^{168}Yb(n,γ) E=thermal 1969Bo16,1972Wi12,1973GrZV

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 109, 2033 (2008)	15-Jun-2008

Others: 2007ChZX (supersedes 2003ChZS), 1963Gi06, 1967Ma25, 1967Pr08, 1968Mi08, 1968Sh12, 1969NaZV, 1973PrZI.
σ_n=2300 *170* (2006MuZX). % abundance(^{168}Yb)=0.13 *1*.
The level scheme combines data for primary transitions from 1973GrZV (measured Eγ, Iγ), and for secondary transitions from 1972Wi12 (measured Eγ, Iγ (crystal spectrometer)) and 1969Bo16 (measured E(ce), Ice (mag spect), Eγ, Iγ (Ge(Li)), $\gamma\gamma$ coin). Reference citations are given with data from other sources. The evaluation of these data by 1988DzZW has also been considered. Many transitions remain unplaced, a number are multiply-placed, a number of levels fed by primary transitions do not yet have any deexciting gammas assigned, and intensity balance At excited levels is not good. some transitions are almost certainly misplaced.

^{169}Yb Levels

E(level)[†]	J$^\pi$[‡]	Comments
0.0[#]	7/2$^+$	
24.1996[@] *12*	1/2$^-$	
70.8817[#] *8*	9/2$^+$	
86.9185[@] *12*	3/2$^-$	
99.2401[@] *12*	5/2$^-$	
161.6508[#] *10*	11/2$^+$	
191.2136[&] *11*	5/2$^-$	
243.8162[@] *13*	7/2$^-$	
264.2533[@] *19*	9/2$^-$	
269.6556[#] *24*	13/2$^+$	
278.5973[&] *12*	7/2$^-$	
389.5266[&] *13*	9/2$^-$	
486.944[@] *3*	(11/2$^-$)	
512.029[@] *15*	(13/2)$^-$	E(level): level proposed by 1988DzZW.
523.070[&] *4*	11/2$^-$	
569.831[a] *3*	5/2$^-$	
590.695[b] *7*	(5/2)$^+$	
647.281[b] *10*	7/2$^+$	
647.837[a] *3*	7/2$^-$	
659.618[c] *7*	3/2$^-$	
677.105[&] *6*	13/2$^-$	
706.981[b] *9*	9/2$^+$	
719.936 *6*	3/2$^+$	
722.263[c] *6*	5/2$^-$	
748.974[a] *6*	(9/2)$^-$	
757.869[b] *19*	(11/2$^+$)	level proposed by 1988DzZW.
761.845 *7*	(5/2)$^+$	
807.054[c] *11*	(7/2)$^-$	
813.326[d] *9*	(1/2)$^-$	
831.889 *10*	(7/2)$^+$	
851.372[d] *15*	3/2$^-$	
865.169[a] *14*	(11/2$^-$)	E(level): possible level proposed by 1988DzZW.
911.654[d] *12*	(5/2)$^-$	
919.749[c] *11*	(9/2)$^-$	
946.450? *12*		E(level): level proposed by 1988DzZW.

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^{168}Yb(n,γ) E=thermal 1969Bo16,1972Wi12,1973GrZV (continued)

^{169}Yb Levels (continued)

E(level)[†]	Jπ[‡]	Comments
960.46 *5*	$7/2^-$	
996.69[d] *6*	$(7/2)^-$	
1033.883 *6*	$(1/2^+,3/2)$	
1061.06[c] *4*	$(11/2^-)$	E(level): level proposed by 1988DzZW.
1064.675 *13*	$(5/2^+,7/2,9/2^+)$	
1070.78[f] *4*	$7/2^+$	
1078.04? *4*		level proposed by 1988DzZW.
1110.691 *8*	$3/2^-,5/2^-$	
1141.26 *10*	$(9/2)^+$	level proposed by 1988DzZW.
1159.87 *4*	$(5/2^+)$	
1176.662 *15*	$(7/2,9/2)^+$	
1202.163 *15*	$(5/2^+)$	
1225.42 *8*	$1/2,3/2,5/2^+$	
1232.16 *4*	$(3/2^-)$	
1261.70 *3*	$(5/2,7/2^-)$	E(level): level proposed by 1988DzZW.
1270.726 *9*	$(1/2)^-$	
1285.111 *9*	$(3/2^+,5/2,7/2^+)$	level proposed by 1988DzZW.
1296.660 *12*	$(3/2^-,5/2,7/2^-)$	
1311.793 *13*	$(5/2^+,7/2)$	level proposed by 1988DzZW.
1319.60[e] *16*	$(1/2)^-$	
1350.108[e] *15*	$(3/2^-)$	
1354.836 *15*	$(3/2^-)$	level not included In 1988DzZW.
1395.387[e] *11*	$(5/2^-)$	level not included In 1988DzZW.
1398.692 *14*	$(3/2)^-$	
1449.52 *3*	$7/2^-$	E(level): level proposed by 1988DzZW.
1463.02 *4*	$(7/2^-)$	E(level): level proposed by 1988DzZW.
1464.98[e] *5*	$(7/2)^-$	
1478.485 *17*	$(3/2^-,5/2^+)$	
1509.7 *9*	$1/2^-$	
1524.08 *3*	$1/2,3/2,5/2^+$	
1531.559 *13*	$(3/2^-,5/2^+)$	
1554.829 *24*	$(1/2^-)$	
1585.856 *15*	$(1/2^-)$	
1616.676 *12*	$(1/2^+,3/2,5/2^+)$	E(level): level proposed by 1988DzZW.
1618.692 *18*	$1/2,3/2$	
1688.91 *13*	$(5/2,7/2)^-$	
1696.348 *16*	$3/2^-$	
1724.49 *4*	$(3/2^-)$	
1742.850 *19*	$(3/2^+,5/2,7/2^-)$	E(level): level proposed by 1988DzZW.
1745.0 *8*	$(1/2^-)$	
1757.3 *9*	$1/2,3/2,5/2^+$	
1781.208 *25*	$(3/2^-,5/2^-)$	E(level): level proposed by 1988DzZW. Differs from 1781 level known from ε decay because decay pattern differs.
1787.3 *8*	$1/2,3/2,5/2^+$	
1796.661 *22*	$(3/2^-,5/2^+)$	E(level): level proposed by 1988DzZW.
1828.037 *16*	$1/2,3/2,5/2^+$	
1837.5 *7*	$1/2,3/2,5/2^+$	
1857.4 *9*	$1/2,3/2,5/2^+$	
1867.57 *4*	$(3/2^-,5/2^+)$	
1894.0 *8*	$1/2,3/2,5/2^+$	
1910.9 *10*	$1/2,3/2,5/2^+$	
1920.5 *9*	$1/2,3/2,5/2^+$	
1939.0 *7*	$1/2,3/2,5/2^+$	
1998.4 *7*	$1/2,3/2,5/2^+$	
2037.7 *8*	$1/2,3/2,5/2^+$	

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^{168}Yb(n,γ) E=thermal 1969Bo16,1972Wi12,1973GrZV (continued)

^{169}Yb Levels (continued)

E(level)†	Jπ‡
2048.2 *11*	1/2,3/2,5/2$^+$
2103.6 *7*	1/2,3/2,5/2$^+$
2123.2 *12*	1/2,3/2,5/2$^+$
2192.9 *10*	1/2,3/2,5/2$^+$
2217.5 *10*	1/2,3/2,5/2$^+$
2234.5 *9*	1/2,3/2,5/2$^+$
2244.5 *7*	1/2,3/2,5/2$^+$
2286.2 *12*	1/2,3/2,5/2$^+$
2299.1 *9*	1/2,3/2,5/2$^+$
2313.6 *7*	1/2,3/2,5/2$^+$
2342.4 *9*	1/2,3/2,5/2$^+$
2350.1 *8*	1/2,3/2,5/2$^+$
2355.6 *8*	1/2,3/2,5/2$^+$
2375.9 *10*	1/2,3/2,5/2$^+$
2381.4 *10*	1/2,3/2,5/2$^+$
2388.0 *9*	1/2,3/2,5/2$^+$
2401.0 *9*	1/2,3/2,5/2$^+$
2407.4 *9*	1/2,3/2,5/2$^+$
2415.4 *9*	1/2,3/2,5/2$^+$
2427.5 *10*	1/2,3/2,5/2$^+$
2441.1 *10*	1/2,3/2,5/2$^+$
2449.8 *8*	1/2,3/2,5/2$^+$
2477.9 *10*	1/2,3/2,5/2$^+$
2498.7 *8*	1/2,3/2,5/2$^+$
2504.4 *9*	1/2,3/2,5/2$^+$
2517.1 *10*	1/2,3/2,5/2$^+$
2522.8 *8*	1/2,3/2,5/2$^+$
2530.3 *8*	1/2,3/2,5/2$^+$
2551.1 *8*	1/2,3/2,5/2$^+$
2620.9 *10*	1/2,3/2,5/2$^+$
2634.0 *12*	1/2,3/2,5/2$^+$
2655.4 *7*	1/2,3/2,5/2$^+$
2679.7 *8*	1/2,3/2,5/2$^+$
2684.8 *11*	1/2,3/2,5/2$^+$
2705.9 *8*	1/2,3/2,5/2$^+$
2741.8 *9*	1/2,3/2,5/2$^+$
2774.5 *9*	1/2,3/2,5/2$^+$
2781.0 *10*	1/2,3/2,5/2$^+$
2801.9 *10*	1/2,3/2,5/2$^+$
2827.2 *7*	1/2,3/2,5/2$^+$
2856.0 *9*	1/2,3/2,5/2$^+$
2869.9 *9*	1/2,3/2,5/2$^+$
2891.6 *7*	1/2,3/2,5/2$^+$
2917.3 *8*	1/2,3/2,5/2$^+$
2932.8 *15*	1/2,3/2,5/2$^+$
2952.0 *10*	1/2,3/2,5/2$^+$
2988.6 *9*	1/2,3/2,5/2$^+$
2998.9 *10*	1/2,3/2,5/2$^+$
3015.2 *12*	1/2,3/2,5/2$^+$
3027.4 *9*	1/2,3/2,5/2$^+$
3038.4 *8*	1/2,3/2,5/2$^+$
3043.8 *8*	1/2,3/2,5/2$^+$
3066.1 *8*	1/2,3/2,5/2$^+$
3094.5 *9*	1/2,3/2,5/2$^+$
3105.6 *7*	1/2,3/2,5/2$^+$
3118.9 *11*	1/2,3/2,5/2$^+$

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^{168}Yb(n,γ) E=thermal 1969Bo16,1972Wi12,1973GrZV (continued)

^{169}Yb Levels (continued)

E(level)[†]	J$^{\pi}$[‡]	Comments
3130.3 *9*	1/2,3/2,5/2$^+$	
3142.6 *8*	1/2,3/2,5/2$^+$	
3173.8 *8*	1/2,3/2,5/2$^+$	
3246.5 *9*	1/2,3/2,5/2$^+$	
3274.0 *15*	1/2,3/2,5/2$^+$	
3344.4 *8*	1/2,3/2,5/2$^+$	
3375.4 *8*	1/2,3/2,5/2$^+$	
3450.0 *9*	1/2,3/2,5/2$^+$	
3526.7 *8*	1/2,3/2,5/2$^+$	
3559.9 *9*	1/2,3/2,5/2$^+$	
3657.0 *10*	1/2,3/2,5/2$^+$	
(6866.67 *14*)	1/2$^+$	E(level): thermal neutron capture state(S). J$^{\pi}$: s-wave capture by even-even nucleus.

[†] From least-squares fit to Eγ, excluding transitions with uncertain or multiple placements and the 545.54γ (from 707 level), 470.557γ (from 749 level), 469.50γ (from 1177 level), 611.626γ (from 1202 level) and 474.28γ from (1065 level), all of which fit their placements poorly. note that Eγ for four additional transitions deviate by 3σ from expected values and one by 4σ. Some placements In this level scheme are almost certainly incorrect.

[‡] Adopted values.

[#] Band(A): 7/2[633] band.

[@] Band(B): 1/2[521] band.

[&] Band(C): 5/2[512] band.

[a] Band(D): 5/2[523] band.

[b] Band(E): 5/2[642] band.

[c] Band(F): 3/2[521] band + K-2 γ vibration built on 1/2[521].

[d] Band(G): 1/2[510] band + K-2 γ vibration built on 5/2[512].

[e] Band(H): 1/2[510] band + γ vibration. The γ vibration is possibly a K-2 γ vibration built on 5/2[523]. Tentative band assignment.

[f] Band(I): β vibration band built on 7/2[633]. Band assignment from 1988DzZW.

^{168}Yb(n,γ) E=thermal 1969Bo16,1972Wi12,1973GrZV (continued)

$\gamma(^{169}Yb)$

Iγ normalization: Iγ normalization=0.0047 *7* from absolute elemental cross section measurement (0.141 b *15*) for the strongest secondary γ (720γ) (Budapest data In 2007ChZX). if, instead, Iγ normalization is obtained by requiring that Σ (I(γ+ce) to g.s. + I(γ+ce) to 24 level)=100, a larger factor (0.0062 *11*) would Be obtained, suggesting that some of the many unplaced transitions feed the g.s. or 24 level. the Budapest data In 2007ChZX include only one primary γ (Eγ=5028.7 *5*); it cannot Be used to normalize the primary γ intensity scale because it appears to arise largely from sources other than ^{168}Yb N capture. if one assumes Σ (Iγ from 6687 level)=100, a normalization factor of 0.050 *1* is obtained but this probably is not reliable because it is very unlikely that all primary gammas have been observed.

E_γ [†]	I_γ [‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[f]	Comments
(24.1996 *12*)		24.1996	1/2$^-$	0.0	7/2$^+$			E_γ: from level energy difference.
62.7190 *6*	451 *72*	86.9185	3/2$^-$	24.1996	1/2$^-$	M1+E2	17 *5*	α(L)exp=4.5 *12*.
70.8814 *9*	70 *11*	70.8817	9/2$^+$	0.0	7/2$^+$	M1+E2	10.9 *19*	α(L1)exp=1.15 *30*.
75.0404 *8*	106 *17*	99.2401	5/2$^-$	24.1996	1/2$^-$	E2	10.05	α(L2)exp+α(L3)exp=4.8 *12*.
79.793[e] *9*	1.1 *2*	1478.485	(3/2$^-$,5/2$^+$)	1398.692	(3/2)$^-$			
87.3836 *10*	115 *18*	278.5973	7/2$^-$	191.2136	5/2$^-$	M1+E2	5.20 *24*	α(L1)exp=0.90 *24*.
89.809[i] *15*	0.55 *13*	659.618	3/2$^-$	569.831	5/2$^-$			
90.7692 *10*	15.9 *25*	161.6508	11/2$^+$	70.8817	9/2$^+$	[M1]	4.459	
91.9737 *12*	66 *11*	191.2136	5/2$^-$	99.2401	5/2$^-$	[M1,E2]	4.37 *7*	α(L1)exp<1.0.
x102.346 *15*	0.68 *19*							
x103.659 *7*	0.43 *10*							
x103.9019 *12*	4.5 *6*							
104.2955 *17*	50 *8*	191.2136	5/2$^-$	86.9185	3/2$^-$	M1(+E2)	2.86 *14*	α(L1)exp=0.48 *12*.
108.0053 *25*	1.2 *2*	269.6556	13/2$^+$	161.6508	11/2$^+$			
110.9291 *10*	22 *3*	389.5266	9/2$^-$	278.5973	7/2$^-$			
111.961[e] *9*	0.39 *6*	831.889	(7/2)$^+$	719.936	3/2$^+$			
113.569[e] *15*	6.9 *9*	1398.692	(3/2)$^-$	1285.111	(3/2$^+$,5/2,7/2$^+$)			
x119.882 *20*	0.24 *7*							
x121.614 *8*	0.34 *4*							
129.221 *10*	0.35 *6*	719.936	3/2$^+$	590.695	(5/2)$^+$			
x129.458 *9*	0.28 *14*							
x130.383 *12*	1.14 *23*							
131.6883[e] *20*	0.74 *16*	1828.037	1/2,3/2,5/2$^+$	1696.348	3/2$^-$			
x133.216 *12*	0.34 *6*							
133.542 *4*	1.6 *3*	523.070	11/2$^-$	389.5266	9/2$^-$			
135.130[e] *15*	0.24 *5*	1311.793	(5/2$^+$,7/2)	1176.662	(7/2,9/2)$^+$			
137.487[e] *8*	0.55 *9*	1202.163	(5/2$^+$)	1064.675	(5/2$^+$,7/2,9/2$^+$)			
143.087[e] *25*	0.39 *9*	1867.57	(3/2$^-$,5/2$^+$)	1724.49	(3/2$^-$)			
x143.933 *17*	0.23 *5*							
144.5758 *9*	116 *16*	243.8162	7/2$^-$	99.2401	5/2$^-$	M1+E2	1.00 *18*	α(K)exp=0.91 *22*.
149.790[e] *20*	0.52 *13*	911.654	(5/2)$^-$	761.845	(5/2)$^+$			
153.732 *12*	0.27 *17*	813.326	(1/2)$^-$	659.618	3/2$^-$			

$^{169}_{70}Yb_{99}$-5

^{168}Yb(n,γ) E=thermal 1969Bo16,1972Wi12,1973GrZV (continued)

γ(^{169}Yb) (continued)

E_γ [†]	I_γ [‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [#]	α [f]	Comments
154.020 *10*	0.48 *26*	677.105	13/2$^-$	523.070	11/2$^-$			
[x]154.747 *15*	0.29 *4*							
156.8977 *10*	269 *38*	243.8162	7/2$^-$	86.9185	3/2$^-$	E2	0.616	K:(L1+L2):L3=10:4.2:1.8 (1969Bo16).
[x]157.33 *3*	0.24 *9*							
[x]158.541 *4*	0.63 *3*							
[x]159.300 *6*	0.8 *3*							
160.035 *4*	0.78 *23*	1270.726	(1/2)$^-$	1110.691	3/2$^-$,5/2$^-$			
161.6513 *15*	3.8 *5*	161.6508	11/2$^+$	0.0	7/2$^+$	[E2]	0.555	
[x]163.394 *20*	0.21 *4*							
[x]163.896 *4*	0.66 *9*							
165.0134 *15*	69 *9*	264.2533	9/2$^-$	99.2401	5/2$^-$	E2	0.517	α(K)exp=0.35 *8*; K:L2:L3=10:<7:2.8 (1969Bo16).
167.0141 *25*	1.6 *2*	191.2136	5/2$^-$	24.1996	1/2$^-$	[E2]	0.495	
170.731[e] *20*	0.17 *4*	919.749	(9/2)$^-$	748.974	(9/2)$^-$			
171.156 *7*	0.36 *8*	761.845	(5/2)$^+$	590.695	(5/2)$^+$			
174.017[e] *25*	0.48 *15*	1524.08	1/2,3/2,5/2$^+$	1350.108	(3/2$^-$)			
174.420[e] *2*	2.3 *3*	1285.111	(3/2$^+$,5/2,7/2$^+$)	1110.691	3/2$^-$,5/2$^-$			
[x]176.45[d] *2*	1.2 *3*							
177.94[e] *4*	0.47 *27*	1463.02	(7/2$^-$)	1285.111	(3/2$^+$,5/2,7/2$^+$)			
179.116[e] *12*	0.20 *8*	748.974	(9/2)$^-$	569.831	5/2$^-$			
179.356 *4*	1.6 *2*	278.5973	7/2$^-$	99.2401	5/2$^-$			
181.27[&ae] *45*	9[&] *4*	1531.559	(3/2$^-$,5/2$^+$)	1350.108	(3/2$^-$)			
[x]182.998 *15*	0.24 *4*							
183.920[e] *12*	0.23 *10*	706.981	9/2$^+$	523.070	11/2$^-$			
[x]184.286 *6*	1.7 *2*							
185.941 *25*	0.30 *4*	1296.660	(3/2$^-$,5/2,7/2$^-$)	1110.691	3/2$^-$,5/2$^-$			
187.159[e] *9*	0.45 *7*	1585.856	(1/2$^-$)	1398.692	(3/2)$^-$			
187.817[e] *17*	0.20 *4*	1449.52	7/2$^-$	1261.70	(5/2,7/2$^-$)			
[x]189.0377 *25*	1.8 *2*							
191.2137 *15*	1.55×10^3 *20*	191.2136	5/2$^-$	0.0	7/2$^+$	E1	0.0623	α(K)exp=0.052 *12*.
197.508 *30*	0.36 *4*	919.749	(9/2)$^-$	722.263	5/2$^-$			
198.3136 *17*	6.9 *9*	389.5266	9/2$^-$	191.2136	5/2$^-$			
198.771 *5*	0.62 *9*	269.6556	13/2$^+$	70.8817	9/2$^+$			
[x]199.226 *8*	3.1 *20*							
[x]200.95 *4*	0.29 *4*							
204.705[e] *25*	0.26 *7*	1554.829	(1/2$^-$)	1350.108	(3/2$^-$)			
[x]205.541 *25*	0.25 *4*							
207.713 *3*	15 *2*	278.5973	7/2$^-$	70.8817	9/2$^+$			Placement from Adopted Levels, Gammas.
208.336 *15*	0.37 *6*	486.944	(11/2$^-$)	278.5973	7/2$^-$			
212.783[e] *10*	0.51 *8*	919.749	(9/2)$^-$	706.981	9/2$^+$			
[x]216.416 *25*	0.40 *7*							
217.321[e] *15*	0.45 *12*	865.169	(11/2$^-$)	647.837	7/2$^-$			
[x]219.140 *10*	0.14 *6*							

$^{169}_{70}Yb_{99}$-6

^{168}Yb(n,γ) E=thermal 1969Bo16,1972Wi12,1973GrZV (continued)

$\gamma(^{169}Yb)$ (continued)

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[f]	Comments
[x]220.859 *7*	0.60 *12*							
222.694 *6*	0.95 *13*	486.944	(11/2$^-$)	264.2533	9/2$^-$			
225.901 *6*	0.81 *8*	748.974	(9/2)$^-$	523.070	11/2$^-$			
226.379[e] *5*	0.96 *15*	1781.208	(3/2$^-$,5/2$^-$)	1554.829	(1/2$^-$)			
227.878 *3*	2.3 *3*	389.5266	9/2$^-$	161.6508	11/2$^+$			
230.193[e] *25*	0.37 *8*	1176.662	(7/2,9/2)$^+$	946.450?				
[x]234.560 *17*	0.47 *22*							Eγ: placement from 1524 level suggested In 1988DzZW; not adopted because Eγ does not fit that placement.
234.904[e] *7*	0.74 *9*	1531.559	(3/2$^-$,5/2$^+$)	1296.660	(3/2$^-$,5/2,7/2$^-$)			
[x]237.520 *10*	0.64 *9*							
239.464[ge] *15*	0.45[g] *7*	946.450?		706.981	9/2$^+$			
239.464[g] *15*	0.45[g] *7*	1350.108	(3/2$^-$)	1110.691	3/2$^-$,5/2$^-$			
243.127 *3*	5.0 *6*	486.944	(11/2$^-$)	243.8162	7/2$^-$			
244.474 *5*	1.27 *16*	523.070	11/2$^-$	278.5973	7/2$^-$			
[x]246.133 *7*	1.18 *14*							
[x]246.60 *3*	0.33 *7*							1988DzZW suggest placement from 1078 level; not adopted because much stronger branches expected to accompany it are absent In (n,γ) E=thermal.
[x]246.917 *25*	0.36 *7*							Eγ: placement from 1311 level suggested In 1988DzZW; not adopted because Eγ fits this placement poorly.
247.766[e] *15*	0.46 *11*	512.029	(13/2)$^-$	264.2533	9/2$^-$			
[x]248.099 *15*	0.65 *10*							
[x]248.944 *17*	0.58 *13*							
[x]253.07 *3*	0.31 *8*							
254.01[e] *4*	0.45 *8*	1061.06	(11/2$^-$)	807.054	(7/2)$^-$			
258.311 *3*	11.8 *15*	647.837	7/2$^-$	389.5266	9/2$^-$	M1	0.236	α(K)exp=0.27 *7*.
262.164[ei] *8*	0.56 *22*	748.974	(9/2)$^-$	486.944	(11/2$^-$)			Eγ: placement shown As uncertain because Eγ fits this placement poorly.
262.753[e] *17*	0.53 *10*	1296.660	(3/2$^-$,5/2,7/2$^-$)	1033.883	(1/2$^+$,3/2)			
[x]263.341 *25*	0.37 *6*							
264.365[e] *10*	0.61 *8*	1742.850	(3/2$^+$,5/2,7/2$^-$)	1478.485	(3/2$^-$,5/2$^+$)			
[x]266.69 *6*	0.60 *16*							
271.70[e] *3*	0.44 *6*	1232.16	(3/2$^-$)	960.46	7/2$^-$			
272.053[e] *10*	1.16 *21*	1033.883	(1/2$^+$,3/2)	761.845	(5/2)$^+$			
[x]273.516 *12*	0.56 *7*							
[x]278.245 *12*	0.83 *22*							
278.595 *5*	4.7 *6*	278.5973	7/2$^-$	0.0	7/2$^+$	[E1]	0.0239	
[x]279.52 *3*	0.71 *11*							
[x]282.43[&a] *15*	16[&] *3*							
[x]283.66 *5*	0.63 *16*							
284.691 *8*	0.88 *12*	1395.387	(5/2$^-$)	1110.691	3/2$^-$,5/2$^-$			
[x]286.175 *6*	2.6 *3*							

^{168}Yb(n,γ) E=thermal 1969Bo16,1972Wi12,1973GrZV (continued)

$\gamma(^{169}Yb)$ (continued)

E_γ [†]	I_γ [‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [#]	α [f]	Comments
287.585 *7*	1.56 *23*	677.105	13/2$^-$	389.5266	9/2$^-$			
291.233 *3*	48 *6*	569.831	5/2$^-$	278.5973	7/2$^-$	M1	0.1704	α(K)exp=0.17 *4*.
x295.36@ *2*	1.61 *22*							
296.53e *2*	0.82 *6*	1828.037	1/2,3/2,5/2$^+$	1531.559	(3/2$^-$,5/2$^+$)			
297.40 *4*	0.44 *8*	1110.691	3/2$^-$,5/2$^-$	813.326	(1/2)$^-$			
x298.317 *10*	0.73 *11*							
x299.80 *4*	0.41 *9*							
x303.50 *3*	0.65 *16*							
304.880e *7*	3.3 *4*	1616.676	(1/2$^+$,3/2,5/2$^+$)	1311.793	(5/2$^+$,7/2)			
311.619 *5*	4.0 *5*	1033.883	(1/2$^+$,3/2)	722.263	5/2$^-$			
312.082ge *15*	0.5g *3*	590.695	(5/2)$^+$	278.5973	7/2$^-$			
312.082ge *15*	0.5g *3*	1061.06	(11/2$^-$)	748.974	(9/2)$^-$			
313.940e *5*	6.5 *8*	1033.883	(1/2$^+$,3/2)	719.936	3/2$^+$			
315.151 *20*	1.61 *24*	1585.856	(1/2$^-$)	1270.726	(1/2)$^-$			
x315.604e *25*	0.68 *12*							E_γ: placed by 1988DzZW from 1450 level but Eγ does not fit that placement.
318.646 *15*	0.96 *12*	389.5266	9/2$^-$	70.8817	9/2$^+$			
320.013e *7*	3.1 *4*	1616.676	(1/2$^+$,3/2,5/2$^+$)	1296.660	(3/2$^-$,5/2,7/2$^-$)			
x320.816d *17*	1.6 *5*							
325.987 *12*	1.64 *19*	569.831	5/2$^-$	243.8162	7/2$^-$			
x328.98 *5*	0.68 *18*							
x329.48 *3*	0.88 *18*							
x331.17 *6*	0.53 *21*							
x333.946 *25*	6.5 *12*							
x335.12 *6*	0.68 *20*							
x338.60 *9*	0.59 *21*							
x342.09 *5*	1.16 *28*							
342.32e *5*	1.05 *27*	865.169	(11/2$^-$)	523.070	11/2$^-$			
x346.72 *4*	0.93 *13*							
348.77i *5*	0.54 *15*	996.69	(7/2)$^-$	647.837	7/2$^-$			
350.99e *10*	1.55 *27*	1202.163	(5/2$^+$)	851.372	3/2$^-$			
x351.65 *6*	0.48 *13*							
353.04e *5*	0.75 *17*	865.169	(11/2$^-$)	512.029	(13/2)$^-$			
x355.14 *5*	0.8 *3*							
x356.413 *25*	1.17 *18*							
357.686 *9*	2.6 *5*	1064.675	(5/2$^+$,7/2,9/2$^+$)	706.981	9/2$^+$			
x358.72 *3*	0.93 *16*							
359.495@ *17*	2.7 *4*	748.974	(9/2)$^-$	389.5266	9/2$^-$			
x364.16&a *25*	17& *4*							
x365.972 *9*	2.4 *5*							
369.232 *5*	30 *4*	647.837	7/2$^-$	278.5973	7/2$^-$	M1	0.0904	α(K)exp=0.092 *22*.

$^{169}_{70}Yb_{99}$-8

^{168}Yb(n,γ) E=thermal 1969Bo16,1972Wi12,1973GrZV (continued)

γ(^{169}Yb) (continued)

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[f]	Comments
[x]370.588 *9*	4.4 *6*							E_γ: placement from 1202 level suggested In 1988DzZW; not adopted because Eγ fits this placement poorly.
374.266 *7*	9.5 *11*	1033.883	$(1/2^+,3/2)$	659.618	$3/2^-$			
378.624 *5*	236 *31*	569.831	$5/2^-$	191.2136	$5/2^-$	(M1)	0.0846	α(K)exp=0.071 *17*.
383.595 *15*	3.0 *4*	647.837	$7/2^-$	264.2533	$9/2^-$			
[x]385.43 *12*	1.6 *4*							
[x]388.06[@] *3*	1.1 *3*							
389.53 *3*	1.5 *10*	389.5266	$9/2^-$	0.0	$7/2^+$	[E1]	0.01067	
390.748[e] *8*	7.2 *9*	1110.691	$3/2^-,5/2^-$	719.936	$3/2^+$			
[x]395.412 *17*	4.1 *6*							
[x]395.836 *20*	6.8 *16*							E_γ: placement from 1160 level suggested In 1988DzZW; not adopted because Eγ does not fit that placement.
399.621[e] *17*	5.5 *7*	1696.348	$3/2^-$	1296.660	$(3/2^-,5/2,7/2^-)$			
400.92[ei] *4*	1.8 *4*	1078.04?		677.105	$13/2^-$			E_γ: placement is doubtful because stronger branches expected from the 1078 level are not observed In (n,γ) E=thermal.
[x]401.46 *8*	0.90 *18*							
401.87[e] *7*	0.75 *22*	1463.02	$(7/2^-)$	1061.06	$(11/2^-)$			
403.957 *25*	4.4 *5*	647.837	$7/2^-$	243.8162	$7/2^-$			
[x]410.954 *25*	2.6 *4*							
[x]412.525 *25*	2.5 *4*							
[x]413.850 *17*	3.9 *6*							
416.528[e] *10*	5.6 *7*	1618.692	1/2,3/2	1202.163	$(5/2^+)$			
417.50[ge] *11*	1.9[g] *7*	807.054	$(7/2)^-$	389.5266	$9/2^-$			
417.50[g] *11*	1.9[g] *7*	1064.675	$(5/2^+,7/2,9/2^+)$	647.281	$7/2^+$			
418.76[ge] *5*	1.7[g] *3*	1176.662	$(7/2,9/2)^+$	757.869	$(11/2^+)$			
418.76[ge] *5*	1.7[g] *3*	1232.16	$(3/2^-)$	813.326	$(1/2)^-$			
419.39 *3*	27 *4*	1270.726	$(1/2)^-$	851.372	$3/2^-$	M1	0.0647	α(K)exp=0.077 *19*.
[x]419.67 *6*	3.0 *6*							
423.376[ge] *17*	4.3[g] *5*	946.450?		523.070	$11/2^-$			
423.376[g] *17*	4.3[g] *5*	1070.78	$7/2^+$	647.281	$7/2^+$			
425.77 *6*	1.1 *3*	1696.348	$3/2^-$	1270.726	$(1/2)^-$			
[x]426.59 *9*	1.9 *4*							
[x]428.95[&a] *55*	8[&] *4*							
432.75 *3*	1.8 *2*	919.749	$(9/2)^-$	486.944	$(11/2^-)$			
[x]435.42 *20*	1.1 *4*							
436.98[e] *10*	2.1 *5*	706.981	$9/2^+$	269.6556	$13/2^+$			
[x]438.874 *12*	6.3 *8*							placed by 1988DzZW from an otherwise unknown 1086 level.
439.42[e] *4*	4.2 *12*	1724.49	$(3/2^-)$	1285.111	$(3/2^+,5/2,7/2^+)$			

$^{169}_{70}Yb_{99}$-9

^{168}Yb(n,γ) E=thermal 1969Bo16,1972Wi12,1973GrZV (continued)

γ(^{169}Yb) (continued)

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[f]	Comments
[x]441.42[d] 15	1.2 3							
[x]442.38[d] 18	1.0 3							placed by 1988DzZW from a 1204 level but insufficient evidence for the existence of such a level is available.
443.182 9	18.1 24	1354.836	(3/2$^-$)	911.654	(5/2)$^-$	(M1)	0.0560	α(K)exp=0.079 18.
443.659 25	3.8 6	722.263	5/2$^-$	278.5973	7/2$^-$			
444.69[i] 11	2.6 5	1478.485	(3/2$^-$,5/2$^+$)	1033.883	(1/2$^+$,3/2)			
445.17 7	0.9 3	1296.660	(3/2$^-$,5/2,7/2$^-$)	851.372	3/2$^-$			
[x]447.76 4	2.5 5							
[x]448.74 9	1.7 3							
451.15[i] 11	1.0 3	1110.691	3/2$^-$,5/2$^-$	659.618	3/2$^-$			
[x]452.43 8	1.4 3							
453.34[e] 6	2.3 7	1285.111	(3/2$^+$,5/2,7/2$^+$)	831.889	(7/2)$^+$			
453.69[e] 7	2.0 7	1724.49	(3/2$^-$)	1270.726	(1/2)$^-$			
454.65[e] 3	4.2 6	1261.70	(5/2,7/2$^-$)	807.054	(7/2)$^-$			
[x]455.30 3	2.7 4							Eγ: placement from 1449 level suggested In 1988DzZW; not adopted because Eγ does not fit this placement.
456.638 9	25 3	647.837	7/2$^-$	191.2136	5/2$^-$	(M1)	0.0518	α(K)exp=0.063 15.
457.43 2	6.6 9	1270.726	(1/2)$^-$	813.326	(1/2)$^-$			
[x]458.462 15	9.2 11							
459.25[e] 5	2.2 6	1524.08	1/2,3/2,5/2$^+$	1064.675	(5/2$^+$,7/2,9/2$^+$)			
[x]467.63 3	3.1 5							
468.434[ge] 12	14.3[g] 19	659.618	3/2$^-$	191.2136	5/2$^-$			
468.434[g] 12	14.3[g] 19	1319.60	(1/2)$^-$	851.372	3/2$^-$			
469.50[e] 2	5.8 8	1176.662	(7/2,9/2)$^+$	706.981	9/2$^+$			
470.557[h] 17	12.2[h] 12	569.831	5/2$^-$	99.2401	5/2$^-$			Iγ: deduced from total Iγ=19.3 27 and requirement that I(470γ from 570 level)/I(379γ) and I(470γ from 749 level)/I(360γ) should each be identical In ε decay and (n,γ) E=thermal. α(K)exp=0.043 12 (for 470.6γ doublet and 470.8γ combined).
470.557[h] 17	7[h] 3	748.974	(9/2)$^-$	278.5973	7/2$^-$			Iγ: see comment on 471γ from 569 level. α(K)exp=0.043 12 (for 470.6γ and 470.8γ combined).
[x]470.805 15	32 4							
[x]472.759 25	3.1 4							
474.28 6	2.1 4	1064.675	(5/2$^+$,7/2,9/2$^+$)	590.695	(5/2)$^+$			
[x]476.086 15	12.9 14							
[x]476.68 5	2.4 5							
477.98 3	6.4 11	1828.037	1/2,3/2,5/2$^+$	1350.108	(3/2$^-$)			
478.449 10	34 5	722.263	5/2$^-$	243.8162	7/2$^-$	M1	0.0459	α(K)exp=0.044 11.
480.08 4	5.0 15	1070.78	7/2$^+$	590.695	(5/2)$^+$			
482.894 12	20.0 26	569.831	5/2$^-$	86.9185	3/2$^-$	(M1)	0.0448	α(K)exp=0.067 16.
485.69 4	3.7 6	647.281	7/2$^+$	161.6508	11/2$^+$			
488.22[e] 2	4.0 5	757.869	(11/2$^+$)	269.6556	13/2$^+$			

$^{169}_{70}Yb_{99}$-10

^{168}Yb(n,γ) E=thermal 1969Bo16,1972Wi12,1973GrZV (continued)

$\gamma(^{169}Yb)$ (continued)

E_γ †	I_γ ‡	E_i(level)	J_i^π	E_f	J_f^π	Comments
x491.90 3	2.3 3					
x492.69 6	2.8 4					
497.68 7	1.8 3	1531.559	(3/2$^-$,5/2$^+$)	1033.883	(1/2$^+$,3/2)	
498.77 4	3.6 5	1350.108	(3/2$^-$)	851.372	3/2$^-$	
x501.478 15	17.4 21					
503.88e 10	2.7 7	590.695	(5/2)$^+$	86.9185	3/2$^-$	
504.64e 7	3.8 10	1311.793	(5/2$^+$,7/2)	807.054	(7/2)$^-$	
x505.40 3	5.4 8					
506.06e 3	7.1 9	1616.676	(1/2$^+$,3/2,5/2$^+$)	1110.691	3/2$^-$,5/2$^-$	
509.88de 6	6.3 16	1232.16	(3/2$^-$)	722.263	5/2$^-$	
510.70e 5	11.0 15	1742.850	(3/2$^+$,5/2,7/2$^-$)	1232.16	(3/2$^-$)	
511.55e 2	20.7 29	1796.661	(3/2$^-$,5/2$^+$)	1285.111	(3/2$^+$,5/2,7/2$^+$)	
512.03e 5	12.4 25	1159.87	(5/2$^+$)	647.837	7/2$^-$	
x513.80e 6	4.7 11					placed by 1988DzZW from 1867 level but Eγ does not fit that placement.
518.07ge 7	4.0g 11	761.845	(5/2)$^+$	243.8162	7/2$^-$	
518.07ge 7	4.0g 11	1478.485	(3/2$^-$,5/2$^+$)	960.46	7/2$^-$	
518.56e 8	3.8 7	1464.98	(7/2)$^-$	946.450?		
519.788e 15	17.0 22	590.695	(5/2)$^+$	70.8817	9/2$^+$	α(K)exp=0.061 15; exceeds α(K)(M1), but level scheme requires E2.
x521.17 7	2.6 6					
522.112e 17	18.8 24	911.654	(5/2)$^-$	389.5266	9/2$^-$	
522.58ge 6	5.6g 11	1724.49	(3/2$^-$)	1202.163	(5/2$^+$)	
x525.04 5	3.8 6					
x527.357 20	17.8 23					α(K)exp=0.035 10 (for 527.4γ+528.7γ).
528.672e 25	12.0 16	719.936	3/2$^+$	191.2136	5/2$^-$	α(K)exp=0.035 10 (for 527.4γ+528.7γ).
530.34 8	3.0 9	919.749	(9/2)$^-$	389.5266	9/2$^-$	
531.04 3	5.1 8	722.263	5/2$^-$	191.2136	5/2$^-$	
x535.65 7	3.6 10					
x538.66 3	9.2 12					
539.10e 25	5.2 17	1261.70	(5/2,7/2$^-$)	722.263	5/2$^-$	
542.82 2	19.7 28	807.054	(7/2)$^-$	264.2533	9/2$^-$	
x544.35 5	3.0 6					placed by 1988DzZW from 1204 level but insufficient evidence for the existence of such a level is available.
545.54@i 2	20 4	569.831	5/2$^-$	24.1996	1/2$^-$	placement proposed by 1988DzZW but not adopted; Eγ somewhat too low. In table In 1988DzZW, γ deexcites only the 707 level.
545.54@ 2	20 4	706.981	9/2$^+$	161.6508	11/2$^+$	
547.45i 20	3.7 9	1398.692	(3/2)$^-$	851.372	3/2$^-$	
548.546 25	16.0 21	647.837	7/2$^-$	99.2401	5/2$^-$	
549.90e 10	2.0 4	1311.793	(5/2$^+$,7/2)	761.845	(5/2)$^+$	
553.31 5	4.7 8	1464.98	(7/2)$^-$	911.654	(5/2)$^-$	
554.44e 17	2.0 8	1202.163	(5/2$^+$)	647.837	7/2$^-$	

$^{169}_{70}Yb_{99}$-11

^{168}Yb(n,γ) E=thermal 1969Bo16,1972Wi12,1973GrZV (continued)

γ(^{169}Yb) (continued)

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[f]	Comments
[x]555.191 *15*	44 *6*					(M1)	0.0313	α(K)exp=0.045 *10*.
[x]559.04 *12*	4.9 *9*							
560.369 *15*	87 *11*	659.618	3/2$^-$	99.2401	5/2$^-$	(M1)	0.0305	α(K)exp=0.053 *13*.
[x]562.50 *6*	8.0 *13*							placed by 1988DzZW from 1232 level but Eγ does not fit that placement.
563.243 *15*	38 *5*	807.054	(7/2)$^-$	243.8162	7/2$^-$			α(K)exp=0.046 *11*.
565.13[e] *9*	3.6 *19*	1285.111	(3/2$^+$,5/2,7/2$^+$)	719.936	3/2$^+$			
[x]567.05 *5*	8.5 *27*							
569.81 *3*	21 *3*	569.831	5/2$^-$	0.0	7/2$^+$	[E1]	0.00457	
[x]570.473 *15*	130 *17*					M1	0.0292	α(K)exp=0.031 *7*.
								E_γ: placed by 1988DzZW (In drawing, but not In table) from 1202 level but Eγ does not fit that placement.
571.36[e] *20*	4.7 *10*	1531.559	(3/2$^-$,5/2$^+$)	960.46	7/2$^-$			
572.731 *12*	349 *45*	659.618	3/2$^-$	86.9185	3/2$^-$	M1	0.0289	α(K)exp=0.022 *5*.
574.10[e] *8*	4.2 *16*	1061.06	(11/2$^-$)	486.944	(11/2$^-$)			
576.396 *12*	169 *22*	647.281	7/2$^+$	70.8817	9/2$^+$	M1	0.0284	α(K)exp=0.031 *7*.
[x]579.68 *10*	4.0 *7*							
[x]580.579 *25*	18.8 *24*							
[x]581.50 *5*	8.2 *12*							
[x]585.061 *25*	19.2 *25*							E_γ: placed by 1988DzZW from 1618 level but Eγ does not fit that placement.
585.983[e] *25*	16.9 *22*	1176.662	(7/2,9/2)$^+$	590.695	(5/2)$^+$			
587.29[de] *20*	3.0 *13*	748.974	(9/2)$^-$	161.6508	11/2$^+$			
588.46 *4*	8.8 *12*	1395.387	(5/2$^-$)	807.054	(7/2)$^-$			
590.04[e] *6*	13.1 *24*	1159.87	(5/2$^+$)	569.831	5/2$^-$			
590.701 *12*	641 *83*	590.695	(5/2)$^+$	0.0	7/2$^+$	M1	0.0267	α(K)exp=0.023 *6*.
591.78[e] *6*	8.9 *26*	1311.793	(5/2$^+$,7/2)	719.936	3/2$^+$			
[x]594.85 *7*	5.0 *18*							
596.15[e] *6*	6.4 *14*	757.869	(11/2$^+$)	161.6508	11/2$^+$			
597.83[e] *7*	8.0 *13*	1463.02	(7/2$^-$)	865.169	(11/2$^-$)			
602.08[e] *7*	5.4 *9*	1261.70	(5/2,7/2$^-$)	659.618	3/2$^-$			
[x]606.17 *12*	4.1 *8*							
607.67 *5*	8.1 *11*	851.372	3/2$^-$	243.8162	7/2$^-$			
611.626[ge] *17*	46[g] *6*	1202.163	(5/2$^+$)	590.695	(5/2)$^+$			α(K)exp<0.026 (ce peak complex).
611.626[ge] *17*	46[g] *6*	1463.02	(7/2$^-$)	851.372	3/2$^-$			α(K)exp<0.026 (ce peak complex).
614.5[de] *4*	2.8 *7*	1261.70	(5/2,7/2$^-$)	647.281	7/2$^+$			
616.14[de] *12*	5.2 *11*	807.054	(7/2)$^-$	191.2136	5/2$^-$			
617.60[e] *8*	3.8 *20*	1449.52	7/2$^-$	831.889	(7/2)$^+$			
622.092 *15*	244 *32*	813.326	(1/2)$^-$	191.2136	5/2$^-$			α(K)exp=0.018 *5* (for 622.1γ and 623.0γ combined).
623.026 *15*	251 *33*	722.263	5/2$^-$	99.2401	5/2$^-$			See comment with 622.1γ.
624.00[e] *25*	11 *5*	1688.91	(5/2,7/2)$^-$	1064.675	(5/2$^+$,7/2,9/2$^+$)			
627.852 *25*	33 *4*	1350.108	(3/2$^-$)	722.263	5/2$^-$			

$^{169}_{70}Yb_{99}$-12

^{168}Yb(n,γ) E=thermal 1969Bo16,1972Wi12,1973GrZV (continued)

$\gamma(^{169}Yb)$ (continued)

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[f]	Comments
630.23[e] *3*	17.4 *23*	1350.108	(3/2$^-$)	719.936	3/2$^+$			
632.38[ge] *7*	10.7[g] *20*	1202.163	(5/2$^+$)	569.831	5/2$^-$			
632.38[g] *7*	10.7[g] *20*	1354.836	(3/2$^-$)	722.263	5/2$^-$			
633.071 *20*	72 *9*	911.654	(5/2)$^-$	278.5973	7/2$^-$			
634.73[ge] *8*	15[g] *4*	1225.42	1/2,3/2,5/2$^+$	590.695	(5/2)$^+$			
634.73[g] *8*	15[g] *4*	1354.836	(3/2$^-$)	719.936	3/2$^+$			
635.410[g] *15*	727[g] *94*	659.618	3/2$^-$	24.1996	1/2$^-$	M1	0.0222	α(K)exp=0.019 *5*.
635.410[g] *15*	727[g] *94*	722.263	5/2$^-$	86.9185	3/2$^-$	M1	0.0222	
636.11 *7*	27 *7*	706.981	9/2$^+$	70.8817	9/2$^+$			
640.51 *10*	4.3 *12*	831.889	(7/2)$^+$	191.2136	5/2$^-$			
[x]642.22[@] *10*	3.3 *11*							
[x]645.81 *7*	7.8 *20*							
647.272 *17*	91 *12*	647.281	7/2$^+$	0.0	7/2$^+$	M1	0.0212	α(K)exp=0.020 *5*.
[x]649.04 *5*	16.0 *24*							
[x]653.00[@] *20*	2.1 *7*							
655.41 *6*	6.9 *15*	919.749	(9/2)$^-$	264.2533	9/2$^-$			
[x]657.70 *5*	13.8 *18*							
660.193[g] *17*	113[g] *15*	851.372	3/2$^-$	191.2136	5/2$^-$	M1+E2	0.015 *6*	α(K)exp=0.011 *3*.
660.193[g] *17*	113[g] *15*	1319.60	(1/2)$^-$	659.618	3/2$^-$	M1+E2	0.015 *6*	
[x]666.90 *15*	7.1 *18*							
667.872 *25*	66 *7*	911.654	(5/2)$^-$	243.8162	7/2$^-$	M1	0.0196	α(K)exp=0.024 *6*.
670.25 *3*	42 *5*	831.889	(7/2)$^+$	161.6508	11/2$^+$			
671.94[e] *15*	5.5 *20*	1742.850	(3/2$^+$,5/2,7/2$^-$)	1070.78	7/2$^+$			
674.29 *15*	11.6 *19*	1585.856	(1/2$^-$)	911.654	(5/2)$^-$			
675.92 *17*	3.1 *8*	919.749	(9/2)$^-$	243.8162	7/2$^-$			
678.67 *10*	4 *4*	1398.692	(3/2)$^-$	719.936	3/2$^+$			
688.3[de] *5*	5.6 *20*	1449.52	7/2$^-$	761.845	(5/2)$^+$			
690.943 *20*	260 *34*	761.845	(5/2)$^+$	70.8817	9/2$^+$	(E2)	0.00820	α(K)exp=0.0076 *18*.
695.53[@e] *10*	8.5 *14*	719.936	3/2$^+$	24.1996	1/2$^-$			
[x]698.26 *4*	25 *4*							
[x]701.45 *4*	30 *4*							
703.38 *9*	15.7 *22*	1554.829	(1/2$^-$)	851.372	3/2$^-$			
705.07[e] *10*	5.9 *23*	1616.676	(1/2$^+$,3/2,5/2$^+$)	911.654	(5/2)$^-$			
707.78 *3*	64 *8*	807.054	(7/2)$^-$	99.2401	5/2$^-$	M1	0.01689	α(K)exp=0.012 *3*.
717.34[e] *12*	12 *4*	1828.037	1/2,3/2,5/2$^+$	1110.691	3/2$^-$,5/2$^-$			
719.979 *25*	1000	719.936	3/2$^+$	0.0	7/2$^+$	E2	0.00747	α(K)exp=0.0064 *13*.
[x]724.93 *10*	11.2 *20*							
726.417 *25*	296 *38*	813.326	(1/2)$^-$	86.9185	3/2$^-$	M1+E2	0.012 *5*	α(K)exp=0.011 *3*.
[x]727.72 *8*	30 *5*							
[x]730.83 *17*	5.9 *11*							
[x]733.54 *20*	3.7 *10*							
739.02[i] *10*	10.8 *17*	1398.692	(3/2)$^-$	659.618	3/2$^-$			α(K)exp=0.051 *16* (for 739.0γ and 740.1γ combined).

^{168}Yb(n,γ) E=thermal 1969Bo16,1972Wi12,1973GrZV (continued)

$\gamma(^{169}Yb)$ (continued)

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[f]	Comments
[x]740.06 *7*	20 *3*							See comment with 739.0γ.
741.54 *12*	11.4 *22*	1554.829	(1/2$^-$)	813.326	(1/2)$^-$			
[x]746.23 *6*	17.6 *25*							
752.19 *5*	25 *3*	851.372	3/2$^-$	99.2401	5/2$^-$			
756.30 *9*	8.5 *13*	1478.485	(3/2$^-$,5/2$^+$)	722.263	5/2$^-$			
758.89[i] *20*	5.6 *15*	1478.485	(3/2$^-$,5/2$^+$)	719.936	3/2$^+$			
760.95 *4*	92 *13*	831.889	(7/2)$^+$	70.8817	9/2$^+$			α(K)exp=0.0071 *19* (for 761.0γ and 761.9γ combined).
761.864 *25*	279 *36*	761.845	(5/2)$^+$	0.0	7/2$^+$	[M1]	0.01404	See comment with 761.0γ.
764.46 *4*	52 *7*	851.372	3/2$^-$	86.9185	3/2$^-$			
767.29 *20*	5.5 *14*	1618.692	1/2,3/2	851.372	3/2$^-$			
[x]771.92 *7*	14 *7*							
[x]774.68 *15*	5.9 *9*							
777.31 *15*	5.9 *10*	1688.91	(5/2,7/2)$^-$	911.654	(5/2)$^-$			
781.77[e] *25*	4.7 *10*	1061.06	(11/2$^-$)	278.5973	7/2$^-$			
784.88[ge] *15*	6.5[g] *13*	946.450?		161.6508	11/2$^+$			
784.88[g] *15*	6.5[g] *13*	1696.348	3/2$^-$	911.654	(5/2)$^-$			
792.97[e] *12*	6.1 *10*	1554.829	(1/2$^-$)	761.845	(5/2)$^+$			
796.36[e] *25*	7.5 *15*	1061.06	(11/2$^-$)	264.2533	9/2$^-$			
[x]800.22 *15*	8.5 *17*							
[x]802.90 *15*	6.7 *15*							
805.47[gi] *25*	3.8[g] *11*	996.69	(7/2)$^-$	191.2136	5/2$^-$			
805.47[gi] *25*	3.8[g] *11*	1618.692	1/2,3/2	813.326	(1/2)$^-$			
812.41 *8*	25 *4*	911.654	(5/2)$^-$	99.2401	5/2$^-$			α(K)exp<0.026 (ce peak complex).
814.02[dei] *20*	10.4 *24*	1078.04?		264.2533	9/2$^-$			E$_\gamma$: placement is doubtful because stronger branches expected from the 1078 level are not observed In (n,γ) E=thermal.
[x]816.53 *7*	24 *3*							
[x]818.24[d] *17*	8 *4*							
[x]822.79 *10*	19 *3*							
824.68 *6*	42 *6*	911.654	(5/2)$^-$	86.9185	3/2$^-$			
827.15 *3*	163 *23*	851.372	3/2$^-$	24.1996	1/2$^-$	M1	0.01144	α(K)exp=0.011 *3*.
831.72 *7*	25 *4*	831.889	(7/2)$^+$	0.0	7/2$^+$	[M1,E2]	0.008 *3*	
834.94[e] *8*	17.8 *28*	1554.829	(1/2$^-$)	719.936	3/2$^+$			
[x]841.95 *10*	12.4 *20*							
845.10 *25*	6.0 *14*	1696.348	3/2$^-$	851.372	3/2$^-$			
[x]851.48 *9*	15.2 *23*							
[x]858.38 *10*	18.6 *28*					M1(+E2+E0)		α(K)exp=0.022 *6*.
869.64 *8*	17.7 *26*	1781.208	(3/2$^-$,5/2$^-$)	911.654	(5/2)$^-$			
871.51[e] *25*	15 *5*	1141.26	(9/2)$^+$	269.6556	13/2$^+$			
[x]874.21 *12*	13.2 *21*							
[x]886.85 *25*	9.8 *21*							
889.89 *20*	5.7 *21*	960.46	7/2$^-$	70.8817	9/2$^+$			
[x]893.73 *15*	18 *3*							

^{168}Yb(n,γ) E=thermal 1969Bo16,1972Wi12,1973GrZV (continued)

$\gamma(^{169}Yb)$ (continued)

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[f]	Comments
897.45 *6*	59 *8*	996.69	(7/2)$^-$	99.2401	5/2$^-$	M1	0.00935	α(K)exp=0.0080 *20*.
908.8[gi] *4*	5.2[g] *17*	1070.78	7/2$^+$	161.6508	11/2$^+$			
908.8[ge] *4*	5.2[g] *17*	1478.485	(3/2$^-$,5/2$^+$)	569.831	5/2$^-$			
917.4[de] *4*	6.3 *21*	1724.49	(3/2$^-$)	807.054	(7/2)$^-$			
920.2 *10*		919.749	(9/2)$^-$	0.0	7/2$^+$			
[x]924.1[d] *8*	8 *3*							
926.49[e] *12*	20 *3*	1449.52	7/2$^-$	523.070	11/2$^-$			I_γ: far too strong relative to 1448γ based on Adopted Gammas; possibly the 926γ is complex In (n,γ) E=thermal.
934.87 *20*	12.3 *21*	1033.883	(1/2$^+$,3/2)	99.2401	5/2$^-$			
947.37 *15*	22 *3*	1033.883	(1/2$^+$,3/2)	86.9185	3/2$^-$			
[x]959.58 *17*	26 *4*							α(K)exp=0.0066 *20* (for 959.6γ+960.6γ).
960.59 *17*	35 *6*	960.46	7/2$^-$	0.0	7/2$^+$	[E1]	1.61×10^{-3}	See comment with 959.6γ.
968.77[e] *17*	11.9 *19*	1159.87	(5/2$^+$)	191.2136	5/2$^-$			
979.74[e] *12*	40 *6*	1141.26	(9/2)$^+$	161.6508	11/2$^+$			
[x]981.01 *8*	112 *16*							placed by 1988DzZW from 1724 level but Eγ does not fit that placement.
989.34[@e] *25*	10.6 *21*	1796.661	(3/2$^-$,5/2$^+$)	807.054	(7/2)$^-$			
[x]995.7[d] *4*	10.2 *26*							
999.9[i] *4*	9.4 *22*	1070.78	7/2$^+$	70.8817	9/2$^+$			
1009.64 *6*	95 *13*	1033.883	(1/2$^+$,3/2)	24.1996	1/2$^-$			
1018.0[ge] *3*	14.8[g] *27*	1261.70	(5/2,7/2$^-$)	243.8162	7/2$^-$			
1018.0[g] *3*	14.8[g] *27*	1296.660	(3/2$^-$,5/2,7/2$^-$)	278.5973	7/2$^-$			
1023.72 *7*	69 *10*	1110.691	3/2$^-$,5/2$^-$	86.9185	3/2$^-$			
1033.72[e] *25*	20 *4*	1311.793	(5/2$^+$,7/2)	278.5973	7/2$^-$			
[x]1037.45 *15*	42 *6*							
[x]1043.06 *15*	25 *4*							
[x]1051.8 *3*	23 *7*							
[x]1053.6 *3*	21 *7*							
1061.60 *17*	34 *6*	1781.208	(3/2$^-$,5/2$^-$)	719.936	3/2$^+$			
1064.7[g] *4*	18[g] *4*	1064.675	(5/2$^+$,7/2,9/2$^+$)	0.0	7/2$^+$			
1064.7[ge] *4*	18[g] *4*	1724.49	(3/2$^-$)	659.618	3/2$^-$			
1067.64[e] *20*	40 *7*	1311.793	(5/2$^+$,7/2)	243.8162	7/2$^-$			
1069.6 *6*		1070.78	7/2$^+$	0.0	7/2$^+$			Seen in ce spectrum only.
1076.56[@e] *8*	135 *20*	1724.49	(3/2$^-$)	647.837	7/2$^-$			α(K)exp=0.0048 *12* suggests M1 multipolarity but line is probably complex.
1086.35 *10*	62 *9*	1110.691	3/2$^-$,5/2$^-$	24.1996	1/2$^-$			
1088.9[de] *4*	21 *5*	1159.87	(5/2$^+$)	70.8817	9/2$^+$			
1095.58[e] *12*	56 *8*	1742.850	(3/2$^+$,5/2,7/2$^-$)	647.281	7/2$^+$			α(K)exp=0.013 *3*.
[x]1099.45 *20*	31 *5*							
1105.5[ge] *3*	24[g] *4*	1176.662	(7/2,9/2)$^+$	70.8817	9/2$^+$			

$^{169}_{70}Yb_{99}$-15

^{168}Yb(n,γ) E=thermal 1969Bo16,1972Wi12,1973GrZV (continued)

$\gamma(^{169}Yb)$ (continued)

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[f]	Comments
1105.5[g] *3*	24[g] *4*	1296.660	(3/2$^-$,5/2,7/2$^-$)	191.2136	5/2$^-$			α(K)exp=0.0081 *25* (for 1105.5γ and 1109.4γ combined).
1105.5[ge] *3*	24[g] *4*	1828.037	1/2,3/2,5/2$^+$	722.263	5/2$^-$			
[x]1109.40 *10*	55 *8*							See comment with 1105.5γ.
1115.1[e] *4*	17 *4*	1202.163	(5/2$^+$)	86.9185	3/2$^-$			
1131.29[e] *17*	29 *13*	1202.163	(5/2$^+$)	70.8817	9/2$^+$			
1131.29 *17*	29 *13*	1395.387	(5/2$^-$)	264.2533	9/2$^-$			
1133.4 *5*	20 *5*	1781.208	(3/2$^-$,5/2$^-$)	647.837	7/2$^-$			
1140.78[e] *25*	31 *18*	1141.26	(9/2)$^+$	0.0	7/2$^+$			
[x]1144.55 *15*	78 *14*							
1151.36 *20*	44 *7*	1395.387	(5/2$^-$)	243.8162	7/2$^-$			
[x]1155.75 *25*	86[&] *13*					M1	0.00503	α(K)exp=0.0047 *12*.
1163.14 *20*	66[&] *13*	1354.836	(3/2$^-$)	191.2136	5/2$^-$	(M1)	0.00495	α(K)exp=0.0060 *17*.
1177.1[e] *4*	22 *4*	1176.662	(7/2,9/2)$^+$	0.0	7/2$^+$			
1183.63 *25*	78[&] *16*	1270.726	(1/2)$^-$	86.9185	3/2$^-$	M1	0.00475	α(K)exp=0.0050 *14*.
[x]1188.21 *15*	72 *11*							
1197.8[&] *7*	73[&] *21*	1296.660	(3/2$^-$,5/2,7/2$^-$)	99.2401	5/2$^-$			
1200.9 *10*	22 *6*	1464.98	(7/2)$^-$	264.2533	9/2$^-$			
1207.5 *3*	128[&] *25*	1398.692	(3/2)$^-$	191.2136	5/2$^-$	M1	0.00453	α(K)exp=0.0038 *11*.
1209.8 *3*	40 *8*	1296.660	(3/2$^-$,5/2,7/2$^-$)	86.9185	3/2$^-$			
1218.7[de] *7*	20 *6*	1463.02	(7/2$^-$)	243.8162	7/2$^-$			
1221.1 *2*	108[&] *16*	1464.98	(7/2)$^-$	243.8162	7/2$^-$	M1+E2	0.0035 *10*	α(K)exp=0.0030 *8*.
1227.3[e] *7*	19 *6*	1796.661	(3/2$^-$,5/2$^+$)	569.831	5/2$^-$			
1232.64 *17*	125[&] *16*	1319.60	(1/2)$^-$	86.9185	3/2$^-$	M1	0.00431	α(K)exp=0.0032 *8*.
1246.5 *3*	56 *10*	1270.726	(1/2)$^-$	24.1996	1/2$^-$	[c]		α(K)exp=0.024 *7*.
[x]1248.3 *6*	86 *44*							α(K)exp=0.0022 *14* (for 1248.3γ and 1257.2γ combined).
[x]1256.4 *5*	160 *60*							
[x]1257.2 *8*	164 *56*							See comment with 1248.3γ.
1263.08 *20*	169 *27*	1350.108	(3/2$^-$)	86.9185	3/2$^-$	(M1)	0.00407	α(K)exp=0.0033 *9* (complex spectrum makes assignment of ce peak to 1263.1γ uncertain).
[x]1266.4[&] *6*	112[&] *19*							α(K)exp=0.018 *5*. E_γ: placed by 1988DzZW from an otherwise unknown 1354 level.
1284.7[e] *8*	156 *56*	1285.111	(3/2$^+$,5/2,7/2$^+$)	0.0	7/2$^+$			α(K)exp=0.013 *6*.
1295.6 *4*	124[&] *20*	1319.60	(1/2)$^-$	24.1996	1/2$^-$	(M1)	0.00383	α(K)exp=0.0058 *15*.
[x]1304.7 *9*	156 *58*							
1325.5[&] *6*	74[&] *16*	1350.108	(3/2$^-$)	24.1996	1/2$^-$	(M1)	0.00364	α(K)exp=0.0075 *23*.
[x]1336.0 *4*	67 *24*							
1373.6[&] *5*	149[&] *22*	1398.692	(3/2)$^-$	24.1996	1/2$^-$	(M1)	0.00335	α(K)exp=0.0053 *14*.
[x]1380.3 *4*	50 *21*							α(K)exp=0.008 *4*.
1391.8[g&] *17*	33[g&] *17*	1478.485	(3/2$^-$,5/2$^+$)	86.9185	3/2$^-$			

$^{169}_{70}Yb_{99}$-16

^{168}Yb(n,γ) E=thermal 1969Bo16,1972Wi12,1973GrZV (continued)

$\gamma(^{169}Yb)$ (continued)

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[f]	Comments
1391.8[g&] *17*	33[g&] *17*	1781.208	(3/2$^-$,5/2$^-$)	389.5266	9/2$^-$			
[x]1402.9 *5*								Seen in ce spectrum only.
[x]1407.0 *10*	24 *11*							
1410.6 *6*	108 *53*	1688.91	(5/2,7/2)$^-$	278.5973	7/2$^-$			
[x]1414.4 *7*	43 *21*							α(K)exp=0.0035 *25* (for 1414.4γ+1417.7γ).
1417.7[e] *5*	70 *32*	1696.348	3/2$^-$	278.5973	7/2$^-$			See comment with 1414.4γ.
1432.5[&] *7*	115[&] *23*	1531.559	(3/2$^-$,5/2$^+$)	99.2401	5/2$^-$			
1445.2[g] *17*	26[g] *13*	1531.559	(3/2$^-$,5/2$^+$)	86.9185	3/2$^-$			
1445.2[ge] *17*	26[g] *13*	1724.49	(3/2$^-$)	278.5973	7/2$^-$			
1448.3[e] *7*	116 *59*	1449.52	7/2$^-$	0.0	7/2$^+$			
[x]1465.2 *10*	63 *18*							
1467.3 *12*	21 *10*	1554.829	(1/2$^-$)	86.9185	3/2$^-$			
[x]1470.4 *25*	28 *14*							
1480.1[e] *20*	123 *69*	1724.49	(3/2$^-$)	243.8162	7/2$^-$			
[x]1485.2[d] *6*	152 *99*					(E2)	1.77×10^{-3}	α(K)exp=0.0016 *11*.
1497.6[&] *20*	70[&] *21*	1688.91	(5/2,7/2)$^-$	191.2136	5/2$^-$	M1	0.00278	α(K)exp=0.0034 *12*.
1505.9[&] *10*	129[&] *26*	1696.348	3/2$^-$	191.2136	5/2$^-$	M1	0.00275	α(K)exp=0.0025 *7*.
1518.5[ge] *8*	44[g] *32*	1616.676	(1/2$^+$,3/2,5/2$^+$)	99.2401	5/2$^-$			
1518.5[ge] *8*	44[g] *32*	1796.661	(3/2$^-$,5/2$^+$)	278.5973	7/2$^-$			
1530.5[g&] *10*	79[g&] *24*	1554.829	(1/2$^-$)	24.1996	1/2$^-$	[c]		α(K)exp=0.013 *5*.
1530.5[g&e] *10*	79[g&] *24*	1616.676	(1/2$^+$,3/2,5/2$^+$)	86.9185	3/2$^-$	[c]		α(K)exp=0.013 *5*.
[x]1540.7[&] *10*	74[&] *24*							
1551.5[&e] *15*	37[&] *19*	1742.850	(3/2$^+$,5/2,7/2$^-$)	191.2136	5/2$^-$			
1563.0[&e] *10*	78[&] *24*	1828.037	1/2,3/2,5/2$^+$	264.2533	9/2$^-$			
[x]1578.2[&] *12*	45[&] *18*							Eγ: placed by 1988DzZW from 1867 level but Eγ does not fit that placement.
1583.6[&e] *10*	54[&] *21*	1828.037	1/2,3/2,5/2$^+$	243.8162	7/2$^-$			
1594.5[&] *11*	82[&] *24*	1618.692	1/2,3/2	24.1996	1/2$^-$			
1604.8[&e] *12*	54[&] *21*	1796.661	(3/2$^-$,5/2$^+$)	191.2136	5/2$^-$			
[x]1614.6[&] *12*	57[&] *28*							
1623.6[e] *9*	47 *31*	1867.57	(3/2$^-$,5/2$^+$)	243.8162	7/2$^-$			
1625.3[e] *8*	≈189	1724.49	(3/2$^-$)	99.2401	5/2$^-$			placed by 1988DzZW from the 1696 level also, but that placement would require an M3 transition so is rejected by the evaluator.
1637.2[g&e] *12*	101[g&] *30*	1724.49	(3/2$^-$)	86.9185	3/2$^-$			
1637.2[g&e] *12*	101[g&] *30*	1828.037	1/2,3/2,5/2$^+$	191.2136	5/2$^-$			
[x]1649.5[&] *12*	68[&] *28*							
[x]1659.8[&] *10*	75[&] *25*							

^{168}Yb(n,γ) E=thermal 1969Bo16,1972Wi12,1973GrZV (continued)

$\gamma(^{169}Yb)$ (continued)

E_γ †	I_γ ‡	E_i(level)	J_i^π	E_f	J_f^π
[x] 1676.0 & 10	93 & 27				
1689.2 & 12	51 & 25	1688.91	$(5/2,7/2)^-$	0.0	$7/2^+$
1743.8 &e 15	81 & 25	1742.850	$(3/2^+,5/2,7/2^-)$	0.0	$7/2^+$
3209.6 10	7.8 b 23	(6866.67)	$1/2^+$	3657.0	$1/2,3/2,5/2^+$
3306.7 8	16 b 5	(6866.67)	$1/2^+$	3559.9	$1/2,3/2,5/2^+$
3339.9 7	27 b 5	(6866.67)	$1/2^+$	3526.7	$1/2,3/2,5/2^+$
3416.6 8	12.7 b 25	(6866.67)	$1/2^+$	3450.0	$1/2,3/2,5/2^+$
3491.2 7	9.4 b 23	(6866.67)	$1/2^+$	3375.4	$1/2,3/2,5/2^+$
3522.2 7	17.1 b 26	(6866.67)	$1/2^+$	3344.4	$1/2,3/2,5/2^+$
3592.6 15	15 b 6	(6866.67)	$1/2^+$	3274.0	$1/2,3/2,5/2^+$
3620.1 8	11 b 5	(6866.67)	$1/2^+$	3246.5	$1/2,3/2,5/2^+$
3692.8 7	15 b 3	(6866.67)	$1/2^+$	3173.8	$1/2,3/2,5/2^+$
3724.0 7	20 b 3	(6866.67)	$1/2^+$	3142.6	$1/2,3/2,5/2^+$
3736.3 8	9.8 b 29	(6866.67)	$1/2^+$	3130.3	$1/2,3/2,5/2^+$
3747.7 11	12 b 4	(6866.67)	$1/2^+$	3118.9	$1/2,3/2,5/2^+$
3761.0 6	25.6 b 26	(6866.67)	$1/2^+$	3105.6	$1/2,3/2,5/2^+$
3772.1 8	8.2 b 24	(6866.67)	$1/2^+$	3094.5	$1/2,3/2,5/2^+$
3800.5 7	11.4 b 17	(6866.67)	$1/2^+$	3066.1	$1/2,3/2,5/2^+$
3822.8 7	16 b 3	(6866.67)	$1/2^+$	3043.8	$1/2,3/2,5/2^+$
3828.2 7	18 b 4	(6866.67)	$1/2^+$	3038.4	$1/2,3/2,5/2^+$
3839.2 8	14.3 b 29	(6866.67)	$1/2^+$	3027.4	$1/2,3/2,5/2^+$
3851.4 12	9 b 3	(6866.67)	$1/2^+$	3015.2	$1/2,3/2,5/2^+$
3867.7 9	5.3 b 16	(6866.67)	$1/2^+$	2998.9	$1/2,3/2,5/2^+$
3878.0 8	16.3 b 24	(6866.67)	$1/2^+$	2988.6	$1/2,3/2,5/2^+$
3914.6 10	9.0 b 22	(6866.67)	$1/2^+$	2952.0	$1/2,3/2,5/2^+$
3933.8 15	8 b 3	(6866.67)	$1/2^+$	2932.8	$1/2,3/2,5/2^+$
3949.3 7	9.0 b 27	(6866.67)	$1/2^+$	2917.3	$1/2,3/2,5/2^+$
3975.0 6	32 b 3	(6866.67)	$1/2^+$	2891.6	$1/2,3/2,5/2^+$
3996.7 8	7.3 b 15	(6866.67)	$1/2^+$	2869.9	$1/2,3/2,5/2^+$
4010.6 8	10.6 b 21	(6866.67)	$1/2^+$	2856.0	$1/2,3/2,5/2^+$
4039.4 6	27 b 3	(6866.67)	$1/2^+$	2827.2	$1/2,3/2,5/2^+$
4064.7 9	16 b 3	(6866.67)	$1/2^+$	2801.9	$1/2,3/2,5/2^+$
4085.6 9	8.6 b 26	(6866.67)	$1/2^+$	2781.0	$1/2,3/2,5/2^+$
4092.1 8	14.3 b 21	(6866.67)	$1/2^+$	2774.5	$1/2,3/2,5/2^+$
4124.8 8	11.4 b 23	(6866.67)	$1/2^+$	2741.8	$1/2,3/2,5/2^+$

$^{169}_{70}Yb_{99}$-18

^{168}Yb(n,γ) E=thermal 1969Bo16,1972Wi12,1973GrZV (continued)

$\gamma(^{169}Yb)$ (continued)

E_γ †	I_γ ‡	E_i(level)	J_i^π	E_f	J_f^π	E_γ †	I_γ ‡	E_i(level)	J_i^π	E_f	J_f^π
4160.7 *7*	18.4[b] *18*	(6866.67)	1/2$^+$	2705.9	1/2,3/2,5/2$^+$	4828.9 *7*	22[b] *3*	(6866.67)	1/2$^+$	2037.7	1/2,3/2,5/2$^+$
4181.8 *11*	7[b] *3*	(6866.67)	1/2$^+$	2684.8	1/2,3/2,5/2$^+$	4868.2 *6*	20[b] *2*	(6866.67)	1/2$^+$	1998.4	1/2,3/2,5/2$^+$
4186.9 *7*	17[b] *4*	(6866.67)	1/2$^+$	2679.7	1/2,3/2,5/2$^+$	4927.6 *6*	32[b] *2*	(6866.67)	1/2$^+$	1939.0	1/2,3/2,5/2$^+$
4211.2 *6*	33.1[b] *23*	(6866.67)	1/2$^+$	2655.4	1/2,3/2,5/2$^+$	4946.1 *8*	6.5[b] *20*	(6866.67)	1/2$^+$	1920.5	1/2,3/2,5/2$^+$
4232.6 *12*	3.3[b] *10*	(6866.67)	1/2$^+$	2634.0	1/2,3/2,5/2$^+$	4955.7 *10*	2.9[b] *9*	(6866.67)	1/2$^+$	1910.9	1/2,3/2,5/2$^+$
4245.7 *10*	9.4[b] *19*	(6866.67)	1/2$^+$	2620.9	1/2,3/2,5/2$^+$	4972.6 *7*	10[b] *1*	(6866.67)	1/2$^+$	1894.0	1/2,3/2,5/2$^+$
4315.5 *7*	11.4[b] *17*	(6866.67)	1/2$^+$	2551.1	1/2,3/2,5/2$^+$	4997.6 *12*	3.7[b] *11*	(6866.67)	1/2$^+$	1867.57	(3/2$^-$,5/2$^+$)
4336.3 *7*	6.5[b] *16*	(6866.67)	1/2$^+$	2530.3	1/2,3/2,5/2$^+$	5009.2 *8*	12[b] *2*	(6866.67)	1/2$^+$	1857.4	1/2,3/2,5/2$^+$
4343.8 *7*	13.9[b] *21*	(6866.67)	1/2$^+$	2522.8	1/2,3/2,5/2$^+$	5029.1 *6*	11[b] *1*	(6866.67)	1/2$^+$	1837.5	1/2,3/2,5/2$^+$
4349.5 *10*	6.5[b] *16*	(6866.67)	1/2$^+$	2517.1	1/2,3/2,5/2$^+$	5037.8 *8*	13[b] *1*	(6866.67)	1/2$^+$	1828.037	1/2,3/2,5/2$^+$
4362.2 *8*	6.1[b] *12*	(6866.67)	1/2$^+$	2504.4	1/2,3/2,5/2$^+$	5069.2 *7*	22[b] *2*	(6866.67)	1/2$^+$	1796.661	(3/2$^-$,5/2$^+$)
4367.9 *7*	10.6[b] *21*	(6866.67)	1/2$^+$	2498.7	1/2,3/2,5/2$^+$	5079.3 *7*	22[b] *2*	(6866.67)	1/2$^+$	1787.3	1/2,3/2,5/2$^+$
4388.7 *10*	10.2[b] *20*	(6866.67)	1/2$^+$	2477.9	1/2,3/2,5/2$^+$	5109.3 *8*	4.5[b] *7*	(6866.67)	1/2$^+$	1757.3	1/2,3/2,5/2$^+$
4416.8 *7*	6.9[b] *10*	(6866.67)	1/2$^+$	2449.8	1/2,3/2,5/2$^+$	5121.6 *7*	8[b] *1*	(6866.67)	1/2$^+$	1745.0	(1/2$^-$)
4425.5 *9*	6.1[b] *12*	(6866.67)	1/2$^+$	2441.1	1/2,3/2,5/2$^+$	5142.7 *7*	7.8[b] *12*	(6866.67)	1/2$^+$	1724.49	(3/2$^-$)
4439.1 *10*	4.1[b] *10*	(6866.67)	1/2$^+$	2427.5	1/2,3/2,5/2$^+$	5169.5 *6*	24[b] *2*	(6866.67)	1/2$^+$	1696.348	3/2$^-$
4451.2 *8*	16[b] *6*	(6866.67)	1/2$^+$	2415.4	1/2,3/2,5/2$^+$	5247.4 *6*	100[b] *7*	(6866.67)	1/2$^+$	1618.692	1/2,3/2
4459.2 *8*	8.6[b] *13*	(6866.67)	1/2$^+$	2407.4	1/2,3/2,5/2$^+$	5281.1 *8*	4.9[b] *7*	(6866.67)	1/2$^+$	1585.856	(1/2$^-$)
4465.6 *8*	12[b] *2*	(6866.67)	1/2$^+$	2401.0	1/2,3/2,5/2$^+$	5312.0 *7*	7.3[b] *7*	(6866.67)	1/2$^+$	1554.829	(1/2$^-$)
4478.6 *8*	14[b] *1*	(6866.67)	1/2$^+$	2388.0	1/2,3/2,5/2$^+$	5334.4 *6*	13[b] *1*	(6866.67)	1/2$^+$	1531.559	(3/2$^-$,5/2$^+$)
4485.2 *10*	4.9[b] *15*	(6866.67)	1/2$^+$	2381.4	1/2,3/2,5/2$^+$	5342.7 *7*	8[b] *1*	(6866.67)	1/2$^+$	1524.08	1/2,3/2,5/2$^+$
4490.7 *10*	4.1[b] *12*	(6866.67)	1/2$^+$	2375.9	1/2,3/2,5/2$^+$	5356.9 *8*	3.7[b] *7*	(6866.67)	1/2$^+$	1509.7	1/2$^-$
4511.0 *7*	21[b] *2*	(6866.67)	1/2$^+$	2355.6	1/2,3/2,5/2$^+$	5388.3 *7*	10[b] *1*	(6866.67)	1/2$^+$	1478.485	(3/2$^-$,5/2$^+$)
4516.5 *7*	22[b] *2*	(6866.67)	1/2$^+$	2350.1	1/2,3/2,5/2$^+$	5468.3 *6*	45[b] *3*	(6866.67)	1/2$^+$	1398.692	(3/2)$^-$
4524.2 *8*	10[b] *2*	(6866.67)	1/2$^+$	2342.4	1/2,3/2,5/2$^+$	5511.9 *7*	25[b] *2*	(6866.67)	1/2$^+$	1354.836	(3/2$^-$)
4553.0 *6*	14[b] *1*	(6866.67)	1/2$^+$	2313.6	1/2,3/2,5/2$^+$	5517.2 *7*	21[b] *2*	(6866.67)	1/2$^+$	1350.108	(3/2$^-$)
4567.5 *8*	8.6[b] *13*	(6866.67)	1/2$^+$	2299.1	1/2,3/2,5/2$^+$	5595.6 *6*	32[b] *2*	(6866.67)	1/2$^+$	1270.726	(1/2)$^-$
4580.4 *12*	3.3[b] *10*	(6866.67)	1/2$^+$	2286.2	1/2,3/2,5/2$^+$	5633.5 *12*	2.0[b] *6*	(6866.67)	1/2$^+$	1232.16	(3/2$^-$)
4622.1 *6*	29[b] *2*	(6866.67)	1/2$^+$	2244.5	1/2,3/2,5/2$^+$	5643.0 *12*	2.0[b] *6*	(6866.67)	1/2$^+$	1225.42	1/2,3/2,5/2$^+$
4632.1 *8*	12[b] *2*	(6866.67)	1/2$^+$	2234.5	1/2,3/2,5/2$^+$	5664.2 *8*	4.5[b] *7*	(6866.67)	1/2$^+$	1202.163	(5/2$^+$)
4649.1 *10*	5.7[b] *17*	(6866.67)	1/2$^+$	2217.5	1/2,3/2,5/2$^+$	5706.7 *8*	3.7[b] *7*	(6866.67)	1/2$^+$	1159.87	(5/2$^+$)
4673.7 *9*	5.3[b] *11*	(6866.67)	1/2$^+$	2192.9	1/2,3/2,5/2$^+$	5832.7 *10*	6.1[b] *9*	(6866.67)	1/2$^+$	1033.883	(1/2$^+$,3/2)
4743.4 *12*	4.1[b] *12*	(6866.67)	1/2$^+$	2123.2	1/2,3/2,5/2$^+$	6017.7 *20*	3.7[b] *18*	(6866.67)	1/2$^+$	851.372	3/2$^-$
4763.0 *6*	11[b] *1*	(6866.67)	1/2$^+$	2103.6	1/2,3/2,5/2$^+$	6053.4 *6*	73[b] *4*	(6866.67)	1/2$^+$	813.326	(1/2)$^-$
4818.4 *11*	3.7[b] *15*	(6866.67)	1/2$^+$	2048.2	1/2,3/2,5/2$^+$	6146.8 *7*	8.2[b] *8*	(6866.67)	1/2$^+$	719.936	3/2$^+$

$^{169}_{70}Yb_{99}$-19

$\gamma(^{169}Yb)$ (continued)

E_γ [†]	I_γ [‡]	E_i(level)	J_i^π	E_f	J_f^π
6207.1 *6*	62[b] *3*	(6866.67)	$1/2^+$	659.618	$3/2^-$
6779.8 *6*	408[b] *20*	(6866.67)	$1/2^+$	86.9185	$3/2^-$
6842.5 *6*	94[b] *5*	(6866.67)	$1/2^+$	24.1996	$1/2^-$

[†] From 1972Wi12, except As noted.
[‡] Arbitrary units relative to Iγ=1000 for 720γ (secondary gammas only; see footnote defining scale for primary gammas). See also the comment on Iγ normalization.
[#] From α(K)exp, α(L)exp, and/or ce subshell ratios. The photon and ce intensity scales have been normalized through α(K)=0.326 (E2 theory) for 156.9γ. Evaluator assigns 20% uncertainty to Ice values. For multiply placed γ's, multipolarity assignments are based on supposition of just one transition.
[@] Complex peak (broader than normal).
[&] From 1968Mi08 (measured Eγ, Iγ (semi)).
[a] Seen only by 1968Mi08; assignment to ^{169}Yb uncertain.
[b] Arbitrary units relative to Iγ=100 for 5247.4γ (primary gammas only). see also the comment on Iγ normalization.
[c] Large α(K)exp indicates probable E0 component.
[d] Existence questionable.
[e] Placement from 1988DzZW.
[f] 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.
[g] Multiply placed with undivided intensity.
[h] Multiply placed with intensity suitably divided.
[i] Placement of transition in the level scheme is uncertain.
[x] γ ray not placed in level scheme.

^{168}Yb(n,γ) E=thermal 1969Bo16,1972Wi12,1973GrZV

Level Scheme

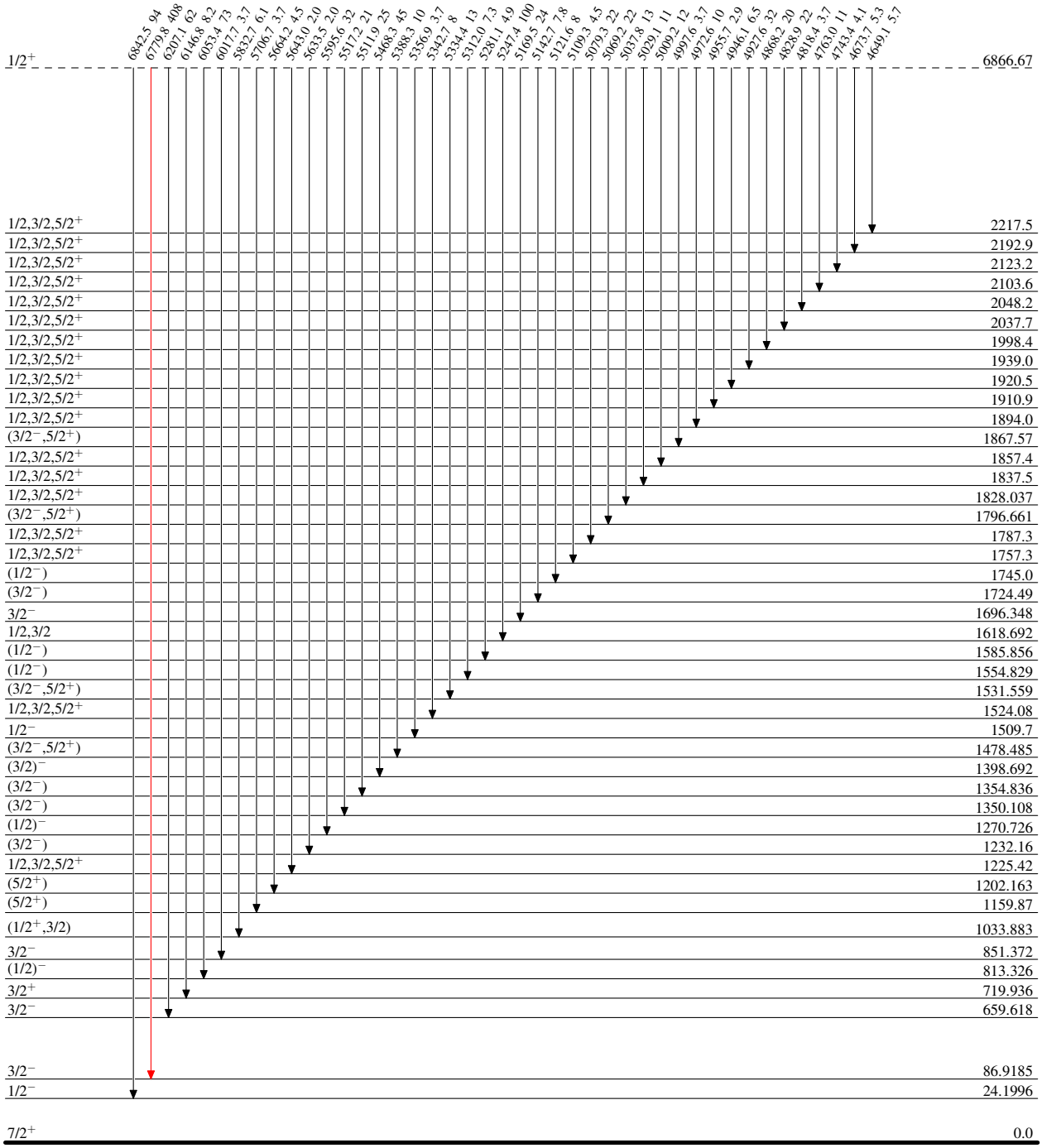
Intensities: Relative Iγ

Legend

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

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

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



$^{169}_{70}Yb_{99}$

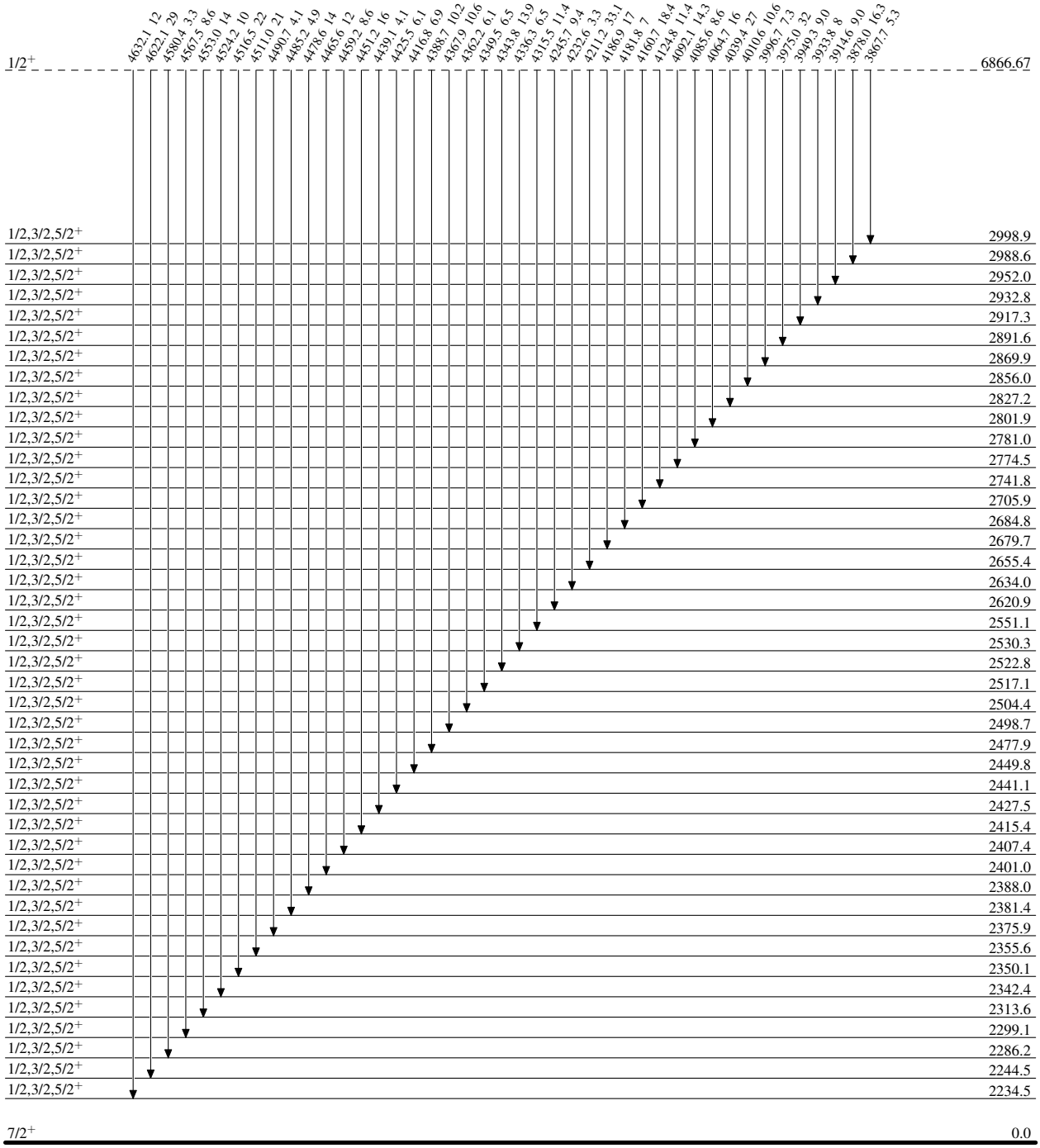
^{168}Yb(n,γ) E=thermal 1969Bo16,1972Wi12,1973GrZV

Legend

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

Level Scheme (continued)

Intensities: Relative Iγ



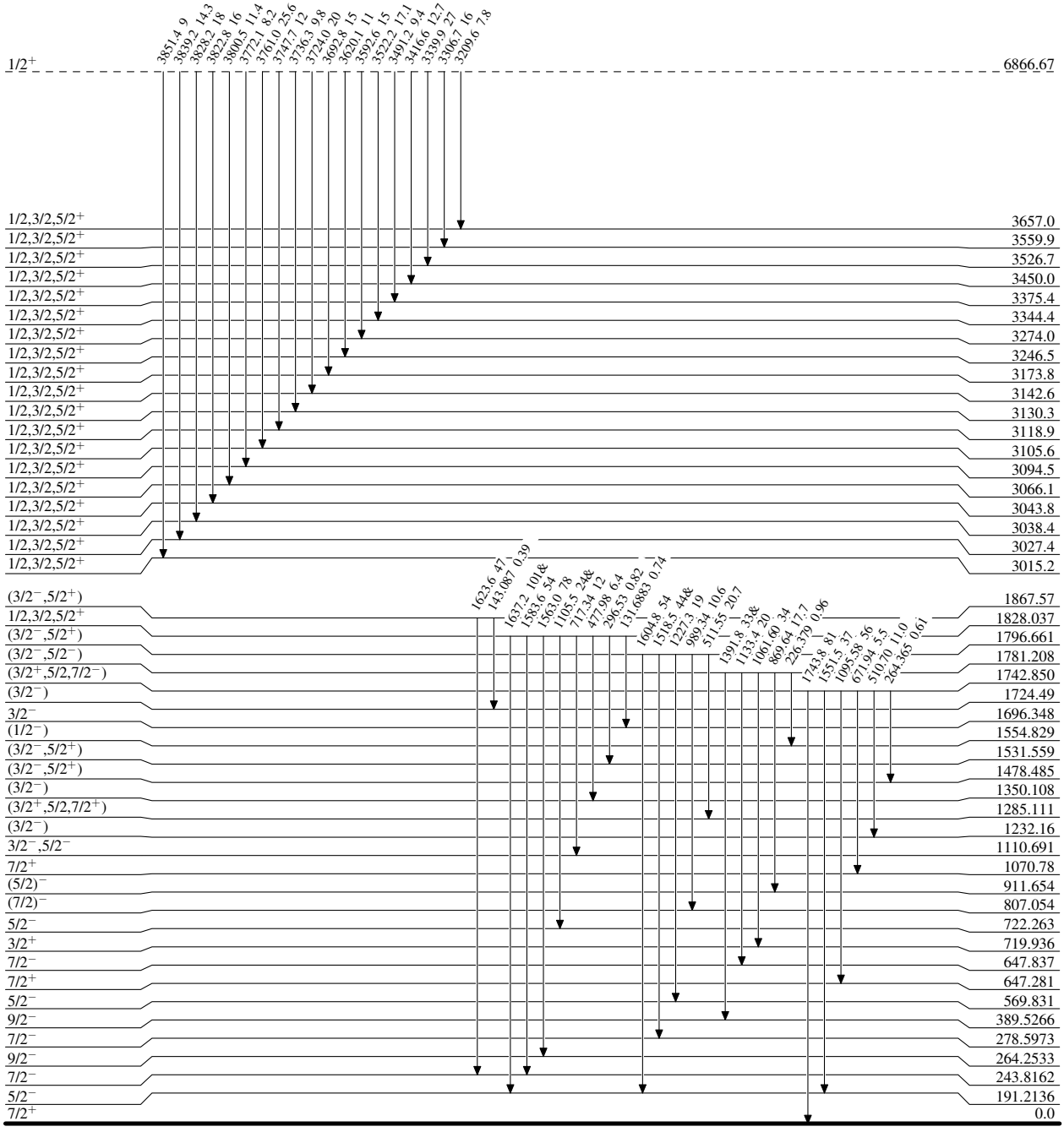
$^{169}_{70}Yb_{99}$

^{168}Yb(n,γ) E=thermal 1969Bo16,1972Wi12,1973GrZV

Level Scheme (continued)

Intensities: Relative Iγ
& Multiply placed: undivided intensity given

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



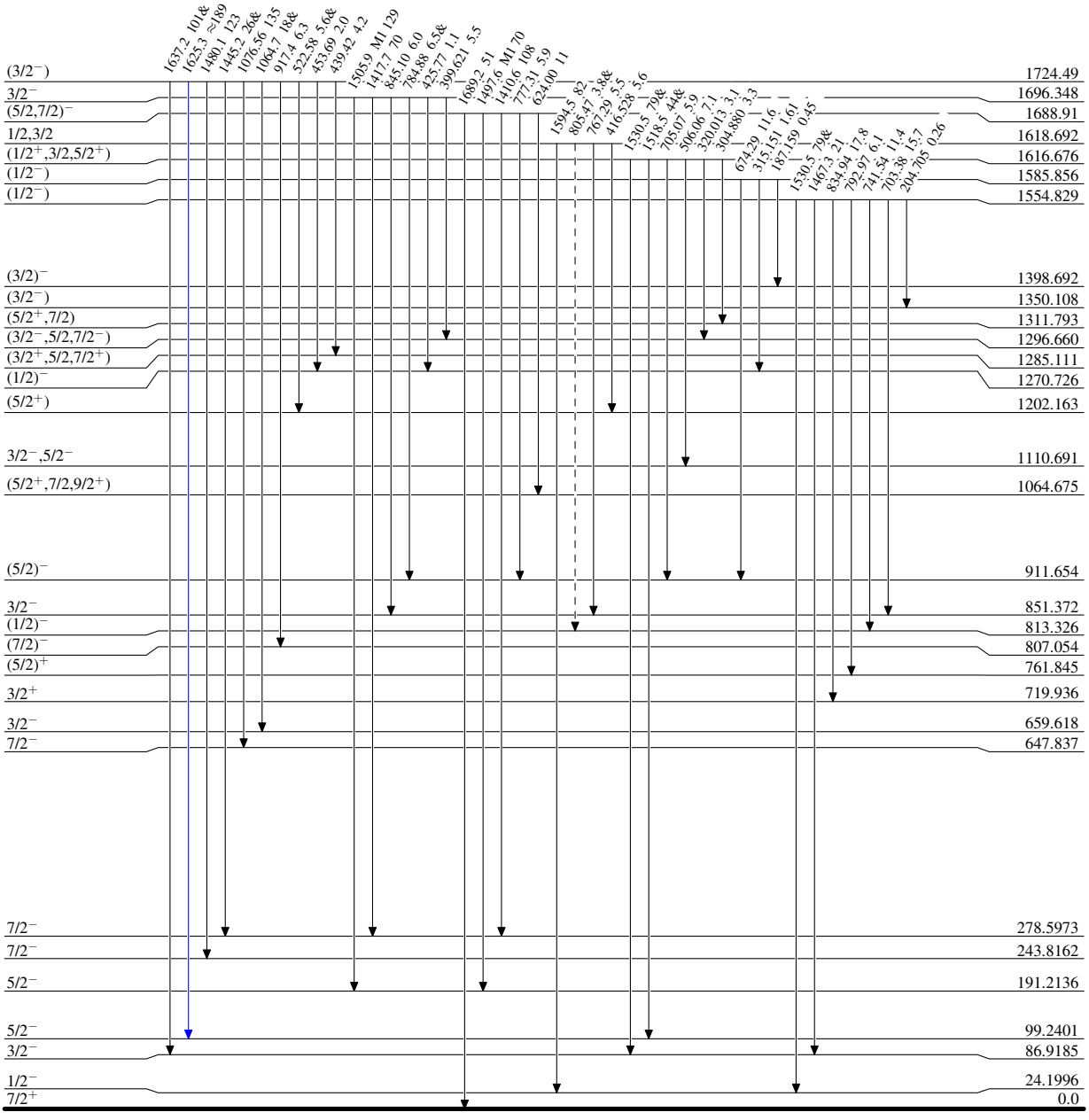
$^{169}_{70}Yb_{99}$

^{168}Yb(n,γ) E=thermal 1969Bo16,1972Wi12,1973GrZV

Level Scheme (continued)

Intensities: Relative Iγ
& 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)

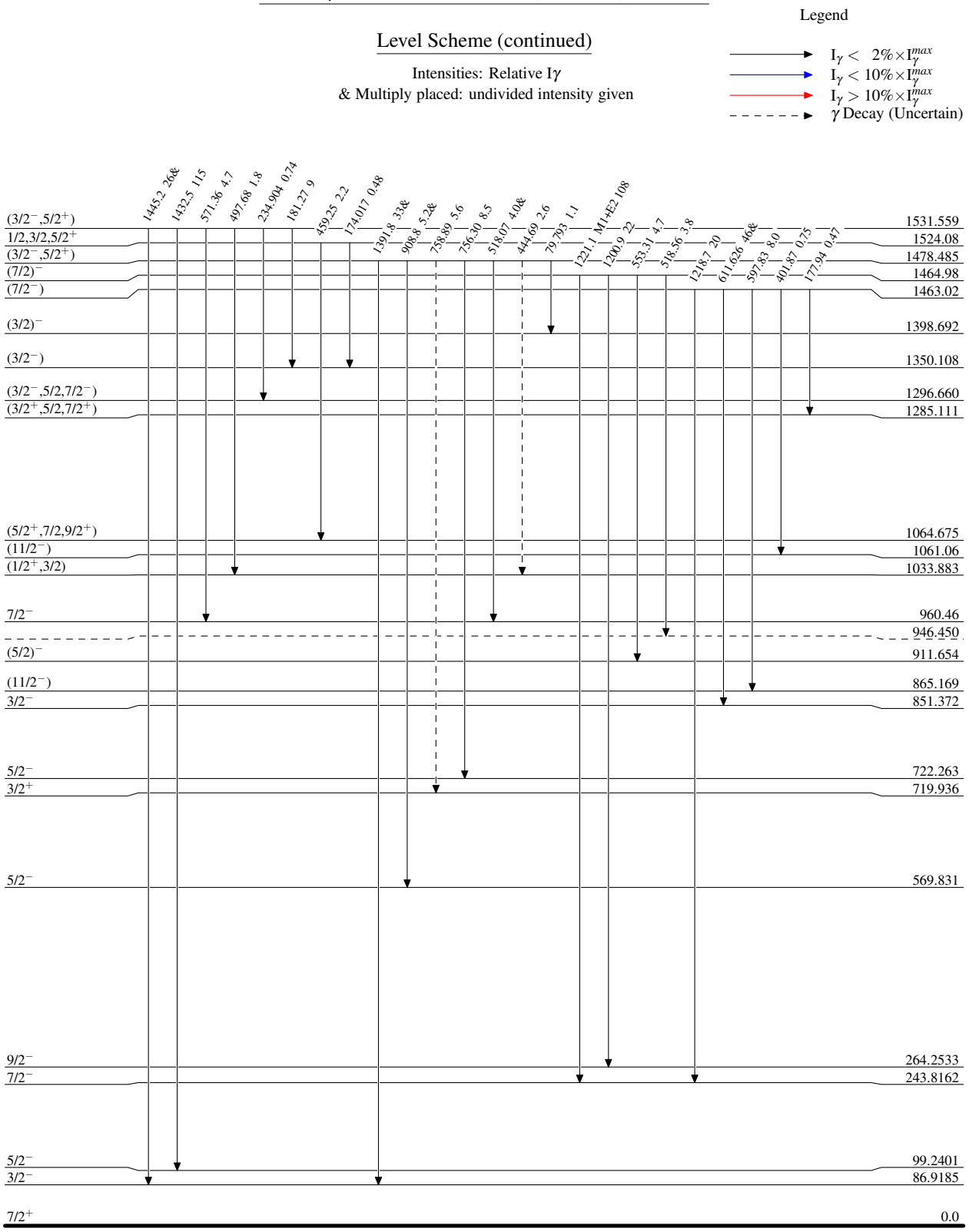


$^{169}_{70}Yb_{99}$

^{168}Yb(n,γ) E=thermal 1969Bo16,1972Wi12,1973GrZV

Level Scheme (continued)

Intensities: Relative Iγ
& Multiply placed: undivided intensity given

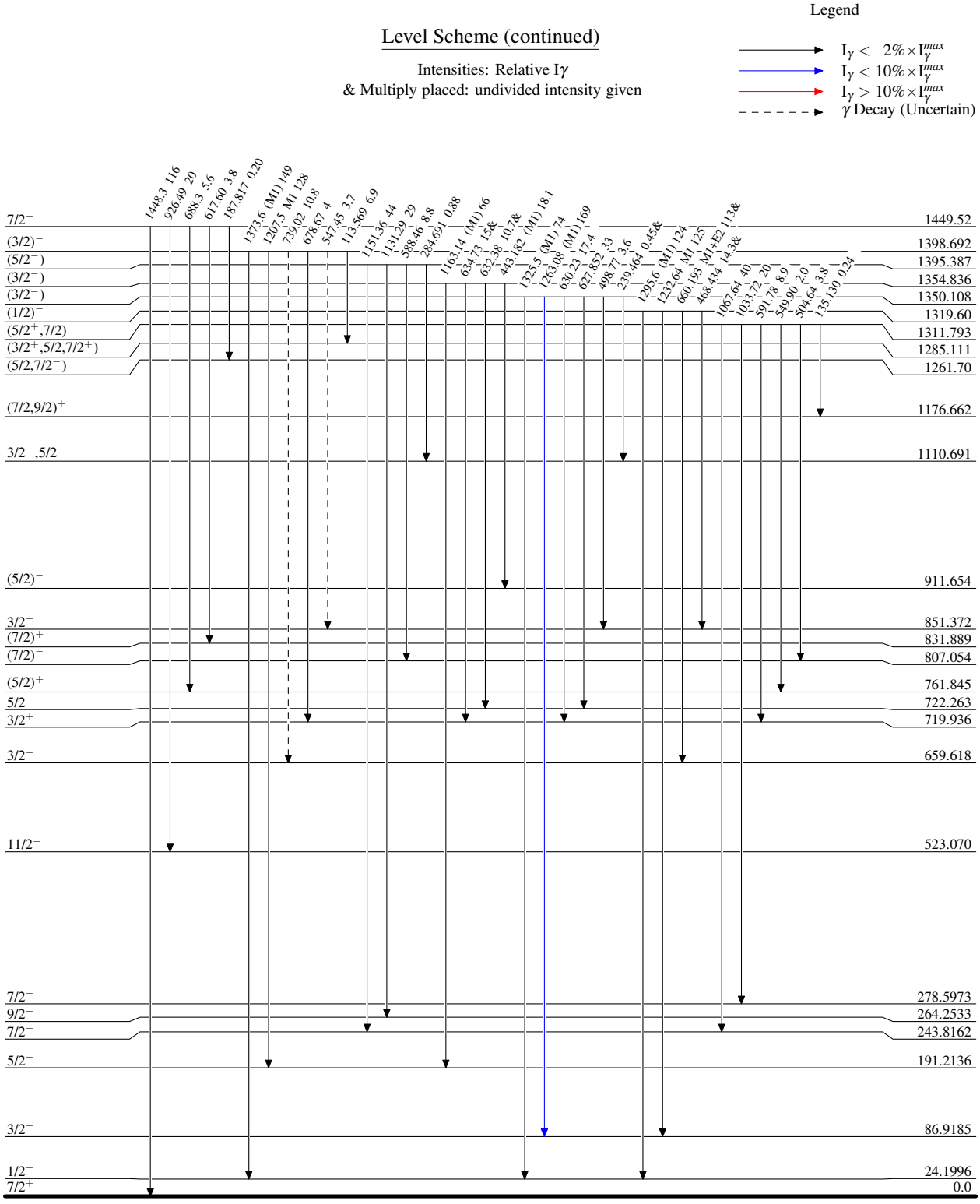


$^{169}_{70}Yb_{99}$

^{168}Yb(n,γ) E=thermal 1969Bo16,1972Wi12,1973GrZV

Level Scheme (continued)

Intensities: Relative Iγ
& Multiply placed: undivided intensity given



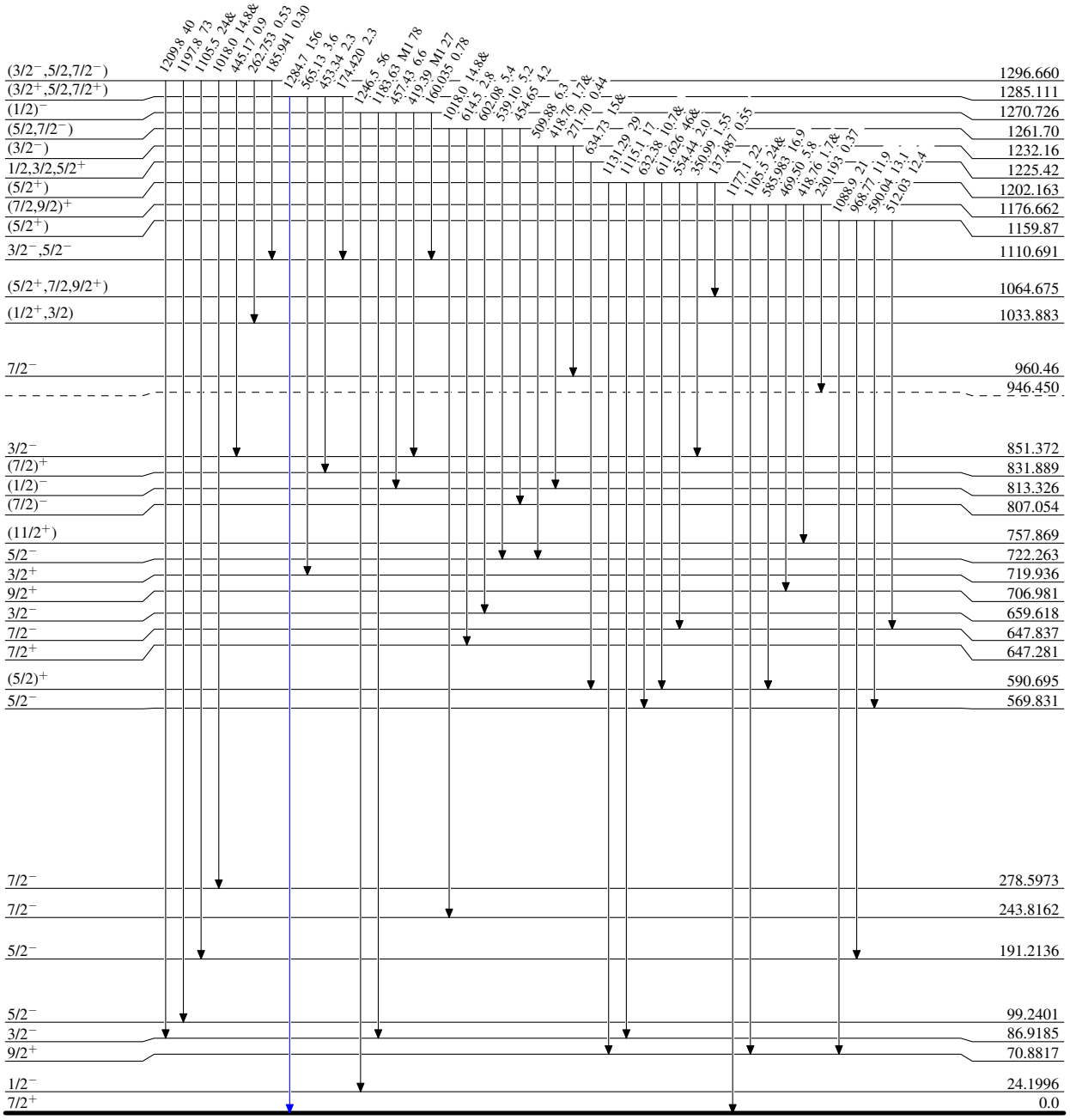
$^{169}_{70}Yb_{99}$

^{168}Yb(n,γ) E=thermal 1969Bo16,1972Wi12,1973GrZV

Level Scheme (continued)

Intensities: Relative Iγ
& Multiply placed: undivided intensity given

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

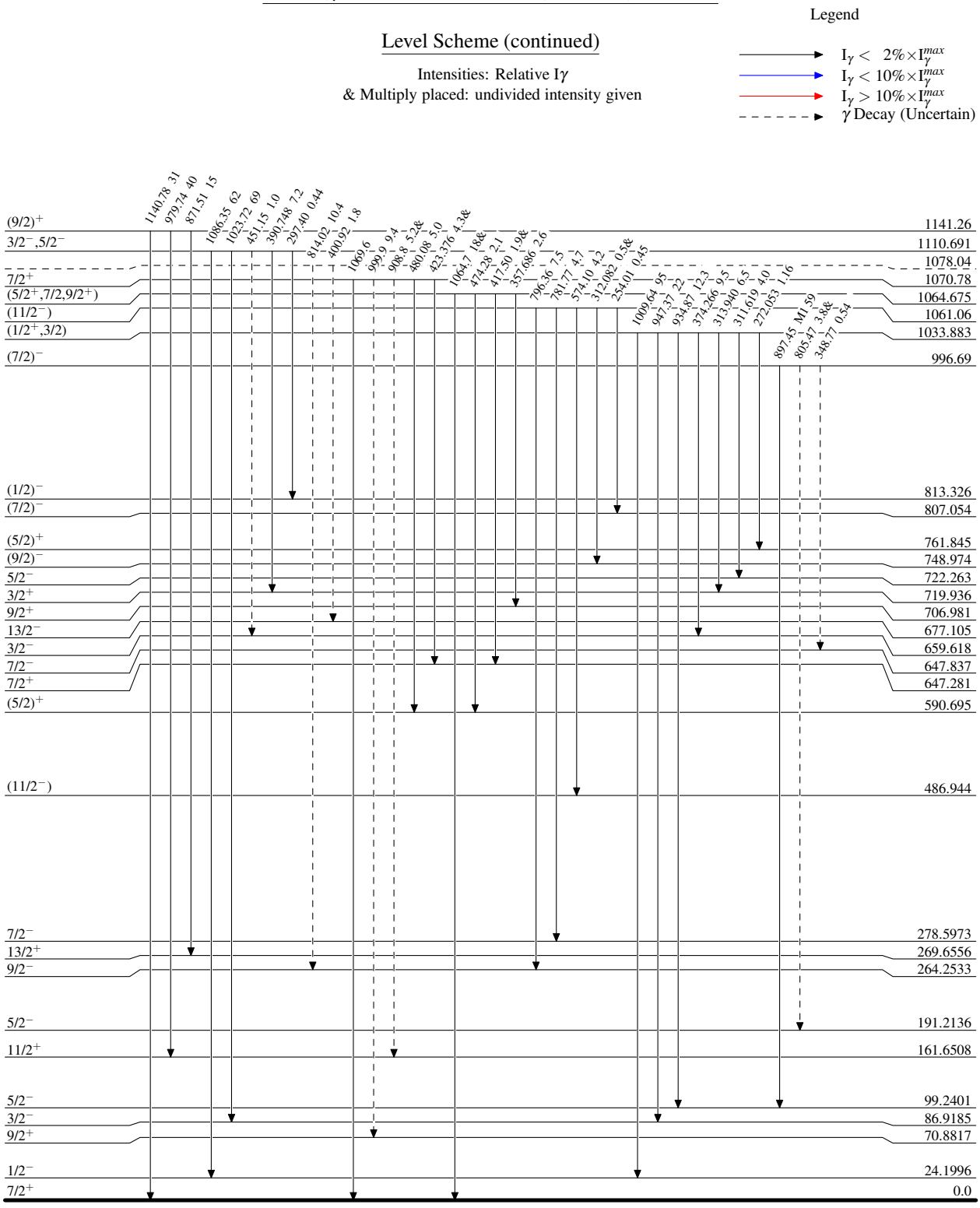


$^{169}_{70}Yb_{99}$

^{168}Yb(n,γ) E=thermal 1969Bo16,1972Wi12,1973GrZV

Level Scheme (continued)

Intensities: Relative Iγ
& Multiply placed: undivided intensity given



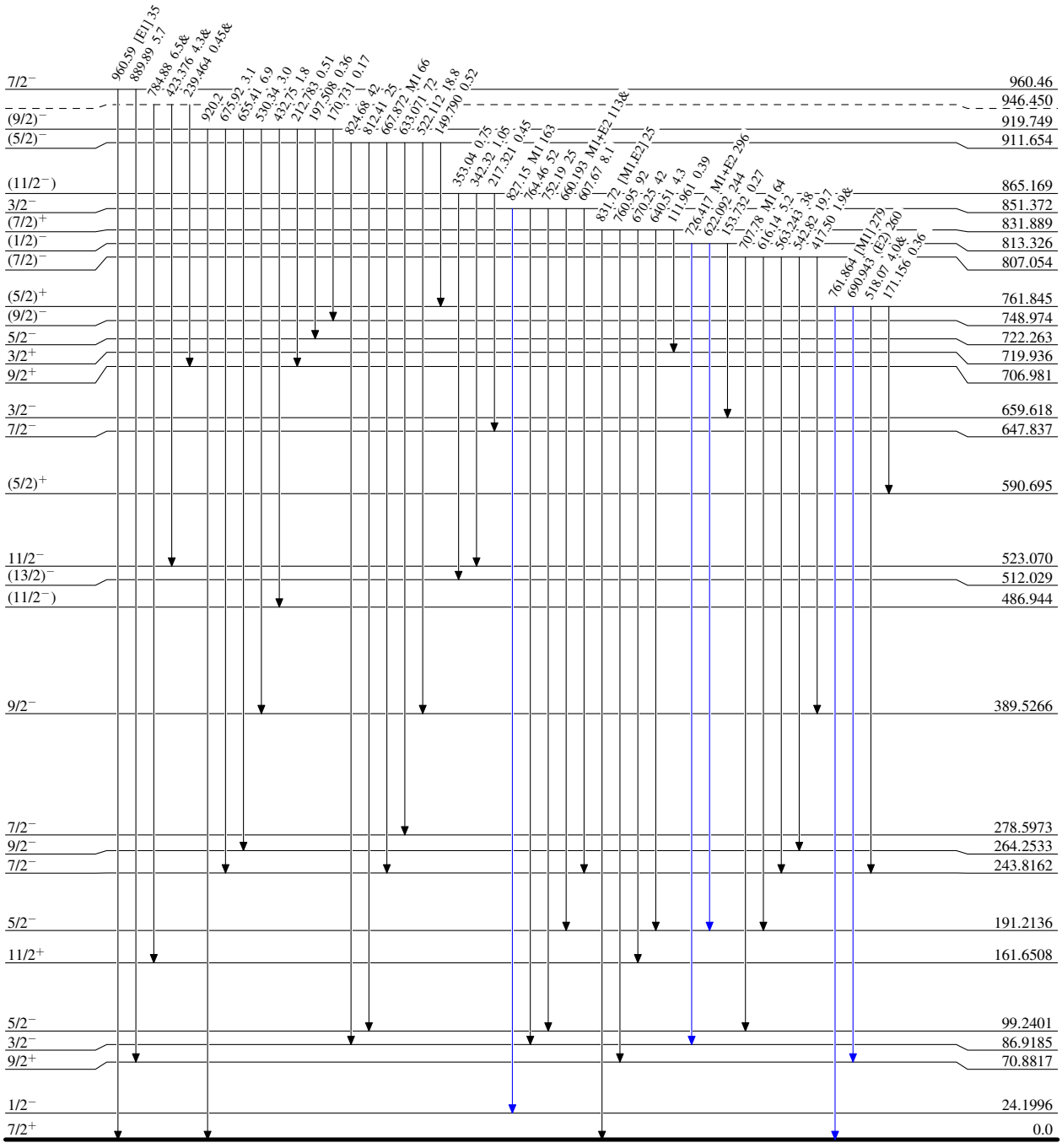
$^{169}_{70}Yb_{99}$

^{168}Yb(n,γ) E=thermal 1969Bo16,1972Wi12,1973GrZV

Level Scheme (continued)

Intensities: Relative Iγ
& Multiply placed: undivided intensity given

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



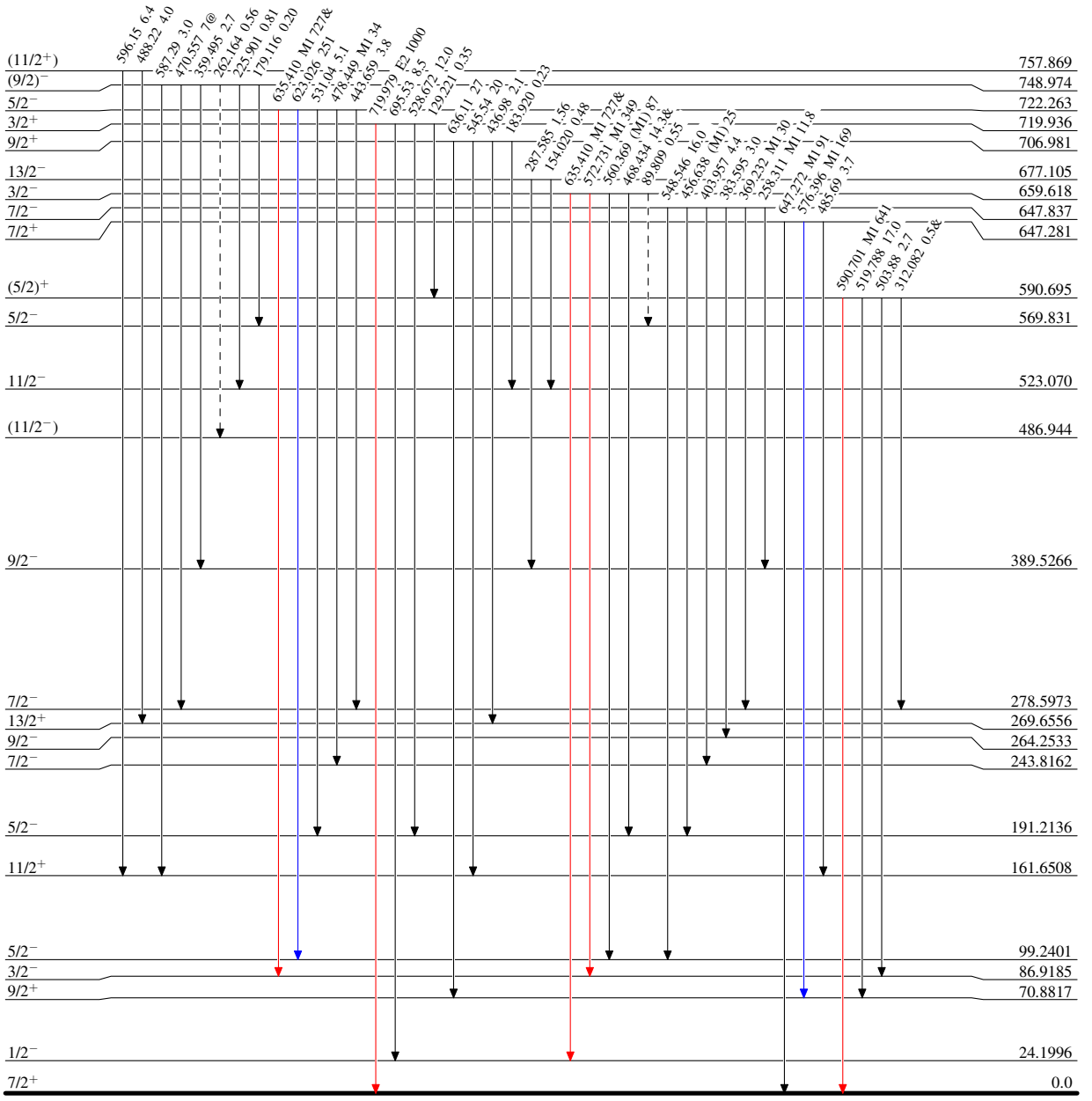
$^{169}_{70}Yb_{99}$

^{168}Yb(n,γ) E=thermal 1969Bo16,1972Wi12,1973GrZV

Level Scheme (continued)

Intensities: Relative Iγ
& 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)



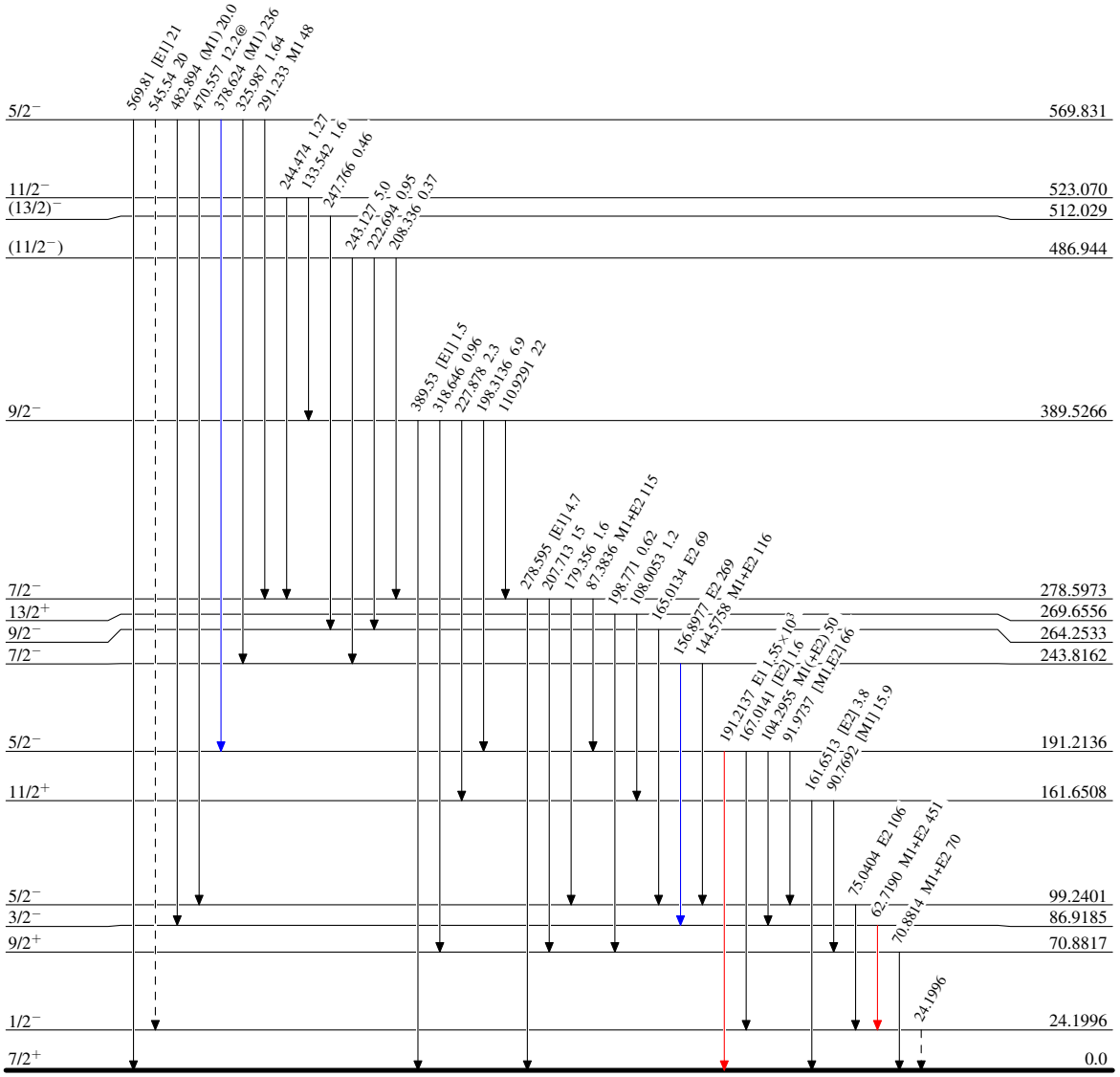
$^{169}_{70}Yb_{99}$

^{168}Yb(n,γ) E=thermal 1969Bo16,1972Wi12,1973GrZV

Level Scheme (continued)

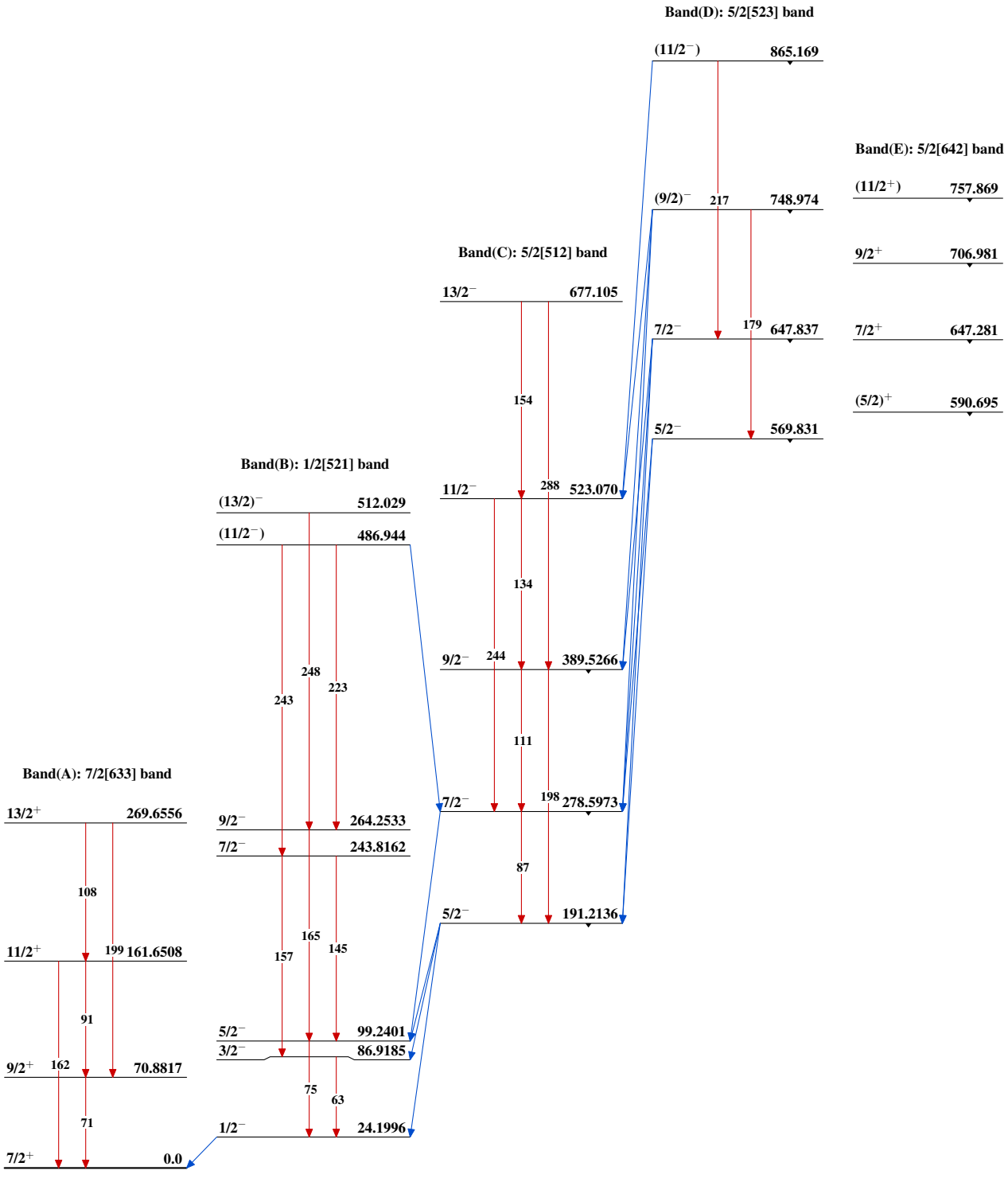
Intensities: Relative Iγ
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

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)



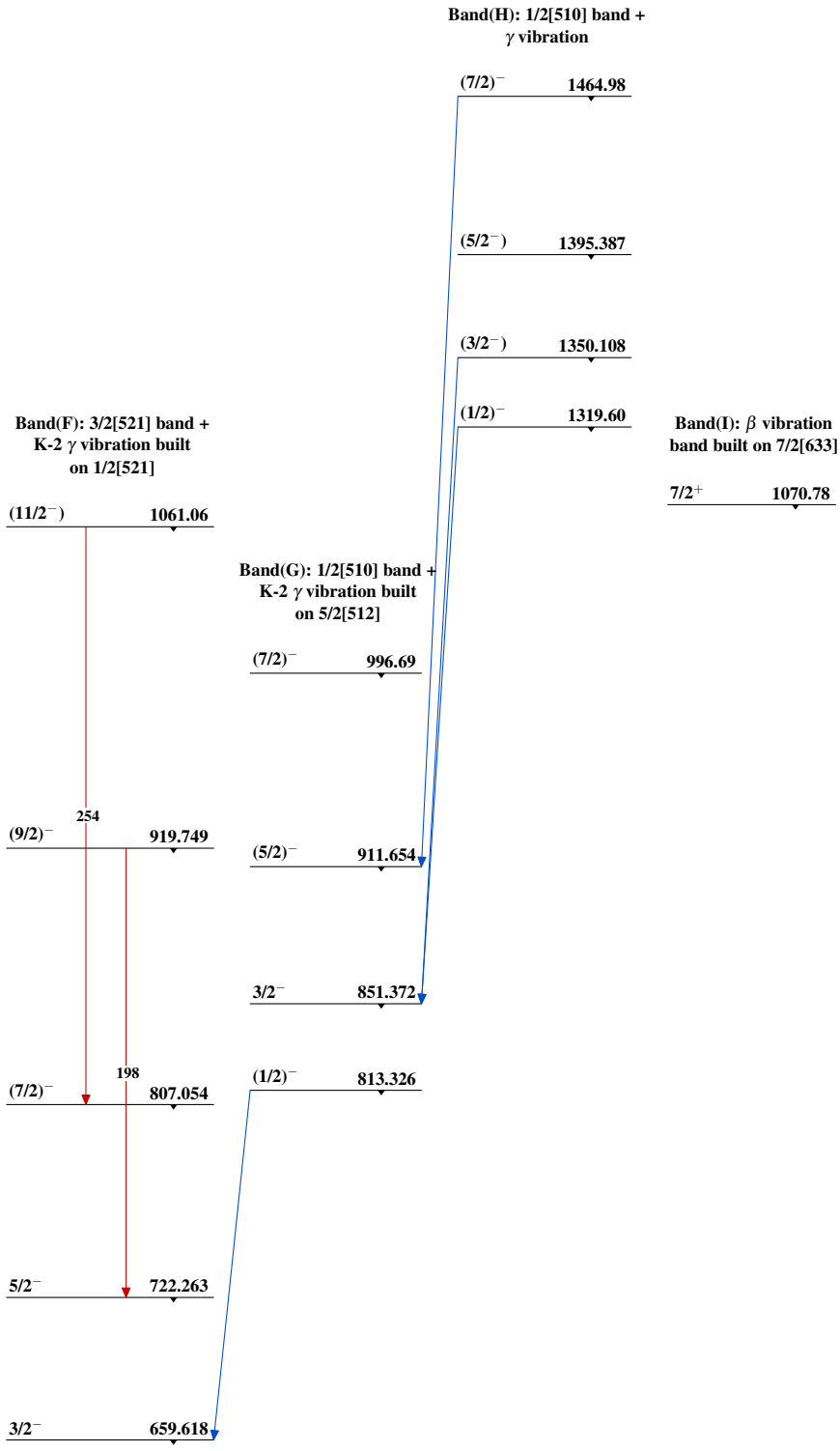
$^{169}_{70}Yb_{99}$

^{168}Yb(n,γ) E=thermal 1969Bo16,1972Wi12,1973GrZV



$^{169}_{70}Yb_{99}$

^{168}Yb(n,γ) E=thermal 1969Bo16,1972Wi12,1973GrZV (continued)



$^{169}_{70}Yb_{99}$