Lawrence Livermore Laboratory

MEASUREMENTS OF THE NEUTRON EMISSION SPECTRA FROM SPHERES OF
N, O, W, ^{235}U , ^{238}U , AND ^{239}Pu , PULSED BY 14-MEV NEUTRONS

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ABSTRACT

Inspired by new detector instrumentation that is insensitive to gamma-ray background and improved deuteron-beam bunching and sweeping of the ICT accelerator, we have measured the high-energy ($2 < E_n < 15$ MeV) neutron emission spectra from spherical targets of nitrogen, oxygen, tungsten, ^{235}U , ^{238}U , and ^{239}Pu . The targets were pulsed at the center by a nominal 14-MeV neutron source at the LLL time-of-flight facility. The neutron source was obtained from the $\text{T(d,n)}^4\text{He}$ reaction with a pulsed 400-keV deuteron beam, produced by the LLL ICT accelerator. Collimated scintillation detectors at 26° and 120° with respect to the deuteron beam and at flight paths from 7.5-9.8 m recorded the neutron time-of-flight spectra.

INTRODUCTION

We present experimental data obtained as part of the continuing pulsed-sphere program at Lawrence Livermore Laboratory (LLL). Measurements of neutron emission spectra from spheres of liquid nitrogen, liquid oxygen, tungsten, ^{235}U , ^{238}U , and ^{239}Pu were made with the NE213 detector. Tungsten was the only new target material measured. The emission spectra from the other materials were measured several years ago with a Pilot-B detector. We presented the older data for the liquid nitrogen and oxygen in the program summary (see Ref. 1). The original ^{238}U experimental data was published in graphical form in Ref. 2.

For this study, we conducted a "good" geometry experiment with a 0.7-mfp (mean free path) ^{235}U hollow shell. Also, the time-of-flight spectra from a 0.7-mfp solid sphere of ^{239}Pu , 0.7- and 1.5-mfp solid spheres of ^{235}U , and 0.7- and 2.8-mfp solid spheres of ^{238}U were remeasured with the new NE213 scintillation detectors and with the improved deuteron beam bunching and sweeping. These high-energy emission spectra of the plutonium and uranium isotopes complement the low-energy (1 keV-1 MeV) spectra obtained from these same spherical targets.³ The target-in/target-out emission spectra presented here are the best measurements we have obtained to date from the LLL time-of-flight facility.

EXPERIMENTAL METHOD

The LLL neutron time-of-flight facility is described in detail in the program summary.¹ Thus, we provide only a brief description of our experimental apparatus and data-reduction techniques here.

Neutrons were produced at the center of the spherical targets by a 400-keV deuteron beam impinging on tritiated titanium that had been deposited on a tungsten disk. (See Fig. 1 for a schematic representation of the target geometry.) The neutron source strength was monitored by a solid state detector measuring the alpha particles associated with the $T(d,n)^4\text{He}$ reaction. Because we used the target-in/target-out technique, only the relative neutron production had to be determined. This value was obtained from the ratio of total neutron counts in the detector to total number of alpha particles detected during a target-out accelerator run. Thus, the relative neutron source strength during the target-in run is the product of the relative neutron production and the integrated alpha count.

The neutron detectors were located in collimated ports in the concrete walls of the target room. Our most recent experiments were conducted with NE213 liquid scintillation detectors. The time-dependent gamma pulse that is produced by inelastic collisions in the target was virtually eliminated by pulse-shape discrimination. (For the original pulsed-sphere experiments, we employed a Pilot-B detector without the gamma suppression feature and, as a result, the strong gamma-ray pulse obscured a significant portion of the time-of-flight spectrum.) In addition, the time-independent gamma background that results from de-excitation gamma rays from neutron capture reactions is considerably reduced with the NE213 detector system. This new detector with the gamma suppression feature plus improved deuteron beam bunching and sweeping has yielded data of considerably improved quality. For this reason, we are repeating many of our earlier pulsed-sphere experiments.

The time-per-channel calibration was obtained by two different methods. In the nitrogen, oxygen, tungsten, ^{235}U shell, and ^{239}Pu experiments, the double-display mode was used. Here, one stop pulse was sent to the time-to-amplitude converter for every two deuteron beam pulses on the tritiated target, producing a double display of the neutron time-of-flight spectrum in the time analyzer. (See Ref. 1 for details of the time-of-flight electronics.) The channel-time width was then determined by dividing the 400-ns period of the

deuteron beam pulse rate by the number of time-analyzer channels that separate the two neutron peaks in the target-out accelerator run.

This double-display method was not used in the measurements of the time-of-flight spectra from the 0.7-mfp ^{235}U and the 0.7- and 2.8-mfp ^{238}U solid spheres because the period was increased to 2 ms using the duo-plasmatron ion source plus deuteron beam sweeping and bunching after acceleration to 400 keV. Thus, with a time resolution of 1.585 ns per channel, a double display could not be obtained in the 512-channel time analyzer. Therefore, in these measurements, we inserted a known time delay between the detector signal and the time analyzer. The displacement (number of channels) of the gamma peak in a target-out run was then used to determine the channel-time width.

We determined the time-zero calibration by disabling the gamma-suppression circuitry for a short time during the target-out accelerator run. Because the source-to-detector distance was accurately measured, the time-of-arrival of the gamma pulse determined the origin time of the neutron pulse.

The linearity of the time vs channel number was determined by feeding random pulses (generated by a NE213 detector viewing a ^{60}Co gamma source) into the time analyzer. Thus, if the width of each time channel is equal, the same number of counts will be recorded in each channel. For our experiments, this procedure verified the linearity of the analyzer over all channels in which the neutron time-of-flight data were recorded. It was therefore unnecessary to correct measurements for nonlinearities in the time analyzer.

We also determined the time-independent background count rate. The time analyzer was adjusted so that there was a statistically significant number of time-analyzer channels between the time that corresponds to the low-energy cut-off of the neutron detector and the arrival time of the next 14-MeV neutron pulse. The average count rate during this time period was then a direct measurement of the time-independent background count rate in the detector.

The neutron detectors were collimated. Therefore, the detector view angle was essentially identical to the solid angle subtended by the target spheres at the neutron source-to-detector distance. The NE213 neutron detectors are described in detail in Ref. 1 and the neutron detection efficiencies at the two detector threshold energies (1.6 and 2.2 MeV) employed in these experiments are given in Table 1. Detector efficiency is expressed as $A\epsilon$,

where A is the cross-sectional area of the detector in square centimeters and ϵ is the detection probability.

Except for the tungsten spheres and the ^{235}U shell, the dimensions and atomic composition of the target spheres have been published elsewhere.^{1,3} However, for easy reference, these data are reproduced in Figs. 2-10.

EXPERIMENTAL RESULTS

Nitrogen and Oxygen. The time-of-flight data are the result of new measurements with the gamma-insensitive NE213 detector system and the improved deuteron beam bunching and sweeping. They thus supersede the data published in the pulsed-sphere program summary.¹ Tables 2-7 and Figs. 11-16 present these new data in tabular and graphical form.

The extremely significant reduction of the gamma background and the improved time resolution due to the better deuteron beam bunching are most evident in the liquid oxygen data. The "valley" between the elastic peak and the onset of the first inelastic level (6.06 MeV) is an order of magnitude lower in this experiment than in the original experiment. In addition, the first few inelastic levels are clearly resolved in the 120° data where the energy dispersion of the neutron source is significantly less than at the 26° view angle. We also conducted Monte Carlo neutron transport calculations of the oxygen experiment using the best available evaluated neutron cross sections for iron.⁴ Our results verify the established opinion that the neutron count rate in the emission spectrum between the elastic peak and the first inelastic level results from inelastic neutron scattering in the walls of the stainless steel dewar.

Tungsten. These experiments were conducted to test the pre-equilibrium nuclear model for a nonfissionable, high mass number element.⁵ They represent a departure from the previous pulsed-sphere measurements because the spherical targets were constructed such that the outer shell was the minimum thickness target. Target material was increased by adding inner nested shells. Thus, the number of target atoms per square centimeter at each detector view angle was identical. The only remaining perturbation of the emission spectrum was the relatively small beam-access hole in the shell and the small amount ($\sim 1\%$) of neutron scattering in the low-mass vacuum pipe and the tritiated target assembly. Use of these spherical shells for the minimum-thickness targets offered an additional advantage; it eliminated the uncertainties

in the measurements that result from small errors in positioning the tritiated target assembly. For example, a 0.3-cm axial displacement of the neutron source in the ^{239}Pu sphere will produce a 10% change in the number of target atoms per square centimeter at the 120° view angle. (See Tables 8-15 and Figs. 17-24 for the time-of-flight data for the 0.5-, 1-, 2-, and 3-mfp tungsten spheres at the two detector locations.)

Uranium-235. We conducted the 0.7-mfp ^{235}U experiment to eliminate the calculational ambiguities that resulted from the nonideal geometry of the original experiment (conducted with a 3.15-cm outer radius solid sphere: Fig. 7). In our most recent experiment, a 2.79-cm thick shell with a 3.15-cm inner radius was pulsed at the center by the 14-MeV neutron source. As was the case for the thin tungsten shells, this experimental geometry minimized the ambiguity in the theoretical interpretations of the results. Also, the emission spectra at 26° and 120° were determined primarily by the first-collision emission cross sections at 15.0 and 13.6 MeV, respectively. The ^{235}U neutron spectra are given in Tables 16 and 17 and are plotted in Figs. 25 and 26.

The measurements with solid spheres of ^{235}U with outer radii of 3.15 and 5.94 cm complement the low-energy emission spectra (1 keV-1 MeV) from these same spheres that were measured with a ^6Li loaded glass scintillation detector.³ Compared to the hollow-shell experiments, the geometry of these solid sphere measurements was not optimal for testing differential scattering cross sections. However, they do accurately determine the nonelastic scattering cross section at 15 MeV ($\theta = 26^\circ$) and the neutron multiplication of ^{235}U when pulsed by nominal 14-MeV neutrons. (See Tables 18-21 and Figs. 27-30 for the experimental time-of-flight data).

Plutonium-239. Because of criticality and toxicity constraints, we constructed the plutonium target as a solid ball with a welded stainless steel enclosure. The dimensions and isotopic compositions of the plutonium and the steel container are illustrated in Fig. 6. The time-of-flight emission spectra for ^{239}Pu are given in Tables 22 and 23 and in Fig. 31 and 32.

The stainless steel container contributed a significant fraction ($\sim 25\%$) of the inelastically scattered neutrons to the emission spectrum between 8 and 13 MeV. Therefore, we also measured the time-of-flight spectrum from an empty stainless steel container, identical to the plutonium enclosure, in a separate experiment. The stainless steel data for the two detector-view

angles are presented in Tables 24 and 25. As was the case with the stainless steel dewar in the liquid oxygen tests, the best agreement with the experimental data was obtained by using the neutron cross sections for iron as derived by Hansen.⁴

Uranium-238. This was the first fissionable isotope we examined in the LLL pulsed-sphere program because the target material was readily available and presented no criticality problem. We employed a Pilot-B scintillator and, consequently, the gamma-ray background count rate seriously degraded the quantitative value of the time-of-flight data. Discrepancies between the ^{238}U pulsed-sphere measurements and the Monte Carlo calculations of the emission spectra have persisted, despite the extensive measurements of the microscopic cross sections of the isotope. Significantly, the cross section for the $^{238}\text{U}(n,2n)^{237}\text{U}$ reaction, which constitutes a major fraction of the nonelastic cross section at 14 MeV, as well as the total cross section have been accurately determined. Thus, our more accurate pulsed-sphere measurement with the NE213 detector system should provide a valuable check on the nonelastic cross section as well as on the theoretical nuclear models for the fissionable isotopes. (See Tables 26-29 and Figs. 33-36 for the time-of-flight emission spectra for the 0.7- and 2.8-mfp solid spheres of ^{238}U .)

DISCUSSION

These pulsed-sphere experiments were macroscopic measurements designed to test neutron transport codes and differential neutron cross section evaluations. Comparisons between the measured time-of-flight spectra and the Monte Carlo calculations that use the LLL evaluated neutron cross section library (ENDL)⁶ are the subject of a forthcoming report.⁷

The target spheres were neutronically thick and were significantly perturbed by the conical hole that was required for the insertion of the deuteron beam pipe and tritiated target assembly. With the exception of the tungsten and ^{235}U shell experiments, the targets were fabricated as solid spheres with the conical hole located at 180°. The number of target atoms per square centimeter at the 26° and 120° detector view angles was significantly different and the back-angle neutron scattering was nonsymmetric as a result of the conical hole. Therefore, quantitative calculations of the experimental time-of-flight spectra require three-dimensional Monte Carlo calculations. These, in turn, require accurate descriptions on the differential

elastic and inelastic scattering cross sections as well as of the neutron source that is anisergic in energy, anisotropic in angle, and nonsymmetric in time. (A detailed description of the ICT neutron source and a Monte Carlo simulation of the pulsed-sphere experiments is presented in a recent report.⁶)

The target-out gamma-ray signal in the detectors provided a direct measurement of the time history of the intensity of the pulsed deuteron beam and the time response function of the detector electronics (see Fig. 37 for a plot of a typical gamma-ray signal). Representative target-out neutron signals at the 26° and 120° view angles are shown in Figs. 38 and 39. The neutron pulse was broader than the gamma pulse because of the energy dispersion from the thick tritiated target and because of the time-of-flight spread across the 5.1-cm long NE213 detector. The shape of the neutron signal was also perturbed by inelastic scattering in the tungsten heat-sink disk and in the iron-copper alloy air-cooling spreader of the tritiated target assembly (see Fig. 6 in Ref. 1 for details of the target assembly).

The operating characteristics of the ICT accelerator varied slightly between individual experiments. However, the shapes of the target-out gamma and 14-MeV neutron signals remained nearly constant. Therefore, to apply the calculational techniques outlined in Ref. 5, the time coordinate of the probability distributions (derived from the experimental data shown in Figs. 37-39) should be directly scaled by the full width at half maximum (FWHM) values.

Comparisons between the measured time-of-flight neutron emission spectra and the Monte Carlo calculations of the time spectra will be reported at a later date. Calculated and measured integrals of the unscattered neutrons plus the elastically scattered neutrons emitted over the energy range between the minimum emission energy for elastic scattering and the neutron source energy are presented in Table 30. These integrals provide a direct measurement of the nonelastic cross section and a stringent test of the neutron transport codes and cross section libraries. The integral values obtained by Howerton⁷ in Monte Carlo calculations with the October 1, 1976, version of the ENDL neutron cross section library are also given in Table 30. The experimental integrals were essentially attenuation measurements and, because we used the target-in/target-out technique, only the relative neutron source strength and the shape of the detector efficiency vs neutron energy curve had to be

determined. Also, because the solid state alpha counter used to monitor the neutron production rate is extremely stable and because the NE213 detector efficiency is nearly constant over the energy range from 10-15 MeV, the experimental integrals are accurate to within a mean deviation of $\pm 3\%$.

The ratio of calculated to experimental integrals under the transmitted peak (see Table 30) shows that, with the exception of the tungsten spheres, the measured and calculated integrals are in good agreement. The tungsten discrepancies indicate that the nonelastic cross section for natural tungsten in the current ENDL is probably too large by approximately 7%.

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Table 1. Efficiency of the NE213 scintillation detector.

<u>Low threshold (1.6 MeV)</u>		<u>High threshold (2.2 MeV)</u>	
E(MeV)	A ϵ	E(MeV)	A ϵ
1.8	1.46	2.5	1.00
1.9	1.86	2.6	1.30
2.0	2.26	2.7	1.60
2.1	2.58	2.8	1.85
2.2	3.00	2.9	2.10
2.3	3.29	3.0	2.35
2.4	3.42	3.1	2.55
2.5	3.63	3.2	2.70
2.75	3.95	3.3	2.85
3.0	4.10	3.4	2.95
3.5	4.25	3.5	3.05
4.0	4.33	4.0	3.35
4.5	4.39	4.5	3.57
5.0	4.40	5.0	3.70
5.5	4.37	5.5	3.75
6.0	4.28	6.0	3.75
6.4	4.15	7.0	3.70
6.6	4.20	8.0	3.55
6.8	4.18	9.0	3.40
7.0	4.12	10.0	3.20
7.5	3.97	11.0	3.05
8.1	3.80	12.0	2.90
8.5	3.77	13.0	2.75
9.0	3.65	13.6	2.71
10.0	3.44	14.0	2.67
11.0	3.24	15.0	2.65
12.0	3.06		
12.5	3.01		
13.0	2.98		
13.5	2.98		
14.0	3.01		
15.0	3.08		
16.0	3.25		

Table 2. Liquid nitrogen emission spectrum: outer radius = 10.48 cm,
detector bias = 1.6 MeV, flight path = 782.3 cm, view angle = 26°,
and FWHM = 3.7 ns.

T(MID) NANOSEC	E(MID) MEV	COUNTS/ NANOSEC	COUNTS/ MEV	NEUTRONS/ MEV	SUM
1.400E+02	1.691E+01	3.097E-05	1.237E-04	1.166E-04	2.579E-05
1.408E+02	1.671E+01	7.686E-05	3.128E-04	2.983E-04	8.978E-05
1.416E+02	1.650E+01	1.629E-04	6.754E-04	6.519E-04	2.254E-04
1.425E+02	1.630E+01	5.736E-04	2.422E-03	2.366E-03	7.030E-04
1.433E+02	1.611E+01	4.037E-03	1.736E-02	1.716E-02	4.064E-03
1.441E+02	1.592E+01	1.988E-02	8.707E-02	8.702E-02	2.062E-02
1.450E+02	1.573E+01	5.211E-02	2.324E-01	2.346E-01	6.400E-02
1.458E+02	1.554E+01	9.479E-02	4.304E-01	4.388E-01	1.429E-01
1.466E+02	1.536E+01	1.418E-01	6.554E-01	6.748E-01	2.610E-01
1.475E+02	1.518E+01	1.657E-01	7.796E-01	8.104E-01	3.990E-01
1.483E+02	1.501E+01	1.454E-01	6.964E-01	7.305E-01	5.201E-01
1.491E+02	1.483E+01	1.040E-01	5.067E-01	5.340E-01	6.066E-01
1.500E+02	1.467E+01	6.488E-02	3.217E-01	3.404E-01	6.606E-01
1.508E+02	1.450E+01	3.383E-02	1.707E-01	1.813E-01	6.888E-01
1.516E+02	1.434E+01	1.721E-02	8.834E-02	9.418E-02	7.031E-01
1.525E+02	1.417E+01	1.026E-02	5.355E-02	5.730E-02	7.117E-01
1.533E+02	1.402E+01	7.308E-03	3.881E-02	4.168E-02	7.178E-01
1.541E+02	1.386E+01	5.830E-03	3.149E-02	3.392E-02	7.226E-01
1.550E+02	1.371E+01	5.289E-03	2.905E-02	3.139E-02	7.270E-01
1.558E+02	1.356E+01	4.988E-03	2.786E-02	3.019E-02	7.312E-01
1.566E+02	1.341E+01	4.737E-03	2.690E-02	2.919E-02	7.351E-01
1.575E+02	1.326E+01	4.747E-03	2.740E-02	2.974E-02	7.391E-01
1.583E+02	1.312E+01	4.585E-03	2.691E-02	2.920E-02	7.429E-01
1.591E+02	1.298E+01	4.553E-03	2.716E-02	2.946E-02	7.467E-01
1.600E+02	1.284E+01	4.440E-03	2.691E-02	2.912E-02	7.504E-01
1.608E+02	1.271E+01	4.264E-03	2.627E-02	2.834E-02	7.539E-01
1.616E+02	1.257E+01	3.939E-03	2.466E-02	2.654E-02	7.572E-01
1.625E+02	1.244E+01	3.635E-03	2.313E-02	2.480E-02	7.602E-01
1.633E+02	1.231E+01	3.218E-03	2.080E-02	2.221E-02	7.629E-01
1.641E+02	1.219E+01	2.982E-03	1.958E-02	2.081E-02	7.654E-01
1.650E+02	1.206E+01	2.871E-03	1.915E-02	2.028E-02	7.678E-01
1.658E+02	1.193E+01	2.696E-03	1.826E-02	1.923E-02	7.700E-01
1.666E+02	1.181E+01	2.426E-03	1.670E-02	1.745E-02	7.721E-01
1.675E+02	1.169E+01	2.248E-03	1.571E-02	1.631E-02	7.739E-01
1.683E+02	1.157E+01	2.206E-03	1.565E-02	1.614E-02	7.758E-01
1.691E+02	1.146E+01	1.993E-03	1.436E-02	1.470E-02	7.774E-01
1.700E+02	1.134E+01	1.861E-03	1.361E-02	1.385E-02	7.790E-01
1.708E+02	1.123E+01	1.760E-03	1.307E-02	1.321E-02	7.804E-01
1.716E+02	1.112E+01	1.717E-03	1.295E-02	1.301E-02	7.819E-01
1.725E+02	1.101E+01	1.580E-03	1.209E-02	1.207E-02	7.832E-01
1.733E+02	1.090E+01	1.526E-03	1.185E-02	1.176E-02	7.845E-01
1.741E+02	1.079E+01	1.406E-03	1.109E-02	1.093E-02	7.856E-01
1.749E+02	1.069E+01	1.330E-03	1.064E-02	1.042E-02	7.867E-01
1.758E+02	1.059E+01	1.242E-03	1.009E-02	9.819E-03	7.878E-01
1.766E+02	1.048E+01	1.168E-03	9.623E-03	9.308E-03	7.887E-01
1.774E+02	1.038E+01	1.227E-03	1.026E-02	9.868E-03	7.898E-01
1.783E+02	1.028E+01	1.155E-03	9.799E-03	9.367E-03	7.907E-01
1.791E+02	1.019E+01	1.114E-03	9.585E-03	9.110E-03	7.917E-01
1.799E+02	1.009E+01	1.115E-03	9.734E-03	9.199E-03	7.926E-01
1.808E+02	9.996E+00	1.089E-03	9.640E-03	9.060E-03	7.935E-01
1.816E+02	9.902E+00	1.003E-03	9.004E-03	8.415E-03	7.943E-01
1.824E+02	9.810E+00	9.384E-04	8.547E-03	7.944E-03	7.951E-01
1.833E+02	9.720E+00	8.306E-04	7.672E-03	7.091E-03	7.958E-01
1.841E+02	9.630E+00	7.411E-04	6.942E-03	6.382E-03	7.964E-01

Table 2. (cont.)

1.849E+02	9.542E+00	7.250E-04	6.886E-03	6.298E-03	7.970E-01
1.858E+02	9.455E+00	6.734E-04	6.485E-03	5.901E-03	7.976E-01
1.879E+02	9.242E+00	6.780E-04	6.756E-03	6.072E-03	7.998E-01
1.912E+02	8.917E+00	7.087E-04	7.454E-03	6.570E-03	8.022E-01
1.945E+02	8.609E+00	7.333E-04	8.135E-03	7.028E-03	8.046E-01
1.978E+02	8.316E+00	6.691E-04	7.819E-03	6.684E-03	8.069E-01
2.012E+02	8.039E+00	5.960E-04	7.331E-03	6.208E-03	8.088E-01
2.045E+02	7.775E+00	6.418E-04	8.303E-03	6.900E-03	8.110E-01
2.078E+02	7.524E+00	6.932E-04	9.423E-03	7.689E-03	8.133E-01
2.112E+02	7.284E+00	7.024E-04	1.002E-02	8.035E-03	8.156E-01
2.145E+02	7.057E+00	6.579E-04	9.850E-03	7.765E-03	8.178E-01
2.178E+02	6.839E+00	6.705E-04	1.052E-02	8.170E-03	8.201E-01
2.212E+02	6.632E+00	6.301E-04	1.036E-02	7.990E-03	8.222E-01
2.245E+02	6.434E+00	6.146E-04	1.058E-02	8.213E-03	8.242E-01
2.278E+02	6.245E+00	6.054E-04	1.090E-02	8.391E-03	8.262E-01
2.311E+02	6.064E+00	6.049E-04	1.138E-02	8.642E-03	8.282E-01
2.345E+02	5.891E+00	6.315E-04	1.241E-02	9.336E-03	8.303E-01
2.378E+02	5.725E+00	6.499E-04	1.333E-02	9.961E-03	8.325E-01
2.411E+02	5.566E+00	6.140E-04	1.314E-02	9.754E-03	8.345E-01
2.445E+02	5.414E+00	6.390E-04	1.426E-02	1.054E-02	8.367E-01
2.478E+02	5.267E+00	6.269E-04	1.458E-02	1.076E-02	8.388E-01
2.511E+02	5.127E+00	6.043E-04	1.464E-02	1.078E-02	8.408E-01
2.545E+02	4.992E+00	6.123E-04	1.544E-02	1.135E-02	8.428E-01
2.578E+02	4.863E+00	5.581E-04	1.464E-02	1.077E-02	8.447E-01
2.611E+02	4.738E+00	5.443E-04	1.485E-02	1.093E-02	8.465E-01
2.645E+02	4.619E+00	5.354E-04	1.518E-02	1.118E-02	8.483E-01
2.678E+02	4.503E+00	4.781E-04	1.408E-02	1.037E-02	8.499E-01
2.711E+02	4.392E+00	4.996E-04	1.527E-02	1.129E-02	8.515E-01
2.744E+02	4.286E+00	4.526E-04	1.436E-02	1.064E-02	8.530E-01
2.778E+02	4.182E+00	4.726E-04	1.556E-02	1.156E-02	8.546E-01
2.811E+02	4.083E+00	4.655E-04	1.588E-02	1.184E-02	8.562E-01
2.844E+02	3.987E+00	4.764E-04	1.685E-02	1.259E-02	8.577E-01
2.878E+02	3.895E+00	4.715E-04	1.727E-02	1.295E-02	8.593E-01
2.911E+02	3.805E+00	4.500E-04	1.707E-02	1.284E-02	8.608E-01
2.944E+02	3.719E+00	4.219E-04	1.657E-02	1.250E-02	8.622E-01
2.978E+02	3.636E+00	4.159E-04	1.690E-02	1.279E-02	8.636E-01
3.011E+02	3.555E+00	3.978E-04	1.672E-02	1.269E-02	8.649E-01
3.044E+02	3.477E+00	4.133E-04	1.796E-02	1.369E-02	8.663E-01
3.077E+02	3.402E+00	4.382E-04	1.968E-02	1.508E-02	8.678E-01
3.111E+02	3.329E+00	4.557E-04	2.114E-02	1.628E-02	8.693E-01
3.144E+02	3.258E+00	4.133E-04	1.980E-02	1.533E-02	8.707E-01
3.177E+02	3.190E+00	4.345E-04	2.149E-02	1.672E-02	8.721E-01
3.211E+02	3.124E+00	4.311E-04	2.201E-02	1.720E-02	8.735E-01
3.244E+02	3.059E+00	4.520E-04	2.381E-02	1.870E-02	8.750E-01
3.277E+02	2.997E+00	4.431E-04	2.407E-02	1.900E-02	8.765E-01
3.311E+02	2.937E+00	4.181E-04	2.342E-02	1.865E-02	8.779E-01
3.344E+02	2.878E+00	4.333E-04	2.502E-02	2.009E-02	8.794E-01
3.377E+02	2.821E+00	4.356E-04	2.592E-02	2.099E-02	8.808E-01
3.411E+02	2.766E+00	4.540E-04	2.782E-02	2.273E-02	8.823E-01
3.444E+02	2.713E+00	4.448E-04	2.807E-02	2.326E-02	8.838E-01
3.477E+02	2.661E+00	4.411E-04	2.866E-02	2.416E-02	8.853E-01
3.510E+02	2.610E+00	4.268E-04	2.854E-02	2.447E-02	8.867E-01
3.544E+02	2.561E+00	4.029E-04	2.773E-02	2.418E-02	8.880E-01
3.577E+02	2.513E+00	3.791E-04	2.684E-02	2.380E-02	8.893E-01
3.610E+02	2.467E+00	3.817E-04	2.779E-02	2.524E-02	8.906E-01
3.644E+02	2.422E+00	3.748E-04	2.805E-02	2.617E-02	8.918E-01
3.677E+02	2.378E+00	3.605E-04	2.773E-02	2.644E-02	8.930E-01
3.710E+02	2.335E+00	3.324E-04	2.628E-02	2.547E-02	8.941E-01
3.744E+02	2.294E+00	3.304E-04	2.683E-02	2.655E-02	8.952E-01
3.777E+02	2.253E+00	3.046E-04	2.541E-02	2.605E-02	8.962E-01

Table 2. (cont.)

3.810E+02	2.214E+00	2.928E-04	2.508E-02	2.668E-02	8.972E-01
3.843E+02	2.175E+00	3.031E-04	2.666E-02	2.976E-02	8.982E-01
3.877E+02	2.138E+00	2.856E-04	2.578E-02	3.043E-02	8.992E-01
3.910E+02	2.102E+00	2.664E-04	2.467E-02	3.080E-02	9.001E-01
3.943E+02	2.066E+00	2.386E-04	2.267E-02	2.966E-02	9.009E-01
3.977E+02	2.031E+00	2.337E-04	2.278E-02	3.120E-02	9.016E-01
4.010E+02	1.998E+00	2.237E-04	2.236E-02	3.215E-02	9.024E-01
4.043E+02	1.965E+00	2.028E-04	2.078E-02	3.170E-02	9.031E-01
4.077E+02	1.933E+00	1.993E-04	2.093E-02	3.400E-02	9.037E-01
4.110E+02	1.901E+00	1.873E-04	2.016E-02	3.494E-02	9.043E-01
4.143E+02	1.871E+00	1.520E-04	1.676E-02	3.110E-02	9.048E-01
4.172E+02	1.845E+00	1.522E-04	1.711E-02	3.353E-02	9.052E-01

Table 3. Liquid nitrogen emission spectrum: outer radius = 10.48 cm,
detector bias = 2.2 MeV, flight path = 996.6 cm, view angle = 120°,
and FWHM = 2.9 ns.

T (MID) NANOSEC	E (MID) MEV	COUNTS/ NANOSEC	COUNTS/ MEV	NEUTRONS/ MEV	SUM
1.914E+02	1.450E+01	1.687E-04	1.072E-03	1.006E-03	1.403E-04
1.923E+02	1.447E+01	3.983E-04	2.566E-03	2.416E-03	4.716E-04
1.931E+02	1.435E+01	8.697E-04	5.680E-03	5.363E-03	1.195E-03
1.939E+02	1.422E+01	1.880E-03	1.244E-02	1.178E-02	2.759E-03
1.948E+02	1.409E+01	5.202E-03	3.490E-02	3.314E-02	7.086E-03
1.956E+02	1.397E+01	1.824E-02	1.240E-01	1.181E-01	2.226E-02
1.964E+02	1.385E+01	6.338E-02	4.366E-01	4.168E-01	7.498E-02
1.973E+02	1.373E+01	1.489E-01	1.039E+00	9.947E-01	1.988E-01
1.981E+02	1.361E+01	2.057E-01	1.455E+00	1.396E+00	3.700E-01
1.989E+02	1.349E+01	1.756E-01	1.258E+00	1.209E+00	5.160E-01
1.998E+02	1.338E+01	1.156E-01	8.393E-01	8.069E-01	6.122E-01
2.006E+02	1.327E+01	7.164E-02	5.268E-01	5.065E-01	6.718E-01
2.014E+02	1.315E+01	3.649E-02	2.718E-01	2.613E-01	7.021E-01
2.023E+02	1.304E+01	1.927E-02	1.454E-01	1.398E-01	7.181E-01
2.031E+02	1.293E+01	1.273E-02	9.725E-02	9.337E-02	7.287E-01
2.039E+02	1.282E+01	9.632E-03	7.454E-02	7.142E-02	7.367E-01
2.047E+02	1.272E+01	7.761E-03	6.083E-02	5.815E-02	7.432E-01
2.056E+02	1.261E+01	6.312E-03	5.010E-02	4.779E-02	7.485E-01
2.064E+02	1.251E+01	5.631E-03	4.526E-02	4.308E-02	7.531E-01
2.072E+02	1.241E+01	4.897E-03	3.986E-02	3.782E-02	7.572E-01
2.081E+02	1.230E+01	4.432E-03	3.652E-02	3.454E-02	7.609E-01
2.089E+02	1.220E+01	4.241E-03	3.538E-02	3.335E-02	7.644E-01
2.097E+02	1.210E+01	4.026E-03	3.400E-02	3.194E-02	7.678E-01
2.106E+02	1.201E+01	3.733E-03	3.192E-02	2.988E-02	7.709E-01
2.114E+02	1.191E+01	3.428E-03	2.967E-02	2.764E-02	7.737E-01
2.122E+02	1.181E+01	3.420E-03	2.997E-02	2.775E-02	7.766E-01
2.131E+02	1.172E+01	3.249E-03	2.882E-02	2.654E-02	7.793E-01
2.139E+02	1.163E+01	2.975E-03	2.671E-02	2.447E-02	7.818E-01
2.147E+02	1.153E+01	2.910E-03	2.644E-02	2.409E-02	7.842E-01
2.156E+02	1.144E+01	2.670E-03	2.455E-02	2.226E-02	7.864E-01
2.164E+02	1.135E+01	2.660E-03	2.475E-02	2.233E-02	7.886E-01
2.172E+02	1.126E+01	2.481E-03	2.336E-02	2.097E-02	7.907E-01
2.181E+02	1.118E+01	2.319E-03	2.209E-02	1.973E-02	7.926E-01
2.189E+02	1.109E+01	2.262E-03	2.181E-02	1.938E-02	7.945E-01
2.197E+02	1.100E+01	1.979E-03	1.931E-02	1.708E-02	7.961E-01
2.206E+02	1.092E+01	1.910E-03	1.885E-02	1.659E-02	7.977E-01
2.214E+02	1.084E+01	1.746E-03	1.743E-02	1.526E-02	7.992E-01
2.222E+02	1.075E+01	1.707E-03	1.724E-02	1.502E-02	8.006E-01
2.230E+02	1.067E+01	1.662E-03	1.699E-02	1.472E-02	8.020E-01
2.239E+02	1.059E+01	1.581E-03	1.634E-02	1.410E-02	8.033E-01
2.247E+02	1.051E+01	1.357E-03	1.419E-02	1.218E-02	8.044E-01
2.255E+02	1.043E+01	1.223E-03	1.294E-02	1.105E-02	8.054E-01
2.264E+02	1.035E+01	9.490E-04	1.015E-02	8.632E-03	8.062E-01
2.272E+02	1.028E+01	7.905E-04	8.552E-03	7.239E-03	8.069E-01
2.280E+02	1.020E+01	6.360E-04	6.960E-03	5.864E-03	8.074E-01
2.289E+02	1.012E+01	5.405E-04	5.981E-03	5.018E-03	8.079E-01
2.314E+02	9.902E+00	4.369E-04	4.998E-03	4.138E-03	8.097E-01
2.355E+02	9.548E+00	4.324E-04	5.237E-03	4.237E-03	8.115E-01
2.397E+02	9.213E+00	4.145E-04	5.288E-03	4.203E-03	8.132E-01
2.438E+02	8.896E+00	3.707E-04	4.985E-03	3.887E-03	8.147E-01
2.480E+02	8.595E+00	4.666E-04	6.610E-03	5.055E-03	8.167E-01
2.522E+02	8.308E+00	5.015E-04	7.477E-03	5.661E-03	8.188E-01
2.563E+02	8.036E+00	5.170E-04	8.105E-03	6.079E-03	8.203E-01
2.605E+02	7.778E+00	5.767E-04	9.499E-03	6.994E-03	8.233E-01

Table 3. (cont.)

2.646E+02	7.531E+00	5.836E-04	1.009E-02	7.299E-03	8.257E-01
2.688E+02	7.296E+00	6.068E-04	1.100E-02	7.822E-03	8.283E-01
2.730E+02	7.072E+00	5.519E-04	1.049E-02	7.335E-03	8.306E-01
2.771E+02	6.859E+00	5.743E-04	1.143E-02	7.872E-03	8.329E-01
2.813E+02	6.654E+00	6.820E-04	1.421E-02	9.710E-03	8.358E-01
2.854E+02	6.459E+00	6.747E-04	1.470E-02	1.011E-02	8.386E-01
2.896E+02	6.273E+00	6.775E-04	1.543E-02	1.055E-02	8.414E-01
2.938E+02	6.094E+00	5.824E-04	1.386E-02	9.342E-03	8.438E-01
2.979E+02	5.923E+00	5.076E-04	1.261E-02	8.412E-03	8.459E-01
3.021E+02	5.759E+00	4.922E-04	1.275E-02	8.450E-03	8.480E-01
3.062E+02	5.602E+00	4.682E-04	1.265E-02	8.326E-03	8.499E-01
3.104E+02	5.451E+00	3.845E-04	1.082E-02	7.089E-03	8.515E-01
3.145E+02	5.306E+00	3.942E-04	1.155E-02	7.555E-03	8.532E-01
3.187E+02	5.167E+00	4.182E-04	1.276E-02	8.325E-03	8.549E-01
3.229E+02	5.033E+00	3.954E-04	1.255E-02	8.175E-03	8.566E-01
3.270E+02	4.905E+00	4.377E-04	1.444E-02	9.407E-03	8.584E-01
3.312E+02	4.781E+00	4.271E-04	1.464E-02	9.545E-03	8.602E-01
3.353E+02	4.662E+00	4.361E-04	1.553E-02	1.013E-02	8.620E-01
3.395E+02	4.547E+00	3.995E-04	1.477E-02	9.637E-03	8.636E-01
3.437E+02	4.437E+00	3.950E-04	1.515E-02	9.907E-03	8.653E-01
3.478E+02	4.331E+00	3.853E-04	1.533E-02	1.005E-02	8.669E-01
3.520E+02	4.228E+00	3.719E-04	1.534E-02	1.009E-02	8.684E-01
3.561E+02	4.129E+00	3.540E-04	1.513E-02	9.977E-03	8.699E-01
3.603E+02	4.033E+00	3.581E-04	1.586E-02	1.048E-02	8.714E-01
3.645E+02	3.941E+00	3.528E-04	1.618E-02	1.073E-02	8.728E-01
3.686E+02	3.852E+00	3.702E-04	1.757E-02	1.169E-02	8.744E-01
3.728E+02	3.766E+00	3.426E-04	1.682E-02	1.123E-02	8.758E-01
3.769E+02	3.682E+00	3.581E-04	1.818E-02	1.217E-02	8.773E-01
3.811E+02	3.602E+00	3.414E-04	1.792E-02	1.204E-02	8.787E-01
3.852E+02	3.524E+00	3.337E-04	1.810E-02	1.219E-02	8.801E-01
3.894E+02	3.449E+00	3.117E-04	1.747E-02	1.182E-02	8.814E-01
3.936E+02	3.376E+00	3.272E-04	1.894E-02	1.288E-02	8.828E-01
3.977E+02	3.305E+00	3.357E-04	2.006E-02	1.371E-02	8.842E-01
4.019E+02	3.236E+00	3.101E-04	1.912E-02	1.313E-02	8.855E-01
4.060E+02	3.170E+00	3.020E-04	1.921E-02	1.326E-02	8.867E-01
4.102E+02	3.105E+00	2.849E-04	1.869E-02	1.296E-02	8.879E-01
4.144E+02	3.043E+00	2.817E-04	1.905E-02	1.327E-02	8.891E-01
4.185E+02	2.983E+00	2.963E-04	2.066E-02	1.447E-02	8.903E-01
4.227E+02	2.924E+00	2.926E-04	2.102E-02	1.485E-02	8.915E-01
4.268E+02	2.867E+00	2.642E-04	1.955E-02	1.393E-02	8.926E-01
4.310E+02	2.811E+00	2.845E-04	2.168E-02	1.558E-02	8.938E-01

Table 4. Liquid nitrogen emission spectrum: outer radius = 19.05 cm, detector bias = 1.6 MeV, flight path = 782.3 cm, view angle = 26°, and FWHM = 3.7 ns.

T(MID) NANOSEC	E(MID) MEV	COUNTS/ NANOSEC	COUNTS/ MEV	NEUTRONS/ MEV	SUM
1.408E+02	1.671E+01	1.493E-04	6.076E-04	5.794E-04	1.132E-04
1.416E+02	1.652E+01	3.902E-04	1.615E-03	1.556E-03	4.089E-04
1.423E+02	1.634E+01	1.839E-03	7.740E-03	7.543E-03	1.803E-03
1.431E+02	1.616E+01	6.990E-03	2.991E-02	2.947E-02	7.101E-03
1.438E+02	1.599E+01	1.939E-02	8.433E-02	8.396E-02	2.179E-02
1.446E+02	1.581E+01	3.806E-02	1.683E-01	1.691E-01	5.064E-02
1.453E+02	1.564E+01	6.032E-02	2.712E-01	2.750E-01	9.636E-02
1.461E+02	1.548E+01	8.210E-02	3.751E-01	3.838E-01	1.586E-01
1.469E+02	1.531E+01	9.490E-02	4.407E-01	4.549E-01	2.305E-01
1.476E+02	1.515E+01	9.543E-02	4.504E-01	4.690E-01	3.028E-01
1.484E+02	1.499E+01	8.617E-02	4.132E-01	4.338E-01	3.681E-01
1.491E+02	1.484E+01	7.418E-02	3.615E-01	3.810E-01	4.244E-01
1.499E+02	1.468E+01	5.694E-02	2.819E-01	2.981E-01	4.675E-01
1.507E+02	1.453E+01	3.722E-02	1.872E-01	1.987E-01	4.957E-01
1.514E+02	1.438E+01	2.270E-02	1.160E-01	1.235E-01	5.129E-01
1.522E+02	1.423E+01	1.457E-02	7.558E-02	8.076E-02	5.240E-01
1.529E+02	1.409E+01	1.008E-02	5.311E-02	5.695E-02	5.316E-01
1.537E+02	1.394E+01	7.932E-03	4.245E-02	4.566E-02	5.376E-01
1.544E+02	1.380E+01	6.818E-03	3.705E-02	3.996E-02	5.428E-01
1.552E+02	1.367E+01	6.221E-03	3.433E-02	3.713E-02	5.475E-01
1.560E+02	1.353E+01	5.962E-03	3.340E-02	3.622E-02	5.520E-01
1.567E+02	1.340E+01	5.859E-03	3.332E-02	3.616E-02	5.565E-01
1.575E+02	1.326E+01	5.775E-03	3.334E-02	3.618E-02	5.608E-01
1.582E+02	1.313E+01	5.669E-03	3.323E-02	3.606E-02	5.651E-01
1.590E+02	1.300E+01	5.717E-03	3.401E-02	3.689E-02	5.695E-01
1.597E+02	1.288E+01	5.701E-03	3.442E-02	3.726E-02	5.738E-01
1.605E+02	1.275E+01	5.493E-03	3.365E-02	3.634E-02	5.779E-01
1.613E+02	1.263E+01	5.242E-03	3.259E-02	3.511E-02	5.819E-01
1.620E+02	1.251E+01	5.086E-03	3.208E-02	3.447E-02	5.858E-01
1.628E+02	1.239E+01	4.685E-03	2.999E-02	3.210E-02	5.893E-01
1.635E+02	1.227E+01	4.312E-03	2.800E-02	2.986E-02	5.926E-01
1.643E+02	1.216E+01	4.162E-03	2.742E-02	2.913E-02	5.958E-01
1.651E+02	1.204E+01	3.728E-03	2.491E-02	2.636E-02	5.986E-01
1.658E+02	1.193E+01	3.406E-03	2.309E-02	2.430E-02	6.012E-01
1.677E+02	1.165E+01	2.996E-03	2.103E-02	2.179E-02	6.102E-01
1.707E+02	1.123E+01	2.429E-03	1.802E-02	1.823E-02	6.176E-01
1.738E+02	1.084E+01	2.084E-03	1.633E-02	1.614E-02	6.239E-01
1.768E+02	1.046E+01	1.774E-03	1.466E-02	1.416E-02	6.293E-01
1.798E+02	1.010E+01	1.600E-03	1.394E-02	1.318E-02	6.341E-01
1.829E+02	9.764E+00	1.464E-03	1.343E-02	1.245E-02	6.386E-01
1.859E+02	9.442E+00	1.280E-03	1.235E-02	1.123E-02	6.425E-01
1.889E+02	9.136E+00	1.167E-03	1.184E-02	1.057E-02	6.460E-01
1.920E+02	8.844E+00	1.159E-03	1.234E-02	1.082E-02	6.495E-01
1.950E+02	8.566E+00	1.112E-03	1.243E-02	1.071E-02	6.529E-01
1.980E+02	8.301E+00	1.040E-03	1.219E-02	1.042E-02	6.560E-01
2.011E+02	8.049E+00	9.357E-04	1.149E-02	9.735E-03	6.589E-01
2.041E+02	7.807E+00	9.133E-04	1.174E-02	9.780E-03	6.616E-01
2.071E+02	7.577E+00	9.909E-04	1.333E-02	1.092E-02	6.647E-01
2.101E+02	7.356E+00	9.317E-04	1.310E-02	1.056E-02	6.675E-01
2.132E+02	7.146E+00	9.796E-04	1.439E-02	1.142E-02	6.704E-01
2.162E+02	6.944E+00	9.365E-04	1.437E-02	1.123E-02	6.733E-01
2.192E+02	6.750E+00	9.360E-04	1.498E-02	1.158E-02	6.761E-01
2.223E+02	6.565E+00	8.876E-04	1.482E-02	1.144E-02	6.788E-01
2.253E+02	6.387E+00	9.020E-04	1.570E-02	1.219E-02	6.815E-01

Table 4. (cont.)

2.283E+02	6.216E+00	8.755E-04	1.587E-02	1.219E-02	6.842E-01
2.314E+02	6.052E+00	8.424E-04	1.590E-02	1.206E-02	6.868E-01
2.344E+02	5.895E+00	8.781E-04	1.724E-02	1.297E-02	6.894E-01
2.374E+02	5.743E+00	9.183E-04	1.875E-02	1.402E-02	6.922E-01
2.405E+02	5.598E+00	9.470E-04	2.010E-02	1.493E-02	6.951E-01
2.435E+02	5.458E+00	9.541E-04	2.104E-02	1.556E-02	6.980E-01
2.465E+02	5.323E+00	9.197E-04	2.106E-02	1.555E-02	7.008E-01
2.496E+02	5.193E+00	8.994E-04	2.137E-02	1.575E-02	7.035E-01
2.526E+02	5.068E+00	9.055E-04	2.232E-02	1.642E-02	7.062E-01
2.556E+02	4.947E+00	9.331E-04	2.386E-02	1.754E-02	7.091E-01
2.587E+02	4.830E+00	9.065E-04	2.402E-02	1.767E-02	7.118E-01
2.617E+02	4.718E+00	8.723E-04	2.395E-02	1.763E-02	7.144E-01
2.647E+02	4.609E+00	8.290E-04	2.357E-02	1.736E-02	7.170E-01
2.677E+02	4.505E+00	7.737E-04	2.278E-02	1.678E-02	7.193E-01
2.708E+02	4.403E+00	7.280E-04	2.217E-02	1.638E-02	7.215E-01
2.738E+02	4.306E+00	7.046E-04	2.220E-02	1.644E-02	7.236E-01
2.768E+02	4.211E+00	6.717E-04	2.188E-02	1.625E-02	7.257E-01
2.799E+02	4.119E+00	6.744E-04	2.271E-02	1.690E-02	7.277E-01
2.829E+02	4.031E+00	6.602E-04	2.297E-02	1.714E-02	7.297E-01
2.859E+02	3.945E+00	6.581E-04	2.365E-02	1.770E-02	7.317E-01
2.890E+02	3.862E+00	6.502E-04	2.412E-02	1.811E-02	7.337E-01
2.920E+02	3.782E+00	6.389E-04	2.447E-02	1.842E-02	7.356E-01
2.950E+02	3.704E+00	6.099E-04	2.410E-02	1.820E-02	7.375E-01
2.981E+02	3.628E+00	6.013E-04	2.451E-02	1.856E-02	7.393E-01
3.011E+02	3.555E+00	5.513E-04	2.317E-02	1.760E-02	7.410E-01
3.041E+02	3.484E+00	5.632E-04	2.440E-02	1.859E-02	7.427E-01
3.072E+02	3.415E+00	6.002E-04	2.680E-02	2.051E-02	7.445E-01
3.102E+02	3.348E+00	6.297E-04	2.896E-02	2.228E-02	7.464E-01
3.132E+02	3.283E+00	5.842E-04	2.767E-02	2.138E-02	7.482E-01
3.163E+02	3.220E+00	5.934E-04	2.894E-02	2.246E-02	7.500E-01
3.193E+02	3.159E+00	6.068E-04	3.046E-02	2.375E-02	7.518E-01
3.223E+02	3.099E+00	6.305E-04	3.257E-02	2.550E-02	7.537E-01
3.253E+02	3.041E+00	6.596E-04	3.505E-02	2.757E-02	7.557E-01
3.284E+02	2.985E+00	6.291E-04	3.438E-02	2.718E-02	7.576E-01
3.314E+02	2.930E+00	6.013E-04	3.379E-02	2.692E-02	7.595E-01
3.344E+02	2.877E+00	6.323E-04	3.652E-02	2.933E-02	7.614E-01
3.375E+02	2.825E+00	6.260E-04	3.716E-02	3.008E-02	7.633E-01
3.405E+02	2.775E+00	6.234E-04	3.802E-02	3.101E-02	7.652E-01
3.435E+02	2.726E+00	6.276E-04	3.931E-02	3.244E-02	7.671E-01
3.466E+02	2.678E+00	6.436E-04	4.140E-02	3.470E-02	7.690E-01
3.496E+02	2.632E+00	6.110E-04	4.035E-02	3.435E-02	7.709E-01
3.526E+02	2.586E+00	5.942E-04	4.028E-02	3.482E-02	7.727E-01
3.557E+02	2.542E+00	5.776E-04	4.018E-02	3.527E-02	7.744E-01
3.587E+02	2.499E+00	5.731E-04	4.091E-02	3.650E-02	7.762E-01
3.617E+02	2.457E+00	5.298E-04	3.879E-02	3.543E-02	7.778E-01
3.648E+02	2.417E+00	5.505E-04	4.134E-02	3.869E-02	7.794E-01
3.678E+02	2.377E+00	5.200E-04	4.003E-02	3.819E-02	7.810E-01
3.708E+02	2.338E+00	5.164E-04	4.075E-02	3.946E-02	7.826E-01
3.739E+02	2.300E+00	4.790E-04	3.874E-02	3.817E-02	7.840E-01
3.769E+02	2.263E+00	4.788E-04	3.968E-02	4.032E-02	7.855E-01
3.799E+02	2.227E+00	4.425E-04	3.757E-02	3.948E-02	7.868E-01
3.829E+02	2.191E+00	4.138E-04	3.599E-02	3.929E-02	7.881E-01
3.860E+02	2.157E+00	4.054E-04	3.611E-02	4.142E-02	7.893E-01
3.890E+02	2.123E+00	3.904E-04	3.560E-02	4.299E-02	7.905E-01
3.920E+02	2.090E+00	3.986E-04	3.721E-02	4.718E-02	7.917E-01
3.951E+02	2.058E+00	3.941E-04	3.766E-02	4.977E-02	7.929E-01
3.981E+02	2.027E+00	3.544E-04	3.465E-02	4.776E-02	7.940E-01
4.011E+02	1.996E+00	3.460E-04	3.461E-02	4.989E-02	7.950E-01
4.042E+02	1.966E+00	3.192E-04	3.266E-02	4.969E-02	7.960E-01
4.072E+02	1.937E+00	3.047E-04	3.190E-02	5.136E-02	7.969E-01

Table 4. (cont.)

4.102E+02	1.908E+00	2.711E-04	2.901E-02	4.954E-02	7.977E-01
4.133E+02	1.880E+00	2.577E-04	2.820E-02	5.118E-02	7.985E-01
4.163E+02	1.853E+00	2.392E-04	2.677E-02	5.176E-02	7.992E-01
4.193E+02	1.826E+00	2.193E-04	2.508E-02	5.181E-02	7.999E-01
4.216E+02	1.806E+00	2.066E-04	2.399E-02	5.198E-02	8.002E-01

Table 5. Liquid nitrogen emission spectrum: outer radius = 19.05 cm, detector bias = 2.2 MeV, flight path = 996.6 cm, view angle = 120°, and FWHM = 2.9 ns.

T (MID) NANOSEC	E (MID) MEV	COUNTS/ NANOSEC	COUNTS/ MEV	NEUTRONS/ MEV	SUM
1.916E+02	1.458E+01	1.396E-04	8.893E-04	8.352E-04	1.058E-04
1.923E+02	1.446E+01	2.830E-04	1.826E-03	1.719E-03	3.203E-04
1.931E+02	1.435E+01	5.679E-04	3.709E-03	3.502E-03	7.508E-04
1.939E+02	1.423E+01	1.277E-03	8.445E-03	7.996E-03	1.719E-03
1.946E+02	1.412E+01	3.142E-03	2.103E-02	1.996E-02	4.101E-03
1.954E+02	1.400E+01	9.853E-03	6.674E-02	6.352E-02	1.157E-02
1.961E+02	1.389E+01	2.995E-02	2.054E-01	1.959E-01	3.427E-02
1.969E+02	1.378E+01	7.769E-02	5.391E-01	5.154E-01	9.316E-02
1.977E+02	1.367E+01	1.408E-01	9.889E-01	9.474E-01	1.999E-01
1.984E+02	1.357E+01	1.635E-01	1.162E+00	1.116E+00	3.238E-01
1.992E+02	1.346E+01	1.232E-01	8.861E-01	8.519E-01	4.172E-01
1.999E+02	1.336E+01	7.053E-02	5.133E-01	4.935E-01	4.707E-01
2.007E+02	1.325E+01	4.094E-02	3.015E-01	2.899E-01	5.017E-01
2.014E+02	1.315E+01	2.570E-02	1.915E-01	1.841E-01	5.212E-01
2.022E+02	1.305E+01	1.845E-02	1.391E-01	1.337E-01	5.352E-01
2.030E+02	1.295E+01	1.445E-02	1.102E-01	1.058E-01	5.461E-01
2.037E+02	1.285E+01	1.200E-02	9.256E-02	8.872E-02	5.552E-01
2.045E+02	1.275E+01	9.643E-03	7.527E-02	7.201E-02	5.625E-01
2.052E+02	1.266E+01	8.461E-03	6.680E-02	6.378E-02	5.690E-01
2.060E+02	1.256E+01	7.246E-03	5.787E-02	5.515E-02	5.745E-01
2.067E+02	1.247E+01	6.877E-03	5.556E-02	5.282E-02	5.797E-01
2.075E+02	1.237E+01	6.253E-03	5.109E-02	4.843E-02	5.844E-01
2.083E+02	1.228E+01	5.769E-03	4.767E-02	4.504E-02	5.888E-01
2.090E+02	1.219E+01	5.615E-03	4.693E-02	4.421E-02	5.930E-01
2.098E+02	1.210E+01	5.449E-03	4.605E-02	4.326E-02	5.972E-01
2.105E+02	1.201E+01	4.910E-03	4.196E-02	3.930E-02	6.009E-01
2.113E+02	1.192E+01	4.817E-03	4.163E-02	3.880E-02	6.045E-01
2.121E+02	1.183E+01	4.749E-03	4.150E-02	3.848E-02	6.081E-01
2.128E+02	1.175E+01	4.536E-03	4.008E-02	3.698E-02	6.116E-01
2.136E+02	1.166E+01	4.580E-03	4.092E-02	3.757E-02	6.150E-01
2.143E+02	1.158E+01	4.187E-03	3.782E-02	3.455E-02	6.182E-01
2.151E+02	1.150E+01	4.129E-03	3.770E-02	3.428E-02	6.213E-01
2.158E+02	1.141E+01	3.625E-03	3.346E-02	3.029E-02	6.241E-01
2.166E+02	1.133E+01	3.547E-03	3.311E-02	2.982E-02	6.268E-01
2.174E+02	1.125E+01	3.284E-03	3.098E-02	2.778E-02	6.293E-01
2.181E+02	1.117E+01	3.125E-03	2.980E-02	2.660E-02	6.316E-01
2.189E+02	1.109E+01	2.908E-03	2.803E-02	2.491E-02	6.338E-01
2.196E+02	1.101E+01	2.762E-03	2.691E-02	2.381E-02	6.359E-01
2.204E+02	1.094E+01	2.646E-03	2.606E-02	2.295E-02	6.379E-01
2.212E+02	1.086E+01	2.597E-03	2.585E-02	2.266E-02	6.399E-01
2.219E+02	1.078E+01	2.309E-03	2.322E-02	2.026E-02	6.417E-01
2.227E+02	1.071E+01	2.367E-03	2.406E-02	2.090E-02	6.435E-01
2.234E+02	1.063E+01	2.229E-03	2.290E-02	1.980E-02	6.451E-01
2.242E+02	1.056E+01	2.103E-03	2.183E-02	1.880E-02	6.467E-01
2.249E+02	1.049E+01	1.958E-03	2.054E-02	1.760E-02	6.482E-01
2.257E+02	1.042E+01	1.764E-03	1.870E-02	1.596E-02	6.496E-01
2.265E+02	1.035E+01	1.504E-03	1.611E-02	1.369E-02	6.507E-01
2.272E+02	1.027E+01	1.543E-03	1.670E-02	1.413E-02	6.519E-01
2.280E+02	1.021E+01	1.281E-03	1.401E-02	1.181E-02	6.528E-01
2.287E+02	1.014E+01	1.175E-03	1.297E-02	1.089E-02	6.537E-01
2.295E+02	1.007E+01	1.047E-03	1.168E-02	9.766E-03	6.545E-01
2.318E+02	9.867E+00	8.529E-04	9.809E-03	8.105E-03	6.578E-01
2.356E+02	9.546E+00	7.986E-04	9.656E-03	7.826E-03	6.608E-01
2.393E+02	9.240E+00	7.234E-04	9.187E-03	7.313E-03	6.635E-01

Table 5. (cont.)

2.431E+02	8.949E+00	6.556E-04	8.738E-03	6.836E-03	6.660E-01
2.469E+02	8.671E+00	7.583E-04	1.060E-02	8.145E-03	6.689E-01
2.507E+02	8.406E+00	8.606E-04	1.261E-02	9.564E-03	6.721E-01
2.545E+02	8.154E+00	8.312E-04	1.275E-02	9.618E-03	6.753E-01
2.583E+02	7.912E+00	8.327E-04	1.337E-02	9.939E-03	6.785E-01
2.621E+02	7.681E+00	8.998E-04	1.510E-02	1.104E-02	6.819E-01
2.659E+02	7.460E+00	8.878E-04	1.557E-02	1.120E-02	6.852E-01
2.697E+02	7.249E+00	8.758E-04	1.604E-02	1.136E-02	6.885E-01
2.735E+02	7.046E+00	8.556E-04	1.636E-02	1.141E-02	6.918E-01
2.772E+02	6.852E+00	9.358E-04	1.866E-02	1.284E-02	6.953E-01
2.810E+02	6.666E+00	1.041E-03	2.164E-02	1.479E-02	6.993E-01
2.848E+02	6.487E+00	1.030E-03	2.229E-02	1.531E-02	7.032E-01
2.886E+02	6.316E+00	9.959E-04	2.245E-02	1.540E-02	7.070E-01
2.924E+02	6.151E+00	8.571E-04	2.011E-02	1.362E-02	7.102E-01
2.962E+02	5.993E+00	7.854E-04	1.916E-02	1.283E-02	7.132E-01
3.000E+02	5.840E+00	7.598E-04	1.927E-02	1.282E-02	7.161E-01
3.038E+02	5.694E+00	7.397E-04	1.949E-02	1.288E-02	7.189E-01
3.076E+02	5.553E+00	7.094E-04	1.942E-02	1.276E-02	7.216E-01
3.114E+02	5.417E+00	6.245E-04	1.774E-02	1.162E-02	7.239E-01
3.151E+02	5.286E+00	6.474E-04	1.908E-02	1.247E-02	7.264E-01
3.189E+02	5.160E+00	6.552E-04	2.003E-02	1.307E-02	7.289E-01
3.227E+02	5.038E+00	6.583E-04	2.086E-02	1.359E-02	7.314E-01
3.265E+02	4.920E+00	6.881E-04	2.259E-02	1.472E-02	7.340E-01
3.303E+02	4.807E+00	7.478E-04	2.543E-02	1.657E-02	7.368E-01
3.341E+02	4.697E+00	7.249E-04	2.552E-02	1.664E-02	7.395E-01
3.379E+02	4.592E+00	7.215E-04	2.629E-02	1.715E-02	7.423E-01
3.417E+02	4.489E+00	6.253E-04	2.357E-02	1.539E-02	7.447E-01
3.455E+02	4.390E+00	6.385E-04	2.489E-02	1.629E-02	7.471E-01
3.493E+02	4.295E+00	6.031E-04	2.418E-02	1.587E-02	7.493E-01
3.530E+02	4.202E+00	5.621E-04	2.340E-02	1.540E-02	7.515E-01
3.568E+02	4.113E+00	5.323E-04	2.289E-02	1.510E-02	7.535E-01
3.606E+02	4.026E+00	5.501E-04	2.443E-02	1.615E-02	7.556E-01
3.644E+02	3.942E+00	5.718E-04	2.621E-02	1.738E-02	7.577E-01
3.682E+02	3.861E+00	5.455E-04	2.580E-02	1.716E-02	7.598E-01
3.720E+02	3.782E+00	5.164E-04	2.519E-02	1.681E-02	7.618E-01
3.758E+02	3.705E+00	5.210E-04	2.621E-02	1.754E-02	7.637E-01
3.796E+02	3.631E+00	4.974E-04	2.580E-02	1.731E-02	7.656E-01
3.834E+02	3.559E+00	4.834E-04	2.584E-02	1.738E-02	7.675E-01
3.872E+02	3.489E+00	4.691E-04	2.583E-02	1.743E-02	7.692E-01
3.909E+02	3.421E+00	5.133E-04	2.911E-02	1.973E-02	7.712E-01
3.947E+02	3.355E+00	4.943E-04	2.887E-02	1.966E-02	7.731E-01
3.985E+02	3.291E+00	5.020E-04	3.018E-02	2.065E-02	7.750E-01
4.023E+02	3.229E+00	4.462E-04	2.760E-02	1.897E-02	7.767E-01
4.061E+02	3.169E+00	4.369E-04	2.781E-02	1.919E-02	7.783E-01
4.099E+02	3.110E+00	4.606E-04	3.015E-02	2.090E-02	7.801E-01
4.137E+02	3.053E+00	4.513E-04	3.037E-02	2.114E-02	7.818E-01
4.175E+02	2.998E+00	4.528E-04	3.133E-02	2.191E-02	7.835E-01
4.213E+02	2.944E+00	4.280E-04	3.043E-02	2.144E-02	7.851E-01
4.251E+02	2.891E+00	4.175E-04	3.050E-02	2.166E-02	7.867E-01
4.288E+02	2.840E+00	4.167E-04	3.128E-02	2.238E-02	7.883E-01
4.315E+02	2.805E+00	4.284E-04	3.271E-02	2.352E-02	7.889E-01

Table 6. Liquid oxygen emission spectrum: outer radius = 10.48 cm, detector bias = 1.6 MeV flight path = 782.3 cm, view angle = 26°, and FWHM = 3.5 ns.

T(MID) NANOSEC	E(MID) MEV	COUNTS/ NANOSEC	COUNTS/ MEV	NEUTRONS/ MEV	SUM
1.413E+02	1.660E+01	9.797E-05	4.026E-04	3.864E-04	8.021E-05
1.421E+02	1.640E+01	3.062E-04	1.282E-03	1.245E-03	3.309E-04
1.429E+02	1.621E+01	1.467E-03	6.253E-03	6.144E-03	1.532E-03
1.437E+02	1.602E+01	7.646E-03	3.317E-02	3.297E-02	7.792E-03
1.445E+02	1.583E+01	2.706E-02	1.195E-01	1.200E-01	2.994E-02
1.453E+02	1.565E+01	5.915E-02	2.659E-01	2.696E-01	7.837E-02
1.462E+02	1.547E+01	1.005E-01	4.598E-01	4.707E-01	1.606E-01
1.470E+02	1.529E+01	1.390E-01	6.470E-01	6.687E-01	2.744E-01
1.478E+02	1.511E+01	1.504E-01	7.123E-01	7.432E-01	3.975E-01
1.486E+02	1.494E+01	1.258E-01	6.065E-01	6.376E-01	5.005E-01
1.494E+02	1.477E+01	8.591E-02	4.213E-01	4.446E-01	5.709E-01
1.503E+02	1.461E+01	4.999E-02	2.493E-01	2.642E-01	6.118E-01
1.511E+02	1.445E+01	2.543E-02	1.290E-01	1.372E-01	6.326E-01
1.519E+02	1.429E+01	1.358E-02	7.008E-02	7.480E-02	6.437E-01
1.527E+02	1.413E+01	8.967E-03	4.705E-02	5.040E-02	6.511E-01
1.535E+02	1.397E+01	7.167E-03	3.824E-02	4.110E-02	6.569E-01
1.543E+02	1.382E+01	6.570E-03	3.564E-02	3.843E-02	6.623E-01
1.552E+02	1.367E+01	6.112E-03	3.370E-02	3.645E-02	6.673E-01
1.560E+02	1.352E+01	6.004E-03	3.366E-02	3.650E-02	6.722E-01
1.568E+02	1.338E+01	5.820E-03	3.316E-02	3.599E-02	6.770E-01
1.576E+02	1.324E+01	5.761E-03	3.336E-02	3.620E-02	6.817E-01
1.584E+02	1.310E+01	5.692E-03	3.350E-02	3.635E-02	6.864E-01
1.593E+02	1.296E+01	5.384E-03	3.220E-02	3.491E-02	6.908E-01
1.601E+02	1.282E+01	5.311E-03	3.227E-02	3.489E-02	6.951E-01
1.609E+02	1.269E+01	5.044E-03	3.114E-02	3.358E-02	6.992E-01
1.617E+02	1.256E+01	4.795E-03	3.007E-02	3.235E-02	7.032E-01
1.625E+02	1.243E+01	4.387E-03	2.795E-02	2.996E-02	7.068E-01
1.634E+02	1.230E+01	3.962E-03	2.564E-02	2.737E-02	7.100E-01
1.642E+02	1.217E+01	3.560E-03	2.339E-02	2.487E-02	7.129E-01
1.650E+02	1.205E+01	3.130E-03	2.089E-02	2.211E-02	7.155E-01
1.658E+02	1.193E+01	2.687E-03	1.821E-02	1.917E-02	7.177E-01
1.666E+02	1.181E+01	2.221E-03	1.528E-02	1.597E-02	7.195E-01
1.674E+02	1.169E+01	1.969E-03	1.376E-02	1.428E-02	7.211E-01
1.683E+02	1.158E+01	1.574E-03	1.117E-02	1.151E-02	7.224E-01
1.691E+02	1.146E+01	1.448E-03	1.043E-02	1.069E-02	7.236E-01
1.699E+02	1.135E+01	1.378E-03	1.007E-02	1.025E-02	7.247E-01
1.707E+02	1.124E+01	1.287E-03	9.551E-03	9.661E-03	7.258E-01
1.715E+02	1.113E+01	1.187E-03	8.934E-03	8.981E-03	7.267E-01
1.724E+02	1.102E+01	1.239E-03	9.472E-03	9.464E-03	7.278E-01
1.732E+02	1.091E+01	1.221E-03	9.471E-03	9.403E-03	7.288E-01
1.740E+02	1.081E+01	1.322E-03	1.040E-02	1.026E-02	7.298E-01
1.748E+02	1.070E+01	1.244E-03	9.930E-03	9.735E-03	7.309E-01
1.756E+02	1.060E+01	1.198E-03	9.704E-03	9.455E-03	7.318E-01
1.765E+02	1.050E+01	1.172E-03	9.630E-03	9.326E-03	7.328E-01
1.773E+02	1.040E+01	1.125E-03	9.376E-03	9.026E-03	7.337E-01
1.781E+02	1.031E+01	1.057E-03	8.933E-03	8.551E-03	7.346E-01
1.789E+02	1.021E+01	8.534E-04	7.318E-03	6.965E-03	7.353E-01
1.797E+02	1.012E+01	6.727E-04	5.850E-03	5.537E-03	7.358E-01
1.805E+02	1.002E+01	5.660E-04	4.992E-03	4.699E-03	7.363E-01
1.814E+02	9.930E+00	4.804E-04	4.297E-03	4.022E-03	7.367E-01
1.822E+02	9.839E+00	4.630E-04	4.199E-03	3.909E-03	7.371E-01
1.830E+02	9.749E+00	4.187E-04	3.850E-03	3.565E-03	7.374E-01
1.846E+02	9.573E+00	3.899E-04	3.685E-03	3.377E-03	7.384E-01
1.871E+02	9.319E+00	4.028E-04	3.964E-03	3.578E-03	7.394E-01

Table 6. (cont.)

1.896E+02	9.074E+00	4.224E-04	4.327E-03	3.851E-03	7.404E-01
1.920E+02	8.839E+00	5.382E-04	5.737E-03	5.031E-03	7.417E-01
1.945E+02	8.613E+00	8.324E-04	9.227E-03	7.973E-03	7.438E-01
1.969E+02	8.396E+00	1.101E-03	1.269E-02	1.086E-02	7.465E-01
1.994E+02	8.187E+00	1.243E-03	1.487E-02	1.268E-02	7.495E-01
2.018E+02	7.985E+00	1.318E-03	1.638E-02	1.382E-02	7.528E-01
2.043E+02	7.791E+00	1.291E-03	1.664E-02	1.385E-02	7.559E-01
2.067E+02	7.604E+00	1.429E-03	1.911E-02	1.569E-02	7.594E-01
2.092E+02	7.424E+00	1.453E-03	2.015E-02	1.632E-02	7.630E-01
2.117E+02	7.250E+00	1.400E-03	2.013E-02	1.609E-02	7.664E-01
2.141E+02	7.082E+00	1.383E-03	2.060E-02	1.627E-02	7.698E-01
2.166E+02	6.920E+00	1.212E-03	1.869E-02	1.459E-02	7.728E-01
2.190E+02	6.764E+00	1.036E-03	1.653E-02	1.278E-02	7.754E-01
2.215E+02	6.612E+00	9.644E-04	1.593E-02	1.228E-02	7.777E-01
2.239E+02	6.466E+00	8.839E-04	1.510E-02	1.172E-02	7.799E-01
2.264E+02	6.325E+00	8.123E-04	1.434E-02	1.111E-02	7.819E-01
2.289E+02	6.188E+00	8.413E-04	1.535E-02	1.177E-02	7.840E-01
2.313E+02	6.056E+00	8.570E-04	1.616E-02	1.226E-02	7.861E-01
2.338E+02	5.927E+00	8.730E-04	1.700E-02	1.281E-02	7.882E-01
2.362E+02	5.803E+00	9.330E-04	1.876E-02	1.406E-02	7.905E-01
2.387E+02	5.683E+00	1.016E-03	2.108E-02	1.572E-02	7.930E-01
2.411E+02	5.566E+00	1.074E-03	2.299E-02	1.706E-02	7.956E-01
2.436E+02	5.453E+00	1.179E-03	2.603E-02	1.925E-02	7.985E-01
2.460E+02	5.344E+00	1.224E-03	2.787E-02	2.058E-02	8.015E-01
2.485E+02	5.238E+00	1.244E-03	2.918E-02	2.152E-02	8.046E-01
2.510E+02	5.134E+00	1.091E-03	2.637E-02	1.942E-02	8.073E-01
2.534E+02	5.034E+00	1.055E-03	2.628E-02	1.933E-02	8.099E-01
2.559E+02	4.937E+00	1.101E-03	2.822E-02	2.075E-02	8.126E-01
2.583E+02	4.843E+00	1.055E-03	2.786E-02	2.049E-02	8.152E-01
2.608E+02	4.751E+00	1.052E-03	2.858E-02	2.103E-02	8.178E-01
2.632E+02	4.662E+00	9.978E-04	2.789E-02	2.053E-02	8.202E-01
2.657E+02	4.575E+00	9.274E-04	2.667E-02	1.964E-02	8.225E-01
2.681E+02	4.491E+00	8.442E-04	2.496E-02	1.840E-02	8.246E-01
2.706E+02	4.409E+00	7.562E-04	2.299E-02	1.698E-02	8.264E-01
2.731E+02	4.329E+00	6.621E-04	2.069E-02	1.531E-02	8.280E-01
2.755E+02	4.252E+00	6.855E-04	2.201E-02	1.633E-02	8.297E-01
2.780E+02	4.176E+00	7.383E-04	2.435E-02	1.810E-02	8.315E-01
2.804E+02	4.103E+00	7.673E-04	2.599E-02	1.936E-02	8.334E-01
2.829E+02	4.031E+00	7.513E-04	2.614E-02	1.950E-02	8.353E-01
2.853E+02	3.962E+00	6.884E-04	2.458E-02	1.839E-02	8.370E-01
2.878E+02	3.894E+00	6.468E-04	2.371E-02	1.778E-02	8.385E-01
2.903E+02	3.828E+00	6.028E-04	2.267E-02	1.704E-02	8.400E-01
2.927E+02	3.763E+00	5.186E-04	2.001E-02	1.508E-02	8.413E-01
2.952E+02	3.700E+00	5.520E-04	2.184E-02	1.650E-02	8.427E-01
2.976E+02	3.639E+00	5.624E-04	2.282E-02	1.727E-02	8.440E-01
3.001E+02	3.579E+00	5.578E-04	2.321E-02	1.761E-02	8.454E-01
3.025E+02	3.521E+00	5.895E-04	2.514E-02	1.911E-02	8.469E-01
3.050E+02	3.464E+00	6.004E-04	2.624E-02	2.001E-02	8.483E-01
3.074E+02	3.409E+00	5.842E-04	2.616E-02	2.003E-02	8.498E-01
3.099E+02	3.354E+00	6.125E-04	2.809E-02	2.160E-02	8.513E-01
3.124E+02	3.301E+00	6.459E-04	3.034E-02	2.341E-02	8.529E-01
3.148E+02	3.250E+00	6.788E-04	3.265E-02	2.529E-02	8.545E-01
3.173E+02	3.199E+00	7.129E-04	3.511E-02	2.729E-02	8.563E-01
3.197E+02	3.150E+00	7.857E-04	3.961E-02	3.090E-02	8.582E-01
3.222E+02	3.102E+00	8.517E-04	4.394E-02	3.440E-02	8.603E-01
3.246E+02	3.055E+00	9.059E-04	4.782E-02	3.757E-02	8.625E-01
3.271E+02	3.009E+00	8.938E-04	4.827E-02	3.806E-02	8.647E-01
3.296E+02	2.964E+00	8.021E-04	4.431E-02	3.514E-02	8.667E-01
3.320E+02	2.920E+00	7.896E-04	4.461E-02	3.560E-02	8.686E-01
3.345E+02	2.877E+00	7.741E-04	4.472E-02	3.592E-02	8.705E-01

Table 6. (cont.)

3.369E+02	2.835E+00	7.511E-04	4.436E-02	3.586E-02	8.724E-01
3.394E+02	2.794E+00	7.775E-04	4.694E-02	3.818E-02	8.743E-01
3.418E+02	2.754E+00	7.608E-04	4.695E-02	3.844E-02	8.761E-01
3.443E+02	2.714E+00	7.477E-04	4.715E-02	3.906E-02	8.780E-01
3.467E+02	2.676E+00	7.417E-04	4.778E-02	4.009E-02	8.798E-01
3.492E+02	2.638E+00	7.363E-04	4.846E-02	4.117E-02	8.816E-01
3.517E+02	2.601E+00	7.213E-04	4.849E-02	4.172E-02	8.834E-01
3.541E+02	2.565E+00	7.138E-04	4.901E-02	4.269E-02	8.851E-01
3.566E+02	2.529E+00	7.189E-04	5.040E-02	4.444E-02	8.869E-01
3.590E+02	2.495E+00	6.925E-04	4.957E-02	4.431E-02	8.886E-01
3.615E+02	2.461E+00	6.524E-04	4.767E-02	4.345E-02	8.902E-01
3.639E+02	2.428E+00	6.580E-04	4.907E-02	4.563E-02	8.918E-01
3.664E+02	2.395E+00	6.749E-04	5.136E-02	4.864E-02	8.935E-01
3.688E+02	2.363E+00	7.056E-04	5.480E-02	5.255E-02	8.952E-01
3.713E+02	2.332E+00	6.988E-04	5.537E-02	5.375E-02	8.969E-01
3.738E+02	2.301E+00	6.551E-04	5.294E-02	5.210E-02	8.985E-01
3.762E+02	2.271E+00	6.093E-04	5.023E-02	5.067E-02	9.000E-01
3.787E+02	2.241E+00	5.259E-04	4.421E-02	4.582E-02	9.013E-01
3.811E+02	2.212E+00	4.918E-04	4.216E-02	4.491E-02	9.025E-01
3.836E+02	2.184E+00	4.446E-04	3.886E-02	4.284E-02	9.036E-01
3.860E+02	2.156E+00	4.204E-04	3.746E-02	4.302E-02	9.047E-01
3.885E+02	2.129E+00	3.931E-04	3.570E-02	4.274E-02	9.056E-01
3.910E+02	2.102E+00	3.464E-04	3.207E-02	4.002E-02	9.065E-01
3.934E+02	2.076E+00	3.191E-04	3.010E-02	3.889E-02	9.073E-01
3.959E+02	2.050E+00	3.007E-04	2.890E-02	3.862E-02	9.080E-01
3.983E+02	2.025E+00	2.765E-04	2.708E-02	3.743E-02	9.087E-01
4.008E+02	2.000E+00	2.603E-04	2.597E-02	3.720E-02	9.093E-01
4.024E+02	1.984E+00	2.496E-04	2.520E-02	3.706E-02	9.095E-01

Table 7. Liquid oxygen emission spectrum: outer radius = 10.48 cm, detector bias = 2.2 MeV, flight path = 996.6 cm, view angle = 120°, and FWHM = 2.7 ns.

T (MID) NANOSEC	E (MID) MEV	COUNTS/ NANOSEC	COUNTS/ MEV	NEUTRONS/ MEV	SUM
1.896E+02	1.476E+01	8.153E-05	5.115E-04	5.021E-04	6.676E-05
1.904E+02	1.463E+01	2.280E-04	1.450E-03	1.422E-03	2.535E-04
1.912E+02	1.450E+01	5.210E-04	3.357E-03	3.289E-03	6.801E-04
1.921E+02	1.438E+01	1.301E-03	8.491E-03	8.311E-03	1.745E-03
1.929E+02	1.425E+01	3.352E-03	2.217E-02	2.168E-02	4.489E-03
1.937E+02	1.413E+01	1.024E-02	6.864E-02	6.706E-02	1.288E-02
1.945E+02	1.401E+01	3.402E-02	2.310E-01	2.254E-01	4.073E-02
1.953E+02	1.389E+01	9.117E-02	6.271E-01	6.095E-01	1.154E-01
1.962E+02	1.377E+01	1.639E-01	1.142E+00	1.105E+00	2.496E-01
1.970E+02	1.365E+01	1.838E-01	1.297E+00	1.250E+00	4.000E-01
1.978E+02	1.354E+01	1.420E-01	1.015E+00	9.746E-01	5.163E-01
1.986E+02	1.342E+01	9.193E-02	6.657E-01	6.374E-01	5.916E-01
1.994E+02	1.331E+01	5.348E-02	3.922E-01	3.745E-01	6.354E-01
2.002E+02	1.320E+01	2.793E-02	2.074E-01	1.975E-01	6.582E-01
2.011E+02	1.309E+01	1.581E-02	1.189E-01	1.130E-01	6.712E-01
2.019E+02	1.298E+01	1.118E-02	8.516E-02	8.062E-02	6.803E-01
2.027E+02	1.288E+01	8.516E-03	6.567E-02	6.182E-02	6.873E-01
2.035E+02	1.277E+01	7.240E-03	5.653E-02	5.291E-02	6.932E-01
2.043E+02	1.267E+01	6.399E-03	5.058E-02	4.708E-02	6.985E-01
2.052E+02	1.256E+01	5.629E-03	4.505E-02	4.170E-02	7.031E-01
2.060E+02	1.246E+01	5.364E-03	4.346E-02	4.001E-02	7.075E-01
2.068E+02	1.236E+01	5.184E-03	4.251E-02	3.893E-02	7.117E-01
2.076E+02	1.226E+01	5.022E-03	4.169E-02	3.798E-02	7.158E-01
2.084E+02	1.216E+01	4.688E-03	3.939E-02	3.570E-02	7.197E-01
2.093E+02	1.207E+01	4.322E-03	3.676E-02	3.315E-02	7.232E-01
2.101E+02	1.197E+01	3.971E-03	3.418E-02	3.067E-02	7.265E-01
2.109E+02	1.188E+01	3.771E-03	3.285E-02	2.933E-02	7.295E-01
2.117E+02	1.178E+01	3.459E-03	3.049E-02	2.710E-02	7.324E-01
2.125E+02	1.169E+01	2.934E-03	2.617E-02	2.315E-02	7.348E-01
2.133E+02	1.160E+01	2.559E-03	2.310E-02	2.034E-02	7.369E-01
2.142E+02	1.151E+01	2.415E-03	2.206E-02	1.934E-02	7.389E-01
2.150E+02	1.142E+01	2.145E-03	1.983E-02	1.730E-02	7.406E-01
2.158E+02	1.133E+01	1.927E-03	1.802E-02	1.566E-02	7.422E-01
2.166E+02	1.125E+01	1.688E-03	1.597E-02	1.381E-02	7.436E-01
2.174E+02	1.116E+01	1.701E-03	1.628E-02	1.402E-02	7.450E-01
2.183E+02	1.108E+01	1.771E-03	1.714E-02	1.470E-02	7.464E-01
2.191E+02	1.099E+01	1.623E-03	1.589E-02	1.357E-02	7.477E-01
2.199E+02	1.091E+01	1.487E-03	1.473E-02	1.253E-02	7.490E-01
2.207E+02	1.083E+01	1.340E-03	1.343E-02	1.138E-02	7.501E-01
2.215E+02	1.074E+01	1.195E-03	1.211E-02	1.022E-02	7.510E-01
2.224E+02	1.066E+01	9.631E-04	9.871E-03	8.297E-03	7.518E-01
2.232E+02	1.058E+01	7.580E-04	7.857E-03	6.579E-03	7.524E-01
2.240E+02	1.051E+01	6.688E-04	7.011E-03	5.849E-03	7.530E-01
2.248E+02	1.043E+01	5.949E-04	6.307E-03	5.241E-03	7.535E-01
2.256E+02	1.035E+01	4.803E-04	5.148E-03	4.263E-03	7.539E-01
2.264E+02	1.028E+01	4.790E-04	5.192E-03	4.284E-03	7.543E-01
2.273E+02	1.020E+01	4.178E-04	4.580E-03	3.765E-03	7.546E-01
2.281E+02	1.013E+01	3.605E-04	3.995E-03	3.273E-03	7.549E-01
2.289E+02	1.005E+01	3.236E-04	3.625E-03	2.960E-03	7.552E-01
2.297E+02	9.980E+00	2.637E-04	2.987E-03	2.430E-03	7.554E-01
2.305E+02	9.908E+00	2.726E-04	3.122E-03	2.528E-03	7.556E-01
2.314E+02	9.837E+00	2.803E-04	3.245E-03	2.618E-03	7.558E-01
2.322E+02	9.767E+00	2.777E-04	3.250E-03	2.609E-03	7.561E-01
2.330E+02	9.697E+00	2.395E-04	2.833E-03	2.264E-03	7.563E-01

Table 7. (cont.)

2.338E+02	9.629E+00	2.866E-04	3.427E-03	2.728E-03	7.565E-01
2.346E+02	9.560E+00	3.006E-04	3.634E-03	2.880E-03	7.567E-01
2.355E+02	9.493E+00	2.777E-04	3.392E-03	2.678E-03	7.570E-01
2.363E+02	9.426E+00	2.803E-04	3.460E-03	2.720E-03	7.572E-01
2.371E+02	9.360E+00	2.739E-04	3.417E-03	2.676E-03	7.574E-01
2.379E+02	9.295E+00	2.624E-04	3.309E-03	2.581E-03	7.576E-01
2.387E+02	9.231E+00	2.777E-04	3.539E-03	2.750E-03	7.579E-01
2.395E+02	9.167E+00	2.854E-04	3.675E-03	2.844E-03	7.581E-01
2.404E+02	9.103E+00	2.739E-04	3.564E-03	2.748E-03	7.583E-01
2.412E+02	9.041E+00	2.662E-04	3.501E-03	2.690E-03	7.585E-01
2.420E+02	8.979E+00	2.701E-04	3.588E-03	2.748E-03	7.588E-01
2.428E+02	8.917E+00	2.369E-04	3.181E-03	2.429E-03	7.590E-01
2.436E+02	8.857E+00	1.962E-04	2.661E-03	2.027E-03	7.591E-01
2.445E+02	8.797E+00	2.064E-04	2.828E-03	2.148E-03	7.593E-01
2.453E+02	8.737E+00	1.758E-04	2.434E-03	1.844E-03	7.594E-01
2.461E+02	8.678E+00	2.038E-04	2.850E-03	2.154E-03	7.596E-01
2.469E+02	8.620E+00	1.911E-04	2.699E-03	2.035E-03	7.597E-01
2.477E+02	8.562E+00	1.860E-04	2.654E-03	1.996E-03	7.599E-01
2.486E+02	8.505E+00	1.631E-04	2.351E-03	1.763E-03	7.600E-01
2.494E+02	8.449E+00	1.975E-04	2.875E-03	2.151E-03	7.602E-01
2.502E+02	8.393E+00	1.363E-04	2.005E-03	1.496E-03	7.603E-01
2.510E+02	8.338E+00	1.694E-04	2.517E-03	1.874E-03	7.604E-01
2.518E+02	8.283E+00	1.440E-04	2.160E-03	1.605E-03	7.606E-01
2.526E+02	8.228E+00	1.478E-04	2.239E-03	1.660E-03	7.607E-01
2.535E+02	8.175E+00	1.656E-04	2.534E-03	1.874E-03	7.608E-01
2.543E+02	8.121E+00	1.936E-04	2.992E-03	2.208E-03	7.610E-01
2.551E+02	8.069E+00	1.401E-04	2.187E-03	1.610E-03	7.611E-01
2.559E+02	8.016E+00	1.338E-04	2.108E-03	1.549E-03	7.612E-01
2.567E+02	7.965E+00	1.261E-04	2.007E-03	1.471E-03	7.613E-01
2.576E+02	7.914E+00	1.758E-04	2.825E-03	2.066E-03	7.615E-01
2.584E+02	7.863E+00	2.178E-04	3.535E-03	2.580E-03	7.616E-01
2.592E+02	7.813E+00	2.701E-04	4.425E-03	3.223E-03	7.619E-01
2.600E+02	7.763E+00	3.949E-04	6.533E-03	4.748E-03	7.622E-01
2.608E+02	7.714E+00	6.586E-04	1.100E-02	7.978E-03	7.627E-01
2.617E+02	7.665E+00	8.510E-04	1.435E-02	1.039E-02	7.634E-01
2.625E+02	7.616E+00	1.080E-03	1.839E-02	1.328E-02	7.643E-01
2.633E+02	7.569E+00	1.311E-03	2.253E-02	1.624E-02	7.654E-01
2.641E+02	7.521E+00	1.397E-03	2.424E-02	1.744E-02	7.665E-01
2.649E+02	7.474E+00	1.394E-03	2.441E-02	1.753E-02	7.677E-01
2.657E+02	7.428E+00	1.446E-03	2.556E-02	1.832E-02	7.688E-01
2.666E+02	7.382E+00	1.431E-03	2.553E-02	1.826E-02	7.700E-01
2.674E+02	7.336E+00	1.358E-03	2.446E-02	1.747E-02	7.711E-01
2.682E+02	7.291E+00	1.345E-03	2.446E-02	1.743E-02	7.722E-01
2.690E+02	7.246E+00	1.362E-03	2.499E-02	1.778E-02	7.733E-01
2.698E+02	7.201E+00	1.270E-03	2.352E-02	1.671E-02	7.744E-01
2.707E+02	7.157E+00	1.204E-03	2.250E-02	1.595E-02	7.754E-01
2.723E+02	7.071E+00	1.242E-03	2.366E-02	1.671E-02	7.784E-01
2.748E+02	6.943E+00	1.283E-03	2.510E-02	1.767E-02	7.816E-01
2.772E+02	6.820E+00	1.240E-03	2.493E-02	1.752E-02	7.846E-01
2.797E+02	6.699E+00	1.275E-03	2.633E-02	1.847E-02	7.877E-01
2.821E+02	6.582E+00	1.335E-03	2.831E-02	1.982E-02	7.910E-01
2.846E+02	6.467E+00	1.384E-03	3.014E-02	2.108E-02	7.944E-01
2.870E+02	6.356E+00	1.206E-03	2.695E-02	1.882E-02	7.974E-01
2.895E+02	6.247E+00	1.074E-03	2.463E-02	1.718E-02	8.000E-01
2.919E+02	6.142E+00	1.083E-03	2.548E-02	1.774E-02	8.027E-01
2.944E+02	6.033E+00	1.085E-03	2.619E-02	1.821E-02	8.053E-01
2.969E+02	5.938E+00	1.074E-03	2.660E-02	1.849E-02	8.080E-01
2.993E+02	5.840E+00	1.062E-03	2.695E-02	1.873E-02	8.106E-01
3.018E+02	5.745E+00	9.707E-04	2.526E-02	1.756E-02	8.130E-01
3.042E+02	5.652E+00	8.973E-04	2.393E-02	1.663E-02	8.152E-01

Table 7. (cont.)

3.067E+02	5.561E+00	7.516E-04	2.054E-02	1.428E-02	8.170E-01
3.091E+02	5.472E+00	6.968E-04	1.951E-02	1.357E-02	8.187E-01
3.116E+02	5.385E+00	7.142E-04	2.049E-02	1.428E-02	8.205E-01
3.141E+02	5.300E+00	6.858E-04	2.015E-02	1.407E-02	8.222E-01
3.165E+02	5.218E+00	6.828E-04	2.054E-02	1.438E-02	8.239E-01
3.190E+02	5.137E+00	6.590E-04	2.029E-02	1.424E-02	8.255E-01
3.214E+02	5.058E+00	6.077E-04	1.915E-02	1.347E-02	8.270E-01
3.239E+02	4.981E+00	5.737E-04	1.850E-02	1.305E-02	8.284E-01
3.263E+02	4.906E+00	6.905E-04	2.279E-02	1.615E-02	8.301E-01
3.288E+02	4.832E+00	7.193E-04	2.428E-02	1.731E-02	8.318E-01
3.313E+02	4.760E+00	7.457E-04	2.575E-02	1.844E-02	8.337E-01
3.337E+02	4.690E+00	7.389E-04	2.609E-02	1.878E-02	8.355E-01
3.362E+02	4.621E+00	6.697E-04	2.418E-02	1.749E-02	8.371E-01
3.386E+02	4.554E+00	6.081E-04	2.244E-02	1.632E-02	8.386E-01
3.411E+02	4.488E+00	5.720E-04	2.158E-02	1.578E-02	8.400E-01
3.435E+02	4.424E+00	4.985E-04	1.922E-02	1.416E-02	8.413E-01
3.460E+02	4.361E+00	5.083E-04	2.002E-02	1.487E-02	8.425E-01
3.484E+02	4.299E+00	4.488E-04	1.807E-02	1.352E-02	8.436E-01
3.509E+02	4.239E+00	4.862E-04	1.999E-02	1.508E-02	8.448E-01
3.534E+02	4.180E+00	5.367E-04	2.254E-02	1.713E-02	8.461E-01
3.558E+02	4.122E+00	5.389E-04	2.311E-02	1.769E-02	8.474E-01
3.583E+02	4.065E+00	5.936E-04	2.599E-02	2.005E-02	8.489E-01
3.607E+02	4.009E+00	6.123E-04	2.737E-02	2.127E-02	8.504E-01
3.632E+02	3.955E+00	5.767E-04	2.631E-02	2.063E-02	8.518E-01
3.656E+02	3.902E+00	5.554E-04	2.586E-02	2.048E-02	8.532E-01
3.681E+02	3.849E+00	5.151E-04	2.448E-02	1.957E-02	8.545E-01
3.706E+02	3.798E+00	4.747E-04	2.302E-02	1.858E-02	8.556E-01
3.730E+02	3.748E+00	4.586E-04	2.268E-02	1.848E-02	8.567E-01
3.755E+02	3.699E+00	4.459E-04	2.250E-02	1.850E-02	8.578E-01
3.779E+02	3.651E+00	4.420E-04	2.275E-02	1.888E-02	8.589E-01
3.804E+02	3.604E+00	4.412E-04	2.315E-02	1.939E-02	8.600E-01
3.828E+02	3.557E+00	4.824E-04	2.581E-02	2.181E-02	8.612E-01
3.853E+02	3.512E+00	4.382E-04	2.391E-02	2.038E-02	8.623E-01
3.877E+02	3.467E+00	4.866E-04	2.706E-02	2.337E-02	8.635E-01
3.902E+02	3.423E+00	4.365E-04	2.474E-02	2.169E-02	8.645E-01
3.927E+02	3.380E+00	4.476E-04	2.585E-02	2.299E-02	8.656E-01
3.951E+02	3.338E+00	4.361E-04	2.567E-02	2.316E-02	8.667E-01
3.976E+02	3.297E+00	4.658E-04	2.794E-02	2.560E-02	8.679E-01
4.000E+02	3.256E+00	4.535E-04	2.771E-02	2.593E-02	8.690E-01
4.025E+02	3.217E+00	4.569E-04	2.844E-02	2.720E-02	8.701E-01
4.049E+02	3.177E+00	4.709E-04	2.986E-02	2.918E-02	8.712E-01
4.074E+02	3.139E+00	4.973E-04	3.211E-02	3.207E-02	8.725E-01
4.099E+02	3.101E+00	5.274E-04	3.468E-02	3.544E-02	8.738E-01
4.123E+02	3.064E+00	5.762E-04	3.858E-02	4.056E-02	8.752E-01
4.148E+02	3.028E+00	5.643E-04	3.847E-02	4.166E-02	8.766E-01
4.172E+02	2.992E+00	5.652E-04	3.922E-02	4.386E-02	8.780E-01
4.197E+02	2.957E+00	5.660E-04	3.998E-02	4.645E-02	8.793E-01
4.221E+02	2.923E+00	5.299E-04	3.809E-02	4.603E-02	8.806E-01
4.246E+02	2.889E+00	5.295E-04	3.874E-02	4.871E-02	8.819E-01
4.271E+02	2.856E+00	5.270E-04	3.923E-02	5.140E-02	8.832E-01
4.295E+02	2.823E+00	5.295E-04	4.010E-02	5.480E-02	8.845E-01
4.320E+02	2.791E+00	5.367E-04	4.136E-02	5.900E-02	8.859E-01
4.344E+02	2.759E+00	5.559E-04	4.357E-02	6.496E-02	8.872E-01
4.369E+02	2.728E+00	5.699E-04	4.543E-02	7.089E-02	8.886E-01
4.393E+02	2.697E+00	5.792E-04	4.697E-02	7.692E-02	8.900E-01
4.418E+02	2.667E+00	5.962E-04	4.916E-02	8.528E-02	8.915E-01
4.442E+02	2.638E+00	6.077E-04	5.095E-02	9.393E-02	8.930E-01
4.467E+02	2.609E+00	5.975E-04	5.094E-02	1.001E-01	8.945E-01
4.492E+02	2.580E+00	5.902E-04	5.116E-02	1.075E-01	8.959E-01
4.508E+02	2.561E+00	5.784E-04	5.065E-02	1.111E-01	8.964E-01

Table 8. Tungsten emission spectrum: inner radius = 9.04 cm, detector bias = 1.6 MeV, flight path = 801.4 cm, view angle = 26°, and FWHM = 4.1 ns.

T(MID) NANOSEC	E(MID) MEV	COUNTS/ NANOSEC	COUNTS/ MEV	NEUTRONS/ MEV	SUM
1.427E+02	1.708E+01	3.593E-05	1.448E-04	1.358E-04	3.573E-05
1.437E+02	1.684E+01	6.012E-05	2.476E-04	2.343E-04	9.552E-05
1.447E+02	1.660E+01	8.776E-05	3.694E-04	3.545E-04	1.828E-04
1.457E+02	1.637E+01	6.005E-04	2.583E-03	2.513E-03	7.800E-04
1.467E+02	1.614E+01	4.981E-03	2.189E-02	2.159E-02	5.734E-03
1.477E+02	1.591E+01	2.155E-02	9.669E-02	9.665E-02	2.716E-02
1.487E+02	1.569E+01	5.538E-02	2.538E-01	2.566E-01	8.223E-02
1.497E+02	1.548E+01	9.981E-02	4.671E-01	4.778E-01	1.815E-01
1.507E+02	1.527E+01	1.419E-01	6.779E-01	7.013E-01	3.226E-01
1.517E+02	1.506E+01	1.560E-01	7.608E-01	7.959E-01	4.777E-01
1.526E+02	1.486E+01	1.318E-01	6.562E-01	6.912E-01	6.088E-01
1.536E+02	1.466E+01	8.750E-02	4.445E-01	4.703E-01	6.958E-01
1.546E+02	1.447E+01	4.836E-02	2.507E-01	2.664E-01	7.439E-01
1.556E+02	1.428E+01	2.402E-02	1.270E-01	1.356E-01	7.678E-01
1.566E+02	1.409E+01	1.169E-02	6.309E-02	6.763E-02	7.794E-01
1.576E+02	1.391E+01	6.067E-03	3.338E-02	3.593E-02	7.855E-01
1.586E+02	1.373E+01	3.715E-03	2.085E-02	2.252E-02	7.892E-01
1.596E+02	1.356E+01	2.481E-03	1.420E-02	1.539E-02	7.916E-01
1.606E+02	1.338E+01	1.848E-03	1.078E-02	1.170E-02	7.935E-01
1.616E+02	1.322E+01	1.472E-03	8.752E-03	9.498E-03	7.949E-01
1.626E+02	1.305E+01	1.356E-03	8.217E-03	8.917E-03	7.963E-01
1.636E+02	1.289E+01	1.230E-03	7.598E-03	8.227E-03	7.975E-01
1.646E+02	1.273E+01	1.044E-03	6.572E-03	7.093E-03	7.986E-01
1.656E+02	1.257E+01	9.342E-04	5.992E-03	6.447E-03	7.995E-01
1.666E+02	1.242E+01	7.311E-04	4.777E-03	5.118E-03	8.002E-01
1.676E+02	1.227E+01	5.984E-04	3.983E-03	4.246E-03	8.008E-01
1.686E+02	1.212E+01	5.182E-04	3.513E-03	3.728E-03	8.013E-01
1.696E+02	1.197E+01	4.733E-04	3.268E-03	3.448E-03	8.018E-01
1.705E+02	1.183E+01	4.298E-04	3.022E-03	3.162E-03	8.022E-01
1.715E+02	1.169E+01	4.153E-04	2.973E-03	3.086E-03	8.026E-01
1.725E+02	1.155E+01	3.849E-04	2.805E-03	2.889E-03	8.030E-01
1.735E+02	1.142E+01	3.745E-04	2.778E-03	2.839E-03	8.034E-01
1.760E+02	1.109E+01	3.502E-04	2.714E-03	2.723E-03	8.048E-01
1.800E+02	1.059E+01	3.365E-04	2.795E-03	2.722E-03	8.061E-01
1.840E+02	1.013E+01	3.244E-04	2.883E-03	2.731E-03	8.074E-01
1.879E+02	9.699E+00	3.061E-04	2.905E-03	2.683E-03	8.086E-01
1.919E+02	9.293E+00	2.857E-04	2.893E-03	2.607E-03	8.098E-01
1.959E+02	8.912E+00	2.707E-04	2.919E-03	2.572E-03	8.108E-01
1.999E+02	8.555E+00	2.548E-04	2.923E-03	2.519E-03	8.119E-01
2.039E+02	8.218E+00	2.462E-04	3.000E-03	2.559E-03	8.128E-01
2.078E+02	7.901E+00	2.323E-04	3.005E-03	2.520E-03	8.138E-01
2.118E+02	7.603E+00	2.292E-04	3.142E-03	2.579E-03	8.147E-01
2.158E+02	7.321E+00	2.329E-04	3.379E-03	2.716E-03	8.156E-01
2.198E+02	7.054E+00	2.339E-04	3.589E-03	2.829E-03	8.165E-01
2.238E+02	6.802E+00	2.285E-04	3.705E-03	2.871E-03	8.174E-01
2.277E+02	6.563E+00	2.206E-04	3.774E-03	2.916E-03	8.183E-01
2.317E+02	6.337E+00	2.033E-04	3.667E-03	2.842E-03	8.191E-01
2.357E+02	6.122E+00	2.071E-04	3.935E-03	3.002E-03	8.199E-01
2.397E+02	5.918E+00	2.189E-04	4.376E-03	3.296E-03	8.208E-01
2.436E+02	5.724E+00	2.192E-04	4.609E-03	3.443E-03	8.217E-01
2.476E+02	5.539E+00	2.116E-04	4.674E-03	3.466E-03	8.225E-01
2.516E+02	5.363E+00	2.130E-04	4.939E-03	3.648E-03	8.234E-01
2.556E+02	5.196E+00	2.270E-04	5.521E-03	4.069E-03	8.243E-01
2.596E+02	5.036E+00	2.111E-04	5.381E-03	3.958E-03	8.251E-01

Table 8. (cont.)

2.635E+02	4.884E+00	2.208E-04	5.895E-03	4.335E-03	8.260E-01
2.675E+02	4.738E+00	2.165E-04	6.049E-03	4.451E-03	8.269E-01
2.715E+02	4.599E+00	2.355E-04	6.882E-03	5.067E-03	8.278E-01
2.755E+02	4.466E+00	2.348E-04	7.172E-03	5.288E-03	8.287E-01
2.794E+02	4.338E+00	2.265E-04	7.226E-03	5.347E-03	8.296E-01
2.834E+02	4.216E+00	2.353E-04	7.837E-03	5.818E-03	8.306E-01
2.874E+02	4.099E+00	2.494E-04	8.668E-03	6.456E-03	8.316E-01
2.914E+02	3.987E+00	2.532E-04	9.175E-03	6.856E-03	8.326E-01
2.954E+02	3.880E+00	2.615E-04	9.873E-03	7.407E-03	8.336E-01
2.993E+02	3.777E+00	2.719E-04	1.069E-02	8.050E-03	8.347E-01
3.033E+02	3.677E+00	2.881E-04	1.179E-02	8.912E-03	8.358E-01
3.073E+02	3.582E+00	2.875E-04	1.224E-02	9.282E-03	8.370E-01
3.113E+02	3.490E+00	2.923E-04	1.294E-02	9.852E-03	8.381E-01
3.152E+02	3.402E+00	3.115E-04	1.433E-02	1.098E-02	8.394E-01
3.192E+02	3.317E+00	3.237E-04	1.547E-02	1.192E-02	8.407E-01
3.232E+02	3.236E+00	3.403E-04	1.688E-02	1.309E-02	8.420E-01
3.272E+02	3.157E+00	3.610E-04	1.858E-02	1.449E-02	8.435E-01
3.312E+02	3.081E+00	3.930E-04	2.098E-02	1.645E-02	8.450E-01
3.351E+02	3.008E+00	3.859E-04	2.136E-02	1.685E-02	8.466E-01
3.391E+02	2.937E+00	4.149E-04	2.380E-02	1.895E-02	8.482E-01
3.431E+02	2.869E+00	4.054E-04	2.409E-02	1.937E-02	8.498E-01
3.471E+02	2.803E+00	4.022E-04	2.475E-02	2.010E-02	8.514E-01
3.510E+02	2.740E+00	4.174E-04	2.658E-02	2.185E-02	8.531E-01
3.550E+02	2.678E+00	4.529E-04	2.985E-02	2.502E-02	8.549E-01
3.590E+02	2.619E+00	4.282E-04	2.919E-02	2.495E-02	8.566E-01
3.630E+02	2.562E+00	4.186E-04	2.949E-02	2.571E-02	8.583E-01
3.670E+02	2.506E+00	4.241E-04	3.088E-02	2.748E-02	8.599E-01
3.709E+02	2.452E+00	4.462E-04	3.357E-02	3.075E-02	8.617E-01
3.749E+02	2.400E+00	4.206E-04	3.268E-02	3.085E-02	8.634E-01
3.789E+02	2.350E+00	4.294E-04	3.445E-02	3.320E-02	8.651E-01
3.829E+02	2.301E+00	4.201E-04	3.478E-02	3.426E-02	8.668E-01
3.868E+02	2.254E+00	4.224E-04	3.607E-02	3.696E-02	8.684E-01
3.908E+02	2.208E+00	4.146E-04	3.652E-02	3.910E-02	8.701E-01
3.948E+02	2.163E+00	4.091E-04	3.715E-02	4.220E-02	8.717E-01
3.988E+02	2.120E+00	3.804E-04	3.561E-02	4.319E-02	8.732E-01
4.028E+02	2.078E+00	3.616E-04	3.488E-02	4.491E-02	8.747E-01
4.067E+02	2.038E+00	3.367E-04	3.345E-02	4.543E-02	8.760E-01
4.107E+02	1.998E+00	3.393E-04	3.472E-02	4.988E-02	8.774E-01
4.147E+02	1.960E+00	3.215E-04	3.387E-02	5.213E-02	8.786E-01
4.187E+02	1.923E+00	3.161E-04	3.427E-02	5.678E-02	8.799E-01
4.227E+02	1.887E+00	2.847E-04	3.176E-02	5.683E-02	8.810E-01
4.266E+02	1.852E+00	2.703E-04	3.102E-02	6.020E-02	8.821E-01

Table 9. Tungsten emission spectrum: inner radius = 9.04 cm, detector bias = 2.2 MeV, flight path = 979.4 cm, view angle = 120°, and FWHM = 3.1 ns.

T (MID) NANOSEC	E (MID) MEV	COUNTS/ NANOSEC	COUNTS/ MEV	NEUTRONS/ MEV	SUM
1.865E+02	1.487E+01	8.763E-05	5.329E-04	5.235E-04	8.710E-05
1.875E+02	1.470E+01	1.856E-04	1.147E-03	1.126E-03	2.716E-04
1.885E+02	1.455E+01	4.987E-04	3.135E-03	3.072E-03	7.673E-04
1.895E+02	1.439E+01	1.300E-03	8.308E-03	8.133E-03	2.060E-03
1.905E+02	1.423E+01	3.482E-03	2.262E-02	2.211E-02	5.521E-03
1.915E+02	1.408E+01	1.152E-02	7.603E-02	7.425E-02	1.697E-02
1.925E+02	1.393E+01	4.044E-02	2.713E-01	2.641E-01	5.716E-02
1.935E+02	1.379E+01	1.080E-01	7.360E-01	7.127E-01	1.645E-01
1.945E+02	1.364E+01	1.854E-01	1.284E+00	1.237E+00	3.487E-01
1.955E+02	1.350E+01	1.995E-01	1.404E+00	1.347E+00	5.470E-01
1.965E+02	1.336E+01	1.341E-01	9.586E-01	9.163E-01	6.803E-01
1.975E+02	1.322E+01	6.479E-02	4.706E-01	4.484E-01	7.447E-01
1.984E+02	1.308E+01	2.861E-02	2.111E-01	2.004E-01	7.731E-01
1.994E+02	1.295E+01	1.379E-02	1.033E-01	9.767E-02	7.868E-01
2.004E+02	1.282E+01	7.300E-03	5.556E-02	5.213E-02	7.941E-01
2.014E+02	1.269E+01	4.233E-03	3.271E-02	3.049E-02	7.993E-01
2.024E+02	1.256E+01	2.649E-03	2.079E-02	1.924E-02	3.009E-01
2.034E+02	1.244E+01	1.870E-03	1.490E-02	1.370E-02	8.028E-01
2.044E+02	1.231E+01	1.406E-03	1.137E-02	1.039E-02	8.042E-01
2.054E+02	1.219E+01	1.107E-03	9.090E-03	8.250E-03	8.053E-01
2.064E+02	1.207E+01	9.111E-04	7.594E-03	6.850E-03	8.062E-01
2.074E+02	1.195E+01	7.732E-04	6.542E-03	5.864E-03	8.069E-01
2.084E+02	1.184E+01	6.559E-04	5.633E-03	5.019E-03	8.076E-01
2.094E+02	1.172E+01	6.572E-04	5.727E-03	5.074E-03	8.082E-01
2.104E+02	1.161E+01	4.974E-04	4.399E-03	3.874E-03	8.087E-01
2.114E+02	1.150E+01	5.180E-04	4.649E-03	4.071E-03	8.092E-01
2.144E+02	1.117E+01	4.673E-04	4.378E-03	3.773E-03	8.116E-01
2.193E+02	1.066E+01	4.088E-04	4.111E-03	3.455E-03	8.136E-01
2.243E+02	1.018E+01	3.753E-04	4.045E-03	3.323E-03	8.155E-01
2.293E+02	9.736E+00	3.436E-04	3.962E-03	3.175E-03	8.172E-01
2.342E+02	9.319E+00	3.039E-04	3.744E-03	2.925E-03	8.187E-01
2.392E+02	8.929E+00	2.758E-04	3.624E-03	2.770E-03	8.201E-01
2.442E+02	8.562E+00	2.765E-04	3.872E-03	2.912E-03	8.214E-01
2.491E+02	8.218E+00	2.549E-04	3.797E-03	2.813E-03	8.227E-01
2.541E+02	7.895E+00	2.430E-04	3.846E-03	2.811E-03	8.239E-01
2.591E+02	7.590E+00	2.482E-04	4.168E-03	3.008E-03	8.251E-01
2.641E+02	7.302E+00	2.219E-04	3.950E-03	2.817E-03	8.262E-01
2.690E+02	7.031E+00	2.332E-04	4.396E-03	3.102E-03	8.274E-01
2.740E+02	6.775E+00	2.155E-04	4.295E-03	3.016E-03	8.285E-01
2.790E+02	6.532E+00	2.340E-04	4.928E-03	3.449E-03	8.296E-01
2.839E+02	6.302E+00	2.134E-04	4.743E-03	3.309E-03	8.307E-01
2.889E+02	6.085E+00	2.000E-04	4.687E-03	3.261E-03	8.317E-01
2.939E+02	5.878E+00	2.227E-04	5.497E-03	3.820E-03	8.328E-01
2.988E+02	5.682E+00	2.160E-04	5.611E-03	3.900E-03	8.339E-01
3.038E+02	5.495E+00	2.034E-04	5.556E-03	3.863E-03	8.349E-01
3.088E+02	5.318E+00	2.046E-04	5.874E-03	4.102E-03	8.359E-01
3.138E+02	5.149E+00	2.057E-04	6.198E-03	4.348E-03	8.369E-01
3.187E+02	4.988E+00	1.959E-04	6.192E-03	4.367E-03	8.379E-01
3.237E+02	4.834E+00	2.124E-04	7.037E-03	5.014E-03	8.389E-01
3.287E+02	4.688E+00	2.168E-04	7.523E-03	5.417E-03	8.400E-01
3.336E+02	4.548E+00	2.075E-04	7.537E-03	5.483E-03	8.411E-01
3.386E+02	4.414E+00	1.938E-04	7.364E-03	5.433E-03	8.420E-01
3.436E+02	4.286E+00	2.129E-04	8.455E-03	6.338E-03	8.431E-01
3.485E+02	4.164E+00	1.918E-04	7.955E-03	6.057E-03	8.440E-01

Table 9. (cont.)

3.535E+02	4.046E+00	2.113E-04	9.152E-03	7.076E-03	8.451E-01
3.585E+02	3.934E+00	2.168E-04	9.793E-03	7.708E-03	8.462E-01
3.635E+02	3.826E+00	1.979E-04	9.324E-03	7.486E-03	8.471E-01
3.684E+02	3.723E+00	2.072E-04	1.017E-02	8.325E-03	8.482E-01
3.734E+02	3.624E+00	2.003E-04	1.024E-02	8.539E-03	8.492E-01
3.784E+02	3.528E+00	2.142E-04	1.140E-02	9.685E-03	8.502E-01
3.833E+02	3.437E+00	2.216E-04	1.227E-02	1.070E-02	8.513E-01
3.883E+02	3.349E+00	2.227E-04	1.282E-02	1.152E-02	8.524E-01
3.933E+02	3.264E+00	2.162E-04	1.294E-02	1.205E-02	8.535E-01
3.982E+02	3.183E+00	2.500E-04	1.553E-02	1.514E-02	8.548E-01
4.032E+02	3.104E+00	2.180E-04	1.407E-02	1.436E-02	8.558E-01
4.082E+02	3.029E+00	1.925E-04	1.289E-02	1.395E-02	8.568E-01
4.132E+02	2.956E+00	2.129E-04	1.479E-02	1.720E-02	8.579E-01
4.181E+02	2.885E+00	1.987E-04	1.431E-02	1.806E-02	8.588E-01
4.231E+02	2.818E+00	1.905E-04	1.421E-02	1.955E-02	8.598E-01
4.281E+02	2.752E+00	1.691E-04	1.307E-02	1.968E-02	8.606E-01
4.330E+02	2.689E+00	1.554E-04	1.244E-02	2.070E-02	8.614E-01
4.380E+02	2.628E+00	2.160E-04	1.790E-02	3.368E-02	8.625E-01
4.430E+02	2.569E+00	1.758E-04	1.507E-02	3.252E-02	8.633E-01
4.479E+02	2.512E+00	1.188E-04	1.054E-02	2.651E-02	8.639E-01
4.529E+02	2.457E+00	1.003E-04	9.192E-03	2.819E-02	8.644E-01
4.579E+02	2.404E+00	8.814E-05	8.353E-03	3.270E-02	8.649E-01

Table 10. Tungsten emission spectrum: inner radius = 7.72 cm, detector bias = 1.6 MeV, flight path = 801.4 cm, view angle = 26°, and FWHM = 4.1 ns.

T(MID) NANOSEC	E(MID) MEV	COUNTS/ NANOSEC	COUNTS/ MEV	NEUTRONS/ MEV	SUM
1.446E+02	1.662E+01	5.980E-05	2.512E-04	2.408E-04	5.947E-05
1.456E+02	1.639E+01	1.095E-04	4.699E-04	4.567E-04	1.683E-04
1.466E+02	1.616E+01	8.240E-04	3.614E-03	3.561E-03	9.878E-04
1.476E+02	1.593E+01	1.194E-02	5.349E-02	5.341E-02	1.286E-02
1.486E+02	1.571E+01	4.052E-02	1.854E-01	1.873E-01	5.316E-02
1.496E+02	1.550E+01	7.344E-02	3.431E-01	3.506E-01	1.262E-01
1.506E+02	1.529E+01	1.152E-01	5.492E-01	5.676E-01	2.407E-01
1.516E+02	1.508E+01	1.327E-01	6.459E-01	6.751E-01	3.727E-01
1.526E+02	1.488E+01	1.091E-01	5.422E-01	5.709E-01	4.812E-01
1.536E+02	1.468E+01	7.458E-02	3.782E-01	4.000E-01	5.554E-01
1.545E+02	1.449E+01	4.470E-02	2.313E-01	2.457E-01	5.998E-01
1.555E+02	1.430E+01	2.524E-02	1.332E-01	1.422E-01	6.249E-01
1.565E+02	1.411E+01	1.553E-02	8.364E-02	8.963E-02	6.404E-01
1.575E+02	1.393E+01	1.084E-02	5.953E-02	6.405E-02	6.511E-01
1.585E+02	1.375E+01	7.718E-03	4.323E-02	4.668E-02	6.588E-01
1.595E+02	1.357E+01	5.849E-03	3.341E-02	3.620E-02	6.646E-01
1.605E+02	1.340E+01	4.343E-03	2.529E-02	2.745E-02	6.689E-01
1.615E+02	1.323E+01	3.263E-03	1.937E-02	2.102E-02	6.722E-01
1.625E+02	1.307E+01	2.732E-03	1.653E-02	1.794E-02	6.749E-01
1.635E+02	1.290E+01	2.239E-03	1.381E-02	1.495E-02	6.771E-01
1.645E+02	1.274E+01	1.874E-03	1.178E-02	1.271E-02	6.790E-01
1.655E+02	1.259E+01	1.579E-03	1.011E-02	1.088E-02	6.806E-01
1.665E+02	1.243E+01	1.256E-03	8.192E-03	8.782E-03	6.818E-01
1.675E+02	1.228E+01	9.690E-04	6.439E-03	6.868E-03	6.828E-01
1.685E+02	1.213E+01	8.646E-04	5.852E-03	6.211E-03	6.836E-01
1.695E+02	1.199E+01	8.017E-04	5.526E-03	5.834E-03	6.844E-01
1.705E+02	1.184E+01	7.156E-04	5.023E-03	5.260E-03	6.851E-01
1.715E+02	1.170E+01	6.811E-04	4.868E-03	5.057E-03	6.858E-01
1.739E+02	1.136E+01	5.595E-04	4.180E-03	4.259E-03	6.881E-01
1.779E+02	1.085E+01	5.489E-04	4.398E-03	4.350E-03	6.902E-01
1.819E+02	1.037E+01	5.030E-04	4.315E-03	4.147E-03	6.922E-01
1.859E+02	9.921E+00	4.655E-04	4.269E-03	3.995E-03	6.941E-01
1.898E+02	9.502E+00	4.541E-04	4.446E-03	4.057E-03	6.959E-01
1.938E+02	9.108E+00	4.255E-04	4.440E-03	3.959E-03	6.976E-01
1.978E+02	8.739E+00	4.097E-04	4.552E-03	3.966E-03	6.992E-01
2.018E+02	8.391E+00	3.857E-04	4.555E-03	3.900E-03	7.008E-01
2.058E+02	8.065E+00	3.852E-04	4.830E-03	4.095E-03	7.023E-01
2.097E+02	7.757E+00	3.512E-04	4.670E-03	3.876E-03	7.037E-01
2.137E+02	7.466E+00	3.484E-04	4.908E-03	3.988E-03	7.051E-01
2.177E+02	7.191E+00	3.482E-04	5.189E-03	4.132E-03	7.065E-01
2.217E+02	6.932E+00	3.395E-04	5.349E-03	4.179E-03	7.078E-01
2.257E+02	6.686E+00	3.408E-04	5.670E-03	4.375E-03	7.092E-01
2.296E+02	6.453E+00	3.363E-04	5.901E-03	4.578E-03	7.105E-01
2.336E+02	6.233E+00	3.160E-04	5.843E-03	4.495E-03	7.118E-01
2.376E+02	6.023E+00	3.228E-04	6.286E-03	4.761E-03	7.130E-01
2.416E+02	5.824E+00	3.218E-04	6.592E-03	4.944E-03	7.143E-01
2.455E+02	5.634E+00	3.140E-04	6.759E-03	5.030E-03	7.156E-01
2.495E+02	5.454E+00	3.274E-04	7.402E-03	5.475E-03	7.169E-01
2.535E+02	5.282E+00	3.385E-04	8.032E-03	5.926E-03	7.182E-01
2.575E+02	5.119E+00	3.221E-04	8.012E-03	5.898E-03	7.195E-01
2.615E+02	4.962E+00	3.431E-04	8.943E-03	6.575E-03	7.209E-01
2.654E+02	4.813E+00	3.464E-04	9.453E-03	6.954E-03	7.222E-01
2.694E+02	4.671E+00	3.687E-04	1.053E-02	7.749E-03	7.237E-01
2.734E+02	4.535E+00	3.416E-04	1.020E-02	7.512E-03	7.251E-01

Table 10. (cont.)

2.774E+02	4.404E+00	3.598E-04	1.122E-02	8.290E-03	7.265E-01
2.813E+02	4.279E+00	3.646E-04	1.188E-02	8.802E-03	7.279E-01
2.853E+02	4.160E+00	3.575E-04	1.215E-02	9.037E-03	7.294E-01
2.893E+02	4.045E+00	3.821E-04	1.355E-02	1.010E-02	7.309E-01
2.933E+02	3.935E+00	3.933E-04	1.453E-02	1.088E-02	7.325E-01
2.973E+02	3.830E+00	4.120E-04	1.586E-02	1.192E-02	7.341E-01
3.012E+02	3.729E+00	4.429E-04	1.775E-02	1.339E-02	7.359E-01
3.052E+02	3.631E+00	4.447E-04	1.854E-02	1.404E-02	7.376E-01
3.092E+02	3.538E+00	4.554E-04	1.975E-02	1.501E-02	7.394E-01
3.132E+02	3.448E+00	4.804E-04	2.166E-02	1.654E-02	7.413E-01
3.171E+02	3.361E+00	4.949E-04	2.318E-02	1.781E-02	7.433E-01
3.211E+02	3.278E+00	4.967E-04	2.416E-02	1.867E-02	7.453E-01
3.251E+02	3.198E+00	5.283E-04	2.667E-02	2.074E-02	7.474E-01
3.291E+02	3.120E+00	5.853E-04	3.066E-02	2.397E-02	7.497E-01
3.331E+02	3.046E+00	5.881E-04	3.195E-02	2.511E-02	7.521E-01
3.370E+02	2.974E+00	6.180E-04	3.480E-02	2.755E-02	7.545E-01
3.410E+02	2.904E+00	5.955E-04	3.474E-02	2.779E-02	7.569E-01
3.450E+02	2.837E+00	6.150E-04	3.716E-02	3.002E-02	7.593E-01
3.490E+02	2.773E+00	6.223E-04	3.893E-02	3.177E-02	7.618E-01
3.529E+02	2.710E+00	6.576E-04	4.257E-02	3.530E-02	7.644E-01
3.569E+02	2.650E+00	6.991E-04	4.682E-02	3.962E-02	7.672E-01
3.609E+02	2.591E+00	6.636E-04	4.596E-02	3.966E-02	7.698E-01
3.649E+02	2.535E+00	6.862E-04	4.912E-02	4.323E-02	7.726E-01
3.689E+02	2.480E+00	6.963E-04	5.150E-02	4.642E-02	7.753E-01
3.728E+02	2.427E+00	6.976E-04	5.330E-02	4.956E-02	7.781E-01
3.768E+02	2.376E+00	6.669E-04	5.262E-02	5.021E-02	7.808E-01
3.808E+02	2.326E+00	6.837E-04	5.567E-02	5.416E-02	7.835E-01
3.848E+02	2.278E+00	6.837E-04	5.745E-02	5.756E-02	7.862E-01
3.887E+02	2.232E+00	6.644E-04	5.759E-02	6.022E-02	7.889E-01
3.927E+02	2.187E+00	6.535E-04	5.841E-02	6.419E-02	7.915E-01
3.967E+02	2.143E+00	6.659E-04	6.136E-02	7.190E-02	7.941E-01
4.007E+02	2.100E+00	6.550E-04	6.220E-02	7.777E-02	7.967E-01
4.047E+02	2.059E+00	6.054E-04	5.923E-02	7.821E-02	7.991E-01
4.086E+02	2.019E+00	5.838E-04	5.883E-02	8.198E-02	8.014E-01
4.126E+02	1.980E+00	5.539E-04	5.747E-02	8.524E-02	8.036E-01
4.166E+02	1.942E+00	5.521E-04	5.897E-02	9.398E-02	8.058E-01
4.206E+02	1.905E+00	5.372E-04	5.904E-02	1.014E-01	8.080E-01

Table 11. Tungsten emission spectrum: inner radius = 7.72 cm, detector bias = 2.2 MeV, flight path = 979.4 cm, view angle = 120°, and FWHM = 3.1 ns.

T(MID) NANOSEC	E(MID) MEV	COUNTS/ NANOSEC	COUNTS/ MEV	NEUTRONS/ MEV	SUM
1.852E+02	1.509E+01	1.890E-05	1.124E-04	1.104E-04	1.879E-05
1.862E+02	1.492E+01	5.859E-05	3.543E-04	3.482E-04	7.703E-05
1.872E+02	1.476E+01	1.493E-04	9.181E-04	9.012E-04	2.254E-04
1.882E+02	1.460E+01	4.101E-04	2.564E-03	2.514E-03	6.331E-04
1.892E+02	1.444E+01	1.019E-03	6.474E-03	6.340E-03	1.646E-03
1.902E+02	1.428E+01	2.680E-03	1.731E-02	1.693E-02	4.310E-03
1.912E+02	1.413E+01	6.785E-03	4.455E-02	4.353E-02	1.105E-02
1.922E+02	1.398E+01	2.147E-02	1.433E-01	1.397E-01	3.240E-02
1.932E+02	1.383E+01	7.390E-02	5.012E-01	4.862E-01	1.059E-01
1.941E+02	1.369E+01	1.549E-01	1.068E+00	1.030E+00	2.599E-01
1.951E+02	1.355E+01	1.685E-01	1.180E+00	1.133E+00	4.273E-01
1.961E+02	1.340E+01	1.031E-01	7.335E-01	7.020E-01	5.298E-01
1.971E+02	1.327E+01	5.197E-02	3.755E-01	3.582E-01	5.815E-01
1.981E+02	1.313E+01	2.792E-02	2.050E-01	1.948E-01	6.093E-01
1.991E+02	1.299E+01	1.746E-02	1.301E-01	1.232E-01	6.266E-01
2.001E+02	1.286E+01	1.196E-02	9.058E-02	8.520E-02	6.385E-01
2.011E+02	1.273E+01	8.390E-03	6.451E-02	6.025E-02	6.468E-01
2.021E+02	1.260E+01	5.954E-03	4.648E-02	4.312E-02	6.528E-01
2.031E+02	1.248E+01	4.385E-03	3.476E-02	3.203E-02	6.571E-01
2.041E+02	1.235E+01	3.049E-03	2.454E-02	2.246E-02	6.601E-01
2.051E+02	1.223E+01	2.366E-03	1.934E-02	1.759E-02	6.625E-01
2.061E+02	1.211E+01	1.746E-03	1.449E-02	1.309E-02	6.642E-01
2.071E+02	1.199E+01	1.472E-03	1.240E-02	1.113E-02	6.657E-01
2.081E+02	1.187E+01	1.223E-03	1.045E-02	9.330E-03	6.669E-01
2.091E+02	1.176E+01	9.601E-04	8.327E-03	7.390E-03	6.679E-01
2.100E+02	1.164E+01	8.789E-04	7.735E-03	6.825E-03	6.687E-01
2.110E+02	1.153E+01	7.768E-04	6.937E-03	6.087E-03	6.695E-01
2.120E+02	1.142E+01	7.069E-04	6.405E-03	5.589E-03	6.702E-01
2.130E+02	1.131E+01	6.747E-04	6.204E-03	5.383E-03	6.709E-01
2.140E+02	1.121E+01	5.708E-04	5.324E-03	4.595E-03	6.715E-01
2.170E+02	1.089E+01	5.534E-04	5.386E-03	4.579E-03	6.742E-01
2.220E+02	1.040E+01	4.937E-04	5.153E-03	4.278E-03	6.767E-01
2.269E+02	9.940E+00	4.740E-04	5.298E-03	4.297E-03	6.790E-01
2.319E+02	9.510E+00	4.400E-04	5.257E-03	4.155E-03	6.812E-01
2.369E+02	9.107E+00	3.980E-04	5.077E-03	3.917E-03	6.832E-01
2.419E+02	8.730E+00	4.011E-04	5.453E-03	4.131E-03	6.852E-01
2.468E+02	8.376E+00	3.565E-04	5.159E-03	3.849E-03	6.869E-01
2.518E+02	8.043E+00	3.432E-04	5.281E-03	3.884E-03	6.886E-01
2.568E+02	7.729E+00	3.383E-04	5.527E-03	4.012E-03	6.903E-01
2.617E+02	7.434E+00	3.119E-04	5.403E-03	3.874E-03	6.919E-01
2.667E+02	7.155E+00	2.918E-04	5.356E-03	3.797E-03	6.933E-01
2.717E+02	6.892E+00	2.880E-04	5.594E-03	3.934E-03	6.948E-01
2.766E+02	6.643E+00	2.937E-04	6.029E-03	4.226E-03	6.962E-01
2.816E+02	6.408E+00	2.941E-04	6.375E-03	4.454E-03	6.977E-01
2.866E+02	6.185E+00	2.846E-04	6.508E-03	4.534E-03	6.991E-01
2.916E+02	5.973E+00	2.926E-04	7.050E-03	4.900E-03	7.006E-01
2.965E+02	5.772E+00	2.899E-04	7.356E-03	5.112E-03	7.020E-01
3.015E+02	5.581E+00	2.578E-04	6.881E-03	4.782E-03	7.033E-01
3.065E+02	5.399E+00	2.616E-04	7.338E-03	5.113E-03	7.046E-01
3.114E+02	5.226E+00	2.631E-04	7.751E-03	5.426E-03	7.059E-01
3.164E+02	5.062E+00	2.616E-04	8.087E-03	5.687E-03	7.072E-01
3.214E+02	4.905E+00	2.567E-04	8.321E-03	5.900E-03	7.085E-01
3.263E+02	4.755E+00	2.665E-04	9.052E-03	6.487E-03	7.098E-01
3.313E+02	4.612E+00	2.948E-04	1.049E-02	7.592E-03	7.112E-01

Table 11. (cont.)

3.363E+02	4.475E+00	2.695E-04	1.003E-02	7.345E-03	7.126E-01
3.413E+02	4.345E+00	2.642E-04	1.028E-02	7.650E-03	7.139E-01
3.462E+02	4.220E+00	2.695E-04	1.096E-02	8.283E-03	7.152E-01
3.512E+02	4.100E+00	2.669E-04	1.133E-02	8.698E-03	7.166E-01
3.562E+02	3.986E+00	2.676E-04	1.186E-02	9.249E-03	7.179E-01
3.611E+02	3.876E+00	2.839E-04	1.312E-02	1.043E-02	7.193E-01
3.661E+02	3.771E+00	2.907E-04	1.400E-02	1.136E-02	7.208E-01
3.711E+02	3.669E+00	2.733E-04	1.371E-02	1.134E-02	7.221E-01
3.760E+02	3.572E+00	2.680E-04	1.400E-02	1.179E-02	7.234E-01
3.810E+02	3.479E+00	2.797E-04	1.520E-02	1.308E-02	7.248E-01
3.860E+02	3.389E+00	2.782E-04	1.573E-02	1.394E-02	7.262E-01
3.910E+02	3.303E+00	2.975E-04	1.748E-02	1.599E-02	7.277E-01
3.959E+02	3.220E+00	2.998E-04	1.830E-02	1.746E-02	7.292E-01
4.009E+02	3.140E+00	3.084E-04	1.956E-02	1.952E-02	7.307E-01
4.059E+02	3.063E+00	2.642E-04	1.739E-02	1.829E-02	7.320E-01
4.108E+02	2.989E+00	2.737E-04	1.869E-02	2.098E-02	7.334E-01
4.158E+02	2.918E+00	2.536E-04	1.796E-02	2.182E-02	7.346E-01
4.208E+02	2.849E+00	2.393E-04	1.756E-02	2.320E-02	7.358E-01
4.257E+02	2.782E+00	2.483E-04	1.889E-02	2.725E-02	7.371E-01
4.307E+02	2.718E+00	2.136E-04	1.682E-02	2.665E-02	7.381E-01
4.357E+02	2.656E+00	2.151E-04	1.754E-02	3.111E-02	7.392E-01
4.407E+02	2.596E+00	2.752E-04	2.322E-02	4.694E-02	7.406E-01
4.456E+02	2.538E+00	1.743E-04	1.521E-02	3.554E-02	7.414E-01
4.506E+02	2.482E+00	1.520E-04	1.372E-02	3.809E-02	7.422E-01
4.556E+02	2.428E+00	1.383E-04	1.291E-02	4.490E-02	7.429E-01
4.585E+02	2.397E+00	1.040E-04	9.886E-03	4.003E-02	7.430E-01

Table 12. Tungsten emission spectrum: inner radius = 5.08 cm, detector bias = 1.6 MeV, flight path = 801.4 cm, view angle = 26°, and FWHM = 4.1 ns.

T (MID) NANOSEC	E (MID) MEV	COUNTS/ NANOSEC	COUNTS/ MEV	NEUTRONS/ MEV	SUM
1.451E+02	1.651E+01	5.881E-05	2.497E-04	2.410E-04	5.848E-05
1.461E+02	1.627E+01	3.464E-04	1.503E-03	1.471E-03	4.029E-04
1.471E+02	1.605E+01	3.321E-03	1.472E-02	1.460E-02	3.705E-03
1.481E+02	1.583E+01	1.603E-02	7.255E-02	7.286E-02	1.964E-02
1.491E+02	1.561E+01	3.627E-02	1.676E-01	1.703E-01	5.571E-02
1.501E+02	1.539E+01	6.054E-02	2.857E-01	2.936E-01	1.159E-01
1.511E+02	1.519E+01	8.199E-02	3.950E-01	4.105E-01	1.974E-01
1.521E+02	1.498E+01	8.185E-02	4.025E-01	4.226E-01	2.788E-01
1.530E+02	1.478E+01	6.253E-02	3.138E-01	3.312E-01	3.410E-01
1.540E+02	1.459E+01	4.122E-02	2.111E-01	2.238E-01	3.820E-01
1.550E+02	1.439E+01	2.423E-02	1.266E-01	1.348E-01	4.061E-01
1.560E+02	1.421E+01	1.384E-02	7.376E-02	7.887E-02	4.199E-01
1.570E+02	1.402E+01	8.467E-03	4.604E-02	4.944E-02	4.283E-01
1.580E+02	1.384E+01	5.626E-03	3.120E-02	3.363E-02	4.339E-01
1.590E+02	1.366E+01	3.906E-03	2.209E-02	2.389E-02	4.378E-01
1.600E+02	1.349E+01	2.925E-03	1.686E-02	1.830E-02	4.407E-01
1.610E+02	1.332E+01	2.160E-03	1.270E-02	1.378E-02	4.428E-01
1.620E+02	1.315E+01	1.763E-03	1.057E-02	1.147E-02	4.446E-01
1.630E+02	1.298E+01	1.490E-03	9.102E-03	9.873E-03	4.461E-01
1.640E+02	1.282E+01	1.274E-03	7.927E-03	8.572E-03	4.473E-01
1.650E+02	1.267E+01	1.079E-03	6.842E-03	7.375E-03	4.484E-01
1.660E+02	1.251E+01	9.271E-04	5.991E-03	6.437E-03	4.493E-01
1.670E+02	1.236E+01	8.316E-04	5.474E-03	5.854E-03	4.501E-01
1.680E+02	1.221E+01	7.222E-04	4.843E-03	5.153E-03	4.509E-01
1.690E+02	1.206E+01	7.121E-04	4.863E-03	5.150E-03	4.516E-01
1.699E+02	1.192E+01	6.570E-04	4.569E-03	4.805E-03	4.522E-01
1.729E+02	1.150E+01	5.923E-04	4.346E-03	4.463E-03	4.552E-01
1.779E+02	1.085E+01	5.971E-04	4.782E-03	4.731E-03	4.581E-01
1.829E+02	1.026E+01	5.634E-04	4.914E-03	4.692E-03	4.609E-01
1.878E+02	9.709E+00	5.249E-04	4.973E-03	4.595E-03	4.635E-01
1.928E+02	9.205E+00	4.710E-04	4.837E-03	4.339E-03	4.659E-01
1.978E+02	8.740E+00	4.488E-04	4.984E-03	4.343E-03	4.681E-01
2.028E+02	8.309E+00	4.466E-04	5.353E-03	4.575E-03	4.703E-01
2.077E+02	7.909E+00	4.232E-04	5.464E-03	4.587E-03	4.724E-01
2.127E+02	7.538E+00	3.993E-04	5.544E-03	4.529E-03	4.744E-01
2.177E+02	7.192E+00	4.043E-04	6.024E-03	4.797E-03	4.764E-01
2.227E+02	6.870E+00	3.806E-04	6.077E-03	4.729E-03	4.783E-01
2.276E+02	6.569E+00	3.709E-04	6.335E-03	4.896E-03	4.802E-01
2.326E+02	6.288E+00	3.699E-04	6.751E-03	5.215E-03	4.820E-01
2.376E+02	6.024E+00	3.516E-04	6.843E-03	5.185E-03	4.838E-01
2.425E+02	5.776E+00	3.554E-04	7.370E-03	5.517E-03	4.855E-01
2.475E+02	5.544E+00	3.584E-04	7.905E-03	5.862E-03	4.873E-01
2.525E+02	5.325E+00	3.549E-04	8.317E-03	6.140E-03	4.891E-01
2.575E+02	5.119E+00	3.694E-04	9.186E-03	6.763E-03	4.909E-01
2.624E+02	4.925E+00	3.624E-04	9.553E-03	7.024E-03	4.927E-01
2.674E+02	4.742E+00	3.832E-04	1.069E-02	7.869E-03	4.946E-01
2.724E+02	4.569E+00	3.786E-04	1.117E-02	8.229E-03	4.965E-01
2.773E+02	4.405E+00	4.025E-04	1.255E-02	9.269E-03	4.985E-01
2.823E+02	4.250E+00	4.096E-04	1.348E-02	1.000E-02	5.005E-01
2.873E+02	4.103E+00	4.117E-04	1.429E-02	1.064E-02	5.026E-01
2.923E+02	3.963E+00	4.398E-04	1.608E-02	1.202E-02	5.048E-01
2.972E+02	3.831E+00	4.787E-04	1.842E-02	1.384E-02	5.072E-01
3.022E+02	3.705E+00	4.679E-04	1.893E-02	1.430E-02	5.095E-01
3.072E+02	3.585E+00	4.857E-04	2.065E-02	1.566E-02	5.119E-01

Table 12. (cont.)

3.121E+02	3.471E+00	5.125E-04	2.288E-02	1.745E-02	5.144E-01
3.171E+02	3.362E+00	5.552E-04	2.600E-02	1.998E-02	5.172E-01
3.221E+02	3.258E+00	5.629E-04	2.763E-02	2.139E-02	5.200E-01
3.271E+02	3.159E+00	6.008E-04	3.089E-02	2.408E-02	5.230E-01
3.320E+02	3.065E+00	6.230E-04	3.353E-02	2.632E-02	5.261E-01
3.370E+02	2.974E+00	6.550E-04	3.687E-02	2.919E-02	5.293E-01
3.420E+02	2.888E+00	6.765E-04	3.980E-02	3.192E-02	5.327E-01
3.470E+02	2.805E+00	6.689E-04	4.112E-02	3.338E-02	5.360E-01
3.519E+02	2.726E+00	7.081E-04	4.544E-02	3.750E-02	5.396E-01
3.569E+02	2.650E+00	7.151E-04	4.787E-02	4.050E-02	5.431E-01
3.619E+02	2.577E+00	7.406E-04	5.170E-02	4.483E-02	5.468E-01
3.668E+02	2.508E+00	7.219E-04	5.251E-02	4.670E-02	5.504E-01
3.718E+02	2.441E+00	7.244E-04	5.489E-02	5.063E-02	5.540E-01
3.768E+02	2.376E+00	7.265E-04	5.729E-02	5.465E-02	5.576E-01
3.818E+02	2.315E+00	7.450E-04	6.113E-02	5.979E-02	5.613E-01
3.867E+02	2.255E+00	7.345E-04	6.267E-02	6.412E-02	5.649E-01
3.917E+02	2.198E+00	7.050E-04	6.251E-02	6.773E-02	5.685E-01
3.967E+02	2.143E+00	7.088E-04	6.530E-02	7.645E-02	5.720E-01
4.016E+02	2.090E+00	6.829E-04	6.532E-02	8.278E-02	5.754E-01
4.066E+02	2.039E+00	6.370E-04	6.323E-02	8.571E-02	5.785E-01
4.116E+02	1.990E+00	6.230E-04	6.415E-02	9.350E-02	5.816E-01
4.166E+02	1.942E+00	5.866E-04	6.263E-02	9.974E-02	5.846E-01
4.215E+02	1.897E+00	5.359E-04	5.930E-02	1.038E-01	5.872E-01
4.265E+02	1.853E+00	5.070E-04	5.813E-02	1.125E-01	5.897E-01
4.295E+02	1.827E+00	4.631E-04	5.418E-02	1.115E-01	5.902E-01

Table 13. Tungsten emission spectrum: inner radius = 5.08 cm, detector bias = 2.2 MeV, flight path = 979.4 cm, view angle = 120°, and FWHM = 3.1 ns.

T (MID) NANOSEC	E (MID) MEV	COUNTS/ NANOSEC	COUNTS/ MEV	NEUTRONS/ MEV	SUM
1.867E+02	1.484E+01	1.284E-04	7.834E-04	7.694E-04	1.277E-04
1.877E+02	1.468E+01	3.528E-04	2.188E-03	2.146E-03	4.783E-04
1.887E+02	1.452E+01	8.254E-04	5.204E-03	5.099E-03	1.299E-03
1.897E+02	1.436E+01	2.112E-03	1.353E-02	1.324E-02	3.398E-03
1.907E+02	1.421E+01	5.338E-03	3.477E-02	3.399E-02	8.704E-03
1.917E+02	1.405E+01	1.302E-02	8.617E-02	8.414E-02	2.164E-02
1.927E+02	1.391E+01	3.537E-02	2.380E-01	2.314E-01	5.680E-02
1.937E+02	1.376E+01	7.768E-02	5.311E-01	5.138E-01	1.340E-01
1.947E+02	1.362E+01	1.047E-01	7.274E-01	7.000E-01	2.381E-01
1.956E+02	1.347E+01	8.625E-02	6.088E-01	5.836E-01	3.238E-01
1.966E+02	1.333E+01	5.070E-02	3.636E-01	3.473E-01	3.742E-01
1.976E+02	1.320E+01	2.677E-02	1.950E-01	1.857E-01	4.008E-01
1.986E+02	1.306E+01	1.534E-02	1.135E-01	1.077E-01	4.161E-01
1.996E+02	1.293E+01	9.114E-03	6.849E-02	6.464E-02	4.251E-01
2.006E+02	1.280E+01	5.668E-03	4.326E-02	4.054E-02	4.308E-01
2.016E+02	1.267E+01	3.500E-03	2.713E-02	2.525E-02	4.342E-01
2.026E+02	1.254E+01	2.271E-03	1.787E-02	1.652E-02	4.365E-01
2.036E+02	1.241E+01	1.680E-03	1.342E-02	1.233E-02	4.382E-01
2.046E+02	1.229E+01	1.216E-03	9.862E-03	8.998E-03	4.394E-01
2.056E+02	1.217E+01	1.122E-03	9.236E-03	8.373E-03	4.405E-01
2.066E+02	1.205E+01	9.162E-04	7.658E-03	6.899E-03	4.414E-01
2.076E+02	1.193E+01	7.706E-04	6.538E-03	5.854E-03	4.422E-01
2.086E+02	1.181E+01	6.285E-04	5.411E-03	4.817E-03	4.428E-01
2.115E+02	1.148E+01	6.069E-04	5.459E-03	4.777E-03	4.458E-01
2.165E+02	1.094E+01	5.631E-04	5.442E-03	4.638E-03	4.486E-01
2.215E+02	1.045E+01	5.189E-04	5.380E-03	4.476E-03	4.512E-01
2.265E+02	9.984E+00	5.340E-04	5.929E-03	4.821E-03	4.538E-01
2.314E+02	9.551E+00	4.685E-04	5.562E-03	4.407E-03	4.562E-01
2.364E+02	9.146E+00	4.583E-04	5.808E-03	4.492E-03	4.585E-01
2.414E+02	8.766E+00	4.377E-04	5.915E-03	4.488E-03	4.606E-01
2.463E+02	8.410E+00	4.268E-04	6.139E-03	4.587E-03	4.628E-01
2.513E+02	8.075E+00	3.816E-04	5.836E-03	4.298E-03	4.646E-01
2.563E+02	7.759E+00	3.935E-04	6.392E-03	4.646E-03	4.666E-01
2.612E+02	7.462E+00	3.641E-04	6.272E-03	4.503E-03	4.684E-01
2.662E+02	7.182E+00	3.367E-04	6.145E-03	4.361E-03	4.701E-01
2.712E+02	6.917E+00	3.418E-04	6.602E-03	4.646E-03	4.718E-01
2.762E+02	6.637E+00	3.435E-04	7.014E-03	4.918E-03	4.735E-01
2.811E+02	6.430E+00	3.285E-04	7.082E-03	4.950E-03	4.751E-01
2.861E+02	6.206E+00	3.196E-04	7.269E-03	5.065E-03	4.767E-01
2.911E+02	5.993E+00	2.976E-04	7.136E-03	4.960E-03	4.782E-01
2.960E+02	5.791E+00	3.045E-04	7.687E-03	5.342E-03	4.797E-01
3.010E+02	5.599E+00	3.045E-04	8.087E-03	5.620E-03	4.812E-01
3.060E+02	5.417E+00	3.072E-04	8.577E-03	5.974E-03	4.827E-01
3.109E+02	5.243E+00	3.024E-04	8.868E-03	6.205E-03	4.843E-01
3.159E+02	5.078E+00	3.052E-04	9.391E-03	6.600E-03	4.858E-01
3.209E+02	4.920E+00	3.083E-04	9.947E-03	7.045E-03	4.873E-01
3.259E+02	4.769E+00	3.011E-04	1.018E-02	7.288E-03	4.888E-01
3.308E+02	4.626E+00	3.189E-04	1.129E-02	8.166E-03	4.904E-01
3.358E+02	4.489E+00	3.199E-04	1.185E-02	8.668E-03	4.920E-01
3.408E+02	4.357E+00	3.302E-04	1.279E-02	9.503E-03	4.936E-01
3.457E+02	4.232E+00	3.052E-04	1.235E-02	9.325E-03	4.951E-01
3.507E+02	4.112E+00	2.983E-04	1.261E-02	9.667E-03	4.966E-01
3.557E+02	3.997E+00	3.189E-04	1.407E-02	1.096E-02	4.982E-01
3.606E+02	3.886E+00	3.261E-04	1.500E-02	1.191E-02	4.998E-01

Table 13. (cont.)

3.656E+02	3.781E+00	3.261E-04	1.564E-02	1.266E-02	5.014E-01
3.706E+02	3.679E+00	3.144E-04	1.571E-02	1.297E-02	5.030E-01
3.756E+02	3.582E+00	3.072E-04	1.598E-02	1.344E-02	5.045E-01
3.805E+02	3.488E+00	3.360E-04	1.819E-02	1.562E-02	5.062E-01
3.855E+02	3.398E+00	3.196E-04	1.800E-02	1.590E-02	5.078E-01
3.905E+02	3.311E+00	3.367E-04	1.971E-02	1.796E-02	5.095E-01
3.954E+02	3.228E+00	3.538E-04	2.152E-02	2.045E-02	5.112E-01
4.004E+02	3.148E+00	3.319E-04	2.097E-02	2.083E-02	5.129E-01
4.054E+02	3.071E+00	3.285E-04	2.154E-02	2.252E-02	5.145E-01
4.103E+02	2.996E+00	3.223E-04	2.193E-02	2.444E-02	5.161E-01
4.153E+02	2.925E+00	3.216E-04	2.269E-02	2.735E-02	5.177E-01
4.203E+02	2.855E+00	2.754E-04	2.014E-02	2.638E-02	5.191E-01
4.253E+02	2.789E+00	2.788E-04	2.113E-02	3.021E-02	5.205E-01
4.302E+02	2.724E+00	2.606E-04	2.046E-02	3.210E-02	5.217E-01
4.352E+02	2.662E+00	2.439E-04	1.982E-02	3.473E-02	5.230E-01
4.402E+02	2.602E+00	2.583E-04	2.172E-02	4.332E-02	5.242E-01
4.451E+02	2.544E+00	2.161E-04	1.881E-02	4.328E-02	5.253E-01
4.501E+02	2.488E+00	1.908E-04	1.717E-02	4.676E-02	5.263E-01

Table 14. Tungsten emission spectrum: inner radius = 0.475 cm, detector bias = 1.6 MeV, flight path = 301.4 cm, view angle = 26°, and FWHM = 4.1 ns.

T(MID) NANOSEC	E(MID) MEV	COUNTS/ NANOSEC	COUNTS/ MEV	NEUTRONS/ MEV	SUM
1.450E+02	1.653E+01	8.107E-05	3.435E-04	3.310E-04	8.061E-05
1.460E+02	1.630E+01	2.745E-04	1.188E-03	1.161E-03	3.536E-04
1.470E+02	1.607E+01	1.725E-03	7.630E-03	7.559E-03	2.069E-03
1.480E+02	1.585E+01	7.362E-03	3.325E-02	3.335E-02	9.390E-03
1.490E+02	1.563E+01	1.615E-02	7.449E-02	7.559E-02	2.545E-02
1.500E+02	1.542E+01	2.772E-02	1.305E-01	1.340E-01	5.301E-02
1.510E+02	1.521E+01	3.872E-02	1.862E-01	1.933E-01	9.152E-02
1.520E+02	1.500E+01	4.006E-02	1.966E-01	2.062E-01	1.313E-01
1.529E+02	1.480E+01	3.257E-02	1.631E-01	1.721E-01	1.637E-01
1.539E+02	1.461E+01	2.237E-02	1.144E-01	1.212E-01	1.860E-01
1.549E+02	1.441E+01	1.351E-02	7.046E-02	7.498E-02	1.994E-01
1.559E+02	1.422E+01	7.928E-03	4.218E-02	4.508E-02	2.073E-01
1.569E+02	1.404E+01	5.154E-03	2.797E-02	3.003E-02	2.124E-01
1.579E+02	1.386E+01	3.334E-03	1.845E-02	1.988E-02	2.157E-01
1.589E+02	1.368E+01	2.461E-03	1.389E-02	1.502E-02	2.182E-01
1.599E+02	1.350E+01	1.947E-03	1.120E-02	1.215E-02	2.201E-01
1.609E+02	1.333E+01	1.529E-03	8.972E-03	9.737E-03	2.216E-01
1.619E+02	1.317E+01	1.253E-03	7.493E-03	8.132E-03	2.229E-01
1.629E+02	1.300E+01	1.012E-03	6.166E-03	6.689E-03	2.239E-01
1.639E+02	1.284E+01	8.669E-04	5.385E-03	5.826E-03	2.248E-01
1.649E+02	1.268E+01	7.702E-04	4.875E-03	5.257E-03	2.255E-01
1.659E+02	1.253E+01	6.734E-04	4.343E-03	4.668E-03	2.262E-01
1.669E+02	1.237E+01	6.403E-04	4.207E-03	4.501E-03	2.268E-01
1.679E+02	1.222E+01	5.675E-04	3.798E-03	4.043E-03	2.274E-01
1.689E+02	1.208E+01	5.297E-04	3.611E-03	3.826E-03	2.279E-01
1.698E+02	1.193E+01	5.316E-04	3.690E-03	3.884E-03	2.285E-01
1.728E+02	1.151E+01	4.923E-04	3.605E-03	3.706E-03	2.309E-01
1.778E+02	1.086E+01	5.054E-04	4.041E-03	4.001E-03	2.334E-01
1.828E+02	1.027E+01	4.816E-04	4.194E-03	4.006E-03	2.358E-01
1.877E+02	9.720E+00	4.750E-04	4.493E-03	4.154E-03	2.382E-01
1.927E+02	9.215E+00	4.298E-04	4.407E-03	3.955E-03	2.403E-01
1.977E+02	8.749E+00	4.059E-04	4.501E-03	3.924E-03	2.423E-01
2.027E+02	8.317E+00	3.792E-04	4.538E-03	3.879E-03	2.442E-01
2.076E+02	7.917E+00	3.751E-04	4.836E-03	4.062E-03	2.461E-01
2.126E+02	7.545E+00	3.526E-04	4.889E-03	3.996E-03	2.478E-01
2.176E+02	7.199E+00	3.490E-04	5.192E-03	4.137E-03	2.496E-01
2.226E+02	6.876E+00	3.339E-04	5.323E-03	4.144E-03	2.512E-01
2.275E+02	6.575E+00	3.169E-04	5.406E-03	4.177E-03	2.528E-01
2.325E+02	6.293E+00	3.129E-04	5.701E-03	4.406E-03	2.544E-01
2.375E+02	6.029E+00	3.094E-04	6.014E-03	4.558E-03	2.559E-01
2.424E+02	5.781E+00	3.154E-04	6.532E-03	4.891E-03	2.575E-01
2.474E+02	5.548E+00	3.049E-04	6.718E-03	4.983E-03	2.590E-01
2.524E+02	5.330E+00	3.116E-04	7.293E-03	5.385E-03	2.605E-01
2.574E+02	5.123E+00	3.294E-04	8.183E-03	6.025E-03	2.622E-01
2.623E+02	4.929E+00	3.261E-04	8.587E-03	6.313E-03	2.638E-01
2.673E+02	4.746E+00	3.442E-04	9.595E-03	7.060E-03	2.655E-01
2.723E+02	4.572E+00	3.359E-04	9.903E-03	7.293E-03	2.672E-01
2.772E+02	4.408E+00	3.569E-04	1.112E-02	8.210E-03	2.689E-01
2.822E+02	4.253E+00	3.550E-04	1.167E-02	8.658E-03	2.707E-01
2.872E+02	4.106E+00	3.526E-04	1.223E-02	9.104E-03	2.725E-01
2.922E+02	3.966E+00	3.799E-04	1.388E-02	1.038E-02	2.743E-01
2.971E+02	3.833E+00	4.122E-04	1.584E-02	1.191E-02	2.764E-01
3.021E+02	3.707E+00	4.166E-04	1.684E-02	1.271E-02	2.785E-01
3.071E+02	3.587E+00	4.434E-04	1.885E-02	1.430E-02	2.807E-01

Table 14. (cont.)

3.120E+02	3.473E+00	4.472E-04	1.994E-02	1.520E-02	2.829E-01
3.170E+02	3.364E+00	4.700E-04	2.199E-02	1.689E-02	2.852E-01
3.220E+02	3.260E+00	4.951E-04	2.428E-02	1.879E-02	2.877E-01
3.270E+02	3.161E+00	5.301E-04	2.723E-02	2.123E-02	2.903E-01
3.319E+02	3.066E+00	5.542E-04	2.980E-02	2.339E-02	2.931E-01
3.369E+02	2.976E+00	5.787E-04	3.255E-02	2.577E-02	2.960E-01
3.419E+02	2.890E+00	5.640E-04	3.316E-02	2.658E-02	2.988E-01
3.469E+02	2.807E+00	5.861E-04	3.599E-02	2.922E-02	3.017E-01
3.518E+02	2.728E+00	6.287E-04	4.031E-02	3.325E-02	3.048E-01
3.568E+02	2.652E+00	5.314E-04	4.224E-02	3.571E-02	3.079E-01
3.618E+02	2.579E+00	6.414E-04	4.474E-02	3.877E-02	3.111E-01
3.667E+02	2.509E+00	6.539E-04	4.753E-02	4.225E-02	3.144E-01
3.717E+02	2.442E+00	6.484E-04	4.908E-02	4.524E-02	3.176E-01
3.767E+02	2.378E+00	6.740E-04	5.311E-02	5.064E-02	3.210E-01
3.817E+02	2.316E+00	6.716E-04	5.506E-02	5.382E-02	3.243E-01
3.866E+02	2.256E+00	6.603E-04	5.630E-02	5.754E-02	3.276E-01
3.916E+02	2.199E+00	6.532E-04	5.788E-02	6.262E-02	3.308E-01
3.966E+02	2.144E+00	6.513E-04	5.995E-02	7.008E-02	3.341E-01
4.015E+02	2.091E+00	6.497E-04	6.209E-02	7.858E-02	3.373E-01
4.065E+02	2.040E+00	6.215E-04	6.165E-02	8.345E-02	3.404E-01
4.115E+02	1.991E+00	6.100E-04	6.277E-02	9.134E-02	3.434E-01
4.165E+02	1.943E+00	5.912E-04	6.308E-02	1.003E-01	3.464E-01
4.214E+02	1.898E+00	5.491E-04	6.072E-02	1.061E-01	3.491E-01
4.264E+02	1.853E+00	5.152E-04	5.902E-02	1.140E-01	3.517E-01
4.299E+02	1.823E+00	5.131E-04	6.015E-02	1.245E-01	3.527E-01

Table 15. Tungsten emission spectrum: inner radius = 0.475 cm, detector bias = 2.2 MeV, flight path = 979.4 cm, view angle = 120°, and FWHM = 3.1 ns.

T(MID) NANOSEC	E(MID) MEV	COUNTS/ NANOSEC	COUNTS/ MEV	NEUTRONS/ MEV	SUM
1.867E+02	1.484E+01	1.943E-04	1.185E-03	1.164E-03	1.932E-04
1.877E+02	1.468E+01	4.077E-04	2.528E-03	2.480E-03	5.986E-04
1.887E+02	1.452E+01	1.048E-03	6.607E-03	6.473E-03	1.641E-03
1.897E+02	1.436E+01	2.344E-03	1.502E-02	1.470E-02	3.971E-03
1.907E+02	1.421E+01	5.149E-03	3.354E-02	3.279E-02	9.091E-03
1.917E+02	1.405E+01	1.084E-02	7.179E-02	7.010E-02	1.987E-02
1.927E+02	1.391E+01	2.449E-02	1.648E-01	1.603E-01	4.422E-02
1.937E+02	1.376E+01	4.616E-02	3.156E-01	3.053E-01	9.012E-02
1.947E+02	1.361E+01	6.052E-02	4.205E-01	4.046E-01	1.503E-01
1.956E+02	1.347E+01	5.063E-02	3.574E-01	3.426E-01	2.006E-01
1.966E+02	1.333E+01	3.080E-02	2.209E-01	2.110E-01	2.313E-01
1.976E+02	1.320E+01	1.654E-02	1.205E-01	1.147E-01	2.477E-01
1.986E+02	1.306E+01	9.287E-03	6.872E-02	6.521E-02	2.569E-01
1.996E+02	1.293E+01	5.496E-03	4.130E-02	3.899E-02	2.624E-01
2.006E+02	1.280E+01	3.354E-03	2.559E-02	2.399E-02	2.657E-01
2.016E+02	1.267E+01	1.988E-03	1.541E-02	1.434E-02	2.677E-01
2.026E+02	1.254E+01	1.443E-03	1.136E-02	1.050E-02	2.692E-01
2.036E+02	1.241E+01	1.015E-03	8.109E-03	7.447E-03	2.702E-01
2.046E+02	1.229E+01	9.022E-04	7.318E-03	6.677E-03	2.711E-01
2.056E+02	1.217E+01	7.738E-04	6.372E-03	5.776E-03	2.718E-01
2.086E+02	1.181E+01	5.465E-04	4.705E-03	4.189E-03	2.745E-01
2.135E+02	1.126E+01	4.750E-04	4.399E-03	3.808E-03	2.769E-01
2.185E+02	1.074E+01	4.618E-04	4.593E-03	3.875E-03	2.792E-01
2.235E+02	1.026E+01	5.181E-04	5.522E-03	4.553E-03	2.818E-01
2.285E+02	9.806E+00	4.816E-04	5.495E-03	4.422E-03	2.842E-01
2.334E+02	9.384E+00	4.358E-04	5.313E-03	4.167E-03	2.863E-01
2.384E+02	8.990E+00	4.164E-04	5.416E-03	4.153E-03	2.884E-01
2.434E+02	8.620E+00	3.897E-04	5.401E-03	4.072E-03	2.904E-01
2.483E+02	8.272E+00	3.758E-04	5.543E-03	4.116E-03	2.922E-01
2.533E+02	7.945E+00	3.945E-04	6.184E-03	4.529E-03	2.942E-01
2.583E+02	7.637E+00	3.657E-04	6.085E-03	4.400E-03	2.960E-01
2.633E+02	7.347E+00	3.244E-04	5.722E-03	4.088E-03	2.976E-01
2.682E+02	7.073E+00	3.227E-04	6.027E-03	4.259E-03	2.992E-01
2.732E+02	6.814E+00	3.283E-04	6.485E-03	4.556E-03	3.008E-01
2.782E+02	6.570E+00	2.991E-04	6.244E-03	4.373E-03	3.023E-01
2.831E+02	6.338E+00	2.908E-04	6.408E-03	4.473E-03	3.038E-01
2.881E+02	6.118E+00	3.043E-04	7.072E-03	4.923E-03	3.053E-01
2.931E+02	5.910E+00	2.880E-04	7.052E-03	4.901E-03	3.067E-01
2.981E+02	5.712E+00	2.790E-04	7.191E-03	4.997E-03	3.081E-01
3.030E+02	5.524E+00	2.918E-04	7.911E-03	5.499E-03	3.096E-01
3.080E+02	5.345E+00	2.831E-04	8.065E-03	5.628E-03	3.110E-01
3.130E+02	5.175E+00	2.852E-04	8.531E-03	5.980E-03	3.124E-01
3.179E+02	5.012E+00	2.779E-04	8.721E-03	6.144E-03	3.138E-01
3.229E+02	4.858E+00	2.790E-04	9.177E-03	6.528E-03	3.152E-01
3.279E+02	4.710E+00	2.856E-04	9.841E-03	7.075E-03	3.166E-01
3.329E+02	4.569E+00	2.929E-04	1.056E-02	7.672E-03	3.180E-01
3.378E+02	4.434E+00	2.880E-04	1.087E-02	7.997E-03	3.195E-01
3.428E+02	4.305E+00	2.856E-04	1.126E-02	8.424E-03	3.209E-01
3.478E+02	4.182E+00	2.929E-04	1.207E-02	9.168E-03	3.223E-01
3.527E+02	4.064E+00	2.793E-04	1.202E-02	9.270E-03	3.237E-01
3.577E+02	3.951E+00	3.019E-04	1.355E-02	1.063E-02	3.252E-01
3.627E+02	3.842E+00	2.984E-04	1.397E-02	1.118E-02	3.267E-01
3.677E+02	3.738E+00	2.963E-04	1.446E-02	1.180E-02	3.282E-01
3.726E+02	3.639E+00	2.939E-04	1.493E-02	1.242E-02	3.296E-01

Table 15. (cont.)

3.776E+02	3.543E+00	2.974E-04	1.573E-02	1.333E-02	3.311E-01
3.826E+02	3.451E+00	2.870E-04	1.579E-02	1.371E-02	3.326E-01
3.875E+02	3.362E+00	2.974E-04	1.702E-02	1.523E-02	3.340E-01
3.925E+02	3.277E+00	2.967E-04	1.765E-02	1.634E-02	3.355E-01
3.975E+02	3.195E+00	3.060E-04	1.891E-02	1.830E-02	3.370E-01
4.025E+02	3.116E+00	2.998E-04	1.923E-02	1.948E-02	3.385E-01
4.074E+02	3.040E+00	2.953E-04	1.966E-02	2.108E-02	3.400E-01
4.124E+02	2.966E+00	3.050E-04	2.107E-02	2.422E-02	3.415E-01
4.174E+02	2.896E+00	2.720E-04	1.948E-02	2.429E-02	3.429E-01
4.223E+02	2.828E+00	2.443E-04	1.813E-02	2.462E-02	3.441E-01
4.273E+02	2.762E+00	2.509E-04	1.929E-02	2.865E-02	3.453E-01
4.323E+02	2.698E+00	2.151E-04	1.713E-02	2.805E-02	3.464E-01
4.358E+02	2.655E+00	2.412E-04	1.965E-02	3.472E-02	3.469E-01

Table 16. ^{235}U emission spectrum from a spherical shell: inner radius = 3.93 cm, detector bias = 1.6 MeV, flight path = 801.4 cm, view angle = 26° , and FWHM = 4.1 ns.

T (MID) NANOSEC	E (MID) MEV	COUNTS/ NANOSEC	COUNTS/ MEV	NEUTRONS/ MEV	SUM
1.431E+02	1.698E+01	8.924E-05	3.629E-04	3.410E-04	9.361E-05
1.442E+02	1.673E+01	1.766E-04	7.350E-04	7.000E-04	2.789E-04
1.452E+02	1.648E+01	5.243E-04	2.232E-03	2.158E-03	8.288E-04
1.463E+02	1.623E+01	2.300E-03	1.001E-02	9.824E-03	3.241E-03
1.473E+02	1.599E+01	1.587E-02	7.069E-02	7.034E-02	1.989E-02
1.484E+02	1.576E+01	5.225E-02	2.379E-01	2.397E-01	7.470E-02
1.494E+02	1.553E+01	9.412E-02	4.381E-01	4.468E-01	1.734E-01
1.505E+02	1.531E+01	1.344E-01	6.395E-01	6.601E-01	3.144E-01
1.515E+02	1.509E+01	1.330E-01	6.468E-01	6.757E-01	4.539E-01
1.526E+02	1.488E+01	9.145E-02	4.544E-01	4.784E-01	5.499E-01
1.536E+02	1.467E+01	4.973E-02	2.524E-01	2.671E-01	6.020E-01
1.546E+02	1.447E+01	2.268E-02	1.176E-01	1.250E-01	6.258E-01
1.557E+02	1.427E+01	1.023E-02	5.416E-02	5.783E-02	6.366E-01
1.567E+02	1.407E+01	5.624E-03	3.041E-02	3.262E-02	6.425E-01
1.578E+02	1.388E+01	3.621E-03	2.000E-02	2.154E-02	6.463E-01
1.588E+02	1.369E+01	2.647E-03	1.490E-02	1.611E-02	6.490E-01
1.599E+02	1.351E+01	1.998E-03	1.149E-02	1.247E-02	6.511E-01
1.609E+02	1.333E+01	1.656E-03	9.727E-03	1.056E-02	6.529E-01
1.620E+02	1.315E+01	1.416E-03	8.483E-03	9.206E-03	6.544E-01
1.630E+02	1.298E+01	1.227E-03	7.502E-03	8.135E-03	6.556E-01
1.641E+02	1.281E+01	1.084E-03	6.760E-03	7.308E-03	6.568E-01
1.651E+02	1.264E+01	8.877E-04	5.647E-03	6.085E-03	6.577E-01
1.662E+02	1.248E+01	8.292E-04	5.380E-03	5.775E-03	6.586E-01
1.672E+02	1.232E+01	7.511E-04	4.969E-03	5.307E-03	6.594E-01
1.693E+02	1.200E+01	7.012E-04	4.821E-03	5.090E-03	6.616E-01
1.725E+02	1.156E+01	6.178E-04	4.498E-03	4.635E-03	6.635E-01
1.756E+02	1.114E+01	6.157E-04	4.740E-03	4.769E-03	6.655E-01
1.788E+02	1.074E+01	6.432E-04	5.232E-03	5.142E-03	6.675E-01
1.819E+02	1.037E+01	6.333E-04	5.437E-03	5.223E-03	6.695E-01
1.851E+02	1.001E+01	6.374E-04	5.769E-03	5.426E-03	6.715E-01
1.882E+02	9.670E+00	6.776E-04	6.461E-03	5.955E-03	6.736E-01
1.914E+02	9.348E+00	6.903E-04	6.927E-03	6.264E-03	6.758E-01
1.945E+02	9.042E+00	7.560E-04	7.977E-03	7.085E-03	6.782E-01
1.977E+02	8.751E+00	7.938E-04	8.800E-03	7.672E-03	6.807E-01
2.008E+02	8.474E+00	8.552E-04	9.952E-03	8.541E-03	6.834E-01
2.040E+02	8.210E+00	8.936E-04	1.091E-02	9.303E-03	6.862E-01
2.071E+02	7.958E+00	9.881E-04	1.264E-02	1.065E-02	6.893E-01
2.102E+02	7.718E+00	1.065E-03	1.427E-02	1.181E-02	6.926E-01
2.134E+02	7.489E+00	1.158E-03	1.624E-02	1.322E-02	6.963E-01
2.165E+02	7.269E+00	1.255E-03	1.841E-02	1.474E-02	7.002E-01
2.197E+02	7.059E+00	1.367E-03	2.095E-02	1.652E-02	7.045E-01
2.228E+02	6.858E+00	1.536E-03	2.459E-02	1.911E-02	7.094E-01
2.260E+02	6.666E+00	1.651E-03	2.758E-02	2.128E-02	7.146E-01
2.291E+02	6.482E+00	1.773E-03	3.091E-02	2.397E-02	7.201E-01
2.323E+02	6.305E+00	1.902E-03	3.456E-02	2.673E-02	7.261E-01
2.354E+02	6.135E+00	2.043E-03	3.870E-02	2.955E-02	7.326E-01
2.386E+02	5.972E+00	2.201E-03	4.341E-02	3.278E-02	7.395E-01
2.417E+02	5.816E+00	2.357E-03	4.838E-02	3.628E-02	7.469E-01
2.449E+02	5.666E+00	2.487E-03	5.309E-02	3.956E-02	7.547E-01
2.480E+02	5.521E+00	2.639E-03	5.859E-02	4.341E-02	7.630E-01
2.512E+02	5.382E+00	2.793E-03	6.443E-02	4.761E-02	7.718E-01
2.543E+02	5.248E+00	3.030E-03	7.260E-02	5.354E-02	7.814E-01
2.575E+02	5.119E+00	3.178E-03	7.905E-02	5.820E-02	7.914E-01
2.606E+02	4.995E+00	3.408E-03	8.797E-02	6.467E-02	8.021E-01

Table 16. (cont.)

2.637E+02	4.875E+00	3.494E-03	9.354E-02	6.879E-02	8.131E-01
2.669E+02	4.760E+00	3.600E-03	9.991E-02	7.352E-02	8.244E-01
2.700E+02	4.649E+00	3.719E-03	1.070E-01	7.873E-02	8.361E-01
2.732E+02	4.541E+00	3.853E-03	1.148E-01	8.454E-02	8.482E-01
2.763E+02	4.437E+00	4.011E-03	1.237E-01	9.130E-02	8.609E-01
2.795E+02	4.337E+00	4.083E-03	1.304E-01	9.646E-02	8.737E-01
2.826E+02	4.240E+00	4.204E-03	1.389E-01	1.030E-01	8.869E-01
2.858E+02	4.146E+00	4.266E-03	1.457E-01	1.084E-01	9.004E-01
2.889E+02	4.056E+00	4.453E-03	1.573E-01	1.173E-01	9.144E-01
2.921E+02	3.968E+00	4.466E-03	1.630E-01	1.219E-01	9.284E-01
2.952E+02	3.883E+00	4.629E-03	1.745E-01	1.309E-01	9.430E-01
2.984E+02	3.801E+00	4.619E-03	1.798E-01	1.353E-01	9.575E-01
3.015E+02	3.721E+00	4.748E-03	1.908E-01	1.440E-01	9.725E-01
3.047E+02	3.644E+00	4.837E-03	2.006E-01	1.518E-01	9.877E-01
3.078E+02	3.570E+00	4.890E-03	2.092E-01	1.588E-01	1.003E+00
3.109E+02	3.497E+00	4.916E-03	2.169E-01	1.651E-01	1.019E+00
3.141E+02	3.427E+00	5.008E-03	2.278E-01	1.742E-01	1.034E+00
3.172E+02	3.359E+00	5.072E-03	2.378E-01	1.828E-01	1.050E+00
3.204E+02	3.293E+00	5.094E-03	2.461E-01	1.900E-01	1.066E+00
3.235E+02	3.229E+00	5.170E-03	2.573E-01	1.996E-01	1.083E+00
3.267E+02	3.166E+00	5.236E-03	2.683E-01	2.091E-01	1.099E+00
3.298E+02	3.106E+00	5.275E-03	2.783E-01	2.178E-01	1.116E+00
3.330E+02	3.047E+00	5.323E-03	2.889E-01	2.271E-01	1.132E+00
3.361E+02	2.990E+00	5.388E-03	3.010E-01	2.378E-01	1.149E+00
3.393E+02	2.934E+00	5.308E-03	3.050E-01	2.429E-01	1.166E+00
3.424E+02	2.880E+00	5.268E-03	3.112E-01	2.498E-01	1.183E+00
3.456E+02	2.828E+00	5.266E-03	3.198E-01	2.588E-01	1.199E+00
3.487E+02	2.777E+00	5.231E-03	3.265E-01	2.663E-01	1.216E+00
3.519E+02	2.727E+00	5.272E-03	3.382E-01	2.790E-01	1.232E+00
3.550E+02	2.678E+00	5.326E-03	3.510E-01	2.941E-01	1.249E+00
3.582E+02	2.631E+00	5.152E-03	3.487E-01	2.969E-01	1.265E+00
3.613E+02	2.585E+00	5.060E-03	3.516E-01	3.041E-01	1.281E+00
3.644E+02	2.541E+00	4.992E-03	3.561E-01	3.127E-01	1.297E+00
3.676E+02	2.497E+00	4.934E-03	3.612E-01	3.226E-01	1.312E+00
3.707E+02	2.455E+00	4.804E-03	3.609E-01	3.302E-01	1.328E+00
3.739E+02	2.413E+00	4.742E-03	3.654E-01	3.427E-01	1.342E+00
3.770E+02	2.373E+00	4.625E-03	3.656E-01	3.493E-01	1.357E+00
3.802E+02	2.334E+00	4.512E-03	3.657E-01	3.547E-01	1.371E+00
3.833E+02	2.295E+00	4.408E-03	3.663E-01	3.619E-01	1.385E+00
3.865E+02	2.258E+00	4.302E-03	3.664E-01	3.740E-01	1.399E+00
3.896E+02	2.222E+00	4.153E-03	3.625E-01	3.827E-01	1.412E+00
3.928E+02	2.186E+00	3.952E-03	3.534E-01	3.887E-01	1.424E+00
3.959E+02	2.151E+00	3.810E-03	3.490E-01	4.038E-01	1.436E+00
3.991E+02	2.117E+00	3.681E-03	3.453E-01	4.210E-01	1.448E+00
4.022E+02	2.084E+00	3.501E-03	3.364E-01	4.301E-01	1.459E+00
4.054E+02	2.052E+00	3.260E-03	3.206E-01	4.275E-01	1.469E+00
4.085E+02	2.020E+00	3.163E-03	3.184E-01	4.430E-01	1.479E+00
4.117E+02	1.989E+00	2.992E-03	3.083E-01	4.498E-01	1.488E+00
4.148E+02	1.959E+00	2.809E-03	2.962E-01	4.570E-01	1.497E+00
4.179E+02	1.929E+00	2.623E-03	2.829E-01	4.625E-01	1.505E+00
4.211E+02	1.901E+00	2.446E-03	2.699E-01	4.685E-01	1.513E+00
4.242E+02	1.872E+00	2.321E-03	2.619E-01	4.840E-01	1.520E+00

Table 17. ^{235}U emission spectrum from a spherical shell: inner radius = 3.93 cm, detector bias = 2.2 MeV, flight path = 979.4 cm, view angle = 120° , and FWHM = 2.7 ns.

T (MID) NANOSEC	E (MID) MEV	COUNTS/ NANOSEC	COUNTS/ MEV	NEUTRONS/ MEV	SUM
1.871E+02	1.477E+01	3.309E-04	2.032E-03	1.995E-03	3.471E-04
1.882E+02	1.460E+01	8.229E-04	5.143E-03	5.043E-03	1.210E-03
1.892E+02	1.443E+01	2.093E-03	1.331E-02	1.304E-02	3.406E-03
1.903E+02	1.427E+01	4.735E-03	3.064E-02	2.996E-02	8.373E-03
1.913E+02	1.411E+01	1.128E-02	7.428E-02	7.255E-02	2.021E-02
1.924E+02	1.395E+01	3.269E-02	2.189E-01	2.132E-01	5.450E-02
1.934E+02	1.380E+01	1.018E-01	6.933E-01	6.716E-01	1.613E-01
1.945E+02	1.364E+01	1.853E-01	1.283E+00	1.236E+00	3.557E-01
1.955E+02	1.349E+01	1.587E-01	1.118E+00	1.072E+00	5.222E-01
1.966E+02	1.335E+01	7.304E-02	5.231E-01	4.999E-01	5.988E-01
1.976E+02	1.320E+01	2.729E-02	1.987E-01	1.892E-01	6.274E-01
1.987E+02	1.306E+01	1.161E-02	8.597E-02	8.158E-02	6.396E-01
1.997E+02	1.292E+01	5.815E-03	4.375E-02	4.128E-02	6.457E-01
2.008E+02	1.278E+01	3.305E-03	2.528E-02	2.367E-02	6.492E-01
2.018E+02	1.264E+01	2.078E-03	1.615E-02	1.501E-02	6.513E-01
2.029E+02	1.251E+01	1.629E-03	1.286E-02	1.187E-02	6.530E-01
2.039E+02	1.238E+01	1.353E-03	1.086E-02	9.950E-03	6.545E-01
2.050E+02	1.225E+01	1.118E-03	9.116E-03	8.298E-03	6.556E-01
2.060E+02	1.212E+01	9.343E-04	7.741E-03	7.000E-03	6.566E-01
2.071E+02	1.199E+01	7.903E-04	6.652E-03	5.976E-03	6.574E-01
2.091E+02	1.175E+01	7.206E-04	6.257E-03	5.551E-03	6.597E-01
2.123E+02	1.139E+01	6.543E-04	5.951E-03	5.186E-03	6.618E-01
2.154E+02	1.106E+01	6.332E-04	6.027E-03	5.164E-03	6.638E-01
2.186E+02	1.073E+01	6.046E-04	6.019E-03	5.076E-03	6.657E-01
2.217E+02	1.042E+01	5.989E-04	6.231E-03	5.178E-03	6.676E-01
2.249E+02	1.013E+01	5.915E-04	6.428E-03	5.266E-03	6.694E-01
2.280E+02	9.844E+00	5.983E-04	6.787E-03	5.474E-03	6.713E-01
2.312E+02	9.572E+00	5.943E-04	7.033E-03	5.579E-03	6.732E-01
2.343E+02	9.312E+00	6.612E-04	8.157E-03	6.369E-03	6.753E-01
2.375E+02	9.062E+00	6.892E-04	8.858E-03	6.816E-03	6.774E-01
2.406E+02	8.822E+00	6.829E-04	9.140E-03	6.952E-03	6.796E-01
2.438E+02	8.592E+00	7.378E-04	1.028E-02	7.738E-03	6.819E-01
2.469E+02	8.370E+00	7.520E-04	1.090E-02	8.127E-03	6.843E-01
2.501E+02	8.157E+00	8.166E-04	1.230E-02	9.092E-03	6.868E-01
2.532E+02	7.952E+00	8.915E-04	1.396E-02	1.022E-02	6.896E-01
2.564E+02	7.755E+00	8.852E-04	1.439E-02	1.046E-02	6.924E-01
2.595E+02	7.565E+00	9.378E-04	1.583E-02	1.141E-02	6.954E-01
2.626E+02	7.382E+00	1.042E-03	1.824E-02	1.305E-02	6.986E-01
2.658E+02	7.206E+00	1.098E-03	1.995E-02	1.417E-02	7.021E-01
2.689E+02	7.036E+00	1.218E-03	2.293E-02	1.618E-02	7.059E-01
2.721E+02	6.871E+00	1.309E-03	2.555E-02	1.796E-02	7.101E-01
2.752E+02	6.713E+00	1.392E-03	2.813E-02	1.974E-02	7.144E-01
2.784E+02	6.560E+00	1.453E-03	3.040E-02	2.128E-02	7.190E-01
2.815E+02	6.412E+00	1.537E-03	3.328E-02	2.325E-02	7.238E-01
2.847E+02	6.269E+00	1.622E-03	3.635E-02	2.535E-02	7.290E-01
2.878E+02	6.131E+00	1.752E-03	4.058E-02	2.825E-02	7.345E-01
2.910E+02	5.998E+00	1.821E-03	4.361E-02	3.031E-02	7.402E-01
2.941E+02	5.868E+00	1.844E-03	4.563E-02	3.171E-02	7.460E-01
2.973E+02	5.743E+00	2.045E-03	5.228E-02	3.633E-02	7.524E-01
3.004E+02	5.622E+00	2.069E-03	5.461E-02	3.795E-02	7.589E-01
3.036E+02	5.505E+00	2.216E-03	6.039E-02	4.198E-02	7.659E-01
3.067E+02	5.391E+00	2.262E-03	6.361E-02	4.433E-02	7.730E-01
3.099E+02	5.281E+00	2.416E-03	7.008E-02	4.898E-02	7.806E-01
3.130E+02	5.174E+00	2.453E-03	7.338E-02	5.144E-02	7.884E-01

Table 17. (cont.)

3.161E+02	5.070E+00	2.540E-03	7.832E-02	5.506E-02	7.963E-01
3.193E+02	4.970E+00	2.732E-03	8.682E-02	6.129E-02	8.049E-01
3.224E+02	4.872E+00	2.782E-03	9.110E-02	6.474E-02	8.137E-01
3.256E+02	4.778E+00	2.884E-03	9.726E-02	6.959E-02	8.228E-01
3.287E+02	4.686E+00	2.984E-03	1.036E-01	7.463E-02	8.322E-01
3.319E+02	4.596E+00	3.010E-03	1.076E-01	7.801E-02	8.416E-01
3.350E+02	4.510E+00	2.945E-03	1.084E-01	7.907E-02	8.509E-01
3.382E+02	4.425E+00	3.133E-03	1.186E-01	8.737E-02	8.608E-01
3.413E+02	4.343E+00	3.173E-03	1.235E-01	9.194E-02	8.707E-01
3.445E+02	4.264E+00	3.088E-03	1.236E-01	9.293E-02	8.805E-01
3.476E+02	4.186E+00	3.168E-03	1.304E-01	9.900E-02	8.904E-01
3.508E+02	4.111E+00	3.231E-03	1.367E-01	1.048E-01	9.006E-01
3.539E+02	4.037E+00	3.237E-03	1.407E-01	1.089E-01	9.108E-01
3.571E+02	3.966E+00	3.254E-03	1.453E-01	1.137E-01	9.210E-01
3.602E+02	3.896E+00	3.296E-03	1.511E-01	1.197E-01	9.314E-01
3.634E+02	3.829E+00	3.258E-03	1.534E-01	1.231E-01	9.417E-01
3.665E+02	3.763E+00	3.244E-03	1.567E-01	1.273E-01	9.519E-01
3.696E+02	3.698E+00	3.162E-03	1.568E-01	1.289E-01	9.618E-01
3.728E+02	3.636E+00	3.186E-03	1.621E-01	1.349E-01	9.718E-01
3.759E+02	3.575E+00	3.206E-03	1.673E-01	1.409E-01	9.819E-01
3.791E+02	3.515E+00	3.149E-03	1.686E-01	1.436E-01	9.918E-01
3.822E+02	3.457E+00	3.154E-03	1.731E-01	1.500E-01	1.002E+00
3.854E+02	3.400E+00	3.063E-03	1.723E-01	1.522E-01	1.011E+00
3.885E+02	3.345E+00	2.994E-03	1.726E-01	1.554E-01	1.021E+00
3.917E+02	3.291E+00	2.974E-03	1.758E-01	1.615E-01	1.030E+00
3.948E+02	3.239E+00	2.904E-03	1.758E-01	1.661E-01	1.039E+00
3.980E+02	3.187E+00	2.862E-03	1.775E-01	1.725E-01	1.048E+00
4.011E+02	3.137E+00	2.822E-03	1.792E-01	1.793E-01	1.057E+00
4.043E+02	3.088E+00	2.727E-03	1.773E-01	1.830E-01	1.066E+00
4.074E+02	3.040E+00	2.659E-03	1.770E-01	1.898E-01	1.074E+00
4.106E+02	2.993E+00	2.532E-03	1.725E-01	1.928E-01	1.082E+00
4.137E+02	2.948E+00	2.548E-03	1.776E-01	2.085E-01	1.090E+00
4.169E+02	2.903E+00	2.310E-03	1.648E-01	2.037E-01	1.097E+00
4.200E+02	2.860E+00	2.237E-03	1.633E-01	2.128E-01	1.104E+00
4.231E+02	2.817E+00	2.114E-03	1.579E-01	2.173E-01	1.111E+00
4.263E+02	2.775E+00	2.011E-03	1.535E-01	2.237E-01	1.117E+00
4.294E+02	2.735E+00	1.828E-03	1.427E-01	2.204E-01	1.123E+00
4.321E+02	2.701E+00	1.800E-03	1.429E-01	2.311E-01	1.127E+00

Table 18. ^{235}U emission spectrum from a solid sphere: outer radius = 3.15 cm, detector bias = 1.6 MeV, flight path = 945.3 cm, view angle = 26° , and FWHM = 4.2 ns.

T (MID) NANOSEC	E (MID) MEV	COUNTS/ NANOSEC	COUNTS/ MEV	NEUTRONS/ MEV	SUM
1.732E+02	1.595E+01	6.588E-04	3.488E-03	3.480E-03	1.044E-03
1.748E+02	1.565E+01	8.062E-03	4.391E-02	4.450E-02	1.382E-02
1.764E+02	1.536E+01	4.062E-02	2.275E-01	2.342E-01	7.820E-02
1.780E+02	1.509E+01	1.058E-01	6.094E-01	6.367E-01	2.459E-01
1.795E+02	1.481E+01	1.421E-01	8.410E-01	8.868E-01	4.711E-01
1.811E+02	1.455E+01	9.217E-02	5.606E-01	5.947E-01	6.172E-01
1.827E+02	1.429E+01	3.220E-02	2.012E-01	2.147E-01	6.683E-01
1.843E+02	1.404E+01	8.461E-03	5.430E-02	5.828E-02	6.817E-01
1.859E+02	1.380E+01	3.181E-03	2.096E-02	2.261E-02	6.867E-01
1.875E+02	1.356E+01	1.908E-03	1.291E-02	1.399E-02	6.897E-01
1.890E+02	1.333E+01	1.407E-03	9.770E-03	1.060E-02	6.920E-01
1.906E+02	1.310E+01	1.195E-03	8.512E-03	9.238E-03	6.939E-01
1.922E+02	1.288E+01	1.073E-03	7.845E-03	8.494E-03	6.956E-01
1.938E+02	1.267E+01	8.829E-04	6.618E-03	7.135E-03	6.970E-01
1.954E+02	1.246E+01	7.534E-04	5.791E-03	6.213E-03	6.982E-01
1.970E+02	1.226E+01	6.557E-04	5.166E-03	5.507E-03	6.992E-01
1.986E+02	1.206E+01	6.027E-04	4.868E-03	5.154E-03	7.001E-01
2.017E+02	1.168E+01	5.699E-04	4.832E-03	5.012E-03	7.029E-01
2.065E+02	1.114E+01	5.176E-04	4.714E-03	4.742E-03	7.053E-01
2.112E+02	1.063E+01	5.187E-04	5.065E-03	4.945E-03	7.078E-01
2.160E+02	1.016E+01	5.085E-04	5.317E-03	5.047E-03	7.102E-01
2.207E+02	9.721E+00	5.612E-04	6.273E-03	5.800E-03	7.129E-01
2.255E+02	9.309E+00	5.401E-04	6.444E-03	5.814E-03	7.154E-01
2.303E+02	8.923E+00	5.729E-04	7.285E-03	6.423E-03	7.182E-01
2.350E+02	8.561E+00	5.841E-04	7.907E-03	6.816E-03	7.209E-01
2.398E+02	8.220E+00	6.783E-04	9.762E-03	8.327E-03	7.242E-01
2.445E+02	7.900E+00	7.360E-04	1.125E-02	9.432E-03	7.277E-01
2.493E+02	7.598E+00	8.292E-04	1.344E-02	1.102E-02	7.316E-01
2.540E+02	7.312E+00	8.018E-04	1.376E-02	1.106E-02	7.354E-01
2.588E+02	7.043E+00	9.081E-04	1.649E-02	1.299E-02	7.397E-01
2.635E+02	6.789E+00	9.465E-04	1.817E-02	1.407E-02	7.442E-01
2.683E+02	6.548E+00	1.066E-03	2.131E-02	1.670E-02	7.493E-01
2.731E+02	6.319E+00	1.111E-03	2.375E-02	1.839E-02	7.546E-01
2.778E+02	6.103E+00	1.229E-03	2.769E-02	2.109E-02	7.604E-01
2.826E+02	5.897E+00	1.326E-03	3.148E-02	2.368E-02	7.667E-01
2.873E+02	5.702E+00	1.417E-03	3.537E-02	2.640E-02	7.735E-01
2.921E+02	5.516E+00	1.506E-03	3.952E-02	2.928E-02	7.806E-01
2.968E+02	5.339E+00	1.571E-03	4.329E-02	3.196E-02	7.881E-01
3.016E+02	5.171E+00	1.724E-03	4.987E-02	3.674E-02	7.963E-01
3.063E+02	5.010E+00	1.793E-03	5.436E-02	3.997E-02	8.048E-01
3.111E+02	4.857E+00	1.884E-03	5.985E-02	4.402E-02	8.138E-01
3.158E+02	4.711E+00	1.992E-03	6.626E-02	4.877E-02	8.233E-01
3.206E+02	4.571E+00	2.042E-03	7.109E-02	5.236E-02	8.330E-01
3.254E+02	4.438E+00	2.136E-03	7.774E-02	5.736E-02	8.431E-01
3.301E+02	4.310E+00	2.159E-03	8.210E-02	6.079E-02	8.534E-01
3.349E+02	4.187E+00	2.205E-03	8.758E-02	6.507E-02	8.639E-01
3.396E+02	4.070E+00	2.243E-03	9.296E-02	6.929E-02	8.745E-01
3.444E+02	3.958E+00	2.304E-03	9.961E-02	7.451E-02	8.855E-01
3.491E+02	3.850E+00	2.384E-03	1.074E-01	8.067E-02	8.968E-01
3.539E+02	3.747E+00	2.436E-03	1.143E-01	8.620E-02	9.084E-01
3.586E+02	3.648E+00	2.404E-03	1.175E-01	8.891E-02	9.198E-01
3.634E+02	3.552E+00	2.478E-03	1.260E-01	9.573E-02	9.316E-01
3.682E+02	3.460E+00	2.503E-03	1.324E-01	1.010E-01	9.435E-01
3.729E+02	3.372E+00	2.553E-03	1.404E-01	1.078E-01	9.557E-01

Table 18. (cont.)

3.777E+02	3.287E+00	2.644E-03	1.511E-01	1.167E-01	9.682E-01
3.824E+02	3.206E+00	2.686E-03	1.594E-01	1.239E-01	9.810E-01
3.872E+02	3.127E+00	2.779E-03	1.712E-01	1.338E-01	9.942E-01
3.919E+02	3.051E+00	2.766E-03	1.767E-01	1.389E-01	1.007E+00
3.967E+02	2.978E+00	2.794E-03	1.852E-01	1.465E-01	1.021E+00
4.014E+02	2.908E+00	2.655E-03	1.824E-01	1.458E-01	1.033E+00
4.062E+02	2.840E+00	2.696E-03	1.919E-01	1.550E-01	1.046E+00
4.109E+02	2.774E+00	2.654E-03	1.957E-01	1.596E-01	1.059E+00
4.157E+02	2.711E+00	2.606E-03	1.989E-01	1.649E-01	1.071E+00
4.205E+02	2.650E+00	2.564E-03	2.025E-01	1.714E-01	1.083E+00
4.252E+02	2.590E+00	2.524E-03	2.063E-01	1.781E-01	1.095E+00
4.300E+02	2.533E+00	2.453E-03	2.073E-01	1.826E-01	1.107E+00
4.347E+02	2.478E+00	2.444E-03	2.135E-01	1.926E-01	1.119E+00
4.395E+02	2.424E+00	2.341E-03	2.113E-01	1.969E-01	1.130E+00
4.442E+02	2.373E+00	2.280E-03	2.127E-01	2.032E-01	1.141E+00
4.490E+02	2.322E+00	2.183E-03	2.103E-01	2.049E-01	1.151E+00
4.537E+02	2.274E+00	2.101E-03	2.088E-01	2.101E-01	1.161E+00
4.585E+02	2.227E+00	1.973E-03	2.024E-01	2.127E-01	1.170E+00
4.633E+02	2.181E+00	1.901E-03	2.011E-01	2.227E-01	1.179E+00
4.680E+02	2.137E+00	1.788E-03	1.951E-01	2.307E-01	1.188E+00
4.728E+02	2.094E+00	1.687E-03	1.898E-01	2.395E-01	1.196E+00
4.775E+02	2.052E+00	1.517E-03	1.759E-01	2.343E-01	1.203E+00
4.823E+02	2.012E+00	1.447E-03	1.729E-01	2.433E-01	1.210E+00

Table 19. ²³⁵U emission spectrum from a solid sphere: outer radius = 3.15 cm, detector bias = 1.6 MeV, flight path = 980.1 cm, view angle = 120°, and FWHM = 3.9 ns.

T(MID) NANOSEC	E(MID) MEV	COUNTS/ NANOSEC	COUNTS/ MEV	NEUTRONS/ MEV	SUM
1.840E+02	1.516E+01	2.091E-04	1.239E-03	1.142E-03	3.314E-04
1.856E+02	1.490E+01	8.769E-04	5.335E-03	4.974E-03	1.721E-03
1.872E+02	1.464E+01	3.955E-03	2.470E-02	2.317E-02	7.989E-03
1.888E+02	1.439E+01	2.321E-02	1.488E-01	1.404E-01	4.478E-02
1.904E+02	1.415E+01	1.053E-01	6.927E-01	6.571E-01	2.116E-01
1.920E+02	1.391E+01	1.767E-01	1.192E+00	1.137E+00	4.916E-01
1.935E+02	1.368E+01	1.188E-01	8.224E-01	7.878E-01	6.799E-01
1.951E+02	1.345E+01	4.424E-02	3.141E-01	3.019E-01	7.500E-01
1.967E+02	1.323E+01	1.005E-02	7.316E-02	7.034E-02	7.659E-01
1.983E+02	1.302E+01	3.027E-03	2.258E-02	2.170E-02	7.707E-01
1.999E+02	1.281E+01	1.917E-03	1.466E-02	1.404E-02	7.738E-01
2.015E+02	1.260E+01	1.497E-03	1.173E-02	1.118E-02	7.762E-01
2.031E+02	1.240E+01	1.211E-03	9.723E-03	9.224E-03	7.781E-01
2.046E+02	1.221E+01	1.060E-03	8.716E-03	8.216E-03	7.798E-01
2.062E+02	1.202E+01	9.699E-04	8.166E-03	7.647E-03	7.813E-01
2.078E+02	1.183E+01	8.364E-04	7.210E-03	6.683E-03	7.826E-01
2.094E+02	1.165E+01	7.448E-04	6.572E-03	6.028E-03	7.838E-01
2.110E+02	1.147E+01	6.818E-04	6.157E-03	5.591E-03	7.849E-01
2.142E+02	1.113E+01	6.613E-04	6.251E-03	5.567E-03	7.880E-01
2.189E+02	1.064E+01	6.093E-04	6.161E-03	5.331E-03	7.909E-01
2.237E+02	1.019E+01	5.378E-04	5.808E-03	4.891E-03	7.935E-01
2.284E+02	9.759E+00	5.098E-04	5.873E-03	4.821E-03	7.959E-01
2.332E+02	9.360E+00	5.231E-04	6.418E-03	5.145E-03	7.984E-01
2.379E+02	8.984E+00	5.559E-04	7.256E-03	5.689E-03	8.010E-01
2.427E+02	8.630E+00	6.070E-04	8.416E-03	6.451E-03	8.039E-01
2.474E+02	8.298E+00	6.448E-04	9.486E-03	7.180E-03	8.070E-01
2.522E+02	7.984E+00	6.494E-04	1.013E-02	7.569E-03	8.101E-01
2.569E+02	7.687E+00	7.904E-04	1.305E-02	9.545E-03	8.138E-01
2.617E+02	7.407E+00	8.979E-04	1.567E-02	1.123E-02	8.181E-01
2.665E+02	7.142E+00	8.655E-04	1.596E-02	1.122E-02	8.222E-01
2.712E+02	6.891E+00	9.499E-04	1.849E-02	1.276E-02	8.267E-01
2.760E+02	6.653E+00	9.951E-04	2.042E-02	1.396E-02	8.315E-01
2.807E+02	6.428E+00	1.094E-03	2.364E-02	1.626E-02	8.367E-01
2.855E+02	6.213E+00	1.178E-03	2.680E-02	1.823E-02	8.423E-01
2.902E+02	6.009E+00	1.241E-03	2.968E-02	1.990E-02	8.482E-01
2.950E+02	5.815E+00	1.328E-03	3.337E-02	2.217E-02	8.545E-01
2.997E+02	5.631E+00	1.464E-03	3.861E-02	2.545E-02	8.614E-01
3.045E+02	5.455E+00	1.538E-03	4.255E-02	2.788E-02	8.688E-01
3.093E+02	5.287E+00	1.634E-03	4.739E-02	3.098E-02	8.765E-01
3.140E+02	5.127E+00	1.734E-03	5.265E-02	3.434E-02	8.848E-01
3.188E+02	4.974E+00	1.815E-03	5.770E-02	3.758E-02	8.934E-01
3.235E+02	4.827E+00	1.941E-03	6.455E-02	4.206E-02	9.026E-01
3.283E+02	4.687E+00	1.981E-03	6.883E-02	4.488E-02	9.121E-01
3.330E+02	4.554E+00	2.052E-03	7.450E-02	4.861E-02	9.218E-01
3.378E+02	4.425E+00	2.088E-03	7.912E-02	5.174E-02	9.317E-01
3.425E+02	4.302E+00	2.193E-03	8.669E-02	5.688E-02	9.422E-01
3.473E+02	4.185E+00	2.245E-03	9.254E-02	6.092E-02	9.528E-01
3.520E+02	4.072E+00	2.275E-03	9.769E-02	6.451E-02	9.637E-01
3.568E+02	3.963E+00	2.329E-03	1.042E-01	6.902E-02	9.747E-01
3.616E+02	3.859E+00	2.353E-03	1.095E-01	7.286E-02	9.859E-01
3.663E+02	3.759E+00	2.418E-03	1.171E-01	7.819E-02	9.974E-01
3.711E+02	3.663E+00	2.424E-03	1.221E-01	8.180E-02	1.009E+00
3.758E+02	3.570E+00	2.486E-03	1.301E-01	8.748E-02	1.021E+00
3.806E+02	3.481E+00	2.499E-03	1.358E-01	9.170E-02	1.033E+00

Table 19. (cont.)

3.853E+02	3.395E+00	2.588E-03	1.461E-01	9.921E-02	1.045E+00
3.901E+02	3.312E+00	2.576E-03	1.508E-01	1.031E-01	1.057E+00
3.948E+02	3.233E+00	2.587E-03	1.572E-01	1.080E-01	1.070E+00
3.996E+02	3.156E+00	2.679E-03	1.687E-01	1.166E-01	1.082E+00
4.044E+02	3.082E+00	2.701E-03	1.764E-01	1.225E-01	1.095E+00
4.091E+02	3.010E+00	2.711E-03	1.834E-01	1.281E-01	1.108E+00
4.139E+02	2.941E+00	2.601E-03	1.822E-01	1.284E-01	1.120E+00
4.186E+02	2.874E+00	2.616E-03	1.896E-01	1.350E-01	1.133E+00
4.234E+02	2.810E+00	2.664E-03	1.998E-01	1.436E-01	1.145E+00
4.281E+02	2.747E+00	2.655E-03	2.059E-01	1.496E-01	1.158E+00
4.329E+02	2.687E+00	2.636E-03	2.114E-01	1.565E-01	1.171E+00
4.376E+02	2.629E+00	2.576E-03	2.135E-01	1.612E-01	1.183E+00
4.424E+02	2.572E+00	2.562E-03	2.194E-01	1.688E-01	1.195E+00
4.471E+02	2.518E+00	2.515E-03	2.224E-01	1.745E-01	1.207E+00
4.519E+02	2.465E+00	2.463E-03	2.249E-01	1.811E-01	1.219E+00
4.567E+02	2.414E+00	2.400E-03	2.261E-01	1.878E-01	1.230E+00
4.614E+02	2.364E+00	2.380E-03	2.314E-01	1.965E-01	1.241E+00
4.662E+02	2.316E+00	2.357E-03	2.364E-01	2.046E-01	1.253E+00
4.709E+02	2.269E+00	2.308E-03	2.386E-01	2.136E-01	1.264E+00
4.757E+02	2.224E+00	2.241E-03	2.388E-01	2.229E-01	1.274E+00
4.804E+02	2.180E+00	2.075E-03	2.279E-01	2.239E-01	1.284E+00
4.852E+02	2.137E+00	1.905E-03	2.155E-01	2.256E-01	1.293E+00
4.899E+02	2.096E+00	1.816E-03	2.116E-01	2.359E-01	1.302E+00
4.947E+02	2.055E+00	1.640E-03	1.967E-01	2.312E-01	1.310E+00
4.995E+02	2.016E+00	1.620E-03	1.999E-01	2.477E-01	1.317E+00
5.042E+02	1.978E+00	1.525E-03	1.937E-01	2.552E-01	1.325E+00
5.090E+02	1.941E+00	1.431E-03	1.870E-01	2.644E-01	1.331E+00
5.137E+02	1.906E+00	1.331E-03	1.788E-01	2.721E-01	1.338E+00
5.185E+02	1.871E+00	1.205E-03	1.664E-01	2.735E-01	1.343E+00
5.232E+02	1.837E+00	1.069E-03	1.517E-01	2.704E-01	1.349E+00
5.280E+02	1.804E+00	1.008E-03	1.472E-01	2.862E-01	1.353E+00
5.327E+02	1.772E+00	8.667E-04	1.299E-01	2.823E-01	1.357E+00
5.375E+02	1.740E+00	7.958E-04	1.225E-01	3.021E-01	1.361E+00

Table 20. ^{235}U emission spectrum from a solid sphere: outer radius = 5.94 cm, detector bias = 1.6 MeV, flight path = 767.2 cm, view angle = 30° , and FWHM = 4.5 ns.

T (MID) NANOSEC	E (MID) MEV	COUNTS/ NANOSEC	COUNTS/ MEV	NEUTRONS/ MEV	SUM
1.380E+02	1.673E+01	2.387E-04	9.508E-04	9.055E-04	2.360E-04
1.390E+02	1.648E+01	1.415E-03	5.763E-03	5.568E-03	1.634E-03
1.400E+02	1.624E+01	5.705E-03	2.376E-02	2.329E-02	7.273E-03
1.410E+02	1.601E+01	1.643E-02	6.994E-02	6.954E-02	2.351E-02
1.420E+02	1.578E+01	3.499E-02	1.523E-01	1.533E-01	5.809E-02
1.429E+02	1.555E+01	5.890E-02	2.620E-01	2.669E-01	1.163E-01
1.439E+02	1.533E+01	7.796E-02	3.543E-01	3.652E-01	1.934E-01
1.449E+02	1.512E+01	8.317E-02	3.862E-01	4.028E-01	2.756E-01
1.459E+02	1.491E+01	7.009E-02	3.324E-01	3.498E-01	3.448E-01
1.469E+02	1.470E+01	4.762E-02	2.307E-01	2.438E-01	3.919E-01
1.479E+02	1.450E+01	2.709E-02	1.340E-01	1.423E-01	4.187E-01
1.489E+02	1.430E+01	1.373E-02	6.934E-02	7.398E-02	4.323E-01
1.499E+02	1.411E+01	7.007E-03	3.613E-02	3.872E-02	4.392E-01
1.508E+02	1.392E+01	3.790E-03	1.994E-02	2.146E-02	4.429E-01
1.513E+02	1.373E+01	2.714E-03	1.458E-02	1.574E-02	4.456E-01
1.528E+02	1.355E+01	2.059E-03	1.128E-02	1.223E-02	4.477E-01
1.538E+02	1.337E+01	1.583E-03	8.854E-03	9.608E-03	4.492E-01
1.548E+02	1.320E+01	1.308E-03	7.460E-03	8.096E-03	4.505E-01
1.558E+02	1.303E+01	1.129E-03	6.567E-03	7.126E-03	4.516E-01
1.568E+02	1.286E+01	9.935E-04	5.896E-03	6.380E-03	4.526E-01
1.588E+02	1.253E+01	9.689E-04	5.977E-03	6.423E-03	4.555E-01
1.617E+02	1.206E+01	8.894E-04	5.811E-03	6.150E-03	4.581E-01
1.647E+02	1.162E+01	8.496E-04	5.872E-03	6.073E-03	4.606E-01
1.677E+02	1.121E+01	8.548E-04	6.245E-03	6.306E-03	4.632E-01
1.706E+02	1.081E+01	8.660E-04	6.678E-03	6.590E-03	4.657E-01
1.736E+02	1.044E+01	8.273E-04	6.730E-03	6.492E-03	4.682E-01
1.765E+02	1.008E+01	8.975E-04	7.693E-03	7.267E-03	4.709E-01
1.795E+02	9.745E+00	8.946E-04	8.072E-03	7.473E-03	4.735E-01
1.825E+02	9.424E+00	9.414E-04	8.934E-03	8.115E-03	4.763E-01
1.854E+02	9.119E+00	1.029E-03	1.026E-02	9.158E-03	4.794E-01
1.884E+02	8.829E+00	1.134E-03	1.187E-02	1.041E-02	4.827E-01
1.914E+02	8.553E+00	1.256E-03	1.380E-02	1.188E-02	4.864E-01
1.943E+02	8.289E+00	1.331E-03	1.533E-02	1.310E-02	4.904E-01
1.973E+02	8.038E+00	1.421E-03	1.715E-02	1.452E-02	4.946E-01
2.003E+02	7.798E+00	1.675E-03	2.116E-02	1.761E-02	4.996E-01
2.032E+02	7.568E+00	1.823E-03	2.409E-02	1.972E-02	5.050E-01
2.062E+02	7.349E+00	2.078E-03	2.871E-02	2.312E-02	5.111E-01
2.092E+02	7.139E+00	2.184E-03	3.151E-02	2.499E-02	5.176E-01
2.121E+02	6.937E+00	2.524E-03	3.802E-02	2.971E-02	5.251E-01
2.151E+02	6.745E+00	2.674E-03	4.203E-02	3.248E-02	5.330E-01
2.181E+02	6.560E+00	2.941E-03	4.820E-02	3.722E-02	5.417E-01
2.210E+02	6.383E+00	3.192E-03	5.453E-02	4.235E-02	5.512E-01
2.240E+02	6.213E+00	3.292E-03	5.856E-02	4.498E-02	5.610E-01
2.270E+02	6.049E+00	3.605E-03	6.677E-02	5.065E-02	5.717E-01
2.299E+02	5.892E+00	3.988E-03	7.684E-02	5.780E-02	5.835E-01
2.329E+02	5.742E+00	4.275E-03	8.565E-02	6.403E-02	5.962E-01
2.359E+02	5.596E+00	4.577E-03	9.530E-02	7.081E-02	6.097E-01
2.388E+02	5.457E+00	4.886E-03	1.057E-01	7.818E-02	6.242E-01
2.418E+02	5.322E+00	5.196E-03	1.167E-01	8.615E-02	6.396E-01
2.447E+02	5.193E+00	5.536E-03	1.290E-01	9.509E-02	6.560E-01
2.477E+02	5.068E+00	5.925E-03	1.433E-01	1.054E-01	6.736E-01
2.507E+02	4.947E+00	6.224E-03	1.560E-01	1.147E-01	6.921E-01
2.536E+02	4.831E+00	6.529E-03	1.696E-01	1.248E-01	7.114E-01
2.566E+02	4.719E+00	6.824E-03	1.837E-01	1.352E-01	7.317E-01

Table 20. (cont.)

2.596E+02	4.611E+00	7.109E-03	1.982E-01	1.459E-01	7.527E-01
2.625E+02	4.506E+00	7.378E-03	2.129E-01	1.568E-01	7.746E-01
2.655E+02	4.405E+00	7.483E-03	2.234E-01	1.650E-01	7.968E-01
2.685E+02	4.307E+00	7.834E-03	2.419E-01	1.791E-01	8.200E-01
2.714E+02	4.213E+00	7.946E-03	2.537E-01	1.884E-01	8.436E-01
2.744E+02	4.122E+00	8.230E-03	2.716E-01	2.021E-01	8.680E-01
2.774E+02	4.033E+00	8.589E-03	2.928E-01	2.185E-01	8.935E-01
2.803E+02	3.948E+00	8.835E-03	3.111E-01	2.328E-01	9.197E-01
2.833E+02	3.865E+00	8.977E-03	3.263E-01	2.449E-01	9.463E-01
2.863E+02	3.784E+00	9.149E-03	3.432E-01	2.584E-01	9.734E-01
2.892E+02	3.707E+00	9.194E-03	3.559E-01	2.687E-01	1.001E+00
2.922E+02	3.631E+00	9.422E-03	3.761E-01	2.848E-01	1.029E+00
2.952E+02	3.558E+00	9.499E-03	3.910E-01	2.969E-01	1.057E+00
2.981E+02	3.487E+00	9.927E-03	4.212E-01	3.208E-01	1.086E+00
3.011E+02	3.418E+00	9.723E-03	4.251E-01	3.253E-01	1.115E+00
3.041E+02	3.351E+00	1.006E-02	4.532E-01	3.485E-01	1.145E+00
3.070E+02	3.287E+00	1.012E-02	4.692E-01	3.625E-01	1.175E+00
3.100E+02	3.224E+00	1.018E-02	4.860E-01	3.772E-01	1.205E+00
3.129E+02	3.162E+00	1.033E-02	5.078E-01	3.959E-01	1.236E+00
3.159E+02	3.103E+00	1.048E-02	5.301E-01	4.150E-01	1.267E+00
3.189E+02	3.045E+00	1.074E-02	5.588E-01	4.393E-01	1.299E+00
3.218E+02	2.989E+00	1.080E-02	5.779E-01	4.566E-01	1.331E+00
3.248E+02	2.934E+00	1.067E-02	5.868E-01	4.674E-01	1.362E+00
3.278E+02	2.881E+00	1.052E-02	5.946E-01	4.773E-01	1.393E+00
3.307E+02	2.829E+00	1.070E-02	6.217E-01	5.029E-01	1.425E+00
3.337E+02	2.779E+00	1.074E-02	6.411E-01	5.226E-01	1.457E+00
3.367E+02	2.730E+00	1.084E-02	6.647E-01	5.477E-01	1.489E+00
3.396E+02	2.682E+00	1.072E-02	6.750E-01	5.651E-01	1.521E+00
3.426E+02	2.636E+00	1.079E-02	6.976E-01	5.931E-01	1.553E+00
3.456E+02	2.590E+00	1.056E-02	7.001E-01	6.045E-01	1.584E+00
3.485E+02	2.546E+00	1.055E-02	7.182E-01	6.296E-01	1.616E+00
3.515E+02	2.503E+00	1.034E-02	7.221E-01	6.431E-01	1.646E+00
3.545E+02	2.461E+00	1.025E-02	7.343E-01	6.691E-01	1.677E+00
3.574E+02	2.421E+00	1.020E-02	7.492E-01	6.996E-01	1.707E+00
3.604E+02	2.381E+00	1.004E-02	7.558E-01	7.199E-01	1.737E+00
3.634E+02	2.342E+00	9.914E-03	7.653E-01	7.400E-01	1.766E+00
3.663E+02	2.304E+00	9.683E-03	7.660E-01	7.529E-01	1.795E+00
3.693E+02	2.267E+00	9.596E-03	7.779E-01	7.876E-01	1.823E+00
3.723E+02	2.231E+00	9.358E-03	7.771E-01	8.135E-01	1.851E+00
3.752E+02	2.195E+00	9.338E-03	7.942E-01	8.625E-01	1.879E+00
3.782E+02	2.161E+00	9.127E-03	7.950E-01	9.065E-01	1.906E+00
3.811E+02	2.127E+00	8.861E-03	7.903E-01	9.483E-01	1.932E+00
3.841E+02	2.094E+00	8.491E-03	7.751E-01	9.776E-01	1.957E+00
3.871E+02	2.062E+00	8.065E-03	7.535E-01	9.908E-01	1.981E+00
3.900E+02	2.031E+00	7.875E-03	7.530E-01	1.032E+00	2.004E+00

Table 21. ^{235}U emission spectrum from a solid sphere: outer radius = 5.94 cm, detector bias = 1.6 MeV, flight path = 978.0 cm, view angle = 120° , and FWHM = 4.0 ns.

T(MID) NANOSEC	E(MID) MEV	COUNTS/ NANOSEC	COUNTS/ MEV	NEUTRONS/ MEV	SUM
1.877E+02	1.462E+01	1.530E-03	9.528E-03	8.939E-03	1.513E-03
1.887E+02	1.447E+01	2.737E-03	1.732E-02	1.631E-02	4.218E-03
1.897E+02	1.431E+01	6.028E-03	3.877E-02	3.664E-02	1.018E-02
1.907E+02	1.416E+01	1.440E-02	9.417E-02	8.930E-02	2.441E-02
1.917E+02	1.401E+01	3.242E-02	2.154E-01	2.049E-01	5.645E-02
1.927E+02	1.386E+01	5.994E-02	4.047E-01	3.863E-01	1.157E-01
1.937E+02	1.372E+01	8.921E-02	6.120E-01	5.858E-01	2.039E-01
1.947E+02	1.357E+01	9.978E-02	6.954E-01	6.676E-01	3.025E-01
1.957E+02	1.343E+01	8.177E-02	5.790E-01	5.567E-01	3.833E-01
1.966E+02	1.329E+01	5.461E-02	3.928E-01	3.776E-01	4.373E-01
1.976E+02	1.316E+01	2.994E-02	2.187E-01	2.103E-01	4.669E-01
1.986E+02	1.302E+01	1.431E-02	1.061E-01	1.020E-01	4.810E-01
1.996E+02	1.289E+01	6.469E-03	4.874E-02	4.676E-02	4.874E-01
2.006E+02	1.276E+01	3.311E-03	2.533E-02	2.424E-02	4.907E-01
2.015E+02	1.263E+01	1.855E-03	1.441E-02	1.375E-02	4.925E-01
2.026E+02	1.251E+01	1.524E-03	1.202E-02	1.144E-02	4.940E-01
2.036E+02	1.238E+01	1.190E-03	9.531E-03	9.036E-03	4.952E-01
2.046E+02	1.226E+01	1.128E-03	9.174E-03	8.663E-03	4.963E-01
2.055E+02	1.214E+01	9.209E-04	7.600E-03	7.148E-03	4.972E-01
2.065E+02	1.202E+01	9.371E-04	7.850E-03	7.353E-03	4.982E-01
2.090E+02	1.173E+01	8.155E-04	7.086E-03	6.533E-03	5.014E-01
2.130E+02	1.129E+01	7.717E-04	7.107E-03	6.388E-03	5.044E-01
2.169E+02	1.087E+01	7.401E-04	7.215E-03	6.331E-03	5.074E-01
2.209E+02	1.048E+01	7.125E-04	7.345E-03	6.293E-03	5.102E-01
2.248E+02	1.010E+01	7.190E-04	7.829E-03	6.561E-03	5.130E-01
2.288E+02	9.751E+00	7.231E-04	8.309E-03	6.817E-03	5.159E-01
2.327E+02	9.416E+00	7.409E-04	8.975E-03	7.218E-03	5.188E-01
2.367E+02	9.098E+00	8.123E-04	1.036E-02	8.181E-03	5.220E-01
2.406E+02	8.796E+00	8.917E-04	1.197E-02	9.273E-03	5.256E-01
2.446E+02	8.509E+00	9.882E-04	1.395E-02	1.062E-02	5.295E-01
2.485E+02	8.236E+00	1.146E-03	1.700E-02	1.285E-02	5.340E-01
2.525E+02	7.975E+00	1.226E-03	1.908E-02	1.425E-02	5.388E-01
2.564E+02	7.727E+00	1.317E-03	2.150E-02	1.577E-02	5.440E-01
2.604E+02	7.491E+00	1.406E-03	2.406E-02	1.735E-02	5.496E-01
2.644E+02	7.265E+00	1.595E-03	2.858E-02	2.027E-02	5.559E-01
2.683E+02	7.049E+00	1.817E-03	3.407E-02	2.378E-02	5.631E-01
2.723E+02	6.843E+00	2.107E-03	4.131E-02	2.841E-02	5.714E-01
2.762E+02	6.646E+00	2.285E-03	4.682E-02	3.199E-02	5.805E-01
2.802E+02	6.457E+00	2.495E-03	5.339E-02	3.672E-02	5.903E-01
2.841E+02	6.276E+00	2.703E-03	6.036E-02	4.127E-02	6.010E-01
2.881E+02	6.103E+00	2.956E-03	6.888E-02	4.647E-02	6.127E-01
2.920E+02	5.937E+00	3.080E-03	7.479E-02	4.994E-02	6.249E-01
2.960E+02	5.777E+00	3.375E-03	8.541E-02	5.664E-02	6.382E-01
2.999E+02	5.624E+00	3.722E-03	9.806E-02	6.462E-02	6.529E-01
3.039E+02	5.477E+00	3.960E-03	1.086E-01	7.118E-02	6.686E-01
3.078E+02	5.336E+00	4.258E-03	1.215E-01	7.945E-02	6.854E-01
3.118E+02	5.200E+00	4.619E-03	1.370E-01	8.943E-02	7.037E-01
3.157E+02	5.069E+00	4.803E-03	1.480E-01	9.645E-02	7.227E-01
3.197E+02	4.943E+00	5.066E-03	1.621E-01	1.056E-01	7.427E-01
3.237E+02	4.822E+00	5.542E-03	1.841E-01	1.200E-01	7.646E-01
3.276E+02	4.705E+00	5.562E-03	1.917E-01	1.250E-01	7.866E-01
3.316E+02	4.592E+00	5.919E-03	2.116E-01	1.380E-01	8.100E-01
3.355E+02	4.484E+00	6.085E-03	2.255E-01	1.472E-01	8.341E-01
3.395E+02	4.379E+00	6.483E-03	2.489E-01	1.630E-01	8.597E-01

Table 21. (cont.)

3.434E+02	4.278E+00	6.552E-03	2.606E-01	1.711E-01	8.856E-01
3.474E+02	4.180E+00	6.761E-03	2.784E-01	1.833E-01	9.123E-01
3.513E+02	4.086E+00	6.978E-03	2.974E-01	1.963E-01	9.399E-01
3.553E+02	3.994E+00	7.056E-03	3.111E-01	2.059E-01	9.678E-01
3.592E+02	3.906E+00	7.222E-03	3.293E-01	2.187E-01	9.964E-01
3.632E+02	3.821E+00	7.406E-03	3.491E-01	2.325E-01	1.026E+00
3.671E+02	3.739E+00	7.549E-03	3.677E-01	2.457E-01	1.055E+00
3.711E+02	3.659E+00	7.688E-03	3.869E-01	2.592E-01	1.086E+00
3.751E+02	3.581E+00	7.855E-03	4.082E-01	2.743E-01	1.117E+00
3.790E+02	3.506E+00	8.054E-03	4.320E-01	2.912E-01	1.149E+00
3.830E+02	3.434E+00	8.020E-03	4.440E-01	3.007E-01	1.180E+00
3.869E+02	3.364E+00	8.152E-03	4.655E-01	3.168E-01	1.213E+00
3.909E+02	3.295E+00	8.351E-03	4.918E-01	3.364E-01	1.246E+00
3.948E+02	3.229E+00	8.280E-03	5.027E-01	3.455E-01	1.278E+00
3.988E+02	3.165E+00	8.618E-03	5.392E-01	3.723E-01	1.313E+00
4.027E+02	3.103E+00	8.601E-03	5.545E-01	3.845E-01	1.347E+00
4.067E+02	3.042E 00	8.687E-03	5.768E-01	4.018E-01	1.381E+00
4.106E+02	2.984E+00	8.753E-03	5.985E-01	4.192E-01	1.416E+00
4.146E+02	2.927E+00	8.655E-03	6.092E-01	4.303E-01	1.450E+00
4.185E+02	2.871E+00	8.454E-03	6.124E-01	4.361E-01	1.483E+00
4.225E+02	2.818E+00	8.477E-03	6.317E-01	4.535E-01	1.517E+00
4.264E+02	2.765E+00	8.541E-03	6.547E-01	4.738E-01	1.550E+00
4.304E+02	2.714E+00	8.761E-03	6.906E-01	5.067E-01	1.585E+00
4.344E+02	2.665E+00	8.671E-03	7.026E-01	5.240E-01	1.619E+00
4.383E+02	2.617E+00	8.671E-03	7.221E-01	5.473E-01	1.654E+00
4.423E+02	2.570E+00	8.668E-03	7.417E-01	5.713E-01	1.688E+00
4.462E+02	2.524E+00	8.345E-03	7.335E-01	5.740E-01	1.721E+00
4.502E+02	2.480E+00	8.590E-03	7.755E-01	6.192E-01	1.755E+00
4.541E+02	2.437E+00	8.213E-03	7.613E-01	6.236E-01	1.787E+00
4.581E+02	2.395E+00	8.004E-03	7.616E-01	6.388E-01	1.819E+00
4.620E+02	2.354E+00	7.780E-03	7.597E-01	6.478E-01	1.850E+00
4.660E+02	2.314E+00	7.704E-03	7.720E-01	6.687E-01	1.880E+00
4.699E+02	2.275E+00	7.598E-03	7.810E-01	6.955E-01	1.910E+00
4.739E+02	2.237E+00	7.275E-03	7.670E-01	7.072E-01	1.939E+00
4.778E+02	2.200E+00	7.147E-03	7.726E-01	7.393E-01	1.967E+00
4.818E+02	2.164E+00	6.936E-03	7.686E-01	7.732E-01	1.995E+00
4.858E+02	2.128E+00	6.723E-03	7.637E-01	8.104E-01	2.021E+00
4.897E+02	2.094E+00	6.402E-03	7.452E-01	8.329E-01	2.047E+00
4.937E+02	2.061E+00	6.094E-03	7.268E-01	8.486E-01	2.071E+00
4.976E+02	2.028E+00	5.653E-03	6.906E-01	8.422E-01	2.093E+00
5.016E+02	1.996E+00	5.490E-03	6.870E-01	8.779E-01	2.115E+00
5.055E+02	1.965E+00	5.188E-03	6.647E-01	8.989E-01	2.135E+00
5.095E+02	1.934E+00	4.863E-03	6.379E-01	9.153E-01	2.154E+00
5.134E+02	1.904E+00	4.715E-03	6.330E-01	9.660E-01	2.173E+00
5.174E+02	1.875E+00	4.448E-03	6.112E-01	9.943E-01	2.191E+00
5.213E+02	1.847E+00	4.140E-03	5.821E-01	1.012E+00	2.207E+00
5.253E+02	1.819E+00	3.835E-03	5.516E-01	1.029E+00	2.222E+00
5.283E+02	1.798E+00	3.688E-03	5.389E-01	1.058E 00	2.229E+00

Table 22. ^{239}Pu emission spectrum from a solid sphere: outer radius = 3.52 cm, detector bias = 1.6 MeV, flight path = 801.4 cm, view angle = 26° , and FWHM = 4.1 ns.

T (MID) NANOSEC	E (MID) MEV	COUNTS/ NANOSEC	COUNTS/ MEV	NEUTRONS/ MEV	SUM
1.441E+02	1.671E+01	1.013E-04	4.209E-04	4.005E-04	1.062E-04
1.451E+02	1.649E+01	2.492E-04	1.060E-03	1.023E-03	3.677E-04
1.462E+02	1.625E+01	5.965E-04	2.594E-03	2.542E-03	9.934E-04
1.472E+02	1.601E+01	3.128E-03	1.391E-02	1.383E-02	4.274E-03
1.483E+02	1.578E+01	2.103E-02	9.562E-02	9.628E-02	2.633E-02
1.493E+02	1.555E+01	5.914E-02	2.750E-01	2.802E-01	8.838E-02
1.504E+02	1.532E+01	1.023E-01	4.859E-01	5.012E-01	1.956E-01
1.514E+02	1.511E+01	1.399E-01	6.795E-01	7.093E-01	3.424E-01
1.525E+02	1.489E+01	1.294E-01	6.422E-01	6.760E-01	4.782E-01
1.535E+02	1.468E+01	8.429E-02	4.274E-01	4.520E-01	5.666E-01
1.546E+02	1.448E+01	4.490E-02	2.325E-01	2.471E-01	6.137E-01
1.556E+02	1.428E+01	2.037E-02	1.077E-01	1.150E-01	6.351E-01
1.567E+02	1.408E+01	9.822E-03	5.305E-02	5.689E-02	6.454E-01
1.577E+02	1.389E+01	5.757E-03	3.175E-02	3.419E-02	6.514E-01
1.588E+02	1.370E+01	3.784E-03	2.131E-02	2.303E-02	6.554E-01
1.598E+02	1.352E+01	2.643E-03	1.519E-02	1.647E-02	6.581E-01
1.609E+02	1.334E+01	2.064E-03	1.210E-02	1.314E-02	6.603E-01
1.619E+02	1.316E+01	1.628E-03	9.742E-03	1.057E-02	6.620E-01
1.630E+02	1.299E+01	1.415E-03	8.642E-03	9.373E-03	6.635E-01
1.640E+02	1.282E+01	1.225E-03	7.632E-03	8.252E-03	6.648E-01
1.651E+02	1.265E+01	1.085E-03	6.895E-03	7.430E-03	6.659E-01
1.661E+02	1.249E+01	9.338E-04	6.052E-03	6.498E-03	6.669E-01
1.672E+02	1.233E+01	8.576E-04	5.667E-03	6.054E-03	6.678E-01
1.682E+02	1.217E+01	7.892E-04	5.317E-03	5.651E-03	6.686E-01
1.693E+02	1.201E+01	7.129E-04	4.897E-03	5.176E-03	6.694E-01
1.714E+02	1.171E+01	6.695E-04	4.777E-03	4.966E-03	6.715E-01
1.745E+02	1.129E+01	6.026E-04	4.549E-03	4.615E-03	6.734E-01
1.777E+02	1.088E+01	5.938E-04	4.738E-03	4.695E-03	6.752E-01
1.808E+02	1.050E+01	6.210E-04	5.231E-03	5.065E-03	6.772E-01
1.840E+02	1.013E+01	6.491E-04	5.767E-03	5.465E-03	6.792E-01
1.871E+02	9.788E+00	7.076E-04	6.625E-03	6.149E-03	6.815E-01
1.903E+02	9.460E+00	7.313E-04	7.208E-03	6.561E-03	6.838E-01
1.934E+02	9.149E+00	7.749E-04	8.033E-03	7.180E-03	6.862E-01
1.965E+02	8.853E+00	8.462E-04	9.218E-03	8.090E-03	6.889E-01
1.997E+02	8.571E+00	8.983E-04	1.023E-02	8.859E-03	6.917E-01
2.028E+02	8.302E+00	9.952E-04	1.195E-02	1.021E-02	6.948E-01
2.060E+02	8.046E+00	1.035E-03	1.302E-02	1.103E-02	6.981E-01
2.091E+02	7.802E+00	1.126E-03	1.484E-02	1.236E-02	7.016E-01
2.123E+02	7.569E+00	1.255E-03	1.731E-02	1.417E-02	7.056E-01
2.154E+02	7.346E+00	1.372E-03	1.981E-02	1.595E-02	7.099E-01
2.186E+02	7.133E+00	1.526E-03	2.303E-02	1.825E-02	7.147E-01
2.217E+02	6.929E+00	1.670E-03	2.633E-02	2.056E-02	7.200E-01
2.249E+02	6.733E+00	1.812E-03	2.982E-02	2.304E-02	7.257E-01
2.280E+02	6.546E+00	1.904E-03	3.270E-02	2.527E-02	7.316E-01
2.312E+02	6.367E+00	2.000E-03	3.582E-02	2.781E-02	7.379E-01
2.343E+02	6.195E+00	2.186E-03	4.080E-02	3.129E-02	7.448E-01
2.375E+02	6.029E+00	2.351E-03	4.570E-02	3.462E-02	7.522E-01
2.406E+02	5.871E+00	2.508E-03	5.076E-02	3.815E-02	7.601E-01
2.438E+02	5.718E+00	2.679E-03	5.642E-02	4.213E-02	7.685E-01
2.469E+02	5.572E+00	2.843E-03	6.225E-02	4.621E-02	7.775E-01
2.500E+02	5.431E+00	2.967E-03	6.751E-02	4.991E-02	7.868E-01
2.532E+02	5.295E+00	3.141E-03	7.426E-02	5.480E-02	7.967E-01
2.563E+02	5.164E+00	3.294E-03	8.086E-02	5.956E-02	8.071E-01
2.595E+02	5.039E+00	3.431E-03	8.741E-02	6.428E-02	8.179E-01

Table 22. (cont.)

2.626E+02	4.917E 00	3.618E-03	9.562E-02	7.031E-02	8.293E-01
2.658E+02	4.800E+00	3.775E-03	1.034E-01	7.609E-02	8.411E-01
2.689E+02	4.688E+00	3.916E-03	1.112E-01	8.185E-02	8.535E-01
2.721E+02	4.579E+00	3.946E-03	1.161E-01	8.549E-02	8.659E-01
2.752E+02	4.474E+00	4.105E-03	1.251E-01	9.221E-02	8.788E-01
2.784E+02	4.372E+00	4.206E-03	1.327E-01	9.807E-02	8.920E-01
2.815E+02	4.274E+00	4.266E-03	1.392E-01	1.032E-01	9.055E-01
2.847E+02	4.179E+00	4.315E-03	1.457E-01	1.083E-01	9.190E-01
2.878E+02	4.088E+00	4.438E-03	1.549E-01	1.154E-01	9.330E-01
2.910E+02	3.999E+00	4.493E-03	1.621E-01	1.211E-01	9.471E-01
2.941E+02	3.913E+00	4.571E-03	1.704E-01	1.276E-01	9.615E-01
2.973E+02	3.830E+00	4.619E-03	1.778E-01	1.336E-01	9.761E-01
3.004E+02	3.750E+00	4.716E-03	1.874E-01	1.413E-01	9.909E-01
3.035E+02	3.672E+00	4.729E-03	1.940E-01	1.467E-01	1.006E+00
3.067E+02	3.596E+00	4.866E-03	2.059E-01	1.561E-01	1.021E+00
3.098E+02	3.523E+00	4.798E-03	2.094E-01	1.592E-01	1.036E+00
3.130E+02	3.452E+00	4.906E-03	2.208E-01	1.686E-01	1.052E+00
3.161E+02	3.383E+00	4.891E-03	2.269E-01	1.741E-01	1.067E+00
3.193E+02	3.316E+00	4.923E-03	2.353E-01	1.814E-01	1.083E+00
3.224E+02	3.251E+00	4.994E-03	2.459E-01	1.905E-01	1.098E+00
3.256E+02	3.188E+00	4.984E-03	2.527E-01	1.966E-01	1.114E+00
3.287E+02	3.127E+00	5.077E-03	2.651E-01	2.071E-01	1.130E+00
3.319E+02	3.068E+00	5.193E-03	2.791E-01	2.190E-01	1.146E+00
3.350E+02	3.010E+00	5.187E-03	2.868E-01	2.261E-01	1.163E+00
3.382E+02	2.954E+00	5.071E-03	2.884E-01	2.291E-01	1.179E+00
3.413E+02	2.899E+00	4.860E-03	2.843E-01	2.276E-01	1.194E+00
3.445E+02	2.846E+00	4.963E-03	2.985E-01	2.408E-01	1.209E+00
3.476E+02	2.795E+00	4.912E-03	3.037E-01	2.469E-01	1.225E+00
3.508E+02	2.744E+00	4.963E-03	3.153E-01	2.588E-01	1.241E+00
3.539E+02	2.696E+00	4.900E-03	3.198E-01	2.666E-01	1.256E+00
3.570E+02	2.648E+00	4.797E-03	3.216E-01	2.723E-01	1.271E+00
3.602E+02	2.602E+00	4.685E-03	3.225E-01	2.773E-01	1.286E+00
3.633E+02	2.557E+00	4.628E-03	3.271E-01	2.857E-01	1.300E+00
3.665E+02	2.513E+00	4.564E-03	3.311E-01	2.937E-01	1.315E+00
3.696E+02	2.470E+00	4.530E-03	3.372E-01	3.057E-01	1.329E+00
3.728E+02	2.428E+00	4.350E-03	3.322E-01	3.088E-01	1.343E+00
3.759E+02	2.387E+00	4.310E-03	3.376E-01	3.208E-01	1.356E+00
3.791E+02	2.348E+00	4.161E-03	3.342E-01	3.224E-01	1.369E+00
3.822E+02	2.309E+00	4.058E-03	3.342E-01	3.276E-01	1.382E+00
3.854E+02	2.271E+00	3.882E-03	3.278E-01	3.305E-01	1.394E+00
3.885E+02	2.234E+00	3.741E-03	3.237E-01	3.376E-01	1.406E+00
3.917E+02	2.198E+00	3.643E-03	3.230E-01	3.494E-01	1.418E+00
3.948E+02	2.163E+00	3.439E-03	3.124E-01	3.549E-01	1.428E+00
3.980E+02	2.129E+00	3.359E-03	3.125E-01	3.735E-01	1.439E+00
4.011E+02	2.096E+00	3.124E-03	2.977E-01	3.747E-01	1.449E+00
4.043E+02	2.063E+00	2.914E-03	2.843E-01	3.734E-01	1.458E+00
4.074E+02	2.031E+00	2.757E-03	2.752E-01	3.771E-01	1.467E+00
4.105E+02	2.000E+00	2.635E-03	2.693E-01	3.858E-01	1.475E+00
4.137E+02	1.970E+00	2.465E-03	2.578E-01	3.897E-01	1.483E+00
4.168E+02	1.940E+00	2.308E-03	2.469E-01	3.953E-01	1.490E+00
4.200E+02	1.911E+00	2.185E-03	2.391E-01	4.063E-01	1.497E+00
4.231E+02	1.882E+00	2.012E-03	2.252E-01	4.069E-01	1.503E+00
4.258E+02	1.859E+00	1.896E-03	2.158E-01	4.092E-01	1.507E+00

Table 23. ²³⁹Pu emission spectrum from a solid sphere: outer radius = 3.52 cm, detector bias = 2.2 MeV, flight path = 979.4 cm, view angle = 120°, and FWHM = 2.7 ns.

T(MID) NANOSEC	E(MID) MEV	COUNTS/ NANOSEC	COUNTS/ MEV	NEUTRONS/ MEV	SUM
1.860E+02	1.495E+01	2.195E-04	1.323E-03	1.300E-03	2.302E-04
1.870E+02	1.478E+01	4.972E-04	3.050E-03	2.994E-03	7.517E-04
1.881E+02	1.461E+01	1.095E-03	6.836E-03	6.703E-03	1.900E-03
1.891E+02	1.444E+01	2.525E-03	1.604E-02	1.570E-02	4.549E-03
1.902E+02	1.428E+01	5.363E-03	3.466E-02	3.390E-02	1.017E-02
1.912E+02	1.412E+01	1.282E-02	8.428E-02	8.233E-02	2.362E-02
1.923E+02	1.396E+01	4.403E-02	2.945E-01	2.870E-01	6.981E-02
1.933E+02	1.381E+01	1.395E-01	9.489E-01	9.195E-01	2.161E-01
1.944E+02	1.365E+01	2.275E-01	1.574E+00	1.517E+00	4.548E-01
1.954E+02	1.350E+01	1.681E-01	1.183E+00	1.135E+00	6.312E-01
1.965E+02	1.335E+01	6.964E-02	4.982E-01	4.762E-01	7.042E-01
1.975E+02	1.321E+01	2.471E-02	1.797E-01	1.712E-01	7.301E-01
1.986E+02	1.307E+01	1.142E-02	8.445E-02	8.015E-02	7.421E-01
1.996E+02	1.293E+01	6.210E-03	4.667E-02	4.405E-02	7.486E-01
2.007E+02	1.279E+01	4.061E-03	3.102E-02	2.906E-02	7.529E-01
2.017E+02	1.265E+01	2.677E-03	2.079E-02	1.933E-02	7.557E-01
2.028E+02	1.252E+01	1.923E-03	1.517E-02	1.401E-02	7.577E-01
2.038E+02	1.238E+01	1.485E-03	1.191E-02	1.092E-02	7.593E-01
2.049E+02	1.225E+01	1.133E-03	9.226E-03	8.402E-03	7.605E-01
2.059E+02	1.213E+01	1.014E-03	8.390E-03	7.590E-03	7.615E-01
2.070E+02	1.200E+01	8.694E-04	7.310E-03	6.570E-03	7.624E-01
2.091E+02	1.176E+01	7.077E-04	6.139E-03	5.449E-03	7.647E-01
2.122E+02	1.140E+01	6.313E-04	5.736E-03	5.000E-03	7.667E-01
2.154E+02	1.106E+01	5.711E-04	5.431E-03	4.655E-03	7.685E-01
2.185E+02	1.074E+01	5.933E-04	5.901E-03	4.979E-03	7.703E-01
2.217E+02	1.043E+01	5.744E-04	5.970E-03	4.962E-03	7.721E-01
2.248E+02	1.013E+01	5.744E-04	6.236E-03	5.111E-03	7.739E-01
2.280E+02	9.850E+00	5.764E-04	6.532E-03	5.271E-03	7.757E-01
2.311E+02	9.578E+00	5.836E-04	6.900E-03	5.475E-03	7.776E-01
2.343E+02	9.317E+00	6.176E-04	7.612E-03	5.946E-03	7.795E-01
2.374E+02	9.067E+00	6.802E-04	8.736E-03	6.724E-03	7.817E-01
2.405E+02	8.827E+00	7.223E-04	9.659E-03	7.348E-03	7.839E-01
2.437E+02	8.597E+00	7.825E-04	1.089E-02	8.202E-03	7.864E-01
2.468E+02	8.375E+00	8.072E-04	1.169E-02	8.717E-03	7.889E-01
2.500E+02	8.162E+00	8.415E-04	1.267E-02	9.363E-03	7.916E-01
2.531E+02	7.957E+00	9.179E-04	1.436E-02	1.052E-02	7.945E-01
2.563E+02	7.759E+00	9.632E-04	1.565E-02	1.137E-02	7.975E-01
2.594E+02	7.569E+00	1.002E-03	1.690E-02	1.218E-02	8.007E-01
2.626E+02	7.386E+00	1.099E-03	1.923E-02	1.376E-02	8.041E-01
2.657E+02	7.209E+00	1.153E-03	2.093E-02	1.487E-02	8.078E-01
2.689E+02	7.039E+00	1.318E-03	2.479E-02	1.749E-02	8.119E-01
2.720E+02	6.875E+00	1.338E-03	2.608E-02	1.834E-02	8.161E-01
2.752E+02	6.716E+00	1.449E-03	2.927E-02	2.054E-02	8.207E-01
2.783E+02	6.563E+00	1.612E-03	3.370E-02	2.360E-02	8.257E-01
2.815E+02	6.415E+00	1.624E-03	3.515E-02	2.456E-02	8.309E-01
2.846E+02	6.272E+00	1.763E-03	3.947E-02	2.753E-02	8.364E-01
2.878E+02	6.134E+00	1.800E-03	4.167E-02	2.901E-02	8.421E-01
2.909E+02	6.000E+00	1.913E-03	4.580E-02	3.183E-02	8.481E-01
2.940E+02	5.871E+00	1.998E-03	4.941E-02	3.434E-02	8.544E-01
2.972E+02	5.746E+00	2.081E-03	5.316E-02	3.694E-02	8.609E-01
3.003E+02	5.624E+00	2.225E-03	5.869E-02	4.079E-02	8.679E-01
3.035E+02	5.507E+00	2.291E-03	6.240E-02	4.338E-02	8.751E-01
3.066E+02	5.393E+00	2.370E-03	6.660E-02	4.641E-02	8.826E-01
3.098E+02	5.283E+00	2.482E-03	7.195E-02	5.029E-02	8.904E-01

Table 23. (cont.)

3.129E+02	5.176E+00	2.549E-03	7.620E-02	5.342E-02	8.984E-01
3.161E+02	5.073E+00	2.605E-03	8.030E-02	5.645E-02	9.066E-01
3.192E+02	4.972E+00	2.744E-03	8.715E-02	6.151E-02	9.153E-01
3.224E+02	4.874E+00	2.882E-03	9.431E-02	6.702E-02	9.243E-01
3.255E+02	4.780E+00	2.900E-03	9.774E-02	6.992E-02	9.335E-01
3.287E+02	4.688E+00	2.999E-03	1.041E-01	7.497E-02	9.429E-01
3.318E+02	4.598E+00	3.004E-03	1.073E-01	7.780E-02	9.523E-01
3.350E+02	4.511E+00	2.996E-03	1.102E-01	8.036E-02	9.618E-01
3.381E+02	4.427E+00	3.020E-03	1.142E-01	8.414E-02	9.713E-01
3.413E+02	4.345E+00	3.111E-03	1.210E-01	9.008E-02	9.811E-01
3.444E+02	4.265E+00	3.091E-03	1.237E-01	9.296E-02	9.908E-01
3.475E+02	4.188E+00	3.103E-03	1.276E-01	9.688E-02	1.001E+00
3.507E+02	4.112E+00	3.101E-03	1.311E-01	1.005E-01	1.010E+00
3.538E+02	4.039E+00	3.072E-03	1.334E-01	1.033E-01	1.020E+00
3.570E+02	3.967E+00	3.108E-03	1.386E-01	1.085E-01	1.030E+00
3.601E+02	3.898E+00	3.121E-03	1.430E-01	1.133E-01	1.040E+00
3.633E+02	3.830E+00	3.138E-03	1.476E-01	1.184E-01	1.049E+00
3.664E+02	3.764E+00	3.126E-03	1.509E-01	1.226E-01	1.059E+00
3.696E+02	3.700E+00	3.091E-03	1.532E-01	1.259E-01	1.069E+00
3.727E+02	3.637E+00	3.061E-03	1.556E-01	1.295E-01	1.079E+00
3.759E+02	3.576E+00	2.975E-03	1.552E-01	1.306E-01	1.088E+00
3.790E+02	3.516E+00	2.954E-03	1.580E-01	1.346E-01	1.097E+00
3.822E+02	3.458E+00	2.866E-03	1.572E-01	1.362E-01	1.106E+00
3.853E+02	3.401E+00	2.869E-03	1.613E-01	1.424E-01	1.115E+00
3.885E+02	3.346E+00	2.839E-03	1.636E-01	1.472E-01	1.124E+00
3.916E+02	3.292E+00	2.747E-03	1.623E-01	1.490E-01	1.133E+00
3.948E+02	3.240E+00	2.735E-03	1.655E-01	1.563E-01	1.142E+00
3.979E+02	3.188E+00	2.622E-03	1.625E-01	1.579E-01	1.150E+00
4.010E+02	3.138E+00	2.560E-03	1.625E-01	1.624E-01	1.158E+00
4.042E+02	3.089E+00	2.439E-03	1.585E-01	1.634E-01	1.166E+00
4.073E+02	3.041E+00	2.421E-03	1.611E-01	1.726E-01	1.173E+00
4.105E+02	2.994E+00	2.379E-03	1.621E-01	1.809E-01	1.181E+00
4.136E+02	2.949E+00	2.286E-03	1.594E-01	1.869E-01	1.188E+00
4.168E+02	2.904E+00	2.068E-03	1.475E-01	1.821E-01	1.194E+00
4.199E+02	2.860E+00	1.958E-03	1.428E-01	1.860E-01	1.201E+00
4.231E+02	2.818E+00	1.831E-03	1.366E-01	1.879E-01	1.206E+00
4.262E+02	2.776E+00	1.761E-03	1.344E-01	1.955E-01	1.212E+00
4.294E+02	2.735E+00	1.660E-03	1.296E-01	1.999E-01	1.217E+00
4.325E+02	2.695E+00	1.595E-03	1.272E-01	2.091E-01	1.222E+00

Table 24. Emission spectrum from the stainless steel container identical to the one used for the ^{239}Pu experiments: flight path = 801.4 cm, view angle = 26° , detector bias = 1.6 MeV, and FWHM = 4.1 ns.

T (MID) NANOSEC	E (MID) MEV	COUNTS/ NANOSEC	COUNTS/ MEV	NEUTRONS/ MEV	SUM
1.441E+02	1.674E+01	4.489E-05	1.865E-04	1.775E-04	4.708E-05
1.451E+02	1.649E+01	8.852E-05	3.764E-04	3.635E-04	1.399E-04
1.462E+02	1.625E+01	2.057E-04	8.946E-04	8.768E-04	3.558E-04
1.472E+02	1.601E+01	1.458E-03	6.482E-03	6.445E-03	1.885E-03
1.483E+02	1.578E+01	2.420E-02	1.100E-01	1.108E-01	2.727E-02
1.493E+02	1.555E+01	8.152E-02	3.790E-01	3.862E-01	1.128E-01
1.504E+02	1.532E+01	1.436E-01	6.822E-01	7.036E-01	2.634E-01
1.514E+02	1.511E+01	2.072E-01	1.006E+00	1.050E+00	4.807E-01
1.525E+02	1.489E+01	1.959E-01	9.723E-01	1.023E+00	6.862E-01
1.535E+02	1.468E+01	1.250E-01	6.339E-01	6.705E-01	8.174E-01
1.546E+02	1.448E+01	6.519E-02	3.376E-01	3.587E-01	8.858E-01
1.556E+02	1.428E+01	2.681E-02	1.418E-01	1.514E-01	9.139E-01
1.567E+02	1.408E+01	1.145E-02	6.185E-02	6.632E-02	9.259E-01
1.577E+02	1.389E+01	6.172E-03	3.404E-02	3.665E-02	9.324E-01
1.588E+02	1.370E+01	3.896E-03	2.194E-02	2.371E-02	9.365E-01
1.598E+02	1.352E+01	2.835E-03	1.629E-02	1.767E-02	9.395E-01
1.609E+02	1.334E+01	1.951E-03	1.144E-02	1.242E-02	9.415E-01
1.619E+02	1.316E+01	1.603E-03	9.597E-03	1.041E-02	9.432E-01
1.630E+02	1.299E+01	1.421E-03	8.680E-03	9.414E-03	9.447E-01
1.640E+02	1.282E+01	1.145E-03	7.130E-03	7.710E-03	9.459E-01
1.672E+02	1.233E+01	6.673E-04	4.408E-03	4.707E-03	9.494E-01
1.724E+02	1.157E+01	2.870E-04	2.086E-03	2.152E-03	9.509E-01
1.777E+02	1.088E+01	1.943E-04	1.549E-03	1.536E-03	9.519E-01
1.829E+02	1.025E+01	2.030E-04	1.771E-03	1.691E-03	9.530E-01
1.882E+02	9.677E+00	2.020E-04	1.923E-03	1.774E-03	9.540E-01
1.934E+02	9.149E+00	1.840E-04	1.907E-03	1.705E-03	9.550E-01
1.986E+02	8.663E+00	1.626E-04	1.830E-03	1.587E-03	9.559E-01
2.039E+02	8.216E+00	1.606E-04	1.958E-03	1.669E-03	9.567E-01
2.091E+02	7.802E+00	1.519E-04	2.002E-03	1.667E-03	9.575E-01
2.144E+02	7.419E+00	1.671E-04	2.376E-03	1.924E-03	9.584E-01
2.196E+02	7.064E+00	1.731E-04	2.650E-03	2.090E-03	9.593E-01
2.249E+02	6.733E+00	1.758E-04	2.893E-03	2.237E-03	9.602E-01
2.301E+02	6.426E+00	1.945E-04	3.435E-03	2.663E-03	9.612E-01
2.354E+02	6.139E+00	1.982E-04	3.750E-03	2.865E-03	9.623E-01
2.406E+02	5.871E+00	2.120E-04	4.289E-03	3.223E-03	9.634E-01
2.459E+02	5.620E+00	2.189E-04	4.731E-03	3.519E-03	9.645E-01
2.511E+02	5.385E+00	2.097E-04	4.833E-03	3.571E-03	9.656E-01
2.563E+02	5.164E+00	2.284E-04	5.606E-03	4.130E-03	9.668E-01
2.616E+02	4.957E+00	2.257E-04	5.891E-03	4.331E-03	9.680E-01
2.668E+02	4.762E+00	2.157E-04	5.981E-03	4.401E-03	9.691E-01
2.721E+02	4.579E+00	2.227E-04	6.551E-03	4.824E-03	9.703E-01
2.773E+02	4.406E+00	2.294E-04	7.152E-03	5.282E-03	9.715E-01
2.826E+02	4.242E+00	2.304E-04	7.604E-03	5.641E-03	9.727E-01
2.878E+02	4.088E+00	2.267E-04	7.910E-03	5.893E-03	9.739E-01
2.931E+02	3.941E+00	2.222E-04	8.190E-03	6.130E-03	9.751E-01
2.983E+02	3.803E+00	2.302E-04	8.953E-03	6.736E-03	9.763E-01
3.035E+02	3.672E+00	2.371E-04	9.726E-03	7.353E-03	9.775E-01
3.088E+02	3.547E+00	2.391E-04	1.033E-02	7.847E-03	9.788E-01
3.140E+02	3.429E+00	2.379E-04	1.081E-02	8.270E-03	9.800E-01
3.193E+02	3.316E+00	2.299E-04	1.099E-02	8.472E-03	9.812E-01
3.245E+02	3.209E+00	2.531E-04	1.271E-02	9.874E-03	9.825E-01
3.298E+02	3.107E+00	3.242E-04	1.709E-02	1.337E-02	9.842E-01
3.350E+02	3.010E+00	3.055E-04	1.689E-02	1.332E-02	9.859E-01
3.403E+02	2.917E+00	2.760E-04	1.600E-02	1.277E-02	9.873E-01

Table 24. (cont.)

3.455E+02	2.829E+00	2.581E-04	1.567E-02	1.267E-02	9.887E-01
3.508E+02	2.744E+00	2.950E-04	1.874E-02	1.539E-02	9.902E-01
3.560E+02	2.664E+00	2.454E-04	1.630E-02	1.373E-02	9.915E-01
3.612E+02	2.586E+00	2.179E-04	1.513E-02	1.308E-02	9.926E-01
3.665E+02	2.513E+00	2.299E-04	1.668E-02	1.480E-02	9.938E-01
3.717E+02	2.442E+00	2.002E-04	1.516E-02	1.397E-02	9.949E-01
3.770E+02	2.374E+00	2.140E-04	1.690E-02	1.614E-02	9.960E-01
3.822E+02	2.309E+00	1.945E-04	1.602E-02	1.572E-02	9.970E-01
3.875E+02	2.247E+00	1.818E-04	1.560E-02	1.609E-02	9.980E-01
3.927E+02	2.187E+00	1.855E-04	1.658E-02	1.822E-02	9.990E-01
3.980E+02	2.129E+00	1.726E-04	1.605E-02	1.920E-02	9.999E-01
4.032E+02	2.074E+00	1.514E-04	1.465E-02	1.897E-02	1.001E+00
4.084E+02	2.021E+00	1.401E-04	1.410E-02	1.960E-02	1.001E+00
4.137E+02	1.970E+00	1.319E-04	1.379E-02	2.085E-02	1.002E+00
4.189E+02	1.920E+00	1.247E-04	1.354E-02	2.255E-02	1.003E+00
4.242E+02	1.873E+00	1.070E-04	1.206E-02	2.226E-02	1.003E+00

Table 25. Emission spectrum from the stainless steel container identical to the one used for the ^{239}Pu experiments: flight path 979.4 cm, view angle = 120° , detector bias = 2.2 MeV, and FWHM = 2.7 ns.

T(MID) NANOSEC	E(MID) MEV	COUNTS/ NANOSEC	COUNTS/ MEV	NEUTRONS/ MEV	SUM
1.880E+02	1.463E+01	3.759E-04	2.343E-03	2.297E-03	3.943E-04
1.890E+02	1.446E+01	9.031E-04	5.727E-03	5.609E-03	1.342E-03
1.901E+02	1.430E+01	2.362E-03	1.524E-02	1.491E-02	3.819E-03
1.911E+02	1.413E+01	6.924E-03	4.545E-02	4.441E-02	1.108E-02
1.922E+02	1.398E+01	3.474E-02	2.320E-01	2.261E-01	4.752E-02
1.932E+02	1.382E+01	1.564E-01	1.062E+00	1.030E+00	2.116E-01
1.943E+02	1.367E+01	3.095E-01	2.138E+00	2.061E+00	5.363E-01
1.953E+02	1.352E+01	2.443E-01	1.716E+00	1.647E+00	7.925E-01
1.964E+02	1.337E+01	9.938E-02	7.098E-01	6.787E-01	8.968E-01
1.974E+02	1.322E+01	3.344E-02	2.429E-01	2.314E-01	9.319E-01
1.985E+02	1.308E+01	1.432E-02	1.057E-01	1.004E-01	9.469E-01
1.995E+02	1.294E+01	7.979E-03	5.988E-02	5.655E-02	9.553E-01
2.006E+02	1.280E+01	5.024E-03	3.832E-02	3.592E-02	9.605E-01
2.016E+02	1.266E+01	3.246E-03	2.516E-02	2.342E-02	9.639E-01
2.027E+02	1.253E+01	2.307E-03	1.818E-02	1.680E-02	9.664E-01
2.037E+02	1.240E+01	1.662E-03	1.331E-02	1.221E-02	9.681E-01
2.048E+02	1.227E+01	1.279E-03	1.040E-02	9.480E-03	9.694E-01
2.058E+02	1.214E+01	9.693E-04	8.011E-03	7.251E-03	9.705E-01
2.069E+02	1.201E+01	7.825E-04	6.570E-03	5.908E-03	9.713E-01
2.079E+02	1.189E+01	6.478E-04	5.525E-03	4.936E-03	9.720E-01
2.090E+02	1.177E+01	4.941E-04	4.280E-03	3.801E-03	9.725E-01
2.121E+02	1.141E+01	3.683E-04	3.341E-03	2.914E-03	9.744E-01
2.174E+02	1.086E+01	2.771E-04	2.711E-03	2.300E-03	9.759E-01
2.226E+02	1.034E+01	2.487E-04	2.619E-03	2.168E-03	9.772E-01
2.279E+02	9.859E+00	1.995E-04	2.258E-03	1.823E-03	9.782E-01
2.331E+02	9.411E+00	1.839E-04	2.233E-03	1.754E-03	9.792E-01
2.384E+02	8.994E+00	1.962E-04	2.551E-03	1.956E-03	9.802E-01
2.436E+02	8.604E+00	1.655E-04	2.300E-03	1.733E-03	9.811E-01
2.488E+02	8.238E+00	1.480E-04	2.196E-03	1.629E-03	9.818E-01
2.541E+02	7.896E+00	1.546E-04	2.446E-03	1.788E-03	9.827E-01
2.593E+02	7.575E+00	1.442E-04	2.429E-03	1.752E-03	9.834E-01
2.646E+02	7.273E+00	1.546E-04	2.769E-03	1.972E-03	9.842E-01
2.698E+02	6.989E+00	1.641E-04	3.120E-03	2.199E-03	9.851E-01
2.751E+02	6.721E+00	1.683E-04	3.395E-03	2.382E-03	9.860E-01
2.803E+02	6.468E+00	1.792E-04	3.829E-03	2.678E-03	9.869E-01
2.856E+02	6.230E+00	1.835E-04	4.149E-03	2.892E-03	9.879E-01
2.908E+02	6.004E+00	1.693E-04	4.047E-03	2.813E-03	9.888E-01
2.960E+02	5.791E+00	1.962E-04	4.954E-03	3.443E-03	9.898E-01
3.013E+02	5.589E+00	1.891E-04	5.037E-03	3.501E-03	9.908E-01
3.065E+02	5.397E+00	1.730E-04	4.858E-03	3.385E-03	9.917E-01
3.118E+02	5.215E+00	1.527E-04	4.515E-03	3.161E-03	9.925E-01
3.170E+02	5.042E+00	1.868E-04	5.809E-03	4.087E-03	9.935E-01
3.223E+02	4.877E+00	1.792E-04	5.859E-03	4.162E-03	9.944E-01
3.275E+02	4.721E+00	1.915E-04	6.576E-03	4.724E-03	9.954E-01
3.328E+02	4.572E+00	1.721E-04	6.202E-03	4.504E-03	9.963E-01
3.380E+02	4.430E+00	1.797E-04	6.790E-03	4.999E-03	9.973E-01
3.433E+02	4.294E+00	1.830E-04	7.246E-03	5.427E-03	9.982E-01
3.485E+02	4.165E+00	1.660E-04	6.882E-03	5.240E-03	9.991E-01
3.537E+02	4.041E+00	1.726E-04	7.488E-03	5.794E-03	1.000E+00
3.590E+02	3.923E+00	1.645E-04	7.466E-03	5.888E-03	1.001E+00
3.642E+02	3.810E+00	1.660E-04	7.869E-03	6.336E-03	1.002E+00
3.695E+02	3.702E+00	1.683E-04	8.334E-03	6.849E-03	1.003E+00
3.747E+02	3.598E+00	1.570E-04	8.112E-03	6.799E-03	1.003E+00
3.800E+02	3.498E+00	1.556E-04	8.394E-03	7.177E-03	1.004E+00

Table 25. (cont.)

3.852E+02	3.403E+00	1.584E-04	8.899E-03	7.852E-03	1.005E+00
3.905E+02	3.312E+00	1.641E-04	9.603E-03	8.753E-03	1.006E+00
3.957E+02	3.224E+00	1.584E-04	9.654E-03	9.193E-03	1.007E+00
4.009E+02	3.140E+00	1.381E-04	8.757E-03	8.743E-03	1.007E+00
4.062E+02	3.058E+00	1.087E-04	7.174E-03	7.576E-03	1.008E+00
4.114E+02	2.980E+00	1.187E-04	8.139E-03	9.218E-03	1.009E+00
4.167E+02	2.905E+00	1.121E-04	7.985E-03	9.841E-03	1.009E+00
4.219E+02	2.833E+00	8.463E-05	6.264E-03	8.440E-03	1.010E+00
4.256E+02	2.784E+00	9.338E-05	7.082E-03	1.014E-02	1.010E+00

Table 26. ^{238}U emission spectrum from a solid sphere: outer radius = 3.63 cm, detector bias = 1.6 MeV, flight path = 945.3 cm, view angle = 26° , and FWHM = 4.0 ns.

T (MID) NANOSEC	E (MID) MEV	COUNTS/ NANOSEC	COUNTS/ MEV	NEUTRONS/ MEV	SUM
1.734E+02	1.591E+01	3.881E-04	2.061E-03	2.060E-03	6.151E-04
1.750E+02	1.562E+01	5.014E-03	2.739E-02	2.781E-02	8.563E-03
1.765E+02	1.533E+01	2.928E-02	1.645E-01	1.696E-01	5.497E-02
1.781E+02	1.506E+01	8.701E-02	5.025E-01	5.258E-01	1.929E-01
1.797E+02	1.478E+01	1.350E-01	8.013E-01	8.455E-01	4.068E-01
1.813E+02	1.452E+01	9.522E-02	5.808E-01	6.165E-01	5.577E-01
1.829E+02	1.427E+01	3.364E-02	2.108E-01	2.251E-01	6.111E-01
1.845E+02	1.402E+01	8.926E-03	5.745E-02	6.169E-02	6.252E-01
1.860E+02	1.377E+01	3.662E-03	2.420E-02	2.612E-02	6.310E-01
1.876E+02	1.354E+01	2.292E-03	1.555E-02	1.685E-02	6.346E-01
1.892E+02	1.331E+01	1.744E-03	1.214E-02	1.318E-02	6.374E-01
1.908E+02	1.308E+01	1.329E-03	9.493E-03	1.030E-02	6.395E-01
1.924E+02	1.286E+01	1.123E-03	8.226E-03	8.902E-03	6.413E-01
1.940E+02	1.265E+01	1.016E-03	7.632E-03	8.225E-03	6.429E-01
1.956E+02	1.244E+01	8.476E-04	6.532E-03	7.004E-03	6.443E-01
1.971E+02	1.224E+01	7.170E-04	5.665E-03	6.034E-03	6.454E-01
1.987E+02	1.204E+01	7.102E-04	5.751E-03	6.084E-03	6.465E-01
2.019E+02	1.166E+01	5.877E-04	4.995E-03	5.176E-03	6.493E-01
2.067E+02	1.112E+01	5.551E-04	5.068E-03	5.093E-03	6.519E-01
2.114E+02	1.061E+01	5.201E-04	5.092E-03	4.965E-03	6.544E-01
2.162E+02	1.014E+01	4.917E-04	5.154E-03	4.887E-03	6.568E-01
2.209E+02	9.706E+00	5.340E-04	5.983E-03	5.527E-03	6.593E-01
2.257E+02	9.295E+00	5.110E-04	6.111E-03	5.509E-03	6.617E-01
2.304E+02	8.910E+00	5.247E-04	6.688E-03	5.891E-03	6.642E-01
2.352E+02	8.548E+00	5.439E-04	7.380E-03	6.358E-03	6.668E-01
2.399E+02	8.208E+00	5.388E-04	7.771E-03	6.626E-03	6.694E-01
2.447E+02	7.889E+00	5.545E-04	8.491E-03	7.116E-03	6.720E-01
2.494E+02	7.587E+00	5.974E-04	9.702E-03	7.953E-03	6.748E-01
2.542E+02	7.303E+00	6.165E-04	1.060E-02	8.513E-03	6.778E-01
2.590E+02	7.034E+00	6.453E-04	1.174E-02	9.243E-03	6.808E-01
2.637E+02	6.780E+00	6.930E-04	1.333E-02	1.032E-02	6.841E-01
2.685E+02	6.539E+00	7.112E-04	1.445E-02	1.117E-02	6.875E-01
2.732E+02	6.311E+00	7.726E-04	1.655E-02	1.281E-02	6.912E-01
2.780E+02	6.095E+00	8.035E-04	1.814E-02	1.381E-02	6.950E-01
2.827E+02	5.890E+00	8.340E-04	1.983E-02	1.491E-02	6.990E-01
2.875E+02	5.695E+00	8.839E-04	2.211E-02	1.649E-02	7.032E-01
2.922E+02	5.510E+00	9.274E-04	2.438E-02	1.806E-02	7.076E-01
2.970E+02	5.333E+00	9.639E-04	2.661E-02	1.965E-02	7.122E-01
3.018E+02	5.165E+00	9.959E-04	2.885E-02	2.125E-02	7.169E-01
3.065E+02	5.005E+00	1.050E-03	3.190E-02	2.346E-02	7.219E-01
3.113E+02	4.852E+00	1.108E-03	3.528E-02	2.595E-02	7.272E-01
3.160E+02	4.706E+00	1.190E-03	3.966E-02	2.919E-02	7.328E-01
3.208E+02	4.566E+00	1.203E-03	4.196E-02	3.090E-02	7.386E-01
3.255E+02	4.433E+00	1.198E-03	4.368E-02	3.224E-02	7.443E-01
3.303E+02	4.305E+00	1.233E-03	4.695E-02	3.477E-02	7.501E-01
3.350E+02	4.183E+00	1.252E-03	4.979E-02	3.700E-02	7.561E-01
3.398E+02	4.066E+00	1.291E-03	5.358E-02	3.995E-02	7.622E-01
3.445E+02	3.954E+00	1.323E-03	5.726E-02	4.284E-02	7.685E-01
3.493E+02	3.846E+00	1.318E-03	5.947E-02	4.467E-02	7.748E-01
3.541E+02	3.743E+00	1.378E-03	6.477E-02	4.884E-02	7.813E-01
3.588E+02	3.644E+00	1.351E-03	6.612E-02	5.004E-02	7.877E-01
3.636E+02	3.549E+00	1.378E-03	7.018E-02	5.330E-02	7.943E-01
3.683E+02	3.457E+00	1.462E-03	7.744E-02	5.910E-02	8.012E-01
3.731E+02	3.369E+00	1.452E-03	7.997E-02	6.142E-02	8.081E-01

Table 26. (cont.)

3.778E+02	3.285E+00	1.507E-03	8.625E-02	6.664E-02	8.153E-01
3.826E+02	3.203E+00	1.590E-03	9.444E-02	7.340E-02	8.229E-01
3.873E+02	3.124E+00	1.655E-03	1.021E-01	7.981E-02	8.307E-01
3.921E+02	3.049E+00	1.657E-03	1.061E-01	8.335E-02	8.386E-01
3.969E+02	2.976E+00	1.632E-03	1.083E-01	8.571E-02	8.464E-01
4.016E+02	2.905E+00	1.573E-03	1.082E-01	8.657E-02	8.539E-01
4.064E+02	2.837E+00	1.596E-03	1.138E-01	9.191E-02	8.615E-01
4.111E+02	2.772E+00	1.579E-03	1.166E-01	9.514E-02	8.690E-01
4.159E+02	2.709E+00	1.542E-03	1.179E-01	9.780E-02	8.763E-01
4.206E+02	2.647E+00	1.491E-03	1.179E-01	9.986E-02	8.834E-01
4.254E+02	2.588E+00	1.477E-03	1.209E-01	1.044E-01	8.904E-01
4.301E+02	2.531E+00	1.473E-03	1.247E-01	1.099E-01	8.974E-01
4.349E+02	2.476E+00	1.461E-03	1.278E-01	1.155E-01	9.044E-01
4.396E+02	2.423E+00	1.371E-03	1.239E-01	1.155E-01	9.109E-01
4.444E+02	2.371E+00	1.353E-03	1.263E-01	1.208E-01	9.173E-01
4.492E+02	2.321E+00	1.304E-03	1.258E-01	1.226E-01	9.235E-01
4.539E+02	2.272E+00	1.280E-03	1.274E-01	1.284E-01	9.296E-01
4.587E+02	2.225E+00	1.229E-03	1.263E-01	1.329E-01	9.355E-01
4.634E+02	2.179E+00	1.165E-03	1.235E-01	1.370E-01	9.410E-01
4.682E+02	2.135E+00	1.098E-03	1.199E-01	1.421E-01	9.462E-01
4.729E+02	2.092E+00	1.036E-03	1.167E-01	1.475E-01	9.511E-01
4.777E+02	2.051E+00	9.287E-04	1.078E-01	1.439E-01	9.556E-01
4.824E+02	2.010E+00	9.196E-04	1.100E-01	1.551E-01	9.599E-01
4.872E+02	1.971E+00	8.454E-04	1.041E-01	1.569E-01	9.640E-01
4.920E+02	1.933E+00	7.948E-04	1.008E-01	1.635E-01	9.677E-01
4.967E+02	1.896E+00	7.199E-04	9.400E-02	1.647E-01	9.712E-01
5.015E+02	1.860E+00	6.517E-04	8.757E-02	1.664E-01	9.743E-01
5.062E+02	1.826E+00	5.949E-04	8.225E-02	1.702E-01	9.771E-01
5.110E+02	1.792E+00	5.216E-04	7.416E-02	1.692E-01	9.796E-01

Table 27. ²³⁸U emission spectrum from a solid sphere: outer radius = 3.63 cm, detector bias = 1.6 MeV, flight path = 980.1 cm, view angle = 120°, and FWHM = 3.5 ns.

T (MID) NANOSEC	E (MID) MEV	COUNTS/ NANOSEC	COUNTS/ MEV	NEUTRONS/ MEV	SUM
1.840E+02	1.516E+01	2.107E-04	1.248E-03	1.151E-03	3.339E-04
1.856E+02	1.490E+01	8.228E-04	5.006E-03	4.667E-03	1.638E-03
1.872E+02	1.464E+01	3.369E-03	2.104E-02	1.973E-02	6.977E-03
1.888E+02	1.439E+01	1.640E-02	1.052E-01	9.920E-02	3.298E-02
1.904E+02	1.415E+01	7.880E-02	5.184E-01	4.918E-01	1.579E-01
1.920E+02	1.391E+01	1.640E-01	1.107E+00	1.055E+00	4.177E-01
1.935E+02	1.368E+01	1.175E-01	8.133E-01	7.791E-01	6.039E-01
1.951E+02	1.345E+01	4.596E-02	3.263E-01	3.137E-01	6.768E-01
1.967E+02	1.323E+01	1.038E-02	7.555E-02	7.263E-02	6.932E-01
1.983E+02	1.302E+01	3.236E-03	2.415E-02	2.321E-02	6.983E-01
1.999E+02	1.281E+01	2.136E-03	1.634E-02	1.564E-02	7.017E-01
2.015E+02	1.260E+01	1.615E-03	1.266E-02	1.207E-02	7.043E-01
2.031E+02	1.240E+01	1.298E-03	1.042E-02	9.888E-03	7.063E-01
2.046E+02	1.221E+01	1.107E-03	9.101E-03	8.579E-03	7.081E-01
2.062E+02	1.202E+01	1.012E-03	8.522E-03	7.980E-03	7.097E-01
2.078E+02	1.183E+01	9.293E-04	8.011E-03	7.426E-03	7.112E-01
2.094E+02	1.165E+01	8.534E-04	7.531E-03	6.908E-03	7.125E-01
2.110E+02	1.147E+01	8.276E-04	7.474E-03	6.787E-03	7.138E-01
2.126E+02	1.130E+01	7.350E-04	6.792E-03	6.107E-03	7.150E-01
2.142E+02	1.113E+01	6.835E-04	6.462E-03	5.755E-03	7.161E-01
2.173E+02	1.080E+01	6.554E-04	6.481E-03	5.662E-03	7.192E-01
2.221E+02	1.033E+01	5.825E-04	6.156E-03	5.230E-03	7.220E-01
2.268E+02	9.898E+00	5.256E-04	5.928E-03	4.907E-03	7.245E-01
2.316E+02	9.490E+00	5.291E-04	6.358E-03	5.137E-03	7.270E-01
2.363E+02	9.107E+00	5.294E-04	6.769E-03	5.347E-03	7.295E-01
2.411E+02	8.746E+00	5.263E-04	7.153E-03	5.524E-03	7.320E-01
2.459E+02	8.406E+00	5.595E-04	8.072E-03	6.125E-03	7.347E-01
2.506E+02	8.086E+00	5.563E-04	8.508E-03	6.398E-03	7.373E-01
2.554E+02	7.784E+00	5.814E-04	9.417E-03	6.938E-03	7.401E-01
2.601E+02	7.499E+00	5.816E-04	9.966E-03	7.191E-03	7.428E-01
2.649E+02	7.229E+00	5.990E-04	1.085E-02	7.672E-03	7.457E-01
2.696E+02	6.973E+00	6.693E-04	1.280E-02	8.882E-03	7.489E-01
2.744E+02	6.731E+00	7.123E-04	1.436E-02	9.829E-03	7.523E-01
2.791E+02	6.502E+00	7.485E-04	1.590E-02	1.091E-02	7.558E-01
2.839E+02	6.283E+00	7.399E-04	1.655E-02	1.132E-02	7.593E-01
2.886E+02	6.076E+00	7.870E-04	1.851E-02	1.247E-02	7.631E-01
2.934E+02	5.879E+00	8.611E-04	2.128E-02	1.418E-02	7.672E-01
2.982E+02	5.691E+00	8.998E-04	2.336E-02	1.543E-02	7.715E-01
3.029E+02	5.512E+00	9.191E-04	2.503E-02	1.643E-02	7.758E-01
3.077E+02	5.342E+00	9.897E-04	2.826E-02	1.848E-02	7.805E-01
3.124E+02	5.179E+00	1.041E-03	3.114E-02	2.033E-02	7.855E-01
3.172E+02	5.024E+00	1.058E-03	3.313E-02	2.159E-02	7.905E-01
3.219E+02	4.875E+00	1.128E-03	3.696E-02	2.408E-02	7.959E-01
3.267E+02	4.733E+00	1.130E-03	3.869E-02	2.522E-02	8.013E-01
3.314E+02	4.598E+00	1.193E-03	4.269E-02	2.784E-02	8.069E-01
3.362E+02	4.467E+00	1.236E-03	4.618E-02	3.017E-02	8.128E-01
3.410E+02	4.343E+00	1.236E-03	4.817E-02	3.157E-02	8.187E-01
3.457E+02	4.223E+00	1.230E-03	5.001E-02	3.289E-02	8.245E-01
3.505E+02	4.109E+00	1.254E-03	5.313E-02	3.505E-02	8.305E-01
3.552E+02	3.999E+00	1.299E-03	5.733E-02	3.794E-02	8.367E-01
3.600E+02	3.893E+00	1.330E-03	6.112E-02	4.060E-02	8.430E-01
3.647E+02	3.792E+00	1.373E-03	6.563E-02	4.376E-02	8.495E-01
3.695E+02	3.694E+00	1.353E-03	6.728E-02	4.502E-02	8.560E-01
3.742E+02	3.600E+00	1.409E-03	7.282E-02	4.890E-02	8.627E-01

Table 27. (cont.)

3.790E+02	3.510E+00	1.433E-03	7.695E-02	5.186E-02	8.695E-01
3.837E+02	3.423E+00	1.434E-03	7.993E-02	5.417E-02	8.763E-01
3.885E+02	3.340E+00	1.458E-03	8.437E-02	5.753E-02	8.832E-01
3.933E+02	3.259E+00	1.490E-03	8.944E-02	6.133E-02	8.903E-01
3.980E+02	3.181E+00	1.530E-03	9.523E-02	6.567E-02	8.976E-01
4.028E+02	3.106E+00	1.517E-03	9.785E-02	6.785E-02	9.048E-01
4.075E+02	3.034E+00	1.601E-03	1.070E-01	7.457E-02	9.124E-01
4.123E+02	2.964E+00	1.554E-03	1.076E-01	7.557E-02	9.198E-01
4.170E+02	2.896E+00	1.519E-03	1.089E-01	7.725E-02	9.270E-01
4.218E+02	2.831E+00	1.523E-03	1.129E-01	8.091E-02	9.343E-01
4.265E+02	2.768E+00	1.560E-03	1.197E-01	8.657E-02	9.417E-01
4.313E+02	2.707E+00	1.550E-03	1.230E-01	9.045E-02	9.491E-01
4.361E+02	2.648E+00	1.492E-03	1.223E-01	9.173E-02	9.562E-01
4.408E+02	2.591E+00	1.539E-03	1.303E-01	9.967E-02	9.635E-01
4.456E+02	2.536E+00	1.488E-03	1.302E-01	1.015E-01	9.705E-01
4.503E+02	2.482E+00	1.466E-03	1.324E-01	1.056E-01	9.775E-01
4.551E+02	2.430E+00	1.493E-03	1.392E-01	1.145E-01	9.846E-01
4.598E+02	2.380E+00	1.436E-03	1.382E-01	1.166E-01	9.914E-01
4.646E+02	2.332E+00	1.468E-03	1.457E-01	1.253E-01	9.984E-01
4.693E+02	2.284E+00	1.472E-03	1.507E-01	1.330E-01	1.005E+00
4.741E+02	2.239E+00	1.401E-03	1.479E-01	1.361E-01	1.012E+00
4.788E+02	2.194E+00	1.291E-03	1.404E-01	1.353E-01	1.018E+00
4.836E+02	2.151E+00	1.206E-03	1.351E-01	1.384E-01	1.024E+00
4.884E+02	2.109E+00	1.167E-03	1.346E-01	1.471E-01	1.030E+00
4.931E+02	2.069E+00	1.100E-03	1.307E-01	1.509E-01	1.035E+00
4.979E+02	2.029E+00	1.081E-03	1.322E-01	1.608E-01	1.040E+00
5.026E+02	1.991E+00	1.010E-03	1.271E-01	1.638E-01	1.045E+00
5.074E+02	1.954E+00	9.384E-04	1.215E-01	1.677E-01	1.049E+00
5.121E+02	1.917E+00	8.676E-04	1.155E-01	1.714E-01	1.053E+00
5.169E+02	1.882E+00	7.833E-04	1.072E-01	1.717E-01	1.057E+00
5.216E+02	1.848E+00	7.367E-04	1.037E-01	1.797E-01	1.061E+00
5.264E+02	1.815E+00	6.844E-04	9.898E-02	1.867E-01	1.064E+00
5.312E+02	1.782E+00	5.876E-04	8.731E-02	1.824E-01	1.067E+00

Table 28. ²³⁸U emission spectrum from a solid sphere: outer radius = 10.92 cm, detector bias = 1.6 MeV, flight path = 746.3 cm, view angle = 26°, and FWHM = 4.0 ns.

T(MID) NANOSEC	E(MID) MEV	COUNTS/ NANOSEC	COUNTS/ MEV	NEUTRONS/ MEV	SUM
1.358E+02	1.617E+01	1.380E-04	5.649E-04	5.563E-04	2.187E-04
1.374E+02	1.579E+01	2.227E-03	9.453E-03	9.512E-03	3.748E-03
1.390E+02	1.542E+01	1.497E-02	6.584E-02	6.757E-02	2.748E-02
1.406E+02	1.507E+01	4.117E-02	1.875E-01	1.961E-01	9.273E-02
1.422E+02	1.472E+01	4.517E-02	2.130E-01	2.251E-01	1.643E-01
1.438E+02	1.439E+01	2.313E-02	1.129E-01	1.202E-01	2.010E-01
1.453E+02	1.407E+01	8.306E-03	4.194E-02	4.498E-02	2.141E-01
1.469E+02	1.376E+01	3.582E-03	1.871E-02	2.019E-02	2.198E-01
1.485E+02	1.347E+01	2.089E-03	1.128E-02	1.223E-02	2.231E-01
1.501E+02	1.318E+01	1.423E-03	7.934E-03	8.610E-03	2.254E-01
1.517E+02	1.290E+01	1.216E-03	7.005E-03	7.586E-03	2.273E-01
1.533E+02	1.263E+01	1.074E-03	6.387E-03	6.879E-03	2.290E-01
1.548E+02	1.236E+01	9.657E-04	5.929E-03	6.342E-03	2.305E-01
1.564E+02	1.211E+01	8.197E-04	5.193E-03	5.508E-03	2.318E-01
1.580E+02	1.186E+01	8.117E-04	5.304E-03	5.562E-03	2.331E-01
1.596E+02	1.163E+01	7.533E-04	5.076E-03	5.249E-03	2.343E-01
1.612E+02	1.139E+01	7.394E-04	5.136E-03	5.242E-03	2.355E-01
1.644E+02	1.095E+01	6.457E-04	4.760E-03	4.737E-03	2.386E-01
1.691E+02	1.033E+01	6.691E-04	5.384E-03	5.163E-03	2.417E-01
1.739E+02	9.767E+00	6.564E-04	5.750E-03	5.332E-03	2.449E-01
1.786E+02	9.247E+00	6.445E-04	6.132E-03	5.513E-03	2.479E-01
1.834E+02	8.767E+00	6.835E-04	7.047E-03	6.151E-03	2.512E-01
1.881E+02	8.323E+00	7.085E-04	7.899E-03	6.754E-03	2.545E-01
1.929E+02	7.913E+00	7.314E-04	8.800E-03	7.388E-03	2.580E-01
1.976E+02	7.532E+00	8.414E-04	1.090E-02	8.904E-03	2.620E-01
2.024E+02	7.179E+00	8.382E-04	1.168E-02	9.290E-03	2.660E-01
2.072E+02	6.849E+00	9.367E-04	1.401E-02	1.089E-02	2.705E-01
2.119E+02	6.542E+00	9.881E-04	1.583E-02	1.225E-02	2.752E-01
2.167E+02	6.255E+00	1.102E-03	1.889E-02	1.456E-02	2.804E-01
2.214E+02	5.987E+00	1.140E-03	2.087E-02	1.578E-02	2.858E-01
2.262E+02	5.736E+00	1.284E-03	2.508E-02	1.874E-02	2.919E-01
2.309E+02	5.500E+00	1.343E-03	2.794E-02	2.069E-02	2.983E-01
2.357E+02	5.278E+00	1.413E-03	3.127E-02	2.307E-02	3.050E-01
2.404E+02	5.070E+00	1.509E-03	3.548E-02	2.611E-02	3.122E-01
2.452E+02	4.874E+00	1.595E-03	3.977E-02	2.924E-02	3.198E-01
2.499E+02	4.689E+00	1.663E-03	4.400E-02	3.238E-02	3.277E-01
2.547E+02	4.514E+00	1.674E-03	4.690E-02	3.456E-02	3.357E-01
2.595E+02	4.349E+00	1.711E-03	5.068E-02	3.749E-02	3.438E-01
2.642E+02	4.193E+00	1.769E-03	5.535E-02	4.112E-02	3.522E-01
2.690E+02	4.045E+00	1.856E-03	6.131E-02	4.574E-02	3.610E-01
2.737E+02	3.905E+00	1.911E-03	6.655E-02	4.988E-02	3.701E-01
2.785E+02	3.772E+00	1.914E-03	7.024E-02	5.291E-02	3.792E-01
2.832E+02	3.645E+00	1.948E-03	7.522E-02	5.632E-02	3.885E-01
2.880E+02	3.525E+00	1.964E-03	7.977E-02	6.065E-02	3.978E-01
2.927E+02	3.411E+00	2.057E-03	8.778E-02	6.721E-02	4.076E-01
2.975E+02	3.302E+00	2.019E-03	9.047E-02	6.981E-02	4.172E-01
3.023E+02	3.199E+00	2.111E-03	9.924E-02	7.715E-02	4.272E-01
3.070E+02	3.100E+00	2.146E-03	1.057E-01	8.278E-02	4.374E-01
3.118E+02	3.006E+00	2.130E-03	1.099E-01	8.672E-02	4.476E-01
3.165E+02	2.916E+00	2.144E-03	1.158E-01	9.251E-02	4.578E-01
3.213E+02	2.829E+00	2.102E-03	1.188E-01	9.610E-02	4.678E-01
3.260E+02	2.747E+00	2.083E-03	1.230E-01	1.010E-01	4.777E-01
3.308E+02	2.668E+00	2.072E-03	1.279E-01	1.075E-01	4.875E-01
3.355E+02	2.593E+00	2.064E-03	1.329E-01	1.147E-01	4.973E-01

Table 28. (cont.)

3.403E+02	2.521E+00	2.040E-03	1.371E-01	1.213E-01	5.070E-01
3.450E+02	2.452E+00	1.962E-03	1.375E-01	1.260E-01	5.164E-01
3.498E+02	2.385E+00	1.922E-03	1.404E-01	1.334E-01	5.255E-01
3.546E+02	2.321E+00	1.817E-03	1.382E-01	1.348E-01	5.341E-01
3.593E+02	2.260E+00	1.750E-03	1.386E-01	1.412E-01	5.425E-01
3.641E+02	2.201E+00	1.680E-03	1.384E-01	1.494E-01	5.504E-01
3.688E+02	2.145E+00	1.562E-03	1.338E-01	1.564E-01	5.579E-01
3.736E+02	2.090E+00	1.455E-03	1.296E-01	1.643E-01	5.648E-01
3.783E+02	2.038E+00	1.370E-03	1.267E-01	1.721E-01	5.713E-01
3.831E+02	1.987E+00	1.289E-03	1.239E-01	1.813E-01	5.774E-01
3.878E+02	1.939E+00	1.146E-03	1.143E-01	1.833E-01	5.829E-01
3.926E+02	1.892E+00	1.063E-03	1.099E-01	1.944E-01	5.879E-01
3.974E+02	1.847E+00	9.552E-04	1.025E-01	2.010E-01	5.925E-01
4.021E+02	1.803E+00	8.387E-04	9.323E-02	2.051E-01	5.965E-01
4.069E+02	1.761E+00	7.185E-04	8.275E-02	2.112E-01	5.999E-01

Table 29. ²³⁸U emission spectrum from a solid sphere: outer radius = 10.92 cm, detector bias = 1.6 MeV, flight path = 980.1 cm, view angle = 120°, and FWHM = 3.6 ns.

T(MID) NANOSEC	E(MID) MEV	COUNTS/ NANOSEC	COUNTS/ MEV	NEUTRONS/ MEV	SUM
1.852E+02	1.498E+01	2.726E-04	1.645E-03	1.530E-03	4.321E-04
1.867E+02	1.472E+01	1.403E-03	8.693E-03	8.139E-03	2.655E-03
1.883E+02	1.446E+01	5.736E-03	3.649E-02	3.436E-02	1.175E-02
1.899E+02	1.422E+01	2.211E-02	1.443E-01	1.367E-01	4.679E-02
1.915E+02	1.398E+01	4.898E-02	3.281E-01	3.124E-01	1.244E-01
1.931E+02	1.375E+01	4.673E-02	3.211E-01	3.072E-01	1.985E-01
1.947E+02	1.352E+01	2.421E-02	1.706E-01	1.639E-01	2.369E-01
1.962E+02	1.330E+01	9.005E-03	6.507E-02	6.256E-02	2.511E-01
1.978E+02	1.308E+01	3.295E-03	2.440E-02	2.346E-02	2.564E-01
1.994E+02	1.287E+01	1.649E-03	1.252E-02	1.201E-02	2.590E-01
2.010E+02	1.266E+01	1.260E-03	9.804E-03	9.362E-03	2.610E-01
2.026E+02	1.246E+01	1.030E-03	8.210E-03	7.803E-03	2.626E-01
2.042E+02	1.226E+01	9.726E-04	7.940E-03	7.498E-03	2.641E-01
2.058E+02	1.207E+01	8.068E-04	6.745E-03	6.330E-03	2.654E-01
2.073E+02	1.188E+01	8.315E-04	7.117E-03	6.619E-03	2.667E-01
2.089E+02	1.170E+01	7.795E-04	6.830E-03	6.285E-03	2.680E-01
2.105E+02	1.152E+01	7.918E-04	7.101E-03	6.467E-03	2.692E-01
2.137E+02	1.118E+01	6.922E-04	6.499E-03	5.805E-03	2.725E-01
2.184E+02	1.069E+01	6.457E-04	6.485E-03	5.628E-03	2.756E-01
2.232E+02	1.023E+01	5.959E-04	6.394E-03	5.399E-03	2.784E-01
2.279E+02	9.801E+00	5.858E-04	6.706E-03	5.519E-03	2.812E-01
2.327E+02	9.398E+00	5.671E-04	6.915E-03	5.556E-03	2.839E-01
2.375E+02	9.020E+00	5.836E-04	7.570E-03	5.948E-03	2.867E-01
2.422E+02	8.665E+00	6.315E-04	8.704E-03	6.686E-03	2.897E-01
2.470E+02	8.330E+00	6.205E-04	9.076E-03	6.874E-03	2.926E-01
2.517E+02	8.014E+00	6.452E-04	1.000E-02	7.491E-03	2.957E-01
2.565E+02	7.716E+00	6.680E-04	1.096E-02	8.038E-03	2.989E-01
2.612E+02	7.435E+00	7.023E-04	1.219E-02	8.755E-03	3.022E-01
2.660E+02	7.168E+00	7.963E-04	1.460E-02	1.028E-02	3.060E-01
2.707E+02	6.916E+00	8.068E-04	1.562E-02	1.080E-02	3.098E-01
2.755E+02	6.677E+00	8.721E-04	1.780E-02	1.217E-02	3.140E-01
2.802E+02	6.450E+00	9.041E-04	1.944E-02	1.336E-02	3.183E-01
2.850E+02	6.234E+00	9.548E-04	2.161E-02	1.473E-02	3.228E-01
2.898E+02	6.029E+00	1.032E-03	2.456E-02	1.648E-02	3.277E-01
2.945E+02	5.834E+00	1.128E-03	2.821E-02	1.875E-02	3.331E-01
2.993E+02	5.649E+00	1.139E-03	2.989E-02	1.972E-02	3.385E-01
3.040E+02	5.472E+00	1.226E-03	3.377E-02	2.214E-02	3.443E-01
3.088E+02	5.303E+00	1.250E-03	3.607E-02	2.359E-02	3.503E-01
3.135E+02	5.142E+00	1.289E-03	3.897E-02	2.543E-02	3.564E-01
3.183E+02	4.989E+00	1.383E-03	4.377E-02	2.851E-02	3.630E-01
3.230E+02	4.842E+00	1.438E-03	4.761E-02	3.102E-02	3.698E-01
3.278E+02	4.701E+00	1.481E-03	5.125E-02	3.342E-02	3.769E-01
3.326E+02	4.567E+00	1.558E-03	5.629E-02	3.673E-02	3.843E-01
3.373E+02	4.438E+00	1.547E-03	5.837E-02	3.816E-02	3.916E-01
3.421E+02	4.315E+00	1.590E-03	6.259E-02	4.105E-02	3.992E-01
3.468E+02	4.196E+00	1.650E-03	6.772E-02	4.456E-02	4.070E-01
3.516E+02	4.083E+00	1.639E-03	7.010E-02	4.627E-02	4.148E-01
3.563E+02	3.974E+00	1.619E-03	7.211E-02	4.776E-02	4.225E-01
3.611E+02	3.869E+00	1.674E-03	7.760E-02	5.159E-02	4.305E-01
3.658E+02	3.769E+00	1.705E-03	8.223E-02	5.488E-02	4.386E-01
3.706E+02	3.672E+00	1.755E-03	8.805E-02	5.897E-02	4.469E-01
3.753E+02	3.579E+00	1.847E-03	9.629E-02	6.472E-02	4.557E-01
3.801E+02	3.490E+00	1.784E-03	9.664E-02	6.521E-02	4.642E-01
3.849E+02	3.403E+00	1.808E-03	1.017E-01	6.901E-02	4.728E-01

Table 29. (cont.)

3.896E+02	3.320E+00	1.862E-03	1.086E-01	7.417E-02	4.817E-01
3.944E+02	3.240E+00	1.862E-03	1.127E-01	7.740E-02	4.905E-01
3.991E+02	3.163E+00	1.896E-03	1.190E-01	8.219E-02	4.995E-01
4.039E+02	3.089E+00	1.931E-03	1.256E-01	8.719E-02	5.087E-01
4.086E+02	3.017E+00	1.971E-03	1.328E-01	9.273E-02	5.181E-01
4.134E+02	2.948E+00	1.921E-03	1.340E-01	9.437E-02	5.272E-01
4.181E+02	2.881E+00	1.874E-03	1.353E-01	9.625E-02	5.361E-01
4.229E+02	2.816E+00	1.920E-03	1.435E-01	1.031E-01	5.453E-01
4.277E+02	2.754E+00	1.899E-03	1.468E-01	1.065E-01	5.543E-01
4.324E+02	2.693E+00	1.922E-03	1.537E-01	1.135E-01	5.634E-01
4.372E+02	2.635E+00	1.883E-03	1.555E-01	1.172E-01	5.724E-01
4.419E+02	2.578E+00	1.907E-03	1.628E-01	1.250E-01	5.814E-01
4.467E+02	2.523E+00	1.856E-03	1.636E-01	1.281E-01	5.903E-01
4.514E+02	2.470E+00	1.821E-03	1.658E-01	1.331E-01	5.989E-01
4.562E+02	2.419E+00	1.815E-03	1.705E-01	1.412E-01	6.076E-01
4.609E+02	2.369E+00	1.734E-03	1.681E-01	1.425E-01	6.158E-01
4.657E+02	2.320E+00	1.730E-03	1.729E-01	1.494E-01	6.240E-01
4.704E+02	2.274E+00	1.724E-03	1.777E-01	1.584E-01	6.322E-01
4.752E+02	2.228E+00	1.632E-03	1.734E-01	1.611E-01	6.400E-01
4.800E+02	2.184E+00	1.614E-03	1.767E-01	1.726E-01	6.477E-01
4.847E+02	2.141E+00	1.484E-03	1.673E-01	1.741E-01	6.547E-01
4.895E+02	2.100E+00	1.435E-03	1.667E-01	1.847E-01	6.615E-01
4.942E+02	2.059E+00	1.316E-03	1.573E-01	1.839E-01	6.678E-01
4.990E+02	2.020E+00	1.299E-03	1.599E-01	1.970E-01	6.740E-01
5.037E+02	1.982E+00	1.270E-03	1.608E-01	2.105E-01	6.800E-01
5.085E+02	1.945E+00	1.186E-03	1.546E-01	2.170E-01	6.856E-01
5.132E+02	1.909E+00	1.100E-03	1.475E-01	2.227E-01	6.909E-01
5.180E+02	1.874E+00	1.020E-03	1.405E-01	2.292E-01	6.957E-01
5.228E+02	1.840E+00	9.484E-04	1.343E-01	2.374E-01	7.002E-01
5.275E+02	1.807E+00	8.324E-04	1.211E-01	2.334E-01	7.042E-01
5.323E+02	1.775E+00	7.434E-04	1.112E-01	2.387E-01	7.077E-01
5.370E+02	1.743E+00	6.868E-04	1.055E-01	2.566E-01	7.110E-01

Table 30. Measured integrals and integrals calculated with the ENDL library for the neutron emission spectra over the energy range of 10-15 MeV for nitrogen and oxygen and 12-15 MeV for the heavy elements. The data are expressed as the ratio of total counts target-in to total counts target-out.

Target	Figure	Path length (g/cm ²)	View angle (deg)	Experimental integral	Calculated integral	Calculated/ experimental
N	2	9.13	26	0.793	0.774	0.976
		8.13	120	0.808	0.801	0.991
N	3	14.98	26	0.635	0.640	1.008
		14.47	120	0.655	0.661	1.009
O	2	12.52	26	0.736	0.729	0.990
		11.05	120	0.753	0.761	1.011
W	4	25.48	26	0.801	0.814	1.016
			120	0.807	0.815	1.010
		50.95	26	0.684	0.667	0.975
			120	0.666	0.658	0.988
		101.90	26	0.452	0.428	0.947
			120	0.441	0.424	0.961
		189.80	26	0.228	0.205	0.899
		174.20	120	0.273	0.241	0.883
²³⁵ U (shell)	5	52.23	26	0.662	0.679	1.026
			120	0.657	0.684	1.041
²³⁵ U	7	48.94	26	0.700	0.699	0.999
		33.83	120	0.781	0.780	0.999
²³⁵ U	8	101.20	26	0.458	0.471	1.028
		86.10	120	0.498	0.534	1.072
²³⁹ PU	6	44.50	26	0.669	0.700	1.001
		28.70	120	0.762	0.787	1.033
²³⁸ U	9	59.10	26	0.647	0.643	0.994
		43.70	120	0.710	0.725	1.021
²³⁸ U	10	198.10	26	0.232	0.218	0.940
		182.70	120	0.266	0.265	0.996

Fig. 1. Time-of-flight geometry of the target spheres and collimated neutron detectors.

Zone	Density (g/cm ³)	Material	At. %
1	1.14	Liquid oxygen	100
2	7.9	Fe	68.6
		Cr	20.0
		Ni	8.4
		Si	2.0
		Mn	1.0
or:			
1	0.808	Liquid nitrogen	100
2	7.9	Steel	Same as above

Fig. 2. Dimensions of the small vacuum dewar used in the 0.5-mfp liquid oxygen and nitrogen experiments.

Zone	Density (g/cm ³)	Material	At. %
1	0.808	Liquid nitrogen	100.0
2	7.9	Fe	68.6
		Cr	20.0
		Ni	8.4
		Si	2.0
		Mn	1.0
3	ICT low-mass tritiated target (See Fig. 6, Ref. 3)		

Fig. 3. Dimensions of the vacuum dewar used in the 1-mfp liquid nitrogen experiment.

Experiment ~ mfp	Shell Combinations
0.5	A
1	A + B
2	A + B + C
3	A + B + C + D

Fig. 4. Dimensions of the tungsten target spheres.

Zone	Density (g/cm ³)	Material	At.%
1	18.7	²³⁵ U ²³⁸ U	93.5 6.5
2	2.70	Al	100

Fig. 5. Dimensions of the ²³⁵U spherical shell target.

Zone	Density (g/cm^3)	Material	At. %
1	15.76	^{239}Pu	90.5
		^{240}Pu	6.1
		Gd	3.4
2	7.90	Fe	68.6
		Cr	20.0
		Ni	8.4
		Si	2.0
		Mn	1.0

Fig. 6. Dimensions of the ^{239}Pu solid spherical target.

Zone	Density (g/cm^3)	Material	At. %
1	18.7	^{235}U ^{238}U	93.5 6.5
2	8.62	Cd	100.0

Fig. 7. Dimensions of the small ^{235}U solid spherical target.

Zone	Density (g/cm ³)	Material	At. %
1	18.7	²³⁵ U ²³⁸ U	93.5 6.5
2	2.70	Al	100

Fig. 8. Dimensions of the large ²³⁵U solid spherical target.

Density g/cm ³	Material	At. %
19.04	²³⁸ U	99
	C + Si	1

Fig. 10. Dimensions of the large ²³⁸U solid spherical target.

Fig. 11. Liquid nitrogen emission spectrum: outer radius = 10.48 cm, detector bias = 1.6 MeV, flight path = 782.3 cm, view angle = 26° , and FWHM = 3.7 ns.

Fig. 12. Liquid nitrogen emission spectrum: outer radius = 10.48 cm, detector bias = 2.2 MeV, flight path = 996.6 cm, view angle = 120° , and FWHM = 2.9 ns.

Fig. 13. Liquid nitrogen emission spectrum: outer radius = 19.05 cm, detector bias = 1.6 MeV, flight path = 782.3 cm, view angle = 26° , and FWHM = 3.7 ns.

Fig. 14. Liquid nitrogen emission spectrum: outer radius = 19.05 cm, detector bias = 2.2 MeV, flight path = 996.6 cm, view angle = 120° , and FWHM = 2.9 ns.

Fig. 15. Liquid oxygen emission spectrum: outer radius = 10.48 cm, detector bias = 1.6 MeV, flight path = 782.3 cm, view angle = 26° , and FWHM = 3.5 ns.

Fig. 16. Liquid oxygen emission spectrum: outer radius = 10.48 cm, detector bias = 2.2 MeV, flight path = 996.6 cm, view angle = 120° , and FWHM = 2.7 ns.

Fig. 17. Tungsten emission spectrum: inner radius = 9.04 cm, detector bias = 1.6 MeV, flight path = 801.4 cm, view angle = 26°, and FWHM = 4.1 ns.

Fig. 18. Tungsten emission spectrum: inner radius = 9.04 cm, detector bias = 2.2 MeV, flight path = 979.4 cm, view angle = 120° , and FWHM = 3.1 ns.

Fig. 19. Tungsten emission spectrum: inner radius = 7.72 cm, detector bias = 1.6 MeV, flight path = 801.4 cm, view angle = 26°, and FWHM = 4.1 ns.

Fig. 20. Tungsten emission spectrum: inner radius = 7.72 cm, detector bias = 2.2 MeV, flight path = 979.4 cm, view angle = 120° , and FWHM = 3.1 ns.

Fig. 21. Tungsten emission spectrum: inner radius = 5.08 cm, detector bias = 1.6 MeV, flight path = 801.4 cm, view angle = 26° , and FWHM = 4.1 ns.

Fig. 22. Tungsten emission spectrum: inner radius = 5.08 cm, detector bias = 2.2 MeV, flight path = 979.4 cm, view angle 120° , and FWHM = 3.1 ns.

Fig. 23. Tungsten emission spectrum: inner radius = 0.475 cm, detector bias = 1.6 MeV, flight path = 801.4 cm, view angle = 26° , and FWHM = 4.1 ns.

Fig. 24. Tungsten emission spectrum: inner radius = 0.475 cm, detector bias = 2.2 MeV, flight path = 979.4 cm, view angle = 120° , and FWHM = 3.1 ns.

Fig. 25. ^{235}U emission spectrum from a spherical shell: inner radius = 3.93 cm, detector bias = 1.6 MeV, flight path = 801.4 cm, view angle = 26° , and FWHM = 4.1 ns.

Fig. 26. ^{235}U emission spectrum from a spherical shell: inner radius = 3.93 cm, detector bias = 2.2 MeV, flight path = 979.4 cm, view angle = 120° , and FWHM = 2.7 ns.

Fig. 27. ^{235}U emission spectrum from a solid sphere: outer radius = 3.15 cm, detector bias = 1.6 MeV, flight path = 945.3 cm, view angle = 26° , and FWHM = 4.2 ns.

Fig. 28. ^{235}U emission spectrum from a solid sphere: outer radius = 3.15 cm, detector bias = 1.6 MeV, flight path = 980.1 cm, view angle = 120° , and FWHM = 3.9 ns.

Fig. 29. ^{235}U emission spectrum from a solid sphere: outer radius = 5.94 cm, detector bias = 1.6 MeV, flight path = 767.2 cm, view angle = 30° , and FWHM = 4.5 ns.

Fig. 30. ^{235}U emission spectrum from a solid sphere: outer radius = 5.94 cm, detector bias = 1.6 MeV, flight path = 978.0 cm, view angle = 120° , and FWHM = 4.0 ns.

Fig. 31. ^{239}Pu emission spectrum from a solid sphere: outer radius = 3.52 cm, detector bias = 1.6 MeV, flight path = 801.4 cm, view angle = 26° , and FWHM = 4.1 ns.

Fig. 32. ^{239}Pu emission spectrum from a solid sphere: outer radius = 3.52 cm, detector bias = 2.2 MeV, flight path = 979.4 cm, view angle = 120° , and FWHM = 2.7 ns.

Fig. 33. ^{238}U emission spectrum from a solid sphere: outer radius = 3.63 cm, detector bias = 1.6 MeV, flight path = 945.3 cm, view angle = 26° , and FWHM = 4.0 ns.

Fig. 34. ^{238}U emission spectrum from a solid sphere: outer radius = 3.63 cm, detector bias = 1.6 MeV, flight path 980.1 cm, view angle = 120° , and FWHM = 3.5 ns.

Fig. 35. ^{238}U emission spectrum from a solid sphere: outer radius = 10.92 cm, detector bias = 1.6 MeV, flight path = 746.3 cm, view angle = 26° , and FWHM = 4.0 ns.

Fig. 36. ^{238}U emission spectrum from a solid sphere: outer radius = 10.92 cm, detector bias = 1.6 MeV, flight path = 980.1 cm, view angle = 120° , and FWHM = 3.6 ns.

Fig. 37. Normalized gamma-ray signal in the NE213 detector.

Fig. 38. Normalized neutron signal in the NE213 detector at 26° with respect to the deuteron beam.

Fig. 39. Normalized neutron signal in the NE213 detector at 120° with respect to the deuteron beam.

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