Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	N. Nica	NDS 195,1 (2024)	19-Sep-2023

Q(β^-)=−6990 *80*; S(n)=10058 *21*; S(p)=5210 *30*; Q(α)=3058 *29* 2021Wa16
S(2n)=17801 *16*, S(2p)=8335 *29* (2021Wa16).
Additional information 1.
Data are from ^{162}Lu ε decay (primarily 2004Mc01) and in-beam γ data of studies, namely the level scheme of 2018Md01, as well as those of 1987Mo21 and 1980BeYG.

^{162}Yb Levels

For levels with J=20-32, the average g-factor is 0.24 *5* from the evaluation of 1989Ra17 and is based on the data of 1984Ma10.

Cross Reference (XREF) Flags

A ^{162}Lu ε decay (1.37 min+1.5 min,
B (HI,xnγ)
C ^{186}W(n,4p21n)

E(level)	J$^\pi$[†]	T$_{1/2}$[‡]	XREF	Comments
0[#]	0$^+$	18.87 min *19*	AB	%ε+%β^+=100 T$_{1/2}$: from 1972Ch23. Others: 17.3 min *10* (1969DeZZ), 14.5 min *5* (1969Pa16), and 19.0 min *5* (1972Go34). For ^{160}Yb-^{162}Yb, $\Delta\langle r^2\rangle\approx$0.22 fm^2. For ^{162}Yb-^{164}Yb, $\Delta\langle r^2\rangle\approx$0.21 fm^2 (1985Ne09, read from plot by the evaluator). Related calculations: 1989Ba43. Other isotope shift data: 1982Bu21. In an evaluation of nuclear rms charge radii, 2013An02 report $\langle r^2\rangle^{1/2}$=5.2054 fm *67*.
166.72[#] *4*	2$^+$	415 ps *9*	ABC	J$^\pi$: E2 γ to 0$^+$ level. T$_{1/2}$: weighted average of: 439 ps *37* (1978Ba16), 401 ps *59* (1972Bo61), 400 ps *13* (1992Mc02), all from (HI,xnγ); and 428 ps *13*, from ^{162}Lu ε decay.
487.34[#] *5*	4$^+$	14.3 ps *6*	ABC	J$^\pi$: E2 γ to 2$^+$ level and expected structure of g.s. band.
798.42[c] *4*	2$^+$		AB	J$^\pi$: from $\gamma\gamma(\theta)$ in ^{162}Lu ε decay (1983Ge08). The γ branching from this level is typical of that observed from the bandheads of γ-vibrational excitations.
924.14[#] *5*	6$^+$	3.47 ps *21*	ABC	J$^\pi$: E2 γ to 4$^+$ level and expected structure of g.s. band.
992.07[d] *5*	3$^+$		AB	J$^\pi$: E2 in-band γ from 5$^+$, γ's to 2$^+$ and 4$^+$ levels.
1006.20[b] *6*	0$^+$		A	J$^\pi$: from $\gamma\gamma(\theta)$ in ^{162}Lu ε decay (1983Ge08). The evaluator has taken the multipolarity (Q, from the $\gamma\gamma(\theta)$ data) of the deexciting γ to be E2, rather than M2. Hence π=+.
1129.59[b] *5*	2$^+$		AB	J$^\pi$: γ's to 0$^+$ and 4$^+$ levels and in-band transition.
1150.21[c] *8*	4$^+$		AB	J$^\pi$: E2 γ to 2$^+$ and in-band transition.
1198.01 *8*	2$^+$,3,4$^+$		A	J$^\pi$: γ's to 2$^+$ and 4$^+$ levels.
1337.23 *5*	2$^+$,3,4$^+$		A	J$^\pi$: γ's to 2$^+$ and 4$^+$ levels.
1343.08[b] *17*	4$^+$		AB	J$^\pi$: E2 in-band γ from 6$^+$.
1379.46 *6*	2$^+$		A	J$^\pi$: γ's to 0$^+$ and 4$^+$ levels.
1393.04[d] *19*	5$^+$		B	J$^\pi$: M1(+E2) γ to 4$^+$, g.s. band.
1398.22 *5*	1,2$^+$		A	J$^\pi$: γ's to 0$^+$ and 2$^+$ levels.
1445.56[#] *5*	8$^+$	1.1 ps *3*	BC	J$^\pi$: E2 γ to 6$^+$. 8$^+$ member of the g.s. band.
1454.87 *5*			A	

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Adopted Levels, Gammas (continued)

^{162}Yb Levels (continued)

E(level)	J^{π}[†]	$T_{1/2}$[‡]	XREF	Comments
1483.24[&] *15*	5^-		AB	J^{π}: E1 γ to 4^+ of g.s. band; bandhead of band C.
1500.69 *16*			A	
1552.82 *8*	2^+,3,4^+		A	J^{π}: γ's to 2^+ and 4^+ levels.
1568.11 *5*			A	
1573.32[c] *10*	6^+		B	J^{π}: E2 in-band γ to 4^+.
1609.00[@] *12*	4^-		AB	J^{π}: stretched D γ to 3^- and E1 $\Delta J=0$ γ to 4^+; bandhead of band B.
1636.59 *6*	$1,2^+$		A	J^{π}: γ's to 0^+ and 2^+ levels.
1637.90 *6*			A	
1647.19[b] *10*	6^+		B	J^{π}: E2 γ to 4^+ of g.s. band, member of band E.
1673.06 *7*			A	
1676.52 *11*	2^+,3,4^+		A	J^{π}: γ's to 2^+ and 4^+ levels.
1716.79 *10*			A	
1741.31 *24*			A	
1767.70[&] *13*	7^-		B	J^{π}: E1 γ to 6^+ of g.s. band.
1853.65 *21*			A	
1860.58 *10*	$1,2^+$		A	J^{π}: γ's to 0^+ and 2^+ levels.
1879.91[d] *21*	7^+		B	J^{π}: E2 in-band γ to 5^+.
1913.37[@] *18*	6^-		B	J^{π}: E2 in-band γ to 4^-; M1 γ to 5^- of band C.
1938.94 *16*	2^+,3,4^+		A	J^{π}: γ's to 2^+ and 4^+ levels.
1985.29[c] *7*	8^+	1.5 ps *2*	B	J^{π}: E2 in-band γ to 6^+.
2024.06[#] *6*	10^+	0.9 ps *3*	BC	J^{π}: E2 in-band γ to 8^+.
2050.39 *22*			A	
2059.49 *9*	2^+,3,4^+		A	J^{π}: γ's to 2^+ and 4^+ levels.
2092.36 *16*			A	
2094.09[b] *20*	8^+		B	J^{π}: E2 in-band γ from 10^+.
2099.00 *8*	$1,2^+$		A	J^{π}: γ's to 0^+ and 2^+ levels.
2152.95[&] *12*	9^-	0.54 ps *5*	B	J^{π}: E2 in-band γ to 7^-; E1 γ to 8^+ of g.s. band.
2269.50 *11*			A	
2280.29[@] *21*	8^-	2.3 ps *5*	B	J^{π}: E2 in-band γ to 6^-; M1 γ to 7^- of band C.
2399.0 *3*			A	
2424.52[c] *7*	10^+	1.3 ps *+3−1*	B	J^{π}: E2 in-band γ to 8^+.
2428.94[d] *24*	9^+		B	J^{π}: E2 in-band γ to 7^+.
2446.52 *12*	$1,2^+$		A	J^{π}: γ's to 0^+ and 2^+ levels.
2549.67 *15*			A	
2572.61[@] *21*	10^-	9.6 ps *8*	B	J^{π}: E2 in-band γ to 8^-; M1 γ to 9^- of band C.
2594.85[b] *20*	10^+		B	J^{π}: E2 γ from 12^+ of band D; E2 γ to 8^+ of g.s. band.
2604.69[&] *8*	11^-	0.62 ps *5*	B	J^{π}: E2 in-band γ to 9^-; E1 γ to 10^+ of g.s. band.
2630.48[a] *22*	10^+		B	J^{π}: E2 in-band γ from 12^+.
2634.29[#] *7*	12^+	1.0 ps *+5−8*	B	J^{π}: E2 in-band γ to 10^+.
2789.82 *15*			A	
2806.29[a] *8*	12^+	4.4 ps *6*	B	J^{π}: E2 γ to 10^+ of g.s. band; E2 γ to 10^+ of band E.
2815.10 *20*			A	
2825.80 *11*			A	
2929.34[c] *22*	12^+		B	J^{π}: E2 in-band γ to 10^+.
2938.47[@] *22*	12^-	8.3 ps *19*	B	J^{π}: E2 in-band γ to 10^-.
2994.9[d] *4*	11^+		B	J^{π}: E2 in-band γ to 9^+.
2996.55 *24*			A	
3077.18[&] *8*	13^-		B	J^{π}: E2 in-band γ to 11^-.
3127.01[a] *8*	14^+	28 ps *10*	B	J^{π}: E2 in-band γ to 12^+.
3128.89[b] *20*	(12^+)		B	J^{π}: in-band γ to 10^+.
3257.35[#] *10*	14^+		B	J^{π}: E2 in-band γ to 12^+.

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Adopted Levels, Gammas (continued)

^{162}Yb Levels (continued)

E(level)	J^{π}[†]	$T_{1/2}$[‡]	XREF	Comments
3416.97[@] *22*	14^-	1.8 ps *+4–13*	B	J^{π}: E2 in-band γ to 12^-.
3461.3[c] *4*	14^+		B	J^{π}: E2 in-band γ to 12^+.
3561.8[d] *5*	(13^+)		B	J^{π}: in-band γ to 11^+.
3578.77[a] *13*	16^+	3.3 ps *2*	B	J^{π}: E2 in-band γ to 14^+.
3597.04[&] *12*	15^-		B	J^{π}: E2 in-band γ to 13^-.
3878.64[#] *14*	16^+		B	J^{π}: E2 in-band γ to 14^+.
3972.40[@] *23*	16^-	0.8 ps *3*	B	J^{π}: E2 in-band γ to 14^-.
4137.7[d] *6*	(15^+)		B	J^{π}: in-band γ to (13^+).
4149.15[a] *14*	18^+	1.9 ps *3*	B	
4185.44[&] *15*	17^-		B	
4495.29[#] *17*	18^+		B	
4562.30[@] *24*	18^-		B	
4821.33[&] *17*	19^-	0.38 ps *+16–31*	B	
4822.28[a] *16*	20^+		B	
5146.4[#] *11*	20^+		B	
5169.7[@] *3*	20^-		B	
5482.2[&] *11*	21^-		B	
5584.76[a] *24*	22^+		B	
5816.6[@] *3*	22^-		B	
5862.0[#] *15*	22^+		B	
6174.4[&] *15*	23^-		B	
6423.1[a] *11*	24^+		B	
6529.1[@] *4*	24^-		B	
6651.9[#] *18*	24^+		B	
6925.8[&] *18*	25^-		B	
7313.8[a] *15*	26^+		B	
7319.1[@] *11*	26^-		B	
7488.0[#]	26^+		B	
7755.2[&] *20*	27^-		B	
8187.7[@] *15*	28^-		B	
8234.7[a] *18*	28^+		B	
8323.9?[#]	(28^+)		B	
8660.8[&] *23*	29^-		B	
9124.8[@] *18*	30^-		B	
9153.5[a] *21*	(30^+)		B	
9606.3[&] *25*	31^-		B	
10067.0[@] *21*	32^-		B	
10502[&] *3*	(33^-)		B	
10969.4[@] *23*	(34^-)		B	
11420[&] *3*	(35^-)		B	
11917.8?[@]	(36^-)		B	
12392.?[&]	(37^-)		B	

[†] Where no specific arguments are listed, the J^{π} and band assignments are from interpretation of the in-beam γ data of 1987Mo21

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Adopted Levels, Gammas (continued)

^{162}Yb Levels (continued)

and 2018Md01. These assignments are based on general considerations of the properties of rotational-band structure as well as γ-transition multipolarities deduced from measured DCO ratios, $\gamma(\theta)$ data and polarization asymmetry measurements supplemented in some instances with α(K)exp data.

‡ Unless otherwise noted, the $T_{1/2}$ values for the excited states are derived from the Doppler-shift recoil-distance data of 1992Mc02, measured in the ^{116}Cd(^{50}Ti,4n) reaction. For a further discussion of the procedures used in deriving these values, see the (HI,xnγ) data set.

Band(A): $K^\pi=0^+$ ground-state band. From the energies of the 2^+ and 4^+ band members, one computes A=29.25, B=−0.244. These parameters do not give a reasonable fit to the energies of the band members; and it seems unrealistic to quote rotational-band parameters for this band.

@ Band(B): Negative-parity, even-spin band.

& Band(C): Negative-parity, odd-spin band.

a Band(D): Positive-parity, even-spin band.

b Band(E): Second $K^\pi=0^+$ band. 10^+ for 2595 level is firmly established from E2 211.8γ from 12^+, 2807 level of band D. The E2 in-band 304γ and 501γ, as well as inter-band 1160γ and 1149γ to g.s. band allow firm J^π assignments of all levels in this band.

c Band(F): Even γ band.

d Band(G): Odd γ band.

Adopted Levels, Gammas (continued)

$\gamma(^{162}Yb)$

Additional information 2.

In their lifetime measurements, 1992Mc02 report only partial lifetimes (and, in some cases, reduced transition probabilities) for individual transitions, but not level lifetimes. For those levels having more than one deexciting transition, it has been necessary for the evaluator to compute the level half-life values from these reported quantities.

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.[#]	δ	α[&]	Comments
166.72	2^+	166.71 *4*	100	0	0^+	E2		0.499 *7*	B(E2)(W.u.)=134.7 *30* α(N)=0.00952 *13*; α(O)=0.001129 *16*; α(P)=1.235×10^{-5} *17* α(K)=0.276 *4*; α(L)=0.1707 *24*; α(M)=0.0416 *6*
487.34	4^+	320.60[a] *4*	100	166.72	2^+	E2		0.0606 *8*	B(E2)(W.u.)=210 *9* α(K)=0.0440 *6*; α(L)=0.01280 *18*; α(M)=0.00303 *4* α(N)=0.000699 *10*; α(O)=8.85×10^{-5} *12*; α(P)=2.275×10^{-6} *32* Mult.: from $\gamma(\theta)$ (1980BeYG), R_{DCO} and A_P (2018Md01) in ^{150}Sm(^{16}O,4nγ). See the comment in the (HI,xnγ) data set.
798.42	2^+	631.67 *5*	100.0 *10*	166.72	2^+	E2		0.01008 *14*	α(K)=0.00814 *11*; α(L)=0.001511 *21*; α(M)=0.000345 *5* α(N)=8.04×10^{-5} *11*; α(O)=1.091×10^{-5} *15*; α(P)=4.53×10^{-7} *6* Mult.: mult=Q from $\gamma\gamma(\theta)$ in ^{162}Lu ε decay (1983Ge08). From the observed γ decay from this level, the evaluator has concluded that the deexciting γ's are much more reasonably assigned as E2 than M2.
		798.48 *6*	63.7 *8*	0	0^+	E2		0.00595 *8*	α(K)=0.00489 *7*; α(L)=0.000825 *12*; α(M)=0.0001869 *26* α(N)=4.36×10^{-5} *6*; α(O)=6.02×10^{-6} *8*; α(P)=2.74×10^{-7} *4*
924.14	6^+	436.80 *2*	100	487.34	4^+	E2[@]		0.0254 *4*	B(E2)(W.u.)=191 *+13−11* α(K)=0.01957 *27*; α(L)=0.00448 *6*; α(M)=0.001043 *15* α(N)=0.0002419 *34*; α(O)=3.17×10^{-5} *4*; α(P)=1.059×10^{-6} *15*
992.07	3^+	193.5 *4*	3.3 *9*	798.42	2^+				
		504.45 *21*	17.8 *16*	487.34	4^+				
		825.29 *6*	100.0 *16*	166.72	2^+	M1+E2	1.60 *+37−28*	0.0072 *5*	α(K)=0.0060 *4*; α(L)=0.00094 *6*; α(M)=0.000212 *12* α(N)=4.96×10^{-5} *29*; α(O)=7.0×10^{-6} *4*; α(P)=3.46×10^{-7} *27*
1006.20	0^+	839.40 *5*		166.72	2^+	E2		0.00534 *7*	α(K)=0.00440 *6*; α(L)=0.000731 *10*; α(M)=0.0001652 *23* α(N)=3.86×10^{-5} *5*; α(O)=5.34×10^{-6} *7*; α(P)=2.474×10^{-7} *35* Mult.: mult=Q, from $\gamma\gamma(\theta)$ in ^{162}Lu ε decay (1983Ge08). The evaluator has regarded mult=E2 to be a more reasonable choice than the alternative, mult=M2.
		1006		0	0^+	E0			E_γ,Mult.: observed 945 keV peak in electron spectra corresponding to K ce of 1006, E0, 0^+ to 0^+ γ transition (2013Bl07, ε decay).
1129.59	2^+	124[d]		1006.20	0^+				
		642.31 *6*	49.3 *25*	487.34	4^+				

$^{162}_{70}Yb_{92}$-5

Adopted Levels, Gammas (continued)

γ(^{162}Yb) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.[#]	α[&]	Comments
1129.59	2+	962.89 *6*	80 *8*	166.72	2+	(E0+M1+E2)	0.0059 *19*	α(K)=0.0050 *17*; α(L)=7.4×10^{-4} *21*; α(M)=1.7×10^{-4} *5* α(N)=3.9×10^{-5} *11*; α(O)=5.5×10^{-6} *17*; α(P)=2.9×10^{-7} *10* Mult.: (E2+M1) assigned from α(K)exp; however value is considerably larger than that predicted for E2+M1 transition, which could indicate an E0 contribution.
		1129.65 *19*	100 *6*	0	0+	E2	0.00290 *4*	α(K)=0.002424 *34*; α(L)=0.000371 *5*; α(M)=8.32×10^{-5} *12* α(N)=1.946×10^{-5} *27*; α(O)=2.74×10^{-6} *4*; α(P)=1.365×10^{-7} *19*; α(IPF)=7.31×10^{-7} *11*
1150.21	4+	351.8 *2*	17 *4*	798.42	2+	E2	0.0462 *7*	α(K)=0.0343 *5*; α(L)=0.00922 *13*; α(M)=0.002171 *31* α(N)=0.000502 *7*; α(O)=6.42×10^{-5} *9*; α(P)=1.801×10^{-6} *25*
		662.88 *8*	100 *9*	487.34	4+	E2,M1	0.014 *5*	α(K)=0.012 *5*; α(L)=0.0019 *6*; α(M)=4.2×10^{-4} *12* α(N)=9.9×10^{-5} *29*; α(O)=1.4×10^{-5} *4*; α(P)=7.0×10^{-7} *30*
		983.5 *4*	13 *7*	166.72	2+	E2	0.00384 *5*	α(K)=0.00319 *4*; α(L)=0.000505 *7*; α(M)=0.0001136 *16* α(N)=2.65×10^{-5} *4*; α(O)=3.71×10^{-6} *5*; α(P)=1.794×10^{-7} *25*
1198.01	2+,3,4+	399.59 *8*	66 *8*	798.42	2+			
		1031.28 *11*	100 *11*	166.72	2+			
1337.23	2+,3,4+	849.85 *5*	30 *3*	487.34	4+			
		1170.55 *5*	100 *4*	166.72	2+			
1343.08	4+	213[d]		1129.59	2+			
		855.6 *3*		487.34	4+			
		1176.61 *23*		166.72	2+			
1379.46	2+	387.39 *6*	65 *5*	992.07	3+			
		581.09 *20*	30 *7*	798.42	2+			
		892.13 *9*	50 *5*	487.34	4+			
		1212.6 *3*	33 *7*	166.72	2+			
		1379.42 *24*	100 *12*	0	0+			
1393.04	5+	400.7 *3*		992.07	3+	E2	0.0321 *5*	α(K)=0.02438 *34*; α(L)=0.00593 *8*; α(M)=0.001387 *20* α(N)=0.000321 *5*; α(O)=4.16×10^{-5} *6*; α(P)=1.305×10^{-6} *18*
		905.9 *3*		487.34	4+	M1(+E2)	0.0068 *23*	α(K)=0.0057 *20*; α(L)=8.6×10^{-4} *25*; α(M)=1.9×10^{-4} *6* α(N)=4.5×10^{-5} *13*; α(O)=6.4×10^{-6} *20*; α(P)=3.3×10^{-7} *12*
1398.22	1,2+	1231.50 *4*	100 *8*	166.72	2+			
		1398.19 *10*	77 *3*	0	0+			
1445.56	8+	521.42 *2*	100	924.14	6+	E2[@]	0.01604 *22*	B(E2)(W.u.)=2.5×10^{2} +9−5 α(K)=0.01268 *18*; α(L)=0.00260 *4*; α(M)=0.000600 *8* α(N)=0.0001394 *20*; α(O)=1.858×10^{-5} *26*; α(P)=6.98×10^{-7} *10*
1454.87		462.76 *8*	18.2 *11*	992.07	3+			
		656.43 *4*	100.0 *25*	798.42	2+			
		1288.17 *4*	66.8 *20*	166.72	2+			
1483.24	5−	995.74 *17*	100 *24*	487.34	4+	E1	1.51×10^{-3} *2*	α(K)=0.001284 *18*; α(L)=0.0001761 *25*; α(M)=3.89×10^{-5} *5* α(N)=9.10×10^{-6} *13*; α(O)=1.298×10^{-6} *18*; α(P)=6.92×10^{-8} *10*

$^{162}_{70}Yb_{92}$-6

Adopted Levels, Gammas (continued)

γ(^{162}Yb) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.[#]	α[&]	Comments
1500.69		1333.96 *15*	100 *12*	166.72	2^+			
1552.82	$2^+,3,4^+$	560.71 *21*	18 *6*	992.07	3^+			
		1065.49 *9*	63 *5*	487.34	4^+			
		1386.07 *11*	100 *9*	166.72	2^+			
1568.11		575.95 *18*	12.7 *24*	992.07	3^+			
		1401.38 *4*	100 *8*	166.72	2^+			
1573.32	6^+	423.12 *6*	100 *6*	1150.21	4^+	E2	0.0276 *4*	α(K)=0.02121 *30*; α(L)=0.00496 *7*; α(M)=0.001158 *16* α(N)=0.000268 *4*; α(O)=3.50×10^{-5} *5*; α(P)=1.143×10^{-6} *16*
		648.7	69 *12*	924.14	6^+	E2,M1	0.015 *6*	α(K)=0.013 *5*; α(L)=0.0020 *6*; α(M)=4.5×10^{-4} *13* α(N)=1.05×10^{-4} *30*; α(O)=1.5×10^{-5} *5*; α(P)=7.4×10^{-7} *31*
1609.00	4^-	617.1 *3*		992.07	3^+	D		
		1121.63 *12*	100 *12*	487.34	4^+	E1	1.22×10^{-3} *2*	α(K)=0.001034 *14*; α(L)=0.0001410 *20*; α(M)=3.11×10^{-5} *4* α(N)=7.29×10^{-6} *10*; α(O)=1.040×10^{-6} *15*; α(P)=5.58×10^{-8} *8*; α(IPF)=2.99×10^{-6} *4*
1636.59	$1,2^+$	1469.88 *5*	100 *4*	166.72	2^+			
		1636.39 *15*	75 *7*	0	0^+			
1637.90		1150.56 *4*	100 *10*	487.34	4^+			
1647.19	6^+	304.4[a] *3*		1343.08	4^+	E2	0.0708 *10*	α(K)=0.0507 *7*; α(L)=0.01545 *22*; α(M)=0.00367 *5* α(N)=0.000846 *12*; α(O)=0.0001064 *15*; α(P)=2.60×10^{-6} *4*
		1160.2 *4*	100	487.34	4^+	E2	0.00275 *4*	α(K)=0.002302 *32*; α(L)=0.000351 *5*; α(M)=7.85×10^{-5} *11* α(N)=1.837×10^{-5} *26*; α(O)=2.59×10^{-6} *4*; α(P)=1.296×10^{-7} *18*; α(IPF)=1.909×10^{-6} *34*
1673.06		680.87 *8*	25.5 *20*	992.07	3^+			
		874.76 *9*	100 *4*	798.42	2^+			
		1506.2 *3*	61 *7*	166.72	2^+			
1676.52	$2^+,3,4^+$	1189.18 *10*	52 *4*	487.34	4^+			
		1509.8 *3*	100 *17*	166.72	2^+			
1716.79		587.16 *12*	21 *5*	1129.59	2^+			
		918.44 *14*	100 *26*	798.42	2^+			
1741.31		1253.97 *23*	100 *18*	487.34	4^+			
1767.70	7^-	284.3 *3*		1483.24	5^-			
		843.0	100	924.14	6^+	E1	2.07×10^{-3} *3*	α(K)=0.001756 *25*; α(L)=0.0002429 *34*; α(M)=5.37×10^{-5} *8* α(N)=1.257×10^{-5} *18*; α(O)=1.786×10^{-6} *25*; α(P)=9.43×10^{-8} *13*
1853.65		1686.92 *20*	100 *19*	166.72	2^+			
1860.58	$1,2^+$	854.34 *13*	37 *7*	1006.20	0^+			
		868.48 *17*	100 *17*	992.07	3^+			
		1062.24 *18*	56 *17*	798.42	2^+			
1879.91	7^+	486.8 *3*		1393.04	5^+	E2	0.01910 *27*	α(K)=0.01497 *21*; α(L)=0.00320 *5*; α(M)=0.000740 *10* α(N)=0.0001718 *24*; α(O)=2.274×10^{-5} *32*; α(P)=8.19×10^{-7} *12*
		955.8 *3*		924.14	6^+			

$^{162}_{70}Yb_{92}$-7

Adopted Levels, Gammas (continued)

γ(^{162}Yb) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.[#]	α[&]	Comments
1913.37	6⁻	304.4[a] *3*		1609.00	4⁻	E2	0.0708 *10*	α(K)=0.0507 *7*; α(L)=0.01545 *22*; α(M)=0.00367 *5* α(N)=0.000846 *12*; α(O)=0.0001064 *15*; α(P)=2.60×10^{-6} *4*
		429.8 *3*		1483.24	5⁻	M1	0.0607 *9*	α(K)=0.0510 *7*; α(L)=0.00756 *11*; α(M)=0.001687 *24* α(N)=0.000396 *6*; α(O)=5.68×10^{-5} *8*; α(P)=3.06×10^{-6} *4*
		989.8 *3*		924.14	6⁺	(E1)	1.53×10^{-3} *2*	α(K)=0.001298 *18*; α(L)=0.0001781 *25*; α(M)=3.94×10^{-5} *6* α(N)=9.21×10^{-6} *13*; α(O)=1.312×10^{-6} *18*; α(P)=7.00×10^{-8} *10*
1938.94	2⁺,3,4⁺	1451.60 *18*	100 *9*	487.34	4⁺			
		1772.2 *3*	97 *16*	166.72	2⁺			
1985.29	8⁺	338.12 *7*	59 *2*	1647.19	6⁺	E2	0.0519 *7*	B(E2)(W.u.)=4.0×10^2 *+6−5* α(K)=0.0381 *5*; α(L)=0.01059 *15*; α(M)=0.002500 *35* α(N)=0.000577 *8*; α(O)=7.35×10^{-5} *10*; α(P)=1.989×10^{-6} *28* B(E2)(W.u.): computed by the evaluator from the partial lifetime of 8.4 ps *27* reported by 1992Mc02 for this transition.
		412.01 *19*	100 *3*	1573.32	6⁺	E2	0.0297 *4*	B(E2)(W.u.)=250 *+39−30* α(K)=0.02270 *32*; α(L)=0.00541 *8*; α(M)=0.001264 *18* α(N)=0.000293 *4*; α(O)=3.81×10^{-5} *5*; α(P)=1.219×10^{-6} *17* B(E2)(W.u.): computed by the evaluator from the partial lifetime of 5.7 ps *7* reported by 1992Mc02 for this transition.
		539.66 *6*	41 *3*	1445.56	8⁺	M1[@]	0.0336 *5*	B(M1)(W.u.)=0.0158 *+26−21* α(N)=0.0002182 *31*; α(O)=3.13×10^{-5} *4*; α(P)=1.691×10^{-6} *24* α(K)=0.0283 *4*; α(L)=0.00417 *6*; α(M)=0.000929 *13*
		1061.3 *3*	35 *2*	924.14	6⁺	E2	0.00329 *5*	B(E2)(W.u.)=0.77 *+12−10* α(K)=0.00274 *4*; α(L)=0.000426 *6*; α(M)=9.56×10^{-5} *13* α(N)=2.234×10^{-5} *31*; α(O)=3.13×10^{-6} *4*; α(P)=1.543×10^{-7} *22* Additional information 3.
2024.06	10⁺	578.50 *3*	100	1445.56	8⁺	E2[@]	0.01243 *17*	B(E2)(W.u.)=1.8×10^2 *+9−5* α(K)=0.00994 *14*; α(L)=0.001927 *27*; α(M)=0.000442 *6* α(N)=0.0001029 *14*; α(O)=1.385×10^{-5} *19*; α(P)=5.51×10^{-7} *8*
2050.39		1251.97 *21*	100 *15*	798.42	2⁺			
2059.49	2⁺,3,4⁺	1261.08 *9*	100 *23*	798.42	2⁺			
		1572.07 *21*	85 *15*	487.34	4⁺			
2092.36		1605.01 *15*	100 *13*	487.34	4⁺			
2094.09	8⁺	447.0 *3*		1647.19	6⁺			
		1170.1 *3*		924.14	6⁺			
2099.00	1,2⁺	969.58 *9*	12 *5*	1129.59	2⁺			
		1092.44 *14*	22 *3*	1006.20	0⁺			
		1932.18 *17*	100 *11*	166.72	2⁺			
2152.95	9⁻	385.25 *6*	20.3 *14*	1767.70	7⁻	E2	0.0357 *5*	B(E2)(W.u.)=394 *+48−40* α(K)=0.0270 *4*; α(L)=0.00676 *9*; α(M)=0.001584 *22*

$^{162}_{70}Yb_{92}$-8

Adopted Levels, Gammas (continued)

γ(^{162}Yb) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.[#]	α[&]	Comments
								α(N)=0.000367 *5*; α(O)=4.73×10^{-5} *7*; α(P)=1.437×10^{-6} *20* B(E2)(W.u.): computed by the evaluator from the partial lifetime of 4.6 ps *7* reported by 1992Mc02 for this transition.
2152.95	9$^-$	707.6 *4*	100 *3*	1445.56	8$^+$	E1[@]	0.00292 *4*	B(E1)(W.u.)=0.00098 *+10−8* α(K)=0.002476 *35*; α(L)=0.000346 *5*; α(M)=7.66×10^{-5} *11* α(N)=1.790×10^{-5} *25*; α(O)=2.54×10^{-6} *4*; α(P)=1.322×10^{-7} *19* B(E1)(W.u.): value reported for this transition by 1992Mc02.
2269.50		1277.34 *21*	39 *7*	992.07	3$^+$			
		1471.10 *12*	100 *12*	798.42	2$^+$			
2280.29	8$^-$	367.2 *3*		1913.37	6$^-$	E2	0.0409 *6*	α(K)=0.0306 *4*; α(L)=0.00795 *11*; α(M)=0.001869 *27* α(N)=0.000432 *6*; α(O)=5.55×10^{-5} *8*; α(P)=1.618×10^{-6} *23*
		512.10	66 *5*	1767.70	7$^-$	M1	0.0385 *5*	B(M1)(W.u.)=0.028 *+12−7* α(N)=0.0002501 *35*; α(O)=3.59×10^{-5} *5*; α(P)=1.937×10^{-6} *27* α(K)=0.0324 *5*; α(L)=0.00477 *7*; α(M)=0.001065 *15*
		835.2	100 *33*	1445.56	8$^+$	E1	2.10×10^{-3} *3*	B(E1)(W.u.)=1.01×10^{-4} *+29−25* α(K)=0.001788 *25*; α(L)=0.0002474 *35*; α(M)=5.47×10^{-5} *8* α(N)=1.280×10^{-5} *18*; α(O)=1.819×10^{-6} *25*; α(P)=9.60×10^{-8} *13* Additional information 4.
2399.0		1600.59 *25*	100 *19*	798.42	2$^+$			
2424.52	10$^+$	400.51 *8*	18.6 *14*	2024.06	10$^+$	M1[@]	0.0730 *10*	B(M1)(W.u.)=0.0401 *+42−66* α(K)=0.0613 *9*; α(L)=0.00911 *13*; α(M)=0.002035 *29* α(N)=0.000478 *7*; α(O)=6.85×10^{-5} *10*; α(P)=3.68×10^{-6} *5*
		439.23 *2*	100 *3*	1985.29	8$^+$	E2[@]	0.02500 *35*	B(E2)(W.u.)=415 *+35−62* α(K)=0.01930 *27*; α(L)=0.00440 *6*; α(M)=0.001025 *14* α(N)=0.0002376 *33*; α(O)=3.11×10^{-5} *4*; α(P)=1.045×10^{-6} *15* B(E2)(W.u.): computed by the evaluator from the partial lifetime of 2.2 ps *3* reported by 1992Mc02 for this transition.
		978.5 *3*		1445.56	8$^+$	E2	0.00388 *5*	α(K)=0.00322 *5*; α(L)=0.000511 *7*; α(M)=0.0001149 *16* α(N)=2.69×10^{-5} *4*; α(O)=3.75×10^{-6} *5*; α(P)=1.812×10^{-7} *25*
2428.94	9$^+$	549.0 *3*		1879.91	7$^+$	E2	0.01412 *20*	α(K)=0.01123 *16*; α(L)=0.002237 *32*; α(M)=0.000515 *7* α(N)=0.0001197 *17*; α(O)=1.603×10^{-5} *23*; α(P)=6.20×10^{-7} *9*
		983.4 *3*		1445.56	8$^+$			
2446.52	1,2$^+$	1317.17 *15*	100 *21*	1129.59	2$^+$			
		1440.00 *17*	32 *9*	1006.20	0$^+$			
2549.67		1558.00 *22*	88 *17*	992.07	3$^+$			
		1750.94 *19*	100 *24*	798.42	2$^+$			
2572.61	10$^-$	292.33 *5*	100 *3*	2280.29	8$^-$	E2	0.0800 *11*	B(E2)(W.u.)=208 *+20−17* α(K)=0.0566 *8*; α(L)=0.01794 *25*; α(M)=0.00426 *6*

$^{162}_{70}Yb_{92}$-9

Adopted Levels, Gammas (continued)

γ(^{162}Yb) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.[#]	α[&]	Comments
								α(N)=0.000983 *14*; α(O)=0.0001231 *17*; α(P)=2.88×10^{-6} *4* B(E2)(W.u.): computed by the evaluator from the partial lifetime of 32.6 ps *47* reported by 1992Mc02 for this transition.
2572.61	10$^-$	419.48 *25*	91 *4*	2152.95	9$^-$	M1	0.0647 *9*	B(M1)(W.u.)=0.0113 *10* α(K)=0.0543 *8*; α(L)=0.00806 *11*; α(M)=0.001799 *25* α(N)=0.000423 *6*; α(O)=6.06×10^{-5} *9*; α(P)=3.26×10^{-6} *5*
		548.4	48 *4*	2024.06	10$^+$	(E1)	0.00496 *7*	B(E1)(W.u.)=2.73×10^{-5} *+32−28* α(K)=0.00420 *6*; α(L)=0.000595 *8*; α(M)=0.0001320 *18* α(N)=3.08×10^{-5} *4*; α(O)=4.34×10^{-6} *6*; α(P)=2.218×10^{-7} *31* Additional information 5.
2594.85	10$^+$	501.0 *3*		2094.09	8$^+$	E2	0.01775 *25*	α(K)=0.01396 *20*; α(L)=0.00293 *4*; α(M)=0.000677 *10* α(N)=0.0001573 *22*; α(O)=2.088×10^{-5} *29*; α(P)=7.66×10^{-7} *11*
		1149.4 *3*		1445.56	8$^+$	E2	0.00280 *4*	α(K)=0.002344 *33*; α(L)=0.000358 *5*; α(M)=8.01×10^{-5} *11* α(N)=1.874×10^{-5} *26*; α(O)=2.64×10^{-6} *4*; α(P)=1.320×10^{-7} *18*; α(IPF)=1.393×10^{-6} *23*
2604.69	11$^-$	451.76[c] *10*	77[c]	2152.95	9$^-$	E2[@]	0.02320 *33*	B(E2)(W.u.)=4.0×10^2 *6* α(K)=0.01799 *25*; α(L)=0.00403 *6*; α(M)=0.000936 *13* α(N)=0.0002171 *30*; α(O)=2.85×10^{-5} *4*; α(P)=9.77×10^{-7} *14* B(E2)(W.u.): computed by the evaluator from the partial lifetime of 2.2 ps *3* reported by 1992Mc02 for this transition.
		580.62 *5*	100 *5*	2024.06	10$^+$	E1[@]	0.00439 *6*	B(E1)(W.u.)=0.00105 *+14−12* α(K)=0.00372 *5*; α(L)=0.000525 *7*; α(M)=0.0001165 *16* α(N)=2.72×10^{-5} *4*; α(O)=3.84×10^{-6} *5*; α(P)=1.970×10^{-7} *28* Additional information 6.
2630.48	10$^+$	1185.3 *3*		1445.56	8$^+$			
2634.29	12$^+$	610.23 *4*	100	2024.06	10$^+$	E2	0.01094 *15*	B(E2)(W.u.)=1.3×10^2 *+11−5* α(K)=0.00880 *12*; α(L)=0.001660 *23*; α(M)=0.000380 *5* α(N)=8.85×10^{-5} *12*; α(O)=1.197×10^{-5} *17*; α(P)=4.89×10^{-7} *7*
2789.82		1116.61 *18*	55 *5*	1673.06				
		1991.60 *21*	100 *18*	798.42	2$^+$			
2806.29	12$^+$	176.2 *3*		2630.48	10$^+$	E2	0.412 *6*	α(K)=0.2361 *35*; α(L)=0.1349 *21*; α(M)=0.0328 *5* α(N)=0.00751 *12*; α(O)=0.000895 *14*; α(P)=1.071×10^{-5} *16*
		211.8 *3*		2594.85	10$^+$	E2	0.2221 *33*	α(K)=0.1402 *20*; α(L)=0.0628 *10*; α(M)=0.01516 *23* α(N)=0.00348 *5*; α(O)=0.000422 *6*; α(P)=6.64×10^{-6} *10*
		381.76 *3*	100 *2*	2424.52	10$^+$	E2	0.0367 *5*	B(E2)(W.u.)=221 *+35−27* α(N)=0.000378 *5*; α(O)=4.88×10^{-5} *7*; α(P)=1.470×10^{-6} *21* α(K)=0.0276 *4*; α(L)=0.00697 *10*; α(M)=0.001634 *23* B(E2)(W.u.): computed by the evaluator from the partial lifetime of 8.4 ps *12* reported by 1992Mc02 for this transition.
		782.2	33 *3*	2024.06	10$^+$	E2	0.00622 *9*	B(E2)(W.u.)=2.02 *+35−29*

$^{162}_{70}Yb_{92}$-10

Adopted Levels, Gammas (continued)

γ(^{162}Yb) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.[#]	α[&]	Comments
								α(K)=0.00510 *7*; α(L)=0.000868 *12*; α(M)=0.0001968 *28* α(N)=4.59×10^{-5} *6*; α(O)=6.33×10^{-6} *9*; α(P)=2.86×10^{-7} *4* Additional information 7.
2815.10		1360.17 *24*	100 *22*	1454.87				
		1823.1 *3*	89 *25*	992.07	3$^+$			
2825.80		1370.99 *13*	57 *9*	1454.87				
		1833.65 *14*	100 *13*	992.07	3$^+$			
2929.34	12$^+$	505.0 *3*		2424.52	10$^+$	E2	0.01739 *24*	α(K)=0.01369 *19*; α(L)=0.00286 *4*; α(M)=0.000661 *9* α(N)=0.0001536 *22*; α(O)=2.040×10^{-5} *29*; α(P)=7.52×10^{-7} *11*
		905.1 *3*		2024.06	10$^+$			
2938.47	12$^-$	365.86 *4*	100	2572.61	10$^-$	E2	0.0413 *6*	B(E2)(W.u.)=1.9×10^2 *+6−4* α(K)=0.0309 *4*; α(L)=0.00805 *11*; α(M)=0.001893 *27* α(N)=0.000438 *6*; α(O)=5.62×10^{-5} *8*; α(P)=1.633×10^{-6} *23* B(E2)(W.u.): computed by the evaluator from the partial lifetime of 12.0 ps *28* reported by 1992Mc02 for this transition.
2994.9	11$^+$	566.0 *3*		2428.94	9$^+$	E2	0.01310 *18*	α(K)=0.01046 *15*; α(L)=0.002050 *29*; α(M)=0.000471 *7* α(N)=0.0001096 *15*; α(O)=1.472×10^{-5} *21*; α(P)=5.79×10^{-7} *8*
2996.55		2198.12 *23*	100 *21*	798.42	2$^+$			
3077.18	13$^-$	472.49 *3*	100	2604.69	11$^-$	E2[@]	0.02063 *29*	α(K)=0.01610 *23*; α(L)=0.00350 *5*; α(M)=0.000812 *11* α(N)=0.0001885 *26*; α(O)=2.487×10^{-5} *35*; α(P)=8.78×10^{-7} *12*
3127.01	14$^+$	320.72[a] *3*	100	2806.29	12$^+$	E2	0.0606 *8*	B(E2)(W.u.)=1.1×10^2 *+6−3* α(K)=0.0439 *6*; α(L)=0.01279 *18*; α(M)=0.00303 *4* α(N)=0.000698 *10*; α(O)=8.84×10^{-5} *12*; α(P)=2.273×10^{-6} *32*
3128.89	(12$^+$)	534.04 *3*		2594.85	10$^+$			
3257.35	14$^+$	623.06 *7*	100	2634.29	12$^+$	E2	0.01041	α(K)=0.00839 *12*; α(L)=0.001568 *22*; α(M)=0.000359 *5* α(N)=8.35×10^{-5} *12*; α(O)=1.132×10^{-5} *16*; α(P)=4.67×10^{-7} *7*
3416.97	14$^-$	478.49 *4*	100	2938.47	12$^-$	E2	0.01997 *28*	B(E2)(W.u.)=2.3×10^2 *+11−5* α(N)=0.0001812 *25*; α(O)=2.394×10^{-5} *34*; α(P)=8.53×10^{-7} *12* α(K)=0.01561 *22*; α(L)=0.00337 *5*; α(M)=0.000781 *11*
3461.3	14$^+$	532.0 *3*		2929.34	12$^+$	E2	0.01526 *21*	α(K)=0.01209 *17*; α(L)=0.002452 *35*; α(M)=0.000565 *8* α(N)=0.0001313 *19*; α(O)=1.754×10^{-5} *25*; α(P)=6.67×10^{-7} *9*
3561.8	(13$^+$)	566.9 *3*		2994.9	11$^+$			
3578.77	16$^+$	451.76[b] *10*	100[b]	3127.01	14$^+$	E2[@]	0.02320 *33*	B(E2)(W.u.)=171 *10* α(K)=0.01799 *25*; α(L)=0.00403 *6*; α(M)=0.000936 *13* α(N)=0.0002171 *30*; α(O)=2.85×10^{-5} *4*; α(P)=9.77×10^{-7} *14*
3597.04	15$^-$	519.86 *9*	100	3077.18	13$^-$	E2	0.01616 *23*	α(K)=0.01278 *18*; α(L)=0.00262 *4*; α(M)=0.000606 *8* α(N)=0.0001407 *20*; α(O)=1.874×10^{-5} *26*; α(P)=7.03×10^{-7} *10*
3878.64	16$^+$	621.28 *10*	100	3257.35	14$^+$	E2	0.01048 *15*	α(K)=0.00845 *12*; α(L)=0.001580 *22*; α(M)=0.000362 *5* α(N)=8.42×10^{-5} *12*; α(O)=1.140×10^{-5} *16*; α(P)=4.70×10^{-7} *7*
3972.40	16$^-$	555.43 *6*	100	3416.97	14$^-$	E2[@]	0.01372 *19*	B(E2)(W.u.)=2.5×10^2 *+15−7*

$^{162}_{70}Yb_{92}$-11

Adopted Levels, Gammas (continued)

γ(^{162}Yb) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.[#]	α[&]	Comments
								α(K)=0.01093 *15*; α(L)=0.002163 *30*; α(M)=0.000498 *7* α(N)=0.0001157 *16*; α(O)=1.551×10^{-5} *22*; α(P)=6.04×10^{-7} *8*
4137.7	(15$^+$)	575.9 *3*		3561.8	(13$^+$)			
4149.15	18$^+$	570.38 *4*	100	3578.77	16$^+$	E2[@]	0.01286 *18*	B(E2)(W.u.)=93 *+18−13* α(K)=0.01027 *14*; α(L)=0.002005 *28*; α(M)=0.000461 *6* α(N)=0.0001072 *15*; α(O)=1.440×10^{-5} *20*; α(P)=5.69×10^{-7} *8*
4185.44	17$^-$	588.40 *9*	100	3597.04	15$^-$	E2[@]	0.01193 *17*	α(K)=0.00956 *13*; α(L)=0.001837 *26*; α(M)=0.000421 *6* α(N)=9.81×10^{-5} *14*; α(O)=1.322×10^{-5} *19*; α(P)=5.30×10^{-7} *7*
4495.29	18$^+$	616.65 *8*	100	3878.64	16$^+$	E2	0.01067 *15*	α(K)=0.00859 *12*; α(L)=0.001613 *23*; α(M)=0.000369 *5* α(N)=8.60×10^{-5} *12*; α(O)=1.163×10^{-5} *16*; α(P)=4.78×10^{-7} *7*
4562.30	18$^-$	589.90 *8*	100	3972.40	16$^-$	E2[@]	0.01186 *17*	α(K)=0.00950 *13*; α(L)=0.001824 *26*; α(M)=0.000418 *6* α(N)=9.74×10^{-5} *14*; α(O)=1.312×10^{-5} *18*; α(P)=5.27×10^{-7} *7*
4821.33	19$^-$	635.89 *8*	100	4185.44	17$^-$	E2[@]	0.00993 *14*	B(E2)(W.u.)=2.7×10^2 *+21−9* α(K)=0.00801 *11*; α(L)=0.001484 *21*; α(M)=0.000339 *5* α(N)=7.90×10^{-5} *11*; α(O)=1.072×10^{-5} *15*; α(P)=4.47×10^{-7} *6*
4822.28	20$^+$	673.13 *8*	100	4149.15	18$^+$	E2[@]	0.00870 *12*	α(N)=6.77×10^{-5} *9*; α(O)=9.23×10^{-6} *13*; α(P)=3.94×10^{-7} *6* α(K)=0.00706 *10*; α(L)=0.001274 *18*; α(M)=0.000291 *4*
5146.4	20$^+$	651.1	100	4495.29	18$^+$	E2	0.00940 *13*	α(K)=0.00760 *11*; α(L)=0.001392 *19*; α(M)=0.000318 *4* α(N)=7.41×10^{-5} *10*; α(O)=1.007×10^{-5} *14*; α(P)=4.24×10^{-7} *6*
5169.7	20$^-$	607.40 *9*	100	4562.30	18$^-$	E2	0.01106 *15*	α(K)=0.00889 *12*; α(L)=0.001682 *24*; α(M)=0.000385 *5* α(N)=8.97×10^{-5} *13*; α(O)=1.212×10^{-5} *17*; α(P)=4.94×10^{-7} *7*
5482.2	21$^-$	660.9	100	4821.33	19$^-$	E2	0.00908 *13*	α(K)=0.00735 *10*; α(L)=0.001338 *19*; α(M)=0.000305 *4* α(N)=7.11×10^{-5} *10*; α(O)=9.68×10^{-6} *14*; α(P)=4.10×10^{-7} *6*
5584.76	22$^+$	762.48 *18*	100	4822.28	20$^+$	E2	0.00658 *9*	α(K)=0.00539 *8*; α(L)=0.000925 *13*; α(M)=0.0002099 *29* α(N)=4.90×10^{-5} *7*; α(O)=6.74×10^{-6} *9*; α(P)=3.02×10^{-7} *4*
5816.6	22$^-$	646.85 *11*	100	5169.7	20$^-$	E2	0.00954 *13*	α(N)=7.54×10^{-5} *11*; α(O)=1.024×10^{-5} *14*; α(P)=4.30×10^{-7} *6* α(K)=0.00771 *11*; α(L)=0.001417 *20*; α(M)=0.000324 *5*
5862.0	22$^+$	715.6	100	5146.4	20$^+$	E2	0.00758 *11*	α(K)=0.00618 *9*; α(L)=0.001087 *15*; α(M)=0.0002472 *35* α(N)=5.76×10^{-5} *8*; α(O)=7.89×10^{-6} *11*; α(P)=3.46×10^{-7} *5*
6174.4	23$^-$	692.2	100	5482.2	21$^-$	E2	0.00817 *11*	α(K)=0.00664 *9*; α(L)=0.001184 *17*; α(M)=0.000270 *4* α(N)=6.29×10^{-5} *9*; α(O)=8.59×10^{-6} *12*; α(P)=3.71×10^{-7} *5*
6423.1	24$^+$	838.3	100	5584.76	22$^+$	E2	0.00536 *8*	α(K)=0.00441 *6*; α(L)=0.000733 *10*; α(M)=0.0001658 *23* α(N)=3.87×10^{-5} *5*; α(O)=5.36×10^{-6} *8*; α(P)=2.481×10^{-7} *35*
6529.1	24$^-$	712.50 *15*	100	5816.6	22$^-$	E2[@]	0.00765 *11*	α(K)=0.00623 *9*; α(L)=0.001099 *15*; α(M)=0.0002500 *35* α(N)=5.83×10^{-5} *8*; α(O)=7.98×10^{-6} *11*; α(P)=3.49×10^{-7} *5*
6651.9	24$^+$	789.9	100	5862.0	22$^+$	E2	0.00609 *9*	α(K)=0.00500 *7*; α(L)=0.000847 *12*; α(M)=0.0001920 *27* α(N)=4.48×10^{-5} *6*; α(O)=6.18×10^{-6} *9*; α(P)=2.81×10^{-7} *4*
6925.8	25$^-$	751.4	100	6174.4	23$^-$	E2	0.00680 *10*	α(K)=0.00556 *8*; α(L)=0.000960 *13*; α(M)=0.0002179 *31* α(N)=5.08×10^{-5} *7*; α(O)=6.99×10^{-6} *10*; α(P)=3.12×10^{-7} *4*

$^{162}_{70}Yb_{92}$-12

Adopted Levels, Gammas (continued)

γ(^{162}Yb) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.[#]	α[&]	Comments
7313.8	26^+	890.7	100	6423.1	24^+	E2	0.00471 *7*	α(K)=0.00390 *5*; α(L)=0.000635 *9*; α(M)=0.0001432 *20* α(N)=3.34×10^{-5} *5*; α(O)=4.65×10^{-6} *7*; α(P)=2.191×10^{-7} *31*
7319.1	26^-	790.0	100	6529.1	24^-	E2	0.00609 *9*	α(K)=0.00500 *7*; α(L)=0.000847 *12*; α(M)=0.0001920 *27* α(N)=4.48×10^{-5} *6*; α(O)=6.18×10^{-6} *9*; α(P)=2.81×10^{-7} *4*
7488.0	26^+	835.9[ad]	100	6651.9	24^+	E2	0.00539 *8*	α(K)=0.00444 *6*; α(L)=0.000738 *10*; α(M)=0.0001669 *23* α(N)=3.90×10^{-5} *5*; α(O)=5.39×10^{-6} *8*; α(P)=2.495×10^{-7} *35*
7755.2	27^-	829.4	100	6925.8	25^-	E2	0.00548 *8*	α(K)=0.00451 *6*; α(L)=0.000752 *11*; α(M)=0.0001701 *24* α(N)=3.97×10^{-5} *6*; α(O)=5.50×10^{-6} *8*; α(P)=2.54×10^{-7} *4*
8187.7	28^-	868.6	100	7319.1	26^-	E2	0.00497 *7*	α(K)=0.00410 *6*; α(L)=0.000673 *9*; α(M)=0.0001521 *21* α(N)=3.55×10^{-5} *5*; α(O)=4.93×10^{-6} *7*; α(P)=2.306×10^{-7} *32*
8234.7	28^+	920.9	100	7313.8	26^+	E2	0.00439 *6*	α(K)=0.00364 *5*; α(L)=0.000587 *8*; α(M)=0.0001323 *19* α(N)=3.09×10^{-5} *4*; α(O)=4.30×10^{-6} *6*; α(P)=2.047×10^{-7} *29*
8323.9?	(28^+)	835.9[ad]	100	7488.0	26^+	E2	0.00539 *8*	α(K)=0.00444 *6*; α(L)=0.000738 *10*; α(M)=0.0001669 *23* α(N)=3.90×10^{-5} *5*; α(O)=5.39×10^{-6} *8*; α(P)=2.495×10^{-7} *35*
8660.8	29^-	905.6	100	7755.2	27^-	E2	0.00455 *6*	α(K)=0.00377 *5*; α(L)=0.000610 *9*; α(M)=0.0001377 *19* α(N)=3.22×10^{-5} *5*; α(O)=4.47×10^{-6} *6*; α(P)=2.118×10^{-7} *30*
9124.8	30^-	937.1	100	8187.7	28^-	E2	0.00424 *6*	α(N)=2.97×10^{-5} *4*; α(O)=4.14×10^{-6} *6*; α(P)=1.977×10^{-7} *28* α(K)=0.00351 *5*; α(L)=0.000564 *8*; α(M)=0.0001270 *18*
9153.5	(30^+)	918.8	100	8234.7	28^+	(E2)	0.00442 *6*	α(K)=0.00366 *5*; α(L)=0.000590 *8*; α(M)=0.0001330 *19* α(N)=3.11×10^{-5} *4*; α(O)=4.33×10^{-6} *6*; α(P)=2.057×10^{-7} *29*
9606.3	31^-	945.5	100	8660.8	29^-	E2	0.00416 *6*	α(K)=0.00345 *5*; α(L)=0.000552 *8*; α(M)=0.0001244 *17* α(N)=2.91×10^{-5} *4*; α(O)=4.05×10^{-6} *6*; α(P)=1.941×10^{-7} *27*
10067.0	32^-	942.2	100	9124.8	30^-	E2	0.00419 *6*	α(N)=2.93×10^{-5} *4*; α(O)=4.09×10^{-6} *6*; α(P)=1.955×10^{-7} *27* α(K)=0.00347 *5*; α(L)=0.000557 *8*; α(M)=0.0001254 *18*
10502	(33^-)	896.1	100	9606.3	31^-	(E2)	0.00465 *7*	α(K)=0.00385 *5*; α(L)=0.000626 *9*; α(M)=0.0001412 *20* α(N)=3.30×10^{-5} *5*; α(O)=4.58×10^{-6} *6*; α(P)=2.164×10^{-7} *30*
10969.4	(34^-)	902.4	100	10067.0	32^-	E2	0.00458 *6*	α(K)=0.00379 *5*; α(L)=0.000615 *9*; α(M)=0.0001388 *19* α(N)=3.24×10^{-5} *5*; α(O)=4.51×10^{-6} *6*; α(P)=2.133×10^{-7} *30*
11420	(35^-)	917.2	100	10502	(33^-)	(E2)	0.00443 *6*	α(K)=0.00367 *5*; α(L)=0.000593 *8*; α(M)=0.0001336 *19* α(N)=3.12×10^{-5} *4*; α(O)=4.34×10^{-6} *6*; α(P)=2.064×10^{-7} *29*
11917.8?	(36^-)	948.4[d]	100	10969.4	(34^-)	(E2)	0.00413 *6*	α(K)=0.00343 *5*; α(L)=0.000548 *8*; α(M)=0.0001235 *17* α(N)=2.89×10^{-5} *4*; α(O)=4.03×10^{-6} *6*; α(P)=1.929×10^{-7} *27*
12392.?	(37^-)	972.3[d]	100	11420	(35^-)	(E2)	0.00393 *5*	α(K)=0.00326 *5*; α(L)=0.000518 *7*; α(M)=0.0001166 *16* α(N)=2.72×10^{-5} *4*; α(O)=3.81×10^{-6} *5*; α(P)=1.835×10^{-7} *26*

[†] The values with listed uncertainties are those reported by 2004Mc01, from ^{162}Lu ε decay, and by 1980BeYG, from in-beam spectroscopy. Those values for which no uncertainties are given are from in-beam spectroscopy of the ^{122}Sn(^{44}Ca,4nγ) reaction (1987Mo21), unless noted otherwise.

$^{162}_{70}Yb_{92}$-13

Adopted Levels, Gammas (continued)

$\gamma(^{162}Yb)$ (continued)

‡ From the $^{122}Sn(^{44}Ca,4n\gamma)$ reaction, with E(^{44}Ca)=195 MeV (1987Mo21).
# From DCO ratios, $\gamma(\theta)$ data and polarization asymmetry measurements from the heavy-ion studies, unless noted otherwise.
@ From internal conversion coefficients measured in the in-beam study of the $^{150}Sm(^{16}O,4n\gamma)$ reaction (1980BeYG). Usually these data are supplemented by DCO ratios, $\gamma(\theta)$ data and polarization asymmetry measurements from the heavy-ion studies, but we mention only the conversion data, since they alone can provide a distinction between E1/M1 and E2/M2 for dipole and quadrupole transitions, respectively.
& Additional information 8.
[a] Multiply placed.
[b] Multiply placed with undivided intensity.
[c] Multiply placed with intensity suitably divided.
[d] Placement of transition in the level scheme is uncertain.

$^{162}_{70}Yb_{92}$-14

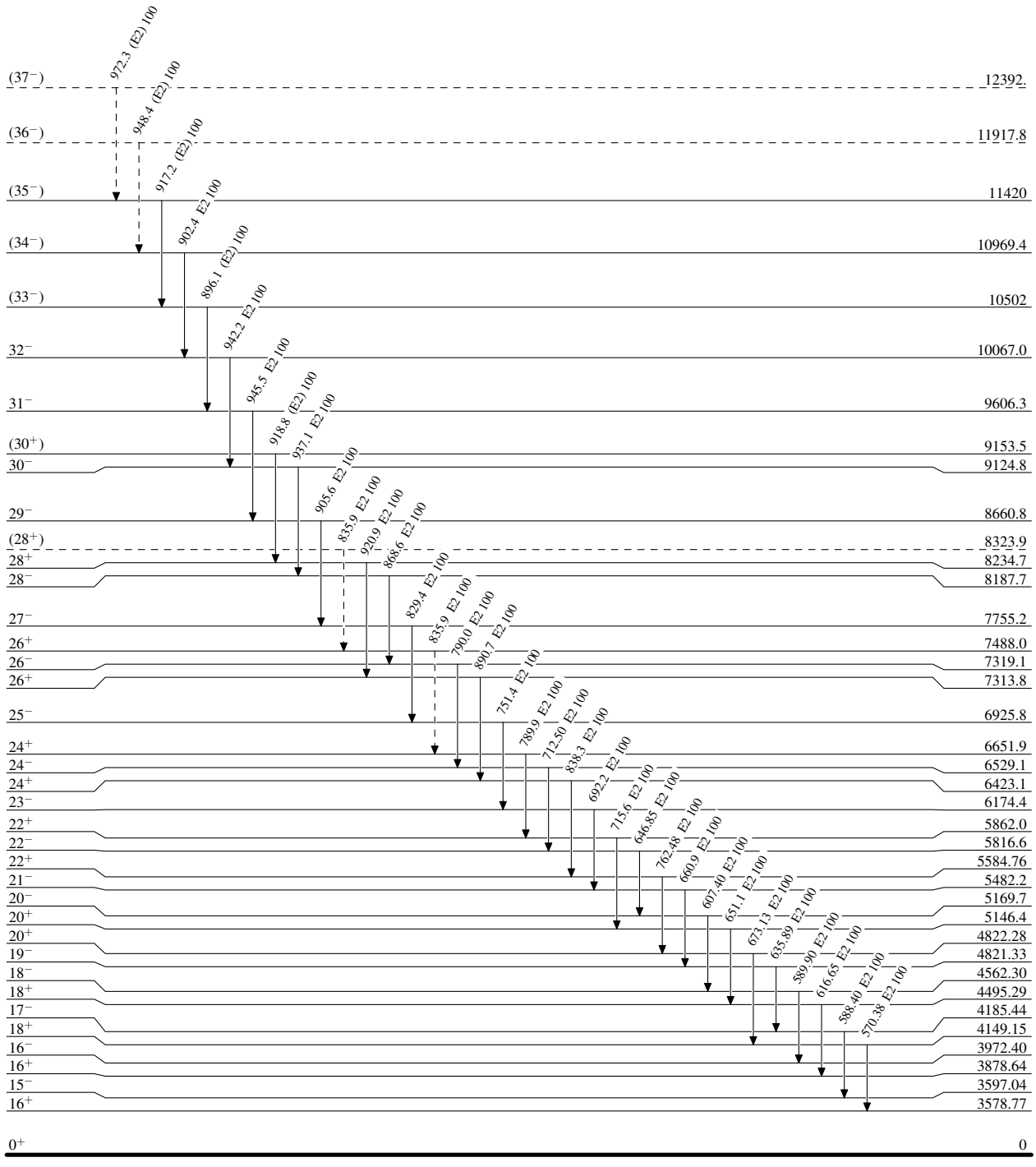
Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level

γ Decay (Uncertain)

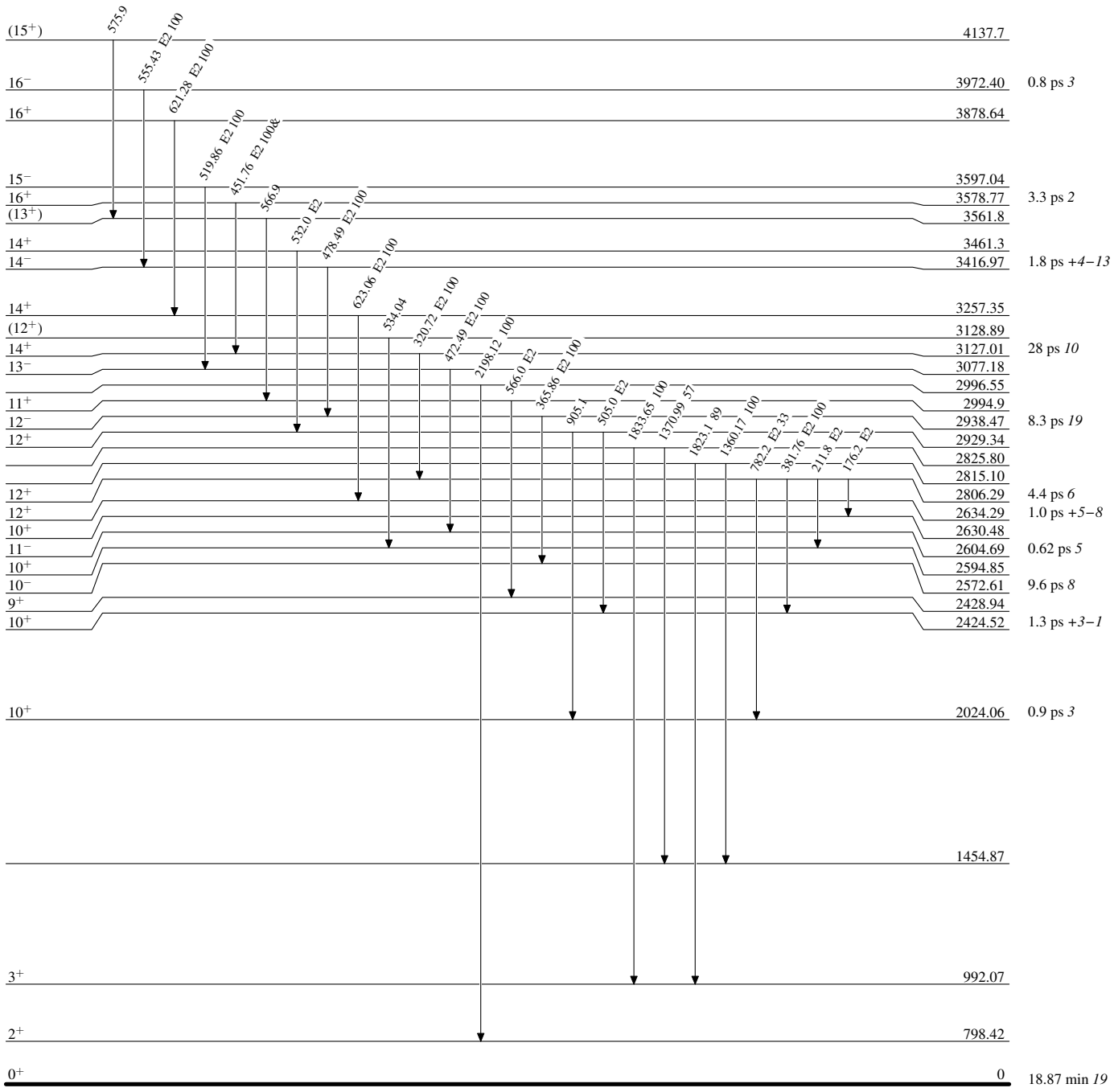


$^{162}_{70}Yb_{92}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

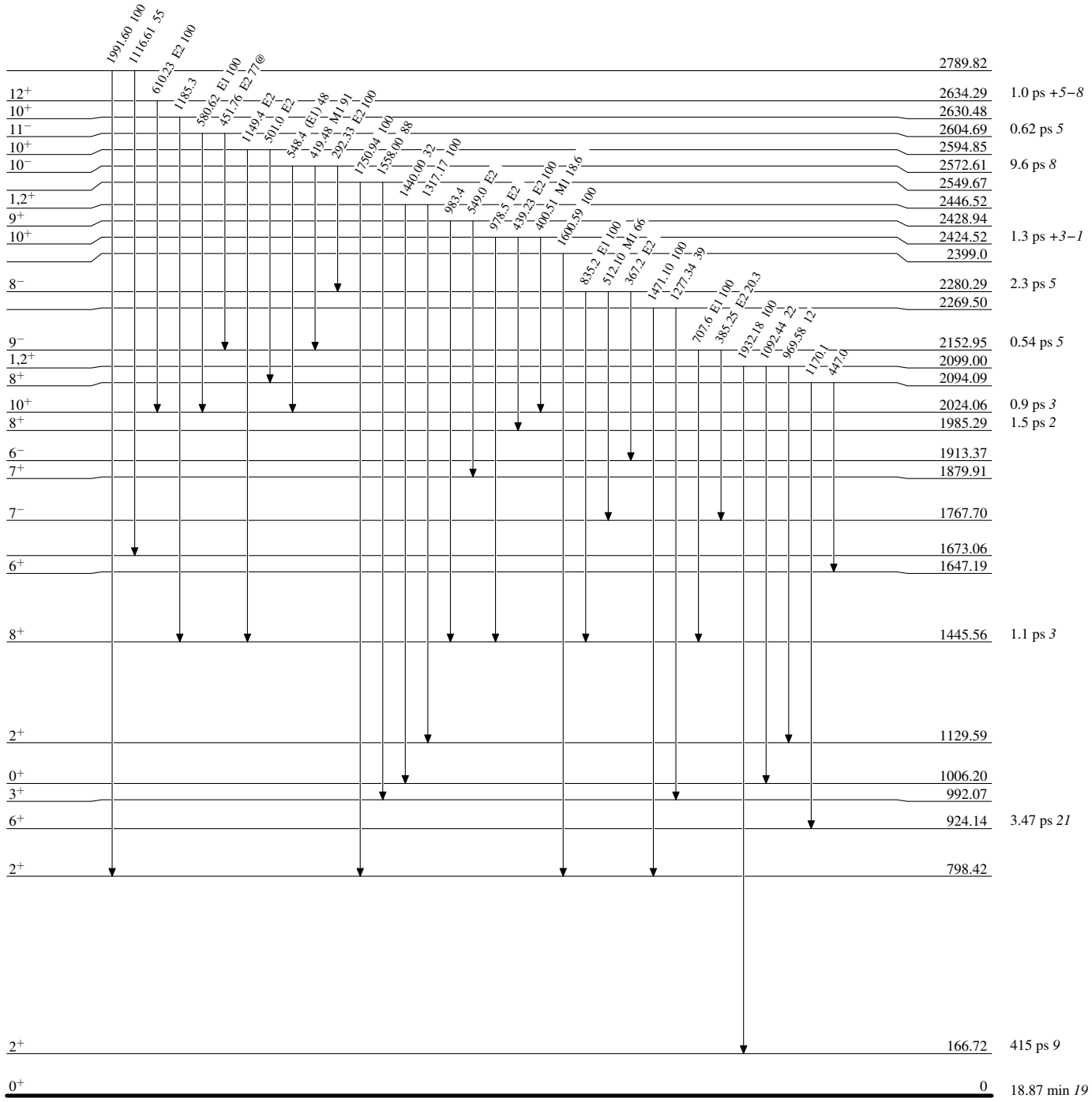


$^{162}_{70}Yb_{92}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

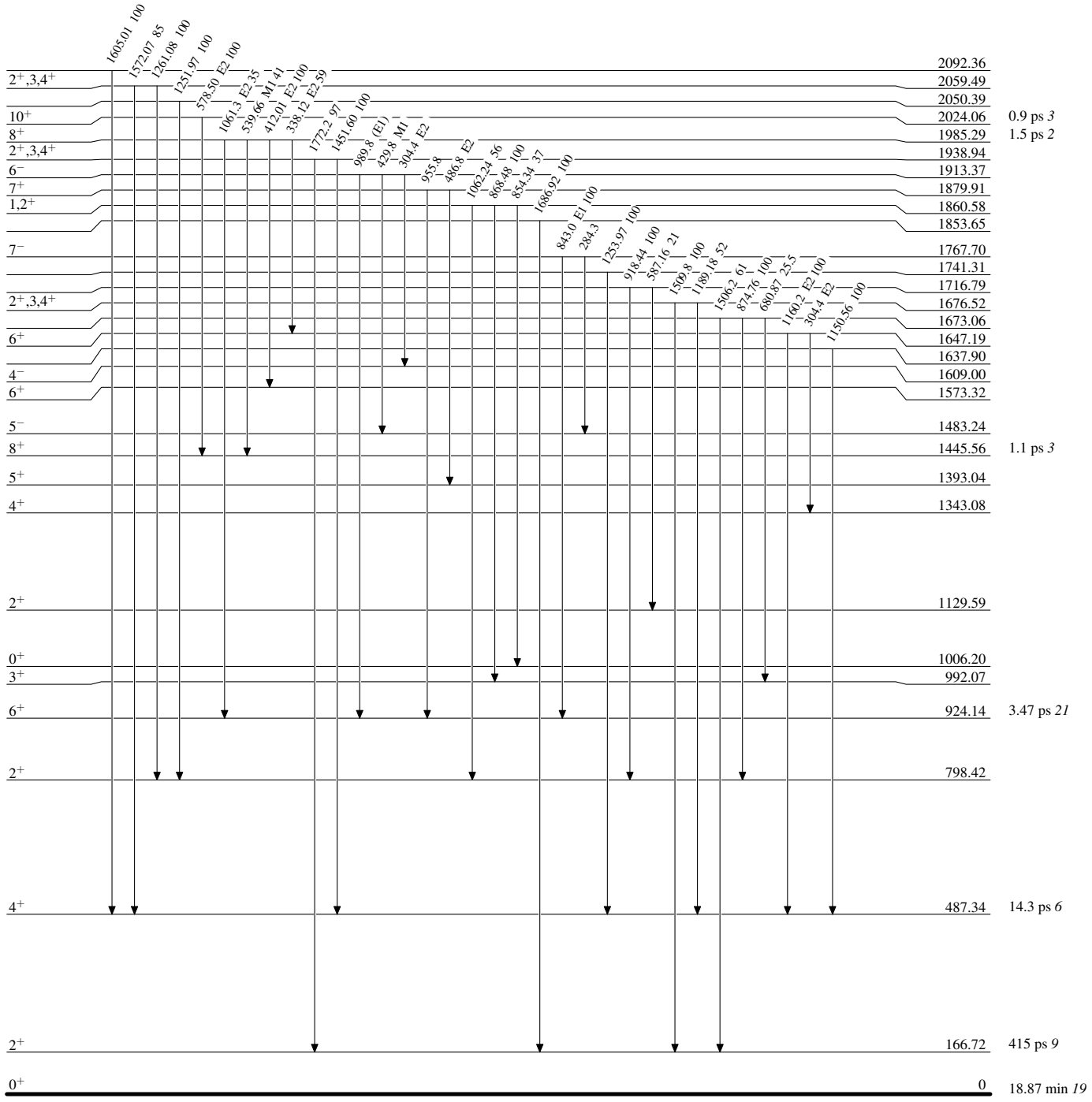


$^{162}_{70}Yb_{92}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided



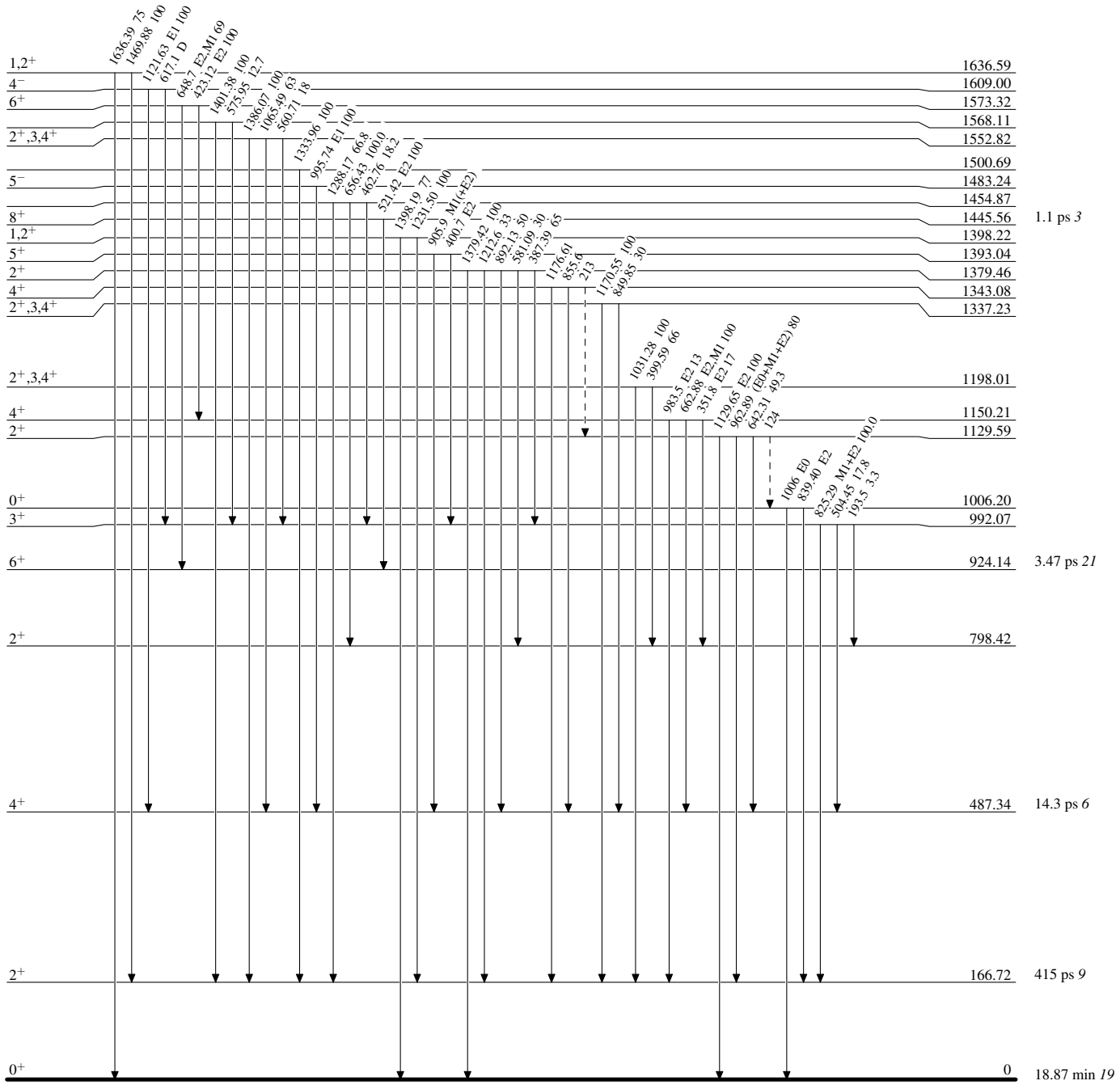
$^{162}_{70}Yb_{92}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

Legend
- - - - - - ► γ Decay (Uncertain)

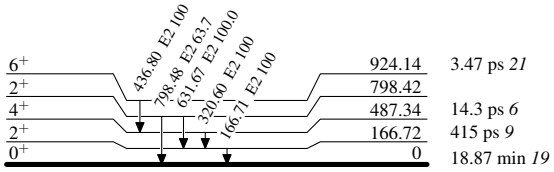


$^{162}_{70}Yb_{92}$

Adopted Levels, Gammas

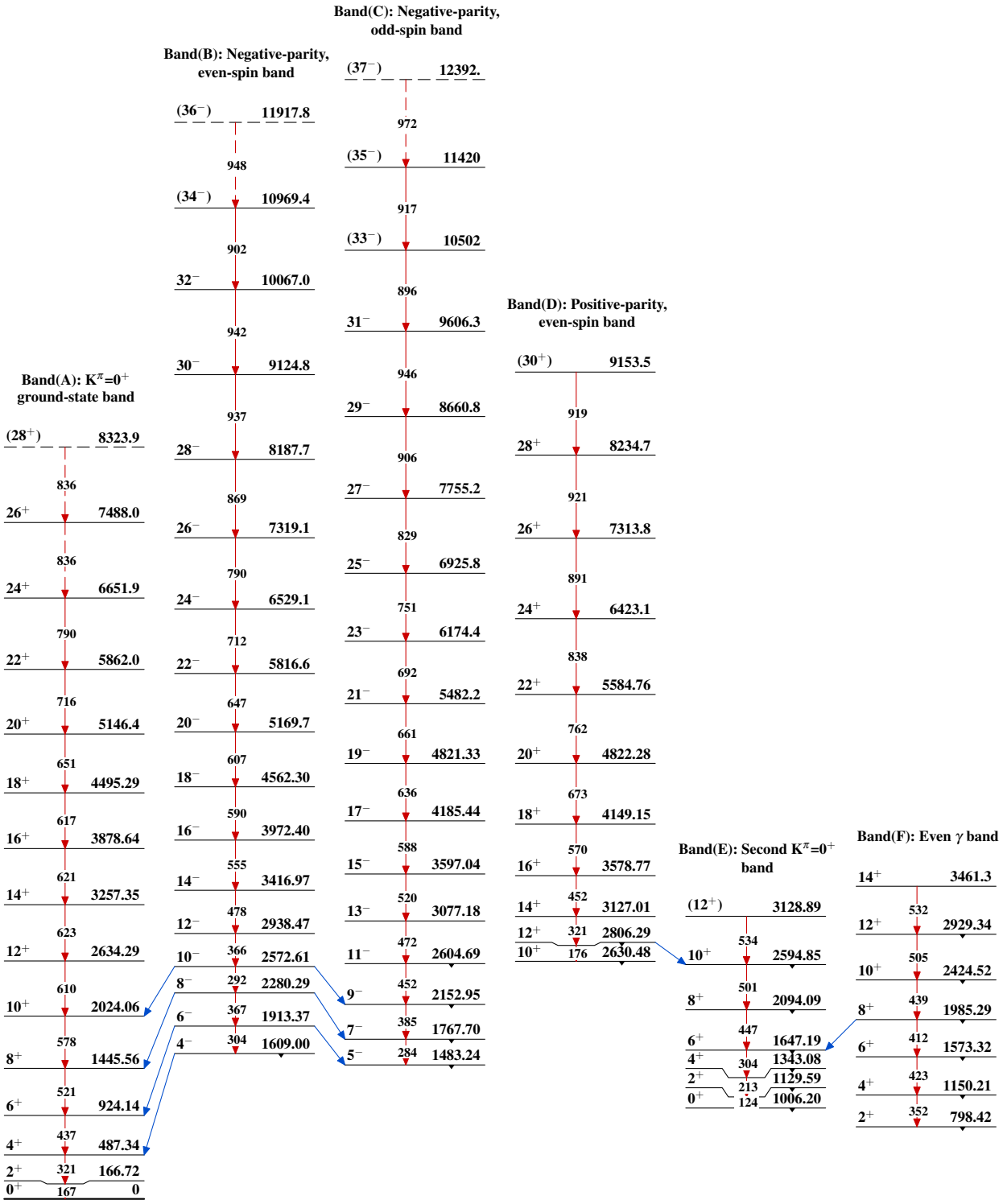
Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided



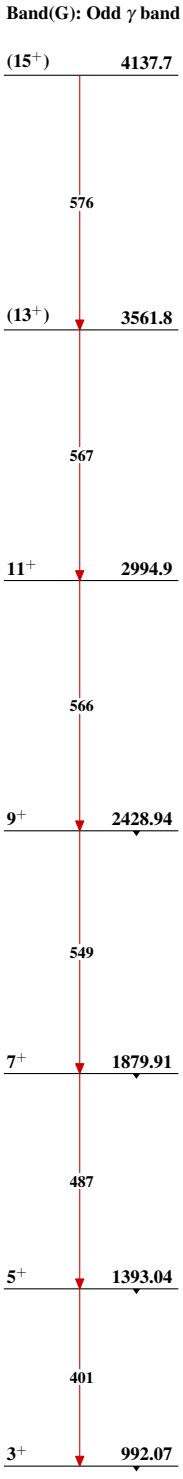
$^{162}_{70}Yb_{92}$

Adopted Levels, Gammas



$^{162}_{70}Yb_{92}$

Adopted Levels, Gammas (continued)



$^{162}_{70}Yb_{92}$