEV	6.81E-01	0.	0.	6.14E-06
18.00 MEV	6.31E-01	0.	0.	1.50E-05
19.00 MEV	5.40E-01	0.	0.	3.06E-06
20.00 MEV	5.15E-01	0.	0.	6.12E-06
21.00 MEV	4.74E-01	0.	0.	0.
22.00 MEV	3.34E-01	0.	0.	0.
23.00 MEV	3.44E-01	0.	0.	0.
24.00 MEV	2.03E-01	0.	0.	0.
25.00 MEV	1.89E-01	0.	0.	0.
26.00 MEV	1.66E-01	0.	0.	0.
27.00 MEV	1.47E-01	0.	0.	0.
28.00 MEV	1.24E-01	0.	0.	0.
29.00 MEV	6.57E-02	0.	0.	0.
30.00 MEV	7.07E-02	0.	0.	0.
32.00 MEV	1.13E-01	0.	0.	0.
34.00 MEV	1.05E-01	0.	0.	0.
36.00 MEV	3.23E-02	0.	0.	0.
38.00 MEV	2.05E-02	0.	0.	0.
40.00 MEV	9.89E-03	0.	0.	0.
42.00 MEV	1.64E-02	0.	0.	0.
44.00 MEV	2.23E-02	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
NAVE, E(MEV)	12.42	4.41	5.09	4.78

1 SLOWING DOWN SPECTRUM AT 4.00 CM. FOR SHONKA A-150 PLASTIC
 50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	6.57E-01	1.25E-04	1.15E-05	1.45E-02
0.15 MEV	3.81E-01	1.96E-04	7.26E-07	1.31E-02
0.20 MEV	3.63E-01	3.46E-04	1.89E-05	2.46E-02
0.25 MEV	3.61E-01	3.52E-04	1.95E-06	1.54E-02
0.30 MEV	3.51E-01	1.91E-04	1.05E-05	2.03E-02
0.35 MEV	3.85E-01	2.54E-04	2.56E-06	8.11E-03
0.40 MEV	3.79E-01	2.42E-04	4.00E-05	1.87E-02
0.45 MEV	4.06E-01	1.04E-03	9.15E-06	1.66E-02
0.50 MEV	4.86E-01	2.69E-04	2.57E-05	1.03E-02
0.55 MEV	3.26E-01	1.47E-03	1.14E-05	9.88E-03
0.60 MEV	3.81E-01	2.71E-04	4.39E-05	1.78E-02
0.65 MEV	4.27E-01	7.28E-04	1.28E-05	1.99E-02
0.70 MEV	4.93E-01	5.26E-04	4.01E-05	7.97E-03
0.75 MEV	4.55E-01	3.50E-04	1.43E-05	1.05E-02
0.80 MEV	4.44E-01	4.13E-04	2.52E-05	4.47E-02
0.85 MEV	6.88E-01	1.40E-03	3.27E-05	1.65E-02
0.90 MEV	3.64E-01	9.28E-04	2.39E-05	1.04E-02
0.95 MEV	5.26E-01	1.57E-04	1.70E-05	1.81E-02
1.00 MEV	5.63E-01	6.92E-04	4.00E-05	1.71E-02
1.10 MEV	4.40E-01	8.20E-04	3.55E-05	1.58E-02
1.20 MEV	5.34E-01	7.34E-04	4.03E-05	2.04E-02
1.30 MEV	4.94E-01	1.27E-03	3.41E-05	1.49E-02
1.40 MEV	4.23E-01	1.35E-03	4.84E-05	1.91E-02
1.50 MEV	7.72E-01	6.67E-04	2.07E-05	2.61E-02
1.60 MEV	4.74E-01	1.30E-03	4.76E-05	1.48E-02
1.70 MEV	6.84E-01	5.59E-04	6.56E-05	1.79E-02
1.80 MEV	6.40E-01	1.05E-03	3.69E-05	2.12E-02
1.90 MEV	4.18E-01	1.32E-03	2.14E-05	2.38E-02
2.00 MEV	6.40E-01	5.93E-04	5.62E-05	1.71E-02
2.10 MEV	6.45E-01	4.62E-04	2.59E-05	2.05E-02
2.20 MEV	5.39E-01	5.97E-04	6.23E-05	3.43E-02
2.30 MEV	7.39E-01	1.87E-04	3.21E-05	1.16E-02
2.40 MEV	4.91E-01	1.35E-03	7.14E-05	2.41E-02
2.50 MEV	5.25E-01	3.95E-04	3.82E-05	1.65E-02
2.60 MEV	4.92E-01	1.15E-03	6.57E-05	2.94E-02
2.70 MEV	7.56E-01	7.29E-04	3.43E-05	1.74E-02
2.80 MEV	4.69E-01	3.17E-04	4.91E-05	2.70E-02
2.90 MEV	6.20E-01	1.87E-04	6.45E-05	3.47E-02
3.00 MEV	1.04E+00	7.69E-04	6.19E-05	1.78E-02
3.20 MEV	5.94E-01	5.46E-04	3.90E-05	1.39E-02
3.40 MEV	5.77E-01	5.38E-04	5.10E-05	2.55E-02
3.60 MEV	5.59E-01	7.53E-04	2.93E-05	2.34E-02
3.80 MEV	8.45E-01	1.22E-03	5.83E-05	2.02E-02
4.00 MEV	6.57E-01	1.74E-04	2.66E-05	1.90E-02

1 SLOWING DOWN SPECTRUM AT 4.00 CM. FOR SHONKA A-150 PLASTIC
50 MEV D+ ON HE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	5.71E-01	2.28E-04	4.45E-05	2.20E-02
4.40 MEV	7.37E-01	3.44E-04	4.74E-05	1.56E-02
4.60 MEV	6.98E-01	5.37E-04	3.58E-05	2.16E-02
4.80 MEV	6.09E-01	1.16E-04	1.79E-05	2.01E-02
5.00 MEV	7.95E-01	2.69E-04	4.44E-05	1.92E-02
5.50 MEV	6.89E-01	1.36E-04	2.91E-05	1.07E-02
6.00 MEV	8.47E-01	2.43E-04	4.00E-05	2.20E-02
6.50 MEV	8.43E-01	1.18E-04	3.66E-05	9.80E-03
7.00 MEV	8.25E-01	2.47E-04	6.81E-05	1.74E-02
7.50 MEV	8.64E-01	1.11E-04	2.24E-05	9.71E-03
8.00 MEV	8.16E-01	1.42E-04	2.91E-05	1.22E-02
8.50 MEV	8.51E-01	8.73E-05	1.39E-05	6.90E-03
9.00 MEV	8.19E-01	1.56E-04	2.90E-05	1.23E-02
9.50 MEV	8.28E-01	4.94E-05	1.50E-06	3.44E-03
10.00 MEV	8.00E-01	1.15E-04	3.06E-06	8.02E-03
11.00 MEV	8.54E-01	2.16E-05	4.30E-06	4.19E-03
12.00 MEV	8.29E-01	3.58E-05	7.00E-06	7.28E-03
13.00 MEV	7.64E-01	8.82E-06	2.08E-06	2.00E-03
14.00 MEV	8.18E-01	2.17E-05	4.17E-06	3.56E-03
15.00 MEV	7.02E-01	1.06E-06	0.	7.04E-04
16.00 MEV	6.95E-01	2.39E-06	0.	1.55E-03
17.00 MEV	6.72E-01	0.	0.	3.14E-04
18.00 MEV	6.12E-01	0.	0.	7.19E-04
19.00 MEV	4.95E-01	0.	0.	4.86E-05
20.00 MEV	5.39E-01	0.	0.	1.21E-04
21.00 MEV	5.07E-01	0.	0.	0.
22.00 MEV	5.06E-01	0.	0.	0.
23.00 MEV	3.52E-01	0.	0.	0.
24.00 MEV	3.04E-01	0.	0.	0.
25.00 MEV	2.37E-01	0.	0.	0.
26.00 MEV	2.15E-01	0.	0.	0.
27.00 MEV	2.36E-01	0.	0.	0.
28.00 MEV	1.87E-01	0.	0.	0.
29.00 MEV	1.52E-01	0.	0.	0.
30.00 MEV	8.78E-02	0.	0.	0.
32.00 MEV	7.04E-02	0.	0.	0.
34.00 MEV	2.82E-02	0.	0.	0.
36.00 MEV	2.11E-02	0.	0.	0.
38.00 MEV	1.59E-02	0.	0.	0.
40.00 MEV	8.13E-03	0.	0.	0.
42.00 MEV	1.56E-02	0.	0.	0.
44.00 MEV	1.32E-02	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE. E (MEV)	12.73	3.41	4.83	5.22

1 SLOWING DOWN SPECTRUM AT 6.00 CM. FOR SHONKA A-150 PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	6.72E-01	9.75E-05	5.91E-05	1.39E-02
0.15 MEV	3.65E-01	2.31E-04	4.98E-06	1.24E-02
0.20 MEV	3.37E-01	3.81E-04	1.98E-05	2.08E-02
0.25 MEV	3.45E-01	3.95E-04	3.72E-06	1.42E-02
0.30 MEV	3.36E-01	2.02E-04	9.52E-06	1.78E-02
0.35 MEV	3.87E-01	2.45E-04	7.68E-06	7.14E-03
0.40 MEV	3.77E-01	2.88E-04	3.05E-05	1.70E-02
0.45 MEV	3.77E-01	7.59E-04	8.19E-06	1.39E-02
0.50 MEV	4.38E-01	2.96E-04	3.49E-05	9.33E-03
0.55 MEV	3.24E-01	4.13E-04	9.31E-06	9.70E-03
0.60 MEV	3.77E-01	3.87E-04	3.93E-05	1.62E-02
0.65 MEV	4.55E-01	6.74E-04	1.44E-05	1.74E-02
0.70 MEV	4.79E-01	5.62E-04	1.76E-05	6.76E-03
0.75 MEV	4.45E-01	3.16E-04	5.77E-06	9.12E-03
0.80 MEV	4.22E-01	4.17E-04	1.28E-05	3.60E-02
0.85 MEV	6.36E-01	5.70E-04	3.89E-05	1.55E-02
0.90 MEV	3.55E-01	9.35E-04	1.37E-05	8.46E-03
0.95 MEV	5.87E-01	1.60E-04	2.50E-05	1.76E-02
1.00 MEV	5.16E-01	6.39E-04	3.87E-05	1.52E-02
1.10 MEV	4.28E-01	1.28E-03	5.19E-05	1.36E-02
1.20 MEV	5.15E-01	7.75E-04	2.91E-05	1.81E-02
1.30 MEV	4.70E-01	6.66E-04	2.39E-05	1.30E-02
1.40 MEV	3.92E-01	8.20E-04	4.06E-05	1.66E-02
1.50 MEV	7.45E-01	5.67E-04	2.19E-05	2.23E-02
1.60 MEV	4.19E-01	9.23E-04	4.48E-05	1.24E-02
1.70 MEV	6.66E-01	4.17E-04	4.97E-05	1.60E-02
1.80 MEV	4.95E-01	8.38E-04	3.35E-05	2.02E-02
1.90 MEV	3.75E-01	3.12E-04	1.73E-05	2.14E-02
2.00 MEV	6.40E-01	5.87E-04	9.97E-05	1.63E-02
2.10 MEV	5.76E-01	1.56E-04	1.47E-05	1.59E-02
2.20 MEV	5.47E-01	2.73E-04	5.98E-05	2.87E-02
2.30 MEV	7.01E-01	7.37E-04	2.55E-05	1.10E-02
2.40 MEV	5.15E-01	3.08E-04	7.76E-05	2.12E-02
2.50 MEV	4.02E-01	9.02E-05	3.31E-05	1.37E-02
2.60 MEV	4.05E-01	2.57E-04	3.12E-05	2.34E-02
2.70 MEV	6.64E-01	1.44E-04	4.71E-05	1.63E-02
2.80 MEV	4.78E-01	1.84E-04	3.09E-05	2.38E-02
2.90 MEV	6.30E-01	1.87E-04	4.43E-05	2.75E-02
3.00 MEV	9.32E-01	1.19E-04	6.88E-05	1.47E-02
3.20 MEV	6.49E-01	4.66E-04	4.29E-05	1.26E-02
3.40 MEV	5.66E-01	1.73E-04	7.19E-05	2.32E-02
3.60 MEV	5.32E-01	7.93E-05	4.58E-05	1.96E-02
3.80 MEV	7.58E-01	5.18E-04	7.14E-05	1.75E-02
4.00 MEV	6.17E-01	1.01E-04	2.77E-05	1.45E-02

1 SLOWING DOWN SPECTRUM AT 6.00 CM. FOR SHONKA A-150 PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	6.10E-01	4.28E-04	4.96E-05	1.69E-02
4.40 MEV	6.77E-01	1.89E-04	6.65E-05	1.28E-02
4.60 MEV	7.42E-01	4.53E-04	4.99E-05	1.62E-02
4.80 MEV	5.96E-01	1.13E-04	2.01E-05	1.55E-02
5.00 MEV	8.12E-01	5.48E-04	6.97E-05	1.45E-02
5.50 MEV	6.62E-01	3.65E-04	3.56E-05	8.68E-03
6.00 MEV	7.65E-01	7.89E-04	6.41E-05	1.75E-02
6.50 MEV	7.76E-01	1.45E-04	3.61E-05	7.79E-03
7.00 MEV	7.19E-01	3.03E-04	6.11E-05	1.43E-02
7.50 MEV	7.78E-01	1.22E-04	4.30E-05	7.50E-03
8.00 MEV	7.29E-01	1.51E-04	6.66E-05	1.00E-02
8.50 MEV	7.78E-01	8.91E-05	2.54E-05	5.06E-03
9.00 MEV	7.30E-01	1.59E-04	4.58E-05	9.03E-03
9.50 MEV	7.75E-01	3.65E-05	2.38E-05	2.45E-03
10.00 MEV	7.30E-01	8.77E-05	5.54E-05	5.72E-03
11.00 MEV	7.66E-01	3.41E-05	7.69E-06	3.49E-03
12.00 MEV	7.68E-01	5.99E-05	1.58E-05	6.42E-03
13.00 MEV	6.90E-01	6.79E-06	5.92E-06	1.22E-03
14.00 MEV	7.72E-01	1.53E-05	1.50E-05	1.82E-03
15.00 MEV	6.60E-01	0.	0.	7.16E-04
16.00 MEV	6.45E-01	0.	0.	1.55E-03
17.00 MEV	6.24E-01	0.	0.	2.34E-04
18.00 MEV	5.22E-01	0.	0.	5.54E-04
19.00 MEV	4.50E-01	0.	0.	1.59E-04
20.00 MEV	4.33E-01	0.	0.	3.18E-04
21.00 MEV	4.03E-01	0.	0.	0.
22.00 MEV	3.53E-01	0.	0.	0.
23.00 MEV	2.86E-01	0.	0.	0.
24.00 MEV	3.11E-01	0.	0.	0.
25.00 MEV	2.32E-01	0.	0.	0.
26.00 MEV	2.29E-01	0.	0.	0.
27.00 MEV	2.00E-01	0.	0.	0.
28.00 MEV	1.43E-01	0.	0.	0.
29.00 MEV	1.17E-01	0.	0.	0.
30.00 MEV	1.07E-01	0.	0.	0.
32.00 MEV	7.32E-02	0.	0.	0.
34.00 MEV	5.02E-02	0.	0.	0.
36.00 MEV	4.26E-02	0.	0.	0.
38.00 MEV	1.81E-02	0.	0.	0.
40.00 MEV	4.93E-03	0.	0.	0.
42.00 MEV	5.29E-03	0.	0.	0.
44.00 MEV	1.31E-02	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.

3AVE, E(MEV)

12.66

4.07

5.89

5.08

1 SLOWING DOWN SPECTRUM AT 10.0 CM. FOR SHONKA A-150 PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	5.79E-01	1.76E-04	4.02E-06	1.12E-02
0.15 MEV	3.18E-01	1.73E-04	3.27E-06	1.04E-02
0.20 MEV	3.12E-01	3.24E-04	2.45E-05	1.90E-02
0.25 MEV	3.23E-01	3.74E-04	3.29E-06	1.25E-02
0.30 MEV	3.22E-01	1.71E-04	8.56E-06	1.57E-02
0.35 MEV	3.42E-01	2.82E-04	6.00E-06	6.11E-03
0.40 MEV	3.20E-01	1.95E-04	3.95E-05	1.50E-02
0.45 MEV	3.48E-01	5.68E-04	9.43E-06	1.23E-02
0.50 MEV	4.16E-01	2.65E-04	2.48E-05	8.43E-03
0.55 MEV	2.91E-01	5.50E-04	1.76E-05	8.36E-03
0.60 MEV	3.28E-01	2.72E-04	3.95E-05	1.35E-02
0.65 MEV	3.56E-01	6.45E-04	1.06E-05	1.50E-02
0.70 MEV	3.88E-01	5.67E-04	2.06E-05	6.40E-03
0.75 MEV	3.79E-01	2.97E-04	1.63E-05	8.09E-03
0.80 MEV	3.88E-01	4.77E-04	2.46E-05	3.01E-02
0.85 MEV	5.25E-01	4.31E-04	2.39E-05	1.33E-02
0.90 MEV	3.13E-01	9.09E-04	2.52E-05	7.57E-03
0.95 MEV	5.05E-01	2.64E-04	1.94E-05	1.50E-02
1.00 MEV	4.24E-01	7.51E-04	2.70E-05	1.36E-02
1.10 MEV	3.78E-01	1.02E-03	4.85E-05	1.21E-02
1.20 MEV	4.66E-01	6.64E-04	1.91E-05	1.50E-02
1.30 MEV	4.48E-01	5.16E-04	4.12E-05	1.14E-02
1.40 MEV	3.75E-01	8.53E-04	3.82E-05	1.44E-02
1.50 MEV	6.66E-01	4.26E-04	2.20E-05	1.89E-02
1.60 MEV	3.62E-01	1.00E-03	4.76E-05	1.13E-02
1.70 MEV	5.77E-01	3.80E-04	6.31E-05	1.38E-02
1.80 MEV	4.74E-01	5.65E-04	2.60E-05	1.72E-02
1.90 MEV	3.42E-01	3.34E-04	2.36E-05	1.72E-02
2.00 MEV	5.30E-01	1.43E-03	5.53E-05	1.42E-02
2.10 MEV	5.29E-01	1.86E-04	1.17E-05	1.44E-02
2.20 MEV	4.48E-01	3.36E-04	6.75E-05	2.56E-02
2.30 MEV	6.78E-01	7.12E-04	2.49E-05	8.92E-03
2.40 MEV	4.52E-01	4.66E-04	6.76E-05	1.80E-02
2.50 MEV	3.94E-01	1.47E-04	3.71E-05	1.18E-02
2.60 MEV	4.23E-01	5.23E-04	4.89E-05	2.10E-02
2.70 MEV	6.41E-01	3.61E-04	3.41E-05	1.37E-02
2.80 MEV	4.06E-01	5.90E-04	2.31E-05	1.98E-02
2.90 MEV	6.13E-01	1.76E-04	6.05E-05	2.27E-02
3.00 MEV	8.21E-01	5.70E-04	1.14E-04	1.27E-02
3.20 MEV	5.58E-01	4.40E-04	2.63E-05	1.02E-02
3.40 MEV	4.79E-01	7.82E-04	5.10E-05	1.86E-02
3.60 MEV	4.77E-01	1.73E-04	4.95E-05	1.65E-02
3.80 MEV	7.18E-01	7.79E-04	6.29E-05	1.58E-02
4.00 MEV	5.53E-01	1.08E-04	3.70E-05	1.34E-02

1 SLOWING DOWN SPECTRUM AT 10.0 CM. FOR SHONKA A-150 PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	4.96E-01	2.72E-04	6.42E-05	1.45E-02
4.40 MEV	6.82E-01	1.63E-04	5.74E-05	1.10E-02
4.60 MEV	6.24E-01	2.38E-04	5.20E-05	1.49E-02
4.80 MEV	4.73E-01	1.22E-04	2.22E-05	1.45E-02
5.00 MEV	7.16E-01	6.82E-04	7.85E-05	1.34E-02
5.50 MEV	5.85E-01	2.06E-04	3.37E-05	7.88E-03
6.00 MEV	7.22E-01	5.24E-04	5.79E-05	1.68E-02
6.50 MEV	6.75E-01	1.27E-04	3.95E-05	6.85E-03
7.00 MEV	6.44E-01	3.90E-04	6.32E-05	1.23E-02
7.50 MEV	6.78E-01	2.45E-04	2.88E-05	7.08E-03
8.00 MEV	6.73E-01	2.85E-04	4.01E-05	8.57E-03
8.50 MEV	6.75E-01	2.14E-04	1.56E-05	4.71E-03
9.00 MEV	7.13E-01	2.76E-04	2.34E-05	8.66E-03
9.50 MEV	6.80E-01	3.21E-04	5.66E-06	2.69E-03
10.00 MEV	7.06E-01	6.55E-04	1.93E-05	6.43E-03
11.00 MEV	7.61E-01	5.04E-05	1.48E-05	3.27E-03
12.00 MEV	7.31E-01	9.93E-05	2.54E-05	5.70E-03
13.00 MEV	7.01E-01	1.40E-05	1.64E-06	1.80E-03
14.00 MEV	7.18E-01	3.45E-05	4.52E-06	3.34E-03
15.00 MEV	6.10E-01	2.12E-06	0.	6.42E-04
16.00 MEV	5.87E-01	5.31E-06	0.	1.47E-03
17.00 MEV	5.11E-01	0.	0.	1.40E-04
18.00 MEV	4.79E-01	0.	0.	2.73E-04
19.00 MEV	4.78E-01	0.	0.	1.53E-04
20.00 MEV	4.43E-01	0.	0.	3.31E-04
21.00 MEV	3.92E-01	0.	0.	0.
22.00 MEV	3.46E-01	0.	0.	0.
23.00 MEV	2.74E-01	0.	0.	0.
24.00 MEV	2.24E-01	0.	0.	0.
25.00 MEV	2.13E-01	0.	0.	0.
26.00 MEV	1.60E-01	0.	0.	0.
27.00 MEV	1.53E-01	0.	0.	0.
28.00 MEV	1.18E-01	0.	0.	0.
29.00 MEV	8.33E-02	0.	0.	0.
30.00 MEV	6.49E-02	0.	0.	0.
32.00 MEV	6.95E-02	0.	0.	0.
34.00 MEV	4.87E-02	0.	0.	0.
36.00 MEV	3.04E-02	0.	0.	0.
38.00 MEV	1.95E-02	0.	0.	0.
40.00 MEV	2.56E-02	0.	0.	0.
42.00 MEV	1.67E-02	0.	0.	0.
44.00 MEV	2.17E-02	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.

DAVE, E(MEV)

12.75

4.94

5.47

5.32

1 SLOWING DOWN SPECTRUM AT 14.0 CM, FOR SHONKA A-150 PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	4.58E-01	5.63E-05	3.28E-05	8.50E-03
0.15 MEV	2.32E-01	1.23E-04	5.19E-06	7.44E-03
0.20 MEV	2.25E-01	2.31E-04	1.40E-05	1.38E-02
0.25 MEV	2.21E-01	2.59E-04	4.78E-06	9.32E-03
0.30 MEV	2.25E-01	7.99E-05	9.01E-06	1.18E-02
0.35 MEV	2.47E-01	1.38E-04	3.90E-06	4.19E-03
0.40 MEV	2.53E-01	1.42E-04	4.20E-05	1.09E-02
0.45 MEV	2.62E-01	9.98E-04	9.59E-06	8.02E-03
0.50 MEV	3.16E-01	1.64E-04	3.79E-05	6.02E-03
0.55 MEV	2.14E-01	3.61E-04	1.39E-05	7.06E-03
0.60 MEV	2.45E-01	2.72E-04	3.42E-05	1.04E-02
0.65 MEV	2.95E-01	4.48E-04	2.44E-05	1.15E-02
0.70 MEV	3.03E-01	5.43E-04	2.12E-05	4.60E-03
0.75 MEV	3.12E-01	1.91E-04	1.15E-05	5.79E-03
0.80 MEV	3.03E-01	2.76E-04	2.85E-05	2.51E-02
0.85 MEV	4.42E-01	4.80E-04	1.49E-05	9.14E-03
0.90 MEV	2.42E-01	6.81E-04	1.55E-05	4.79E-03
0.95 MEV	4.47E-01	1.99E-04	1.45E-05	1.13E-02
1.00 MEV	3.78E-01	5.35E-04	3.95E-05	9.47E-03
1.10 MEV	3.08E-01	7.33E-04	4.30E-05	8.83E-03
1.20 MEV	3.73E-01	5.36E-04	2.19E-05	1.17E-02
1.30 MEV	3.55E-01	5.15E-04	2.89E-05	8.95E-03
1.40 MEV	2.84E-01	8.92E-04	4.00E-05	1.04E-02
1.50 MEV	4.78E-01	4.60E-04	2.87E-05	1.39E-02
1.60 MEV	2.96E-01	9.39E-04	4.26E-05	8.15E-03
1.70 MEV	4.70E-01	2.84E-04	5.74E-05	1.04E-02
1.80 MEV	4.35E-01	5.34E-04	4.27E-05	1.18E-02
1.90 MEV	2.79E-01	1.71E-04	3.58E-05	1.28E-02
2.00 MEV	4.24E-01	4.74E-04	6.52E-05	1.02E-02
2.10 MEV	4.31E-01	1.41E-04	1.68E-05	1.07E-02
2.20 MEV	3.89E-01	4.78E-04	5.64E-05	1.87E-02
2.30 MEV	6.18E-01	2.47E-04	2.98E-05	7.26E-03
2.40 MEV	3.51E-01	3.48E-04	5.63E-05	1.36E-02
2.50 MEV	3.25E-01	1.65E-04	3.27E-05	8.43E-03
2.60 MEV	3.16E-01	2.72E-04	5.24E-05	1.59E-02
2.70 MEV	5.72E-01	3.93E-04	4.15E-05	9.59E-03
2.80 MEV	3.39E-01	3.54E-04	3.11E-05	1.34E-02
2.90 MEV	4.49E-01	3.07E-04	5.87E-05	1.84E-02
3.00 MEV	7.17E-01	4.75E-04	5.35E-05	8.77E-03
3.20 MEV	4.76E-01	3.02E-04	2.54E-05	8.35E-03
3.40 MEV	4.06E-01	3.84E-04	4.18E-05	1.46E-02
3.60 MEV	4.01E-01	2.09E-04	3.50E-05	1.36E-02
3.80 MEV	6.05E-01	2.09E-04	5.83E-05	1.27E-02
4.00 MEV	4.49E-01	2.53E-04	2.75E-05	9.70E-03

1 SLOWING DOWN SPECTRUM AT 14.9 CM. FOR SHONKA A-150 PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	4.36E-01	3.70E-04	4.40E-05	1.22E-02
4.40 MEV	5.44E-01	1.14E-04	4.14E-05	7.86E-03
4.60 MEV	5.54E-01	2.23E-04	3.02E-05	1.08E-02
4.80 MEV	4.17E-01	1.57E-04	2.40E-05	1.01E-02
5.00 MEV	5.90E-01	2.93E-04	6.67E-05	1.03E-02
5.50 MEV	4.95E-01	1.73E-04	2.80E-05	5.77E-03
6.00 MEV	6.24E-01	2.75E-04	5.06E-05	1.25E-02
6.50 MEV	5.80E-01	2.72E-04	3.03E-05	5.08E-03
7.00 MEV	5.61E-01	5.11E-04	5.64E-05	8.93E-03
7.50 MEV	5.77E-01	1.41E-04	2.02E-05	5.32E-03
8.00 MEV	5.97E-01	2.26E-04	3.45E-05	7.61E-03
8.50 MEV	5.77E-01	9.56E-05	1.33E-05	3.72E-03
9.00 MEV	6.03E-01	1.78E-04	2.72E-05	6.30E-03
9.50 MEV	5.94E-01	3.75E-05	8.65E-06	2.49E-03
10.00 MEV	5.78E-01	8.77E-05	2.09E-05	5.39E-03
11.00 MEV	6.75E-01	4.22E-05	5.67E-06	1.88E-03
12.00 MEV	8.00E-01	7.83E-05	1.23E-05	3.48E-03
13.00 MEV	5.81E-01	6.23E-06	2.98E-06	7.60E-04
14.00 MEV	6.03E-01	1.39E-05	7.46E-06	1.36E-03
15.00 MEV	5.03E-01	0.	0.	3.36E-04
16.00 MEV	5.34E-01	0.	0.	7.30E-04
17.00 MEV	4.47E-01	0.	0.	8.51E-05
18.00 MEV	4.23E-01	0.	0.	2.02E-04
19.00 MEV	3.72E-01	0.	0.	1.05E-06
20.00 MEV	3.90E-01	0.	0.	2.29E-06
21.00 MEV	3.65E-01	0.	0.	0.
22.00 MEV	2.98E-01	0.	0.	0.
23.00 MEV	2.41E-01	0.	0.	0.
24.00 MEV	2.03E-01	0.	0.	0.
25.00 MEV	1.79E-01	0.	0.	0.
26.00 MEV	1.49E-01	0.	0.	0.
27.00 MEV	1.42E-01	0.	0.	0.
28.00 MEV	9.10E-02	0.	0.	0.
29.00 MEV	6.91E-02	0.	0.	0.
30.00 MEV	7.96E-02	0.	0.	0.
32.00 MEV	6.38E-02	0.	0.	0.
34.00 MEV	5.53E-02	0.	0.	0.
36.00 MEV	3.46E-02	0.	0.	0.
38.00 MEV	2.51E-02	0.	0.	0.
40.00 MEV	2.06E-02	0.	0.	0.
42.00 MEV	1.29E-02	0.	0.	0.
44.00 MEV	6.55E-03	0.	0.	0.
46.00 MEV	1.53E-03	0.	0.	0.
48.00 MEV	4.59E-03	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	12.97	4.38	5.27	5.02

1 SLOWING DOWN SPECTRUM AT 0.00 CM, FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	7.20E-01	1.01E-04	0.	2.39E-03
0.15 MEV	2.67E-01	6.76E-05	0.	2.94E-03
0.20 MEV	8.65E-01	1.16E-04	0.	3.10E-03
0.25 MEV	6.92E-01	4.84E-05	0.	1.58E-03
0.30 MEV	1.47E+00	1.03E-05	0.	2.57E-03
0.35 MEV	3.93E-01	1.22E-05	0.	1.27E-03
0.40 MEV	6.25E-01	1.33E-05	0.	1.42E-03
0.45 MEV	2.54E+00	1.75E-05	0.	2.46E-03
0.50 MEV	1.25E+00	2.36E-04	0.	1.23E-03
0.55 MEV	7.66E-01	3.08E-05	0.	4.25E-04
0.60 MEV	6.63E-01	3.88E-05	0.	2.66E-03
0.65 MEV	7.79E-01	6.93E-05	0.	2.28E-03
0.70 MEV	7.45E-01	1.63E-05	0.	5.52E-04
0.75 MEV	1.76E-01	4.20E-06	0.	1.97E-03
0.80 MEV	7.53E-01	4.96E-05	0.	1.33E-03
0.85 MEV	9.04E-01	8.41E-06	0.	2.79E-03
0.90 MEV	4.10E-02	5.80E-05	0.	6.14E-04
0.95 MEV	4.36E-01	1.37E-05	0.	7.60E-04
1.00 MEV	1.59E-01	4.54E-05	0.	1.88E-03
1.10 MEV	6.94E-01	2.27E-05	0.	2.12E-03
1.20 MEV	4.24E-01	2.27E-05	0.	2.18E-03
1.30 MEV	1.11E-01	2.11E-04	0.	1.73E-03
1.40 MEV	2.26E-01	1.13E-04	0.	2.22E-03
1.50 MEV	2.02E-01	9.69E-05	0.	2.28E-03
1.60 MEV	1.91E-02	0.	0.	3.69E-03
1.70 MEV	4.68E-02	6.86E-06	0.	2.34E-03
1.80 MEV	1.92E-01	6.86E-06	0.	3.09E-03
1.90 MEV	2.96E-02	0.	0.	1.58E-03
2.00 MEV	4.91E-02	6.86E-06	0.	2.47E-03
2.10 MEV	1.90E-02	2.55E-04	0.	1.40E-03
2.20 MEV	2.24E-01	6.86E-06	0.	2.18E-03
2.30 MEV	2.02E-02	6.86E-06	0.	1.46E-03
2.40 MEV	2.04E-01	1.37E-05	0.	1.99E-03
2.50 MEV	2.71E-02	1.04E-04	0.	1.23E-03
2.60 MEV	5.46E-02	2.74E-05	0.	2.41E-03
2.70 MEV	8.22E-02	1.59E-04	0.	4.41E-04
2.80 MEV	2.34E-02	0.	0.	6.07E-04
2.90 MEV	1.30E-02	9.00E-05	0.	4.93E-04
3.00 MEV	3.10E-02	0.	0.	7.92E-04
3.20 MEV	4.63E-02	7.93E-05	0.	4.55E-04
3.40 MEV	1.81E-02	4.50E-05	0.	8.95E-04
3.60 MEV	1.89E-02	1.24E-04	0.	3.09E-04
3.80 MEV	3.43E-02	0.	0.	3.72E-04
4.00 MEV	5.01E-02	1.24E-04	0.	2.58E-04

1 SLOWING DOWN SPECTRUM AT 0.00 CM, FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	6.74E-04	4.50E-05	0.	2.72E-04
4.40 MEV	4.36E-02	1.24E-04	0.	2.78E-04
4.60 MEV	8.00E-04	1.24E-04	0.	3.62E-04
4.80 MEV	7.15E-03	4.50E-05	0.	1.76E-04
5.00 MEV	1.64E-04	1.24E-04	0.	1.59E-04
5.50 MEV	1.76E-02	1.35E-04	0.	1.15E-04
6.00 MEV	5.68E-03	2.75E-04	0.	2.26E-04
6.50 MEV	1.75E-02	1.27E-04	0.	1.13E-04
7.00 MEV	2.00E-02	2.85E-04	0.	2.14E-04
7.50 MEV	7.99E-03	0.	0.	5.55E-05
8.00 MEV	2.30E-02	0.	0.	1.27E-04
8.50 MEV	3.54E-02	0.	0.	1.05E-05
9.00 MEV	1.46E-02	0.	0.	2.15E-05
9.50 MEV	2.93E-02	0.	0.	2.43E-06
10.00 MEV	1.46E-02	0.	0.	7.32E-06
11.00 MEV	2.93E-02	0.	0.	1.37E-06
12.00 MEV	6.59E-02	0.	0.	3.93E-06
13.00 MEV	0.	0.	0.	0.
14.00 MEV	0.	0.	0.	0.
15.00 MEV	0.	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	2.23	4.63	0.	2.01

ISLOWING DOWN SPECTRUM AT 0.05 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	1.23E+00	2.80E-04	0.	6.90E-03
0.15 MEV	2.15E+00	7.78E-04	0.	4.43E-03
0.20 MEV	1.37E+00	1.20E-04	0.	8.10E-03
0.25 MEV	1.36E+00	2.92E-04	0.	5.35E-03
0.30 MEV	1.14E+00	3.61E-04	0.	5.37E-03
0.35 MEV	9.57E-01	8.73E-05	0.	7.44E-03
0.40 MEV	4.59E-01	2.78E-04	0.	6.36E-03
0.45 MEV	8.45E-01	7.25E-04	0.	2.44E-03
0.50 MEV	2.31E+00	4.29E-04	0.	4.41E-03
0.55 MEV	1.29E+00	2.30E-04	0.	4.41E-03
0.60 MEV	8.42E-01	3.06E-04	0.	7.71E-03
0.65 MEV	8.74E-01	9.13E-04	0.	4.01E-03
0.70 MEV	1.04E+00	8.58E-05	0.	4.77E-03
0.75 MEV	1.25E+00	4.60E-04	0.	6.61E-03
0.80 MEV	1.53E+00	3.91E-04	2.66E-04	3.38E-03
0.85 MEV	7.17E-01	1.49E-03	0.	5.46E-03
0.90 MEV	7.92E-01	5.21E-04	0.	5.80E-03
0.95 MEV	1.38E+00	3.76E-04	0.	6.24E-03
1.00 MEV	4.13E-01	1.07E-03	0.	6.70E-03
1.10 MEV	1.05E+00	6.40E-04	0.	6.76E-03
1.20 MEV	1.18E+00	1.04E-03	1.12E-04	7.37E-03
1.30 MEV	6.48E-01	6.96E-04	0.	6.80E-03
1.40 MEV	9.34E-01	6.86E-04	1.33E-04	7.33E-03
1.50 MEV	7.85E-01	4.55E-04	0.	1.14E-02
1.60 MEV	5.96E-01	1.31E-03	0.	1.16E-02
1.70 MEV	3.58E-01	3.65E-04	0.	7.40E-03
1.80 MEV	2.32E-01	7.91E-04	0.	9.71E-03
1.90 MEV	2.81E-01	2.92E-04	1.33E-04	7.12E-03
2.00 MEV	4.22E-01	2.10E-04	1.12E-04	7.51E-03
2.10 MEV	4.84E-01	2.73E-04	0.	6.48E-03
2.20 MEV	5.95E-01	1.11E-04	1.33E-04	7.09E-03
2.30 MEV	6.32E-01	2.50E-04	0.	5.92E-03
2.40 MEV	3.73E-01	8.31E-05	0.	9.44E-03
2.50 MEV	9.01E-01	2.62E-04	0.	4.51E-03
2.60 MEV	5.01E-01	5.53E-05	2.45E-04	1.08E-02
2.70 MEV	5.57E-01	2.62E-04	0.	4.25E-03
2.80 MEV	6.43E-01	2.37E-04	0.	6.12E-03
2.90 MEV	6.19E-01	6.43E-05	1.33E-04	6.02E-03
3.00 MEV	7.59E-01	2.92E-04	0.	9.02E-03
3.20 MEV	5.69E-01	2.75E-04	1.23E-04	6.38E-03
3.40 MEV	4.52E-01	3.68E-04	6.66E-05	1.26E-02
3.60 MEV	6.96E-01	3.36E-04	1.23E-04	6.14E-03
3.80 MEV	4.63E-01	7.98E-04	6.66E-05	8.12E-03
4.00 MEV	6.46E-01	0.	1.23E-04	5.19E-03

1 SLOWING DOWN SPECTRUM AT 0.05 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	8.55E-01	1.49E-05	1.33E-04	7.14E-03
4.40 MEV	5.22E-01	1.49E-05	1.89E-04	4.48E-03
4.60 MEV	5.28E-01	1.49E-05	1.89E-04	8.10E-03
4.80 MEV	7.29E-01	1.49E-05	1.33E-04	2.74E-03
5.00 MEV	6.64E-01	1.49E-05	5.22E-04	4.20E-03
5.50 MEV	6.77E-01	1.79E-05	4.48E-05	1.71E-03
6.00 MEV	8.00E-01	4.77E-05	6.73E-05	2.52E-03
6.50 MEV	4.24E-01	0.	8.97E-05	2.40E-03
7.00 MEV	1.82E-01	0.	2.02E-04	4.55E-03
7.50 MEV	1.31E-01	0.	0.	1.17E-03
8.00 MEV	7.93E-02	0.	0.	1.94E-03
8.50 MEV	2.11E-02	0.	0.	9.29E-04
9.00 MEV	1.35E-02	0.	0.	1.69E-03
9.50 MEV	2.45E-02	0.	0.	1.05E-03
10.00 MEV	3.11E-02	0.	0.	2.56E-03
11.00 MEV	3.46E-02	0.	0.	2.34E-04
12.00 MEV	1.09E-02	0.	0.	6.09E-04
13.00 MEV	1.69E-02	0.	0.	9.99E-05
14.00 MEV	0.	0.	0.	1.46E-04
15.00 MEV	5.59E-02	0.	0.	6.34E-05
16.00 MEV	8.10E-03	0.	0.	1.58E-04
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	2.77E-02	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	1.59E-02	0.	0.	0.
24.00 MEV	1.69E-02	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	2.35E-02	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE. E(MEV)	3.77	1.87	4.50	3.85

1 SLOWING DOWN SPECTRUM AT 0.10 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	1.02E+00	4.87E-05	0.	5.47E-03
0.15 MEV	3.35E-01	2.02E-04	0.	5.39E-03
0.20 MEV	7.18E-01	5.65E-05	0.	3.45E-03
0.25 MEV	9.19E-01	1.12E-04	0.	6.79E-03
0.30 MEV	6.20E-01	8.18E-05	0.	2.91E-03
0.35 MEV	5.49E-01	6.49E-05	0.	7.24E-03
0.40 MEV	8.98E-01	1.53E-04	0.	4.69E-03
0.45 MEV	1.53E+00	4.32E-04	0.	5.13E-03
0.50 MEV	2.03E+00	2.75E-04	0.	3.57E-03
0.55 MEV	1.31E+00	7.43E-05	0.	4.32E-03
0.60 MEV	1.61E+00	1.19E-04	0.	8.80E-03
0.65 MEV	9.52E-01	4.14E-04	0.	3.46E-03
0.70 MEV	9.70E-01	9.60E-05	0.	3.44E-03
0.75 MEV	1.81E+00	1.22E-04	0.	5.91E-03
0.80 MEV	6.22E-01	4.00E-05	0.	4.25E-03
0.85 MEV	5.09E-01	5.53E-04	0.	7.65E-03
0.90 MEV	8.91E-01	1.18E-04	0.	9.78E-03
0.95 MEV	1.20E+00	6.37E-05	0.	1.14E-02
1.00 MEV	9.66E-01	3.90E-04	0.	9.53E-03
1.10 MEV	1.59E+00	2.70E-04	0.	3.44E-03
1.20 MEV	8.08E-01	3.33E-04	0.	4.42E-03
1.30 MEV	1.21E+00	2.58E-04	0.	2.92E-03
1.40 MEV	1.17E+00	4.39E-04	0.	4.02E-03
1.50 MEV	7.33E-01	3.06E-04	0.	6.11E-03
1.60 MEV	6.55E-01	6.88E-04	0.	5.19E-03
1.70 MEV	5.18E-01	1.41E-04	0.	5.00E-03
1.80 MEV	6.62E-01	1.46E-04	0.	4.77E-03
1.90 MEV	8.09E-01	8.14E-05	0.	6.21E-03
2.00 MEV	3.33E-01	1.99E-04	0.	5.24E-03
2.10 MEV	4.31E-01	5.01E-05	0.	3.83E-03
2.20 MEV	6.20E-01	5.64E-05	0.	4.94E-03
2.30 MEV	1.16E+00	6.55E-05	0.	4.92E-03
2.40 MEV	7.92E-01	1.26E-04	0.	3.85E-03
2.50 MEV	3.71E-01	6.86E-05	0.	1.20E-02
2.60 MEV	7.42E-01	4.00E-05	0.	3.84E-03
2.70 MEV	7.23E-01	8.72E-05	0.	5.76E-03
2.80 MEV	8.38E-01	1.24E-04	0.	5.70E-03
2.90 MEV	6.06E-01	4.65E-05	0.	4.90E-03
3.00 MEV	9.79E-01	4.94E-05	0.	7.84E-03
3.20 MEV	7.38E-01	5.13E-05	0.	4.21E-03
3.40 MEV	6.35E-01	1.39E-04	0.	8.00E-03
3.60 MEV	4.90E-01	1.06E-05	0.	7.39E-03
3.80 MEV	4.14E-01	2.29E-05	0.	7.13E-03
4.00 MEV	7.99E-01	1.35E-06	0.	9.93E-03

1 SLOWING DOWN SPECTRUM AT 7.10 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	4.71E-01	2.70E-06	0.	9.09E-03
4.40 MEV	5.10E-01	2.70E-06	0.	2.45E-03
4.60 MEV	4.91E-01	2.70E-06	0.	3.40E-03
4.80 MEV	8.26E-01	2.70E-06	0.	3.22E-03
5.00 MEV	3.93E-01	9.44E-06	0.	2.20E-03
5.50 MEV	5.30E-01	0.	0.	4.51E-03
6.00 MEV	4.20E-01	0.	0.	7.13E-03
6.50 MEV	2.26E-01	0.	0.	2.36E-03
7.00 MEV	2.33E-01	0.	0.	2.93E-03
7.50 MEV	1.99E-01	0.	0.	1.05E-03
8.00 MEV	1.22E-01	0.	0.	2.81E-03
8.50 MEV	7.05E-02	0.	0.	2.48E-03
9.00 MEV	3.46E-02	0.	0.	3.44E-03
9.50 MEV	9.21E-02	0.	0.	3.02E-03
10.00 MEV	7.62E-02	0.	0.	5.42E-03
11.00 MEV	6.39E-02	0.	0.	1.62E-03
12.00 MEV	1.93E-02	0.	0.	2.61E-03
13.00 MEV	6.04E-02	0.	0.	2.97E-03
14.00 MEV	5.46E-02	0.	0.	7.40E-03
15.00 MEV	6.72E-02	0.	0.	0.
16.00 MEV	2.64E-03	0.	0.	0.
17.00 MEV	3.63E-02	0.	0.	0.
18.00 MEV	5.29E-03	0.	0.	0.
19.00 MEV	3.44E-02	0.	0.	0.
20.00 MEV	2.77E-02	0.	0.	0.
21.00 MEV	1.23E-02	0.	0.	0.
22.00 MEV	1.59E-02	0.	0.	0.
23.00 MEV	1.69E-02	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	4.33E-02	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.

0AVE, E(MEV)

4.29

1.48

4.50

6.41

1 SLOWING DOWN SPECTRUM AT 0.15 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	4.77E-01	1.73E-05	0.	2.26E-03
0.15 MEV	7.21E-01	1.80E-04	0.	2.87E-03
0.20 MEV	6.81E-01	6.93E-05	0.	2.28E-03
0.25 MEV	7.36E-01	1.36E-04	2.00E-05	3.55E-03
0.30 MEV	2.44E-01	1.61E-04	0.	3.46E-03
0.35 MEV	9.07E-01	2.14E-04	2.00E-05	2.95E-03
0.40 MEV	4.15E-01	4.58E-04	0.	3.84E-03
0.45 MEV	3.81E-01	1.88E-04	0.	2.89E-03
0.50 MEV	9.60E-01	1.90E-04	2.00E-05	1.51E-03
0.55 MEV	1.03E+00	4.03E-06	2.00E-05	8.71E-04
0.60 MEV	4.91E-01	7.19E-05	0.	8.41E-03
0.65 MEV	5.94E-01	3.30E-04	2.00E-05	2.26E-03
0.70 MEV	1.23E+00	3.49E-05	2.00E-05	3.74E-03
0.75 MEV	1.99E+00	5.95E-05	0.	3.62E-03
0.80 MEV	8.37E-01	8.60E-05	2.00E-05	3.50E-03
0.85 MEV	6.42E-01	3.35E-04	3.99E-05	2.88E-03
0.90 MEV	3.04E-01	1.13E-04	2.00E-05	6.03E-03
0.95 MEV	7.15E-01	4.85E-05	3.99E-05	1.33E-03
1.00 MEV	7.91E-01	3.13E-04	7.98E-05	2.92E-03
1.10 MEV	1.25E+00	1.91E-04	0.	3.20E-03
1.20 MEV	8.76E-01	2.58E-04	0.	6.06E-03
1.30 MEV	1.14E+00	2.07E-04	0.	5.22E-03
1.40 MEV	8.93E-01	2.61E-04	0.	6.01E-03
1.50 MEV	9.38E-01	2.78E-04	0.	4.01E-03
1.60 MEV	6.03E-01	4.60E-04	0.	7.61E-03
1.70 MEV	1.23E+00	2.13E-04	0.	4.04E-03
1.80 MEV	8.96E-01	2.59E-04	0.	4.85E-03
1.90 MEV	9.64E-01	2.43E-04	0.	3.21E-03
2.00 MEV	5.99E-01	6.98E-04	0.	7.37E-03
2.10 MEV	4.87E-01	9.53E-05	0.	2.78E-03
2.20 MEV	1.21E+00	1.82E-04	0.	5.98E-03
2.30 MEV	4.21E-01	1.07E-04	0.	8.38E-03
2.40 MEV	1.10E+00	1.45E-04	0.	5.43E-03
2.50 MEV	1.12E+00	1.57E-04	0.	5.21E-03
2.60 MEV	5.58E-01	1.54E-04	0.	6.53E-03
2.70 MEV	8.42E-01	1.01E-04	0.	3.10E-03
2.80 MEV	3.60E-01	1.12E-04	0.	8.80E-03
2.90 MEV	1.00E+00	7.48E-05	0.	3.10E-03
3.00 MEV	4.05E-01	6.85E-05	0.	9.82E-03
3.20 MEV	7.70E-01	5.82E-05	0.	5.35E-03
3.40 MEV	3.85E-01	1.29E-04	0.	7.17E-03
3.60 MEV	8.41E-01	2.29E-05	0.	7.08E-03
3.80 MEV	4.58E-01	6.88E-05	0.	6.92E-03
4.00 MEV	4.15E-01	0.	0.	8.46E-03

1 SLOWING DOWN SPECTRUM AT 0.15 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	6.39E-01	0.	0.	9.11E-03
4.40 MEV	3.70E-01	0.	0.	6.91E-03
4.60 MEV	6.62E-01	0.	0.	1.46E-02
4.80 MEV	2.92E-01	0.	0.	1.88E-03
5.00 MEV	3.85E-01	0.	0.	3.08E-03
5.50 MEV	6.20E-01	0.	0.	2.92E-03
6.00 MEV	5.31E-01	0.	0.	4.31E-03
6.50 MEV	4.35E-01	0.	0.	2.71E-03
7.00 MEV	2.98E-01	0.	0.	4.72E-03
7.50 MEV	3.01E-01	0.	0.	2.66E-03
8.00 MEV	1.15E-01	0.	0.	5.67E-03
8.50 MEV	1.80E-01	0.	0.	3.65E-04
9.00 MEV	6.30E-02	0.	0.	5.88E-04
9.50 MEV	1.22E-01	0.	0.	2.58E-04
10.00 MEV	4.69E-02	0.	0.	5.82E-04
11.00 MEV	1.55E-01	0.	0.	2.20E-04
12.00 MEV	1.40E-01	0.	0.	5.23E-04
13.00 MEV	9.60E-02	0.	0.	9.52E-05
14.00 MEV	4.45E-02	0.	0.	2.00E-04
15.00 MEV	1.11E-01	0.	0.	1.79E-05
16.00 MEV	4.04E-02	0.	0.	4.63E-05
17.00 MEV	4.25E-02	0.	0.	0.
18.00 MEV	5.86E-02	0.	0.	0.
19.00 MEV	2.25E-02	0.	0.	0.
20.00 MEV	2.52E-02	0.	0.	0.
21.00 MEV	1.59E-02	0.	0.	0.
22.00 MEV	1.69E-02	0.	0.	0.
23.00 MEV	1.41E-02	0.	0.	0.
24.00 MEV	1.69E-02	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	1.79E-02	0.	0.	0.
28.00 MEV	8.64E-02	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	1.01E-02	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	2.15E-02	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
2AVE, E (MEV)	5.76	1.66	0.74	4.26

1 SLOWING DOWN SPECTRUM AT 0.20 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	2.62E-01	7.55E-05	0.	2.68E-03
0.15 MEV	1.53E-01	6.30E-05	0.	2.27E-03
0.20 MEV	4.94E-01	5.89E-05	0.	2.10E-03
0.25 MEV	3.26E-01	2.50E-04	2.39E-05	4.84E-03
0.30 MEV	4.50E-01	1.12E-04	4.32E-06	1.60E-03
0.35 MEV	7.94E-01	4.68E-05	0.	3.19E-03
0.40 MEV	3.99E-01	7.87E-04	1.26E-05	2.39E-03
0.45 MEV	4.69E-01	3.27E-04	0.	1.11E-03
0.50 MEV	1.07E+00	4.03E-04	0.	6.94E-04
0.55 MEV	4.53E-01	4.45E-05	0.	2.36E-03
0.60 MEV	5.89E-01	9.59E-04	0.	5.42E-03
0.65 MEV	4.65E-01	4.06E-04	0.	1.94E-03
0.70 MEV	5.62E-01	5.39E-05	2.39E-05	1.32E-03
0.75 MEV	4.91E-01	1.38E-04	0.	1.59E-03
0.80 MEV	9.19E-01	9.43E-04	0.	5.25E-03
0.85 MEV	7.09E-01	5.37E-04	0.	1.93E-03
0.90 MEV	6.72E-01	2.63E-04	1.26E-05	3.52E-03
0.95 MEV	9.16E-01	7.39E-04	0.	1.03E-03
1.00 MEV	3.73E-01	3.17E-04	2.82E-05	2.77E-03
1.10 MEV	1.01E+00	5.84E-04	0.	2.71E-03
1.20 MEV	5.62E-01	6.88E-04	1.20E-05	4.60E-03
1.30 MEV	9.12E-01	6.39E-04	6.29E-06	3.57E-03
1.40 MEV	8.72E-01	7.76E-04	0.	3.06E-03
1.50 MEV	4.40E-01	9.58E-04	2.04E-05	3.28E-03
1.60 MEV	7.88E-01	5.48E-04	1.20E-05	8.08E-03
1.70 MEV	9.51E-01	9.44E-04	0.	3.50E-03
1.80 MEV	4.36E-01	9.93E-04	1.82E-05	5.42E-03
1.90 MEV	8.36E-01	1.42E-03	1.41E-05	1.89E-03
2.00 MEV	6.97E-01	2.90E-03	6.29E-06	5.21E-03
2.10 MEV	4.88E-01	3.34E-04	1.20E-05	1.33E-03
2.20 MEV	7.14E-01	2.25E-04	2.04E-05	3.60E-03
2.30 MEV	8.13E-01	2.43E-04	1.82E-05	4.79E-03
2.40 MEV	6.01E-01	1.66E-04	1.20E-05	3.51E-03
2.50 MEV	6.30E-01	3.18E-04	3.24E-05	3.41E-03
2.60 MEV	1.02E+00	5.04E-04	3.02E-05	4.80E-03
2.70 MEV	9.08E-01	2.39E-04	3.02E-05	2.64E-03
2.80 MEV	3.33E-01	3.40E-04	6.82E-05	2.61E-03
2.90 MEV	3.28E-01	1.46E-04	6.29E-06	3.06E-03
3.00 MEV	8.76E-01	3.44E-05	8.45E-06	3.33E-03
3.20 MEV	8.30E-01	1.40E-04	1.05E-05	3.66E-03
3.40 MEV	4.09E-01	1.25E-04	2.31E-05	4.31E-03
3.60 MEV	4.33E-01	1.31E-04	1.08E-06	3.03E-03
3.80 MEV	6.16E-01	2.48E-04	2.16E-06	4.55E-03
4.00 MEV	5.37E-01	8.46E-05	1.08E-06	4.35E-03

1 SLOWING DOWN SPECTRUM AT 0.20 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.93E-01	1.80E-04	3.24E-06	7.00E-03
4.40 MEV	7.40E-01	8.26E-05	2.16E-06	3.25E-03
4.60 MEV	5.38E-01	1.47E-04	7.55E-06	5.26E-03
4.80 MEV	5.37E-01	5.57E-05	0.	1.51E-03
5.00 MEV	5.40E-01	1.78E-04	0.	2.26E-03
5.50 MEV	6.02E-01	9.81E-05	0.	1.35E-03
6.00 MEV	7.24E-01	1.78E-04	0.	2.53E-03
6.50 MEV	5.95E-01	7.85E-05	0.	1.41E-03
7.00 MEV	6.41E-01	2.00E-04	0.	2.49E-03
7.50 MEV	6.22E-01	0.	0.	6.74E-04
8.00 MEV	5.94E-01	0.	0.	1.35E-03
8.50 MEV	5.57E-01	0.	0.	4.22E-04
9.00 MEV	7.13E-01	0.	0.	7.81E-04
9.50 MEV	5.18E-01	0.	0.	2.20E-04
10.00 MEV	4.83E-01	0.	0.	5.20E-04
11.00 MEV	7.64E-01	0.	0.	1.68E-04
12.00 MEV	6.56E-01	0.	0.	4.46E-04
13.00 MEV	5.13E-01	0.	0.	4.53E-05
14.00 MEV	1.06E-01	0.	0.	8.73E-05
15.00 MEV	7.72E-02	0.	0.	9.63E-06
16.00 MEV	8.73E-02	0.	0.	2.57E-05
17.00 MEV	3.74E-02	0.	0.	0.
18.00 MEV	4.45E-02	0.	0.	0.
19.00 MEV	5.12E-02	0.	0.	0.
20.00 MEV	1.69E-02	0.	0.	0.
21.00 MEV	1.23E-02	0.	0.	0.
22.00 MEV	1.41E-02	0.	0.	0.
23.00 MEV	3.28E-02	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	1.79E-02	0.	0.	0.
27.00 MEV	1.07E-01	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	1.01E-02	0.	0.	0.
34.00 MEV	1.43E-02	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	2.15E-02	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
AVERAGE, E (MEV)	7.62	2.44	2.37	3.94

1 SLOWING DOWN SPECTRUM AT 0.40 CM. FOR ICRU MUSCLE TISSUE

50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	2.28E-01	8.58E-05	0.	3.87E-03
0.15 MEV	1.61E-01	1.28E-04	0.	2.69E-03
0.20 MEV	1.50E-01	4.31E-05	1.19E-05	2.72E-03
0.25 MEV	1.84E-01	1.81E-04	2.44E-03	3.34E-03
0.30 MEV	2.99E-01	1.10E-04	0.	2.63E-03
0.35 MEV	5.56E-01	5.68E-05	2.21E-05	4.60E-03
0.40 MEV	1.98E-01	1.50E-04	1.19E-05	3.53E-03
0.45 MEV	4.51E-01	3.20E-04	3.12E-05	3.06E-03
0.50 MEV	1.94E-01	2.39E-04	0.	2.10E-03
0.55 MEV	7.36E-01	1.14E-04	0.	2.42E-03
0.60 MEV	3.62E-01	1.95E-04	3.40E-05	4.00E-03
0.65 MEV	3.71E-01	3.81E-04	0.	2.48E-03
0.70 MEV	4.46E-01	1.55E-04	1.19E-05	4.75E-03
0.75 MEV	4.01E-01	1.61E-04	0.	2.55E-03
0.80 MEV	6.38E-01	2.34E-04	2.48E-03	2.38E-03
0.85 MEV	2.53E-01	5.01E-04	0.	3.05E-03
0.90 MEV	5.01E-01	2.92E-04	1.19E-05	5.85E-03
0.95 MEV	4.94E-01	1.26E-04	0.	1.94E-03
1.00 MEV	3.81E-01	4.06E-04	3.40E-05	4.72E-03
1.10 MEV	8.45E-01	2.73E-04	5.97E-06	3.92E-03
1.20 MEV	7.60E-01	3.83E-04	1.27E-03	2.77E-03
1.30 MEV	5.24E-01	3.34E-04	2.30E-05	3.82E-03
1.40 MEV	6.87E-01	4.73E-04	1.17E-04	2.86E-03
1.50 MEV	4.49E-01	3.94E-04	1.23E-03	4.87E-03
1.60 MEV	4.48E-01	4.99E-04	1.10E-05	4.71E-03
1.70 MEV	9.11E-01	1.92E-04	1.24E-03	4.38E-03
1.80 MEV	5.25E-01	2.71E-04	1.10E-05	6.05E-03
1.90 MEV	7.60E-01	2.16E-04	1.28E-03	4.72E-03
2.00 MEV	6.59E-01	2.87E-04	7.08E-05	3.81E-03
2.10 MEV	6.76E-01	2.93E-04	1.22E-03	4.59E-03
2.20 MEV	5.85E-01	2.69E-04	2.27E-06	4.48E-03
2.30 MEV	8.70E-01	1.12E-04	1.22E-03	5.99E-03
2.40 MEV	5.57E-01	1.11E-04	1.22E-03	6.73E-03
2.50 MEV	7.11E-01	1.56E-04	9.69E-05	4.86E-03
2.60 MEV	7.56E-01	1.10E-04	1.22E-03	5.86E-03
2.70 MEV	8.68E-01	1.73E-04	1.22E-03	5.06E-03
2.80 MEV	5.20E-01	9.76E-05	1.22E-03	8.15E-03
2.90 MEV	6.62E-01	1.48E-04	1.24E-03	3.92E-03
3.00 MEV	1.10E+00	7.04E-05	1.25E-03	7.70E-03
3.20 MEV	9.48E-01	6.96E-05	1.86E-03	3.64E-03
3.40 MEV	8.15E-01	1.45E-04	4.28E-03	6.03E-03
3.60 MEV	5.48E-01	1.12E-04	8.94E-06	4.43E-03
3.80 MEV	8.74E-01	1.02E-04	2.34E-05	6.78E-03
4.00 MEV	4.49E-01	1.47E-04	2.74E-05	3.61E-03

1 SLOWING DOWN SPECTRUM AT 0.40 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	5.77E-01	1.11E-04	2.45E-05	3.72E-03
4.40 MEV	4.20E-01	1.30E-04	5.07E-05	3.20E-03
4.60 MEV	6.46E-01	1.02E-04	2.45E-05	4.12E-03
4.80 MEV	5.33E-01	9.37E-05	2.45E-05	2.45E-03
5.00 MEV	7.21E-01	1.78E-04	5.64E-05	3.39E-03
5.50 MEV	5.47E-01	9.96E-05	4.03E-05	2.49E-03
6.00 MEV	7.54E-01	1.67E-04	9.84E-05	4.75E-03
6.50 MEV	6.28E-01	7.40E-05	2.10E-05	2.18E-03
7.00 MEV	6.88E-01	1.55E-04	2.10E-05	3.94E-03
7.50 MEV	7.34E-01	1.01E-04	3.15E-05	1.04E-03
8.00 MEV	7.76E-01	2.14E-04	7.34E-05	1.63E-03
8.50 MEV	5.55E-01	2.01E-05	0.	6.09E-04
9.00 MEV	7.74E-01	4.03E-05	0.	1.41E-03
9.50 MEV	6.45E-01	3.52E-05	0.	7.13E-04
10.00 MEV	6.72E-01	7.79E-05	0.	1.85E-03
11.00 MEV	5.44E-01	2.52E-05	0.	2.21E-04
12.00 MEV	4.83E-01	6.93E-05	0.	5.55E-04
13.00 MEV	4.87E-01	0.	0.	7.77E-05
14.00 MEV	2.58E-01	0.	0.	1.62E-04
15.00 MEV	7.53E-02	0.	0.	6.92E-06
16.00 MEV	2.78E-02	0.	0.	1.81E-05
17.00 MEV	7.04E-02	0.	0.	0.
18.00 MEV	2.99E-02	0.	0.	0.
19.00 MEV	2.61E-02	0.	0.	0.
20.00 MEV	3.65E-02	0.	0.	0.
21.00 MEV	2.96E-02	0.	0.	0.
22.00 MEV	1.17E-01	0.	0.	0.
23.00 MEV	1.50E-02	0.	0.	0.
24.00 MEV	7.99E-03	0.	0.	0.
25.00 MEV	2.92E-02	0.	0.	0.
26.00 MEV	4.76E-03	0.	0.	0.
27.00 MEV	1.51E-02	0.	0.	0.
28.00 MEV	1.36E-02	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	3.46E-02	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	2.57E-02	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE. E(MEV)	7.65	4.32	2.69	4.25

ISLOWING DOWN SPECTRUM AT 0.60 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	2.71E-01	6.88E-05	1.09E-05	3.77E-03
0.15 MEV	1.76E-01	5.22E-05	8.58E-07	4.00E-03
0.20 MEV	3.32E-01	4.19E-05	6.03E-06	3.51E-03
0.25 MEV	2.52E-01	1.12E-04	5.29E-06	5.06E-03
0.30 MEV	2.15E-01	1.10E-04	6.46E-06	2.93E-03
0.35 MEV	1.65E-01	4.30E-05	5.29E-06	2.88E-03
0.40 MEV	2.87E-01	4.36E-05	4.38E-05	4.24E-03
0.45 MEV	2.24E-01	4.29E-04	1.26E-05	3.03E-03
0.50 MEV	2.23E-01	2.54E-04	2.57E-06	2.20E-03
0.55 MEV	2.35E-01	8.02E-05	1.09E-05	2.39E-03
0.60 MEV	2.77E-01	1.77E-04	8.43E-05	8.03E-03
0.65 MEV	2.85E-01	1.99E-04	1.09E-05	2.51E-03
0.70 MEV	1.82E-01	2.23E-04	1.69E-05	3.20E-03
0.75 MEV	3.31E-01	1.39E-04	4.43E-06	2.94E-03
0.80 MEV	1.56E-01	1.59E-04	9.24E-05	4.99E-03
0.85 MEV	2.15E-01	3.80E-04	1.53E-05	3.00E-03
0.90 MEV	3.80E-01	1.14E-04	6.71E-05	4.90E-03
0.95 MEV	3.55E-01	1.18E-04	1.29E-05	4.28E-03
1.00 MEV	3.43E-01	2.34E-04	2.54E-05	4.61E-03
1.10 MEV	2.64E-01	1.54E-04	3.01E-06	3.44E-03
1.20 MEV	5.87E-01	2.06E-04	4.96E-05	4.35E-03
1.30 MEV	3.92E-01	1.98E-04	2.45E-05	5.30E-03
1.40 MEV	3.58E-01	2.86E-04	5.58E-05	3.90E-03
1.50 MEV	2.46E-01	2.41E-04	1.84E-05	4.60E-03
1.60 MEV	3.41E-01	1.97E-04	0.	7.54E-03
1.70 MEV	4.42E-01	1.32E-04	0.	4.81E-03
1.80 MEV	3.59E-01	1.65E-04	5.53E-05	5.04E-03
1.90 MEV	3.40E-01	2.11E-04	8.14E-05	4.28E-03
2.00 MEV	4.19E-01	1.66E-04	1.84E-05	6.54E-03
2.10 MEV	3.91E-01	3.03E-04	0.	4.72E-03
2.20 MEV	3.75E-01	3.38E-04	5.62E-05	5.78E-03
2.30 MEV	4.64E-01	1.33E-04	1.84E-05	6.46E-03
2.40 MEV	3.09E-01	8.72E-05	0.	6.27E-03
2.50 MEV	2.77E-01	1.61E-04	6.20E-05	4.94E-03
2.60 MEV	6.25E-01	2.98E-04	9.31E-05	7.33E-03
2.70 MEV	3.12E-01	1.92E-04	1.84E-05	3.84E-03
2.80 MEV	2.43E-01	1.10E-04	1.84E-05	6.21E-03
2.90 MEV	3.47E-01	1.85E-04	5.62E-05	4.42E-03
3.00 MEV	5.82E-01	5.21E-05	6.20E-05	7.21E-03
3.20 MEV	5.27E-01	1.50E-04	6.50E-05	4.04E-03
3.40 MEV	5.41E-01	1.85E-04	1.05E-04	6.80E-03
3.60 MEV	3.95E-01	1.52E-04	1.89E-05	3.98E-03
3.80 MEV	5.91E-01	9.80E-05	5.91E-05	6.39E-03
4.00 MEV	4.00E-01	2.77E-04	1.89E-05	4.24E-03

1 SLOWING DOWN SPECTRUM AT 0.60 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON HE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	4.31E-01	1.71E-04	7.80E-05	5.72E-03
4.40 MEV	5.85E-01	1.56E-04	5.96E-05	4.21E-03
4.60 MEV	3.72E-01	2.19E-04	7.80E-05	6.19E-03
4.80 MEV	5.50E-01	1.35E-04	7.80E-05	2.80E-03
5.00 MEV	5.65E-01	3.14E-04	1.54E-04	4.37E-03
5.50 MEV	4.60E-01	1.55E-04	4.09E-05	2.10E-03
6.00 MEV	4.44E-01	2.30E-04	8.45E-05	3.45E-03
6.50 MEV	4.54E-01	9.58E-05	2.21E-05	2.02E-03
7.00 MEV	5.81E-01	1.57E-04	5.91E-05	3.71E-03
7.50 MEV	4.36E-01	1.52E-04	0.	7.51E-04
8.00 MEV	6.18E-01	2.25E-04	0.	1.32E-03
8.50 MEV	4.52E-01	1.16E-04	0.	8.26E-04
9.00 MEV	5.17E-01	2.24E-04	0.	1.38E-03
9.50 MEV	4.44E-01	4.89E-05	0.	7.10E-04
10.00 MEV	5.94E-01	6.66E-05	0.	1.59E-03
11.00 MEV	5.48E-01	9.78E-05	0.	3.20E-04
12.00 MEV	6.31E-01	2.38E-04	0.	6.98E-04
13.00 MEV	6.57E-01	0.	0.	2.91E-04
14.00 MEV	6.18E-01	0.	0.	7.15E-04
15.00 MEV	6.26E-01	0.	0.	1.69E-06
16.00 MEV	5.40E-01	0.	0.	4.23E-06
17.00 MEV	3.25E-01	0.	0.	0.
18.00 MEV	2.03E-01	0.	0.	0.
19.00 MEV	1.63E-01	0.	0.	0.
20.00 MEV	8.04E-02	0.	0.	0.
21.00 MEV	3.59E-02	0.	0.	0.
22.00 MEV	1.51E-02	0.	0.	0.
23.00 MEV	2.15E-02	0.	0.	0.
24.00 MEV	7.52E-03	0.	0.	0.
25.00 MEV	7.99E-03	0.	0.	0.
26.00 MEV	4.73E-02	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	1.57E-02	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	7.86E-03	0.	0.	0.
38.00 MEV	2.57E-02	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	5.13E-03	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE. E(MEV)	10.03	5.80	4.07	4.28

1 SLOWING DOWN SPECTRUM AT 1.00 CM, FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	2.63E-01	5.32E-05	0.	4.42E-03
0.15 MEV	1.85E-01	3.84E-05	8.72E-08	2.54E-03
0.20 MEV	1.72E-01	4.70E-05	1.15E-05	2.41E-03
0.25 MEV	2.44E-01	1.01E-04	3.16E-06	3.82E-03
0.30 MEV	2.10E-01	8.68E-05	4.61E-06	2.46E-03
0.35 MEV	1.65E-01	4.34E-05	1.74E-07	3.16E-03
0.40 MEV	2.90E-01	1.14E-04	3.76E-05	3.45E-03
0.45 MEV	2.88E-01	6.40E-04	7.05E-05	3.54E-03
0.50 MEV	1.98E-01	1.05E-04	0.	1.54E-03
0.55 MEV	2.45E-01	4.93E-05	5.98E-05	2.89E-03
0.60 MEV	2.60E-01	1.76E-04	3.07E-06	3.46E-03
0.65 MEV	2.20E-01	2.48E-04	1.14E-05	2.29E-03
0.70 MEV	2.03E-01	6.16E-05	7.59E-06	2.52E-03
0.75 MEV	2.44E-01	1.14E-04	2.00E-06	2.87E-03
0.80 MEV	1.77E-01	5.52E-04	1.74E-05	2.75E-03
0.85 MEV	2.59E-01	3.55E-04	0.	3.57E-03
0.90 MEV	2.26E-01	1.36E-04	1.45E-05	5.84E-03
0.95 MEV	2.73E-01	7.31E-05	0.	4.04E-03
1.00 MEV	1.67E-01	6.74E-04	2.53E-05	3.91E-03
1.10 MEV	3.21E-01	1.90E-04	8.78E-06	3.31E-03
1.20 MEV	3.59E-01	4.99E-04	1.71E-05	3.32E-03
1.30 MEV	3.84E-01	2.41E-04	1.24E-05	3.71E-03
1.40 MEV	2.76E-01	4.53E-04	9.12E-05	3.91E-03
1.50 MEV	2.96E-01	3.81E-04	2.07E-05	4.05E-03
1.60 MEV	2.62E-01	3.05E-04	4.71E-06	5.99E-03
1.70 MEV	3.44E-01	3.84E-04	5.39E-06	4.38E-03
1.80 MEV	2.53E-01	4.96E-04	1.45E-06	4.84E-03
1.90 MEV	2.58E-01	3.48E-04	3.53E-05	4.17E-03
2.00 MEV	3.73E-01	4.44E-04	3.06E-05	3.84E-03
2.10 MEV	2.41E-01	5.96E-04	2.09E-05	4.53E-03
2.20 MEV	3.04E-01	5.52E-04	7.65E-06	6.15E-03
2.30 MEV	3.49E-01	5.36E-04	3.79E-05	5.41E-03
2.40 MEV	3.70E-01	1.27E-03	1.36E-05	5.20E-03
2.50 MEV	2.73E-01	1.17E-04	3.39E-05	4.29E-03
2.60 MEV	5.16E-01	1.56E-04	2.72E-05	5.04E-03
2.70 MEV	3.22E-01	1.84E-04	3.50E-05	4.46E-03
2.80 MEV	2.77E-01	8.53E-05	7.94E-06	4.65E-03
2.90 MEV	2.61E-01	6.78E-05	2.80E-05	2.84E-03
3.00 MEV	3.94E-01	1.40E-04	3.20E-05	7.18E-03
3.20 MEV	3.83E-01	1.05E-04	2.31E-05	3.70E-03
3.40 MEV	2.83E-01	9.94E-05	3.17E-05	5.96E-03
3.60 MEV	2.60E-01	9.16E-05	2.79E-05	4.01E-03
3.80 MEV	4.42E-01	9.33E-05	2.79E-05	6.51E-03
4.00 MEV	3.16E-01	1.07E-04	3.34E-05	4.51E-03

1 SLOWING DOWN SPECTRUM AT 1.00 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.25E-01	1.20E-04	2.79E-05	4.79E-03
4.40 MEV	4.15E-01	1.15E-04	4.28E-05	3.98E-03
4.60 MEV	2.63E-01	1.68E-04	4.63E-05	5.11E-03
4.80 MEV	3.76E-01	2.42E-05	5.78E-05	3.51E-03
5.00 MEV	3.99E-01	6.80E-05	9.81E-05	4.05E-03
5.50 MEV	3.71E-01	5.99E-05	2.81E-05	3.46E-03
6.00 MEV	4.03E-01	8.21E-05	5.91E-05	7.00E-03
6.50 MEV	3.99E-01	9.38E-05	1.48E-05	1.73E-03
7.00 MEV	4.58E-01	1.97E-04	7.38E-06	2.82E-03
7.50 MEV	3.86E-01	3.88E-05	1.48E-05	1.18E-03
8.00 MEV	4.67E-01	5.90E-05	1.89E-05	2.23E-03
8.50 MEV	4.37E-01	3.08E-05	2.63E-05	1.21E-03
9.00 MEV	5.06E-01	5.72E-05	5.58E-05	1.87E-03
9.50 MEV	3.52E-01	2.89E-05	0.	5.46E-04
10.00 MEV	4.43E-01	5.78E-05	0.	7.83E-04
11.00 MEV	5.13E-01	0.	0.	5.97E-04
12.00 MEV	4.94E-01	0.	0.	1.22E-03
13.00 MEV	4.24E-01	0.	0.	4.16E-04
14.00 MEV	4.32E-01	0.	0.	1.02E-03
15.00 MEV	3.75E-01	0.	0.	6.00E-06
16.00 MEV	3.69E-01	0.	0.	1.52E-05
17.00 MEV	3.79E-01	0.	0.	0.
18.00 MEV	3.04E-01	0.	0.	0.
19.00 MEV	2.40E-01	0.	0.	0.
20.00 MEV	2.43E-01	0.	0.	0.
21.00 MEV	2.58E-01	0.	0.	0.
22.00 MEV	2.21E-01	0.	0.	0.
23.00 MEV	1.53E-01	0.	0.	0.
24.00 MEV	1.23E-01	0.	0.	0.
25.00 MEV	1.48E-01	0.	0.	0.
26.00 MEV	1.05E-01	0.	0.	0.
27.00 MEV	8.86E-02	0.	0.	0.
28.00 MEV	1.30E-01	0.	0.	0.
29.00 MEV	7.33E-02	0.	0.	0.
30.00 MEV	5.67E-02	0.	0.	0.
32.00 MEV	1.79E-02	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	7.45E-03	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE. E (MEV)	12.23	3.28	4.88	4.79

1 SLOWING DOWN SPECTRUM AT 2.00 CM. FOR ICRU MUSCLE TISSUE

50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	3.28E-01	4.75E-05	1.65E-05	4.52E-03
0.15 MEV	2.01E-01	3.49E-04	3.82E-06	3.18E-03
0.20 MEV	1.84E-01	5.36E-05	2.05E-05	3.35E-03
0.25 MEV	2.46E-01	9.96E-05	8.53E-06	3.77E-03
0.30 MEV	2.09E-01	9.93E-05	1.49E-05	2.81E-03
0.35 MEV	1.90E-01	2.22E-04	7.33E-06	4.41E-03
0.40 MEV	2.71E-01	5.94E-05	2.91E-05	3.03E-03
0.45 MEV	2.65E-01	7.51E-04	3.73E-05	3.90E-03
0.50 MEV	2.10E-01	1.64E-04	8.44E-07	1.98E-03
0.55 MEV	2.20E-01	5.14E-05	9.45E-06	2.96E-03
0.60 MEV	2.30E-01	4.86E-04	5.23E-05	4.38E-03
0.65 MEV	2.52E-01	7.85E-04	1.55E-05	2.44E-03
0.70 MEV	2.04E-01	3.18E-04	1.64E-06	3.00E-03
0.75 MEV	2.48E-01	1.01E-04	1.03E-05	2.61E-03
0.80 MEV	1.80E-01	7.22E-04	3.82E-05	2.93E-03
0.85 MEV	2.42E-01	6.07E-04	2.19E-05	3.55E-03
0.90 MEV	2.20E-01	1.74E-04	2.31E-05	4.56E-03
0.95 MEV	3.30E-01	1.39E-04	4.06E-05	3.63E-03
1.00 MEV	2.01E-01	7.89E-04	4.76E-05	4.91E-03
1.10 MEV	2.66E-01	1.02E-03	1.20E-05	3.20E-03
1.20 MEV	3.54E-01	7.44E-04	3.39E-05	4.21E-03
1.30 MEV	3.14E-01	6.23E-04	3.13E-05	3.70E-03
1.40 MEV	2.84E-01	6.73E-04	6.26E-05	3.77E-03
1.50 MEV	3.23E-01	6.59E-04	4.13E-05	4.15E-03
1.60 MEV	2.67E-01	1.12E-03	5.61E-05	5.21E-03
1.70 MEV	4.06E-01	5.74E-04	3.32E-05	4.30E-03
1.80 MEV	2.90E-01	1.44E-03	5.72E-05	4.50E-03
1.90 MEV	2.80E-01	6.84E-04	2.77E-05	3.72E-03
2.00 MEV	4.16E-01	6.69E-04	6.94E-05	4.57E-03
2.10 MEV	2.31E-01	8.32E-04	1.59E-05	3.85E-03
2.20 MEV	3.69E-01	1.31E-03	3.11E-05	5.58E-03
2.30 MEV	3.02E-01	8.31E-04	2.37E-05	5.78E-03
2.40 MEV	3.21E-01	2.60E-03	3.10E-05	5.12E-03
2.50 MEV	2.91E-01	6.24E-04	4.46E-05	3.59E-03
2.60 MEV	4.77E-01	5.42E-04	7.73E-05	5.38E-03
2.70 MEV	3.25E-01	5.41E-04	3.01E-05	4.49E-03
2.80 MEV	2.59E-01	2.06E-03	7.81E-06	5.03E-03
2.90 MEV	2.85E-01	9.16E-05	3.92E-05	4.05E-03
3.00 MEV	4.34E-01	2.95E-04	1.88E-05	7.48E-03
3.20 MEV	3.70E-01	1.07E-03	3.25E-05	3.68E-03
3.40 MEV	3.19E-01	4.91E-04	4.12E-05	6.14E-03
3.60 MEV	3.03E-01	7.54E-04	2.35E-05	3.77E-03
3.80 MEV	4.77E-01	6.75E-04	4.71E-05	5.72E-03
4.00 MEV	2.90E-01	8.41E-04	2.61E-05	3.64E-03

1 SLOWING DOWN SPECTRUM AT 2.00 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.80E-01	1.39E-03	2.20E-05	4.52E-03
4.40 MEV	4.97E-01	9.24E-04	3.06E-05	3.03E-03
4.60 MEV	3.25E-01	8.60E-04	6.36E-05	4.14E-03
4.80 MEV	4.05E-01	8.62E-04	1.32E-05	3.21E-03
5.00 MEV	4.74E-01	1.36E-03	1.08E-05	4.43E-03
5.50 MEV	4.12E-01	6.15E-04	1.85E-05	2.37E-03
6.00 MEV	3.90E-01	8.11E-04	3.05E-05	4.65E-03
6.50 MEV	4.18E-01	7.44E-04	1.94E-05	1.70E-03
7.00 MEV	4.98E-01	1.82E-03	3.57E-05	2.87E-03
7.50 MEV	4.15E-01	1.83E-04	6.72E-06	1.20E-03
8.00 MEV	4.26E-01	2.47E-04	1.01E-05	2.12E-03
8.50 MEV	4.34E-01	2.65E-04	1.34E-05	7.54E-04
9.00 MEV	4.63E-01	1.45E-04	2.69E-05	1.18E-03
9.50 MEV	3.62E-01	1.35E-04	0.	5.44E-04
10.00 MEV	4.28E-01	2.71E-04	0.	8.54E-04
11.00 MEV	5.09E-01	2.56E-04	0.	5.36E-04
12.00 MEV	5.16E-01	7.03E-04	0.	1.13E-03
13.00 MEV	4.36E-01	0.	0.	1.08E-04
14.00 MEV	4.09E-01	0.	0.	1.77E-04
15.00 MEV	4.06E-01	0.	0.	1.14E-04
16.00 MEV	3.74E-01	0.	0.	2.74E-04
17.00 MEV	3.77E-01	0.	0.	5.39E-07
18.00 MEV	3.09E-01	0.	0.	1.44E-06
19.00 MEV	3.01E-01	0.	0.	0.
20.00 MEV	2.33E-01	0.	0.	0.
21.00 MEV	2.14E-01	0.	0.	0.
22.00 MEV	2.43E-01	0.	0.	0.
23.00 MEV	1.73E-01	0.	0.	0.
24.00 MEV	1.27E-01	0.	0.	0.
25.00 MEV	1.44E-01	0.	0.	0.
26.00 MEV	1.20E-01	0.	0.	0.
27.00 MEV	9.40E-02	0.	0.	0.
28.00 MEV	5.89E-02	0.	0.	0.
29.00 MEV	4.57E-02	0.	0.	0.
30.00 MEV	4.96E-02	0.	0.	0.
32.00 MEV	3.35E-02	0.	0.	0.
34.00 MEV	2.62E-02	0.	0.	0.
36.00 MEV	2.79E-03	0.	0.	0.
38.00 MEV	4.64E-03	0.	0.	0.
40.00 MEV	9.28E-03	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
DAVE, E (MEV)	12.27	5.30	4.04	4.46

1 SLOWING DOWN SPECTRUM AT 4.00 CM, FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	3.04E-01	4.75E-05	7.09E-06	4.02E-03
0.15 MEV	1.97E-01	7.58E-05	7.45E-06	3.60E-03
0.20 MEV	1.78E-01	5.68E-05	5.35E-06	3.35E-03
0.25 MEV	2.70E-01	1.09E-04	1.39E-05	4.14E-03
0.30 MEV	2.07E-01	2.55E-04	1.93E-04	2.82E-03
0.35 MEV	1.73E-01	5.03E-05	9.78E-06	4.00E-03
0.40 MEV	2.70E-01	8.36E-05	5.73E-05	3.65E-03
0.45 MEV	2.90E-01	2.21E-04	2.04E-05	3.49E-03
0.50 MEV	2.11E-01	1.79E-04	3.46E-06	2.11E-03
0.55 MEV	2.27E-01	5.18E-05	2.65E-05	3.84E-03
0.60 MEV	2.60E-01	2.10E-04	2.96E-05	5.30E-03
0.65 MEV	2.28E-01	4.46E-04	1.43E-05	2.46E-03
0.70 MEV	2.11E-01	8.75E-05	1.88E-04	2.54E-03
0.75 MEV	2.53E-01	1.08E-04	3.72E-06	2.82E-03
0.80 MEV	1.90E-01	1.30E-04	5.23E-05	3.66E-03
0.85 MEV	2.33E-01	4.87E-04	4.02E-06	2.94E-03
0.90 MEV	2.20E-01	1.50E-04	2.59E-05	5.97E-03
0.95 MEV	2.50E-01	9.39E-05	1.90E-04	3.05E-03
1.00 MEV	1.69E-01	2.19E-04	3.94E-05	4.76E-03
1.10 MEV	2.74E-01	1.82E-04	7.68E-06	3.38E-03
1.20 MEV	3.24E-01	3.52E-04	1.36E-04	4.13E-03
1.30 MEV	2.99E-01	3.16E-04	1.65E-05	4.54E-03
1.40 MEV	2.76E-01	2.87E-04	1.61E-04	4.34E-03
1.50 MEV	3.27E-01	3.23E-04	4.10E-05	3.93E-03
1.60 MEV	2.64E-01	3.32E-04	1.31E-04	5.76E-03
1.70 MEV	3.66E-01	1.63E-04	1.14E-04	4.88E-03
1.80 MEV	3.04E-01	3.83E-04	1.20E-04	5.35E-03
1.90 MEV	2.83E-01	1.54E-04	3.82E-05	4.37E-03
2.00 MEV	3.23E-01	3.24E-04	1.32E-04	5.67E-03
2.10 MEV	2.67E-01	1.69E-04	1.29E-04	4.26E-03
2.20 MEV	3.06E-01	3.41E-04	2.17E-04	5.88E-03
2.30 MEV	3.12E-01	1.91E-04	1.26E-04	7.10E-03
2.40 MEV	3.24E-01	1.72E-04	2.03E-04	6.28E-03
2.50 MEV	2.74E-01	3.42E-04	2.53E-04	4.29E-03
2.60 MEV	4.46E-01	2.97E-04	5.07E-04	5.77E-03
2.70 MEV	3.28E-01	2.48E-04	3.64E-05	4.37E-03
2.80 MEV	2.47E-01	2.64E-04	4.58E-05	5.16E-03
2.90 MEV	2.82E-01	2.24E-04	1.84E-05	4.53E-03
3.00 MEV	3.92E-01	2.29E-04	4.16E-05	6.93E-03
3.20 MEV	3.50E-01	2.80E-04	3.88E-05	4.60E-03
3.40 MEV	3.27E-01	5.35E-04	4.91E-05	7.29E-03
3.60 MEV	3.07E-01	1.39E-04	1.62E-05	4.66E-03
3.80 MEV	4.32E-01	1.94E-04	1.91E-05	7.31E-03
4.00 MEV	2.62E-01	2.27E-04	4.94E-05	4.16E-03

1 SLOWING DOWN SPECTRUM AT 4.00 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.50E-01	2.02E-04	2.99E-05	5.55E-03
4.40 MEV	4.34E-01	1.88E-04	2.68E-05	3.63E-03
4.60 MEV	2.65E-01	2.04E-04	3.13E-05	5.26E-03
4.80 MEV	3.36E-01	1.96E-04	1.86E-05	2.74E-03
5.00 MEV	4.26E-01	3.74E-04	4.92E-05	4.07E-03
5.50 MEV	3.79E-01	8.16E-05	1.92E-05	2.23E-03
6.00 MEV	3.80E-01	1.29E-04	3.27E-05	4.12E-03
6.50 MEV	3.66E-01	6.22E-05	2.92E-05	1.83E-03
7.00 MEV	4.16E-01	1.31E-04	3.56E-05	3.15E-03
7.50 MEV	3.08E-01	7.03E-05	3.13E-05	1.33E-03
8.00 MEV	3.98E-01	1.28E-04	5.65E-05	2.27E-03
8.50 MEV	4.13E-01	3.95E-05	2.77E-05	8.85E-04
9.00 MEV	4.59E-01	8.35E-05	5.17E-05	1.53E-03
9.50 MEV	3.66E-01	3.00E-05	1.04E-05	5.90E-04
10.00 MEV	4.41E-01	5.83E-05	2.07E-05	1.22E-03
11.00 MEV	4.26E-01	1.48E-05	4.48E-06	4.12E-04
12.00 MEV	4.16E-01	3.57E-05	1.34E-05	8.94E-04
13.00 MEV	3.68E-01	0.	0.	1.03E-04
14.00 MEV	4.12E-01	0.	0.	1.85E-04
15.00 MEV	3.75E-01	0.	0.	1.08E-04
16.00 MEV	3.55E-01	0.	0.	2.33E-04
17.00 MEV	3.46E-01	0.	0.	5.90E-05
18.00 MEV	3.35E-01	0.	0.	1.33E-04
19.00 MEV	2.66E-01	0.	0.	0.
20.00 MEV	2.45E-01	0.	0.	0.
21.00 MEV	2.19E-01	0.	0.	0.
22.00 MEV	2.04E-01	0.	0.	0.
23.00 MEV	1.69E-01	0.	0.	0.
24.00 MEV	1.20E-01	0.	0.	0.
25.00 MEV	1.18E-01	0.	0.	0.
26.00 MEV	8.92E-02	0.	0.	0.
27.00 MEV	1.03E-01	0.	0.	0.
28.00 MEV	6.25E-02	0.	0.	0.
29.00 MEV	5.77E-02	0.	0.	0.
30.00 MEV	4.73E-02	0.	0.	0.
32.00 MEV	3.74E-02	0.	0.	0.
34.00 MEV	3.01E-02	0.	0.	0.
36.00 MEV	9.27E-03	0.	0.	0.
38.00 MEV	8.98E-03	0.	0.	0.
40.00 MEV	5.85E-03	0.	0.	0.
42.00 MEV	8.90E-03	0.	0.	0.
44.00 MEV	7.70E-03	0.	0.	0.
46.00 MEV	5.77E-03	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.

0AVE, E(MEV)   12.60   4.02   4.10   4.41

1 SLOWING DOWN SPECTRUM AT 6.00 CM, FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	2.88E-01	4.57E-05	1.01E-05	4.12E-03
0.15 MEV	1.92E-01	6.14E-05	8.90E-06	3.16E-03
0.20 MEV	1.72E-01	4.26E-05	1.21E-04	2.73E-03
0.25 MEV	2.50E-01	9.85E-05	3.91E-06	3.38E-03
0.30 MEV	1.87E-01	8.40E-05	2.79E-05	2.09E-03
0.35 MEV	1.61E-01	5.29E-05	5.77E-06	3.51E-03
0.40 MEV	2.50E-01	7.18E-05	2.87E-05	3.21E-03
0.45 MEV	2.49E-01	2.42E-04	1.48E-05	3.35E-03
0.50 MEV	1.91E-01	1.42E-04	3.46E-06	1.96E-03
0.55 MEV	2.13E-01	5.87E-05	1.74E-05	3.12E-03
0.60 MEV	2.54E-01	1.63E-04	3.61E-05	4.47E-03
0.65 MEV	2.44E-01	2.96E-04	1.23E-05	2.12E-03
0.70 MEV	2.11E-01	9.22E-05	1.15E-05	2.15E-03
0.75 MEV	2.28E-01	1.07E-04	3.87E-06	2.31E-03
0.80 MEV	1.67E-01	1.19E-04	4.69E-05	2.75E-03
0.85 MEV	2.18E-01	2.78E-04	1.21E-05	2.75E-03
0.90 MEV	2.05E-01	2.12E-04	1.77E-05	5.52E-03
0.95 MEV	2.96E-01	8.62E-05	1.76E-05	2.80E-03
1.00 MEV	1.87E-01	1.91E-04	5.02E-05	4.39E-03
1.10 MEV	2.70E-01	1.74E-04	6.23E-05	2.70E-03
1.20 MEV	2.96E-01	2.37E-04	4.27E-05	3.55E-03
1.30 MEV	2.89E-01	2.10E-04	1.77E-05	3.79E-03
1.40 MEV	2.56E-01	2.38E-04	4.23E-05	3.38E-03
1.50 MEV	3.08E-01	2.32E-04	3.33E-05	3.33E-03
1.60 MEV	2.64E-01	3.17E-04	4.16E-05	5.36E-03
1.70 MEV	3.41E-01	1.23E-04	7.41E-05	4.15E-03
1.80 MEV	2.82E-01	1.79E-04	2.62E-05	4.46E-03
1.90 MEV	2.62E-01	2.16E-04	4.49E-05	3.52E-03
2.00 MEV	3.35E-01	2.34E-04	4.53E-05	4.39E-03
2.10 MEV	2.50E-01	1.89E-04	6.77E-05	3.81E-03
2.20 MEV	2.97E-01	2.18E-04	2.88E-05	4.60E-03
2.30 MEV	2.69E-01	1.01E-04	2.87E-05	5.87E-03
2.40 MEV	2.85E-01	1.29E-04	2.56E-05	4.69E-03
2.50 MEV	2.68E-01	1.69E-04	9.95E-05	3.75E-03
2.60 MEV	4.17E-01	2.06E-04	2.86E-05	4.69E-03
2.70 MEV	3.34E-01	1.93E-04	2.22E-05	4.11E-03
2.80 MEV	2.22E-01	7.62E-05	8.14E-05	4.78E-03
2.90 MEV	2.44E-01	1.16E-04	2.04E-05	4.51E-03
3.00 MEV	3.62E-01	1.64E-04	4.52E-05	6.54E-03
3.20 MEV	3.56E-01	1.49E-04	6.35E-05	3.72E-03
3.40 MEV	3.06E-01	1.93E-04	7.46E-05	6.11E-03
3.60 MEV	2.60E-01	1.25E-04	5.11E-05	4.03E-03
3.80 MEV	3.89E-01	1.69E-04	7.96E-05	6.28E-03
4.00 MEV	2.77E-01	1.72E-04	2.97E-05	3.59E-03

1SLOWING DOWN SPECTRUM AT 6.00 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.13E-01	2.02E-04	1.01E-04	4.86E-03
4.40 MEV	4.18E-01	1.53E-04	5.77E-05	3.43E-03
4.60 MEV	2.84E-01	3.24E-04	9.10E-05	4.75E-03
4.80 MEV	3.30E-01	6.04E-05	4.18E-05	2.77E-03
5.00 MEV	4.18E-01	1.58E-04	7.33E-05	4.01E-03
5.50 MEV	3.71E-01	1.03E-04	7.16E-05	2.06E-03
6.00 MEV	3.68E-01	1.61E-04	1.62E-04	3.72E-03
6.50 MEV	3.51E-01	9.29E-05	1.69E-05	1.67E-03
7.00 MEV	4.32E-01	2.05E-04	2.76E-05	2.92E-03
7.50 MEV	3.65E-01	6.53E-05	1.10E-05	1.22E-03
8.00 MEV	3.81E-01	1.09E-04	2.06E-05	2.08E-03
8.50 MEV	4.10E-01	4.51E-05	1.03E-05	9.38E-04
9.00 MEV	4.19E-01	1.08E-04	1.89E-05	1.58E-03
9.50 MEV	3.37E-01	1.75E-05	5.52E-06	6.91E-04
10.00 MEV	3.89E-01	3.27E-05	1.10E-05	1.51E-03
11.00 MEV	3.84E-01	2.09E-05	0.	3.49E-04
12.00 MEV	4.35E-01	5.28E-05	0.	7.51E-04
13.00 MEV	3.57E-01	2.75E-06	0.	1.61E-04
14.00 MEV	3.63E-01	6.88E-06	0.	3.83E-04
15.00 MEV	3.33E-01	0.	0.	9.31E-06
16.00 MEV	3.06E-01	0.	0.	2.25E-05
17.00 MEV	2.87E-01	0.	0.	0.
18.00 MEV	2.61E-01	0.	0.	0.
19.00 MEV	2.45E-01	0.	0.	0.
20.00 MEV	2.47E-01	0.	0.	0.
21.00 MEV	1.93E-01	0.	0.	0.
22.00 MEV	1.91E-01	0.	0.	0.
23.00 MEV	1.76E-01	0.	0.	0.
24.00 MEV	1.42E-01	0.	0.	0.
25.00 MEV	1.40E-01	0.	0.	0.
26.00 MEV	1.06E-01	0.	0.	0.
27.00 MEV	1.10E-01	0.	0.	0.
28.00 MEV	7.63E-02	0.	0.	0.
29.00 MEV	3.73E-02	0.	0.	0.
30.00 MEV	2.61E-02	0.	0.	0.
32.00 MEV	3.29E-02	0.	0.	0.
34.00 MEV	2.59E-02	0.	0.	0.
36.00 MEV	2.16E-02	0.	0.	0.
38.00 MEV	1.06E-02	0.	0.	0.
40.00 MEV	2.23E-03	0.	0.	0.
42.00 MEV	4.90E-03	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	12.51	4.60	4.38	4.45

15LOWING DOWN SPECTRUM AT 10.0 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON RE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	2.77E-01	4.67E-05	5.58E-05	3.45E-03
0.15 MEV	1.74E-01	3.86E-05	5.58E-06	3.04E-03
0.20 MEV	1.52E-01	7.96E-05	2.80E-05	2.56E-03
0.25 MEV	2.30E-01	9.36E-05	4.85E-06	3.21E-03
0.30 MEV	1.77E-01	2.42E-04	3.39E-05	2.28E-03
0.35 MEV	1.54E-01	6.18E-05	5.37E-05	3.35E-03
0.40 MEV	2.32E-01	9.34E-05	1.20E-05	2.81E-03
0.45 MEV	2.36E-01	2.32E-04	4.43E-05	2.83E-03
0.50 MEV	1.90E-01	2.63E-04	3.16E-05	1.77E-03
0.55 MEV	1.99E-01	8.58E-05	6.40E-05	2.86E-03
0.60 MEV	2.35E-01	1.62E-04	1.93E-04	3.50E-03
0.65 MEV	2.06E-01	2.36E-04	6.24E-05	2.09E-03
0.70 MEV	1.88E-01	2.87E-04	1.33E-04	2.28E-03
0.75 MEV	2.32E-01	1.14E-04	3.26E-06	2.27E-03
0.80 MEV	1.58E-01	1.47E-04	2.37E-05	2.49E-03
0.85 MEV	2.18E-01	4.16E-04	3.03E-05	2.42E-03
0.90 MEV	1.98E-01	1.60E-04	6.69E-06	4.43E-03
0.95 MEV	2.53E-01	1.65E-04	3.60E-05	2.85E-03
1.00 MEV	1.71E-01	2.77E-04	1.87E-05	3.88E-03
1.10 MEV	2.51E-01	3.00E-04	1.67E-05	2.82E-03
1.20 MEV	2.84E-01	4.25E-04	3.96E-05	3.20E-03
1.30 MEV	2.74E-01	1.81E-04	1.05E-04	3.37E-03
1.40 MEV	2.51E-01	3.07E-04	3.69E-05	3.09E-03
1.50 MEV	2.48E-01	3.06E-04	3.60E-05	3.20E-03
1.60 MEV	2.42E-01	7.93E-04	4.24E-05	4.50E-03
1.70 MEV	3.41E-01	1.30E-04	5.04E-05	3.73E-03
1.80 MEV	2.36E-01	3.44E-04	1.72E-04	4.10E-03
1.90 MEV	2.51E-01	2.75E-04	2.10E-05	3.14E-03
2.00 MEV	3.22E-01	3.12E-04	3.02E-05	3.85E-03
2.10 MEV	2.33E-01	1.26E-04	7.16E-06	3.16E-03
2.20 MEV	2.93E-01	3.89E-04	9.13E-05	4.65E-03
2.30 MEV	2.61E-01	1.47E-04	1.74E-05	4.66E-03
2.40 MEV	2.81E-01	3.27E-04	1.44E-05	4.51E-03
2.50 MEV	2.42E-01	1.82E-04	1.04E-04	3.29E-03
2.60 MEV	3.84E-01	3.98E-04	2.45E-05	4.97E-03
2.70 MEV	3.03E-01	1.85E-04	2.09E-05	3.49E-03
2.80 MEV	2.15E-01	3.51E-04	9.73E-05	4.21E-03
2.90 MEV	2.41E-01	1.72E-04	1.79E-05	3.80E-03
3.00 MEV	3.29E-01	3.06E-04	1.04E-04	5.66E-03
3.20 MEV	3.39E-01	5.45E-04	2.03E-05	3.37E-03
3.40 MEV	2.78E-01	5.47E-04	6.23E-05	5.76E-03
3.60 MEV	2.73E-01	1.65E-04	5.30E-05	3.36E-03
3.80 MEV	3.86E-01	2.12E-04	6.69E-05	5.49E-03
4.00 MEV	2.92E-01	3.01E-04	9.82E-05	3.09E-03

1 SLOWING DOWN SPECTRUM AT 10.0 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.22E-01	6.86E-04	6.66E-05	4.18E-03
4.40 MEV	4.00E-01	2.34E-04	9.81E-05	2.96E-03
4.60 MEV	2.69E-01	4.41E-04	1.06E-04	3.99E-03
4.80 MEV	3.03E-01	1.12E-04	1.24E-04	2.41E-03
5.00 MEV	4.08E-01	1.31E-04	2.47E-04	3.49E-03
5.50 MEV	3.27E-01	2.27E-04	1.29E-05	1.79E-03
6.00 MEV	3.53E-01	3.05E-04	2.54E-05	3.49E-03
6.50 MEV	3.46E-01	2.19E-04	1.12E-05	1.27E-03
7.00 MEV	4.00E-01	2.91E-04	1.91E-05	2.19E-03
7.50 MEV	3.53E-01	1.51E-04	1.46E-06	9.31E-04
8.00 MEV	3.58E-01	1.86E-04	1.69E-05	1.54E-03
8.50 MEV	3.52E-01	2.30E-04	3.87E-06	7.25E-04
9.00 MEV	3.97E-01	1.76E-04	7.01E-06	1.25E-03
9.50 MEV	3.15E-01	1.24E-04	1.48E-06	4.71E-04
10.00 MEV	3.66E-01	2.48E-04	2.95E-06	9.92E-04
11.00 MEV	3.75E-01	2.04E-04	0.	2.72E-04
12.00 MEV	3.90E-01	5.58E-04	0.	5.66E-04
13.00 MEV	3.47E-01	0.	0.	9.32E-05
14.00 MEV	3.36E-01	0.	0.	1.82E-04
15.00 MEV	3.40E-01	0.	0.	4.26E-05
16.00 MEV	2.62E-01	0.	0.	9.78E-05
17.00 MEV	2.66E-01	0.	0.	1.32E-07
18.00 MEV	2.41E-01	0.	0.	2.97E-07
19.00 MEV	2.14E-01	0.	0.	0.
20.00 MEV	2.00E-01	0.	0.	0.
21.00 MEV	1.98E-01	0.	0.	0.
22.00 MEV	1.67E-01	0.	0.	0.
23.00 MEV	1.43E-01	0.	0.	0.
24.00 MEV	1.38E-01	0.	0.	0.
25.00 MEV	1.23E-01	0.	0.	0.
26.00 MEV	7.91E-02	0.	0.	0.
27.00 MEV	7.18E-02	0.	0.	0.
28.00 MEV	6.24E-02	0.	0.	0.
29.00 MEV	5.21E-02	0.	0.	0.
30.00 MEV	3.12E-02	0.	0.	0.
32.00 MEV	2.32E-02	0.	0.	0.
34.00 MEV	2.54E-02	0.	0.	0.
36.00 MEV	1.66E-02	0.	0.	0.
38.00 MEV	1.15E-02	0.	0.	0.
40.00 MEV	1.27E-02	0.	0.	0.
42.00 MEV	5.97E-03	0.	0.	0.
44.00 MEV	2.63E-03	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	12.41	6.21	3.62	4.26

1 SLOWING DOWN SPECTRUM AT 14.0 CM, FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	1.98E-01	3.59E-05	4.58E-06	2.60E-03
0.15 MEV	1.23E-01	4.61E-05	1.51E-06	1.83E-03
0.20 MEV	1.11E-01	3.19E-05	1.34E-06	1.78E-03
0.25 MEV	1.70E-01	6.42E-05	3.82E-06	2.39E-03
0.30 MEV	1.31E-01	4.99E-05	4.14E-06	1.60E-03
0.35 MEV	1.16E-01	4.32E-05	3.61E-06	2.33E-03
0.40 MEV	1.83E-01	6.91E-05	9.47E-06	1.93E-03
0.45 MEV	1.76E-01	1.32E-04	1.33E-05	1.92E-03
0.50 MEV	1.29E-01	2.90E-04	3.47E-06	1.22E-03
0.55 MEV	1.42E-01	4.24E-05	1.18E-05	1.68E-03
0.60 MEV	1.78E-01	1.32E-04	8.30E-06	2.81E-03
0.65 MEV	1.65E-01	1.67E-04	6.69E-06	1.40E-03
0.70 MEV	1.36E-01	6.95E-05	5.45E-06	1.52E-03
0.75 MEV	1.65E-01	7.07E-05	2.13E-06	1.58E-03
0.80 MEV	1.13E-01	1.24E-04	1.75E-05	1.81E-03
0.85 MEV	1.56E-01	1.63E-04	3.37E-06	2.10E-03
0.90 MEV	1.47E-01	9.82E-05	8.75E-06	3.19E-03
0.95 MEV	2.07E-01	8.02E-05	8.50E-06	1.67E-03
1.00 MEV	1.27E-01	1.46E-04	1.52E-05	2.52E-03
1.10 MEV	1.96E-01	2.30E-04	3.16E-06	1.91E-03
1.20 MEV	2.17E-01	1.81E-04	1.89E-05	2.14E-03
1.30 MEV	2.24E-01	1.37E-04	2.32E-06	2.39E-03
1.40 MEV	1.91E-01	1.83E-04	2.00E-05	2.27E-03
1.50 MEV	2.11E-01	2.60E-04	8.66E-06	2.26E-03
1.60 MEV	1.87E-01	2.37E-04	1.24E-05	3.08E-03
1.70 MEV	2.73E-01	1.08E-04	7.78E-06	2.61E-03
1.80 MEV	2.07E-01	1.54E-04	6.65E-06	2.88E-03
1.90 MEV	2.04E-01	2.01E-04	1.68E-05	2.35E-03
2.00 MEV	2.71E-01	1.79E-04	1.41E-05	2.70E-03
2.10 MEV	1.83E-01	7.27E-05	6.75E-06	2.35E-03
2.20 MEV	2.32E-01	1.84E-04	1.31E-05	3.01E-03
2.30 MEV	1.95E-01	5.45E-05	9.73E-06	3.60E-03
2.40 MEV	2.15E-01	1.93E-04	1.19E-05	3.14E-03
2.50 MEV	1.97E-01	6.81E-05	2.11E-05	2.45E-03
2.60 MEV	3.27E-01	2.17E-04	1.73E-05	3.31E-03
2.70 MEV	2.26E-01	7.53E-05	1.22E-05	2.64E-03
2.80 MEV	1.79E-01	1.54E-04	1.40E-05	3.10E-03
2.90 MEV	1.75E-01	5.14E-05	1.16E-05	2.77E-03
3.00 MEV	2.62E-01	1.62E-04	1.57E-05	4.35E-03
3.20 MEV	2.68E-01	9.90E-05	8.75E-06	2.31E-03
3.40 MEV	2.26E-01	1.78E-04	1.86E-05	3.86E-03
3.60 MEV	2.10E-01	8.89E-05	5.33E-06	2.49E-03
3.80 MEV	3.29E-01	1.60E-04	9.54E-06	3.83E-03
4.00 MEV	2.17E-01	2.18E-04	1.02E-05	2.35E-03

1 SLOWING DOWN SPECTRUM AT 14.0 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	2.45E-01	4.21E-04	1.30E-05	2.96E-03
4.40 MEV	3.28E-01	4.93E-05	1.28E-05	2.05E-03
4.60 MEV	2.07E-01	6.49E-05	1.18E-05	2.73E-03
4.80 MEV	2.45E-01	3.24E-05	8.68E-06	1.72E-03
5.00 MEV	3.22E-01	5.01E-05	1.70E-05	2.50E-03
5.50 MEV	2.83E-01	4.38E-05	6.34E-06	1.43E-03
6.00 MEV	2.76E-01	6.64E-05	1.32E-05	2.69E-03
6.50 MEV	2.81E-01	3.14E-05	2.91E-06	1.07E-03
7.00 MEV	3.09E-01	6.67E-05	4.72E-06	1.85E-03
7.50 MEV	2.88E-01	3.12E-05	3.54E-06	7.63E-04
8.00 MEV	2.96E-01	5.20E-05	7.41E-06	1.27E-03
8.50 MEV	3.02E-01	2.17E-05	1.37E-06	5.58E-04
9.00 MEV	3.23E-01	4.46E-05	2.73E-06	9.08E-04
9.50 MEV	2.61E-01	1.63E-05	2.77E-06	4.07E-04
10.00 MEV	3.05E-01	2.86E-05	6.23E-06	7.36E-04
11.00 MEV	3.07E-01	1.03E-05	1.34E-06	2.88E-04
12.00 MEV	3.25E-01	2.19E-05	3.67E-06	5.96E-04
13.00 MEV	3.00E-01	1.93E-06	0.	7.63E-05
14.00 MEV	2.93E-01	3.86E-06	0.	1.45E-04
15.00 MEV	2.90E-01	0.	0.	3.35E-05
16.00 MEV	2.38E-01	0.	0.	4.45E-05
17.00 MEV	2.39E-01	0.	0.	4.18E-05
18.00 MEV	2.08E-01	0.	0.	7.93E-05
19.00 MEV	1.80E-01	0.	0.	3.84E-05
20.00 MEV	1.67E-01	0.	0.	8.44E-05
21.00 MEV	1.59E-01	0.	0.	0.
22.00 MEV	1.52E-01	0.	0.	0.
23.00 MEV	1.14E-01	0.	0.	0.
24.00 MEV	7.76E-02	0.	0.	0.
25.00 MEV	7.02E-02	0.	0.	0.
26.00 MEV	5.56E-02	0.	0.	0.
27.00 MEV	6.09E-02	0.	0.	0.
28.00 MEV	3.70E-02	0.	0.	0.
29.00 MEV	3.29E-02	0.	0.	0.
30.00 MEV	2.60E-02	0.	0.	0.
32.00 MEV	2.60E-02	0.	0.	0.
34.00 MEV	1.42E-02	0.	0.	0.
36.00 MEV	9.98E-03	0.	0.	0.
38.00 MEV	6.70E-03	0.	0.	0.
40.00 MEV	8.05E-03	0.	0.	0.
42.00 MEV	5.97E-03	0.	0.	0.
44.00 MEV	2.63E-03	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.

0AVE, E(MEV)   12.29   3.91   4.56   4.61

1 INITIAL SPECTRUM AT 3.00-0.05 CM, FOR SHONKA A-150 PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	4.80E+00
0.10 MEV	1.13E+03	0.	0.	4.80E+00
0.15 MEV	3.40E+02	2.24E-01	0.	1.18E+01
0.20 MEV	1.33E+02	2.24E-01	0.	1.18E+01
0.25 MEV	1.77E+02	4.91E-01	0.	2.13E+01
0.30 MEV	1.60E+02	4.91E-01	0.	2.13E+01
0.35 MEV	1.96E+02	7.58E-01	0.	3.19E+01
0.40 MEV	2.59E+02	7.58E-01	0.	3.19E+01
0.45 MEV	6.00E+01	2.11E-01	0.	1.18E+01
0.50 MEV	7.67E+01	2.11E-01	0.	1.18E+01
0.55 MEV	9.71E+01	6.22E-01	6.15E-02	1.23E+01
0.60 MEV	1.39E+02	6.22E-01	6.15E-02	1.23E+01
0.65 MEV	1.20E+02	3.26E-01	2.03E-01	5.19E+00
0.70 MEV	1.15E+02	3.26E-01	2.03E-01	5.19E+00
0.75 MEV	4.00E+01	4.21E-01	0.	1.73E+01
0.80 MEV	1.39E+02	4.21E-01	0.	1.73E+01
0.85 MEV	1.12E+02	3.01E-01	0.	2.03E+01
0.90 MEV	7.52E+01	3.01E-01	0.	2.03E+01
0.95 MEV	6.04E+01	4.11E-01	0.	2.60E+01
1.00 MEV	4.03E+01	4.11E-01	0.	2.60E+01
1.10 MEV	8.03E+01	2.95E-01	0.	5.06E+01
1.20 MEV	1.97E+02	2.95E-01	0.	5.06E+01
1.30 MEV	1.90E+02	9.26E-01	0.	6.80E+01
1.40 MEV	8.05E+01	9.26E-01	0.	6.80E+01
1.50 MEV	6.05E+01	5.66E-01	2.01E-01	7.13E+01
1.60 MEV	9.81E+01	5.66E-01	2.01E-01	7.13E+01
1.70 MEV	9.62E+01	7.44E-01	0.	4.40E+01
1.80 MEV	8.02E+01	7.44E-01	0.	4.40E+01
1.90 MEV	9.20E+01	1.81E-01	0.	3.26E+01
2.00 MEV	1.19E+02	1.81E-01	0.	3.26E+01
2.10 MEV	2.20E-01	9.06E-02	0.	4.69E+01
2.20 MEV	2.00E+01	9.06E-02	0.	4.69E+01
2.30 MEV	6.05E+01	1.60E-01	0.	6.14E+01
2.40 MEV	1.00E+02	1.60E-01	0.	6.14E+01
2.50 MEV	4.03E+01	1.60E-01	0.	4.98E+01
2.60 MEV	5.59E+01	1.60E-01	0.	4.98E+01
2.70 MEV	1.86E-01	2.07E-02	7.83E-02	2.96E+01
2.80 MEV	4.15E+01	2.07E-02	7.83E-02	2.96E+01
2.90 MEV	4.45E+01	9.40E-02	7.83E-02	3.69E+01
3.00 MEV	1.20E+02	9.40E-02	7.83E-02	3.69E+01
3.20 MEV	1.26E+02	2.29E-01	0.	3.91E+01
3.40 MEV	7.74E+01	2.29E-01	0.	3.91E+01
3.60 MEV	1.25E+02	0.	5.38E-02	5.43E+01
3.80 MEV	2.18E+01	0.	5.38E-02	5.43E+01
4.00 MEV	6.31E+01	4.18E-02	0.	5.89E+01

1 INITIAL SPECTRUM AT 0.00-0.05 CM. FOR SHONKA A-150 PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	4.04E+01	4.18E-02	0.	5.89E+01
4.40 MEV	3.90E+01	0.	0.	6.32E+01
4.60 MEV	1.02E+02	0.	0.	6.32E+01
4.80 MEV	1.00E+02	0.	0.	3.20E+01
5.00 MEV	2.26E+01	0.	0.	3.20E+01
5.50 MEV	6.25E+01	1.12E-01	0.	1.14E+02
6.00 MEV	1.80E+02	1.12E-01	0.	1.14E+02
6.50 MEV	2.05E+01	1.35E-01	0.	3.70E+01
7.00 MEV	4.05E+01	1.35E-01	0.	3.70E+01
7.50 MEV	1.61E+02	2.15E-01	4.46E-02	2.87E+01
8.00 MEV	1.00E+02	2.15E-01	4.46E-02	2.87E+01
8.50 MEV	1.20E+02	1.62E-01	4.42E-02	3.59E+01
9.00 MEV	8.00E+01	1.62E-01	4.42E-02	3.59E+01
9.50 MEV	3.50E+01	3.42E-02	9.56E-02	2.82E+01
10.00 MEV	6.00E+01	3.42E-02	9.56E-02	2.82E+00
11.00 MEV	4.04E+01	0.	4.51E-02	2.10E+00
12.00 MEV	6.03E+01	0.	4.51E-02	2.10E+00
13.00 MEV	1.19E+02	0.	0.	1.03E+01
14.00 MEV	5.87E+01	0.	0.	1.03E+01
15.00 MEV	0.	0.	0.	1.02E+01
16.00 MEV	8.00E+01	0.	0.	1.02E+01
17.00 MEV	2.00E+01	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	4.00E+01	0.	0.	4.15E-02
20.00 MEV	4.00E+01	0.	0.	4.15E-02
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	6.00E+01	0.	0.	0.
24.00 MEV	2.00E+01	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	2.00E+01	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
NAVE, E(MEV)	8.82	3.59	7.24	5.51

1 INITIAL SPECTRUM AT 0.05-0.10 CM, FOR SHONKA A-150 PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	1.33E+01
0.10 MEV	1.12E+03	0.	0.	1.33E+01
0.15 MEV	3.32E+02	1.14E-01	0.	2.45E+01
0.20 MEV	2.54E+02	1.14E-01	0.	2.45E+01
0.25 MEV	1.75E+02	1.14E-01	0.	2.51E+01
0.30 MEV	2.15E+02	1.14E-01	0.	2.51E+01
0.35 MEV	1.40E+02	3.08E-01	0.	2.53E+01
0.40 MEV	1.74E+02	3.08E-01	0.	2.53E+01
0.45 MEV	1.53E+02	8.67E-02	0.	1.41E+01
0.50 MEV	1.38E+02	8.67E-02	0.	1.41E+01
0.55 MEV	1.20E+02	1.95E-01	0.	1.68E+01
0.60 MEV	1.56E+02	1.95E-01	0.	1.68E+01
0.65 MEV	7.83E+01	1.36E-01	0.	2.32E+01
0.70 MEV	1.60E+02	1.36E-01	0.	2.32E+01
0.75 MEV	9.74E+01	2.95E-01	0.	1.97E+01
0.80 MEV	8.00E+01	2.95E-01	0.	1.97E+01
0.85 MEV	2.00E+01	0.	0.	3.42E+01
0.90 MEV	2.46E+01	0.	0.	3.42E+01
0.95 MEV	4.00E+01	1.01E-01	0.	2.02E+01
1.00 MEV	2.00E+01	1.01E-01	0.	2.02E+01
1.10 MEV	1.20E+02	2.19E-01	0.	8.71E+01
1.20 MEV	8.09E+01	2.19E-01	0.	8.71E+01
1.30 MEV	9.65E+01	4.06E-01	0.	7.12E+01
1.40 MEV	6.47E+01	4.06E-01	0.	7.12E+01
1.50 MEV	9.36E+01	3.39E-01	0.	4.14E+01
1.60 MEV	1.19E+02	3.39E-01	0.	4.14E+01
1.70 MEV	1.25E+02	9.37E-02	0.	5.02E+01
1.80 MEV	1.08E+02	9.37E-02	0.	5.02E+01
1.90 MEV	6.04E+01	2.54E-01	0.	3.14E+01
2.00 MEV	4.04E+01	2.54E-01	0.	3.14E+01
2.10 MEV	8.00E+01	9.07E-02	2.20E+01	2.74E+01
2.20 MEV	1.03E+01	9.07E-02	2.20E+01	2.74E+01
2.30 MEV	1.20E+00	0.	0.	7.18E+01
2.40 MEV	1.71E+01	0.	0.	7.18E+01
2.50 MEV	1.01E+02	0.	0.	3.53E+01
2.60 MEV	2.02E+01	0.	0.	3.53E+01
2.70 MEV	2.70E-01	3.05E-01	0.	5.20E+01
2.80 MEV	4.06E+01	3.05E-01	0.	5.20E+01
2.90 MEV	4.06E+01	0.	0.	3.33E+01
3.00 MEV	4.05E+01	0.	0.	3.33E+01
3.20 MEV	4.10E+01	0.	0.	4.94E+01
3.40 MEV	2.00E+01	0.	0.	4.94E+01
3.60 MEV	7.85E+01	0.	0.	4.20E+01
3.80 MEV	1.02E+01	0.	0.	4.20E+01
4.00 MEV	9.48E+01	0.	0.	5.24E+01

INITIAL SPECTRUM AT 0.05-0.10 CM. FOR SHONKA A-15% PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	7.88E+01	0.	0.	5.24E+01
4.40 MEV	3.64E+01	0.	0.	2.62E+01
4.60 MEV	4.02E+01	0.	0.	2.62E+01
4.80 MEV	4.03E+01	0.	0.	2.44E+01
5.00 MEV	2.00E+01	0.	0.	2.44E+01
5.50 MEV	8.01E+01	0.	0.	3.96E+01
6.00 MEV	6.08E+01	0.	0.	3.96E+01
6.50 MEV	1.60E+02	0.	0.	7.11E+00
7.00 MEV	4.00E+01	0.	0.	7.11E+00
7.50 MEV	4.01E+01	0.	4.40E-02	1.13E+01
8.00 MEV	6.01E+01	0.	4.40E-02	1.13E+01
8.50 MEV	6.00E+01	6.86E-02	0.	1.70E+01
9.00 MEV	4.00E+01	6.86E-02	0.	1.70E+01
9.50 MEV	2.00E+01	0.	0.	4.38E+00
10.00 MEV	4.01E+01	0.	0.	4.38E+00
11.00 MEV	4.00E+01	0.	0.	1.13E+01
12.00 MEV	2.00E+01	0.	0.	1.13E+01
13.00 MEV	0.	0.	0.	1.23E+01
14.00 MEV	6.01E+01	0.	0.	1.23E+01
15.00 MEV	1.60E+02	0.	0.	1.00E+01
16.00 MEV	0.	0.	0.	1.00E+01
17.00 MEV	2.00E+01	0.	0.	0.
18.00 MEV	6.00E+01	0.	0.	0.
19.00 MEV	6.00E+01	0.	0.	0.
20.00 MEV	6.00E+01	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	4.00E+01	0.	0.	0.
23.00 MEV	4.00E+01	0.	0.	0.
24.00 MEV	2.00E+01	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	2.00E+01	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	2.00E+01	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	10.30	2.28	4.80	4.94

INITIAL SPECTRUM AT 0.10-0.15 CM. FOR SHONKA A-150 PLASTIC
50 MEV D+ ON HE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	2.57E+00
0.10 MEV	1.05E+03	0.	0.	2.57E+00
0.15 MEV	5.14E+02	4.34E-01	0.	3.58E-01
0.20 MEV	3.58E+02	4.34E-01	0.	3.58E-01
0.25 MEV	3.55E+02	2.16E-01	0.	2.71E+00
0.30 MEV	2.69E+02	2.16E-01	0.	2.71E+00
0.35 MEV	1.76E+02	4.27E-01	0.	2.43E-01
0.40 MEV	1.76E+02	4.27E-01	0.	2.43E-01
0.45 MEV	9.53E+01	4.60E-01	0.	5.40E+00
0.50 MEV	1.57E+02	4.60E-01	0.	5.40E+00
0.55 MEV	3.72E+01	6.06E-01	0.	4.32E+01
0.60 MEV	1.37E+02	6.06E-01	0.	4.32E+01
0.65 MEV	4.06E+01	4.60E-01	0.	1.30E+01
0.70 MEV	3.70E+01	4.60E-01	0.	1.30E+01
0.75 MEV	3.73E+01	2.10E-01	0.	1.76E+01
0.80 MEV	2.03E+01	2.10E-01	0.	1.76E+01
0.85 MEV	6.04E+01	0.	0.	2.01E+01
0.90 MEV	3.80E+01	0.	0.	2.01E+01
0.95 MEV	1.79E+02	2.21E-01	0.	1.62E+01
1.00 MEV	4.02E+01	2.21E-01	0.	1.62E+01
1.10 MEV	8.03E+01	4.91E-01	0.	1.80E+01
1.20 MEV	6.20E+01	4.91E-01	0.	1.80E+01
1.30 MEV	9.73E+01	9.73E-01	0.	4.81E+01
1.40 MEV	7.89E+01	9.73E-01	0.	4.81E+01
1.50 MEV	7.59E+01	5.16E-01	0.	3.55E+01
1.60 MEV	4.15E+01	5.16E-01	0.	3.55E+01
1.70 MEV	1.60E+02	9.15E-02	0.	3.03E+01
1.80 MEV	8.03E+01	9.15E-02	0.	3.03E+01
1.90 MEV	6.02E+01	9.22E-02	0.	1.17E+01
2.00 MEV	9.78E+01	9.22E-02	0.	1.17E+01
2.10 MEV	1.89E+01	1.96E-01	0.	3.60E+01
2.20 MEV	1.18E+02	1.96E-01	0.	3.60E+01
2.30 MEV	4.10E+01	9.22E-02	0.	2.36E+01
2.40 MEV	4.68E-01	9.22E-02	0.	2.36E+01
2.50 MEV	4.03E-01	0.	0.	4.15E+01
2.60 MEV	2.35E+00	0.	0.	4.15E+01
2.70 MEV	1.02E+02	0.	0.	3.48E+01
2.80 MEV	3.88E+01	0.	0.	3.48E+01
2.90 MEV	4.25E+01	0.	0.	1.62E+01
3.00 MEV	4.02E+01	0.	0.	1.62E+01
3.20 MEV	1.53E+00	0.	0.	4.23E+01
3.40 MEV	9.93E+01	0.	0.	4.23E+01
3.60 MEV	9.87E+01	0.	0.	3.18E+01
3.80 MEV	4.02E+01	0.	0.	3.18E+01
4.00 MEV	4.00E+01	0.	0.	5.57E+01

1 INITIAL SPECTRUM AT 0.10-0.15 CM. FOR SHONKA A-15W PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.90E+01	0.	0.	5.57E+01
4.40 MEV	9.72E+01	0.	0.	1.77E+01
4.60 MEV	2.00E+01	0.	0.	1.77E+01
4.80 MEV	6.13E+01	0.	0.	5.48E+01
5.00 MEV	1.12E+02	0.	0.	5.48E+01
5.50 MEV	5.78E+01	3.44E-02	0.	3.70E+01
6.00 MEV	1.20E+02	3.44E-02	0.	3.70E+01
6.50 MEV	6.00E+01	0.	4.35E-02	7.60E+01
7.00 MEV	4.00E+01	0.	4.35E-02	7.60E+01
7.50 MEV	1.00E+02	3.44E-02	0.	3.87E+01
8.00 MEV	1.20E+02	3.44E-02	0.	3.87E+01
8.50 MEV	8.00E+01	3.43E-02	0.	2.59E+01
9.00 MEV	4.00E+01	3.43E-02	0.	2.59E+01
9.50 MEV	9.87E+01	0.	0.	1.64E+00
10.00 MEV	6.00E+01	0.	0.	1.64E+00
11.00 MEV	1.00E+02	3.43E-02	4.46E-02	2.19E+01
12.00 MEV	1.40E+02	3.43E-02	4.46E-02	2.19E+01
13.00 MEV	6.00E+01	0.	0.	4.60E-02
14.00 MEV	2.01E+01	0.	0.	4.60E-02
15.00 MEV	8.00E+01	0.	0.	9.21E-02
16.00 MEV	6.00E+01	0.	0.	9.21E-02
17.00 MEV	4.00E+01	0.	0.	4.18E-02
18.00 MEV	4.00E+01	0.	0.	4.18E-02
19.00 MEV	4.00E+01	0.	0.	0.
20.00 MEV	8.00E+01	0.	0.	0.
21.00 MEV	4.00E+01	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	2.00E+01	0.	0.	0.
25.00 MEV	2.00E+01	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	2.00E+01	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	2.00E+01	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
NAVE, E(MEV)	10.01	2.43	9.53	5.75

INITIAL SPECTRUM AT 0.15-0.20 CM. FOR SHONKA A-150 PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	7.04E+00
0.10 MEV	1.01E+03	0.	0.	7.04E+00
0.15 MEV	6.37E+02	3.36E-01	0.	1.72E+01
0.20 MEV	2.88E+02	3.36E-01	0.	1.72E+01
0.25 MEV	2.39E+02	3.37E-01	0.	9.50E+00
0.30 MEV	3.14E+02	3.37E-01	0.	9.50E+00
0.35 MEV	1.94E+02	3.71E-01	0.	4.06E+01
0.40 MEV	2.12E+02	3.71E-01	0.	4.06E+01
0.45 MEV	1.60E+02	2.22E-01	0.	2.38E+01
0.50 MEV	1.16E+02	2.22E-01	0.	2.38E+01
0.55 MEV	8.09E+01	2.10E-01	0.	2.61E+01
0.60 MEV	7.79E+01	2.10E-01	0.	2.61E+01
0.65 MEV	1.21E+02	2.10E-01	0.	7.58E+00
0.70 MEV	3.85E+01	2.10E-01	0.	7.58E+00
0.75 MEV	2.00E+01	3.11E-01	0.	3.22E+01
0.80 MEV	4.02E+01	3.11E-01	0.	3.22E+01
0.85 MEV	8.05E+01	4.74E-01	0.	1.39E+01
0.90 MEV	5.87E+01	4.74E-01	0.	1.39E+01
0.95 MEV	8.01E+01	6.58E-01	0.	1.25E+01
1.00 MEV	7.91E+01	6.58E-01	0.	1.25E+01
1.10 MEV	1.79E+02	7.54E-01	0.	5.14E+01
1.20 MEV	5.91E+01	7.54E-01	0.	5.14E+01
1.30 MEV	6.58E+01	7.10E-01	0.	3.59E+01
1.40 MEV	1.00E+02	7.10E-01	0.	3.59E+01
1.50 MEV	1.65E+02	4.37E-01	0.	3.01E+01
1.60 MEV	7.93E+01	4.37E-01	0.	3.01E+01
1.70 MEV	2.00E+01	7.70E-01	2.19E-01	4.82E+01
1.80 MEV	1.77E+02	7.70E-01	2.19E-01	4.82E+01
1.90 MEV	9.58E+01	2.92E-01	0.	1.76E+01
2.00 MEV	8.11E+01	2.92E-01	0.	1.76E+01
2.10 MEV	2.03E+01	0.	0.	5.18E+01
2.20 MEV	6.12E+01	0.	0.	5.18E+01
2.30 MEV	4.06E+01	9.34E-02	0.	4.72E+01
2.40 MEV	7.94E+01	9.34E-02	0.	4.72E+01
2.50 MEV	2.13E+01	1.60E-01	9.64E-02	2.95E+01
2.60 MEV	1.00E+02	1.60E-01	9.64E-02	2.95E+01
2.70 MEV	8.02E+01	0.	0.	2.75E+01
2.80 MEV	6.05E+01	0.	0.	2.75E+01
2.90 MEV	2.00E+01	0.	9.64E-02	4.12E+01
3.00 MEV	2.08E+01	0.	9.64E-02	4.12E+01
3.20 MEV	3.91E+01	4.12E-02	5.29E-02	3.15E+01
3.40 MEV	2.25E+01	4.12E-02	5.29E-02	3.15E+01
3.60 MEV	2.21E+01	0.	0.	1.99E+01
3.80 MEV	5.90E+01	0.	0.	1.99E+01
4.00 MEV	4.01E+01	2.99E-01	0.	3.57E+01

INITIAL SPECTRUM AT 0.15-0.20 CM. FOR SHONKA A-150 PLASTIC
50 MEV D+ ON RE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	1.85E+01	2.99E-01	0.	3.57E+01
4.40 MEV	3.58E+01	7.26E-02	1.30E-01	1.58E+01
4.60 MEV	6.86E+01	7.26E-02	1.30E-01	1.58E+01
4.80 MEV	2.05E+01	1.14E-01	0.	2.78E+01
5.00 MEV	9.58E+01	1.14E-01	0.	2.78E+01
5.50 MEV	4.10E+01	3.43E-02	8.81E-02	2.63E+01
6.00 MEV	1.20E+02	3.43E-02	8.81E-02	2.63E+01
6.50 MEV	6.00E+01	6.85E-02	0.	3.65E+01
7.00 MEV	2.08E+01	6.85E-02	0.	3.65E+01
7.50 MEV	3.52E+01	3.94E-01	0.	2.60E+01
8.00 MEV	2.02E+01	3.94E-01	0.	2.60E+01
8.50 MEV	8.11E+01	6.87E-02	0.	4.56E+00
9.00 MEV	6.00E+01	6.87E-02	0.	4.56E+00
9.50 MEV	0.	1.03E-01	8.92E-02	3.40E+00
10.00 MEV	2.09E+01	1.03E-01	8.92E-02	3.40E+00
11.00 MEV	4.07E+01	1.07E-01	0.	2.27E+01
12.00 MEV	1.40E+02	1.07E-01	0.	2.27E+01
13.00 MEV	2.01E+02	0.	4.51E-02	1.02E+00
14.00 MEV	6.06E+01	0.	4.51E-02	1.02E+00
15.00 MEV	2.00E+01	0.	0.	1.66E+01
16.00 MEV	1.20E+02	0.	0.	1.66E+01
17.00 MEV	2.00E+01	0.	0.	4.15E+02
18.00 MEV	0.	0.	0.	4.15E+02
19.00 MEV	0.	0.	0.	3.99E+02
20.00 MEV	4.00E+01	0.	0.	3.99E+02
21.00 MEV	0.	0.	0.	0.
22.00 MEV	2.00E+01	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	4.00E+01	0.	0.	0.
25.00 MEV	2.00E+01	0.	0.	0.
26.00 MEV	2.00E+01	0.	0.	0.
27.00 MEV	2.00E+01	0.	0.	0.
28.00 MEV	2.00E+01	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	2.00E+01	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	2.00E+01	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
DAVE, E (MEV)	11.09	4.66	7.05	5.30

1 INITIAL SPECTRUM AT 0.20-0.40 CM. FOR SHONKA A-150 PLASTIC
50 MEV D+ ON RE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	4.52E+00
0.10 MEV	1.41E+03	0.	0.	4.52E+00
0.15 MEV	4.41E+02	1.37E-01	0.	9.84E+00
0.20 MEV	3.54E+02	1.37E-01	0.	9.84E+00
0.25 MEV	2.68E+02	3.23E-01	0.	1.79E+01
0.30 MEV	2.12E+02	3.23E-01	0.	1.79E+01
0.35 MEV	1.87E+02	1.73E-01	0.	1.02E+01
0.40 MEV	1.53E+02	1.73E-01	0.	1.02E+01
0.45 MEV	1.28E+02	2.99E-01	0.	1.36E+01
0.50 MEV	1.27E+02	2.99E-01	0.	1.36E+01
0.55 MEV	1.03E+02	2.83E-01	0.	1.63E+01
0.60 MEV	8.39E+01	2.83E-01	0.	1.63E+01
0.65 MEV	9.73E+01	2.41E-01	0.	1.63E+01
0.70 MEV	9.35E+01	2.41E-01	0.	1.63E+01
0.75 MEV	4.88E+01	1.36E-01	0.	2.30E+01
0.80 MEV	3.42E+01	1.36E-01	0.	2.30E+01
0.85 MEV	4.50E+01	2.97E-01	0.	1.87E+01
0.90 MEV	2.33E+01	2.97E-01	0.	1.87E+01
0.95 MEV	8.88E+01	1.34E-01	0.	1.58E+01
1.00 MEV	6.97E+01	1.34E-01	0.	1.58E+01
1.10 MEV	1.19E+02	4.38E-01	5.48E-02	3.96E+01
1.20 MEV	6.42E+01	4.38E-01	5.48E-02	3.96E+01
1.30 MEV	6.42E+01	5.45E-01	1.20E-01	4.67E+01
1.40 MEV	1.04E+02	5.45E-01	1.20E-01	4.67E+01
1.50 MEV	5.50E+01	5.74E-01	5.46E-02	3.66E+01
1.60 MEV	6.45E+01	5.74E-01	5.46E-02	3.66E+01
1.70 MEV	3.96E+01	3.25E-01	0.	2.01E+01
1.80 MEV	5.07E+01	3.25E-01	0.	2.01E+01
1.90 MEV	8.61E+01	2.06E-01	5.51E-02	2.80E+01
2.00 MEV	5.61E+01	2.06E-01	5.51E-02	2.80E+01
2.10 MEV	6.61E+01	3.17E-01	0.	2.69E+01
2.20 MEV	6.26E+01	3.17E-01	0.	2.69E+01
2.30 MEV	2.66E+01	1.10E-01	9.93E-03	3.01E+01
2.40 MEV	2.50E+01	1.10E-01	9.93E-03	3.01E+01
2.50 MEV	3.06E+01	1.56E-02	0.	2.20E+01
2.60 MEV	1.43E+01	1.56E-02	0.	2.20E+01
2.70 MEV	6.63E+01	4.04E-02	0.	3.57E+01
2.80 MEV	5.85E+01	4.04E-02	0.	3.57E+01
2.90 MEV	4.52E+01	6.16E-03	0.	3.03E+01
3.00 MEV	1.64E+01	6.16E-03	0.	3.03E+01
3.20 MEV	5.02E+01	9.02E-03	9.51E-02	5.20E+01
3.40 MEV	5.13E+01	9.02E-03	9.51E-02	5.20E+01
3.60 MEV	8.24E+01	1.64E-02	0.	5.18E+01
3.80 MEV	7.49E+01	1.64E-02	0.	5.18E+01
4.00 MEV	5.33E+01	3.44E-02	4.39E-02	3.14E+01

1 INITIAL SPECTRUM AT 0.20-0.40 CM. FOR SHONKA A-150 PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.87E+01	3.44E-02	4.39E-02	3.14E+01
4.40 MEV	7.42E+01	1.90E-02	0.	3.55E+01
4.60 MEV	3.38E+01	1.90E-02	0.	3.55E+01
4.80 MEV	3.51E+01	7.85E-02	0.	3.03E+01
5.00 MEV	4.00E+01	7.85E-02	0.	3.03E+01
5.50 MEV	1.06E+02	2.99E-02	2.93E-02	4.50E+01
6.00 MEV	8.41E+01	2.99E-02	2.93E-02	4.50E+01
6.50 MEV	5.39E+01	1.81E-02	0.	4.26E+01
7.00 MEV	6.98E+01	1.81E-02	0.	4.26E+01
7.50 MEV	4.04E+01	4.09E-02	1.11E-02	2.35E+01
8.00 MEV	5.94E+01	4.09E-02	1.11E-02	2.35E+01
8.50 MEV	5.00E+01	6.94E-02	0.	1.45E+01
9.00 MEV	1.04E+02	6.94E-02	0.	1.45E+01
9.50 MEV	6.00E+01	1.71E-02	1.12E-02	7.34E+00
10.00 MEV	6.01E+01	1.71E-02	1.12E-02	7.34E+00
11.00 MEV	1.05E+02	1.71E-02	1.11E-02	1.70E+01
12.00 MEV	8.01E+01	1.71E-02	1.11E-02	1.70E+01
13.00 MEV	5.93E+01	0.	0.	7.58E+00
14.00 MEV	5.46E+01	0.	0.	7.58E+00
15.00 MEV	7.00E+01	0.	0.	6.08E-02
16.00 MEV	5.00E+01	0.	0.	6.08E-02
17.00 MEV	3.50E+01	0.	0.	2.50E+00
18.00 MEV	3.00E+01	0.	0.	2.50E+00
19.00 MEV	3.98E+01	0.	0.	0.
20.00 MEV	4.50E+01	0.	0.	0.
21.00 MEV	2.50E+01	0.	0.	0.
22.00 MEV	4.00E+01	0.	0.	0.
23.00 MEV	1.00E+01	0.	0.	0.
24.00 MEV	1.50E+01	0.	0.	0.
25.00 MEV	1.50E+01	0.	0.	0.
26.00 MEV	1.00E+01	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	5.00E+00	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.

Ave. E (MEV)

9.75

2.95

4.63

5.78

1 INITIAL SPECTRUM AT 0.40-0.60 CM. FOR SHONKA A-150 PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	5.50E-02	0.	8.10E+00
0.10 MEV	1.47E+03	5.50E-02	0.	8.10E+00
0.15 MEV	5.23E+02	2.89E-01	0.	9.44E+00
0.20 MEV	3.94E+02	2.89E-01	0.	9.44E+00
0.25 MEV	2.86E+02	3.47E-01	0.	1.16E+01
0.30 MEV	2.51E+02	3.47E-01	0.	1.16E+01
0.35 MEV	1.78E+02	5.57E-01	0.	1.73E+01
0.40 MEV	1.35E+02	5.57E-01	0.	1.73E+01
0.45 MEV	1.23E+02	1.59E-01	0.	2.56E+01
0.50 MEV	1.17E+02	1.59E-01	0.	2.58E+01
0.55 MEV	1.03E+02	2.83E-01	0.	1.58E+01
0.60 MEV	1.39E+02	2.83E-01	0.	1.58E+01
0.65 MEV	8.21E+01	2.22E-01	0.	2.66E+01
0.70 MEV	1.13E+02	2.22E-01	0.	2.66E+01
0.75 MEV	9.28E+01	3.81E-01	0.	1.77E+01
0.80 MEV	1.16E+02	3.81E-01	0.	1.77E+01
0.85 MEV	6.73E+01	3.06E-01	0.	1.82E+01
0.90 MEV	9.46E+01	3.06E-01	0.	1.82E+01
0.95 MEV	5.42E+01	4.65E-01	0.	3.58E+01
1.00 MEV	6.51E+01	4.65E-01	0.	3.58E+01
1.10 MEV	1.23E+02	3.01E+00	0.	4.62E+01
1.20 MEV	7.35E+01	3.01E+00	0.	4.62E+01
1.30 MEV	1.05E+02	5.60E-01	0.	5.29E+01
1.40 MEV	1.01E+02	5.60E-01	0.	5.29E+01
1.50 MEV	7.73E+01	8.53E-01	0.	3.67E+01
1.60 MEV	9.36E+01	8.53E-01	0.	3.67E+01
1.70 MEV	8.85E+01	4.12E-01	0.	3.76E+01
1.80 MEV	5.26E+01	4.12E-01	0.	3.76E+01
1.90 MEV	4.94E+01	2.05E-01	0.	3.93E+01
2.00 MEV	4.55E+01	2.05E-01	0.	3.93E+01
2.10 MEV	3.34E+01	1.16E-01	0.	3.76E+01
2.20 MEV	5.37E+01	1.16E-01	0.	3.76E+01
2.30 MEV	4.04E+01	4.58E-02	0.	5.03E+01
2.40 MEV	4.06E+01	4.58E-02	0.	5.03E+01
2.50 MEV	4.76E+01	6.63E-02	0.	3.62E+01
2.60 MEV	3.99E+01	6.63E-02	0.	3.62E+01
2.70 MEV	5.03E+01	7.83E-02	0.	3.93E+01
2.80 MEV	4.25E+01	7.83E-02	0.	3.93E+01
2.90 MEV	4.08E+01	0.	5.51E-02	3.20E+01
3.00 MEV	3.97E+01	0.	5.51E-02	3.20E+01
3.20 MEV	5.06E+01	1.07E-01	5.51E-02	5.71E+01
3.40 MEV	6.90E+01	1.07E-01	5.51E-02	5.71E+01
3.60 MEV	2.16E+01	5.71E-03	0.	4.69E+01
3.80 MEV	6.50E+01	5.71E-03	0.	4.69E+01
4.00 MEV	3.03E+01	0.	0.	4.83E+01

INITIAL SPECTRUM AT 0.40-0.60 CM. FOR SHONKA A-150 PLASTIC

50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	5.99E+01	0.	0.	4.83E+01
4.40 MEV	4.89E+01	0.	0.	4.67E+01
4.60 MEV	7.40E+01	0.	0.	4.67E+01
4.80 MEV	3.87E+01	0.	2.27E-02	3.62E+01
5.00 MEV	5.91E+01	0.	2.27E-02	3.62E+01
5.50 MEV	7.78E+01	0.	2.27E-02	5.91E+01
6.00 MEV	7.97E+01	0.	2.27E-02	5.91E+01
6.50 MEV	6.39E+01	0.	0.	4.15E+01
7.00 MEV	6.71E+01	0.	0.	4.15E+01
7.50 MEV	6.94E+01	0.	0.	2.71E+01
8.00 MEV	8.82E+01	0.	0.	2.71E+01
8.50 MEV	7.01E+01	5.53E-02	0.	1.86E+01
9.00 MEV	5.87E+01	5.53E-02	0.	1.86E+01
9.50 MEV	9.32E+01	2.76E-02	0.	7.09E+00
10.00 MEV	5.83E+01	2.76E-02	0.	7.09E+00
11.00 MEV	5.49E+01	2.76E-02	0.	1.52E+01
12.00 MEV	7.98E+01	2.76E-02	0.	1.52E+01
13.00 MEV	8.93E+01	0.	0.	2.68E+00
14.00 MEV	4.50E+01	0.	0.	2.68E+00
15.00 MEV	3.50E+01	0.	0.	4.01E-02
16.00 MEV	7.00E+01	0.	0.	4.01E-02
17.00 MEV	4.00E+01	0.	0.	0.
18.00 MEV	3.00E+01	0.	0.	0.
19.00 MEV	4.00E+01	0.	0.	0.
20.00 MEV	4.50E+01	0.	0.	0.
21.00 MEV	5.00E+01	0.	0.	0.
22.00 MEV	2.50E+01	0.	0.	0.
23.00 MEV	2.00E+01	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	5.00E+00	0.	0.	0.
26.00 MEV	1.00E+01	0.	0.	0.
27.00 MEV	1.50E+01	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	5.00E+00	0.	0.	0.
34.00 MEV	5.00E+00	0.	0.	0.
36.00 MEV	5.00E+00	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	5.00E+00	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.

0AVE. E(MEV)

10.14

1.98

4.18

5.13

INITIAL SPECTRUM AT 0.00-1.00 CM. FOR SHONKA A-150 PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	1.46E-02	0.	7.61E+00
0.10 MEV	1.43E+03	1.46E-02	0.	7.61E+00
0.15 MEV	5.24E+02	1.11E-01	0.	1.20E+01
0.20 MEV	4.06E+02	1.11E-01	0.	1.20E+01
0.25 MEV	3.25E+02	1.73E-01	0.	1.55E+01
0.30 MEV	3.01E+02	1.73E-01	0.	1.55E+01
0.35 MEV	2.23E+02	2.05E-01	5.04E-03	1.27E+01
0.40 MEV	1.98E+02	2.05E-01	5.04E-03	1.27E+01
0.45 MEV	1.74E+02	1.96E-01	0.	1.27E+01
0.50 MEV	1.78E+02	1.96E-01	0.	1.27E+01
0.55 MEV	1.81E+02	2.21E-01	0.	1.19E+01
0.60 MEV	1.33E+02	2.21E-01	0.	1.19E+01
0.65 MEV	1.29E+02	1.45E-01	0.	1.89E+01
0.70 MEV	1.09E+02	1.45E-01	0.	1.89E+01
0.75 MEV	8.47E+01	2.06E-01	0.	1.62E+01
0.80 MEV	9.82E+01	2.06E-01	0.	1.62E+01
0.85 MEV	7.41E+01	2.31E-01	0.	2.14E+01
0.90 MEV	7.03E+01	2.31E-01	0.	2.14E+01
0.95 MEV	7.18E+01	3.39E-01	0.	1.50E+01
1.00 MEV	7.59E+01	3.39E-01	0.	1.50E+01
1.10 MEV	1.11E+02	5.53E-01	2.48E-02	3.75E+01
1.20 MEV	1.36E+02	5.53E-01	2.48E-02	3.75E+01
1.30 MEV	1.33E+02	4.09E-01	2.43E-02	3.82E+01
1.40 MEV	1.17E+02	4.09E-01	2.43E-02	3.82E+01
1.50 MEV	1.03E+02	4.52E-01	5.17E-02	2.35E+01
1.60 MEV	9.11E+01	4.52E-01	5.17E-02	2.35E+01
1.70 MEV	6.63E+01	2.31E-01	0.	2.88E+01
1.80 MEV	6.43E+01	2.31E-01	0.	2.88E+01
1.90 MEV	5.92E+01	1.95E-01	2.59E-02	3.24E+01
2.00 MEV	4.94E+01	1.95E-01	2.59E-02	3.24E+01
2.10 MEV	5.79E+01	5.43E-02	0.	3.03E+01
2.20 MEV	3.53E+01	5.43E-02	0.	3.03E+01
2.30 MEV	4.80E+01	2.77E-02	0.	2.37E+01
2.40 MEV	5.51E+01	2.77E-02	0.	2.37E+01
2.50 MEV	3.89E+01	2.87E-02	3.74E-02	3.01E+01
2.60 MEV	4.74E+01	2.87E-02	3.74E-02	3.01E+01
2.70 MEV	3.17E+01	4.57E-02	2.64E-02	2.14E+01
2.80 MEV	3.51E+01	4.57E-02	2.64E-02	2.14E+01
2.90 MEV	3.45E+01	0.	1.56E-02	2.03E+01
3.00 MEV	3.40E+01	0.	1.56E-02	2.03E+01
3.20 MEV	9.33E+01	5.05E-02	2.43E-02	4.84E+01
3.40 MEV	5.06E+01	5.05E-02	2.43E-02	4.84E+01
3.60 MEV	6.62E+01	1.22E-01	4.82E-02	3.76E+01
3.80 MEV	5.34E+01	1.22E-01	4.82E-02	3.76E+01
4.00 MEV	4.80E+01	4.17E-02	0.	3.40E+01

INITIAL SPECTRUM AT 0.60-1.00 CM. FOR SHONKA A-150 PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	4.42E+01	4.17E-02	0.	3.40E+01
4.40 MEV	6.20E+01	8.85E-02	1.25E-02	3.07E+01
4.60 MEV	1.99E+01	8.85E-02	1.25E-02	3.07E+01
4.80 MEV	2.28E+01	0.	1.17E-02	2.92E+01
5.00 MEV	3.05E+01	0.	1.17E-02	2.92E+01
5.50 MEV	7.62E+01	1.26E-01	2.29E-02	4.15E+01
6.00 MEV	8.28E+01	1.26E-01	2.29E-02	4.15E+01
6.50 MEV	6.90E+01	1.02E-01	5.66E-02	2.28E+01
7.00 MEV	6.97E+01	1.02E-01	5.66E-02	2.28E+01
7.50 MEV	4.52E+01	5.38E-02	6.12E-02	2.27E+01
8.00 MEV	7.75E+01	5.38E-02	6.12E-02	2.27E+01
8.50 MEV	5.69E+01	8.70E-02	2.51E-02	2.20E+01
9.00 MEV	4.26E+01	8.70E-02	2.51E-02	2.20E+01
9.50 MEV	4.44E+01	4.38E-02	0.	7.30E+00
10.00 MEV	2.26E+01	4.38E-02	0.	7.30E+00
11.00 MEV	9.50E+01	0.	0.	1.58E+01
12.00 MEV	9.69E+01	0.	0.	1.58E+01
13.00 MEV	7.22E+01	0.	0.	2.72E+00
14.00 MEV	6.76E+01	0.	0.	2.72E+00
15.00 MEV	6.50E+01	0.	0.	1.27E+00
16.00 MEV	7.75E+01	0.	0.	1.27E+00
17.00 MEV	4.75E+01	0.	0.	1.25E+00
18.00 MEV	5.25E+01	0.	0.	1.25E+00
19.00 MEV	4.00E+01	0.	0.	1.25E+00
20.00 MEV	3.25E+01	0.	0.	1.25E+00
21.00 MEV	4.00E+01	0.	0.	0.
22.00 MEV	2.75E+01	0.	0.	0.
23.00 MEV	3.75E+01	0.	0.	0.
24.00 MEV	1.25E+01	0.	0.	0.
25.00 MEV	1.50E+01	0.	0.	0.
26.00 MEV	1.75E+01	0.	0.	0.
27.00 MEV	1.75E+01	0.	0.	0.
28.00 MEV	5.00E+00	0.	0.	0.
29.00 MEV	7.50E+00	0.	0.	0.
30.00 MEV	2.50E+00	0.	0.	0.
32.00 MEV	5.00E+00	0.	0.	0.
34.00 MEV	1.00E+01	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	2.50E+00	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE. F (MEV)	10.65	3.65	5.65	5.74

1 INITIAL SPECTRUM AT 1.00-2.00 CM. FOR SMOGKA A-150 PLASTIC
50 MEV D+ ON RE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	4.46E-02	0.	8.11E+00
0.10 MEV	1.62E+03	4.46E-02	0.	8.11E+00
0.15 MEV	5.93E+02	1.21E-01	0.	1.14E+01
0.20 MEV	4.32E+02	1.21E-01	0.	1.14E+01
0.25 MEV	3.33E+02	1.93E-01	9.79E-03	1.48E+01
0.30 MEV	2.74E+02	1.93E-01	9.79E-03	1.48E+01
0.35 MEV	2.29E+02	1.54E-01	2.02E-02	1.75E+01
0.40 MEV	2.14E+02	1.54E-01	2.02E-02	1.75E+01
0.45 MEV	1.94E+02	2.41E-01	0.	1.48E+01
0.50 MEV	1.56E+02	2.41E-01	0.	1.48E+01
0.55 MEV	1.43E+02	1.90E-01	0.	1.42E+01
0.60 MEV	1.28E+02	1.90E-01	0.	1.42E+01
0.65 MEV	8.28E+01	2.55E-01	1.91E-03	1.89E+01
0.70 MEV	1.18E+02	2.55E-01	1.91E-03	1.89E+01
0.75 MEV	9.01E+01	2.50E-01	1.07E-02	1.41E+01
0.80 MEV	1.14E+02	2.50E-01	1.07E-02	1.41E+01
0.85 MEV	1.01E+02	2.38E-01	1.34E-02	1.72E+01
0.90 MEV	8.75E+01	2.38E-01	1.34E-02	1.72E+01
0.95 MEV	7.53E+01	2.36E-01	1.16E-02	1.73E+01
1.00 MEV	7.15E+01	2.36E-01	1.16E-02	1.73E+01
1.10 MEV	1.23E+02	4.85E-01	3.11E-02	2.82E+01
1.20 MEV	1.04E+02	4.85E-01	3.11E-02	2.82E+01
1.30 MEV	1.13E+02	3.80E-01	5.19E-02	3.23E+01
1.40 MEV	9.74E+01	3.80E-01	5.19E-02	3.23E+01
1.50 MEV	8.86E+01	9.22E-01	2.05E-02	3.09E+01
1.60 MEV	9.42E+01	9.22E-01	2.05E-02	3.09E+01
1.70 MEV	7.73E+01	2.77E-01	2.12E-02	3.03E+01
1.80 MEV	7.76E+01	2.77E-01	2.12E-02	3.03E+01
1.90 MEV	7.64E+01	1.35E-01	1.12E-02	2.82E+01
2.00 MEV	5.23E+01	1.35E-01	1.12E-02	2.82E+01
2.10 MEV	3.73E+01	6.17E-01	4.79E-02	3.12E+01
2.20 MEV	5.08E+01	6.17E-01	4.79E-02	3.12E+01
2.30 MEV	6.42E+01	7.69E-02	2.20E-02	2.76E+01
2.40 MEV	4.30E+01	7.69E-02	2.20E-02	2.76E+01
2.50 MEV	4.80E+01	9.09E-02	2.61E-02	2.55E+01
2.60 MEV	4.24E+01	9.09E-02	2.61E-02	2.55E+01
2.70 MEV	5.07E+01	5.40E-02	1.25E-02	2.72E+01
2.80 MEV	3.10E+01	5.40E-02	1.25E-02	2.72E+01
2.90 MEV	5.10E+01	3.57E-02	1.61E-02	2.44E+01
3.00 MEV	4.44E+01	3.57E-02	1.61E-02	2.44E+01
3.20 MEV	7.94E+01	1.03E-01	6.75E-02	4.12E+01
3.40 MEV	6.44E+01	1.03E-01	6.75E-02	4.12E+01
3.60 MEV	6.72E+01	6.02E-02	6.07E-02	4.58E+01
3.80 MEV	5.74E+01	6.02E-02	6.07E-02	4.58E+01
4.00 MEV	6.15E+01	8.10E-02	4.25E-02	3.20E+01

1 INITIAL SPECTRUM AT 1.00-2.00 CM. FOR SHONKA A-150 PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	4.65E+01	8.10E-02	4.25E-02	3.20E+01
4.40 MEV	5.43E+01	6.05E-02	8.01E-03	2.65E+01
4.60 MEV	4.12E+01	6.05E-02	8.01E-03	2.65E+01
4.80 MEV	4.80E+01	4.28E-02	2.90E-02	2.21E+01
5.00 MEV	3.40E+01	4.28E-02	2.90E-02	2.21E+01
5.50 MEV	9.55E+01	1.24E-01	5.28E-02	4.83E+01
6.00 MEV	7.18E+01	1.24E-01	5.28E-02	4.83E+01
6.50 MEV	8.46E+01	6.09E-01	5.65E-02	3.12E+01
7.00 MEV	6.80E+01	6.09E-01	5.65E-02	3.12E+01
7.50 MEV	7.66E+01	1.16E-01	3.06E-02	2.17E+01
8.00 MEV	7.17E+01	1.16E-01	3.06E-02	2.17E+01
8.50 MEV	8.26E+01	6.59E-02	6.91E-03	1.27E+01
9.00 MEV	5.94E+01	6.59E-02	6.91E-03	1.27E+01
9.50 MEV	5.45E+01	7.22E-02	2.64E-02	1.15E+01
10.00 MEV	4.98E+01	7.22E-02	2.64E-02	1.15E+01
11.00 MEV	1.04E+02	2.83E-02	6.73E-03	7.85E+00
12.00 MEV	9.41E+01	2.83E-02	6.73E-03	7.85E+00
13.00 MEV	7.96E+01	1.07E-02	6.78E-03	4.73E+00
14.00 MEV	5.88E+01	1.07E-02	6.78E-03	4.73E+00
15.00 MEV	5.87E+01	1.71E-03	0.	2.08E+00
16.00 MEV	4.59E+01	1.71E-03	0.	2.08E+00
17.00 MEV	5.86E+01	0.	0.	1.64E-02
18.00 MEV	3.79E+01	0.	0.	1.64E-02
19.00 MEV	2.70E+01	0.	0.	3.83E-03
20.00 MEV	3.40E+01	0.	0.	3.83E-03
21.00 MEV	2.80E+01	0.	0.	0.
22.00 MEV	1.60E+01	0.	0.	0.
23.00 MEV	2.20E+01	0.	0.	0.
24.00 MEV	1.30E+01	0.	0.	0.
25.00 MEV	8.00E+00	0.	0.	0.
26.00 MEV	9.00E+00	0.	0.	0.
27.00 MEV	6.00E+00	0.	0.	0.
28.00 MEV	6.00E+00	0.	0.	0.
29.00 MEV	3.00E+00	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	6.00E+00	0.	0.	0.
34.00 MEV	8.00E+00	0.	0.	0.
36.00 MEV	3.00E+00	0.	0.	0.
38.00 MEV	2.00E+00	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	1.00E+00	0.	0.	0.
44.00 MEV	2.00E+00	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
DAVE, E(MEV)	9.77	4.65	5.65	5.40

INITIAL SPECTRUM AT 2.00-4.00 CM. FOR SHONKA A-150 PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	1.66E-02	0.	8.33E+00
0.10 MEV	1.71E+03	1.66E-02	0.	8.33E+00
0.15 MEV	6.75E+02	8.52E-02	0.	1.26E+01
0.20 MEV	4.91E+02	8.52E-02	0.	1.26E+01
0.25 MEV	3.82E+02	1.62E-01	0.	1.29E+01
0.30 MEV	2.89E+02	1.62E-01	0.	1.29E+01
0.35 MEV	2.57E+02	1.84E-01	0.	1.53E+01
0.40 MEV	2.08E+02	1.84E-01	0.	1.53E+01
0.45 MEV	1.93E+02	2.11E-01	1.22E-02	1.62E+01
0.50 MEV	1.80E+02	2.11E-01	1.22E-02	1.62E+01
0.55 MEV	1.48E+02	2.02E-01	0.	1.61E+01
0.60 MEV	1.26E+02	2.02E-01	0.	1.61E+01
0.65 MEV	1.20E+02	2.04E-01	0.	1.72E+01
0.70 MEV	1.12E+02	2.04E-01	0.	1.72E+01
0.75 MEV	1.02E+02	2.26E-01	4.55E-03	1.79E+01
0.80 MEV	1.01E+02	2.26E-01	4.55E-03	1.79E+01
0.85 MEV	9.89E+01	2.11E-01	2.08E-03	1.83E+01
0.90 MEV	8.19E+01	2.11E-01	2.08E-03	1.83E+01
0.95 MEV	7.91E+01	2.26E-01	4.85E-03	1.70E+01
1.00 MEV	7.02E+01	2.26E-01	4.85E-03	1.70E+01
1.10 MEV	1.32E+02	4.17E-01	2.60E-01	3.55E+01
1.20 MEV	1.17E+02	4.17E-01	2.60E-01	3.55E+01
1.30 MEV	1.09E+02	3.63E-01	5.09E-03	3.65E+01
1.40 MEV	8.45E+01	3.63E-01	5.09E-03	3.65E+01
1.50 MEV	9.83E+01	3.86E-01	5.67E-03	3.41E+01
1.60 MEV	7.35E+01	3.86E-01	5.67E-03	3.41E+01
1.70 MEV	8.85E+01	1.96E-01	1.56E-02	2.97E+01
1.80 MEV	7.69E+01	1.96E-01	1.56E-02	2.97E+01
1.90 MEV	7.49E+01	4.33E-01	1.11E-02	3.14E+01
2.00 MEV	5.94E+01	4.33E-01	1.11E-02	3.14E+01
2.10 MEV	5.87E+01	8.25E-02	2.38E-02	3.19E+01
2.20 MEV	6.64E+01	8.25E-02	2.38E-02	3.19E+01
2.30 MEV	6.14E+01	3.47E-02	1.52E-02	3.12E+01
2.40 MEV	4.43E+01	3.47E-02	1.52E-02	3.12E+01
2.50 MEV	5.68E+01	3.35E-01	1.78E-02	3.28E+01
2.60 MEV	4.19E+01	3.35E-01	1.78E-02	3.28E+01
2.70 MEV	4.02E+01	3.72E-02	1.43E-02	2.73E+01
2.80 MEV	4.89E+01	3.72E-02	1.43E-02	2.73E+01
2.90 MEV	4.35E+01	2.76E-01	9.87E-03	2.85E+01
3.00 MEV	4.25E+01	2.76E-01	9.87E-03	2.85E+01
3.20 MEV	5.98E+01	2.52E-02	4.60E-02	4.66E+01
3.40 MEV	6.75E+01	2.52E-02	4.60E-02	4.66E+01
3.60 MEV	6.67E+01	4.45E-02	1.76E-02	3.95E+01
3.80 MEV	5.26E+01	4.45E-02	1.76E-02	3.95E+01
4.00 MEV	6.10E+01	2.41E-02	2.13E-02	3.44E+01

INITIAL SPECTRUM AT 2.00-4.00 CM. FOR SHONKA A-15W PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	4.32E+01	2.41E-02	2.13E-02	3.44E+01
4.40 MEV	4.56E+01	3.13E-01	1.56E-02	3.14E+01
4.60 MEV	3.54E+01	3.13E-01	1.56E-02	3.14E+01
4.80 MEV	4.50E+01	2.71E-02	1.76E-02	2.58E+01
5.00 MEV	3.83E+01	2.71E-02	1.76E-02	2.58E+01
5.50 MEV	8.54E+01	1.02E-01	2.25E-02	4.66E+01
6.00 MEV	9.55E+01	1.02E-01	2.25E-02	4.60E+01
6.50 MEV	7.53E+01	5.77E-02	2.42E-02	2.98E+01
7.00 MEV	7.42E+01	5.77E-02	2.42E-02	2.98E+01
7.50 MEV	6.70E+01	4.39E-02	8.55E-03	2.24E+01
8.00 MEV	6.29E+01	4.39E-02	8.55E-03	2.24E+01
8.50 MEV	6.09E+01	3.62E-02	1.22E-02	1.58E+01
9.00 MEV	6.24E+01	3.62E-02	1.22E-02	1.58E+01
9.50 MEV	4.79E+01	2.54E-02	2.27E-03	1.01E+01
10.00 MEV	5.04E+01	2.54E-02	2.27E-03	1.01E+01
11.00 MEV	8.09E+01	6.17E-03	2.24E-03	1.16E+01
12.00 MEV	7.61E+01	6.17E-03	2.24E-03	1.16E+01
13.00 MEV	6.20E+01	6.25E-03	1.13E-03	5.36E+00
14.00 MEV	5.57E+01	6.25E-03	1.13E-03	5.36E+00
15.00 MEV	5.64E+01	8.55E-04	0.	2.03E+00
16.00 MEV	3.89E+01	8.55E-04	0.	2.03E+00
17.00 MEV	4.68E+01	0.	0.	7.53E-01
18.00 MEV	3.50E+01	0.	0.	7.53E-01
19.00 MEV	2.35E+01	0.	0.	2.54E-01
20.00 MEV	2.50E+01	0.	0.	2.54E-01
21.00 MEV	2.65E+01	0.	0.	0.
22.00 MEV	3.10E+01	0.	0.	0.
23.00 MEV	1.85E+01	0.	0.	0.
24.00 MEV	1.45E+01	0.	0.	0.
25.00 MEV	1.00E+01	0.	0.	0.
26.00 MEV	1.00E+01	0.	0.	0.
27.00 MEV	1.10E+01	0.	0.	0.
28.00 MEV	1.05E+01	0.	0.	0.
29.00 MEV	9.00E+00	0.	0.	0.
30.00 MEV	4.00E+00	0.	0.	0.
32.00 MEV	5.50E+00	0.	0.	0.
34.00 MEV	1.50E+00	0.	0.	0.
36.00 MEV	2.00E+00	0.	0.	0.
38.00 MEV	1.00E+00	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	5.00E-01	0.	0.	0.
44.00 MEV	1.00E+00	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.

0AVE. E (MEV)   9.42   3.40   4.16   5.55

1 INITIAL SPECTRUM AT 4.40-6.00 CM, FOR SHONKA A-150 PLASTIC
5.0 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	2.56E-02	0.	9.65E+00
0.10 MEV	1.71E+03	2.56E-02	0.	9.65E+00
0.15 MEV	6.69E+02	1.05E-01	0.	1.28E+01
0.20 MEV	4.90E+02	1.05E-01	0.	1.28E+01
0.25 MEV	3.42E+02	1.49E-01	0.	1.36E+01
0.30 MEV	2.74E+02	1.49E-01	0.	1.36E+01
0.35 MEV	2.30E+02	1.67E-01	0.	1.67E+01
0.40 MEV	1.94E+02	1.87E-01	0.	1.67E+01
0.45 MEV	1.81E+02	1.65E-01	0.	1.54E+01
0.50 MEV	1.50E+02	1.65E-01	0.	1.54E+01
0.55 MEV	1.47E+02	4.33E-01	6.91E-03	1.26E+01
0.60 MEV	1.29E+02	4.33E-01	6.91E-03	1.26E+01
0.65 MEV	1.05E+02	2.07E-01	1.03E-02	1.37E+01
0.70 MEV	1.13E+02	2.07E-01	1.03E-02	1.37E+01
0.75 MEV	1.10E+02	1.69E-01	8.64E-04	1.49E+01
0.80 MEV	9.00E+01	1.64E-01	8.84E-04	1.49E+01
0.85 MEV	8.58E+01	1.53E-01	1.02E-02	1.53E+01
0.90 MEV	8.32E+01	1.53E-01	1.02E-02	1.53E+01
0.95 MEV	8.91E+01	1.72E-01	1.76E-03	1.71E+01
1.00 MEV	7.58E+01	1.72E-01	1.76E-03	1.71E+01
1.10 MEV	1.43E+02	4.21E-01	1.60E-02	3.18E+01
1.20 MEV	1.23E+02	4.21E-01	1.60E-02	3.18E+01
1.30 MEV	1.18E+02	3.78E-01	1.77E-02	2.94E+01
1.40 MEV	1.06E+02	3.78E-01	1.77E-02	2.94E+01
1.50 MEV	9.20E+01	3.53E-01	2.57E-02	2.77E+01
1.60 MEV	1.05E+02	3.53E-01	2.57E-02	2.77E+01
1.70 MEV	7.99E+01	5.00E-01	1.01E-02	2.98E+01
1.80 MEV	7.87E+01	5.00E-01	1.01E-02	2.98E+01
1.90 MEV	8.12E+01	3.74E-01	1.17E-02	3.11E+01
2.00 MEV	6.46E+01	3.74E-01	1.17E-02	3.11E+01
2.10 MEV	5.54E+01	6.93E-02	1.56E-02	2.56E+01
2.20 MEV	5.72E+01	6.93E-02	1.56E-02	2.56E+01
2.30 MEV	5.85E+01	5.70E-02	1.35E-02	2.42E+01
2.40 MEV	5.69E+01	5.70E-02	1.35E-02	2.42E+01
2.50 MEV	4.41E+01	4.01E-02	1.06E-03	2.25E+01
2.60 MEV	4.17E+01	4.01E-02	1.06E-03	2.25E+01
2.70 MEV	4.49E+01	4.80E-02	1.64E-02	2.52E+01
2.80 MEV	4.53E+01	4.80E-02	1.64E-02	2.52E+01
2.90 MEV	3.23E+01	2.32E-02	9.03E-03	2.22E+01
3.00 MEV	3.92E+01	2.32E-02	9.03E-03	2.22E+01
3.20 MEV	6.87E+01	6.52E-02	3.09E-02	4.35E+01
3.40 MEV	6.90E+01	6.52E-02	3.09E-02	4.35E+01
3.60 MEV	6.12E+01	2.74E-01	2.21E-02	3.89E+01
3.80 MEV	5.17E+01	2.74E-01	2.21E-02	3.89E+01
4.00 MEV	5.79E+01	4.16E-02	1.22E-02	3.19E+01

INITIAL SPECTRUM AT 4.00-6.00 CM. FOR SHUNKA A-150 PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	4.71E+01	4.16E-02	1.22E-02	3.19E+01
4.40 MEV	4.44E+01	2.33E-02	2.42E-02	2.42E+01
4.60 MEV	5.13E+01	2.33E-02	2.42E-02	2.42E+01
4.80 MEV	5.01E+01	3.26E-02	2.03E-02	2.04E+01
5.00 MEV	4.49E+01	3.26E-02	2.03E-02	2.04E+01
5.50 MEV	9.29E+01	9.01E-02	3.75E-02	4.14E+01
6.00 MEV	8.76E+01	9.01E-02	3.75E-02	4.14E+01
6.50 MEV	7.56E+01	1.06E-01	1.96E-02	2.69E+01
7.00 MEV	6.71E+01	1.06E-01	1.96E-02	2.69E+01
7.50 MEV	6.41E+01	5.08E-02	1.51E-02	2.03E+01
8.00 MEV	4.87E+01	5.08E-02	1.51E-02	2.03E+01
8.50 MEV	6.58E+01	6.18E-02	1.36E-02	1.33E+01
9.00 MEV	5.69E+01	6.18E-02	1.36E-02	1.33E+01
9.50 MEV	4.68E+01	1.74E-02	1.28E-02	5.57E+00
10.00 MEV	4.15E+01	1.74E-02	1.28E-02	5.57E+00
11.00 MEV	7.05E+01	1.91E-02	4.90E-03	1.10E+01
12.00 MEV	6.34E+01	1.91E-02	4.90E-03	1.10E+01
13.00 MEV	4.95E+01	4.38E-03	3.38E-03	2.16E+00
14.00 MEV	5.68E+01	4.38E-03	3.38E-03	2.16E+00
15.00 MEV	5.23E+01	0.	0.	1.03E+00
16.00 MEV	4.42E+01	0.	0.	1.03E+00
17.00 MEV	4.39E+01	0.	0.	7.59E-01
18.00 MEV	3.45E+01	0.	0.	7.59E-01
19.00 MEV	2.84E+01	0.	0.	2.56E-01
20.00 MEV	2.00E+01	0.	0.	2.56E-01
21.00 MEV	2.20E+01	0.	0.	0.
22.00 MEV	1.85E+01	0.	0.	0.
23.00 MEV	1.10E+01	0.	0.	0.
24.00 MEV	1.95E+01	0.	0.	0.
25.00 MEV	9.00E+00	0.	0.	0.
26.00 MEV	1.05E+01	0.	0.	0.
27.00 MEV	1.00E+01	0.	0.	0.
28.00 MEV	8.00E+00	0.	0.	0.
29.00 MEV	5.50E+00	0.	0.	0.
30.00 MEV	5.00E+00	0.	0.	0.
32.00 MEV	5.00E+00	0.	0.	0.
34.00 MEV	4.00E+00	0.	0.	0.
36.00 MEV	3.00E+00	0.	0.	0.
38.00 MEV	1.50E+00	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	1.00E+00	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
AVERAGE, E (MEV)	9.24	3.62	5.84	5.35

INITIAL SPECTRUM AT 6.00-10.0 CM. FOR SHONKA A-150 PLASTIC

50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	1.62E-02	0.	7.70E+00
0.10 MEV	1.58E+03	1.62E-02	0.	7.70E+00
0.15 MEV	5.95E+02	1.00E-01	0.	1.10E+01
0.20 MEV	4.22E+02	1.00E-01	0.	1.10E+01
0.25 MEV	3.26E+02	1.18E-01	2.42E-03	1.32E+01
0.30 MEV	2.84E+02	1.18E-01	2.42E-03	1.32E+01
0.35 MEV	2.09E+02	1.69E-01	4.65E-03	1.24E+01
0.40 MEV	1.94E+02	1.69E-01	4.65E-03	1.24E+01
0.45 MEV	1.80E+02	1.72E-01	1.08E-02	1.32E+01
0.50 MEV	1.52E+02	1.72E-01	1.08E-02	1.32E+01
0.55 MEV	1.45E+02	1.73E-01	0.	1.32E+01
0.60 MEV	1.12E+02	1.73E-01	0.	1.32E+01
0.65 MEV	9.82E+01	1.65E-01	6.06E-03	1.58E+01
0.70 MEV	1.08E+02	1.65E-01	6.06E-03	1.58E+01
0.75 MEV	9.19E+01	1.58E-01	6.09E-03	1.37E+01
0.80 MEV	9.23E+01	1.58E-01	6.09E-03	1.37E+01
0.85 MEV	8.17E+01	1.61E-01	3.69E-03	1.58E+01
0.90 MEV	7.90E+01	1.61E-01	3.69E-03	1.58E+01
0.95 MEV	8.05E+01	3.12E-01	1.28E-02	1.51E+01
1.00 MEV	6.96E+01	3.12E-01	1.28E-02	1.51E+01
1.10 MEV	1.27E+02	3.60E-01	1.12E-02	2.91E+01
1.20 MEV	1.12E+02	3.60E-01	1.12E-02	2.91E+01
1.30 MEV	1.08E+02	3.55E-01	7.93E-03	2.54E+01
1.40 MEV	8.48E+01	3.55E-01	7.93E-03	2.54E+01
1.50 MEV	8.81E+01	3.01E-01	1.54E-02	2.63E+01
1.60 MEV	8.53E+01	3.01E-01	1.54E-02	2.63E+01
1.70 MEV	7.44E+01	1.76E-01	1.34E-02	2.58E+01
1.80 MEV	7.69E+01	1.76E-01	1.34E-02	2.58E+01
1.90 MEV	6.55E+01	1.21E-01	3.11E-03	2.52E+01
2.00 MEV	6.66E+01	1.21E-01	3.11E-03	2.52E+01
2.10 MEV	5.77E+01	5.37E-02	1.70E-02	2.52E+01
2.20 MEV	5.37E+01	5.37E-02	1.70E-02	2.52E+01
2.30 MEV	5.14E+01	1.85E-01	9.10E-03	2.43E+01
2.40 MEV	5.64E+01	1.85E-01	9.10E-03	2.43E+01
2.50 MEV	4.43E+01	4.01E-02	1.13E-02	2.30E+01
2.60 MEV	4.71E+01	4.01E-02	1.13E-02	2.30E+01
2.70 MEV	4.50E+01	1.58E-01	4.35E-03	2.34E+01
2.80 MEV	4.29E+01	1.58E-01	4.35E-03	2.34E+01
2.90 MEV	3.82E+01	2.66E-02	4.52E-03	2.09E+01
3.00 MEV	4.03E+01	2.66E-02	4.52E-03	2.09E+01
3.20 MEV	6.64E+01	1.78E-01	2.84E-02	3.72E+01
3.40 MEV	6.30E+01	1.78E-01	2.84E-02	3.72E+01
3.60 MEV	5.78E+01	1.47E-01	1.70E-02	3.11E+01
3.80 MEV	5.92E+01	1.47E-01	1.70E-02	3.11E+01
4.00 MEV	5.15E+01	2.50E-02	2.82E-02	2.69E+01

INITIAL SPECTRUM AT 6.00-10.0 CM. FOR SHONKA A-150 PLASTIC
50 MEV D+ ON RE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	4.29E+01	2.50E-02	2.82E-02	2.69E+01
4.40 MEV	4.55E+01	2.82E-02	2.47E-02	2.07E+01
4.60 MEV	4.14E+01	2.82E-02	2.47E-02	2.07E+01
4.80 MEV	3.36E+01	2.99E-02	1.26E-02	1.84E+01
5.00 MEV	3.66E+01	2.99E-02	1.26E-02	1.84E+01
5.50 MEV	8.52E+01	1.94E-01	2.75E-02	3.80E+01
6.00 MEV	8.31E+01	1.94E-01	2.75E-02	3.80E+01
6.50 MEV	7.64E+01	8.56E-02	3.37E-02	2.47E+01
7.00 MEV	6.14E+01	8.56E-02	3.37E-02	2.47E+01
7.50 MEV	5.53E+01	4.07E-02	1.79E-02	1.52E+01
8.00 MEV	4.71E+01	4.07E-02	1.79E-02	1.52E+01
8.50 MEV	4.67E+01	3.94E-02	5.57E-03	1.06E+01
9.00 MEV	4.60E+01	3.94E-02	5.57E-03	1.06E+01
9.50 MEV	4.43E+01	1.56E-01	5.97E-03	7.58E+00
10.00 MEV	4.17E+01	1.56E-01	5.97E-03	7.58E+00
11.00 MEV	7.63E+01	3.21E-02	1.42E-02	8.66E+00
12.00 MEV	6.45E+01	3.21E-02	1.42E-02	8.66E+00
13.00 MEV	6.14E+01	7.01E-03	1.67E-03	5.24E+00
14.00 MEV	5.55E+01	7.01E-03	1.67E-03	5.24E+00
15.00 MEV	4.62E+01	8.55E-04	0.	1.53E+00
16.00 MEV	4.22E+01	8.55E-04	0.	1.53E+00
17.00 MEV	3.17E+01	0.	0.	1.42E-01
18.00 MEV	2.41E+01	0.	0.	1.42E-01
19.00 MEV	2.62E+01	0.	0.	3.78E-01
20.00 MEV	2.40E+01	0.	0.	3.78E-01
21.00 MEV	2.23E+01	0.	0.	0.
22.00 MEV	1.78E+01	0.	0.	0.
23.00 MEV	1.50E+01	0.	0.	0.
24.00 MEV	1.17E+01	0.	0.	0.
25.00 MEV	1.05E+01	0.	0.	0.
26.00 MEV	7.75E+00	0.	0.	0.
27.00 MEV	8.75E+00	0.	0.	0.
28.00 MEV	4.75E+00	0.	0.	0.
29.00 MEV	4.25E+00	0.	0.	0.
30.00 MEV	2.50E+00	0.	0.	0.
32.00 MEV	4.25E+00	0.	0.	0.
34.00 MEV	3.25E+00	0.	0.	0.
36.00 MEV	1.50E+00	0.	0.	0.
38.00 MEV	5.00E-01	0.	0.	0.
40.00 MEV	1.25E+00	0.	0.	0.
42.00 MEV	7.50E-01	0.	0.	0.
44.00 MEV	1.25E+00	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
NAVE. E(MEV)	9.15	4.68	5.95	5.52

INITIAL SPECTRUM AT 10.0-14.0 CM. FOR SHONKA A-150 PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	1.12E-02	0.	0.73E+00
0.10 MEV	1.33E+03	1.12E-02	0.	0.73E+00
0.15 MEV	5.10E+02	7.69E-02	0.	1.13E+01
0.20 MEV	3.73E+02	7.69E-02	0.	1.10E+01
0.25 MEV	2.73E+02	1.37E-01	0.	1.01E+01
0.30 MEV	2.24E+02	1.37E-01	0.	1.01E+01
0.35 MEV	2.03E+02	1.31E-01	8.39E-03	9.77E+00
0.40 MEV	1.62E+02	1.31E-01	8.39E-03	9.77E+00
0.45 MEV	1.40E+02	1.27E-01	5.16E-03	1.08E+01
0.50 MEV	1.28E+02	1.27E-01	5.16E-03	1.08E+01
0.55 MEV	1.12E+02	1.03E-01	7.63E-03	1.09E+01
0.60 MEV	1.04E+02	1.03E-01	7.63E-03	1.09E+01
0.65 MEV	9.91E+01	1.65E-01	1.38E-02	1.05E+01
0.70 MEV	8.42E+01	1.65E-01	1.38E-02	1.05E+01
0.75 MEV	8.31E+01	1.22E-01	6.26E-03	1.25E+01
0.80 MEV	7.09E+01	1.22E-01	6.26E-03	1.25E+01
0.85 MEV	7.05E+01	1.73E-01	4.11E-03	1.13E+01
0.90 MEV	6.54E+01	1.73E-01	4.11E-03	1.13E+01
0.95 MEV	6.28E+01	1.22E-01	2.90E-03	1.17E+01
1.00 MEV	6.11E+01	1.22E-01	2.90E-03	1.17E+01
1.10 MEV	1.16E+02	2.67E-01	5.11E-03	2.16E+01
1.20 MEV	9.74E+01	2.67E-01	5.11E-03	2.16E+01
1.30 MEV	9.15E+01	3.98E-01	1.06E-02	2.20E+01
1.40 MEV	9.54E+01	3.98E-01	1.06E-02	2.20E+01
1.50 MEV	8.20E+01	2.79E-01	2.36E-02	2.17E+01
1.60 MEV	7.03E+01	2.79E-01	2.36E-02	2.17E+01
1.70 MEV	6.81E+01	1.66E-01	1.04E-02	2.14E+01
1.80 MEV	6.22E+01	1.66E-01	1.04E-02	2.14E+01
1.90 MEV	5.65E+01	9.98E-02	1.77E-02	2.16E+01
2.00 MEV	5.44E+01	9.98E-02	1.77E-02	2.16E+01
2.10 MEV	5.00E+01	1.81E-01	9.75E-03	1.94E+01
2.20 MEV	5.04E+01	1.81E-01	9.75E-03	1.94E+01
2.30 MEV	3.90E+01	3.93E-02	9.08E-03	1.95E+01
2.40 MEV	4.35E+01	3.93E-02	9.08E-03	1.95E+01
2.50 MEV	3.91E+01	3.29E-02	2.30E-02	1.89E+01
2.60 MEV	3.60E+01	3.29E-02	2.30E-02	1.89E+01
2.70 MEV	3.54E+01	3.02E-02	9.74E-03	1.79E+01
2.80 MEV	3.56E+01	3.02E-02	9.74E-03	1.79E+01
2.90 MEV	3.50E+01	1.34E-01	1.08E-02	1.35E+01
3.00 MEV	3.16E+01	1.34E-01	1.08E-02	1.35E+01
3.20 MEV	6.11E+01	1.88E-01	2.39E-02	2.89E+01
3.40 MEV	5.68E+01	1.88E-01	2.39E-02	2.89E+01
3.60 MEV	4.61E+01	2.67E-02	1.82E-02	2.56E+01
3.80 MEV	4.69E+01	2.67E-02	1.82E-02	2.56E+01
4.00 MEV	4.11E+01	1.77E-01	1.61E-02	2.27E+01

INITIAL SPECTRUM AT 10.0-14.0 CM. FOR SHONKA A-15A PLASTIC
50 MEV D+ ON RE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.72E+01	1.77E-01	1.61E-02	2.27E+01
4.40 MEV	4.04E+01	1.98E-02	1.01E-02	1.64E+01
4.60 MEV	3.85E+01	1.98E-02	1.01E-02	1.64E+01
4.80 MEV	3.80E+01	3.08E-02	2.35E-02	1.47E+01
5.00 MEV	3.04E+01	3.08E-02	2.35E-02	1.47E+01
5.50 MEV	7.91E+01	2.08E-01	2.48E-02	2.98E+01
6.00 MEV	6.50E+01	2.08E-01	2.48E-02	2.98E+01
6.50 MEV	5.20E+01	1.96E-01	2.67E-02	1.73E+01
7.00 MEV	5.70E+01	1.96E-01	2.67E-02	1.73E+01
7.50 MEV	5.12E+01	6.66E-02	1.82E-02	1.48E+01
8.00 MEV	4.47E+01	6.66E-02	1.82E-02	1.48E+01
8.50 MEV	4.25E+01	1.47E-01	1.30E-02	8.84E+00
9.00 MEV	3.95E+01	1.47E-01	1.30E-02	8.84E+00
9.50 MEV	3.28E+01	2.28E-02	5.39E-03	7.36E+00
10.00 MEV	3.16E+01	2.28E-02	5.39E-03	7.36E+00
11.00 MEV	6.77E+01	2.25E-02	5.17E-03	6.68E+00
12.00 MEV	5.44E+01	2.25E-02	5.17E-03	6.68E+00
13.00 MEV	4.88E+01	3.97E-03	1.64E-03	2.50E+00
14.00 MEV	4.94E+01	3.97E-03	1.64E-03	2.50E+00
15.00 MEV	3.73E+01	0.	0.	1.01E+00
16.00 MEV	3.61E+01	0.	0.	1.01E+00
17.00 MEV	2.85E+01	0.	0.	3.82E-01
18.00 MEV	2.67E+01	0.	0.	3.82E-01
19.00 MEV	2.00E+01	0.	0.	2.28E-03
20.00 MEV	2.08E+01	0.	0.	2.28E-03
21.00 MEV	2.15E+01	0.	0.	0.
22.00 MEV	1.60E+01	0.	0.	0.
23.00 MEV	1.25E+01	0.	0.	0.
24.00 MEV	9.75E+00	0.	0.	0.
25.00 MEV	9.00E+00	0.	0.	0.
26.00 MEV	7.00E+00	0.	0.	0.
27.00 MEV	6.00E+00	0.	0.	0.
28.00 MEV	4.75E+00	0.	0.	0.
29.00 MEV	2.25E+00	0.	0.	0.
30.00 MEV	3.00E+00	0.	0.	0.
32.00 MEV	3.75E+00	0.	0.	0.
34.00 MEV	4.00E+00	0.	0.	0.
36.00 MEV	2.00E+00	0.	0.	0.
38.00 MEV	1.50E+00	0.	0.	0.
40.00 MEV	1.25E+00	0.	0.	0.
42.00 MEV	5.00E-01	0.	0.	0.
44.00 MEV	2.50E-01	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	2.50E-01	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
DAVE, E(MEV)	9.28	4.76	5.71	5.39

INITIAL SPECTRUM AT 14.0-46.0 CM. FOR SHONKA A-154 PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	6.76E-03	0.	2.73E+00
0.10 MEV	6.72E+02	6.76E-03	0.	2.73E+00
0.15 MEV	2.53E+02	4.18E-02	0.	4.40E+00
0.20 MEV	1.82E+02	4.18E-02	0.	4.40E+00
0.25 MEV	1.38E+02	4.20E-02	7.20E-04	5.23E+00
0.30 MEV	1.14E+02	4.20E-02	7.20E-04	5.23E+00
0.35 MEV	9.79E+01	5.67E-02	7.54E-04	5.28E+00
0.40 MEV	8.43E+01	5.67E-02	7.54E-04	5.28E+00
0.45 MEV	7.27E+01	5.66E-02	1.85E-03	5.52E+00
0.50 MEV	6.80E+01	5.66E-02	1.85E-03	5.52E+00
0.55 MEV	5.72E+01	5.97E-02	1.35E-03	5.42E+00
0.60 MEV	5.47E+01	5.97E-02	1.45E-03	5.42E+00
0.65 MEV	4.78E+01	5.77E-02	2.27E-02	5.87E+00
0.70 MEV	4.45E+01	5.77E-02	2.27E-02	5.87E+00
0.75 MEV	4.15E+01	6.08E-02	4.37E-03	5.87E+00
0.80 MEV	4.01E+01	6.08E-02	4.37E-03	5.87E+00
0.85 MEV	3.76E+01	5.83E-02	1.60E-03	6.18E+00
0.90 MEV	3.47E+01	5.83E-02	1.60E-03	6.18E+00
0.95 MEV	3.22E+01	8.67E-02	2.21E-02	6.30E+00
1.00 MEV	3.24E+01	8.67E-02	2.21E-02	6.30E+00
1.10 MEV	5.35E+01	1.45E-01	5.81E-03	1.20E+01
1.20 MEV	5.15E+01	1.46E-01	5.81E-03	1.20E+01
1.30 MEV	4.53E+01	1.16E-01	6.46E-03	1.22E+01
1.40 MEV	4.03E+01	1.16E-01	6.46E-03	1.22E+01
1.50 MEV	3.83E+01	1.18E-01	6.69E-03	1.13E+01
1.60 MEV	3.47E+01	1.18E-01	6.69E-03	1.13E+01
1.70 MEV	3.34E+01	1.12E-01	7.01E-03	1.12E+01
1.80 MEV	3.27E+01	1.12E-01	7.01E-03	1.12E+01
1.90 MEV	2.91E+01	6.79E-02	7.53E-03	1.12E+01
2.00 MEV	2.74E+01	6.09E-02	7.53E-03	1.12E+01
2.10 MEV	2.68E+01	4.16E-02	8.70E-03	1.10E+01
2.20 MEV	2.49E+01	4.16E-02	8.70E-03	1.10E+01
2.30 MEV	2.37E+01	3.81E-02	6.09E-03	1.04E+01
2.40 MEV	2.24E+01	3.81E-02	6.09E-03	1.04E+01
2.50 MEV	2.15E+01	1.46E-02	2.51E-02	9.81E+00
2.60 MEV	1.94E+01	1.46E-02	2.51E-02	9.81E+00
2.70 MEV	1.93E+01	3.00E-02	4.14E-02	9.70E+00
2.80 MEV	1.75E+01	3.00E-02	4.14E-02	9.70E+00
2.90 MEV	1.73E+01	8.65E-03	6.68E-03	9.25E+00
3.00 MEV	1.71E+01	8.65E-03	6.68E-03	9.25E+00
3.20 MEV	3.20E+01	3.61E-02	9.00E-03	1.59E+01
3.40 MEV	2.94E+01	3.61E-02	9.00E-03	1.59E+01
3.60 MEV	2.62E+01	3.48E-02	1.02E-02	1.39E+01
3.80 MEV	2.59E+01	3.48E-02	1.02E-02	1.39E+01
4.00 MEV	2.28E+01	3.50E-02	7.81E-03	1.14E+01

1 INITIAL SPECTRUM AT 14.0-40.0 CM. FOR SHONKA A-150 PLASTIC
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	2.24E+01	3.54E-02	7.61E-03	1.14E+01
4.40 MEV	1.92E+01	1.11E-02	5.76E-03	1.02E+01
4.60 MEV	1.97E+01	1.11E-02	5.76E-03	1.02E+01
4.80 MEV	1.71E+01	1.33E-02	5.46E-03	8.72E+00
5.00 MEV	1.78E+01	1.33E-02	5.46E-03	8.72E+00
5.50 MEV	4.04E+01	7.01E-02	3.01E-02	1.63E+01
6.00 MEV	3.56E+01	7.01E-02	3.01E-02	1.63E+01
6.50 MEV	3.20E+01	4.18E-02	8.86E-03	1.08E+01
7.00 MEV	2.74E+01	4.18E-02	8.86E-03	1.08E+01
7.50 MEV	2.58E+01	6.05E-02	6.23E-03	7.27E+00
8.00 MEV	2.44E+01	6.05E-02	6.23E-03	7.27E+00
8.50 MEV	2.22E+01	1.86E-02	2.39E-02	5.01E+00
9.00 MEV	2.07E+01	1.86E-02	2.39E-02	5.01E+00
9.50 MEV	1.82E+01	9.72E-03	2.58E-03	3.57E+00
10.00 MEV	1.96E+01	9.72E-03	2.58E-03	3.57E+00
11.00 MEV	3.29E+01	4.71E-02	2.67E-03	4.57E+00
12.00 MEV	2.02E+01	4.71E-02	2.67E-03	4.57E+00
13.00 MEV	2.55E+01	1.81E-03	4.06E-04	1.74E+00
14.00 MEV	2.04E+01	1.81E-03	4.06E-04	1.74E+00
15.00 MEV	1.98E+01	6.58E-05	8.70E-05	6.65E-01
16.00 MEV	1.64E+01	6.58E-05	8.70E-05	6.65E-01
17.00 MEV	1.61E+01	0.	0.	3.89E-01
18.00 MEV	1.33E+01	0.	0.	3.89E-01
19.00 MEV	1.18E+01	0.	0.	2.51E-01
20.00 MEV	9.62E+00	0.	0.	2.51E-01
21.00 MEV	8.92E+00	0.	0.	0.
22.00 MEV	8.23E+00	0.	0.	0.
23.00 MEV	8.00E+00	0.	0.	0.
24.00 MEV	6.35E+00	0.	0.	0.
25.00 MEV	5.00E+00	0.	0.	0.
26.00 MEV	5.50E+00	0.	0.	0.
27.00 MEV	3.15E+00	0.	0.	0.
28.00 MEV	2.42E+00	0.	0.	0.
29.00 MEV	2.27E+00	0.	0.	0.
30.00 MEV	2.12E+00	0.	0.	0.
32.00 MEV	2.73E+00	0.	0.	0.
34.00 MEV	2.50E+00	0.	0.	0.
36.00 MEV	1.08E+00	0.	0.	0.
38.00 MEV	7.31E-01	0.	0.	0.
40.00 MEV	4.62E-01	0.	0.	0.
42.00 MEV	3.85E-01	0.	0.	0.
44.00 MEV	2.31E-01	0.	0.	0.
46.00 MEV	7.69E-02	0.	0.	0.
48.00 MEV	1.15E-01	0.	0.	0.
50.00 MEV	3.85E-02	0.	0.	0.
0AVE. E (MEV)	9.52	5.36	5.59	5.66

INITIAL SPECTRUM AT 0.00-0.05 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON HE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	1.14E-01	0.	2.51E+00
0.10 MEV	7.36E+02	1.14E-01	0.	2.51E+00
0.15 MEV	1.60E+02	2.26E-01	0.	7.08E+00
0.20 MEV	1.40E+02	2.26E-01	0.	7.08E+00
0.25 MEV	1.59E+02	0.	0.	1.26E+01
0.30 MEV	8.00E+01	0.	0.	1.26E+01
0.35 MEV	9.62E+01	1.14E-01	0.	2.61E+00
0.40 MEV	1.57E+02	1.14E-01	0.	2.61E+00
0.45 MEV	1.94E+01	0.	0.	2.05E+02
0.50 MEV	3.60E+01	0.	0.	2.05E+02
0.55 MEV	4.00E+01	4.66E-02	0.	5.24E+00
0.60 MEV	2.01E+01	4.66E-02	0.	5.24E+00
0.65 MEV	5.93E+01	8.89E-02	0.	0.
0.70 MEV	4.00E+01	8.89E-02	0.	0.
0.75 MEV	5.97E+01	1.14E-01	0.	2.46E+00
0.80 MEV	7.98E+01	1.14E-01	0.	2.46E+00
0.85 MEV	1.97E+01	1.40E-01	0.	1.85E-01
0.90 MEV	4.02E+01	1.40E-01	0.	1.85E-01
0.95 MEV	4.04E+01	4.12E-01	0.	3.09E-01
1.00 MEV	4.06E+01	4.12E-01	0.	3.09E-01
1.10 MEV	2.57E+01	3.25E-01	0.	7.24E+00
1.20 MEV	4.05E+01	3.25E-01	0.	7.24E+00
1.30 MEV	2.53E+01	3.41E-01	0.	2.51E+00
1.40 MEV	3.09E+01	3.41E-01	0.	2.51E+00
1.50 MEV	2.93E+01	3.61E-01	0.	3.22E+01
1.60 MEV	2.03E+01	3.61E-01	0.	3.22E+01
1.70 MEV	1.77E+01	3.87E-01	0.	2.01E+01
1.80 MEV	2.51E+01	3.87E-01	0.	2.01E+01
1.90 MEV	1.02E+00	5.61E-02	0.	2.08E+01
2.00 MEV	3.58E+01	5.61E-02	0.	2.08E+01
2.10 MEV	4.06E+01	2.80E-02	0.	1.03E+01
2.20 MEV	2.50E+01	2.80E-02	0.	1.03E+01
2.30 MEV	0.	3.63E-02	0.	1.87E+01
2.40 MEV	5.05E-01	3.63E-02	0.	1.87E+01
2.50 MEV	2.04E+01	1.86E-02	0.	2.79E+01
2.60 MEV	4.00E+01	1.86E-02	0.	2.79E+01
2.70 MEV	6.01E+01	0.	0.	6.30E+00
2.80 MEV	2.00E+01	0.	0.	6.30E+00
2.90 MEV	2.51E+01	0.	0.	3.53E+00
3.00 MEV	0.	0.	0.	3.53E+00
3.20 MEV	2.00E+01	9.04E-02	0.	2.92E+01
3.40 MEV	4.00E+01	9.04E-02	0.	2.92E+01
3.60 MEV	2.01E+01	3.05E-01	0.	1.21E+01
3.80 MEV	3.40E+01	3.05E-01	0.	1.21E+01
4.00 MEV	6.50E+01	0.	0.	9.67E+00

INITIAL SPECTRUM AT 0.00-0.05 CM. FOR ICRO MUSCLE TISSUE				
50 MEV D+ ON BE NEUTRON SPECTRUM				
ENERGY	PROTONS	NEUTRONS	TRITONS	ALPHAS
4.20 MEV	4.02E+01	0.	0.	9.67E+00
4.40 MEV	2.02E+01	0.	0.	1.67E+01
4.60 MEV	7.83E-01	0.	0.	1.67E+01
4.80 MEV	8.07E+01	0.	0.	1.67E+01
5.00 MEV	4.44E+01	0.	2.20E-01	6.09E+00
5.50 MEV	1.00E+02	1.40E-01	2.20E-01	6.09E+00
6.00 MEV	1.01E+02	1.40E-01	0.	2.78E+00
6.50 MEV	4.50E+01	1.19E-01	1.13E-01	2.78E+00
7.00 MEV	4.40E+01	0.	0.	1.28E+01
7.50 MEV	6.03E+01	0.	0.	2.71E+00
8.00 MEV	4.04E+01	0.	0.	1.37E+00
8.50 MEV	7.74E+01	0.	0.	1.08E+01
9.00 MEV	4.01E+01	0.	0.	1.04E+00
9.50 MEV	2.01E+01	0.	0.	1.04E+00
10.00 MEV	6.00E+01	0.	0.	1.04E+00
11.00 MEV	6.02E+01	0.	0.	1.04E+00
12.00 MEV	5.58E+01	0.	0.	1.04E+00
13.00 MEV	0.	0.	0.	1.04E+00
14.00 MEV	0.	0.	0.	1.04E+00
15.00 MEV	6.00E+01	0.	0.	1.04E+00
16.00 MEV	2.00E+01	0.	0.	1.04E+00
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	4.00E+01	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	2.00E+01	0.	0.	0.
24.00 MEV	2.00E+01	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	2.00E+01	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.

0AVE, E(MEV)

9.02

3.09

5.76

4.56

INITIAL SPECTRUM AT 0.05-0.10 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	2.31E+00
0.10 MEV	4.90E+02	0.	0.	2.31E+00
0.15 MEV	1.98E+02	9.07E-02	0.	1.77E+00
0.20 MEV	1.99E+02	9.07E-02	0.	1.77E+00
0.25 MEV	1.20E+02	9.95E-02	0.	2.34E+00
0.30 MEV	8.00E+01	9.95E-02	0.	2.34E+00
0.35 MEV	1.39E+02	9.95E-02	0.	1.77E+00
0.40 MEV	1.00E+02	9.95E-02	0.	1.77E+00
0.45 MEV	1.37E+02	1.88E-01	0.	4.08E+00
0.50 MEV	7.45E+01	1.88E-01	0.	4.08E+00
0.55 MEV	4.00E+01	8.30E-02	0.	1.70E+01
0.60 MEV	9.86E+01	8.30E-02	0.	1.70E+01
0.65 MEV	2.00E+01	1.83E-02	0.	6.13E-02
0.70 MEV	3.87E+01	1.83E-02	0.	6.13E-02
0.75 MEV	4.48E+01	4.56E-02	0.	1.88E-01
0.80 MEV	0.	4.56E-02	0.	1.88E-01
0.85 MEV	4.48E+01	9.07E-02	0.	2.35E+00
0.90 MEV	2.99E+01	9.07E-02	0.	2.35E+00
0.95 MEV	1.95E-01	0.	0.	2.01E+01
1.00 MEV	2.00E+01	0.	0.	2.01E+01
1.10 MEV	6.48E+01	3.38E-01	0.	1.64E+01
1.20 MEV	1.18E+02	3.38E-01	0.	1.64E+01
1.30 MEV	6.96E+01	2.51E-01	0.	4.41E+00
1.40 MEV	2.48E+01	2.51E-01	0.	4.41E+00
1.50 MEV	4.04E+01	2.95E-01	0.	1.73E+01
1.60 MEV	8.07E+01	2.95E-01	0.	1.73E+01
1.70 MEV	2.24E+01	2.07E-02	0.	1.29E+01
1.80 MEV	4.02E+01	2.07E-02	0.	1.29E+01
1.90 MEV	4.05E+01	1.18E-01	0.	1.41E+01
2.00 MEV	3.68E-01	1.18E-01	0.	1.41E+01
2.10 MEV	6.01E+01	0.	0.	1.58E+01
2.20 MEV	4.04E+01	0.	0.	1.58E+01
2.30 MEV	1.46E-01	2.88E-02	0.	4.91E+00
2.40 MEV	4.03E+01	2.88E-02	0.	4.91E+00
2.50 MEV	3.61E+01	0.	0.	3.35E+00
2.60 MEV	2.53E+01	0.	0.	3.35E+00
2.70 MEV	4.87E+00	2.62E-02	0.	1.21E+00
2.80 MEV	5.17E+00	2.62E-02	0.	1.21E+00
2.90 MEV	3.41E-01	0.	0.	6.98E+00
3.00 MEV	4.01E+01	0.	0.	6.98E+00
3.20 MEV	8.91E-01	5.75E-02	0.	2.52E+01
3.40 MEV	2.02E+01	5.75E-02	0.	2.52E+01
3.60 MEV	2.29E-01	2.52E-02	0.	7.69E+00
3.80 MEV	2.01E+01	2.52E-02	0.	7.69E+00
4.00 MEV	6.00E+01	0.	0.	2.29E+01

INITIAL SPECTRUM AT 0.05-0.10 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON HE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	1.86E+01	0.	0.	2.29E+01
4.40 MEV	0.	0.	0.	5.64E+00
4.60 MEV	1.89E+01	0.	0.	5.64E+00
4.80 MEV	7.87E+01	0.	0.	1.27E+00
5.00 MEV	2.03E+01	0.	0.	1.27E+00
5.50 MEV	7.72E+01	0.	0.	1.93E+01
6.00 MEV	7.70E+01	0.	0.	1.93E+01
6.50 MEV	5.48E+01	0.	0.	1.90E+00
7.00 MEV	6.08E+01	0.	0.	1.90E+00
7.50 MEV	6.03E+01	0.	0.	7.25E-01
8.00 MEV	2.01E+01	0.	0.	7.25E-01
8.50 MEV	2.00E+01	0.	0.	1.03E+00
9.00 MEV	4.00E+01	0.	0.	1.03E+00
9.50 MEV	2.01E+01	0.	0.	1.11E+01
10.00 MEV	0.	0.	0.	1.11E+01
11.00 MEV	1.20E+02	0.	0.	7.04E-01
12.00 MEV	6.00E+01	0.	0.	7.04E-01
13.00 MEV	2.00E+01	0.	0.	1.02E+01
14.00 MEV	4.00E+01	0.	0.	1.02E+01
15.00 MEV	8.00E+01	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	6.00E+01	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	4.00E+01	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	2.00E+01	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	2.00E+01	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	9.45	1.41	5.76	6.15

INITIAL SPECTRUM AT 0.10-0.15 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	NEUTRONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	5.22E+02	0.	0.	0.
0.15 MEV	1.53E+02	0.	0.	6.86E-02
0.20 MEV	1.20E+02	0.	0.	6.86E-02
0.25 MEV	1.39E+02	0.	0.	6.78E-01
0.30 MEV	7.94E+01	0.	0.	6.78E-01
0.35 MEV	1.18E+02	0.	0.	7.82E-01
0.40 MEV	1.55E+02	0.	0.	7.82E-01
0.45 MEV	8.00E+01	1.31E-01	0.	7.11E+00
0.50 MEV	1.16E+02	1.31E-01	0.	7.11E+00
0.55 MEV	5.88E+01	0.	0.	6.32E-01
0.60 MEV	2.96E+01	0.	0.	6.32E-01
0.65 MEV	4.48E+01	7.04E-02	0.	4.61E-01
0.70 MEV	3.93E+01	7.04E-02	0.	4.61E-01
0.75 MEV	6.06E+01	2.13E-02	0.	2.23E+00
0.80 MEV	4.01E+01	2.13E-02	0.	2.23E+00
0.85 MEV	2.04E+01	0.	0.	2.65E+00
0.90 MEV	0.	0.	0.	2.65E+00
0.95 MEV	4.03E+01	0.	1.97E-01	5.56E+00
1.00 MEV	6.24E+01	0.	1.97E-01	5.56E+00
1.10 MEV	2.91E+01	8.68E-02	0.	5.14E+00
1.20 MEV	3.00E+01	8.68E-02	0.	5.14E+00
1.30 MEV	1.06E+02	3.02E-02	0.	2.63E+00
1.40 MEV	2.11E+01	3.02E-02	0.	2.63E+00
1.50 MEV	5.01E+01	2.12E-01	0.	1.19E+01
1.60 MEV	2.97E+01	2.12E-01	0.	1.19E+01
1.70 MEV	7.02E+01	5.38E-02	0.	1.14E+01
1.80 MEV	2.04E+01	5.38E-02	0.	1.14E+01
1.90 MEV	3.44E+01	4.46E-01	0.	5.55E+00
2.00 MEV	4.48E+01	4.46E-01	0.	5.55E+00
2.10 MEV	2.02E+01	4.44E-02	0.	5.92E+00
2.20 MEV	1.35E-01	4.44E-02	0.	5.92E+00
2.30 MEV	6.00E+01	3.43E-02	0.	1.23E+00
2.40 MEV	0.	3.43E-02	0.	1.23E+00
2.50 MEV	2.00E+01	5.95E-02	0.	8.64E+00
2.60 MEV	9.64E-02	5.95E-02	0.	8.64E+00
2.70 MEV	2.02E+01	4.02E-02	0.	1.03E+01
2.80 MEV	2.03E+01	4.02E-02	0.	1.03E+01
2.90 MEV	0.	1.97E-02	0.	6.48E+00
3.00 MEV	4.01E+01	1.97E-02	0.	6.48E+00
3.20 MEV	2.09E+01	3.96E-02	0.	9.61E+00
3.40 MEV	1.00E+02	3.96E-02	0.	9.61E+00
3.60 MEV	6.79E-01	2.87E-02	0.	9.16E+00
3.80 MEV	3.02E-01	2.87E-02	0.	9.16E+00
4.00 MEV	1.48E-01	0.	0.	1.45E+01

INITIAL SPECTRUM AT 0.10-0.15 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	4.08E+01	0.	0.	1.45E+01
4.40 MEV	2.05E+01	0.	0.	3.15E+01
4.60 MEV	2.01E+01	0.	0.	3.15E+01
4.80 MEV	2.97E-01	2.36E-02	0.	1.24E+00
5.00 MEV	2.02E+01	2.36E-02	0.	1.24E+00
5.50 MEV	4.09E+01	0.	0.	1.82E+01
6.00 MEV	4.06E+01	0.	0.	1.82E+01
6.50 MEV	3.87E+01	0.	0.	6.69E+00
7.00 MEV	4.13E+01	0.	0.	6.69E+00
7.50 MEV	6.03E+01	0.	0.	2.40E+01
8.00 MEV	2.04E+01	0.	0.	2.40E+01
8.50 MEV	2.03E-01	0.	0.	6.86E-01
9.00 MEV	2.00E+01	0.	0.	6.86E-01
9.50 MEV	4.01E+01	0.	0.	4.40E-01
10.00 MEV	0.	0.	0.	4.40E-01
11.00 MEV	6.00E+01	0.	0.	9.86E-01
12.00 MEV	4.00E+01	0.	0.	9.86E-01
13.00 MEV	0.	0.	0.	2.89E-01
14.00 MEV	6.00E+01	0.	0.	2.89E-01
15.00 MEV	6.00E+01	0.	0.	4.90E-02
16.00 MEV	2.00E+01	0.	0.	4.90E-02
17.00 MEV	4.00E+01	0.	0.	0.
18.00 MEV	2.00E+01	0.	0.	0.
19.00 MEV	6.00E+01	0.	0.	0.
20.00 MEV	2.00E+01	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	2.00E+01	0.	0.	0.
24.00 MEV	2.00E+01	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	2.00E+01	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	2.00E+01	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	2.00E+01	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.

0AVE. E(MEV)   13.04   1.99   0.95   5.27

INITIAL SPECTRUM AT 0.15-0.20 CM. FOR ICRU MUSCLE TISSUE

50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	1.31E-01
0.10 MEV	5.15E+02	0.	0.	1.31E-01
0.15 MEV	2.57E+02	0.	0.	9.05E-02
0.20 MEV	1.55E+02	0.	0.	9.05E-02
0.25 MEV	1.20E+02	0.	0.	1.30E-01
0.30 MEV	1.00E+02	0.	0.	1.30E-01
0.35 MEV	1.18E+02	3.74E-01	0.	8.77E-02
0.40 MEV	0.	3.74E-01	0.	8.77E-02
0.45 MEV	8.00E+01	1.11E-01	0.	3.43E-01
0.50 MEV	2.00E+01	1.11E-01	0.	3.43E-01
0.55 MEV	5.91E+01	0.	0.	2.55E-01
0.60 MEV	2.00E+01	0.	0.	2.55E-01
0.65 MEV	2.00E+01	0.	0.	0.
0.70 MEV	7.80E+01	0.	0.	0.
0.75 MEV	8.00E+01	1.22E-01	0.	2.81E-03
0.80 MEV	4.03E+01	1.22E-01	0.	2.81E-03
0.85 MEV	4.06E+01	0.	0.	0.
0.90 MEV	2.03E+01	0.	0.	0.
0.95 MEV	5.86E+01	1.38E-01	0.	0.
1.00 MEV	6.06E+01	1.38E-01	0.	0.
1.10 MEV	4.03E+01	7.02E-02	0.	3.65E-01
1.20 MEV	9.07E-01	7.09E-02	0.	3.65E-01
1.30 MEV	1.35E+02	2.10E-01	0.	1.94E+01
1.40 MEV	2.02E+01	2.10E-01	0.	1.94E+01
1.50 MEV	6.02E+01	1.35E-01	0.	1.02E+01
1.60 MEV	4.02E+01	1.35E-01	0.	1.02E+01
1.70 MEV	3.53E+01	5.68E-02	0.	1.25E+01
1.80 MEV	2.94E-01	5.68E-02	0.	1.25E+01
1.90 MEV	2.03E+01	1.67E-01	0.	4.79E+00
2.00 MEV	4.03E+01	1.67E-01	0.	4.79E+00
2.10 MEV	6.02E+01	6.54E-02	0.	6.14E+00
2.20 MEV	2.03E+01	6.54E-02	0.	6.14E+00
2.30 MEV	5.05E-01	3.12E-02	0.	5.66E+00
2.40 MEV	2.04E+01	3.12E-02	0.	5.66E+00
2.50 MEV	4.01E+01	1.36E-01	0.	1.08E+01
2.60 MEV	7.36E+01	1.36E-01	0.	1.08E+01
2.70 MEV	4.01E+01	9.63E-02	0.	1.26E+00
2.80 MEV	5.84E+01	9.63E-02	0.	1.26E+00
2.90 MEV	7.03E-01	0.	0.	1.80E+00
3.00 MEV	8.04E-01	0.	0.	1.80E+00
3.20 MEV	3.17E-01	0.	0.	6.51E+00
3.40 MEV	3.62E-01	0.	0.	6.51E+00
3.60 MEV	2.03E+01	6.20E-02	0.	1.71E+00
3.80 MEV	1.55E+01	6.20E-02	0.	1.71E+00
4.00 MEV	3.75E+01	1.92E-02	0.	1.11E+01

1 INITIAL SPECTRUM AT 0.15-0.20 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	2.04E+01	1.92E-02	0.	1.11E+01
4.40 MEV	2.02E+01	2.84E-02	0.	1.20E+01
4.60 MEV	4.03E+01	2.84E-02	0.	1.20E+01
4.80 MEV	2.95E-01	0.	0.	1.60E+00
5.00 MEV	6.13E-01	0.	0.	1.60E+00
5.50 MEV	6.05E+01	0.	0.	1.39E+01
6.00 MEV	7.83E+01	0.	0.	1.39E+01
6.50 MEV	7.94E+01	0.	0.	2.90E+00
7.00 MEV	4.02E+01	0.	0.	2.90E+00
7.50 MEV	6.03E+01	0.	0.	2.91E+00
8.00 MEV	4.01E+01	0.	0.	2.91E+00
8.50 MEV	4.01E+01	0.	0.	1.53E+00
9.00 MEV	4.00E+01	0.	0.	1.53E+00
9.50 MEV	2.00E+01	0.	0.	8.10E-01
10.00 MEV	0.	0.	0.	8.10E-01
11.00 MEV	8.00E+01	0.	0.	8.47E-01
12.00 MEV	4.00E+01	0.	0.	8.47E-01
13.00 MEV	1.00E+02	0.	0.	1.12E-01
14.00 MEV	0.	0.	0.	1.12E-01
15.00 MEV	4.00E+01	0.	0.	2.57E-02
16.00 MEV	4.00E+01	0.	0.	2.57E-02
17.00 MEV	0.	0.	0.	0.
18.00 MEV	2.00E+01	0.	0.	0.
19.00 MEV	4.00E+01	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	2.00E+01	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	2.00E+01	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	2.00E+01	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	2.00E+01	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E (MEV)	10.66	1.81	0.95	4.62

1 INITIAL SPECTRUM AT 0.20-0.40 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	2.93E-02	0.	1.29E+00
0.10 MEV	7.19E+02	2.93E-02	0.	1.29E+00
0.15 MEV	2.95E+02	5.38E-02	0.	7.52E-01
0.20 MEV	2.30E+02	5.38E-02	0.	7.52E-01
0.25 MEV	1.38E+02	0.	0.	2.05E+00
0.30 MEV	1.04E+02	0.	0.	2.05E+00
0.35 MEV	6.25E+01	7.00E-02	0.	4.43E+00
0.40 MEV	6.89E+01	7.00E-02	0.	4.43E+00
0.45 MEV	9.25E+01	3.90E-02	0.	2.94E-01
0.50 MEV	7.25E+01	3.90E-02	0.	2.94E-01
0.55 MEV	7.75E+01	1.20E-01	0.	2.04E+00
0.60 MEV	4.83E+01	1.20E-01	0.	2.04E+00
0.65 MEV	4.49E+01	5.19E-02	0.	2.52E+00
0.70 MEV	3.00E+01	5.19E-02	0.	2.52E+00
0.75 MEV	4.00E+01	5.75E-02	0.	9.53E-01
0.80 MEV	4.64E+01	5.75E-02	0.	9.53E-01
0.85 MEV	1.14E+01	1.64E-01	0.	1.69E+00
0.90 MEV	2.99E+01	1.64E-01	0.	1.69E+00
0.95 MEV	5.12E+01	9.39E-02	0.	3.29E+00
1.00 MEV	2.50E+00	9.39E-02	0.	3.29E+00
1.10 MEV	1.01E+02	2.36E-01	0.	5.07E+00
1.20 MEV	3.53E+01	2.36E-01	0.	5.07E+00
1.30 MEV	6.30E+01	2.12E-01	5.13E-02	3.84E+00
1.40 MEV	3.01E+01	2.12E-01	5.13E-02	3.84E+00
1.50 MEV	5.93E+01	2.25E-01	0.	5.37E+00
1.60 MEV	3.08E+01	2.25E-01	0.	5.37E+00
1.70 MEV	2.22E+01	9.99E-02	0.	7.20E+00
1.80 MEV	3.15E+01	9.99E-02	0.	7.20E+00
1.90 MEV	2.53E+01	2.56E+00	0.	6.87E+00
2.00 MEV	4.78E+01	2.56E+00	0.	6.87E+00
2.10 MEV	3.03E+01	1.19E-01	0.	5.92E+00
2.20 MEV	2.47E+01	1.19E-01	0.	5.92E+00
2.30 MEV	2.08E+01	5.18E-02	0.	5.63E+00
2.40 MEV	3.00E+01	5.18E-02	0.	5.63E+00
2.50 MEV	1.84E+01	1.35E-02	0.	1.41E+01
2.60 MEV	1.48E+01	1.35E-02	0.	1.41E+01
2.70 MEV	1.99E+01	5.32E-02	3.92E-02	1.20E+01
2.80 MEV	1.04E+01	5.32E-02	3.92E-02	1.20E+01
2.90 MEV	1.97E+01	3.36E-02	0.	4.62E+00
3.00 MEV	2.53E+01	3.36E-02	0.	4.62E+00
3.20 MEV	2.56E+01	2.65E-02	2.54E+00	1.20E+01
3.40 MEV	4.76E+01	2.65E-02	2.54E+00	1.20E+01
3.60 MEV	2.50E+01	2.47E-02	0.	1.45E+01
3.80 MEV	2.53E+01	2.47E-02	0.	1.45E+01
4.00 MEV	3.03E+01	2.71E-02	0.	1.00E+01

INITIAL SPECTRUM AT 0.20-0.40 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.94E+01	2.71E-02	0.	1.00E+01
4.40 MEV	2.45E+01	0.	2.76E-02	6.54E+00
4.60 MEV	1.53E+01	0.	2.76E-02	6.54E+00
4.80 MEV	2.03E+01	4.55E-02	2.63E-02	3.79E+00
5.00 MEV	4.03E+01	4.55E-02	2.63E-02	3.79E+00
5.50 MEV	6.89E+01	1.09E-01	3.65E-02	1.29E+01
6.00 MEV	4.05E+01	1.09E-01	3.65E-02	1.29E+01
6.50 MEV	2.58E+01	1.18E-01	0.	1.09E+01
7.00 MEV	4.52E+01	1.18E-01	0.	1.09E+01
7.50 MEV	3.03E+01	6.14E-02	2.42E-02	2.71E+00
8.00 MEV	5.01E+01	6.14E-02	2.42E-02	2.71E+00
8.50 MEV	3.02E+01	0.	0.	1.53E+00
9.00 MEV	5.51E+01	0.	0.	1.53E+00
9.50 MEV	3.51E+01	2.81E-02	0.	3.73E+00
10.00 MEV	3.51E+01	2.81E-02	0.	3.73E+00
11.00 MEV	5.47E+01	2.90E-02	0.	9.13E-01
12.00 MEV	3.02E+01	2.96E-02	0.	9.13E-01
13.00 MEV	4.44E+01	0.	0.	2.34E-01
14.00 MEV	4.51E+01	0.	0.	2.34E-01
15.00 MEV	4.00E+01	0.	0.	2.01E-02
16.00 MEV	3.50E+01	0.	0.	2.01E-02
17.00 MEV	4.00E+01	0.	0.	0.
18.00 MEV	4.50E+01	0.	0.	0.
19.00 MEV	2.99E+01	0.	0.	0.
20.00 MEV	4.50E+01	0.	0.	0.
21.00 MEV	1.00E+01	0.	0.	0.
22.00 MEV	1.50E+01	0.	0.	0.
23.00 MEV	2.00E+01	0.	0.	0.
24.00 MEV	1.00E+01	0.	0.	0.
25.00 MEV	1.00E+01	0.	0.	0.
26.00 MEV	5.00E+00	0.	0.	0.
27.00 MEV	1.50E+01	0.	0.	0.
28.00 MEV	5.00E+00	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	5.00E+00	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	5.00E+00	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
QAVE, E(MEV)	11.15	3.54	3.38	4.93

INITIAL SPECTRUM AT 0.40-0.60 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	1.26E+00
0.10 MEV	7.39E+02	0.	0.	1.26E+00
0.15 MEV	2.64E+02	0.	0.	2.11E+00
0.20 MEV	2.32E+02	0.	0.	2.11E+00
0.25 MEV	1.93E+02	0.	0.	2.59E+00
0.30 MEV	1.30E+02	0.	0.	2.59E+00
0.35 MEV	1.01E+02	4.25E-02	0.	4.15E-02
0.40 MEV	6.37E+01	4.25E-02	0.	4.15E-02
0.45 MEV	5.39E+01	2.91E-02	0.	5.55E+00
0.50 MEV	7.30E+01	2.91E-02	0.	5.55E+00
0.55 MEV	8.48E+01	4.17E-02	0.	2.62E+00
0.60 MEV	5.94E+01	4.17E-02	0.	2.62E+00
0.65 MEV	9.95E+01	1.21E-02	0.	1.88E+00
0.70 MEV	3.90E+01	1.21E-02	0.	1.88E+00
0.75 MEV	3.01E+01	8.23E-02	0.	3.24E+00
0.80 MEV	2.82E+01	8.23E-02	0.	3.24E+00
0.85 MEV	6.30E+01	6.18E-02	0.	3.03E+00
0.90 MEV	2.35E+01	6.18E-02	0.	3.03E+00
0.95 MEV	3.44E+01	1.13E-01	0.	3.81E+00
1.00 MEV	3.09E+01	1.13E-01	0.	3.81E+00
1.10 MEV	8.30E+01	7.96E-02	0.	4.07E+00
1.20 MEV	7.29E+01	7.96E-02	0.	4.07E+00
1.30 MEV	7.96E+01	1.56E-01	0.	4.42E+00
1.40 MEV	3.02E+01	1.56E-01	0.	4.42E+00
1.50 MEV	3.74E+01	1.41E-01	0.	6.27E+00
1.60 MEV	3.49E+01	1.41E-01	0.	6.27E+00
1.70 MEV	2.50E+01	7.07E-02	0.	8.03E+00
1.80 MEV	4.40E+01	7.07E-02	0.	8.03E+00
1.90 MEV	4.51E+01	4.38E-02	3.80E-02	1.52E+01
2.00 MEV	2.46E+01	4.38E-02	3.80E-02	1.52E+01
2.10 MEV	2.91E+01	9.42E-02	0.	7.57E+00
2.20 MEV	1.97E+01	9.42E-02	0.	7.57E+00
2.30 MEV	2.34E+01	1.07E-02	0.	1.35E+01
2.40 MEV	3.52E+01	1.07E-02	0.	1.35E+01
2.50 MEV	3.45E+01	8.19E-03	0.	9.02E+00
2.60 MEV	1.45E+01	8.19E-03	0.	9.02E+00
2.70 MEV	1.99E+01	1.66E-02	0.	9.76E+00
2.80 MEV	1.23E+01	1.66E-02	0.	9.76E+00
2.90 MEV	1.52E+01	6.26E-03	0.	1.05E+01
3.00 MEV	3.56E+01	6.26E-03	0.	1.05E+01
3.20 MEV	3.63E+01	2.63E-02	4.86E-02	1.02E+01
3.40 MEV	3.54E+01	2.63E-02	4.86E-02	1.02E+01
3.60 MEV	2.52E+01	1.98E-02	0.	1.03E+01
3.80 MEV	2.54E+01	1.98E-02	0.	1.03E+01
4.00 MEV	4.12E+01	8.90E-03	0.	1.06E+01

INITIAL SPECTRUM AT 0.40-0.60 CM, FOR ICRU MUSCLE TISSUE

50 MEV D+ ON HE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	2.53E+01	8.90E-03	0.	1.06E+01
4.40 MEV	1.95E+01	0.	0.	1.09E+01
4.60 MEV	2.64E+01	0.	0.	1.09E+01
4.80 MEV	1.53E+01	9.98E-02	4.97E-02	7.84E+00
5.00 MEV	2.52E+01	9.98E-02	4.97E-02	7.84E+00
5.50 MEV	5.50E+01	7.32E-02	6.70E-02	1.35E+01
6.00 MEV	3.05E+01	7.32E-02	6.70E-02	1.35E+01
6.50 MEV	2.53E+01	3.07E-02	2.66E-02	1.02E+01
7.00 MEV	5.02E+01	3.07E-02	2.66E-02	1.02E+01
7.50 MEV	2.02E+01	6.05E-02	0.	1.73E+00
8.00 MEV	2.81E+01	6.05E-02	0.	1.73E+00
8.50 MEV	3.02E+01	6.01E-02	0.	1.58E+00
9.00 MEV	2.96E+01	6.01E-02	0.	1.58E+00
9.50 MEV	1.00E+01	0.	0.	3.33E+00
10.00 MEV	1.52E+01	0.	0.	3.33E+00
11.00 MEV	4.50E+01	5.87E-02	0.	8.31E-01
12.00 MEV	3.97E+01	5.87E-02	0.	8.31E-01
13.00 MEV	5.50E+01	0.	0.	2.68E+00
14.00 MEV	6.00E+01	0.	0.	2.68E+00
15.00 MEV	4.50E+01	0.	0.	6.10E-03
16.00 MEV	5.50E+01	0.	0.	6.10E-03
17.00 MEV	3.50E+01	0.	0.	0.
18.00 MEV	2.50E+01	0.	0.	0.
19.00 MEV	2.00E+01	0.	0.	0.
20.00 MEV	1.00E+01	0.	0.	0.
21.00 MEV	5.00E+00	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	1.00E+01	0.	0.	0.
24.00 MEV	1.00E+01	0.	0.	0.
25.00 MEV	1.00E+01	0.	0.	0.
26.00 MEV	1.50E+01	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	1.00E+01	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	5.00E+00	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.

0AVE, E(MEV)

10.77

5.92

5.08

5.22

INITIAL SPECTRUM AT 0.60-1.00 CM. FOR ICRU MUSCLE TISSUE

50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	2.13E+00
0.10 MEV	7.90E+02	0.	0.	2.13E+00
0.15 MEV	3.42E+02	0.	0.	2.07E+00
0.20 MEV	2.13E+02	0.	0.	2.07E+00
0.25 MEV	1.27E+02	1.18E-02	0.	2.06E+00
0.30 MEV	1.48E+02	1.18E-02	0.	2.06E+00
0.35 MEV	1.03E+02	3.25E-02	0.	9.34E-01
0.40 MEV	1.04E+02	3.25E-02	0.	9.34E-01
0.45 MEV	9.06E+01	4.93E-02	2.42E-02	1.56E+00
0.50 MEV	7.62E+01	4.93E-02	2.42E-02	1.56E+00
0.55 MEV	7.29E+01	6.98E-02	0.	6.08E-01
0.60 MEV	7.30E+01	6.98E-02	0.	6.08E-01
0.65 MEV	6.88E+01	8.06E-02	0.	2.38E+00
0.70 MEV	5.10E+01	8.06E-02	0.	2.38E+00
0.75 MEV	4.17E+01	3.44E-02	0.	2.97E+00
0.80 MEV	6.26E+01	3.44E-02	0.	2.97E+00
0.85 MEV	4.54E+01	3.69E-02	2.75E-02	7.99E-01
0.90 MEV	4.31E+01	3.69E-02	2.75E-02	7.99E-01
0.95 MEV	2.28E+01	5.44E-02	2.73E-02	3.66E+00
1.00 MEV	4.11E+01	5.44E-02	2.73E-02	3.66E+00
1.10 MEV	6.70E+01	1.35E-01	0.	3.43E+00
1.20 MEV	4.84E+01	1.35E-01	0.	3.43E+00
1.30 MEV	5.71E+01	9.21E-02	5.09E-02	7.50E+00
1.40 MEV	7.19E+01	9.21E-02	5.09E-02	7.50E+00
1.50 MEV	4.36E+01	6.82E-02	0.	1.35E+01
1.60 MEV	3.92E+01	6.82E-02	0.	1.35E+01
1.70 MEV	6.17E+01	1.29E-01	0.	4.71E+00
1.80 MEV	4.04E+01	1.29E-01	0.	4.71E+00
1.90 MEV	3.06E+01	5.53E-02	0.	6.00E+00
2.00 MEV	3.12E+01	5.53E-02	0.	6.00E+00
2.10 MEV	3.71E+01	3.47E-02	0.	7.86E+00
2.20 MEV	3.26E+01	3.47E-02	0.	7.86E+00
2.30 MEV	2.40E+01	3.33E-02	0.	5.54E+00
2.40 MEV	2.03E+01	3.33E-02	0.	5.54E+00
2.50 MEV	1.99E+01	2.81E-02	2.45E-02	9.15E+00
2.60 MEV	2.95E+01	2.81E-02	2.45E-02	9.15E+00
2.70 MEV	2.04E+01	4.40E-02	0.	7.25E+00
2.80 MEV	1.66E+01	4.40E-02	0.	7.25E+00
2.90 MEV	2.72E+01	2.94E-02	0.	4.98E+00
3.00 MEV	2.50E+01	2.94E-02	0.	4.98E+00
3.20 MEV	5.21E+01	1.55E-02	0.	1.24E+01
3.40 MEV	3.31E+01	1.55E-02	0.	1.24E+01
3.60 MEV	3.26E+01	2.16E-02	0.	9.08E+00
3.80 MEV	3.18E+01	2.16E-02	0.	9.08E+00
4.00 MEV	2.75E+01	2.73E-02	0.	5.73E+00

INITIAL SPECTRUM AT 0.60-1.00 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.29E+01	2.73E-02	0.	5.73E+00
4.40 MEV	1.77E+01	8.35E-02	0.	8.53E+00
4.60 MEV	2.11E+01	8.35E-02	0.	8.53E+00
4.80 MEV	1.66E+01	4.03E-02	4.54E-02	4.12E+00
5.00 MEV	1.46E+01	4.03E-02	4.54E-02	4.12E+00
5.50 MEV	4.32E+01	0.	2.54E-02	2.06E+01
6.00 MEV	4.30E+01	0.	2.54E-02	2.06E+01
6.50 MEV	4.96E+01	8.52E-02	0.	6.97E+00
7.00 MEV	3.95E+01	8.52E-02	0.	6.97E+00
7.50 MEV	2.23E+01	1.38E-02	0.	3.74E+00
8.00 MEV	4.22E+01	1.38E-02	0.	3.74E+00
8.50 MEV	3.49E+01	2.76E-02	2.27E-02	2.73E+00
9.00 MEV	4.26E+01	2.76E-02	2.27E-02	2.73E+00
9.50 MEV	1.68E+01	1.38E-02	0.	5.17E+01
10.00 MEV	1.96E+01	1.38E-02	0.	5.17E+01
11.00 MEV	7.41E+01	0.	0.	1.94E+00
12.00 MEV	3.72E+01	0.	0.	1.94E+00
13.00 MEV	4.50E+01	0.	0.	1.43E+00
14.00 MEV	3.75E+01	0.	0.	1.43E+00
15.00 MEV	2.75E+01	0.	0.	1.75E-02
16.00 MEV	2.25E+01	0.	0.	1.75E-02
17.00 MEV	3.00E+01	0.	0.	0.
18.00 MEV	2.25E+01	0.	0.	0.
19.00 MEV	1.25E+01	0.	0.	0.
20.00 MEV	1.50E+01	0.	0.	0.
21.00 MEV	1.75E+01	0.	0.	0.
22.00 MEV	1.75E+01	0.	0.	0.
23.00 MEV	1.00E+01	0.	0.	0.
24.00 MEV	5.00E+00	0.	0.	0.
25.00 MEV	1.00E+01	0.	0.	0.
26.00 MEV	7.50E+00	0.	0.	0.
27.00 MEV	5.00E+00	0.	0.	0.
28.00 MEV	2.50E+00	0.	0.	0.
29.00 MEV	5.00E+00	0.	0.	0.
30.00 MEV	5.00E+00	0.	0.	0.
32.00 MEV	2.50E+00	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	2.50E+00	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
NAVE, E(MEV)	9.92	4.16	5.06	5.26

1 INITIAL SPECTRUM AT 1.00-2.00 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	6.60E-01
0.10 MEV	8.50E+02	0.	0.	6.60E-01
0.15 MEV	3.30E+02	5.38E-03	0.	2.89E+00
0.20 MEV	2.52E+02	5.38E-03	0.	2.89E+00
0.25 MEV	1.78E+02	1.69E-02	8.41E-03	2.40E+00
0.30 MEV	1.55E+02	1.69E-02	8.41E-03	2.40E+00
0.35 MEV	1.11E+02	1.56E-02	3.74E-03	8.96E-01
0.40 MEV	1.03E+02	1.56E-02	3.74E-03	8.96E-01
0.45 MEV	6.76E+01	2.92E-02	0.	1.34E+00
0.50 MEV	8.05E+01	2.92E-02	0.	1.34E+00
0.55 MEV	7.40E+01	7.25E-02	0.	1.84E+00
0.60 MEV	7.79E+01	7.25E-02	0.	1.84E+00
0.65 MEV	5.45E+01	2.89E-02	0.	2.43E+00
0.70 MEV	5.89E+01	2.89E-02	0.	2.43E+00
0.75 MEV	5.62E+01	5.80E-02	0.	1.79E+00
0.80 MEV	4.35E+01	5.80E-02	0.	1.79E+00
0.85 MEV	3.54E+01	6.01E-02	0.	2.59E+00
0.90 MEV	4.04E+01	6.01E-02	0.	2.59E+00
0.95 MEV	4.48E+01	3.75E-02	0.	3.32E+00
1.00 MEV	3.79E+01	3.75E-02	0.	3.32E+00
1.10 MEV	6.54E+01	1.54E-01	1.09E-02	6.17E+00
1.20 MEV	5.32E+01	1.54E-01	1.09E-02	6.17E+00
1.30 MEV	5.80E+01	9.48E-02	2.85E-02	4.43E+00
1.40 MEV	5.23E+01	9.48E-02	2.85E-02	4.43E+00
1.50 MEV	5.39E+01	1.09E-01	9.93E-03	4.79E+00
1.60 MEV	5.75E+01	1.09E-01	9.93E-03	4.79E+00
1.70 MEV	4.65E+01	7.72E-02	2.16E-02	9.13E+00
1.80 MEV	4.13E+01	7.72E-02	2.16E-02	9.13E+00
1.90 MEV	2.99E+01	6.90E-02	1.09E-02	4.37E+00
2.00 MEV	3.31E+01	6.90E-02	1.09E-02	4.37E+00
2.10 MEV	3.31E+01	6.10E-02	1.08E-02	8.54E+00
2.20 MEV	2.65E+01	6.10E-02	1.08E-02	8.54E+00
2.30 MEV	2.62E+01	1.03E+00	8.48E-03	9.92E+00
2.40 MEV	2.49E+01	1.03E+00	8.48E-03	9.92E+00
2.50 MEV	2.09E+01	4.68E-02	2.13E-02	6.94E+00
2.60 MEV	2.80E+01	4.68E-02	2.13E-02	6.94E+00
2.70 MEV	1.57E+01	5.31E-01	7.93E-03	8.14E+00
2.80 MEV	2.50E+01	5.31E-01	7.93E-03	8.14E+00
2.90 MEV	2.51E+01	2.20E-02	0.	8.73E+00
3.00 MEV	2.06E+01	2.20E-02	0.	8.73E+00
3.20 MEV	4.00E+01	4.22E-02	5.63E-03	1.40E+01
3.40 MEV	4.24E+01	4.22E-02	5.63E-03	1.40E+01
3.60 MEV	3.54E+01	2.99E-02	1.08E-02	1.26E+01
3.80 MEV	2.34E+01	2.99E-02	1.08E-02	1.26E+01
4.00 MEV	2.17E+01	2.18E-02	0.	8.55E+00

1 INITIAL SPECTRUM AT 1.00-2.00 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BF NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.69E+01	2.18E-02	0.	8.55E+00
4.40 MEV	3.08E+01	5.17E-01	1.02E-02	5.91E+00
4.60 MEV	3.30E+01	5.17E-01	1.02E-02	5.91E+00
4.80 MEV	2.51E+01	5.27E-01	0.	7.35E+00
5.00 MEV	2.28E+01	5.27E-01	0.	7.35E+00
5.50 MEV	6.30E+01	1.52E-02	1.08E-02	1.23E+01
6.00 MEV	3.63E+01	1.52E-02	1.08E-02	1.23E+01
6.50 MEV	4.91E+01	1.01E+00	1.06E-02	7.44E+00
7.00 MEV	5.04E+01	1.01E+00	1.06E-02	7.44E+00
7.50 MEV	4.10E+01	4.48E-02	0.	4.67E+00
8.00 MEV	3.26E+01	4.48E-02	0.	4.67E+00
8.50 MEV	3.64E+01	0.	1.02E-02	1.63E+00
9.00 MEV	2.98E+01	0.	1.02E-02	1.63E+00
9.50 MEV	2.05E+01	1.15E-02	0.	1.17E+00
10.00 MEV	1.78E+01	1.15E-02	0.	1.17E+00
11.00 MEV	5.35E+01	5.00E-01	0.	2.08E+00
12.00 MEV	5.39E+01	5.00E-01	0.	2.08E+00
13.00 MEV	4.49E+01	0.	0.	1.29E-01
14.00 MEV	3.57E+01	0.	0.	1.29E-01
15.00 MEV	2.90E+01	0.	0.	5.12E-01
16.00 MEV	2.70E+01	0.	0.	5.12E-01
17.00 MEV	3.00E+01	0.	0.	1.21E-03
18.00 MEV	2.10E+01	0.	0.	1.21E-03
19.00 MEV	2.30E+01	0.	0.	0.
20.00 MEV	1.40E+01	0.	0.	0.
21.00 MEV	1.20E+01	0.	0.	0.
22.00 MEV	1.90E+01	0.	0.	0.
23.00 MEV	1.20E+01	0.	0.	0.
24.00 MEV	5.00E+00	0.	0.	0.
25.00 MEV	9.00E+00	0.	0.	0.
26.00 MEV	9.00E+00	0.	0.	0.
27.00 MEV	6.00E+00	0.	0.	0.
28.00 MEV	3.00E+00	0.	0.	0.
29.00 MEV	2.00E+00	0.	0.	0.
30.00 MEV	3.00E+00	0.	0.	0.
32.00 MEV	3.00E+00	0.	0.	0.
34.00 MEV	3.00E+00	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	1.00E+00	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.

0AVE, E(MEV)

9.06

7.03

4.37

5.06

INITIAL SPECTRUM AT 2.00-4.00 CM, FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	6.73E-01
0.10 MEV	9.23E+02	0.	0.	6.73E-01
0.15 MEV	3.65E+02	1.55E-02	0.	1.71E+00
0.20 MEV	2.39E+02	1.55E-02	0.	1.71E+00
0.25 MEV	2.17E+02	1.68E-02	1.50E-02	1.74E+00
0.30 MEV	1.63E+02	1.68E-02	1.50E-02	1.74E+00
0.35 MEV	1.26E+02	2.32E-02	5.00E-03	2.67E+00
0.40 MEV	1.07E+02	2.32E-02	5.00E-03	2.67E+00
0.45 MEV	1.01E+02	4.14E-02	5.89E-03	2.28E+00
0.50 MEV	9.17E+01	4.14E-02	5.89E-03	2.28E+00
0.55 MEV	8.04E+01	4.75E-02	1.15E-03	2.60E+00
0.60 MEV	7.08E+01	4.75E-02	1.15E-03	2.60E+00
0.65 MEV	7.26E+01	4.56E-02	0.	2.45E+00
0.70 MEV	5.61E+01	4.56E-02	0.	2.45E+00
0.75 MEV	5.63E+01	7.29E-02	0.	3.23E+00
0.80 MEV	5.26E+01	7.29E-02	0.	3.23E+00
0.85 MEV	5.25E+01	3.92E-02	0.	2.80E+00
0.90 MEV	4.26E+01	3.92E-02	0.	2.80E+00
0.95 MEV	4.89E+01	5.47E-02	0.	2.96E+00
1.00 MEV	3.75E+01	5.47E-02	0.	2.96E+00
1.10 MEV	5.86E+01	1.25E-01	1.16E-02	5.80E+00
1.20 MEV	7.78E+01	1.25E-01	1.16E-02	5.80E+00
1.30 MEV	5.98E+01	3.89E-01	0.	6.91E+00
1.40 MEV	4.84E+01	3.89E-01	0.	6.91E+00
1.50 MEV	5.21E+01	1.10E-01	1.48E-02	7.76E+00
1.60 MEV	5.82E+01	1.10E-01	1.48E-02	7.76E+00
1.70 MEV	4.52E+01	9.43E-02	0.	6.52E+00
1.80 MEV	4.54E+01	9.43E-02	0.	6.52E+00
1.90 MEV	3.76E+01	6.97E-02	1.42E-02	9.05E+00
2.00 MEV	4.64E+01	6.97E-02	1.42E-02	9.05E+00
2.10 MEV	3.60E+01	4.39E-02	1.08E-02	9.91E+00
2.20 MEV	2.88E+01	4.39E-02	1.08E-02	9.91E+00
2.30 MEV	2.32E+01	2.81E-01	0.	1.17E+01
2.40 MEV	3.84E+01	2.81E-01	0.	1.17E+01
2.50 MEV	2.60E+01	2.87E-02	0.	9.58E+00
2.60 MEV	2.70E+01	2.87E-02	0.	9.58E+00
2.70 MEV	3.11E+01	2.70E-01	2.10E-02	8.95E+00
2.80 MEV	2.14E+01	2.70E-01	2.10E-02	8.95E+00
2.90 MEV	2.49E+01	3.52E-02	9.88E-03	5.46E+00
3.00 MEV	2.24E+01	3.52E-02	9.88E-03	5.46E+00
3.20 MEV	3.86E+01	2.21E-02	2.07E-02	1.68E+01
3.40 MEV	4.14E+01	2.21E-02	2.07E-02	1.68E+01
3.60 MEV	3.72E+01	2.86E-01	3.49E-03	1.33E+01
3.80 MEV	3.53E+01	2.86E-01	3.49E-03	1.33E+01
4.00 MEV	3.26E+01	5.17E-02	1.27E-02	1.10E+01

INITIAL SPECTRUM AT 2.00-4.00 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	2.41E+01	5.17E-02	1.27E-02	1.10E+01
4.40 MEV	3.20E+01	2.96E-02	1.85E-02	9.27E+00
4.60 MEV	2.86E+01	2.90E-02	1.85E-02	9.27E+00
4.80 MEV	2.02E+01	2.82E-01	1.27E-02	6.69E+00
5.00 MEV	2.48E+01	2.82E-01	1.27E-02	6.69E+00
5.50 MEV	5.57E+01	4.81E-02	8.50E-03	1.07E+01
6.00 MEV	5.04E+01	4.81E-02	8.50E-03	1.07E+01
6.50 MEV	4.36E+01	4.80E-02	1.27E-02	7.62E+00
7.00 MEV	3.34E+01	4.80E-02	1.27E-02	7.62E+00
7.50 MEV	3.53E+01	2.93E-02	1.41E-02	4.63E+00
8.00 MEV	2.99E+01	2.93E-02	1.41E-02	4.63E+00
8.50 MEV	2.75E+01	2.67E-02	1.48E-02	2.51E+00
9.00 MEV	2.88E+01	2.67E-02	1.48E-02	2.51E+00
9.50 MEV	2.67E+01	1.55E-02	6.11E-03	1.79E+00
10.00 MEV	3.02E+01	1.55E-02	6.11E-03	1.79E+00
11.00 MEV	5.17E+01	1.10E-02	4.24E-03	1.67E+00
12.00 MEV	3.73E+01	1.10E-02	4.24E-03	1.67E+00
13.00 MEV	3.13E+01	0.	0.	3.74E-01
14.00 MEV	3.85E+01	0.	0.	3.74E-01
15.00 MEV	2.39E+01	0.	0.	2.73E-01
16.00 MEV	2.70E+01	0.	0.	2.73E-01
17.00 MEV	2.55E+01	0.	0.	2.50E-01
18.00 MEV	2.70E+01	0.	0.	2.50E-01
19.00 MEV	1.75E+01	0.	0.	0.
20.00 MEV	1.65E+01	0.	0.	0.
21.00 MEV	1.50E+01	0.	0.	0.
22.00 MEV	1.45E+01	0.	0.	0.
23.00 MEV	1.25E+01	0.	0.	0.
24.00 MEV	6.00E+00	0.	0.	0.
25.00 MEV	6.50E+00	0.	0.	0.
26.00 MEV	5.00E+00	0.	0.	0.
27.00 MEV	6.50E+00	0.	0.	0.
28.00 MEV	2.50E+00	0.	0.	0.
29.00 MEV	3.50E+00	0.	0.	0.
30.00 MEV	2.50E+00	0.	0.	0.
32.00 MEV	3.00E+00	0.	0.	0.
34.00 MEV	3.00E+00	0.	0.	0.
36.00 MEV	5.00E-01	0.	0.	0.
38.00 MEV	5.00E-01	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	5.00E-01	0.	0.	0.
44.00 MEV	5.00E-01	0.	0.	0.
46.00 MEV	5.00E-01	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
DAVE, E(MEV)	9.61	3.96	5.91	4.96

1 INITIAL SPECTRUM AT 4.00-6.00 CM. FOR ICRU MUSCLE TISSUE

50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	2.89E-03	0.	7.99E-01
0.10 MEV	9.08E+02	2.89E-03	0.	7.99E-01
0.15 MEV	3.47E+02	5.85E-03	0.	1.13E+00
0.20 MEV	2.59E+02	5.85E-03	0.	1.13E+00
0.25 MEV	1.89E+02	1.31E-02	5.38E-03	1.82E+00
0.30 MEV	1.45E+02	1.31E-02	5.38E-03	1.82E+00
0.35 MEV	1.28E+02	2.46E-02	0.	1.96E+00
0.40 MEV	8.74E+01	2.46E-02	0.	1.96E+00
0.45 MEV	9.36E+01	6.24E-02	0.	2.02E+00
0.50 MEV	7.93E+01	6.24E-02	0.	2.02E+00
0.55 MEV	6.92E+01	5.92E-02	5.13E-03	2.69E+00
0.60 MEV	6.58E+01	5.92E-02	5.13E-03	2.69E+00
0.65 MEV	5.40E+01	4.92E-02	0.	2.01E+00
0.70 MEV	5.82E+01	4.92E-02	0.	2.01E+00
0.75 MEV	5.33E+01	4.57E-02	0.	2.45E+00
0.80 MEV	5.61E+01	4.57E-02	0.	2.45E+00
0.85 MEV	4.12E+01	5.15E-02	0.	2.02E+00
0.90 MEV	3.71E+01	5.15E-02	0.	2.02E+00
0.95 MEV	4.11E+01	5.73E-02	1.05E-03	2.64E+00
1.00 MEV	3.38E+01	5.73E-02	1.05E-03	2.64E+00
1.10 MEV	7.74E+01	1.17E-01	5.57E-03	5.24E+00
1.20 MEV	7.34E+01	1.17E-01	5.57E-03	5.24E+00
1.30 MEV	6.17E+01	1.07E-01	1.63E-02	5.96E+00
1.40 MEV	6.03E+01	1.07E-01	1.63E-02	5.96E+00
1.50 MEV	6.62E+01	1.22E-01	2.03E-02	5.53E+00
1.60 MEV	5.48E+01	1.22E-01	2.03E-02	5.53E+00
1.70 MEV	5.01E+01	7.02E-02	5.43E-03	5.47E+00
1.80 MEV	4.25E+01	7.02E-02	5.43E-03	5.47E+00
1.90 MEV	4.76E+01	6.88E-02	2.09E-02	6.80E+00
2.00 MEV	3.40E+01	6.88E-02	2.09E-02	6.80E+00
2.10 MEV	3.78E+01	5.90E-02	1.09E-02	7.42E+00
2.20 MEV	3.50E+01	5.90E-02	1.09E-02	7.42E+00
2.30 MEV	2.82E+01	3.44E-02	5.18E-03	7.29E+00
2.40 MEV	2.09E+01	3.44E-02	5.18E-03	7.29E+00
2.50 MEV	3.96E+01	3.01E-02	2.54E-01	6.60E+00
2.60 MEV	3.02E+01	3.01E-02	2.54E-01	6.60E+00
2.70 MEV	2.90E+01	2.57E-02	0.	6.65E+00
2.80 MEV	2.13E+01	2.57E-02	0.	6.65E+00
2.90 MEV	2.43E+01	2.60E-02	7.37E-03	7.10E+00
3.00 MEV	2.20E+01	2.60E-02	7.37E-03	7.10E+00
3.20 MEV	4.20E+01	2.95E-01	2.12E-02	1.23E+01
3.40 MEV	4.11E+01	2.95E-01	2.12E-02	1.23E+01
3.60 MEV	3.01E+01	3.56E-02	2.12E-02	1.29E+01
3.80 MEV	3.41E+01	3.56E-02	2.12E-02	1.29E+01
4.00 MEV	2.97E+01	4.02E-02	1.34E-02	8.28E+00

INITIAL SPECTRUM AT 4.00-6.00 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	1.89E+01	4.02E-02	1.34E-02	8.28E+00
4.40 MEV	2.33E+01	2.94E-02	3.02E-02	1.08E+01
4.60 MEV	2.63E+01	2.94E-02	3.02E-02	1.08E+01
4.80 MEV	2.79E+01	4.14E-02	7.51E-03	7.18E+00
5.00 MEV	1.96E+01	4.14E-02	7.51E-03	7.18E+00
5.50 MEV	5.60E+01	5.38E-02	2.79E-01	9.58E+00
6.00 MEV	4.10E+01	5.38E-02	2.79E-01	9.58E+00
6.50 MEV	4.11E+01	7.11E-02	1.19E-02	6.60E+00
7.00 MEV	3.96E+01	7.11E-02	1.19E-02	6.60E+00
7.50 MEV	3.29E+01	3.95E-02	8.79E-03	4.59E+00
8.00 MEV	3.22E+01	3.95E-02	8.79E-03	4.59E+00
8.50 MEV	3.82E+01	1.83E-02	7.44E-03	2.11E+00
9.00 MEV	3.04E+01	1.83E-02	7.44E-03	2.11E+00
9.50 MEV	2.30E+01	6.69E-03	5.85E-03	2.30E+00
10.00 MEV	2.70E+01	6.69E-03	5.85E-03	2.30E+00
11.00 MEV	3.57E+01	1.31E-02	0.	2.10E+00
12.00 MEV	4.48E+01	1.31E-02	0.	2.10E+00
13.00 MEV	3.61E+01	1.81E-03	0.	8.81E-01
14.00 MEV	3.38E+01	1.81E-03	0.	8.81E-01
15.00 MEV	2.39E+01	0.	0.	1.38E-02
16.00 MEV	2.35E+01	0.	0.	1.38E-02
17.00 MEV	2.20E+01	0.	0.	0.
18.00 MEV	1.65E+01	0.	0.	0.
19.00 MEV	1.35E+01	0.	0.	0.
20.00 MEV	1.90E+01	0.	0.	0.
21.00 MEV	1.15E+01	0.	0.	0.
22.00 MEV	1.10E+01	0.	0.	0.
23.00 MEV	1.15E+01	0.	0.	0.
24.00 MEV	7.50E+00	0.	0.	0.
25.00 MEV	9.00E+00	0.	0.	0.
26.00 MEV	6.00E+00	0.	0.	0.
27.00 MEV	7.00E+00	0.	0.	0.
28.00 MEV	6.00E+00	0.	0.	0.
29.00 MEV	2.00E+00	0.	0.	0.
30.00 MEV	5.00E-01	0.	0.	0.
32.00 MEV	2.50E+00	0.	0.	0.
34.00 MEV	2.00E+00	0.	0.	0.
36.00 MEV	2.00E+00	0.	0.	0.
38.00 MEV	1.00E+00	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	5.00E-01	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	9.45	4.39	5.00	5.22

INITIAL SPECTRUM AT 6.00-10.0 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	4.00E-03	0.	1.19E+00
0.10 MEV	8.45E+02	4.06E-03	0.	1.19E+00
0.15 MEV	3.09E+02	2.82E-03	0.	2.25E+00
0.20 MEV	2.20E+02	2.82E-03	0.	2.25E+00
0.25 MEV	1.79E+02	8.18E-03	2.04E-03	2.11E+00
0.30 MEV	1.37E+02	8.18E-03	2.04E-03	2.11E+00
0.35 MEV	1.18E+02	2.62E-02	0.	2.14E+00
0.40 MEV	9.84E+01	2.62E-02	0.	2.14E+00
0.45 MEV	8.53E+01	3.75E-02	2.55E-03	2.28E+00
0.50 MEV	9.66E+01	3.75E-02	2.55E-03	2.28E+00
0.55 MEV	8.10E+01	3.30E-02	8.10E-03	1.64E+00
0.60 MEV	6.79E+01	3.30E-02	8.10E-03	1.64E+00
0.65 MEV	6.68E+01	4.03E-02	4.75E-03	2.06E+00
0.70 MEV	5.73E+01	4.03E-02	4.75E-03	2.06E+00
0.75 MEV	4.87E+01	3.97E-02	5.11E-03	2.06E+00
0.80 MEV	4.81E+01	3.97E-02	5.11E-03	2.06E+00
0.85 MEV	4.18E+01	3.96E-02	5.34E-03	2.18E+00
0.90 MEV	4.71E+01	3.96E-02	5.34E-03	2.18E+00
0.95 MEV	3.96E+01	4.63E-02	0.	2.31E+00
1.00 MEV	3.82E+01	4.63E-02	0.	2.31E+00
1.10 MEV	7.38E+01	1.13E-01	7.11E-03	5.71E+00
1.20 MEV	6.61E+01	1.13E-01	7.11E-03	5.71E+00
1.30 MEV	5.74E+01	1.10E-01	3.30E-03	5.11E+00
1.40 MEV	5.72E+01	1.10E-01	3.30E-03	5.11E+00
1.50 MEV	5.01E+01	9.79E-02	7.66E-03	5.21E+00
1.60 MEV	4.35E+01	9.79E-02	7.66E-03	5.21E+00
1.70 MEV	4.74E+01	8.54E-02	1.35E-01	6.44E+00
1.80 MEV	3.96E+01	8.54E-02	1.35E-01	6.44E+00
1.90 MEV	3.72E+01	6.22E-02	1.03E-02	5.80E+00
2.00 MEV	3.30E+01	6.22E-02	1.03E-02	5.80E+00
2.10 MEV	4.39E+01	3.98E-02	5.03E-03	6.26E+00
2.20 MEV	3.36E+01	3.98E-02	5.03E-03	6.26E+00
2.30 MEV	3.25E+01	2.98E-02	7.62E-03	6.17E+00
2.40 MEV	3.05E+01	2.98E-02	7.62E-03	6.17E+00
2.50 MEV	2.69E+01	4.25E-02	2.37E-03	7.14E+00
2.60 MEV	2.55E+01	4.25E-02	2.37E-03	7.14E+00
2.70 MEV	2.34E+01	2.22E-02	8.43E-03	6.66E+00
2.80 MEV	2.53E+01	2.22E-02	8.43E-03	6.66E+00
2.90 MEV	2.34E+01	1.84E-02	6.95E-03	6.53E+00
3.00 MEV	1.85E+01	1.84E-02	6.95E-03	6.53E+00
3.20 MEV	3.38E+01	1.65E-01	7.29E-03	1.25E+01
3.40 MEV	3.43E+01	1.65E-01	7.29E-03	1.25E+01
3.60 MEV	3.38E+01	2.01E-02	1.10E-02	1.15E+01
3.80 MEV	3.36E+01	2.01E-02	1.10E-02	1.15E+01
4.00 MEV	2.99E+01	2.62E-02	1.09E-02	8.97E+00

1 INITIAL SPECTRUM AT 6.00-10.0 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.01E+01	2.62E-02	1.09E-02	8.97E+00
4.40 MEV	2.85E+01	2.65E-01	1.38E-02	7.44E+00
4.60 MEV	2.50E+01	2.65E-01	1.38E-02	7.44E+00
4.80 MEV	2.19E+01	2.40E-02	1.31E-01	5.09E+00
5.00 MEV	2.38E+01	2.40E-02	1.31E-01	5.09E+00
5.50 MEV	4.60E+01	5.61E-02	1.82E-02	9.58E+00
6.00 MEV	4.22E+01	5.61E-02	1.82E-02	9.58E+00
6.50 MEV	4.13E+01	2.78E-01	1.25E-02	5.21E+00
7.00 MEV	4.16E+01	2.78E-01	1.25E-02	5.21E+00
7.50 MEV	3.63E+01	2.47E-02	7.45E-03	3.12E+00
8.00 MEV	3.03E+01	2.47E-02	7.45E-03	3.12E+00
8.50 MEV	2.73E+01	2.09E-02	3.52E-03	1.90E+00
9.00 MEV	2.63E+01	2.09E-02	3.52E-03	1.90E+00
9.50 MEV	2.56E+01	1.26E-02	1.12E-03	1.33E+00
10.00 MEV	2.07E+01	1.26E-02	1.12E-03	1.33E+00
11.00 MEV	4.27E+01	1.35E-01	0.	1.24E+00
12.00 MEV	4.06E+01	1.35E-01	0.	1.24E+00
13.00 MEV	3.61E+01	0.	0.	2.41E-01
14.00 MEV	3.10E+01	0.	0.	2.41E-01
15.00 MEV	3.00E+01	0.	0.	3.86E-01
16.00 MEV	2.01E+01	0.	0.	3.86E-01
17.00 MEV	1.99E+01	0.	0.	3.10E-04
18.00 MEV	1.75E+01	0.	0.	3.10E-04
19.00 MEV	1.22E+01	0.	0.	0.
20.00 MEV	1.15E+01	0.	0.	0.
21.00 MEV	1.55E+01	0.	0.	0.
22.00 MEV	1.03E+01	0.	0.	0.
23.00 MEV	7.75E+00	0.	0.	0.
24.00 MEV	9.25E+00	0.	0.	0.
25.00 MEV	8.75E+00	0.	0.	0.
26.00 MEV	4.75E+00	0.	0.	0.
27.00 MEV	3.50E+00	0.	0.	0.
28.00 MEV	3.50E+00	0.	0.	0.
29.00 MEV	3.50E+00	0.	0.	0.
30.00 MEV	1.75E+00	0.	0.	0.
32.00 MEV	1.25E+00	0.	0.	0.
34.00 MEV	2.00E+00	0.	0.	0.
36.00 MEV	1.25E+00	0.	0.	0.
38.00 MEV	5.00E-01	0.	0.	0.
40.00 MEV	1.00E+00	0.	0.	0.
42.00 MEV	5.00E-01	0.	0.	0.
44.00 MEV	2.50E-01	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE. E(MEV)	9.36	6.50	4.34	4.88

1 INITIAL SPECTRUM AT 10.0-14.0 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	7.23E-01
0.10 MEV	7.34E+02	0.	0.	7.23E-01
0.15 MEV	2.83E+02	1.44E-03	0.	1.11E+00
0.20 MEV	2.15E+02	1.44E-03	0.	1.11E+00
0.25 MEV	1.49E+02	1.43E-02	0.	1.47E+00
0.30 MEV	1.31E+02	1.43E-02	0.	1.47E+00
0.35 MEV	1.03E+02	1.90E-02	2.14E-03	1.83E+00
0.40 MEV	9.52E+01	1.90E-02	2.14E-03	1.83E+00
0.45 MEV	7.06E+01	2.63E-02	7.84E-03	1.60E+00
0.50 MEV	7.84E+01	2.63E-02	7.84E-03	1.60E+00
0.55 MEV	6.44E+01	2.07E-02	5.13E-03	1.45E+00
0.60 MEV	5.27E+01	2.07E-02	5.13E-03	1.45E+00
0.65 MEV	4.77E+01	4.20E-02	1.25E-01	1.85E+00
0.70 MEV	4.82E+01	4.20E-02	1.25E-01	1.85E+00
0.75 MEV	3.97E+01	4.75E-02	6.56E-03	1.34E+00
0.80 MEV	3.99E+01	4.75E-02	6.56E-03	1.34E+00
0.85 MEV	3.71E+01	3.36E-02	3.61E-03	1.73E+00
0.90 MEV	3.23E+01	3.36E-02	3.61E-03	1.73E+00
0.95 MEV	3.41E+01	1.56E-01	8.19E-03	1.60E+00
1.00 MEV	3.11E+01	1.56E-01	8.19E-03	1.60E+00
1.10 MEV	5.96E+01	8.35E-02	2.74E-03	4.31E+00
1.20 MEV	5.34E+01	8.35E-02	2.74E-03	4.31E+00
1.30 MEV	5.41E+01	2.19E-01	1.80E-03	4.44E+00
1.40 MEV	4.83E+01	2.19E-01	1.80E-03	4.44E+00
1.50 MEV	4.25E+01	9.79E-02	7.45E-03	4.74E+00
1.60 MEV	3.70E+01	9.79E-02	7.45E-03	4.74E+00
1.70 MEV	4.17E+01	4.84E-02	0.	5.87E+00
1.80 MEV	3.45E+01	4.84E-02	0.	5.87E+00
1.90 MEV	3.56E+01	1.73E-01	0.	4.96E+00
2.00 MEV	3.53E+01	1.73E-01	0.	4.96E+00
2.10 MEV	3.31E+01	1.62E-01	7.39E-03	4.78E+00
2.20 MEV	2.52E+01	1.62E-01	7.39E-03	4.78E+00
2.30 MEV	2.45E+01	2.04E-02	2.32E-03	5.35E+00
2.40 MEV	2.44E+01	2.04E-02	2.32E-03	5.35E+00
2.50 MEV	2.48E+01	1.58E-02	5.18E-03	5.94E+00
2.60 MEV	2.57E+01	1.58E-02	5.18E-03	5.94E+00
2.70 MEV	2.04E+01	2.48E-02	1.07E-02	5.28E+00
2.80 MEV	2.08E+01	2.48E-02	1.07E-02	5.28E+00
2.90 MEV	1.85E+01	1.41E-02	1.13E-02	5.14E+00
3.00 MEV	2.03E+01	1.41E-02	1.13E-02	5.14E+00
3.20 MEV	2.89E+01	2.58E-02	7.92E-03	9.46E+00
3.40 MEV	3.05E+01	2.58E-02	7.92E-03	9.46E+00
3.60 MEV	2.67E+01	1.74E-02	1.71E-03	8.98E+00
3.80 MEV	3.07E+01	1.74E-02	1.71E-03	8.98E+00
4.00 MEV	2.33E+01	2.69E-01	6.55E-03	5.61E+00

INITIAL SPECTRUM AT 10.0-14.0 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	2.57E+01	2.69E-01	6.55E-03	5.61E+00
4.40 MEV	2.47E+01	1.17E-02	4.61E-03	4.97E+00
4.60 MEV	2.18E+01	1.17E-02	4.61E-03	4.97E+00
4.80 MEV	1.91E+01	1.15E-02	3.97E-03	4.27E+00
5.00 MEV	1.82E+01	1.15E-02	3.97E-03	4.27E+00
5.50 MEV	4.43E+01	3.11E-02	1.23E-02	7.66E+00
6.00 MEV	3.68E+01	3.11E-02	1.23E-02	7.66E+00
6.50 MEV	3.25E+01	2.32E-02	2.41E-03	4.30E+00
7.00 MEV	2.81E+01	2.32E-02	2.41E-03	4.30E+00
7.50 MEV	2.89E+01	1.81E-02	2.67E-03	2.75E+00
8.00 MEV	2.62E+01	1.81E-02	2.67E-03	2.75E+00
8.50 MEV	2.65E+01	1.25E-02	0.	1.42E+00
9.00 MEV	2.06E+01	1.25E-02	0.	1.42E+00
9.50 MEV	1.90E+01	7.20E-03	1.14E-03	9.67E-01
10.00 MEV	1.94E+01	7.20E-03	1.14E-03	9.67E-01
11.00 MEV	3.21E+01	5.08E-03	1.18E-03	1.17E+00
12.00 MEV	2.97E+01	5.08E-03	1.18E-03	1.17E+00
13.00 MEV	3.16E+01	9.06E-04	0.	1.94E-01
14.00 MEV	2.74E+01	9.06E-04	0.	1.94E-01
15.00 MEV	2.37E+01	0.	0.	1.25E-02
16.00 MEV	1.79E+01	0.	0.	1.25E-02
17.00 MEV	1.92E+01	0.	0.	1.25E-01
18.00 MEV	1.57E+01	0.	0.	1.25E-01
19.00 MEV	1.10E+01	0.	0.	1.25E-01
20.00 MEV	1.08E+01	0.	0.	1.25E-01
21.00 MEV	1.15E+01	0.	0.	0.
22.00 MEV	1.23E+01	0.	0.	0.
23.00 MEV	8.75E+00	0.	0.	0.
24.00 MEV	4.50E+00	0.	0.	0.
25.00 MEV	4.00E+00	0.	0.	0.
26.00 MEV	3.00E+00	0.	0.	0.
27.00 MEV	3.75E+00	0.	0.	0.
28.00 MEV	1.75E+00	0.	0.	0.
29.00 MEV	1.75E+00	0.	0.	0.
30.00 MEV	1.25E+00	0.	0.	0.
32.00 MEV	2.50E+00	0.	0.	0.
34.00 MEV	1.00E+00	0.	0.	0.
36.00 MEV	7.50E-01	0.	0.	0.
38.00 MEV	2.50E-01	0.	0.	0.
40.00 MEV	5.00E-01	0.	0.	0.
42.00 MEV	5.00E-01	0.	0.	0.
44.00 MEV	2.50E-01	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.

0AVE, E(MEV)

9.19

3.63

3.79

4.96

INITIAL SPECTRUM AT 14.0-40.0 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON RE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	7.82E-04	0.	5.70E-01
0.10 MEV	3.80E+02	7.82E-04	0.	5.70E-01
0.15 MEV	1.46E+02	5.77E-03	0.	6.51E-01
0.20 MEV	1.02E+02	5.77E-03	0.	6.51E-01
0.25 MEV	7.90E+01	5.27E-03	3.27E-04	7.69E-01
0.30 MEV	6.49E+01	5.27E-03	3.27E-04	7.69E-01
0.35 MEV	5.56E+01	9.38E-03	1.73E-03	9.32E-01
0.40 MEV	4.64E+01	9.38E-03	1.73E-03	9.32E-01
0.45 MEV	4.25E+01	1.24E-02	2.26E-03	8.34E-01
0.50 MEV	3.61E+01	1.24E-02	2.26E-03	8.34E-01
0.55 MEV	3.19E+01	1.66E-02	9.69E-04	1.00E+00
0.60 MEV	2.86E+01	1.66E-02	9.69E-04	1.00E+00
0.65 MEV	2.81E+01	1.94E-02	7.82E-04	9.37E-01
0.70 MEV	2.61E+01	1.94E-02	7.82E-04	9.37E-01
0.75 MEV	2.55E+01	4.09E-02	1.95E-03	8.70E-01
0.80 MEV	2.04E+01	4.09E-02	1.95E-03	8.70E-01
0.85 MEV	2.18E+01	1.71E-02	1.21E-03	9.59E-01
0.90 MEV	1.85E+01	1.71E-02	1.21E-03	9.59E-01
0.95 MEV	1.86E+01	4.19E-02	2.07E-03	1.06E+00
1.00 MEV	1.87E+01	4.19E-02	2.07E-03	1.06E+00
1.10 MEV	3.13E+01	6.41E-02	2.34E-02	1.91E+00
1.20 MEV	2.98E+01	6.41E-02	2.34E-02	1.91E+00
1.30 MEV	2.68E+01	4.19E-02	2.50E-03	2.16E+00
1.40 MEV	2.69E+01	4.19E-02	2.50E-03	2.16E+00
1.50 MEV	2.37E+01	5.92E-02	3.74E-03	2.71E+00
1.60 MEV	2.24E+01	5.92E-02	3.74E-03	2.71E+00
1.70 MEV	1.80E+01	4.83E-02	3.44E-03	2.55E+00
1.80 MEV	1.99E+01	4.83E-02	3.44E-03	2.55E+00
1.90 MEV	1.75E+01	4.27E-02	3.88E-03	2.67E+00
2.00 MEV	1.76E+01	4.27E-02	3.88E-03	2.67E+00
2.10 MEV	1.69E+01	1.95E-02	2.20E-02	2.88E+00
2.20 MEV	1.66E+01	1.95E-02	2.20E-02	2.88E+00
2.30 MEV	1.46E+01	3.38E-02	2.88E-03	3.06E+00
2.40 MEV	1.39E+01	3.38E-02	2.88E-03	3.06E+00
2.50 MEV	1.34E+01	3.12E-02	2.32E-02	2.84E+00
2.60 MEV	1.13E+01	3.12E-02	2.32E-02	2.84E+00
2.70 MEV	1.12E+01	1.03E-02	2.07E-02	3.06E+00
2.80 MEV	1.19E+01	1.03E-02	2.07E-02	3.06E+00
2.90 MEV	1.01E+01	4.49E-02	2.07E-02	2.79E+00
3.00 MEV	1.03E+01	4.49E-02	2.07E-02	2.79E+00
3.20 MEV	1.81E+01	9.04E-02	2.46E-02	5.55E+00
3.40 MEV	1.80E+01	9.04E-02	2.46E-02	5.55E+00
3.60 MEV	1.56E+01	3.18E-02	2.83E-03	4.40E+00
3.80 MEV	1.33E+01	3.18E-02	2.83E-03	4.40E+00
4.00 MEV	1.56E+01	4.56E-02	4.12E-03	3.87E+00

1 INITIAL SPECTRUM AT 14.0-40.0 CM. FOR ICRU MUSCLE TISSUE
50 MEV D+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	1.31E+01	4.56E-02	4.12E-03	3.87E+00
4.40 MEV	1.29E+01	1.01E-02	4.01E-03	3.32E+00
4.60 MEV	1.18E+01	1.01E-02	4.01E-03	3.32E+00
4.80 MEV	1.07E+01	5.42E-03	2.16E-03	2.47E+00
5.00 MEV	9.80E+00	5.42E-03	2.16E-03	2.47E+00
5.50 MEV	2.26E+01	5.50E-02	7.31E-03	4.28E+00
6.00 MEV	2.22E+01	5.50E-02	7.31E-03	4.28E+00
6.50 MEV	1.02E+01	1.41E-02	5.16E-03	2.34E+00
7.00 MEV	1.62E+01	1.41E-02	5.16E-03	2.34E+00
7.50 MEV	1.45E+01	1.05E-02	1.84E-03	1.61E+00
8.00 MEV	1.58E+01	1.05E-02	1.84E-03	1.61E+00
8.50 MEV	1.45E+01	4.65E-02	1.15E-03	9.58E-01
9.00 MEV	1.26E+01	4.65E-02	1.15E-03	9.58E-01
9.50 MEV	1.06E+01	2.50E-02	8.91E-04	6.19E-01
10.00 MEV	9.58E+00	2.50E-02	8.91E-04	6.19E-01
11.00 MEV	1.02E+01	2.62E-03	1.06E-03	7.96E-01
12.00 MEV	1.55E+01	2.62E-03	1.06E-03	7.98E-01
13.00 MEV	1.50E+01	1.39E-04	1.53E-04	3.86E-01
14.00 MEV	1.28E+01	1.39E-04	1.53E-04	3.86E-01
15.00 MEV	1.28E+01	0.	0.	2.49E-02
16.00 MEV	1.03E+01	0.	0.	2.49E-02
17.00 MEV	9.56E+00	0.	0.	1.93E-02
18.00 MEV	7.88E+00	0.	0.	1.93E-02
19.00 MEV	6.68E+00	0.	0.	3.85E-02
20.00 MEV	7.31E+00	0.	0.	3.85E-02
21.00 MEV	5.65E+00	0.	0.	0.
22.00 MEV	5.69E+00	0.	0.	0.
23.00 MEV	3.65E+00	0.	0.	0.
24.00 MEV	3.50E+00	0.	0.	0.
25.00 MEV	3.42E+00	0.	0.	0.
26.00 MEV	2.46E+00	0.	0.	0.
27.00 MEV	1.96E+00	0.	0.	0.
28.00 MEV	1.65E+00	0.	0.	0.
29.00 MEV	1.46E+00	0.	0.	0.
30.00 MEV	1.08E+00	0.	0.	0.
32.00 MEV	1.81E+00	0.	0.	0.
34.00 MEV	1.00E+00	0.	0.	0.
36.00 MEV	9.62E-01	0.	0.	0.
38.00 MEV	5.77E-01	0.	0.	0.
40.00 MEV	3.46E-01	0.	0.	0.
42.00 MEV	7.69E-02	0.	0.	0.
44.00 MEV	2.69E-01	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	9.62	4.87	4.02	5.20

1SLOWING DOWN SPECTRUM AT 0.00 CM, FOR SHONKA A-150 PLASTIC
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	1.74E+00	0.	0.	8.47E-04
0.15 MEV	1.32E+00	0.	0.	2.86E-04
0.20 MEV	2.15E-02	0.	0.	1.46E-03
0.25 MEV	6.44E-02	0.	0.	3.29E-04
0.30 MEV	9.52E-01	4.04E-05	0.	1.03E-03
0.35 MEV	2.76E-01	0.	0.	6.45E-04
0.40 MEV	2.91E+00	0.	0.	1.08E-03
0.45 MEV	5.58E-01	0.	0.	9.99E-04
0.50 MEV	1.06E+00	6.83E-05	0.	2.13E-04
0.55 MEV	8.90E-01	0.	0.	4.82E-04
0.60 MEV	2.81E+00	4.04E-05	0.	5.78E-03
0.65 MEV	1.41E+00	0.	0.	1.07E-03
0.70 MEV	1.52E-01	0.	0.	1.68E-04
0.75 MEV	2.25E+00	4.04E-05	0.	7.92E-04
0.80 MEV	1.11E-01	2.43E-06	0.	6.60E-04
0.85 MEV	1.78E+00	4.04E-05	0.	1.19E-03
0.90 MEV	2.70E-01	4.04E-05	0.	1.14E-03
0.95 MEV	4.38E-01	0.	0.	4.98E-04
1.00 MEV	4.90E-01	4.04E-05	0.	1.29E-03
1.10 MEV	2.83E+00	5.43E-05	0.	5.67E-04
1.20 MEV	8.36E-01	1.01E-04	0.	5.26E-04
1.30 MEV	7.72E-01	1.22E-06	0.	5.51E-04
1.40 MEV	6.38E-01	1.40E-05	0.	5.82E-04
1.50 MEV	1.18E+00	0.	0.	3.32E-03
1.60 MEV	9.60E-02	1.22E-06	0.	4.39E-04
1.70 MEV	1.47E+00	1.40E-05	0.	8.16E-04
1.80 MEV	1.07E+00	1.22E-06	0.	1.23E-03
1.90 MEV	1.61E+00	1.22E-06	0.	3.02E-04
2.00 MEV	9.49E-01	1.52E-05	0.	4.64E-04
2.10 MEV	6.93E-01	2.43E-06	0.	2.87E-03
2.20 MEV	4.76E-01	1.76E-05	0.	3.35E-04
2.30 MEV	9.38E-01	0.	0.	3.72E-04
2.40 MEV	4.76E-01	1.28E-05	0.	3.91E-04
2.50 MEV	7.26E-01	1.28E-05	0.	2.89E-03
2.60 MEV	5.37E-02	0.	0.	5.01E-04
2.70 MEV	1.31E-04	1.28E-05	0.	1.43E-04
2.80 MEV	1.58E+00	1.28E-05	0.	4.27E-04
2.90 MEV	9.44E-05	1.28E-05	0.	2.80E-03
3.00 MEV	2.62E-02	1.28E-05	0.	2.14E-04
3.20 MEV	4.66E-02	1.28E-05	0.	1.50E-03
3.40 MEV	1.32E-02	3.83E-05	0.	3.83E-04
3.60 MEV	5.61E-02	0.	0.	1.53E-03
3.80 MEV	4.25E-02	0.	0.	1.52E-03
4.00 MEV	7.24E-02	0.	0.	4.23E-03

1 SLOWING DOWN SPECTRUM AT 0.00 CM. FOR SHONKA A-150 PLASTIC

42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	5.06E-02	0.	0.	4.15E-03
4.40 MEV	1.63E-02	0.	0.	8.83E-05
4.60 MEV	3.36E-02	0.	0.	9.32E-05
4.80 MEV	3.34E-02	0.	0.	1.09E-04
5.00 MEV	4.96E-02	0.	0.	1.52E-04
5.50 MEV	6.59E-02	0.	0.	7.13E-05
6.00 MEV	4.82E-02	0.	0.	7.42E-04
6.50 MEV	2.12E-04	0.	0.	2.16E-05
7.00 MEV	2.20E-04	0.	0.	3.88E-05
7.50 MEV	4.30E-05	0.	0.	5.79E-04
8.00 MEV	2.79E-05	0.	0.	2.83E-05
8.50 MEV	0.	0.	0.	2.28E-06
9.00 MEV	0.	0.	0.	5.73E-04
9.50 MEV	0.	0.	0.	2.45E-06
10.00 MEV	0.	0.	0.	5.75E-04
11.00 MEV	0.	0.	0.	2.83E-04
12.00 MEV	0.	0.	0.	5.66E-04
13.00 MEV	0.	0.	0.	5.66E-04
14.00 MEV	0.	0.	0.	1.42E-03
15.00 MEV	0.	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	1.46	1.67	0.	6.16

1 SLOWING DOWN SPECTRUM AT 0.05 CM. FOR SHONKA A-150 PLASTIC
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	2.56E+00	7.98E-06	0.	6.14E-04
0.15 MEV	1.27E-01	7.08E-05	0.	2.88E-03
0.20 MEV	3.94E-01	3.07E-05	0.	1.05E-02
0.25 MEV	1.18E+00	2.30E-05	0.	2.59E-03
0.30 MEV	1.78E+00	2.62E-05	0.	4.28E-03
0.35 MEV	2.37E+00	1.41E-05	0.	5.09E-03
0.40 MEV	2.26E+00	3.07E-05	0.	1.56E-03
0.45 MEV	3.45E-01	1.07E-04	1.46E-04	6.42E-03
0.50 MEV	1.27E+00	7.89E-05	0.	1.41E-03
0.55 MEV	6.61E-01	2.46E-05	0.	2.51E-04
0.60 MEV	2.24E+00	6.31E-04	0.	2.87E-02
0.65 MEV	5.83E-01	2.04E-04	0.	1.32E-03
0.70 MEV	4.98E-01	4.98E-05	0.	1.71E-03
0.75 MEV	2.54E-01	9.65E-06	0.	3.94E-03
0.80 MEV	6.90E-01	7.98E-06	0.	2.93E-02
0.85 MEV	3.26E+00	8.93E-05	0.	7.08E-03
0.90 MEV	5.02E-01	9.65E-06	0.	5.05E-03
0.95 MEV	4.11E-01	4.07E-05	0.	3.19E-03
1.00 MEV	3.05E+00	9.64E-05	1.46E-04	1.51E-02
1.10 MEV	3.45E+00	5.06E-05	0.	5.89E-03
1.20 MEV	1.69E+00	4.40E-05	0.	3.60E-03
1.30 MEV	3.39E-01	4.78E-05	0.	2.45E-03
1.40 MEV	1.49E+00	3.51E-04	7.29E-05	6.77E-03
1.50 MEV	6.80E-01	8.76E-05	0.	1.52E-02
1.60 MEV	1.28E+00	1.81E-04	0.	2.30E-03
1.70 MEV	2.82E+00	2.59E-05	7.29E-05	2.94E-03
1.80 MEV	2.41E+00	2.12E-05	0.	7.31E-03
1.90 MEV	4.35E-01	4.25E-05	7.29E-05	5.95E-03
2.00 MEV	1.55E+00	3.41E-04	0.	3.88E-03
2.10 MEV	4.39E-01	1.24E-05	0.	2.10E-02
2.20 MEV	1.17E+00	2.15E-05	7.29E-05	1.28E-02
2.30 MEV	9.66E-01	1.24E-05	0.	2.20E-03
2.40 MEV	2.05E+00	3.36E-04	7.29E-05	8.18E-03
2.50 MEV	1.16E+00	3.38E-05	7.29E-05	1.37E-02
2.60 MEV	9.76E-01	8.31E-05	0.	4.10E-03
2.70 MEV	4.17E-01	3.11E-04	7.29E-05	3.35E-03
2.80 MEV	1.55E+00	9.09E-06	7.29E-05	2.10E-02
2.90 MEV	2.30E-01	9.09E-06	7.29E-05	1.68E-02
3.00 MEV	1.87E+00	9.09E-06	7.29E-05	5.80E-03
3.20 MEV	7.51E-01	1.77E-04	7.29E-05	9.46E-03
3.40 MEV	6.53E-01	1.78E-04	2.19E-04	8.45E-03
3.60 MEV	5.18E-01	1.51E-04	0.	1.22E-02
3.80 MEV	1.11E+00	1.68E-04	0.	7.61E-03
4.00 MEV	4.10E-01	1.51E-04	0.	1.74E-02

1 SLOWING DOWN SPECTRUM AT 0.25 CM. FOR SHONKA A-150 PLASTIC
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	1.67E+00	1.68E-04	0.	3.03E-02
4.40 MEV	1.07E+00	3.02E-04	0.	8.15E-03
4.60 MEV	3.49E-01	1.68E-04	0.	1.23E-02
4.80 MEV	9.20E-01	4.53E-04	0.	2.70E-03
5.00 MEV	3.94E-01	7.72E-04	0.	1.72E-02
5.50 MEV	5.04E-01	1.35E-05	0.	2.84E-04
6.00 MEV	4.06E-01	1.35E-05	0.	4.55E-03
6.50 MEV	8.68E-02	2.02E-05	0.	4.20E-03
7.00 MEV	1.75E-01	5.39E-05	0.	5.57E-03
7.50 MEV	6.30E-02	0.	0.	5.33E-03
8.00 MEV	6.20E-02	0.	0.	7.94E-03
8.50 MEV	1.29E-01	0.	0.	5.39E-03
9.00 MEV	0.	0.	0.	1.07E-02
9.50 MEV	1.58E-01	0.	0.	8.83E-05
10.00 MEV	0.	0.	0.	1.61E-04
11.00 MEV	1.48E-01	0.	0.	1.21E-04
12.00 MEV	1.80E-02	0.	0.	3.29E-04
13.00 MEV	1.11E-01	0.	0.	3.52E-05
14.00 MEV	1.49E-01	0.	0.	7.03E-05
15.00 MEV	1.65E-02	0.	0.	0.
16.00 MEV	7.29E-02	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	1.48E-01	0.	0.	0.
19.00 MEV	4.76E-02	0.	0.	0.
20.00 MEV	1.03E-01	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	5.95E-02	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	6.77E-02	0.	0.	0.
25.00 MEV	7.19E-02	0.	0.	0.
26.00 MEV	1.52E-01	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	5.21E-02	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
DAVE, E(MEV)	5.41	3.53	2.52	4.43

1SLOWING DOWN SPECTRUM AT 0.10 CM. FOR SHONKA A-150 PLASTIC
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	1.11E-01	3.74E-05	0.	1.12E-03
0.15 MEV	1.92E+00	0.	0.	7.51E-04
0.20 MEV	7.46E-01	2.49E-05	0.	4.39E-03
0.25 MEV	5.54E+00	1.32E-04	0.	5.63E-04
0.30 MEV	7.64E-01	7.08E-05	0.	9.89E-04
0.35 MEV	1.23E+00	2.49E-05	0.	2.12E-03
0.40 MEV	1.01E+00	4.41E-05	0.	9.32E-04
0.45 MEV	1.55E+00	4.97E-05	0.	9.39E-04
0.50 MEV	1.18E+00	1.68E-04	0.	8.05E-04
0.55 MEV	1.20E+00	0.	0.	5.62E-04
0.60 MEV	1.53E+00	1.56E-04	0.	2.38E-03
0.65 MEV	6.16E-01	4.14E-05	0.	3.73E-03
0.70 MEV	2.39E-01	3.74E-05	0.	7.95E-04
0.75 MEV	1.73E+00	7.08E-05	0.	6.39E-03
0.80 MEV	2.72E-01	2.22E-05	0.	7.73E-03
0.85 MEV	3.11E+00	1.75E-04	0.	7.31E-04
0.90 MEV	4.17E-01	9.30E-05	0.	9.70E-04
0.95 MEV	4.70E-01	0.	0.	2.62E-03
1.00 MEV	5.28E-01	9.30E-05	0.	4.09E-03
1.10 MEV	1.21E+00	1.53E-04	0.	1.89E-03
1.20 MEV	1.54E+00	2.40E-04	0.	1.05E-03
1.30 MEV	1.33E+00	3.18E-05	0.	3.54E-03
1.40 MEV	1.79E+00	1.26E-04	0.	1.21E-02
1.50 MEV	1.15E+00	5.21E-05	0.	2.98E-03
1.60 MEV	6.49E-01	6.17E-05	0.	7.65E-03
1.70 MEV	1.59E+00	8.04E-05	0.	1.39E-03
1.80 MEV	6.05E-01	1.23E-04	0.	2.66E-03
1.90 MEV	6.37E-01	1.04E-04	0.	6.97E-03
2.00 MEV	1.14E+00	1.88E-04	0.	5.33E-03
2.10 MEV	1.13E+00	0.	0.	2.53E-03
2.20 MEV	1.95E+00	1.87E-05	0.	8.61E-03
2.30 MEV	7.09E-01	1.87E-05	0.	1.71E-03
2.40 MEV	1.77E+00	0.	0.	1.96E-03
2.50 MEV	1.10E+00	1.87E-05	0.	5.62E-03
2.60 MEV	1.09E+00	1.87E-05	0.	2.78E-03
2.70 MEV	4.37E-01	1.87E-05	0.	1.18E-02
2.80 MEV	1.01E+00	3.74E-05	0.	1.83E-03
2.90 MEV	7.91E-01	3.74E-05	0.	6.27E-03
3.00 MEV	5.44E-01	7.49E-05	0.	2.37E-03
3.20 MEV	1.36E+00	0.	0.	4.46E-03
3.40 MEV	1.05E+00	0.	0.	6.64E-03
3.60 MEV	4.26E-01	0.	0.	6.79E-03
3.80 MEV	8.55E-01	0.	0.	2.29E-03
4.00 MEV	8.36E-01	0.	0.	2.97E-03

1 SLOWING DOWN SPECTRUM AT 0.10 CM. FOR SHONKA A-150 PLASTIC

42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	1.47E+00	0.	0.	2.23E-03
4.40 MEV	1.09E+00	0.	0.	4.38E-03
4.60 MEV	9.87E-01	0.	0.	2.58E-03
4.80 MEV	4.58E-01	0.	0.	5.31E-03
5.00 MEV	1.05E+00	0.	0.	5.69E-04
5.50 MEV	8.66E-01	0.	0.	2.85E-03
6.00 MEV	9.60E-01	0.	0.	6.18E-03
6.50 MEV	3.67E-01	0.	0.	3.30E-03
7.00 MEV	4.72E-01	0.	0.	6.35E-03
7.50 MEV	3.64E-01	0.	0.	3.78E-04
8.00 MEV	1.15E-01	0.	0.	6.05E-04
8.50 MEV	2.97E-01	0.	0.	3.05E-04
9.00 MEV	1.02E-01	0.	0.	6.74E-04
9.50 MEV	6.37E-01	0.	0.	9.33E-05
10.00 MEV	6.13E-02	0.	0.	2.64E-04
11.00 MEV	1.02E-01	0.	0.	6.28E-05
12.00 MEV	2.91E-01	0.	0.	1.88E-04
13.00 MEV	1.33E-01	0.	0.	0.
14.00 MEV	4.30E-02	0.	0.	0.
15.00 MEV	3.30E-01	0.	0.	0.
16.00 MEV	1.41E-01	0.	0.	0.
17.00 MEV	1.04E-01	0.	0.	0.
18.00 MEV	1.57E-01	0.	0.	0.
19.00 MEV	1.51E-01	0.	0.	0.
20.00 MEV	5.15E-02	0.	0.	0.
21.00 MEV	5.95E-02	0.	0.	0.
22.00 MEV	5.95E-02	0.	0.	0.
23.00 MEV	1.31E-01	0.	0.	0.
24.00 MEV	7.19E-02	0.	0.	0.
25.00 MEV	1.52E-01	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	8.94E-02	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	5.21E-02	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.

0AVE, E (MEV)

6.79

1.35

2.52

4.04

1SLOWING DOWN SPECTRUM AT 0.15 CM. FOR SHONKA A-150 PLASTIC
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	2.02E-01	4.31E-05	0.	7.02E-03
0.15 MEV	1.48E-01	2.07E-05	0.	4.21E-03
0.20 MEV	4.00E-01	3.41E-05	2.79E-05	5.72E-03
0.25 MEV	1.28E+00	2.73E-04	0.	2.62E-04
0.30 MEV	1.54E+00	8.22E-05	2.79E-05	9.70E-03
0.35 MEV	5.64E-01	2.75E-05	0.	1.93E-03
0.40 MEV	1.34E+00	1.55E-04	2.79E-05	3.61E-03
0.45 MEV	3.37E+00	5.04E-05	0.	4.91E-03
0.50 MEV	1.85E-01	3.09E-04	2.79E-05	8.59E-03
0.55 MEV	9.53E-01	7.23E-05	0.	4.95E-04
0.60 MEV	6.19E-01	2.25E-04	2.79E-05	1.48E-02
0.65 MEV	1.50E-01	3.36E-04	2.79E-05	4.55E-03
0.70 MEV	2.47E+00	9.46E-05	2.79E-05	3.10E-04
0.75 MEV	2.75E-01	7.18E-05	5.58E-05	9.83E-03
0.80 MEV	1.40E+00	2.20E-04	8.37E-05	7.96E-03
0.85 MEV	4.50E-01	2.68E-04	0.	1.23E-03
0.90 MEV	2.42E+00	2.81E-04	0.	9.42E-03
0.95 MEV	3.85E+00	1.06E-05	0.	5.92E-03
1.00 MEV	1.82E-01	2.60E-04	0.	2.19E-03
1.10 MEV	4.57E-01	2.96E-04	0.	2.92E-03
1.20 MEV	1.63E+00	3.13E-04	0.	3.96E-03
1.30 MEV	8.47E-01	2.54E-04	0.	4.20E-03
1.40 MEV	1.56E+00	6.34E-04	0.	3.16E-03
1.50 MEV	5.96E-01	1.03E-04	0.	1.09E-02
1.60 MEV	3.00E+00	1.66E-04	0.	5.90E-03
1.70 MEV	1.10E+00	2.12E-04	0.	2.79E-03
1.80 MEV	2.19E+00	3.07E-04	0.	2.21E-03
1.90 MEV	1.20E+00	1.15E-04	0.	3.45E-03
2.00 MEV	8.17E-01	2.27E-04	0.	3.25E-03
2.10 MEV	4.79E-01	5.29E-06	0.	4.12E-03
2.20 MEV	5.70E-01	6.07E-05	0.	4.84E-03
2.30 MEV	1.37E+00	4.33E-05	0.	4.94E-03
2.40 MEV	9.50E-01	4.02E-05	0.	5.23E-03
2.50 MEV	4.78E-01	6.60E-05	0.	6.05E-03
2.60 MEV	2.10E+00	5.92E-05	0.	3.94E-03
2.70 MEV	5.85E-01	6.77E-05	0.	2.20E-03
2.80 MEV	1.60E+00	9.35E-05	0.	2.71E-03
2.90 MEV	8.04E-01	9.35E-05	0.	5.09E-03
3.00 MEV	7.49E-01	1.78E-04	0.	2.46E-03
3.20 MEV	1.26E+00	2.35E-05	0.	4.15E-03
3.40 MEV	1.45E+00	5.83E-05	0.	5.84E-03
3.60 MEV	5.99E-01	6.13E-06	0.	3.06E-03
3.80 MEV	6.40E-01	6.13E-06	0.	2.63E-03
4.00 MEV	9.88E-01	6.13E-06	0.	4.40E-03

1 SLOWING DOWN SPECTRUM AT 0.15 CM. FOR SHONKA A-150 PLASTIC
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	1.24E+00	1.04E-05	0.	5.72E-03
4.40 MEV	7.97E-01	1.66E-05	0.	9.31E-04
4.60 MEV	9.23E-01	2.33E-05	0.	1.15E-03
4.80 MEV	7.54E-01	5.48E-06	0.	8.75E-04
5.00 MEV	5.86E-01	9.14E-06	0.	1.14E-03
5.50 MEV	3.46E-01	0.	0.	8.74E-04
6.00 MEV	9.25E-01	0.	0.	2.09E-03
6.50 MEV	6.18E-01	0.	0.	3.70E-04
7.00 MEV	2.62E-01	0.	0.	5.01E-04
7.50 MEV	2.45E-01	0.	0.	3.17E-04
8.00 MEV	2.89E-02	0.	0.	4.90E-04
8.50 MEV	3.22E-01	0.	0.	2.42E-04
9.00 MEV	4.19E-01	0.	0.	5.49E-04
9.50 MEV	2.96E-01	0.	0.	1.15E-04
10.00 MEV	0.	0.	0.	2.02E-04
11.00 MEV	2.57E-01	0.	0.	8.62E-05
12.00 MEV	1.43E-01	0.	0.	2.12E-04
13.00 MEV	2.84E-01	0.	0.	4.70E-05
14.00 MEV	1.34E-01	0.	0.	9.40E-05
15.00 MEV	8.03E-02	0.	0.	0.
16.00 MEV	1.08E-01	0.	0.	0.
17.00 MEV	3.13E-01	0.	0.	0.
18.00 MEV	9.14E-02	0.	0.	0.
19.00 MEV	1.11E-01	0.	0.	0.
20.00 MEV	5.15E-02	0.	0.	0.
21.00 MEV	5.95E-02	0.	0.	0.
22.00 MEV	1.31E-01	0.	0.	0.
23.00 MEV	7.19E-02	0.	0.	0.
24.00 MEV	1.52E-01	0.	0.	0.
25.00 MEV	7.19E-02	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	8.94E-02	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	1.04E-01	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
AVE. E (MEV)	6.84	1.53	0.58	2.90

1 SLOWING DOWN SPECTRUM AT 0.20 CM. FOR SHONKA A-150 PLASTIC
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	1.12E+00	4.55E-05	7.68E-05	4.12E-03
0.15 MEV	1.69E-01	1.81E-04	0.	3.18E-03
0.20 MEV	1.75E-01	4.11E-03	1.36E-05	4.28E-03
0.25 MEV	2.42E-01	2.78E-05	0.	4.68E-03
0.30 MEV	1.51E-01	7.94E-05	1.36E-05	1.54E-03
0.35 MEV	1.85E-01	1.05E-04	0.	2.29E-03
0.40 MEV	1.65E-01	4.21E-05	9.04E-05	2.66E-03
0.45 MEV	2.02E+00	4.56E-04	0.	3.43E-03
0.50 MEV	4.74E+00	1.79E-04	1.36E-05	1.00E-03
0.55 MEV	3.25E-01	1.18E-04	0.	2.04E-03
0.60 MEV	1.64E+00	1.46E-04	1.36E-05	9.93E-03
0.65 MEV	1.94E-01	4.39E-03	9.04E-05	6.69E-04
0.70 MEV	1.61E+00	1.49E-04	1.36E-05	4.26E-03
0.75 MEV	1.48E-01	1.91E-04	2.71E-05	2.68E-02
0.80 MEV	1.55E-01	2.86E-04	1.18E-04	1.03E-02
0.85 MEV	2.20E+00	4.56E-04	0.	4.56E-03
0.90 MEV	5.75E-01	4.30E-03	0.	4.36E-03
0.95 MEV	1.51E+00	1.10E-04	7.68E-05	4.28E-03
1.00 MEV	2.35E-01	2.92E-04	0.	6.01E-03
1.10 MEV	6.66E-01	2.15E-03	3.84E-05	4.98E-03
1.20 MEV	1.70E+00	1.79E-04	3.84E-05	3.76E-03
1.30 MEV	2.35E-01	2.17E-03	3.84E-05	5.43E-03
1.40 MEV	1.62E+00	2.21E-03	7.68E-05	5.72E-03
1.50 MEV	8.62E-01	2.26E-03	7.68E-05	7.19E-03
1.60 MEV	7.02E-01	6.43E-03	1.54E-04	3.29E-03
1.70 MEV	8.08E-01	2.13E-04	0.	4.77E-03
1.80 MEV	1.14E+00	4.40E-05	0.	4.66E-03
1.90 MEV	7.36E-01	1.22E-04	0.	7.36E-03
2.00 MEV	2.48E-01	2.19E-04	0.	1.47E-02
2.10 MEV	1.37E+00	1.73E-04	0.	2.70E-03
2.20 MEV	3.10E-01	1.23E-04	0.	9.57E-03
2.30 MEV	1.05E+00	1.47E-04	0.	4.42E-03
2.40 MEV	8.09E-01	1.74E-04	0.	8.88E-03
2.50 MEV	5.27E-01	1.70E-04	0.	8.43E-03
2.60 MEV	9.02E-01	2.46E-04	0.	6.27E-03
2.70 MEV	3.65E-01	2.42E-04	0.	6.25E-03
2.80 MEV	3.54E-01	3.86E-04	0.	1.51E-02
2.90 MEV	7.01E-01	8.71E-05	0.	1.91E-02
3.00 MEV	7.08E-01	2.20E-05	0.	2.24E-03
3.20 MEV	6.56E-01	7.38E-05	0.	5.76E-03
3.40 MEV	7.74E-01	1.31E-04	0.	9.86E-03
3.60 MEV	5.28E-01	5.18E-05	0.	1.07E-02
3.80 MEV	4.52E-01	1.42E-04	0.	3.85E-03
4.00 MEV	5.49E-01	2.66E-05	0.	9.58E-03

1 SLOWING DOWN SPECTRUM AT 0.20 CM. FOR SHONKA A-150 PLASTIC

42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	1.11E+00	7.99E-05	0.	3.47E-03
4.40 MEV	8.85E-01	0.	0.	4.06E-03
4.60 MEV	1.36E+00	0.	0.	1.29E-02
4.80 MEV	5.56E-01	0.	0.	1.04E-02
5.00 MEV	8.17E-01	0.	0.	2.10E-03
5.50 MEV	1.09E+00	0.	0.	5.53E-03
6.00 MEV	1.25E+00	0.	0.	1.38E-02
6.50 MEV	7.84E-01	0.	0.	1.03E-03
7.00 MEV	7.18E-01	0.	0.	3.90E-04
7.50 MEV	1.17E+00	0.	0.	1.56E-03
8.00 MEV	7.63E-01	0.	0.	3.48E-04
8.50 MEV	1.15E+00	0.	0.	1.47E-03
9.00 MEV	7.88E-01	0.	0.	1.62E-03
9.50 MEV	1.34E+00	0.	0.	9.43E-05
10.00 MEV	1.23E+00	0.	0.	1.55E-03
11.00 MEV	1.14E+00	0.	0.	2.10E-03
12.00 MEV	1.06E+00	0.	0.	3.57E-03
13.00 MEV	6.07E-01	0.	0.	5.16E-05
14.00 MEV	4.40E-01	0.	0.	1.03E-04
15.00 MEV	2.12E-01	0.	0.	0.
16.00 MEV	1.66E-01	0.	0.	0.
17.00 MEV	1.35E-01	0.	0.	0.
18.00 MEV	1.03E-01	0.	0.	0.
19.00 MEV	1.11E-01	0.	0.	0.
20.00 MEV	1.62E-01	0.	0.	0.
21.00 MEV	2.46E-01	0.	0.	0.
22.00 MEV	1.52E-01	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	7.19E-02	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	8.94E-02	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	1.04E-01	0.	0.	0.
30.00 MEV	9.38E-02	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	1.15E-01	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.

DAVE, E(MEV)

8.90

1.32

1.06

4.56

1 SLOWING DOWN SPECTRUM AT 0.40 CM. FOR SHONKA A-150 PLASTIC
42 MEV P+ ON HE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	2.80E+00	1.16E-05	4.03E-06	1.55E-03
0.15 MEV	1.30E+00	7.56E-05	0.	3.40E-03
0.20 MEV	1.77E-01	7.31E-06	2.07E-05	6.43E-03
0.25 MEV	2.20E-01	6.43E-05	1.41E-05	1.05E-02
0.30 MEV	1.73E-01	5.38E-05	0.	3.11E-03
0.35 MEV	1.78E-01	9.13E-05	0.	5.84E-03
0.40 MEV	2.90E-01	9.38E-05	4.03E-06	3.82E-03
0.45 MEV	6.17E-01	1.34E-04	3.48E-05	4.43E-03
0.50 MEV	1.41E+00	9.33E-05	0.	1.36E-03
0.55 MEV	2.86E-01	2.95E-05	0.	1.96E-03
0.60 MEV	1.18E-01	1.74E-05	1.41E-05	1.01E-02
0.65 MEV	1.67E-01	1.36E-04	2.47E-05	1.68E-03
0.70 MEV	5.02E-01	8.64E-05	1.41E-05	2.47E-03
0.75 MEV	8.74E-01	7.07E-05	0.	1.01E-02
0.80 MEV	1.19E-01	1.01E-04	3.88E-05	6.03E-03
0.85 MEV	1.54E+00	1.94E-04	0.	6.41E-03
0.90 MEV	3.30E-01	2.57E-04	3.48E-05	5.49E-03
0.95 MEV	1.65E+00	3.21E-05	4.03E-06	3.82E-03
1.00 MEV	3.43E+00	2.85E-04	3.48E-05	5.15E-03
1.10 MEV	4.41E-01	1.26E-04	2.65E-05	9.49E-03
1.20 MEV	7.60E-01	1.14E-04	4.77E-05	4.42E-03
1.30 MEV	1.68E+00	9.99E-05	2.27E-05	4.58E-03
1.40 MEV	1.05E+00	2.32E-04	9.04E-05	7.91E-03
1.50 MEV	1.30E+00	1.73E-04	4.03E-06	7.27E-03
1.60 MEV	6.98E-01	2.32E-04	8.06E-06	3.27E-03
1.70 MEV	1.84E+00	1.95E-04	0.	7.48E-03
1.80 MEV	8.78E-01	1.01E-04	0.	6.03E-03
1.90 MEV	1.11E+00	1.01E-04	0.	5.57E-03
2.00 MEV	5.43E-01	2.94E-04	0.	8.43E-03
2.10 MEV	7.95E-01	9.15E-05	0.	7.27E-03
2.20 MEV	8.13E-01	1.42E-04	0.	1.08E-02
2.30 MEV	4.98E-01	1.70E-04	0.	4.23E-03
2.40 MEV	9.47E-01	1.93E-04	0.	7.52E-03
2.50 MEV	2.71E+00	1.53E-04	3.47E-05	5.38E-03
2.60 MEV	1.93E+00	3.22E-04	0.	7.59E-03
2.70 MEV	1.48E+00	2.64E-04	0.	5.41E-03
2.80 MEV	9.51E-01	2.00E-04	0.	7.57E-03
2.90 MEV	5.12E-01	2.10E-04	0.	1.15E-02
3.00 MEV	1.22E+00	2.23E-04	0.	4.72E-03
3.20 MEV	1.44E+00	1.18E-04	1.74E-05	6.08E-03
3.40 MEV	1.25E+00	1.20E-04	0.	7.85E-03
3.60 MEV	6.58E-01	1.17E-04	0.	1.12E-02
3.80 MEV	1.95E+00	2.59E-04	0.	8.70E-03
4.00 MEV	1.64E+00	1.79E-04	1.74E-05	7.51E-03

1 SLOWING DOWN SPECTRUM AT 0.40 CM. FOR SHONKA A-150 PLASTIC
42 MEV P+ ON HE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	7.88E-01	9.20E-05	0.	6.78E-03
4.40 MEV	6.50E-01	1.38E-04	1.74E-05	5.60E-03
4.60 MEV	1.25E+00	2.30E-04	0.	7.61E-03
4.80 MEV	1.39E+00	3.62E-05	0.	5.64E-03
5.00 MEV	8.27E-01	0.	1.74E-05	5.64E-03
5.50 MEV	9.32E-01	5.32E-05	6.95E-06	2.89E-03
6.00 MEV	8.57E-01	5.32E-05	1.39E-05	7.08E-03
6.50 MEV	7.13E-01	1.45E-05	1.39E-05	2.55E-03
7.00 MEV	9.19E-01	5.32E-05	1.39E-05	4.41E-03
7.50 MEV	8.21E-01	5.32E-05	2.08E-05	2.11E-03
8.00 MEV	7.33E-01	6.77E-05	4.86E-05	4.04E-03
8.50 MEV	1.01E+00	5.32E-05	0.	3.86E-04
9.00 MEV	8.67E-01	6.77E-05	0.	7.54E-04
9.50 MEV	6.07E-01	8.22E-05	0.	1.08E-04
10.00 MEV	1.14E+00	1.40E-04	0.	4.35E-04
11.00 MEV	7.71E-01	7.74E-05	0.	2.11E-04
12.00 MEV	8.77E-01	1.74E-04	0.	3.93E-04
13.00 MEV	7.17E-01	0.	0.	1.61E-05
14.00 MEV	3.89E-01	0.	0.	3.22E-05
15.00 MEV	2.50E-01	0.	0.	0.
16.00 MEV	3.91E-01	0.	0.	0.
17.00 MEV	3.52E-02	0.	0.	0.
18.00 MEV	1.05E-01	0.	0.	0.
19.00 MEV	8.18E-02	0.	0.	0.
20.00 MEV	1.35E-01	0.	0.	0.
21.00 MEV	4.16E-02	0.	0.	0.
22.00 MEV	1.34E-01	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	1.04E-01	0.	0.	0.
25.00 MEV	3.43E-02	0.	0.	0.
26.00 MEV	9.38E-02	0.	0.	0.
27.00 MEV	2.01E-02	0.	0.	0.
28.00 MEV	6.37E-02	0.	0.	0.
29.00 MEV	4.47E-02	0.	0.	0.
30.00 MEV	2.53E-01	0.	0.	0.
32.00 MEV	5.21E-02	0.	0.	0.
34.00 MEV	2.87E-02	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	1.71E-02	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E (MEV)	8.47	5.60	4.70	3.84

1 SLOWING DOWN SPECTRUM AT 0.60 CM. FOR SHONKA A-150 PLASTIC
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	2.40E-01	1.41E-05	0.	4.18E-03
0.15 MEV	1.66E-01	8.33E-05	0.	3.12E-03
0.20 MEV	1.63E-01	2.75E-05	7.01E-06	1.17E-02
0.25 MEV	2.10E-01	4.12E-05	0.	4.12E-03
0.30 MEV	1.71E-01	4.97E-05	1.61E-06	4.69E-03
0.35 MEV	1.58E-01	3.36E-05	0.	4.22E-03
0.40 MEV	2.73E-01	5.52E-05	1.61E-06	3.27E-03
0.45 MEV	1.70E-01	1.15E-04	4.11E-05	4.55E-03
0.50 MEV	2.19E-01	1.28E-04	1.61E-06	3.21E-03
0.55 MEV	2.91E-01	2.78E-05	1.61E-06	8.79E-04
0.60 MEV	1.69E-01	8.04E-05	1.61E-06	8.94E-03
0.65 MEV	1.92E-01	5.24E-04	8.62E-06	4.49E-03
0.70 MEV	6.54E-01	2.93E-05	4.82E-06	1.75E-03
0.75 MEV	2.19E-01	6.11E-05	0.	1.40E-02
0.80 MEV	1.68E-01	6.32E-05	5.40E-06	3.86E-03
0.85 MEV	2.28E-01	1.65E-04	0.	5.03E-03
0.90 MEV	3.64E-01	1.11E-04	5.40E-06	4.61E-03
0.95 MEV	1.91E-01	1.53E-05	6.80E-05	3.38E-03
1.00 MEV	1.26E+00	1.37E-04	4.11E-05	1.08E-02
1.10 MEV	1.95E-01	1.20E-04	2.70E-06	3.97E-03
1.20 MEV	2.61E-01	1.50E-04	2.70E-06	4.06E-03
1.30 MEV	5.58E-01	7.92E-05	5.40E-06	5.02E-03
1.40 MEV	3.70E-01	1.46E-04	3.13E-05	9.29E-03
1.50 MEV	2.52E-01	9.83E-05	0.	7.59E-03
1.60 MEV	7.16E-01	2.16E-04	3.40E-05	5.16E-03
1.70 MEV	9.17E-01	9.23E-05	1.79E-05	4.58E-03
1.80 MEV	2.49E-01	7.46E-05	0.	7.59E-03
1.90 MEV	2.39E-01	2.19E-04	1.79E-05	5.56E-03
2.00 MEV	1.31E+00	1.05E-04	3.40E-05	9.17E-03
2.10 MEV	4.29E-01	2.55E-05	0.	4.50E-03
2.20 MEV	9.17E-01	4.97E-05	1.79E-05	8.58E-03
2.30 MEV	6.41E-01	3.41E-05	0.	3.44E-03
2.40 MEV	2.48E-01	4.46E-05	5.19E-05	8.11E-03
2.50 MEV	3.61E-01	4.81E-05	1.79E-05	5.19E-03
2.60 MEV	4.25E-01	2.21E-04	0.	4.92E-03
2.70 MEV	4.05E-01	5.33E-05	5.19E-05	7.88E-03
2.80 MEV	1.15E+00	4.21E-05	1.79E-05	1.36E-02
2.90 MEV	1.43E+00	4.89E-05	5.19E-05	1.13E-02
3.00 MEV	6.73E-01	3.53E-05	1.79E-05	3.33E-03
3.20 MEV	7.08E-01	1.41E-04	3.49E-05	4.26E-03
3.40 MEV	7.90E-01	9.61E-05	7.06E-05	5.96E-03
3.60 MEV	6.68E-01	2.49E-05	1.70E-05	1.10E-02
3.80 MEV	1.24E+00	1.74E-04	1.70E-05	4.32E-03
4.00 MEV	8.41E-01	5.78E-06	3.40E-05	8.52E-03

1 SLOWING DOWN SPECTRUM AT 0.60 CM. FOR SHONKA A-150 PLASTIC
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	1.53E+00	1.19E-04	1.70E-05	6.84E-03
4.40 MEV	1.14E+00	6.82E-06	5.10E-05	6.68E-03
4.60 MEV	1.14E+00	1.02E-04	8.50E-05	1.12E-02
4.80 MEV	1.30E+00	6.82E-06	0.	9.68E-03
5.00 MEV	5.12E-01	1.02E-04	0.	4.85E-03
5.50 MEV	1.11E+00	8.43E-05	0.	3.81E-03
6.00 MEV	1.16E+00	9.79E-05	0.	6.72E-03
6.50 MEV	8.93E-01	1.14E-04	0.	3.52E-03
7.00 MEV	6.47E-01	3.04E-04	0.	4.70E-03
7.50 MEV	9.94E-01	0.	0.	1.44E-03
8.00 MEV	6.96E-01	0.	0.	6.56E-04
8.50 MEV	7.09E-01	0.	0.	1.35E-03
9.00 MEV	7.28E-01	0.	0.	1.77E-03
9.50 MEV	1.10E+00	0.	0.	2.59E-04
10.00 MEV	7.29E-01	0.	0.	1.91E-03
11.00 MEV	7.45E-01	0.	0.	1.65E-03
12.00 MEV	8.51E-01	0.	0.	2.80E-03
13.00 MEV	9.64E-01	0.	0.	1.61E-05
14.00 MEV	6.18E-01	0.	0.	3.22E-05
15.00 MEV	6.43E-01	0.	0.	0.
16.00 MEV	5.27E-01	0.	0.	0.
17.00 MEV	3.86E-01	0.	0.	0.
18.00 MEV	6.06E-01	0.	0.	0.
19.00 MEV	3.86E-01	0.	0.	0.
20.00 MEV	2.58E-01	0.	0.	0.
21.00 MEV	1.66E-01	0.	0.	0.
22.00 MEV	7.96E-02	0.	0.	0.
23.00 MEV	1.63E-01	0.	0.	0.
24.00 MEV	3.39E-02	0.	0.	0.
25.00 MEV	3.10E-01	0.	0.	0.
26.00 MEV	8.06E-02	0.	0.	0.
27.00 MEV	2.01E-02	0.	0.	0.
28.00 MEV	1.36E-01	0.	0.	0.
29.00 MEV	2.23E-02	0.	0.	0.
30.00 MEV	8.08E-02	0.	0.	0.
32.00 MEV	2.60E-02	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	3.28E-02	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.

DAVE, E(MEV)

10.53

3.94

3.67

4.53

1 SLOWING DOWN SPECTRUM AT 1.00 CM. FOR SHONKA A-150 PLASTIC

42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	2.11E-01	1.53E-05	1.65E-06	3.38E-03
0.15 MEV	1.94E-01	4.72E-05	1.16E-06	2.56E-03
0.20 MEV	1.83E-01	2.42E-05	1.63E-05	5.79E-03
0.25 MEV	2.01E-01	4.03E-05	8.64E-07	7.08E-03
0.30 MEV	1.95E-01	6.23E-05	2.83E-06	3.90E-03
0.35 MEV	1.48E-01	4.36E-05	5.27E-06	4.49E-03
0.40 MEV	2.43E-01	6.77E-05	1.83E-06	3.11E-03
0.45 MEV	1.37E-01	1.06E-04	1.64E-05	4.40E-03
0.50 MEV	2.18E-01	1.02E-04	3.83E-06	2.44E-03
0.55 MEV	2.37E-01	3.48E-05	2.93E-05	8.35E-04
0.60 MEV	1.37E-01	1.07E-04	4.36E-05	9.23E-03
0.65 MEV	1.90E-01	1.54E-04	1.37E-05	2.04E-03
0.70 MEV	5.94E-01	4.81E-05	1.56E-06	2.00E-03
0.75 MEV	3.22E-01	7.82E-05	0.	8.41E-03
0.80 MEV	1.51E-01	7.34E-05	1.60E-05	1.05E-02
0.85 MEV	2.23E-01	1.75E-04	8.74E-06	4.44E-03
0.90 MEV	3.27E-01	9.56E-05	1.35E-05	5.72E-03
0.95 MEV	1.59E-01	4.59E-05	2.60E-06	3.85E-03
1.00 MEV	1.86E-01	3.08E-04	2.13E-05	6.15E-03
1.10 MEV	2.60E-01	1.13E-04	6.12E-06	6.37E-03
1.20 MEV	3.20E-01	1.68E-04	2.03E-05	4.50E-03
1.30 MEV	2.84E-01	9.01E-05	1.60E-05	3.90E-03
1.40 MEV	5.38E-01	1.35E-04	3.32E-05	4.81E-03
1.50 MEV	4.22E-01	1.13E-04	2.57E-06	8.08E-03
1.60 MEV	3.00E-01	2.32E-04	3.91E-06	3.88E-03
1.70 MEV	2.38E-01	1.18E-04	1.79E-05	8.51E-03
1.80 MEV	5.96E-01	1.16E-04	2.65E-05	6.98E-03
1.90 MEV	2.12E-01	6.08E-05	2.48E-06	5.34E-03
2.00 MEV	3.51E-01	2.37E-04	1.89E-05	6.10E-03
2.10 MEV	2.83E-01	6.36E-05	0.	7.53E-03
2.20 MEV	2.66E-01	7.69E-05	0.	8.47E-03
2.30 MEV	6.40E-01	6.43E-05	1.40E-05	4.03E-03
2.40 MEV	1.94E-01	2.01E-04	0.	8.08E-03
2.50 MEV	3.93E-01	6.45E-05	2.39E-06	5.21E-03
2.60 MEV	3.26E-01	1.30E-04	3.03E-05	7.03E-03
2.70 MEV	2.90E-01	1.74E-04	2.39E-06	4.61E-03
2.80 MEV	4.47E-01	1.09E-04	1.16E-05	9.89E-03
2.90 MEV	4.24E-01	6.56E-05	2.39E-06	9.78E-03
3.00 MEV	1.51E+00	1.72E-04	1.40E-05	5.22E-03
3.20 MEV	5.81E-01	7.78E-05	1.63E-05	4.30E-03
3.40 MEV	3.13E-01	1.14E-04	8.18E-06	8.66E-03
3.60 MEV	4.41E-01	6.63E-05	8.18E-06	9.00E-03
3.80 MEV	6.84E-01	1.03E-04	2.81E-05	5.45E-03
4.00 MEV	5.44E-01	7.36E-05	1.74E-05	7.50E-03

1 SLOWING DOWN SPECTRUM AT 1.00 CM. FOR SHONKA A-150 PLASTIC
42 MEV P+ ON HE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.79E-01	1.48E-04	3.83E-05	7.23E-03
4.40 MEV	8.81E-01	1.70E-04	0.	5.80E-03
4.60 MEV	3.97E-01	2.60E-04	9.35E-06	7.46E-03
4.80 MEV	6.69E-01	4.42E-05	9.35E-06	4.25E-03
5.00 MEV	7.25E-01	4.96E-05	0.	6.25E-03
5.50 MEV	6.18E-01	2.37E-05	7.48E-06	2.03E-03
6.00 MEV	6.23E-01	5.35E-05	7.48E-06	7.12E-03
6.50 MEV	6.05E-01	6.66E-06	1.12E-05	2.13E-03
7.00 MEV	6.15E-01	1.12E-05	2.90E-05	3.86E-03
7.50 MEV	7.87E-01	3.92E-06	0.	3.40E-03
8.00 MEV	6.89E-01	7.85E-06	0.	4.77E-03
8.50 MEV	6.61E-01	3.92E-06	0.	1.82E-03
9.00 MEV	5.34E-01	7.85E-06	0.	3.74E-03
9.50 MEV	5.52E-01	1.18E-05	0.	9.77E-04
10.00 MEV	6.62E-01	2.75E-05	0.	2.53E-03
11.00 MEV	8.05E-01	0.	0.	3.35E-04
12.00 MEV	1.02E+00	0.	0.	7.27E-04
13.00 MEV	6.75E-01	0.	0.	5.19E-04
14.00 MEV	1.07E+00	0.	0.	1.28E-03
15.00 MEV	7.83E-01	0.	0.	6.51E-06
16.00 MEV	8.19E-01	0.	0.	1.74E-05
17.00 MEV	9.16E-01	0.	0.	0.
18.00 MEV	7.64E-01	0.	0.	0.
19.00 MEV	5.66E-01	0.	0.	0.
20.00 MEV	8.01E-01	0.	0.	0.
21.00 MEV	5.44E-01	0.	0.	0.
22.00 MEV	6.00E-01	0.	0.	0.
23.00 MEV	5.55E-01	0.	0.	0.
24.00 MEV	5.91E-01	0.	0.	0.
25.00 MEV	4.69E-01	0.	0.	0.
26.00 MEV	4.41E-01	0.	0.	0.
27.00 MEV	5.72E-01	0.	0.	0.
28.00 MEV	3.60E-01	0.	0.	0.
29.00 MEV	3.22E-01	0.	0.	0.
30.00 MEV	2.12E-01	0.	0.	0.
32.00 MEV	1.52E-01	0.	0.	0.
34.00 MEV	3.59E-02	0.	0.	0.
36.00 MEV	7.86E-03	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
DAVE. E(MEV)	14.93	3.17	3.76	4.73

1 SLOWING DOWN SPECTRUM AT 2.00 CM. FOR SHONKA A-150 PLASTIC
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	2.49E-01	1.17E-04	8.70E-06	1.86E-03
0.15 MEV	1.98E-01	8.21E-05	1.66E-06	1.81E-03
0.20 MEV	1.98E-01	8.39E-04	4.42E-06	7.09E-03
0.25 MEV	2.36E-01	6.42E-05	1.86E-06	6.23E-03
0.30 MEV	2.16E-01	1.56E-04	3.61E-06	2.92E-03
0.35 MEV	1.82E-01	5.94E-05	3.03E-06	3.32E-03
0.40 MEV	2.33E-01	6.56E-05	6.29E-05	2.62E-03
0.45 MEV	1.83E-01	1.95E-04	1.24E-05	3.25E-03
0.50 MEV	2.65E-01	2.31E-04	6.94E-06	2.01E-03
0.55 MEV	3.04E-01	3.18E-05	1.06E-05	9.30E-04
0.60 MEV	1.81E-01	2.35E-04	7.93E-05	8.45E-03
0.65 MEV	2.06E-01	1.26E-03	1.08E-05	3.20E-03
0.70 MEV	6.85E-01	1.44E-04	3.72E-06	1.79E-03
0.75 MEV	2.63E-01	1.90E-04	2.60E-06	5.70E-03
0.80 MEV	1.59E-01	2.78E-04	1.29E-05	1.01E-02
0.85 MEV	2.73E-01	2.16E-04	3.46E-06	3.21E-03
0.90 MEV	3.81E-01	9.26E-04	2.42E-06	3.84E-03
0.95 MEV	2.12E-01	2.55E-05	7.45E-06	2.71E-03
1.00 MEV	1.80E-01	3.40E-04	8.16E-06	5.58E-03
1.10 MEV	2.72E-01	1.17E-03	4.87E-06	5.55E-03
1.20 MEV	2.92E-01	1.64E-03	1.49E-05	3.27E-03
1.30 MEV	2.75E-01	2.22E-03	6.27E-06	4.01E-03
1.40 MEV	5.45E-01	5.75E-04	2.55E-05	7.52E-03
1.50 MEV	4.42E-01	6.43E-04	2.20E-05	6.87E-03
1.60 MEV	3.56E-01	2.08E-03	1.49E-05	3.70E-03
1.70 MEV	2.93E-01	1.87E-04	8.19E-06	5.91E-03
1.80 MEV	8.62E-01	1.90E-04	3.62E-05	5.79E-03
1.90 MEV	2.65E-01	2.07E-04	8.86E-06	4.63E-03
2.00 MEV	3.45E-01	1.85E-03	4.95E-06	5.09E-03
2.10 MEV	3.98E-01	1.69E-03	2.60E-05	6.08E-03
2.20 MEV	2.86E-01	1.07E-04	3.24E-06	9.14E-03
2.30 MEV	6.21E-01	6.80E-04	4.95E-06	3.03E-03
2.40 MEV	2.14E-01	1.34E-04	3.24E-06	5.56E-03
2.50 MEV	4.25E-01	5.84E-05	2.24E-05	5.22E-03
2.60 MEV	3.75E-01	2.43E-03	3.96E-05	5.37E-03
2.70 MEV	2.89E-01	9.19E-05	4.72E-06	5.51E-03
2.80 MEV	5.15E-01	7.06E-04	6.70E-06	8.33E-03
2.90 MEV	5.06E-01	8.02E-05	1.93E-05	9.11E-03
3.00 MEV	1.05E+00	2.33E-03	1.38E-05	3.79E-03
3.20 MEV	4.19E-01	1.12E-03	4.28E-05	5.05E-03
3.40 MEV	2.67E-01	2.13E-03	1.57E-05	6.31E-03
3.60 MEV	4.29E-01	3.38E-05	3.21E-06	8.79E-03
3.80 MEV	5.96E-01	1.33E-03	2.68E-05	5.80E-03
4.00 MEV	5.69E-01	8.89E-04	3.15E-05	6.03E-03

1 SLOWING DOWN SPECTRUM AT 2.00 CM. FOR SHONKA A-150 PLASTIC

42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	4.20E-01	9.32E-04	2.96E-05	7.53E-03
4.40 MEV	5.72E-01	2.41E-03	8.86E-06	4.58E-03
4.60 MEV	5.97E-01	2.57E-03	4.12E-05	6.11E-03
4.80 MEV	3.94E-01	4.29E-05	2.09E-05	5.79E-03
5.00 MEV	7.32E-01	4.93E-04	8.86E-06	5.27E-03
5.50 MEV	5.05E-01	3.43E-04	2.84E-05	1.91E-03
6.00 MEV	6.13E-01	5.30E-04	3.64E-05	5.19E-03
6.50 MEV	5.55E-01	5.95E-05	3.99E-05	2.60E-03
7.00 MEV	6.07E-01	5.83E-04	7.08E-05	4.32E-03
7.50 MEV	6.20E-01	7.68E-04	2.06E-05	1.82E-03
8.00 MEV	11.42E-01	4.93E-04	3.32E-05	2.95E-03
8.50 MEV	6.88E-01	7.70E-04	1.85E-05	1.63E-03
9.00 MEV	5.85E-01	1.37E-03	4.22E-05	2.96E-03
9.50 MEV	5.48E-01	3.59E-04	8.73E-06	5.30E-04
10.00 MEV	5.96E-01	7.22E-04	2.04E-05	1.75E-03
11.00 MEV	6.59E-01	6.73E-06	0.	3.22E-04
12.00 MEV	6.78E-01	1.52E-05	0.	8.39E-04
13.00 MEV	6.19E-01	0.	0.	2.57E-05
14.00 MEV	6.80E-01	0.	0.	2.67E-04
15.00 MEV	5.55E-01	0.	0.	2.21E-04
16.00 MEV	5.73E-01	0.	0.	2.27E-04
17.00 MEV	4.91E-01	0.	0.	2.17E-04
18.00 MEV	5.60E-01	0.	0.	4.34E-04
19.00 MEV	4.46E-01	0.	0.	4.34E-04
20.00 MEV	6.25E-01	0.	0.	8.69E-04
21.00 MEV	4.38E-01	0.	0.	0.
22.00 MEV	5.30E-01	0.	0.	0.
23.00 MEV	4.18E-01	0.	0.	0.
24.00 MEV	3.77E-01	0.	0.	0.
25.00 MEV	4.32E-01	0.	0.	0.
26.00 MEV	2.33E-01	0.	0.	0.
27.00 MEV	2.85E-01	0.	0.	0.
28.00 MEV	2.53E-01	0.	0.	0.
29.00 MEV	2.45E-01	0.	0.	0.
30.00 MEV	3.09E-01	0.	0.	0.
32.00 MEV	1.45E-01	0.	0.	0.
34.00 MEV	9.57E-02	0.	0.	0.
36.00 MEV	8.54E-02	0.	0.	0.
38.00 MEV	1.71E-02	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.

DAVE, E(MEV)

14.79

4.90

5.64

5.10

1 SLOWING DOWN SPECTRUM AT 4.00 CM. FOR SHONKA A-150 PLASTIC
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	2.95E-01	8.42E-04	1.01E-05	3.62E-03
0.15 MEV	2.11E-01	5.69E-05	1.83E-06	2.25E-03
0.20 MEV	1.97E-01	3.27E-05	7.21E-06	6.81E-03
0.25 MEV	2.34E-01	6.78E-05	2.99E-06	5.30E-03
0.30 MEV	2.17E-01	5.73E-05	4.19E-06	3.25E-03
0.35 MEV	1.90E-01	4.40E-05	6.76E-06	3.54E-03
0.40 MEV	2.64E-01	6.34E-05	3.23E-05	2.55E-03
0.45 MEV	1.88E-01	1.39E-04	2.27E-05	4.59E-03
0.50 MEV	2.64E-01	1.49E-04	2.04E-07	1.87E-03
0.55 MEV	3.18E-01	3.40E-05	1.40E-05	9.52E-04
0.60 MEV	1.72E-01	1.08E-04	1.99E-05	7.61E-03
0.65 MEV	2.11E-01	2.49E-04	1.60E-05	2.83E-03
0.70 MEV	4.54E-01	4.88E-05	6.08E-06	1.90E-03
0.75 MEV	2.75E-01	8.07E-05	3.22E-07	9.26E-03
0.80 MEV	1.53E-01	8.82E-05	9.23E-06	8.50E-03
0.85 MEV	2.59E-01	1.01E-03	2.36E-05	4.18E-03
0.90 MEV	3.76E-01	6.13E-04	1.38E-05	3.66E-03
0.95 MEV	2.18E-01	4.42E-05	9.89E-06	2.80E-03
1.00 MEV	2.19E-01	1.30E-04	2.87E-05	3.76E-03
1.10 MEV	2.67E-01	6.90E-04	1.06E-05	5.63E-03
1.20 MEV	3.02E-01	1.74E-04	1.93E-05	3.63E-03
1.30 MEV	3.10E-01	5.15E-04	6.33E-04	4.15E-03
1.40 MEV	4.85E-01	1.72E-04	4.24E-05	7.56E-03
1.50 MEV	3.73E-01	1.23E-04	1.87E-06	6.64E-03
1.60 MEV	3.20E-01	1.15E-03	1.60E-05	3.65E-03
1.70 MEV	3.03E-01	3.64E-04	2.08E-05	7.02E-03
1.80 MEV	5.90E-01	1.33E-04	1.87E-05	6.66E-03
1.90 MEV	2.49E-01	5.05E-04	2.05E-05	5.55E-03
2.00 MEV	3.14E-01	7.28E-04	6.35E-04	7.28E-03
2.10 MEV	3.56E-01	4.62E-04	1.66E-05	4.81E-03
2.20 MEV	3.17E-01	5.16E-04	1.53E-05	8.75E-03
2.30 MEV	6.41E-01	8.55E-04	1.38E-03	3.24E-03
2.40 MEV	1.99E-01	5.04E-04	2.35E-05	5.59E-03
2.50 MEV	3.96E-01	4.95E-04	3.03E-05	5.08E-03
2.60 MEV	4.06E-01	1.96E-03	6.33E-04	5.77E-03
2.70 MEV	2.42E-01	2.98E-04	3.69E-05	6.18E-03
2.80 MEV	4.61E-01	6.02E-04	1.16E-05	8.10E-03
2.90 MEV	4.99E-01	5.60E-05	3.04E-05	9.07E-03
3.00 MEV	1.23E+00	8.53E-04	6.62E-04	4.35E-03
3.20 MEV	4.46E-01	3.47E-04	2.57E-05	4.59E-03
3.40 MEV	2.87E-01	1.33E-03	3.45E-04	6.54E-03
3.60 MEV	3.69E-01	1.45E-04	6.91E-04	8.51E-03
3.80 MEV	5.50E-01	2.15E-04	3.46E-04	4.70E-03
4.00 MEV	5.07E-01	2.84E-04	3.25E-04	5.63E-03

1 SLOWING DOWN SPECTRUM AT 4.00 CM. FOR SHONKA A-150 PLASTIC
42 MEV P+ ON HE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.67E-01	4.11E-04	3.18E-04	5.10E-03
4.40 MEV	6.03E-01	2.32E-05	1.31E-03	3.50E-03
4.60 MEV	5.13E-01	4.69E-05	9.49E-04	5.47E-03
4.80 MEV	3.41E-01	2.26E-05	1.41E-05	6.32E-03
5.00 MEV	7.15E-01	4.33E-05	2.14E-05	4.34E-03
5.50 MEV	4.64E-01	4.26E-05	2.79E-04	2.75E-03
6.00 MEV	5.28E-01	6.85E-05	2.84E-04	6.50E-03
6.50 MEV	5.74E-01	3.35E-05	2.81E-04	2.29E-03
7.00 MEV	5.24E-01	7.47E-05	5.53E-04	3.84E-03
7.50 MEV	5.09E-01	2.15E-05	5.50E-04	1.98E-03
8.00 MEV	4.75E-01	3.09E-05	1.09E-03	2.22E-03
8.50 MEV	5.89E-01	2.01E-05	8.26E-06	1.27E-03
9.00 MEV	5.43E-01	3.84E-05	1.93E-05	2.67E-03
9.50 MEV	5.40E-01	1.22E-05	0.	8.51E-04
10.00 MEV	5.34E-01	2.06E-05	0.	2.29E-03
11.00 MEV	5.90E-01	1.18E-05	0.	6.12E-04
12.00 MEV	6.37E-01	2.64E-05	0.	1.07E-03
13.00 MEV	5.74E-01	0.	0.	5.51E-04
14.00 MEV	7.31E-01	0.	0.	7.08E-04
15.00 MEV	5.74E-01	0.	0.	5.13E-04
16.00 MEV	5.81E-01	0.	0.	1.01E-03
17.00 MEV	6.15E-01	0.	0.	2.53E-04
18.00 MEV	5.65E-01	0.	0.	5.78E-04
19.00 MEV	4.37E-01	0.	0.	2.17E-04
20.00 MEV	5.61E-01	0.	0.	4.34E-04
21.00 MEV	4.61E-01	0.	0.	0.
22.00 MEV	5.08E-01	0.	0.	0.
23.00 MEV	3.34E-01	0.	0.	0.
24.00 MEV	3.93E-01	0.	0.	0.
25.00 MEV	3.57E-01	0.	0.	0.
26.00 MEV	2.38E-01	0.	0.	0.
27.00 MEV	2.58E-01	0.	0.	0.
28.00 MEV	2.21E-01	0.	0.	0.
29.00 MEV	1.88E-01	0.	0.	0.
30.00 MEV	2.47E-01	0.	0.	0.
32.00 MEV	1.50E-01	0.	0.	0.
34.00 MEV	8.65E-02	0.	0.	0.
36.00 MEV	5.74E-02	0.	0.	0.
38.00 MEV	2.57E-02	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
DAVE, E (MEV)	14.70	2.95	5.32	5.40

1 SLOWING DOWN SPECTRUM AT 6.00 CM. FOR SHONKA A-15H PLASTIC
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	2.92E-01	8.86E-06	7.73E-06	2.89E-03
0.15 MEV	1.97E-01	1.79E-04	2.14E-06	2.39E-03
0.20 MEV	1.91E-01	1.99E-05	9.48E-06	6.33E-03
0.25 MEV	2.26E-01	6.81E-05	2.64E-06	7.11E-03
0.30 MEV	2.08E-01	1.54E-04	7.41E-06	5.41E-03
0.35 MEV	1.68E-01	3.67E-05	5.52E-06	5.37E-03
0.40 MEV	2.42E-01	1.63E-04	2.57E-05	2.97E-03
0.45 MEV	1.71E-01	2.28E-04	1.32E-05	4.97E-03
0.50 MEV	2.49E-01	3.63E-04	4.88E-06	2.27E-03
0.55 MEV	2.76E-01	2.68E-05	5.86E-05	1.10E-03
0.60 MEV	1.66E-01	1.37E-04	2.80E-05	8.24E-03
0.65 MEV	2.05E-01	2.21E-04	1.31E-05	2.69E-03
0.70 MEV	3.99E-01	4.84E-05	5.20E-06	1.84E-03
0.75 MEV	2.74E-01	6.18E-05	5.09E-06	7.89E-03
0.80 MEV	1.57E-01	8.87E-05	2.58E-05	1.03E-02
0.85 MEV	2.57E-01	1.73E-04	1.26E-05	4.66E-03
0.90 MEV	3.37E-01	1.01E-04	1.69E-05	4.03E-03
0.95 MEV	1.95E-01	2.35E-05	7.21E-06	2.67E-03
1.00 MEV	2.01E-01	1.70E-04	1.35E-05	5.47E-03
1.10 MEV	2.48E-01	1.40E-04	1.05E-04	6.12E-03
1.20 MEV	3.28E-01	1.53E-04	3.37E-05	3.18E-03
1.30 MEV	2.75E-01	1.10E-04	1.18E-05	4.18E-03
1.40 MEV	4.85E-01	2.25E-04	4.03E-05	7.86E-03
1.50 MEV	3.14E-01	1.42E-04	1.50E-05	6.75E-03
1.60 MEV	3.13E-01	2.14E-04	1.95E-05	3.75E-03
1.70 MEV	3.37E-01	1.14E-04	2.13E-05	6.49E-03
1.80 MEV	6.09E-01	1.07E-04	1.67E-05	5.78E-03
1.90 MEV	2.38E-01	9.62E-05	2.36E-05	6.48E-03
2.00 MEV	3.16E-01	1.95E-04	2.29E-05	6.49E-03
2.10 MEV	3.71E-01	5.18E-05	1.25E-05	5.85E-03
2.20 MEV	2.86E-01	9.31E-05	1.05E-04	9.01E-03
2.30 MEV	5.99E-01	5.36E-05	3.55E-05	3.27E-03
2.40 MEV	2.28E-01	1.27E-04	1.01E-05	6.85E-03
2.50 MEV	3.54E-01	7.92E-05	2.35E-05	6.13E-03
2.60 MEV	3.68E-01	1.27E-04	3.50E-05	6.37E-03
2.70 MEV	2.20E-01	1.10E-04	2.25E-05	7.15E-03
2.80 MEV	3.99E-01	9.10E-05	2.57E-05	8.60E-03
2.90 MEV	5.46E-01	7.20E-05	1.22E-05	1.05E-02
3.00 MEV	1.07E+00	9.98E-05	1.35E-04	4.29E-03
3.20 MEV	4.14E-01	7.02E-05	1.70E-05	5.18E-03
3.40 MEV	2.74E-01	1.12E-04	2.31E-05	8.00E-03
3.60 MEV	3.33E-01	3.51E-05	6.61E-05	8.11E-03
3.80 MEV	4.83E-01	7.97E-05	3.63E-05	4.84E-03
4.00 MEV	4.91E-01	5.74E-05	3.48E-05	5.51E-03

1 SLOWING DOWN SPECTRUM AT 6.00 CM. FOR SHONKA A-150 PLASTIC
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.25E-01	7.69E-05	9.60E-05	5.38E-03
4.40 MEV	4.96E-01	7.42E-05	1.61E-05	4.66E-03
4.60 MEV	4.11E-01	8.58E-05	6.81E-05	6.08E-03
4.80 MEV	3.11E-01	5.90E-05	2.44E-05	4.99E-03
5.00 MEV	6.24E-01	1.04E-04	8.41E-05	4.25E-03
5.50 MEV	4.47E-01	3.41E-05	4.83E-05	2.29E-03
6.00 MEV	5.43E-01	5.61E-05	1.13E-04	5.97E-03
6.50 MEV	4.65E-01	2.66E-05	8.36E-06	2.43E-03
7.00 MEV	5.49E-01	6.74E-05	1.32E-05	3.91E-03
7.50 MEV	5.22E-01	1.94E-05	5.09E-06	1.81E-03
8.00 MEV	4.63E-01	3.80E-05	8.13E-06	2.61E-03
8.50 MEV	5.21E-01	8.44E-06	5.14E-06	1.12E-03
9.00 MEV	5.34E-01	1.42E-05	1.15E-05	2.13E-03
9.50 MEV	4.54E-01	1.28E-05	4.48E-06	4.38E-04
10.00 MEV	5.00E-01	2.54E-05	1.05E-05	1.28E-03
11.00 MEV	5.73E-01	6.63E-06	0.	4.69E-04
12.00 MEV	5.25E-01	1.49E-05	0.	8.55E-04
13.00 MEV	4.84E-01	0.	0.	1.73E-04
14.00 MEV	6.22E-01	0.	0.	2.73E-04
15.00 MEV	5.44E-01	0.	0.	1.44E-04
16.00 MEV	5.16E-01	0.	0.	2.26E-04
17.00 MEV	4.89E-01	0.	0.	1.43E-04
18.00 MEV	4.93E-01	0.	0.	3.39E-04
19.00 MEV	3.69E-01	0.	0.	7.24E-05
20.00 MEV	4.70E-01	0.	0.	1.45E-04
21.00 MEV	4.40E-01	0.	0.	0.
22.00 MEV	4.17E-01	0.	0.	0.
23.00 MEV	3.79E-01	0.	0.	0.
24.00 MEV	3.79E-01	0.	0.	0.
25.00 MEV	3.33E-01	0.	0.	0.
26.00 MEV	2.22E-01	0.	0.	0.
27.00 MEV	2.97E-01	0.	0.	0.
28.00 MEV	2.88E-01	0.	0.	0.
29.00 MEV	1.62E-01	0.	0.	0.
30.00 MEV	1.34E-01	0.	0.	0.
32.00 MEV	9.88E-02	0.	0.	0.
34.00 MEV	9.70E-02	0.	0.	0.
36.00 MEV	3.66E-02	0.	0.	0.
38.00 MEV	4.65E-02	0.	0.	0.
40.00 MEV	9.28E-03	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
DAVE, E(MEV)	14.69	3.57	4.29	4.52

1 SLOWING DOWN SPECTRUM AT 10.0 CM. FOR SHONKA A-15⁴ PLASTIC
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	2.19E-01	1.00E-05	5.28E-06	2.41E-03
0.15 MEV	1.85E-01	1.26E-04	1.03E-06	1.83E-03
0.20 MEV	1.76E-01	1.79E-05	6.13E-06	5.35E-03
0.25 MEV	1.99E-01	1.27E-04	1.44E-06	3.92E-03
0.30 MEV	1.89E-01	1.24E-04	4.95E-06	2.48E-03
0.35 MEV	1.56E-01	2.62E-05	3.07E-06	2.66E-03
0.40 MEV	2.15E-01	1.25E-04	1.35E-04	2.47E-03
0.45 MEV	1.54E-01	9.12E-04	5.73E-06	3.94E-03
0.50 MEV	2.23E-01	1.29E-03	4.68E-06	1.79E-03
0.55 MEV	2.45E-01	8.88E-05	1.60E-05	6.76E-04
0.60 MEV	1.47E-01	1.22E-04	1.85E-05	6.48E-03
0.65 MEV	1.94E-01	3.89E-04	8.37E-06	2.23E-03
0.70 MEV	4.43E-01	3.45E-05	5.59E-06	1.60E-03
0.75 MEV	2.24E-01	1.13E-04	2.02E-06	6.92E-03
0.80 MEV	1.45E-01	3.67E-04	1.47E-05	6.54E-03
0.85 MEV	2.06E-01	1.28E-04	8.51E-06	3.38E-03
0.90 MEV	3.15E-01	5.61E-04	3.57E-06	3.15E-03
0.95 MEV	1.74E-01	2.35E-05	8.87E-06	1.78E-03
1.00 MEV	1.88E-01	3.81E-04	1.74E-04	5.00E-03
1.10 MEV	2.36E-01	8.76E-04	3.75E-06	4.75E-03
1.20 MEV	2.84E-01	2.20E-04	2.22E-05	2.43E-03
1.30 MEV	2.50E-01	3.45E-04	6.61E-06	2.92E-03
1.40 MEV	4.05E-01	6.70E-04	2.04E-05	5.43E-03
1.50 MEV	3.24E-01	5.80E-04	6.47E-05	5.45E-03
1.60 MEV	2.57E-01	6.40E-04	3.98E-05	2.71E-03
1.70 MEV	2.88E-01	5.58E-04	1.20E-05	5.45E-03
1.80 MEV	5.35E-01	8.54E-04	7.50E-05	6.04E-03
1.90 MEV	2.17E-01	6.88E-04	1.82E-05	4.30E-03
2.00 MEV	2.55E-01	8.45E-04	1.03E-04	5.92E-03
2.10 MEV	3.12E-01	2.75E-04	1.18E-05	5.37E-03
2.20 MEV	2.72E-01	8.19E-05	6.56E-05	6.45E-03
2.30 MEV	5.42E-01	1.33E-03	4.25E-05	2.84E-03
2.40 MEV	1.98E-01	4.13E-04	7.21E-05	5.89E-03
2.50 MEV	3.36E-01	6.82E-05	2.07E-05	3.89E-03
2.60 MEV	3.51E-01	7.09E-04	9.69E-05	4.93E-03
2.70 MEV	2.01E-01	1.21E-03	1.31E-04	4.76E-03
2.80 MEV	3.51E-01	8.79E-04	1.50E-04	7.43E-03
2.90 MEV	4.35E-01	6.73E-05	1.27E-05	8.04E-03
3.00 MEV	7.99E-01	1.13E-03	4.90E-05	3.73E-03
3.20 MEV	3.68E-01	4.95E-04	3.65E-05	3.27E-03
3.40 MEV	2.56E-01	1.19E-03	4.82E-05	5.26E-03
3.60 MEV	3.26E-01	6.75E-04	8.02E-06	7.22E-03
3.80 MEV	4.70E-01	9.25E-04	2.40E-05	3.74E-03
4.00 MEV	3.86E-01	2.55E-04	1.56E-05	4.95E-03

1SLOWING DOWN SPECTRUM AT 10.0 CM. FOR SHONKA A-150 PLASTIC
42 MEV P+ ON RE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.18E-01	3.87E-04	1.88E-05	4.78E-03
4.40 MEV	5.50E-01	3.94E-05	1.41E-05	4.41E-03
4.60 MEV	4.75E-01	9.34E-05	2.21E-05	5.80E-03
4.80 MEV	3.05E-01	4.15E-05	1.20E-05	5.30E-03
5.00 MEV	6.16E-01	7.44E-05	1.33E-05	4.12E-03
5.50 MEV	3.89E-01	5.63E-05	1.05E-05	2.29E-03
6.00 MEV	5.09E-01	7.76E-05	2.03E-05	5.49E-03
6.50 MEV	4.20E-01	5.09E-05	8.09E-06	2.17E-03
7.00 MEV	4.60E-01	1.06E-04	1.32E-05	3.56E-03
7.50 MEV	5.11E-01	6.36E-05	4.91E-06	2.11E-03
8.00 MEV	3.97E-01	1.22E-04	7.91E-06	2.62E-03
8.50 MEV	5.02E-01	1.27E-05	4.31E-06	1.19E-03
9.00 MEV	4.98E-01	2.37E-05	9.88E-06	2.25E-03
9.50 MEV	4.95E-01	1.33E-05	1.55E-06	5.98E-04
10.00 MEV	4.83E-01	2.62E-05	3.61E-06	1.72E-03
11.00 MEV	5.26E-01	5.26E-06	0.	6.41E-04
12.00 MEV	5.51E-01	9.44E-06	0.	1.10E-03
13.00 MEV	4.89E-01	3.84E-06	0.	3.46E-04
14.00 MEV	5.50E-01	7.68E-06	0.	3.50E-04
15.00 MEV	4.88E-01	0.	0.	3.68E-04
16.00 MEV	4.65E-01	0.	0.	7.87E-04
17.00 MEV	4.39E-01	0.	0.	1.03E-04
18.00 MEV	4.71E-01	0.	0.	2.22E-04
19.00 MEV	4.46E-01	0.	0.	1.45E-04
20.00 MEV	4.72E-01	0.	0.	2.90E-04
21.00 MEV	3.97E-01	0.	0.	0.
22.00 MEV	3.63E-01	0.	0.	0.
23.00 MEV	2.82E-01	0.	0.	0.
24.00 MEV	2.68E-01	0.	0.	0.
25.00 MEV	2.78E-01	0.	0.	0.
26.00 MEV	2.17E-01	0.	0.	0.
27.00 MEV	2.12E-01	0.	0.	0.
28.00 MEV	1.78E-01	0.	0.	0.
29.00 MEV	1.43E-01	0.	0.	0.
30.00 MEV	1.44E-01	0.	0.	0.
32.00 MEV	1.23E-01	0.	0.	0.
34.00 MEV	8.34E-02	0.	0.	0.
36.00 MEV	6.71E-02	0.	0.	0.
38.00 MEV	2.75E-02	0.	0.	0.
40.00 MEV	4.64E-03	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	14.57	3.02	3.34	5.24

1 SLOWING DOWN SPECTRUM AT 14.0 CM. FOR SHONKA A-150 PLASTIC
42 MEV P+ ON HE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	1.58E-01	6.34E-06	6.00E-06	1.62E-03
0.15 MEV	1.37E-01	3.31E-05	5.73E-07	1.41E-03
0.20 MEV	1.32E-01	4.55E-05	3.61E-05	3.61E-03
0.25 MEV	1.50E-01	7.77E-05	1.68E-06	3.05E-03
0.30 MEV	1.49E-01	2.64E-05	3.24E-06	1.85E-03
0.35 MEV	1.26E-01	1.01E-04	4.49E-06	2.38E-03
0.40 MEV	1.68E-01	4.29E-05	9.75E-06	1.48E-03
0.45 MEV	1.19E-01	9.44E-05	4.45E-06	3.10E-03
0.50 MEV	1.64E-01	1.90E-04	7.06E-07	1.13E-03
0.55 MEV	1.94E-01	4.82E-05	1.11E-05	5.68E-04
0.60 MEV	1.15E-01	1.72E-04	5.14E-05	4.03E-03
0.65 MEV	1.42E-01	1.96E-04	7.96E-06	1.58E-03
0.70 MEV	4.08E-01	1.05E-04	3.27E-06	1.25E-03
0.75 MEV	1.84E-01	9.68E-05	8.58E-07	5.95E-03
0.80 MEV	1.15E-01	6.75E-05	8.91E-06	5.83E-03
0.85 MEV	1.70E-01	1.50E-04	9.43E-05	2.10E-03
0.90 MEV	2.32E-01	7.49E-04	4.40E-06	2.20E-03
0.95 MEV	1.42E-01	1.06E-05	9.85E-06	1.61E-03
1.00 MEV	1.44E-01	1.27E-04	1.26E-05	4.23E-03
1.10 MEV	1.81E-01	2.36E-04	2.04E-05	3.48E-03
1.20 MEV	2.23E-01	2.26E-04	1.24E-05	1.93E-03
1.30 MEV	1.96E-01	1.25E-04	2.41E-05	2.26E-03
1.40 MEV	3.39E-01	2.22E-04	3.48E-05	4.34E-03
1.50 MEV	2.78E-01	1.06E-04	2.61E-05	3.69E-03
1.60 MEV	2.34E-01	2.20E-04	6.33E-05	2.20E-03
1.70 MEV	2.29E-01	4.59E-04	3.51E-05	4.23E-03
1.80 MEV	4.32E-01	1.11E-04	1.96E-05	4.75E-03
1.90 MEV	1.66E-01	1.26E-04	1.00E-05	3.54E-03
2.00 MEV	1.96E-01	2.64E-04	1.67E-05	4.47E-03
2.10 MEV	2.67E-01	8.46E-05	4.39E-06	3.85E-03
2.20 MEV	2.13E-01	1.64E-04	2.73E-05	5.03E-03
2.30 MEV	4.43E-01	5.24E-04	1.08E-05	1.84E-03
2.40 MEV	1.54E-01	1.62E-04	7.29E-06	4.25E-03
2.50 MEV	2.80E-01	6.51E-05	1.58E-05	2.99E-03
2.60 MEV	2.87E-01	2.31E-04	9.91E-06	3.33E-03
2.70 MEV	1.61E-01	3.94E-04	3.90E-05	4.08E-03
2.80 MEV	2.98E-01	1.49E-04	4.06E-06	5.84E-03
2.90 MEV	3.60E-01	5.99E-05	1.71E-05	6.74E-03
3.00 MEV	6.98E-01	5.41E-04	4.40E-05	2.79E-03
3.20 MEV	3.12E-01	1.41E-04	1.24E-05	2.75E-03
3.40 MEV	1.96E-01	4.48E-04	2.27E-05	4.62E-03
3.60 MEV	2.54E-01	2.12E-04	1.95E-05	5.83E-03
3.80 MEV	3.97E-01	2.78E-04	3.39E-05	2.77E-03
4.00 MEV	3.33E-01	3.69E-04	3.59E-05	4.28E-03

1 SLOWING DOWN SPECTRUM AT 14.0 CM. FOR SHONKA A-150 PLASTIC
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	2.71E-01	5.47E-04	4.45E-05	3.57E-03
4.40 MEV	4.67E-01	8.64E-05	1.21E-05	3.62E-03
4.60 MEV	3.67E-01	8.07E-05	1.79E-05	4.70E-03
4.80 MEV	2.63E-01	2.07E-05	8.73E-06	4.21E-03
5.00 MEV	5.40E-01	5.20E-05	1.13E-05	2.96E-03
5.50 MEV	3.12E-01	3.97E-05	7.50E-06	1.84E-03
6.00 MEV	4.07E-01	5.74E-05	1.24E-05	4.67E-03
6.50 MEV	3.59E-01	2.51E-05	8.44E-06	1.81E-03
7.00 MEV	4.16E-01	7.13E-05	1.38E-05	3.00E-03
7.50 MEV	4.30E-01	4.33E-05	6.01E-06	2.00E-03
8.00 MEV	3.35E-01	5.00E-05	1.19E-05	2.06E-03
8.50 MEV	4.22E-01	3.27E-05	3.02E-06	1.08E-03
9.00 MEV	4.35E-01	6.49E-05	6.75E-06	2.08E-03
9.50 MEV	4.43E-01	4.31E-06	2.78E-06	6.45E-04
10.00 MEV	4.15E-01	6.07E-06	6.48E-06	1.84E-03
11.00 MEV	4.74E-01	5.97E-06	0.	6.78E-04
12.00 MEV	4.64E-01	1.34E-05	0.	1.14E-03
13.00 MEV	4.24E-01	0.	0.	4.50E-04
14.00 MEV	4.66E-01	0.	0.	6.65E-04
15.00 MEV	4.38E-01	0.	0.	2.28E-04
16.00 MEV	4.02E-01	0.	0.	5.69E-04
17.00 MEV	4.28E-01	0.	0.	0.
18.00 MEV	4.24E-01	0.	0.	0.
19.00 MEV	3.92E-01	0.	0.	0.
20.00 MEV	3.97E-01	0.	0.	0.
21.00 MEV	3.51E-01	0.	0.	0.
22.00 MEV	3.27E-01	0.	0.	0.
23.00 MEV	2.55E-01	0.	0.	0.
24.00 MEV	2.54E-01	0.	0.	0.
25.00 MEV	2.78E-01	0.	0.	0.
26.00 MEV	2.07E-01	0.	0.	0.
27.00 MEV	2.05E-01	0.	0.	0.
28.00 MEV	1.87E-01	0.	0.	0.
29.00 MEV	1.62E-01	0.	0.	0.
30.00 MEV	1.50E-01	0.	0.	0.
32.00 MEV	1.12E-01	0.	0.	0.
34.00 MEV	6.78E-02	0.	0.	0.
36.00 MEV	4.42E-02	0.	0.	0.
38.00 MEV	1.66E-02	0.	0.	0.
40.00 MEV	9.28E-03	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
AVE, E (MEV)	14.87	3.51	3.89	5.30

1 SLOWING DOWN SPECTRUM AT 0.00 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	1.99E+00	1.37E-05	0.	1.64E-03
0.15 MEV	5.88E-02	2.74E-05	6.19E-05	2.85E-03
0.20 MEV	3.64E-01	4.11E-05	0.	4.91E-03
0.25 MEV	2.71E+00	2.37E-05	1.17E-04	1.01E-03
0.30 MEV	1.70E-02	0.	0.	2.98E-03
0.35 MEV	1.49E+00	0.	6.19E-05	1.82E-03
0.40 MEV	1.87E-01	2.13E-05	1.32E-04	3.04E-03
0.45 MEV	1.61E+00	3.36E-04	1.79E-04	1.70E-03
0.50 MEV	1.34E+00	0.	1.86E-04	2.66E-03
0.55 MEV	4.74E-01	0.	0.	1.33E-03
0.60 MEV	3.55E+00	2.37E-05	5.53E-05	3.76E-03
0.65 MEV	2.20E+00	2.13E-05	0.	1.67E-03
0.70 MEV	2.61E-01	0.	5.53E-05	1.05E-03
0.75 MEV	9.53E-01	0.	0.	1.67E-03
0.80 MEV	4.43E-03	0.	5.53E-05	4.18E-03
0.85 MEV	5.35E-01	4.50E-05	0.	1.72E-03
0.90 MEV	5.20E-02	3.36E-04	5.53E-05	2.78E-03
0.95 MEV	7.61E-01	0.	0.	1.04E-03
1.00 MEV	4.97E-01	0.	5.53E-05	2.63E-03
1.10 MEV	1.35E+00	2.25E-05	5.53E-05	2.48E-03
1.20 MEV	6.24E-01	2.25E-05	1.38E-04	2.04E-03
1.30 MEV	2.25E-02	1.07E-05	0.	1.02E-03
1.40 MEV	1.10E+00	2.25E-05	0.	8.31E-04
1.50 MEV	5.30E-01	1.14E-04	0.	2.16E-03
1.60 MEV	1.56E-01	3.32E-05	0.	1.54E-03
1.70 MEV	1.47E-02	3.32E-05	0.	7.58E-04
1.80 MEV	4.83E-02	6.64E-05	0.	1.03E-03
1.90 MEV	2.51E-01	2.37E-05	0.	3.02E-03
2.00 MEV	1.39E-02	4.74E-05	0.	1.05E-03
2.10 MEV	2.21E-01	0.	0.	5.13E-04
2.20 MEV	1.03E-03	0.	3.51E-05	2.79E-03
2.30 MEV	5.30E-02	0.	0.	8.43E-04
2.40 MEV	7.46E-04	0.	0.	3.93E-03
2.50 MEV	2.80E-02	0.	0.	1.81E-04
2.60 MEV	3.31E-02	9.16E-05	0.	2.48E-03
2.70 MEV	4.81E-02	0.	0.	1.00E-03
2.80 MEV	2.50E-02	0.	0.	1.42E-03
2.90 MEV	9.71E-03	0.	0.	1.23E-03
3.00 MEV	3.34E-02	0.	0.	2.40E-03
3.20 MEV	6.01E-02	0.	1.75E-05	1.66E-03
3.40 MEV	7.38E-02	4.58E-05	0.	3.86E-03
3.60 MEV	5.27E-02	0.	0.	1.98E-03
3.80 MEV	6.23E-03	0.	0.	3.27E-03
4.00 MEV	3.83E-02	4.58E-05	1.75E-05	1.90E-04

1SLOWING DOWN SPECTRUM AT 0.00 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	2.49E-02	0.	0.	1.09E-04
4.40 MEV	1.26E-02	0.	0.	1.66E-04
4.60 MEV	3.40E-02	4.58E-05	1.75E-05	1.71E-04
4.80 MEV	2.42E-02	0.	0.	1.20E-04
5.00 MEV	3.40E-02	4.58E-05	0.	1.34E-04
5.50 MEV	5.32E-02	1.83E-05	7.01E-06	1.15E-04
6.00 MEV	3.88E-02	3.67E-05	7.01E-06	2.77E-04
6.50 MEV	4.45E-04	1.83E-05	1.40E-05	4.37E-05
7.00 MEV	3.22E-04	5.50E-05	7.01E-06	6.15E-05
7.50 MEV	5.63E-04	5.50E-05	1.40E-05	1.28E-05
8.00 MEV	2.63E-04	1.28E-04	1.40E-05	2.07E-05
8.50 MEV	3.56E-04	0.	2.10E-05	0.
9.00 MEV	3.56E-04	0.	4.91E-05	6.83E-06
9.50 MEV	5.27E-04	0.	0.	6.83E-06
10.00 MEV	3.56E-04	0.	0.	6.83E-06
11.00 MEV	6.20E-04	0.	0.	6.83E-06
12.00 MEV	1.41E-03	0.	0.	6.83E-06
13.00 MEV	1.39E-04	0.	0.	1.37E-05
14.00 MEV	3.72E-04	0.	0.	2.73E-05
15.00 MEV	0.	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	1.08	4.75	4.02	2.23

1 SLOWING DOWN SPECTRUM AT 0.05 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON HE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	5.17E-01	2.60E-05	0.	1.00E-02
0.15 MEV	5.80E-01	1.40E-04	0.	6.70E-03
0.20 MEV	3.40E-01	7.00E-05	0.	1.75E-02
0.25 MEV	6.06E-01	1.85E-05	0.	8.39E-03
0.30 MEV	2.32E+00	9.18E-05	0.	1.20E-02
0.35 MEV	1.29E+00	5.38E-04	0.	4.30E-03
0.40 MEV	3.61E+00	4.57E-06	0.	9.21E-03
0.45 MEV	7.43E-01	2.38E-04	0.	1.08E-02
0.50 MEV	7.82E-01	7.28E-05	7.50E-05	8.38E-03
0.55 MEV	4.55E-01	2.18E-05	0.	2.54E-03
0.60 MEV	1.44E+00	1.37E-05	3.26E-06	1.07E-02
0.65 MEV	7.92E-01	2.16E-04	0.	1.01E-02
0.70 MEV	3.62E-01	9.31E-05	0.	3.56E-03
0.75 MEV	1.25E+00	9.54E-05	0.	7.26E-03
0.80 MEV	2.52E+00	1.27E-05	0.	8.99E-03
0.85 MEV	1.90E+00	1.74E-04	0.	1.67E-02
0.90 MEV	3.12E-01	2.10E-04	0.	5.74E-03
0.95 MEV	3.56E-01	1.43E-05	3.26E-06	1.30E-02
1.00 MEV	2.00E+00	3.12E-04	7.50E-05	1.25E-02
1.10 MEV	1.50E+00	2.87E-04	0.	1.06E-02
1.20 MEV	7.35E-01	2.42E-04	1.03E-06	1.64E-02
1.30 MEV	8.25E-01	1.77E-04	0.	1.37E-02
1.40 MEV	2.23E+00	6.69E-05	6.84E-05	7.06E-03
1.50 MEV	3.55E-01	2.40E-04	0.	1.16E-02
1.60 MEV	1.09E+00	2.27E-04	1.63E-06	1.19E-02
1.70 MEV	7.08E-01	1.65E-04	3.75E-05	7.75E-03
1.80 MEV	2.64E+00	8.33E-05	1.63E-06	1.28E-02
1.90 MEV	1.09E+00	9.00E-05	1.63E-06	9.68E-03
2.00 MEV	1.44E+00	2.08E-04	3.75E-05	5.35E-03
2.10 MEV	3.61E-01	1.06E-04	1.63E-06	6.30E-03
2.20 MEV	4.72E-01	1.89E-04	3.91E-05	8.50E-03
2.30 MEV	5.56E-01	1.57E-04	1.63E-06	5.28E-03
2.40 MEV	1.05E+00	2.17E-04	4.08E-05	2.62E-02
2.50 MEV	5.88E-01	2.33E-04	7.00E-05	4.60E-03
2.60 MEV	1.15E+00	5.10E-04	6.53E-06	8.66E-03
2.70 MEV	4.63E-01	2.43E-04	3.75E-05	8.49E-03
2.80 MEV	1.16E+00	4.66E-04	3.75E-05	4.37E-03
2.90 MEV	2.69E-01	3.04E-05	3.75E-05	8.96E-03
3.00 MEV	2.65E-01	6.07E-05	3.75E-05	9.78E-03
3.20 MEV	9.54E-01	2.49E-05	3.75E-05	3.34E-03
3.40 MEV	7.78E-01	5.10E-06	1.27E-04	8.14E-03
3.60 MEV	7.64E-01	2.49E-05	0.	5.85E-03
3.80 MEV	2.52E-01	1.09E-04	0.	8.67E-03
4.00 MEV	2.10E-01	5.10E-06	1.46E-05	4.40E-03

1 SLOWING DOWN SPECTRUM AT 0.05 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	7.33E-01	7.20E-05	0.	2.01E-03
4.40 MEV	3.03E-01	2.49E-05	1.46E-05	1.32E-02
4.60 MEV	7.23E-01	1.14E-04	0.	6.29E-03
4.80 MEV	2.39E-01	2.49E-05	0.	4.04E-03
5.00 MEV	6.49E-01	3.00E-05	1.46E-05	6.52E-03
5.50 MEV	3.96E-01	8.44E-05	5.84E-06	4.94E-03
6.00 MEV	3.06E-01	1.36E-04	1.17E-05	1.32E-02
6.50 MEV	3.12E-01	3.57E-05	1.17E-05	4.07E-03
7.00 MEV	2.70E-01	9.23E-05	1.17E-05	6.50E-03
7.50 MEV	9.65E-02	9.23E-05	1.75E-05	3.93E-03
8.00 MEV	1.86E-01	1.34E-04	4.09E-05	8.25E-03
8.50 MEV	8.00E-05	1.89E-05	0.	6.46E-03
9.00 MEV	1.79E-02	1.89E-05	0.	1.51E-02
9.50 MEV	1.48E-02	1.89E-05	0.	3.40E-03
10.00 MEV	0.	1.89E-05	0.	2.38E-03
11.00 MEV	5.17E-02	3.77E-05	0.	3.07E-03
12.00 MEV	1.99E-02	8.49E-05	0.	7.46E-03
13.00 MEV	4.59E-02	0.	0.	3.52E-03
14.00 MEV	2.75E-02	1.68E-05	0.	8.22E-03
15.00 MEV	9.18E-02	0.	0.	2.17E-05
16.00 MEV	0.	0.	0.	3.25E-05
17.00 MEV	3.72E-02	0.	0.	2.28E-05
18.00 MEV	1.16E-02	0.	0.	6.08E-05
19.00 MEV	0.	0.	0.	0.
20.00 MEV	6.64E-02	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	2.02E-02	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	3.95E-02	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E (MEV)	3.80	4.74	4.14	6.37

1 SLOWING DOWN SPECTRUM AT 0.10 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BF NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	5.49E-01	6.22E-05	0.	9.51E-03
0.15 MEV	1.04E+00	2.06E-04	1.21E-05	9.30E-03
0.20 MEV	8.88E-02	1.57E-04	0.	1.64E-02
0.25 MEV	4.41E-01	4.29E-04	1.21E-05	4.88E-03
0.30 MEV	5.80E-01	1.27E-04	0.	1.29E-02
0.35 MEV	6.51E-01	4.31E-05	1.21E-05	8.61E-03
0.40 MEV	7.24E-01	7.36E-05	3.39E-04	1.19E-02
0.45 MEV	4.71E+00	2.24E-04	2.42E-05	1.69E-02
0.50 MEV	5.03E-01	1.98E-04	3.63E-05	9.09E-03
0.55 MEV	7.19E-01	1.83E-04	0.	4.55E-03
0.60 MEV	5.94E-01	3.61E-04	0.	1.76E-02
0.65 MEV	8.32E-01	4.12E-04	3.27E-04	1.01E-02
0.70 MEV	1.20E+00	2.89E-04	0.	3.17E-03
0.75 MEV	9.89E-01	9.63E-05	0.	5.32E-03
0.80 MEV	3.71E+00	2.71E-04	0.	9.57E-03
0.85 MEV	1.35E+00	4.39E-04	0.	1.27E-02
0.90 MEV	1.07E+00	1.86E-04	0.	5.24E-03
0.95 MEV	1.33E+00	7.93E-05	9.16E-05	1.08E-02
1.00 MEV	8.89E-01	5.29E-04	0.	8.62E-03
1.10 MEV	1.25E+00	2.99E-04	0.	1.34E-02
1.20 MEV	8.33E-01	2.73E-04	0.	2.10E-02
1.30 MEV	7.88E-01	2.78E-04	0.	7.99E-03
1.40 MEV	4.17E-01	5.92E-04	0.	0.48E-03
1.50 MEV	1.13E+00	3.31E-04	0.	1.29E-02
1.60 MEV	5.33E-01	4.87E-04	4.58E-05	8.13E-03
1.70 MEV	2.14E-01	2.13E-04	0.	2.36E-02
1.80 MEV	6.77E-01	3.16E-04	0.	1.43E-02
1.90 MEV	1.31E+00	2.56E-04	0.	1.22E-02
2.00 MEV	6.90E-01	5.97E-04	4.58E-05	5.78E-03
2.10 MEV	1.26E+00	5.99E-05	0.	3.87E-03
2.20 MEV	3.63E-01	8.56E-05	0.	9.73E-03
2.30 MEV	6.82E-01	5.99E-05	0.	4.48E-03
2.40 MEV	4.86E-01	1.45E-04	4.58E-05	1.15E-02
2.50 MEV	1.73E+00	1.20E-04	0.	5.71E-03
2.60 MEV	1.41E+00	2.65E-04	0.	1.37E-02
2.70 MEV	8.34E-01	2.57E-05	4.58E-05	8.90E-03
2.80 MEV	1.61E+00	2.57E-05	0.	8.31E-03
2.90 MEV	6.46E-01	2.57E-05	0.	1.11E-02
3.00 MEV	9.39E-01	2.57E-05	4.58E-05	1.54E-02
3.20 MEV	4.83E-01	2.57E-05	2.29E-05	3.55E-03
3.40 MEV	1.10E+00	7.72E-05	2.29E-05	5.76E-03
3.60 MEV	3.43E-01	0.	2.29E-05	1.16E-02
3.80 MEV	6.54E-01	0.	2.29E-05	1.11E-02
4.00 MEV	2.91E-01	0.	2.29E-05	4.38E-03

150000 DOWN SPECTRUM AT 0.10 CM. FOR ICRU MUSCLE TISSUE

42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	1.51E+00	0.	4.58E-05	3.28E-03
4.40 MEV	7.07E-01	0.	6.87E-05	4.94E-03
4.60 MEV	5.38E-01	0.	1.15E-04	8.47E-03
4.80 MEV	6.63E-01	0.	0.	4.61E-03
5.00 MEV	5.43E-01	0.	0.	1.54E-02
5.50 MEV	1.04E+00	0.	0.	3.60E-03
6.00 MEV	4.39E-01	0.	0.	1.02E-02
6.50 MEV	3.61E-01	0.	0.	2.17E-03
7.00 MEV	5.47E-01	0.	0.	5.32E-03
7.50 MEV	6.06E-02	0.	0.	5.41E-03
8.00 MEV	3.83E-01	3.36E-05	0.	6.73E-03
8.50 MEV	4.27E-02	0.	0.	5.68E-03
9.00 MEV	6.04E-02	0.	0.	1.00E-02
9.50 MEV	3.78E-02	0.	0.	7.55E-03
10.00 MEV	1.96E-01	0.	0.	1.77E-02
11.00 MEV	4.90E-02	0.	0.	2.18E-04
12.00 MEV	1.66E-01	0.	0.	5.50E-04
13.00 MEV	8.56E-02	0.	0.	1.04E-04
14.00 MEV	1.24E-01	0.	0.	2.07E-04
15.00 MEV	4.36E-02	0.	0.	1.53E-06
16.00 MEV	5.41E-02	0.	0.	4.09E-06
17.00 MEV	1.16E-02	0.	0.	0.
18.00 MEV	8.78E-02	0.	0.	0.
19.00 MEV	6.99E-02	0.	0.	0.
20.00 MEV	2.30E-02	0.	0.	0.
21.00 MEV	2.57E-02	0.	0.	0.
22.00 MEV	5.52E-02	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	3.15E-02	0.	0.	0.
25.00 MEV	5.37E-02	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	3.95E-02	0.	0.	0.
28.00 MEV	2.26E-02	0.	0.	0.
29.00 MEV	6.53E-02	0.	0.	0.
30.00 MEV	4.36E-02	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	5.85E-02	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	3.46E-02	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
DAVE, E(MEV)	6.44	1.54	2.64	4.96

1 SLOWING DOWN SPECTRUM AT 0.15 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	1.35E-01	3.84E-05	0.	5.02E-03
0.15 MEV	2.59E-01	3.14E-04	0.	6.46E-03
0.20 MEV	5.11E-01	1.17E-04	0.	1.94E-02
0.25 MEV	3.12E-01	3.39E-04	0.	6.54E-03
0.30 MEV	2.84E-01	1.75E-04	0.	7.38E-03
0.35 MEV	4.76E-01	1.74E-04	0.	6.71E-03
0.40 MEV	1.06E+00	1.18E-04	0.	2.19E-02
0.45 MEV	1.37E+00	8.71E-04	0.	4.43E-03
0.50 MEV	4.19E-01	4.16E-04	0.	8.86E-03
0.55 MEV	6.44E-01	1.45E-04	0.	3.46E-03
0.60 MEV	4.90E-01	1.82E-04	0.	1.04E-02
0.65 MEV	8.18E-01	4.62E-04	3.27E-04	7.27E-03
0.70 MEV	1.19E+00	3.58E-04	0.	6.54E-03
0.75 MEV	5.49E-01	2.93E-04	0.	1.13E-02
0.80 MEV	1.24E+00	4.54E-04	0.	3.11E-02
0.85 MEV	1.41E+00	6.27E-04	0.	7.45E-03
0.90 MEV	1.82E+00	4.58E-04	0.	2.11E-03
0.95 MEV	1.48E+00	4.95E-05	0.	1.32E-02
1.00 MEV	5.75E-01	5.84E-04	0.	4.89E-03
1.10 MEV	2.38E+00	4.08E-04	0.	8.36E-03
1.20 MEV	8.52E-01	5.14E-04	0.	1.01E-02
1.30 MEV	8.92E-01	3.54E-04	0.	2.26E-02
1.40 MEV	1.63E+00	7.86E-04	0.	1.20E-02
1.50 MEV	6.48E-01	2.61E-04	0.	1.27E-02
1.60 MEV	1.16E+00	6.22E-04	1.63E-04	1.54E-02
1.70 MEV	5.70E-01	1.02E-04	0.	9.26E-03
1.80 MEV	7.74E-01	1.55E-04	0.	1.66E-02
1.90 MEV	8.58E-01	1.55E-04	0.	1.84E-02
2.00 MEV	9.53E-01	3.09E-04	0.	1.06E-02
2.10 MEV	1.07E+00	9.91E-05	0.	1.46E-02
2.20 MEV	7.12E-01	1.98E-04	1.63E-04	1.98E-02
2.30 MEV	8.01E-01	0.	0.	7.46E-03
2.40 MEV	2.18E-01	0.	0.	2.18E-02
2.50 MEV	1.03E+00	2.66E-04	0.	1.02E-02
2.60 MEV	1.03E+00	0.	1.63E-04	1.36E-02
2.70 MEV	3.45E-01	9.42E-05	0.	1.04E-02
2.80 MEV	1.86E+00	0.	0.	1.21E-02
2.90 MEV	1.18E+00	0.	1.63E-04	2.16E-02
3.00 MEV	2.16E+00	0.	0.	1.68E-02
3.20 MEV	5.51E-01	0.	8.17E-05	1.02E-02
3.40 MEV	1.35E+00	0.	8.17E-05	1.78E-02
3.60 MEV	9.46E-01	1.33E-04	0.	2.06E-02
3.80 MEV	6.70E-01	0.	0.	1.03E-02
4.00 MEV	4.52E-01	0.	0.	1.54E-02

1 SLOWING DOWN SPECTRUM AT 0.15 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	1.10E+00	4.71E-05	0.	6.75E-03
4.40 MEV	5.83E-01	1.33E-04	0.	1.43E-02
4.60 MEV	1.39E+00	0.	0.	1.54E-02
4.80 MEV	1.26E+00	0.	0.	1.07E-02
5.00 MEV	2.51E-01	1.33E-04	0.	9.23E-03
5.50 MEV	4.73E-01	7.21E-05	0.	1.02E-02
6.00 MEV	4.44E-01	7.21E-05	0.	1.94E-02
6.50 MEV	4.03E-01	1.06E-04	0.	1.12E-02
7.00 MEV	4.06E-01	7.21E-05	0.	1.26E-02
7.50 MEV	1.71E-01	1.88E-05	0.	5.31E-03
8.00 MEV	1.80E-01	1.88E-05	0.	7.66E-03
8.50 MEV	1.06E-01	1.88E-05	0.	5.66E-03
9.00 MEV	1.10E-01	1.88E-05	0.	1.37E-02
9.50 MEV	2.60E-01	1.88E-05	0.	2.25E-03
10.00 MEV	9.00E-02	1.88E-05	0.	2.91E-03
11.00 MEV	3.56E-01	3.77E-05	0.	2.15E-03
12.00 MEV	1.66E-02	8.48E-05	1.63E-05	2.70E-03
13.00 MEV	1.11E-01	2.66E-05	0.	3.75E-03
14.00 MEV	3.82E-02	0.	0.	7.49E-03
15.00 MEV	5.69E-02	0.	0.	1.53E-06
16.00 MEV	8.78E-02	2.66E-05	0.	4.09E-06
17.00 MEV	5.61E-02	0.	0.	0.
18.00 MEV	4.89E-02	0.	0.	0.
19.00 MEV	4.60E-02	0.	0.	0.
20.00 MEV	2.57E-02	0.	0.	0.
21.00 MEV	8.10E-02	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	3.15E-02	0.	0.	0.
24.00 MEV	5.37E-02	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	3.95E-02	0.	0.	0.
27.00 MEV	2.26E-02	0.	0.	0.
28.00 MEV	6.53E-02	0.	0.	0.
29.00 MEV	4.36E-02	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	5.34E-02	0.	0.	0.
36.00 MEV	1.17E-01	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	3.46E-02	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE. E (MEV)	7.28	3.94	3.45	5.46

1 SLOWING DOWN SPECTRUM AT 0.20 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	2.00E+00	7.67E-05	0.	5.57E-03
0.15 MEV	1.52E-01	3.22E-05	4.81E-06	7.95E-03
0.20 MEV	1.26E-01	7.41E-05	1.36E-05	1.46E-02
0.25 MEV	4.13E-01	9.63E-05	4.81E-06	7.44E-03
0.30 MEV	1.16E-01	7.49E-05	2.01E-02	1.50E-02
0.35 MEV	2.20E-01	4.97E-05	4.81E-06	6.60E-03
0.40 MEV	3.93E-01	7.36E-05	1.84E-05	9.41E-03
0.45 MEV	3.34E-01	1.09E-04	9.62E-06	1.14E-02
0.50 MEV	1.49E-01	1.47E-04	2.00E-05	7.91E-03
0.55 MEV	1.56E-01	6.78E-05	0.	6.59E-03
0.60 MEV	9.68E-02	4.83E-05	3.75E-04	1.28E-02
0.65 MEV	6.53E-01	8.19E-05	1.36E-05	5.90E-03
0.70 MEV	1.39E+00	0.	1.36E-05	1.16E-03
0.75 MEV	8.71E-01	3.97E-05	2.72E-05	4.39E-03
0.80 MEV	3.18E-01	7.86E-05	4.09E-05	9.71E-03
0.85 MEV	6.93E-01	4.69E-05	0.	1.20E-02
0.90 MEV	1.04E+00	8.19E-05	0.	7.63E-03
0.95 MEV	1.05E-01	7.27E-05	0.	1.05E-02
1.00 MEV	7.95E-01	1.55E-04	0.	4.65E-03
1.10 MEV	1.61E-01	3.01E-05	0.	8.59E-03
1.20 MEV	1.08E+00	3.31E-05	1.00E-02	1.06E-02
1.30 MEV	1.20E+00	4.22E-05	0.	1.01E-02
1.40 MEV	8.53E-01	1.11E-04	0.	5.81E-03
1.50 MEV	9.82E-01	1.80E-04	0.	1.33E-02
1.60 MEV	3.90E-01	2.47E-04	0.	1.13E-02
1.70 MEV	7.58E-01	5.63E-06	1.00E-02	5.75E-03
1.80 MEV	5.81E-01	7.20E-06	1.81E-04	1.84E-02
1.90 MEV	2.27E-01	7.20E-06	0.	1.03E-02
2.00 MEV	8.32E-01	1.64E-05	0.	1.00E-02
2.10 MEV	5.04E-01	0.	1.00E-02	8.40E-03
2.20 MEV	9.02E-01	2.03E-06	0.	1.58E-02
2.30 MEV	6.39E-01	0.	0.	1.40E-02
2.40 MEV	2.12E-01	2.03E-06	1.00E-02	1.89E-02
2.50 MEV	9.42E-01	0.	0.	1.19E-02
2.60 MEV	7.47E-01	1.78E-04	1.81E-04	1.69E-02
2.70 MEV	8.09E-01	2.03E-06	1.00E-02	5.63E-03
2.80 MEV	6.85E-01	2.03E-06	0.	1.22E-02
2.90 MEV	5.40E-01	2.03E-06	1.00E-02	1.68E-02
3.00 MEV	6.34E-01	2.46E-04	0.	1.64E-02
3.20 MEV	4.34E-01	2.03E-06	5.11E-03	6.72E-03
3.40 MEV	1.05E+00	9.41E-05	5.10E-03	1.23E-02
3.60 MEV	4.97E-01	0.	5.02E-03	5.01E-03
3.80 MEV	4.32E-01	0.	1.01E-02	8.53E-03
4.00 MEV	8.02E-01	2.10E-04	1.00E-02	6.83E-03

1 SLOWING DOWN SPECTRUM AT 0.20 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	7.94E-01	0.	2.52E-02	7.28E-03
4.40 MEV	6.12E-01	0.	0.	6.20E-03
4.60 MEV	5.73E-01	8.81E-05	9.03E-05	1.07E-02
4.80 MEV	1.19E+00	1.22E-04	0.	2.80E-03
5.00 MEV	3.91E-01	8.81E-05	9.03E-05	3.84E-03
5.50 MEV	9.75E-01	8.40E-05	7.22E-05	2.67E-03
6.00 MEV	5.72E-01	1.19E-04	7.22E-05	6.44E-03
6.50 MEV	7.42E-01	8.40E-05	1.08E-04	9.10E-04
7.00 MEV	6.19E-01	2.08E-04	2.89E-04	1.33E-03
7.50 MEV	9.95E-01	1.54E-04	0.	1.09E-03
8.00 MEV	9.73E-01	3.44E-04	0.	1.56E-03
8.50 MEV	7.49E-01	4.87E-05	0.	1.08E-03
9.00 MEV	9.25E-01	9.75E-05	0.	2.44E-03
9.50 MEV	7.13E-01	1.46E-04	0.	3.57E-04
10.00 MEV	8.18E-01	3.41E-04	0.	1.02E-03
11.00 MEV	9.36E-01	0.	0.	1.99E-04
12.00 MEV	8.06E-01	0.	0.	5.60E-04
13.00 MEV	7.17E-01	2.66E-05	0.	2.96E-05
14.00 MEV	4.89E-01	0.	0.	5.64E-05
15.00 MEV	2.37E-01	0.	0.	8.51E-06
16.00 MEV	3.90E-02	0.	0.	2.27E-05
17.00 MEV	7.52E-02	0.	0.	0.
18.00 MEV	4.78E-02	0.	0.	0.
19.00 MEV	5.52E-02	0.	0.	0.
20.00 MEV	2.57E-02	0.	0.	0.
21.00 MEV	3.15E-02	0.	0.	0.
22.00 MEV	2.02E-02	0.	0.	0.
23.00 MEV	3.34E-02	0.	0.	0.
24.00 MEV	3.95E-02	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	9.34E-02	0.	0.	0.
27.00 MEV	1.03E-01	0.	0.	0.
28.00 MEV	4.36E-02	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	1.12E-01	0.	0.	0.
36.00 MEV	1.46E-01	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	3.46E-02	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
DAVE, E(MEV)	9.50	6.55	3.13	3.25

1 SLOWING DOWN SPECTRUM AT 0.40 CM. FOR ICRU MUSCLE TISSUE

42 MEV P+ ON HE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	1.66E-01	6.63E-05	2.98E-05	6.14E-03
0.15 MEV	1.41E-01	4.93E-05	0.	7.12E-03
0.20 MEV	3.19E-01	6.41E-05	0.	1.80E-02
0.25 MEV	4.11E-01	1.20E-04	0.	2.32E-03
0.30 MEV	1.43E-01	1.39E-04	1.59E-05	8.00E-03
0.35 MEV	5.59E-01	6.94E-05	0.	5.53E-03
0.40 MEV	1.57E-01	2.41E-04	0.	5.73E-03
0.45 MEV	2.88E-01	1.23E-04	2.98E-05	9.18E-03
0.50 MEV	1.23E-01	1.83E-04	7.36E-05	4.37E-03
0.55 MEV	2.66E-01	6.40E-05	2.23E-03	6.18E-03
0.60 MEV	5.15E-01	9.34E-05	0.	1.25E-02
0.65 MEV	3.47E-01	3.20E-04	2.98E-05	4.75E-03
0.70 MEV	4.26E-01	3.79E-05	1.59E-05	2.58E-03
0.75 MEV	1.67E-01	1.76E-04	0.	6.31E-03
0.80 MEV	1.03E-01	8.18E-05	2.98E-05	1.27E-02
0.85 MEV	6.99E-01	2.91E-04	0.	7.59E-03
0.90 MEV	6.89E-01	2.19E-04	0.	5.30E-03
0.95 MEV	5.34E-01	4.16E-06	2.98E-05	9.78E-03
1.00 MEV	2.54E-01	1.55E-04	8.95E-05	4.19E-03
1.10 MEV	5.12E-01	2.57E-04	1.49E-05	8.32E-03
1.20 MEV	3.99E-01	3.48E-04	1.14E-03	1.51E-02
1.30 MEV	7.65E-01	1.66E-04	1.49E-05	5.89E-03
1.40 MEV	6.52E-01	2.98E-04	7.45E-05	4.67E-03
1.50 MEV	4.04E-01	1.59E-04	2.98E-05	1.15E-02
1.60 MEV	4.63E-01	2.45E-04	6.75E-05	8.02E-03
1.70 MEV	4.62E-01	2.46E-04	1.16E-03	4.90E-03
1.80 MEV	6.86E-01	3.98E-04	0.	1.46E-02
1.90 MEV	5.25E-01	9.39E-05	7.94E-06	1.57E-02
2.00 MEV	4.61E-01	9.53E-05	1.16E-03	4.35E-03
2.10 MEV	6.97E-01	5.75E-05	7.94E-06	8.09E-03
2.20 MEV	6.32E-01	8.97E-05	5.27E-05	1.50E-02
2.30 MEV	7.45E-01	9.92E-05	1.59E-05	9.43E-03
2.40 MEV	6.39E-01	8.90E-05	1.18E-03	1.74E-02
2.50 MEV	8.56E-01	7.16E-05	3.68E-05	5.94E-03
2.60 MEV	4.46E-01	8.99E-05	1.11E-03	1.10E-02
2.70 MEV	9.34E-01	1.05E-04	3.68E-05	8.85E-03
2.80 MEV	6.79E-01	1.74E-04	3.68E-05	7.25E-03
2.90 MEV	6.45E-01	7.79E-05	1.15E-03	1.34E-02
3.00 MEV	1.08E+00	1.19E-04	3.68E-05	1.68E-02
3.20 MEV	8.50E-01	2.12E-05	1.15E-03	7.60E-03
3.40 MEV	6.49E-01	3.29E-05	6.68E-04	1.21E-02
3.60 MEV	9.63E-01	1.54E-05	5.57E-04	1.01E-02
3.80 MEV	5.75E-01	4.61E-05	1.11E-03	1.92E-02
4.00 MEV	8.90E-01	0.	1.11E-03	9.28E-03

1 SLOWING DOWN SPECTRUM AT 0.40 CM, FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	6.92E-01	0.	3.34E-03	9.30E-03
4.40 MEV	9.27E-01	0.	0.	7.42E-03
4.60 MEV	5.65E-01	0.	0.	1.02E-02
4.80 MEV	5.29E-01	0.	0.	6.02E-03
5.00 MEV	1.09E+00	0.	0.	7.64E-03
5.50 MEV	6.75E-01	0.	0.	6.49E-03
6.00 MEV	7.27E-01	0.	0.	1.23E-02
6.50 MEV	7.46E-01	0.	0.	5.42E-03
7.00 MEV	7.86E-01	0.	0.	8.73E-03
7.50 MEV	5.18E-01	0.	0.	9.09E-03
8.00 MEV	6.69E-01	0.	0.	9.78E-03
8.50 MEV	6.00E-01	0.	0.	6.71E-03
9.00 MEV	4.75E-01	0.	0.	1.31E-02
9.50 MEV	5.15E-01	0.	0.	3.04E-03
10.00 MEV	4.88E-01	0.	0.	6.87E-03
11.00 MEV	5.42E-01	0.	0.	3.93E-03
12.00 MEV	5.99E-01	0.	0.	8.78E-03
13.00 MEV	3.17E-01	0.	0.	2.60E-03
14.00 MEV	5.10E-01	0.	0.	3.69E-03
15.00 MEV	3.32E-01	0.	0.	1.97E-03
16.00 MEV	1.40E-01	0.	0.	5.08E-03
17.00 MEV	8.64E-02	0.	0.	0.
18.00 MEV	1.10E-01	0.	0.	0.
19.00 MEV	2.11E-02	0.	0.	0.
20.00 MEV	5.71E-02	0.	0.	0.
21.00 MEV	1.68E-01	0.	0.	0.
22.00 MEV	1.27E-01	0.	0.	0.
23.00 MEV	4.43E-02	0.	0.	0.
24.00 MEV	3.93E-02	0.	0.	0.
25.00 MEV	1.79E-02	0.	0.	0.
26.00 MEV	3.16E-02	0.	0.	0.
27.00 MEV	1.87E-02	0.	0.	0.
28.00 MEV	9.87E-03	0.	0.	0.
29.00 MEV	1.13E-01	0.	0.	0.
30.00 MEV	1.28E-01	0.	0.	0.
32.00 MEV	1.71E-01	0.	0.	0.
34.00 MEV	3.46E-02	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
DAVE, E(MEV)	9.64	1.54	3.09	6.64

1SLOWING DOWN SPECTRUM AT 0.60 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	1.83E-01	4.72E-05	1.13E-05	6.77E-03
0.15 MEV	1.46E-01	1.71E-04	1.70E-05	7.17E-03
0.20 MEV	1.62E-01	4.89E-05	0.	1.21E-02
0.25 MEV	1.64E-01	2.23E-04	7.53E-06	5.21E-03
0.30 MEV	1.86E-01	1.53E-04	2.72E-05	1.22E-02
0.35 MEV	1.49E-01	1.34E-04	7.02E-05	8.52E-03
0.40 MEV	2.26E-01	9.61E-05	7.53E-06	1.36E-02
0.45 MEV	3.34E-01	2.46E-04	3.59E-05	7.92E-03
0.50 MEV	2.29E-01	4.05E-04	2.26E-05	6.57E-03
0.55 MEV	3.37E-01	7.95E-05	2.58E-05	1.30E-02
0.60 MEV	8.10E-01	7.64E-05	2.63E-05	9.81E-03
0.65 MEV	2.00E-01	6.52E-04	7.40E-05	5.98E-03
0.70 MEV	6.07E-01	2.25E-04	2.72E-05	3.47E-03
0.75 MEV	3.38E-01	2.77E-04	9.49E-06	6.95E-03
0.80 MEV	3.86E-01	2.42E-04	2.08E-05	1.74E-02
0.85 MEV	6.09E-01	5.28E-04	1.10E-04	8.02E-03
0.90 MEV	3.54E-01	4.13E-04	3.98E-05	5.92E-03
0.95 MEV	3.26E-01	3.75E-05	5.47E-05	1.80E-02
1.00 MEV	2.37E-01	4.60E-04	1.03E-04	8.16E-03
1.10 MEV	4.14E-01	4.49E-04	0.	8.23E-03
1.20 MEV	2.43E-01	4.75E-04	4.30E-05	1.38E-02
1.30 MEV	3.37E-01	3.85E-04	4.00E-05	1.04E-02
1.40 MEV	3.44E-01	7.24E-04	4.55E-05	6.71E-03
1.50 MEV	5.99E-01	2.33E-04	3.13E-05	1.06E-02
1.60 MEV	3.21E-01	5.35E-04	8.19E-05	1.08E-02
1.70 MEV	3.94E-01	1.51E-04	7.46E-05	8.49E-03
1.80 MEV	6.73E-01	2.96E-04	1.34E-04	1.46E-02
1.90 MEV	4.12E-01	1.58E-04	1.41E-05	1.10E-02
2.00 MEV	4.82E-01	3.56E-04	1.95E-05	1.01E-02
2.10 MEV	3.89E-01	1.95E-04	1.16E-05	7.40E-03
2.20 MEV	4.15E-01	3.23E-04	1.48E-05	1.79E-02
2.30 MEV	4.18E-01	1.09E-04	2.35E-05	1.15E-02
2.40 MEV	2.30E-01	3.27E-04	3.97E-05	2.13E-02
2.50 MEV	5.74E-01	1.73E-05	2.55E-05	7.92E-03
2.60 MEV	4.28E-01	3.08E-05	3.37E-05	1.38E-02
2.70 MEV	6.89E-01	6.42E-05	1.87E-05	8.48E-03
2.80 MEV	8.22E-01	1.23E-04	0.	1.50E-02
2.90 MEV	5.16E-01	2.43E-05	8.69E-06	2.01E-02
3.00 MEV	6.57E-01	6.17E-05	1.87E-05	1.35E-02
3.20 MEV	3.68E-01	1.04E-04	8.13E-06	6.56E-03
3.40 MEV	6.28E-01	9.03E-05	1.37E-05	1.28E-02
3.60 MEV	6.50E-01	9.09E-05	1.37E-05	1.18E-02
3.80 MEV	5.20E-01	1.18E-04	3.11E-05	1.40E-02
4.00 MEV	5.96E-01	8.66E-05	5.03E-06	1.11E-02

1SLOWING DOWN SPECTRUM AT 0.60 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON HE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	5.56E-01	1.04E-04	8.81E-06	1.29E-02
4.40 MEV	4.40E-01	1.69E-04	1.38E-05	1.43E-02
4.60 MEV	7.40E-01	1.57E-04	2.02E-05	1.37E-02
4.80 MEV	7.05E-01	1.86E-04	3.74E-06	1.12E-02
5.00 MEV	8.46E-01	2.90E-04	6.23E-06	1.50E-02
5.50 MEV	5.68E-01	2.31E-05	0.	8.40E-03
6.00 MEV	6.26E-01	4.32E-05	0.	1.76E-02
6.50 MEV	5.55E-01	1.96E-05	0.	8.06E-03
7.00 MEV	6.17E-01	2.95E-05	0.	1.12E-02
7.50 MEV	5.87E-01	1.33E-05	0.	5.75E-03
8.00 MEV	5.54E-01	1.69E-05	0.	8.48E-03
8.50 MEV	6.98E-01	1.59E-05	0.	6.34E-03
9.00 MEV	5.04E-01	3.71E-05	0.	1.02E-02
9.50 MEV	6.04E-01	0.	0.	1.71E-03
10.00 MEV	6.37E-01	0.	0.	6.06E-03
11.00 MEV	5.72E-01	0.	0.	3.53E-03
12.00 MEV	5.88E-01	0.	0.	7.53E-03
13.00 MEV	6.28E-01	0.	0.	5.45E-04
14.00 MEV	6.74E-01	0.	0.	1.09E-03
15.00 MEV	5.05E-01	0.	0.	7.13E-04
16.00 MEV	4.49E-01	0.	0.	1.05E-03
17.00 MEV	4.17E-01	0.	0.	1.57E-03
18.00 MEV	3.19E-01	0.	0.	3.85E-03
19.00 MEV	2.97E-01	0.	0.	0.
20.00 MEV	2.62E-01	0.	0.	0.
21.00 MEV	1.77E-01	0.	0.	0.
22.00 MEV	1.95E-01	0.	0.	0.
23.00 MEV	1.17E-01	0.	0.	0.
24.00 MEV	1.38E-02	0.	0.	0.
25.00 MEV	1.49E-01	0.	0.	0.
26.00 MEV	1.31E-01	0.	0.	0.
27.00 MEV	1.84E-01	0.	0.	0.
28.00 MEV	6.02E-02	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	1.34E-01	0.	0.	0.
32.00 MEV	6.06E-03	0.	0.	0.
34.00 MEV	3.82E-03	0.	0.	0.
36.00 MEV	4.18E-03	0.	0.	0.
38.00 MEV	1.59E-02	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E (MEV)	11.19	2.56	1.92	6.01

1 SLOWING DOWN SPECTRUM AT 1.00 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	2.37E-01	1.84E-05	1.26E-05	6.27E-03
0.15 MEV	1.83E-01	1.18E-04	0.	5.00E-03
0.20 MEV	1.80E-01	5.40E-05	1.33E-06	1.22E-02
0.25 MEV	1.83E-01	1.06E-04	0.	3.39E-03
0.30 MEV	2.03E-01	9.65E-05	2.69E-06	8.19E-03
0.35 MEV	1.39E-01	3.56E-05	0.	6.98E-03
0.40 MEV	2.28E-01	1.41E-04	1.33E-06	9.39E-03
0.45 MEV	2.34E-01	3.11E-04	1.26E-05	7.45E-03
0.50 MEV	1.98E-01	1.37E-04	1.17E-05	5.41E-03
0.55 MEV	2.92E-01	5.60E-05	3.87E-05	1.02E-02
0.60 MEV	1.77E-01	1.28E-04	6.54E-05	7.72E-03
0.65 MEV	2.29E-01	2.47E-04	1.40E-05	5.72E-03
0.70 MEV	4.15E-01	4.55E-04	2.69E-06	3.48E-03
0.75 MEV	2.48E-01	7.92E-05	2.67E-06	4.82E-03
0.80 MEV	1.64E-01	7.68E-05	1.66E-05	1.54E-02
0.85 MEV	2.45E-01	3.22E-04	2.36E-05	7.88E-03
0.90 MEV	2.76E-01	1.22E-04	0.	3.57E-03
0.95 MEV	2.30E-01	2.43E-05	2.52E-05	9.72E-03
1.00 MEV	2.54E-01	2.16E-04	1.17E-05	3.61E-03
1.10 MEV	2.44E-01	1.91E-04	6.32E-06	8.63E-03
1.20 MEV	2.70E-01	2.34E-04	4.16E-05	1.13E-02
1.30 MEV	3.22E-01	3.96E-03	1.81E-05	8.83E-03
1.40 MEV	2.33E-01	2.29E-04	5.67E-05	6.75E-03
1.50 MEV	3.98E-01	2.79E-04	1.08E-05	8.71E-03
1.60 MEV	3.20E-01	3.63E-04	3.22E-05	1.10E-02
1.70 MEV	3.00E-01	1.63E-04	2.02E-05	9.97E-03
1.80 MEV	4.76E-01	2.71E-04	3.20E-05	1.02E-02
1.90 MEV	2.37E-01	2.18E-04	1.74E-05	1.03E-02
2.00 MEV	3.03E-01	1.88E-04	5.85E-05	8.05E-03
2.10 MEV	3.28E-01	3.78E-03	6.78E-07	7.30E-03
2.20 MEV	4.06E-01	1.45E-04	6.51E-06	1.16E-02
2.30 MEV	3.12E-01	1.90E-05	1.32E-05	7.02E-03
2.40 MEV	3.76E-01	5.24E-05	3.35E-05	1.42E-02
2.50 MEV	3.24E-01	1.93E-05	5.04E-05	6.27E-03
2.60 MEV	2.87E-01	3.92E-03	3.46E-05	1.19E-02
2.70 MEV	2.37E-01	1.86E-04	4.00E-05	8.26E-03
2.80 MEV	4.12E-01	9.23E-06	5.16E-06	8.81E-03
2.90 MEV	2.86E-01	2.46E-05	2.58E-05	1.38E-02
3.00 MEV	6.23E-01	3.73E-03	7.20E-05	1.17E-02
3.20 MEV	3.46E-01	9.09E-05	3.28E-05	5.48E-03
3.40 MEV	3.47E-01	2.02E-03	5.68E-05	9.76E-03
3.60 MEV	3.93E-01	4.77E-05	2.46E-05	9.87E-03
3.80 MEV	3.87E-01	2.00E-03	8.15E-05	1.32E-02
4.00 MEV	3.53E-01	1.98E-03	1.79E-05	8.46E-03

1 SLOWING DOWN SPECTRUM AT 1.00 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.30E-01	2.03E-03	5.44E-05	4.97E-03
4.40 MEV	4.68E-01	3.76E-03	4.29E-05	7.58E-03
4.60 MEV	9.44E-01	5.75E-03	5.60E-05	9.29E-03
4.80 MEV	4.22E-01	8.01E-05	4.42E-05	7.83E-03
5.00 MEV	3.94E-01	1.70E-04	7.46E-05	1.15E-02
5.50 MEV	4.65E-01	1.41E-04	3.35E-05	5.41E-03
6.00 MEV	3.83E-01	2.27E-04	6.58E-05	1.21E-02
6.50 MEV	4.55E-01	1.51E-04	2.10E-05	5.60E-03
7.00 MEV	4.16E-01	3.34E-04	5.31E-05	7.31E-03
7.50 MEV	4.89E-01	9.84E-05	2.11E-06	6.74E-03
8.00 MEV	4.21E-01	1.83E-04	4.52E-06	6.04E-03
8.50 MEV	7.00E-01	5.22E-05	1.24E-06	5.42E-03
9.00 MEV	4.45E-01	1.22E-04	2.48E-06	9.61E-03
9.50 MEV	3.80E-01	1.27E-06	3.72E-06	4.33E-03
10.00 MEV	3.93E-01	2.96E-06	8.67E-06	1.06E-02
11.00 MEV	4.70E-01	0.	0.	3.83E-03
12.00 MEV	5.27E-01	0.	0.	6.48E-03
13.00 MEV	5.18E-01	0.	0.	3.08E-03
14.00 MEV	6.77E-01	0.	0.	5.93E-03
15.00 MEV	4.58E-01	0.	0.	1.84E-03
16.00 MEV	4.35E-01	0.	0.	3.22E-03
17.00 MEV	4.16E-01	0.	0.	1.44E-03
18.00 MEV	4.93E-01	0.	0.	3.16E-03
19.00 MEV	3.80E-01	0.	0.	6.00E-04
20.00 MEV	3.25E-01	0.	0.	1.40E-03
21.00 MEV	3.58E-01	0.	0.	0.
22.00 MEV	3.41E-01	0.	0.	0.
23.00 MEV	2.99E-01	0.	0.	0.
24.00 MEV	2.92E-01	0.	0.	0.
25.00 MEV	2.90E-01	0.	0.	0.
26.00 MEV	2.72E-01	0.	0.	0.
27.00 MEV	2.50E-01	0.	0.	0.
28.00 MEV	1.54E-01	0.	0.	0.
29.00 MEV	1.44E-01	0.	0.	0.
30.00 MEV	1.91E-01	0.	0.	0.
32.00 MEV	9.73E-02	0.	0.	0.
34.00 MEV	4.13E-02	0.	0.	0.
36.00 MEV	3.66E-02	0.	0.	0.
38.00 MEV	1.03E-02	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.

0AVE, E(MEV)

14.19

3.74

4.34

7.33

1 SLOWING DOWN SPECTRUM AT 2.00 CM, FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	2.43E-01	5.56E-05	5.40E-06	4.86E-03
0.15 MEV	1.97E-01	1.38E-04	2.86E-07	5.80E-03
0.20 MEV	1.66E-01	5.08E-05	6.51E-06	1.05E-02
0.25 MEV	2.01E-01	1.47E-04	1.44E-06	3.81E-03
0.30 MEV	2.02E-01	1.25E-04	1.63E-05	9.24E-03
0.35 MEV	1.57E-01	5.31E-05	2.86E-07	9.02E-03
0.40 MEV	2.15E-01	1.35E-04	1.44E-06	9.53E-03
0.45 MEV	2.10E-01	3.91E-04	4.84E-06	6.25E-03
0.50 MEV	1.85E-01	2.33E-04	1.93E-05	5.75E-03
0.55 MEV	3.14E-01	9.16E-05	1.23E-05	6.00E-03
0.60 MEV	1.62E-01	9.71E-05	1.10E-05	1.01E-02
0.65 MEV	2.25E-01	3.52E-04	4.27E-06	8.44E-03
0.70 MEV	4.75E-01	9.68E-04	3.19E-05	2.67E-03
0.75 MEV	2.95E-01	1.65E-04	9.14E-07	6.13E-03
0.80 MEV	1.70E-01	1.50E-04	5.75E-06	1.48E-02
0.85 MEV	1.77E-01	8.80E-04	1.35E-05	8.56E-03
0.90 MEV	2.34E-01	4.28E-04	4.26E-06	4.55E-03
0.95 MEV	3.14E-01	3.33E-05	2.14E-05	1.09E-02
1.00 MEV	2.04E-01	3.50E-04	3.73E-05	7.40E-03
1.10 MEV	2.44E-01	2.93E-04	1.09E-05	8.10E-03
1.20 MEV	2.50E-01	4.47E-04	4.20E-05	1.25E-02
1.30 MEV	3.05E-01	2.72E-04	6.42E-06	7.20E-03
1.40 MEV	2.29E-01	4.08E-04	3.54E-05	6.91E-03
1.50 MEV	5.01E-01	3.59E-04	1.29E-06	1.05E-02
1.60 MEV	3.36E-01	6.68E-04	2.68E-05	9.20E-03
1.70 MEV	2.71E-01	2.75E-04	2.74E-05	7.83E-03
1.80 MEV	3.15E-01	2.68E-04	1.29E-05	1.07E-02
1.90 MEV	2.70E-01	5.76E-04	1.24E-05	1.25E-02
2.00 MEV	2.92E-01	2.57E-04	7.26E-05	6.38E-03
2.10 MEV	4.27E-01	3.30E-04	6.30E-06	9.48E-03
2.20 MEV	3.60E-01	2.35E-04	3.16E-05	1.55E-02
2.30 MEV	4.37E-01	1.42E-04	2.81E-05	8.17E-03
2.40 MEV	2.91E-01	1.79E-04	5.69E-05	1.63E-02
2.50 MEV	2.71E-01	3.86E-04	4.63E-05	6.28E-03
2.60 MEV	3.33E-01	3.72E-04	1.52E-05	1.22E-02
2.70 MEV	2.44E-01	6.42E-04	4.04E-05	5.29E-03
2.80 MEV	3.95E-01	6.69E-04	1.63E-05	7.76E-03
2.90 MEV	2.98E-01	5.61E-05	3.20E-05	1.64E-02
3.00 MEV	7.32E-01	9.56E-05	7.75E-05	1.07E-02
3.20 MEV	3.91E-01	1.73E-04	2.23E-05	6.24E-03
3.40 MEV	3.40E-01	4.23E-04	5.20E-05	1.23E-02
3.60 MEV	3.86E-01	1.49E-04	1.35E-05	1.07E-02
3.80 MEV	4.11E-01	3.67E-04	3.96E-05	1.38E-02
4.00 MEV	4.21E-01	1.97E-04	1.07E-05	9.58E-03

1 SLOWING DOWN SPECTRUM AT 2.00 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.55E-01	5.00E-04	3.73E-05	3.51E-03
4.40 MEV	4.21E-01	2.65E-04	2.97E-05	1.20E-02
4.60 MEV	3.54E-01	6.81E-04	4.04E-05	1.06E-02
4.80 MEV	4.38E-01	3.97E-05	1.46E-05	7.42E-03
5.00 MEV	4.77E-01	2.62E-04	1.82E-05	9.60E-03
5.50 MEV	4.84E-01	2.06E-04	1.56E-05	6.04E-03
6.00 MEV	4.28E-01	2.49E-04	3.95E-05	1.25E-02
6.50 MEV	4.51E-01	2.75E-04	2.06E-06	5.01E-03
7.00 MEV	4.92E-01	7.12E-04	5.03E-06	8.21E-03
7.50 MEV	4.72E-01	5.94E-05	4.31E-07	4.76E-03
8.00 MEV	3.82E-01	1.25E-04	1.01E-06	7.61E-03
8.50 MEV	4.63E-01	1.82E-05	0.	3.36E-03
9.00 MEV	3.85E-01	4.04E-05	0.	6.59E-03
9.50 MEV	4.52E-01	1.48E-05	0.	2.28E-03
10.00 MEV	4.49E-01	3.42E-05	0.	6.17E-03
11.00 MEV	4.73E-01	2.40E-07	0.	1.04E-03
12.00 MEV	4.32E-01	2.40E-07	0.	2.37E-03
13.00 MEV	4.34E-01	4.80E-07	0.	8.96E-04
14.00 MEV	4.97E-01	9.60E-07	0.	2.16E-03
15.00 MEV	4.73E-01	0.	0.	6.02E-06
16.00 MEV	4.21E-01	0.	0.	1.37E-05
17.00 MEV	4.43E-01	0.	0.	1.56E-06
18.00 MEV	4.16E-01	0.	0.	3.44E-06
19.00 MEV	3.60E-01	0.	0.	9.25E-07
20.00 MEV	4.20E-01	0.	0.	2.16E-06
21.00 MEV	3.46E-01	0.	0.	0.
22.00 MEV	3.71E-01	0.	0.	0.
23.00 MEV	3.17E-01	0.	0.	0.
24.00 MEV	2.96E-01	0.	0.	0.
25.00 MEV	2.63E-01	0.	0.	0.
26.00 MEV	1.83E-01	0.	0.	0.
27.00 MEV	1.84E-01	0.	0.	0.
28.00 MEV	2.14E-01	0.	0.	0.
29.00 MEV	1.46E-01	0.	0.	0.
30.00 MEV	1.30E-01	0.	0.	0.
32.00 MEV	1.11E-01	0.	0.	0.
34.00 MEV	7.31E-02	0.	0.	0.
36.00 MEV	4.01E-02	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
DAVE, E(MEV)	14.28	4.02	3.42	5.04

15 SLOWING DOWN SPECTRUM AT 4.00 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	2.48E-01	2.83E-05	7.29E-06	6.26E-03
0.15 MEV	1.92E-01	1.08E-04	0.	5.76E-03
0.20 MEV	1.75E-01	5.57E-05	3.66E-06	1.32E-02
0.25 MEV	2.11E-01	1.27E-04	2.31E-06	3.97E-03
0.30 MEV	1.90E-01	9.27E-05	4.76E-06	9.65E-03
0.35 MEV	1.49E-01	1.40E-04	8.62E-06	7.99E-03
0.40 MEV	2.16E-01	6.62E-05	3.00E-05	1.01E-02
0.45 MEV	2.10E-01	1.48E-03	6.75E-06	7.41E-03
0.50 MEV	1.90E-01	1.78E-04	1.96E-05	5.84E-03
0.55 MEV	2.65E-01	7.55E-05	2.25E-05	5.25E-03
0.60 MEV	1.58E-01	1.14E-04	2.18E-05	8.78E-03
0.65 MEV	2.07E-01	2.41E-04	1.42E-05	6.87E-03
0.70 MEV	4.69E-01	2.56E-04	2.17E-05	2.46E-03
0.75 MEV	2.66E-01	2.01E-04	0.	6.35E-03
0.80 MEV	1.53E-01	1.30E-04	9.76E-06	1.41E-02
0.85 MEV	2.05E-01	1.37E-03	2.14E-05	7.97E-03
0.90 MEV	2.23E-01	2.02E-04	3.01E-06	4.37E-03
0.95 MEV	3.41E-01	3.43E-05	2.50E-05	1.16E-02
1.00 MEV	2.39E-01	2.41E-04	2.46E-05	5.82E-03
1.10 MEV	2.12E-01	2.29E-04	1.22E-05	8.11E-03
1.20 MEV	2.37E-01	2.11E-04	3.88E-05	1.12E-02
1.30 MEV	3.12E-01	2.38E-04	1.05E-05	7.13E-03
1.40 MEV	2.20E-01	2.86E-04	3.69E-05	6.64E-03
1.50 MEV	5.15E-01	2.18E-04	6.20E-06	1.18E-02
1.60 MEV	2.67E-01	3.11E-04	3.47E-05	8.19E-03
1.70 MEV	2.87E-01	7.65E-04	2.58E-05	6.59E-03
1.80 MEV	2.68E-01	2.23E-04	3.21E-05	1.25E-02
1.90 MEV	2.46E-01	7.44E-04	1.21E-05	1.14E-02
2.00 MEV	2.84E-01	2.44E-04	4.96E-05	5.67E-03
2.10 MEV	3.23E-01	1.41E-04	1.15E-05	8.43E-03
2.20 MEV	3.66E-01	2.59E-04	3.90E-05	1.29E-02
2.30 MEV	4.20E-01	1.34E-04	1.92E-05	7.61E-03
2.40 MEV	2.87E-01	9.05E-04	3.62E-05	1.44E-02
2.50 MEV	3.09E-01	5.86E-04	4.68E-05	6.35E-03
2.60 MEV	3.21E-01	1.20E-04	4.49E-05	1.14E-02
2.70 MEV	2.02E-01	1.49E-04	3.91E-05	6.37E-03
2.80 MEV	3.63E-01	3.65E-05	2.05E-05	1.07E-02
2.90 MEV	2.93E-01	3.43E-05	2.98E-05	1.46E-02
3.00 MEV	6.28E-01	6.67E-04	6.15E-05	1.21E-02
3.20 MEV	3.94E-01	3.29E-04	2.37E-05	6.39E-03
3.40 MEV	3.23E-01	4.26E-04	3.98E-05	1.10E-02
3.60 MEV	3.92E-01	3.07E-04	1.29E-05	9.97E-03
3.80 MEV	3.78E-01	4.24E-04	3.32E-05	1.21E-02
4.00 MEV	4.63E-01	6.59E-04	2.46E-05	9.44E-03

1 SLOWING DOWN SPECTRUM AT 4.00 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON HE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.88E-01	3.83E-04	3.05E-05	8.02E-03
4.40 MEV	4.38E-01	3.40E-04	2.34E-05	9.32E-03
4.60 MEV	3.76E-01	6.67E-04	3.38E-05	1.05E-02
4.80 MEV	4.59E-01	9.61E-04	1.52E-05	8.20E-03
5.00 MEV	4.39E-01	1.32E-03	2.78E-05	8.00E-03
5.50 MEV	4.50E-01	3.94E-04	1.28E-05	5.91E-03
6.00 MEV	4.43E-01	8.59E-04	2.99E-05	1.20E-02
6.50 MEV	3.74E-01	6.81E-05	7.85E-06	5.78E-03
7.00 MEV	4.26E-01	1.58E-04	1.05E-05	7.78E-03
7.50 MEV	5.00E-01	5.04E-05	9.25E-06	5.80E-03
8.00 MEV	4.10E-01	8.98E-05	1.18E-05	6.90E-03
8.50 MEV	4.32E-01	2.98E-05	1.01E-05	4.36E-03
9.00 MEV	4.35E-01	5.94E-05	2.01E-05	7.95E-03
9.50 MEV	4.83E-01	1.61E-05	3.66E-06	2.23E-03
10.00 MEV	4.72E-01	2.85E-05	5.26E-06	6.20E-03
11.00 MEV	4.46E-01	1.37E-05	4.90E-06	2.73E-03
12.00 MEV	4.74E-01	3.09E-05	1.10E-05	5.72E-03
13.00 MEV	4.67E-01	0.	0.	1.47E-03
14.00 MEV	4.40E-01	0.	0.	2.33E-03
15.00 MEV	4.44E-01	0.	0.	9.93E-04
16.00 MEV	4.25E-01	0.	0.	1.77E-03
17.00 MEV	3.63E-01	0.	0.	5.18E-04
18.00 MEV	3.84E-01	0.	0.	9.21E-04
19.00 MEV	3.36E-01	0.	0.	4.20E-04
20.00 MEV	3.37E-01	0.	0.	8.80E-04
21.00 MEV	3.24E-01	0.	0.	0.
22.00 MEV	3.08E-01	0.	0.	0.
23.00 MEV	2.61E-01	0.	0.	0.
24.00 MEV	3.17E-01	0.	0.	0.
25.00 MEV	2.94E-01	0.	0.	0.
26.00 MEV	2.17E-01	0.	0.	0.
27.00 MEV	1.97E-01	0.	0.	0.
28.00 MEV	1.72E-01	0.	0.	0.
29.00 MEV	1.29E-01	0.	0.	0.
30.00 MEV	1.47E-01	0.	0.	0.
32.00 MEV	1.19E-01	0.	0.	0.
34.00 MEV	7.65E-02	0.	0.	0.
36.00 MEV	5.16E-02	0.	0.	0.
38.00 MEV	2.07E-02	0.	0.	0.
40.00 MEV	6.05E-03	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	14.41	4.10	4.72	6.17

1 SLOWING DOWN SPECTRUM AT 6.00 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON HE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	2.35E-01	3.28E-05	7.31E-06	5.23E-03
0.15 MEV	1.89E-01	1.01E-04	6.14E-07	5.45E-03
0.20 MEV	1.77E-01	5.37E-05	4.30E-06	1.11E-02
0.25 MEV	2.06E-01	9.98E-05	9.09E-07	4.62E-03
0.30 MEV	2.01E-01	8.77E-05	7.15E-06	9.72E-03
0.35 MEV	1.50E-01	4.46E-05	2.82E-06	6.86E-03
0.40 MEV	2.14E-01	9.98E-05	6.67E-04	8.47E-03
0.45 MEV	2.00E-01	1.55E-04	6.80E-06	6.26E-03
0.50 MEV	1.84E-01	1.40E-04	1.01E-05	5.09E-03
0.55 MEV	2.57E-01	9.18E-05	1.55E-06	4.57E-03
0.60 MEV	1.62E-01	8.66E-05	3.94E-05	9.19E-03
0.65 MEV	2.04E-01	2.37E-04	1.14E-05	6.48E-03
0.70 MEV	4.19E-01	1.98E-04	9.53E-06	2.83E-03
0.75 MEV	2.51E-01	1.04E-04	2.04E-06	5.62E-03
0.80 MEV	1.58E-01	1.12E-04	1.12E-05	1.58E-02
0.85 MEV	1.92E-01	2.48E-04	1.02E-05	7.80E-03
0.90 MEV	2.20E-01	1.70E-04	4.18E-06	4.39E-03
0.95 MEV	2.87E-01	2.48E-05	3.71E-05	1.06E-02
1.00 MEV	2.29E-01	2.05E-04	2.01E-05	4.94E-03
1.10 MEV	2.16E-01	1.82E-04	6.00E-06	7.98E-03
1.20 MEV	2.26E-01	2.03E-04	1.96E-05	1.06E-02
1.30 MEV	2.89E-01	1.75E-04	6.38E-06	7.04E-03
1.40 MEV	2.11E-01	2.60E-04	2.95E-05	6.15E-03
1.50 MEV	4.56E-01	1.45E-04	1.00E-05	1.04E-02
1.60 MEV	2.53E-01	2.91E-04	3.41E-05	7.42E-03
1.70 MEV	2.59E-01	1.18E-04	1.23E-05	7.74E-03
1.80 MEV	2.61E-01	1.74E-04	2.61E-05	1.01E-02
1.90 MEV	2.21E-01	7.75E-05	1.04E-05	1.04E-02
2.00 MEV	2.61E-01	1.14E-04	2.68E-05	5.47E-03
2.10 MEV	3.41E-01	4.62E-05	8.36E-06	6.98E-03
2.20 MEV	3.74E-01	7.02E-05	3.48E-04	1.33E-02
2.30 MEV	3.60E-01	2.59E-05	1.22E-05	7.03E-03
2.40 MEV	3.09E-01	6.31E-05	3.49E-05	1.31E-02
2.50 MEV	2.50E-01	1.88E-05	2.65E-05	6.26E-03
2.60 MEV	2.64E-01	8.63E-05	9.51E-04	1.15E-02
2.70 MEV	2.30E-01	1.15E-04	1.68E-05	6.44E-03
2.80 MEV	3.13E-01	4.09E-05	6.12E-06	1.32E-02
2.90 MEV	2.87E-01	4.09E-05	8.04E-06	1.44E-02
3.00 MEV	5.58E-01	7.21E-05	2.01E-05	1.08E-02
3.20 MEV	3.23E-01	5.14E-05	1.82E-04	6.31E-03
3.40 MEV	2.63E-01	9.27E-05	2.38E-05	1.08E-02
3.60 MEV	3.11E-01	3.01E-05	6.06E-06	9.51E-03
3.80 MEV	3.14E-01	6.33E-05	1.60E-05	1.23E-02
4.00 MEV	4.02E-01	4.85E-05	6.33E-04	8.76E-03

1SLOWING DOWN SPECTRUM AT 6.04 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.07E-01	8.69E-05	1.71E-05	7.15E-03
4.40 MEV	4.17E-01	2.97E-05	1.90E-05	8.05E-03
4.60 MEV	3.00E-01	6.40E-05	1.98E-04	8.74E-03
4.80 MEV	4.03E-01	4.22E-05	2.34E-04	8.59E-03
5.00 MEV	3.37E-01	5.60E-05	4.69E-04	7.83E-03
5.50 MEV	3.50E-01	5.03E-05	7.46E-05	5.04E-03
6.00 MEV	3.84E-01	8.27E-05	2.62E-04	1.16E-02
6.50 MEV	3.54E-01	3.73E-05	1.43E-04	5.49E-03
7.00 MEV	3.51E-01	8.58E-05	2.71E-04	6.85E-03
7.50 MEV	4.26E-01	3.16E-05	3.20E-04	6.02E-03
8.00 MEV	3.59E-01	5.57E-05	3.25E-04	6.15E-03
8.50 MEV	3.66E-01	2.04E-05	3.83E-04	4.86E-03
9.00 MEV	3.83E-01	3.75E-05	6.50E-04	8.35E-03
9.50 MEV	4.35E-01	2.26E-05	1.84E-04	2.36E-03
10.00 MEV	3.72E-01	4.44E-05	1.85E-04	6.11E-03
11.00 MEV	3.93E-01	1.27E-05	3.67E-04	3.25E-03
12.00 MEV	3.83E-01	2.85E-05	8.25E-04	6.01E-03
13.00 MEV	4.03E-01	0.	0.	1.48E-03
14.00 MEV	4.27E-01	0.	0.	2.95E-03
15.00 MEV	3.67E-01	0.	0.	6.96E-04
16.00 MEV	4.00E-01	0.	0.	1.52E-03
17.00 MEV	3.54E-01	0.	0.	3.07E-04
18.00 MEV	3.51E-01	0.	0.	7.01E-04
19.00 MEV	3.23E-01	0.	0.	6.67E-05
20.00 MEV	3.53E-01	0.	0.	1.56E-04
21.00 MEV	3.48E-01	0.	0.	0.
22.00 MEV	3.01E-01	0.	0.	0.
23.00 MEV	2.41E-01	0.	0.	0.
24.00 MEV	2.71E-01	0.	0.	0.
25.00 MEV	2.31E-01	0.	0.	0.
26.00 MEV	1.53E-01	0.	0.	0.
27.00 MEV	1.99E-01	0.	0.	0.
28.00 MEV	1.49E-01	0.	0.	0.
29.00 MEV	1.17E-01	0.	0.	0.
30.00 MEV	1.35E-01	0.	0.	0.
32.00 MEV	8.50E-02	0.	0.	0.
34.00 MEV	6.63E-02	0.	0.	0.
36.00 MEV	5.54E-02	0.	0.	0.
38.00 MEV	5.29E-02	0.	0.	0.
40.00 MEV	4.94E-03	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.

DAVE, E(MEV)

14.65

4.15

8.35

6.10

1 SLOWING DOWN SPECTRUM AT 10.0 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	2.04E-01	2.50E-05	4.93E-06	4.23E-03
0.15 MEV	1.65E-01	8.04E-05	2.40E-06	4.81E-03
0.20 MEV	1.50E-01	3.15E-05	4.29E-06	9.79E-03
0.25 MEV	1.80E-01	9.23E-05	2.20E-06	3.71E-03
0.30 MEV	1.74E-01	6.76E-05	3.20E-06	8.58E-03
0.35 MEV	1.29E-01	5.37E-05	3.93E-06	5.41E-03
0.40 MEV	1.67E-01	7.36E-05	1.87E-05	7.84E-03
0.45 MEV	1.68E-01	1.59E-04	8.50E-06	5.27E-03
0.50 MEV	1.55E-01	1.15E-04	7.64E-06	4.36E-03
0.55 MEV	2.10E-01	5.89E-05	1.64E-05	6.08E-03
0.60 MEV	1.38E-01	9.73E-05	1.72E-05	7.41E-03
0.65 MEV	1.71E-01	2.07E-04	6.92E-06	5.47E-03
0.70 MEV	3.87E-01	1.86E-04	7.67E-06	2.06E-03
0.75 MEV	2.27E-01	1.12E-04	1.27E-06	5.06E-03
0.80 MEV	1.33E-01	9.70E-05	7.80E-06	1.13E-02
0.85 MEV	1.56E-01	2.34E-04	1.68E-05	6.53E-03
0.90 MEV	1.79E-01	1.81E-04	8.16E-06	3.60E-03
0.95 MEV	3.02E-01	2.62E-05	2.29E-04	9.19E-03
1.00 MEV	2.26E-01	1.89E-04	1.37E-05	4.21E-03
1.10 MEV	1.77E-01	1.80E-04	6.19E-06	6.82E-03
1.20 MEV	1.98E-01	1.93E-04	3.09E-05	9.89E-03
1.30 MEV	2.45E-01	3.40E-04	9.28E-06	5.98E-03
1.40 MEV	1.74E-01	2.56E-04	2.29E-05	5.57E-03
1.50 MEV	3.93E-01	1.36E-04	5.07E-06	9.01E-03
1.60 MEV	2.26E-01	2.63E-04	1.23E-04	6.93E-03
1.70 MEV	2.21E-01	1.21E-04	1.53E-05	5.61E-03
1.80 MEV	2.52E-01	1.71E-04	1.42E-05	9.89E-03
1.90 MEV	2.02E-01	1.04E-04	4.95E-06	3.71E-03
2.00 MEV	2.10E-01	3.10E-04	1.48E-04	4.67E-03
2.10 MEV	2.99E-01	7.92E-05	1.04E-06	6.74E-03
2.20 MEV	3.11E-01	9.85E-05	1.35E-05	1.23E-02
2.30 MEV	3.21E-01	4.81E-05	8.09E-06	6.53E-03
2.40 MEV	2.39E-01	2.04E-04	1.26E-04	1.15E-02
2.50 MEV	2.30E-01	3.21E-05	3.20E-05	5.44E-03
2.60 MEV	2.54E-01	2.48E-04	1.50E-05	9.49E-03
2.70 MEV	2.24E-01	1.05E-04	1.29E-04	5.48E-03
2.80 MEV	2.77E-01	4.91E-05	7.10E-06	8.40E-03
2.90 MEV	2.53E-01	4.37E-05	1.67E-05	1.13E-02
3.00 MEV	5.18E-01	6.65E-05	1.48E-04	9.38E-03
3.20 MEV	3.05E-01	1.29E-04	7.32E-05	5.07E-03
3.40 MEV	2.64E-01	7.57E-05	8.47E-05	9.85E-03
3.60 MEV	2.81E-01	1.63E-04	6.52E-05	8.04E-03
3.80 MEV	2.74E-01	1.59E-04	8.86E-05	1.01E-02
4.00 MEV	3.22E-01	5.47E-05	7.08E-05	6.86E-03

1 SLOWING DOWN SPECTRUM AT 10.0 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	2.74E-01	1.86E-04	1.39E-04	5.76E-03
4.40 MEV	3.52E-01	1.15E-04	1.84E-04	7.30E-03
4.60 MEV	2.66E-01	1.93E-04	3.00E-04	7.76E-03
4.80 MEV	3.51E-01	1.24E-04	1.41E-05	6.32E-03
5.00 MEV	3.17E-01	1.38E-04	2.27E-05	6.47E-03
5.50 MEV	3.44E-01	1.56E-04	1.55E-05	4.56E-03
6.00 MEV	3.65E-01	3.42E-04	3.38E-05	9.79E-03
6.50 MEV	3.43E-01	5.40E-05	8.79E-06	4.39E-03
7.00 MEV	3.64E-01	1.13E-04	1.41E-05	6.52E-03
7.50 MEV	3.93E-01	5.89E-05	6.13E-06	4.10E-03
8.00 MEV	3.48E-01	1.12E-04	9.75E-06	5.63E-03
8.50 MEV	3.46E-01	1.56E-05	5.12E-06	2.47E-03
9.00 MEV	3.58E-01	3.14E-05	1.14E-05	5.05E-03
9.50 MEV	3.97E-01	1.75E-05	1.26E-06	1.62E-03
10.00 MEV	3.57E-01	3.76E-05	2.45E-06	4.04E-03
11.00 MEV	3.85E-01	4.56E-06	7.27E-07	1.70E-03
12.00 MEV	3.54E-01	9.66E-06	1.64E-06	3.21E-03
13.00 MEV	3.92E-01	9.60E-07	0.	1.13E-03
14.00 MEV	3.82E-01	1.92E-06	0.	2.05E-03
15.00 MEV	3.64E-01	0.	0.	6.32E-04
16.00 MEV	3.42E-01	0.	0.	1.22E-03
17.00 MEV	3.25E-01	0.	0.	3.71E-04
18.00 MEV	3.37E-01	0.	0.	9.50E-04
19.00 MEV	3.00E-01	0.	0.	3.42E-05
20.00 MEV	3.18E-01	0.	0.	7.99E-05
21.00 MEV	2.90E-01	0.	0.	0.
22.00 MEV	2.66E-01	0.	0.	0.
23.00 MEV	2.11E-01	0.	0.	0.
24.00 MEV	2.53E-01	0.	0.	0.
25.00 MEV	2.06E-01	0.	0.	0.
26.00 MEV	1.81E-01	0.	0.	0.
27.00 MEV	1.76E-01	0.	0.	0.
28.00 MEV	1.60E-01	0.	0.	0.
29.00 MEV	1.23E-01	0.	0.	0.
30.00 MEV	1.25E-01	0.	0.	0.
32.00 MEV	9.84E-02	0.	0.	0.
34.00 MEV	7.13E-02	0.	0.	0.
36.00 MEV	4.74E-02	0.	0.	0.
38.00 MEV	3.51E-02	0.	0.	0.
40.00 MEV	4.32E-03	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE. E(MEV)	14.73	4.26	3.88	5.78

1 SLOWING DOWN SPECTRIUM AT 14.0 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	1.51E-01	9.48E-06	2.06E-06	3.18E-03
0.15 MEV	1.19E-01	5.44E-05	1.01E-07	3.30E-03
0.20 MEV	1.14E-01	2.83E-05	4.41E-06	7.27E-03
0.25 MEV	1.25E-01	6.08E-05	5.60E-07	2.29E-03
0.30 MEV	1.18E-01	4.43E-05	2.48E-06	5.89E-03
0.35 MEV	9.42E-02	2.85E-05	1.60E-06	4.64E-03
0.40 MEV	1.39E-01	2.14E-04	2.26E-05	5.67E-03
0.45 MEV	1.37E-01	3.54E-04	2.41E-06	4.13E-03
0.50 MEV	1.19E-01	8.87E-05	3.26E-06	3.61E-03
0.55 MEV	1.86E-01	3.71E-05	4.40E-06	3.85E-03
0.60 MEV	1.03E-01	5.09E-05	2.21E-05	5.20E-03
0.65 MEV	1.27E-01	8.10E-04	3.55E-06	4.41E-03
0.70 MEV	3.00E-01	1.03E-04	1.01E-05	1.56E-03
0.75 MEV	1.74E-01	7.43E-05	4.94E-07	3.35E-03
0.80 MEV	1.02E-01	5.75E-05	3.18E-06	8.82E-03
0.85 MEV	1.11E-01	3.00E-04	8.82E-06	4.74E-03
0.90 MEV	1.45E-01	9.63E-05	2.30E-06	2.67E-03
0.95 MEV	1.80E-01	1.93E-05	5.17E-06	6.86E-03
1.00 MEV	1.41E-01	1.45E-04	8.03E-06	3.30E-03
1.10 MEV	1.35E-01	1.86E-04	6.25E-06	5.23E-03
1.20 MEV	1.49E-01	1.10E-04	1.28E-05	7.17E-03
1.30 MEV	1.99E-01	2.11E-04	4.36E-06	5.27E-03
1.40 MEV	1.41E-01	2.43E-04	1.79E-05	4.01E-03
1.50 MEV	2.80E-01	1.05E-04	4.81E-06	7.40E-03
1.60 MEV	1.83E-01	3.04E-04	1.02E-05	5.54E-03
1.70 MEV	1.76E-01	3.09E-04	8.89E-06	4.64E-03
1.80 MEV	1.97E-01	9.11E-05	1.83E-05	7.25E-03
1.90 MEV	1.45E-01	1.36E-04	5.32E-06	6.77E-03
2.00 MEV	1.86E-01	2.73E-04	2.07E-05	3.91E-03
2.10 MEV	2.51E-01	1.39E-04	2.60E-06	4.42E-03
2.20 MEV	2.65E-01	4.83E-04	1.95E-05	9.54E-03
2.30 MEV	2.70E-01	2.28E-04	8.84E-06	4.99E-03
2.40 MEV	2.10E-01	5.68E-04	1.08E-05	9.76E-03
2.50 MEV	2.03E-01	9.55E-05	1.88E-05	3.77E-03
2.60 MEV	1.90E-01	2.06E-04	2.12E-05	6.86E-03
2.70 MEV	1.73E-01	5.69E-05	1.20E-05	4.51E-03
2.80 MEV	2.25E-01	3.39E-05	5.06E-06	6.75E-03
2.90 MEV	1.99E-01	4.03E-05	1.19E-05	9.03E-03
3.00 MEV	3.91E-01	1.93E-04	2.33E-05	7.75E-03
3.20 MEV	2.49E-01	2.51E-04	1.39E-05	3.95E-03
3.40 MEV	2.25E-01	1.21E-04	1.21E-05	7.33E-03
3.60 MEV	2.34E-01	6.28E-05	3.69E-06	7.01E-03
3.80 MEV	2.49E-01	1.79E-04	1.62E-05	7.68E-03
4.00 MEV	2.60E-01	2.70E-04	1.18E-05	5.07E-03

1 SLOWING DOWN SPECTRUM AT 14.0 CM, FOR ICRU MUSCLE TISSUE

42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	2.56E-01	1.17E-04	1.23E-05	5.07E-03
4.40 MEV	2.81E-01	1.27E-04	6.68E-06	6.04E-03
4.60 MEV	2.46E-01	3.27E-04	1.47E-05	5.91E-03
4.80 MEV	2.70E-01	2.09E-04	2.80E-06	5.30E-03
5.00 MEV	2.81E-01	4.77E-04	1.10E-05	6.19E-03
5.50 MEV	3.15E-01	1.50E-04	9.50E-06	3.57E-03
6.00 MEV	2.81E-01	2.53E-04	1.51E-05	7.56E-03
6.50 MEV	2.85E-01	1.78E-04	1.15E-05	3.98E-03
7.00 MEV	2.86E-01	2.36E-04	1.72E-05	6.03E-03
7.50 MEV	3.25E-01	2.17E-04	8.37E-06	3.51E-03
8.00 MEV	2.67E-01	4.29E-04	1.21E-05	4.62E-03
8.50 MEV	2.83E-01	1.13E-05	7.26E-06	2.61E-03
9.00 MEV	2.89E-01	1.95E-05	1.66E-05	4.67E-03
9.50 MEV	3.49E-01	1.43E-05	1.15E-06	1.39E-03
10.00 MEV	3.35E-01	2.76E-05	1.15E-06	3.20E-03
11.00 MEV	3.11E-01	6.28E-06	1.79E-06	1.85E-03
12.00 MEV	2.87E-01	1.13E-05	3.38E-06	3.67E-03
13.00 MEV	3.24E-01	4.50E-06	1.03E-06	9.22E-04
14.00 MEV	2.92E-01	8.99E-06	2.05E-06	1.63E-03
15.00 MEV	2.81E-01	0.	0.	4.56E-04
16.00 MEV	2.71E-01	0.	0.	7.64E-04
17.00 MEV	2.64E-01	0.	0.	4.49E-04
18.00 MEV	2.64E-01	0.	0.	9.93E-04
19.00 MEV	2.53E-01	0.	0.	1.36E-04
20.00 MEV	2.44E-01	0.	0.	2.92E-04
21.00 MEV	2.25E-01	0.	0.	0.
22.00 MEV	2.25E-01	0.	0.	0.
23.00 MEV	1.66E-01	0.	0.	0.
24.00 MEV	1.80E-01	0.	0.	0.
25.00 MEV	1.71E-01	0.	0.	0.
26.00 MEV	1.50E-01	0.	0.	0.
27.00 MEV	1.24E-01	0.	0.	0.
28.00 MEV	1.27E-01	0.	0.	0.
29.00 MEV	8.78E-02	0.	0.	0.
30.00 MEV	9.77E-02	0.	0.	0.
32.00 MEV	8.64E-02	0.	0.	0.
34.00 MEV	5.77E-02	0.	0.	0.
36.00 MEV	2.14E-02	0.	0.	0.
38.00 MEV	1.50E-02	0.	0.	0.
40.00 MEV	6.05E-03	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.

AVE. E(MEV)

14.48

4.71

5.40

6.13

1 INITIAL SPECTRUM AT 0.00-0.05 CM. FOR SHONKA A-150 PLASTIC
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	1.02E-01
0.10 MEV	4.50E+02	0.	0.	1.02E-01
0.15 MEV	1.60E+02	0.	0.	1.31E-01
0.20 MEV	6.00E+01	0.	0.	1.31E-01
0.25 MEV	1.31E+02	0.	0.	3.29E-01
0.30 MEV	1.94E+01	0.	0.	3.29E-01
0.35 MEV	3.91E+01	0.	0.	2.52E+00
0.40 MEV	9.81E+01	0.	0.	2.52E+00
0.45 MEV	4.00E+01	0.	0.	2.32E+00
0.50 MEV	3.79E+01	0.	0.	2.32E+00
0.55 MEV	1.16E+02	0.	0.	3.41E-01
0.60 MEV	2.00E+01	0.	0.	3.41E-01
0.65 MEV	0.	0.	0.	0.
0.70 MEV	0.	0.	0.	0.
0.75 MEV	6.00E+01	0.	0.	4.82E-01
0.80 MEV	2.10E+01	0.	0.	4.82E-01
0.85 MEV	9.51E-02	0.	0.	2.52E+00
0.90 MEV	6.49E+01	0.	0.	2.52E+00
0.95 MEV	2.54E-01	0.	0.	1.71E+01
1.00 MEV	0.	0.	0.	1.71E+01
1.10 MEV	1.50E+02	1.41E-01	0.	1.53E+01
1.20 MEV	4.02E+01	1.41E-01	0.	1.53E+01
1.30 MEV	3.82E+01	0.	0.	2.48E+00
1.40 MEV	6.92E+01	0.	0.	2.48E+00
1.50 MEV	5.79E+01	7.23E-02	0.	1.50E+00
1.60 MEV	2.04E+01	7.23E-02	0.	1.50E+00
1.70 MEV	5.87E+01	0.	0.	2.76E+00
1.80 MEV	8.00E+01	0.	0.	2.76E+00
1.90 MEV	4.00E+01	0.	0.	6.07E+00
2.00 MEV	5.78E+01	0.	0.	6.07E+00
2.10 MEV	2.02E+01	1.93E-02	0.	1.55E+01
2.20 MEV	3.81E+01	1.93E-02	0.	1.55E+01
2.30 MEV	4.00E+01	0.	0.	4.01E+00
2.40 MEV	2.01E+01	0.	0.	4.01E+00
2.50 MEV	2.00E+01	2.40E-02	0.	1.62E+01
2.60 MEV	2.00E+01	2.40E-02	0.	1.62E+01
2.70 MEV	6.00E+01	0.	0.	3.50E+00
2.80 MEV	2.03E+01	0.	0.	3.50E+00
2.90 MEV	2.01E+01	0.	0.	1.27E+01
3.00 MEV	0.	0.	0.	1.27E+01
3.20 MEV	4.02E+01	5.64E-02	1.92E-01	1.33E+01
3.40 MEV	5.23E+01	5.64E-02	1.92E-01	1.33E+01
3.60 MEV	4.00E+01	0.	0.	3.54E+00
3.80 MEV	6.01E+01	0.	0.	3.54E+00
4.00 MEV	7.09E+01	0.	0.	4.86E+01

1 INITIAL SPECTRUM AT 0.00-0.05 CM. FOR SHONKA A-150 PLASTIC
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	5.69E+01	0.	0.	4.86E+01
4.40 MEV	4.01E+01	0.	0.	1.25E+01
4.60 MEV	8.01E+01	0.	0.	1.25E+01
4.80 MEV	2.01E+01	2.69E-01	0.	1.09E+01
5.00 MEV	6.01E+01	2.69E-01	0.	1.09E+01
5.50 MEV	7.86E+01	0.	0.	1.64E+00
6.00 MEV	3.73E+01	0.	0.	1.64E+00
6.50 MEV	2.86E-01	1.81E-02	0.	1.24E+00
7.00 MEV	4.09E+01	1.81E-02	0.	1.24E+00
7.50 MEV	1.40E-01	0.	0.	1.06E+01
8.00 MEV	4.01E+01	0.	0.	1.06E+01
8.50 MEV	2.00E+01	0.	0.	1.02E+01
9.00 MEV	0.	0.	0.	1.02E+01
9.50 MEV	2.01E+01	0.	0.	8.60E-02
10.00 MEV	0.	0.	0.	8.60E-02
11.00 MEV	8.00E+01	0.	0.	5.38E-01
12.00 MEV	2.00E+01	0.	0.	5.38E-01
13.00 MEV	0.	0.	0.	1.01E+01
14.00 MEV	2.00E+01	0.	0.	1.01E+01
15.00 MEV	2.00E+01	0.	0.	0.
16.00 MEV	4.00E+01	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	2.00E+01	0.	0.	0.
19.00 MEV	2.00E+01	0.	0.	0.
20.00 MEV	4.00E+01	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	2.00E+01	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	2.00E+01	0.	0.	0.
25.00 MEV	2.00E+01	0.	0.	0.
26.00 MEV	4.00E+01	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	2.00E+01	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE. E(MEV)	11.31	3.90	3.20	6.42

INITIAL SPECTRUM AT 0.05-0.1 μ CM. FOR SHONKA A-150 PLASTIC
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	5.25E+02	0.	0.	0.
0.15 MEV	2.72E+02	0.	0.	1.49E-01
0.20 MEV	9.79E+01	0.	0.	1.49E-01
0.25 MEV	3.95E+01	0.	0.	4.17E-01
0.30 MEV	7.54E+01	0.	0.	4.17E-01
0.35 MEV	4.00E+01	0.	0.	1.95E-02
0.40 MEV	8.00E+01	0.	0.	1.95E-02
0.45 MEV	3.76E+01	6.99E-02	0.	3.24E-01
0.50 MEV	8.00E+01	6.99E-02	0.	3.24E-01
0.55 MEV	1.00E+02	0.	0.	1.35E-01
0.60 MEV	5.86E+01	0.	0.	1.35E-01
0.65 MEV	0.	6.98E-02	0.	1.48E-01
0.70 MEV	2.00E+01	6.98E-02	0.	1.48E-01
0.75 MEV	4.02E+01	0.	0.	1.67E-02
0.80 MEV	1.43E-01	0.	0.	1.67E-02
0.85 MEV	2.04E+01	0.	0.	1.25E-01
0.90 MEV	6.27E-02	0.	0.	1.25E-01
0.95 MEV	2.02E+01	4.64E-02	0.	3.05E-01
1.00 MEV	3.84E+01	4.64E-02	0.	3.05E-01
1.10 MEV	6.03E+01	1.57E-01	0.	1.25E-01
1.20 MEV	9.88E+01	1.57E-01	0.	1.25E-01
1.30 MEV	6.48E+01	0.	0.	1.08E+01
1.40 MEV	6.03E+01	0.	0.	1.08E+01
1.50 MEV	2.03E+01	3.85E-02	0.	1.06E+01
1.60 MEV	5.85E+01	3.85E-02	0.	1.06E+01
1.70 MEV	6.43E+01	2.90E-02	0.	1.26E+00
1.80 MEV	5.38E+01	2.90E-02	0.	1.26E+00
1.90 MEV	9.59E+00	1.34E-01	0.	3.85E+00
2.00 MEV	2.00E+01	1.34E-01	0.	3.85E+00
2.10 MEV	5.02E+01	0.	0.	1.22E+01
2.20 MEV	5.76E+01	0.	0.	1.22E+01
2.30 MEV	2.01E+01	0.	0.	1.20E+00
2.40 MEV	2.04E+01	0.	0.	1.20E+00
2.50 MEV	6.02E+01	0.	0.	1.13E+01
2.60 MEV	1.20E+01	0.	0.	1.13E+01
2.70 MEV	2.54E+01	0.	0.	3.47E+00
2.80 MEV	2.05E+01	0.	0.	3.47E+00
2.90 MEV	0.	2.47E-02	0.	1.73E+00
3.00 MEV	4.00E+01	2.47E-02	0.	1.73E+00
3.20 MEV	2.00E+01	0.	0.	2.27E+01
3.40 MEV	4.04E+01	0.	0.	2.27E+01
3.60 MEV	5.71E+01	0.	0.	1.20E+00
3.80 MEV	1.09E-01	0.	0.	1.20E+00
4.00 MEV	7.41E+01	0.	0.	4.30E+00

INITIAL SPECTRUM AT 0.05-0.10 CM. FOR SHONKA A-150 PLASTIC
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	4.00E+01	0.	0.	4.30E+00
4.40 MEV	2.02E+01	0.	0.	2.87E+00
4.60 MEV	6.04E+01	0.	0.	2.87E+00
4.80 MEV	2.33E+01	0.	0.	1.06E+00
5.00 MEV	4.01E+01	0.	0.	1.06E+00
5.50 MEV	4.00E+01	0.	0.	5.42E+01
6.00 MEV	7.87E+01	0.	0.	5.42E+01
6.50 MEV	6.02E+01	0.	0.	1.12E+01
7.00 MEV	1.19E+02	0.	0.	1.12E+01
7.50 MEV	2.03E+01	0.	0.	7.07E+01
8.00 MEV	6.00E+01	0.	0.	7.07E+01
8.50 MEV	6.00E+01	0.	0.	9.48E+01
9.00 MEV	2.00E+01	0.	0.	9.48E+01
9.50 MEV	2.00E+01	0.	0.	3.41E+01
10.00 MEV	6.00E+01	0.	0.	3.41E+01
11.00 MEV	2.00E+01	0.	0.	4.15E+01
12.00 MEV	1.00E+02	0.	0.	4.15E+01
13.00 MEV	2.00E+01	0.	0.	0.
14.00 MEV	2.00E+01	0.	0.	0.
15.00 MEV	4.00E+01	0.	0.	0.
16.00 MEV	2.00E+01	0.	0.	0.
17.00 MEV	4.00E+01	0.	0.	0.
18.00 MEV	6.00E+01	0.	0.	0.
19.00 MEV	2.00E+01	0.	0.	0.
20.00 MEV	2.00E+01	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	2.00E+01	0.	0.	0.
23.00 MEV	2.00E+01	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	2.00E+01	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
DAVE, E(MEV)	9.93	1.40	3.20	4.33

INITIAL SPECTRUM AT 0.10-0.15 CM. FOR SHONKA A-150 PLASTIC
42 MEV P+ ON RE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	2.38E+00
0.10 MEV	5.10E+02	0.	0.	2.38E+00
0.15 MEV	1.39E+02	0.	0.	2.91E-01
0.20 MEV	7.95E+01	0.	0.	2.91E-01
0.25 MEV	3.79E+01	0.	0.	1.33E-01
0.30 MEV	9.87E+01	0.	0.	1.33E-01
0.35 MEV	1.17E+02	0.	0.	1.61E-01
0.40 MEV	6.00E+01	0.	0.	1.61E-01
0.45 MEV	4.00E+01	8.78E-02	0.	4.97E-01
0.50 MEV	3.98E+01	8.78E-02	0.	4.97E-01
0.55 MEV	4.00E+01	0.	0.	5.40E+00
0.60 MEV	6.00E+01	0.	0.	5.40E+00
0.65 MEV	2.00E+01	0.	0.	3.41E-03
0.70 MEV	4.00E+01	0.	0.	3.41E-03
0.75 MEV	2.48E+01	9.54E-02	2.17E-01	5.87E-03
0.80 MEV	2.48E+01	9.54E-02	2.17E-01	5.87E-03
0.85 MEV	4.42E+01	8.44E-02	0.	2.85E-01
0.90 MEV	0.	8.44E-02	0.	2.85E-01
0.95 MEV	2.50E+01	0.	0.	3.41E-03
1.00 MEV	2.04E+01	0.	0.	3.41E-03
1.10 MEV	4.02E+01	9.48E-02	0.	6.93E-01
1.20 MEV	2.48E+01	9.48E-02	0.	6.93E-01
1.30 MEV	1.94E+01	3.31E-01	0.	2.56E+00
1.40 MEV	4.53E+01	3.31E-01	0.	2.56E+00
1.50 MEV	6.02E+01	0.	0.	3.94E+00
1.60 MEV	2.98E+01	0.	0.	3.94E+00
1.70 MEV	9.94E+01	1.88E-01	0.	2.89E+00
1.80 MEV	5.17E-01	1.88E-01	0.	2.89E+00
1.90 MEV	0.	4.38E-01	0.	3.58E+00
2.00 MEV	2.01E+01	4.38E-01	0.	3.58E+00
2.10 MEV	5.08E-01	0.	0.	1.96E-01
2.20 MEV	3.96E+01	0.	0.	1.96E-01
2.30 MEV	2.01E+01	0.	0.	7.78E+00
2.40 MEV	3.96E+01	0.	0.	7.78E+00
2.50 MEV	0.	2.39E-02	0.	3.07E+00
2.60 MEV	0.	2.39E-02	0.	3.07E+00
2.70 MEV	6.02E+01	0.	0.	8.03E-01
2.80 MEV	3.98E+01	0.	0.	8.03E-01
2.90 MEV	2.02E+01	2.85E-02	0.	3.25E+00
3.00 MEV	2.00E+01	2.85E-02	0.	3.25E+00
3.20 MEV	2.01E+01	1.95E-02	0.	1.20E+01
3.40 MEV	2.00E+01	1.95E-02	0.	1.20E+01
3.60 MEV	4.02E+01	0.	0.	6.35E+00
3.80 MEV	4.00E+01	0.	0.	6.35E+00
4.00 MEV	4.00E+01	0.	0.	1.42E+01

1 INITIAL SPECTRUM AT 0.10-0.15 CM, FOR SHONKA A-150 PLASTIC

42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	2.06E+01	0.	0.	1.42E+01
4.40 MEV	1.51E+01	1.98E-02	0.	7.16E+01
4.60 MEV	2.02E+01	1.98E-02	0.	7.16E+01
4.80 MEV	8.02E+01	0.	0.	1.14E+00
5.00 MEV	2.00E+01	0.	0.	1.14E+00
5.50 MEV	2.05E+01	0.	0.	1.39E+01
6.00 MEV	1.01E+02	0.	0.	1.39E+01
6.50 MEV	6.03E+01	0.	0.	1.22E+00
7.00 MEV	4.04E+01	0.	0.	1.22E+00
7.50 MEV	8.02E+01	0.	0.	1.04E+00
8.00 MEV	4.00E+01	0.	0.	1.04E+00
8.50 MEV	4.01E+01	0.	0.	9.13E+01
9.00 MEV	0.	0.	0.	9.13E+01
9.50 MEV	2.00E+01	0.	0.	3.39E+01
10.00 MEV	0.	0.	0.	3.39E+01
11.00 MEV	4.00E+01	0.	0.	4.50E+01
12.00 MEV	2.00E+01	0.	0.	4.50E+01
13.00 MEV	2.00E+01	0.	0.	1.32E+01
14.00 MEV	2.00E+01	0.	0.	1.32E+01
15.00 MEV	0.	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	6.00E+01	0.	0.	0.
18.00 MEV	2.00E+01	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	2.00E+01	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	2.00E+01	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.

NAVE, E(MEV)

8.42

1.60

0.75

4.60

INITIAL SPECTRUM AT 0.15-0.20 CM. FOR SHONKA A-150 PLASTIC

42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	4.12E-01
0.10 MEV	4.33E+02	0.	0.	4.12E-01
0.15 MEV	1.76E+02	0.	0.	7.21E-01
0.20 MEV	2.11E+02	0.	0.	7.21E-01
0.25 MEV	1.00E+02	0.	0.	0.
0.30 MEV	1.40E+02	0.	0.	0.
0.35 MEV	1.94E+02	1.74E-02	0.	6.90E-02
0.40 MEV	4.00E+01	1.74E-02	0.	6.90E-02
0.45 MEV	1.16E+02	0.	0.	6.94E-01
0.50 MEV	4.00E+01	0.	0.	6.94E-01
0.55 MEV	6.00E+01	9.48E-02	0.	1.05E+01
0.60 MEV	5.09E+01	9.48E-02	0.	1.05E+01
0.65 MEV	7.57E+01	0.	0.	1.09E+01
0.70 MEV	6.02E+01	0.	0.	1.09E+01
0.75 MEV	6.00E+01	1.86E-01	0.	4.12E-01
0.80 MEV	7.02E+01	1.86E-01	0.	4.12E-01
0.85 MEV	7.80E-02	6.27E-02	0.	1.06E+01
0.90 MEV	2.16E+01	6.27E-02	0.	1.06E+01
0.95 MEV	4.01E+01	9.48E-02	0.	2.44E+00
1.00 MEV	0.	9.48E-02	0.	2.44E+00
1.10 MEV	2.45E+01	1.61E-01	0.	1.03E+01
1.20 MEV	2.99E+01	1.61E-01	0.	1.03E+01
1.30 MEV	2.49E+01	1.98E-02	0.	7.68E+00
1.40 MEV	2.00E+01	1.98E-02	0.	7.68E+00
1.50 MEV	5.41E+00	2.22E-01	2.08E-01	2.36E+01
1.60 MEV	4.51E+01	2.22E-01	2.08E-01	2.36E+01
1.70 MEV	1.57E+01	0.	0.	1.22E+00
1.80 MEV	1.95E+01	0.	0.	1.22E+00
1.90 MEV	7.91E+01	8.50E-02	0.	6.77E-01
2.00 MEV	2.04E+01	8.50E-02	0.	6.77E-01
2.10 MEV	4.02E+01	6.54E-02	0.	3.73E+00
2.20 MEV	4.00E+01	6.54E-02	0.	3.73E+00
2.30 MEV	1.90E+01	1.90E-02	0.	7.26E+00
2.40 MEV	1.52E-01	1.90E-02	0.	7.26E+00
2.50 MEV	4.03E+01	4.53E-02	0.	2.36E+01
2.60 MEV	4.51E+01	4.53E-02	0.	2.36E+01
2.70 MEV	2.01E+01	1.61E-01	0.	5.64E+00
2.80 MEV	0.	1.61E-01	0.	5.64E+00
2.90 MEV	2.00E+01	2.80E-02	0.	7.94E-01
3.00 MEV	1.80E+01	2.80E-02	0.	7.94E-01
3.20 MEV	8.04E+01	2.47E-02	0.	2.24E+01
3.40 MEV	2.03E+01	2.47E-02	0.	2.24E+01
3.60 MEV	2.26E-01	5.53E-02	0.	1.02E+01
3.80 MEV	1.55E-01	5.53E-02	0.	1.02E+01
4.00 MEV	4.01E+01	0.	0.	7.91E-01

1 INITIAL SPECTRUM AT 0.15-0.20 CM. FOR SHONKA A-150 PLASTIC
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	1.73E-01	0.	0.	7.91E-01
4.40 MEV	7.85E-02	0.	0.	5.08E+00
4.60 MEV	2.04E+01	0.	0.	5.08E+00
4.80 MEV	5.60E-01	2.28E-02	0.	1.08E+01
5.00 MEV	2.01E+01	2.28E-02	0.	1.08E+01
5.50 MEV	6.05E+01	0.	0.	2.68E+01
6.00 MEV	6.07E+01	0.	0.	2.68E+01
6.50 MEV	6.03E+01	0.	0.	1.18E+00
7.00 MEV	8.10E+01	0.	0.	1.18E+00
7.50 MEV	2.05E+01	0.	0.	9.97E-01
8.00 MEV	2.11E-01	0.	0.	9.97E-01
8.50 MEV	4.01E+01	0.	0.	7.44E-01
9.00 MEV	0.	0.	0.	7.44E-01
9.50 MEV	4.01E+01	0.	0.	3.28E-01
10.00 MEV	2.00E+01	0.	0.	3.28E-01
11.00 MEV	1.20E+02	0.	0.	1.04E+01
12.00 MEV	6.00E+01	0.	0.	1.04E+01
13.00 MEV	6.00E+01	0.	0.	1.61E-01
14.00 MEV	0.	0.	0.	1.61E-01
15.00 MEV	0.	0.	0.	0.
16.00 MEV	2.00E+01	0.	0.	0.
17.00 MEV	2.00E+01	0.	0.	0.
18.00 MEV	2.00E+01	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	4.00E+01	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	2.00E+01	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	4.00E+01	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
NAVE, E(MEV)	11.43	1.98	1.50	5.62

1 INITIAL SPECTRUM AT 0.20-0.40 CM. FOR SHONKA A-150 PLASTIC
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	7.14E+01
0.10 MEV	5.97E+02	0.	0.	7.14E+01
0.15 MEV	2.24E+02	0.	0.	3.16E+00
0.20 MEV	1.78E+02	0.	0.	3.16E+00
0.25 MEV	8.46E+01	0.	0.	1.38E+00
0.30 MEV	9.15E+01	0.	0.	1.38E+00
0.35 MEV	5.50E+01	2.67E-02	0.	2.31E+00
0.40 MEV	1.03E+02	2.67E-02	0.	2.31E+00
0.45 MEV	8.68E+01	0.	0.	6.95E+01
0.50 MEV	7.92E+01	0.	0.	6.95E+01
0.55 MEV	7.10E+01	2.83E-02	0.	2.43E+00
0.60 MEV	4.35E+01	2.83E-02	0.	2.43E+00
0.65 MEV	1.96E+01	9.49E-02	0.	2.23E+00
0.70 MEV	3.40E+01	9.49E-02	0.	2.23E+00
0.75 MEV	2.28E+01	1.69E-02	4.53E-02	1.90E+00
0.80 MEV	1.44E+01	1.69E-02	4.53E-02	1.90E+00
0.85 MEV	5.15E+01	9.01E-02	0.	3.72E+00
0.90 MEV	1.86E+01	9.01E-02	0.	3.72E+00
0.95 MEV	3.35E+01	3.61E-02	0.	2.60E+00
1.00 MEV	1.52E+01	3.61E-02	0.	2.60E+00
1.10 MEV	4.50E+01	4.92E-02	5.01E-02	9.85E+00
1.20 MEV	3.44E+01	4.92E-02	5.01E-02	9.85E+00
1.30 MEV	4.01E+01	8.77E-02	4.53E-02	6.95E+00
1.40 MEV	6.36E+01	8.77E-02	4.53E-02	6.95E+00
1.50 MEV	5.11E+01	2.56E+00	0.	2.03E+00
1.60 MEV	2.98E+01	2.56E+00	0.	2.03E+00
1.70 MEV	4.54E+01	5.33E-02	0.	4.69E+00
1.80 MEV	3.59E+01	5.33E-02	0.	4.69E+00
1.90 MEV	5.60E+01	1.69E-02	0.	4.27E+00
2.00 MEV	6.55E+01	1.69E-02	0.	4.27E+00
2.10 MEV	2.91E+01	3.99E-02	0.	3.98E+00
2.20 MEV	4.52E+01	3.99E-02	0.	3.98E+00
2.30 MEV	1.03E+01	6.24E-02	0.	8.94E+00
2.40 MEV	1.90E+01	6.24E-02	0.	8.94E+00
2.50 MEV	2.85E+01	1.53E-02	0.	9.72E+00
2.60 MEV	3.95E+01	1.53E-02	0.	9.72E+00
2.70 MEV	2.01E+01	5.62E-02	0.	1.50E+01
2.80 MEV	5.17E+00	5.62E-02	0.	1.50E+01
2.90 MEV	1.50E+01	5.17E-02	0.	4.91E+00
3.00 MEV	1.01E+01	5.17E-02	0.	4.91E+00
3.20 MEV	3.99E+01	0.	0.	1.01E+01
3.40 MEV	3.51E+01	0.	0.	1.01E+01
3.60 MEV	3.95E+01	1.02E-02	0.	1.68E+01
3.80 MEV	1.50E+01	1.02E-02	0.	1.68E+01
4.00 MEV	2.46E+01	6.87E-02	0.	1.58E+01

1 INITIAL SPECTRUM AT 0.20-0.40 CM. FOR SHONKA A-150 PLASTIC
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.97E+01	6.87E-02	0.	1.58E+01
4.40 MEV	2.36E+01	1.02E-02	0.	1.28E+01
4.60 MEV	1.52E+01	1.02E-02	0.	1.28E+01
4.80 MEV	1.52E+01	0.	0.	4.38E+00
5.00 MEV	2.01E+01	0.	0.	4.38E+00
5.50 MEV	3.96E+01	0.	0.	6.51E+00
6.00 MEV	3.53E+01	0.	0.	8.51E+00
6.50 MEV	3.03E+01	0.	0.	7.80E+00
7.00 MEV	3.52E+01	0.	0.	7.80E+00
7.50 MEV	1.51E+01	0.	2.07E-02	5.49E+00
8.00 MEV	2.51E+01	0.	2.07E-02	5.49E+00
8.50 MEV	4.92E+01	0.	0.	9.33E-01
9.00 MEV	3.33E+01	0.	0.	9.33E-01
9.50 MEV	1.50E+01	1.80E-02	0.	3.76E-01
10.00 MEV	2.50E+01	1.80E-02	0.	3.76E-01
11.00 MEV	4.42E+01	3.60E-02	0.	2.70E+00
12.00 MEV	4.50E+01	3.60E-02	0.	2.70E+00
13.00 MEV	4.44E+01	0.	0.	7.34E-02
14.00 MEV	2.00E+01	0.	0.	7.34E-02
15.00 MEV	3.50E+01	0.	0.	0.
16.00 MEV	3.50E+01	0.	0.	0.
17.00 MEV	2.00E+01	0.	0.	0.
18.00 MEV	2.50E+01	0.	0.	0.
19.00 MEV	2.00E+01	0.	0.	0.
20.00 MEV	3.00E+01	0.	0.	0.
21.00 MEV	1.50E+01	0.	0.	0.
22.00 MEV	1.50E+01	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	5.00E+00	0.	0.	0.
28.00 MEV	1.50E+01	0.	0.	0.
29.00 MEV	1.00E+01	0.	0.	0.
30.00 MEV	5.00E+00	0.	0.	0.
32.00 MEV	2.00E+01	0.	0.	0.
34.00 MEV	1.00E+01	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	5.00E+00	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.

0AVE, E(MEV)

12.12

2.74

4.09

4.88

1 INITIAL SPECTRUM AT 0.40-0.60 CM. FOR SHONKA A-150 PLASTIC
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	1.16E+00
0.10 MEV	6.94E+02	0.	0.	1.16E+00
0.15 MEV	1.84E+02	0.	0.	3.05E+00
0.20 MEV	1.76E+02	0.	0.	3.05E+00
0.25 MEV	1.68E+02	2.29E-02	0.	1.61E+00
0.30 MEV	9.27E+01	2.29E-02	0.	1.61E+00
0.35 MEV	7.81E+01	8.07E-02	0.	2.66E+00
0.40 MEV	5.85E+01	8.07E-02	0.	2.66E+00
0.45 MEV	7.17E+01	4.89E-02	0.	3.85E+00
0.50 MEV	8.87E+01	4.89E-02	0.	3.85E+00
0.55 MEV	8.77E+01	0.	0.	1.28E+00
0.60 MEV	6.84E+01	0.	0.	1.28E+00
0.65 MEV	5.51E+01	0.	0.	2.57E+00
0.70 MEV	3.43E+01	0.	0.	2.57E+00
0.75 MEV	3.63E+01	4.89E-02	0.	3.04E+00
0.80 MEV	3.98E+01	4.89E-02	0.	3.04E+00
0.85 MEV	3.78E+01	8.69E-02	0.	3.72E+00
0.90 MEV	2.96E+01	8.69E-02	0.	3.72E+00
0.95 MEV	5.19E+00	9.33E-03	0.	1.18E+01
1.00 MEV	6.00E+01	9.33E-03	0.	1.18E+01
1.10 MEV	3.94E+01	7.05E-02	0.	1.20E+01
1.20 MEV	4.90E+01	7.05E-02	0.	1.20E+01
1.30 MEV	4.42E+01	4.13E-02	0.	4.76E+00
1.40 MEV	1.64E+01	4.13E-02	0.	4.76E+00
1.50 MEV	4.73E+01	1.11E-01	5.46E-02	1.39E+01
1.60 MEV	1.89E+01	1.11E-01	5.46E-02	1.39E+01
1.70 MEV	3.48E+01	2.94E-02	0.	2.92E+00
1.80 MEV	4.00E+01	2.94E-02	0.	2.92E+00
1.90 MEV	2.58E+01	1.08E-02	0.	9.98E+00
2.00 MEV	3.98E+01	1.08E-02	0.	9.98E+00
2.10 MEV	1.58E+01	1.79E-02	0.	6.17E+00
2.20 MEV	3.51E+01	1.79E-02	0.	6.17E+00
2.30 MEV	1.01E+01	0.	0.	5.35E+00
2.40 MEV	1.00E+01	0.	0.	5.35E+00
2.50 MEV	1.99E+01	0.	0.	6.72E+00
2.60 MEV	1.90E+01	0.	0.	6.72E+00
2.70 MEV	3.01E+01	2.25E-02	0.	1.04E+01
2.80 MEV	1.50E+01	2.25E-02	0.	1.04E+01
2.90 MEV	5.13E+00	7.89E-03	0.	5.82E+00
3.00 MEV	3.00E+01	7.89E-03	0.	5.82E+00
3.20 MEV	4.42E+01	3.94E-02	4.71E-02	1.19E+01
3.40 MEV	2.46E+01	3.94E-02	4.71E-02	1.19E+01
3.60 MEV	2.94E+01	8.73E-02	0.	9.68E+00
3.80 MEV	3.90E+01	8.73E-02	0.	9.68E+00
4.00 MEV	2.50E+01	1.08E-02	0.	1.03E+01

1 INITIAL SPECTRUM AT 0.40-0.60 CM. FOR SHONKA A-150 PLASTIC
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.42E+01	1.00E-02	0.	1.03E+01
4.40 MEV	3.45E+01	6.61E-02	4.44E-02	1.60E+01
4.60 MEV	2.51E+01	6.61E-02	4.44E-02	1.60E+01
4.80 MEV	3.02E+01	0.	0.	7.12E+00
5.00 MEV	1.97E+01	0.	0.	7.12E+00
5.50 MEV	4.48E+01	9.24E-03	0.	1.99E+01
6.00 MEV	5.46E+01	9.24E-03	0.	1.99E+01
6.50 MEV	2.99E+01	7.47E-02	0.	1.18E+01
7.00 MEV	1.52E+01	7.47E-02	0.	1.18E+01
7.50 MEV	2.54E+01	0.	0.	8.38E-01
8.00 MEV	2.02E+01	0.	0.	8.38E-01
8.50 MEV	2.50E+01	0.	0.	7.91E-01
9.00 MEV	1.49E+01	0.	0.	7.91E-01
9.50 MEV	3.50E+01	0.	0.	1.02E+00
10.00 MEV	1.50E+01	0.	0.	1.02E+00
11.00 MEV	5.00E+01	0.	0.	2.73E+00
12.00 MEV	3.00E+01	0.	0.	2.73E+00
13.00 MEV	5.50E+01	0.	0.	4.63E-02
14.00 MEV	4.00E+01	0.	0.	4.63E-02
15.00 MEV	1.92E+01	0.	0.	0.
16.00 MEV	2.50E+01	0.	0.	0.
17.00 MEV	1.50E+01	0.	0.	0.
18.00 MEV	2.50E+01	0.	0.	0.
19.00 MEV	2.50E+01	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	1.50E+01	0.	0.	0.
22.00 MEV	2.00E+01	0.	0.	0.
23.00 MEV	1.50E+01	0.	0.	0.
24.00 MEV	1.00E+01	0.	0.	0.
25.00 MEV	1.00E+01	0.	0.	0.
26.00 MEV	1.50E+01	0.	0.	0.
27.00 MEV	5.00E+00	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	5.00E+00	0.	0.	0.
30.00 MEV	5.00E+00	0.	0.	0.
32.00 MEV	1.00E+01	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	5.00E+00	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	11.13	3.74	3.26	4.82

INITIAL SPECTRUM AT 0.60-1.00 CM. FOR SHONKA A-150 PLASTIC
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	1.01E+00
0.10 MEV	7.00E+02	0.	0.	1.01E+00
0.15 MEV	2.62E+02	1.32E-02	0.	1.81E+00
0.20 MEV	2.02E+02	1.32E-02	0.	1.81E+00
0.25 MEV	1.18E+02	0.	0.	1.85E+00
0.30 MEV	1.20E+02	0.	0.	1.85E+00
0.35 MEV	1.10E+02	1.53E-02	0.	2.03E+00
0.40 MEV	6.30E+01	1.53E-02	0.	2.03E+00
0.45 MEV	5.96E+01	2.88E-02	0.	2.14E+00
0.50 MEV	7.69E+01	2.88E-02	0.	2.14E+00
0.55 MEV	4.47E+01	3.51E-02	0.	2.02E+00
0.60 MEV	4.26E+01	3.51E-02	0.	2.02E+00
0.65 MEV	4.45E+01	1.45E-02	4.41E-03	3.33E+00
0.70 MEV	3.67E+01	1.45E-02	4.41E-03	3.33E+00
0.75 MEV	5.25E+01	2.94E-02	0.	1.31E+00
0.80 MEV	3.41E+01	2.94E-02	0.	1.31E+00
0.85 MEV	4.81E+01	0.	0.	2.61E+00
0.90 MEV	4.20E+01	0.	0.	2.61E+00
0.95 MEV	2.95E+01	7.97E-02	5.48E-03	9.19E+01
1.00 MEV	3.85E+01	7.97E-02	5.48E-03	9.19E+01
1.10 MEV	5.47E+01	5.77E-02	0.	5.93E+00
1.20 MEV	6.71E+01	5.77E-02	0.	5.93E+00
1.30 MEV	5.16E+01	5.26E-02	5.44E-02	5.26E+00
1.40 MEV	6.36E+01	5.26E-02	5.44E-02	5.26E+00
1.50 MEV	3.33E+01	4.16E-02	0.	7.94E+00
1.60 MEV	2.98E+01	4.16E-02	0.	7.94E+00
1.70 MEV	4.11E+01	6.07E-02	0.	7.38E+00
1.80 MEV	2.54E+01	6.07E-02	0.	7.38E+00
1.90 MEV	4.68E+01	5.82E-02	2.74E-02	3.97E+00
2.00 MEV	5.30E+01	5.82E-02	2.74E-02	3.97E+00
2.10 MEV	3.08E+01	3.36E-02	0.	4.58E+00
2.20 MEV	1.79E+01	3.36E-02	0.	4.58E+00
2.30 MEV	4.07E+01	3.26E-02	0.	3.12E+00
2.40 MEV	1.88E+01	3.26E-02	0.	3.12E+00
2.50 MEV	2.25E+01	1.51E-02	0.	7.26E+00
2.60 MEV	2.23E+01	1.51E-02	0.	7.26E+00
2.70 MEV	1.06E+01	2.98E-02	0.	9.35E+00
2.80 MEV	1.97E+01	2.98E-02	0.	9.35E+00
2.90 MEV	2.21E+01	1.54E-02	0.	6.91E+00
3.00 MEV	2.99E+01	1.54E-02	0.	6.91E+00
3.20 MEV	2.76E+01	1.61E-02	0.	1.19E+01
3.40 MEV	3.71E+01	1.61E-02	0.	1.19E+01
3.60 MEV	2.93E+01	1.07E-02	0.	1.08E+01
3.80 MEV	1.77E+01	1.07E-02	0.	1.08E+01
4.00 MEV	3.70E+01	3.21E-03	2.36E-02	1.14E+01

1 INITIAL SPECTRUM AT 0.60-1.00 CM. FOR SHONKA A-150 ELASTIC

42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	4.18E+01	3.21E-03	2.36E-02	1.14E+01
4.40 MEV	1.57E+01	8.22E-02	0.	1.04E+01
4.60 MEV	3.01E+01	8.22E-02	0.	1.04E+01
4.80 MEV	2.65E+01	0.	0.	7.03E+00
5.00 MEV	1.72E+01	0.	0.	7.03E+00
5.50 MEV	5.24E+01	3.57E-02	0.	8.12E+00
6.00 MEV	3.00E+01	3.57E-02	0.	8.12E+00
6.50 MEV	3.95E+01	1.46E-02	1.35E-02	3.38E+00
7.00 MEV	3.46E+01	1.46E-02	1.35E-02	3.38E+00
7.50 MEV	3.09E+01	0.	0.	5.12E+00
8.00 MEV	3.44E+01	0.	0.	5.12E+00
8.50 MEV	3.25E+01	0.	0.	3.21E+00
9.00 MEV	1.25E+01	0.	0.	3.21E+00
9.50 MEV	1.25E+01	1.46E-02	0.	2.91E+00
10.00 MEV	5.00E+00	1.46E-02	0.	2.91E+00
11.00 MEV	3.50E+01	0.	0.	1.67E+00
12.00 MEV	3.00E+01	0.	0.	1.67E+00
13.00 MEV	2.00E+01	0.	0.	1.30E+00
14.00 MEV	3.50E+01	0.	0.	1.30E+00
15.00 MEV	4.00E+01	0.	0.	2.14E-02
16.00 MEV	3.24E+01	0.	0.	2.14E-02
17.00 MEV	3.50E+01	0.	0.	0.
18.00 MEV	2.50E+01	0.	0.	0.
19.00 MEV	2.25E+01	0.	0.	0.
20.00 MEV	1.75E+01	0.	0.	0.
21.00 MEV	7.50E+00	0.	0.	0.
22.00 MEV	1.50E+01	0.	0.	0.
23.00 MEV	1.00E+01	0.	0.	0.
24.00 MEV	1.75E+01	0.	0.	0.
25.00 MEV	1.00E+01	0.	0.	0.
26.00 MEV	7.50E+00	0.	0.	0.
27.00 MEV	2.25E+01	0.	0.	0.
28.00 MEV	7.50E+00	0.	0.	0.
29.00 MEV	1.25E+01	0.	0.	0.
30.00 MEV	5.00E+00	0.	0.	0.
32.00 MEV	1.00E+01	0.	0.	0.
34.00 MEV	2.50E+00	0.	0.	0.
36.00 MEV	2.50E+00	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.

0AVE. E(MEV)

11.64

3.68

3.74

5.34

1 INITIAL SPECTRUM AT 1.00-2.00 CM. FOR SHONKA A-150 PLASTIC
42 MEV P+ ON HE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	9.78E-01
0.10 MEV	7.25E+02	0.	0.	9.78E-01
0.15 MEV	2.81E+02	5.81E-03	0.	1.33E+00
0.20 MEV	2.03E+02	5.81E-03	0.	1.33E+00
0.25 MEV	1.83E+02	1.58E-02	0.	7.72E-01
0.30 MEV	1.16E+02	1.58E-02	0.	7.72E-01
0.35 MEV	1.11E+02	1.99E-02	9.00E-03	1.23E+00
0.40 MEV	8.48E+01	1.99E-02	9.00E-03	1.23E+00
0.45 MEV	6.54E+01	1.70E-02	1.20E-02	2.52E+00
0.50 MEV	7.42E+01	1.70E-02	1.20E-02	2.52E+00
0.55 MEV	7.13E+01	2.18E-02	1.01E-02	2.32E+00
0.60 MEV	4.91E+01	2.18E-02	1.01E-02	2.32E+00
0.65 MEV	5.28E+01	4.37E-02	4.17E-03	2.05E+00
0.70 MEV	6.49E+01	4.37E-02	4.17E-03	2.05E+00
0.75 MEV	5.07E+01	2.90E-02	0.	2.30E+00
0.80 MEV	3.87E+01	2.90E-02	0.	2.30E+00
0.85 MEV	4.02E+01	6.64E-02	0.	1.93E+00
0.90 MEV	4.61E+01	6.64E-02	0.	1.93E+00
0.95 MEV	4.59E+01	2.91E-02	0.	1.44E+00
1.00 MEV	2.46E+01	2.91E-02	0.	1.44E+00
1.10 MEV	6.63E+01	9.72E-02	2.16E-03	3.71E+00
1.20 MEV	6.51E+01	9.72E-02	2.16E-03	3.71E+00
1.30 MEV	4.81E+01	5.51E-02	0.	6.70E+00
1.40 MEV	4.27E+01	5.51E-02	0.	6.70E+00
1.50 MEV	4.52E+01	5.92E-01	1.06E-02	5.41E+00
1.60 MEV	4.75E+01	5.92E-01	1.06E-02	5.41E+00
1.70 MEV	4.04E+01	4.56E-02	1.08E-02	7.17E+00
1.80 MEV	2.91E+01	4.56E-02	1.08E-02	7.17E+00
1.90 MEV	3.37E+01	5.33E-01	0.	3.63E+00
2.00 MEV	4.10E+01	5.33E-01	0.	3.63E+00
2.10 MEV	3.61E+01	3.69E-02	0.	6.19E+00
2.20 MEV	2.44E+01	3.69E-02	0.	6.19E+00
2.30 MEV	3.34E+01	2.60E-02	0.	7.78E+00
2.40 MEV	2.99E+01	2.60E-02	0.	7.78E+00
2.50 MEV	1.98E+01	1.44E-02	0.	7.21E+00
2.60 MEV	2.87E+01	1.44E-02	0.	7.21E+00
2.70 MEV	2.25E+01	1.78E-02	0.	4.01E+00
2.80 MEV	3.50E+01	1.78E-02	0.	4.01E+00
2.90 MEV	1.62E+01	1.17E-02	0.	6.87E+00
3.00 MEV	1.77E+01	1.17E-02	0.	6.87E+00
3.20 MEV	4.16E+01	5.23E-01	0.	8.94E+00
3.40 MEV	3.25E+01	5.23E-01	0.	8.94E+00
3.60 MEV	4.11E+01	7.84E-03	1.69E-02	1.03E+01
3.80 MEV	3.81E+01	7.84E-03	1.69E-02	1.03E+01
4.00 MEV	3.16E+01	8.86E-03	0.	1.08E+01

INITIAL SPECTRUM AT 1.00-2.00 CM. FOR SHONKA A-15A PLASTIC
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	1.80E+01	8.86E-03	0.	1.08E+01
4.40 MEV	2.55E+01	5.24E-01	0.	6.26E+00
4.60 MEV	2.17E+01	5.24E-01	0.	6.26E+00
4.80 MEV	2.86E+01	1.39E-02	0.	4.34E+00
5.00 MEV	2.42E+01	1.39E-02	0.	4.34E+00
5.50 MEV	5.03E+01	2.59E-02	0.	8.96E+00
6.00 MEV	4.95E+01	2.59E-02	0.	8.96E+00
6.50 MEV	4.85E+01	4.95E-02	1.91E-02	5.06E+00
7.00 MEV	4.40E+01	4.95E-02	1.91E-02	5.06E+00
7.50 MEV	3.48E+01	1.17E-02	4.85E-03	3.76E+00
8.00 MEV	2.41E+01	1.17E-02	4.85E-03	3.76E+00
8.50 MEV	2.58E+01	5.11E-01	1.85E-02	2.87E+00
9.00 MEV	1.87E+01	5.11E-01	1.85E-02	2.87E+00
9.50 MEV	1.96E+01	1.10E-02	4.90E-03	9.70E-01
10.00 MEV	2.69E+01	1.10E-02	4.90E-03	9.70E-01
11.00 MEV	4.15E+01	5.64E-03	0.	8.93E-01
12.00 MEV	3.87E+01	5.64E-03	0.	8.93E-01
13.00 MEV	3.09E+01	0.	0.	6.94E-02
14.00 MEV	3.78E+01	0.	0.	6.94E-02
15.00 MEV	2.40E+01	0.	0.	9.44E-03
16.00 MEV	1.90E+01	0.	0.	9.44E-03
17.00 MEV	1.90E+01	0.	0.	0.
18.00 MEV	1.30E+01	0.	0.	0.
19.00 MEV	1.00E+01	0.	0.	5.00E-01
20.00 MEV	1.70E+01	0.	0.	5.00E-01
21.00 MEV	1.10E+01	0.	0.	0.
22.00 MEV	1.10E+01	0.	0.	0.
23.00 MEV	1.60E+01	0.	0.	0.
24.00 MEV	8.00E+00	0.	0.	0.
25.00 MEV	1.30E+01	0.	0.	0.
26.00 MEV	6.00E+00	0.	0.	0.
27.00 MEV	5.00E+00	0.	0.	0.
28.00 MEV	6.00E+00	0.	0.	0.
29.00 MEV	5.00E+00	0.	0.	0.
30.00 MEV	1.00E+01	0.	0.	0.
32.00 MEV	6.00E+00	0.	0.	0.
34.00 MEV	4.00E+00	0.	0.	0.
36.00 MEV	5.00E+00	0.	0.	0.
38.00 MEV	1.00E+00	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	10.53	5.34	6.38	5.02

INITIAL SPECTRUM AT 2.00-4.00 CM. FOR SHONKA A-150 PLASTIC

42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	9.09E-01
0.10 MEV	8.84E+02	0.	0.	9.09E-01
0.15 MEV	3.07E+02	7.39E-03	0.	1.57E+00
0.20 MEV	2.31E+02	7.39E-03	0.	1.57E+00
0.25 MEV	1.64E+02	6.99E-03	0.	1.88E+00
0.30 MEV	1.31E+02	6.99E-03	0.	1.88E+00
0.35 MEV	1.23E+02	3.48E-02	1.01E-03	2.46E+00
0.40 MEV	9.16E+01	3.48E-02	1.01E-03	2.46E+00
0.45 MEV	1.00E+02	3.09E-02	5.04E-03	1.92E+00
0.50 MEV	8.30E+01	3.09E-02	5.04E-03	1.92E+00
0.55 MEV	7.79E+01	2.57E-02	5.46E-03	2.50E+00
0.60 MEV	5.59E+01	2.57E-02	5.46E-03	2.50E+00
0.65 MEV	6.71E+01	2.49E-02	0.	1.76E+00
0.70 MEV	5.19E+01	2.49E-02	0.	1.76E+00
0.75 MEV	5.35E+01	3.00E-01	5.50E-03	2.13E+00
0.80 MEV	4.60E+01	3.00E-01	5.50E-03	2.13E+00
0.85 MEV	4.26E+01	4.04E-02	6.53E-03	1.53E+00
0.90 MEV	4.40E+01	4.04E-02	6.53E-03	1.53E+00
0.95 MEV	4.40E+01	2.97E-02	9.84E-04	1.67E+00
1.00 MEV	3.12E+01	2.97E-02	9.84E-04	1.67E+00
1.10 MEV	7.28E+01	8.06E-02	6.50E-03	6.00E+00
1.20 MEV	5.93E+01	8.06E-02	6.50E-03	6.00E+00
1.30 MEV	5.38E+01	6.72E-02	1.04E-02	5.49E+00
1.40 MEV	5.52E+01	6.72E-02	1.04E-02	5.49E+00
1.50 MEV	5.64E+01	7.20E-02	5.51E-03	6.02E+00
1.60 MEV	4.95E+01	7.20E-02	5.51E-03	6.02E+00
1.70 MEV	5.43E+01	6.41E-02	5.05E-03	7.25E+00
1.80 MEV	4.39E+01	6.41E-02	5.05E-03	7.25E+00
1.90 MEV	3.07E+01	3.87E-02	0.	6.31E+00
2.00 MEV	3.46E+01	3.87E-02	0.	6.31E+00
2.10 MEV	3.33E+01	2.22E-02	0.	6.78E+00
2.20 MEV	3.26E+01	2.22E-02	0.	6.78E+00
2.30 MEV	2.96E+01	2.03E-02	0.	5.34E+00
2.40 MEV	2.64E+01	2.03E-02	0.	5.34E+00
2.50 MEV	2.74E+01	1.61E-02	0.	4.90E+00
2.60 MEV	3.08E+01	1.61E-02	0.	4.90E+00
2.70 MEV	2.70E+01	2.70E-02	0.	5.27E+00
2.80 MEV	2.67E+01	2.70E-02	0.	5.27E+00
2.90 MEV	1.72E+01	1.07E-02	5.17E-03	6.36E+00
3.00 MEV	1.94E+01	1.07E-02	5.17E-03	6.36E+00
3.20 MEV	4.10E+01	2.80E-01	2.17E-02	1.12E+01
3.40 MEV	3.54E+01	2.80E-01	2.17E-02	1.12E+01
3.60 MEV	3.45E+01	1.47E-02	8.18E-03	8.73E+00
3.80 MEV	2.98E+01	1.47E-02	8.18E-03	8.73E+00
4.00 MEV	3.29E+01	2.78E-01	5.76E-03	8.49E+00

INITIAL SPECTRUM AT 2.00-4.00 CM. FOR SHONKA A-15 PLASTIC
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.15E+01	2.78E-01	5.76E-03	8.49E+00
4.40 MEV	2.84E+01	1.43E-02	2.55E-01	5.65E+00
4.60 MEV	2.51E+01	1.43E-02	2.55E-01	5.65E+00
4.80 MEV	1.83E+01	7.76E-03	1.21E-02	5.93E+00
5.00 MEV	2.38E+01	7.76E-03	1.21E-02	5.93E+00
5.50 MEV	5.77E+01	3.91E-02	1.06E-02	9.18E+00
6.00 MEV	4.45E+01	3.91E-02	1.06E-02	9.18E+00
6.50 MEV	4.48E+01	2.82E-02	5.19E-03	7.00E+00
7.00 MEV	3.31E+01	2.82E-02	5.19E-03	7.00E+00
7.50 MEV	3.16E+01	1.42E-02	5.69E-03	2.41E+00
8.00 MEV	2.76E+01	1.42E-02	5.69E-03	2.41E+00
8.50 MEV	1.98E+01	1.21E-02	5.92E-03	2.21E+00
9.00 MEV	2.14E+01	1.21E-02	5.92E-03	2.21E+00
9.50 MEV	1.82E+01	2.53E-01	0.	1.92E+00
10.00 MEV	1.55E+01	2.53E-01	0.	1.92E+00
11.00 MEV	2.87E+01	5.47E-03	0.	8.61E-01
12.00 MEV	3.37E+01	5.47E-03	0.	8.61E-01
13.00 MEV	2.39E+01	0.	0.	3.10E-01
14.00 MEV	3.19E+01	0.	0.	3.10E-01
15.00 MEV	2.60E+01	0.	0.	7.58E-01
16.00 MEV	2.20E+01	0.	0.	7.58E-01
17.00 MEV	2.80E+01	0.	0.	2.50E-01
18.00 MEV	1.75E+01	0.	0.	2.50E-01
19.00 MEV	1.30E+01	0.	0.	2.50E-01
20.00 MEV	1.25E+01	0.	0.	2.50E-01
21.00 MEV	1.20E+01	0.	0.	0.
22.00 MEV	1.65E+01	0.	0.	0.
23.00 MEV	8.50E+00	0.	0.	0.
24.00 MEV	1.20E+01	0.	0.	0.
25.00 MEV	9.00E+00	0.	0.	0.
26.00 MEV	7.50E+00	0.	0.	0.
27.00 MEV	5.50E+00	0.	0.	0.
28.00 MEV	5.00E+00	0.	0.	0.
29.00 MEV	4.00E+00	0.	0.	0.
30.00 MEV	6.50E+00	0.	0.	0.
32.00 MEV	7.00E+00	0.	0.	0.
34.00 MEV	4.00E+00	0.	0.	0.
36.00 MEV	3.00E+00	0.	0.	0.
38.00 MEV	1.50E+00	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	10.21	5.72	4.58	5.32

1 INITIAL SPECTRUM AT 4.00-6.00 CM. FOR SHONKA A-150 PLASTIC
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	2.93E-03	0.	1.17E+00
0.10 MEV	8.41E+02	2.93E-03	0.	1.17E+00
0.15 MEV	3.06E+02	5.76E-03	0.	1.14E+00
0.20 MEV	1.98E+02	5.76E-03	0.	1.14E+00
0.25 MEV	1.78E+02	1.66E-02	0.	2.09E+00
0.30 MEV	1.32E+02	1.66E-02	0.	2.09E+00
0.35 MEV	1.11E+02	1.27E-02	5.14E-03	2.18E+00
0.40 MEV	9.22E+01	1.27E-02	5.14E-03	2.18E+00
0.45 MEV	8.09E+01	3.82E-02	0.	2.79E+00
0.50 MEV	8.81E+01	3.82E-02	0.	2.79E+00
0.55 MEV	6.74E+01	2.93E-02	0.	2.37E+00
0.60 MEV	6.27E+01	2.93E-02	0.	2.37E+00
0.65 MEV	5.79E+01	4.56E-02	5.04E-03	2.10E+00
0.70 MEV	5.31E+01	4.56E-02	5.04E-03	2.10E+00
0.75 MEV	5.56E+01	3.79E-02	5.47E-03	3.38E+00
0.80 MEV	4.54E+01	3.79E-02	5.47E-03	3.38E+00
0.85 MEV	4.87E+01	3.35E-02	5.14E-03	1.93E+00
0.90 MEV	3.85E+01	3.35E-02	5.14E-03	1.93E+00
0.95 MEV	3.06E+01	3.76E-02	5.10E-03	2.36E+00
1.00 MEV	3.50E+01	3.76E-02	5.10E-03	2.36E+00
1.10 MEV	7.12E+01	6.60E-02	1.01E-03	6.41E+00
1.20 MEV	7.87E+01	6.60E-02	1.01E-03	6.41E+00
1.30 MEV	6.13E+01	8.06E-02	1.75E-02	5.97E+00
1.40 MEV	5.40E+01	8.06E-02	1.75E-02	5.97E+00
1.50 MEV	4.73E+01	9.94E-02	6.59E-03	6.87E+00
1.60 MEV	4.59E+01	9.94E-02	6.59E-03	6.87E+00
1.70 MEV	4.40E+01	5.81E-02	1.00E-02	6.46E+00
1.80 MEV	3.81E+01	5.81E-02	1.00E-02	6.46E+00
1.90 MEV	4.44E+01	4.17E-02	0.	6.48E+00
2.00 MEV	4.27E+01	4.17E-02	0.	6.48E+00
2.10 MEV	3.44E+01	2.48E-02	0.	8.81E+00
2.20 MEV	3.17E+01	2.48E-02	0.	8.81E+00
2.30 MEV	2.64E+01	2.17E-02	5.43E-03	4.86E+00
2.40 MEV	2.78E+01	2.17E-02	5.43E-03	4.86E+00
2.50 MEV	3.03E+01	2.70E-01	1.44E-02	7.09E+00
2.60 MEV	2.03E+01	2.70E-01	1.44E-02	7.09E+00
2.70 MEV	2.51E+01	2.23E-02	4.81E-03	7.64E+00
2.80 MEV	2.76E+01	2.23E-02	4.81E-03	7.64E+00
2.90 MEV	2.43E+01	2.04E-02	4.02E-03	6.66E+00
3.00 MEV	2.00E+01	2.04E-02	4.02E-03	6.66E+00
3.20 MEV	4.04E+01	2.09E-02	8.02E-03	1.46E+01
3.40 MEV	3.85E+01	2.09E-02	8.02E-03	1.46E+01
3.60 MEV	3.28E+01	3.02E-02	8.26E-03	1.09E+01
3.80 MEV	3.25E+01	3.02E-02	8.26E-03	1.09E+01
4.00 MEV	2.47E+01	2.18E-02	1.43E-02	8.44E+00

INITIAL SPECTRUM AT 4.00-6.00 CM. FOR SHUKLA A-150 PLASTIC

42 MEV P+ ON BE NEUTRON SPECTRUM	ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	2.55E+01	2.18E-02	1.43E-02	0.	0.44E+00
4.40 MEV	2.47E+01	1.64E-02	0.	0.	5.64E+00
4.60 MEV	2.13E+01	1.64E-02	0.	0.	5.64E+00
4.80 MEV	1.94E+01	2.74E-02	1.57E-02	0.	4.46E+00
5.00 MEV	2.60E+01	2.74E-02	1.57E-02	0.	4.46E+00
5.50 MEV	5.53E+01	1.77E-02	2.53E-01	0.	8.95E+00
6.00 MEV	4.32E+01	1.77E-02	2.53E-01	0.	8.95E+00
6.50 MEV	3.41E+01	2.41E-02	6.04E-03	0.	5.15E+00
7.00 MEV	3.58E+01	2.41E-02	6.04E-03	0.	5.15E+00
7.50 MEV	3.09E+01	1.77E-02	2.53E-01	0.	3.49E+00
8.00 MEV	2.78E+01	1.77E-02	2.53E-01	0.	3.49E+00
8.50 MEV	2.45E+01	2.83E-03	2.83E-03	0.	1.90E+00
9.00 MEV	2.66E+01	2.83E-03	2.83E-03	0.	1.90E+00
9.50 MEV	2.10E+01	5.77E-03	4.52E-03	0.	1.44E+00
10.00 MEV	2.36E+01	5.77E-03	4.52E-03	0.	1.44E+00
11.00 MEV	2.80E+01	3.08E-03	0.	0.	1.13E+00
12.00 MEV	2.75E+01	0.	0.	0.	1.13E+00
13.00 MEV	2.13E+01	0.	0.	0.	3.23E-01
14.00 MEV	2.34E+01	0.	0.	0.	3.23E-01
15.00 MEV	2.65E+01	0.	0.	0.	2.56E-01
16.00 MEV	2.40E+01	0.	0.	0.	2.56E-01
17.00 MEV	2.00E+01	0.	0.	0.	2.57E-01
18.00 MEV	1.50E+01	0.	0.	0.	2.57E-01
19.00 MEV	9.46E+00	0.	0.	0.	2.50E-01
20.00 MEV	1.00E+01	0.	0.	0.	2.50E-01
21.00 MEV	1.05E+01	0.	0.	0.	0.
22.00 MEV	1.05E+01	0.	0.	0.	0.
23.00 MEV	1.00E+01	0.	0.	0.	0.
24.00 MEV	1.15E+01	0.	0.	0.	0.
25.00 MEV	9.50E+00	0.	0.	0.	0.
26.00 MEV	4.02E+00	0.	0.	0.	0.
27.00 MEV	8.00E+00	0.	0.	0.	0.
28.00 MEV	9.00E+00	0.	0.	0.	0.
29.00 MEV	6.50E+00	0.	0.	0.	0.
30.00 MEV	2.50E+00	0.	0.	0.	0.
32.00 MEV	3.00E+00	0.	0.	0.	0.
34.00 MEV	5.00E+00	0.	0.	0.	0.
36.00 MEV	1.00E+00	0.	0.	0.	0.
38.00 MEV	2.50E+00	0.	0.	0.	0.
40.00 MEV	5.00E-01	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.	0.

INITIAL SPECTRUM AT 6.00-10.0 CM. FOR SHONKA A-150 PLASTIC

42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	8.79E-01
0.10 MEV	7.43E+02	0.	0.	8.79E-01
0.15 MEV	2.95E+02	5.24E-03	0.	1.32E+00
0.20 MEV	2.04E+02	5.24E-03	0.	1.32E+00
0.25 MEV	1.51E+02	2.11E-03	2.50E-03	1.08E+00
0.30 MEV	1.34E+02	2.11E-03	2.50E-03	1.08E+00
0.35 MEV	1.03E+02	1.36E-02	0.	1.42E+00
0.40 MEV	8.83E+01	1.36E-02	0.	1.42E+00
0.45 MEV	7.92E+01	1.42E-01	2.35E-03	1.38E+00
0.50 MEV	7.32E+01	1.42E-01	2.35E-03	1.38E+00
0.55 MEV	6.54E+01	2.18E-02	7.74E-03	2.46E+00
0.60 MEV	5.85E+01	2.18E-02	7.74E-03	2.46E+00
0.65 MEV	5.39E+01	1.99E-02	2.95E-03	2.04E+00
0.70 MEV	5.54E+01	1.99E-02	2.95E-03	2.04E+00
0.75 MEV	4.45E+01	2.10E-02	3.37E-03	1.45E+00
0.80 MEV	4.55E+01	2.10E-02	3.37E-03	1.45E+00
0.85 MEV	3.80E+01	3.57E-02	2.73E-03	2.08E+00
0.90 MEV	3.84E+01	3.57E-02	2.73E-03	2.08E+00
0.95 MEV	3.88E+01	2.55E-02	5.14E-04	2.15E+00
1.00 MEV	3.13E+01	2.55E-02	5.14E-04	2.15E+00
1.10 MEV	6.53E+01	1.71E-01	3.42E-03	4.89E+00
1.20 MEV	5.50E+01	1.71E-01	3.42E-03	4.89E+00
1.30 MEV	5.21E+01	7.36E-02	4.60E-03	4.01E+00
1.40 MEV	5.12E+01	7.36E-02	4.60E-03	4.01E+00
1.50 MEV	4.55E+01	4.68E-02	4.72E-03	5.51E+00
1.60 MEV	4.65E+01	4.68E-02	4.72E-03	5.51E+00
1.70 MEV	4.13E+01	3.83E-02	2.35E-03	5.13E+00
1.80 MEV	3.87E+01	3.83E-02	2.35E-03	5.13E+00
1.90 MEV	3.58E+01	1.61E-01	7.37E-03	6.10E+00
2.00 MEV	3.81E+01	1.61E-01	7.37E-03	6.10E+00
2.10 MEV	3.23E+01	2.44E-02	2.44E-03	4.87E+00
2.20 MEV	3.07E+01	2.44E-02	2.44E-03	4.87E+00
2.30 MEV	3.05E+01	2.00E-02	0.	5.49E+00
2.40 MEV	2.68E+01	2.00E-02	0.	5.49E+00
2.50 MEV	2.59E+01	1.41E-02	7.37E-03	5.75E+00
2.60 MEV	2.34E+01	1.41E-02	7.37E-03	5.75E+00
2.70 MEV	2.10E+01	1.47E-01	1.30E-01	4.39E+00
2.80 MEV	1.90E+01	1.47E-01	1.30E-01	4.39E+00
2.90 MEV	2.21E+01	1.74E-02	5.29E-03	6.01E+00
3.00 MEV	2.06E+01	1.74E-02	5.29E-03	6.01E+00
3.20 MEV	3.26E+01	2.84E-01	3.38E-03	7.96E+00
3.40 MEV	3.65E+01	2.84E-01	3.38E-03	7.96E+00
3.60 MEV	3.09E+01	2.69E-01	1.74E-02	8.05E+00
3.80 MEV	2.87E+01	2.69E-01	1.74E-02	8.05E+00
4.00 MEV	2.79E+01	1.47E-01	1.30E-02	6.96E+00

INITIAL SPECTRUM AT 6.00-10.0 CM. FOR SHONKA A-150 PLASTIC
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	2.76E+01	1.47E-01	1.30E-02	6.96E+00
4.40 MEV	2.38E+01	5.20E-03	2.47E-03	6.95E+00
4.60 MEV	2.34E+01	5.20E-03	2.47E-03	6.95E+00
4.80 MEV	2.35E+01	2.27E-02	1.12E-02	4.81E+00
5.00 MEV	2.04E+01	2.27E-02	1.12E-02	4.81E+00
5.50 MEV	3.64E+01	2.52E-02	8.52E-03	8.41E+00
6.00 MEV	4.51E+01	2.52E-02	8.52E-03	8.41E+00
6.50 MEV	3.31E+01	1.67E-02	4.85E-03	5.25E+00
7.00 MEV	2.79E+01	1.67E-02	4.85E-03	5.25E+00
7.50 MEV	3.08E+01	1.32E-01	2.11E-03	3.37E+00
8.00 MEV	2.27E+01	1.32E-01	2.11E-03	3.37E+00
8.50 MEV	2.52E+01	7.43E-03	2.47E-03	1.66E+00
9.00 MEV	2.38E+01	7.43E-03	2.47E-03	1.66E+00
9.50 MEV	2.15E+01	8.47E-03	1.12E-03	1.34E+00
10.00 MEV	1.97E+01	8.47E-03	1.12E-03	1.34E+00
11.00 MEV	2.89E+01	1.56E-03	0.	1.13E+00
12.00 MEV	3.17E+01	1.56E-03	0.	1.13E+00
13.00 MEV	2.38E+01	1.40E-03	0.	1.76E-01
14.00 MEV	2.51E+01	1.40E-03	0.	1.76E-01
15.00 MEV	1.94E+01	0.	0.	5.07E-01
16.00 MEV	1.99E+01	0.	0.	5.07E-01
17.00 MEV	1.49E+01	0.	0.	1.25E-01
18.00 MEV	1.32E+01	0.	0.	1.25E-01
19.00 MEV	1.62E+01	0.	0.	2.50E-01
20.00 MEV	1.28E+01	0.	0.	2.50E-01
21.00 MEV	1.25E+01	0.	0.	0.
22.00 MEV	1.00E+01	0.	0.	0.
23.00 MEV	8.50E+00	0.	0.	0.
24.00 MEV	7.00E+00	0.	0.	0.
25.00 MEV	5.75E+00	0.	0.	0.
26.00 MEV	8.00E+00	0.	0.	0.
27.00 MEV	5.00E+00	0.	0.	0.
28.00 MEV	4.25E+00	0.	0.	0.
29.00 MEV	4.25E+00	0.	0.	0.
30.00 MEV	2.00E+00	0.	0.	0.
32.00 MEV	5.00E+00	0.	0.	0.
34.00 MEV	3.50E+00	0.	0.	0.
36.00 MEV	3.50E+00	0.	0.	0.
38.00 MEV	1.50E+00	0.	0.	0.
40.00 MEV	2.50E-01	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	9.95	4.21	3.90	5.31

1 INITIAL SPECTRUM AT 10.0-14.0 CM, FOR SHONKA A-150 PLASTIC
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	1.46E-03	0.	3.47E-01
0.10 MEV	6.72E+02	1.46E-03	0.	3.47E-01
0.15 MEV	2.62E+02	7.14E-03	0.	7.43E-01
0.20 MEV	1.77E+02	7.14E-03	0.	7.43E-01
0.25 MEV	1.42E+02	5.11E-03	0.	1.06E+00
0.30 MEV	1.04E+02	5.11E-03	0.	1.06E+00
0.35 MEV	9.82E+01	1.15E-02	0.	1.07E+00
0.40 MEV	8.01E+01	1.15E-02	0.	1.07E+00
0.45 MEV	7.52E+01	1.42E-01	4.37E-03	2.07E+00
0.50 MEV	6.51E+01	1.42E-01	4.37E-03	2.07E+00
0.55 MEV	5.59E+01	2.04E-02	4.69E-04	9.70E-01
0.60 MEV	4.78E+01	2.04E-02	4.69E-04	9.70E-01
0.65 MEV	4.77E+01	2.45E-02	9.39E-04	1.29E+00
0.70 MEV	4.67E+01	2.45E-02	9.39E-04	1.29E+00
0.75 MEV	4.20E+01	2.43E-02	2.57E-03	1.86E+00
0.80 MEV	3.91E+01	2.43E-02	2.57E-03	1.86E+00
0.85 MEV	3.70E+01	2.45E-02	1.10E-03	1.69E+00
0.90 MEV	3.10E+01	2.45E-02	1.10E-03	1.69E+00
0.95 MEV	3.08E+01	2.68E-02	3.17E-03	1.83E+00
1.00 MEV	3.34E+01	2.68E-02	3.17E-03	1.83E+00
1.10 MEV	5.63E+01	5.35E-02	2.49E-03	4.08E+00
1.20 MEV	5.75E+01	5.35E-02	2.49E-03	4.08E+00
1.30 MEV	5.40E+01	6.39E-02	2.55E-03	3.25E+00
1.40 MEV	3.98E+01	6.39E-02	2.55E-03	3.25E+00
1.50 MEV	3.91E+01	4.66E-02	7.63E-03	3.81E+00
1.60 MEV	3.36E+01	4.66E-02	7.63E-03	3.81E+00
1.70 MEV	3.02E+01	1.71E-01	7.21E-03	3.05E+00
1.80 MEV	3.30E+01	1.71E-01	7.21E-03	3.05E+00
1.90 MEV	3.26E+01	1.46E-01	7.46E-03	4.42E+00
2.00 MEV	2.65E+01	1.46E-01	7.46E-03	4.42E+00
2.10 MEV	2.82E+01	2.15E-02	2.70E-03	4.79E+00
2.20 MEV	2.87E+01	2.15E-02	2.70E-03	4.79E+00
2.30 MEV	2.88E+01	1.36E-02	4.96E-03	4.52E+00
2.40 MEV	2.02E+01	1.36E-02	4.96E-03	4.52E+00
2.50 MEV	2.65E+01	1.13E-02	0.	3.51E+00
2.60 MEV	2.23E+01	1.13E-02	0.	3.51E+00
2.70 MEV	1.83E+01	1.28E-02	6.19E-03	4.36E+00
2.80 MEV	1.41E+01	1.28E-02	6.19E-03	4.36E+00
2.90 MEV	1.86E+01	1.10E-02	4.90E-03	4.62E+00
3.00 MEV	1.48E+01	1.10E-02	4.90E-03	4.62E+00
3.20 MEV	2.89E+01	1.64E-02	1.25E-01	7.86E+00
3.40 MEV	3.03E+01	1.64E-02	1.25E-01	7.86E+00
3.60 MEV	2.59E+01	1.40E-01	6.75E-03	5.42E+00
3.80 MEV	2.07E+01	1.40E-01	6.75E-03	5.42E+00
4.00 MEV	2.12E+01	1.38E-01	1.67E-03	4.91E+00

1 INITIAL SPECTRUM AT 10.0-14.0 CM. FOR SHONKA A-150 PLASTIC
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	2.27E+01	1.38E-01	1.67E-03	4.91E+00
4.40 MEV	2.28E+01	1.31E-02	5.89E-03	5.43E+00
4.60 MEV	2.21E+01	1.31E-02	5.89E-03	5.43E+00
4.80 MEV	2.01E+01	1.10E-02	1.95E-03	3.35E+00
5.00 MEV	1.69E+01	1.10E-02	1.95E-03	3.35E+00
5.50 MEV	3.84E+01	1.23E-02	6.18E-03	6.08E+00
6.00 MEV	3.16E+01	1.23E-02	6.18E-03	6.08E+00
6.50 MEV	3.13E+01	2.37E-02	6.56E-03	4.86E+00
7.00 MEV	2.92E+01	2.37E-02	6.56E-03	4.86E+00
7.50 MEV	2.26E+01	1.88E-02	3.77E-03	2.85E+00
8.00 MEV	2.00E+01	1.98E-02	3.77E-03	2.85E+00
8.50 MEV	1.87E+01	7.27E-03	1.35E-03	1.70E+00
9.00 MEV	1.81E+01	7.27E-03	1.35E-03	1.70E+00
9.50 MEV	2.01E+01	2.26E-03	1.49E-03	1.58E+00
10.00 MEV	1.49E+01	2.26E-03	1.49E-03	1.58E+00
11.00 MEV	3.35E+01	2.78E-03	0.	1.13E+00
12.00 MEV	2.83E+01	2.78E-03	0.	1.13E+00
13.00 MEV	2.17E+01	0.	0.	6.73E-01
14.00 MEV	1.87E+01	0.	0.	6.73E-01
15.00 MEV	1.74E+01	0.	0.	5.07E-01
16.00 MEV	1.52E+01	0.	0.	5.07E-01
17.00 MEV	1.65E+01	0.	0.	0.
18.00 MEV	1.35E+01	0.	0.	0.
19.00 MEV	1.52E+01	0.	0.	0.
20.00 MEV	8.00E+00	0.	0.	0.
21.00 MEV	1.15E+01	0.	0.	0.
22.00 MEV	8.50E+00	0.	0.	0.
23.00 MEV	7.00E+00	0.	0.	0.
24.00 MEV	5.75E+00	0.	0.	0.
25.00 MEV	6.00E+00	0.	0.	0.
26.00 MEV	7.25E+00	0.	0.	0.
27.00 MEV	4.50E+00	0.	0.	0.
28.00 MEV	4.25E+00	0.	0.	0.
29.00 MEV	5.25E+00	0.	0.	0.
30.00 MEV	3.00E+00	0.	0.	0.
32.00 MEV	5.00E+00	0.	0.	0.
34.00 MEV	3.25E+00	0.	0.	0.
36.00 MEV	2.25E+00	0.	0.	0.
38.00 MEV	7.50E-01	0.	0.	0.
40.00 MEV	5.00E-01	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.

0AVE, E(MEV)	10.03	3.57	3.93	5.55

INITIAL SPECTRUM AT 14.0-45.0 CM. FOR SHONKA A-15% PLASTIC
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	3.76E-01
0.10 MEV	3.52E+02	0.	0.	3.76E-01
0.15 MEV	1.31E+02	3.17E-03	0.	4.85E-01
0.20 MEV	9.53E+01	3.17E-03	0.	4.85E-01
0.25 MEV	7.43E+01	3.26E-03	1.14E-03	7.02E-01
0.30 MEV	5.89E+01	3.26E-03	1.14E-03	7.02E-01
0.35 MEV	4.79E+01	7.49E-03	7.99E-05	7.53E-01
0.40 MEV	4.22E+01	7.49E-03	7.99E-05	7.53E-01
0.45 MEV	3.85E+01	9.30E-03	0.	7.16E-01
0.50 MEV	3.47E+01	9.30E-03	0.	7.16E-01
0.55 MEV	3.30E+01	1.13E-02	2.46E-03	6.90E-01
0.60 MEV	2.89E+01	1.13E-02	2.46E-03	6.90E-01
0.65 MEV	2.47E+01	5.27E-02	1.46E-03	1.10E+00
0.70 MEV	2.24E+01	5.27E-02	1.46E-03	1.10E+00
0.75 MEV	2.01E+01	1.39E-02	5.45E-04	8.13E-01
0.80 MEV	1.99E+01	1.39E-02	5.45E-04	8.13E-01
0.85 MEV	1.89E+01	5.50E-02	2.28E-03	8.61E-01
0.90 MEV	1.67E+01	5.50E-02	2.28E-03	8.61E-01
0.95 MEV	1.69E+01	1.47E-02	1.80E-03	9.26E-01
1.00 MEV	1.63E+01	1.47E-02	1.80E-03	9.26E-01
1.10 MEV	2.98E+01	4.98E-02	3.99E-03	1.81E+00
1.20 MEV	2.76E+01	4.98E-02	3.99E-03	1.81E+00
1.30 MEV	2.29E+01	7.28E-02	1.60E-03	2.12E+00
1.40 MEV	2.29E+01	7.28E-02	1.60E-03	2.12E+00
1.50 MEV	2.10E+01	5.00E-02	2.30E-02	2.22E+00
1.60 MEV	1.94E+01	5.00E-02	2.30E-02	2.22E+00
1.70 MEV	1.95E+01	5.88E-02	4.58E-03	2.35E+00
1.80 MEV	1.88E+01	5.88E-02	4.58E-03	2.35E+00
1.90 MEV	1.66E+01	3.56E-02	3.33E-03	2.57E+00
2.00 MEV	1.64E+01	3.56E-02	3.33E-03	2.57E+00
2.10 MEV	1.51E+01	6.95E-02	2.16E-03	2.64E+00
2.20 MEV	1.37E+01	6.95E-02	2.16E-03	2.64E+00
2.30 MEV	1.19E+01	7.05E-02	2.52E-03	2.82E+00
2.40 MEV	1.32E+01	7.05E-02	2.52E-03	2.82E+00
2.50 MEV	1.18E+01	9.48E-03	2.11E-02	2.91E+00
2.60 MEV	1.02E+01	9.48E-03	2.11E-02	2.91E+00
2.70 MEV	1.10E+01	2.65E-02	2.09E-03	2.60E+00
2.80 MEV	1.08E+01	2.65E-02	2.09E-03	2.60E+00
2.90 MEV	1.00E+01	2.61E-02	2.10E-02	2.57E+00
3.00 MEV	9.74E+00	2.61E-02	2.10E-02	2.57E+00
3.20 MEV	1.68E+01	1.27E-01	3.59E-03	4.72E+00
3.40 MEV	1.60E+01	1.27E-01	3.59E-03	4.72E+00
3.60 MEV	1.43E+01	4.89E-02	2.11E-03	4.40E+00
3.80 MEV	1.40E+01	4.89E-02	2.11E-03	4.40E+00
4.00 MEV	1.23E+01	6.56E-02	2.16E-02	3.37E+00

1 INITIAL SPECTRUM AT 14.0-40.0 CM. FOR SHONKA A-150 PLASTIC
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	1.19E+21	6.56E-02	2.16E-02	3.37E+00
4.40 MEV	1.19E+01	6.33E-02	2.71E-03	2.82E+00
4.60 MEV	1.16E+01	6.33E-02	2.71E-03	2.82E+00
4.80 MEV	1.04E+01	4.63E-03	9.25E-04	2.26E+00
5.00 MEV	9.83E+00	4.63E-03	9.25E-04	2.26E+00
5.50 MEV	2.10E+01	5.52E-02	3.79E-03	3.85E+00
6.00 MEV	1.86E+01	5.52E-02	3.79E-03	3.85E+00
6.50 MEV	1.63E+01	2.90E-02	2.21E-02	2.26E+00
7.00 MEV	1.46E+01	2.90E-02	2.21E-02	2.26E+00
7.50 MEV	1.28E+01	2.53E-02	4.00E-03	1.76E+00
8.00 MEV	1.20E+01	2.53E-02	4.00E-03	1.76E+00
8.50 MEV	9.74E+00	2.37E-02	8.50E-04	9.76E-01
9.00 MEV	1.08E+01	2.37E-02	8.50E-04	9.76E-01
9.50 MEV	9.54E+00	4.10E-02	5.91E-04	6.77E-01
10.00 MEV	8.96E+00	4.10E-02	5.91E-04	6.77E-01
11.00 MEV	1.55E+01	2.08E-02	3.50E-04	8.25E-01
12.00 MEV	1.42E+01	2.08E-02	3.50E-04	8.25E-01
13.00 MEV	1.22E+01	8.23E-04	0.	2.57E-01
14.00 MEV	1.17E+01	8.23E-04	0.	2.57E-01
15.00 MEV	1.10E+01	0.	0.	1.96E-01
16.00 MEV	9.48E+00	0.	0.	1.96E-01
17.00 MEV	7.82E+00	0.	0.	1.35E-01
18.00 MEV	7.18E+00	0.	0.	1.35E-01
19.00 MEV	6.15E+00	0.	0.	7.69E-02
20.00 MEV	6.31E+00	0.	0.	7.69E-02
21.00 MEV	6.31E+00	0.	0.	0.
22.00 MEV	5.65E+00	0.	0.	0.
23.00 MEV	4.77E+00	0.	0.	0.
24.00 MEV	5.00E+00	0.	0.	0.
25.00 MEV	4.31E+00	0.	0.	0.
26.00 MEV	3.65E+00	0.	0.	0.
27.00 MEV	3.50E+00	0.	0.	0.
28.00 MEV	2.73E+00	0.	0.	0.
29.00 MEV	2.23E+00	0.	0.	0.
30.00 MEV	1.77E+00	0.	0.	0.
32.00 MEV	3.46E+00	0.	0.	0.
34.00 MEV	2.46E+00	0.	0.	0.
36.00 MEV	1.23E+00	0.	0.	0.
38.00 MEV	7.31E-01	0.	0.	0.
40.00 MEV	1.54E-01	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	10.57	5.30	4.83	5.54

INITIAL SPECTRUM AT 0.00-0.05 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	2.33E+00
0.10 MEV	4.30E+02	0.	0.	2.33E+00
0.15 MEV	2.17E+02	1.17E-01	0.	4.41E+00
0.20 MEV	9.56E+01	1.17E-01	0.	4.41E+00
0.25 MEV	1.96E+02	0.	0.	8.86E+00
0.30 MEV	3.80E+01	0.	0.	8.86E+00
0.35 MEV	8.00E+01	0.	0.	1.00E+01
0.40 MEV	0.	0.	0.	1.00E+01
0.45 MEV	9.56E+01	0.	2.20E-01	1.14E+01
0.50 MEV	2.00E+01	0.	2.20E-01	1.14E+01
0.55 MEV	6.00E+01	1.17E-01	0.	6.74E+00
0.60 MEV	0.	1.17E-01	0.	6.74E+00
0.65 MEV	6.00E+01	0.	0.	9.33E+00
0.70 MEV	0.	0.	0.	9.33E+00
0.75 MEV	2.00E+01	0.	0.	7.34E+00
0.80 MEV	1.21E-01	0.	0.	7.34E+00
0.85 MEV	3.71E+01	0.	0.	1.64E+01
0.90 MEV	2.00E+01	0.	0.	1.64E+01
0.95 MEV	2.03E+01	0.	0.	2.39E+01
1.00 MEV	3.88E+01	0.	0.	2.39E+01
1.10 MEV	5.76E+01	1.17E-01	2.21E-01	5.30E+01
1.20 MEV	6.00E+01	1.17E-01	2.21E-01	5.30E+01
1.30 MEV	0.00E+01	0.	0.	2.31E+01
1.40 MEV	4.00E+01	0.	0.	2.31E+01
1.50 MEV	4.00E+01	1.17E-01	0.	2.34E+01
1.60 MEV	0.	1.17E-01	0.	2.34E+01
1.70 MEV	2.43E+01	3.26E-02	0.	1.31E+01
1.80 MEV	0.	3.26E-02	0.	1.31E+01
1.90 MEV	3.58E+01	3.26E-02	0.	1.48E+01
2.00 MEV	2.00E+01	3.26E-02	0.	1.48E+01
2.10 MEV	4.48E+01	0.	0.	1.43E+01
2.20 MEV	0.	0.	0.	1.43E+01
2.30 MEV	4.00E+01	0.	0.	1.97E+01
2.40 MEV	4.00E+01	0.	0.	1.97E+01
2.50 MEV	0.	3.08E-01	3.16E-02	1.03E+01
2.60 MEV	2.00E+01	3.08E-01	3.16E-02	1.03E+01
2.70 MEV	1.09E+02	3.11E-01	0.	5.41E+00
2.80 MEV	0.	3.11E-01	0.	5.41E+00
2.90 MEV	0.	6.61E-02	0.	1.01E+01
3.00 MEV	0.	6.61E-02	0.	1.01E+01
3.20 MEV	6.00E+01	0.	1.82E-01	2.44E+01
3.40 MEV	1.60E+02	0.	1.82E-01	2.44E+01
3.60 MEV	7.82E+01	0.	0.	1.56E+01
3.80 MEV	0.	0.	0.	1.56E+01
4.00 MEV	4.11E+01	0.	0.	3.98E+00

1 INITIAL SPECTRUM AT 0.00-0.05 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	5.82E+01	0.	0.	3.98E+00
4.40 MEV	1.71E+00	0.	0.	3.98E+00
4.60 MEV	1.08E+00	0.	0.	3.98E+00
4.80 MEV	2.00E+01	0.	0.	1.63E+01
5.00 MEV	2.00E+01	0.	0.	1.63E+01
5.50 MEV	1.19E+02	2.57E-01	0.	1.60E+01
6.00 MEV	1.50E+01	2.57E-01	0.	1.60E+01
6.50 MEV	4.17E+01	0.	0.	4.42E+00
7.00 MEV	2.01E+01	0.	0.	4.42E+00
7.50 MEV	2.01E+01	6.85E-02	4.43E-02	1.15E+01
8.00 MEV	4.00E+01	6.85E-02	4.43E-02	1.15E+01
8.50 MEV	0.	0.	4.48E-02	2.14E+01
9.00 MEV	4.00E+01	0.	4.48E-02	2.14E+01
9.50 MEV	2.00E+01	0.	0.	1.02E+00
10.00 MEV	0.	0.	0.	1.02E+00
11.00 MEV	4.00E+01	3.43E-02	0.	1.04E+01
12.00 MEV	2.05E+01	3.43E-02	0.	1.04E+01
13.00 MEV	6.00E+01	3.42E-02	0.	1.01E+01
14.00 MEV	2.03E+01	3.42E-02	0.	1.01E+01
15.00 MEV	2.00E+01	0.	0.	8.37E-02
16.00 MEV	0.	0.	0.	8.37E-02
17.00 MEV	4.00E+01	0.	0.	8.37E-02
18.00 MEV	2.00E+01	0.	0.	8.37E-02
19.00 MEV	0.	0.	0.	0.
20.00 MEV	4.00E+01	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	2.00E+01	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	2.00E+01	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
BAVE, E(MEV)	9.32	5.90	4.35	6.27

1 INITIAL SPECTRUM AT 0.05-0.10 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	1.26E+01
0.10 MEV	2.32E+02	0.	0.	1.26E+01
0.15 MEV	2.05E+02	1.15E-01	0.	2.53E+00
0.20 MEV	7.84E+01	1.15E-01	0.	2.53E+00
0.25 MEV	1.14E+02	1.09E-01	0.	7.31E+00
0.30 MEV	7.88E+01	1.09E-01	0.	7.31E+00
0.35 MEV	5.73E+01	0.	0.	1.26E+01
0.40 MEV	1.75E+02	0.	0.	1.26E+01
0.45 MEV	6.00E+01	0.	0.	3.35E+00
0.50 MEV	1.20E+02	0.	0.	3.35E+00
0.55 MEV	5.72E+01	0.	0.	4.88E+00
0.60 MEV	8.00E+01	0.	0.	4.88E+00
0.65 MEV	2.42E+01	2.30E-01	0.	4.96E-01
0.70 MEV	6.00E+01	2.30E-01	0.	4.96E-01
0.75 MEV	5.89E+01	2.09E-01	0.	4.03E-01
0.80 MEV	6.43E+01	2.09E-01	0.	4.03E-01
0.85 MEV	4.00E+01	1.15E-01	0.	2.97E+00
0.90 MEV	8.02E+01	1.15E-01	0.	2.97E+00
0.95 MEV	4.00E+01	3.31E-01	0.	5.51E+00
1.00 MEV	2.01E+01	3.31E-01	0.	5.51E+00
1.10 MEV	1.39E+02	2.64E-02	0.	3.67E+01
1.20 MEV	5.77E+01	2.64E-02	0.	3.67E+01
1.30 MEV	2.44E+01	2.24E-01	0.	1.87E+01
1.40 MEV	4.95E-02	2.24E-01	0.	1.87E+01
1.50 MEV	2.02E+01	1.92E-01	0.	1.61E+01
1.60 MEV	2.00E+01	1.92E-01	0.	1.61E+01
1.70 MEV	0.	0.	0.	3.79E+01
1.80 MEV	3.85E+01	0.	0.	3.79E+01
1.90 MEV	4.02E+01	2.94E-01	0.	3.61E+00
2.00 MEV	4.00E+01	2.94E-01	0.	3.61E+00
2.10 MEV	4.00E+01	1.39E-01	0.	8.47E+00
2.20 MEV	2.00E+01	1.39E-01	0.	8.47E+00
2.30 MEV	3.69E-01	0.	0.	5.80E-01
2.40 MEV	2.03E+01	0.	0.	5.80E-01
2.50 MEV	6.00E+01	1.40E-01	0.	9.36E+00
2.60 MEV	9.64E-02	1.40E-01	0.	9.36E+00
2.70 MEV	4.05E+01	0.	0.	5.70E+00
2.80 MEV	5.72E+01	0.	0.	5.70E+00
2.90 MEV	4.02E+01	0.	0.	1.32E+01
3.00 MEV	3.89E-01	0.	0.	1.32E+01
3.20 MEV	2.02E+01	4.08E-02	0.	1.65E+01
3.40 MEV	4.00E+01	4.08E-02	0.	1.65E+01
3.60 MEV	4.00E+01	0.	0.	8.94E+00
3.80 MEV	2.01E+01	0.	0.	8.94E+00
4.00 MEV	1.73E+01	0.	0.	1.45E+01

INITIAL SPECTRUM AT 0.05-0.10 CM, FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	4.00E+01	0.	0.	1.45E+01
4.40 MEV	5.37E+01	0.	5.11E-02	1.27E+00
4.60 MEV	0.	0.	5.11E-02	1.27E+00
4.80 MEV	5.78E+01	0.	0.	5.34E+00
5.00 MEV	0.	0.	0.	5.34E+00
5.50 MEV	1.00E+02	0.	0.	2.36E+01
6.00 MEV	4.01E+01	0.	0.	2.36E+01
6.50 MEV	6.01E+01	0.	0.	2.44E+00
7.00 MEV	8.00E+01	0.	0.	2.44E+00
7.50 MEV	3.53E-01	0.	0.	2.14E+00
8.00 MEV	2.03E+01	0.	0.	2.14E+00
8.50 MEV	6.00E+01	0.	0.	1.12E+01
9.00 MEV	1.17E-01	0.	0.	1.12E+01
9.50 MEV	6.00E+01	0.	0.	2.03E+01
10.00 MEV	0.	0.	0.	2.03E+01
11.00 MEV	6.00E+01	0.	0.	9.33E-01
12.00 MEV	1.00E+02	0.	0.	9.33E-01
13.00 MEV	0.	0.	0.	2.68E-01
14.00 MEV	0.	0.	0.	2.68E-01
15.00 MEV	0.	0.	0.	0.
16.00 MEV	2.00E+01	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	2.00E+01	0.	0.	0.
20.00 MEV	2.00E+01	0.	0.	0.
21.00 MEV	2.00E+01	0.	0.	0.
22.00 MEV	2.00E+01	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	2.00E+01	0.	0.	0.
25.00 MEV	2.00E+01	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	2.00E+01	0.	0.	0.
29.00 MEV	4.00E+01	0.	0.	0.
30.00 MEV	2.00E+01	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	2.00E+01	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	2.00E+01	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	13.37	1.48	4.40	5.17

INITIAL SPECTRUM AT 0.10-0.15 CM. FOR ICRU MUSCLE TISSUE

42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	3.46E+01
0.10 MEV	6.07E+02	0.	0.	3.46E+01
0.15 MEV	2.38E+01	1.07E-01	0.	6.16E+01
0.20 MEV	1.58E+02	1.07E-01	0.	6.16E+01
0.25 MEV	1.99E+02	1.13E-01	0.	6.24E+01
0.30 MEV	6.00E+01	1.13E-01	0.	6.24E+01
0.35 MEV	8.40E+01	2.30E-01	0.	2.70E+00
0.40 MEV	4.00E+01	2.30E-01	0.	2.70E+00
0.45 MEV	7.56E+01	0.	4.31E-02	1.01E+01
0.50 MEV	1.00E+02	0.	4.31E-02	1.01E+01
0.55 MEV	5.87E+01	1.07E-01	0.	2.27E+01
0.60 MEV	2.00E+01	1.07E-01	0.	2.27E+01
0.65 MEV	6.00E+01	1.17E-01	0.	1.78E+01
0.70 MEV	2.01E+01	1.17E-01	0.	1.78E+01
0.75 MEV	2.00E+01	2.24E-01	0.	9.94E+00
0.80 MEV	6.00E+01	2.24E-01	0.	9.94E+00
0.85 MEV	6.00E+01	1.17E-01	0.	6.69E+01
0.90 MEV	2.00E+01	1.17E-01	0.	6.69E+01
0.95 MEV	2.01E+01	9.67E-02	0.	1.72E+01
1.00 MEV	2.00E+01	9.67E-02	0.	1.72E+01
1.10 MEV	7.88E+01	2.34E-01	0.	1.29E+01
1.20 MEV	4.01E+01	2.34E-01	0.	1.29E+01
1.30 MEV	2.03E+01	3.26E-01	0.	1.12E+01
1.40 MEV	4.01E+01	3.26E-01	0.	1.12E+01
1.50 MEV	4.00E+01	3.21E-01	0.	3.49E+01
1.60 MEV	0.	3.21E-01	0.	3.49E+01
1.70 MEV	0.	0.	0.	3.11E+01
1.80 MEV	4.06E+01	0.	0.	3.11E+01
1.90 MEV	4.06E+01	1.13E-01	0.	2.94E+01
2.00 MEV	4.03E+01	1.13E-01	0.	2.94E+01
2.10 MEV	2.00E+01	9.67E-02	0.	2.08E+01
2.20 MEV	6.03E+01	9.67E-02	0.	2.08E+01
2.30 MEV	6.02E+01	0.	0.	2.08E+01
2.40 MEV	0.	0.	0.	2.08E+01
2.50 MEV	0.	0.	0.	2.72E+01
2.60 MEV	2.03E+01	0.	0.	2.72E+01
2.70 MEV	2.00E+01	0.	0.	1.54E+01
2.80 MEV	5.86E+01	0.	0.	1.54E+01
2.90 MEV	2.00E+01	0.	0.	2.12E+01
3.00 MEV	2.00E+01	0.	0.	2.12E+01
3.20 MEV	7.85E+01	0.	0.	3.37E+01
3.40 MEV	2.02E+01	0.	0.	3.37E+01
3.60 MEV	6.02E+01	0.	0.	2.04E+01
3.80 MEV	4.00E+01	0.	0.	2.04E+01
4.00 MEV	4.02E+01	0.	0.	1.56E+01

INITIAL SPECTRUM AT 0.10-0.15 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	6.03E+01	0.	0.	1.56E+01
4.40 MEV	5.68E+01	0.	0.	1.63E+01
4.60 MEV	2.03E+01	0.	0.	1.63E+01
4.80 MEV	0.	0.	0.	1.71E+01
5.00 MEV	0.	0.	0.	1.71E+01
5.50 MEV	1.00E+02	0.	0.	4.69E+01
6.00 MEV	2.00E+01	0.	0.	4.69E+01
6.50 MEV	4.00E+01	0.	0.	2.68E+01
7.00 MEV	0.	0.	0.	2.68E+01
7.50 MEV	1.89E+01	0.	0.	4.63E+00
8.00 MEV	2.00E+01	0.	0.	4.63E+00
8.50 MEV	2.00E+01	0.	0.	2.09E+01
9.00 MEV	2.00E+01	0.	0.	2.09E+01
9.50 MEV	6.00E+01	0.	0.	7.96E-01
10.00 MEV	2.00E+01	0.	0.	7.96E-01
11.00 MEV	6.00E+01	3.42E-02	4.50E-02	1.30E+00
12.00 MEV	2.00E+01	3.42E-02	4.50E-02	1.30E+00
13.00 MEV	0.	0.	0.	1.00E+01
14.00 MEV	2.00E+01	0.	0.	1.00E+01
15.00 MEV	2.00E+01	3.42E-02	0.	8.03E-02
16.00 MEV	1.23E-01	3.42E-02	0.	8.03E-02
17.00 MEV	2.00E+01	0.	0.	0.
18.00 MEV	4.00E+01	0.	0.	0.
19.00 MEV	2.00E+01	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	2.00E+01	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	2.00E+01	0.	0.	0.
36.00 MEV	2.00E+01	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
Average, E (MEV)	10.85	4.63	10.52	5.55

INITIAL SPECTRUM AT 0.15-0.20 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	1.73E+01
0.10 MEV	5.30E+02	0.	0.	1.73E+01
0.15 MEV	1.98E+02	1.17E-01	0.	5.33E-01
0.20 MEV	9.64E+01	1.17E-01	0.	5.33E-01
0.25 MEV	7.73E+01	0.	0.	2.22E+01
0.30 MEV	1.80E+02	0.	0.	2.22E+01
0.35 MEV	3.82E+01	3.30E-01	0.	1.45E+01
0.40 MEV	8.00E+01	3.30E-01	0.	1.45E+01
0.45 MEV	3.70E+01	2.23E-01	0.	7.50E+00
0.50 MEV	4.00E+01	2.23E-01	0.	7.50E+00
0.55 MEV	4.00E+01	1.17E-01	0.	1.42E+01
0.60 MEV	4.00E+01	1.17E-01	0.	1.42E+01
0.65 MEV	6.00E+01	0.	0.	2.74E+00
0.70 MEV	2.00E+01	0.	0.	2.74E+00
0.75 MEV	4.00E+01	7.96E-02	0.	7.66E-01
0.80 MEV	6.00E+01	7.96E-02	0.	7.66E-01
0.85 MEV	3.72E+01	3.64E-02	0.	2.97E+00
0.90 MEV	4.00E+01	3.64E-02	0.	2.97E+00
0.95 MEV	2.01E+01	1.06E-01	0.	2.67E+00
1.00 MEV	3.69E+01	1.06E-01	0.	2.67E+00
1.10 MEV	7.96E+01	1.81E-02	0.	6.20E+00
1.20 MEV	6.01E+01	1.81E-02	0.	6.20E+00
1.30 MEV	4.02E+01	4.39E-02	0.	7.51E+00
1.40 MEV	4.19E+01	4.39E-02	0.	7.51E+00
1.50 MEV	6.20E+01	0.	0.	1.65E+01
1.60 MEV	7.44E+01	0.	0.	1.65E+01
1.70 MEV	6.04E+01	0.	0.	7.68E+00
1.80 MEV	2.02E+01	0.	0.	7.68E+00
1.90 MEV	9.98E+01	0.	0.	5.09E+00
2.00 MEV	6.00E+01	0.	0.	5.09E+00
2.10 MEV	5.17E+01	0.	0.	3.02E+01
2.20 MEV	2.00E+01	0.	0.	3.02E+01
2.30 MEV	5.86E+01	0.	0.	2.76E+01
2.40 MEV	2.10E+01	0.	0.	2.76E+01
2.50 MEV	2.00E+01	0.	0.	1.96E+01
2.60 MEV	9.80E+01	0.	0.	1.96E+01
2.70 MEV	1.60E+01	0.	0.	1.56E+01
2.80 MEV	1.10E+00	0.	0.	1.56E+01
2.90 MEV	1.54E+00	0.	0.	3.12E+01
3.00 MEV	1.50E+01	0.	0.	3.12E+01
3.20 MEV	6.12E+01	0.	0.	3.39E+01
3.40 MEV	4.25E+01	0.	0.	3.39E+01
3.60 MEV	0.	0.	0.	9.75E+00
3.80 MEV	4.08E+01	0.	0.	9.75E+00
4.00 MEV	6.00E+01	0.	1.00E+01	1.08E+01

INITIAL SPECTRUM AT 0.15-0.20 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	5.70E+01	0.	1.00E+01	1.08E+01
4.40 MEV	2.10E+01	0.	0.	1.62E+01
4.60 MEV	0.	0.	0.	1.62E+01
4.80 MEV	0.	0.	0.	5.27E+00
5.00 MEV	2.00E+01	0.	0.	5.27E+00
5.50 MEV	2.04E+01	0.	0.	1.18E+01
6.00 MEV	2.00E+01	0.	0.	1.18E+01
6.50 MEV	8.00E+01	0.	1.11E-01	2.13E+00
7.00 MEV	2.01E+01	0.	1.11E-01	2.13E+00
7.50 MEV	6.01E+01	1.10E-01	0.	6.52E-01
8.00 MEV	2.01E+01	1.10E-01	0.	6.52E-01
8.50 MEV	2.00E+01	0.	0.	3.59E+00
9.00 MEV	6.00E+01	0.	0.	3.59E+00
9.50 MEV	6.02E+01	1.10E-01	0.	1.38E+00
10.00 MEV	4.00E+01	1.10E-01	0.	1.38E+00
11.00 MEV	1.00E+02	0.	0.	8.03E-01
12.00 MEV	6.02E+01	0.	0.	8.03E-01
13.00 MEV	6.00E+01	0.	0.	6.39E-02
14.00 MEV	0.	0.	0.	6.39E-02
15.00 MEV	4.00E+01	0.	0.	2.47E-02
16.00 MEV	2.00E+01	0.	0.	2.47E-02
17.00 MEV	4.00E+01	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	2.00E+01	0.	0.	0.
27.00 MEV	2.00E+01	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	4.00E+01	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	11.51	5.93	4.07	3.62

1 INITIAL SPECTRUM AT 0.20-0.40 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	5.85E-02	0.	1.27E+00
0.10 MEV	6.88E+02	5.85E-02	0.	1.27E+00
0.15 MEV	1.79E+02	5.58E-02	0.	3.05E+00
0.20 MEV	2.14E+02	5.58E-02	0.	3.05E+00
0.25 MEV	1.54E+02	2.65E-02	0.	2.00E+00
0.30 MEV	6.42E+01	2.65E-02	0.	2.00E+00
0.35 MEV	5.50E+01	5.14E-02	0.	5.03E+00
0.40 MEV	9.78E+01	5.14E-02	0.	5.03E+00
0.45 MEV	5.83E+01	4.00E-02	5.14E-02	3.80E+00
0.50 MEV	4.93E+01	4.00E-02	5.14E-02	3.80E+00
0.55 MEV	5.00E+01	5.85E-02	0.	6.46E+00
0.60 MEV	3.50E+01	5.85E-02	0.	6.46E+00
0.65 MEV	6.74E+01	0.	0.	5.09E+00
0.70 MEV	2.47E+01	0.	0.	5.09E+00
0.75 MEV	1.01E+01	1.01E-01	5.14E-02	8.50E+00
0.80 MEV	3.85E+01	1.01E-01	5.14E-02	8.50E+00
0.85 MEV	2.46E+01	0.	0.	1.41E+00
0.90 MEV	2.03E+01	0.	0.	1.41E+00
0.95 MEV	3.45E+01	6.62E-02	0.	5.23E+00
1.00 MEV	1.35E+01	6.62E-02	0.	5.23E+00
1.10 MEV	6.51E+01	1.29E-01	0.	1.86E+01
1.20 MEV	2.96E+01	1.29E-01	0.	1.86E+01
1.30 MEV	5.47E+01	3.08E-01	0.	8.64E+00
1.40 MEV	5.90E+01	3.08E-01	0.	8.64E+00
1.50 MEV	5.78E+01	2.50E-02	5.01E-02	1.11E+01
1.60 MEV	1.97E+01	2.50E-02	5.01E-02	1.11E+01
1.70 MEV	2.50E+01	2.09E-01	0.	1.63E+01
1.80 MEV	3.01E+01	2.09E-01	0.	1.63E+01
1.90 MEV	3.50E+01	3.55E-02	0.	8.54E+00
2.00 MEV	1.99E+01	3.55E-02	0.	8.54E+00
2.10 MEV	1.97E+01	0.	0.	1.49E+01
2.20 MEV	3.92E+01	0.	0.	1.49E+01
2.30 MEV	2.50E+01	2.48E-02	0.	1.30E+01
2.40 MEV	1.07E+01	2.48E-02	0.	1.30E+01
2.50 MEV	1.02E+01	0.	0.	8.61E+00
2.60 MEV	1.41E+01	0.	0.	8.61E+00
2.70 MEV	3.57E+01	0.	0.	8.80E+00
2.80 MEV	2.39E+01	0.	0.	8.80E+00
2.90 MEV	1.54E+01	5.02E-02	0.	1.32E+01
3.00 MEV	1.84E+01	5.02E-02	0.	1.32E+01
3.20 MEV	3.05E+01	3.18E-02	5.29E-02	3.24E+01
3.40 MEV	3.77E+01	3.18E-02	5.29E-02	3.24E+01
3.60 MEV	3.93E+01	0.	0.	2.23E+01
3.80 MEV	3.92E+01	0.	0.	2.23E+01
4.00 MEV	3.45E+01	0.	2.50E+00	2.01E+01

INITIAL SPECTRUM AT 0.20-0.40 CM. FOR ICRU MUSCLE TISSUE

42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.00E+01	0.	2.50E+00	2.01E+01
4.40 MEV	3.51E+01	0.	0.	1.57E+01
4.60 MEV	4.03E+01	0.	0.	1.57E+01
4.80 MEV	1.86E+01	0.	0.	4.77E+00
5.00 MEV	5.10E+00	0.	0.	4.77E+00
5.50 MEV	6.01E+01	0.	0.	2.17E+01
6.00 MEV	2.52E+01	0.	0.	2.17E+01
6.50 MEV	5.49E+01	0.	0.	1.10E+01
7.00 MEV	5.98E+01	0.	0.	1.10E+01
7.50 MEV	2.50E+01	0.	0.	1.24E+01
8.00 MEV	3.02E+01	0.	0.	1.24E+01
8.50 MEV	3.50E+01	0.	0.	1.35E+01
9.00 MEV	2.50E+01	0.	0.	1.35E+01
9.50 MEV	1.51E+01	0.	0.	3.20E+00
10.00 MEV	5.00E+00	0.	0.	3.20E+00
11.00 MEV	3.50E+01	0.	0.	1.31E+01
12.00 MEV	3.00E+01	0.	0.	1.31E+01
13.00 MEV	1.50E+01	0.	0.	2.50E+00
14.00 MEV	3.01E+01	0.	0.	2.50E+00
15.00 MEV	2.50E+01	0.	0.	5.00E+00
16.00 MEV	2.98E+01	0.	0.	5.00E+00
17.00 MEV	4.00E+01	0.	0.	0.
18.00 MEV	2.50E+01	0.	0.	0.
19.00 MEV	5.00E+00	0.	0.	0.
20.00 MEV	2.00E+01	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	2.00E+01	0.	0.	0.
23.00 MEV	2.00E+01	0.	0.	0.
24.00 MEV	2.00E+01	0.	0.	0.
25.00 MEV	1.50E+01	0.	0.	0.
26.00 MEV	2.00E+01	0.	0.	0.
27.00 MEV	1.00E+01	0.	0.	0.
28.00 MEV	5.00E+00	0.	0.	0.
29.00 MEV	5.00E+00	0.	0.	0.
30.00 MEV	5.00E+00	0.	0.	0.
32.00 MEV	1.50E+01	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	11.54	1.42	3.93	6.63

INITIAL SPECTRUM AT $\lambda_{0.40-0.60}$ CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	6.44E+00
0.10 MEV	6.88E+02	0.	0.	6.44E+00
0.15 MEV	1.85E+02	2.85E-02	0.	1.32E+01
0.20 MEV	1.79E+02	2.85E-02	0.	1.32E+01
0.25 MEV	1.33E+02	1.89E-01	0.	7.79E+00
0.30 MEV	9.43E+01	1.89E-01	0.	7.79E+00
0.35 MEV	3.89E+01	9.85E-02	0.	1.14E+01
0.40 MEV	8.50E+01	9.85E-02	0.	1.14E+01
0.45 MEV	9.40E+01	1.02E-01	0.	5.48E+00
0.50 MEV	9.83E+01	1.02E-01	0.	5.48E+00
0.55 MEV	6.46E+01	9.29E-02	0.	1.30E+01
0.60 MEV	4.71E+01	9.29E-02	0.	1.30E+01
0.65 MEV	2.60E+01	1.58E-01	0.	5.36E+00
0.70 MEV	5.71E+01	1.58E-01	0.	5.36E+00
0.75 MEV	2.63E+01	1.04E-01	0.	8.83E+00
0.80 MEV	4.97E+01	1.04E-01	0.	8.83E+00
0.85 MEV	3.77E+01	1.14E-01	0.	9.01E+00
0.90 MEV	1.16E+01	1.14E-01	0.	9.01E+00
0.95 MEV	3.64E+01	7.61E-02	4.88E-02	5.68E+00
1.00 MEV	2.97E+01	7.61E-02	4.88E-02	5.68E+00
1.10 MEV	7.45E+01	3.51E-01	0.	2.11E+01
1.20 MEV	4.98E+01	3.51E-01	0.	2.11E+01
1.30 MEV	4.22E+01	3.22E-01	0.	1.17E+01
1.40 MEV	5.79E+01	3.22E-01	0.	1.17E+01
1.50 MEV	1.83E+01	2.12E-01	0.	1.60E+01
1.60 MEV	3.49E+01	2.12E-01	0.	1.60E+01
1.70 MEV	3.00E+01	1.24E-01	1.07E-01	1.89E+01
1.80 MEV	4.04E+01	1.24E-01	1.07E-01	1.89E+01
1.90 MEV	4.94E+00	6.26E-02	0.	1.54E+01
2.00 MEV	3.47E+01	6.26E-02	0.	1.54E+01
2.10 MEV	3.00E+01	9.61E-02	0.	1.01E+01
2.20 MEV	3.46E+01	9.61E-02	0.	1.01E+01
2.30 MEV	1.51E+01	8.27E-02	5.52E-02	1.91E+01
2.40 MEV	1.51E+01	8.27E-02	5.52E-02	1.91E+01
2.50 MEV	3.03E+01	0.	0.	1.89E+01
2.60 MEV	3.36E+01	0.	0.	1.89E+01
2.70 MEV	3.94E+01	7.76E-02	0.	1.75E+01
2.80 MEV	4.47E+01	7.76E-02	0.	1.75E+01
2.90 MEV	2.00E+01	1.84E-02	0.	1.12E+01
3.00 MEV	2.89E+01	1.84E-02	0.	1.12E+01
3.20 MEV	2.56E+01	0.	1.20E-02	9.81E+00
3.40 MEV	2.97E+01	0.	1.20E-02	9.81E+00
3.60 MEV	3.05E+01	1.85E-02	0.	1.47E+01
3.80 MEV	4.27E+01	1.85E-02	0.	1.47E+01
4.00 MEV	2.51E+01	0.	0.	2.24E+01

INITIAL SPECTRUM AT 0.40-0.60 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.34E+01	0.	0.	2.20E+01
4.40 MEV	8.76E+00	0.	0.	1.95E+01
4.60 MEV	2.87E+01	0.	0.	1.95E+01
4.80 MEV	1.53E+01	7.85E-02	0.	1.68E+01
5.00 MEV	1.50E+01	7.85E-02	0.	1.68E+01
5.50 MEV	5.42E+01	4.82E-03	0.	3.80E+01
6.00 MEV	5.02E+01	4.82E-03	0.	3.80E+01
6.50 MEV	4.44E+01	0.	0.	1.55E+01
7.00 MEV	4.43E+01	0.	0.	1.55E+01
7.50 MEV	3.50E+01	0.	0.	9.78E+00
8.00 MEV	2.50E+01	0.	0.	9.78E+00
8.50 MEV	2.50E+01	0.	0.	1.40E+01
9.00 MEV	2.32E+01	0.	0.	1.40E+01
9.50 MEV	2.37E+01	0.	0.	5.43E+00
10.00 MEV	3.50E+01	0.	0.	5.43E+00
11.00 MEV	6.50E+01	0.	0.	1.59E+01
12.00 MEV	2.93E+01	0.	0.	1.59E+01
13.00 MEV	3.00E+01	0.	0.	5.99E-02
14.00 MEV	5.00E+01	0.	0.	5.99E-02
15.00 MEV	2.00E+01	0.	0.	0.
16.00 MEV	2.00E+01	0.	0.	0.
17.00 MEV	2.50E+01	0.	0.	5.00E+00
18.00 MEV	1.50E+01	0.	0.	5.00E+00
19.00 MEV	1.00E+01	0.	0.	0.
20.00 MEV	2.00E+01	0.	0.	0.
21.00 MEV	5.00E+00	0.	0.	0.
22.00 MEV	1.50E+01	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	5.00E+00	0.	0.	0.
25.00 MEV	1.00E+01	0.	0.	0.
26.00 MEV	1.00E+01	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	1.00E+01	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	1.00E+01	0.	0.	0.
32.00 MEV	5.00E+00	0.	0.	0.
34.00 MEV	5.00E+00	0.	0.	0.
36.00 MEV	5.00E+00	0.	0.	0.
38.00 MEV	5.00E+00	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
DAVE, E(MEV)	10.83	1.69	1.94	6.44

1 INITIAL SPECTRUM AT 0.62-1.00 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	NEUTRONS	TRITONS	ALPHAS
0.05 MEV	0.	1.16E-02	0.	4.14E+00
0.10 MEV	6.95E+02	1.16E-02	0.	4.14E+00
0.15 MEV	3.01E+02	3.89E-02	0.	4.55E+00
0.20 MEV	2.21E+02	3.89E-02	0.	4.55E+00
0.25 MEV	2.09E+02	2.65E-02	0.	4.76E+00
0.30 MEV	1.23E+02	2.65E-02	0.	4.76E+00
0.35 MEV	1.24E+02	2.62E-02	0.	3.50E+00
0.40 MEV	1.11E+02	2.62E-02	0.	3.50E+00
0.45 MEV	7.60E+01	5.09E-02	2.68E-02	6.10E+00
0.50 MEV	8.43E+01	5.09E-02	2.68E-02	6.16E+00
0.55 MEV	5.16E+01	4.86E-02	0.	6.82E+00
0.60 MEV	5.96E+01	4.86E-02	0.	6.82E+00
0.65 MEV	6.84E+01	4.99E-02	0.	1.33E+01
0.70 MEV	6.01E+01	4.99E-02	0.	1.33E+01
0.75 MEV	2.73E+01	3.80E-02	2.49E-02	4.13E+00
0.80 MEV	3.68E+01	3.80E-02	2.49E-02	4.13E+00
0.85 MEV	2.76E+01	6.86E-02	2.64E-02	6.34E+00
0.90 MEV	5.80E+01	6.86E-02	2.64E-02	6.34E+00
0.95 MEV	3.33E+01	7.01E-02	2.63E-02	6.12E+00
1.00 MEV	3.16E+01	7.01E-02	2.63E-02	6.12E+00
1.10 MEV	7.85E+01	1.02E-01	0.	1.24E+01
1.20 MEV	7.17E+01	1.02E-01	0.	1.24E+01
1.30 MEV	6.87E+01	8.89E-02	0.	1.91E+01
1.40 MEV	6.26E+01	8.89E-02	0.	1.91E+01
1.50 MEV	3.97E+01	1.27E-01	2.74E-02	1.48E+01
1.60 MEV	5.02E+01	1.27E-01	2.74E-02	1.48E+01
1.70 MEV	4.20E+01	1.28E-01	0.	1.68E+01
1.80 MEV	5.18E+01	1.28E-01	0.	1.68E+01
1.90 MEV	2.74E+01	7.46E-02	0.	1.54E+01
2.00 MEV	4.71E+01	7.46E-02	0.	1.54E+01
2.10 MEV	4.27E+01	3.80E-02	0.	1.16E+01
2.20 MEV	3.21E+01	3.80E-02	0.	1.16E+01
2.30 MEV	3.38E+01	0.	7.41E-03	1.82E+01
2.40 MEV	3.12E+01	0.	7.41E-03	1.82E+01
2.50 MEV	2.40E+01	1.15E-02	2.33E-02	1.57E+01
2.60 MEV	1.45E+01	1.15E-02	2.33E-02	1.57E+01
2.70 MEV	2.73E+01	2.72E-03	0.	9.74E+00
2.80 MEV	1.25E+01	2.72E-03	0.	9.74E+00
2.90 MEV	3.28E+01	0.	0.	1.44E+01
3.00 MEV	1.71E+01	0.	0.	1.44E+01
3.20 MEV	2.01E+01	0.	7.41E-03	2.42E+01
3.40 MEV	4.16E+01	0.	7.41E-03	2.42E+01
3.60 MEV	4.21E+01	3.28E-02	4.89E-02	1.30E+01
3.80 MEV	2.50E+01	3.28E-02	4.89E-02	1.30E+01
4.00 MEV	1.99E+01	3.45E-03	0.	8.34E+00

INITIAL SPECTRUM AT 0.60-1.00 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON RE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.49E+01	3.45E-03	0.	8.34E+00
4.40 MEV	2.25E+01	1.31E+00	3.71E-02	1.05E+01
4.60 MEV	2.76E+01	1.31E+00	3.71E-02	1.05E+01
4.80 MEV	2.71E+01	3.40E-02	4.38E-02	1.20E+01
5.00 MEV	2.64E+01	3.40E-02	4.38E-02	1.20E+01
5.50 MEV	6.13E+01	5.14E-02	2.29E-02	2.08E+01
6.00 MEV	2.23E+01	5.14E-02	2.29E-02	2.08E+01
6.50 MEV	3.21E+01	7.93E-02	3.00E-02	1.66E+01
7.00 MEV	4.71E+01	7.93E-02	3.00E-02	1.66E+01
7.50 MEV	3.00E+01	6.94E-02	0.	4.24E+00
8.00 MEV	3.20E+01	6.94E-02	0.	4.24E+00
8.50 MEV	2.74E+01	7.60E-02	0.	7.73E+00
9.00 MEV	3.23E+01	7.60E-02	0.	7.73E+00
9.50 MEV	5.02E+00	0.	0.	1.01E+01
10.00 MEV	2.48E+01	0.	0.	1.01E+01
11.00 MEV	2.98E+01	0.	0.	9.24E+00
12.00 MEV	2.24E+01	0.	0.	9.24E+00
13.00 MEV	3.50E+01	0.	0.	5.08E+00
14.00 MEV	3.75E+01	0.	0.	5.08E+00
15.00 MEV	2.50E+01	0.	0.	3.77E+00
16.00 MEV	1.50E+01	0.	0.	3.77E+00
17.00 MEV	2.75E+01	0.	0.	2.50E+00
18.00 MEV	2.00E+01	0.	0.	2.50E+00
19.00 MEV	1.25E+01	0.	0.	1.25E+00
20.00 MEV	7.50E+00	0.	0.	1.25E+00
21.00 MEV	1.50E+01	0.	0.	0.
22.00 MEV	7.50E+00	0.	0.	0.
23.00 MEV	1.25E+01	0.	0.	0.
24.00 MEV	1.00E+01	0.	0.	0.
25.00 MEV	7.50E+00	0.	0.	0.
26.00 MEV	1.25E+01	0.	0.	0.
27.00 MEV	1.00E+01	0.	0.	0.
28.00 MEV	5.00E+00	0.	0.	0.
29.00 MEV	5.00E+00	0.	0.	0.
30.00 MEV	7.50E+00	0.	0.	0.
32.00 MEV	7.50E+00	0.	0.	0.
34.00 MEV	2.50E+00	0.	0.	0.
36.00 MEV	2.50E+00	0.	0.	0.
38.00 MEV	5.00E+00	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
AVE. E (MEV)	10.63	4.66	4.48	7.01

INITIAL SPECTRUM AT 1.00-2.00 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	3.66E+00
0.10 MEV	8.20E+02	0.	0.	3.66E+00
0.15 MEV	3.28E+02	3.18E-02	0.	4.16E+00
0.20 MEV	2.09E+02	3.18E-02	0.	4.16E+00
0.25 MEV	1.74E+02	4.71E-02	0.	4.32E+00
0.30 MEV	1.54E+02	4.71E-02	0.	4.32E+00
0.35 MEV	1.21E+02	4.71E-02	0.	5.61E+00
0.40 MEV	9.49E+01	4.71E-02	0.	5.61E+00
0.45 MEV	9.02E+01	5.58E-02	0.	5.94E+00
0.50 MEV	8.94E+01	5.58E-02	0.	5.94E+00
0.55 MEV	8.59E+01	1.01E-01	0.	6.67E+00
0.60 MEV	5.67E+01	1.01E-01	0.	6.67E+00
0.65 MEV	6.50E+01	9.45E-02	9.77E-03	8.93E+00
0.70 MEV	5.68E+01	9.45E-02	9.77E-03	8.93E+00
0.75 MEV	6.16E+01	3.45E-02	1.43E-02	8.36E+00
0.80 MEV	5.70E+01	3.45E-02	1.43E-02	8.36E+00
0.85 MEV	3.84E+01	6.89E-02	0.	6.96E+00
0.90 MEV	4.78E+01	6.89E-02	0.	6.96E+00
0.95 MEV	3.73E+01	6.42E-02	0.	6.36E+00
1.00 MEV	3.84E+01	6.42E-02	0.	6.36E+00
1.10 MEV	7.79E+01	2.01E-01	3.28E-03	1.53E+01
1.20 MEV	5.76E+01	2.01E-01	3.28E-03	1.53E+01
1.30 MEV	6.14E+01	1.96E-01	1.07E-02	1.20E+01
1.40 MEV	6.42E+01	1.96E-01	1.07E-02	1.20E+01
1.50 MEV	4.50E+01	1.62E-01	0.	1.67E+01
1.60 MEV	4.57E+01	1.62E-01	0.	1.67E+01
1.70 MEV	4.20E+01	1.21E-01	0.	1.57E+01
1.80 MEV	3.95E+01	1.21E-01	0.	1.57E+01
1.90 MEV	3.15E+01	3.48E-02	1.06E-02	1.51E+01
2.00 MEV	3.21E+01	3.48E-02	1.06E-02	1.51E+01
2.10 MEV	3.50E+01	2.73E-02	0.	1.42E+01
2.20 MEV	3.50E+01	2.73E-02	0.	1.42E+01
2.30 MEV	2.98E+01	2.42E-02	4.47E-02	1.65E+01
2.40 MEV	2.90E+01	2.42E-02	4.47E-02	1.65E+01
2.50 MEV	2.57E+01	2.00E-02	0.	1.24E+01
2.60 MEV	2.53E+01	2.00E-02	0.	1.24E+01
2.70 MEV	1.27E+01	1.04E-02	0.	9.51E+00
2.80 MEV	2.06E+01	1.04E-02	0.	9.51E+00
2.90 MEV	1.11E+01	3.81E-02	2.58E-02	8.98E+00
3.00 MEV	1.86E+01	3.81E-02	2.58E-02	8.98E+00
3.20 MEV	3.41E+01	2.10E-02	2.35E-02	1.78E+01
3.40 MEV	3.44E+01	2.10E-02	2.35E-02	1.78E+01
3.60 MEV	3.77E+01	2.17E-02	8.86E-03	1.84E+01
3.80 MEV	2.98E+01	2.17E-02	8.86E-03	1.84E+01
4.00 MEV	4.13E+01	3.94E-02	7.75E-03	1.09E+01

1 INITIAL SPECTRUM AT 1.00-2.00 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	2.59E+01	3.94E-02	7.75E-03	1.09E+01
4.40 MEV	2.23E+01	5.11E-01	2.55E-02	1.62E+01
4.60 MEV	2.43E+01	5.11E-01	2.55E-02	1.62E+01
4.80 MEV	1.88E+01	2.75E-03	4.22E-03	1.51E+01
5.00 MEV	2.10E+01	2.75E-03	4.22E-03	1.51E+01
5.50 MEV	6.89E+01	4.08E-02	3.72E-02	2.11E+01
6.00 MEV	5.92E+01	4.08E-02	3.72E-02	2.11E+01
6.50 MEV	4.13E+01	5.78E-01	2.17E-03	1.33E+01
7.00 MEV	5.06E+01	5.78E-01	2.17E-03	1.33E+01
7.50 MEV	3.29E+01	4.99E-02	2.21E-03	1.60E+01
8.00 MEV	2.91E+01	4.99E-02	2.21E-03	1.60E+01
8.50 MEV	1.71E+01	1.09E-02	0.	4.71E+00
9.00 MEV	2.58E+01	1.09E-02	0.	4.71E+00
9.50 MEV	1.87E+01	6.81E-03	2.27E-03	9.72E+00
10.00 MEV	2.08E+01	6.81E-03	2.27E-03	9.72E+00
11.00 MEV	4.07E+01	0.	0.	2.74E+00
12.00 MEV	3.20E+01	0.	0.	2.74E+00
13.00 MEV	1.87E+01	1.71E-03	0.	2.55E+00
14.00 MEV	2.89E+01	1.71E-03	0.	2.55E+00
15.00 MEV	2.80E+01	0.	0.	2.23E-02
16.00 MEV	1.88E+01	0.	0.	2.23E-02
17.00 MEV	2.40E+01	0.	0.	2.30E-03
18.00 MEV	1.90E+01	0.	0.	2.30E-03
19.00 MEV	1.30E+01	0.	0.	1.93E-03
20.00 MEV	1.80E+01	0.	0.	1.93E-03
21.00 MEV	8.00E+00	0.	0.	0.
22.00 MEV	1.70E+01	0.	0.	0.
23.00 MEV	1.50E+01	0.	0.	0.
24.00 MEV	1.20E+01	0.	0.	0.
25.00 MEV	1.10E+01	0.	0.	0.
26.00 MEV	6.00E+00	0.	0.	0.
27.00 MEV	4.00E+00	0.	0.	0.
28.00 MEV	8.00E+00	0.	0.	0.
29.00 MEV	5.00E+00	0.	0.	0.
30.00 MEV	5.00E+00	0.	0.	0.
32.00 MEV	7.00E+00	0.	0.	0.
34.00 MEV	6.00E+00	0.	0.	0.
36.00 MEV	4.00E+00	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
AVER. E(MEV)	10.33	5.10	4.40	5.40

1 INITIAL SPECTRUM AT 2.00-4.00 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	2.57E+00
0.10 MEV	8.60E+02	0.	0.	2.57E+00
0.15 MEV	3.41E+02	4.27E-02	0.	4.82E+00
0.20 MEV	2.29E+02	4.27E-02	0.	4.82E+00
0.25 MEV	1.89E+02	2.83E-02	0.	6.09E+00
0.30 MEV	1.38E+02	2.83E-02	0.	6.09E+00
0.35 MEV	1.27E+02	6.25E-02	0.	7.89E+00
0.40 MEV	1.16E+02	6.25E-02	0.	7.89E+00
0.45 MEV	1.02E+02	4.62E-02	1.02E-03	5.62E+00
0.50 MEV	8.53E+01	4.62E-02	1.02E-03	5.62E+00
0.55 MEV	7.44E+01	7.08E-02	0.	6.78E+00
0.60 MEV	6.57E+01	7.08E-02	0.	6.78E+00
0.65 MEV	5.81E+01	6.55E-02	1.14E-02	6.28E+00
0.70 MEV	6.79E+01	6.55E-02	1.14E-02	6.28E+00
0.75 MEV	5.31E+01	7.55E-02	0.	8.56E+00
0.80 MEV	4.70E+01	7.55E-02	0.	8.56E+00
0.85 MEV	4.79E+01	6.83E-02	0.	7.65E+00
0.90 MEV	5.03E+01	6.83E-02	0.	7.65E+00
0.95 MEV	4.97E+01	6.14E-02	1.57E-03	8.54E+00
1.00 MEV	4.23E+01	6.14E-02	1.57E-03	8.54E+00
1.10 MEV	6.91E+01	1.29E-01	1.52E-02	1.37E+01
1.20 MEV	6.53E+01	1.29E-01	1.52E-02	1.37E+01
1.30 MEV	6.83E+01	1.35E-01	5.44E-03	1.41E+01
1.40 MEV	4.96E+01	1.35E-01	5.44E-03	1.41E+01
1.50 MEV	5.08E+01	1.07E-01	5.42E-03	1.58E+01
1.60 MEV	4.83E+01	1.07E-01	5.42E-03	1.58E+01
1.70 MEV	4.40E+01	7.01E-02	1.44E-02	1.37E+01
1.80 MEV	4.04E+01	7.01E-02	1.44E-02	1.37E+01
1.90 MEV	3.38E+01	6.66E-02	0.	1.27E+01
2.00 MEV	3.13E+01	6.66E-02	0.	1.27E+01
2.10 MEV	2.59E+01	3.91E-02	6.15E-03	1.19E+01
2.20 MEV	3.47E+01	3.91E-02	6.15E-03	1.19E+01
2.30 MEV	3.03E+01	2.60E-01	5.32E-03	1.19E+01
2.40 MEV	3.15E+01	2.60E-01	5.32E-03	1.19E+01
2.50 MEV	2.80E+01	3.31E-02	7.58E-03	1.13E+01
2.60 MEV	2.56E+01	3.31E-02	7.58E-03	1.13E+01
2.70 MEV	2.60E+01	2.57E-01	8.40E-03	1.18E+01
2.80 MEV	2.39E+01	2.57E-01	8.40E-03	1.18E+01
2.90 MEV	2.55E+01	4.36E-03	1.17E-02	1.29E+01
3.00 MEV	2.01E+01	4.36E-03	1.17E-02	1.29E+01
3.20 MEV	4.68E+01	3.55E-02	1.52E-02	1.84E+01
3.40 MEV	3.04E+01	3.55E-02	1.52E-02	1.84E+01
3.60 MEV	4.05E+01	2.82E-02	2.05E-02	1.65E+01
3.80 MEV	2.65E+01	2.82E-02	2.05E-02	1.65E+01
4.00 MEV	2.74E+01	3.19E-02	2.06E-02	1.78E+01

INITIAL SPECTRUM AT 2.00-4.00 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.17E+01	3.19E-02	2.06E-02	1.78E+01
4.40 MEV	3.07E+01	1.45E-03	1.30E-02	1.23E+01
4.60 MEV	2.94E+01	1.45E-03	1.30E-02	1.23E+01
4.80 MEV	3.10E+01	2.54E-01	5.45E-03	8.95E+00
5.00 MEV	2.41E+01	2.54E-01	5.45E-03	8.95E+00
5.50 MEV	5.87E+01	2.71E-01	1.79E-02	2.18E+01
6.00 MEV	5.95E+01	2.71E-01	1.79E-02	2.18E+01
6.50 MEV	3.44E+01	4.26E-02	3.38E-03	1.38E+01
7.00 MEV	3.41E+01	4.26E-02	3.38E-03	1.38E+01
7.50 MEV	3.52E+01	2.73E-02	2.17E-03	7.24E+00
8.00 MEV	2.71E+01	2.73E-02	2.17E-03	7.24E+00
8.50 MEV	2.71E+01	1.40E-02	5.14E-03	9.31E+00
9.00 MEV	2.76E+01	1.40E-02	5.14E-03	9.31E+00
9.50 MEV	2.22E+01	8.15E-03	2.21E-03	5.77E+00
10.00 MEV	2.33E+01	8.15E-03	2.21E-03	5.77E+00
11.00 MEV	3.84E+01	8.09E-03	2.50E-03	8.47E+00
12.00 MEV	4.30E+01	8.09E-03	2.50E-03	8.47E+00
13.00 MEV	3.22E+01	0.	0.	3.08E+00
14.00 MEV	2.30E+01	0.	0.	3.08E+00
15.00 MEV	2.92E+01	0.	0.	1.76E+00
16.00 MEV	2.50E+01	0.	0.	1.76E+00
17.00 MEV	1.85E+01	0.	0.	7.53E-01
18.00 MEV	1.70E+01	0.	0.	7.53E-01
19.00 MEV	1.45E+01	0.	0.	7.52E-01
20.00 MEV	1.35E+01	0.	0.	7.50E-01
21.00 MEV	1.00E+01	0.	0.	0.
22.00 MEV	1.00E+01	0.	0.	0.
23.00 MEV	9.50E+00	0.	0.	0.
24.00 MEV	1.20E+01	0.	0.	0.
25.00 MEV	1.20E+01	0.	0.	0.
26.00 MEV	1.00E+01	0.	0.	0.
27.00 MEV	7.50E+00	0.	0.	0.
28.00 MEV	5.50E+00	0.	0.	0.
29.00 MEV	4.00E+00	0.	0.	0.
30.00 MEV	5.50E+00	0.	0.	0.
32.00 MEV	8.00E+00	0.	0.	0.
34.00 MEV	5.00E+00	0.	0.	0.
36.00 MEV	3.50E+00	0.	0.	0.
38.00 MEV	1.50E+00	0.	0.	0.
40.00 MEV	5.00E-01	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
AVERAGE, E(MEV)	10.27	4.35	4.87	6.29

1 INITIAL SPECTRUM AT 4.00-6.00 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON HE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	2.77E+00
0.10 MEV	8.46E+02	0.	0.	2.77E+00
0.15 MEV	3.41E+02	4.91E-02	0.	5.95E+00
0.20 MEV	2.26E+02	4.91E-02	0.	5.95E+00
0.25 MEV	1.80E+02	5.04E-02	0.	5.72E+00
0.30 MEV	1.61E+02	5.04E-02	0.	5.72E+00
0.35 MEV	1.27E+02	4.03E-02	0.	7.36E+00
0.40 MEV	1.06E+02	4.03E-02	0.	7.36E+00
0.45 MEV	8.99E+01	5.76E-02	0.	6.52E+00
0.50 MEV	8.41E+01	5.76E-02	0.	6.52E+00
0.55 MEV	8.62E+01	6.36E-02	5.26E-03	6.29E+00
0.60 MEV	7.26E+01	6.36E-02	5.26E-03	6.27E+00
0.65 MEV	6.92E+01	7.94E-02	0.	7.55E+00
0.70 MEV	6.20E+01	7.94E-02	0.	7.55E+00
0.75 MEV	5.55E+01	5.02E-02	0.	8.22E+00
0.80 MEV	4.38E+01	5.02E-02	0.	8.22E+00
0.85 MEV	4.13E+01	8.21E-02	5.12E-03	6.24E+00
0.90 MEV	4.87E+01	8.21E-02	5.12E-03	6.24E+00
0.95 MEV	4.67E+01	6.35E-02	4.93E-03	8.40E+00
1.00 MEV	3.75E+01	6.35E-02	4.93E-03	8.40E+00
1.10 MEV	7.66E+01	1.05E-01	5.34E-03	1.37E+01
1.20 MEV	7.77E+01	1.05E-01	5.34E-03	1.37E+01
1.30 MEV	5.91E+01	1.20E-01	5.51E-03	1.32E+01
1.40 MEV	5.38E+01	1.20E-01	5.51E-03	1.32E+01
1.50 MEV	5.59E+01	9.96E-02	1.25E-02	1.42E+01
1.60 MEV	4.41E+01	9.96E-02	1.25E-02	1.42E+01
1.70 MEV	4.16E+01	3.05E-01	1.04E-02	1.41E+01
1.80 MEV	4.74E+01	3.05E-01	1.00E-02	1.41E+01
1.90 MEV	4.22E+01	3.14E-02	6.05E-03	1.40E+01
2.00 MEV	3.83E+01	3.14E-02	6.05E-03	1.40E+01
2.10 MEV	3.17E+01	2.67E-01	0.	1.18E+01
2.20 MEV	3.36E+01	2.67E-01	0.	1.18E+01
2.30 MEV	3.09E+01	2.01E-02	6.17E-03	1.19E+01
2.40 MEV	2.74E+01	2.01E-02	6.17E-03	1.19E+01
2.50 MEV	2.60E+01	8.74E-03	2.05E-02	1.25E+01
2.60 MEV	1.82E+01	8.74E-03	2.05E-02	1.25E+01
2.70 MEV	2.27E+01	1.10E-02	0.	1.27E+01
2.80 MEV	2.85E+01	1.10E-02	0.	1.27E+01
2.90 MEV	2.58E+01	9.41E-03	5.91E-03	1.19E+01
3.00 MEV	1.91E+01	9.41E-03	5.91E-03	1.19E+01
3.20 MEV	5.17E+01	3.53E-02	1.86E-02	1.64E+01
3.40 MEV	3.33E+01	3.53E-02	1.86E-02	1.64E+01
3.60 MEV	3.48E+01	1.04E-02	7.16E-03	1.87E+01
3.80 MEV	2.74E+01	1.04E-02	7.16E-03	1.87E+01
4.00 MEV	3.33E+01	1.42E-02	2.05E-03	1.30E+01

INITIAL SPECTRUM AT 4.00-6.00 CM. FOR ICRU MUSCLE FL C
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	2.99E+01	1.42E-02	2.65E-03	1.30E+01
4.40 MEV	2.16E+01	4.88E-03	1.80E-02	1.05E+01
4.60 MEV	2.19E+01	4.88E-03	1.80E-02	1.05E+01
4.80 MEV	2.41E+01	7.05E-03	6.27E-03	9.49E+00
5.00 MEV	2.16E+01	7.05E-03	6.27E-03	9.49E+00
5.50 MEV	4.90E+01	2.63E-02	1.11E-03	1.85E+01
6.00 MEV	3.99E+01	2.63E-02	1.11E-03	1.85E+01
6.50 MEV	2.83E+01	4.86E-02	1.11E-02	1.27E+01
7.00 MEV	2.94E+01	4.86E-02	1.11E-02	1.27E+01
7.50 MEV	2.91E+01	1.73E-02	4.45E-03	8.66E+00
8.00 MEV	2.86E+01	1.73E-02	4.45E-03	8.66E+00
8.50 MEV	2.51E+01	1.25E-02	2.53E-01	9.61E+00
9.00 MEV	1.81E+01	1.25E-02	2.53E-01	9.61E+00
9.50 MEV	2.61E+01	1.01E-02	0.	6.13E+00
10.00 MEV	1.73E+01	1.01E-02	0.	6.13E+00
11.00 MEV	3.34E+01	7.36E-03	2.55E-01	7.80E+00
12.00 MEV	2.62E+01	7.36E-03	2.55E-01	7.80E+00
13.00 MEV	2.27E+01	0.	0.	3.30E+00
14.00 MEV	2.63E+01	0.	0.	3.30E+00
15.00 MEV	1.99E+01	0.	0.	1.51E+00
16.00 MEV	2.09E+01	0.	0.	1.51E+00
17.00 MEV	1.85E+01	0.	0.	5.04E-01
18.00 MEV	1.34E+01	0.	0.	5.04E-01
19.00 MEV	1.15E+01	0.	0.	2.50E-01
20.00 MEV	1.40E+01	0.	0.	2.50E-01
21.00 MEV	1.55E+01	0.	0.	0.
22.00 MEV	1.15E+01	0.	0.	0.
23.00 MEV	1.10E+01	0.	0.	0.
24.00 MEV	1.05E+01	0.	0.	0.
25.00 MEV	1.00E+01	0.	0.	0.
26.00 MEV	4.00E+00	0.	0.	0.
27.00 MEV	8.00E+00	0.	0.	0.
28.00 MEV	5.00E+00	0.	0.	0.
29.00 MEV	4.50E+00	0.	0.	0.
30.00 MEV	5.50E+00	0.	0.	0.
32.00 MEV	4.50E+00	0.	0.	0.
34.00 MEV	3.50E+00	0.	0.	0.
36.00 MEV	2.50E+00	0.	0.	0.
38.00 MEV	4.50E+00	0.	0.	0.
40.00 MEV	5.00E-01	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	10.05	3.51	9.77	6.19

INITIAL SPECTRUM AT 6.20-10.0 CM. FOR ICRU MUSCLE TISSUE

42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	5.34E-03	0.	2.86E+00
0.10 MEV	8.18E+02	5.34E-03	0.	2.88E+00
0.15 MEV	3.12E+02	3.45E-02	0.	3.88E+00
0.20 MEV	2.18E+02	3.45E-02	0.	3.88E+00
0.25 MEV	1.75E+02	4.04E-02	0.	5.28E+00
0.30 MEV	1.36E+02	4.04E-02	0.	5.28E+00
0.35 MEV	1.25E+02	4.61E-02	0.	4.85E+00
0.40 MEV	1.01E+02	4.61E-02	0.	4.85E+00
0.45 MEV	9.08E+01	3.69E-02	0.	4.53E+00
0.50 MEV	7.79E+01	3.69E-02	0.	4.53E+00
0.55 MEV	7.06E+01	5.45E-02	0.	4.97E+00
0.60 MEV	6.13E+01	5.45E-02	0.	4.97E+00
0.65 MEV	5.89E+01	4.74E-02	4.62E-03	6.61E+00
0.70 MEV	5.18E+01	4.74E-02	4.62E-03	6.61E+00
0.75 MEV	5.07E+01	5.24E-02	3.12E-03	5.97E+00
0.80 MEV	4.40E+01	5.24E-02	3.12E-03	5.97E+00
0.85 MEV	4.65E+01	4.72E-02	0.	5.98E+00
0.90 MEV	4.38E+01	4.72E-02	0.	5.98E+00
0.95 MEV	3.75E+01	5.32E-02	7.93E-04	5.13E+00
1.00 MEV	4.01E+01	5.32E-02	7.93E-04	5.13E+00
1.10 MEV	6.71E+01	9.92E-02	6.14E-03	1.42E+01
1.20 MEV	5.48E+01	9.92E-02	6.14E-03	1.42E+01
1.30 MEV	5.08E+01	2.32E-01	7.38E-03	1.45E+01
1.40 MEV	5.21E+01	2.32E-01	7.38E-03	1.45E+01
1.50 MEV	5.17E+01	9.19E-02	5.03E-03	1.19E+01
1.60 MEV	4.46E+01	9.19E-02	5.03E-03	1.19E+01
1.70 MEV	4.14E+01	7.21E-02	7.52E-03	1.20E+01
1.80 MEV	3.73E+01	7.21E-02	7.52E-03	1.20E+01
1.90 MEV	3.28E+01	4.54E-02	5.11E-03	1.09E+01
2.00 MEV	2.88E+01	4.54E-02	5.11E-03	1.09E+01
2.10 MEV	3.24E+01	1.72E-02	5.07E-03	1.18E+01
2.20 MEV	3.21E+01	1.72E-02	5.07E-03	1.18E+01
2.30 MEV	3.22E+01	1.35E-01	2.51E-03	1.04E+01
2.40 MEV	3.18E+01	1.35E-01	2.51E-03	1.04E+01
2.50 MEV	2.49E+01	1.62E-02	5.03E-03	1.25E+01
2.60 MEV	2.49E+01	1.62E-02	5.03E-03	1.25E+01
2.70 MEV	2.10E+01	1.12E-02	3.59E-03	1.12E+01
2.80 MEV	1.98E+01	1.12E-02	3.59E-03	1.12E+01
2.90 MEV	1.92E+01	1.17E-02	6.71E-03	9.95E+00
3.00 MEV	2.12E+01	1.17E-02	6.71E-03	9.95E+00
3.20 MEV	4.20E+01	8.82E-03	8.96E-03	1.87E+01
3.40 MEV	2.92E+01	8.82E-03	8.96E-03	1.87E+01
3.60 MEV	3.11E+01	1.56E-02	1.05E-02	1.55E+01
3.80 MEV	2.48E+01	1.56E-02	1.05E-02	1.55E+01
4.00 MEV	2.46E+01	1.42E-02	4.84E-03	1.09E+01

1 INITIAL SPECTRUM AT 6.00-10.0 CM, FOR ICRU MUSCLE TISSUE
42 MEV P+ ON HE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	2.18E+01	1.42E-02	4.84E-03	1.09E+01
4.40 MEV	2.36E+01	1.12E-02	1.29E-01	1.17E+01
4.60 MEV	2.15E+01	1.12E-02	1.29E-01	1.17E+01
4.80 MEV	2.25E+01	1.82E-02	4.07E-03	7.69E+00
5.00 MEV	1.81E+01	1.82E-02	4.07E-03	7.69E+00
5.50 MEV	4.05E+01	2.80E-01	1.97E-02	1.84E+01
6.00 MEV	3.65E+01	2.80E-01	1.97E-02	1.84E+01
6.50 MEV	3.51E+01	3.60E-02	7.59E-03	1.13E+01
7.00 MEV	3.41E+01	3.60E-02	7.59E-03	1.13E+01
7.50 MEV	2.79E+01	1.36E-01	4.95E-03	7.60E+00
8.00 MEV	2.68E+01	1.36E-01	4.95E-03	7.60E+00
8.50 MEV	2.18E+01	8.87E-03	4.02E-03	5.94E+00
9.00 MEV	1.90E+01	8.87E-03	4.02E-03	5.94E+00
9.50 MEV	2.14E+01	1.22E-02	1.11E-03	4.46E+00
10.00 MEV	1.70E+01	1.22E-02	1.11E-03	4.46E+00
11.00 MEV	3.37E+01	4.80E-03	5.61E-04	4.70E+00
12.00 MEV	2.66E+01	4.80E-03	5.61E-04	4.70E+00
13.00 MEV	2.52E+01	4.28E-04	0.	2.04E+00
14.00 MEV	2.35E+01	4.28E-04	0.	2.04E+00
15.00 MEV	2.45E+01	0.	0.	1.26E+00
16.00 MEV	1.66E+01	0.	0.	1.26E+00
17.00 MEV	1.54E+01	0.	0.	8.78E-01
18.00 MEV	1.36E+01	0.	0.	8.78E-01
19.00 MEV	1.53E+01	0.	0.	1.27E-01
20.00 MEV	1.32E+01	0.	0.	1.27E-01
21.00 MEV	1.08E+01	0.	0.	0.
22.00 MEV	9.25E+00	0.	0.	0.
23.00 MEV	8.50E+00	0.	0.	0.
24.00 MEV	9.25E+00	0.	0.	0.
25.00 MEV	6.25E+00	0.	0.	0.
26.00 MEV	7.50E+00	0.	0.	0.
27.00 MEV	6.25E+00	0.	0.	0.
28.00 MEV	5.75E+00	0.	0.	0.
29.00 MEV	4.75E+00	0.	0.	0.
30.00 MEV	4.25E+00	0.	0.	0.
32.00 MEV	6.00E+00	0.	0.	0.
34.00 MEV	4.50E+00	0.	0.	0.
36.00 MEV	2.75E+00	0.	0.	0.
38.00 MEV	2.50E+00	0.	0.	0.
40.00 MEV	2.50E-01	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	10.12	4.98	4.80	5.83

INITIAL SPECTRUM AT 10.0-14.0 CM. FOR ICRU MUSCLE TISSUE

42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	2.75E-03	0.	1.95E+00
0.10 MEV	7.05E+02	2.75E-03	0.	1.95E+00
0.15 MEV	2.64E+02	2.33E-02	0.	3.73E+00
0.20 MEV	1.90E+02	2.33E-02	0.	3.73E+00
0.25 MEV	1.39E+02	1.99E-02	0.	3.93E+00
0.30 MEV	1.15E+02	1.99E-02	0.	3.93E+00
0.35 MEV	9.63E+01	2.92E-02	2.56E-03	4.37E+00
0.40 MEV	9.09E+01	2.92E-02	2.56E-03	4.37E+00
0.45 MEV	7.17E+01	3.41E-02	3.44E-03	4.18E+00
0.50 MEV	6.55E+01	3.41E-02	3.44E-03	4.18E+00
0.55 MEV	5.34E+01	4.00E-02	0.	3.79E+00
0.60 MEV	4.99E+01	4.00E-02	0.	3.79E+00
0.65 MEV	5.12E+01	3.58E-02	9.30E-04	6.69E+00
0.70 MEV	4.65E+01	3.58E-02	9.30E-04	6.69E+00
0.75 MEV	3.97E+01	2.26E-02	0.	4.70E+00
0.80 MEV	4.47E+01	2.26E-02	0.	4.70E+00
0.85 MEV	3.66E+01	1.58E-01	5.34E-03	5.85E+00
0.90 MEV	3.16E+01	1.58E-01	5.34E-03	5.85E+00
0.95 MEV	3.57E+01	2.36E-02	0.	4.66E+00
1.00 MEV	3.19E+01	2.36E-02	0.	4.66E+00
1.10 MEV	4.91E+01	6.22E-02	1.75E-03	9.83E+00
1.20 MEV	4.76E+01	6.22E-02	1.75E-03	9.83E+00
1.30 MEV	4.70E+01	7.21E-02	8.73E-03	9.77E+00
1.40 MEV	4.33E+01	7.21E-02	8.73E-03	9.77E+00
1.50 MEV	4.19E+01	6.76E-02	2.38E-03	1.12E+01
1.60 MEV	3.66E+01	6.76E-02	2.38E-03	1.12E+01
1.70 MEV	2.91E+01	3.27E-02	7.50E-03	1.03E+01
1.80 MEV	3.64E+01	3.27E-02	7.50E-03	1.03E+01
1.90 MEV	3.15E+01	1.89E-02	5.25E-03	1.01E+01
2.00 MEV	2.67E+01	1.89E-02	5.25E-03	1.01E+01
2.10 MEV	2.71E+01	1.92E-02	2.39E-03	8.11E+00
2.20 MEV	2.40E+01	1.92E-02	2.39E-03	8.11E+00
2.30 MEV	1.84E+01	1.40E-01	2.59E-03	1.08E+01
2.40 MEV	2.13E+01	1.40E-01	2.59E-03	1.08E+01
2.50 MEV	2.03E+01	1.34E-01	4.10E-03	7.67E+00
2.60 MEV	2.02E+01	1.34E-01	4.10E-03	7.67E+00
2.70 MEV	1.54E+01	7.66E-03	2.31E-03	7.88E+00
2.80 MEV	1.52E+01	7.66E-03	2.31E-03	7.88E+00
2.90 MEV	1.55E+01	6.76E-03	1.02E-02	7.76E+00
3.00 MEV	2.04E+01	6.76E-03	1.02E-02	7.76E+00
3.20 MEV	2.53E+01	8.10E-03	4.58E-03	1.40E+01
3.40 MEV	2.57E+01	8.18E-03	4.58E-03	1.40E+01
3.60 MEV	2.85E+01	6.96E-03	6.53E-03	1.16E+01
3.80 MEV	2.24E+01	6.96E-03	6.53E-03	1.16E+01
4.00 MEV	2.27E+01	1.32E-01	3.34E-03	1.03E+01

1 INITIAL SPECTRUM AT 10.0-14.0 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	2.30E+01	1.32E-01	3.34E-03	1.03E+01
4.40 MEV	1.96E+01	9.26E-03	5.66E-03	7.64E+00
4.60 MEV	1.97E+01	9.28E-03	5.66E-03	7.64E+00
4.80 MEV	1.93E+01	1.35E-01	3.33E-03	6.83E+00
5.00 MEV	1.55E+01	1.35E-01	3.33E-03	6.88E+00
5.50 MEV	4.47E+01	1.56E-01	8.64E-03	1.56E+01
6.00 MEV	3.09E+01	1.56E-01	8.64E-03	1.56E+01
6.50 MEV	2.90E+01	2.42E-02	7.64E-03	1.15E+01
7.00 MEV	2.80E+01	2.42E-02	7.64E-03	1.15E+01
7.50 MEV	2.44E+01	1.42E-01	3.13E-03	7.76E+00
8.00 MEV	2.25E+01	1.42E-01	3.13E-03	7.76E+00
8.50 MEV	1.64E+01	6.13E-03	6.03E-03	5.46E+00
9.00 MEV	1.59E+01	6.13E-03	6.03E-03	5.46E+00
9.50 MEV	1.64E+01	7.96E-03	0.	2.69E+00
10.00 MEV	2.34E+01	7.96E-03	0.	2.69E+00
11.00 MEV	2.83E+01	2.77E-03	2.25E-03	5.47E+00
12.00 MEV	2.25E+01	2.77E-03	2.25E-03	5.47E+00
13.00 MEV	2.48E+01	3.44E-03	5.27E-04	2.28E+00
14.00 MEV	1.87E+01	3.44E-03	5.27E-04	2.28E+00
15.00 MEV	1.49E+01	0.	0.	7.57E-01
16.00 MEV	1.52E+01	0.	0.	7.57E-01
17.00 MEV	1.19E+01	0.	0.	7.53E-01
18.00 MEV	1.17E+01	0.	0.	7.53E-01
19.00 MEV	1.12E+01	0.	0.	2.51E-01
20.00 MEV	1.03E+01	0.	0.	2.51E-01
21.00 MEV	7.50E+00	0.	0.	0.
22.00 MEV	1.00E+01	0.	0.	0.
23.00 MEV	7.00E+00	0.	0.	0.
24.00 MEV	7.00E+00	0.	0.	0.
25.00 MEV	5.25E+00	0.	0.	0.
26.00 MEV	7.25E+00	0.	0.	0.
27.00 MEV	3.50E+00	0.	0.	0.
28.00 MEV	4.25E+00	0.	0.	0.
29.00 MEV	3.50E+00	0.	0.	0.
30.00 MEV	3.50E+00	0.	0.	0.
32.00 MEV	5.75E+00	0.	0.	0.
34.00 MEV	4.25E+00	0.	0.	0.
36.00 MEV	1.00E+00	0.	0.	0.
38.00 MEV	1.00E+00	0.	0.	0.
40.00 MEV	5.00E-01	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.

0AVE, E(MEV)

9.86

5.04

5.72

6.13

1 INITIAL SPECTRUM AT 14.0-40.0 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON HE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	2.02E-03	0.	1.40E+00
0.10 MEV	3.39E+02	2.02E-03	0.	1.40E+00
0.15 MEV	1.29E+02	3.15E-02	0.	2.15E+00
0.20 MEV	9.59E+01	3.15E-02	0.	2.15E+00
0.25 MEV	7.12E+01	2.01E-02	0.	2.44E+00
0.30 MEV	5.71E+01	2.01E-02	0.	2.44E+00
0.35 MEV	5.14E+01	2.06E-02	1.95E-04	2.15E+00
0.40 MEV	4.39E+01	2.06E-02	1.95E-04	2.15E+00
0.45 MEV	3.72E+01	1.77E-02	1.17E-04	2.39E+00
0.50 MEV	3.28E+01	1.77E-02	1.17E-04	2.39E+00
0.55 MEV	2.97E+01	2.07E-02	7.86E-04	2.66E+00
0.60 MEV	2.73E+01	2.07E-02	7.86E-04	2.66E+00
0.65 MEV	2.55E+01	1.97E-02	9.56E-04	2.49E+00
0.70 MEV	2.51E+01	1.97E-02	9.56E-04	2.49E+00
0.75 MEV	2.14E+01	2.45E-02	2.08E-02	2.59E+00
0.80 MEV	1.88E+01	2.45E-02	2.08E-02	2.59E+00
0.85 MEV	1.93E+01	2.37E-02	7.12E-04	2.58E+00
0.90 MEV	1.66E+01	2.37E-02	7.12E-04	2.58E+00
0.95 MEV	1.79E+01	2.35E-02	1.19E-03	2.61E+00
1.00 MEV	1.76E+01	2.35E-02	1.19E-03	2.61E+00
1.10 MEV	2.83E+01	4.99E-02	2.91E-03	5.12E+00
1.20 MEV	2.71E+01	4.99E-02	2.91E-03	5.12E+00
1.30 MEV	2.50E+01	4.42E-02	3.12E-03	5.42E+00
1.40 MEV	2.24E+01	4.42E-02	3.12E-03	5.42E+00
1.50 MEV	1.86E+01	5.83E-02	2.55E-03	4.97E+00
1.60 MEV	1.82E+01	5.83E-02	2.55E-03	4.97E+00
1.70 MEV	1.76E+01	2.57E-02	3.29E-03	5.09E+00
1.80 MEV	1.66E+01	2.57E-02	3.29E-03	5.09E+00
1.90 MEV	1.53E+01	1.58E-02	3.60E-03	4.86E+00
2.00 MEV	1.30E+01	1.58E-02	3.60E-03	4.86E+00
2.10 MEV	1.36E+01	2.90E-02	2.53E-03	5.17E+00
2.20 MEV	1.24E+01	2.90E-02	2.53E-03	5.17E+00
2.30 MEV	1.16E+01	6.87E-03	1.99E-03	4.53E+00
2.40 MEV	1.10E+01	6.87E-03	1.99E-03	4.53E+00
2.50 MEV	1.10E+01	2.62E-02	2.50E-03	4.26E+00
2.60 MEV	1.13E+01	2.62E-02	2.50E-03	4.26E+00
2.70 MEV	9.71E+00	5.28E-03	1.29E-03	4.58E+00
2.80 MEV	9.00E+00	5.28E-03	1.29E-03	4.58E+00
2.90 MEV	6.24E+00	2.23E-02	1.21E-03	4.63E+00
3.00 MEV	6.46E+00	2.23E-02	1.21E-03	4.63E+00
3.20 MEV	1.51E+01	9.59E-03	4.52E-03	7.38E+00
3.40 MEV	1.34E+01	9.59E-03	4.52E-03	7.38E+00
3.60 MEV	1.53E+01	4.91E-03	3.98E-03	6.38E+00
3.80 MEV	1.38E+01	4.91E-03	3.98E-03	6.38E+00
4.00 MEV	1.18E+01	4.54E-02	2.49E-03	5.88E+00

1 INITIAL SPECTRUM AT 14.0-40.0 CM. FOR ICRU MUSCLE TISSUE
42 MEV P+ ON BE NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	1.16E+01	4.54E-02	2.49E-03	5.88E+00
4.40 MEV	1.07E+01	4.55E-03	9.10E-04	5.29E+00
4.60 MEV	9.90E+00	4.55E-03	9.10E-04	5.29E+00
4.80 MEV	9.14E+00	3.45E-03	1.53E-03	4.34E+00
5.00 MEV	9.07E+00	3.45E-03	1.53E-03	4.34E+00
5.50 MEV	2.00E+01	1.11E-02	3.97E-03	8.53E+00
6.00 MEV	1.65E+01	1.11E-02	3.97E-03	8.53E+00
6.50 MEV	1.68E+01	2.70E-02	2.20E-02	5.89E+00
7.00 MEV	1.45E+01	2.70E-02	2.20E-02	5.89E+00
7.50 MEV	1.30E+01	6.88E-03	1.60E-03	4.45E+00
8.00 MEV	1.20E+01	6.88E-03	1.60E-03	4.45E+00
8.50 MEV	9.73E+00	4.07E-03	1.50E-03	3.29E+00
9.00 MEV	9.66E+00	4.07E-03	1.50E-03	3.29E+00
9.50 MEV	8.40E+00	2.22E-03	3.28E-04	2.19E+00
10.00 MEV	9.83E+00	2.22E-03	3.28E-04	2.19E+00
11.00 MEV	1.53E+01	2.14E-02	2.05E-02	3.02E+00
12.00 MEV	1.33E+01	2.14E-02	2.05E-02	3.02E+00
13.00 MEV	1.13E+01	8.62E-04	3.76E-04	1.09E+00
14.00 MEV	9.51E+00	8.62E-04	3.76E-04	1.09E+00
15.00 MEV	9.49E+00	6.58E-05	0.	6.18E-01
16.00 MEV	9.35E+00	6.58E-05	0.	6.18E-01
17.00 MEV	8.22E+00	0.	0.	3.68E-01
18.00 MEV	6.74E+00	0.	0.	3.68E-01
19.00 MEV	6.30E+00	0.	0.	1.16E-01
20.00 MEV	6.35E+00	0.	0.	1.16E-01
21.00 MEV	5.88E+00	0.	0.	0.
22.00 MEV	5.65E+00	0.	0.	0.
23.00 MEV	4.35E+00	0.	0.	0.
24.00 MEV	4.42E+00	0.	0.	0.
25.00 MEV	3.73E+00	0.	0.	0.
26.00 MEV	3.38E+00	0.	0.	0.
27.00 MEV	2.38E+00	0.	0.	0.
28.00 MEV	2.50E+00	0.	0.	0.
29.00 MEV	2.31E+00	0.	0.	0.
30.00 MEV	1.96E+00	0.	0.	0.
32.00 MEV	2.96E+00	0.	0.	0.
34.00 MEV	2.62E+00	0.	0.	0.
36.00 MEV	1.58E+00	0.	0.	0.
38.00 MEV	5.77E-01	0.	0.	0.
40.00 MEV	7.69E-02	0.	0.	0.
42.00 MEV	3.85E-02	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E (MEV)	10.51	5.27	8.15	6.21

1 SLOWING DOWN SPECTRUM AT 0.00 CM. FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	0.	0.	0.	0.
0.15 MEV	0.	0.	0.	0.
0.20 MEV	0.	0.	0.	0.
0.25 MEV	0.	0.	0.	0.
0.30 MEV	0.	0.	0.	0.
0.35 MEV	0.	0.	0.	0.
0.40 MEV	0.	0.	0.	0.
0.45 MEV	0.	0.	0.	0.
0.50 MEV	0.	0.	0.	0.
0.55 MEV	0.	0.	0.	0.
0.60 MEV	0.	0.	0.	0.
0.65 MEV	0.	0.	0.	0.
0.70 MEV	0.	0.	0.	0.
0.75 MEV	0.	0.	0.	0.
0.80 MEV	0.	0.	0.	0.
0.85 MEV	0.	0.	0.	0.
0.90 MEV	0.	0.	0.	0.
0.95 MEV	0.	0.	0.	0.
1.00 MEV	0.	0.	0.	0.
1.10 MEV	0.	0.	0.	0.
1.20 MEV	0.	0.	0.	0.
1.30 MEV	0.	0.	0.	0.
1.40 MEV	0.	0.	0.	0.
1.50 MEV	0.	0.	0.	0.
1.60 MEV	0.	0.	0.	0.
1.70 MEV	0.	0.	0.	0.
1.80 MEV	0.	0.	0.	0.
1.90 MEV	0.	0.	0.	0.
2.00 MEV	0.	0.	0.	0.
2.10 MEV	0.	0.	0.	0.
2.20 MEV	0.	0.	0.	0.
2.30 MEV	0.	0.	0.	0.
2.40 MEV	0.	0.	0.	0.
2.50 MEV	0.	0.	0.	0.
2.60 MEV	0.	0.	0.	0.
2.70 MEV	0.	0.	0.	0.
2.80 MEV	0.	0.	0.	0.
2.90 MEV	0.	0.	0.	0.
3.00 MEV	0.	0.	0.	0.
3.20 MEV	0.	0.	0.	0.
3.40 MEV	0.	0.	0.	0.
3.60 MEV	0.	0.	0.	0.
3.80 MEV	0.	0.	0.	0.
4.00 MEV	0.	0.	0.	0.

1 SLOWING DOWN SPECTRUM AT 0.00 CM. FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	0.	0.	0.	0.
4.40 MEV	0.	0.	0.	0.
4.60 MEV	0.	0.	0.	0.
4.80 MEV	0.	0.	0.	0.
5.00 MEV	0.	0.	0.	0.
5.50 MEV	0.	0.	0.	0.
6.00 MEV	0.	0.	0.	0.
6.50 MEV	0.	0.	0.	0.
7.00 MEV	0.	0.	0.	0.
7.50 MEV	0.	0.	0.	0.
8.00 MEV	0.	0.	0.	0.
8.50 MEV	0.	0.	0.	0.
9.00 MEV	0.	0.	0.	0.
9.50 MEV	0.	0.	0.	0.
10.00 MEV	0.	0.	0.	0.
11.00 MEV	0.	0.	0.	0.
12.00 MEV	0.	0.	0.	0.
13.00 MEV	0.	0.	0.	0.
14.00 MEV	0.	0.	0.	0.
15.00 MEV	0.	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	0.	0.	0.	0.

1SLOWING DOWN SPECTRUM AT 0.05 CM. FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	7.39E-03	6.97E-06	0.	1.29E-02
0.15 MEV	4.43E-03	0.	3.08E-05	6.62E-03
0.20 MEV	1.25E-02	0.	0.	2.50E-02
0.25 MEV	1.35E-02	2.86E-05	0.	2.72E-02
0.30 MEV	4.75E-03	0.	0.	2.04E-03
0.35 MEV	8.81E-03	0.	0.	2.60E-03
0.40 MEV	4.03E-03	3.84E-05	6.89E-05	1.68E-02
0.45 MEV	3.46E-03	0.	8.17E-06	1.82E-02
0.50 MEV	5.86E-03	2.48E-05	6.20E-05	3.24E-03
0.55 MEV	2.62E-02	0.	0.	1.29E-02
0.60 MEV	2.08E-02	5.36E-04	0.	9.95E-03
0.65 MEV	1.76E-03	6.00E-05	0.	9.67E-03
0.70 MEV	3.93E-02	6.97E-06	3.08E-05	3.11E-03
0.75 MEV	4.82E-03	0.	0.	1.27E-02
0.80 MEV	1.20E-01	3.84E-05	0.	5.55E-02
0.85 MEV	2.89E-02	0.	1.41E-04	1.54E-02
0.90 MEV	9.54E-03	6.70E-05	0.	3.51E-03
0.95 MEV	4.70E-03	6.97E-06	0.	1.84E-02
1.00 MEV	1.22E-02	7.04E-05	6.20E-05	4.74E-03
1.10 MEV	2.44E-02	3.00E-05	4.98E-05	8.05E-03
1.20 MEV	3.61E-02	6.14E-05	0.	2.62E-02
1.30 MEV	1.83E-02	1.24E-05	1.54E-05	1.07E-02
1.40 MEV	2.96E-02	2.86E-05	3.43E-05	1.31E-02
1.50 MEV	1.86E-02	2.08E-04	4.98E-05	2.80E-02
1.60 MEV	3.69E-02	4.29E-05	7.04E-05	1.27E-02
1.70 MEV	3.98E-02	1.25E-05	4.64E-05	4.51E-03
1.80 MEV	2.66E-02	1.24E-05	4.90E-05	1.06E-02
1.90 MEV	5.26E-02	0.	4.64E-05	1.95E-02
2.00 MEV	3.61E-02	0.	4.61E-05	1.80E-02
2.10 MEV	1.70E-02	2.49E-05	6.95E-05	0.
2.20 MEV	1.52E-02	0.	1.23E-04	4.61E-02
2.30 MEV	7.99E-02	2.64E-04	6.54E-05	0.
2.40 MEV	4.90E-02	1.24E-05	3.43E-05	1.34E-02
2.50 MEV	2.80E-02	1.25E-05	6.54E-05	1.44E-02
2.60 MEV	6.54E-02	1.94E-04	1.63E-04	2.11E-02
2.70 MEV	3.37E-02	1.24E-05	3.44E-05	0.
2.80 MEV	5.95E-02	1.25E-05	3.44E-05	1.14E-02
2.90 MEV	1.74E-02	1.24E-05	1.05E-04	3.67E-02
3.00 MEV	4.73E-02	0.	1.03E-04	5.37E-03
3.20 MEV	1.08E-01	1.25E-05	3.89E-05	1.10E-02
3.40 MEV	2.34E-02	2.48E-04	3.52E-05	1.81E-02
3.60 MEV	4.63E-02	1.87E-05	6.30E-05	1.32E-02
3.80 MEV	5.22E-02	3.73E-05	3.72E-05	1.02E-02
4.00 MEV	1.16E-01	1.10E-04	3.52E-05	1.15E-02

1 SLOWING DOWN SPECTRUM AT 0.05 CM. FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.96E-02	1.57E-04	1.42E-04	4.99E-03
4.40 MEV	7.90E-02	9.70E-05	2.04E-06	4.99E-03
4.60 MEV	9.77E-02	0.	2.78E-05	5.70E-03
4.80 MEV	7.39E-02	2.29E-04	1.64E-06	1.34E-02
5.00 MEV	7.23E-02	0.	2.04E-06	4.53E-03
5.50 MEV	1.03E-01	1.30E-04	1.32E-05	1.44E-03
6.00 MEV	1.12E-01	9.17E-05	1.54E-05	6.43E-03
6.50 MEV	9.41E-02	2.22E-04	1.63E-06	2.25E-03
7.00 MEV	8.51E-02	3.39E-04	2.50E-05	5.70E-03
7.50 MEV	1.27E-01	1.06E-04	1.05E-05	2.05E-03
8.00 MEV	9.97E-02	3.17E-04	1.05E-05	3.05E-03
8.50 MEV	1.27E-01	0.	2.09E-05	3.31E-04
9.00 MEV	1.12E-01	0.	5.23E-05	5.82E-04
9.50 MEV	1.17E-01	0.	0.	1.70E-04
10.00 MEV	1.09E-01	0.	0.	3.40E-04
11.00 MEV	1.34E-01	0.	0.	2.30E-04
12.00 MEV	1.13E-01	0.	0.	2.16E-04
13.00 MEV	1.32E-01	0.	0.	5.82E-05
14.00 MEV	5.50E-02	0.	0.	1.03E-04
15.00 MEV	2.34E-02	0.	0.	1.34E-05
16.00 MEV	0.	0.	0.	2.67E-05
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	8.35	5.40	3.87	3.01

1SLOWING DOWN SPECTRUM AT 0.14 CM. FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	1.31E-02	6.97E-06	3.51E-05	1.83E-02
0.15 MEV	3.63E-03	0.	0.	6.03E-03
0.20 MEV	3.34E-02	0.	0.	1.93E-02
0.25 MEV	1.75E-02	8.58E-05	0.	1.02E-02
0.30 MEV	3.71E-03	0.	0.	1.86E-03
0.35 MEV	8.83E-03	8.71E-06	0.	3.05E-03
0.40 MEV	9.83E-03	2.53E-05	0.	7.97E-03
0.45 MEV	4.61E-03	0.	0.	2.31E-02
0.50 MEV	1.05E-02	2.77E-04	0.	3.59E-03
0.55 MEV	2.92E-02	3.10E-05	0.	7.58E-03
0.60 MEV	1.62E-02	7.74E-05	0.	6.16E-03
0.65 MEV	9.42E-03	1.13E-04	0.	9.25E-03
0.70 MEV	1.49E-02	6.97E-06	0.	2.24E-03
0.75 MEV	1.09E-02	0.	3.51E-05	5.74E-03
0.80 MEV	2.66E-02	2.53E-05	0.	4.29E-02
0.85 MEV	1.48E-02	3.98E-05	2.22E-04	1.24E-02
0.90 MEV	9.96E-03	1.11E-04	0.	1.84E-03
0.95 MEV	1.65E-02	6.97E-06	0.	1.07E-02
1.00 MEV	6.84E-03	4.10E-05	0.	1.68E-03
1.10 MEV	1.34E-02	6.76E-05	0.	7.76E-03
1.20 MEV	2.67E-02	7.91E-05	1.75E-05	1.02E-02
1.30 MEV	2.74E-02	1.99E-05	0.	3.98E-03
1.40 MEV	2.10E-02	1.14E-04	1.26E-04	8.60E-03
1.50 MEV	1.65E-02	1.81E-04	1.75E-05	2.97E-02
1.60 MEV	3.28E-02	1.44E-04	0.	1.18E-02
1.70 MEV	3.50E-02	3.10E-05	1.75E-05	2.46E-03
1.80 MEV	1.55E-02	5.44E-05	0.	1.20E-02
1.90 MEV	7.56E-02	0.	1.29E-04	1.78E-02
2.00 MEV	3.68E-02	1.38E-04	0.	1.42E-02
2.10 MEV	1.69E-02	0.	1.75E-05	0.
2.20 MEV	8.40E-03	0.	1.29E-04	3.61E-02
2.30 MEV	3.34E-02	2.74E-05	1.75E-05	0.
2.40 MEV	3.91E-02	0.	5.26E-05	1.25E-02
2.50 MEV	2.34E-02	1.38E-04	1.11E-04	9.26E-03
2.60 MEV	5.48E-02	7.83E-06	0.	2.26E-02
2.70 MEV	3.59E-02	0.	1.11E-04	0.
2.80 MEV	5.04E-02	0.	1.48E-05	6.05E-03
2.90 MEV	1.67E-02	1.38E-04	1.11E-04	2.61E-02
3.00 MEV	7.60E-02	0.	1.11E-04	5.74E-03
3.20 MEV	6.65E-02	7.31E-05	5.55E-05	9.51E-03
3.40 MEV	2.37E-02	8.29E-05	2.22E-04	9.07E-03
3.60 MEV	3.63E-02	3.91E-06	0.	9.52E-03
3.80 MEV	4.81E-02	6.92E-05	7.39E-06	5.87E-03
4.00 MEV	7.59E-02	1.42E-04	0.	1.29E-02

1 SLOWING DOWN SPECTRUM AT 0.1 μ CM. FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	2.99E-02	8.29E-05	0.	6.91E-03
4.40 MEV	6.16E-02	1.42E-04	0.	5.46E-03
4.60 MEV	6.53E-02	2.77E-04	7.39E-06	5.49E-03
4.80 MEV	5.93E-02	1.76E-05	0.	1.43E-02
5.00 MEV	6.26E-02	3.91E-06	0.	3.46E-03
5.50 MEV	7.21E-02	1.02E-05	2.96E-06	2.17E-03
6.00 MEV	8.82E-02	1.49E-05	2.96E-06	7.62E-03
6.50 MEV	7.51E-02	1.10E-05	2.96E-06	2.81E-03
7.00 MEV	7.49E-02	1.10E-05	5.91E-06	6.29E-03
7.50 MEV	6.65E-02	1.10E-05	5.91E-06	2.00E-03
8.00 MEV	9.48E-02	3.29E-05	1.48E-05	2.75E-03
8.50 MEV	6.42E-02	0.	0.	5.02E-04
9.00 MEV	6.17E-02	0.	0.	7.81E-04
9.50 MEV	9.12E-02	0.	0.	1.48E-04
10.00 MEV	6.95E-02	0.	0.	2.95E-04
11.00 MEV	1.00E-01	0.	0.	9.72E-05
12.00 MEV	7.10E-02	0.	0.	6.60E-05
13.00 MEV	5.96E-02	0.	0.	3.73E-05
14.00 MEV	1.04E-01	0.	0.	4.33E-05
15.00 MEV	1.17E-02	0.	0.	3.12E-05
16.00 MEV	0.	0.	0.	6.24E-05
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	8.34	3.31	2.90	3.26

1SLOWING DOWN SPECTRUM AT 0.15 CM. FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	1.19E-02	0.	5.93E-05	2.36E-02
0.15 MEV	7.82E-03	0.	0.	6.27E-03
0.20 MEV	3.14E-02	0.	0.	1.05E-02
0.25 MEV	1.48E-02	2.86E-05	0.	2.24E-02
0.30 MEV	6.36E-03	0.	0.	1.21E-03
0.35 MEV	9.18E-03	0.	1.62E-04	3.43E-03
0.40 MEV	1.07E-02	3.04E-05	0.	1.33E-02
0.45 MEV	6.83E-03	0.	0.	2.31E-02
0.50 MEV	1.25E-02	0.	0.	3.33E-03
0.55 MEV	2.04E-02	8.13E-05	5.93E-05	9.94E-03
0.60 MEV	1.83E-02	5.36E-05	0.	8.94E-03
0.65 MEV	8.18E-03	5.90E-05	0.	1.40E-02
0.70 MEV	3.82E-02	0.	0.	2.13E-03
0.75 MEV	1.71E-02	0.	0.	1.27E-02
0.80 MEV	1.04E-01	3.04E-05	0.	5.19E-02
0.85 MEV	3.19E-02	8.13E-05	5.93E-05	1.49E-02
0.90 MEV	9.80E-03	5.90E-05	0.	3.53E-03
0.95 MEV	2.43E-02	0.	0.	1.73E-02
1.00 MEV	1.25E-02	8.89E-05	0.	4.10E-03
1.10 MEV	2.01E-02	7.01E-05	2.96E-05	1.14E-02
1.20 MEV	1.99E-02	5.99E-05	0.	2.45E-02
1.30 MEV	3.26E-02	4.06E-05	1.11E-04	6.25E-03
1.40 MEV	3.95E-02	6.92E-05	2.96E-05	1.50E-02
1.50 MEV	1.69E-02	1.43E-05	2.76E-05	3.24E-02
1.60 MEV	2.93E-02	8.36E-05	8.89E-05	1.50E-02
1.70 MEV	3.36E-02	1.11E-04	0.	5.46E-03
1.80 MEV	1.45E-02	1.49E-04	8.09E-05	1.83E-02
1.90 MEV	7.56E-02	0.	0.	2.40E-02
2.00 MEV	3.12E-02	0.	0.	1.98E-02
2.10 MEV	2.51E-02	2.92E-05	0.	0.
2.20 MEV	2.31E-02	0.	8.09E-05	4.40E-02
2.30 MEV	7.41E-02	0.	0.	0.
2.40 MEV	5.03E-02	0.	0.	1.49E-02
2.50 MEV	4.63E-02	2.92E-05	0.	1.22E-02
2.60 MEV	5.13E-02	2.68E-05	8.09E-05	2.35E-02
2.70 MEV	3.49E-02	0.	0.	0.
2.80 MEV	5.12E-02	2.92E-05	8.09E-05	8.90E-03
2.90 MEV	2.03E-02	0.	0.	3.77E-02
3.00 MEV	7.00E-02	0.	0.	5.86E-03
3.20 MEV	9.16E-02	2.80E-05	4.04E-05	1.02E-02
3.40 MEV	2.32E-02	1.46E-05	8.09E-05	1.20E-02
3.60 MEV	4.63E-02	2.80E-05	4.04E-05	1.56E-02
3.80 MEV	4.04E-02	2.92E-05	1.62E-04	9.05E-03
4.00 MEV	1.07E-01	4.27E-05	0.	9.00E-03

1 SLOWING DOWN SPECTRUM AT 0.15 CM, FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.72E-02	5.85E-05	0.	7.40E-03
4.40 MEV	7.70E-02	1.34E-05	0.	7.40E-03
4.60 MEV	7.04E-02	0.	0.	4.21E-03
4.80 MEV	5.29E-02	1.34E-05	0.	1.22E-02
5.00 MEV	5.59E-02	1.34E-05	0.	6.70E-04
5.50 MEV	8.57E-02	1.61E-05	0.	1.77E-03
6.00 MEV	8.55E-02	3.22E-05	0.	7.79E-03
6.50 MEV	8.43E-02	0.	0.	2.91E-03
7.00 MEV	9.32E-02	0.	0.	7.18E-03
7.50 MEV	1.10E-01	0.	0.	2.01E-03
8.00 MEV	9.55E-02	0.	0.	3.26E-03
8.50 MEV	9.22E-02	0.	0.	2.57E-04
9.00 MEV	1.01E-01	0.	0.	3.90E-04
9.50 MEV	1.20E-01	0.	0.	1.21E-04
10.00 MEV	9.95E-02	0.	0.	2.41E-04
11.00 MEV	1.10E-01	0.	0.	1.17E-04
12.00 MEV	1.17E-01	0.	0.	1.17E-04
13.00 MEV	1.18E-01	0.	0.	0.
14.00 MEV	7.72E-02	0.	0.	0.
15.00 MEV	0.	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	8.34	2.69	2.43	2.99

1SLOWING DOWN SPECTRUM AT 0.20 CM. FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	1.15E-02	0.	3.51E-05	1.50E-02
0.15 MEV	7.36E-03	0.	0.	3.01E-03
0.20 MEV	1.97E-02	0.	0.	1.12E-02
0.25 MEV	1.27E-02	0.	0.	2.36E-02
0.30 MEV	4.69E-03	0.	0.	1.17E-03
0.35 MEV	1.51E-02	6.10E-05	0.	1.60E-03
0.40 MEV	8.18E-03	0.	6.69E-05	6.79E-03
0.45 MEV	6.32E-03	6.69E-05	0.	1.28E-02
0.50 MEV	1.00E-02	0.	2.48E-05	1.18E-03
0.55 MEV	3.17E-02	2.41E-05	0.	4.70E-03
0.60 MEV	2.20E-02	6.99E-04	0.	4.90E-03
0.65 MEV	1.55E-02	6.10E-05	0.	0.44E-03
0.70 MEV	2.22E-02	0.	0.	1.58E-03
0.75 MEV	1.07E-02	0.	3.51E-05	9.55E-03
0.80 MEV	7.11E-02	0.	0.	3.63E-02
0.85 MEV	3.58E-02	1.52E-04	1.01E-04	1.08E-02
0.90 MEV	1.24E-02	0.	0.	1.54E-03
0.95 MEV	1.87E-02	0.	0.	1.26E-02
1.00 MEV	1.71E-02	3.94E-04	2.48E-05	2.86E-03
1.10 MEV	1.94E-02	4.55E-05	3.44E-05	8.02E-03
1.20 MEV	2.65E-02	6.10E-05	1.75E-05	2.39E-02
1.30 MEV	2.41E-02	7.60E-05	0.	6.43E-03
1.40 MEV	5.04E-02	1.04E-04	1.24E-05	1.02E-02
1.50 MEV	1.50E-02	3.34E-05	5.20E-05	2.32E-02
1.60 MEV	3.00E-02	4.55E-05	5.03E-05	1.04E-02
1.70 MEV	4.38E-02	1.91E-04	2.99E-05	4.73E-03
1.80 MEV	1.48E-02	4.19E-04	3.44E-05	1.49E-02
1.90 MEV	8.51E-02	6.69E-05	2.99E-05	1.88E-02
2.00 MEV	3.20E-02	1.00E-04	0.	1.51E-02
2.10 MEV	2.22E-02	1.67E-04	6.44E-05	0.
2.20 MEV	1.73E-02	0.	6.78E-05	4.52E-02
2.30 MEV	5.71E-02	0.	6.44E-05	0.
2.40 MEV	3.24E-02	0.	6.50E-05	1.52E-02
2.50 MEV	5.35E-02	1.67E-04	4.68E-05	1.16E-02
2.60 MEV	6.98E-02	3.49E-04	8.75E-05	2.08E-02
2.70 MEV	2.62E-02	0.	3.44E-05	0.
2.80 MEV	3.44E-02	1.67E-04	3.44E-05	8.42E-03
2.90 MEV	1.86E-02	0.	8.47E-05	3.71E-02
3.00 MEV	7.80E-02	0.	1.03E-04	3.58E-03
3.20 MEV	8.28E-02	2.58E-04	2.51E-05	8.82E-03
3.40 MEV	1.85E-02	8.33E-05	2.51E-05	1.56E-02
3.60 MEV	3.58E-02	2.50E-04	2.51E-05	1.52E-02
3.80 MEV	4.41E-02	1.67E-04	2.51E-05	1.09E-02
4.00 MEV	1.04E-01	3.41E-04	2.51E-05	7.30E-03

1 SLOWING DOWN SPECTRUM AT 0.20 CM, FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	2.94E-02	3.33E-04	1.01E-04	5.45E-03
4.40 MEV	7.72E-02	1.75E-04	0.	6.27E-03
4.60 MEV	7.29E-02	0.	0.	4.40E-03
4.80 MEV	4.90E-02	1.75E-04	0.	9.20E-03
5.00 MEV	5.39E-02	1.75E-04	0.	1.99E-03
5.50 MEV	7.68E-02	2.10E-04	0.	9.99E-04
6.00 MEV	8.24E-02	4.19E-04	0.	5.31E-03
6.50 MEV	6.78E-02	0.	0.	2.00E-03
7.00 MEV	6.65E-02	0.	0.	5.37E-03
7.50 MEV	9.12E-02	0.	0.	1.73E-03
8.00 MEV	8.18E-02	0.	0.	3.08E-03
8.50 MEV	7.56E-02	0.	0.	1.23E-04
9.00 MEV	1.03E-01	0.	0.	2.35E-04
9.50 MEV	1.19E-01	0.	0.	3.52E-05
10.00 MEV	1.11E-01	0.	0.	7.05E-05
11.00 MEV	1.32E-01	0.	0.	6.00E-05
12.00 MEV	1.31E-01	0.	0.	6.00E-05
13.00 MEV	9.64E-02	0.	0.	0.
14.00 MEV	1.00E-01	0.	0.	0.
15.00 MEV	0.	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	8.56	3.82	2.53	3.00

1 SLOWING DOWN SPECTRUM AT 0.40 CM. FOR SHONKA A-15P PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	1.80E-02	1.16E-05	1.17E-05	8.94E-03
0.15 MEV	1.08E-02	0.	3.08E-05	3.66E-03
0.20 MEV	3.43E-02	3.58E-05	0.	7.28E-03
0.25 MEV	1.89E-02	5.09E-05	0.	1.82E-02
0.30 MEV	1.54E-02	0.	0.	1.29E-03
0.35 MEV	8.67E-03	0.	0.	2.79E-03
0.40 MEV	9.79E-03	3.26E-05	6.89E-05	4.80E-03
0.45 MEV	1.09E-02	0.	0.	1.84E-02
0.50 MEV	9.66E-03	0.	0.	2.78E-03
0.55 MEV	1.80E-02	0.	0.	7.10E-03
0.60 MEV	1.64E-02	3.17E-04	0.	5.42E-03
0.65 MEV	8.85E-03	7.18E-05	0.	1.23E-02
0.70 MEV	2.79E-02	1.16E-05	1.04E-04	8.70E-04
0.75 MEV	1.30E-02	3.58E-05	1.17E-05	5.61E-03
0.80 MEV	6.85E-02	5.45E-05	0.	3.95E-02
0.85 MEV	4.35E-02	0.	0.	1.24E-02
0.90 MEV	1.05E-02	8.34E-05	0.	6.42E-04
0.95 MEV	1.97E-02	1.16E-05	0.	1.23E-02
1.00 MEV	1.51E-02	1.27E-04	0.	2.43E-03
1.10 MEV	1.22E-02	5.38E-05	4.98E-05	4.80E-03
1.20 MEV	1.63E-02	5.69E-05	5.84E-06	1.85E-02
1.30 MEV	2.18E-02	1.79E-05	1.54E-05	7.57E-03
1.40 MEV	2.91E-02	6.18E-05	0.	1.12E-02
1.50 MEV	1.67E-02	4.33E-05	5.57E-05	2.04E-02
1.60 MEV	2.73E-02	7.63E-05	0.	1.11E-02
1.70 MEV	2.87E-02	5.95E-05	5.79E-05	2.93E-03
1.80 MEV	1.86E-02	1.82E-04	4.98E-05	1.15E-02
1.90 MEV	6.74E-02	0.	2.12E-05	1.25E-02
2.00 MEV	3.76E-02	1.79E-05	4.61E-05	1.80E-02
2.10 MEV	1.44E-02	8.84E-05	4.03E-05	0.
2.20 MEV	1.74E-02	5.37E-05	5.84E-06	3.79E-02
2.30 MEV	5.90E-02	1.09E-05	4.03E-05	0.
2.40 MEV	4.83E-02	0.	5.42E-05	1.28E-02
2.50 MEV	3.27E-02	4.16E-05	3.44E-05	5.19E-03
2.60 MEV	5.32E-02	1.64E-04	0.	1.63E-02
2.70 MEV	2.37E-02	1.09E-05	3.44E-05	0.
2.80 MEV	4.47E-02	4.16E-05	3.44E-05	8.89E-03
2.90 MEV	2.89E-02	1.09E-05	7.11E-05	3.32E-02
3.00 MEV	5.13E-02	1.09E-05	1.03E-04	4.55E-03
3.20 MEV	7.59E-02	1.08E-04	0.	4.56E-03
3.40 MEV	2.27E-02	4.27E-05	1.83E-05	9.12E-03
3.60 MEV	4.31E-02	9.72E-05	1.83E-05	1.28E-02
3.80 MEV	3.84E-02	4.16E-05	0.	7.53E-03
4.00 MEV	7.67E-02	1.18E-04	1.83E-05	9.02E-03

1SLOWING DOWN SPECTRUM AT 0.40 CM, FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY *	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	2.57E-02	8.33E-05	1.83E-05	3.85E-03
4.40 MEV	5.36E-02	7.64E-05	1.83E-05	5.25E-03
4.60 MEV	5.42E-02	0.	1.83E-05	2.84E-03
4.80 MEV	4.01E-02	7.64E-05	3.67E-05	1.18E-02
5.00 MEV	4.42E-02	7.64E-05	5.50E-05	9.60E-04
5.50 MEV	5.56E-02	9.17E-05	0.	2.63E-03
6.00 MEV	6.41E-02	1.83E-04	0.	8.37E-03
6.50 MEV	6.57E-02	0.	0.	2.09E-03
7.00 MEV	7.31E-02	0.	0.	5.14E-03
7.50 MEV	7.57E-02	0.	0.	1.80E-03
8.00 MEV	8.28E-02	0.	0.	2.69E-03
8.50 MEV	5.77E-02	0.	0.	4.36E-04
9.00 MEV	6.52E-02	0.	0.	3.96E-04
9.50 MEV	6.56E-02	0.	0.	2.47E-04
10.00 MEV	9.47E-02	0.	0.	4.93E-04
11.00 MEV	7.71E-02	0.	0.	1.57E-05
12.00 MEV	7.62E-02	0.	0.	1.57E-05
13.00 MEV	7.61E-02	0.	0.	0.
14.00 MEV	4.45E-02	0.	0.	0.
15.00 MEV	0.	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	8.01	3.66	2.72	3.19

1 SLOWING DOWN SPECTRUM AT 0.60 CM. FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	1.62E-02	1.39E-06	0.	8.77E-03
0.15 MEV	9.24E-03	0.	3.13E-06	3.57E-03
0.20 MEV	2.98E-02	7.16E-06	0.	1.04E-02
0.25 MEV	1.94E-02	2.85E-05	3.13E-06	1.81E-02
0.30 MEV	1.27E-02	0.	4.83E-06	1.19E-03
0.35 MEV	1.59E-02	8.57E-05	1.50E-04	1.99E-03
0.40 MEV	1.63E-02	2.37E-05	2.25E-05	7.64E-03
0.45 MEV	1.07E-02	5.20E-06	1.96E-05	1.64E-02
0.50 MEV	1.49E-02	2.17E-04	2.48E-06	1.78E-03
0.55 MEV	2.38E-02	4.58E-05	0.	7.37E-03
0.60 MEV	2.57E-02	2.86E-04	0.	4.63E-03
0.65 MEV	1.26E-02	1.01E-04	4.15E-06	9.69E-03
0.70 MEV	3.42E-02	1.94E-06	7.82E-05	1.57E-03
0.75 MEV	1.33E-02	9.77E-06	0.	6.62E-03
0.80 MEV	6.74E-02	5.83E-05	1.55E-05	3.97E-02
0.85 MEV	3.78E-02	9.82E-05	8.67E-05	9.81E-03
0.90 MEV	1.54E-02	5.53E-05	0.	2.10E-03
0.95 MEV	2.07E-02	3.93E-05	2.45E-06	1.14E-02
1.00 MEV	1.94E-02	1.69E-04	2.48E-06	2.05E-03
1.10 MEV	2.39E-02	1.85E-04	8.96E-06	5.58E-03
1.20 MEV	2.52E-02	9.40E-05	4.53E-06	1.54E-02
1.30 MEV	2.81E-02	9.34E-05	1.12E-04	6.91E-03
1.40 MEV	4.43E-02	1.54E-04	5.60E-05	9.54E-03
1.50 MEV	1.92E-02	1.52E-04	6.89E-06	1.91E-02
1.60 MEV	3.54E-02	6.93E-05	1.26E-05	9.74E-03
1.70 MEV	3.54E-02	1.24E-04	4.03E-05	3.65E-03
1.80 MEV	1.79E-02	2.49E-04	8.06E-05	1.03E-02
1.90 MEV	6.47E-02	1.39E-04	4.43E-05	1.73E-02
2.00 MEV	3.13E-02	1.02E-04	3.12E-05	1.56E-02
2.10 MEV	2.23E-02	1.10E-04	2.45E-05	0.
2.20 MEV	1.76E-02	3.34E-05	1.20E-04	3.24E-02
2.30 MEV	5.29E-02	4.67E-05	1.47E-05	0.
2.40 MEV	4.58E-02	1.96E-04	4.03E-05	1.16E-02
2.50 MEV	4.24E-02	1.36E-04	8.23E-05	8.43E-03
2.60 MEV	5.40E-02	2.03E-04	9.00E-05	1.60E-02
2.70 MEV	3.28E-02	7.79E-05	4.99E-05	0.
2.80 MEV	4.45E-02	7.14E-05	1.16E-04	7.89E-03
2.90 MEV	1.98E-02	2.93E-04	1.20E-04	3.04E-02
3.00 MEV	5.28E-02	7.29E-05	5.71E-05	3.62E-03
3.20 MEV	8.42E-02	2.21E-04	6.30E-05	6.56E-03
3.40 MEV	2.74E-02	1.73E-04	1.85E-04	9.25E-03
3.60 MEV	4.53E-02	1.87E-04	7.67E-05	1.10E-02
3.80 MEV	3.94E-02	2.27E-04	1.79E-04	6.03E-03
4.00 MEV	9.00E-02	2.78E-04	3.82E-05	7.83E-03

1SLOWING DOWN SPECTRUM AT 0.60 CM. FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	2.93E-02	1.41E-04	4.72E-05	5.01E-03
4.40 MEV	6.98E-02	2.88E-04	4.00E-05	6.42E-03
4.60 MEV	6.16E-02	2.01E-04	9.15E-05	4.02E-03
4.80 MEV	5.35E-02	2.41E-04	3.91E-05	9.98E-03
5.00 MEV	5.58E-02	3.21E-04	6.36E-05	1.36E-03
5.50 MEV	7.49E-02	1.01E-04	5.81E-06	1.85E-03
6.00 MEV	7.57E-02	1.59E-04	7.77E-06	6.69E-03
6.50 MEV	8.36E-02	5.10E-05	7.08E-06	1.91E-03
7.00 MEV	7.70E-02	8.67E-05	1.75E-05	4.93E-03
7.50 MEV	9.38E-02	1.32E-05	7.01E-06	1.93E-03
8.00 MEV	8.74E-02	3.49E-05	1.65E-05	3.01E-03
8.50 MEV	8.52E-02	6.31E-06	1.39E-06	3.34E-04
9.00 MEV	9.58E-02	1.15E-05	3.49E-06	5.33E-04
9.50 MEV	1.01E-01	4.48E-06	0.	1.33E-04
10.00 MEV	9.52E-02	7.47E-06	0.	2.66E-04
11.00 MEV	1.03E-01	0.	0.	1.13E-04
12.00 MEV	1.04E-01	0.	0.	1.10E-04
13.00 MEV	7.74E-02	0.	0.	2.37E-05
14.00 MEV	5.90E-02	0.	0.	4.48E-05
15.00 MEV	4.68E-03	0.	0.	2.67E-06
16.00 MEV	0.	0.	0.	5.35E-06
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	8.15	3.85	3.39	3.20

1SLOWING DOWN SPECTRUM AT 1.00 CM, FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	2.44E-02	6.97E-07	4.05E-06	1.55E-02
0.15 MEV	1.77E-02	0.	2.05E-06	4.78E-03
0.20 MEV	3.42E-02	1.18E-06	0.	1.32E-02
0.25 MEV	2.38E-02	3.01E-05	0.	1.95E-02
0.30 MEV	1.68E-02	4.56E-06	3.04E-06	1.97E-03
0.35 MEV	2.07E-02	1.42E-05	2.56E-05	2.10E-03
0.40 MEV	1.99E-02	1.66E-05	5.80E-05	1.00E-02
0.45 MEV	1.18E-02	4.09E-06	1.31E-05	1.78E-02
0.50 MEV	1.59E-02	1.73E-04	2.79E-05	2.28E-03
0.55 MEV	3.22E-02	2.12E-05	4.05E-06	7.26E-03
0.60 MEV	2.49E-02	1.64E-04	3.04E-06	6.69E-03
0.65 MEV	1.04E-02	5.95E-05	1.25E-05	9.13E-03
0.70 MEV	3.41E-02	1.42E-06	4.19E-05	2.06E-03
0.75 MEV	1.62E-02	2.73E-06	7.09E-06	7.19E-03
0.80 MEV	6.35E-02	3.99E-05	1.45E-05	4.60E-02
0.85 MEV	3.91E-02	4.33E-05	6.10E-05	1.18E-02
0.90 MEV	1.38E-02	4.69E-05	8.10E-06	1.69E-03
0.95 MEV	2.37E-02	6.97E-07	2.35E-05	1.32E-02
1.00 MEV	1.87E-02	1.04E-04	1.28E-05	3.44E-03
1.10 MEV	2.13E-02	7.57E-05	3.00E-05	7.04E-03
1.20 MEV	3.06E-02	5.09E-05	1.26E-05	1.72E-02
1.30 MEV	2.75E-02	3.50E-05	3.27E-05	6.11E-03
1.40 MEV	4.30E-02	7.05E-05	5.19E-05	9.75E-03
1.50 MEV	2.02E-02	1.34E-04	3.33E-05	2.44E-02
1.60 MEV	4.23E-02	5.64E-05	2.01E-06	1.04E-02
1.70 MEV	3.89E-02	9.68E-05	3.34E-05	3.82E-03
1.80 MEV	2.12E-02	1.05E-04	3.66E-05	1.11E-02
1.90 MEV	6.73E-02	4.46E-05	4.14E-05	1.93E-02
2.00 MEV	3.96E-02	8.19E-05	2.40E-05	1.41E-02
2.10 MEV	2.55E-02	6.43E-05	4.37E-05	0.
2.20 MEV	2.10E-02	1.77E-06	6.24E-05	3.35E-02
2.30 MEV	5.64E-02	4.96E-05	3.12E-05	0.
2.40 MEV	4.64E-02	5.50E-05	4.38E-05	1.16E-02
2.50 MEV	4.31E-02	1.14E-04	7.11E-05	9.89E-03
2.60 MEV	6.02E-02	1.04E-04	3.20E-05	1.98E-02
2.70 MEV	4.21E-02	2.40E-05	5.13E-05	0.
2.80 MEV	4.79E-02	3.69E-05	3.56E-05	7.39E-03
2.90 MEV	2.51E-02	1.37E-04	8.51E-05	3.34E-02
3.00 MEV	6.44E-02	1.08E-05	1.01E-04	4.07E-03
3.20 MEV	8.24E-02	1.34E-04	3.16E-05	9.13E-03
3.40 MEV	2.82E-02	1.29E-04	8.06E-05	1.07E-02
3.60 MEV	4.72E-02	7.44E-05	3.21E-05	1.18E-02
3.80 MEV	4.39E-02	1.20E-04	3.18E-05	8.21E-03
4.00 MEV	9.35E-02	1.93E-04	1.69E-05	1.03E-02

ISLOWING DOWN SPECTRUM AT 1.00 CM. FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.62E-02	1.28E-04	2.94E-05	7.18E-03
4.40 MEV	7.53E-02	1.57E-04	1.84E-05	6.29E-03
4.60 MEV	6.64E-02	1.66E-04	4.57E-05	4.72E-03
4.80 MEV	5.58E-02	1.21E-04	2.79E-05	1.08E-02
5.00 MEV	6.24E-02	1.04E-04	3.01E-05	1.72E-03
5.50 MEV	7.73E-02	5.87E-05	1.25E-05	1.90E-03
6.00 MEV	8.31E-02	7.75E-05	2.11E-05	6.75E-03
6.50 MEV	7.82E-02	4.73E-05	2.00E-06	2.00E-03
7.00 MEV	8.00E-02	7.22E-05	5.24E-06	5.00E-03
7.50 MEV	8.59E-02	2.24E-05	1.16E-07	1.64E-03
8.00 MEV	7.98E-02	5.94E-05	1.16E-07	2.64E-03
8.50 MEV	7.65E-02	1.55E-05	2.32E-07	2.45E-04
9.00 MEV	9.01E-02	4.66E-05	5.81E-07	4.02E-04
9.50 MEV	1.00E-01	0.	0.	8.76E-05
10.00 MEV	9.13E-02	0.	0.	1.75E-04
11.00 MEV	9.77E-02	0.	0.	8.36E-05
12.00 MEV	9.48E-02	0.	0.	7.75E-05
13.00 MEV	7.18E-02	0.	0.	1.54E-05
14.00 MEV	6.17E-02	0.	0.	2.47E-05
15.00 MEV	7.07E-03	0.	0.	6.09E-06
16.00 MEV	0.	0.	0.	1.22E-05
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	8.01	4.24	3.07	3.07

1 SLOWING DOWN SPECTRUM AT 2.00 CM. FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	2.77E-02	1.60E-06	1.16E-05	1.34E-02
0.15 MEV	1.91E-02	1.17E-06	1.03E-06	4.08E-03
0.20 MEV	3.67E-02	0.	0.	1.11E-02
0.25 MEV	2.66E-02	1.86E-05	0.	1.52E-02
0.30 MEV	2.25E-02	4.70E-07	0.	1.54E-03
0.35 MEV	2.22E-02	1.12E-05	4.18E-05	2.33E-03
0.40 MEV	2.77E-02	1.59E-05	7.66E-06	8.87E-03
0.45 MEV	1.47E-02	5.54E-06	8.29E-06	1.35E-02
0.50 MEV	1.95E-02	7.72E-05	1.35E-05	2.26E-03
0.55 MEV	3.41E-02	7.81E-06	0.	6.98E-03
0.60 MEV	2.97E-02	1.29E-04	0.	4.95E-03
0.65 MEV	1.50E-02	4.39E-05	0.	7.72E-03
0.70 MEV	3.88E-02	4.11E-06	5.23E-05	1.41E-03
0.75 MEV	2.22E-02	2.97E-06	1.16E-05	7.02E-03
0.80 MEV	6.69E-02	3.61E-05	1.82E-07	3.61E-02
0.85 MEV	3.50E-02	2.14E-05	9.06E-05	9.14E-03
0.90 MEV	1.90E-02	3.97E-05	0.	1.88E-03
0.95 MEV	2.64E-02	1.60E-06	9.80E-06	9.85E-03
1.00 MEV	2.54E-02	2.72E-05	3.72E-06	2.14E-03
1.10 MEV	2.71E-02	4.12E-05	4.44E-06	6.08E-03
1.20 MEV	2.96E-02	3.76E-05	5.81E-06	1.50E-02
1.30 MEV	3.07E-02	3.03E-05	3.23E-05	5.92E-03
1.40 MEV	4.35E-02	4.11E-05	6.20E-05	7.85E-03
1.50 MEV	2.41E-02	5.80E-05	1.51E-05	1.94E-02
1.60 MEV	4.56E-02	3.30E-05	3.43E-05	8.98E-03
1.70 MEV	3.56E-02	4.25E-05	3.88E-05	2.37E-03
1.80 MEV	2.60E-02	1.05E-04	2.55E-05	8.59E-03
1.90 MEV	6.11E-02	2.39E-05	2.42E-05	1.49E-02
2.00 MEV	3.87E-02	2.29E-05	1.23E-05	1.27E-02
2.10 MEV	2.96E-02	3.12E-05	2.05E-05	0.
2.20 MEV	2.31E-02	0.	8.67E-05	2.76E-02
2.30 MEV	5.55E-02	8.86E-06	1.15E-05	0.
2.40 MEV	5.21E-02	4.08E-05	8.26E-05	1.01E-02
2.50 MEV	3.90E-02	1.80E-05	2.26E-05	8.02E-03
2.60 MEV	5.44E-02	1.03E-04	6.07E-05	1.52E-02
2.70 MEV	4.07E-02	2.97E-05	1.49E-05	0.
2.80 MEV	4.95E-02	1.34E-06	3.61E-05	6.29E-03
2.90 MEV	2.79E-02	6.54E-05	8.06E-05	2.58E-02
3.00 MEV	5.82E-02	8.62E-06	2.26E-05	2.92E-03
3.20 MEV	7.72E-02	8.65E-05	5.40E-05	6.84E-03
3.40 MEV	3.33E-02	6.21E-05	7.60E-05	8.84E-03
3.60 MEV	4.71E-02	6.30E-05	6.22E-05	9.61E-03
3.80 MEV	3.96E-02	6.13E-05	6.96E-05	6.20E-03
4.00 MEV	8.32E-02	9.12E-05	3.29E-05	7.42E-03

1 SLOWING DOWN SPECTRUM AT 2.00 CM. FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.31E-02	1.07E-05	1.03E-04	4.80E-03
4.40 MEV	6.92E-02	8.23E-05	1.78E-05	4.63E-03
4.60 MEV	6.47E-02	4.21E-05	4.91E-05	3.43E-03
4.80 MEV	5.28E-02	8.35E-05	4.45E-05	8.81E-03
5.00 MEV	5.80E-02	7.06E-05	4.05E-05	1.40E-03
5.50 MEV	6.93E-02	5.68E-05	2.57E-05	1.43E-03
6.00 MEV	7.42E-02	8.86E-05	4.16E-05	5.31E-03
6.50 MEV	6.94E-02	2.51E-05	3.89E-06	1.82E-03
7.00 MEV	7.00E-02	4.32E-05	8.59E-06	4.35E-03
7.50 MEV	7.72E-02	6.94E-06	4.53E-06	1.35E-03
8.00 MEV	7.01E-02	1.39E-05	1.13E-05	2.12E-03
8.50 MEV	7.45E-02	1.39E-05	0.	2.37E-04
9.00 MEV	7.62E-02	4.17E-05	0.	4.25E-04
9.50 MEV	8.21E-02	0.	0.	6.35E-05
10.00 MEV	6.90E-02	0.	0.	1.27E-04
11.00 MEV	7.86E-02	0.	0.	6.48E-05
12.00 MEV	8.01E-02	0.	0.	6.07E-05
13.00 MEV	6.58E-02	0.	0.	2.14E-05
14.00 MEV	4.08E-02	0.	0.	3.86E-05
15.00 MEV	1.17E-03	0.	0.	4.16E-06
16.00 MEV	0.	0.	0.	8.32E-06
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E (MEV)	7.71	4.36	3.65	3.07

1 SLOWING DOWN SPECTRUM AT 4.00 CM, FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	3.19E-02	1.95E-06	1.95E-05	8.19E-03
0.15 MEV	2.15E-02	0.	5.78E-06	4.21E-03
0.20 MEV	4.20E-02	7.11E-06	0.	9.44E-03
0.25 MEV	2.80E-02	1.49E-05	1.42E-06	1.31E-02
0.30 MEV	2.44E-02	2.75E-06	0.	1.76E-03
0.35 MEV	2.17E-02	2.18E-05	3.75E-06	2.29E-03
0.40 MEV	2.62E-02	9.71E-06	2.06E-05	7.22E-03
0.45 MEV	1.59E-02	4.78E-06	1.83E-05	1.41E-02
0.50 MEV	2.12E-02	6.25E-05	2.00E-05	2.46E-03
0.55 MEV	3.43E-02	1.31E-05	5.28E-07	6.88E-03
0.60 MEV	3.26E-02	1.35E-04	5.78E-06	4.89E-03
0.65 MEV	1.55E-02	4.24E-05	5.22E-06	7.78E-03
0.70 MEV	3.87E-02	2.01E-06	0.	1.43E-03
0.75 MEV	2.30E-02	8.61E-06	2.39E-05	7.44E-03
0.80 MEV	6.22E-02	2.34E-05	2.68E-05	2.92E-02
0.85 MEV	3.72E-02	3.42E-05	6.42E-05	9.51E-03
0.90 MEV	1.92E-02	2.12E-05	1.06E-06	2.03E-03
0.95 MEV	3.02E-02	6.08E-06	1.90E-05	1.00E-02
1.00 MEV	2.62E-02	6.93E-05	2.02E-05	2.14E-03
1.10 MEV	2.75E-02	2.91E-05	9.96E-06	4.50E-03
1.20 MEV	2.97E-02	3.52E-05	1.58E-05	1.33E-02
1.30 MEV	3.01E-02	3.87E-05	2.62E-05	4.52E-03
1.40 MEV	4.08E-02	5.17E-05	2.42E-05	7.87E-03
1.50 MEV	2.62E-02	6.39E-05	2.07E-05	1.49E-02
1.60 MEV	4.42E-02	2.65E-05	2.97E-05	9.47E-03
1.70 MEV	3.69E-02	3.99E-05	1.78E-05	2.59E-03
1.80 MEV	2.52E-02	1.11E-04	9.31E-06	8.14E-03
1.90 MEV	5.83E-02	1.22E-05	3.83E-05	1.19E-02
2.00 MEV	3.56E-02	2.81E-05	1.43E-05	1.17E-02
2.10 MEV	2.63E-02	5.56E-05	4.04E-05	0.
2.20 MEV	2.45E-02	1.59E-05	5.14E-05	2.37E-02
2.30 MEV	5.27E-02	1.61E-05	3.10E-05	0.
2.40 MEV	4.77E-02	3.06E-05	3.10E-05	8.44E-03
2.50 MEV	3.79E-02	4.25E-05	4.25E-05	6.37E-03
2.60 MEV	5.24E-02	1.12E-04	4.32E-05	1.15E-02
2.70 MEV	3.35E-02	3.27E-05	2.82E-05	0.
2.80 MEV	4.50E-02	3.27E-05	4.94E-05	5.04E-03
2.90 MEV	2.24E-02	5.07E-05	4.62E-05	2.04E-02
3.00 MEV	4.98E-02	1.43E-05	3.20E-05	2.95E-03
3.20 MEV	6.79E-02	6.77E-05	1.77E-05	5.09E-03
3.40 MEV	2.71E-02	6.93E-05	3.58E-05	7.03E-03
3.60 MEV	4.14E-02	6.39E-05	1.49E-05	6.92E-03
3.80 MEV	3.58E-02	6.91E-05	2.33E-05	4.74E-03
4.00 MEV	7.48E-02	8.85E-05	1.43E-05	5.60E-03

1 SLOWING DOWN SPECTRUM AT 4.00 CM. FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.04E-02	5.34E-05	4.25E-05	3.14E-03
4.40 MEV	5.95E-02	6.89E-05	7.58E-06	3.17E-03
4.60 MEV	5.67E-02	2.88E-05	2.48E-05	2.25E-03
4.80 MEV	4.45E-02	6.09E-05	1.64E-07	6.48E-03
5.00 MEV	5.14E-02	4.71E-05	2.57E-06	1.02E-03
5.50 MEV	6.14E-02	5.18E-05	3.08E-06	1.17E-03
6.00 MEV	6.43E-02	8.15E-05	4.24E-06	4.09E-03
6.50 MEV	6.02E-02	2.43E-05	3.91E-06	1.19E-03
7.00 MEV	6.50E-02	4.58E-05	8.80E-06	2.96E-03
7.50 MEV	6.97E-02	2.81E-06	3.71E-06	9.55E-04
8.00 MEV	6.54E-02	7.28E-06	9.27E-06	1.55E-03
8.50 MEV	6.93E-02	1.24E-06	0.	1.48E-04
9.00 MEV	7.27E-02	1.05E-06	0.	2.49E-04
9.50 MEV	7.26E-02	1.60E-06	0.	4.89E-05
10.00 MEV	6.32E-02	2.67E-06	0.	9.78E-05
11.00 MEV	7.21E-02	0.	0.	4.03E-05
12.00 MEV	6.83E-02	0.	0.	3.66E-05
13.00 MEV	5.78E-02	0.	0.	1.73E-05
14.00 MEV	4.27E-02	0.	0.	3.10E-05
15.00 MEV	2.34E-03	0.	0.	3.66E-06
16.00 MEV	0.	0.	0.	7.32E-06
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
BAVE, E (MEV)	7.67	3.91	3.09	2.90

ISLOWING DOWN SPECTRUM AT 6.00 CM. FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	3.03E-02	2.32E-07	6.53E-06	7.30E-03
0.15 MEV	2.14E-02	0.	0.	4.88E-03
0.20 MEV	3.98E-02	0.	0.	1.03E-02
0.25 MEV	2.96E-02	1.04E-05	0.	1.59E-02
0.30 MEV	2.42E-02	5.59E-06	0.	1.69E-03
0.35 MEV	2.44E-02	8.08E-06	4.31E-05	2.99E-03
0.40 MEV	2.77E-02	1.18E-05	2.20E-05	7.58E-03
0.45 MEV	1.58E-02	4.69E-06	4.09E-06	1.03E-02
0.50 MEV	2.11E-02	8.78E-05	1.06E-05	3.06E-03
0.55 MEV	2.98E-02	9.40E-06	6.53E-06	5.97E-03
0.60 MEV	2.04E-02	1.47E-04	0.	5.43E-03
0.65 MEV	1.73E-02	3.06E-05	0.	8.08E-03
0.70 MEV	3.61E-02	4.13E-07	0.	1.41E-03
0.75 MEV	1.85E-02	1.01E-06	0.	6.25E-03
0.80 MEV	5.00E-02	1.93E-05	0.	2.98E-02
0.85 MEV	3.64E-02	2.76E-05	5.97E-05	7.09E-03
0.90 MEV	1.60E-02	2.34E-05	0.	1.79E-03
0.95 MEV	2.97E-02	2.32E-07	1.10E-06	9.95E-03
1.00 MEV	2.67E-02	7.61E-05	9.52E-06	2.02E-03
1.10 MEV	2.77E-02	4.72E-05	1.43E-05	4.23E-03
1.20 MEV	2.95E-02	2.98E-05	0.	1.26E-02
1.30 MEV	2.74E-02	2.39E-05	3.54E-05	5.35E-03
1.40 MEV	3.65E-02	2.90E-05	4.05E-05	8.22E-03
1.50 MEV	2.27E-02	6.82E-05	1.48E-05	1.54E-02
1.60 MEV	4.07E-02	2.44E-05	2.69E-05	6.82E-03
1.70 MEV	3.53E-02	3.97E-05	5.31E-06	2.88E-03
1.80 MEV	2.62E-02	6.83E-05	3.26E-05	8.33E-03
1.90 MEV	5.34E-02	3.64E-05	1.48E-05	1.13E-02
2.00 MEV	3.34E-02	4.76E-05	1.06E-05	1.11E-02
2.10 MEV	2.49E-02	4.08E-05	1.64E-05	0.
2.20 MEV	2.22E-02	2.57E-06	4.98E-05	2.29E-02
2.30 MEV	4.45E-02	5.06E-05	1.58E-05	0.
2.40 MEV	4.63E-02	4.71E-05	2.52E-05	7.96E-03
2.50 MEV	3.41E-02	6.75E-05	3.53E-05	6.62E-03
2.60 MEV	4.91E-02	6.87E-05	5.29E-05	1.29E-02
2.70 MEV	3.26E-02	1.24E-05	2.05E-05	0.
2.80 MEV	4.41E-02	2.76E-05	3.51E-05	5.55E-03
2.90 MEV	2.49E-02	7.63E-05	4.77E-05	2.14E-02
3.00 MEV	5.21E-02	3.28E-06	4.26E-05	2.30E-03
3.20 MEV	6.48E-02	7.09E-05	3.53E-05	5.68E-03
3.40 MEV	2.37E-02	7.67E-05	5.42E-05	7.79E-03
3.60 MEV	3.91E-02	5.21E-05	3.46E-05	7.39E-03
3.80 MEV	3.58E-02	7.71E-05	5.89E-05	5.70E-03
4.00 MEV	6.55E-02	1.07E-04	1.36E-05	6.66E-03

1 SLOWING DOWN SPECTRUM AT 6.00 CM. FOR SHONKA A-15H PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	2.92E-02	9.02E-05	4.94E-05	3.87E-03
4.40 MEV	5.70E-02	9.17E-05	6.03E-06	3.12E-03
4.60 MEV	4.98E-02	8.51E-05	3.15E-05	2.66E-03
4.80 MEV	4.28E-02	7.98E-05	1.02E-05	7.03E-03
5.00 MEV	4.74E-02	7.49E-05	1.02E-06	1.36E-03
5.50 MEV	5.95E-02	3.74E-05	1.32E-05	1.20E-03
6.00 MEV	5.88E-02	5.17E-05	2.18E-05	4.11E-03
6.50 MEV	6.14E-02	3.14E-05	1.31E-06	1.26E-03
7.00 MEV	5.78E-02	4.48E-05	3.03E-06	3.03E-03
7.50 MEV	6.11E-02	1.73E-05	9.86E-07	9.15E-04
8.00 MEV	5.84E-02	5.06E-05	2.46E-06	1.46E-03
8.50 MEV	6.24E-02	3.43E-06	0.	1.50E-04
9.00 MEV	6.45E-02	6.22E-06	0.	2.71E-04
9.50 MEV	6.68E-02	2.31E-06	0.	3.91E-05
10.00 MEV	5.83E-02	3.37E-06	0.	7.81E-05
11.00 MEV	6.55E-02	1.06E-06	0.	4.27E-05
12.00 MEV	5.78E-02	2.47E-06	0.	3.96E-05
13.00 MEV	4.52E-02	0.	0.	1.25E-05
14.00 MEV	4.03E-02	0.	0.	2.19E-05
15.00 MEV	0.	0.	0.	3.12E-06
16.00 MEV	0.	0.	0.	6.24E-06
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
DAVE, E (MEV)	7.53	4.30	3.28	2.94

1SLOWING DOWN SPECTRUM AT 10.0 CM, FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	2.99E-02	2.64E-06	1.01E-05	5.67E-03
0.15 MEV	2.09E-02	3.22E-07	3.42E-06	2.89E-03
0.20 MEV	4.00E-02	2.34E-07	0.	8.66E-03
0.25 MEV	2.43E-02	1.57E-05	3.30E-06	1.03E-02
0.30 MEV	2.34E-02	1.53E-06	2.39E-06	1.35E-03
0.35 MEV	2.47E-02	9.99E-06	2.33E-05	1.84E-03
0.40 MEV	2.66E-02	1.33E-05	3.46E-05	5.48E-03
0.45 MEV	1.54E-02	3.22E-07	1.61E-05	8.53E-03
0.50 MEV	2.00E-02	9.68E-05	1.07E-05	1.77E-03
0.55 MEV	3.68E-02	6.84E-07	5.47E-06	5.33E-03
0.60 MEV	3.09E-02	2.21E-04	8.08E-06	3.18E-03
0.65 MEV	1.71E-02	3.77E-05	3.35E-06	5.34E-03
0.70 MEV	3.84E-02	3.64E-06	7.62E-06	9.19E-04
0.75 MEV	1.90E-02	2.04E-06	6.98E-06	5.39E-03
0.80 MEV	6.47E-02	3.39E-05	1.57E-05	2.15E-02
0.85 MEV	3.09E-02	9.03E-06	6.67E-05	4.49E-03
0.90 MEV	1.62E-02	3.12E-05	0.	1.06E-03
0.95 MEV	3.09E-02	4.80E-06	1.15E-06	6.68E-03
1.00 MEV	2.38E-02	4.77E-05	3.94E-06	1.23E-03
1.10 MEV	2.67E-02	2.64E-05	1.78E-05	3.67E-03
1.20 MEV	2.94E-02	3.11E-05	3.57E-06	8.02E-03
1.30 MEV	2.49E-02	1.81E-05	3.21E-05	3.97E-03
1.40 MEV	3.31E-02	3.49E-05	4.45E-05	5.14E-03
1.50 MEV	2.43E-02	9.91E-05	2.18E-05	1.11E-02
1.60 MEV	4.05E-02	2.51E-05	2.28E-05	5.17E-03
1.70 MEV	2.97E-02	1.22E-05	7.81E-06	1.61E-03
1.80 MEV	2.48E-02	1.23E-04	3.04E-05	5.61E-03
1.90 MEV	5.45E-02	1.56E-05	3.45E-05	8.33E-03
2.00 MEV	3.55E-02	4.15E-05	1.21E-05	7.44E-03
2.10 MEV	2.66E-02	3.35E-05	3.37E-05	0.
2.20 MEV	2.15E-02	5.42E-06	4.86E-05	1.58E-02
2.30 MEV	5.12E-02	2.62E-05	2.64E-05	0.
2.40 MEV	4.33E-02	3.37E-05	2.70E-05	6.03E-03
2.50 MEV	3.15E-02	5.10E-05	5.44E-05	4.47E-03
2.60 MEV	4.33E-02	1.66E-04	3.44E-05	9.24E-03
2.70 MEV	2.78E-02	2.64E-05	4.24E-05	0.
2.80 MEV	4.38E-02	1.77E-05	5.06E-05	3.86E-03
2.90 MEV	2.29E-02	7.27E-05	5.63E-05	1.48E-02
3.00 MEV	5.34E-02	1.26E-05	6.47E-05	1.62E-03
3.20 MEV	6.15E-02	9.40E-05	3.24E-05	3.84E-03
3.40 MEV	2.71E-02	8.57E-05	6.48E-05	5.13E-03
3.60 MEV	3.88E-02	7.29E-05	2.33E-05	5.29E-03
3.80 MEV	3.60E-02	5.97E-05	3.93E-05	3.50E-03
4.00 MEV	7.20E-02	1.30E-04	1.02E-05	4.57E-03

1SLOWING DOWN SPECTRUM AT 10.0 CM, FOR SHONKA A-15V PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.24E-02	4.47E-05	5.38E-05	2.66E-03
4.40 MEV	4.89E-02	1.24E-04	8.40E-06	2.42E-03
4.60 MEV	5.60E-02	7.78E-05	2.98E-05	2.06E-03
4.80 MEV	3.91E-02	9.49E-05	7.28E-06	5.32E-03
5.00 MEV	4.69E-02	7.55E-05	3.39E-06	1.01E-03
5.50 MEV	5.75E-02	8.14E-05	1.11E-05	8.82E-04
6.00 MEV	6.24E-02	1.30E-04	1.83E-05	3.07E-03
6.50 MEV	5.23E-02	3.64E-05	3.70E-06	1.04E-03
7.00 MEV	5.53E-02	6.82E-05	8.75E-06	2.36E-03
7.50 MEV	6.32E-02	4.53E-06	1.97E-06	7.31E-04
8.00 MEV	5.30E-02	1.25E-05	4.93E-06	1.10E-03
8.50 MEV	5.82E-02	1.07E-06	0.	1.38E-04
9.00 MEV	5.95E-02	5.34E-07	0.	2.50E-04
9.50 MEV	5.55E-02	1.60E-06	0.	3.78E-05
10.00 MEV	4.78E-02	2.67E-06	0.	7.56E-05
11.00 MEV	6.17E-02	0.	0.	4.72E-05
12.00 MEV	5.81E-02	0.	0.	4.39E-05
13.00 MEV	6.30E-02	0.	0.	9.73E-06
14.00 MEV	4.83E-02	0.	0.	1.61E-05
15.00 MEV	7.99E-06	0.	0.	3.34E-06
16.00 MEV	0.	0.	0.	6.68E-06
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE. E(MEV)	7.69	4.19	3.21	2.99

1SLOWING DOWN SPECTRUM AT 14.0 CM. FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	2.93E-02	3.10E-06	9.00E-06	4.99E-03
0.15 MEV	2.11E-02	1.82E-07	3.95E-06	2.40E-03
0.20 MEV	3.53E-02	3.90E-06	0.	6.37E-03
0.25 MEV	2.55E-02	6.67E-06	0.	9.46E-03
0.30 MEV	2.12E-02	6.86E-06	2.34E-06	1.22E-03
0.35 MEV	2.19E-02	3.17E-05	1.08E-05	1.10E-03
0.40 MEV	2.74E-02	8.36E-06	6.54E-07	4.47E-03
0.45 MEV	1.24E-02	2.58E-06	8.31E-06	8.03E-03
0.50 MEV	1.73E-02	3.60E-05	2.32E-05	1.35E-03
0.55 MEV	2.65E-02	3.29E-06	4.33E-06	4.04E-03
0.60 MEV	2.68E-02	8.21E-05	0.	2.47E-03
0.65 MEV	1.36E-02	2.51E-05	3.00E-06	4.01E-03
0.70 MEV	3.05E-02	3.36E-06	4.92E-05	8.46E-04
0.75 MEV	1.83E-02	3.79E-06	4.68E-06	4.15E-03
0.80 MEV	3.92E-02	3.04E-05	1.45E-05	1.85E-02
0.85 MEV	4.02E-02	2.54E-05	6.96E-05	4.72E-03
0.90 MEV	1.40E-02	1.47E-05	0.	1.22E-03
0.95 MEV	2.26E-02	2.12E-05	9.40E-06	6.15E-03
1.00 MEV	2.26E-02	2.70E-05	1.45E-05	1.02E-03
1.10 MEV	2.15E-02	2.54E-05	6.11E-06	3.77E-03
1.20 MEV	2.57E-02	2.41E-05	4.49E-06	7.09E-03
1.30 MEV	2.39E-02	2.25E-05	2.30E-05	3.48E-03
1.40 MEV	3.20E-02	4.83E-05	2.26E-05	4.59E-03
1.50 MEV	2.17E-02	6.33E-05	1.13E-05	1.00E-02
1.60 MEV	3.74E-02	1.28E-05	3.55E-05	4.56E-03
1.70 MEV	2.88E-02	1.55E-05	3.90E-05	1.66E-03
1.80 MEV	2.04E-02	6.92E-05	8.78E-06	5.77E-03
1.90 MEV	4.33E-02	1.73E-05	3.17E-05	7.09E-03
2.00 MEV	3.08E-02	2.81E-05	1.13E-05	6.60E-03
2.10 MEV	2.24E-02	2.76E-05	2.41E-05	0.
2.20 MEV	2.01E-02	1.48E-05	5.75E-05	1.57E-02
2.30 MEV	3.88E-02	1.50E-05	1.60E-05	0.
2.40 MEV	3.86E-02	3.53E-05	3.69E-05	6.49E-03
2.50 MEV	2.59E-02	2.74E-05	2.41E-05	3.99E-03
2.60 MEV	4.28E-02	1.04E-04	5.56E-05	9.04E-03
2.70 MEV	2.84E-02	2.82E-05	1.58E-05	0.
2.80 MEV	3.77E-02	1.05E-05	2.52E-05	4.35E-03
2.90 MEV	2.25E-02	6.23E-05	5.51E-05	1.30E-02
3.00 MEV	3.75E-02	3.85E-05	9.33E-06	2.28E-03
3.20 MEV	5.20E-02	4.79E-05	2.03E-05	3.05E-03
3.40 MEV	2.41E-02	5.79E-05	4.69E-05	4.41E-03
3.60 MEV	3.43E-02	3.55E-05	2.82E-05	4.75E-03
3.80 MEV	2.81E-02	2.96E-05	2.44E-05	2.65E-03
4.00 MEV	5.20E-02	6.02E-05	2.29E-05	3.66E-03

1SLOWING DOWN SPECTRUM AT 14.0 CM. FOR SHONKA A-150 PLASTIC
O-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	2.44E-02	8.04E-06	5.61E-05	1.98E-03
4.40 MEV	4.56E-02	6.62E-05	1.37E-05	2.27E-03
4.60 MEV	3.58E-02	2.77E-05	1.62E-05	1.75E-03
4.80 MEV	3.62E-02	5.63E-05	2.26E-05	4.73E-03
5.00 MEV	3.66E-02	4.93E-05	3.58E-05	8.26E-04
5.50 MEV	4.42E-02	4.09E-05	1.86E-06	7.88E-04
6.00 MEV	4.59E-02	5.56E-05	2.00E-06	2.87E-03
6.50 MEV	4.64E-02	2.62E-05	1.55E-06	9.04E-04
7.00 MEV	4.75E-02	5.22E-05	5.93E-06	2.19E-03
7.50 MEV	4.61E-02	1.57E-07	1.21E-06	7.00E-04
8.00 MEV	4.46E-02	4.70E-07	1.46E-06	1.07E-03
8.50 MEV	4.58E-02	0.	2.09E-06	1.41E-04
9.00 MEV	5.64E-02	0.	5.23E-06	1.85E-04
9.50 MEV	5.10E-02	0.	0.	6.49E-05
10.00 MEV	5.31E-02	0.	0.	1.50E-04
11.00 MEV	4.39E-02	0.	0.	2.79E-05
12.00 MEV	3.71E-02	0.	0.	2.67E-05
13.00 MEV	3.00E-02	0.	0.	8.02E-06
14.00 MEV	2.18E-02	0.	0.	1.48E-05
15.00 MEV	1.17E-03	0.	0.	1.26E-06
16.00 MEV	0.	0.	0.	2.53E-06
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE. E (MEV)	7.20	3.95	3.23	3.02

1 SLOWING DOWN SPECTRUM AT 0.00 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	0.	0.	0.	0.
0.15 MEV	0.	0.	0.	0.
0.20 MEV	0.	0.	0.	0.
0.25 MEV	0.	0.	0.	0.
0.30 MEV	0.	0.	0.	0.
0.35 MEV	0.	0.	0.	0.
0.40 MEV	0.	0.	0.	0.
0.45 MEV	0.	0.	0.	0.
0.50 MEV	0.	0.	0.	0.
0.55 MEV	0.	0.	0.	0.
0.60 MEV	0.	0.	0.	0.
0.65 MEV	0.	0.	0.	0.
0.70 MEV	0.	0.	0.	0.
0.75 MEV	0.	0.	0.	0.
0.80 MEV	0.	0.	0.	0.
0.85 MEV	0.	0.	0.	0.
0.90 MEV	0.	0.	0.	0.
0.95 MEV	0.	0.	0.	0.
1.00 MEV	0.	0.	0.	0.
1.10 MEV	0.	0.	0.	0.
1.20 MEV	0.	0.	0.	0.
1.30 MEV	0.	0.	0.	0.
1.40 MEV	0.	0.	0.	0.
1.50 MEV	0.	0.	0.	0.
1.60 MEV	0.	0.	0.	0.
1.70 MEV	0.	0.	0.	0.
1.80 MEV	0.	0.	0.	0.
1.90 MEV	0.	0.	0.	0.
2.00 MEV	0.	0.	0.	0.
2.10 MEV	0.	0.	0.	0.
2.20 MEV	0.	0.	0.	0.
2.30 MEV	0.	0.	0.	0.
2.40 MEV	0.	0.	0.	0.
2.50 MEV	0.	0.	0.	0.
2.60 MEV	0.	0.	0.	0.
2.70 MEV	0.	0.	0.	0.
2.80 MEV	0.	0.	0.	0.
2.90 MEV	0.	0.	0.	0.
3.00 MEV	0.	0.	0.	0.
3.20 MEV	0.	0.	0.	0.
3.40 MEV	0.	0.	0.	0.
3.60 MEV	0.	0.	0.	0.
3.80 MEV	0.	0.	0.	0.
4.00 MEV	0.	0.	0.	0.

1 SLOWING DOWN SPECTRUM AT 0.00 CM, FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	0.	0.	0.	0.
4.40 MEV	0.	0.	0.	0.
4.60 MEV	0.	0.	0.	0.
4.80 MEV	0.	0.	0.	0.
5.00 MEV	0.	0.	0.	0.
5.50 MEV	0.	0.	0.	0.
6.00 MEV	0.	0.	0.	0.
6.50 MEV	0.	0.	0.	0.
7.00 MEV	0.	0.	0.	0.
7.50 MEV	0.	0.	0.	0.
8.00 MEV	0.	0.	0.	0.
8.50 MEV	0.	0.	0.	0.
9.00 MEV	0.	0.	0.	0.
9.50 MEV	0.	0.	0.	0.
10.00 MEV	0.	0.	0.	0.
11.00 MEV	0.	0.	0.	0.
12.00 MEV	0.	0.	0.	0.
13.00 MEV	0.	0.	0.	0.
14.00 MEV	0.	0.	0.	0.
15.00 MEV	0.	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	0.	0.	0.	0.

1SLOWING DOWN SPECTRUM AT 0.05 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	6.27E-03	3.72E-05	3.51E-05	2.88E-03
0.15 MEV	3.16E-03	1.57E-06	0.	3.44E-03
0.20 MEV	1.37E-02	0.	0.	2.15E-04
0.25 MEV	1.88E-02	3.44E-04	0.	5.40E-03
0.30 MEV	4.13E-03	0.	0.	8.85E-04
0.35 MEV	7.70E-03	3.49E-04	1.08E-04	1.04E-03
0.40 MEV	3.84E-03	1.94E-04	9.64E-05	3.88E-03
0.45 MEV	3.83E-03	8.70E-05	0.	5.26E-03
0.50 MEV	6.48E-03	2.85E-04	0.	1.66E-03
0.55 MEV	2.18E-02	9.50E-05	0.	1.71E-03
0.60 MEV	2.00E-02	3.82E-04	0.	3.23E-03
0.65 MEV	3.07E-03	8.43E-04	0.	3.04E-03
0.70 MEV	3.56E-02	4.75E-05	0.	1.79E-03
0.75 MEV	4.31E-03	1.55E-05	3.51E-05	1.47E-03
0.80 MEV	7.82E-02	2.09E-04	0.	1.65E-02
0.85 MEV	2.47E-02	5.20E-04	3.22E-04	4.58E-03
0.90 MEV	9.08E-03	5.40E-04	0.	0.
0.95 MEV	2.90E-03	3.72E-05	0.	2.68E-03
1.00 MEV	9.28E-03	8.51E-04	0.	6.51E-04
1.10 MEV	2.12E-02	3.29E-04	4.82E-05	1.50E-03
1.20 MEV	3.34E-02	7.32E-04	1.75E-05	9.43E-03
1.30 MEV	1.56E-02	2.75E-04	8.73E-05	2.61E-03
1.40 MEV	2.06E-02	8.90E-04	0.	2.83E-03
1.50 MEV	1.51E-02	3.50E-04	6.58E-05	1.17E-02
1.60 MEV	3.24E-02	6.18E-04	1.61E-04	5.00E-03
1.70 MEV	3.12E-02	2.11E-04	1.75E-05	4.84E-04
1.80 MEV	2.18E-02	3.44E-04	1.02E-04	2.98E-03
1.90 MEV	4.79E-02	1.05E-04	1.75E-05	7.40E-03
2.00 MEV	3.33E-02	2.88E-04	3.34E-05	7.51E-03
2.10 MEV	1.50E-02	1.23E-04	6.58E-05	0.
2.20 MEV	1.75E-02	1.91E-05	2.32E-04	1.99E-02
2.30 MEV	5.79E-02	3.81E-05	6.58E-05	0.
2.40 MEV	4.43E-02	5.72E-05	5.26E-05	4.73E-03
2.50 MEV	1.91E-02	2.63E-04	8.16E-05	4.00E-03
2.60 MEV	5.22E-02	1.53E-04	2.15E-04	5.87E-03
2.70 MEV	3.08E-02	0.	4.82E-05	0.
2.80 MEV	5.42E-02	1.25E-04	1.02E-04	2.06E-03
2.90 MEV	1.60E-02	1.38E-04	2.43E-04	1.98E-02
3.00 MEV	4.51E-02	0.	1.45E-04	3.02E-04
3.20 MEV	8.12E-02	2.08E-04	1.07E-04	3.40E-03
3.40 MEV	2.06E-02	1.32E-04	1.51E-04	4.99E-03
3.60 MEV	3.92E-02	1.39E-04	1.24E-04	8.57E-03
3.80 MEV	4.47E-02	1.94E-04	2.05E-04	4.35E-03
4.00 MEV	8.92E-02	3.40E-04	9.71E-05	3.30E-03

1 SLOWING DOWN SPECTRUM AT 0.05 CM, FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.77E-02	3.19E-04	3.38E-04	1.95E-03
4.40 MEV	6.15E-02	2.15E-04	1.67E-05	5.13E-03
4.60 MEV	7.84E-02	2.77E-04	6.68E-05	5.84E-04
4.80 MEV	6.08E-02	7.64E-05	0.	6.37E-03
5.00 MEV	5.67E-02	7.64E-05	0.	3.45E-05
5.50 MEV	8.48E-02	9.17E-05	0.	1.76E-03
6.00 MEV	9.09E-02	1.83E-04	0.	5.35E-03
6.50 MEV	7.71E-02	0.	0.	2.58E-03
7.00 MEV	6.75E-02	0.	0.	4.96E-03
7.50 MEV	1.01E-01	0.	0.	3.54E-03
8.00 MEV	7.96E-02	0.	0.	3.66E-03
8.50 MEV	9.97E-02	0.	0.	1.48E-03
9.00 MEV	8.66E-02	0.	0.	2.26E-03
9.50 MEV	8.24E-02	0.	0.	4.63E-04
10.00 MEV	7.79E-02	0.	0.	9.26E-04
11.00 MEV	9.73E-02	0.	0.	2.27E-04
12.00 MEV	7.75E-02	0.	0.	2.27E-04
13.00 MEV	9.24E-02	0.	0.	0.
14.00 MEV	5.49E-02	0.	0.	0.
15.00 MEV	2.34E-02	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	8.26	2.59	2.90	4.31

1SLOWING DOWN SPECTRUM AT 0.10 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	7.82E-03	6.74E-05	0.	6.43E-03
0.15 MEV	2.86E-03	0.	0.	9.33E-04
0.20 MEV	2.96E-02	1.07E-04	0.	1.52E-03
0.25 MEV	6.92E-03	2.90E-04	0.	7.32E-03
0.30 MEV	4.47E-03	0.	0.	4.03E-04
0.35 MEV	8.32E-03	4.35E-04	0.	6.03E-04
0.40 MEV	8.22E-03	2.95E-04	0.	2.45E-03
0.45 MEV	3.10E-03	5.94E-05	0.	3.47E-04
0.50 MEV	8.61E-03	2.27E-05	0.	5.35E-04
0.55 MEV	2.34E-02	5.55E-05	0.	1.72E-03
0.60 MEV	6.58E-03	6.74E-05	0.	7.36E-04
0.65 MEV	4.66E-03	9.45E-04	0.	1.46E-04
0.70 MEV	1.17E-02	7.46E-05	0.	3.84E-04
0.75 MEV	8.97E-03	1.37E-04	0.	4.35E-03
0.80 MEV	4.80E-02	3.24E-04	6.54E-05	1.48E-02
0.85 MEV	2.39E-02	5.43E-04	1.43E-04	3.25E-03
0.90 MEV	6.99E-03	6.16E-04	0.	1.11E-03
0.95 MEV	1.62E-02	6.74E-05	0.	3.25E-03
1.00 MEV	7.27E-03	7.67E-04	0.	6.96E-05
1.10 MEV	9.04E-03	3.59E-04	0.	2.10E-03
1.20 MEV	2.61E-02	8.84E-04	0.	6.59E-03
1.30 MEV	2.59E-02	3.14E-04	3.27E-05	2.38E-03
1.40 MEV	2.72E-02	9.25E-04	7.14E-05	1.63E-03
1.50 MEV	1.57E-02	2.25E-04	0.	9.00E-03
1.60 MEV	2.84E-02	4.78E-04	3.27E-05	3.31E-03
1.70 MEV	2.72E-02	1.02E-04	0.	1.32E-03
1.80 MEV	1.12E-02	1.56E-04	0.	2.67E-03
1.90 MEV	6.73E-02	5.94E-05	1.04E-04	6.67E-03
2.00 MEV	2.80E-02	1.43E-04	0.	3.76E-03
2.10 MEV	1.58E-02	1.07E-04	3.27E-05	0.
2.20 MEV	8.81E-03	1.61E-04	7.14E-05	1.80E-02
2.30 MEV	3.97E-02	0.	3.27E-05	0.
2.40 MEV	2.79E-02	0.	0.	5.02E-03
2.50 MEV	2.73E-02	0.	1.04E-04	4.78E-03
2.60 MEV	4.69E-02	0.	3.27E-05	4.55E-03
2.70 MEV	3.08E-02	0.	1.04E-04	0.
2.80 MEV	3.79E-02	0.	9.82E-05	2.07E-03
2.90 MEV	1.28E-02	0.	7.14E-05	1.68E-02
3.00 MEV	6.07E-02	0.	7.14E-05	2.71E-06
3.20 MEV	6.51E-02	0.	3.57E-05	2.95E-03
3.40 MEV	1.61E-02	0.	1.43E-04	4.47E-03
3.60 MEV	3.06E-02	0.	0.	7.50E-03
3.80 MEV	3.62E-02	0.	0.	2.62E-03
4.00 MEV	7.26E-02	0.	0.	1.49E-03

1 SLOWING DOWN SPECTRUM AT 0.10 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	2.49E-02	0.	0.	1.46E-03
4.40 MEV	5.26E-02	0.	0.	6.32E-03
4.60 MEV	5.60E-02	0.	0.	9.17E-04
4.80 MEV	4.65E-02	0.	0.	4.36E-03
5.00 MEV	5.44E-02	0.	0.	2.20E-03
5.50 MEV	6.08E-02	0.	0.	1.23E-03
6.00 MEV	7.53E-02	0.	0.	4.72E-03
6.50 MEV	5.77E-02	0.	0.	2.12E-03
7.00 MEV	6.15E-02	0.	0.	4.67E-03
7.50 MEV	7.34E-02	0.	0.	3.73E-03
8.00 MEV	8.19E-02	0.	0.	4.34E-03
8.50 MEV	5.68E-02	0.	0.	1.44E-03
9.00 MEV	7.43E-02	0.	0.	1.85E-03
9.50 MEV	9.08E-02	0.	0.	5.69E-04
10.00 MEV	7.53E-02	0.	0.	1.14E-03
11.00 MEV	8.79E-02	0.	0.	1.20E-04
12.00 MEV	8.12E-02	0.	0.	1.20E-04
13.00 MEV	7.13E-02	0.	0.	0.
14.00 MEV	8.20E-02	0.	0.	0.
15.00 MEV	1.17E-02	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0 AVE, E(MEV)	8.51	1.12	2.44	4.47

1SLOWING DOWN SPECTRUM AT 0.15 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	1.14E-02	3.25E-05	4.27E-05	0.22E-03
0.15 MEV	5.10E-03	0.	0.	1.29E-03
0.20 MEV	2.88E-02	1.07E-04	0.	2.03E-03
0.25 MEV	8.81E-03	2.99E-04	0.	1.56E-02
0.30 MEV	8.26E-03	0.	0.	5.82E-04
0.35 MEV	5.98E-03	2.09E-04	4.27E-05	1.51E-03
0.40 MEV	7.16E-03	1.80E-04	9.64E-05	2.83E-03
0.45 MEV	3.79E-03	0.	0.	1.47E-02
0.50 MEV	9.54E-03	8.24E-06	0.	1.29E-03
0.55 MEV	1.92E-02	6.57E-05	4.27E-05	5.09E-03
0.60 MEV	1.54E-02	4.25E-04	0.	1.70E-03
0.65 MEV	3.60E-03	6.52E-04	4.27E-05	5.25E-03
0.70 MEV	1.43E-02	3.61E-05	0.	0.
0.75 MEV	1.18E-02	1.19E-04	4.27E-05	5.36E-03
0.80 MEV	6.96E-02	2.58E-04	6.54E-05	1.81E-02
0.85 MEV	2.06E-02	2.71E-04	1.22E-04	6.46E-03
0.90 MEV	4.46E-03	4.89E-04	8.55E-05	8.34E-04
0.95 MEV	1.27E-02	3.25E-05	0.	7.36E-03
1.00 MEV	7.82E-03	7.42E-04	0.	9.93E-04
1.10 MEV	1.10E-02	3.05E-04	4.82E-05	2.90E-03
1.20 MEV	1.43E-02	5.64E-04	0.	1.09E-02
1.30 MEV	2.15E-02	1.85E-04	3.27E-05	7.50E-03
1.40 MEV	2.68E-02	6.60E-04	3.96E-05	5.88E-03
1.50 MEV	9.08E-03	2.02E-04	4.82E-05	1.42E-02
1.60 MEV	1.89E-02	4.75E-04	3.27E-05	8.47E-03
1.70 MEV	1.82E-02	2.82E-04	0.	1.55E-03
1.80 MEV	1.30E-02	3.70E-04	4.82E-05	5.93E-03
1.90 MEV	7.92E-02	0.	7.24E-05	1.09E-02
2.00 MEV	1.51E-02	5.37E-05	0.	1.38E-02
2.10 MEV	1.71E-02	3.07E-04	8.09E-05	0.
2.20 MEV	1.21E-02	1.61E-04	3.96E-05	2.53E-02
2.30 MEV	4.63E-02	3.28E-05	8.09E-05	0.
2.40 MEV	2.96E-02	0.	0.	1.03E-02
2.50 MEV	3.13E-02	1.67E-04	1.21E-04	5.67E-03
2.60 MEV	2.79E-02	2.29E-04	3.27E-05	1.21E-02
2.70 MEV	2.25E-02	3.28E-05	1.21E-04	0.
2.80 MEV	3.53E-02	1.67E-04	1.46E-04	8.83E-03
2.90 MEV	1.60E-02	3.28E-05	8.79E-05	1.92E-02
3.00 MEV	7.55E-02	3.28E-05	1.84E-04	3.46E-03
3.20 MEV	6.00E-02	2.14E-04	1.98E-05	3.40E-03
3.40 MEV	1.27E-02	1.49E-04	7.93E-05	5.16E-03
3.60 MEV	3.24E-02	1.82E-04	0.	7.74E-03
3.80 MEV	2.64E-02	1.67E-04	0.	2.80E-03
4.00 MEV	8.66E-02	2.65E-04	0.	1.77E-03

1 SLOWING DOWN SPECTRUM AT 0.15 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	2.69E-02	3.33E-04	0.	1.47E-03
4.40 MEV	5.23E-02	9.82E-05	0.	5.92E-03
4.60 MEV	5.73E-02	0.	0.	9.91E-04
4.80 MEV	2.88E-02	9.82E-05	0.	5.31E-03
5.00 MEV	3.63E-02	9.82E-05	0.	8.88E-05
5.50 MEV	5.65E-02	1.18E-04	0.	1.44E-03
6.00 MEV	6.35E-02	2.36E-04	0.	4.74E-03
6.50 MEV	5.07E-02	0.	0.	2.47E-03
7.00 MEV	6.10E-02	0.	0.	4.96E-03
7.50 MEV	7.70E-02	0.	0.	3.53E-03
8.00 MEV	7.66E-02	0.	0.	4.02E-03
8.50 MEV	6.72E-02	0.	0.	1.36E-03
9.00 MEV	7.97E-02	0.	0.	2.15E-03
9.50 MEV	8.87E-02	0.	0.	3.63E-04
10.00 MEV	7.20E-02	0.	0.	7.27E-04
11.00 MEV	7.15E-02	0.	0.	1.67E-04
12.00 MEV	9.34E-02	0.	0.	1.67E-04
13.00 MEV	9.63E-02	0.	0.	0.
14.00 MEV	9.90E-02	0.	0.	0.
15.00 MEV	0.	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE. E (MEV)	8.72	2.74	2.13	3.77

ISLOWING DOWN SPECTRUM AT 0.20 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	7.12E-03	1.86E-05	0.	1.60E-03
0.15 MEV	5.06E-03	1.57E-06	0.	6.77E-04
0.20 MEV	1.75E-02	3.58E-05	0.	3.66E-03
0.25 MEV	8.27E-03	3.14E-04	0.	3.83E-03
0.30 MEV	2.88E-03	0.	0.	2.99E-04
0.35 MEV	8.08E-03	3.32E-04	0.	7.78E-04
0.40 MEV	7.30E-03	1.60E-04	0.	2.87E-04
0.45 MEV	3.61E-03	1.57E-06	0.	5.20E-03
0.50 MEV	7.25E-03	8.24E-06	0.	6.73E-04
0.55 MEV	1.92E-02	1.66E-04	0.	1.20E-04
0.60 MEV	1.87E-02	1.51E-04	0.	1.21E-03
0.65 MEV	7.46E-03	7.82E-04	0.	1.21E-03
0.70 MEV	3.40E-02	2.71E-05	0.	0.
0.75 MEV	5.32E-03	4.95E-05	0.	8.60E-04
0.80 MEV	1.02E-01	1.74E-04	0.	1.41E-02
0.85 MEV	1.61E-02	4.89E-04	0.	2.05E-03
0.90 MEV	6.64E-03	4.80E-04	0.	2.67E-05
0.95 MEV	1.57E-02	1.86E-05	0.	1.18E-03
1.00 MEV	1.26E-02	4.95E-04	0.	5.70E-04
1.10 MEV	1.24E-02	3.19E-04	0.	9.73E-04
1.20 MEV	1.86E-02	6.80E-04	0.	5.22E-03
1.30 MEV	2.03E-02	2.58E-04	0.	9.33E-04
1.40 MEV	4.20E-02	8.70E-04	1.58E-05	1.01E-03
1.50 MEV	1.77E-02	1.72E-04	0.	1.39E-02
1.60 MEV	2.61E-02	5.42E-04	0.	2.40E-03
1.70 MEV	3.88E-02	1.77E-04	0.	5.44E-04
1.80 MEV	1.20E-02	3.21E-04	0.	1.87E-03
1.90 MEV	5.45E-02	0.	0.	6.14E-03
2.00 MEV	2.87E-02	1.79E-05	0.	3.29E-03
2.10 MEV	1.70E-02	3.58E-05	0.	0.
2.20 MEV	1.57E-02	5.37E-05	0.	1.46E-02
2.30 MEV	6.60E-02	0.	0.	0.
2.40 MEV	3.67E-02	0.	1.58E-05	2.54E-03
2.50 MEV	4.46E-02	0.	0.	2.05E-03
2.60 MEV	5.58E-02	6.55E-05	0.	1.02E-02
2.70 MEV	1.69E-02	0.	0.	0.
2.80 MEV	4.06E-02	0.	0.	2.05E-03
2.90 MEV	1.26E-02	0.	0.	1.96E-02
3.00 MEV	5.16E-02	0.	0.	1.16E-03
3.20 MEV	8.35E-02	3.27E-05	7.91E-06	4.63E-03
3.40 MEV	1.49E-02	0.	0.	3.52E-03
3.60 MEV	2.29E-02	3.27E-05	7.91E-06	6.35E-03
3.80 MEV	3.40E-02	0.	0.	5.36E-03
4.00 MEV	8.36E-02	3.27E-05	0.	6.74E-03

1 SLOWING DOWN SPECTRUM AT 0.20 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	2.56E-02	0.	7.91E-06	5.03E-03
4.40 MEV	6.53E-02	3.27E-05	0.	4.61E-03
4.60 MEV	7.05E-02	0.	7.91E-06	2.17E-03
4.80 MEV	4.32E-02	3.27E-05	7.91E-06	6.54E-03
5.00 MEV	4.54E-02	3.27E-05	0.	7.46E-04
5.50 MEV	6.98E-02	3.93E-05	9.49E-06	2.24E-03
6.00 MEV	7.64E-02	7.86E-05	1.58E-05	4.46E-03
6.50 MEV	6.73E-02	0.	0.	2.31E-03
7.00 MEV	6.88E-02	0.	0.	3.34E-03
7.50 MEV	1.06E-01	0.	0.	3.13E-03
8.00 MEV	7.82E-02	0.	0.	2.55E-03
8.50 MEV	6.97E-02	0.	0.	1.53E-03
9.00 MEV	8.59E-02	0.	0.	2.90E-03
9.50 MEV	9.37E-02	0.	0.	2.42E-04
10.00 MEV	8.31E-02	0.	0.	4.83E-04
11.00 MEV	1.25E-01	0.	0.	3.33E-04
12.00 MEV	1.20E-01	0.	0.	3.33E-04
13.00 MEV	1.10E-01	0.	0.	0.
14.00 MEV	5.56E-02	0.	0.	0.
15.00 MEV	0.	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
DAVE, E(MEV)	8.51	1.74	4.54	4.47

1 SLOWING DOWN SPECTRUM AT 0.40 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	1.28E-02	3.95E-05	0.	1.26E-03
0.15 MEV	6.27E-03	0.	0.	1.03E-05
0.20 MEV	1.99E-02	3.58E-05	0.	5.22E-03
0.25 MEV	1.18E-02	3.61E-04	0.	5.07E-03
0.30 MEV	9.56E-03	0.	0.	2.93E-05
0.35 MEV	9.36E-03	1.60E-04	1.62E-04	1.80E-06
0.40 MEV	1.01E-02	1.67E-04	0.	2.34E-04
0.45 MEV	5.88E-03	1.19E-04	0.	4.78E-03
0.50 MEV	9.55E-03	1.30E-04	0.	8.89E-06
0.55 MEV	1.61E-02	8.48E-05	0.	4.21E-04
0.60 MEV	1.05E-02	8.31E-05	0.	2.96E-06
0.65 MEV	1.29E-02	6.43E-04	0.	1.26E-05
0.70 MEV	1.74E-02	4.49E-05	0.	1.44E-06
0.75 MEV	1.30E-02	4.74E-05	0.	1.10E-03
0.80 MEV	2.85E-02	1.78E-04	0.	7.98E-03
0.85 MEV	4.30E-02	3.58E-04	0.	2.41E-03
0.90 MEV	1.38E-02	5.30E-04	0.	4.02E-04
0.95 MEV	1.26E-02	3.95E-05	0.	1.43E-03
1.00 MEV	1.27E-02	4.93E-04	0.	0.
1.10 MEV	1.60E-02	3.56E-04	0.	1.18E-03
1.20 MEV	1.67E-02	5.15E-04	0.	9.91E-04
1.30 MEV	1.51E-02	2.56E-04	8.09E-05	1.83E-03
1.40 MEV	3.58E-02	6.26E-04	0.	7.19E-04
1.50 MEV	1.21E-02	2.55E-04	0.	1.00E-02
1.60 MEV	1.52E-02	6.33E-04	0.	1.57E-03
1.70 MEV	2.63E-02	1.67E-04	0.	7.05E-04
1.80 MEV	1.45E-02	2.80E-04	8.09E-05	1.78E-03
1.90 MEV	4.67E-02	1.19E-04	0.	3.28E-03
2.00 MEV	2.34E-02	1.96E-04	0.	3.04E-03
2.10 MEV	1.48E-02	1.67E-04	0.	0.
2.20 MEV	1.48E-02	5.37E-05	8.09E-05	1.48E-02
2.30 MEV	3.01E-02	0.	0.	0.
2.40 MEV	3.16E-02	6.20E-05	0.	4.09E-03
2.50 MEV	3.94E-02	6.94E-05	0.	2.30E-03
2.60 MEV	5.34E-02	2.18E-05	8.09E-05	7.30E-03
2.70 MEV	2.43E-02	6.20E-05	0.	0.
2.80 MEV	3.21E-02	6.94E-05	8.09E-05	4.20E-03
2.90 MEV	2.71E-02	6.20E-05	0.	1.03E-02
3.00 MEV	3.66E-02	0.	0.	2.38E-03
3.20 MEV	5.28E-02	7.66E-05	4.04E-05	2.17E-03
3.40 MEV	1.48E-02	9.67E-05	8.09E-05	2.61E-03
3.60 MEV	2.76E-02	1.08E-04	4.04E-05	4.35E-03
3.80 MEV	2.83E-02	1.93E-04	1.62E-04	1.28E-03
4.00 MEV	5.42E-02	8.03E-05	0.	3.00E-03

1SLOWING DOWN SPECTRUM AT 0.4μ CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	1.64E-02	1.39E-04	0.	1.50E-03
4.40 MEV	3.93E-02	1.09E-05	0.	4.08E-03
4.60 MEV	2.43E-02	0.	0.	1.68E-03
4.80 MEV	2.83E-02	1.09E-05	0.	5.15E-03
5.00 MEV	3.36E-02	1.09E-05	0.	1.20E-03
5.50 MEV	3.74E-02	1.31E-05	0.	1.31E-03
6.00 MEV	3.87E-02	2.62E-05	0.	3.51E-03
6.50 MEV	3.92E-02	0.	0.	2.05E-03
7.00 MEV	3.68E-02	0.	0.	3.55E-03
7.50 MEV	4.16E-02	0.	0.	3.04E-03
8.00 MEV	4.93E-02	0.	0.	2.88E-03
8.50 MEV	3.99E-02	0.	0.	1.38E-03
9.00 MEV	4.87E-02	0.	0.	2.21E-03
9.50 MEV	6.45E-02	0.	0.	3.87E-04
10.00 MEV	7.99E-02	0.	0.	7.75E-04
11.00 MEV	6.58E-02	0.	0.	2.13E-04
12.00 MEV	6.51E-02	0.	0.	2.13E-04
13.00 MEV	3.21E-02	0.	0.	0.
14.00 MEV	3.34E-02	0.	0.	0.
15.00 MEV	0.	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	8.02	1.87	2.77	4.71

1SLOWING DOWN SPECTRUM AT 0.60 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	1.33E-02	2.65E-05	0.	2.04E-03
0.15 MEV	7.02E-03	0.	0.	1.24E-03
0.20 MEV	2.47E-02	1.99E-05	0.	4.28E-03
0.25 MEV	1.73E-02	2.56E-04	0.	3.87E-03
0.30 MEV	1.21E-02	0.	0.	4.68E-04
0.35 MEV	1.21E-02	2.44E-04	1.06E-04	7.23E-04
0.40 MEV	1.36E-02	1.74E-04	1.38E-05	1.98E-03
0.45 MEV	8.33E-03	5.35E-05	1.59E-06	4.08E-03
0.50 MEV	1.27E-02	1.03E-04	2.13E-05	7.29E-04
0.55 MEV	2.09E-02	1.19E-04	0.	1.27E-03
0.60 MEV	2.23E-02	1.84E-04	0.	1.54E-03
0.65 MEV	9.41E-03	6.52E-04	0.	9.59E-04
0.70 MEV	2.91E-02	3.19E-05	0.	4.02E-04
0.75 MEV	1.17E-02	4.27E-05	0.	1.14E-03
0.80 MEV	7.02E-02	1.96E-04	1.99E-05	9.10E-03
0.85 MEV	3.38E-02	4.11E-04	0.	2.56E-03
0.90 MEV	1.01E-02	4.53E-04	0.	4.81E-04
0.95 MEV	1.64E-02	2.65E-05	6.59E-06	1.34E-03
1.00 MEV	1.72E-02	4.49E-04	1.48E-05	7.30E-04
1.10 MEV	2.03E-02	2.90E-04	7.69E-06	1.14E-03
1.20 MEV	2.31E-02	5.70E-04	0.	3.10E-03
1.30 MEV	2.47E-02	2.29E-04	6.61E-05	1.45E-03
1.40 MEV	3.95E-02	6.47E-04	7.38E-06	8.49E-04
1.50 MEV	1.75E-02	2.16E-04	1.10E-05	1.14E-02
1.60 MEV	3.19E-02	4.59E-04	9.96E-06	1.66E-03
1.70 MEV	3.14E-02	1.38E-04	1.15E-05	2.70E-04
1.80 MEV	1.61E-02	3.13E-04	6.21E-05	1.13E-03
1.90 MEV	5.38E-02	5.35E-05	1.98E-05	3.92E-03
2.00 MEV	2.75E-02	1.17E-04	3.29E-06	2.57E-03
2.10 MEV	2.06E-02	5.53E-05	2.67E-05	0.
2.20 MEV	1.62E-02	3.50E-05	6.27E-05	1.42E-02
2.30 MEV	5.23E-02	5.13E-06	2.34E-05	0.
2.40 MEV	3.62E-02	2.15E-05	7.38E-06	2.64E-03
2.50 MEV	3.66E-02	4.05E-05	2.34E-05	1.94E-03
2.60 MEV	4.65E-02	1.11E-04	8.41E-05	7.42E-03
2.70 MEV	2.91E-02	3.18E-05	1.61E-05	0.
2.80 MEV	3.66E-02	2.93E-05	8.72E-05	2.38E-03
2.90 MEV	1.81E-02	4.31E-05	6.89E-06	1.21E-02
3.00 MEV	4.35E-02	0.	2.07E-05	1.32E-03
3.20 MEV	7.53E-02	6.78E-05	2.64E-05	3.16E-03
3.40 MEV	2.10E-02	5.28E-05	5.28E-05	2.63E-03
3.60 MEV	3.73E-02	6.78E-05	2.64E-05	5.42E-03
3.80 MEV	3.21E-02	6.77E-05	1.06E-04	3.13E-03
4.00 MEV	7.76E-02	8.83E-05	0.	3.81E-03

1 SLOWING DOWN SPECTRUM AT 0.60 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	2.32E-02	3.85E-05	0.	2.97E-03
4.40 MEV	5.91E-02	7.44E-05	0.	4.68E-03
4.60 MEV	5.44E-02	4.30E-05	0.	1.49E-03
4.80 MEV	4.35E-02	5.29E-05	0.	4.84E-03
5.00 MEV	4.77E-02	3.93E-05	0.	7.11E-04
5.50 MEV	6.32E-02	5.80E-05	0.	1.34E-03
6.00 MEV	6.75E-02	9.97E-05	0.	3.79E-03
6.50 MEV	7.21E-02	1.63E-05	0.	2.05E-03
7.00 MEV	6.48E-02	3.26E-05	0.	3.70E-03
7.50 MEV	7.94E-02	0.	0.	3.15E-03
8.00 MEV	7.47E-02	0.	0.	3.12E-03
8.50 MEV	7.44E-02	0.	0.	1.38E-03
9.00 MEV	8.55E-02	0.	0.	2.18E-03
9.50 MEV	9.09E-02	0.	0.	4.07E-04
10.00 MEV	8.59E-02	0.	0.	8.14E-04
11.00 MEV	8.95E-02	0.	0.	2.19E-04
12.00 MEV	9.28E-02	0.	0.	2.19E-04
13.00 MEV	7.61E-02	0.	0.	8.61E-06
14.00 MEV	4.94E-02	0.	0.	1.72E-05
15.00 MEV	7.02E-03	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E (MEV)	8.23	2.31	2.54	4.63

1SLOWING DOWN SPECTRUM AT 1.00 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	1.71E-02	2.66E-05	1.89E-05	4.21E-03
0.15 MEV	1.24E-02	1.23E-06	5.15E-07	1.60E-03
0.20 MEV	2.88E-02	1.70E-05	0.	3.72E-03
0.25 MEV	1.86E-02	2.04E-04	0.	5.00E-03
0.30 MEV	1.37E-02	1.96E-06	0.	4.92E-04
0.35 MEV	1.63E-02	2.15E-04	1.26E-05	6.10E-04
0.40 MEV	1.58E-02	1.48E-04	1.62E-05	2.84E-03
0.45 MEV	1.05E-02	3.27E-05	6.82E-06	4.95E-03
0.50 MEV	1.31E-02	7.57E-05	0.	6.87E-04
0.55 MEV	2.40E-02	1.31E-04	0.	1.09E-03
0.60 MEV	2.19E-02	7.08E-05	5.15E-07	1.67E-03
0.65 MEV	1.10E-02	5.35E-04	6.75E-07	3.28E-03
0.70 MEV	3.02E-02	3.43E-05	2.44E-06	8.67E-04
0.75 MEV	1.19E-02	3.65E-05	1.94E-05	2.40E-03
0.80 MEV	5.24E-02	1.66E-04	1.61E-05	1.47E-02
0.85 MEV	3.32E-02	3.70E-04	3.73E-05	2.22E-03
0.90 MEV	1.05E-02	3.67E-04	0.	4.50E-04
0.95 MEV	2.19E-02	2.60E-05	1.19E-06	2.24E-03
1.00 MEV	1.78E-02	3.98E-04	1.03E-06	4.20E-04
1.10 MEV	1.80E-02	2.83E-04	1.12E-05	1.80E-03
1.20 MEV	2.59E-02	4.73E-04	1.05E-05	6.05E-03
1.30 MEV	2.23E-02	1.98E-04	1.40E-05	1.60E-03
1.40 MEV	3.50E-02	5.60E-04	1.74E-05	2.46E-03
1.50 MEV	1.79E-02	1.47E-04	2.04E-05	1.18E-02
1.60 MEV	3.49E-02	3.78E-04	1.98E-05	2.47E-03
1.70 MEV	3.16E-02	1.43E-04	1.38E-05	8.02E-04
1.80 MEV	1.87E-02	2.38E-04	2.35E-05	3.21E-03
1.90 MEV	5.85E-02	7.57E-05	2.04E-05	6.76E-03
2.00 MEV	3.08E-02	8.29E-05	0.	4.11E-03
2.10 MEV	2.06E-02	3.63E-05	2.18E-05	0.
2.20 MEV	1.70E-02	2.91E-05	3.42E-05	1.65E-02
2.30 MEV	4.53E-02	8.48E-06	2.18E-05	0.
2.40 MEV	4.22E-02	6.06E-05	4.07E-05	3.26E-03
2.50 MEV	3.30E-02	3.61E-05	1.87E-05	3.56E-03
2.60 MEV	5.05E-02	2.00E-05	2.29E-05	7.71E-03
2.70 MEV	3.59E-02	7.44E-06	1.87E-05	0.
2.80 MEV	4.09E-02	1.11E-05	2.78E-05	2.85E-03
2.90 MEV	2.15E-02	7.16E-05	2.74E-05	1.63E-02
3.00 MEV	5.79E-02	0.	2.96E-05	1.57E-03
3.20 MEV	6.81E-02	5.01E-05	1.79E-05	3.67E-03
3.40 MEV	2.36E-02	2.46E-05	2.56E-05	4.25E-03
3.60 MEV	4.08E-02	4.22E-05	1.53E-05	6.89E-03
3.80 MEV	3.84E-02	5.81E-05	1.86E-05	3.77E-03
4.00 MEV	7.66E-02	6.36E-05	6.64E-06	3.86E-03

1 SLOWING DOWN SPECTRUM AT 1.00 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.10E-02	3.39E-05	3.03E-05	3.19E-03
4.40 MEV	6.04E-02	7.29E-05	6.11E-07	4.61E-03
4.60 MEV	5.88E-02	6.70E-05	6.14E-06	1.90E-03
4.80 MEV	4.68E-02	4.96E-05	6.76E-06	5.27E-03
5.00 MEV	5.02E-02	9.05E-05	1.83E-06	5.94E-04
5.50 MEV	6.43E-02	1.05E-05	6.64E-06	1.27E-03
6.00 MEV	6.83E-02	2.10E-05	1.11E-05	3.90E-03
6.50 MEV	6.58E-02	0.	0.	1.81E-03
7.00 MEV	7.07E-02	0.	0.	3.49E-03
7.50 MEV	7.64E-02	0.	0.	2.68E-03
8.00 MEV	6.85E-02	0.	0.	2.65E-03
8.50 MEV	6.56E-02	0.	0.	1.12E-03
9.00 MEV	7.66E-02	0.	0.	1.69E-03
9.50 MEV	8.13E-02	0.	0.	3.97E-04
10.00 MEV	7.67E-02	0.	0.	7.94E-04
11.00 MEV	7.99E-02	0.	0.	2.36E-04
12.00 MEV	7.51E-02	0.	0.	2.36E-04
13.00 MEV	6.09E-02	0.	0.	0.
14.00 MEV	5.82E-02	0.	0.	0.
15.00 MEV	7.02E-03	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
AVE. E(MEV)	8.04	1.92	2.87	4.18

1SLOWING DOWN SPECTRUM AT 2.00 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	2.05E-02	2.57E-05	7.01E-06	2.77E-03
0.15 MEV	1.52E-02	1.27E-06	1.03E-06	9.41E-04
0.20 MEV	2.75E-02	7.16E-06	0.	3.43E-03
0.25 MEV	2.17E-02	1.81E-04	0.	4.80E-03
0.30 MEV	1.45E-02	0.	5.12E-06	4.32E-04
0.35 MEV	1.68E-02	2.14E-04	5.39E-05	4.38E-04
0.40 MEV	2.26E-02	1.35E-04	2.10E-05	1.82E-03
0.45 MEV	1.05E-02	4.35E-05	0.	3.39E-03
0.50 MEV	1.54E-02	1.03E-04	2.43E-05	5.99E-04
0.55 MEV	2.75E-02	1.18E-04	0.	1.56E-03
0.60 MEV	2.56E-02	2.30E-04	0.	1.19E-03
0.65 MEV	1.19E-02	4.92E-04	5.12E-06	1.78E-03
0.70 MEV	3.11E-02	3.48E-05	1.03E-06	2.85E-04
0.75 MEV	1.81E-02	2.77E-05	7.01E-06	1.27E-03
0.80 MEV	6.26E-02	1.58E-04	1.83E-05	1.48E-02
0.85 MEV	2.32E-02	3.59E-04	1.21E-04	2.17E-03
0.90 MEV	1.54E-02	3.30E-04	0.	4.12E-04
0.95 MEV	2.11E-02	3.09E-05	5.49E-06	2.27E-03
1.00 MEV	2.19E-02	4.29E-04	1.89E-05	6.41E-04
1.10 MEV	2.16E-02	2.45E-04	1.36E-05	1.50E-03
1.20 MEV	2.59E-02	4.35E-04	6.07E-06	4.17E-03
1.30 MEV	2.62E-02	1.95E-04	5.31E-05	1.95E-03
1.40 MEV	3.89E-02	5.23E-04	5.38E-05	1.83E-03
1.50 MEV	2.01E-02	2.28E-04	1.72E-05	9.63E-03
1.60 MEV	3.98E-02	3.39E-04	3.03E-05	1.56E-03
1.70 MEV	3.30E-02	1.55E-04	1.62E-05	5.63E-04
1.80 MEV	2.13E-02	2.79E-04	3.80E-05	2.24E-03
1.90 MEV	5.29E-02	7.10E-05	6.21E-05	6.13E-03
2.00 MEV	3.34E-02	9.90E-05	1.54E-05	3.20E-03
2.10 MEV	2.66E-02	6.40E-05	3.53E-05	0.
2.20 MEV	2.33E-02	1.53E-05	9.65E-05	1.40E-02
2.30 MEV	5.31E-02	3.44E-05	3.26E-05	0.
2.40 MEV	4.44E-02	5.22E-05	1.99E-05	3.13E-03
2.50 MEV	3.67E-02	6.92E-05	7.69E-05	3.87E-03
2.60 MEV	4.46E-02	1.59E-04	8.55E-05	6.65E-03
2.70 MEV	3.58E-02	2.06E-05	5.64E-05	0.
2.80 MEV	4.18E-02	4.15E-05	6.49E-05	2.52E-03
2.90 MEV	2.46E-02	7.79E-05	7.95E-05	1.47E-02
3.00 MEV	5.19E-02	9.07E-06	6.82E-05	1.14E-03
3.20 MEV	6.72E-02	9.12E-05	4.24E-05	3.51E-03
3.40 MEV	2.87E-02	1.11E-04	1.17E-04	3.97E-03
3.60 MEV	3.67E-02	8.47E-05	2.96E-05	5.94E-03
3.80 MEV	3.31E-02	9.98E-05	7.00E-05	3.00E-03
4.00 MEV	7.16E-02	1.59E-04	1.61E-05	3.59E-03

1SLOWING DOWN SPECTRUM AT 2.00 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	2.93E-02	1.06E-04	4.78E-05	2.52E-03
4.40 MEV	5.75E-02	1.34E-04	5.57E-06	4.11E-03
4.60 MEV	5.86E-02	6.88E-05	2.23E-05	1.56E-03
4.80 MEV	4.25E-02	1.21E-04	0.	5.09E-03
5.00 MEV	5.13E-02	8.89E-05	0.	6.05E-04
5.50 MEV	5.87E-02	8.31E-05	0.	1.22E-03
6.00 MEV	6.32E-02	1.07E-04	0.	3.82E-03
6.50 MEV	5.89E-02	6.47E-05	0.	1.63E-03
7.00 MEV	5.67E-02	1.18E-04	0.	3.23E-03
7.50 MEV	6.30E-02	1.18E-05	0.	2.61E-03
8.00 MEV	5.74E-02	3.54E-05	0.	2.53E-03
8.50 MEV	5.96E-02	0.	0.	1.09E-03
9.00 MEV	6.56E-02	0.	0.	1.55E-03
9.50 MEV	7.02E-02	0.	0.	4.41E-04
10.00 MEV	5.28E-02	0.	0.	8.83E-04
11.00 MEV	7.23E-02	0.	0.	2.47E-04
12.00 MEV	7.37E-02	0.	0.	2.47E-04
13.00 MEV	6.38E-02	0.	0.	0.
14.00 MEV	4.45E-02	0.	0.	0.
15.00 MEV	1.17E-03	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.

0AVE. E(MEV)

7.84

3.13

2.63

4.34

1 SLOWING DOWN SPECTRUM AT 4.00 CM, FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	2.09E-02	2.44E-05	2.34E-06	1.58E-03
0.15 MEV	1.45E-02	8.18E-07	7.90E-06	9.49E-04
0.20 MEV	3.23E-02	7.67E-06	0.	3.12E-03
0.25 MEV	1.95E-02	1.44E-04	0.	4.56E-03
0.30 MEV	1.92E-02	1.54E-06	1.13E-06	3.87E-04
0.35 MEV	1.89E-02	1.29E-04	0.	3.97E-04
0.40 MEV	2.12E-02	1.07E-04	1.98E-05	1.93E-03
0.45 MEV	1.36E-02	2.38E-05	6.37E-06	5.62E-03
0.50 MEV	1.81E-02	1.46E-04	1.35E-05	5.62E-04
0.55 MEV	2.68E-02	7.82E-05	1.13E-06	1.96E-03
0.60 MEV	2.67E-02	1.28E-04	2.25E-06	1.38E-03
0.65 MEV	1.42E-02	3.59E-04	7.17E-07	2.23E-03
0.70 MEV	3.37E-02	3.08E-05	6.77E-06	3.52E-04
0.75 MEV	1.99E-02	2.34E-05	2.34E-06	1.27E-03
0.80 MEV	5.55E-02	1.23E-04	2.81E-05	1.16E-02
0.85 MEV	3.47E-02	2.19E-04	7.65E-05	2.74E-03
0.90 MEV	1.61E-02	2.59E-04	0.	2.63E-04
0.95 MEV	2.51E-02	2.88E-05	7.17E-07	3.20E-03
1.00 MEV	2.15E-02	2.73E-04	1.24E-05	7.40E-04
1.10 MEV	2.37E-02	2.00E-04	1.59E-05	1.42E-03
1.20 MEV	2.58E-02	3.05E-04	2.24E-06	4.92E-03
1.30 MEV	2.50E-02	1.26E-04	2.04E-05	1.89E-03
1.40 MEV	3.40E-02	3.46E-04	4.14E-05	2.48E-03
1.50 MEV	2.31E-02	1.46E-04	1.67E-05	8.29E-03
1.60 MEV	3.70E-02	2.59E-04	2.78E-05	2.50E-03
1.70 MEV	3.31E-02	8.87E-05	1.39E-05	7.52E-04
1.80 MEV	2.17E-02	1.94E-04	2.19E-05	2.45E-03
1.90 MEV	5.15E-02	7.03E-05	4.54E-05	5.08E-03
2.00 MEV	3.16E-02	1.09E-04	1.35E-05	3.92E-03
2.10 MEV	2.37E-02	3.07E-05	2.68E-05	0.
2.20 MEV	1.93E-02	2.58E-05	3.94E-05	1.29E-02
2.30 MEV	4.52E-02	1.85E-05	2.68E-05	0.
2.40 MEV	3.93E-02	7.30E-05	2.08E-05	2.87E-03
2.50 MEV	3.16E-02	7.58E-05	5.32E-05	2.65E-03
2.60 MEV	4.56E-02	5.28E-05	4.32E-05	6.00E-03
2.70 MEV	2.90E-02	2.89E-05	4.36E-05	0.
2.80 MEV	3.96E-02	3.46E-05	4.05E-05	2.61E-03
2.90 MEV	1.82E-02	1.13E-04	5.05E-05	1.19E-02
3.00 MEV	4.43E-02	6.74E-06	5.10E-05	1.57E-03
3.20 MEV	5.94E-02	8.29E-05	2.47E-05	2.61E-03
3.40 MEV	2.33E-02	4.56E-05	5.70E-05	3.29E-03
3.60 MEV	3.57E-02	6.15E-05	1.42E-05	4.61E-03
3.80 MEV	3.21E-02	8.42E-05	8.71E-06	2.69E-03
4.00 MEV	6.34E-02	1.10E-04	8.71E-06	2.99E-03

1SLOWING DOWN SPECTRUM AT 4.00 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	2.59E-02	4.99E-05	3.54E-05	2.00E-03
4.40 MEV	5.23E-02	1.19E-04	1.67E-06	3.06E-03
4.60 MEV	5.03E-02	1.31E-04	1.22E-05	1.27E-03
4.80 MEV	4.01E-02	6.41E-05	5.53E-06	3.91E-03
5.00 MEV	4.29E-02	1.05E-04	0.	5.49E-04
5.50 MEV	5.25E-02	2.74E-05	6.64E-06	1.01E-03
6.00 MEV	5.41E-02	5.49E-05	1.11E-05	2.86E-03
6.50 MEV	5.27E-02	0.	0.	1.27E-03
7.00 MEV	5.77E-02	0.	0.	2.40E-03
7.50 MEV	6.19E-02	0.	0.	1.89E-03
8.00 MEV	5.82E-02	0.	0.	1.87E-03
8.50 MEV	6.14E-02	0.	0.	8.04E-04
9.00 MEV	6.44E-02	0.	0.	1.23E-03
9.50 MEV	6.41E-02	0.	0.	2.61E-04
10.00 MEV	6.11E-02	0.	0.	5.22E-04
11.00 MEV	6.71E-02	0.	0.	1.49E-04
12.00 MEV	6.11E-02	0.	0.	1.49E-04
13.00 MEV	5.30E-02	0.	0.	0.
14.00 MEV	3.98E-02	0.	0.	0.
15.00 MEV	3.40E-03	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	7.79	2.51	2.77	4.03

1 SLOWING DOWN SPECTRUM AT 6.00 CM, FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	2.49E-02	1.58E-05	1.57E-05	2.33E-03
0.15 MEV	1.62E-02	1.16E-06	9.89E-06	7.08E-04
0.20 MEV	3.10E-02	1.66E-05	0.	2.77E-03
0.25 MEV	2.32E-02	1.53E-04	0.	4.30E-03
0.30 MEV	1.90E-02	8.41E-06	1.06E-06	3.07E-04
0.35 MEV	1.96E-02	1.62E-04	2.43E-05	3.22E-04
0.40 MEV	2.25E-02	9.22E-05	1.50E-05	1.94E-03
0.45 MEV	1.28E-02	4.23E-05	0.	3.20E-03
0.50 MEV	1.86E-02	1.64E-04	3.72E-06	4.33E-04
0.55 MEV	2.78E-02	7.16E-05	1.62E-06	1.39E-03
0.60 MEV	2.55E-02	1.09E-04	0.	9.67E-04
0.65 MEV	1.54E-02	3.89E-04	1.06E-06	2.19E-03
0.70 MEV	3.13E-02	2.06E-05	9.89E-06	1.97E-04
0.75 MEV	1.42E-02	2.75E-05	1.41E-05	2.06E-03
0.80 MEV	4.06E-02	1.09E-04	3.93E-06	1.13E-02
0.85 MEV	3.32E-02	2.77E-04	6.33E-05	1.73E-03
0.90 MEV	1.33E-02	2.59E-04	0.	5.10E-04
0.95 MEV	2.24E-02	1.58E-05	0.	2.19E-03
1.00 MEV	2.38E-02	3.11E-04	3.72E-06	5.56E-04
1.10 MEV	2.43E-02	2.17E-04	1.38E-05	1.62E-03
1.20 MEV	2.62E-02	3.38E-04	7.58E-06	4.54E-03
1.30 MEV	2.13E-02	1.52E-04	2.90E-05	1.57E-03
1.40 MEV	3.62E-02	4.15E-04	1.93E-05	2.02E-03
1.50 MEV	2.23E-02	1.84E-04	2.03E-05	7.64E-03
1.60 MEV	3.56E-02	2.81E-04	1.97E-05	1.77E-03
1.70 MEV	2.79E-02	1.36E-04	1.39E-05	6.51E-04
1.80 MEV	2.16E-02	1.93E-04	2.46E-05	2.49E-03
1.90 MEV	4.93E-02	8.27E-05	3.08E-05	4.10E-03
2.00 MEV	2.97E-02	1.41E-04	2.34E-05	3.04E-03
2.10 MEV	2.19E-02	5.94E-05	1.84E-05	0.
2.20 MEV	2.28E-02	2.45E-05	4.96E-05	1.12E-02
2.30 MEV	3.98E-02	7.04E-06	1.64E-05	0.
2.40 MEV	4.06E-02	5.56E-05	2.30E-05	2.62E-03
2.50 MEV	3.37E-02	1.03E-04	3.50E-05	2.17E-03
2.60 MEV	4.11E-02	6.92E-05	3.50E-05	5.29E-03
2.70 MEV	2.63E-02	1.24E-05	2.45E-05	0.
2.80 MEV	3.86E-02	2.67E-05	2.56E-05	2.15E-03
2.90 MEV	2.05E-02	1.23E-04	4.64E-05	1.12E-02
3.00 MEV	4.64E-02	3.00E-06	3.76E-05	1.03E-03
3.20 MEV	5.42E-02	1.15E-04	2.13E-05	2.20E-03
3.40 MEV	2.10E-02	6.69E-05	5.42E-05	2.83E-03
3.60 MEV	3.40E-02	6.67E-05	1.80E-05	4.37E-03
3.80 MEV	2.63E-02	1.01E-04	3.63E-05	2.44E-03
4.00 MEV	5.88E-02	1.59E-04	1.20E-05	2.84E-03

ISLOWING DOWN SPECTRUM AT 6.00 CM, FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	2.41E-02	8.74E-05	3.49E-05	1.87E-03
4.40 MEV	4.82E-02	1.37E-04	4.30E-06	2.86E-03
4.60 MEV	4.28E-02	1.57E-04	1.72E-05	1.18E-03
4.80 MEV	3.50E-02	8.56E-05	0.	4.07E-03
5.00 MEV	3.93E-02	1.07E-04	0.	4.21E-04
5.50 MEV	4.94E-02	3.74E-05	0.	9.75E-04
6.00 MEV	5.08E-02	5.32E-05	0.	2.80E-03
6.50 MEV	4.81E-02	1.15E-05	0.	1.18E-03
7.00 MEV	4.58E-02	1.65E-05	0.	2.29E-03
7.50 MEV	5.01E-02	6.57E-06	0.	1.70E-03
8.00 MEV	4.54E-02	1.31E-05	0.	1.68E-03
8.50 MEV	5.06E-02	1.31E-05	0.	6.45E-04
9.00 MEV	5.24E-02	3.94E-05	0.	1.12E-03
9.50 MEV	5.30E-02	0.	0.	1.92E-04
10.00 MEV	5.35E-02	0.	0.	3.83E-04
11.00 MEV	4.93E-02	0.	0.	2.14E-04
12.00 MEV	5.36E-02	0.	0.	2.14E-04
13.00 MEV	3.73E-02	0.	0.	0.
14.00 MEV	3.58E-02	0.	0.	0.
15.00 MEV	0.	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
DAVE, E(MEV)	7.52	2.97	2.62	4.11

1 SLOWING DOWN SPECTRUM AT 10.0 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	2.43E-02	1.61E-05	0.	1.36E-03
0.15 MEV	1.75E-02	1.11E-06	1.11E-05	9.34E-04
0.20 MEV	3.44E-02	3.86E-06	0.	3.19E-03
0.25 MEV	2.16E-02	1.15E-04	0.	2.90E-03
0.30 MEV	1.94E-02	2.77E-07	0.	3.44E-04
0.35 MEV	2.18E-02	1.38E-04	2.76E-05	3.78E-04
0.40 MEV	2.20E-02	8.75E-05	0.	1.42E-03
0.45 MEV	1.34E-02	2.08E-05	4.25E-06	2.43E-03
0.50 MEV	1.80E-02	1.60E-05	2.28E-06	4.57E-04
0.55 MEV	3.25E-02	7.07E-05	0.	1.41E-03
0.60 MEV	2.30E-02	1.07E-04	0.	9.90E-04
0.65 MEV	1.29E-02	3.14E-04	0.	1.48E-03
0.70 MEV	3.20E-02	2.05E-05	1.11E-05	4.29E-04
0.75 MEV	1.53E-02	2.12E-05	0.	1.38E-03
0.80 MEV	5.12E-02	1.35E-04	5.36E-06	7.80E-03
0.85 MEV	2.74E-02	2.07E-04	1.96E-05	1.12E-03
0.90 MEV	1.40E-02	2.29E-04	0.	6.34E-04
0.95 MEV	2.39E-02	3.23E-05	1.10E-06	1.94E-03
1.00 MEV	2.07E-02	2.56E-04	1.18E-06	3.24E-04
1.10 MEV	2.14E-02	1.36E-04	7.67E-06	8.53E-04
1.20 MEV	2.70E-02	2.69E-04	0.	3.50E-03
1.30 MEV	2.32E-02	9.74E-05	2.26E-05	9.66E-04
1.40 MEV	2.73E-02	3.27E-04	1.65E-05	1.56E-03
1.50 MEV	1.88E-02	7.20E-05	8.22E-06	5.95E-03
1.60 MEV	3.34E-02	2.13E-04	1.17E-05	1.21E-03
1.70 MEV	2.63E-02	1.02E-04	8.81E-06	5.80E-04
1.80 MEV	1.98E-02	1.76E-04	2.57E-05	1.71E-03
1.90 MEV	5.33E-02	1.91E-05	7.97E-06	3.50E-03
2.00 MEV	3.26E-02	4.27E-05	1.72E-05	2.01E-03
2.10 MEV	1.94E-02	4.37E-05	1.70E-06	0.
2.20 MEV	2.02E-02	1.76E-05	2.52E-05	9.66E-03
2.30 MEV	4.41E-02	1.91E-05	1.15E-06	0.
2.40 MEV	3.53E-02	8.11E-06	1.58E-05	1.51E-03
2.50 MEV	2.50E-02	3.73E-05	1.88E-06	2.01E-03
2.60 MEV	3.91E-02	6.38E-05	2.52E-05	3.73E-03
2.70 MEV	2.47E-02	3.14E-05	1.29E-06	0.
2.80 MEV	3.92E-02	4.55E-05	1.55E-05	1.20E-03
2.90 MEV	1.94E-02	3.12E-05	9.78E-06	9.16E-03
3.00 MEV	5.06E-02	3.94E-05	7.29E-07	6.24E-04
3.20 MEV	5.22E-02	4.99E-05	1.94E-05	2.00E-03
3.40 MEV	2.43E-02	4.26E-05	1.98E-05	2.70E-03
3.60 MEV	3.32E-02	3.49E-05	1.90E-05	3.76E-03
3.80 MEV	2.91E-02	2.51E-05	3.22E-05	2.18E-03
4.00 MEV	6.26E-02	4.74E-05	4.52E-06	2.22E-03

150MG DOWN SPECTRUM AT 10.0 CM. FOR ICRU MUSCLE TISSUE

D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	2.75E-02	5.02E-05	2.57E-05	1.52E-03
4.40 MEV	4.08E-02	2.23E-05	n	2.58E-03
4.60 MEV	4.83E-02	n	7.58E-06	1.04E-03
4.80 MEV	3.47E-02	2.23E-05	7.58E-06	3.07E-03
5.00 MEV	3.82E-02	2.23E-05	7.58E-06	5.11E-04
5.50 MEV	5.02E-02	2.68E-05	9.10E-06	7.06E-04
6.00 MEV	5.51E-02	5.36E-05	1.52E-05	2.21E-03
6.50 MEV	4.33E-02	n	n	1.05E-03
7.00 MEV	4.56E-02	n	n	2.01E-03
7.50 MEV	5.38E-02	n	n	1.66E-03
8.00 MEV	4.72E-02	n	n	1.65E-03
8.50 MEV	4.84E-02	n	n	6.89E-04
9.00 MEV	5.08E-02	n	n	1.07E-03
9.50 MEV	5.02E-02	n	n	2.28E-04
10.00 MEV	4.36E-02	n	n	4.55E-04
11.00 MEV	5.12E-02	n	n	1.47E-04
12.00 MEV	5.00E-02	n	n	1.47E-04
13.00 MEV	5.40E-02	n	n	n
14.00 MEV	4.87E-02	n	n	n
15.00 MEV	1.17E-03	n	n	n
16.00 MEV	n	n	n	n
17.00 MEV	n	n	n	n
18.00 MEV	n	n	n	n
19.00 MEV	n	n	n	n
20.00 MEV	n	n	n	n
21.00 MEV	n	n	n	n
22.00 MEV	n	n	n	n
23.00 MEV	n	n	n	n
24.00 MEV	n	n	n	n
25.00 MEV	n	n	n	n
26.00 MEV	n	n	n	n
27.00 MEV	n	n	n	n
28.00 MEV	n	n	n	n
29.00 MEV	n	n	n	n
30.00 MEV	n	n	n	n
32.00 MEV	n	n	n	n
34.00 MEV	n	n	n	n
36.00 MEV	n	n	n	n
38.00 MEV	n	n	n	n
40.00 MEV	n	n	n	n
42.00 MEV	n	n	n	n
44.00 MEV	n	n	n	n
46.00 MEV	n	n	n	n
48.00 MEV	n	n	n	n
50.00 MEV	n	n	n	n

1SLOWING DOWN SPECTRUM AT 14.0 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	0.
0.10 MEV	2.03E-02	1.31E-05	5.48E-06	1.08E-03
0.15 MEV	1.56E-02	6.32E-07	0.	4.69E-04
0.20 MEV	2.97E-02	7.16E-06	0.	1.54E-03
0.25 MEV	2.05E-02	1.00E-04	0.	2.93E-03
0.30 MEV	1.62E-02	4.56E-06	0.	1.77E-04
0.35 MEV	1.65E-02	1.03E-04	2.37E-05	1.36E-04
0.40 MEV	2.24E-02	7.15E-05	0.	1.46E-03
0.45 MEV	1.11E-02	2.38E-05	0.	2.01E-03
0.50 MEV	1.55E-02	1.76E-05	6.20E-06	2.30E-04
0.55 MEV	2.27E-02	5.40E-05	1.98E-06	9.87E-04
0.60 MEV	2.27E-02	1.62E-04	0.	8.01E-04
0.65 MEV	1.24E-02	2.58E-04	1.98E-06	1.30E-03
0.70 MEV	3.00E-02	1.70E-05	1.71E-05	1.81E-04
0.75 MEV	1.84E-02	1.61E-05	5.48E-06	7.26E-04
0.80 MEV	3.92E-02	8.99E-05	6.54E-06	9.52E-03
0.85 MEV	3.72E-02	1.79E-04	9.91E-06	1.72E-03
0.90 MEV	1.39E-02	1.75E-04	3.95E-06	1.09E-04
0.95 MEV	2.43E-02	1.25E-05	0.	1.56E-03
1.00 MEV	2.15E-02	1.81E-04	6.20E-06	5.20E-04
1.10 MEV	2.17E-02	1.15E-04	0.	9.68E-04
1.20 MEV	2.39E-02	2.27E-04	1.75E-06	3.02E-03
1.30 MEV	2.25E-02	9.77E-05	1.41E-05	1.26E-03
1.40 MEV	3.18E-02	2.71E-04	7.06E-06	1.26E-03
1.50 MEV	1.93E-02	6.52E-05	1.75E-06	5.23E-03
1.60 MEV	3.33E-02	1.82E-04	3.27E-06	1.07E-03
1.70 MEV	2.79E-02	5.29E-05	1.34E-05	3.40E-04
1.80 MEV	1.92E-02	1.76E-04	1.08E-05	1.23E-03
1.90 MEV	4.09E-02	2.44E-05	1.21E-05	3.29E-03
2.00 MEV	2.92E-02	4.16E-05	0.	2.07E-03
2.10 MEV	1.99E-02	2.01E-05	8.12E-06	0.
2.20 MEV	1.80E-02	1.26E-05	1.66E-05	7.87E-03
2.30 MEV	3.59E-02	1.11E-05	8.12E-06	0.
2.40 MEV	3.68E-02	1.36E-05	1.69E-05	1.83E-03
2.50 MEV	2.78E-02	4.56E-06	1.03E-05	2.33E-03
2.60 MEV	3.82E-02	8.38E-05	2.34E-05	3.71E-03
2.70 MEV	2.74E-02	1.07E-05	7.24E-06	0.
2.80 MEV	3.37E-02	0.	2.07E-05	1.50E-03
2.90 MEV	2.20E-02	1.07E-05	1.25E-05	8.46E-03
3.00 MEV	3.21E-02	5.06E-06	3.96E-06	6.74E-04
3.20 MEV	4.78E-02	4.38E-05	7.40E-06	2.06E-03
3.40 MEV	2.06E-02	1.58E-05	2.30E-05	2.39E-03
3.60 MEV	2.84E-02	4.16E-05	9.70E-06	3.11E-03
3.80 MEV	2.56E-02	1.13E-05	2.17E-05	1.90E-03
4.00 MEV	4.75E-02	3.60E-05	4.28E-06	1.99E-03

ISLOWING DOWN SPECTRUM AT 14.0 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	2.26E-02	0.	4.28E-06	1.30E-03
4.40 MEV	4.40E-02	3.60E-05	4.28E-06	2.02E-03
4.60 MEV	3.14E-02	0.	4.28E-06	6.31E-04
4.80 MEV	2.99E-02	3.60E-05	8.55E-06	2.66E-03
5.00 MEV	3.17E-02	3.60E-05	1.28E-05	2.32E-04
5.50 MEV	3.77E-02	4.32E-05	0.	6.67E-04
6.00 MEV	4.20E-02	6.63E-05	0.	2.02E-03
6.50 MEV	4.31E-02	0.	0.	8.15E-04
7.00 MEV	4.23E-02	0.	0.	1.63E-03
7.50 MEV	4.37E-02	0.	0.	1.31E-03
8.00 MEV	3.91E-02	0.	0.	1.30E-03
8.50 MEV	3.81E-02	0.	0.	5.21E-04
9.00 MEV	4.65E-02	0.	0.	7.91E-04
9.50 MEV	4.47E-02	0.	0.	1.96E-04
10.00 MEV	4.88E-02	0.	0.	3.91E-04
11.00 MEV	4.08E-02	0.	0.	1.41E-04
12.00 MEV	3.93E-02	0.	0.	1.41E-04
13.00 MEV	2.98E-02	0.	0.	0.
14.00 MEV	2.07E-02	0.	0.	0.
15.00 MEV	1.17E-03	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
DAVE, E(MEV)	7.29	2.50	2.79	4.17

1 INITIAL SPECTRUM AT 0.00-0.05 CM. FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	2.89E+00
0.10 MEV	1.09E+02	0.	0.	2.89E+00
0.15 MEV	2.88E+01	0.	0.	4.09E+00
0.20 MEV	2.34E+01	0.	0.	4.09E+00
0.25 MEV	9.48E+00	0.	0.	8.15E+00
0.30 MEV	3.21E+01	0.	0.	8.15E+00
0.35 MEV	2.41E+01	0.	0.	5.29E+00
0.40 MEV	4.58E+00	0.	0.	5.29E+00
0.45 MEV	2.33E+01	1.89E-02	0.	5.28E+00
0.50 MEV	1.75E+01	1.89E-02	0.	5.28E+00
0.55 MEV	1.29E+01	0.	0.	6.41E+00
0.60 MEV	5.02E+00	0.	0.	6.41E+00
0.65 MEV	8.95E+00	0.	0.	6.58E+00
0.70 MEV	1.45E-02	0.	0.	6.58E+00
0.75 MEV	2.91E-02	1.89E-02	0.	7.60E+00
0.80 MEV	9.53E+00	1.89E-02	0.	7.60E+00
0.85 MEV	1.44E+01	0.	0.	9.38E+00
0.90 MEV	9.63E+00	0.	0.	9.38E+00
0.95 MEV	5.01E+00	1.89E-02	0.	7.72E+00
1.00 MEV	4.72E+00	1.89E-02	0.	7.72E+00
1.10 MEV	1.97E+01	9.44E-02	0.	1.82E+01
1.20 MEV	6.87E+00	9.44E-02	0.	1.82E+01
1.30 MEV	1.14E+00	1.89E-02	0.	1.36E+01
1.40 MEV	1.08E+00	1.89E-02	0.	1.36E+01
1.50 MEV	4.45E+00	1.89E-02	0.	1.58E+01
1.60 MEV	2.96E+01	1.89E-02	0.	1.58E+01
1.70 MEV	4.44E+00	0.	0.	1.36E+01
1.80 MEV	1.23E+01	0.	0.	1.36E+01
1.90 MEV	9.52E+00	0.	5.21E-02	6.83E+00
2.00 MEV	1.11E+01	0.	5.21E-02	6.83E+00
2.10 MEV	5.08E+00	0.	0.	8.29E+00
2.20 MEV	1.47E+01	0.	0.	8.29E+00
2.30 MEV	4.80E+00	0.	0.	1.11E+01
2.40 MEV	0.	0.	0.	1.11E+01
2.50 MEV	0.	0.	5.21E-02	3.93E+00
2.60 MEV	3.82E-02	0.	5.21E-02	3.93E+00
2.70 MEV	3.82E-02	7.19E-02	0.	9.59E+00
2.80 MEV	4.70E+00	7.19E-02	0.	9.59E+00
2.90 MEV	4.74E+00	0.	1.04E-01	5.99E+00
3.00 MEV	0.	0.	1.04E-01	5.99E+00
3.20 MEV	1.39E+01	0.	0.	1.66E+01
3.40 MEV	4.77E+00	0.	0.	1.66E+01
3.60 MEV	4.70E+00	7.19E-02	0.	1.26E+01
3.80 MEV	4.78E+00	7.19E-02	0.	1.26E+01
4.00 MEV	2.39E+01	1.13E-01	5.21E-02	6.62E+00

INITIAL SPECTRUM AT 0.00-0.05 CM, FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	5.04E+00	1.15E-01	5.21E-02	6.62E+00
4.40 MEV	0.	0.	0.	2.78E+00
4.60 MEV	1.88E+01	0.	0.	2.78E+00
4.80 MEV	1.38E+01	8.59E-03	2.17E-02	5.56E+00
5.00 MEV	1.00E+01	8.59E-03	2.17E-02	5.56E+00
5.50 MEV	3.41E+01	1.72E-02	1.08E-02	4.55E+00
6.00 MEV	3.50E+01	1.72E-02	1.08E-02	4.55E+00
6.50 MEV	2.03E+01	1.23E-01	1.08E-02	4.16E+00
7.00 MEV	1.44E+01	1.23E-01	1.08E-02	4.16E+00
7.50 MEV	3.00E+01	0.05E-02	0.	2.10E+00
8.00 MEV	1.42E+01	8.05E-02	0.	2.10E+00
8.50 MEV	3.50E+01	0.	1.08E-02	2.94E-01
9.00 MEV	1.55E+01	0.	1.08E-02	2.94E-01
9.50 MEV	1.52E+01	0.	0.	2.51E-01
10.00 MEV	1.52E+01	0.	0.	2.51E-01
11.00 MEV	4.01E+01	0.	0.	1.79E-01
12.00 MEV	2.51E+01	0.	0.	1.79E-01
13.00 MEV	5.51E+01	0.	0.	8.16E-02
14.00 MEV	2.01E+01	0.	0.	8.16E-02
15.00 MEV	1.00E+01	0.	0.	1.17E-02
16.00 MEV	0.	0.	0.	1.17E-02
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
AVERAGE, E (MEV)	8.76	5.43	4.37	3.26

1 INITIAL SPECTRUM AT 0.05-0.10 CM. FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	5.12E+00
0.10 MEV	1.77E+02	0.	0.	5.12E+00
0.15 MEV	2.82E+01	0.	0.	5.08E+00
0.20 MEV	3.38E+01	0.	0.	5.08E+00
0.25 MEV	3.68E+01	0.	0.	5.20E+00
0.30 MEV	1.86E+01	0.	0.	5.20E+00
0.35 MEV	9.23E+00	0.	0.	9.38E+00
0.40 MEV	1.41E+01	0.	0.	9.38E+00
0.45 MEV	4.64E+00	0.	0.	8.23E+00
0.50 MEV	2.47E+01	0.	0.	8.23E+00
0.55 MEV	1.94E+01	1.89E-02	0.	7.61E+00
0.60 MEV	9.75E+00	1.89E-02	0.	7.61E+00
0.65 MEV	2.38E+01	0.	0.	7.66E+00
0.70 MEV	4.25E+00	0.	0.	7.66E+00
0.75 MEV	4.72E+00	1.89E-02	0.	8.93E+00
0.80 MEV	1.00E+01	1.89E-02	0.	8.93E+00
0.85 MEV	9.34E+00	1.89E-02	0.	4.08E+00
0.90 MEV	9.42E+00	1.89E-02	0.	4.08E+00
0.95 MEV	5.01E+00	1.89E-02	0.	2.40E+00
1.00 MEV	9.42E+00	1.89E-02	0.	2.40E+00
1.10 MEV	5.04E+00	3.77E-02	0.	1.23E+01
1.20 MEV	1.44E+01	3.77E-02	0.	1.23E+01
1.30 MEV	1.58E+01	1.89E-02	0.	1.14E+01
1.40 MEV	1.29E+01	1.89E-02	0.	1.14E+01
1.50 MEV	9.71E+00	5.66E-02	0.	6.48E+00
1.60 MEV	5.00E+00	5.66E-02	0.	6.48E+00
1.70 MEV	3.82E-02	1.89E-02	0.	1.01E+01
1.80 MEV	1.01E+01	1.89E-02	0.	1.01E+01
1.90 MEV	5.11E+00	0.	0.	1.19E+01
2.00 MEV	1.94E+01	0.	0.	1.19E+01
2.10 MEV	5.04E+00	0.	0.	5.54E+00
2.20 MEV	5.04E+00	0.	0.	5.54E+00
2.30 MEV	4.50E+00	2.16E-02	5.21E-02	8.15E+00
2.40 MEV	0.	2.16E-02	5.21E-02	8.15E+00
2.50 MEV	7.65E-02	2.16E-02	0.	8.10E+00
2.60 MEV	4.82E+00	2.16E-02	0.	8.10E+00
2.70 MEV	5.08E+00	0.	0.	3.51E+00
2.80 MEV	9.70E+00	0.	0.	3.51E+00
2.90 MEV	3.82E-02	1.44E-01	5.21E-02	7.72E+00
3.00 MEV	4.82E+00	1.44E-01	5.21E-02	7.72E+00
3.20 MEV	1.48E+01	0.	1.04E-01	1.12E+01
3.40 MEV	1.48E+01	0.	1.04E-01	1.12E+01
3.60 MEV	3.82E-02	0.	0.	3.83E+00
3.80 MEV	1.00E+01	0.	0.	3.83E+00
4.00 MEV	5.00E+00	0.	0.	7.82E+00

INITIAL SPECTRUM AT 0.05-0.10 CM. FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	5.04E+00	0.	0.	7.82E+00
4.40 MEV	1.40E+01	1.44E-01	0.	4.22E+00
4.60 MEV	0.	1.44E-01	0.	4.22E+00
4.80 MEV	9.70E+00	0.	0.	4.93E+00
5.00 MEV	1.50E+01	0.	0.	4.93E+00
5.50 MEV	9.14E+00	8.59E-03	1.08E-02	5.65E+00
6.00 MEV	3.51E+01	8.59E-03	1.08E-02	5.65E+00
6.50 MEV	1.50E+01	8.59E-03	0.	4.71E+00
7.00 MEV	1.50E+01	8.59E-03	0.	4.71E+00
7.50 MEV	1.01E+01	8.59E-03	1.08E-02	1.76E+00
8.00 MEV	3.01E+01	8.59E-03	1.08E-02	1.76E+00
8.50 MEV	1.01E+01	8.59E-03	0.	5.02E-01
9.00 MEV	1.01E+01	8.59E-03	0.	5.02E-01
9.50 MEV	1.51E+01	0.	0.	2.89E-01
10.00 MEV	5.20E+00	0.	0.	2.89E-01
11.00 MEV	3.52E+01	0.	0.	6.38E-02
12.00 MEV	1.96E+01	0.	0.	6.38E-02
13.00 MEV	1.00E+01	0.	0.	1.17E-02
14.00 MEV	4.45E+01	0.	0.	1.17E-02
15.00 MEV	5.00E+00	0.	0.	3.50E-02
16.00 MEV	0.	0.	0.	3.50E-02
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	8.43	3.92	3.90	3.43

1 INITIAL SPECTRUM AT 0.10-0.15 CM. FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	1.76E+00
0.10 MEV	1.31E+02	0.	0.	1.76E+00
0.15 MEV	3.33E+01	0.	0.	9.40E+00
0.20 MEV	6.24E+01	0.	0.	9.40E+00
0.25 MEV	1.94E+01	0.	0.	5.88E+00
0.30 MEV	2.11E+01	0.	0.	5.88E+00
0.35 MEV	2.75E+01	0.	0.	7.05E+00
0.40 MEV	2.84E+01	0.	0.	7.05E+00
0.45 MEV	5.02E+00	3.77E-02	0.	5.29E+00
0.50 MEV	2.29E+01	3.77E-02	0.	5.29E+00
0.55 MEV	1.50E+01	1.89E-02	0.	1.29E+01
0.60 MEV	4.72E+00	1.89E-02	0.	1.29E+01
0.65 MEV	9.42E+00	3.77E-02	0.	5.76E+00
0.70 MEV	8.90E+00	3.77E-02	0.	5.76E+00
0.75 MEV	1.50E+01	0.	0.	4.64E+00
0.80 MEV	1.41E+01	0.	0.	4.64E+00
0.85 MEV	4.73E+00	0.	0.	1.05E+01
0.90 MEV	4.74E+00	0.	0.	1.05E+01
0.95 MEV	1.47E+01	3.78E-02	0.	8.23E+00
1.00 MEV	3.46E+00	3.78E-02	0.	8.23E+00
1.10 MEV	5.03E+00	6.83E-02	0.	1.77E+01
1.20 MEV	9.81E+00	6.83E-02	0.	1.77E+01
1.30 MEV	3.19E+01	0.	0.	1.18E+01
1.40 MEV	1.45E+01	0.	0.	1.18E+01
1.50 MEV	1.94E+01	1.89E-02	5.03E-02	1.35E+01
1.60 MEV	4.24E+00	1.89E-02	5.03E-02	1.35E+01
1.70 MEV	9.44E+00	4.94E-02	0.	1.11E+01
1.80 MEV	5.00E+00	4.94E-02	0.	1.11E+01
1.90 MEV	1.15E+01	0.	5.21E-02	1.11E+01
2.00 MEV	4.78E+00	0.	5.21E-02	1.11E+01
2.10 MEV	3.82E-02	0.	0.	1.17E+01
2.20 MEV	5.15E+00	0.	0.	1.17E+01
2.30 MEV	9.74E+00	2.16E-02	0.	9.70E+00
2.40 MEV	0.	2.16E-02	0.	9.70E+00
2.50 MEV	1.02E+01	3.78E-02	0.	7.58E+00
2.60 MEV	5.00E+00	3.78E-02	0.	7.58E+00
2.70 MEV	3.82E-02	0.	0.	5.43E+00
2.80 MEV	1.09E+01	0.	0.	5.43E+00
2.90 MEV	5.11E+00	7.19E-02	0.	8.61E+00
3.00 MEV	5.04E+00	7.19E-02	0.	8.61E+00
3.20 MEV	9.82E+00	0.	1.13E-02	1.62E+01
3.40 MEV	2.14E+00	0.	1.13E-02	1.62E+01
3.60 MEV	5.38E+00	0.	5.21E-02	9.71E+00
3.80 MEV	6.07E+00	0.	5.21E-02	9.71E+00
4.00 MEV	1.41E+01	9.35E-02	0.	7.36E+00

1 INITIAL SPECTRUM AT 0.10-0.15 CM. FOR SHONKA A-15W PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	1.03E+01	9.35E-02	0.	7.36E+00
4.40 MEV	2.04E+01	0.	0.	6.13E+00
4.60 MEV	4.35E+00	0.	0.	6.13E+00
4.80 MEV	5.00E+00	0.	0.	2.23E+00
5.00 MEV	1.44E+01	0.	0.	2.23E+00
5.50 MEV	2.76E+01	1.77E-02	0.	5.51E+00
6.00 MEV	2.46E+01	1.77E-02	0.	5.51E+00
6.50 MEV	1.91E+01	0.	0.	5.11E+00
7.00 MEV	2.00E+01	0.	0.	5.11E+00
7.50 MEV	2.00E+01	0.	0.	2.21E+00
8.00 MEV	2.00E+01	0.	0.	2.21E+00
8.50 MEV	1.50E+01	0.	0.	2.35E-01
9.00 MEV	9.70E+00	0.	0.	2.35E-01
9.50 MEV	2.02E+01	0.	0.	1.74E-01
10.00 MEV	1.50E+01	0.	0.	1.74E-01
11.00 MEV	2.99E+01	0.	0.	1.35E-01
12.00 MEV	3.02E+01	0.	0.	1.35E-01
13.00 MEV	4.50E+01	0.	0.	0.
14.00 MEV	3.47E+01	0.	0.	0.
15.00 MEV	0.	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE. E (MEV)	8.58	2.98	2.71	3.26

INITIAL SPECTRUM AT 0.15-0.20 CM. FOR SHONKA A-15² PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	2.39E+00
0.10 MEV	1.56E+02	0.	0.	2.39E+00
0.15 MEV	6.14E+01	0.	0.	1.81E+00
0.20 MEV	1.36E+01	0.	0.	1.81E+00
0.25 MEV	4.25E+01	0.	0.	6.51E+00
0.30 MEV	2.79E+01	0.	0.	6.51E+00
0.35 MEV	2.82E+01	0.	0.	5.34E+00
0.40 MEV	3.37E+01	0.	0.	5.34E+00
0.45 MEV	1.78E+01	0.	0.	2.94E+00
0.50 MEV	1.00E+01	0.	0.	2.94E+00
0.55 MEV	2.37E+01	0.	0.	2.35E+00
0.60 MEV	3.31E+01	0.	0.	2.35E+00
0.65 MEV	3.75E+01	0.	0.	5.45E+00
0.70 MEV	9.72E+00	0.	0.	5.45E+00
0.75 MEV	1.17E+01	3.77E-02	0.	4.16E+00
0.80 MEV	4.10E+00	3.77E-02	0.	4.16E+00
0.85 MEV	1.10E+01	4.05E-02	0.	4.84E+00
0.90 MEV	5.85E+00	4.05E-02	0.	4.84E+00
0.95 MEV	2.24E+02	1.89E-02	0.	8.31E+00
1.00 MEV	1.32E+01	1.89E-02	0.	8.31E+00
1.10 MEV	3.15E+01	0.	0.	8.87E+00
1.20 MEV	2.03E+01	0.	0.	8.87E+00
1.30 MEV	2.41E+01	7.82E-02	0.	7.83E+00
1.40 MEV	9.72E+00	7.82E-02	0.	7.83E+00
1.50 MEV	1.44E+01	0.	0.	1.04E+01
1.60 MEV	7.65E-02	0.	0.	1.04E+01
1.70 MEV	1.49E+01	1.89E-02	0.	1.19E+01
1.80 MEV	5.08E+00	1.89E-02	0.	1.19E+01
1.90 MEV	6.10E+00	3.77E-02	0.	5.46E+00
2.00 MEV	1.85E+01	3.77E-02	0.	5.46E+00
2.10 MEV	1.10E+01	7.19E-02	0.	6.65E+00
2.20 MEV	7.65E-02	7.19E-02	0.	6.65E+00
2.30 MEV	5.04E+00	0.	1.04E-01	9.78E+00
2.40 MEV	5.00E+00	0.	1.04E-01	9.78E+00
2.50 MEV	9.02E+00	7.19E-02	1.04E-01	1.06E+01
2.60 MEV	9.75E+00	7.19E-02	1.04E-01	1.06E+01
2.70 MEV	6.11E+00	0.	0.	7.24E+00
2.80 MEV	4.13E+00	0.	0.	7.24E+00
2.90 MEV	5.04E+00	0.	5.21E-02	5.61E+00
3.00 MEV	5.01E+00	0.	5.21E-02	5.61E+00
3.20 MEV	5.09E+00	0.	0.	1.32E+01
3.40 MEV	4.29E+00	0.	0.	1.32E+01
3.60 MEV	3.82E-02	0.	0.	1.30E+01
3.80 MEV	1.42E+01	0.	0.	1.30E+01
4.00 MEV	1.00E+01	1.44E-01	5.21E-02	5.41E+00

1 INITIAL SPECTRUM AT 0.15-0.20 CM. FOR SHONKA A-15N PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	2.27E+01	1.44E-01	5.21E-02	5.41E+00
4.40 MEV	9.78E+00	0.	0.	3.70E+00
4.60 MEV	1.90E+01	0.	0.	3.70E+00
4.80 MEV	9.25E+00	0.	0.	3.16E+00
5.00 MEV	9.32E+00	0.	0.	3.16E+00
5.50 MEV	1.50E+01	1.44E-01	0.	3.78E+00
6.00 MEV	4.31E+01	1.44E-01	0.	3.78E+00
6.50 MEV	5.14E+00	0.	0.	3.77E+00
7.00 MEV	5.14E+00	0.	0.	3.77E+00
7.50 MEV	1.01E+01	0.	0.	2.07E+00
8.00 MEV	1.01E+01	0.	0.	2.07E+00
8.50 MEV	9.55E+00	0.	0.	1.18E-01
9.00 MEV	1.00E+01	0.	0.	1.18E-01
9.50 MEV	1.47E+01	0.	0.	4.05E-02
10.00 MEV	1.50E+01	0.	0.	4.05E-02
11.00 MEV	3.97E+01	0.	0.	4.05E-02
12.00 MEV	4.00E+01	0.	0.	4.05E-02
13.00 MEV	3.00E+01	0.	0.	0.
14.00 MEV	4.50E+01	0.	0.	0.
15.00 MEV	0.	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	8.52	4.26	2.93	3.34

1 INITIAL SPECTRUM AT 0.20-0.40 CM. FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	5.89E+01
0.10 MEV	2.22E+02	0.	0.	5.89E+01
0.15 MEV	9.00E+01	0.	0.	2.43E+00
0.20 MEV	2.71E+01	0.	0.	2.43E+00
0.25 MEV	3.94E+01	0.	0.	4.12E+00
0.30 MEV	4.38E+01	0.	0.	4.12E+00
0.35 MEV	9.42E+00	0.	0.	3.54E+00
0.40 MEV	9.14E+00	0.	0.	3.54E+00
0.45 MEV	2.41E+01	1.89E-02	0.	3.54E+00
0.50 MEV	1.97E+01	1.89E-02	0.	3.54E+00
0.55 MEV	4.86E+00	0.	0.	7.12E+00
0.60 MEV	4.65E+00	0.	0.	7.12E+00
0.65 MEV	1.38E+01	0.	0.	3.49E+00
0.70 MEV	2.32E+01	0.	0.	3.49E+00
0.75 MEV	1.58E+01	0.	0.	5.29E+00
0.80 MEV	1.20E+01	0.	0.	5.29E+00
0.85 MEV	2.91E+02	0.	0.	2.98E+00
0.90 MEV	5.05E+00	0.	0.	2.98E+00
0.95 MEV	8.46E+00	3.77E-02	0.	5.49E+00
1.00 MEV	1.40E+01	3.77E-02	0.	5.49E+00
1.10 MEV	9.28E+00	3.77E-02	0.	9.07E+00
1.20 MEV	4.75E+00	3.77E-02	0.	9.07E+00
1.30 MEV	2.45E+01	0.	1.04E+01	1.19E+01
1.40 MEV	7.79E+00	0.	1.04E+01	1.19E+01
1.50 MEV	5.04E+00	3.77E-02	0.	1.16E+01
1.60 MEV	6.83E+00	3.77E-02	0.	1.16E+01
1.70 MEV	7.65E+02	0.	5.21E+02	6.74E+00
1.80 MEV	0.	0.	5.21E+02	6.74E+00
1.90 MEV	5.11E+00	2.16E-02	5.21E+02	9.52E+00
2.00 MEV	1.97E+01	2.16E-02	5.21E+02	9.52E+00
2.10 MEV	9.92E+00	3.92E-02	0.	8.20E+00
2.20 MEV	8.92E+00	3.92E-02	0.	8.20E+00
2.30 MEV	1.67E+01	0.	5.21E+02	7.38E+00
2.40 MEV	5.08E+00	0.	5.21E+02	7.38E+00
2.50 MEV	7.65E+02	9.35E-02	0.	5.22E+00
2.60 MEV	5.00E+00	9.35E-02	0.	5.22E+00
2.70 MEV	4.74E+00	1.44E-01	0.	7.30E+00
2.80 MEV	5.00E+00	1.44E-01	0.	7.30E+00
2.90 MEV	1.49E+01	0.	5.21E+02	5.80E+00
3.00 MEV	5.00E+00	0.	5.21E+02	5.80E+00
3.20 MEV	1.99E+01	1.44E-01	0.	7.96E+00
3.40 MEV	5.00E+00	1.44E-01	0.	7.96E+00
3.60 MEV	9.28E+00	0.	0.	1.04E+01
3.80 MEV	1.00E+01	0.	0.	1.04E+01
4.00 MEV	1.48E+01	7.17E-02	0.	3.86E+00

INITIAL SPECTRUM AT 0.20-0.40 CM. FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	5.00E+00	7.19E-02	0.	3.86E+00
4.40 MEV	5.00E+00	0.	0.	3.84E+00
4.60 MEV	1.39E+01	0.	0.	3.84E+00
4.80 MEV	9.85E+00	0.	5.21E-02	1.83E+00
5.00 MEV	1.00E+01	0.	5.21E-02	1.83E+00
5.50 MEV	9.38E+00	7.19E-02	0.	6.30E+00
6.00 MEV	9.70E+00	7.19E-02	0.	6.30E+00
6.50 MEV	1.39E+01	0.	0.	3.55E+00
7.00 MEV	2.47E+01	0.	0.	3.55E+00
7.50 MEV	1.01E+01	0.	0.	1.79E+00
8.00 MEV	3.01E+01	0.	0.	1.79E+00
8.50 MEV	5.14E+00	0.	0.	4.40E-01
9.00 MEV	9.80E+00	0.	0.	4.40E-01
9.50 MEV	4.04E+01	0.	0.	2.87E-01
10.00 MEV	2.43E+01	0.	0.	2.87E-01
11.00 MEV	2.02E+01	0.	0.	3.19E-02
12.00 MEV	2.49E+01	0.	0.	3.19E-02
13.00 MEV	3.01E+01	0.	0.	0.
14.00 MEV	2.01E+01	0.	0.	0.
15.00 MEV	0.	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	7.76	3.64	2.63	3.49

1 INITIAL SPECTRUM AT 0.40-2.60 CM. FOR SHONKA A-15W PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	3.07E+00
0.10 MEV	1.83E+02	0.	0.	3.07E+00
0.15 MEV	6.52E+01	0.	0.	2.47E+00
0.20 MEV	5.06E+01	0.	0.	2.47E+00
0.25 MEV	3.66E+01	0.	0.	3.53E+00
0.30 MEV	2.35E+01	0.	0.	3.53E+00
0.35 MEV	2.99E+01	3.77E-03	9.47E-03	4.52E+00
0.40 MEV	2.50E+01	3.77E-03	9.47E-03	4.52E+00
0.45 MEV	1.73E+01	3.77E-03	0.	4.53E+00
0.50 MEV	1.93E+01	3.77E-03	0.	4.53E+00
0.55 MEV	1.77E+01	3.77E-03	0.	5.26E+00
0.60 MEV	1.53E+01	3.77E-03	0.	5.26E+00
0.65 MEV	1.32E+01	3.38E-02	0.	5.96E+00
0.70 MEV	1.47E+01	3.38E-02	0.	5.96E+00
0.75 MEV	1.15E+01	1.91E-03	9.29E-03	5.28E+00
0.80 MEV	1.26E+01	1.91E-03	9.29E-03	5.28E+00
0.85 MEV	9.90E+00	1.51E-02	0.	6.01E+00
0.90 MEV	1.20E+01	1.51E-02	0.	6.01E+00
0.95 MEV	1.26E+01	7.55E-03	0.	5.09E+00
1.00 MEV	1.61E+01	7.55E-03	0.	5.09E+00
1.10 MEV	1.66E+01	5.62E-02	1.24E-02	9.75E+00
1.20 MEV	1.95E+01	5.62E-02	1.24E-02	9.75E+00
1.30 MEV	1.05E+01	4.88E-02	2.12E-02	9.01E+00
1.40 MEV	7.92E+00	4.88E-02	2.12E-02	9.01E+00
1.50 MEV	1.40E+01	2.26E-02	1.04E-02	8.41E+00
1.60 MEV	9.77E+00	2.26E-02	1.04E-02	8.41E+00
1.70 MEV	1.08E+01	3.71E-02	1.93E-02	7.89E+00
1.80 MEV	8.54E+00	3.71E-02	1.93E-02	7.89E+00
1.90 MEV	6.86E+00	3.77E-03	1.04E-02	7.61E+00
2.00 MEV	6.18E+00	3.77E-03	1.04E-02	7.61E+00
2.10 MEV	1.37E+01	1.82E-02	0.	7.58E+00
2.20 MEV	7.77E+00	1.82E-02	0.	7.58E+00
2.30 MEV	7.96E+00	7.92E-03	1.04E-02	6.36E+00
2.40 MEV	7.27E+00	7.92E-03	1.04E-02	6.36E+00
2.50 MEV	6.74E+00	1.87E-02	2.08E-02	6.30E+00
2.60 MEV	4.87E+00	1.87E-02	2.08E-02	6.30E+00
2.70 MEV	2.89E+00	2.62E-02	3.12E-02	6.83E+00
2.80 MEV	5.21E+00	2.62E-02	3.12E-02	6.83E+00
2.90 MEV	5.21E+00	1.93E-02	1.04E-02	5.08E+00
3.00 MEV	5.11E+00	1.93E-02	1.04E-02	5.08E+00
3.20 MEV	7.60E+00	4.38E-02	6.25E-02	9.61E+00
3.40 MEV	1.33E+01	4.38E-02	6.25E-02	9.61E+00
3.60 MEV	1.28E+01	5.75E-02	6.25E-02	7.29E+00
3.80 MEV	6.51E+00	5.75E-02	6.25E-02	7.29E+00
4.00 MEV	1.16E+01	7.62E-02	1.26E-02	4.53E+00

INITIAL SPECTRUM AT 0.40-0.60 CM. FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	8.79E+00	7.62E-02	1.26E-02	4.53E+00
4.40 MEV	8.34E+00	6.08E-02	2.50E-02	4.62E+00
4.60 MEV	5.67E+00	6.08E-02	2.50E-02	4.62E+00
4.80 MEV	1.10E+01	7.19E-02	2.08E-02	2.65E+00
5.00 MEV	8.47E+00	7.19E-02	2.08E-02	2.65E+00
5.50 MEV	2.14E+01	6.10E-02	0.	5.08E+00
6.00 MEV	1.39E+01	6.10E-02	0.	5.08E+00
6.50 MEV	2.39E+01	2.80E-02	6.50E-03	3.39E+00
7.00 MEV	1.74E+01	2.80E-02	6.50E-03	3.39E+00
7.50 MEV	1.98E+01	6.88E-03	4.33E-03	2.03E+00
8.00 MEV	1.88E+01	6.88E-03	4.33E-03	2.03E+00
8.50 MEV	1.41E+01	1.72E-03	2.17E-03	3.29E+01
9.00 MEV	1.75E+01	1.72E-03	2.17E-03	3.29E+01
9.50 MEV	1.58E+01	1.72E-03	0.	2.08E+01
10.00 MEV	1.79E+01	1.72E-03	0.	2.08E+01
11.00 MEV	3.17E+01	0.	0.	8.27E+02
12.00 MEV	3.49E+01	0.	0.	8.27E+02
13.00 MEV	2.80E+01	0.	0.	4.43E+02
14.00 MEV	2.59E+01	0.	0.	4.43E+02
15.00 MEV	2.00E+00	0.	0.	2.33E+03
16.00 MEV	0.	0.	0.	2.33E+03
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
DAVE, E (MEV)	8.05	4.26	3.64	3.48

1 INITIAL SPECTRUM AT 0.60-1.00 CM. FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	3.06E+00
0.10 MEV	2.29E+02	0.	0.	3.06E+00
0.15 MEV	1.02E+02	0.	0.	5.37E+00
0.20 MEV	5.88E+01	0.	0.	5.37E+00
0.25 MEV	5.53E+01	0.	0.	5.25E+00
0.30 MEV	4.22E+01	0.	0.	5.25E+00
0.35 MEV	3.59E+01	1.89E-03	0.	5.59E+00
0.40 MEV	3.44E+01	1.89E-03	0.	5.59E+00
0.45 MEV	2.35E+01	0.	0.	4.49E+00
0.50 MEV	2.36E+01	0.	0.	4.49E+00
0.55 MEV	2.43E+01	1.02E-02	0.	5.09E+00
0.60 MEV	1.80E+01	1.02E-02	0.	5.09E+00
0.65 MEV	1.51E+01	1.89E-03	9.58E-04	6.27E+00
0.70 MEV	1.71E+01	1.89E-03	9.58E-04	6.27E+00
0.75 MEV	1.32E+01	1.15E-02	4.53E-03	6.73E+00
0.80 MEV	1.18E+01	1.15E-02	4.53E-03	6.73E+00
0.85 MEV	1.45E+01	5.66E-03	9.33E-03	5.19E+00
0.90 MEV	1.49E+01	5.66E-03	9.33E-03	5.19E+00
0.95 MEV	1.41E+01	3.77E-03	0.	7.30E+00
1.00 MEV	7.37E+00	3.77E-03	0.	7.30E+00
1.10 MEV	1.49E+01	2.27E-02	1.03E-02	1.22E+01
1.20 MEV	1.69E+01	2.27E-02	1.03E-02	1.22E+01
1.30 MEV	1.18E+01	2.03E-02	1.04E-02	9.54E+00
1.40 MEV	1.41E+01	2.03E-02	1.04E-02	9.54E+00
1.50 MEV	1.45E+01	2.15E-02	1.04E-02	9.78E+00
1.60 MEV	1.58E+01	2.15E-02	1.04E-02	9.78E+00
1.70 MEV	1.09E+01	1.69E-02	1.53E-02	1.13E+01
1.80 MEV	1.40E+01	1.69E-02	1.53E-02	1.13E+01
1.90 MEV	9.97E+00	1.11E-02	1.04E-02	8.50E+00
2.00 MEV	9.93E+00	1.11E-02	1.04E-02	8.50E+00
2.10 MEV	1.18E+01	4.03E-03	2.54E-02	6.90E+00
2.20 MEV	8.91E+00	4.03E-03	2.54E-02	6.90E+00
2.30 MEV	1.36E+01	7.43E-03	0.	7.64E+00
2.40 MEV	5.07E+00	7.43E-03	0.	7.64E+00
2.50 MEV	5.60E+00	8.35E-03	2.11E-02	6.97E+00
2.60 MEV	5.74E+00	8.35E-03	2.11E-02	6.97E+00
2.70 MEV	9.68E+00	1.49E-02	0.	5.38E+00
2.80 MEV	1.21E+01	1.49E-02	0.	5.38E+00
2.90 MEV	7.61E+00	6.21E-03	3.12E-02	6.16E+00
3.00 MEV	7.70E+00	6.21E-03	3.12E-02	6.16E+00
3.20 MEV	1.40E+01	4.71E-02	3.05E-02	1.09E+01
3.40 MEV	1.10E+01	4.71E-02	3.05E-02	1.09E+01
3.60 MEV	9.32E+00	4.24E-02	1.04E-02	7.68E+00
3.80 MEV	6.26E+00	4.24E-02	1.04E-02	7.68E+00
4.00 MEV	1.29E+01	4.86E-02	1.04E-02	6.69E+00

INITIAL SPECTRUM AT 0.60-1.00 CM. FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	1.17E+01	4.86E-02	1.04E-02	6.69E+00
4.40 MEV	1.04E+01	6.18E-02	1.75E-02	4.69E+00
4.60 MEV	1.23E+01	6.18E-02	1.75E-02	4.69E+00
4.80 MEV	9.40E+00	3.05E-02	9.72E-03	2.79E+00
5.00 MEV	1.05E+01	3.05E-02	9.72E-03	2.79E+00
5.50 MEV	2.31E+01	4.76E-02	1.58E-02	5.19E+00
6.00 MEV	2.68E+01	4.76E-02	1.58E-02	5.19E+00
6.50 MEV	1.79E+01	2.33E-02	4.36E-03	3.50E+00
7.00 MEV	2.17E+01	2.33E-02	4.36E-03	3.50E+00
7.50 MEV	1.63E+01	1.15E-02	0.	1.76E+00
8.00 MEV	1.51E+01	1.15E-02	0.	1.76E+00
8.50 MEV	1.31E+01	8.05E-03	1.08E-03	2.87E-01
9.00 MEV	1.34E+01	8.05E-03	1.08E-03	2.87E-01
9.50 MEV	1.64E+01	0.	0.	1.30E-01
10.00 MEV	1.80E+01	0.	0.	1.30E-01
11.00 MEV	3.11E+01	0.	0.	8.64E-02
12.00 MEV	3.02E+01	0.	0.	8.64E-02
13.00 MEV	2.48E+01	0.	0.	1.98E-02
14.00 MEV	2.64E+01	0.	0.	1.98E-02
15.00 MEV	3.02E+00	0.	0.	5.83E-03
16.00 MEV	0.	0.	0.	5.83E-03
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	7.59	4.63	3.73	3.32

1 INITIAL SPECTRUM AT 1.00-2.00 CM. FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	3.33E+00
0.10 MEV	2.51E+02	0.	0.	3.33E+00
0.15 MEV	1.02E+02	0.	0.	5.47E+00
0.20 MEV	5.77E+01	0.	0.	5.47E+00
0.25 MEV	5.08E+01	0.	0.	5.11E+00
0.30 MEV	4.46E+01	0.	0.	5.11E+00
0.35 MEV	4.37E+01	6.24E-03	0.	5.06E+00
0.40 MEV	3.73E+01	6.24E-03	0.	5.06E+00
0.45 MEV	3.11E+01	1.26E-02	0.	4.28E+00
0.50 MEV	2.50E+01	1.26E-02	0.	4.28E+00
0.55 MEV	2.19E+01	7.55E-03	0.	5.12E+00
0.60 MEV	2.12E+01	7.55E-03	0.	5.12E+00
0.65 MEV	1.82E+01	1.32E-02	0.	5.13E+00
0.70 MEV	1.53E+01	1.32E-02	0.	5.13E+00
0.75 MEV	1.37E+01	4.03E-03	0.	5.96E+00
0.80 MEV	1.71E+01	4.03E-03	0.	5.96E+00
0.85 MEV	1.26E+01	1.50E-02	0.	4.27E+00
0.90 MEV	1.94E+01	1.50E-02	0.	4.27E+00
0.95 MEV	1.02E+01	9.23E-03	0.	5.03E+00
1.00 MEV	1.12E+01	9.23E-03	0.	5.03E+00
1.10 MEV	1.99E+01	2.72E-02	0.	9.80E+00
1.20 MEV	2.26E+01	2.72E-02	0.	9.80E+00
1.30 MEV	2.24E+01	9.99E-03	5.21E-03	8.68E+00
1.40 MEV	2.11E+01	9.99E-03	5.21E-03	8.68E+00
1.50 MEV	1.73E+01	1.74E-02	1.04E-02	8.59E+00
1.60 MEV	2.01E+01	1.74E-02	1.04E-02	8.59E+00
1.70 MEV	1.29E+01	4.05E-03	1.04E-02	6.80E+00
1.80 MEV	1.26E+01	4.05E-03	1.04E-02	6.80E+00
1.90 MEV	1.57E+01	5.40E-03	2.08E-02	6.71E+00
2.00 MEV	1.32E+01	5.40E-03	2.08E-02	6.71E+00
2.10 MEV	1.19E+01	7.19E-03	1.55E-02	6.13E+00
2.20 MEV	1.10E+01	7.19E-03	1.55E-02	6.13E+00
2.30 MEV	8.29E+00	3.94E-03	1.05E-02	6.76E+00
2.40 MEV	7.61E+00	3.94E-03	1.05E-02	6.76E+00
2.50 MEV	6.46E+00	1.97E-03	1.04E-02	6.00E+00
2.60 MEV	6.76E+00	1.97E-03	1.04E-02	6.00E+00
2.70 MEV	1.39E+01	7.19E-03	5.21E-03	5.49E+00
2.80 MEV	4.70E+00	7.19E-03	5.21E-03	5.49E+00
2.90 MEV	7.63E+00	2.23E-02	9.96E-03	4.64E+00
3.00 MEV	9.64E+00	2.23E-02	9.96E-03	4.64E+00
3.20 MEV	1.16E+01	3.60E-02	1.25E-02	9.34E+00
3.40 MEV	1.93E+01	3.60E-02	1.25E-02	9.34E+00
3.60 MEV	1.25E+01	4.70E-02	2.85E-02	6.63E+00
3.80 MEV	1.27E+01	4.70E-02	2.85E-02	6.63E+00
4.00 MEV	1.08E+01	3.03E-02	2.08E-02	4.94E+00

INITIAL SPECTRUM AT 1.00-2.00 CM. FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	8.51E+00	3.03E-02	2.08E-02	4.94E+00
4.40 MEV	1.16E+01	2.07E-02	6.56E-03	3.46E+00
4.60 MEV	1.27E+01	2.07E-02	6.56E-03	3.46E+00
4.80 MEV	1.11E+01	6.11E-02	1.66E-02	2.41E+00
5.00 MEV	9.54E+00	6.11E-02	1.66E-02	2.41E+00
5.50 MEV	2.02E+01	5.48E-02	2.00E-02	4.13E+00
6.00 MEV	2.56E+01	5.48E-02	2.00E-02	4.13E+00
6.50 MEV	1.98E+01	1.24E-02	2.14E-03	3.25E+00
7.00 MEV	1.99E+01	1.24E-02	2.14E-03	3.25E+00
7.50 MEV	1.67E+01	1.62E-03	5.35E-03	1.45E+00
8.00 MEV	1.44E+01	1.62E-03	5.35E-03	1.45E+00
8.50 MEV	1.69E+01	7.19E-03	0.	2.38E-01
9.00 MEV	1.41E+01	7.19E-03	0.	2.38E-01
9.50 MEV	1.62E+01	0.	0.	1.15E-01
10.00 MEV	1.29E+01	0.	0.	1.15E-01
11.00 MEV	2.32E+01	0.	0.	5.28E-02
12.00 MEV	2.55E+01	0.	0.	5.28E-02
13.00 MEV	2.53E+01	0.	0.	2.44E-02
14.00 MEV	2.08E+01	0.	0.	2.44E-02
15.00 MEV	5.00E-01	0.	0.	4.66E-03
16.00 MEV	0.	0.	0.	4.66E-03
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	7.06	4.48	4.18	3.31

INITIAL SPECTRUM AT 2.00-4.00 CM. FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	2.01E+00
0.10 MEV	2.62E+02	0.	0.	2.01E+00
0.15 MEV	1.10E+02	0.	0.	3.54E+00
0.20 MEV	8.00E+01	0.	0.	3.54E+00
0.25 MEV	6.04E+01	0.	0.	4.86E+00
0.30 MEV	4.79E+01	0.	0.	4.86E+00
0.35 MEV	4.13E+01	2.04E-03	0.	4.76E+00
0.40 MEV	3.05E+01	2.04E-03	0.	4.76E+00
0.45 MEV	2.82E+01	3.77E-03	4.83E-03	4.27E+00
0.50 MEV	3.18E+01	3.77E-03	4.83E-03	4.27E+00
0.55 MEV	2.25E+01	8.09E-03	0.	4.85E+00
0.60 MEV	2.23E+01	8.09E-03	0.	4.85E+00
0.65 MEV	1.91E+01	2.00E-02	0.	4.09E+00
0.70 MEV	2.12E+01	2.00E-02	0.	4.09E+00
0.75 MEV	1.92E+01	6.04E-03	0.	5.16E+00
0.80 MEV	1.80E+01	6.04E-03	0.	5.16E+00
0.85 MEV	1.34E+01	7.82E-03	4.83E-03	4.66E+00
0.90 MEV	1.82E+01	7.82E-03	4.83E-03	4.66E+00
0.95 MEV	1.64E+01	3.77E-03	6.31E-03	4.77E+00
1.00 MEV	1.28E+01	3.77E-03	6.31E-03	4.77E+00
1.10 MEV	2.12E+01	1.33E-02	1.47E-02	7.68E+00
1.20 MEV	1.93E+01	1.33E-02	1.47E-02	7.68E+00
1.30 MEV	2.34E+01	2.72E-02	1.04E-02	8.33E+00
1.40 MEV	1.78E+01	2.72E-02	1.04E-02	8.33E+00
1.50 MEV	1.96E+01	1.88E-02	1.56E-02	6.99E+00
1.60 MEV	1.75E+01	1.88E-02	1.56E-02	6.99E+00
1.70 MEV	1.36E+01	1.05E-02	4.57E-03	7.47E+00
1.80 MEV	9.75E+00	1.05E-02	4.57E-03	7.47E+00
1.90 MEV	1.53E+01	1.17E-02	5.21E-03	6.81E+00
2.00 MEV	9.92E+00	1.17E-02	5.21E-03	6.81E+00
2.10 MEV	8.36E+00	6.86E-03	1.54E-02	5.73E+00
2.20 MEV	1.24E+01	6.86E-03	1.54E-02	5.73E+00
2.30 MEV	1.00E+01	9.35E-03	2.62E-02	6.23E+00
2.40 MEV	9.06E+00	9.35E-03	2.62E-02	6.23E+00
2.50 MEV	9.12E+00	2.04E-02	2.07E-02	4.80E+00
2.60 MEV	1.03E+01	2.04E-02	2.07E-02	4.80E+00
2.70 MEV	8.86E+00	3.33E-02	2.04E-02	3.58E+00
2.80 MEV	6.42E+00	3.33E-02	2.04E-02	3.58E+00
2.90 MEV	7.64E+00	1.54E-02	1.05E-02	4.36E+00
3.00 MEV	7.23E+00	1.54E-02	1.05E-02	4.36E+00
3.20 MEV	1.11E+01	5.43E-02	1.56E-02	7.72E+00
3.40 MEV	1.17E+01	5.43E-02	1.56E-02	7.72E+00
3.60 MEV	1.16E+01	3.70E-02	5.21E-03	5.49E+00
3.80 MEV	9.23E+00	3.70E-02	5.21E-03	5.49E+00
4.00 MEV	1.20E+01	2.47E-02	1.64E-02	3.38E+00

INITIAL SPECTRUM AT 2.00-4.00 CM. FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	6.96E+00	2.47E-02	1.64E-02	3.38E+00
4.40 MEV	9.16E+00	2.41E-02	6.29E-03	2.27E+00
4.60 MEV	1.11E+01	2.41E-02	6.29E-03	2.27E+00
4.80 MEV	7.10E+00	9.77E-03	3.32E-03	1.80E+00
5.00 MEV	7.75E+00	9.77E-03	3.32E-03	1.80E+00
5.50 MEV	1.97E+01	4.53E-02	2.10E-03	3.42E+00
6.00 MEV	2.09E+01	4.53E-02	2.10E-03	3.42E+00
6.50 MEV	1.50E+01	1.40E-02	5.35E-03	2.16E+00
7.00 MEV	1.71E+01	1.40E-02	5.35E-03	2.16E+00
7.50 MEV	1.35E+01	1.72E-03	3.18E-03	1.06E+00
8.00 MEV	1.24E+01	1.72E-03	3.18E-03	1.06E+00
8.50 MEV	1.74E+01	8.09E-04	0.	1.92E-01
9.00 MEV	1.51E+01	8.09E-04	0.	1.92E-01
9.50 MEV	1.50E+01	8.59E-04	0.	9.74E-02
10.00 MEV	1.08E+01	8.59E-04	0.	9.74E-02
11.00 MEV	2.25E+01	0.	0.	4.88E-02
12.00 MEV	2.12E+01	0.	0.	4.88E-02
13.00 MEV	2.21E+01	0.	0.	2.85E-02
14.00 MEV	1.89E+01	0.	0.	2.85E-02
15.00 MEV	1.00E+00	0.	0.	3.44E-03
16.00 MEV	0.	0.	0.	3.44E-03
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
DAVE, E(MEV)	6.85	4.11	3.40	3.17

INITIAL SPECTRUM AT 4.00-6.00 CM. FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	2.54E+00
0.10 MEV	2.81E+02	0.	0.	2.54E+00
0.15 MEV	1.01E+02	0.	0.	4.32E+00
0.20 MEV	7.58E+01	0.	0.	4.32E+00
0.25 MEV	5.88E+01	0.	0.	4.62E+00
0.30 MEV	4.90E+01	0.	0.	4.62E+00
0.35 MEV	4.00E+01	3.85E-03	0.	5.14E+00
0.40 MEV	3.62E+01	3.85E-03	0.	5.14E+00
0.45 MEV	3.05E+01	0.	0.	4.05E+00
0.50 MEV	2.55E+01	0.	0.	4.05E+00
0.55 MEV	2.41E+01	9.44E-03	0.	6.74E+00
0.60 MEV	2.52E+01	9.44E-03	0.	6.74E+00
0.65 MEV	1.91E+01	7.55E-03	0.	4.34E+00
0.70 MEV	1.49E+01	7.55E-03	0.	4.34E+00
0.75 MEV	1.62E+01	5.68E-03	0.	4.86E+00
0.80 MEV	1.33E+01	5.68E-03	0.	4.86E+00
0.85 MEV	1.59E+01	9.44E-03	0.	4.12E+00
0.90 MEV	1.28E+01	9.44E-03	0.	4.12E+00
0.95 MEV	1.68E+01	1.89E-03	0.	4.63E+00
1.00 MEV	1.46E+01	1.89E-03	0.	4.63E+00
1.10 MEV	1.98E+01	1.86E-02	1.03E-02	7.55E+00
1.20 MEV	2.32E+01	1.86E-02	1.03E-02	7.55E+00
1.30 MEV	2.09E+01	8.58E-03	1.56E-02	8.29E+00
1.40 MEV	1.80E+01	8.58E-03	1.56E-02	8.29E+00
1.50 MEV	1.61E+01	2.35E-02	1.47E-02	7.22E+00
1.60 MEV	1.24E+01	2.35E-02	1.47E-02	7.22E+00
1.70 MEV	1.26E+01	1.49E-02	5.00E-03	7.40E+00
1.80 MEV	1.81E+01	1.49E-02	5.00E-03	7.40E+00
1.90 MEV	1.29E+01	3.40E-03	5.21E-03	5.53E+00
2.00 MEV	9.84E+00	3.40E-03	5.21E-03	5.53E+00
2.10 MEV	9.76E+00	1.86E-03	1.02E-02	6.60E+00
2.20 MEV	7.51E+00	1.86E-03	1.02E-02	6.60E+00
2.30 MEV	1.22E+01	1.11E-02	1.04E-02	5.08E+00
2.40 MEV	1.02E+01	1.11E-02	1.04E-02	5.08E+00
2.50 MEV	1.06E+01	6.22E-03	1.53E-02	4.19E+00
2.60 MEV	9.21E+00	6.22E-03	1.53E-02	4.19E+00
2.70 MEV	5.78E+00	2.44E-02	0.	4.91E+00
2.80 MEV	1.05E+01	2.44E-02	0.	4.91E+00
2.90 MEV	6.20E+00	0.	1.04E-02	3.57E+00
3.00 MEV	9.16E+00	0.	1.04E-02	3.57E+00
3.20 MEV	1.50E+01	2.16E-02	1.04E-02	7.80E+00
3.40 MEV	1.03E+01	2.16E-02	1.04E-02	7.80E+00
3.60 MEV	8.86E+00	3.28E-02	2.08E-02	6.28E+00
3.80 MEV	1.23E+01	3.28E-02	2.08E-02	6.28E+00
4.00 MEV	8.67E+00	2.37E-02	1.56E-02	4.41E+00

INITIAL SPECTRUM AT 4.00-6.00 CM, FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	6.09E+00	2.37E-02	1.56E-02	4.41E+00
4.40 MEV	1.19E+01	5.00E-02	5.21E-03	2.36E+00
4.60 MEV	1.07E+01	5.00E-02	5.21E-03	2.36E+00
4.80 MEV	6.62E+00	2.20E-02	1.02E-03	2.15E+00
5.00 MEV	8.28E+00	2.20E-02	1.02E-03	2.15E+00
5.50 MEV	2.24E+01	2.33E-02	1.96E-02	3.35E+00
6.00 MEV	1.79E+01	2.33E-02	1.96E-02	3.35E+00
6.50 MEV	2.16E+01	9.44E-03	1.08E-03	2.31E+00
7.00 MEV	1.48E+01	9.44E-03	1.06E-03	2.31E+00
7.50 MEV	1.27E+01	1.21E-02	2.17E-03	1.06E+00
8.00 MEV	1.38E+01	1.21E-02	2.17E-03	1.06E+00
8.50 MEV	1.50E+01	8.59E-04	0.	1.64E-01
9.00 MEV	1.40E+01	8.59E-04	0.	1.64E-01
9.50 MEV	1.21E+01	8.59E-04	0.	7.41E-02
10.00 MEV	9.98E+00	8.59E-04	0.	7.41E-02
11.00 MEV	2.28E+01	8.59E-04	0.	3.59E-02
12.00 MEV	1.89E+01	8.59E-04	0.	3.59E-02
13.00 MEV	1.57E+01	0.	0.	1.62E-02
14.00 MEV	1.82E+01	0.	0.	1.62E-02
15.00 MEV	0.	0.	0.	3.50E-03
16.00 MEV	0.	0.	0.	3.50E-03
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
WAVE, E(MEV)	6.58	4.47	3.90	3.16

INITIAL SPECTRUM AT 6.00-10.0 CM, FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	2.39E+00
0.10 MEV	2.50E+02	0.	0.	2.39E+00
0.15 MEV	1.04E+02	0.	0.	2.80E+00
0.20 MEV	7.11E+01	0.	0.	2.80E+00
0.25 MEV	5.45E+01	0.	0.	4.16E+00
0.30 MEV	4.67E+01	0.	0.	4.16E+00
0.35 MEV	3.71E+01	1.89E-03	0.	3.54E+00
0.40 MEV	2.76E+01	1.89E-03	0.	3.54E+00
0.45 MEV	2.48E+01	6.12E-03	0.	3.58E+00
0.50 MEV	2.26E+01	6.12E-03	0.	3.58E+00
0.55 MEV	2.69E+01	7.77E-03	4.83E-03	3.49E+00
0.60 MEV	2.39E+01	7.77E-03	4.83E-03	3.49E+00
0.65 MEV	1.95E+01	5.76E-03	4.41E-03	3.19E+00
0.70 MEV	2.04E+01	5.76E-03	4.41E-03	3.19E+00
0.75 MEV	1.59E+01	5.66E-03	0.	4.29E+00
0.80 MEV	1.40E+01	5.66E-03	0.	4.29E+00
0.85 MEV	1.26E+01	1.17E-02	0.	3.85E+00
0.90 MEV	1.53E+01	1.17E-02	0.	3.85E+00
0.95 MEV	1.82E+01	1.09E-02	0.	2.87E+00
1.00 MEV	1.43E+01	1.09E-02	0.	2.87E+00
1.10 MEV	3.07E+01	2.34E-02	5.58E-03	5.62E+00
1.20 MEV	2.10E+01	2.34E-02	5.58E-03	5.62E+00
1.30 MEV	1.73E+01	9.88E-03	4.65E-03	6.01E+00
1.40 MEV	1.69E+01	9.88E-03	4.65E-03	6.01E+00
1.50 MEV	1.92E+01	1.31E-02	3.66E-03	5.48E+00
1.60 MEV	1.52E+01	1.31E-02	3.66E-03	5.48E+00
1.70 MEV	8.51E+00	3.05E-03	9.91E-03	5.48E+00
1.80 MEV	1.34E+01	3.05E-03	9.91E-03	5.48E+00
1.90 MEV	1.31E+01	1.27E-02	1.04E-02	4.32E+00
2.00 MEV	1.00E+01	1.27E-02	1.04E-02	4.32E+00
2.10 MEV	1.13E+01	6.61E-03	1.04E-02	3.90E+00
2.20 MEV	8.57E+00	6.61E-03	1.04E-02	3.90E+00
2.30 MEV	7.63E+00	2.72E-02	6.22E-03	3.42E+00
2.40 MEV	7.65E+00	2.72E-02	6.22E-03	3.42E+00
2.50 MEV	1.09E+01	3.02E-03	1.52E-02	3.77E+00
2.60 MEV	6.07E+00	3.02E-03	1.52E-02	3.77E+00
2.70 MEV	8.83E+00	4.33E-03	1.04E-02	3.72E+00
2.80 MEV	6.05E+00	4.33E-03	1.04E-02	3.72E+00
2.90 MEV	6.03E+00	9.10E-04	2.57E-02	2.45E+00
3.00 MEV	3.68E+00	9.10E-04	2.57E-02	2.45E+00
3.20 MEV	1.08E+01	4.19E-02	2.01E-02	5.62E+00
3.40 MEV	1.22E+01	4.19E-02	2.01E-02	5.62E+00
3.60 MEV	9.18E+00	2.49E-02	1.53E-02	3.89E+00
3.80 MEV	8.71E+00	2.49E-02	1.53E-02	3.89E+00
4.00 MEV	1.19E+01	1.63E-02	9.43E-03	3.00E+00

INITIAL SPECTRUM AT 6.00-10.0 CM. FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	1.21E+01	1.63E-02	9.43E-03	3.00E+00
4.40 MEV	7.16E+00	3.77E-02	6.17E-03	1.95E+00
4.60 MEV	8.37E+00	3.77E-02	6.17E-03	1.95E+00
4.80 MEV	5.28E+00	1.44E-02	2.25E-03	1.64E+00
5.00 MEV	8.49E+00	1.44E-02	2.25E-03	1.64E+00
5.50 MEV	2.11E+01	4.84E-02	8.39E-03	2.66E+00
6.00 MEV	2.41E+01	4.84E-02	8.39E-03	2.66E+00
6.50 MEV	1.49E+01	1.94E-02	4.41E-03	1.86E+00
7.00 MEV	1.52E+01	1.94E-02	4.41E-03	1.86E+00
7.50 MEV	1.27E+01	4.34E-03	2.17E-03	7.70E-01
8.00 MEV	1.14E+01	4.34E-03	2.17E-03	7.70E-01
8.50 MEV	1.50E+01	0.	0.	1.77E-01
9.00 MEV	1.23E+01	0.	0.	1.77E-01
9.50 MEV	8.69E+00	8.59E-04	0.	5.97E-02
10.00 MEV	5.92E+00	8.59E-04	0.	5.97E-02
11.00 MEV	1.87E+01	0.	0.	5.22E-02
12.00 MEV	1.37E+01	0.	0.	5.22E-02
13.00 MEV	2.45E+01	0.	0.	1.16E-02
14.00 MEV	2.17E+01	0.	0.	1.16E-02
15.00 MEV	1.02E-02	0.	0.	3.43E-03
16.00 MEV	0.	0.	0.	3.43E-03
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
AVE. E (MEV)	6.77	4.47	3.75	3.23

INITIAL SPECTRUM AT 10.0-14.0 CM. FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	2.26E+00
0.10 MEV	2.64E+02	0.	0.	2.20E+00
0.15 MEV	1.04E+02	0.	0.	2.39E+00
0.20 MEV	7.26E+01	0.	0.	2.39E+00
0.25 MEV	5.79E+01	0.	0.	3.29E+00
0.30 MEV	5.02E+01	0.	0.	3.29E+00
0.35 MEV	3.27E+01	2.26E-03	0.	2.78E+00
0.40 MEV	3.32E+01	2.26E-03	0.	2.78E+00
0.45 MEV	2.48E+01	8.04E-03	0.	2.86E+00
0.50 MEV	2.17E+01	8.04E-03	0.	2.86E+00
0.55 MEV	2.27E+01	7.46E-03	1.03E-03	2.81E+00
0.60 MEV	1.74E+01	7.46E-03	1.03E-03	2.81E+00
0.65 MEV	1.62E+01	4.08E-03	0.	2.81E+00
0.70 MEV	1.00E+01	4.08E-03	0.	2.81E+00
0.75 MEV	1.91E+01	3.75E-03	0.	2.47E+00
0.80 MEV	1.55E+01	3.75E-03	0.	2.47E+00
0.85 MEV	1.50E+01	0.	0.	2.55E+00
0.90 MEV	9.87E+00	0.	0.	2.55E+00
0.95 MEV	1.20E+01	6.37E-03	0.	2.41E+00
1.00 MEV	9.58E+00	6.37E-03	0.	2.41E+00
1.10 MEV	1.76E+01	9.47E-03	1.02E-02	4.91E+00
1.20 MEV	1.47E+01	9.47E-03	1.02E-02	4.91E+00
1.30 MEV	1.61E+01	2.00E-02	1.52E-02	5.61E+00
1.40 MEV	1.51E+01	2.00E-02	1.52E-02	5.61E+00
1.50 MEV	1.34E+01	7.59E-03	5.14E-03	5.03E+00
1.60 MEV	1.48E+01	7.59E-03	5.14E-03	5.03E+00
1.70 MEV	1.07E+01	2.56E-03	1.04E-02	4.22E+00
1.80 MEV	1.39E+01	2.56E-03	1.04E-02	4.22E+00
1.90 MEV	8.14E+00	4.06E-03	1.02E-02	3.64E+00
2.00 MEV	9.64E+00	4.06E-03	1.02E-02	3.64E+00
2.10 MEV	9.55E+00	1.44E-02	2.08E-02	4.20E+00
2.20 MEV	1.08E+01	1.44E-02	2.08E-02	4.20E+00
2.30 MEV	7.26E+00	9.03E-03	1.04E-02	3.52E+00
2.40 MEV	1.24E+01	9.03E-03	1.04E-02	3.52E+00
2.50 MEV	7.46E+00	6.22E-03	1.02E-02	4.38E+00
2.60 MEV	6.50E+00	6.22E-03	1.02E-02	4.38E+00
2.70 MEV	7.48E+00	2.05E-02	2.01E-02	3.13E+00
2.80 MEV	1.04E+01	2.05E-02	2.01E-02	3.13E+00
2.90 MEV	6.88E+00	2.59E-02	0.	3.37E+00
3.00 MEV	8.51E+00	2.59E-02	0.	3.37E+00
3.20 MEV	9.77E+00	4.05E-02	1.02E-02	4.85E+00
3.40 MEV	1.50E+01	4.05E-02	1.02E-02	4.85E+00
3.60 MEV	9.78E+00	4.94E-02	4.46E-03	3.25E+00
3.80 MEV	9.17E+00	4.94E-02	4.46E-03	3.25E+00
4.00 MEV	8.94E+00	2.08E-02	2.15E-02	2.41E+00

1 INITIAL SPECTRUM AT 10.0-14.0 CM. FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	9.69E+00	2.08E-02	2.15E-02	2.41E+00
4.40 MEV	7.21E+00	1.48E-02	4.94E-03	1.63E+00
4.60 MEV	5.64E+00	1.48E-02	4.94E-03	1.63E+00
4.80 MEV	9.00E+00	2.25E-02	1.29E-02	1.45E+00
5.00 MEV	6.55E+00	2.25E-02	1.29E-02	1.45E+00
5.50 MEV	1.56E+01	1.66E-02	1.02E-03	2.23E+00
6.00 MEV	1.61E+01	1.66E-02	1.02E-03	2.23E+00
6.50 MEV	1.46E+01	1.68E-02	1.08E-03	1.62E+00
7.00 MEV	1.61E+01	1.68E-02	1.08E-03	1.62E+00
7.50 MEV	1.01E+01	1.72E-03	9.06E-04	7.74E-01
8.00 MEV	8.11E+00	1.72E-03	9.06E-04	7.74E-01
8.50 MEV	7.77E+00	0.	1.08E-03	1.22E-01
9.00 MEV	1.46E+01	0.	1.08E-03	1.22E-01
9.50 MEV	9.04E+00	0.	0.	8.79E-02
10.00 MEV	1.49E+01	0.	0.	8.79E-02
11.00 MEV	1.57E+01	0.	0.	3.36E-02
12.00 MEV	1.25E+01	0.	0.	3.36E-02
13.00 MEV	1.21E+01	0.	0.	1.25E-02
14.00 MEV	9.70E+00	0.	0.	1.25E-02
15.00 MEV	5.00E-01	0.	0.	1.10E-03
16.00 MEV	0.	0.	0.	1.10E-03
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	6.09	4.05	3.32	3.24

1 INITIAL SPECTRUM AT 14.0-40.0 CM. FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	6.72E-01
0.10 MEV	1.16E+02	0.	0.	6.72E-01
0.15 MEV	4.53E+01	2.04E-04	0.	9.91E-01
0.20 MEV	3.08E+01	2.04E-04	0.	9.91E-01
0.25 MEV	2.50E+01	0.	0.	1.17E+00
0.30 MEV	2.07E+01	0.	0.	1.17E+00
0.35 MEV	1.72E+01	8.04E-04	6.43E-05	1.13E+00
0.40 MEV	1.53E+01	8.04E-04	6.43E-05	1.13E+00
0.45 MEV	1.28E+01	1.13E-03	4.18E-04	1.22E+00
0.50 MEV	1.14E+01	1.13E-03	4.18E-04	1.22E+00
0.55 MEV	1.08E+01	2.82E-03	1.74E-04	1.19E+00
0.60 MEV	9.46E+00	2.82E-03	1.74E-04	1.19E+00
0.65 MEV	8.55E+00	1.91E-03	0.	1.17E+00
0.70 MEV	8.30E+00	1.91E-03	0.	1.17E+00
0.75 MEV	7.01E+00	3.10E-03	8.72E-04	1.25E+00
0.80 MEV	6.87E+00	3.10E-03	8.72E-04	1.25E+00
0.85 MEV	7.07E+00	2.08E-03	7.76E-05	1.26E+00
0.90 MEV	6.57E+00	2.08E-03	7.76E-05	1.26E+00
0.95 MEV	4.86E+00	3.70E-03	8.01E-04	1.22E+00
1.00 MEV	5.75E+00	3.70E-03	8.01E-04	1.22E+00
1.10 MEV	1.03E+01	5.13E-03	4.19E-03	2.05E+00
1.20 MEV	8.60E+00	5.13E-03	4.19E-03	2.05E+00
1.30 MEV	8.98E+00	4.20E-03	3.32E-03	2.03E+00
1.40 MEV	7.81E+00	4.20E-03	3.32E-03	2.03E+00
1.50 MEV	6.58E+00	4.06E-03	4.05E-03	1.97E+00
1.60 MEV	6.10E+00	4.06E-03	4.05E-03	1.97E+00
1.70 MEV	6.57E+00	2.27E-03	2.43E-03	1.82E+00
1.80 MEV	5.09E+00	2.27E-03	2.43E-03	1.82E+00
1.90 MEV	6.01E+00	2.00E-03	3.24E-03	1.56E+00
2.00 MEV	5.09E+00	2.00E-03	3.24E-03	1.56E+00
2.10 MEV	4.65E+00	3.98E-03	3.07E-03	1.55E+00
2.20 MEV	4.07E+00	3.98E-03	3.07E-03	1.55E+00
2.30 MEV	3.37E+00	2.48E-03	1.56E-03	1.42E+00
2.40 MEV	4.13E+00	2.48E-03	1.56E-03	1.42E+00
2.50 MEV	4.07E+00	3.75E-03	3.91E-03	1.33E+00
2.60 MEV	3.36E+00	3.75E-03	3.91E-03	1.33E+00
2.70 MEV	3.30E+00	3.48E-03	4.19E-03	1.13E+00
2.80 MEV	3.50E+00	3.48E-03	4.19E-03	1.13E+00
2.90 MEV	2.80E+00	4.05E-03	1.98E-03	1.13E+00
3.00 MEV	2.94E+00	4.05E-03	1.98E-03	1.13E+00
3.20 MEV	4.96E+00	1.07E-02	4.60E-03	1.99E+00
3.40 MEV	5.16E+00	1.07E-02	4.60E-03	1.99E+00
3.60 MEV	4.06E+00	1.18E-02	2.89E-03	1.47E+00
3.80 MEV	4.60E+00	1.18E-02	2.89E-03	1.47E+00
4.00 MEV	4.62E+00	6.38E-03	1.80E-03	1.01E+00

11 INITIAL SPECTRUM AT 14.0-40.0 CM, FOR SHONKA A-150 PLASTIC
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.99E+00	6.38E-03	1.80E-03	1.01E+00
4.40 MEV	3.84E+00	5.59E-03	2.15E-03	7.16E-01
4.60 MEV	3.52E+00	5.59E-03	2.15E-03	7.16E-01
4.80 MEV	3.96E+00	4.06E-03	1.43E-03	5.53E-01
5.00 MEV	3.11E+00	4.06E-03	1.43E-03	5.53E-01
5.50 MEV	7.37E+00	6.73E-03	1.79E-03	8.18E-01
6.00 MEV	6.88E+00	6.73E-03	1.79E-03	8.18E-01
6.50 MEV	6.19E+00	4.31E-03	1.23E-03	6.13E-01
7.00 MEV	5.16E+00	4.31E-03	1.23E-03	6.13E-01
7.50 MEV	4.89E+00	1.92E-03	6.23E-04	2.44E-01
8.00 MEV	4.75E+00	1.92E-03	6.23E-04	2.44E-01
8.50 MEV	5.10E+00	4.37E-04	2.30E-04	5.00E-02
9.00 MEV	4.02E+00	4.37E-04	2.30E-04	5.00E-02
9.50 MEV	3.49E+00	6.61E-05	0.	2.02E-02
10.00 MEV	3.35E+00	6.61E-05	0.	2.02E-02
11.00 MEV	6.44E+00	0.	0.	1.25E-02
12.00 MEV	5.39E+00	0.	0.	1.25E-02
13.00 MEV	5.27E+00	0.	0.	4.50E-03
14.00 MEV	3.83E+00	0.	0.	4.50E-03
15.00 MEV	1.18E-01	0.	0.	4.44E-04
16.00 MEV	0.	0.	0.	4.44E-04
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
AVERAGE, E(MEV)	5.01	4.19	3.61	3.16

INITIAL SPECTRUM AT 0.00-0.05 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	1.15E+00
0.10 MEV	8.10E+01	0.	0.	1.15E+00
0.15 MEV	3.37E+01	0.	0.	0.
0.20 MEV	2.64E+01	0.	0.	0.
0.25 MEV	2.64E+01	0.	0.	5.65E-01
0.30 MEV	2.33E+01	0.	0.	5.65E-01
0.35 MEV	4.52E+00	1.89E-02	0.	1.76E+00
0.40 MEV	3.64E+03	1.89E-02	0.	1.76E+00
0.45 MEV	1.39E+01	7.55E-02	0.	2.35E+00
0.50 MEV	9.41E+00	7.55E-02	0.	2.35E+00
0.55 MEV	3.64E+03	5.66E-02	0.	2.35E+00
0.60 MEV	7.19E+00	5.66E-02	0.	2.35E+00
0.65 MEV	3.64E+03	1.51E-01	0.	2.90E+00
0.70 MEV	5.00E+00	1.51E-01	0.	2.90E+00
0.75 MEV	1.07E+01	1.89E-01	0.	1.74E+00
0.80 MEV	6.15E+00	1.89E-01	0.	1.74E+00
0.85 MEV	9.56E+00	1.29E-01	0.	8.23E-04
0.90 MEV	1.91E+01	1.29E-01	0.	8.23E-04
0.95 MEV	5.10E+00	1.70E-01	0.	1.76E+00
1.00 MEV	5.68E+00	1.70E-01	0.	1.76E+00
1.10 MEV	9.58E+00	2.45E-01	0.	2.87E+00
1.20 MEV	1.11E+00	2.45E-01	0.	2.87E+00
1.30 MEV	1.41E+00	3.21E-01	5.21E-02	2.31E+00
1.40 MEV	5.76E+00	3.21E-01	5.21E-02	2.31E+00
1.50 MEV	9.75E+00	2.64E-01	5.21E-02	4.62E+00
1.60 MEV	5.73E-01	2.64E-01	5.21E-02	4.62E+00
1.70 MEV	3.06E-01	5.66E-02	0.	2.29E+00
1.80 MEV	5.71E+00	5.66E-02	0.	2.29E+00
1.90 MEV	3.82E-01	5.66E-02	0.	8.09E+00
2.00 MEV	1.06E+01	5.66E-02	0.	8.09E+00
2.10 MEV	5.41E+00	7.19E-02	0.	2.28E+00
2.20 MEV	1.51E+01	7.19E-02	0.	2.28E+00
2.30 MEV	5.77E-01	1.89E-02	5.21E-02	4.93E+00
2.40 MEV	7.27E-01	1.89E-02	5.21E-02	4.93E+00
2.50 MEV	4.70E+00	7.19E-02	0.	3.59E+00
2.60 MEV	5.43E+00	7.19E-02	0.	3.59E+00
2.70 MEV	4.36E+00	7.19E-02	0.	4.71E+00
2.80 MEV	5.53E+00	7.19E-02	0.	4.71E+00
2.90 MEV	4.21E-01	7.19E-02	5.21E-02	2.99E+00
3.00 MEV	9.25E+00	7.19E-02	5.21E-02	2.99E+00
3.20 MEV	1.06E+01	0.	0.	6.48E+00
3.40 MEV	3.82E-01	0.	0.	6.48E+00
3.60 MEV	4.87E+00	7.19E-02	1.04E-01	5.41E+00
3.80 MEV	4.58E+00	7.19E-02	1.04E-01	5.41E+00
4.00 MEV	1.01E+01	1.44E-01	1.04E-01	3.89E+00

INITIAL SPECTRUM AT 0.00-0.05 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	9.75E+00	1.44E-01	1.04E-01	3.89E+00
4.40 MEV	7.65E-02	7.19E-02	5.21E-02	1.99E+00
4.60 MEV	1.01E+01	7.19E-02	5.21E-02	1.99E+00
4.80 MEV	1.41E+01	0.	0.	1.41E+00
5.00 MEV	5.00E+00	0.	0.	1.41E+00
5.50 MEV	2.50E+01	7.19E-02	0.	4.62E+30
6.00 MEV	3.75E+01	7.19E-02	0.	4.62E+00
6.50 MEV	2.03E+01	0.	0.	4.70E+00
7.00 MEV	5.76E-01	0.	0.	4.70E+00
7.50 MEV	2.51E+01	0.	0.	3.30E+00
8.00 MEV	1.00E+01	0.	0.	3.30E+00
8.50 MEV	3.01E+01	0.	0.	1.33E+00
9.00 MEV	1.50E+01	0.	0.	1.33E+00
9.50 MEV	1.01E+01	0.	0.	4.86E-01
10.00 MEV	1.00E+01	0.	0.	4.86E-01
11.00 MEV	3.45E+01	0.	0.	1.62E-01
12.00 MEV	1.50E+01	0.	0.	1.62E-01
13.00 MEV	3.50E+01	0.	0.	1.62E-01
14.00 MEV	2.00E+01	0.	0.	0.
15.00 MEV	1.00E+01	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E (MEV)	8.69	2.53	3.37	4.59

INITIAL SPECTRUM AT 0.05-0.10 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	1.53E-02
0.10 MEV	7.80E+01	0.	0.	1.53E-02
0.15 MEV	1.62E+01	0.	0.	1.65E+00
0.20 MEV	4.21E+01	0.	0.	1.65E+00
0.25 MEV	1.29E+01	0.	0.	5.93E-01
0.30 MEV	1.83E+01	0.	0.	5.93E-01
0.35 MEV	2.76E+01	0.	0.	1.70E+00
0.40 MEV	4.70E+00	0.	0.	1.70E+00
0.45 MEV	9.11E+00	9.44E-02	0.	1.10E+00
0.50 MEV	1.45E+01	9.44E-02	0.	1.10E+00
0.55 MEV	1.35E+01	3.77E-02	0.	2.26E+00
0.60 MEV	0.	3.77E-02	0.	2.26E+00
0.65 MEV	5.00E+00	1.13E-01	0.	1.64E+00
0.70 MEV	4.53E+00	1.13E-01	0.	1.64E+00
0.75 MEV	3.64E-03	1.13E-01	0.	1.00E+00
0.80 MEV	5.00E+00	1.13E-01	0.	1.00E+00
0.85 MEV	5.07E+00	1.32E-01	0.	1.63E+00
0.90 MEV	4.69E+00	1.32E-01	0.	1.63E+00
0.95 MEV	1.37E+01	2.08E-01	0.	1.70E+00
1.00 MEV	7.80E+00	2.08E-01	0.	1.70E+00
1.10 MEV	1.58E+01	3.21E-01	0.	2.28E+00
1.20 MEV	1.51E+00	3.21E-01	0.	2.28E+00
1.30 MEV	1.04E+01	3.77E-01	0.	1.16E+00
1.40 MEV	3.07E-01	3.77E-01	0.	1.16E+00
1.50 MEV	5.23E+00	2.08E-01	0.	4.66E+00
1.60 MEV	1.96E+01	2.08E-01	0.	4.66E+00
1.70 MEV	1.56E+00	3.77E-02	0.	3.42E+00
1.80 MEV	7.10E-01	3.77E-02	0.	3.42E+00
1.90 MEV	1.15E+01	3.77E-02	0.	6.34E-01
2.00 MEV	1.57E+01	3.77E-02	0.	6.34E-01
2.10 MEV	5.77E+00	5.66E-02	0.	1.69E+00
2.20 MEV	6.86E+00	5.66E-02	0.	1.69E+00
2.30 MEV	5.29E+00	0.	0.	2.89E+00
2.40 MEV	4.90E+00	0.	0.	2.89E+00
2.50 MEV	6.08E+00	7.19E-02	0.	3.00E+00
2.60 MEV	6.64E-01	7.19E-02	0.	3.00E+00
2.70 MEV	5.50E+00	0.	5.21E-02	3.14E+00
2.80 MEV	5.46E+00	0.	5.21E-02	3.14E+00
2.90 MEV	4.94E+00	0.	0.	6.76E-01
3.00 MEV	4.17E+00	0.	0.	6.76E-01
3.20 MEV	1.50E+01	0.	5.21E-02	5.47E+00
3.40 MEV	5.46E+00	0.	5.21E-02	5.47E+00
3.60 MEV	1.91E-01	0.	0.	4.95E+00
3.80 MEV	5.19E+00	0.	0.	4.95E+00
4.00 MEV	5.19E+00	0.	0.	2.19E+00

INITIAL SPECTRUM AT 0.05-0.10 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	9.12E+00	0.	0.	2.19E+00
4.40 MEV	4.64E+00	7.19E-02	0.	2.59E+00
4.60 MEV	0.	7.19E-02	0.	2.59E+00
4.80 MEV	9.56E+00	0.	0.	1.39E+00
5.00 MEV	1.90E+01	0.	0.	1.39E+00
5.50 MEV	5.14E+00	0.	0.	4.03E+00
6.00 MEV	3.00E+01	0.	0.	4.03E+00
6.50 MEV	1.36E+01	0.	0.	4.27E+00
7.00 MEV	1.45E+01	0.	0.	4.27E+00
7.50 MEV	5.14E+00	0.	0.	3.94E+00
8.00 MEV	2.50E+01	0.	0.	3.94E+00
8.50 MEV	6.13E+00	0.	0.	1.26E+00
9.00 MEV	5.00E+00	0.	0.	1.26E+00
9.50 MEV	1.50E+01	0.	0.	6.55E-01
10.00 MEV	1.00E+01	0.	0.	6.55E-01
11.00 MEV	2.50E+01	0.	0.	8.11E-02
12.00 MEV	2.00E+01	0.	0.	8.11E-02
13.00 MEV	2.00E+01	0.	0.	0.
14.00 MEV	3.45E+01	0.	0.	0.
15.00 MEV	5.00E+00	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE. E(MEV)	8.72	1.55	3.03	4.93

INITIAL SPECTRUM AT 0.10-0.15 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	1.65E+00
0.10 MEV	1.14E+02	0.	0.	1.65E+00
0.15 MEV	4.05E+01	0.	0.	0.
0.20 MEV	5.67E+01	0.	0.	0.
0.25 MEV	2.35E+01	0.	0.	1.19E+00
0.30 MEV	3.23E+01	0.	0.	1.19E+00
0.35 MEV	4.48E+00	1.89E-02	0.	3.53E+00
0.40 MEV	1.94E+01	1.89E-02	0.	3.53E+00
0.45 MEV	9.52E+00	1.33E-01	0.	3.52E+00
0.50 MEV	1.00E+01	1.33E-01	0.	3.52E+00
0.55 MEV	1.61E+01	1.89E-01	0.	2.39E+00
0.60 MEV	4.52E+00	1.89E-01	0.	2.39E+00
0.65 MEV	4.09E+00	9.44E-02	0.	0.
0.70 MEV	4.52E+00	9.44E-02	0.	0.
0.75 MEV	1.01E+01	1.32E-01	0.	2.39E+00
0.80 MEV	9.53E+00	1.32E-01	0.	2.39E+00
0.85 MEV	4.53E+00	7.55E-02	4.35E-02	2.40E+00
0.90 MEV	3.97E+02	7.55E-02	4.35E-02	2.40E+00
0.95 MEV	1.02E+01	1.32E-01	0.	1.19E+00
1.00 MEV	1.38E+01	1.32E-01	0.	1.19E+00
1.10 MEV	9.64E+00	2.45E-01	0.	5.63E+00
1.20 MEV	9.37E+00	2.45E-01	0.	5.63E+00
1.30 MEV	1.57E+01	3.10E-01	1.04E-01	6.31E+00
1.40 MEV	8.88E+00	3.10E-01	1.04E-01	6.31E+00
1.50 MEV	1.77E+01	2.08E-01	0.	6.83E+00
1.60 MEV	2.35E+00	2.08E-01	0.	6.83E+00
1.70 MEV	5.17E+00	3.77E-02	0.	6.46E+00
1.80 MEV	1.21E+01	3.77E-02	0.	6.46E+00
1.90 MEV	1.05E+01	0.	5.21E-02	6.42E+00
2.00 MEV	4.99E+00	0.	5.21E-02	6.42E+00
2.10 MEV	1.65E+00	5.66E-02	0.	6.92E+00
2.20 MEV	4.97E-01	5.66E-02	0.	6.92E+00
2.30 MEV	4.21E-01	7.19E-02	0.	5.15E+00
2.40 MEV	6.12E-01	7.19E-02	0.	5.15E+00
2.50 MEV	9.98E+00	7.19E-02	0.	4.75E+00
2.60 MEV	6.89E-01	7.19E-02	0.	4.75E+00
2.70 MEV	4.59E-01	0.	5.21E-02	7.63E+00
2.80 MEV	3.06E-01	0.	5.21E-02	7.63E+00
2.90 MEV	5.31E+00	0.	5.21E-02	7.59E+00
3.00 MEV	1.48E+01	0.	5.21E-02	7.59E+00
3.20 MEV	1.33E+01	7.19E-02	5.21E-02	7.59E+00
3.40 MEV	4.98E+00	7.19E-02	5.21E-02	7.59E+00
3.60 MEV	2.29E-01	7.19E-02	0.	4.89E+00
3.80 MEV	5.19E+00	7.19E-02	0.	4.89E+00
4.00 MEV	1.46E+01	1.44E-01	0.	1.87E+00

INITIAL SPECTRUM AT 0.10-0.15 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	1.00E+01	1.44E-01	0.	1.87E+00
4.40 MEV	2.01E+01	0.	0.	2.70E+00
4.60 MEV	3.65E+00	0.	0.	2.70E+00
4.80 MEV	3.82E-02	0.	5.21E-02	1.13E+00
5.00 MEV	0.	0.	5.21E-02	1.13E+00
5.50 MEV	1.02E+01	7.19E-02	0.	4.38E+00
6.00 MEV	1.93E+01	7.19E-02	0.	4.38E+00
6.50 MEV	4.48E+00	0.	0.	3.96E+00
7.00 MEV	1.43E+01	0.	0.	3.96E+00
7.50 MEV	5.07E+00	0.	0.	3.52E+00
8.00 MEV	2.03E+01	0.	0.	3.52E+00
8.50 MEV	1.45E+01	0.	0.	1.35E+00
9.00 MEV	9.52E+00	0.	0.	1.35E+00
9.50 MEV	1.50E+01	0.	0.	3.70E-01
10.00 MEV	1.00E+01	0.	0.	3.70E-01
11.00 MEV	1.45E+01	0.	0.	1.22E-01
12.00 MEV	2.00E+01	0.	0.	1.22E-01
13.00 MEV	3.01E+01	0.	0.	0.
14.00 MEV	4.45E+01	0.	0.	0.
15.00 MEV	0.	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	8.77	2.53	2.81	4.13

1 INITIAL SPECTRUM AT 0.15-0.20 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	1.18E+00
0.10 MEV	5.98E+01	0.	0.	1.18E+00
0.15 MEV	4.75E+01	0.	0.	3.51E-02
0.20 MEV	1.76E+01	0.	0.	3.51E-02
0.25 MEV	2.90E+01	0.	0.	2.40E+00
0.30 MEV	1.82E+01	0.	0.	2.40E+00
0.35 MEV	1.47E+01	1.89E-02	0.	6.13E-01
0.40 MEV	1.22E+01	1.89E-02	0.	6.13E-01
0.45 MEV	2.25E+01	1.89E-02	0.	5.65E-01
0.50 MEV	4.52E+00	1.89E-02	0.	5.65E-01
0.55 MEV	1.45E+01	7.55E-02	0.	1.13E+00
0.60 MEV	1.50E+01	7.55E-02	0.	1.13E+00
0.65 MEV	3.21E+01	1.32E-01	0.	5.88E-01
0.70 MEV	1.47E+01	1.32E-01	0.	5.88E-01
0.75 MEV	0.	1.32E-01	0.	1.20E+00
0.80 MEV	5.36E+00	1.32E-01	0.	1.20E+00
0.85 MEV	3.73E-02	9.44E-02	0.	4.41E-02
0.90 MEV	5.65E+00	9.44E-02	0.	4.41E-02
0.95 MEV	6.25E+00	5.66E-02	0.	1.17E+00
1.00 MEV	4.71E+00	5.66E-02	0.	1.17E+00
1.10 MEV	1.45E+01	2.45E-01	0.	1.19E+00
1.20 MEV	1.07E+01	2.45E-01	0.	1.19E+00
1.30 MEV	1.96E+01	3.72E-01	0.	2.39E+00
1.40 MEV	4.92E+00	3.72E-01	0.	2.39E+00
1.50 MEV	7.65E-02	2.78E-01	5.21E-02	2.92E+00
1.60 MEV	1.39E+01	2.78E-01	5.21E-02	2.92E+00
1.70 MEV	9.49E+00	1.13E-01	0.	3.70E+00
1.80 MEV	1.04E+01	1.13E-01	0.	3.70E+00
1.90 MEV	1.05E+01	0.	0.	2.50E+00
2.00 MEV	1.05E+01	0.	0.	2.50E+00
2.10 MEV	5.61E+00	1.89E-02	0.	2.52E+00
2.20 MEV	8.23E+00	1.89E-02	0.	2.52E+00
2.30 MEV	8.95E-01	0.	0.	3.96E+00
2.40 MEV	4.94E+00	0.	0.	3.96E+00
2.50 MEV	5.50E+00	0.	0.	1.86E+00
2.60 MEV	9.97E+00	0.	0.	1.86E+00
2.70 MEV	4.59E-01	0.	0.	1.46E+00
2.80 MEV	4.83E+00	0.	0.	1.46E+00
2.90 MEV	4.73E+00	0.	0.	2.06E+00
3.00 MEV	9.58E+00	0.	0.	2.06E+00
3.20 MEV	9.72E+00	0.	0.	3.80E+00
3.40 MEV	3.82E-01	0.	0.	3.80E+00
3.60 MEV	4.81E+00	0.	0.	4.04E+00
3.80 MEV	3.51E-01	0.	0.	4.04E+00
4.00 MEV	1.89E-01	0.	0.	5.57E+00

INITIAL SPECTRUM AT 0.15-0.20 CM, FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	5.08E+00	0.	0.	5.57E+00
4.40 MEV	9.15E+00	0.	0.	2.47E+00
4.60 MEV	1.96E+01	0.	0.	2.47E+00
4.80 MEV	9.56E+00	7.19E-02	0.	2.33E+00
5.00 MEV	0.	7.19E-02	0.	2.33E+00
5.50 MEV	1.90E+01	7.19E-02	5.21E-02	4.79E+00
6.00 MEV	2.01E+01	7.19E-02	5.21E-02	4.79E+00
6.50 MEV	9.19E+00	0.	0.	3.33E+00
7.00 MEV	5.00E+00	0.	0.	3.33E+00
7.50 MEV	3.41E+01	0.	0.	2.38E+00
8.00 MEV	1.50E+01	0.	0.	2.38E+00
8.50 MEV	5.00E+00	0.	0.	1.70E+00
9.00 MEV	1.00E+01	0.	0.	1.70E+00
9.50 MEV	9.72E+00	0.	0.	2.43E+01
10.00 MEV	5.00E+00	0.	0.	2.43E+01
11.00 MEV	3.50E+01	0.	0.	2.43E+01
12.00 MEV	3.50E+01	0.	0.	2.43E+01
13.00 MEV	4.50E+01	0.	0.	0.
14.00 MEV	2.50E+01	0.	0.	0.
15.00 MEV	0.	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
BAVE, E(MEV)	8.89	2.37	4.83	4.86

INITIAL SPECTRUM AT 0.20-0.40 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	6.60E-01
0.10 MEV	1.75E+02	0.	0.	6.60E-01
0.15 MEV	7.41E+01	0.	0.	5.65E-01
0.20 MEV	1.36E+01	0.	0.	5.65E-01
0.25 MEV	1.40E+01	0.	0.	1.10E+00
0.30 MEV	2.45E+01	0.	0.	1.10E+00
0.35 MEV	3.28E+01	3.77E-02	0.	1.17E+00
0.40 MEV	4.53E+00	3.77E-02	0.	1.17E+00
0.45 MEV	1.42E+01	7.55E-02	0.	5.99E-02
0.50 MEV	1.45E+01	7.55E-02	0.	5.99E-02
0.55 MEV	1.89E+01	7.55E-02	0.	1.82E-02
0.60 MEV	3.64E-03	7.55E-02	0.	1.82E-02
0.65 MEV	9.52E+00	5.66E-02	0.	5.68E-01
0.70 MEV	2.36E+01	5.66E-02	0.	5.68E-01
0.75 MEV	1.26E+01	7.55E-02	0.	5.61E-01
0.80 MEV	3.64E-03	7.55E-02	0.	5.61E-01
0.85 MEV	0.	9.44E-02	0.	6.24E-01
0.90 MEV	1.85E+01	9.44E-02	0.	6.24E-01
0.95 MEV	3.79E+00	1.51E-01	0.	5.66E-01
1.00 MEV	4.52E+00	1.51E-01	0.	5.66E-01
1.10 MEV	1.96E+01	2.62E-01	0.	1.18E+00
1.20 MEV	1.40E+01	2.62E-01	0.	1.18E+00
1.30 MEV	1.33E+01	1.70E-01	0.	5.69E-01
1.40 MEV	2.78E+01	1.70E-01	0.	5.69E-01
1.50 MEV	3.10E-01	2.64E-01	5.21E-02	1.72E+00
1.60 MEV	4.26E-01	2.64E-01	5.21E-02	1.72E+00
1.70 MEV	4.56E-01	5.66E-02	0.	2.21E+00
1.80 MEV	4.92E+00	5.66E-02	0.	2.21E+00
1.90 MEV	2.68E-01	7.55E-02	0.	7.64E-01
2.00 MEV	1.40E+01	7.55E-02	0.	7.64E-01
2.10 MEV	4.27E-01	1.89E-02	0.	1.17E+00
2.20 MEV	1.07E+01	1.89E-02	0.	1.17E+00
2.30 MEV	5.06E+00	0.	0.	1.73E+00
2.40 MEV	1.51E+01	0.	0.	1.73E+00
2.50 MEV	5.23E+00	0.	0.	2.26E+00
2.60 MEV	1.75E+01	0.	0.	2.26E+00
2.70 MEV	9.78E+00	0.	1.04E-01	2.57E+00
2.80 MEV	9.98E+00	0.	1.04E-01	2.57E+00
2.90 MEV	2.02E+01	0.	0.	3.93E+00
3.00 MEV	9.43E+00	0.	0.	3.93E+00
3.20 MEV	1.05E+01	0.	0.	2.90E+00
3.40 MEV	5.57E+00	0.	0.	2.90E+00
3.60 MEV	5.23E+00	7.19E-02	5.21E-02	1.61E+00
3.80 MEV	1.02E+01	7.19E-02	5.21E-02	1.61E+00
4.00 MEV	9.78E+00	7.19E-02	0.	1.87E+00

INITIAL SPECTRUM AT 0.20-0.40 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	1.46E+01	7.19E-02	0.	1.87E+00
4.40 MEV	4.22E+00	0.	0.	1.80E+00
4.60 MEV	4.23E+00	0.	0.	1.80E+00
4.80 MEV	0.	7.19E-02	0.	2.02E+00
5.00 MEV	1.00E+01	7.19E-02	0.	2.02E+00
5.50 MEV	5.00E+00	7.19E-02	0.	3.25E+00
6.00 MEV	1.83E+01	7.19E-02	0.	3.25E+00
6.50 MEV	5.14E+00	0.	0.	3.72E+00
7.00 MEV	5.14E+00	0.	0.	3.72E+00
7.50 MEV	4.16E+00	0.	0.	2.63E+00
8.00 MEV	1.00E+01	0.	0.	2.63E+00
8.50 MEV	4.52E+00	0.	0.	1.42E+00
9.00 MEV	0.	0.	0.	1.42E+00
9.50 MEV	5.00E+00	0.	0.	4.46E-01
10.00 MEV	2.00E+01	0.	0.	4.46E-01
11.00 MEV	2.00E+01	0.	0.	1.62E-01
12.00 MEV	2.97E+01	0.	0.	1.62E-01
13.00 MEV	1.00E+01	0.	0.	0.
14.00 MEV	1.50E+01	0.	0.	0.
15.00 MEV	0.	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	7.46	2.68	2.82	5.28

INITIAL SPECTRUM AT 0.40-0.60 CM, FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	8.40E-01
0.10 MEV	1.28E+02	0.	0.	8.40E-01
0.15 MEV	5.36E+01	0.	0.	1.53E+00
0.20 MEV	3.53E+01	0.	0.	1.53E+00
0.25 MEV	2.05E+01	0.	0.	1.04E+00
0.30 MEV	2.24E+01	0.	0.	1.04E+00
0.35 MEV	2.25E+01	1.48E-02	0.	1.53E+00
0.40 MEV	1.51E+01	1.48E-02	0.	1.53E+00
0.45 MEV	1.73E+01	8.66E-02	0.	1.18E+00
0.50 MEV	1.85E+01	8.66E-02	0.	1.18E+00
0.55 MEV	1.55E+01	9.44E-02	0.	1.09E+00
0.60 MEV	1.13E+01	9.44E-02	0.	1.09E+00
0.65 MEV	9.67E+00	1.47E-01	0.	1.17E+00
0.70 MEV	1.42E+01	1.47E-01	0.	1.17E+00
0.75 MEV	1.33E+01	1.44E-01	0.	1.31E+00
0.80 MEV	1.06E+01	1.44E-01	0.	1.31E+00
0.85 MEV	7.35E+00	1.10E-01	1.04E-02	8.26E-01
0.90 MEV	8.15E+00	1.10E-01	1.04E-02	8.26E-01
0.95 MEV	7.63E+00	9.85E-02	0.	1.34E+00
1.00 MEV	9.49E+00	9.85E-02	0.	1.34E+00
1.10 MEV	1.53E+01	2.45E-01	0.	3.64E+00
1.20 MEV	1.57E+01	2.45E-01	0.	3.64E+00
1.30 MEV	1.26E+01	2.34E-01	2.02E-02	1.74E+00
1.40 MEV	9.53E+00	2.34E-01	2.02E-02	1.74E+00
1.50 MEV	1.22E+01	2.00E-01	1.04E-02	1.83E+00
1.60 MEV	9.11E+00	2.00E-01	1.04E-02	1.83E+00
1.70 MEV	1.03E+01	7.93E-02	1.91E-02	2.25E+00
1.80 MEV	1.06E+01	7.93E-02	1.91E-02	2.25E+00
1.90 MEV	2.48E+00	3.77E-02	0.	1.72E+00
2.00 MEV	7.83E+00	3.77E-02	0.	1.72E+00
2.10 MEV	1.66E+01	1.13E-02	1.04E-02	2.02E+00
2.20 MEV	6.98E+00	1.13E-02	1.04E-02	2.02E+00
2.30 MEV	1.11E+01	1.44E-02	0.	2.44E+00
2.40 MEV	5.22E+00	1.44E-02	0.	2.44E+00
2.50 MEV	5.31E+00	0.	4.12E-02	1.63E+00
2.60 MEV	6.94E+00	0.	4.12E-02	1.63E+00
2.70 MEV	2.24E+00	3.93E-02	1.04E-02	1.99E+00
2.80 MEV	3.32E+00	3.93E-02	1.04E-02	1.99E+00
2.90 MEV	5.72E+00	0.	1.04E-02	2.28E+00
3.00 MEV	2.97E+00	0.	1.04E-02	2.28E+00
3.20 MEV	1.19E+01	0.	0.	2.93E+00
3.40 MEV	1.46E+01	0.	0.	2.93E+00
3.60 MEV	9.68E+00	7.10E-02	4.07E-02	2.23E+00
3.80 MEV	5.87E+00	7.10E-02	4.07E-02	2.23E+00
4.00 MEV	9.05E+00	1.44E-02	0.	4.00E+00

INITIAL SPECTRUM AT 0.40-0.60 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	6.69E+00	1.44E-02	0.	4.00E+00
4.40 MEV	4.98E+00	2.88E-02	0.	2.03E+00
4.60 MEV	4.76E+00	2.88E-02	0.	2.03E+00
4.80 MEV	7.38E+00	0.	0.	1.96E+00
5.00 MEV	3.75E+00	0.	0.	1.96E+00
5.50 MEV	1.35E+01	5.62E-02	0.	3.67E+00
6.00 MEV	1.42E+01	5.62E-02	0.	3.67E+00
6.50 MEV	1.96E+01	1.44E-02	0.	3.49E+00
7.00 MEV	1.07E+01	1.44E-02	0.	3.49E+00
7.50 MEV	1.47E+01	0.	0.	2.70E+00
8.00 MEV	1.34E+01	0.	0.	2.70E+00
8.50 MEV	1.26E+01	0.	0.	1.32E+00
9.00 MEV	1.37E+01	0.	0.	1.32E+00
9.50 MEV	1.38E+01	0.	0.	4.56E-01
10.00 MEV	1.81E+01	0.	0.	4.56E-01
11.00 MEV	2.55E+01	0.	0.	1.55E-01
12.00 MEV	2.97E+01	0.	0.	1.55E-01
13.00 MEV	2.89E+01	0.	0.	9.20E-03
14.00 MEV	2.08E+01	0.	0.	9.20E-03
15.00 MEV	3.00E+00	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	8.23	2.45	2.66	4.93

INITIAL SPECTRUM AT 0.60-1.00 CM, FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	8.57E-01
0.10 MEV	1.63E+02	0.	0.	8.57E-01
0.15 MEV	6.28E+01	0.	0.	9.90E-01
0.20 MEV	4.87E+01	0.	0.	9.90E-01
0.25 MEV	3.51E+01	2.27E-03	0.	1.46E+00
0.30 MEV	3.71E+01	2.27E-03	0.	1.46E+00
0.35 MEV	2.59E+01	1.87E-02	0.	1.51E+00
0.40 MEV	2.61E+01	1.87E-02	0.	1.51E+00
0.45 MEV	2.12E+01	4.50E-02	0.	1.68E+00
0.50 MEV	1.53E+01	4.50E-02	0.	1.68E+00
0.55 MEV	2.00E+01	1.09E-01	0.	1.78E+00
0.60 MEV	1.58E+01	1.09E-01	0.	1.78E+00
0.65 MEV	1.31E+01	1.21E-01	0.	2.06E+00
0.70 MEV	1.46E+01	1.21E-01	0.	2.06E+00
0.75 MEV	1.05E+01	1.14E-01	0.	1.70E+00
0.80 MEV	9.51E+00	1.14E-01	0.	1.70E+00
0.85 MEV	1.04E+01	1.10E-01	0.	1.23E+00
0.90 MEV	8.61E+00	1.10E-01	0.	1.23E+00
0.95 MEV	9.44E+00	1.08E-01	4.18E-03	8.94E-01
1.00 MEV	7.90E+00	1.08E-01	4.18E-03	8.94E-01
1.10 MEV	1.88E+01	2.11E-01	1.66E-02	3.38E+00
1.20 MEV	1.50E+01	2.11E-01	1.66E-02	3.38E+00
1.30 MEV	9.16E+00	2.13E-01	1.00E-02	2.04E+00
1.40 MEV	1.64E+01	2.13E-01	1.00E-02	2.04E+00
1.50 MEV	1.11E+01	1.56E-01	1.56E-02	4.01E+00
1.60 MEV	1.39E+01	1.56E-01	1.56E-02	4.01E+00
1.70 MEV	1.04E+01	8.48E-02	2.05E-02	2.76E+00
1.80 MEV	1.37E+01	8.48E-02	2.05E-02	2.76E+00
1.90 MEV	1.25E+01	1.87E-02	4.99E-03	2.15E+00
2.00 MEV	6.96E+00	1.87E-02	4.99E-03	2.15E+00
2.10 MEV	9.67E+00	9.32E-03	0.	3.14E+00
2.20 MEV	4.90E+00	9.32E-03	0.	3.14E+00
2.30 MEV	8.10E+00	3.77E-03	1.50E-02	2.38E+00
2.40 MEV	9.26E+00	3.77E-03	1.50E-02	2.38E+00
2.50 MEV	5.46E+00	1.44E-02	1.04E-02	2.95E+00
2.60 MEV	5.47E+00	1.44E-02	1.04E-02	2.95E+00
2.70 MEV	9.26E+00	2.84E-02	1.04E-02	2.87E+00
2.80 MEV	5.46E+00	2.84E-02	1.04E-02	2.87E+00
2.90 MEV	5.92E+00	1.44E-02	9.98E-03	2.45E+00
3.00 MEV	7.48E+00	1.44E-02	9.98E-03	2.45E+00
3.20 MEV	1.17E+01	1.44E-02	1.04E-02	4.77E+00
3.40 MEV	7.66E+00	1.44E-02	1.04E-02	4.77E+00
3.60 MEV	9.70E+00	3.60E-02	5.21E-03	4.04E+00
3.80 MEV	9.38E+00	3.60E-02	5.21E-03	4.04E+00
4.00 MEV	7.40E+00	1.44E-02	1.04E-02	3.81E+00

INITIAL SPECTRUM AT 0.60-1.00 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	1.15E+01	1.44E-02	1.04E-02	3.81E+00
4.40 MEV	6.82E+00	4.89E-02	0.	2.78E+00
4.60 MEV	9.65E+00	4.89E-02	0.	2.78E+00
4.80 MEV	5.93E+00	2.10E-02	5.21E-03	1.75E+00
5.00 MEV	8.03E+00	2.10E-02	5.21E-03	1.75E+00
5.50 MEV	1.75E+01	1.44E-02	5.21E-03	3.82E+00
6.00 MEV	1.90E+01	1.44E-02	5.21E-03	3.82E+00
6.50 MEV	1.32E+01	0.	0.	3.54E+00
7.00 MEV	1.77E+01	0.	0.	3.54E+00
7.50 MEV	1.62E+01	0.	0.	2.37E+00
8.00 MEV	1.36E+01	0.	0.	2.37E+00
8.50 MEV	1.18E+01	0.	0.	1.05E+00
9.00 MEV	1.34E+01	0.	0.	1.05E+00
9.50 MEV	1.27E+01	0.	0.	4.47E-01
10.00 MEV	1.48E+01	0.	0.	4.47E-01
11.00 MEV	2.42E+01	0.	0.	1.71E-01
12.00 MEV	2.18E+01	0.	0.	1.71E-01
13.00 MEV	2.03E+01	0.	0.	0.
14.00 MEV	2.49E+01	0.	0.	0.
15.00 MEV	3.00E+00	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
AVE, E(MEV)	7.69	2.00	2.94	4.59

1 INITIAL SPECTRUM AT 1.00-2.00 CM, FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	3.01E-01
0.10 MEV	1.93E+02	0.	0.	3.01E-01
0.15 MEV	7.59E+01	0.	0.	6.29E-01
0.20 MEV	4.00E+01	0.	0.	6.29E-01
0.25 MEV	4.14E+01	0.	0.	1.04E+00
0.30 MEV	2.72E+01	0.	0.	1.04E+00
0.35 MEV	2.58E+01	1.89E-02	0.	9.45E-01
0.40 MEV	3.02E+01	1.89E-02	0.	9.45E-01
0.45 MEV	2.02E+01	5.04E-02	0.	1.15E+00
0.50 MEV	2.17E+01	5.04E-02	0.	1.15E+00
0.55 MEV	1.78E+01	9.04E-02	4.37E-03	1.16E+00
0.60 MEV	1.22E+01	9.04E-02	4.37E-03	1.16E+00
0.65 MEV	1.56E+01	1.05E-01	0.	9.92E-01
0.70 MEV	1.40E+01	1.05E-01	0.	9.92E-01
0.75 MEV	1.43E+01	8.68E-02	0.	1.49E+00
0.80 MEV	1.23E+01	8.68E-02	0.	1.49E+00
0.85 MEV	9.74E+00	9.40E-02	0.	1.35E+00
0.90 MEV	1.29E+01	9.40E-02	0.	1.35E+00
0.95 MEV	9.41E+00	1.05E-01	5.21E-03	1.10E+00
1.00 MEV	6.54E+00	1.05E-01	5.21E-03	1.10E+00
1.10 MEV	1.57E+01	1.83E-01	1.01E-02	2.03E+00
1.20 MEV	1.60E+01	1.83E-01	1.01E-02	2.03E+00
1.30 MEV	2.23E+01	2.03E-01	9.96E-03	2.00E+00
1.40 MEV	1.32E+01	2.03E-01	9.96E-03	2.00E+00
1.50 MEV	1.34E+01	1.41E-01	5.21E-03	2.28E+00
1.60 MEV	1.43E+01	1.41E-01	5.21E-03	2.28E+00
1.70 MEV	1.26E+01	7.88E-02	0.	2.43E+00
1.80 MEV	9.39E+00	7.88E-02	0.	2.43E+00
1.90 MEV	1.49E+01	3.86E-02	2.60E-02	1.93E+00
2.00 MEV	9.23E+00	3.86E-02	2.60E-02	1.93E+00
2.10 MEV	9.20E+00	1.10E-02	3.10E-02	2.62E+00
2.20 MEV	1.24E+01	1.10E-02	3.10E-02	2.62E+00
2.30 MEV	1.24E+01	2.00E-02	2.08E-02	2.28E+00
2.40 MEV	9.58E+00	2.00E-02	2.08E-02	2.28E+00
2.50 MEV	8.41E+00	7.19E-03	1.52E-02	2.34E+00
2.60 MEV	4.39E+00	7.19E-03	1.52E-02	2.34E+00
2.70 MEV	1.37E+01	3.64E-03	1.54E-02	2.61E+00
2.80 MEV	7.07E+00	3.64E-03	1.54E-02	2.61E+00
2.90 MEV	6.53E+00	2.11E-02	2.10E-02	1.91E+00
3.00 MEV	8.28E+00	2.11E-02	2.10E-02	1.91E+00
3.20 MEV	1.22E+01	2.89E-02	3.46E-02	5.36E+00
3.40 MEV	1.67E+01	2.89E-02	3.46E-02	5.36E+00
3.60 MEV	1.00E+01	3.53E-02	2.60E-02	3.42E+00
3.80 MEV	8.10E+00	3.53E-02	2.60E-02	3.42E+00
4.00 MEV	8.46E+00	7.13E-02	1.56E-02	3.21E+00

INITIAL SPECTRUM AT 1.00-2.00 CM, FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	8.16E+00	7.13E-02	1.56E-02	3.21E+00
4.40 MEV	1.08E+01	3.60E-02	1.04E-02	2.12E+00
4.60 MEV	1.21E+01	3.60E-02	1.04E-02	2.12E+00
4.80 MEV	8.24E+00	1.44E-02	0.	1.74E+00
5.00 MEV	1.02E+01	1.44E-02	0.	1.74E+00
5.50 MEV	1.84E+01	2.88E-02	0.	3.69E+00
6.00 MEV	1.92E+01	2.88E-02	0.	3.69E+00
6.50 MEV	1.66E+01	4.27E-02	0.	3.23E+00
7.00 MEV	1.62E+01	4.27E-02	0.	3.23E+00
7.50 MEV	1.12E+01	7.19E-03	0.	2.17E+00
8.00 MEV	9.41E+00	7.19E-03	0.	2.17E+00
8.50 MEV	1.29E+01	0.	0.	9.15E-01
9.00 MEV	1.40E+01	0.	0.	9.15E-01
9.50 MEV	1.45E+01	0.	0.	4.94E-01
10.00 MEV	4.50E+00	0.	0.	4.94E-01
11.00 MEV	2.05E+01	0.	0.	1.83E-01
12.00 MEV	2.41E+01	0.	0.	1.83E-01
13.00 MEV	2.56E+01	0.	0.	0.
14.00 MEV	1.98E+01	0.	0.	0.
15.00 MEV	5.00E-01	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	7.34	2.95	2.90	4.74

INITIAL SPECTRUM AT 2.00-4.00 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	5.99E-01
0.10 MEV	1.93E+02	0.	0.	5.99E-01
0.15 MEV	8.76E+01	0.	0.	9.56E-01
0.20 MEV	5.57E+01	0.	0.	9.56E-01
0.25 MEV	4.72E+01	2.05E-03	0.	9.28E-01
0.30 MEV	3.58E+01	2.05E-03	0.	9.28E-01
0.35 MEV	3.02E+01	2.26E-02	0.	8.52E-01
0.40 MEV	2.60E+01	2.26E-02	0.	8.52E-01
0.45 MEV	1.83E+01	7.28E-02	0.	1.13E+00
0.50 MEV	2.09E+01	7.28E-02	0.	1.13E+00
0.55 MEV	1.73E+01	7.35E-02	9.68E-03	1.56E+00
0.60 MEV	1.70E+01	7.35E-02	9.68E-03	1.56E+00
0.65 MEV	1.67E+01	4.67E-02	0.	1.22E+00
0.70 MEV	1.51E+01	4.67E-02	0.	1.22E+00
0.75 MEV	1.32E+01	9.82E-02	0.	1.15E+00
0.80 MEV	1.28E+01	9.82E-02	0.	1.15E+00
0.85 MEV	1.30E+01	7.34E-02	0.	9.39E-01
0.90 MEV	1.28E+01	7.34E-02	0.	9.39E-01
0.95 MEV	1.23E+01	8.08E-02	0.	1.79E+00
1.00 MEV	6.34E+00	8.08E-02	0.	1.79E+00
1.10 MEV	1.84E+01	1.29E-01	1.56E-02	3.03E+00
1.20 MEV	1.77E+01	1.29E-01	1.56E-02	3.03E+00
1.30 MEV	1.72E+01	1.24E-01	5.21E-03	3.16E+00
1.40 MEV	1.46E+01	1.24E-01	5.21E-03	3.16E+00
1.50 MEV	1.97E+01	1.08E-01	2.06E-02	1.99E+00
1.60 MEV	1.74E+01	1.08E-01	2.06E-02	1.99E+00
1.70 MEV	1.12E+01	5.71E-02	1.02E-02	2.48E+00
1.80 MEV	9.16E+00	5.71E-02	1.02E-02	2.48E+00
1.90 MEV	9.36E+00	1.32E-02	4.91E-03	2.40E+00
2.00 MEV	1.31E+01	1.32E-02	4.91E-03	2.40E+00
2.10 MEV	9.85E+00	3.77E-03	5.21E-03	2.55E+00
2.20 MEV	1.19E+01	3.77E-03	5.21E-03	2.55E+00
2.30 MEV	1.15E+01	1.29E-02	1.52E-02	2.38E+00
2.40 MEV	6.17E+00	1.29E-02	1.52E-02	2.38E+00
2.50 MEV	7.36E+00	0.	1.56E-02	1.71E+00
2.60 MEV	6.81E+00	0.	1.56E-02	1.71E+00
2.70 MEV	5.79E+00	2.02E-02	1.48E-02	1.96E+00
2.80 MEV	6.17E+00	2.02E-02	1.48E-02	1.96E+00
2.90 MEV	7.08E+00	3.06E-02	1.56E-02	2.32E+00
3.00 MEV	6.26E+00	3.06E-02	1.56E-02	2.32E+00
3.20 MEV	8.70E+00	2.85E-02	2.57E-02	3.53E+00
3.40 MEV	1.31E+01	2.85E-02	2.57E-02	3.53E+00
3.60 MEV	1.08E+01	3.54E-02	0.	3.07E+00
3.80 MEV	1.19E+01	3.54E-02	0.	3.07E+00
4.00 MEV	7.94E+00	1.44E-02	1.04E-02	2.68E+00

INITIAL SPECTRUM AT 2.00-4.00 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	5.56E+00	1.44E-02	1.04E-02	2.68E+00
4.40 MEV	9.38E+00	4.97E-02	5.21E-03	1.89E+00
4.60 MEV	8.11E+00	4.97E-02	5.21E-03	1.89E+00
4.80 MEV	7.40E+00	2.10E-02	0.	1.38E+00
5.00 MEV	6.79E+00	2.10E-02	0.	1.38E+00
5.50 MEV	1.67E+01	3.59E-02	5.21E-03	2.84E+00
6.00 MEV	1.51E+01	3.59E-02	5.21E-03	2.84E+00
6.50 MEV	1.17E+01	0.	0.	2.42E+00
7.00 MEV	1.50E+01	0.	0.	2.42E+00
7.50 MEV	1.16E+01	0.	0.	1.74E+00
8.00 MEV	1.09E+01	0.	0.	1.74E+00
8.50 MEV	1.36E+01	0.	0.	7.69E-01
9.00 MEV	1.32E+01	0.	0.	7.69E-01
9.50 MEV	9.23E+00	0.	0.	2.91E-01
10.00 MEV	1.23E+01	0.	0.	2.91E-01
11.00 MEV	2.30E+01	0.	0.	1.09E-01
12.00 MEV	1.80E+01	0.	0.	1.09E-01
13.00 MEV	2.01E+01	0.	0.	0.
14.00 MEV	1.76E+01	0.	0.	0.
15.00 MEV	1.45E+00	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
BAVE, E(MEV)	7.13	2.57	2.92	4.44

1 INITIAL SPECTRUM AT 4.00-6.00 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	3.54E-01
0.10 MEV	2.31E+02	0.	0.	3.54E-01
0.15 MEV	7.23E+01	0.	0.	1.12E+00
0.20 MEV	5.39E+01	0.	0.	1.12E+00
0.25 MEV	4.44E+01	0.	0.	6.27E-01
0.30 MEV	3.99E+01	0.	0.	6.27E-01
0.35 MEV	3.50E+01	1.90E-02	0.	6.87E-01
0.40 MEV	2.77E+01	1.90E-02	0.	6.87E-01
0.45 MEV	2.55E+01	6.03E-02	0.	1.03E+00
0.50 MEV	2.42E+01	6.03E-02	0.	1.03E+00
0.55 MEV	2.24E+01	5.63E-02	4.38E-03	1.11E+00
0.60 MEV	2.05E+01	5.63E-02	4.38E-03	1.11E+00
0.65 MEV	1.76E+01	6.80E-02	0.	7.64E-01
0.70 MEV	1.40E+01	6.80E-02	0.	7.64E-01
0.75 MEV	1.30E+01	5.55E-02	5.32E-03	1.11E+00
0.80 MEV	1.48E+01	5.55E-02	5.32E-03	1.11E+00
0.85 MEV	1.15E+01	6.00E-02	0.	1.08E+00
0.90 MEV	9.02E+00	6.00E-02	0.	1.08E+00
0.95 MEV	1.25E+01	5.08E-02	0.	9.65E-01
1.00 MEV	1.23E+01	5.08E-02	0.	9.65E-01
1.10 MEV	1.85E+01	1.24E-01	5.21E-03	2.38E+00
1.20 MEV	1.74E+01	1.24E-01	5.21E-03	2.38E+00
1.30 MEV	1.25E+01	1.54E-01	7.65E-04	2.17E+00
1.40 MEV	1.57E+01	1.54E-01	7.65E-04	2.17E+00
1.50 MEV	1.66E+01	1.18E-01	1.96E-02	2.47E+00
1.60 MEV	1.74E+01	1.18E-01	1.96E-02	2.47E+00
1.70 MEV	1.61E+01	5.20E-02	5.21E-03	2.12E+00
1.80 MEV	1.20E+01	5.20E-02	5.21E-03	2.12E+00
1.90 MEV	1.01E+01	3.46E-02	2.49E-02	1.96E+00
2.00 MEV	1.02E+01	3.46E-02	2.49E-02	1.96E+00
2.10 MEV	7.14E+00	9.44E-03	1.52E-02	2.80E+00
2.20 MEV	1.07E+01	9.44E-03	1.52E-02	2.80E+00
2.30 MEV	1.02E+01	0.	2.97E-02	1.87E+00
2.40 MEV	8.41E+00	0.	2.97E-02	1.87E+00
2.50 MEV	9.70E+00	1.75E-02	2.06E-02	2.20E+00
2.60 MEV	7.74E+00	1.75E-02	2.06E-02	2.20E+00
2.70 MEV	5.28E+00	3.64E-03	5.21E-03	2.26E+00
2.80 MEV	8.97E+00	3.64E-03	5.21E-03	2.26E+00
2.90 MEV	5.69E+00	2.09E-02	1.51E-02	1.88E+00
3.00 MEV	7.60E+00	2.09E-02	1.51E-02	1.88E+00
3.20 MEV	1.46E+01	2.62E-02	1.99E-02	2.98E+00
3.40 MEV	8.59E+00	2.62E-02	1.99E-02	2.98E+00
3.60 MEV	1.13E+01	3.85E-02	1.52E-02	2.74E+00
3.80 MEV	8.17E+00	3.85E-02	1.52E-02	2.74E+00
4.00 MEV	9.28E+00	4.18E-02	9.97E-03	2.33E+00

INITIAL SPECTRUM AT 4.00-6.00 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	6.67E+00	4.18E-02	9.97E-03	2.33E+00
4.40 MEV	7.22E+00	4.55E-02	9.93E-03	1.68E+00
4.60 MEV	1.06E+01	4.55E-02	9.93E-03	1.68E+00
4.80 MEV	6.39E+00	2.16E-02	0.	1.21E+00
5.00 MEV	4.22E+00	2.16E-02	0.	1.21E+00
5.50 MEV	1.72E+01	2.88E-02	0.	2.84E+00
6.00 MEV	1.97E+01	2.88E-02	0.	2.84E+00
6.50 MEV	1.58E+01	7.28E-03	0.	2.32E+00
7.00 MEV	1.34E+01	7.28E-03	0.	2.32E+00
7.50 MEV	1.10E+01	0.	0.	1.66E+00
8.00 MEV	7.88E+00	0.	0.	1.66E+00
8.50 MEV	1.14E+01	6.80E-03	0.	6.36E-01
9.00 MEV	1.01E+01	6.80E-03	0.	6.36E-01
9.50 MEV	7.71E+00	0.	0.	2.31E-01
10.00 MEV	1.26E+01	0.	0.	2.31E-01
11.00 MEV	1.44E+01	0.	0.	1.55E-01
12.00 MEV	1.82E+01	0.	0.	1.55E-01
13.00 MEV	1.33E+01	0.	0.	0.
14.00 MEV	1.62E+01	0.	0.	0.
15.00 MEV	0.	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	6.57	2.84	2.77	4.53

1 INITIAL SPECTRUM AT 6.00-10.0 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	3.88E-01
0.10 MEV	2.11E+02	0.	0.	3.88E-01
0.15 MEV	8.33E+01	0.	0.	6.66E-01
0.20 MEV	5.78E+01	0.	0.	6.66E-01
0.25 MEV	4.71E+01	0.	0.	9.12E-01
0.30 MEV	3.98E+01	0.	0.	9.12E-01
0.35 MEV	3.14E+01	2.26E-02	0.	9.41E-01
0.40 MEV	2.53E+01	2.26E-02	0.	9.41E-01
0.45 MEV	2.53E+01	3.93E-02	0.	6.21E-01
0.50 MEV	1.77E+01	3.93E-02	0.	6.21E-01
0.55 MEV	2.18E+01	4.70E-02	0.	9.03E-01
0.60 MEV	2.01E+01	4.70E-02	0.	9.03E-01
0.65 MEV	1.49E+01	3.40E-02	4.83E-03	9.14E-01
0.70 MEV	1.68E+01	3.40E-02	4.83E-03	9.14E-01
0.75 MEV	1.05E+01	6.99E-02	5.45E-03	8.11E-01
0.80 MEV	1.00E+01	6.99E-02	5.45E-03	8.11E-01
0.85 MEV	8.26E+00	8.39E-02	0.	1.18E+00
0.90 MEV	7.47E+00	8.39E-02	0.	1.18E+00
0.95 MEV	1.22E+01	5.91E-02	0.	6.17E-01
1.00 MEV	1.00E+01	5.91E-02	0.	6.17E-01
1.10 MEV	1.93E+01	1.27E-01	0.	1.59E+00
1.20 MEV	1.61E+01	1.27E-01	0.	1.59E+00
1.30 MEV	1.82E+01	1.13E-01	2.99E-02	1.59E+00
1.40 MEV	1.48E+01	1.13E-01	2.99E-02	1.59E+00
1.50 MEV	1.20E+01	8.78E-02	5.21E-03	1.77E+00
1.60 MEV	1.11E+01	8.78E-02	5.21E-03	1.77E+00
1.70 MEV	9.88E+00	4.82E-02	4.65E-03	2.03E+00
1.80 MEV	1.06E+01	4.82E-02	4.65E-03	2.03E+00
1.90 MEV	1.26E+01	1.12E-02	1.55E-02	1.65E+00
2.00 MEV	1.01E+01	1.12E-02	1.55E-02	1.65E+00
2.10 MEV	1.02E+01	9.08E-03	5.21E-03	1.90E+00
2.20 MEV	1.05E+01	9.08E-03	5.21E-03	1.90E+00
2.30 MEV	9.03E+00	0.	0.	1.36E+00
2.40 MEV	5.12E+00	0.	0.	1.36E+00
2.50 MEV	5.91E+00	1.98E-02	1.02E-02	1.58E+00
2.60 MEV	5.37E+00	1.98E-02	1.02E-02	1.58E+00
2.70 MEV	7.19E+00	3.63E-03	4.43E-03	1.27E+00
2.80 MEV	6.15E+00	3.63E-03	4.43E-03	1.27E+00
2.90 MEV	8.39E+00	1.28E-02	0.	9.84E-01
3.00 MEV	3.79E+00	1.28E-02	0.	9.84E-01
3.20 MEV	8.51E+00	4.39E-02	4.79E-03	2.57E+00
3.40 MEV	1.31E+01	4.39E-02	4.79E-03	2.57E+00
3.60 MEV	8.42E+00	1.08E-02	9.95E-03	2.59E+00
3.80 MEV	5.92E+00	1.08E-02	9.95E-03	2.59E+00
4.00 MEV	9.49E+00	2.56E-02	5.21E-03	2.02E+00

INITIAL SPECTRUM AT 6.00-10.0 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	1.13E+01	2.56E-02	5.21E-03	2.02E+00
4.40 MEV	5.64E+00	6.72E-03	0.	1.27E+00
4.60 MEV	8.10E+00	6.72E-03	0.	1.27E+00
4.80 MEV	6.69E+00	0.	0.	1.27E+00
5.00 MEV	5.80E+00	0.	0.	1.27E+00
5.50 MEV	1.64E+01	2.45E-02	1.01E-02	2.19E+00
6.00 MEV	2.09E+01	2.45E-02	1.01E-02	2.19E+00
6.50 MEV	1.14E+01	0.	0.	1.89E+00
7.00 MEV	1.10E+01	0.	0.	1.89E+00
7.50 MEV	9.59E+00	0.	0.	1.54E+00
8.00 MEV	1.18E+01	0.	0.	1.54E+00
8.50 MEV	1.07E+01	0.	0.	6.54E-01
9.00 MEV	9.00E+00	0.	0.	6.54E-01
9.50 MEV	8.46E+00	0.	0.	2.49E-01
10.00 MEV	6.21E+00	0.	0.	2.49E-01
11.00 MEV	1.49E+01	0.	0.	1.09E-01
12.00 MEV	1.19E+01	0.	0.	1.09E-01
13.00 MEV	1.86E+01	0.	0.	0.
14.00 MEV	2.23E+01	0.	0.	0.
15.00 MEV	5.00E-01	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
0AVE, E(MEV)	6.89	2.27	3.27	4.64

INITIAL SPECTRUM AT 10.0-14.0 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	2.55E-01
0.10 MEV	1.84E+02	0.	0.	2.55E-01
0.15 MEV	6.84E+01	0.	0.	6.86E-01
0.20 MEV	6.02E+01	0.	0.	6.86E-01
0.25 MEV	3.76E+01	0.	0.	4.68E-01
0.30 MEV	4.06E+01	0.	0.	4.68E-01
0.35 MEV	2.38E+01	7.09E-03	0.	5.18E-01
0.40 MEV	2.60E+01	7.09E-03	0.	5.18E-01
0.45 MEV	2.15E+01	3.79E-02	0.	6.46E-01
0.50 MEV	1.41E+01	3.79E-02	0.	6.46E-01
0.55 MEV	1.66E+01	5.59E-02	0.	4.44E-01
0.60 MEV	1.29E+01	5.59E-02	0.	4.44E-01
0.65 MEV	1.55E+01	5.83E-02	0.	9.35E-01
0.70 MEV	1.09E+01	5.83E-02	0.	9.35E-01
0.75 MEV	1.26E+01	5.85E-02	0.	8.67E-01
0.80 MEV	1.63E+01	5.85E-02	0.	8.67E-01
0.85 MEV	1.30E+01	4.88E-02	1.36E-02	5.22E-01
0.90 MEV	5.87E+00	4.88E-02	1.36E-02	5.22E-01
0.95 MEV	1.21E+01	5.09E-02	0.	9.86E-01
1.00 MEV	8.83E+00	5.09E-02	0.	9.86E-01
1.10 MEV	1.77E+01	8.77E-02	0.	1.88E+00
1.20 MEV	1.63E+01	8.77E-02	0.	1.88E+00
1.30 MEV	1.62E+01	9.99E-02	0.	1.65E+00
1.40 MEV	1.71E+01	9.99E-02	0.	1.65E+00
1.50 MEV	8.56E+00	8.27E-02	0.	1.43E+00
1.60 MEV	1.22E+01	8.27E-02	0.	1.43E+00
1.70 MEV	1.09E+01	3.37E-02	5.21E-03	1.67E+00
1.80 MEV	1.25E+01	3.37E-02	5.21E-03	1.67E+00
1.90 MEV	1.07E+01	1.31E-02	0.	9.90E-01
2.00 MEV	1.01E+01	1.31E-02	0.	9.90E-01
2.10 MEV	1.06E+01	3.77E-03	0.	1.27E+00
2.20 MEV	7.64E+00	3.77E-03	0.	1.27E+00
2.30 MEV	8.16E+00	1.89E-03	5.21E-03	1.90E+00
2.40 MEV	8.91E+00	1.89E-03	5.21E-03	1.90E+00
2.50 MEV	6.87E+00	6.39E-03	1.04E-02	1.59E+00
2.60 MEV	5.43E+00	6.39E-03	1.04E-02	1.59E+00
2.70 MEV	6.80E+00	0.	5.21E-03	1.78E+00
2.80 MEV	8.44E+00	0.	5.21E-03	1.78E+00
2.90 MEV	7.16E+00	0.	0.	1.17E+00
3.00 MEV	5.27E+00	0.	0.	1.17E+00
3.20 MEV	9.30E+00	1.30E-02	5.21E-03	3.25E+00
3.40 MEV	1.07E+01	1.30E-02	5.21E-03	3.25E+00
3.60 MEV	7.46E+00	6.53E-03	8.78E-03	2.11E+00
3.80 MEV	7.43E+00	6.53E-03	8.78E-03	2.11E+00
4.00 MEV	7.18E+00	7.19E-03	0.	1.82E+00

INITIAL SPECTRUM AT 10.0-14.0 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	8.75E+00	7.19E-03	0.	1.82E+00
4.40 MEV	1.19E+01	0.	0.	1.05E+00
4.60 MEV	4.24E+00	0.	0.	1.05E+00
4.80 MEV	6.39E+00	0.	5.21E-03	8.64E-01
5.00 MEV	4.66E+00	0.	5.21E-03	8.64E-01
5.50 MEV	1.02E+01	4.15E-02	0.	2.19E+00
6.00 MEV	1.47E+01	4.15E-02	0.	2.19E+00
6.50 MEV	1.49E+01	0.	0.	1.64E+00
7.00 MEV	1.31E+01	0.	0.	1.64E+00
7.50 MEV	1.21E+01	0.	0.	1.29E+00
8.00 MEV	6.92E+00	0.	0.	1.29E+00
8.50 MEV	6.76E+00	0.	0.	4.69E-01
9.00 MEV	9.75E+00	0.	0.	4.69E-01
9.50 MEV	6.45E+00	0.	0.	2.10E-01
10.00 MEV	1.26E+01	0.	0.	2.10E-01
11.00 MEV	1.25E+01	0.	0.	1.05E-01
12.00 MEV	1.40E+01	0.	0.	1.05E-01
13.00 MEV	1.19E+01	0.	0.	0.
14.00 MEV	9.05E+00	0.	0.	0.
15.00 MEV	5.00E-01	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
AVERAGE, E(MEV)	6.36	2.54	2.99	4.55

INITIAL SPECTRUM AT 14.0-40.0 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
0.05 MEV	0.	0.	0.	1.66E-01
0.10 MEV	1.02E+02	0.	0.	1.66E-01
0.15 MEV	3.82E+01	0.	6.58E-05	2.93E-01
0.20 MEV	2.64E+01	0.	8.58E-05	2.93E-01
0.25 MEV	2.20E+01	1.12E-04	2.65E-04	3.49E-01
0.30 MEV	1.63E+01	1.12E-04	2.65E-04	3.49E-01
0.35 MEV	1.44E+01	7.17E-03	0.	2.88E-01
0.40 MEV	1.29E+01	7.17E-03	0.	2.88E-01
0.45 MEV	1.10E+01	1.19E-02	0.	2.75E-01
0.50 MEV	1.01E+01	1.19E-02	0.	2.75E-01
0.55 MEV	9.61E+00	1.79E-02	6.40E-04	3.26E-01
0.60 MEV	8.84E+00	1.79E-02	6.40E-04	3.26E-01
0.65 MEV	7.85E+00	1.75E-02	3.82E-04	2.86E-01
0.70 MEV	7.22E+00	1.75E-02	3.82E-04	2.86E-01
0.75 MEV	6.56E+00	2.08E-02	0.	2.79E-01
0.80 MEV	5.62E+00	2.08E-02	0.	2.79E-01
0.85 MEV	5.43E+00	1.62E-02	7.63E-04	3.01E-01
0.90 MEV	5.08E+00	1.62E-02	7.63E-04	3.01E-01
0.95 MEV	4.73E+00	2.09E-02	1.18E-03	2.88E-01
1.00 MEV	4.98E+00	2.09E-02	1.18E-03	2.88E-01
1.10 MEV	8.29E+00	3.80E-02	1.54E-03	5.53E-01
1.20 MEV	7.54E+00	3.80E-02	1.54E-03	5.53E-01
1.30 MEV	7.61E+00	3.92E-02	1.08E-03	5.72E-01
1.40 MEV	6.13E+00	3.92E-02	1.08E-03	5.72E-01
1.50 MEV	6.31E+00	2.55E-02	3.42E-03	6.69E-01
1.60 MEV	6.04E+00	2.55E-02	3.42E-03	6.69E-01
1.70 MEV	6.00E+00	1.32E-02	2.64E-03	5.78E-01
1.80 MEV	5.65E+00	1.32E-02	2.64E-03	5.78E-01
1.90 MEV	5.43E+00	4.37E-03	1.96E-03	6.29E-01
2.00 MEV	4.95E+00	4.37E-03	1.96E-03	6.29E-01
2.10 MEV	4.72E+00	3.45E-03	4.15E-03	6.75E-01
2.20 MEV	3.75E+00	3.45E-03	4.15E-03	6.75E-01
2.30 MEV	4.02E+00	4.09E-03	1.81E-03	6.39E-01
2.40 MEV	3.94E+00	4.09E-03	1.81E-03	6.39E-01
2.50 MEV	3.88E+00	5.85E-03	3.47E-03	6.30E-01
2.60 MEV	3.24E+00	5.85E-03	3.47E-03	6.30E-01
2.70 MEV	3.61E+00	4.06E-03	1.48E-03	5.80E-01
2.80 MEV	3.01E+00	4.06E-03	1.48E-03	5.80E-01
2.90 MEV	2.66E+00	4.47E-03	2.53E-03	5.57E-01
3.00 MEV	2.41E+00	4.47E-03	2.53E-03	5.57E-01
3.20 MEV	4.95E+00	8.06E-03	4.15E-03	9.60E-01
3.40 MEV	5.01E+00	8.06E-03	4.15E-03	9.60E-01
3.60 MEV	4.07E+00	3.25E-03	6.11E-03	8.25E-01
3.80 MEV	4.30E+00	3.25E-03	6.11E-03	8.25E-01
4.00 MEV	4.36E+00	5.71E-03	2.30E-03	7.63E-01

INITIAL SPECTRUM AT 14.0-40.0 CM. FOR ICRU MUSCLE TISSUE
D-T NEUTRON SPECTRUM

ENERGY	PROTONS	DEUTERONS	TRITONS	ALPHAS
4.20 MEV	3.50E+00	5.71E-03	2.30E-03	7.63E-01
4.40 MEV	2.93E+00	5.80E-03	1.55E-03	5.42E-01
4.60 MEV	3.61E+00	5.80E-03	1.55E-03	5.42E-01
4.80 MEV	3.50E+00	1.50E-03	8.01E-04	4.68E-01
5.00 MEV	3.07E+00	1.59E-03	8.01E-04	4.68E-01
5.50 MEV	6.68E+00	8.08E-03	7.66E-04	8.50E-01
6.00 MEV	6.74E+00	8.08E-03	7.66E-04	8.50E-01
6.50 MEV	5.43E+00	2.01E-03	0.	6.94E-01
7.00 MEV	4.80E+00	2.01E-03	0.	6.94E-01
7.50 MEV	4.28E+00	5.53E-04	0.	4.67E-01
8.00 MEV	4.03E+00	5.53E-04	0.	4.67E-01
8.50 MEV	3.88E+00	1.11E-03	0.	2.06E-01
9.00 MEV	3.92E+00	1.11E-03	0.	2.06E-01
9.50 MEV	3.28E+00	0.	0.	7.60E-02
10.00 MEV	3.00E+00	0.	0.	7.60E-02
11.00 MEV	5.47E+00	0.	0.	2.03E-02
12.00 MEV	5.16E+00	0.	0.	2.03E-02
13.00 MEV	4.89E+00	0.	0.	3.54E-04
14.00 MEV	4.17E+00	0.	0.	3.54E-04
15.00 MEV	1.15E-01	0.	0.	0.
16.00 MEV	0.	0.	0.	0.
17.00 MEV	0.	0.	0.	0.
18.00 MEV	0.	0.	0.	0.
19.00 MEV	0.	0.	0.	0.
20.00 MEV	0.	0.	0.	0.
21.00 MEV	0.	0.	0.	0.
22.00 MEV	0.	0.	0.	0.
23.00 MEV	0.	0.	0.	0.
24.00 MEV	0.	0.	0.	0.
25.00 MEV	0.	0.	0.	0.
26.00 MEV	0.	0.	0.	0.
27.00 MEV	0.	0.	0.	0.
28.00 MEV	0.	0.	0.	0.
29.00 MEV	0.	0.	0.	0.
30.00 MEV	0.	0.	0.	0.
32.00 MEV	0.	0.	0.	0.
34.00 MEV	0.	0.	0.	0.
36.00 MEV	0.	0.	0.	0.
38.00 MEV	0.	0.	0.	0.
40.00 MEV	0.	0.	0.	0.
42.00 MEV	0.	0.	0.	0.
44.00 MEV	0.	0.	0.	0.
46.00 MEV	0.	0.	0.	0.
48.00 MEV	0.	0.	0.	0.
50.00 MEV	0.	0.	0.	0.
DAVE, E(MEV)	5.92	2.61	3.06	4.51