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Thermal-Neutron Capture Data Update and Revision for Some Nuclides with A >190

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Abstract: The prompt gamma-ray data of thermal- neutron captures for some nuclides with nuclear mass number A>190 had been evaluated and put into Evaluated Nuclear Structure Data File, ENSDF. Since last evaluations the many experimental data of the thermal-neutron captures for nuclear mass number A>190 have been measured and published. Some of them in ENSDF have not been given normalization factors, by which the gamma-ray intensities can been calculated. The reevaluation and revision of the evaluated prompt gamma-ray data is very necessary for use in PGAA of high-resolution analytical prompt gamma-ray spectroscopy on the basis of all experimental data. The levels, prompt gamma-rays and decay schemes of thermal-neutron captures for some nuclides (**193Ir, 194Pt,** 1**95Pt, 196Pt, 197Au, 207Pb, and 240Pu**) with nuclear mass number A>190 have been reevaluated and revised. The normalization factors and necessary comments are given in the text. The physical check of evaluated thermal-neutron capture data has been done. This reevaluation and revision may be considered as an update of the Prompt Gamma-ray from Thermal Neutron Capture data table as published in Atomic Data and Nuclear Data Tables 26, 511 (1982**).**

Cutoff Date: March 2001; all references entered into the Nuclear Science References File, NSRF, and private communications have been considered.

$^{194}_{77}Ir_{117}$

^{193}Ir(n,γ) E=thermal 98Ba85,98Ba42,87CoZW

Target Jπ=3/2+.

^{194}Ir Levels

The level scheme is from 98Ba85,73PrZI and 87CoZW. Additional levels at 143.6, 147.1, 245.5, 270.9, 296.6, 314.0, 337.5, 371.2, 407.0, 413.0, 467.2, 519.5, 524.2, 579.1, and 644.9 are from 93BaZP, 94KoZQ, 93Ko59, 93KoZT, 88Ba49, and 98Ba42.

93Ko59 and 94KoZQ from γγ and K x ray–γ delayed coincidences deduced an energy of 147.078 keV *5* for the 31.8–ms isomer.

E(level)†	Jπ‡	$T_{1/2}$	Comments
0.0	1–		Jπ: from adopted levels.
43.1189 *8*	0–		Jπ: from adopted levels.
82.3361 *8*	1–		
84.2846 *9*	2–		
112.2320 *8*	2–		
138.6875 *7*	1–		
143.5919 *9*	0–		
147.0723 *20*	4+	31.85 ms *24*	$T_{1/2}$: from adopted levels.
148.9340 *9*	3–		
160.9978 *9*	1–		
184.6882 *13*	3–		
195.5269 *10*	2–		
245.1100 *11*	3–		
245.4918 *20*	0–		
254.1608 *9*	2–		
270.9166 *21*	3,4+		
278.5048 *13*	2–		
296.6305 *20*	4–		
308.9739 *10*	1–		
314.0527 *13*	2–		
337.5236 *16*	1–		
337.6483 *17*	2–		
347.0506 *16*	3–		
371.282 *7*	3–		
376.9981 *19*	3–		
390.9632 *16*	1,2,3–		
407.017 *3*	(3)+		
413.059 *5*	(3)+		
419.6108 *23*	3–		
423.7271 *14*	2–		
436.2960 *14*	2–		
467.208 *3*	2,3,4–		
489.6489 *22*	2–		
501.809 *3*	2–		
518.5767 *22*	2+		
519.517 *3*	(3)+		
524.217 *8*	(3)+		
542.5933 *21*	(2)+		
547.2 *6*			
579.3 *5*			
590.7 *10*			
598.7 *6*			
639.6 *7*			
644.941 *7*			
≈653.1			
≈660.1			
≈668.1			
≈677.1			
681.0 *8*			
689.4 *12*			
697.6 *10*			
707.9 *6*			
721.1 *6*			
749.2 *6*			
757.8 *13*			
765.4 *10*			

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$^{194}_{77}Ir_{117}$

^{193}Ir(n,γ) E=thermal 98Ba85,98Ba42,87CoZW (continued)

^{194}Ir Levels (continued)

E(level)†	Jπ‡	Comments
774.5 *10*		
785.3 *6*		
803.3 *6*		
820.3 *9*		
834.4 *7*		
861.2 *8*		
873.9 *7*		
881.2 *6*		
887.9 *7*		
897.1 *10*		
908.0 *6*		
920.8 *8*		
926.8 *8*		
937.7 *6*		
949.9? *16*		
957.9 *6*		
968.6? *16*		
974.9 *7*		
994.7 *6*		
1007.7 *6*		
1038.0 *5*		
1052.2 *5*		
1059.6 *5*		
1072.9 *5*		
1088.5 *6*		
1097.1 *6*		
1113.8 *7*		
1135.4 *5*		
1145.0 *5*		
1178.1 *8*		
1193.4 *5*		
1211.4 *5*		
1227.4 *5*		
1239.8 *5*		
1258.8 *5*		
1271.4 *5*		
1280.9 *8*		
1287.4? *17*		
1312.7 *5*		
1323.2 *8*		
1331.6 *7*		
1352.2 *5*		
1368.0 *14*		
1376? *3*		
1388.5 *5*		
1400.3 *6*		
1423.4 *6*		
1439? *4*		
1445? *3*		
1453.6 *7*		
1466.3 *6*		
1481.5 *6*		
1488.8 *5*		
1506.3 *21*		
1520.1 *11*		
1541.7 *6*		
1560.8 *6*		
1571.3 *5*		
1578.7 *6*		
1593.6 *5*		
1604.3 *8*		
1611.5 *6*		
1623.7 *5*		

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^{193}Ir(n,γ) E=thermal 98Ba85,98Ba42,87CoZW (continued)

^{194}Ir Levels (continued)

E(level)†	Jπ‡	Comments
1631.1 *12*		
1641.2 *9*		
1653.5 *9*		
1664.5 *10*		
1671.4 *10*		
1684.1 *13*		
1694.7 *13*		
1701.8 *8*		
(6066.8 *4*)	1+,2+§	from evaluated S(n) (95Au04). Observed deexcitation intensity is 28.2% of g.s. feeding.

† From least–squares fit to secondary Eγ's for levels below 645 keV, above this energy, values are from primary Eγ's.
‡ Evaluator's assignments based on γ–ray multipolarities and decay patterns, unless otherwise specified.
§ s–wave capture in ^{193}Ir g.s. (Jπ=3/2+).

γ(^{194}Ir)

Iγ normalization: from assuming I(γ+ce) (to g.s.)=100.

Eγ†	E(level)	Iγ†j	Mult.‡	δ‡	α	Comments
22.264 *14*	160.9978	1.00 *11*	M1			
26.434 *15*	138.6875	0.65 *8*	M1			
27.927 *34*	112.2320	0.23 *5*	M1+E2	0.25		
29.890 *6*	112.2320	1.75 *15*	M1+E2	0.07		
x34.368 *11*		1.01 *9*	M1			Eγ=34.368 *11*, Iγ=1.45 *8*, Si(Li) (89KoZW).
34.829 *10*	147.0723	0.76 *5*	M2			L1/L3=2.3 *5*, M1/M3=2.2 *7*.
35.723 *26*	184.6882	0.45 *7*	M1+E2	0.16		
x36.213 *55*		0.20 *5*				
x37.228 *51*		0.20 *5*				
x37.378 *2*		1.67 *56*				Eγ=37.23 *5*, Iγ=0.20 *5*, Si(Li) (89KoZW).
x37.410 *1*		3.79 *59*				
x37.451 *3*		1.49 *52*				
x37.684 *2*		2.63 *46*	E1			
39.217 *1*	82.3361	7.49 *46*	M1(+E2)	0.12	14 *2*	α: estimated from α(L1)exp. α(L1)exp=12.9 *12*, L1/L2=11 *4*. Eγ=39.220 *21*, Iγ=6.5 *3*, Si(Li) (89KoZW).
x40.698 *2*		1.54 *34*	E1			Eγ=41.42 *5*, Iγ=0.29 *8*, Si(Li) (89KoZW).
41.166 *10*	84.2846	0.78 *6*	E2			Eγ=41.42 *5*, Iγ=0.29 *8*, Si(Li) (89KoZW).
x41.416 *48*		0.29 *8*				
x42.203g *44*		1.05g *28*				
42.484 *33*	296.6305	1.47 *28*				
43.119 *1*	43.1189	33.6 *23*	M1(+E2)	0.08	11 *1*	α: estimated from α(L1)exp. α(L1)exp=9.56 *83*, L1/L2=16 *6*, L1/L3=76 *30*, M1/M2=10 *4*. Eγ=43.117 *3*, Iγ=33.6 *14* (normalized), Si(Li) (89KoZW).
x43.546 *7*		0.56 *30*				
x46.223 *2*		1.35 *28*				Eγ=46.50 *5*, Iγ=0.53 *13*, Si(Li) (89KoZW).
46.499 *53*	195.5269	0.53 *14*	M1			
48.707g *33*	160.9978	0.91g *22*				
49.520 *71*	245.1100	0.36 *15*	M1			
54.404 *1*	138.6875	5.32 *48*	M1+E2	0.51		
x56.333 *5*		1.11 *25*				
56.355 *2*	138.6875	2.11 *20*	M1+E2			Eγ=56.36 *5*, Iγ=1.3 *3*, Si(Li) (89KoZW).
56.844 *2*	195.5269	2.87 *26*	M1+E2	0.071		
x58.037 *93*		0.70 *35*				
59.142 *10*	337.6483	0.300 *14*	M1+E2			
x59.358 *9*		0.66 *25*				Eγ=59.27 *7*, Iγ=1.1 *4*, Si(Li) (89KoZW).
x59.665 *6*		1.31 *41*				
61.225 *3*	143.5919	1.71 *30*	M1			
x61.380 *5*		1.07 *30*	M1			
62.793 *3*	147.0723	1.42 *21*	M2			L1/L2=10 *2*, L1/L3=3.1 *6*.

Continued on next page (footnotes at end of table)

^{193}Ir(n,γ) E=thermal 98Ba85,98Ba42,87CoZW (continued)

γ(^{194}Ir) (continued)

Eγ†	E(level)	Iγ†j	Mult.‡	δ‡	α	Comments
64.647@k 10	148.9340	74.9 76	M1			L1/L2=4.8 14, L1/L3=4.0 12.
x66.117 9		0.52 24				
x66.330 9		0.64 24				
x68.894 11		1.13 44				
69.009 24	314.0527	1.01 44				
69.460 7	254.1608	1.06 25	M1+E2			
x69.855 8		0.97 23				
x74.812 3		2.03 15	M1			
x76.735 4		4.11 75	M1+E2			Eγ=75.93 3, Iγ=13.4 13, Si(Li) (89KoZW).
x76.980 4		2.99 46	M1+E2			
x77.787 7		1.10 52				
x77.875 4		2.24 45				
78.666 2	160.9978	2.45 39	M1		12.7	Eγ=78.62 6, Iγ=2.1 5, Si(Li) (89KoZW). α(K)=10.5; α(L)=1.72; α(M)=0.397; α(N+..)=0.123.
x79.475g 35		2.51g 33	M1+E2		12.4	α(K)=5 5; α(L)=5 4; α(M)=1.3 10; α(N+..)=0.4 3.
82.339 2	82.3361	21.62 36	M1+E2	0.105	11.1	α(L1)exp=1.7 5, α(M1)exp=0.9 3. Eγ=82.335 4, Iγ=11.3 10, Si(Li) (89KoZW). α(K)=9.1; α(L)=1.57; α(M)=0.364; α(N+..)=0.113.
x82.569 4		2.64 53	M1+E2		10.8 3	α(K)=5 5; α(L)=4 3; α(M)=1.1 8; α(N+..)=0.33 23.
83.291 7	195.5269	1.71 41	M1		10.8	α(K)=8.9; α(L)=1.46; α(M)=0.336; α(N+..)=0.104.
83.419 48	337.6483	2.16 43				
84.288 2	84.2846	50 3	M1+E2	0.44 1	10.3	L1/L2=1.50 14, L1/L3=1.65 20. α(K)=7.31 5; α(L)=2.24 4; α(M)=0.545 9; α(N+..)=0.167 3.
x84.789 16		2.20 66				
x84.902 12		1.33 39				
x86.307 11		1.11 43				
x87.688 6		1.06 31	M1		9.3	α(K)=7.64; α(L)=1.26; α(M)=0.289; α(N+..)=0.090.
x87.704 7		1.49 29	M1		9.3	α(K)=7.63; α(L)=1.26; α(M)=0.289; α(N+..)=0.090.
x89.108 6		1.56 36				
x89.448 10		1.04 35	M1		8.8	α(K)=7.21; α(L)=1.19; α(M)=0.273; α(N+..)=0.085.
90.187 14	467.208	2.30 65				
x90.293 14		2.12 65				
x90.460 5		2.71 40	M1		8.5	α(K)=6.98; α(L)=1.15; α(M)=0.264; α(N+..)=0.0824.
x90.963 7		1.19 43				
x91.093 6		2.19 44				
92.019 15	337.5236	1.87 60				
93.166 2	254.1608	14.94 37	M1		7.78	α(K)exp=5.7 14, α(L1)exp=1.2 3. α(K)=6.41; α(L)=1.05; α(M)=0.242; α(N+..)=0.0758.
x93.562 6		1.84 36	E1		0.478	α(K)=0.385; α(L)=0.0717; α(M)=0.0165; α(N+..)=0.00495.
x95.107 18		1.08 40	M1,M1+E2		6.6 8	α(K)=3 3; α(L)=2.4 14; α(M)=0.6 4; α(N+..)=0.18 11.
95.575 3	138.6875	34.7 16	M1+E2	0.17	7.19	α(K)exp=5.5 14, α(L1)exp=0.9 2, α(M1)exp=0.3 1. α(K)=5.81; α(L)=1.05; α(M)=0.245; α(N+..)=0.0764.
x96.022 7		2.07 46	E1		0.448	α(K)=0.361; α(L)=0.0668; α(M)=0.0154; α(N+..)=0.00462.
96.172 4	245.1100	1.33 21	M1+E2		6.3 8	α(K)=3 3; α(L)=2.2 13; α(M)=0.6 4; α(N+..)=0.17 11.
98.698 6	489.6489	1.16 25	M1+E2		5.8 9	α(K)=3.1 24; α(L)=2.0 12; α(M)=0.5 3; α(N+..)=0.15 9.

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^{193}Ir(n,γ) E=thermal 98Ba85,98Ba42,87CoZW (continued)

γ(^{194}Ir) (continued)

Eγ†	E(level)	Iγ†j	Mult.‡	δ‡	α	Comments
100.353 *17*	371.282	1.76 *65*	E1		0.400	α(K)exp=0.8 *5*. α(K)=0.323; α(L)=0.0592; α(M)=0.0136; α(N+..)=0.00410.
100.407 *2*	184.6882	5.56 *38*	M1+E2		5.4 *9*	α(K)=3.0 *22*; α(L)=1.9 *11*; α(M)=0.5 *3*; α(N+..)=0.14 *9*.
x102.267 *8*		1.00 *27*	M1+E2		5.1 *9*	α(K)=2.8 *21*; α(L)=1.7 *10*; α(M)=0.43 *25*; α(N+..)=0.13 *8*.
x104.464 *6*		1.09 *23*	E1		0.361	α(K)=0.292; α(L)=0.0531; α(M)=0.0122; α(N+..)=0.00368.
x105.814 *10*		0.53 *30*				
x106.129 *10*		0.67 *27*				
x109.058 *6*		1.17 *20*	M1		4.94	α(K)=4.07; α(L)=0.669; α(M)=0.154; α(N+..)=0.0483.
x109.400 *3*		2.64 *14*	E2		3.26	α(K)=0.675; α(L)=1.94; α(M)=0.496; α(N+..)=0.151.
109.662 *23*	423.7271	0.91 *45*	M1+E2		4.0 *9*	α(K)=2.3 *17*; α(L)=1.3 *7*; α(M)=0.32 *17*; α(N+..)=0.10 *5*.
x110.396 *14*		1.11 *37*	M1+E2		4.0 *9*	α(K)=2.3 *17*; α(L)=1.3 *6*; α(M)=0.31 *17*; α(N+..)=0.10 *5*.
111.168 *9*	524.217	1.00 *16*	M1+E2		3.9 *9*	α(K)=2.3 *16*; α(L)=1.2 *6*; α(M)=0.30 *16*; α(N+..)=0.09 *5*.
111.246 *4*	195.5269	1.43 *17*	M1+E2		3.9 *9*	α(K)=2.3 *16*; α(L)=1.2 *6*; α(M)=0.30 *16*; α(N+..)=0.09 *5*.
111.938 *6*	296.6305	1.18 *21*	M1		4.59	α(K)=3.78; α(L)=0.621; α(M)=0.142; α(N+..)=0.0448.
112.230 *1*	112.2320	87.1 *15*	M1+E2	0.85 *1*	3.88 *1*	α(K)exp=1.9, L1/L2=0.46 *8*, L1/L3=0.62 *9*. α(K)=2.45 *2*; α(L)=1.08 *1*; α(M)=0.267 *2*; α(N+..)=0.082 *1*.
112.500 *3*	519.517	1.58 *25*	M1		4.52	α(K)=3.72; α(L)=0.612; α(M)=0.140; α(N+..)=0.0442.
113.192 *4*	195.5269	2.11 *14*	M1+E2		3.6 *8*	α(K)=2.1 *16*; α(L)=1.1 *6*; α(M)=0.28 *15*; α(N+..)=0.09 *5*.
113.447 *1*	308.9739	4.01 *12*	M1		4.41	α(K)exp=2.7 *11*, α(L)exp=0.8 *3*. α(K)=3.63; α(L)=0.598; α(M)=0.137; α(N+..)=0.0431.
x113.630 *18*		0.65 *28*				
x114.121 *11*		1.22 *24*	E1		0.288	α(K)=0.233; α(L)=0.0417; α(M)=0.0096; α(N+..)=0.00290.
x114.196 *5*		1.30 *22*	E1		0.287	α(K)=0.233; α(L)=0.0417; α(M)=0.0096; α(N+..)=0.00290.
115.473 *1*	254.1608	20.23 *48*	M1+E2	0.12	4.17	α(K)exp=1.9 *5*, α(L1)exp=0.41 *13*. α(K)=3.41; α(L)=0.581; α(M)=0.134; α(N+..)=0.0421.
x116.726 *3*		4.39 *24*	M1,M1+E2		3.3 *8*	α(K)exp=4.1 *16*, α(L1)exp=0.46 *21*. α(K)=2.0 *14*; α(L)=1.0 *5*; α(M)=0.25 *12*; α(N+..)=0.08 *4*.
117.503 *4*	278.5048	1.22 *12*	M1		3.99	α(K)=3.29; α(L)=0.540; α(M)=0.124; α(N+..)=0.0390.
117.880 *2*	160.9978	18.6 *5*	M1+E2	0.16	3.92	α(K)exp=2.0 *6*, α(L1)exp=0.43 *12*. α(K)=3.19; α(L)=0.556; α(M)=0.129; α(N+..)=0.0403.
x118.002 *5*		1.03 *18*	E1		0.264	α(K)=0.214; α(L)=0.0381; α(M)=0.0088; α(N+..)=0.00265.
x118.152 *8*		0.61 *23*				
x119.736 *12*		0.51 *18*				
x119.958 *3*		1.32 *13*	M1+E2		3.0 *8*	α(K)=1.8 *13*; α(L)=0.9 *4*; α(M)=0.22 *11*; α(N+..)=0.07 *4*.
x121.389 *11*		0.81 *18*				
x122.601 *9*		1.73 *13*	E2		2.08	α(K)=0.547; α(L)=1.15; α(M)=0.294; α(N+..)=0.090.
122.847 *8*	376.9981	0.84 *16*	M1		3.51	α(K)=2.90; α(L)=0.475; α(M)=0.109; α(N+..)=0.0343.

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^{193}Ir(n,γ) E=thermal 98Ba85,98Ba42,87CoZW (continued)

γ(^{194}Ir) (continued)

Eγ†	E(level)	Iγ†j	Mult.‡	δ‡	α	Comments
x123.800 *18*		1.05 *66*	E1		0.233	α(K)=0.190; α(L)=0.0335; α(M)=0.00770; α(N+..)=0.00233.
123.845 *1*	270.9166	43.5 *13*	M1+E2	0.12	3.41	α(K)exp=2.5 *6*, α(L1)exp=0.30 *7*. α(K)=2.80; α(L)=0.473; α(M)=0.109; α(N+..)=0.0342.
124.320 *25*	308.9739	0.72 *34*	E2		1.97	α(K)=0.532; α(L)=1.08; α(M)=0.276; α(N+..)=0.084.
124.777 *7*	501.809	0.99 *14*	M1+E2		2.7 *8*	α(K)=1.6 *12*; α(L)=0.8 *3*; α(M)=0.19 *9*; α(N+..)=0.058 *25*.
x125.085 *16*		0.75 *23*				
x125.221 *20*		0.86 *23*				
x125.942 *9*		0.55 *23*				
x126.164 *8*		1.19 *19*	E1		0.222	α(K)=0.181; α(L)=0.0318; α(M)=0.00731; α(N+..)=0.00222.
x126.814 *15*		1.65 *23*	M1		3.21	α(K)=2.65; α(L)=0.434; α(M)=0.100; α(N+..)=0.0313.
x126.966 *12*		0.62 *26*	M1		3.20	α(K)=2.64; α(L)=0.432; α(M)=0.099; α(N+..)=0.0312.
x128.906 *31*		1.56 *46*	E1		0.210	α(K)=0.171; α(L)=0.0300; α(M)=0.00690; α(N+..)=0.00209.
x129.312 *38*		1.71 *64*	M1		3.04	α(K)=2.50; α(L)=0.410; α(M)=0.094; α(N+..)=0.0296.
129.368 *4*	314.0527	1.31 *15*	M1		3.03	α(K)=2.50; α(L)=0.410; α(M)=0.094; α(N+..)=0.0295.
129.571[l] *5*	278.5048	1.02[l] *12*	M1+E2		2.3 *7*	α(K)=1.5 *10*; α(L)=0.65 *25*; α(M)=0.16 *7*; α(N+..)=0.049 *20*.
	467.208	1.02[l] *12*	M1+E2		2.3 *7*	α(K)=1.5 *10*; α(L)=0.65 *25*; α(M)=0.16 *7*; α(N+..)=0.049 *20*.
	542.5933	1.02[l] *12*	M1+E2		2.3 *7*	α(K)=1.5 *10*; α(L)=0.65 *25*; α(M)=0.16 *7*; α(N+..)=0.049 *20*.
x131.577 *14*		0.81 *23*				
131.898 *3*	376.9981	2.37 *15*	M1		2.87	α(K)=2.37; α(L)=0.388; α(M)=0.089; α(N+..)=0.0279.
x132.007 *13*		0.56 *19*	M1		2.86	α(K)=2.36; α(L)=0.387; α(M)=0.089; α(N+..)=0.0279.
x132.384 *14*		0.75 *13*	M1+E2		2.2 *7*	α(K)=1.4 *10*; α(L)=0.60 *22*; α(M)=0.15 *6*; α(N+..)=0.045 *18*.
132.883 *2*	245.1100	7.56 *23*	M1+E2	0.94	2.21	α(K)exp=1.3 *4*. α(K)=1.45; α(L)=0.575; α(M)=0.142; α(N+..)=0.0436.
x133.626 *10*		0.72 *16*	M1		2.77	α(K)=2.28; α(L)=0.373; α(M)=0.086; α(N+..)=0.0269.
x135.999 *12*		1.08 *25*	M1		2.63	α(K)=2.17; α(L)=0.355; α(M)=0.0816; α(N+..)=0.0256.
136.100 *2*	407.017	7.27 *42*	M1		2.62	α(K)exp=1.9 *7*. α(K)=2.16; α(L)=0.354; α(M)=0.0815; α(N+..)=0.0255.
x136.146 *15*		1.54 *28*	M1		2.62	α(K)=2.16; α(L)=0.354; α(M)=0.0814; α(N+..)=0.0255.
x136.203 *10*		1.14 *19*	M1+E2		2.0 *7*	α(K)=1.3 *9*; α(L)=0.53 *18*; α(M)=0.13 *5*; α(N+..)=0.040 *15*.
136.803 *4*	390.9632	1.13 *9*	M1+E2		2.0 *7*	α(K)exp=1.2 *7*. α(K)=1.3 *9*; α(L)=0.52 *18*; α(M)=0.13 *5*; α(N+..)=0.040 *15*.
x137.645 *24*		0.65 *19*				
x138.246 *16*		1.45 *26*	M1		2.51	α(K)=2.07; α(L)=0.339; α(M)=0.0779; α(N+..)=0.0244.
x138.285 *8*		0.68 *16*	M1		2.51	α(K)=2.07; α(L)=0.339; α(M)=0.0779; α(N+..)=0.0244.
138.686 *1*	138.6875	34.8 *7*	M1+E2	0.82	2.01	α(K)exp=0.9 *2*, L1/L2=0.50 *12*, L1/L3=0.59 *14*. α(K)=1.39; α(L)=0.465; α(M)=0.114; α(N+..)=0.0350.

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$^{194}_{77}Ir_{117}$

^{193}Ir(n,γ) E=thermal 98Ba85,98Ba42,87CoZW (continued)

γ(^{194}Ir) (continued)

Eγ†	E(level)	Iγ†j	Mult.‡	δ‡	α	Comments
x138.947 *4*		2.05 *28*	M1+E2		1.9 *6*	α(K)=1.2 *8*; α(L)=0.49 *16*; α(M)=0.12 *5*; α(N+..)=0.037 *14*.
139.804 *6*	278.5048	0.76 *12*	M1		2.43	α(K)=2.00; α(L)=0.328; α(M)=0.0755; α(N+..)=0.0236.
x141.448 *14*		1.04 *15*	E1		0.166	α(K)=0.135; α(L)=0.0234; α(M)=0.00537; α(N+..)=0.00163.
141.953 *26*	337.5236	1.54 *38*	M1+E2,E2		1.8 *6*	α(K)=1.2 *8*; α(L)=0.45 *14*; α(M)=0.11 *4*; α(N+..)=0.034 *12*.
x142.119 *2*		4.58 *40*	M1		2.32	α(K)=1.91; α(L)=0.313; α(M)=0.0720; α(N+..)=0.0225.
142.199 *6*	413.059	2.79 *18*	M1		2.32	α(K)=1.91; α(L)=0.313; α(M)=0.0719; α(N+..)=0.0225.
x142.778 *7*		0.70 *9*	M1		2.29	α(K)=1.89; α(L)=0.309; α(M)=0.0711; α(N+..)=0.0222.
x143.213 *4*		0.99 *13*	M1		2.27	α(K)=1.87; α(L)=0.306; α(M)=0.0705; α(N+..)=0.0220.
143.594 *1*	143.5919	27.7 *4*	M1		2.25	α(K)exp=1.4 *2*, α(L1)exp=0.27 *5*. α(K)=1.86; α(L)=0.304; α(M)=0.0700; α(N+..)=0.0219.
x144.196 *10*		0.70 *10*				
x144.866 *15*		0.82 *13*				
145.221 *2*	423.7271	4.70 *18*	M1		2.18	α(K)exp=0.5 *3*. α(K)=1.80; α(L)=0.294; α(M)=0.0678; α(N+..)=0.0212.
x145.746 *4*		1.64 *8*	M1		2.16	α(K)=1.78; α(L)=0.291; α(M)=0.0671; α(N+..)=0.0210.
x146.169 *2*		3.85 *17*	M1		2.14	α(K)exp=2.3 *10*. α(K)=1.76; α(L)=0.289; α(M)=0.0665; α(N+..)=0.0208.
x146.769 *23*		1.07 *11*	E1		0.151	α(K)=0.123; α(L)=0.0212; α(M)=0.00487; α(N+..)=0.00147.
147.306 *10*	518.5767	1.03 *45*	E1		0.149	α(K)=0.122; α(L)=0.0210; α(M)=0.00482; α(N+..)=0.00146.
x147.522 *23*		0.54 *19*				
x147.630 *9*		2.14 *41*	M1+E2		1.6 *6*	α(K)=1.0 *7*; α(L)=0.39 *11*; α(M)=0.10 *4*; α(N+..)=0.029 *10*.
147.979 *3*	308.9739	1.96 *9*	M1		2.07	α(K)exp=0.4 *2*. α(K)=1.70; α(L)=0.279; α(M)=0.0642; α(N+..)=0.0201.
148.258 *12*	519.517	0.56 *13*				
148.934& *1*	148.9340	61.6 *15*	E2		0.99	α(K)exp=0.33 *8*, L1/L2=0.22 *8*, L2/3=1.4 *4*. α(K)=0.357; α(L)=0.478; α(M)=0.122; α(N+..)=0.0371.
x149.375 *7*		1.76 *41*	E1		0.144	α(K)=0.118; α(L)=0.0202; α(M)=0.00464; α(N+..)=0.00141.
x149.588 *8*		0.77 *10*	M1		2.00	α(K)=1.65; α(L)=0.270; α(M)=0.0623; α(N+..)=0.0195.
x149.777 *14*		0.61 *13*				
x150.348 *7*		0.72 *10*				
x150.729 *5*		1.23 *13*	M1		1.96	α(K)=1.62; α(L)=0.265; α(M)=0.0610; α(N+..)=0.0190.
x151.107 *9*		0.68 *21*	M1		1.95	α(K)=1.60; α(L)=0.263; α(M)=0.0605; α(N+..)=0.0189.
151.526 *9*	347.0506	1.01 *9*	M1		1.93	α(K)=1.59; α(L)=0.261; α(M)=0.0601; α(N+..)=0.0187.
152.016 *20*	489.6489	0.64 *34*	M1		1.91	α(K)=1.58; α(L)=0.258; α(M)=0.0595; α(N+..)=0.0186.
152.118 *14*	489.6489	0.84 *24*	M1		1.91	α(K)=1.57; α(L)=0.258; α(M)=0.0594; α(N+..)=0.0185.
152.405 *2*	195.5269	15.81 *33*	E2		0.91	α(K)exp=0.14 *4*. 93BaZP assigned E2 multipolarity. α(K)=0.338; α(L)=0.432; α(M)=0.110; α(N+..)=0.0334.

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^{193}Ir(n,γ) E=thermal 98Ba85,98Ba42,87CoZW (continued)

γ(^{194}Ir) (continued)

Eγ†	E(level)	Iγ†j	Mult.‡	δ‡	α	Comments
152.960 *7*	337.6483	2.05 *22*	M1+E2		1.4 *5*	α(K)exp=1.7 *6*. α(K)=0.9 *6*; α(L)=0.34 *9*; α(M)=0.08 *3*; α(N+..)=0.026 *8*.
153.054 *1*	314.0527	21.35 *50*	M1		1.88	α(K)exp=1.7 *4*, α(L1)exp=0.20 *4*. α(K)=1.55; α(L)=0.253; α(M)=0.0584; α(N+..)=0.0182.
x153.360 *9*		1.04 *19*	M1		1.87	α(K)=1.54; α(L)=0.252; α(M)=0.0581; α(N+..)=0.0181.
x153.688 *11*		1.19 *36*				
x153.750 *38*		0.64 *18*				
x154.853 *11*		0.55 *17*				
x155.141 *9*		0.34 *15*				
x155.662 *20*		0.64 *11*				
x156.825 *29*		1.55 *60*				
x157.023 *18*		0.67 *15*				
x157.336 *10*		0.56 *23*				
158.249 *12*	467.208	1.48 *57*	M1		1.71	α(K)=1.41; α(L)=0.230; α(M)=0.0531; α(N+..)=0.0165.
x158.411 *6*		2.01 *31*	E1		0.124	α(K)=0.102; α(L)=0.0173; α(M)=0.00397; α(N+..)=0.00120.
x159.733 *9*		1.13 *26*	E2		0.769	α(K)=0.302; α(L)=0.351; α(M)=0.089; α(N+..)=0.0271.
x160.398 *7*		1.13 *16*	M1		1.65	α(K)=1.36; α(L)=0.222; α(M)=0.0511; α(N+..)=0.0159.
160.825[a] *2*	245.1100	14.6 *4*	M1+E2	0.84	1.27	α(K)=0.91; α(L)=0.270; α(M)=0.0656; α(N+..)=0.0201.
160.996 *2*	160.9978	18.1 *3*	M1+E2	0.45	1.48	α(K)=1.17; α(L)=0.239; α(M)=0.0566; α(N+..)=0.0175.
x161.507 *10*		0.90 *17*	M1		1.61	α(K)=1.33; α(L)=0.217; α(M)=0.0501; α(N+..)=0.0156.
162.366 *3*	347.0506	2.16 *13*	M1+E2		1.2 *5*	α(K)=0.8 *6*; α(L)=0.27 *6*; α(M)=0.066 *17*; α(N+..)=0.020 *5*.
x162.511 *14*		1.56 *38*	M1+E2		1.2 *5*	α(K)=0.8 *5*; α(L)=0.27 *6*; α(M)=0.066 *17*; α(N+..)=0.020 *5*.
162.774 *2*	245.1100	10.3 *3*	E2		0.718	α(K)exp=0.7 *3*. α(K)=0.288; α(L)=0.323; α(M)=0.0823; α(N+..)=0.0249.
x163.120 *4*		2.05 *14*	M1		1.57	α(K)=1.29; α(L)=0.211; α(M)=0.0488; α(N+..)=0.0152.
x163.469 *19*		1.36 *45*	M1+E2		1.1 *5*	α(K)=0.8 *5*; α(L)=0.26 *6*; α(M)=0.065 *17*; α(N+..)=0.020 *5*.
x163.570 *12*		0.69 *15*				
x163.896 *8*		0.86 *10*	M1		1.55	α(K)=1.28; α(L)=0.208; α(M)=0.0481; α(N+..)=0.0150.
x163.999 *25*		0.67 *20*				
x164.682 *9*		0.95 *14*	M1		1.53	α(K)=1.26; α(L)=0.206; α(M)=0.0475; α(N+..)=0.0148.
165.374[b] *3*	308.9739	11.60 *45*	M1		1.51	α(K)=1.25; α(L)=0.203; α(M)=0.0469; α(N+..)=0.0146.
165.448 *3*	419.6108	15.17 *48*	M1		1.51	α(K)=1.25; α(L)=0.203; α(M)=0.0468; α(N+..)=0.0146.
x166.148 *34*		0.69 *18*	M1+E2		1.1 *5*	α(K)=0.8 *5*; α(L)=0.25 *5*; α(M)=0.061 *15*; α(N+..)=0.019 *5*.
166.275 *3*	278.5048	3.93 *12*	M1		1.49	α(K)=1.23; α(L)=0.200; α(M)=0.0462; α(N+..)=0.0144.
x166.890 *16*		2.04 *65*	E1		0.109	α(K)=0.089; α(L)=0.0150; α(M)=0.00346; α(N+..)=0.00104.
x168.058 *3*		1.80 *8*	M1,M1+E2		1.0 *4*	α(K)=0.7 *5*; α(L)=0.24 *5*; α(M)=0.058 *14*; α(N+..)=0.018 *4*.
x168.149 *36*		1.37 *26*	M1+E2		1.0 *4*	α(K)=0.7 *5*; α(L)=0.24 *5*; α(M)=0.058 *14*; α(N+..)=0.018 *4*.
x168.538 *14*		0.81 *14*	M1+E2		1.0 *4*	α(K)=0.7 *5*; α(L)=0.24 *5*; α(M)=0.058 *13*; α(N+..)=0.018 *4*.

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$^{194}_{77}Ir_{117}$

^{193}Ir(n,γ) E=thermal 98Ba85,98Ba42,87CoZW (continued)

γ(^{194}Ir) (continued)

Eγ†	E(level)	Iγ†j	Mult.‡	α	Comments
x169.214 *9*		0.67 *10*			
169.564 *2*	423.7271	10.17 *25*	M1	1.41	α(K)=1.16; α(L)=0.189; α(M)=0.0437; α(N+..)=0.0136.
169.874 *2*	254.1608	6.5 *3*	M1	1.40	α(K)exp=1.5 *5*. α(K)=1.16; α(L)=0.188; α(M)=0.0435; α(N+..)=0.0135.
x170.055 *40*		1.15 *26*	M1	1.40	α(K)=1.15; α(L)=0.188; α(M)=0.0433; α(N+..)=0.0135.
170.314 *12*	308.9739	0.96 *34*	E2,M1+E2	1.0 *4*	α(K)=0.7 *5*; α(L)=0.23 *4*; α(M)=0.055 *13*; α(N+..)=0.017 *4*.
170.588 *13*	467.208	0.92 *20*	E2,M1+E2	1.0 *4*	α(K)=0.7 *5*; α(L)=0.22 *4*; α(M)=0.055 *12*; α(N+..)=0.017 *4*.
171.835 *4*	254.1608	2.07 *9*	M1	1.36	α(K)=1.12; α(L)=0.182; α(M)=0.0421; α(N+..)=0.0131.
x172.016 *5*		0.99 *8*	M1	1.36	α(K)=1.12; α(L)=0.182; α(M)=0.0420; α(N+..)=0.0130.
x172.759 *17*		0.63 *10*			
x175.025 *66*		1.60 *79*	M1,M1+E2	0.9 *4*	α(K)=0.7 *5*; α(L)=0.20 *4*; α(M)=0.050 *10*; α(N+..)=0.015 *3*.
175.608 *16*	489.6489	0.89 *18*			
176.534 *4*	337.5236	2.54 *19*	M1	1.26	α(K)=1.04; α(L)=0.169; α(M)=0.0390; α(N+..)=0.0121.
176.654 *3*	337.6483	6.64 *18*	M1	1.26	α(K)=1.04; α(L)=0.169; α(M)=0.0389; α(N+..)=0.0121.
x177.120 *11*		1.54 *45*	M1+E2	0.9 *4*	α(K)=0.6 *4*; α(L)=0.20 *3*; α(M)=0.048 *10*; α(N+..)=0.015 *3*.
x177.885 *16*		0.85 *35*			
x177.985 *11*		0.76 *11*			
x179.051 *9*		0.84 *10*	M1	1.21	α(K)=1.00; α(L)=0.162; α(M)=0.0375; α(N+..)=0.0116.
x179.226 *3*		3.83 *15*	M1	1.21	α(K)exp=0.13 *6*. α(K)=1.00; α(L)=0.162; α(M)=0.0374; α(N+..)=0.0116.
180.680 *5*	489.6489	2.15 *9*	M1	1.18	α(K)=0.98; α(L)=0.158; α(M)=0.0365; α(N+..)=0.0113.
180.930 *5*	518.5767	2.17 *12*	E1	0.088	α(K)=0.0727; α(L)=0.0122; α(M)=0.00279; α(N+..)=0.00084.
181.069 *5*	518.5767	1.88 *16*	E1	0.088	α(K)=0.0725; α(L)=0.0121; α(M)=0.00278; α(N+..)=0.00084.
x181.799 *9*		0.76 *11*	M1	1.16	α(K)=0.96; α(L)=0.156; α(M)=0.0359; α(N+..)=0.0111.
182.146 *5*	436.2960	3.83 *12*	M1	1.15	α(K)=0.95; α(L)=0.155; α(M)=0.0357; α(N+..)=0.0111.
184.407 *9*	296.6305	1.22 *23*	E2	0.462	α(K)=0.211; α(L)=0.189; α(M)=0.0478; α(N+..)=0.0144.
184.687 *2*	184.6882	39.6 *7*	E2	0.459	α(K)exp=0.22 *5*, L1/L2=0.26 *16*, L2/L3=2.0 *9*. α(K)=0.210; α(L)=0.187; α(M)=0.0475; α(N+..)=0.0144.
x185.080 *15*		0.53 *14*			
x186.162 *3*		3.83 *10*	M1	1.09	α(K)=0.90; α(L)=0.146; α(M)=0.0336; α(N+..)=0.0104.
x186.640 *5*		1.27 *11*			
x187.404 *11*		0.79 *23*			
x187.530 *4*		2.12 *8*	M1	1.06	α(K)=0.88; α(L)=0.143; α(M)=0.0329; α(N+..)=0.0102.
x188.175 *16*		0.29 *29*			
188.628[l] *49*	337.5236	0.32[l] *15*			
	467.208	0.32[l] *15*			
188.721 *5*	337.6483	2.43 *14*	M1+E2	0.7 *3*	α(K)=0.5 *4*; α(L)=0.155 *16*; α(M)=0.038 *6*; α(N+..)=0.0115 *16*.
x190.181 *15*		0.76 *5*	M1	1.02	α(K)=0.84; α(L)=0.137; α(M)=0.0316; α(N+..)=0.0098.
190.789 *12*	436.2960	0.67 *23*	E2,M1+E2	0.7 *3*	α(K)=0.5 *4*; α(L)=0.149 *14*; α(M)=0.036 *5*; α(N+..)=0.0111 *14*.
191.198 *7*	436.2960	0.72 *9*			
192.349 *23*	376.9981	0.34 *11*			
192.818 *29*	501.809	0.36 *11*	M1	0.98	α(K)=0.811; α(L)=0.132; α(M)=0.0304; α(N+..)=0.0094.
x193.685 *70*		0.50 *22*	M1	0.97	α(K)=0.801; α(L)=0.130; α(M)=0.0300; α(N+..)=0.0093.
193.928 *3*	337.5236	9.12 *27*	M1+E2	0.7 *3*	α(K)exp=0.4 *2*. α(K)=0.5 *3*; α(L)=0.141 *12*; α(M)=0.034 *5*; α(N+..)=0.0104 *12*.
194.217 *3*	278.5048	1.95 *11*	M1+E2	0.7 *3*	α(K)=0.5 *3*; α(L)=0.140 *11*; α(M)=0.034 *5*; α(N+..)=0.0104 *12*.
195.519 *3*	195.5269	8.99 *24*	E2	0.378	α(K)=0.182; α(L)=0.147; α(M)=0.0372; α(N+..)=0.0112.
x195.885 *16*		0.73 *16*	M1	0.94	α(K)=0.776; α(L)=0.126; α(M)=0.0291; α(N+..)=0.0090.
196.639 *23*	308.9739	0.44 *11*			
x196.753 *11*		0.73 *9*			
x197.281 *24*		1.37 *89*	E2,M1+E2	0.6 *3*	α(K)=0.5 *3*; α(L)=0.133 *9*; α(M)=0.032 *4*; α(N+..)=0.0098 *10*.

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^{193}Ir(n,γ) E=thermal 98Ba85,98Ba42,87CoZW (continued)

γ(^{194}Ir) (continued)

Eγ†	E(level)	Iγ†j	Mult.‡	α	Comments
x198.004 33		1.93 89	E1	0.0705	α(K)=0.0580; α(L)=0.0096; α(M)=0.00220; α(N+..)=0.00066.
198.101 5	347.0506	2.41 13	M1+E2	0.6 3	α(K)=0.5 3; α(L)=0.131 9; α(M)=0.032 4; α(N+..)=0.0097 10.
x198.457 12		1.02 13	M1	0.91	α(K)=0.748; α(L)=0.122; α(M)=0.0281; α(N+..)=0.0087.
198.834 3	337.5236	6.31 16	M1+E2	0.6 3	α(K)exp=0.4 2. α(K)=0.5 3; α(L)=0.129 8; α(M)=0.031 4; α(N+..)=0.0095 10.
x199.219 9		0.82 28			
x201.506 9		0.63 3			
x201.708 22		1.72 32	M1+E2,E2	0.6 3	α(K)=0.4 3; α(L)=0.123 7; α(M)=0.030 3; α(N+..)=0.0091 8.
x202.314 11		0.72 5			
x203.035 19		0.39 13	M1	0.85	α(K)=0.701; α(L)=0.114; α(M)=0.0263; α(N+..)=0.00813.
x203.241 13		0.81 11	M1	0.85	α(K)=0.699; α(L)=0.114; α(M)=0.0262; α(N+..)=0.00810.
x204.187 3		3.82 12	M1	0.84	α(K)exp=0.4 2. α(K)=0.690; α(L)=0.112; α(M)=0.0259; α(N+..)=0.00800.
205.065 4	542.5933	2.43 9	E1	0.0645	α(K)=0.0532; α(L)=0.0088; α(M)=0.00201; α(N+..)=0.00060.
x205.743 18		0.95 21	M1+E2,E2	0.6 3	α(K)=0.4 3; α(L)=0.114 5; α(M)=0.0277 24; α(N+..)=0.0084 7.
x206.229 8		0.97 10			
x206.425 18		0.87 35	M1+E2,E2	0.56 25	α(K)=0.4 3; α(L)=0.113 4; α(M)=0.0274 23; α(N+..)=0.0083 6.
x207.123 14		1.31 12	M1+E2	0.56 25	α(K)=0.4 3; α(L)=0.112 4; α(M)=0.0270 22; α(N+..)=0.0082 6.
x207.403 16		1.70 28	E1	0.0627	α(K)=0.0517; α(L)=0.0085; α(M)=0.00195; α(N+..)=0.00059.
x208.322 4		2.10 12	M1+E2	0.55 25	α(K)=0.40 25; α(L)=0.110 4; α(M)=0.0265 20; α(N+..)=0.0081 6.
x208.443 4		1.87 10	M1	0.790	α(K)=0.652; α(L)=0.106; α(M)=0.0245; α(N+..)=0.00754.
x209.056 10		0.99 13	M1	0.784	α(K)=0.647; α(L)=0.105; α(M)=0.0243; α(N+..)=0.00748.
209.595 6	518.5767	1.45 12	E1	0.0611	α(K)=0.0503; α(L)=0.00828; α(M)=0.00190; α(N+..)=0.00057.
x209.859 29		1.11 25	E1	0.0609	α(K)=0.0502; α(L)=0.00825; α(M)=0.00189; α(N+..)=0.00057.
x210.202 7		1.23 11	M1+E2	0.53 24	α(K)=0.39 25; α(L)=0.106 3; α(M)=0.0257 18; α(N+..)=0.0078 5.
211.133 4	489.6489	2.51 15	M1+E2	0.53 24	α(K)=0.39 24; α(L)=0.105 2; α(M)=0.0253 17; α(N+..)=0.0077 5.
x212.241 12		1.01 22			
212.346 2	296.6305	6.64 16	E2	0.286	α(K)=0.147; α(L)=0.104; α(M)=0.0263; α(N+..)=0.00792.
x212.978 9		0.83 16	M1	0.744	α(K)=0.614; α(L)=0.100; α(M)=0.0230; α(N+..)=0.00710.
x213.188 17		0.92 34			
x213.721 18		2.58 70	E1	0.0582	α(K)=0.0480; α(L)=0.00787; α(M)=0.00181; α(N+..)=0.00054.
x214.327 22		0.52 10	M1	0.731	α(K)=0.604; α(L)=0.098; α(M)=0.0226; α(N+..)=0.00697.
x215.248 32		0.62 13	M1	0.723	α(K)=0.597; α(L)=0.097; α(M)=0.0223; α(N+..)=0.00689.
215.991 11	376.9981	1.38 8	E2	0.270	α(K)=0.141; α(L)=0.097; α(M)=0.0245; α(N+..)=0.00738.
x216.903 6		1.81 16	M1	0.708	α(K)=0.584; α(L)=0.095; α(M)=0.0219; α(N+..)=0.00674.
x218.812 9		1.43 14	M1+E2	0.47 22	α(K)=0.35 22; α(L)=0.092; α(M)=0.0223 10; α(N+..)=0.0068 2.
x219.163 2		7.91 38	E2	0.257	α(K)=0.136; α(L)=0.092; α(M)=0.0231; α(N+..)=0.00695.
x219.314 28		1.22 31	M1+E2	0.47 22	α(K)=0.35 22; α(L)=0.092 1; α(M)=0.0221 9; α(N+..)=0.0067 2.
x219.827 15		0.68 9	M1	0.682	α(K)=0.563; α(L)=0.092; α(M)=0.0211; α(N+..)=0.00649.
222.392 12	371.282	0.92 10			
x223.211 34		0.70 24	M1	0.654	α(K)=0.540; α(L)=0.088; α(M)=0.0202; α(N+..)=0.00622.
x223.417 32		0.73 24	M1	0.652	α(K)=0.538; α(L)=0.088; α(M)=0.0201; α(N+..)=0.00620.
224.085 3	419.6108	7.71 23	M1	0.647	α(K)=0.534; α(L)=0.087; α(M)=0.0200; α(N+..)=0.00615.
x224.345 16		1.05 28	M1	0.645	α(K)=0.532; α(L)=0.087; α(M)=0.0199; α(N+..)=0.00613.

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^{193}Ir(n,γ) E=thermal 98Ba85,98Ba42,87CoZW (continued)

γ(^{194}Ir) (continued)

Eγ†	E(level)	Iγ†j	Mult.‡	α	Comments
225.412 *5*	337.6483	4.95 *12*	M1+E2	0.44 *20*	α(K)exp=0.7 *3*. α(K)=0.33 *20*; α(L)=0.083 *2*; α(M)=0.0201 *5*; α(N+..)=0.00612 *7*.
x226.299 *15*		1.63 *16*	M1	0.630	α(K)exp=1.1 *7*. α(K)=0.520; α(L)=0.084; α(M)=0.0194; α(N+..)=0.00598.
226.639 *2*	308.9739	8.41 *23*	M1+E2	0.43 *20*	α(K)exp=0.30 *11*. α(K)=0.32 *20*; α(L)=0.082 *2*; α(M)=0.0197 *4*; α(N+..)=0.00600 *5*.
228.070 *4*	376.9981	5.16 *34*	M1,M1+E2	0.42 *20*	α(K)=0.32 *20*; α(L)=0.080 *3*; α(M)=0.0193 *3*; α(N+..)=0.00587 *2*.
228.201 *4*	423.7271	4.20 *19*	M1+E2	0.42 *20*	α(K)=0.32 *20*; α(L)=0.080 *3*; α(M)=0.0193 *3*; α(N+..)=0.00586 *2*.
x228.518 *26*		0.99 *21*	M1	0.613	α(K)=0.506; α(L)=0.0822; α(M)=0.0189; α(N+..)=0.00582.
x229.269 *49*		2.25 *80*	E1	0.0488	α(K)=0.0403; α(L)=0.00657; α(M)=0.00151; α(N+..)=0.00045.
x230.467 *46*		0.59 *25*			
x230.565 *18*		1.22 *22*			
x230.627 *9*		1.12 *13*			
x230.882 *26*		0.66 *17*			
x231.751 *23*		1.64 *25*	M1+E2	0.40 *19*	α(K)=0.30 *19*; α(L)=0.076 *3*; α(M)=0.0183 *1*; α(N+..)=0.00556 *4*.
x231.901 *3*		5.12 *15*	M1	0.588	α(K)exp=0.34 *13*. α(K)=0.486; α(L)=0.0789; α(M)=0.0182; α(N+..)=0.00559.
x232.222 *26*		0.72 *23*	M1	0.586	α(K)=0.484; α(L)=0.0786; α(M)=0.0181; α(N+..)=0.00556.
x233.709 *11*		1.51 *12*	M1	0.576	α(K)=0.476; α(L)=0.0773; α(M)=0.0178; α(N+..)=0.00547.
x233.928 *25*		2.40 *83*	E1	0.0464	α(K)=0.0383; α(L)=0.00624; α(M)=0.00143; α(N+..)=0.00043.
x234.535 *4*		3.65 *19*	M1+E2	0.39 *19*	α(K)=0.29 *18*; α(L)=0.073 *4*; α(M)=0.0175 *1*; α(N+..)=0.00533 *8*.
234.817 *2*	347.0506	19.07 *42*	M1+E2	0.39 *19*	α(K)exp=0.28 *6*. α(K)=0.29 *18*; α(L)=0.073 *4*; α(M)=0.0174 *1*; α(N+..)=0.00531 *9*.
235.493 *5*	489.6489	3.44 *16*	M1	0.564	α(K)=0.466; α(L)=0.0756; α(M)=0.0174; α(N+..)=0.00535.
x235.707 *4*		3.82 *18*	M1	0.563	α(K)=0.464; α(L)=0.0755; α(M)=0.0173; α(N+..)=0.00534.
x236.777 *59*		0.29 *16*			
x239.549 *15*		1.01 *19*	M1+E2	0.37 *18*	α(K)=0.28 *17*; α(L)=0.068 *5*; α(M)=0.0163 *3*; α(N+..)=0.00496 *14*.
240.774 *5*	436.2960	2.84 *12*	M1+E2	0.36 *17*	α(K)=0.27 *17*; α(L)=0.067 *5*; α(M)=0.0160 *4*; α(N+..)=0.00488 *16*.
x241.759 *4*		3.30 *18*	M1+E2	0.36 *17*	α(K)=0.27 *17*; α(L)=0.066 *5*; α(M)=0.0158 *4*; α(N+..)=0.00481 *17*.
x242.314 *3*		4.55 *15*	M1+E2	0.35 *17*	α(K)exp(242.3γ+242.6γ)=0.57 *14*. α(K)=0.27 *17*; α(L)=0.065 *5*; α(M)=0.0157 *4*; α(N+..)=0.00477 *17*.
x242.571 *5*		2.17 *17*	M1+E2	0.35 *17*	α(K)=0.27 *17*; α(L)=0.065 *5*; α(M)=0.0156 *4*; α(N+..)=0.00475 *17*.
x243.647 *20*		0.89 *16*	M1+E2	0.35 *17*	α(K)=0.26 *16*; α(L)=0.064 *5*; α(M)=0.0154 *5*; α(N+..)=0.00468 *18*.
x243.885 *26*		1.22 *22*	E1	0.0419	α(K)=0.0346; α(L)=0.00561; α(M)=0.00129; α(N+..)=0.00039.
245.115 *3*	245.1100	6.06 *24*	E2	0.179	α(K)exp=0.13 *5*. α(K)=0.102; α(L)=0.0582; α(M)=0.0146; α(N+..)=0.00439.
245.491 *2*	245.4918	13.1 *3*	M1(+E2)	0.34 *17*	α(K)exp=0.17 *5*. α(K)=0.26 *16*; α(L)=0.063 *5*; α(M)=0.0150 *5*; α(N+..)=0.00457 *20*.
x245.734 *6*		3.05 *20*	M1+E2	0.34 *17*	α(K)=0.26 *16*; α(L)=0.062 *5*; α(M)=0.0149 *5*; α(N+..)=0.00455 *20*.
x245.943 *4*		3.20 *18*	M1+E2	0.34 *17*	α(K)=0.26 *16*; α(L)=0.062 *5*; α(M)=0.0149 *5*; α(N+..)=0.00454 *21*.
x246.051 *8*		1.70 *19*	M1	0.500	α(K)=0.413; α(L)=0.0670; α(M)=0.0154; α(N+..)=0.00473.
x246.397 *13*		1.47 *23*	M1+E2	0.34 *16*	α(K)=0.26 *16*; α(L)=0.062 *5*; α(M)=0.0148 *6*; α(N+..)=0.00451 *21*.
x247.041 *17*		0.69 *13*			

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$^{194}_{77}Ir_{117}$

^{193}Ir(n,γ) E=thermal 98Ba85,98Ba42,87CoZW (continued)

γ(^{194}Ir) (continued)

Eγ†	E(level)	Iγ†j	Mult.‡	α	Comments
247.655[l] *4*	501.809	1.99[l] *14*	M1	0.491	α(K)=0.405; α(L)=0.0658; α(M)=0.0151; α(N+..)=0.00465.
	518.5767	1.99[l] *14*	M1	0.491	α(K)=0.405; α(L)=0.0658; α(M)=0.0151; α(N+..)=0.00465.
x248.123 *17*		0.76 *8*			
248.599 *2*	519.517	10.29 *22*	M1	0.486	α(K)=0.401; α(L)=0.0651; α(M)=0.0150; α(N+..)=0.00460.
x249.789 *22*		1.63 *25*	E1	0.0395	α(K)=0.0327; α(L)=0.00528; α(M)=0.00121; α(N+..)=0.00036.
x250.170 *56*		1.20 *34*	E2	0.168	α(K)=0.096; α(L)=0.0537; α(M)=0.0134; α(N+..)=0.00405.
x250.526 *25*		1.03 *20*			
x250.686 *6*		2.10 *12*	M1+E2	0.32 *16*	α(K)=0.24 *15*; α(L)=0.058 *6*; α(M)=0.0140 *7*; α(N+..)=0.0043 *2*.
x251.031 *17*		0.51 *10*			
x251.311 *12*		0.87 *13*	M1+E2	0.32 *16*	α(K)=0.24 *15*; α(L)=0.058 *6*; α(M)=0.0139 *7*; α(N+..)=0.0042 *3*.
x251.695 *17*		2.0 *10*	E1	0.0388	α(K)=0.0321; α(L)=0.00518; α(M)=0.00119; α(N+..)=0.00036.
x251.866 *11*		1.02 *20*			
x252.044 *6*		2.23 *12*	M1	0.468	α(K)=0.386; α(L)=0.0627; α(M)=0.0144; α(N+..)=0.00443.
252.288 *4*	390.9632	4.70 *15*	M1+E2	0.31 *16*	α(K)exp=0.15 *6*. α(K)=0.24 *15*; α(L)=0.057 *6*; α(M)=0.0137 *7*; α(N+..)=0.0042 *3*.
253.288 *14*	524.217	1.51 *13*	M1+E2	0.31 *15*	α(K)=0.24 *15*; α(L)=0.056 *6*; α(M)=0.0135 *7*; α(N+..)=0.0041 *3*.
x254.868 *10*		1.33 *16*	M1	0.454	α(K)=0.374; α(L)=0.0608; α(M)=0.0140; α(N+..)=0.00429.
255.313 *4*	337.6483	15.39 *64*	M1+E2	0.30 *15*	α(K)exp=0.09 *3*. α(K)=0.23 *14*; α(L)=0.055 *6*; α(M)=0.0131 *8*; α(N+..)=0.0040 *3*.
x255.743 *9*		1.60 *16*	M1+E2	0.30 *15*	α(K)=0.23 *14*; α(L)=0.055 *6*; α(M)=0.0131 *8*; α(N+..)=0.0040 *3*.
x258.815 *45*		0.72 *15*			
x259.340 *26*		0.60 *13*	M1	0.432	α(K)=0.357; α(L)=0.0580; α(M)=0.0133; α(N+..)=0.00409.
259.949 *4*	407.017	2.70 *9*	M1	0.430	α(K)=0.355; α(L)=0.0576; α(M)=0.0132; α(N+..)=0.00406.
x261.762 *15*		0.94 *16*	M1	0.421	α(K)=0.348; α(L)=0.0565; α(M)=0.0130; α(N+..)=0.00398.
x261.963 *15*		1.25 *30*	M1	0.421	α(K)=0.347; α(L)=0.0564; α(M)=0.0129; α(N+..)=0.00397.
262.739 *3*	423.7271	5.82 *23*	M1+E2	0.28 *14*	α(K)=0.21 *13*; α(L)=0.050 *6*; α(M)=0.0119 *9*; α(N+..)=0.0036 *3*.
x263.064 *68*		1.13 *39*	M1,M1+E2	0.28 *14*	α(K)=0.21 *13*; α(L)=0.050 *6*; α(M)=0.0119 *9*; α(N+..)=0.0036 *3*.
x263.587 *65*		1.43 *39*	M1+E2	0.28 *14*	α(K)=0.21 *13*; α(L)=0.050 *6*; α(M)=0.0118 *9*; α(N+..)=0.0036 *3*.
x264.027 *7*		2.47 *16*	M1	0.412	α(K)=0.340; α(L)=0.0552; α(M)=0.0127; α(N+..)=0.00389.
264.744 *3*	376.9981	33.77 *79*	M1+E2	0.27 *14*	α(K)=0.21 *13*; α(L)=0.049 *6*; α(M)=0.0117 *10*; α(N+..)=0.0035 *4*.
x265.093 *23*		1.75 *37*	M1	0.407	α(K)=0.336; α(L)=0.0546; α(M)=0.0125; α(N+..)=0.00385.
265.383 *50*	519.517	1.08 *88*			
x265.625 *31*		1.75 *46*	E1	0.0340	α(K)=0.0281; α(L)=0.00452; α(M)=0.00104; α(N+..)=0.00031.
x266.168 *8*		1.25 *17*	M1	0.403	α(K)=0.332; α(L)=0.0540; α(M)=0.0124; α(N+..)=0.00380.
x267.835 *2*		8.45 *26*	M1	0.396	α(K)exp=0.10 *6*. α(K)=0.327; α(L)=0.0530; α(M)=0.0122; α(N+..)=0.00374.
x269.069 *7*		1.53 *10*	M1+E2	0.26 *13*	α(K)=0.20 *13*; α(L)=0.046 *6*; α(M)=0.0110 *10*; α(N+..)=0.0034 *4*.
x269.307 *10*		1.46 *10*	M1+E2	0.26 *13*	α(K)=0.20 *13*; α(L)=0.046 *6*; α(M)=0.0110 *10*; α(N+..)=0.0034 *4*.
x269.518 *6*		1.94 *24*	E1	0.0328	α(K)=0.0272; α(L)=0.00436; α(M)=0.00100; α(N+..)=0.00030.
x270.152 *20*		0.95 *13*	M1+E2	0.26 *13*	α(K)=0.20 *12*; α(L)=0.046 *6*; α(M)=0.0109 *10*; α(N+..)=0.0033 *4*.
271.676[l] *3*	467.208	24.08[l] *43*	E2	0.129	α(K)exp=0.09 *3*. α(K)=0.0779; α(L)=0.0389; α(M)=0.0097; α(N+..)=0.00292.
	542.5933	24.08[l] *43*	E2	0.129	α(K)exp=0.09 *3*. α(K)=0.0779; α(L)=0.0389; α(M)=0.0097; α(N+..)=0.00292.

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^{193}Ir(n,γ) E=thermal 98Ba85,98Ba42,87CoZW (continued)

γ(^{194}Ir) (continued)

Eγ†	E(level)	Iγ†j	Mult.‡	α	Comments
x273.085 *34*		1.50 *31*	E1	0.0318	α(K)=0.0263; α(L)=0.00422; α(M)=0.00097; α(N+..)=0.00029.
x273.228 *10*		1.68 *12*	M1	0.375	α(K)=0.309; α(L)=0.0502; α(M)=0.0115; α(N+..)=0.00354.
x274.473 *9*		1.29 *13*	M1	0.370	α(K)=0.306; α(L)=0.0496; α(M)=0.0114; α(N+..)=0.00349.
x275.112 *37*		1.84 *54*	E1	0.0312	α(K)=0.0259; α(L)=0.00414; α(M)=0.00095; α(N+..)=0.00028.
275.292 *2*	436.2960	24.28 *38*	M1,M1+E2	0.25 *13*	α(K)exp=0.15 *4*. α(K)=0.19 *12*; α(L)=0.043 *7*; α(M)=0.0102 *11*; α(N+..)=0.0031 *4*.
276.667 *24*	423.7271	1.47 *24*			
x276.742 *13*		0.92 *14*			
x277.494 *6*		2.21 *9*	M1	0.359	α(K)=0.297; α(L)=0.0481; α(M)=0.0110; α(N+..)=0.00339.
278.502 *3*	278.5048	76.2 *19*	M1,M1+E2	0.24 *12*	α(K)exp=0.09 *2*. α(K)=0.18 *11*; α(L)=0.041 *7*; α(M)=0.0099 *11*; α(N+..)=0.0030 *4*.
280.956 *24*	419.6108	0.86 *14*			
x281.358 *12*		1.22 *14*			
x281.982 *26*		1.86 *41*	E1	0.0294	α(K)=0.0244; α(L)=0.00389; α(M)=0.00089; α(N+..)=0.00027.
282.515 *33*	467.208	1.40 *34*	M1+E2	0.23 *12*	α(K)=0.18 *11*; α(L)=0.040 *7*; α(M)=0.0094 *11*; α(N+..)=0.0029 *4*.
x282.646 *8*		1.85 *11*	E1	0.0293	α(K)=0.0242; α(L)=0.00387; α(M)=0.00089; α(N+..)=0.00027.
x283.260 *12*		1.02 *14*	M1	0.339	α(K)=0.280; α(L)=0.0455; α(M)=0.0104; α(N+..)=0.00320.
x284.288 *15*		1.31 *13*	M1	0.336	α(K)=0.278; α(L)=0.0450; α(M)=0.0103; α(N+..)=0.00317.
x285.146 *11*		2.47 *20*	M1+E2	0.22 *11*	α(K)=0.17 *11*; α(L)=0.038 *7*; α(M)=0.0091 *11*; α(N+..)=0.0028 *4*.
x285.820 *37*		1.24 *14*	E2	0.111	α(K)=0.0684; α(L)=0.0320; α(M)=0.00796; α(N+..)=0.00240.
288.423 *8*	542.5933	4.95 *25*	E1	0.0279	α(K)=0.0231; α(L)=0.00368; α(M)=0.00084; α(N+..)=0.00025.
x289.981 *43*		0.97 *22*	M1+E2	0.21 *11*	α(K)=0.16 *10*; α(L)=0.036 *7*; α(M)=0.0087 *12*; α(N+..)=0.0026 *4*.
x290.516 *9*		2.18 *16*	M1	0.317	α(K)=0.262; α(L)=0.0424; α(M)=0.0097; α(N+..)=0.00299.
x290.913 *10*		1.79 *11*	M1	0.316	α(K)=0.261; α(L)=0.0423; α(M)=0.0097; α(N+..)=0.00297.
292.665[l] *58*	376.9981	1.69[l] *51*	M1+E2	0.21 *11*	α(K)=0.16 *10*; α(L)=0.035 *7*; α(M)=0.0084 *12*; α(N+..)=0.0026 *4*.
	436.2960	1.69[l] *51*	M1+E2	0.21 *11*	α(K)=0.16 *10*; α(L)=0.035 *7*; α(M)=0.0084 *12*; α(N+..)=0.0026 *4*.
x293.123 *26*		1.32 *48*	M1	0.309	α(K)=0.255; α(L)=0.0414; α(M)=0.0095; α(N+..)=0.00291.
294.411 *28*	337.5236	3.2 *13*	M1	0.306	α(K)=0.252; α(L)=0.0409; α(M)=0.0094; α(N+..)=0.00288.
294.531 *6*	337.6483	17.50 *74*	M1+E2	0.20 *11*	α(K)=0.16 *10*; α(L)=0.035 *7*; α(M)=0.0082 *12*; α(N+..)=0.0025 *4*.
x295.198 *55*		1.19 *34*			
x295.283 *20*		1.69 *18*			
297.597 *10*	436.2960	1.76 *14*	M1	0.297	α(K)=0.245; α(L)=0.0397; α(M)=0.0091; α(N+..)=0.00279.
x297.839 *14*		1.65 *11*	M1+E2	0.20 *10*	α(K)=0.15 *10*; α(L)=0.034 *7*; α(M)=0.0079 *12*; α(N+..)=0.0024 *4*.
x298.561 *33*		0.96 *19*	M1	0.294	α(K)=0.243; α(L)=0.0394; α(M)=0.0090; α(N+..)=0.00277.
x298.856 *10*		1.82 *15*	E1	0.0256	α(K)=0.0212; α(L)=0.00337; α(M)=0.00077; α(N+..)=0.00023.
x299.567 *20*		1.91 *23*	M1+E2	0.19 *10*	α(K)=0.15 *9*; α(L)=0.033 *7*; α(M)=0.0078 *12*; α(N+..)=0.0024 *4*.
x299.765 *75*		1.86 *68*	E1	0.0254	α(K)=0.0211; α(L)=0.00335; α(M)=0.00077; α(N+..)=0.00023.
x301.356 *9*		1.37 *21*	M1	0.287	α(K)=0.237; α(L)=0.0384; α(M)=0.0088; α(N+..)=0.00270.
x301.800 *25*		0.98 *18*			
x301.877 *28*		1.85 *29*			
x302.698 *37*		2.77 *70*	E1	0.0248	α(K)=0.0206; α(L)=0.00327; α(M)=0.00075; α(N+..)=0.00023.
x303.085 *27*		1.32 *10*			
x304.666 *4*		5.86 *22*	M1	0.279	α(K)=0.230; α(L)=0.0372; α(M)=0.0085; α(N+..)=0.00262.
304.982 *15*	489.6489	1.61 *19*	M1	0.278	α(K)=0.229; α(L)=0.0371; α(M)=0.0085; α(N+..)=0.00261.

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^{193}Ir(n,γ) E=thermal 98Ba85,98Ba42,87CoZW (continued)

γ(^{194}Ir) (continued)

Eγ†	E(level)	Iγ†j	Mult.‡	α	Comments
x305.687 *7*		2.33 *12*	M1+E2	0.18 *10*	α(K)=0.14 *9*; α(L)=0.031 *6*; α(M)=0.0073 *12*; α(N+..)=0.0022 *4*.
306.240[l] *28*	467.208	1.52[l] *23*	M1	0.275	α(K)=0.227; α(L)=0.0367; α(M)=0.0084; α(N+..)=0.00258.
	501.809	1.52[l] *23*	M1	0.275	α(K)=0.227; α(L)=0.0367; α(M)=0.0084; α(N+..)=0.00258.
x307.805 *24*		1.15 *24*	M1+E2	0.18 *10*	α(K)=0.14 *9*; α(L)=0.030 *6*; α(M)=0.0072 *12*; α(N+..)=0.0022 *4*.
308.975 *2*	308.9739	24.49 *64*	M1+E2	0.18 *9*	α(K)exp=0.06 *2*. α(K)=0.14 *9*; α(L)=0.030 *6*; α(M)=0.0071 *12*; α(N+..)=0.0022 *4*.
x309.509 *14*		1.82 *14*	M1+E2	0.18 *9*	α(K)=0.14 *9*; α(L)=0.030 *6*; α(M)=0.0070 *12*; α(N+..)=0.0021 *4*.
x309.946 *38*		1.20 *42*	E1	0.0235	α(K)=0.0195; α(L)=0.00308; α(M)=0.00071; α(N+..)=0.00021.
x310.196 *26*		1.51 *28*	M1+E2	0.18 *9*	α(K)=0.14 *9*; α(L)=0.029 *6*; α(M)=0.0070 *12*; α(N+..)=0.0021 *4*.
x310.594 *2*		11.62 *24*	M1+E2	0.18 *9*	α(K)=0.14 *9*; α(L)=0.029 *6*; α(M)=0.0070 *12*; α(N+..)=0.0021 *4*.
x311.265 *16*		1.70 *26*	E1	0.0232	α(K)=0.0193; α(L)=0.00305; α(M)=0.00070; α(N+..)=0.00021.
311.492 *4*	423.7271	7.03 *20*	M1+E2	0.17 *9*	α(K)=0.14 *8*; α(L)=0.029 *6*; α(M)=0.0069 *12*; α(N+..)=0.0021 *4*.
x311.730 *31*		0.80 *26*			
x312.851 *15*		1.01 *13*			
x313.130 *43*		1.57 *26*			
x313.191 *20*		1.42 *18*			
314.065 *6*	314.0527	11.36 *84*	M1+E2	0.17 *9*	α(K)=0.13 *8*; α(L)=0.028 *6*; α(M)=0.0067 *12*; α(N+..)=0.0020 *4*.
x314.815 *15*		1.69 *17*	E1	0.0226	α(K)=0.0188; α(L)=0.00297; α(M)=0.00068; α(N+..)=0.00020.
x315.520 *59*		1.06 *30*	M1+E2,E2	0.17 *9*	α(K)=0.13 *8*; α(L)=0.028 *6*; α(M)=0.0066 *12*; α(N+..)=0.0020 *4*.
x316.423 *43*		2.61 *34*	E1	0.0223	α(K)=0.0185; α(L)=0.00293; α(M)=0.00067; α(N+..)=0.00020.
x317.117 *6*		3.41 *18*	E1	0.0222	α(K)=0.0184; α(L)=0.00292; α(M)=0.00067; α(N+..)=0.00020.
x319.390 *47*		2.16 *86*	M1+E2,E2	0.16 *9*	α(K)=0.13 *8*; α(L)=0.027 *6*; α(M)=0.0064 *12*; α(N+..)=0.0019 *4*.
x319.850 *4*		3.80 *17*	E1	0.0218	α(K)=0.0181; α(L)=0.00286; α(M)=0.00065; α(N+..)=0.00020.
x320.543 *54*		0.89 *19*			
x320.844 *42*		1.52 *25*	M1+E2	0.16 *9*	α(K)=0.13 *8*; α(L)=0.027 *6*; α(M)=0.0063 *12*; α(N+..)=0.0019 *4*.
x321.543 *21*		1.32 *17*	M1+E2	0.16 *9*	α(K)=0.12 *8*; α(L)=0.026 *6*; α(M)=0.0062 *12*; α(N+..)=0.0019 *4*.
x321.681 *34*		1.33 *17*	M1+E2	0.16 *9*	α(K)=0.12 *8*; α(L)=0.026 *6*; α(M)=0.0062 *12*; α(N+..)=0.0019 *4*.
322.605 *59*	407.017	0.60 *14*			
323.037 *40*	518.5767	1.04 *19*			
323.86[l] *11*	436.2960	1.39[l] *69*			
	467.208	1.39[l] *69*			
x324.265 *3*		7.82 *29*	M1+E2	0.16 *8*	α(K)=0.12 *8*; α(L)=0.026 *6*; α(M)=0.0061 *12*; α(N+..)=0.0018 *4*.
x324.988 *3*		12.65 *43*	M1	0.234	α(K)=0.193; α(L)=0.0312; α(M)=0.00716; α(N+..)=0.00220.
x325.513 *10*		1.50 *18*	M1	0.233	α(K)=0.193; α(L)=0.0311; α(M)=0.00713; α(N+..)=0.00219.
x329.318 *15*		1.90 *24*	M1+E2	0.15 *8*	α(K)=0.12 *7*; α(L)=0.025 *6*; α(M)=0.0058 *12*; α(N+..)=0.0018 *4*.
x329.542 *17*		1.86 *25*	M1+E2	0.15 *8*	α(K)=0.12 *7*; α(L)=0.024 *6*; α(M)=0.0058 *12*; α(N+..)=0.0018 *4*.
x330.148 *39*		1.37 *34*	M1+E2	0.15 *8*	α(K)=0.12 *7*; α(L)=0.024 *6*; α(M)=0.0057 *12*; α(N+..)=0.0017 *4*.

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$^{194}_{77}Ir_{117}$

^{193}Ir(n,γ) E=thermal 98Ba85,98Ba42,87CoZW (continued)

γ(^{194}Ir) (continued)

Eγ†	E(level)	Iγ†j	Mult.‡	α	Comments
x330.418 *3*		7.27 *24*	M1	0.224	α(K)exp=0.19 *6*. α(K)=0.185; α(L)=0.0298; α(M)=0.00684; α(N+..)=0.00210.
x331.099 *23*		1.36 *23*	M1+E2	0.15 *8*	α(K)=0.12 *7*; α(L)=0.024 *6*; α(M)=0.0057 *12*; α(N+..)=0.0017 *4*.
x333.443 *34*		2.24 *62*	E1	0.0197	α(K)=0.0164; α(L)=0.00259; α(M)=0.00059; α(N+..)=0.00018.
334.120 *77*	518.5767	1.18 *23*	E1	0.0196	α(K)=0.0163; α(L)=0.00257; α(M)=0.00059; α(N+..)=0.00018.
x335.095 *6*		4.30 *18*	M1+E2	0.14 *8*	α(K)=0.11 *7*; α(L)=0.023 *6*; α(M)=0.0055 *11*; α(N+..)=0.0017 *4*.
x336.374 *43*		1.16 *33*			
337.531 *4*	337.5236	26.34 *58*	M1	0.211	α(K)exp=0.04 *2*. α(K)=0.175; α(L)=0.0282; α(M)=0.00646; α(N+..)=0.00198.
x338.152 *15*		2.14 *25*	E1	0.0191	α(K)=0.0159; α(L)=0.00250; α(M)=0.00057; α(N+..)=0.00017.
x338.571 *22*		1.19 *33*	M1	0.210	α(K)=0.173; α(L)=0.0279; α(M)=0.00640; α(N+..)=0.00196.
340.813 *4*	501.809	32.78 *52*	M1	0.206	α(K)exp=0.09 *2*. α(K)=0.170; α(L)=0.0274; α(M)=0.00629; α(N+..)=0.00193.
x341.733 *31*		2.46 *56*			
x341.899 *14*		3.03 *32*			
x342.162 *8*		2.73 *16*	E1	0.0186	α(K)=0.0154; α(L)=0.00243; α(M)=0.00056; α(N+..)=0.00017.
x342.472 *6*		4.21 *25*	E2	0.0651	α(K)=0.0434; α(L)=0.0164; α(M)=0.00404; α(N+..)=0.00122.
x343.331 *57*		1.64 *66*			
x343.508 *28*		1.20 *16*			
x344.664 *66*		0.82 *20*	M1	0.200	α(K)=0.165; α(L)=0.0266; α(M)=0.00610; α(N+..)=0.00187.
x345.237 *6*		3.36 *10*	M1	0.199	α(K)=0.165; α(L)=0.0265; α(M)=0.00607; α(N+..)=0.00186.
346.040 *51*	489.6489	1.21 *24*			
x346.693 *37*		3.05 *81*	E2	0.0629	α(K)=0.0421; α(L)=0.0157; α(M)=0.00387; α(N+..)=0.00117.
347.064 *5*	347.0506	3.84 *20*	E2	0.0627	α(K)=0.0420; α(L)=0.0156; α(M)=0.00385; α(N+..)=0.00116.
x347.234 *20*		2.41 *25*	M1+E2	0.13 *7*	α(K)=0.10 *6*; α(L)=0.021 *6*; α(M)=0.0049 *11*; α(N+..)=0.0015 *4*.
x348.268 *35*		1.31 *17*	E1	0.0178	α(K)=0.0148; α(L)=0.00233; α(M)=0.00053; α(N+..)=0.00016.
x349.062 *72*		0.89 *25*			
x349.576 *51*		1.64 *32*			
x350.259 *72*		0.54 *20*			
x350.717 *19*		1.22 *13*			
350.914 *67*	489.6489	0.91 *21*			
x351.107 *56*		1.12 *20*			
x352.361 *13*		1.57 *17*			
353.963 *2*	436.2960	22.01 *64*	M1	0.186	α(K)exp=0.04 *2*. α(K)=0.154; α(L)=0.0247; α(M)=0.00567; α(N+..)=0.00174.
x354.289 *21*		2.29 *35*			
x356.430 *18*		1.57 *24*			
x357.768 *7*		2.38 *29*	E2,M1+E2	0.12 *7*	α(K)=0.09 *6*; α(L)=0.019 *5*; α(M)=0.0045 *11*; α(N+..)=0.0014 *4*.
x358.000 *37*		1.09 *25*			
358.200 *38*	501.809	1.20 *26*			
x359.248 *16*		1.58 *61*			
x359.739 *10*		2.91 *24*	M1	0.178	α(K)=0.147; α(L)=0.0237; α(M)=0.00543; α(N+..)=0.00167.

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^{193}Ir(n,γ) E=thermal 98Ba85,98Ba42,87CoZW (continued)

γ(^{194}Ir) (continued)

Eγ†	E(level)	Iγ†j	Mult.‡	α	Comments
x360.423 *3*		12.13 *30*	M1+E2	0.12 *6*	α(K)=0.09 *6*; α(L)=0.019 *5*; α(M)=0.0044 *11*; α(N+..)=0.0013 *4*.
x360.856 *7*		4.88 *36*	M1	0.177	α(K)=0.146; α(L)=0.0235; α(M)=0.00539; α(N+..)=0.00165.
x361.435 *62*		2.45 *89*	E1	0.0164	α(K)=0.0136; α(L)=0.00214; α(M)=0.00049; α(N+..)=0.00015.
x361.567 *98*		1.26 *31*			
x361.726 *70*		1.84 *48*	M1+E2	0.12 *6*	α(K)=0.09 *6*; α(L)=0.018 *5*; α(M)=0.0043 *11*; α(N+..)=0.0013 *4*.
363.142 *11*	501.809	1.79 *21*	M1	0.174	α(K)=0.144; α(L)=0.0231; α(M)=0.00530; α(N+..)=0.00162.
x364.257 *78*		2.81 *58*	E1	0.0161	α(K)=0.0134; α(L)=0.00210; α(M)=0.00048; α(N+..)=0.00014.
x364.522 *17*		2.20 *29*	M1+E2	0.11 *6*	α(K)=0.09 *6*; α(L)=0.018 *5*; α(M)=0.0042 *10*; α(N+..)=0.0013 *4*.
x364.880 *5*		4.13 *29*	E1	0.0160	α(K)=0.0133; α(L)=0.00209; α(M)=0.00048; α(N+..)=0.00014.
x367.216 *58*		3.0 *11*	E1	0.0158	α(K)=0.0131; α(L)=0.00206; α(M)=0.00047; α(N+..)=0.00014.
x370.517 *18*		2.76 *35*	M1,M1+E2	0.11 *6*	α(K)=0.09 *5*; α(L)=0.017 *5*; α(M)=0.0040 *10*; α(N+..)=0.0012 *3*.
x370.866 *26*		1.65 *18*	M1	0.164	α(K)=0.136; α(L)=0.0218; α(M)=0.00500; α(N+..)=0.00153.
371.502 *2*	518.5767	90.6 *24*	E2	0.0518	Mult.: from 93BaZP, 94KoZQ. α(K)exp=0.018 *6* gives E1 multipolarity (80SiZS, 79SiZU). α(K)=0.0356; α(L)=0.0123; α(M)=0.00302; α(N+..)=0.00091.
372.475 *29*	519.517	1.88 *20*	M1	0.162	α(K)=0.134; α(L)=0.0216; α(M)=0.00494; α(N+..)=0.00152.
x372.969 *30*		1.28 *20*	M1	0.162	α(K)=0.134; α(L)=0.0215; α(M)=0.00493; α(N+..)=0.00151.
x373.845 *9*		2.94 *16*	M1+E2	0.11 *6*	α(K)=0.08 *5*; α(L)=0.017 *5*; α(M)=0.0039 *10*; α(N+..)=0.0012 *3*.
x374.827 *25*		1.15 *13*	E1	0.0151	α(K)=0.0125; α(L)=0.00196; α(M)=0.00045; α(N+..)=0.00013.
377.346 *61*	489.6489	2.13 *43*			
x377.463 *15*		1.92 *79*			
x378.182 *11*		2.01 *30*	M1	0.156	α(K)=0.129; α(L)=0.0207; α(M)=0.00475; α(N+..)=0.00146.
x378.615 *9*		3.00 *14*	M1+E2	0.10 *6*	α(K)=0.08 *5*; α(L)=0.016 *5*; α(M)=0.0038 *10*; α(N+..)=0.0012 *3*.
x380.308 *35*		3.02 *45*	(E2)	0.0486	α(K)=0.0336; α(L)=0.0114; α(M)=0.00278; α(N+..)=0.00084.
x381.636 *27*		1.15 *22*	M1	0.152	α(K)=0.126; α(L)=0.0202; α(M)=0.00463; α(N+..)=0.00142.
x381.968 *49*		1.63 *26*	M1	0.152	α(K)=0.126; α(L)=0.0201; α(M)=0.00462; α(N+..)=0.00142.
382.906 *50*	467.208	3.7 *10*			
x382.984 *6*		4.43 *25*			
x383.459 *47*		3.10 *75*	M1+E2	0.10 *6*	α(K)=0.08 *5*; α(L)=0.015 *5*; α(M)=0.0036 *10*; α(N+..)=0.0011 *3*.
x383.676 *3*		15.30 *42*	M1	0.150	α(K)exp=0.06 *3*. α(K)=0.124; α(L)=0.0199; α(M)=0.00456; α(N+..)=0.00140.
x385.155 *61*		2.10 *36*			
x385.238 *26*		2.72 *46*			
x386.015 *55*		3.54 *89*	E2	0.0467	α(K)=0.0325; α(L)=0.0108; α(M)=0.00264; α(N+..)=0.00080.
x386.714 *73*		4.45 *67*	E1	0.0140	α(K)=0.0117; α(L)=0.00182; α(M)=0.00042; α(N+..)=0.00013.
x388.919 *12*		1.85 *19*			
x389.081 *24*		4.25 *33*			

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$^{194}_{77}Ir_{117}$

^{193}Ir(n,γ) E=thermal 98Ba85,98Ba42,87CoZW (continued)

γ(^{194}Ir) (continued)

Eγ†	E(level)	Iγ†j	Mult.‡	α	Comments
x389.166 *7*		3.42 *20*	M1	0.144	α(K)=0.120; α(L)=0.0191; α(M)=0.00439; α(N+..)=0.00135.
x389.28 *10*		3.11 *65*	E1	0.0138	α(K)=0.0115; α(L)=0.00180; α(M)=0.00041; α(N+..)=0.00012.
389.698 *79*	501.809	2.90 *73*	M1+E2	0.09 *5*	α(K)=0.08 *5*; α(L)=0.015 *5*; α(M)=0.0035 *10*; α(N+..)=0.0011 *3*.
x390.147 *18*		1.27 *14*	M1	0.144	α(K)=0.119; α(L)=0.0190; α(M)=0.00436; α(N+..)=0.00134.
x390.777 *25*		2.40 *32*	E2	0.0452	α(K)=0.0315; α(L)=0.0103; α(M)=0.00253; α(N+..)=0.00077.
390.961 *2*	390.9632	24.79 *54*	M1	0.143	α(K)=0.118; α(L)=0.0189; α(M)=0.00434; α(N+..)=0.00133.
x391.497 *45*		3.31 *85*	E1	0.0136	α(K)=0.0113; α(L)=0.00177; α(M)=0.00040; α(N+..)=0.00012.
x392.002 *13*		2.13 *23*	M1	0.142	α(K)=0.117; α(L)=0.0188; α(M)=0.00431; α(N+..)=0.00132.
x394.026 *29*		1.48 *20*	M1+E2	0.09 *5*	α(K)=0.07 *5*; α(L)=0.014 *5*; α(M)=0.0034 *9*; α(N+..)=0.0010 *3*.
x394.329 *66*		2.09 *56*			
x394.516 *25*		1.83 *20*	M1	0.139	α(K)=0.115; α(L)=0.0185; α(M)=0.00424; α(N+..)=0.00130.
x396.123 *11*		2.64 *17*	M1	0.138	α(K)=0.114; α(L)=0.0183; α(M)=0.00419; α(N+..)=0.00129.
x396.319 *61*		2.77 *35*	E1	0.0133	α(K)=0.0110; α(L)=0.00172; α(M)=0.00039; α(N+..)=0.00012.
x396.784 *6*		5.22 *16*	M1	0.137	α(K)=0.114; α(L)=0.0182; α(M)=0.00417; α(N+..)=0.00128.
x398.866 *54*		3.05 *56*			
x398.948 *35*		1.43 *16*			
x399.588 *9*		3.21 *22*	M1	0.135	α(K)=0.111; α(L)=0.0178; α(M)=0.00409; α(N+..)=0.00126.
x400.316 *26*		1.47 *21*			
x400.627 *23*		1.81 *48*			
x401.782 *6*		5.05 *18*	M1+E2	0.09 *5*	α(K)=0.07 *4*; α(L)=0.013 *4*; α(M)=0.0032 *9*; α(N+..)=0.0010 *3*.
x402.580 *21*		1.46 *17*	M1	0.132	α(K)=0.109; α(L)=0.0175; α(M)=0.00401; α(N+..)=0.00123.
405.351 *6*	489.6489	4.77 *20*	M1	0.130	α(K)=0.107; α(L)=0.0172; α(M)=0.00394; α(N+..)=0.00121.
x405.602 *69*		4.41 *57*	E2	0.0409	α(K)=0.0289; α(L)=0.0091; α(M)=0.00223; α(N+..)=0.00067.
407.325 *8*	489.6489	5.51 *62*	M1	0.128	α(K)=0.106; α(L)=0.0169; α(M)=0.00389; α(N+..)=0.00119.
x407.540 *17*		3.21 *47*	M1	0.128	α(K)=0.106; α(L)=0.0169; α(M)=0.00388; α(N+..)=0.00119.
x409.544 *24*		1.81 *16*			
x410.582 *13*		2.64 *15*	M1+E2	0.08 *5*	α(K)=0.07 *4*; α(L)=0.013 *4*; α(M)=0.0030 *9*; α(N+..)=0.0009 *3*.
411.898 *39*	524.217	5.37 *66*	E1	0.0122	α(K)=0.0101; α(L)=0.00158; α(M)=0.00036; α(N+..)=0.00011.
x412.491 *65*		3.24 *53*	E1	0.0121	α(K)=0.0101; α(L)=0.00157; α(M)=0.00036; α(N+..)=0.00011.
x413.526 *8*		3.58 *18*	M1	0.123	α(K)=0.102; α(L)=0.0163; α(M)=0.00373; α(N+..)=0.00115.
x413.813 *63*		1.44 *72*	M1+E2	0.08 *5*	α(K)=0.06 *4*; α(L)=0.012 *4*; α(M)=0.0029 *9*; α(N+..)=0.0009 *3*.
x414.468 *27*		1.78 *29*	M1,M1+E2	0.08 *5*	α(K)=0.06 *4*; α(L)=0.012 *4*; α(M)=0.0029 *9*; α(N+..)=0.0009 *3*.
x414.783 *3*		26.41 *60*	M1	0.122	α(K)exp=0.05 *2*. α(K)=0.101; α(L)=0.0161; α(M)=0.00370; α(N+..)=0.00114.
x415.426 *31*		1.49 *26*	M1	0.121	α(K)=0.101; α(L)=0.0161; α(M)=0.00369; α(N+..)=0.00113.

Continued on next page (footnotes at end of table)

$^{194}_{77}Ir_{117}$

^{193}Ir(n,γ) E=thermal 98Ba85,98Ba42,87CoZW (continued)

γ(^{194}Ir) (continued)

Eγ†	E(level)	Iγ†j	Mult.‡	α	Comments
417.526 *61*	501.809	1.12 *31*	M1	0.120	α(K)=0.099; α(L)=0.0158; α(M)=0.00364; α(N+..)=0.00112.
x418.144 *3*		26.13 *72*	M1	0.119	α(K)=0.099; α(L)=0.0158; α(M)=0.00362; α(N+..)=0.00111.
x419.536 *19*		1.90 *19*			
x420.846 *5*		5.74 *17*	M1	0.117	α(K)=0.097; α(L)=0.0155; α(M)=0.00356; α(N+..)=0.00109.
x422.532 *27*		1.37 *30*			
x422.785 *33*		1.26 *18*			
423.743 *37*	423.7271	0.99 *21*	M1	0.115	α(K)=0.095; α(L)=0.0152; α(M)=0.00350; α(N+..)=0.00107.
x424.041 *38*		0.99 *22*	E2	0.0364	α(K)=0.0260; α(L)=0.00787; α(M)=0.00192; α(N+..)=0.00058.
424.207 *68*	467.208	2.66 *34*	E2	0.0363	α(K)=0.0260; α(L)=0.00786; α(M)=0.00192; α(N+..)=0.00058.
x424.323 *46*		1.05 *22*			
x425.270 *73*		2.81 *37*	E1	0.0113	α(K)=0.0094; α(L)=0.00147; α(M)=0.00033; α(N+..)=0.00010.
x425.444 *12*		2.19 *25*	M1+E2	0.08 *4*	α(K)=0.06 *4*; α(L)=0.011 *4*; α(M)=0.0027 *8*; α(N+..)=0.00082 *25*.
x426.66 *12*		1.30 *30*	M1+E2	0.07 *4*	α(K)=0.06 *4*; α(L)=0.011 *4*; α(M)=0.0027 *8*; α(N+..)=0.00081 *25*.
x430.053 *29*		1.95 *20*	M1+E2	0.07 *4*	α(K)=0.06 *4*; α(L)=0.011 *4*; α(M)=0.0026 *8*; α(N+..)=0.00079 *24*.
430.399 *82*	542.5933	1.44 *96*			
x431.050 *67*		1.61 *80*			
x431.324 *30*		1.40 *27*			
x431.526 *65*		4.07 *89*	E1	0.0110	α(K)=0.0092; α(L)=0.00142; α(M)=0.00032.
x432.449 *28*		1.87 *23*	M1+E2	0.07 *4*	α(K)=0.06 *4*; α(L)=0.011 *4*; α(M)=0.0026 *8*; α(N+..)=0.00078 *24*.
x432.739 *51*		2.52 *45*			
x432.848 *15*		4.66 *68*			
x432.935 *41*		3.56 *61*	E1	0.0109	α(K)=0.0091; α(L)=0.00141; α(M)=0.00032.
x433.374 *14*		2.23 *32*	M1	0.108	α(K)=0.090; α(L)=0.0143; α(M)=0.00329; α(N+..)=0.00101.
x434.897 *19*		1.90 *32*			
x435.840 *9*		3.87 *31*	M1+E2	0.07 *4*	α(K)=0.06 *4*; α(L)=0.011 *4*; α(M)=0.0025 *8*; α(N+..)=0.00076 *24*.
436.281[l] *16*	436.2960	2.63[l] *30*	M1	0.107	α(K)=0.088; α(L)=0.0141; α(M)=0.00324; α(N+..)=0.00099.
	518.5767	2.63[l] *30*	M1	0.107	α(K)=0.088; α(L)=0.0141; α(M)=0.00324; α(N+..)=0.00099.
x436.538 *20*		2.33 *22*			
x437.191 *62*		2.34 *46*			
x437.322 *99*		2.35 *66*			
x438.339 *40*		1.25 *42*			
x440.458 *10*		9.47 *32*	M1	0.104	α(K)=0.086; α(L)=0.0137; α(M)=0.00315; α(N+..)=0.00097.
x440.932 *24*		1.90 *25*	M1	0.104	α(K)=0.086; α(L)=0.0137; α(M)=0.00315; α(N+..)=0.00097.
x441.21 *12*		3.09 *71*			
x441.349 *19*		1.97 *41*			
x443.212 *73*		1.70 *62*	M1+E2	0.07 *4*	α(K)=0.05 *3*; α(L)=0.010 *4*; α(M)=0.0024 *8*; α(N+..)=0.00073 *23*.
x444.043 *26*		2.77 *43*			
x444.25 *11*		2.42 *58*			
x444.70 *10*		1.21 *86*			
x445.758 *66*		3.8 *13*	E1	0.0102	α(K)=0.0085; α(L)=0.00132; α(M)=0.00030.
x445.918 *39*		1.49 *31*			
x446.065 *44*		2.50 *56*	M1+E2	0.07 *4*	α(K)=0.05 *3*; α(L)=0.010 *4*; α(M)=0.0023 *8*; α(N+..)=0.00071 *23*.
x446.687 *26*		1.92 *26*	M1+E2	0.07 *4*	α(K)=0.05 *3*; α(L)=0.010 *4*; α(M)=0.0023 *8*; α(N+..)=0.00071 *23*.

Continued on next page (footnotes at end of table)

$^{194}_{77}Ir_{117}$

^{193}Ir(n,γ) E=thermal 98Ba85,98Ba42,87CoZW (continued)

γ(^{194}Ir) (continued)

Eγ†	E(level)	Iγ†j	Mult.‡	α	Comments
x447.189 *26*		1.71 *25*	M1	0.100	α(K)=0.0827; α(L)=0.0132; α(M)=0.00303; α(N+..)=0.00093.
x447.307 *43*		2.70 *78*	E2	0.0317	α(K)=0.0230; α(L)=0.00661; α(M)=0.00161; α(N+..)=0.00049.
x447.467 *16*		3.09 *24*	M1	0.100	α(K)=0.0825; α(L)=0.0132; α(M)=0.00303; α(N+..)=0.00093.
x447.681 *64*		2.48 *26*	M1+E2	0.07 *4*	α(K)=0.05 *3*; α(L)=0.010 *4*; α(M)=0.0023 *7*; α(N+..)=0.00071 *23*.
x450.706 *84*		2.67 *65*			
x450.891 *33*		3.17 *24*			
x451.832 *32*		2.24 *21*	M1+E2	0.06 *4*	α(K)=0.05 *3*; α(L)=0.010 *4*; α(M)=0.0023 *7*; α(N+..)=0.00069 *22*.
x452.157 *54*		3.27 *51*	E1	0.0099	α(K)=0.00827; α(L)=0.00127; α(M)=0.00029.
x452.352 *30*		3.26 *20*	E2	0.0308	α(K)=0.0224; α(L)=0.00638; α(M)=0.00155; α(N+..)=0.00047.
x454.090 *20*		3.84 *48*	M1+E2	0.06 *4*	α(K)=0.05 *3*; α(L)=0.009 *4*; α(M)=0.0022 *7*; α(N+..)=0.00068 *22*.
x455.895 *11*		3.82 *24*	M1+E2	0.06 *4*	α(K)=0.05 *3*; α(L)=0.009 *4*; α(M)=0.0022 *7*; α(N+..)=0.00067 *22*.
x458.055 *30*		6.8 *12*	E1		α=0.0096; α(K)=0.00804; α(L)=0.00124; α(M)=0.00028.
458.294 *5*	542.5933	17.61 *39*	E1		α=0.0096; α(K)=0.00803; α(L)=0.00124; α(M)=0.00028.
x458.837 *41*		2.51 *37*	M1	0.093	α(K)=0.0772; α(L)=0.0123; α(M)=0.00283; α(N+..)=0.00087.
x459.768 *8*		7.27 *31*	M1	0.093	α(K)=0.0768; α(L)=0.0123; α(M)=0.00282; α(N+..)=0.00087.
460.250 *4*	542.5933	33.61 *84*	E1		α=0.0095; α(K)=0.00796; α(L)=0.00122; α(M)=0.00028.
x461.768 *29*		1.94 *20*	M1+E2	0.06 *4*	α(K)=0.05 *3*; α(L)=0.009 *3*; α(M)=0.0021 *7*; α(N+..)=0.00065 *21*.
x462.218 *43*		3.20 *94*	E2	0.0291	α(K)=0.0213; α(L)=0.00596; α(M)=0.00144; α(N+..)=0.00044.
x463.462 *22*		2.03 *32*	M1+E2	0.06 *3*	α(K)=0.05 *3*; α(L)=0.009 *3*; α(M)=0.0021 *7*; α(N+..)=0.00064 *21*.
x464.465 *8*		6.02 *35*	M1	0.090	α(K)=0.0748; α(L)=0.0119; α(M)=0.00274; α(N+..)=0.00084.
x465.370 *11*		5.14 *23*	M1	0.090	α(K)=0.0744; α(L)=0.0119; α(M)=0.00273; α(N+..)=0.00084.
x465.61 *15*		2.62 *67*			
x466.398 *8*		6.59 *31*	M1	0.089	α(K)=0.0740; α(L)=0.0118; α(M)=0.00271; α(N+..)=0.00083.
x466.60 *12*		5.9 *11*	M1+E2	0.06 *3*	α(K)=0.05 *3*; α(L)=0.009 *3*; α(M)=0.0021 *7*; α(N+..)=0.00063 *21*.
x467.413 *6*		10.37 *37*	M1	0.089	α(K)=0.0736; α(L)=0.0117; α(M)=0.00269; α(N+..)=0.00083.
x468.106 *43*		1.61 *30*			
x468.26 *13*		4.3 *13*	E1		α=0.0092; α(K)=0.00767; α(L)=0.00118; α(M)=0.00027.
x468.990 *26*		3.82 *72*	M1+E2	0.06 *3*	α(K)=0.05 *3*; α(L)=0.009 *3*; α(M)=0.0020 *7*; α(N+..)=0.00062 *21*.
x470.355 *22*		3.59 *47*	M1+E2	0.06 *3*	α(K)=0.05 *3*; α(L)=0.009 *3*; α(M)=0.0020 *7*; α(N+..)=0.00061 *20*.
x471.581 *8*		8.69 *50*	M1	0.087	α(K)=0.0719; α(L)=0.0115; α(M)=0.00263; α(N+..)=0.00081.
x472.102 *10*		9.08 *44*	M1	0.087	α(K)=0.0717; α(L)=0.0114; α(M)=0.00262; α(N+..)=0.00081.
x473.763 *59*		1.45 *64*			
x474.355 *38*		2.22 *20*	M1+E2	0.06 *3*	α(K)=0.05 *3*; α(L)=0.008 *3*; α(M)=0.0020 *7*; α(N+..)=0.00060 *20*.
x477.707 *10*		5.78 *35*	M1+E2	0.06 *3*	α(K)=0.045 *25*; α(L)=0.008 *3*; α(M)=0.0019 *7*; α(N+..)=0.00059 *20*.
x478.388 *11*		5.35 *36*	M1	0.084	α(K)=0.0692; α(L)=0.0110; α(M)=0.00253; α(N+..)=0.00078.
x478.71 *10*		3.49 *51*	M1+E2	0.06 *3*	α(K)=0.044 *25*; α(L)=0.008 *3*; α(M)=0.0019 *7*; α(N+..)=0.00059 *20*.

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$^{194}_{77}Ir_{117}$

^{193}Ir(n,γ) E=thermal 98Ba85,98Ba42,87CoZW (continued)

γ(^{194}Ir) (continued)

Eγ†	E(level)	Iγ†j	Mult.‡	α	Comments
x479.655 *68*		1.21 *94*	M1,E2	0.05 *3*	α(K)=0.044 *25*; α(L)=0.008 *3*; α(M)=0.0019 *7*; α(N+..)=0.00058 *20*.
x479.948 *64*		3.28 *37*			
x480.075 *39*		3.23 *24*			
x480.972 *31*		1.93 *54*	M1	0.0824	α(K)=0.0682; α(L)=0.0109; α(M)=0.00250; α(N+..)=0.00077.
x482.002 *29*		1.92 *45*			
x482.108 *92*		3.29 *73*	M1+E2	0.05 *3*	α(K)=0.044 *25*; α(L)=0.008 *3*; α(M)=0.0019 *7*; α(N+..)=0.00057 *19*.
x482.474 *96*		3.66 *56*	E1		α=0.0086; α(K)=0.00719; α(L)=0.00110; α(M)=0.00025.
x482.846 *18*		3.60 *36*	E1		α=0.0086; α(K)=0.00718; α(L)=0.00110; α(M)=0.00025.
x483.007 *82*		2.85 *69*	M1	0.0815	α(K)=0.0675; α(L)=0.0108; α(M)=0.00247; α(N+..)=0.00076.
x484.043 *30*		2.01 *26*	M1	0.0810	α(K)=0.0671; α(L)=0.0107; α(M)=0.00246; α(N+..)=0.00076.
x487.176 *6*		23.94 *56*	M1	0.0797	α(K)=0.0660; α(L)=0.0105; α(M)=0.00242; α(N+..)=0.00074.
x488.406 *57*		2.12 *30*			
x488.790 *39*		1.88 *37*			
x490.441 *33*		2.11 *41*			
x490.742 *31*		1.98 *16*			
x492.744 *79*		3.79 *83*	E1		α=0.00824; α(K)=0.00688; α(L)=0.00105; α(M)=0.00024.
x496.070 *62*		1.68 *30*	M1	0.0760	α(K)=0.0629; α(L)=0.0100; α(M)=0.00230; α(N+..)=0.00071.
x496.818 *40*		1.92 *29*	E2	0.0243	α(K)=0.0181; α(L)=0.00475; α(M)=0.00115; α(N+..)=0.00035.
x498.087 *46*		2.78 *25*	M1+E2	0.05 *3*	α(K)=0.040 *23*; α(L)=0.007 *3*; α(M)=0.0017 *6*; α(N+..)=0.00052 *18*.
x499.456 *8*		25.8 *11*	M1+E2	0.05 *3*	α(K)=0.040 *22*; α(L)=0.007 *3*; α(M)=0.0017 *6*; α(N+..)=0.00052 *18*.
x500.66 *3*		3.4 *9*			
x501.041 *16*		5.0 *5*			
x503.33 *11*		1.6 *4*			
x505.16 *5*		2.3 *3*			
x505.69 *3*		2.5 *5*			
x506.54 *5*		2.6 *4*			
x509.93 *3*		7.8 *9*			
x510.40 *10*		12.3 *20*			
x510.67 *14*		20 *4*			
x511.24 *7*		12.9 *20*			
x511.69 *7*		13.5 *20*			
x511.98 *9*		11.1 *16*			
x513.017 *14*		6.8 *5*			
x518.056 *12*		5.7 *3*			
x520.35 *7*		2.0 *6*			
x520.57 *6*		7.2 *5*			
x520.892 *21*		7.3 *6*			
x521.191 *7*		7.3 *8*			
x522.61 *5*		1.7 *3*			
x525.55 *4*		2.3 *3*			
x525.98 *3*		1.7 *3*			
x527.18 *5*		2.0 *3*			
x528.34 *6*		1.6 *3*			
x530.26 *6*		2.6 *4*			
x530.772 *13*		6.1 *3*			
x531.388 *17*		4.41 *21*			
x533.27 *5*		1.5 *3*			
x534.10 *5*		2.04 *25*			
x534.89 *3*		2.0 *4*			
x535.94 *3*		2.4 *8*			
x536.339 *13*		6.2 *4*			
x538.03 *3*		2.2 *6*			
x541.60 *6*		0.98 *24*			

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$^{194}_{77}Ir_{117}$

^{193}Ir(n,γ) E=thermal 98Ba85,98Ba42,87CoZW (continued)

γ(^{194}Ir) (continued)

Eγ†	E(level)	Iγ†j
x542.12 7		1.2 3
x544.34 11		1.4 3
x546.23 5		2.8 5
x546.902 15		9.6 5
x547.558 12		12.4 5
x548.67 10		1.1 5
x548.998 22		4.4 3
x551.04 4		2.4 4
x552.080 17		6.4 6
x553.77 5		1.9 4
x554.392 24		3.9 8
x556.76 7		3.4 5
x557.10 3		6.5 6
x557.73 3		4.6 7
x558.07 19		2.0 5
x558.54 3		4.7 9
x565.02 4		1.76 23
x566.36 3		3.0 5
x567.42 4		1.94 23
x568.444 16		5.5 4
x569.777 13		6.4 3
x570.69 4		2.9 3
x574.84 4		4.1 5
x575.691 10		11.8 7
x576.819 18		4.6 6
x578.959 25		3.7 5
x579.62 4		2.5 3
x580.909 21		4.19 23
x582.71 13		2.1 3
x584.81 3		2.8 3
x588.40 5		3.7 7
x593.13 6		1.8 3
x593.66 9		1.4 3
x596.28 8		2.1 3
x597.13 4		3.2 3
x598.08 16		4.9 7
x599.65 3		6.4 6
x600.470 8		18.6 6
x601.871 23		3.8 5
x603.04 10		11.1 7
x603.95 5		2.1 3
x605.39 4		2.9 5
x605.76 9		2.25 22
x606.880 23		5.4 3
x607.57 16		2.4 8
x608.69 3		4.8 3
x609.76 9		13.4 7
x610.15 4		3.6 5
x610.762 8		14.6 8
x611.27 9		2.2 5
x612.76 7		9.7 6
x613.48 8		2.9 5
x614.58 8		2.9 6
x615.25 13		3.7 8
x615.73 11		6.0 5
x616.40 9		4.6 4
x617.10 3		5.9 6
x618.07 18		2.2 4
x618.46 7		1.7 3
x619.28 7		2.1 5
x622.67 5		4.4 11
x623.25 3		4.9 12
x623.80 7		5.1 7
x624.72 12		6.2 8
x626.211 21		4.9 5
x629.06 12		1.8 3
x630.37 8		1.89 25
x631.48 7		1.9 3
x635.33 10		7.6 5
x635.90 11		2.1 4
x637.12 8		4.2 9
x639.91 4		6.1 6
x642.046 21		7.5 6
x643.80 3		4.8 6
x646.96 6		2.5 3
x648.65 3		6.4 6
x649.21 7		3.2 5
x651.172 16		6.2 9
x652.99 7		2.6 3
x653.93 10		1.7 4
x656.82 7		4.0 5
x659.14 3		4.6 6
x662.51 11		2.0 4
x663.27 8		2.0 3
x665.91 4		4.7 3
x675.08 6		2.3 14
x676.66 14		1.6 4
x677.02 12		2.4 6
x677.42 16		1.6 5
x677.99 7		5.2 4
x679.20 21		0.9 6
x679.90 8		3.1 3
x680.84 5		4.6 4
x684.76 3		5.4 15
x685.79 7		3.3 7
x687.10 4		3.4 10
x688.97 6		4.9 4
x689.63 15		2.4 6
x690.76 9		3.6 8
x691.11 9		4.8 8
x692.02 6		7.2 9
x698.623 15		11.3 8
x700.11 13		2.7 12
x700.59 14		4.6 4
x701.45 10		3.1 5
x704.47 12		3.2 6
x706.54 3		9.1 5
x708.547 17		23.4 9
x709.47 4		6.6 6
x710.92 7		3.6 8
x713.23 13		3.6 12
x713.77 5		6.1 6
x716.15 11		3.0 7
x717.21 6		7.7 10
x719.33 8		3.3 8
x720.96 13		2.1 6
x722.29 9		6.2 5
x722.93 10		3.8 6
x724.09 15		1.9 5
x725.39 8		4.1 9
x727.66 5		3.8 15
x731.97 13		1.7 4
x735.59 15		2.4 5
x738.25 10		3.6 7
x740.66 7		5.0 6
x743.87 4		5.5 12

Continued on next page (footnotes at end of table)

$^{194}_{77}Ir_{117}$

^{193}Ir(n,γ) E=thermal 98Ba85,98Ba42,87CoZW (continued)

γ(^{194}Ir) (continued)

Eγ[†]	E(level)	Iγ[†j]
x745.33 6		5.8 9
x747.47 3		11.2 16
x748.57 4		6 3
x749.93 3		8.4 15
x751.83 10		4.3 6
x753.14 9		3.8 7
x755.82 8		3.3 6
x757.49 4		7.0 7
x759.70 8		3.4 7
x761.33 3		9.6 8
x762.23 13		4.6 5
x763.37 9		2.8 9
x768.39 8		3.2 5
x769.82 12		3.2 4
x771.72 9		4.1 5
x773.92 10		4.1 6
x776.19 7		3.6 5
x781.49 10		3.3 11
x783.87 19		2.9 6
x785.51 3		12.8 5
x787.07 10		6.4 11
x787.72 6		4.2 12
x788.46 20		5.6 8
x788.98 5		7.5 15
x789.86 17		3.9 6
x795.08 11		4.1 6
x797.03 5		8.5 11
x801.61 11		5.3 8
x803.73 12		5.3 11
x804.24 9		6.2 15
x804.76 10		9.0 10
x807.80 4		17.8 10
x809.86 16		3.9 6
x812.25 16		5.0 7
x814.64 17		3.8 14
x822.58 16		3.5 8
x823.53 25		2.8 6
x825.94 5		8.1 7
x829.23 4		11.5 12
x830.99 14		3.3 6
x832.31 11		4.6 6
x833.95 14		3.8 6
x842.48 11		5.5 7
x844.78 3		14.3 7
x846.60 22		3.9 7
x851.26 14		5.7 8
x853.78 6		10.0 15
x856.03 9		7.0 8
x863.4 4		3.2 8
x865.00 16		7.2 11
x866.63 15		5.8 9
x876.46 9		8.0 9
x882.66 23		3.1 6
x889.73 8		6.2 17
x890.89 11		11.1 20
x891.39 15		5.1 8
x892.57 10		11.2 24
x893.26 7		19.5 17
x895.07 20		3.6 8
x899.61 13		5.6 8
x909.18 14		8.2 17
x911.13 4		20.2 14
x912.51 8		9.2 17
x915.5 4		2.2 8
x921.73 17		5.2 6
x923.6 3		5.2 20
x924.24 9		8.6 10
x925.90 13		5.0 9
x938.78 3		29.6 14
x941.3 3		5.1 10
x945.70 18		4.5 8
x951.58 18		8.4 21
x954.05 17		9.3 21
x956.34 18		5.7 10
x956.98 20		5.4 21
x960.21 10		7.6 18
x961.30 13		12.9 19
x962.05 20		5.1 9
x964.59 6		13.2 14
x966.61 16		5.7 11
x974.99 15		9.6 13
x985.76 10		8.9 8
x988.99 13		7.4 9
x1006.4 3		3.3 8
x1010.75 17		11.0 14
x1014.6 3		5.8 13
x1023.45 14		9.8 11
x1233.8 4		6.8 17
x1454.8 7		6.9 16
x1465.8 5		7.0 16
x1476.5 7		4.2 19
x1479.8 8		5.5 16
x1527.3 10		5.2 18
4364.3[#] 9	(6066.8)	2.7[i] 14
4371.4[#] 14	(6066.8)	2.7[i] 11
4382.0 14	(6066.8)	0.68[i] 45
4394.7[#] 10	(6066.8)	1.6[i] 11
4401.6[#] 11	(6066.8)	2.3[i] 11
4412.6 10	(6066.8)	1.13[i] 45
4424.9 10	(6066.8)	1.35[i] 45
4435.0[#] 13	(6066.8)	1.35[i] 68
4442.4[#] 6	(6066.8)	2.70[i] 45
4454.6[#] 7	(6066.8)	2.70[i] 68
4461.8[#] 9	(6066.8)	1.80[i] 68
4472.5 6	(6066.8)	3.38[i] 45
4487.4[#] 7	(6066.8)	2.25[i] 68
4494.8[#] 7	(6066.8)	4.95[i] 90
4505.3 7	(6066.8)	1.35[i] 45
4524.4[§] 7	(6066.8)	2.03[i] 45
4546.0[§] 11	(6066.8)	2.03[i] 68
4559.8 21	(6066.8)	1.13[i] 45
4577.3[#] 7	(6066.8)	6.1[i] 14
4584.6[#] 7	(6066.8)	4.3[i] 14
4599.8 7	(6066.8)	5.0[i] 11
4612.5 8	(6066.8)	5.4[i] 11
4621[h] 3	(6066.8)	<3.6[i]
4627[h] 4	(6066.8)	<2.5[i]
4643.40 60	(6066.8)	12.1 21
4754.75 44	(6066.8)	16.1 30
4808.32 70	(6066.8)	6.9 14
4827.20 72	(6066.8)	8.8 21
4839.30 52	(6066.8)	12.3 22
4855.47 59	(6066.8)	13.3 23
4875.4 12	(6066.8)	4.7 20
4892.4 10	(6066.8)	4.5 27
4930.81 86	(6066.8)	8.8 24

Continued on next page (footnotes at end of table)

$^{194}_{77}Ir_{117}$

^{193}Ir(n,γ) E=thermal 98Ba85,98Ba42,87CoZW (continued)

γ(^{194}Ir) (continued)

Eγ†	E(level)	Iγ†j
4967.65 *72*	(6066.8)	6.8 *28*
4979.50 *76*	(6066.8)	7.9 *16*
4991.8 *11*	(6066.8)	4.9 *14*
5014.40 *90*	(6066.8)	12.2 *35*
5028.16 *48*	(6066.8)	17.8 *40*
5071.85 *50*	(6066.8)	14.4 *20*
5090.63 *68*	(6066.8)	9.1 *11*
5109.74 *64*	(6066.8)	7.2 *30*
5128.95 *77*	(6066.8)	6.6 *11*
5140.10 *85*	(6066.8)	5.2 *10*
5158.40 *62*	(6066.8)	7.0 *27*
5180.70 *63*	(6066.8)	12.2 *30*
5189.45 *97*	(6066.8)	5.5 *22*
5231.60 *60*	(6066.8)	3.6 *15*
5246.60 *97*	(6066.8)	4.9 *28*
5261.06 *88*	(6066.8)	7.0 *20*
5264.82 *98*	(6066.8)	6.5 *40*
5281.77 *68*	(6066.8)	6.4 *11*
5291.20 *53*	(6066.8)	6.4 *17*
5300.3 *11*	(6066.8)	6.6 *20*
5315.35 *65*	(6066.8)	11.0 *24*
5357.92 *50*	(6066.8)	18.0 *30*
5368.00 *80*	(6066.8)	2.7 *13*
5385.88 *90*	(6066.8)	4.8 *18*
5466.65 *48*	(6066.8)	23.2 *60*
5487.62 *54*	(6066.8)	14.2 *13*
5519.2 *12*	(6066.8)	9.3 *30*
5563.47 *63*	(6066.8)	10.7 *15*
5577.14 *44*	(6066.8)	6.6 *19*
5630.70 *36*	(6066.8)	15.0 *16*
5643.53 *37*	(6066.8)	13.6 *15*
5678.0 *14*	(6066.8)	2.2 *15*
5728.73[l] *32*	(6066.8)	38.0[l] *35*
	(6066.8)	38.0[l] *35*
5750.1 *17*	(6066.8)	2.1 *15*
5757.5 *17*	(6066.8)	2.2 *15*
5787.38 *48*	(6066.8)	18.7 *35*
5814.00 *80*	(6066.8)	5.0 *17*
5821.45 *40*	(6066.8)	22.2 *20*
5882.50 *63*	(6066.8)	6.8 *16*
5904.97 *66*	(6066.8)	7.2 *16*
5918.15 *37*	(6066.8)	12.2 *16*
5928.15 *36*	(6066.8)	10.0 *22*
5954.67 *42*	(6066.8)	27.9 *35*
5984.17 *47*	(6066.8)	11.4 *20*
6023.9 *15*	(6066.8)	3.3 *14*
6067.00 *40*	(6066.8)	12.2 *11*

† From 98Ba42, 98Ba85, 71Kr09 for primary γ's and from 98Ba42, 98Ba85, and 87CoZW for secondary transitions. Relative intensities are given (98Ba42,98Ba85); for primary γ's intensities (71Kr09) are renormalized and for secondary transitions only relative intensities are given. Measurements were done with a curved–crystal spectrometer at grenoble.

‡ From ce data of 98Ba42 and 98Ba85. The assignments are considered tentative by the evaluator. α(K)exp's and subshell ratios are from 79SiZU. The method of normalization of ce data is not known.

§ Unresolved overlapping peaks (71Kr09).

Part of an overlapping peak, numerically resolved by 71Kr09.

@ Reported by 79SiZU only in the ce data; treated as uncertain by the evaluator since not reported in the γ–ray data of 87CoZW.

& L– and M– subshell ratios also given by 79SiZU.

a Unresolved from 160.996γ in ce data of 79SiZU.

b Unresolved from 165.448γ in ce data of 79SiZU.

g From 89KoZW; detector: Si(Li).

h Uncertain γ ray.

i From 71Kr09 and renormalized.

j For intensity per 100 neutron captures, multiply by 0.04292.

k Placement of transition in the level scheme is uncertain.

l Multiply placed; undivided intensity given.

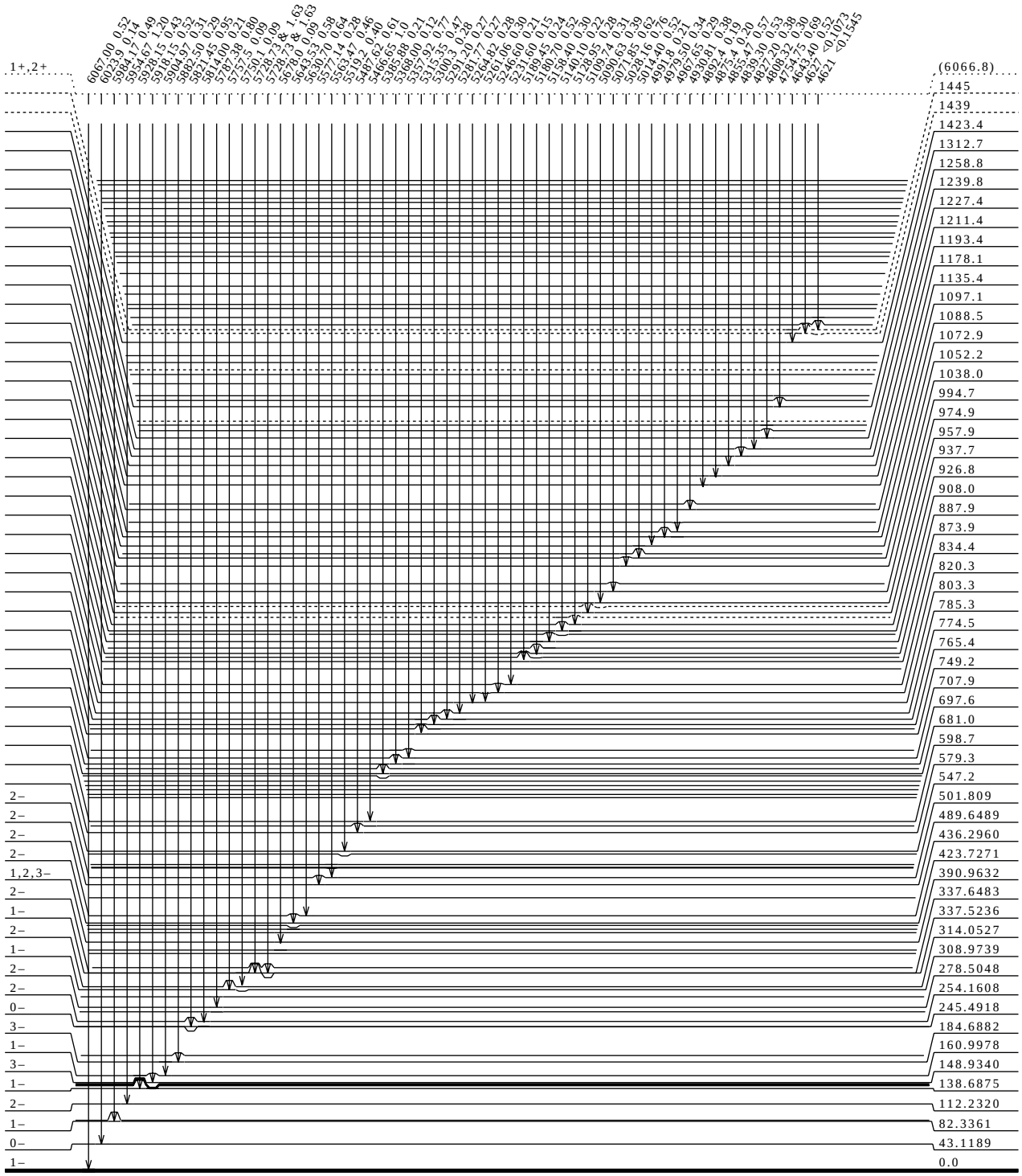
x γ ray not placed in level scheme.

$^{194}_{77}Ir_{117}$

^{193}Ir(n,γ) E=thermal 98Ba85,98Ba42,87CoZW (continued)

Level Scheme

Intensities: I(γ+ce) per 100 parent decays
& Multiply placed; undivided intensity given

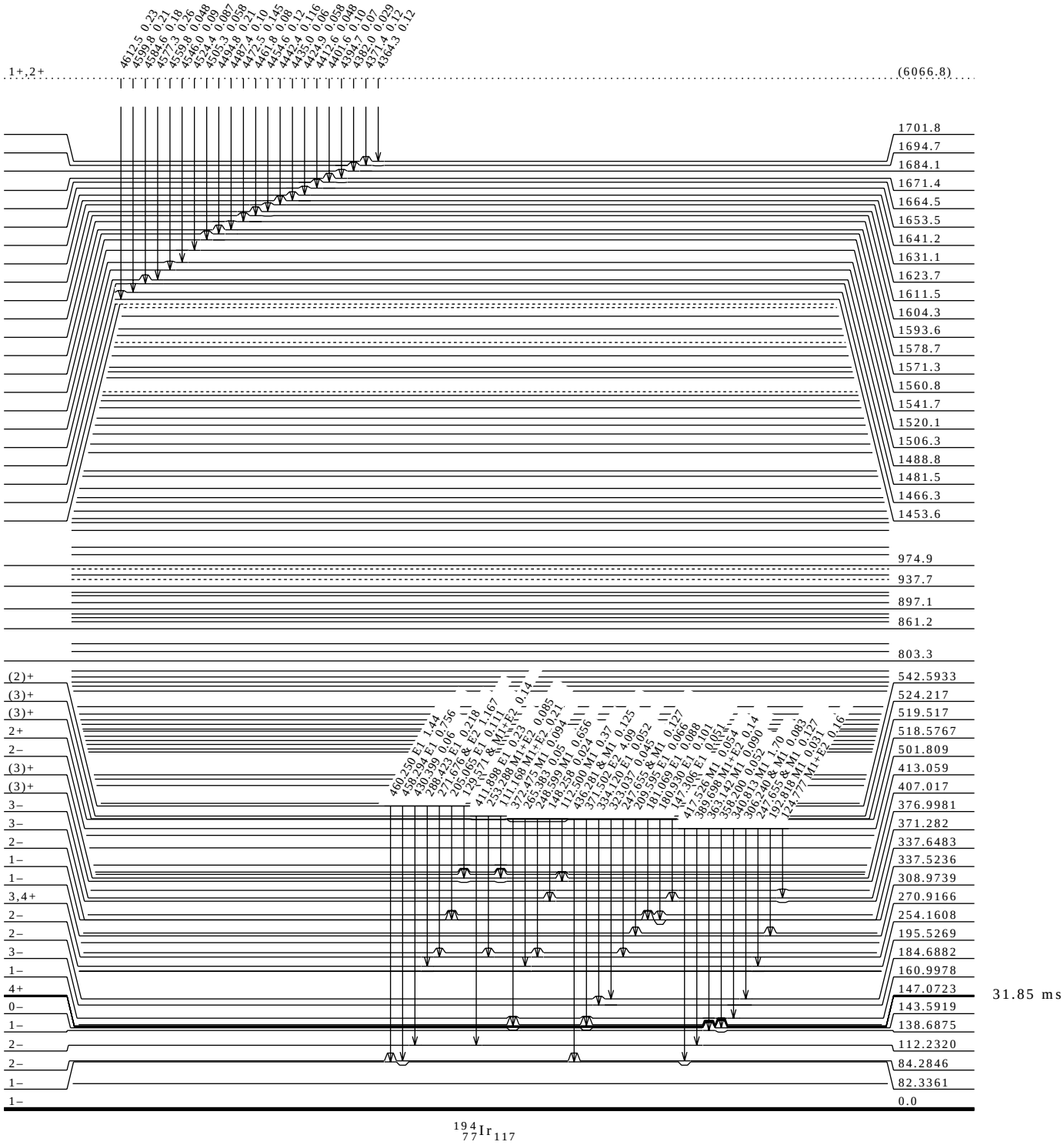


$^{194}_{77}Ir_{117}$

^{193}Ir(n,γ) E=thermal 98Ba85,98Ba42,87CoZW (continued)

Level Scheme (continued)

Intensities: I(γ+ce) per 100 parent decays
& Multiply placed; undivided intensity given

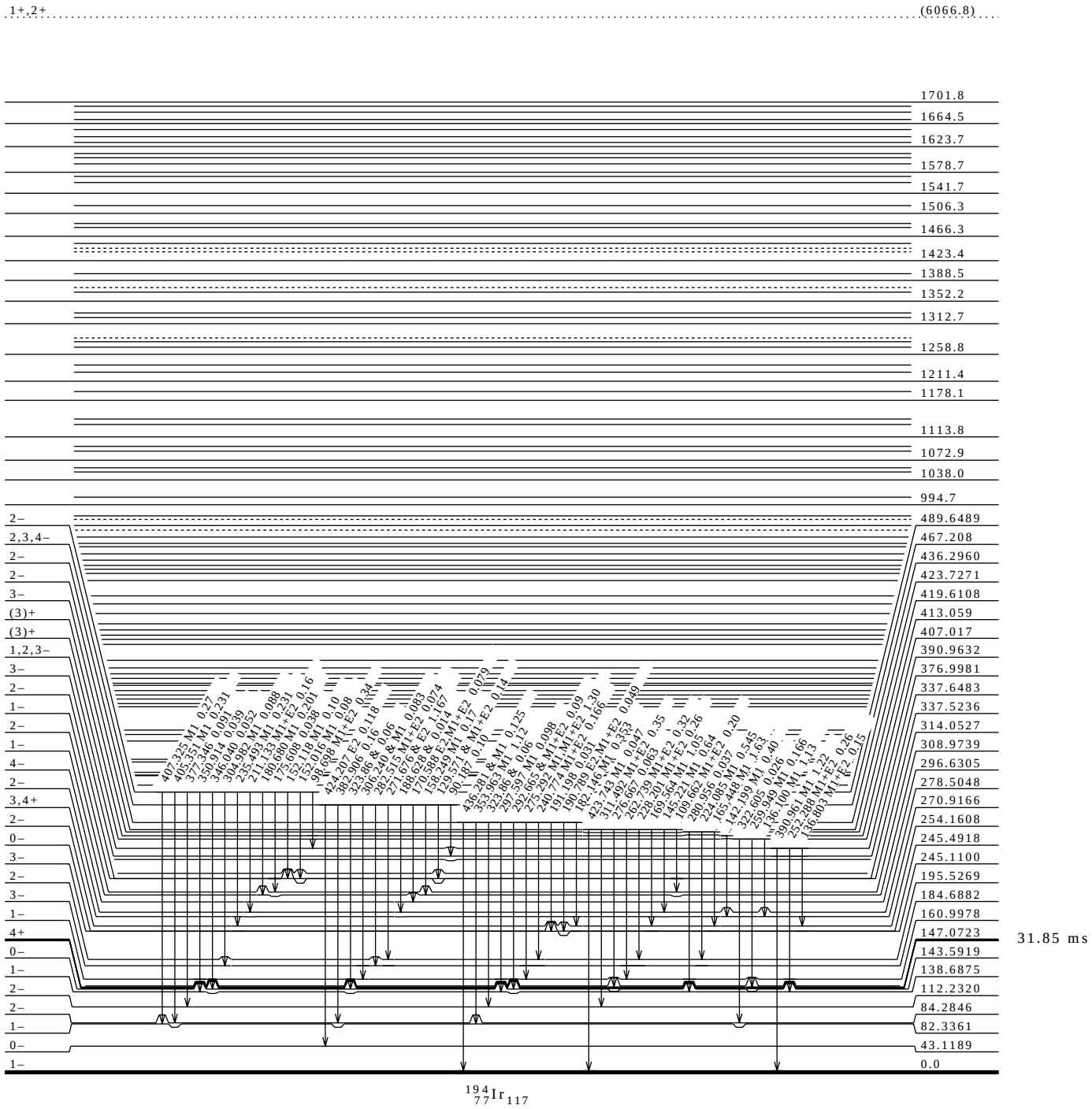


$^{194}_{77}Ir_{117}$

^{193}Ir(n,γ) E=thermal 98Ba85,98Ba42,87CoZW (continued)

Level Scheme (continued)

Intensities: I(γ+ce) per 100 parent decays
& Multiply placed; undivided intensity given



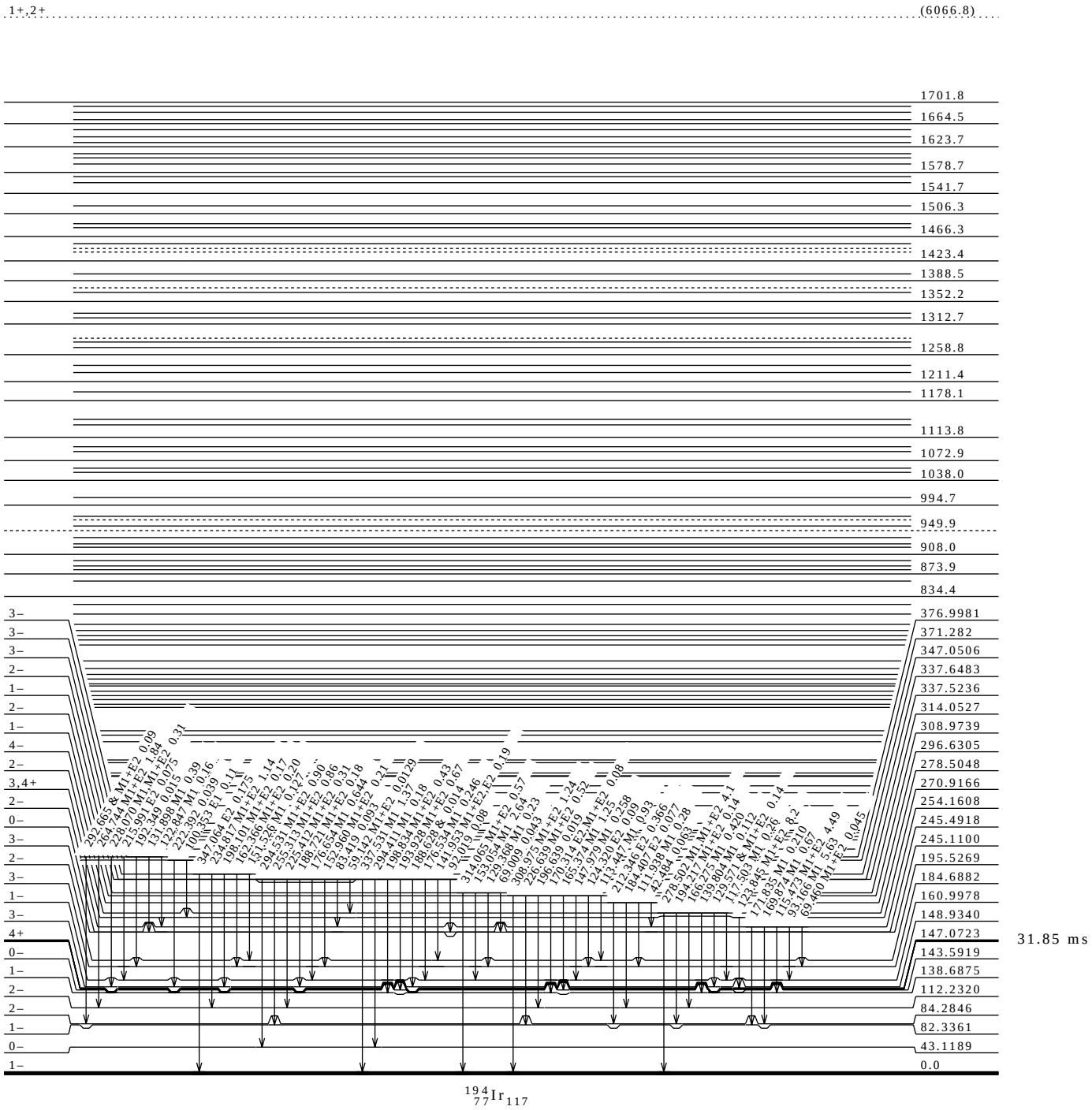
$^{194}_{77}Ir_{117}$

$^{194}_{77}Ir_{117}$

^{193}Ir(n,γ) E=thermal 98Ba85,98Ba42,87CoZW (continued)

Level Scheme (continued)

Intensities: I(γ+ce) per 100 parent decays
& Multiply placed; undivided intensity given

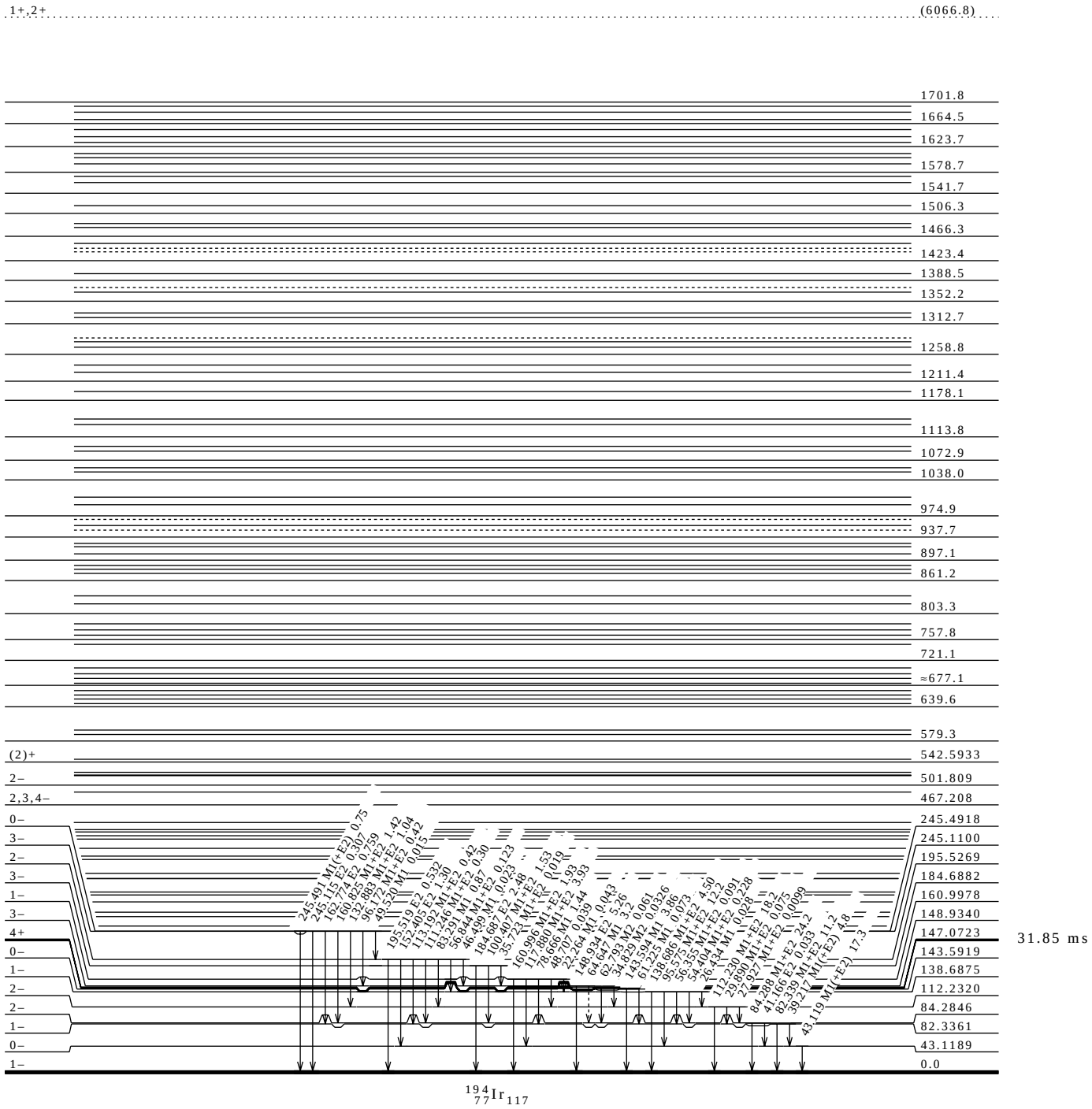


$^{194}_{77}Ir_{117}$

^{193}Ir(n,γ) E=thermal 98Ba85,98Ba42,87CoZW (continued)

Level Scheme (continued)

Intensities: I(γ+ce) per 100 parent decays
& Multiply placed; undivided intensity given



$^{195}_{78}Pt_{117}$

^{194}Pt(n,γ) E=thermal 87Ca03,82Wa20

Target Jπ=0+.
Others: 67Gr24, 68Sa13, 70Or05.
87Ca03: ^{194}Pt(n,γ) E=thermal; measured E(ce), Ice; U(6/12) supersymmetry analyses.
82Wa20: ^{194}Pt(n,γ) E=thermal, 2 keV, 24 keV; measured Eγ and Iγ with curved spectrometers and Ge(Li); comparison with multi–J supersymmetry in interacting boson–fermion approximation.
Measured neutron binding energy 6105.3 *5* (82Wa20) is in good agreement with 6105.06 *12* recommended by 93Au05.

^{195}Pt Levels

Spin and parity assignments from the av resonance capture data (82Wa20):

I(2 keV)/I(24 keV)	Jπ	Comments
ratio of reduced primary γ–ray intensities		
≥ 0.5	1/2–,3/2–	
0.3 – 0.5	1/2±,3/2±	
< 0.3	1/2+,3/2+	
0	5/2+,(5/2–,1/2+,3/2+)	for I(24 keV) > 30
0	5/2±	for I(24 keV) < 30

E(level)[†]	Jπ[‡]	$T_{1/2}$[#]	I(2 keV)/I(24 keV)[a]	Comments
0.0[@]	1/2–	stable	1.00	
98.8839[@] *16*	3/2–		1.11	
129.782 *4*	5/2–			
199.5340[@] *18*	3/2–		1.61	
211.4063[@] *19*	3/2–		1.18	
222.229[@] *4*	1/2–,3/2–[§]		0.62	
239.268 *4*	5/2–			
259.071 *23*	13/2+			
389.137 *3*	5/2–			
419.704[@] *3*	3/2–		2.72	
431.974 *23*	9/2+			
455.276[&] *7*	5/2–		0.0	
507.920 *8*	5/2–,7/2–			
524.851[@] *3*	3/2–		0.92	
590.901[@] *4*	1/2–,3/2–[§]		1.06	
630.145[@] *7*	1/2–,3/2–[§]		1.12	
664.207 *6*	5/2–,7/2–			
739.548[@] *5*	1/2–,3/2–[§]		1.79	
821.782[&] *23*	5/2+		0.0	Jπ: Jπ=5/2+,(5/2–,1/2+,3/2+) from av resonance capture measurements.
926.89[@] *5*	1/2–,3/2–[§]		1.70	
1095.8 *4*	1/2–,3/2–[§]		0.70	
1122.591[&] *23*			0.0	Jπ: Jπ=5/2+,(5/2–,1/2+,3/2+) from av resonance capture measurements.
1132.402[@] *20*	1/2–,3/2–[§]		2.38	
1160.39[@] *3*	1/2–,3/2–[§]		0.61	
1166.4 *6*	1/2+,3/2+[§]		0.28	
1271.0 *3*	1/2–,3/2–[§]		0.68	
1287.7 *4*	1/2–,3/2–[§]		0.63	
1312.7 *7*	1/2+,3/2+[§]		0.18	
1320.8 *7*	1/2–,3/2–[§]		0.68	
1334.7 *4*	1/2–,3/2–[§]		0.74	
1346.9 *6*	1/2,3/2[§]		0.32	
1372.7 *4*	1/2–,3/2–[§]		0.61	
1411.1 *5*	1/2–,3/2–[§]		0.68	
1425.0 *5*	1/2–,3/2–[§]		0.68	
1438.3 *4*	1/2,3/2[§]		0.33	
1445.3 *5*	1/2–,3/2–[§]		0.54	

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^{194}Pt(n,γ) E=thermal 87Ca03,82Wa20 (continued)

^{195}Pt Levels (continued)

E(level)†	Jπ‡	Comments
(6105.06 *12*)	1/2+	E(level): from evaluated s(n) (95Au04). Jπ: from s–wave thermal neutron capture. Observed deexcitation intensity is 110% *18* of g.s. feeding from assuming that from intensity captured state to g.s. is 12% *12*.

† From authors' values: E(level) values for the 129– and 1095–levels and the levels above 1160 are from 2– and 24–keV average resonance neutron capture measurements.
‡ From adopted levels, except as noted.
§ From average resonance neutron capture measurements: ratio of reduced primary intensities observed in 2 and 24 keV.
# From adopted levels.
@ Populated also in the average resonance capture(E=2, 24 keV).
& From 24–keV average resonance neutron capture only.
a Ratio of reduced primary γ intensities observed in 2– and 24–keV average resonance neutron capture. The intensity of γ ray was divided by the fifth power of the γ energy.

γ(^{195}Pt)

Iγ normalization: from I(γ+ce)(to g.s.)=100 and assuming intensity from captured state to g.s. is 12% *12*.

Eγ†	E(level)	Iγ#b	Mult.a	δa	α	Comments
98.886 *2*	98.8839	599 *60*	M1(+E2)	<0.17	7.12 *3*	α(K)=5.73; α(L)=1.043; α(M)=0.2432; α(N+..)=0.0769. α(L1)exp=1.16 *11*; α(L2)exp=0.15 *15* (87Ca03).
100.652 *3*	199.5340	131 *13*	M1(+E2)	<0.17	6.77 *3*	α(K)=5.45; α(L)=0.989; α(M)=0.2303; α(N+..)=0.0729. α(L1)exp=1.09 *14*; α(M1)exp=0.25 *23* (87Ca03).
123.337 *10*	222.229	130 *13*	M1(+E2)	<0.32	3.72 *13*	α(K)=2.88; α(L)=0.581; α(M)=0.1370; α(N+..)=0.0432. α(L1)exp=0.42 *16* (87Ca03).
140.385 *9*	239.268	115 *16*	M1(+E2)	<0.62	2.47 *14*	α(K)=1.766; α(L)=0.426; α(M)=0.1021; α(N+..)=0.0320. α(L1)exp=0.32 *28*; α(L2)exp=0.30 *24* (87Ca03).
172.906 *3*	431.974	505 *51*	E2		0.604	α(K)=0.2461; α(L)=0.269; α(M)=0.0686; α(N+..)=0.02099. α(K)exp=0.22 *16*; α(L1)exp=0.054 *21*; α(L2)exp=0.19 *12* (87Ca03). Mult.: M=E2(+M1) with δ>2.0 (87Ca03). But γ to 13/2+ rules out (M1) component (evaluator). δ: δ>2.24 (87Ca03).
197.479 *14*	419.704	50 *9*	M1(+E2)	<1.9	0.86 *14*	α(K)=0.541; α(L)=0.1430; α(M)=0.0345; α(N+..)=0.01069. α(K)exp=0.60 *51* (87Ca03).
199.533 *2*	199.5340	265 *26*	M1(+E2)	<0.40	0.84 *13*	α(K)=0.526; α(L)=0.1380; α(M)=0.0333; α(N+..)=0.01031. α(K)exp=0.82 *11*; α(L1)exp=0.13 *17* (87Ca03).
211.407 *2*	211.4063	1000	M1+E2	0.38 *3*	0.762 *10*	α(K)=0.623; α(L)=0.1125; α(M)=0.0262; α(N+..)=0.00818. α(K)exp=0.614 *5* (87Ca03). δ: from β^- decay. Other: M1+(12%E2) (87Ca03).
216.012 *9*	455.276	52 *6*	M1(+E2)	<0.6	0.72 *6*	α(K)=0.509; α(L)=0.1054; α(M)=0.02492; α(N+..)=0.00775. α(K)exp=0.61 *25* (87Ca03).
222.230 *5*	222.229	64 *8*	M1(+E2)	<0.54	0.67 *6*	α(K)=0.489; α(L)=0.0966; α(M)=0.02272; α(N+..)=0.00707. α(K)exp=0.57 *20* (87Ca03).

Continued on next page (footnotes at end of table)

^{194}Pt(n,γ) E=thermal 87Ca03,82Wa20 (continued)

γ(^{195}Pt) (continued)

Eγ[†]	E(level)	Iγ[#b]	Mult.[a]	δ[a]	α	Comments
239.261 *5*	239.268	215 *22*	E2		0.2004	α(K)=0.1086; α(L)=0.0691; α(M)=0.01743; α(N+..)=0.00532. α(K)exp=0.13 *22* (87Ca03). δ: E2(+ (6 *+10−6*)%M1). Mult.: E2(+M1) with δ>2.3, but ΔJ=2 rules out M1 (evaluator).
243.855 *14*	455.276	45 *5*	M1(+E2)	0.37 *+54−37*	0.51 *13*	α(K)=0.42 *12*; α(L)=0.074 *4*; α(M)=0.0172 *4*; α(N+..)=0.00537 *17*. α(K)exp=0.40 *25* (87Ca03). δ: M1(+ (14 *+29−14*)%E2).
255.741 *30*	455.276	39 *5*				
259.351 *6*	389.137	105 *12*	M1(+E2)	<0.5	0.44 *3*	α(K)=0.328; α(L)=0.0608; α(M)=0.01421; α(N+..)=0.00443. α(K)exp=0.41 *23* (87Ca03).
285.578 *4*	524.851	60 *7*	(M1+E2)	<0.72	0.33 *3*	Mult.: α(K)exp also allows mult=E1; but decay scheme requires Δπ=no. α(K)exp=0.30 *32* (87Ca03).
[x]287.822 *15*		37 *4*				
290.254 *3*	389.137	290 *29*	M1(+E2)	<0.54	0.32 *3*	α(K)=0.2360; α(L)=0.0434; α(M)=0.01012; α(N+..)=0.00315. α(K)exp=0.27 *14* (87Ca03).
[x]299.114 *12*		37 *4*				
300.811 *2*	1122.591	232 *23*	E2(+M1)	2.1 *+17−4*	0.14 *3*	α(K)=0.098 *24*; α(L)=0.0309 *17*; α(M)=0.0076 *4*; α(N+..)=0.00233 *11*. α(K)exp=0.11 *19* (87Ca03).
313.449 *6*	524.851	33 *4*				
[x]319.313 *4*		82[@] *9*	M1(+E2)	<0.57	0.224	α(K)=0.1792; α(L)=0.0327; α(M)=0.00761; α(N+..)=0.00237. α(K)exp=0.22 *25* (87Ca03).
319.843 *4*	739.548	73[@] *9*	E2(+M1)	≥1.23	0.1554	α(K)=0.1189; α(L)=0.0278; α(M)=0.00665; α(N+..)=0.00206. α(K)exp=0.11 *51* (87Ca03).
320.819 *3*	419.704	79[@] *9*	M1(+E2)	<0.58	0.24 *3*	α(K)=0.1759; α(L)=0.0321; α(M)=0.00749; α(N+..)=0.00233. α(K)exp=0.22 *26* (87Ca03).
[x]325.404 *8*		90 *12*				
[x]328.471 *10*		28 *4*				
356.395 *14*	455.276	66[&] *12*				
368.671 *3*	590.901	146 *15*	M1(+E2)	<0.14	0.180 *10*	
[x]373.459 *9*		27 *3*				
378.129 *9*	507.920	47 *6*				
379.503 *8*	590.901	46 *6*				
[x]388.10 *3*		26 *4*				
389.803 *4*	821.782	309 *31*	E2		0.0474	α(K)=0.0326; α(L)=0.01119; α(M)=0.00276; α(N+..)=0.00084. α(K)exp=0.058 *24* (87Ca03). Mult.: M=E2(+M1) (87Ca03). But γ to 9/2+ rules out (M1) component (evaluator). δ: δ=1.9 *+11−4* (87Ca03).
391.377 *10*	590.901	26[@] *4*	M1(+E2)	<0.14		α(K)=0.1475; α(L)=0.02414; α(M)=0.00554; α(N+..)=0.00173. α(K)exp=0.18 *17* (87Ca03).
392.860 *19*	1132.402	18[@] *4*				
395.071 *3*	524.851	134 *15*	M1(+E2)	0.49 *+60−49*	0.13 *4*	α(K)=0.11 *4*; α(L)=0.018 *4*; α(M)=0.0042 *7*; α(N+..)=0.00132 *23*. α(K)exp=0.10 *32* (87Ca03).
407.910 *12*	630.145	60[@] *7*				
409.049 *11*	507.920	54[@] *6*				
[x]409.716 *21*		54[@] *7*				
[x]414.327 *6*		120 *12*				
418.741 *8*	630.145	66 *10*				

Continued on next page (footnotes at end of table)

$^{195}_{78}Pt_{117}$

^{194}Pt(n,γ) E=thermal 87Ca03,82Wa20 (continued)

γ(^{195}Pt) (continued)

Eγ[†]	E(level)	Iγ[#b]	Mult.[a]	δ[a]	α	Comments
419.705 *4*	419.704	485 *49*	M1(+E2)	<0.46	0.12 *1*	α(K)=0.0922; α(L)=0.01571; α(M)=0.00363; α(N+..)=0.00113. α(K)exp=0.11 *18* (87Ca03).
420.71 *6*	1160.39	14 *6*				
424.944 *18*	664.207	18 *5*				
425.978 *7*	524.851	72 *8*				
[x]430.620 *10*		63 *7*				
[x]432.408 *11*		108[@] *16*				
432.647 *22*	821.782	48[@] *13*				
452.799 *16*	664.207	40 *5*				
464.674 *7*	664.207	60 *7*				
[x]472.217 *20*		53[&] *12*				
524.846 *4*	524.851	186 *19*				
531.263 *23*	630.145	40[@] *12*				
[x]533.252 *19*		52[@] *8*				
534.418 *15*	664.207	46[@] *9*				
[x]544.126 *15*		40 *5*				
590.895 *7*	590.901	159 *16*	M1(+E2)	<0.32	0.051 *2*	α(K)=0.0404; α(L)=0.00657. α(K)exp=0.05 *21* (87Ca03).
[x]594.26 *4*		46[&] *10*				
[x]612.870 *21*		70 *8*				
[x]617.71 *14*		21 *4*				
629.86 *25*	630.145	11 *3*				
635.59 *3*	1160.39	39 *5*				
640.33 *16*	739.548	20 *3*				
[x]647.485 *12*		75 *8*				
687.69 *6*	926.89	44 *8*				
[x]688.96 *24*		30 *8*				
705.07 *13*	1160.39	31 *5*				
715.11 *14*	926.89	26 *4*				
[x]738.27 *2*		30 *6*				
739.74 *16*	739.548	41 *6*				
[x]758.5 *3*		17 *5*				
[x]776.71 *5*		29 *4*				
[x]864.2 *4*		19 *7*				
892.57 *26*	1132.402	19 *5*				
[x]913.9 *4*		27 *11*				
[x]915.3 *4*		37 *10*				
[x]917.1 *3*		27 *7*				
926.85 *23*	926.89	25 *7*				
[x]929.1 *4*		25 *8*				
[x]930.7 *5*		22 *7*				
948.70 *15*	1160.39	38 *6*				
[x]1005.60 *8*		101 *11*				
[x]1024.91 *19*		28 *5*				
1030.60 *22*	1160.39	27 *6*				
1033.13 *22*	1132.402	29 *6*				
[x]1046.93 *9*		113 *12*				
[x]1049.09 *20*		37 *6*				
1061.45 *10*	1160.39	86 *10*				
[x]1064.8 *5*		14 *6*				
[x]1066.77 *23*		34 *6*				
[x]1076.04 *21*		33 *7*				
[x]1091.27 *8*		126 *14*				
(4948.71[‡] *5*)	(6105.06)	235[§] *16*				
(4976.70[‡] *5*)	(6105.06)	66[§] *9*				
(4986.51[‡] *5*)	(6105.06)	260[§] *30*				
(5182.21[‡] *7*)	(6105.06)	95[§] *12*				
(5287.31[‡] *5*)	(6105.06)	110[§] *50*				
(5369.54[‡] *5*)	(6105.06)	113[§] *15*				
(5444.88[‡] *5*)	(6105.06)	164[§] *14*				
(5478.94[‡] *5*)	(6105.06)	177[§] *18*				
(5518.19[‡] *5*)	(6105.06)	410[§] *30*				

Continued on next page (footnotes at end of table)

$^{195}_{78}Pt_{117}$

^{194}Pt(n,γ) E=thermal 87Ca03,82Wa20 (continued)

γ(^{195}Pt) (continued)

Eγ[†]	E(level)	Iγ[#b]	Comments
(5584.23[‡] *5*)	(6105.06)	480[§] *30*	
(5601.16[‡] *5*)	(6105.06)	101[§] *9*	
(5653.81[‡] *5*)	(6105.06)	231[§] *20*	
(5677.10[‡] *5*)	(6105.06)	490[§] *90*	Iγ: may be incorrect from intensity balance because 1/2+ to 9/2+ to 13/2+ transitions.
(5689.38[‡] *5*)	(6105.06)	650[§] *60*	
(5719.94[‡] *5*)	(6105.06)	490[§] *50*	
(5869.81[‡] *5*)	(6105.06)	410[§] *70*	
(5886.85[‡] *5*)	(6105.06)	400[§] *80*	
(5897.67[‡] *5*)	(6105.06)	1450[§] *30*	
(5909.54[‡] *5*)	(6105.06)	1380[§] *120*	
(5979.29[‡] *5*)	(6105.06)		
(6010.19[‡] *5*)	(6105.06)	1630[§] *130*	
(6109.07[‡] *5*)	(6105.06)	1200 *1200*	Iγ: intensity from capture state to g.s. is ≈25% for ^{196}Pt(n,γ), ≈3% for ^{195}Pt(n,γ).

[†] From 82Wa20. Secondary Eγ observed with γ spectrometer and Ge(Li) at thermal neutron energies. Absolute calibration error is not included.

[‡] From level energy difference.

[§] From intensity balance.

[#] Relative photon intensity obtained from Ge(Li) and normalized to Iγ(Eγ=211 keV)=1000, except as noted. Values are from 82Wa20.

[@] Total intensity of the multiplet was taken from the Ge(Li) data, while relative intensities of the individual components were obtained from the cryst measurements.

[&] The γ ray was obscured in the Ge(Li) measurements by a contaminant. The intensity was obtained from the ratio to neighboring lines in the cryst measurements.

[a] From α(exp) measurements (87Ca03), except as noted. Normalized so that α(K)(211γ)=0.614 *5* from δ(211γ)=0.37, taken by the authors from 73Ca10.

[b] For intensity per 100 neutron captures, multiply by 0.0104 *12*.

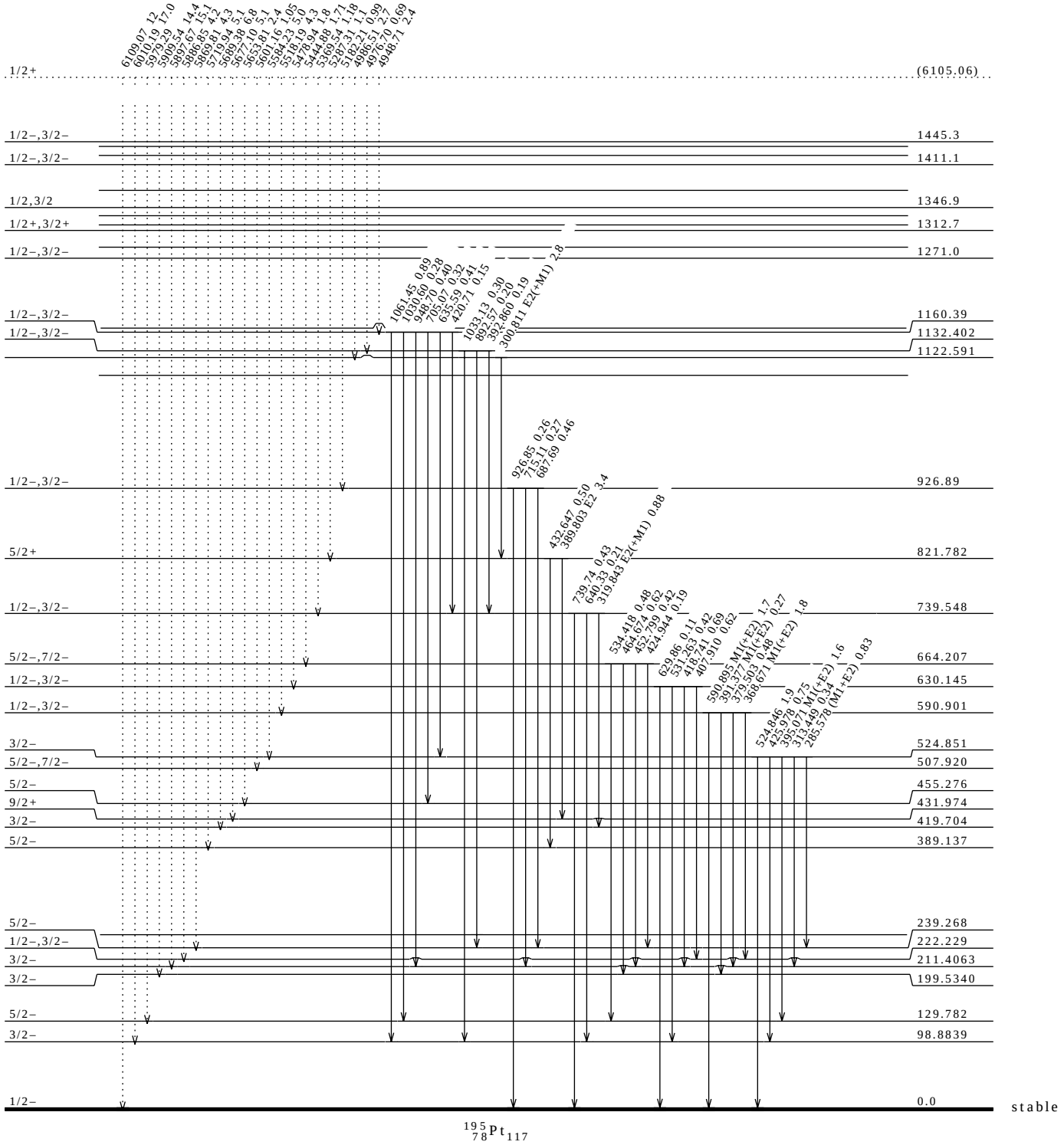
[x] γ ray not placed in level scheme.

$^{195}_{78}Pt_{117}$

^{194}Pt(n,γ) E=thermal 87Ca03,82Wa20 (continued)

Level Scheme

Intensities: I(γ+ce) per 100 parent decays

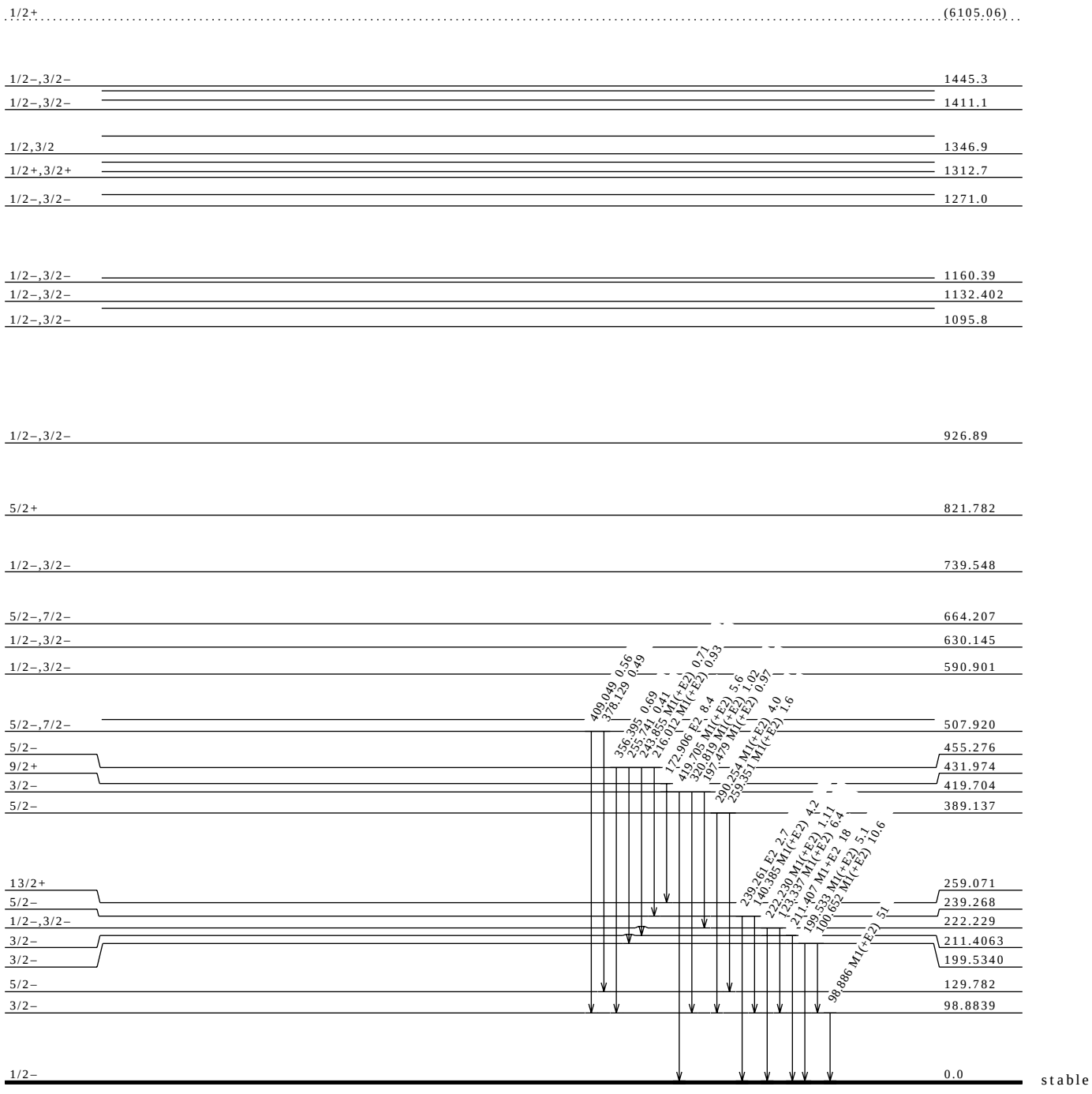


$^{195}_{78}Pt_{117}$

^{194}Pt(n,γ) E=thermal 87Ca03,82Wa20 (continued)

Level Scheme (continued)

Intensities: I(γ+ce) per 100 parent decays



$^{195}_{78}Pt_{117}$

$^{196}_{78}Pt_{118}$

^{195}Pt(n,γ) E=thermal 79Ci04

Target Jπ=1/2− (g.s.).

Natural Pt and 97.28% enriched ^{195}Pt. Measured Eγ, Iγ, and γ−γ coin. Ge(Li), bent−crystal spectrometers and NaI(Tl) detectors, Ge(Li) three−crystal pair spectrometer.

The level scheme was constructed on the basis of the energy fit and γγ−coincidence measurements. All data are from 79Ci04, except where noted.

Others: 82Ka28, 81Mc05, 78Ci02, 71Wa24, 70Or05, 69Gr41, 68Sa13, 68Gr21.

90Bo29: γ ray induced Doppler broadening technique with ultrahigh resolution spectroscopy. Measured absolute transition rates.

82Ka28 give data for E0 transitions based on ce measurement.

^{196}Pt Levels

E(level)†	Jπ‡	$T_{1/2}$	Comments
0.0	0+	stable	
355.6843 *20*	2+		
688.672 *3*	2+		
876.854 *4*	4+	>0.69 ps	$T_{1/2}$: from $T_{1/2}$>0.7 ps for lower limit; <2.6 ps for upper limit (90Bo29). $T_{1/2}$=3.55 ps *5* from adopted level.
1015.028 *4*	3+		
1135.293 *4*	0+	>2.6 ps	$T_{1/2}$: from $T_{1/2}$>2.6 ps for lower limit; <3.1 ps for upper limit (90Bo29). $T_{1/2}$=6 ps *3* from adopted level.
1270.200 *6*	5−		
1293.293 *6*	4+		
1361.568 *4*	2+		
1402.719 *11*	0+	>1.29 ps	$T_{1/2}$: from $T_{1/2}$>1.29 ps for lower limit; <1.9 ps for upper limit (90Bo29).
1447.029 *6*	3−		
1604.485 *11*	2+		
1677.242 *12*	2+		
1754.642 *9*	3−,4+		
1795.08 *6*	2+,(1−)		
1802.284 *9*	1+,2+		
1823.21 *8*	0+		
1825.698 *7*	2+		
1847.343 *18*	2+		
1853.643 *12*	2+		
1888.123 *13*	1+,2+	1.3 ps *+740−6*	$T_{1/2}$: from τ=1.8 ps *+1070−9* for 1888γ (90Bo29).
1918.54 *4*	0+		
1932.00 *11*	0+,1+,2+		
1968.897 *13*	1+,(2+)		
1984.91 *5*	1+,2+		
1988.204 *9*	1+,2+		
1999.05 *16*	2+		
2013.86 *3*	2+		
2046.97 *6*	2+		
2069.33 *20*	0+,1+,2+		
2087.313 *21*	3−,4+		
2092.6 *7*	(2+)		
2124.376 *22*	3−,4+		
2126.925 *15*	2+		
2162.68 *8*	2+		
2174.42 *12*	0+,2+		
2183.5 *3*	1+,2+		
2199.43 *5*	0+		
2204.415 *12*	1+,2+		
2229.6 *3*	2+		
2245.542 *13*	1+,2+		
2262.419 *16*	2+		
2309.22 *4*	(2+)		
2324.208 *22*	1+,2+		
2345.28 *25*	1+,2+		
2365.967 *19*	2+		
2375.07 *21*	1+,2+		
2383.31 *6*	0+,1+,2+		
2403.64 *6*	2+		
2422.49 *4*	0+,1+,2+		
2443.96 *18*	2+		

Continued on next page (footnotes at end of table)

$^{196}_{78}Pt_{118}$

^{195}Pt(n,γ) E=thermal 79Ci04 (continued)

^{196}Pt Levels (continued)

E(level)†	Jπ‡	$T_{1/2}$	Comments
2460.2 *3*	0+,1+,2+		
2469.88 *17*	1−,2+		
2488.229 *24*	1+,2+		
2505.10 *5*	2+		
2527.83 *4*	1+,2+		
2529.2 *3*	2+		
2554.7 *13*	0+,2+		
2614.8 *7*	0+,1+,2+		
2661.2 *8*	0+,1+,2+		
2667.233 *23*	1+,2+	0.14 ps *+2−1*	$T_{1/2}$: from τ=0.20 ps *+3−2* for 1979γ (90Bo29).
2737.5§ *10*	(1)+§		
2749.0§ *10*	(2)+§		
2823.6§ *10*	(1)+§		
2861.5§ *10*	(1,2)+§		
2875.8§ *10*	(1,2)+§		
2927.2§ *10*	(1,2)+§		
2951.7§ *10*	(0,1,2)+§		
2974.8§ *10*	(0,2)+§		
3023.0§ *10*	(1,2)+§		
3040.0§ *10*	(1,2)+§		
3106.0§ *10*	(0,1,2)+§		
3130.6§ *10*	(2)+§		
3245.0§ *10*	(0,2)+§		
7921.88 *15*	0−,1−		E(level): from evaluated s(n) (95Au04). Jπ: from s−wave neutron capture. Observed deexcitation intensity is 44.1% of g.s. feeding.

† From least−squares fit to Eγ's.
‡ From the adopted levels, except as indicated.
§ These levels are not adopted, only from 70Or05.

γ(^{196}Pt)

Iγ normalization from assuming I(γ+ce)(to g.s.)=100.

Eγ†	E(level)	Iγ‡f	Mult.§	α	I(γ+ce)f	Comments
138.178 *4*	1015.028	1.1 *3*				
176.830 *3*	1447.029	2.6 *7*				
x191.164 *6*		0.9 *3*				
x192.903 *10*		0.8 *2*				
201.769 *6*	1604.485	0.7 *2*	(E2)	0.353		
x208.733 *2*		4.8 *15*				
x209.642 *6*		1.2 *4*				
225.810 *18*	2488.229	0.7 *3*				
226.270 *3*	1361.568	1.3 *3*				
242.858 *17*	1847.343	0.26 *12*				
x243.119 *18*		0.20 *10*				
245.655h *5*	2092.6	0.5 *2*				
x276.376 *21*		0.28 *10*				
x283.09 *4*		0.19 *10*				
x290.54 *5*		0.22 *10*				
x291.620 *7*		0.8 *4*				
293.522 *10*	2262.419	0.8 *3*				
307.616 *9*	1754.642	1.6 *3*				
x310.588 *8*		0.4 *2*				
315.58 *8*	1677.242	0.5 *2*				
316.27h *3*	2204.415	0.9 *5*				
326.349 *4*	1015.028	85 *7*	E2	0.0778		
332.983 *2*	688.672	411 *33*	(E0+E2+M1)			
x345.973 *7*		0.9 *2*				
346.541 *3*	1361.568	6.6 *11*				
355.684 *2*	355.6843	1000	E2	0.0609		

Continued on next page (footnotes at end of table)

$^{196}_{78}Pt_{118}$

^{195}Pt(n,γ) E=thermal 79Ci04 (continued)

γ(^{196}Pt) (continued)

Eγ[†]	E(level)	Iγ[‡f]	Mult.[§]	α	I(γ+ce)[f]	Comments
[x]357.729[#] *9*		0.7 *2*				
369.46 *5*	2383.31	0.4 *2*				
[x]370.77 *5*		0.18 *13*				
372.292[h] *22*	2126.925	0.20 *9*				
378.675 *14*	1825.698	3.2 *4*				
[x]383.748 *8*		0.9 *3*				
[x]385.161 *13*		0.8 *3*				
393.346 *7*	1270.200	10.3 *8*				
402.130 *7*	2204.415	1.3 *2*				
416.443 *6*	1293.293	1.4 *4*				
[x]418.10 *3*		0.7 *2*				
418.73 *3*	2403.64	0.7 *2*				
423.00 *3*	1825.698	1.3 *2*				
423.7 *3*	2422.49	0.6 *2*				
430.2[#] *3*	2443.96	0.60 *14*				
431.982 *24*	1447.029	2.6 *4*				
440.709 *9*	1802.284	0.8 *4*				
443.258 *9*	2245.542	1.0 *2*				
446.613 *3*	1135.293	15.3 *11*	E2	0.0331		
[x]456.425 *24*		0.56 *12*				
[x]459.69 *3*		0.6 *4*				
461.86 *3*	2309.22	0.27 *6*				
464.126 *9*	1825.698	0.60 *13*				
470.567 *19*	2324.208	0.15 *5*				
484.438 *11*	1754.642	2.2 *7*				
484.707 *25*	1361.568	1.4 *4*				
521.175 *5*	876.854	60 *6*	E2	0.0226		B(E2)=0.38 (85Fe03,86Fe02). ce(K)=44 *4*; ce(L)=8 *3*; K/L=5.5 *21*.
522.440 *11*	2126.925	3.7 *10*				
526.58 *3*	1888.123	0.39 *11*				
[x]540.33 *3*		1.0 *2*				
541.174 *7*	1988.204	3.1 *7*				
541.942 *20*	1677.242	0.7 *2*				
560.354 *10*	1853.643	1.2 *3*				
566.174 *8*	1968.897	3.6 *9*				
566.55[h] *4*	2013.86	0.8 *2*				
568.85 *3*	2422.49	0.40 *13*				
570.203 *18*	1447.029	1.4 *4*				
[x]587.423 *17*		0.6 *3*				
589.434 *20*	1604.485	0.6 *3*				
[x]590.00 *9*		0.6 *4*				
[x]594.21 *3*		0.7 *2*				
604.616 *7*	1293.293	8.3 *7*				
623.34 *5*	1984.91	1.2 *2*				
626.636 *18*	1988.204	1.2 *2*				
[x]632.80 *6*		0.43 *12*				
639.70 *3*	2527.83	0.50 *11*				
641.12[h] *4*	2245.542	1.2 *2*				
645.95[h] *3*	2092.6	1.6 *4*				
659.389 *12*	1015.028	3.7 *8*				
662.188 *16*	1677.242	1.9 *4*				
[x]663.95 *3*		1.3 *2*				
[x]665.988 *24*		1.0 *5*				
666.99 *3*	1802.284	0.5 *3*				
672.900 *7*	1361.568	30 *2*	(M1+E2)	0.025 *13*		ce(K)=27 *2*; ce(L)=8 *3*; α(K)exp=0.022 *3*; K/L=3.4 *13*.
677.34 *3*	2124.376	1.1 *4*				
689	688.672	<0.002				Iγ: from 71Wa24.
690.403 *12*	1825.698	2.4 *4*				
698.23 *4*	2667.233	1.7 *3*				
705.65[h] *4*	1999.05	0.9 *2*				
715.3[i] *4*	2162.68	0.7[i] *2*				Transition placed from 2469–keV level also.

Continued on next page (footnotes at end of table)

$^{196}_{78}Pt_{118}$

^{195}Pt(n,γ) E=thermal 79Ci04 (continued)

γ(^{196}Pt) (continued)

Eγ[†]	E(level)	Iγ[‡f]	Mult.[§]	α	I(γ+ce)[f]	Comments
715.3[i] *4*	2469.88	0.7[i] *2*				Transition placed from 2162–keV level also.
726.0[i] *7*	2087.313	1.8[i] *4*				Transition placed from 2403–keV level also.
	2403.64	1.8[i] *4*				Transition placed from 2087–keV level also.
727.581 *23*	1604.485	7.1 *14*	(E2)	0.0106		ce(K)=7 *2* (71Wa24).
748.66 *6*	2667.233	1.0 *4*				
[x]750.00 *4*		0.7 *3*				
752.823 *14*	1888.123	2.0 *3*				
758.358 *10*	1447.029	6 *2*				
761.482 *16*	2365.967	2.3 *3*				
779.630 *7*	1135.293	39 *3*	E2			Iγ: Iγ=2.9 *3* for 100 n–capture events (82Ka28). ce(K)=8 *3*; α(K)exp=0.017 *7*.
800.38 *5*	1677.242	0.8 *2*				
[x]813.80 *5*		1.1 *2*				
817.112 *20*	2087.313	3.3 *3*				
833.58 *5*	1968.897	5.0 *5*				
849.74[h] *9*	1984.91	0.7 *2*				
854.18 *3*	2124.376	1.6 *3*				
864.72[h] *8*	2667.233	0.72 *15*				
877.77 *3*	1754.642	1.9 *3*				
915.80 *6*	1604.485	6.5 *6*				
918.81 *14*	2365.967	1.8 *2*				
937.62 *7*	1293.293	1.4 *2*				
947.4 *6*	2309.22	1.2 *5*				
[x]955.37 *13*		0.60 *12*				
956.4 *5*	2403.64	1.5 *5*				
[x]961.4 *3*		1.9 *5*				
969.94 *12*	1984.91	0.8 *2*				
[x]976.34 *5*		1.7 *3*				
988.54 *7*	1677.242	3.1 *4*	M1+E2+E0			α(K)exp=0.089 *11* (82Ka28); ce(K)=0.24 *4*. ce(K): relative to Iγ(1677γ)=15 *2* from 82Ka28. Other: ce(K)=7 *2* (71Wa24, relative to ce(K)(356)=1420 *55*). Mult.: E0 violates the O(6) selection rules for both σ and τ (82Ka28).
1005.894 *20*	1361.568	24 *2*				
[x]1029.0 *5*		0.9 *3*				
1031.93 *8*	2046.97	2.0 *4*				
1047.044 *20*	1402.719	30 *2*				Iγ: Iγ=2.3 *2* for 100 n–capture events (82Ka28).
1048.3 *7*	2183.5	4.0[a] *12*				
[x]1055.91 *14*		0.8 *2*				
1062.66 *6*	2667.233	2.4 *5*				
1069.4 *2*	2204.415	1.5 *4*				
1080.5[#] *4*	2527.83	0.7 *3*				
1091.331 *17*	1447.029	30[b] *2*				
[x]1096.0 *3*		2.4 *4*				
[x]1101.6 *2*		3.4 *4*				
1106.6 *2*	1795.08	4.4 *8*				
[x]1113.72[g] *4*		1.4[g] *7*				
1113.72[g] *4*	1802.284	5.0[ag] *9*				Iγ: possible doublet from coincidence measurements with Iγ=6.4 *6*.
1135.3	1135.293		E0		<0.0094	I(γ+ce): I(γ+ce)=Ice: from I(cek)/Iγ(779γ)<0.00021 *3* (82Ka28), and ce(E0)/ce(K)(E0)=1.16 (69Ha61).
1137.01[g] *3*	1825.698	4.6[ag] *14*				Iγ: possible doublet from coincidence measurements with Iγ=6.0 *8*.
	2013.86	1.4[ag] *7*				Iγ: possible doublet from coincidence measurements with Iγ=6.0 *8*.

Continued on next page (footnotes at end of table)

$^{196}_{78}Pt_{118}$

^{195}Pt(n,γ) E=thermal 79Ci04 (continued)

γ(^{196}Pt) (continued)

Eγ[†]	E(level)	Iγ[‡f]	Mult.[§]	I(γ+ce)[f]	Comments
1143.53 *5*	2505.10	2.0 *4*			
1150.8 *3*	2443.96	1.5 *3*			
1158.82 *13*	1847.343	1.2 *2*	M1+E2+E0		α(K)exp<0.02 (82Ka28); ce(K)<0.013. ce(K): relative to Iγ(1492γ)=23 *2* from 82Ka28.
[x]1162.1 *4*		1.5 *4*			
1188.9 *2*	2324.208	1.0 *2*			
1199.50 *4*	1888.123	10[@] *2*			
[x]1204.1 *2*		4.4[@] *5*			
1210.2 *4*	2087.313	1.7 *4*			
1229.65 *13*	1918.54	2.4 *5*			
[x]1243.94 *7*		4.5 *5*			
1248.84 *3*	1604.485	16.3 *14*	M1+E2+E0		ce(K)=21 *3*; ce(L)=2 *1*; K/L=10 *5* (71Wa24). α(K)exp=0.058 *5* (82Ka28); ce(K)=0.86 *10*. ce(K): relative to Iγ(1249γ)=16.3 *14* from 82Ka28.
1264.6 *2*	2667.233	3.3 *6*			
[x]1272.6 *5*		1.7 *4*			
[x]1296.49 *6*		7.5[a] *10*			
1305.59 *4*	2667.233	10.4 *7*			
[x]1311.8[#] *6*		1.0 *4*			
[x]1314.9[#] *5*		1.1 *4*			
[x]1321.74[g] *4*		5[g] *2*			
1321.74[g] *4*	1677.242	9[ag] *3*			Iγ: possible doublet from coincidence measurements with Iγ=13.8 *11*.
1330.6 *5*	2345.28	1.6 *5*			
1334.3 *3*	2469.88	2.3 *5*			
1353.0[hi] *4*	2229.6	1.3[i] *5*			
	2488.229	1.3[i] *5*			
1358.30 *8*	2046.97	11.7 *11*			
[x]1360.4 *3*		5.5 *8*			
[x]1370.7 *3*		2.0 *5*			
[x]1379.1 *3*		1.8 *6*			
1397.9[h] *4*	2087.313	1.5 *5*			
1402.7	1402.719		E0	0.41 *5*	I(γ+ce): I(γ+ce)=Ice: from I(cek)/Iγ(1047γ)=0.0117 *11* (82Ka28), and ce(E0)/ce(K)(E0)=1.16 (69Ha61). Other: ce(K)=11 *2*, α(K)exp=0.009 *2* (71Wa24, see footnote on mult).
1404.6[h] *2*	2092.6	4.3 *5*			
[x]1422.3 *3*		1.2 *3*			
1428.7 *3*	2443.96	1.3 *3*			
1439.38 *6*	1795.08	11.0 *9*			
1446.84[g] *12*	1447.029	4.5[ag] *10*			Iγ: possible doublet from coincidence measurements with Iγ=7.5 *7*.
	1802.284	3.0[ag] *7*			Iγ: possible doublet from coincidence measurements with Iγ=7.5 *7*.
[x]1450.1 *4*		1.9 *5*			
[x]1463.5 *3*		3.7 *6*			
1467.53 *8*	1823.21	8.4 *8*			Iγ: Iγ=0.63 *6* for 100 n–capture events (82Ka28).
1473.97 *8*	2162.68	9.0 *15*			
1485.81 *15*	2174.42	3.6 *8*			
1491.60 *4*	1847.343	23 *2*			
1497.85 *6*	1853.643	12.5 *11*			
1510.75 *5*	2199.43	13.3 *11*			
1515.5 *3*	2204.415	1.9 *6*			
1526.7 *2*	2403.64	2.3[@] *14*			
1532.30[g] *5*	1888.123	11[ag] *3*			Iγ: possible doublet from coincidence measurements with Iγ=20 *2*.
	2667.233	9[ag] *3*			Iγ: possible doublet from coincidence measurements with Iγ=20 *2*.
1562.85 *5*	1918.54	13.5 *13*			Iγ: Iγ=1.02 *1* for 100 n–capture events (82Ka28).
1576.32 *11*	1932.00	7.5 *11*			
[x]1582.5 *2*		3.7 *6*			
1604.3 *3*	1604.485	3.3 *6*			

Continued on next page (footnotes at end of table)

$^{196}_{78}Pt_{118}$

^{195}Pt(n,γ) E=thermal 79Ci04 (continued)

γ(^{196}Pt) (continued)

Eγ[†]	E(level)	Iγ[‡f]	Mult.[§]	I(γ+ce)[f]	Comments
1613.1 *3*	1968.897	2.3 *4*			
1620.7 *3*	2309.22	5.7 *10*			
[x]1628.5 *2*		5.7 *5*			
1632.4 *2*	1988.204	8.8 *7*			
1635.2 *2*	2324.208	3.4 *5*			
1643.4 *2*	1999.05	7.1 *6*			
[x]1646.0 *5*		3.3 *5*			
1656.5 *3*	2345.28	3.1 *4*			
[x]1661.9 *5*		1.1 *4*			
[x]1671.7 *4*		2.0 *5*			
[x]1674.7 *5*		2.5 *6*			
1677.5 *2*	1677.242	15[@] *2*			
1686.6 *3*	2375.07	3.1 *5*			
1691.7[h] *2*	2046.97	3.9 *7*			
1694.3 *4*	2383.31	2.6 *6*			
1713.6 *2*	2069.33	14[@] *2*			
[x]1726.1 *3*		4.5 *7*			
1731.9 *3*	2087.313	3.9 *7*			
1736.9[h] *2*	2092.6	14.8 *12*			
1768.9 *5*	2124.376	2.9 *7*			
1771.5 *3*	2126.925	9.3 *10*			
1795.0 *3*	1795.08	2.7 *7*			
1799.5 *4*	2488.229	4.4 *10*			
1802.3 *2*	1802.284	26 *2*			
1807.3 *2*	2162.68	8.3 *8*			
1818.6 *2*	2174.42	2.8 *6*			
1823.2	1823.21		E0	<0.008	I(γ+ce): I(γ+ce)=Ice: from I(cek)/Iγ(1467γ)<0.00095 *9* (82Ka28), and ce(E0)/ce(K)(E0)=1.16 (69Ha61). <0.03 (82Ka28).
1826.0 *2*	1825.698	14.3 *12*			
1839.4 *3*	2527.83	4.0 *5*			
1848.7 *4*	2204.415	1.8 *4*			
1853.6 *3*	1853.643	2.5 *4*			
[x]1863.7 *5*		1.6 *6*			
[x]1870.0 *7*		1.4 *6*			
1873.9 *3*	2229.6	7.5 *8*			
1888.4 *2*	1888.123	15.2 *12*			
[x]1900.2[#] *4*		1.7 *6*			
[x]1910.8[#] *5*		1.9 *5*			
1918.5	1918.54		E0	0.022 *4*	I(γ+ce): I(γ+ce)=Ice: from I(cek)/Iγ(1563γ)=0.0014 *2* (82Ka28), and ce(E0)/ce(K)(E0)=1.16 (69Ha61).
1969.1 *2*	1968.897	16 *2*			
1978.6 *2*	2667.233	26 *2*			
1999.3 *4*	1999.05	3.0 *9*			
2066.5 *3*	2422.49	9.3 *13*			
[x]2068.0 *3*		5.3 *12*			
2104.4 *3*	2460.2	5.5 *9*			
2114.4 *3*	2469.88	3.9 *5*			
2132.9 *7*	2488.229	2.0 *7*			
[x]2135.7 *6*		1.8 *7*			
2149.1 *7*	2505.10	1.3 *5*			
2173.5 *3*	2529.2	5.6 *6*			
2183.6 *3*	2183.5	8.4 *11*			
[x]2185.4[#] *6*		2.8 *9*			
2199.4	2199.43		E0	0.017 *2*	I(γ+ce): I(γ+ce)=Ice: from I(cek)/I(cek)(1402.7γ)=0.041 *8* (82Ka28) and ce(E0)/ce(K)(E0)=1.16 (69Ha61).
2245.8 *3*	2245.542	7.4 *5*			
[x]2253.4 *4*		2.0 *4*			
[x]2259.8 *4*		1.9 *3*			
[x]2275.8 *5*		1.6 *3*			

Continued on next page (footnotes at end of table)

$^{196}_{78}Pt_{118}$

^{195}Pt(n,γ) E=thermal 79Ci04 (continued)

γ(^{196}Pt) (continued)

Eγ[†]	E(level)	Iγ[‡f]	Mult.[§]	Comments
2310.9[g] *3*	2309.22	11[ag] *2*		Iγ: possible doublet from coincidence measurements with Iγ=21 *2*.
	2667.233	10[ag] *2*		Iγ: possible doublet from coincidence measurements with Iγ=21 *2*.
[x]2321.2 *3*		3.8 *5*		
[x]2333.9 *5*		3.0 *4*		
[x]2351.0 *3*		1.8 *3*		
2374.8 *3*	2375.07	5.6 *5*		
[x]2381.4[#] *7*		1.3 *3*		
[x]2392.6 *4*		11.8 *9*		
[x]2467.3 *7*		3.5[&] *11*		
[x]2469.7[g] *4*		5.0[g] *2*		
2469.7[g] *4*	2469.88	7.0[&ag] *2*		Iγ: possible doublet from coincidence measurements with Iγ=12.0 *14*.
[x]2484.1 *7*		1.6 *4*		
2488.1 *6*	2488.229	2.6 *4*		
[x]2492.7 *10*		1.0 *4*		
2505.2 *4*	2505.10	5.0 *5*		
[x]2510.4 *7*		1.3 *4*		
2526.9 *10*	2527.83	11.7[e]		
4677.4 *10*	7921.88	0.9[e]	(E1)	
4791.8 *10*	7921.88	4.2[e]	(E1)	
4816.4 *10*	7921.88	4.4[e]	(E1)	
4882.4 *10*	7921.88	6.9[e]	(E1)	
4899.4 *10*	7921.88	8.2[e]	(E1)	
4947.6 *10*	7921.88	12[e]	(E1)	
4970.7 *10*	7921.88	2.4[e]	(E1)	
4995.2 *10*	7921.88	1.5[e]	(E1)	
5046.6 *10*	7921.88	2.7[e]	(E1)	
5060.9 *10*	7921.88	3.1[e]	(E1)	
5098.8 *10*	7921.88	17[e]	(E1)	
5173.4 *10*	7921.88	32[e]	(E1)	
5184.9 *10*	7921.88	15[e]	(E1)	
5255.3 *7*	7921.88	104 *8*	(E1)	
5261.2 *8*	7921.88	16 *2*	(E1)	
5307.6 *7*	7921.88	26 *2*	(E1)	
5367.7[#] *13*	7921.88	2.0 *8*		
5393.7 *7*	7921.88	23[d] *2*	(E1)	
5417.9 *8*	7921.88	2.8 *8*	(E1)	
5435.4 *14*	7921.88	5 *2*	(E1)	
5452.0 *6*	7921.88	16.0 *17*	(E1)	
5459.6 *14*	7921.88	2.6 *10*	(E1)	
5500.7[#] *7*	7921.88	5.5 *9*	(E1)	
5539.0 *8*	7921.88	3.0 *10*	(E1)	
5546.9 *9*	7921.88	5.6 *12*	(E1)	
5553.7 *15*	7921.88	2.6 *10*	(E1)	
5577.3 *8*	7921.88	5.3 *10*	(E1)	
5612.5 *5*	7921.88	25 *2*	(E1)	
5661 *3*	7921.88	2.2		
5677.0 *10*	7921.88	3.9[d] *11*	(E1)	
5692.8 *10*	7921.88	0.7		
5717.3 *12*	7921.88	4.1 *13*	(E1)	
5722.9 *7*	7921.88	13.6 *17*	(E1)	
5739.3 *6*	7921.88	8.6 *11*	(E1)	
5747.5 *10*	7921.88	4.6 *10*	(E1)	
5760.1 *6*	7921.88	14.5 *16*	(E1)	
5795.0 *6*	7921.88	6.4 *9*	(E1)	
5829.8 *6*	7921.88	4.4 *7*	(E1)	
5852.2 *10*	7921.88	1.8 *4*	(E1)	
5874.9 *6*	7921.88	8.3 *9*	(E1)	
5911.4 *6*	7921.88	8.4[d] *7*	(E1)	
5936.8 *11*	7921.88	1.7 *7*	(E1)	
5953.4 *5*	7921.88	15.7 *13*	(E1)	
5990.9 *8*	7921.88	3.6 *8*	(E1)	
6003.6 *6*	7921.88	13.3 *14*	(E1)	

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$^{196}_{78}Pt_{118}$

^{195}Pt(n,γ) E=thermal 79Ci04 (continued)

γ(^{196}Pt) (continued)

Eγ[†]	E(level)	Iγ[‡f]	Mult.[§]
6034.0 *7*	7921.88	24[@] *3*	(E1)
6071.2 *13*	7921.88	3.0[c] *14*	(E1)
6075.6 *9*	7921.88	5.7[c] *14*	(E1)
6095.9 *11*	7921.88	2.2[c] *7*	
6101.5 *15*	7921.88	1.4[c] *7*	(E1)
6120.1 *9*	7921.88	2.4 *5*	(E1)
6243.8 *10*	7921.88	1.1 *3*	(E1)
6318.7 *8*	7921.88	1.5 *3*	(E1)
6518.8 *9*	7921.88	1.2 *3*	(E1)
6560.5 *6*	7921.88	2.9 *3*	(E1)
6787.0 *11*	7921.88	1.8 *7*	(E1)
7234.3 *6*	7921.88	11.0 *12*	(E1)
7566.6 *6*	7921.88	3.8 *5*	(E1)
7922.2 *6*	7921.88	10.8 *8*	(E1)

[†] Weighted average of the energy at thermal and 11.9–eV neutron energies. The energy cutoff for the low energy 11.9–eV resonance study was ≈2470 keV.

[‡] Relative intensities renormalized to 1000 for 355–keV transition, unless otherwise noted.

[§] From α(K)exp and K/L (71Wa24). Primary γ assumed to be E1. ce(K) from 71Wa24, relative ce intensities normalized to ce(K)(356)=1420 *55*.

[#] Questionable line.

[@] Intensity corrected to account for nearby impurity.

[&] Unresolved multiplet for which the best estimates of centroids and intensities of the components are quoted.

[a] Intensity taken from coincidence measurements.

[b] Up to 10% of the 1091γ intensity may be placed elsewhere in level scheme (in coincidence with 521γ).

[c] Pair of partially resolved lines. The quoted energies and intensities are the best estimates for the components.

[d] Broad peak, possible unresolved multiplet. The centroid energy and total intensity are quoted.

[e] Converting the Iγ values of 70Or05 to the scale of 79Ci04 by normalizing to the three strong highest energy transitions, 7235, 7567, and 7920; the data of 70Or05 should be multiplied by 22.1.

[f] For intensity per 100 neutron captures, multiply by 0.081103.

[g] Multiply placed; intensity suitably divided.

[h] Placement of transition in the level scheme is uncertain.

[i] Multiply placed; undivided intensity given.

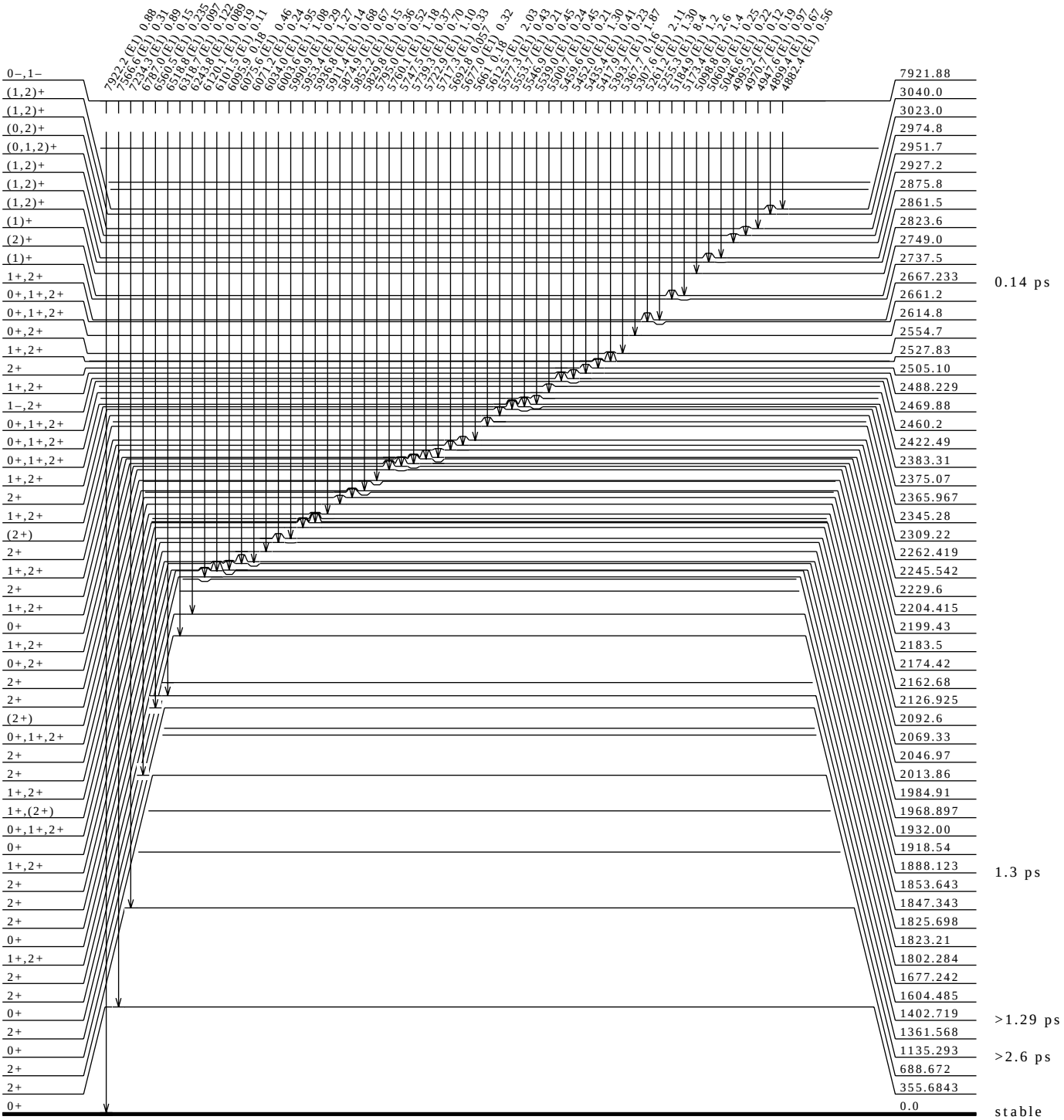
[x] γ ray not placed in level scheme.

$^{196}_{78}Pt_{118}$

^{195}Pt(n,γ) E=thermal 79Ci04 (continued)

Level Scheme

Intensities: I(γ+ce) per 100 parent decays
@ Multiply placed; intensity suitably divided
& Multiply placed; undivided intensity given

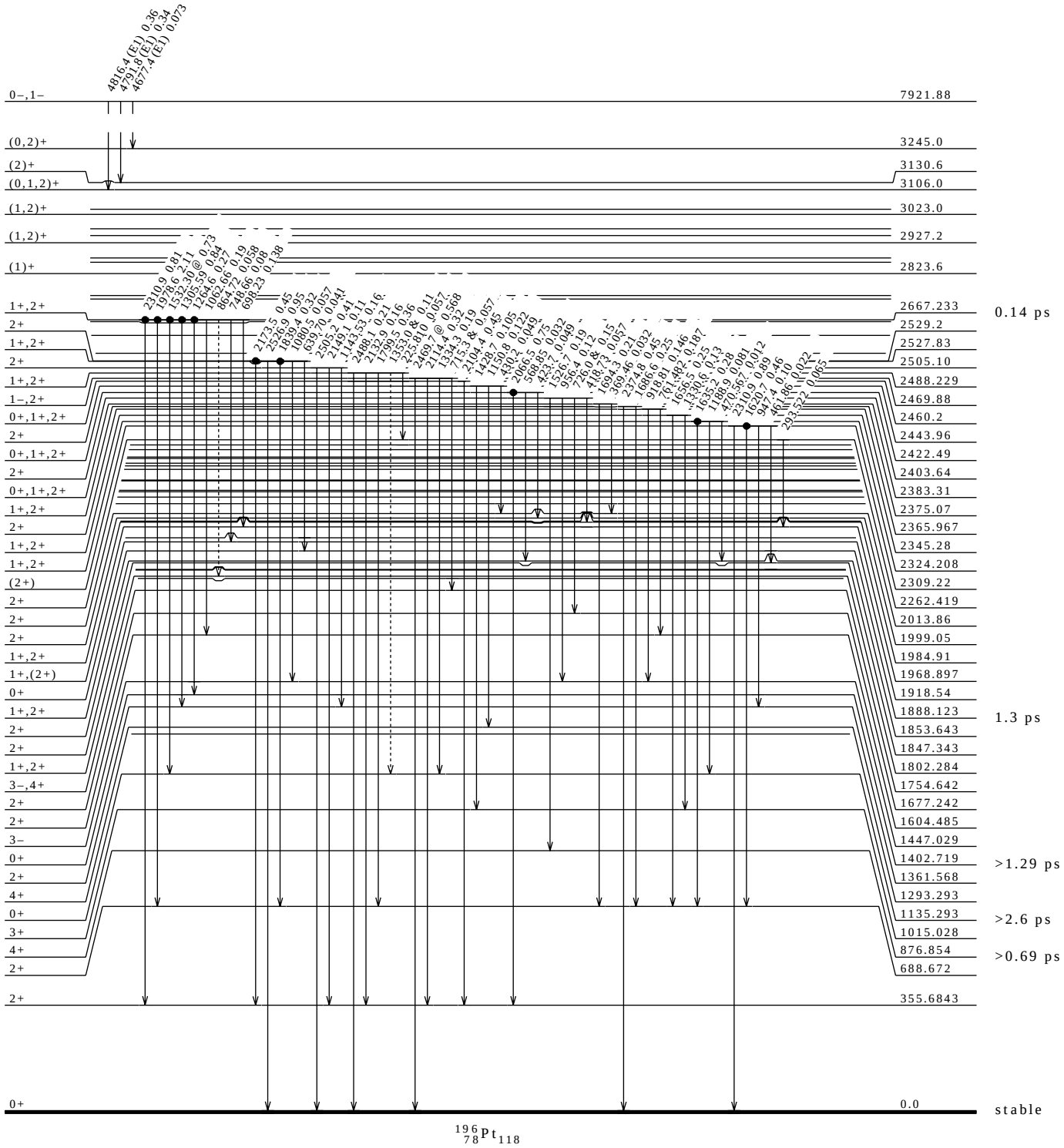


$^{196}_{78}Pt_{118}$

^{195}Pt(n,γ) E=thermal 79Ci04 (continued)

Level Scheme (continued)

Intensities: I(γ+ce) per 100 parent decays
@ Multiply placed; intensity suitably divided
& Multiply placed; undivided intensity given

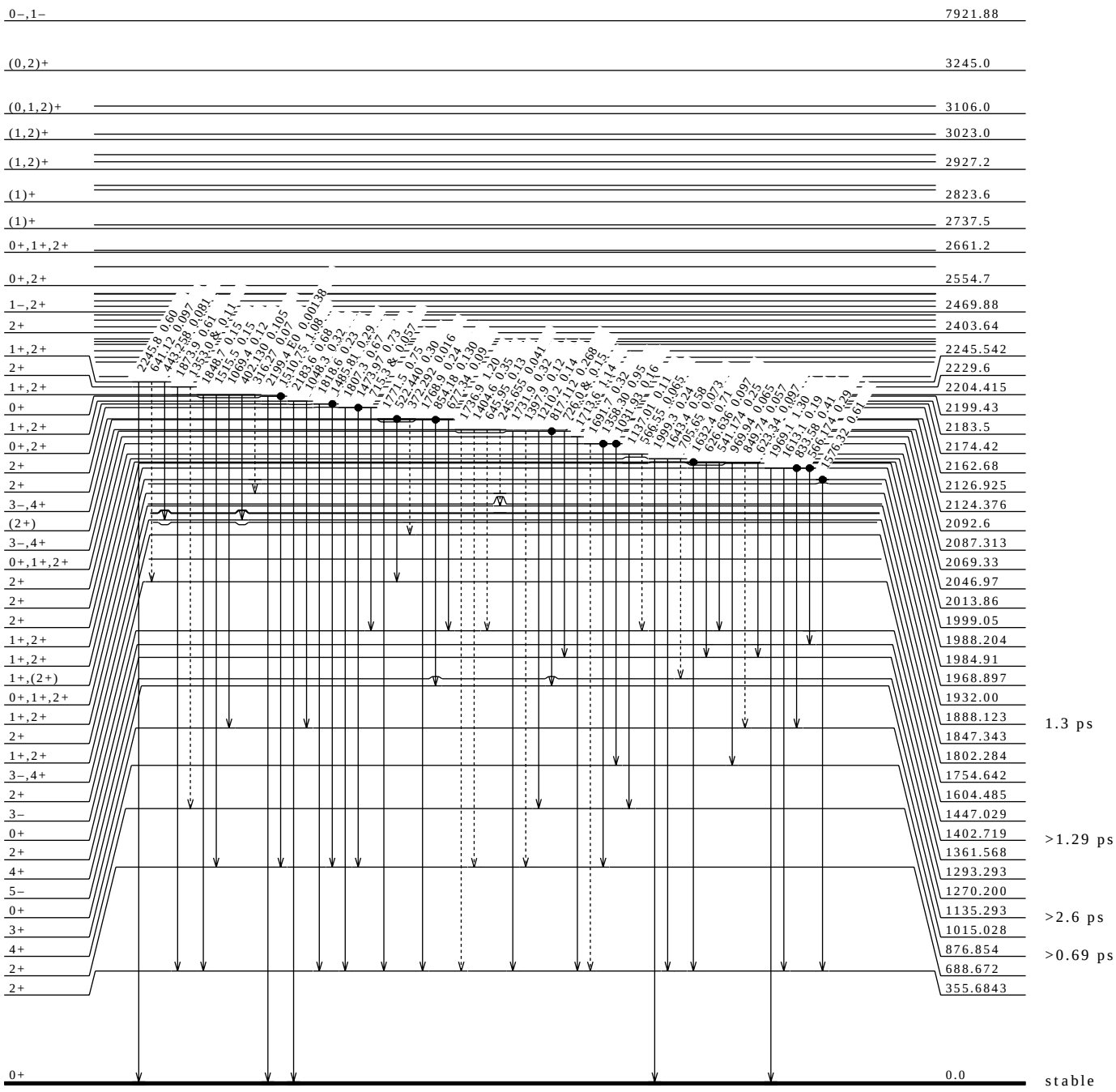


$^{196}_{78}Pt_{118}$

^{195}Pt(n,γ) E=thermal 79Ci04 (continued)

Level Scheme (continued)

Intensities: I(γ+ce) per 100 parent decays
@ Multiply placed; intensity suitably divided
& Multiply placed; undivided intensity given

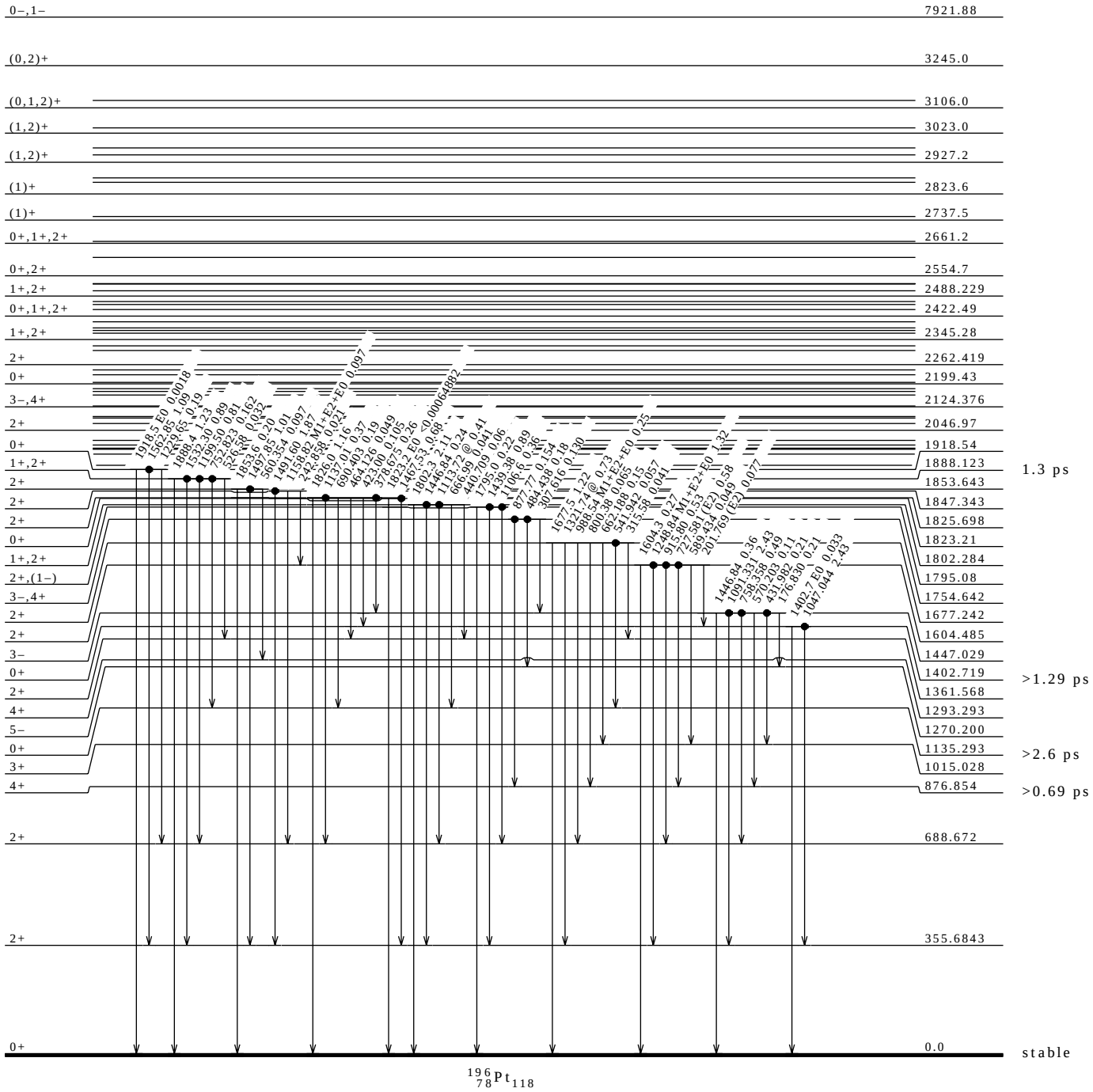


$^{196}_{78}Pt_{118}$

^{195}Pt(n,γ) E=thermal 79Ci04 (continued)

Level Scheme (continued)

Intensities: I(γ+ce) per 100 parent decays
@ Multiply placed; intensity suitably divided
& Multiply placed; undivided intensity given

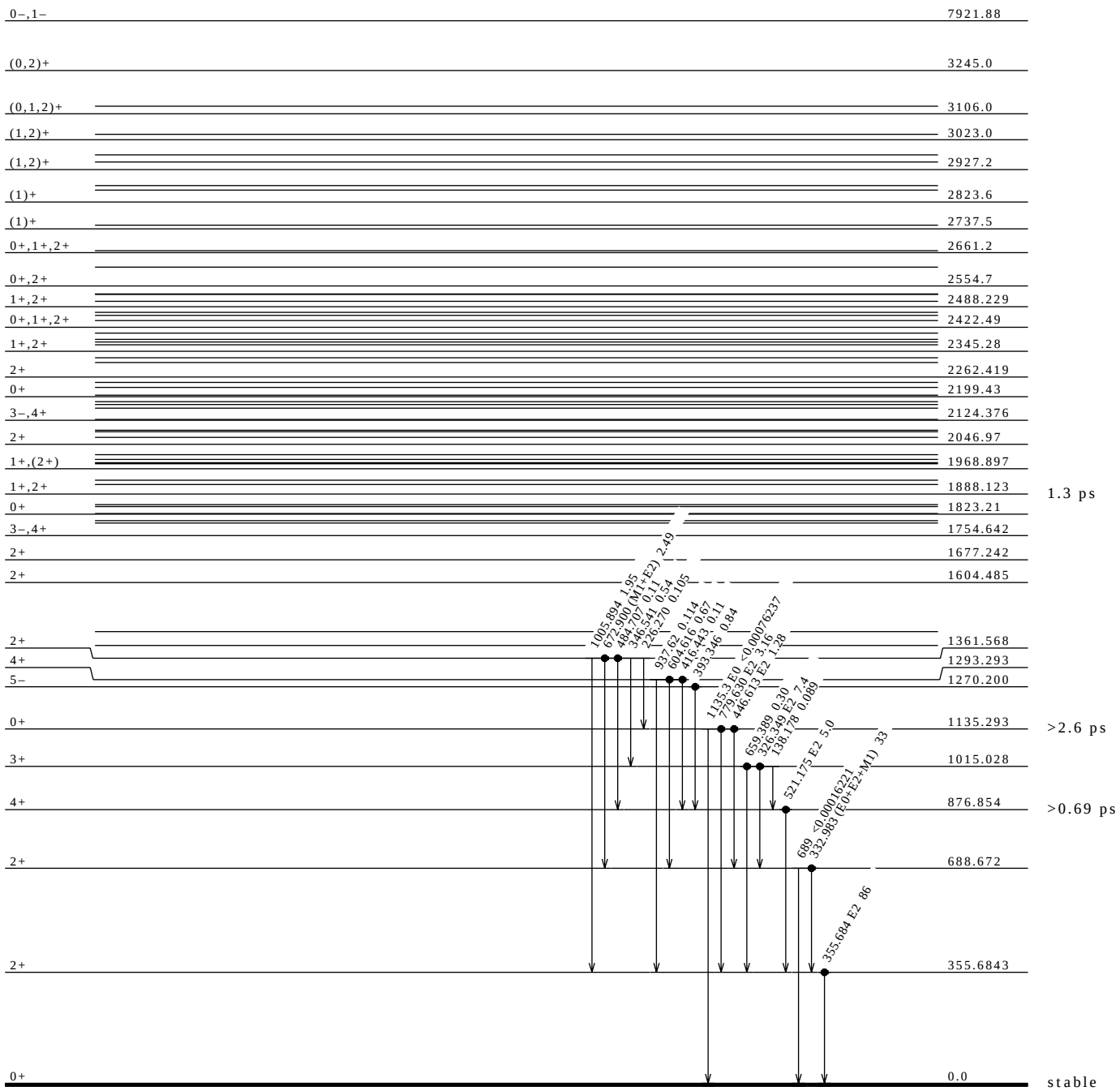


$^{196}_{78}Pt_{118}$

^{195}Pt(n,γ) E=thermal 79Ci04 (continued)

Level Scheme (continued)

Intensities: I(γ+ce) per 100 parent decays
@ Multiply placed; intensity suitably divided
& Multiply placed; undivided intensity given



$^{197}_{78}Pt_{119}$

^{196}Pt(n,γ) E=thermal 78Ya07

Target Jπ=0+.

Measured S(n)=5846.3 *4* (78Ya07). Others: 5849 *3* (68Sa13), 5850 *3* (77Wa08), 5846.3 *4* (85Wa02), 5846.44 *31* (93Au05) mass adjustment.

^{197}Pt Levels

E(level)†	Jπ‡	Comments
0.0	1/2−	
52.99 *6*	5/2−	
71.59 *7*	3/2−	
98.58 *8*	3/2−	
130.98 *4*	1/2−	
269.10 *3*	1/2−, 3/2−	Branching: Iγ(138γ):Iγ(216γ):Iγ(269γ)=32 *14*:19 *4*:100.
299.33 *4*	5/2−	Branching: Iγ(228γ):Iγ(246γ):Iγ(299γ)=21 9:47 *14*:100.
425.7 *6*		
456.85 *6*	5/2−	Branching: Iγ(157γ):Iγ(404γ):Iγ(457γ)=13 *7*:9 *3*:100.
502.43 *5*	3/2−	Branching: Iγ(233γ):Iγ(371γ):Iγ(431γ):Iγ(502γ)=12 *4*:8 *5*:65 *8*:100.
595.31 *8*	(5/2−, 1/2−)	Branching: Iγ(524γ):Iγ(542γ):Iγ(595γ)=100:100 *13*:54 *11*.
708.37 *5*	3/2−	Branching: Iγ(439γ):Iγ(637γ):Iγ(708γ)=19 *3*:17 *3*:100.
747.81 *9*	1/2−	Branching: Iγ(649γ):Iγ(676γ):Iγ(695γ)=100:3.1 *5*:3.9 *7*.
978.0 *9*	1/2−, 3/2−	
(5846.43 *31*)	1/2+	E(level): from evaluated s(n) (95Au04). Jπ: from s−wave neutron capture. Observed deexcitation intensity is 63.5% of g.s. feeding.

† From level scheme and Eγ's by using least−squares fit to data.

‡ From adopted levels, except as noted.

γ(^{197}Pt)

Iγ normalization: from assuming I(γ+ce)(to g.s.)=100.

Eγ	E(level)	Iγ†‡	Comments
71.53 *17*	71.59	88 *39*	
98.58 *10*	98.58	30 *28*	
130.99 *5*	130.98	11 *5*	
x135.21 *4*		25 *10*	
138.13 *4*	269.10	19 *8*	
157.38 *19*	456.85	2.4 *12*	
x167.32 *15*		9.8 *31*	
216.05 *7*	269.10	11 *2*	
227.62 *15*	299.33	4.0 *15*	
233.27 *13*	502.43	3.7 *12*	
246.15 *15*	299.33	8.9 *24*	
x259.25 *11*		2.4 *10*	
269.12 *4*	269.10	59 *5*	
x274.08 *4*		29 *3*	
299.34 *4*	299.33	19 *2*	
371.45 *34*	502.43	2.6 *15*	
x390.38 *17*		3.5 *8*	
404.03 *10*	456.85	1.7 *6*	γ placement is consistent with Iγ branching via ^{197}Ir decay.
430.89§ *5*	502.43	20 *2*	
439.35 *10*	708.37	6.8 *9*	
x441.81 *9*		8.7 *11*	
x453.70 *22*		1.9 *7*	
456.81 *6*	456.85	18 *2*	
502.44 *5*	502.43	31 *2*	
x517.11 *5*		20 *2*	
523.77 *7*	595.31	11 *1*	
x527.18 *15*		2.7 *6*	
542.22§ *9*	595.31	11 *1*	
x558.42 *6*		16 *2*	
x570.65 *20*		2.0 *5*	
x578.31 *14*		8.2 *15*	Eγ: 578γ placement between ΔL=5 states (78Ya07) is incompatible with prompt (n,γ) spectrum.

Continued on next page (footnotes at end of table)

$^{197}_{78}Pt_{119}$

^{196}Pt(n,γ) E=thermal 78Ya07 (continued)

γ(^{197}Pt) (continued)

Eγ	E(level)	Iγ†‡
595.17 *11*	595.31	5.9 *10*
x620.10 *13*		3.8 *6*
x625.50 *6*		15 *2*
636.73 *10*	708.37	6.2 *9*
649.22 *5*	747.81	100
x658.74 *18*		3.5 *8*
676.12 *14*	747.81	3.1 *5*
695.04 *21*	747.81	3.9 *7*
x701.93 *12*		5.6 *6*
708.35 *5*	708.37	36 *2*
4868.4 *8*	(5846.43)	18 *3*
5098.5 *4*	(5846.43)	100
5137.8 *4*	(5846.43)	17 *2*
5344.0 *5*	(5846.43)	3.9 *9*
5420.6 *5*	(5846.43)	6.2 *9*
5577.2 *5*	(5846.43)	10 *2*
5715.9 *7*	(5846.43)	8.2 *19*
5747.8 *6*	(5846.43)	2.7 *6*
5846.3 *4*	(5846.43)	107 *9*

† Relative photon intensity normalized to Iγ(649.22γ)=100.

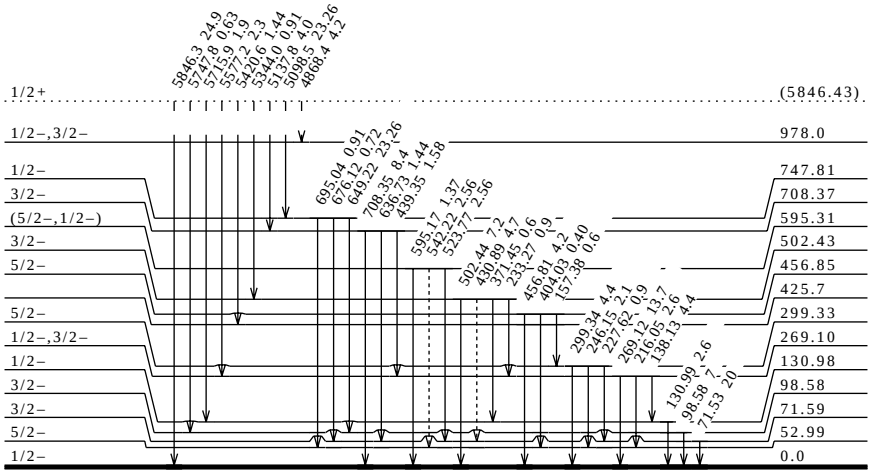
‡ For intensity per 100 neutron captures, multiply by 0.2326.

§ Placement of transition in the level scheme is uncertain.

x γ ray not placed in level scheme.

Level Scheme

Intensities: I(γ+ce) per 100 parent decays



$^{197}_{78}Pt_{119}$

$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04

Others: 75Mi05, 78Li22, 61Ha10, 66Pe14, 66Bo14, 66Eg01, 70Lo05, 70Or05.

Target Jπ=3/2+.

New measurements were performed with bent crystal spectrometers GAMS for (n,γ), and with conversion electron spectrometer BILL for (n,e) reaction (96Ma70,96Ma75).

Polarized beam and target, γ(θ), CP(γ) (78Li22).

γγ(t) measurements see 93Pe04.

^{198}Au Levels

All data are from 96Ma70 and 96Ma75, except as noted.

E(level)§	Jπ‡	$T_{1/2}$†	Comments
0.0	2−	2.69517 d‡ *21*	
55.1800 *6*	1−		$T_{1/2}$: 0.28 ns *14* (68Na21) γγ(t) scin; uncertain assignment.
91.0040 *8*	0−		
192.9427 *6*	1−	0.7 ns *2*	
214.9708 *9*	4−	0.4 ns *2*	
236.0441 *8*	3−	≤0.15 ns	
247.5719 *10*	1−	0.4 ns *1*	
259.3382 *9*	1−	≤0.2 ns	
261.4033 *7*	2−	≤0.2 ns	
312.2200 *20*	5+	124 ns *4*	$T_{1/2}$: from γγ(t) (75Mi05).
328.4800 *16*	3−	≤0.15 ns	
339.2895 *16*	1−	≤0.4 ns	
346.9056 *7*	2−	≤0.15 ns	
362.8972 *10*	2−	≤0.15 ns	
368.2529 *11*	1−	≤0.15 ns	
381.1993 *10*	3+	2.3 ns *2*	
406.0064 *8*	2−		
449.5681 *13*	3−		
453.8234 *9*	2−		
482.3245 *21*	4+		
495.5091 *14*	1−		
511.5181 *17*	3−		
516.3815 *22*	6+		
529.1671 *12*	3−		
530.4767 *10*	1−		
544.0081 *21*	4−		
548.9326 *13*	2−		
571.2410 *10*	1−		
625.4276 *14*	3−		
632.4792 *13*	1−,2−		
637.122 *3*	4+		
646.407 *5*	0+		
672.6533 *10*	1−,2−		
696.699 *4*	8+		
702.4785 *20*	2−		
703.7274 *15*	1−		
728.668 *5*	0−		
745.2156 *21*	1−,2−		
758.395 *3*	4+		
764.478 *3*	4−		
786.5336 *12*	2−		
789.2954 *16*	1−		
800.0380 *17*	2−		
801.7043 *12*	1−,2−		
810.424 *3*	3+		
824.591 *3*	3+		
835.362 *3*	3−		
868.7710 *20*	3−		
891.613 *3*	1−,2−		
894.2527 *25*	3−		
896.5651 *25*	1−,2−		
916.4418 *25*	1−,2−		
918.5862 *16*	1−,2−		
931.940 *3*	3−		
951.417 *5*	3+		

Continued on next page (footnotes at end of table)

$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

^{198}Au Levels (continued)

E(level)§	Jπ‡	Comments
956.9448 *20*	1−,2−	
960.624 *3*	3+	
971.8184 *20*	3−	
983.0823 *25*	2+	
987.5714 *19*	3−	
999.206 *4*	1−,2−	
1018.428 *3*	1−,2−	
1032.241 *3*	3−	
1038.2728 *21*	3−	
1047.110 *3*	1−,2−	
1056.714 *3*	2−	
1061.277 *3*	3−	
1075.533 *4*	1−,2−,3−	
1092.874 *5*	0−	
1095.495 *4*	3+	
1104.840 *4*	0−,1−,2−	
1108.867 *4*	1−,2−	
1115.257 *3*	3−	
1124.877 *4*	2−	
1157.2356 *22*	3−	
1160.011 *4*	3−	
1191.558 *4*	1+,2+,3+	
1202.260 *3*	2−	
1209.362 *4*	3−	
1232.7988 *25*	3−	
1240.381 *4*	3−	
1256.005 *5*	1−,2−	
1265.519 *6*	1−,2−,3−	
1272.1312 *24*	3−	
1286.718 *4*	2−	
1293.898 *6*	1−,2−	
1297.130 *5*	1−,2−,3−	
1301.041 *5*	2−	
1304.8163 *23*	3−	
1306.852 *3*	2−	
1318.625 *8*	1−,2−	
1325.828 *4*	2−	
1335.535 *4*	1−,2−,3−	
1338.166 *4*	3−	
1359.026 *4*	1−,2−,3−	
1363.341 *4*	1−,2−,3−	
1371.475 *3*	1−,2−	
1375.983 *4*	1−,2−	
1380.880 *4*	3−	
1390.212 *4*	2−	
1396.136 *6*	3−	
1399.334 *5*	2−,3−	
1402.084 *5*	1−,2−	
1404.889 *8*	2−,3−	
1409.371 *4*	3−	
1418.679 *4*	3+,4+	
1423.792 *5*	3−	
1431.638 *3*	2−,3−	
1434.582 *5*	1−,2−	
1444.393 *22*	3−	
1453.831 *3*	3−	
1458.982 *4*	3−	
1472.091 *4*	3−	
1475.616 *4*	2−	
1487.126 *4*	1−,2−	
1496.191 *5*	3−	
1505.164 *4*	1−,2−	
1513.555 *3*	1−,2−	

Continued on next page (footnotes at end of table)

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

^{198}Au Levels (continued)

E(level)§	Jπ‡	Comments
1530.695 *5*	1−,2−	
1536.355 *3*	1−,2−,3−	
1542.775 *5*	3−	
1554.423 *4*	1−,2−	
1560.399 *6*	3−	
(6512.49 *6*)	1+	Observed deexcitation intensity is 17.74% of g.s. Feeding.

† From γγ(t) (93Pe04), except as noted.
‡ From adopted leveles.
§ From level scheme and Eγ's by using least−squares fit to data .

γ(^{198}Au)

All data are from 96Ma70 and 96Ma75, except as noted.
Iγ normalization: from I(γ+ce) (to g.s.)=100. Uncertainty from 20% systematic error.

Eγ	E(level)	Iγ§#	Mult.†	δ†	α	Comments
35.819 *3*	91.0040	0.56 *2*	M1		27.6	α(L)=21.1; α(M)=4.88.
55.181 *1*	55.1800	2.64 *13*	M1+E2	0.23 *2*	12.5 *7*	α(L)=9.5 *6*; α(M)=2.31 *14*; α(N+..)=0.72 *5*. L1:L2:L3=100 *15*:48 *7*:43 *6* (66Eg01), 100:53:43 (66Bo14).
66.391 *3*	259.3382	0.57 *14*				
x75.208 *4*		0.12 *3*	M1			
82.356 *1*	1453.831	3.09 *34*	E2‡		0.685	E1 (96Ma70,96Ma75). α(K)=0.544; α(L)=0.108; α(M)=0.0252; α(N+..)=0.00763.
82.524 *1*	1536.355	1.92 *35*				
83.142 *8*	1240.381	0.230 *92*				
91.002 *2*	91.0040	0.64 *13*	E2		7.88	Mult.: from L2:L3:M=2:2:1 (66Bo14), α(L3)exp=2.0. α(K)=0.699; α(L)=5.36; α(M)=1.39; α(N+..)=0.434.
97.249 *2*	312.2200	7.1 *12*	E1		0.450	α(K)=0.360; α(L)=0.0688; α(M)=0.0160; α(N+..)=0.00489.
99.330 *5*	346.9056	0.160 *48*	M1		7.69	α(K)=6.31; α(L)=1.06; α(M)=0.246; α(N+..)=0.0783.
x101.495 *6*		0.16 *6*	M1		7.22	α(K)=5.93; α(L)=0.99; α(M)=0.231; α(N+..)=0.0736.
101.936 *1*	192.9427	5.09 *25*	M1		7.14	α(K)=5.85; α(L)=0.98; α(M)=0.228; α(N+..)=0.0727.
103.560 *1*	362.8972	1.54 *22*	M1		6.82	α(K)=5.59; α(L)=0.94; α(M)=0.218; α(N+..)=0.0695.
106.909 *4*	453.8234	0.220 *55*	M1		6.22	α(K)=5.11; α(L)=0.86; α(M)=0.199; α(N+..)=0.0634.
x107.485 *1*		2.03 *18*				
108.911 *2*	368.2529	1.28 *17*	M1		5.90	α(K)=4.84; α(L)=0.812; α(M)=0.189; α(N+..)=0.0601.
113.511 *7*	328.4800	0.12 *4*	M1+E2		4.2 *11*	α(K)=2.4 *19*; α(L)=1.3 *6*; α(M)=0.33 *17*; α(N+..)=0.10 *6*.
x118.022 *2*		0.91 *12*				
121.084 *6*	449.5681	0.150 *45*	M1		4.36	α(K)=3.57; α(L)=0.600; α(M)=0.139; α(N+..)=0.0443.
122.652 *1*	1409.371	1.100 *99*				
x123.227 *1*		1.44 *10*				
123.786 *1*	1487.126	1.12 *10*				
125.346 *9*	453.8234	0.100 *40*	M1		3.95	α(K)=3.24; α(L)=0.543; α(M)=0.126; α(N+..)=0.0401.
x130.699 *1*		0.95 *8*				
131.952 *7*	346.9056	0.230 *69*	E2		1.73	α(K)=0.446; α(L)=0.96; α(M)=0.249; α(N+..)=0.0779.
132.851 *4*	1496.191	0.140 *27*				
135.615 *6*	1375.983	0.130 *33*				

Continued on next page (footnotes at end of table)

$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

γ(^{198}Au) (continued)

Eγ	E(level)	Iγ[§#]	Mult.[†]	δ[†]	α	Comments
137.450[@] 6	1434.582	0.180[@] 56				
	1475.616	0.180[@] 56				
137.763 1	192.9427	0.950 38	M1		3.02	α(K)=2.48; α(L)=0.414; α(M)=0.096; α(N+..)=0.0305.
138.014 4	544.0081	0.230 58				
[x]142.242 6		0.07 2	M1		2.76	α(K)=2.26; α(L)=0.378; α(M)=0.088; α(N+..)=0.0278.
142.918 3	548.9326	0.460 51	M1		2.72	α(K)=2.23; α(L)=0.373; α(M)=0.086; α(N+..)=0.0275.
144.605 3	406.0064	0.250 40	M1		2.63	α(K)=2.16; α(L)=0.361; α(M)=0.084; α(N+..)=0.0266.
145.154 1	381.1993	0.630 44	E1		0.163	α(K)=0.133; α(L)=0.0235; α(M)=0.00543; α(N+..)=0.00167.
146.343 2	339.2895	0.420 38	M1		2.54	α(K)=2.09; α(L)=0.349; α(M)=0.0808; α(N+..)=0.0257.
146.670 3	406.0064	0.380 38	M1		2.53	α(K)=2.07; α(L)=0.347; α(M)=0.0803; α(N+..)=0.0255.
148.589[@] 14	495.5091	0.050[@] 25	M1		2.44	α(K)=2.00; α(L)=0.334; α(M)=0.0774; α(N+..)=0.0246.
	511.5181	0.050[@] 25	M1		2.44	α(K)=2.00; α(L)=0.334; α(M)=0.0774; α(N+..)=0.0246.
153.962 8	346.9056	0.08 2	(M1)		2.20	α(K)=1.81; α(L)=0.302; α(M)=0.0699; α(N+..)=0.0222.
154.057 9	786.5336	0.060 17	(M1)		2.20	α(K)=1.80; α(L)=0.301; α(M)=0.0698; α(N+..)=0.0221.
154.793[@] 2	637.122	0.520[@] 36	M1		2.17	α(K)=1.78; α(L)=0.297; α(M)=0.0688; α(N+..)=0.0218.
	703.7274	0.520[@] 36	M1		2.17	α(K)=1.78; α(L)=0.297; α(M)=0.0688; α(N+..)=0.0218.
156.561 4	247.5719	0.120 24	M1		2.10	α(K)=1.72; α(L)=0.288; α(M)=0.0666; α(N+..)=0.0211.
158.520 24	983.0823	0.910 36	M1		2.03	α(K)=1.66; α(L)=0.278; α(M)=0.0643; α(N+..)=0.0204.
159.281 6	1191.558	0.120 24				
164.713 1	1061.277	0.280 28				
166.229 2	381.1993	0.480 29	E1		0.115	α(K)=0.094; α(L)=0.0164; α(M)=0.00379; α(N+..)=0.00116.
167.012[@] 15	1061.277	0.030[@] 6	M1		1.75	α(K)=1.43; α(L)=0.240; α(M)=0.0555; α(N+..)=0.0176.
	1505.164	0.030[@] 5	M1		1.75	α(K)=1.43; α(L)=0.240; α(M)=0.0555; α(N+..)=0.0176.
168.334 1	259.3382	6.92 7	M1		1.71	α(K)=1.40; α(L)=0.234; α(M)=0.0542; α(N+..)=0.0172.
169.225 8	801.7043	0.100 20	M1		1.68	α(K)=1.38; α(L)=0.231; α(M)=0.0534; α(N+..)=0.0169.
169.964[@] 8	362.8972	0.170[@] 26				
	406.0064	0.170[@] 26				
170.103 1	482.3245	2.250 45	M1		1.66	α(K)=1.36; α(L)=0.228; α(M)=0.0527; α(N+..)=0.0167.
170.395 3	261.4033	0.510 26				
170.789 13	1475.616	0.050 22				
173.355 10	918.5862	0.050 15				
175.309 6	368.2529	0.140 22				
175.858 15	625.4276	0.030 13				
180.317 3	696.699	0.050 4	E2		0.545	α(K)=0.221; α(L)=0.242; α(M)=0.0621; α(N+..)=0.0193.
180.863 1	236.0441	0.850 26	E2		0.539	α(K)=0.219; α(L)=0.239; α(M)=0.0613; α(N+..)=0.0191.
181.966 9	1306.852	0.080 21	M1		1.37	α(K)=1.12; α(L)=0.188; α(M)=0.0435; α(N+..)=0.0137.
182.283 11	529.1671	0.070 20				
184.998 14	810.424	0.040 13	E1		0.088	α(K)=0.0722; α(L)=0.0124; α(M)=0.00286; α(N+..)=0.00088.

Continued on next page (footnotes at end of table)

$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

γ(^{198}Au) (continued)

Eγ	E(level)	Iγ§#	Mult.†	δ†	α	Comments
188.166 *2*	449.5681	0.860 *26*	M1		1.25	α(K)=1.02; α(L)=0.171; α(M)=0.0396; α(N+..)=0.0125.
x189.148 *6*		0.030 *4*				
191.182 *4*	530.4767	0.240 *22*	M1		1.19	α(K)=0.98; α(L)=0.164; α(M)=0.0379; α(N+..)=0.0119.
192.392 *1*	247.5719	5.210 *52*	M1		1.17	α(K)=0.96; α(L)=0.161; α(M)=0.0372; α(N+..)=0.0117.
192.946 *1*	192.9427	2.300 *23*	E2		0.429	α(K)=0.187; α(L)=0.181; α(M)=0.0464; α(N+..)=0.0144.
x194.341 *6*		0.040 *8*				
x197.171 *20*		0.010 *4*				
201.015 *12*	1293.898	0.030 *9*	M1		1.04	α(K)=0.85; α(L)=0.142; α(M)=0.0329; α(N+..)=0.0104.
202.006 *3*	1306.852	0.120 *13*	M1		1.02	α(K)=0.84; α(L)=0.140; α(M)=0.0324; α(N+..)=0.0102.
202.866@ *14*	835.362	0.040@ *17*				
	1038.2728	0.040@ *17*				
202.987 *1*	571.2410	0.350 *14*	M1		1.01	α(K)=0.830; α(L)=0.138; α(M)=0.0320; α(N+..)=0.0101.
204.162 *1*	516.3815	0.800 *80*	M1		0.99	α(K)=0.817; α(L)=0.136; α(M)=0.0315; α(N+..)=0.0099.
206.227 *1*	261.4033	0.300 *15*	M1		0.97	α(K)=0.795; α(L)=0.132; α(M)=0.0306; α(N+..)=0.0096.
206.741 *9*	1513.555	0.020 *3*				
208.33 *4*	571.2410	0.00 *81*				
213.066 *3*	406.0064	0.130 *12*	M1		0.88	α(K)=0.726; α(L)=0.121; α(M)=0.0279; α(N+..)=0.0088.
213.545 *9*	449.5681	0.020 *4*	M1		0.88	α(K)=0.721; α(L)=0.120; α(M)=0.0277; α(N+..)=0.0087.
214.852 *4*	918.5862	0.260 *52*				
214.971 *1*	214.9708	12.19 *39*	E2		0.297	Mult.: from K:L1:L2:L3:M=100 *5*:7 *3*:45 *4*:23 *5*:18 *3* (66Eg01). α(K)=0.143; α(L)=0.115; α(M)=0.0294; α(N+..)=0.0092.
215.295 *2*	786.5336	0.260 *18*	M1		0.86	α(K)=0.705; α(L)=0.117; α(M)=0.0271; α(N+..)=0.0085.
215.535 *5*	544.0081	0.060 *11*				
218.045 *5*	789.2954	0.080 *17*	M1		0.828	α(K)=0.681; α(L)=0.113; α(M)=0.0262; α(N+..)=0.00822.
218.830 *3*	672.6533	0.190 *17*	(M1)		0.820	α(K)=0.674; α(L)=0.112; α(M)=0.0259; α(N+..)=0.00814.
218.907 *8*	1554.423	0.060 *12*	(M1)		0.819	α(K)=0.673; α(L)=0.112; α(M)=0.0259; α(N+..)=0.00813.
x219.352 *1*		0.400 *16*				
223.078 *8*	672.6533	0.040 *8*				
224.341 *4*	571.2410	0.090 *15*				
226.471 *6*	632.4792	0.060 *11*				
227.826 *15*	1038.2728	0.030 *10*				
x229.979 *6*		0.020 *3*				
230.212 *6*	1390.212	0.020 *3*				
x232.899 *7*		0.020 *3*				
234.109 *3*	495.5091	0.110 *10*	M1		0.680	α(K)=0.559; α(L)=0.093; α(M)=0.0215; α(N+..)=0.00673.
234.607@ *7*	449.5681	0.060@ *13*				
	1191.558	0.060@ *13*				
x234.763 *12*		0.020 *3*				
235.28@ *3*	764.478	0.020@ *10*				
	1475.616	0.020@ *10*				
	1536.355	0.020@ *10*				
236.047 *2*	236.0441	5.54 *6*	M1+E2	1.0 *4*	0.44 *11*	α(K)=0.33 *11*; α(L)=0.085 *3*; α(M)=0.0205 *2*; α(N+..)=0.00640 *9*.
236.160 *4*	495.5091	0.350 *70*				
237.611 *12*	786.5336	0.030 *7*				

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$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

γ(^{198}Au) (continued)

Eγ	E(level)	Iγ§#	Mult.†	α	Comments
238.477 *16*	1363.341	0.060 *14*			
x239.077 *4*		0.09 *1*			
239.634@ *15*	1286.718	0.020@ *7*			
	1505.164	0.020@ *7*			
x240.945 *10*		0.020 *3*			
241.672 *17*	1202.260	0.030 *10*			
242.773@ *11*	571.2410	0.030@ *7*			
	1475.616	0.030@ *7*			
243.343 *17*	868.7710	0.030 *9*			
245.305 *3*	1202.260	0.150 *15*			
245.977 *17*	918.5862	0.0100 *23*			
247.570 *3*	247.5719	7.51 *45*	M1	0.583	α(K)=0.479; α(L)=0.0795; α(M)=0.0184; α(N+..)=0.00576.
247.928 *5*	495.5091	0.090 *10*			
248.740 *3*	1209.362	0.150 *9*			
249.239 *18*	1505.164	0.010 *2*			
249.715@ *14*	745.2156	0.020@ *6*			
	1232.7988	0.020@ *6*			
	1536.355	0.020@ *6*			
250.118 *7*	511.5181	0.070 *9*			
252.828 *8*	1240.381	0.050 *13*			
x252.941 *4*		0.10 *1*			
253.203 *9*	956.9448	0.020 *3*			
255.882 *10*	346.9056	0.030 *6*			
x256.886 *4*		0.080 *9*			
x258.022 *10*		0.020 *2*			
x258.444 *8*		0.020 *2*			
259.348 *9*	259.3382	0.030 *3*	M1	0.513	α(K)=0.422; α(L)=0.0699; α(M)=0.0162; α(N+..)=0.00506.
259.467 *9*	495.5091	0.030 *3*			
260.882 *1*	453.8234	1.12 *9*	M1	0.505	α(K)=0.415; α(L)=0.0687; α(M)=0.0159; α(N+..)=0.00498.
261.402 *1*	261.4033	6.76 *20*	M1	0.502	α(K)=0.413; α(L)=0.0684; α(M)=0.0158; α(N+..)=0.00495.
x262.059 *12*		0.010 *1*			
262.535 *6*	625.4276	0.070 *12*			
262.712 *14*	1472.091	0.020 *8*			
264.062 *9*	896.5651	0.020 *2*			
264.210@ *3*	632.4792	0.080@ *8*			
	1536.355	0.080@ *8*			
x264.981 *10*		0.020 *2*			
266.271 *8*	1475.616	0.050 *11*			
266.647 *1*	672.6533	0.320 *10*	M1	0.475	α(K)=0.391; α(L)=0.0647; α(M)=0.0150; α(N+..)=0.00468.
267.774 *3*	529.1671	0.100 *8*			
269.081 *2*	530.4767	0.210 *17*	M1	0.464	α(K)=0.381; α(L)=0.0631; α(M)=0.0146; α(N+..)=0.00457.
269.574 *7*	632.4792	0.050 *11*			
270.160 *10*	1056.714	0.020 *2*			
270.639 *5*	1542.775	0.050 *17*			
271.144@ *4*	530.4767	0.140@ *11*	(M1)	0.454	α(K)=0.374; α(L)=0.0618; α(M)=0.0143; α(N+..)=0.00447.
	896.5651	0.140@ *11*	(M1)	0.454	α(K)=0.374; α(L)=0.0618; α(M)=0.0143; α(N+..)=0.00447.
	1375.983	0.140@ *11*	(M1)	0.454	α(K)=0.374; α(L)=0.0618; α(M)=0.0143; α(N+..)=0.00447.
271.229 *3*	801.7043	0.230 *12*	(M1)	0.454	α(K)=0.373; α(L)=0.0617; α(M)=0.0143; α(N+..)=0.00447.
271.895 *2*	362.8972	0.270 *11*			
272.564 *5*	1304.8163	0.090 *7*			
273.286 *15*	328.4800	0.050 *17*			
273.519 *10*	1108.867	0.020 *2*			
275.470@ *7*	511.5181	0.060@ *11*			
	1293.898	0.060@ *11*			
x275.656 *3*		0.090 *6*	M1	0.434	α(K)=0.357; α(L)=0.0590; α(M)=0.0136; α(N+..)=0.00427.
276.071 *3*	758.395	0.300 *24*	M1	0.432	α(K)=0.356; α(L)=0.0588; α(M)=0.0136; α(N+..)=0.00425.
277.246 *2*	368.2529	0.350 *56*	M1	0.427	α(K)=0.352; α(L)=0.0581; α(M)=0.0134; α(N+..)=0.00420.
x279.500 *12*		0.010 *1*			
281.432 *7*	1338.166	0.050 *14*			
282.893 *22*	530.4767	0.020 *5*	M1	0.404	α(K)=0.333; α(L)=0.0550; α(M)=0.0127; α(N+..)=0.00398.
283.076 *22*	1375.983	0.020 *4*	M1	0.404	α(K)=0.332; α(L)=0.0549; α(M)=0.0127; α(N+..)=0.00397.
x283.316 *11*		0.040 *11*			
283.944 *15*	916.4418	0.090 *17*			

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^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

γ(^{198}Au) (continued)

Eγ	E(level)	Iγ§#	Mult.†	α	Comments
284.111 *3*	339.2895	0.210 *29*	M1	0.400	α(K)=0.329; α(L)=0.0543; α(M)=0.0126; α(N+..)=0.00393.
285.838 *9*	1202.260	0.020 *2*			
x288.627 *8*		0.020 *2*			
290.183 *20*	801.7043	0.020 *6*			
291.025@ *19*	786.5336	0.020@ *5*			
	916.4418	0.020@ *5*			
	1338.166	0.020@ *5*			
291.722 *1*	346.9056	1.42 *14*	M1	0.372	α(K)=0.306; α(L)=0.0505; α(M)=0.0117; α(N+..)=0.00365.
x292.173 *12*		0.030 *6*			
292.258 *10*	1056.714	0.050 *6*			
293.117 *4*	529.1671	0.110 *26*	M1	0.367	α(K)=0.302; α(L)=0.0499; α(M)=0.0115; α(N+..)=0.00360.
x293.476 *14*		0.030 *6*			
x294.313 *11*		0.030 *7*	M1	0.363	α(K)=0.299; α(L)=0.0493; α(M)=0.0114; α(N+..)=0.00356.
x295.109 *13*		0.040 *6*			
296.025@ *22*	1371.475	0.010@ *2*			
	1404.889	0.010@ *2*			
	1536.355	0.010@ *2*			
296.528 *9*	511.5181	0.030 *3*			
x297.134 *14*		0.020 *3*			
297.720 *5*	703.7274	0.080 *4*	M1	0.352	α(K)=0.290; α(L)=0.0478; α(M)=0.0110; α(N+..)=0.00345.
299.161@ *12*	971.8184	0.030@ *4*			
	1286.718	0.030@ *4*			
300.646 *7*	1396.136	0.040 *3*			
300.845 *12*	1232.7988	0.020 *2*			
x301.118 *9*		0.020 *2*			
301.365 *10*	548.9326	0.020 *2*			
302.608 *9*	495.5091	0.020 *2*			
304.419 *7*	1560.399	0.030 *2*			
306.199@ *4*	801.7043	0.070@ *2*	M1	0.326	α(K)=0.268; α(L)=0.0442; α(M)=0.0102; α(N+..)=0.00320.
	835.362	0.070@ *2*	M1	0.326	α(K)=0.268; α(L)=0.0442; α(M)=0.0102; α(N+..)=0.00320.
307.723 *3*	362.8972	0.590 *18*	M1+E2	0.21 *12*	α(K)=0.16 *11*; α(L)=0.036 *8*; α(M)=0.0086 *16*; α(N+..)=0.0027 *5*.
311.905@ *3*	571.2410	0.640@ *13*	M1	0.310	α(K)=0.255; α(L)=0.0421; α(M)=0.0097; α(N+..)=0.00304.
	1359.026	0.640@ *13*	M1	0.310	α(K)=0.255; α(L)=0.0421; α(M)=0.0097; α(N+..)=0.00304.
312.793 *14*	1209.362	0.030 *4*			
313.065@ *4*	368.2529	0.070@ *4*			
	824.591	0.070@ *4*			
313.20 *5*	824.591	0.020 *9*			
313.82@ *3*	1409.371	0.010@ *2*			
	1418.679	0.010@ *2*			
314.181 *9*	529.1671	0.040 *4*			
314.916 *4*	764.478	0.360 *7*	M1	0.302	α(K)=0.249; α(L)=0.0410; α(M)=0.0095; α(N+..)=0.00296.
315.240@ *17*	1115.257	0.040@ *10*			
	1272.1312	0.040@ *10*			
x316.158 *7*		0.010 *2*			
317.271 *10*	1304.8163	0.120 *24*			
319.597 *13*	1380.880	0.020 *3*			
320.329 *17*	891.613	0.020 *3*			
x321.079 *7*		0.060 *4*	M1	0.287	α(K)=0.236; α(L)=0.0389; α(M)=0.0090; α(N+..)=0.00281.
322.77@ *6*	728.668	0.020@ *9*			
	1191.558	0.020@ *9*			
	1431.638	0.020@ *9*			
324.916 *4*	637.122	0.140 *4*			
325.319 *7*	896.5651	0.010 *1*			
325.751 *3*	672.6533	0.120 *3*	M1	0.276	α(K)=0.227; α(L)=0.0374; α(M)=0.0086; α(N+..)=0.00270.
x326.162 *4*		0.020 *2*			
x327.215 *8*		0.010 *1*			
328.087 *8*	810.424	0.020 *2*			
328.484 *3*	328.4800	2.00 *2*	M1	0.270	α(K)=0.222; α(L)=0.0365; α(M)=0.0084; α(N+..)=0.00264.
328.706 *4*	1115.257	0.150 *2*	M1	0.269	α(K)=0.222; α(L)=0.0365; α(M)=0.0084; α(N+..)=0.00263.
329.021 *8*	544.0081	0.020 *1*			
331.558 *12*	956.9448	0.010 *2*			
x332.038 *15*		0.010 *2*			

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$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

γ(^{198}Au) (continued)

Eγ	E(level)	Iγ§#	Mult.†	α	Comments
x332.297 *6*		0.010 *1*			
x332.548 *10*		0.010 *2*			
332.713 *2*	786.5336	0.040 *3*	M1	0.260	α(K)=0.214; α(L)=0.0353; α(M)=0.00815; α(N+..)=0.00255.
333.839 *2*	1409.371	0.150 *3*	M1	0.258	α(K)=0.213; α(L)=0.0350; α(M)=0.00807; α(N+..)=0.00252.
333.970 *4*	548.9326	0.040 *2*			
334.113@ *11*	1458.982	0.010@ *1*			
	1536.355	0.010@ *1*			
334.235 *14*	702.4785	0.0100 *13*			
335.192 *8*	571.2410	0.020 *10*			
335.297 *4*	1286.718	0.040 *2*	E1‡	0.255	M1 (96Ma70,96Ma75). α(K)=0.210; α(L)=0.0346; α(M)=0.00798; α(N+..)=0.00249.
x335.495 *2*		0.080 *2*	M1	0.255	α(K)=0.210; α(L)=0.0345; α(M)=0.00797; α(N+..)=0.00249.
x335.936 *16*		0.010 *3*			
336.054 *18*	1431.638	0.010 *2*			
336.320 *3*	1335.535	0.040 *4*			
337.533 *1*	530.4767	0.240 *5*	M1	0.251	α(K)=0.206; α(L)=0.0339; α(M)=0.00783; α(N+..)=0.00245.
338.055 *10*	1399.334	0.010 *2*			
339.131 *8*	1530.695	0.010 *1*			
339.328 *5*	971.8184	0.060 *4*			
339.596@ *3*	702.4785	0.030@ *2*			
	868.7710	0.030@ *2*			
x339.921 *8*		0.010 *1*			
340.19 *5*	1297.130	0.040 *12*			
x341.365 *3*		0.040 *2*			
341.693 *8*	1434.582	0.110 *19*			
342.217 *20*	824.591	0.020 *6*			
342.81 *3*	1325.828	0.020 *4*			
x343.629 *1*		1.04 *1*	E2	0.0698	α(K)=0.0450; α(L)=0.0187; α(M)=0.00466; α(N+..)=0.00146.
344.172@ *4*	672.6533	0.030@ *2*			
	1304.8163	0.030@ *2*			
x344.847 *5*		0.040 *3*			
345.21@ *5*	894.2527	0.020@ *8*			
	916.4418	0.020@ *8*			
	1505.164	0.020@ *8*			
346.394 *3*	971.8184	0.040 *2*	M1	0.234	α(K)=0.192; α(L)=0.0316; α(M)=0.00730; α(N+..)=0.00228.
346.909 *1*	346.9056	0.590 *6*	M1	0.233	α(K)=0.192; α(L)=0.0315; α(M)=0.00727; α(N+..)=0.00227.
347.877@ *2*	801.7043	0.150@ *3*	M1	0.231	α(K)=0.190; α(L)=0.0313; α(M)=0.00722; α(N+..)=0.00226.
	1304.8163	0.150@ *3*	M1	0.231	α(K)=0.190; α(L)=0.0313; α(M)=0.00722; α(N+..)=0.00226.
350.115 *2*	1458.982	0.050 *4*			
350.494 *8*	800.0380	0.010 *2*			
350.828 *1*	406.0064	1.290 *13*	M1	0.226	α(K)=0.186; α(L)=0.0306; α(M)=0.00705; α(N+..)=0.00221.
x351.843 *5*		0.020 *1*			
x354.553 *7*		0.010 *4*			
355.100@ *5*	987.5714	0.020@ *3*			
	1338.166	0.020@ *3*			
355.530 *2*	1157.2356	0.420 *9*	M1	0.218	α(K)=0.179; α(L)=0.0295; α(M)=0.00680; α(N+..)=0.00213.
356.077 *7*	1431.638	0.010 *1*			
357.91@ *3*	1318.625	0.020@ *4*			
	1390.212	0.020@ *4*			
	1396.136	0.020@ *4*			
358.472 *7*	764.478	0.020 *2*			

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$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

γ(^{198}Au) (continued)

Eγ	E(level)	Iγ§#	Mult.†	α	Comments
x359.688 2		0.090 3			
x360.208 9		0.010 1			
360.399 3	1124.877	0.040 2			
360.859 4	810.424	0.030 2			
361.745 6	1256.005	0.050 7			
x361.907 12		0.050 14			
362.141 8	987.5714	0.070 6			
362.453@ 5	891.613	0.050@ 6			
	1380.880	0.050@ 6			
362.857 5	1554.423	0.040 3			
364.019@ 3	625.4276	0.140@ 4	M1	0.204	α(K)=0.168; α(L)=0.0277; α(M)=0.00638; α(N+..)=0.00200.
	1232.7988	0.140@ 4	M1	0.204	α(K)=0.168; α(L)=0.0277; α(M)=0.00638; α(N+..)=0.00200.
364.421 6	703.7274	0.020 3			
x364.933 10		0.020 2			
365.620 2	1038.2728	0.100 3			
x365.970 13		0.010 2			
366.095 3	625.4276	0.070 5			
366.332 9	1338.166	0.010 1			
366.963@ 11	1191.558	0.010@ 1			
	1202.260	0.010@ 2			
368.249 7	368.2529	0.180 2	M1	0.198	α(K)=0.163; α(L)=0.0268; α(M)=0.00619; α(N+..)=0.00193.
x369.280 7		0.010 1			
369.636 5	918.5862	0.020 2			
371.080 2	632.4792	0.600 6	M1	0.194	α(K)=0.160; α(L)=0.0263; α(M)=0.00606; α(N+..)=0.00190.
373.150 11	632.4792	0.100 15	M1	0.191	α(K)=0.158; α(L)=0.0259; α(M)=0.00597; α(N+..)=0.00187.
373.37 3	1434.582	0.040 12			
373.765 5	999.206	0.040 2			
x374.234 16		0.010 1			
374.922@ 3	1306.852	0.070@ 6			
	1335.535	0.070@ 6			
	1431.638	0.070@ 6			
x375.189 9		0.010 1			
x375.708 17		0.010 2			
376.154 7	1104.840	0.020 2			
376.795 17	1375.983	0.040 13			
x377.043 2		0.480 11			
377.874 2	1272.1312	0.080 6			
378.302 2	571.2410	0.240 5	M1	0.184	α(K)=0.152; α(L)=0.0249; α(M)=0.00575; α(N+..)=0.00180.
x378.756 8		0.020 1			
381.205 2	381.1993	4.02 4	E1‡	0.0523	E2 (96Ma70,96Ma75). α(K)=0.0351; α(L)=0.0129; α(M)=0.00322; α(N+..)=0.00100.
381.565 9	835.362	0.110 2	M1	0.180	α(K)=0.148; α(L)=0.0244; α(M)=0.00562; α(N+..)=0.00176.
382.327 3	745.2156	0.050 2	M1	0.179	α(K)=0.148; α(L)=0.0242; α(M)=0.00559; α(N+..)=0.00175.
382.992 8	931.940	0.020 2			
383.295 2	789.2954	0.320 3			
x383.488 5		0.030 1			
x383.699 9		0.010 1			
x384.856 13		0.010 2			
385.553@ 15	1423.792	0.010@ 2			
	1542.775	0.010@ 2			
385.726 8	956.9448	0.020 5			
x385.991 8		0.010 1			
386.193 13	1304.8163	0.010 2			
386.420@ 21	868.7710	0.00@ 29			

Continued on next page (footnotes at end of table)

$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

γ(^{198}Au) (continued)

Eγ	E(level)	Iγ[§#]	Mult.[†]	α	Comments
386.420[@] *21*	1418.679	0.000[@] *29*			
387.284 *3*	916.4418	0.060 *6*	M1	0.173	α(K)=0.143; α(L)=0.0234; α(M)=0.00540; α(N+..)=0.00169.
387.900 *22*	931.940	0.010 *2*			
389.335 *19*	625.4276	0.030 *8*			
389.421 *4*	918.5862	0.040 *2*			
[x]391.297 *3*		0.060 *4*			
[x]393.453 *5*		0.030 *2*			
393.881 *2*	1325.828	0.300 *6*	M1	0.165	α(K)=0.136; α(L)=0.0224; α(M)=0.00516; α(N+..)=0.00161.
[x]394.120 *6*		0.020 *1*			
394.361 *8*	449.5681	0.020 *2*			
395.703 *3*	801.7043	0.090 *6*	M1	0.163	α(K)=0.135; α(L)=0.0221; α(M)=0.00509; α(N+..)=0.00159.
[x]396.139 *4*		0.030 *3*			
396.426 *14*	632.4792	0.010 *2*			
[x]397.020 *16*		0.010 *2*			
397.330 *14*	1293.898	0.010 *2*			
397.672 *13*	1458.982	0.010 *2*			
398.293 *2*	1513.555	0.130 *4*			
398.650 *5*	453.8234	0.070 *4*			
398.844 *12*	1157.2356	0.020 *2*			
400.703[@] *11*	1047.110	0.030[@] *5*			
	1496.191	0.030[@] *5*			
[x]400.880 *18*		0.020 *2*			
401.567 *11*	764.478	0.030 *2*			
402.297 *20*	1293.898	0.010 *3*			
403.141 *7*	1560.399	0.050 *2*			
[x]403.444 *6*		0.300 *15*			
404.547 *4*	495.5091	0.040 *4*	M1	0.154	α(K)=0.127; α(L)=0.0208; α(M)=0.00480; α(N+..)=0.00150.
405.102 *12*	1191.558	0.010 *2*			
405.514 *8*	1297.130	0.020 *2*			
406.009 *3*	406.0064	0.050 *5*			
406.397[@] *8*	1108.867	0.010[@] *1*			
	1363.341	0.010[@] *1*			
406.757[@] *18*	1032.241	0.010[@] *2*			
	1301.041	0.010[@] *2*			
	1453.831	0.010[@] *2*			
408.558 *8*	1396.136	0.030 *1*			
[x]409.802 *13*		0.020 *5*			
[x]411.010 *8*		0.020 *2*			
[x]411.293 *8*		0.020 *2*			
[x]412.757 *18*		0.050 *8*			
413.289 *5*	672.6533	0.070 *2*			
[x]413.485 *2*		0.320 *3*			
414.583 *17*	1371.475	0.010 *2*			
414.955 *6*	868.7710	0.030 *3*			
418.321 *13*	786.5336	0.030 *2*			
418.840 *2*	800.0380	0.950 *10*	E1[‡]	0.0407	E2 (96Ma70,96Ma75). α(K)=0.0283; α(L)=0.0094; α(M)=0.00232; α(N+..)=0.00072.
419.199 *5*	868.7710	0.100 *2*	M1	0.140	α(K)=0.115; α(L)=0.0189; α(M)=0.00436; α(N+..)=0.00137.
[x]419.802 *10*		0.030 *2*			
421.646 *6*	1453.831	0.040 *3*			
[x]422.994 *19*		0.040 *14*			
423.100 *7*	918.5862	0.030 *2*			
423.641 *8*	786.5336	0.020 *1*			
424.220 *4*	1056.714	0.060 *3*	M1	0.136	α(K)=0.112; α(L)=0.0183; α(M)=0.00423; α(N+..)=0.00132.
425.081 *8*	672.6533	0.030 *1*			
[x]427.176 *6*		0.050 *2*			

Continued on next page (footnotes at end of table)

$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

γ(^{198}Au) (continued)

Eγ	E(level)	Iγ§#	Mult.†	α	Comments
x428.197 *10*		0.020 *1*			
x430.361 *4*		0.070 *3*			
432.169 *11*	1104.840	0.010 *1*			
x432.700 *3*		0.110 *3*			
432.96 *10*	1232.7988	0.020 *11*			
433.457 *6*	801.7043	0.030 *2*			
x434.395 *16*		0.250 *75*			
435.861 *24*	1061.277	0.010 *2*			
436.037 *8*	1304.8163	0.020 *2*			
436.614 *4*	672.6533	0.040 *2*			
437.127 *6*	800.0380	0.020 *2*			
x437.805 *4*		0.040 *2*			
438.805 *10*	801.7043	0.010 *1*			
x439.507 *3*		0.860 *9*			
439.63 *4*	786.5336	0.100 *35*			
440.11 *4*	1487.126	0.100 *35*			
440.331 *3*	495.5091	1.240 *12*	M1	0.123	α(K)=0.101; α(L)=0.0166; α(M)=0.00383; α(N+..)=0.00120.
441.065 *7*	702.4785	0.120 *3*	M1	0.122	α(K)=0.101; α(L)=0.0165; α(M)=0.00381; α(N+..)=0.00119.
442.081 *14*	891.613	0.020 *2*			
442.379@ *5*	789.2954	0.050@ *2*			
	1399.334	0.050@ *2*			
x443.774 *4*		0.080 *2*			
443.85@ *3*	1335.535	0.120@ *18*			
	1338.166	0.120@ *18*			
	1505.164	0.120@ *18*			
444.393 *3*	703.7274	0.760 *8*	M1	0.120	α(K)=0.099; α(L)=0.0162; α(M)=0.00373; α(N+..)=0.00117.
444.754 *6*	1363.341	0.070 *2*			
446.177 *4*	758.395	0.080 *3*	M1	0.119	α(K)=0.098; α(L)=0.0160; α(M)=0.00369; α(N+..)=0.00116.
446.997@ *11*	896.5651	0.020@ *2*			
	1434.582	0.020@ *2*			
447.522@ *5*	810.424	0.050@ *2*			
	1272.1312	0.050@ *2*			
448.004 *17*	1404.889	0.010 *1*			
448.566 *3*	1431.638	0.160 *3*			
448.924 *8*	1380.880	0.030 *2*			
449.572 *3*	449.5681	0.670 *7*	M1	0.116	α(K)=0.096; α(L)=0.0157; α(M)=0.00362; α(N+..)=0.00113.
451.359 *18*	1286.718	0.010 *1*			
451.944 *12*	1423.792	0.020 *2*			
453.147 *9*	800.0380	0.040 *2*			
x453.385 *17*		0.020 *2*			
453.810 *4*	453.8234	0.080 *2*			
454.887@ *6*	702.4785	0.040@ *2*			
	1487.126	0.040@ *2*			
456.172 *8*	703.7274	0.190 *17*	M1	0.112	α(K)=0.092; α(L)=0.0151; α(M)=0.00348; α(N+..)=0.00109.
456.290 *4*	1160.011	0.630 *6*			
457.090@ *15*	987.5714	0.010@ *3*			
	1202.260	0.010@ *3*			
	1325.828	0.010@ *3*			
457.65@ *7*	672.6533	0.050@ *18*			
	1160.011	0.050@ *18*			
458.049@ *3*	786.5336	0.390@ *4*	M1	0.111	α(K)=0.091; α(L)=0.0149; α(M)=0.00344; α(N+..)=0.00108.
	1418.679	0.390@ *4*	M1	0.111	α(K)=0.091; α(L)=0.0149; α(M)=0.00344; α(N+..)=0.00108.
	1505.164	0.390@ *4*	M1	0.111	α(K)=0.091; α(L)=0.0149; α(M)=0.00344; α(N+..)=0.00108.

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$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

γ(^{198}Au) (continued)

Eγ	E(level)	Iγ[§#]	Mult.[†]	α	Comments
458.369 *4*	1095.495	0.220 *22*	M1	0.110	α(K)=0.091; α(L)=0.0149; α(M)=0.00344; α(N+..)=0.00108.
459.514 *12*	1375.983	0.030 *2*			
460.385 *5*	1092.874	0.080 *3*			
461.715[@] *21*	824.591	0.020[@] *2*			
	1272.1312	0.020[@] *2*			
	1297.130	0.020[@] *2*			
	1418.679	0.020[@] *2*			
464.21[@] *3*	1209.362	0.010[@] *2*			
	1396.136	0.010[@] *2*			
464.754 *21*	918.5862	0.230 *78*			
466.459 *7*	1513.555	0.080 *3*			
[x]466.712 *13*		0.040 *2*			
469.027 *7*	918.5862	0.040 *2*			
469.294 *12*	728.668	0.110 *8*	M1	0.104	α(K)=0.086; α(L)=0.0140; α(M)=0.00323; α(N+..)=0.00101.
[x]469.701 *15*		0.020 *2*			
[x]471.122 *13*		0.010 *1*			
471.739 *8*	1363.341	0.030 *2*			
[x]471.983 *8*		0.030 *2*			
[x]472.425 *10*		0.050 *2*			
473.219 *8*	801.7043	0.020 *3*			
473.978 *7*	529.1671	0.060 *1*			
476.24 *9*	1286.718	0.020 *2*			
[x]476.855 *11*		0.030 *11*			
[x]477.211 *19*		0.010 *1*			
478.323 *24*	960.624	0.010 *1*			
478.83 *3*	1554.423	0.020 *2*			
480.196 *22*	571.2410	0.040 *3*			
481.945 *9*	810.424	0.080 *4*			
483.305[@] *15*	1032.241	0.020[@] *2*			
	1318.625	0.020[@] *2*			
483.41[@] *5*	1032.241	0.010[@] *1*			
	1108.867	0.010[@] *1*			
	1402.084	0.010[@] *1*			
484.536[@] *15*	1157.2356	0.020[@] *2*			
	1472.091	0.020[@] *2*			
485.638 *5*	1402.084	0.220 *20*			
485.891 *18*	745.2156	0.050 *4*			
487.167 *7*	1458.982	0.080 *4*			
487.589[@] *3*	983.0823	0.090[@] *7*			
	1232.7988	0.090[@] *7*			
488.043 *8*	1475.616	0.040 *4*			
489.273[@] *5*	1018.428	0.050[@] *4*			
	1380.880	0.050[@] *4*			
	1536.355	0.050[@] *4*			
[x]490.329 *5*		0.050 *6*			
490.616 *7*	1301.041	0.050 *2*			
[x]490.948 *12*		0.040 *4*			
492.063 *3*	987.5714	0.110 *3*			
495.955 *4*	1390.212	0.050 *6*			
[x]496.538 *8*		0.030 *4*			
[x]496.97 *4*		0.010 *2*			
497.687 *11*	1554.423	0.030 *2*			
[x]498.049 *9*		0.020 *1*			
[x]498.461 *4*		0.470 *9*	M1	0.089	α(K)=0.0730; α(L)=0.0119; α(M)=0.00275; α(N+..)=0.00086.
[x]498.882 *2*		0.310 *6*			
499.562[@] *19*	1396.136	0.020[@] *2*			
	1487.126	0.020[@] *2*			
502.030 *6*	1458.982	0.030 *11*			
502.463 *13*	1453.831	0.220 *48*			
[x]503.890 *11*		0.020 *3*			

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$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

γ(^{198}Au) (continued)

Eγ	E(level)	Iγ§#	Mult.†	α	Comments
504.105 *6*	1536.355	0.080 *5*			
x506.145 *10*		0.020 *3*			
x507.481 *20*		0.030 *5*			
x509.72 *6*		0.130 *3*			
510.405 *11*	916.4418	0.260 *83*	M1	0.083	α(K)=0.0686; α(L)=0.0112.
510.785 *11*	703.7274	0.040 *5*			
511.103 *18*	960.624	0.150 *23*			
511.517 *2*	511.5181	0.920 *83*	M1	0.0830	α(K)=0.0682; α(L)=0.0111.
512.581 *8*	918.5862	0.230 *60*	M1	0.0826	α(K)=0.0679; α(L)=0.0110.
x513.44 *6*		0.110 *2*			
515.140@ *4*	1409.371	0.140@ *7*			
	1472.091	0.140@ *5*			
516.061 *2*	571.2410	0.470 *10*	M1	0.0811	α(K)=0.0667; α(L)=0.0109.
516.891@ *18*	764.478	0.020@ *2*			
	1318.625	0.020@ *2*			
x517.932 *8*		0.030 *2*			
x518.790 *6*		0.050 *4*			
x519.17 *3*		0.28 *11*			
x519.50 *3*		0.25 *11*			
520.62@ *4*	1032.241	0.26@ *10*			
	1472.091	0.26@ *10*			
521.878@ *13*	868.7710	0.020@ *4*			
	1453.831	0.020@ *4*			
522.247 *3*	971.8184	0.110 *8*			
522.35 *3*	758.395	0.130 *1*			
x522.648 *12*		0.070 *3*			
522.917 *9*	1018.428	0.040 *4*			
524.744 *20*	1157.2356	0.36 *10*			
525.124 *2*	786.5336	0.450 *16*			
525.838 *7*	1325.828	0.060 *6*			
527.169 *6*	786.5336	0.070 *9*			
x527.842 *4*		0.150 *14*	M1	0.0765	α(K)=0.0629; α(L)=0.0102.
529.170 *2*	529.1671	2.45 *7*	M1	0.0760	α(K)=0.0625; α(L)=0.0102.
529.948 *3*	789.2954	0.530 *21*	M1	0.0757	α(K)=0.0622; α(L)=0.0101.
530.476 *6*	530.4767	0.070 *2*			
532.20@ *5*	1061.277	0.020@ *2*			
	1318.625	0.020@ *2*			
	1423.792	0.020@ *2*			
533.748 *4*	987.5714	0.080 *4*			
535.77 *3*	728.668	0.020 *5*			
x537.598 *3*		0.150 *3*	M1	0.0729	α(K)=0.0599; α(L)=0.0097.
538.011@ *17*	987.5714	0.030@ *2*			
	1434.582	0.030@ *2*			
538.991 *19*	786.5336	0.020 *4*			
540.298 *2*	801.7043	0.660 *13*	M1	0.0719	α(K)=0.0592; α(L)=0.0096.
x540.915 *3*		0.190 *17*	M1	0.0717	α(K)=0.0590; α(L)=0.0096.
542.373@ *8*	801.7043	0.140@ *3*			
	1306.852	0.140@ *3*			
544.002 *3*	544.0081	0.670 *20*	E2	0.0213	α(K)=0.0158; α(L)=0.00415.
x546.143 *9*		0.040 *4*			
x547.199 *9*		0.030 *3*			
548.246 *10*	1505.164	0.030 *5*			
548.930 *2*	548.9326	0.900 *27*	M1	0.0690	α(K)=0.0568; α(L)=0.0092.
x549.34 *3*		0.27 *11*			
549.512 *12*	764.478	0.050 *2*			
549.68@ *3*	896.5651	0.020@ *4*			
	999.206	0.020@ *4*			
	1061.277	0.020@ *4*			
x550.227 *15*		0.040 *4*			
550.527 *18*	786.5336	0.050 *7*			
550.748 *22*	931.940	0.030 *5*			
550.939 *14*	956.9448	0.050 *6*			
x551.699 *9*		0.710 *43*	M1	0.0681	α(K)=0.0560; α(L)=0.0091.

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$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

γ(^{198}Au) (continued)

Eγ	E(level)	Iγ[§#]	Mult.[†]	α	Comments
x552.127 *7*		0.170 *3*			
552.490 *9*	800.0380	0.140 *3*	M1	0.0679	α(K)=0.0558; α(L)=0.0091.
552.98[@] *15*	789.2954	0.030[@] *15*			
	1363.341	0.030[@] *15*			
	1444.393	0.030[@] *15*			
	1513.555	0.030[@] *15*			
	1536.355	0.030[@] *15*			
554.144 *14*	801.7043	0.020 *2*			
555.691 *3*	918.5862	0.170 *5*	M1	0.0669	α(K)=0.0550; α(L)=0.0089.
x556.598 *6*		0.060 *2*			
557.036 *18*	1475.616	0.030 *3*			
x557.63 *3*		0.020 *4*			
x559.343 *18*		0.030 *1*			
563.97[@] *3*	800.0380	0.030[@] *4*			
	1075.533	0.030[@] *4*			
	1399.334	0.030[@] *4*			
564.71 *3*	1458.982	0.030 *4*			
565.777 *5*	894.2527	0.520 *5*	M1	0.0638	α(K)=0.0525; α(L)=0.0085.
566.32[@] *3*	1095.495	0.030[@] *5*			
	1115.257	0.030[@] *5*			
566.80[@] *4*	1402.084	0.030[@] *5*			
	1554.423	0.030[@] *5*			
567.33 *5*	1458.982	0.020 *5*			
568.116 *11*	896.5651	0.040 *7*			
570.02 *10*	1371.475	0.030 *2*			
571.694 *5*	918.5862	0.670 *27*	M1	0.0621	α(K)=0.0511; α(L)=0.00828.
x572.742 *13*		0.040 *4*			
573.27[@] *8*	1318.625	0.170[@] *5*			
	1505.164	0.170[@] *5*			
573.750 *8*	1530.695	0.130 *8*			
573.953 *24*	835.362	0.450 *9*			
574.373 *13*	1104.840	0.200 *6*	M1	0.0613	α(K)=0.0505; α(L)=0.00818.
574.83 *5*	1399.334	0.140 *3*			
x574.993 *9*		0.060 *4*			
575.536 *11*	1472.091	0.050 *4*			
577.287 *4*	632.4792	0.360 *7*	M1	0.0605	α(K)=0.0498; α(L)=0.00807.
578.959 *14*	1061.277	0.050 *4*			
579.296 *9*	918.5862	0.710 *50*			
x579.826 *12*		0.060 *4*			
x581.469 *23*		0.020 *1*			
x584.160 *10*		0.100 *2*	M1	0.0587	α(K)=0.0483; α(L)=0.00783.
584.73 *8*	1115.257	0.060 *24*			
x585.359 *21*		0.030 *2*			
588.419 *6*	1423.792	0.090 *2*			
591.228 *6*	646.407	0.110 *2*			
591.625[@] *16*	1380.880	0.040[@] *5*			
	1402.084	0.040[@] *5*			
593.177 *13*	999.206	0.200 *13*	M1	0.0564	α(K)=0.0464; α(L)=0.00752.
x593.982 *20*		0.030 *4*			
594.19[@] *5*	956.9448	0.060[@] *10*			
	1418.679	0.060[@] *10*			
595.423 *14*	810.424	0.030 *4*			
597.49[@] *3*	1047.110	0.030[@] *6*			
	1554.423	0.030[@] *6*			
597.71[@] *5*	960.624	0.050[@] *4*			
	1399.334	0.050[@] *4*			
598.846 *17*	1363.341	0.030 *4*			
x602.271 *4*		0.830 *8*	M1	0.0542	α(K)=0.0446; α(L)=0.00722.
607.20 *4*	1056.714	0.030 *8*			
607.914 *13*	1240.381	0.040 *4*			
608.83 *4*	801.7043	0.020 *5*			
x609.396 *5*		0.160 *8*			
x609.815 *22*		0.030 *5*			

Continued on next page (footnotes at end of table)

$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

γ(^{198}Au) (continued)

Eγ	E(level)	Iγ[§#]	Mult.[†]	α	Comments
[x]611.025 *7*		0.120 *6*	M1	0.0522	α(K)=0.0430; α(L)=0.00696.
612.125 *9*	1530.695	0.060 *4*			
612.724 *6*	703.7274	0.140 *4*	M1	0.0519	α(K)=0.0427; α(L)=0.00691.
612.93[@] *7*	1399.334	0.130[@] *25*			
	1402.084	0.130[@] *25*			
613.844 *9*	1359.026	0.060 *4*			
614.98[@] *6*	983.0823	0.020[@] *7*			
	1240.381	0.020[@] *7*			
	1318.625	0.020[@] *7*			
615.582[@] *9*	1402.084	0.070[@] *4*			
	1404.889	0.070[@] *4*			
616.386 *10*	1380.880	0.060 *8*			
617.04[@] *3*	1418.679	0.030[@] *5*			
	1513.555	0.030[@] *5*			
619.105 *8*	1265.519	0.100 *4*			
620.398[@] *21*	835.362	0.040[@] *5*			
	1191.558	0.040[@] *5*			
[x]621.570 *9*		0.060 *3*			
[x]623.148 *12*		0.050 *4*			
623.757 *12*	1423.792	0.060 *5*	M1	0.0495	α(K)=0.0407; α(L)=0.00659.
625.429 *3*	625.4276	0.550 *33*	M1	0.0492	α(K)=0.0405; α(L)=0.00655.
[x]628.715 *14*		0.050 *5*			
630.235 *14*	891.613	0.060 *5*	M1	0.0482	α(K)=0.0397; α(L)=0.00642.
630.945 *17*	999.206	0.040 *7*			
632.281[@] *7*	891.613	0.230[@] *9*	M1	0.0478	α(K)=0.0393; α(L)=0.00636.
	1038.2728	0.230[@] *9*	M1	0.0478	α(K)=0.0393; α(L)=0.00636.
632.502 *13*	632.4792	0.110 *8*			
[x]633.822 *7*		0.180 *7*	M1	0.0475	α(K)=0.0391; α(L)=0.00632.
635.197 *10*	896.5651	0.320 *13*	M1	0.0472	α(K)=0.0389; α(L)=0.00629.
635.848 *7*	1554.423	0.110 *4*	M1	0.0471	α(K)=0.0388; α(L)=0.00627.
636.285 *18*	999.206	0.030 *6*			
[x]638.834 *11*		0.060 *5*			
639.04[@] *3*	1092.874	0.060[@] *3*			
	1530.695	0.060[@] *3*			
639.201 *12*	951.417	0.060 *5*			
639.662 *11*	1272.1312	0.070 *5*			
640.071 *13*	1265.519	0.060 *5*			
640.665 *6*	987.5714	0.810 *65*	M1	0.0462	α(K)=0.0380; α(L)=0.00615.
642.06 *6*	1536.355	0.010 *2*			
[x]643.223 *19*		0.060 *2*			
644.039 *9*	891.613	0.080 *3*			
[x]645.477 *22*		0.050 *3*			
647.307[@] *6*	702.4785	0.170[@] *9*	M1	0.0450	α(K)=0.0370; α(L)=0.00598.
	1375.983	0.170[@] *9*	M1	0.0450	α(K)=0.0370; α(L)=0.00598.
[x]647.652 *7*		0.160 *18*	M1	0.0449	α(K)=0.0370; α(L)=0.00598.
648.573[@] *22*	703.7274	0.040[@] *5*			
	1458.982	0.040[@] *5*			
	1542.775	0.040[@] *5*			
648.959 *19*	896.5651	0.080 *4*	M1	0.0447	α(K)=0.0368; α(L)=0.00594.
[x]649.617 *11*		0.070 *4*			
653.23 *4*	1325.828	0.030 *5*			
653.801[@] *13*	868.7710	0.060[@] *5*			
	1453.831	0.060[@] *5*			
654.206 *7*	1418.679	0.120 *8*	E1[‡]	0.0438	M1 (96Ma70,96Ma75). α(K)=0.0360; α(L)=0.00582.
655.009 *8*	916.4418	0.100 *5*	M1	0.0436	α(K)=0.0359; α(L)=0.00580.
655.529 *6*	1018.428	0.280 *8*	M1	0.0435	α(K)=0.0358; α(L)=0.00579.
[x]656.23 *7*		0.020 *8*			
657.84[@] *7*	1444.393	0.030[@] *9*			
657.84[@] *6*	1554.423	0.030[@] *9*			
659.229 *7*	918.5862	0.340 *7*	M1	0.0429	α(K)=0.0353; α(L)=0.00571.
[x]659.541 *16*		0.10 *1*			
660.322 *13*	1418.679	0.090 *6*			

Continued on next page (footnotes at end of table)

$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

γ(^{198}Au) (continued)

Eγ	E(level)	Iγ§#	Mult.†	α	Comments
x663.42 3		0.050 6			
664.152 24	1409.371	0.070 6			
x664.476 11		0.190 8	M1	0.0420	α(K)=0.0346; α(L)=0.00559.
666.17 6	1560.399	0.070 20			
x667.522 24		0.050 6			
x668.336 16		0.120 8			
668.572 7	1301.041	0.220 11			
670.58 3	931.940	0.040 6			
x670.856 18		0.090 6			
x671.933 22		0.070 13	M1	0.0408	α(K)=0.0336; α(L)=0.00543.
672.654 3	672.6533	0.750 3	M1	0.0407	α(K)=0.0335; α(L)=0.00541.
673.460 8	728.668	0.170 12	M1	0.0406	α(K)=0.0334; α(L)=0.00540.
x674.700 22		0.070 6			
x674.99 4		0.140 14	M1	0.0404	α(K)=0.0332; α(L)=0.00537.
678.29 4	1513.555	0.56 15			
679.135 9	1018.428	0.100 9			
679.84 3	1444.393	0.030 5			
680.365 16	916.4418	0.130 8			
681.40 4	1306.852	0.020 4			
682.805 6	1472.091	0.150 6			
x683.728 14		0.070 5			
x684.614 21		0.050 6			
x686.970 5		0.330 7	M1	0.0386	α(K)=0.0317; α(L)=0.00513.
688.967 5	1513.555	0.210 17			
690.037 4	745.2156	0.530 21	M1	0.0381	α(K)=0.0314; α(L)=0.00507.
x691.056 9		0.110 6	M1	0.0380	α(K)=0.0313; α(L)=0.00505.
x692.498 18		0.050 3			
x692.934 21		0.050 6			
x694.041 24		0.050 3			
695.654 14	1399.334	0.070 4			
696.415 15	1240.381	0.060 3	M1	0.0372	α(K)=0.0306; α(L)=0.00495.
697.628 13	956.9448	0.100 7			
698.304 7	789.2954	0.200 10	M1	0.0370	α(K)=0.0304; α(L)=0.00491.
x698.939 8		0.180 6			
700.29 4	1047.110	0.050 7			
x701.545 6		0.300 18			
702.467 4	702.4785	0.690 7	M1	0.0364	α(K)=0.0300; α(L)=0.00484.
703.78@ 3	703.7274	0.050@ 5	M1	0.0362	α(K)=0.0298; α(L)=0.00481.
	1032.241	0.050@ 5			
705.10 4	1505.164	0.060 8			
x705.358 18		0.130 7	M1	0.0360	α(K)=0.0297; α(L)=0.00479.
707.447 24	1542.775	0.070 6			
x708.54 3		0.040 5			
709.39 3	956.9448	0.060 8			
x709.724 16		0.250 8	M1	0.0355	α(K)=0.0292; α(L)=0.00471.
710.708 18	801.7043	0.070 6			
x711.674 21		0.060 5			
712.70@ 3	1075.533	0.050@ 6			
	1338.166	0.050@ 6			
	1359.026	0.050@ 6			
713.567 23	1513.555	0.060 6			
x716.12 3		0.150 29			
717.32@ 4	1056.714	0.100@ 22			
	1475.616	0.100@ 22			
717.66 5	1390.212	0.050 10			
x718.518 18		0.060 6			
720.935 11	956.9448	0.090 4	M1	0.0340	α(K)=0.0280; α(L)=0.00452.
x722.446 23		0.050 4			
x723.362 9		0.130 4			
x724.795 10		0.170 9			
725.747 15	1256.005	0.090 5			
726.15 3	987.5714	0.060 20			
x727.269 11		0.120 16	M1	0.0333	α(K)=0.0274; α(L)=0.00442.

Continued on next page (footnotes at end of table)

$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

γ(^{198}Au) (continued)

Eγ	E(level)	Iγ[§#]	Mult.[†]	α	Comments
728.995 *15*	1530.695	0.150 *18*	M1	0.0331	α(K)=0.0272; α(L)=0.00439.
[x]730.125 *21*		0.150 *12*	M1	0.0330	α(K)=0.0271; α(L)=0.00438.
730.83[@] *3*	1363.341	0.090[@] *28*			
	1434.582	0.090[@] *28*			
732.20[@] *3*	1404.889	0.140[@] *6*	M1	0.0327	α(K)=0.0269; α(L)=0.00434.
	1434.582	0.140[@] *6*	M1	0.0327	α(K)=0.0269; α(L)=0.00434.
[x]733.076 *12*		0.250 *13*			
734.132 *15*	789.2954	0.090 *6*	M1	0.0325	α(K)=0.0268; α(L)=0.00432.
[x]736.90 *5*		0.070 *7*			
[x]738.21 *5*		0.63 *18*			
[x]739.960 *3*		2.05 *10*	M1+E2	0.021 *11*	α(K)=0.017 *9*; α(L)=0.0030 *13*.
[x]741.54 *3*		0.100 *8*			
742.91[@] *10*	1272.1312	0.060[@] *22*			
	1286.718	0.060[@] *22*			
	1542.775	0.060[@] *22*			
744.857[@] *24*	800.0380	0.140[@] *8*			
	1240.381	0.140[@] *8*			
745.21 *3*	745.2156	0.200 *14*			
746.061[@] *19*	1371.475	0.180[@] *9*			
	1418.679	0.180[@] *9*			
[x]748.03 *3*		0.050 *9*			
[x]748.86 *3*		0.070 *8*			
[x]749.602 *7*		0.420 *17*	M1	0.0308	α(K)=0.0254; α(L)=0.00409.
[x]750.067 *22*		0.080 *7*			
[x]751.085 *14*		0.300 *12*	M1	0.0306	α(K)=0.0252; α(L)=0.00407.
751.56[@] *4*	987.5714	0.080[@] *15*			
	999.206	0.080[@] *15*			
[x]754.99 *3*		0.090 *8*			
756.999[@] *18*	1018.428	0.080[@] *6*			
	1301.041	0.080[@] *6*			
[x]759.40 *3*		0.110 *15*			
759.70 *3*	1209.362	0.110 *14*			
762.91 *6*	1306.852	0.040 *6*			
763.998 *8*	956.9448	0.340 *10*	M1	0.0293	α(K)=0.0242; α(L)=0.00389.
[x]764.96 *3*		0.160 *21*			
765.123 *16*	1554.423	0.220 *11*			
[x]765.322 *24*		0.150 *20*			
[x]766.09 *4*		0.040 *14*			
766.73 *4*	1297.130	0.040 *14*			
[x]767.61 *3*		0.060 *13*			
767.92[@] *4*	1297.130	0.130[@] *10*			
	1554.423	0.130[@] *10*			
[x]768.62 *4*		0.030 *7*			
[x]768.95 *6*		0.030 *11*			
769.63[@] *3*	1108.867	0.060[@] *12*			
	1318.625	0.060[@] *12*			
	1402.084	0.060[@] *12*			
	1472.091	0.060[@] *12*			
[x]770.21 *3*		0.130 *14*			
770.828 *7*	1032.241	0.290 *17*	E2	0.0098	α(K)=0.00772; α(L)=0.00160.
[x]771.34 *3*		0.080 *10*			
[x]772.12 *4*		0.040 *8*			
772.56 *3*	987.5714	0.050 *7*			
773.82[@] *6*	1399.334	0.070[@] *18*			
	1560.399	0.070[@] *18*			
774.07 *6*	1399.334	0.080 *12*			
[x]775.05 *4*		0.070 *13*			
[x]775.719 *15*		0.130 *10*			
776.627[@] *22*	1272.1312	0.160[@] *16*			
	1402.084	0.160[@] *16*			
777.696 *14*	1306.852	0.120 *14*	M1	0.0280	α(K)=0.0231; α(L)=0.00372.
778.28 *7*	1542.775	0.030 *15*			
779.03[@] *4*	1038.2728	0.060[@] *8*			

Continued on next page (footnotes at end of table)

$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

γ(^{198}Au) (continued)

Eγ	E(level)	Iγ[§#]	Mult.[†]	α	Comments
779.03[@] *4*	1232.7988	0.060[@] *8*			
[x]780.96 *5*		0.090 *10*			
[x]782.01 *3*		0.080 *20*			
783.19 *3*	1232.7988	0.150 *24*	M1	0.0275	α(K)=0.0227; α(L)=0.00365.
[x]783.73 *3*		0.110 *39*			
784.36 *4*	1542.775	0.040 *19*			
785.37[@] *6*	1431.638	0.050[@] *12*			
	1530.695	0.050[@] *12*			
786.19[@] *6*	1418.679	0.080[@] *12*			
	1458.982	0.080[@] *12*			
788.162 *18*	1318.625	0.140 *18*	M1	0.0271	α(K)=0.0223; α(L)=0.00359.
[x]788.813 *14*		0.200 *20*	M1	0.0270	α(K)=0.0223; α(L)=0.00358.
[x]790.137 *24*		0.090 *9*			
793.38[@] *5*	1304.8163	0.030[@] *9*			
	1418.679	0.030[@] *9*			
794.174 *10*	1338.166	0.240 *12*	M1	0.0266	α(K)=0.0219; α(L)=0.00352.
796.221 *9*	1032.241	0.200 *14*			
[x]796.93 *4*		0.140 *45*			
797.102 *20*	1160.011	0.080 *14*			
798.417[@] *16*	1293.898	0.110[@] *12*	M1	0.0262	α(K)=0.0216; α(L)=0.00347.
	1423.792	0.110[@] *12*	M1	0.0262	α(K)=0.0216; α(L)=0.00347.
800.05 *4*	800.0380	0.090 *18*			
800.31 *5*	1371.475	0.040 *11*			
801.713 *10*	801.7043	0.260 *10*	M1	0.0259	α(K)=0.0214; α(L)=0.00344.
[x]802.42 *4*		0.060 *10*	(M1)	0.0259	α(K)=0.0213; α(L)=0.00343.
[x]803.510 *13*		0.200 *10*	M1	0.0258	α(K)=0.0212; α(L)=0.00342.
[x]804.188 *20*		0.230 *23*	M1	0.0257	α(K)=0.0212; α(L)=0.00341.
806.13 *3*	1431.638	0.090 *10*			
807.04 *5*	1318.625	0.060 *10*			
810.119 *6*	1359.026	0.350 *7*	M1	0.0252	α(K)=0.0208; α(L)=0.00334.
811.710 *14*	1265.519	0.110 *7*			
[x]812.576 *7*		0.200 *16*	(M1)	0.0250	α(K)=0.0206; α(L)=0.00332.
813.57[@] *7*	868.7710	0.030[@] *9*			
	1061.277	0.030[@] *9*			
[x]815.56 *5*		0.060 *14*			
815.964 *17*	1265.519	0.140 *21*	M1	0.0248	α(K)=0.0204; α(L)=0.00328.
816.63 *4*	1453.831	0.060 *13*			
[x]817.16 *3*		0.090 *13*			
[x]817.835 *19*		0.120 *12*			
818.29 *3*	1272.1312	0.100 *14*			
[x]819.399 *11*		0.260 *18*	M1	0.0245	α(K)=0.0202; α(L)=0.00325.
[x]820.49 *4*		0.110 *11*			
[x]821.63 *5*		0.86 *23*	E1		α=0.00320; α(K)=0.00267; α(L)=0.00040.
822.539[@] *20*	1272.1312	0.140[@] *15*			
	1304.8163	0.140[@] *15*			
[x]822.983 *18*		0.120 *11*			
824.12 *7*	1335.535	0.040 *13*			
824.58 *4*	824.591	0.080 *14*			
825.472 *6*	1018.428	0.420 *42*	M1	0.0241	α(K)=0.0198; α(L)=0.00319.
[x]826.567 *15*		0.120 *11*	M1	0.0240	α(K)=0.0198; α(L)=0.00318.
[x]827.31 *4*		0.060 *13*			
827.99 *9*	1209.362	0.050 *34*			
[x]828.316 *18*		0.150 *15*			
828.85[@] *6*	1157.2356	0.070[@] *14*			
	1191.558	0.070[@] *14*			
829.32 *8*	1475.616	0.040 *14*			
830.78 *3*	1402.084	0.100 *13*	M1	0.0237	α(K)=0.0195; α(L)=0.00313.
[x]831.31 *5*		0.080 *13*			
[x]831.815 *16*		0.170 *14*			
833.915 *13*	1536.355	0.140 *13*			
[x]835.339 *14*		0.550 *22*			
[x]835.726 *5*		1.32 *15*			
836.405 *9*	891.613	0.640 *83*	M1	0.0233	α(K)=0.0192; α(L)=0.00308.

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$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

γ(^{198}Au) (continued)

Eγ	E(level)	Iγ§#	Mult.†	α	Comments
x837.46 *4*		0.120 *52*			
838.23 *4*	1409.371	0.170 *27*			
839.53 *4*	1075.533	0.99 *24*			
840.78 *8*	1513.555	0.080 *25*			
x844.468 *10*		0.330 *66*	M1	0.0227	α(K)=0.0187; α(L)=0.00301.
846.15 *5*	1390.212	0.140 *27*			
849.56 *5*	1108.867	0.110 *21*	M1	0.0224	α(K)=0.0184; α(L)=0.00296.
x851.374 *10*		0.270 *16*	(E2)		α=0.00802; α(K)=0.00635; α(L)=0.00125.
x853.222 *14*		0.340 *78*	M1	0.0221	α(K)=0.0182; α(L)=0.00293.
854.60 *3*	1487.126	0.200 *22*	M1	0.0220	α(K)=0.0181; α(L)=0.00291.
856.58 *6*	1560.399	0.110 *21*			
857.19@ *7*	1104.840	0.100@ *22*			
	1306.852	0.100@ *22*			
857.86 *6*	1560.399	0.100 *21*			
863.01@ *3*	1191.558	0.200@ *22*			
	1202.260	0.200@ *22*			
x864.04 *10*		0.060 *19*			
864.77 *3*	1318.625	0.100 *17*			
x866.54 *8*		0.070 *20*			
x867.38 *6*		0.110 *25*			
x867.98 *5*		0.170 *26*	M1	0.0212	α(K)=0.0174; α(L)=0.00280.
868.757 *9*	868.7710	0.570 *57*	M1	0.0211	α(K)=0.0174; α(L)=0.00279.
x871.42 *3*		0.120 *12*	M1	0.0210	α(K)=0.0173; α(L)=0.00277.
872.86@ *4*	1108.867	0.130@ *17*			
	1402.084	0.130@ *17*			
x876.87 *3*		0.210 *32*			
x877.07 *3*		0.250 *48*			
877.33 *3*	1124.877	0.290 *61*	M1	0.0206	α(K)=0.0170; α(L)=0.00272.
x879.47 *3*		0.190 *21*	M1	0.0205	α(K)=0.0169; α(L)=0.00271.
881.04@ *6*	1209.362	0.100@ *20*			
	1363.341	0.100@ *20*			
	1513.555	0.100@ *20*			
x881.99 *7*		0.080 *19*			
885.647 *16*	1434.582	0.230 *25*	M1	0.0201	α(K)=0.0166; α(L)=0.00266.
x886.143 *14*		1.42 *7*	E1		α=0.00277; α(K)=0.00232; α(L)=0.00035.
x887.34 *4*		0.130 *25*	M1	0.0200	α(K)=0.0165; α(L)=0.00265.
888.60@ *11*	1124.877	0.080@ *29*			
	1338.166	0.080@ *29*			
889.53 *9*	1418.679	0.100 *22*			
891.16 *4*	1297.130	0.110 *44*			
891.600 *23*	891.613	0.130 *26*			
x891.97 *6*		0.240 *77*			
x895.20 *4*		0.190 *23*			
x896.74 *6*		0.160 *30*			
x897.733 *21*		0.160 *61*			
898.53@ *5*	1160.011	0.200@ *30*			
	1380.880	0.200@ *30*			
902.500 *15*	1431.638	0.520 *47*			
x902.78 *3*		0.320 *42*			
x906.108 *17*		0.280 *22*	M1	0.0190	α(K)=0.0156; α(L)=0.00251.
909.61@ *4*	1157.2356	0.120@ *16*			
	1363.341	0.120@ *16*			
x910.57 *5*		0.100 *15*	M1	0.0187	α(K)=0.0155; α(L)=0.00248.
x913.588 *16*		0.300 *24*			
913.752 *16*	1363.341	0.410 *57*	M1	0.0186	α(K)=0.0153; α(L)=0.00245.
x913.994 *21*		0.200 *32*			
915.91@ *3*	1108.867	0.090@ *15*			
	1297.130	0.090@ *15*			
	1487.126	0.090@ *15*			
916.406 *11*	916.4418	0.340 *17*	M1	0.0184	α(K)=0.0152; α(L)=0.00243.
917.39 *6*	1542.775	0.050 *11*	M1	0.0184	α(K)=0.0152; α(L)=0.00243.
920.10 *6*	1431.638	0.110 *25*	M1	0.0183	α(K)=0.0150; α(L)=0.00241.
x920.89 *5*		0.150 *27*	M1	0.0182	α(K)=0.0150; α(L)=0.00240.

Continued on next page (footnotes at end of table)

$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

γ(^{198}Au) (continued)

Eγ	E(level)	Iγ[§#]	Mult.[†]	α	Comments
921.78 *6*	1554.423	0.120 *25*	M1	0.0182	α(K)=0.0150; α(L)=0.00240.
x922.77 *4*		0.090 *17*			
923.86[@] *7*	1160.011	0.110[@] *9*			
	1286.718	0.110[@] *9*			
926.60[@] *12*	1375.983	0.040[@] *4*			
	1475.616	0.040[@] *4*			
927.39[@] *7*	1018.428	0.42[@] *16*			
	1256.005	0.42[@] *16*			
929.03 *4*	1554.423	0.170 *20*	M1	0.0178	α(K)=0.0147; α(L)=0.00235.
x930.46 *6*		0.100 *19*			
x931.370 *15*		0.320 *35*	M1	0.0177	α(K)=0.0146; α(L)=0.00234.
933.89 *7*	1505.164	0.64 *17*			
934.33 *4*	1297.130	0.070 *5*			
x935.18 *3*		0.110 *6*			
936.10 *4*	1431.638	0.060 *10*			
938.70 *3*	1306.852	0.110 *6*	M1	0.0174	α(K)=0.0143; α(L)=0.00229.
x939.60 *4*		0.090 *7*	M1	0.0173	α(K)=0.0143; α(L)=0.00228.
x941.22 *3*		0.130 *14*	M1	0.0172	α(K)=0.0142; α(L)=0.00227.
x942.51 *3*		0.090 *15*	M1	0.0172	α(K)=0.0142; α(L)=0.00227.
x943.22 *3*		0.090 *13*			
x944.484 *9*		0.460 *18*	M1	0.0171	α(K)=0.0141; α(L)=0.00225.
946.45 *3*	1475.616	0.130 *5*			
947.56 *6*	1458.982	0.090 *24*			
947.94 *3*	1209.362	0.430 *13*	M1	0.0169	α(K)=0.0140; α(L)=0.00223.
x949.59 *7*		0.060 *11*			
950.38 *5*	1318.625	0.080 *9*	M1	0.0168	α(K)=0.0139; α(L)=0.00222.
952.485 *19*	1402.084	0.260 *18*	(E2)		α=0.00640; α(K)=0.00512; α(L)=0.00096.
x953.38 *4*		0.120 *40*			
x953.75 *5*		0.390 *20*	M1	0.0167	α(K)=0.0137; α(L)=0.00220.
x955.11 *3*		0.130 *10*			
x957.18 *3*		0.170 *10*	M1	0.0165	α(K)=0.0136; α(L)=0.00218.
960.47 *4*	1472.091	0.100 *8*			
x962.774 *12*		0.290 *29*			
x963.958 *24*		0.180 *11*	E2		α=0.00625; α(K)=0.00501; α(L)=0.00093.
965.14 *4*	1536.355	0.110 *5*			
x971.20 *7*		0.160 *10*			
x973.207 *20*		0.420 *17*	M1	0.0158	α(K)=0.0131; α(L)=0.00209.
x975.186 *20*		0.200 *12*			
976.48[@] *7*	1191.558	0.080[@] *18*			
	1304.8163	0.080[@] *18*			
	1458.982	0.080[@] *18*			
	1472.091	0.080[@] *18*			
978.85 *5*	1325.828	0.190 *13*			
979.46 *7*	1318.625	0.100 *19*			
983.00[@] *4*	983.0823	0.130[@] *10*			
	1038.2728	0.130[@] *10*			
	1513.555	0.130[@] *10*			
984.92 *8*	1434.582	0.140 *29*			
x986.03 *5*		0.190 *10*			
x989.49 *3*		0.170 *31*	M1	0.0152	α(K)=0.0125; α(L)=0.00200.
990.60 *6*	1444.393	0.090 *29*	(M1)	0.0151	α(K)=0.0125; α(L)=0.00199.
x993.191 *14*		0.560 *34*	M1+E2	0.010 *5*	α(K)=0.009 *4*; α(L)=0.0014 *6*.
993.72 *3*	1505.164	0.280 *50*			
x995.77 *6*		0.130 *7*			
996.10[@] *6*	1359.026	0.120[@] *22*			
	1402.084	0.120[@] *22*			
999.74 *3*	1380.880	0.310 *16*	E1+M2[‡]	0.010 *5*	M1+E2 (96Ma70,96Ma75). α(K)=0.008 *4*; α(L)=0.0014 *6*.
1000.40 *5*	1363.341	0.140 *24*			
x1003.66 *6*		0.110 *8*	M1	0.0147	α(K)=0.0121; α(L)=0.00193.
1005.36 *5*	1554.423	0.180 *22*			
x1005.71 *5*		0.180 *9*			
1006.32[@] *8*	1061.277	0.130[@] *12*			

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$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

γ(^{198}Au) (continued)

Eγ	E(level)	Iγ[§#]	Mult.[†]	α	Comments
1006.32[@] *8*	1265.519	0.130[@] *12*			
[x]1008.26 *3*		0.240 *19*	M1	0.0145	α(K)=0.0119; α(L)=0.00191.
[x]1009.507 *21*		0.290 *32*	M1+E2	0.010 *5*	α(K)=0.008 *4*; α(L)=0.0014 *6*.
[x]1011.11 *6*		0.200 *8*			
1012.79[@] *13*	1272.1312	0.080[@] *7*			
	1375.983	0.080[@] *7*			
	1380.880	0.080[@] *7*			
	1418.679	0.080[@] *7*			
1016.34[@] *16*	1209.362	0.050[@] *8*			
	1363.341	0.050[@] *8*			
	1560.399	0.050[@] *8*			
1018.02 *8*	1399.334	0.150 *29*			
1018.36 *3*	1018.428	0.250 *15*			
[x]1018.75 *6*		0.210 *29*			
[x]1024.25 *3*		0.210 *8*	M1	0.0139	α(K)=0.0115; α(L)=0.00183.
1025.48[@] *13*	1240.381	0.060[@] *5*			
	1286.718	0.060[@] *5*			
	1431.638	0.060[@] *5*			
	1554.423	0.060[@] *5*			
1027.12 *9*	1390.212	0.090 *5*			
1028.19 *5*	1409.371	0.140 *34*			
1028.613 *14*	1434.582	0.620 *43*	M1	0.0138	α(K)=0.0114; α(L)=0.00181.
[x]1030.83 *3*		0.170 *5*	M1	0.0137	α(K)=0.0113; α(L)=0.00180.
1033.08[@] *10*	1396.136	0.070[@] *5*	M1	0.0136	α(K)=0.0112; α(L)=0.00179.
	1487.126	0.070[@] *5*	M1	0.0136	α(K)=0.0112; α(L)=0.00179.
1034.48 *8*	1293.898	0.080 *5*			
[x]1036.94 *8*		0.070 *12*			
[x]1037.95 *3*		0.230 *9*	M1	0.0135	α(K)=0.0111; α(L)=0.00177.
1040.77[@] *11*	1256.005	0.120[@] *6*			
	1536.355	0.120[@] *6*			
[x]1042.25 *4*		0.260 *8*	(E2)		α=0.00536; α(K)=0.00432; α(L)=0.00078.
[x]1045.01 *3*		0.280 *50*	M1	0.0132	α(K)=0.0109; α(L)=0.00174.
1046.16 *8*	1293.898	0.150 *9*			
1047.09[@] *7*	1047.110	0.210[@] *6*			
	1542.775	0.210[@] *6*			
1047.72 *7*	1453.831	0.130 *8*			
1049.23 *5*	1396.136	0.140 *14*	M1	0.0131	α(K)=0.0108; α(L)=0.00172.
1050.728 *16*	1286.718	0.380 *42*	M1	0.0131	α(K)=0.0108; α(L)=0.00172.
[x]1053.53 *3*		0.420 *21*	E2		α=0.00525; α(K)=0.00423; α(L)=0.00076.
1053.93 *5*	1536.355	0.210 *36*			
[x]1059.59 *5*		0.120 *6*			
1060.937 *21*	1423.792	0.260 *16*	M1	0.0127	α(K)=0.0105; α(L)=0.00167.
1062.55 *8*	1409.371	0.110 *6*			
1064.45 *7*	1325.828	0.130 *7*			
1064.78[@] *9*	1301.041	0.200[@] *40*			
	1560.399	0.200[@] *40*			
[x]1065.867 *24*		0.400 *16*	M1	0.0126	α(K)=0.0104; α(L)=0.00165.
1068.52[@] *11*	1304.8163	0.070[@] *5*			
	1431.638	0.070[@] *5*			
[x]1074.93 *4*		0.200 *18*			
[x]1075.71 *5*		0.160 *45*	M1	0.0123	α(K)=0.0102; α(L)=0.00162.
1076.38[@] *10*	1335.535	0.090[@] *14*			
	1404.889	0.090[@] *14*			
	1444.393	0.090[@] *14*			
1076.81[@] *5*	1338.166	0.150[@] *20*			
	1423.792	0.150[@] *20*			
	1530.695	0.150[@] *20*			
[x]1078.40 *13*		0.100 *28*			
1079.191 *17*	1272.1312	0.320 *26*	(M1,E2)	0.009 *4*	α(K)=0.007 *3*; α(L)=0.0012 *5*.
1081.60 *5*	1444.393	0.130 *30*			
[x]1082.037 *23*		0.220 *40*			
[x]1083.58 *7*		0.080 *26*			
1085.49 *5*	1453.831	0.260 *10*			

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$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

γ(^{198}Au) (continued)

Eγ	E(level)	Iγ§#	Mult.†	α	Comments
x1088.54 5		0.090 18			
1090.05 8	1496.191	0.120 22	M1	0.0119	α(K)=0.0098; α(L)=0.00156.
x1091.41 4		0.180 18			
x1092.57 4		0.160 13			
x1099.592 24		0.400 12	M1	0.0116	α(K)=0.0096; α(L)=0.00153.
1101.86 4	1363.341	0.230 9	M1	0.0116	α(K)=0.0096; α(L)=0.00152.
1107.01 4	1453.831	0.260 39	M1	0.0114	α(K)=0.0094; α(L)=0.00150.
1107.67 5	1513.555	0.700 98	E2		α=0.00476; α(K)=0.00385; α(L)=0.00068.
1109.29 5	1472.091	0.66 11	M1+E2	0.008 4	α(K)=0.007 3; α(L)=0.0011 4.
1111.64 7	1359.026	0.500 45			
1114.51 5	1375.983	0.240 12			
x1117.93 3		0.290 20			
1120.54 10	1335.535	0.100 10			
x1122.40 9		0.080 19	M1	0.0111	α(K)=0.0091; α(L)=0.00145.
x1123.70 5		0.190 8	M1	0.0110	α(K)=0.0091; α(L)=0.00145.
x1126.11 4		0.200 16	M1	0.0110	α(K)=0.0091; α(L)=0.00144.
1128.52 6	1375.983	0.190 8	E2		α=0.00459; α(K)=0.00372; α(L)=0.00066.
1132.93 3	1325.828	0.340 44	M1	0.0108	α(K)=0.0089; α(L)=0.00142.
x1139.516 15		0.640 96	M1	0.0106	α(K)=0.0088; α(L)=0.00140.
x1141.83 5		0.150 11	M1	0.0106	α(K)=0.0087; α(L)=0.00139.
1148.65 5	1396.136	0.360 14	E2‡	0.0104	M1 (96Ma70,96Ma75). α(K)=0.0086; α(L)=0.00137.
1150.55 8	1513.555	0.340 24	M1	0.0104	α(K)=0.0086; α(L)=0.00136.
1157.25 6	1157.2356	0.180 49	M1	0.0102	α(K)=0.0085; α(L)=0.00134.
x1161.38 6		0.23 30	M1	0.0101	α(K)=0.0084; α(L)=0.00133.
x1163.80 13		0.140 8			
x1164.10 11		0.240 50			
x1167.32 5		0.280 64	M1	0.0100	α(K)=0.00827; α(L)=0.00131.
x1170.95 5		0.56 12	M1+E2		α=0.007 3; α(K)=0.0058 24; α(L)=0.0010 4.
1179.90 7	1542.775	0.160 62	M1+E2		α=0.007 3; α(K)=0.0057 24; α(L)=0.0009 4.
x1181.60 5		0.250 35	M1	0.0097	α(K)=0.00802; α(L)=0.00127.
x1183.42 8		0.450 77	(M1,E2)		α=0.007 3; α(K)=0.0057 23; α(L)=0.0009 4.
1183.79 4	1530.695	0.430 30	(M1,E2)		α=0.007 3; α(K)=0.0057 23; α(L)=0.0009 4.
x1184.70 8		0.340 65	E2		α=0.00418; α(K)=0.00339; α(L)=0.00059.
1185.89 10	1554.423	0.180 14			
1186.31 10	1554.423	0.220 55			
1187.32@ 12	1402.084	0.210@ 11			
	1434.582	0.210@ 11			
1187.73@ 9	1380.880	0.200@ 44			
	1423.792	0.200@ 44			
1189.3@ 3	1404.889	0.110@ 9			
	1536.355	0.110@ 9			
1189.77 7	1404.889	0.140 31			
1195.50 7	1431.638	0.200 14			
x1196.60 6		0.270 16	M1		α=0.0094; α(K)=0.00777; α(L)=0.00123.
1200.75 12	1256.005	0.140 11	M1		α=0.0093; α(K)=0.00771; α(L)=0.00122.
x1203.81 4		0.940 38	M1		α=0.0093; α(K)=0.00766; α(L)=0.00121.
x1205.68 4		0.860 69			
1210.72 7	1472.091	0.270 24			
1216.62@ 8	1409.371	0.290@ 17	E2		α=0.00397; α(K)=0.00323; α(L)=0.00056.
	1431.638	0.290@ 17	E2		α=0.00397; α(K)=0.00323; α(L)=0.00056.
x1217.39 9		0.240 34			
x1219.05 5		0.330 63	E2		α=0.00395; α(K)=0.00322; α(L)=0.00055.
x1225.51 4		1.08 14	(E1,E2)		α=0.0027 12; α(K)=0.0022 10; α(L)=0.00037 18.
1226.01 3	1554.423	0.370 15	M1+E2		α=0.0064 25; α(K)=0.0052 21; α(L)=0.0009 3.
x1230.35 6		0.150 18			
x1232.49 6		0.160 32	M1		α=0.0087; α(K)=0.00722; α(L)=0.00114.
x1234.36 6		0.190 11	M1		α=0.0087; α(K)=0.00719; α(L)=0.00114.
1239.590@ 19	1475.616	0.660@ 73	E2		α=0.00383; α(K)=0.00312; α(L)=0.00054.
	1487.126	0.660@ 73	E2		α=0.00383; α(K)=0.00312; α(L)=0.00054.
1252.12 10	1513.555	0.170 22			
x1253.24 8		0.220 22			
x1254.06 6		0.66 12	E1		α=0.00148; α(K)=0.00124; α(L)=0.00018.

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$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

γ(^{198}Au) (continued)

Eγ	E(level)	Iγ§#	Mult.†	Comments
x1256.36 10		0.53 13	(E1,E2)	α=0.0026 12; α(K)=0.0021 9; α(L)=0.00035 17.
x1258.83 6		0.230 37	M1	α=0.00829; α(K)=0.00685; α(L)=0.00108.
x1262.946 16		1.50 15		
1272.16@ 11	1272.1312	0.130@ 14		
	1363.341	0.130@ 14		
	1487.126	0.130@ 14		
x1273.48 7		0.88 7		
1275.05 6	1536.355	0.350 35	M1	α=0.00803; α(K)=0.00663; α(L)=0.00105.
x1276.75 4		0.660 86	M1	α=0.00800; α(K)=0.00661; α(L)=0.00105.
1281.55 9	1542.775	0.66 14	(E1,E2)	α=0.0025 11; α(K)=0.0021 9; α(L)=0.00034 17.
1283.47 13	1542.775	0.47 14		
x1285.39 8		0.260 57	M1	α=0.00787; α(K)=0.00650; α(L)=0.00103.
x1291.15 13		0.50 13	E2	α=0.00354; α(K)=0.00289; α(L)=0.00049.
x1291.69 5		0.270 30		
1297.137 17	1297.130	0.58 12	M1	α=0.00769; α(K)=0.00635; α(L)=0.00101.
1300.92 7	1301.041	0.200 82		
1304.76 6	1304.8163	0.340 54		
1306.82 5	1306.852	0.950 19	E2	α=0.00346; α(K)=0.00283; α(L)=0.00048.
1308.45 17	1363.341	0.160 27	M1	α=0.00752; α(K)=0.00622; α(L)=0.00098.
1316.52 9	1371.475	0.290 29		
x1318.51 4		1.180 24	E2	α=0.00340; α(K)=0.00278; α(L)=0.00047.
1324.41 6	1560.399	0.260 29	M1	α=0.00730; α(K)=0.00603; α(L)=0.00095.
x1326.82 7		0.240 26	M1	α=0.00727; α(K)=0.00600; α(L)=0.00095.
1335.51 5	1335.535	0.220 44	M1	α=0.00715; α(K)=0.00591; α(L)=0.00093.
1338.09 8	1338.166	0.160 22	M1	α=0.00711; α(K)=0.00588; α(L)=0.00093.
1344.26 7	1399.334	0.220 31	M1	α=0.00703; α(K)=0.00581; α(L)=0.00092.
x1352.13 12		0.160 27		
x1354.286 24		0.840 59	M1	α=0.00690; α(K)=0.00570; α(L)=0.00090.
x1355.71 10		0.250 30	M1	α=0.00689; α(K)=0.00569; α(L)=0.00090.
1361.41 5	1554.423	0.360 29	M1	α=0.00681; α(K)=0.00563; α(L)=0.00089.
1363.39 6	1363.341	0.350 25	M1	α=0.00679; α(K)=0.00561; α(L)=0.00089.
x1365.18 12		0.270 32		
x1365.51 10		0.240 19		
x1373.59 9		0.230 28		
x1377.70 10		0.190 21		
1379.35 8	1434.582	0.190 17	M1	α=0.00659; α(K)=0.00545; α(L)=0.00086.
x1383.74 17		0.110 20		
x1388.44 9		0.250 23		
x1389.04 4		0.25 13	M1	α=0.00648; α(K)=0.00536; α(L)=0.00085.
x1394.01 4		0.520 31	(M1)	α=0.00642; α(K)=0.00531; α(L)=0.00084.
x1395.58 9		0.280 28		
1396.09@ 15	1396.136	0.190@ 17	M1	α=0.00640; α(K)=0.00529; α(L)=0.00084.
	1487.126	0.190@ 17	M1	α=0.00640; α(K)=0.00529; α(L)=0.00084.
x1397.73 16		0.130 7	M1	α=0.00638; α(K)=0.00527; α(L)=0.00083.
x1407.903 24		1.09 14		
x1411.54 20		0.090 23		
x1411.90 12		0.130 36		
x1413.18 17		0.110 15		
x1415.73 21		0.070 26		
1422.65 15	1513.555	0.100 20		
x1430.99 9		0.280 22	M1	α=0.00602; α(K)=0.00497; α(L)=0.00079.
1431.42 13	1431.638	0.200 42		
1432.04 14	1487.126	0.310 31		
x1434.04 11		0.130 14		
x1437.53 14		0.120 23		
x1441.60 10		0.180 22	M1	α=0.00591; α(K)=0.00488; α(L)=0.00077.
x1443.98 13		0.150 23		
1445.50 10	1536.355	0.190 32		
x1450.90 10		0.180 22		
x1452.33 10		0.300 57		
x1454.22 6		0.250 25	M1	α=0.00578; α(K)=0.00478; α(L)=0.00075.
x1460.22 7		0.280 70		
x1460.84 17		0.150 17		

Continued on next page (footnotes at end of table)

$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

γ(^{198}Au) (continued)

Eγ	E(level)	Iγ[§#]	Mult.[†]	Comments
x1461.65 22		0.090 32		
x1462.12 18		0.140 24		
x1466.58 6		0.40 11		
x1467.96 10		0.480 38		
x1470.00 12		0.160 14		
x1474.580 19		0.89 23	M1	α=0.00558; α(K)=0.00462; α(L)=0.00073.
x1477.95 9		0.230 55		
1487.31[@] 12	1487.126	0.270[@] 32	M1	α=0.00547; α(K)=0.00452; α(L)=0.00071.
	1542.775	0.270[@] 32	E2[‡]	M1 (96Ma70,96Ma75). α=0.00547; α(K)=0.00452; α(L)=0.00071.
x1488.77 8		0.520 36		
x1490.88 19		0.130 22		
x1500.58 5		0.26 16		
x1504.44 14		0.170 22		
1505.50[@] 23	1505.164	0.110[@] 15		
	1560.399	0.110[@] 15		
x1513.31 5		0.910 27	M1+E2	α=0.0032 11; α(K)=0.0032 11.
x1514.8 4		0.430 52		
x1516.19 10		0.350 18		
x1516.68 18		0.360 40		
x1519.42 4		0.64 20	M1	α=0.00429; α(K)=0.00429.
x1524.40 14		0.100 50		
x1526.5 3		0.120 29		
1530.60 8	1530.695	0.410 33		
x1533.14 4		0.64 19	(M1,E2)	α=0.0031 11; α(K)=0.0031 11.
x1537.72 15		0.320 42		
x1539.96 16		0.270 41		
x1547.10 11		0.360 36		
x1550.49 8		0.490 34		
1554.51 7	1554.423	0.34 12		
x1566.79 16		0.170 17		
x1567.13 6		0.590 24	M1	α=0.00397; α(K)=0.00397.
x1574.89 7		0.360 22		
x1578.47 11		0.270 24		
x1597.91 20		0.220 26		
x1604.01 7		0.670 47		
x1611.43 15		0.440 40		
x1615.96 22		0.130 30		
x1620.35 15		0.210 40		
x1630.61 20		0.180 40		
x1633.36 19		0.70 17		
x1634.06 7		0.500 80		
x1638.5 3		0.190 40		
x1642.7 3		0.280 39		
x1645.12 10		0.810 49		
x1651.1 4		0.130 42		
x1656.72 7		0.900 63		
x1660.15 16		0.380 61		
x1669.2 3		0.73 25		
x1693.314 23		7.1 12		
x1706.0 3		0.58 20		
x4897.4 14		0.360 94		
x4905.5 10		0.420 97		
x4931.6 10		0.230 97		
x4940.3 16		0.080 54		
4958.2 10	(6512.49)	0.85 10		
4973.1[@] 15	(6512.49)	0.080[@] 45		
	(6512.49)	0.080[@] 45		
4980.5 15	(6512.49)	0.120 43		
4999.1 10	(6512.49)	0.420 11		
5007.5 15	(6512.49)	0.080 54		
5024.6 10	(6512.49)	0.130 78		
5035.2 9	(6512.49)	0.250 95		

Continued on next page (footnotes at end of table)

$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

γ(^{198}Au) (continued)

Eγ	E(level)	Iγ[§#]	Mult.[†]
5042.5 *12*	(6512.49)	0.250 *95*	
5053.7 *14*	(6512.49)	0.080 *26*	
5080.9 *10*	(6512.49)	0.330 *53*	
5086.3 *9*	(6512.49)	0.670 *53*	
5103.0 *9*	(6512.49)	1.180 *83*	
5109.5[@] *14*	(6512.49)	0.210[@] *44*	
	(6512.49)	0.210[@] *44*	
	(6512.49)	0.210[@] *44*	
5118.7[@] *16*	(6512.49)	0.250[@] *43*	
	(6512.49)	0.250[@] *43*	
5141.1 *10*	(6512.49)	0.470 *80*	
5149.9 *10*	(6512.49)	0.620 *74*	
5153.5 *11*	(6512.49)	0.78 *44*	
5174.7 *8*	(6512.49)	0.30 *10*	
5206.4[@] *10*	(6512.49)	0.210[@] *80*	
	(6512.49)	0.210[@] *80*	
5217.8[@] *10*	(6512.49)	0.210[@] *80*	
	(6512.49)	0.210[@] *80*	
5223.1 *14*	(6512.49)	0.180 *52*	
5226.1 *8*	(6512.49)	0.570 *97*	
5244.4[@] *14*	(6512.49)	0.69[@] *26*	
	(6512.49)	0.69[@] *26*	
5272.1 *14*	(6512.49)	0.52 *26*	
5279.5 *8*	(6512.49)	0.49 *12*	
5303.0 *14*	(6512.49)	0.26 *7*	
5418.8[@] *9*	(6512.49)	0.130[@] *43*	
	(6512.49)	0.130[@] *43*	
5456.0 *12*	(6512.49)	0.10 *5*	
[x]5462.9 *8*		0.300 *69*	
5474.4[@] *24*	(6512.49)	0.28[@] *7*	
	(6512.49)	0.28[@] *7*	
5493.7 *8*	(6512.49)	0.57 *12*	
5524.4 *10*	(6512.49)	1.08 *12*	
5539.9 *10*	(6512.49)	0.230 *69*	
[x]5594.75 *7*		0.610 *37*	
5620.6[@] *9*	(6512.49)	0.46[@] *11*	
	(6512.49)	0.46[@] *11*	
5643.4 *9*	(6512.49)	0.080 *45*	
5677.3 *9*	(6512.49)	0.070 *44*	
5710.70 *6*	(6512.49)	1.710 *86*	
5724.3[@] *8*	(6512.49)	0.74[@] *20*	
	(6512.49)	0.74[@] *20*	
5766.5 *12*	(6512.49)	0.120 *43*	
5783.7 *11*	(6512.49)	0.10 *5*	
5808.2[@] *9*	(6512.49)	0.33[@] *11*	
	(6512.49)	0.33[@] *11*	
5839.7 *8*	(6512.49)	0.21 *10*	
5880.0 *8*	(6512.49)	0.40 *10*	
5941.32 *7*	(6512.49)	0.620 *37*	
5983.19 *6*	(6512.49)	1.380 *69*	
6106.43 *14*	(6512.49)	0.630 *44*	
6145.3 *10*	(6512.49)	0.39 *22*	
6149.55 *7*	(6512.49)	1.00 *5*	
6165.5 *9*	(6512.49)	0.230 *69*	
6251.05 *17*	(6512.49)	1.94 *31*	
6253.11 *13*	(6512.49)	3.28 *33*	
6264.9 *10*	(6512.49)	0.61 *12*	
6276.8 *8*	(6512.49)	1.19 *18*	
[x]6319.23 *6*		3.24 *16*	E1
6457.37 *6*	(6512.49)	2.66 *13*	E1
6512.63 *7*	(6512.49)	1.82 *9*	E1

[†] From internal conversion electron measurements (96Ma70, 96Ma75).

[‡] From Jπ between transition levels.

[§] Photons per 100 neutron captures given by authors (96Ma70, 96Ma75). For absolute intensities a systematic error of 20% has to be added.

[#] For intensity per 100 neutron captures, multiply by 0.88 *18*.

[@] Multiply placed; undivided intensity given.

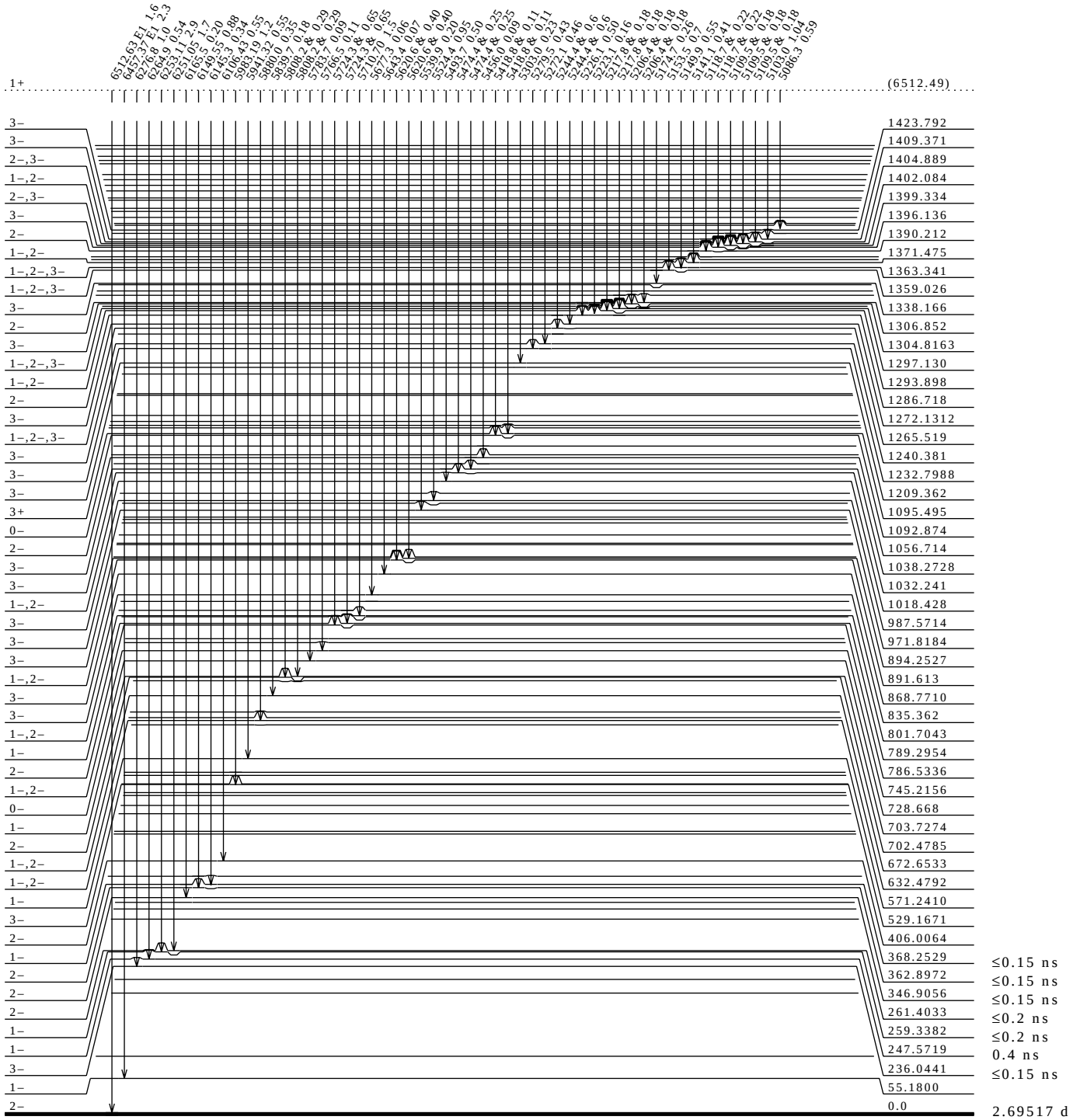
[x] γ ray not placed in level scheme.

$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

Level Scheme

Intensities: I(γ+ce) per 100 parent decays
& Multiply placed; undivided intensity given



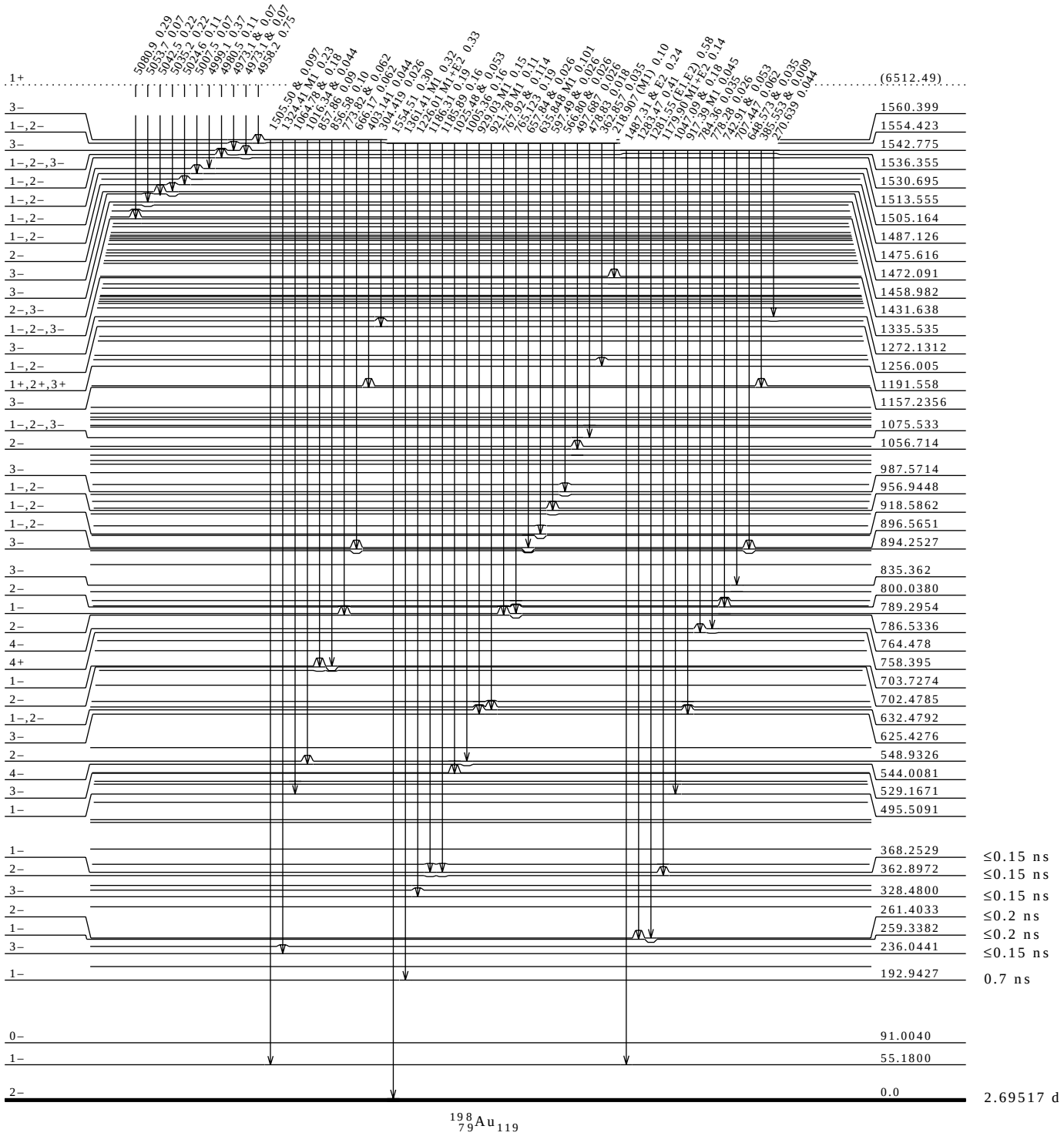
$^{198}_{79}Au_{119}$

$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

Level Scheme (continued)

Intensities: I(γ+ce) per 100 parent decays
& Multiply placed; undivided intensity given

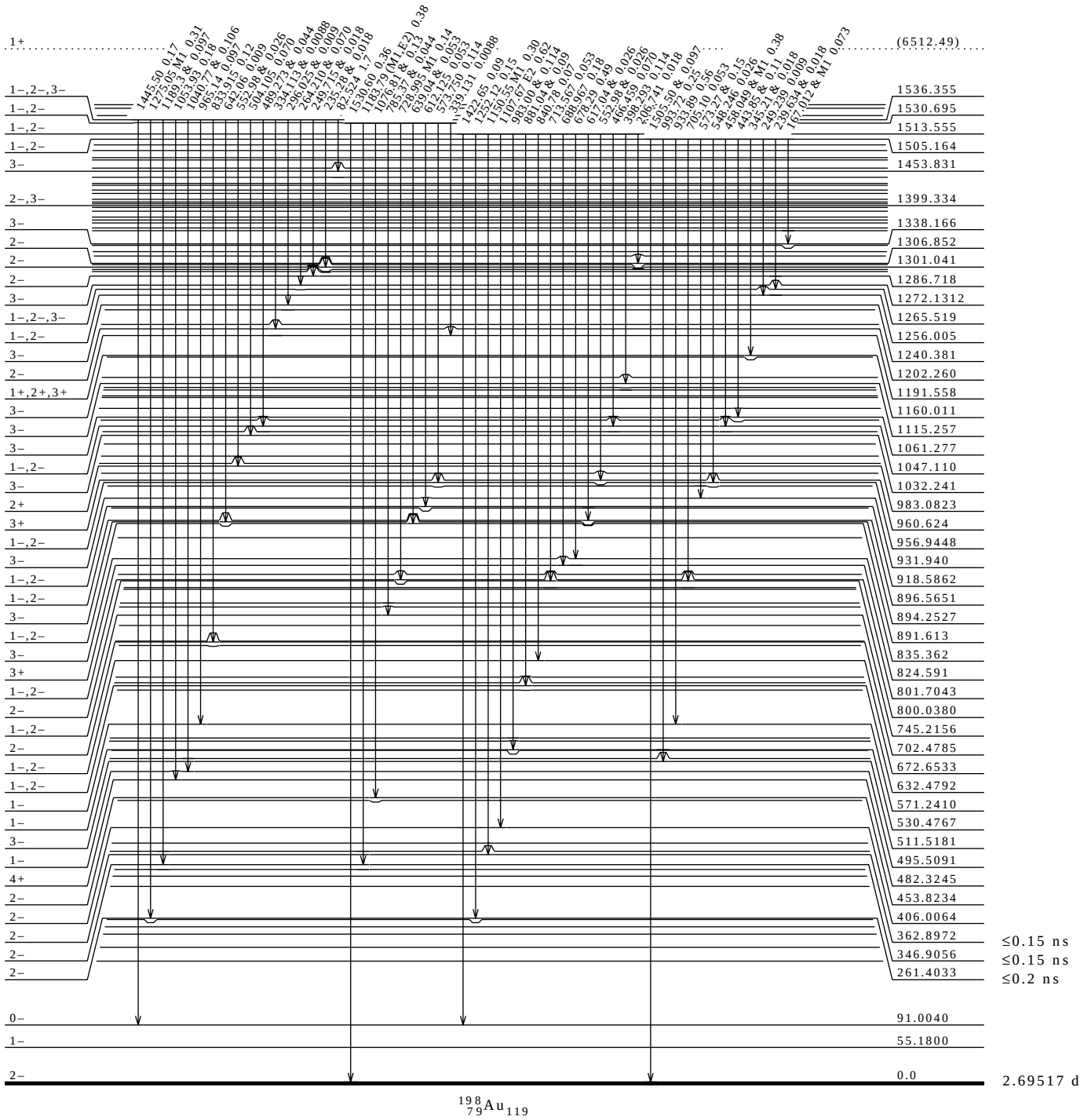


$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

Level Scheme (continued)

Intensities: I(γ+ce) per 100 parent decays
& Multiply placed; undivided intensity given



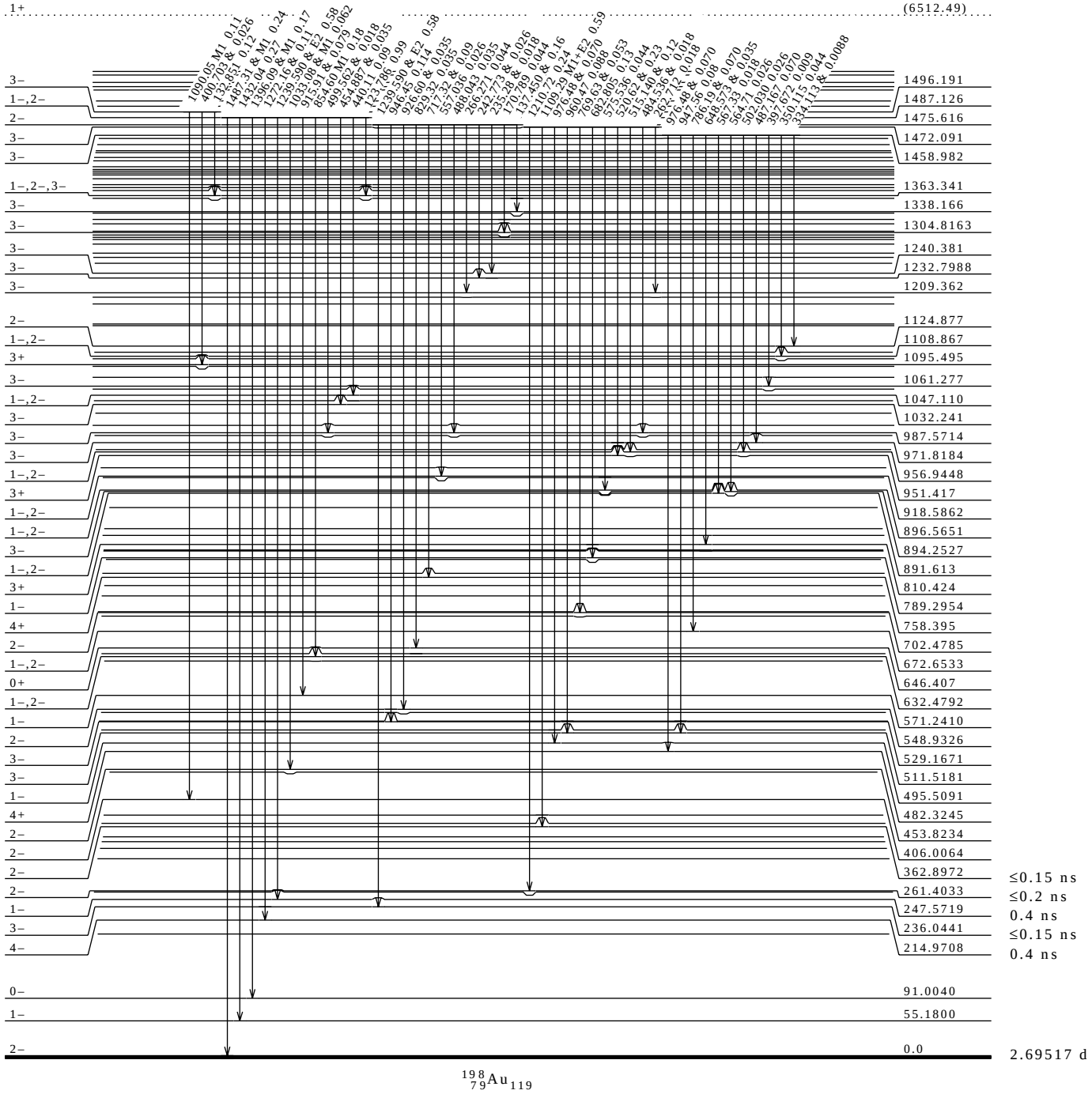
$^{198}_{79}Au_{119}$

$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

Level Scheme (continued)

Intensities: I(γ+ce) per 100 parent decays
& Multiply placed; undivided intensity given

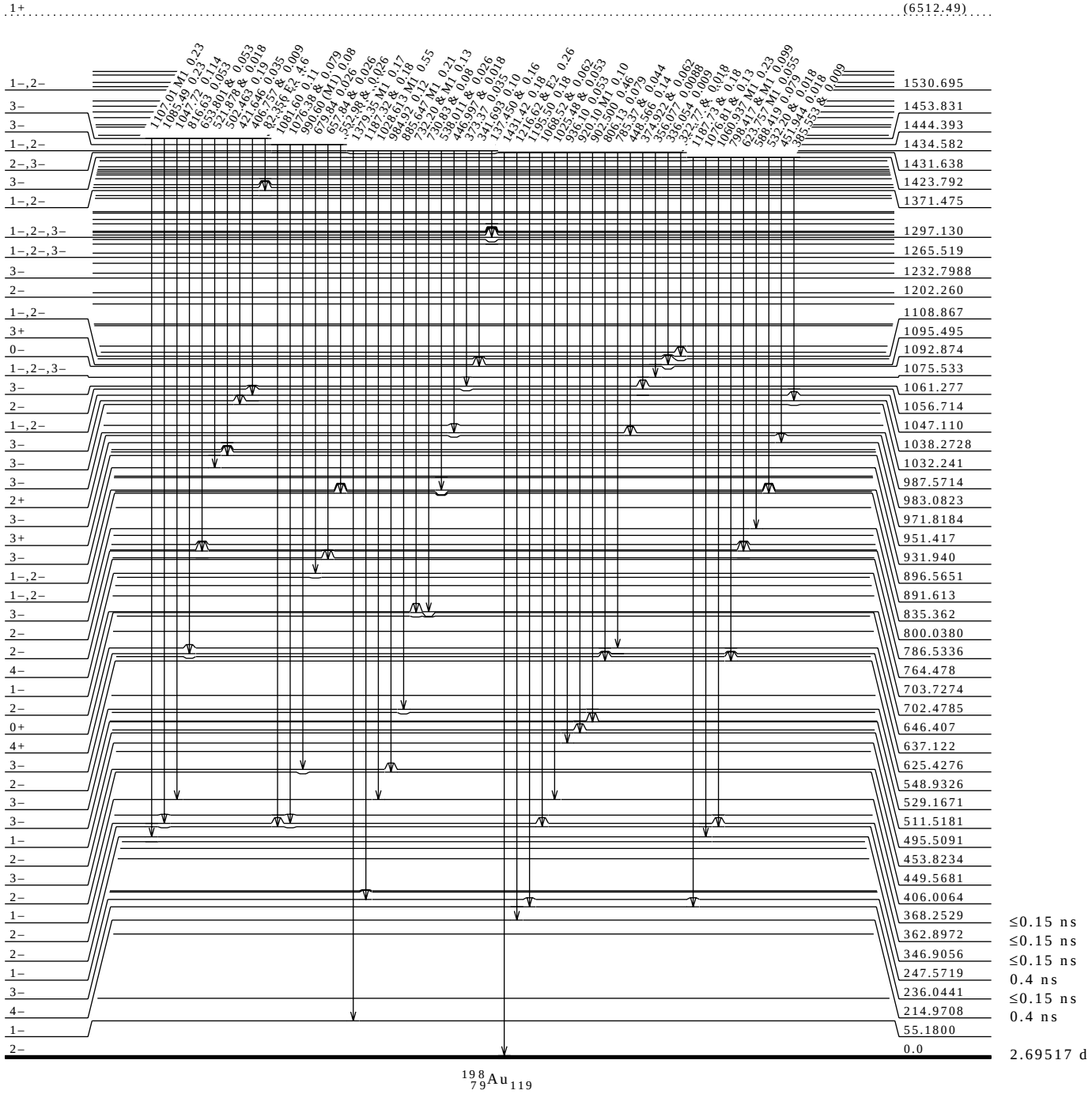


$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

Level Scheme (continued)

Intensities: I(γ+ce) per 100 parent decays
& Multiply placed; undivided intensity given

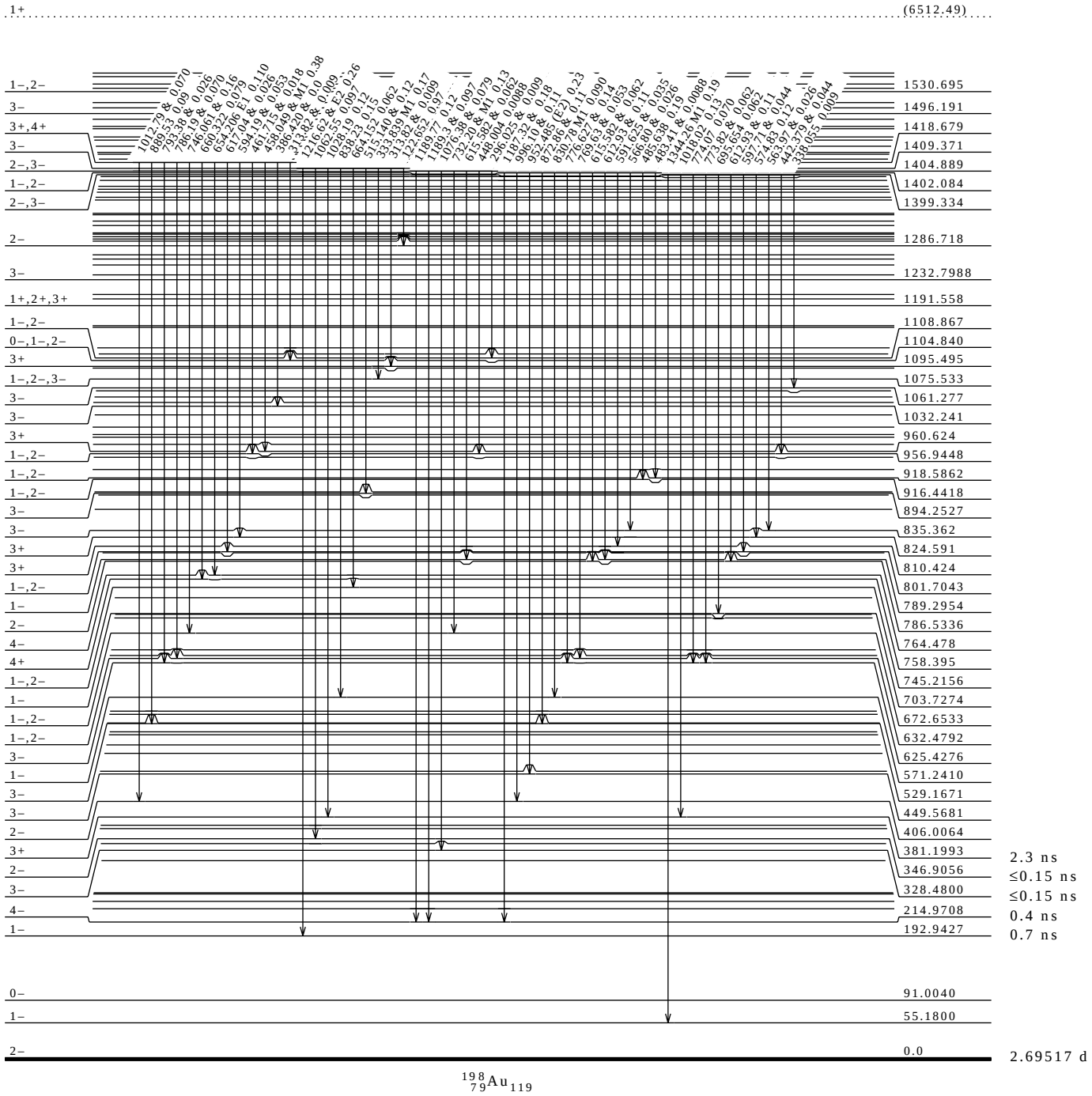


$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

Level Scheme (continued)

Intensities: I(γ+ce) per 100 parent decays
& Multiply placed; undivided intensity given



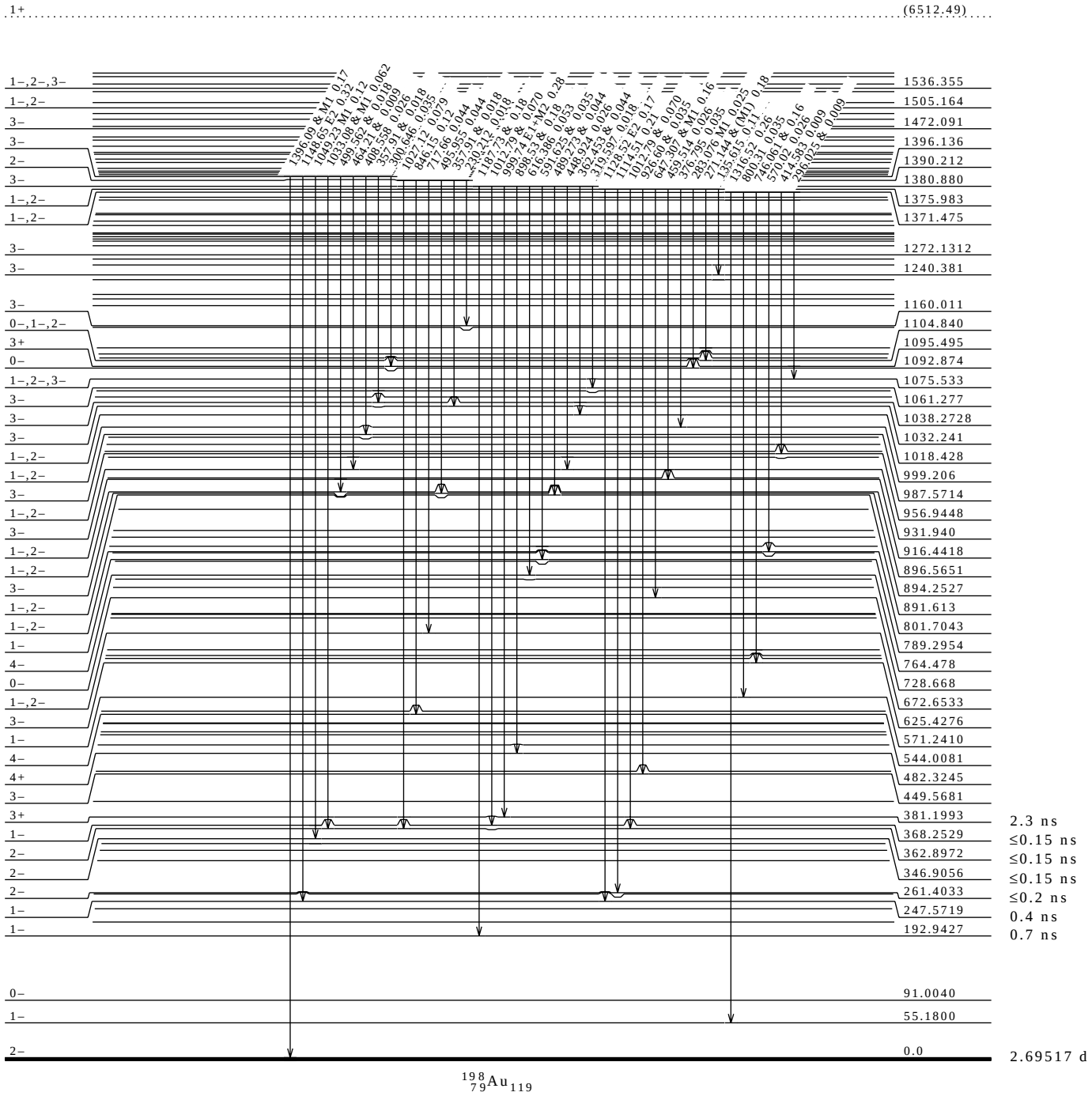
$^{198}_{79}Au_{119}$

$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

Level Scheme (continued)

Intensities: I(γ+ce) per 100 parent decays
& Multiply placed; undivided intensity given

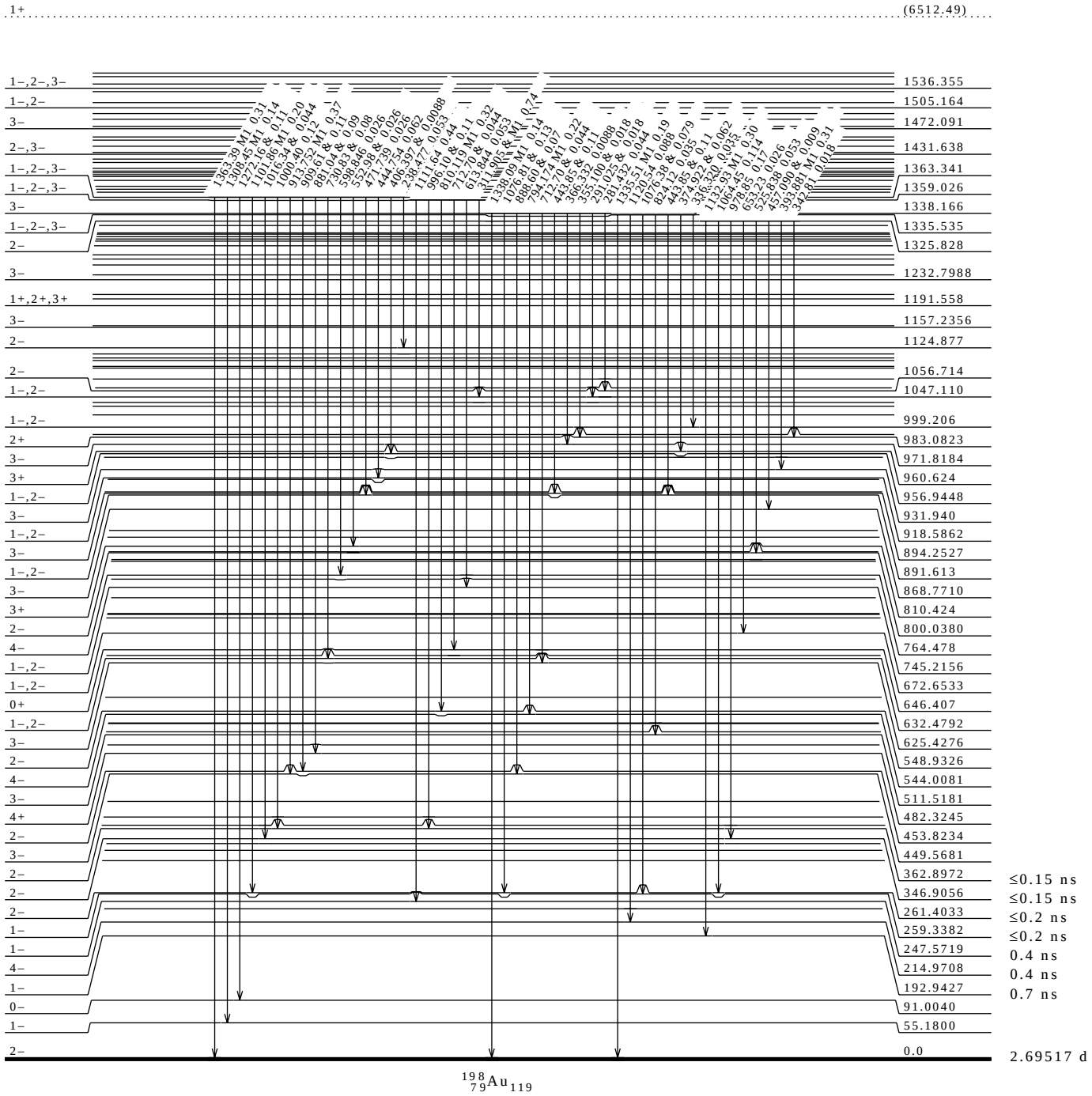


$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

Level Scheme (continued)

Intensities: I(γ+ce) per 100 parent decays
& Multiply placed; undivided intensity given

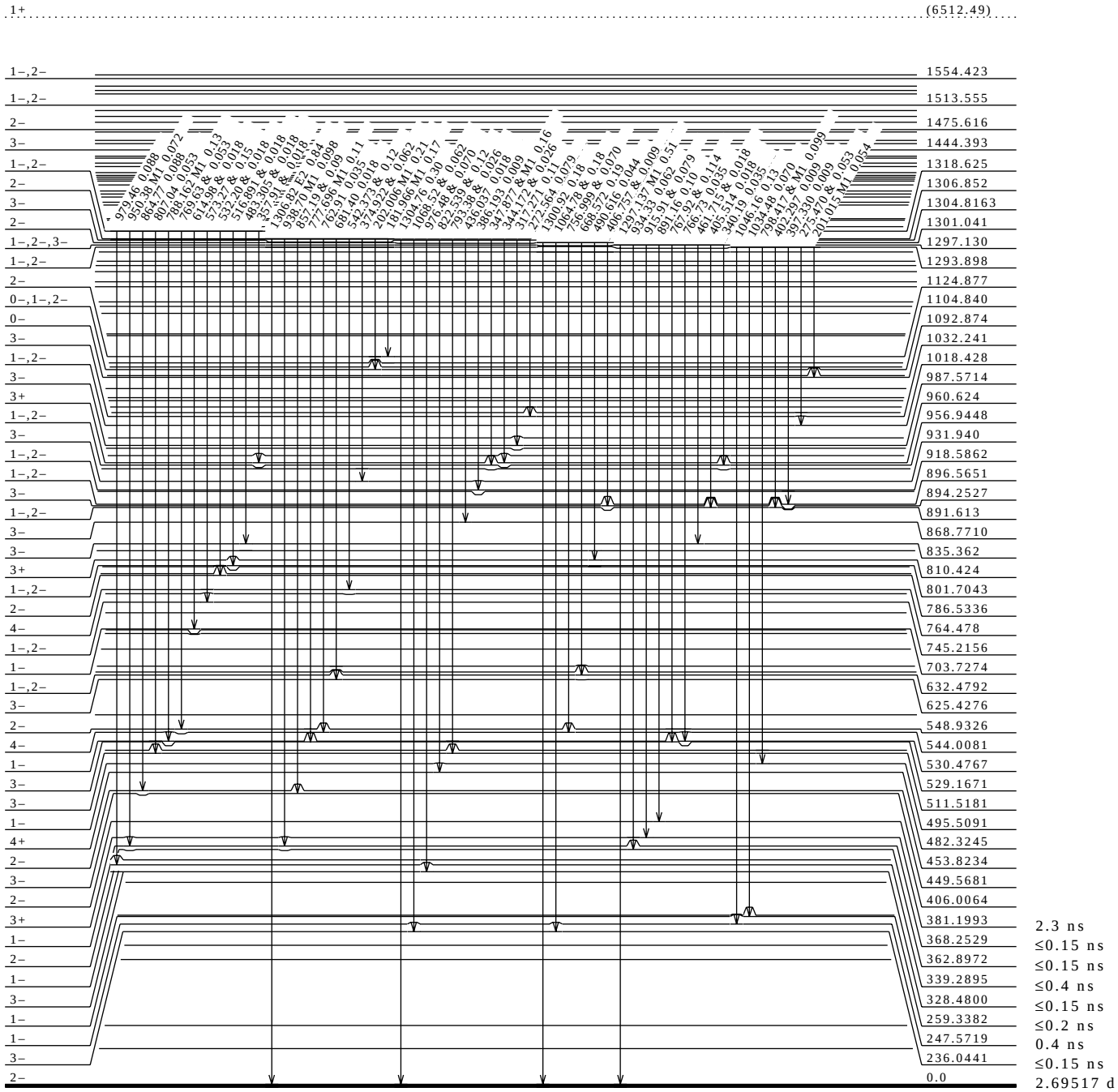


$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

Level Scheme (continued)

Intensities: I(γ+ce) per 100 parent decays
& Multiply placed; undivided intensity given

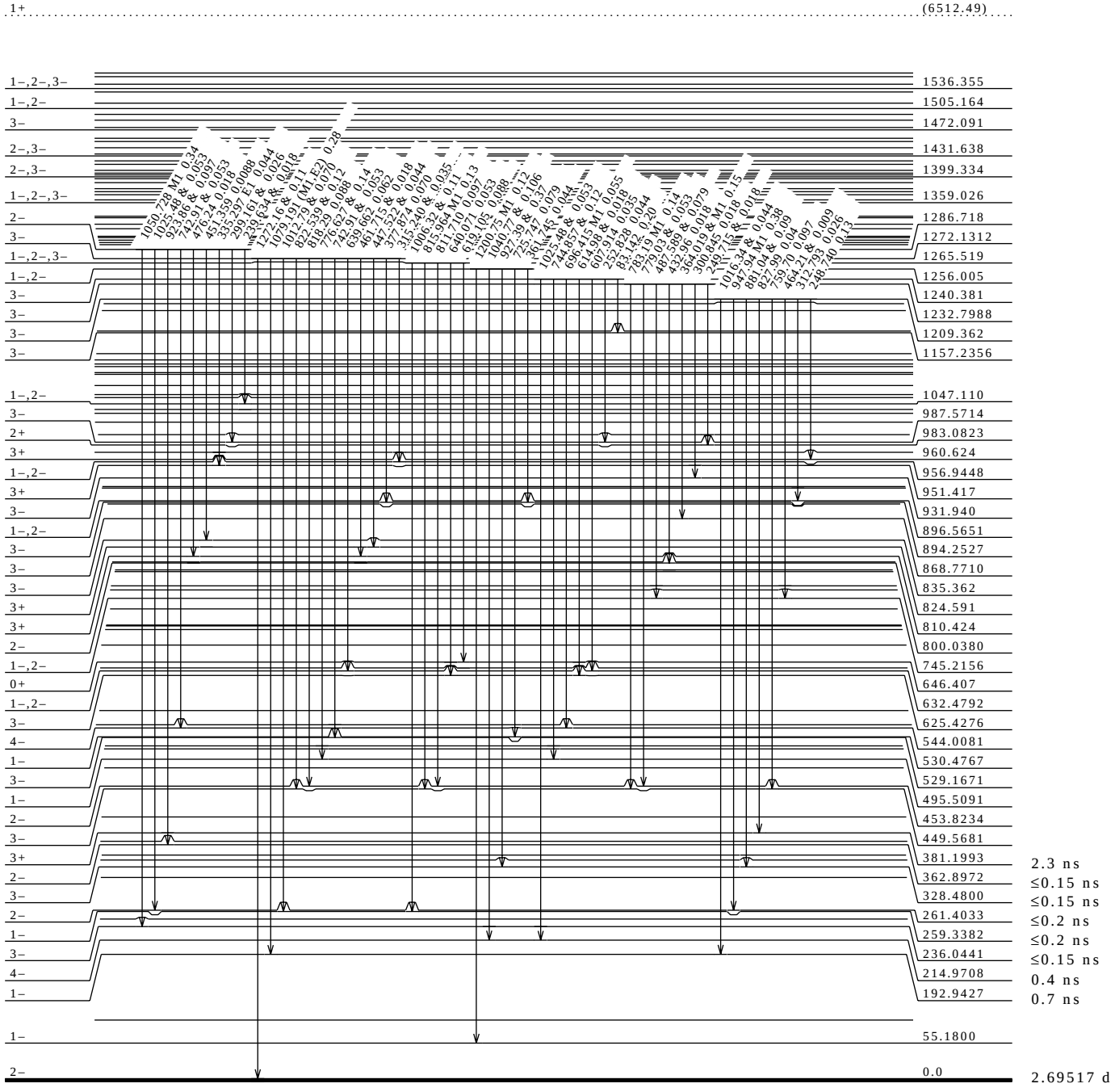


$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

Level Scheme (continued)

Intensities: I(γ+ce) per 100 parent decays
& Multiply placed; undivided intensity given

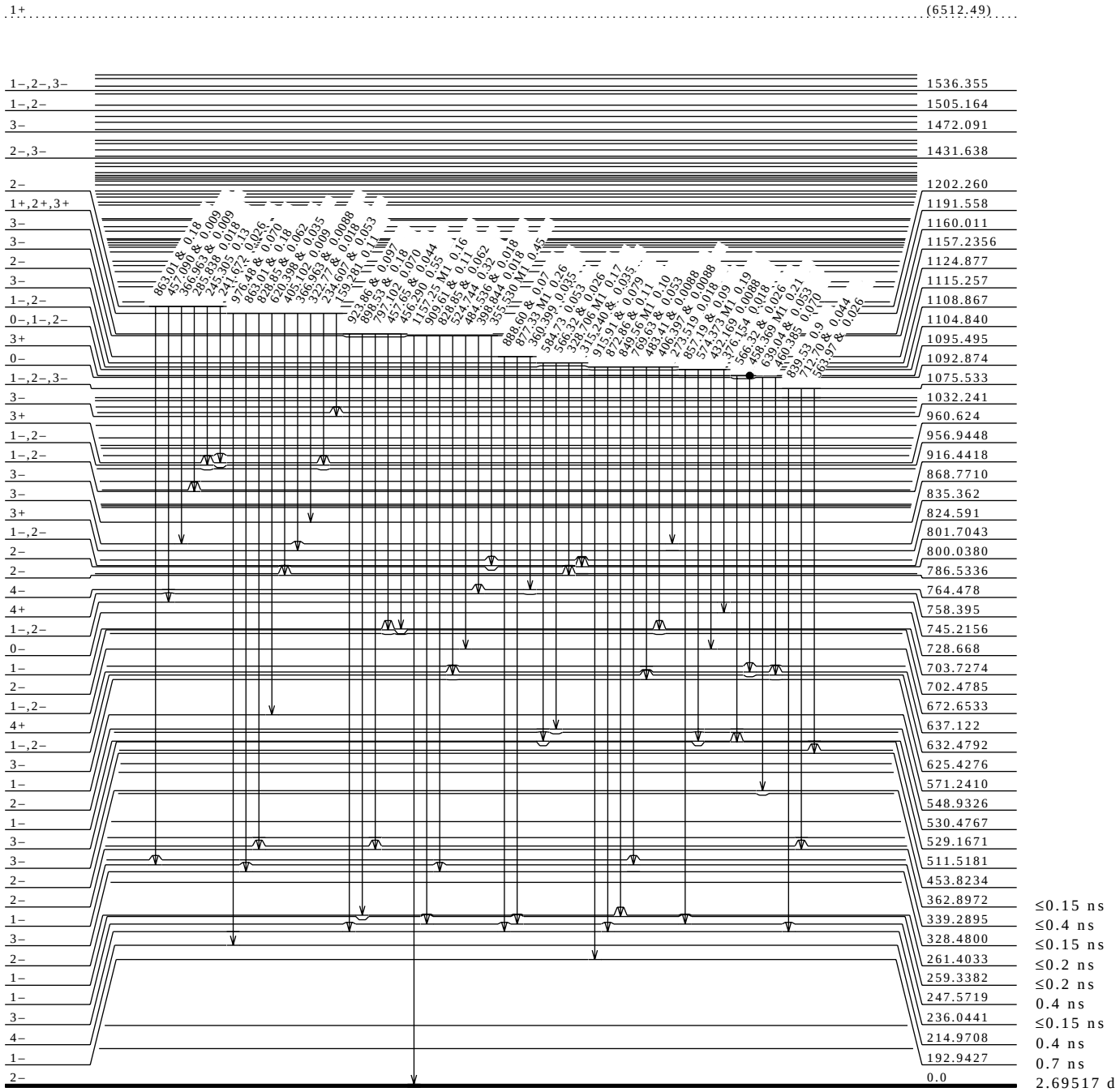


$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

Level Scheme (continued)

Intensities: I(γ+ce) per 100 parent decays
& Multiply placed; undivided intensity given



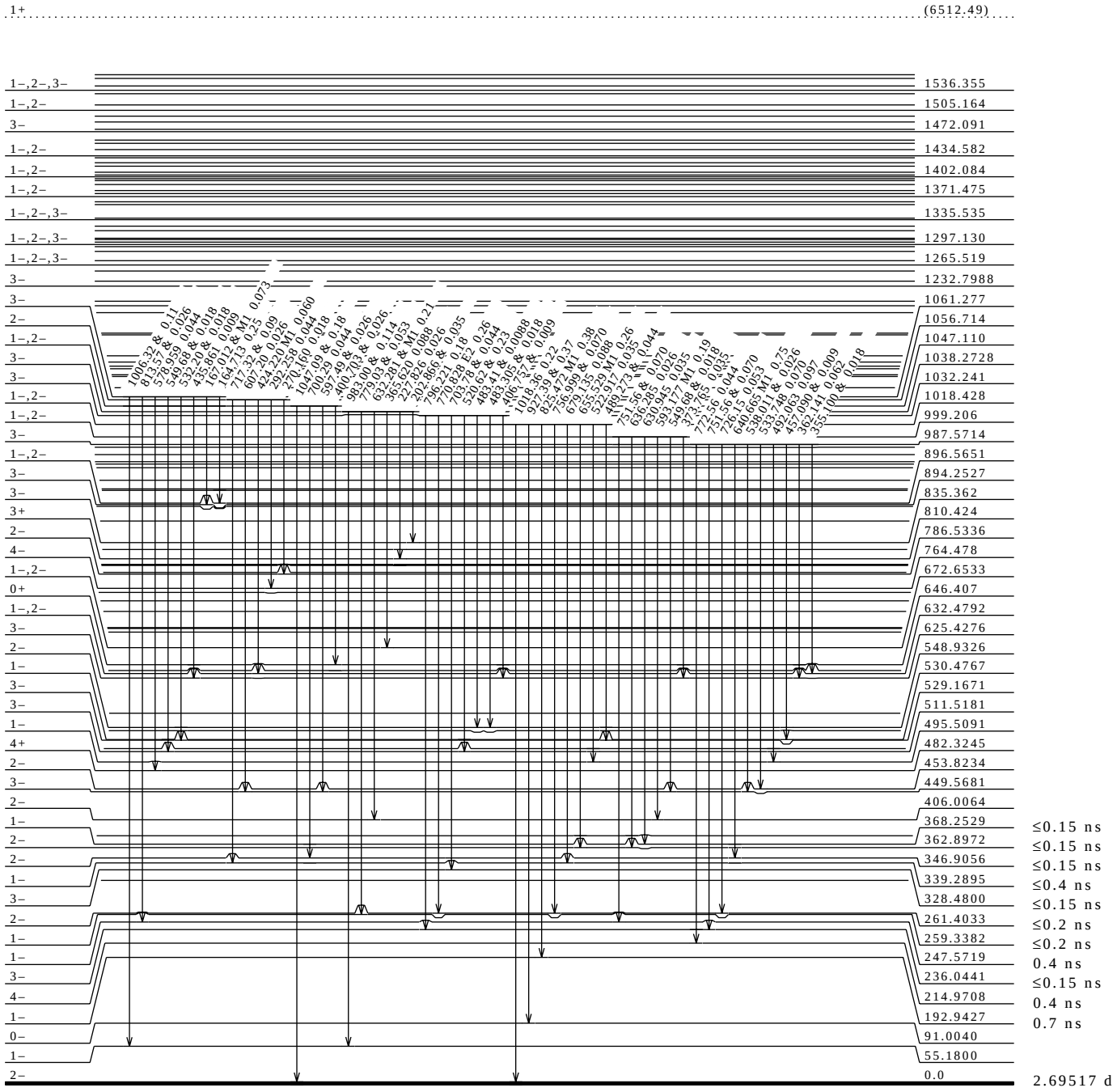
$^{198}_{79}Au_{119}$

$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

Level Scheme (continued)

Intensities: I(γ+ce) per 100 parent decays
& Multiply placed; undivided intensity given

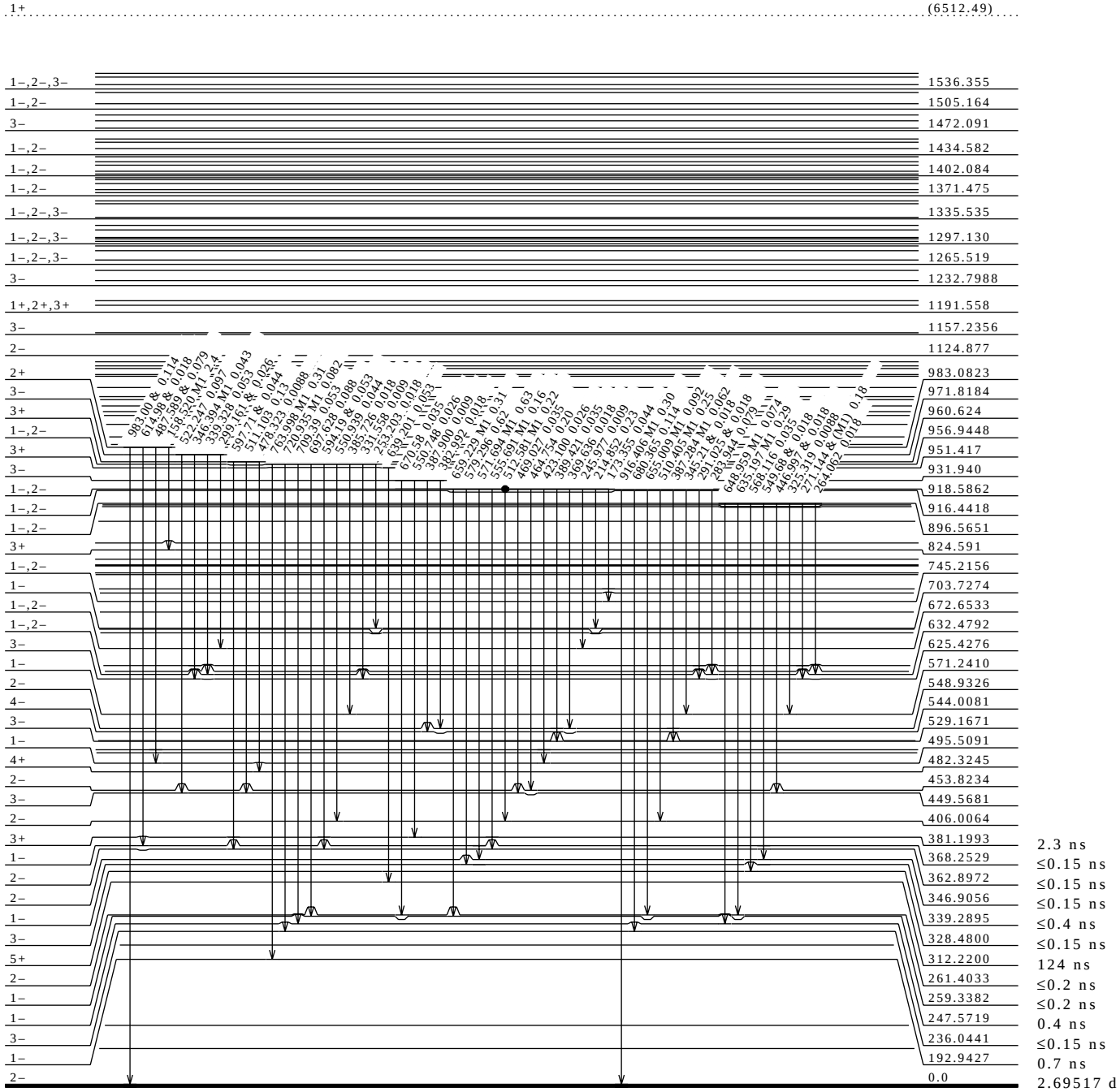


$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

Level Scheme (continued)

Intensities: I(γ+ce) per 100 parent decays
& Multiply placed; undivided intensity given

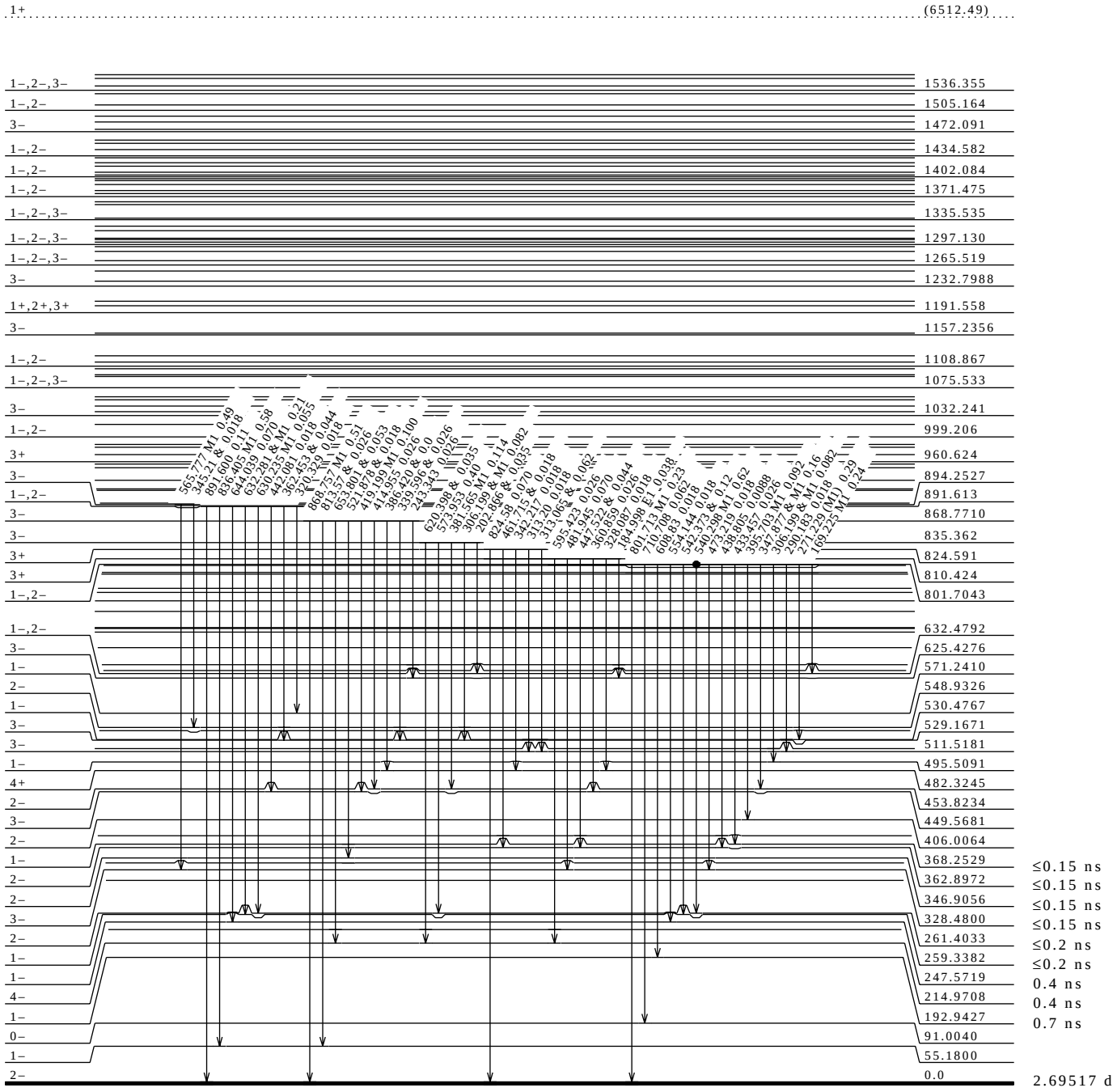


$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

Level Scheme (continued)

Intensities: I(γ+ce) per 100 parent decays
& Multiply placed; undivided intensity given

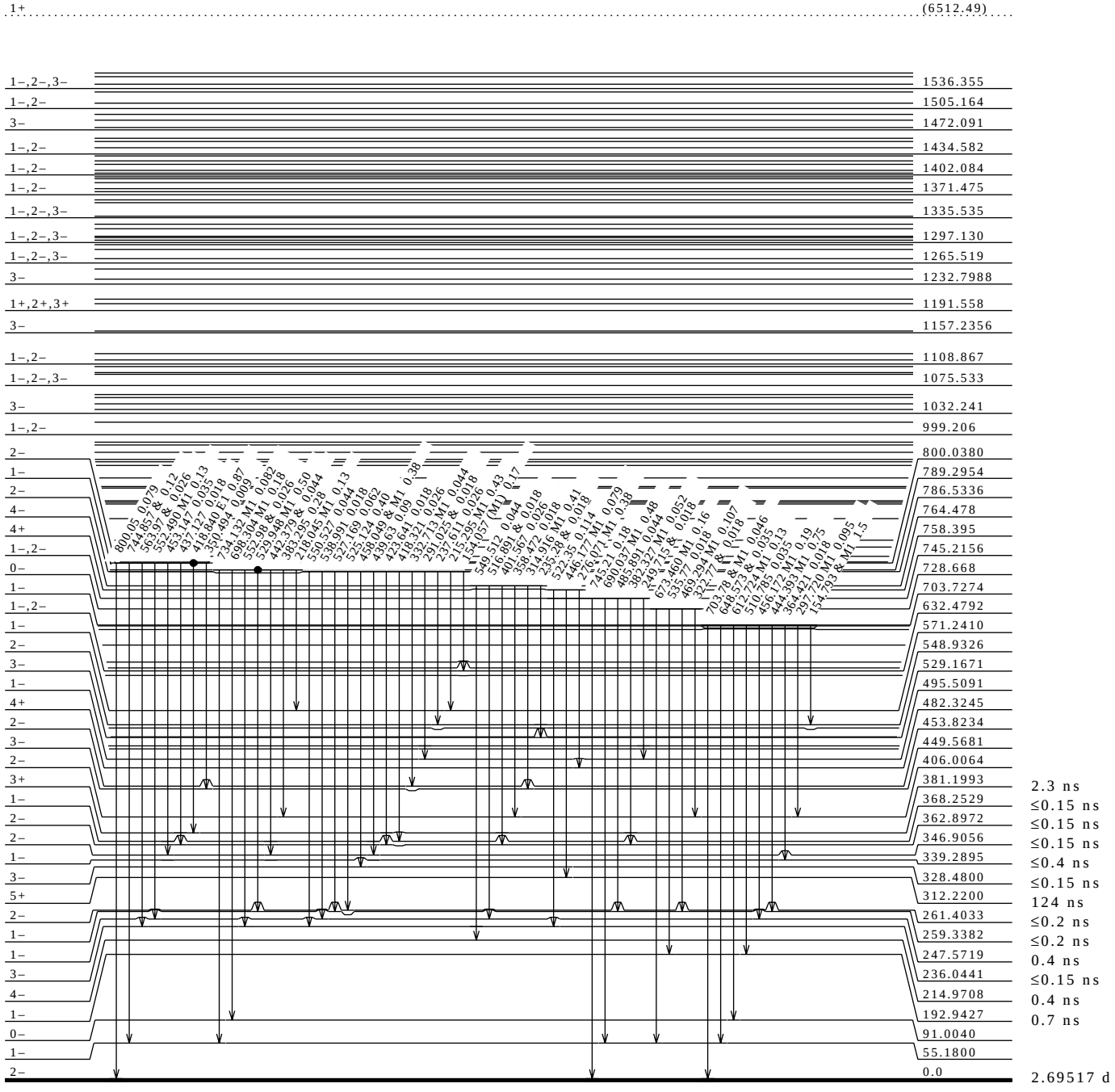


$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

Level Scheme (continued)

Intensities: I(γ+ce) per 100 parent decays
& Multiply placed; undivided intensity given

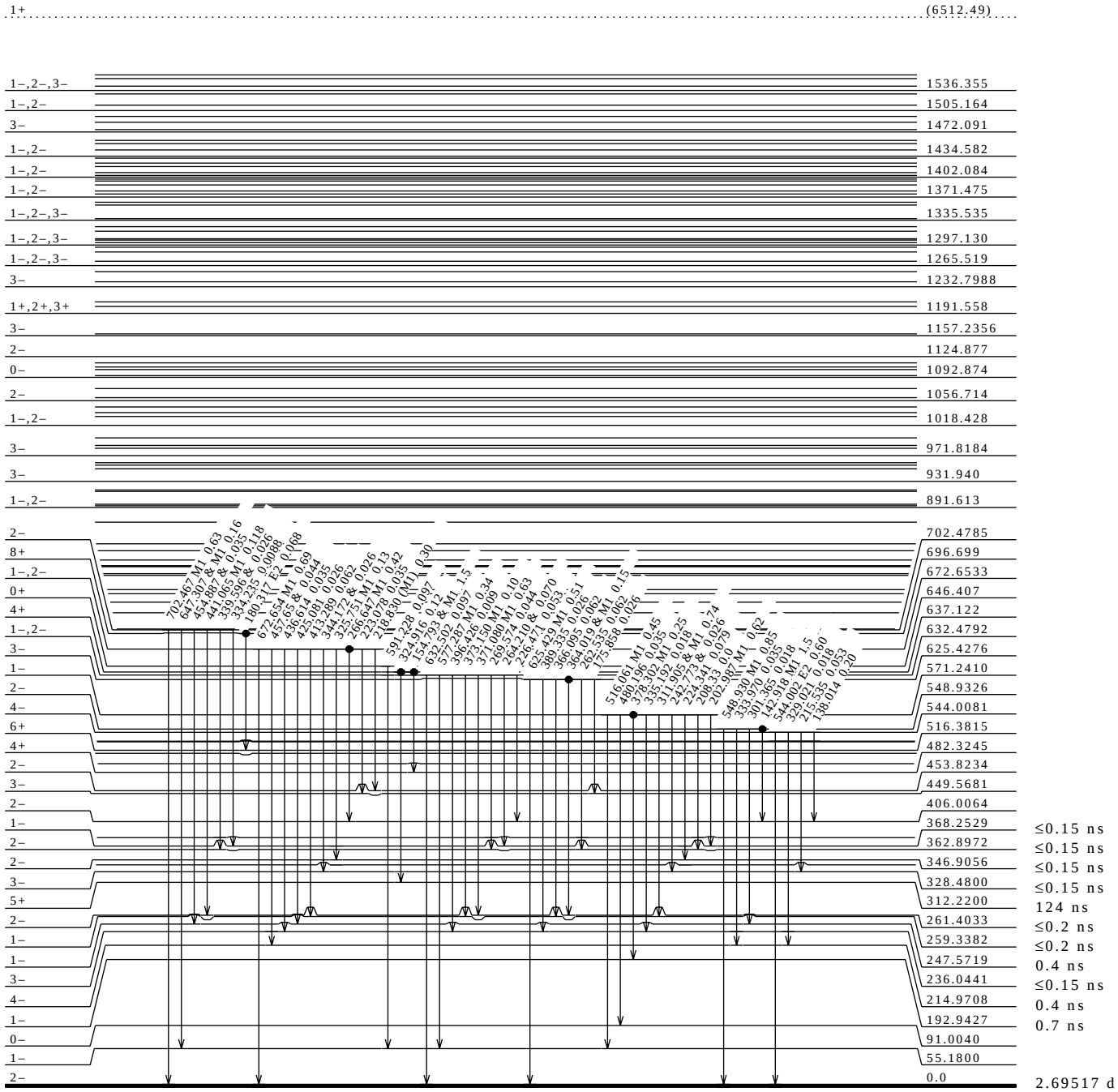


$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

Level Scheme (continued)

Intensities: I(γ+ce) per 100 parent decays
& Multiply placed; undivided intensity given

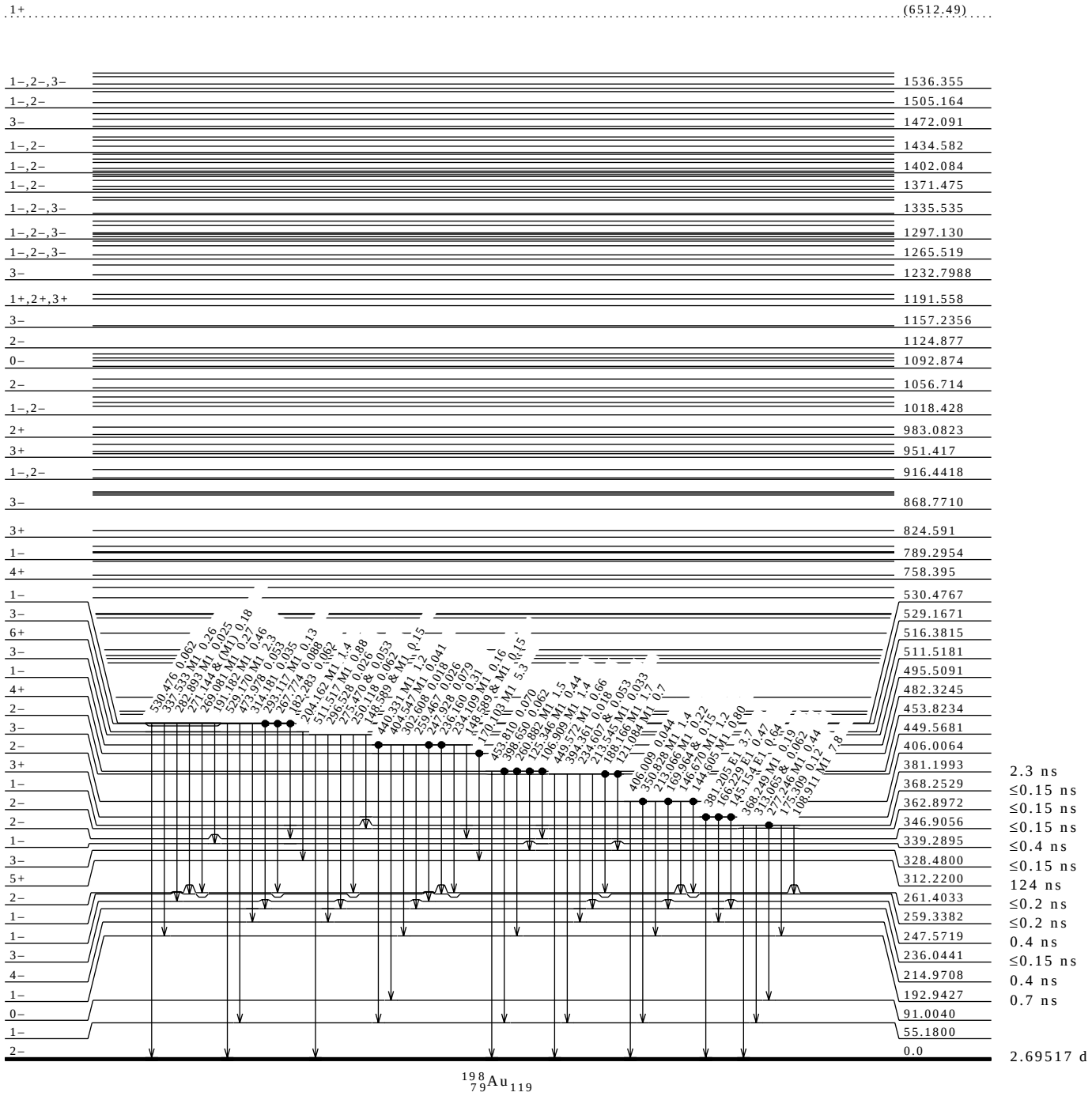


$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

Level Scheme (continued)

Intensities: I(γ+ce) per 100 parent decays
& Multiply placed; undivided intensity given



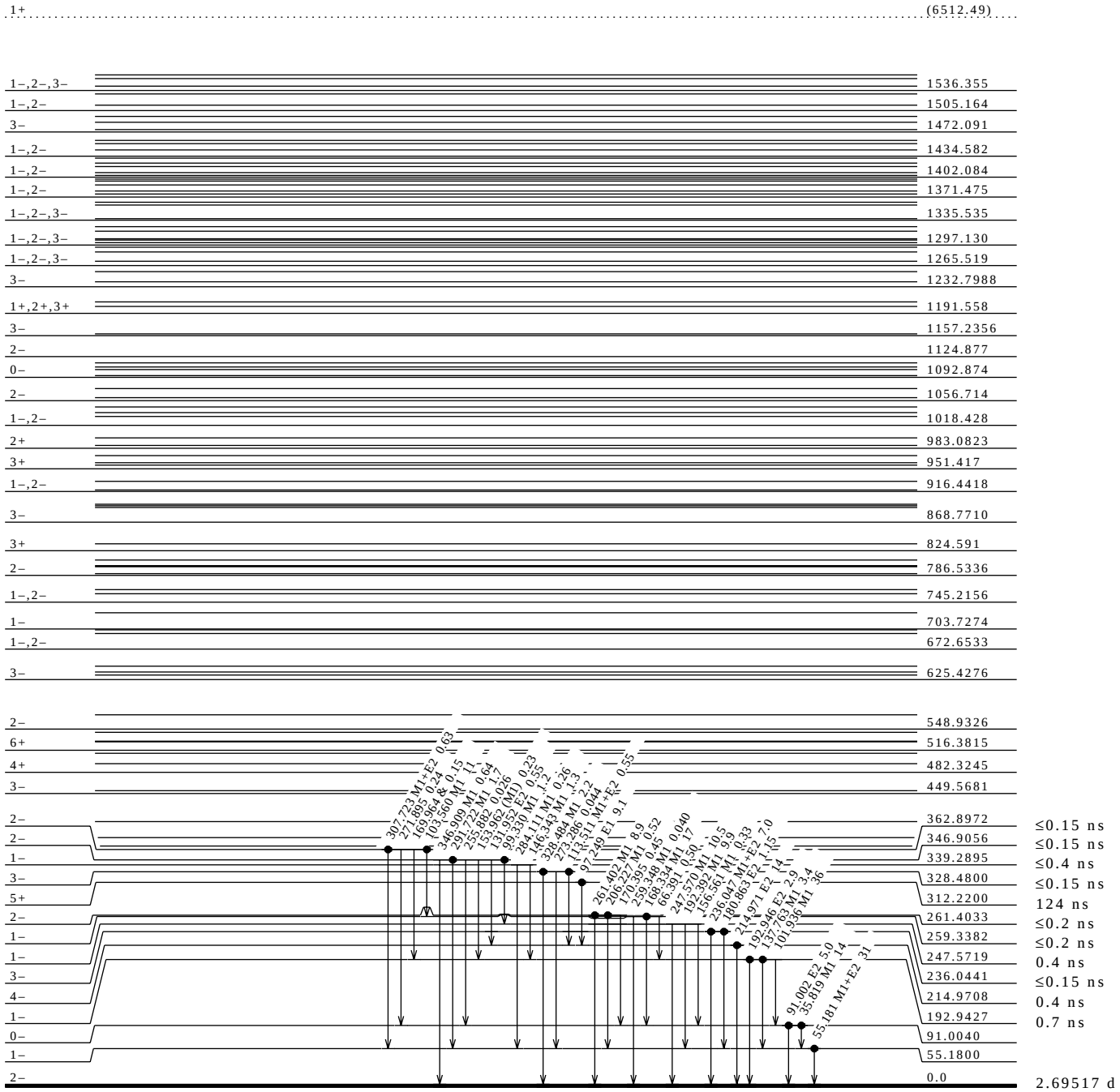
$^{198}_{79}Au_{119}$

$^{198}_{79}Au_{119}$

^{197}Au(n,γ) E=thermal 96Ma70,96Ma75,93Pe04 (continued)

Level Scheme (continued)

Intensities: I(γ+ce) per 100 parent decays
& Multiply placed; undivided intensity given



$^{198}_{79}Au_{119}$

$^{208}_{82}Pb_{126}$

^{207}Pb(n,γ) E=thermal 98Be19,83Ma55

Target Jπ=1/2−.
98Be19: measured Eγ, Iγ with HPGe surrounded by BGO Compton suppression.

^{208}Pb Levels

E(level)†	Jπ‡	Comments
0.0	0+	
2614.57 *3*	3−	
3998? *4*		Level at 3995.7 with Jπ=5− and deexcited by a 1381.1γ is known from (n,n'γ). A level with such a high spin is not expected to be populated in (n,γ) from a Jπ=0−,1− capturing state; so this may be a different level, or the 1383γ may have an alternate placement (note, however, that it was seen in coincidence with the 2614γ).
4051.98 *18*	3−	
4085.50 *7*	2+	
4229.70 *9*	2−	
4254.73 *8*	3−	
4705? *4*		
4882.1? *12*	(0+)	Jπ: E0 to 0+. Tentatively identified by the authors as the two−neutron pairing vibration reported by 66Bj03 E=4859 *15* for this state from more recent (t,p) data and E=4863 *5* in (d,pγ).
4905.0? *8*	(0+)	Jπ: E0 to 0+.
4937.19 *8*	(3,4)−	
5384.83 *13*	2−	
5844.40 *19*	(1)	
6343? *4*	3−	
7367.91 *5*	0−,1−	Jπ: s−wave neutron capture. Evaluated s(n)=7367.82 keV *9* (95Au04). Observed deexcitation intensity is 100% of g.s. feeding.

† From Eγ's and scheme by using least−squares fit data.
‡ From adopted levels. Note that Jπ assignments for the 0+ excited levels are from this reaction.

γ(^{208}Pb)

All data are from 98Be19, except as noted.
Iγ normalization: renormalized to assuming Iγ(to g.s.)=100.

Eγ	E(level)	Iγ†#	Mult.§	Comments
1025‡ *4*	7367.91	80‡		
1155.1 *2*	5384.83	40 *6*		
1332.6 *3*	5384.83	20 *10*		
1383‡ *4*	3998?	120‡		
1437.3 *2*	4051.98	30 *10*		
1470@	4085.50	<30		
1523.3 *2*	7367.91	40 *10*		
1615.2 *1*	4229.70	80 *10*		
1640.2 *1*	4254.73	130 *10*		
1983.1 *2*	7367.91	140 *10*		
2090‡ *4*	4705?	198‡		
2322.6 *1*	4937.19	110 *10*		
2430.7 *1*	7367.91	110 *10*		Iγ: 150 *80* (83Ma55).
2614.53 *3*	2614.57	1460 *20*	E3	
2770.9 *3*	5384.83	60 *10*		
3113.2 *1*	7367.91	130 *20*		Iγ: 310 *70* (83Ma55).
3138.5 *2*	7367.91	50 *10*		
3282.41 *8*	7367.91	480 *20*		Iγ: 710 *140* (83Ma55).
3729‡@ *4*	6343?	≈80‡		Eγ: masked by double−escape peak of the 4753γ, but Iγ for the doublet is consistent with Iγ(3729)=Iγ(1025γ).
4085.50 *9*	4085.50	490 *20*		
4753.16 *6*	7367.91	960 *20*		Iγ: 1130 *140* (83Ma55).
4882.0‡@ *12*	4882.1?		E0	
4904.9‡@ *8*	4905.0?		E0	
4935‡@ *1*	4937.19	<380‡		
5383.6 *6*	5384.83	30 *10*		
5843.5 *4*	5844.40	50 *15*		

Continued on next page (footnotes at end of table)

$^{208}_{82}Pb_{126}$

^{207}Pb(n,γ) E=thermal 98Be19,83Ma55 (continued)

γ(^{208}Pb) (continued)

Eγ	E(level)	Iγ†#	Comments
7367.96 *9*	7367.91	7.08×10^5 *12*	Iγ: 705000 (83Ma55).

† Relative intensity. Sum of the primary γ–ray yields are nomalized to equivalent to the ^{207}Pb thermal–neutron capture cross section of 0.70 b *1*.

‡ From 83Ma55.

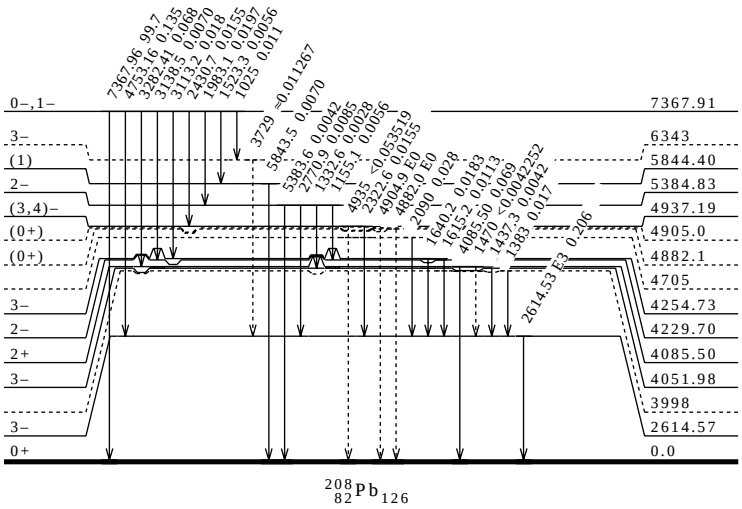
§ From observation of ce line with no corresponding photon transition.

For intensity per 100 neutron captures, multiply by 0.00014084.

@ Placement of transition in the level scheme is uncertain.

Level Scheme

Intensities: I(γ+ce) per 100 parent decays



$^{208}_{82}Pb_{126}$

$^{241}_{94}Pu_{147}$

^{240}Pu(n,γ) E=th: Primary γ's 98Wh01,75MaXY,75WeZA

Target Jπ=0+.
98Wh01: measured Eγ, Iγ by using a three–crystal pair spectrometer with Ge(Li)–NaI(Tl).

^{241}Pu Levels

E(level)†	Jπ	Comments
0.0		
161.350 *3*		
170.9395 *9*		
755.1730 *20*		
769.286 *4*		
784.1511 *25*		
800.475 *5*		
841.9562 *21*		
850.5380 *20*		
940.311 *10*		
942.582 *5*		
964.929 *7*		
995.633 *21*		
1009.439 *7*		
1090.022 *5*		
1223.839 *9*		
1253.789 *7*		
1268.9 *3*		
1296.693 *7*		
1316.2 *1*		
1351.6 *2*		
1357.682 *22*		
1362.8 *1*		
1472.1 *1*		
1478.2 *1*		
1501.3 *2*		
1505.2 *2*		
1513.9 *2*		
1523.7 *4*		
1530.9 *2*		
1611.1 *3*		
(5241.60 *19*)	1/2+	Jπ: from s–wave neutron capture. E(level): from evaluated s(n) (95Au04).

† From adopted levels, except as noted.

γ(^{241}Pu)

All data are from 98Wh01.
E not corrected for recoil.

Eγ	E(level)	Iγ†	Eγ	E(level)	Iγ†
3630.52 *3*	(5241.60)	2.4 *6*	4017.80 *6*	(5241.60)	3.19 *23*
3710.63 *20*	(5241.60)	1.9 *5*	4151.53 *2*	(5241.60)	6.6 *3*
3717.81 *5*	(5241.60)	4.67 *27*	4232.04 *5*	(5241.60)	1.65 *10*
3727.57 *10*	(5241.60)	1.49 *11*	4245.84 *4*	(5241.60)	2.39 *14*
3736.33 *19*	(5241.60)	0.74 *8*	4276.61 *2*	(5241.60)	6.1 *3*
3740.22 *21*	(5241.60)	0.64 *8*	4298.95 *6*	(5241.60)	2.50 *28*
3763.36 *13*	(5241.60)	0.58 *5*	4301.25 *5*	(5241.60)	2.7 *3*
3769.46 *12*	(5241.60)	0.58 *12*	4390.97 *3*	(5241.60)	5.42 *4*
3878.71 *8*	(5241.60)	2.12 *14*	4399.54 *10*	(5241.60)	2.12 *15*
3883.89 *4*	(5241.60)	13.0 *7*	4441.12 *9*	(5241.60)	0.53 *3*
3889.94 *20*	(5241.60)	1.9 *4*	4457.42 *3*	(5241.60)	2.34 *13*
3925.30 *10*	(5241.60)	0.90 *6*	4472.29 *4*	(5241.60)	3.7 *3*
3944.81 *4*	(5241.60)	12.7 *7*	4486.19 *19*	(5241.60)	0.48 *5*
3972.68 *5*	(5241.60)	0.54 *3*	5071.8 *10*	(5241.60)	0.58 *24*
3987.74 *2*	(5241.60)	6.4 *3*	5079.80 *2*	(5241.60)	2.76 *14*

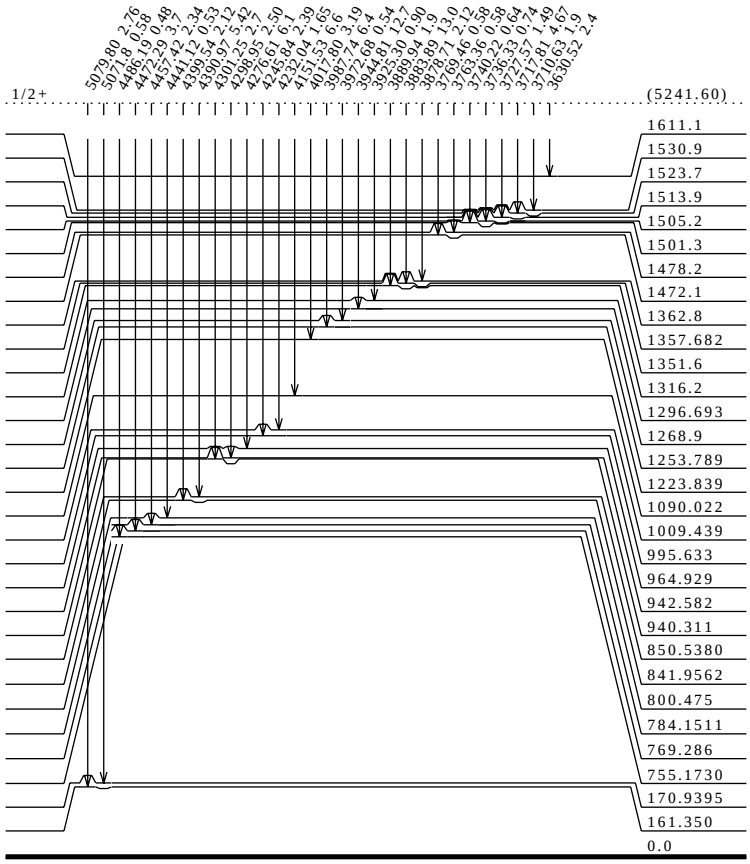
† Relative intensities measured by 98Wh01.

$^{241}_{94}Pu_{147}$

^{240}Pu(n,γ) E=th: Primary γ's 98Wh01,75MaXY,75WeZA (continued)

Level Scheme

Intensities: relative Iγ



$^{241}_{94}Pu_{147}$

^{240}Pu(n,γ) E=th: Secondary γ's 98Wh01,75MaXY

98Wh01: measured Eγ, Iγ by using GAMS1, GAMS2/3, and Ge(Li)–NaI(Tl); conversion electrons by using bill electron spectrometer.

^{241}Pu Levels

E(level)†	Jπ‡	$T_{1/2}$	Comments
0.0	5/2+	14.290 y *6*	%β^-≈100; %α=2.5×10^{-3}; %SF>2.0×10^{-14}.
41.9731 *8*	7/2+		
95.7827 *12*	9/2+		
161.350 *3*	11/2+		
161.6845 *9*	1/2+		
170.9395 *9*	3/2+		
175.0529 *14*	7/2+		
222.9864 *10*	5/2+		
231.938 *10*	9/2+		
235	13/2+		
244.8893 *13*	7/2+		

Continued on next page (footnotes at end of table)

^{240}Pu(n,γ) E=th: Secondary γ's 98Wh01,75MaXY (continued)

^{241}Pu Levels (continued)

E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡
301	11/2+	779.1490 *21*	3/2−	940.311 *10*	
337.1348 *22*	9/2+	784.1511 *25*	3/2+	942.582 *5*	
404.4549 *16*	9/2−	800.198 *5*	3/2+	964.929 *7*	1/2−
408.901 *3*	7/2−	800.475 *5*	5/2+	995.633 *21*	3/2−
444	11/2−	810.945 *4*	5/2−	1009.437 *7*	
518.8127 *25*	5/2−	831.586 *7*	5/2+	1090.022 *5*	
534.202 *13*		833.352 *5*	7/2−	1223.839 *9*	
561.424 *5*	7/2−	834.839 *17*		1253.789 *7*	
569	15/2−	841.9562 *21*	1/2−	1296.693 *7*	
614.837 *9*	9/2−	850.5380 *20*	3/2−	1357.682 *22*	
755.1730 *20*	1/2+	869.103 *6*	7/2+		
769.268 *4*	1/2−	897.503 *22*	5/2−		

† From Eγ by using least−squares fit to data.
‡ From adopted leveles.

γ(^{241}Pu)

Iγ normalization: from measured absolute γ−ray intensities obtained from the total intensity populating the ground state for 100 netron captures (98Wh01).
All data are from 98Wh01, except as nots.

Eγ	E(level)	Iγ†§	Mult.#	δ#	α	Comments
x35.788 *1*		0.100 *12*				
41.972 *1*	41.9731	0.146 *5*	M1+E2	0.2	109	α(L)=83.9; α(M)=21.4. α(L1)exp=53 *8*.
x51.325 *2*		0.049 *5*				
52.048 *2*	222.9864	0.054 *6*	M1+E2	0.47	99.6	α(L)=72.2; α(M)=19.2; α(N+..)=8.22. α(L2)exp=33 *6*.
53.807 *1*	95.7827	0.086 *11*	M1+E2	0.2	48.0	α(L)=35.2; α(M)=8.88; α(N+..)=3.87. α(L1)exp=17 *3*.
56.89@ *3*	231.938	0.33 *3*				
57.806 *2*	841.9562	0.066 *10*	[E1]		0.569	α(L)=0.422; α(M)=0.105; α(N+..)=0.0423.
61.303 *1*	222.9864	0.091 *3*	E2		166	α(L)=118; α(M)=33.0; α(N+..)=15.1. α(L2)exp=66 *10*.
x62.812 *2*		0.067 *5*				
65.535 *3*	161.350	0.164 *7*	M1		20.9	α(L)=15.6; α(M)=3.79; α(N+..)=1.50. α(L1)exp=14.0 *21*.
68.904 *2*	869.103	0.029 *5*	M1		18.0	α(L)=13.5; α(M)=3.28; α(N+..)=1.24. α(L1)exp=11.8 *25*.
71.390 *2*	850.5380	0.042 *3*	M1+E2	0.447	26.6	α(L)=19.6; α(M)=5.11; α(N+..)=1.90. α(K)exp=10.0 *25*.
x72.584 *3*		0.018 *3*				
73.950 *1*	244.8893	0.056 *3*	E2		66.6	α(L)=48.2; α(M)=13.5; α(N+..)=4.89. α(L2)exp=21 *3*.
x75.331 *2*		0.034 *6*				
79.262 *7*	175.0529	0.007 *2*	M1+E2			α(L1)exp=5.8 *10*.
86.783 *1*	841.9562	0.134 *6*	[E1]		0.194	α(L)=0.146; α(M)=0.0359; α(N+..)=0.0125.
x86.965 *4*		0.023 *40*				
95.365 *1*	850.5380	0.077 *4*	[E1]		0.152	α(L)=0.114; α(M)=0.0280; α(N+..)=0.00997.
95.786 *3*	95.7827	0.013 *2*	E2		19.7	α(L)=14.2; α(M)=4.00; α(N+..)=1.50. α(L2)exp=7.6 *12*.
114.148 *2*	337.1348	0.097 *5*	E2		8.76	α(L)=6.32; α(M)=1.76; α(N+..)=0.688. α(L2)exp=3.1 *5*.
x119.734 *5*		0.032 *4*				
126.09@ *4*	301	0.07 *2*				
133.081 *2*	175.0529	1.11 *3*	M1+E2	0.245	12.1	α(K)=9.36; α(L)=2.06; α(M)=0.503; α(N+..)=0.191. α(L1)exp=1.9 *3*.
136.127@ *20*	231.938	0.029 *5*	M1+E2		8 *4*	α(K)=5 *5*; α(L)=2.3 *12*; α(M)=0.6 *3*; α(N+..)=0.24 *7*. α(L1)exp=1.22 *21*.

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$^{241}_{94}Pu_{147}$

^{240}Pu(n,γ) E=th: Secondary γ's 98Wh01,75MaXY (continued)

γ(^{241}Pu) (continued)

Eγ	E(level)	Iγ†§	Mult.#	δ#	α	Comments
139.87@ *4*	301	0.09 *1*				
149.107 *6*	244.8893	0.035 *5*	M1		9.08	α(K)=7.16; α(L)=1.44; α(M)=0.349; α(N+..)=0.131. α(K)exp=6.5 *13*.
161.685 *1*	161.6845	20.57 *20*	E2		2.02	α(K)=0.193; α(L)=1.31; α(M)=0.370; α(N+..)=0.141. α(L2)exp=0.71 *11*.
170.940 *1*	170.9395	0.378 *7*	M1		6.17	α(K)=4.86; α(L)=0.977; α(M)=0.243; α(N+..)=0.0900. α(K)exp=4.9 *7*.
175.051 *2*	175.0529	0.362 *4*	M1+E2	0.265	5.49	α(K)=4.26; α(L)=0.914; α(M)=0.231; α(N+..)=0.0853. α(K)exp=3.7 *6*.
181.017 *2*	222.9864	0.250 *7*	M1+E2			α(K)exp=3.8 *6* 0.249.
185.132 *22*	940.311	0.004 *2*	E1		0.124	α(K)=0.0960; α(L)=0.0209; α(M)=0.00526; α(N+..)=0.00186. α(K)exp=0.08 *3*.
187.414 *6*	942.582	0.042 *9*	M1+E2			α(K)exp=1.9 *5*.
189.965 *10*	231.938	0.020 *2*	M1+E2	0.557	3.75	α(K)=2.79; α(L)=0.707; α(M)=0.187; α(N+..)=0.0673. α(K)exp=2.9 *5*.
195.669 *10*	964.929	0.038 *5*	M1		4.22	α(K)=3.32; α(L)=0.666; α(M)=0.171; α(N+..)=0.0608. α(K)exp=3.4 *6*.
202.910 *7*	244.8893	0.039 *7*	M1+E2	0.58	3.06	α(K)=2.28; α(L)=0.574; α(M)=0.154; α(N+..)=0.0535. α(L1)exp=0.34 *7*.
205.404@ *20*	301	0.08 *1*				
209.745 *9*	964.929	0.037 *9*	E1		0.0932	α(K)=0.0725; α(L)=0.0154; α(M)=0.00395; α(N+..)=0.00133. α(K)exp=0.40 *16*. Mult.: α(K)exp can not determinde E1 or E2; E1 from Jπ values.
x211.666 *11*		0.063 *18*				
222.971 *3*	222.9864	0.126 *5*	M1+E2	0.548	2.39	α(K)=1.80; α(L)=0.431; α(M)=0.116; α(N+..)=0.0377. α(K)exp=1.9 *4*.
229.403 *4*	404.4549	0.0956	E2		0.536	α(K)=0.124; α(L)=0.294; α(M)=0.0899; α(N+..)=0.0279. α(K)exp=0.130 *22*.
231.96@ *3*	231.938	0.11 *2*				
233.844 *3*	408.901	0.121 *4*	[E1]		0.0726	α(K)=0.0568; α(L)=0.0118; α(M)=0.00304; α(N+..)=0.000965.
239.493 *8*	1090.022	0.055 *5*	M1		2.39	α(K)=1.89; α(L)=0.377; α(M)=0.0984; α(N+..)=0.0304. α(K)exp=2.0 *3*.
240.167 *12*	1009.437	0.040 *5*	M1		2.37	α(K)=1.87; α(L)=0.374; α(M)=0.0976; α(N+..)=0.0301. α(K)exp=2.1 *4*.
x240.986 *7*		0.054 *4*	M1+E2			α(K)exp=0.23 *4*.
241.381 *17*	337.1348	0.052 *6*	M1+E2			α(K)exp=0.53 *10*.
x247.129 *23*		0.063 *8*	M1+E2			α(K)exp=0.20 *4*.
x247.591 *4*		0.099 *9*				
248.066 *6*	1090.022	0.076 *6*	M1+E2			α(K)exp=1.50 *25*.
x277.992 *9*		0.062 *16*				
x278.420 *20*		0.053 *5*				
308.674 *2*	404.4549	0.503 *8*	E1		0.0390	α(K)=0.0310; α(L)=0.00615; α(M)=0.00141; α(N+..)=0.000419. α(K)exp=0.033 *5*.
313.123 *4*	408.901	0.110 *7*	[E1]		0.0378	α(K)=0.0301; α(L)=0.00595; α(M)=0.00135; α(N+..)=0.000403.

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^{240}Pu(n,γ) E=th: Secondary γ's 98Wh01,75MaXY (continued)

γ(^{241}Pu) (continued)

Eγ	E(level)	Iγ†§	Mult.#	α	Comments
320.746 *7*	1090.022	0.056 *4*	M1	1.05	α(K)=0.839; α(L)=0.167; α(M)=0.0365; α(N+..)=0.0106. α(K)exp=0.84 *14*.
359.149 *13*	534.202	0.045 *11*	E2	0.121	α(K)=0.0567; α(L)=0.0508; α(M)=0.0105; α(N+..)=0.00324. α(K)exp=0.060 *17*.
362.479 *2*	404.4549	1.271 *18*	E1	0.0276	α(K)=0.0221; α(L)=0.00428; α(M)=0.000873; α(N+..)=0.000279. α(K)exp=0.024 *4*.
367.101 *76*	408.901	0.370 *13*	[E1]	0.0268	α(K)=0.0216; α(L)=0.00416; α(M)=0.000843; α(N+..)=0.000272.
x382.164 *15*		0.047 *5*			
x388.16 *5*		0.19 *1*			
x402.540 *30*		0.101 *23*	E1	0.0222	α(K)=0.0179; α(L)=0.00340; α(M)=0.000672; α(N+..)=2.28×10^{-4}. α(K)exp=0.017 *5*.
403.260 *14*	1253.789	0.061 *9*	M1+E2		α(K)exp=0.090 *18*.
x404.707 *10*		0.056 *8*			
x405.899 *50*		0.056 *12*	E2	0.0869	α(K)=0.0455; α(L)=0.0329; α(M)=0.00638; α(N+..)=0.00218. α(K)exp=0.050 *14*.
x408.699 *31*		0.048 *7*	M1+E2		α(K)exp=0.30 *9*.
x429.139 *22*		0.040 *6*	M1+E2		α(K)exp=0.090 *20*.
x439.382 *20*		0.066 *7*	M1+E2		α(K)exp=0.063 *13*.
x439.750 *6*		0.117 *7*	E1	0.0186	α(K)=0.0150; α(L)=0.00282; α(M)=0.000572; α(N+..)=2.03×10^{-4}. α(K)exp=0.025 *5*.
444.687 *9*	1223.839	0.126 *18*	E1	0.0182	α(K)=0.0146; α(L)=0.00275; α(M)=0.000563; α(N+..)=2.00×10^{-4}. α(K)exp=0.013 *3*.
x464.775 *57*		0.063 *13*	E1	0.0167	α(K)=0.0134; α(L)=0.00251; α(M)=0.000536; α(N+..)=1.93×10^{-4}. α(K)exp=0.020 *6*.
465.646 *5*	561.424	0.287 *11*	E1	0.0166	α(K)=0.0134; α(L)=0.00250; α(M)=0.000535; α(N+..)=1.93×10^{-4}. α(K)exp=0.019 *3*.
x468.233 *50*		0.071 *15*	M1+E2		α(K)exp=0.060 *15*.
476.840 *3*	518.8127	1.044 *46*	E1	0.0159	α(K)=0.0128; α(L)=0.00238; α(M)=0.000526; α(N+..)=1.91×10^{-4}. α(K)exp=0.020 *3*. Mult.: α(K)exp can not determinde E1 or E2; E1 from Jπ values.
x483.662 *6*		0.528 *67*			
484.521 *7*	1253.789	0.422 *20*	E1	0.0154	α(K)=0.0124; α(L)=0.00230; α(M)=0.000522; α(N+..)=1.90×10^{-4}. α(K)exp=0.0130 *21*.
490.624 *9*	1009.437	0.184 *14*	M1+E2		α(K)exp=0.24 *4*.
x490.927 *8*		0.195 *16*			
x491.423 *10*		0.409 *23*	E1,E2		α(K)exp=0.026 *4*.
496.217& *4*	833.352	0.489& *9*	E1	0.0147	α(K)=0.0118; α(L)=0.00219; α(M)=0.000519; α(N+..)=1.89×10^{-4}.
	1296.693	0.489& *9*	E1	0.0147	α(K)=0.0118; α(L)=0.00219; α(M)=0.000519; α(N+..)=1.89×10^{-4}.
x501.447 *28*		0.121 *14*	E1	0.0137	α(K)=0.0116; α(L)=0.00214. α(K)exp=0.012 *3*.
x513.504 *9*		0.177 *17*			
515.701 *32*	1357.682	0.101 *20*	M1+E2		α(K)exp=0.13 *4*.
x515.952 *31*		0.103 *19*	M1+E2		α(K)exp=0.063 *13*.
518.810 *4*	518.8127	3.213 *58*	E1	0.0128	α(K)=0.0108; α(L)=0.00199. α(K)exp=0.0120 *18*.
519.433 *8*	561.424	0.528 *36*	E1	0.0128	α(K)=0.0108; α(L)=0.00199. α(K)exp=0.040 *21*. Mult.: α(K)exp can not determinde E1 or E2; E1 from Jπ values.

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^{240}Pu(n,γ) E=th: Secondary γ's 98Wh01,75MaXY (continued)

γ(^{241}Pu) (continued)

Eγ	E(level)	Iγ†§	Mult.#	α	Comments
x520.505 *23*		0.094 *13*			
x521.106 *27*		0.073 *13*	M1+E2		α(K)exp=0.054 *13*.
x527.258 *25*		0.064 *18*	M1+E2		α(K)exp=0.080 *26*.
x528.199 *44*		0.079 *9*	E0+M1	0.259	α(K)=0.217; α(L)=0.0427. α(K)exp=0.35 *7*.
x541.594 *6*		0.435 *34*	E1	0.0118	α(K)=0.00998; α(L)=0.00182. α(K)exp=0.0130 *22*.
x546.479 *25*		0.081 *10*	E1	0.0116	α(K)=0.00981; α(L)=0.00179. α(K)exp=0.014 *4*.
x549.115 *9*		0.244 *11*			
556.164 *3*	779.1490	2.948 *47*	E1	0.0112	α(K)=0.00949; α(L)=0.00173. α(K)exp=0.0099 *15*.
561.168 *4*	784.1511	2.248 *51*	M1+E2		α(K)exp=0.160 *24*.
561.437 *20*	561.424	0.365 *19*	M1+E2		α(K)exp=0.038 *8*.
566.057 *4*	810.945	1.168 *44*	E1	0.0108	α(K)=0.00918; α(L)=0.00167. α(K)exp=0.0090 *13*.
572.863 *9*	614.837	0.134 *12*	E1	0.0106	α(K)=0.00897; α(L)=0.00163. α(K)exp=0.022 *6*.
x575.084 *20*		0.200 *18*	M1+E2		α(K)exp=0.068 *12*.
x576.681 *84*		0.045 *12*	M1	0.205	α(K)=0.171; α(L)=0.0335. α(K)exp=0.19 *6*.
x577.561 *4*		1.138 *33*	M1+E2		α(K)exp=0.130 *21*.
x584.431 *12*		0.191 *25*			
586.703 *16*	831.586	0.097 *10*	M1	0.195	α(K)=0.163; α(L)=0.0319. α(K)exp=0.18 *3*.
587.953 *24*	810.945	0.099 *10*			
593.488 *4*	755.1730	2.695 *37*	M1+E2		α(K)exp=0.140 *21*.
598.328 *6*	769.268	2.512 *39*	E1	0.00976	α(K)=0.00827; α(L)=0.00149. α(K)exp=0.0084 *12*.
x598.830 *24*		0.133 *15*	M1+E2		α(K)exp=0.080 *15*.
602.530 *30*	1357.682	0.225 *45*	M1+E2		α(K)exp=0.13 *3*.
x605.546 *7*		0.518 *11*	E1	0.00954	α(K)=0.00809; α(L)=0.00145. α(K)exp=0.0130 *22*.
607.580 *5*	769.268	1.570 *38*	E1	0.00948	α(K)=0.00804; α(L)=0.00144.
608.229 *9*	779.1490	0.437 *16*	[E1]	0.00946	α(K)=0.00802; α(L)=0.00144.
608.608 *10*	831.586	0.379 *12*	M1+E2		α(K)exp=0.120 *19*.
617.457 *5*	779.1490	2.171 *33*	E1	0.00920	α(K)=0.00780; α(L)=0.00140. α(K)exp=0.0100 *25*.
x618.950 *82*		0.051 *13*			
622.464 *14*	784.1511	0.190 *12*	M1+E2		α(K)exp=0.119 *19*.
x624.015 *39*		0.079 *10*	M1+E2		α(K)exp=0.106 *20*.
627.552 *5*	850.5380	1.335 *25*	E1	0.00892	α(K)=0.00757; α(L)=0.00135. α(K)exp=0.0110 *17*.
629.539 *6*	800.475	1.492 *30*	M1+E2		α(K)exp=0.107 *16*.
x634.193 *23*		0.172 *8*	M1+E2		α(K)exp=0.098 *15*.
638.757 *5*	800.198	1.079 *25*	M1+E2		α(K)exp=0.097 *15*.
640.001 *6*	810.945	1.103 *37*	E1	0.00860	α(K)=0.00730; α(L)=0.00130. α(K)exp=0.0080 *13*.
x642.25 *3*		0.067 *23*	M1+E2		α(K)exp=0.11 *4*.
x652.38 *8*		0.111 *11*	E2	0.0268	α(K)=0.0196; α(L)=0.00725. α(K)exp=0.019 *4*.
x656.035 *23*		0.141 *13*	M1+E2		α(K)exp=0.040 *7*.
660.625 *13*	831.586	0.593 *28*	M1+E2		α(K)exp=0.096 *15*.
x663.374 *31*		0.077 *71*	M1+E2		α(K)exp=0.030 *3*.
671.007 *9*	841.9562	0.303 *14*	E1	0.00789	α(K)=0.00670; α(L)=0.00119. α(K)exp=0.0080 *15*.
680.274 *16*	841.9562	0.376 *10*	E1	0.00769	α(K)=0.00653; α(L)=0.00116. α(K)exp=0.011 *4*.
688.851 *14*	850.5380	0.678 *24*	E1	0.00752	α(K)=0.00639; α(L)=0.00113. α(K)exp=0.0060 *10*.
x698.661 *24*		0.143 *8*	E2	0.0234	α(K)=0.0173; α(L)=0.00600. α(K)exp=0.025 *4*.

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^{240}Pu(n,γ) E=th: Secondary γ's 98Wh01,75MaXY (continued)

γ(^{241}Pu) (continued)

Eγ	E(level)	Iγ†§	Mult.#	α	Comments
704.70 *14*	800.475	0.093 *25*	E2	0.0230	α(K)=0.0171; α(L)=0.00586. α(K)exp=0.016 *5*.
708.01 *6*	869.103	0.138 *23*	M1+E2		α(K)exp=0.050 *11*.
726.562 *22*	897.503	0.180 *8*	E2	0.0216	α(K)=0.0162; α(L)=0.00541. α(K)exp=0.017 *3*.
x737.922 *20*		0.219 *14*	M1+E2		α(K)exp=0.070 *13*.
x742.250 *9*		1.088 *42*	M1+E2		α(K)exp=0.049 *8*.
x749.67 *5*		0.240 *25*	E2	0.0203	α(K)=0.0153; α(L)=0.00499. α(K)exp=0.016 *4*.
x750.19 *4*		0.313 *33*	M1+E2		α(K)exp=0.053 *10*.
x751.16 *6*		0.125 *22*	E2	0.0203	α(K)=0.0153; α(L)=0.00497. α(K)exp=0.022 *5*.
x751.92 *6*		0.126 *22*	M1+E2		α(K)exp=0.055 *12*.
755.154 *14*	755.1730	0.580 *45*	E2	0.0200	α(K)=0.0151; α(L)=0.00490. α(K)exp=0.018 *3*.
758.494& *15*	800.198	0.377& *23*	E2	0.0199	α(K)=0.0150; α(L)=0.00485. α(K)exp=0.0080 *16*.
	800.475	0.377& *23*	E2	0.0199	α(K)=0.0150; α(L)=0.00485. α(K)exp=0.0080 *16*.
x760.13 *8*		0.084 *21*	E0+M1	0.0985	α(K)=0.0824; α(L)=0.0161. α(K)exp=0.11 *3*.
765.23 *3*	940.311	0.212 *16*	E2	0.0195	α(K)=0.0148; α(L)=0.00475. α(K)exp=0.0090 *19*.
771.64 *4*	942.582	0.162 *83*	M1+E2		α(K)exp=0.035 *19*.
772.645 *21*	995.633	0.488 *45*	E1	0.00612	α(K)=0.00520; α(L)=0.000921. α(K)exp=0.0030 *6*.
773.59 *4*	869.103	0.197 *21*	M1+E2		α(K)exp=0.040 *8*.
777.89 *5*	1296.693	0.132 *13*	M1+E2		α(K)exp=0.050 *9*.
780.889 *8*	942.582	1.904 *32*	M1+E2		α(K)exp=0.061 *9*.
784.153 *16*	784.1511	0.518 *16*	E2	0.0186	α(K)=0.0142; α(L)=0.00447. α(K)exp=0.017 *3*.
786.454 *16*	1009.437	0.49 *3*			
789.63 *4*	831.586	0.218 *23*	M1+E2		α(K)exp=0.059 *11*.
793.95 *5*	964.929	1.082 *83*			
x794.27 *5*		1.126 *81*	M1+E2		α(K)exp=0.049 *8*.
800.461& *11*	800.198	0.742& *25*	M1+E2		α(K)exp=0.044 *7*.
	800.475	0.742& *25*	M1+E2		α(K)exp=0.044 *7*.
803.265 *19*	964.929	0.583 *16*	E1	0.00571	α(K)=0.00485; α(L)=0.000861. α(K)exp=0.0039 *6*.
x811.982 *19*		0.480 *23*	M1+E2		α(K)exp=0.035 *6*.
833.904 *13*	995.633	0.807 *28*	E1	0.00535	α(K)=0.00454; α(L)=0.000809. α(K)exp=0.0050 *9*.
834.837 *17*	834.839	0.512 *26*	M1+E2		α(K)exp=0.040 *6*.
x838.646 *22*		0.449 *24*	E2	0.0164	α(K)=0.0126; α(L)=0.00380. α(K)exp=0.0150 *26*.
x844.200 *20*		0.306 *48*	M1+E2		α(K)exp=0.028 *6*.
x845.07 *5*		0.215 *23*	E1	0.00522	α(K)=0.00443; α(L)=0.000789. α(K)exp=0.0040 *11*.
x848.12 *6*		0.172 *22*			
x853.31 *6*		0.106 *12*	M1+E2		α(K)exp=0.033 *7*.
x876.58 *10*		0.282 *94*	E1,E2		α(K)exp=0.008 *3*.
x892.934 *18*		0.419 *21*	M1	0.0643	α(K)=0.0535; α(L)=0.0108. α(K)exp=0.058 *9*.
x931.667 *20*		0.741 *38*	M1+E2		α(K)exp=0.028 *4*.
940.315 *12*	940.311	2.211 *84*	M1+E2		α(K)exp=0.027.
x941.12 *3*		1.228 *53*	E2	0.0131	α(K)=0.0103; α(L)=0.00286. α(K)exp=0.0090 *14*.
942.58 *4*	942.582	0.492 *55*	E1	0.00429	α(K)=0.00364; α(L)=0.000646. α(K)exp=0.0040 *8*.
x953.20 *4*		0.728 *46*	E2	0.0128	α(K)=0.01004; α(L)=0.00276. α(K)exp=0.0100 *21*.
x958.30 *11*		0.169 *33*	E2	0.0127	α(K)=0.00995; α(L)=0.00272. α(K)exp=0.0080 *24*.

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^{240}Pu(n,γ) E=th: Secondary γ's 98Wh01,75MaXY (continued)

γ(^{241}Pu) (continued)

Eγ	E(level)	Iγ†§	Mult.#	α	Comments
x965.07 *12*		0.147 *36*			
x967.46 *13*		0.191 *34*			
x973.70 *10*		0.55 *11*	M1+E2		α(K)exp=0.013 *3*.
x999.37 *15*		0.175 *24*	E0+M1	0.0473	α(K)=0.0395; α(L)=0.00775. α(K)exp=0.58 *12*.
x1000.325‡ *9*		0.338 *31*	E2	0.0117	α(K)=0.00924; α(L)=0.00241. α(K)exp=0.0100 *18*.
x1000.621‡ *13*		0.47 *15*	E1	0.00385	α(K)=0.00328; α(L)=0.000571. α(K)exp=0.0040 *14*.
x1000.695‡ *12*		0.57 *15*			
x1000.930 *10*		0.31 *11*			
x1002.039‡ *6*		0.281 *63*	E1,E2		α(K)exp=0.0070 *19*.
x1002.295‡ *7*		0.280 *35*	E2	0.0116	α(K)=0.00921; α(L)=0.00240. α(K)exp=0.0100 *21*.
x1002.598 *7*		0.288 *36*	E1	0.00384	α(K)=0.00327; α(L)=0.000569. α(K)exp=0.0040 *12*.
x1003.475‡ *18*		0.263 *32*	E1	0.00383	α(K)=0.00327; α(L)=0.000568. α(K)exp=0.2163 *32*.
x1003.726‡ *10*		0.268 *42*			
x1003.989‡ *13*		0.191 *40*	M1,E2		α(K)exp=0,031 *8*.
x1004.500‡ *6*		0.362 *66*	E1,E2		α(K)exp=0.0060 *15*.
1052.927 *28*	1223.839	0.824 *38*	E1	0.00352	α(K)=0.00301; α(L)=0.000509. α(K)exp=0.0026 *4*.
x1060.64 *15*		0.206 *36*	E1,E2	0.007 *4*	α(K)=0.006 *3*; α(L)=0.0013 *5*. α(K)exp=0.0060 *15*.
x1062.31 *4*		0.81 *11*	E1	0.00347	α(K)=0.00297; α(L)=0.000498. α(K)exp=0.0031 *6*.
x1064.28 *11*		0.211 *33*	M1+E2		α(K)exp=0.022 *5*.
x1073.00 *10*		0.376 *50*	E1,E2	0.007 *3*	α(K)=0.006 *3*; α(L)=0.0012 *5*. α(K)exp=0.0060 *14*.
x1074.44 *11*		0.455 *50*			
x1078.15 *7*		0.325 *67*			
1082.80 *4*	1253.789	0.623 *34*	E1	0.00336	α(K)=0.00288; α(L)=0.000476. α(K)exp=0.0025 *4*.
x1089.94 *4*		1.061 *82*	E1	0.00332	α(K)=0.00285; α(L)=0.000469. α(K)exp=0.0025 *4*.
1092.08 *5*	1253.789	0.885 *54*	E1	0.00331	α(K)=0.00284; α(L)=0.000467. α(K)exp=0.0030 *5*.
x1134.445 *76*		0.527 *35*	E1	0.00311	α(K)=0.00268; α(L)=0.000427. α(K)exp=0.0029 *8*.
x1146.493 *78*		0.444 *34*	E1,E2	0.006 *3*	α(K)=0.0050 *24*; α(L)=0.0010 *4*. α(K)exp=0.0056 *10*.
x1155.258 *95*		0.388 *31*	E1,E2	0.006 *3*	α(K)=0.0050 *24*; α(L)=0.0010 *4*. α(K)exp=0.0039 *8*.
x1170.019 *56*		0.632 *37*	M1+E2		α(K)exp=0.0105 *16*.
x1174.00 *15*		0.232 *42*			
x1177.835 *98*		0.395 *33*			
x1180.637 *71*		0.598 *60*	M1+E2		α(K)exp=0.0097 *17*.
x1196.31 *20*		0.600 *52*	E1,E2	0.006 *3*	α(K)=0.0047 *22*; α(L)=0.0009 *4*. α(K)exp=0.0037 *7*.
x1200.87 *11*		0.419 *48*	M1+E2		α(K)exp=0.0120 *23*.
x1203.343 *77*		0.539 *48*	E1	0.00282	α(K)=0.00245; α(L)=0.000373. α(K)exp=0.0035 *6*.
x1206.573 *51*		1.342 *69*	M1	0.0289	α(K)=0.0248; α(L)=0.00401. α(K)exp=0.0103 *16*.
x1214.65 *12*		0.478 *35*	E1,E2	0.005 *3*	α(K)=0.0046 *22*; α(L)=0.0009 *4*. α(K)exp=0.0039 *7*.
x1228.02 *19*		0.357 *67*	E1,E2	0.005 *3*	α(K)=0.0045 *21*; α(L)=0.0008 *4*. α(K)exp=0.0039 *10*.
x1235.282 *80*		0.573 *51*	M1+E2		α(K)exp=0.0100 *19*.
x1255.32 *11*		0.637 *42*	M1+E2		α(K)exp=0.020 *3*.
x1266.14 *11*		0.604 *70*	E1	0.00259	α(K)=0.00225; α(L)=0.000337. α(K)exp=0.0022 *4*.

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$^{241}_{94}Pu_{147}$

^{240}Pu(n,γ) E=th: Secondary γ's 98Wh01,75MaXY (continued)

γ(^{241}Pu) (continued)

Eγ	Iγ†§	Mult.#	α	Comments
x1267.951 *95*	0.85 *11*	E1	0.00258	α(K)=0.00225; α(L)=0.000336. α(K)exp=0.0031 *6*.
x1276.7 *12*	0.57 *10*			
x1301.0 *14*	0.489 *90*			
x1303.46 *34*	0.303 *53*	E1,E2	0.0048 *23*	α(K)=0.0040 *19*; α(L)=0.0007 *3*. α(K)exp=0.0032 *9*.
x1315.594 *54*	0.956 *43*	E1,E2	0.0047 *23*	α(K)=0.0040 *19*; α(L)=0.0007 *3*. α(K)exp=0.0040 *6*.
x1332.30 *15*	0.852 *82*	E1	0.00236	α(K)=0.00205; α(L)=0.000309. α(K)exp=0.0017 *3*.
x1352.64 *10*	0.63 *14*	M1+E2		α(K)exp=0.0076 *20*.
x1378.52 *22*	0.265 *36*	M1+E2		α(K)exp=0.0060 *1*.
x1393.494 *98*	0.774 *45*	M1+E2		α(K)exp=0.0140 *22*.
x1423.89 *20*	0.59 *11*			
x1491.35 *11*	0.80 *13*	M1+E2	0.010 *5*	α(K)=0.009 *4*; α(L)=0.0018 *8*. α(K)exp=0.0090 *19*.
x1502.84 *28*	0.483 *95*	E1,E2	0.0030 *14*	α(K)=0.0030 *14*. α(K)exp=0.0028 *7*.
x1512.38 *13*	0.704 *66*	E1	0.00157	α(K)=0.00157. α(K)exp=0.0014 *3*.

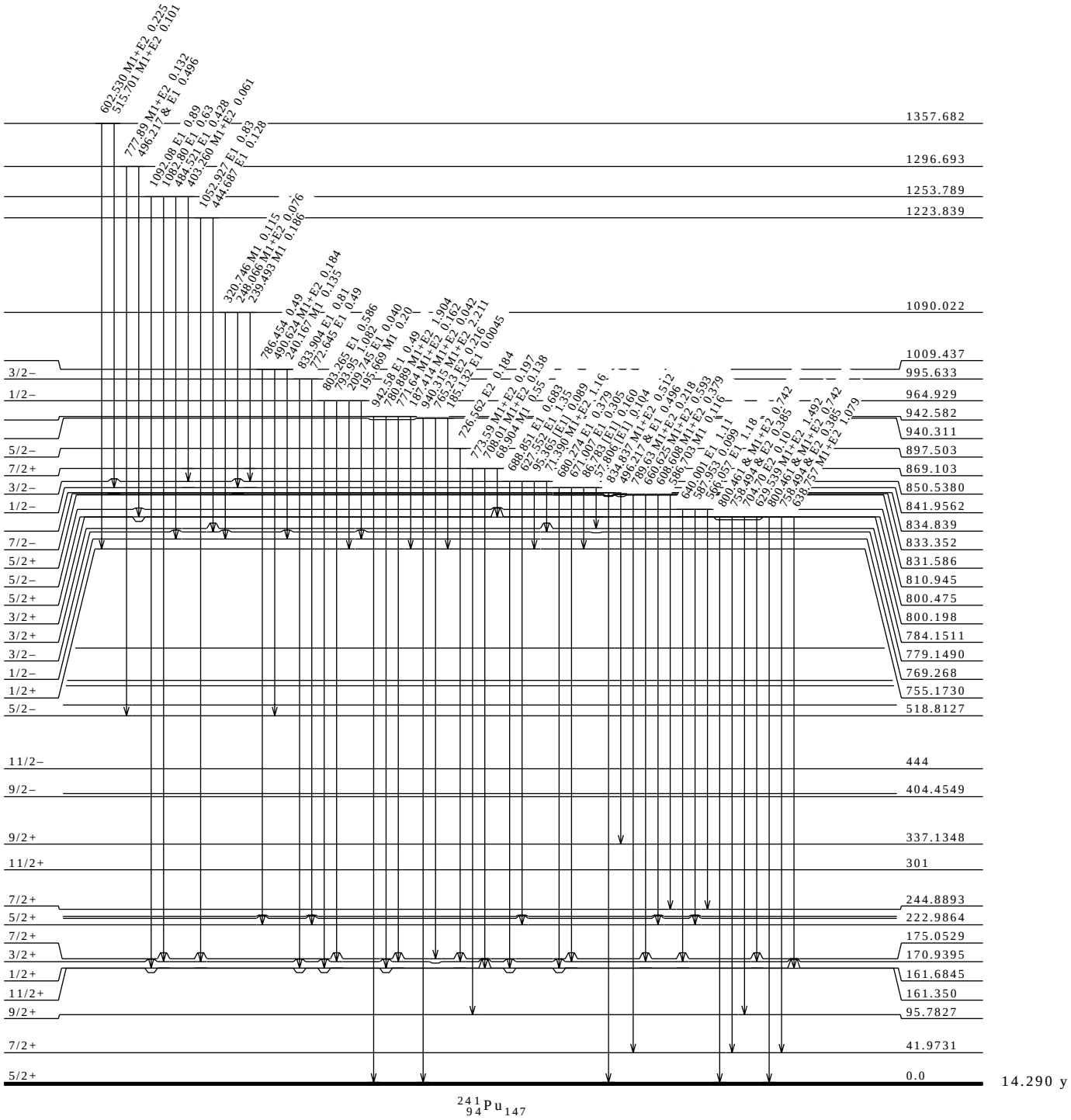
† For intensity per 100 neutron captures, multiply by 1.0.
‡ May be wrong between 100.325 keV and 104.500 keV levels in page 1117 of table 1 of 98Wh01.
§ Values are absolute γ–ray intensity per 100 neutron captures given by 98Wh01.
# From conversion electron measurement.
@ Placement of transition in the level scheme is uncertain.
& Multiply placed; undivided intensity given.
x γ ray not placed in level scheme.

$^{241}_{94}Pu_{147}$

^{240}Pu(n,γ) E=th: Secondary γ's 98Wh01,75MaXY (continued)

Level Scheme

Intensities: I(γ+ce) per 100 parent decays
& Multiply placed; undivided intensity given

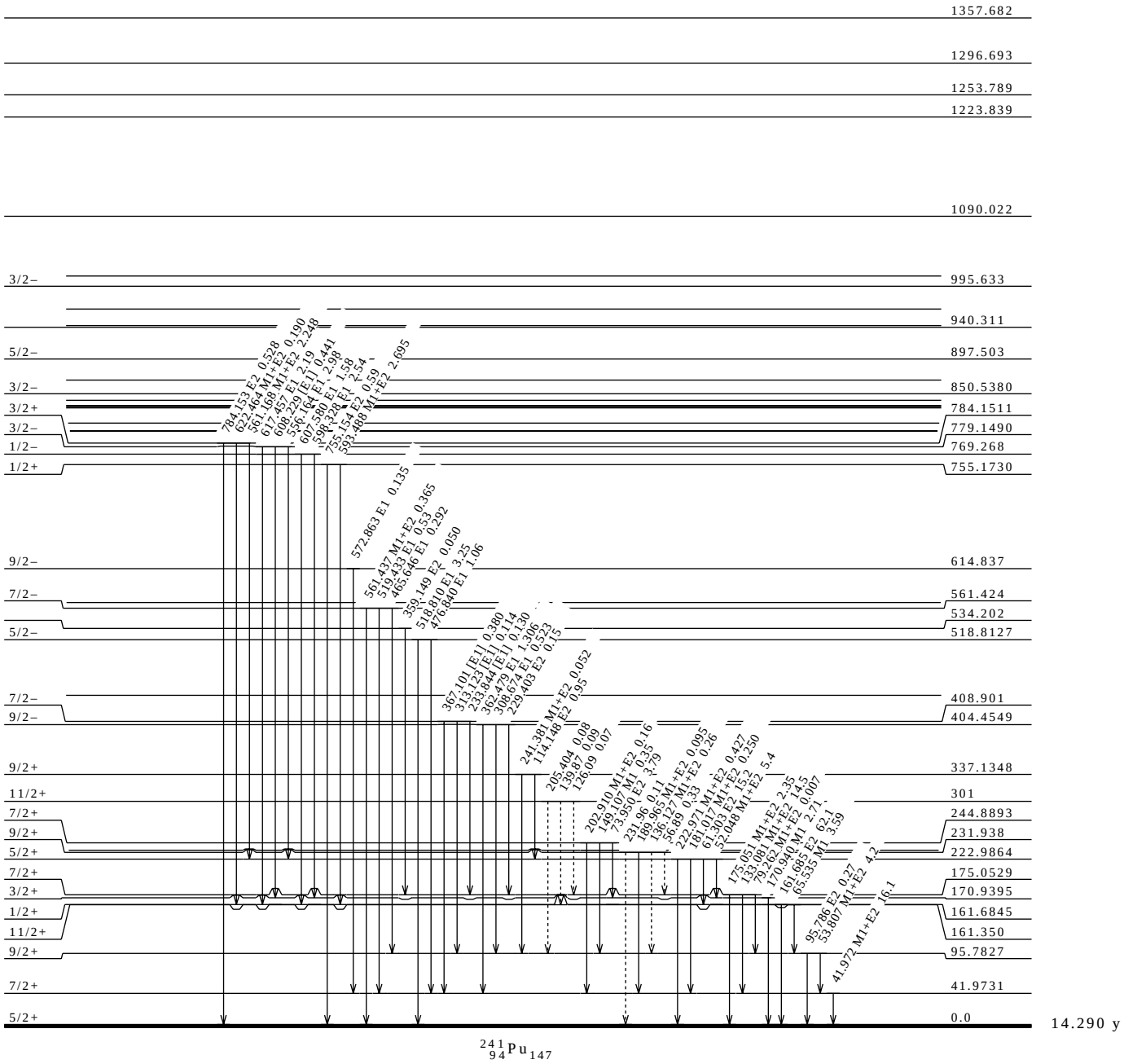


$^{241}_{94}Pu_{147}$

^{240}Pu(n,γ) E=th: Secondary γ's 98Wh01,75MaXY (continued)

Level Scheme (continued)

Intensities: I(γ+ce) per 100 parent decays
& Multiply placed; undivided intensity given



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