GAMMA-RAY SPECTRA IN FUSION BLANKET MOCK-UPS

LESTER M. PETRIE, JR.

TECHNICAL REPORT 438

JULY 20, 1965

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
RESEARCH LABORATORY OF ELECTRONICS
CAMBRIDGE, MASSACHUSETTS

The Research Laboratory of Electronics is an interdepartmental laboratory in which faculty members and graduate students from numerous academic departments conduct research.

The research reported in this document was made possible in part by support extended the Massachusetts Institute of Technology, Research Laboratory of Electronics, by the JOINT SERVICES ELECTRONICS PROGRAMS (U.S. Army, U.S. Navy, and U.S. Air Force) under Contract No. DA36-039-AMC-03200(E); additional support was received from the National Science Foundation (Grant GK-57).

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

RESEARCH LABORATORY OF ELECTRONICS

Technical Report No. 438 July 20, 1965

GAMMA-RAY SPECTRA IN FUSION BLANKET MOCK-UPS

Lester M. Petrie, Jr.

Submitted to the Department of Nuclear Engineering, M. I. T., March 1, 1965, in partial fulfillment of the requirements for the degree of Doctor of Science.

(Manuscript received March 31, 1965)

Abstract

Gamma-ray spectra have been measured in cylinders, 18 inches in diameter and 15-16 inches thick, to evaluate previous theoretical calculations of gamma-ray spectra in proposed fusion reactor blankets. The cylinders were constructed of 0.5 inch graphite slabs and 1-inch thick layers of lithium-beryllium fluoride salt mixture contained in aluminum pans. Molybdenum plates were used to approximate first walls, 0-1.25 inches thick.

The cylinders were irradiated by 14-Mev neutrons produced by bombarding a tritium target with a beam of deuterons from a 150-kilovolt Cockroft-Walton accelerator. The target was positioned on the center line of the cylinder, 5.25 inches from its base.

The gamma-ray spectra were measured by collimating a beam of gamma rays leaking out of the side of the blanket mock-up and by using a sodium iodide scintillation crystal as a detector.

The gamma-ray spectra from the graphite assemblies are characterized by a large peak at 4.43 Mev, a smaller peak at 6.87 Mev, and a still smaller peak at 4.95 Mev. The spectra in the salt assemblies are characterized by large peaks at 6.63 Mev and 5.13 Mev, and several smaller peaks.

The relative magnitudes of these peaks at different depths in the assemblies are in agreement with previous theoretical calculations. Varying the thickness of the first wall had no observable effect on the spectrum. The absolute magnitude of the measured spectrum differs from previous theoretical calculations by a factor of approximately 4.

PREFACE

This is the last in a series of five reports on Fusion Blanket research. With the publication of this report the initial phase of this work has been completed.

A list of the authors and titles of the four preceding reports follows.

Technical Report 434	Albert J. Impink, Jr., "Neutron Economy in Fusion Reactor Blanket Assemblies"
Technical Report 435	William G. Homeyer, "Thermal and Chemical Properties of the Thermonuclear Blanket Problem"
Technical Report 436	Lazlo M. Lontai, "Study of a Thermonuclear Reactor Blanket with Fissile Nuclides"
Technical Report 437	Patrick S. Spangler, "Fusion Reactor Blanket Experiment"

TABLE OF CONTENTS

I. INTRODUCTION

A major goal for nuclear research for more than ten years has been the attainment of a controlled fusion plasma. The primary effort has been directed toward creating and maintaining a plasma at high enough temperature and density to sustain a continuous fusion reaction. Since this goal has not yet been accomplished, and does not seem to be attainable soon, only a relatively small effort has been made to study the problems for converting the fusion energy of the plasma into some more useful form. The studies that have been made[1-3] show that there are important problems in obtaining useful, economical energy from a controlled fusion plasma even if it had been attained.

In order to study the problem of recovering the energy from a fusion plasma, certain assumptions must be made as to the nature of the plasma. In previous studies at the Massachusetts Institute of Technology it has been assumed that a fusion reactor would operate on the $H^3(d,n)He^4$ reaction.[4-7] The reactor was envisioned as being cylindrical in shape, with a blanket surrounding it. The principal tasks of the blanket would be to convert the energy liberated in the plasma in the form of 14 Mev neutrons into heat, to produce enough tritium so that when all losses are taken into account, there would be a net production of one tritium atom for every tritium atom burned in the plasma, and to shield the magnet coils confining the plasma, the coils being envisioned as superconducting.

Impink[5] studied the neutronics and tritium breeding of the blanket of such a system by assuming that the diameter of the cylinder was large enough that the system could be approximated by an infinite slab blanket with an infinite plane source. His calculations were limited by the absence of microscopic data, such as cross sections and emission spectra of inelastically scattered neutrons, and by the lack of verification of some of the simplifications he made in scattering models for his computer codes.

Homeyer[4] made a complementary study of heating and physical properties of this blanket. He showed that for such a fusion reactor to produce economical electrical power, it would indeed have to be a large enough cylinder (~2 meters in diameter) to justify the infinite-slab approximation.

Impink showed that the only practical reaction for producing the tritium is the $Li^6(n,\alpha)H^3$ reaction. Some tritium can also be produced by the $Li^7(n,n\alpha)H^3$ reaction. This reaction has the further advantage that there is a neutron left for still further production. It was assumed that the blanket would use LiF as a moderator for the fast neutrons, as a coolant to remove the heat produced in the blanket, and to produce tritium. In order to reduce the melting point of LiF, it would be mixed with BeF_2. Beryllium offers the further advantage of having a (n, 2n) cross section that provides neutron multiplication in the blanket. This in turn leads to more tritium production. The fluoride salt was chosen because of its good stability, which leads to better corrosion properties, its good heat transfer properties, and because its parasitic capture of neutrons is not too high, being primarily from the F^{19} (n,α) N^{16} reaction which has an average cross

section of approximately 130 millibarns. The chosen salt composition was 2 LiF · BeF_2 which has a melting point of 455°C.

Graphite was chosen as the structural material in the blanket for a number of reasons. It has excellent nuclear properties, being a good moderator with a very low parasitic absorption cross section. It is very resistant to corrosion by the fused salt, being compatible with it at temperatures as high as 700°C. Graphite's low strength is not a deterring factor, as it would be used primarily to channel coolant flow in the blanket. Homeyer calculated that the maximum thermal stresses in the graphite would be only 100-200 psi.

Some sort of vacuum wall must separate the blanket from the plasma. Because of the high temperature of this blanket (500-600°C), the first wall should be a refractory metal. Calculations by Homeyer showed that approximately one-fourth of the total heat load is deposited in a first wall of 2 cm thickness. Another quarter of the heat load is deposited in the coolant channel immediately following the first wall. The first wall must also provide some neutron multiplication if tritium breeding is to take place. It should resist corrosion by the fused salt, and it should not suffer seriously from radiation damage. Present knowledge indicates that molybdenum is a good choice. With a 2-cm molybdenum first wall and an energy flux on it of 5 MW per square meter, Homeyer calculates that the thermal stresses in the first wall amount to approximately 35,000 psi. Energy fluxes of this magnitude will be necessary for an economical reactor, so that the stresses in the first wall are an important limiting factor in the design of a fusion blanket.

Other materials were studied by Impink and Homeyer, but those listed above seemed the most promising when cost factors were included. In order to test the simplifications made by Impink in writing his computer codes, Spangler[7] measured the neutron spectrum in a mock-up of the blanket, using a point source of 14 Mev neutrons. Because the mock-up did not approximate an infinite slab very well and the neutron source was a point rather than a plane, only rough comparisons between the experiment and the calculations were possible. Nevertheless, the experiment did indicate that there were no gross errors in Impink's calculations. In an effort to provide a closer check of the assumptions, Lontai[6] is writing a Monte Carlo computer program for a specific experimental arrangement.

The purpose of the work reported here was to gather experimental data on the gamma spectrum in the blanket mock-up to be used as a check on Homeyer's heating calculations[1] and as a guide for future calculations to determine which reactions are of importance in a fusion blanket. The experiment for gathering the data will be described in Section II. The results will be presented in Section III and discussed in Section IV. Conclusions will be presented and recommendations for future work will be made in Section V. A sample calculation will be given in Appendix A. The computer codes used for the data reduction will be discussed in Appendix B. Data will be given in Appendix C.

II. EXPERIMENT

The blanket was mocked up by taking a cylindrical core out of it. This core was built of plates of molybdenum as the first wall with pans of the Li_2BeF_4 salt mixture, supplied by Oak Ridge National Laboratory, and slabs of graphite stacked on it. This assembly was irradiated with a point source of neutrons created by bombarding a tritium target with a beam of deuterons. The gamma rays produced in this blanket were measured by collimating a beam of gamma rays leaking out of the blanket at some level and measuring the spectrum of this beam with a sodium iodide scintillation crystal.

2.1 BLANKET

The molybdenum was in the form of square plates, 12 inches on a side. There were three plates having the following thicknesses: 0.25 inch, 0.375 inch, and 0.50 inch. With these plates used, the three first-wall thicknesses of 0.375, 0.750, and 1.125 inches, corresponding approximately to 1, 2, and 3 cm, were studied.

The $Li_2 \cdot BeF_4$ salt mixture was cast in pie-shaped wedges, ~1 inch thick, and held in aluminum pans. The aluminum pans were 20 inches in diameter, and the metal was ~0.0335 inch thick. The salt wedges formed 120° angles with an outside diameter of approximately 18 inches. When placed in the aluminum pan, the wedges left a hole in the center, 2 inches in diameter. This hole was filled with salt chips. The effective density of the salt in the pan was ~2.25 grams per cc. The lithium in the salt was ~3% lithium-6. The outside diameter of the salt slabs varied as much as 0.5 inch, and the thickness of the wedges as much as 0.125 inch. The sides of the aluminum pans were slanted so that the diameter of the bottom of the pans was 18 inches. The graphite slabs used in the experiment were 18 inches in diameter and 0.5 inch thick.

The blanket mock-up was stacked on a movable cart. Figure 1 is a picture of the cart with a blanket assembled on it. The cart was designed to fit around the base of the accelerator. This arrangement allowed the cart to be repositioned for each run within ~0.125 inch. The top of the cart was marked so that the molybdenum plates, which were placed on the cart first, could be repositioned within ~0.0625 inch. The pans of salt and slabs of graphite were then stacked on top of the molybdenum plates in the desired order. These pans and slabs could be stacked with a positioning error of approximately 0.125 inch. The height of the blanket when it was assembled would be approximately 2 ft.

2.2 NEUTRON SOURCE

The source of 14-Mev neutrons for the blanket consists of a copper disk, 1.25 inches in diameter with a 1-inch diameter area on one face, activated with 3-5 curies per square inch of tritium. The target was obtained from the Texas Nuclear Corporation. The target was bombarded by a beam of deuterons in a Cockroft-Walton accelerator. The accelerator was capable of delivering a beam slightly in excess of 1 ma at 150 kilovolts. The beam would strike the target in an area of 1 square centimeter. At this beam current

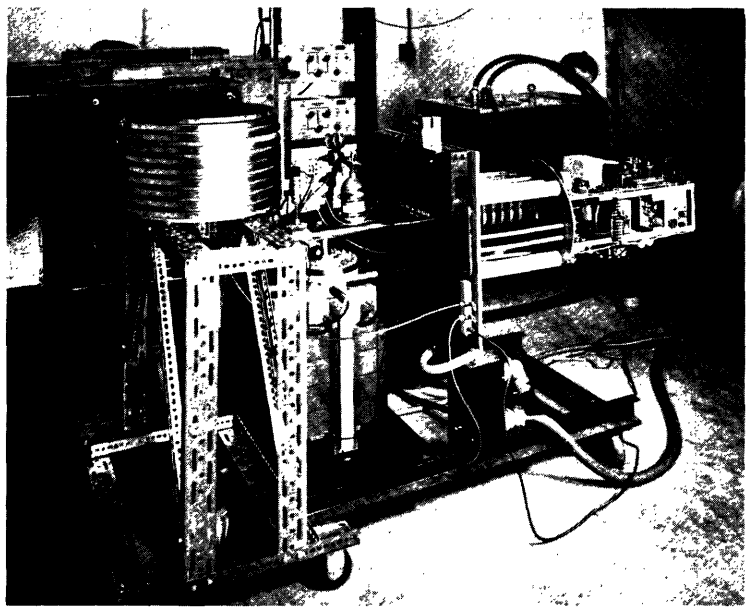


Fig. 1. Accelerator and blanket.

the target would have an effective halflife of 2-4 hours. A fresh target could produce approximately 10^{11} neutrons per second at 1 ma of current. Targets varied among themselves by factors of as much as 1.5. The physical center of the target was 5.25 inches from the face of the blanket. As the beam only struck a portion of the target, and this portion depended upon the machine conditions, there was an uncertainty in the effective target-to-blanket distance of as much as 0.25 inch. Spangler[7] was able to observe this variation in standard foils which were placed within 2 inches of the target, but no effects were observed in the blanket itself. The variation in distance should also have a negligible effect on this experiment.

The energy of the neutrons impinging on the first wall of the blanket varied from 13.5 Mev to 14.5 Mev as a function of the angle between the deuteron beam and the point of observation. Since the cross section for the D-D reaction at 150 kilovolts is a factor of 200 lower than the D-T cross section, less than 0.5% of the neutrons produced come from a D-D reaction. The target holder is made of aluminum, 2 inches in diameter and 1 inch thick, with the target placed in the middle. At 14 Mev, the cross section in aluminum for producing a neutron of degraded energy is ~70 millibarns, so that more than 99% of the neutrons emerging from the target holder in directions of interest have energies in the 13.5-14.5 Mev range.

The high backgrounds observed in this experiment limited the target output to approximately 5×10^9 neutrons per second. For this output, the sodium iodide crystal gave a count rate of 250,000 counts per minute. This count rate was about as high as could be tolerated, because the analyzer began to saturate. Also, enough pulses in the sodium iodide were overlapping to begin reducing the resolution, and the photomultiplier tube began to experience gain shifts. A fresh target could produce this output at a current of 40-60 μa, and could be used 25-40 hours before the neutron output at maximum current became too low to be useful.

Figure 2 is a picture of the room in which the experiment took place. The blanket was 1 meter from the wall nearest it (the wall to the right) and 3 meters from the next nearest wall (the far wall in the picture). These walls are far enough away from the blanket, as compared with the target, so that the maximum effect they could contribute would be approximately 1 per cent. Spangler[7] did not observe any effects from the walls in his measurements of the neutron spectrum in the mock-up.

2.3 NEUTRON MONITOR

The neutron output was monitored by means of a small BF_3 counter placed approximately 1 meter from the target. Owing to its close proximity to the blanket, this counter was found to be sensitive to whether or not the blanket was in place, and even to which blanket was being studied. For a given neutron output, the count rate with a blanket was 20% higher than the count rate without a blanket. To correct for this, the counter was calibrated against a BF_3 counter which was placed far enough away from the target (~6.25 meters) to be relatively insensitive to the blanket. Finally, the long counter was

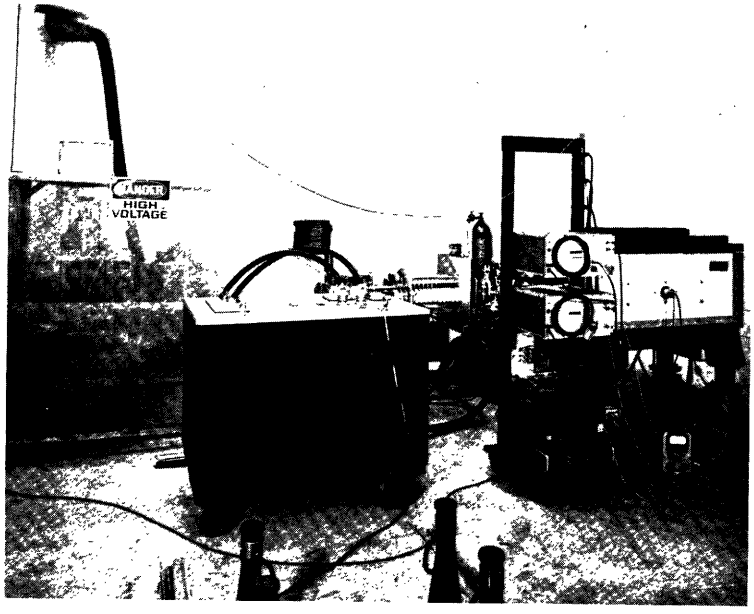


Fig. 2. Accelerator room.

calibrated against teflon foils taped to the end of the target.

The fluorine in the teflon foil has a threshold of approximately 10 Mev for a (n, 2n) reaction. Therefore scattered neutrons had a negligible effect on the foil, both because their intensity was much less than the target intensity and because nearly all of them were degraded below the fluorine threshold. The foils showed that the count rate in the long counter increased about 2 per cent when a blanket was put in place. This effect was small enough so that corrections to the long counter for other blankets were scaled from the measured value. These corrected values were then used to calibrate the small BF_3 counter. Using the calibration of the long counter as the standard, a count rate on the small counter of about 100,000 counts per minute was found to correspond roughly to a target output of 10^{10} neutrons per second.

2.4 DETECTOR

Figure 3 shows the position of the detector shield relative to the target. The detector was a thallium-activated sodium iodide scintillation crystal, 2 inches in diameter and 3 inches long. The crystal had a resolution of 7.5-8 per cent at 1.33 Mev.

The crystal was mounted behind a collimator, approximately 1 meter long, with a 1-inch hole through it. Directly in front of the crystal the collimator consisted of 3 inches of lead. Next, there were 16 inches of dense masonite acting as a neutron shield. Finally, the entrance end of the collimator was a lead cylinder, 19.75 inches long. The wall at which the collimator pointed was 3 meters behind the blanket; thus it did not affect the measurements.

The crystal was in a lead shield 9 × 9 × 27 inches. This shield provided a minimum 3 inches of lead shield in all directions, except directly to the rear. There the lead was only 1 inch thick. This lead shield was inside a neutron shield of dense masonite. This shield was made of slabs of masonite, 3 ft × 4 ft × 2 inches thick, and bricks, 2 × 4 × 8 inches. The minimum thickness of this shield was 1 ft, and in the direction of the blanket and target it was a minimum of 16 inches. The shield was mounted on a table that could be raised and lowered, allowing measurements to be taken at different depths in the blanket.

As well as the shielding, a copper cone, 12 inches long by 1.5 inches in diameter at one end, and 2.5 inches in diameter at the other end, was placed between the target and the crystal to act as a shadow shield. The cone was mounted on the blanket cart so that when the cart was in place, the small end of the cone was 1.5 inches from the center of the target and the center line of the cone passed through both the center of the target and the center of the crystal. By doubling the length of this cone, the over-all background in the crystal could be cut approximately 10 per cent. This second piece, however, would have had to be mounted externally on the cart. Due to the difficulty in properly aligning it, the results would have suffered more from the poorer reproducibility than they would have gained from the better statistics. A major share of the remaining background apparently came from gamma rays produced in the lead collimator and from hydrogen capture in the masonite. Another important source of the inelastic scattering

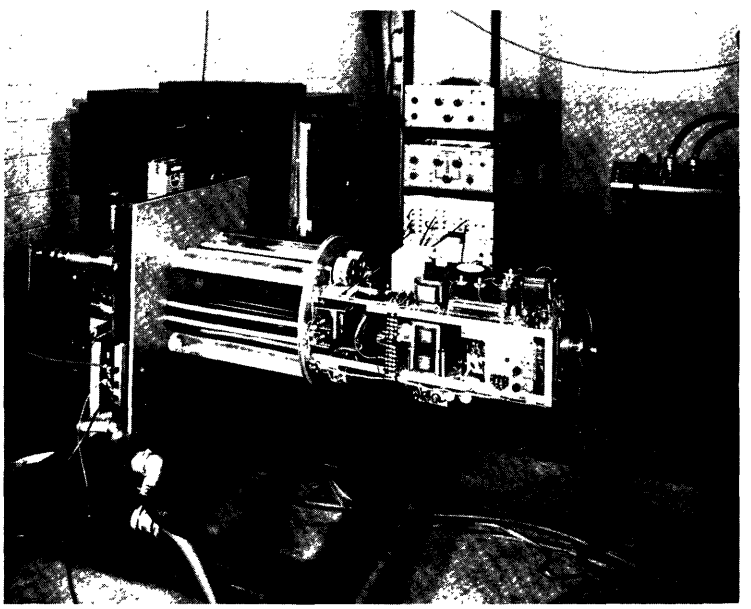


Fig. 3. Accelerator and detector shield.

gamma rays is the lead shield around the crystal.

The output of the photomultiplier tube attached to the crystal was fed through approximately 60 ft of doubly shielded cable to a matched impedance preamplifier with a current gain of 10. The output of the preamplifier fed into a TMC Model 210 plug-in unit in a TMC 256 Model CN-110A channel analyzer.

2.5 PROCEDURE

The following steps were performed at the beginning of each set of measurements. The shield was raised or lowered to the proper level, and the copper cone was adjusted so that it shadowed the crystal. The blanket cart was positioned and the accelerator started. The beam current was increased until the neutron monitor showed a count rate of approximately 45,000 counts per minute. A 10-minute measurement was then made with the base line of the analyzer set to zero. This measurement was the background count with no blanket in place. The base line of the analyzer was increased to ~2.5 Mev, and another background measurement lasting 30-90 minutes was made.

For each measurement the live time of the analyzer, the true time of the run, and the number of neutrons counted by the monitor during the run were recorded. The accelerator was then shut off, the blanket to be studied was stacked on the cart, and the cart was repositioned over the target. Changing blankets took 10-15 minutes. The accelerator was restarted, and the two measurements were repeated. This time, however, the count rate on the neutron monitor was set at ~55,000 cpm. As many blankets as desired could be studied at this position in this manner. Measurements showed that the background was nearly constant from beginning to end, so that it only needed to be measured once for a given set of runs.

2.6 TRIPLE COINCIDENCE

In the spectra measured by this method, the result shows both the peaks present in the spectra and peaks caused by the escape of the annihilation radiation from pair production events and Compton distribution in the detecting crystal. In order to determine which peaks were actually present in the spectra, some measurements were made by using a triple coincidence counter.

In this type of counter, only pair production events in which both annihilation gamma rays escape the detector crystal and are detected in surrounding side crystals are measured. The detector crystal was the same as that used for the previous measurements. The side crystals were sodium iodide, 3 inches thick by 6 inches in diameter. The faces of these crystals were slotted so they would completely surround the sides of the detector crystal. The circuitry for this arrangement is shown in Fig. 4.

Each side crystal was fed to a single channel analyzer with the window set at 0.511 Mev. A coincidence output from each of the three crystals was fed to a fast coincidence unit. If all three crystals recorded an event within ~0.5 μsec, the pulses to the fast coincidence circuit would trigger, and a pulse would appear at its output. This

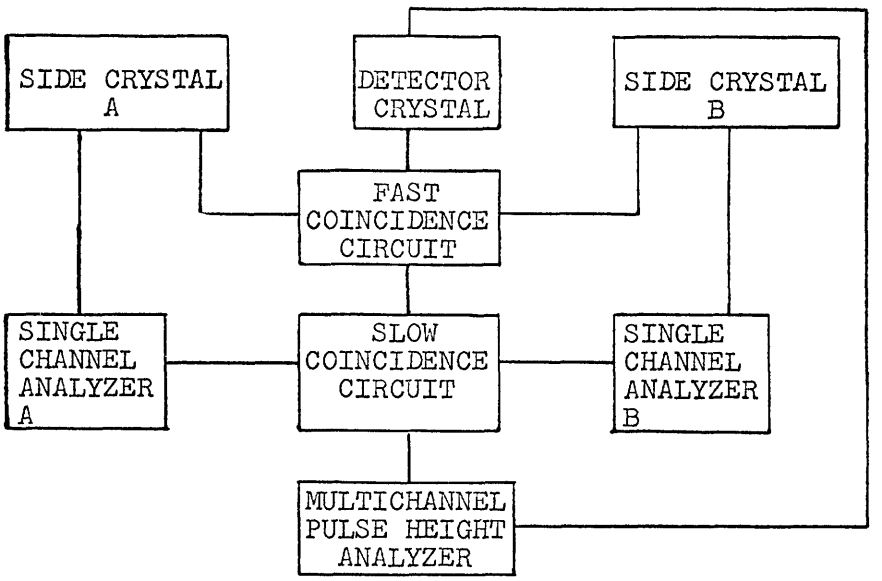


Fig. 4. Triple coincidence circuit.

output was fed into a slow coincidence circuit, along with the outputs from the single channel analyzers. If all three of these inputs had pulses occurring within ~2-3 μsec of each other, the circuit was triggered, and the output pulse was used to gate the multichannel pulse-height analyzer.

The linear output of the detector crystal was fed through a delay line to the input of the analyzer. When the gating pulse occurred at the coincidence input of the analyzer, the pulse from the crystal would be admitted; otherwise, it would not. The intrinsic efficiency of this triple coincidence counter was approximately 0.03 per cent.

The three crystals were housed in a shield consisting of 1 inch of lead surrounded by 2 inches of steel. Dense masonite was stacked around this to increase the neutron shielding. The collimator was approximately 76 cm long with a 0.75-inch hole, giving a geometric efficiency of approximately 0.004 per cent. The over-all efficiency of the system was then 1.5×10^{-6} per cent. Because of the low efficiency, measurements with the triple coincidence counter took 6 hours each. The rest of the procedure for making these measurements was the same as before.

Unfortunately, the results of these measurements had so much statistical scatter that only one peak showed up definitely in the graphite blanket, and two other peaks showed up in the salt. The rest of the spectrum depended on just how the data were smoothed. The results obtained were a guide to interpreting the spectra, but they could not be used to definitely eliminate certain peaks.

III. RESULTS

3.1 BLANKET CONSTRUCTION

The 67 mole per cent salt – 33 mole per cent graphite blanket, known hereafter as a 67 salt 33 graphite blanket, was built up by alternating pans of salt with slabs of graphite. The composition of this blanket was actually approximately 65.5 mole per cent salt and 34.5 mole per cent graphite. This blanket was to be stacked on an appropriate first wall as shown in Fig. 14. The all-salt blanket was built up by stacking ten pans of salt on the appropriate first wall. A 6-inch reflector of graphite was placed on top of this blanket (Fig. 10) so that the measurement at the 8.25-inch depth would not be affected by leakage out the back of the blanket. Since the scattering properties of graphite are similar to those of the salt, only a small error should be introduced by making the reflector graphite rather than salt.

3.2 DATA REDUCTION

The raw data for these spectra consisted of the multichannel analyzer output from 0 to 5 Mev both with and without a blanket in place, and also from 2.5 to 7.5 Mev with and without a blanket. A sample calculation with numbers illustrating the data reduction is given in Appendix A.

The measurement without a blanket in place was used as the background. For each set of data from the analyzer, there were also the total count from the neutron monitor, the live time of the analyzer during the count, and the actual time of the measurement. The live time was the time during which the analyzer was available to receive a new count. The number of counts that a channel in the analyzer was capable of holding (65,537) determined the length of a measurement. If more than this number of counts was fed to a channel, it would recycle to zero and start counting again.

The raw data in the analyzer roughly fit a decreasing exponential with increasing channel number (or energy). Therefore the channel overflows would occur starting at low channel numbers and advancing to higher channel numbers. Because of this, a limited number of overflows could be corrected for, but if too many occurred, it became impossible to tell how many times a channel had overflowed. Counting had to be stopped, therefore, before this point was reached.

For the low-energy measurements, some of the low channels would overflow four or five times in 10 minutes. For the high-energy measurement, the low channels were about to overflow a second time at the end of 90 minutes. To correct for overflows, the channel capacity times the number of overflows was added to the counts remaining in a channel. It was found that the first five channels did not count properly, and there was some doubt as to the sixth channel.

After the data had been corrected for the channels that overflowed, it was normalized. Since the efficiency of the neutron monitor was dependent on just which blanket was being measured, the average neutron count rate during the measurement was divided by a factor

to make it equal to the count rate that would have been measured if no blanket were there. This factor varied from 1.00 for no blanket to 1.29 for the all-graphite blanket. This factor was very important, as this 30% difference was more than the difference between the measurements with a blanket and without a blanket for most of the channels.

Six measurements were made to determine these factors, and the maximum spread measured from the average was 1-2 per cent. This spread represented an error in the magnitudes of the spectra of from 3% to as much as 40%. Most of the channels would change by approximately 10% for this much spread.

Next, the gamma-ray count rate was divided by the corrected neutron count rate. The normalized data from the measurement without a blanket was then subtracted from the normalized data with a blanket to give a normalized spectrum.

Standard deviations of the unnormalized data were calculated, normalized, and added to give a measure of the statistical variations of the spectrum. The standard deviations for all except the graphite blankets were approximately 10% spread from 0 to 0.75 Mev, gradually increasing to approximately 25% at approximately 2 Mev, staying 25-30% at approximately 3 Mev, decreasing to 15-20% at approximately 4 Mev, and remaining constant from there to 7.5 Mev.

The spectra at this point were in two parts for each blanket: one from 0 to 5 Mev; and the other, from 2.5 to 7.5 Mev. These two parts were now joined. Because of the uncertainties of the first few channels, joining was started in the high-energy part at channel 8, the first 7 channels being ignored.

From measurements made at different times in which the base line was varied, the correspondence of channels in the high- and low-energy parts of the spectrum was known probably to ±1 channel, and almost certainly within 2 channels. This was true of all the runs except for a group taken at a depth of 4.25 inches. For this group the high- and low-energy parts of the spectrum were measured at different times, so that a larger error probably occurs. Only Fig. 16 represents data taken in this group.

After the spectra were joined, they were smoothed by using the least-squares technique presented in Hildebrand.[8] In the smoothing process the point at which a peak occurred might be shifted as much as 5 or 6 channels, so that the error in joining the spectra should be insignificant compared with the errors caused by poor statistics. The smoothing formulas were for a third-order polynomial; 11 points were used, and the data were smoothed twice. The smoothing should decrease the statistical standard deviations by a factor of approximately 3, in other words, to 3-10 per cent. Now, however, instead of the variation being randomly distributed, adjacent channels have substantially the same variation. At this point, the data normalization was corrected to approximately 1 neutron per square centimeter per second incident on the blanket wall.

The accuracy of this calculation depends on the normalization of the BF_3 long counter used for calibrating the neutron monitor. This factor has been measured for fast neutrons of 1-2 Mev. For 14-Mev neutrons, however, it may have changed by a factor of as much as 2. Since the normalization as a function of energy for this counter was not

known, and since the exact neutron spectrum that it was measuring was not known either, the normalization factor for 1-2 Mev neutrons was used. Any error from this factor would decrease the absolute magnitude of the final spectra, but it would introduce no relative error within a spectrum or between two different spectra.

The spectra were next corrected for the scintillation crystal's efficiency. Since the crystal saw a collimated beam of gamma rays, the efficiency could be calculated easily and accurately as $(1-\exp(-S \cdot L))$, where L is the length of the crystal (3 inches), and S is the total attenuation coefficient for sodium iodide[9] at a particular energy. The spectrum was then divided by the photofraction[11] for a 2 × 3 inch crystal as a function of energy. This corrected the magnitudes of the different parts of the spectrum so that they were roughly correct relative to each other. No attempt was made to strip the Compton distribution out of the spectrum because to do this acceptably would be too complex to be justified.

Finally, the spectrum was corrected for the collimator transmission and the attenuation in the blanket and scaled by the energy. This correction left the spectrum in terms of the gamma-ray energy flux at the center line of the blanket.

In making this calculation, the magnitude of the spectrum in the blanket was assumed to have the same spatial distribution as the primary neutrons from the target, while the relative shape of the spectrum remained constant at a given depth. Spangler[7] found that the magnitude of the neutron spectrum in a blanket followed this spatial distribution closely. The spectra measured at different levels in a blanket indicate that the shape of the spectrum changes rather slowly with position, but that there is some build-up of Compton distribution as distance from the target increases. This build-up is small enough, however, that it should not cause a significant error in the calculation. The calculation itself is not very sensitive to the exact spatial distribution, so that the error introduced by assuming the above-mentioned distribution should be unimportant.

3.3 RESULTS

Results in the form of spectra, along with figures showing blanket make-up, are presented in Figs. 5-21. The normalization factor in these plots has units of Mev per square centimeter per second per neutron per square centimeter per second incident on the first wall. The abscissas cover the approximate range of 0-7.5 Mev.

Figure 5 is a schematic diagram of the graphite blanket. Figures 6-9 show the spectrum in an all-graphite blanket with no first wall at progressively larger depths. Figure 10 is a schematic diagram of an all-salt blanket, and Figs. 11-13 show the spectrum at a depth of 2.25 inches in an all-salt blanket as the first-wall thickness is increased. Figure 14 is a schematic diagram of a 67 salt 33 graphite blanket, and Figs. 15-18 show the spectrum at progressively larger depths in a 67 salt 33 graphite blanket with a first-wall thickness of 0.75 inch of molybdenum. Figures 19-21 show three different measurements of the spectrum of a 67 salt 33 graphite blanket with a 0.375-inch first wall, at a depth of 2.25 inches.

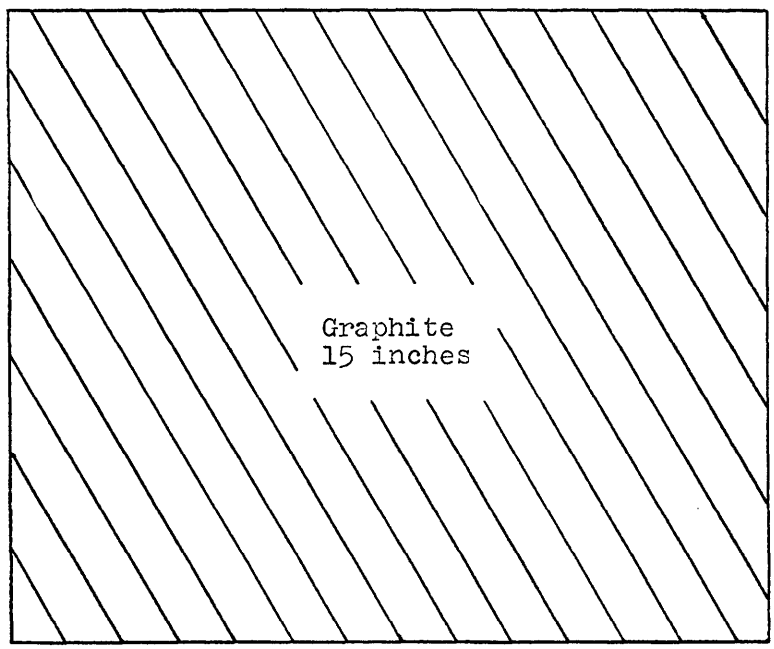
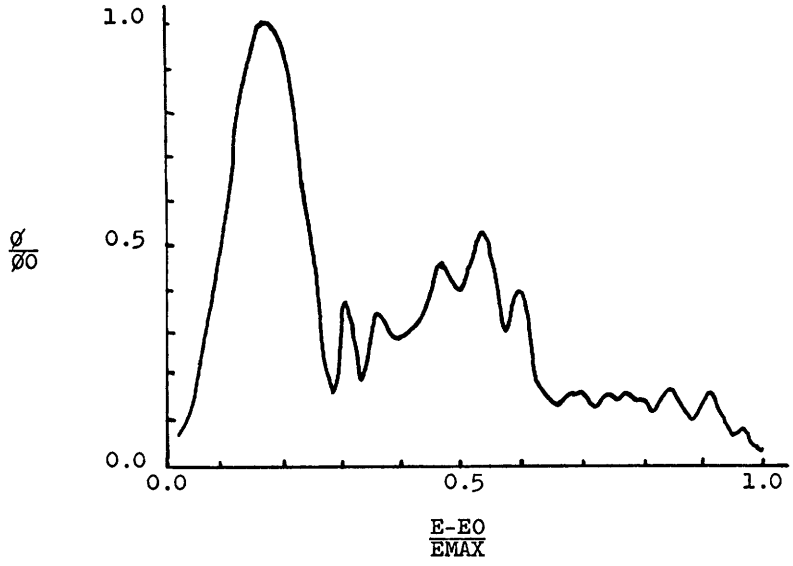


Fig. 5. Schematic of the graphite blanket.



GRAPHITE BLANKET DEPTH IN BLANKET 2.25 INCHES

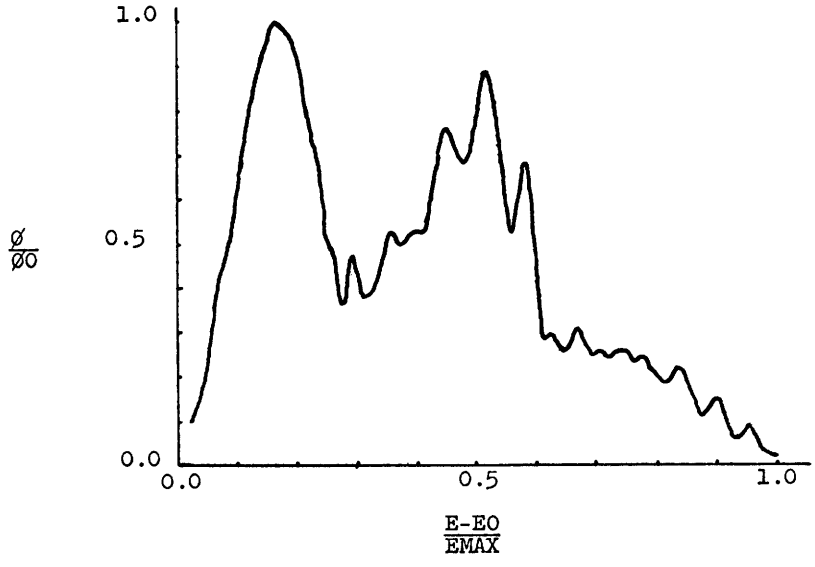
NO MOLYBDENUM FIRST WALL

ø0=1.10 MEV/CM^{2}SEC/NEUTRON/CM^{2}SEC INCIDENT ON FIRST WALL

E0=-.059 MEV

EMAX=7.543 MEV

Fig. 6.
Gamma-ray spectrum.



GRAPHITE BLANKET DEPTH IN BLANKET 4.25 INCHES

NO MOLYBDENUM FIRST WALL

ø0=.721 MEV/CM^{2}SEC/NEUTRON/CM^{2}SEC INCIDENT ON FIRST WALL

E0=-.034 MEV

EMAX=7.606 MEV

Fig. 7.
Gamma-ray spectrum.

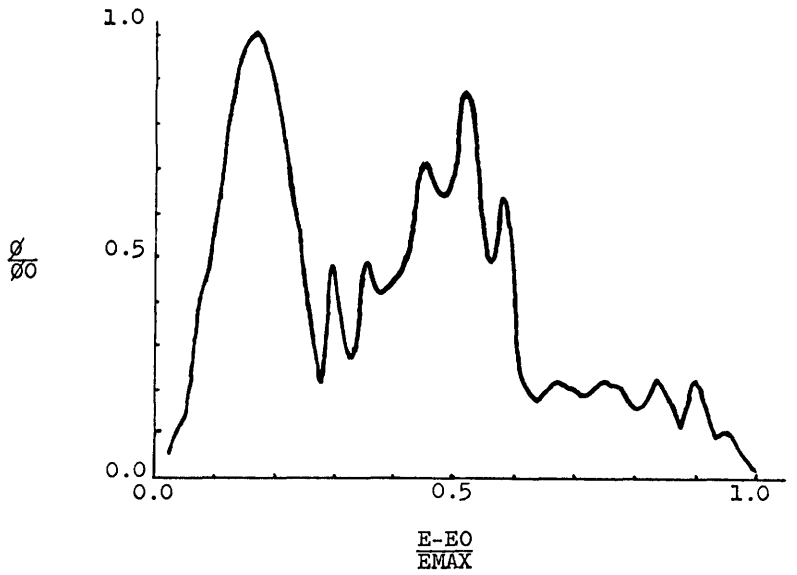


Fig. 8.
Gamma-ray spectrum.

GRAPHITE BLANKET DEPTH IN BLANKET 6.25 INCHES

øo=.629 MEV/CM^{2}SEC/NEUTRON/CM^{2}SEC INCIDENT ON FIRST WALL

NO MOLYBDENUM FIRST WALL

EO=-.067 MEV

EMAX=7.649 MEV

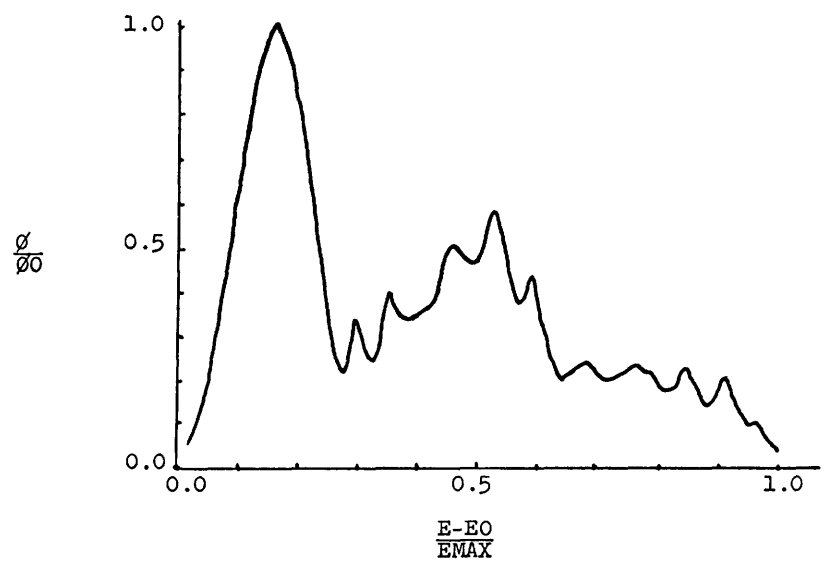


Fig. 9.
Gamma-ray spectrum.

GRAPHITE BLANKET DEPTH IN BLANKET 8.25 INCHES

NO MOLYBDENUM FIRST WALL

øo=.585 MEV/CM^{2}SEC/NEUTRON/CM^{2}SEC INCIDENT ON FIRST WALL

EO=-.056 MEV

EMAX=7.546 MEV

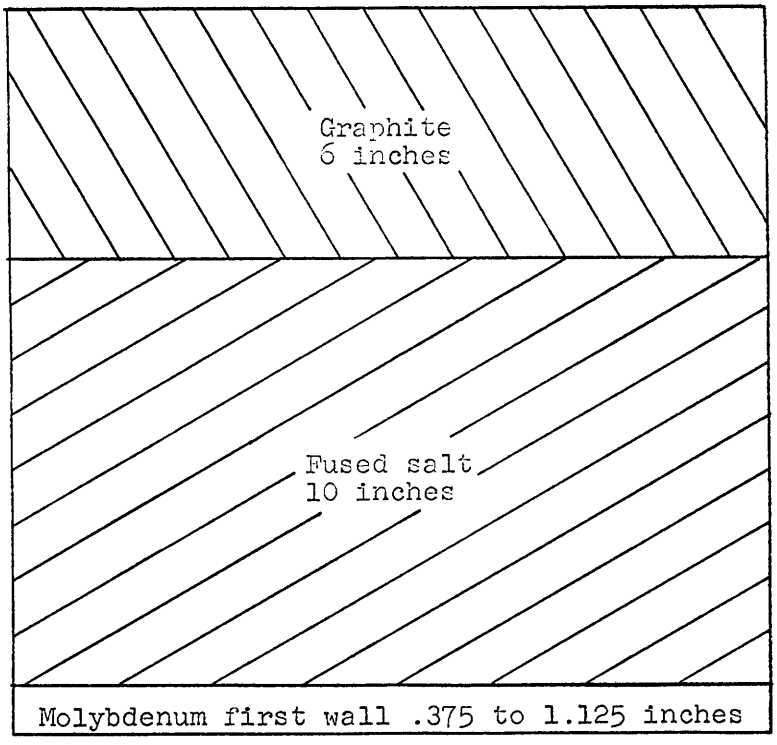


Fig. 10. Schematic of an all-salt blanket.

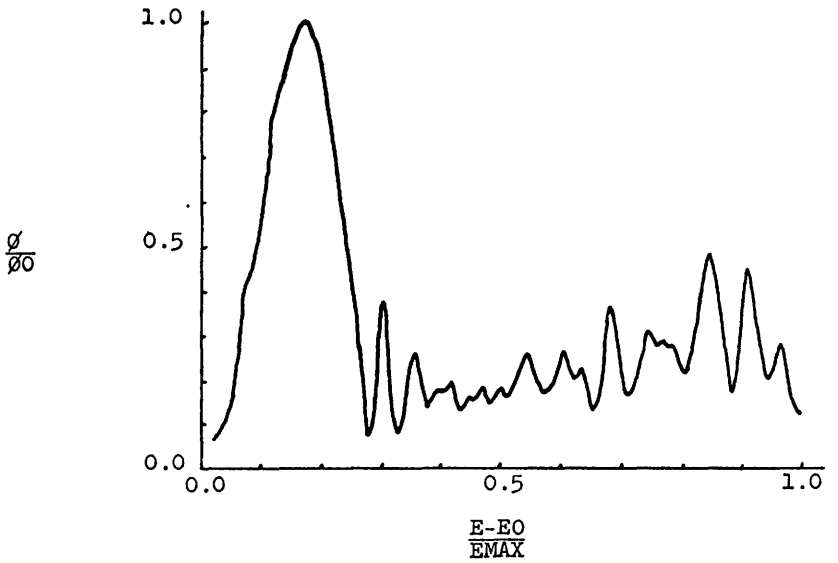


Fig. 11.
Gamma-ray spectrum.

ALL SALT BLANKET DEPTH IN BLANKET 2.25 INCHES

.375 INCH MOLYBDENUM FIRST WALL

ø0=.784 MEV/CM^{2}SEC/NEUTRON/CM^{2}SEC INCIDENT ON FIRST WALL

E0=-.003 MEV

EMAX=7.255 MEV

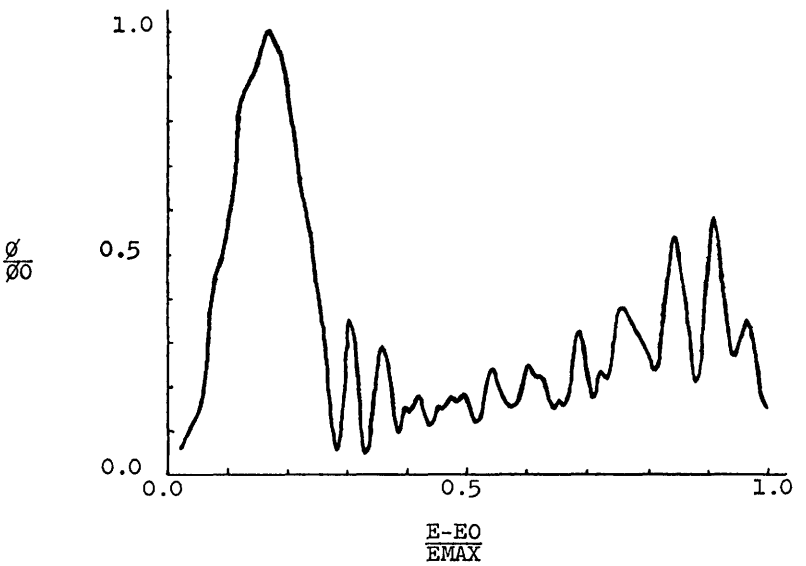


Fig. 12.
Gamma-ray spectrum.

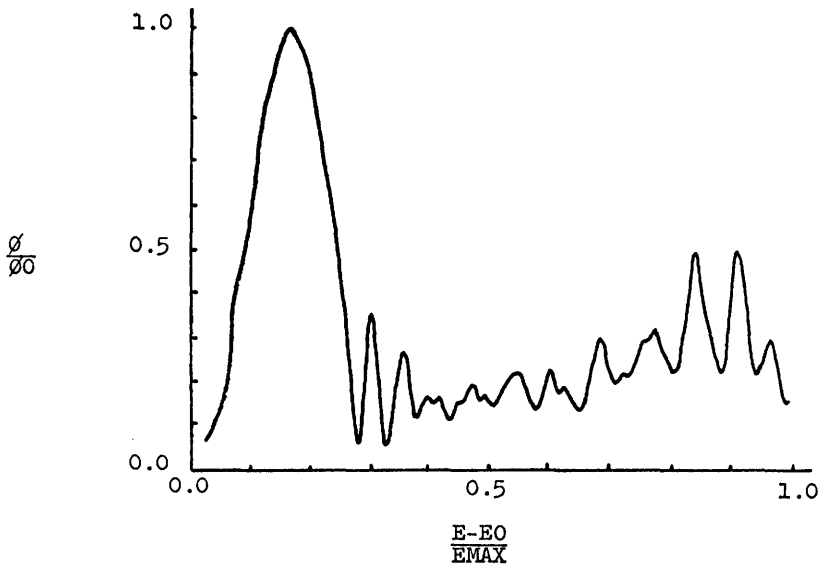
ALL SALT BLANKET DEPTH IN BLANKET 2.25 INCHES

.750 INCH MOLYBDENUM FIRST WALL

ø0=.777 MEV/CM^{2}SEC/NEUTRON/CM^{2}SEC INCIDENT ON FIRST WALL

E0=-.003 MEV

EMAX=7.255 MEV



ALL SALT BLANKET DEPTH IN BLANKET 2.25 INCHES

1.125 INCH MOLYBDENUM FIRST WALL

ø0=.888 MEV/CM^{2}SEC/NEUTRON/CM^{2}SEC INCIDENT ON FIRST WALL

E0=-.005 MEV

EMAX=7.253 MEV

Fig. 13. Gamma-ray spectrum.

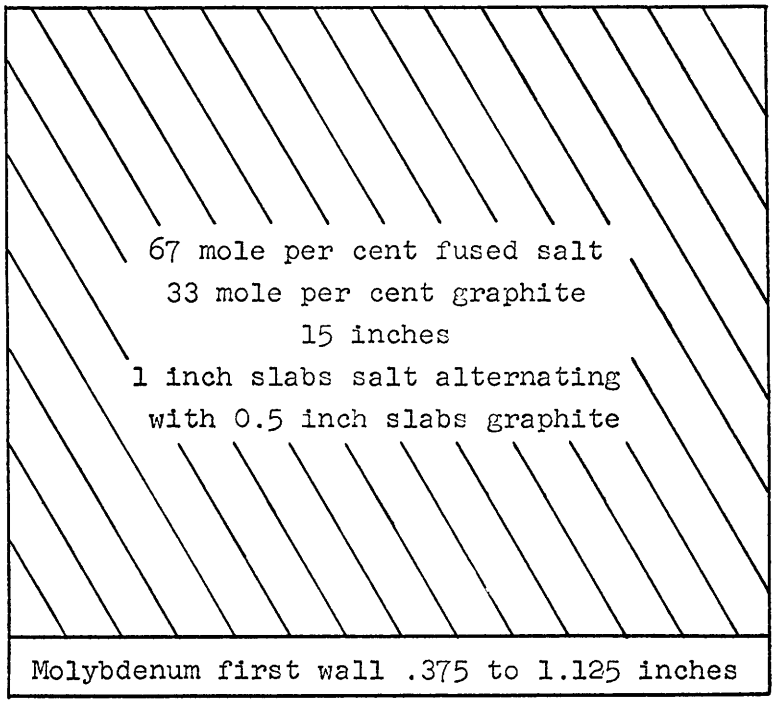


Fig. 14. Schematic of a mixed salt-graphite blanket.

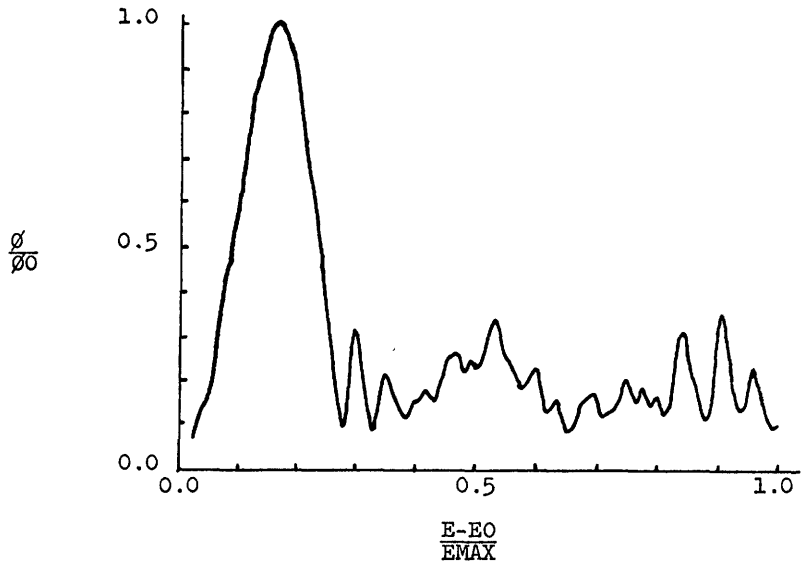


Fig. 15.
Gamma-ray spectrum.

67 SALT 33 GRAPHITE BLANKET DEPTH IN BLANKET 2.25 INCHES

.750 INCH MOLYBDENUM FIRST WALL

ø0=.799 MEV/CM^{2}SEC/NEUTRON/CM^{2}SEC INCIDENT ON FIRST WALL

E0= .015 MEV

EMAX=7.312 MEV

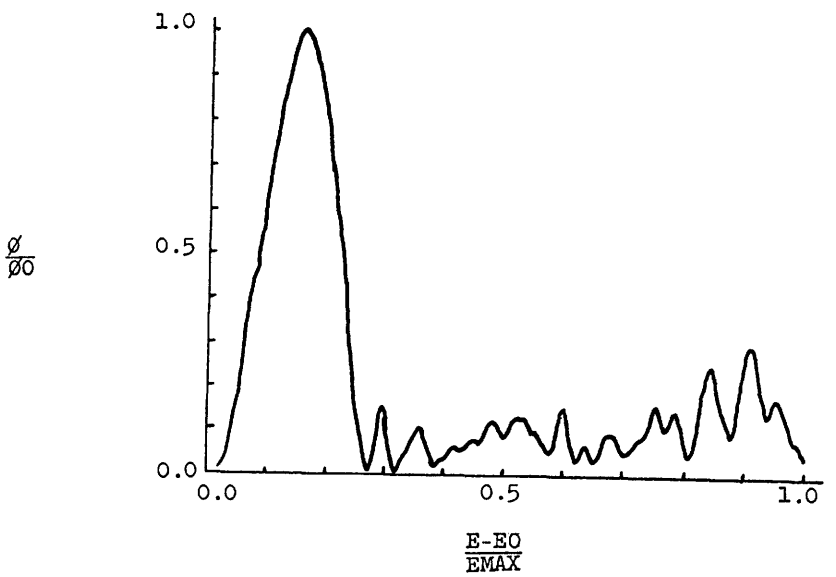


Fig. 16.
Gamma-ray spectrum.

67 SALT 33 GRAPHITE BLANKET DEPTH IN BLANKET 4.25 INCHES

.750 INCH MOLYBDENUM FIRST WALL

ø0=.634 MEV/CM^{2}SEC/NEUTRON/CM^{2}SEC INCIDENT ON FIRST WALL

E0= .018 MEV

EMAX=7.315 MEV

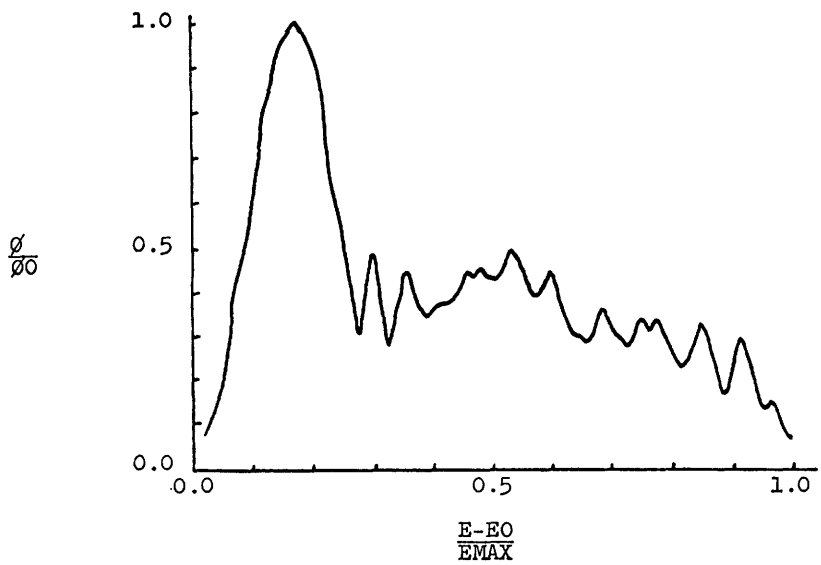


Fig. 17.
Gamma-ray spectrum.

67 SALT 33 GRAPHITE BLANKET DEPTH IN BLANKET 6.25 INCHES

.750 MOLYBDENUM FIRST WALL

ØO=.513 MEV/CM^{2}SEC/NEUTRON/CM^{2}SEC INCIDENT ON FIRST WALL

EO= .031 MEV

EMAX=7.251 MEV

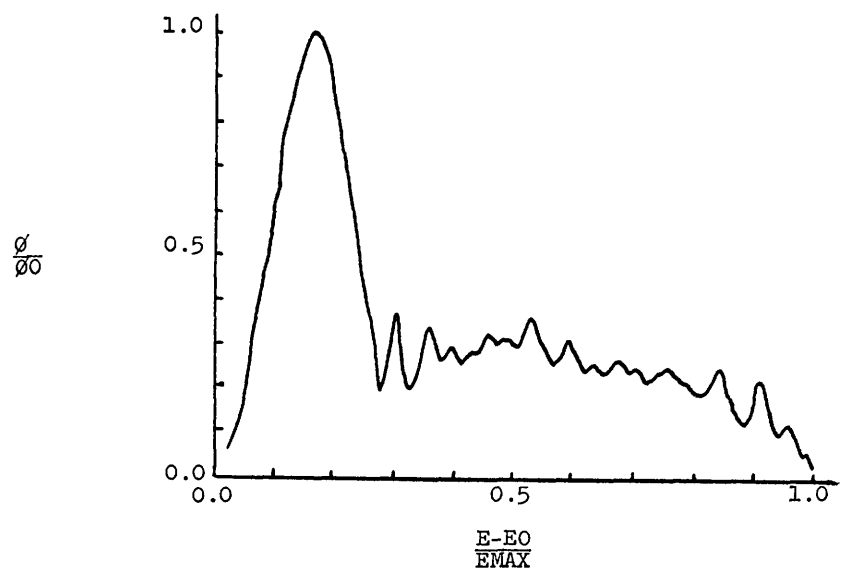


Fig. 18.
Gamma-ray spectrum.

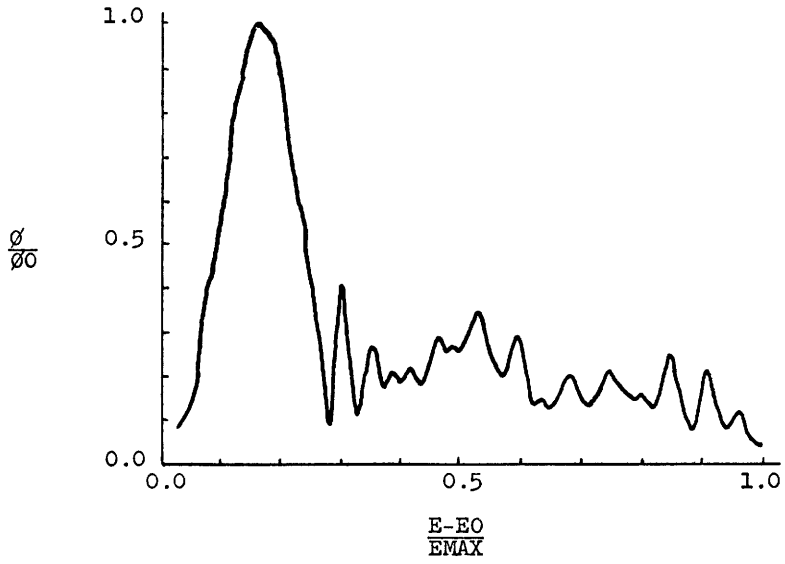
67 SALT 33 GRAPHITE BLANKET DEPTH IN BLANKET 8.25 INCHES

.750 INCH MOLYBDENUM FIRST WALL

ØO=.463 MEV/CM^{2}SEC/NEUTRON/CM^{2}SEC INCIDENT ON FIRST WALL

EO= .010 MEV

EMAX=7.306 MEV



67 SALT 33 GRAPHITE BLANKET DEPTH IN BLANKET 2.25 INCHES

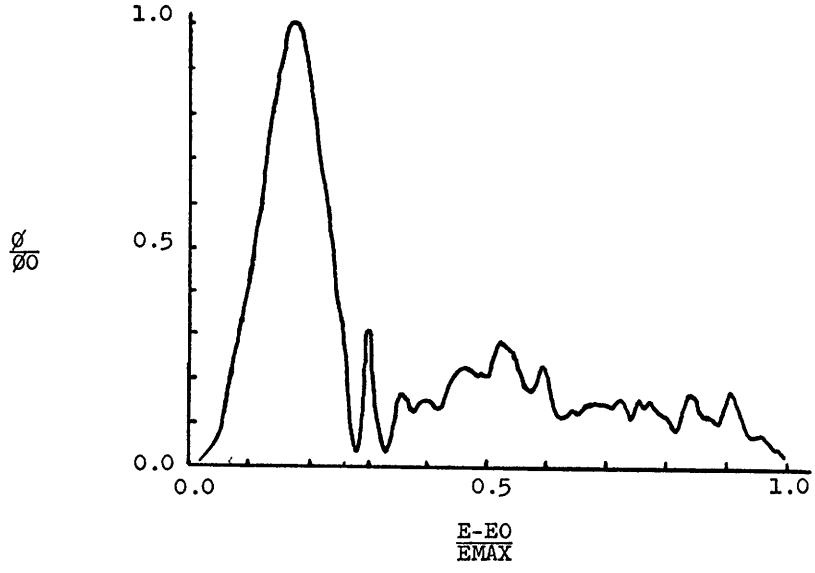
.375 INCH MOLYBDENUM FIRST WALL

ø0=.550 MEV/CM^{2}SEC/NEUTRON/CM^{2}SEC INCIDENT ON FIRST WALL

E0= .010 MEV

EMAX=7.306 MEV

Fig. 19.
Gamma-ray spectrum.



67 SALT 33 GRAPHITE BLANKET DEPTH IN BLANKET 2.25 INCHES

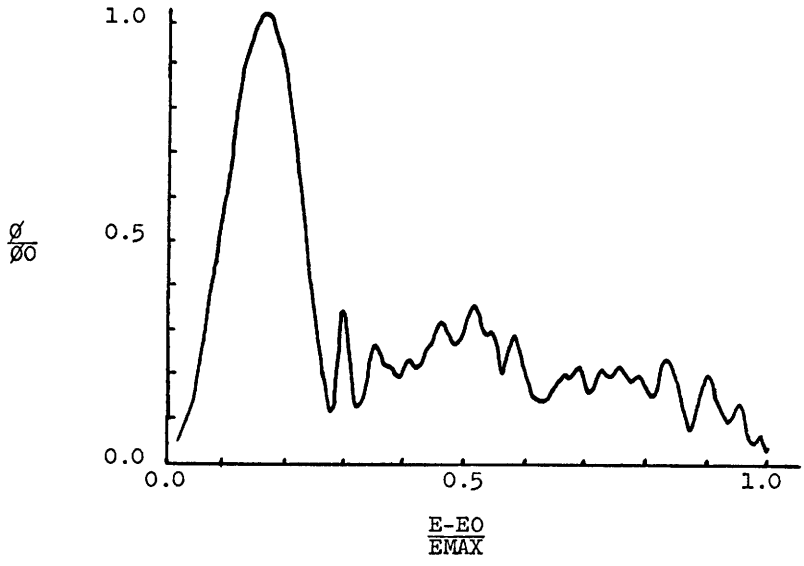
.375 INCH MOLYBDENUM FIRST WALL

ø0=.586 MEV/CM^{2}SEC/NEUTRON/CM^{2}SEC INCIDENT ON FIRST WALL

E0=-.007 MEV

EMAX=7.327 MEV

Fig. 20.
Gamma-ray spectrum.



67 SALT 33 GRAPHITE BLANKET DEPTH IN BLANKET 2.25 INCHES

.375 INCH MOLYBDENUM FIRST WALL

ØO=.531 MEV/CM^{2}SEC/NEUTRON/CM^{2}SEC INCIDENT ON FIRST WALL

EO= .004 MEV

EMAX=7.376 MEV

Fig. 21. Gamma-ray spectrum.

3.4 REPRODUCIBILITY

Looking at Figs. 19-21, we see that for the three measurements of the spectrum of this one blanket, the normalization factors are within 4.5% of their average value. This spread is just slightly larger than an expected standard deviation for this point (approximately 4%). The magnitudes of the peaks at 4.5 Mev have a spread of 8%, which, again, is slightly more than the expected standard deviation here (approximately 6.5%). For the peak at 6.7 Mev, the magnitudes have a spread of only 2.5%, which is less than the expected standard deviation of approximately 5%.

These comparisons show the measurements to be reproducible almost to statistical limits. Actually, the agreement here is better than would be expected from looking at the other data. These indicate that the reproducibility of the measurements is probably closer to 15% for the blanket containing salt. This is not surprising, because of the variations between the different salt wedges and because of the fissures between them. For the all-graphite blanket the reproducibility is probably better, as the graphite blanket is a continuous, homogeneous medium.

3.5 STATISTICAL SIGNIFICANCE OF TRENDS

Looking at Figs. 11-13, we see that although there is a trend in the magnitude of the spectra with different first-wall thicknesses, the total variation in magnitude is less than 10%, so that it is not very significant statistically. These spectra also have different neutron monitor normalization factors, so that any errors in these would be reflected by differences in the spectra. Other data taken (which are not shown here) also indicate that any trend in the magnitude of the spectra with first-wall thickness is too small to show up among the variations in the spectra.

Figures 15-18 show a trend of decreasing magnitude with increasing depth in the blanket. This trend is certainly large enough to be significant statistically.

3.6 GRAPHITE BLANKET

For Figs. 6-9, which represent the all-graphite blanket, the data are better statistically than for the other blankets. The maximum standard deviations calculated for the graphite are only approximately 20%, instead of 30%. For most of the data, the standard deviation was approximately 10%. This means that for the smoothed curves shown, the standard deviation should be only approximately 3.5% for most of the curve, and at worst (from 2-2.5 Mev) become approximately 7%. Since the trends shown in these curves are a good deal larger than this, they are at least statistically significant. These curves will be discussed further in Section IV.

IV. DISCUSSION OF RESULTS

We shall now discuss the various peaks that are evident in the results with respect to both their origin and significance in terms of important reactions in the blanket.

4.1 GRAPHITE BLANKET

First, referring to the spectrum of the graphite blanket in Figs. 6-9, there are peaks at the following approximate energies: 7.25 Mev, 6.85 Mev, 6.35 Mev, 5.85 Mev, 5.00 Mev, 4.45 Mev, 3.95 Mev, 3.45 Mev, 2.65 Mev, 2.20 Mev, and a large broad peak from 0.5 Mev to 1.5 Mev. Table 1 lists these with their probable and other possible causes.

Table 1. Peaks in the gamma-ray spectrum of a graphite blanket with possible sources.

Energy	Most Probable Source	Other Possibilities
2.22	Hydrogen capture in shield	
2.62	Inelastic scattering in lead collimator	
3.45	Double escape peak for 4.43	3.68 Mev C^{13}
3.95	Escape peak for 4.43	
4.43	Inelastic scattering in C^{12}	
4.95	C^{12} capture gamma ray	
5.85	Double escape peak for 6.87	
6.35	Escape peak for 6.87	
6.87	Resonance neutron capture in C^{12}	
7.25	Escape peak, resonance neutron capture in C^{12}	

The large low-energy peak represents a continuous low-energy gamma-ray spectrum from Compton scattering in the blanket, background Compton scattering in the shield, and some Compton scattering in the sodium iodide crystal. The peak at 2.20 Mev is the hydrogen capture peak at 2.22 Mev and comes from the masonite shield. The peak at 2.65 Mev is probably an inelastic scattering gamma ray from Pb^{208} of 2.62 Mev and would come from the lead collimator. The presence of these two peaks is the reason for attributing some of the low-energy continuous gamma-ray spectrum to Compton-scattered gamma rays in the shield. These peaks do not arise because the background has not been properly subtracted, since subtracting more background would actually increase their size relative to the rest of the spectrum. The probable cause of these peaks is that the background was measured with no blanket in place. When the measurement with the blanket was made, probably enough neutrons were scattered out of the blanket into the shield and collimator to raise the background from the sources so that it could not be properly removed. An attempt was made to measure the background with the blanket in place by putting a lead plug in the collimator. This plug contributed so much to the background, however, that backgrounds taken in this way were useless. These measurements did indicate that the scattered neutrons contributed very little to the background above the 2.62-Mev peak.

The 4.45-Mev peak is the inelastic scattering gamma ray from the 4.43-Mev level of C^{12}. The peaks at 3.95 Mev and 3.45 Mev are probably the positron annihilation escape peaks from a pair production interaction of the 4.43-Mev gamma ray. The 5.0-Mev peak is probably the 4.95-Mev gamma ray from thermal neutron capture in C^{12}. The 6.85-Mev peak is the 6.87-Mev gamma ray from resonance capture of a 2.07-Mev neutron in C^{12}. The 6.35-Mev and 5.85-Mev peaks are probably, again, the escape peaks for the 6.87-Mev gamma ray. Finally, the 7.25-Mev peak is probably the escape peak from a 7.75-Mev gamma ray caused by resonance absorption of a 2.95-Mev neutron. The primary gamma ray for this reaction is outside the limits of these measurements, while the double escape peak would be covered by the 6.87-Mev peak. From Figs. 6-9 it can easily be seen that the 4.43-Mev gamma ray is the most important one in graphite from the point of view of both number of gamma rays and total energy source (which is the way the figures are plotted).

The total magnitude of the 6.87-Mev peak and the 4.95-Mev peak is just about the same. In terms of peak height above the continuous spectrum, however, the 4.95-Mev peak is only 0.3-0.5 times as large as the 6.87-Mev peak. Since the resonance cross section of C^{12} for 2.07-Mev neutrons is roughly the same size as the thermal absorption cross section, this would indicate that the neutrons leak out of the blanket before they are fully thermalized. Spangler's results[7] also indicate this.

4.2 TRENDS IN THE GRAPHITE BLANKET

From Figs. 6-9 it is seen that the normalization constant (representing the height of the broad, low energy peak) decreases somewhat less than exponentially with depth.

Since an unknown fraction of this peak may be due to background from the shield, it is not possible to say whether the spectrum in the blanket at these energies decreases more or less rapidly than exponentially. Since the background in the shield from neutrons scattered out of the blanket should have only a small variation with the depth of the measurement, an appreciable portion of this peak must come from the blanket.

The magnitude of the 4.43-Mev peak remains relatively constant for the first three depths, then decreases fairly rapidly at the 8.25-inch depth. The first three points decrease only approximately 4% (not significant statistically) if only the magnitude of the peak above the continuous spectrum is considered. If the total height of the peak is considered, the points vary approximately 20%, with the magnitude of the peak at 4.25 inches actually being the largest. In both cases the magnitude of the peak at 8.25 inches is smaller by a factor of approximately 2.

This behavior is probably due to a build-up in neutron population in the energy range around 4.5-8 Mev over the first few inches of the blanket. Owing to the large cross section for exciting the 4.43-Mev level in C^{12} in this energy range, a small build-up could compensate for the fairly large decrease in primary 14-Mev neutrons. Eventually, as is seen at 8.25 inches, the neutron population for all energies must decrease.

The behavior of the 6.87-Mev peak is somewhat different. A plot of the magnitude of

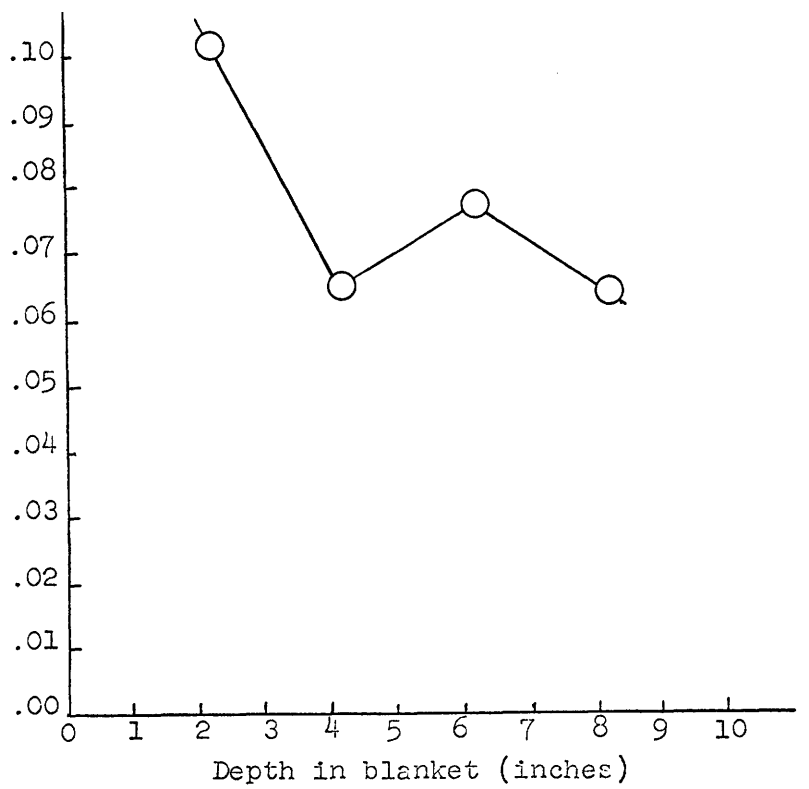


Fig. 22. Gamma-ray at 6.87 Mev in graphite as a function of depth in blanket.

the peak as a function of depth in the blanket is given in Fig. 22. A sharp decrease in the magnitude of the peak is observed between 2.25 inches and 4.25 inches. An approximately 20% increase then takes place from 4.25 to 6.25 inches. Finally, there is a decrease to 8.25 inches, which is somewhat more gradual than the original decrease. This behavior is the same whether the total peak height, or only the height above the continuous spectrum, is considered.

The magnitudes of these variations are considerably larger than could be accounted for by the counting statistics. The probable explanation of this behavior is the following. Since the 6.87 gamma ray comes from the resonance capture of the 2.07-Mev neutron, the magnitude of the peak will follow the magnitude of the 2-Mev neutron population.

In the first part of the blanket, this level will be populated primarily by the inelastic scattering of the primary neutrons at the 10.84-Mev and 11.83-Mev levels of C^{12}. Hence the original sharp decrease in the magnitude of the peak reflects the decrease in the primary neutrons. As the depth in the blanket increases, elastic moderation of higher energy neutrons leads to an increase in the population of this level. Since elastic collisions with high-energy neutrons are predominantly forward-scattering events, the build-up in the lower neutron energy regions takes place at some distance from the surface of the blanket. Finally, the decrease in the over-all neutron levels causes the population of this level to fall again.

Calculations by Impink[11] tend to support this explanation. Impink's calculations were done for an infinite slab with an infinite plane source of neutrons. His slab consisted of a 3-cm first wall of molybdenum followed by a homogeneous blanket, 67 mole per cent salt and 33 mole per cent graphite. His results show the trends outlined above, but his trends take place somewhat more rapidly with depth than the measurements. Some of the speed-up is probably due to the molybdenum wall, and the rest could easily be due to the different geometry. Since the variation in depths between the calculations and the measurements is approximately 50%, the rather coarse mesh used in both the calculation and the measurement may be the cause of some of the difference.

4.3 ALL-SALT BLANKET

Looking now at Figs. 11-13, which represent the spectrum of the all-salt blanket, peaks are observed at approximately the following energies: 6.90 Mev, 6.65 Mev, 6.15 Mev, 5.90 Mev, 5.70 Mev, 5.55 Mev, 5.30 Mev, 5.05 Mev, 4.75 Mev, 4.45 Mev, 4.0 Mev, 3.65 Mev, 3.40 Mev, 3.0 Mev, 2.65 Mev, 2.20 Mev, and again at the broad low-energy peak. These peaks are tabulated in Table 2.

The low-energy peak has the same explanation as for the graphite blanket. The 2.20-Mev peak is, again, hydrogen capture, while the 2.65-Mev peak is probably mostly inelastic scattering in lead. In this blanket, however, since the salt is hygroscopic, there may be contributions to the hydrogen-capture peak from the blanket itself. There are also 2.65-Mev gamma rays produced by inelastic scattering in the fluorine in the blanket. Comparing the size of these peaks with the similar ones in the graphite blanket indicates

Table 2. Peaks in the gamma-ray spectrum of an all-salt blanket with possible sources.

Energy	Most Probable Source	Other Possibilities
2.22	Hydrogen capture in shield	Hydrogen capture in blanket
2.62	Inelastic scattering in Pb collimator	Inelastic scattering in F^{19}
3.0	$F^{18}(3.07)$, $F^{18}(3.00)$	
3.40	Neutron capture in Be	
3.65	F^{18}	
4.0	Inelastic scattering in F^{19}	
4.45	F^{18}	
4.75	Inelastic scattering $F^{19}(4.68, 4.80)$	
5.05	F^{19} capture gamma ray (5.10) F^{19} inelastic scattering (5.15, 5.18)	$F^{18}(4.90)$
5.30	F^{19} capture gamma ray	
5.54	F^{19} capture gamma ray	
5.70	Escape peak, 6.13; double escape peak, 6.63	$F^{18}(5.80)$
6.02	F^{19} capture gamma ray	
6.13	$F^{19}(n,\alpha)N^{16}$	Escape peak, 6.63
6.63	F^{19} resonance capture gamma ray	
6.9	F^{19} resonance capture gamma ray	Neutron capture in Be and Li^6

that they are still primarily due to background causes. It is difficult to make precise comparisons in the blankets containing salt because the salt wedges have holes between them. Such holes will cause large, spurious variations between measurements with different blankets. Taking into account the better statistics of the graphite blanket, we find that the blankets containing salt still have larger variations than the graphite blanket.

The 3.0-Mev gamma-ray peak is probably a combination of a 3.00-Mev gamma ray and a 3.07-Mev gamma ray from F^{18} produced by the reaction F^{19} (n, 2n) F^{18}.

The 3.40-Mev gamma ray is probably from neutron capture in the beryllium, which then emits two 3.40-Mev gamma rays in cascade. Since these cascade gamma rays are in competition with a 6.80-Mev single-transition gamma ray, this reaction probably contributes something to the peak observed at 6.8 Mev.

The 3.65-Mev gamma ray probably comes also from F^{18}. The 4.0-Mev gamma ray probably arises from inelastic scattering in F^{19}, which has several different transitions giving gamma rays of ~4 Mev. The 4.45-Mev gamma ray probably comes from F^{18}. Although there are several gamma rays that might be produced by this reaction, and there are very little published data on the relative abundance of these gamma rays, available data indicate that this gamma ray is more prominent than the others. The 4.75-Mev peak is probably due again to inelastic scattering in F^{19}, which has transitions of 4.80 Mev and 4.68 Mev. No data were found to indicate which gamma ray was more likely.

The peak at 5.05 Mev does not correspond directly to any known gamma ray from the blanket. A 5.10-Mev gamma ray does arise from neutron capture in F^{19}, and 5.15 and 5.18 Mev gamma rays occur from inelastic scattering in F^{19}. A 4.90-Mev gamma ray also occurs in F^{18}, and the observed peak is probably some combination of the sources discussed above. The 5% spread in energies is within the error spread of the energy base line.

The 5.30-Mev peak is probably from neutron absorption in F^{19}. The 5.55-Mev peak is the 5.54-Mev gamma ray resulting from neutron absorption in F^{19}. This gamma ray is one of the more prominant members of the decay scheme of F^{20}. The 5.70-Mev peak is probably the escape peak for the 6.15-Mev peak and the double escape peak from the 6.65-Mev peak. Possibly included in this peak is a 5.80-Mev gamma ray from F^{18}. The 5.90-Mev peak is probably the 6.02-Mev gamma ray from neutron capture in F^{19}. The 6.15-Mev peak is probably from two sources. The F^{19} (n, α) N^{16} reaction gives a 6.13-Mev gamma ray approximately 68% of the time. This reaction has a large cross section from 4.5-9 Mev. The largest value of this cross section is approximately 300 millibarns, and it is larger than 100 millibarns for this entire region. The cross section is unknown between 9 Mev and 14 Mev, but it is unlikely that it becomes negligible. Therefore part of this peak must be due to the 6.13-Mev gamma ray. The escape peak for the 6.65-Mev gamma ray also occurs at this energy, so that part of the peak is also due to this source.

The 6.65-Mev peak is from resonance capture of a 0.027-Mev neutron in F^{19}. The

cross section for capture in this resonance is an order of magnitude higher than at any other energy in F^{19}.

The peak at 6.9 Mev is probably some resonance capture of 0.27-Mev neutrons in F^{19}, giving a gamma ray of 6.88 Mev, some neutron capture in Be^{9}, giving a 6.80-Mev gamma ray, and some neutron capture in Li^{6}, giving a 6.76-Mev gamma ray. The predominant effect is probably the neutron capture in F^{19}. If this is true, comparison of the magnitudes of the 6.63-Mev peak and the 6.88-Mev peak indicates that the neutron population at 0.027 Mev is lower than at 0.27 Mev, possibly by a factor of 2 or 3, since the cross section at 0.027 Mev is ten times as large as the cross section at 0.27 Mev.

The variations of the magnitudes of different peaks with first-wall thickness are smaller than are statistically significant, and are also fairly random. Other data taken have similar variations, so that any trend in the gamma-ray spectra with first-wall thickness in the range 0.375-1.125 inches is less than 10-15 per cent.

4.4 MIXED GRAPHITE-SALT BLANKET

Figures 15-18 give the spectrum of a mixed blanket of 67 mole per cent salt and 33 mole per cent graphite, with a 0.75-inch molybdenum first wall at different depths. The peaks observed are a mixture of the peaks from the graphite and the all-salt blanket. The 6.87-Mev peak in graphite combines with the salt peak at ~6.90 Mev. The 4.46-Mev gamma ray from F^{18} is covered by the 4.43-Mev gamma ray from C^{12}. The peaks in the salt at 3.40 Mev, 3.65 Mev, and 4.0 Mev are covered by the escape peaks of the 4.43-Mev gamma ray.

The normalization factors for these curves, as in the case of the graphite blanket, decrease approximately exponentially with depth in the blanket. In this blanket the peak at 6.65 Mev is due to the capture of a 0.027-Mev neutron in F^{19}. Both the total magnitude and the height of the peak above the continuous spectrum decrease roughly exponentially with depth in the blanket. This indicates that the neutron population at approximately 0.027 Mev decreases exponentially with depth in the blanket. Such a decrease is in agreement with the calculations of Impink.[11]

As in the case of the graphite blanket, the peak height above the continuous spectrum for the 4.43-Mev gamma ray is approximately constant to 6.25 inches and then decreases by a factor of two at 8.25 inches. The behavior of the total magnitude of this peak does not agree with its behavior in the graphite blanket. The continuous spectrum below the peak at a depth of 4.25 inches is much smaller than in the case of the other depths.

This particular spectrum was a member of the first group of spectra measured (all at 4.25 inches depth). Several of these spectra gave very poor results, as though too much background were being subtracted. Therefore the low measured value of the continuous spectrum at 4.25 inches depth is probably due to some error made during the measurement rather than to a real trend in the actual spectrum. The graphite-blanket spectrum at this depth was measured at a later time, so that it should be as good as the other graphite blanket measurements. None of the other spectra measured in this group

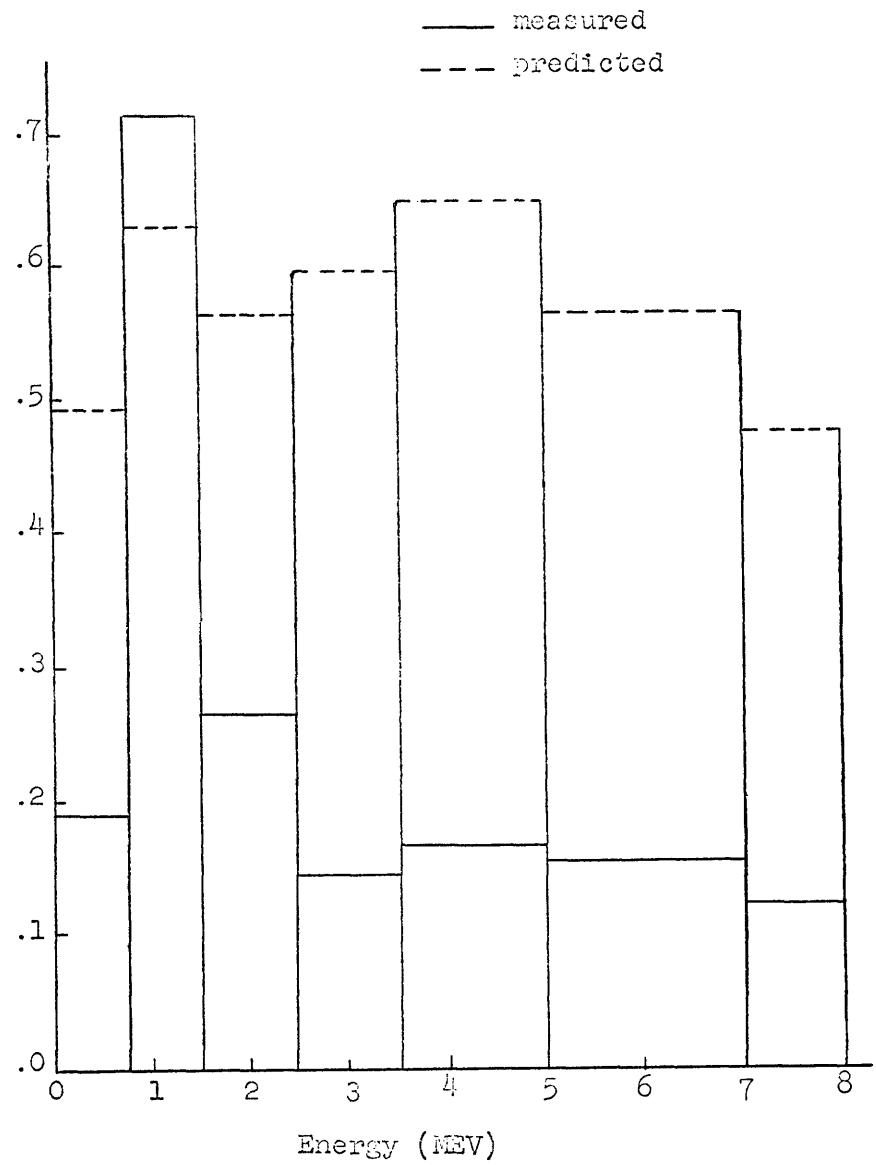


Fig. 23. Comparison of measured and predicted spectra.

are presented here, although the data for some others are given in Appendix C.

4.5 COMPARISON OF SPECTRUM WITH PREDICTIONS

Figure 23 shows a comparison of a predicted source spectrum by Homeyer[12] at the back of a 2-cm first wall of molybdenum, with an averaged spectrum from the data of Fig. 15. Homeyer's calculations were done for an infinite plane source of neutrons incident on an infinite-slab blanket. Looking at Fig. 23, we see that the measured values of the energy flux in the region from 2.5 Mev to 7.5 Mev are lower than his predicted values by a factor of approximately 4. Because the neutrons in the blanket mock-up leak out after only a few interactions, the measured flux would be expected to be somewhat lower than the flux in a full-scale blanket where the neutrons can only leak out the back.

Another reason for the measured values to be lower than the predicted ones is that Homeyer's predictions are at a depth of 2 cm, while the measurements are at a depth of ~5.5 cm.

The shapes are seen to be very similar from 2.5 Mev to 7.5 Mev. Below 2.5 Mev the measured energy flux increases much more rapidly than the predicted flux. There are two reasons for this. First, the predicted spectrum is really a source spectrum and does not take into account any build-up of the low-energy spectrum caused by Compton scattering. Second, the measured spectrum includes a large amount of background that was introduced in this region by leakage of the neutrons from the blanket into the shield. Therefore comparisons in the region below 2.5 Mev are very difficult to make. In the higher energy region it is possible that the observed difference is due mostly to the neutron leakage from the mock-up. It might also arise from inaccuracies in the cross sections that Homeyer assumed for producing gamma rays. He concluded that most of the gamma rays were produced by inelastic scattering, while, except for those produced around 4-5 Mev, the measured gamma rays are due to neutron absorption or reactions such as (n, α) and (n, 2n). Therefore Homeyer's estimates of the inelastic cross sections may have been too high.

V. CONCLUSIONS

This experiment demonstrates that useful results on different fusion reactor blankets can be obtained by measuring the gamma-ray spectrum of a mock-up of the blanket. The qualitative agreement between the results obtained in this experiment and those calculated by Impink[11] indicates that he assumed valid models for neutron scattering. A closer check on his assumptions could be made if his assumptions were used in making a calculation for the mock-up of the blanket.

Qualitatively, the results agree with Homeyer's calculations[4] in the region where comparisons can be made. The results differ from his quantitatively, but not enough to be able to say that his results are in error. The difference could be due to the different geometries.

Several changes could be made which would improve the experiment. First, since the accelerator is capable of a neutron output that is larger by a factor of 20 than was used, the detector crystal could be moved farther from the blanket, thereby increasing the length of the collimator. The shielding around the crystal could then be increased to give a higher ratio of spectrum counts to background counts. It should be possible to increase the statistical accuracy of the experiment noticeably this way. Also, since the shielding contributes so much additional background below 2.75 Mev that the measurements do not have much value, it would probably be worth while to start each measurement at 3 Mev. The measurements with and without a blanket could then be run for a longer period of time, and yield better statistics for the measurements.

One very important change could be made in the method of monitoring the neutrons. Some method should be devised which is sensitive only to the 14-Mev neutrons, so that it would be insensitive to whether or not a blanket was in place. This method might be monitoring the nitrogen 16 in the cooling water to the tritium target. This is produced by the O^{16} (n, p) N^{16}. The criterion for picking a system is that it determines the target neutron output, at least relatively, to better than 1 per cent.

The shadow shield cone could be improved by making it of tungsten. The macroscopic cross section for tungsten is approximately twice that of copper, and a much larger percentage of the tungsten cross section is due to inelastic processes. This means that a 12-inch tungsten cone would have roughly the same effect as a 24-inch copper cone.

One obvious improvement that could be made in the mock-up itself is in the salt slabs. Rather than casting the salt in pie-shaped wedges, it could be cast in one solid slab. Since the casting is usually done in graphite, the salt could be cast in graphite pans that could be used in the mock-up directly. Doing this should greatly increase the reproducibility of the measurements for blankets containing the salt.

A much more important improvement in the experiment would result if a detector could be found which was small enough to be placed in the blanket mock-up without affecting the properties of the mock-up appreciably. This detector would either have to

be insensitive to neutrons, or it would have to allow some method of discriminating against the neutron-caused pulses. Such a detector could have an efficiency of 10^{-5} that of the 2 × 3 inch sodium iodide crystal used in this experiment, as putting it in the blanket would increase the geometrical efficiency by 10^4 and the neutron output of the target could be raised by a factor of 10. This detector would allow the spectrum to be measured at much lower energies, since almost all of the gamma rays it would see would be from the blanket itself. Possibly, a solid-state detector will be developed which will fulfill these requirements.

Important work that needs to be done includes determination of cross sections for many of the reactions that take place in the blanket over much of the 0-14 Mev range. Also needed are the emission spectra of neutrons and gamma rays from the excited nuclei that occur in the blanket. Studies of the radiation damage to blanket materials would also be valuable.

APPENDIX A

Calculations

A.1 SAMPLE CALCULATION

The following sample calculation is done for an all-graphite blanket with no first wall at a depth of 2.25 inches. The numbers are for channel 50 in the measurement of the low-energy spectrum.

Counts in Channel/Live Time of Analyzer

neutron counts/(true time of count x neutron normalization factor
= normalized count rate (for both with and without blankets)

normalized count rate with blanket

$$= \frac{36014/10}{489791/(12.102 \times 1.286)} = 0.1143$$

normalized count rate without blanket

$$= \frac{25970/10}{488153/(11.920 \times 1.00)} = 0.0633$$

normalized gamma-ray count rate from blanket = 0.05102

This is the stage in the processing when the data given in Appendix C are presented. The data for the high-energy and the low-energy spectra are then joined, and the combined spectrum is smoothed by using the formula

$$y(I) = \frac{1}{429} \sum_{J=-5}^{5} ((89-5J^2) f(I+J)),$$

where y(I) is the smoothed value, and the f(R) are the unsmoothed values. The first and last five points are smoothed by using somewhat different formulas. These formulas are for a third-degree polynomial fitting eleven points. The f(J), J = -5 to +5 are given below.

f(-5) = .05802	f(5) = .04751	f(0) = .05102
f(-4) = .05725	f(4) = .04717	
f(-3) = .05600	f(3) = .05059	
f(-2) = .05455	f(2) = .04928	
f(-1) = .05323	f(1) = .04983	
	y(0) = .0518	

After smoothing a second time with the same formulas, y(0) = 0.05197, where y(0) is the value in channel 50. The spectrum is now renormalized to 1 neutron per square centimeter per second incident on the first wall. Using the normalization of the neutron counter of 90,000 counts per minute yields a source output of 10^{10} neutrons per second

which in turn equals an average flux on the first wall of 2.77×10^6; the spectrum was multiplied by $90,000/2.77 \times 10^6 \times 60 = 5.42 \times 10^{-4}$. The spectrum was then divided by the collimator transmission as a function of gamma-ray energy, the sodium iodide crystal efficiency as a function of energy, and the crystal photofraction as a function of energy. The actual correction for these factors was made by fitting the inverse product of the factors at discrete energies to a polynomial and using the polynomial to compute factors by which the spectrum was multiplied. This was all done on the computer so that the exact numbers used cannot be given here. These factors would have the following approximate values for 1.0 Mev (approximately channel 50).

$$\text{collimator transmission} = 8.64 \times 10^{-5}$$

$$\text{photofraction} = 0.378 \quad (11)$$

$$\text{efficiency} = 0.796 \quad (1)$$

$$1/\text{product} = 38,500$$

Channel 50 really corresponds to an energy of 0.989 Mev (calculated). When the smoothed value has been multiplied by the factors above and scaled by this energy, the resulting value is

$$S = 0.9466 \text{ Mev/cm}^2\text{/sec/neutron/cm}^2\text{/sec.}$$

APPENDIX B

Computer Programs

B. 1 INTRODUCTION TO THE DATA PROCESSING PROGRAMS

The data from this experiment were processed by a series of three computer programs. The first program, DATA, took the raw data as it came from the analyzer, corrected it for overflows of the analyzer memory, normalized it, subtracted the background, and also computed standard deviations. The output of this program consisted of a printed table containing the channel number, the normalized counts in that channel, and the normalized standard deviation for that channel. The normalized counts and plus and minus a standard deviation were then plotted in graphical form. Finally, the normalized counts were punched out so they could be used as input to the next program. DATA would also read in a series of energies and corresponding channel numbers, fit these data to a straight line, and print out the analyzer base line, the energy width per channel, and the energy corresponding to the last channel.

The second program, JOIN, took the output from DATA, joined the high-energy part to the low-energy part, and smoothed the data. The output of JOIN consisted of the smoothed data punched out on cards and plotted in a graph.

The final program, SCOPE, reads in the smoothed data, corrects the data for the sodium iodide crystal efficiency, photofraction, collimator transmission function, and scales the data by energy, all by means of a polynomial that is read in. The corrected data are then plotted on the scope in the form of the graphs that appeared in Section III.

These programs were written in FAP for the IBM 7094 computer by using the input-output routines of the Computation Center, M. I. T., during the summer and fall of 1964. These programs are not compatible with IBM 709/7090 computers, and may not be compatible with the input-output routines in use at other installations.

B. 2 INPUT FOR DATA PROGRAM

The first card for the DATA program is read in under Fortran format (3A6, 2I3). Columns 1-18 give the dates on which the data were taken. Columns 19-21 contain the number of sets of data, and columns 22-24 contain the number of channels contained in each set of data.

A set of data is read in. The first card of each set is read in under Fortran format (3I4). Columns 1-4 give the identification number of the set, columns 5-8 contain a code word for the energy-fitting subroutines, and columns 9-12 give a number that is negative if the set to be read in is to be used as a background, and is positive otherwise.

If the code word in columns 5-8 is negative, the energy-fitting routines are called, and the magnitude of the code word is printed out as the number of sets of data to which the energy fit, which is calculated, applies. If the word is positive, the energy-fitting

routines are not called, and the raw data are read in next.

If the code word was negative, the next card gives the number of points which will be used to determine the fit. The format for this card is (I3). If N points are specified by this card, then the next N cards read in would give the following information in Fortran format (2F10.5): columns 1-10 would contain an energy in Mev, and columns 11-20 would contain the channel corresponding to this energy.

The raw data are now read in under Fortran format (8F10.5) starting with channel 1. The number of cards read in here is the number of channels specified previously divided by 8. Any remainder means an additional card is read.

The next cards are read in under Fortran format (26I3). Columns 1-3 of the first card specify the number of overflows which are to be corrected. If there are none, a blank card must be inserted here. An overflow is corrected by adding 65536 to the specified channel and all lower channels. If N overflows are specified, the next 3 N columns of this card (through column 78) and subsequent cards, if necessary, give the channel numbers in which the overflows occur.

Columns 1-3 of the next card after the overflow cards specify the number of peak overflows which are to be corrected. Again, if there are none, a blank card must be inserted. A peak overflow is corrected by adding 65536 to the specified channel only. The channels are given in the remaining columns of this card, and in subsequent cards if necessary.

The next card is read in under Fortran format (4F10.5). Columns 1-10 of this card contain the live time of the analyzer during the run. Columns 11-20 contain the actual time of the run, columns 21-30 contain the number of neutrons during the run, and columns 31-40 contain a normalization factor to correct the neutrons to the same source output. The data are normalized by multiplying them by the actual time and the normalization factor, and dividing by the live time and the number of neutrons.

If the background code word were negative, so that this set of data was interpreted as a background, the program now returns to read in the next set of data. If the code word were positive, meaning these data were not background, the next card is read in under format (12A6). This card is used as a heading both for the punched output and for the plot of the data. DATA now recycles to read in the next set of data, or exits from the machine if it is all through.

DATA subtracts the latest background from the set of data which is being processed (unless this set is a new background). For this reason, the data should be read in in the following order: a background, followed by the runs for which it is applicable, a new background, followed by its runs, etc. The data are punched out according to the format (8E10.4).

B.3 INPUT DATA FOR JOIN PROGRAM

The first card for the JOIN program is read in under format (3I5). Columns 1-5 give the number of sets of joined data which will be processed, columns 6-10 contain

the number of channels in each unjoined set of data, and columns 11-15 contain a control word that determines whether the results are punched out on cards or not. If columns 11-15 contain only blanks and zeros (with possibly a sign), the output will be punched according to the format (8E10.4). If these columns contain any number other than zero, the output will not be punched.

For each set of joined data, the input cards are read in in the following order. The first card contains a heading in format (13A6). The next card is read in under the format (6I5,012). Columns 1-5 contain the last channel of the low-energy spectrum which will not be replaced by the data from the high-energy spectrum. Columns 6-10 contain the first channel of the high-energy spectrum which will be used to replace the low-energy spectrum in the joined spectrum. Columns 11-15 contain the first channel of the joined spectrum that the plotting routine will look at in hunting for its normalization factor. This number is included to keep the graph from being normalized to a meaningless number which might occur in the first few channels. Columns 16-20 contain the power of the polynomial that will be used to smooth the joined data. The largest power that this program will accept is 7.

If (2*M+1) is the number of points used in the smoothing formula, columns 21-25 contain M. The maximum allowable value of M is 10. Columns 26-30 contain the number of times the data are to be smoothed by using the preceding smoothing formulas. Columns 31-42 contain an octal number controlling the graph of the smoothed data.

The columns have the following significance in this number. Column 31 should be a 1. This tells the graph routine to save all seven index registers. Columns 32-34 should contain the factor (in octal) by which the graph is to be scaled every N channels, where N is given (in octal) in columns 35-37. Scaling actually starts after N+1 channels, and a new scaling factor is determined every N channels thereafter. For example, if columns 32-34 contained 012 (octal for decimal 10) and columns 35-37 contained 062 (octal for decimal 50), the graph would be scaled by a factor of 10 starting with channel 52, by a factor of 100 starting with channel 102, and so on. If no scaling is desirable, these columns may be left blank, and column 40 should be zero.

Columns 38-39 may be any legitimate octal number, as they are not interpreted by the graphing routine. If scaling as described above is desirable, column 40 should contain a 1. If it is not desired, column 40 should contain a zero. Column 41 should be a 3. This tells the graph routine to print out the graph and that the data are not stored as in Fortran. Column 42 should be either a 1 or a 5. A 5 will cause all numbers that are less than 1% of the normalization factor to be scaled by 100. If they are still less than 1%, they will be scaled by 100 again. If either of these two scalings makes the number larger than 1% of the normalization factor, it will be plotted along with an appropriate tag indicating the amount of the scaling. If it is still less than 1%, that channel will be left blank, and no tag will be given. A 1 in column 42 means all numbers less than 1% will cause that channel to be left blank.

The next group of cards are the data for the low-energy spectrum. These cards are

read in under format (8E10.4). After these cards, the cards representing the high-energy spectrum are read in under the same format. The program then processes these data and returns to read in the next set, or exits if all the sets have been read in.

B.5 INPUT FOR THE SCOPE PROGRAM

The first card for the SCOPE program is read in under format (2I3, A6). Columns 1-3 contain the number of sets of data to be plotted, columns 4-6 contain the number of polynomial coefficients to be read in, and columns 7-12 contain an identification word. (At the Computation Center, M.I.T., this is the problem number under which the program is being run.) This word is plotted on the scope as the first film frame. Therefore, the number of film frames used is one more than the number of data plots.

The next card, or two cards, contains the polynomial coefficients (maximum number of 10) for a polynomial, which was fitted to the inverse of the product of the crystal efficiency, photofraction, and collimator transmission factor. The coefficients are read in in terms of ascending powers of E, starting with the zeroth power, or constant, term. If the data are to be plotted directly, only a constant coefficient of 1 should be read in.

The next card is read in under format (I3, 012, 2F5.3), and is the first card for each set of data. Columns 1-3 give the number of channels of data. Columns 4-15 contain an octal code word to be discussed later. Columns 16-20 contain the base line of the plot in Mev. Columns 21-25 contain the energy width per channel in Mev.

The octal code word should be of the following form. Column 4 should contain a 4 if scaling of the plot is desired at a certain channel N. If scaling every N channels is desired, column 4 should be zero. Columns 5-9 give the channel number N (in octal). If no scaling is desired, this number should be larger than the number of channels to be plotted. Column 10 should be zero. Columns 11-15 contain the scaling factor in octal. All scaling is done by integers (no fractional scaling). If column 4 is a 4, all channels after channel N will be scaled by the factor in columns 11-15. If column 4 is zero, all channels between N and 2 N will be scaled by the factor, all channels between 2N and 3N will be scaled by the factor squared, and so on.

The next card in each set of data is the heading card read in under format (10A6). On this card columns 1-6 contain the figure number, left adjusted. Columns 7-12 contain blanks. Columns 13-36 contain the blanket identification. Columns 37-48 contain the thickness of the first wall with the units, and columns 49-60 contain the depth of the measurements in the blanket with the units. All items above are left adjusted in their fields.

The next group of cards contains the data, read in under format (8E10.4). The program then plots the data and headings on the scope and returns for the next set.

APPENDIX C

Data Tabulation

EXPLANATION OF ABBREVIATIONS

67 S 33 C BLAN=67 MOLE PER CENT SALT 33 MOLE PER CENT GRAPHITE BLANKET

GRAPHITE BLAN =ALL GRAPHITE BLANKET

SALT BLAN =ALL SALT BLANKET

MOLY WALL =THICKNESS OF MOLYBDENUM FIRST WALL, INCHES

DIB =DEPTH IN BLANKET FROM SURFACE, INCHES

EO =APPROXIMATE BASELINE ENERGY OF DATA, MEV

DATA REPRESENTS A RANGE OF ABOUT 5 MEV

THE DATA READS LEFT TO RIGHT ON A LINE

FROM TOP LINE TO BOTTOM LINE

GRAPHITE BLAN MOLY WALL NONE DIB 2.25 INCHES EO=0 MEV

.4825E-01	.4881E-01	.4827E-01	.4974E-01	.4749E-01	.2929E-01	.2316E-01	.2372E-01
.9543E-01	.6438E-01	.3393E-01	.5728E-01	.6172E-01	.6586E-01	.5782E-01	.5771E-01
.5642E-01	.5139E-01	.5096E-01	.5656E-01	.5648E-01	.5255E-01	.5238E-01	.5746E-01
.6246E-01	.6853E-01	.7538E-01	.6962E-01	.6713E-01	.6295E-01	.6312E-01	.5905E-01
.5899E-01	.6084E-01	.6224E-01	.5918E-01	.5881E-01	.5789E-01	.5915E-01	.5753E-01
.5946E-01	.5721E-01	.5582E-01	.5593E-01	.5802E-01	.5725E-01	.5611E-01	.5455E-01
.5323E-01	.5102E-01	.4983E-01	.4928E-01	.5059E-01	.4717E-01	.4750E-01	.4681E-01
.4556E-01	.4375E-01	.3721E-01	.4215E-01	.4105E-01	.4013E-01	.3946E-01	.3884E-01
.3678E-01	.3646E-01	.3358E-01	.3388E-01	.3242E-01	.3270E-01	.3094E-01	.3013E-01
.2854E-01	.2729E-01	.2640E-01	.2539E-01	.2428E-01	.2294E-01	.2264E-01	.2145E-01
.1967E-01	.1862E-01	.1810E-01	.1636E-01	.1487E-01	.1410E-01	.1349E-01	.1320E-01
.1366E-01	.1257E-01	.1190E-01	.1113E-01	.1040E-01	.9262E-02	.8696E-02	.8748E-02
.7149E-02	.7362E-02	.6494E-02	.6549E-02	.6174E-02	.4203E-02	.3951E-02	.4359E-02
.3803E-02	.2785E-02	.2593E-02	.1970E-02	.1485E-02	.2439E-02	.3251E-02	.3392E-02
.4302E-02	.4840E-02	.5466E-02	.4800E-02	.4080E-02	.4292E-02	.4013E-02	.3774E-02
.2813E-02	.3071E-02	.2099E-02	.2573E-02	.2619E-02	.2580E-02	.2059E-02	.1967E-02
.1934E-02	.1979E-02	.2342E-02	.2548E-02	.4826E-02	.3342E-02	.2889E-02	.2962E-02
.2805E-02	.2550E-02	.2599E-02	.2791E-02	.2409E-02	.2446E-02	.2054E-02	.2202E-02
.2001E-02	.1736E-02	.1896E-02	.189 E-02	.1887E-02	.2384E-02	.2450E-02	.2101E-02
.2235E-02	.1998E-02	.2452E-02	.2335E-02	.2199E-02	.1985E-02	.2127E-02	.2017E-02
.2680E-02	.2225E-02	.2458E-02	.1857E-02	.1839E-02	.2277E-02	.2106E-02	.2216E-02
.2469E-02	.1989E-02	.2778E-02	.2652E-02	.2547E-02	.3020E-02	.2769E-02	.3180E-02
.3136E-02	.2931E-02	.2731E-02	.2892E-02	.2689E-02	.2193E-02	.2688E-02	.2625E-02
.2702E-02	.2417E-02	.2218E-02	.2345E-02	.2151E-02	.2440E-02	.2120E-02	.1811E-02
.2394E-02	.1973E-02	.2108E-02	.2371E-02	.2152E-02	.2139E-02	.3026E-02	.2700E-02
.2749E-02	.3087E-02	.3168E-02	.3116E-02	.2794E-02	.2502E-02	.2572E-02	.2784E-02
.2765E-02	.2282E-02	.1987E-02	.2119E-02	.2314E-02	.1869E-02	.1542E-02	.1112E-02
.1274E-02	.1257E-02	.1289E-02	.1503E-02	.1684E-02	.1598E-02	.8798E-03	.1739E-02
.1795E-02	.1539E-02	.1939E-02	.2202E-02	.2172E-02	.1738E-02	.1570E-02	.1657E-02
.1494E-02	.1419E-02	.1275E-02	.7682E-03	.1023E-02	.5209E-03	.7901E-03	.4809E-03
.5239E-03	.8380E-03	.7154E-03	.4809E-03	.6186E-03	.2955E-03	.4223E-03	.2182E-03
.2693E-03	.4241E-03	.4299E-04	.5775E-03	.5278E-03	.4772E-03	.5427E-03	.6996E-03

GRAPHITE BLAN MOLY WALL NONE DIB 2.25 INCHES EO=2.5 MEV

.3294E-06	-.2752E-06	.4158E-06	.2211E-05	-.1698E-02	.3950E-02	.3644E-02	.3206E-02
.3266E-02	.3619E-02	.3378E-02	.2926E-02	.3089E-02	.2963E-02	.2869E-02	.2853E-02
.2672E-02	.2663E-02	.2720E-02	.2585E-02	.2517E-02	.2384E-02	.2520E-02	.2549E-02
.2479E-02	.2432E-02	.2465E-02	.2389E-02	.2521E-02	.2402E-02	.2383E-02	.2392E-02
.2357E-02	.2467E-02	.2428E-02	.2452E-02	.2285E-02	.2403E-02	.2441E-02	.2472E-02
.2468E-02	.2473E-02	.2656E-02	.2736E-02	.2850E-02	.2849E-02	.3042E-02	.3026E-02
.3072E-02	.3073E-02	.2952E-02	.3138E-02	.2837E-02	.2756E-02	.2754E-02	.2584E-02
.2609E-02	.2590E-02	.2541E-02	.2429E-02	.2531E-02	.2334E-02	.2386E-02	.2381E-02
.2311E-02	.2414E-02	.2180E-02	.2359E-02	.2445E-02	.2519E-02	.2670E-02	.2530E-02
.2688E-02	.2778E-02	.2858E-02	.2803E-02	.2908E-02	.2970E-02	.2705E-02	.2534E-02
.2575E-02	.2313E-02	.2245E-02	.2069E-02	.2046E-02	.1818E-02	.1698E-02	.1694E-02
.1692E-02	.1364E-02	.1453E-02	.1370E-02	.1433E-02	.1417E-02	.1425E-02	.1581E-02
.1695E-02	.1504E-02	.1812E-02	.1710E-02	.1878E-02	.1738E-02	.1791E-02	.1622E-02
.1626E-02	.1333E-02	.1261E-02	.1113E-02	.9242E-03	.8525E-03	.7753E-03	.8186E-03
.6487E-03	.7162E-03	.6876E-03	.6443E-03	.5611E-03	.5485E-03	.5842E-03	.5204E-03
.5504E-03	.5151E-03	.5788E-03	.5456E-03	.5289E-03	.5236E-03	.4700E-03	.3483E-03
.5389E-03	.4703E-03	.6129E-03	.5931E-03	.5592E-03	.5584E-03	.6194E-03	.5023E-03
.5363E-03	.5021E-03	.5679E-03	.5206E-03	.5820E-03	.5405E-03	.4765E-03	.5483E-03
.4814E-03	.3812E-03	.3659E-03	.4075E-03	.3785E-03	.3912E-03	.3663E-03	.4726E-03
.4459E-03	.4695E-03	.4526E-03	.5074E-03	.4497E-03	.4735E-03	.4591E-03	.4351E-03
.4304E-03	.4666E-03	.4541E-03	.4459E-03	.4524E-03	.4215E-03	.4839E-03	.4817E-03
.4885E-03	.4293E-03	.4331E-03	.4424E-03	.4179E-03	.4080E-03	.3863E-03	.3534E-03
.4290E-03	.4046E-03	.4473E-03	.3409E-03	.3304E-03	.3263E-03	.3769E-03	.3737E-03
.2969E-03	.2785E-03	.2950E-03	.2167E-03	.2751E-03	.3210E-03	.4120E-03	.3263E-03
.4090E-03	.4667E-03	.4771E-03	.4182E-03	.3793E-03	.4675E-03	.3492E-03	.4237E-03
.4233E-03	.3497E-03	.3218E-03	.3110E-03	.2886E-03	.3120E-03	.2771E-03	.3011E-03
.2468E-03	.2002E-03	.2596E-03	.1868E-03	.2327E-03	.2278E-03	.2557E-03	.2671E-03
.3227E-03	.3197E-03	.3427E-03	.3742E-03	.3303E-03	.3515E-03	.3587E-03	.3435E-03
.3323E-03	.3179E-03	.2849E-03	.2475E-03	.2348E-03	.1886E-03	.1811E-03	.1998E-03
.2208E-03	.1595E-03	.1463E-03	.1291E-03	.1777E-03	.1482E-03	.1460E-03	.1250E-03
.1394E-03	.1926E-03	.1239E-03	.1630E-03	.1349E-03	.1309E-03	.9546E-04	.1086E-03
.1140E-03	.6832E-04	.5501E-04	.8643E-04	.8936E-04	.5344E-04	.6457E-04	.5373E-04

GRAPHITE BLAN MOLY WALL NONE DIB 4.25 INCHES EO=0 MEV

.3321E-01	.3345E-01	.3323E-01	.3381E-01	.5793E-01	.1249E 00	.7819E-01	.6838E-01
.8194E-01	.6339E-01	.6300E-01	.5841E-01	.6038E-01	.5704E-01	.5331E-01	.5324E-01
.5239E-01	.5039E-01	.5257E-01	.5534E-01	.5362E-01	.5242E-01	.5567E-01	.5906E-01
.5984E-01	.5988E-01	.5870E-01	.5517E-01	.5268E-01	.5044E-01	.4924E-01	.4857E-01
.4747E-01	.4850E-01	.4956E-01	.4753E-01	.4550E-01	.4611E-01	.4638E-01	.4504E-01
.4626E-01	.4482E-01	.4342E-01	.4386E-01	.4371E-01	.4304E-01	.4102E-01	.4066E-01
.4050E-01	.3869E-01	.3926E-01	.3799E-01	.3784E-01	.3587E-01	.3683E-01	.3510E-01
.3485E-01	.3169E-01	.3203E-01	.3313E-01	.3099E-01	.3147E-01	.2851E-01	.2943E-01
.2794E-01	.2527E-01	.2577E-01	.2476E-01	.2609E-01	.2288E-01	.2315E-01	.2195E-01
.2198E-01	.2131E-01	.1898E-01	.1941E-01	.1859E-01	.1760E-01	.1780E-01	.1698E-01
.1499E-01	.1457E-01	.1445E-01	.1404E-01	.1251E-01	.1150E-01	.1226E-01	.1141E-01
.1062E-01	.1062E-01	.1031E-01	.8978E-02	.8671E-02	.7796E-02	.7251E-02	.7455E-02
.6256E-02	.7019E-02	.6647E-02	.6128E-02	.5640E-02	.5709E-02	.4755E-02	.4214E-02
.4874E-02	.4237E-02	.3177E-02	.4607E-02	.4358E-02	.4175E-02	.5031E-02	.5651E-02
.4952E-02	.4793E-02	.4487E-02	.4519E-02	.4114E-02	.3616E-02	.3646E-02	.3230E-02
.3961E-02	.3290E-02	.3737E-02	.2966E-02	.4096E-02	.3182E-02	.3494E-02	.3253E-02
.3393E-02	.4519E-02	.3268E-02	.3181E-02	.2887E-02	.3616E-02	.4123E-02	.3713E-02
.3724E-02	.3477E-02	.3453E-02	.3695E-02	.3701E-02	.3621E-02	.2651E-02	.3185E-02
.3002E-02	.3674E-02	.2626E-02	.3267E-02	.2695E-02	.3333E-02	.3060E-02	.2834E-02
.2708E-02	.3254E-02	.3080E-02	.3394E-02	.2689E-02	.3120E-02	.3181E-02	.2855E-02
.3052E-02	.3006E-02	.3013E-02	.3734E-02	.3191E-02	.3423E-02	.3540E-02	.3567E-02
.3685E-02	.3783E-02	.3 73E-02	.3713E-02	.3732E-02	.3794E-02	.4082E-02	.3600E-02
.3404E-02	.3428E-02	.3433E-02	.3180E-02	.3025E-02	.3251E-02	.3382E-02	.3011E-02
.2991E-02	.3213E-02	.3 32E-02	.2830E-02	.3164E-02	.3383E-02	.3351E-02	.3156E-02
.3209E-02	.3721E-02	.3120E-02	.3283E-02	.3433E-02	.3498E-02	.3497E-02	.3232E-02
.3519E-02	.3535E-02	.3234E-02	.3327E-02	.2893E-02	.3055E-02	.2937E-02	.2360E-02
.2418E-02	.2151E-02	.2117E-02	.2087E-02	.2741E-02	.2279E-02	.2066E-02	.1765E-02
.1909E-02	.1845E-02	.1821E-02	.1713E-02	.2242E-02	.2416E-02	.2322E-02	.2018E-02
.2367E-02	.1934E-02	.2124E-02	.2263E-02	.1762E-02	.1683E-02	.1002E-02	.1677E-02
.1177E-02	.1202E-02	.7486E-03	.1086E-02	.9746E-03	.7784E-03	.1092E-02	.6833E-03
.8258E-03	.1099E-02	.6587E-03	.8619E-03	.1191E-02	.8549E-03	.5489E-03	.7825E-03
.8250E-03	.8369E-03	.1007E-02	.8256E-03	.1028E-02	.9011E-03	.6954E-03	.1011E-02

GRAPHITE BLAN MOLY WALL NONE DIB 4.25 INCHES EO=2.5 MEV

-.4568E-06-.3662E-06 .6 81E-06 .3919E-05 .4956E-03 .5412E-02 .4691E-02 .4293E-02
.4368E-02 .3793E-02 .3898E-02 .3810E-02 .3425E-02 .3648E-02 .3447E-02 .3389E-02
.3421E-02 .3367E-02 .3281E-02 .3323E-02 .3376E-02 .3251E-02 .3171E-02 .3059E-02
.3274E-02 .3354E-02 .3098E-02 .3229E-02 .3006E-02 .3117E-02 .3052E-02 .3016E-02
.2837E-02 .2950E-02 .2979E-02 .3111E-02 .3006E-02 .3050E-02 .3191E-02 .3366E-02
.3428E-02 .3633E-02 .3592E-02 .3579E-02 .3792E-02 .3875E-02 .3600E-02 .3831E-02
.3760E-02 .3526E-02 .3407E-02 .3409E-02 .3255E-02 .3224E-02 .3229E-02 .3078E-02
.3143E-02 .2905E-02 .2995E-02 .3046E-02 .2962E-02 .2932E-02 .3044E-02 .3130E-02
.3038E-02 .3059E-02 .3022E-02 .3216E-02 .3192E-02 .3497E-02 .3552E-02 .3698E-02
.3444E-02 .3486E-02 .3347E-02 .3077E-02 .3018E-02 .2936E-02 .2874E-02 .2517E-02
.2793E-02 .2381E-02 .2 58E-02 .2056E-02 .2018E-02 .1904E-02 .1912E-02 .1843E-02
.1816E-02 .1867E-02 .1696E-02 .1926E-02 .2106E-02 .2102E-02 .2141E-02 .2414E-02
.2179E-02 .2084E-02 .2159E-02 .2199E-02 .1871E-02 .1734E-02 .1635E-02 .1386E-02
.1364E-02 .1009E-02 .1121E-02 .9773E-03 .8372E-03 .8120E-03 .7172E-03 .9407E-03
.9349E-03 .7906E-03 .8527E-03 .7923E-03 .7979E-03 .9117E-03 .7502E-03 .7113E-03
.7184E-03 .6102E-03 .6906E-03 .7180E-03 .7287E-03 .7791E-03 .7144E-03 .7340E-03
.7203E-03 .8877E-03 .8 20E-03 .7516E-03 .8261E-03 .5970E-03 .7761E-03 .5870E-03
.6360E-03 .6628E-03 .6056E-03 .5638E-03 .5892E-03 .5797E-03 .6275E-03 .6206E-03
.6129E-03 .5539E-03 .6125E-03 .6109E-03 .5007E-03 .5256E-03 .5120E-03 .5251E-03
.6108E-03 .5963E-03 .5916E-03 .5510E-03 .5397E-03 .5539E-03 .5892E-03 .5261E-03
.5982E-03 .4618E-03 .5807E-03 .5107E-03 .5351E-03 .4295E-03 .4933E-03 .4101E-03
.4693E-03 .4855E-03 .5361E-03 .5770E-03 .4888E-03 .3909E-03 .4107E-03 .3934E-03
.4488E-03 .4936E-03 .3564E-03 .4415E-03 .3031E-03 .3409E-03 .4151E-03 .2979E-03
.3683E-03 .4029E-03 .3369E-03 .3500E-03 .4069E-03 .2747E-03 .3908E-03 .4302E-03
.4257E-03 .4057E-03 .3652E-03 .4294E-03 .3295E-03 .3094E-03 .2767E-03 .4337E-03
.3173E-03 .2459E-03 .1903E-03 .2840E-03 .2033E-03 .2090E-03 .2149E-03 .1430E-03
.1802E-03 .1604E-03 .2594E-03 .2393E-03 .2045E-03 .2186E-03 .2320E-03 .2376E-03
.2549E-03 .2383E-03 .2322E-03 .2674E-03 .2228E-03 .1813E-03 .1599E-03 .1725E-03
.9916E-04 .9983E-04 .1170E-03 .1177E-03 .8684E-04 .1040E-03 .6955E-04 .1034E-03
.1324E-03 .1364E-03 .1698E-03 .1299E-03 .1694E-03 .1085E-03 .1387E-03 .1087E-03
.7355E-04 .1003E-03 .8 63E-04 .7580E-04 .5639E-04 .7300E-04 .2895E-04 .5905E-04
.5606E-04 .7049E-04 .4385E-04 .3821E-04 .2682E-04 .3010E-04 .3359E-04 .2774E-04

GRAPHITE BLAN MOLY WALL NONE DIB 6.25 INCHES EO=0 MEV

.1365E 00	.1371E 00	.1364E 00	.1386E 00	.3998E-01	.2000E 00	.1436E 00	.6877E-01
.6772E-01	.4133E-01	.3963E-01	.3869E-01	.4501E-01	.4367E-01	.3749E-01	.3873E-01
.3676E-01	.2993E-01	.3272E-01	.3667E-01	.3586E-01	.3125E-01	.3467E-01	.3900E-01
.4501E-01	.4766E-01	.4956E-01	.4430E-01	.4302E-01	.4040E-01	.3942E-01	.3737E-01
.3902E-01	.3805E-01	.3806E-01	.3790E-01	.4076E-01	.3597E-01	.3678E-01	.3654E-01
.3586E-01	.3630E-01	.3516E-01	.3581E-01	.3607E-01	.3589E-01	.3445E-01	.3348E-01
.3305E-01	.3162E-01	.3165E-01	.3180E-01	.3116E-01	.2979E-01	.3030E-01	.2936E-01
.2796E-01	.2833E-01	.2713E-01	.2714E-01	.2540E-01	.2489E-01	.2375E-01	.2413E-01
.2397E-01	.2224E-01	.2148E-01	.2136E-01	.2076E-01	.1968E-01	.1906E-01	.1855E-01
.1740E-01	.1701E-01	.1477E-01	.1506E-01	.1556E-01	.1399E-01	.1392E-01	.1290E-01
.1253E-01	.1185E-01	.1026E-01	.1080E-01	.9700E-02	.8872E-02	.8952E-02	.8624E-02
.8536E-02	.7771E-02	.7208E-02	.6569E-02	.5708E-02	.6509E-02	.5450E-02	.5169E-02
.5143E-02	.4652E-02	.4242E-02	.4002E-02	.3652E-02	.3005E-02	.2914E-02	.3192E-02
.2003E-02	.1996E-02	.1678E-02	.1787E-02	.2569E-02	.3027E-02	.3419E-02	.4148E-02
.4152E-02	.4055E-02	.4086E-02	.3814E-02	.3117E-02	.2449E-02	.2688E-02	.2509E-02
.1861E-02	.2664E-02	.2352E-02	.1818E-02	.2020E-02	.1923E-02	.1997E-02	.1664E-02
.2263E-02	.1960E-02	.2846E-02	.2515E-02	.2511E-02	.2664E-02	.2920E-02	.2404E-02
.2287E-02	.1925E-02	.2109E-02	.1941E-02	.2252E-02	.2258E-02	.1644E-02	.2613E-02
.2248E-02	.2060E-02	.1969E-02	.2382E-02	.2015E-02	.1884E-02	.2219E-02	.2040E-02
.2365E-02	.2273E-02	.2017E-02	.1879E-02	.2070E-02	.2297E-02	.2092E-02	.2122E-02
.2368E-02	.2173E-02	.2 76E-02	.2789E-02	.2215E-02	.2491E-02	.2714E-02	.2893E-02
.3194E-02	.2808E-02	.3087E-02	.2996E-02	.3042E-02	.3214E-02	.2745E-02	.2571E-02
.2892E-02	.2900E-02	.2340E-02	.2762E-02	.2603E-02	.2719E-02	.2833E-02	.2092E-02
.2327E-02	.2443E-02	.2 99E-02	.2546E-02	.2625E-02	.2445E-02	.2464E-02	.2324E-02
.2633E-02	.2524E-02	.3047E-02	.2550E-02	.2948E-02	.3266E-02	.2910E-02	.3132E-02
.3046E-02	.2485E-02	.2545E-02	.2780E-02	.2423E-02	.1964E-02	.1819E-02	.1873E-02
.1478E-02	.1619E-02	.1714E-02	.1570E-02	.1485E-02	.1044E-02	.1429E-02	.7625E-03
.1449E-02	.1461E-02	.1672E-02	.1576E-02	.2119E-02	.1769E-02	.1909E-02	.1766E-02
.2060E-02	.1296E-02	.1514E-02	.1255E-02	.1067E-02	.7489E-03	.7028E-03	.9242E-03
.6282E-03	.4145E-03	.5380E-03	.5693E-03	.5209E-03	.5669E-03	.3312E-03	.2682E-03
.4'90E-03	.5307E-03	.5180E-03	.3070E-03	.5631E-03	.6911E-03	.3786E-03	.4584E-03
.3333E-03	.4053E-03	.6072E-03	.3048E-03	.4115E-03	.3583E-03	.5397E-03	.5228E-03

GRAPHITE BLAN MOLY WALL NONE DIB 6.25 INCHES EO=2.5 MEV

.4629E-06 .4448E-06 .0000E 00 .7691E-05 .6158E-03 .4163E-02 .4031E-02 .3633E-02
.3644E-02 .3515E-02 .3487E-02 .3170E-02 .3039E-02 .2924E-02 .2878E-02 .2923E-02
.2768E-02 .2710E-02 .2657E-02 .2744E-02 .2620E-02 .2562E-02 .2631E-02 .2606E-02
.2'92E-02 .2625E-02 .2563E-02 .2604E-02 .2640E-02 .2430E-02 .2601E-02 .2626E-02
.2518E-02 .2643E-02 .2594E-02 .2560E-02 .2793E-02 .2671E-02 .2752E-02 .2787E-02
.2994E-02 .3215E-02 .3206E-02 .3347E-02 .3432E-02 .3326E-02 .3378E-02 .3466E-02
.3448E-02 .3280E-02 .3135E-02 .3055E-02 .3100E-02 .2880E-02 .3006E-02 .2819E-02
.2703E-02 .2753E-02 .2875E-02 .2624E-02 .2804E-02 .2614E-02 .2626E-02 .2678E-02
.2686E-02 .2805E-02 .2857E-02 .2901E-02 .3105E-02 .3060E-02 .3148E-02 .3349E-02
.3331E-02 .3273E-02 .3191E-02 .3136E-02 .2993E-02 .2754E-02 .2645E-02 .2547E-02
.2261E-02 .2105E-02 .1980E-02 .1890E-02 .1869E-02 .1809E-02 .1753E-02 .1620E-02
.1729E-02 .1555E-02 .1655E-02 .1563E-02 .1792E-02 .1854E-02 .1906E-02 .1987E-02
.2050E-02 .1919E-02 .1953E-02 .1866E-02 .1713E-02 .1606E-02 .1409E-02 .1163E-02
.1152E-02 .1021E-02 .8210E-03 .8059E-03 .6463E-03 .7002E-03 .6574E-03 .6799E-03
.5897E-03 .6336E-03 .6020E-03 .4777E-03 .5478E-03 .4631E-03 .4645E-03 .5072E-03
.5165E-03 .4948E-03 .5214E-03 .5027E-03 .5054E-03 .5091E-03 .5009E-03 .5398E-03
.5634E-03 .6240E-03 .5065E-03 .4829E-03 .4635E-03 .5573E-03 .5077E-03 .5464E-03
.4693E-03 .5410E-03 .5120E-03 .4359E-03 .3824E-03 .5016E-03 .5126E-03 .4609E-03
.4319E-03 .4374E-03 .4065E-03 .3654E-03 .4393E-03 .4578E-03 .4328E-03 .4097E-03
.4529E-03 .4127E-03 .3998E-03 .4668E-03 .4481E-03 .4213E-03 .4493E-03 .4689E-03
.5360E-03 .4246E-03 .4286E-03 .3938E-03 .4553E-03 .4089E-03 .4222E-03 .4629E-03
.4264E-03 .4114E-03 .4076E-03 .4163E-03 .3925E-03 .3720E-03 .2900E-03 .4277E-03
.3526E-03 .3148E-03 .3228E-03 .3343E-03 .2858E-03 .3458E-03 .2541E-03 .2673E-03
.3129E-03 .3351E-03 .3578E-03 .3660E-03 .3428E-03 .3737E-03 .3770E-03 .3831E-03
.4330E-03 .3901E-03 .3712E-03 .3738E-03 .3685E-03 .3233E-03 .3655E-03 .2763E-03
.2743E-03 .2901E-03 .3053E-03 .2503E-03 .2269E-03 .1583E-03 .1710E-03 .2046E-03
.1794E-03 .2350E-03 .1694E-03 .2403E-03 .2998E-03 .3052E-03 .3017E-03 .3082E-03
.3611E-03 .3552E-03 .3567E-03 .3011E-03 .2874E-03 .2654E-03 .2371E-03 .2133E-03
.2220E-03 .2111E-03 .1524E-03 .1779E-03 .1573E-03 .1517E-03 .1514E-03 .1493E-03
.1343E-03 .1552E-03 .1 46E-03 .1465E-03 .1512E-03 .1429E-03 .1471E-03 .1622E-03
.1537E-03 .1413E-03 .1245E-03 .1008E-03 .7238E-04 .8667E-04 .6922E-04 .7621E-04
.7559E-04 .6578E-04 .8042E-04 .4310E-04 .5582E-04 .2910E-04 .4426E-04 .3839E-04

GRAPHITE BLAN MOLY WALL NONE DIB 8.25 INCHES EO=0 MEV

.7725E-02	.8386E-02	.7669E-02	.9461E-02	.4049E-01	.5344E-01	.5502E-01	.5019E-01
.5055E-01	.4351E-01	.4431E-01	.4325E-01	.4541E-01	.4427E-01	.4352E-01	.4269E-01
.4217E-01	.4079E-01	.4179E-01	.4294E-01	.4416E-01	.4205E-01	.4449E-01	.4526E-01
.4810E-01	.4948E-01	.5203E-01	.4873E-01	.4805E-01	.4561E-01	.4506E-01	.4434E-01
.4442E-01	.4436E-01	.4439E-01	.4379E-01	.4360E-01	.4444E-01	.4240E-01	.4226E-01
.4258E-01	.4174E-01	.4251E-01	.4107E-01	.4200E-01	.4024E-01	.3997E-01	.3938E-01
.3821E-01	.3903E-01	.3635E-01	.3686E-01	.3673E-01	.3431E-01	.3530E-01	.3348E-01
.3356E-01	.3110E-01	.3078E-01	.3152E-01	.3020E-01	.2978E-01	.2830E-01	.2776E-01
.2732E-01	.2559E-01	.2511E-01	.2446E-01	.2412E-01	.2227E-01	.2140E-01	.2082E-01
.2064E-01	.1953E-01	.1893E-01	.1762E-01	.1674E-01	.1553E-01	.1596E-01	.1463E-01
.1387E-01	.1297E-01	.1269E-01	.1206E-01	.1084E-01	.1010E-01	.1084E-01	.9287E-02
.8348E-02	.9071E-02	.8280E-02	.7649E-02	.6809E-02	.6074E-02	.5523E-02	.5686E-02
.5240E-02	.4706E-02	.4114E-02	.3167E-02	.3798E-02	.3457E-02	.3242E-02	.2872E-02
.2535E-02	.2260E-02	.2504E-02	.2416E-02	.2237E-02	.2403E-02	.2641E-02	.2443E-02
.3540E-02	.3447E-02	.3285E-02	.3243E-02	.3137E-02	.3020E-02	.2104E-02	.2722E-02
.2294E-02	.2495E-02	.2170E-02	.1549E-02	.2337E-02	.2260E-02	.2145E-02	.1902E-02
.1552E-02	.2268E-02	.2251E-02	.2387E-02	.2272E-02	.2358E-02	.2311E-02	.2308E-02
.2296E-02	.1957E-02	.2281E-02	.1973E-02	.1861E-02	.1860E-02	.1990E-02	.1990E-02
.1881E-02	.1591E-02	.2046E-02	.2015E-02	.2403E-02	.1848E-02	.2060E-02	.2381E-02
.1783E-02	.1934E-02	.2005E-02	.2093E-02	.1851E-02	.2015E-02	.1689E-02	.1437E-02
.1874E-02	.1781E-02	.1998E-02	.1999E-02	.2160E-02	.2307E-02	.2153E-02	.2011E-02
.2657E-02	.2150E-02	.2774E-02	.2808E-02	.2952E-02	.2743E-02	.2676E-02	.2936E-02
.2409E-02	.2590E-02	.2648E-02	.2501E-02	.2431E-02	.2003E-02	.2342E-02	.2185E-02
.2208E-02	.2164E-02	.1913E-02	.1928E-02	.2018E-02	.2402E-02	.1973E-02	.2198E-02
.2302E-02	.2503E-02	.2237E-02	.2500E-02	.2261E-02	.2487E-02	.2659E-02	.2711E-02
.2605E-02	.2266E-02	.2318E-02	.2254E-02	.2313E-02	.1697E-02	.1850E-02	.1592E-02
.1413E-02	.1754E-02	.1649E-02	.1337E-02	.1470E-02	.1168E-02	.1197E-02	.9938E-03
.1178E-02	.1141E-02	.1410E-02	.1421E-02	.1319E-02	.1733E-02	.1770E-02	.1258E-02
.1318E-02	.1359E-02	.1146E-02	.1203E-02	.1016E-02	.8853E-03	.8834E-03	.6730E-03
.8974E-03	.5523E-03	.5923E-03	.5879E-03	.4060E-03	.5462E-03	.4238E-03	.4364E-03
.5956E-03	.3658E-03	.3987E-03	.4652E-03	.2756E-03	.3590E-03	.2507E-03	.4641E-03
.4233E-03	.4363E-03	.6406E-03	.5035E-03	.3315E-03	.3553E-03	.3512E-03	.1142E-03

GRAPHITE BLAN MOLY WALL NONE DIB 8.25 INCHES EO=2.5 MEV

.7794E-03	.7800E-03	.7803E-03	.7861E-03	.3039E-02	.5746E-02	.5116E-02	.4916E-02
.5031E-02	.4949E-02	.4593E-02	.4626E-02	.4270E-02	.4143E-02	.3952E-02	.4051E-02
.3783E-02	.3711E-02	.3708E-02	.3574E-02	.3611E-02	.3474E-02	.3448E-02	.3481E-02
.3467E-02	.3433E-02	.3376E-02	.3190E-02	.3276E-02	.3375E-02	.3402E-02	.3352E-02
.3222E-02	.3239E-02	.322 E-02	.3119E-02	.3102E-02	.3299E-02	.3393E-02	.3271E-02
.3550E-02	.3402E-02	.3718E-02	.3766E-02	.3759E-02	.3799E-02	.3945E-02	.3940E-02
.4117E-02	.3984E-02	.3859E-02	.3838E-02	.3881E-02	.3720E-02	.3637E-02	.3546E-02
.3552E-02	.3375E-02	.3470E-02	.3435E-02	.3258E-02	.3202E-02	.3308E-02	.3168E-02
.3145E-02	.3139E-02	.3211E-02	.3175E-02	.3299E-02	.3296E-02	.3326E-02	.3429E-02
.3594E-02	.3592E-02	.3719E-02	.3725E-02	.3593E-02	.3504E-02	.3395E-02	.3211E-02
.3136E-02	.3057E-02	.2945E-02	.2578E-02	.2585E-02	.2506E-02	.2347E-02	.2340E-02
.2137E-02	.2035E-02	.2106E-02	.1997E-02	.2046E-02	.2057E-02	.1992E-02	.2040E-02
.2131E-02	.2200E-02	.2185E-02	.2267E-02	.2300E-02	.2247E-02	.2216E-02	.2071E-02
.1930E-02	.1755E-02	.1610E-02	.1522E-02	.1401E-02	.1308E-02	.1221E-02	.1146E-02
.1170E-02	.1130E-02	.1073E-02	.9331E-03	.9453E-03	.9780E-03	.8857E-03	.9036E-03
.9040E-03	.9614E-03	.8916E-03	.8840E-03	.9046E-03	.8574E-03	.8415E-03	.9083E-03
.9100E-03	.9513E-03	.9004E-03	.9065E-03	.9253E-03	.9964E-03	.9365E-03	.9422E-03
.8716E-03	.9512E-03	.9404E-03	.8523E-03	.8213E-03	.8082E-03	.7884E-03	.8078E-03
.7860E-03	.7840E-03	.7384E-03	.6969E-03	.7510E-03	.7530E-03	.7662E-03	.7196E-03
.7103E-03	.7244E-03	.6428E-03	.7544E-03	.7445E-03	.7790E-03	.7001E-03	.7484E-03
.8087E-03	.7295E-03	.8220E-03	.7827E-03	.7946E-03	.7677E-03	.7675E-03	.7119E-03
.6796E-03	.6917E-03	.7 27E-03	.7137E-03	.6674E-03	.7314E-03	.6938E-03	.6409E-03
.6260E-03	.6543E-03	.6177E-03	.6473E-03	.5562E-03	.5878E-03	.6087E-03	.5305E-03
.5119E-03	.5066E-03	.5136E-03	.5295E-03	.5444E-03	.5075E-03	.5946E-03	.6005E-03
.5479E-03	.6193E-03	.7087E-03	.6192E-03	.6126E-03	.6509E-03	.6419E-03	.6321E-03
.5933E-03	.5237E-03	.5186E-03	.5105E-03	.4738E-03	.4476E-03	.4300E-03	.4303E-03
.3758E-03	.3656E-03	.3530E-03	.3836E-03	.3661E-03	.3488E-03	.4410E-03	.3758E-03
.4312E-03	.5066E-03	.5173E-03	.5395E-03	.5055E-03	.5156E-03	.5153E-03	.4906E-03
.4818E-03	.4453E-03	.4354E-03	.3816E-03	.3827E-03	.3529E-03	.3292E-03	.2800E-03
.2842E-03	.2639E-03	.2625E-03	.2389E-03	.2339E-03	.2188E-03	.2295E-03	.2364E-03
.2336E-03	.2317E-03	.2394E-03	.2162E-03	.2164E-03	.1903E-03	.1874E-03	.1659E-03
.1317E-03	.1424E-03	.1288E-03	.1224E-03	.1247E-03	.1129E-03	.9701E-04	.8857E-04

SALT BLAN MOLY WALL 1.125 IN DIB 2.25 INCHES EO=0 MEV

.1484E 00	.1491E 00	.1484E 00	.1503E 00	.4523E-01	.7841E-01	.2488E-01	.4103E-01
.1003E 00	.5467E-01	.4616E-01	.4531E-01	.4896E-01	.5767E-01	.4608E-01	.4552E-01
.4546E-01	.3809E-01	.3518E-01	.3964E-01	.4169E-01	.3881E-01	.3536E-01	.4041E-01
.5046E-01	.5562E-01	.6139E-01	.6216E-01	.5724E-01	.5410E-01	.5204E-01	.4747E-01
.4916E-01	.4967E-01	.4948E-01	.4912E-01	.4929E-01	.4805E-01	.4755E-01	.4697E-01
.4571E-01	.4661E-01	.4708E-01	.4710E-01	.4669E-01	.4827E-01	.4760E-01	.4587E-01
.4434E-01	.4359E-01	.4211E-01	.4175E-01	.4166E-01	.3981E-01	.3918E-01	.3934E-01
.3842E-01	.3679E-01	.3585E-01	.3428E-01	.3606E-01	.3473E-01	.3389E-01	.3246E-01
.3208E-01	.3139E-01	.2877E-01	.2846E-01	.2759E-01	.2697E-01	.2612E-01	.2527E-01
.2363E-01	.2337E-01	.2289E-01	.2110E-01	.1968E-01	.1868E-01	.1797E-01	.1679E-01
.1647E-01	.1611E-01	.1490E-01	.1458E-01	.1300E-01	.1202E-01	.1143E-01	.1189E-01
.1021E-01	.1071E-01	.1036E-01	.8145E-02	.8045E-02	.7981E-02	.6629E-02	.6380E-02
.6169E-02	.5739E-02	.5957E-02	.4335E-02	.3920E-02	.4042E-02	.3136E-02	.2772E-02
.2315E-02	.2078E-02	.1157E-02	.4020E-03	.2157E-03	.3786E-03	.1286E-02	.2130E-02
.3017E-02	.3373E-02	.3542E-02	.4381E-02	.3911E-02	.4164E-02	.2762E-02	.2407E-02
.1625E-02	.1800E-02	.1045E-02	.8713E-03	.1136E-02	.1227E-03	.9925E-03	.2508E-03
.4101E-03	.8809E-03	.1420E-02	.1286E-02	.1935E-02	.1594E-02	.1654E-02	.2067E-02
.1963E-02	.2077E-02	.1933E-02	.1578E-02	.1287E-02	.1031E-02	.1111E-02	.1205E-02
.1067E-02	.1386E-02	.6740E-03	.1119E-02	.9559E-03	.5270E-03	.7401E-03	.7463E-03
.6071E-03	.1153E-02	.7914E-03	.8912E-03	.1589E-02	.9646E-03	.1013E-02	.9994E-03
.8168E-03	.7362E-03	.7498E-03	.1144E-02	.7034E-03	.8710E-03	.7898E-03	.8341E-03
.8467E-03	.4956E-03	.7856E-03	.8706E-03	.1167E-02	.9592E-03	.9020E-03	.8733E-03
.6954E-03	.1513E-02	.8074E-03	.8547E-03	.9251E-03	.9847E-03	.9432E-03	.1015E-02
.9898E-03	.1020E-02	.7185E-03	.7248E-03	.7650E-03	.6161E-03	.4869E-03	.8484E-03
.8006E-03	.6840E-03	.4848E-03	.4235E-03	.3369E-03	.5068E-03	.6198E-03	.8940E-03
.5341E-03	.8739E-03	.6203E-03	.9860E-03	.7120E-03	.7458E-03	.9290E-03	.7254E-03
.1128E-02	.7040E-03	.7658E-03	.8146E-03	.1086E-02	.7963E-03	.6525E-03	.6706E-03
.6137E-03	.8441E-03	.5487E-03	.5636E-03	.5510E-03	.4412E-03	.2332E-03	.4182E-03
.5345E-03	.5374E-03	.5157E-03	.1031E-02	.7178E-03	.5707E-03	.7659E-03	.4712E-03
.8770E-03	.8881E-03	.7801E-03	.6975E-03	.5126E-03	.3839E-03	.7566E-03	.5879E-03
.7192E-03	.3993E-03	.5156E-03	.4318E-03	.5469E-03	.4442E-03	.5573E-03	.3893E-03
.4216E-03	.3217E-03	.7225E-03	.8021E-03	.5037E-03	.3938E-03	.6548E-03	.5991E-03

SALT BLAN MOLY WALL 1.125 IN DIB 2.25 INCHES EO=2.5 MEV

.1U03E-05	.2938E-05	.0000E 00	.2217E-05	.7783E-03	.2699E-03	.6647E-03	.8639E-03
.8295E-03	.1263E-02	.1066E-02	.1224E-02	.9932E-03	.1117E-02	.5704E-03	.8355E-03
.6639E-03	.4262E-03	.2671E-03	.4753E-03	.4957E-03	.6041E-03	.5288E-03	.6608E-03
.4827E-03	.3921E-03	.6769E-03	.7160E-03	.5306E-03	.5118E-03	.5210E-03	.4925E-03
.4752E-03	.4287E-03	.7108E-03	.3569E-03	.5073E-03	.5390E-03	.5822E-03	.2297E-03
.4718E-04	.3510E-03	.4839E-03	.4292E-03	.4328E-03	.4958E-03	.3554E-03	.5090E-03
.2495E-03	.3856E-03	.5822E-03	.3264E-03	.5411E-03	.4872E-03	.4739E-03	.5021E-03
.5725E-03	.4891E-03	.4135E-03	.4232E-03	.4473E-03	.2561E-03	.5152E-03	.3999E-03
.4043E-03	.5000E-03	.2093E-03	.4445E-03	.4644E-03	.2285E-03	.2246E-03	.3274E-03
.4855E-03	.4552E-03	.3335E-03	.4306E-03	.3111E-03	.5929E-03	.2374E-03	.5569E-03
.4009E-03	.5146E-03	.4671E-03	.4310E-03	.4441E-03	.3634E-03	.3819E-03	.5070E-03
.4588E-03	.3147E-03	.4 87E-03	.2300E-03	.3796E-03	.2727E-03	.2353E-03	.2452E-03
.2757E-03	.1547E-03	.4610E-03	.3096E-03	.2193E-03	.3471E-03	.3427E-03	.4220E-03
.4276E-03	.3923E-03	.4457E-03	.2657E-03	.3760E-03	.2704E-03	.3482E-03	.2013E-03
.3205E-03	.4055E-03	.3093E-03	.3497E-03	.2199E-03	.2025E-03	.2429E-03	.3446E-03
.2703E-03	.2185E-03	.9 47E-04	.3527E-03	.9234E-04	.2685E-03	.1807E-03	.3229E-03
.2638E-03	.1770E-03	.2852E-03	.4647E-03	.2865E-03	.3454E-03	.4272E-03	.4819E-03
.4283E-03	.3332E-03	.4992E-03	.4113E-03	.2826E-03	.2991E-03	.2902E-03	.2965E-03
.2342E-03	.3218E-03	.2586E-03	.2643E-03	.3371E-03	.2846E-03	.2218E-03	.2918E-03
.2402E-03	.3239E-03	.3169E-03	.1945E-03	.3278E-03	.2779E-03	.2092E-03	.4572E-03
.2427E-03	.3278E-03	.3582E-03	.4293E-03	.3306E-03	.2900E-03	.3216E-03	.4085E-03
.3575E-03	.3308E-03	.4423E-03	.2833E-03	.4181E-03	.3600E-03	.3500E-03	.2804E-03
.2531E-03	.3406E-03	.2903E-03	.3306E-03	.2601E-03	.1911E-03	.2384E-03	.3292E-03
.2156E-03	.2280E-03	.2308E-03	.2843E-03	.3758E-03	.3260E-03	.3556E-03	.3710E-03
.4001E-03	.3872E-03	.4 53E-03	.5148E-03	.5446E-03	.5169E-03	.5112E-03	.4132E-03
.3737E-03	.3885E-03	.3966E-03	.3110E-03	.3074E-03	.3020E-03	.2831E-03	.3193E-03
.2056E-03	.3198E-03	.2033E-03	.2290E-03	.1385E-03	.2068E-03	.2151E-03	.2826E-03
.3334E-03	.3294E-03	.3305E-03	.3830E-03	.4439E-03	.4561E-03	.4310E-03	.4531E-03
.4645E-03	.3653E-03	.3842E-03	.3481E-03	.3046E-03	.2884E-03	.2549E-03	.2182E-03
.2255E-03	.1745E-03	.1812E-03	.2308E-03	.1959E-03	.1560E-03	.2204E-03	.1879E-03
.2105E-03	.2172E-03	.2868E-03	.2614E-03	.2398E-03	.2083E-03	.1960E-03	.1585E-03
.1704E-03	.1723E-03	.1472E-03	.1094E-03	.1492E-03	.1097E-03	.1027E-03	.1379E-03

SALT BLAN MOLY WALL 1.125 IN DIB 4.25 INCHES EO=0 MEV

.4794E-02	.4881E-02	.4820E-02	.5009E-02	.1646E-01	.2588E-01	.9315E-02	.4590E-02
.1662E-01	.1320E-01	1.18 E-02	.1098E-01	.9298E-02	.9268E-02	.8269E-02	.9266E-02
.7986E-02	.8078E-02	.6372E-02	.9075E-02	.7331E-02	.6742E-02	.5444E-02	.7755E-02
.7739E-02	.8228E-02	.8432E-02	.8951E-02	.8021E-02	.7177E-02	.6694E-02	.5967E-02
.7026E-02	.6906E-02	.6559E-02	.5852E-02	.6283E-02	.5869E-02	.6777E-02	.6762E-02
.5730E-02	.5443E-02	.5598E-02	.5867E-02	.6411E-02	.6121E-02	.5065E-02	.5712E-02
.5753E-02	.4546E-02	.4767E-02	.4447E-02	.5262E-02	.4527E-02	.5534E-02	.4444E-02
.4281E-02	.4861E-02	.4320E-02	.3828E-02	.5350E-02	.4583E-02	.3848E-02	.4442E-02
.4324E-02	.4509E-02	.4809E-02	.3706E-02	.3029E-02	.4264E-02	.3311E-02	.3652E-02
.3445E-02	.3204E-02	.3515E-02	.2718E-02	.2290E-02	.2244E-02	.2454E-02	.2607E-02
.2021E-02	.1700E-02	.1639E-02	.1829E-02	.1623E-02	.1495E-02	.2237E-02	.2330E-02
.2001E-02	.2142E-02	.1315E-02	.1135E-02	.1831E-02	.1529E-02	.1015E-02	.8488E-03
.1409E-02	.1332E-02	.1280E-02	.1377E-02	.1496E-02	.8328E-03	.1098E-02	.1096E-02
.5760E-03	.7458E-03	.1146E-02	.6734E-03	.9909E-03	.7659E-03	.1263E-02	.1153E-02
.1142E-02	.1541E-02	.1156E-02	.8827E-03	.6391E-03	.9152E-03	.8791E-03	.8581E-03
.5586E-03	.3068E-03	.2351E-03	.2427E-03	.1935E-03	.6568E-03	-.7613E-04	.3231E-03
.1213E-03	.5263E-03	.6425E-03	.3824E-03	.2729E-03	.5548E-03	.2403E-03	.9415E-03
.6679E-03	.6619E-03	.4903E-03	.8625E-04	.5213E-03	.3632E-03	.4304E-03	.2822E-03
.6541E-03	.5620E-03	.6417E-03	.2502E-03	.4899E-03	.2290E-03	.4560E-03	.1797E-03
.2074E-03	.2235E-03	-.1840E-03	.4424E-03	.2393E-03	.2615E-03	.4815E-03	.1330E-03
.3870E-03	.4457E-03	.3162E-03	.3318E-03	.3259E-03	-.8752E-04	.1001E-03	.2884E-03
.4315E-03	-.3111E-03	.2626E-03	.3461E-03	.3309E-03	.2633E-04	.2915E-03	.2131E-03
.1818E-03	.4815E-03	.4140E-03	-.1243E-04	.4749E-03	.4541E-03	.3306E-03	.2405E-03
.2828E-03	.5088E-03	.1969E-03	.3508E-03	.1737E-03	-.8865E-04	.1179E-03	.1463E-03
.1451E-03	.2113E-03	.4346E-03	.7091E-05	.4685E-03	.4221E-03	.3309E-03	.4322E-03
.3164E-03	.4560E-04	.1554E-03	.2892E-03	.2976E-03	.3764E-03	.8533E-04	.3967E-03
.1686E-03	.1887E-03	.5613E-03	.2084E-03	.2412E-03	.4591E-03	.5019E-03	.3173E-03
.3049E-03	.1872E-03	.1487E-03	.1298E-03	.1680E-03	-.6411E-04	.4176E-03	-.5164E-04
.6885E-04	.8955E-04	.9040E-04	.3057E-03	.3423E-03	.2963E-03	.1789E-03	.3853E-03
.6702E-04	.7621E-04	.4519E-03	.1917E-03	.1991E-03	.1473E-03	.2682E-03	.4286E-03
.3511E-03	.1734E-03	.8283E-04	.3542E-03	.1369E-03	.4146E-03	.1306E-03	.1288E-03
.2687E-03	.1732E-03	-.4919E-04	.1191E-03	.2957E-03	.3024E-03	.3449E-03	.2441E-03

SALT BLAN MOLY WALL 1.125 IN DIB 4.25 INCHES EO=2.5 MEV

-.1411E-05 .1380E-05 .0000E 00-.7103E-05-.2251E-03-.8681E-03-.3573E-03-.4885E-03
-.3631E-03 .7550E-05 .3783E-04-.5420E-04-.4702E-03-.3022E-03-.9883E-04-.3451E-03
-.2192E-03-.1282E-03-.5 99E-03-.2869E-03-.1480E-03-.4942E-03-.3400E-03-.2221E-03
-.8996E-04-.2402E-03-.5225E-03-.2197E-03-.8131E-04-.3116E-03-.4171E-03-.1244E-03
-.2038E-04-.3359E-03-.1151E-03-.1651E-03-.1525E-03-.1247E-03-.1326E-03-.2563E-03
-.1381E-03-.2506E-03-.1872E-03-.2302E-03-.3349E-03-.2215E-03-.2342E-03-.2483E-03
-.2738E-03-.2672E-03-.2588E-03-.1554E-03-.4366E-03-.1153E-03-.8292E-04-.3199E-03
.6323E-04-.2466E-03-.2109E-03-.2139E-03-.1425E-03-.2940E-03-.1624E-03-.1585E-03
-.1352E-03-.1437E-03-.1964E-03-.1545E-03-.2004E-03-.2884E-03 .5417E-04-.7814E-05
-.1621E-03-.1355E-03 .5577E-04-.1358E-03-.1579E-03-.2187E-03-.1208E-03-.1909E-03
-.1577E-03-.2086E-03 .4046E-04-.6332E-04-.1029E-03-.2975E-03 .3118E-04-.1910E-03
-.1533E-03-.8389E-04-.2834E-03-.1710E-03-.1532E-03-.7001E-04-.1342E-03-.2594E-03
-.2396E-03-.3232E-04-.3162E-03-.6586E-04 .2406E-06-.2032E-03-.2272E-05 .1468E-03
-.1312E-03-.2461E-04-.1267E-03-.9322E-04-.7071E-04-.4107E-04-.1496E-03-.1253E-03
-.2028E-03 .3547E-04 .1638E-05-.3576E-04 .1245E-03 .1302E-04 .6807E-04 .2429E-04
-.1348E-03-.6854E-04-.8290E-04-.2467E-04-.1890E-04-.1215E-03-.7390E-04 .9435E-05
-.9683E-05 .2312E-04-.3211E-04 .1144E-03-.1712E-03 .5096E-04-.6118E-04 .2274E-04
-.2636E-04-.1093E-04-.8870E-04-.6682E-04-.1670E-03-.1548E-03 .2308E-04-.9807E-04
-.1417E-03 .4408E-04-.6594E-04-.1218E-03-.1603E-04-.9146E-04-.3387E-04 .2286E-04
-.3332E-04-.3822E-04-.3474E-04 .4707E-04-.8182E-04 .1644E-04-.1810E-04 .2146E-04
.3172E-05-.4842E-04 .8581E-04-.1224E-03 .3039E-04 .1815E-04-.3761E-04-.3466E-05
-.1046E-03-.3570E-05 .1335E-04-.1160E-03-.6180E-04 .1085E-03-.2708E-05 .1517E-05
-.8018E-04 .2015E-04-.3996E-04-.6492E-04-.1247E-03-.8469E-04-.1756E-04-.1473E-03
-.6860E-04-.7590E-06 .3993E-04-.1742E-04 .1908E-04-.2585E-05 .6072E-06 .1277E-03
.1546E-04 .1673E-04 .8901E-04 .9337E-04 .1295E-04 .5355E-04 .1099E-03-.8878E-05
.1328E-04-.4451E-05-.7175E-06-.8192E-05 .5363E-05 .1653E-05-.7930E-04-.5320E-04
.1603E-04 .2072E-05-.9768E-05 .5866E-04 .8743E-04 .4266E-04 .7475E-04 .1395E-03
.7729E-04 .1353E-03 .1407E-03 .1503E-03 .7804E-04 .1131E-03 .9399E-04 .4828E-04
.9473E-04 .1056E-03 .5084E-04 .8134E-04 .1446E-03 .3725E-04 .6543E-04 .5022E-04
.7277E-04 .8289E-04 .8939E-04 .8984E-04 .8853E-04 .5798E-04 .6645E-04 .2808E-04
.3372E-04 .1370E-04 .5315E-04 .2730E-04 .4280E-04 .3861E-04 .1617E-04 .6348E-04
.7971E-04 .2709E-04 .1942E-04 .2248E-04 .3231E-04 .2947E-04 .3303E-04-.6918E-06

SALT BLAN MOLY WALL 1.125 IN DIB 6.25 INCHES EO=0 MEV

.2877E-02 .3388E-02 .2810E-02 .4002E-02 .1361E-01 .3640E-01-.3642E-01 .1197E-01
.2990E-01 .2655E-01 .2149E-01 .2197E-01 .2663E-01 .3249E-01 .2837E-01 .2694E-01
.2672E-01 .2205E-01 .1809E-01 .2238E-01 .2479E-01 .2201E-01 .1880E-01 .2123E-01
.2765E-01 .3597E-01 .3820E-01 .3791E-01 .3763E-01 .3563E-01 .3624E-01 .3350E-01
.3192E-01 .3337E-01 .3225E-01 .3460E-01 .3347E-01 .3302E-01 .3343E-01 .3178E-01
.3289E-01 .3154E-01 .3176E-01 .3259E-01 .3353E-01 .3378E-01 .3336E-01 .3110E-01
.3107E-01 .3022E-01 .2940E-01 .2829E-01 .2819E-01 .2755E-01 .2854E-01 .2535E-01
.2636E-01 .2544E-01 .2580E-01 .2403E-01 .2466E-01 .2317E-01 .2401E-01 .2235E-01
.2289E-01 .2093E-01 .2066E-01 .2060E-01 .1938E-01 .1849E-01 .1846E-01 .1745E-01
.1644E-01 .1597E-01 .1542E-01 .1451E-01 .1441E-01 .1316E-01 .1279E-01 .1250E-01
.1159E-01 .9850E-02 .1009E-01 .9232E-02 .8655E-02 .7603E-02 .7767E-02 .6706E-02
.7152E-02 .6877E-02 .6941E-02 .5227E-02 .5960E-02 .4799E-02 .4402E-02 .3714E-02
.3984E-02 .3907E-02 .3212E-02 .2472E-02 .2646E-02 .2002E-02 .1754E-02 .1925E-02
.9025E-03 .1565E-03 .2466E-03-.2836E-03-.7276E-03-.8956E-03-.6679E-03-.1582E-03
.5912E-03 .1633E-02 .1698E-02 .2114E-02 .2809E-02 .2037E-02 .1290E-02 .1053E-02
.1038E-02 .1793E-03 .4176E-03 .3821E-03-.2961E-04-.1259E-03-.7892E-03-.4313E-04
.4898E-03-.9233E-04-.4485E-03 .2779E-03 .5466E-04 .4487E-03 .4167E-03 .1012E-02
.5199E-03 .1229E-02 .7817E-03 .6325E-03 .2861E-03 .7711E-03-.2540E-03 .4512E-03
.3261E-03 .2852E-03 .2609E-05-.1584E-03-.4938E-04 .3804E-03 .2295E-03 .3670E-03
.2833E-03 .3795E-04 .4028E-03-.7269E-04 .6010E-03 .3786E-03 .4286E-03 .3358E-03
.1365E-03 .6419E-03-.1591E-03 .4041E-03 .1174E-04 .3770E-03 .3735E-03 .4841E-04
.1379E-03-.6329E-04 .2790E-03 .2430E-03 .5831E-04 .1617E-03-.1795E-03 .3060E-03
.4379E-03-.1676E-04 .2923E-03 .9608E-04 .4252E-03 .2273E-03 .2271E-03 .2106E-03
.2345E-03 .1094E-03 .4553E-03 .1666E-03 .4287E-03 .4771E-03 .3172E-03 .1226E-03
.6821E-03 .3428E-03 .4071E-05-.1053E-03 .4082E-03-.2074E-03-.9972E-04 .1163E-03
.2951E-03 .2996E-03 .7234E-04 .3016E-03 .4408E-03 .4518E-03 .3265E-03 .4322E-03
.4536E-03 .2303E-03 .3507E-03 .5544E-03-.9536E-05 .4510E-03 .2538E-03 .1887E-03
-.3915E-04 .1319E-03 .9011E-04 .1061E-03-.5463E-04 .8544E-04 .3439E-03 .1617E-03
.2882E-03-.2886E-04 .4481E-03 .2806E-03 .3507E-03 .4562E-03 .4435E-04 .3395E-03
.4240E-03 .5451E-03 .2 74E-03 .1930E-03 .3088E-03 .7145E-03 .3013E-03 .1535E-03
.2520E-03 .1795E-06-.8125E-04 .1351E-03 .3194E-03 .1277E-03 .1858E-03 .1024E-03
.2071E-03 .2593E-03-.1425E-03 .2251E-03 .2850E-03 .5107E-04-.1001E-03 .4505E-03

SALT BLAN MOLY WALL 1.125 IN DIB 6.25 INCHES EO=2.5 MEV

.2182E-05	-.2006E-05	.7275E-06	.1301E-04	-.1498E-03	.2236E-02	.1841E-02	.1847E-02
.1957E-02	.1833E-02	.1976E-02	.2157E-02	.2319E-02	.2336E-02	.2337E-02	.2129E-02
.1801E-02	.1577E-02	.1674E-02	.1646E-02	.1338E-02	.1400E-02	.1501E-02	.1326E-02
.1124E-02	.1121E-02	.1294E-02	.1366E-02	.1395E-02	.1211E-02	.1366E-02	.1246E-02
.1227E-02	.1260E-02	.1422E-02	.1318E-02	.1117E-02	.1276E-02	.1243E-02	.1355E-02
.1201E-02	.1241E-02	.1229E-02	.1093E-02	.1073E-02	.1298E-02	.1066E-02	.1027E-02
.1201E-02	.1090E-02	.9794E-03	.1307E-02	.1187E-02	.9707E-03	.1293E-02	.8553E-03
.1239E-02	.1052E-02	.1148E-02	.1164E-02	.1096E-02	.1125E-02	.1074E-02	.1121E-02
.1018E-02	.9546E-03	.1125E-02	.9829E-03	.9357E-03	.1032E-02	.8093E-03	.8332E-03
.6865E-03	.8552E-03	.8829E-03	.8141E-03	.1045E-02	.9691E-03	.1010E-02	.1026E-02
.1198E-02	.1049E-02	.1022E-02	.9841E-03	.9622E-03	.1049E-02	.9798E-03	.7969E-03
.8842E-03	.9475E-03	.8201E-03	.8235E-03	.8383E-03	.8005E-03	.7793E-03	.7137E-03
.7082E-03	.6458E-03	.9620E-03	.8703E-03	.8278E-03	.8062E-03	.8521E-03	.7067E-03
.8208E-03	.9557E-03	.7422E-03	.9373E-03	.9571E-03	.8338E-03	.9140E-03	.8163E-03
.6992E-03	.6807E-03	.6896E-03	.7769E-03	.5586E-03	.5197E-03	.6808E-03	.4450E-03
.6716E-03	.6332E-03	.8878E-03	.4724E-03	.7101E-03	.5136E-03	.5607E-03	.7116E-03
.6188E-03	.4782E-03	.7214E-03	.6261E-03	.5072E-03	.6544E-03	.6353E-03	.6967E-03
.6763E-03	.7337E-03	.6619E-03	.6215E-03	.6721E-03	.6559E-03	.5462E-03	.4833E-03
.6037E-03	.6132E-03	.4412E-03	.4902E-03	.5191E-03	.4812E-03	.3271E-03	.6899E-03
.5153E-03	.4622E-03	.5264E-03	.5483E-03	.6064E-03	.5467E-03	.4116E-03	.5359E-03
.7243E-03	.3956E-03	.5291E-03	.6213E-03	.6716E-03	.4762E-03	.5156E-03	.5686E-03
.5120E-03	.6214E-03	.6798E-03	.5743E-03	.6455E-03	.6153E-03	.5004E-03	.4931E-03
.5128E-03	.4510E-03	.4985E-03	.5535E-03	.4103E-03	.3911E-03	.3031E-03	.3586E-03
.3816E-03	.4004E-03	.3793E-03	.4333E-03	.3809E-03	.3459E-03	.3248E-03	.3285E-03
.4146E-03	.4022E-03	.5513E-03	.5234E-03	.5547E-03	.5359E-03	.5670E-03	.5877E-03
.5697E-03	.5047E-03	.5688E-03	.5730E-03	.5036E-03	.5175E-03	.4849E-03	.4631E-03
.4084E-03	.4209E-03	.2304E-03	.2336E-03	.2883E-03	.2511E-03	.2116E-03	.2047E-03
.2575E-03	.2794E-03	.2682E-03	.4120E-03	.4107E-03	.4561E-03	.4783E-03	.4886E-03
.4786E-03	.5537E-03	.5042E-03	.4988E-03	.4813E-03	.3414E-03	.3378E-03	.2844E-03
.2701E-03	.2668E-03	.2840E-03	.2222E-03	.2076E-03	.2289E-03	.2812E-03	.2130E-03
.2827E-03	.2698E-03	.2 05E-03	.2410E-03	.2547E-03	.2809E-03	.2188E-03	.2046E-03
.1711E-03	.1554E-03	.1377E-03	.1378E-03	.1189E-03	.1405E-03	.1139E-03	.1124E-03

SALT BLAN MOLY WALL 1.125 IN DIB 8.25 INCHES EO=0 MEV

-.8324E-02	-.7720E-02	-.8324E-02	-.6925E-02	.2373E-01	.3928E-01	.1355E-01	.3572E-01
.3664E-01	.3072E-01	.2984E-01	.2868E-01	.2951E-01	.3085E-01	.2925E-01	.2895E-01
.3054E-01	.2815E-01	.2905E-01	.2966E-01	.3001E-01	.2858E-01	.2864E-01	.3077E-01
.3129E-01	.3290E-01	.3600E-01	.3494E-01	.3439E-01	.3310E-01	.3238E-01	.3226E-01
.3268E-01	.3261E-01	.3223E-01	.3170E-01	.3299E-01	.3203E-01	.3095E-01	.3177E-01
.3073E-01	.2991E-01	.3099E-01	.3115E-01	.2990E-01	.3037E-01	.2927E-01	.2912E-01
.2860E-01	.2868E-01	.2798E-01	.2656E-01	.2678E-01	.2651E-01	.2568E-01	.2498E-01
.2453E-01	.2360E-01	.2379E-01	.2184E-01	.2335E-01	.2228E-01	.2193E-01	.2088E-01
.2095E-01	.1941E-01	.1782E-01	.1771E-01	.1693E-01	.1751E-01	.1620E-01	.1591E-01
.1467E-01	.1408E-01	.1302E-01	.1286E-01	.1163E-01	.1112E-01	.1000E-01	.9477E-02
.9262E-02	.8983E-02	.8775E-02	.7396E-02	.7448E-02	.7049E-02	.5790E-02	.5810E-02
.5191E-02	.5744E-02	.4718E-02	.4631E-02	.3466E-02	.3416E-02	.3252E-02	.2524E-02
.2156E-02	.2365E-02	.2352E-02	.2319E-02	.1922E-02	.1871E-02	.1201E-02	.1194E-02
.6681E-03	.8783E-03	.9297E-03	.8314E-03	.9260E-03	.9381E-03	.1122E-02	.1683E-02
.2229E-02	.1646E-02	.1 58E-02	.7617E-03	.8289E-03	.1057E-02	.4439E-03	.8563E-03
.3573E-03	.1000E-02	.6841E-03	.6405E-03	.2606E-03	.2881E-03	.6930E-03	.5182E-03
.6348E-03	.3132E-03	.2767E-03	.8452E-03	.1806E-03	.1165E-02	.3611E-03	.9354E-03
.7801E-03	.1001E-02	.6811E-03	.7381E-03	.6725E-05	.4750E-03	.5996E-03	.2681E-03
.8856E-03	.4141E-03	.5585E-03	.1409E-03	.7322E-03	.3970E-03	.5961E-03	.5461E-03
.3777E-03	.3699E-03	.5475E-03	.1952E-03	.3520E-03	.2458E-04	.2551E-03	.3740E-03
.4772E-03	.4801E-03	.5027E-03	.5262E-03	.5872E-03	.7296E-03	.3184E-03	.7189E-03
.4477E-03	.1411E-03	.7882E-04	.6541E-03	.4095E-03	.2963E-03	.4195E-03	.6663E-03
.2905E-05	.4620E-03	.5642E-03	.5282E-03	.5782E-03	.5851E-03	.5250E-03	.2201E-03
.3463E-03	.5371E-03	.2967E-03	.2555E-03	.3719E-03	.2744E-03	.4076E-03	.2903E-03
.2641E-03	.1056E-03	.3415E-03	.6249E-03	.3092E-03	.5081E-03	.3568E-03	.3827E-03
.3179E-03	.4706E-03	.1994E-03	.7165E-03	.3095E-03	.3901E-03	.7827E-03	.1654E-03
.2761E-03	.5931E-03	.4187E-03	.2844E-03	.2900E-03	.3982E-03	.5056E-03	.4451E-03
.4170E-03	.2773E-03	.5833E-03	.3392E-03	.3771E-03	.1783E-03	.3757E-03	.1241E-03
.4236E-03	.3581E-03	.2386E-03	.8976E-04	.1368E-03	.4798E-03	.2816E-03	.3822E-03
.2809E-03	.1700E-03	.1522E-03	.2974E-03	.1632E-03	.4655E-03	.3120E-03	.9223E-04
.3707E-03	.4416E-03	.2538E-03	.2825E-03	.2238E-03	.2783E-03	.8316E-04	.1995E-03
.1287E-03	.1826E-03	.1027E-03	.1269E-03	-.5274E-05	.2921E-03	.1024E-03	.1955E-03

SALT BLAN MOLY WALL 1.125 IN DIB 8.25 INCHES EO=2.5 MEV

.0000E 00	.1791E-05	.0000E 00	.1241E-04	.2216E-02	.9096E-03	.6935E-03	.5001E-03
.6570E-03	.9965E-03	.6785E-03	.7480E-03	.8540E-03	.7251E-03	.7515E-03	.5178E-03
.5123E-03	.3040E-03	.8444E-03	.3887E-03	.3411E-03	.4766E-03	.4246E-03	.4225E-03
.5731E-03	.5209E-03	.5814E-03	.6616E-03	.2707E-03	.4072E-03	.2640E-03	.5324E-03
.3148E-03	.2969E-03	.4573E-03	.2987E-03	.2824E-03	.3407E-03	.4053E-03	.5848E-03
.5445E-03	.3609E-03	.4202E-03	.2627E-03	.5785E-03	.3275E-03	.1520E-03	.5270E-03
.4156E-03	.3956E-03	.6360E-03	.5397E-03	.4156E-03	.3514E-03	.3486E-03	.1873E-03
.4194E-03	.3898E-03	.3187E-03	.4542E-03	.4881E-03	.2849E-03	.4435E-03	.2558E-03
.5042E-03	.3669E-03	.2354E-03	.2766E-03	.3086E-03	.2407E-03	.3408E-03	.4595E-03
.4609E-03	.5023E-03	.3147E-03	.5252E-03	.4411E-03	.5517E-03	.4468E-03	.5651E-03
.3961E-03	.3677E-03	.4668E-03	.2177E-03	.4723E-03	.3858E-03	.3356E-03	.1583E-03
.4619E-03	.2526E-03	.3499E-03	.2702E-03	.2797E-03	.2443E-03	.2484E-03	.2286E-03
.3373E-03	.3852E-03	.1840E-03	.2086E-03	.5127E-03	.3500E-03	.6258E-04	.3772E-03
.2441E-03	.3754E-03	.2026E-03	.2092E-03	.2710E-03	.2690E-03	.3276E-03	.1671E-03
.1739E-03	.3758E-03	.2817E-03	.1949E-03	.2183E-03	.3393E-03	.2433E-03	.3297E-03
.1160E-03	.1480E-03	.2567E-03	.2380E-03	.3199E-03	.3030E-03	.8313E-04	.2792E-03
.2302E-03	.2735E-03	.2509E-03	.3409E-03	.2252E-03	.2108E-03	.2704E-03	.3078E-03
.2143E-03	.1627E-03	.2819E-03	.1686E-03	.3748E-03	.1837E-03	.1731E-03	.7214E-04
.1410E-03	.2041E-03	.2592E-03	.2552E-03	.1087E-03	.2604E-03	.1369E-03	.1331E-03
.2744E-03	.8643E-04	.7797E-04	.2830E-03	.2142E-03	.2489E-03	.1416E-03	.2371E-03
.1502E-03	.2109E-03	.2161E-03	.9353E-04	.2412E-03	.2546E-03	.1168E-03	.2425E-03
.1772E-03	.1902E-03	.9566E-04	.2202E-03	.1481E-03	.3481E-04	.1912E-03	.1877E-03
.1350E-03	.8067E-04	.1040E-03	.1279E-03	.2002E-03	.2091E-03	.1373E-03	.1013E-03
.7297E-04	.8640E-04	.1625E-03	.1965E-03	.1247E-03	.1295E-03	.1778E-03	.1186E-03
.1440E-03	.1562E-03	.9994E-04	.1887E-03	.1742E-03	.1723E-03	.1731E-03	.1709E-03
.1508E-03	.5486E-04	.1067E-03	.1171E-03	.1155E-03	.1075E-03	.2243E-04	.9230E-04
.4884E-04	.2497E-04	.5025E-04	.1149E-03	.6121E-04	.6507E-04	.1535E-03	.1284E-03
.1165E-03	.1994E-03	.2152E-03	.2070E-03	.2199E-03	.1493E-03	.1586E-03	.1314E-03
.1139E-03	.1138E-03	.1122E-03	.1173E-03	.8919E-04	.7271E-04	.1206E-03	.1140E-03
.1055E-03	.6623E-04	.6817E-04	.7558E-04	.1087E-03	.1061E-03	.6400E-04	.7436E-04
.6897E-04	.7172E-04	.8441E-04	.4624E-04	.3928E-04	.4156E-04	.7112E-04	.2173E-04
.3573E-04	.5612E-04	.6023E-04	.1408E-04	.3730E-04	.3264E-04	.5147E-04	.3465E-04

SALT BLAN MOLY WALL .750 IN DIB 2.25 INCHES EO=0 MEV

.1184E 00	.1192E 00	.1184E 00	.1212E 00	.4070E-01	.6961E-01	.2896E-01	.4884E-01
.56 E-01	.4790E-01	.4008E-01	.3872E-01	.4204E-01	.4943E-01	.4125E-01	.3919E-01
.3859E-01	.3212E-01	.2917E-01	.3398E-01	.3450E-01	.3312E-01	.2969E-01	.3391E-01
.4125E-01	.4889E-01	.5394E-01	.5435E-01	.4958E-01	.4613E-01	.4469E-01	.4135E-01
.4184E-01	.4198E-01	.4232E-01	.4233E-01	.4191E-01	.4129E-01	.4069E-01	.4046E-01
.3914E-01	.3990E-01	.4069E-01	.3991E-01	.4026E-01	.4143E-01	.4027E-01	.4531E-01
.3932E-01	.3712E-01	.3546E-01	.3655E-01	.3566E-01	.3372E-01	.3436E-01	.3377E-01
.3201E-01	.3167E-01	.3124E-01	.2951E-01	.3054E-01	.2988E-01	.2844E-01	.2799E-01
.2812E-01	.2687E-01	.2531E-01	.2504E-01	.2415E-01	.2302E-01	.2260E-01	.2111E-01
.2087E-01	.2044E-01	.1988E-01	.1806E-01	.1757E-01	.1606E-01	.1527E-01	.1442E-01
.1416E-01	.1333E-01	.1216E-01	.1146E-01	.1149E-01	.1012E-01	.1022E-01	.9460E-02
.8240E-02	.8780E-02	.8712E-02	.7194E-02	.6772E-02	.6807E-02	.5596E-02	.6013E-02
.5347E-02	.4078E-02	.4774E-02	.3849E-02	.3538E-02	.3175E-02	.2885E-02	.2078E-02
.1823E-02	.1381E-02	.7828E-03	.4280E-03	.3596E-03	.5376E-03	.7559E-03	.1871E-02
.2737E-02	.2896E-02	.3151E-02	.3813E-02	.3495E-02	.3500E-02	.2346E-02	.2255E-02
.1'92E-02	.1488E-02	.9481E-03	.9040E-03	.6709E-03	.1111E-03	.2553E-03	.2041E-03
.6946E-03	.9053E-03	.1138E-02	.1089E-02	.1152E-02	.1318E-02	.1628E-02	.1993E-02
.2058E-02	.1801E-02	.1 76E-02	.1104E-02	.1186E-02	.6238E-03	.1098E-02	.1128E-02
.1199E-02	.1074E-02	.4166E-03	.1143E-02	.9141E-03	.5313E-03	.1018E-02	.8412E-03
.5750E-03	.9187E-03	.5558E-03	.8729E-03	.8873E-03	.8933E-03	.6624E-03	.7712E-03
.8749E-03	.5114E-03	.1031E-02	.8339E-03	.9883E-03	.8775E-03	.1011E-02	.9602E-03
.1311E-02	.2512E-03	.7398E-03	.6992E-03	.6255E-03	.5398E-03	.7714E-03	.7238E-03
.8764E-03	.7255E-03	.5567E-03	.9908E-03	.9562E-03	.5627E-03	.2206E-03	.8952E-03
.7260E-03	.1040E-02	.5142E-03	.3741E-03	.1005E-02	.8112E-03	.5858E-03	.7271E-03
.5528E-03	.7111E-03	.3411E-03	.2628E-03	.4498E-03	.5140E-03	.8404E-03	.6524E-03
.8059E-03	.7303E-03	.5495E-03	.9552E-03	.8423E-03	.4841E-03	.8662E-03	.4303E-03
.1011E-02	.5733E-03	.7257E-03	.6947E-03	.1094E-02	.7387E-03	.5618E-03	.8080E-03
.5443E-03	.5866E-03	.4109E-03	.4042E-03	.3746E-03	.5597E-03	.1608E-03	.5155E-03
.3451E-03	.5450E-03	.2723E-03	.9319E-03	.6602E-03	.4268E-03	.4954E-03	.7626E-03
.5859E-03	.7319E-03	.7476E-03	.5451E-03	.4515E-03	.4946E-03	.5203E-03	.3355E-03
.5595E-03	.4677E-03	.5607E-03	.5578E-03	.5754E-03	.6351E-03	.5972E-03	.4970E-03
.4706E-03	.3493E-03	.5870E-03	.6676E-03	.6496E-03	.4520E-03	.5329E-03	.6809E-03

SALT BLAN MOLY WALL-.750 IN DIB 2.25 INCHES EO=2.5 MEV

.6922E-06 .7527E-06 .0000E 00-.1408E-05 .5894E-03 .2592E-03 .2250E-03 .7242E-03
.8147E-03 .9356E-03 .1079E-02 .9203E-03 .9130E-03 .1033E-02 .5635E-03 .5154E-03
.6074E-03 .4437E-03 .2248E-03 .3140E-03 .1761E-03 .2997E-03 .2254E-03 .4706E-03
.5252E-03 .2605E-03 .3841E-03 .5140E-03 .3290E-03 .3859E-03 .5032E-03 .2365E-03
.4247E-03 .3247E-03 .6734E-03 .4094E-03 .5227E-03 .3656E-03 .2532E-03 .2897E-03
.1072E-03 .3361E-03 .3330E-03 .2342E-03 .2302E-03 .4343E-03 .2581E-03 .5356E-03
.2055E-03 .3543E-03 .3042E-03 .2066E-03 .2725E-03 .5199E-03 .3173E-03 .3833E-03
.3901E-03 .3712E-03 .2986E-03 .2950E-03 .3536E-03 .2241E-03 .3346E-03 .4975E-03
.2533E-03 .3304E-03 .4820E-03 .1691E-03 .2909E-03 .9789E-04 .2012E-03 .1608E-03
.3365E-03 .2385E-03 .1572E-03 .4038E-03 .9231E-04 .5293E-03 .3211E-03 .4935E-03
.3326E-03 .4363E-03 .4658E-03 .2871E-03 .3751E-03 .3080E-03 .2853E-03 .3236E-03
.2361E-03 .2815E-03 .2586E-03 .2108E-03 .2190E-03 .3501E-03 .1282E-03 .2705E-03
.2511E-03 .1177E-03 .3 36E-03 .2344E-03 .2400E-03 .2496E-03 .3627E-03 .3810E-03
.3795E-03 .3125E-03 .3 82E-03 .2838E-03 .4013E-03 .2243E-03 .3239E-03 .1827E-03
.3261E-03 .2743E-03 .3710E-03 .2058E-03 .2176E-03 .1949E-03 .1258E-03 .1986E-03
.2596E-03 .8566E-04 .2 20E-03 .3134E-03 .1111E-03 .1495E-03 .2750E-03 .2367E-03
.1250E-03 .9230E-04 .2420E-03 .3375E-03 .2163E-03 .3317E-03 .3842E-03 .3682E-03
.3393E-03 .3313E-03 .3687E-03 .3285E-03 .3277E-03 .1842E-03 .2647E-03 .2190E-03
.6775E-04 .2036E-03 .1804E-03 .2340E-03 .2752E-03 .3174E-03 .1236E-03 .2895E-03
.2361E-03 .2438E-03 .1815E-03 .9408E-04 .2563E-03 .3715E-03 .3048E-03 .4394E-03
.2436E-03 .3337E-03 .4159E-03 .3906E-03 .3315E-03 .3821E-03 .3091E-03 .2393E-03
.3514E-03 .3733E-03 .3080E-03 .2890E-03 .3392E-03 .2040E-03 .2200E-03 .2910E-03
.3308E-03 .3057E-03 .2041E-03 .1930E-03 .2125E-03 .2041E-03 .2814E-03 .1784E-03
.1399E-03 .2247E-03 .2699E-03 .1791E-03 .2361E-03 .2403E-03 .3063E-03 .3322E-03
.3014E-03 .3193E-03 .4186E-03 .4175E-03 .4956E-03 .4218E-03 .4216E-03 .3453E-03
.3339E-03 .2932E-03 .3 49E-03 .3165E-03 .2370E-03 .2946E-03 .2262E-03 .2501E-03
.1687E-03 .2014E-03 .1247E-03 .1506E-03 .1368E-03 .2044E-03 .2136E-03 .2296E-03
.3467E-03 .3853E-03 .2981E-03 .4144E-03 .3874E-03 .4277E-03 .4614E-03 .3429E-03
.3809E-03 .3173E-03 .3009E-03 .3280E-03 .2550E-03 .2361E-03 .1902E-03 .2217E-03
.1943E-03 .1635E-03 .1636E-03 .1679E-03 .1751E-03 .1941E-03 .2033E-03 .2163E-03
.2105E-03 .2198E-03 .2150E-03 .2471E-03 .2312E-03 .1753E-03 .1874E-03 .1528E-03
.1779E-03 .1300E-03 .1213E-03 .1165E-03 .9014E-04 .7759E-04 .1192E-03 .1397E-03

SALT BLAN MOLY WALL .750 IN DIB 4.25 INCHES EO=0 MEV

-.6950E-02-.6754E-02-.6997E-02-.6428E-02 .4274E-01-.1250E 00 .5912E-02 .3971E-01
.3973E-01 .2793E-01-.1037E 00 .2498E-01 .2856E-01 .26 E-01 .2567E-01 .2721E-01
.2558E-01 .2377E-01 .2269E-01 .2591E-01 .2480E-01 .2356E-01 .2408E-01 .2742E-01
.3031E-01 .3135E-01 .3266E-01 .3105E-01 .3116E-01 .2961E-01 .3102E-01 .2840E-01
.2960E-01 .2867E-01 .2640E-01 .2995E-01 .2897E-01 .2825E-01 .2763E-01 .2764E-01
.2740E-01 .2813E-01 .279 E-01 .2760E-01 .2701E-01 .2793E-01 .2675E-01 .2577E-01
.2471E-01 .2529E-01 .2264E-01 .2401E-01 .2448E-01 .2316E-01 .2361E-01 .2252E-01
.2140E-01 .2035E-01 .2050E-01 .2068E-01 .1990E-01 .1916E-01 .1858E-01 .1768E-01
.1726E-01 .1630E-01 .1605E-01 .1606E-01 .1415E-01 .1459E-01 .1331E-01 .1307E-01
.1264E-01 .1091E-01 .1088E-01 .1083E-01 .1098E-01 .9874E-02 .9085E-02 .8451E-02
.7884E-02 .7096E-02 .7448E-02 .6128E-02 .5667E-02 .5240E-02 .5302E-02 .4926E-02
.4970E-02 .3862E-02 .3704E-02 .4170E-02 .3146E-02 .1716E-02 .2281E-02 .2127E-02
.2224E-02 .1984E-02 .1530E-02 .1424E-02 .7315E-03 .9073E-03 .8224E-03 .3787E-03
.2267E-03 .2681E-03 .3210E-03 .9228E-03 .3315E-03 .9168E-03 .1600E-02 .1503E-02
.1962E-02 .1451E-02 .1114E-02 .1189E-02 .3348E-03 .2827E-03 .6038E-03 .4230E-03
.5866E-03 .1707E-03 .6346E-03 .7044E-03 .2594E-03 .4309E-03 .6820E-03 .2740E-03
.4132E-03 .4080E-03 .9556E-03 .8918E-03 .5955E-03 .7574E-03 .4705E-03 .8835E-03
.6981E-03 .2283E-03 .9935E-04 .2846E-03 .4190E-03 .3079E-03 .2625E-04 .1364E-03
.4651E-03 .1240E-03 .4260E-03 .5897E-04 .3716E-03 .3320E-03 .2069E-03 .4849E-04
.5198E-03 .3780E-04 .3851E-03 .2399E-03 .2853E-03 .5687E-03 .2312E-03 .2483E-03
.1002E-04 .2778E-03-.8716E-04 .3296E-03 .3657E-03 .8851E-04 .2563E-03 .2802E-03
.1967E-03 .2597E-03 .5778E-03 .3049E-03 .6445E-03 .6133E-03 .3792E-03 .2580E-03
.5433E-04 .4952E-03-.1833E-04 .2284E-04 .7968E-03 .2381E-03 .2370E-03 .2211E-03
.7138E-03 .4179E-03-.2915E-04 .3451E-03 .4914E-03-.1167E-03 .5374E-03 .4838E-03
.6802E-04 .3517E-03 .5608E-03 .1828E-03 .3669E-03 .3078E-03 .3726E-03 .5515E-03
.1228E-03 .5038E-03 .2520E-03 .3512E-04 .2477E-03 .1045E-03 .3628E-03 .3180E-03
.4320E-03-.6498E-04 .3025E-03 .2471E-03 .4612E-03 .3792E-03 .3773E-03 .4772E-03
.3475E-03 .3789E-03 .1907E-03-.8090E-04 .2571E-03 .1805E-03 .5531E-04-.1228E-03
.3054E-03-.1225E-03 .4639E-03 .2346E-03 .1017E-03 .3815E-03 .6280E-03 .3594E-03
.4366E-03 .1538E-03 .1410E-03-.2730E-04 .3120E-03 .5019E-03 .3837E-03 .3285E-04
-.1414E-03 .4248E-03 .5236E-04 .2390E-03 .5996E-03 .3245E-03-.1118E-03 .1965E-03
.1805E-03 .1298E-03-.6659E-04 .1299E-03 .2657E-03 .1814E-03 .5993E-03 .2164E-03

SALT BLAN MOLY WALL .750 IN DIB 4.25 INCHES EO=2.5 MEV

-.1411E-05-.6976E-06 .1419E-05 .8583E-05-.1696E-03-.9414E-04-.2416E-03-.7388E-04
.9686E-06 .3714E-03 .4307E-03 .3215E-03 .6799E-04 .3024E-04 .1979E-03-.2518E-03
.6891E-04 .5399E-04-.4463E-03-.1477E-03 .9424E-04-.3665E-04-.5103E-04 .1496E-05
-.2479E-03-.2359E-04-.2985E-03-.1339E-03-.6866E-04-.7676E-04-.1715E-03 .1864E-03
.9153E-04-.1912E-03-.4420E-04 .9850E-04-.1362E-04 .1939E-04-.2358E-03-.1176E-03
-.1806E-04-.2158E-03 .8378E-04 .1971E-04-.1217E-03-.1874E-03 .4205E-05-.5574E-04
-.9284E-04-.5565E-05-.3532E-04-.5860E-04-.7797E-04-.2677E-04 .9483E-04-.1164E-03
.6652E-04-.5688E-04-.5166E-04-.5180E-05-.7092E-04-.1030E-03 .1386E-03-.3616E-04
-.2993E-04 .1338E-03-.1969E-03-.2020E-03 .6937E-04 .1441E-04 .1831E-03 .1791E-04
-.3028E-04 .2411E-04 .6122E-04 .1929E-03 .1473E-03-.5840E-04 .4431E-04 .2482E-04
.5441E-05 .6943E-04 .1469E-03 .2821E-04-.2190E-04 .1110E-03 .7787E-04-.1375E-03
.6102E-04-.8026E-04-.1185E-03 .2266E-04 .2269E-04 .4968E-04 .1839E-04-.1592E-03
-.7112E-04 .9919E-04-.2182E-03 .4507E-04 .1002E-03 .6491E-04 .7399E-04 .1212E-03
.9878E-04 .1336E-03 .2911E-04 .1183E-03 .4091E-04 .1001E-03-.7267E-04 .2796E-04
.4591E-04 .9527E-04 .5096E-04 .5189E-04 .1878E-03 .1627E-03-.3577E-04 .8845E-04
.8982E-04 .7202E-04 .5665E-04 .6292E-04 .5526E-04 .1048E-03-.1583E-04 .5888E-05
.9303E-04 .4924E-05 .7868E-04 .1960E-03 .1080E-03 .1462E-03 .9506E-04 .1646E-03
.1676E-03 .1139E-03 .4731E-04-.6915E-04 .1256E-03-.8839E-04 .1205E-03 .4897E-04
.1654E-04-.7636E-05 .1174E-03 .4801E-04-.1166E-04-.1079E-05 .3210E-04 .8763E-04
.6748E-04 .4832E-04 .3344E-04 .8716E-04 .7950E-04 .9700E-04 .9460E-04 .8680E-04
.1443E-03 .1466E-03 .2679E-03 .4864E-04 .1193E-03 .1059E-03 .1129E-03 .1494E-03
-.1701E-04 .8303E-04 .5954E-04 .3850E-04 .4653E-04 .2880E-03 .1012E-03 .4750E-04
.3085E-04 .7346E-04 .3230E-04 .9813E-04-.7369E-05 .5737E-04-.2215E-05-.2679E-04
.1551E-04 .5762E-04 .6489E-04 .1351E-03 .1651E-03 .1112E-03 .1974E-03 .2002E-03
.1189E-03 .9366E-04 .2470E-03 .2917E-03 .1840E-03 .1360E-03 .2046E-03 .1037E-03
.1261E-03 .1305E-03 .6088E-04 .6358E-04 .3432E-04 .3117E-04 .4099E-04-.4453E-04
.4085E-04 .5218E-04 .2 78E-04 .1851E-03 .9568E-04 .1995E-03 .1662E-03 .2322E-03
.1756E-03 .2211E-03 .2548E-03 .2701E-03 .2192E-03 .1995E-03 .1869E-03 .1377E-03
.1871E-03 .1528E-03 .1508E-03 .1605E-03 .1475E-03 .4418E-04 .1143E-03 .6734E-04
.1027E-03 .1131E-03 .7894E-04 .1155E-03 .1240E-03 .1579E-03 .1181E-03 .8473E-04
.8186E-04 .1086E-03 .1078E-03 .7298E-04 .5872E-04 .5233E-04 .6797E-04 .7194E-04
.9951E-04 .6486E-04 .6059E-04 .5971E-04 .5259E-04 .4553E-04 .3059E-04 .4444E-05

SALT BLAN MOLY WALL .750 IN DIB 6.25 INCHES EO=0 MEV

.1355E-01	.1414E-01	.1349E-01	.1430E-01	.2457E-01	.4689E-01	.1461E-01	.2997E-01
.5620E-01	.3450E-01	.2977E-01	.2792E-01	.3220E-01	.3682E-01	.3161E-01	.2955E-01
.3135E-01	.2473E-01	.2 37E-01	.2621E-01	.2753E-01	.2500E-01	.2384E-01	.2712E-01
.3201E-01	.3664E-01	.4038E-01	.3995E-01	.3760E-01	.3486E-01	.3593E-01	.3318E-01
.3349E-01	.3340E-01	.3347E-01	.3284E-01	.3292E-01	.3249E-01	.3316E-01	.3104E-01
.3115E-01	.3151E-01	.3197E-01	.3153E-01	.3265E-01	.3226E-01	.3294E-01	.3043E-01
.2954E-01	.2928E-01	.2848E-01	.2792E-01	.2849E-01	.2720E-01	.2730E-01	.2646E-01
.2556E-01	.2506E-01	.2497E-01	.2322E-01	.2366E-01	.2302E-01	.2236E-01	.2212E-01
.2172E-01	.2094E-01	.2005E-01	.1904E-01	.1946E-01	.1762E-01	.1764E-01	.1700E-01
.1593E-01	.1570E-01	.1521E-01	.1427E-01	.1500E-01	.1366E-01	.1233E-01	.1216E-01
.1135E-01	.1084E-01	.1025E-01	.9492E-02	.8464E-02	.8136E-02	.8176E-02	.7709E-02
.7555E-02	.7376E-02	.6184E-02	.6054E-02	.5949E-02	.5624E-02	.4717E-02	.4633E-02
.5064E-02	.4317E-02	.3736E-02	.3465E-02	.3596E-02	.2384E-02	.2697E-02	.2977E-02
.1763E-02	.1345E-02	.1110E-02	.4736E-03	.7736E-03	.3347E-03	.7003E-03	.1168E-02
.1622E-02	.2895E-02	.2589E-02	.2850E-02	.3067E-02	.2330E-02	.1580E-02	.1490E-02
.1800E-02	.1334E-02	.9329E-03	.1101E-02	.8645E-03	.1422E-03	.1349E-03	.6794E-03
.6214E-03	.5774E-03	.4334E-03	.8842E-03	.6887E-03	.1717E-02	.1204E-02	.1719E-02
.1555E-02	.1619E-02	.1013E-02	.8188E-03	.9039E-03	.1042E-02	.6098E-03	.8303E-03
.9270E-03	.7133E-03	.5459E-03	.8026E-03	.8341E-03	.7379E-03	.3558E-03	.6191E-03
.8839E-03	.3953E-03	.5635E-03	.6614E-03	.7782E-03	.9201E-03	.1005E-02	.3935E-03
.9406E-03	.9987E-03	.2034E-03	.8170E-03	.5838E-03	.4839E-03	.6629E-03	.3332E-03
.6320E-03	.5740E-03	.8043E-03	.7535E-03	.5833E-03	.1027E-02	.6035E-03	.6049E-03
.7010E-03	.3637E-03	.8250E-03	.6533E-03	.7968E-03	.6656E-03	.6108E-03	.2677E-03
.6205E-03	.3507E-03	.8623E-03	.2648E-03	.6843E-03	.6482E-03	.6084E-03	.4689E-03
.8461E-03	.6062E-03	.2694E-03	.3134E-03	.4004E-03	.3497E-03	.1652E-03	.4003E-03
.6763E-03	.7858E-03	.2662E-03	.6510E-03	.9887E-03	.6917E-03	.7086E-03	.7953E-03
.5527E-03	.6030E-03	.5182E-03	.7263E-03	.3768E-03	.5117E-03	.5333E-03	.5394E-03
.5134E-03	.3147E-03	.3046E-03	.6892E-03	.4745E-03	.4062E-03	.6254E-03	.5084E-03
.5024E-03	.2834E-03	.8320E-03	.8048E-03	.3549E-03	.5397E-03	.4485E-03	.7612E-03
.8087E-03	.8353E-03	.4758E-03	.5242E-03	.3597E-03	.3619E-03	.2741E-03	.3676E-03
.5872E-03	.2819E-03	.5375E-03	.2680E-03	.5534E-03	.3467E-03	.3341E-03	.7223E-03
.4766E-03	.4285E-03	.1521E-03	.3148E-03	.4328E-03	.1503E-03	.1275E-03	.3776E-03

SALT BLAN MOLY WALL .750 IN DIB 6.25 INCHES EO=2.5 MEV

.7578E-06	.4906E-05	.0000E 00	-.9577E-06	-.9161E-03	.9273E-03	.8339E-03	.1077E-02
.9643E-03	.1028E-02	.1189E-02	.1517E-02	.1664E-02	.1609E-02	.1361E-02	.1191E-02
.9609E-03	.8744E-03	.1183E-02	.1110E-02	.6089E-03	.7717E-03	.8407E-03	.8354E-03
.5298E-03	.0010E-03	.8101E-03	.6990E-03	.6376E-03	.7103E-03	.6532E-03	.6480E-03
.7391E-03	.9632E-03	.9615E-03	.8604E-03	.7137E-03	.9598E-03	.5809E-03	.7894E-03
.7373E-03	.9445E-03	.7222E-03	.5347E-03	.3625E-03	.7350E-03	.5155E-03	.5303E-03
.6151E-03	.8892E-03	.6433E-03	.7396E-03	.7188E-03	.5861E-03	.8566E-03	.3679E-03
.6976E-03	.7145E-03	.7947E-03	.7154E-03	.6553E-03	.8126E-03	.6440E-03	.7447E-03
.5774E-03	.5566E-03	.8573E-03	.5872E-03	.5927E-03	.6735E-03	.6018E-03	.5698E-03
.5210E-03	.6114E-03	.4 80E-03	.5654E-03	.6541E-03	.5977E-03	.6195E-03	.6648E-03
.6048E-03	.6468E-03	.4903E-03	.7340E-03	.5921E-03	.6719E-03	.5024E-03	.5679E-03
.5225E-03	.6260E-03	.675 E-03	.7021E-03	.5231E-03	.5126E-03	.4755E-03	.4638E-03
.4621E-03	.3451E-03	.6013E-03	.5580E-03	.4414E-03	.5268E-03	.6439E-03	.4978E-03
.4757E-03	.6678E-03	.3916E-03	.5886E-03	.5757E-03	.5257E-03	.5596E-03	.5145E-03
.7064E-03	.5066E-03	.4509E-03	.4782E-03	.3319E-03	.4100E-03	.4557E-03	.2219E-03
.4034E-03	.3469E-03	.5535E-03	.1362E-03	.3565E-03	.3307E-03	.5101E-03	.3002E-03
.3440E-03	.3436E-03	.5151E-03	.3096E-03	.2968E-03	.5206E-03	.4551E-03	.4019E-03
.5089E-03	.5315E-03	.3258E-03	.4570E-03	.4747E-03	.3326E-03	.4497E-03	.3817E-03
.5024E-03	.2652E-03	.2783E-03	.2601E-03	.3895E-03	.2731E-03	.1596E-03	.4280E-03
.3035E-03	.5145E-03	.2678E-03	.3387E-03	.4198E-03	.2210E-03	.2205E-03	.3094E-03
.5353E-03	.3566E-03	.2914E-03	.4789E-03	.4069E-03	.3705E-03	.4292E-03	.4254E-03
.3225E-03	.3529E-03	.4044E-03	.3316E-03	.4831E-03	.4485E-03	.3869E-03	.2082E-03
.4670E-03	.2897E-03	.3076E-03	.3079E-03	.2421E-03	.3341E-03	.2779E-03	.2613E-03
.2334E-03	.2704E-03	.1240E-03	.2369E-03	.2808E-03	.1829E-03	.2752E-03	.2673E-03
.2489E-03	.2787E-03	.3332E-03	.3314E-03	.4946E-03	.4433E-03	.3793E-03	.4636E-03
.3823E-03	.3484E-03	.4095E-03	.3948E-03	.4368E-03	.3771E-03	.4108E-03	.3245E-03
.2861E-03	.2093E-03	.2034E-03	.1639E-03	.2240E-03	.1483E-03	.1598E-03	.1903E-03
.1768E-03	.1369E-03	.1827E-03	.3149E-03	.3548E-03	.3745E-03	.4898E-03	.4469E-03
.4027E-03	.3903E-03	.4298E-03	.4048E-03	.3428E-03	.2542E-03	.3029E-03	.1599E-03
.2061E-03	.1665E-03	.2479E-03	.1731E-03	.1653E-03	.1826E-03	.2181E-03	.1509E-03
.2046E-03	.1938E-03	.1982E-03	.2164E-03	.2169E-03	.2284E-03	.1794E-03	.1597E-03
.1271E-03	.1239E-03	.1 94E-03	.1116E-03	.7210E-04	.1075E-03	.9673E-04	.8830E-04

SALT BLAN MOLY WALL .750 IN DIB 8.25 INCHES EO=0 MEV

-.1002E 00-.1002E 00-.1003E 00-.1010E 00-.1597E-02 .1791E-01 .2823E-01 .10 E-01
.9025E-02 .1274E-01 .11 E-01 .1015E-01 .8764E-02 .7234E-02 .7253E-02 .6870E-02
.6319E-02 .7649E-02 .7360E-02 .6415E-02 .5835E-02 .4345E-02 .6431E-02 .7171E-02
.4950E-02 .6273E-02 .6536E-02 .5180E-02 .5040E-02 .4737E-02 .3504E-02 .3802E-02
.4519E-02 .4499E-02 .3387E-02 .3476E-02 .3157E-02 .3218E-02 .2022E-02 .2794E-02
.2093E-02 .2205E-02 .2376E-02 .2984E-02 .1889E-02 .2814E-02 .2473E-02 .2812E-02
.1934E-02 .2198E-02 .2767E-02 .1529E-02 .1528E-02 .2536E-02 .1369E-02 .1672E-02
.1199E-02 .2180E-02 .2102E-02 .1309E-02 .2849E-02 .2628E-02 .2497E-02 .1770E-02
.2313E-02 .2278E-02 .1571E-02 .1358E-02 .2106E-02 .2188E-02 .1556E-02 .1915E-02
.1805E-02 .1910E-02 .2169E-02 .1912E-02 .2283E-02 .1831E-02 .1518E-02 .1972E-02
.1582E-02 .2477E-02 .2466E-02 .1433E-02 .2306E-02 .1667E-02 .1705E-02 .1304E-02
.1978E-02 .2287E-02 .2098E-02 .1918E-02 .1634E-02 .2542E-02 .1867E-02 .1406E-02
.1587E-02 .1836E-02 .1915E-02 .2240E-02 .1576E-02 .1941E-02 .1525E-02 .1689E-02
.8937E-03 .1226E-02 .1883E-02 .1431E-02 .1390E-02 .1689E-02 .1529E-02 .1816E-02
.2725E-02 .1925E-02 .1310E-02 .1439E-02 .8917E-03 .1287E-02 .1122E-02 .9085E-03
.6395E-03 .8498E-03 .8462E-03 .9889E-03 .9255E-03 .9867E-03 .1004E-02 .9456E-03
.1065E-02 .6877E-03 .8690E-03 .1010E-02 .7997E-03 .9705E-03 .8173E-03 .1290E-02
.9716E-03 .1109E-02 .1246E-02 .8470E-03 .5359E-03 .6633E-03 .9527E-03 .7181E-03
.1156E-02 .6039E-03 .7463E-03 .1664E-03 .1052E-02 .7007E-03 .9168E-03 .8187E-03
.6807E-03 .6147E-03 .8771E-03 .6868E-03 .7192E-03 .4879E-03 .7901E-03 .6994E-03
.6926E-03 .8630E-03 .8632E-03 .7865E-03 .8960E-03 .6427E-03 .7665E-03 .8181E-03
.6754E-03 .5930E-03 .5266E-03 .8374E-03 .5351E-03 .4857E-03 .8964E-03 .9355E-03
.4091E-03 .7240E-03 .9086E-03 .5847E-03 .7600E-03 .7850E-03 .9549E-03 .6239E-03
.9208E-03 .6006E-03 .6159E-03 .3941E-03 .8516E-03 .6197E-03 .6668E-03 .5729E-03
.7811E-03 .3325E-03 .5036E-03 .6554E-03 .6108E-03 .9572E-03 .5522E-03 .5260E-03
.7301E-03 .6600E-03 .5595E-03 .7172E-03 .4681E-03 .3892E-03 .5455E-03 .4524E-03
.5166E-03 .6537E-03 .7030E-03 .2189E-03 .4702E-03 .6639E-03 .4228E-03 .5959E-03
.2035E-03 .5192E-03 .1070E-02 .3854E-03 .2619E-03 .4703E-03 .6774E-03 .2875E-03
.3133E-03 .5062E-03 .2201E-03 .3831E-03 .3377E-03 .7402E-03 .4666E-03 .4169E-03
.2819E-03 .2301E-03 .4211E-03 .1750E-03 .3979E-03 .6075E-03 .1857E-03 .2920E-03
.2424E-03 .5123E-03 .2820E-03 .7012E-03 .5272E-03 .5944E-03 .7801E-04 .3609E-03
.5742E-04 .2596E-03 .5233E-03 .3059E-03 .2064E-03 .1860E-03 .3346E-03 .1909E-03

SALT BLAN MOLY WALL .750 IN DIB 8.25 INCHES EO=2.5 MEV

.0000E 00	-.6196E-06	.0000E 00	.3764E-05	-.4272E-02	.1558E-02	.1706E-02	.1480E-02
.1316E-02	.1426E-02	.1242E-02	.1290E-02	.1277E-02	.1105E-02	.1214E-02	.1017E-02
.9257E-03	.9374E-03	.1171E-02	.1051E-02	.8864E-03	.1090E-02	.7733E-03	.1121E-02
.1035E-02	.1168E-02	.7865E-03	.1085E-02	.9466E-03	.8773E-03	.8683E-03	.8722E-03
.7958E-03	.7601E-03	.7196E-03	.7218E-03	.7556E-03	.8205E-03	.7735E-03	.8288E-03
.7068E-03	.6931E-03	.6941E-03	.8402E-03	.6567E-03	.8008E-03	.6810E-03	.8005E-03
.7938E-03	.7062E-03	.9629E-03	.7871E-03	.5647E-03	.7050E-03	.7141E-03	.3972E-03
.5752E-03	.8535E-03	.6314E-03	.6044E-03	.7062E-03	.5120E-03	.7401E-03	.6438E-03
.9547E-03	.7966E-03	.5393E-03	.5401E-03	.4512E-03	.6190E-03	.6863E-03	.6471E-03
.6714E-03	.8223E-03	.6702E-03	.6160E-03	.6232E-03	.5514E-03	.7214E-03	.6738E-03
.6361E-03	.7164E-03	.5479E-03	.6683E-03	.6023E-03	.5430E-03	.6319E-03	.5618E-03
.6957E-03	.7008E-03	.5127E-03	.3885E-03	.5437E-03	.4820E-03	.3956E-03	.4878E-03
.5228E-03	.5993E-03	.4113E-03	.4868E-03	.6911E-03	.5817E-03	.3626E-03	.4628E-03
.4667E-03	.4100E-03	.3759E-03	.4390E-03	.4248E-03	.4877E-03	.3913E-03	.2433E-03
.3805E-03	.4707E-03	.4274E-03	.5247E-03	.3524E-03	.5828E-03	.4189E-03	.5005E-03
.3814E-03	.3170E-03	.4040E-03	.4567E-03	.3920E-03	.3853E-03	.2834E-03	.4150E-03
.3696E-03	.5176E-03	.4446E-03	.5972E-03	.2965E-03	.3940E-03	.3815E-03	.3645E-03
.4289E-03	.3395E-03	.3025E-03	.2706E-03	.4612E-03	.2242E-03	.2949E-03	.1924E-03
.2784E-03	.2952E-03	.3119E-03	.3635E-03	.2535E-03	.2866E-03	.2290E-03	.1957E-03
.3507E-03	.2437E-03	.3430E-03	.3038E-03	.2805E-03	.4023E-03	.2688E-03	.3530E-03
.1860E-03	.3651E-03	.2861E-03	.2252E-03	.2853E-03	.3104E-03	.1868E-03	.2295E-03
.2059E-03	.3549E-03	.2977E-03	.2863E-03	.3108E-03	.5572E-04	.2309E-03	.1843E-03
.1728E-03	.2180E-03	.1210E-03	.1867E-03	.2659E-03	.3588E-03	.2250E-03	.1739E-03
.1669E-03	.1918E-03	.1207E-03	.2794E-03	.8845E-04	.1882E-03	.1500E-03	.1532E-03
.1643E-03	.2845E-03	.1558E-03	.1986E-03	.2045E-03	.1683E-03	.1256E-03	.1880E-03
.1101E-03	.1086E-03	.1326E-03	.1517E-03	.1571E-03	.8045E-04	.1062E-03	.1449E-03
.9526E-04	.1221E-03	.1312E-03	.1253E-03	.1193E-03	.1574E-03	.1291E-03	.1653E-03
.1429E-03	.1333E-03	.1576E-03	.1722E-03	.1515E-03	.1721E-03	.1224E-03	.1342E-03
.1197E-03	.1025E-03	.8259E-04	.1193E-03	.1113E-03	.5805E-04	.7075E-04	.6384E-04
.8448E-04	.7633E-04	.8490E-04	.9730E-04	.7351E-04	.6063E-04	.3766E-04	.3726E-04
.5502E-04	.6483E-04	.5452E-04	.2449E-05	.3863E-04	.1794E-04	.4886E-04	.3719E-04
.2465E-04	.2786E-04	.3468E-04	.2503E-04	.4376E-04	.4841E-04	.4620E-04	.1503E-04

SALT BLAN MOLY WALL .375 IN DIB 2.25 INCHES EO=0 MEV

.1304E 00	.1311E 00	.1304E 00	.1328E 00	.4333E-01	.7104E-01	.1693E-01	.5250E-01
.8897E-01	.5004E-01	.4401E-01	.3988E-01	.4534E-01	.5194E-01	.4335E-01	.4166E-01
.4000E-01	.3362E-01	.3307E-01	.3795E-01	.3829E-01	.3557E-01	.3342E-01	.3845E-01
.4620E-01	.5236E-01	.5644E-01	.5542E-01	.5152E-01	.4947E-01	.4713E-01	.4269E-01
.4484E-01	.4488E-01	.4439E-01	.4502E-01	.4358E-01	.4338E-01	.4401E-01	.4325E-01
.4182E-01	.4274E-01	.4248E-01	.4304E-01	.4349E-01	.4281E-01	.4240E-01	.4129E-01
.4052E-01	.3931E-01	.3714E-01	.3741E-01	.3776E-01	.3612E-01	.3490E-01	.3445E-01
.3408E-01	.3339E-01	.3 13E-01	.3134E-01	.3255E-01	.3109E-01	.2866E-01	.2878E-01
.2843E-01	.2800E-01	.2667E-01	.2533E-01	.2497E-01	.2382E-01	.2386E-01	.2228E-01
.2177E-01	.2006E-01	.2071E-01	.1841E-01	.1836E-01	.1706E-01	.1581E-01	.1414E-01
.1432E-01	.1396E-01	.1231E-01	.1285E-01	.1126E-01	.1113E-01	.1015E-01	.9778E-02
.8589E-02	.9507E-02	.8988E-02	.7373E-02	.6689E-02	.6652E-02	.5590E-02	.5676E-02
.5486E-02	.3992E-02	.4917E-02	.3535E-02	.3628E-02	.3153E-02	.3019E-02	.2212E-02
.2019E-02	.1606E-02	.1039E-02	.8031E-03	.3829E-03	.5721E-03	.1651E-02	.2359E-02
.3576E-02	.3245E-02	.3626E-02	.4109E-02	.3858E-02	.3186E-02	.2330E-02	.2265E-02
.1636E-02	.1557E-02	.1198E-02	.1290E-02	.9876E-03	.2759E-03	.7609E-03	.5836E-03
.1048E-02	.1062E-02	.1497E-02	.1277E-02	.1562E-02	.1546E-02	.1584E-02	.1806E-02
.2087E-02	.2024E-02	.1420E-02	.1298E-02	.1088E-02	.8192E-03	.8782E-03	.1151E-02
.1301E-02	.9972E-03	.5511E-03	.1029E-02	.1120E-02	.1086E-02	.1018E-02	.8777E-03
.8660E-03	.1042E-02	.8654E-03	.1125E-02	.1165E-02	.9977E-03	.1045E-02	.8622E-03
.1065E-02	.6856E-03	.8247E-03	.8114E-03	.1189E-02	.7068E-03	.1098E-02	.7709E-03
.1034E-02	.5434E-03	.6359E-03	.3963E-03	.1006E-02	.8824E-03	.8573E-03	.1034E-02
.7262E-03	.9765E-03	.1102E-02	.7495E-03	.7356E-03	.1048E-02	.7345E-03	.6735E-03
.9873E-03	.1086E-02	.7250E-03	.7302E-03	.6963E-03	.7372E-03	.6559E-03	.7392E-03
.6084E-03	.7403E-03	.2961E-03	.4830E-03	.4428E-03	.5746E-03	.6596E-03	.8006E-03
.7941E-03	.7065E-03	.7270E-03	.1327E-02	.8717E-03	.6573E-03	.9146E-03	.6375E-03
.8014E-03	.5409E-03	.7011E-03	.5721E-03	.8811E-03	.8009E-03	.6625E-03	.4548E-03
.8195E-03	.8646E-03	.5575E-03	.5969E-03	.3358E-03	.5256E-03	.5072E-03	.4712E-03
.5744E-03	.4595E-03	.4391E-03	.1032E-02	.6994E-03	.6787E-03	.6206E-03	.8188E-03
.7401E-03	.8070E-03	.6386E-03	.6163E-03	.5246E-03	.5711E-03	.5689E-03	.4065E-03
.6322E-03	.5738E-03	.5326E-03	.6324E-03	.6072E-03	.6373E-03	.7053E-03	.5264E-03
.5732E-03	.3845E-03	.6247E-03	.6868E-03	.6617E-03	.6576E-03	.6247E-03	.8401E-03

SALT BLAN MOLY WALL .375 IN DIB 2.25 INCHES EO=2.5 MEV

.0000E 00-	.2586E-05	.0000E 00-	.1733E-05	.9467E-03	.7204E-03	.4710E-03	.8804E-03
.1128E-02	.1131E-02	.8100E-03	.9584E-03	.1157E-02	.9195E-03	.5280E-03	.8144E-03
.6396E-03	.4362E-03	.4787E-03	.4820E-03	.4869E-03	.6550E-03	.3475E-03	.6424E-03
.7232E-03	.4552E-03	.5787E-03	.6670E-03	.6248E-03	.4823E-03	.3617E-03	.6049E-03
.5146E-03	.6448E-03	.6614E-03	.5244E-03	.4913E-03	.5150E-03	.3460E-03	.3534E-03
.3107E-03	.3406E-03	.4425E-03	.3142E-03	.5145E-03	.6458E-03	.3527E-03	.3943E-03
.2385E-03	.3832E-03	.3922E-03	.3847E-03	.4755E-03	.5710E-03	.4865E-03	.3883E-03
.3945E-03	.2876E-03	.4599E-03	.3711E-03	.2424E-03	.2409E-03	.4781E-03	.4055E-03
.4236E-03	.3458E-03	.4848E-03	.3230E-03	.3956E-03	.3609E-03	.3234E-03	.2300E-03
.4460E-03	.5084E-03	.2987E-03	.4306E-03	.3505E-03	.6622E-03	.3171E-03	.5847E-03
.4858E-03	.4005E-03	.5840E-03	.4495E-03	.5358E-03	.4231E-03	.4374E-03	.4620E-03
.3193E-03	.4407E-03	.4146E-03	.3220E-03	.3444E-03	.2233E-03	.3170E-03	.3787E-03
.3104E-03	.2395E-03	.4769E-03	.2487E-03	.3126E-03	.3964E-03	.4851E-03	.3679E-03
.4047E-03	.5626E-03	.3162E-03	.4439E-03	.4015E-03	.2534E-03	.3984E-03	.3531E-03
.2957E-03	.2503E-03	.3255E-03	.4146E-03	.3428E-03	.2184E-03	.3069E-03	.4010E-03
.3987E-03	.2441E-03	.1157E-03	.2060E-03	.1550E-03	.1650E-03	.2335E-03	.3002E-03
.2145E-03	.3384E-03	.3260E-03	.3740E-03	.4375E-03	.4517E-03	.5793E-03	.4498E-03
.4240E-03	.4421E-03	.4136E-03	.3660E-03	.4114E-03	.1303E-03	.2539E-03	.2660E-03
.1548E-03	.2720E-03	.2085E-03	.1622E-03	.2742E-03	.3006E-03	.1623E-03	.1545E-03
.3038E-03	.3281E-03	.2787E-03	.3433E-03	.3167E-03	.2769E-03	.4011E-03	.5319E-03
.2173E-03	.3313E-03	.2243E-03	.3748E-03	.2834E-03	.3589E-03	.2961E-03	.2818E-03
.3991E-03	.2714E-03	.2553E-03	.2241E-03	.3780E-03	.3179E-03	.3281E-03	.2130E-03
.2335E-03	.3039E-03	.2938E-03	.3214E-03	.1929E-03	.1865E-03	.1854E-03	.2633E-03
.1851E-03	.2298E-03	.2956E-03	.2314E-03	.3994E-03	.1961E-03	.3473E-03	.3076E-03
.3527E-03	.3489E-03	.4130E-03	.4582E-03	.4695E-03	.3904E-03	.472 E-03	.456 E-03
.3967E-03	.3265E-03	.3466E-03	.2535E-03	.2363E-03	.2444E-03	.2449E-03	.2660E-03
.1438E-03	.2025E-03	.1053E-03	.1686E-03	.1141E-03	.1990E-03	.1816E-03	.2779E-03
.3082E-03	.3558E-03	.2926E-03	.3417E-03	.3566E-03	.4190E-03	.3600E-03	.3539E-03
.3599E-03	.2576E-03	.2682E-03	.2813E-03	.2083E-03	.2124E-03	.2102E-03	.1990E-03
.1669E-03	.1565E-03	.1661E-03	.1760E-03	.1671E-03	.1616E-03	.1757E-03	.2214E-03
.2003E-03	.1730E-03	.2795E-03	.2229E-03	.1749E-03	.1551E-03	.1554E-03	.1306E-03
.1529E-03	.1350E-03	.1287E-03	.8705E-04	.8225E-04	.1028E-03	.9163E-04	.9604E-04

SALT BLAN MOLY WALL .375 IN DIB 4.25 INCHES EO=0 MEV

-.1588E-03 .1358E-03-.1800E-03-.1362E-04 .1757E-03 .2288E-01-.3760E-02 .1315E-01
.18 E-01 .1604E-01 .14 E-01 .1319E-01 .1279E-01 .1509E-01 .15 E-01 .1541E-01
.1468E-01 .1329E-01 .1294E-01 .1442E-01 .1283E-01 .1336E-01 .1319E-01 .1448E-01
.18 E-01 .1684E-01 .1724E-01 .1651E-01 .1566E-01 .1517E-01 .1662E-01 .1572E-01
.1669E-01 .1515E-01 .1387E-01 .1666E-01 .1600E-01 .1435E-01 .1343E-01 .1477E-01
.1578E-01 .1466E-01 .1438E-01 .1452E-01 .1529E-01 .1422E-01 .1354E-01 .1403E-01
.1345E-01 .1385E-01 .1308E-01 .1291E-01 .1222E-01 .1273E-01 .1310E-01 .1294E-01
.1192E-01 .1164E-01 .1145E-01 .1056E-01 .1088E-01 .1031E-01 .1055E-01 .9469E-02
.8913E-02 .8706E-02 .9053E-02 .8682E-02 .7810E-02 .8255E-02 .6736E-02 .7412E-02
.6027E-02 .6089E-02 .5251E-02 .5927E-02 .5323E-02 .4883E-02 .4924E-02 .4485E-02
.3793E-02 .3831E-02 .3773E-02 .2846E-02 .2654E-02 .2767E-02 .2595E-02 .2822E-02
.2317E-02 .1816E-02 .1626E-02 .2189E-02 .1147E-02 .7319E-03 .5249E-03 .1070E-02
.1246E-02 .1028E-02 .5726E-03 .1229E-03 .1631E-03 .3797E-03 .5183E-03 .5741E-03
-.3611E-03 .2439E-03 .4199E-03 .7451E-03 .8617E-03 .5128E-03 .1270E-02 .6503E-03
.1088E-02 .6491E-03 .4128E-03 .2242E-03 .3577E-03 .8646E-04-.2035E-03-.8623E-04
.1510E-03-.4481E-03 .6016E-03 .6102E-04 .3593E-03-.3535E-04-.5863E-04-.3068E-03
-.2413E-04 .1787E-03-.2620E-04 .2567E-03 .4086E-03 .4356E-03 .2255E-03 .4311E-03
-.3526E-04 .1062E-03 .3967E-04 .1064E-03-.1040E-03-.1011E-03-.8242E-04-.6343E-04
.2909E-03 .9886E-04 .1713E-03 .3710E-03 .3073E-03 .4168E-03 .1476E-03 .4644E-04
.1719E-03 .8406E-04 .1774E-03-.2434E-03 .1591E-03 .3753E-03-.3737E-03 .3701E-03
.2047E-03 .2210E-03 .1408E-03-.1573E-03-.4265E-04 .2667E-04-.3943E-03 .2723E-03
.4187E-03 .2706E-04 .3576E-03 .4043E-04 .6991E-04-.1138E-03 .2195E-03 .1502E-03
-.9774E-04 .1877E-03-.1189E-03 .2223E-03 .7718E-03-.2782E-04 .1588E-03 .7623E-04
.4479E-03-.3825E-04-.1847E-03 .4989E-04 .2819E-03-.1367E-03 .5431E-03 .4961E-05
-.1871E-03 .3168E-03 .2528E-03 .3915E-03-.4563E-04-.9065E-04 .4103E-03 .1015E-03
.1386E-03 .2829E-03 .8402E-05-.1756E-03 .6443E-04 .3068E-03 .3363E-03 .1526E-03
.3607E-03-.1483E-03 .1341E-03-.8141E-04 .1956E-03 .3448E-03 .4463E-03 .2705E-03
.1344E-03 .1052E-03 .1825E-03 .2571E-03 .3025E-03 .1081E-03-.2223E-03-.2570E-03
.2468E-03 .8699E-04 .4363E-03-.1208E-03-.9670E-04 .4019E-03 .3405E-03 .4633E-03
.2662E-03-.7776E-04 .6342E-04 .2074E-03 .1197E-03 .5850E-04-.2423E-04-.1617E-04
-.2107E-03 .4103E-03 .1092E-03 .2583E-03 .2240E-03 .1040E-03-.1887E-04-.2929E-04
-.2876E-03-.4514E-04 .1973E-03 .3093E-03 .1521E-03 .1708E-03 .5176E-03 .9384E-04

SALT BLAN MOLY WALL .375 IN DIB 4.25 INCHES EO=2.5 MEV

-.6800E-06-.6545E-06 .0000E 00-.1734E-05-.5610E-04-.1571E-03 .5268E-04 .2177E-03
.2642E-03 .8111E-03 .5309E-03 .6137E-03 .2359E-03 .3976E-03 .4186E-03 .1682E-03
.3241E-03 .2139E-03-.1221E-04 .3536E-04-.3602E-04-.1580E-05 .1455E-03 .2459E-03
-.4253E-04 .4887E-04-.6230E-04-.9676E-04 .2597E-03 .1269E-03 .7223E-04 .7492E-04
.3243E-03-.1670E-03 .1984E-03 .1562E-03 .1318E-03 .1062E-03-.3325E-04-.2190E-04
.8065E-05 .3244E-05 .2140E-03 .1211E-03-.3297E-05 .2975E-04 .9084E-04 .1550E-03
-.1814E-04 .2567E-04 .8144E-04 .2638E-03-.1365E-04 .2818E-03 .2260E-03 .1576E-03
.3671E-03 .5224E-04 .2379E-03 .1523E-03 .1412E-03 .1649E-03 .2126E-03 .1093E-03
.1273E-03 .1381E-03 .6865E-04 .1043E-04 .5208E-04 .9537E-04 .2002E-03 .2649E-03
.3071E-03 .1029E-03 .1475E-03 .1603E-03 .2007E-03 .1862E-04 .1396E-03 .2945E-03
.1593E-03 .1951E-03 .2210E-03 .7157E-04 .4177E-04 .1618E-03 .1830E-03 .1175E-04
.1693E-03 .1641E-03 .1567E-03 .1629E-03 .2082E-03 .1901E-03 .2451E-03-.1591E-03
.3379E-04 .8955E-04 .1500E-03 .1852E-03 .2216E-03 .2309E-03 .2226E-03 .3265E-03
.2551E-03 .2005E-03 .1663E-03 .2417E-03 .2646E-03 .2679E-03 .1178E-03 .1513E-03
.2337E-03 .1419E-03 .2654E-03 .1375E-03 .2247E-03 .2515E-03 .2428E-03 .3008E-03
-.9177E-05 .5448E-04 .1854E-03 .1364E-03 .1693E-03 .1363E-03 .5934E-04 .3198E-03
.1483E-03 .1522E-03 .1587E-03 .3620E-03 .2387E-03 .3077E-03 .1801E-03 .2378E-03
.2428E-03 .2558E-03 .1979E-03 .9620E-04 .2308E-03 .8105E-04 .1698E-03 .1369E-03
.6659E-04 .2158E-03 .1605E-03 .2250E-03 .1455E-03 .6615E-04 .8413E-04 .9547E-04
.2017E-03 .1440E-03 .1543E-03 .1850E-03 .2012E-03 .1851E-03 .2243E-03 .3505E-03
.1982E-03 .2465E-03 .2708E-03 .2307E-03 .2028E-03 .1926E-03 .1567E-03 .1696E-03
.8756E-04 .2497E-03 .2616E-03 .1665E-03 .1541E-03 .2169E-03 .1555E-03 .1831E-03
.1410E-03 .1630E-03 .1468E-03 .1239E-03 .2874E-04 .1291E-03 .1036E-03 .6574E-04
.1507E-04 .4866E-04 .1629E-03 .1022E-03 .2456E-03 .1688E-03 .2498E-03 .2636E-03
.2213E-03 .7125E-04 .3231E-03 .3512E-03 .2844E-03 .2915E-03 .1958E-03 .2331E-03
.2194E-03 .1649E-03 .1010E-03 .1403E-03 .1049E-03 .1642E-03 .7141E-04 .2516E-04
.9970E-04 .7110E-04 .8551E-04 .1539E-03 .1893E-03 .2932E-03 .1926E-03 .2589E-03
.2874E-03 .3175E-03 .3597E-03 .4272E-03 .2337E-03 .2881E-03 .2628E-03 .2323E-03
.2180E-03 .2341E-03 .1792E-03 .1943E-03 .1836E-03 .1645E-03 .1439E-03 .1585E-03
.1351E-03 .1469E-03 .2015E-03 .1975E-03 .1773E-03 .1436E-03 .1922E-03 .1509E-03
.1244E-03 .1145E-03 .1469E-03 .1095E-03 .1069E-03 .9368E-04 .5666E-04 .1213E-03
.1236E-03 .8043E-04 .6647E-04 .8877E-04 .7397E-04 .4199E-04 .5855E-04 .1898E-04

SALT BLAN MOLY WALL .375 IN DIB 6.25 INCHES EO=0 MEV

.1294E-02	.1649E-02	.1227E-02	.2030E-02	.1687E-01	.2698E-01	.9379E-02	.2050E-01
.208 E-01	.1466E-01	.11 E-01	.9188E-02	.1017E-01	.1315E-01	.8169E-02	.5955E-02
.5990E-02	.1787E-02	.5925E-03	.2636E-02	.3762E-02	.1174E-02	.8639E-03	.3276E-02
.7210E-02	.1066E-01	.1059E-01	.9807E-02	.7741E-02	.5346E-02	.5470E-02	.3304E-02
.3083E-02	.3854E-02	.2369E-02	.3524E-02	.3635E-02	.1709E-02	.2811E-02	.1598E-02
.2727E-02	.1803E-02	.2219E-02	.2568E-02	.3447E-02	.3520E-02	.3355E-02	.2417E-02
.2316E-02	.1737E-02	.1815E-02	.1449E-02	.1971E-02	.1863E-02	.2465E-02	.1731E-02
.1785E-02	.1625E-02	.1746E-02	.1979E-02	.2418E-02	.2535E-02	.2249E-02	.1587E-02
.2983E-02	.3207E-02	.1970E-02	.2024E-02	.2468E-02	.2359E-02	.1945E-02	.3173E-02
.2248E-02	.2500E-02	.2475E-02	.2158E-02	.2767E-02	.2941E-02	.2427E-02	.2561E-02
.2239E-02	.2157E-02	.2170E-02	.1596E-02	.2331E-02	.2086E-02	.2109E-02	.2391E-02
.3183E-02	.2980E-02	.3473E-02	.2541E-02	.3281E-02	.2948E-02	.2316E-02	.3295E-02
.2954E-02	.2749E-02	.2649E-02	.2794E-02	.2871E-02	.2666E-02	.2198E-02	.2401E-02
.1812E-02	.1463E-02	.1200E-02	.1458E-02	.7585E-03	.6082E-03	.1683E-02	.2081E-02
.2048E-02	.2826E-02	.3391E-02	.3237E-02	.3137E-02	.2502E-02	.2223E-02	.1558E-02
.1947E-02	.1249E-02	.1143E-02	.1087E-02	.1314E-02	.7033E-03	.6543E-03	.8857E-03
.1478E-02	.1115E-02	.8908E-03	.1784E-02	.1288E-02	.1482E-02	.1560E-02	.2009E-02
.1798E-02	.1483E-02	.1299E-02	.1083E-02	.1107E-02	.1558E-02	.4420E-03	.9037E-03
.8285E-03	.1105E-02	.9585E-03	.9366E-03	.9596E-03	.7838E-03	.1022E-02	.1055E-02
.1013E-02	.1022E-02	.1094E-02	.1000E-02	.1439E-02	.9437E-03	.1140E-02	.1074E-02
.8891E-03	.1038E-02	.7441E-03	.1195E-02	.8498E-03	.8541E-03	.9427E-03	.8844E-03
.1164E-02	.6793E-03	.9787E-03	.9103E-03	.8981E-03	.1095E-02	.1007E-02	.1011E-02
.1196E-02	.8297E-03	.1251E-02	.8203E-03	.1402E-02	.8555E-03	.7650E-03	.9840E-03
.8936E-03	.7163E-03	.1176E-02	.9999E-03	.8505E-03	.1141E-02	.9694E-03	.5788E-03
.1290E-02	.6874E-03	.6717E-03	.5334E-03	.8245E-03	.5763E-03	.7052E-03	.8107E-03
.9190E-03	.8233E-03	.4562E-03	.9859E-03	.8420E-03	.1379E-02	.7744E-03	.7884E-03
.9205E-03	.5501E-03	.7780E-03	.7749E-03	.6010E-03	.8452E-03	.1035E-02	.5738E-03
.4798E-03	.4616E-03	.7068E-03	.7127E-03	.5648E-03	.6226E-03	.7524E-03	.6004E-03
.9099E-03	.5013E-03	.8076E-03	.7350E-03	.7116E-03	.6674E-03	.7714E-03	.1041E-02
.8U09E-03	.7612E-03	.4499E-03	.8541E-03	.6362E-03	.1035E-02	.9264E-03	.7065E-03
.6716E-03	.4139E-03	.2205E-03	.4972E-03	.5480E-03	.5011E-03	.4019E-03	.7535E-03
.7237E-03	.5731E-03	.4637E-03	.7145E-03	.7206E-03	.3835E-03	.3492E-03	.4510E-03

SALT BLAN MOLY WALL .375 IN DIB 6.25 INCHES EO=2.5 MEV

.0000E 00	.1485E-05	.0000E 00	.7336E-05	.4636E-03	.2896E-02	.2148E-02	.2232E-02
.2204E-02	.2226E-02	.2360E-02	.2398E-02	.2479E-02	.2713E-02	.2241E-02	.2219E-02
.2016E-02	.1884E-02	.1982E-02	.1939E-02	.1718E-02	.1769E-02	.1670E-02	.1465E-02
.1362E-02	.1495E-02	.1747E-02	.1518E-02	.1636E-02	.1445E-02	.1409E-02	.1522E-02
.1491E-02	.1579E-02	.1710E-02	.1497E-02	.1302E-02	.1532E-02	.1492E-02	.1471E-02
.1379E-02	.1499E-02	.1488E-02	.1542E-02	.1284E-02	.1396E-02	.1333E-02	.1269E-02
.1520E-02	.1390E-02	.1335E-02	.1361E-02	.1214E-02	.1223E-02	.1418E-02	.1031E-02
.1305E-02	.1137E-02	.1415E-02	.1226E-02	.1165E-02	.1190E-02	.1306E-02	.1074E-02
.1099E-02	.1081E-02	.1383E-02	.1247E-02	.1055E-02	.1163E-02	.1029E-02	.9995E-03
.1046E-02	.1174E-02	.1200E-02	.1147E-02	.1146E-02	.9919E-03	.1101E-02	.1188E-02
.1237E-02	.1250E-02	.1163E-02	.1309E-02	.1089E-02	.1187E-02	.1082E-02	.9943E-03
.1031E-02	.9584E-03	.9744E-03	.1053E-02	.9079E-03	.8873E-03	.9294E-03	.8973E-03
.8092E-03	.7754E-03	.9309E-03	.1169E-02	.1038E-02	.8446E-03	.1020E-02	.9606E-03
.1016E-02	.1006E-02	.8447E-03	.9597E-03	.1080E-02	.8650E-03	.9489E-03	.9207E-03
.1036E-02	.8050E-03	.7560E-03	.7801E-03	.7102E-03	.7555E-03	.9291E-03	.5467E-03
.7578E-03	.7299E-03	.8710E-03	.5762E-03	.8107E-03	.7150E-03	.7637E-03	.7363E-03
.7037E-03	.6808E-03	.7585E-03	.7486E-03	.7429E-03	.8645E-03	.8244E-03	.7272E-03
.8037E-03	.8061E-03	.7456E-03	.8187E-03	.7837E-03	.7295E-03	.6738E-03	.6249E-03
.6590E-03	.5375E-03	.5639E-03	.5898E-03	.6202E-03	.5682E-03	.5267E-03	.6196E-03
.5798E-03	.6064E-03	.6242E-03	.6315E-03	.6836E-03	.5657E-03	.4760E-03	.5780E-03
.7486E-03	.5423E-03	.6024E-03	.7503E-03	.7489E-03	.5873E-03	.5396E-03	.6396E-03
.4765E-03	.5861E-03	.5912E-03	.5717E-03	.6225E-03	.5984E-03	.4301E-03	.4199E-03
.6080E-03	.4954E-03	.4911E-03	.5251E-03	.4906E-03	.4253E-03	.3739E-03	.4442E-03
.4472E-03	.4065E-03	.3436E-03	.3198E-03	.4025E-03	.3511E-03	.3755E-03	.4239E-03
.3791E-03	.4717E-03	.4520E-03	.4485E-03	.5494E-03	.4549E-03	.5622E-03	.5659E-03
.5014E-03	.4112E-03	.4794E-03	.4681E-03	.4729E-03	.3960E-03	.4622E-03	.4002E-03
.2827E-03	.2969E-03	.3199E-03	.2528E-03	.2199E-03	.2491E-03	.2146E-03	.2739E-03
.2563E-03	.3056E-03	.2686E-03	.4186E-03	.4482E-03	.4547E-03	.4307E-03	.4568E-03
.3876E-03	.3719E-03	.4616E-03	.3874E-03	.3535E-03	.2788E-03	.2652E-03	.2725E-03
.2094E-03	.2248E-03	.2065E-03	.1732E-03	.1781E-03	.1901E-03	.2736E-03	.1690E-03
.2568E-03	.2407E-03	.2057E-03	.1968E-03	.2163E-03	.2403E-03	.1759E-03	.1436E-03
.1223E-03	.1243E-03	.1204E-03	.1131E-03	.1013E-03	.1390E-03	.7906E-04	.8515E-04

SALT BLAN MOLY WALL .375 IN DIB 8.25 INCHES EO=0 MEV

.3998E-01	.4045E-01	.3986E-01	.4010E-01	.2552E-01	.5233E-01	.3165E-01	.3166E-01
.4895E-01	.4153E-01	.4103E-01	.3789E-01	.3942E-01	.4068E-01	.3719E-01	.3690E-01
.3832E-01	.3725E-01	.3742E-01	.3957E-01	.3856E-01	.3537E-01	.3871E-01	.3996E-01
.4021E-01	.4307E-01	.4501E-01	.4317E-01	.4319E-01	.4144E-01	.4105E-01	.3965E-01
.4112E-01	.4055E-01	.3995E-01	.3884E-01	.3877E-01	.3916E-01	.3828E-01	.3827E-01
.3826E-01	.3761E-01	.3790E-01	.3743E-01	.3704E-01	.3741E-01	.3546E-01	.3576E-01
.3773E-01	.3352E-01	.3394E-01	.3311E-01	.3130E-01	.3179E-01	.3164E-01	.3053E-01
.3036E-01	.2934E-01	.2866E-01	.2709E-01	.2796E-01	.2655E-01	.2697E-01	.2504E-01
.2476E-01	.2363E-01	.2243E-01	.2149E-01	.2175E-01	.2032E-01	.1988E-01	.1993E-01
.1816E-01	.1731E-01	.1656E-01	.1625E-01	.1453E-01	.1391E-01	.1297E-01	.1221E-01
.1182E-01	.1205E-01	.1076E-01	.9814E-02	.1038E-01	.8517E-02	.8514E-02	.8447E-02
.7553E-02	.7209E-02	.6783E-02	.6488E-02	.5935E-02	.6002E-02	.4626E-02	.4318E-02
.3440E-02	.3373E-02	.3480E-02	.3141E-02	.3192E-02	.2945E-02	.2146E-02	.2273E-02
.1689E-02	.1842E-02	.2257E-02	.1534E-02	.1277E-02	.1775E-02	.1635E-02	.2723E-02
.2753E-02	.2926E-02	.30 E-02	.2808E-02	.2344E-02	.2087E-02	.1376E-02	.1439E-02
.1190E-02	.1296E-02	.1395E-02	.1151E-02	.7542E-03	.1268E-02	.1593E-02	.1138E-02
.1667E-02	.9073E-03	.1307E-02	.1199E-02	.1115E-02	.1316E-02	.1284E-02	.1620E-02
.1915E-02	.1332E-02	.1084E-02	.1561E-02	.8163E-03	.1185E-02	.9572E-03	.1347E-02
.1573E-02	.8924E-03	.1082E-02	.6835E-03	.1029E-02	.1211E-02	.1143E-02	.1081E-02
.1059E-02	.6377E-03	.1080E-02	.9856E-03	.1198E-02	.7011E-03	.1072E-02	.1259E-02
.1032E-02	.9734E-03	.1006E-02	.1051E-02	.9079E-03	.1364E-02	.6821E-03	.9432E-03
.8945E-03	.5405E-03	.6793E-03	.1052E-02	.8331E-03	.1143E-02	.8908E-03	.8679E-03
.2580E-03	.7438E-03	.1247E-02	.9699E-03	.8802E-03	.1277E-02	.8934E-03	.5623E-03
.7737E-03	.9663E-03	.1005E-02	.7555E-03	.6252E-03	.6689E-03	.9534E-03	.7353E-03
.6657E-03	.5868E-03	.4629E-03	.8905E-03	.7241E-03	.6150E-03	.7081E-03	.6947E-03
.8924E-03	.8393E-03	.7573E-03	.9028E-03	.6216E-03	.3954E-03	.1227E-02	.4668E-03
.8325E-03	.7878E-03	.7921E-03	.6521E-03	.7922E-03	.5177E-03	.4926E-03	.8495E-03
.6216E-03	.6595E-03	.7425E-03	.7543E-03	.7441E-03	.6447E-03	.1016E-02	.2372E-03
.5582E-03	.6270E-03	.6423E-03	.4505E-03	.5333E-03	.7498E-03	.4354E-03	.5610E-03
.4837E-03	.5174E-03	.5886E-03	.5434E-03	.6660E-03	.8563E-03	.3745E-03	.4830E-03
.4953E-03	.6348E-03	.3916E-03	.5544E-03	.4573E-03	.7467E-03	.4313E-03	.4576E-03
.3037E-03	.4096E-03	.4853E-03	.2571E-03	.3031E-03	.3317E-03	.2089E-03	.8002E-04

SALT BLAN MOLY WALL .375 IN DIB 8.25 INCHES EO=2.5 MEV

.6762E-06	.2715E-05	.6762E-06	.7525E-05	-.3572E-02	.1955E-02	.1577E-02	.1576E-02
.1595E-02	.1803E-02	.1435E-02	.1716E-02	.1645E-02	.1123E-02	.1578E-02	.1391E-02
.1345E-02	.1170E-02	.1 79E-02	.9630E-03	.1086E-02	.8965E-03	.8791E-03	.1117E-02
.1149E-02	.1196E-02	.1252E-02	.1199E-02	.1029E-02	.1102E-02	.8732E-03	.1064E-02
.7226E-03	.8994E-03	.8422E-03	.8427E-03	.9031E-03	.7879E-03	.9383E-03	.8467E-03
.9655E-03	.8284E-03	.7785E-03	.9720E-03	.8961E-03	.8511E-03	.7846E-03	.9681E-03
.8769E-03	.7866E-03	.1125E-02	.1078E-02	.7376E-03	.6950E-03	.9112E-03	.7321E-03
.7178E-03	.8417E-03	.8070E-03	.8163E-03	.8792E-03	.8720E-03	.8498E-03	.6215E-03
.9283E-03	.9262E-03	.6745E-03	.8136E-03	.5933E-03	.8122E-03	.8505E-03	.8187E-03
.8158E-03	.7887E-03	.7048E-03	.7189E-03	.8252E-03	.8035E-03	.1010E-02	.9392E-03
.7045E-03	.6694E-03	.6495E-03	.6065E-03	.8250E-03	.7105E-03	.7701E-03	.6166E-03
.7474E-03	.6285E-03	.7748E-03	.5466E-03	.6786E-03	.6304E-03	.4148E-03	.6392E-03
.6631E-03	.7840E-03	.5868E-03	.5047E-03	.8369E-03	.7569E-03	.6381E-03	.7177E-03
.6531E-03	.5057E-03	.4856E-03	.5841E-03	.4227E-03	.5699E-03	.6546E-03	.3079E-03
.5422E-03	.6051E-03	.6525E-03	.4968E-03	.5110E-03	.5039E-03	.6340E-03	.5852E-03
.3779E-03	.5075E-03	.3682E-03	.4552E-03	.4964E-03	.4388E-03	.4786E-03	.5000E-03
.4981E-03	.5708E-03	.6634E-03	.6730E-03	.3636E-03	.4765E-03	.4832E-03	.4899E-03
.4964E-03	.4055E-03	.4583E-03	.4041E-03	.4198E-03	.3897E-03	.5141E-03	.3270E-03
.4435E-03	.4550E-03	.4847E-03	.3843E-03	.3572E-03	.4289E-03	.3035E-03	.2911E-03
.3125E-03	.3578E-03	.4885E-03	.4212E-03	.3952E-03	.4368E-03	.3985E-03	.3688E-03
.3866E-03	.3740E-03	.3105E-03	.3445E-03	.4825E-03	.4103E-03	.3074E-03	.3517E-03
.4340E-03	.3775E-03	.3327E-03	.3697E-03	.3020E-03	.2137E-03	.3787E-03	.3269E-03
.2377E-03	.3303E-03	.1988E-03	.3450E-03	.4141E-03	.3089E-03	.3449E-03	.2182E-03
.1858E-03	.2320E-03	.2626E-03	.3010E-03	.1584E-03	.2653E-03	.2133E-03	.2482E-03
.3134E-03	.2498E-03	.2248E-03	.3367E-03	.2601E-03	.2850E-03	.2827E-03	.3198E-03
.2222E-03	.2508E-03	.1817E-03	.2061E-03	.2013E-03	.2308E-03	.1093E-03	.1443E-03
.1231E-03	.1310E-03	.1944E-03	.1198E-03	.1714E-03	.2129E-03	.1437E-03	.2433E-03
.2678E-03	.2692E-03	.2909E-03	.2972E-03	.2883E-03	.2971E-03	.2431E-03	.1986E-03
.1998E-03	.1821E-03	.1766E-03	.1653E-03	.1383E-03	.1375E-03	.1278E-03	.1354E-03
.1032E-03	.5264E-04	.1314E-03	.1460E-03	.1337E-03	.1807E-03	.1314E-03	.8832E-04
.1316E-03	.1475E-03	.1413E-03	.7448E-04	.1033E-03	.3899E-04	.8804E-04	.6709E-04
.7132E-04	.5619E-04	.7095E-04	.5003E-04	.5800E-04	.4842E-04	.4969E-04	.5422E-04

67 S 33 C BLAN MOLY WALL 1.125 IN DIB 2.25 INCHES EO=0 MEV

.1310E 00	.1317E 00	.1310E 00	.1331E 00	.4850E-01	.7084E-01	.1095E-01	.6626E-01
.7733E-01	.5050E-01	.4732E-01	.4682E-01	.4983E-01	.3254E-01	.4444E-01	.4561E-01
.4348E-01	.4093E-01	.4080E-01	.4590E-01	.4485E-01	.4147E-01	.4189E-01	.4617E-01
.5165E-01	.5330E-01	.5395E-01	.5355E-01	.5063E-01	.4895E-01	.4788E-01	.4539E-01
.4683E-01	.4695E-01	.4767E-01	.4713E-01	.4659E-01	.4446E-01	.4613E-01	.4492E-01
.4411E-01	.4393E-01	.4434E-01	.4399E-01	.4424E-01	.4311E-01	.4346E-01	.4126E-01
.4058E-01	.4032E-01	.3923E-01	.3829E-01	.3878E-01	.3674E-01	.3644E-01	.3553E-01
.3553E-01	.3353E-01	.3339E-01	.3136E-01	.3303E-01	.3072E-01	.2991E-01	.2928E-01
.2914E-01	.2751E-01	.2618E-01	.2583E-01	.2518E-01	.2329E-01	.2370E-01	.2144E-01
.2140E-01	.2013E-01	.1942E-01	.1837E-01	.1736E-01	.1632E-01	.1552E-01	.1437E-01
.1401E-01	.1293E-01	.1204E-01	.1161E-01	.1045E-01	.1023E-01	.9558E-02	.9694E-02
.7893E-02	.8499E-02	.7609E-02	.6308E-02	.5518E-02	.5895E-02	.4865E-02	.4700E-02
.4084E-02	.3509E-02	.3892E-02	.2779E-02	.3071E-02	.2677E-02	.2169E-02	.2160E-02
.1814E-02	.2050E-02	.1223E-02	.1251E-02	.1004E-02	.1204E-02	.2273E-02	.3576E-02
.3341E-02	.3500E-02	.2793E-02	.2640E-02	.2519E-02	.2353E-02	.1517E-02	.1754E-02
.1068E-02	.1575E-02	.1143E-02	.9480E-03	.1070E-02	.6356E-03	.7841E-03	.7654E-03
.1427E-02	.1248E-02	.2019E-02	.1630E-02	.1632E-02	.1348E-02	.1388E-02	.1343E-02
.1570E-02	.1678E-02	.1100E-02	.1030E-02	.9452E-03	.9457E-03	.1159E-02	.1098E-02
.1387E-02	.1259E-02	.7431E-03	.1313E-02	.1190E-02	.7620E-03	.9627E-03	.1037E-02
.9459E-03	.1312E-02	.8821E-03	.1037E-02	.1050E-02	.7798E-03	.1167E-02	.9802E-03
.1068E-02	.1033E-02	.1076E-02	.1211E-02	.1187E-02	.1133E-02	.1104E-02	.9312E-03
.1278E-02	.6929E-03	.8856E-03	.7102E-03	.1052E-02	.1053E-02	.1092E-02	.8313E-03
.8830E-03	.1223E-02	.9645E-03	.1039E-02	.8500E-03	.8777E-03	.1027E-02	.8432E-03
.1312E-02	.1030E-02	.7796E-03	.9164E-03	.9136E-03	.7536E-03	.7957E-03	.1080E-02
.9844E-03	.6282E-03	.7782E-03	.7577E-03	.8036E-03	.5774E-03	.1106E-02	.1048E-02
.1073E-02	.1004E-02	.7313E-03	.9607E-03	.9848E-03	.9037E-03	.8762E-03	.4901E-03
.8003E-03	.4413E-03	.9781E-03	.7022E-03	.8919E-03	.8684E-03	.8114E-03	.7077E-03
.5370E-03	.5380E-03	.7476E-03	.5147E-03	.8186E-03	.7575E-03	.6468E-03	.7339E-03
.6594E-03	.5901E-03	.5533E-03	.9008E-03	.7986E-03	.6250E-03	.5585E-03	.6960E-03
.5226E-03	.7842E-03	.6973E-03	.4697E-03	.5285E-03	.4181E-03	.4052E-03	.3284E-03
.3596E-03	.5482E-03	.4669E-03	.6129E-03	.4325E-03	.2910E-03	.4219E-03	.3203E-03
.4299E-03	.3810E-03	.5563E-03	.5493E-03	.6561E-03	.4278E-03	.5685E-03	.5997E-03

67 S 33 C BLAN MOLY WALL 1.125 IN DIB 2.25 INCHES EO=2.5 MEV

.0000E 00-.4748E-05	.0000E 00-.1655E-05-.6177E-04	.1229E-02	.8190E-03	.9074E-03		
.7313E-03	.7692E-03	.5084E-03	.8486E-03	.9664E-03	.8589E-03	.3907E-03	.5331E-03
.8502E-03	.5950E-03	.5383E-03	.5236E-03	.4415E-03	.4993E-03	.7279E-03	.5996E-03
.6435E-03	.3100E-03	.6170E-03	.7349E-03	.6886E-03	.4434E-03	.6885E-03	.4048E-03
.2722E-03	.4839E-03	.8371E-03	.5354E-03	.4675E-03	.3924E-03	.4676E-03	.3699E-03
.5271E-03	.6557E-03	.5410E-03	.5577E-03	.6363E-03	.7006E-03	.6046E-03	.7207E-03
.4729E-03	.5959E-03	.8633E-03	.5745E-03	.6448E-03	.8553E-03	.6189E-03	.6372E-03
.3676E-03	.5440E-03	.5431E-03	.4044E-03	.4725E-03	.5089E-03	.4936E-03	.5773E-03
.3348E-03	.4119E-03	.7856E-03	.5499E-03	.6299E-03	.6682E-03	.5057E-03	.5469E-03
.6837E-03	.6796E-03	.6240E-03	.7212E-03	.5189E-03	.7811E-03	.7100E-03	.5723E-03
.4198E-03	.6354E-03	.5905E-03	.4732E-03	.5165E-03	.4835E-03	.4495E-03	.2970E-03
.5357E-03	.3874E-03	.4381E-03	.3359E-03	.4544E-03	.2358E-03	.3004E-03	.4339E-03
.5672E-03	.3284E-03	.5846E-03	.3221E-03	.3414E-03	.4272E-03	.3732E-03	.2662E-03
.2613E-03	.4554E-03	.1969E-03	.2378E-03	.4470E-03	.1690E-03	.2552E-03	.1881E-03
.3307E-03	.1627E-03	.2427E-03	.1769E-03	.2736E-03	.2060E-03	.1827E-03	.2459E-03
.1954E-03	.1257E-03	.2384E-03	.3515E-03	.1748E-03	.1794E-03	.1681E-03	.1724E-03
.9596E-04	.2042E-03	.2147E-03	.2710E-03	.2293E-03	.2506E-03	.2813E-03	.3165E-03
.2157E-03	.2799E-03	.3069E-03	.2412E-03	.2358E-03	.5834E-04	.2448E-03	.1112E-03
.6911E-04	.1123E-03	.8318E-04	.9421E-04	.2982E-03	.2326E-03	.9374E-04	.1815E-03
.1933E-03	.1715E-03	.2540E-03	.8182E-04	.1638E-03	.2452E-03	.2434E-03	.2704E-03
.2333E-03	.8473E-04	.1955E-03	.2122E-03	.1689E-03	.1591E-03	.7993E-04	.1320E-03
.2502E-03	.1290E-03	.1599E-03	.1182E-03	.2012E-03	.1360E-03	.2328E-03	.7553E-04
.8869E-04	.1661E-03	.1289E-03	.1332E-03	.2351E-03	.1462E-03	.2115E-03	.1826E-03
.9375E-04	.3670E-04	.1976E-03	.1294E-03	.2679E-03	.1561E-03	.2602E-03	.1981E-03
.1782E-03	.2175E-03	.2256E-03	.2549E-03	.1919E-03	.1407E-03	.1798E-03	.1676E-03
.1802E-03	.1322E-03	.1813E-03	.1069E-03	.1106E-03	.1146E-03	.3042E-04	.1373E-03
.9592E-04	.1013E-03	.6696E-04	.9255E-04	.1141E-03	.1787E-03	.1339E-03	.2303E-03
.2152E-03	.2054E-03	.2012E-03	.1940E-03	.1647E-03	.2113E-03	.2040E-03	.1685E-03
.1671E-03	.9175E-04	.1352E-03	.1300E-03	.1112E-03	.1105E-03	.6489E-04	.1158E-03
.6969E-04	.9396E-04	.6483E-04	.4816E-04	.6907E-04	.1014E-03	.5692E-04	.1062E-03
.1504E-03	.7980E-04	.1264E-03	.1302E-03	.7168E-04	.4799E-04	.6276E-04	.7993E-04
.9856E-04	.5862E-04	.5281E-04	.3639E-04	.3513E-04	.4991E-04	.5320E-04	.3117E-04

67 S 33 C BLAN MOLY WALL 1.125 IN DIB 4.25 INCHES EO=0 MEV

.1912E-01	.1944E-01	.1910E-01	.1946E-01	.1677E-01	.5379E-01	-.2393E-01	.2820E-01
.7502E-01	.3536E-01	-.1489E 00	.3298E-01	.3556E-01	.3758E-01	.3395E-01	.3486E-01
.3247E-01	.3001E-01	.2887E-01	.3107E-01	.3256E-01	.3028E-01	.2889E-01	.3518E-01
.6077E-01	.4105E-01	.4331E-01	.4042E-01	.3843E-01	.3796E-01	.3717E-01	.3736E-01
.3730E-01	.3523E-01	.3489E-01	.3692E-01	.3680E-01	.3596E-01	.3549E-01	.3507E-01
.3606E-01	.3426E-01	.345 E-01	.3495E-01	.3428E-01	.3627E-01	.3399E-01	.3240E-01
.3228E-01	.3224E-01	.3121E-01	.2947E-01	.2964E-01	.2995E-01	.2924E-01	.2829E-01
.2750E-01	.2610E-01	.2653E-01	.2565E-01	.2541E-01	.2478E-01	.2374E-01	.2301E-01
.2145E-01	.2173E-01	.2013E-01	.2007E-01	.1878E-01	.1876E-01	.1771E-01	.1760E-01
.1539E-01	.1505E-01	.1 89E-01	.1392E-01	.1395E-01	.1253E-01	.1172E-01	.1164E-01
.1038E-01	.9408E-02	.8898E-02	.8307E-02	.7792E-02	.7599E-02	.7214E-02	.7144E-02
.6902E-02	.6288E-02	.6051E-02	.5153E-02	.4429E-02	.3582E-02	.2988E-02	.3560E-02
.3041E-02	.3045E-02	.2560E-02	.2096E-02	.1882E-02	.1652E-02	.1291E-02	.6048E-03
.3237E-03	.7372E-03	.4790E-03	.7148E-03	.7580E-03	.7467E-03	.2472E-02	.2212E-02
.3179E-02	.2486E-02	.2241E-02	.1878E-02	.1037E-02	.1023E-02	.1636E-02	.7922E-03
.1059E-02	.8102E-03	.1010E-02	.1065E-02	.6712E-03	.1671E-03	.1160E-02	.2553E-03
.9879E-03	.1035E-02	.8845E-03	.9474E-03	.1304E-02	.1413E-02	.1412E-02	.1280E-02
.1117E-02	.3235E-03	.9333E-03	.7865E-03	.5179E-03	.7413E-03	.6279E-03	.5453E-03
.5664E-03	.3229E-03	.7994E-03	.4245E-03	.7901E-03	.6234E-03	.5271E-03	.5015E-03
.1099E-02	.2488E-03	.5862E-03	.6274E-03	.9565E-03	.6800E-03	.7562E-03	.9567E-03
.4873E-03	.6446E-03	.3026E-03	.6310E-03	.4933E-03	.6241E-03	.6343E-03	.9122E-03
.8821E-03	.8286E-03	.5751E-03	.5133E-03	.1069E-02	.4773E-03	.1140E-02	.7999E-03
.7260E-03	.6383E-03	.6603E-03	.6033E-03	.1374E-02	.6842E-03	.6040E-03	.5256E-03
.1091E-02	.5343E-03	.7495E-03	.6427E-03	.9330E-03	.1199E-03	.9371E-03	.5826E-03
.2112E-03	.6427E-03	.9034E-03	.1020E-02	.2757E-03	.5263E-03	.8590E-03	.1019E-02
.7053E-03	.8705E-03	.6594E-03	.4002E-03	.4105E-03	.4513E-03	.3987E-03	.4070E-03
.6888E-03	.7106E-03	.5678E-03	.7798E-03	.5281E-03	.3794E-03	.7146E-03	.5930E-03
.3514E-03	.4521E-03	.5551E-03	.2835E-03	.2279E-03	.4580E-03	.2918E-03	.1106E-03
.5272E-03	.6663E-03	.6101E-03	.3947E-03	.3802E-03	.6616E-03	.2022E-03	.8580E-03
.6202E-03	.9231E-04	.2993E-03	.2492E-03	.5084E-03	.3820E-03	.4562E-03	.1360E-03
-.3387E-04	.5985E-03	.3218E-03	.1637E-03	.2601E-03	.2388E-03	-.1001E-03	.1068E-03
.1518E-03	.2144E-03	.1266E-03	.4870E-03	.1791E-03	.3856E-03	.7875E-03	.3323E-03

67 S 33 C BLAN MOLY WALL 1.125 IN DIB 4.25 INCHES EO=2.5 MEV

-.1411E-05	.2747E-05	.0000E 00	.8146E-05	.1255E-02	.4792E-03	.6563E-03	.3645E-03
.1055E-02	.1218E-02	.1198E-02	.1295E-02	.1089E-02	.1171E-02	.1084E-02	.1037E-02
.9799E-03	.6517E-03	.6019E-03	.5743E-03	.5202E-03	.6293E-03	.6354E-03	.6814E-03
.5005E-03	.4374E-03	.4761E-03	.5312E-03	.6455E-03	.4656E-03	.4779E-03	.3582E-03
.6519E-03	.3338E-03	.5512E-03	.6671E-03	.6075E-03	.5778E-03	.4155E-03	.5981E-03
.3916E-03	.5264E-03	.8200E-03	.6585E-03	.4429E-03	.7343E-03	.5104E-03	.7642E-03
.5411E-03	.6743E-03	.6262E-03	.6749E-03	.4943E-03	.8631E-03	.7101E-03	.5740E-03
.7470E-03	.6046E-03	.6816E-03	.5693E-03	.5768E-03	.4244E-03	.5668E-03	.5112E-03
.4595E-03	.5610E-03	.4074E-03	.5410E-03	.5883E-03	.5296E-03	.6521E-03	.6336E-03
.5128E-03	.5487E-03	.5967E-03	.6389E-03	.7582E-03	.5443E-03	.7960E-03	.7017E-03
.5682E-03	.6636E-03	.7143E-03	.6636E-03	.3934E-03	.5967E-03	.6647E-03	.5193E-03
.4285E-03	.3371E-03	.3633E-03	.3263E-03	.3740E-03	.4330E-03	.3214E-03	.2438E-03
.2557E-03	.3700E-03	.1785E-03	.4462E-03	.5830E-03	.4732E-03	.5430E-03	.6110E-03
.5325E-03	.6037E-03	.4447E-03	.3964E-03	.4279E-03	.4954E-03	.2475E-03	.2497E-03
.3094E-03	.3372E-03	.3333E-03	.2285E-03	.3569E-03	.2402E-03	.3677E-03	.3249E-03
.1863E-03	.3023E-03	.2627E-03	.8034E-04	.2451E-03	.2066E-03	.2692E-03	.3170E-03
.2209E-03	.4379E-03	.2948E-03	.4062E-03	.3233E-03	.4295E-03	.2882E-03	.3683E-03
.3569E-03	.3395E-03	.3316E-03	.2222E-03	.2765E-03	.1599E-03	.4032E-03	.1222E-03
.1286E-03	.1918E-03	.1553E-03	.3033E-03	.2264E-03	.1835E-03	.2187E-03	.2138E-03
.2799E-03	.1778E-03	.2466E-03	.3810E-03	.3139E-03	.3500E-03	.2597E-03	.3512E-03
.4275E-03	.3005E-03	.3810E-03	.2687E-03	.3201E-03	.3316E-03	.3563E-03	.3726E-03
.2522E-03	.3639E-03	.3349E-03	.3251E-03	.3147E-03	.3970E-03	.2777E-03	.2873E-03
.3175E-03	.2380E-03	.2020E-03	.1857E-03	.1851E-03	.2025E-03	.1817E-03	.1317E-03
.1088E-03	.1649E-03	.2553E-03	.1802E-03	.3971E-03	.2915E-03	.3262E-03	.4389E-03
.3006E-03	.2759E-03	.4450E-03	.4842E-03	.4799E-03	.4812E-03	.4832E-03	.3911E-03
.4350E-03	.3942E-03	.2814E-03	.2582E-03	.2246E-03	.2518E-03	.2216E-03	.1749E-03
.1754E-03	.1699E-03	.1081E-03	.2002E-03	.1747E-03	.2370E-03	.2285E-03	.3618E-03
.2732E-03	.3831E-03	.4876E-03	.5440E-03	.4186E-03	.4582E-03	.3709E-03	.3974E-03
.4062E-03	.3937E-03	.3503E-03	.3045E-03	.2987E-03	.2120E-03	.1992E-03	.1786E-03
.2039E-03	.2427E-03	.2118E-03	.2745E-03	.2725E-03	.2632E-03	.2585E-03	.2253E-03
.1892E-03	.1730E-03	.1930E-03	.1791E-03	.1856E-03	.1481E-03	.1160E-03	.1564E-03
.1650E-03	.9937E-04	.1064E-03	.1186E-03	.1166E-03	.9291E-04	.8260E-04	.6566E-04

67 S 33 C BLAN MOLY WALL 1.125 IN DIB 6.25 INCHES EO=0 MEV

-.1060E 00	-.1059E 00	-.1061E 00	-.1062E 00	.2061E-01	.4136E-01	.1782E-01	.2998E-01
.3565E-01	.3241E-01	.1035E-01	.3003E-01	.3371E-01	.3463E-01	.3516E-01	.3420E-01
.3395E-01	.3130E-01	.3236E-01	.3349E-01	.3524E-01	.3321E-01	.3228E-01	.3473E-01
.3697E-01	.3902E-01	.4043E-01	.4032E-01	.3780E-01	.3612E-01	.4031E-01	.3706E-01
.3962E-01	.3864E-01	.3722E-01	.3728E-01	.3748E-01	.3681E-01	.3622E-01	.3581E-01
.3607E-01	.3657E-01	.3515E-01	.3575E-01	.3688E-01	.3600E-01	.3560E-01	.3382E-01
.3403E-01	.3252E-01	.3335E-01	.3118E-01	.3045E-01	.2979E-01	.3035E-01	.2947E-01
.2837E-01	.2768E-01	.2660E-01	.2679E-01	.2593E-01	.2568E-01	.2507E-01	.2378E-01
.2342E-01	.2248E-01	.2143E-01	.2103E-01	.1979E-01	.1909E-01	.1823E-01	.1702E-01
.1606E-01	.1568E-01	.1528E-01	.1331E-01	.1422E-01	.1367E-01	.1246E-01	.1229E-01
.1067E-01	.9846E-02	.9277E-02	.8955E-02	.7831E-02	.7499E-02	.6668E-02	.6639E-02
.6951E-02	.5503E-02	.5634E-02	.4947E-02	.4517E-02	.4779E-02	.3763E-02	.3201E-02
.3554E-02	.3081E-02	.2558E-02	.2283E-02	.2078E-02	.1538E-02	.1317E-02	.1233E-02
.7810E-03	.8602E-03	.5445E-03	.9520E-03	.1895E-03	.5260E-03	.1103E-02	.1379E-02
.1517E-02	.1803E-02	.1219E-02	.9436E-03	.1520E-02	.1047E-02	.7346E-03	.6019E-03
.1016E-02	.1978E-03	.8157E-02	.5270E-03	.5546E-03	-.1782E-03	-.5059E-04	.6083E-03
.1291E-02	.6655E-03	.4214E-03	.4918E-03	.3293E-03	.1166E-02	.6341E-03	.1065E-02
.5443E-03	.8525E-03	.5552E-03	.3585E-03	.3174E-03	.9071E-03	.3203E-03	.1442E-03
-.9994E-04	.2887E-03	.4612E-03	.3558E-03	.4178E-03	.5877E-03	.2071E-03	.1481E-03
.9049E-03	.5348E-03	.7455E-03	.4250E-03	.9376E-03	.6359E-03	.8348E-03	.3563E-03
.7012E-03	.6699E-03	.3599E-03	.8548E-03	.4626E-03	.8467E-03	.5886E-03	.3475E-03
.8364E-03	.7051E-03	.8288E-03	.5222E-03	.7143E-03	.7266E-03	.5186E-03	.3784E-03
.7072E-03	.5129E-03	.8646E-03	.3354E-03	.7673E-03	.4343E-03	.3655E-03	.6463E-03
.4333E-03	.6597E-03	.5930E-03	.6458E-03	.3466E-03	.4235E-03	.2971E-03	.5621E-03
.7374E-03	.7724E-03	.1941E-03	.5239E-03	.8163E-03	.3223E-03	.5067E-03	.6948E-03
.5064E-03	.5296E-03	.8684E-04	.5311E-03	.5757E-03	.8876E-03	.6319E-03	.5486E-03
.5089E-03	.2031E-03	.2446E-03	.6030E-03	.1633E-03	.3672E-03	.6112E-03	.3465E-03
.2124E-03	.3291E-03	.7423E-04	.3443E-03	.2310E-03	.1993E-03	.8160E-03	.5805E-03
.4006E-03	.4503E-03	.9833E-03	.5521E-03	.4247E-03	.5592E-03	.3606E-03	.6929E-03
.3609E-03	.3300E-03	-.9187E-04	-.1144E-03	.3002E-03	.3827E-03	.2574E-03	.2656E-03
.1679E-03	.8829E-04	-.3075E-03	-.6056E-04	.2092E-03	.2947E-04	-.3126E-04	.4440E-03
.2068E-03	.2136E-03	-.1789E-04	-.7396E-04	.2241E-03	.1796E-03	-.2219E-03	.1253E-03

67 S 33 C BLAN MOLY WALL 1.125 IN DIB 6.25 INCHES EO=2.5 MEV

.7713E-06	.1211E-05	.0000E 00	.3155E-05	.7361E-04	.2056E-02	.1521E-02	.1619E-02
.1827E-02	.1751E-02	.1667E-02	.1525E-02	.1939E-02	.1862E-02	.1323E-02	.1653E-02
.1367E-02	.1192E-02	.1199E-02	.1387E-02	.1061E-02	.1169E-02	.1208E-02	.1004E-02
.1141E-02	.9042E-03	.1020E-02	.1180E-02	.1171E-02	.1164E-02	.9369E-03	.9958E-03
.1189E-02	.1179E-02	.1267E-02	.9908E-03	.8443E-03	.1375E-02	.1229E-02	.1245E-02
.1087E-02	.1261E-02	.1094E-02	.1058E-02	.1060E-02	.1190E-02	.1191E-02	.1075E-02
.1262E-02	.1212E-02	.1038E-02	.1159E-02	.1009E-02	.9691E-03	.1238E-02	.7934E-03
.1206E-02	.1110E-02	.8941E-03	.1090E-02	.9097E-03	.9147E-03	.8665E-03	.9571E-03
.8078E-03	.7648E-03	.9372E-03	.8273E-03	.9769E-03	.1172E-02	.9587E-03	.9451E-03
.9393E-03	.9111E-03	.1075E-02	.1115E-02	.1074E-02	.1105E-02	.9649E-03	.1067E-02
.9314E-03	.9469E-03	.9933E-03	.1008E-02	.8813E-03	.9445E-03	.7340E-03	.7912E-03
.7771E-03	.8736E-03	.7868E-03	.7905E-03	.7278E-03	.7548E-03	.8500E-03	.5656E-03
.6840E-03	.5929E-03	.7898E-03	.8191E-03	.7452E-03	.6394E-03	.7316E-03	.7228E-03
.8113E-03	.7028E-03	.4979E-03	.5550E-03	.6441E-03	.3879E-03	.5708E-03	.4856E-03
.4989E-03	.4435E-03	.6258E-03	.5117E-03	.4456E-03	.3329E-03	.4417E-03	.2746E-03
.4381E-03	.6026E-03	.4802E-03	.3334E-03	.4919E-03	.3830E-03	.3572E-03	.3744E-03
.4082E-03	.1778E-03	.4698E-03	.3590E-03	.4043E-03	.5073E-03	.4989E-03	.5011E-03
.3931E-03	.4464E-03	.4065E-03	.3997E-03	.3519E-03	.3402E-03	.4421E-03	.2836E-03
.4780E-03	.2749E-03	.3023E-03	.2826E-03	.4102E-03	.1620E-03	.3052E-03	.3562E-03
.3089E-03	.2648E-03	.2938E-03	.4070E-03	.3194E-03	.3028E-03	.2533E-03	.3197E-03
.3750E-03	.3512E-03	.2878E-03	.4049E-03	.3910E-03	.3355E-03	.2971E-03	.2886E-03
.2557E-03	.2661E-03	.2808E-03	.3344E-03	.2916E-03	.3296E-03	.2435E-03	.2294E-03
.3689E-03	.2248E-03	.3 40E-03	.2694E-03	.1796E-03	.1906E-03	.1300E-03	.3029E-03
.1764E-03	.1839E-03	.1053E-03	.1943E-03	.1971E-03	.2189E-03	.1643E-03	.1588E-03
.2093E-03	.2508E-03	.2679E-03	.1890E-03	.2581E-03	.2696E-03	.2510E-03	.2721E-03
.3136E-03	.1116E-03	.2 08E-03	.1705E-03	.2724E-03	.2098E-03	.1371E-03	.1616E-03
.9034E-04	.7379E-04	.1345E-03	.1045E-03	.1369E-03	.1379E-03	.1606E-03	.1875E-03
.1362E-03	.1553E-03	.1655E-03	.2348E-03	.1773E-03	.2252E-03	.2369E-03	.2109E-03
.1299E-03	.1820E-03	.2132E-03	.1673E-03	.1368E-03	.3939E-04	.1389E-03	.8149E-04
.9531E-04	.1605E-03	.5602E-04	.8092E-04	.9220E-04	.7587E-04	.1180E-03	.1094E-03
.1306E-03	.9904E-04	.9243E-04	.8116E-04	.6508E-04	.9367E-04	.4393E-04	.3814E-04
.3274E-04	.4846E-04	.3462E-04	.6393E-04	.5019E-04	.5626E-04	.2412E-04	.3911E-04

67 S 33 C BLAN MOLY WALL 1.125 IN DIB 8.25 INCHES EO=0 MEV

-.9244E-01 -.9159E-01 -.9247E-01 -.9167E-01 -.1094E 00 -.6592E-01 .1021E-01 .4324E-01
.8941E-01 .5951E-01 .5358E-01 .5269E-01 .5758E-01 .5979E-01 .5432E-01 .5325E-01
.5374E-01 .4943E-01 .4828E-01 .5309E-01 .5382E-01 .4857E-01 .5031E-01 .5417E-01
.5906E-01 .6339E-01 .6731E-01 .6450E-01 .6366E-01 .6035E-01 .5983E-01 .5725E-01
.5794E-01 .5689E-01 .5812E-01 .5631E-01 .5702E-01 .5663E-01 .5649E-01 .5522E-01
.5602E-01 .5350E-01 .5510E-01 .5454E-01 .5480E-01 .5547E-01 .5422E-01 .5283E-01
.5238E-01 .4976E-01 .4899E-01 .4699E-01 .4813E-01 .4725E-01 .4563E-01 .4510E-01
.4361E-01 .4332E-01 .4254E-01 .4021E-01 .4052E-01 .3901E-01 .3749E-01 .3665E-01
.3581E-01 .3505E-01 .3284E-01 .3229E-01 .3169E-01 .3123E-01 .2964E-01 .2889E-01
.2733E-01 .2577E-01 .2517E-01 .2430E-01 .2210E-01 .2144E-01 .2069E-01 .1958E-01
.1752E-01 .1793E-01 .1750E-01 .1587E-01 .1483E-01 .1326E-01 .1317E-01 .1228E-01
.1128E-01 .1084E-01 .9953E-02 .9679E-02 .9116E-02 .8406E-02 .7580E-02 .6080E-02
.6584E-02 .5980E-02 .5533E-02 .4795E-02 .5094E-02 .4674E-02 .3646E-02 .3529E-02
.2304E-02 .2247E-02 .2650E-02 .1702E-02 .1296E-02 .1808E-02 .1782E-02 .2631E-02
.3370E-02 .3689E-02 .3598E-02 .3789E-02 .3803E-02 .3443E-02 .3157E-02 .2787E-02
.2580E-02 .1848E-02 .1938E-02 .1359E-02 .1410E-02 .1381E-02 .1444E-02 .1133E-02
.1524E-02 .1138E-02 .1285E-02 .1768E-02 .1517E-02 .1985E-02 .2311E-02 .2506E-02
.2072E-02 .2352E-02 .2092E-02 .1513E-02 .1361E-02 .1502E-02 .156 E-02 .1479E-02
.1796E-02 .1172E-02 .1347E-02 .1381E-02 .1866E-02 .1795E-02 .1231E-02 .1580E-02
.1220E-02 .1368E-02 .1593E-02 .1138E-02 .1229E-02 .8958E-03 .8852E-03 .1077E-02
.1140E-02 .1304E-02 .1549E-02 .1249E-02 .1644E-02 .1555E-02 .1149E-02 .1504E-02
.1218E-02 .9052E-03 .1390E-02 .1437E-02 .1306E-02 .7769E-03 .1210E-02 .1293E-02
.1043E-02 .1431E-02 .1672E-02 .1407E-02 .1652E-02 .1525E-02 .1460E-02 .1188E-02
.1298E-02 .1441E-02 .1138E-02 .1289E-02 .1248E-02 .1250E-02 .1389E-02 .1253E-02
.1184E-02 .1032E-02 .1099E-02 .1386E-02 .9929E-03 .1227E-02 .1073E-02 .1104E-02
.1401E-02 .1404E-02 .7827E-03 .1693E-02 .1297E-02 .1299E-02 .1288E-02 .9646E-03
.1091E-02 .1244E-02 .1269E-02 .7592E-03 .9330E-03 .8855E-03 .6084E-03 .8225E-03
.1068E-02 .8008E-03 .1039E-02 .8400E-03 .8705E-03 .1002E-02 .8724E-03 .8233E-03
.7474E-03 .1037E-02 .8174E-03 .7979E-03 .7838E-03 .1158E-02 .1073E-02 .8870E-03
.6599E-03 .7346E-03 .1023E-02 .6166E-03 .6540E-03 .8905E-03 .5098E-03 .6958E-03
.4766E-03 .9594E-03 .6048E-03 .6441E-03 .5380E-03 .8860E-03 .4199E-03 .4130E-03
.5326E-03 .6290E-03 .6754E-03 .4767E-03 .1588E-03 .6099E-03 .4795E-03 .4429E-03

67 S 33 C BLAN MOLY WALL 1.125 IN DIB 8.25 INCHES EO=2.5 MEV

.7624E-06	.3233E-05	.7624E-06	-.2258E-05	-.1988E-02	.2421E-02	.2064E-02	.2036E-02
.2074E-02	.1966E-02	.2210E-02	.2090E-02	.2279E-02	.1993E-02	.2130E-02	.1851E-02
.1443E-02	.1385E-02	.1893E-02	.1416E-02	.1331E-02	.1564E-02	.1522E-02	.1528E-02
.1585E-02	.1523E-02	.1591E-02	.1529E-02	.1324E-02	.1267E-02	.1322E-02	.1418E-02
.1331E-02	.1046E-02	.1117E-02	.1178E-02	.1273E-02	.1240E-02	.1417E-02	.1453E-02
.1336E-02	.1275E-02	.1172E-02	.1342E-02	.1143E-02	.1308E-02	.1298E-02	.1468E-02
.1358E-02	.1227E-02	.1562E-02	.1407E-02	.1264E-02	.1224E-02	.1227E-02	.1089E-02
.1199E-02	.1217E-02	.1182E-02	.1144E-02	.1207E-02	.1224E-02	.1382E-02	.9408E-03
.1429E-02	.1235E-02	.8955E-03	.1135E-02	.1104E-02	.1066E-02	.1104E-02	.1385E-02
.1191E-02	.1225E-02	.1244E-02	.1102E-02	.1371E-02	.1196E-02	.1225E-02	.1282E-02
.1090E-02	.1030E-02	.1141E-02	.1051E-02	.1247E-02	.9669E-03	.9894E-03	.8575E-03
.8813E-03	.8110E-03	.8119E-03	.7384E-03	.9037E-03	.8200E-03	.5696E-03	.7953E-03
.8047E-03	.8453E-03	.6175E-03	.7506E-03	.1100E-02	.8546E-03	.7658E-03	.9359E-03
.9441E-03	.7616E-03	.6851E-03	.6904E-03	.5598E-03	.7354E-03	.6265E-03	.4541E-03
.5941E-03	.6090E-03	.6148E-03	.6158E-03	.6554E-03	.6695E-03	.6647E-03	.5826E-03
.4558E-03	.4683E-03	.4872E-03	.5550E-03	.5166E-03	.6021E-03	.4143E-03	.4210E-03
.5081E-03	.6497E-03	.5812E-03	.6884E-03	.5813E-03	.6119E-03	.6602E-03	.6083E-03
.5465E-03	.5066E-03	.5684E-03	.4314E-03	.6312E-03	.5760E-03	.5240E-03	.4119E-03
.5318E-03	.5106E-03	.4974E-03	.5204E-03	.3771E-03	.4970E-03	.4253E-03	.3221E-03
.5350E-03	.3906E-03	.3756E-03	.5150E-03	.3685E-03	.5245E-03	.5093E-03	.5541E-03
.4541E-03	.5235E-03	.4046E-03	.4703E-03	.4962E-03	.5714E-03	.3760E-03	.4809E-03
.5195E-03	.4089E-03	.3619E-03	.5368E-03	.5134E-03	.3773E-03	.4166E-03	.3372E-03
.4539E-03	.4734E-03	.3268E-03	.3916E-03	.4964E-03	.3754E-03	.3484E-03	.3809E-03
.2950E-03	.4148E-03	.2650E-03	.3763E-03	.2848E-03	.3854E-03	.3493E-03	.3810E-03
.3520E-03	.4350E-03	.4102E-03	.5666E-03	.4692E-03	.4890E-03	.3883E-03	.3930E-03
.3864E-03	.3530E-03	.2707E-03	.4263E-03	.3535E-03	.3139E-03	.2523E-03	.2853E-03
.2284E-03	.1705E-03	.2328E-03	.1913E-03	.1536E-03	.2166E-03	.2163E-03	.2331E-03
.2601E-03	.3357E-03	.3599E-03	.4487E-03	.3955E-03	.4475E-03	.4178E-03	.4213E-03
.3965E-03	.4142E-03	.2923E-03	.2680E-03	.2698E-03	.2364E-03	.2358E-03	.2043E-03
.2236E-03	.1472E-03	.1650E-03	.1698E-03	.2329E-03	.1847E-03	.2198E-03	.2107E-03
.2322E-03	.1899E-03	.2099E-03	.1628E-03	.1867E-03	.1829E-03	.1607E-03	.9016E-04
.6707E-04	.8614E-04	.8946E-04	.5216E-04	.9068E-04	.1016E-03	.9416E-04	.4875E-04

67 S 33 C BLAN MOLY WALL .750 IN DIB 2.25 INCHES EO=0 MEV

.1332E 00	.1340E 00	.1 32E 00	.1354E 00	.4365E-01	.6289E-01	.8077E-03	.5392E-01
.7486E-01	.4649E-01	.4247E-01	.4050E-01	.4566E-01	.4876E-01	.4151E-01	.4125E-01
.4090E-01	.3697E-01	.3656E-01	.4064E-01	.4032E-01	.3781E-01	.3676E-01	.3942E-01
.4823E-01	.5128E-01	.5310E-01	.5335E-01	.4915E-01	.4839E-01	.4601E-01	.4256E-01
.4456E-01	.4429E-01	.4480E-01	.4454E-01	.4506E-01	.4406E-01	.4365E-01	.4241E-01
.4209E-01	.4321E-01	.4276E-01	.4347E-01	.4243E-01	.4182E-01	.4279E-01	.3949E-01
.3987E-01	.3816E-01	.3781E-01	.3826E-01	.3741E-01	.3553E-01	.3520E-01	.3530E-01
.3421E-01	.3382E-01	.3233E-01	.3105E-01	.3185E-01	.3005E-01	.2917E-01	.2843E-01
.2782E-01	.2706E-01	.2545E-01	.2541E-01	.2462E-01	.2335E-01	.2231E-01	.2149E-01
.2043E-01	.1952E-01	.1956E-01	.1767E-01	.1708E-01	.1653E-01	.1515E-01	.1452E-01
.1417E-01	.1358E-01	.1204E-01	.1165E-01	.1068E-01	.1038E-01	.1032E-01	.9346E-02
.8483E-02	.8272E-02	.7952E-02	.7066E-02	.6590E-02	.6100E-02	.5512E-02	.5153E-02
.4974E-02	.3935E-02	.4531E-02	.3538E-02	.3280E-02	.2702E-02	.2494E-02	.2056E-02
.2048E-02	.1711E-02	.6494E-03	.8454E-03	.7803E-03	.1627E-02	.1592E-02	.2355E-02
.3354E-02	.3049E-02	.3054E-02	.3300E-02	.2804E-02	.2712E-02	.1867E-02	.1827E-02
.1319E-02	.1521E-02	.1085E-02	.1339E-02	.8119E-03	.7113E-03	.6673E-03	.5458E-03
.1190E-02	.6745E-03	.1693E-02	.1594E-02	.1423E-02	.1494E-02	.1240E-02	.1811E-02
.1819E-02	.1421E-02	.1186E-02	.1118E-02	.9047E-03	.6817E-03	.9452E-03	.1436E-02
.1233E-02	.1090E-02	.1002E-02	.9679E-03	.1150E-02	.9518E-03	.1071E-02	.8466E-03
.9270E-03	.1097E-02	.8655E-03	.9477E-03	.1081E-02	.8803E-03	.1085E-02	.7692E-03
.9725E-03	.9967E-03	.8869E-03	.1086E-02	.1192E-02	.8633E-03	.1757E-02	.9928E-03
.1388E-02	.6185E-03	.8319E-03	.9646E-03	.1464E-02	.1029E-02	.1117E-02	.1060E-02
.8761E-03	.1230E-02	.7633E-03	.1216E-02	.8618E-03	.7353E-03	.8743E-03	.1417E-02
.1202E-02	.1259E-02	.1061E-02	.7460E-03	.1084E-02	.1096E-02	.5536E-03	.7622E-03
.9095E-03	.9226E-03	.8285E-03	.7281E-03	.5538E-03	.6459E-03	.7195E-03	.1045E-02
.8196E-03	.1158E-02	.9308E-03	.1441E-02	.1020E-02	.1112E-02	.9517E-03	.9210E-03
.8237E-03	.7275E-03	.9474E-03	.6374E-03	.1086E-02	.8437E-03	.8142E-03	.8016E-03
.5486E-03	.7138E-03	.4462E-03	.6249E-03	.6192E-03	.4875E-03	.7640E-03	.8297E-03
.6872E-03	.8256E-03	.4563E-03	.1163E-02	.7950E-03	.6706E-03	.4966E-03	.4522E-03
.8319E-03	.6130E-03	.5344E-03	.3829E-03	.5456E-03	.4114E-03	.3090E-03	.3690E-03
.3656E-03	.4358E-03	.4543E-03	.4931E-03	.4777E-03	.5016E-03	.5658E-03	.2972E-03
.2298E-03	.3073E-03	.6972E-03	.4956E-03	.2992E-03	.4276E-03	.6763E-03	.6580E-03

67 S 33 C BLAN MOLY WALL .750 IN DIB 2.25 INCHES EO=2.5 MEV

.7258E-06	-.1122E-05	.0000E 00	-.9714E-06	.2619E-03	.8663E-03	.7446E-03	.1024E-02
.9262E-03	.9752E-03	.7 87E-03	.7691E-03	.6471E-03	.9535E-03	.6212E-03	.5493E-03
.7504E-03	.5014E-03	.5431E-03	.5085E-03	.3871E-03	.3988E-03	.4275E-03	.4697E-03
.4425E-03	.4469E-03	.6679E-03	.5424E-03	.5690E-03	.3627E-03	.5603E-03	.5503E-03
.5015E-03	.5198E-03	.6020E-03	.6938E-03	.6067E-03	.4202E-03	.5720E-03	.4095E-03
.2888E-03	.4216E-03	.7594E-03	.6003E-03	.6942E-03	.8082E-03	.4357E-03	.8506E-03
.6098E-03	.6424E-03	.8087E-03	.6050E-03	.7140E-03	.8202E-03	.6802E-03	.6455E-03
.5253E-03	.6396E-03	.4989E-03	.6800E-03	.6068E-03	.4199E-03	.6181E-03	.7994E-03
.3921E-03	.5634E-03	.7535E-03	.4581E-03	.4403E-03	.6115E-03	.5136E-03	.5812E-03
.7233E-03	.6761E-03	.5612E-03	.6693E-03	.8293E-03	.8232E-03	.6000E-03	.7189E-03
.6125E-03	.6814E-03	.6827E-03	.4015E-03	.5756E-03	.5280E-03	.4206E-03	.4327E-03
.5926E-03	.3520E-03	.5822E-03	.3059E-03	.4001E-03	.4217E-03	.2709E-03	.3589E-03
.3753E-03	.2612E-03	.5867E-03	.3469E-03	.3574E-03	.4103E-03	.3739E-03	.3696E-03
.4107E-03	.5278E-03	.3252E-03	.3063E-03	.3372E-03	.1402E-03	.2098E-03	.2455E-03
.2074E-03	.2197E-03	.3020E-03	.3238E-03	.3061E-03	.9467E-04	.1732E-03	.2628E-03
.2758E-03	.2776E-04	.6868E-04	.3053E-03	.5500E-04	.1167E-03	.2022E-03	.1852E-03
.8414E-04	.2010E-03	.2715E-03	.2700E-03	.2168E-03	.1395E-03	.2606E-03	.2553E-03
.2850E-03	.1486E-03	.2102E-03	.3017E-03	.2920E-03	.1987E-03	.2498E-03	.1494E-03
.8971E-04	.2172E-03	.1625E-03	.1622E-03	.1537E-03	.3013E-03	.4519E-04	.1768E-03
.1227E-03	.2695E-03	.1392E-03	.2188E-03	.1664E-03	.2777E-03	.2354E-03	.3225E-03
.2233E-03	.2608E-03	.2132E-03	.2303E-03	.1984E-03	.2264E-03	.1424E-03	.1300E-03
.2147E-03	.2605E-03	.2616E-03	.1787E-03	.2407E-03	.2108E-03	.1599E-03	.1139E-03
.1227E-03	.2315E-03	.1764E-03	.2395E-03	.1895E-03	.1300E-03	.1976E-03	.1450E-03
.1217E-03	.6339E-04	.1836E-03	.1787E-03	.2514E-03	.2542E-03	.3068E-03	.2175E-03
.2720E-03	.3340E-03	.2573E-03	.3611E-03	.3336E-03	.3014E-03	.3267E-03	.1972E-03
.3014E-03	.2074E-03	.2325E-03	.2283E-03	.2175E-03	.8387E-04	.8140E-04	.1039E-03
.1329E-03	.2228E-03	.8973E-04	.7405E-04	.1318E-03	.1304E-03	.1316E-03	.2375E-03
.2836E-03	.2783E-03	.3128E-03	.3146E-03	.3213E-03	.2750E-03	.3085E-03	.3190E-03
.2829E-03	.1512E-03	.2253E-03	.2275E-03	.1826E-03	.2162E-03	.6178E-04	.1780E-03
.7186E-04	.1084E-03	.1188E-03	.1677E-03	.1123E-03	.1503E-03	.1759E-03	.2129E-03
.2068E-03	.1628E-03	.1752E-03	.1872E-03	.1499E-03	.1039E-03	.1222E-03	.9076E-04
.9190E-04	.9577E-04	.1068E-03	.7662E-04	.7177E-04	.7128E-04	.6588E-04	.8763E-04

67 S 33 C BLAN MOLY WALL .750 IN DIB 4.25 INCHES EO=0 MEV

.2600E-01 .2618E-01 .2596E-01 .2613E-01 .3317E-01 .4879E-01-.2937E-01 .7044E-02
.6512E-01 .3405E-01-.1266E 00 .3076E-01 .3541E-01 .3948E-01 .9821E-02 .3733E-01
.3564E-01 .3075E-01 .3248E-01 .3491E-01 .3601E-01 .3323E-01 .3253E-01 .3664E-01
.6156E-01 .4369E-01 .4413E-01 .4223E-01 .4247E-01 .4136E-01 .4208E-01 .4093E-01
.4204E-01 .4177E-01 .3973E-01 .4166E-01 .4054E-01 .3952E-01 .3969E-01 .4077E-01
.3932E-01 .3913E-01 .3875E-01 .3901E-01 .3956E-01 .3805E-01 .3716E-01 .3682E-01
.3576E-01 .3490E-01 .3499E-01 .3423E-01 .3363E-01 .3338E-01 .3264E-01 .3202E-01
.3027E-01 .3004E-01 .2960E-01 .2917E-01 .2859E-01 .2769E-01 .2555E-01 .2495E-01
.2478E-01 .2331E-01 .2275E-01 .2216E-01 .2026E-01 .2080E-01 .1922E-01 .1908E-01
.1694E-01 .1632E-01 .1574E-01 .1598E-01 .1541E-01 .1370E-01 .1320E-01 .1201E-01
.1091E-01 .1014E-01 .9168E-02 .8314E-02 .7908E-02 .7567E-02 .7060E-02 .6721E-02
.6889E-02 .5364E-02 .5114E-02 .4462E-02 .4298E-02 .2409E-02 .2199E-02 .2868E-02
.2126E-02 .2008E-02 .1310E-02 .1119E-02 .5515E-03 .8109E-03 .3987E-03 .4959E-04
-.2369E-03 .1612E-03 .5156E-03 .8692E-03 .2016E-03 .5108E-03 .1276E-02 .1670E-02
.1578E-02 .1322E-02 .1840E-02 .6118E-03 .7019E-03 .4395E-03 .4829E-03-.1820E-05
.8990E-04-.3875E-03 .2313E-03 .3565E-03 .3705E-03-.2477E-03 .8800E-03-.4989E-03
.2589E-03 .5636E-03 .7533E-03 .6217E-03 .7963E-03 .6117E-03 .5526E-03 .6636E-03
.3476E-03 .4573E-03 .6715E-03 .2600E-03 .1392E-03 .7449E-04-.7590E-04 .1947E-03
.6046E-03-.2068E-03 .3481E-03 .4574E-04 .3039E-03 .6255E-03 .2085E-03-.1663E-04
.3757E-03 .3237E-04 .3994E-03 .2095E-03 .2232E-03 .4507E-03 .2183E-03 .1481E-03
.1927E-03 .1246E-03-.1017E-04 .6000E-03 .5132E-03 .2519E-04-.7734E-04 .4986E-03
.6886E-03 .3767E-03 .3979E-03 .3244E-03 .2566E-03 .2425E-03 .6216E-03 .4966E-03
.2481E-03 .4249E-03 .1772E-03 .3684E-03 .1152E-02 .1244E-03 .4643E-03 .3009E-03
.7575E-03 .3228E-04 .1448E-03-.4733E-04 .4490E-03 .1526E-03 .6571E-03 .2983E-03
.5847E-04 .7010E-03 .5299E-03 .5567E-03 .2400E-03 .6040E-03 .4593E-03 .5728E-03
.5992E-03 .6170E-03 .7651E-03 .3774E-03 .6330E-03-.2320E-04 .4701E-03 .3919E-03
.4345E-03 .2957E-03 .2674E-05 .1326E-03 .1392E-03 .2588E-03 .4637E-03 .2183E-03
.7245E-03 .4339E-03 .3709E-03 .1604E-03 .2482E-03 .4220E-03 .2772E-03-.6605E-04
.6068E-03 .2068E-03 .9027E-03-.1988E-03 .1244E-03 .1136E-03 .3929E-03 .3023E-03
.5641E-03 .1318E-03 .2635E-03-.3934E-04 .3527E-03 .2038E-03-.4206E-04-.2667E-04
.1337E-03 .5501E-03 .9846E-04 .1547E-03 .4443E-04 .1505E-03-.1444E-03 .9875E-04
.2693E-03 .9238E-04 .1049E-03 .4235E-04 .2655E-03-.4766E-04 .4041E-03 .4470E-03

67 S 33 C BLAN MOLY WALL .750 IN DIB 4.25 INCHES EO=2.5 MEV

-.1411E-05	.7586E-06	.7187E-06	.8864E-05	.5251E-03	-.3284E-03	.1376E-03	.1583E-03
.9835E-04	.8684E-03	.6529E-03	.6019E-03	.6941E-03	.5673E-03	.7043E-03	.3235E-03
.2264E-03	.2236E-03	.8467E-04	.2083E-03	.1839E-03	.2329E-04	.9665E-04	.3627E-03
.2506E-03	.6613E-04	-.1009E-03	.1855E-03	.4038E-03	.1426E-03	.5183E-04	.2517E-03
.4136E-03	.2164E-03	.2791E-03	.2859E-03	.3189E-03	.2602E-03	.1831E-03	.4112E-04
.3867E-03	.2254E-03	.3895E-03	.1573E-03	.2060E-03	.3318E-03	.3960E-03	.2920E-03
.3739E-03	.1603E-03	.3164E-03	.2538E-03	.2167E-03	.5462E-03	.4862E-03	.4499E-03
.4780E-03	.3638E-03	.3738E-03	.4164E-03	.2761E-03	.3783E-03	.5223E-03	.3159E-03
.3376E-03	.2385E-03	.1211E-03	.2332E-03	.4892E-03	.3625E-03	.3359E-03	.4876E-03
.3860E-03	.3663E-03	.3929E-03	.3832E-03	.3940E-03	.3063E-03	.4651E-03	.3087E-03
.3791E-03	.3729E-03	.3582E-03	.2696E-03	.2467E-03	.2110E-03	.3122E-03	.2321E-03
.2170E-03	.2381E-03	.2054E-03	.1972E-03	.1467E-03	.2374E-03	.2342E-03	-.3310E-04
.1425E-03	.1166E-03	.2223E-03	.2788E-03	.3980E-03	.2885E-03	.4433E-03	.3199E-03
.4480E-03	.3660E-03	.1650E-03	.1749E-03	.2170E-03	.3241E-03	-.4705E-04	-.5123E-04
.1570E-03	.8196E-04	.1383E-03	.1506E-03	.8835E-04	.1830E-03	.2230E-03	.1605E-03
.3620E-04	.1780E-03	.1498E-04	-.1273E-04	.9028E-04	.9055E-04	.1379E-03	.2489E-03
.1431E-03	.1510E-03	.1682E-03	.2657E-03	.1133E-03	.2358E-03	.1049E-03	.2548E-03
.1646E-03	.1967E-03	.1769E-03	.1147E-03	.1438E-03	-.2575E-04	.2013E-03	.7735E-04
.6724E-04	.1602E-03	.7303E-04	.1424E-03	.1888E-03	.4125E-04	.1183E-03	.1878E-03
.2342E-03	.1300E-03	.1437E-03	.1176E-03	.1469E-03	.1763E-03	.2393E-03	.2628E-03
.2652E-03	.3696E-03	.2519E-03	.1933E-03	.1939E-03	.2362E-03	.1539E-03	.2396E-03
.7817E-04	.1844E-03	.2150E-03	.1681E-03	.2005E-03	.3641E-03	.2090E-03	.2333E-03
.7209E-04	.1777E-03	.1718E-03	.1469E-03	.7787E-04	.1120E-03	.1056E-03	-.2437E-04
.5883E-04	.8962E-04	.1777E-03	.1733E-03	.2642E-03	.1665E-03	.1836E-03	.3339E-03
.2643E-03	.3263E-03	.3667E-03	.4156E-03	.2692E-03	.3322E-03	.3006E-03	.3462E-03
.2984E-03	.2084E-03	.2194E-03	.1744E-03	.1867E-03	.1317E-03	.1644E-03	.1152E-03
.2020E-03	.7836E-04	.6101E-04	.1337E-03	.2004E-03	.2434E-03	.2249E-03	.3116E-03
.2365E-03	.3274E-03	.4167E-03	.3805E-03	.3745E-03	.3469E-03	.3481E-03	.3069E-03
.3314E-03	.3184E-03	.2 11E-03	.2208E-03	.2288E-03	.1490E-03	.1673E-03	.1173E-03
.1816E-03	.1722E-03	.2185E-03	.2067E-03	.2087E-03	.2061E-03	.2174E-03	.1676E-03
.1869E-03	.1942E-03	.1699E-03	.1289E-03	.1365E-03	.1358E-03	.7412E-04	.1012E-03
.1432E-03	.5664E-04	.7601E-04	.7184E-04	.7678E-04	.7759E-04	.8393E-04	.3323E-04

67 S 33 C BLAN MOLY WALL .750 IN DIB 6.25 INCHES EO=0 MEV

-.1508E 00-.1498E 00-.1508E 00-.1480E 00-.7889E-01-.5985E-01-.1093E 00-.6206E-01
.56 E-01 .4951E-01 .4 77E-01 .4230E-01 .4208E-01 .4491E-01 .4057E-01 .3797E-01
.3743E-01 .3394E-01 .3251E-01 .3700E-01 .3815E-01 .3479E-01 .3555E-01 .3779E-01
.41 E-01 .4457E-01 .4634E-01 .4433E-01 .4280E-01 .3949E-01 .3948E-01 .3719E-01
.3649E-01 .3638E-01 .3542E-01 .3647E-01 .3641E-01 .3526E-01 .3496E-01 .3374E-01
.3413E-01 .3454E-01 .343 E-01 .3422E-01 .3429E-01 .3479E-01 .3258E-01 .3212E-01
.3157E-01 .2978E-01 .3088E-01 .2930E-01 .2909E-01 .2888E-01 .2836E-01 .2828E-01
.2741E-01 .2643E-01 .2654E-01 .2397E-01 .2458E-01 .2454E-01 .2373E-01 .2246E-01
.2352E-01 .2200E-01 .2130E-01 .2049E-01 .1962E-01 .1954E-01 .1906E-01 .1792E-01
.1690E-01 .1636E-01 .1635E-01 .1493E-01 .1548E-01 .1474E-01 .1359E-01 .1410E-01
.1283E-01 .1168E-01 .1131E-01 .1052E-01 .1040E-01 .9268E-02 .9162E-02 .8463E-02
.8943E-02 .7796E-02 .8168E-02 .6933E-02 .7633E-02 .7068E-02 .6394E-02 .6164E-02
.6199E-02 .5521E-02 .4688E-02 .4889E-02 .4730E-02 .3932E-02 .3872E-02 .3751E-02
.3288E-02 .3043E-02 .2978E-02 .2729E-02 .2560E-02 .2535E-02 .3214E-02 .3329E-02
.3783E-02 .4240E-02 .3802E-02 .3897E-02 .4453E-02 .3174E-02 .2496E-02 .2266E-02
.2822E-02 .1971E-02 .1922E-02 .2219E-02 .1922E-02 .1658E-02 .1843E-02 .2589E-02
.2037E-02 .2065E-02 .2182E-02 .2499E-02 .2142E-02 .2349E-02 .2645E-02 .2414E-02
.2346E-02 .2469E-02 .1968E-02 .2271E-02 .1882E-02 .2341E-02 .1734E-02 .2006E-02
.1842E-02 .1668E-02 .1863E-02 .1597E-02 .1794E-02 .2012E-02 .1529E-02 .1725E-02
.1696E-02 .1811E-02 .1652E-02 .1168E-02 .1868E-02 .1931E-02 .1822E-02 .1743E-02
.1806E-02 .1839E-02 .8813E-03 .1973E-02 .1363E-02 .1789E-02 .1769E-02 .1516E-02
.1415E-02 .1623E-02 .1408E-02 .1699E-02 .1574E-02 .1941E-02 .1920E-02 .1815E-02
.1799E-02 .1449E-02 .1756E-02 .1364E-02 .1798E-02 .1501E-02 .1576E-02 .1691E-02
.1441E-02 .1401E-02 .1868E-02 .1641E-02 .1579E-02 .1738E-02 .1339E-02 .1371E-02
.1761E-02 .1465E-02 .1002E-02 .1302E-02 .1588E-02 .1340E-02 .1394E-02 .1747E-02
.1505E-02 .1657E-02 .1379E-02 .1740E-02 .1529E-02 .1639E-02 .1441E-02 .1501E-02
.1140E-02 .1215E-02 .1130E-02 .1415E-02 .1193E-02 .1086E-02 .1111E-02 .1031E-02
.8562E-03 .1201E-02 .1155E-02 .1097E-02 .1055E-02 .9947E-03 .1374E-02 .1191E-02
.1385E-02 .1087E-02 .1159E-02 .1445E-02 .1072E-02 .1431E-02 .1050E-02 .1254E-02
.1194E-02 .1131E-02 .8555E-03 .8064E-03 .1070E-02 .1142E-02 .8135E-03 .9790E-03
.7467E-03 .7182E-03 .6287E-03 .6777E-03 .9057E-03 .5515E-03 .4049E-03 .1112E-02
.9401E-03 .8765E-03 .5940E-03 .5638E-03 .8149E-03 .7207E-03 .5373E-03 .7167E-03

67 S 33 C BLAN MOLY WALL .750 IN DIB 6.25 INCHES EO=2.5 MEV

.6513E-06	.1023E-05	.0000E 00	.1526E-04	.1267E-02	.3233E-02	.3052E-02	.2766E-02
.2926E-02	.2787E-02	.2871E-02	.2696E-02	.2735E-02	.2890E-02	.2569E-02	.2455E-02
.2177E-02	.2249E-02	.2382E-02	.2271E-02	.2009E-02	.1795E-02	.2049E-02	.1880E-02
.1806E-02	.1920E-02	.2063E-02	.1893E-02	.1858E-02	.1703E-02	.1705E-02	.2017E-02
.2058E-02	.1698E-02	.1915E-02	.1733E-02	.1717E-02	.1806E-02	.1885E-02	.1772E-02
.1648E-02	.1946E-02	.1756E-02	.1721E-02	.1719E-02	.1793E-02	.1791E-02	.1757E-02
.1880E-02	.1934E-02	.1785E-02	.1885E-02	.1947E-02	.1544E-02	.1878E-02	.1545E-02
.1839E-02	.1757E-02	.1849E-02	.1787E-02	.1561E-02	.1775E-02	.1655E-02	.1525E-02
.1642E-02	.1503E-02	.1672E-02	.1498E-02	.1559E-02	.1629E-02	.1381E-02	.1500E-02
.1478E-02	.1507E-02	.1729E-02	.1592E-02	.1790E-02	.1609E-02	.1470E-02	.1649E-02
.1640E-02	.1406E-02	.1433E-02	.1656E-02	.1472E-02	.1379E-02	.1292E-02	.1360E-02
.1202E-02	.1329E-02	.1311E-02	.1128E-02	.1134E-02	.1265E-02	.1238E-02	.1072E-02
.1119E-02	.1062E-02	.1097E-02	.1198E-02	.1301E-02	.1265E-02	.1348E-02	.1058E-02
.1199E-02	.1139E-02	.1042E-02	.1143E-02	.1166E-02	.8257E-03	.1076E-02	.9781E-03
.8947E-03	.9075E-03	.7922E-03	.8488E-03	.7995E-03	.7988E-03	.7393E-03	.6408E-03
.7450E-03	.7512E-03	.8 13E-03	.6461E-03	.7429E-03	.5743E-03	.6412E-03	.7071E-03
.6591E-03	.6023E-03	.8391E-03	.7787E-03	.6818E-03	.7044E-03	.7918E-03	.7662E-03
.9136E-03	.8187E-03	.6750E-03	.6277E-03	.8342E-03	.6358E-03	.7483E-03	.5821E-03
.5937E-03	.6684E-03	.5713E-03	.6120E-03	.7068E-03	.5087E-03	.4423E-03	.7100E-03
.5284E-03	.5805E-03	.4577E-03	.5374E-03	.7160E-03	.6037E-03	.4974E-03	.7204E-03
.7711E-03	.4856E-03	.4458E-03	.6432E-03	.6855E-03	.6140E-03	.5354E-03	.5713E-03
.4683E-03	.6042E-03	.6695E-03	.5965E-03	.5782E-03	.5888E-03	.5217E-03	.3853E-03
.6252E-03	.5044E-03	.5636E-03	.4578E-03	.3614E-03	.4595E-03	.3676E-03	.4767E-03
.3899E-03	.3529E-03	.3512E-03	.3954E-03	.3842E-03	.3998E-03	.3356E-03	.4796E-03
.4192E-03	.3857E-03	.4350E-03	.4129E-03	.5408E-03	.5177E-03	.5194E-03	.4921E-03
.5114E-03	.3458E-03	.4673E-03	.3656E-03	.4008E-03	.3217E-03	.3323E-03	.4083E-03
.3000E-03	.3188E-03	.2837E-03	.2008E-03	.2324E-03	.2752E-03	.2751E-03	.2726E-03
.2308E-03	.2077E-03	.3028E-03	.4014E-03	.3833E-03	.4297E-03	.4313E-03	.3695E-03
.4098E-03	.3603E-03	.3245E-03	.3517E-03	.2868E-03	.2147E-03	.2825E-03	.2330E-03
.1930E-03	.2210E-03	.2309E-03	.1884E-03	.1423E-03	.1617E-03	.2005E-03	.1711E-03
.2073E-03	.1943E-03	.1616E-03	.1953E-03	.1479E-03	.1669E-03	.1525E-03	.1119E-03
.9430E-04	.1140E-03	.1193E-03	.9491E-04	.7170E-04	.9115E-04	.7388E-04	.7514E-04

67 S 33 C BLAN MOLY WALL .750 IN DTB 8.25 INCHES EO=0 MEV

.4232E-01	.4330E-01	.4220E-01	.4395E-01	.5310E-01	.9031E-01	.3033E-01	.6883E-01
.9731E-01	.6544E-01	.4108E-01	.5872E-01	.6077E-01	.6284E-01	.5495E-01	.5434E-01
.5534E-01	.5095E-01	.5104E-01	.5529E-01	.5629E-01	.5330E-01	.5311E-01	.5690E-01
.6163E-01	.6458E-01	.6830E-01	.6443E-01	.6107E-01	.6111E-01	.5819E-01	.5633E-01
.5713E-01	.5713E-01	.5643E-01	.5560E-01	.5509E-01	.5387E-01	.5335E-01	.5452E-01
.5299E-01	.5245E-01	.5355E-01	.5309E-01	.5178E-01	.5217E-01	.5154E-01	.5130E-01
.4897E-01	.4700E-01	.4719E-01	.4588E-01	.4488E-01	.4575E-01	.4381E-01	.4346E-01
.4204E-01	.4113E-01	.4078E-01	.3890E-01	.3897E-01	.3752E-01	.3682E-01	.3587E-01
.3487E-01	.3431E-01	.3315E-01	.3126E-01	.3017E-01	.2911E-01	.2838E-01	.2699E-01
.2672E-01	.2565E-01	.2467E-01	.2318E-01	.2226E-01	.2094E-01	.1978E-01	.1916E-01
.1791E-01	.1735E-01	.1667E-01	.1468E-01	.1500E-01	.1421E-01	.1320E-01	.1242E-01
.1137E-01	.1172E-01	.1064E-01	.9550E-02	.9864E-02	.8836E-02	.7770E-02	.7395E-02
.6501E-02	.6603E-02	.6260E-02	.6159E-02	.5798E-02	.4972E-02	.4434E-02	.4305E-02
.3429E-02	.3038E-02	.2898E-02	.2372E-02	.2942E-02	.2824E-02	.2778E-02	.4311E-02
.4611E-02	.4124E-02	.4396E-02	.4627E-02	.4277E-02	.4207E-02	.3709E-02	.3311E-02
.2663E-02	.2860E-02	.2350E-02	.1861E-02	.2167E-02	.2338E-02	.2208E-02	.2194E-02
.2167E-02	.2091E-02	.2287E-02	.2381E-02	.2321E-02	.2949E-02	.2540E-02	.3097E-02
.2697E-02	.2988E-02	.2406E-02	.2164E-02	.1828E-02	.2153E-02	.2022E-02	.1819E-02
.2691E-02	.1594E-02	.1898E-02	.2028E-02	.2152E-02	.2161E-02	.1709E-02	.1686E-02
.1946E-02	.1804E-02	.2307E-02	.1664E-02	.2137E-02	.1578E-02	.1974E-02	.1546E-02
.2010E-02	.1901E-02	.2034E-02	.1763E-02	.2257E-02	.2152E-02	.1390E-02	.1888E-02
.1644E-02	.1485E-02	.1739E-02	.1933E-02	.1683E-02	.1805E-02	.2298E-02	.2098E-02
.1579E-02	.2012E-02	.2138E-02	.1908E-02	.1904E-02	.2134E-02	.1854E-02	.1656E-02
.1918E-02	.1974E-02	.1575E-02	.1635E-02	.1754E-02	.1651E-02	.1625E-02	.1486E-02
.1582E-02	.1354E-02	.1384E-02	.1599E-02	.1362E-02	.1702E-02	.1625E-02	.1625E-02
.1682E-02	.1649E-02	.1378E-02	.2018E-02	.1724E-02	.1585E-02	.1654E-02	.1231E-02
.1357E-02	.1353E-02	.1507E-02	.9686E-03	.1347E-02	.1453E-02	.1090E-02	.1224E-02
.1043E-02	.1397E-02	.1269E-02	.1319E-02	.8699E-03	.9991E-03	.1308E-02	.1196E-02
.9384E-03	.1325E-02	.1205E-02	.1378E-02	.1207E-02	.1155E-02	.1048E-02	.1215E-02
.1113E-02	.1082E-02	.1075E-02	.9091E-03	.8895E-03	.8824E-03	.9306E-03	.9077E-03
.8933E-03	.1012E-02	.1027E-02	.8990E-03	.9826E-03	.1143E-02	.4612E-03	.7949E-03
.8380E-03	.1033E-02	.8378E-03	.7441E-03	.4018E-03	.6718E-03	.5208E-03	.7631E-03

67 S 33 C BLAN MOLY WALL .750 IN DIB 8.25 INCHES EO=2.5 MEV

.1487E-05	.3862E-05	.0000E 00	.7921E-05	-.1544E-02	.3942E-02	.3162E-02	.3046E-02
.3049E-02	.3409E-02	.3226E-02	.3328E-02	.3404E-02	.2743E-02	.2702E-02	.2678E-02
.2617E-02	.2352E-02	.2783E-02	.2133E-02	.2061E-02	.2545E-02	.2338E-02	.2131E-02
.2516E-02	.2349E-02	.2533E-02	.2407E-02	.2122E-02	.2161E-02	.1927E-02	.2282E-02
.2026E-02	.1933E-02	.1880E-02	.1850E-02	.1935E-02	.2041E-02	.2044E-02	.1938E-02
.1982E-02	.1990E-02	.1986E-02	.2008E-02	.1796E-02	.1933E-02	.1914E-02	.1983E-02
.2062E-02	.2146E-02	.2257E-02	.2013E-02	.1799E-02	.1841E-02	.1880E-02	.1819E-02
.1908E-02	.1903E-02	.1749E-02	.1902E-02	.1817E-02	.1699E-02	.1800E-02	.1591E-02
.1825E-02	.1932E-02	.1616E-02	.1679E-02	.1472E-02	.1561E-02	.1649E-02	.1696E-02
.1659E-02	.1734E-02	.1771E-02	.1806E-02	.2016E-02	.1777E-02	.1947E-02	.1627E-02
.1505E-02	.1638E-02	.1408E-02	.1395E-02	.1583E-02	.1362E-02	.1420E-02	.1269E-02
.1349E-02	.1280E-02	.1303E-02	.1213E-02	.1169E-02	.1136E-02	.1036E-02	.1121E-02
.1320E-02	.1413E-02	.1188E-02	.1248E-02	.1509E-02	.1336E-02	.1099E-02	.1221E-02
.1276E-02	.1106E-02	.1171E-02	.1020E-02	.8975E-03	.1149E-02	.1049E-02	.7236E-03
.9699E-03	.9844E-03	.9987E-03	.8844E-03	.9906E-03	.9796E-03	.8793E-03	.1075E-02
.8478E-03	.7529E-03	.8864E-03	.8404E-03	.9055E-03	.8807E-03	.7502E-03	.9325E-03
.8093E-03	.9014E-03	.8784E-03	.9765E-03	.8943E-03	.3380E-03	.8918E-03	.8658E-03
.8373E-03	.7331E-03	.8280E-03	.6719E-03	.8393E-03	.7949E-03	.771 E-03	.7598E-03
.7021E-03	.8500E-03	.7763E-03	.7374E-03	.6130E-03	.7580E-03	.5755E-03	.6209E-03
.7314E-03	.6305E-03	.6608E-03	.7979E-03	.5904E-03	.7705E-03	.6313E-03	.6255E-03
.6130E-03	.8182E-03	.7475E-03	.6956E-03	.6595E-03	.6803E-03	.6413E-03	.7400E-03
.5628E-03	.6003E-03	.6040E-03	.5925E-03	.6450E-03	.5270E-03	.5718E-03	.6139E-03
.4965E-03	.5097E-03	.5475E-03	.4882E-03	.4420E-03	.6006E-03	.5201E-03	.4603E-03
.4084E-03	.5497E-03	.4264E-03	.4647E-03	.4132E-03	.6135E-03	.4696E-03	.5293E-03
.5056E-03	.5360E-03	.5481E-03	.6527E-03	.5510E-03	.6002E-03	.5655E-03	.5532E-03
.5408E-03	.4207E-03	.4011E-03	.3948E-03	.3770E-03	.3936E-03	.2747E-03	.3064E-03
.3212E-03	.2662E-03	.2975E-03	.2868E-03	.2516E-03	.2840E-03	.3023E-03	.2867E-03
.3311E-03	.4041E-03	.4739E-03	.4239E-03	.4675E-03	.4922E-03	.4391E-03	.4100E-03
.4235E-03	.3975E-03	.3175E-03	.2946E-03	.2635E-03	.1979E-03	.2390E-03	.2305E-03
.2404E-03	.2005E-03	.1834E-03	.1917E-03	.2507E-03	.2153E-03	.2195E-03	.2449E-03
.2243E-03	.2852E-03	.2190E-03	.1607E-03	.1761E-03	.1442E-03	.1637E-03	.8362E-04
.1023E-03	.1076E-03	.1016E-03	.1208E-03	.1053E-03	.9035E-04	.9224E-04	.4107E-04

67 S 33 C BLAN MOLY WALL .375 IN DIB 2.25 INCHES EO=0 MEV

.1247E 00	.1254E 00	.1248E 00	.1272E 00	.4397E-01	.7216E-01	-.1720E-01	.5709E-01
.8843E-01	.4888E-01	.4185E-01	.4004E-01	.4493E-01	.5015E-01	.4153E-01	.3994E-01
.3991E-01	.3358E-01	.3157E-01	.3660E-01	.3718E-01	.3494E-01	.3199E-01	.3770E-01
.4325E-01	.5133E-01	.5395E-01	.5329E-01	.4927E-01	.4593E-01	.4525E-01	.4097E-01
.4330E-01	.4287E-01	.4241E-01	.4273E-01	.4202E-01	.4103E-01	.4260E-01	.4075E-01
.4023E-01	.4066E-01	.4091E-01	.4111E-01	.3992E-01	.4088E-01	.4084E-01	.3889E-01
.3801E-01	.3679E-01	.3627E-01	.3535E-01	.3680E-01	.3372E-01	.3352E-01	.3396E-01
.3321E-01	.3218E-01	.3175E-01	.3010E-01	.3094E-01	.2980E-01	.2843E-01	.2794E-01
.2746E-01	.2595E-01	.2473E-01	.2414E-01	.2368E-01	.2349E-01	.2202E-01	.2140E-01
.2050E-01	.2036E-01	.1952E-01	.1793E-01	.1684E-01	.1618E-01	.1513E-01	.1434E-01
.1389E-01	.1398E-01	.1215E-01	.1091E-01	.1086E-01	.9998E-02	.1009E-01	.9113E-02
.8507E-02	.8672E-02	.8072E-02	.7717E-02	.6621E-02	.6176E-02	.5564E-02	.5066E-02
.4976E-02	.4405E-02	.4582E-02	.3878E-02	.3829E-02	.3246E-02	.2766E-02	.2462E-02
.1725E-02	.1713E-02	.1158E-02	.5790E-03	.8193E-03	.8085E-03	.1178E-02	.2698E-02
.3371E-02	.3485E-02	.3737E-02	.4374E-02	.3234E-02	.3562E-02	.2451E-02	.2168E-02
.1838E-02	.1488E-02	.1437E-02	.1048E-02	.1113E-02	.6700E-03	.6454E-03	.1138E-02
.8886E-03	.1377E-02	.1644E-02	.1364E-02	.1490E-02	.1850E-02	.1718E-02	.1646E-02
.2256E-02	.1799E-02	.1469E-02	.1121E-02	.1191E-02	.8364E-03	.1250E-02	.1185E-02
.1078E-02	.1312E-02	.1064E-02	.1191E-02	.1025E-02	.9502E-03	.1119E-02	.9077E-03
.8034E-03	.9790E-03	.9025E-03	.1235E-02	.1190E-02	.9790E-03	.1215E-02	.6356E-03
.1371E-02	.7832E-03	.1456E-02	.1156E-02	.1233E-02	.1147E-02	.1021E-02	.9924E-03
.1537E-02	.6276E-03	.7886E-03	.1019E-02	.1344E-02	.1057E-02	.1062E-02	.1422E-02
.1298E-02	.1377E-02	.1022E-02	.9763E-03	.9828E-03	.1074E-02	.1056E-02	.1040E-02
.1259E-02	.1086E-02	.9909E-03	.1040E-02	.1071E-02	.7565E-03	.7670E-03	.7836E-03
.7113E-03	.1033E-02	.9739E-03	.9482E-03	.9263E-03	.7647E-03	.1003E-02	.9312E-03
.1077E-02	.1347E-02	.1090E-02	.1561E-02	.1153E-02	.1109E-02	.1261E-02	.7727E-03
.1111E-02	.5590E-03	.9984E-03	.9316E-03	.9717E-03	.8971E-03	.7562E-03	.6309E-03
.7399E-03	.7447E-03	.7459E-03	.5784E-03	.7558E-03	.4287E-03	.7660E-03	.5183E-03
.7088E-03	.7190E-03	.5501E-03	.1244E-02	.8653E-03	.9413E-03	.8069E-03	.8245E-03
.9768E-03	.7156E-03	.6761E-03	.5625E-03	.5669E-03	.4214E-03	.5602E-03	.4250E-03
.5057E-03	.5827E-03	.4032E-03	.7094E-03	.4910E-03	.5763E-03	.5819E-03	.3316E-03
.4115E-03	.3757E-03	.8499E-03	.5674E-03	.6002E-03	.5481E-03	.6633E-03	.6007E-03

67 S 33 C BLAN MOLY WALL .375 IN DIB 2.25 INCHES EO=2.5 MEV

.0000E 00	.2105E-05	.1 79E-05	.5447E-05	.1252E-02	.1112E-02	.1139E-02	.1175E-02
.1368E-02	.1501E-02	.1099E-02	.1236E-02	.1112E-02	.1228E-02	.8008E-03	.9192E-03
.1012E-02	.6569E-03	.7017E-03	.7825E-03	.9252E-03	.8715E-03	.8631E-03	.9714E-03
.8916E-03	.7199E-03	.7509E-03	.8748E-03	.8919E-03	.5971E-03	.8972E-03	.7221E-03
.7326E-03	.8164E-03	.9560E-03	.8132E-03	.8013E-03	.7309E-03	.6549E-03	.6740E-03
.5538E-03	.7117E-03	.7160E-03	.6671E-03	.7118E-03	.7874E-03	.6020E-03	.1027E-02
.9234E-03	.9435E-03	.9326E-03	.7976E-03	.9436E-03	.1086E-02	.8399E-03	.8140E-03
.8030E-03	.7156E-03	.7035E-03	.9127E-03	.7806E-03	.8719E-03	.7676E-03	.7567E-03
.6757E-03	.6824E-03	.9488E-03	.7336E-03	.7289E-03	.7023E-03	.7024E-03	.7577E-03
.9825E-03	.9816E-03	.7781E-03	.8676E-03	.9308E-03	.1033E-02	.8153E-03	.9060E-03
.8276E-03	.8158E-03	.7530E-03	.6263E-03	.7067E-03	.5776E-03	.5976E-03	.6340E-03
.5635E-03	.5416E-03	.5951E-03	.5044E-03	.4032E-03	.3901E-03	.5554E-03	.5470E-03
.4931E-03	.4742E-03	.7022E-03	.5301E-03	.5984E-03	.7129E-03	.6207E-03	.7401E-03
.6430E-03	.6626E-03	.4630E-03	.4341E-03	.5352E-03	.4075E-03	.4086E-03	.2771E-03
.2387E-03	.2355E-03	.4026E-03	.3423E-03	.1935E-03	.3441E-03	.3147E-03	.2394E-03
.3981E-03	.1214E-03	.2161E-03	.3687E-03	.2757E-03	.2243E-03	.2349E-03	.3758E-03
.2270E-03	.2590E-03	.3492E-03	.3772E-03	.4461E-03	.1669E-03	.4830E-03	.4017E-03
.4565E-03	.3039E-03	.2872E-03	.3877E-03	.4263E-03	.1957E-03	.4204E-03	.2805E-03
.1370E-03	.2843E-03	.2809E-03	.2932E-03	.3002E-03	.1817E-03	.1876E-03	.3073E-03
.3404E-03	.2180E-03	.3967E-03	.2998E-03	.3341E-03	.2363E-03	.3629E-03	.4942E-03
.4029E-03	.3142E-03	.3358E-03	.4219E-03	.1815E-03	.3111E-03	.3252E-03	.2732E-03
.4452E-03	.2355E-03	.2754E-03	.2592E-03	.2345E-03	.3040E-03	.2180E-03	.2716E-03
.2452E-03	.3199E-03	.2319E-03	.2065E-03	.2880E-03	.2617E-03	.3335E-03	.2049E-03
.2664E-03	.2214E-03	.2171E-03	.1811E-03	.2490E-03	.1643E-03	.2960E-03	.2971E-03
.3714E-03	.2524E-03	.4555E-03	.4046E-03	.4496E-03	.3870E-03	.4291E-03	.3685E-03
.3194E-03	.3280E-03	.3291E-03	.3576E-03	.2503E-03	.2451E-03	.2329E-03	.2459E-03
.1310E-03	.1789E-03	.1169E-03	.1518E-03	.8714E-04	.1879E-03	.1743E-03	.2644E-03
.2964E-03	.2715E-03	.3123E-03	.3340E-03	.3487E-03	.4139E-03	.3572E-03	.3276E-03
.2848E-03	.1986E-03	.2 78E-03	.2656E-03	.1735E-03	.2329E-03	.1545E-03	.1972E-03
.1664E-03	.1096E-03	.1608E-03	.1266E-03	.1938E-03	.1522E-03	.1463E-03	.1843E-03
.1937E-03	.1755E-03	.2157E-03	.2078E-03	.1671E-03	.1493E-03	.9321E-04	.1373E-03
.1164E-03	.9889E-04	.1069E-03	.9383E-04	.7724E-04	.3476E-04	.9243E-04	.9433E-04

67 S 33 C BLAN MOLY WALL .375 IN DIB 4.25 INCHES EO=0 MEV

.3135E-01	.3168E-01	.3132E-01	.3159E-01	.4482E-01	.6566E-01	-.1912E-01	.3123E-01
.56 E-01	.4413E-01	.44 E-01	.4294E-01	.4523E-01	.4687E-01	.45 E-01	.4173E-01
.4199E-01	.3713E-01	.3798E-01	.4231E-01	.4073E-01	.3857E-01	.4064E-01	.4437E-01
.55 E-01	.5200E-01	.5150E-01	.4960E-01	.4806E-01	.4463E-01	.4635E-01	.4445E-01
.4486E-01	.4617E-01	.4277E-01	.4491E-01	.4495E-01	.4184E-01	.4317E-01	.4163E-01
.4356E-01	.4141E-01	.4241E-01	.4172E-01	.4187E-01	.4167E-01	.3996E-01	.3889E-01
.3727E-01	.3775E-01	.3737E-01	.3689E-01	.3553E-01	.3558E-01	.3469E-01	.3497E-01
.3285E-01	.3232E-01	.3165E-01	.3020E-01	.3016E-01	.2996E-01	.2733E-01	.2720E-01
.2581E-01	.2552E-01	.2514E-01	.2507E-01	.2262E-01	.2263E-01	.2102E-01	.2155E-01
.1872E-01	.1844E-01	.1795E-01	.1630E-01	.1630E-01	.1524E-01	.1488E-01	.1294E-01
.1304E-01	.1150E-01	.1119E-01	.1060E-01	.8972E-02	.8917E-02	.9513E-02	.8503E-02
.7729E-02	.7111E-02	.6251E-02	.6827E-02	.5667E-02	.4192E-02	.4041E-02	.4396E-02
.3704E-02	.3537E-02	.3136E-02	.2692E-02	.2346E-02	.2352E-02	.2091E-02	.1577E-02
.1022E-02	.8146E-03	.1359E-02	.1642E-02	.9608E-03	.1599E-02	.2740E-02	.2808E-02
.3023E-02	.3110E-02	.3460E-02	.1915E-02	.1698E-02	.1593E-02	.1339E-02	.1603E-02
.1472E-02	.1358E-02	.1441E-02	.1160E-02	.8550E-03	.6239E-03	.1660E-02	.9159E-03
.8972E-03	.1615E-02	.1493E-02	.1491E-02	.1880E-02	.1678E-02	.1825E-02	.1766E-02
.9129E-03	.1099E-02	.1125E-02	.1465E-02	.1279E-02	.1012E-02	.8272E-03	.1191E-02
.1504E-02	.5633E-03	.1069E-02	.9936E-03	.1018E-02	.1499E-02	.8443E-03	.6616E-03
.1114E-02	.7476E-03	.1326E-02	.9778E-03	.8850E-03	.1090E-02	.1085E-02	.9741E-03
.1368E-02	.9820E-03	.8182E-03	.1004E-02	.8378E-03	.7348E-03	.8270E-03	.1151E-02
.1292E-02	.1051E-02	.1504E-02	.1260E-02	.1202E-02	.1070E-02	.1747E-02	.1075E-02
.1173E-02	.1350E-02	.9 56E-03	.6549E-03	.1750E-02	.1127E-02	.7420E-03	.8670E-03
.1333E-02	.7060E-03	.8695E-03	.1011E-02	.1045E-02	.9642E-03	.1211E-02	.1162E-02
.6154E-03	.1355E-02	.9643E-03	.9218E-03	.5766E-03	.5474E-03	.1115E-02	.1324E-02
.9687E-03	.1296E-02	.9050E-03	.8134E-03	.8142E-03	.6182E-03	.7142E-03	.7619E-03
.9708E-03	.8557E-03	.5916E-03	.8685E-03	.8665E-03	.6480E-03	.8308E-03	.1113E-02
.8798E-03	.7554E-03	.7213E-03	.6437E-03	.1202E-02	.6979E-03	.5146E-03	.5296E-03
.6816E-03	.8576E-03	.9691E-03	.5646E-03	.4180E-03	.9433E-03	.7502E-03	.1130E-02
.7632E-03	.6257E-03	.5691E-03	.5359E-03	.6556E-03	.3026E-03	.5381E-03	.3227E-03
.1087E-03	.6658E-03	.4939E-03	.2453E-03	.5389E-03	.5765E-03	-.8979E-04	.1132E-03
.4914E-03	.9383E-04	.1848E-03	.4289E-03	.2618E-03	.6350E-03	.5801E-03	.5909E-03

67 S 33 C BLAN MOLY WALL .375 IN DIB 4.25 INCHES EO=2.5 MEV

.2783E-05	.2078E-05	.0000E 00	.7574E-05	.4338E-03	.3998E-03	.5737E-03	.5106E-03
.6616E-03	.8081E-03	.1090E-02	.9743E-03	.6662E-03	.7079E-03	.9897E-03	.4562E-03
.6255E-03	.4530E-03	.3113E-03	.3826E-03	.5293E-03	.4651E-03	.3018E-03	.4548E-03
.4317E-03	.4669E-03	.2294E-03	.9672E-04	.4694E-03	.4461E-03	.4105E-03	.6516E-03
.6305E-03	.2738E-03	.3045E-03	.6712E-03	.5112E-03	.3755E-03	.3885E-03	.5215E-03
.4600E-03	.4769E-03	.6509E-03	.3856E-03	.2620E-03	.5482E-03	.5949E-03	.4515E-03
.5252E-03	.6648E-03	.5389E-03	.6319E-03	.5003E-03	.5595E-03	.6492E-03	.6640E-03
.6871E-03	.4465E-03	.7381E-03	.5660E-03	.5486E-03	.6425E-03	.5169E-03	.4460E-03
.5449E-03	.6161E-03	.4523E-03	.3978E-03	.7706E-03	.4827E-03	.6225E-03	.6564E-03
.6034E-03	.6322E-03	.6109E-03	.5691E-03	.7414E-03	.5590E-03	.7777E-03	.4980E-03
.5969E-03	.4804E-03	.5644E-03	.5383E-03	.2660E-03	.4686E-03	.5371E-03	.3052E-03
.4394E-03	.2299E-03	.2458E-03	.2379E-03	.2866E-03	.3173E-03	.3608E-03	.1308E-03
.4574E-03	.3697E-03	.2991E-03	.5564E-03	.4555E-03	.4926E-03	.4502E-03	.5742E-03
.5269E-03	.4252E-03	.2182E-03	.3462E-03	.3624E-03	.2935E-03	.2171E-03	.1555E-03
.3353E-03	.3141E-03	.1930E-03	.1891E-03	.2802E-03	.2974E-03	.2308E-03	.2528E-03
.2343E-03	.1838E-03	.1512E-03	.1172E-03	.2244E-03	.2155E-03	.1561E-03	.2136E-03
.1120E-03	.1036E-03	.2057E-03	.2368E-03	.2610E-03	.2371E-03	.1648E-03	.2676E-03
.2416E-03	.3228E-03	.2017E-03	.2208E-03	.2353E-03	.1007E-03	.3143E-03	.2889E-03
.3485E-04	.1661E-03	.1645E-03	.1528E-03	.2186E-03	.1502E-03	.1155E-03	.1639E-03
.2168E-03	.2364E-03	.1126E-03	.2944E-03	.2467E-03	.2631E-03	.2356E-03	.3724E-03
.3191E-03	.3019E-03	.3109E-03	.1859E-03	.2779E-03	.2517E-03	.2918E-03	.2679E-03
.2059E-03	.1721E-03	.3148E-03	.2471E-03	.1754E-03	.3688E-03	.2303E-03	.2094E-03
.1396E-03	.2400E-03	.1247E-03	.1752E-03	.1847E-03	.2624E-03	.1282E-03	.5860E-04
.7161E-04	.1709E-03	.1949E-03	.2032E-03	.2586E-03	.1419E-03	.2339E-03	.3918E-03
.2194E-03	.2054E-03	.3490E-03	.4520E-03	.3583E-03	.3730E-03	.3580E-03	.2652E-03
.3118E-03	.1920E-03	.2084E-03	.2324E-03	.1418E-03	.2143E-03	.1523E-03	.6717E-04
.1630E-03	.1441E-03	.1386E-03	.1511E-03	.1882E-03	.2295E-03	.2085E-03	.2956E-03
.2542E-03	.3571E-03	.4052E-03	.3729E-03	.3685E-03	.3693E-03	.3117E-03	.3213E-03
.2776E-03	.2723E-03	.2295E-03	.2279E-03	.2373E-03	.1922E-03	.1553E-03	.1821E-03
.1718E-03	.1812E-03	.2059E-03	.1896E-03	.1834E-03	.1948E-03	.1746E-03	.1817E-03
.1517E-03	.1723E-03	.1390E-03	.1285E-03	.1105E-03	.9092E-04	.8456E-04	.1172E-03
.1180E-03	.7523E-04	.6127E-04	.8951E-04	.8116E-04	.6854E-04	.5742E-04	.4817E-04

67 S 33 C BLAN MOLY WALL .375 IN DIB 6.25 INCHES EO=0 MEV

-.8134E-03	-.1195E-03	-.8176E-03	.1092E-02	.3704E-01	.6068E-01	.6250E-03	.4892E-01
.56 E-01	.4771E-01	.4085E-01	.4071E-01	.4436E-01	.4626E-01	.4278E-01	.4237E-01
.4179E-01	.3627E-01	.3517E-01	.3934E-01	.4041E-01	.3710E-01	.3715E-01	.3978E-01
.4605E-01	.5124E-01	.5410E-01	.5217E-01	.4943E-01	.4739E-01	.4717E-01	.4381E-01
.4555E-01	.4587E-01	.4477E-01	.4416E-01	.4493E-01	.4330E-01	.4462E-01	.4292E-01
.4329E-01	.4253E-01	.4170E-01	.4086E-01	.4443E-01	.4344E-01	.4294E-01	.4175E-01
.4052E-01	.3829E-01	.3850E-01	.3725E-01	.3664E-01	.3670E-01	.3585E-01	.3496E-01
.3433E-01	.3290E-01	.3 53E-01	.3150E-01	.3080E-01	.3098E-01	.2998E-01	.2915E-01
.2864E-01	.2786E-01	.2709E-01	.2616E-01	.2487E-01	.2355E-01	.2352E-01	.2244E-01
.2187E-01	.2031E-01	.2083E-01	.1888E-01	.1773E-01	.1784E-01	.1637E-01	.1611E-01
.1445E-01	.1383E-01	.1280E-01	.1185E-01	.1135E-01	.1041E-01	.1023E-01	.9746E-02
.9687E-02	.9005E-02	.8587E-02	.7675E-02	.7829E-02	.7379E-02	.5512E-02	.6169E-02
.5415E-02	.5176E-02	.4501E-02	.4470E-02	.4194E-02	.3405E-02	.3132E-02	.3111E-02
.2583E-02	.1642E-02	.1750E-02	.1643E-02	.8956E-03	.8398E-03	.1183E-02	.2017E-02
.2111E-02	.28 E-02	.3357E-02	.3039E-02	.3686E-02	.2634E-02	.2236E-02	.2283E-02
.1945E-02	.1274E-02	.1246E-02	.1684E-02	.1093E-02	.1179E-02	.9388E-03	.1851E-02
.1662E-02	.1061E-02	.1007E-02	.1423E-02	.1343E-02	.1690E-02	.1859E-02	.1782E-02
.2055E-02	.1858E-02	.1492E-02	.1262E-02	.1493E-02	.1719E-02	.1169E-02	.1243E-02
.1140E-02	.9780E-03	.1 89E-02	.9466E-03	.1199E-02	.1399E-02	.8895E-03	.1292E-02
.1079E-02	.1058E-02	.1193E-02	.9297E-03	.1579E-02	.1449E-02	.1025E-02	.1430E-02
.1280E-02	.1484E-02	.7238E-03	.1481E-02	.1093E-02	.8635E-03	.1128E-02	.1205E-02
.1411E-02	.1167E-02	.1073E-02	.1243E-02	.1305E-02	.1540E-02	.1226E-02	.1598E-02
.1325E-02	.1133E-02	.1213E-02	.9452E-03	.1686E-02	.1344E-02	.1087E-02	.1096E-02
.1207E-02	.1186E-02	.1529E-02	.1283E-02	.1448E-02	.1094E-02	.1050E-02	.1126E-02
.1522E-02	.1225E-02	.9547E-03	.7435E-03	.1424E-02	.7928E-03	.8357E-03	.1205E-02
.1102E-02	.1365E-02	.1106E-02	.1355E-02	.1473E-02	.1480E-02	.1274E-02	.1414E-02
.1037E-02	.1016E-02	.8220E-03	.8269E-03	.9291E-03	.1005E-02	.9963E-03	.9215E-03
.5898E-03	.9559E-03	.8493E-03	.7279E-03	.9560E-03	.4562E-03	.1184E-02	.5614E-03
.1045E-02	.6939E-03	.1107E-02	.1049E-02	.8077E-03	.1140E-02	.9661E-03	.8070E-03
.8647E-03	.7921E-03	.4582E-03	.4350E-03	.6811E-03	.1007E-02	.4527E-03	.6047E-03
.7182E-03	.5768E-03	.2026E-03	.6242E-03	.6740E-03	.3168E-03	.5285E-03	.7603E-03
.6511E-03	.4715E-03	.2832E-03	.4891E-03	.5812E-03	.4588E-03	.2664E-03	.4598E-03

67 S 33 C BLAN MOLY WALL .375 IN DIB 6.25 INCHES EO=2.5 MEV

.6881E-06	.4757E-05	.0000E 00-	.2182E-06	.4593E-03	.2345E-02	.2108E-02	.2086E-02
.2239E-02	.2140E-02	.2207E-02	.2131E-02	.2400E-02	.2354E-02	.2142E-02	.2317E-02
.1936E-02	.1886E-02	.1718E-02	.1789E-02	.1585E-02	.1702E-02	.1631E-02	.1603E-02
.1257E-02	.1196E-02	.1457E-02	.1562E-02	.1382E-02	.1527E-02	.1588E-02	.1486E-02
.1607E-02	.1722E-02	.1403E-02	.1620E-02	.1358E-02	.1670E-02	.1537E-02	.1504E-02
.1472E-02	.1459E-02	.1418E-02	.1432E-02	.1325E-02	.1684E-02	.1473E-02	.1370E-02
.1555E-02	.1623E-02	.1667E-02	.1631E-02	.1600E-02	.1333E-02	.1674E-02	.1266E-02
.1564E-02	.1484E-02	.1564E-02	.1416E-02	.1118E-02	.1288E-02	.1471E-02	.1284E-02
.1264E-02	.1226E-02	.1292E-02	.1273E-02	.1491E-02	.1262E-02	.1251E-02	.1342E-02
.1448E-02	.1357E-02	.1364E-02	.1290E-02	.1361E-02	.1479E-02	.1310E-02	.1398E-02
.1400E-02	.1558E-02	.1374E-02	.1234E-02	.1273E-02	.1231E-02	.1175E-02	.1129E-02
.1127E-02	.1178E-02	.1151E-02	.9828E-03	.1097E-02	.1003E-02	.9061E-03	.7618E-03
.8363E-03	.8505E-03	.1141E-02	.9875E-03	.9518E-03	.9901E-03	.1108E-02	.9133E-03
.1030E-02	.1067E-02	.8157E-03	.9619E-03	.1149E-02	.7908E-03	.8695E-03	.7084E-03
.6843E-03	.7379E-03	.6678E-03	.6973E-03	.6778E-03	.7273E-03	.6082E-03	.5102E-03
.7559E-03	.6555E-03	.7 52E-03	.4917E-03	.6169E-03	.4579E-03	.5798E-03	.5445E-03
.4598E-03	.5426E-03	.7 33E-03	.5266E-03	.5751E-03	.6701E-03	.6863E-03	.6216E-03
.6257E-03	.6137E-03	.5 35E-03	.5188E-03	.6704E-03	.5035E-03	.6173E-03	.5448E-03
.6329E-03	.5451E-03	.5091E-03	.4674E-03	.6098E-03	.3714E-03	.3828E-03	.3790E-03
.4115E-03	.5740E-03	.3704E-03	.4980E-03	.6483E-03	.5068E-03	.2906E-03	.5546E-03
.5415E-03	.5266E-03	.3987E-03	.6107E-03	.6004E-03	.5273E-03	.5296E-03	.5432E-03
.4764E-03	.5881E-03	.5803E-03	.5173E-03	.5986E-03	.4595E-03	.4001E-03	.4327E-03
.5815E-03	.3592E-03	.4348E-03	.4845E-03	.3493E-03	.3981E-03	.3366E-03	.3708E-03
.3112E-03	.3042E-03	.3129E-03	.3042E-03	.3451E-03	.2772E-03	.2736E-03	.3778E-03
.3139E-03	.4393E-03	.4804E-03	.4259E-03	.4586E-03	.4739E-03	.4695E-03	.4974E-03
.4678E-03	.4348E-03	.4993E-03	.3843E-03	.4395E-03	.3963E-03	.4264E-03	.3317E-03
.2166E-03	.2744E-03	.2548E-03	.2428E-03	.2389E-03	.2208E-03	.1959E-03	.2325E-03
.2475E-03	.2237E-03	.3077E-03	.3389E-03	.3556E-03	.4283E-03	.4812E-03	.4908E-03
.4617E-03	.3970E-03	.4468E-03	.3887E-03	.3596E-03	.2835E-03	.2897E-03	.2559E-03
.2269E-03	.1844E-03	.2159E-03	.1877E-03	.1423E-03	.2090E-03	.2174E-03	.1717E-03
.2399E-03	.2045E-03	.1965E-03	.2210E-03	.2144E-03	.2309E-03	.1799E-03	.1699E-03
.1479E-03	.1033E-03	.1 60E-03	.1162E-03	.9330E-04	.1062E-03	.5289E-04	.7930E-04

67 S 33 C BLAN MOLY WALL .375 IN DIB 8.25 INCHES EO=0 MEV

.2678E-01	.2753E-01	.2669E-01	.2764E-01	.1604E-01	.6477E-01	.2087E-01	.4890E-01
.55 E-01	.4746E-01	.4423E-01	.4375E-01	.4526E-01	.4581E-01	.4145E-01	.4176E-01
.4263E-01	.3975E-01	.3934E-01	.4231E-01	.4235E-01	.3808E-01	.3949E-01	.4272E-01
.4723E-01	.4853E-01	.5233E-01	.5009E-01	.4806E-01	.4479E-01	.4450E-01	.4230E-01
.4334E-01	.4365E-01	.4302E-01	.4254E-01	.4312E-01	.4262E-01	.4080E-01	.4174E-01
.4037E-01	.4068E-01	.4072E-01	.4216E-01	.4065E-01	.4038E-01	.4002E-01	.3790E-01
.3776E-01	.3777E-01	.3655E-01	.3424E-01	.3477E-01	.3530E-01	.3305E-01	.3205E-01
.3296E-01	.3098E-01	.3171E-01	.2975E-01	.3048E-01	.2870E-01	.2883E-01	.2632E-01
.2605E-01	.2534E-01	.2520E-01	.2403E-01	.2346E-01	.2195E-01	.2151E-01	.2185E-01
.2025E-01	.1926E-01	.1802E-01	.1740E-01	.1614E-01	.1606E-01	.1447E-01	.1350E-01
.1347E-01	.1395E-01	.1254E-01	.1152E-01	.1116E-01	.1054E-01	.9509E-02	.8812E-02
.8838+-02	.8856E-02	.7714E-02	.7617E-02	.7177E-02	.6623E-02	.5864E-02	.5183E-02
.4835E-02	.4451E-02	.4550E-02	.4482E-02	.4274E-02	.3554E-02	.3071E-02	.2980E-02
.2420E-02	.1618E-02	.2396E-02	.1437E-02	.1651E-02	.2292E-02	.2046E-02	.3050E-02
.4027E-02	.3661E-02	.3352E-02	.3345E-02	.3028E-02	.2647E-02	.2684E-02	.2293E-02
.1868E-02	.2215E-02	.1936E-02	.1391E-02	.1530E-02	.1807E-02	.1401E-02	.1036E-02
.1560E-02	.1332E-02	.1636E-02	.1754E-02	.1675E-02	.1964E-02	.1807E-02	.2214E-02
.2169E-02	.2001E-02	.1852E-02	.1687E-02	.1224E-02	.1488E-02	.1614E-02	.1385E-02
.2080E-02	.1578E-02	.1332E-02	.9971E-03	.1796E-02	.1261E-02	.1583E-02	.1507E-02
.1004E-02	.1488E-02	.1701E-02	.9601E-03	.1267E-02	.1064E-02	.1144E-02	.1343E-02
.1393E-02	.1604E-02	.1435E-02	.1741E-02	.1243E-02	.1450E-02	.1451E-02	.1299E-02
.1510E-02	.1407E-02	.1317E-02	.1709E-02	.1270E-02	.1415E-02	.1526E-02	.1886E-02
.1140E-02	.1565E-02	.1636E-02	.1349E-02	.1282E-02	.1469E-02	.1618E-02	.1285E-02
.1380E-02	.1597E-02	.1402E-02	.1186E-02	.1313E-02	.1268E-02	.1024E-02	.1229E-02
.1441E-02	.1358E-02	.1278E-02	.1358E-02	.1362E-02	.1542E-02	.1215E-02	.1276E-02
.1570E-02	.1388E-02	.1196E-02	.1699E-02	.1318E-02	.1460E-02	.1362E-02	.1245E-02
.1048E-02	.1233E-02	.1406E-02	.9091E-03	.1149E-02	.1210E-02	.1038E-02	.1139E-02
.8822E-03	.9658E-03	.1187E-02	.8700E-03	.8134E-03	.9348E-03	.1012E-02	.8939E-03
.8001E-03	.9426E-03	.8927E-03	.7056E-03	.7232E-03	.1082E-02	.8613E-03	.7572E-03
.6562E-03	.6099E-03	.7074E-03	.6026E-03	.5700E-03	.5784E-03	.5586E-03	.5218E-03
.4596E-03	.7247E-03	.7162E-03	.5548E-03	.4778E-03	.7225E-03	.4861E-03	.5096E-03
.6054E-03	.7621E-03	.6262E-03	.4972E-03	.4120E-03	.6533E-03	.4169E-03	.4813E-03

67 S 33 C BLAN MOLY WALL .375 IN DIB 8.25 INCHES EO=2.5 MEV

.1439E-05	.5134E-05	.0000E 00	.1055E-06	-.2994E-02	.2240E-02	.2113E-02	.2070E-02
.2126E-02	.2336E-02	.2226E-02	.2175E-02	.2153E-02	.1879E-02	.1875E-02	.1723E-02
.1782E-02	.1562E-02	.1932E-02	.1462E-02	.1535E-02	.1491E-02	.1590E-02	.1466E-02
.1722E-02	.1563E-02	.1758E-02	.1671E-02	.1250E-02	.1609E-02	.1350E-02	.1404E-02
.1422E-02	.1194E-02	.1377E-02	.1248E-02	.1319E-02	.1334E-02	.1248E-02	.1465E-02
.1379E-02	.1423E-02	.1522E-02	.1328E-02	.1399E-02	.1406E-02	.1430E-02	.1563E-02
.1561E-02	.1561E-02	.1712E-02	.1594E-02	.1293E-02	.1228E-02	.1472E-02	.1088E-02
.1264E-02	.1272E-02	.1295E-02	.1255E-02	.1399E-02	.1327E-02	.1449E-02	.1090E-02
.1399E-02	.1346E-02	.1206E-02	.1204E-02	.1083E-02	.1136E-02	.1349E-02	.1253E-02
.1322E-02	.1213E-02	.1387E-02	.1374E-02	.1437E-02	.1246E-02	.1376E-02	.1256E-02
.1323E-02	.1063E-02	.1153E-02	.9887E-03	.1141E-02	.1058E-02	.1075E-02	.8224E-03
.1100E-02	.9240E-03	.9916E-03	.7717E-03	.8783E-03	.8040E-03	.6773E-03	.1011E-02
.8791E-03	.9482E-03	.8967E-03	.9509E-03	.1128E-02	.9903E-03	.7986E-03	.1019E-02
.8508E-03	.7687E-03	.7749E-03	.6454E-03	.6075E-03	.6882E-03	.6367E-03	.4890E-03
.6710E-03	.7381E-03	.6306E-03	.6210E-03	.6725E-03	.6111E-03	.5787E-03	.7944E-03
.5420E-03	.4121E-03	.4844E-03	.5618E-03	.3923E-03	.4522E-03	.4922E-03	.4962E-03
.4893E-03	.5342E-03	.5019E-03	.6595E-03	.5603E-03	.5556E-03	.6464E-03	.5606E-03
.5283E-03	.4617E-03	.5000E-03	.4524E-03	.5461E-03	.4140E-03	.4801E-03	.3982E-03
.5216E-03	.4890E-03	.5482E-03	.4939E-03	.2747E-03	.4753E-03	.4174E-03	.2767E-03
.4924E-03	.3362E-03	.3764E-03	.5451E-03	.4713E-03	.5011E-03	.4586E-03	.6149E-03
.4303E-03	.4244E-03	.4745E-03	.4831E-03	.5022E-03	.4994E-03	.3034E-03	.4503E-03
.4576E-03	.4565E-03	.3939E-03	.4650E-03	.4161E-03	.3741E-03	.3755E-03	.2975E-03
.3373E-03	.2928E-03	.2 05E-03	.2919E-03	.3581E-03	.3487E-03	.2807E-03	.2169E-03
.2654E-03	.3754E-03	.2642E-03	.3162E-03	.2739E-03	.4171E-03	.2868E-03	.3307E-03
.2547E-03	.3640E-03	.3229E-03	.3322E-03	.4375E-03	.3939E-03	.3637E-03	.3614E-03
.3204E-03	.3091E-03	.2511E-03	.3070E-03	.2211E-03	.2428E-03	.1359E-03	.2754E-03
.1310E-03	.1585E-03	.1489E-03	.2115E-03	.1594E-03	.1854E-03	.2357E-03	.2704E-03
.3281E-03	.3181E-03	.3678E-03	.4523E-03	.3965E-03	.3678E-03	.3730E-03	.2876E-03
.2900E-03	.2851E-03	.1459E-03	.1900E-03	.2064E-03	.1750E-03	.2065E-03	.1753E-03
.1606E-03	.1567E-03	.1467E-03	.1462E-03	.1788E-03	.1531E-03	.1475E-03	.1954E-03
.1737E-03	.1541E-03	.1965E-03	.1006E-03	.1296E-03	.1148E-03	.1285E-03	.5555E-04
.6398E-04	.1083E-03	.8999E-04	.7675E-04	.6383E-04	.7284E-04	.5988E-04	.6118E-04

67 S 33 C BLAN MOLY WALL .375 IN DIB 2.25 INCHES EO=0 MEV

-.8510E-02	-.7861E-02	-.8481E-02	-.6311E-02	.2338E-01	.4107E-01	-.1075E-01	.2989E-01
.4638E-01	.3026E-01	.2925E-01	.2781E-01	.3054E-01	.3572E-01	.3182E-01	.3083E-01
.3081E-01	.2647E-01	.2558E-01	.2849E-01	.3077E-01	.2604E-01	.2520E-01	.2809E-01
.3291E-01	.3843E-01	.4354E-01	.4069E-01	.3925E-01	.3823E-01	.3743E-01	.3475E-01
.3527E-01	.3632E-01	.3654E-01	.3693E-01	.3523E-01	.3528E-01	.3540E-01	.3509E-01
.3598E-01	.3422E-01	.3465E-01	.3387E-01	.3471E-01	.3606E-01	.3514E-01	.3357E-01
.3282E-01	.3194E-01	.3191E-01	.3030E-01	.3072E-01	.2918E-01	.2957E-01	.2789E-01
.2778E-01	.2625E-01	.258 E-01	.2524E-01	.2618E-01	.2520E-01	.2485E-01	.2288E-01
.2325E-01	.2238E-01	.2126E-01	.2071E-01	.1982E-01	.2006E-01	.1786E-01	.1834E-01
.1784E-01	.1615E-01	.1549E-01	.1435E-01	.1426E-01	.1333E-01	.1243E-01	.1250E-01
.1121E-01	.1046E-01	.1016E-01	.9263E-02	.8623E-02	.7096E-02	.7525E-02	.7467E-02
.7033E-02	.6767E-02	.6327E-02	.5581E-02	.5041E-02	.4276E-02	.3990E-02	.3551E-02
.3319E-02	.3704E-02	.2633E-02	.2394E-02	.2645E-02	.1345E-02	.8468E-03	.1405E-02
.8408E-03	.1187E-03	.288 E-03	.3193E-03	.835 E-03	.7355E-04	.2211E-03	.1015E-02
.1396E-02	.2062E-02	.2271E-02	.2405E-02	.1463E-02	.1075E-02	.1020E-02	.1236E-02
.5308E-03	.6828E-03	.329 E-03	.3079E-03	.2216E-03	.2144E-03	.159 E-03	.283 E-03
.3850E-03	.2108E-03	.1058E-03	.2839E-03	.7885E-03	.6206E-03	.8286E-03	.7737E-03
.1435E-02	.5116E-03	.5094E-03	.5810E-03	.7154E-03	.2772E-03	.1670E-03	.4427E-03
.3314E-03	.2703E-04	.2654E-03	.692 E-03	.4271E-03	.2397E-03	.3783E-03	.3962E-03
.1119E-03	.9816E-04	.2863E-03	.9456E-03	.3925E-03	.3981E-03	.2935E-03	.2360E-03
.6284E-03	.2561E-03	.3728E-03	.4344E-03	.4433E-03	.4687E-03	.9338E-04	.3384E-03
.1399E-03	.3665E-03	.3445E-03	.6717E-03	.6754E-03	.5315E-03	.4210E-03	.6929E-03
.4764E-03	.7538E-03	.4775E-03	.5746E-03	.6371E-03	.5758E-03	.6374E-03	.6811E-03
.6534E-03	.4228E-03	.1734E-03	.4120E-03	.3477E-03	.8007E-03	.5930E-03	.2666E-03
.3311E-03	.1827E-03	.4089E-03	.1600E-03	.3770E-03	.4412E-03	.5856E-03	.5902E-03
.6976E-03	.6756E-03	.9663E-03	.7028E-03	.5175E-03	.7267E-03	.3783E-03	.4971E-03
.6570E-03	.5222E-03	.2733E-03	.5535E-03	.4761E-03	.2011E-03	.3438E-03	-.6960E-04
.2881E-03	.2400E-03	.3175E-03	.3747E-04	.7032E-03	.3486E-03	.1775E-03	.3952E-03
.2569E-03	.2359E-03	.5835E-03	.6261E-03	.7938E-03	.5800E-03	.3533E-03	.4920E-03
.9950E-04	.6027E-03	.6 23E-03	.1208E-03	.2893E-03	.3318E-04	.1981E-03	.6595E-04
.6158E-04	.3011E-03	.1450E-03	.2118E-03	.1903E-03	-.7101E-04	.1670E-03	.4633E-04
.1067E-03	.4743E-04	-.1176E-03	-.2584E-05	.3639E-04	.2473E-04	.3281E-03	.9719E-04

67 S 33 C BLAN MOLY WALL .375 IN DIB 2.25 INCHES EO=2.5 MEV

-.5022E-06	.2401E-05	.7131E-06	.4711E-05	-.7358E-03	.9476E-03	.9624E-03	.1017E-02
.1224E-02	.9942E-03	.1009E-02	.8381E-03	.1019E-02	.9400E-03	.8755E-03	.7027E-03
.6151E-03	.8322E-03	.7347E-03	.7685E-03	.5711E-03	.6060E-03	.8143E-03	.8337E-03
.7072E-03	.9926E-03	.5550E-03	.6626E-03	.6416E-03	.9387E-03	.7354E-03	.5100E-03
.6339E-03	.6935E-03	.6101E-03	.3845E-03	.5259E-03	.5795E-03	.6852E-03	.6739E-03
.7710E-03	.6067E-03	.9241E-03	.7547E-03	.6842E-03	.7978E-03	.9644E-03	.7945E-03
.8964E-03	.7422E-03	.6461E-03	.8074E-03	.8900E-03	.8479E-03	.7709E-03	.6766E-03
.7119E-03	.6817E-03	.6756E-03	.5712E-03	.7827E-03	.7334E-03	.5995E-03	.6997E-03
.5771E-03	.7121E-03	.5364E-03	.6553E-03	.6338E-03	.6641E-03	.7833E-03	.5805E-03
.8584E-03	.7980E-03	.9172E-03	.7776E-03	.7721E-03	.7884E-03	.6477E-03	.7678E-03
.6926E-03	.7660E-03	.5870E-03	.6433E-03	.7951E-03	.5037E-03	.5448E-03	.3720E-03
.4895E-03	.4753E-03	.5726E-03	.4940E-03	.3813E-03	.5739E-03	.3181E-03	.4269E-03
.3847E-03	.4519E-03	.5476E-03	.4603E-03	.6154E-03	.4346E-03	.5724E-03	.5439E-03
.5018E-03	.3378E-03	.4330E-03	.3913E-03	.3304E-03	.1581E-03	.2915E-03	.2303E-03
.3442E-03	.2542E-03	.1972E-03	.1806E-03	.2347E-03	.3635E-03	.2992E-03	.1652E-03
.3069E-03	.2613E-03	.2393E-03	.2234E-03	.2495E-03	.3604E-03	.2033E-03	.1552E-03
.3072E-03	.2378E-03	.2702E-03	.2985E-03	.3276E-03	.3308E-03	.1749E-03	.2493E-03
.2735E-03	.2373E-03	.3120E-03	.2840E-03	.2530E-03	.3057E-03	.2015E-03	.2335E-03
.2415E-03	.3096E-03	.2049E-03	.1739E-03	.2709E-03	.3238E-03	.2829E-03	.2510E-03
.2577E-03	.2499E-03	.1557E-03	.2149E-03	.1673E-03	.1606E-03	.1842E-03	.2564E-03
.1976E-03	.2922E-03	.2929E-03	.2106E-03	.2602E-03	.2375E-03	.1932E-03	.2592E-03
.1659E-03	.2998E-03	.2309E-03	.2445E-03	.2226E-03	.2919E-03	.1627E-03	.1466E-03
.1398E-03	.2674E-03	.1915E-03	.1708E-03	.1026E-03	.2180E-03	.1480E-03	.2105E-03
.7877E-04	.8241E-04	.1666E-03	.1523E-03	.2023E-03	.1469E-03	.1776E-03	.2954E-03
.2136E-03	.2312E-03	.2617E-03	.2546E-03	.1713E-03	.2865E-03	.2547E-03	.2001E-03
.1829E-03	.8701E-04	.1996E-03	.1956E-03	.1665E-03	.1675E-03	.1491E-03	.1937E-03
.1464E-03	.1236E-03	.1294E-03	.1660E-03	.1617E-03	.8831E-04	.1973E-03	.1500E-03
.1779E-03	.1793E-03	.2569E-03	.2735E-03	.2169E-03	.3011E-03	.2268E-03	.1900E-03
.2223E-03	.1735E-03	.1695E-03	.1820E-03	.1398E-03	.1281E-03	.9049E-04	.9591E-04
.1314E-03	.1527E-03	.1026E-03	.1023E-03	.9836E-04	.1191E-03	.1064E-03	.9484E-04
.1062E-03	.1305E-03	.9281E-04	.1217E-03	.1090E-03	.8132E-04	.6699E-04	.5705E-04
.8295E-04	.7279E-04	.3999E-04	.7386E-04	.6400E-04	.5142E-04	.5886E-04	.2443E-04

67 S 33 C BLAN MOLY WALL .375 IN DIB 2.25 INCHES EO=0 MEV

-.6897E-02-.6194E-02-.6947E-02-.5465E-02 .3520E-01-.6995E-01 .2587E-01 .4094E-01
.4769E-01 .3312E-01 .3124E-01 .2910E-01 .2998E-01 .3288E-01 .2830E-01 .2825E-01
.2672E-01 .2560E-01 .2589E-01 .2789E-01 .2748E-01 .2402E-01 .2602E-01 .2721E-01
.3115E-01 .3215E-01 .325 E-01 .3272E-01 .3381E-01 .3107E-01 .3065E-01 .3001E-01
.2979E-01 .3010E-01 .2999E-01 .3015E-01 .2948E-01 .2884E-01 .2956E-01 .2873E-01
.2853E-01 .2843E-01 .2839E-01 .2745E-01 .2834E-01 .2759E-01 .2808E-01 .2764E-01
.2616E-01 .2679E-01 .2611E-01 .2491E-01 .2504E-01 .2381E-01 .2425E-01 .2309E-01
.2305E-01 .2136E-01 .2166E-01 .2103E-01 .2028E-01 .1938E-01 .1989E-01 .1889E-01
.1815E-01 .1837E-01 .1688E-01 .1593E-01 .1661E-01 .1558E-01 .1467E-01 .1429E-01
.1356E-01 .1283E-01 .1259E-01 .1255E-01 .1120E-01 .1039E-01 .1040E-01 .9364E-02
.9118E-02 .9043E-02 .8184E-02 .8401E-02 .7505E-02 .6982E-02 .6207E-02 .5738E-02
.5152E-02 .5857E-02 .4602E-02 .4224E-02 .3935E-02 .3987E-02 .3433E-02 .3416E-02
.3090E-02 .2355E-02 .2055E-02 .2183E-02 .2036E-02 .1752E-02 .9490E-03 .1771E-02
.1267E-02 .9706E-03 .8871E-03 .7803E-03 .2629E-03 .9651E-03 .1637E-02 .1616E-02
.2352E-02 .2302E-02 .2324E-02 .2112E-02 .1702E-02 .1348E-02 .1199E-02 .1311E-02
.9825E-03 .4081E-03 .8439E-03 .8667E-03 .4686E-03 .9686E-03 .8046E-03 .7257E-03
.8259E-03 .6863E-03 .9337E-03 .9496E-03 .1042E-02 .1159E-02 .1085E-02 .1302E-02
.1165E-02 .8472E-03 .6179E-03 .3895E-03 .8171E-03 .2788E-03 .5704E-03 .7642E-03
.7456E-03 .7131E-03 .4088E-03 .8915E-03 .5171E-03 .9254E-03 .7899E-03 .1132E-02
.9015E-03 .8275E-03 .8193E-03 .1141E-02 .5498E-03 .6033E-03 .7003E-03 .1178E-02
.6390E-03 .1024E-02 .1035E-02 .9119E-03 .8596E-03 .8222E-03 .5927E-03 .7383E-03
.8665E-03 .1060E-02 .1229E-02 .1212E-02 .9779E-03 .6052E-03 .7224E-03 .7783E-03
.1216E-02 .8540E-03 .6268E-03 .1130E-02 .8825E-03 .7123E-03 .7854E-03 .7654E-03
.4683E-03 .1397E-03 .7078E-03 .9031E-03 .4624E-03 .6923E-03 .5504E-03 .7255E-03
.7114E-03 .8704E-03 .5100E-03 .7386E-03 .7119E-03 .1038E-02 .1092E-02 .9415E-03
.8778E-03 .8207E-03 .7889E-03 .8230E-03 .8419E-03 .7578E-03 .6624E-03 .5438E-03
.7979E-03 .6503E-03 .6928E-03 .5300E-03 .8014E-03 .7741E-03 .3646E-03 .3681E-03
.3893E-03 .4662E-03 .5692E-03 .4937E-03 .7574E-03 .7257E-03 .7845E-03 .6756E-03
.8054E-03 .5076E-03 .4311E-03 .6053E-03 .4904E-03 .5517E-03 .2775E-03 .6524E-03
.2147E-03 .1503E-03 .2725E-03 .3890E-03 .3339E-03 .5084E-03 .3579E-03 .2473E-03
.3900E-03 .7236E-04 .3608E-03 .2762E-03 .3183E-03 .3369E-03 .5322E-03 .2081E-03
.4252E-03 .5910E-03 .3159E-03 .4097E-03 .1781E-03 .2282E-03 .3406E-03 .2786E-03

67 S 33 C BLAN MOLY WALL .375 IN DIB 2.25 INCHES EO=2.5 MEV

.0000E 00	-.5741E-06	.0000E 00	.1133E-05	.5939E-03	.1231E-02	.1441E-02	.1446E-02
.1414E-02	.1366E-02	.1115E-02	.1082E-02	.1216E-02	.1011E-02	.9118E-03	.1039E-02
.9814E-03	.8484E-03	.1112E-02	.8088E-03	.8955E-03	.9623E-03	.8738E-03	.6650E-03
.9158E-03	.7456E-03	.7432E-03	.6899E-03	.8555E-03	.9647E-03	.8351E-03	.8780E-03
.8388E-03	.7564E-03	.8524E-03	.8339E-03	.7388E-03	.6546E-03	.7338E-03	.6463E-03
.8882E-03	.1168E-02	.8967E-03	.7750E-03	.6657E-03	.7883E-03	.1146E-02	.1023E-02
.9089E-03	.9189E-03	.9755E-03	.8407E-03	.1230E-02	.7885E-03	.6573E-03	.9699E-03
.7577E-03	.7401E-03	.8221E-03	.7343E-03	.6807E-03	.7417E-03	.9135E-03	.6714E-03
.7355E-03	.7677E-03	.7151E-03	.9050E-03	.8089E-03	.8896E-03	.8849E-03	.8434E-03
.9812E-03	.1010E-02	.7723E-03	.7481E-03	.8603E-03	.7639E-03	.7721E-03	.7087E-03
.5537E-03	.7170E-03	.6360E-03	.7020E-03	.7332E-03	.6538E-03	.7183E-03	.4153E-03
.6621E-03	.4509E-03	.3114E-03	.4779E-03	.4417E-03	.4291E-03	.5798E-03	.6512E-03
.6606E-03	.6494E-03	.4519E-03	.6111E-03	.6851E-03	.4965E-03	.3158E-03	.4156E-03
.4678E-03	.4703E-03	.4102E-03	.2610E-03	.2629E-03	.2040E-03	.3024E-03	.3119E-03
.3363E-03	.2006E-03	.2101E-03	.3278E-03	.2503E-03	.2562E-03	.1849E-03	.2281E-03
.1928E-03	.4104E-03	.3097E-03	.2148E-03	.2347E-03	.2581E-03	.4187E-03	.3641E-03
.2121E-03	.2732E-03	.2785E-03	.4990E-03	.2768E-03	.3620E-03	.1984E-03	.3220E-03
.3190E-03	.2267E-03	.3733E-03	.4855E-03	.3877E-03	.2094E-03	.2108E-03	.2977E-03
.1579E-03	.2909E-03	.1879E-03	.4058E-03	.2972E-03	.2053E-03	.2137E-03	.3697E-03
.3835E-03	.2354E-03	.3190E-03	.2468E-03	.2787E-03	.2928E-03	.2927E-03	.2172E-03
.2972E-03	.2342E-03	.3885E-03	.2704E-03	.3227E-03	.2459E-03	.2570E-03	.1990E-03
.3724E-03	.2186E-03	.2692E-03	.2450E-03	.1471E-03	.2637E-03	.3341E-03	.2201E-03
.2320E-03	.2214E-03	.2709E-03	.2086E-03	.2304E-03	.2130E-03	.1921E-03	.2041E-03
.1831E-03	.1459E-03	.2296E-03	.2100E-03	.1783E-03	.2143E-03	.2684E-03	.2403E-03
.3126E-03	.2513E-03	.3 40E-03	.1498E-03	.2415E-03	.1979E-03	.2382E-03	.2225E-03
.2444E-03	.1349E-03	.1410E-03	.1086E-03	.1447E-03	.1103E-03	.1042E-03	.5163E-04
.6886E-04	.3737E-04	.1124E-03	.1221E-03	.1725E-03	.9720E-04	.2173E-03	.1944E-03
.1447E-03	.2072E-03	.2274E-03	.1873E-03	.2024E-03	.2041E-03	.1903E-03	.1195E-03
.1570E-03	.1610E-03	.1051E-03	.1099E-03	.1528E-03	.9605E-04	.8097E-04	.7445E-04
.1090E-03	.9258E-04	.9789E-04	.1009E-03	.7616E-04	.1038E-03	.1281E-03	.1647E-03
.1078E-03	.9313E-04	.9276E-04	.7090E-04	.8882E-04	.2446E-04	.4158E-04	.6118E-04
.3206E-04	.2812E-04	.5416E-04	.3896E-04	.6431E-04	.5229E-04	.3893E-04	.2300E-04

Acknowledgment

The author wishes to express his sincere appreciation to Professor David J. Rose and to Professor Norman C. Rasmussen for their invaluable aid and guidance in completing and evaluating these experiments. He would also like to express his gratitude to Patrick S. Spangler for many informative discussions, to members of the Research Laboratory of Electronics, M. I. T., especially John B. Keefe, and to William M. Trenholme, of the Department of Nuclear Engineering, M. I. T., for aid with the electronic equipment.

This work was done partly at the Computation Center, M. I. T.

References

1. K. O. Hinterman and R. Wideröe, "Tritium Production and Cycling in a Fusion Reactor with a Lithium Blanket," Proceedings of the Second United Nations Conference on the Peaceful Uses of Atomic Energy, Geneva, 1958, Vol. 32 (United Nations Publications, 1958), p. 440.
2. D. J. Rose and M. Clark, Jr., Plasmas and Controlled Fusion (The M. I. T. Press, Cambridge, Mass., and John Wiley and Sons, Inc., New York, 1961).
3. L. Spitzer, Jr., D. J. Grove, W. E. Johnson, L. Tonks, and W. F. Westendorp, "Problems of the Stellerator as a Useful Power Source," Report NYO-6047, Princeton University, Princeton, New Jersey, 1954.
4. W. G. Homeyer, "Thermal and Chemical Aspects of the Thermonuclear Blanket Problem," Sc. D. Thesis, Department of Nuclear Engineering, M. I. T., December 1962.
5. A. J. Impink, Jr., "Neutron Economy in Fusion Reactor Blanket Assemblies," Ph.D. Thesis, Department of Nuclear Engineering, M. I. T., January 1963.
6. L. N. Lontai (unpublished work in progress, 1963).
7. P. S. Spangler, "Fusion Reactor Blanket Experiment," Sc. D. Thesis, Department of Nuclear Engineering, M. I. T., September 1964.
8. F. B. Hildebrand, Introduction to Numerical Analysis (McGraw-Hill Book Company, Inc., New York, 1956.
9. R. W. Carlson, R. Fier, M. W. Fletterich, W. W. Managan, J. J. McIntyre, and E. C. Stewart, "Harshaw Scintillation Phosphors," Harshaw Chemical Company, Cleveland, Ohio, 1962.
10. W. F. Miller, J. Reynolds, and W. J. Snow, "Calculated Efficiencies and Photofractions for Various Size Thallium Activated Sodium Iodide Crystals," Rev. Sci. Instr. 28, 717 (1957).
11. A. J. Impink, Jr. (private communication, 1964).
12. W. G. Homeyer (private communication, 1964).

JOINT SERVICES DISTRIBUTION LIST

Department of Defense

Defense Documentation Center
Attn: TISIA
Cameron Station, Bldg. 5
Alexandria, Virginia 22314

Director, National Security Agency
Attn: C3/TDL
Fort George G. Meade, Maryland 20755

Mr. Charles Yost, Director
For Materials Sciences
Advanced Research Projects Agency, DOD
Washington, D.C. 20301

Director
Advanced Research Projects Agency
Department of Defense
Washington, D.C. 20301

Dr. James A. Ward
Office of Deputy Director (Research and Information Rm. 3D1037) DOD
The Pentagon
Washington, D.C. 20301

Dr. Edward M. Reilley
Asst. Director (Research)
Ofc of Defense Res. & Eng., DOD
Washington, D.C. 20301

Department of the Army

Librarian PTA130
United States Military Academy
West Point, New York 10996

Director
U.S. Army Electronics Laboratories
Fort Monmouth, New Jersey 07703
Attn: AMSEL-RD-ADT

	NP	SE
DR	NR	SR
FU#1	PE	SS
GF	PF	X
NE	PR	XC
NO	SA	XE
		XS

Commanding General
U.S. Army Electronics Command
Attn: AMSEL-SC
Fort Monmouth, New Jersey 07703

C.O., Harry Diamond Laboratories
Attn: Mr. Berthold Altman
Connecticut Ave. & Van Ness St. N.W.
Washington, D.C. 20438

The Walter Reed Institute of Research
Walter Reed Army Medical Center
Washington, D.C. 20012

Director
U.S. Army Electronics Laboratories
Attn: Mr. Robert O. Parker, Executive Secretary, JSTAC (AMSEL-RD-X)
Fort Monmouth, New Jersey 07703

Director
U.S. Army Electronics Laboratories
Attn: Dr. S. Benedict Levin, Director Institute of Exploratory Research
Fort Monmouth, New Jersey 07703

Commanding Officer
U.S. Army Research Office (Durham)
Attn: CRD-AA-IP (Richard O. Ulsh)
P.O. Box CM, Duke Station
Durham, North Carolina 27706

Commanding Officer
U.S. Army Medical Research Laboratory
Fort Knox, Kentucky

Commanding Officer
U.S. Army Personnel Research Office
Washington, D.C.

Dr. H. Robl, Deputy Director
U.S. Army Research Office (Durham)
P.O. Box CM, Duke Station
Durham, North Carolina 27706

Commandant
U.S. Command and General Staff College
Attn: Secretary
Fort Leavenworth, Kansas 66207

Director
U.S. Army Eng. Geodesy, Intell. and Mapping
Research & Development Agcy.
Fort Belvoir, Virginia 22060

Commanding Officer
Human Engineering Laboratories
Aberdeen Proving Ground, Maryland 21005

Commanding Officer
U.S. Limited War Laboratory
Attn: Technical Director
Aberdeen Proving Ground, Maryland 21005

Commanding Officer
U.S. Army Security Agency
Arlington Hall, Arlington, Virginia 22212

C.O., Harry Diamond Laboratories
Attn: Dr. R. T. Young, Elec. Tubes Div.
Connecticut Ave. & Van Ness St., N.W.
Washington, D.C. 20438

U. S. Army Munitions Command
Attn: Technical Information Branch
Picatinney Arsenal
Dover, New Jersey 07801

Commanding General
Frankford Arsenal
Attn: SMUFA-1310 (Dr. Sidney Ross)
Philadelphia, Pennsylvania 19137

Commanding General
U. S. Army Missile Command
Attn: Technical Library
Redstone Arsenal, Alabama 35809

Commandant
U. S. Army Air Defense School
Attn: Missile Sciences Division, C&S Dept.
P. O. Box 9390
Fort Bliss, Texas 79916

Commanding Officer
U. S. Army Ballistics Research Lab.
Attn: V. W. Richards
Aberdeen Proving Ground
Aberdeen, Maryland 21005

Commanding Officer
U. S. Army Materials Research Agency
Watertown Arsenal
Watertown, Massachusetts 02172

Commanding General
U. S. Army Strategic Communications Command
Washington, D.C. 20315

Commanding General
U. S. Army Materiel Command
Attn: AMCRD-RS-PE-E
Washington, D.C. 20315

Commanding Officer
Foreign Service & Technology Center
Arlington Hall
Arlington, Virginia

Research Plans Office
U. S. Army Research Office
3045 Columbia Pike
Arlington, Virginia 22204

Chief of Research and Development
Headquarters, Department of the Army
Attn: Physical Sciences Division P&E
Washington, D.C. 20310

Director
Human Resources Research Office
The George Washington University
300 N. Washington Street
Alexandria, Virginia 22314

Commanding Officer
U. S. Army Electronics R&D Activity
White Sands Missile Range
New Mexico 88002

Commanding Officer
U. S. Army Engineers R&D Laboratory
Attn: STINFO Branch
Fort Belvoir, Virginia 22060

Commanding Officer
U. S. Army Electronics R&D Activity
Fort Huachuca, Arizona 85163

Mr. Alvin D. Bedrosian
Room 26-131
Massachusetts Institute of Technology
Cambridge, Massachusetts 02139

Department of the Air Force

Battelle Memorial Inst.
Technical Library
505 King Avenue
Columbus, Ohio 43201

Goddard Space Flight Center
NASA
Greenbelt, Maryland 20771

Research and Tech. Div. (AFAPL)
Attn: APIE-2, Mr. Robert F. Cooper
Wright-Patterson AFB, Ohio 45433

Technical Library
White Sands Missile Range
New Mexico 88002

AFSC (Tech Library)
Andrews AFB
Washington, D.C. 20031

AUL-3T-9663
Maxwell AFB
Alabama 36112

JOINT SERVICES DISTRIBUTION LIST (continued)

DDR&E (Tech Library)
Rm. 3C 128
The Pentagon
Washington, D.C. 20301

Systems Engineering Group
Deputy for Systems Eng'g., SEPRR
Directorate of Tech. Pubs. & Specs.
Wright-Patterson AFB, Ohio 45433

APGC (PGBAP-1)
Eglin AFB
Florida 32542

RTD (Tech Library)
Bolling AFB
District of Columbia 20332

BSD (Tech Library)
Norton AFB
California 92409

ASD (Tech Library)
Wright-Patterson AFB
Ohio 45433

Industrial College of the Armed Forces
Attn: Library
Washington, D. C.

Southwest Research Institute
Library
8500 Culebra Road
San Antonio, Texas

Stanford Research Institute
Library
820 Mission St.
South Pasadena, Calif. 91030

Library
National Science Foundation
Washington 25, D.C.

Linda Hall Library
5109 Cherry St.
Kansas City, Mo.

Dr. H. Harrison
NASA (Code RRE)
Fourth and Independence Sts.
Washington, D.C. 20546

Mr. James Tippett
National Security Agency
Fort Meade, Maryland

Brig. Gen. J.T. Stewart
Director of Science & Technology
Deputy Chief of Staff (R&D)
USAF
Washington 25, D.C.

Dr. R. L. Sproull, Director
Advanced Research Projects Agency
Washington 25, D.C.

Lt. Col. Edwin M. Myers
Headquarters USAF (AFRDR)
Washington 25, D.C.

Dr. John M. Ide
Div. Director for Eng'g.
National Science Foundation
Washington 25, D.C.

Dr. Zohrab Kaprielian
University of Southern California
University Park
Los Angeles 7, California

Dr. Lowell M. Hollingsworth
AFCRL
L. G. Hanscom Field
Bedford, Massachusetts

Professor Nicholas George
California Institute of Technology
EE Department
Pasadena, California

Hon. Alexander H. Flax
Asst. Secretary of the Air Force
Office of the Secretary of the Air Force
(R&D)
Washington 25, D.C.

Prof. Arwin Dougal
University of Texas
EE Department
Austin, Texas

Mr. Roland Chase
National Aeronautics & Space Admin.
1512 H Street, N.W.
Washington 25, D.C.

AFAL (AVTE)
Wright-Patterson AFB
Ohio 45433

Systems Engineering Group (RTD)
Attn: SEPIR
Wright-Patterson AFB
Ohio 45433

JOINT SERVICES DISTRIBUTION LIST (continued)

AFAPL (APIE-2, Lt. Barthelmey)
Wright-Patterson AFB, Ohio.45433

Rome Air Dev. Center (RAWL, H. Webb)
Griffiss Air Force Base, New York 13442

S. H. Sternick
Aerospace Com - Attn: ESNC
Waltham Federal Center
424 Trapelo Road
Waltham, Massachusetts 02154

AFCRL (CRFE-Dr. Nicholas Yannoni)
L. G. Hanscom Field
Bedford, Massachusetts

Mr. Rocco H. Urbano, Chief
AFCRL, Appl Math. Branch
Data Sciences Laboratory
Laurence G. Hanscom Field
Bedford, Massachusetts

AFCRL
Office of Aerospace Res., USAF
Bedford, Mass.
Attn: CRDA

Dr. Louis C. Block
AFCRL (CROO)
Laurence G. Hanscom Field
Bedford, Massachusetts 01731

Commander, AFCRL
Attn: C. P. Smith (CRBS)
L. G. Hanscom Field
Bedford, Massachusetts

AFETR (Tech Library MU-135)
Patrick AFB, Florida 32925

Mr. C. N. Hasert
Scientific Advisory Board
Hq. USAF
Washington 25, D. C.

Dr. Harvey E. Savely, SRL
Air Force Office of Sci. Res.
Office Aerospace Research, USAF
Washington 25, D. C.

Department of the Air Force
Headquarters, United States Air Force
Washington 25, D. C.
Attn: AFTAC/TD-1

John Crerar Library
35 West 33rd St.
Chicago, Ill.

LOOAR (Library)
AF Unit Post Office
Los Angeles, Calif. 90045

Office of Research Analyses
Library
Holloman AFB, New Mexico 88330

Office of Research Analyses
Attn: Col. K. W. Gallup
Holloman AFB, New Mexico 88330

ARL (ARD/Col. R. E. Fontana)
Wright-Patterson AFB
Ohio 45433

Brig. Gen. B. G. Holzman, USAF (Ret.)
National Aeronautics and Space Admin.
Code RS
Washington, D. C. 20546

AFRST (SC/EN)
Lt. Col. L. Stone
Room 4C 341
The Pentagon
Washington, D. C. 20301

Commander
Rome Air Development Center
AFSC
Office of the Scientific Director
Griffiss AFB, Rome, New York

Commander
Research & Technology Division (AFSC)
Office of the Scientific Director
Bolling AFB 25, D. C.

Commander
Air Force Systems Command
Office of the Chief Scientist
Andrews AFB, Maryland

Commander
Air Force Cambridge Research Lab.
Office of the Scientific Director
L. G. Hanscom Field
Bedford, Massachusetts

Commander
Aerospace Research Laboratories (OAR)
Office of the Scientific Director
Wright-Patterson AFB, Ohio

Commander, Aerospace Systems Division
AFSC
Office of the Scientific Director
Wright-Patterson AFB, Ohio

JOINT SERVICES DISTRIBUTION LIST (Continued)

Commander
Space Systems Division (AFSC)
Office of the Scientific Director
Inglewood, California

Dr. G. E. Knausenberger
c/o Hq Co. Munich Post
APO 09407, New York, N. Y.

AVCO Research Lab, Library
2385 Revere Beach Parkway
Everett, Mass. 02149

California Institute of Technology
Aeronautics Library
1201 East California St.
Pasadena 4, Calif. 91102

Carnegie Institute of Technology
Science & Engineering Hunt Library
Schenley Park
Pittsburgh, Pa. 15213

Rand Corporation
1700 Main St.
Santa Monica, Calif. 90401

Aerospace Corp. (Tech Library)
P.O. Box 95085
Los Angeles, Calif. 90045

Lewis Research Center (NASA)
Technical Library
21000 Brookpark Road
Cleveland, Ohio

George C. Marshall Space Flight Center
(NASA)
Redstone Arsenal, Ala. 35808

High Speed Flight Center (NASA)
Technical Library
Edwards AFB, Calif. 93523

Ames Rsch. Center (NASA)
Technical Library
Moffett Field, Calif. 94035

CIA OCR/LY/IAS
IH 129 HQ
Washington, D.C. 20505

RADC (Tech Library)
Griffiss AFB, N.Y. 13442

AEDC (Tech Library)
Arnold AFS
Tennessee 37389

APGC (Tech Library)
Eglin AFB
Florida 32542

AFWL (WLIL, Technical Library)
Kirtland Air Force Base
New Mexico 87117

AFMDC (Tech Library)
Holloman AFB
New Mexico 88330

AFFTC (Tech Library)
Edwards AFB
California 93523

Space Systems Division
Los Angeles Air Force Station
Air Force Unit Post Office
Los Angeles, California 90045
Attn: SSSD

Churchill Research Range
Library
Fort Churchill
Manitoba, Canada

National Defense Library
Headquarters
Ottawa, Ontario, Canada

Director
National Aeronautical Establishment
Ottawa, Ontario, Canada

EDS (ESTI)
Laurence G. Hanscom Field
Bedford, Massachusetts 01731

Johns Hopkins University
Applied Physics Lab., Library
White Oak, Silver Spring, Maryland 20919

Los Alamos Scientific Lab
Attn: Technical Library
Los Alamos, New Mexico 87544

ARL (AROL)
Wright-Patterson AFB
Ohio 45433

Frank J. Seiler Rsch. Lab.
Library
USAF Academy, Colo. 80840

U.S. Atomic Energy Commission
Library
Gaithersburg, Maryland 20760

AFAL
AVR(L)
Wright-Patterson AFB
Ohio 45433

Air Force Cambridge Res. Lab.
L.G. Hanscom Field
Bedford, Massachusetts 01731
Attn: CRDM, Mr. Herskovitz

Commander
Air Force Office of Scientific Research
Washington 25, D.C.
Attn: SREE

Director
Air University Library
Maxwell A.F. Base, Alabama

NASA/AFSS/1 FOB6
Tech Library, Rm. 60084
Washington, D.C. 20546

USAFA (DLIB)
U.S. Air Force Academy
Colorado

ARPA
Tech Info Office
The Pentagon
Washington, D.C. 20301

AFCRL(CRXL)
L.G. Hanscom Field
Bedford, Mass. 01731

U.S. Regional Sci. Office (LAOAR)
U.S. Embassy
APO 676, New York, N.Y.

AEC
Div. of Tech Info. Ext.
P.O. Box 62
Oak Ridge, Tennessee

Dr. Hermann H. Kurzweg
Director of Research - OART
NASA
Washington, D.C. 20546

AFIT (MCLI)
Tech Library
Wright-Patterson AFB, Ohio 45433

Prof. W. H. Radford
Lincoln Laboratory, A-183
244 Wood Street
Lexington, Massachusetts

Department of the Navy

Chief of Naval Operations
Pentagon OP 07T
Washington, D.C.

Commanding Officer
Office of Naval Research Branch Office
Navy 100, Fleet P.O. Box 39
New York, New York

Library
U.S. Navy Electronics Lab.
San Diego, California 92152

Commander
U.S. Naval Air Development Center
Johnsville, Pennsylvania
Attn: NADC Library

Commanding Officer
Office of Naval Research Branch Office
495 Summer Street
Boston, Massachusetts 02110

Commanding Officer
U.S. Navy Underwater Sound Laboratory
Ft. Trumbull, New London, Connecticut

U.S. Navy Post Graduate School
Monterey, California
Attn: Electrical Engineering Department

Commander, Naval Ordnance Laboratory
White Oak, Maryland
Attn: Technical Library

Chief, Bureau of Ships, Attn: Code 680
Department of the Navy
Washington, D.C. 20360

Chief, Bureau of Weapons
Department of the Navy
Washington, D.C. 20360

Dr. Arnold Shostak, Code 427
Head, Electronics Branch
Physical Sciences Division
Office of Naval Research
Washington, D.C. 20360

Chief of Naval Research, Code 427
Department of the Navy
Washington, D.C. 20360

Director
Naval Research Laboratory
Washington, D.C. 20390