^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 111, 1807 (2010)	15-Jun-2010

This dataset includes lifetime measurements made using pile neutrons (1998Le03, 2000Ge14) and thermal-neutron capture two-photon cascade data from 2000Gr34. see 2006MuZX for evaluation of resonance properties deduced from (n,γ) E=res.

$J^\pi(^{167}Er)=7/2^+$.

σ_n=649 *8* (2006MuZX). other: 568 *9* (1997Kn01).

Abundance(^{167}Er): 22.93%.

Others: 1962Iv02, 1964Ka30, 1965Gr32, 1966Bo29, 1966Ko03, 1969FaZX, 1970Mi09, 1970Pr11, 1973PrZI, 1974Iv02, 1976SiZQ, 1979Br25, 1981Ge02, 1984Pr03, 1986Va30, 1987Ge02, 1991Da12, 1991DaZT, 1992BoZF, 2000Ge14, 2000Gr34, 2007ChZX.

The level scheme is that of 1991Da12 and 1991DaZT after modifications based on information from 1994Ju02 and 1996Gi09.

1980Sc15,1987Ge02: measured E(ce), Ice using high resolution and sensitivity BILL spectrometer; deduced δ from sub-shell ratios.

1981Da05, 1991Da12, 1991DaZT: Target: Er oxide enriched to 91.54% in ^{167}Er; measured Eγ, Iγ, E(ce), Ice, prompt and delayed $\gamma\gamma$ coin (cryst, mag spect, Ge(Li), coaxial intrinsic germanium 3-cryst pair spectrometer).

1992BoZF: time-differential $\gamma\gamma$ coin measurements to investigate the 1094-keV isomeric level; deduced new γ placements and levels.

1994Ju02: 91.54% ^{167}Er target; 3 Ge detectors At 55 °, 125° and −90°; measured Eγ, Iγ, $\gamma\gamma$ coin. intensities calibrated using ^{35}Cl(n,γ) standard.

1996Gi09: 91.54% ^{167}Er target; TESSA detector array (16 Compton-suppressed Ge detectors); measured Eγ, Iγ, $\gamma\gamma$ coin.

2000Gr34: GeLi detectors; measured Eγ, I($\gamma\gamma$ coin) In spectra gated by sum peak resulting from two-photon cascade to one of various known low-energy levels; deduced energies of intermediate levels.

2007ChZX: evaluation of (n,γ) E=thermal data; includes new Eγ and elemental cross section measurements referred to below As Budapest data; Ge(Li) detector.

For calculation of possible K-dependence of γ transition rates from neutron capture states see, e.g., 1993Re06 and references therein.

^{168}Er Levels

E(level)[†]	J$^\pi$[‡]	T$_{1/2}$[#]	Comments
0.0[g]	0$^+$		
79.8039[g] *10*	2$^+$		
264.0886[g] *14*	4$^+$		
548.7466[g] *20*	6$^+$		
821.1679[h] *16*	2$^+$		
895.7941[h] *17*	3$^+$		
928.3026[g] *25*	8$^+$		
994.7469[h] *16*	4$^+$		
1094.0379[i] *17*	4$^-$	109.0 ns *7*	T$_{1/2}$: adopted value. 1974Iv02 report 89 ns.
1117.5699[h] *17*	5$^+$		
1193.0249[i] *18*	5$^-$	0.70 ns *7*	T$_{1/2}$: $\gamma\gamma$(t) (1991Pe12). Other value: 0.6 ns *1* (1988Pe06).
1217.167[j] *14*	0$^+$		
1263.9042[h] *19*	6$^+$		
1276.2709[j] *20*	2$^+$	2.0 ps *+21−7*	
1311.4603[i] *17*	6$^-$		
1358.899[k] *6*	1$^-$		
1396.826[g] *5*	10$^+$		
1403.7344[k] *23*	(2)$^-$		
1411.0953[j] *19*	4$^+$	>0.83 ps	
1422.12[l] *3*	0$^+$		
1431.465[k] *4*	3$^-$		
1432.9505[h] *23*	7$^+$		

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^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

^{168}Er Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$[#]	Comments
1448.9552[i] *18*	7^-		
1493.133[l] *5*	2^+		
1541.5562[m] *19*	3^-		
1541.7084[k] *24*	$(4)^-$		
1569.4484[n] *25*	$(2)^-$	0.43[c] ps *+11−8*	
1574.116[k] *4*	5^-		
1605.8501[i] *23*	8^-		
1615.3420[m] *18*	4^-		
1616.8054[j] *20*	6^+	>1.7 ps	
1624.507[h] *4*	8^+		
1629.697 *6*	4^-,5^-,6^-		level proposed by 1992BoZF based on time-differential $\gamma\gamma$ coin.
1633.4616[n] *24*	3^-	0.35[c] ps *+11−8*	
1653.5459[o] *21*	3^+		
1656.273[l] *5*	$(4)^+$		
1707.9929[m] *18*	5^-		
1719.1785[n] *24*	4^-		
1736.6868[o] *20*	4^+		
1760.760[k] *3*	$(6)^-$		
1773.204[p] *3*	$(6)^-$		
1786.124[q] *14*	1^-	13[c] fs *+9−8*	
1795.328[k] *11*	(7^-)		
1812.5[e] *9*	$(2^+,3,4^+)$		E(level): existence of level considered uncertain because it is reported only In two-photon cascade data from 2000Gr34 and such a low-lying level should have been observed In other experiments also.
1820.1321[m] *19*	6^-		
1820.475[n] *3*	5^-		
1828.0644[r] *20*	3^-	0.82[c] ps *+32−19*	
1833.54[s] *11*	0^+		
1839.3461[o] *20*	5^+		
1848.353[t] *4*	2^+		
1881.82 *3*			E(level): level proposed by 1992BoZF based on time-differential $\gamma\gamma$ coin data.
1892.9364[r] *21*	$(4)^-$	177[c] fs *+17−15*	
1893.100[s] *6*	2^+		
1896.379[p] *3*	$(7)^-$		
1902.696[l] *7*	(6^+)		
1905.0929[u] *25*	$(4)^-$		
1913.87[q] *3*	3^-	<11[c] fs	
1915.501[t] *4*	$(3)^+$		
1930.388[v] *4*	2^+		
1936.595[w] *11*	1^-		
1949.636[n] *3*	$(6)^-$		
1950.8067[m] *20*	7^-		
1961.3981[o] *20*	6^+		
1972.311[w] *14*	$(2)^-$	0.13[c] ps *+8−4*	
1983.0432[r] *24*	5^-	0.29[c] ps *+8−5*	
1994.820[v] *4*	$(3)^+$		
1999.2233[x] *22*	$(3)^-$	0.44 ns *+12−8*	$T_{1/2}$: $\gamma\gamma$(t) (1991Pe12).
2001.957[u] *4*	5^-		
2002.465[t] *4*	$(4)^+$		
2022.359[w] *21*	$(3)^-$	105[c] fs *+37−25*	2000Gr34 report a 928.29γ (attributed to 1991DaZT) deexciting this level;

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^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

^{168}Er Levels (continued)

E(level)[†]	J$^{\pi}$[‡]	T$_{1/2}$[#]	Comments
			however, 1991DaZT observe only a 928.935γ and that Eγ does not fit the proposed placement.
2031.097[s] 7	(4)$^+$		
2055.913[y] 8	(4)$^+$	0.32 ps *16*	T$_{1/2}$: γ-ray-induced Doppler broadening (1991Bo18).
2059.9763[z] 20	(4)$^-$		
2080.455[v] 3	(4)$^+$		
2089.348[x] 3	4$^-$		
2091.272[r] 5	(6)$^-$		
2097.571[w] 6	4$^-$	0.21[c] ps *+6−4*	
2100.360[o] 4	7$^+$		
2108.987[t] 4	(5)$^+$		
2118.794[u] 5	(6)$^-$		
2122.428 3	(5,6,7)$^-$		possible bandhead for a K$^{\pi}$=7$^-$ band (1991Da12).
2125.421 7			E(level): level proposed by 1992BoZF based on time-differential $\gamma\gamma$ coin data.
2129.229[q] 21	(5)$^-$		
2133.767[1] 15	(1$^+$)		
2137.08[2] 9	(2)$^+$		
2144.53 3			level proposed by 1992BoZF based on time-differential $\gamma\gamma$ coin data.
2148.3742[z] 23	5$^-$		
2169.516[y] 12	(5)$^+$	0.21 ps *14*	T$_{1/2}$: γ-ray-induced Doppler broadening (1991Bo18).
2177.79[1] 8	(2$^+$)		
2185.06[w] 3	(5)$^-$	44[c] fs *+25−16*	
2186.740[3] 4	(3)$^+$		
2188.406[v] 10	(5$^+$)		
2188.74[&] 11	(2$^+$,3,4$^+$)		
2193.20[4] 3	2$^+$		
2200.4194[x] 23	(5)$^-$		
2210.016[r] 6	(7$^-$)		
2218.5[e] 16			
2230.30[5] 4	(2)$^-$		
2238.179[6] 3	(4)$^+$		
2243.514[1] 19	(3)$^+$		
2246.530[s] 9	(6)$^+$		
2249.68 5			E(level): level proposed by 1992BoZF based on time-differential $\gamma\gamma$ coin data.
2254.73[&] 3	(2$^+$)		
2254.85[4] 5	(3)$^+$		
2255.347[z] 3	(6)$^-$		
2262.690[7] 7	(3)$^-$		
2267.634 8	(3,4,5)$^+$		suggested bandhead for K$^{\pi}$=5$^+$ band (1).
2270.46 5			level proposed by 1992BoZF based on time-differential $\gamma\gamma$ coin data.
2273.66[&] 9	(2$^+$,3,4$^+$)		
2279.628[3] 5	(4)$^+$		
2298.258 4	(4,5,6)$^+$		
2302.582[5] 5	(3)$^-$		
2303.10 3	(6)$^-$		
2306.882[y] 24	(6$^+$)		
2311.07[2] 3	(4)$^+$		
2323.02[8] 5	3$^-$		
2331.987[x] 3	6$^-$		
2336.26[4] 10	4$^+$		
2337.099[9] 20	3$^-$		

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^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

^{168}Er Levels (continued)

E(level)[†]	J$^{\pi}$[‡]	Comments
2345.27[&] *9*	1$^-$,2$^-$,3$^-$	
2348.579[7] *18*	4$^-$	
2365.199[!] *14*	(5)$^-$	
2365.4 *3*	(1$^+$)	
2368.587[6] *8*	(5$^+$)	
2373.654[&] *18*	2,3	
2378.12 *8*		level proposed by 1992BoZF based In time-differential $\gamma\gamma$ coin data.
2382.587[&] *4*	(2)$^+$	
2392.117[a] *7*	(5,6$^+$)	
2392.926 *9*	(3$^-$,4$^+$)	level proposed by 1991Da12 As J=4 member of a K$^{\pi}$=2$^-$ band built on the 2230 level. this is incompatible with placement (supported by $\gamma\gamma$ coin data) of the M1 362γ from this level but consistent with placement of the E2 1200γ (also supported by $\gamma\gamma$ coin data) from the level.
2393.71 *9*	(2$^+$)	
2398.47[&] *9*	(3$^+$,4,5$^+$)	
2402.08[d] *15*	(1$^-$)	
2402.29[d8] *6*	(4)$^-$	
2411.792 *25*	(5)$^+$	Proposed by 1991Da12 as J=4 member of a possible K$^{\pi}$=3$^-$ band based on the 2337 level but, if placement and multipolarity of 1417γ are correct, that band assignment is untenable.
2423.25 *9*		
2425.72[l] *3*	(2)$^+$	
2427.2 *4*		
2434.660 *5*		2000Gr34 report that the 5336.8 keV primary γ feeding this level forms a two-photon cascade with a 2137.04γ (Eγ attributed to 1991DaZT) feeding the 4$^+$ 264.1 level. 1991DaZT do not report such an Eγ (closest datum is 2136.89 *16*) and the transition indicated implies an Eγ=2170.1 transition anyway. there exists an unplaced 2170.49 *9* γ which fits a 2435 to 264 placement, but its Iγ is very much larger than Iγ for the feeding primary G. note that 2000Gr34 also report E(level)=2437.13, inconsistent with the indicated primary G.
2440.118[&] *19*	(4$^+$,5$^+$)	
2440.45 *5*	(2$^+$)	level introduced by evaluator, consistent with Adopted Levels, Gammas.
2451.166[7] *24*	(5$^-$)	
2455.96[&] *6*	(3$^+$,4,5$^+$)	
2468.7 *7*		
2474.12[!] *6*	(6$^-$)	
2477.22[b] *6*	(5)$^-$	
2478.92 *7*	(3)$^-$	E(level): 1994Ju02′s suggestion of a close doublet At this energy is not supported by $\gamma\gamma$ coin data of 1996Gi09. level proposed by 1991Da12 as J=3 member of a possible K$^{\pi}$=1$^+$ band based on 2365 level but, if placement and multipolarity of 1484γ are correct, that band assignment is untenable.
2484.61[l] *6*	(3$^+$)	
2494.528[&] *15*	(3)$^-$	
2499.1 *3*		
2513.61 *5*	(4)$^-$	
2517.28?[&] *16*	(3$^+$,4$^+$)	existence proposed by 1994Ju02 but unconfirmed by $\gamma\gamma$ coin data of 1996Gi09.
2526.584[9] *12*	(5)$^-$	
2527.78 *7*		E(level): level proposed by 1992BoZF based on their time-differential $\gamma\gamma$ coin data.
2528.81[&] *9*	(5)$^-$	
2538.1 *3*	2$^+$	
2540.22[a] *5*	(3,4,5)$^+$	
2546.7 *3*	(4$^+$)	
2551.48[&] *7*	(4,5)$^-$	existence unconfirmed by $\gamma\gamma$ coin data of 1996Gi09.
2552.66 *21*	2$^+$	

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^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

^{168}Er Levels (continued)

E(level)†	Jπ‡	E(level)†	Jπ‡
2558.67[&] 5	(5)⁻	2972.6 7	(≤4)
2561.56[|] 5	(4⁺)	2979.3 3	(≤4)
2563.5 3		2982.53[a] 10	(3,4,5)
2571.31 5		2984.03 23	
2578.8 3		2991.33 23	(≤4)
2586.2 4		2998.2 4	0⁺
2601.37 17		3001.8 4	(1,2⁺)
2628.57[a] 22	(3⁺,4,5⁺)	3011.77 23	(4⁺)
2629.44 11		3019.13 23	2⁺
2644.4 4	(0⁺)	3026.02 19	
2651.89 24		3030.7 5	
2656.94 5		3033.8 4	(≤4)
2657.66[a] 4	(2,3,4)	3042.47 19	3⁻,4⁻,5⁻
2660.56[&] 7	(3,4)⁺	3049.62 24	1⁺
2663.232[/] 21	(4)⁺	3055.96 23	2⁺
2673.39[a] 20	(4⁺,5,6⁺)	3063.6 3	
2683.76 24	(2⁺)	3068.8 3	
2689.0 4	(1,2⁺)	3078.1 12	
2700.55 15		3082.8 5	2⁺
2713.2 4		3087.8 4	
2716.0[e] 16	(2⁺,3,4⁺)	3099.47 7	(3⁻)
2727.77[a] 5	(4,5)⁻	3106.0 4	
2733.33 22		3111.26 14	(2⁺,3,4⁺)
2738.58[a] 4		3118.3[f] 3	
2740.16[a] 15	(4,5,6)⁺	3124.0 3	(4⁺)
2746.5 3	(≤4)	3127.93 25	(4⁺,5,6⁺)
2751.9 4		3131.9 4	
2764.9 9	(1,2⁺)	3137.6 4	
2768.55[a] 6		3142.71 24	
2769.80[/] 13	(5⁺)	3151.9[e] 16	(≤4)
2777.78 15		3158.3[e] 16	(1,2⁺)
2786.80[&] 6	(3,4)⁺	3198.0[e] 16	(≤4)
2790.7 3	0⁺	3205.2[e] 16	
2806.5 4		3223.2[e] 16	(4⁺)
2810.9 4		3238.0[e] 16	
2819.7 4		3285.1[e] 16	(4⁺)
2843.2 10	0⁺	3327.3[e] 16	(≤4)
2849.61[a] 5	(4⁺)	3335.0[e] 16	(4⁺,5⁺)
2852.0[a] 5		3347.7[e] 16	
2854.6 4		3376.6[e] 16	(4⁺)
2871.2 12	0⁺	3394.5[e] 16	
2874.62 3	(3,4,5)	3399.3[e] 16	(≤4)
2880.6 3		3415.5[e] 16	(≤4)
2890.47 18		3432.0[e] 16	(4⁺)
2896.12[a] 21	(3,4⁺)	3475.7[e] 16	(≤4)
2901.6 3		3487.3[e] 16	
2907.8 3		3496.4[e] 16	(4⁺)
2920.00 24		3499.3[e] 16	
2929.1 6	1(+)	3507.8[e] 16	(≤4)
2933.36 15	2⁺	3513.9[e] 16	
2942.94 24		3521.1[e] 16	(≤4)
2950.7 3		3560.0[e] 16	
2959.1 9		3570.9[e] 16	(4⁺)
2969.74[&] 11	3⁺,4⁺,5⁺	3588.0[e] 16	

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^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

^{168}Er Levels (continued)

E(level)[†]	Jπ[‡]	Comments
3606.8[e] *16*	(≤4)	
3617.8[e] *16*	2+	
3643.1[e] *16*	(≤4)	
3660.9[e] *16*	(≤4)	
3680.1[e] *16*	(2+,3,4+)	
3702.5[e] *16*	(≤4)	
3715.2[e] *16*		
3739.0[e] *16*	(2−,3,4+)	
3755.4[e] *16*		
3761.6[e] *16*	(≤4)	
3781.7[e] *16*	(4+,5,6+)	
3799.4[e] *16*		
3817.0[e] *16*	(≤4)	
3835.2[e] *16*		
3888.4[e] *16*		
3895.2[e] *16*		
3908.3[e] *16*		
(7771.426 *19*)	3+,4+[@]	E(level): least-squares adjusted value. S(n)=7771.32 *12* from 2003Au03 and 2009AuZZ.

[†] From least squares fit to Eγ except As noted, excluding transitions with multiple or uncertain placements unless No others deexcite the level In question. note that, even so, 44 out 884 Eγ values differ by At least 3σ from expected values.
[‡] Adopted values, except where noted.
[#] From 1998Le03, measured using pile neutrons and the γ-induced Doppler broadening technique, except As noted.
[@] s-wave capture by 7/2+ target.
[&] Level newly proposed by 1994Ju02.
[a] Level newly proposed by 1996Gi09.
[b] Bandhead for Kπ=5− band (2).
[c] From 2000Ge14, determined from γ-induced broadening (GRID technique, using pile neutrons and 23% ^{167}Er oxide target). This value was determined using statistical simulations for unknown feeding and fluctuating free path approach to account for atomic collisions. see 2000Ge14 for value determined using extreme assumptions for unknown feeding.
[d] The evaluator adopts two 2402-keV levels In order to accommodate both the E1 1408γ to 4+ and the 2402γ to 0+. this is consistent with the suggestion In (n,n′γ) that the 1506γ and 1581γ deexcite different levels and also with the observed Eγ.
[e] From primary transition Eγ from 2000Gr34 assuming S(n)=7771.3 and Δ(Eγ)=1.6 keV.
[f] 2000Gr34 report a 2860γ (coincident with primary γ) deexciting this level, but Eγ does not fit that placement.
[g] Band(A): Kπ=0+ g.s. band.
[h] Band(B): Kπ=2+ γ-vibration band.
[i] Band(C): Kπ=4− band (1).
[j] Band(D): Kπ=0+ band (2).
[k] Band(E): Kπ=1− band (1).
[l] Band(F): Kπ=0+ band (3).
[m] Band(G): Kπ=3− band (1).
[n] Band(H): Kπ=2− band (1).
[o] Band(I): Kπ=3+ band (1).
[p] Band(J): Kπ=6− band (1).
[q] Band(K): Kπ=0− band (1).
[r] Band(L): Kπ=3− band (2).
[s] Band(M): Kπ=0+ band (4).

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^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

^{168}Er Levels (continued)

[t] Band(N): $K^\pi=2^+$ band (2).
[u] Band(O): $K^\pi=4^-$ band (2).
[v] Band(P): $K^\pi=2^+$ band (3).
[w] Band(Q): $K^\pi=1^-$ band (2).
[x] Band(R): $K^\pi=3^-$ band (3).
[y] Band(S): $K^\pi=4^+$ $\gamma\gamma$ band.
[z] Band(T): $K^\pi=4^-$ band (3).
[1] Band(U): $K^\pi=1^+$ band (1).
[2] Band(V): $K^\pi=0^+$ band (5). Bandhead undetermined.
[3] Band(W): $K^\pi=(3)^+$ band (2).
[4] Band(X): $K^\pi=(2)^+$ band (4).
[5] Band(Y): $K^\pi=2^-$ band (2).
[6] Band(Z): $K^\pi=4^+$ band (2).
[7] Band(a): $K^\pi=(3)^-$ band (4).
[8] Band(b): $K^\pi=3^-$ band (5).
[9] Band(c): $K^\pi=3^-$ band (6).
[!] Band(d): $K^\pi=(5)^-$ band (1).
Band(e): $K^\pi=(1^+)$ band (2).
[|] Band(f): $K^\pi=2^+$ band (5).
[/] Band(g): $K^\pi=(4)^+$ band (3).

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

γ(^{168}Er)

Iγ normalization: multiply Iγ by 0.01 to convert scale from Iγ per 10000 N captures to Iγ per 100 N captures.
γγ coin data: 1992BoZF, 1994Ju02, 1996Gi09, 2000Gr34.

E_γ [†]	I_γ [†‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[#]	α[m]	Comments
73.784 *3*	3.9 *8*	1615.3420	4^-	1541.5562	3^-	M1+E2	0.11 *+3−2*	6.87	Mult.: L1/L3=16 *5*.
74.626 *3*	1.1[b] *3*	895.7941	3^+	821.1679	2^+	M1+E2	1.42 *+4−5*	8.35 *13*	Mult.,δ: from L1/L3=0.203 *8* (1980Sc15). Other: L1/L3=0.20 *2* (1991DaZT). other Eγ (Iγ): 74.88 *4* (54 *3*) (2007ChZX, Budapest data).
75.466 *7*	0.55 *15*	1193.0249	5^-	1117.5699	5^+				
79.804 *1*	1.10×10^3 *15*	79.8039	2^+	0.0	0^+	E2		7.04	L1:L2:L3=8.59 *6*:96.3 *4*:100.
83.138 *2*	2.1 *4*	1736.6868	4^+	1653.5459	3^+	E2		5.99	Mult.: α(K)exp=1.8 *3*.
84.096 *3*	1.1 *3*	1653.5459	3^+	1569.4484	$(2)^-$	E1		0.514	Mult.: α(K)exp<0.65.
[x]84.630 *3*	0.46 *14*								α(K)exp<1.6.
88.392 *3*	0.51 *14*	2148.3742	5^-	2059.9763	$(4)^-$	M1+E2	1.2 *+7−4*	4.45 *15*	Mult.: α(K)exp=2.3 *4*.
90.104[n] *5*	0.22[n] *6*	1983.0432	5^-	1892.9364	$(4)^-$				
90.104[n] *5*	0.22[n] *6*	2089.348	4^-	1999.2233	$(3)^-$				
[x]90.142 *5*	0.61 *16*					M1		3.83	Mult.: α(K)exp=2.6 *6*.
92.652 *1*	6.7 *10*	1707.9929	5^-	1615.3420	4^-	M1		3.54	Mult.: α(K)exp=2.8 *3*; L1/L2=6 *3*.
98.982 *2*	198 *30*	1193.0249	5^-	1094.0379	4^-	E2		3.06	Mult.: α(K)exp=1.00 *8*; α(L3)exp=0.67 *7*.
99.289 *2*	155 *23*	1094.0379	4^-	994.7469	4^+	E1		0.332	Mult.: α(K)exp=0.30 *5*; α(L3)exp=0.0090 *15*. other Eγ (Iγ): 99.07 *3* (251 *9*) (2007ChZX, Budapest data); presumably for 99.0γ+99.3γ doublet.
100.953 *5*	0.24 *6*	2368.587	(5^+)	2267.634	$(3,4,5)^+$				
102.659 *1*	2.3 *4*	1839.3461	5^+	1736.6868	4^+	M1+E2	1.3 *+10−5*	2.65	Mult.: L1/L2=0.4 *1*; L1/L3=1.9 *6*.
103.228 *4*	1.2 *3*	1736.6868	4^+	1633.4616	3^-				
106.524 *3*	0.33 *9*	2108.987	$(5)^+$	2002.465	$(4)^+$				
106.974 *3*	0.44 *9*	2255.347	$(6)^-$	2148.3742	5^-				
110.245 *4*	0.44 *9*	1541.7084	$(4)^-$	1431.465	3^-				
111.068 *9*	0.72 *13*	2200.4194	$(5)^-$	2089.348	4^-	M1		2.11	Mult.: α(K)exp=1.5 *4*.
[x]111.603 *9*	0.16 *5*								
111.985 *13*	0.11 *4*	1653.5459	3^+	1541.5562	3^-				
112.139 *1*	4.9 *6*	1820.1321	6^-	1707.9929	5^-	M1+E2		1.98 *8*	Mult.: α(K)exp=2.0 *3*; α(L2)exp=0.18 *9*.
118.437 *1*	51 *6*	1311.4603	6^-	1193.0249	5^-	E2		1.568	Mult.: L1/L2=0.25 *2*; L1/L3=0.23 *2*. Iγ: from 1991DaZT. other: 37.2 *15* (2007ChZX, Budapest data).
120.170 *8*	0.77 *12*	1839.3461	5^+	1719.1785	4^-				
122.049 *2*	1.0 *2*	1961.3981	6^+	1839.3461	5^+				
122.821 *1*	1.9[b] *3*	1117.5699	5^+	994.7469	4^+	M1+E2	1.57 *+7−9*	1.434 *21*	Mult.,δ: from L1/L3=0.572 *30* (1980Sc15, 1987Ge02). others: L1/L2=0.51 *10*, L1/L3=0.57 *4* (1991DaZT).
123.174 *1*	4.8[b] *5*	1896.379	$(7)^-$	1773.204	$(6)^-$	M1+E2	0.25 *2*	1.556	Mult.: L1/L2=5.8 *4*; L1/L3=11.7 *14*.

$^{168}_{68}Er_{100}$-8

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

γ(^{168}Er) (continued)

E_γ [†]	I_γ [†‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[#]	α^m	Comments
130.675 *1*	1.0 *2*	1950.8067	7^-	1820.1321	6^-	M1		1.326	Mult.: α(L1)exp=0.30 *15*.
131.566 *2*	0.55 *12*	2331.987	6^-	2200.4194	$(5)^-$				
134.824 *1*	5.5[b] *12*	1411.0953	4^+	1276.2709	2^+				
136.552 *4*	0.44 *11*	2255.347	$(6)^-$	2118.794	$(6)^-$				
137.494 *1*	5.9 *7*	1448.9552	7^-	1311.4603	6^-	E2		0.916	Mult.: L1/L2=0.5 *2*; L1/L3=0.5 *2*. other Eγ (Iγ): 137.39 *10* (8.3 *13*) (2007ChZX, Budapest data); probably includes 137.97γ.
137.974 *4*	2.2 *4*	1541.7084	$(4)^-$	1403.7344	$(2)^-$	E2		0.904	Mult.: α(L2)exp=0.15 *5*; α(L3)exp=0.15 *5*.
138.956 *8*	0.16 *5*	2100.360	7^+	1961.3981	6^+				
140.457 *8*	0.16 *5*	2091.272	$(6)^-$	1950.8067	7^-				
[x]140.700 *10*	0.06 *2*								
140.929 *6*	0.16 *5*	1961.3981	6^+	1820.475	5^-				
[x]141.022 *8*	0.11 *4*								
[x]142.366 *8*	0.29 *7*								
146.331 *7*	1.0 *2*	1263.9042	6^+	1117.5699	5^+	M1+E2	1.9 *+4−3*	0.784 *19*	Mult.,δ: from L1/L3=0.70 *10* (1980Sc15). other data: L1/L2=0.64 *10*, L1/L3=0.70 *10* (1991DaZT).
146.420 *5*	2.0 *4*	2148.3742	5^-	2001.957	5^-	M1		0.961	Mult.: L1/L2>15.
146.472 *5*	0.44 *8*	1994.820	$(3)^+$	1848.353	2^+				
147.583 *10*	0.07 *2*	2108.987	$(5)^+$	1961.3981	6^+				
[x]148.395 *10*	0.12 *4*								
150.083 *18*	0.05 *2*	2080.455	$(4)^+$	1930.388	2^+				
150.480 *10*	0.09 *3*	1936.595	1^-	1786.124	1^-				
154.120[j] *6*	0.17 *5*	2302.582	$(3)^-$	2148.3742	5^-				1991Da12's placement from 2002 level rejected based on γγ coin In 1996Gi09.
154.884 *2*	2.4 *5*	2059.9763	$(4)^-$	1905.0929	$(4)^-$	E2		0.602	Mult.: α(K)exp=0.36 *12*.
156.884 *4*	0.33 *7*	1605.8501	8^-	1448.9552	7^-				
163.137[n] *2*	0.74[n] *18*	1656.273	$(4)^+$	1493.133	2^+				
163.137[n] *2*	0.74[n] *18*	2002.465	$(4)^+$	1839.3461	5^+				
[x]164.964 *2*	0.58 *17*								
165.326 *2*	0.62 *17*	2148.3742	5^-	1983.0432	5^-				
166.434 *1*	1.5 *3*	1707.9929	5^-	1541.5562	3^-				
167.040 *1*	2.9[b] *4*	2059.9763	$(4)^-$	1892.9364	$(4)^-$	M1		0.664	Mult.: α(K)exp=0.52 *15*.
169.043 *3*	0.31 *6*	1432.9505	7^+	1263.9042	6^+	M1+E2	1.5 *+4−2*	0.505 *20*	δ: deduced by 1987Ge02 by applying the Alaga rule to measured Iγ from 1978Ge02.
171.158 *2*	0.73 *18*	1999.2233	$(3)^-$	1828.0644	3^-				
173.577 *1*	8.4[b] *11*	994.7469	4^+	821.1679	2^+	E2		0.406	Mult.: α(K)exp=0.28 *5*.
[x]177.62 *4*	0.12 *3*								
[x]178.189 *20*	0.15 *3*								placement from 2238 level by 1991Da12 rejected based on γγ coin In 1996Gi09.
178.829 *23*	0.16 *4*	1915.501	$(3)^+$	1736.6868	4^+				
184.285 *1*	3.84×10^3[b] *26*	264.0886	4^+	79.8039	2^+	E2		0.331	L1:L2:L3=66.7 *5*:127.2 *8*:100.
185.056 *5*	0.37 *8*	1448.9552	7^-	1263.9042	6^+				

$^{168}_{68}Er_{100}$-9

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

$\gamma(^{168}Er)$ (continued)

E_γ [†]	I_γ [†‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α^m	Comments
185.797 *2*	2.7 *5*	1839.3461	5^+	1653.5459	3^+	E2	0.322	Mult.: α(K)exp=0.2 *1*.
186.644 *3*	0.45 *9*	1760.760	$(6)^-$	1574.116	5^-			
187.013 *26*	0.16 *4*	1820.475	5^-	1633.4616	3^-			
191.555 *10*	0.08 *4*	1624.507	8^+	1432.9505	7^+			
[x]192.469 *15*	0.19 *5*							
193.502 *7*	0.37 *9*	2108.987	$(5)^+$	1915.501	$(3)^+$			
193.888 *1*	3.3 *5*	1311.4603	6^-	1117.5699	5^+			
194.821 *7*	0.15 *4*	1848.353	2^+	1653.5459	3^+			
194.992 *8*	0.12 *4*	1736.6868	4^+	1541.7084	$(4)^-$			
195.836 *25*	0.08 *3*	2451.166	(5^-)	2255.347	$(6)^-$			
196.409 *6*	0.33 *8*	2089.348	4^-	1892.9364	$(4)^-$			
198.241 *1*	2050[b] *90*	1094.0379	4^-	895.7941	3^+	E1	0.0532	Mult.: α(K)exp=0.046 *6*.
201.160 *17*	0.09 *3*	2200.4194	$(5)^-$	1999.2233	$(3)^-$			
[x]202.119 *14*	0.12 *4*							
204.790 *1*	1.9 *5*	1820.1321	6^-	1615.3420	4^-			
205.710 *1*	12.4[b] *11*	1616.8054	6^+	1411.0953	4^+	E2	0.229	Mult.: α(K)exp=0.18 *4*.
[x]208.94 *3*	0.08 *3*							placement from 2298 level by 1991Da12 rejected based on $\gamma\gamma$ coin In 1996Gi09.
[x]211.601 *7*	0.20 *5*							
212.720 *2*	1.3 *2*	1828.0644	3^-	1615.3420	4^-	M1	0.339	Mult.: α(K)exp=0.24 *5*.
214.865 *17*	0.16 *4*	1848.353	2^+	1633.4616	3^-			
215.35 *3*	0.10 *3*	2129.229	$(5)^-$	1913.87	3^-			
217.422 *1*	181[b] *7*	1311.4603	6^-	1094.0379	4^-	E2	0.191	Mult.: α(K)exp=0.16 *4*.
219.050 *2*	5.4 *7*	1760.760	$(6)^-$	1541.7084	$(4)^-$			other Eγ (Iγ): 218.70 *16* (9.4 *20*) (2007ChZX, Budapest data).
219.63 *3*	0.09 *3*	2279.628	$(4)^+$	2059.9763	$(4)^-$			
220.27 *3*	0.07 *3*	2368.587	(5^+)	2148.3742	5^-			
221.775 *2*	18.0[b] *15*	1117.5699	5^+	895.7941	3^+	E2	0.179	Mult.: L1/L2=0.74 *7*; L1/L3=0.80 *8*.
224.712 *1*	2.8 *4*	1961.3981	6^+	1736.6868	4^+			
226.048 *1*	2.5 *4*	2122.428	$(5,6,7)^-$	1896.379	$(7)^-$			
226.98[n] *3*	0.11[n] *4*	2188.406	(5^+)	1961.3981	6^+			
226.98[n] *3*	0.11[n] *4*	2210.016	(7^-)	1983.0432	5^-			
[x]227.484 *23*	0.14 *4*							
227.705 *10*	0.23 *6*	1624.507	8^+	1396.826	10^+			
[x]229.413 *14*	0.23 *6*							
[x]229.555 *12*	0.29 *6*							
230.461 *4*	0.18 *5*	1949.636	$(6)^-$	1719.1785	4^-			
[x]231.005 *4*	0.20 *6*							
231.911 *1*	2.0 *4*	2059.9763	$(4)^-$	1828.0644	3^-			other Eγ (Iγ): 232.08 *14* (4.3 *8*) (2007ChZX, Budapest data).
235.652[k] *18*	0.20 *6*	2558.67	$(5)^-$	2323.02	3^-			
236.216 *18*	0.14 *5*	2022.359	$(3)^-$	1786.124	1^-			
240.658 *14*	0.25 *6*	2133.767	(1^+)	1893.100	2^+			
241.109 *2*	0.43 *8*	2080.455	$(4)^+$	1839.3461	5^+			

$^{168}_{68}Er_{100}$-10

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

γ(^{168}Er) (continued)

E_γ [†]	I_γ [†‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[#]	α^m	Comments
242.811 *3*	0.81 *17*	1950.8067	7^-	1707.9929	5^-				
246.422 *4*	1.21[b] *19*	1902.696	(6^+)	1656.273	$(4)^+$				
249.809 *3*	0.41 *8*	1653.5459	3^+	1403.7344	$(2)^-$				
250.784 *4*	0.27 *6*	2200.4194	$(5)^-$	1949.636	$(6)^-$				
253.387 *4*	0.15 *4*	2255.347	$(6)^-$	2001.957	5^-				
255.436 *2*	3.2 *5*	2148.3742	5^-	1892.9364	$(4)^-$	M1		0.206	Mult.: α(L1)exp=0.25 *3*.
255.929 *1*	51.1[b] *19*	1448.9552	7^-	1193.0249	5^-	E2		0.1130	L1/L2=0.93 *10*; L1/L3=1.9 *4*.
258.130 *3*	0.76 *20*	1994.820	$(3)^+$	1736.6868	4^+				
259.034 *5*	0.24 *5*	1707.9929	5^-	1448.9552	7^-				
259.209 *5*	0.21 *5*	2210.016	(7^-)	1950.8067	7^-				
261.017 *3*	0.81 *22*	2100.360	7^+	1839.3461	5^+				other Eγ (Iγ): 260.52 *19* (2.8 *8*) (2007ChZX, Budapest data).
263.421 *18*	0.30 *6*	2262.690	$(3)^-$	1999.2233	$(3)^-$				
265.233 *6*	0.13 *4*	1839.3461	5^+	1574.116	5^-				
[x]266.503 *7*	0.27 *6*								
[x]267.359 *8*	0.22 *7*								1994Ju02's placement from 2456 level not supported by γγ coin data of 1996Gi09.
[x]267.830 *2*	1.3 *2*								
268.880 *7*	0.49 *8*	2089.348	4^-	1820.475	5^-				
269.161 *2*	22.8[b] *17*	1263.9042	6^+	994.7469	4^+	E2		0.0964	L1/L2=1.01 *8*; L1/L3=1.90 *20*.
271.189 *4*	0.46 *8*	2185.06	$(5)^-$	1913.87	3^-				
272.306 *3*	1.1 *2*	2255.347	$(6)^-$	1983.0432	5^-				
272.876 *2*	3.8 *6*	1094.0379	4^-	821.1679	2^+	M2		0.754	Mult.: α(L1)exp=0.13 *3*; α(L2)exp=0.019 *5*; α(L3)exp=0.02 *1*.
[x]273.458 *14*	0.24 *6*								
[x]274.602 *20*	0.28 *6*								
275.046 *3*	0.42 *7*	1983.0432	5^-	1707.9929	5^-				
276.843 *3*	0.59 *14*	1930.388	2^+	1653.5459	3^+				
277.589 *3*	0.73 *14*	1892.9364	$(4)^-$	1615.3420	4^-				
278.860 *23*	0.21 *5*	1848.353	2^+	1569.4484	$(2)^-$				
280.048 *6*	0.64 *12*	1999.2233	$(3)^-$	1719.1785	4^-				
282.043 *4*	0.20 *6*	1915.501	$(3)^+$	1633.4616	3^-				
284.655 *2*	960[b] *60*	548.7466	6^+	264.0886	4^+	E2		0.0811	Mult.: α(K)exp=0.059 *5*; α(L1)exp=0.0069 *7*; α(L2)exp=0.0064 *6*; α(L3)exp=0.0043 *5*.
286.509 *4*	11.6 *9*	1828.0644	3^-	1541.5562	3^-	M1		0.1509	Mult.: α(K)exp=0.138 *14*; α(L1)exp=0.021 *3*. other Iγ: 24 *9* (2007ChZX, Budapest data).
[x]287.499 *10*	0.68 *12*								
288.497 *11*	0.62 *12*	2108.987	$(5)^+$	1820.475	5^-				
[x]288.895 *26*	0.21 *5*								
289.72 *3*	0.16 *4*	1905.0929	$(4)^-$	1615.3420	4^-				
[x]293.235 *2*	0.97 *20*								
293.523 *2*	1.00 *20*	1411.0953	4^+	1117.5699	5^+	M1+E2	1.4 *+14−5*	0.097 *16*	Mult.: α(K)exp=0.077 *15*.
294.390 *2*	6.7 *9*	1605.8501	8^-	1311.4603	6^-	E2		0.0731	Mult.: α(K)exp=0.056 *5*; α(L1)exp=0.0048 *10*.

$^{168}_{68}Er_{100}$-11

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

$\gamma(^{168}Er)$ (continued)

E_γ[†]	I_γ[†‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[#]	α[m]	Comments
[x]295.068 *21*	0.15 *4*								
[x]295.384 *20*	0.20 *5*								
[x]295.926 *20*	0.20 *5*								
[x]296.309 *6*	0.39 *8*								1991Da12's placement from 2298 level rejected based on $\gamma\gamma$ coin In 1996Gi09.
297.640 *3*	0.50 *9*	1839.3461	5^+	1541.7084	$(4)^-$				
[x]299.418 *22*	0.34 *7*								
303.878 *4*	0.99 *16*	1615.3420	4^-	1311.4603	6^-				
305.219 *5*	0.62 *8*	1736.6868	4^+	1431.465	3^-				
307.481 *5*	0.22 *5*	2200.4194	$(5)^-$	1892.9364	$(4)^-$				
[x]308.309 *5*	0.60 *8*								1994Ju02's placement from 2786 level rejected based on $\gamma\gamma$ coin data of 1996Gi09.
313.420[kp] *14*	0.21 *5*	2551.48	$(4,5)^-$	2238.179	$(4)^+$				E_γ: γ unobserved by 1996Gi09.
315.383 *3*	10.8[b] *7*	1432.9505	7^+	1117.5699	5^+	E2		0.0594	Mult.: α(K)exp=0.040 *6*; α(L1)exp=0.0065 *15*; α(L2)exp=0.0063 *15*.
[x]322.910 *6*	0.18 *5*								1994Ju02's placement from 2345 level rejected based on $\gamma\gamma$ coin data of 1996Gi09.
324.256 *14*	0.52 *8*	1773.204	$(6)^-$	1448.9552	7^-				
[x]330.459 *8*	1.33 *20*								
[x]331.301 *8*	0.24 *5*								
333.086 *4*	1.26 *20*	2238.179	$(4)^+$	1905.0929	$(4)^-$				other Iγ: 4.0 *11*) (2007ChZX, Budapest data).
335.589 *3*	0.98 *18*	1263.9042	6^+	928.3026	8^+				
336.881 *14*	0.49 *8*	1961.3981	6^+	1624.507	8^+				
[x]337.523 *11*	0.22 *5*								
338.547 *17*	0.41 *8*	1994.820	$(3)^+$	1656.273	$(4)^+$				
[x]340.802 *4*	0.55 *9*								
344.954 *3*	2.2 *4*	1950.8067	7^-	1605.8501	8^-	M1+E2	1.9 *+22−6*	0.056 *8*	Mult.: α(K)exp=0.044 *7*.
345.247 *7*	0.95 *17*	2238.179	$(4)^+$	1892.9364	$(4)^-$				
345.669 *7*	0.52 *9*	1999.2233	$(3)^-$	1653.5459	3^+				
346.054 *10*	0.44 *10*	1915.501	$(3)^+$	1569.4484	$(2)^-$				
346.197 *8*	0.56 *9*	2002.465	$(4)^+$	1656.273	$(4)^+$				
348.523 *2*	3.8 *5*	1541.5562	3^-	1193.0249	5^-	E2		0.0442	Mult.: α(K)exp=0.034 *4*.
348.94[n] *3*	0.35[n] *7*	2002.465	$(4)^+$	1653.5459	3^+				
348.94[n] *3*	0.35[n] *7*	2188.406	(5^+)	1839.3461	5^+				
349.229 *3*	1.0 *2*	2122.428	$(5,6,7)^-$	1773.204	$(6)^-$	M1		0.0890	Mult.: α(K)exp=0.075 *10*. an alternative placement from 2188.6 level (1994Ju02) is not supported by $\gamma\gamma$ coin data of 1996Gi09.
[x]349.703 *21*	0.64 *8*								
351.422[k] *14*	0.27 *5*	2382.587	$(2)^+$	2031.097	$(4)^+$				
351.970 *7*	0.65 *10*	2059.9763	$(4)^-$	1707.9929	5^-	M1		0.0871	Mult.: α(K)exp=0.085 *15*.
352.900 *3*	3.4 *4*	1616.8054	6^+	1263.9042	6^+	M1+E2		0.065 *22*	Mult.: α(K)exp=0.055 *7*; α(L1)exp=0.009 *3*.
[x]354.883 *6*	0.29 *5*								
355.215 *8*	0.48 *8*	1848.353	2^+	1493.133	2^+				

$^{168}_{68}Er_{100}$-12

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

$\gamma(^{168}Er)$ (continued)

E_γ[†]	I_γ[†‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[m]	Comments
360.599 *4*	1.4 *3*	1624.507	8^+	1263.9042	6^+	E2	0.0401	Mult.: α(K)exp=0.043 *14*.
361.834[j] *5*	1.4[b] *3*	2392.926	$(3^-,4^+)$	2031.097	$(4)^+$			Mult.: α(K)exp=0.075 *18* implies M1 multipolarity. however, see comment on 1200γ. placement from 2451 level by 1991Da12 rejected based on $\gamma\gamma$ coin In 1996Gi09.
362.547 *15*	2.7 *4*	2267.634	$(3,4,5)^+$	1905.0929	$(4)^-$	E1	0.01170	Mult.: α(K)exp=0.011 *5*.
363.540 *6*	0.36 *8*	1905.0929	$(4)^-$	1541.5562	3^-			
365.763 *2*	8.7[b] *12*	1999.2233	$(3)^-$	1633.4616	3^-	M1	0.0787	Mult.: α(K)exp=0.057 *8*; α(L1)exp=0.010 *2*.
[x]367.904 *9*	0.46 *8*							placement from 2188 (5^+) level by 1991Da12 rejected based on $\gamma\gamma$ coin In 1996Gi09.
369.006 *8*	0.90 *18*	2002.465	$(4)^+$	1633.4616	3^-			
370.170 *6*	6.4 *8*	2089.348	4^-	1719.1785	4^-	M1	0.0763	Mult.: α(K)exp=0.061 *8*; α(L1)exp=0.006 *2*.
371.173 *3*	17.3[b] *13*	1820.1321	6^-	1448.9552	7^-	M1	0.0757	Mult.: α(K)exp=0.060 *7*; α(L1)exp=0.010 *2*.
[x]372.537 *5*	0.45 *9*							
374.683[n] *4*	2.5[n] *4*	2267.634	$(3,4,5)^+$	1892.9364	$(4)^-$			
374.683[n] *4*	2.5[n] *4*	2434.660		2059.9763	$(4)^-$			placement from time-differential $\gamma\gamma$ coin (1992BoZF).
[x]375.128 *10*	0.33 *8*							
[x]378.404 *12*	0.74 *18*							
379.545 *3*	31 *3*	928.3026	8^+	548.7466	6^+	E2	0.0346	Mult.: α(K)exp=0.0255 *20*; α(L1)exp=0.004 *1*.
379.954 *8*	2.6 *4*	2200.4194	$(5)^-$	1820.475	5^-	M1	0.0712	Mult.: α(K)exp=0.075 *15*.
380.286 *6*	1.9 *4*	2200.4194	$(5)^-$	1820.1321	6^-			
380.479 *5*	2.6 *6*	1276.2709	2^+	895.7941	3^+			
381.181 *14*	0.63 *7*	2331.987	6^-	1950.8067	7^-			
381.349 *3*	4.9 *7*	2089.348	4^-	1707.9929	5^-	M1	0.0705	Mult.: α(K)exp=0.064 *15*.
382.346 *9*	0.81 *16*	2331.987	6^-	1949.636	$(6)^-$	M1	0.0701	Mult.: α(K)exp=0.059 *15*.
[x]383.226 *20*	0.60 *18*							
383.366[k] *3*	6.6 *6*	2382.587	$(2)^+$	1999.2233	$(3)^-$	E1	0.01025	Mult.: α(K)exp=0.006 *2*. other Eγ (Iγ): 383.52 *10* (15.5 *20*) (2007ChZX, Budapest data).
383.875 *6*	8.1 *18*	1999.2233	$(3)^-$	1615.3420	4^-	M1	0.0693	Mult.: α(K)exp=0.060 *7*; α(L1)exp=0.010 *2*.
384.510[k] *9*	0.51 *11*	2786.80	$(3,4)^+$	2402.29	$(4)^-$			
387.191 *6*	1.3 *3*	1820.1321	6^-	1432.9505	7^+			
[x]389.386 *10*	0.17 *5*							
389.804 *4*	0.46 *9*	2108.987	$(5)^+$	1719.1785	4^-			an alternative placement from the 2238 level (1991Da12) is rejected based on $\gamma\gamma$ coin (1996Gi09).
[x]390.476 *8*	0.36 *8*							
[x]391.671 *9*	0.26 *6*							
[x]392.194 *15*	0.42 *8*							
396.530 *3*	48[b] *3*	1707.9929	5^-	1311.4603	6^-	M1	0.0637	Mult.: α(K)exp=0.051 *4*; α(L1)exp=0.009 *2*.
[x]398.144 *7*	0.22 *5*							
398.829 *3*	0.61 *12*	2238.179	$(4)^+$	1839.3461	5^+			
401.343[k] *11*	0.25 *6*	2373.654	2,3	1972.311	$(2)^-$			
[x]407.984 *6*	0.86 *18*							Eγ: 1992BoZF propose that this γ deexcites the 2527 level but Eγ

$^{168}_{68}Er_{100}$-13

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

$\gamma(^{168}Er)$ (continued)

E_γ[†]	I_γ[†‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[#]	α[m]	Comments
									is≈0.2 keV too high for that placement. Eγ would, however, fit a 2658 to 2250 placement very well.
408.457[nkp] *8*	0.78[n] *18*	2517.28?	$(3^+,4^+)$	2108.987	$(5)^+$				Eγ: γ unobserved by 1996Gi09.
408.457[n] *8*	0.78[n] *18*	2663.232	$(4)^+$	2254.73	(2^+)				placement from 1992BoZF.
[x]409.751 *6*	0.41 *9*								placement from 2302.6 level by 1991Da12 rejected based on $\gamma\gamma$ coin In 1996Gi09.
[x]410.838 *10*	0.41 *9*								
416.352 *4*	13.4[b] *10*	1411.0953	4^+	994.7469	4^+	M1+E2	1.7 *+11−5*	0.034 *5*	Mult.: α(K)exp=0.028 *4*.
[x]420.478 *7*	0.37 *9*								
422.318 *4*	107[b] *4*	1615.3420	4^-	1193.0249	5^-	M1		0.0540	Mult.: α(K)exp=0.0430 *3*; α(L1)exp=0.0063 *8*; α(L2)exp=0.0006 *3*.
424.329[n] *4*	3.4[n] *9*	1828.0644	3^-	1403.7344	$(2)^-$				
424.329[n] *4*	3.4[n] *9*	2185.06	$(5)^-$	1760.760	$(6)^-$				
426.66[k] *3*	1.22 *15*	2254.73	(2^+)	1828.0644	3^-				
428.295 *13*	0.90 *20*	2267.634	$(3,4,5)^+$	1839.3461	5^+				
[x]428.974 *19*	1.1 *3*								
429.779 *5*	20.0[b] *18*	1999.2233	$(3)^-$	1569.4484	$(2)^-$	M1		0.0516	Mult.: α(K)exp=0.043 *3*.
430.731 *20*	0.12 *4*	1972.311	$(2)^-$	1541.5562	3^-				
[x]436.672 *5*	1.8 *4*					M1		0.0495	Mult.: α(K)exp=0.054 *15*.
436.672 *5*	1.8 *4*	1629.697	$4^-,5^-,6^-$	1193.0249	5^-	M1		0.0495	Mult.: α(K)exp=0.054 *15*. placement from 1992BoZF.
440.264 *16*	1.0 *2*	2279.628	$(4)^+$	1839.3461	5^+				
440.391 *12*	1.4 *2*	2148.3742	5^-	1707.9929	5^-				
442.593[kp] *20*	0.6 *2*	2551.48	$(4,5)^-$	2108.987	$(5)^+$				Eγ: γ unobserved by 1996Gi09.
[x]442.773 *6*	2.7 *5*								
444.086 *4*	5.5 *8*	1707.9929	5^-	1263.9042	6^+				
444.638 *5*	2.6 *5*	2059.9763	$(4)^-$	1615.3420	4^-				
445.234[k] *20*	0.92 *20*	2440.118	$(4^+,5^+)$	1994.820	$(3)^+$				
445.995 *4*	9.7 *10*	994.7469	4^+	548.7466	6^+				
[x]446.63 *7*	0.29 *6*								
447.515 *3*	208[b] *7*	1541.5562	3^-	1094.0379	4^-	M1		0.0465	Mult.: α(K)exp=0.036 *3*; α(L1)exp=0.006 *1*; α(L2)exp=0.0006 *2*.
450.048 *3*	2.1 *4*	2186.740	$(3)^+$	1736.6868	4^+	M1		0.0458	Mult.: α(K)exp=0.047 *10*.
[x]451.01 *3*	0.5 *2*								
[x]451.312 *25*	0.66 *18*								
451.68 *3*	0.24 *9*	2188.406	(5^+)	1736.6868	4^+				
455.096 *3*	5.2 *8*	1276.2709	2^+	821.1679	2^+				
455.899 *8*	8.5 *9*	2089.348	4^-	1633.4616	3^-				
457.664 *5*	54.7[b] *25*	1999.2233	$(3)^-$	1541.5562	3^-	M1		0.0438	Mult.: α(K)exp=0.036 *3*; α(L1)exp=0.0053 *6*.
458.910 *3*	1.7 *3*	2298.258	$(4,5,6)^+$	1839.3461	5^+	M1		0.0435	Mult.: α(K)exp=0.048 *12*.
460.100 *15*	0.55 *13*	2365.199	$(5)^-$	1905.0929	$(4)^-$				

$^{168}_{68}Er_{100}$-14

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

$\gamma(^{168}Er)$ (continued)

E_γ †	I_γ †‡	E_i(level)	J_i^π	E_f	J_f^π	Mult.#	δ#	α^m	Comments
461.739 *3*	12.3[b] *20*	1773.204	(6)$^-$	1311.4603	6$^-$	M1		0.0428	Mult.: α(K)exp=0.034 *4*.
463.485 *14*	0.28 *6*	2368.587	(5$^+$)	1905.0929	(4)$^-$				
[x]464.707 *8*	0.37 *8*								
466.603 *12*	0.34 *8*	2526.584	(5)$^-$	2059.9763	(4)$^-$				
[x]467.516 *12*	0.21 *5*								
468.529 *5*	0.50 *10*	1396.826	10$^+$	928.3026	8$^+$				
469.168 *5*	7.2[b] *7*	1828.0644	3$^-$	1358.899	1$^-$	E2		0.0194	Mult.: α(K)exp=0.015 *6*.
[x]470.977 *13*	0.43 *8*								
471.874[n] *6*	1.0[n] *2*	2125.421		1653.5459	3$^+$				E_γ: placement from 1992BoZF.
471.874[nk] *6*	1.0[n] *2*	2660.56	(3,4)$^+$	2188.406	(5$^+$)				
472.218[n] *12*	0.81[n] *18*	2365.199	(5)$^-$	1892.9364	(4)$^-$				
472.218[n] *12*	0.81[n] *18*	2474.12	(6$^-$)	2001.957	5$^-$				
[x]473.536 *10*	1.8 *3*								
474.004 *5*	24.4[b] *24*	2089.348	4$^-$	1615.3420	4$^-$	M1		0.0400	Mult.: α(K)exp=0.036 *3*; α(L1)exp=0.0043 *4*.
474.636 *17*	0.49 *9*	2302.582	(3)$^-$	1828.0644	3$^-$				
[x]475.462 *18*	0.63 *13*								
[x]477.454 *10*	0.49 *9*								
[x]480.13 *9*	0.69 *14*								
480.619[n] *5*	3.5[n] *5*	2022.359	(3)$^-$	1541.7084	(4)$^-$				
480.619[nk] *5*	3.5[n] *5*	2373.654	2,3	1893.100	2$^+$				
481.239 *3*	3.3 *5*	2200.4194	(5)$^-$	1719.1785	4$^-$	M1		0.0385	Mult.: α(K)exp=0.034 *4*. other Eγ (Iγ): 480.94 *16* (6.8 *11*) (2007ChZX, Budapest data); probably includes 480.6γ.
[x]482.190 *20*	0.41 *8*								placement from 2302.6 level by 1991Da12 rejected based on $\gamma\gamma$ coin In 1996Gi09.
492.427 *3*	6.0 *8*	2200.4194	(5)$^-$	1707.9929	5$^-$				
494.480 *10*	1.8 *3*	2100.360	7$^+$	1605.8501	8$^-$				
496.858 *4*	3.7 *5*	1760.760	(6)$^-$	1263.9042	6$^+$				
[x]497.49 *3*	2.0 *4*								
497.768 *6*	19.1 *25*	1615.3420	4$^-$	1117.5699	5$^+$	E1			Mult.: α(K)exp=0.0055 *8*; α(L1)exp=0.0009 *3*.
498.46 *6*	0.6 *2*	1493.133	2$^+$	994.7469	4$^+$				
499.233 *3*	6.7 *8*	1616.8054	6$^+$	1117.5699	5$^+$	M1+E2	1.0 *+9−5*	0.026 *6*	Mult.: α(K)exp=0.022 *5*.
[x]499.856 *11*	1.2 *2*								
501.506 *10*	3.8 *5*	2238.179	(4)$^+$	1736.6868	4$^+$				
[x]501.783 *11*	1.2 *3*								
[x]502.822 *7*	1.06 *15*								
504.644 *4*	4.1 *5*	1432.9505	7$^+$	928.3026	8$^+$	M1(+E2)	<0.22	0.0337 *7*	Mult.: α(K)exp=0.033 *5*.
507.936 *3*	3.7 *5*	1403.7344	(2)$^-$	895.7941	3$^+$				
508.679 *5*	2.4 *4*	1820.1321	6$^-$	1311.4603	6$^-$				
511.504 *15*	1.6 *3*	2494.528	(3)$^-$	1983.0432	5$^-$				1991Da12's placement from 2332 level rejected based on $\gamma\gamma$ coin from 1996Gi09.
511.860[j] *7*	2.5 *4*	2425.72	(2)$^+$	1913.87	3$^-$				placement from 2332 level by 1991Da12 rejected based

$^{168}_{68}Er_{100}$-15

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

$\gamma(^{168}Er)$ (continued)

E_γ[†]	I_γ[†‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[#]	α[m]	Comments
									on $\gamma\gamma$ coin In 1996Gi09. the present placement is supported by $\gamma\gamma$ coin.
[x]512.133 *24*	2.2 *4*								1994Ju02's placement from 2660 level not supported by $\gamma\gamma$ coin data of 1996Gi09.
512.441 *2*	13.9 *17*	1961.3981	6^+	1448.9552	7^-				
514.970 *2*	8.7 *9*	1707.9929	5^-	1193.0249	5^-				
515.303 *2*	18.7 *22*	1411.0953	4^+	895.7941	3^+	E2		0.01522	other Iγ: 29 *3* (2007ChZX, Budapest data). Mult.: α(K)exp=0.011 *3*.
516.683 *2*	7.4[b] *9*	1949.636	$(6)^-$	1432.9505	7^+				
518.405 *9*	1.3 *3*	2059.9763	$(4)^-$	1541.5562	3^-				
520.667 *9*	0.81 *15*	1448.9552	7^-	928.3026	8^+				
521.303 *3*	14.9[b] *20*	1615.3420	4^-	1094.0379	4^-	M1+E2	1.1 *+9−5*	0.022 *5*	Mult.: α(K)exp=0.019 *4*.
523.480 *18*	0.37 *7*	2097.571	4^-	1574.116	5^-				
[x]526.079 *7*	1.2 *3*								1994Ju02's placement from 2440 level not supported by $\gamma\gamma$ coin data of 1996Gi09.
527.884 *3*	60.0[b] *27*	1839.3461	5^+	1311.4603	6^-	E1			Mult.: α(K)exp=0.0044 *6*.
[x]530.55 *6*	1.2 *3*								
533.202 *5*	26.0[b] *21*	2186.740	$(3)^+$	1653.5459	3^+	M1		0.0296	Mult.: α(K)exp=0.026 *3*.
534.793 *15*	0.78 *14*	2188.406	(5^+)	1653.5459	3^+				
535.642[n] *21*	0.46[n] *8*	1431.465	3^-	895.7941	3^+				
535.642[n] *21*	0.46[n] *8*	1629.697	$4^-,5^-,6^-$	1094.0379	4^-				placement from 1992BoZF.
537.76[o] *6*	0.73[o] *14*	1358.899	1^-	821.1679	2^+				I_γ: from I(538γ doublet)=0.73 *14* and adopted branching, I(538γ from 1359 level)=0.61 *13*, so I(538γ from 2663 level)=0.12 *18*.
537.76[o] *6*	0.12[o] *18*	2663.232	$(4)^+$	2125.421					I_γ: see comment on 538γ from 1359 level.
538.68[n] *3*	1.4[n] *3*	1656.273	$(4)^+$	1117.5699	5^+				Mult.: α(K)exp=0.0092 *20*, mult=E2 for doubly-placed G. other Eγ (Iγ): 539.1 *4* (4.7 *20*) (2007ChZX, Budapest data).
538.68[n] *3*	1.4[n] *3*	2144.53		1605.8501	8^-				Mult.: α(K)exp=0.0092 *20*, mult=E2 for doubly-placed G. placement from 1992BoZF.
[x]540.971 *9*	0.9 *2*								
542.35 *4*	0.6 *2*	2303.10	$(6)^-$	1760.760	$(6)^-$				
542.939 *6*	8.0 *10*	2279.628	$(4)^+$	1736.6868	4^+	M1		0.0283	α(K)exp=0.029 *4*.
543.667 *7*	135[b] *6*	1736.6868	4^+	1193.0249	5^-	E1			Mult.: α(K)exp=0.0044 *6*; α(L1)exp=0.0008 *3*.
546.802 *5*	23 *5*	1541.5562	3^-	994.7469	4^+	E1			Mult.: from α(K)exp=0.0037 *6*, as deduced from unresolved Ice for 546.8γ+547.0γ and α(K)=0.0039 (E1 theory) for 547.0γ.
546.960 *5*	40 *8*	1541.7084	$(4)^-$	994.7469	4^+	[E1]			other Eγ (Iγ): 547.07 *5* (69 *3*) (2007ChZX, Budapest data); May include 546.8γ. Mult.: see comment with 546.8γ.
547.805 *7*	18.4 *25*	2089.348	4^-	1541.5562	3^-	M1		0.0276	α(K)exp=0.020 *3*; α(L1)exp=0.0023 *5*.
552.771[j] *6*	2.6 *4*	2392.117	$(5,6^+)$	1839.3461	5^+				
555.866 *17*	0.8 *3*	2097.571	4^-	1541.7084	$(4)^-$				

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

γ(^{168}Er) (continued)

E_γ [†]	I_γ [†‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[#]	α^m	Comments
556.571 *4*	24 *4*	1820.475	5^-	1263.9042	6^+	E1			Mult.: α(K)exp=0.006 *2*. other Eγ (Iγ): 556.64 *8* (34 *3*) (2007ChZX, Budapest data).
557.079 *3*	8.0 *10*	821.1679	2^+	264.0886	4^+				
559.510 *4*	159[b] *7*	1653.5459	3^+	1094.0379	4^-	E1			Mult.: α(K)exp=0.0045 *4*; α(L1)exp=0.0005 *1*.
[x]563.187 *8*	0.81 *20*								
[x]563.89 *8*	0.37 *15*								
[x]566.425 *11*	0.62 *18*								
568.821 *6*	82[b] *4*	1117.5699	5^+	548.7466	6^+	E2+M1	3.6 *3*	0.01284 *25*	Mult.: α(K)exp=0.010 *1*; α(L1)exp=0.0016 *3*; α(L2)exp=0.0004 *1*.
571.428 *19*	0.46 *15*	2186.740	$(3)^+$	1615.3420	4^-				
572.068 *14*	1.1 *3*	1848.353	2^+	1276.2709	2^+				
577.690 *9*	0.52 *15*	1936.595	1^-	1358.899	1^-				
580.176 *4*	37.5[b] *24*	1773.204	$(6)^-$	1193.0249	5^-	M1		0.0239	Mult.: α(K)exp=0.020 *3*.
582.567 *3*	37.0[b] *23*	1403.7344	$(2)^-$	821.1679	2^+	E1			Mult.: α(K)exp=0.0039 *4*.
[x]583.472 *22*	1.3 *3*								placement from 2302.6 level by 1991Da12 rejected based on γγ coin In 1996Gi09.
585.066 *5*	9.7[b] *10*	2200.4194	$(5)^-$	1615.3420	4^-	M1		0.0234	Mult.: α(K)exp=0.020 *2*; α(L1)exp=0.005 *1*.
587.253 *19*	0.33 *15*	2243.514	$(3)^+$	1656.273	$(4)^+$				
589.913 *8*	3.0 *5*	1411.0953	4^+	821.1679	2^+	E2		0.01088	Mult.: α(K)exp=0.012 *3*.
590.415 *12*	1.5 *3*	1707.9929	5^-	1117.5699	5^+				
[x]591.257 *25*	1.6 *3*								
591.402 *20*	2.0 *3*	2002.465	$(4)^+$	1411.0953	4^+				other Iγ: 6.0 *20* (2007ChZX, Budapest data).
597.327 *7*	2.3 *4*	1493.133	2^+	895.7941	3^+				
601.603 *5*	49[b] *4*	1719.1785	4^-	1117.5699	5^+	E1			Mult.: α(K)exp=0.0027 *4*; α(L1)exp=0.0005 *1*.
609.164 *9*	2.2 *3*	2262.690	$(3)^-$	1653.5459	3^+				
612.0[l] *5*	7[l] *5*	2348.579	4^-	1736.6868	4^+				
613.951 *4*	7.7 *12*	1707.9929	5^-	1094.0379	4^-	M1		0.0207	Mult.: α(K)exp=0.018 *2*; α(L1)exp=0.0032 *6*.
614.996[n] *24*	2.8[n] *5*	2230.30	$(2)^-$	1615.3420	4^-				other Eγ (Iγ): 614.56 *22* (12.1 *27*) (2007ChZX, Budapest data).
614.996[n j] *24*	2.8[n] *5*	2528.81	$(5)^-$	1913.87	3^-				
616.827 *5*	8.2[b] *16*	1893.100	2^+	1276.2709	2^+	M1		0.0204	Mult.: α(K)exp=0.021 *4*.
619.990 *8*	23[b] *3*	2031.097	$(4)^+$	1411.0953	4^+	M1		0.0202	Mult.: α(K)exp=0.0157 *20*; α(L1)exp=0.0024 *4*.
620.590 *17*	3.9 *5*	1615.3420	4^-	994.7469	4^+				
622.059 *5*	3.1 *4*	1616.8054	6^+	994.7469	4^+	E2			Mult.: α(K)exp=0.011 *3*.
624.005 *5*	2.3 *3*	2331.987	6^-	1707.9929	5^-				
626.086 *7*	3.5 *6*	2279.628	$(4)^+$	1653.5459	3^+	M1		0.0197	α(K)exp=0.024 *4*.
627.104 *6*	5.5 *9*	1820.1321	6^-	1193.0249	5^-				other Eγ (Iγ): 626.70 *22* (10.8 *20*) (2007ChZX, Budapest data).
629.184 *20*	4.0 *10*	2262.690	$(3)^-$	1633.4616	3^-				other Iγ: 12.1 *20* (2007ChZX, Budapest data).
629.397 *20*	4.9 *12*	2348.579	4^-	1719.1785	4^-				
629.724 *9*	6.5 *12*	2246.530	$(6)^+$	1616.8054	6^+				

$^{168}_{68}Er_{100}$-17

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

γ(^{168}Er) (continued)

E_γ[†]	I_γ[†‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[#]	α[m]	Comments
631.703 *3*	532[b] *19*	895.7941	3^+	264.0886	4^+	M1+E2[&]	5.1[&] *+56−13*	0.0096 *4*	Mult.: α(K)exp=0.0075 *5*; α(L1)exp=0.0011 *2*; α(L2)exp=0.00032 *6*; α(L3)exp=0.00013 *3*.
638.710 *8*	64[b] *7*	1633.4616	3^-	994.7469	4^+	E1			Mult.: α(K)exp=0.0033 *6*.
639.24 *4*	3.8 *9*	1950.8067	7^-	1311.4603	6^-				
640.567[n] *20*	1.9[n] *4*	2133.767	(1^+)	1493.133	2^+				
640.567[n] *20*	1.9[n] *4*	2348.579	4^-	1707.9929	5^-				
[x]640.880 *24*	1.6 *4*								
642.324 *18*	2.4 *7*	2091.272	$(6)^-$	1448.9552	7^-				
642.629 *20*	2.4 *7*	1736.6868	4^+	1094.0379	4^-				
643.181 *8*	11.4 *13*	1760.760	$(6)^-$	1117.5699	5^+	E1			Mult.: α(K)exp=0.0024 *4*. other Eγ (Iγ): 643.52 *20* (22 *3*) (2007ChZX, Budapest data).
644.277 *5*	21.8 *25*	1193.0249	5^-	548.7466	6^+	E1			Mult.: α(K)exp=0.0025 *5*.
645.21 *3*	1.6 *3*	2186.740	$(3)^+$	1541.5562	3^-				
645.775 *15*	35 *6*	1541.5562	3^-	895.7941	3^+	E1			Mult.: from α(K)exp=0.0023 *5*, as deduced from unresolved Ice for 645.8γ+645.9γ and α(K)=0.00276 (E1 theory) for 645.9γ. other Iγ: 65 *3* (2007ChZX, Budapest data); May include 645.9γ.
645.939 *11*	24 *4*	1541.7084	$(4)^-$	895.7941	3^+	[E1]			Mult.: see comment with 645.8γ.
647.344 *15*	3.4 *6*	2262.690	$(3)^-$	1615.3420	4^-	E2			α(K)exp=0.010 *3*.
649.087[j] *9*	1.6 *4*	2302.582	$(3)^-$	1653.5459	3^+				
[x]651.036 *8*	1.4 *4*					M1		0.01783	Mult.: α(K)exp=0.015 *5*.
653.88 *6*	0.33 *15*	2474.12	(6^-)	1820.1321	6^-				
654.79 *3*	0.41 *8*	2311.07	$(4)^+$	1656.273	$(4)^+$				
655.39[j] *3*	0.98 *18*	2392.117	$(5,6^+)$	1736.6868	4^+				
658.393 *24*	1.7 *4*	2091.272	$(6)^-$	1432.9505	7^+				
660.85 *4*	2.0 *4*	2230.30	$(2)^-$	1569.4484	$(2)^-$	M1		0.01718	Mult.: α(K)exp=0.012 *4*.
661.523 *7*	2.4 *4*	1656.273	$(4)^+$	994.7469	4^+	M1		0.01713	Mult.: α(K)exp=0.013 *4*. other Eγ (Iγ): 661.47 *17* (6.1 *14*) (2007ChZX, Budapest data).
666.10 *3*	0.8 *3*	2097.571	4^-	1431.465	3^-				
669.221 *20*	4.1 *7*	2302.582	$(3)^-$	1633.4616	3^-	M1		0.01664	Mult.: α(K)exp=0.015 *3*.
669.34 *4*	2.0 *4*	2080.455	$(4)^+$	1411.0953	4^+				
669.835 *11*	2.1 *3*	2118.794	$(6)^-$	1448.9552	7^-				
671.589 *8*	6.0 *8*	1983.0432	5^-	1311.4603	6^-	M1		0.01649	Mult.: α(K)exp=0.017 *3*.
671.961 *9*	2.8 *5*	1493.133	2^+	821.1679	2^+				
673.666 *4*	37.6[b] *19*	1569.4484	$(2)^-$	895.7941	3^+	E1			Mult.: α(K)exp=0.0025 *3*.
675.960 *26*	1.0 *2*	1893.100	2^+	1217.167	0^+	E2			Mult.: α(K)exp=0.0078 *18*.
679.180 *5*	27.4[b] *25*	1773.204	$(6)^-$	1094.0379	4^-				Mult.: α(K)exp=0.010 *3*.
684.654[n] *15*	2.0[n] *4*	2177.79	(2^+)	1493.133	2^+				
684.654[n] *15*	2.0[n] *4*	2392.926	$(3^-,4^+)$	1707.9929	5^-				

$^{168}_{68}Er_{100}$-18

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

$\gamma(^{168}Er)$ (continued)

E_γ [†]	I_γ [†‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[#]	α[m]	Comments
685.760 *15*	2.8 *5*	1949.636	$(6)^-$	1263.9042	6^+				
687.30 *3*	6.8 *12*	2302.582	$(3)^-$	1615.3420	4^-				
688.538 *20*	3.5 *10*	1616.8054	6^+	928.3026	8^+				other Eγ (Iγ): 688.0 *4* (11 *3*) (2007ChZX, Budapest data).
688.79[n] *3*	1.9[n] *6*	1881.82		1193.0249	5^-				E$_\gamma$: placement from 1992BoZF.
688.79[n] *3*	1.9[n] *6*	2230.30	$(2)^-$	1541.5562	3^-				
690.494 *6*	6.0 *12*	2001.957	5^-	1311.4603	6^-	M1		0.01539	Mult.: α(K)exp=0.014 *3*.
[x]692.54 *4*	1.2 *4*								
695.04 *4*	0.9 *3*	2348.579	4^-	1653.5459	3^+				
696.13 *3*	1.9 *6*	1624.507	8^+	928.3026	8^+				
[x]697.658 *17*	1.6 *5*								
699.921 *6*	11.7[b] *13*	1892.9364	$(4)^-$	1193.0249	5^-	M1		0.01487	Mult.: α(K)exp=0.012 *2*.
702.576 *6*	8.6 *13*	1820.1321	6^-	1117.5699	5^+	E1			Mult.: from α(K)exp=0.0028 *6*, as deduced from unresolved Ice for 702.6γ+702.9γ and α(K)=0.00223 (E1 theory) for 702.9γ.
702.914 *6*	12.8 *15*	1820.475	5^-	1117.5699	5^+	[E1]			other Eγ (Iγ): 702.90 *15* (19.5 *27*) (2007ChZX, Budapest data), presumed to Be for 702.6γ+702.9γ doublet. Mult.: see comment with 702.6γ.
711.666 *24*	2.3 *8*	2133.767	(1^+)	1422.12	0^+				
712.079 *7*	6.9 *12*	1905.0929	$(4)^-$	1193.0249	5^-	M1		0.01425	Mult.: α(K)exp=0.016 *2*.
713.257 *6*	45.5[b] *26*	1707.9929	5^-	994.7469	4^+	E1			Mult.: α(K)exp=0.0030 *7*.
715.163 *6*	128[b] *5*	1263.9042	6^+	548.7466	6^+	M1+E2[&]	3.0[&] *+16−6*		Mult.: α(K)exp=0.0065 *15*.
718.57 *7*	1.2 *5*	1994.820	$(3)^+$	1276.2709	2^+				
719.17 *10*	1.2 *6*	1983.0432	5^-	1263.9042	6^+				
719.550 *5*	78 *9*	1615.3420	4^-	895.7941	3^+	E1			Mult.: α(K)exp=0.0026 *4*.
720.392 *5*	110 *10*	1541.5562	3^-	821.1679	2^+	E1			Mult.: α(K)exp=0.0024 *4*.
721.71 *3*	2.8 *8*	1839.3461	5^+	1117.5699	5^+				
724.432 *5*	33[b] *3*	1719.1785	4^-	994.7469	4^+	E1			Mult.: α(K)exp=0.0025 *7*.
726.16 *4*	0.7 *2*	1820.1321	6^-	1094.0379	4^-				
729.00 *5*	1.7 *7*	2303.10	$(6)^-$	1574.116	5^-				
730.660 *2*	785[b] *26*	994.7469	4^+	264.0886	4^+	E2			Mult.: α(K)exp=0.0053 *3*; α(L1)exp=0.00078 *9*; α(L2)exp=0.00018 *3*.
733.231 *10*	3.4 *8*	2302.582	$(3)^-$	1569.4484	$(2)^-$	M1		0.01324	Mult.: α(K)exp=0.020 *5*. other Eγ (Iγ): 732.8 *4* (10.0 *27*) (2007ChZX, Budapest data).
736.56 *6*	1.3 *5*	2169.516	$(5)^+$	1432.9505	7^+				
737.686 *4*	81[b] *4*	1633.4616	3^-	895.7941	3^+	E1			Mult.: α(K)exp=0.0022 *4*.
741.0[h] *16*		1736.6868	4^+	994.7469	4^+				I$_\gamma$: see comment on 741γ from 821 level.
741.356 *3*	458[b] *28*	821.1679	2^+	79.8039	2^+	E2			I$_\gamma$: 2000Gr34 report a 741.0γ deexciting the 1737 level based on their two-photon cascade coin data. however, adopted branching for the 821 level implies that all or most of I(741.3γ) deexcites this level.

$^{168}_{68}Er_{100}$-19

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

$\gamma(^{168}Er)$ (continued)

E_γ [†]	I_γ [†‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[#]	α[m]	Comments
									Mult.: α(K)exp=0.0050 *3*; α(L1)exp=0.00069 *9*; α(L2)exp=0.00007 *2*.
745.293 *10*	5.9[b] *9*	1839.3461	5^+	1094.0379	4^-				Mult.: α(K)exp=0.0031 *10*.
[x]745.807 *25*	1.1 *3*								
748.281 *4*	90[b] *4*	1569.4484	$(2)^-$	821.1679	2^+	E1			Mult.: α(K)exp=0.0023 *3*; α(L1)exp=0.0005 *2*.
[x]751.50 *3*	0.33 *12*								
755.66 *8*	1.7 *4*	2177.79	(2^+)	1422.12	0^+				
757.84 *3*	1.5 *4*	1653.5459	3^+	895.7941	3^+	M1		0.01220	Mult.: α(K)exp=0.0083 *20*.
[x]759.157 *10*	1.0 *3*								placement from 2393 level by 1991Da12 rejected based on $\gamma\gamma$ coin In 1996Gi09.
760.54 *9*	1.2 *3*	1656.273	$(4)^+$	895.7941	3^+				
761.11[j] *5*	2.1 *5*	2302.582	$(3)^-$	1541.5562	3^-				1991Da12's placement from 2210 level rejected based on $\gamma\gamma$ coin In 1996Gi09.
762.75 *4*	0.9 *3*	1311.4603	6^-	548.7466	6^+				
768.368 *11*	5.0[b] *10*	1961.3981	6^+	1193.0249	5^-				
[x]769.38 *4*	2.1 *7*								
775.378 *13*	2.0 *7*	1892.9364	$(4)^-$	1117.5699	5^+				
[x]778.717 *7*	6.9 *14*								
779.806 *6*	13.9 *20*	2091.272	$(6)^-$	1311.4603	6^-				
790.001 *5*	46.7[b] *25*	1983.0432	5^-	1193.0249	5^-	M1		0.01100	Mult.: α(K)exp=0.0099 *9*; α(L1)exp=0.0011 *2*.
792.11[n] *6*	1.9[n] *7*	2055.913	$(4)^+$	1263.9042	6^+				
792.11[n j] *6*	1.9[n] *7*	2852.0		2059.9763	$(4)^-$				
[x]795.045 *9*	5.9 *13*					E2			Mult.: α(K)exp=0.0043 *7*.
797.94 *10*	2.0 *6*	1915.501	$(3)^+$	1117.5699	5^+				
798.890 *7*	148[b] *6*	1892.9364	$(4)^-$	1094.0379	4^-	M1		0.01070	Mult.: α(K)exp=0.0087 *7*.
807.30 *4*	17.5 *20*	2118.794	$(6)^-$	1311.4603	6^-	M1		0.01043	Mult.: α(K)exp=0.0105 *20*; α(L1)exp=0.0015 *3*.
808.910 *13*	53[b] *5*	2001.957	5^-	1193.0249	5^-	M1		0.01038	Mult.: α(K)exp=0.0100 *20*; α(L1)exp=0.0015 *3*.
811.043 *8*	115[b] *9*	1905.0929	$(4)^-$	1094.0379	4^-	M1		0.01031	Mult.: α(K)exp=0.0091 *25*; α(L1)exp=0.0012 *4*.
812.287 *11*	72[b] *9*	1633.4616	3^-	821.1679	2^+				
813.46 *5*	5.4 *12*	2246.530	$(6)^+$	1432.9505	7^+				
814.77[k] *7*	1.6 *5*	2551.48	$(4,5)^-$	1736.6868	4^+				
815.990 *4*	2880[b] *90*	895.7941	3^+	79.8039	2^+	E2+M1	5.1 *+12−7*	0.00535 *10*	Mult.: α(K)exp=0.00414 *15*; α(L1)exp=0.00058 *3*; α(L2)exp=0.000092 *8*; α(L3)exp=0.000053 *5*. δ: from sub-shell ratios (1987Ge02); inconsistent with adopted δ=+17.7 *23*.
817.7[e]		1812.5	$(2^+,3,4^+)$	994.7469	4^+				
821.164 *5*	451[b] *11*	821.1679	2^+	0.0	0^+	E2			Mult.: α(K)exp=0.00425 *25*; α(L1)exp=0.00051 *8*; α(L2)exp=0.00011 *2*.
823.386 *8*	88[b] *6*	1719.1785	4^-	895.7941	3^+	E1			Mult.: α(K)exp=0.0017 *3*.
825.729 *7*	60[b] *5*	1820.475	5^-	994.7469	4^+	E1			Mult.: α(K)exp=0.0016 *3*.

$^{168}_{68}Er_{100}$-20

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

γ(^{168}Er) (continued)

E_γ [†]	I_γ [†‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[#]	Comments
829.958 *7*	279[b] *12*	1094.0379	4⁻	264.0886	4⁺	E1		Mult.: α(K)exp=0.0016 *3*; α(L1)exp=0.00026 *6*.
832.05 *3*	20 *4*	1949.636	(6)⁻	1117.5699	5⁺			
832.36 *4*	16 *3*	1653.5459	3⁺	821.1679	2⁺			other Eγ: 832.75 *11* (2007ChZX, Budapest data).
833.294 *9*	32 *5*	1828.0644	3⁻	994.7469	4⁺	E1		Mult.: α(K)exp=0.0014 *3*.
835.14 *3*	2.0 *8*	1656.273	(4)⁺	821.1679	2⁺			
[x]836.81 *3*	1.9 *5*							
840.890 *8*	1.5 *3*	1736.6868	4⁺	895.7941	3⁺	E2		Mult.: α(K)exp=0.0036 *6*. other Eγ (Iγ): 840.93 *13* (15.5 *20*) (2007ChZX, Budapest data).
843.83 *4*	1.3 *6*	1961.3981	6⁺	1117.5699	5⁺			
844.614 *15*	6.6[b] *7*	1839.3461	5⁺	994.7469	4⁺	M1		Mult.: α(K)exp=0.009 *2*.
[x]847.7[l] *2*	2.1[l] *5*							
853.473 *6*	506[b] *18*	1117.5699	5⁺	264.0886	4⁺	M1+E2[&]	3.6[&] *+24−8*	Mult.: α(K)exp=0.00404 *25*; α(L1)exp=0.00056 *6*; α(L2)exp=0.00009 *2*; α(L3)exp=0.00007 *2*.
858.063 *23*	3.7 *7*	2169.516	(5)⁺	1311.4603	6⁻			
[x]860.039 *19*	5.2 *9*							
862.355 *11*	77[b] *4*	1411.0953	4⁺	548.7466	6⁺	E2		Mult.: α(K)exp=0.0041 *7*; α(L1)exp=0.00065 *9*.
862.99 *6*	8.0 *20*	2055.913	(4)⁺	1193.0249	5⁻			
865.329 *23*	6.4[b] *9*	2129.229	(5)⁻	1263.9042	6⁺			
867.014 *11*	7.5 *10*	1795.328	(7⁻)	928.3026	8⁺			
877.072[j] *17*	2.8 *6*	2188.406	(5⁺)	1311.4603	6⁻			other Iγ: 6.7 *20* (2007ChZX, Budapest data).
884.219 *9*	29[b] *3*	1432.9505	7⁺	548.7466	6⁺	M1+E2	1.3 *+8−4*	Mult.: α(K)exp=0.0050 *7*.
889.006 *10*	6.3[b] *12*	1983.0432	5⁻	1094.0379	4⁻	M1		Mult.: α(K)exp=0.012 *3*.
[x]890.62 *5*	0.7 *3*							
898.32 *3*	6.5[b] *11*	2091.272	(6)⁻	1193.0249	5⁻	M1		Mult.: α(K)exp=0.0066 *9*.
899.85[j] *5*	2.2 *9*	2392.926	(3⁻,4⁺)	1493.133	2⁺			
900.206 *15*	6.9[b] *9*	1448.9552	7⁻	548.7466	6⁺			
905.30 *15*	0.9 *3*	2169.516	(5)⁺	1263.9042	6⁺			
907.927 *25*	10.3[b] *13*	2001.957	5⁻	1094.0379	4⁻	M1		Mult.: α(K)exp=0.0080 *12*.
909.41 *9*	1.3 *4*	2451.166	(5⁻)	1541.7084	(4)⁻			other Eγ (Iγ): 910.74 *21* (10.8 *20*) (2007ChZX, Budapest data).
[x]910.55 *3*	6.5 *9*							
[x]912.91 *4*	5.3 *8*							
914.944 *6*	473[b] *15*	994.7469	4⁺	79.8039	2⁺	E2		Mult.: α(K)exp=0.0033 *3*; α(L1)exp=0.00045 *3*; α(L2)exp=0.000076 *12*; α(L3)exp=0.00005 *2*.
[x]916.0[l] *5*	[l]							
916.7[e]		1812.5	(2⁺,3,4⁺)	895.7941	3⁺			Eγ: differs from the unplaced 916.0 *5* transition reported by 1996Gi09 because the latter is coincident with a 1786.09γ.
920.78 *3*	10 *4*	1915.501	(3)⁺	994.7469	4⁺	E2		Mult.: α(K)exp=0.0031 *4*. Iγ: weighted average of 14.5 *25* (1991DaZT) and 6.7 *20* (2007ChZX, Budapest data).
925.762 *15*	5.1 *8*	2118.794	(6)⁻	1193.0249	5⁻	M1		α(K)exp=0.0076 *10*. other Iγ: 9.4 *27* (2007ChZX, Budapest data).

$^{168}_{68}Er_{100}$-21

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

$\gamma(^{168}Er)$ (continued)

E_γ [†]	I_γ [†‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[#]	Comments
928.935 *5*	105[b] *4*	1193.0249	5^-	264.0886	4^+	E1		Mult.: α(K)exp=0.0014 *2*; α(L1)exp=0.00018 *3*.
[x]930.48 *5*	5.0 *8*							
932.269 *9*	54.7[b] *26*	1828.0644	3^-	895.7941	3^+	E1		Mult.: α(K)exp=0.0015 *5*.
[x]937.57 *7*	1.0 *3*							
938.22[n] *5*	1.5[n] *3*	2055.913	$(4)^+$	1117.5699	5^+			
938.22[n] *5*	1.5[n] *3*	2249.68		1311.4603	6^-			placement from 1992BoZF.
943.892 *25*	5.5 *9*	2255.347	$(6)^-$	1311.4603	6^-	M1		Mult.: α(K)exp=0.0070 *6*. other Iγ: 10.8 *27* (2007ChZX, Budapest data).
944.79 *6*	2.4 *7*	2561.56	(4^+)	1616.8054	6^+			
952.611 *15*	7.0 *14*	1848.353	2^+	895.7941	3^+	M1+E2	0.8 *+9−6*	I_γ: weighted average of 7.8 *12* (1991DaZT) and 4.7 *20* (2007ChZX, Budapest data). Mult.: α(K)exp=0.0048 *10*.
955.339 *11*	27[b] *3*	2148.3742	5^-	1193.0249	5^-	M1		Mult.: α(K)exp=0.0055 *7*; α(L1)exp=0.0007 *1*.
961.875 *8*	30.3[b] *26*	2055.913	$(4)^+$	1094.0379	4^-	E1		Mult.: α(K)exp=0.0014 *3*.
965.937 *6*	57[b] *3*	2059.9763	$(4)^-$	1094.0379	4^-	M1		Mult.: α(K)exp=0.0053 *10*.
969.51 *3*	3.3 *8*	2874.62	(3,4,5)	1905.0929	$(4)^-$			
973.70 *3*	3.8 *8*	2091.272	$(6)^-$	1117.5699	5^+			
974.42 *4*	3.7 *8*	1902.696	(6^+)	928.3026	8^+			
976.498 *14*	9.7[b] *18*	2169.516	$(5)^+$	1193.0249	5^-	E1		Mult.: α(K)exp=0.0015 *4*.
[x]978.55 *5*	2.0 *4*							
979.996 *6*	25[b] *4*	2097.571	4^-	1117.5699	5^+	E1		Mult.: α(K)exp=0.0010 *3*.
982.64 *3*	2.4 *7*	2246.530	$(6)^+$	1263.9042	6^+			
984.42[k] *8*	2.0 *4*	2558.67	$(5)^-$	1574.116	5^-			
986.40 *4*	6.0 *11*	2080.455	$(4)^+$	1094.0379	4^-			
986.94 *5*	4.84 *8*	2298.258	$(4,5,6)^+$	1311.4603	6^-			1991Da12's placement from 2298 level questioned by 1994Ju02 but confirmed by $\gamma\gamma$ coin data of 1996Gi09. other Iγ: 9.4 *27* (2007ChZX, Budapest data).
[x]988.447 *20*	4.7 *9*							
991.3[e]		1812.5	$(2^+,3,4^+)$	821.1679	2^+			
991.388 *21*	8.8 *14*	2108.987	$(5)^+$	1117.5699	5^+	E2		Mult.: α(K)exp=0.0032 *5*.
995.306 *25*	8.0 *12*	2188.406	(5^+)	1193.0249	5^-			
995.420 *25*	8.3[b] *13*	2306.882	(6^+)	1311.4603	6^-			
997.25 *3*	4.2 *7*	1893.100	2^+	895.7941	3^+	E2		Mult.: α(K)exp=0.0026 *3*.
[x]998.45 *4*	1.8 *7*							
999.827 *11*	69[b] *4*	1263.9042	6^+	264.0886	4^+	E2		Mult.: α(K)exp=0.0027 *2*; α(L1)exp=0.0003 *1*.
1004.11[j] *4*	3.7 *8*	2657.66	(2,3,4)	1653.5459	3^+			
1006.91 *3*	12.0[b] *21*	1828.0644	3^-	821.1679	2^+	E1		Mult.: α(K)exp=0.0016 *4*.
1007.57 *6*	7.5 *18*	2002.465	$(4)^+$	994.7469	4^+	M1		Mult.: α(K)exp=0.0055 *7*.
1009.675 *21*	20.9[b] *20*	2663.232	$(4)^+$	1653.5459	3^+	E2		Mult.: α(K)exp=0.0027 *5*. also placed from 2273 level In 1994Ju02 but $\gamma\gamma$ coin (1996Gi09) does not confirm that placement.

$^{168}_{68}Er_{100}$-22

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

$\gamma(^{168}Er)$ (continued)

E_γ[†]	I_γ[†‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[#]	α[m]	Comments
[x]1010.61 *7*	3.1 *10*								
1012.190 *10*	96[b] *4*	1276.2709	2^+	264.0886	4^+	E2			Mult.: α(K)exp=0.0027 *3*; α(L1)exp=0.0004 *1*.
1014.11 *4*	7.0 *11*	1094.0379	4^-	79.8039	2^+	M2		0.01485	Mult.: α(K)exp=0.011 *2*.
[x]1015.65 *13*	2.1 *6*								
1018.33 *17*	2.1 *6*	1913.87	3^-	895.7941	3^+				
1019.57 *7*	5.3 *8*	1915.501	$(3)^+$	895.7941	3^+				
1020.70[j] *8*	6.1 *8*	2331.987	6^-	1311.4603	6^-				
1025.377 *11*	66[b] *4*	1574.116	5^-	548.7466	6^+	E1			Mult.: α(K)exp=0.0010 *2*.
1027.11 *7*	4.1 *8*	1848.353	2^+	821.1679	2^+				
[x]1027.79 *7*	4.0 *9*								
1029.45[j] *5*	4.0 *9*	2440.118	$(4^+,5^+)$	1411.0953	4^+				E_γ: from 1991DaZT; 1029.41 *4* In 1996Gi09.
1030.50[j] *5*	5.3 *11*	2738.58		1707.9929	5^-				
1034.49 *4*	4.6 *9*	1930.388	2^+	895.7941	3^+	E2			Mult.: α(K)exp=0.0023 *4*.
1036.38 *6*	3.4 *12*	2031.097	$(4)^+$	994.7469	4^+	E2			Mult.: α(K)exp=0.0024 *8*.
1037.88[k] *18*	2.4 *10*	2254.73	(2^+)	1217.167	0^+				
1038.73 *16*	3.4 *12*	2303.10	$(6)^-$	1263.9042	6^+				
1041.35 *11*	3.6 *11*	2474.12	(6^-)	1432.9505	7^+				
1042.35[n] *21*	2.2[n] *9*	2306.882	(6^+)	1263.9042	6^+				
1042.35[n j] *21*	2.2[n] *9*	2657.66	(2,3,4)	1615.3420	4^-				
[x]1043.56 *12*	2.4 *9*								
1045.31 *7*	2.9 *10*	2238.179	$(4)^+$	1193.0249	5^-				
[x]1047.2[l] *2*	[l]								
[x]1050.56 *15*	1.6 *6*								
1051.86 *6*	4.1 *18*	2169.516	$(5)^+$	1117.5699	5^+				
1054.297 *19*	11.0 *25*	2148.3742	5^-	1094.0379	4^-	M1+E2	1.1 *+8−4*		Mult.: α(K)exp=0.0035 *5*.
[x]1056.75 *5*	6.5 *15*					E2			Mult.: α(K)exp=0.0028 *6*.
[x]1058.33 *4*	3.5 *9*								
1060.06[j] *13*	2.4 *9*	2768.55		1707.9929	5^-				
1061.13 *5*	6.9 *15*	2055.913	$(4)^+$	994.7469	4^+				
[x]1062.70 *3*	9.5 *25*					M1+E2	1.0 *+9−5*		Mult.: α(K)exp=0.0037 *7*.
1068.079 *13*	24 *5*	1616.8054	6^+	548.7466	6^+	M1			Mult.: α(K)exp=0.0041 *7*. I_γ: weighted average of 44 *7* (1991DaZT) and 22.8 *20* (2007ChZX, Budapest data).
1071.74 *13*	1.7 *5*	1893.100	2^+	821.1679	2^+				
1074.50 *17*	5.5 *18*	2267.634	$(3,4,5)^+$	1193.0249	5^-				
1075.64 *8*	5.9 *18*	1624.507	8^+	548.7466	6^+				
1076.524 *23*	14 *3*	1972.311	$(2)^-$	895.7941	3^+	E1			Mult.: α(K)exp=0.0008 *3*. I_γ: weighted average of 19 *3* (1991DaZT) and 12.1 *20* (2007ChZX, Budapest data).
1080.4[l] *2*	2.4[l] *6*	2392.117	$(5,6^+)$	1311.4603	6^-				
[x]1085.25 *8*	3.9 *12*								
1086.62 *3*	8.7[b] *21*	2279.628	$(4)^+$	1193.0249	5^-				

$^{168}_{68}Er_{100}$-23

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

γ(^{168}Er) (continued)

E_γ[†]	I_γ[†‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[#]	Comments
[x]1090.82 *3*	7.9 *20*					E2		Mult.: α(K)exp=0.0025 *7*.
[x]1093.67 *10*	5 *2*							E_γ: incompatible with placement from 2089 level proposed by 2000Gr34.
1094.43 *10*	12.8[b] *20*	1915.501	$(3)^+$	821.1679	2^+			Mult.: α(K)exp=0.0016 *3*.
1100.11 *15*	1.7 *7*	2411.792	$(5)^+$	1311.4603	6^-			
1102.81 *5*	6.1 *17*	2097.571	4^-	994.7469	4^+			
1105.260 *16*	29.1[b] *24*	2298.258	$(4,5,6)^+$	1193.0249	5^-	E1		Mult.: α(K)exp=0.0011 *2*.
1106.65 *5*	7 *2*	2002.465	$(4)^+$	895.7941	3^+			
1107.495 *19*	32[b] *3*	1656.273	$(4)^+$	548.7466	6^+	E2		Mult.: α(K)exp=0.0019 *3*.
1109.36 *8*	3.9 *11*	1930.388	2^+	821.1679	2^+			
1112.41[j] *5*	7.5 *15*	2727.77	$(4,5)^-$	1615.3420	4^-	M1+E2	1.2 *+14−5*	Mult.: α(K)exp=0.0030 *5*.
1113.84 *7*	8.0[b] *14*	2306.882	(6^+)	1193.0249	5^-			
[x]1117.30 *16*	3.4 *11*							
1123.30[j] *6*	5.6 *11*	2738.58		1615.3420	4^-			
[x]1124.8[l] *2*	2.5[l] *5*							
[x]1126.8[l] *3*	0.1[l] *1*							
1128.27[j] *8*	4.5 *10*	2392.117	$(5,6^+)$	1263.9042	6^+			
[x]1131.31 *5*	3.8 *12*							
[x]1132.02 *7*	2.6 *11*							
[x]1133.38 *4*	3.6 *12*							
1135.39 *6*	2.1 *9*	2031.097	$(4)^+$	895.7941	3^+			
1137.357 *16*	12.4[b] *15*	1217.167	0^+	79.8039	2^+	E2		Mult.: α(K)exp=0.0026 *5*.
[x]1138.15 *4*	5.0 *10*							
1141.47[j] *7*	3.4 *13*	2849.61	(4^+)	1707.9929	5^-			
[x]1142.03 *3*	10.6 *16*							
1144.112[p] *11*	42 *7*	2238.179	$(4)^+$	1094.0379	4^-	E1		Mult.: α(K)exp=0.00085 *20*. placement from 2238 level by 1991Da12 is unconfirmed by γγ coin from 1996Gi09, but supported by two-photon cascade data from 2000Gr34, so placement is shown As uncertain. I_γ: weighted average of 59 *7* (1991DaZT) and 39 *3* (2007ChZX, Budapest data). other Eγ: 1143.76 *11* (2007ChZX, Budapest data).
1146.998 *9*	64[b] *4*	1411.0953	4^+	264.0886	4^+	M1		Mult.: α(K)exp=0.0047 *8*.
1151.19 *4*	6.6 *18*	1972.311	$(2)^-$	821.1679	2^+			
1153.31[j] *6*	2.4 *7*	2768.55		1615.3420	4^-			
1155.56[p] *3*	6.2[b] *14*	2348.579	4^-	1193.0249	5^-	M1		Mult.: α(K)exp=0.0053 *9*. questionable placement (1996Gi09).
[x]1159.19 *3*	17 *4*					E2		Mult.: α(K)exp=0.0017 *3*.
1160.077 *20*	14 *3*	2055.913	$(4)^+$	895.7941	3^+	E2		Mult.: α(K)exp=0.0023 *4*. other Eγ (Iγ): 1159.72 *10* (26.2 *27*) (2007ChZX, Budapest data).
1165.65 *10*	5.2 *17*	2477.22	$(5)^-$	1311.4603	6^-	M1		Mult.: α(K)exp=0.0043 *6*.

$^{168}_{68}Er_{100}$-24

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

γ(^{168}Er) (continued)

E_γ[†]	I_γ[†‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	Comments
1167.396 *15*	133[b] *5*	1431.465	3^-	264.0886	4^+	E1	Mult.: α(K)exp=0.00090 *10*; α(L1)exp=0.00009 *2*.
1172.30 *7*	4.2 *18*	2365.199	$(5)^-$	1193.0249	5^-	M1	Mult.: α(K)exp=0.0036 *7*.
1173.557 *20*	47.8[b] *27*	2267.634	$(3,4,5)^+$	1094.0379	4^-	E1	Mult.: α(K)exp=0.0009 *2*.
1174.56 *7*	7.6 *20*	2169.516	$(5)^+$	994.7469	4^+	E2	Mult.: α(K)exp=0.0024 *4*.
1175.53 *7*	7.8 *20*	2368.587	(5^+)	1193.0249	5^-		
1176.42[n] *5*	10.0[n] *17*	2270.46		1094.0379	4^-		placement from 1992BoZF. Mult.: α(K)exp=0.0039 *5*, mult=M1 for doubly-placed G. other Iγ: 18.8 *27* (2007ChZX, Budapest data).
1176.42[n j] *5*	10.0[n] *17*	2440.118	$(4^+,5^+)$	1263.9042	6^+		Mult.: α(K)exp=0.0039 *5*, mult=M1 for doubly-placed G. other Iγ: 18.8 *27* (2007ChZX, Budapest data).
[x]1180.868 *24*	13.0 *20*					E1	Mult.: α(K)exp=0.0008 *3*.
[x]1185.480 *18*	17.6[b] *26*					E1	Mult.: α(K)exp=0.0009 *3*. 1991Da12's placement from 2303.1 level ruled out by $\gamma\gamma$ coin In 1994Ju02.
[x]1189.95 *21*	3.1 *13*						
1192.7[l] *5*	4[l] *1*	2186.740	$(3)^+$	994.7469	4^+		
1194.08[k] *16*	4.6 *14*	2188.74	$(2^+,3,4^+)$	994.7469	4^+		
1196.513 *20*	55[b] *3*	1276.2709	2^+	79.8039	2^+	M1	Mult.: α(K)exp=0.0038 *4*; α(L1)exp=0.00045 *8*.
1199.61 *4*	7.8 *20*	2392.926	$(3^-,4^+)$	1193.0249	5^-		alternative placement from 2559 level (1994Ju02) rejected by evaluator because Eγ fits that placement very poorly and implied multipolarity would Be high. Mult.: α(K)exp=0.0024 *5*, mult=E2; inconsistent with placement of 362γ from same level.
1201.757 *21*	26[b] *3*	2097.571	4^-	895.7941	3^+	E1	Mult.: α(K)exp=0.0011 *3*.
[x]1207.46 *16*	2.5 *10*						
1208.30[n] *9*	4.4[n] *12*	2425.72	$(2)^+$	1217.167	0^+		
1208.30[n] *9*	4.4[n] *12*	2484.61	(3^+)	1276.2709	2^+		
1212.045 *20*	31[b] *4*	1760.760	$(6)^-$	548.7466	6^+	E1	Mult.: α(K)exp=0.00085 *15*.
1218.68[n] *6*	7.0[n] *25*	2336.26	4^+	1117.5699	5^+		
1218.68[n] *7*	10[nb] *3*	2411.792	$(5)^+$	1193.0249	5^-		
[x]1219.80 *5*	6.0 *23*						
[x]1222.28 *10*	4.0 *17*						
1223.00 *7*	5.0 *20*	2440.45	(2^+)	1217.167	0^+		1994Ju02's placement from 2440.1 level not supported by $\gamma\gamma$ coin data of 1996Gi09. Placed by evaluator consistent with Adopted Levels, Gammas. other Iγ: 13.4 *27*) (2007ChZX, Budapest data).
1226.0[l] *5*	0.6[l] *3*	2657.66	(2,3,4)	1431.465	3^-		
1229.080 *15*	42[b] *3*	1493.133	2^+	264.0886	4^+	E2	Mult.: α(K)exp=0.0019 *4*.
1231.04 *9*	4.0 *2*	2348.579	4^-	1117.5699	5^+		
1234.760 *23*	28.1[b] *24*	2055.913	$(4)^+$	821.1679	2^+	E2	Mult.: α(K)exp=0.0019 *4*.
[x]1238.77 *15*	3.0 *10*						
[x]1240.9[l] *3*	1.1[l] *5*						
[x]1242.20 *12*	3.0 *10*						

$^{168}_{68}Er_{100}$-25

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

$\gamma(^{168}Er)$ (continued)

E_γ[†]	I_γ[†‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	Comments
1243.072 *20*	15.9[b] *4*	2337.099	3$^-$	1094.0379	4$^-$	M1	Mult.: α(K)exp=0.0029 *5*.
1246.70 *4*	8.5 *25*	1795.328	(7$^-$)	548.7466	6$^+$		Mult.: α(K)exp<0.0012.
1247.78 *13*	2.5 *10*	2365.199	(5)$^-$	1117.5699	5$^+$		
x1250.9[l] *2*	2.1[l] *3*						
x1256.3[l] *5*	0.8[l] *2*						
x1256.8[l] *3*	18[l] *4*						
1259.27 *5*	12.6[b] *23*	2080.455	(4)$^+$	821.1679	2$^+$	E2	Mult.: α(K)exp=0.0015 *3*.
1260.09 *5*	25 *5*	2254.85	(3)$^+$	994.7469	4$^+$		Mult.: α(K)exp=0.0011 *2*, mult=E1,E2.
1265.0[lp] *2*	1.7[l] *9*	2528.81	(5)$^-$	1263.9042	6$^+$		possible placement based on Eγ and γ-715γ, γ-999.8γ coin.
1267.83 *10*	10 *3*	2262.690	(3)$^-$	994.7469	4$^+$		
x1268.91 *3*	8 *3*						
1271.13 *4*	31[b] *3*	2365.199	(5)$^-$	1094.0379	4$^-$	M1	Mult.: α(K)exp=0.0026 *4*.
1273.74 *9*	15 *7*	2169.516	(5)$^+$	895.7941	3$^+$	E2	Mult.: α(K)exp=0.0017 *3*.
1274.53 *12*	19 *7*	2368.587	(5$^+$)	1094.0379	4$^-$		Mult.: α(K)exp=0.0013 *5*. other Eγ (Iγ): 1274.86 *17* (46 *7*) (2007ChZX, Budapest data).
1275.32 *9*	18 *7*	2392.926	(3$^-$,4$^+$)	1117.5699	5$^+$		
1276.27 *3*	52 *7*	1276.2709	2$^+$	0.0	0$^+$	E2	α(K)exp=0.0016 *3*.
1277.451 *5*	14.6 *5*	1541.5562	3$^-$	264.0886	4$^+$		E$_\gamma$: from Adopted Gammas; Eγ=1277.592 *20* for doublet In 1991DaZT. I$_\gamma$: see comment with 1277.6γ.
1277.592 *20*	142 *18*	1541.7084	(4)$^-$	264.0886	4$^+$	E1	Mult.: α(K)exp=0.0008 *1*. I$_\gamma$: Iγ(exp)=157 *18* (1991DaZT) for doublet. based on adopted branching for 3$^-$ 1541.6 level and I(448γ) here, Iγ=14.6 *5* deexcites that level leaving Iγ=142 *18* for this placement. Other Eγ (Iγ): 1277.57 *8* (190 *11*) (2007ChZX, Budapest data), presumably for doublet.
1279.13 *3*	69 *9*	1358.899	1$^-$	79.8039	2$^+$	E1	Mult.: α(K)exp=0.0007 *2*.
1281.03[nk] *7*	10[n] *3*	2398.47	(3$^+$,4,5$^+$)	1117.5699	5$^+$		Mult.: α(K)exp=0.0033 *5* for multiply-placed γ; consistent with M1. placement from 2474 level In 1991Da12 inconsistent with $\gamma\gamma$ coin In 1994Ju02.
1281.03[nj] *7*	10[n] *3*	2896.12	(3,4$^+$)	1615.3420	4$^-$		Mult.: α(K)exp=0.0033 *5* for multiply-placed γ; consistent with M1.
1284.08[n] *8*	7[n] *3*	2378.12		1094.0379	4$^-$		Mult.: α(K)exp=0.0020 *7*, mult=M1,E2 for doubly-placed G. placement from 1992BoZF.
1284.08[n] *8*	7[n] *3*	2477.22	(5)$^-$	1193.0249	5$^-$		Mult.: α(K)exp=0.0020 *7*, mult=M1,E2 for doubly-placed G.
x1292.66 *4*	11 *3*					E2	Mult.: α(K)exp=0.0015 *4*. placement from 2188 (5$^+$) level by 1991Da12 rejected based on $\gamma\gamma$ coin In 1996Gi09.
1294.053[n] *25*	21[n] *6*	2411.792	(5)$^+$	1117.5699	5$^+$		Mult.: α(K)exp=0.00065 *15*, mult=E1 for doubly-placed G.
1294.053[n] *25*	21.8[nb] *27*	2558.67	(5)$^-$	1263.9042	6$^+$		Mult.: α(K)exp=0.00065 *15*, mult=E1 for doubly-placed G.
1297.32 *6*	7.7 *23*	2193.20	2$^+$	895.7941	3$^+$		
1298.40[p] *9*	7.2 *23*	2392.117	(5,6$^+$)	1094.0379	4$^-$		placement from 2393 level by 1991Da12 rejected based on $\gamma\gamma$ coin In 1996Gi09 but supported by $\gamma\gamma$ coin In two-photon cascade study by 2000Gr34, so placement shown As uncertain here.
1302.0[h] *16*		2398.47	(3$^+$,4,5$^+$)	1094.0379	4$^-$		

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

$\gamma(^{168}Er)$ (continued)

E_γ[†]	I_γ[†‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	Comments
1304.1[l] 3	2.9[l] 9	2298.258	(4,5,6)$^+$	994.7469	4$^+$		
1308.0[h] 16		2402.29	(4)$^-$	1094.0379	4$^-$		I_γ: I(1308γ):I(1408γ):I(1506γ)=7.2 *20*:5.8 *11*:15 *3* (2000Gr34).
1309.0[hp] 16		2302.582	(3)$^-$	994.7469	4$^+$		I(13009γ):I(1482γ)=3.3 *10*:2.2 *7* (2000Gr34). E_γ,I_γ: seen only In (n,γ) E=thermal two-photon cascade work. Placement shown As uncertain because such a strong branch should have been seen In other studies but was not.
1310.030 8	113[b] 5	1574.116	5$^-$	264.0886	4$^+$	E1	Mult.: α(K)exp=0.0007 *1*; α(L1)exp=0.00009 *1*.
1317.42[nj] 6	5.0[n] 15	2969.74	3$^+$,4$^+$,5$^+$	1653.5459	3$^+$		E_γ: from 1996Gi09; 1317.56 *10* In 1991DaZT.
1317.56[nip] 10	5.0[n] 15	2411.792	(5)$^+$	1094.0379	4$^-$		1991Da12′s placement from 2412 level rejected by 1996Gi09 based on $\gamma\gamma$ coin data; however, two-photon cascade data from 2000Gr34 appear to confirm this placement. consequently, placement is retained but shown As uncertain here.
1322.6[l] 2	8[l] 4	2440.118	(4$^+$,5$^+$)	1117.5699	5$^+$		
1322.7[e]		2218.5		895.7941	3$^+$		
1323.913 20	116[b] 5	1403.7344	(2)$^-$	79.8039	2$^+$	E1	Mult.: α(K)exp=0.0009 *2*.
1328.57 21	3.7 15	2323.02	3$^-$	994.7469	4$^+$		
[x]1330.7[l] 3	2.1[l] 5						
1331.324 15	95[b] 8	1411.0953	4$^+$	79.8039	2$^+$	E2	Mult.: α(K)exp=0.0016 *2*; α(L1)exp=0.00022 *3*.
1333.44[n] 15	10[n] 3	2451.166	(5$^-$)	1117.5699	5$^+$		
1333.44[n] 15	9.3[nb] 20	2526.584	(5)$^-$	1193.0249	5$^-$		
1338.67[j] 15	4.3 22	2455.96	(3$^+$,4,5$^+$)	1117.5699	5$^+$		E_γ: from 1991DaZT; 1338.4 *2* In 1996Gi09.
1341.58 14	11 3	2336.26	4$^+$	994.7469	4$^+$		
1342.44 7	28[b] 3	1422.12	0$^+$	79.8039	2$^+$	E2	Mult.: α(K)exp=0.0020 *5*.
[x]1346.72 17	5 2						
1351.54 4	131[b] 5	1431.465	3$^-$	79.8039	2$^+$	E1	Mult.: α(K)exp=0.0008 *2*.
1352.53 13	21 7	1616.8054	6$^+$	264.0886	4$^+$	E2	Mult.: α(K)exp=0.0020 *3*.
1353.78[np] 10	39[n] 3	1902.696	(6$^+$)	548.7466	6$^+$		tentatively placed by evaluator; see comment on 1354γ from 2349 level.
1353.78[nj] 10	39[nb] 3	2348.579	4$^-$	994.7469	4$^+$		Mult.: α(K)exp=0.0019 *3* implies E2(+M1), but placement requires E1. Placed from 1902 level also In (n,n′γ), so 1354γ May Be a doublet.
1355.3[l] 3	67[l] 8	2896.12	(3,4$^+$)	1541.5562	3$^-$		
[x]1356.4[l] 3	6[l] 3						
1358.0[h] 16		2451.166	(5$^-$)	1094.0379	4$^-$		
1358.90[o] 3	20[ob] 3	1358.899	1$^-$	0.0	0$^+$		1994Ju02 suggest that the stronger component of this doublet deexcites the 1358 level. based on adopted branching from the 1359 level and I(1279γ) here, the observed Iγ=31.5 *28* comprises Iγ=20 *3* for this placement, and Iγ=12 *4* deexciting a 2255 level.
1358.90[ok] 3	12[o] 4	2254.73	(2$^+$)	895.7941	3$^+$		
[x]1364.2[l] 4	3.4[l] 4						
1366.914[n] 20	26.2[nb] 27	2262.690	(3)$^-$	895.7941	3$^+$		

$^{168}_{68}Er_{100}$-27

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

$\gamma(^{168}Er)$ (continued)

E_γ[†]	I_γ[†‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	Comments
1366.914[n j] *20*	23[n] *6*	2982.53	(3,4,5)	1615.3420	4$^-$		
[x]1368.65 *4*	14 *5*						
1372.05 *3*	17.5[b] *24*	2193.20	2$^+$	821.1679	2$^+$	M1	Mult.: α(K)exp=0.0031 *3*.
1383.36 *8*	5 *2*	2477.22	(5)$^-$	1094.0379	4$^-$		
1392.209 *13*	87[b] *4*	1656.273	(4)$^+$	264.0886	4$^+$	M1	Mult.: α(K)exp=0.0026 *3*; α(L1)exp=0.0004 *1*.
1396.13 *6*	11 *4*	2513.61	(4)$^-$	1117.5699	5$^+$		
1398.05 *6*	15.8[b] *26*	2392.926	(3$^-$,4$^+$)	994.7469	4$^+$		
1406.93 *7*	7.0 *2*	2302.582	(3)$^-$	895.7941	3$^+$		Mult.: α(K)exp=0.0009 *5*.
1407.67 *9*	7.0 *2*	2402.29	(4)$^-$	994.7469	4$^+$	E1	Mult.: α(K)exp=0.0007 *4*. other Eγ (Iγ): 1408.06 *18* (22.8 *27*) (2007ChZX, Budapest data).
1409.15[n] *4*	13[n] *4*	2230.30	(2)$^-$	821.1679	2$^+$		
1409.15[n j] *4*	13[n] *4*	2673.39	(4$^+$,5,6$^+$)	1263.9042	6$^+$		
1413.317 *23*	35.2[b] *26*	1493.133	2$^+$	79.8039	2$^+$	M1	Mult.: α(K)exp=0.0024 *3*.
1417.053[j] *25*	15.8[b] *22*	2411.792	(5)$^+$	994.7469	4$^+$	M1	Mult.: α(K)exp=0.0022 *4*.
1422.58[j] *8*	4 *2*	2540.22	(3,4,5)$^+$	1117.5699	5$^+$		
[x]1426.26 *11*	4 *2*						
1427.40 *11*	4 *2*	2323.02	3$^-$	895.7941	3$^+$		
1432.64 *7*	8 *3*	2526.584	(5)$^-$	1094.0379	4$^-$	E2	Mult.: α(K)exp=0.0017 *4*. other Eγ (Iγ): 1432.93 *20* (17.5 *27*) (2007ChZX, Budapest data).
1433.74[n] *7*	15[n] *4*	2254.85	(3)$^+$	821.1679	2$^+$		Mult.: α(K)exp=0.0013 *4*, mult=E2 for doubly-placed G.
1433.74[n] *7*	15[n] *4*	2527.78		1094.0379	4$^-$		Mult.: α(K)exp=0.0013 *4*, mult=E2 for doubly-placed G. placement from 1992BoZF.
[x]1438.32 *13*	3 *1*						
1440.41 *12*	10 *3*	2336.26	4$^+$	895.7941	3$^+$		
1441.41[nip] *7*	19[n] *2*	2262.690	(3)$^-$	821.1679	2$^+$		Mult.: α(K)exp=0.0005 *3*, mult=E1 for multiply-placed G. 1991Da12′s placement from 2263 level rejected by 1994Ju02 based on their $\gamma\gamma$ coin data; however, two-photon cascade data of 2000Gr34 do support this placement. consequently, placement is shown here As tentative.
1441.41[n] *7*	20.4[nb] *18*	2337.099	3$^-$	895.7941	3$^+$		Mult.: α(K)exp=0.0005 *3*, mult=E1 for multiply-placed G.
1441.41[n] *7*	19[n] *2*	2558.67	(5)$^-$	1117.5699	5$^+$		Mult.: α(K)exp=0.0005 *3*, mult=E1 for multiply-placed G. placed based on $\gamma\gamma$ coin (1996Gi09). $\gamma\gamma$ coin (1994Ju02) ruled out 1991Da12′s placement from 2263 level.
1444.06 *14*	4 *2*	2561.56	(4$^+$)	1117.5699	5$^+$		
1445.26[k] *8*	4 *2*	2440.118	(4$^+$,5$^+$)	994.7469	4$^+$		other Iγ: 14.1 *27* (2007ChZX, Budapest data).
1446.00 *7*	4 *2*	2440.45	(2$^+$)	994.7469	4$^+$		
[x]1447.50 *11*	7 *3*						
1449.26[k] *12*	8.7[b] *20*	2345.27	1$^-$,2$^-$,3$^-$	895.7941	3$^+$		
1452.50[k] *11*	7 *3*	2273.66	(2$^+$,3,4$^+$)	821.1679	2$^+$		placed from 2349 level In 1991Da12.
1456.15 *12*	8.7[b] *20*	2451.166	(5$^-$)	994.7469	4$^+$		
1458.34 *15*	7 *3*	2769.80	(5$^+$)	1311.4603	6$^-$		

$^{168}_{68}Er_{100}$-28

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

$\gamma(^{168}Er)$ (continued)

E_γ[†]	I_γ[†‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	Comments
1461.13[k] *8*	8 *2*	2455.96	$(3^+,4,5^+)$	994.7469	4^+		
[x]1466.40 *15*	4 *1*						
1470.40 *17*	5 *2*	2663.232	$(4)^+$	1193.0249	5^-		
1472.81 *11*	9 *2*	1736.6868	4^+	264.0886	4^+		
1476.0[l] *3*	0.6[l] *3*	2740.16	$(4,5,6)^+$	1263.9042	6^+		
[x]1477.38 *11*	8 *3*						
1481.71 *13*	10 *2*	2302.582	$(3)^-$	821.1679	2^+		
1484.46[k] *8*	16.4[b] *22*	2478.92	$(3)^-$	994.7469	4^+	E1	Mult.: α(K)exp=0.0006 *3*.
1486.78[k] *8*	15 *4*	2382.587	$(2)^+$	895.7941	3^+		Mult.: α(K)exp=0.0011 *3*.
1489.47 *14*	5 *2*	1569.4484	$(2)^-$	79.8039	2^+		I_γ: much greater than (≈11 times) corresponding intensity in ^{168}Tm ε decay, suggesting that 1489.5γ May Be a multiplet in ^{167}Er(n,γ) E=thermal.
1489.8[l] *2*	4[l] *2*	2484.61	(3^+)	994.7469	4^+		E_γ: misprinted As 1489.2 In table iv of 1996Gi09.
[x]1491.17 *12*	6 *2*						Mult.: α(K)exp=0.0010 *2*.
1493.09 *8*	9.3[b] *16*	1493.133	2^+	0.0	0^+	E2	Mult.: α(K)exp=0.0014 *3*. other Eγ: 1491.5 *3* (2007ChZX, Budapest data).
[x]1496.76 *13*	5 *2*						Mult.: α(K)exp=0.0013 *4*. placement from 2393 level by 1991Da12 rejected based on $\gamma\gamma$ coin In 1996Gi09.
1497.94 *22*	5 *2*	2393.71	(2^+)	895.7941	3^+		
1501.92 *18*	18.1[b] *22*	2323.02	3^-	821.1679	2^+		I_γ: combined value for 1501.9γ and 1502.7γ (unplaced).
1502.73[k] *9*	18 *4*	2398.47	$(3^+,4,5^+)$	895.7941	3^+		I_γ: combined value for 1501.9γ and 1502.7γ.
1506.49 *12*	21.8[b] *26*	2402.29	$(4)^-$	895.7941	3^+	E1	Mult.: α(K)exp=0.00055 *20*. I_γ: combined value for 1506.5γ and unplaced 1507.5γ.
[x]1507.50 *18*	21.8[b] *26*						I_γ: see comment on 1506.5γ.
1511.1[l] *3*	3[l] *2*	2628.57	$(3^+,4,5^+)$	1117.5699	5^+		
[x]1512.0[l] *5*	0.7[l] *4*						
1515.98[n] *6*	51[n] *7*	2337.099	3^-	821.1679	2^+		Mult.: α(K)exp=0.00051 *7*, mult=E1 for multiply-placed G.
1515.98[np] *6*	40[n] *5*	2411.792	$(5)^+$	895.7941	3^+		I_γ: weighted average of 51 *7* (1991DaZT) and 38 *3* (2007ChZX, Budapest data). Mult.: α(K)exp=0.00051 *7*, mult=E1 for doubly-placed G. placement from 2412 level by 1991Da12 confirmed by 2-photon cascade data from 2000Gr34 but rejected by 1996Gi09 based on $\gamma\gamma$ coin data, so placement shown as uncertain here.
[x]1517.77 *14*	3 *1*						
1518.95 *16*	9 *3*	2513.61	$(4)^-$	994.7469	4^+	E1	Mult.: α(K)exp=0.0007 *3*.
1524.18[k] *13*	9[b] *3*	2345.27	$1^-,2^-,3^-$	821.1679	2^+	E1	Mult.: α(K)exp=0.00044 *8*.
1529.67[p] *17*	3 *1*	2425.72	$(2)^+$	895.7941	3^+		placement from 2425 level by 1991Da12 rejected by 1996Gi09 based on $\gamma\gamma$ coin. however, γ is placed from 2425 level In β^- decay and (n,n′γ) also, so placement is retained here and shown As uncertain.
1532.18 *21*	3 *1*	2526.584	$(5)^-$	994.7469	4^+		other Eγ (Iγ): 1533.64 *21* (14.1 *27*) (2007ChZX, Budapest data).
1534.05[k] *10*	21 *4*	2528.81	$(5)^-$	994.7469	4^+	E1	Mult.: α(K)exp=0.00051 *8*.
1541.46 *25*	5 *2*	1541.5562	3^-	0.0	0^+		

$^{168}_{68}Er_{100}$-29

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

$\gamma(^{168}Er)$ (continued)

E_γ[†]	I_γ[†‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	Comments
1542.94[k] *25*	6 *2*	2660.56	$(3,4)^+$	1117.5699	5^+		
[x]1547.83 *15*	5 *2*						
1552.55[k] *25*	6 *2*	2373.654	2,3	821.1679	2^+		1991Da12′s placement from 2547 level ruled out by $\gamma\gamma$ coin In 1994Ju02.
1556.84[k] *15*	27 *4*	2551.48	$(4,5)^-$	994.7469	4^+	E1	Mult.: α(K)exp=0.00035 *10*.
1560.16[k] *8*	21.4[b] *24*	2455.96	$(3^+,4,5^+)$	895.7941	3^+		1991Da12′s placement from 2108 level rejected based on $\gamma\gamma$ coin In 1994Ju02.
1563.85[k] *9*	13.5[b] *21*	2558.67	$(5)^-$	994.7469	4^+		
1569.30 *11*	9 *2*	2663.232	$(4)^+$	1094.0379	4^-		Mult.: α(K)exp=0.0009 *2*. other Iγ: 18 *4* (2007ChZX, Budapest data).
1572.41 *15*	4 *1*	2393.71	(2^+)	821.1679	2^+		
1575.11 *17*	5 *2*	1839.3461	5^+	264.0886	4^+		
1576.58[n] *8*	7.5[nb] *23*	1656.273	$(4)^+$	79.8039	2^+		Mult.: α(K)exp=0.0012 *3*, mult=E1,E2 for multiply-placed G.
1576.58[ni] *8*	7.5[nb] *23*	2571.31		994.7469	4^+		I$_\gamma$: I(1577γ):I(1675γ)=4.0 *14*:3.9 *14* from 2571 level (2000Gr34). Mult.: α(K)exp=0.0012 *3*, mult=E1,E2 for multiply-placed G.
1576.58[n] *8*	7.5[nb] *23*	2769.80	(5^+)	1193.0249	5^-		Mult.: α(K)exp=0.0012 *3*, mult=E1,E2 for multiply-placed G.
1580.72[ni] *8*	38[n] *3*	2129.229	$(5)^-$	548.7466	6^+	E1	
1580.72[nk] *8*	38[nb] *3*	2402.08	(1^-)	821.1679	2^+	E1	Mult.: α(K)exp=0.00047 *7*. placed from 2129 level In 1991Da12.
1582.95 *20*	9 *3*	2478.92	$(3)^-$	895.7941	3^+		
1585.89[l] *24*	5[l] *2*	2849.61	(4^+)	1263.9042	6^+		
1588.75 *10*	4.3[b] *19*	2484.61	(3^+)	895.7941	3^+		
[x]1589.70 *15*	9 *3*						
[x]1599.00 *16*	7 *2*						
1604.09 *18*	5 *2*	2425.72	$(2)^+$	821.1679	2^+		
[x]1606.0[l] *5*	4[l] *1*						
[x]1610.30 *20*	8 *2*						
1611.4[l] *5*	4[l] *2*	2727.77	$(4,5)^-$	1117.5699	5^+		
1617.75[j] *10*	11.4[b] *18*	2513.61	$(4)^-$	895.7941	3^+	E1	E$_\gamma$: from 1981Da05; 1617.79 *12* from 1996Gi09. Mult.: α(K)exp=0.0006 *2*.
1622.0[l] *5*	2[l] *1*	2740.16	$(4,5,6)^+$	1117.5699	5^+		
[x]1624.23 *17*	5 *2*						
[x]1630.22 *20*	3 *1*						
1633.7[j] *3*	3 *1*	2628.57	$(3^+,4,5^+)$	994.7469	4^+		
1636.60 *10*	12 *2*	2185.06	$(5)^-$	548.7466	6^+	E1	Mult.: α(K)exp=0.0005 *2*.
1639.73 *10*	7 *2*	2188.406	(5^+)	548.7466	6^+		
1644.45[j] *6*	13 *3*	2540.22	$(3,4,5)^+$	895.7941	3^+	E2	Mult.: α(K)exp=0.0013 *3*.
1649.77 *6*	42[b] *5*	1913.87	3^-	264.0886	4^+	E1	Mult.: α(K)exp=0.00045 *7*.
1651.49[n] *7*	7[n] *2*	1915.501	$(3)^+$	264.0886	4^+		Mult.: α(K)exp=0.0023 *5*, mult=M1 for doubly-placed G.
1651.49[n] *7*	7[n] *2*	2546.7	(4^+)	895.7941	3^+		α(K)exp=0.0023 *5*, mult=M1 for doubly-placed G.
1651.5[h] *16*		2200.4194	$(5)^-$	548.7466	6^+		

$^{168}_{68}Er_{100}$-30

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

γ(^{168}Er) (continued)

E_γ[†]	I_γ[†‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	Comments
1656.84[n] 9	8[n] 2	1736.6868	4$^+$	79.8039	2$^+$		Mult.: α(K)exp=0.00078 9 for doubly-placed G.
1656.84[n] 9	8[n] 2	2478.92	(3)$^-$	821.1679	2$^+$		Mult.: α(K)exp=0.00078 9 for doubly-placed G. other Eγ (Iγ): 1657.44 25 (19 3) (2007ChZX, Budapest data).
[x]1658.76 9	7 2					M1	Mult.: α(K)exp=0.00167 25.
1663.21 10	5 2	2484.61	(3$^+$)	821.1679	2$^+$		
1665.74[k] 8	8 2	2660.56	(3,4)$^+$	994.7469	4$^+$	M1	Mult.: α(K)exp=0.00153 25. γγ coin from 1994Ju02 and 1996Gi09 rule out 1991Da12's placement from 2562 level.
1672.84[k] 9	19 3	2494.528	(3)$^-$	821.1679	2$^+$	E1	Mult.: α(K)exp=0.0006 2.
1675.49[ni] 6	18.5[nb] 21	2571.31		895.7941	3$^+$		Mult.: α(K)exp=0.00075 20, mult=E1,E2 for doubly-placed G.
1675.49[n] 6	18.5[nb] 21	2769.80	(5$^+$)	1094.0379	4$^-$		Mult.: α(K)exp=0.00075 20, mult=E1,E2 for doubly-placed G.
1677.2[l] 5	2.1[l] 7	2673.39	(4$^+$,5,6$^+$)	994.7469	4$^+$		
[x]1683.28 8	9 2					M1	Mult.: α(K)exp=0.0017 3.
[x]1691.47 15	5 2						
1696.30[k] 20	9 2	2517.28?	(3$^+$,4$^+$)	821.1679	2$^+$		
1697.86 7	13.0[b] 21	2246.530	(6)$^+$	548.7466	6$^+$	M1	Mult.: α(K)exp=0.0015 3.
[x]1700.8 4	3 1						
1706.37 8	22[b] 3	1786.124	1$^-$	79.8039	2$^+$	E1	Mult.: α(K)exp=0.00050 7.
[x]1717.47 15	6 2						
1730.89 7	21[b] 3	1994.820	(3)$^+$	264.0886	4$^+$	E2	Mult.: α(K)exp=0.0011 2.
1732.76[nj] 16	10[n] 2	2628.57	(3$^+$,4,5$^+$)	895.7941	3$^+$		
1732.76[nj] 16	10[n] 2	2727.77	(4,5)$^-$	994.7469	4$^+$		
1734.4[l] 5	4[l] 2	2852.0		1117.5699	5$^+$		possible multiplet (1996Gi09).
1738.34 6	33[b] 4	2002.465	(4)$^+$	264.0886	4$^+$	E2	Mult.: α(K)exp=0.0010 2.
1745.58[j] 18	7 2	2740.16	(4,5,6)$^+$	994.7469	4$^+$	E2	Mult.: α(K)exp=0.00097 15.
[x]1750.21 8	29 4					E2	Mult.: α(K)exp=0.00085 20.
[x]1751.6[l] 5	17[l] 4						
1753.73 11	11 2	1833.54	0$^+$	79.8039	2$^+$	E2	Mult.: α(K)exp=0.0008 2.
1756.0[h] 16		2849.61	(4$^+$)	1094.0379	4$^-$		I_γ: I(1756γ):I(2301γ)=8 2:26 3 (2000Gr34).
1758.47 8	18.5[b] 21	2022.359	(3)$^-$	264.0886	4$^+$		Mult.: α(K)exp=0.0007 2.
1762.19[n] 18	13.9[nb] 17	2311.07	(4)$^+$	548.7466	6$^+$		
1762.19[n] 18	13.9[n] 17	2656.94		895.7941	3$^+$		
[x]1763.41 16	10 2						I_γ: combined value for 1763.4γ and 1765.0γ.
1765.02[i] 12	10 2	2660.56	(3,4)$^+$	895.7941	3$^+$		Mult.: α(K)exp=0.0012 2, mult=E2 for doublet. I_γ: combined value for 1763.4γ and 1765.0γ.
1766.99 5	42 5	2031.097	(4)$^+$	264.0886	4$^+$	M1	Mult.: α(K)exp=0.0017 3; α(L1)exp=0.00023 5. other Eγ (Iγ): 1767.22 12 (61 5) (2007ChZX, Budapest data).
1768.49 7	22 3	1848.353	2$^+$	79.8039	2$^+$	E2	Mult.: α(K)exp=0.0010 2.
1780.51 8	7 2	2874.62	(3,4,5)	1094.0379	4$^-$		
1786.20 8	9 2	1786.124	1$^-$	0.0	0$^+$	E1	Mult.: α(K)exp=0.0006 1.

$^{168}_{68}Er_{100}$-31

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

$\gamma(^{168}Er)$ (continued)

E_γ[†]	I_γ[†‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	Comments
[x]1787.60 *12*	8 *2*						
[x]1790.42 *12*	5 *2*						
[x]1792.33 *14*	5 *2*						
[x]1801.49 *25*	5 *2*						
[x]1811.29 *14*	5 *2*						
1813.29 *5*	31[b] *3*	1893.100	2^+	79.8039	2^+	M1	Mult.: α(K)exp=0.0019 *4*.
1816.34 *6*	24.2[b] *26*	2080.455	$(4)^+$	264.0886	4^+	M1	Mult.: α(K)exp=0.0015 *4*.
1825.0[h] *16*		2089.348	4^-	264.0886	4^+		
1833.43 *10*	38 *8*	2097.571	4^-	264.0886	4^+	[E1]	I_γ,Mult.: see comments with 1834.0γ.
1834.05 *9*	40 *8*	1913.87	3^-	79.8039	2^+	E1	I_γ: deduced from I(1833.4γ+1834.0γ) in ce spectrum, and deduced multipolarity. other Eγ (Iγ): 1834.01 *11* (94 *6*) (2007ChZX, Budapest data), presumed to Be for doublet. Mult.: from α(K)exp=0.0005 *1*, as deduced from unresolved Ice for 1833.4γ+1834.0γ assuming α(K)(E1 theory)=0.0005 for 1833.4γ.
1835.68[n] *5*	47[nb] *6*	1915.501	$(3)^+$	79.8039	2^+		Mult.: α(K)exp=0.0010 *2*, mult=E2 for doubly-placed G.
1835.68[n] *5*	47[nb] *6*	2656.94		821.1679	2^+		Mult.: α(K)exp=0.0010 *2*, mult=E2 for doubly-placed G.
1837.0[h] *16*		2733.33		895.7941	3^+		
1839.0[hp] *16*		2933.36	2^+	1094.0379	4^-		I_γ: I(1839γ):I(1939γ)=13.0 *25*:4.5 *14* (2000Gr34). Placement shown As tentative because γ with this strength should have been seen by 1991DaZT but was not.
1844.75 *7*	25[b] *3*	2108.987	$(5)^+$	264.0886	4^+		
1848.31 *7*	24 *5*	1848.353	2^+	0.0	0^+	E2	Mult.: α(K)exp=0.0008 *2*.
1850.0[h] *16*		2398.47	$(3^+,4,5^+)$	548.7466	6^+		
1850.46 *10*	24[b] *3*	1930.388	2^+	79.8039	2^+	E2	Mult.: α(K)exp=0.0008 *2*.
1855.6[i] *3*	3 *1*	2849.61	(4^+)	994.7469	4^+		
[x]1861.34 *8*	13 *3*						I_γ: combined value for 1861.3γ and 1862.4γ (both unplaced).
[x]1862.43 *8*	13 *3*						I_γ: see comment on 1861.3γ.
1865.10 *10*	35[b] *3*	2129.229	$(5)^-$	264.0886	4^+	E1	Mult.: α(K)exp=0.0004 *1*.
1873.12 *13*	10[b] *3*	2137.08	$(2)^+$	264.0886	4^+		
1875.69[k] *12*	9 *2*	2969.74	$3^+,4^+,5^+$	1094.0379	4^-	E1	Mult.: α(K)exp=0.0004 *1*.
1880.47[i] *20*	3 *1*	2874.62	(3,4,5)	994.7469	4^+		
1883.47[i] *14*	7 *2*	2148.3742	5^-	264.0886	4^+		Mult.: α(K)exp=0.0010 *2*.
[x]1885.71 *9*	13 *3*					M1	Mult.: α(K)exp=0.0013 *3*.
[x]1889.64 *20*	4 *2*						
1890.9[k] *4*	4 *2*	2786.80	$(3,4)^+$	895.7941	3^+		
1892.63 *9*	27[b] *3*	1972.311	$(2)^-$	79.8039	2^+		α(K)exp=0.0006 *2*.
[x]1896.82 *12*	4 *2*						
[x]1898.36 *14*	4 *2*						
[x]1900.92 *12*	4 *2*						
[x]1907.84 *20*	6 *2*					E2	Mult.: α(K)exp=0.0008 *2*.
[x]1912.66 *16*	6 *2*						

$^{168}_{68}Er_{100}$-32

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

$\gamma(^{168}Er)$ (continued)

E_γ[†]	I_γ[†‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	Comments
1914.97 *8*	34[b] *3*	1994.820	(3)$^+$	79.8039	2$^+$	E2	Mult.: α(K)exp=0.0008 *1*.
1921.11 *10*	28 *5*	2185.06	(5)$^-$	264.0886	4$^+$	[E1]	I_γ: deduced from Iγ(1921.1γ+1922.6γ), ce spectrum, and multipolarities. Other Eγ (Iγ): 1921.81 *18* (37 *4*) (2007ChZX, Budapest data), presumably for doublet. Mult.: see comment with 1922.6γ.
1922.64 *9*	27 *5*	2002.465	(4)$^+$	79.8039	2$^+$	(E2)	I_γ: deduced from Iγ(1921.1γ+1922.6γ), ce spectrum, and multipolarities. Mult.: from α(K)exp=0.0010 *2*, as deduced from unresolved Ice for 1921.1γ+1922.6γ and α(K)=0.0004 (E1 theory) for 1921.1γ.
1924.36 *13*	22 *5*	2188.406	(5$^+$)	264.0886	4$^+$		Mult.: α(K)exp=0.0007 *1*.
1925.0[h] *16*		2746.5	(≤4)	821.1679	2$^+$		
1928.21[i] *12*	16 *3*	2477.22	(5)$^-$	548.7466	6$^+$	(E1)	Mult.: α(K)exp=0.00061 *15*.
1930.49 *12*	16.5[b] *20*	1930.388	2$^+$	0.0	0$^+$	E2	Mult.: α(K)exp=0.0009 *1*.
[x]1933.39 *20*	3 *1*					M1	Mult.: α(K)exp>0.002.
1936.40 *13*	30[b] *3*	1936.595	1$^-$	0.0	0$^+$	E1	Mult.: α(K)exp=0.0005 *1*.
1936.4[h] *16*		2200.4194	(5)$^-$	264.0886	4$^+$		
1938.69[i] *18*	10 *4*	2933.36	2$^+$	994.7469	4$^+$		Mult.: α(K)exp=0.0006 *2*.
1942.69 *8*	60[b] *4*	2022.359	(3)$^-$	79.8039	2$^+$	E1	Mult.: α(K)exp=0.00044 *6*.
1948.73[i] *25*	4 *2*	3042.47	3$^-$,4$^-$,5$^-$	1094.0379	4$^-$	M1	Mult.: α(K)exp=0.0014 *5*.
1950.94 *15*	6 *2*	2031.097	(4)$^+$	79.8039	2$^+$		
1954.0[h] *16*		2849.61	(4$^+$)	895.7941	3$^+$		I_γ: I(1954γ):I(2301γ)=5.5 *18*:26 *3* (2000Gr34).
[x]1963.2 *3*	4 *2*						
1965.19[k] *15*	7 *2*	2786.80	(3,4)$^+$	821.1679	2$^+$		
[x]1970.09 *10*	11 *3*						Mult.: α(K)exp=0.00089 *15*.
1975.1[k] *3*	9 *2*	2969.74	3$^+$,4$^+$,5$^+$	994.7469	4$^+$		
1979.36 *9*	13.4 *27*	2243.514	(3)$^+$	264.0886	4$^+$	E2	Mult.: α(K)exp=0.00067 *10*. I_γ: from 2007ChZX (Budapest data). other: 23 *4* (1991DaZT).
1987.77[j] *10*	5 *2*	2982.53	(3,4,5)	994.7469	4$^+$		
1997.9 *3*	3 *2*	2546.7	(4$^+$)	548.7466	6$^+$		
2000.56 *15*	9.7[b] *26*	2080.455	(4)$^+$	79.8039	2$^+$		
[x]2007.18 *16*	8 *2*						
2009.56[k] *16*	10 *2*	2273.66	(2$^+$,3,4$^+$)	264.0886	4$^+$		
2012.34 *21*	5 *2*	2561.56	(4$^+$)	548.7466	6$^+$		
[x]2015.60 *10*	8 *2*						
[x]2023.41 *20*	6 *2*						
[x]2025.49 *25*	5 *2*						
2029.78[i] *18*	7 *2*	2849.61	(4$^+$)	821.1679	2$^+$	(E2)	Mult.: α(K)exp=0.00061 *22* consistent with E1 or E2; not E1 from level scheme.
[x]2034.85 *16*	11 *3*					E1	Mult.: α(K)exp=0.00046 *15*.
[x]2037.69 *25*	9 *2*						
2047.03 *10*	41[b] *4*	2311.07	(4)$^+$	264.0886	4$^+$	E2	Mult.: α(K)exp=0.00065 *10*.
2052.0[h] *16*		2601.37		548.7466	6$^+$		
2057.20 *20*	7 *2*	2137.08	(2)$^+$	79.8039	2$^+$	M1	Mult.: α(K)exp=0.0011 *3*.

$^{168}_{68}Er_{100}$-33

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

$\gamma(^{168}Er)$ (continued)

E_γ[†]	I_γ[†‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	Comments
[x]2059.51 *10*	19 *4*						
[x]2062.44 *25*	4 *2*						
[x]2068.07 *12*	9 *2*						Mult.: α(K)exp=0.0006 *2*.
[x]2070.98 *12*	9 *2*						
[x]2075.65 *20*	6 *2*						
[x]2078.02 *20*	7 *2*						
[x]2081.2 *4*	3 *1*						1994Ju02′s placement from 2345 level rejected based on $\gamma\gamma$ coin data of 1996Gi09.
[x]2085.2 *3*	4 *2*						
[x]2088.14 *25*	8 *2*						
[x]2092.20 *17*	6 *2*						
[x]2094.88 *12*	30 *5*						Mult.: α(K)exp=0.00073 *10*.
[x]2099.37 *20*	3 *1*						
[x]2102.09 *16*	3 *1*						
2104.67[i] *15*	8 *2*	3099.47	(3^-)	994.7469	4^+		
2108.85[k] *15*	11 *3*	2188.74	(2^+,3,4^+)	79.8039	2^+		
2116.48[i] *15*	9 *2*	3111.26	(2^+,3,4^+)	994.7469	4^+		
[x]2119.44 *19*	7 *2*						
[x]2124.76 *18*	6 *2*						
2129.46 *20*	6 *2*	2393.71	(2^+)	264.0886	4^+		
2133.94 *10*	15 *3*	2133.767	(1^+)	0.0	0^+		
2136.89 *16*	10 *3*	2137.08	$(2)^+$	0.0	0^+		
[x]2143.21 *20*	4 *2*						
2147.34[i] *20*	7 *2*	2411.792	$(5)^+$	264.0886	4^+		
[x]2151.05 *20*	7 *2*						
[x]2156.28 *18*	10 *3*						
2158.0[h] *16*		2979.3	($\leq$4)	821.1679	2^+		
2159.15[i] *9*	35 *5*	2423.25		264.0886	4^+		Mult.: α(K)exp=0.00053 *13*, mult=E1,E2.
2163.44 *9*	20 *3*	2243.514	$(3)^+$	79.8039	2^+		Mult.: α(K)exp=0.00057 *13*.
							I_γ: from 2007ChZX (Budapest data). other: 42 *6* (1991DaZT).
[x]2170.49 *9*	30 *5*						Mult.: α(K)exp=0.00052 *13*.
2177.80 *15*	8 *2*	2177.79	(2^+)	0.0	0^+		
[x]2185.39 *20*	7 *2*						
2189.0[h] *16*		3011.77	(4^+)	821.1679	2^+		I_γ: I(2189γ):I(2462γ)=2.4 *10*:8.6 *17* (2000Gr34).
[x]2191.48 *20*	11 *3*						1994Ju02′s placement from 2456 level not supported by $\gamma\gamma$ coin data of 1996Gi09.
[x]2193.41 *20*	16.0[b] *24*						
[x]2198.01 *15*	9 *2*						
2203.65[i] *9*	19 *4*	3099.47	(3^-)	895.7941	3^+	(E1)	Mult.: α(K)exp=0.00055 *13*.
[x]2208.0 *4*	8 *2*						
[x]2210.0 *4*	9 *2*						
2212.7[i] *5*	8 *3*	3033.8	($\leq$4)	821.1679	2^+		
2214.47[n] *20*	13[n] *3*	2478.92	$(3)^-$	264.0886	4^+		
2214.47[ni] *20*	13[n] *3*	3111.26	(2^+,3,4^+)	895.7941	3^+		

$^{168}_{68}Er_{100}$-34

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

$\gamma(^{168}Er)$ (continued)

E_γ †	I_γ †‡	E_i(level)	J_i^π	E_f	J_f^π	Comments
2220.70 *21*	13[b] *3*	2484.61	(3$^+$)	264.0886	4$^+$	
x2226.43 *14*	11 *3*					
2229.27[nk] *20*	5[n] *2*	2494.528	(3)$^-$	264.0886	4$^+$	
2229.27[ni] *20*	5[n] *2*	2777.78		548.7466	6$^+$	
2229.27[nk] *20*	5[n] *2*	3049.62	1$^+$	821.1679	2$^+$	I_γ: I(2229γ):I(2970γ)=2.7 *10*:3.4 *12* from this level (2000Gr34).
x2235.30 *20*	23 *4*					
x2242.96 *14*	12 *3*					
x2250.10 *15*	7 *2*					
2256.73[i] *12*	17 *3*	2337.099	3$^-$	79.8039	2$^+$	
x2270.10 *11*	38 *6*					
x2275.1 *4*	4 *2*					
2277.97[i] *22*	6 *2*	3099.47	(3$^-$)	821.1679	2$^+$	
x2279.8[l] *5*	6[l] *3*					
2282.8 *5*	4 *2*	2546.7	(4$^+$)	264.0886	4$^+$	
2285.6 *3*	7 *2*	2365.4	(1$^+$)	79.8039	2$^+$	
2290.0[h] *16*		3111.26	(2$^+$,3,4$^+$)	821.1679	2$^+$	I_γ: I(2290γ):I(2214γ)=4.2 *11*:8 *3* (2000Gr34).
2297.43 *10*	23[b] *3*	2561.56	(4$^+$)	264.0886	4$^+$	
2300.2[e]		3394.5		1094.0379	4$^-$	
2300.63[i] *9*	34 *6*	2849.61	(4$^+$)	548.7466	6$^+$	
2303.22[nk] *20*	13.1[nb] *26*	2382.587	(2)$^+$	79.8039	2$^+$	
2303.22[ni] *20*	13.1[n] *26*	3124.0	(4$^+$)	821.1679	2$^+$	I_γ: I(2303γ):I(2575γ)=6.5 *13*:13 *8* from this level (2000Gr34).
x2305.01 *20*	12 *3*					
x2312.50 *16*	30 *5*					
2314.49 *20*	14 *3*	2393.71	(2$^+$)	79.8039	2$^+$	other Eγ (Iγ): 2313.0 *4* (22 *5*) (2007ChZX, Budapest data).
x2316.0 *3*	5 *2*					
x2320.03 *16*	15 *3*					
x2322.5 *3*	10 *3*					placed from 2402 level In 1994Ju02 but $\gamma\gamma$ coin (1996Gi09) does not confirm that placement.
2330.7[e]		3151.9	(≤4)	821.1679	2$^+$	
2337.1[i] *4*	16 *4*	2601.37		264.0886	4$^+$	
x2339.58 *24*	16 *4*					
2341.89[i] *24*	12 *3*	2890.47		548.7466	6$^+$	
2345.58[p] *17*	16.1[b] *24*	2425.72	(2)$^+$	79.8039	2$^+$	placement from 2425 level by 1991Da12 rejected by 1996Gi09 based on $\gamma\gamma$ coin. However, γ is placed from 2425 level In β^- decay and (n,n$'\gamma$) also, so placement is retained here but shown As uncertain.
x2347.63 *16*	16 *4*					
2352.9[e]		3347.7		994.7469	4$^+$	
x2361.69 *18*	6 *2*					
2365.30[n] *12*	13[n] *3*	2365.4	(1$^+$)	0.0	0$^+$	
2365.30[ni] *12*	13[n] *3*	2629.44		264.0886	4$^+$	
x2369.2 *3*	3 *1*					

$^{168}_{68}Er_{100}$-35

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

$\gamma(^{168}Er)$ (continued)

E_γ [†]	I_γ [†‡]	E_i(level)	J_i^π	E_f	J_f^π	Comments
[x]2372.79 *23*	3 *1*					
2382.22[k] *24*	6 *2*	2382.587	$(2)^+$	0.0	0^+	
2393.47 *18*	8 *2*	2393.71	(2^+)	0.0	0^+	
2395.0[h] *16*		2660.56	$(3,4)^+$	264.0886	4^+	I_γ: I(2395);I(1666)=2.1 *8*:5.4 *11* (2000Gr34).
2398.25[ip] *15*	15.4[b] *24*	2478.92	$(3)^-$	79.8039	2^+	placement from 2478 level by 1991Da12 rejected by 1996Gi09 based on $\gamma\gamma$ coin; however, two-photon cascade data of 2000Gr34 indicate 5393γ-2398γ coin, so placement from 2478 level is is shown here As uncertain.
2401.92[k] *24*	8 *2*	2402.08	(1^-)	0.0	0^+	
2402.0[e]		3223.2	(4^+)	821.1679	2^+	
2404.84 *20*	8 *2*	2484.61	(3^+)	79.8039	2^+	
2405.3[e]		3499.3		1094.0379	4^-	
2410.0[h] *16*		2673.39	$(4^+,5,6^+)$	264.0886	4^+	
[x]2411.16 *21*	14 *3*					
2414.33[k] *19*	8 *2*	2494.528	$(3)^-$	79.8039	2^+	
2420.0[h] *16*		2683.76	(2^+)	264.0886	4^+	
2420.71[p] *24*	16 *4*	2969.74	$3^+,4^+,5^+$	548.7466	6^+	1994Ju02's placement from 2970 level not supported by $\gamma\gamma$ coin data of 1996Gi09; however, 2000Gr34 do report coin with primary γ feeding this level, so placement shown As uncertain here.
2425.35 *20*	14.5[b] *26*	2425.72	$(2)^+$	0.0	0^+	I_γ: branching is significantly larger than In β^- decay or In (n,n'γ).
2436.49[i] *20*	15 *3*	2700.55		264.0886	4^+	
2439.2[e]		3335.0	$(4^+,5^+)$	895.7941	3^+	
2451.9[e]		2716.0	$(2^+,3,4^+)$	264.0886	4^+	
[x]2452.31 *25*	10 *3*					
[x]2456.60 *18*	13 *3*					
[x]2459.49 *19*	13 *3*					
2462.0[h] *16*		3011.77	(4^+)	548.7466	6^+	
2469.0[h] *16*		2733.33		264.0886	4^+	I_γ: I(2469γ):I(1837γ)=4.7 *18*:8.4 *19* (2000Gr34).
[x]2472.9 *3*	10 *3*					
2475.0[h] *16*		2740.16	$(4,5,6)^+$	264.0886	4^+	
2477.3[i] *3*	15 *3*	3026.02		548.7466	6^+	E_γ: misprinted As 2472.2 In table 1 of 2000Gr34.
[x]2498.5[l] *5*	0.7[l] *3*					
[x]2505.5 *5*	5 *2*					
[x]2512.9 *4*	6 *2*					
2520.0[h] *16*		3068.8		548.7466	6^+	
[x]2521.5 *3*	26 *5*					other Eγ (Iγ): 5222.5 *3* (40 *6*) (2007ChZX, Budapest data).
2522.0[h] *16*		2601.37		79.8039	2^+	
2523.2 *4*	22 *4*	2786.80	$(3,4)^+$	264.0886	4^+	other Eγ (Iγ): 2522.5 *3* (40 *6*) (2007ChZX, Budapest data).
2524.0[h] *16*		2790.7	0^+	264.0886	4^+	
[x]2524.03 *14*	28 *5*					

$^{168}_{68}Er_{100}$-36

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

$\gamma(^{168}Er)$ (continued)

E_γ[†]	I_γ[†‡]	E_i(level)	J_i^π	E_f	J_f^π	Comments
[x]2525.9 *4*	8 *3*					
2533.0[h] *16*		3082.8	2^+	548.7466	6^+	I_γ: I(2533γ):I(2819γ)=3.2 *12*:4.3 *15* (2000Gr34).
[x]2547.0[d] *3*						
2547.0[h] *16*		2810.9		264.0886	4^+	
[x]2553.9[d] *3*						
2555.4[e]		3376.6	(4^+)	821.1679	2^+	
2556.0[h] *16*		2819.7		264.0886	4^+	
2575.0[h] *16*		3124.0	(4^+)	548.7466	6^+	
[x]2576.67[d] *23*						
[x]2577.6[l] *5*	12[l] *3*					apparent multiplet (1996Gi09).
2579.0[h] *16*		3127.93	$(4^+,5,6^+)$	548.7466	6^+	I_γ: I(2579γ):I(2864γ)=6.7 *8*:11 *2* (2000Gr34).
2580.0[h] *16*		2660.56	$(3,4)^+$	79.8039	2^+	I_γ: I(2580);I(1666)=4.8 *8*:5.4 *11* (2000Gr34).
2586.0[h] *16*		2849.61	(4^+)	264.0886	4^+	I_γ: I(2586γ):I(2301γ)=5.3 *10*:26 *3* (2000Gr34).
[x]2588.82[d] *26*						
2591.5[e]		3487.3		895.7941	3^+	
2593.2[e]		3588.0		994.7469	4^+	
[x]2597.21[d] *18*						
[x]2606.2[l] *5*	10[l] *3*					
[x]2609.60[d] *23*						
2611.0[h] *16*		2874.62	(3,4,5)	264.0886	4^+	I_γ: I(2611γ):I(1880γ)=3.8 *10*:3 (2000Gr34).
[x]2612.88[d] *20*						
[x]2616.82[d] *24*						
2623.0[e]		3617.8	2^+	994.7469	4^+	
[x]2626.03[d] *23*						
[x]2627.88[d] *19*						
2631.0[h] *16*		2896.12	$(3,4^+)$	264.0886	4^+	I_γ: I(2631γ)=I(2815γ) (2000Gr34).
[x]2634.2[d] *4*						
2636.2[e]		2716.0	$(2^+,3,4^+)$	79.8039	2^+	
[x]2636.3[d] *4*						
2645.0[e]		3739.0	$(2^-,3,4^+)$	1094.0379	4^-	
[x]2645.1[d] *3*						
[x]2648.6[d] *4*						
2656.0[h] *16*		2920.00		264.0886	4^+	
[x]2659.1[d] *7*						
[x]2667.4[d] *3*						
2669.0[h] *16*		2933.36	2^+	264.0886	4^+	I_γ: I(2669γ):I(1939γ)=5.0 *10*:4.5 *14* (2000Gr34).

$^{168}_{68}Er_{100}$-37

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

$\gamma(^{168}Er)$ (continued)

E_γ †	E_i(level)	J_i^π	E_f	J_f^π	Comments
x2671.3 d 3					
2674.5 e	3223.2	(4+)	548.7466	6+	
2675.1 e	3570.9	(4+)	895.7941	3+	
2685.3 e	3680.1	(2+,3,4+)	994.7469	4+	
2686.0 h 16	2950.7		264.0886	4+	
x2687.2 d 3					
x2695.65 d 25					
x2704.3 d 3					
x2711.2 d 3					
x2715.4 d 4					
2734.0 h 16	2998.2	0+	264.0886	4+	
2736.4 e	3285.1	(4+)	548.7466	6+	
2747.0 h 16	3011.77	(4+)	264.0886	4+	I_γ: I(2747γ):I(2462γ)=6.9 *12*:8.6 *17* (2000Gr34).
x2747.45 d 26					
2749.7 e	3570.9	(4+)	821.1679	2+	
2769.0 h 16	3030.7		264.0886	4+	
2770.0 h 16	2849.61	(4+)	79.8039	2+	I_γ: I(2770γ):I(2301γ)=2.5 *10*:26 *3* (2000Gr34).
x2779.5 d 3					
2786.3 e	3335.0	(4+,5+)	548.7466	6+	
2786.9 e	3781.7	(4+,5,6+)	994.7469	4+	
x2793.8 d 3					
2796.6 e	3617.8	2+	821.1679	2+	
2815.0 h 16	2896.12	(3,4+)	79.8039	2+	I_γ: see comment on 2631γ.
2819.0 h 16	3082.8	2+	264.0886	4+	
2819.4 e	3715.2		895.7941	3+	
2821.9 e	3643.1	(≤4)	821.1679	2+	
x2823.7 d 3					
x2827.65 d 25					
2827.9 e	3376.6	(4+)	548.7466	6+	
2839.7 e	3660.9	(≤4)	821.1679	2+	
2853.0 h 16	2933.36	2+	79.8039	2+	I_γ: I(2853γ):I(1939γ)=2.7 *12*:4.5 *14* (2000Gr34).
2858.9 e	3680.1	(2+,3,4+)	821.1679	2+	
2859.6 e	3755.4		895.7941	3+	
2864.0 h 16	3127.93	(4+,5,6+)	264.0886	4+	
2879.0 h 16	3142.71		264.0886	4+	
2883.3 e	3432.0	(4+)	548.7466	6+	

$^{168}_{68}Er_{100}$-38

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

$\gamma(^{168}Er)$ (continued)

E_γ †	E_i(level)	J_i^π	E_f	J_f^π	Comments
2893.0[h] *16*	2972.6	(≤4)	79.8039	2^+	
2911.0[h] *16*	2991.33	(≤4)	79.8039	2^+	
[x]2912.82[d] *26*					
2917.8[e]	3739.0	(2^-,3,4^+)	821.1679	2^+	
[x]2922.0[d] *4*					
2932.0[h] *16*	3011.77	(4^+)	79.8039	2^+	I_γ: I(2932γ):I(2462γ)=5.0 *12*:8.6 *17* (2000Gr34).
2940.4[e]	3761.6	(≤4)	821.1679	2^+	
2941.1[e]	3205.2		264.0886	4^+	
[x]2943.38[d] *26*					
2947.7[e]	3496.4	(4^+)	548.7466	6^+	
[x]2948.4[d] *3*					
[x]2957.1[d] *4*					
2959.1[e]	3223.2	(4^+)	264.0886	4^+	
2965.2[e]	3513.9		548.7466	6^+	
[x]2968.4[d] *4*					
2970.0[h] *16*	3049.62	1^+	79.8039	2^+	
[x]2971.0[d] *3*					
[x]2973.4[d] *4*					
2973.9[e]	3238.0		264.0886	4^+	
[x]2975.7[d] *3*					
[x]2983.7[d] *3*					
[x]2992.2[d] *3*					
2992.6[e]	3888.4		895.7941	3^+	
2995.8[e]	3817.0	(≤4)	821.1679	2^+	
[x]2999.3[d] *3*					
3003.0[h] *16*	3082.8	2^+	79.8039	2^+	I_γ: I(3003γ):I(2819γ)=2.6 *15*:4.3 *15* (2000Gr34).
[x]3010.1[d] *5*					
3011.3[e]	3560.0		548.7466	6^+	
3021.0[e]	3285.1	(4^+)	264.0886	4^+	
3022.2[e]	3570.9	(4^+)	548.7466	6^+	
3031.0[h] *16*	3111.26	(2^+,3,4^+)	79.8039	2^+	I_γ: I(3031γ):I(2214γ)=3.3 *9*:8 *3* (2000Gr34).
3063.0[h] *16*	3142.71		79.8039	2^+	
3077.6[e]	3158.3	(1,2^+)	79.8039	2^+	
3118.2[e]	3198.0	(≤4)	79.8039	2^+	
3205.3[e]	3285.1	(4^+)	79.8039	2^+	
3233.0[e]	3781.7	(4^+,5,6^+)	548.7466	6^+	
3247.5[e]	3327.3	(≤4)	79.8039	2^+	

$^{168}_{68}Er_{100}$-39

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

$\gamma(^{168}Er)$ (continued)

E_γ [†]	E_i(level)	J_i^π	E_f	J_f^π
3250.7[e]	3799.4		548.7466	6^+
3296.8[e]	3376.6	(4^+)	79.8039	2^+
3319.5[e]	3399.3	(≤4)	79.8039	2^+
3335.7[e]	3415.5	(≤4)	79.8039	2^+
3352.2[e]	3432.0	(4^+)	79.8039	2^+
3395.9[e]	3475.7	(≤4)	79.8039	2^+
3416.6[e]	3496.4	(4^+)	79.8039	2^+
3428.0[e]	3507.8	(≤4)	79.8039	2^+
3441.3[e]	3521.1	(≤4)	79.8039	2^+
3517.6[e]	3781.7	$(4^+,5,6^+)$	264.0886	4^+
3527.0[e]	3606.8	(≤4)	79.8039	2^+
3538.0[e]	3617.8	2^+	79.8039	2^+
3571.1[e]	3835.2		264.0886	4^+
3622.7[e]	3702.5	(≤4)	79.8039	2^+
3631.1[e]	3895.2		264.0886	4^+
3644.2[e]	3908.3		264.0886	4^+
3863.1[f] *16*	(7771.426)	$3^+,4^+$	3908.3	
3876.2[f] *16*	(7771.426)	$3^+,4^+$	3895.2	
3883.0[f] *16*	(7771.426)	$3^+,4^+$	3888.4	
3936.2[f] *16*	(7771.426)	$3^+,4^+$	3835.2	
3954.4[f] *16*	(7771.426)	$3^+,4^+$	3817.0	(≤4)
3972.0[f] *16*	(7771.426)	$3^+,4^+$	3799.4	
3989.7[f] *16*	(7771.426)	$3^+,4^+$	3781.7	$(4^+,5,6^+)$
4009.8[f] *16*	(7771.426)	$3^+,4^+$	3761.6	(≤4)
4016.0[f] *16*	(7771.426)	$3^+,4^+$	3755.4	
4032.4[f] *16*	(7771.426)	$3^+,4^+$	3739.0	$(2^-,3,4^+)$
4056.2[f] *16*	(7771.426)	$3^+,4^+$	3715.2	
4068.9[f] *16*	(7771.426)	$3^+,4^+$	3702.5	(≤4)
4091.3[f] *16*	(7771.426)	$3^+,4^+$	3680.1	$(2^+,3,4^+)$
4110.5[f] *16*	(7771.426)	$3^+,4^+$	3660.9	(≤4)
4128.3[f] *16*	(7771.426)	$3^+,4^+$	3643.1	(≤4)
4153.6[f] *16*	(7771.426)	$3^+,4^+$	3617.8	2^+
4164.6[f] *16*	(7771.426)	$3^+,4^+$	3606.8	(≤4)
4183.4[f] *16*	(7771.426)	$3^+,4^+$	3588.0	
4200.5[f] *16*	(7771.426)	$3^+,4^+$	3570.9	(4^+)
4211.4[f] *16*	(7771.426)	$3^+,4^+$	3560.0	
4250.3[f] *16*	(7771.426)	$3^+,4^+$	3521.1	(≤4)

$^{168}_{68}Er_{100}$-40

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

$\gamma(^{168}Er)$ (continued)

E_γ †	I_γ †‡	E_i(level)	J_i^π	E_f	J_f^π	Comments
4257.5[f] *16*		(7771.426)	$3^+,4^+$	3513.9		
4263.6[f] *16*		(7771.426)	$3^+,4^+$	3507.8	(≤4)	
4272.1[f] *16*		(7771.426)	$3^+,4^+$	3499.3		
4275.0[f] *16*		(7771.426)	$3^+,4^+$	3496.4	(4^+)	
4284.1[f] *16*		(7771.426)	$3^+,4^+$	3487.3		
4295.7[f] *16*		(7771.426)	$3^+,4^+$	3475.7	(≤4)	
4339.4[f] *16*		(7771.426)	$3^+,4^+$	3432.0	(4^+)	
4355.9[f] *16*		(7771.426)	$3^+,4^+$	3415.5	(≤4)	
4372.1[f] *16*		(7771.426)	$3^+,4^+$	3399.3	(≤4)	
4376.9[f] *16*		(7771.426)	$3^+,4^+$	3394.5		
4394.8[f] *16*		(7771.426)	$3^+,4^+$	3376.6	(4^+)	
4423.7[f] *16*		(7771.426)	$3^+,4^+$	3347.7		
4436.4[f] *16*		(7771.426)	$3^+,4^+$	3335.0	$(4^+,5^+)$	
4444.1[f] *16*		(7771.426)	$3^+,4^+$	3327.3	(≤4)	
4486.3[f] *16*		(7771.426)	$3^+,4^+$	3285.1	(4^+)	
4533.4[f] *16*		(7771.426)	$3^+,4^+$	3238.0		
4548.2[f] *16*		(7771.426)	$3^+,4^+$	3223.2	(4^+)	
4566.2[f] *16*		(7771.426)	$3^+,4^+$	3205.2		
4573.4[f] *16*		(7771.426)	$3^+,4^+$	3198.0	(≤4)	
4613.1[f] *16*		(7771.426)	$3^+,4^+$	3158.3	$(1,2^+)$	
4619.5[f] *16*		(7771.426)	$3^+,4^+$	3151.9	(≤4)	
4628.66[a] *24*	14.6	(7771.426)	$3^+,4^+$	3142.71		
4633.8[a] *4*	2.64	(7771.426)	$3^+,4^+$	3137.6		
4639.42[a] *32*	7.00	(7771.426)	$3^+,4^+$	3131.9		
4643.43[a] *25*	23.8	(7771.426)	$3^+,4^+$	3127.93	$(4^+,5,6^+)$	
4647.40[a] *27*	12.4	(7771.426)	$3^+,4^+$	3124.0	(4^+)	E_γ: misprinted As 4674.4 In table 1 of 2000Gr34.
4653.24[a] *27*	16.9	(7771.426)	$3^+,4^+$	3118.3		
4660.03[a] *29*	13.5	(7771.426)	$3^+,4^+$	3111.26	$(2^+,3,4^+)$	other Iγ: 10 *7* (2007ChZX, Budapest data).
4665.40[a] *37*	2.96	(7771.426)	$3^+,4^+$	3106.0		
4671.36[a] *24*	13.5	(7771.426)	$3^+,4^+$	3099.47	(3^-)	other Iγ: 7 *5* (2007ChZX, Budapest data).
4683.57[a] *35*	1.40	(7771.426)	$3^+,4^+$	3087.8		
4688.5[a] *5*	10.2	(7771.426)	$3^+,4^+$	3082.8	2^+	other Iγ: 11 *7* (2007ChZX, Budapest data).
4693.3[a] *12*	3.2	(7771.426)	$3^+,4^+$	3078.1		
4702.54[a] *28*	5.4	(7771.426)	$3^+,4^+$	3068.8		
4707.79[a] *25*	7.0	(7771.426)	$3^+,4^+$	3063.6		
4715.39[a] *23*	14.1	(7771.426)	$3^+,4^+$	3055.96	2^+	
4721.74[a] *24*	6.8	(7771.426)	$3^+,4^+$	3049.62	1^+	

$^{168}_{68}Er_{100}$-41

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

$\gamma(^{168}Er)$ (continued)

E_γ [†]	I_γ [†‡]	E_i(level)	J_i^π	E_f	J_f^π	Comments
4729.25[a] 27	3.6	(7771.426)	3+,4+	3042.47	3−,4−,5−	
4737.6[a] 7	2.56	(7771.426)	3+,4+	3033.8	(≤4)	
4740.9[a] 5	5.4	(7771.426)	3+,4+	3030.7		
4745.36[a] 23	16.8[g] 27	(7771.426)	3+,4+	3026.02		Iγ(1981Da05; 1994Ju02 normalization)=18.
4752.22[a] 23	8.3	(7771.426)	3+,4+	3019.13	2+	
4759.52[a] 23	10.5	(7771.426)	3+,4+	3011.77	(4+)	
4769.59[a] 35	4.1	(7771.426)	3+,4+	3001.8	(1,2+)	
4773.2[a] 4	2.94	(7771.426)	3+,4+	2998.2	0+	
4780.01[a] 23	10.1	(7771.426)	3+,4+	2991.33	(≤4)	other Iγ: 15 3 (2007ChZX, Budapest data).
4787.32[a] 23	10.0	(7771.426)	3+,4+	2984.03		other Iγ: 16 5 (2007ChZX, Budapest data).
4792.09[a] 31	3.9	(7771.426)	3+,4+	2979.3	(≤4)	
4798.8[a] 7	2.9	(7771.426)	3+,4+	2972.6	(≤4)	
4801.68[a] 24	14[g] 3	(7771.426)	3+,4+	2969.74	3+,4+,5+	Iγ(1981Da05; 1994Ju02 normalization)=20.
4812.3[a] 9	0.66	(7771.426)	3+,4+	2959.1		
4820.68[a] 26	4.2	(7771.426)	3+,4+	2950.7		other Eγ (Iγ): 4819.1 8 (3.4 27) (2007ChZX, Budapest data).
4828.41[a] 24	5.0	(7771.426)	3+,4+	2942.94		
4838.13[a] 24	8.6	(7771.426)	3+,4+	2933.36	2+	other Iγ: 15 5 (2007ChZX, Budapest data).
4842.3[a] 6	1.90	(7771.426)	3+,4+	2929.1	1(+)	
4851.35[a] 24	5.0	(7771.426)	3+,4+	2920.00		
4863.56[a] 28	3.8	(7771.426)	3+,4+	2907.8		
4869.71[a] 25	5.2	(7771.426)	3+,4+	2901.6		
4875.90[a] 30	3.9	(7771.426)	3+,4+	2896.12	(3,4+)	
4881.11[a] 27	4.4	(7771.426)	3+,4+	2890.47		
4890.75[a] 28	4.1	(7771.426)	3+,4+	2880.6		
4896.42[a] 24	14[g] 3	(7771.426)	3+,4+	2874.62	(3,4,5)	Iγ(1981Da05; 1994Ju02 normalization)=13.
4900.1[a] 12	1.10	(7771.426)	3+,4+	2871.2	0+	
4916.73[a] 36	3.5	(7771.426)	3+,4+	2854.6		
4921.58[a] 21	41[g] 4	(7771.426)	3+,4+	2849.61	(4+)	Iγ(1981Da05; 1994Ju02 normalization)=46.
4928.1[a] 10	0.72	(7771.426)	3+,4+	2843.2	0+	
4951.69[a] 36	2.20	(7771.426)	3+,4+	2819.7		
4960.45[a] 34	3.26	(7771.426)	3+,4+	2810.9		
4964.87[a] 34	3.3	(7771.426)	3+,4+	2806.5		
4980.54[a] 30	4.2	(7771.426)	3+,4+	2790.7	0+	
4984.49[a] 21	17[g] 3	(7771.426)	3+,4+	2786.80	(3,4)+	Iγ(1981Da05; 1994Ju02 normalization)=15.
4993.84[a] 21	6.0	(7771.426)	3+,4+	2777.78		
5001.56[a] 21	12.5	(7771.426)	3+,4+	2769.80	(5+)	
5006.4[a] 9	0.74	(7771.426)	3+,4+	2764.9	(1,2+)	
5019.44[a] 36	1.80	(7771.426)	3+,4+	2751.9		
5024.79[a] 30	2.60	(7771.426)	3+,4+	2746.5	(≤4)	

$^{168}_{68}Er_{100}$-42

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

$\gamma(^{168}Er)$ (continued)

E_γ [†]	I_γ [†‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [#]	Comments
5032.24[a] 21	12.0	(7771.426)	3+,4+	2738.58			
5038.00[a] 22	24[g] 3	(7771.426)	3+,4+	2733.33			Iγ(1981Da05; 1994Ju02 normalization)=24.
5043.48[a] 23	0.52	(7771.426)	3+,4+	2727.77	(4,5)−		
5055.3[f] 16		(7771.426)	3+,4+	2716.0	(2+,3,4+)		
5058.11[a] 33	1.60	(7771.426)	3+,4+	2713.2			
5070.85[a] 20	13.4[g] 27	(7771.426)	3+,4+	2700.55			Iγ(1981Da05; 1994Ju02 normalization)=15.9.
5082.35[a] 31	2.60	(7771.426)	3+,4+	2689.0	(1,2+)		
5087.59[a] 24	4.8	(7771.426)	3+,4+	2683.76	(2+)		
5097.71[a] 21	5.4	(7771.426)	3+,4+	2673.39	(4+,5,6+)		
5107.7[a] 8	2.08	(7771.426)	3+,4+	2663.232	(4)+		
5111.52[a] 33	19[g]	(7771.426)	3+,4+	2660.56	(3,4)+		other Iγ: 33 3 (2007ChZX, Budapest data).
5114.64[a] 35	14.5	(7771.426)	3+,4+	2656.94			
5119.45[a] 24	7.8	(7771.426)	3+,4+	2651.89			
5126.9[a] 4	1.26	(7771.426)	3+,4+	2644.4	(0+)		
5141.80[a] 21	4.7[g] 27	(7771.426)	3+,4+	2629.44			Additional information 1. Iγ(1981Da05; 1994Ju02 normalization)=5.8.
5169.94[a] 18	38[g] 3	(7771.426)	3+,4+	2601.37		E1[@]	Iγ(1981Da05; 1994Ju02 normalization)=36.
5185.10[a] 31	2.10	(7771.426)	3+,4+	2586.2			
5192.52[a] 27	3.0	(7771.426)	3+,4+	2578.8			
5200.04[a] 19	9.7	(7771.426)	3+,4+	2571.31			
5207.84[a] 30	4.2	(7771.426)	3+,4+	2563.5			
5212.50[a] 19	19.3	(7771.426)	3+,4+	2558.67	(5)−	E1[@]	
5218.68[a] 21	6.9	(7771.426)	3+,4+	2552.66	2+		
5233.26[a] 25	3.1	(7771.426)	3+,4+	2538.1	2+		
5242.53[a] 18	17[g] 3	(7771.426)	3+,4+	2528.81	(5)−		Iγ(1981Da05; 1994Ju02 normalization)=13.
5254.40[a] 26	4.9	(7771.426)	3+,4+	2517.28?	(3+,4+)		
5258.59[a] 19	12.7	(7771.426)	3+,4+	2513.61	(4)−		other Iγ: 23 4 (2007ChZX, Budapest data).
5272.22[a] 27	3.6	(7771.426)	3+,4+	2499.1			
5277.43[a] 19	11.6	(7771.426)	3+,4+	2494.528	(3)−		other Iγ: 16.1 27 (2007ChZX, Budapest data).
5285.67[a] 21	5.7	(7771.426)	3+,4+	2484.61	(3+)		
5292.56[a] 18	42[g] 5	(7771.426)	3+,4+	2478.92	(3)−	E1[@]	Iγ(1981Da05; 1994Ju02 normalization)=42.
5295.84[a] 32	8.0	(7771.426)	3+,4+	2474.12	(6−)		
5302.6[a] 7	0.88	(7771.426)	3+,4+	2468.7			
5316.3[a] 7	1.16	(7771.426)	3+,4+	2455.96	(3+,4,5+)		
5320.46[a] 23	5.4	(7771.426)	3+,4+	2451.166	(5−)		
5331.7[a] 5	1.24	(7771.426)	3+,4+	2440.45	(2+)		Additional information 2.
5336.8[a] 4	1.60	(7771.426)	3+,4+	2434.660			
5344.18[a] 32	3.26	(7771.426)	3+,4+	2427.2			
5348.12[a] 22	6.7	(7771.426)	3+,4+	2425.72	(2)+		

$^{168}_{68}Er_{100}$-43

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

γ(^{168}Er) (continued)

E_γ [†]	I_γ [†‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [#]	Comments
5359.68[a] 17	42[g] 5	(7771.426)	3$^+$,4$^+$	2411.792	(5)$^+$		Iγ(1981Da05; 1994Ju02 normalization)=48.
5369.17[a] 18	19[g] 3	(7771.426)	3$^+$,4$^+$	2402.08	(1$^-$)	E1 [@]	Additional information 3. Iγ(1981Da05; 1994Ju02 normalization)=20.
5373.21[a] 22	12.7	(7771.426)	3$^+$,4$^+$	2398.47	(3$^+$,4,5$^+$)		
5378.57[c] 16	11.7	(7771.426)	3$^+$,4$^+$	2392.926	(3$^-$,4$^+$)		Additional information 4.
5388.15[a] 30	1.74	(7771.426)	3$^+$,4$^+$	2382.587	(2)$^+$		
5398.07[a] 24	2.80	(7771.426)	3$^+$,4$^+$	2373.654	2,3		
5405.93[a] 18	10.8[g] 27	(7771.426)	3$^+$,4$^+$	2365.199	(5)$^-$		Iγ(1981Da05; 1994Ju02 normalization)=12.0.
5425.28[a] 29	1.96	(7771.426)	3$^+$,4$^+$	2345.27	1$^-$,2$^-$,3$^-$		
5434.29[a] 17	13.4[g] 27	(7771.426)	3$^+$,4$^+$	2337.099	3$^-$		Additional information 5. Iγ(1981Da05; 1994Ju02 normalization)=15.3.
5448.7[a] 9	0.42	(7771.426)	3$^+$,4$^+$	2323.02	3$^-$		
5460.17[a] 19	5.8	(7771.426)	3$^+$,4$^+$	2311.07	(4)$^+$		
5468.75[a] 19	14.1[g] 27	(7771.426)	3$^+$,4$^+$	2302.582	(3)$^-$		Iγ(1981Da05; 1994Ju02 normalization)=10.4.
5473.4[a] 4	2.04	(7771.426)	3$^+$,4$^+$	2298.258	(4,5,6)$^+$		
5498.4[a] 7	0.94	(7771.426)	3$^+$,4$^+$	2273.66	(2$^+$,3,4$^+$)		
5503.63[a] 21	10.1[g] 20	(7771.426)	3$^+$,4$^+$	2267.634	(3,4,5)$^+$		Iγ(1981Da05; 1994Ju02 normalization)=8.9.
5508.62[a] 19	9.3	(7771.426)	3$^+$,4$^+$	2262.690	(3)$^-$		
5516.36[a] 27	1.82	(7771.426)	3$^+$,4$^+$	2254.85	(3)$^+$		Additional information 6.
5527.7[a] 4	1.48	(7771.426)	3$^+$,4$^+$	2243.514	(3)$^+$		
5533.17[a] 21	5.3	(7771.426)	3$^+$,4$^+$	2238.179	(4)$^+$		
5552.8[f] 16		(7771.426)	3$^+$,4$^+$	2218.5			
5571.00[a] 17	11.4[g] 27	(7771.426)	3$^+$,4$^+$	2200.4194	(5)$^-$		Iγ(1981Da05; 1994Ju02 normalization)=14.1.
5579.3[a] 4	1.20	(7771.426)	3$^+$,4$^+$	2193.20	2$^+$		
5585.70[a] 19	5.2	(7771.426)	3$^+$,4$^+$	2185.06	(5)$^-$		
5600.83[a] 37	1.06	(7771.426)	3$^+$,4$^+$	2169.516	(5)$^+$		
5623.10[a] 17	12.1[g] 27	(7771.426)	3$^+$,4$^+$	2148.3742	5$^-$		Iγ(1981Da05; 1994Ju02 normalization)=11.5.
5642.03[a] 17	11.4[g] 27	(7771.426)	3$^+$,4$^+$	2129.229	(5)$^-$		Iγ(1981Da05; 1994Ju02 normalization)=13.5.
5673.62[c] 19	22[g] 3	(7771.426)	3$^+$,4$^+$	2097.571	4$^-$	E1 [@]	Iγ(1981Da05; 1994Ju02 normalization)=25.
5682.05[a] 18	7.6	(7771.426)	3$^+$,4$^+$	2089.348	4$^-$		
5690.54[a] 21	2.84	(7771.426)	3$^+$,4$^+$	2080.455	(4)$^+$		
5711.35[a] 19	10.5	(7771.426)	3$^+$,4$^+$	2059.9763	(4)$^-$		other Eγ (Iγ): 5712.9 *8* (15 *3*) (2007ChZX, Budapest data).
5715.23[a] 34	2.80	(7771.426)	3$^+$,4$^+$	2055.913	(4)$^+$		
5740.32[a] 22	2.20	(7771.426)	3$^+$,4$^+$	2031.097	(4)$^+$		
5748.85[a] 17	10.1[g] 20	(7771.426)	3$^+$,4$^+$	2022.359	(3)$^-$		Iγ(1981Da05; 1994Ju02 normalization)=11.1.
5769.19[a] 30	6.2	(7771.426)	3$^+$,4$^+$	2001.957	5$^-$		
5772.32[a] 20	24[g] 3	(7771.426)	3$^+$,4$^+$	1999.2233	(3)$^-$		Iγ(1981Da05; 1994Ju02 normalization)=23.
5777.63[a] 28	3.0	(7771.426)	3$^+$,4$^+$	1994.820	(3)$^+$		
5788.17[a] 18	6.1	(7771.426)	3$^+$,4$^+$	1983.0432	5$^-$		

$^{168}_{68}Er_{100}$-44

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

$\gamma(^{168}Er)$ (continued)

E_γ[†]	I_γ[†‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	Comments
5799.18[a] *24*	2.60	(7771.426)	$3^+,4^+$	1972.311	$(2)^-$		
5841.16[a] *34*	1.26	(7771.426)	$3^+,4^+$	1930.388	2^+		
5857.63[a] *17*	23[g] *3*	(7771.426)	$3^+,4^+$	1913.87	3^-		Iγ(1981Da05; 1994Ju02 normalization)=20.
5866.39[a] *17*	10.9	(7771.426)	$3^+,4^+$	1905.0929	$(4)^-$		
5878.23[c] *6*	52[g] *5*	(7771.426)	$3^+,4^+$	1892.9364	$(4)^-$	E1[@]	Iγ(1981Da05; 1994Ju02 normalization)=54.
5922.9[a] *5*	0.76	(7771.426)	$3^+,4^+$	1848.353	2^+		
5932.62[a] *23*	2.26	(7771.426)	$3^+,4^+$	1839.3461	5^+		
5943.34[a] *17*	13.5	(7771.426)	$3^+,4^+$	1828.0644	3^-		
5950.84[a] *17*	12.4	(7771.426)	$3^+,4^+$	1820.475	5^-		
5958.8[f] *16*		(7771.426)	$3^+,4^+$	1812.5	$(2^+,3,4^+)$		
6034.70[a] *19*	5.8	(7771.426)	$3^+,4^+$	1736.6868	4^+		
6051.84[c] *7*	24[g] *3*	(7771.426)	$3^+,4^+$	1719.1785	4^-	E1[@]	Iγ(1981Da05; 1994Ju02 normalization)=30.
6063.39[a] *17*	12.1[g] *20*	(7771.426)	$3^+,4^+$	1707.9929	5^-		Iγ(1981Da05; 1994Ju02 normalization)=12.9.
6113.5[a] *5*	2.24	(7771.426)	$3^+,4^+$	1656.273	$(4)^+$		
6116.90[a] *29*	4.2	(7771.426)	$3^+,4^+$	1653.5459	3^+		
6137.71[c] *10*	38 *4*	(7771.426)	$3^+,4^+$	1633.4616	3^-	E1[@]	Iγ(1981Da05; 1994Ju02 normalization)=39.
6155.83[a] *28*	21.6	(7771.426)	$3^+,4^+$	1615.3420	4^-		
6197.30[c] *22*	13.8	(7771.426)	$3^+,4^+$	1574.116	5^-		other Eγ (Iγ): 6198.5 *8* (19.5 *27*) (2007ChZX, Budapest data).
6202.13[a] *18*	10.4	(7771.426)	$3^+,4^+$	1569.4484	$(2)^-$		
6229.62[c] *10*	40	(7771.426)	$3^+,4^+$	1541.7084	$(4)^-$	E1[@]	Additional information 7. other Eγ (Iγ): 6229.06 *19* (103 *6*) (2007ChZX, Budapest data).
6278.2[a] *4*	0.74	(7771.426)	$3^+,4^+$	1493.133	2^+		
6339.88[a] *18*	3.8	(7771.426)	$3^+,4^+$	1431.465	3^-		
6360.38[a] *23*	18.4	(7771.426)	$3^+,4^+$	1411.0953	4^+		
6367.54[c] *16*	18.8[g] *20*	(7771.426)	$3^+,4^+$	1403.7344	$(2)^-$		Iγ(1981Da05; 1994Ju02 normalization)=14.6.
6495.06[a] *17*	10.3[g] *13*	(7771.426)	$3^+,4^+$	1276.2709	2^+		Iγ(1981Da05; 1994Ju02 normalization)=7.6.
6578.35[a] *17*	20.0[g] *17*	(7771.426)	$3^+,4^+$	1193.0249	5^-		Iγ(1981Da05; 1994Ju02 normalization)=22.
6653.53[a] *34*	1.04	(7771.426)	$3^+,4^+$	1117.5699	5^+		
6677.24[c] *7*	69[g] *4*	(7771.426)	$3^+,4^+$	1094.0379	4^-	E1[@]	Iγ(1981Da05; 1994Ju02 normalization)=62.
6776.63[a] *24*	1.58	(7771.426)	$3^+,4^+$	994.7469	4^+		
6875.29[a] *22*	1.24	(7771.426)	$3^+,4^+$	895.7941	3^+		
6950.19[a] *17*	4.4	(7771.426)	$3^+,4^+$	821.1679	2^+		
7222.58[a] *20*	1.70	(7771.426)	$3^+,4^+$	548.7466	6^+		
7507.43[a] *18*	3.38	(7771.426)	$3^+,4^+$	264.0886	4^+		
7691.71[a] *23*	1.64	(7771.426)	$3^+,4^+$	79.8039	2^+		

[†] From 1981Da05, 1991DaZT except As noted.

$^{168}_{68}Er_{100}$-45

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)

$\gamma(^{168}Er)$ (continued)

‡ Secondary transitions: Iγ per 10000 neutron captures; from 1991DaZT except As noted. primary transitions: Iγ data from 1981Da05 (relative to Iγ=1000 for 5369.2γ) have been multiplied by 0.0200 *12*, As measured by 1994Ju02, to obtain Iγ per 10000 captures for these transitions also. Iγ from 1981Da05 for primary γ's has a statistical uncertainty (not shown here) which ranges from 10% for strongest lines to 35% for weakest lines.

From conversion coefficient and/or ce subshell ratio data from 1981Da05, except where noted. The photon and ce intensity scales were normalized assuming α(K)(E2 theory)=0.00423 for 821.2γ.

@ From α(K)exp (1974Ol04).

& From ce subshell data (1987Ge02).

a Uncertainties include both statistical and 0.15-keV systematic uncertainties.

b Weighted average of data from 1991DaZT and 2007ChZX (Budapest data, assuming σ_n=649 *8* and abundance(^{167}Er)=22.93%).

c From precision high-energy γ and ce data (cryst, mag spect, pair spectrometer) (1979Br25) after removal of authors' recoil correction.

d From conversion electron data (1991DaZT). γ spectrum energy resolution inadequate to determine Eγ In this energy region.

e Eγ from level energy difference for a transition reported only In the two-photon cascade study by 2000Gr34. authors do not report specific transition energies or Iγ; uncertainty is presumably≈1.6 keV, the same As for other Eγ data from that experiment.

f From 2-photon cascade data (2000Gr34). not reported In any other studies.

g From 2007ChZX, Budapest data.

h Eγ and placement from two-photon cascade study by 2000Gr34.

i Placement taken from two-photon cascade study by 2000Gr34.

j Placement taken from 1996Gi09.

k Placement taken from 1994Ju02.

l From 1996Gi09; γ not reported In earlier studies.

m Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

n Multiply placed with undivided intensity.

o Multiply placed with intensity suitably divided.

p Placement of transition in the level scheme is uncertain.

x γ ray not placed in level scheme.

$^{168}_{68}Er_{100}$-46

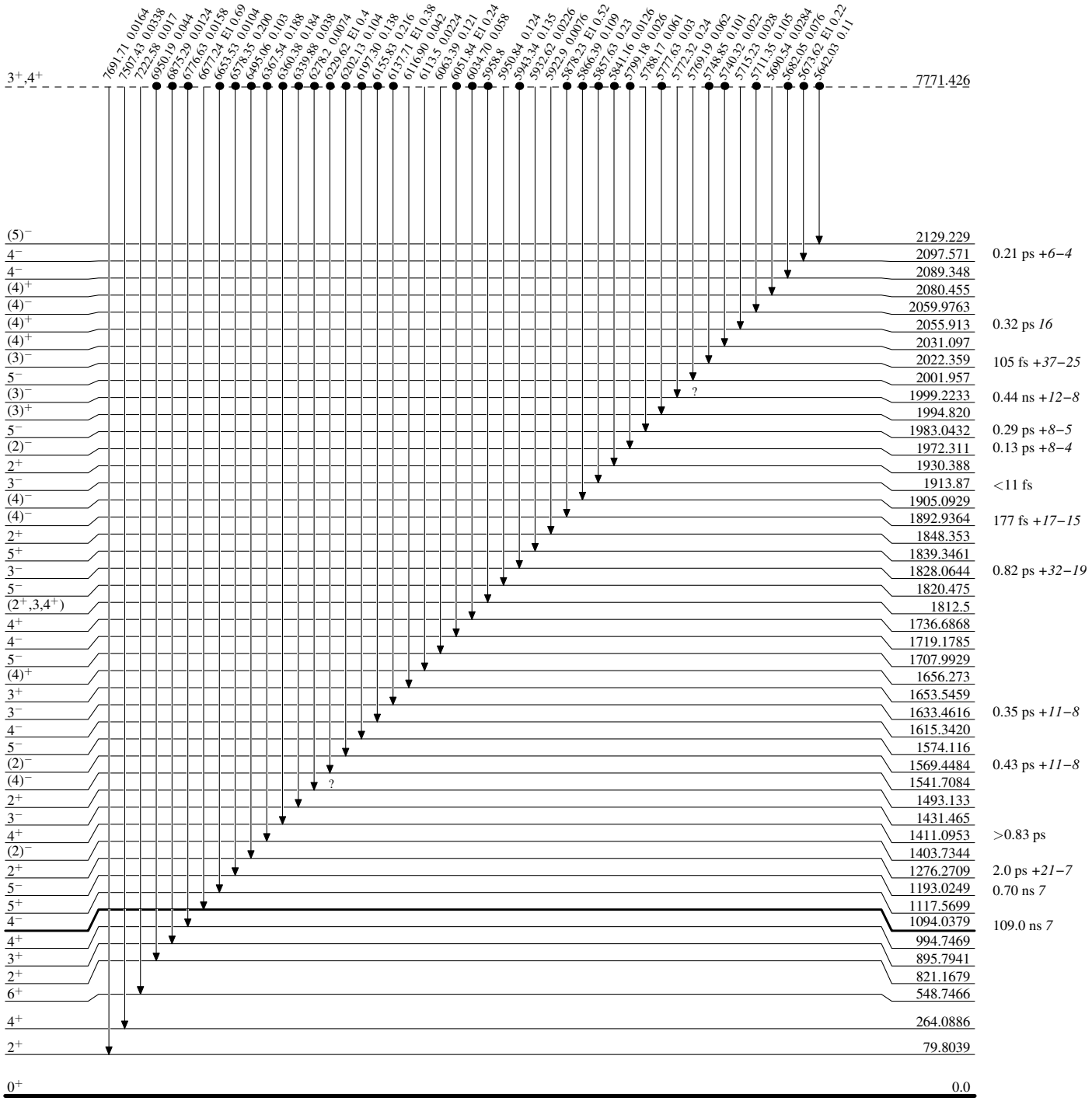
^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09

Legend

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

Level Scheme

Intensities: $I_{(\gamma+ce)}$ per 100 neutron captures



$^{168}_{68}Er_{100}$

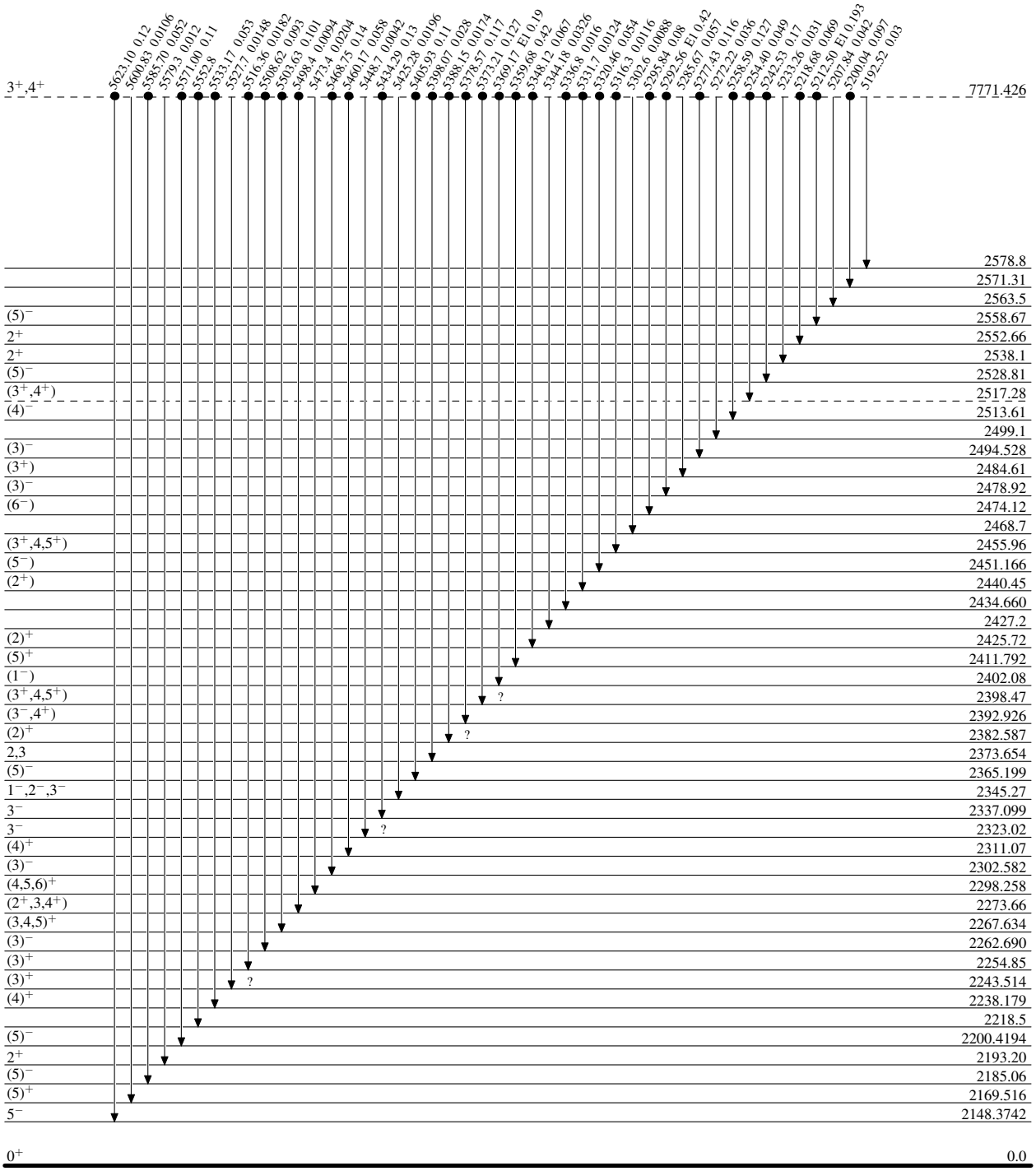
^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09

Legend

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

Level Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 neutron captures



$^{168}_{68}Er_{100}$

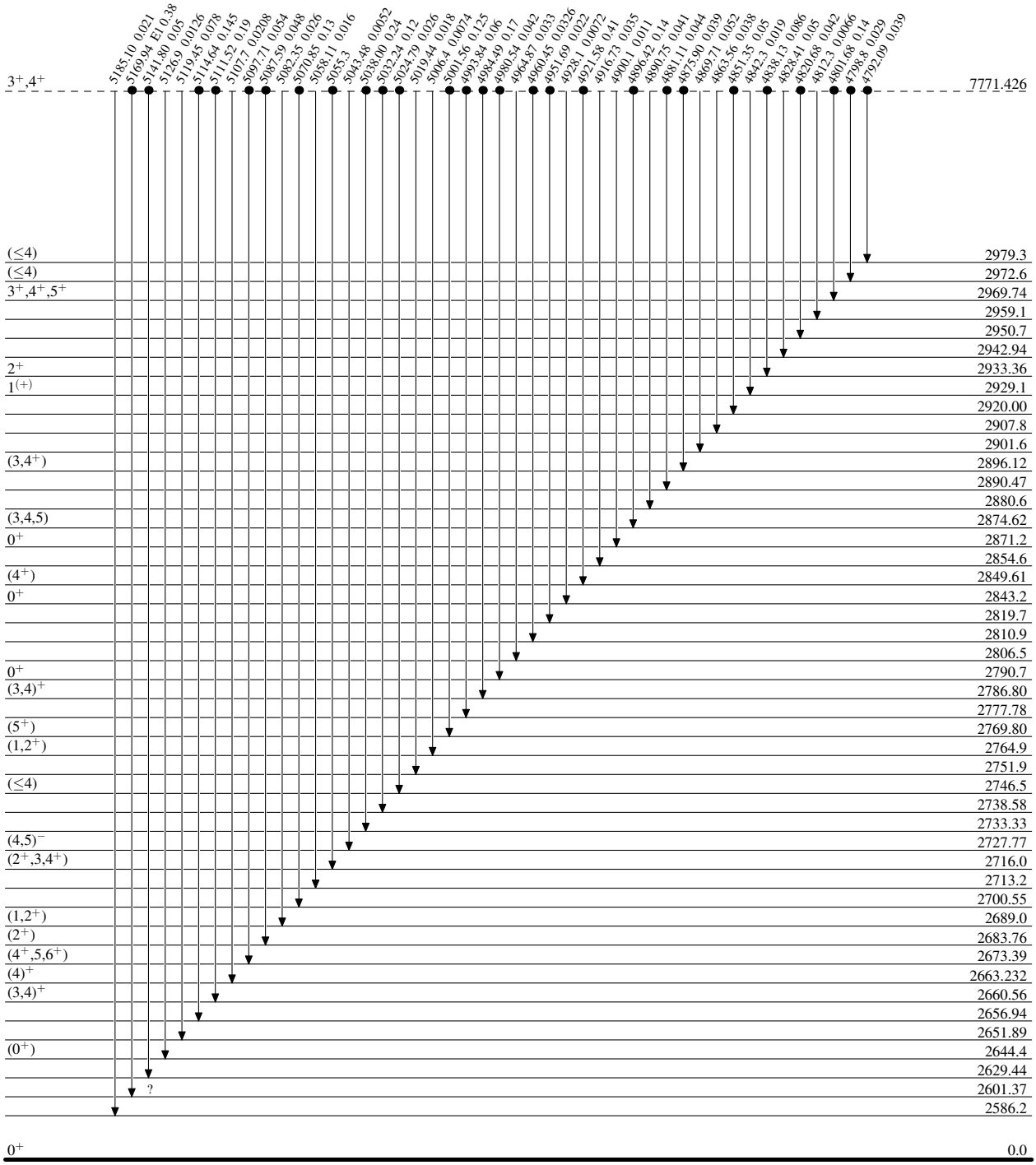
^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09

Legend

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

Level Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 neutron captures



$^{168}_{68}Er_{100}$

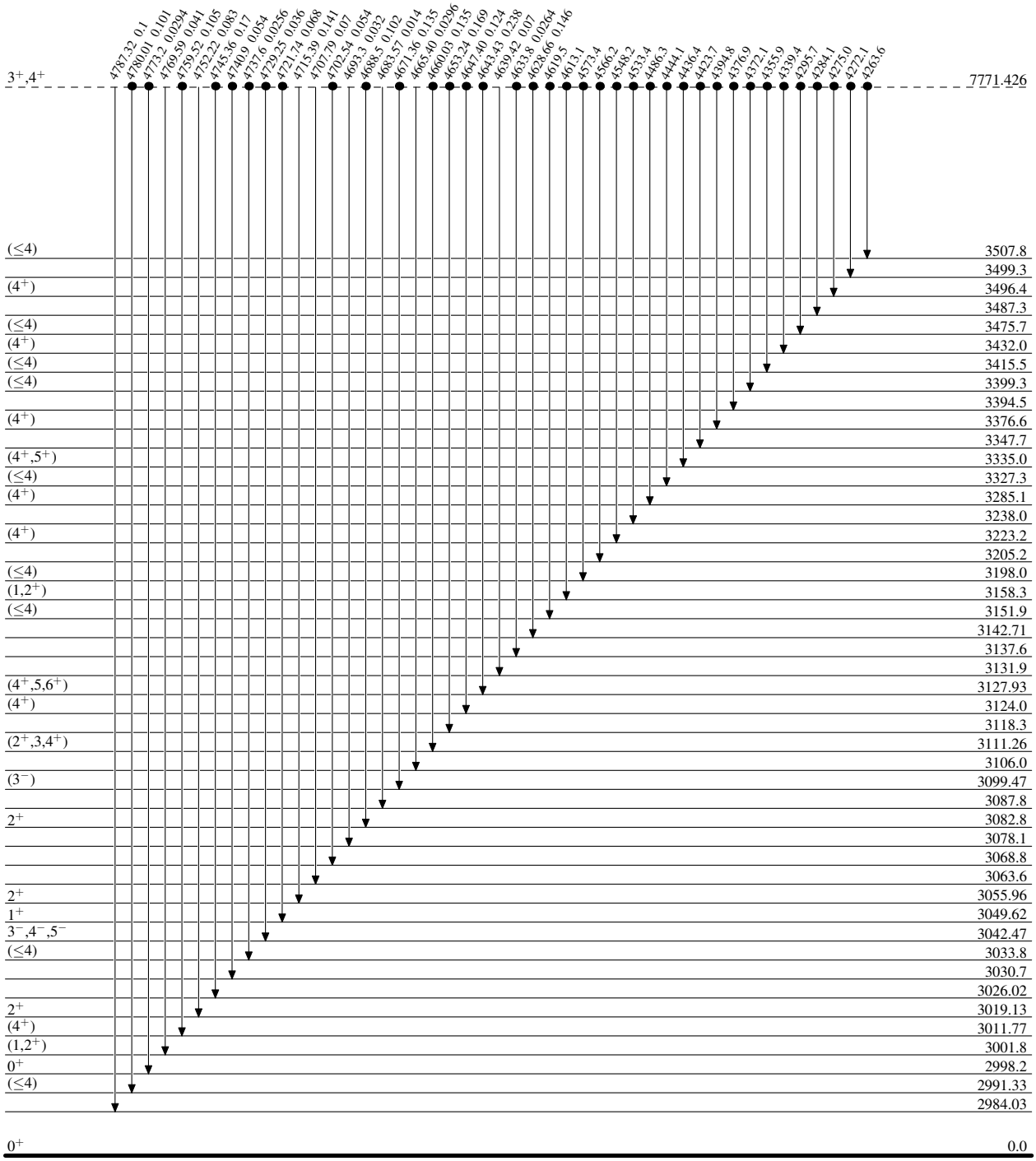
^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09

Legend

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

Level Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 neutron captures



$^{168}_{68}Er_{100}$

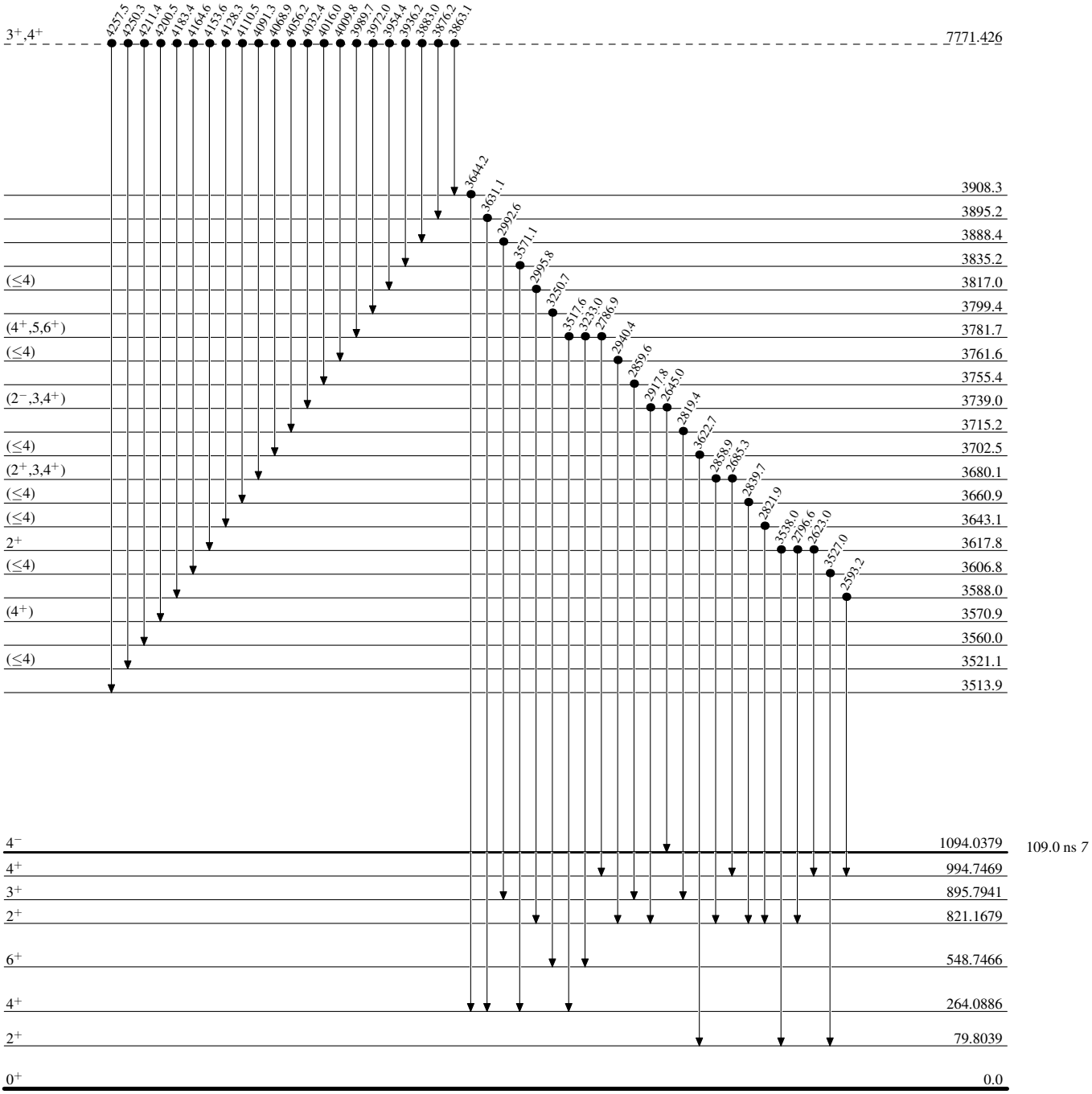
^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09

Legend

Level Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 neutron captures

● Coincidence



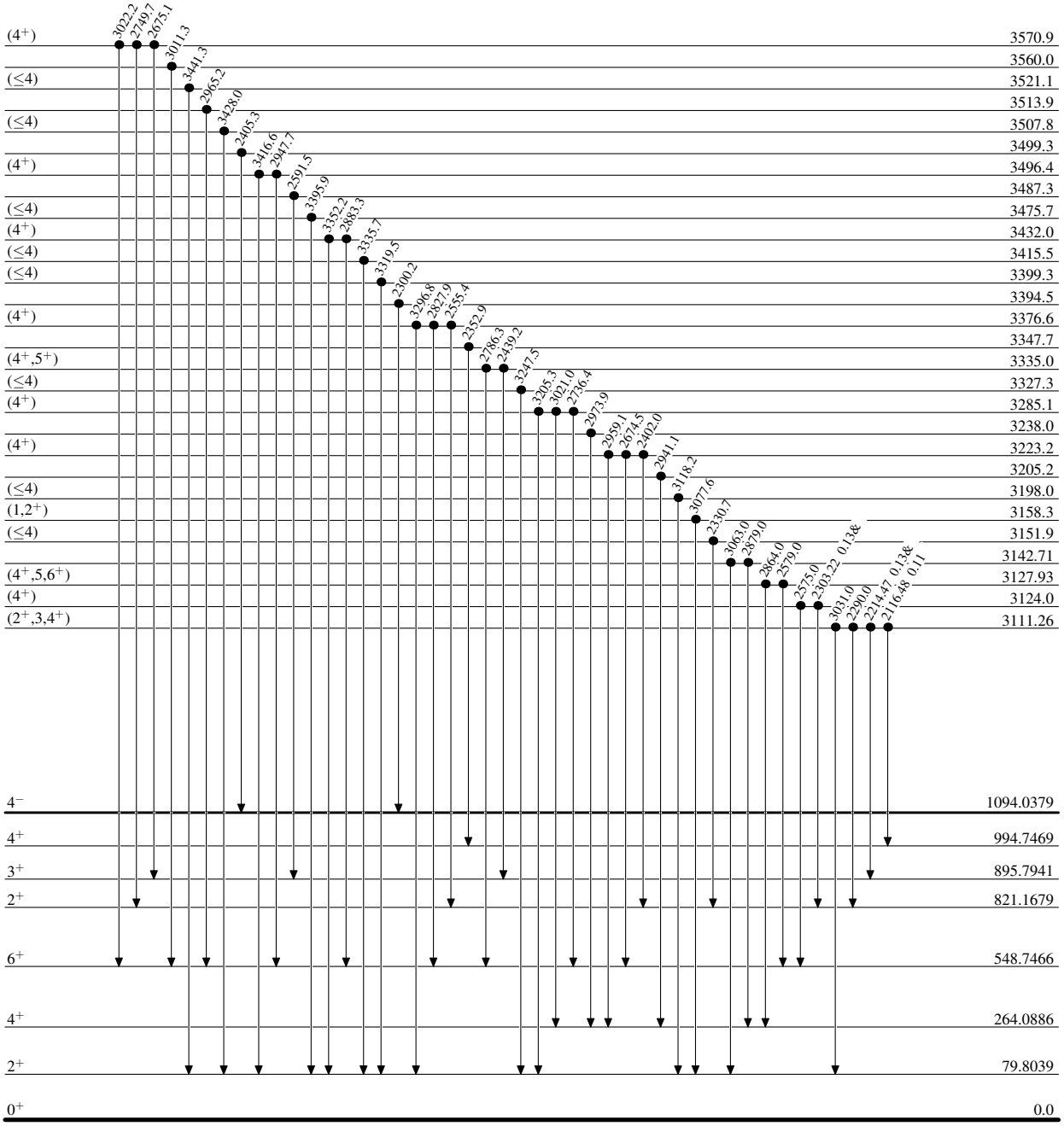
$^{168}_{68}Er_{100}$

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09

Level Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 neutron captures
& Multiply placed: undivided intensity given

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



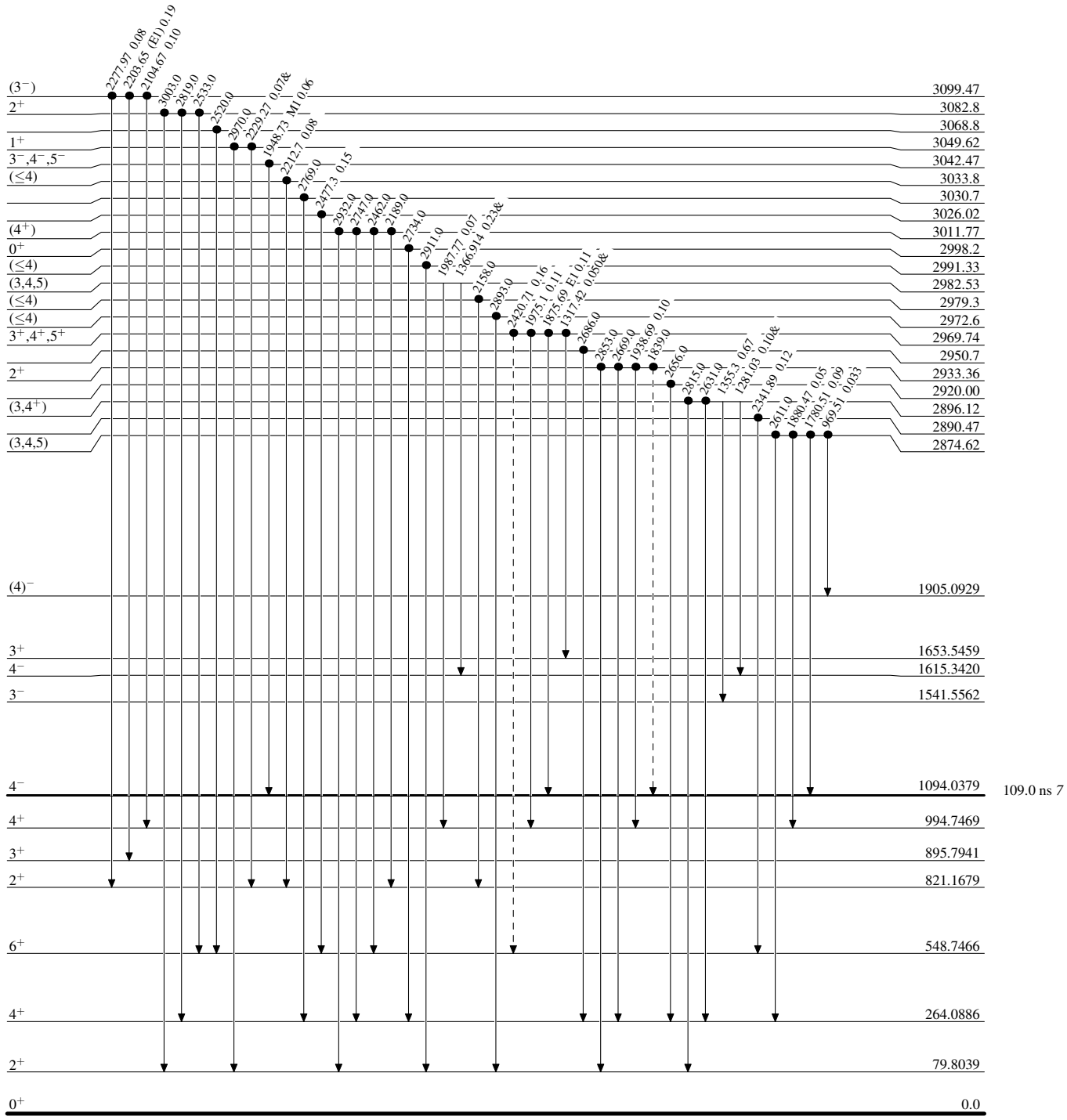
$^{168}_{68}Er_{100}$

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09

Level Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 neutron captures
& Multiply placed: undivided intensity given

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



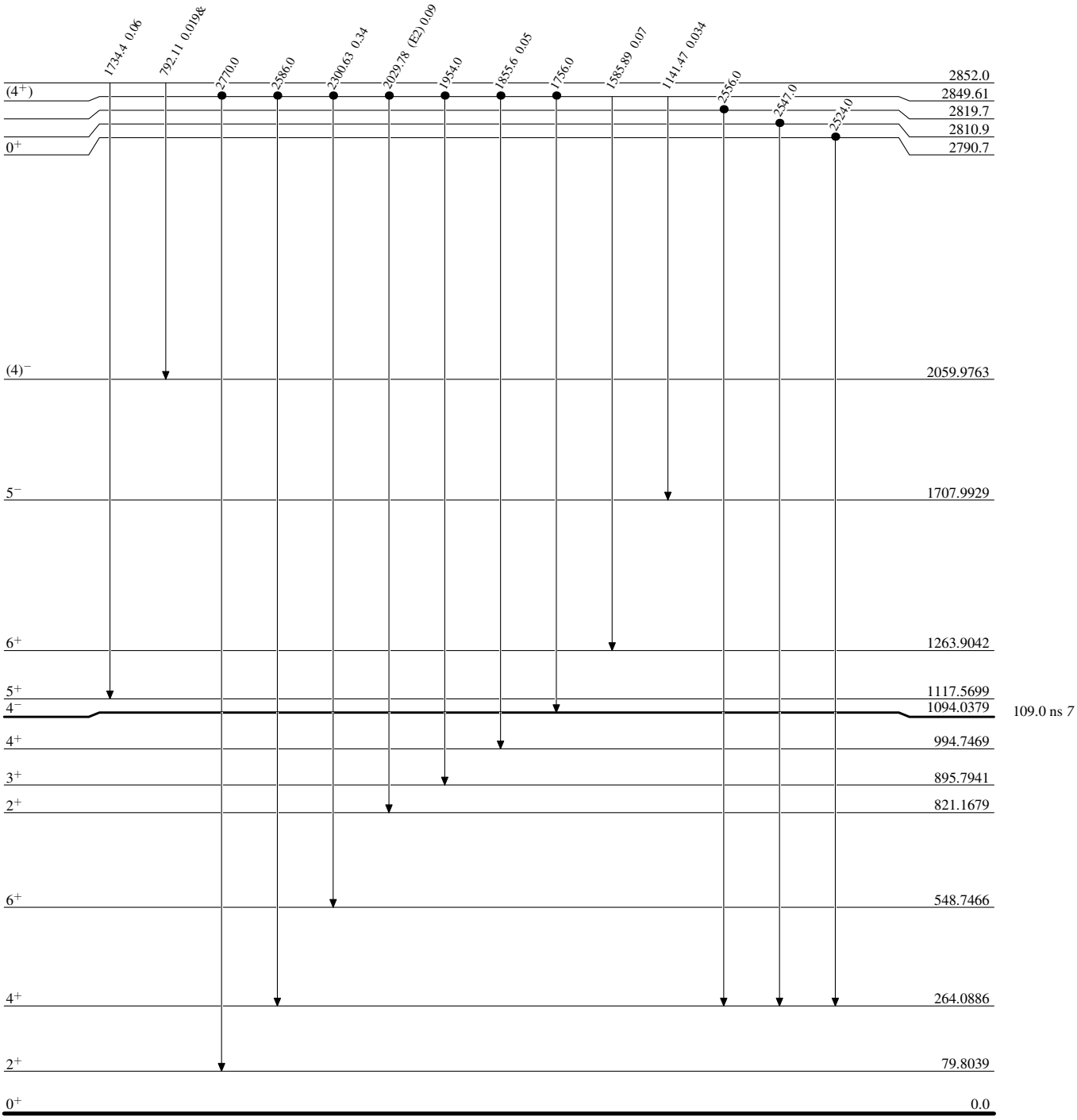
$^{168}_{68}Er_{100}$

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09

Level Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 neutron captures
& Multiply placed: undivided intensity given

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



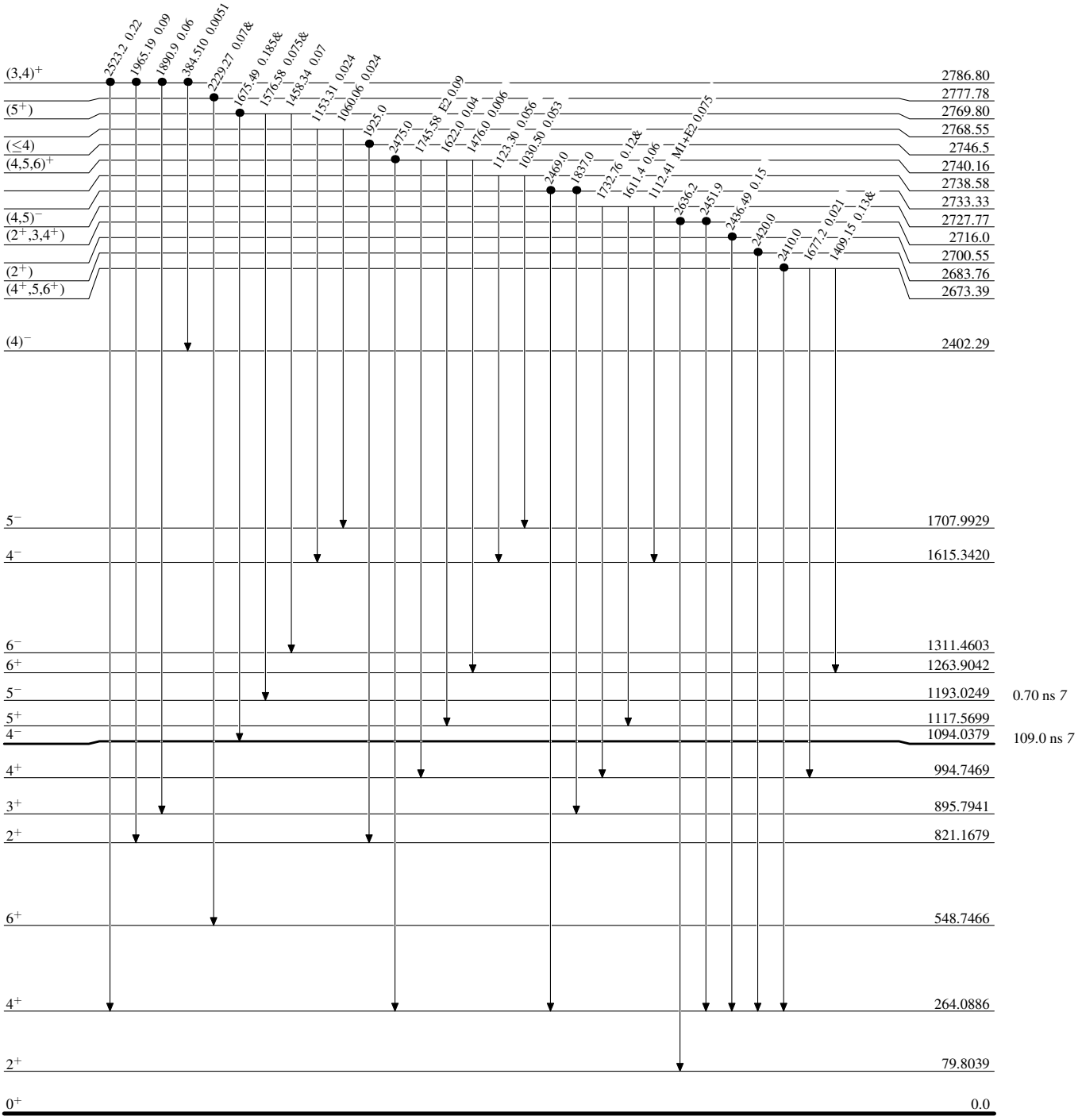
$^{168}_{68}Er_{100}$

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09

Level Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 neutron captures
& Multiply placed: undivided intensity given

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



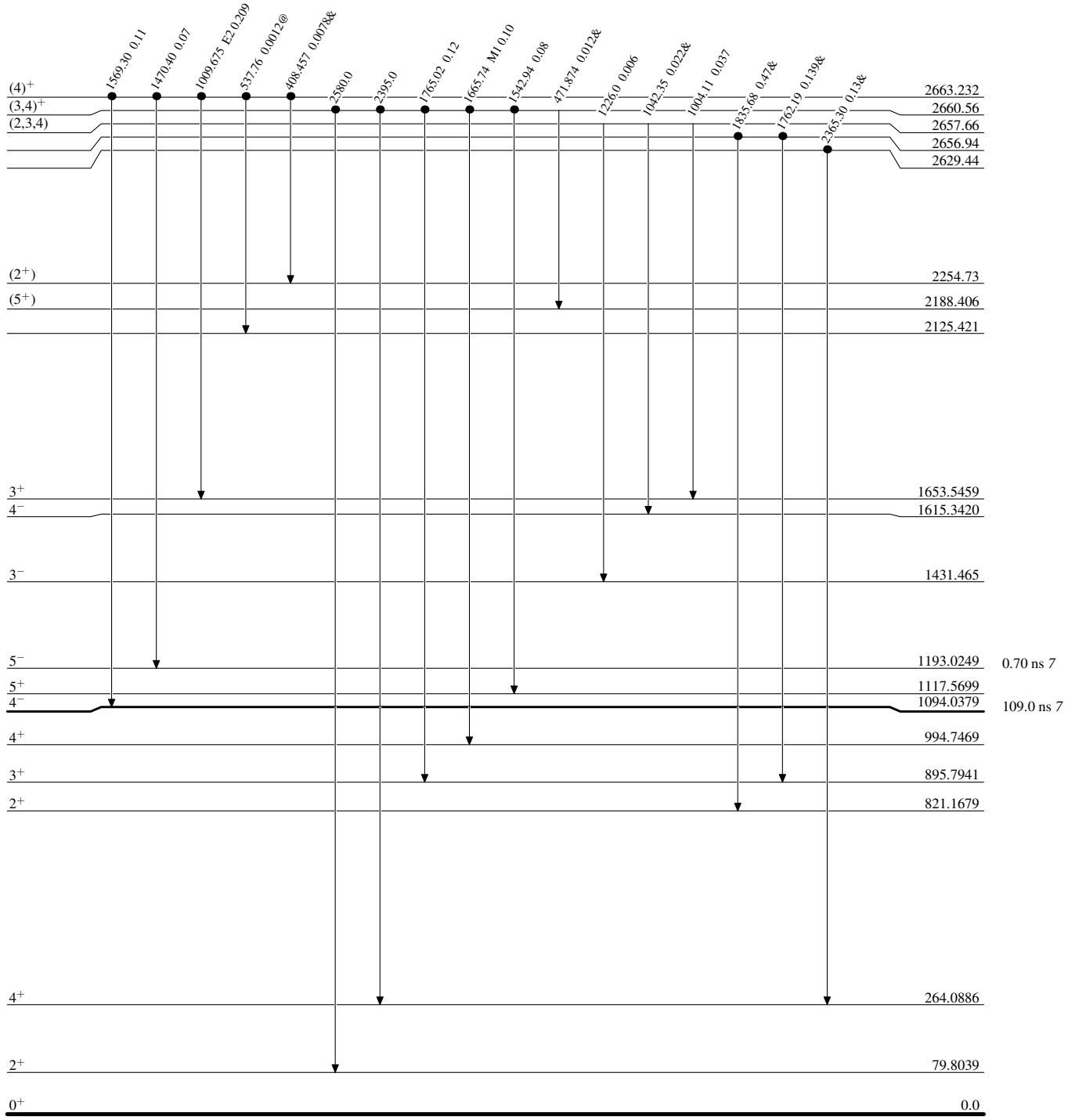
$^{168}_{68}Er_{100}$

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09

Level Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 neutron captures
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

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

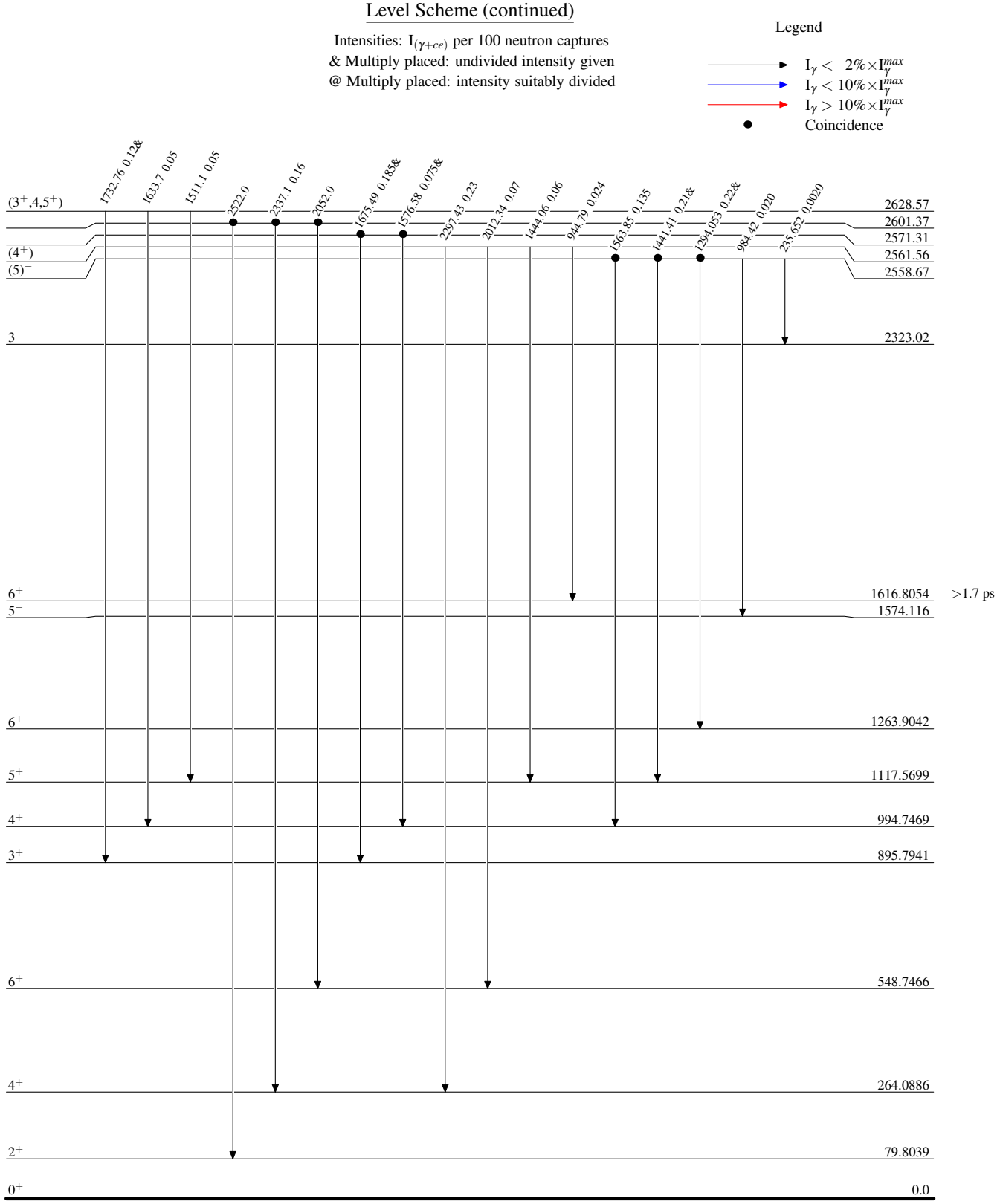


$^{168}_{68}Er_{100}$

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09

Level Scheme (continued)

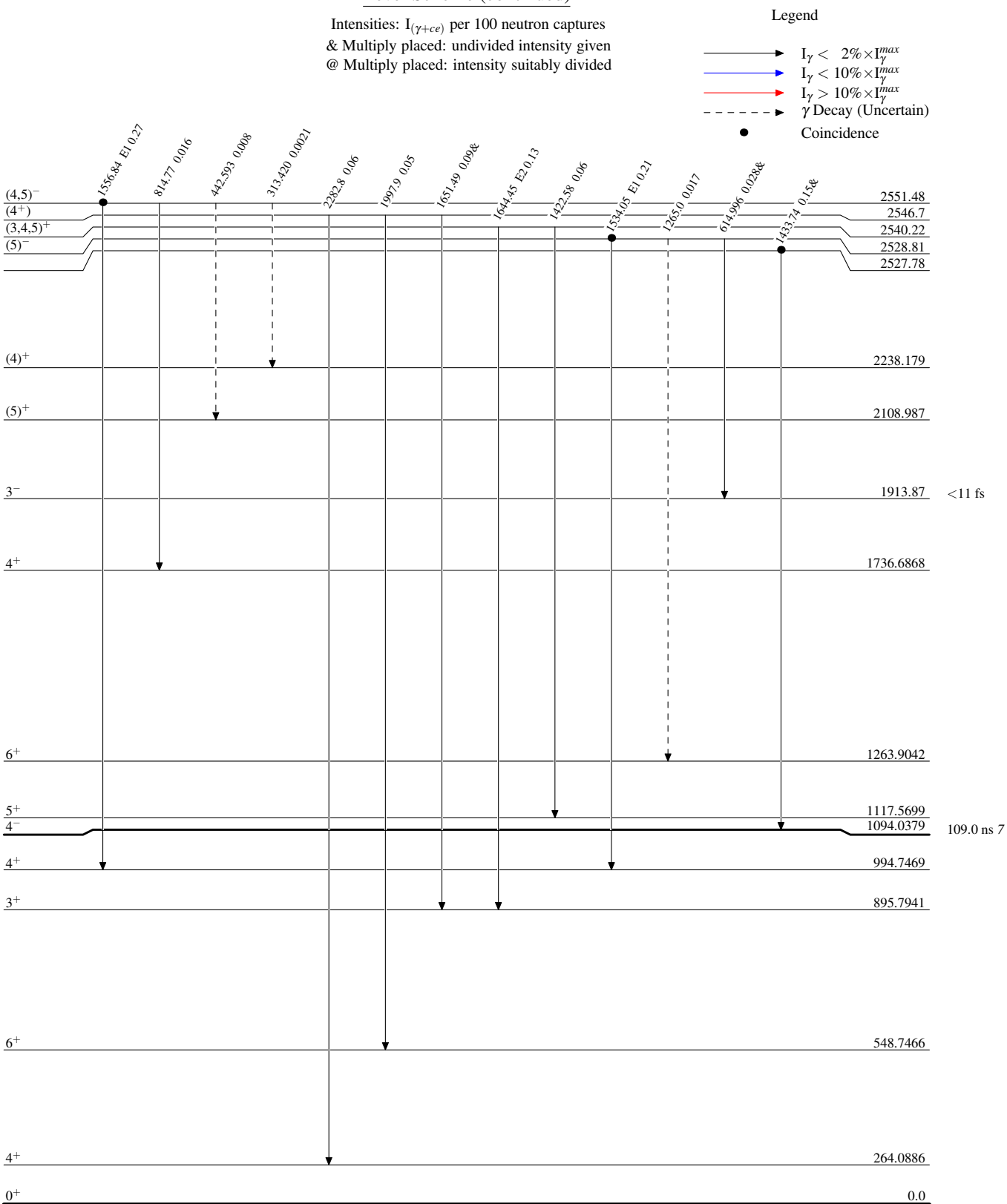
Intensities: $I_{(\gamma+ce)}$ per 100 neutron captures
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided



^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09

Level Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 neutron captures
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

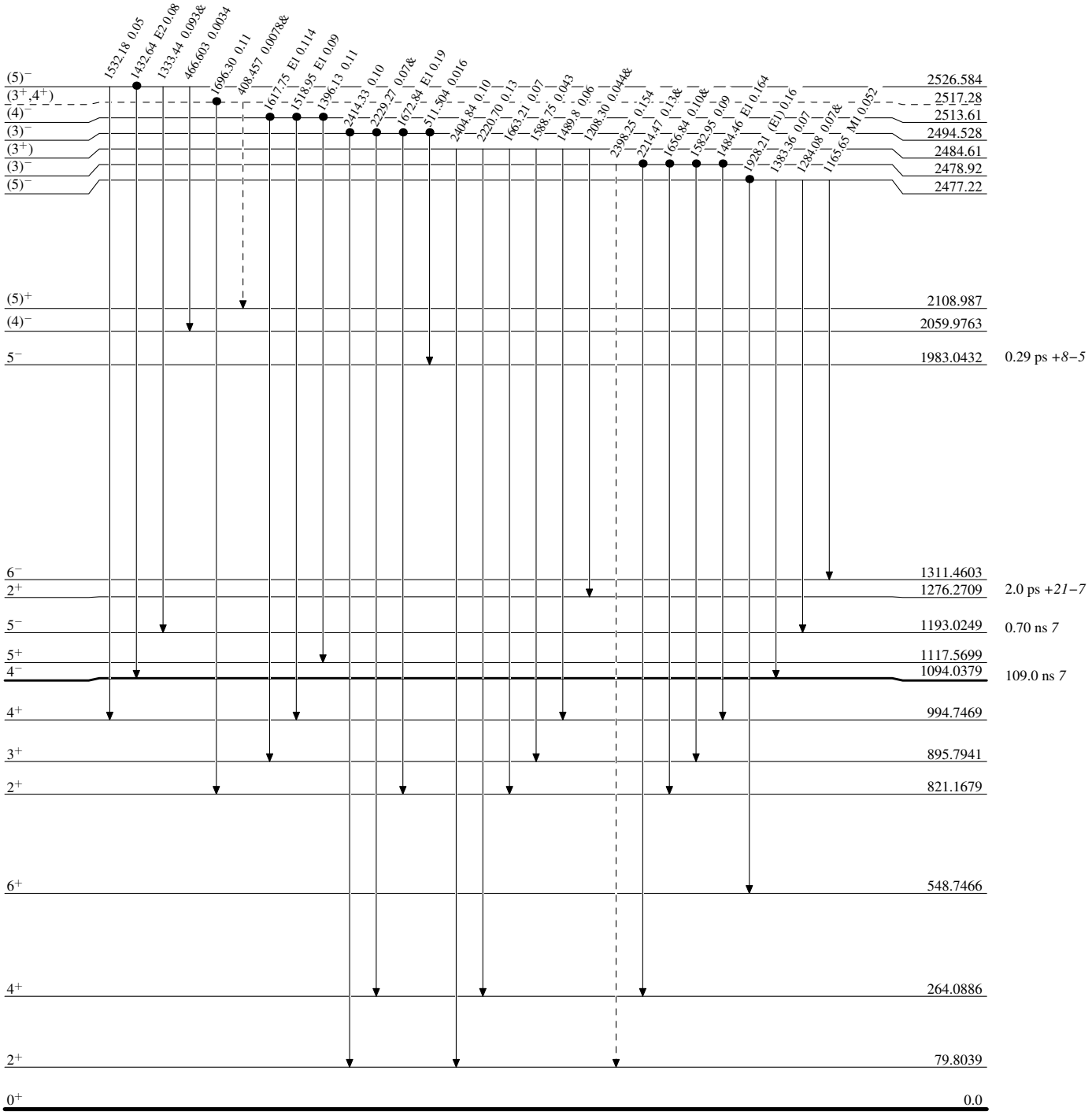


^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09

Level Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 neutron captures
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

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



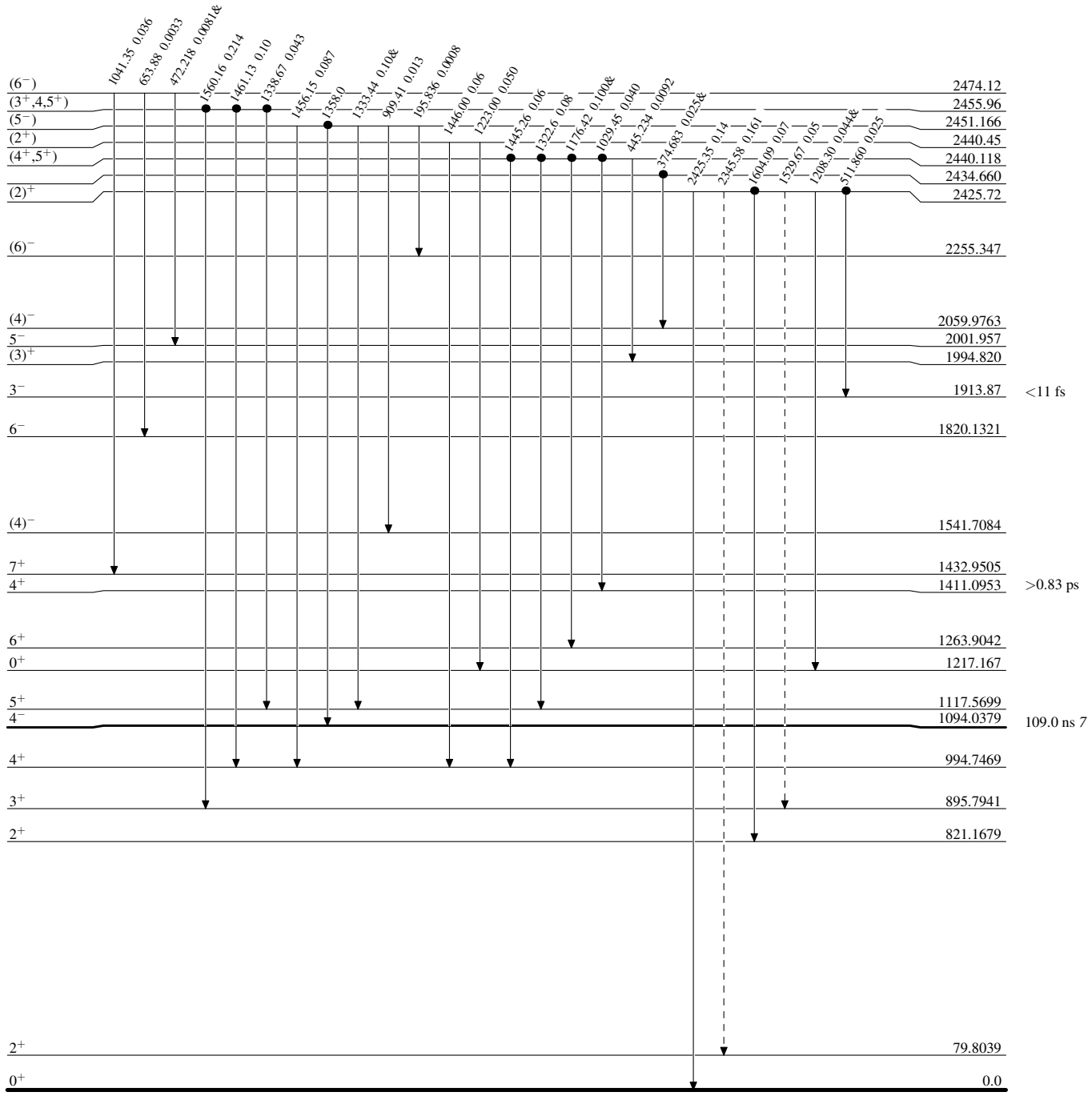
$^{168}_{68}Er_{100}$

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09

Level Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 neutron captures
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

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



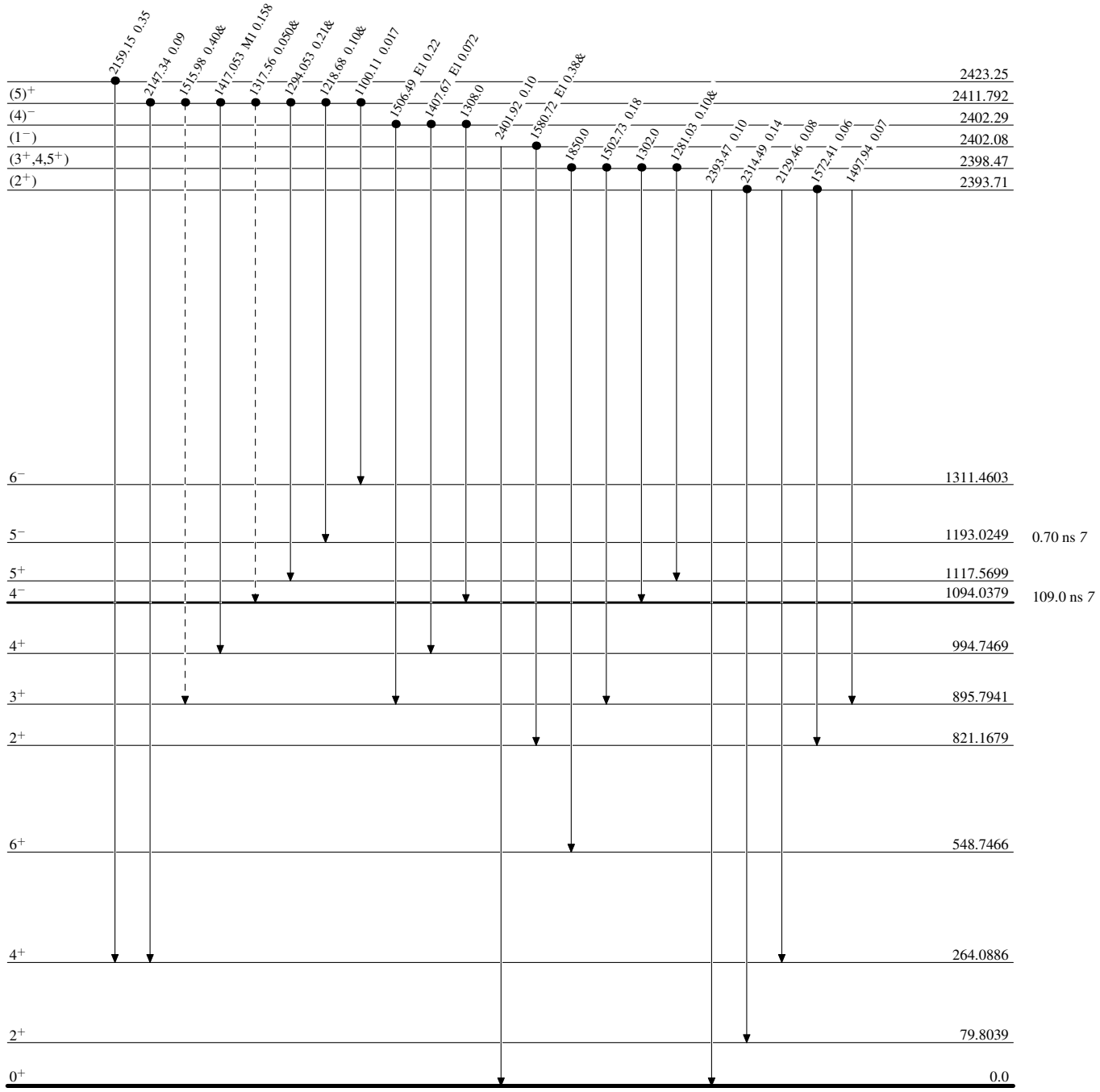
$^{168}_{68}Er_{100}$

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09

Level Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 neutron captures
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

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



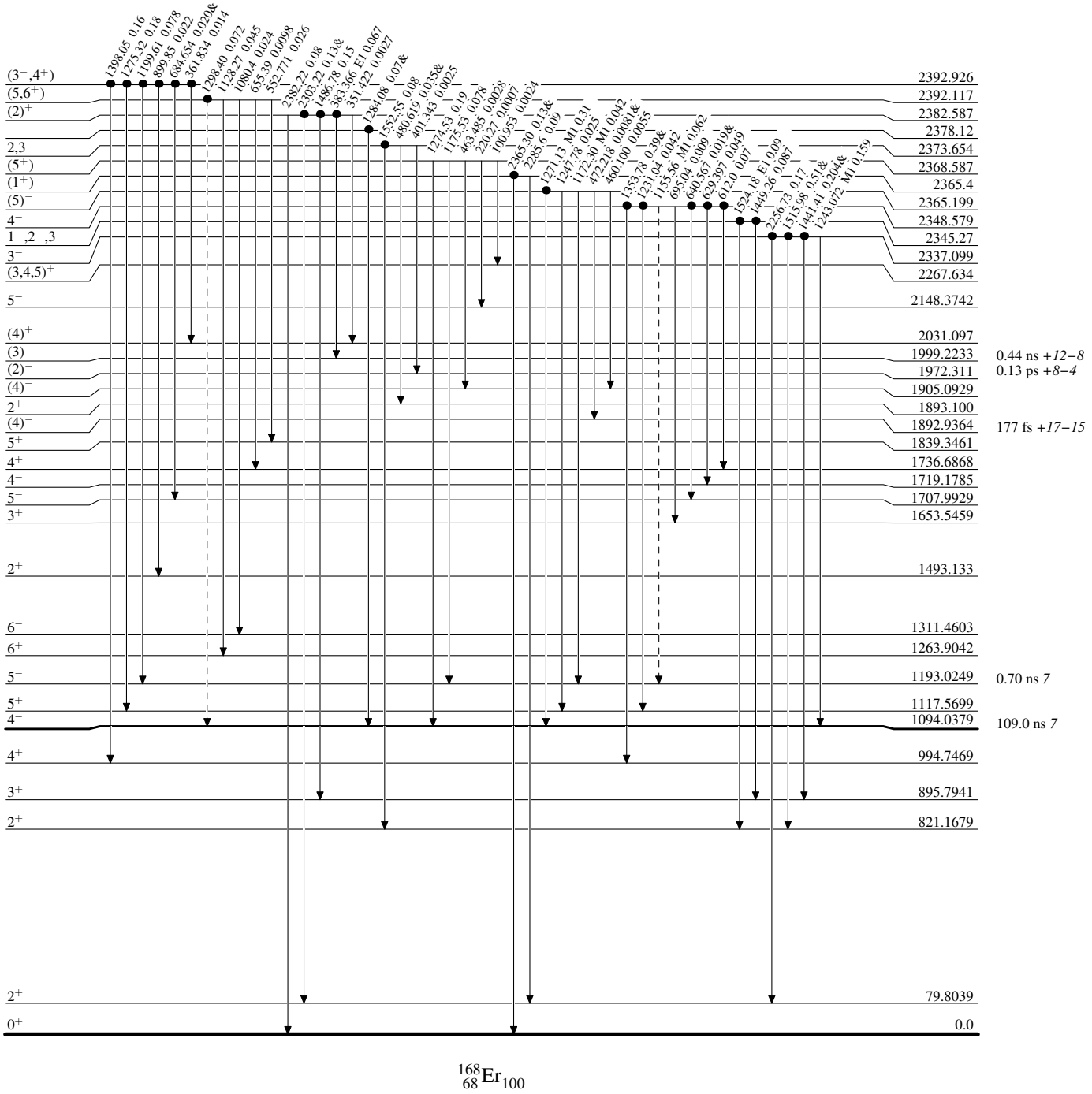
$^{168}_{68}Er_{100}$

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09

Level Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 neutron captures
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

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

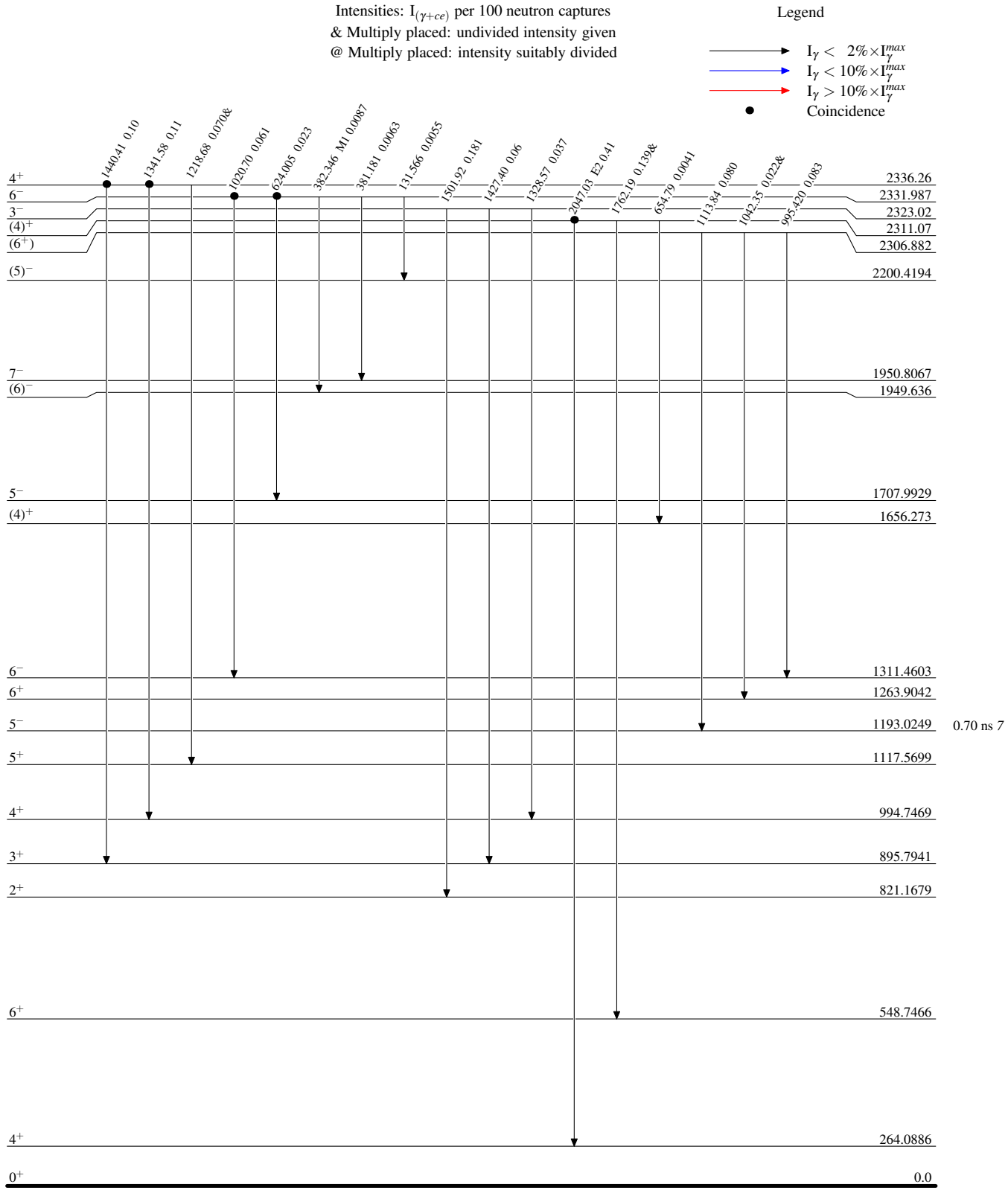


$^{168}_{68}Er_{100}$

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09

Level Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 neutron captures
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

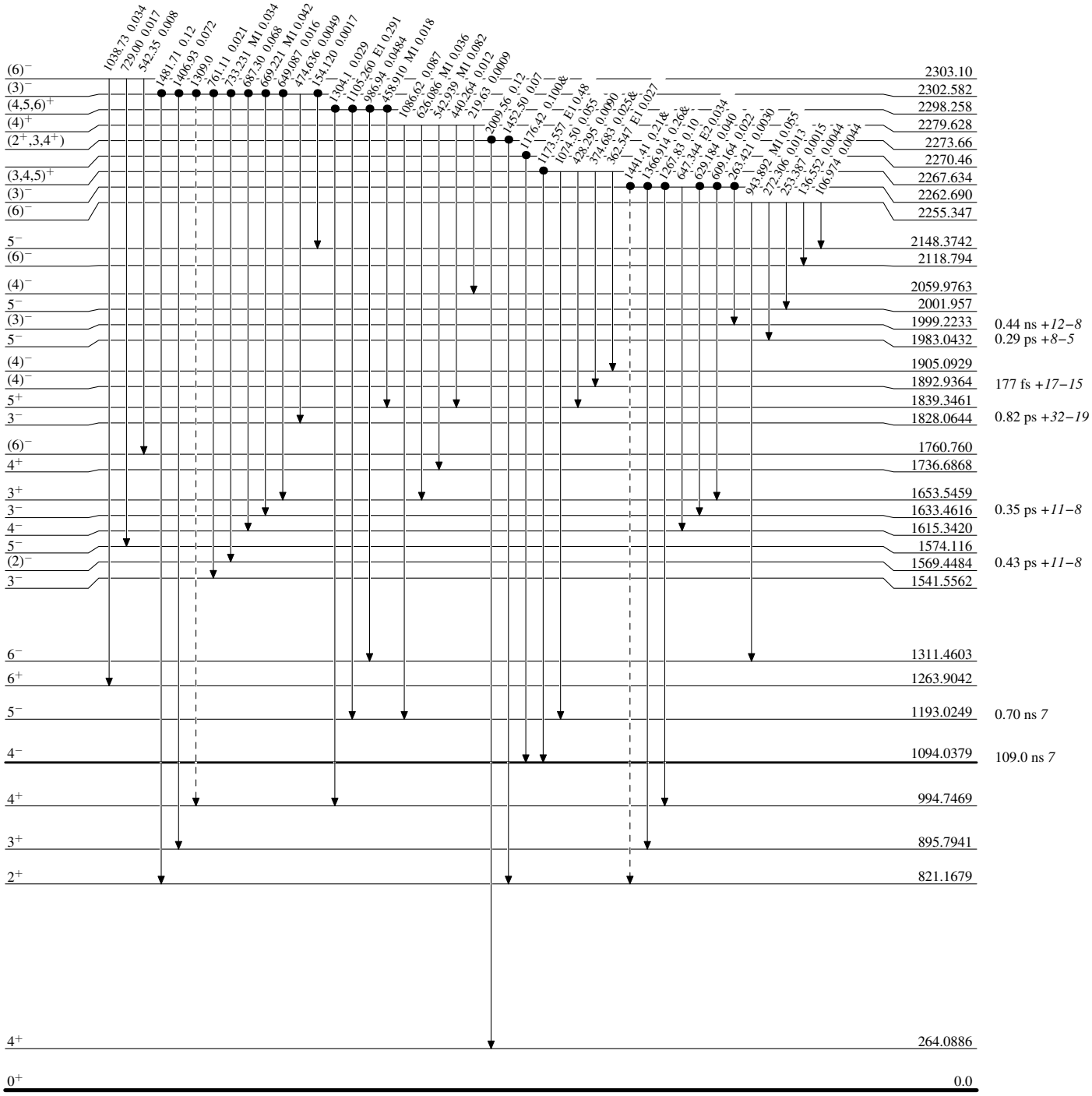


^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09

Level Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 neutron captures
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

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



$^{168}_{68}Er_{100}$

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09

Level Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 neutron captures
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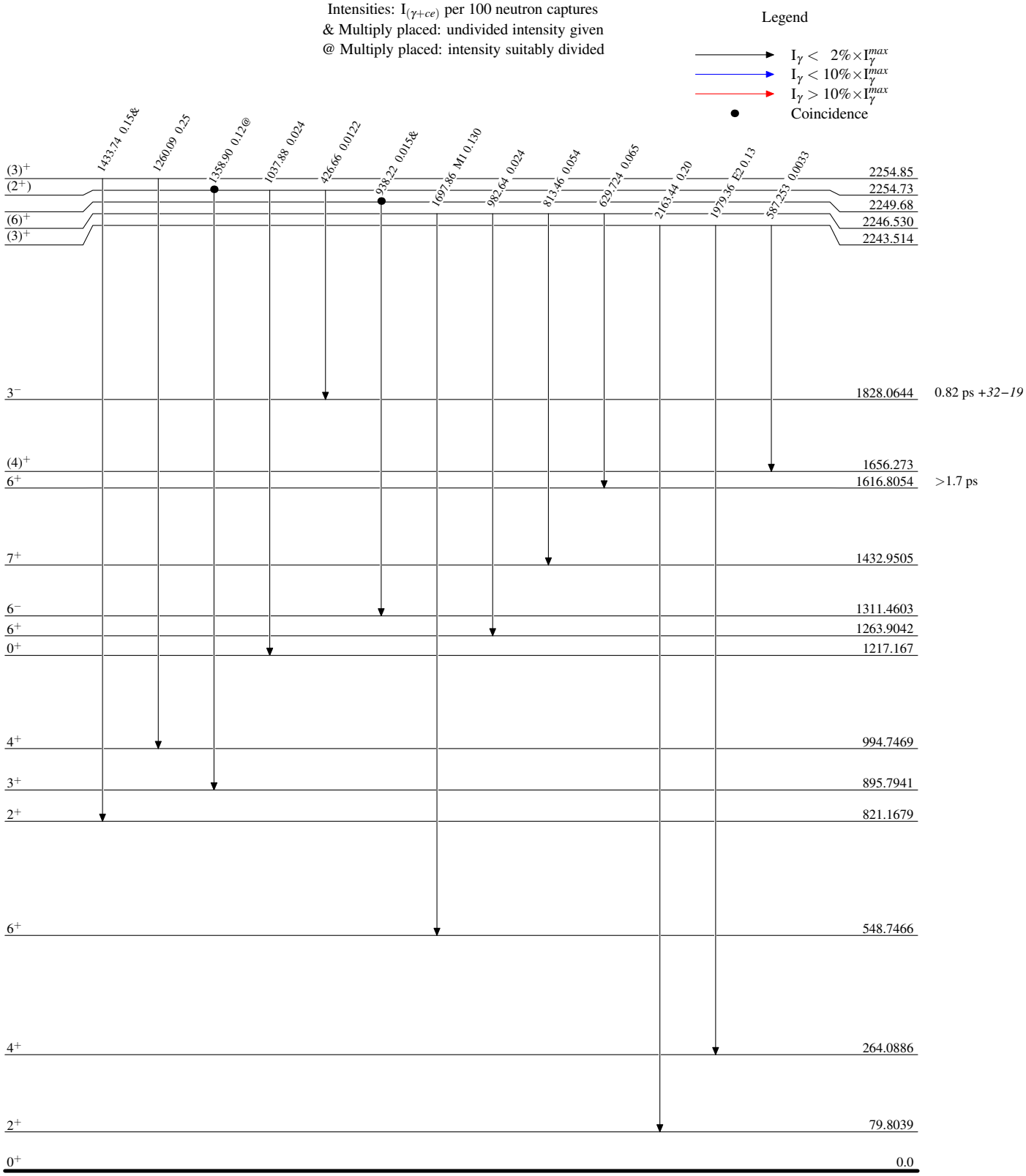

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09

Level Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 neutron captures
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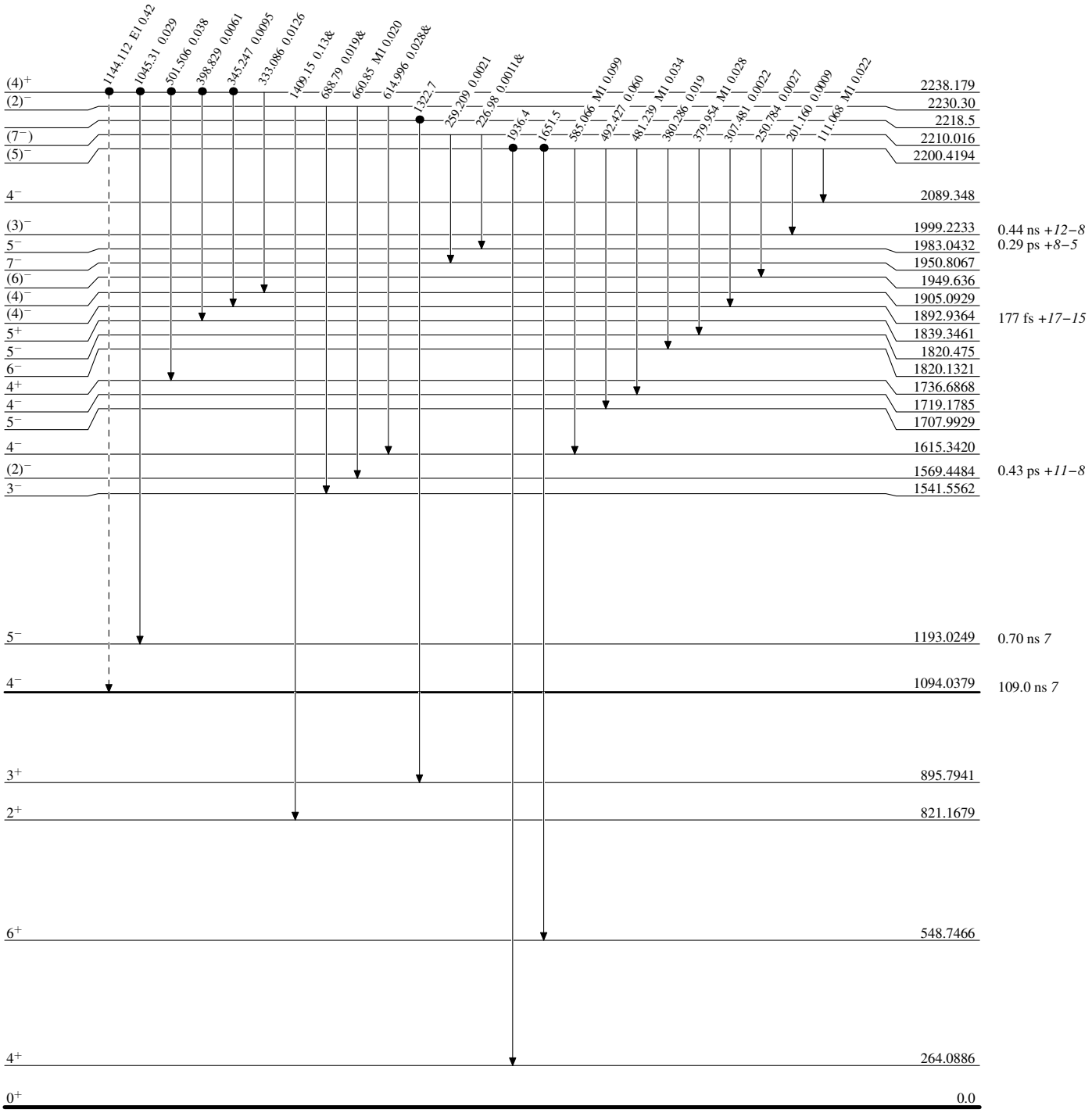
- γ Decay (Uncertain)
- Coincidence



$^{168}_{68}Er_{100}$

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09

Level Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 neutron captures
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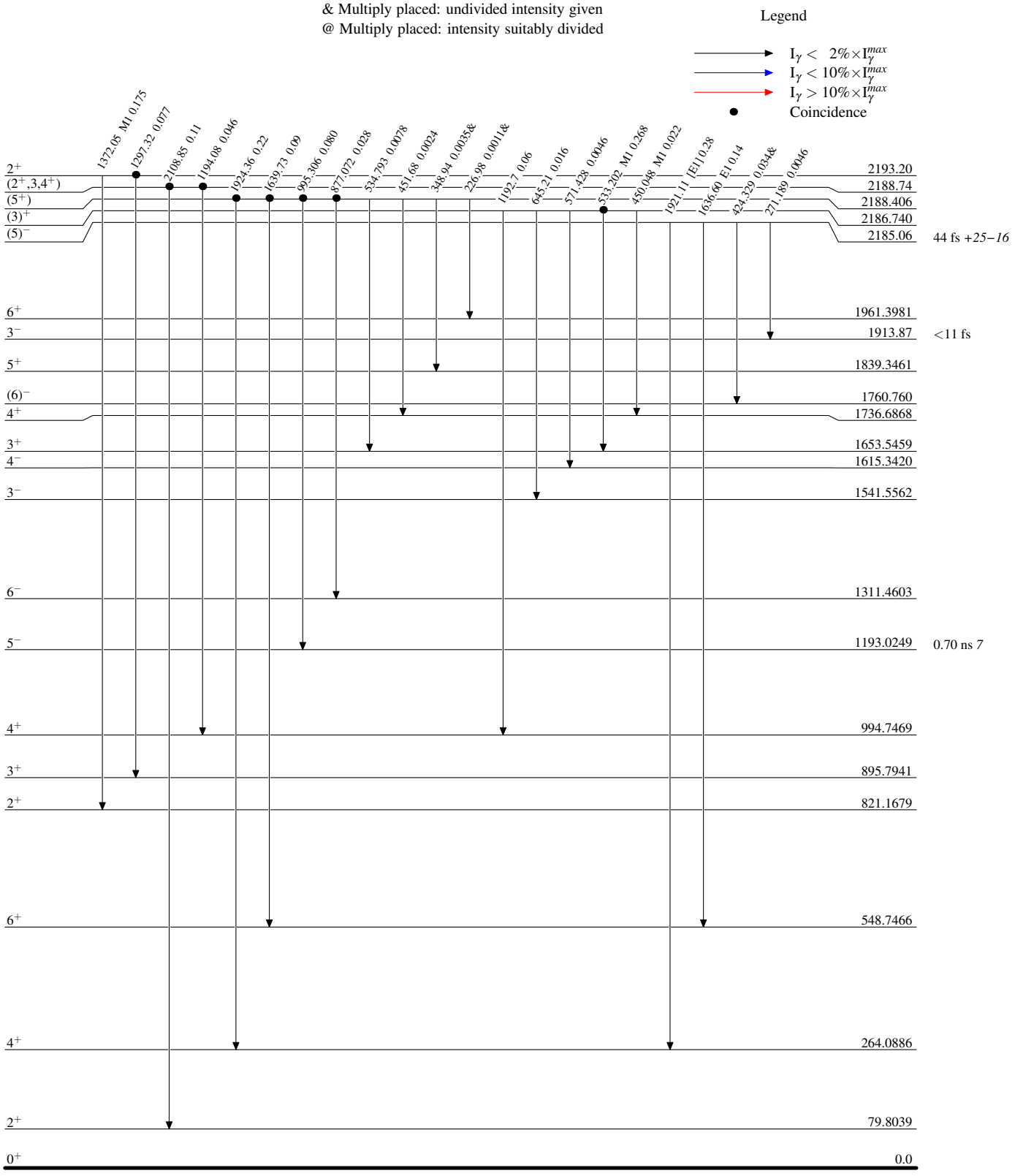

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09

Level Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 neutron captures
& Multiply placed: undivided intensity given
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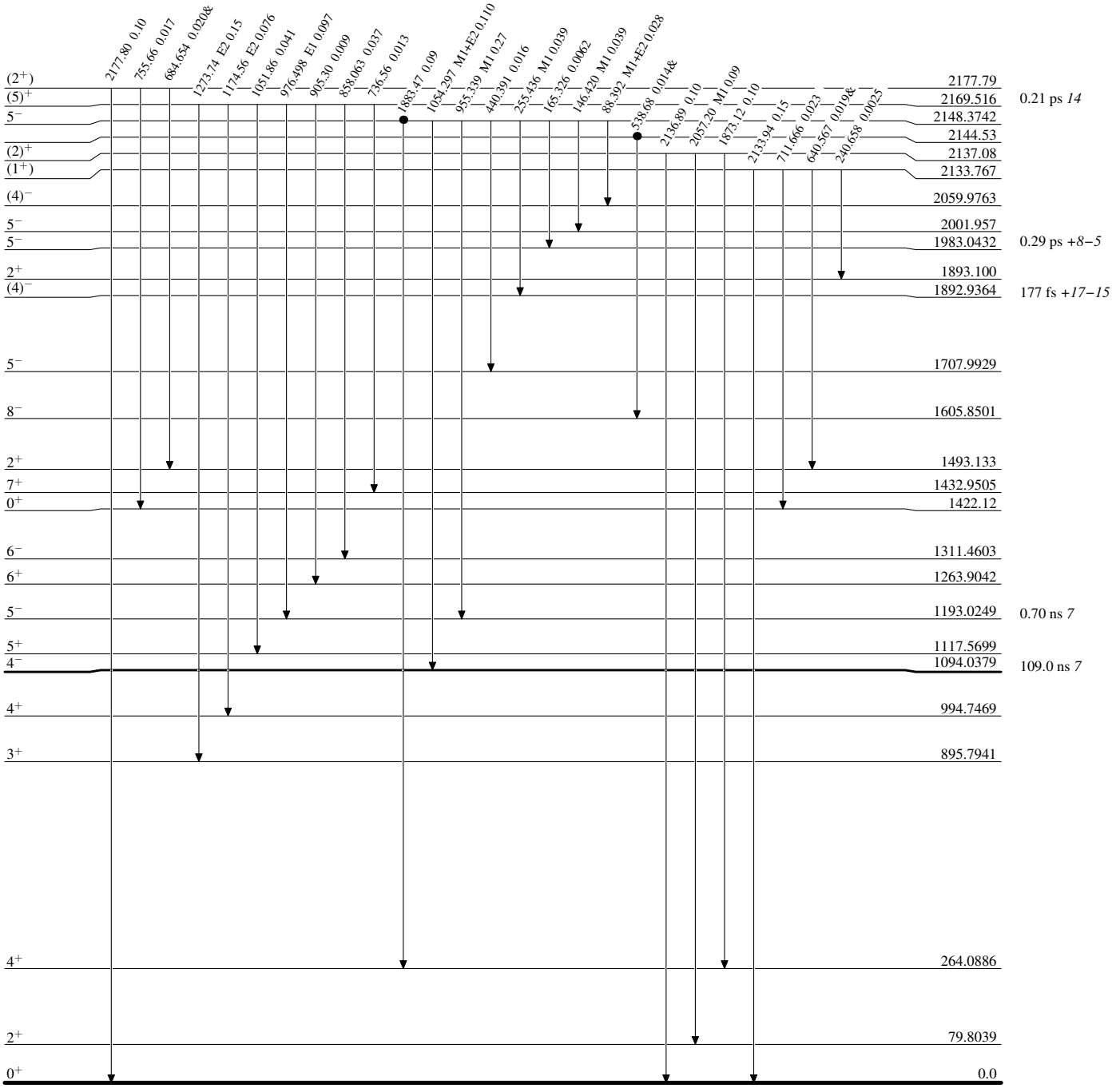
Legend
$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$
Coincidence



$^{168}_{68}Er_{100}$

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09

Level Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 neutron captures
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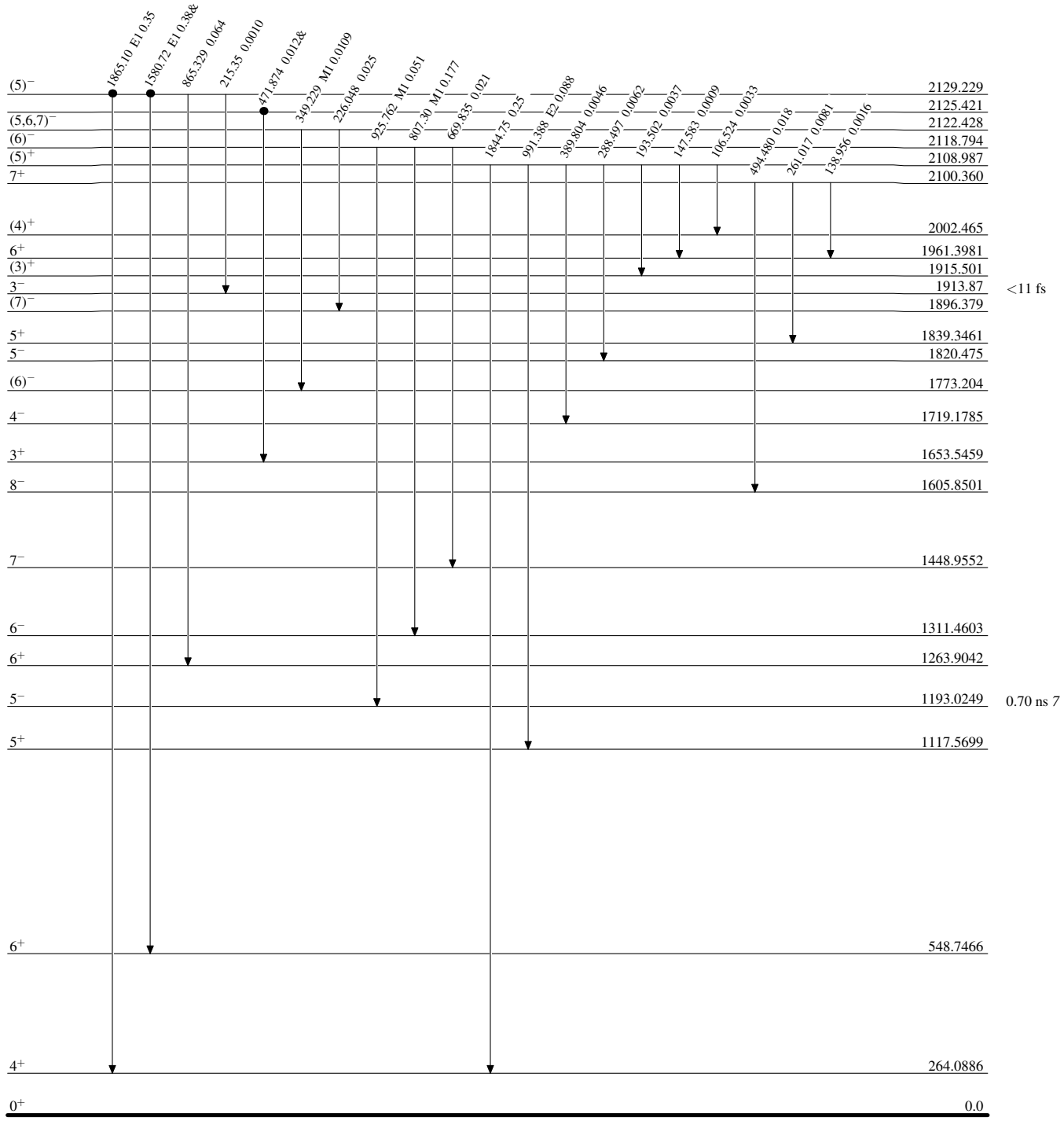
Coincidence



$^{168}_{68}Er_{100}$

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09

Level Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 neutron captures
& Multiply placed: undivided intensity given
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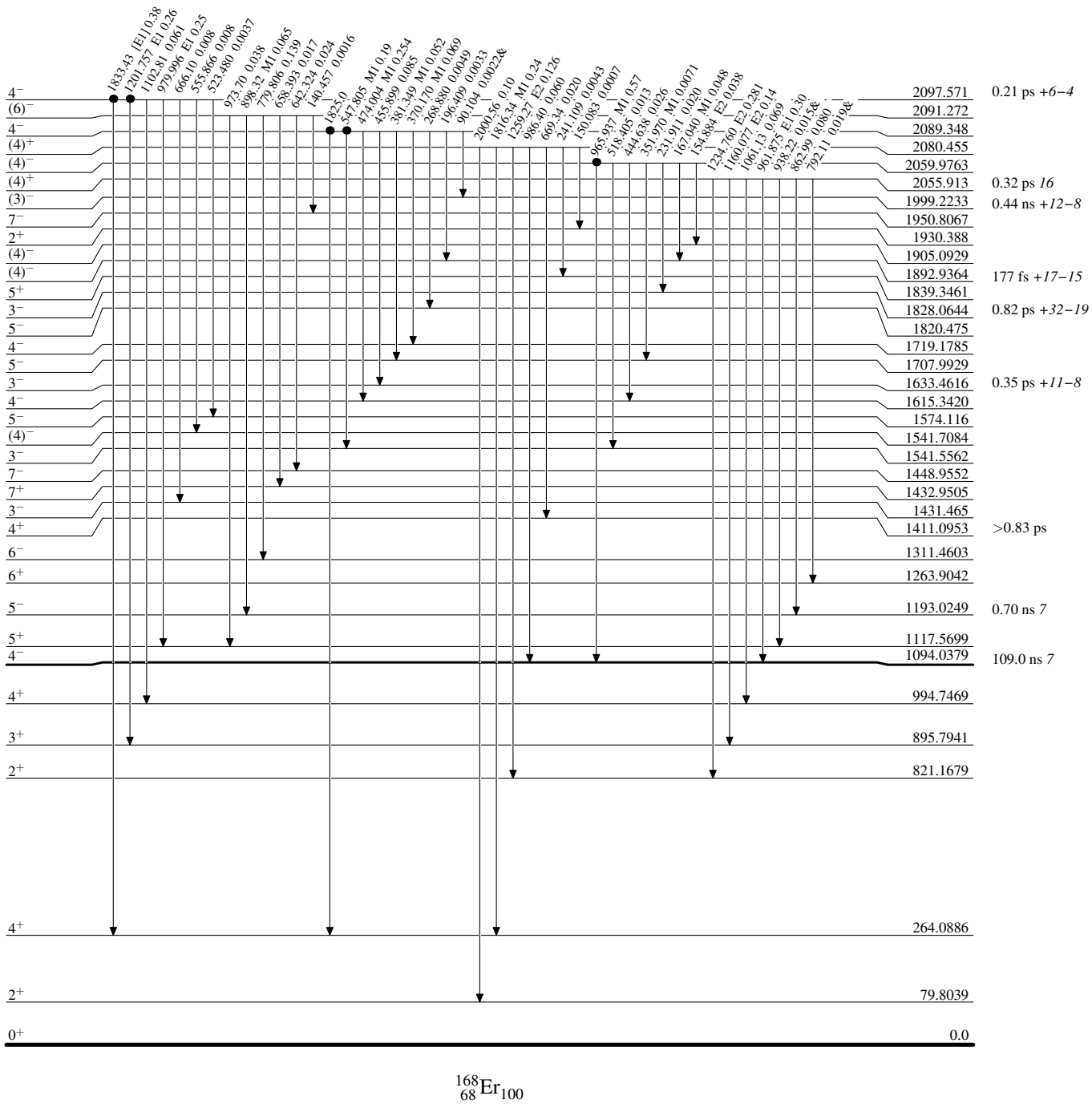
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$
Coincidence



$^{168}_{68}Er_{100}$

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09

Level Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 neutron captures
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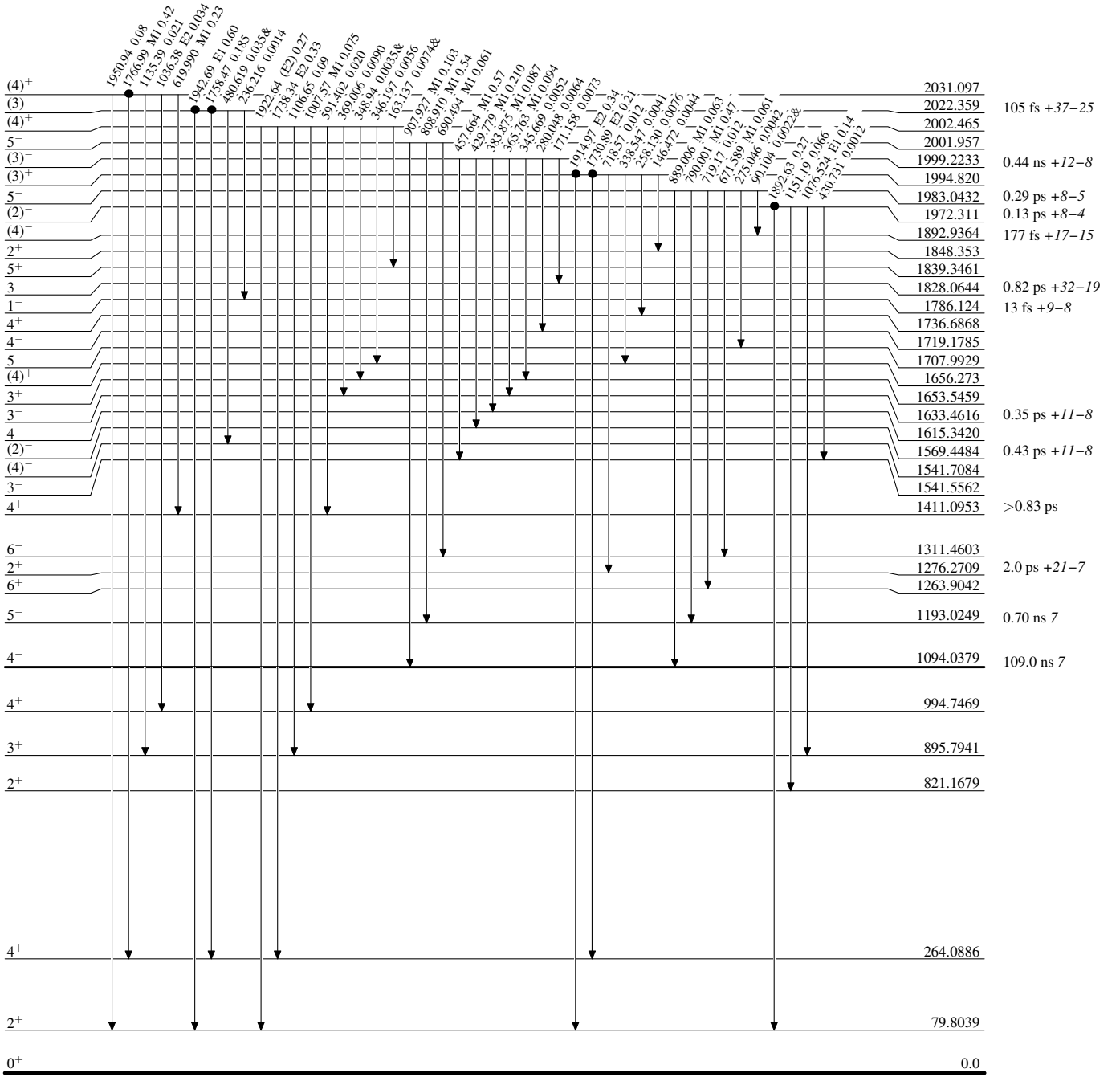
Coincidence



$^{168}_{68}Er_{100}$

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09

Level Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 neutron captures
& Multiply placed: undivided intensity given
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Legend
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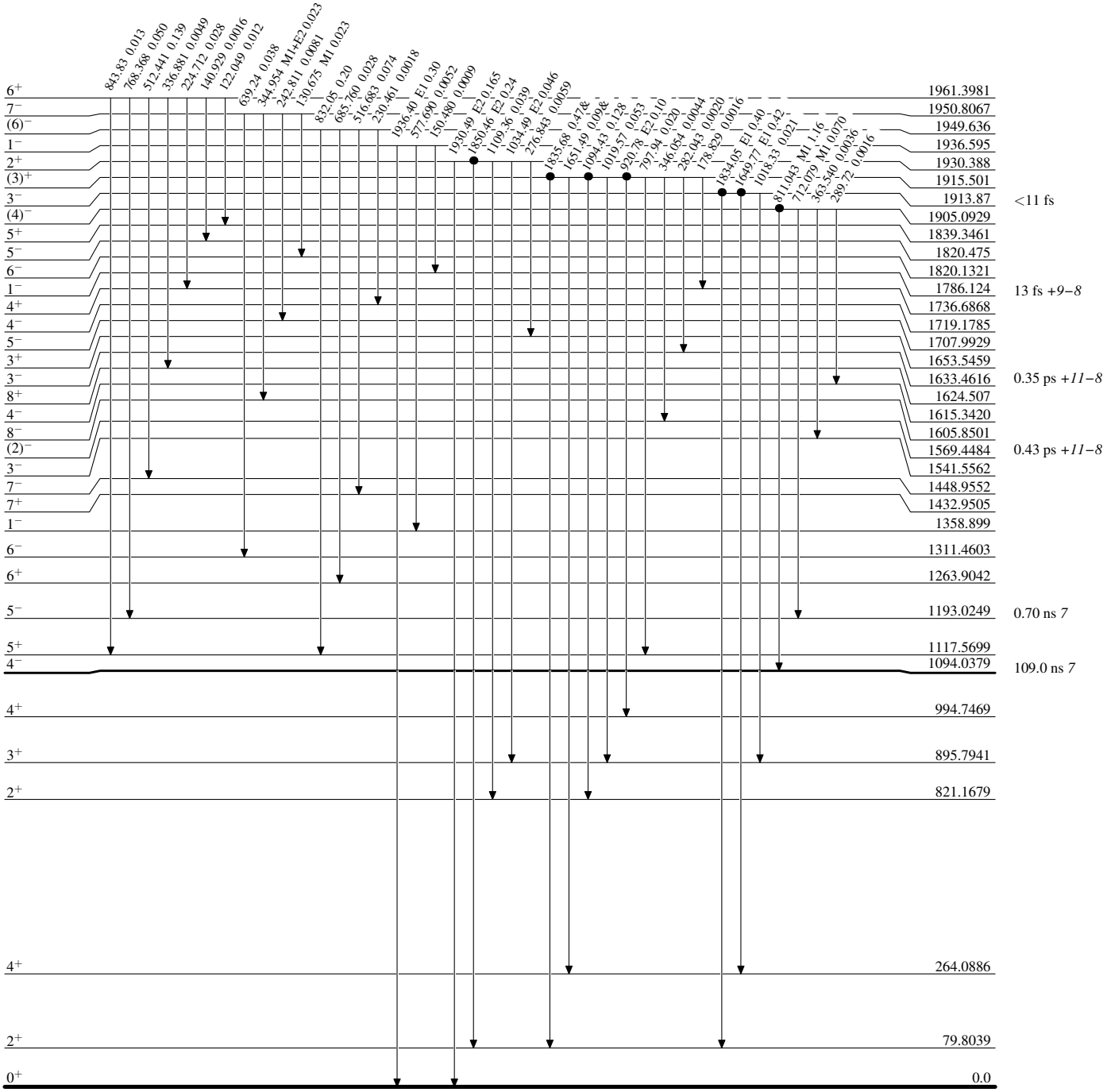
Coincidence



$^{168}_{68}Er_{100}$

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09

Level Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 neutron captures
& Multiply placed: undivided intensity given
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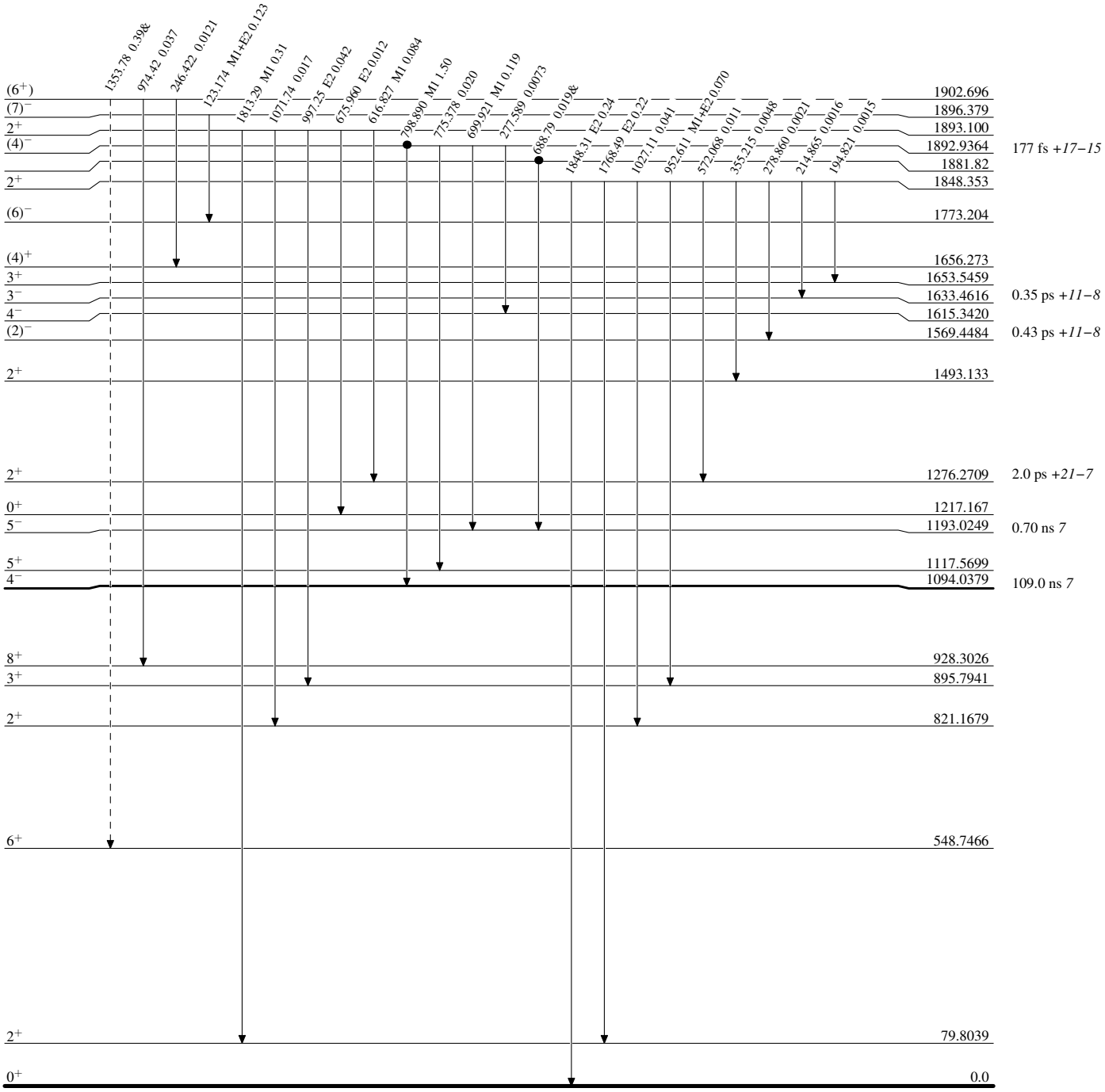
$I_\gamma > 10\% \times I_\gamma^{max}$
γ Decay (Uncertain)
Coincidence



$^{168}_{68}Er_{100}$

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09

Level Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 neutron captures
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Legend
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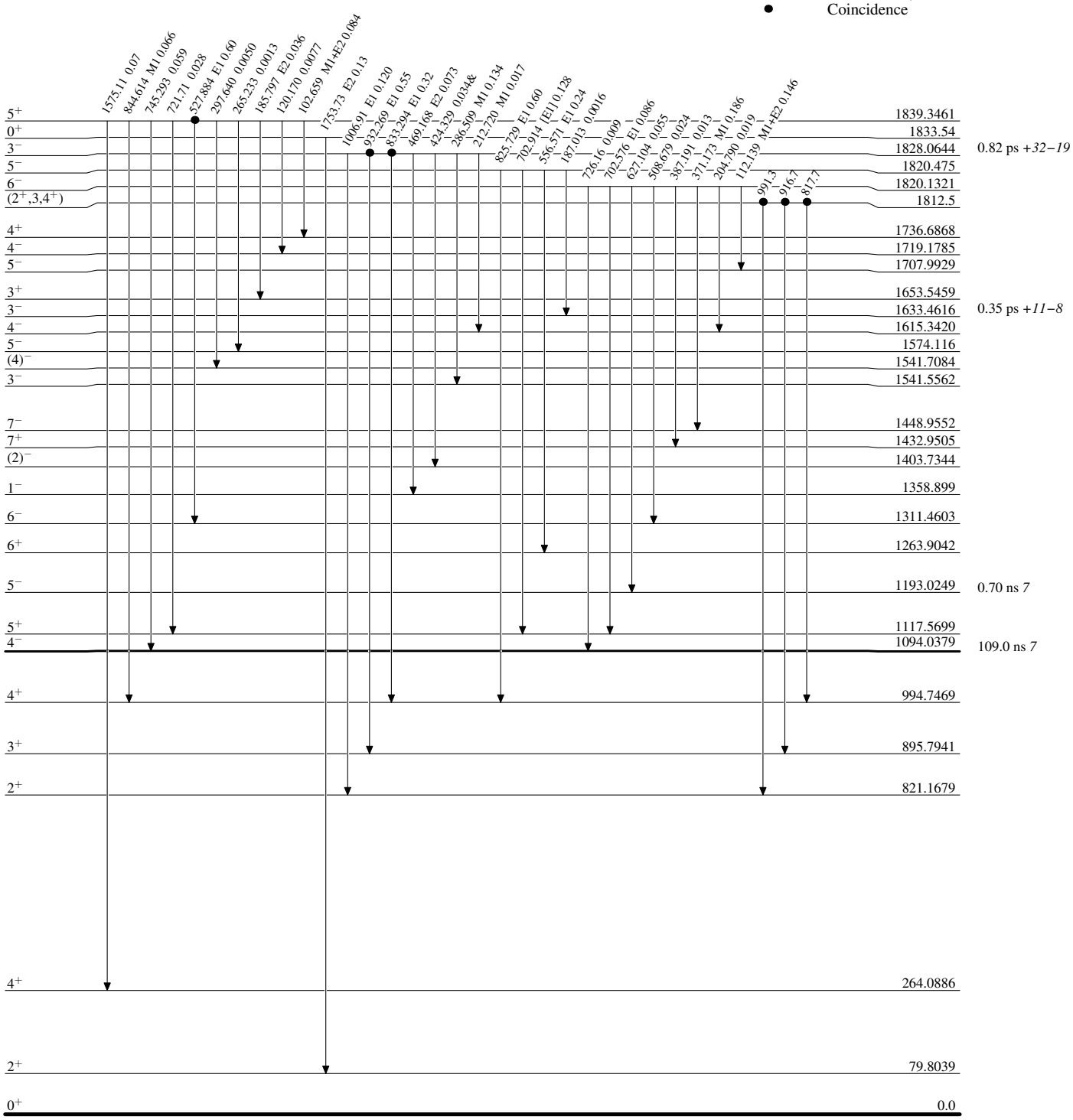
$I_\gamma > 10\% \times I_\gamma^{max}$
Coincidence



$^{168}_{68}Er_{100}$

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09

Level Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 neutron captures
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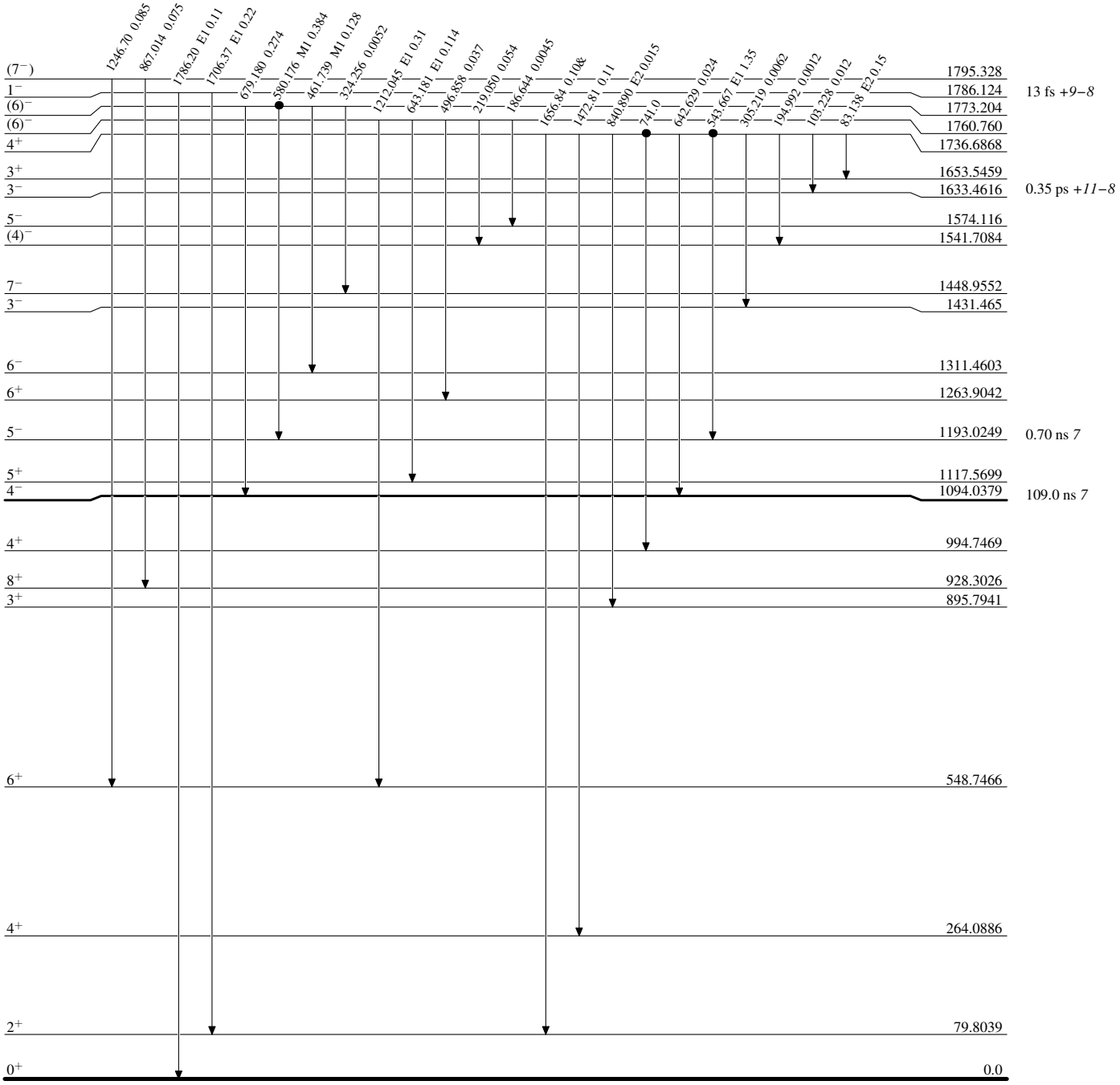
$I_\gamma > 10\% \times I_\gamma^{max}$
Coincidence



$^{168}_{68}Er_{100}$

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09

Level Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 neutron captures
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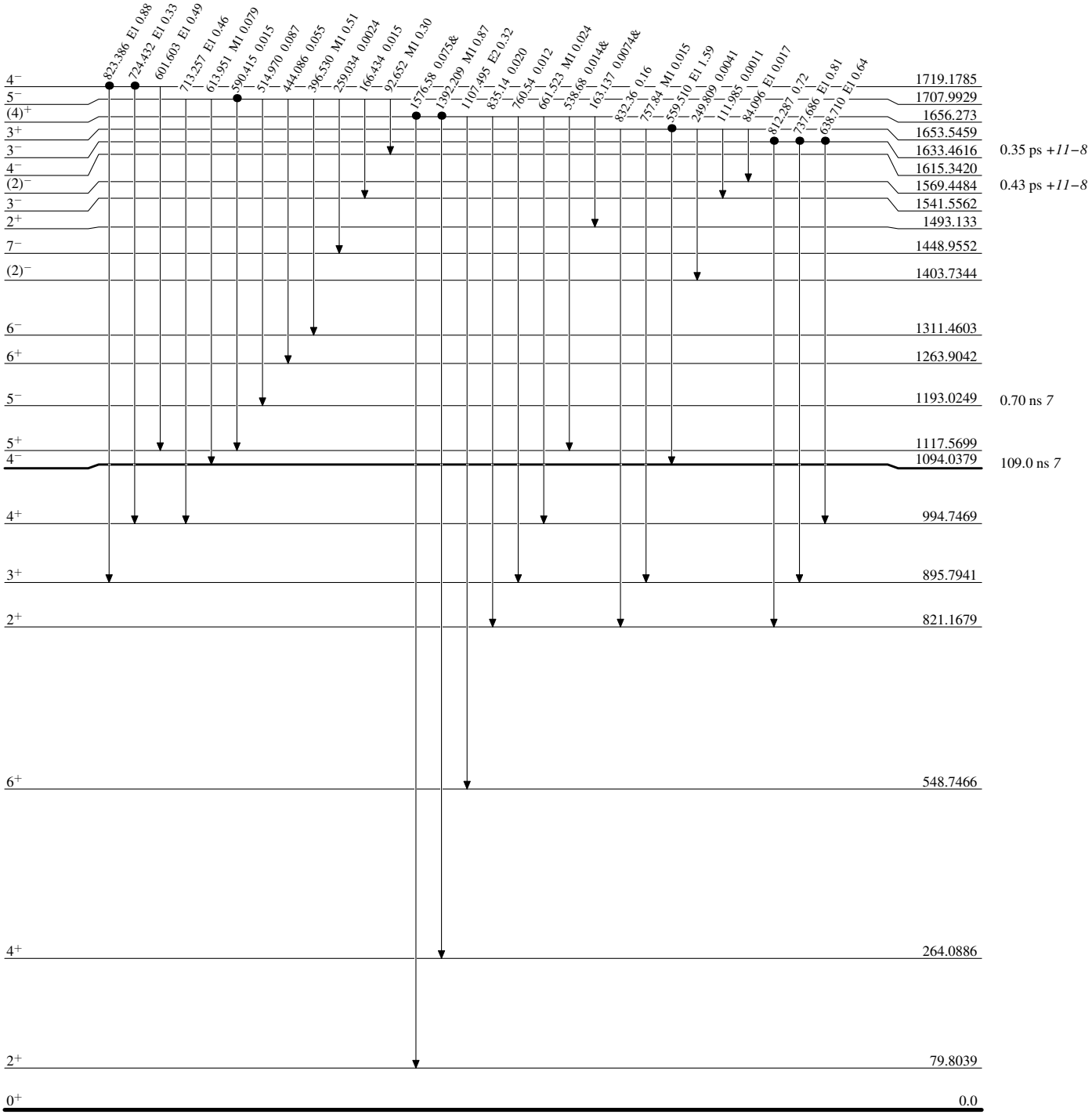
Coincidence



$^{168}_{68}Er_{100}$

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09

Level Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 neutron captures
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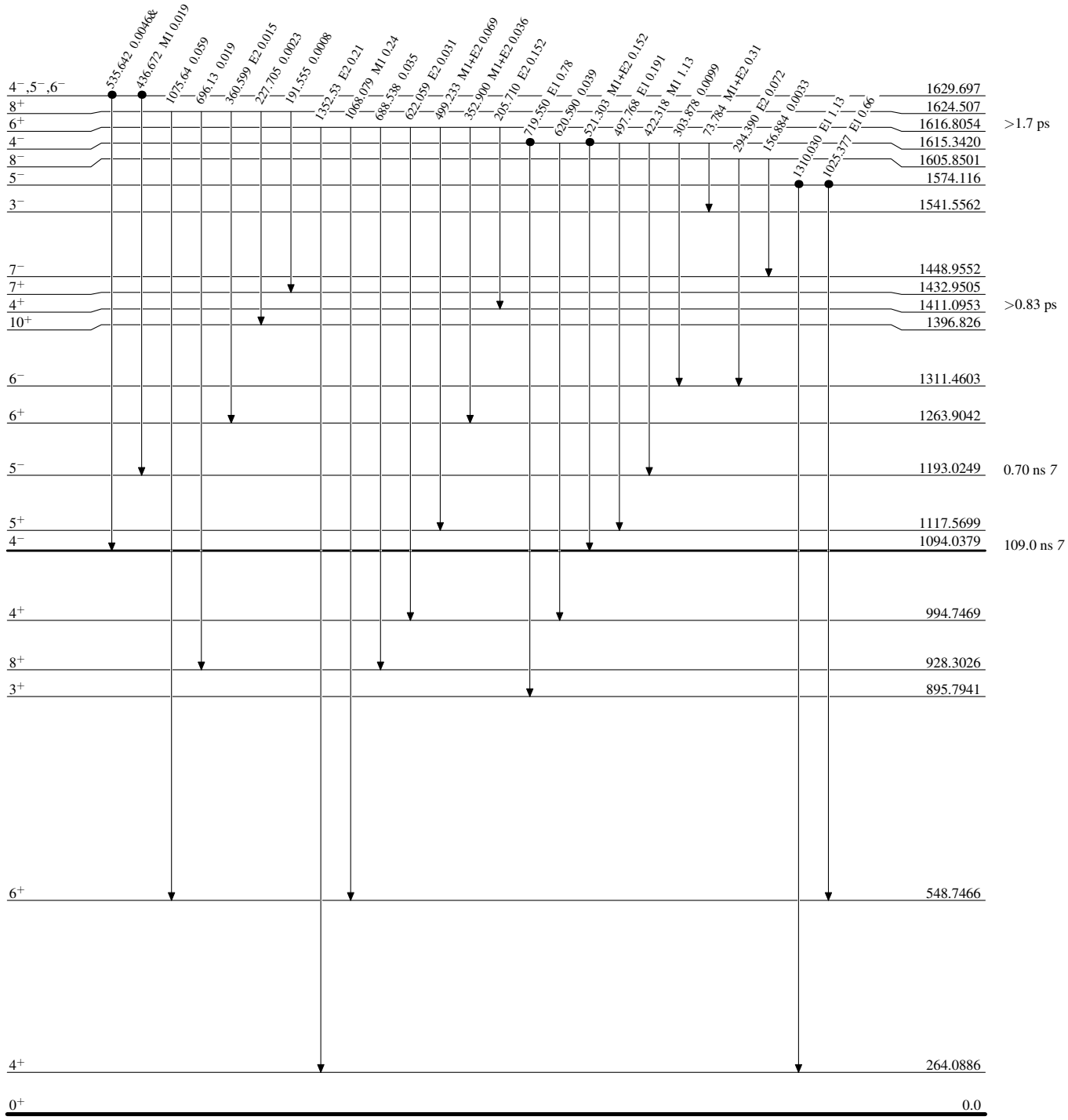
Coincidence



$^{168}_{68}Er_{100}$

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09

Level Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 neutron captures
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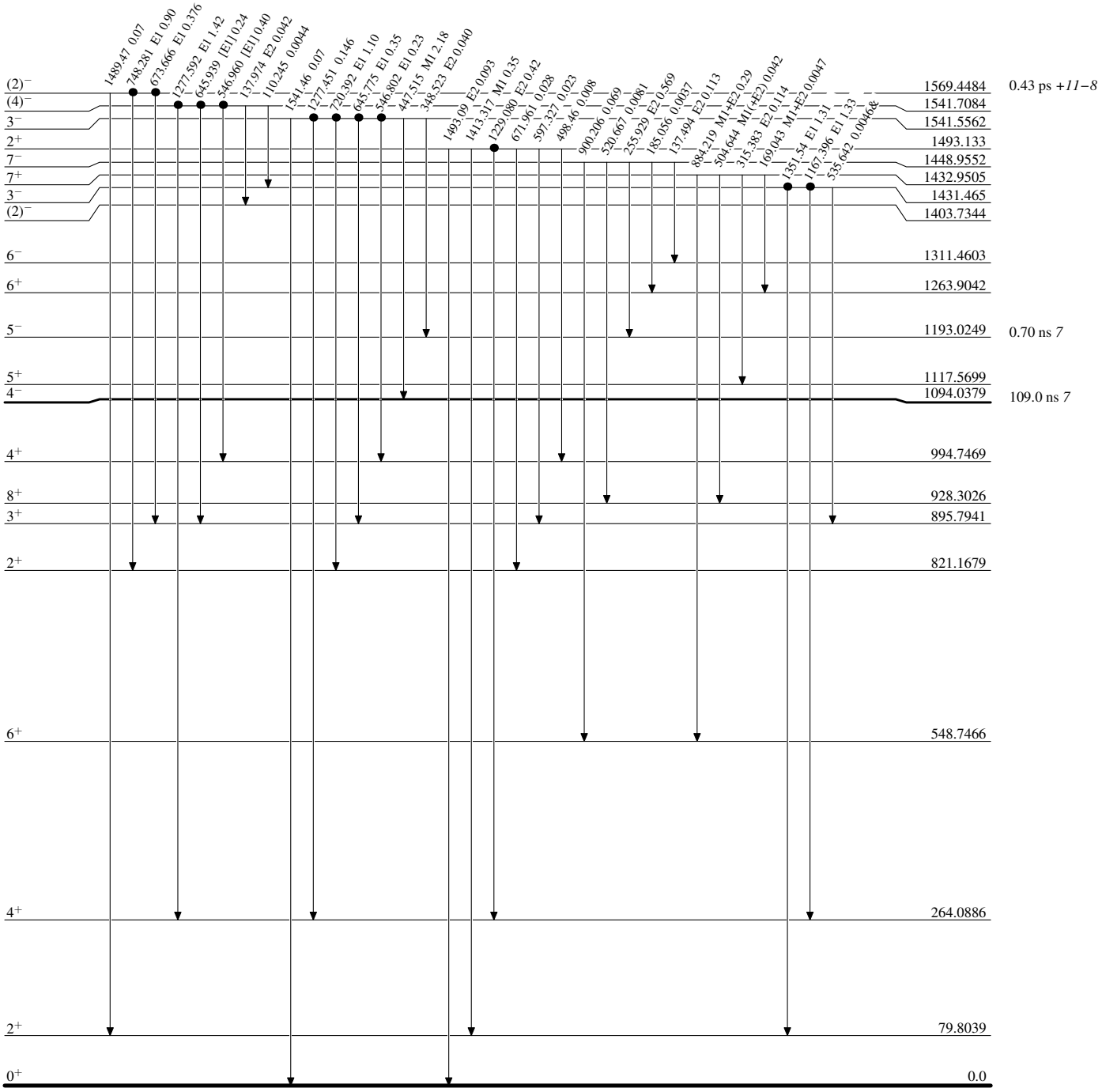
Coincidence



$^{168}_{68}Er_{100}$

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09

Level Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 neutron captures
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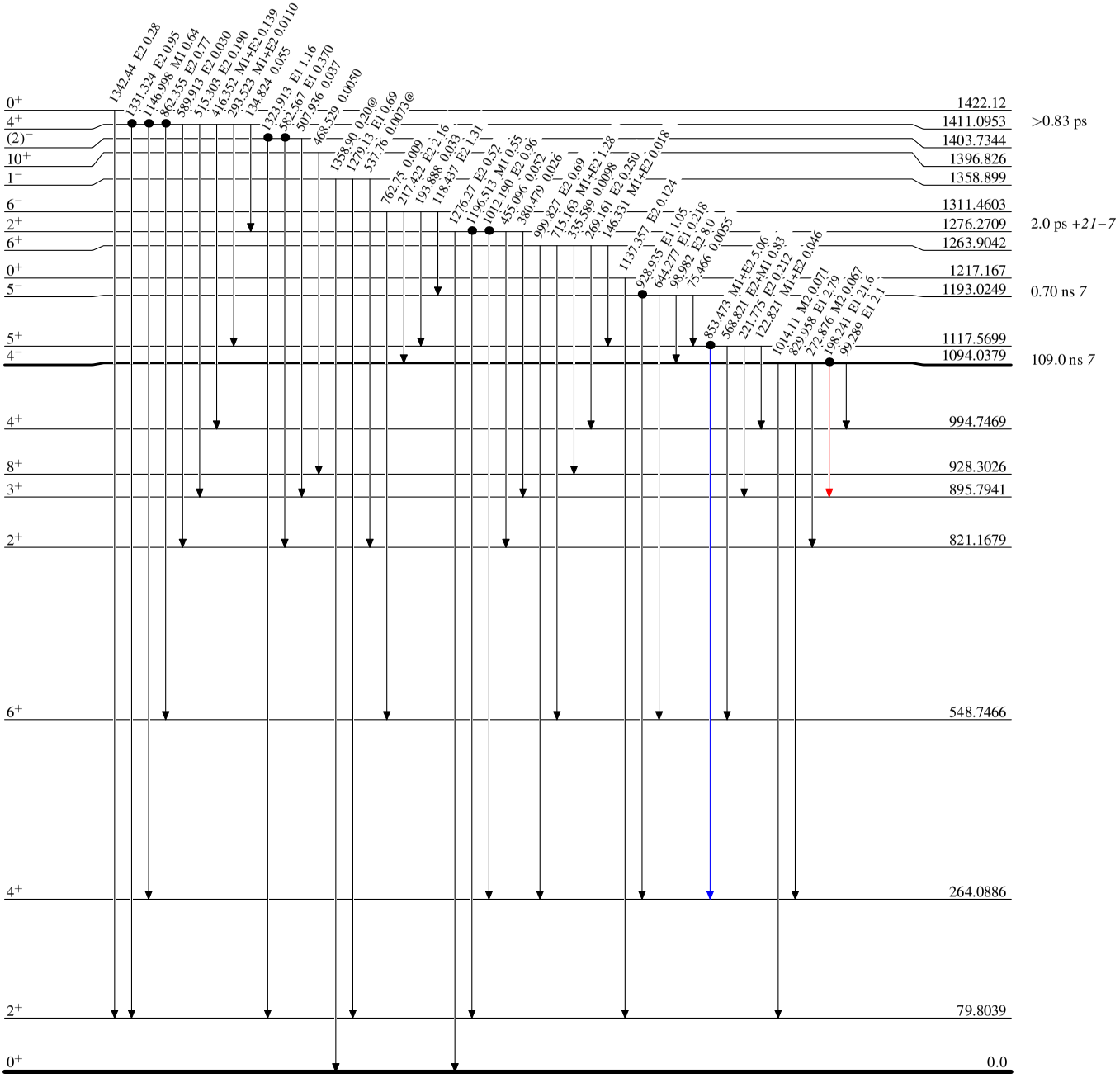
Coincidence



$^{168}_{68}Er_{100}$

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09

Level Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 neutron captures
& Multiply placed: undivided intensity given
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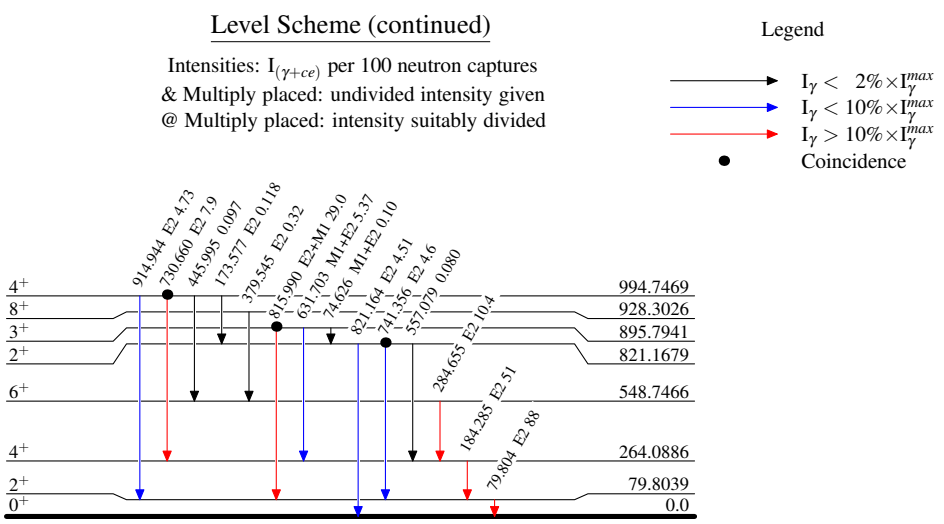
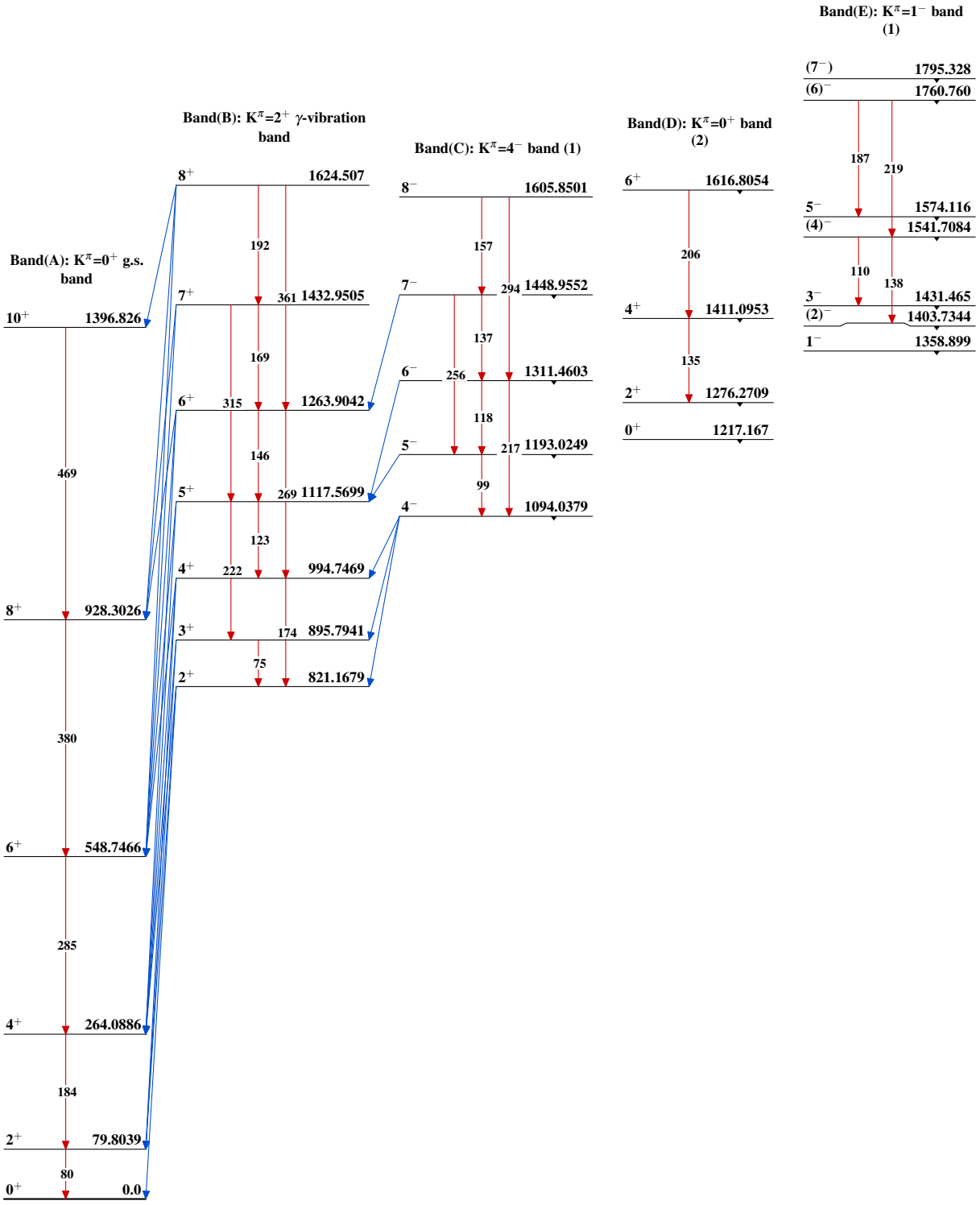


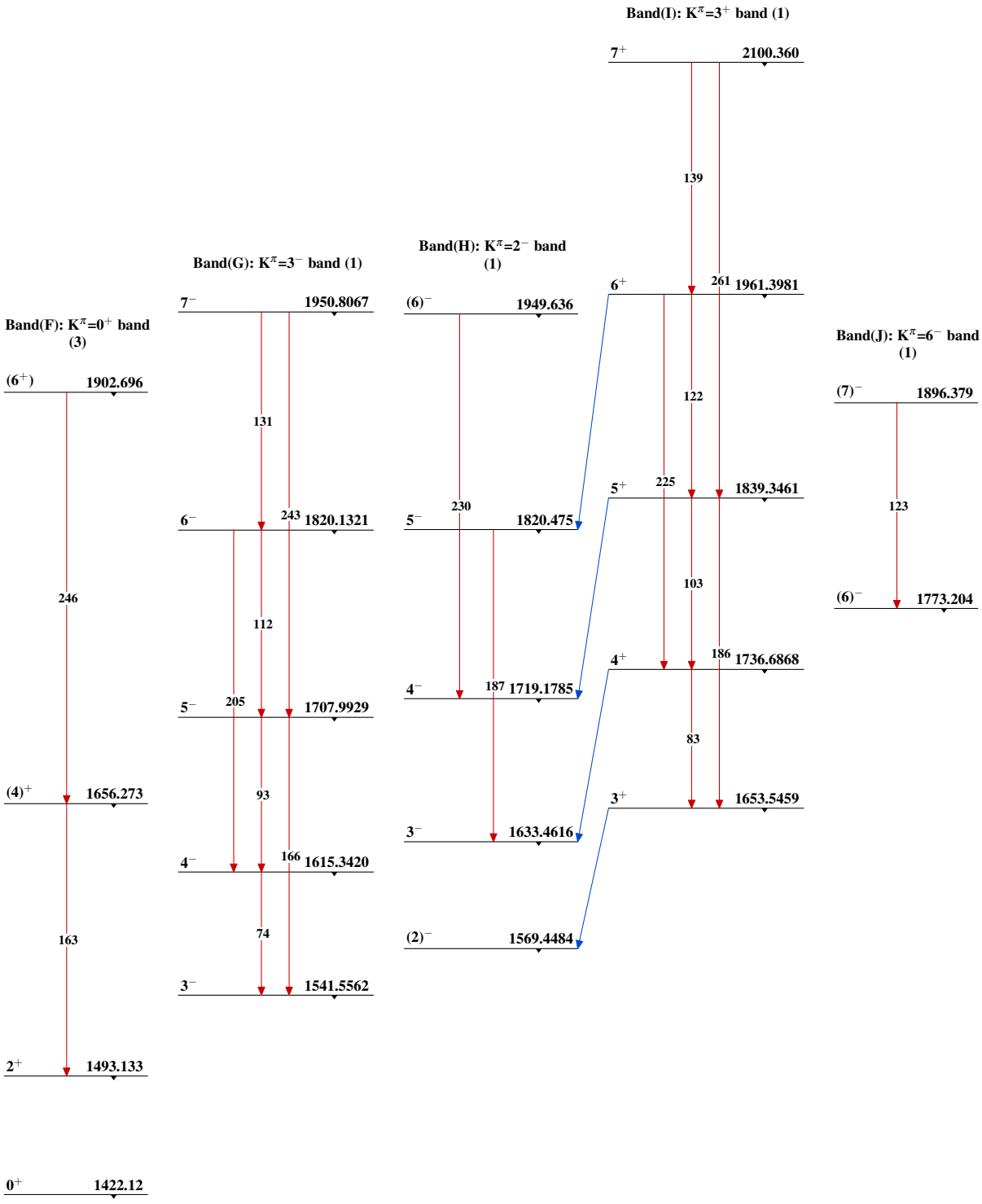
$^{168}_{68}Er_{100}$

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09



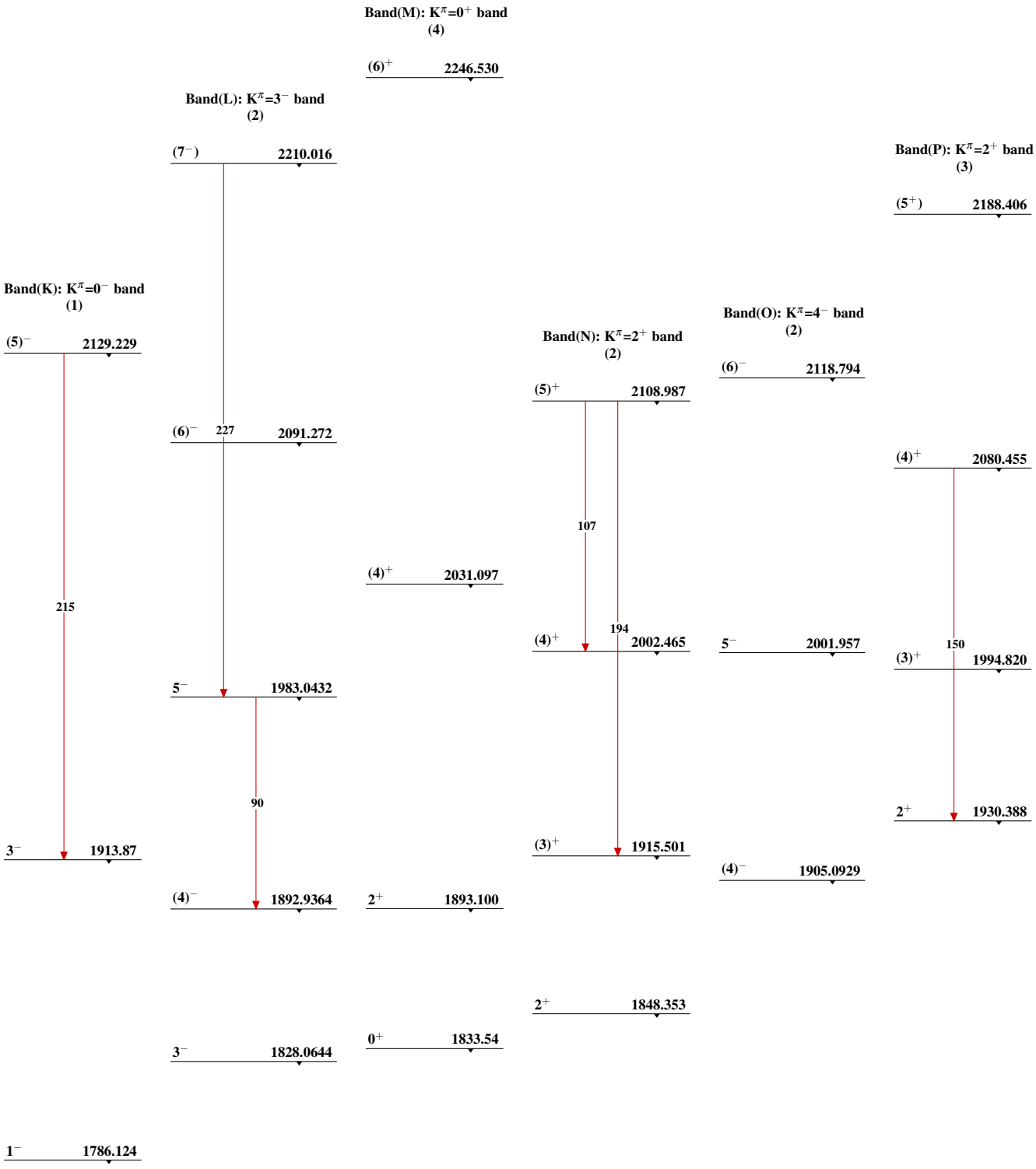
$^{168}_{68}Er_{100}$

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)



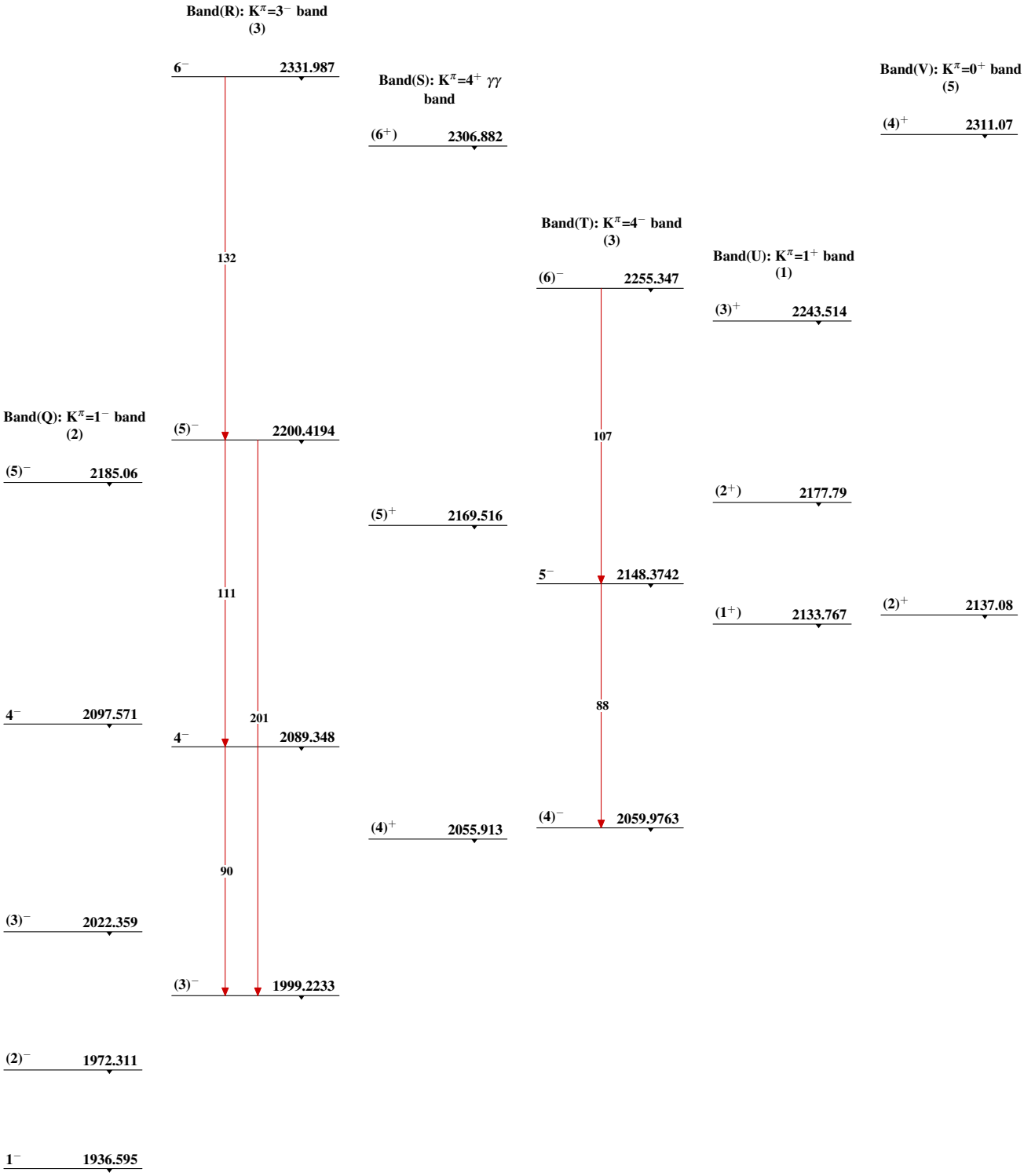
$^{168}_{68}Er_{100}$

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)



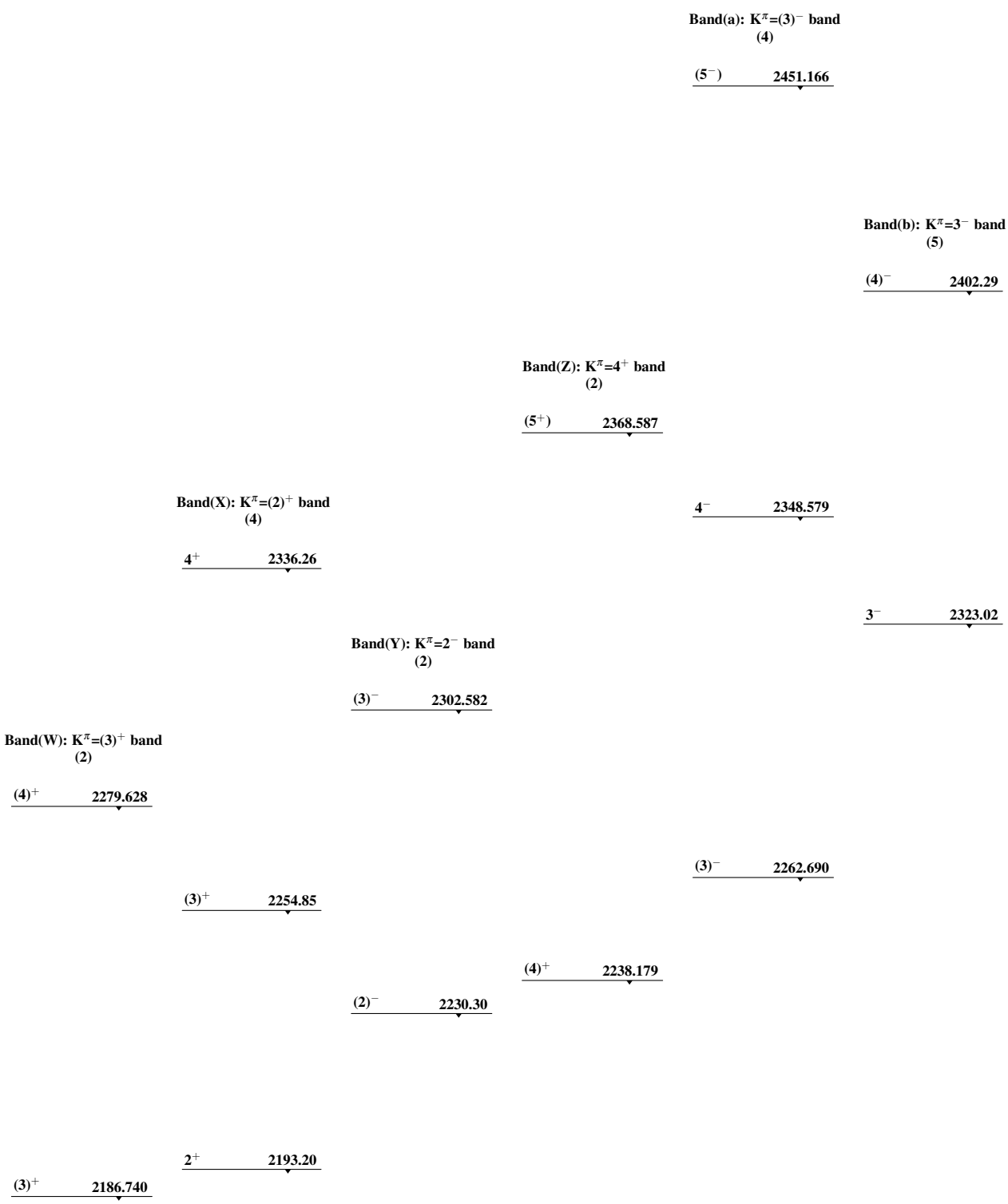
$^{168}_{68}Er_{100}$

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)



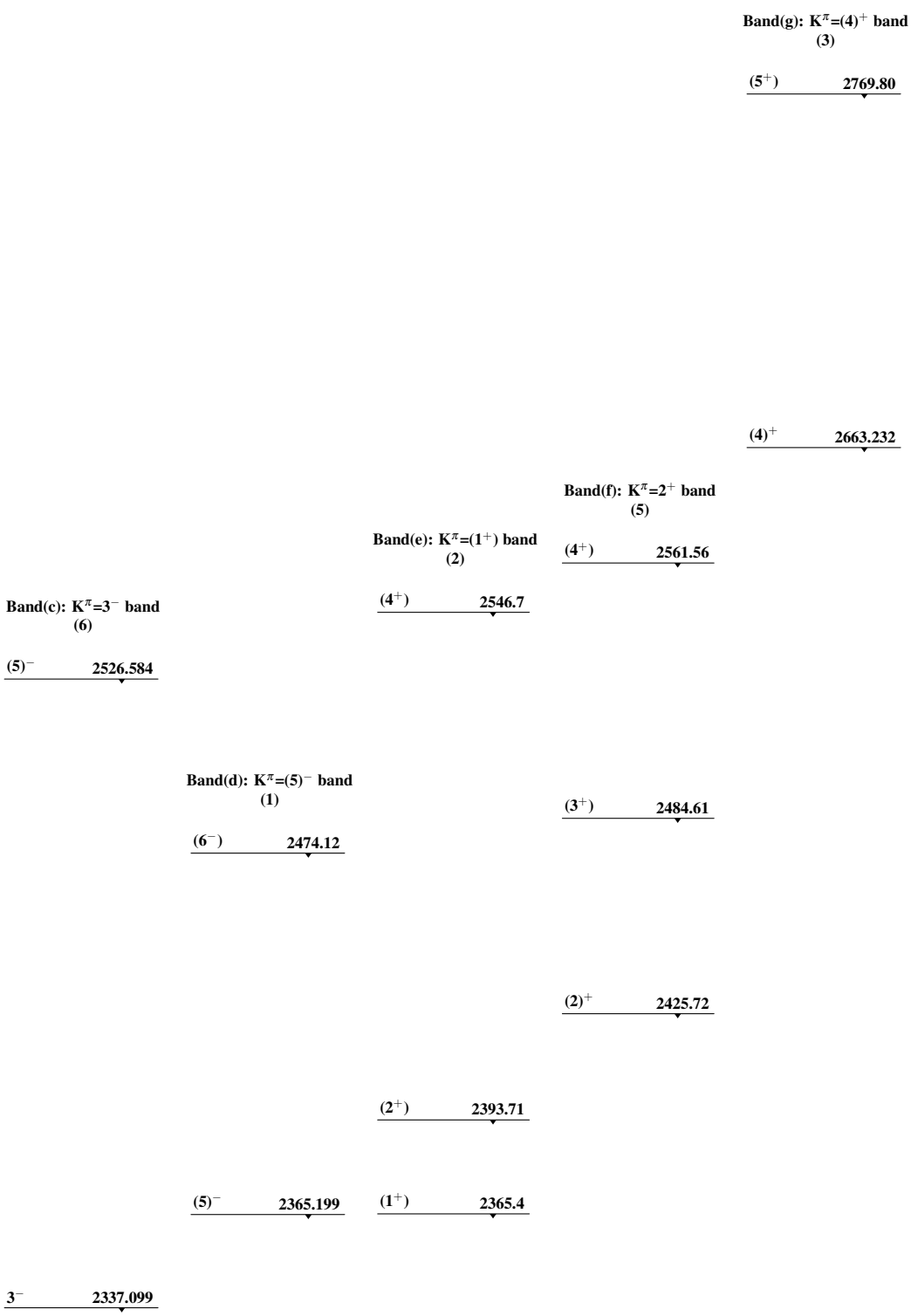
$^{168}_{68}Er_{100}$

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)



$^{168}_{68}Er_{100}$

^{167}Er(n,γ) E=thermal 1981Da05,1994Ju02,1996Gi09 (continued)



$^{168}_{68}Er_{100}$