

$^{234}\text{U}(\text{n},\gamma)$ E=th [1972Ri08,1979Ai03](#)

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli	NDS 122, 205 (2014)		1-Feb-2014

[Additional information 1.](#)

[1979Ai03](#): 99.1% enriched ^{234}U , 5.5×10^{14} thermal n/cm² s. γ rays bent crystal, internal conversion electrons, with a magnetic spectrometer ([1979Ai03](#)).

[1972Ri08](#): 99.7% enriched ^{234}U . Low energy γ 's measured with Ge(Li) with Na(I) annulus detector, high-energy γ 's measured with Ge(Li) detector.

$^{234}\text{U}(\text{n},\gamma)$. Compiled and analyzed $\sigma(\text{n},\gamma)$: [2012Pr13](#), [2011Go05](#), [2011Wo04](#), [2010Pr07](#), [2006BeZU](#), [2006RuZZ](#).

Calculated $\sigma(\text{n},\text{F})$ E(n)=0 3030 MeV ([2011Go05](#)).

Measured $\sigma(\text{n},\gamma)$ E(n)=0-5.3 MeV ([2011Gu21](#)). Others: [2006BrZX](#), [2006DrZX](#).

Measured $\sigma(\text{n},\gamma)$ E(n)=0.001 1 1 MeV ([2010Co02](#)). $\sigma(\text{n},\gamma)$ E(n)= Thermal ([2008Br08,2008BrZW,2008BrZW](#)).

 ^{235}U Levels

E(level)	$J^{\pi\ddagger}$	E(level)	$J^{\pi\ddagger}$
0	$7/2^{-}\ddagger$	958.7 10	$1/2,3/2$
0.0768 10	$1/2^{+}\ddagger$	968.447 14	$3/2^{+}$
13.0410 24	$3/2^{+}$	977.7 10	$1/2,3/2$
46.205 7	$9/2^{-}$	990.247 8	$(1/2^{-},3/2^{-})$
51.7027 20	$5/2^{+}$	992.71 3	$(1/2^{+})$
81.739 4	$7/2^{+}$	1002.35 17	$1/2^{-},3/2^{-}$
129.3009 16	$5/2^{+}\ddagger$	1007.5 7	$1/2^{-},3/2^{-}$
150.449 6	$9/2^{+}$	1010.7 19	$1/2^{-},3/2^{-}$
171.390 3	$7/2^{+}$	1034.9 3	$1/2^{-},3/2^{-}$
225.418 5	$9/2^{+}$	1038.372 10	$5/2^{+}$
332.8413 19	$5/2^{+}\ddagger$	1045.1 15	$1/2,3/2$
367.074 5	$7/2^{+}$	1057.24 14	$7/2^{+}$
393.2138 22	$3/2^{+}\ddagger$	1072.91 16	$1/2^{+}\ddagger$
426.742 4	$5/2^{+}$	1082.9 7	$1/2,3/2$
445.747 5	$7/2^{+}$	1099.11 13	$(3/2^{-})$
474.301 4	$7/2^{+}$	1106.0 7	$1/2,3/2$
633.089 6	$5/2^{-}\ddagger$	1116.21 4	$(5/2^{-})$
637.791 5	$3/2^{-}$	1129.3 3	$1/2^{-},3/2^{-}$
658.938 4	$1/2^{-}\ddagger$	1142.632 7	$3/2^{-}$
664.539 5	$5/2^{-}$	1157.64 21	$7/2^{+}$
670.983 23	$7/2^{-}$	1185.6 4	$1/2^{-},3/2^{-}$
701.006 22	$7/2^{-}$	1194.35 17	$1/2^{-}\ddagger$
703.757 5	$3/2^{-}$	1202.7 3	$3/2^{-}$
761.018 6	$1/2^{-},3/2^{-}$	1225.9 7	$1/2^{-},3/2^{-}$
769.25 4	$1/2^{+}\ddagger$	1242.9 3	$3/2^{-}\ddagger$
769.937 9	$3/2^{-}$	1251.8 7	$1/2^{+},3/2^{+}$
779.509 14	$3/2^{+}$	1265.8 3	$1/2^{-},3/2^{-}$
805.649 8	$3/2^{-}$	1272.5 3	$1/2^{-}$
811.96 3	$5/2^{-}$	1288.196 24	$5/2^{-}$
821.24 4	$5/2^{+}$	1296.91 16	$3/2^{+}$
835.0 6	$1/2,3/2$	1302.4 4	$1/2^{-},3/2^{-}$
843.865 8	$1/2^{+}$	1316.5 4	$1/2^{-},3/2^{-}$
845.351? 21	$7/2^{+}$	1321.401 14	$5/2^{+}$
865.207 7	$3/2^{+}$	1330.7 3	$1/2^{-},3/2^{-}$
891.94 3	$5/2^{+}$	1358.6 3	$1/2^{-},3/2^{-}$
905.272 18	$5/2^{+}$	1368.7 8	$1/2^{-},3/2^{-}$
951.055 15	$(1/2^{-},3/2^{-})$	1382.54 16	$1/2^{-}\ddagger$

Continued on next page (footnotes at end of table)

$^{234}\text{U}(\text{n},\gamma)$ E=th [1972Ri08](#),[1979AI03](#) (continued) ^{235}U Levels (continued)

E(level)	$J^{\pi\ddagger}$	$T_{1/2}$	Comments
1388.3 4	$1/2^{-}, 3/2^{-}$		
1396.4 3	$3/2^{-}$		
1404.5 5	$(1/2^{+}, 3/2^{+})$		
1412.91 11	$3/2^{+}\dagger$		
1413.11 22	$3/2^{-}$		
1438.63 24	$5/2^{+}$		
1439.2 4	$3/2^{-}, 1/2^{-}$		
1448.9 3	$1/2^{-}, 3/2^{-}$		
1463.4 5	$1/2^{-}, 3/2^{-}$		
1483.60 22	$7/2^{+}$		
1483.9 9	$(1/2, 3/2)$		
1488.1 9	$(1/2, 3/2)$		
1496.0 9	$(1/2^{+}, 3/2^{+})$		
1534.3 7	$1/2^{-}, 3/2^{-}$		
1553.8 10	$1/2, 3/2$		
1572.4 5	$1/2^{-}, 3/2^{-}$		
1614.0 7	$1/2^{-}, 3/2^{-}$		
1622.6 13	$1/2^{-}, 3/2^{-}$		
1689.6 5	$1/2^{-}, 3/2^{-}$		
1707.4 7	$1/2^{-}, 3/2^{-}$		
1744.5 7	$1/2, 3/2$		
1773.0 10	$1/2^{-}, 3/2^{-}$		
1801.9 12	$1/2^{-}, 3/2^{-}$		
1890.4 4	$1/2^{-}, 3/2^{-}$		
1905.7 5	$1/2^{-}, 3/2^{-}$		
1911.1 7	$1/2^{-}, 3/2^{-}$		
1931.7 9	$1/2^{-}, 3/2^{-}$		
2003.6 13	$1/2^{-}, 3/2^{-}$		
2013.6 15	$1/2^{-}, 3/2^{-}$		
2023.3 12	$1/2^{-}, 3/2^{-}$		
2073.3 20	$1/2^{-}, 3/2^{-}$		
2139.0 8	$1/2^{-}, 3/2^{-}$		
2206.7 3	$1/2^{-}, 3/2^{-}$		
2.5×10^3 3		3.6 ms 18	E(level), $T_{1/2}$: Fission isomer (2007Ob02). From $^{234}\text{U}(\text{n},\text{F})$, $\sigma(\text{SF})=10 \mu\text{b}$ 8. Produced with neutrons of $E(\text{n})=0.95$ and 1.27 MeV. Separated with the isomer spectrometer neptune at the Van de Graaff laboratory of the irmm, Geel, Belgium.
5297.65 7	$1/2^{+}$		

 $\dagger$ Same assignment In [1972Ri08](#). $\ddagger$ From [1979AI03](#).

$\gamma(^{235}\text{U})$

Intensities of primary γ rays are from thermal neutron capture (1972Ri08). Intensities of secondary γ rays are from 1979Ai03.

Partial radiation widths $\Gamma(\gamma)=I\gamma/E\gamma^3$ ($E\gamma$ is the γ -ray energy in units of fractions of the n-binding energy in thermal n capture (1979Ai03), $I\gamma$ is an average of γ -ray intensities (in units of 1×10^{-3} eV) from resonances at 5.2, 31, and 49 eV, and from thermal neutron capture). Total $\Gamma=25\times 10^{-3}$ eV 6 (1977Ko15).

$E_\gamma^{\ddagger}$	$I_\gamma^{\&}$	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. #@	$\alpha^\dagger$	Comments
(0.077 1)		0.0768	1/2 ⁺	0	7/2 ⁻	E3		
12.975 10		13.0410	3/2 ⁺	0.0768	1/2 ⁺			E_γ : From Adopted Levels, gammas.
^x 23.45 5	0.040 15							
29.86 5	0.02 1	81.739	7/2 ⁺	51.7027	5/2 ⁺			
^x 30.90 10	0.010 5							
38.72 6	0.010 5	51.7027	5/2 ⁺	13.0410	3/2 ⁺			
42.14 5	0.03 1	171.390	7/2 ⁺	129.3009	5/2 ⁺			
46.16 5	0.020 5	46.205	9/2 ⁻	0	7/2 ⁻			
47.60 5	0.03 1	129.3009	5/2 ⁺	81.739	7/2 ⁺			
51.628 4	0.03 1	51.7027	5/2 ⁺	0.0768	1/2 ⁺	[E2]	310	$\alpha(\text{L})=226$ 4; $\alpha(\text{M})=62.6$ 9; $\alpha(\text{N}+..)=21.5$ 3 $\alpha(\text{N})=16.97$ 24; $\alpha(\text{O})=3.89$ 6; $\alpha(\text{P})=0.630$ 9; $\alpha(\text{Q})=0.001599$ 23
^x 53.51 15	0.010 5							
54.026 5	0.010 5	225.418	9/2 ⁺	171.390	7/2 ⁺	[M1]	27.8	$\alpha(\text{L})=21.0$ 3; $\alpha(\text{M})=5.08$ 8; $\alpha(\text{N}+..)=1.772$ 25 $\alpha(\text{N})=1.370$ 20; $\alpha(\text{O})=0.333$ 5; $\alpha(\text{P})=0.0643$ 9; $\alpha(\text{Q})=0.00516$ 8
68.697 3	0.08 2	81.739	7/2 ⁺	13.0410	3/2 ⁺	[E2]	78.6	$\alpha(\text{L})=57.2$ 8; $\alpha(\text{M})=15.86$ 23; $\alpha(\text{N}+..)=5.45$ 8 $\alpha(\text{N})=4.30$ 6; $\alpha(\text{O})=0.987$ 14; $\alpha(\text{P})=0.1605$ 23; $\alpha(\text{Q})=0.000474$ 7
(68.70)		150.449	9/2 ⁺	81.739	7/2 ⁺			
77.599 2	0.16 4	129.3009	5/2 ⁺	51.7027	5/2 ⁺	[M1+E2]	≈16.52	$\alpha(\text{L})\approx 12.23$; $\alpha(\text{M})\approx 3.19$; $\alpha(\text{N}+..)\approx 1.102$ $\alpha(\text{N})\approx 0.862$; $\alpha(\text{O})\approx 0.203$; $\alpha(\text{P})\approx 0.0358$; $\alpha(\text{Q})\approx 0.001486$
^x 89.90 5	0.02 1							
(98.78 2)		150.449	9/2 ⁺	51.7027	5/2 ⁺	[E2]	14.11	$\alpha(\text{L})=10.28$ 15; $\alpha(\text{M})=2.85$ 4; $\alpha(\text{N}+..)=0.981$ 14 $\alpha(\text{N})=0.774$ 11; $\alpha(\text{O})=0.1779$ 25; $\alpha(\text{P})=0.0291$ 4; $\alpha(\text{Q})=0.0001143$ 16 E_γ : from ^{239}Pu α decay.
116.262 3	0.19 3	129.3009	5/2 ⁺	13.0410	3/2 ⁺	[M1+E2]	4.99	$\alpha(\text{L})= 3.65$; $\alpha(\text{M})= 0.972$; $\alpha(\text{N}+..)= 0.363$
≈119.38	0.010 5	171.390	7/2 ⁺	51.7027	5/2 ⁺			
^x 121.95 6	0.03 1							
123.228 5	0.025 5	761.018	1/2 ⁻ , 3/2 ⁻	637.791	3/2 ⁻			
125.040 2	0.06 2	990.247	(1/2 ⁻ , 3/2 ⁻)	865.207	3/2 ⁺	[E1]	0.297	$\alpha(\text{K})=0.227$ 4; $\alpha(\text{L})=0.0525$ 8; $\alpha(\text{M})=0.01280$ 18; $\alpha(\text{N}+..)=0.00436$ 6 $\alpha(\text{N})=0.00341$ 5; $\alpha(\text{O})=0.000800$ 12; $\alpha(\text{P})=0.0001408$ 20; $\alpha(\text{Q})=7.22\times 10^{-6}$ 11
125.21 10	0.01 CA	171.390	7/2 ⁺	46.205	9/2 ⁻	[E1]	0.296	$\alpha(\text{K})=0.227$ 4; $\alpha(\text{L})=0.0523$ 8; $\alpha(\text{M})=0.01275$ 18; $\alpha(\text{N}+..)=0.00434$ 7 $\alpha(\text{N})=0.00340$ 5; $\alpha(\text{O})=0.000797$ 12; $\alpha(\text{P})=0.0001403$ 20; $\alpha(\text{Q})=7.20\times 10^{-6}$ 11
129.302 2	3.23 30	129.3009	5/2 ⁺	0	7/2 ⁻	[E1]	0.275	$E, I\gamma$ based on ^{239}Pu α decay. $\alpha(\text{K})=0.211$ 3; $\alpha(\text{L})=0.0482$ 7; $\alpha(\text{M})=0.01173$ 17; $\alpha(\text{N}+..)=0.00400$ 6

²³⁴U(n,γ) E=th **1972Ri08,1979A103** (continued)

$\gamma(^{235}\text{U})$ (continued)								Comments
E_γ [‡]	I_γ ^{&}	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. ^{#@}	$\alpha^\dagger$	
								$\alpha(\text{N})=0.00313$ 5; $\alpha(\text{O})=0.000734$ 11; $\alpha(\text{P})=0.0001295$ 19; $\alpha(\text{Q})=6.70 \times 10^{-6}$ 10
^x 132.187 4 141.655 6	0.02 1 0.020 7	367.074	7/2 ⁺	225.418	9/2 ⁺	[M1]	8.22	$\alpha(\text{K})=6.52$ 10; $\alpha(\text{L})=1.279$ 18; $\alpha(\text{M})=0.309$ 5; $\alpha(\text{N}+..)=0.1079$ 16 $\alpha(\text{N})=0.0834$ 12; $\alpha(\text{O})=0.0203$ 3; $\alpha(\text{P})=0.00391$ 6; $\alpha(\text{Q})=0.000312$ 5
^x 142.18 8 ^x 146.65 7 ^x 148.14 13 ^x 158.960 4 161.449 3	0.02 7 0.020 5 0.010 5 0.04 2 0.15 3	332.8413	5/2 ⁺	171.390	7/2 ⁺	M1	5.67	$\alpha(\text{L1})_{\text{exp}}=1.0$ 3 $\alpha(\text{K})=4.51$ 7; $\alpha(\text{L})=0.880$ 13; $\alpha(\text{M})=0.213$ 3; $\alpha(\text{N}+..)=0.0742$ 11 $\alpha(\text{N})=0.0574$ 8; $\alpha(\text{O})=0.01395$ 20; $\alpha(\text{P})=0.00269$ 4; $\alpha(\text{Q})=0.000215$ 3
^x 167.13 9 171.370 11	0.03 1 0.02 1	171.390	7/2 ⁺	0	7/2 ⁻	[E1]	0.1415	$\alpha(\text{K})=0.1103$ 16; $\alpha(\text{L})=0.0235$ 4; $\alpha(\text{M})=0.00570$ 8; $\alpha(\text{N}+..)=0.00195$ 3 $\alpha(\text{N})=0.001521$ 22; $\alpha(\text{O})=0.000360$ 5; $\alpha(\text{P})=6.45 \times 10^{-5}$ 9; $\alpha(\text{Q})=3.62 \times 10^{-6}$ 5
171.548 8	0.02 1	951.055	(1/2 ⁻ , 3/2 ⁻)	779.509	3/2 ⁺	[E1]	0.1411	$\alpha(\text{K})=0.1101$ 16; $\alpha(\text{L})=0.0234$ 4; $\alpha(\text{M})=0.00569$ 8; $\alpha(\text{N}+..)=0.00194$ 3 $\alpha(\text{N})=0.001517$ 22; $\alpha(\text{O})=0.000359$ 5; $\alpha(\text{P})=6.44 \times 10^{-5}$ 9; $\alpha(\text{Q})=3.61 \times 10^{-6}$ 5
172.560 11	0.03 1	805.649	3/2 ⁻	633.089	5/2 ⁻	[M1]	4.70	$\alpha(\text{K})=3.73$ 6; $\alpha(\text{L})=0.728$ 11; $\alpha(\text{M})=0.1761$ 25; $\alpha(\text{N}+..)=0.0614$ 9 $\alpha(\text{N})=0.0475$ 7; $\alpha(\text{O})=0.01155$ 17; $\alpha(\text{P})=0.00223$ 4; $\alpha(\text{Q})=0.0001777$ 25
^x 181.870 19 ^x 182.849 5 ^x 195.220 12 195.70 2	0.02 1 0.08 3 0.02 1 0.08 2	367.074	7/2 ⁺	171.390	7/2 ⁺	M1	3.30	$\alpha(\text{L1})_{\text{exp}}=0.62$ 20 $\alpha(\text{K})=2.62$ 4; $\alpha(\text{L})=0.510$ 8; $\alpha(\text{M})=0.1233$ 18; $\alpha(\text{N}+..)=0.0430$ 6 $\alpha(\text{N})=0.0332$ 5; $\alpha(\text{O})=0.00808$ 12; $\alpha(\text{P})=0.001558$ 22; $\alpha(\text{Q})=0.0001243$ 18
^x 196.872 7 203.553 7	0.05 2 0.51 5	332.8413	5/2 ⁺	129.3009	5/2 ⁺	M1	2.95	$\alpha(\text{L1})_{\text{exp}}=0.55$ 10 $\alpha(\text{K})=2.35$ 4; $\alpha(\text{L})=0.456$ 7; $\alpha(\text{M})=0.1103$ 16; $\alpha(\text{N}+..)=0.0385$ 6 $\alpha(\text{N})=0.0297$ 5; $\alpha(\text{O})=0.00723$ 11; $\alpha(\text{P})=0.001394$ 20; $\alpha(\text{Q})=0.0001112$ 16
211.056 7	0.02 1	637.791	3/2 ⁻	426.742	5/2 ⁺	[E1]	0.0869	$\alpha(\text{K})=0.0684$ 10; $\alpha(\text{L})=0.01399$ 20; $\alpha(\text{M})=0.00339$ 5; $\alpha(\text{N}+..)=0.001161$ 17 $\alpha(\text{N})=0.000905$ 13; $\alpha(\text{O})=0.000215$ 3; $\alpha(\text{P})=3.90 \times 10^{-5}$ 6; $\alpha(\text{Q})=2.30 \times 10^{-6}$ 4
^x 212.42 11 229.24 2	0.04 2 0.05 3	990.247	(1/2 ⁻ , 3/2 ⁻)	761.018	1/2 ⁻ , 3/2 ⁻	[M1]	2.12	$\alpha(\text{K})=1.682$ 24; $\alpha(\text{L})=0.326$ 5; $\alpha(\text{M})=0.0789$ 11; $\alpha(\text{N}+..)=0.0275$ 4 $\alpha(\text{N})=0.0213$ 3; $\alpha(\text{O})=0.00517$ 8; $\alpha(\text{P})=0.000997$ 14; $\alpha(\text{Q})=7.95 \times 10^{-5}$ 12
237.774 6	0.03 1	367.074	7/2 ⁺	129.3009	5/2 ⁺	[M1]	1.91	$\alpha(\text{K})=1.519$ 22; $\alpha(\text{L})=0.295$ 5; $\alpha(\text{M})=0.0712$ 10; $\alpha(\text{N}+..)=0.0248$ 4

γ(²³⁵U) (continued)

E _γ [‡]	I _γ ^{&}	E _i (level)	J _i ^π	E _f	J _f ^π	Mult. #@	α [†]	Comments
244.583 8	0.04 2	637.791	3/2 ⁻	393.2138	3/2 ⁺	[E1]	0.0620	α(N)=0.0192 3; α(O)=0.00467 7; α(P)=0.000900 13; α(Q)=7.18×10 ⁻⁵ 10 α(K)=0.0490 7; α(L)=0.00978 14; α(M)=0.00236 4; α(N+..)=0.000811 12 α(N)=0.000632 9; α(O)=0.0001503 21; α(P)=2.75×10 ⁻⁵ 4; α(Q)=1.681×10 ⁻⁶ 24
263.916 4	0.16 2	393.2138	3/2 ⁺	129.3009	5/2 ⁺	M1	1.428	α(K)exp=0.96 20; α(L1)exp=0.22 4 α(K)=1.137 16; α(L)=0.220 3; α(M)=0.0532 8; α(N+..)=0.0185 3 α(N)=0.01433 20; α(O)=0.00348 5; α(P)=0.000672 10; α(Q)=5.36×10 ⁻⁵ 8
274.370 10	0.02 1	445.747	7/2 ⁺	171.390	7/2 ⁺	M1	1.282	α(K)=1.021 15; α(L)=0.197 3; α(M)=0.0477 7; α(N+..)=0.01663 24 α(N)=0.01285 18; α(O)=0.00313 5; α(P)=0.000603 9; α(Q)=4.81×10 ⁻⁵ 7
297.42 3	0.03 1	426.742	5/2 ⁺	129.3009	5/2 ⁺	[M1]	1.026	α(K)exp=0.74 10; α(L1)exp=0.15 2 α(K)=0.817 12; α(L)=0.1578 22; α(M)=0.0381 6; α(N+..)=0.01328 19 α(N)=0.01027 15; α(O)=0.00250 4; α(P)=0.000482 7; α(Q)=3.84×10 ⁻⁵ 6
316.444 6	0.26 3	445.747	7/2 ⁺	129.3009	5/2 ⁺	M1	0.865	α(K)=0.688 10; α(L)=0.1329 19; α(M)=0.0321 5; α(N+..)=0.01118 16 α(N)=0.00864 13; α(O)=0.00210 3; α(P)=0.000405 6; α(Q)=3.23×10 ⁻⁵ 5
320.51 17	0.03 1	367.074	7/2 ⁺	46.205	9/2 ⁻			
323.853 4	0.10 2	474.301	7/2 ⁺	150.449	9/2 ⁺	M1	0.811	α(K)=0.646 9; α(L)=0.1246 18; α(M)=0.0301 5; α(N+..)=0.01049 15 α(N)=0.00811 12; α(O)=0.00197 3; α(P)=0.000380 6; α(Q)=3.03×10 ⁻⁵ 5
332.841 2	0.45 5	332.8413	5/2 ⁺	0	7/2 ⁻	E1	0.0313	α(K)=0.0250 4; α(L)=0.00476 7; α(M)=0.001145 16; α(N+..)=0.000394 6 α(N)=0.000306 5; α(O)=7.33×10 ⁻⁵ 11; α(P)=1.356×10 ⁻⁵ 19; α(Q)=8.87×10 ⁻⁷ 13
341.510 2	0.37 4	393.2138	3/2 ⁺	51.7027	5/2 ⁺	M1	0.701	α(K)exp=0.62 9 α(K)=0.559 8; α(L)=0.1076 15; α(M)=0.0260 4; α(N+..)=0.00906 13 α(N)=0.00700 10; α(O)=0.001703 24; α(P)=0.000328 5; α(Q)=2.62×10 ⁻⁵ 4
345.003 ^b 4	0.35 ^b 4	426.742	5/2 ⁺	81.739	7/2 ⁺	M1	0.682	α(K)exp=0.55 8 α(K)=0.543 8; α(L)=0.1047 15; α(M)=0.0253 4; α(N+..)=0.00881 13 α(N)=0.00681 10; α(O)=0.001655 24; α(P)=0.000319 5; α(Q)=2.54×10 ⁻⁵ 4
345.003 ^b 4	≤0.1 ^b	474.301	7/2 ⁺	129.3009	5/2 ⁺	M1	0.682	α(K)exp=0.50 15 α(K)=0.543 8; α(L)=0.1047 15; α(M)=0.0253 4; α(N+..)=0.00881 13 α(N)=0.00681 10; α(O)=0.001655 24; α(P)=0.000319 5; α(Q)=2.54×10 ⁻⁵ 4
367.15 17	0.11 4	367.074	7/2 ⁺	0	7/2 ⁻			
^x 371.330 12	0.07 2					(M1)	0.558	α(K)exp=0.51 15 α(K)=0.444 7; α(L)=0.0855 12; α(M)=0.0206 3; α(N+..)=0.00719 10 α(N)=0.00556 8; α(O)=0.001352 19; α(P)=0.000261 4; α(Q)=2.08×10 ⁻⁵ 3
^x 373.74 16	0.07 4							
375.043 7	1.0 1	426.742	5/2 ⁺	51.7027	5/2 ⁺	M1	0.543	α(K)exp=0.48 6 α(K)=0.432 6; α(L)=0.0832 12; α(M)=0.0201 3; α(N+..)=0.00700 10 α(N)=0.00541 8; α(O)=0.001315 19; α(P)=0.000254 4; α(Q)=2.02×10 ⁻⁵ 3
^x 376.094 5	0.14 2					M1	0.539	α(K)=0.429 6; α(L)=0.0825 12; α(M)=0.0199 3; α(N+..)=0.00694 10 α(N)=0.00537 8; α(O)=0.001305 19; α(P)=0.000252 4; α(Q)=2.01×10 ⁻⁵ 3
378.83 16	0.10 5	805.649	3/2 ⁻	426.742	5/2 ⁺			
380.173 3	1.92 20	393.2138	3/2 ⁺	13.0410	3/2 ⁺	M1	0.523	α(K)exp=0.44 6

γ(²³⁵U) (continued)

<u>E_γ[‡]</u>	<u>I_γ^{&}</u>	<u>E_i(level)</u>	<u>J_i^π</u>	<u>E_f</u>	<u>J_f^π</u>	<u>Mult.#@</u>	<u>δ</u>	<u>α[†]</u>	<u>Comments</u>
									α(K)=0.417 6; α(L)=0.0801 12; α(M)=0.0193 3; α(N+..)=0.00674 10
392.552 6	0.31 4	474.301	7/2 ⁺	81.739	7/2 ⁺	M1		0.479	α(N)=0.00521 8; α(O)=0.001267 18; α(P)=0.000244 4; α(Q)=1.95×10 ⁻⁵ 3
393.138 6	2.11 21	393.2138	3/2 ⁺	0.0768	1/2 ⁺	M1		0.477	α(K)=0.382 6; α(L)=0.0734 11; α(M)=0.01771 25; α(N+..)=0.00617 9
									α(N)=0.00477 7; α(O)=0.001160 17; α(P)=0.000224 4; α(Q)=1.783×10 ⁻⁵ 25
399.530 12	0.15 3	445.747	7/2 ⁺	46.205	9/2 ⁻	[E1]		0.0213	α(K)exp=0.41 5 α(K)=0.380 6; α(L)=0.0731 11; α(M)=0.01764 25; α(N+..)=0.00615 9
									α(N)=0.00475 7; α(O)=0.001156 17; α(P)=0.000223 4; α(Q)=1.776×10 ⁻⁵ 25
412.31 12	0.24 8	805.649	3/2 ⁻	393.2138	3/2 ⁺				α(K)=0.01706 24; α(L)=0.00317 5; α(M)=0.000761 11; α(N+..)=0.000262 4
413.710 13	0.91 10	426.742	5/2 ⁺	13.0410	3/2 ⁺	M1		0.415	α(N)=0.000204 3; α(O)=4.88×10 ⁻⁵ 7; α(P)=9.10×10 ⁻⁶ 13; α(Q)=6.16×10 ⁻⁷ 9
									α(K)=0.331 5; α(L)=0.0636 9; α(M)=0.01534 22; α(N+..)=0.00535 8
422.596 8	0.18 2	474.301	7/2 ⁺	51.7027	5/2 ⁺	M1		0.392	α(N)=0.00413 6; α(O)=0.001005 14; α(P)=0.000194 3; α(Q)=1.545×10 ⁻⁵ 22
									α(K)=0.313 5; α(L)=0.0600 9; α(M)=0.01447 21; α(N+..)=0.00504 7
445.740 17	0.20 2	445.747	7/2 ⁺	0	7/2 ⁻	E1		0.01698	α(N)=0.00390 6; α(O)=0.000948 14; α(P)=0.000183 3; α(Q)=1.457×10 ⁻⁵ 21
									α(K)=0.01367 20; α(L)=0.00250 4; α(M)=0.000600 9; α(N+..)=0.000207 3
^x 454.56 20	0.09 4								α(N)=0.0001606 23; α(O)=3.86×10 ⁻⁵ 6; α(P)=7.21×10 ⁻⁶ 10; α(Q)=4.98×10 ⁻⁷ 7
478.100 19	0.36 4	1142.632	3/2 ⁻	664.539	5/2 ⁻	M1		0.281	α(K)=0.224 4; α(L)=0.0429 6; α(M)=0.01034 15; α(N+..)=0.00360 5
									α(N)=0.00278 4; α(O)=0.000677 10; α(P)=0.0001306 19; α(Q)=1.041×10 ⁻⁵ 15
^x 491.130 13	0.41 5					M1+E2	0.54 20	0.21 3	α(K)exp=0.16 2; α(L1)exp=0.29 4 α(K)=0.168 23; α(L)=0.034 4; α(M)=0.0083 8; α(N+..)=0.0029 3 α(N)=0.00224 21; α(O)=0.00054 5; α(P)=0.000104 11; α(Q)=7.8×10 ⁻⁶ 11
^x 495.92 30	0.05 2								
504.840 6	0.38 4	1142.632	3/2 ⁻	637.791	3/2 ⁻	M1+E2	1.2 2	0.127 18	α(K)exp=0.129 15 α(K)=0.096 15; α(L)=0.0230 22; α(M)=0.0057 5;

γ(²³⁵U) (continued)

<u>E_γ[‡]</u>	<u>I_γ^{&}</u>	<u>E_i(level)</u>	<u>J_i^π</u>	<u>E_f</u>	<u>J_f^π</u>	<u>Mult.^{#@}</u>	<u>δ</u>	<u>α[†]</u>	<u>Comments</u>
									α(N+..)=0.00198 18 α(N)=0.00154 14; α(O)=0.00037 4; α(P)=6.9×10 ⁻⁵ 7; α(Q)=4.5×10 ⁻⁶ 7
^x 517.0 3	0.06 2								
^x 558.3 1	0.12 3								
564.070 17	0.08 2	1038.372	5/2 ⁺	474.301	7/2 ⁺	M1		0.180	α(K)exp=0.15 4 α(K)=0.1437 21; α(L)=0.0274 4; α(M)=0.00660 10; α(N+..)=0.00230 4 α(N)=0.001777 25; α(O)=0.000432 6; α(P)=8.34×10 ⁻⁵ 12; α(Q)=6.65×10 ⁻⁶ 10
582.75 8	0.12 3	664.539	5/2 ⁻	81.739	7/2 ⁺				
^x 586.940 14	0.05 2								
^x 595.440 15	0.10 2								
^x 599.244 5	0.41 4					M1		0.1530	α(K)exp=0.13 2 α(K)=0.1222 18; α(L)=0.0233 4; α(M)=0.00560 8; α(N+..)=0.00195 3 α(N)=0.001509 22; α(O)=0.000367 6; α(P)=7.08×10 ⁻⁵ 10; α(Q)=5.65×10 ⁻⁶ 8
^x 602.370 15	0.20 4								
^x 608.4 2	0.13 3								
611.630 11	0.10 2	1038.372	5/2 ⁺	426.742	5/2 ⁺	E1,E2			
612.838 6	0.39 4	664.539	5/2 ⁻	51.7027	5/2 ⁺	E1		0.00910 13	α=0.00910 13; α(K)=0.00738 11; α(L)=0.001300 19; α(M)=0.000310 5; α(N+..)=0.0001072 α(N)=8.31×10 ⁻⁵ 12; α(O)=2.00×10 ⁻⁵ 3; α(P)=3.78×10 ⁻⁶ 6; α(Q)=2.75×10 ⁻⁷ 4
^x 615.800 11	0.21 3					M1+E2	0.9 3	0.092 21	α(K)exp=0.076 15 α(K)=0.072 18; α(L)=0.015 3; α(M)=0.0037 7; α(N+..)=0.00129 22 α(N)=0.00100 17; α(O)=0.00024 4; α(P)=4.6×10 ⁻⁵ 9; α(Q)=3.3×10 ⁻⁶ 8
617.212 7	0.50 5	1288.196	5/2 ⁻	670.983	7/2 ⁻	E2		0.0293	α(K)=0.0197 3; α(L)=0.00719 10; α(M)=0.00185 3; α(N+..)=0.000642 9 α(N)=0.000501 7; α(O)=0.0001186 17; α(P)=2.14×10 ⁻⁵ 3; α(Q)=9.56×10 ⁻⁷ 14
618.335 6	0.70 7	664.539	5/2 ⁻	46.205	9/2 ⁻	(E2)		0.0292	Mult.: E1 or E2. Level scheme requires E2. α(K)=0.0196 3; α(L)=0.00715 10; α(M)=0.00184 3; α(N+..)=0.000639 9 α(N)=0.000498 7; α(O)=0.0001180 17; α(P)=2.13×10 ⁻⁵ 3; α(Q)=9.53×10 ⁻⁷ 14
^x 621.900 15	0.20 4								Mult.: E2 or E1. Level scheme requires E2.
624.750 10	0.61 10	637.791	3/2 ⁻	13.0410	3/2 ⁺	(E1)		0.00877 13	α=0.00877 13; α(K)=0.00712 10; α(L)=0.001252 18; α(M)=0.000299 5; α(N+..)=0.0001032 α(N)=8.00×10 ⁻⁵ 12; α(O)=1.93×10 ⁻⁵ 3; α(P)=3.64×10 ⁻⁶ 5; α(Q)=2.66×10 ⁻⁷ 4

$\gamma(^{235}\text{U})$ (continued)

E_γ ‡	I_γ &	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. # @	$\alpha^\dagger$	Comments
624.777 22	0.3 1	670.983	7/2 ⁻	46.205	9/2 ⁻	(M1)	0.1369	$\alpha(\text{K})=0.1094$ 16; $\alpha(\text{L})=0.0208$ 3; $\alpha(\text{M})=0.00501$ 7; $\alpha(\text{N}+..)=0.001745$ 25 $\alpha(\text{N})=0.001349$ 19; $\alpha(\text{O})=0.000328$ 5; $\alpha(\text{P})=6.33\times 10^{-5}$ 9; $\alpha(\text{Q})=5.05\times 10^{-6}$ 7 E_γ : from ce(K) (1979Al03). I_γ : from 1979Al03 and ^{239}Pu α decay.
^x 627.4 11 633.088 6	0.02 2 2.0 2	633.089	5/2 ⁻	0	7/2 ⁻	M1	0.1321	$\alpha(\text{K})_{\text{exp}}=0.096$ 15 $\alpha(\text{K})=0.1056$ 15; $\alpha(\text{L})=0.0201$ 3; $\alpha(\text{M})=0.00483$ 7; $\alpha(\text{N}+..)=0.001684$ 24 $\alpha(\text{N})=0.001301$ 19; $\alpha(\text{O})=0.000317$ 5; $\alpha(\text{P})=6.11\times 10^{-5}$ 9; $\alpha(\text{Q})=4.88\times 10^{-6}$ 7
637.770 10	3.5 4	637.791	3/2 ⁻	0	7/2 ⁻	E2	0.0273	$\alpha(\text{K})_{\text{exp}}=0.016$ 2 $\alpha(\text{K})=0.0185$ 3; $\alpha(\text{L})=0.00655$ 10; $\alpha(\text{M})=0.001683$ 24; $\alpha(\text{N}+..)=0.000583$ 9 $\alpha(\text{N})=0.000455$ 7; $\alpha(\text{O})=0.0001078$ 15; $\alpha(\text{P})=1.95\times 10^{-5}$ 3; $\alpha(\text{Q})=8.96\times 10^{-7}$ 13 Doublet.
640.4 2 ^x 642.6 5 645.894 5	0.23 6 0.07 3 1.34 15	769.25 658.938	1/2 ⁺ 1/2 ⁻	129.3009 13.0410	5/2 ⁺ 3/2 ⁺	E1	0.00824 12	$\alpha=0.00824$ 12; $\alpha(\text{K})=0.00669$ 10; $\alpha(\text{L})=0.001172$ 17; $\alpha(\text{M})=0.000280$ 4; $\alpha(\text{N}+..)=9.66\times 10^{-5}$ 14 $\alpha(\text{N})=7.49\times 10^{-5}$ 11; $\alpha(\text{O})=1.81\times 10^{-5}$ 3; $\alpha(\text{P})=3.41\times 10^{-6}$ 5; $\alpha(\text{Q})=2.50\times 10^{-7}$ 4
^x 649.5 3 652.052 5	0.20 5 1.31	703.757	3/2 ⁻	51.7027	5/2 ⁺	E1	0.00809 12	$\alpha=0.00809$ 12; $\alpha(\text{K})=0.00657$ 10; $\alpha(\text{L})=0.001151$ 17; $\alpha(\text{M})=0.000274$ 4; $\alpha(\text{N}+..)=9.48\times 10^{-5}$ 14 $\alpha(\text{N})=7.35\times 10^{-5}$ 11; $\alpha(\text{O})=1.773\times 10^{-5}$ 25; $\alpha(\text{P})=3.35\times 10^{-6}$ 5; $\alpha(\text{Q})=2.46\times 10^{-7}$ 4
654.80 2 ^x 658.163 7 658.862 5	0.09 2 0.46 5 0.90 9	701.006 658.938	7/2 ⁻ 1/2 ⁻	46.205 0.0768	9/2 ⁻ 1/2 ⁺	E1	0.00794 12	$\alpha=0.00794$ 12; $\alpha(\text{K})=0.00645$ 9; $\alpha(\text{L})=0.001128$ 16; $\alpha(\text{M})=0.000269$ 4; $\alpha(\text{N}+..)=9.29\times 10^{-5}$ 13 $\alpha(\text{N})=7.20\times 10^{-5}$ 10; $\alpha(\text{O})=1.737\times 10^{-5}$ 25; $\alpha(\text{P})=3.29\times 10^{-6}$ 5; $\alpha(\text{Q})=2.41\times 10^{-7}$ 4
664.520 12	0.58 6	664.539	5/2 ⁻	0	7/2 ⁻	E2	0.0251	$\alpha(\text{K})_{\text{exp}}=0.025$ 4 $\alpha(\text{K})=0.01722$ 25; $\alpha(\text{L})=0.00583$ 9; $\alpha(\text{M})=0.001494$ 21; $\alpha(\text{N}+..)=0.000517$ 8 $\alpha(\text{N})=0.000404$ 6; $\alpha(\text{O})=9.57\times 10^{-5}$ 14; $\alpha(\text{P})=1.737\times 10^{-5}$ 25; $\alpha(\text{Q})=8.26\times 10^{-7}$ 12 I_γ : $I_\gamma=0.31$ 4 from ^{239}Pu α decay. This γ ray may be a doublet in (n, γ).
^x 670.7 4 679.83 6	0.18 8 0.15 2	905.272	5/2 ⁺	225.418	9/2 ⁺	E2	0.0239	$\alpha(\text{K})_{\text{exp}}=0.03$ 1 $\alpha(\text{K})=0.01653$ 24; $\alpha(\text{L})=0.00547$ 8; $\alpha(\text{M})=0.001399$ 20; $\alpha(\text{N}+..)=0.000485$ 7 $\alpha(\text{N})=0.000378$ 6; $\alpha(\text{O})=8.97\times 10^{-5}$ 13; $\alpha(\text{P})=1.630\times 10^{-5}$ 23; $\alpha(\text{Q})=7.89\times 10^{-7}$ 11
^x 685.861 6	0.65 6					E1	0.00736 11	$\alpha=0.00736$ 11; $\alpha(\text{K})=0.00599$ 9; $\alpha(\text{L})=0.001043$ 15; $\alpha(\text{M})=0.000249$ 4; $\alpha(\text{N}+..)=8.59\times 10^{-5}$ 12

²³⁴U(n,γ) E=th **1972Ri08,1979A103** (continued)

$\gamma(^{235}\text{U})$ (continued)									
E_γ ‡	I_γ &	E_i (level)	J_i^π	E_f	J_f^π	Mult. # @	δ	$\alpha^\dagger$	Comments
690.73 2	0.34 4	703.757	3/2 ⁻	13.0410	3/2 ⁺	E1		0.00727 11	$\alpha(\text{N})=6.66\times 10^{-5}$ 10; $\alpha(\text{O})=1.606\times 10^{-5}$ 23; $\alpha(\text{P})=3.04\times 10^{-6}$ 5; $\alpha(\text{Q})=2.25\times 10^{-7}$ 4 $\alpha=0.00727$ 11; $\alpha(\text{K})=0.00591$ 9; $\alpha(\text{L})=0.001029$ 15; $\alpha(\text{M})=0.000245$ 4; $\alpha(\text{N}+..)=8.47\times 10^{-5}$ 12
^x 691.88 2	0.09 2					M1		0.1043	$\alpha(\text{N})=6.57\times 10^{-5}$ 10; $\alpha(\text{O})=1.584\times 10^{-5}$ 23; $\alpha(\text{P})=3.00\times 10^{-6}$ 5; $\alpha(\text{Q})=2.22\times 10^{-7}$ 4 $\alpha(\text{K})_{\text{exp}}=0.07$ 5 $\alpha(\text{K})=0.0833$ 12; $\alpha(\text{L})=0.01580$ 23; $\alpha(\text{M})=0.00381$ 6; $\alpha(\text{N}+..)=0.001326$ 19
693.810 10	0.25 3	865.207	3/2 ⁺	171.390	7/2 ⁺	E2		0.0229	$\alpha(\text{N})=0.001025$ 15; $\alpha(\text{O})=0.000249$ 4; $\alpha(\text{P})=4.81\times 10^{-5}$ 7; $\alpha(\text{Q})=3.84\times 10^{-6}$ 6 $\alpha(\text{K})_{\text{exp}}=0.020$ 5 $\alpha(\text{K})=0.01594$ 23; $\alpha(\text{L})=0.00517$ 8; $\alpha(\text{M})=0.001321$ 19; $\alpha(\text{N}+..)=0.000458$ 7
^x 698.3 3	0.15 4								$\alpha(\text{N})=0.000357$ 5; $\alpha(\text{O})=8.47\times 10^{-5}$ 12; $\alpha(\text{P})=1.542\times 10^{-5}$ 22; $\alpha(\text{Q})=7.58\times 10^{-7}$ 11
703.68 2	0.70 7	703.757	3/2 ⁻	0.0768	1/2 ⁺	E1		0.00702 10	$\alpha=0.00702$ 10; $\alpha(\text{K})=0.00571$ 8; $\alpha(\text{L})=0.000993$ 14; $\alpha(\text{M})=0.000236$ 4; $\alpha(\text{N}+..)=8.17\times 10^{-5}$ 12 $\alpha(\text{N})=6.33\times 10^{-5}$ 9; $\alpha(\text{O})=1.529\times 10^{-5}$ 22; $\alpha(\text{P})=2.90\times 10^{-6}$ 4; $\alpha(\text{Q})=2.15\times 10^{-7}$ 3
714.570 10	0.44 5	843.865	1/2 ⁺	129.3009	5/2 ⁺	E2		0.0215	$\alpha(\text{K})_{\text{exp}}=0.016$ 2 $\alpha(\text{K})=0.01513$ 22; $\alpha(\text{L})=0.00477$ 7; $\alpha(\text{M})=0.001216$ 17; $\alpha(\text{N}+..)=0.000421$ 6 $\alpha(\text{N})=0.000328$ 5; $\alpha(\text{O})=7.81\times 10^{-5}$ 11; $\alpha(\text{P})=1.423\times 10^{-5}$ 20; $\alpha(\text{Q})=7.16\times 10^{-7}$ 10
718.230 10	0.59 6	769.937	3/2 ⁻	51.7027	5/2 ⁺	E1		0.00676 10	$\alpha=0.00676$ 10; $\alpha(\text{K})=0.00550$ 8; $\alpha(\text{L})=0.000954$ 14; $\alpha(\text{M})=0.000227$ 4; $\alpha(\text{N}+..)=7.86\times 10^{-5}$ 11 $\alpha(\text{N})=6.09\times 10^{-5}$ 9; $\alpha(\text{O})=1.470\times 10^{-5}$ 21; $\alpha(\text{P})=2.79\times 10^{-6}$ 4; $\alpha(\text{Q})=2.07\times 10^{-7}$ 3
720.55 3	0.08 2	891.94	5/2 ⁺	171.390	7/2 ⁺				
^x 724.3 4	0.04 2								
727.86 3	0.15 2	779.509	3/2 ⁺	51.7027	5/2 ⁺	M1		0.0911	$\alpha(\text{K})_{\text{exp}}=0.07$ 2 $\alpha(\text{K})=0.0728$ 11; $\alpha(\text{L})=0.01379$ 20; $\alpha(\text{M})=0.00332$ 5; $\alpha(\text{N}+..)=0.001157$ 17 $\alpha(\text{N})=0.000894$ 13; $\alpha(\text{O})=0.000217$ 3; $\alpha(\text{P})=4.20\times 10^{-5}$ 6; $\alpha(\text{Q})=3.35\times 10^{-6}$ 5
733.93 4	0.13 2	905.272	5/2 ⁺	171.390	7/2 ⁺	M1		0.0891	$\alpha(\text{K})=0.0712$ 10; $\alpha(\text{L})=0.01348$ 19; $\alpha(\text{M})=0.00325$ 5; $\alpha(\text{N}+..)=0.001132$ 16 $\alpha(\text{N})=0.000875$ 13; $\alpha(\text{O})=0.000213$ 3; $\alpha(\text{P})=4.10\times 10^{-5}$ 6; $\alpha(\text{Q})=3.28\times 10^{-6}$ 5
735.910 15	0.40 4	865.207	3/2 ⁺	129.3009	5/2 ⁺	M1+E2	1.2 2	0.048 7	$\alpha(\text{K})_{\text{exp}}=0.037$ 6

²³⁴U(n,γ) E=th **1972Ri08,1979A103 (continued)**

<u>γ(²³⁵U) (continued)</u>										
<u>E_γ[‡]</u>	<u>I_γ^{&}</u>	<u>E_i(level)</u>	<u>J_i^π</u>	<u>E_f</u>	<u>J_f^π</u>	<u>Mult.#@</u>	<u>δ</u>	<u>α[†]</u>	<u>I_(γ+ce)^{&}</u>	<u>Comments</u>
747.970 10	1.24 10	761.018	1/2 ⁻ ,3/2 ⁻	13.0410	3/2 ⁺	E1		0.00628 9		α(K)=0.037 6; α(L)=0.0081 9; α(M)=0.00198 20; α(N+..)=0.00069 7 α(N)=0.00053 6; α(O)=0.000129 13; α(P)=2.4×10 ⁻⁵ 3; α(Q)=1.73×10 ⁻⁶ 24 α=0.00628 9; α(K)=0.00511 8; α(L)=0.000883 13; α(M)=0.000210 3; α(N+..)=7.27×10 ⁻⁵ 11 α(N)=5.63×10 ⁻⁵ 8; α(O)=1.360×10 ⁻⁵ 19; α(P)=2.58×10 ⁻⁶ 4; α(Q)=1.93×10 ⁻⁷ 3
^x 750.72 6	0.13 2					M1(+E2)	0.3 3	0.079 12		α(K)exp=0.058 9 α(K)=0.063 10; α(L)=0.0120 16; α(M)=0.0029 4; α(N+..)=0.00101 13 α(N)=0.00078 10; α(O)=0.000189 25; α(P)=3.6×10 ⁻⁵ 5; α(Q)=2.9×10 ⁻⁶ 5
756.19 4	0.14 3	769.25	1/2 ⁺	13.0410	3/2 ⁺					
756.87 6	0.17 3	769.937	3/2 ⁻	13.0410	3/2 ⁺					
760.26 5	0.10 2	811.96	5/2 ⁻	51.7027	5/2 ⁺					
760.98 4	0.10 2	761.018	1/2 ⁻ ,3/2 ⁻	0.0768	1/2 ⁺					
762.6 2	0.04 2	891.94	5/2 ⁺	129.3009	5/2 ⁺					
763.61 2	<0.05	845.351?	7/2 ⁺	81.739	7/2 ⁺	E0(+M1)			0.07 2	
766.47 3	0.16 2	779.509	3/2 ⁺	13.0410	3/2 ⁺	E0+M1			0.76 8	K:L1:M1:N1=4.86 25:0.93 5:0.22 2:0.07 1.
^x 767.29 4	0.15 2									
769.15 8	0.30 3	769.25	1/2 ⁺	0.0768	1/2 ⁺	E0+M1			0.87 10	K:L1:M1:N1=4.46 30:0.94 6:0.26 3:0.06 1.
769.59 14	<0.05	821.24	5/2 ⁺	51.7027	5/2 ⁺	E0			0.7 2	
769.870 16	1.47 15	769.937	3/2 ⁻	0.0768	1/2 ⁺	E1		0.00596 9		α=0.00596 9; α(K)=0.00485 7; α(L)=0.000836 12; α(M)=0.000199 3; α(N+..)=6.88×10 ⁻⁵ 10 α(N)=5.33×10 ⁻⁵ 8; α(O)=1.287×10 ⁻⁵ 18; α(P)=2.44×10 ⁻⁶ 4; α(Q)=1.83×10 ⁻⁷ 3
^x 775.300 15	0.23 3									
775.96 2	0.07 2	905.272	5/2 ⁺	129.3009	5/2 ⁺	E0+M1			0.18 3	K:L1=1.39 14:0.25 3
779.42 2	0.19 2	779.509	3/2 ⁺	0.0768	1/2 ⁺	M1		0.0759		α(K)=0.0607 9; α(L)=0.01148 16; α(M)=0.00276 4; α(N+..)=0.000963 14 α(N)=0.000744 11; α(O)=0.000181 3; α(P)=3.49×10 ⁻⁵ 5; α(Q)=2.79×10 ⁻⁶ 4
783.49 5	0.05 1	865.207	3/2 ⁺	81.739	7/2 ⁺					
^x 786.90 2	0.35 4					E2		0.01771		α(K)exp=0.012 4 α(K)=0.01275 18; α(L)=0.00370 6; α(M)=0.000935 13; α(N+..)=0.000324 5 α(N)=0.000252 4; α(O)=6.01×10 ⁻⁵ 9; α(P)=1.104×10 ⁻⁵ 16; α(Q)=5.94×10 ⁻⁷ 9
792.58 5	0.27 3	805.649	3/2 ⁻	13.0410	3/2 ⁺	E1,E2				
798.92 3	0.22 2	811.96	5/2 ⁻	13.0410	3/2 ⁺	E1,E2				
^x 803.4 4	0.11 3									
805.650 10	0.35 4	805.649	3/2 ⁻	0	7/2 ⁻	E2		0.01689		α(K)exp=0.011 4

²³⁴U(n,γ) E=th [1972Ri08](#),[1979A103](#) (continued)

$\gamma(^{235}\text{U})$ (continued)									
E_γ	I_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult.#@	δ	$\alpha^\dagger$	Comments
808.19 4	0.11 2	821.24	5/2 ⁺	13.0410	3/2 ⁺	M1		0.0690	$\alpha(\text{K})=0.01223$ 18; $\alpha(\text{L})=0.00348$ 5; $\alpha(\text{M})=0.000878$ 13; $\alpha(\text{N}+..)=0.000304$ 5 $\alpha(\text{N})=0.000237$ 4; $\alpha(\text{O})=5.65\times 10^{-5}$ 8; $\alpha(\text{P})=1.039\times 10^{-5}$ 15; $\alpha(\text{Q})=5.67\times 10^{-7}$ 8
813.510 17	0.57 6	865.207	3/2 ⁺	51.7027	5/2 ⁺	M1		0.0678	$\alpha(\text{K})=0.0552$ 8; $\alpha(\text{L})=0.01042$ 15; $\alpha(\text{M})=0.00251$ 4; $\alpha(\text{N}+..)=0.000874$ 13 $\alpha(\text{N})=0.000675$ 10; $\alpha(\text{O})=0.0001643$ 23; $\alpha(\text{P})=3.17\times 10^{-5}$ 5; $\alpha(\text{Q})=2.54\times 10^{-6}$ 4
821.3 2	0.12 3	821.24	5/2 ⁺	0.0768	1/2 ⁺				$\alpha(\text{K})=0.0542$ 8; $\alpha(\text{L})=0.01024$ 15; $\alpha(\text{M})=0.00246$ 4; $\alpha(\text{N}+..)=0.000859$ 12 $\alpha(\text{N})=0.000664$ 10; $\alpha(\text{O})=0.0001614$ 23; $\alpha(\text{P})=3.11\times 10^{-5}$ 5; $\alpha(\text{Q})=2.49\times 10^{-6}$ 4
^x 823.6 2	0.08 2								E_γ, I_γ : From 1972Ri08 ; γ ray not detected in 1979A103 . Possible doublet.
^x 828.82 4	0.15 2								
831.550 ^C 15	0.35 5	1057.24	7/2 ⁺	225.418	9/2 ⁺				$E_\gamma=832.3$ keV 1, $I_\gamma=0.19$ 4 (1972Ri08) (In better agreement with values from ²³⁹ Pu α DECAY.). I_γ : $I_\gamma=0.017$ from ²³⁹ Pu α decay suggests that this γ ray is a doublet in (n,γ).
840.26 9	0.19 2	891.94	5/2 ⁺	51.7027	5/2 ⁺	M1(+E0)		0.14 2	$\alpha(\text{K})\text{exp}=0.11$ 2
843.780 10	0.60 5	843.865	1/2 ⁺	0.0768	1/2 ⁺	M1(+E0)		0.09 1	$\alpha(\text{K})\text{exp}=0.075$ 10; $\alpha(\text{L1})\text{exp}=0.015$ 2
847.100 13	0.057 10	1321.401	5/2 ⁺	474.301	7/2 ⁺	M1		0.0609	$\alpha(\text{K})=0.0487$ 7; $\alpha(\text{L})=0.00919$ 13; $\alpha(\text{M})=0.00221$ 3; $\alpha(\text{N}+..)=0.000771$ 11 $\alpha(\text{N})=0.000596$ 9; $\alpha(\text{O})=0.0001448$ 21; $\alpha(\text{P})=2.79\times 10^{-5}$ 4; $\alpha(\text{Q})=2.24\times 10^{-6}$ 4
849.9 3	0.08 2	1242.9	3/2 ⁻	393.2138	3/2 ⁺				I_γ : reported (probably in error) as 0.57 in 1979A103 .
^x 852.41 3	0.25 3								
^x 856.7 3	0.06 2								
^x 863.67 2	0.17 2								
^x 878.75 5	0.21 2								
886.0 5	0.02 1	1057.24	7/2 ⁺	171.390	7/2 ⁺				
^x 889.50 4	0.32 4					M1+E2	0.6 3	0.043 8	$\alpha(\text{K})\text{exp}=0.031$ 7 $\alpha(\text{K})=0.034$ 6; $\alpha(\text{L})=0.0066$ 10; $\alpha(\text{M})=0.00161$ 24; $\alpha(\text{N}+..)=0.00056$ 8 $\alpha(\text{N})=0.00043$ 7; $\alpha(\text{O})=0.000105$ 16; $\alpha(\text{P})=2.0\times 10^{-5}$ 3; $\alpha(\text{Q})=1.6\times 10^{-6}$ 3
^x 892.3 2	0.12 3								
894.6 5	0.04 2	1321.401	5/2 ⁺	426.742	5/2 ⁺				
^x 901.1 3	0.06 2								
^x 905.0 2	0.12 3								
^x 911.8 2	0.10 3								

²³⁴U(n,γ) E=th **1972Ri08,1979Al03** (continued)

$\gamma(^{235}\text{U})$ (continued)									
E_γ ‡	I_γ &	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. #@	δ	$\alpha^\dagger$	Comments
916.78 8	0.07 2	968.447	3/2 ⁺	51.7027	5/2 ⁺				
^x 918.2 3	0.10 3								
927.8 2	0.12 3	1057.24	7/2 ⁺	129.3009	5/2 ⁺				
^x 931.1 3	0.05 2								
^x 938.9 8	0.07 4								
^x 941.2 7	0.08 4								
944.9 4	0.12 4	1116.21	(5/2 ⁻)	171.390	7/2 ⁺				
^x 948.50 3	0.70 7					M1		0.0451	$\alpha(\text{K})=0.0361$ 5; $\alpha(\text{L})=0.00679$ 10; $\alpha(\text{M})=0.001635$ 23; $\alpha(\text{N}+..)=0.000570$ 8 $\alpha(\text{N})=0.000440$ 7; $\alpha(\text{O})=0.0001071$ 15; $\alpha(\text{P})=2.07\times 10^{-5}$ 3; $\alpha(\text{Q})=1.655\times 10^{-6}$ 24
950.94 3	0.71 7	951.055	(1/2 ⁻ , 3/2 ⁻)	0.0768	1/2 ⁺	E1		0.00409 6	$\alpha=0.00409$ 6; $\alpha(\text{K})=0.00334$ 5; $\alpha(\text{L})=0.000565$ 8; $\alpha(\text{M})=0.0001342$ 19; $\alpha(\text{N}+..)=4.65\times 10^{-5}$ 7 $\alpha(\text{N})=3.60\times 10^{-5}$ 5; $\alpha(\text{O})=8.70\times 10^{-6}$ 13; $\alpha(\text{P})=1.659\times 10^{-6}$ 24; $\alpha(\text{Q})=1.274\times 10^{-7}$ 18
955.40 2	0.45 5	968.447	3/2 ⁺	13.0410	3/2 ⁺	M1+E2	0.6 2	0.036 5	$\alpha(\text{K})_{\text{exp}}=0.024$ 4 $\alpha(\text{K})=0.028$ 4; $\alpha(\text{L})=0.0055$ 6; $\alpha(\text{M})=0.00133$ 14; $\alpha(\text{N}+..)=0.00046$ 5 $\alpha(\text{N})=0.00036$ 4; $\alpha(\text{O})=8.7\times 10^{-5}$ 9; $\alpha(\text{P})=1.67\times 10^{-5}$ 18; $\alpha(\text{Q})=1.30\times 10^{-6}$ 16
^x 962.2 3	0.07 2								
^x 965.3 3	0.10 3								
968.37 2	0.40 4	968.447	3/2 ⁺	0.0768	1/2 ⁺	M1+E2	0.6 3	0.035 6	$\alpha(\text{K})_{\text{exp}}=0.025$ 4 $\alpha(\text{K})=0.027$ 5; $\alpha(\text{L})=0.0053$ 8; $\alpha(\text{M})=0.00128$ 19; $\alpha(\text{N}+..)=0.00045$ 7 $\alpha(\text{N})=0.00035$ 5; $\alpha(\text{O})=8.4\times 10^{-5}$ 12; $\alpha(\text{P})=1.61\times 10^{-5}$ 24; $\alpha(\text{Q})=1.26\times 10^{-6}$ 22
^x 969.82 4	0.26 3								
^x 977.51 3	0.19 2								
978.9 7	0.10 3	992.71	(1/2 ⁺)	13.0410	3/2 ⁺				
^x 981.2 5	0.12 3								
^x 983.2 3	0.10 3								
986.92 4	0.35 3	1116.21	(5/2 ⁻)	129.3009	5/2 ⁺	E1		0.00383 6	$\alpha=0.00383$ 6; $\alpha(\text{K})=0.00313$ 5; $\alpha(\text{L})=0.000529$ 8; $\alpha(\text{M})=0.0001255$ 18; $\alpha(\text{N}+..)=4.34\times 10^{-5}$ 6 $\alpha(\text{N})=3.36\times 10^{-5}$ 5; $\alpha(\text{O})=8.13\times 10^{-6}$ 12; $\alpha(\text{P})=1.552\times 10^{-6}$ 22; $\alpha(\text{Q})=1.196\times 10^{-7}$ 17
990.13 4	0.64 6	990.247	(1/2 ⁻ , 3/2 ⁻)	0.0768	1/2 ⁺				
992.64 3	0.29 3	992.71	(1/2 ⁺)	0.0768	1/2 ⁺				I_γ : γ -ray branching is larger than in ²³⁹ Pu α decay, which suggests that this γ ray is a doublet.
^x 995.40 4	0.40 6								
^x 1000.0 6	0.04 2								
1002.2 2	0.34 8	1002.35	1/2 ⁻ , 3/2 ⁻	0.0768	1/2 ⁺				
1005.8 5	0.04 2	1057.24	7/2 ⁺	51.7027	5/2 ⁺				

²³⁴U(n,γ) E=th **1972Ri08,1979A103** (continued)

γ(²³⁵U) (continued)

E_γ ‡	I_γ &	$E_i(\text{level})$	J_i^π	E_f	J_f^π	E_γ ‡	I_γ &	$E_i(\text{level})$	J_i^π	E_f	J_f^π
1009.2 3	0.10 3	1483.60	7/2 ⁺	474.301	7/2 ⁺	^x 1213.0 5	0.06 2				
^x 1015.9 2	0.25 5					^x 1220.6 2	0.20 4				
1019.8 2	0.18 4	1412.91	3/2 ⁺	393.2138	3/2 ⁺	^x 1224.4 3	0.18 5				
1024.7 6	0.06 2	1038.372	5/2 ⁺	13.0410	3/2 ⁺	^x 1226.6 5	0.14 4				
1028.1 9	0.02 2	1157.64	7/2 ⁺	129.3009	5/2 ⁺	1229.9 8	0.05 2	1242.9	3/2 ⁻	13.0410	3/2 ⁺
^x 1032.7 2	0.15 3					^x 1233.1 2	0.35 7				
^x 1045.0 2	0.33 7					^x 1238.1 6	0.05 2				
1047.5 2	0.26 6	1099.11	(3/2 ⁻)	51.7027	5/2 ⁺	1245.4 3	0.14 7	1296.91	3/2 ⁺	51.7027	5/2 ⁺
1057.3 2	0.17 4	1057.24	7/2 ⁺	0	7/2 ⁻	^x 1246.4 3	0.23 8				
1060.1 3	0.10 3	1072.91	1/2 ⁺	13.0410	3/2 ⁺	^x 1252.4 3	0.14 4				
1072.6 2	0.29 6	1072.91	1/2 ⁺	0.0768	1/2 ⁺	^x 1256.0 3	0.05 2				
^x 1078.2 6	0.07 2					^x 1265.4 2	0.17 4				
^x 1083.1 4	0.05 2					^x 1269.0 2	0.18 4				
1085.8 2	0.13 3	1099.11	(3/2 ⁻)	13.0410	3/2 ⁺	1272.3 5	0.08 2	1272.5	1/2 ⁻	0.0768	1/2 ⁺
1090.9 2	0.14 3	1142.632	3/2 ⁻	51.7027	5/2 ⁺	^x 1279.8 2	0.08 2				
^x 1095.6 2	0.18 4					1283.6 2	0.25 5	1412.91	3/2 ⁺	129.3009	5/2 ⁺
1099.0 3	0.10 3	1099.11	(3/2 ⁻)	0.0768	1/2 ⁺	^x 1286.1 7	0.04 1				
1102.9 7	0.03 2	1116.21	(5/2 ⁻)	13.0410	3/2 ⁺	^x 1289.8 4	0.05 2				
^x 1104.8 4	0.06 2					^x 1293.6 2	0.47 10				
1111.4 3	0.07 2	1157.64	7/2 ⁺	46.205	9/2 ⁻	1296.7 2	0.19 4	1296.91	3/2 ⁺	0.0768	1/2 ⁺
1115.6 3	0.07 2	1116.21	(5/2 ⁻)	0.0768	1/2 ⁺	^x 1301.3 2	0.28 6				
^x 1117.7 5	0.05 2					^x 1304.8 3	0.09 3				
^x 1124.4 3	0.07 2					1308.1 2	0.28 6	1321.401	5/2 ⁺	13.0410	3/2 ⁺
1142.2 2	0.58 12	1142.632	3/2 ⁻	0.0768	1/2 ⁺	^x 1318.2 3	0.11 4				
^x 1145.0 3	0.08 2					^x 1319.6 4	0.13 4				
1149.9 5	0.03 2	1321.401	5/2 ⁺	171.390	7/2 ⁺	^x 1324.3 3	0.09 3				
^x 1153.2 5	0.04 2					^x 1328.8 9	0.05 2				
1157.7 3	0.09 3	1157.64	7/2 ⁺	0	7/2 ⁻	^x 1331.4 3	0.17 4				
^x 1161.8 7	0.04 2					^x 1333.9 5	0.10 3				
^x 1164.8 3	0.16 4					^x 1337.1 2	0.25 5				
^x 1167.7 5	0.08 3					1344.5 3	0.11 3	1396.4	3/2 ⁻	51.7027	5/2 ⁺
^x 1170.6 11	0.03 2					^x 1349.7 5	0.07 2				
^x 1173.0 2	0.21 5					1354.4 3	0.19 4	1483.60	7/2 ⁺	129.3009	5/2 ⁺
^x 1177.0 8	0.07 3					^x 1357.9 2	0.42 9				
^x 1182.9 5	0.05 2					^x 1364.1 7	0.06 3				
^x 1185.5 2	0.27 6					^x 1367.1 6	0.12 4				
1190.2 ^a 6	0.03 ^a 1	1202.7	3/2 ⁻	13.0410	3/2 ⁺	1369.3 5	0.18 5	1382.54	1/2 ⁻	13.0410	3/2 ⁺
1190.2 ^a 6	0.03 ^a 1	1242.9	3/2 ⁻	51.7027	5/2 ⁺	^x 1372.0 10	0.08 3				
1194.2 2	0.24 5	1194.35	1/2 ⁻	0.0768	1/2 ⁺	^x 1377.4 4	0.09 3				
^x 1197.5 3	0.10 3					1382.5 2	0.40 8	1382.54	1/2 ⁻	0.0768	1/2 ⁺
1202.5 3	0.09 3	1202.7	3/2 ⁻	0.0768	1/2 ⁺	1386.9 4	0.11 3	1438.63	5/2 ⁺	51.7027	5/2 ⁺
1206.0 8	0.04 2	1288.196	5/2 ⁻	81.739	7/2 ⁺	^x 1391.3 3	0.28 6				
^x 1210.5 7	0.04 2					^x 1393.9 7	0.10 3				

$^{234}\text{U}(\text{n},\gamma) \text{ E=th}$ **1972Ri08,1979A103** (continued)

 $\gamma(^{235}\text{U})$ (continued)

E_γ ‡	I_γ &	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. #@	$\alpha^\dagger$	Comments
1397.2 7	0.10 4	1396.4	3/2 ⁻	0.0768	1/2 ⁺			
1399.9 3	0.23 6	1412.91	3/2 ⁺	13.0410	3/2 ⁺			
1412.7 2	0.24 5	1412.91	3/2 ⁺	0.0768	1/2 ⁺			
^x 1416.9 6	0.05 2							
^x 1422.9 4	0.08 3							
1425.6 3	0.19 5	1438.63	5/2 ⁺	13.0410	3/2 ⁺			
^x 1428.0 5	0.06 2							
^x 1435.9 3	0.09 3							
^x 1438.3 2	0.16 4							
^x 1442.9 4	0.04 2							
^x 1449.0 4	0.13 4							
^x 1450.9 4	0.07 3							
^x 1461.6 3	0.16 4							
^x 1464.3 3	0.18 4							
^x 1468.3 5	0.08 3							
^x 1470.4 8	0.04 2							
^x 1473.1 8	0.03 2							
^x 1477.9 3	0.18 4							
^x 1480.8 7	0.05 2							
^x 1484.3 7	0.06 2							
^x 1493.7 4	0.09 3							
^x 1496.2 5	0.08 3							
3090.9 3		5297.65	1/2 ⁺	2206.7	1/2 ⁻ , 3/2 ⁻	E1	0.001747 25	$\alpha=0.001747$ 25; $\alpha(\text{K})=0.000476$ 7; $\alpha(\text{L})=7.66\times 10^{-5}$ 11; $\alpha(\text{M})=1.81\times 10^{-5}$ 3; $\alpha(\text{N}+..)=0.001176$ 17 $\alpha(\text{N})=4.84\times 10^{-6}$ 7; $\alpha(\text{O})=1.178\times 10^{-6}$ 17; $\alpha(\text{P})=2.27\times 10^{-7}$ 4; $\alpha(\text{Q})=1.88\times 10^{-8}$ 3; $\alpha(\text{IPF})=0.001170$ 17 $\Gamma=0.70$ 21.
3158.6 8		5297.65	1/2 ⁺	2139.0	1/2 ⁻ , 3/2 ⁻	E1	0.001761 25	$\alpha=0.001761$ 25; $\alpha(\text{K})=0.000460$ 7; $\alpha(\text{L})=7.40\times 10^{-5}$ 11; $\alpha(\text{M})=1.744\times 10^{-5}$ 25; $\alpha(\text{N}+..)=0.001209$ $\alpha(\text{N})=4.68\times 10^{-6}$ 7; $\alpha(\text{O})=1.137\times 10^{-6}$ 16; $\alpha(\text{P})=2.20\times 10^{-7}$ 3; $\alpha(\text{Q})=1.82\times 10^{-8}$ 3; $\alpha(\text{IPF})=0.001203$ 17 $\Gamma=0.18$ 9.
3224.3 20		5297.65	1/2 ⁺	2073.3	1/2 ⁻ , 3/2 ⁻	E1	0.001776 25	$\alpha=0.001776$ 25; $\alpha(\text{K})=0.000445$ 7; $\alpha(\text{L})=7.16\times 10^{-5}$ 10; $\alpha(\text{M})=1.687\times 10^{-5}$ 24; $\alpha(\text{N}+..)=0.001242$ $\alpha(\text{N})=4.52\times 10^{-6}$ 7; $\alpha(\text{O})=1.100\times 10^{-6}$ 16; $\alpha(\text{P})=2.12\times 10^{-7}$ 3; $\alpha(\text{Q})=1.761\times 10^{-8}$ 25; $\alpha(\text{IPF})=0.001236$ 18 $\Gamma=0.17$ 8.
3274.3 12		5297.65	1/2 ⁺	2023.3	1/2 ⁻ , 3/2 ⁻	E1	0.00179 3	$\alpha=0.00179$ 3; $\alpha(\text{K})=0.000435$ 6; $\alpha(\text{L})=6.98\times 10^{-5}$ 10; $\alpha(\text{M})=1.646\times 10^{-5}$ 23; $\alpha(\text{N}+..)=0.001268$ 18 $\alpha(\text{N})=4.41\times 10^{-6}$ 7; $\alpha(\text{O})=1.073\times 10^{-6}$ 15; $\alpha(\text{P})=2.07\times 10^{-7}$ 3; $\alpha(\text{Q})=1.719\times 10^{-8}$ 24; $\alpha(\text{IPF})=0.001262$ 18 $\Gamma=0.42$ 12.
3284.0 15		5297.65	1/2 ⁺	2013.6	1/2 ⁻ , 3/2 ⁻	E1	0.00179 3	$\alpha=0.00179$ 3; $\alpha(\text{K})=0.000433$ 6; $\alpha(\text{L})=6.95\times 10^{-5}$ 10; $\alpha(\text{M})=1.638\times 10^{-5}$

²³⁴U(n,γ) E=th **1972Ri08,1979Al03** (continued)

<u>γ(²³⁵U) (continued)</u>							Comments
<u>E_γ[‡]</u>	<u>E_i(level)</u>	<u>J_i^π</u>	<u>E_f</u>	<u>J_f^π</u>	<u>Mult.#@</u>	<u>α[†]</u>	
							23; α(N+..)=0.001273 18 α(N)=4.39×10 ⁻⁶ 7; α(O)=1.068×10 ⁻⁶ 15; α(P)=2.06×10 ⁻⁷ 3; α(Q)=1.711×10 ⁻⁸ 24; α(IPF)=0.001268 18 Γ=0.16 7.
3294.0 13	5297.65	1/2 ⁺	2003.6	1/2 ⁻ ,3/2 ⁻	E1	0.00179 3	α=0.00179 3; α(K)=0.000430 6; α(L)=6.92×10 ⁻⁵ 10; α(M)=1.630×10 ⁻⁵ 23; α(N+..)=0.001278 18 α(N)=4.37×10 ⁻⁶ 7; α(O)=1.063×10 ⁻⁶ 15; α(P)=2.05×10 ⁻⁷ 3; α(Q)=1.703×10 ⁻⁸ 24; α(IPF)=0.001273 18 Γ=0.19 7.
3365.9 9	5297.65	1/2 ⁺	1931.7	1/2 ⁻ ,3/2 ⁻	E1	0.00181 3	α=0.00181 3; α(K)=0.000416 6; α(L)=6.68×10 ⁻⁵ 10; α(M)=1.574×10 ⁻⁵ 22; α(N+..)=0.001315 19 α(N)=4.22×10 ⁻⁶ 6; α(O)=1.027×10 ⁻⁶ 15; α(P)=1.98×10 ⁻⁷ 3; α(Q)=1.646×10 ⁻⁸ 23; α(IPF)=0.001309 19 Γ=0.19 7.
3386.5 7	5297.65	1/2 ⁺	1911.1	1/2 ⁻ ,3/2 ⁻	E1	0.00182 3	α=0.00182 3; α(K)=0.000412 6; α(L)=6.61×10 ⁻⁵ 10; α(M)=1.559×10 ⁻⁵ 22; α(N+..)=0.001325 19 α(N)=4.18×10 ⁻⁶ 6; α(O)=1.017×10 ⁻⁶ 15; α(P)=1.96×10 ⁻⁷ 3; α(Q)=1.630×10 ⁻⁸ 23; α(IPF)=0.001320 19 Γ=0.33 7.
3391.9 5	5297.65	1/2 ⁺	1905.7	1/2 ⁻ ,3/2 ⁻	E1	0.00182 3	α=0.00182 3; α(K)=0.000411 6; α(L)=6.60×10 ⁻⁵ 10; α(M)=1.555×10 ⁻⁵ 22; α(N+..)=0.001328 19 α(N)=4.17×10 ⁻⁶ 6; α(O)=1.014×10 ⁻⁶ 15; α(P)=1.96×10 ⁻⁷ 3; α(Q)=1.626×10 ⁻⁸ 23; α(IPF)=0.001322 19 Γ=0.25 7.
3407.2 4	5297.65	1/2 ⁺	1890.4	1/2 ⁻ ,3/2 ⁻	E1	0.00182 3	α=0.00182 3; α(K)=0.000408 6; α(L)=6.55×10 ⁻⁵ 10; α(M)=1.543×10 ⁻⁵ 22; α(N+..)=0.001335 19 α(N)=4.14×10 ⁻⁶ 6; α(O)=1.007×10 ⁻⁶ 14; α(P)=1.94×10 ⁻⁷ 3; α(Q)=1.615×10 ⁻⁸ 23; α(IPF)=0.001329 19 Γ=0.38 7.
3495.7 12	5297.65	1/2 ⁺	1801.9	1/2 ⁻ ,3/2 ⁻	E1	0.00184 3	α=0.00184 3; α(K)=0.000392 6; α(L)=6.29×10 ⁻⁵ 9; α(M)=1.481×10 ⁻⁵ 21; α(N+..)=0.001374 20 α(N)=3.97×10 ⁻⁶ 6; α(O)=9.66×10 ⁻⁷ 14; α(P)=1.87×10 ⁻⁷ 3; α(Q)=1.551×10 ⁻⁸ 22; α(IPF)=0.001369 20 Γ=0.56 11.
3524.6 10	5297.65	1/2 ⁺	1773.0	1/2 ⁻ ,3/2 ⁻	E1	0.00185 3	α=0.00185 3; α(K)=0.000387 6; α(L)=6.20×10 ⁻⁵ 9; α(M)=1.462×10 ⁻⁵ 21; α(N+..)=0.001386 20 α(N)=3.92×10 ⁻⁶ 6; α(O)=9.54×10 ⁻⁷ 14; α(P)=1.84×10 ⁻⁷ 3; α(Q)=1.531×10 ⁻⁸ 22; α(IPF)=0.001381 20 Γ=0.47 8.
3553.1 7	5297.65	1/2 ⁺	1744.5	1/2,3/2			Γ=0.07 4.
3590.2 7	5297.65	1/2 ⁺	1707.4	1/2 ⁻ ,3/2 ⁻	E1	0.00186 3	α=0.00186 3; α(K)=0.000376 6; α(L)=6.02×10 ⁻⁵ 9; α(M)=1.419×10 ⁻⁵ 20; α(N+..)=0.001415 20

$^{234}\text{U}(\text{n},\gamma) \text{E=th}$ **1972Ri08,1979Al03** (continued)

$\gamma(^{235}\text{U})$ (continued)								
$E_\gamma^{\ddagger}$	$I_\gamma^{\&}$	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. ^{#@}	$\alpha^\dagger$	Comments
								$\alpha(\text{N})=3.80\times 10^{-6}$ 6; $\alpha(\text{O})=9.26\times 10^{-7}$ 13; $\alpha(\text{P})=1.79\times 10^{-7}$ 3; $\alpha(\text{Q})=1.488\times 10^{-8}$ 21; $\alpha(\text{IPF})=0.001410$ 20 $\Gamma=0.29$ 9.
3608.0 5		5297.65	1/2 ⁺	1689.6	1/2 ⁻ , 3/2 ⁻	E1	0.00187 3	$\alpha=0.00187$ 3; $\alpha(\text{K})=0.000373$ 6; $\alpha(\text{L})=5.98\times 10^{-5}$ 9; $\alpha(\text{M})=1.408\times 10^{-5}$ 20; $\alpha(\text{N}+..)=0.001422$ 20 $\alpha(\text{N})=3.77\times 10^{-6}$ 6; $\alpha(\text{O})=9.19\times 10^{-7}$ 13; $\alpha(\text{P})=1.775\times 10^{-7}$ 25; $\alpha(\text{Q})=1.476\times 10^{-8}$ 21; $\alpha(\text{IPF})=0.001418$ 2 $\Gamma=0.11$ 6.
3675.0 13		5297.65	1/2 ⁺	1622.6	1/2 ⁻ , 3/2 ⁻	E1	0.00189 3	$\alpha=0.00189$ 3; $\alpha(\text{K})=0.000362$ 5; $\alpha(\text{L})=5.80\times 10^{-5}$ 9; $\alpha(\text{M})=1.367\times 10^{-5}$ 20; $\alpha(\text{N}+..)=0.001453$ 21 $\alpha(\text{N})=3.67\times 10^{-6}$ 6; $\alpha(\text{O})=8.92\times 10^{-7}$ 13; $\alpha(\text{P})=1.724\times 10^{-7}$ 25; $\alpha(\text{Q})=1.434\times 10^{-8}$ 20; $\alpha(\text{IPF})=0.001448$ 2 $\Gamma=0.47$ 8.
3683.6 7		5297.65	1/2 ⁺	1614.0	1/2 ⁻ , 3/2 ⁻	E1	0.00189 3	$\alpha=0.00189$ 3; $\alpha(\text{K})=0.000361$ 5; $\alpha(\text{L})=5.78\times 10^{-5}$ 8; $\alpha(\text{M})=1.362\times 10^{-5}$ 19; $\alpha(\text{N}+..)=0.001457$ 21 $\alpha(\text{N})=3.65\times 10^{-6}$ 6; $\alpha(\text{O})=8.89\times 10^{-7}$ 13; $\alpha(\text{P})=1.717\times 10^{-7}$ 24; $\alpha(\text{Q})=1.429\times 10^{-8}$ 20; $\alpha(\text{IPF})=0.001452$ 2 $\Gamma=0.32$ 13.
3725.2 5		5297.65	1/2 ⁺	1572.4	1/2 ⁻ , 3/2 ⁻	E1	0.00190 3	$\alpha=0.00190$ 3; $\alpha(\text{K})=0.000355$ 5; $\alpha(\text{L})=5.68\times 10^{-5}$ 8; $\alpha(\text{M})=1.338\times 10^{-5}$ 19; $\alpha(\text{N}+..)=0.001476$ 21 $\alpha(\text{N})=3.59\times 10^{-6}$ 5; $\alpha(\text{O})=8.73\times 10^{-7}$ 13; $\alpha(\text{P})=1.687\times 10^{-7}$ 24; $\alpha(\text{Q})=1.404\times 10^{-8}$ 20; $\alpha(\text{IPF})=0.001471$ 2 $\Gamma=0.39$ 11.
3743.8 10		5297.65	1/2 ⁺	1553.8	1/2, 3/2			$\Gamma=0.07$ 4.
3763.3 7		5297.65	1/2 ⁺	1534.3	1/2 ⁻ , 3/2 ⁻	E1	0.00191 3	$\alpha=0.00191$ 3; $\alpha(\text{K})=0.000349$ 5; $\alpha(\text{L})=5.59\times 10^{-5}$ 8; $\alpha(\text{M})=1.316\times 10^{-5}$ 19; $\alpha(\text{N}+..)=0.001493$ 21 $\alpha(\text{N})=3.53\times 10^{-6}$ 5; $\alpha(\text{O})=8.59\times 10^{-7}$ 12; $\alpha(\text{P})=1.660\times 10^{-7}$ 24; $\alpha(\text{Q})=1.382\times 10^{-8}$ 20; $\alpha(\text{IPF})=0.001489$ 2 $\Gamma=0.27$ 6.
3801.6 9	0.037 15	5297.65	1/2 ⁺	1496.0	(1/2 ⁺ , 3/2 ⁺)	(M1)	0.00291 4	$\alpha=0.00291$ 4; $\alpha(\text{K})=0.000860$ 12; $\alpha(\text{L})=0.0001588$ 23; $\alpha(\text{M})=3.81\times 10^{-5}$ 6; $\alpha(\text{N}+..)=0.00186$ 3 $\alpha(\text{N})=1.026\times 10^{-5}$ 15; $\alpha(\text{O})=2.50\times 10^{-6}$ 4; $\alpha(\text{P})=4.83\times 10^{-7}$ 7; $\alpha(\text{Q})=3.94\times 10^{-8}$ 6; $\alpha(\text{IPF})=0.00184$ 3 $\Gamma=0.03$ 3.
3809.5 9	0.078 27	5297.65	1/2 ⁺	1488.1	(1/2, 3/2)			
3813.7 9	0.093 25	5297.65	1/2 ⁺	1483.9	(1/2, 3/2)			
3834.2 5	0.12 3	5297.65	1/2 ⁺	1463.4	1/2 ⁻ , 3/2 ⁻	E1	0.00193 3	$\alpha=0.00193$ 3; $\alpha(\text{K})=0.000339$ 5; $\alpha(\text{L})=5.42\times 10^{-5}$ 8; $\alpha(\text{M})=1.278\times 10^{-5}$ 18; $\alpha(\text{N}+..)=0.001526$ 22 $\alpha(\text{N})=3.43\times 10^{-6}$ 5; $\alpha(\text{O})=8.34\times 10^{-7}$ 12; $\alpha(\text{P})=1.611\times 10^{-7}$ 23; $\alpha(\text{Q})=1.342\times 10^{-8}$ 19; $\alpha(\text{IPF})=0.001522$ 2 $\Gamma=0.12$ 3.
3848.7 3	0.31 7	5297.65	1/2 ⁺	1448.9	1/2 ⁻ , 3/2 ⁻	E1	0.00194 3	$\alpha=0.00194$ 3; $\alpha(\text{K})=0.000337$ 5; $\alpha(\text{L})=5.39\times 10^{-5}$ 8; $\alpha(\text{M})=1.270\times 10^{-5}$

²³⁴U(n,γ) E=th **1972Ri08,1979A103** (continued)

$\gamma(^{235}\text{U})$ (continued)								Comments
E_γ ‡	I_γ &	E_i (level)	J_i^π	E_f	J_f^π	Mult. # @	$\alpha^\dagger$	
3858.4 4	0.11 3	5297.65	1/2 ⁺	1439.2	3/2 ⁻ , 1/2 ⁻	E1	0.00194 3	18; $\alpha(\text{N}+..)=0.001533$ 22 $\alpha(\text{N})=3.40\times 10^{-6}$ 5; $\alpha(\text{O})=8.29\times 10^{-7}$ 12; $\alpha(\text{P})=1.602\times 10^{-7}$ 23; $\alpha(\text{Q})=1.334\times 10^{-8}$ 19; $\alpha(\text{IPF})=0.001528$ 2 $\Gamma=0.10$ 3. $\alpha=0.00194$ 3; $\alpha(\text{K})=0.000336$ 5; $\alpha(\text{L})=5.37\times 10^{-5}$ 8; $\alpha(\text{M})=1.265\times 10^{-5}$ 18; $\alpha(\text{N}+..)=0.001537$ 22 $\alpha(\text{N})=3.39\times 10^{-6}$ 5; $\alpha(\text{O})=8.25\times 10^{-7}$ 12; $\alpha(\text{P})=1.595\times 10^{-7}$ 23; $\alpha(\text{Q})=1.329\times 10^{-8}$ 19; $\alpha(\text{IPF})=0.001533$ 2 $\Gamma=0.17$ 4.
3884.5 2	0.64 13	5297.65	1/2 ⁺	1413.11	3/2 ⁻	E1	0.00195 3	$\alpha=0.00195$ 3; $\alpha(\text{K})=0.000332$ 5; $\alpha(\text{L})=5.31\times 10^{-5}$ 8; $\alpha(\text{M})=1.251\times 10^{-5}$ 18; $\alpha(\text{N}+..)=0.001549$ 22 $\alpha(\text{N})=3.36\times 10^{-6}$ 5; $\alpha(\text{O})=8.17\times 10^{-7}$ 12; $\alpha(\text{P})=1.578\times 10^{-7}$ 22; $\alpha(\text{Q})=1.315\times 10^{-8}$ 19; $\alpha(\text{IPF})=0.001545$ 2 $\Gamma=0.30$ 4. $\alpha=0.00289$ 4; $\alpha(\text{K})=0.000805$ 12; $\alpha(\text{L})=0.0001486$ 21; $\alpha(\text{M})=3.57\times 10^{-5}$ 5; $\alpha(\text{N}+..)=0.00190$ 3 $\alpha(\text{N})=9.61\times 10^{-6}$ 14; $\alpha(\text{O})=2.34\times 10^{-6}$ 4; $\alpha(\text{P})=4.52\times 10^{-7}$ 7; $\alpha(\text{Q})=3.69\times 10^{-8}$ 6; $\alpha(\text{IPF})=0.00189$ 3
3893.1 5	0.10 3	5297.65	1/2 ⁺	1404.5	(1/2 ⁺ , 3/2 ⁺)	(M1)	0.00289 4	$\alpha=0.00195$ 3; $\alpha(\text{K})=0.000329$ 5; $\alpha(\text{L})=5.26\times 10^{-5}$ 8; $\alpha(\text{M})=1.239\times 10^{-5}$ 18; $\alpha(\text{N}+..)=0.001560$ 22 $\alpha(\text{N})=3.32\times 10^{-6}$ 5; $\alpha(\text{O})=8.08\times 10^{-7}$ 12; $\alpha(\text{P})=1.562\times 10^{-7}$ 22; $\alpha(\text{Q})=1.302\times 10^{-8}$ 19; $\alpha(\text{IPF})=0.001556$ 2 $\Gamma=0.29$ 5. $\alpha=0.00196$ 3; $\alpha(\text{K})=0.000328$ 5; $\alpha(\text{L})=5.25\times 10^{-5}$ 8; $\alpha(\text{M})=1.236\times 10^{-5}$ 18; $\alpha(\text{N}+..)=0.001563$ 22 $\alpha(\text{N})=3.31\times 10^{-6}$ 5; $\alpha(\text{O})=8.07\times 10^{-7}$ 12; $\alpha(\text{P})=1.559\times 10^{-7}$ 22; $\alpha(\text{Q})=1.299\times 10^{-8}$ 19; $\alpha(\text{IPF})=0.001558$ 2 $\Gamma=0.13$ 3.
3909.3 4	0.21 5	5297.65	1/2 ⁺	1388.3	1/2 ⁻ , 3/2 ⁻	E1	0.00195 3	$\alpha=0.00196$ 3; $\alpha(\text{K})=0.000326$ 5; $\alpha(\text{L})=5.22\times 10^{-5}$ 8; $\alpha(\text{M})=1.229\times 10^{-5}$ 18; $\alpha(\text{N}+..)=0.001569$ 22 $\alpha(\text{N})=3.29\times 10^{-6}$ 5; $\alpha(\text{O})=8.02\times 10^{-7}$ 12; $\alpha(\text{P})=1.550\times 10^{-7}$ 22; $\alpha(\text{Q})=1.292\times 10^{-8}$ 18; $\alpha(\text{IPF})=0.001564$ 2 $\Gamma=0.17$ 3.
3915.1 3	0.55 11	5297.65	1/2 ⁺	1382.54	1/2 ⁻	E1	0.00196 3	$\alpha=0.00196$ 3; $\alpha(\text{K})=0.000325$ 5; $\alpha(\text{L})=5.20\times 10^{-5}$ 8; $\alpha(\text{M})=1.224\times 10^{-5}$ 18; $\alpha(\text{N}+..)=0.001573$ 22 $\alpha(\text{N})=3.28\times 10^{-6}$ 5; $\alpha(\text{O})=7.99\times 10^{-7}$ 12; $\alpha(\text{P})=1.544\times 10^{-7}$ 22; $\alpha(\text{Q})=1.287\times 10^{-8}$ 18; $\alpha(\text{IPF})=0.001569$ 2 $\Gamma=0.15$ 3.
3928.9 8		5297.65	1/2 ⁺	1368.7	1/2 ⁻ , 3/2 ⁻	E1	0.00196 3	$\alpha=0.00197$ 3; $\alpha(\text{K})=0.000321$ 5; $\alpha(\text{L})=5.14\times 10^{-5}$ 8; $\alpha(\text{M})=1.210\times 10^{-5}$ 17; $\alpha(\text{N}+..)=0.001585$ 23 $\alpha(\text{N})=3.24\times 10^{-6}$ 5; $\alpha(\text{O})=7.90\times 10^{-7}$ 11; $\alpha(\text{P})=1.527\times 10^{-7}$ 22; $\alpha(\text{Q})=1.273\times 10^{-8}$ 18; $\alpha(\text{IPF})=0.001581$ 2 $\Gamma=0.08$ 2.
3939.0 3	0.21	5297.65	1/2 ⁺	1358.6	1/2 ⁻ , 3/2 ⁻	E1	0.00196 3	
3966.9 3		5297.65	1/2 ⁺	1330.7	1/2 ⁻ , 3/2 ⁻	E1	0.00197 3	

²³⁴U(n,γ) E=th **1972Ri08,1979A103** (continued)

γ(²³⁵U) (continued)

$E_\gamma^\ddagger$	$I_\gamma^\&$	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. #@	$\alpha^\dagger$	Comments
3981.1 4	0.019 11	5297.65	1/2 ⁺	1316.5	1/2 ⁻ , 3/2 ⁻	E1	0.00197 3	$\alpha=0.00197$ 3; $\alpha(K)=0.000319$ 5; $\alpha(L)=5.11\times 10^{-5}$ 8; $\alpha(M)=1.203\times 10^{-5}$ 17; $\alpha(N+..)=0.001591$ 23 $\alpha(N)=3.23\times 10^{-6}$ 5; $\alpha(O)=7.85\times 10^{-7}$ 11; $\alpha(P)=1.518\times 10^{-7}$ 22; $\alpha(Q)=1.266\times 10^{-8}$ 18; $\alpha(IPF)=0.001587$ 2 $\Gamma=0.18$ 10.
3995.2 4	0.16 4	5297.65	1/2 ⁺	1302.4	1/2 ⁻ , 3/2 ⁻	E1	0.00198 3	$\alpha=0.00198$ 3; $\alpha(K)=0.000318$ 5; $\alpha(L)=5.08\times 10^{-5}$ 8; $\alpha(M)=1.197\times 10^{-5}$ 17; $\alpha(N+..)=0.001597$ 23 $\alpha(N)=3.21\times 10^{-6}$ 5; $\alpha(O)=7.81\times 10^{-7}$ 11; $\alpha(P)=1.509\times 10^{-7}$ 22; $\alpha(Q)=1.259\times 10^{-8}$ 18; $\alpha(IPF)=0.001593$ 2 $\Gamma=0.31$ 5.
4000.5 4	0.16 4	5297.65	1/2 ⁺	1296.91	3/2 ⁺	E1	0.00199 3	$\Gamma=0.05$ 2.
4025.0 3	0.31 7	5297.65	1/2 ⁺	1272.5	1/2 ⁻			$\alpha=0.00199$ 3; $\alpha(K)=0.000314$ 5; $\alpha(L)=5.02\times 10^{-5}$ 7; $\alpha(M)=1.183\times 10^{-5}$ 17; $\alpha(N+..)=0.001609$ 23 $\alpha(N)=3.17\times 10^{-6}$ 5; $\alpha(O)=7.72\times 10^{-7}$ 11; $\alpha(P)=1.492\times 10^{-7}$ 21; $\alpha(Q)=1.244\times 10^{-8}$ 18; $\alpha(IPF)=0.001605$ 2 $\Gamma=0.16$ 5.
4031.8 3	0.11 3	5297.65	1/2 ⁺	1265.8	1/2 ⁻ , 3/2 ⁻	E1	0.00199 3	$\alpha=0.00199$ 3; $\alpha(K)=0.000313$ 5; $\alpha(L)=5.01\times 10^{-5}$ 7; $\alpha(M)=1.180\times 10^{-5}$ 17; $\alpha(N+..)=0.001612$ 23 $\alpha(N)=3.16\times 10^{-6}$ 5; $\alpha(O)=7.70\times 10^{-7}$ 11; $\alpha(P)=1.488\times 10^{-7}$ 21; $\alpha(Q)=1.241\times 10^{-8}$ 18; $\alpha(IPF)=0.001608$ 2 $\Gamma=0.13$ 3.
4045.8 7		5297.65	1/2 ⁺	1251.8	1/2 ⁺ , 3/2 ⁺	M1	0.00287 4	$\alpha=0.00287$ 4; $\alpha(K)=0.000724$ 11; $\alpha(L)=0.0001335$ 19; $\alpha(M)=3.21\times 10^{-5}$ 5; $\alpha(N+..)=0.00198$ 3 $\alpha(N)=8.63\times 10^{-6}$ 12; $\alpha(O)=2.10\times 10^{-6}$ 3; $\alpha(P)=4.06\times 10^{-7}$ 6; $\alpha(Q)=3.32\times 10^{-8}$ 5; $\alpha(IPF)=0.00197$ 3 $\Gamma=0.02$ 2.
4071.7 7	0.046 13	5297.65	1/2 ⁺	1225.9	1/2 ⁻ , 3/2 ⁻	E1	0.00200 3	$\alpha=0.00200$ 3; $\alpha(K)=0.000308$ 5; $\alpha(L)=4.93\times 10^{-5}$ 7; $\alpha(M)=1.161\times 10^{-5}$ 17; $\alpha(N+..)=0.001628$ 23 $\alpha(N)=3.11\times 10^{-6}$ 5; $\alpha(O)=7.58\times 10^{-7}$ 11; $\alpha(P)=1.465\times 10^{-7}$ 21; $\alpha(Q)=1.222\times 10^{-8}$ 18; $\alpha(IPF)=0.001624$ 2 $\Gamma=0.15$ 3.
4103.1 3	0.58 12	5297.65	1/2 ⁺	1194.35	1/2 ⁻	E1	0.00201 3	$\alpha=0.00201$ 3; $\alpha(K)=0.000305$ 5; $\alpha(L)=4.87\times 10^{-5}$ 7; $\alpha(M)=1.147\times 10^{-5}$ 16; $\alpha(N+..)=0.001641$ 23 $\alpha(N)=3.08\times 10^{-6}$ 5; $\alpha(O)=7.49\times 10^{-7}$ 11; $\alpha(P)=1.447\times 10^{-7}$ 21; $\alpha(Q)=1.208\times 10^{-8}$ 17; $\alpha(IPF)=0.001637$ 2 $\Gamma=0.14$ 3.
4112.0 4	0.09 2	5297.65	1/2 ⁺	1185.6	1/2 ⁻ , 3/2 ⁻	E1	0.00201 3	$\alpha=0.00201$ 3; $\alpha(K)=0.000304$ 5; $\alpha(L)=4.85\times 10^{-5}$ 7; $\alpha(M)=1.143\times 10^{-5}$ 16; $\alpha(N+..)=0.001644$ 23 $\alpha(N)=3.06\times 10^{-6}$ 5; $\alpha(O)=7.46\times 10^{-7}$ 11; $\alpha(P)=1.442\times 10^{-7}$ 21; $\alpha(Q)=1.203\times 10^{-8}$ 17; $\alpha(IPF)=0.001640$ 2 $\Gamma=0.13$ 3.
4154.8 3	0.95 20	5297.65	1/2 ⁺	1142.632	3/2 ⁻	E1	0.00202 3	$\alpha=0.00202$ 3; $\alpha(K)=0.000299$ 5; $\alpha(L)=4.78\times 10^{-5}$ 7; $\alpha(M)=1.125\times 10^{-5}$ 16;

²³⁴U(n,γ) E=th [1972Ri08,1979A103](#) (continued)

γ(²³⁵U) (continued)

<u>E_γ[†]</u>	<u>I_γ^{&}</u>	<u>E_i(level)</u>	<u>J_i^π</u>	<u>E_f</u>	<u>J_f^π</u>	<u>Mult. #[@]</u>	<u>α[†]</u>	<u>Comments</u>
4168.3 3	0.37 7	5297.65	1/2 ⁺	1129.3	1/2 ⁻ , 3/2 ⁻	E1	0.00202 3	α(N+..)=0.001662 24 α(N)=3.02×10 ⁻⁶ 5; α(O)=7.34×10 ⁻⁷ 11; α(P)=1.419×10 ⁻⁷ 20; α(Q)=1.184×10 ⁻⁸ 17; α(IPF)=0.001658 2 Γ=0.21 4. α=0.00202 3; α(K)=0.000297 5; α(L)=4.75×10 ⁻⁵ 7; α(M)=1.119×10 ⁻⁵ 16; α(N+..)=0.001667 24 α(N)=3.00×10 ⁻⁶ 5; α(O)=7.30×10 ⁻⁷ 11; α(P)=1.411×10 ⁻⁷ 20; α(Q)=1.178×10 ⁻⁸ 17; α(IPF)=0.001663 2 Γ=0.33 3. Γ=0.05 3.
4191.6 7	0.018 10	5297.65	1/2 ⁺	1106.0	1/2, 3/2	E1	0.00203 3	α=0.00203 3; α(K)=0.000294 5; α(L)=4.70×10 ⁻⁵ 7; α(M)=1.106×10 ⁻⁵ 16; α(N+..)=0.001679 24 α(N)=2.97×10 ⁻⁶ 5; α(O)=7.22×10 ⁻⁷ 11; α(P)=1.396×10 ⁻⁷ 20; α(Q)=1.165×10 ⁻⁸ 17; α(IPF)=0.001675 2 Γ=0.14 3. Γ=0.024 7. Γ=0.071 14. Γ=0.07 2.
4197.8 4	0.046 13	5297.65	1/2 ⁺	1099.11	(3/2 ⁻)			α=0.00205 3; α(K)=0.000287 4; α(L)=4.59×10 ⁻⁵ 7; α(M)=1.080×10 ⁻⁵ 16; α(N+..)=0.001706 24 α(N)=2.90×10 ⁻⁶ 4; α(O)=7.05×10 ⁻⁷ 10; α(P)=1.362×10 ⁻⁷ 19; α(Q)=1.138×10 ⁻⁸ 16; α(IPF)=0.001702 2 Γ=0.27 3.
4214.7 7	0.033 10	5297.65	1/2 ⁺	1082.9	1/2, 3/2	E1	0.00205 3	α=0.00206 3; α(K)=0.000285 4; α(L)=4.54×10 ⁻⁵ 7; α(M)=1.070×10 ⁻⁵ 15; α(N+..)=0.001716 24 α(N)=2.87×10 ⁻⁶ 4; α(O)=6.99×10 ⁻⁷ 10; α(P)=1.350×10 ⁻⁷ 19; α(Q)=1.128×10 ⁻⁸ 16; α(IPF)=0.001712 2 Γ=0.10 3.
4223.9 5	0.10 2	5297.65	1/2 ⁺	1072.91	1/2 ⁺			α=0.00206 3; α(K)=0.000284 4; α(L)=4.54×10 ⁻⁵ 7; α(M)=1.069×10 ⁻⁵ 15; α(N+..)=0.001717 24 α(N)=2.87×10 ⁻⁶ 4; α(O)=6.98×10 ⁻⁷ 10; α(P)=1.349×10 ⁻⁷ 19; α(Q)=1.127×10 ⁻⁸ 16; α(IPF)=0.001714 2 Γ=0.08 2.
4252.5 15		5297.65	1/2 ⁺	1045.1	1/2, 3/2			α=0.00206 3; α(K)=0.000284 4; α(L)=4.53×10 ⁻⁵ 7; α(M)=1.067×10 ⁻⁵ 15; α(N+..)=0.001719 24 α(N)=2.86×10 ⁻⁶ 4; α(O)=6.96×10 ⁻⁷ 10; α(P)=1.346×10 ⁻⁷ 19; α(Q)=1.125×10 ⁻⁸ 16; α(IPF)=0.001716 2 Γ=0.10 3.
4262.7 3	0.15 4	5297.65	1/2 ⁺	1034.9	1/2 ⁻ , 3/2 ⁻			α=0.00206 3; α(K)=0.000283 4; α(L)=4.51×10 ⁻⁵ 7; α(M)=1.062×10 ⁻⁵ 15; α(N+..)=0.001724 25
4286.9 19	0.10 4	5297.65	1/2 ⁺	1010.7	1/2 ⁻ , 3/2 ⁻	E1	0.00206 3	
4290.1 7		5297.65	1/2 ⁺	1007.5	1/2 ⁻ , 3/2 ⁻	E1	0.00206 3	
4295.1 3	0.37 8	5297.65	1/2 ⁺	1002.35	1/2 ⁻ , 3/2 ⁻	E1	0.00206 3	
4305.2 3	0.021 5	5297.65	1/2 ⁺	992.71	(1/2 ⁺)	E1	0.00206 3	
4307.1 4		5297.65	1/2 ⁺	990.247	(1/2 ⁻ , 3/2 ⁻)			

$^{234}\text{U}(\text{n},\gamma) \text{E=th}$ **1972Ri08,1979Al03** (continued) $\gamma(^{235}\text{U})$ (continued)

E_γ [†]	I_γ ^{&}	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. ^{#@}	α [†]	Comments
								$\alpha(\text{N})=2.85\times 10^{-6}$ 4; $\alpha(\text{O})=6.93\times 10^{-7}$ 10; $\alpha(\text{P})=1.340\times 10^{-7}$ 19; $\alpha(\text{Q})=1.120\times 10^{-8}$ 16; $\alpha(\text{IPF})=0.001721$ 2 $\Gamma=0.21$ 3. $\Gamma=0.05$ 2. $\Gamma=0.06$ 3. $\Gamma=0.07$ 2. $\Gamma=0.14$ 3.
4319.9 10		5297.65	1/2 ⁺	977.7	1/2,3/2			
4327.6 13		5297.65	1/2 ⁺	968.447	3/2 ⁺			
4338.9 10		5297.65	1/2 ⁺	958.7	1/2,3/2			
4347.4 12		5297.65	1/2 ⁺	951.055	(1/2 ⁻ ,3/2 ⁻)			
4405.6 3	0.10 2	5297.65	1/2 ⁺	891.94	5/2 ⁺	M1,E2	0.0024 5	$\alpha=0.0024$ 5; $\alpha(\text{K})=0.000578$ 11; $\alpha(\text{L})=0.000103$ 3; $\alpha(\text{M})=2.45\times 10^{-5}$ 9; $\alpha(\text{N}+..)=0.0017$ 5 $\alpha(\text{N})=6.60\times 10^{-6}$ 24; $\alpha(\text{O})=1.61\times 10^{-6}$ 6; $\alpha(\text{P})=3.10\times 10^{-7}$ 11; $\alpha(\text{Q})=2.54\times 10^{-8}$ 9; $\alpha(\text{IPF})=0.0017$ 5 $\Gamma=0.022$ 12.
4432.6 3	0.068	5297.65	1/2 ⁺	865.207	3/2 ⁺	M1	0.00285 4	$\alpha=0.00285$ 4; $\alpha(\text{K})=0.000562$ 8; $\alpha(\text{L})=0.0001035$ 15; $\alpha(\text{M})=2.49\times 10^{-5}$ 4; $\alpha(\text{N}+..)=0.00216$ 3 $\alpha(\text{N})=6.69\times 10^{-6}$ 10; $\alpha(\text{O})=1.630\times 10^{-6}$ 23; $\alpha(\text{P})=3.15\times 10^{-7}$ 5; $\alpha(\text{Q})=2.57\times 10^{-8}$ 4; $\alpha(\text{IPF})=0.00215$ 3 $\Gamma=0.016$ 13.
4453.7 13		5297.65	1/2 ⁺	843.865	1/2 ⁺	E1,M1	0.0025 4	$\alpha=0.0025$ 4; $\alpha(\text{K})=0.00041$ 15; $\alpha(\text{L})=7.\text{E}-5$ 3; $\alpha(\text{M})=1.7\times 10^{-5}$ 8; $\alpha(\text{N}+..)=0.00198$ 20 $\alpha(\text{N})=4.7\times 10^{-6}$ 20; $\alpha(\text{O})=1.1\times 10^{-6}$ 5; $\alpha(\text{P})=2.2\times 10^{-7}$ 10; $\alpha(\text{Q})=1.8\times 10^{-8}$ 8; $\alpha(\text{IPF})=0.00197$ 20 $\Gamma=0.08$ 3. $\Gamma=0.04$ 2.
4462.6 6		5297.65	1/2 ⁺	835.0	1/2,3/2			
4492.3	0.09 2	5297.65	1/2 ⁺	805.649	3/2 ⁻	E1	0.00211 3	$\alpha=0.00211$ 3; $\alpha(\text{K})=0.000265$ 4; $\alpha(\text{L})=4.22\times 10^{-5}$ 6; $\alpha(\text{M})=9.94\times 10^{-6}$ 14; $\alpha(\text{N}+..)=0.00179$ 3 $\alpha(\text{N})=2.67\times 10^{-6}$ 4; $\alpha(\text{O})=6.49\times 10^{-7}$ 9; $\alpha(\text{P})=1.254\times 10^{-7}$ 18; $\alpha(\text{Q})=1.049\times 10^{-8}$ 15; $\alpha(\text{IPF})=0.00179$ 3 $\Gamma=0.16$ 4. $\Gamma=0.047$ 13.
4517.1 5	0.037 12	5297.65	1/2 ⁺	779.509	3/2 ⁺			
4527.8 3	0.89 18	5297.65	1/2 ⁺	769.937	3/2 ⁻	E1	0.00212 3	$\alpha=0.00212$ 3; $\alpha(\text{K})=0.000261$ 4; $\alpha(\text{L})=4.17\times 10^{-5}$ 6; $\alpha(\text{M})=9.82\times 10^{-6}$ 14; $\alpha(\text{N}+..)=0.00181$ 3 $\alpha(\text{N})=2.63\times 10^{-6}$ 4; $\alpha(\text{O})=6.41\times 10^{-7}$ 9; $\alpha(\text{P})=1.239\times 10^{-7}$ 18; $\alpha(\text{Q})=1.036\times 10^{-8}$ 15; $\alpha(\text{IPF})=0.00180$ 3 $\Gamma=0.36$ 4.
4536.9 3	0.11 3	5297.65	1/2 ⁺	761.018	1/2 ⁻ ,3/2 ⁻	E1	0.00212 3	I_γ : probably a doublet from ^{235}U level scheme. $\alpha=0.00212$ 3; $\alpha(\text{K})=0.000261$ 4; $\alpha(\text{L})=4.16\times 10^{-5}$ 6; $\alpha(\text{M})=9.79\times 10^{-6}$ 14; $\alpha(\text{N}+..)=0.00181$ 3 $\alpha(\text{N})=2.62\times 10^{-6}$ 4; $\alpha(\text{O})=6.39\times 10^{-7}$ 9; $\alpha(\text{P})=1.235\times 10^{-7}$ 18; $\alpha(\text{Q})=1.033\times 10^{-8}$ 15; $\alpha(\text{IPF})=0.00181$ 3 $\Gamma=0.15$ 3.
4594.0 2	0.77 16	5297.65	1/2 ⁺	703.757	3/2 ⁻	E1	0.00214 3	$\alpha=0.00214$ 3; $\alpha(\text{K})=0.000256$ 4; $\alpha(\text{L})=4.08\times 10^{-5}$ 6; $\alpha(\text{M})=9.60\times 10^{-6}$ 14; $\alpha(\text{N}+..)=0.00183$ 3

²³⁴U(n,γ) E=th **1972Ri08,1979A103** (continued)

$\gamma(^{235}\text{U})$ (continued)								Comments
$E_\gamma^\ddagger$	$I_\gamma^\&$	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. # [@]	$\alpha^\dagger$	
4639.3 4	0.027 8	5297.65	1/2 ⁺	658.938	1/2 ⁻	E1	0.00215 3	$\alpha(\text{N})=2.57\times 10^{-6}$ 4; $\alpha(\text{O})=6.26\times 10^{-7}$ 9; $\alpha(\text{P})=1.211\times 10^{-7}$ 17; $\alpha(\text{Q})=1.014\times 10^{-8}$ 15; $\alpha(\text{IPF})=0.00183$ 3 $\Gamma=0.25$ 3. $\alpha=0.00215$ 3; $\alpha(\text{K})=0.000252$ 4; $\alpha(\text{L})=4.01\times 10^{-5}$ 6; $\alpha(\text{M})=9.45\times 10^{-6}$ 14; $\alpha(\text{N}+..)=0.00184$ 3 $\alpha(\text{N})=2.53\times 10^{-6}$ 4; $\alpha(\text{O})=6.17\times 10^{-7}$ 9; $\alpha(\text{P})=1.193\times 10^{-7}$ 17; $\alpha(\text{Q})=9.98\times 10^{-9}$ 14; $\alpha(\text{IPF})=0.00184$ 3 $\Gamma=0.26$ 4.
4659.7 12	0.018 6	5297.65	1/2 ⁺	637.791	3/2 ⁻	E1	0.00215 3	$\alpha=0.00215$ 3; $\alpha(\text{K})=0.000250$ 4; $\alpha(\text{L})=3.99\times 10^{-5}$ 6; $\alpha(\text{M})=9.38\times 10^{-6}$ 14; $\alpha(\text{N}+..)=0.00185$ 3 $\alpha(\text{N})=2.52\times 10^{-6}$ 4; $\alpha(\text{O})=6.13\times 10^{-7}$ 9; $\alpha(\text{P})=1.185\times 10^{-7}$ 17; $\alpha(\text{Q})=9.92\times 10^{-9}$ 14; $\alpha(\text{IPF})=0.00185$ 3 $\Gamma=0.10$ 2.
4904.4 7	0.020 10	5297.65	1/2 ⁺	393.2138	3/2 ⁺	M1,E2	0.0024 5	$\alpha=0.0024$ 5; $\alpha(\text{K})=0.00045$ 3; $\alpha(\text{L})=7.97\times 10^{-5}$ 20; $\alpha(\text{M})=1.90\times 10^{-5}$ 4; $\alpha(\text{N}+..)=0.0019$ 5 $\alpha(\text{N})=5.12\times 10^{-6}$ 10; $\alpha(\text{O})=1.246\times 10^{-6}$ 24; $\alpha(\text{P})=2.41\times 10^{-7}$ 5; $\alpha(\text{Q})=1.98\times 10^{-8}$ 5; $\alpha(\text{IPF})=0.0019$ 5 $\Gamma=0.009$ 4.
5245.9 2	0.078 18	5297.65	1/2 ⁺	51.7027	5/2 ⁺	M1,E2	0.0025 5	$\alpha=0.0025$ 5; $\alpha(\text{K})=0.00039$ 4; $\alpha(\text{L})=6.8\times 10^{-5}$ 4; $\alpha(\text{M})=1.63\times 10^{-5}$ 8; $\alpha(\text{N}+..)=0.0020$ 5 $\alpha(\text{N})=4.37\times 10^{-6}$ 20; $\alpha(\text{O})=1.06\times 10^{-6}$ 5; $\alpha(\text{P})=2.06\times 10^{-7}$ 10; $\alpha(\text{Q})=1.69\times 10^{-8}$ 9; $\alpha(\text{IPF})=0.0020$ 5 $\Gamma=0.011$ 10.
5284.6 3	0.033 9	5297.65	1/2 ⁺	13.0410	3/2 ⁺	M1,E2	0.0025 5	$\alpha=0.0025$ 5; $\alpha(\text{K})=0.00038$ 4; $\alpha(\text{L})=6.7\times 10^{-5}$ 4; $\alpha(\text{M})=1.60\times 10^{-5}$ 8; $\alpha(\text{N}+..)=0.0020$ 5 $\alpha(\text{N})=4.30\times 10^{-6}$ 21; $\alpha(\text{O})=1.05\times 10^{-6}$ 5; $\alpha(\text{P})=2.02\times 10^{-7}$ 10; $\alpha(\text{Q})=1.67\times 10^{-8}$ 9; $\alpha(\text{IPF})=0.0020$ 5 $\Gamma=0.005$ 3.
5297.6 3	0.018 6	5297.65	1/2 ⁺	0.0768	1/2 ⁺	M1,E2	0.0025 5	$\alpha=0.0025$ 5; $\alpha(\text{K})=0.00038$ 4; $\alpha(\text{L})=6.7\times 10^{-5}$ 4; $\alpha(\text{M})=1.59\times 10^{-5}$ 8; $\alpha(\text{N}+..)=0.0020$ 5 $\alpha(\text{N})=4.27\times 10^{-6}$ 21; $\alpha(\text{O})=1.04\times 10^{-6}$ 5; $\alpha(\text{P})=2.01\times 10^{-7}$ 10; $\alpha(\text{Q})=1.66\times 10^{-8}$ 9; $\alpha(\text{IPF})=0.0020$ 5 $\Gamma=0.011$ 11.

[†] Additional information 2.

[‡] Low energy (secondary) γ rays are from **1972Ri08,1979A103**. E_γ with accuracies better than 0.1 keV are from cryst results of **1979A103**. High energy (primary) γ rays are from thermal capture results of **1972Ri08**, and from capture at resonances of 5.2, 31 and 49 eV (**1977Ko15**).

[#] Multipolarities of primary γ-ray transitions are from average radiation widths (**1977Ko15**).

[@] From ce data (**1979A103**).

[&] Intensity per 100 neutron captures.

²³⁴U(n,γ) E=th [1972Ri08,1979Al03](#) (continued)

γ(²³⁵U) (continued)

- ^a Multiply placed with undivided intensity.
^b Multiply placed with intensity suitably divided.
^c Placement of transition in the level scheme is uncertain.
^x γ ray not placed in level scheme.

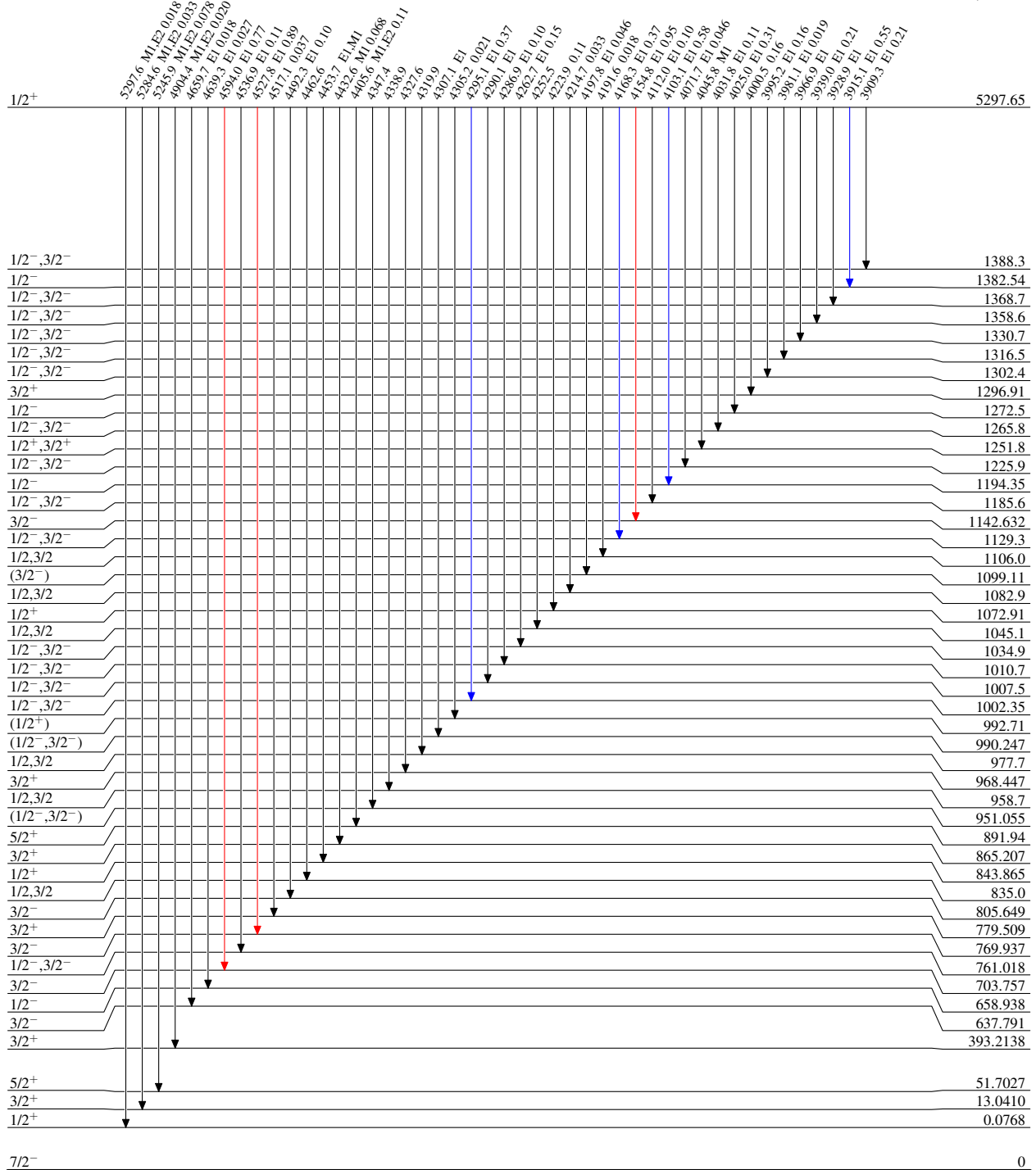
$^{234}\text{U}(\text{n},\gamma) \text{E=th}$ 1972Ri08,1979Al03

Legend

Level Scheme

Intensities: I_γ per 100 neutron captures

$I_\gamma < 2\% \times I_\gamma^{\text{max}}$
 $I_\gamma < 10\% \times I_\gamma^{\text{max}}$
 $I_\gamma > 10\% \times I_\gamma^{\text{max}}$



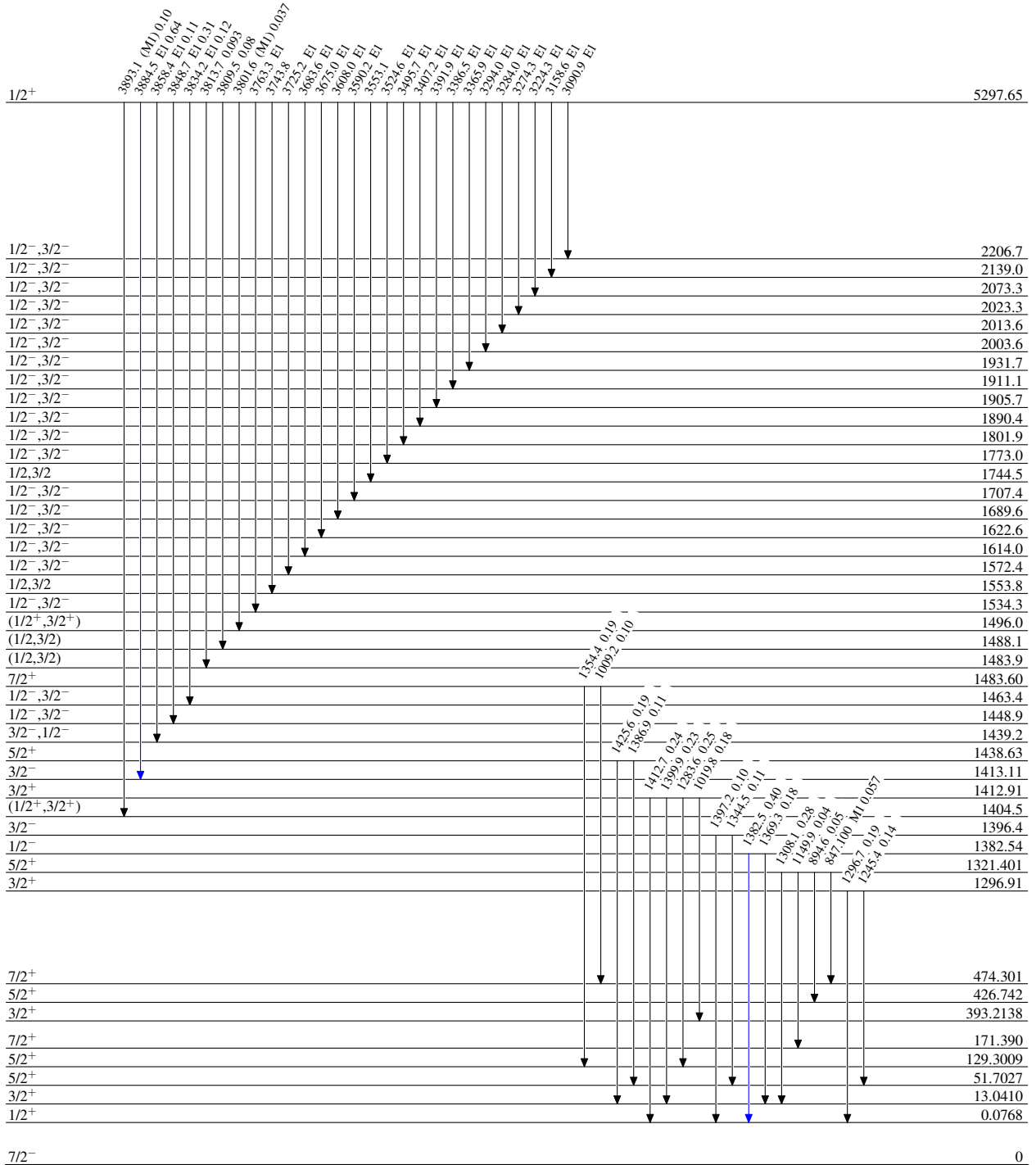
$^{234}\text{U}(\text{n},\gamma) \text{E=th}$ 1972Ri08,1979Al03

Level Scheme (continued)

Intensities: I_γ per 100 neutron captures

Legend

- $\longrightarrow$ $I_\gamma < 2\% \times I_\gamma^{\text{max}}$
 $\longrightarrow$ $I_\gamma < 10\% \times I_\gamma^{\text{max}}$
 $\longrightarrow$ $I_\gamma > 10\% \times I_\gamma^{\text{max}}$



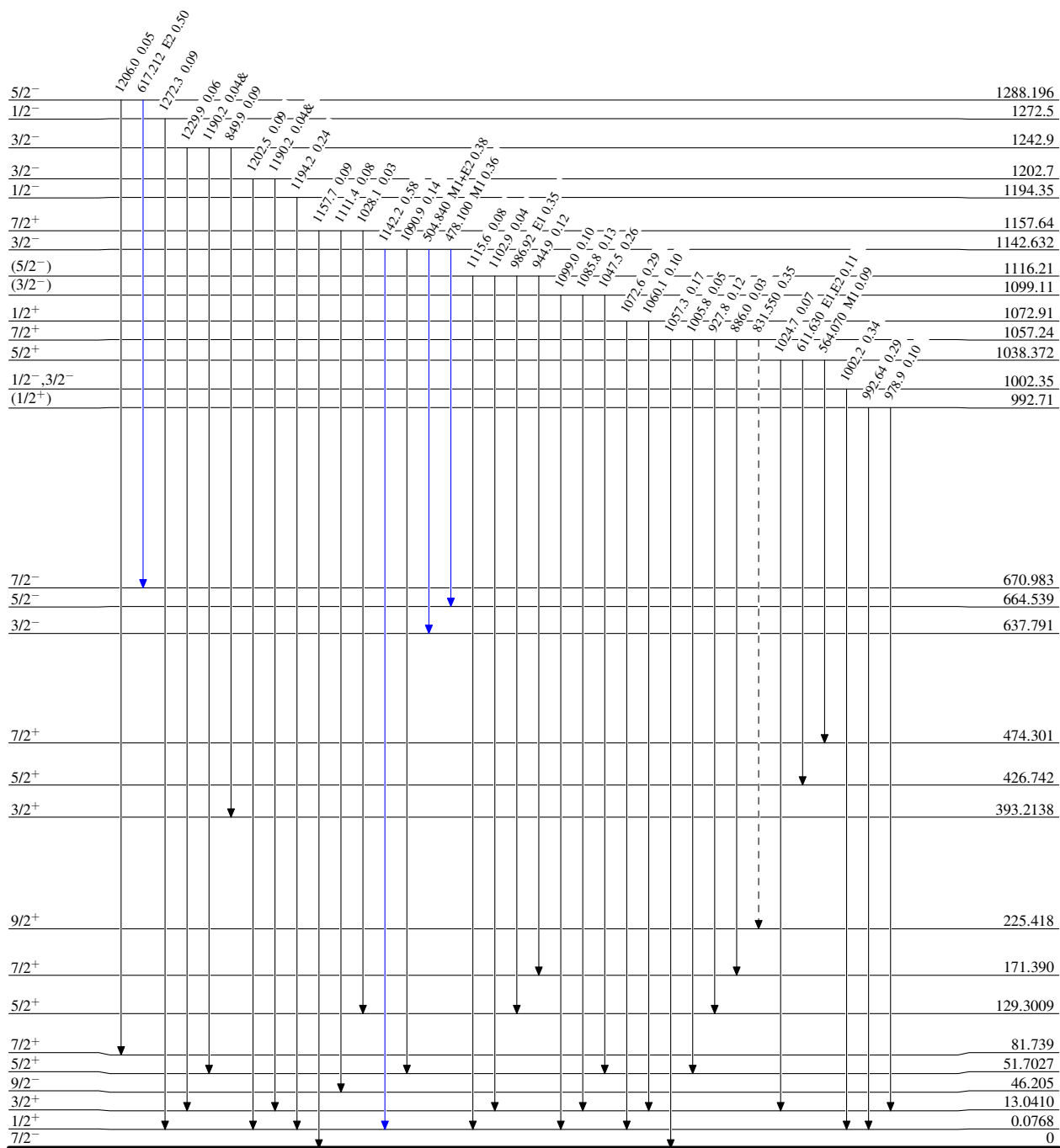
$^{234}\text{U}(\text{n},\gamma) \text{E=th}$ 1972Ri08,1979Al03

Level Scheme (continued)

Intensities: I_γ per 100 neutron captures
& Multiply placed: undivided intensity given

Legend

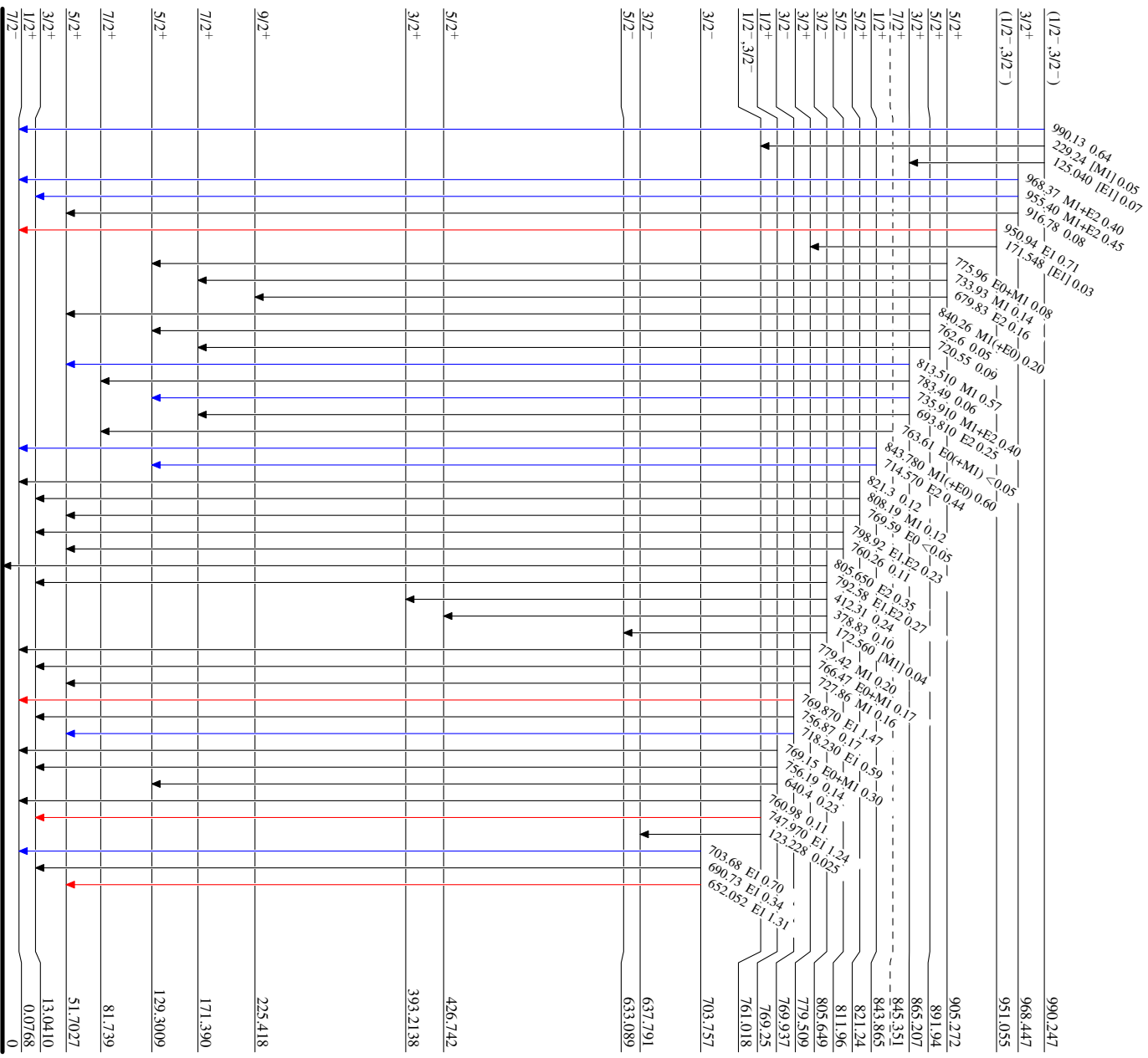
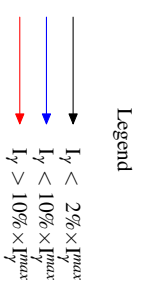
-  $I_\gamma < 2\% \times I_\gamma^{\text{max}}$
 $I_\gamma < 10\% \times I_\gamma^{\text{max}}$
 $I_\gamma > 10\% \times I_\gamma^{\text{max}}$
 γ Decay (Uncertain)

 $^{235}_{92}\text{U}_{143}$

²³⁴U(n,γ) E=th 1972Ri08,1979Ai03

Level Scheme (continued)

Intensities: I_γ per 100 neutron captures
& Multiply placed: undivided intensity given

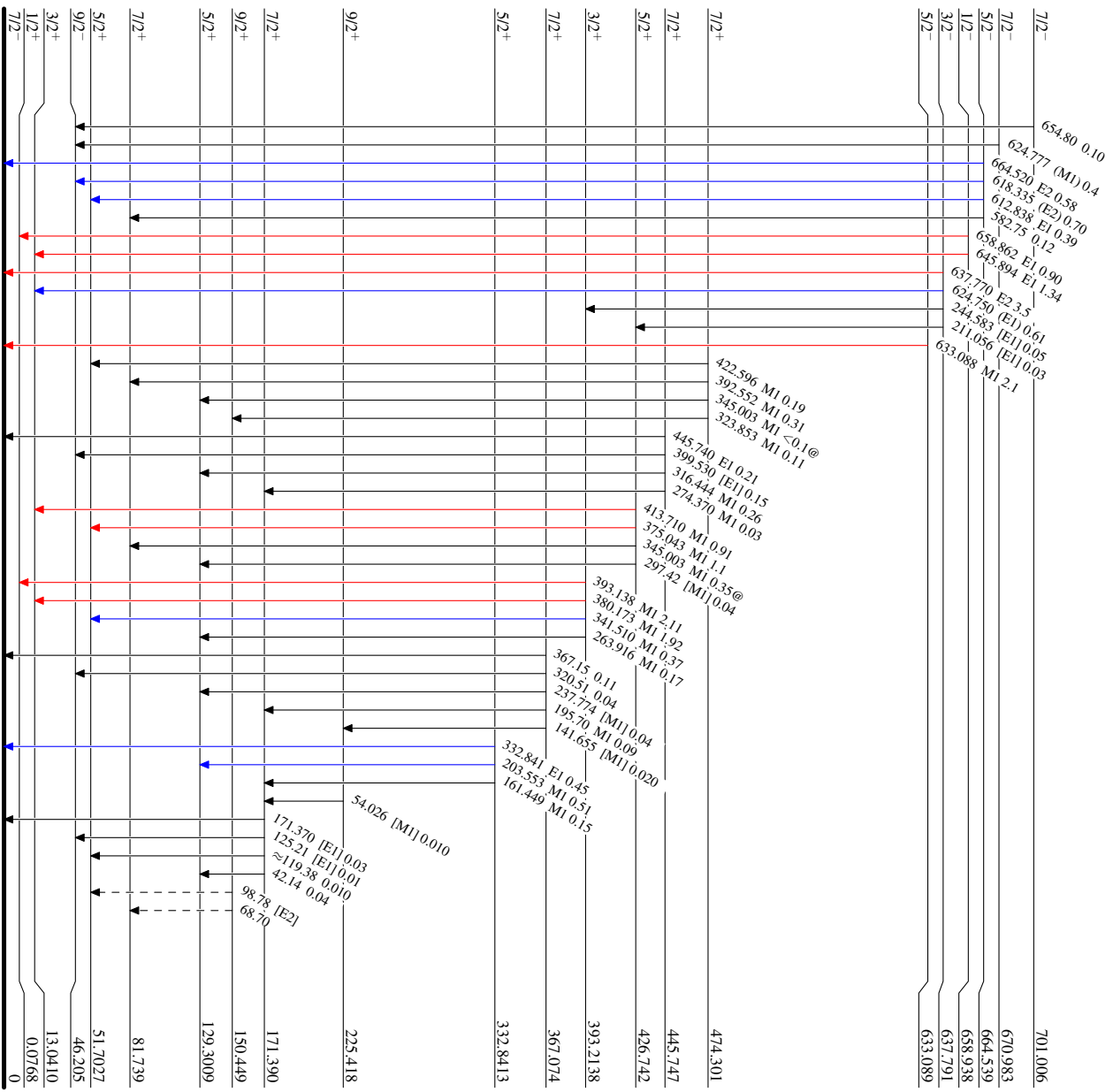


²³⁴U(n,γ) E=th 1972RI08,1979AI03

Level Scheme (continued)

Intensities: I_γ per 100 neutron captures
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

Legend
→ I_γ < 2% × I_γ^{max}
→ I_γ < 10% × I_γ^{max}
→ I_γ > 10% × I_γ^{max}
- - - γ Decay (Uncertain) →



²³⁵U₁₄₃

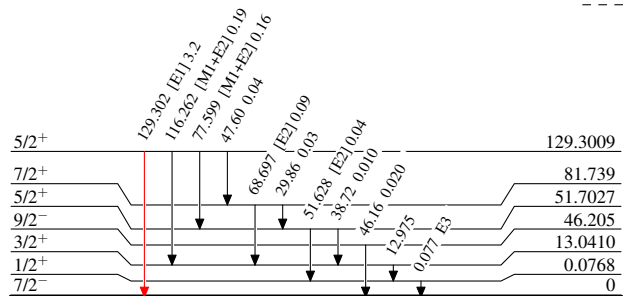
$^{234}\text{U}(\text{n},\gamma) \text{E=th}$ 1972Ri08,1979Al03

Level Scheme (continued)

Intensities: I_γ per 100 neutron captures
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

Legend

- $I_\gamma < 2\% \times I_\gamma^{\text{max}}$
- $I_\gamma < 10\% \times I_\gamma^{\text{max}}$
- $I_\gamma > 10\% \times I_\gamma^{\text{max}}$
- - - - -→ γ Decay (Uncertain)


 $^{235}_{92}\text{U}_{143}$