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BUILDUP OF RADIOACTIVE PRODUCTS IN THERMAL REACTORS

III. ^{230}Th, ^{231}Pa, and ^{232}Th Targets

by

D. C. Stewart, E. S. Macias,
L. J. Basile, and J. Milsted

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Chemistry Division

December 1968

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INTRODUCTION

Reports on the production of special radioisotopes in reactors are usually written by reactor specialists or engineers who are interested in a single product, a particular reactor, the economics of various cycling times, etc. The chemist or radiochemist has a different point of view, being concerned not only with yields but also with the side activities with which he must contend when his sample is removed from the reactor. This is the prime reason for the present series of reports.[1,2] Accepted cross sections have also changed, making many earlier reports of dubious value. Computer techniques have also advanced to such a high degree that much more elaborate buildup and decay schemes can be considered than was previously possible.

In this report, the three targets ^{230}Th (Io), ^{231}Pa, and ^{232}Th are considered together since their buildup patterns in a reactor involve so many of the same products. Thorium-230 irradiations have been examined by Hanson,[3] Foster,[4] and Coppinger and Rohrmann.[5] Guillot[6] has made calculations on ^{231}Pa as a target. Because of the importance of the ^{232}Th irradiation to produce fissionable ^{233}U, this system has been the object of a number of investigations, including those by Foster,[4] Nisle,[7] Taraba,[8] and Gresky and Arnold.[9,10] St. John and Toops,[11] Meichle,[12] and Boswell et al.[13] have considered the problem of minimizing ^{232}U contamination of ^{233}U product.

There is a widely held feeling that higher fluxes will produce a higher maximum yield of a desired transmutation product in such irradiations. Higher fluxes are not always beneficial, however, and each situation must be examined separately. In this report, this question will be considered for the production of ^{231}Pa and ^{232}U from ^{230}Th, ^{232}U from ^{231}Pa, and ^{233}U from ^{232}Th.

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The calculation methods used are extensions of those developed by Milsted and his co-workers[14] in estimating very heavy isotope yields from transneptunium targets. Figures 1-3 give the reaction schemes assumed for each of the targets, ^{230}Th, ^{231}Pa, and ^{232}Th. Table I summarizes the cross section and half-life data used. (Neutron capture by ^{233}Pa forms two products with essentially equal probability, one of which is 1.18 min ^{234m}Pa. Because of the very short half-life, yields of this isotope were not calculated. The reaction was assumed to go directly to ^{234}U as indicated by the dotted arrows on the figures.) The calculated yield data are presented in tabular form (Tables VIII-XXII) as being more precise and convenient than graphs in most cases. Calculations were made for seven different fluxes, but are reproduced in their entirety for the five lower levels only. Information on the other two (5×10^{15} and 1×10^{16}) can be supplied on request. These are somewhat unrealistic fluxes for present-day reactors, however; therefore only selected values are quoted in the summary tables of this report.

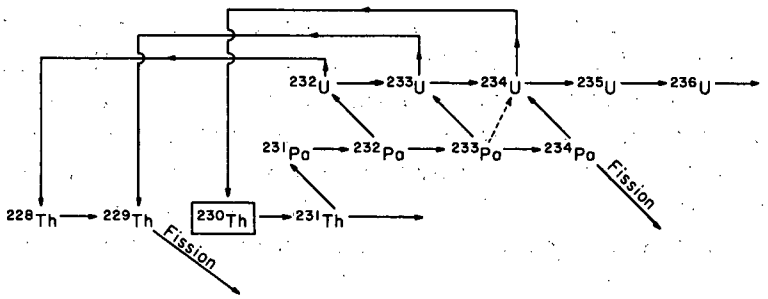
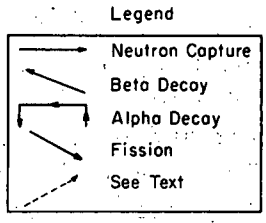


Fig. 1
Assumed Reaction Scheme for ^{230}Th Targets



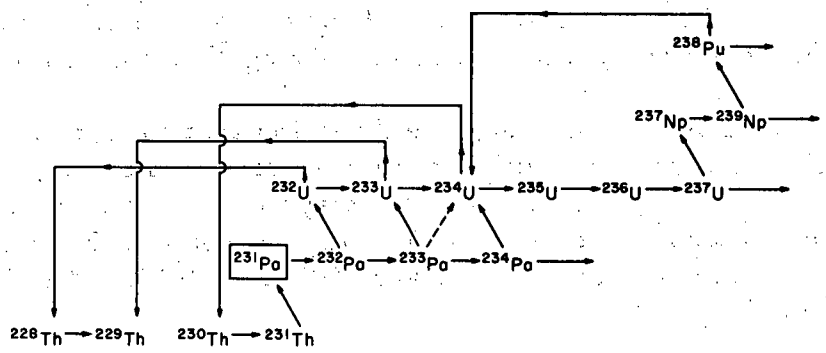
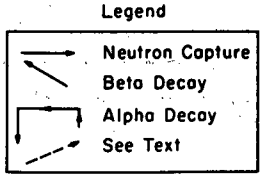


Fig. 2
Assumed Reaction Scheme for ^{231}Pa Targets



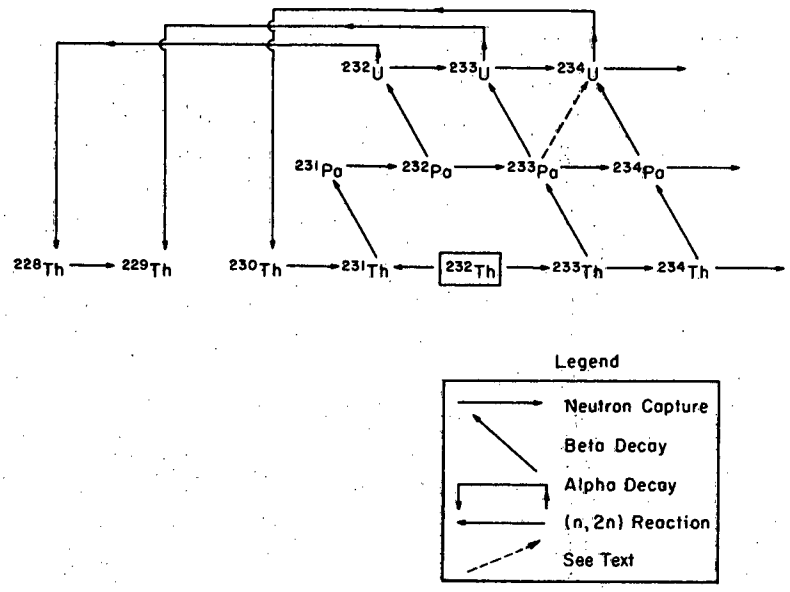


Fig. 3. Assumed Reaction Scheme for ^{232}Th Targets

TABLE I. Nuclear Data Used for ^{230}Th-^{231}Pa-^{232}Th Irradiations

Nuclide	Half-life[a]	Cross Sections, barns			Specific Activity, dis/sec-μg
		Capture	Fission	Destruction	
^{228}Th	1.910 y	120[b]	<0.3[a]	120	3.02×10^{7}
^{229}Th	7,340 y	-	32[c]	32	7,860
^{230}Th	80,000 y	23[c]	<0.001[a]	23	717
^{231}Th	25.52 h	-	-	-	1.97×10^{10}
^{232}Th	1.41×10^{10} y	7.4[c]	<0.0002[a]	7.4	4.04×10^{-3}
^{233}Th	22.12 m	1,500[c]	15[b]	1,515	1.35×10^{11}
^{234}Th	24.10 d	1.8[b]	<0.001[a]	1.8	8.56×10^{8}
^{231}Pa	32,500 y	200[c]	0.01[a]	200	1,760
^{232}Pa	1.31 d	800[b]	700[b]	1,500	1.59×10^{10}
^{233}Pa	27.0 d	21 to ^{234}Pa[c] 22 to ^{234m}Pa[c]	<0.1[a]	43	7.66×10^{8}
^{234}Pa	6.75 h	-	<5,000[a]	5,000	7.35×10^{10}
^{232}U	72 y	78[c]	77[c]	155	7.90×10^{5}
^{233}U	1.62×10^{5} y	49[c]	525[c]	574	350
^{234}U	2.47×10^{5} y	95[c]	-	95	229
^{235}U	7.1×10^{8} y	101[c]	577[c]	678	0.079
^{236}U	2.39×10^{7} y	6[c]	-	6	2.34
^{237}U	6.75 d	-	-	-	3.02×10^{9}
^{237}Np	2.14×10^{6} y	170[b]	0.019[b]	170	26.0
^{238}Np	2.10 d	-	1,600[b]	1,600	9.65×10^{9}
^{238}Pu	86.4 y	500[c]	17[c]	517	6.46×10^{5}

[a] C. M. Lederer, J. M. Holland, and I. Perlman, Table of Isotopes, 6th Ed., Wiley, N. Y. (1967).

[b] D. T. Goldman and J. R. Roesser, Chart of the Nuclides, 9th Ed., Rev. to July 1966, Knolls Atomic Power Laboratory.

[c] J. R. Stehn et al., Neutron Cross Sections, Vol. III, Z = 88 to 98, BNL-325, 2nd Ed., Suppl. 2 (Feb 1965).

The yield data in Tables VIII-XXII are reproductions of computer printout sheets. Time is given in units of 10^6 sec. A yield notation of "1.30-002" indicates that 0.013 atom of that product is present at that time per atom of original target. The data for ^{230}Th targets are given in Tables VIII-XII; for ^{231}Pa in Tables XIII-XVII; and for ^{232}Th in Tables XVIII-XXII. In the ionium set, "Comb 1" refers to the combined yield of ^{231}Th plus ^{231}Pa, and "Comb 2" to ^{232}Pa plus ^{232}U. With protactinium targets, "Comb 1" is ^{232}Pa plus ^{232}U, and for thorium, "Comb 1" is ^{233}Pa plus ^{233}U. In each case, the major product is formed by beta decay of a relatively short-lived parent; therefore the amounts of both nuclides present must be considered in evaluating final yields.

For the ^{232}Th irradiation, the effect of the ^{232}Th (n,2n) ^{231}Th reaction leading to ^{232}U contamination of the ^{233}U product was considered because of its practical importance in chemical processing. A cross section of 0.012 barn was assumed, based on the survey made by St. John and Toops.[11]

RESULTS

Ionium Targets

Ionium is usually irradiated as a means of producing the rare element protactinium, although it could also be considered as a suitable material for making ^{232}U, an isotope of possible interest as a heat source. As described under Protactinium Targets below, ^{232}U is made more efficiently by irradiation of ^{231}Pa, but the latter is an element of high value. Ionium is somewhat more accessible as a starting material,[15] although, in quantity, it is always associated with ^{232}Th. With either ^{230}Th or ^{231}Pa targets, uranium-protactinium-thorium separations chemistry would be required after the irradiation.

Table II summarizes the maximum possible yield of the mass 231 chain from ionium irradiation, and Table III gives the same information for the mass 232 chain. Increase in flux improves the 231 chain yield, but has a sharply depressing effect for 232 masses.

TABLE II. Maximum Obtainable Yields of Mass 231 Chain for ^{230}Th Targets

Flux	At Point of Maximum 231 Chain Yield				
	Time Needed, sec	As ^{231}Th	As ^{231}Pa	Total	^{230}Th Remaining
3×10^{13}	$>1.5 \times 10^8$	-	-	-	-
7×10^{13}	$>1.5 \times 10^8$	-	-	-	-
3×10^{14}	4×10^7	0.00069	0.0868	0.0875	0.759
7×10^{14}	1.8×10^7	0.0016	0.0868	0.0884	0.748
2×10^{15}	5.8×10^6	0.0047	0.0867	0.0914	0.766
5×10^{15}	2.4×10^6	0.0117	0.0866	0.0983	0.759
10^{16}	10^6	0.0250	0.0827	0.108	0.794

TABLE III. Maximum Obtainable Yields of Mass 232 Chain for ^{230}Th Targets

Flux	At Point of Maximum 232 Chain Yield				
	Time Needed, sec	As ^{232}Pa	As ^{232}U	Total	^{230}Th Remaining
3×10^{13}	$>1.5 \times 10^{8}$	-	-	-	-
7×10^{13}	$>1.5 \times 10^{8}$	-	-	-	-
3×10^{14}	7×10^{7}	7.15×10^{-4}	0.0929	0.0936	0.617
7×10^{14}	3×10^{7}	0.00153	0.0854	0.0869	0.617
2×10^{15}	1.03×10^{7}	0.00348	0.0671	0.0706	0.623
5×10^{15}	4.2×10^{6}	0.00585	0.0449	0.0507	0.617
10^{16}	2.2×10^{6}	0.00746	0.0290	0.0364	0.600

Protactinium Targets

Protactinium-231 is most likely to be used as a reactor target when small amounts of ^{232}U are needed as a tracer. Table IV treats the irradiation as a production problem and summarizes the maximum obtainable yield of the mass 232 chain as affected by flux. The deleterious effect of higher fluxes is immediately apparent. On the other hand, a surprisingly high conversion to ^{232}U can be obtained at the lower fluxes.

TABLE IV. Maximum Obtainable Yields of Mass 232 Chain for ^{231}Pa Targets

Flux	At Point of Maximum 232 Chain Yield				
	Time Needed, sec	As ^{232}Pa	As ^{232}U	Total	^{231}Pa Remaining
3×10^{13}	$>1.5 \times 10^{8}$	-	-	-	-
7×10^{13}	8×10^{7}	7.35×10^{-4}	0.403	0.404	0.326
3×10^{14}	1.8×10^{7}	0.0032	0.385	0.389	0.340
7×10^{14}	8×10^{6}	0.0065	0.354	0.361	0.326
2×10^{15}	2.7×10^{6}	0.0156	0.277	0.293	0.339
5×10^{15}	10^{6}	0.0291	0.183	0.212	0.368
10^{16}	4.5×10^{5}	0.0423	0.114	0.156	0.406

Increasing the flux not only affects the yield, but also somewhat decreases the quality, assuming the criterion is preparation of ^{232}U as free of other isotopes as possible. For a flux of 7×10^{13}, the product at the maximum yield point will be about 88% ^{232}U, 11% ^{233}U, and 1% ^{234}U, with traces of ^{235}U and ^{236}U also present. At a flux of 1×10^{16}, the situation is complicated by the fact that a substantial amount of the 232 and 233 chains are still in the form of protactinium. Assuming the best case--instantaneous processing of the uranium on removal from the reactor--the product would be 78% ^{232}U. If the protactinium isotopes present are allowed to decay completely before processing, the uranium product is about 43% ^{232}U and 53% ^{233}U.

Thorium Targets

Large-scale irradiations to produce fissionable ^{233}U as a possible reactor fuel have already been made. Table V summarizes the maximum

yields of the mass 233 chain that can be obtained for the fluxes considered and the nuclear data used in this report. Higher fluxes are definitely beneficial in terms of increased yields, although there is a slight decrease in quality (isotopic purity as ^{233}U), as can be seen in Table VI. (Calculations were not made for ^{235}U and ^{236}U for thorium targets, but examination of the protactinium data shows that for long irradiations the ^{234}U:^{235}U:^{236}U ratios stabilize at roughly 100:10:4. These ratios were assumed in calculating the ^{235}U and ^{236}U values in Table VI.)

TABLE V. Maximum Obtainable Yields of Mass 233 Chain for ^{232}Th Targets

	At Point of Maximum 233 Chain Yield						
Flux	Time Needed, sec	As ^{233}Th	As ^{233}Pa	As ^{233}U	Total	^{232}Th Remaining	$^{232}U + ^{232}Pa$
3×10^{13}	$>1.5 \times 10^{8}$	-	-	-	-	-	-
7×10^{13}	10^{8}	9.4×10^{-7}	0.00164	0.0120	0.0137	0.954	2.2×10^{-5}
3×10^{14}	2.6×10^{7}	4.0×10^{-6}	0.00683	0.0116	0.0184	0.948	2.8×10^{-5}
7×10^{14}	1.4×10^{7}	9.2×10^{-6}	0.0148	0.0107	0.0255	0.930	3.3×10^{-5}
2×10^{15}	9×10^{6}	2.5×10^{-5}	0.0337	0.00868	0.0424	0.875	4.1×10^{-5}
5×10^{15}	5.2×10^{6}	5.8×10^{-5}	0.0580	0.00597	0.0640	0.825	3.2×10^{-5}
10^{16}	3.4×10^{6}	1.1×10^{-4}	0.0764	0.00394	0.0803	0.778	2.3×10^{-5}

TABLE VI. Uranium Fraction Composition at Point of 233 Chain Maximum Yield for ^{232}Th Targets

	Uranium Fraction Comp., at. %				
Flux	^{232}U	^{233}U	^{234}U	^{235}U[a]	^{236}U[a]
7×10^{13}	0.13	81.34	16.45	1.66	0.42
3×10^{14}	0.12	80.95	16.85	1.68	0.40
7×10^{14}	0.10	79.42	18.19	1.82	0.47
2×10^{15}	0.07	74.54	22.57	2.26	0.56
5×10^{15}	0.04	74.53	22.48	2.25	0.70
10^{16}	0.02	75.30	21.75	2.18	0.75

[a]Estimated. See text.

As indicated above, ^{232}U in the ^{233}U product creates handling problems because of the presence of several intense gamma emitters in the former's decay chain. Table V shows that the absolute amount of ^{232}U formed is fairly constant over a broad range of flux. The relative amount, as seen in Table VI, decreases markedly at the higher fluxes. The buildup pattern of the ^{232}U decay chain has been presented elsewhere.[16]

DISCUSSION

As noted above, one purpose of this series of reports[1,2,14,17,18] has been to evaluate the effect of flux level on the maximum obtainable yield of a chosen product of the neutron irradiation being examined. In most cases, this product has been the third member of the buildup chain formed by the reactions:

$$\underset{\text{Long-lived Target}}{A} \xrightarrow{(n,\gamma)} \underset{\text{Short-lived Intermediate}}{B} \xrightarrow[\text{Decay}]{\beta} \underset{\text{Long-lived Product}}{C} .$$

As the flux is increased, the maximum yield of "C" can vary in several ways, depending on the nuclear properties of the system, particularly those of intermediate "B." Table VII summarizes seven of the situations that have been considered.

TABLE VII. Effect of Increase in Flux on Maximum Product Chain Yield

Case	A $T_{1/2}$	(n,γ) σ_C, barns	B σ_D, barns	β → $T_{1/2}$	C σ_D, barns	α → $T_{1/2}$	Flux Effect on Yield of B + C	Ref.
1	^{226}Ra 1,602 y	20	^{227}Ra 0(?)	41.2 m	^{227}Ac 830	21.6 y	Yield essentially constant at 0.022 over 140X flux range.	2
2	^{230}Th 80,000 y	23	^{231}Th 0(?)	25.52 h	^{231}Pa 200	32,500 y	25% increase (to 0.11) over range. Increment in ^{231}Th form.	This report (Table II)
3	^{243}Am 7,600 y	150	^{244}Am 2,000	26 m	^{244}Cm 35	17.9 y	Yield is 0.62 at 3×10^{14}, 0.64 at 10^{16}.	18
4	^{242}Pu 3.79×10^5 y	50	^{243}Pu 300	4.98 h	^{243}Am 150	7,600 y	Slow drop in yield. 3×10^{14} = 0.191, 10^{16} = 0.178.	18
5	^{241}Am 458 y	620	^{242}Am 3,000	16.01 h	^{242}Cm 30	162.5 d	Yield shows almost Gaussian curve with maximum at 7×10^{14}.	17
6	^{231}Pa 32,500 y	200	^{232}Pa 1,500	1.31 d	^{232}U 155	72 y	232 chain yield down ~2X over range. Loss accelerated after 7×10^{14}.	This report (Table IV)
7	^{237}Np 2.14×10^6 y	170	^{238}Np 1,600	2.10 d	^{238}Pu 5.17	86.4 y	238 chain yield shows same pattern as Case 6.	1

Cases 1 and 2 are the most straightforward, although this simplicity may be partly illusionary since, lacking the necessary data, we had to assume that radioactive decay was the only process acting to destroy "B." In such cases, "B" rapidly reaches its maximum concentration (the level being directly flux dependent) and comes into equilibrium with "A." "C" then attains its maximum concentration at a time roughly inversely proportional to the level of the flux. "B" declines from its maximum in parallel with the destruction of the parent. "C" may or may not show similar parallel decay after passing its maximum. With a ^{226}Ra target (Case 1), the intermediate has such a short half-life that ^{227}Ac can be assumed to be formed essentially directly. The cross section for its formation (20 barns), however, is much less than that for its destruction (830 barns). The ratio of these cross sections, 0.024, determines the

maximum obtainable yield, and since any change in flux will affect both processes equally, this remains constant at all flux levels. (The theoretical maximum of 0.024 is never actually reached because the amount of ^{226}Ra target itself does not remain constant.)

Case 2, the ionium target, is somewhat more complicated. The half-life of the intermediate, ^{231}Th, is long enough so that as the flux is raised, an increasingly significant proportion of the desired 231 mass is in this buffer form, assumed to be flux-resistant. The result is that the 231 chain yield increases with flux.

The other five cases of Table VII all involve "B" intermediates that are not "safe"; that is, they are destroyed by flux-dependent processes as well as by radioactive decay. The maximum obtainable yield of product "C" then largely depends on the half-life of "B," since this governs the average length of time that the product atoms are in the flux-labile "B" state. In Case 3, the intermediate has a very short half-life; therefore the situation is similar to Case 1, in spite of the high destruction cross section of ^{244}Am. The product yield remains essentially constant with increase in flux up to the 10^{16} level, although it would eventually be expected to drop. In Case 4, the intermediate has a longer half-life. Therefore relatively more of it is destroyed, resulting in a moderate decline in product yield with increase in flux. The "B" intermediates in Cases 6 and 7 have even longer half-lives; therefore the loss of product with increase in flux is even more marked.

Case 5, the production of curium from americium, follows a different pattern. The maximum yield of mass 242 chain is 0.169 at a flux of 3×10^{13}, increases to 0.500 at 7×10^{14}, then declines to 0.292 at 10^{16}. This is due to a combination of two different processes. Since ^{242}Cm has a half-life of 162.5 d, the first material produced has undergone about two half-lives of decay when the maximum ^{242}Cm yield is obtained in a flux of 3×10^{13} after a period of 3×10^{7} sec. This process accounts for the low yields in the low flux irradiations. The maximum curium yield is reached at progressively shorter times as the flux is raised; therefore ^{242}Cm decay losses become steadily less important. At the same time, destruction of the ^{242}Am intermediate by fission is increasing, until this process finally dominates the situation, accounting for the low values at the high-flux end of the yield curve. (At a flux of about 4×10^{15}, the rate of ^{242}Am destruction by fission becomes equal to its rate of transmutation to curium.)

An interesting system that fortunately contains a relatively "safe" buffer nuclide in the buildup chain is the important one for producing ^{233}U from ^{232}Th (Table V of this report).

$$^{232}Th(n,\gamma)\ ^{233}Th \xrightarrow{22.12\ m}\ ^{233}Pa \xrightarrow{27.0\ d}\ ^{233}U$$

$$\sigma_C = 7.4\ b \qquad \sigma_D = 1515\ b \qquad \sigma_D = 43\ b \qquad \sigma_D = 574\ b$$

The presence of the long-lived ^{233}Pa in the chain means that a higher proportion of the desired 233 mass is in the protactinium form as the flux is increased. Since ^{233}Pa is much less flux-labile than ^{233}U, the absolute amount of 233 chain that can be produced is higher than would otherwise be the case, and the yield increases steadily with flux. Another important comparable system where the situation is not quite so fortunate is

$$^{238}U(n,\gamma)\ ^{239}U \xrightarrow{23.5\ m} {}^{239}Np \xrightarrow{2.35\ d} {}^{239}Pu$$
$$\sigma_C = 2.7\ b \quad \sigma_D = 36\ b \qquad \sigma_D = 70\ b \qquad \sigma_D = 1010\ b$$

Here the buffering effect of the shorter-lived ^{239}Np is obviously much less effective than ^{233}Pa in the thorium target case.

TABLE VIII

TARGET= TH230
DATA TYPE= YIELD-ATOMS PER ATOM TARGET
FLUX= 3.0+013
TIME SPAN= 0- 150

TIME	0.00500	0.01000	0.05000	0.10000	0.50000	0.80000
FLUX=	3.0+013	TARGET=TH230		DATA TYPE=YIELD		
TH230	1.00+000	1.00+000	1.00+000	1.00+000	1.00+000	9.99-001
TH231	1.38-005	2.55-005	3.55-005	5.11-005	8.99-005	9.13-005
PA231	2.08-006	5.93-006	1.13-005	2.56-005	2.68-004	4.73-004
PA232	2.50-010	9.31-010	2.17-009	6.63-009	1.77-007	3.67-007
PA233	1.20-013	5.66-013	1.60-012	6.70-012	7.57-010	2.61-009
PA234	1.51-018	7.78-018	2.35-017	1.08-016	1.54-014	5.49-014
U232	3.06-011	1.45-010	4.10-010	1.72-009	2.00-007	7.08-007
TH228	1.87-016	1.07-015	3.57-015	1.96-014	8.47-012	4.88-011
TH229	1.34-020	9.05-020	3.48-019	2.41-018	3.47-015	3.16-014
U233	2.15-015	1.23-014	4.10-014	2.25-013	9.65-011	5.52-010
U234	2.51-018	1.48-017	5.06-017	2.88-016	1.46-013	8.95-013
U235	1.43-022	9.85-022	3.87-021	2.78-020	4.64-017	4.46-016
U236	8.66-027	6.84-026	3.03-025	2.67-024	1.35-020	2.00-019
COMB1	1.59-005	3.14-005	4.67-005	7.67-005	3.58-004	5.65-004
COMB2	2.80-010	1.08-009	2.58-009	8.34-009	3.77-007	1.08-006

TIME	1.00000	1.10000	1.20000	1.40000	1.60000	1.80000
FLUX=	3.0+013	TARGET=TH230		DATA TYPE=YIELD		
TH230	9.99-001	9.99-001	9.99-001	9.99-001	9.99-001	9.99-001
TH231	9.14-005	9.14-005	9.14-005	9.14-005	9.14-005	9.13-005
PA231	6.11-004	6.79-004	7.48-004	8.85-004	1.02-003	1.16-003
PA232	4.99-007	5.66-007	6.33-007	7.66-007	8.99-007	1.03-006
PA233	4.52-009	5.67-009	6.94-009	9.84-009	1.32-008	1.70-008
PA234	9.59-014	1.21-013	1.48-013	2.11-013	2.84-013	3.66-013
U232	1.25-006	1.58-006	1.95-006	2.81-006	3.83-006	5.02-006
TH228	1.09-010	1.53-010	2.07-010	3.53-010	5.57-010	8.27-010
TH229	8.86-014	1.37-013	2.04-013	4.07-013	7.39-013	1.24-012
U233	1.23-009	1.72-009	2.32-009	3.94-009	6.19-009	9.16-009
U234	2.07-012	2.95-012	4.07-012	7.16-012	1.16-011	1.78-011
U235	1.29-015	2.02-015	3.04-015	6.25-015	1.16-014	2.00-014
U236	7.17-019	1.23-018	2.02-018	4.85-018	1.03-017	2.00-017
COMB1	7.02-004	7.70-004	8.39-004	9.76-004	1.11-003	1.25-003
COMB2	1.75-006	2.14-006	2.58-006	3.57-006	4.73-006	6.05-006

TIME	2.00000	2.20000	2.50000	3.00000	3.20000	3.50000
FLUX=	3.0+013	TARGET=TH230		DATA TYPE=YIELD		
TH230	9.99-001	9.98-001	9.98-001	9.98-001	9.98-001	9.98-001
TH231	9.13-005	9.13-005	9.13-005	9.13-005	9.13-005	9.12-005
PA231	1.29-003	1.43-003	1.63-003	1.97-003	2.11-003	2.31-003
PA232	1.16-006	1.30-006	1.50-006	1.83-006	1.96-006	2.15-006
PA233	2.11-008	2.57-008	3.32-008	4.73-008	5.34-008	6.31-008
PA234	4.58-013	5.57-013	7.21-013	1.03-012	1.16-012	1.37-012
U232	6.37-006	7.87-006	1.04-005	1.55-005	1.78-005	2.16-005
TH228	1.18-009	1.61-009	2.44-009	4.40-009	5.41-009	7.19-009
TH229	1.97-012	2.98-012	5.18-012	1.13-011	1.49-011	2.17-011
U233	1.30-008	1.77-008	2.67-008	4.76-008	5.82-008	7.70-008
U234	2.60-011	3.65-011	5.77-011	1.11-010	1.39-010	1.91-010
U235	3.25-014	5.04-014	9.03-014	2.07-013	2.78-013	4.18-013
U236	3.60-017	6.14-017	1.25-016	3.45-016	4.93-016	8.10-016
COMB1	1.39-003	1.52-003	1.73-003	2.06-003	2.20-003	2.40-003
COMB2	7.53-006	9.17-006	1.19-005	1.73-005	1.98-005	2.37-005

TABLE VIII (Contd.)

TIME	4.00000	4.50000	5.00000	6.00000	7.00000	8.00000
FLUX= 3.0+013	TARGET=TH230			DATA TYPE=YIELD		
TH230	9.97-001	9.97-001	9.97-001	9.96-001	9.95-001	9.94-001
TH231	9.12-005	9.12-005	9.11-005	9.11-005	9.10-005	9.10-005
PA231	2.65-003	2.98-003	3.32-003	3.98-003	4.64-003	5.30-003
PA232	2.48-006	2.81-006	3.13-006	3.78-006	4.43-006	5.07-006
PA233	8.03-008	9.89-008	1.18-007	1.60-007	2.05-007	2.51-007
PA234	1.75-012	2.16-012	2.59-012	3.51-012	4.48-012	5.50-012
U232	2.86-005	3.67-005	4.57-005	6.66-005	9.14-005	1.20-004
TH228	1.10-008	1.59-008	2.20-008	3.87-008	6.20-008	9.31-008
TH229	3.80-011	6.21-011	9.62-011	2.04-010	3.84-010	6.61-010
U233	1.16-007	1.67-007	2.30-007	3.97-007	6.27-007	9.29-007
U234	3.08-010	4.69-010	6.84-010	1.32-009	2.29-009	3.72-009
U235	7.67-013	1.31-012	2.11-012	4.84-012	9.78-012	1.80-011
U236	1.70-015	3.26-015	5.84-015	1.60-014	3.76-014	7.90-014
COMB1	2.74-003	3.07-003	3.41-003	4.07-003	4.74-003	5.39-003
COMB2	3.11-005	3.95-005	4.88-005	7.04-005	9.59-005	1.25-004

TIME	9.00000	10.00000	12.00000	14.00000	16.00000	18.00000
FLUX= 3.0+013	TARGET=TH230			DATA TYPE=YIELD		
TH230	9.94-001	9.93-001	9.92-001	9.90-001	9.89-001	9.88-001
TH231	9.09-005	9.08-005	9.07-005	9.06-005	9.05-005	9.03-005
PA231	5.95-003	6.60-003	7.88-003	9.15-003	1.04-002	1.16-002
PA232	5.70-006	6.33-006	7.58-006	8.81-006	1.00-005	1.12-005
PA233	2.98-007	3.47-007	4.45-007	5.44-007	6.43-007	7.41-007
PA234	6.54-012	7.60-012	9.76-012	1.19-011	1.41-011	1.63-011
U232	1.52-004	1.88-004	2.71-004	3.69-004	4.80-004	6.05-004
TH228	1.33-007	1.83-007	3.15-007	4.98-007	7.38-007	1.04-006
TH229	1.07-009	1.63-009	3.40-009	6.29-009	1.07-008	1.70-008
U233	1.31-006	1.78-006	3.01-006	4.66-006	6.80-006	9.47-006
U234	5.70-009	8.36-009	1.63-008	2.86-008	4.67-008	7.20-008
U235	3.08-011	5.00-011	1.15-010	2.34-010	4.33-010	7.45-010
U236	1.52-013	2.73-013	7.54-013	1.78-012	3.76-012	7.27-012
COMB1	6.04-003	6.69-003	7.97-003	9.24-003	1.05-002	1.17-002
COMB2	1.58-004	1.95-004	2.79-004	3.78-004	4.90-004	6.16-004

TIME	20.00000	22.00000	25.00000	30.00000	32.00000	35.00000
FLUX= 3.0+013	TARGET=TH230			DATA TYPE=YIELD		
TH230	9.86-001	9.85-001	9.83-001	9.80-001	9.78-001	9.76-001
TH231	9.02-005	9.01-005	8.99-005	8.96-005	8.95-005	8.93-005
PA231	1.28-002	1.40-002	1.58-002	1.87-002	1.98-002	2.15-002
PA232	1.24-005	1.36-005	1.53-005	1.81-005	1.92-005	2.08-005
PA233	8.38-007	9.33-007	1.07-006	1.30-006	1.39-006	1.53-006
PA234	1.84-011	2.05-011	2.36-011	2.86-011	3.06-011	3.35-011
U232	7.43-004	8.94-004	1.14-003	1.62-003	1.83-003	2.17-003
TH228	1.42-006	1.87-006	2.69-006	4.53-006	5.43-006	6.98-006
TH229	2.58-008	3.76-008	6.19-008	1.26-007	1.61-007	2.28-007
U233	1.27-005	1.66-005	2.36-005	3.88-005	4.63-005	5.89-005
U234	1.06-007	1.51-007	2.41-007	4.70-007	5.96-007	8.27-007
U235	1.21-009	1.87-009	3.37-009	7.77-009	1.04-008	1.57-008
U236	1.31-011	2.24-011	4.57-011	1.27-010	1.82-010	2.99-010
COMB1	1.29-002	1.41-002	1.59-002	1.88-002	1.99-002	2.15-002
COMB2	7.56-004	9.08-004	1.16-003	1.64-003	1.85-003	2.19-003

TIME	40.00000	45.00000	50.00000	60.00000	70.00000	80.00000
FLUX= 3.0+013	TARGET=TH230			DATA TYPE=YIELD		
TH230	9.73-001	9.69-001	9.66-001	9.59-001	9.53-001	9.46-001
TH231	8.90-005	8.87-005	8.84-005	8.78-005	8.71-005	8.65-005
PA231	2.41-002	2.67-002	2.92-002	3.40-002	3.84-002	4.25-002
PA232	2.34-005	2.59-005	2.83-005	3.30-005	3.73-005	4.13-005
PA233	1.74-006	1.95-006	2.15-006	2.53-006	2.88-006	3.21-006
PA234	3.82-011	4.28-011	4.72-011	5.56-011	6.34-011	7.06-011
U232	2.79-003	3.46-003	4.20-003	5.83-003	7.65-003	9.63-003
TH228	1.01-005	1.40-005	1.86-005	3.02-005	4.51-005	6.33-005
TH229	3.79-007	5.93-007	8.81-007	1.74-006	3.06-006	4.97-006
U233	8.42-005	1.15-004	1.51-004	2.42-004	3.56-004	4.94-004
U234	1.34-006	2.06-006	3.01-006	5.78-006	9.97-006	1.59-005
U235	2.88-008	4.89-008	7.84-008	1.76-007	3.45-007	6.14-007
U236	6.28-010	1.21-009	2.16-009	5.86-009	1.35-008	2.77-008
COMB1	2.42-002	2.68-002	2.93-002	3.41-002	3.85-002	4.26-002
COMB2	2.81-003	3.49-003	4.23-003	5.87-003	7.69-003	9.67-003

TABLE VIII (Contd.)

TIME	90.00000	100.00000	110.00000	120.00000	130.00000	150.00000
FLUX=	3.0+013	TARGET=TH230		DATA TYPE=YIELD		
TH230	9.40-001	9.33-001	9.27-001	9.21-001	9.14-001	9.02-001
TH231	8.60-005	8.54-005	8.48-005	8.42-005	8.36-005	8.25-005
PA231	4.64-002	4.99-002	5.32-002	5.63-002	5.92-002	6.43-002
PA232	4.50-005	4.85-005	5.17-005	5.47-005	5.75-005	6.25-005
PA233	3.52-006	3.81-006	4.08-006	4.32-006	4.55-006	4.96-006
PA234	7.74-011	8.37-011	8.95-011	9.50-011	1.00-010	1.09-010
U232	1.17-002	1.40-002	1.63-002	1.87-002	2.11-002	2.62-002
TH228	8.47-005	1.09-004	1.37-004	1.67-004	2.00-004	2.73-004
TH229	7.56-006	1.10-005	1.53-005	2.06-005	2.70-005	4.33-005
U233	6.56-004	8.39-004	1.04-003	1.27-003	1.51-003	2.03-003
U234	2.38-005	3.40-005	4.67-005	6.22-005	8.06-005	1.27-004
U235	1.01-006	1.57-006	2.32-006	3.30-006	4.53-006	7.90-006
U236	5.19-008	9.05-008	1.49-007	2.33-007	3.50-007	7.19-007
COMB1	4.64-002	5.00-002	5.33-002	5.64-002	5.93-002	6.44-002
COMB2	1.18-002	1.40-002	1.64-002	1.87-002	2.12-002	2.62-002

TABLE IX

TARGET= TH230
DATA TYPE= YIELD-ATOMS PER ATOM TARGET
FLUX= 7.0+013
TIME SPAN= 0- 150

TIME	0.00500	0.01000	0.05000	0.10000	0.50000	0.80000
FLUX=	7.0+013	TARGET=TH230		DATA TYPE=YIELD		
TH230	1.00+000	1.00+000	1.00+000	1.00+000	9.99-001	9.99-001
TH231	3.22-005	5.95-005	8.28-005	1.19-004	2.10-004	2.13-004
PA231	4.86-006	1.38-005	2.63-005	5.98-005	6.25-004	1.10-003
PA232	1.36-009	5.07-009	1.18-008	3.60-008	9.55-007	1.98-006
PA233	1.52-012	7.19-012	2.04-011	8.50-011	9.56-009	3.29-008
PA234	4.48-017	2.30-016	6.96-016	3.18-015	4.51-013	1.60-012
U232	1.67-010	7.87-010	2.23-009	9.34-009	1.08-006	3.82-006
TH228	1.02-015	5.82-015	1.94-014	1.06-013	4.59-011	2.63-010
TH229	1.71-019	1.15-018	4.42-018	3.06-017	4.39-014	3.99-013
U233	2.73-014	1.56-013	5.21-013	2.85-012	1.22-009	6.94-009
U234	7.44-017	4.38-016	1.50-015	8.52-015	4.30-012	2.63-011
U235	9.89-021	6.81-020	2.67-019	1.92-018	3.18-015	3.05-014
U236	1.40-024	1.10-023	4.88-023	4.31-022	2.16-018	3.19-017
COMB1	3.71-005	7.34-005	1.09-004	1.79-004	8.35-004	1.31-003
COMB2	1.53-009	5.85-009	1.40-008	4.54-008	2.04-006	5.80-006

TIME	1.00000	1.10000	1.20000	1.40000	1.60000	1.80000
FLUX=	7.0+013	TARGET=TH230		DATA TYPE=YIELD		
TH230	9.98-001	9.98-001	9.98-001	9.98-001	9.97-001	9.97-001
TH231	2.13-004	2.13-004	2.13-004	2.13-004	2.13-004	2.13-004
PA231	1.42-003	1.58-003	1.74-003	2.05-003	2.37-003	2.68-003
PA232	2.69-006	3.05-006	3.40-006	4.11-006	4.82-006	5.53-006
PA233	5.69-008	7.13-008	8.72-008	1.23-007	1.65-007	2.13-007
PA234	2.80-012	3.52-012	4.32-012	6.14-012	8.26-012	1.06-011
U232	6.71-006	8.48-006	1.05-005	1.51-005	2.06-005	2.69-005
TH228	5.88-010	8.23-010	1.12-009	1.90-009	2.99-009	4.44-009
TH229	1.12-012	1.72-012	2.56-012	5.12-012	9.27-012	1.56-011
U233	1.54-008	2.15-008	2.91-008	4.92-008	7.71-008	1.14-007
U234	6.07-011	8.64-011	1.19-010	2.09-010	3.39-010	5.18-010
U235	8.78-014	1.38-013	2.07-013	4.24-013	7.87-013	1.35-012
U236	1.14-016	1.96-016	3.22-016	7.69-016	1.63-015	3.16-015
COMB1	1.63-003	1.79-003	1.95-003	2.27-003	2.58-003	2.89-003
COMB2	9.40-006	1.15-005	1.39-005	1.92-005	2.54-005	3.24-005

TIME	2.00000	2.20000	2.50000	3.00000	3.20000	3.50000
FLUX=	7.0+013	TARGET=TH230		DATA TYPE=YIELD		
TH230	9.97-001	9.96-001	9.96-001	9.95-001	9.95-001	9.94-001
TH231	2.13-004	2.13-004	2.13-004	2.12-004	2.12-004	2.12-004
PA231	2.99-003	3.31-003	3.77-003	4.55-003	4.85-003	5.31-003
PA232	6.24-006	6.94-006	7.99-006	9.73-006	1.04-005	1.15-005
PA233	2.65-007	3.22-007	4.15-007	5.89-007	6.65-007	7.85-007
PA234	1.33-011	1.61-011	2.09-011	2.97-011	3.36-011	3.96-011
U232	3.41-005	4.21-005	5.57-005	8.26-005	9.48-005	1.15-004
TH228	6.29-009	8.61-009	1.30-008	2.34-008	2.88-008	3.82-008
TH229	2.47-011	3.73-011	6.47-011	1.41-010	1.85-010	2.70-010
U233	1.61-007	2.19-007	3.29-007	5.84-007	7.14-007	9.41-007
U234	7.55-010	1.06-009	1.67-009	3.19-009	4.01-009	5.51-009
U235	2.19-012	3.39-012	6.06-012	1.38-011	1.85-011	2.77-011
U236	5.69-015	9.67-015	1.97-014	5.39-014	7.70-014	1.26-013
COMB1	3.21-003	3.52-003	3.99-003	4.76-003	5.07-003	5.52-003
COMB2	4.03-005	4.90-005	6.37-005	9.23-005	1.05-004	1.26-004

TABLE IX (Contd.)

TIME	4.00000	4.50000	5.00000	6.00000	7.00000	8.00000
FLUX= 7.0+013		TARGET=TH230		DATA TYPE=YIELD		
TH230	9.94-001	9.93-001	9.92-001	9.90-001	9.89-001	9.87-001
TH231	2.12-004	2.12-004	2.12-004	2.11-004	2.11-004	2.11-004
PA231	6.07-003	6.83-003	7.58-003	9.06-003	1.05-002	1.19-002
PA232	1.32-005	1.49-005	1.66-005	1.99-005	2.32-005	2.64-005
PA233	9.97-007	1.23-006	1.46-006	1.97-006	2.51-006	3.07-006
PA234	5.05-011	6.20-011	7.42-011	1.00-010	1.27-010	1.56-010
U232	1.52-004	1.94-004	2.41-004	3.49-004	4.77-004	6.23-004
TH228	5.81-008	8.38-008	1.16-007	2.03-007	3.24-007	4.83-007
TH229	4.71-010	7.69-010	1.19-009	2.51-009	4.70-009	8.06-009
U233	1.42-006	2.02-006	2.77-006	4.74-006	7.42-006	1.09-005
U234	8.84-009	1.34-008	1.95-008	3.72-008	6.43-008	1.03-007
U235	5.06-011	8.59-011	1.38-010	3.13-010	6.25-010	1.14-009
U236	2.63-013	5.03-013	8.96-013	2.44-012	5.67-012	1.18-011
COMB1	6.28-003	7.04-003	7.79-003	9.27-003	1.07-002	1.22-002
COMB2	1.65-004	2.09-004	2.57-004	3.69-004	5.00-004	6.49-004

TIME	9.00000	10.00000	12.00000	14.00000	16.00000	18.00000
FLUX= 7.0+013		TARGET=TH230		DATA TYPE=YIELD		
TH230	9.86-001	9.84-001	9.81-001	9.78-001	9.75-001	9.71-001
TH231	2.10-004	2.10-004	2.09-004	2.09-004	2.08-004	2.07-004
PA231	1.34-002	1.47-002	1.75-002	2.01-002	2.26-002	2.51-002
PA232	2.96-005	3.27-005	3.88-005	4.47-005	5.05-005	5.60-005
PA233	3.63-006	4.20-006	5.35-006	6.48-006	7.60-006	8.68-006
PA234	1.84-010	2.14-010	2.72-010	3.30-010	3.86-010	4.42-010
U232	7.87-004	9.68-004	1.38-003	1.86-003	2.39-003	2.99-003
TH228	6.87-007	9.38-007	1.60-006	2.51-006	3.68-006	5.15-006
TH229	1.29-008	1.97-008	4.07-008	7.47-008	1.26-007	1.99-007
U233	1.52-005	2.05-005	3.39-005	5.17-005	7.40-005	1.01-004
U234	1.57-007	2.29-007	4.38-007	7.57-007	1.22-006	1.84-006
U235	1.93-009	3.09-009	6.97-009	1.38-008	2.50-008	4.21-008
U236	2.25-011	4.00-011	1.08-010	2.52-010	5.21-010	9.88-010
COMB1	1.36-002	1.50-002	1.77-002	2.03-002	2.28-002	2.53-002
COMB2	8.16-004	1.00-003	1.42-003	1.90-003	2.44-003	3.04-003

TIME	20.00000	22.00000	25.00000	30.00000	32.00000	35.00000
FLUX= 7.0+013		TARGET=TH230		DATA TYPE=YIELD		
TH230	9.68-001	9.65-001	9.61-001	9.53-001	9.50-001	9.45-001
TH231	2.07-004	2.06-004	2.05-004	2.03-004	2.03-004	2.02-004
PA231	2.75-002	2.98-002	3.31-002	3.83-002	4.03-002	4.31-002
PA232	6.14-005	6.66-005	7.41-005	8.58-005	9.02-005	9.66-005
PA233	9.74-006	1.08-005	1.22-005	1.45-005	1.54-005	1.67-005
PA234	4.95-010	5.47-010	6.23-010	7.40-010	7.85-010	8.49-010
U232	3.63-003	4.33-003	5.46-003	7.55-003	8.45-003	9.86-003
TH228	6.93-006	9.04-006	1.29-005	2.11-005	2.51-005	3.17-005
TH229	2.99-007	4.31-007	7.02-007	1.40-006	1.78-006	2.48-006
U233	1.33-004	1.71-004	2.37-004	3.73-004	4.37-004	5.42-004
U234	2.67-006	3.73-006	5.83-006	1.09-005	1.37-005	1.85-005
U235	6.68-008	1.01-007	1.76-007	3.85-007	5.07-007	7.38-007
U236	1.75-009	2.93-009	5.82-009	1.54-008	2.17-008	3.47-008
COMB1	2.77-002	3.00-002	3.33-002	3.85-002	4.05-002	4.33-002
COMB2	3.69-003	4.39-003	5.53-003	7.63-003	8.54-003	9.96-003

TIME	40.00000	45.00000	50.00000	60.00000	70.00000	80.00000
FLUX= 7.0+013		TARGET=TH230		DATA TYPE=YIELD		
TH230	9.38-001	9.30-001	9.23-001	9.08-001	8.93-001	8.79-001
TH231	2.00-004	1.99-004	1.97-004	1.94-004	1.91-004	1.88-004
PA231	4.75-002	5.16-002	5.53-002	6.18-002	6.73-002	7.18-002
PA232	1.07-004	1.16-004	1.24-004	1.39-004	1.51-004	1.61-004
PA233	1.86-005	2.04-005	2.21-005	2.50-005	2.74-005	2.95-005
PA234	9.48-010	1.04-009	1.12-009	1.27-009	1.40-009	1.50-009
U232	1.24-002	1.50-002	1.78-002	2.35-002	2.95-002	3.54-002
TH228	4.49-005	6.05-005	7.86-005	1.22-004	1.73-004	2.32-004
TH229	4.04-006	6.19-006	9.02-006	1.71-005	2.89-005	4.51-005
U233	7.43-004	9.73-004	1.23-003	1.82-003	2.48-003	3.20-003
U234	2.90-005	4.28-005	6.03-005	1.08-004	1.73-004	2.57-004
U235	1.28-006	2.08-006	3.16-006	6.44-006	1.15-005	1.86-005
U236	6.98-008	1.28-007	2.20-007	5.48-007	1.17-006	2.21-006
COMB1	4.77-002	5.18-002	5.55-002	6.20-002	6.75-002	7.20-002
COMB2	1.25-002	1.51-002	1.79-002	2.37-002	2.96-002	3.56-002

TABLE IX (Contd.)

TIME	90.00000	100.00000	110.00000	120.00000	130.00000	150.00000
FLUX= 7.0+013		TARGET=TH230		DATA TYPE=YIELD		
TH230	8.65-001	8.51-001	8.38-001	8.24-001	8.11-001	7.85-001
TH231	1.85-004	1.82-004	1.79-004	1.76-004	1.73-004	1.68-004
PA231	7.55-002	7.85-002	8.10-002	8.29-002	8.43-002	8.61-002
PA232	1.70-004	1.76-004	1.82-004	1.86-004	1.90-004	1.94-004
PA233	3.11-005	3.25-005	3.36-005	3.45-005	3.52-005	3.60-005
PA234	1.59-009	1.66-009	1.71-009	1.76-009	1.79-009	1.83-009
U232	4.13-002	4.70-002	5.24-002	5.75-002	6.24-002	7.10-002
TH228	2.97-004	3.65-004	4.37-004	5.11-004	5.85-004	7.30-004
TH229	6.60-005	9.21-005	1.23-004	1.60-004	2.02-004	3.01-004
U233	3.95-003	4.71-003	5.48-003	6.23-003	6.96-003	8.32-003
U234	3.60-004	4.81-004	6.21-004	7.76-004	9.46-004	1.32-003
U235	2.80-005	3.99-005	5.42-005	7.10-005	9.01-005	1.35-004
U236	3.83-006	6.20-006	9.48-006	1.38-005	1.95-005	3.50-005
COMB1	7.57-002	7.87-002	8.11-002	8.31-002	8.45-002	8.63-002
COMB2	4.14-002	4.71-002	5.26-002	5.77-002	6.25-002	7.11-002

TABLE X

TARGET= TH230
DATA TYPE= YIELD-ATOMS PER ATOM TARGET
FLUX= 3.0+014
TIME SPAN= 0- 100

TIME	0.05000	0.10000	0.20000	0.30000	0.40000	0.50000
FLUX= 3.0+014		TARGET=TH230		DATA TYPE=YIELD		
TH230	1.00+000	9.99-001	9.99-001	9.98-001	9.97-001	9.97-001
TH231	3.55-004	5.11-004	7.36-004	8.35-004	8.78-004	8.97-004
PA231	1.13-004	2.56-004	7.51-004	1.35-003	1.99-003	2.65-003
PA232	2.16-007	6.56-007	2.95-006	6.72-006	1.15-005	1.69-005
PA233	1.60-009	6.65-009	5.16-008	1.72-007	3.92-007	7.28-007
PA234	2.32-013	1.05-012	9.13-012	3.20-011	7.53-011	1.43-010
U232	4.09-008	1.70-007	1.33-006	4.45-006	1.03-005	1.92-005
TH228	3.56-013	1.94-012	2.47-011	1.16-010	3.50-010	8.16-010
TH229	3.47-016	2.40-015	4.71-014	3.05-013	1.18-012	3.36-012
U233	4.08-011	2.23-010	2.82-009	1.32-008	3.96-008	9.19-008
U234	5.03-013	2.84-012	3.83-011	1.88-010	5.82-010	1.39-009
U235	3.84-016	2.74-015	5.68-014	3.80-013	1.50-012	4.38-012
U236	3.01-019	2.64-018	8.13-017	7.28-016	3.63-015	1.28-014
COMB1	4.67-004	7.66-004	1.49-003	2.18-003	2.87-003	3.55-003
COMB2	2.57-007	8.26-007	4.29-006	1.12-005	2.17-005	3.60-005

TIME	0.60000	0.80000	1.00000	1.20000	1.40000	1.60000
FLUX= 3.0+014		TARGET=TH230		DATA TYPE=YIELD		
TH230	9.96-001	9.94-001	9.93-001	9.92-001	9.90-001	9.89-001
TH231	9.05-004	9.09-004	9.09-004	9.08-004	9.06-004	9.05-004
PA231	3.31-003	4.64-003	5.94-003	7.24-003	8.51-003	9.77-003
PA232	2.26-005	3.44-005	4.64-005	5.82-005	7.00-005	8.16-005
PA233	1.19-006	2.47-006	4.24-006	6.46-006	9.09-006	1.21-005
PA234	2.35-010	4.99-010	8.63-010	1.32-009	1.87-009	2.50-009
U232	3.15-005	6.66-005	1.16-004	1.80-004	2.57-004	3.48-004
TH228	1.61-009	4.61-009	1.02-008	1.92-008	3.24-008	5.07-008
TH229	7.90-012	3.01-011	8.36-011	1.90-010	3.78-010	6.80-010
U233	1.81-007	5.13-007	1.12-006	2.09-006	3.50-006	5.42-006
U234	2.81-009	8.36-009	1.91-008	3.72-008	6.49-008	1.04-007
U235	1.05-011	4.10-011	1.17-010	2.71-010	5.50-010	1.01-009
U236	3.62-014	1.86-013	6.56-013	1.83-012	4.33-012	9.07-012
COMB1	4.22-003	5.54-003	6.85-003	8.14-003	9.42-003	1.07-002
COMB2	5.41-005	1.01-004	1.62-004	2.38-004	3.27-004	4.29-004

TIME	1.80000	2.00000	2.20000	2.50000	3.00000	3.50000
FLUX= 3.0+014		TARGET=TH230		DATA TYPE=YIELD		
TH230	9.88-001	9.86-001	9.85-001	9.83-001	9.80-001	9.76-001
TH231	9.04-004	9.03-004	9.01-004	9.00-004	8.97-004	8.93-004
PA231	1.10-002	1.22-002	1.34-002	1.52-002	1.81-002	2.09-002
PA232	9.30-005	1.04-004	1.15-004	1.32-004	1.58-004	1.84-004
PA233	1.55-005	1.92-005	2.32-005	2.97-005	4.17-005	5.49-005
PA234	3.20-009	3.97-009	4.81-009	6.17-009	8.68-009	1.14-008
U232	4.51-004	5.68-004	6.98-004	9.15-004	1.33-003	1.82-003
TH228	7.48-008	1.05-007	1.43-007	2.15-007	3.80-007	6.10-007
TH229	1.13-009	1.79-009	2.69-009	4.62-009	9.91-009	1.87-008
U233	7.91-006	1.10-005	1.49-005	2.20-005	3.80-005	5.96-005
U234	1.58-007	2.29-007	3.20-007	4.98-007	9.32-007	1.58-006
U235	1.71-009	2.74-009	4.18-009	7.35-009	1.63-008	3.17-008
U236	1.74-011	3.10-011	5.22-011	1.05-010	2.80-010	6.38-010
COMB1	1.19-002	1.31-002	1.43-002	1.61-002	1.90-002	2.18-002
COMB2	5.44-004	6.73-004	8.13-004	1.05-003	1.49-003	2.01-003

TABLE X (Contd.)

TIME	4.00000	5.00000	6.00000	7.00000	8.00000	9.00000
FLUX= 3.0+014		TARGET=TH230		DATA TYPE=YIELD		
TH230	9.73-001	9.66-001	9.59-001	9.53-001	9.46-001	9.40-001
TH231	8.90-004	8.84-004	8.78-004	8.72-004	8.66-004	8.60-004
PA231	2.36-002	2.87-002	3.35-002	3.80-002	4.21-002	4.60-002
PA232	2.09-004	2.56-004	3.00-004	3.41-004	3.80-004	4.15-004
PA233	6.90-005	9.91-005	1.31-004	1.62-004	1.94-004	2.25-004
PA234	1.44-008	2.07-008	2.73-008	3.40-008	4.06-008	4.70-008
U232	2.38-003	3.67-003	5.17-003	6.86-003	8.71-003	1.07-002
TH228	9.14-007	1.77-006	3.01-006	4.66-006	6.77-006	9.35-006
TH229	3.23-008	7.94-008	1.64-007	2.99-007	5.00-007	7.84-007
U233	8.73-005	1.62-004	2.63-004	3.92-004	5.47-004	7.27-004
U234	2.48-006	5.24-006	9.59-006	1.59-005	2.44-005	3.56-005
U235	5.62-008	1.44-007	3.09-007	5.80-007	9.95-007	1.59-006
U236	1.30-009	4.21-009	1.09-008	2.41-008	4.76-008	8.63-008
COMB1	2.45-002	2.96-002	3.44-002	3.88-002	4.30-002	4.69-002
COMB2	2.59-003	3.92-003	5.47-003	7.20-003	9.09-003	1.11-002

TIME	10.00000	12.00000	14.00000	16.00000	18.00000	20.00000
FLUX= 3.0+014		TARGET=TH230		DATA TYPE=YIELD		
TH230	9.33-001	9.21-001	9.08-001	8.95-001	8.83-001	8.71-001
TH231	8.54-004	8.43-004	8.31-004	8.20-004	8.08-004	7.97-004
PA231	4.96-002	5.60-002	6.16-002	6.64-002	7.04-002	7.39-002
PA232	4.48-004	5.08-004	5.59-004	6.03-004	6.41-004	6.72-004
PA233	2.54-004	3.09-004	3.59-004	4.02-004	4.40-004	4.72-004
PA234	5.33-008	6.48-008	7.52-008	8.43-008	9.22-008	9.90-008
U232	1.28-002	1.73-002	2.20-002	2.68-002	3.17-002	3.66-002
TH228	1.24-005	2.01-005	2.97-005	4.12-005	5.46-005	6.95-005
TH229	1.17-006	2.29-006	4.02-006	6.47-006	9.76-006	1.40-005
U233	9.32-004	1.40-003	1.95-003	2.54-003	3.18-003	3.84-003
U234	4.96-005	8.71-005	1.38-004	2.04-004	2.85-004	3.81-004
U235	2.40-006	4.82-006	8.53-006	1.38-005	2.07-005	2.95-005
U236	1.46-007	3.59-007	7.56-007	1.42-006	2.45-006	3.96-006
COMB1	5.04-002	5.69-002	6.24-002	6.72-002	7.13-002	7.47-002
COMB2	1.32-002	1.78-002	2.25-002	2.74-002	3.23-002	3.72-002

TIME	22.00000	24.00000	26.00000	30.00000	35.00000	40.00000
FLUX= 3.0+014		TARGET=TH230		DATA TYPE=YIELD		
TH230	8.59-001	8.47-001	8.36-001	8.13-001	7.85-001	7.59-001
TH231	7.86-004	7.76-004	7.65-004	7.44-004	7.19-004	6.94-004
PA231	7.68-002	7.92-002	8.12-002	8.41-002	8.61-002	8.68-002
PA232	6.99-004	7.22-004	7.40-004	7.67-004	7.86-004	7.92-004
PA233	5.00-004	5.24-004	5.44-004	5.74-004	5.97-004	6.09-004
PA234	1.05-007	1.10-007	1.14-007	1.20-007	1.25-007	1.28-007
U232	4.13-002	4.59-002	5.04-002	5.87-002	6.77-002	7.51-002
TH228	8.60-005	1.04-004	1.22-004	1.62-004	2.14-004	2.66-004
TH229	1.93-005	2.57-005	3.32-005	5.21-005	8.27-005	1.21-004
U233	4.52-003	5.20-003	5.87-003	7.16-003	8.63-003	9.90-003
U234	4.92-004	6.16-004	7.53-004	1.06-003	1.50-003	1.97-003
U235	4.03-005	5.29-005	6.75-005	1.02-004	1.55-004	2.15-004
U236	6.05-006	8.84-006	1.24-005	2.25-005	4.16-005	6.90-005
COMB1	7.76-002	8.00-002	8.20-002	8.49-002	8.68-002	8.75-002
COMB2	4.20-002	4.67-002	5.11-002	5.94-002	6.85-002	7.59-002

TIME	45.00000	50.00000	55.00000	60.00000	65.00000	70.00000
FLUX= 3.0+014		TARGET=TH230		DATA TYPE=YIELD		
TH230	7.33-001	7.08-001	6.84-001	6.61-001	6.39-001	6.17-001
TH231	6.71-004	6.48-004	6.26-004	6.05-004	5.84-004	5.65-004
PA231	8.65-002	8.56-002	8.41-002	8.24-002	8.04-002	7.83-002
PA232	7.90-004	7.81-004	7.68-004	7.52-004	7.34-004	7.15-004
PA233	6.12-004	6.09-004	6.01-004	5.90-004	5.77-004	5.63-004
PA234	1.28-007	1.28-007	1.26-007	1.24-007	1.21-007	1.18-007
U232	8.11-002	8.56-002	8.89-002	9.11-002	9.24-002	9.29-002
TH228	3.16-004	3.63-004	4.05-004	4.42-004	4.73-004	4.99-004
TH229	1.67-004	2.19-004	2.76-004	3.38-004	4.02-004	4.69-004
U233	1.10-002	1.18-002	1.25-002	1.29-002	1.33-002	1.34-002
U234	2.46-003	2.95-003	3.43-003	3.88-003	4.30-003	4.68-003
U235	2.80-004	3.47-004	4.15-004	4.81-004	5.43-004	6.01-004
U236	1.06-004	1.52-004	2.08-004	2.74-004	3.49-004	4.32-004
COMB1	8.72-002	8.62-002	8.48-002	8.30-002	8.10-002	7.88-002
COMB2	8.19-002	8.64-002	8.97-002	9.19-002	9.31-002	9.36-002

TABLE X (Contd.)

TIME	75.00000	80.00000	85.00000	90.00000	95.00000	100.00000
FLUX= 3.0+014		TARGET=TH230		DATA TYPE=YIELD		
TH230	5.96-001	5.76-001	5.56-001	5.37-001	5.19-001	5.02-001
TH231	5.45-004	5.27-004	5.09-004	4.92-004	4.75-004	4.59-004
PA231	7.60-002	7.38-002	7.15-002	6.93-002	6.71-002	6.49-002
PA232	6.95-004	6.74-004	6.53-004	6.33-004	6.13-004	5.93-004
PA233	5.48-004	5.32-004	5.16-004	5.00-004	4.84-004	4.69-004
PA234	1.15-007	1.12-007	1.08-007	1.05-007	1.02-007	9.84-008
U232	9.27-002	9.20-002	9.09-002	8.95-002	8.78-002	8.59-002
TH228	5.19-004	5.35-004	5.46-004	5.53-004	5.57-004	5.57-004
TH229	5.37-004	6.04-004	6.71-004	7.36-004	7.99-004	8.60-004
U233	1.35-002	1.35-002	1.34-002	1.32-002	1.30-002	1.28-002
U234	5.01-003	5.31-003	5.55-003	5.76-003	5.92-003	6.05-003
U235	6.54-004	7.01-004	7.41-004	7.76-004	8.05-004	8.28-004
U236	5.23-004	6.21-004	7.24-004	8.32-004	9.44-004	1.06-003
COMB1	7.66-002	7.43-002	7.20-002	6.98-002	6.75-002	6.53-002
COMB2	9.34-002	9.27-002	9.16-002	9.01-002	8.84-002	8.65-002

TABLE XI

TARGET= TH230
DATA TYPE= YIELD-ATOMS PER ATOM TARGET
FLUX= 7.0+014
TIME SPAN= 0- 80

TIME	0.05000	0.10000	0.20000	0.30000	0.40000	0.50000
FLUX= 7.0+014		TARGET=TH230		DATA TYPE=YIELD		
TH230	9.99-001	9.98-001	9.97-001	9.95-001	9.94-001	9.92-001
TH231	6.92-004	1.16-003	1.69-003	1.92-003	2.03-003	2.08-003
PA231	1.64-004	5.35-004	1.64-003	2.99-003	4.44-003	5.92-003
PA232	5.12-007	2.69-006	1.34-005	3.15-005	5.46-005	8.07-005
PA233	5.90-009	5.20-008	4.86-007	1.73-006	4.10-006	7.77-006
PA234	1.29-012	1.43-011	1.66-010	6.50-010	1.62-009	3.18-009
U232	6.46-008	5.71-007	5.37-006	1.92-005	4.58-005	8.72-005
TH228	3.62-013	5.09-012	8.57-011	4.52-010	1.44-009	3.47-009
TH229	5.14-016	1.10-014	3.20-013	2.43-012	1.02-011	3.08-011
U233	9.67-011	1.36-009	2.27-008	1.19-007	3.76-007	8.98-007
U234	2.36-012	3.59-011	6.62-010	3.69-009	1.22-008	3.05-008
U235	2.62-015	6.00-014	1.88-012	1.50-011	6.52-011	2.01-010
U236	2.92-018	9.80-017	5.10-015	5.75-014	3.26-013	1.25-012
COMB1	8.56-004	1.69-003	3.33-003	4.92-003	6.47-003	8.00-003
COMB2	5.77-007	3.26-006	1.87-005	5.07-005	1.00-004	1.68-004

TIME	0.60000	0.80000	1.00000	1.20000	1.40000	1.60000
FLUX= 7.0+014		TARGET=TH230		DATA TYPE=YIELD		
TH230	9.90-001	9.87-001	9.84-001	9.81-001	9.78-001	9.75-001
TH231	2.10-003	2.11-003	2.10-003	2.10-003	2.09-003	2.08-003
PA231	7.41-003	1.03-002	1.32-002	1.60-002	1.86-002	2.12-002
PA232	1.08-004	1.65-004	2.21-004	2.76-004	3.30-004	3.81-004
PA233	1.28-005	2.70-005	4.65-005	7.07-005	9.93-005	1.32-004
PA234	5.36-009	1.16-008	2.03-008	3.12-008	4.41-008	5.89-008
U232	1.45-004	3.09-004	5.39-004	8.30-004	1.18-003	1.59-003
TH228	7.01-009	2.05-008	4.58-008	8.65-008	1.46-007	2.27-007
TH229	7.50-011	2.98-010	8.44-010	1.94-009	3.88-009	7.00-009
U233	1.80-006	5.18-006	1.14-005	2.11-005	3.50-005	5.36-005
U234	6.32-008	1.94-007	4.51-007	8.82-007	1.54-006	2.47-006
U235	4.99-010	2.04-009	5.90-009	1.38-008	2.79-008	5.10-008
U236	3.70-012	2.03-011	7.41-011	2.10-010	5.01-010	1.05-009
COMB1	9.51-003	1.24-002	1.53-002	1.80-002	2.07-002	2.33-002
COMB2	2.53-004	4.74-004	7.60-004	1.11-003	1.51-003	1.97-003

TIME	1.80000	2.00000	2.20000	2.50000	3.00000	3.50000
FLUX= 7.0+014		TARGET=TH230		DATA TYPE=YIELD		
TH230	9.71-001	9.68-001	9.65-001	9.61-001	9.53-001	9.45-001
TH231	2.08-003	2.07-003	2.06-003	2.05-003	2.04-003	2.02-003
PA231	2.37-002	2.62-002	2.85-002	3.19-002	3.72-002	4.21-002
PA232	4.31-004	4.80-004	5.27-004	5.94-004	7.00-004	7.97-004
PA233	1.68-004	2.07-004	2.48-004	3.15-004	4.36-004	5.64-004
PA234	7.52-008	9.29-008	1.12-007	1.42-007	1.98-007	2.56-007
U232	2.05-003	2.56-003	3.12-003	4.03-003	5.75-003	7.69-003
TH228	3.33-007	4.67-007	6.30-007	9.36-007	1.62-006	2.55-006
TH229	1.17-008	1.84-008	2.75-008	4.70-008	9.94-008	1.85-007
U233	7.73-005	1.06-004	1.41-004	2.05-004	3.40-004	5.13-004
U234	3.73-006	5.36-006	7.42-006	1.14-005	2.08-005	3.43-005
U235	8.59-008	1.36-007	2.05-007	3.54-007	7.56-007	1.42-006
U236	2.02-009	3.58-009	5.99-009	1.19-008	3.09-008	6.86-008
COMB1	2.58-002	2.82-002	3.06-002	3.40-002	3.92-002	4.41-002
COMB2	2.48-003	3.04-003	3.64-003	4.63-003	6.45-003	8.48-003

TABLE XI (Contd.)

TIME	4.00000	5.00000	6.00000	7.00000	8.00000	9.00000
FLUX= 7.0+014		TARGET=TH230		DATA TYPE=YIELD		
TH230	9.38-001	9.23-001	9.08-001	8.93-001	8.79-001	8.65-001
TH231	2.00-003	1.97-003	1.94-003	1.91-003	1.88-003	1.85-003
PA231	4.66-002	5.45-002	6.12-002	6.67-002	7.13-002	7.52-002
PA232	8.87-004	1.04-003	1.18-003	1.29-003	1.38-003	1.46-003
PA233	6.98-004	9.68-004	1.23-003	1.48-003	1.71-003	1.91-003
PA234	3.18-007	4.42-007	5.63-007	6.77-007	7.81-007	8.75-007
U232	9.80-003	1.44-002	1.94-002	2.46-002	2.98-002	3.50-002
TH228	3.74-006	6.93-006	1.12-005	1.66-005	2.30-005	3.04-005
TH229	3.14-007	7.44-007	1.48-006	2.60-006	4.18-006	6.31-006
U233	7.23-004	1.24-003	1.87-003	2.59-003	3.36-003	4.16-003
U234	5.25-005	1.05-004	1.80-004	2.80-004	4.04-004	5.53-004
U235	2.41-006	5.69-006	1.11-005	1.92-005	3.03-005	4.45-005
U236	1.35-007	4.10-007	9.90-007	2.04-006	3.77-006	6.38-006
COMB1	4.86-002	5.65-002	6.31-002	6.86-002	7.32-002	7.70-002
COMB2	1.07-002	1.55-002	2.06-002	2.59-002	3.12-002	3.65-002

TIME	10.00000	12.00000	14.00000	16.00000	18.00000	20.00000
FLUX= 7.0+014		TARGET=TH230		DATA TYPE=YIELD		
TH230	8.51-001	8.24-001	7.98-001	7.73-001	7.48-001	7.25-001
TH231	1.82-003	1.76-003	1.71-003	1.65-003	1.60-003	1.55-003
PA231	7.83-002	8.27-002	8.53-002	8.66-002	8.68-002	8.63-002
PA232	1.52-003	1.61-003	1.66-003	1.69-003	1.69-003	1.69-003
PA233	2.09-003	2.38-003	2.59-003	2.72-003	2.81-003	2.85-003
PA234	9.58-007	1.09-006	1.19-006	1.25-006	1.29-006	1.31-006
U232	4.00-002	4.95-002	5.79-002	6.50-002	7.09-002	7.57-002
TH228	3.86-005	5.69-005	7.69-005	9.78-005	1.19-004	1.39-004
TH229	9.04-006	1.65-005	2.67-005	4.00-005	5.60-005	7.48-005
U233	4.97-003	6.57-003	8.04-003	9.35-003	1.05-002	1.14-002
U234	7.25-004	1.13-003	1.59-003	2.10-003	2.62-003	3.15-003
U235	6.18-005	1.06-004	1.61-004	2.24-004	2.93-004	3.65-004
U236	1.01-005	2.17-005	4.02-005	6.68-005	1.03-004	1.48-004
COMB1	8.01-002	8.45-002	8.70-002	8.82-002	8.84-002	8.79-002
COMB2	4.16-002	5.11-002	5.95-002	6.67-002	7.26-002	7.74-002

TIME	25.00000	30.00000	35.00000	40.00000	45.00000	50.00000
FLUX= 7.0+014		TARGET=TH230		DATA TYPE=YIELD		
TH230	6.69-001	6.17-001	5.69-001	5.25-001	4.85-001	4.47-001
TH231	1.43-003	1.32-003	1.22-003	1.12-003	1.04-003	9.56-004
PA231	8.31-002	7.83-002	7.31-002	6.79-002	6.28-002	5.81-002
PA232	1.62-003	1.53-003	1.43-003	1.33-003	1.23-003	1.14-003
PA233	2.83-003	2.71-003	2.55-003	2.38-003	2.21-003	2.04-003
PA234	1.30-006	1.24-006	1.17-006	1.09-006	1.01-006	9.37-007
U232	8.30-002	8.54-002	8.44-002	8.14-002	7.73-002	7.27-002
TH228	1.83-004	2.16-004	2.37-004	2.48-004	2.50-004	2.46-004
TH229	1.31-004	1.97-004	2.67-004	3.36-004	3.99-004	4.55-004
U233	1.29-002	1.35-002	1.35-002	1.31-002	1.25-002	1.18-002
U234	4.39-003	5.42-003	6.18-003	6.67-003	6.92-003	6.99-003
U235	5.44-004	7.00-004	8.22-004	9.06-004	9.56-004	9.76-004
U236	3.04-004	5.17-004	7.74-004	1.06-003	1.37-003	1.68-003
COMB1	8.45-002	7.97-002	7.43-002	6.90-002	6.39-002	5.90-002
COMB2	8.46-002	8.69-002	8.58-002	8.27-002	7.85-002	7.38-002

TIME	55.00000	60.00000	65.00000	70.00000	75.00000	80.00000
FLUX= 7.0+014		TARGET=TH230		DATA TYPE=YIELD		
TH230	4.12-001	3.81-001	3.51-001	3.24-001	2.99-001	2.76-001
TH231	8.82-004	8.14-004	7.51-004	6.93-004	6.39-004	5.90-004
PA231	5.36-002	4.95-002	4.57-002	4.22-002	3.89-002	3.59-002
PA232	1.05-003	9.68-004	8.94-004	8.25-004	7.61-004	7.02-004
PA233	1.89-003	1.74-003	1.61-003	1.48-003	1.37-003	1.26-003
PA234	8.66-007	8.00-007	7.38-007	6.81-007	6.29-007	5.80-007
U232	6.79-002	6.31-002	5.85-002	5.42-002	5.01-002	4.63-002
TH228	2.37-004	2.26-004	2.14-004	2.01-004	1.88-004	1.75-004
TH229	5.03-004	5.42-004	5.72-004	5.94-004	6.08-004	6.16-004
U233	1.10-002	1.02-002	9.50-003	8.80-003	8.13-003	7.52-003
U234	6.90-003	6.72-003	6.45-003	6.15-003	5.81-003	5.47-003
U235	9.73-004	9.52-004	9.20-004	8.79-004	8.34-004	7.86-004
U236	1.98-003	2.28-003	2.56-003	2.82-003	3.06-003	3.28-003
COMB1	5.45-002	5.03-002	4.64-002	4.29-002	3.95-002	3.65-002
COMB2	6.89-002	6.41-002	5.94-002	5.50-002	5.08-002	4.70-002

TABLE XII

TARGET= TH230
DATA TYPE= YIELD-ATOMS PER ATOM TARGET
FLUX= 2.0+015
TIME SPAN= 0- 35

TIME	0.05000	0.10000	0.30000	0.60000	1.00000	1.50000
FLUX= 2.0+015		TARGET=TH230		DATA TYPE=YIELD		
TH230	9.98-001	9.95-001	9.86-001	9.73-001	9.55-001	9.33-001
TH231	1.98-003	3.31-003	5.46-003	5.91-003	5.85-003	5.72-003
PA231	4.68-004	1.51-003	8.27-003	1.97-002	3.33-002	4.70-002
PA232	4.09-006	2.09-005	2.24-004	7.01-004	1.32-003	1.95-003
PA233	1.35-007	1.16-006	3.60-005	2.45-004	8.24-004	1.89-003
PA234	8.08-011	8.53-010	3.38-008	2.50-007	8.67-007	2.02-006
U232	5.17-007	4.46-006	1.39-004	9.50-004	3.22-003	7.47-003
TH228	2.90-012	4.00-011	3.30-009	4.68-008	2.78-007	1.01-006
TH229	1.18-014	2.49-013	5.13-011	1.46-009	1.51-008	8.63-008
U233	2.21-009	3.02-008	2.40-006	3.22-005	1.77-004	5.85-004
U234	1.54-010	2.26-009	2.12-007	3.31-006	2.15-005	8.46-005
U235	4.86-013	1.08-011	2.41-009	7.07-008	7.27-007	4.02-006
U236	1.55-015	5.06-014	2.69-011	1.55-009	2.73-008	2.38-007
COMB1	2.44-003	4.82-003	1.37-002	2.56-002	3.91-002	5.28-002
COMB2	4.60-006	2.53-005	3.62-004	1.65-003	4.53-003	9.42-003

TIME	2.00000	2.50000	3.00000	3.50000	4.00000	4.50000
FLUX= 2.0+015		TARGET=TH230		DATA TYPE=YIELD		
TH230	9.12-001	8.91-001	8.71-001	8.51-001	8.32-001	8.13-001
TH231	5.59-003	5.47-003	5.34-003	5.22-003	5.10-003	4.98-003
PA231	5.79-002	6.63-002	7.27-002	7.76-002	8.12-002	8.37-002
PA232	2.45-003	2.84-003	3.14-003	3.36-003	3.53-003	3.65-003
PA233	3.18-003	4.57-003	5.96-003	7.30-003	8.54-003	9.67-003
PA234	3.42-006	4.93-006	6.45-006	7.91-006	9.27-006	1.05-005
U232	1.27-002	1.84-002	2.43-002	3.01-002	3.55-002	4.06-002
TH228	2.34-006	4.31-006	6.88-006	9.99-006	1.35-005	1.74-005
TH229	2.77-007	6.59-007	1.30-006	2.25-006	3.57-006	5.29-006
U233	1.24-003	2.09-003	3.07-003	4.13-003	5.20-003	6.25-003
U234	2.10-004	4.08-004	6.81-004	1.03-003	1.44-003	1.90-003
U235	1.24-005	2.82-005	5.28-005	8.71-005	1.31-004	1.84-004
U236	1.02-006	3.01-006	7.01-006	1.40-005	2.48-005	4.05-005
COMB1	6.34-002	7.17-002	7.81-002	8.28-002	8.63-002	8.87-002
COMB2	1.51-002	2.13-002	2.74-002	3.34-002	3.91-002	4.43-002

TIME	5.20000	5.80000	6.30000	6.90000	7.50000	8.00000
FLUX= 2.0+015		TARGET=TH230		DATA TYPE=YIELD		
TH230	7.87-001	7.66-001	7.48-001	7.28-001	7.08-001	6.92-001
TH231	4.83-003	4.70-003	4.59-003	4.46-003	4.34-003	4.24-003
PA231	8.58-002	8.67-002	8.68-002	8.65-002	8.57-002	8.49-002
PA232	3.75-003	3.80-003	3.81-003	3.80-003	3.77-003	3.73-003
PA233	1.10-002	1.20-002	1.27-002	1.33-002	1.38-002	1.42-002
PA234	1.20-005	1.31-005	1.38-005	1.45-005	1.51-005	1.54-005
U232	4.70-002	5.17-002	5.51-002	5.85-002	6.12-002	6.30-002
TH228	2.32-005	2.84-005	3.27-005	3.78-005	4.27-005	4.66-005
TH229	8.41-006	1.17-005	1.50-005	1.94-005	2.44-005	2.89-005
U233	7.63-003	8.70-003	9.49-003	1.03-002	1.10-002	1.15-002
U234	2.63-003	3.29-003	3.86-003	4.55-003	5.24-003	5.79-003
U235	2.71-004	3.55-004	4.30-004	5.23-004	6.18-004	6.97-004
U236	7.21-005	1.09-004	1.48-004	2.05-004	2.72-004	3.37-004
COMB1	9.07-002	9.14-002	9.14-002	9.10-002	9.01-002	8.91-002
COMB2	5.08-002	5.55-002	5.89-002	6.23-002	6.50-002	6.68-002

TIME	8.50000	9.00000	9.30000	9.60000	10.00000	10.30000
FLUX= 2.0+015		TARGET=TH230		DATA TYPE=YIELD		
TH230	6.76-001	6.61-001	6.52-001	6.43-001	6.31-001	6.23-001
TH231	4.15-003	4.05-003	4.00-003	3.94-003	3.87-003	3.82-003
PA231	8.38-002	8.26-002	8.19-002	8.11-002	8.00-002	7.91-002
PA232	3.68-003	3.63-003	3.60-003	3.57-003	3.52-003	3.48-003
PA233	1.44-002	1.45-002	1.46-002	1.46-002	1.47-002	1.47-002
PA234	1.57-005	1.59-005	1.59-005	1.60-005	1.60-005	1.60-005
U232	6.45-002	6.56-002	6.61-002	6.65-002	6.69-002	6.71-002
TH228	5.02-005	5.36-005	5.55-005	5.73-005	5.96-005	6.12-005
TH229	3.37-005	3.88-005	4.20-005	4.52-005	4.96-005	5.30-005
U233	1.19-002	1.22-002	1.23-002	1.25-002	1.26-002	1.27-002
U234	6.32-003	6.83-003	7.13-003	7.41-003	7.76-003	8.02-003
U235	7.75-004	8.50-004	8.94-004	9.36-004	9.91-004	1.03-003
U236	4.09-004	4.89-004	5.40-004	5.93-004	6.68-004	7.27-004
COMB1	8.80-002	8.67-002	8.59-002	8.50-002	8.38-002	8.29-002
COMB2	6.82-002	6.92-002	6.97-002	7.01-002	7.04-002	7.06-002

TABLE XII (Contd.)

TIME	10.50000	11.00000	11.50000	12.00000	12.50000	13.00000
FLUX= 2.0+015		TARGET=TH230		DATA TYPE=YIELD		
TH230	6.17-001	6.03-001	5.89-001	5.76-001	5.63-001	5.50-001
TH231	3.78-003	3.70-003	3.61-003	3.53-003	3.45-003	3.37-003
PA231	7.85-002	7.71-002	7.56-002	7.41-002	7.26-002	7.11-002
PA232	3.46-003	3.39-003	3.33-003	3.26-003	3.20-003	3.13-003
PA233	1.46-002	1.46-002	1.45-002	1.44-002	1.42-002	1.40-002
PA234	1.60-005	1.59-005	1.58-005	1.57-005	1.55-005	1.53-005
U232	6.72-002	6.72-002	6.71-002	6.68-002	6.63-002	6.58-002
TH228	6.22-005	6.45-005	6.65-005	6.82-005	6.97-005	7.09-005
TH229	5.52-005	6.10-005	6.68-005	7.27-005	7.85-005	8.44-005
U233	1.27-002	1.28-002	1.29-002	1.28-002	1.28-002	1.27-002
U234	8.18-003	8.56-003	8.90-003	9.22-003	9.49-003	9.73-003
U235	1.06-003	1.12-003	1.17-003	1.22-003	1.27-003	1.31-003
U236	7.67-004	8.72-004	9.82-004	1.10-003	1.22-003	1.34-003
COMB1	8.23-002	8.08-002	7.92-002	7.76-002	7.60-002	7.44-002
COMB2	7.06-002	7.06-002	7.04-002	7.01-002	6.95-002	6.89-002

TIME	13.50000	14.00000	14.50000	15.00000	16.00000	17.00000
FLUX= 2.0+015		TARGET=TH230		DATA TYPE=YIELD		
TH230	5.37-001	5.25-001	5.13-001	5.01-001	4.79-001	4.57-001
TH231	3.29-003	3.22-003	3.15-003	3.07-003	2.94-003	2.80-003
PA231	6.96-002	6.81-002	6.66-002	6.52-002	6.23-002	5.96-002
PA232	3.06-003	3.00-003	2.93-003	2.87-003	2.75-003	2.62-003
PA233	1.38-002	1.36-002	1.34-002	1.32-002	1.27-002	1.22-002
PA234	1.51-005	1.49-005	1.46-005	1.44-005	1.39-005	1.33-005
U232	6.51-002	6.43-002	6.35-002	6.26-002	6.07-002	5.86-002
TH228	7.19-005	7.27-005	7.33-005	7.37-005	7.39-005	7.35-005
TH229	9.02-005	9.59-005	1.01-004	1.07-004	1.17-004	1.27-004
U233	1.26-002	1.25-002	1.24-002	1.22-002	1.18-002	1.15-002
U234	9.94-003	1.01-002	1.03-002	1.04-002	1.05-002	1.06-002
U235	1.34-003	1.38-003	1.40-003	1.43-003	1.46-003	1.48-003
U236	1.46-003	1.59-003	1.72-003	1.85-003	2.12-003	2.39-003
COMB1	7.29-002	7.13-002	6.98-002	6.82-002	6.53-002	6.24-002
COMB2	6.82-002	6.73-002	6.64-002	6.55-002	6.34-002	6.12-002

TIME	18.00000	19.00000	20.00000	21.00000	22.00000	23.00000
FLUX= 2.0+015		TARGET=TH230		DATA TYPE=YIELD		
TH230	4.37-001	4.17-001	3.98-001	3.81-001	3.63-001	3.47-001
TH231	2.68-003	2.56-003	2.44-003	2.33-003	2.23-003	2.13-003
PA231	5.70-002	5.44-002	5.20-002	4.97-002	4.74-002	4.53-002
PA232	2.51-003	2.40-003	2.29-003	2.19-003	2.09-003	2.00-003
PA233	1.17-002	1.13-002	1.08-002	1.03-002	9.87-003	9.44-003
PA234	1.28-005	1.23-005	1.18-005	1.13-005	1.08-005	1.03-005
U232	5.64-002	5.43-002	5.21-002	5.00-002	4.79-002	4.58-002
TH228	7.27-005	7.14-005	6.99-005	6.81-005	6.61-005	6.40-005
TH229	1.36-004	1.45-004	1.52-004	1.59-004	1.65-004	1.69-004
U233	1.11-002	1.06-002	1.02-002	9.82-003	9.41-003	9.01-003
U234	1.06-002	1.05-002	1.04-002	1.02-002	9.98-003	9.74-003
U235	1.48-003	1.48-003	1.47-003	1.45-003	1.42-003	1.39-003
U236	2.66-003	2.93-003	3.19-003	3.44-003	3.69-003	3.93-003
COMB1	5.96-002	5.70-002	5.44-002	5.20-002	4.97-002	4.74-002
COMB2	5.90-002	5.67-002	5.44-002	5.22-002	5.00-002	4.78-002

TIME	25.00000	27.00000	29.00000	31.00000	33.00000	35.00000
FLUX= 2.0+015		TARGET=TH230		DATA TYPE=YIELD		
TH230	3.17-001	2.89-001	2.63-001	2.40-001	2.19-001	2.00-001
TH231	1.94-003	1.77-003	1.61-003	1.47-003	1.34-003	1.23-003
PA231	4.13-002	3.77-002	3.44-002	3.14-002	2.86-002	2.61-002
PA232	1.82-003	1.66-003	1.51-003	1.38-003	1.26-003	1.15-003
PA233	8.62-003	7.87-003	7.18-003	6.55-003	5.98-003	5.45-003
PA234	9.41-006	8.59-006	7.84-006	7.15-006	6.52-006	5.95-006
U232	4.20-002	3.83-002	3.50-002	3.20-002	2.92-002	2.66-002
TH228	5.97-005	5.52-005	5.09-005	4.68-005	4.29-005	3.92-005
TH229	1.77-004	1.82-004	1.84-004	1.84-004	1.82-004	1.78-004
U233	8.25-003	7.54-003	6.89-003	6.29-003	5.74-003	5.23-003
U234	9.19-003	8.59-003	7.98-003	7.38-003	6.81-003	6.26-003
U235	1.32-003	1.23-003	1.15-003	1.07-003	9.83-004	9.04-004
U236	4.38-003	4.78-003	5.14-003	5.46-003	5.74-003	5.98-003
COMB1	4.33-002	3.95-002	3.60-002	3.28-002	3.00-002	2.73-002
COMB2	4.38-002	4.00-002	3.65-002	3.33-002	3.04-002	2.78-002

TABLE XIII

TARGET= PA231
DATA TYPE= YIELD-ATOMS PER ATOM TARGET
FLUX= 3.0+013
TIME SPAN= 0- 150

TIME	0.00500	0.01000	0.05000	0.10000	0.50000	0.80000
FLUX=	3.0+013	TARGET=PA231		DATA TYPE=YIELD		
PA231	1.00+000	1.00+000	1.00+000	9.99-001	9.97-001	9.95-001
PA232	2.39-005	5.85-005	2.59-004	4.50-004	9.27-004	9.62-004
PA233	1.72-009	8.49-009	1.69-007	6.00-007	7.63-006	1.35-005
PA234	2.85-015	2.37-014	1.43-012	7.57-012	1.53-010	2.83-010
U232	4.39-007	2.17-006	4.34-005	1.55-004	2.06-003	3.80-003
TH228	3.58-013	3.10-012	2.44-010	1.71-009	1.27-007	3.94-007
TH229	3.22-018	4.48-017	1.25-014	1.68-013	6.45-011	3.32-010
U233	4.11-012	3.56-011	2.80-009	1.96-008	1.43-006	4.43-006
U234	3.25-015	2.92-014	2.74-012	2.18-011	2.17-009	7.38-009
TH230	7.21-025	1.03-023	3.33-021	5.05-020	2.60-017	1.46-016
TH231	1.19-030	2.53-029	2.48-026	6.60-025	1.12-021	8.03-021
U235	2.31-020	3.31-019	1.07-016	1.62-015	8.33-013	4.66-012
U236	1.68-025	3.59-024	3.70-021	1.04-019	2.67-016	2.44-015
U237	7.04-032	2.14-030	6.52-027	3.34-025	3.86-021	5.44-020
NP237	1.91-034	7.99-033	6.80-029	6.30-027	3.45-022	7.89-021
NP238	2.19-039	1.22-037	2.70-033	4.35-031	9.43-026	3.12-024
PU238	1.86-041	1.34-039	7.53-035	2.14-032	2.13-026	1.15-024
COMB1	2.43-005	6.07-005	3.03-004	6.04-004	2.99-003	4.77-003

TIME	1.00000	1.10000	1.20000	1.40000	1.60000	1.80000
FLUX=	3.0+013	TARGET=PA231		DATA TYPE=YIELD		
PA231	9.94-001	9.93-001	9.93-001	9.92-001	9.90-001	9.89-001
PA232	9.66-004	9.66-004	9.66-004	9.65-004	9.64-004	9.63-004
PA233	1.72-005	1.90-005	2.07-005	2.40-005	2.71-005	3.01-005
PA234	3.65-010	4.05-010	4.43-010	5.16-010	5.85-010	6.50-010
U232	4.98-003	5.57-003	6.16-003	7.33-003	8.51-003	9.68-003
TH228	6.61-007	8.21-007	9.98-007	1.41-006	1.89-006	2.43-006
TH229	7.09-010	9.76-010	1.30-009	2.17-009	3.35-009	4.90-009
U233	7.38-006	9.14-006	1.11-005	1.55-005	2.07-005	2.66-005
U234	1.30-008	1.65-008	2.05-008	3.01-008	4.19-008	5.61-008
TH230	3.25-016	4.56-016	6.20-016	1.07-015	1.70-015	2.57-015
TH231	1.96-020	2.85-020	3.99-020	7.21-020	1.19-019	1.85-019
U235	1.04-011	1.45-011	1.98-011	3.40-011	5.43-011	8.19-011
U236	6.84-015	1.06-014	1.58-014	3.18-014	5.83-014	9.92-014
U237	1.86-019	3.13-019	5.01-019	1.15-018	2.34-018	4.36-018
NP237	3.41-020	6.33-020	1.11-019	2.99-019	7.02-019	1.48-018
NP238	1.58-023	3.14-023	5.84-023	1.73-022	4.39-022	9.89-022
PU238	7.35-024	1.61-023	3.29-023	1.15-022	3.36-022	8.58-022
COMB1	5.95-003	6.54-003	7.12-003	8.30-003	9.47-003	1.06-002

TIME	2.00000	2.20000	2.50000	3.00000	3.20000	3.50000
FLUX=	3.0+013	TARGET=PA231		DATA TYPE=YIELD		
PA231	9.88-001	9.87-001	9.85-001	9.82-001	9.81-001	9.79-001
PA232	9.62-004	9.61-004	9.59-004	9.56-004	9.55-004	9.53-004
PA233	3.28-005	3.54-005	3.90-005	4.42-005	4.61-005	4.88-005
PA234	7.11-010	7.68-010	8.48-010	9.65-010	1.01-009	1.06-009
U232	1.08-002	1.20-002	1.38-002	1.67-002	1.78-002	1.95-002
TH228	3.05-006	3.74-006	4.90-006	7.18-006	8.20-006	9.87-006
TH229	6.87-009	9.32-009	1.40-008	2.48-008	3.03-008	4.01-008
U233	3.32-005	4.04-005	5.25-005	7.60-005	8.65-005	1.03-004
U234	7.29-008	9.24-008	1.27-007	2.01-007	2.36-007	2.96-007
TH230	3.72-015	5.19-015	8.10-015	1.53-014	1.92-014	2.63-014
TH231	2.74-019	3.89-019	6.22-019	1.21-018	1.53-018	2.12-018
U235	1.18-010	1.65-010	2.57-010	4.84-010	6.06-010	8.29-010
U236	1.59-013	2.45-013	4.34-013	9.83-013	1.31-012	1.96-012
U237	7.57-018	1.24-017	2.41-017	6.14-017	8.53-017	1.34-016
NP237	2.87-018	5.21-018	1.16-017	3.56-017	5.29-017	9.15-017
NP238	2.03-021	3.86-021	9.07-021	3.01-020	4.59-020	8.20-020
PU238	1.97-021	4.15-021	1.12-020	4.52-020	7.38-020	1.45-019
COMB1	1.18-002	1.30-002	1.47-002	1.76-002	1.88-002	2.05-002

TABLE XIII (Contd.)

TIME	4.00000	4.50000	5.00000	6.00000	7.00000	8.00000
FLUX= 3.0+013		TARGET=PA231		DATA TYPE=YIELD		
PA231	9.76-001	9.73-001	9.70-001	9.65-001	9.59-001	9.53-001
PA232	9.50-004	9.48-004	9.45-004	9.39-004	9.33-004	9.28-004
PA233	5.26-005	5.59-005	5.87-005	6.31-005	6.62-005	6.85-005
PA234	1.15-009	1.22-009	1.29-009	1.38-009	1.45-009	1.50-009
U232	2.24-002	2.52-002	2.81-002	3.37-002	3.92-002	4.47-002
TH228	1.30-005	1.65-005	2.04-005	2.95-005	4.01-005	5.22-005
TH229	6.06-008	8.70-008	1.20-007	2.09-007	3.34-007	4.99-007
U233	1.34-004	1.69-004	2.07-004	2.93-004	3.92-004	5.03-004
U234	4.15-007	5.60-007	7.34-007	1.18-006	1.76-006	2.49-006
TH230	4.20-014	6.35-014	9.22-014	1.76-013	3.05-013	4.93-013
TH231	3.43-018	5.26-018	7.70-018	1.49-017	2.62-017	4.26-017
U235	1.32-009	2.00-009	2.89-009	5.50-009	9.50-009	1.53-008
U236	3.57-012	6.06-012	9.74-012	2.22-011	4.45-011	8.15-011
U237	2.63-016	4.75-016	8.04-016	1.98-015	4.24-015	8.16-015
NP237	2.06-016	4.20-016	7.93-016	2.36-015	5.91-015	1.30-014
NP238	1.93-019	4.07-019	7.91-019	2.46-018	6.36-018	1.44-017
PU238	3.94-019	9.42-019	2.04-018	7.70-018	2.34-017	6.07-017
COMB1	2.33-002	2.62-002	2.90-002	3.46-002	4.02-002	4.57-002

TIME	9.00000	10.00000	12.00000	14.00000	16.00000	18.00000
FLUX= 3.0+013		TARGET=PA231		DATA TYPE=YIELD		
PA231	9.47-001	9.42-001	9.31-001	9.19-001	9.08-001	8.98-001
PA232	9.22-004	9.17-004	9.06-004	8.95-004	8.84-004	8.74-004
PA233	7.00-005	7.10-005	7.20-005	7.22-005	7.19-005	7.13-005
PA234	1.54-009	1.56-009	1.58-009	1.59-009	1.58-009	1.57-009
U232	5.02-002	5.55-002	6.61-002	7.64-002	8.65-002	9.64-002
TH228	6.58-005	8.08-005	1.15-004	1.54-004	1.99-004	2.48-004
TH229	7.11-007	9.74-007	1.67-006	2.64-006	3.90-006	5.50-006
U233	6.25-004	7.57-004	1.05-003	1.39-003	1.76-003	2.16-003
U234	3.40-006	4.50-006	7.30-006	1.10-005	1.57-005	2.16-005
TH230	7.54-013	1.10-012	2.14-012	3.75-012	6.10-012	9.40-012
TH231	6.54-017	9.63-017	1.88-016	3.31-016	5.42-016	8.37-016
U235	2.33-008	3.39-008	6.51-008	1.13-007	1.83-007	2.80-007
U236	1.39-010	2.25-010	5.18-010	1.05-009	1.93-009	3.32-009
U237	1.45-014	2.42-014	5.86-014	1.23-013	2.34-013	4.11-013
NP237	2.61-014	4.86-014	1.41-013	3.48-013	7.56-013	1.50-012
NP238	2.94-017	5.55-017	1.65-016	4.14-016	9.11-016	1.82-015
PU238	1.40-016	2.95-016	1.06-015	3.09-015	7.79-015	1.75-014
COMB1	5.11-002	5.64-002	6.70-002	7.73-002	8.74-002	9.72-002

TIME	20.00000	22.00000	25.00000	30.00000	32.00000	35.00000
FLUX= 3.0+013		TARGET=PA231		DATA TYPE=YIELD		
PA231	8.87-001	8.76-001	8.61-001	8.35-001	8.25-001	8.11-001
PA232	8.63-004	8.53-004	8.38-004	8.13-004	8.03-004	7.89-004
PA233	7.06-005	6.99-005	6.87-005	6.67-005	6.59-005	6.48-005
PA234	1.55-009	1.54-009	1.51-009	1.47-009	1.45-009	1.42-009
U232	1.06-001	1.15-001	1.29-001	1.51-001	1.59-001	1.71-001
TH228	3.01-004	3.59-004	4.53-004	6.26-004	7.00-004	8.17-004
TH229	7.46-006	9.82-006	1.42-005	2.37-005	2.85-005	3.66-005
U233	2.60-003	3.06-003	3.80-003	5.16-003	5.74-003	6.64-003
U234	2.86-005	3.69-005	5.19-005	8.42-005	9.99-005	1.26-004
TH230	1.38-011	1.96-011	3.13-011	6.11-011	7.73-011	1.07-010
TH231	1.23-015	1.75-015	2.81-015	5.50-015	6.97-015	9.68-015
U235	4.08-007	5.74-007	9.07-007	1.73-006	2.18-006	2.99-006
U236	5.39-009	8.34-009	1.50-008	3.45-008	4.63-008	6.96-008
U237	6.80-013	1.07-012	1.96-012	4.62-012	6.25-012	9.49-012
NP237	2.75-012	4.77-012	9.94-012	2.82-011	4.07-011	6.76-011
NP238	3.38-015	5.89-015	1.24-014	3.54-014	5.13-014	8.56-014
PU238	3.61-014	6.91-014	1.65-013	5.64-013	8.70-013	1.58-012
COMB1	1.07-001	1.16-001	1.30-001	1.52-001	1.60-001	1.72-001

TABLE XIII (Contd.)

TIME	40.00000	45.00000	50.00000	60.00000	70.00000	80.00000
FLUX=	3.0+013	TARGET=PA231		DATA TYPE=YIELD		
PA231	7.87-001	7.63-001	7.41-001	6.98-001	6.57-001	6.19-001
PA232	7.66-004	7.43-004	7.21-004	6.79-004	6.40-004	6.02-004
PA233	6.28-005	6.10-005	5.92-005	5.57-005	5.25-005	4.94-005
PA234	1.38-009	1.34-009	1.30-009	1.22-009	1.15-009	1.09-009
U232	1.91-001	2.09-001	2.26-001	2.57-001	2.84-001	3.07-001
TH228	1.02-003	1.24-003	1.47-003	1.95-003	2.45-003	2.94-003
TH229	5.29-005	7.30-005	9.71-005	1.57-004	2.35-004	3.29-004
U233	8.21-003	9.87-003	1.16-002	1.51-002	1.87-002	2.22-002
U234	1.79-004	2.43-004	3.18-004	5.03-004	7.35-004	1.01-003
TH230	1.74-010	2.67-010	3.90-010	7.48-010	1.29-009	2.05-009
TH231	1.58-014	2.42-014	3.54-014	6.79-014	1.17-013	1.86-013
U235	4.76-006	7.16-006	1.03-005	1.89-005	3.14-005	4.82-005
U236	1.28-007	2.17-007	3.48-007	7.80-007	1.53-006	2.72-006
U237	1.76-011	3.03-011	4.89-011	1.11-010	2.20-010	3.94-010
NP237	1.44-010	2.78-010	5.00-010	1.37-009	3.17-009	6.51-009
NP238	1.83-013	3.55-013	6.41-013	1.76-012	4.10-012	8.44-012
PU238	3.85-012	8.38-012	1.67-011	5.47-011	1.47-010	3.42-010
COMB1	1.92-001	2.10-001	2.27-001	2.58-001	2.84-001	3.08-001

TIME	90.00000	100.00000	110.00000	120.00000	130.00000	150.00000
FLUX=	3.0+013	TARGET=PA231		DATA TYPE=YIELD		
PA231	5.83-001	5.49-001	5.17-001	4.87-001	4.58-001	4.07-001
PA232	5.67-004	5.34-004	5.03-004	4.74-004	4.46-004	3.96-004
PA233	4.66-005	4.38-005	4.13-005	3.89-005	3.66-005	3.25-005
PA234	1.02-009	9.64-010	9.07-010	8.55-010	8.05-010	7.14-010
U232	3.27-001	3.44-001	3.59-001	3.70-001	3.80-001	3.93-001
TH228	3.43-003	3.90-003	4.35-003	4.77-003	5.17-003	5.86-003
TH229	4.40-004	5.67-004	7.10-004	8.67-004	1.04-003	1.41-003
U233	2.57-002	2.90-002	3.21-002	3.50-002	3.76-002	4.22-002
U234	1.33-003	1.69-003	2.09-003	2.51-003	2.97-003	3.95-003
TH230	3.07-009	4.39-009	6.03-009	8.02-009	1.04-008	1.64-008
TH231	2.80-013	3.99-013	5.49-013	7.31-013	9.48-013	1.49-012
U235	6.96-005	9.58-005	1.27-004	1.63-004	2.04-004	2.99-004
U236	4.49-006	6.97-006	1.03-005	1.47-005	2.02-005	3.53-005
U237	6.54-010	1.02-009	1.52-009	2.16-009	2.98-009	5.23-009
NP237	1.22-008	2.12-008	3.47-008	5.42-008	8.11-008	1.65-007
NP238	1.58-011	2.76-011	4.52-011	7.06-011	1.06-010	2.16-010
PU238	7.14-010	1.37-009	2.44-009	4.12-009	6.62-009	1.52-008
COMB1	3.28-001	3.45-001	3.59-001	3.71-001	3.80-001	3.94-001

TABLE XIV

TARGET= PA231
DATA TYPE= YIELD-ATOMS PER ATOM TARGET
FLUX= 7.0+013
TIME SPAN= 0- 150

TIME	0.00500	0.01000	0.05000	0.10000	0.50000	0.80000
FLUX=	7.0+013	TARGET=PA231		DATA TYPE=YIELD		
PA231	1.00+000	1.00+000	9.99-001	9.99-001	9.93-001	9.89-001
PA232	5.56-005	1.37-004	6.04-004	1.05-003	2.14-003	2.21-003
PA233	9.37-009	4.62-008	9.20-007	3.26-006	4.12-005	7.28-005
PA234	3.62-014	3.01-013	1.81-011	9.56-011	1.92-009	3.54-009
U232	1.02-006	5.06-006	1.01-004	3.60-004	4.77-003	8.77-003
TH228	8.34-013	7.23-012	5.68-010	3.99-009	2.93-007	9.10-007
TH229	1.75-017	2.44-016	6.79-014	9.15-013	3.49-010	1.79-009
U233	2.24-011	1.94-010	1.52-008	1.07-007	7.74-006	2.38-005
U234	4.13-014	3.71-013	3.47-011	2.76-010	2.73-008	9.26-008
TH230	9.16-024	1.31-022	4.23-020	6.41-019	3.28-016	1.83-015
TH231	3.53-029	7.49-028	7.34-025	1.95-023	3.31-020	2.36-019
U235	6.85-019	9.80-018	3.16-015	4.79-014	2.44-011	1.36-010
U236	1.16-023	2.48-022	2.55-019	7.20-018	1.83-014	1.66-013
U237	1.14-029	3.46-028	1.05-024	5.38-023	6.17-019	8.67-018
NP237	3.09-032	1.29-030	1.10-026	1.01-024	5.52-020	1.26-018
NP238	8.25-037	4.58-035	1.02-030	1.64-028	3.51-023	1.16-021
PU238	7.00-039	5.05-037	2.83-032	8.03-030	7.95-024	4.25-022
COMB1	5.67-005	1.42-004	7.06-004	1.41-003	6.91-003	1.10-002

TABLE XIV (Contd.)

TIME	1.00000	1.10000	1.20000	1.40000	1.60000	1.80000
FLUX=	7.0+013	TARGET=PA231		DATA TYPE=YIELD		
PA231	9.86-001	9.85-001	9.83-001	9.81-001	9.78-001	9.75-001
PA232	2.22-003	2.22-003	2.21-003	2.21-003	2.20-003	2.20-003
PA233	9.27-005	1.02-004	1.11-004	1.29-004	1.45-004	1.61-004
PA234	4.56-009	5.04-009	5.52-009	6.42-009	7.27-009	8.06-009
U232	1.15-002	1.28-002	1.41-002	1.68-002	1.95-002	2.21-002
TH228	1.52-006	1.89-006	2.30-006	3.23-006	4.32-006	5.58-006
TH229	3.82-009	5.25-009	7.01-009	1.16-008	1.80-008	2.63-008
U233	3.95-005	4.88-005	5.92-005	8.27-005	1.10-004	1.41-004
U234	1.63-007	2.06-007	2.56-007	3.76-007	5.22-007	6.98-007
TH230	4.07-015	5.71-015	7.77-015	1.34-014	2.13-014	3.21-014
TH231	5.75-019	8.34-019	1.17-018	2.11-018	3.48-018	5.40-018
U235	3.02-010	4.23-010	5.74-010	9.85-010	1.57-009	2.36-009
U236	4.66-013	7.21-013	1.07-012	2.16-012	3.95-012	6.70-012
U237	2.96-017	4.97-017	7.96-017	1.82-016	3.70-016	6.88-016
NP237	5.43-018	1.01-017	1.77-017	4.75-017	1.11-016	2.34-016
NP238	5.85-021	1.16-020	2.15-020	6.38-020	1.61-019	3.62-019
PU238	2.72-021	5.95-021	1.21-020	4.23-020	1.23-019	3.14-019
COMB1	1.37-002	1.50-002	1.64-002	1.90-002	2.17-002	2.43-002

TIME	2.00000	2.20000	2.50000	3.00000	3.20000	3.50000
FLUX=	7.0+013	TARGET=PA231		DATA TYPE=YIELD		
PA231	9.72-001	9.70-001	9.66-001	9.59-001	9.56-001	9.52-001
PA232	2.19-003	2.18-003	2.18-003	2.16-003	2.15-003	2.14-003
PA233	1.75-004	1.89-004	2.08-004	2.35-004	2.45-004	2.58-004
PA234	8.81-009	9.51-009	1.05-008	1.19-008	1.24-008	1.31-008
U232	2.48-002	2.74-002	3.13-002	3.77-002	4.03-002	4.41-002
TH228	6.98-006	8.54-006	1.12-005	1.63-005	1.86-005	2.24-005
TH229	3.68-008	4.98-008	7.46-008	1.32-007	1.61-007	2.13-007
U233	1.75-004	2.13-004	2.76-004	3.96-004	4.50-004	5.35-004
U234	9.05-007	1.15-006	1.57-006	2.47-006	2.90-006	3.62-006
TH230	4.63-014	6.45-014	1.01-013	1.89-013	2.37-013	3.24-013
TH231	7.97-018	1.13-017	1.80-017	3.49-017	4.41-017	6.09-017
U235	3.40-009	4.72-009	7.33-009	1.37-008	1.72-008	2.34-008
U236	1.07-011	1.65-011	2.91-011	6.56-011	8.74-011	1.30-010
U237	1.19-015	1.96-015	3.78-015	9.59-015	1.33-014	2.09-014
NP237	4.53-016	8.21-016	1.81-015	5.56-015	8.25-015	1.42-014
NP238	7.41-019	1.41-018	3.29-018	1.09-017	1.66-017	2.95-017
PU238	7.19-019	1.51-018	4.06-018	1.63-017	2.65-017	5.19-017
COMB1	2.70-002	2.96-002	3.35-002	3.99-002	4.24-002	4.62-002

TIME	4.00000	4.50000	5.00000	6.00000	7.00000	8.00000
FLUX=	7.0+013	TARGET=PA231		DATA TYPE=YIELD		
PA231	9.46-001	9.39-001	9.32-001	9.19-001	9.07-001	8.94-001
PA232	2.13-003	2.11-003	2.10-003	2.07-003	2.04-003	2.01-003
PA233	2.78-004	2.94-004	3.08-004	3.29-004	3.43-004	3.52-004
PA234	1.41-008	1.49-008	1.56-008	1.67-008	1.75-008	1.79-008
U232	5.04-002	5.66-002	6.27-002	7.47-002	8.64-002	9.78-002
TH228	2.93-005	3.71-005	4.58-005	6.57-005	8.87-005	1.15-004
TH229	3.21-007	4.59-007	6.33-007	1.10-006	1.74-006	2.59-006
U233	6.92-004	8.65-004	1.05-003	1.47-003	1.94-003	2.46-003
U234	5.06-006	6.80-006	8.87-006	1.41-005	2.08-005	2.92-005
TH230	5.16-013	7.78-013	1.12-012	2.13-012	3.67-012	5.87-012
TH231	9.85-017	1.50-016	2.19-016	4.22-016	7.33-016	1.18-015
U235	3.70-008	5.56-008	8.00-008	1.50-007	2.56-007	4.06-007
U236	2.36-010	3.98-010	6.36-010	1.43-009	2.84-009	5.15-009
U237	4.07-014	7.31-014	1.23-013	3.01-013	6.36-013	1.21-012
NP237	3.19-014	6.48-014	1.22-013	3.59-013	8.89-013	1.94-012
NP238	6.90-017	1.45-016	2.80-016	8.63-016	2.21-015	4.94-015
PU238	1.40-016	3.33-016	7.19-016	2.68-015	8.05-015	2.07-014
COMB1	5.25-002	5.87-002	6.48-002	7.68-002	8.84-002	9.98-002

TABLE XIV (Contd.)

TIME	9.00000	10.00000	12.00000	14.00000	16.00000	18.00000
FLUX= 7.0+013		TARGET=PA231		DATA TYPE=YIELD		
PA231	8.82-001	8.69-001	8.45-001	8.22-001	7.99-001	7.77-001
PA232	1.99-003	1.96-003	1.90-003	1.85-003	1.80-003	1.75-003
PA233	3.58-004	3.60-004	3.60-004	3.55-004	3.49-004	3.41-004
PA234	1.82-008	1.83-008	1.83-008	1.81-008	1.78-008	1.73-008
U232	1.09-001	1.20-001	1.40-001	1.60-001	1.79-001	1.96-001
TH228	1.44-004	1.75-004	2.47-004	3.27-004	4.16-004	5.12-004
TH229	3.67-006	5.00-006	8.50-006	1.33-005	1.94-005	2.71-005
U233	3.02-003	3.62-003	4.91-003	6.32-003	7.81-003	9.37-003
U234	3.95-005	5.16-005	8.21-005	1.21-004	1.70-004	2.28-004
TH230	8.90-012	1.29-011	2.46-011	4.25-011	6.81-011	1.03-010
TH231	1.81-015	2.63-015	5.06-015	8.77-015	1.41-014	2.14-014
U235	6.09-007	8.76-007	1.64-006	2.78-006	4.37-006	6.50-006
U236	8.70-009	1.39-008	3.13-008	6.20-008	1.12-007	1.88-007
U237	2.13-012	3.51-012	8.32-012	1.71-011	3.18-011	5.47-011
NP237	3.85-012	7.09-012	2.02-011	4.87-011	1.04-010	2.01-010
NP238	9.99-015	1.87-014	5.45-014	1.34-013	2.88-013	5.64-013
PU238	4.71-014	9.79-014	3.44-013	9.81-013	2.41-012	5.31-012
COMB1	1.11-001	1.22-001	1.42-001	1.62-001	1.80-001	1.98-001

TIME	20.00000	22.00000	25.00000	30.00000	32.00000	35.00000
FLUX= 7.0+013		TARGET=PA231		DATA TYPE=YIELD		
PA231	7.56-001	7.35-001	7.05-001	6.57-001	6.39-001	6.13-001
PA232	1.70-003	1.66-003	1.59-003	1.48-003	1.44-003	1.38-003
PA233	3.32-004	3.23-004	3.10-004	2.90-004	2.82-004	2.70-004
PA234	1.69-008	1.65-008	1.58-008	1.47-008	1.43-008	1.38-008
U232	2.13-001	2.28-001	2.50-001	2.82-001	2.94-001	3.10-001
TH228	6.14-004	7.22-004	8.93-004	1.20-003	1.32-003	1.51-003
TH229	3.64-005	4.74-005	6.74-005	1.10-004	1.31-004	1.66-004
U233	1.10-002	1.26-002	1.52-002	1.94-002	2.11-002	2.36-002
U234	2.97-004	3.75-004	5.12-004	7.92-004	9.21-004	1.13-003
TH230	1.49-010	2.08-010	3.25-010	6.09-010	7.59-010	1.03-009
TH231	3.11-014	4.35-014	6.81-014	1.28-013	1.60-013	2.17-013
U235	9.23-006	1.27-005	1.92-005	3.45-005	4.22-005	5.57-005
U236	2.98-007	4.52-007	7.86-007	1.72-006	2.26-006	3.29-006
U237	8.85-011	1.36-010	2.42-010	5.40-010	7.16-010	1.05-009
NP237	3.63-010	6.15-010	1.24-009	3.35-009	4.74-009	7.65-009
NP238	1.02-012	1.75-012	3.56-012	9.70-012	1.38-011	2.23-011
PU238	1.07-011	2.00-011	4.60-011	1.49-010	2.24-010	3.95-010
COMB1	2.15-001	2.30-001	2.52-001	2.84-001	2.95-001	3.11-001

TIME	40.00000	45.00000	50.00000	60.00000	70.00000	80.00000
FLUX= 7.0+013		TARGET=PA231		DATA TYPE=YIELD		
PA231	5.71-001	5.33-001	4.97-001	4.32-001	3.75-001	3.26-001
PA232	1.29-003	1.20-003	1.12-003	9.72-004	8.45-004	7.35-004
PA233	2.52-004	2.35-004	2.19-004	1.90-004	1.65-004	1.44-004
PA234	1.28-008	1.20-008	1.11-008	9.69-009	8.43-009	7.33-009
U232	3.32-001	3.51-001	3.67-001	3.88-001	4.00-001	4.03-001
TH228	1.84-003	2.16-003	2.48-003	3.08-003	3.62-003	4.08-003
TH229	2.34-004	3.15-004	4.08-004	6.30-004	8.95-004	1.20-003
U233	2.76-002	3.14-002	3.49-002	4.09-002	4.56-002	4.90-002
U234	1.53-003	1.98-003	2.48-003	3.59-003	4.80-003	6.07-003
TH230	1.61-009	2.37-009	3.34-009	5.96-009	9.56-009	1.42-008
TH231	3.40-013	5.02-013	7.07-013	1.26-012	2.03-012	3.02-012
U235	8.35-005	1.18-004	1.59-004	2.62-004	3.87-004	5.31-004
U236	5.72-006	9.25-006	1.41-005	2.88-005	5.14-005	8.35-005
U237	1.86-009	3.03-009	4.67-009	9.64-009	1.74-008	2.84-008
NP237	1.55-008	2.85-008	4.89-008	1.22-007	2.58-007	4.83-007
NP238	4.53-011	8.39-011	1.44-010	3.61-010	7.66-010	1.44-009
PU238	9.07-010	1.87-009	3.53-009	1.04-008	2.50-008	5.25-008
COMB1	3.34-001	3.53-001	3.68-001	3.89-001	4.01-001	4.04-001

TABLE XIV (Contd.)

TIME	90.00000	100.00000	110.00000	120.00000	130.00000	150.00000
FLUX=	7.0+013	TARGET=PA231		DATA TYPE=YIELD		
PA231	2.84-001	2.47-001	2.14-001	1.86-001	1.62-001	1.22-001
PA232	6.39-004	5.55-004	4.83-004	4.20-004	3.65-004	2.76-004
PA233	1.25-004	1.09-004	9.45-005	8.21-005	7.14-005	5.40-005
PA234	6.37-009	5.54-009	4.81-009	4.18-009	3.64-009	2.75-009
U232	4.01-001	3.93-001	3.81-001	3.67-001	3.51-001	3.16-001
TH228	4.45-003	4.75-003	4.96-003	5.10-003	5.17-003	5.15-003
TH229	1.52-003	1.87-003	2.24-003	2.60-003	2.97-003	3.69-003
U233	5.12-002	5.24-002	5.27-002	5.23-002	5.13-002	4.81-002
U234	7.35-003	8.60-003	9.80-003	1.09-002	1.19-002	1.36-002
TH230	1.99-008	2.66-008	3.43-008	4.29-008	5.23-008	7.31-008
TH231	4.23-012	5.66-012	7.30-012	9.13-012	1.11-011	1.56-011
U235	6.89-004	8.53-004	1.02-003	1.19-003	1.35-003	1.63-003
U236	1.26-004	1.80-004	2.45-004	3.22-004	4.10-004	6.17-004
U237	4.32-008	6.19-008	8.46-008	1.11-007	1.42-007	2.15-007
NP237	8.28-007	1.32-006	1.99-006	2.87-006	3.97-006	6.91-006
NP238	2.48-009	3.96-009	5.97-009	8.60-009	1.19-008	2.08-008
PU238	9.91-008	1.72-007	2.79-007	4.28-007	6.27-007	1.20-006
COMB1	4.01-001	3.93-001	3.82-001	3.68-001	3.51-001	3.16-001

TABLE XV

TARGET= PA231
DATA TYPE= YIELD-ATOMS PER ATOM TARGET
FLUX= 3.0+014
TIME SPAN= 0- 100

TIME	0.05000	0.10000	0.20000	0.30000	0.40000	0.50000
FLUX=	3.0+014	TARGET=PA231		DATA TYPE=YIELD		
PA231	9.97-001	9.94-001	9.88-001	9.82-001	9.76-001	9.70-001
PA232	2.57-003	4.40-003	6.65-003	7.78-003	8.34-003	8.60-003
PA233	1.68-005	5.91-005	1.92-004	3.58-004	5.39-004	7.23-004
PA234	1.40-009	7.30-009	3.10-008	6.40-008	1.01-007	1.40-007
U232	4.30-004	1.52-003	4.98-003	9.41-003	1.43-002	1.94-002
TH228	2.42-009	1.69-008	1.14-007	3.32-007	6.92-007	1.20-006
TH229	1.24-012	1.67-011	2.23-010	9.92-010	2.80-009	6.18-009
U233	2.78-007	1.93-006	1.29-005	3.75-005	7.77-005	1.34-004
U234	2.71-009	2.15-008	1.64-007	5.15-007	1.13-006	2.04-006
TH230	3.31-018	4.98-017	7.59-016	3.63-015	1.08-014	2.47-014
TH231	2.47-022	6.52-021	1.74-019	1.13-018	4.07-018	1.07-017
U235	1.06-012	1.59-011	2.41-010	1.15-009	3.40-009	7.76-009
U236	3.67-016	1.03-014	3.05-013	2.19-012	8.72-012	2.51-011
U237	6.48-021	3.30-019	1.86-017	1.96-016	1.03-015	3.65-015
NP237	6.77-023	6.22-021	6.69-019	1.05-017	7.33-017	3.27-016
NP238	2.68-026	4.29-024	8.32-022	1.85-020	1.64-019	8.81-019
PU238	7.48-028	2.11-025	7.65-023	2.51-021	2.97-020	1.99-019
COMB1	3.00-003	5.93-003	1.16-002	1.72-002	2.27-002	2.80-002

TIME	0.60000	0.80000	1.00000	1.20000	1.40000	1.60000
FLUX=	3.0+014	TARGET=PA231		DATA TYPE=YIELD		
PA231	9.65-001	9.53-001	9.42-001	9.31-001	9.19-001	9.08-001
PA232	8.71-003	8.73-003	8.66-003	8.57-003	8.47-003	8.37-003
PA233	9.06-004	1.26-003	1.59-003	1.89-003	2.18-003	2.44-003
PA234	1.78-007	2.53-007	3.22-007	3.87-007	4.47-007	5.03-007
U232	2.46-002	3.51-002	4.53-002	5.54-002	6.53-002	7.49-002
TH228	1.87-006	3.67-006	6.08-006	9.09-006	1.27-005	1.68-005
TH229	1.17-008	3.13-008	6.60-008	1.20-007	1.98-007	3.04-007
U233	2.07-004	4.02-004	6.57-004	9.69-004	1.33-003	1.75-003
U234	3.28-006	6.80-006	1.18-005	1.84-005	2.68-005	3.69-005
TH230	4.82-014	1.36-013	2.99-013	5.66-013	9.65-013	1.53-012
TH231	2.31-017	7.52-017	1.82-016	3.66-016	6.55-016	1.07-015
U235	1.51-008	4.21-008	9.19-008	1.72-007	2.91-007	4.57-007
U236	5.91-011	2.23-010	6.17-010	1.40-009	2.79-009	5.03-009
U237	1.02-014	5.03-014	1.70-013	4.51-013	1.02-012	2.05-012
NP237	1.10-015	7.32-015	3.12-014	1.00-013	2.67-013	6.17-013
NP238	3.42-018	2.82-017	1.40-016	5.09-016	1.49-015	3.70-015
PU238	9.32-019	1.03-017	6.49-017	2.85-016	9.78-016	2.81-015
COMB1	3.34-002	4.38-002	5.40-002	6.40-002	7.38-002	8.33-002

TABLE XV (Contd.)

TIME	1.80000	2.00000	2.20000	2.50000	3.00000	3.50000
FLUX=	3.0+014	TARGET=PA231		DATA TYPE=YIELD		
PA231	8.98-001	8.87-001	8.76-001	8.61-001	8.35-001	8.11-001
PA232	8.27-003	8.17-003	8.07-003	7.93-003	7.69-003	7.47-003
PA233	2.68-003	2.90-003	3.10-003	3.38-003	3.76-003	4.06-003
PA234	5.54-007	6.01-007	6.44-007	7.03-007	7.84-007	8.49-007
U232	8.44-002	9.36-002	1.03-001	1.16-001	1.37-001	1.57-001
TH228	2.15-005	2.67-005	3.24-005	4.19-005	6.00-005	8.07-005
TH229	4.41-007	6.13-007	8.25-007	1.22-006	2.13-006	3.38-006
U233	2.20-003	2.70-003	3.24-003	4.10-003	5.69-003	7.43-003
U234	4.88-005	6.27-005	7.85-005	1.06-004	1.63-004	2.33-004
TH230	2.28-012	3.27-012	4.52-012	6.96-012	1.29-011	2.15-011
TH231	1.65-015	2.42-015	3.41-015	5.38-015	1.02-014	1.75-014
U235	6.78-007	9.62-007	1.32-006	2.00-006	3.62-006	5.95-006
U236	8.45-009	1.34-008	2.03-008	3.52-008	7.71-008	1.49-007
U237	3.77-012	6.47-012	1.05-011	1.99-011	4.92-011	1.04-010
NP237	1.29-012	2.46-012	4.42-012	9.61-012	2.87-011	7.16-011
NP238	8.21-015	1.66-014	3.11-014	7.15-014	2.29-013	6.03-013
PU238	7.04-015	1.59-014	3.30-014	8.66-014	3.36-013	1.04-012
COMB1	9.26-002	1.02-001	1.11-001	1.24-001	1.44-001	1.64-001

TIME	4.00000	5.00000	6.00000	7.00000	8.00000	9.00000
FLUX=	3.0+014	TARGET=PA231		DATA TYPE=YIELD		
PA231	7.87-001	7.41-001	6.98-001	6.57-001	6.19-001	5.83-001
PA232	7.24-003	6.82-003	6.43-003	6.05-003	5.70-003	5.37-003
PA233	4.30-003	4.60-003	4.74-003	4.76-003	4.70-003	4.59-003
PA234	8.99-007	9.64-007	9.94-007	9.99-007	9.87-007	9.63-007
U232	1.75-001	2.09-001	2.39-001	2.66-001	2.89-001	3.08-001
TH228	1.04-004	1.56-004	2.16-004	2.81-004	3.51-004	4.24-004
TH229	5.02-006	9.61-006	1.62-005	2.49-005	3.60-005	4.96-005
U233	9.28-003	1.32-002	1.72-002	2.12-002	2.51-002	2.89-002
U234	3.16-004	5.25-004	7.89-004	1.10-003	1.47-003	1.88-003
TH230	3.36-011	7.03-011	1.28-010	2.10-010	3.23-010	4.68-010
TH231	2.76-014	5.91-014	1.09-013	1.81-013	2.80-013	4.09-013
U235	9.09-006	1.82-005	3.18-005	5.04-005	7.44-005	1.04-004
U236	2.61-007	6.65-007	1.41-006	2.64-006	4.51-006	7.19-006
U237	1.98-010	5.66-010	1.31-009	2.61-009	4.69-009	7.79-009
NP237	1.56-010	5.65-010	1.58-009	3.72-009	7.69-009	1.45-008
NP238	1.37-012	5.27-012	1.53-011	3.71-011	7.86-011	1.50-010
PU238	2.71-012	1.30-011	4.56-011	1.29-010	3.10-010	6.63-010
COMB1	1.82-001	2.16-001	2.46-001	2.72-001	2.94-001	3.14-001

TIME	10.00000	12.00000	14.00000	16.00000	18.00000	20.00000
FLUX=	3.0+014	TARGET=PA231		DATA TYPE=YIELD		
PA231	5.49-001	4.87-001	4.32-001	3.83-001	3.40-001	3.01-001
PA232	5.05-003	4.48-003	3.98-003	3.53-003	3.13-003	2.77-003
PA233	4.44-003	4.08-003	3.70-003	3.32-003	2.97-003	2.64-003
PA234	9.32-007	8.57-007	7.77-007	6.98-007	6.24-007	5.56-007
U232	3.26-001	3.52-001	3.70-001	3.81-001	3.85-001	3.85-001
TH228	4.99-004	6.51-004	8.03-004	9.49-004	1.09-003	1.21-003
TH229	6.56-005	1.05-004	1.55-004	2.15-004	2.83-004	3.60-004
U233	3.23-002	3.85-002	4.36-002	4.75-002	5.05-002	5.24-002
U234	2.32-003	3.32-003	4.40-003	5.55-003	6.72-003	7.89-003
TH230	6.51-010	1.14-009	1.80-009	2.66-009	3.71-009	4.95-009
TH231	5.72-013	1.01-012	1.61-012	2.38-012	3.32-012	4.45-012
U235	1.39-004	2.26-004	3.33-004	4.56-004	5.93-004	7.39-004
U236	1.08-005	2.17-005	3.85-005	6.21-005	9.36-005	1.34-004
U237	1.22-008	2.57-008	4.73-008	7.86-008	1.21-007	1.76-007
NP237	2.52-008	6.45-008	1.39-007	2.67-007	4.65-007	7.55-007
NP238	2.66-010	6.95-010	1.53-009	2.96-009	5.21-009	8.51-009
PU238	1.29-009	4.01-009	1.01-008	2.20-008	4.28-008	7.63-008
COMB1	3.31-001	3.57-001	3.74-001	3.84-001	3.89-001	3.88-001

TABLE XV (Contd.)

TIME	22.00000	24.00000	26.00000	30.00000	35.00000	40.00000
FLUX=	3.0+014	TARGET=PA231		DATA TYPE=YIELD		
PA231	2.67-001	2.37-001	2.10-001	1.65-001	1.22-001	9.07-002
PA232	2.46-003	2.18-003	1.94-003	1.52-003	1.13-003	8.35-004
PA233	2.35-003	2.09-003	1.85-003	1.46-003	1.08-003	8.02-004
PA234	4.94-007	4.39-007	3.90-007	3.07-007	2.27-007	1.69-007
U232	3.82-001	3.74-001	3.65-001	3.41-001	3.06-001	2.68-001
TH228	1.33-003	1.43-003	1.51-003	1.64-003	1.73-003	1.76-003
TH229	4.44-004	5.34-004	6.28-004	8.28-004	1.09-003	1.34-003
U233	5.36-002	5.41-002	5.39-002	5.23-002	4.85-002	4.37-002
U234	9.03-003	1.01-002	1.12-002	1.30-002	1.48-002	1.60-002
TH230	6.37-009	7.98-009	9.75-009	1.37-008	1.94-008	2.55-008
TH231	5.74-012	7.20-012	8.81-012	1.24-011	1.76-011	2.31-011
U235	8.90-004	1.04-003	1.20-003	1.48-003	1.80-003	2.04-003
U236	1.82-004	2.40-004	3.07-004	4.67-004	7.11-004	9.95-004
U237	2.45-007	3.26-007	4.22-007	6.53-007	1.01-006	1.43-006
NP237	1.16-006	1.69-006	2.37-006	4.24-006	7.66-006	1.24-005
NP238	1.31-008	1.92-008	2.71-008	4.88-008	8.87-008	1.44-007
PU238	1.27-007	1.99-007	2.99-007	5.97-007	1.21-006	2.13-006
COMB1	3.84-001	3.77-001	3.67-001	3.43-001	3.07-001	2.69-001

TIME	45.00000	50.00000	55.00000	60.00000	65.00000	70.00000
FLUX=	3.0+014	TARGET=PA231		DATA TYPE=YIELD		
PA231	6.72-002	4.98-002	3.69-002	2.73-002	2.02-002	1.50-002
PA232	6.19-004	4.58-004	3.40-004	2.52-004	1.86-004	1.38-004
PA233	5.94-004	4.40-004	3.26-004	2.41-004	1.79-004	1.33-004
PA234	1.25-007	9.25-008	6.85-008	5.08-008	3.76-008	2.79-008
U232	2.32-001	1.98-001	1.67-001	1.40-001	1.17-001	9.70-002
TH228	1.72-003	1.65-003	1.55-003	1.43-003	1.30-003	1.17-003
TH229	1.59-003	1.81-003	2.01-003	2.17-003	2.31-003	2.42-003
U233	3.86-002	3.34-002	2.86-002	2.43-002	2.04-002	1.70-002
U234	1.68-002	1.70-002	1.69-002	1.65-002	1.58-002	1.50-002
TH230	3.18-008	3.81-008	4.43-008	5.01-008	5.54-008	6.03-008
TH231	2.89-011	3.47-011	4.03-011	4.57-011	5.06-011	5.50-011
U235	2.22-003	2.32-003	2.36-003	2.35-003	2.29-003	2.20-003
U236	1.31-003	1.64-003	1.98-003	2.32-003	2.64-003	2.96-003
U237	1.90-006	2.40-006	2.91-006	3.42-006	3.92-006	4.40-006
NP237	1.84-005	2.55-005	3.38-005	4.28-005	5.25-005	6.26-005
NP238	2.14-007	2.99-007	3.96-007	5.03-007	6.17-007	7.37-007
PU238	3.40-006	5.03-006	6.99-006	9.27-006	1.18-005	1.45-005
COMB1	2.32-001	1.98-001	1.68-001	1.41-001	1.17-001	9.71-002

TIME	75.00000	80.00000	85.00000	90.00000	95.00000	100.00000
FLUX=	3.0+014	TARGET=PA231		DATA TYPE=YIELD		
PA231	1.11-002	8.23-003	6.09-003	4.51-003	3.34-003	2.48-003
PA232	1.02-004	7.58-005	5.61-005	4.16-005	3.08-005	2.28-005
PA233	9.82-005	7.27-005	5.39-005	3.99-005	2.96-005	2.19-005
PA234	2.06-008	1.53-008	1.13-008	8.39-009	6.21-009	4.60-009
U232	8.00-002	6.57-002	5.38-002	4.39-002	3.57-002	2.90-002
TH228	1.04-003	9.20-004	8.06-004	7.01-004	6.07-004	5.22-004
TH229	2.50-003	2.56-003	2.59-003	2.60-003	2.59-003	2.57-003
U233	1.41-002	1.17-002	9.60-003	7.87-003	6.42-003	5.23-003
U234	1.41-002	1.31-002	1.21-002	1.11-002	1.01-002	9.16-003
TH230	6.46-008	6.84-008	7.16-008	7.42-008	7.63-008	7.79-008
TH231	5.90-011	6.25-011	6.54-011	6.78-011	6.98-011	7.12-011
U235	2.09-003	1.97-003	1.83-003	1.69-003	1.55-003	1.42-003
U236	3.26-003	3.54-003	3.79-003	4.02-003	4.23-003	4.42-003
U237	4.86-006	5.29-006	5.68-006	6.03-006	6.36-006	6.64-006
NP237	7.29-005	8.31-005	9.32-005	1.03-004	1.12-004	1.21-004
NP238	8.59-007	9.80-007	1.10-006	1.22-006	1.33-006	1.43-006
PU238	1.74-005	2.03-005	2.33-005	2.62-005	2.90-005	3.18-005
COMB1	8.01-002	6.58-002	5.38-002	4.39-002	3.57-002	2.90-002

TABLE XVI

TARGET= PA231
DATA TYPE= YIELD-ATOMS PER ATOM TARGET
FLUX= 7.0+014
TIME SPAN= 0- 10

TIME	0.00500	0.01000	0.05000	0.10000	0.20000	0.40000
FLUX=	7.0+014	TARGET=PA231		DATA TYPE=YIELD		
PA231	9.99-001	9.99-001	9.93-001	9.86-001	9.72-001	9.46-001
PA232	5.56-004	1.36-003	5.89-003	9.96-003	1.47-002	1.77-002
PA233	9.36-007	4.61-006	9.04-005	3.15-004	1.00-003	2.74-003
PA234	3.61-011	2.98-010	1.73-008	8.82-008	3.63-007	1.14-006
U232	1.02-005	5.04-005	9.92-004	3.47-003	1.11-002	3.10-002
TH228	8.34-012	7.21-011	5.60-009	3.88-008	2.56-007	1.52-006
TH229	1.75-015	2.43-014	6.70-012	8.93-011	1.18-009	1.45-008
U233	2.23-009	1.93-008	1.49-006	1.03-005	6.72-005	3.90-004
U234	4.13-011	3.70-010	3.41-008	2.66-007	1.99-006	1.33-005
TH230	9.15-021	1.31-019	4.17-017	6.21-016	9.28-015	1.28-013
TH231	3.52-025	7.47-024	7.25-021	1.90-019	4.98-018	1.14-016
U235	6.84-015	9.77-014	3.10-011	4.60-010	6.82-009	9.24-008
U236	1.16-018	2.48-017	2.51-014	6.97-013	2.03-011	5.60-010
U237	1.14-023	3.45-022	1.04-018	5.23-017	2.89-015	1.55-013
NP237	3.08-026	1.29-024	1.08-020	9.88-019	1.04-016	1.11-014
NP238	8.24-030	4.57-028	9.99-024	1.58-021	3.00-019	5.71-017
PU238	6.99-032	5.03-030	2.79-025	7.76-023	2.76-020	1.03-017
COMB1	5.66-004	1.41-003	6.89-003	1.34-002	2.58-002	4.88-002

TIME	0.60000	0.80000	1.00000	1.20000	1.40000	1.60000
FLUX=	7.0+014	TARGET=PA231		DATA TYPE=YIELD		
PA231	9.19-001	8.94-001	8.69-001	8.45-001	8.22-001	7.99-001
PA232	1.80-002	1.77-002	1.73-002	1.68-002	1.64-002	1.59-002
PA233	4.52-003	6.17-003	7.68-003	9.04-003	1.03-002	1.14-002
PA234	1.96-006	2.73-006	3.43-006	4.06-006	4.63-006	5.15-006
U232	5.21-002	7.27-002	9.24-002	1.11-001	1.29-001	1.46-001
TH228	4.01-006	7.72-006	1.26-005	1.85-005	2.54-005	3.32-005
TH229	5.93-008	1.56-007	3.24-007	5.83-007	9.47-007	1.43-006
U233	1.01-003	1.90-003	3.02-003	4.33-003	5.81-003	7.43-003
U234	3.77-005	7.68-005	1.31-004	2.01-004	2.88-004	3.90-004
TH230	5.62-013	1.56-012	3.38-012	6.31-012	1.06-011	1.66-011
TH231	6.34-016	2.02-015	4.82-015	9.58-015	1.69-014	2.74-014
U235	3.97-007	1.08-006	2.29-006	4.19-006	6.91-006	1.06-005
U236	3.69-009	1.36-008	3.68-008	8.18-008	1.59-007	2.82-007
U237	1.50-012	7.25-012	2.39-011	6.24-011	1.39-010	2.73-010
NP237	1.63-013	1.06-012	4.42-012	1.40-011	3.64-011	8.28-011
NP238	1.15-015	9.20-015	4.45-014	1.57-013	4.48-013	1.09-012
PU238	3.12-016	3.35-015	2.04-014	8.72-014	2.91-013	8.15-013
COMB1	7.02-002	9.04-002	1.10-001	1.28-001	1.45-001	1.61-001

TIME	1.80000	2.00000	2.22000	2.40000	2.60000	2.80000
FLUX=	7.0+014	TARGET=PA231		DATA TYPE=YIELD		
PA231	7.77-001	7.56-001	7.33-001	7.15-001	6.95-001	6.76-001
PA232	1.55-002	1.50-002	1.46-002	1.42-002	1.38-002	1.34-002
PA233	1.23-002	1.32-002	1.41-002	1.47-002	1.53-002	1.58-002
PA234	5.60-006	6.01-006	6.40-006	6.69-006	6.96-006	7.20-006
U232	1.61-001	1.76-001	1.92-001	2.04-001	2.17-001	2.28-001
TH228	4.19-005	5.13-005	6.25-005	7.22-005	8.35-005	9.54-005
TH229	2.06-006	2.83-006	3.86-006	4.87-006	6.15-006	7.62-006
U233	9.14-003	1.09-002	1.30-002	1.47-002	1.66-002	1.86-002
U234	5.08-004	6.42-004	8.07-004	9.55-004	1.13-003	1.33-003
TH230	2.45-011	3.46-011	4.86-011	6.25-011	8.09-011	1.02-010
TH231	4.16-014	6.02-014	8.63-014	1.13-013	1.48-013	1.89-013
U235	1.53-005	2.12-005	2.92-005	3.69-005	4.69-005	5.83-005
U236	4.64-007	7.21-007	1.11-006	1.53-006	2.12-006	2.86-006
U237	4.94-010	8.32-010	1.39-009	2.02-009	2.96-009	4.20-009
NP237	1.69-010	3.19-010	5.93-010	9.39-010	1.50-009	2.30-009
NP238	2.37-012	4.68-012	9.10-012	1.49-011	2.45-011	3.86-011
PU238	1.99-012	4.39-012	9.50-012	1.68-011	3.00-011	5.09-011
COMB1	1.77-001	1.91-001	2.06-001	2.18-001	2.30-001	2.42-001

TABLE XVI (Contd.)

TIME	3.00000	3.20000	3.40000	3.60000	3.80000	4.00000
FLUX= 7.0+014		TARGET=PA231		DATA TYPE=YIELD		
PA231	6.57-001	6.39-001	6.21-001	6.04-001	5.87-001	5.71-001
PA232	1.31-002	1.27-002	1.24-002	1.20-002	1.17-002	1.14-002
PA233	1.62-002	1.66-002	1.69-002	1.71-002	1.73-002	1.75-002
PA234	7.41-006	7.58-006	7.73-006	7.85-006	7.94-006	8.02-006
U232	2.40-001	2.50-001	2.60-001	2.69-001	2.78-001	2.86-001
TH228	1.08-004	1.21-004	1.34-004	1.47-004	1.61-004	1.75-004
TH229	9.29-006	1.12-005	1.32-005	1.55-005	1.81-005	2.08-005
U233	2.05-002	2.24-002	2.43-002	2.62-002	2.80-002	2.98-002
U234	1.53-003	1.75-003	1.98-003	2.23-003	2.48-003	2.74-003
TH230	1.28-010	1.56-010	1.89-010	2.26-010	2.67-010	3.12-010
TH231	2.38-013	2.94-013	3.59-013	4.31-013	5.13-013	6.04-013
U235	7.12-005	8.56-005	1.02-004	1.19-004	1.38-004	1.59-004
U236	3.77-006	4.88-006	6.19-006	7.75-006	9.56-006	1.16-005
U237	5.80-009	7.81-009	1.03-008	1.34-008	1.70-008	2.14-008
NP237	3.41-009	4.93-009	6.93-009	9.55-009	1.29-008	1.71-008
NP238	5.86-011	8.64-011	1.24-010	1.73-010	2.38-010	3.20-010
PU238	8.29-011	1.30-010	1.98-010	2.94-010	4.24-010	6.00-010
COMB1	2.53-001	2.63-001	2.72-001	2.81-001	2.89-001	2.97-001

TIME	4.20000	4.40000	4.60000	4.80000	5.00000	5.20000
FLUX= 7.0+014		TARGET=PA231		DATA TYPE=YIELD		
PA231	5.55-001	5.40-001	5.25-001	5.11-001	4.97-001	4.83-001
PA232	1.11-002	1.07-002	1.04-002	1.02-002	9.88-003	9.61-003
PA233	1.76-002	1.77-002	1.77-002	1.77-002	1.77-002	1.76-002
PA234	8.07-006	8.10-006	8.12-006	8.12-006	8.10-006	8.08-006
U232	2.93-001	3.00-001	3.06-001	3.12-001	3.18-001	3.22-001
TH228	1.89-004	2.03-004	2.18-004	2.32-004	2.47-004	2.62-004
TH229	2.37-005	2.69-005	3.03-005	3.40-005	3.78-005	4.19-005
U233	3.16-002	3.32-002	3.49-002	3.64-002	3.79-002	3.94-002
U234	3.01-003	3.29-003	3.58-003	3.88-003	4.18-003	4.49-003
TH230	3.62-010	4.17-010	4.77-010	5.42-010	6.11-010	6.86-010
TH231	7.04-013	8.15-013	9.35-013	1.07-012	1.21-012	1.36-012
U235	1.81-004	2.05-004	2.30-004	2.56-004	2.84-004	3.14-004
U236	1.40-005	1.68-005	1.98-005	2.32-005	2.70-005	3.12-005
U237	2.65-008	3.24-008	3.93-008	4.71-008	5.60-008	6.60-008
NP237	2.23-008	2.87-008	3.64-008	4.57-008	5.67-008	6.97-008
NP238	4.22-010	5.50-010	7.06-010	8.94-010	1.12-009	1.39-009
PU238	8.31-010	1.13-009	1.51-009	2.00-009	2.60-009	3.34-009
COMB1	3.04-001	3.11-001	3.17-001	3.22-001	3.27-001	3.32-001

TIME	5.40000	5.60000	5.80000	6.00000	6.20000	6.40000
FLUX= 7.0+014		TARGET=PA231		DATA TYPE=YIELD		
PA231	4.69-001	4.57-001	4.44-001	4.32-001	4.20-001	4.08-001
PA232	9.34-003	9.08-003	8.83-003	8.59-003	8.35-003	8.12-003
PA233	1.75-002	1.74-002	1.73-002	1.71-002	1.69-002	1.68-002
PA234	8.04-006	7.99-006	7.93-006	7.86-006	7.79-006	7.71-006
U232	3.27-001	3.31-001	3.35-001	3.38-001	3.41-001	3.44-001
TH228	2.76-004	2.91-004	3.06-004	3.20-004	3.35-004	3.49-004
TH229	4.63-005	5.08-005	5.56-005	6.06-005	6.58-005	7.13-005
U233	4.07-002	4.20-002	4.33-002	4.45-002	4.56-002	4.66-002
U234	4.80-003	5.12-003	5.44-003	5.77-003	6.09-003	6.42-003
TH230	7.67-010	8.52-010	9.43-010	1.04-009	1.14-009	1.25-009
TH231	1.53-012	1.70-012	1.89-012	2.09-012	2.30-012	2.52-012
U235	3.44-004	3.76-004	4.09-004	4.43-004	4.78-004	5.15-004
U236	3.59-005	4.09-005	4.64-005	5.24-005	5.89-005	6.59-005
U237	7.72-008	8.96-008	1.03-007	1.19-007	1.35-007	1.53-007
NP237	8.49-008	1.02-007	1.23-007	1.46-007	1.72-007	2.02-007
NP238	1.70-009	2.07-009	2.50-009	2.99-009	3.55-009	4.19-009
PU238	4.25-009	5.34-009	6.65-009	8.21-009	1.00-008	1.22-008
COMB1	3.36-001	3.40-001	3.44-001	3.47-001	3.50-001	3.52-001

TABLE XVI (Contd.)

TIME	6.60000	6.80000	7.00000	7.20000	7.40000	7.60000
FLUX=	7.0+014	TARGET=PA231		DATA TYPE=YIELD		
PA231	3.97-001	3.86-001	3.75-001	3.65-001	3.55-001	3.45-001
PA232	7.90-003	7.68-003	7.47-003	7.26-003	7.06-003	6.87-003
PA233	1.66-002	1.64-002	1.61-002	1.59-002	1.57-002	1.55-002
PA234	7.62-006	7.53-006	7.43-006	7.32-006	7.22-006	7.11-006
U232	3.46-001	3.48-001	3.50-001	3.51-001	3.52-001	3.53-001
TH228	3.63-004	3.77-004	3.91-004	4.05-004	4.19-004	4.32-004
TH229	7.69-005	8.28-005	8.89-005	9.51-005	1.02-004	1.08-004
U233	4.76-002	4.85-002	4.93-002	5.01-002	5.08-002	5.15-002
U234	6.75-003	7.08-003	7.42-003	7.75-003	8.08-003	8.41-003
TH230	1.36-009	1.48-009	1.60-009	1.73-009	1.87-009	2.01-009
TH231	2.75-012	3.00-012	3.25-012	3.52-012	3.80-012	4.09-012
U235	5.52-004	5.89-004	6.28-004	6.68-004	7.08-004	7.48-004
U236	7.33-005	8.13-005	8.99-005	9.90-005	1.09-004	1.19-004
U237	1.73-007	1.94-007	2.17-007	2.42-007	2.69-007	2.97-007
NP237	2.36-007	2.73-007	3.15-007	3.62-007	4.13-007	4.70-007
NP238	4.91-009	5.72-009	6.63-009	7.65-009	8.77-009	1.00-008
PU238	1.47-008	1.76-008	2.09-008	2.47-008	2.91-008	3.40-008
COMB1	3.54-001	3.56-001	3.57-001	3.58-001	3.59-001	3.60-001

TIME	7.80000	8.00000	8.20000	8.40000	8.60000	8.80000
FLUX=	7.0+014	TARGET=PA231		DATA TYPE=YIELD		
PA231	3.35-001	3.26-001	3.17-001	3.08-001	3.00-001	2.92-001
PA232	6.68-003	6.49-003	6.31-003	6.14-003	5.97-003	5.80-003
PA233	1.52-002	1.50-002	1.47-002	1.44-002	1.42-002	1.39-002
PA234	7.00-006	6.88-006	6.77-006	6.65-006	6.53-006	6.41-006
U232	3.54-001	3.54-001	3.54-001	3.54-001	3.54-001	3.53-001
TH228	4.45-004	4.58-004	4.71-004	4.83-004	4.96-004	5.08-004
TH229	1.15-004	1.22-004	1.29-004	1.37-004	1.44-004	1.52-004
U233	5.21-002	5.27-002	5.32-002	5.36-002	5.40-002	5.43-002
U234	8.74-003	9.06-003	9.39-003	9.71-003	1.00-002	1.03-002
TH230	2.16-009	2.31-009	2.46-009	2.62-009	2.79-009	2.96-009
TH231	4.40-012	4.71-012	5.04-012	5.38-012	5.73-012	6.09-012
U235	7.89-004	8.31-004	8.73-004	9.15-004	9.57-004	1.00-003
U236	1.30-004	1.41-004	1.53-004	1.65-004	1.78-004	1.92-004
U237	3.27-007	3.59-007	3.93-007	4.29-007	4.67-007	5.07-007
NP237	5.32-007	6.01-007	6.75-007	7.56-007	8.43-007	9.38-007
NP238	1.14-008	1.29-008	1.45-008	1.63-008	1.83-008	2.04-008
PU238	3.95-008	4.57-008	5.26-008	6.03-008	6.88-008	7.83-008
COMB1	3.60-001	3.61-001	3.61-001	3.60-001	3.60-001	3.59-001

TIME	9.00000	9.20000	9.40000	9.60000	9.80000	10.00000
FLUX=	7.0+014	TARGET=PA231		DATA TYPE=YIELD		
PA231	2.84-001	2.76-001	2.68-001	2.61-001	2.54-001	2.47-001
PA232	5.64-003	5.49-003	5.34-003	5.19-003	5.04-003	4.91-003
PA233	1.37-002	1.34-002	1.31-002	1.29-002	1.26-002	1.24-002
PA234	6.29-006	6.17-006	6.05-006	5.93-006	5.81-006	5.69-006
U232	3.53-001	3.52-001	3.51-001	3.50-001	3.48-001	3.47-001
TH228	5.19-004	5.31-004	5.42-004	5.53-004	5.64-004	5.74-004
TH229	1.60-004	1.68-004	1.77-004	1.85-004	1.93-004	2.02-004
U233	5.46-002	5.49-002	5.51-002	5.53-002	5.54-002	5.55-002
U234	1.07-002	1.10-002	1.13-002	1.16-002	1.19-002	1.22-002
TH230	3.14-009	3.32-009	3.51-009	3.70-009	3.90-009	4.10-009
TH231	6.46-012	6.84-012	7.23-012	7.63-012	8.04-012	8.47-012
U235	1.04-003	1.09-003	1.13-003	1.17-003	1.21-003	1.26-003
U236	2.06-004	2.21-004	2.37-004	2.53-004	2.69-004	2.87-004
U237	5.49-007	5.93-007	6.39-007	6.87-007	7.37-007	7.90-007
NP237	1.04-006	1.15-006	1.27-006	1.39-006	1.53-006	1.67-006
NP238	2.27-008	2.51-008	2.78-008	3.06-008	3.37-008	3.69-008
PU238	8.87-008	1.00-007	1.13-007	1.26-007	1.41-007	1.57-007
COMB1	3.58-001	3.57-001	3.56-001	3.55-001	3.53-001	3.52-001

TABLE XVII

TARGET= PA231
DATA TYPE= YIELD-ATOMS PER ATOM TARGET
FLUX= 2.0+015
TIME SPAN= 0- 5

TIME	0.00500	0.00800	0.01000	0.05000	0.08000	0.10000
FLUX= 2.0+015		TARGET=PA231		DATA TYPE=YIELD		
PA231	9.98-001	9.97-001	9.96-001	9.80-001	9.68-001	9.61-001
PA232	1.58-003	3.11-003	3.85-003	1.60-002	2.24-002	2.58-002
PA233	7.62-006	2.51-005	3.74-005	7.12-004	1.64-003	2.40-003
PA234	8.39-010	4.00-009	6.83-009	3.68-007	1.08-006	1.75-006
U232	2.92-005	9.60-005	1.43-004	2.73-003	6.29-003	9.22-003
TH228	2.38-011	1.18-010	2.05-010	1.55-008	5.68-008	1.04-007
TH229	1.43-014	9.92-014	1.98-013	5.34-011	3.04-010	6.95-010
U233	1.82-008	9.00-008	1.57-007	1.18-005	4.27-005	7.81-005
U234	9.60-010	4.87-009	8.58-009	7.64-007	3.01-006	5.74-006
TH230	2.13-019	1.51-018	3.03-018	9.43-016	5.74-015	1.36-014
TH231	2.35-023	2.20-022	4.96-022	4.71-019	4.21-018	1.20-017
U235	4.55-013	3.22-012	6.47-012	1.99-009	1.20-008	2.83-008
U236	2.20-016	2.08-015	4.69-015	4.63-012	4.27-011	1.24-010
U237	6.17-021	7.45-020	1.87-019	5.49-016	7.57-015	2.69-014
NP237	1.67-023	2.53-022	6.97-022	5.75-018	1.18-016	5.10-016
NP238	1.28-026	2.35-025	7.05-025	1.50-020	4.43-019	2.29-018
PU238	1.09-028	2.39-027	7.78-027	4.19-022	1.80-020	1.13-019
COMB1	1.61-003	3.20-003	3.99-003	1.87-002	2.87-002	3.50-002

TIME	0.20000	0.30000	0.40000	0.50000	0.60000	0.70000
FLUX= 2.0+015		TARGET=PA231		DATA TYPE=YIELD		
PA231	9.23-001	8.87-001	8.52-001	8.19-001	7.87-001	7.56-001
PA232	3.50-002	3.77-002	3.79-002	3.70-002	3.59-002	3.45-002
PA233	7.24-003	1.27-002	1.82-002	2.34-002	2.83-002	3.27-002
PA234	6.55-006	1.24-005	1.84-005	2.42-005	2.96-005	3.45-005
U232	2.78-002	4.92-002	7.05-002	9.10-002	1.10-001	1.28-001
TH228	6.55-007	1.80-006	3.57-006	5.93-006	8.82-006	1.22-005
TH229	8.80-009	3.72-008	1.01-007	2.13-007	3.88-007	6.37-007
U233	4.78-004	1.28-003	2.47-003	3.99-003	5.78-003	7.78-003
U234	4.03-005	1.18-004	2.46-004	4.24-004	6.53-004	9.31-004
TH230	1.92-013	8.68-013	2.46-012	5.40-012	1.01-011	1.71-011
TH231	2.99-016	1.83-015	6.32-015	1.60-014	3.33-014	6.08-014
U235	3.90-007	1.71-006	4.71-006	1.01-005	1.84-005	3.02-005
U236	3.39-009	2.27-008	8.47-008	2.30-007	5.13-007	9.99-007
U237	1.41-012	1.39-011	6.88-011	2.33-010	6.18-010	1.39-009
NP237	5.11-014	7.54-013	4.99-012	2.12-011	6.79-011	1.80-010
NP238	4.07-016	8.32-015	6.87-014	3.43-013	1.25-012	3.66-012
PU238	3.74-017	1.13-015	1.23-014	7.69-014	3.36-013	1.15-012
COMB1	6.29-002	8.69-002	1.08-001	1.28-001	1.46-001	1.63-001

TIME	0.80000	0.90000	1.00000	1.10000	1.20000	1.30000
FLUX= 2.0+015		TARGET=PA231		DATA TYPE=YIELD		
PA231	7.26-001	6.98-001	6.70-001	6.44-001	6.19-001	5.94-001
PA232	3.32-002	3.19-002	3.07-002	2.95-002	2.83-002	2.72-002
PA233	3.68-002	4.05-002	4.39-002	4.70-002	4.98-002	5.23-002
PA234	3.91-005	4.32-005	4.70-005	5.05-005	5.36-005	5.63-005
U232	1.45-001	1.60-001	1.74-001	1.87-001	1.98-001	2.09-001
TH228	1.60-005	2.02-005	2.47-005	2.96-005	3.46-005	3.99-005
TH229	9.71-007	1.40-006	1.93-006	2.57-006	3.32-006	4.19-006
U233	9.93-003	1.22-002	1.45-002	1.69-002	1.93-002	2.16-002
U234	1.26-003	1.62-003	2.04-003	2.49-003	2.97-003	3.50-003
TH230	2.67-011	3.94-011	5.54-011	7.53-011	9.92-011	1.27-010
TH231	1.01-013	1.57-013	2.30-013	3.23-013	4.39-013	5.78-013
U235	4.58-005	6.57-005	9.00-005	1.19-004	1.53-004	1.91-004
U236	1.76-006	2.88-006	4.45-006	6.55-006	9.28-006	1.27-005
U237	2.79-009	5.09-009	8.66-009	1.39-008	2.13-008	3.14-008
NP237	4.13-010	8.53-010	1.62-009	2.87-009	4.82-009	7.73-009
NP238	9.15-012	2.03-011	4.08-011	7.62-011	1.34-010	2.23-010
PU238	3.27-012	8.15-012	1.82-011	3.74-011	7.14-011	1.29-010
COMB1	1.78-001	1.92-001	2.05-001	2.16-001	2.27-001	2.36-001

TABLE XVII (Contd.)

TIME	1.40000	1.50000	1.60000	1.70000	1.80000	1.90000
FLUX= 2.0+015		TARGET=PA231		DATA TYPE=YIELD		
PA231	5.71-001	5.49-001	5.27-001	5.06-001	4.87-001	4.68-001
PA232	2.62-002	2.51-002	2.42-002	2.32-002	2.23-002	2.14-002
PA233	5.45-002	5.65-002	5.82-002	5.97-002	6.11-002	6.22-002
PA234	5.88-005	6.11-005	6.30-005	6.47-005	6.62-005	6.75-005
U232	2.19-001	2.28-001	2.35-001	2.43-001	2.49-001	2.54-001
TH228	4.54-005	5.10-005	5.67-005	6.25-005	6.83-005	7.42-005
TH229	5.19-006	6.31-006	7.56-006	8.94-006	1.04-005	1.21-005
U233	2.39-002	2.62-002	2.84-002	3.05-002	3.25-002	3.44-002
U234	4.05-003	4.63-003	5.23-003	5.86-003	6.50-003	7.16-003
TH230	1.60-010	1.98-010	2.41-010	2.89-010	3.43-010	4.02-010
TH231	7.44-013	9.37-013	1.16-012	1.41-012	1.70-012	2.01-012
U235	2.34-004	2.82-004	3.34-004	3.90-004	4.51-004	5.15-004
U236	1.70-005	2.22-005	2.84-005	3.57-005	4.41-005	5.38-005
U237	4.47-008	6.20-008	8.37-008	1.11-007	1.43-007	1.83-007
NP237	1.19-008	1.77-008	2.56-008	3.61-008	4.98-008	6.72-008
NP238	3.55-010	5.45-010	8.10-010	1.17-009	1.65-009	2.27-009
PU238	2.20-010	3.61-010	5.71-010	8.74-010	1.30-009	1.88-009
COMB1	2.45-001	2.53-001	2.60-001	2.66-001	2.71-001	2.76-001

TIME	2.00000	2.10000	2.20000	2.30000	2.40000	2.50000
FLUX= 2.0+015		TARGET=PA231		DATA TYPE=YIELD		
PA231	4.49-001	4.32-001	4.15-001	3.98-001	3.83-001	3.68-001
PA232	2.06-002	1.98-002	1.90-002	1.83-002	1.75-002	1.68-002
PA233	6.31-002	6.39-002	6.46-002	6.51-002	6.54-002	6.57-002
PA234	6.86-005	6.95-005	7.02-005	7.08-005	7.13-005	7.15-005
U232	2.59-001	2.64-001	2.67-001	2.70-001	2.73-001	2.75-001
TH228	8.01-005	8.60-005	9.19-005	9.77-005	1.03-004	1.09-004
TH229	1.39-005	1.58-005	1.78-005	1.99-005	2.22-005	2.46-005
U233	3.62-002	3.79-002	3.95-002	4.10-002	4.24-002	4.37-002
U234	7.83-003	8.52-003	9.21-003	9.91-003	1.06-002	1.13-002
TH230	4.66-010	5.37-010	6.13-010	6.95-010	7.83-010	8.77-010
TH231	2.36-012	2.75-012	3.17-012	3.62-012	4.11-012	4.64-012
U235	5.83-004	6.55-004	7.30-004	8.08-004	8.88-004	9.71-004
U236	6.48-005	7.73-005	9.12-005	1.07-004	1.24-004	1.42-004
U237	2.30-007	2.85-007	3.48-007	4.21-007	5.05-007	5.99-007
NP237	8.90-008	1.16-007	1.49-007	1.89-007	2.37-007	2.94-007
NP238	3.06-009	4.06-009	5.30-009	6.82-009	8.66-009	1.09-008
PU238	2.66-009	3.70-009	5.03-009	6.74-009	8.89-009	1.16-008
COMB1	2.80-001	2.83-001	2.86-001	2.88-001	2.90-001	2.92-001

TIME	2.60000	2.70000	2.80000	2.90000	3.00000	3.10000
FLUX= 2.0+015		TARGET=PA231		DATA TYPE=YIELD		
PA231	3.53-001	3.39-001	3.26-001	3.13-001	3.01-001	2.89-001
PA232	1.62-002	1.56-002	1.49-002	1.44-002	1.38-002	1.33-002
PA233	6.58-002	6.58-002	6.57-002	6.56-002	6.53-002	6.50-002
PA234	7.17-005	7.17-005	7.17-005	7.15-005	7.13-005	7.09-005
U232	2.76-001	2.77-001	2.78-001	2.78-001	2.78-001	2.78-001
TH228	1.15-004	1.20-004	1.26-004	1.31-004	1.36-004	1.41-004
TH229	2.72-005	2.98-005	3.25-005	3.54-005	3.84-005	4.14-005
U233	4.49-002	4.59-002	4.69-002	4.78-002	4.85-002	4.92-002
U234	1.20-002	1.27-002	1.34-002	1.41-002	1.48-002	1.55-002
TH230	9.77-010	1.08-009	1.19-009	1.31-009	1.43-009	1.56-009
TH231	5.20-012	5.80-012	6.43-012	7.09-012	7.80-012	8.53-012
U235	1.06-003	1.14-003	1.23-003	1.32-003	1.41-003	1.50-003
U236	1.63-004	1.85-004	2.08-004	2.34-004	2.61-004	2.90-004
U237	7.05-007	8.22-007	9.53-007	1.10-006	1.25-006	1.43-006
NP237	3.60-007	4.37-007	5.27-007	6.29-007	7.45-007	8.77-007
NP238	1.35-008	1.65-008	2.01-008	2.42-008	2.90-008	3.44-008
PU238	1.49-008	1.89-008	2.37-008	2.94-008	3.62-008	4.42-008
COMB1	2.92-001	2.93-001	2.93-001	2.93-001	2.92-001	2.91-001

TABLE XVII (Contd.)

TIME	3.20000	3.30000	3.40000	3.50000	3.60000	3.80000
FLUX=	2.0+015	TARGET=PA231		DATA TYPE=YIELD		
PA231	2.78-001	2.67-001	2.57-001	2.46-001	2.37-001	2.19-001
PA232	1.27-002	1.22-002	1.18-002	1.13-002	1.08-002	1.00-002
PA233	6.46-002	6.41-002	6.36-002	6.30-002	6.24-002	6.10-002
PA234	7.05-005	7.00-005	6.94-005	6.88-005	6.81-005	6.66-005
U232	2.77-001	2.76-001	2.75-001	2.74-001	2.72-001	2.68-001
TH228	1.46-004	1.51-004	1.55-004	1.60-004	1.64-004	1.72-004
TH229	4.46-005	4.79-005	5.12-005	5.47-005	5.82-005	6.55-005
U233	4.98-002	5.03-002	5.07-002	5.10-002	5.12-002	5.15-002
U234	1.62-002	1.68-002	1.75-002	1.81-002	1.87-002	1.99-002
TH230	1.69-009	1.83-009	1.98-009	2.13-009	2.28-009	2.60-009
TH231	9.30-012	1.01-011	1.09-011	1.18-011	1.27-011	1.46-011
U235	1.59-003	1.68-003	1.78-003	1.87-003	1.96-003	2.14-003
U236	3.21-004	3.54-004	3.88-004	4.25-004	4.63-004	5.44-004
U237	1.61-006	1.81-006	2.03-006	2.26-006	2.51-006	3.06-006
NP237	1.03-006	1.19-006	1.38-006	1.58-006	1.81-006	2.33-006
NP238	4.05-008	4.74-008	5.52-008	6.38-008	7.34-008	9.57-008
PU238	5.34-008	6.42-008	7.66-008	9.07-008	1.07-007	1.45-007
COMB1	2.90-001	2.89-001	2.87-001	2.85-001	2.83-001	2.78-001

TIME	4.00000	4.20000	4.40000	4.60000	4.80000	5.00000
FLUX=	2.0+015	TARGET=PA231		DATA TYPE=YIELD		
PA231	2.02-001	1.86-001	1.72-001	1.59-001	1.46-001	1.35-001
PA232	9.24-003	8.53-003	7.88-003	7.27-003	6.71-003	6.20-003
PA233	5.94-002	5.78-002	5.60-002	5.42-002	5.24-002	5.05-002
PA234	6.50-005	6.32-005	6.13-005	5.94-005	5.73-005	5.53-005
U232	2.63-001	2.58-001	2.52-001	2.46-001	2.40-001	2.33-001
TH228	1.79-004	1.86-004	1.92-004	1.97-004	2.02-004	2.06-004
TH229	7.30-005	8.08-005	8.88-005	9.70-005	1.05-004	1.14-004
U233	5.16-002	5.14-002	5.10-002	5.04-002	4.96-002	4.88-002
U234	2.11-002	2.21-002	2.31-002	2.41-002	2.49-002	2.57-002
TH230	2.94-009	3.30-009	3.67-009	4.05-009	4.45-009	4.86-009
TH231	1.66-011	1.87-011	2.09-011	2.32-011	2.55-011	2.80-011
U235	2.31-003	2.48-003	2.65-003	2.81-003	2.96-003	3.10-003
U236	6.33-004	7.28-004	8.30-004	9.38-004	1.05-003	1.17-003
U237	3.67-006	4.36-006	5.10-006	5.92-006	6.80-006	7.74-006
NP237	2.95-006	3.68-006	4.53-006	5.50-006	6.60-006	7.84-006
NP238	1.23-007	1.54-007	1.91-007	2.34-007	2.83-007	3.38-007
PU238	1.94-007	2.53-007	3.25-007	4.12-007	5.14-007	6.33-007
COMB1	2.73-001	2.67-001	2.60-001	2.53-001	2.46-001	2.39-001

TABLE XVIII

TARGET= TH232
DATA TYPE= YIELD-ATOMS PER ATOM TARGET
FLUX= 3.0+013
TIME SPAN= 0- 150

TIME	0.00500	0.01000	0.05000	0.10000	0.50000	0.80000
FLUX=	3.0+013	TARGET=TH232		DATA TYPE=YIELD		
TH232	1.00+000	1.00+000	1.00+000	1.00+000	1.00+000	1.00+000
TH233	4.24-007	4.25-007	4.25-007	4.25-007	4.25-007	4.25-007
PA233	9.07-007	2.24-006	1.10-005	2.19-005	1.03-004	1.58-004
TH234	7.81-011	1.93-010	9.50-010	1.88-009	8.81-009	1.34-008
PA234	1.77-012	8.24-012	1.25-010	3.47-010	2.22-009	3.49-009
U234	1.95-012	1.01-011	2.64-010	1.17-009	3.48-008	9.11-008
TH230	4.37-022	3.92-021	3.89-019	3.33-018	5.02-016	2.12-015
TH231	1.43-009	3.49-009	1.51-008	2.54-008	4.66-008	4.76-008
PA231	1.07-011	1.05-010	2.87-009	1.04-008	1.31-007	2.36-007
PA232	1.28-016	2.52-015	2.86-013	1.94-012	8.05-011	1.76-010
U232	1.57-018	5.41-017	2.44-014	3.30-013	8.17-011	3.16-010
TH228	9.59-025	5.30-023	8.50-020	2.22-018	3.02-015	1.99-014
TH229	2.96-019	2.55-018	2.09-016	1.57-015	1.81-013	7.23-013
U233	8.14-010	4.01-009	8.56-008	3.33-007	7.86-006	1.95-005
COMB1	9.07-007	2.24-006	1.11-005	2.22-005	1.11-004	1.78-004

TABLE XVIII (Contd.)

TIME	1.00000	1.10000	1.20000	1.40000	1.60000	1.80000
FLUX=	3.0+013	TARGET=TH232		DATA TYPE=YIELD		
TH232	1.00+000	1.00+000	1.00+000	1.00+000	1.00+000	1.00+000
TH233	4.25-007	4.25-007	4.25-007	4.25-007	4.25-007	4.25-007
PA233	1.92-004	2.08-004	2.24-004	2.54-004	2.82-004	3.09-004
TH234	1.63-008	1.76-008	1.89-008	2.14-008	2.37-008	2.59-008
PA234	4.28-009	4.66-009	5.02-009	5.72-009	6.38-009	6.99-009
U234	1.44-007	1.74-007	2.08-007	2.85-007	3.73-007	4.74-007
TH230	4.19-015	5.60-015	7.30-015	1.17-014	1.75-014	2.50-014
TH231	4.77-008	4.77-008	4.77-008	4.77-008	4.77-008	4.77-008
PA231	3.07-007	3.42-007	3.77-007	4.48-007	5.18-007	5.88-007
PA232	2.44-010	2.78-010	3.12-010	3.81-010	4.49-010	5.17-010
U232	5.73-010	7.33-010	9.13-010	1.34-009	1.84-009	2.43-009
TH228	4.66-014	6.64-014	9.14-014	1.59-013	2.56-013	3.85-013
TH229	1.39-012	1.83-012	2.36-012	3.69-012	5.42-012	7.60-012
U233	2.98-005	3.57-005	4.21-005	5.61-005	7.19-005	8.92-005
COMB1	2.22-004	2.44-004	2.66-004	3.10-004	3.54-004	3.98-004

TIME	2.00000	2.20000	2.50000	3.00000	3.20000	3.50000
FLUX=	3.0+013	TARGET=TH232		DATA TYPE=YIELD		
TH232	1.00+000	1.00+000	9.99-001	9.99-001	9.99-001	9.99-001
TH233	4.25-007	4.25-007	4.25-007	4.25-007	4.25-007	4.25-007
PA233	3.34-004	3.58-004	3.91-004	4.40-004	4.57-004	4.82-004
TH234	2.79-008	2.98-008	3.25-008	3.63-008	3.76-008	3.95-008
PA234	7.58-009	8.13-009	8.89-009	1.00-008	1.04-008	1.10-008
U234	5.87-007	7.12-007	9.22-007	1.33-006	1.52-006	1.82-006
TH230	3.44-014	4.59-014	6.76-014	1.17-013	1.43-013	1.87-013
TH231	4.77-008	4.77-008	4.77-008	4.77-008	4.77-008	4.77-008
PA231	6.58-007	7.28-007	8.33-007	1.01-006	1.08-006	1.18-006
PA232	5.86-010	6.54-010	7.56-010	9.26-010	9.94-010	1.10-009
U232	3.11-009	3.86-009	5.15-009	7.71-009	8.88-009	1.08-008
TH228	5.52-013	7.63-013	1.17-012	2.13-012	2.63-012	3.52-012
TH229	1.03-011	1.35-011	1.93-011	3.22-011	3.86-011	4.94-011
U233	1.08-004	1.28-004	1.61-004	2.21-004	2.47-004	2.87-004
COMB1	4.42-004	4.86-004	5.52-004	6.61-004	7.04-004	7.69-004

TIME	4.00000	4.50000	5.00000	6.00000	7.00000	8.00000
FLUX=	3.0+013	TARGET=TH232		DATA TYPE=YIELD		
TH232	9.99-001	9.99-001	9.99-001	9.99-001	9.98-001	9.98-001
TH233	4.25-007	4.25-007	4.25-007	4.24-007	4.24-007	4.24-007
PA233	5.18-004	5.49-004	5.76-004	6.19-004	6.51-004	6.75-004
TH234	4.23-008	4.46-008	4.65-008	4.96-008	5.18-008	5.34-008
PA234	1.18-008	1.25-008	1.32-008	1.42-008	1.49-008	1.54-008
U234	2.38-006	3.02-006	3.73-006	5.38-006	7.33-006	9.57-006
TH230	2.80-013	4.00-013	5.49-013	9.52-013	1.51-012	2.26-012
TH231	4.77-008	4.77-008	4.77-008	4.77-008	4.76-008	4.76-008
PA231	1.35-006	1.53-006	1.70-006	2.04-006	2.38-006	2.72-006
PA232	1.26-009	1.43-009	1.60-009	1.93-009	2.27-009	2.60-009
U232	1.44-008	1.85-008	2.30-008	3.37-008	4.64-008	6.10-008
TH228	5.40-012	7.84-012	1.09-011	1.93-011	3.11-011	4.69-011
TH229	7.13-011	9.82-011	1.30-010	2.11-010	3.15-010	4.44-010
U233	3.59-004	4.35-004	5.15-004	6.82-004	8.58-004	1.04-003
COMB1	8.77-004	9.84-004	1.09-003	1.30-003	1.51-003	1.71-003

TIME	9.00000	10.00000	12.00000	14.00000	16.00000	18.00000
FLUX=	3.0+013	TARGET=TH232		DATA TYPE=YIELD		
TH232	9.98-001	9.98-001	9.97-001	9.97-001	9.96-001	9.96-001
TH233	4.24-007	4.24-007	4.24-007	4.24-007	4.24-007	4.23-007
PA233	6.92-004	7.05-004	7.22-004	7.31-004	7.35-004	7.38-004
TH234	5.45-008	5.53-008	5.63-008	5.68-008	5.70-008	5.71-008
PA234	1.58-008	1.61-008	1.65-008	1.67-008	1.68-008	1.69-008
U234	1.21-005	1.49-005	2.14-005	2.89-005	3.75-005	4.70-005
TH230	3.22-012	4.42-012	7.62-012	1.21-011	1.79-011	2.54-011
TH231	4.76-008	4.76-008	4.76-008	4.76-008	4.75-008	4.75-008
PA231	3.06-006	3.39-006	4.06-006	4.71-006	5.36-006	6.00-006
PA232	2.92-009	3.25-009	3.89-009	4.53-009	5.16-009	5.78-009
U232	7.76-008	9.60-008	1.39-007	1.89-007	2.46-007	3.10-007
TH228	6.71-011	9.23-011	1.60-010	2.53-010	3.76-010	5.32-010
TH229	5.97-010	7.75-010	1.21-009	1.74-009	2.36-009	3.09-009
U233	1.22-003	1.41-003	1.78-003	2.14-003	2.50-003	2.84-003
COMB1	1.91-003	2.11-003	2.50-003	2.87-003	3.23-003	3.58-003

TABLE XVIII (Contd.)

TIME	20.00000	22.00000	25.00000	30.00000	32.00000	35.00000
FLUX=	3.0+013	TARGET=TH232		DATA TYPE=YIELD		
TH232	9.96-001	9.95-001	9.94-001	9.93-001	9.93-001	9.92-001
TH233	4.23-007	4.23-007	4.23-007	4.22-007	4.22-007	4.22-007
PA233	7.39-004	7.40-004	7.40-004	7.39-004	7.39-004	7.39-004
TH234	5.72-008	5.72-008	5.72-008	5.71-008	5.71-008	5.70-008
PA234	1.69-008	1.69-008	1.69-008	1.69-008	1.69-008	1.69-008
U234	5.75-005	6.89-005	8.76-005	1.23-004	1.38-004	1.63-004
TH230	3.46-011	4.58-011	6.65-011	1.13-010	1.36-010	1.76-010
TH231	4.75-008	4.75-008	4.75-008	4.74-008	4.74-008	4.73-008
PA231	6.63-006	7.25-006	8.17-006	9.66-006	1.02-005	1.11-005
PA232	6.40-009	7.00-009	7.90-009	9.35-009	9.92-009	1.08-008
U232	3.81-007	4.59-007	5.88-007	8.35-007	9.44-007	1.12-006
TH228	7.23-010	9.54-010	1.38-009	2.32-009	2.79-009	3.59-009
TH229	3.90-009	4.80-009	6.32-009	9.26-009	1.06-008	1.27-008
U233	3.18-003	3.50-003	3.97-003	4.69-003	4.97-003	5.36-003
COMB1	3.92-003	4.24-003	4.71-003	5.43-003	5.71-003	6.10-003

TIME	40.00000	45.00000	50.00000	60.00000	70.00000	80.00000
FLUX=	3.0+013	TARGET=TH232		DATA TYPE=YIELD		
TH232	9.91-001	9.90-001	9.89-001	9.87-001	9.85-001	9.82-001
TH233	4.21-007	4.21-007	4.20-007	4.19-007	4.18-007	4.18-007
PA233	7.38-004	7.37-004	7.36-004	7.35-004	7.33-004	7.31-004
TH234	5.70-008	5.69-008	5.69-008	5.67-008	5.66-008	5.65-008
PA234	1.69-008	1.69-008	1.68-008	1.68-008	1.68-008	1.67-008
U234	2.07-004	2.54-004	3.05-004	4.14-004	5.33-004	6.58-004
TH230	2.57-010	3.58-010	4.81-010	7.95-010	1.21-009	1.73-009
TH231	4.73-008	4.72-008	4.72-008	4.71-008	4.70-008	4.69-008
PA231	1.25-005	1.39-005	1.52-005	1.77-005	2.01-005	2.23-005
PA232	1.21-008	1.35-008	1.47-008	1.72-008	1.95-008	2.16-008
U232	1.44-006	1.79-006	2.17-006	3.02-006	3.97-006	5.01-006
TH228	5.20-009	7.19-009	9.58-009	1.56-008	2.33-008	3.28-008
TH229	1.65-008	2.08-008	2.54-008	3.57-008	4.73-008	6.00-008
U233	5.97-003	6.53-003	7.04-003	7.93-003	8.68-003	9.30-003
COMB1	6.71-003	7.26-003	7.77-003	8.66-003	9.41-003	1.00-002

TIME	90.00000	100.00000	110.00000	120.00000	130.00000	150.00000
FLUX=	3.0+013	TARGET=TH232		DATA TYPE=YIELD		
TH232	9.80-001	9.78-001	9.76-001	9.74-001	9.72-001	9.67-001
TH233	4.17-007	4.16-007	4.15-007	4.14-007	4.13-007	4.11-007
PA233	7.30-004	7.28-004	7.26-004	7.25-004	7.23-004	7.20-004
TH234	5.63-008	5.62-008	5.61-008	5.60-008	5.59-008	5.56-008
PA234	1.67-008	1.66-008	1.66-008	1.66-008	1.65-008	1.65-008
U234	7.87-004	9.20-004	1.06-003	1.19-003	1.33-003	1.60-003
TH230	2.36-009	3.10-009	3.95-009	4.92-009	6.00-009	8.50-009
TH231	4.68-008	4.67-008	4.66-008	4.65-008	4.64-008	4.62-008
PA231	2.44-005	2.63-005	2.81-005	2.99-005	3.15-005	3.44-005
PA232	2.37-008	2.56-008	2.73-008	2.90-008	3.06-008	3.34-008
U232	6.12-006	7.30-006	8.53-006	9.80-006	1.11-005	1.38-005
TH228	4.40-008	5.68-008	7.13-008	8.73-008	1.05-007	1.43-007
TH229	7.37-008	8.84-008	1.04-007	1.20-007	1.37-007	1.74-007
U233	9.83-003	1.03-002	1.06-002	1.09-002	1.12-002	1.15-002
COMB1	1.06-002	1.10-002	1.13-002	1.16-002	1.19-002	1.23-002

TABLE XIX

TARGET= TH232
DATA TYPE= YIELD-ATOMS PER ATOM TARGET
FLUX= 7.0+013
TIME SPAN= 0- 150

TIME	0.00500	0.01000	0.05000	0.10000	0.50000	0.80000
FLUX=	7.0+013	TARGET=TH232		DATA TYPE=YIELD		
TH232	1.00+000	1.00+000	1.00+000	1.00+000	1.00+000	1.00+000
TH233	9.90-007	9.92-007	9.92-007	9.92-007	9.91-007	9.91-007
PA233	2.12-006	5.22-006	2.58-005	5.11-005	2.41-004	3.68-004
TH234	4.25-010	1.05-009	5.17-009	1.03-008	4.80-008	7.31-008
PA234	9.64-012	4.48-011	6.80-010	1.88-009	1.20-008	1.89-008
U234	1.06-011	5.48-011	1.43-009	6.35-009	1.89-007	4.94-007
TH230	2.38-021	2.14-020	2.12-018	1.81-017	2.72-015	1.15-014
TH231	3.33-009	8.15-009	3.52-008	5.93-008	1.09-007	1.11-007
PA231	2.50-011	2.46-010	6.69-009	2.43-008	3.06-007	5.50-007
PA232	6.99-016	1.37-014	1.55-012	1.06-011	4.35-010	9.51-010
U232	8.56-018	2.95-016	1.33-013	1.79-012	4.42-010	1.71-009
TH228	5.22-024	2.89-022	4.62-019	1.21-017	1.63-014	1.07-013
TH229	6.90-019	5.95-018	4.88-016	3.67-015	4.22-013	1.68-012
U233	1.90-009	9.36-009	2.00-007	7.77-007	1.83-005	4.52-005
COMB1	2.12-006	5.23-006	2.60-005	5.19-005	2.59-004	4.14-004

TABLE XIX (Contd.)

TIME	1.00000	1.10000	1.20000	1.40000	1.60000	1.80000
FLUX=	7.0+013	TARGET=TH232		DATA TYPE=YIELD		
TH232	9.99-001	9.99-001	9.99-001	9.99-001	9.99-001	9.99-001
TH233	9.91-007	9.91-007	9.91-007	9.91-007	9.91-007	9.91-007
PA233	4.47-004	4.85-004	5.22-004	5.92-004	6.58-004	7.20-004
TH234	8.86-008	9.59-008	1.03-007	1.16-007	1.29-007	1.41-007
PA234	2.31-008	2.52-008	2.71-008	3.09-008	3.44-008	3.78-008
U234	7.78-007	9.44-007	1.13-006	1.54-006	2.02-006	2.56-006
TH230	2.27-014	3.03-014	3.95-014	6.31-014	9.46-014	1.35-013
TH231	1.11-007	1.11-007	1.11-007	1.11-007	1.11-007	1.11-007
PA231	7.13-007	7.95-007	8.76-007	1.04-006	1.20-006	1.36-006
PA232	1.31-009	1.50-009	1.68-009	2.05-009	2.41-009	2.77-009
U232	3.09-009	3.95-009	4.92-009	7.18-009	9.90-009	1.30-008
TH228	2.51-013	3.58-013	4.92-013	8.57-013	1.37-012	2.06-012
TH229	3.22-012	4.24-012	5.46-012	8.53-012	1.25-011	1.75-011
U233	6.90-005	8.26-005	9.72-005	1.29-004	1.65-004	2.05-004
COMB1	5.16-004	5.68-004	6.19-004	7.21-004	8.23-004	9.25-004

TIME	2.00000	2.20000	2.50000	3.00000	3.20000	3.50000
FLUX=	7.0+013	TARGET=TH232		DATA TYPE=YIELD		
TH232	9.99-001	9.99-001	9.99-001	9.98-001	9.98-001	9.98-001
TH233	9.91-007	9.91-007	9.90-007	9.90-007	9.90-007	9.90-007
PA233	7.79-004	8.34-004	9.10-004	1.02-003	1.06-003	1.12-003
TH234	1.52-007	1.62-007	1.77-007	1.97-007	2.05-007	2.15-007
PA234	4.09-008	4.38-008	4.80-008	5.40-008	5.62-008	5.92-008
U234	3.17-006	3.84-006	4.97-006	7.16-006	8.15-006	9.76-006
TH230	1.86-013	2.48-013	3.65-013	6.33-013	7.69-013	1.01-012
TH231	1.11-007	1.11-007	1.11-007	1.11-007	1.11-007	1.11-007
PA231	1.52-006	1.68-006	1.93-006	2.32-006	2.48-006	2.72-006
PA232	3.14-009	3.50-009	4.04-009	4.94-009	5.30-009	5.83-009
U232	1.66-008	2.07-008	2.75-008	4.11-008	4.73-008	5.73-008
TH228	2.96-012	4.08-012	6.25-012	1.14-011	1.40-011	1.87-011
TH229	2.37-011	3.10-011	4.44-011	7.38-011	8.82-011	1.13-010
U233	2.48-004	2.93-004	3.67-004	5.02-004	5.60-004	6.50-004
COMB1	1.03-003	1.13-003	1.28-003	1.53-003	1.62-003	1.77-003

TIME	4.00000	4.50000	5.00000	6.00000	7.00000	8.00000
FLUX=	7.0+013	TARGET=TH232		DATA TYPE=YIELD		
TH232	9.98-001	9.98-001	9.97-001	9.97-001	9.96-001	9.96-001
TH233	9.90-007	9.89-007	9.89-007	9.89-007	9.88-007	9.88-007
PA233	1.20-003	1.28-003	1.34-003	1.44-003	1.51-003	1.56-003
TH234	2.30-007	2.42-007	2.53-007	2.70-007	2.82-007	2.90-007
PA234	6.37-008	6.76-008	7.09-008	7.62-008	8.01-008	8.29-008
U234	1.27-005	1.61-005	1.99-005	2.85-005	3.86-005	5.01-005
TH230	1.50-012	2.14-012	2.94-012	5.07-012	8.04-012	1.20-011
TH231	1.11-007	1.11-007	1.11-007	1.11-007	1.11-007	1.11-007
PA231	3.11-006	3.50-006	3.89-006	4.65-006	5.41-006	6.15-006
PA232	6.71-009	7.59-009	8.46-009	1.02-008	1.19-008	1.36-008
U232	7.61-008	9.76-008	1.22-007	1.77-007	2.42-007	3.17-007
TH228	2.86-011	4.15-011	5.77-011	1.01-010	1.63-010	2.44-010
TH229	1.62-010	2.23-010	2.94-010	4.74-010	7.04-010	9.84-010
U233	8.09-004	9.75-004	1.15-003	1.51-003	1.88-003	2.25-003
COMB1	2.01-003	2.25-003	2.49-003	2.95-003	3.39-003	3.82-003

TIME	9.00000	10.00000	12.00000	14.00000	16.00000	18.00000
FLUX=	7.0+013	TARGET=TH232		DATA TYPE=YIELD		
TH232	9.95-001	9.95-001	9.94-001	9.93-001	9.92-001	9.91-001
TH233	9.87-007	9.87-007	9.85-007	9.84-007	9.83-007	9.82-007
PA233	1.60-003	1.63-003	1.67-003	1.69-003	1.70-003	1.70-003
TH234	2.96-007	3.00-007	3.05-007	3.08-007	3.09-007	3.09-007
PA234	8.50-008	8.66-008	8.86-008	8.96-008	9.01-008	9.03-008
U234	6.29-005	7.71-005	1.09-004	1.45-004	1.86-004	2.30-004
TH230	1.69-011	2.31-011	3.95-011	6.19-011	9.10-011	1.28-010
TH231	1.11-007	1.11-007	1.11-007	1.11-007	1.10-007	1.10-007
PA231	6.88-006	7.60-006	9.02-006	1.04-005	1.17-005	1.30-005
PA232	1.52-008	1.68-008	2.00-008	2.31-008	2.61-008	2.90-008
U232	4.01-007	4.94-007	7.07-007	9.53-007	1.23-006	1.54-006
TH228	3.47-010	4.75-010	8.15-010	1.28-009	1.88-009	2.63-009
TH229	1.31-009	1.70-009	2.61-009	3.71-009	4.99-009	6.44-009
U233	2.63-003	2.99-003	3.71-003	4.38-003	5.01-003	5.60-003
COMB1	4.23-003	4.63-003	5.38-003	6.07-003	6.71-003	7.30-003

TABLE XIX (Contd.)

TIME	20.00000	22.00000	25.00000	30.00000	32.00000	35.00000
FLUX=	7.0+013	TARGET=TH232		DATA TYPE=YIELD		
TH232	9.90-001	9.89-001	9.87-001	9.85-001	9.84-001	9.82-001
TH233	9.81-007	9.80-007	9.79-007	9.76-007	9.75-007	9.74-007
PA233	1.71-003	1.71-003	1.71-003	1.70-003	1.70-003	1.70-003
TH234	3.10-007	3.09-007	3.09-007	3.08-007	3.08-007	3.08-007
PA234	9.04-008	9.04-008	9.04-008	9.02-008	9.01-008	9.00-008
U234	2.77-004	3.27-004	4.08-004	5.52-004	6.12-004	7.06-004
TH230	1.72-010	2.25-010	3.22-010	5.31-010	6.33-010	8.05-010
TH231	1.10-007	1.10-007	1.10-007	1.10-007	1.10-007	1.09-007
PA231	1.43-005	1.55-005	1.73-005	2.00-005	2.11-005	2.26-005
PA232	3.19-008	3.46-008	3.86-008	4.48-008	4.72-008	5.06-008
U232	1.87-006	2.23-006	2.82-006	3.91-006	4.38-006	5.12-006
TH228	3.55-009	4.64-009	6.61-009	1.09-008	1.29-008	1.64-008
TH229	8.05-009	9.81-009	1.27-008	1.82-008	2.06-008	2.44-008
U233	6.14-003	6.64-003	7.32-003	8.28-003	8.61-003	9.06-003
COMB1	7.85-003	8.35-003	9.02-003	9.98-003	1.03-002	1.08-002

TIME	40.00000	45.00000	50.00000	60.00000	70.00000	80.00000
FLUX=	7.0+013	TARGET=TH232		DATA TYPE=YIELD		
TH232	9.79-001	9.77-001	9.74-001	9.69-001	9.64-001	9.59-001
TH233	9.71-007	9.69-007	9.66-007	9.61-007	9.56-007	9.51-007
PA233	1.69-003	1.69-003	1.68-003	1.68-003	1.67-003	1.66-003
TH234	3.07-007	3.06-007	3.05-007	3.04-007	3.02-007	3.00-007
PA234	8.97-008	8.95-008	8.93-008	8.88-008	8.83-008	8.79-008
U234	8.66-004	1.03-003	1.20-003	1.53-003	1.86-003	2.18-003
TH230	1.15-009	1.56-009	2.04-009	3.21-009	4.66-009	6.37-009
TH231	1.09-007	1.09-007	1.08-007	1.08-007	1.07-007	1.07-007
PA231	2.50-005	2.72-005	2.93-005	3.29-005	3.61-005	3.88-005
PA232	5.60-008	6.10-008	6.56-008	7.39-008	8.11-008	8.72-008
U232	6.43-006	7.83-006	9.29-006	1.24-005	1.56-005	1.88-005
TH228	2.32-008	3.14-008	4.09-008	6.36-008	9.08-008	1.22-007
TH229	3.13-008	3.88-008	4.69-008	6.48-008	8.51-008	1.08-007
U233	9.69-003	1.02-002	1.06-002	1.12-002	1.16-002	1.18-002
COMB1	1.14-002	1.19-002	1.23-002	1.29-002	1.33-002	1.35-002

TIME	90.00000	100.00000	110.00000	120.00000	130.00000	150.00000
FLUX=	7.0+013	TARGET=TH232		DATA TYPE=YIELD		
TH232	9.54-001	9.50-001	9.45-001	9.40-001	9.35-001	9.25-001
TH233	9.46-007	9.42-007	9.37-007	9.32-007	9.27-007	9.17-007
PA233	1.65-003	1.64-003	1.63-003	1.62-003	1.62-003	1.60-003
TH234	2.99-007	2.97-007	2.96-007	2.94-007	2.93-007	2.90-007
PA234	8.74-008	8.70-008	8.65-008	8.61-008	8.56-008	8.48-008
U234	2.49-003	2.77-003	3.04-003	3.29-003	3.53-003	3.95-003
TH230	8.33-009	1.05-008	1.29-008	1.55-008	1.83-008	2.42-008
TH231	1.06-007	1.06-007	1.05-007	1.05-007	1.04-007	1.03-007
PA231	4.11-005	4.31-005	4.48-005	4.62-005	4.74-005	4.93-005
PA232	9.24-008	9.68-008	1.01-007	1.04-007	1.07-007	1.11-007
U232	2.20-005	2.52-005	2.83-005	3.12-005	3.40-005	3.91-005
TH228	1.57-007	1.94-007	2.33-007	2.73-007	3.14-007	3.96-007
TH229	1.33-007	1.61-007	1.91-007	2.24-007	2.59-007	3.38-007
U233	1.20-002	1.20-002	1.21-002	1.21-002	1.20-002	1.19-002
COMB1	1.36-002	1.37-002	1.37-002	1.37-002	1.36-002	1.35-002

TABLE XX

TARGET= TH232
DATA TYPE= YIELD-ATOMS PER ATOM TARGET
FLUX= 3.0+014
TIME SPAN= 0- 100

TIME	0.05000	0.10000	0.20000	0.30000	0.40000	0.50000
FLUX=	3.0+014	TARGET=TH232		DATA TYPE=YIELD		
TH232	1.00+000	1.00+000	1.00+000	9.99-001	9.99-001	9.99-001
TH233	4.25-006	4.25-006	4.25-006	4.24-006	4.24-006	4.24-006
PA233	1.10-004	2.19-004	4.30-004	6.36-004	8.34-004	1.03-003
TH234	9.50-008	1.88-007	3.70-007	5.46-007	7.16-007	8.80-007
PA234	1.23-008	3.37-008	8.00-008	1.25-007	1.69-007	2.12-007
U234	2.62-008	1.16-007	5.06-007	1.18-006	2.14-006	3.39-006
TH230	3.88-017	3.31-016	2.88-015	1.02-014	2.47-014	4.91-014
TH231	1.51-007	2.54-007	3.73-007	4.28-007	4.54-007	4.66-007
PA231	2.86-008	1.04-007	3.40-007	6.37-007	9.61-007	1.30-006
PA232	2.84-011	1.92-010	1.12-009	2.81-009	5.07-009	7.70-009
U232	2.43-012	3.27-011	3.96-010	1.57-009	3.96-009	7.84-009
TH228	8.46-018	2.21-016	5.42-015	3.31-014	1.14-013	2.90-013
TH229	2.09-015	1.56-014	1.20-013	3.96-013	9.22-013	1.77-012
U233	8.53-007	3.31-006	1.29-005	2.85-005	4.97-005	7.64-005
COMB1	1.11-004	2.22-004	4.43-004	6.64-004	8.84-004	1.10-003

TABLE XX (Contd.)

TIME	0.60000	0.80000	1.00000	1.20000	1.40000	1.60000
FLUX=	3.0+014	TARGET=TH232		DATA TYPE=YIELD		
TH232	9.99-001	9.98-001	9.98-001	9.97-001	9.97-001	9.96-001
TH233	4.24-006	4.24-006	4.24-006	4.24-006	4.23-006	4.23-006
PA233	1.21-003	1.57-003	1.91-003	2.22-003	2.52-003	2.79-003
TH234	1.04-006	1.34-006	1.62-006	1.89-006	2.14-006	2.37-006
PA234	2.54-007	3.32-007	4.07-007	4.76-007	5.42-007	6.03-007
U234	4.92-006	8.83-006	1.39-005	2.00-005	2.72-005	3.56-005
TH230	8.58-014	2.06-013	4.06-013	7.04-013	1.12-012	1.68-012
TH231	4.72-007	4.75-007	4.76-007	4.76-007	4.76-007	4.76-007
PA231	1.64-006	2.32-006	2.99-006	3.66-006	4.32-006	4.97-006
PA232	1.05-008	1.66-008	2.27-008	2.88-008	3.49-008	4.09-008
U232	1.34-008	2.98-008	5.35-008	8.45-008	1.23-007	1.68-007
TH228	6.09-013	1.88-012	4.37-012	8.49-012	1.47-011	2.33-011
TH229	3.02-012	6.98-012	1.33-011	2.24-011	3.48-011	5.08-011
U233	1.08-004	1.86-004	2.82-004	3.93-004	5.18-004	6.56-004
COMB1	1.32-003	1.76-003	2.19-003	2.61-003	3.03-003	3.45-003

TIME	1.80000	2.00000	2.20000	2.50000	3.00000	3.50000
FLUX=	3.0+014	TARGET=TH232		DATA TYPE=YIELD		
TH232	9.96-001	9.96-001	9.95-001	9.94-001	9.93-001	9.92-001
TH233	4.23-006	4.23-006	4.23-006	4.22-006	4.22-006	4.21-006
PA233	3.05-003	3.30-003	3.53-003	3.85-003	4.32-003	4.72-003
TH234	2.58-006	2.78-006	2.97-006	3.23-006	3.61-006	3.93-006
PA234	6.61-007	7.15-007	7.66-007	8.36-007	9.40-007	1.03-006
U234	4.50-005	5.54-005	6.69-005	8.59-005	1.23-004	1.65-004
TH230	2.39-012	3.27-012	4.35-012	6.38-012	1.10-011	1.73-011
TH231	4.75-007	4.75-007	4.75-007	4.75-007	4.74-007	4.74-007
PA231	5.61-006	6.25-006	6.88-006	7.80-006	9.31-006	1.08-005
PA232	4.68-008	5.27-008	5.85-008	6.70-008	8.09-008	9.43-008
U232	2.20-007	2.78-007	3.43-007	4.53-007	6.67-007	9.17-007
TH228	3.48-011	4.96-011	6.80-011	1.03-010	1.85-010	3.00-010
TH229	7.07-011	9.48-011	1.23-010	1.75-010	2.87-010	4.32-010
U233	8.05-004	9.63-004	1.13-003	1.39-003	1.86-003	2.35-003
COMB1	3.86-003	4.26-003	4.66-003	5.24-003	6.18-003	7.07-003

TIME	4.00000	5.00000	6.00000	7.00000	8.00000	9.00000
FLUX=	3.0+014	TARGET=TH232		DATA TYPE=YIELD		
TH232	9.91-001	9.89-001	9.87-001	9.85-001	9.82-001	9.80-001
TH233	4.21-006	4.20-006	4.19-006	4.18-006	4.17-006	4.16-006
PA233	5.06-003	5.60-003	5.99-003	6.27-003	6.48-003	6.62-003
TH234	4.20-006	4.62-006	4.91-006	5.12-006	5.27-006	5.37-006
PA234	1.10-006	1.22-006	1.31-006	1.37-006	1.42-006	1.45-006
U234	2.13-004	3.23-004	4.51-004	5.93-004	7.46-004	9.09-004
TH230	2.56-011	4.90-011	8.29-011	1.28-010	1.87-010	2.59-010
TH231	4.73-007	4.72-007	4.71-007	4.70-007	4.69-007	4.68-007
PA231	1.22-005	1.49-005	1.74-005	1.98-005	2.20-005	2.41-005
PA232	1.07-007	1.32-007	1.56-007	1.77-007	1.98-007	2.17-007
U232	1.20-006	1.86-006	2.64-006	3.52-006	4.48-006	5.52-006
TH228	4.52-010	8.85-010	1.51-009	2.36-009	3.44-009	4.77-009
TH229	6.13-010	1.08-009	1.70-009	2.47-009	3.39-009	4.44-009
U233	2.86-003	3.86-003	4.84-003	5.75-003	6.58-003	7.33-003
COMB1	7.91-003	9.46-003	1.08-002	1.20-002	1.31-002	1.40-002

TIME	10.00000	12.00000	14.00000	16.00000	18.00000	20.00000
FLUX=	3.0+014	TARGET=TH232		DATA TYPE=YIELD		
TH232	9.78-001	9.74-001	9.69-001	9.65-001	9.61-001	9.57-001
TH233	4.15-006	4.14-006	4.12-006	4.10-006	4.08-006	4.06-006
PA233	6.72-003	6.84-003	6.89-003	6.90-003	6.90-003	6.88-003
TH234	5.44-006	5.51-006	5.54-006	5.54-006	5.53-006	5.51-006
PA234	1.47-006	1.50-006	1.51-006	1.51-006	1.51-006	1.50-006
U234	1.08-003	1.43-003	1.80-003	2.16-003	2.52-003	2.87-003
TH230	3.45-010	5.62-010	8.40-010	1.18-009	1.58-009	2.03-009
TH231	4.67-007	4.65-007	4.63-007	4.61-007	4.59-007	4.57-007
PA231	2.61-005	2.97-005	3.28-005	3.56-005	3.80-005	4.01-005
PA232	2.35-007	2.68-007	2.97-007	3.23-007	3.45-007	3.65-007
U232	6.62-006	8.99-006	1.15-005	1.41-005	1.67-005	1.94-005
TH228	6.36-009	1.03-008	1.54-008	2.14-008	2.85-008	3.64-008
TH229	5.63-009	8.41-009	1.17-008	1.55-008	1.99-008	2.48-008
U233	7.99-003	9.08-003	9.89-003	1.05-002	1.09-002	1.12-002
COMB1	1.47-002	1.59-002	1.68-002	1.74-002	1.78-002	1.81-002

TABLE XX (Contd.)

TIME	22.00000	24.00000	26.00000	30.00000	35.00000	40.00000
FLUX=	3.0+014	TARGET=TH232		DATA TYPE=YIELD		
TH232	9.52-001	9.48-001	9.44-001	9.36-001	9.25-001	9.15-001
TH233	4.04-006	4.03-006	4.01-006	3.97-006	3.93-006	3.89-006
PA233	6.85-003	6.83-003	6.80-003	6.74-003	6.67-003	6.59-003
TH234	5.49-006	5.47-006	5.45-006	5.40-006	5.34-006	5.28-006
PA234	1.50-006	1.49-006	1.49-006	1.47-006	1.46-006	1.44-006
U234	3.20-003	3.52-003	3.83-003	4.39-003	5.00-003	5.53-003
TH230	2.54-009	3.10-009	3.71-009	5.05-009	6.93-009	9.00-009
TH231	4.55-007	4.53-007	4.51-007	4.47-007	4.42-007	4.37-007
PA231	4.19-005	4.35-005	4.49-005	4.72-005	4.92-005	5.06-005
PA232	3.82-007	3.96-007	4.09-007	4.30-007	4.49-007	4.61-007
U232	2.20-005	2.46-005	2.71-005	3.19-005	3.73-005	4.19-005
TH228	4.52-008	5.47-008	6.48-008	8.65-008	1.15-007	1.45-007
TH229	3.03-008	3.63-008	4.30-008	5.82-008	8.09-008	1.08-007
U233	1.14-002	1.15-002	1.16-002	1.16-002	1.16-002	1.15-002
COMB1	1.82-002	1.83-002	1.84-002	1.84-002	1.83-002	1.81-002

TIME	45.00000	50.00000	55.00000	60.00000	65.00000	70.00000
FLUX=	3.0+014	TARGET=TH232		DATA TYPE=YIELD		
TH232	9.05-001	8.95-001	8.85-001	8.75-001	8.66-001	8.56-001
TH233	3.84-006	3.80-006	3.76-006	3.72-006	3.68-006	3.64-006
PA233	6.52-003	6.45-003	6.38-003	6.31-003	6.24-003	6.17-003
TH234	5.22-006	5.16-006	5.11-006	5.05-006	4.99-006	4.94-006
PA234	1.43-006	1.41-006	1.39-006	1.38-006	1.36-006	1.35-006
U234	5.97-003	6.34-003	6.65-003	6.91-003	7.12-003	7.29-003
TH230	1.12-008	1.35-008	1.59-008	1.83-008	2.08-008	2.32-008
TH231	4.32-007	4.27-007	4.22-007	4.18-007	4.13-007	4.09-007
PA231	5.14-005	5.19-005	5.20-005	5.20-005	5.19-005	5.16-005
PA232	4.69-007	4.73-007	4.75-007	4.75-007	4.74-007	4.71-007
U232	4.59-005	4.92-005	5.19-005	5.40-005	5.57-005	5.70-005
TH228	1.74-007	2.02-007	2.28-007	2.52-007	2.73-007	2.92-007
TH229	1.38-007	1.72-007	2.10-007	2.49-007	2.91-007	3.34-007
U233	1.14-002	1.13-002	1.12-002	1.10-002	1.09-002	1.08-002
COMB1	1.79-002	1.77-002	1.75-002	1.73-002	1.71-002	1.70-002

TIME	75.00000	80.00000	85.00000	90.00000	95.00000	100.00000
FLUX=	3.0+014	TARGET=TH232		DATA TYPE=YIELD		
TH232	8.47-001	8.37-001	8.28-001	8.19-001	8.10-001	8.01-001
TH233	3.60-006	3.56-006	3.52-006	3.48-006	3.44-006	3.40-006
PA233	6.10-003	6.03-003	5.97-003	5.90-003	5.84-003	5.77-003
TH234	4.89-006	4.83-006	4.78-006	4.73-006	4.67-006	4.62-006
PA234	1.33-006	1.32-006	1.31-006	1.29-006	1.28-006	1.26-006
U234	7.42-003	7.52-003	7.60-003	7.66-003	7.70-003	7.72-003
TH230	2.56-008	2.80-008	3.04-008	3.27-008	3.50-008	3.71-008
TH231	4.04-007	4.00-007	3.95-007	3.91-007	3.87-007	3.82-007
PA231	5.13-005	5.09-005	5.05-005	5.00-005	4.95-005	4.90-005
PA232	4.68-007	4.65-007	4.61-007	4.56-007	4.52-007	4.47-007
U232	5.79-005	5.86-005	5.90-005	5.92-005	5.92-005	5.91-005
TH228	3.08-007	3.22-007	3.34-007	3.44-007	3.51-007	3.57-007
TH229	3.79-007	4.23-007	4.68-007	5.13-007	5.56-007	5.99-007
U233	1.07-002	1.06-002	1.04-002	1.03-002	1.02-002	1.01-002
COMB1	1.68-002	1.66-002	1.64-002	1.62-002	1.60-002	1.59-002

TABLE XXI

TARGET= TH232
DATA TYPE= YIELD-ATOMS PER ATOM TARGET
FLUX= 7.0+014
TIME SPAN= 0- 80

TIME	0.05000	0.10000	0.20000	0.30000	0.40000	0.50000
FLUX=	7.0+014	TARGET=TH232		DATA TYPE=YIELD		
TH232	1.00+000	9.99-001	9.99-001	9.98-001	9.98-001	9.97-001
TH233	9.90-006	9.89-006	9.89-006	9.88-006	9.88-006	9.87-006
PA233	2.57-004	5.09-004	1.00-003	1.48-003	1.94-003	2.38-003
TH234	5.16-007	1.02-006	2.01-006	2.97-006	3.89-006	4.78-006
PA234	6.52-008	1.76-007	4.12-007	6.42-007	8.65-007	1.08-006
U234	1.42-007	6.21-007	2.69-006	6.25-006	1.13-005	1.78-005
TH230	2.10-016	1.78-015	1.54-014	5.40-014	1.31-013	2.59-013
TH231	3.52-007	5.93-007	8.69-007	9.99-007	1.06-006	1.09-006
PA231	6.68-008	2.42-007	7.89-007	1.47-006	2.21-006	2.98-006
PA232	1.54-010	1.03-009	5.90-009	1.46-008	2.61-008	3.93-008
U232	1.31-011	1.75-010	2.10-009	8.22-009	2.05-008	4.02-008
TH228	4.58-017	1.19-015	2.88-014	1.74-013	5.95-013	1.50-012
TH229	4.85-015	3.62-014	2.76-013	9.05-013	2.10-012	4.01-012
U233	1.98-006	7.66-006	2.96-005	6.47-005	1.12-004	1.71-004
COMB1	2.59-004	5.17-004	1.03-003	1.54-003	2.05-003	2.55-003

TABLE XXI (Contd.)

TIME	0.60000	0.80000	1.00000	1.20000	1.40000	1.60000
FLUX= 7.0+014		TARGET=TH232		DATA TYPE=YIELD		
TH232	9.97-001	9.96-001	9.95-001	9.94-001	9.93-001	9.92-001
TH233	9.87-006	9.86-006	9.85-006	9.84-006	9.83-006	9.82-006
PA233	2.81-003	3.63-003	4.40-003	5.12-003	5.79-003	6.41-003
TH234	5.64-006	7.28-006	8.81-006	1.02-005	1.16-005	1.28-005
PA234	1.29-006	1.69-006	2.06-006	2.41-006	2.73-006	3.03-006
U234	2.58-005	4.60-005	7.17-005	1.03-004	1.39-004	1.81-004
TH230	4.51-013	1.08-012	2.11-012	3.65-012	5.78-012	8.59-012
TH231	1.10-006	1.11-006	1.11-006	1.11-006	1.11-006	1.10-006
PA231	3.74-006	5.26-006	6.73-006	8.17-006	9.57-006	1.09-005
PA232	5.33-008	8.24-008	1.12-007	1.40-007	1.68-007	1.95-007
U232	6.80-008	1.49-007	2.64-007	4.11-007	5.89-007	7.96-007
TH228	3.11-012	9.47-012	2.16-011	4.15-011	7.08-011	1.11-010
TH229	6.80-012	1.56-011	2.94-011	4.92-011	7.57-011	1.10-010
U233	2.40-004	4.06-004	6.05-004	8.31-004	1.08-003	1.34-003
COMB1	3.05-003	4.04-003	5.00-003	5.95-003	6.86-003	7.76-003

TIME	1.80000	2.00000	2.20000	2.50000	3.00000	3.50000
FLUX= 7.0+014		TARGET=TH232		DATA TYPE=YIELD		
TH232	9.91-001	9.90-001	9.89-001	9.87-001	9.85-001	9.82-001
TH233	9.81-006	9.80-006	9.79-006	9.77-006	9.75-006	9.72-006
PA233	7.00-003	7.55-003	8.06-003	8.76-003	9.79-003	1.07-002
TH234	1.40-005	1.51-005	1.61-005	1.75-005	1.95-005	2.12-005
PA234	3.32-006	3.58-006	3.83-006	4.17-006	4.67-006	5.09-006
U234	2.27-004	2.78-004	3.33-004	4.24-004	5.94-004	7.86-004
TH230	1.22-011	1.66-011	2.20-011	3.19-011	5.41-011	8.42-011
TH231	1.10-006	1.10-006	1.10-006	1.10-006	1.10-006	1.09-006
PA231	1.22-005	1.35-005	1.48-005	1.66-005	1.94-005	2.20-005
PA232	2.21-007	2.47-007	2.71-007	3.07-007	3.63-007	4.16-007
U232	1.03-006	1.29-006	1.58-006	2.05-006	2.94-006	3.95-006
TH228	1.64-010	2.31-010	3.14-010	4.69-010	8.18-010	1.29-009
TH229	1.52-010	2.02-010	2.62-010	3.69-010	5.97-010	8.92-010
U233	1.62-003	1.91-003	2.21-003	2.67-003	3.44-003	4.19-003
COMB1	8.62-003	9.46-003	1.03-002	1.14-002	1.32-002	1.49-002

TIME	4.00000	5.00000	6.00000	7.00000	8.00000	9.00000
FLUX= 7.0+014		TARGET=TH232		DATA TYPE=YIELD		
TH232	9.79-001	9.74-001	9.69-001	9.64-001	9.59-001	9.54-001
TH233	9.70-006	9.65-006	9.60-006	9.55-006	9.50-006	9.45-006
PA233	1.14-002	1.25-002	1.33-002	1.39-002	1.42-002	1.45-002
TH234	2.26-005	2.48-005	2.64-005	2.74-005	2.81-005	2.86-005
PA234	5.44-006	5.99-006	6.37-006	6.64-006	6.82-006	6.94-006
U234	9.94-004	1.45-003	1.95-003	2.47-003	2.99-003	3.51-003
TH230	1.23-010	2.29-010	3.75-010	5.64-010	7.95-010	1.07-009
TH231	1.09-006	1.09-006	1.08-006	1.07-006	1.07-006	1.06-006
PA231	2.44-005	2.88-005	3.25-005	3.58-005	3.85-005	4.09-005
PA232	4.64-007	5.51-007	6.25-007	6.90-007	7.45-007	7.92-007
U232	5.05-006	7.49-006	1.01-005	1.29-005	1.58-005	1.86-005
TH228	1.90-009	3.55-009	5.80-009	8.63-009	1.20-008	1.59-008
TH229	1.26-009	2.20-009	3.45-009	5.02-009	6.92-009	9.16-009
U233	4.92-003	6.23-003	7.34-003	8.25-003	8.96-003	9.51-003
COMB1	1.63-002	1.88-002	2.07-002	2.21-002	2.32-002	2.40-002

TIME	10.00000	12.00000	14.00000	16.00000	18.00000	20.00000
FLUX= 7.0+014		TARGET=TH232		DATA TYPE=YIELD		
TH232	9.50-001	9.40-001	9.30-001	9.20-001	9.11-001	9.02-001
TH233	9.40-006	9.30-006	9.21-006	9.11-006	9.02-006	8.92-006
PA233	1.46-002	1.48-002	1.48-002	1.47-002	1.46-002	1.45-002
TH234	2.89-005	2.91-005	2.91-005	2.89-005	2.87-005	2.84-005
PA234	7.02-006	7.08-006	7.08-006	7.04-006	6.99-006	6.93-006
U234	4.02-003	4.97-003	5.84-003	6.61-003	7.28-003	7.86-003
TH230	1.38-009	2.13-009	3.01-009	4.00-009	5.09-009	6.26-009
TH231	1.06-006	1.05-006	1.04-006	1.03-006	1.01-006	1.00-006
PA231	4.29-005	4.61-005	4.83-005	4.99-005	5.09-005	5.16-005
PA232	8.32-007	8.95-007	9.40-007	9.71-007	9.92-007	1.01-006
U232	2.14-005	2.67-005	3.16-005	3.60-005	3.98-005	4.30-005
TH228	2.03-008	3.02-008	4.12-008	5.29-008	6.48-008	7.66-008
TH229	1.18-008	1.81-008	2.60-008	3.54-008	4.64-008	5.89-008
U233	9.93-003	1.05-002	1.07-002	1.08-002	1.08-002	1.08-002
COMB1	2.46-002	2.52-002	2.55-002	2.55-002	2.54-002	2.52-002

TABLE XXI (Contd.)

TIME	25.00000	30.00000	35.00000	40.00000	45.00000	50.00000
FLUX=	7.0+014	TARGET=TH232		DATA TYPE=YIELD		
TH232	8.79-001	8.56-001	8.34-001	8.13-001	7.92-001	7.72-001
TH233	8.70-006	8.47-006	8.26-006	8.05-006	7.84-006	7.64-006
PA233	1.41-002	1.37-002	1.34-002	1.30-002	1.27-002	1.24-002
TH234	2.77-005	2.70-005	2.64-005	2.57-005	2.50-005	2.44-005
PA234	6.76-006	6.59-006	6.42-006	6.26-006	6.10-006	5.94-006
U234	8.95-003	9.66-003	1.01-002	1.03-002	1.04-002	1.04-002
TH230	9.38-009	1.26-008	1.59-008	1.90-008	2.20-008	2.47-008
TH231	9.79-007	9.54-007	9.29-007	9.06-007	8.83-007	8.60-007
PA231	5.21-005	5.16-005	5.08-005	4.97-005	4.85-005	4.73-005
PA232	1.02-006	1.01-006	9.91-007	9.70-007	9.48-007	9.24-007
U232	4.89-005	5.23-005	5.39-005	5.45-005	5.42-005	5.36-005
TH228	1.04-007	1.26-007	1.43-007	1.54-007	1.62-007	1.66-007
TH229	9.56-008	1.38-007	1.84-007	2.30-007	2.75-007	3.17-007
U233	1.06-002	1.03-002	1.00-002	9.78-003	9.53-003	9.29-003
COMB1	2.47-002	2.40-002	2.34-002	2.28-002	2.22-002	2.17-002

TIME	55.00000	60.00000	65.00000	70.00000	75.00000	80.00000
FLUX=	7.0+014	TARGET=TH232		DATA TYPE=YIELD		
TH232	7.52-001	7.33-001	7.14-001	6.96-001	6.78-001	6.61-001
TH233	7.44-006	7.25-006	7.07-006	6.89-006	6.71-006	6.54-006
PA233	1.21-002	1.18-002	1.15-002	1.12-002	1.09-002	1.06-002
TH234	2.38-005	2.32-005	2.26-005	2.20-005	2.14-005	2.09-005
PA234	5.79-006	5.64-006	5.50-006	5.36-006	5.22-006	5.09-006
U234	1.03-002	1.02-002	9.99-003	9.80-003	9.60-003	9.38-003
TH230	2.72-008	2.95-008	3.15-008	3.33-008	3.49-008	3.62-008
TH231	8.38-007	8.17-007	7.96-007	7.75-007	7.56-007	7.36-007
PA231	4.62-005	4.50-005	4.38-005	4.27-005	4.16-005	4.06-005
PA232	9.01-007	8.79-007	8.56-007	8.34-007	8.13-007	7.92-007
U232	5.26-005	5.15-005	5.04-005	4.92-005	4.80-005	4.68-005
TH228	1.67-007	1.67-007	1.65-007	1.63-007	1.60-007	1.57-007
TH229	3.55-007	3.90-007	4.20-007	4.46-007	4.68-007	4.87-007
U233	9.05-003	8.82-003	8.60-003	8.38-003	8.16-003	7.95-003
COMB1	2.11-002	2.06-002	2.01-002	1.95-002	1.90-002	1.86-002

TABLE XXII

TARGET= TH232
DATA TYPE= YIELD-ATOMS PER ATOM TARGET
FLUX= 2.0+015
TIME SPAN= 0- 35

TIME	0.05000	0.10000	0.30000	0.60000	1.00000	1.50000
FLUX=	2.0+015	TARGET=TH232		DATA TYPE=YIELD		
TH232	9.99-001	9.99-001	9.96-001	9.91-001	9.85-001	9.78-001
TH233	2.82-005	2.81-005	2.80-005	2.79-005	2.78-005	2.76-005
PA233	7.30-004	1.44-003	4.16-003	7.86-003	1.21-002	1.66-002
TH234	4.20-006	8.32-006	2.41-005	4.57-005	7.12-005	9.84-005
PA234	4.89-007	1.26-006	4.39-006	8.64-006	1.36-005	1.87-005
U234	1.13-006	4.86-006	4.70-005	1.88-004	5.04-004	1.07-003
TH230	1.69-015	1.41-014	4.10-013	3.32-012	1.51-011	4.88-011
TH231	1.01-006	1.69-006	2.85-006	3.13-006	3.14-006	3.12-006
PA231	1.90-007	6.86-007	4.08-006	1.00-005	1.72-005	2.46-005
PA232	1.22-009	8.00-009	1.04-007	3.47-007	6.71-007	1.01-006
U232	1.05-010	1.37-009	5.94-008	4.49-007	1.59-006	3.78-006
TH228	3.67-016	9.31-015	1.27-012	2.09-011	1.32-010	4.97-010
TH229	1.37-014	1.01-013	2.44-012	1.77-011	7.47-011	2.32-010
U233	5.57-006	2.12-005	1.70-004	5.86-004	1.35-003	2.42-003
COMB1	7.36-004	1.47-003	4.33-003	8.44-003	1.35-002	1.90-002

TIME	2.00000	2.50000	3.00000	3.50000	4.00000	4.50000
FLUX=	2.0+015	TARGET=TH232		DATA TYPE=YIELD		
TH232	9.71-001	9.64-001	9.57-001	9.50-001	9.43-001	9.36-001
TH233	2.74-005	2.72-005	2.70-005	2.68-005	2.66-005	2.64-005
PA233	2.02-002	2.32-002	2.56-002	2.75-002	2.90-002	3.03-002
TH234	1.21-004	1.40-004	1.56-004	1.69-004	1.79-004	1.88-004
PA234	2.29-005	2.63-005	2.91-005	3.13-005	3.31-005	3.46-005
U234	1.79-003	2.60-003	3.49-003	4.40-003	5.33-003	6.25-003
TH230	1.10-010	2.04-010	3.33-010	4.99-010	7.01-010	9.40-010
TH231	3.09-006	3.07-006	3.05-006	3.03-006	3.00-006	2.98-006
PA231	3.06-005	3.54-005	3.93-005	4.24-005	4.49-005	4.68-005
PA232	1.29-006	1.51-006	1.69-006	1.83-006	1.95-006	2.04-006
U232	6.52-006	9.57-006	1.28-005	1.59-005	1.90-005	2.19-005
TH228	1.18-009	2.19-009	3.54-009	5.18-009	7.08-009	9.19-009
TH229	5.18-010	9.62-010	1.59-009	2.43-009	3.50-009	4.80-009
U233	3.47-003	4.43-003	5.27-003	5.98-003	6.58-003	7.07-003
COMB1	2.37-002	2.76-002	3.08-002	3.35-002	3.56-002	3.73-002

TABLE XXII (Contd.)

TIME	5.20000	5.80000	6.30000	6.90000	7.50000	8.00000
FLUX= 2.0+015		TARGET=TH232		DATA TYPE=YIELD		
TH232	9.26-001	9.18-001	9.11-001	9.03-001	8.95-001	8.88-001
TH233	2.61-005	2.59-005	2.57-005	2.54-005	2.52-005	2.50-005
PA233	3.16-002	3.23-002	3.28-002	3.32-002	3.35-002	3.36-002
TH234	1.98-004	2.04-004	2.08-004	2.11-004	2.14-004	2.16-004
PA234	3.61-005	3.70-005	3.76-005	3.81-005	3.84-005	3.85-005
U234	7.50-003	8.52-003	9.31-003	1.02-002	1.10-002	1.17-002
TH230	1.33-009	1.72-009	2.07-009	2.53-009	3.02-009	3.45-009
TH231	2.95-006	2.93-006	2.90-006	2.88-006	2.85-006	2.83-006
PA231	4.88-005	5.01-005	5.08-005	5.14-005	5.18-005	5.20-005
PA232	2.13-006	2.19-006	2.22-006	2.25-006	2.27-006	2.28-006
U232	2.57-005	2.86-005	3.07-005	3.30-005	3.50-005	3.64-005
TH228	1.24-008	1.53-008	1.77-008	2.07-008	2.36-008	2.59-008
TH229	7.05-009	9.36-009	1.16-008	1.45-008	1.77-008	2.07-008
U233	7.60-003	7.94-003	8.16-003	8.36-003	8.51-003	8.59-003
COMB1	3.92-002	4.03-002	4.10-002	4.16-002	4.20-002	4.22-002

TIME	8.50000	9.00000	9.30000	9.60000	10.00000	10.30000
FLUX= 2.0+015		TARGET=TH232		DATA TYPE=YIELD		
TH232	8.82-001	8.75-001	8.71-001	8.68-001	8.62-001	8.59-001
TH233	2.48-005	2.47-005	2.46-005	2.44-005	2.43-005	2.42-005
PA233	3.37-002	3.37-002	3.37-002	3.37-002	3.36-002	3.35-002
TH234	2.17-004	2.17-004	2.17-004	2.18-004	2.18-004	2.17-004
PA234	3.86-005	3.86-005	3.86-005	3.86-005	3.85-005	3.84-005
U234	1.22-002	1.28-002	1.31-002	1.33-002	1.37-002	1.39-002
TH230	3.89-009	4.36-009	4.64-009	4.92-009	5.31-009	5.60-009
TH231	2.81-006	2.79-006	2.78-006	2.77-006	2.75-006	2.74-006
PA231	5.21-005	5.20-005	5.20-005	5.20-005	5.18-005	5.17-005
PA232	2.28-006	2.28-006	2.28-006	2.28-006	2.27-006	2.27-006
U232	3.76-005	3.87-005	3.93-005	3.98-005	4.04-005	4.08-005
TH228	2.81-008	3.03-008	3.15-008	3.27-008	3.42-008	3.53-008
TH229	2.38-008	2.71-008	2.91-008	3.12-008	3.41-008	3.62-008
U233	8.65-003	8.68-003	8.70-003	8.70-003	8.71-003	8.70-003
COMB1	4.23-002	4.24-002	4.24-002	4.24-002	4.23-002	4.22-002

TIME	10.50000	11.00000	11.50000	12.00000	12.50000	13.00000
FLUX= 2.0+015		TARGET=TH232		DATA TYPE=YIELD		
TH232	8.56-001	8.50-001	8.43-001	8.37-001	8.31-001	8.25-001
TH233	2.41-005	2.39-005	2.38-005	2.36-005	2.34-005	2.32-005
PA233	3.35-002	3.34-002	3.32-002	3.31-002	3.29-002	3.27-002
TH234	2.17-004	2.17-004	2.16-004	2.15-004	2.14-004	2.13-004
PA234	3.84-005	3.83-005	3.81-005	3.79-005	3.77-005	3.75-005
U234	1.41-002	1.44-002	1.47-002	1.50-002	1.53-002	1.55-002
TH230	5.80-009	6.29-009	6.79-009	7.29-009	7.79-009	8.29-009
TH231	2.73-006	2.71-006	2.69-006	2.67-006	2.65-006	2.63-006
PA231	5.17-005	5.15-005	5.12-005	5.09-005	5.07-005	5.04-005
PA232	2.27-006	2.26-006	2.25-006	2.24-006	2.22-006	2.21-006
U232	4.10-005	4.15-005	4.20-005	4.23-005	4.25-005	4.27-005
TH228	3.60-008	3.77-008	3.92-008	4.06-008	4.19-008	4.31-008
TH229	3.77-008	4.15-008	4.53-008	4.91-008	5.30-008	5.70-008
U233	8.70-003	8.68-003	8.65-003	8.62-003	8.58-003	8.54-003
COMB1	4.22-002	4.20-002	4.19-002	4.17-002	4.15-002	4.12-002

TIME	13.50000	14.00000	14.50000	15.00000	16.00000	17.00000
FLUX= 2.0+015		TARGET=TH232		DATA TYPE=YIELD		
TH232	8.19-001	8.13-001	8.07-001	8.01-001	7.89-001	7.78-001
TH233	2.31-005	2.29-005	2.27-005	2.26-005	2.22-005	2.19-005
PA233	3.25-002	3.23-002	3.21-002	3.19-002	3.14-002	3.10-002
TH234	2.12-004	2.11-004	2.10-004	2.09-004	2.06-004	2.03-004
PA234	3.73-005	3.70-005	3.68-005	3.66-005	3.61-005	3.56-005
U234	1.57-002	1.58-002	1.60-002	1.61-002	1.63-002	1.64-002
TH230	8.79-009	9.28-009	9.77-009	1.03-008	1.12-008	1.21-008
TH231	2.61-006	2.59-006	2.57-006	2.55-006	2.52-006	2.48-006
PA231	5.01-005	4.97-005	4.94-005	4.91-005	4.84-005	4.77-005
PA232	2.20-006	2.18-006	2.17-006	2.15-006	2.13-006	2.10-006
U232	4.28-005	4.29-005	4.29-005	4.29-005	4.27-005	4.24-005
TH228	4.41-008	4.50-008	4.59-008	4.66-008	4.78-008	4.86-008
TH229	6.09-008	6.48-008	6.87-008	7.25-008	8.01-008	8.74-008
U233	8.50-003	8.45-003	8.40-003	8.35-003	8.24-003	8.13-003
COMB1	4.10-002	4.07-002	4.05-002	4.02-002	3.97-002	3.91-002

TABLE XXII (Contd.)

TIME	18.00000	19.00000	20.00000	21.00000	22.00000	23.00000
FLUX=	2.0+015	TARGET=TH232		DATA TYPE=YIELD		
TH232	7.66-001	7.55-001	7.44-001	7.33-001	7.22-001	7.11-001
TH233	2.16-005	2.13-005	2.10-005	2.06-005	2.03-005	2.00-005
PA233	3.06-002	3.01-002	2.97-002	2.93-002	2.88-002	2.84-002
TH234	2.01-004	1.98-004	1.95-004	1.92-004	1.90-004	1.87-004
PA234	3.51-005	3.46-005	3.41-005	3.36-005	3.31-005	3.26-005
U234	1.64-002	1.64-002	1.63-002	1.63-002	1.62-002	1.60-002
TH230	1.30-008	1.38-008	1.46-008	1.54-008	1.61-008	1.68-008
TH231	2.44-006	2.41-006	2.37-006	2.34-006	2.30-006	2.27-006
PA231	4.71-005	4.64-005	4.57-005	4.50-005	4.44-005	4.37-005
PA232	2.07-006	2.04-006	2.01-006	1.98-006	1.95-006	1.92-006
U232	4.20-005	4.16-005	4.12-005	4.07-005	4.02-005	3.96-005
TH228	4.92-008	4.95-008	4.97-008	4.97-008	4.95-008	4.93-008
TH229	9.45-008	1.01-007	1.07-007	1.13-007	1.19-007	1.24-007
U233	8.02-003	7.90-003	7.79-003	7.68-003	7.57-003	7.46-003
COMB1	3.86-002	3.80-002	3.75-002	3.70-002	3.64-002	3.59-002

TIME	25.00000	27.00000	29.00000	31.00000	33.00000	35.00000
FLUX=	2.0+015	TARGET=TH232		DATA TYPE=YIELD		
TH232	6.91-001	6.71-001	6.51-001	6.32-001	6.14-001	5.96-001
TH233	1.95-005	1.89-005	1.83-005	1.78-005	1.73-005	1.68-005
PA233	2.76-002	2.68-002	2.60-002	2.53-002	2.45-002	2.38-002
TH234	1.81-004	1.76-004	1.71-004	1.66-004	1.61-004	1.57-004
PA234	3.17-005	3.07-005	2.98-005	2.90-005	2.81-005	2.73-005
U234	1.57-002	1.54-002	1.50-002	1.46-002	1.42-002	1.39-002
TH230	1.80-008	1.91-008	2.00-008	2.07-008	2.14-008	2.19-008
TH231	2.20-006	2.14-006	2.08-006	2.01-006	1.96-006	1.90-006
PA231	4.25-005	4.12-005	4.00-005	3.89-005	3.77-005	3.66-005
PA232	1.86-006	1.81-006	1.76-006	1.71-006	1.66-006	1.61-006
U232	3.85-005	3.75-005	3.64-005	3.53-005	3.43-005	3.33-005
TH228	4.85-008	4.75-008	4.64-008	4.53-008	4.40-008	4.28-008
TH229	1.33-007	1.40-007	1.46-007	1.51-007	1.55-007	1.57-007
U233	7.24-003	7.03-003	6.83-003	6.63-003	6.43-003	6.25-003
COMB1	3.48-002	3.38-002	3.28-002	3.19-002	3.10-002	3.01-002

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