Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, Huo Junde	NDS 87,15 (1999)	1-Nov-1998

Q(β^-)=−1373.4 *16*; S(n)=7464.63 *6*; S(p)=7980 *5*; Q(α)=738.6 *16* 2012Wa38
Note: Current evaluation has used the following Q record −1374.3 167464.60 *107980* 5 *740.*1 16 1995Au04.

^{174}Yb Levels

Values of the rotational parameters shown for each band were obtained from least-squares fits to the adopted experimental energies. See 1981Gr01 for additional rotational parameters.

Cross Reference (XREF) Flags

A	^{173}Yb(n,γ) E=thermal	G	^{174}Lu ε decay (3.31 y)	M	^{174}Yb(pol p,p), (pol p,p′)
B	^{173}Yb(n,γ) E=2 keV	H	^{174}Lu ε decay (142 d)	N	^{173}Yb(d,p),(d,pγ)
C	^{173}Yb(n,γ) E=4.53 eV	I	Coulomb excitation	O	^{174}Yb(e,e), (e,e′)
D	^{173}Yb(n,γ) E=4.51-307.1 eV	J	^{174}Yb(d,d′)	P	^{174}Yb(γ,γ′)
E	^{174}Yb(n,n′γ)	K	^{176}Yb(p,t) E=19 MeV	Q	^{172}Yb(t,p) E=15 MeV
F	^{174}Tm β^- decay	L	^{174}Yb(p,p), (p,p′)	R	^{175}Lu(t,α)

E(level)[†]	J$^\pi$[‡]	$T_{1/2}$	XREF	Comments
0.0[#]	0$^+$	stable	ABCDEFGHIJKLMNO QR	Isotope shifts: 1994Ma57, 1991Ma48, 1991Ki14, 1991Ji06, 1990Bi08, 1992Ku21.
76.471[#] *1*	2$^+$	1.79 ns *4*	ABCDEFGHIJKLMN R	μ=+0.676 *8* Q=2.12 *25* J$^\pi$: 76.471 E2 γ to 0$^+$. $T_{1/2}$: weighted average of: 1.74 ns *9*, γ ce(L)(t) (1966Fu03); 1.8 ns *1*, $\gamma\gamma$(t) (1966Ja16); 1.80 ns *5*, pγ(t) in Coul. ex. (1966Ti01); 1.91 ns *21*, $\alpha\gamma$(t) in Coul. ex. (1962Bi05); 1.87 ns *12* (from B(E2),1963Bj04); 1.74 ns *5* (from B(E2),1974Sh12,1975Wo08). μ: Mossbauer (1971He03,1989Ra17). Other value: 0.679 *16* (1968Mu01), relative to μ(^{170}Yb,84)=0.675 *12*. Q: Mossbauer (1971He03,1971Pl03,1989Ra17). Deduced using Q(^{170}Yb,84)=2.12 *36*.
253.117[#] *2*	4$^+$	144 ps *4*	ABCDEFGHIJKLMN QR	Q=−1.8 *12* $T_{1/2}$: from 1977Si15, recoil distance, Coul. ex. J$^\pi$: L=4 in (t,p). Q: Coulomb excitation reorientation (1970McZQ,1989Ra17).
526.034[#] *9*	6$^+$	16 ps *2*	ABC EF HIJKLMN QR	$T_{1/2}$: weighted average of: 16.3 ps *24* (1977Si15) and 14 ps *4* (1976Wa06), recoil distance in Coulomb excitation. J$^\pi$: 273γ E2 to 4$^+$.
889.93[#] *5*	8$^+$	3.8 ps *2*	A EF HI K Q	$T_{1/2}$: weighted average of: 3.7 ps *2* (1977Si15), 3.6 ps *5* (1976Wa06), recoil distance in Coul. ex., and 4.0 ps *3* (1977Ke06,1974Ke04), Doppler broadening in Coul. ex. J$^\pi$: populated in Coul. ex.
1318.361[@] *6*	2$^-$	0.491 ns *13*	ABC EFG K Q	$T_{1/2}$: weighted average of 0.51 ns *3*, $\gamma\gamma$(t), ^{174}Lu ε decay (1972MaZS,1973ScYS) and 0.486 ns *15*, $\gamma\gamma$(t), ^{173}Yb(n,γ) E=thermal (1974Lo13). J$^\pi$: 1318.3 M2 γ to 0$^+$. γ ray reduced transition probability ratios of transitions deexciting this level are consistent with

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Adopted Levels, Gammas (continued)

^{174}Yb Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$	XREF	Comments
				Alaga′s rule for $JK^{\pi}=22^{-}$ assignment. See ^{174}Lu ε decay (3.31 y).
1336[#] *1*	10^{+}	1.6 ps *1*	I	E(level): from Coul. ex. $T_{1/2}$: weighted average. See Coul. ex. Jπ: populated in Coul. ex.
1348 *3*			J	
1382.013[@] *6*	3^{-}		ABC EF IJK Q	Jπ: 1129γ E1 to 2^{+}, 1305γ E1 to 4^{+}.
1468.195[@] *6*	$(4)^{-}$		ABC EF	Jπ: population by capture γ ray in (n,γ), E=2 keV indicates $J^{\pi}=1^{-}$, 4^{-}. 1215.0γ E1 to 4^{+}.
1487.12[&] *3*	0^{+}	1.3 ps *6*	A E I K Q	Jπ: L=0 in (p,t) and (t,p). $T_{1/2}$: from Coul. ex.
1518.148[d] *13*	6^{+}	830 μs *40*	ABC EF H K N Q	%IT=100 $T_{1/2}$: weighted average of 850 μs *80*, γγ(t) in ^{174}Tm β^{-} decay (1964Ka15), and 820 μs *50*, γγ(t) in ^{173}Yb(d,pγ) (1967Bo08). Jπ: 992.1 (M1+E2) γ to 6^{+}, 1265.2γ to 4^{+}, 628.3γ to 8^{+}, γγ(θ) in ^{174}Lu ε decay (142 d).
1561.021[&] *20*	$(2)^{+}$		ABCDE K Q	Jπ: population by capture γ ray in (n,γ), E=2 keV indicates $J^{\pi}=2^{+}$, 3^{+}. 1484γ M1+E2 to 2^{+}.
1572.126[@] *10*	(5^{-})		A C EF N	XREF: N(1559). Jπ: (d,p) strength consistent with configuration assignment ν 9/2[624]-ν 5/2[512]. The $K^{\pi}=2^{-}$ octupole vibrational band is expected to have a large component of this configuration.
1606.358[a] *6*	$(3)^{+}$		AB DEF K R	Jπ: population by capture γ ray in (n,γ), E=2 keV indicates $J^{\pi}=2^{+}$, 3^{+}. 288γ E1 to 2^{-}. γ ray reduced transition probability ratio to 1318.32(2^{-}) and 1381.98(3^{-}) members of $K^{\pi}=2^{-}$ octupole vibrational band is consistent with Alaga′s rule for $JK^{\pi}=33^{+}$ assignment. B(E1)(288γ)/B(E1)(224γ) exp.: 1.9 *2*, theoretical value: 2.8.
1624.40[b] *3*	$(1)^{+}$		AB DE	Jπ: population by capture γ ray in (n,γ), E=2 keV indicates $J^{\pi}=1^{+}$, 4^{+}. 1624.3γ to 0^{+}.
1633.973[c] *7*	$(2)^{+}$	0.20 ps *3*	ABCDE IJK N	Jπ: L=(2) in (p,t). Population by capture γ ray in (n,γ), E=2 keV indicates $J^{\pi}=2^{+}$, 3^{+}. 1634.2γ to 0^{+}, 1557.5γ E2 to 2^{+}. $T_{1/2}$: from Coul. ex.
1671.216[d] *14*	(7^{+})		A F k n	XREF: k(1676)n(1667). E(level): from ^{174}Tm β^{-} decay. Jπ: 153.1γ to (6^{+}).
1674.82[b] *3*	2^{+}		AB DE k n	XREF: k(1676)n(1667). Jπ: 1674.8γ E2 to 0^{+}.
1701.68[a] *10*	4^{+}		AB DEF JK R	Jπ: population by capture γ ray in (n,γ), E=2 keV indicates $J^{\pi}=1^{+}$, 4^{+}. 319.5γ E1 to 3^{-}. γ-decay reduced transition probability ratio to 1381.98(3^{-}) and 1468.15 (4^{-}) members of $K^{\pi}=2^{-}$ octupole vibrational band is consistent with Alaga′s rule for $JK^{\pi}=43^{+}$ assignment, B(E1)(319γ)/B(E1)(233γ) exp: 1.6 *2* (theoretical value: 1.66).
1709.42[c] *6*	$(3)^{+}$		ABCDE N	XREF: N(1702). Jπ: population by capture γ ray in (n,γ), E=2 keV indicates $J^{\pi}=2^{+}$, 3^{+}. 1456.2γ E2 to 4^{+}.
1710.859[e] *50*	(1^{-})	7.6[s] fs *20*	A P	Jπ: γ ray reduced transition probability ratio to 0.0(0^{+}) and 76.470(2^{+}) levels is consistent with Alaga′s rule for $JK^{\pi}=11^{-}$ assignment, B(E1)(1710γ)/B(E1)(1634γ) exp: 0.64 *15*, (theoretical value: 0.50).

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Adopted Levels, Gammas (continued)

^{174}Yb Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$	XREF	Comments
1715.449[&] *27*	4^+		ABCDE K N Q	XREF: K(1712)N(1723). Jπ: population by capture γ ray in (n,γ), E=2 keV indicates $J^\pi=1^+, 4^+$. 1462.3γ E2 to 4^+.
1733.64[b] *1*	$(3)^+$		AB DE	Jπ: population by capture γ ray in (n,γ), E=2 keV indicates $J^\pi=2^+, 3^+$. 1657.3γ E2 to 2^+.
1760 *6*			B J	
1785.90[e] *4*	3^-		AB JK	Jπ: population by capture γ ray in (n,γ), E=2 keV indicates $J^\pi=2^-, 3^-$. 1532.8γ E1 to 4^+. γ ray reduced transition probability ratio to 76.470(2^+) and 253.123(4^+) levels is consistent with Alaga′s rule for $JK^\pi=31^-$ assignment, B(E1)(1709γ)/B(E1)(1533γ) exp: 0.65 *9* (theoretical value: 0.75).
1805.40[c] *15*	4^+		ABCDE JK N q	XREF: q(1812). Jπ: population by capture γ ray in (n,γ), E=2 keV indicates $J^\pi=1^+, 4^+$. 1552.1γ E2 to 4^+.
1819.817[a] *7*	(5^+)		A E qR	XREF: q(1812). Jπ: γ ray reduced transition probability ratio to 1468.15 (4^-) and 1572.06 (5^-) is consistent with Alaga′s rule for $JK^\pi=53^+$ assignment, B(E1)(351γ)/B(E1)(248γ) exp.: 2.4 *5* (theoretical value: 1.25).
1851.408[f] *10*	$(3)^-$		AB Jk N q	XREF: k(1852)N(1841)q(1855). Jπ: population by capture γ ray in (n,γ), E=2 keV indicates $J^\pi=2^-,3^-$. 1598.3γ to 4^+.
1859.232[b] *25*	(4^+)		AB DE k q	XREF: k(1852)q(1855). Jπ: population by capture γ ray in (n,γ), E=2 keV indicates $J^\pi=1^+, 4^+$.
1861[#] *2*	(12^+)	0.66 ps *4*	I	E(level): from Coul. ex. $T_{1/2}$: from 1977Ke06, 1974Ke04, Doppler broadening, Coul. ex. Jπ: populated in Coul. ex.
1876 *6*			N	
1884.674[i] *14*	$(5)^-$		A EF Q	E(level): from ^{174}Tm β⁻ decay. Jπ: 366.5 E1 γ to 6^+, 1631.5γ to 4^+.
1886.0[g] *2*	0^+		C E K	Jπ: L=0 in (p,t).
1913 *2*			R	
1926[c]	(5^+)		N	Jπ: strength in (d,p) consistent with $JK^\pi=52^+$ assignment.
1933.951 *25*			AB E R	
1949.696[f] *6*	(4^-)		AB N	Jπ: 567.7γ to 3^-, 343.3γ to $(3)^+$, 248.1γ to 4^+.
1958.52[g] *3*	(2^+)		ABCDE K Q	Jπ: population by capture γ ray in (n,γ), E=2 keV indicates $J^\pi=2^+, 3^+$.
1959[a] *2*	(6^+)		R	
2016.126 *20*	3^+		AB DE	Jπ: population by capture γ ray in (n,γ), E=2 keV indicates $J^\pi=2^+, 3^+$. 314.5γ M1 to 4^+.
2019 *2*			R	L=2 in (t,α).
2020.622[i] *50*	(6^-)		A F	E(level): from ^{174}Tm β⁻ decay. Jπ: 136.0γ to (5^-), 349.3γ to (7^+), 502.4γ to (6^+).
2037	1		P	
2038.83 *3*			A N	
2049.967 *9*	$(3)^-$		AB EF	Jπ: population by capture γ ray in (n,γ), E=2 keV indicates $J^\pi=2^-, 3^-$. 347.6γ to (4^+).
2068.984 *60*	$(1)^+$		AB DE K PQ	Jπ: population by capture γ ray in (n,γ), E=2 keV indicates $J^\pi=1^+, 4^+$. 1992.3γ to 2^-.
2088.46 *18*	$(4)^-$		AB F N R	Jπ: population by capture γ ray in (n,γ), E=2 keV indicates $J^\pi=1^-, 2^-, 3^-, 4^-$. 268.9γ to (5^+).
2101.209 *23*			ABCDE q	XREF: q(2099).

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Adopted Levels, Gammas (continued)

^{174}Yb Levels (continued)

E(level)[†]	Jπ[‡]	XREF	Comments
			Jπ: population by capture γ ray in (n,γ), E=2 keV indicates $J^\pi=1^+$, 4^+. Population in ^{173}Yb(n,γ) E=4.51-307.1 eV suggests $J^\pi=2^+$, 3^+. $J^\pi=(4^+)$ assigned in ^{174}Yb(n,n′γ). $J^\pi=(1^-,2^-,3^-)$ from 2024.8γ (E1) to 2^+.
2111.876 *14*		AB D R	XREF: R(2114). Jπ: population by capture γ ray in (n,γ), E=2 keV indicates $J^\pi=2^-$, 3^-. Possibly not consistent with 292γ to (5^+).
2113.9[h] *4*	0^+	E K q	XREF: q(2099). Jπ: L=0 in (p,t).
2123.04[g] *10*	$(4)^+$	ABCDE K	Jπ: 1869.9γ E2 to 4^+.
2150 *6*		N	
2160.918[m] *10*	4^+	A D R	XREF: D(2161.1)R(2163). Jπ: L=2 in (t,α). $J^\pi=1^-$, 2^-, 3^-, 4^-. Population in ^{173}Yb(n,γ) E=4.51-307.1 eV suggests $J^\pi=(2^+,3^+,4)$. 341.1γ to (5^+).
2163.144 *11*	(2^+)	AB D	XREF: D(2163.3). Jπ: population by capture γ ray in (n,γ), E=2 keV indicates $J^\pi=2^+$, 3^+. 2163.6γ to 0^+.
2171.982[h] *26*	(2^+)	ABCDE JK	Jπ: population by capture γ ray in (n,γ), E=2 keV indicates $J^\pi=2^+$, 3^+.
2186.864 *26*		A	
2189		N	
2191.6 *10*		B R	
2198.6 *3*	(1^-)	B	Jπ: population by capture γ ray in (n,γ), E=2 keV indicates $J^\pi=1^-$ to 4^-. 2198.5γ to 0^+.
2213		N	
2230	(3^+)[p]	J R	
2237.715 *19*	$(1^+,2^+)$	AB D N	Jπ: population by capture γ ray in (n,γ), E=2 keV indicates $J^\pi=1^+$, 2^+, 3^+, 4^+. 750.6γ to 0^+.
2246.825 *15*	$(2^+,3^+)$	AB D K	Jπ: population by capture γ ray in (n,γ), E=2 keV indicates $J^\pi=2^+$, 3^+.
2256.416 *8*	(3^+)	AB D R	XREF: R(2260). Jπ: population in ^{173}Yb(n,γ) E=4.51-307.1 eV suggests $J^\pi=(2^+,3^+)$. 788.3γ to $(4)^-$, 622.4γ to $(2)^+$.
2284[j]	(3^+)[p]	N	
2290[m] *2*	5^+	R	Jπ: L=2 in (t,α).
2295.773 *30*	$(2)^+$	AB D K	Jπ: population by capture γ ray in (n,γ), E=2 keV indicates $J^\pi=2^+$, 3^+. 808.3γ to 0^+, 661.8γ M1+E2 to $(2)^+$.
2320.6[r] *3*		E	
2329[l] *2*	7^-	R	Jπ: L=5 in (t,α).
2336.7 *3*	$(4^-,5)$	ABCD F	E(level): from ^{174}Tm β^- decay. Jπ: 452.2γ to (5^-), 315.8γ to (6^-), populated by β^- with log *ft*=6.3 from $(4)^-$.
2336.876[h] *7*	(4^+)	A F K N	Jπ: populated by capture γ ray in (n,γ), E=2 keV.
2338	1	P	Jπ: D γ to 0^+.
2341.502 *17*	$1,2^+$	A	Jπ: 854.5γ to 0^+.
2350.3[r] *2*		E	
2361.838 *10*		AB E	
2370[j]	(4^+)	N	
2377.9[r] *2*		E K	
2378.7 *2*	$(5)^-$	A F	E(level): from ^{174}Tm β^- decay. Jπ: log *ft*=4.6 from ^{174}Tm ($J^\pi=(4)^-$) β^- decay. 494.1 M1 γ to $(5)^-$, 860.7γ to 6^+. Probable configuration=(π 1/2[411])+(π 9/2[514]).
2384.056 *25*	(4^+)	AB	Jπ: 88.2γ to 2^+, 578.6γ to 4^+, 866.0γ to 6^+.
2403.332 *13*		AB N	
2408 *3*		R	
2434[k] *3*	5^+	R	Jπ: L=2 in (t,α).
2436.4[r] *3*		b E k	XREF: b(2437.2)k(2436).

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Adopted Levels, Gammas (continued)

^{174}Yb Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$	XREF	Comments
2438.165 *10*	(4+)		Ab k	XREF: b(2437.2)k(2436). Jπ: 866.0γ to (5−), 763.2γ to 2+.
2450			N	
2457[#] *3*	(14+)	0.4 ps *1*	I	$T_{1/2}$: from 1976Wa06, Doppler broadening, Coul. ex. Jπ: populated in Coul. ex.
2464.965 *17*	(2+,3+)		AB K	Jπ: population by capture γ ray in (n,γ), E=2 keV indicates J^π=2+, 3+.
2482[j]	(5+)		N	
2496[l] *4*	8−		R	Jπ: L=5 in (t,α).
2500	1		P	Jπ: D γ to 0+.
2501.3 *5*	(2−,3−)		AB	Jπ: population by capture γ ray in (n,γ), E=2 keV indicates J^π=2−, 3−.
2514.3 *7*			AB	
2519.7 *7*			AB K R	XREF: K(2520)R(2521).
2527.4 *7*			AB	
2540.8 *1*			AB	
2549.1 *11*			A R	XREF: R(2546).
2558 *5*			K	
2572[k] *3*	(6+)		R	Jπ: L=2 in (t,α).
2581.4 *4*	1[q]		A P	Jπ: from ^{174}Yb(γ,γ′).
2583.1[o] *7*			B	
2588.2 *4*	(2+,3+)		AB K	XREF: K(2588). Jπ: population by capture γ ray in (n,γ), E=2 keV indicates J^π=2+, 3+.
2601.2[r] *2*			AB E	
2623.3 *5*	(2+,3+)		AB K	Jπ: population by capture γ ray in (n,γ), E=2 keV indicates J^π=2+, 3+.
2642.5 *4*			AB	
2647.0[o] *7*			B	
2657.5 *5*			AB R	XREF: R(2654).
2663.1 *5*			AB K	XREF: K(2662).
2680.3 *4*			AB	
2683[l] *3*	9−		R	Jπ: L=5 in (t,α).
2705.3 *5*			AB	
2712.4 *4*			AB k	XREF: k(2720).
2728.1[no] *10*	2+		B k	XREF: k(2720). Jπ: L=2 in (t,α).
2732.3 *4*			A	
2749.4 *5*			AB	
2753 *5*			K	
2761 *3*			R	
2767.9 *6*			A	
2784.0 *6*			AB	
2793.1[n] *4*	3+		A R	XREF: R(2791). Jπ: L=2 in (t,α).
2796.1[r] *2*			E	
2799.3 *6*			AB	
2808.8 *5*			A	
2813.8[o] *15*	1[q]		B P	Jπ: from ^{174}Yb(γ,γ′).
2818.6 *4*			A R	
2821 *5*	(0+)		K	Jπ: L=(0) in (p,t).
2824.4 *5*			AB	
2839.5 *5*			A k	XREF: k(2840).
2845.4 *4*			AB k	XREF: k(2840).

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Adopted Levels, Gammas (continued)

^{174}Yb Levels (continued)

E(level)†	Jπ‡	$T_{1/2}$	XREF	Comments
2870.1 *7*			A R	XREF: R(2868).
2882.8[n] *4*	(4+)		AB K R	Jπ: L=(2) in (t,α).
2895.4 *5*			AB	
2902.4 *4*			A R	
2904 *5*	(0+)		K	Jπ: L=(0) in (p,t).
2909.1 *5*			AB	
2918.2 *5*	1[q]		A P	Jπ: from ^{174}Yb(γ,γ′).
2944.5 *4*			AB	
2965.3 *7*			AB	
3001.7[o] *6*			B K	
3009	(1−)[q]	3.9[s] fs *13*	P	
3009 *4*	(5+)		R	
3014.8[o] *8*			B	
3038.9 *7*			A K	
3049.0 *7*	(1−)	15[s] fs *10*	A P R	XREF: R(3051). Jπ: from ^{174}Yb(γ,γ′).
3062.4 *7*			A	
3075.2 *10*			A	
3095.6 *7*			A	
3117[#] *4*	(16+)		I	Jπ: populated in Coul. ex.
3122.3 *11*	1[q]		A P	
3136.1 *8*			A	
3145	1[q]		P	
3153.9[o] *9*			B	
3163.0 *6*			AB R	XREF: R(3162).
3174.6 *6*			A	
3184 *4*			R	
3210.6 *7*			AB	
3217.2 *3*			A	
3222	(1−)[q]	3.9[s] fs *19*	P	
3236.3 *6*			AB	
3244 *3*			R	
3250.8[o] *8*			B	
3268.0 *7*			AB	
3283.8[o] *9*			B	
3294.2[o] *8*			B	
3300.0[o] *8*			B	
3314.9 *8*			AB	
3327	(1−)[q]	2.8[s] fs *7*	P	
3349.1 *9*	1+		A oP	XREF: o(3350). Jπ: from excitation strength and form factor in (e,e′).
3352.7[o] *10*			B o	XREF: o(3350).
3356.0 *7*			A o	XREF: o(3350).
3383.4 *7*			A	
3387	(1−)[q]	1.8[s] fs *5*	P	
3395.3 *6*			A	
3402.9[r] *2*			E	
3410.1 *6*			A	
3427.0[r] *2*			E	
3446.1 *7*			A	
3462.0 *6*			AB	
3477.6[o] *8*			B	
3480.1 *6*			A	
3485	1[q]		P	

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Adopted Levels, Gammas (continued)

^{174}Yb Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$	XREF	Comments
3491.2 *6*			A	
3519.8 *3*			A R	XREF: R(3521).
3523.6[o] *12*			B	
3527	$(1^-)^q$	1.6[s] fs *5*	P	
3534.6[o] *9*			B	
3553.4 *7*	1^+		AB OP	XREF: P(3562). Jπ: from excitation strength and form factor in (e,e′).
3597.8 *6*			AB	
3602.8 *7*			A	
3614.5 *6*			A	
3624.0[o] *12*			B	
3648.1 *12*	$(1^-)^q$	7.8[s] fs *7*	A P	XREF: P(3647). Jπ: from ^{174}Yb(γ,γ′).
3655.8 *6*			A	
3692.2 *8*	1^q		A P	XREF: P(3695). Jπ: from ^{174}Yb(γ,γ′).
3725.6 *6*			A	
3733.3 *6*			AB	
3757.1 *6*			A	
3772.5 *8*			AB	
3836[#] *5*	(18^+)		I	Jπ: populated in Coul. ex.
3886.2 *7*			A	
3895.5 *6*			A	
3901.5 *6*			A	
3918.8 *6*			A	
4610[#] *7*	(20^+)		I	Jπ: populated in Coul. ex.

[†] Level energies are from ^{173}Yb(n,γ) E=thermal, for levels populated by this reaction.

[‡] Assignments are based on rotational band structure and γ-decay patterns. Assignments from ^{173}Yb(n,γ) E=2 keV (1981Gr01) are based on systematic trends of Iγ/Eγ^3 for various γ-ray multipolarities (note the incorrect scale of fig. 3 in 1981Gr01).

[#] Band(A): $K^\pi=0^+$ g.s.-rotational band. Rotational parameters: A=12.76, B=−5.55. Spin members of the band used in the fit: 0 to 8.

[@] Band(B): $K^\pi=2^-$ octupole-vibrational band. rotational parameters: A=10.43, B=5.47. Spin members of the band used in the fit: 2 to 6.

[&] Band(C): $K^\pi=0^+$ band. rotational parameters: A=12.64, B=−61.8. Spin members of the band used in the fit: 0 to 4. Populated in (p,t).

[a] Band(D): $K^\pi=(3^+)$ band. probable configuration=((n,7/2[514])-(ν 1/2[521])) is consistent with experimental g−factor(K)=+(0.62 *4*) or +(0.06 *4*). Theoretical g−factor(K)=+0.184. Fast E1 γ rays to $K^\pi=2^-$ octupole-vibrational band (which contains a large configuration=((ν 9/2[624])-(ν 5/2[512])) component) requires mixing with configuration ((ν 11/2[505])-(ν 5/2[512])).

[b] Band(E): $K^\pi=(1^+)$ band. Probable configuration=(ν 5/2[512])-(ν 7/2[514]) consistent with (d,p) strengths for J=1 to 4 band members (fingerprint). Anomalous rotational spacing is probably caused by mixing with $K^\pi=0^+$ rotational band at 1487.4.

[c] Band(F): $K^\pi=(2^+)$ γ-vibrational band. Probable configuration=(ν 5/2[512])-(ν 1/2[510]) consistent with relative (d,p) strengths to J=2 to 5 band members. Absolute (d,p) strengths suggest mixing with configuration=(ν 5/2[512])-(ν 1/2[521]).

[d] Band(G): $K^\pi=(6^+)$ band. Probable configuration=(ν 7/2[514])+(ν 5/2[512]) consistent with (d,p) strength to J=6 and J=(7) band members.

[e] Band(H): $K^\pi=(0^-)$ octupole-vibrational band. Rotational parameter A=7.5 suggests mixing with a higher $K^\pi=1^-$ octupole-vibrational band.

[f] Band(I): $K^\pi=(3^-)$ octupole-vibrational band.

[g] Band(J): $K^\pi=(0^+)$ band. Rotational parameters: A=12.25, B=−20.0. Spin members of the band used in the fit: 0 to 4. Populated in (p,t).

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{174}Yb Levels (continued)

[h] Band(K): $K^\pi=(0^+)$ band. Rotational parameters: A=9.1, B=105.0. Spin members of the band used in the fit: 0 to 4. Populated in (p,t).
[i] Band(L): $K^\pi=(5^-)$ band. Probable configuration=(ν 1/2[521])+(ν 9/2[624]). log *ft*=4.7 from ^{174}Tm β^- decay and intense M1 494.4γ from 2378.7 level to the bandhead requires mixing between these states.
[j] Band(M): $K^\pi=(3^+)$ band. Rotational parameters: A=9.9, B=25.0. Spin members of the band used in the fit: 3 to 5. (d,p) strengths to $J^\pi=3^+$, 4^+, and 5^+ levels are consistent with ≈60% component of configuration=((ν 5/2[512])+(ν 1/2[510])).
[k] Band(N): $K^\pi=(5^+)$ band.
[l] Band(O): $K^\pi=7^-$ band.
[m] Band(P): $K^\pi=4^+$ band.
[n] Band(Q): $K^\pi=(2^+)$ band.
[o] From (n,γ) E=2 keV.
[p] Based on comparison between experimental and theoretical (d,p) and (d,d′) cross sections.
[q] J=1 or 2 from excitation in (γ,γ'). J=1 from Alaga branching ratio.
[r] From ^{174}Yb(n,n′γ).
[s] From ^{174}Yb(γ,γ').

Adopted Levels, Gammas (continued)

γ(^{174}Yb)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.	δ	α[d]	Comments
76.471	2^+	76.471 *1*	100	0.0	0^+	E2		9.43	B(E2)(W.u.)=201 *7* Mult.: from ce data, ^{174}Lu ε decay.
253.117	4^+	176.645 *2*	100	76.471	2^+	E2[‡]		0.413	B(E2)(W.u.)=280 *9*
526.034	6^+	272.918 *6*	100	253.117	4^+	E2[‡]		0.0996	B(E2)(W.u.)=370 *50*
889.93	8^+	363.64 *5*	100	526.034	6^+	[E2]		0.0423	B(E2)(W.u.)=388 *21* E_γ: from ^{174}Lu(142 d) ε decay.
1318.361	2^-	1065.04[@] *8*	0.32[@] *4*	253.117	4^+	E3(+M2)	>1.64	0.0082 *11*	B(M2)(W.u.)<0.001; B(E3)(W.u.)>2.4 *4* Mult.,δ: from α(K)exp, ^{174}Lu ε decay (3.31 y).
		1241.847[@] *6*	100[@] *2*	76.471	2^+	E1+E3(+M2)	0.19 *8*		Mult.: from γγ(θ), ^{174}Lu ε decay (3.31 y). δ: from γγ(θ). δ(M2/E1)=0.05 *9*, δ(E3/E1)=0.19 *8* in ^{174}Lu (3.31 y) ε decay.
		1318.296[@] *10*	0.69[@] *5*	0.0	0^+	M2		0.00891	B(M2)(W.u.)=0.0033 *4* Mult.: from α(K)exp, ^{174}Lu ε decay (3.31 y).
1336	10^+	447.2[&] *10*	100	889.93	8^+	[E2]		0.0239	B(E2)(W.u.)=335 *22*
1382.013	3^-	1128.895 *14*	23.2 *22*	253.117	4^+	E1[‡]		0.00120	
		1305.553 *13*	100 *5*	76.471	2^+	E1[‡]			
1468.195	$(4)^-$	86.181[e] *2*	12[e] *4*	1382.013	3^-				
		149.832[e] *7*	16[e] *5*	1318.361	2^-				
		1215.05 *4*	100 *5*	253.117	4^+	E1[‡]		0.00106	
1487.12	0^+	1410.73 *10*	100	76.471	2^+	[E2]			B(E2)(W.u.)=1.4 *+11−5*
1518.148	6^+	628.37[#] *4*	3.10[#] *15*	889.93	8^+				
		992.128 *13*	100 *7*	526.034	6^+	(M1+E2)	−1.63 *20*	0.00482 *16*	B(M1)(W.u.)=7.0×10^{-12} *15* B(E2)(W.u.)=8.5×10^{-9} *11* δ: δ=−1.6 *+4−3* from ^{174}Yb(n,n′γ) (1986Yo08). Mult.: from α(K)exp, ^{174}Lu ε decay (142 d). δ: from γγ(θ), ^{174}Lu ε decay (142 d).
		1265.18[#] *10*	2.52[#] *12*	253.117	4^+	[E2]			B(E2)(W.u.)=8.7×10^{-11} *9*
1561.021	$(2)^+$	1307.88 *10*	100 *6*	253.117	4^+	E2[‡]		0.00219	
		1484.54 *7*	64 *3*	76.471	2^+	M1+E2[‡]	+1.3 *+9−5*	0.00214 *15*	δ: from ^{174}Yb(n,γ) E=thermal. δ=+1.7 *4* from ^{174}Yb(n,n′γ) (1986Yo08).
		1561.5[g] *15*	<8.5	0.0	0^+				
1572.126	(5^-)	103.929 *7*	11.3 *25*	1468.195	$(4)^-$				
		1319.02 *15*	100 *6*	253.117	4^+	D+Q[c]	−0.03[c] *4*		E_γ: Eγ=1316.5 *10* from ^{174}Tm ε decay.
1606.358	$(3)^+$	138.170 *14*	1.1 *4*	1468.195	$(4)^-$				
		224.346 *4*	24.3 *20*	1382.013	3^-	E1[‡]		0.0414	
		287.997 *2*	100 *5*	1318.361	2^-	E1[‡]		0.0221	

$^{174}_{70}Yb_{104}$-9

Adopted Levels, Gammas (continued)

γ(^{174}Yb) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.	δ	α[d]	Comments
1606.358	(3)$^+$	1353.18 *15*	9.1 *7*	253.117	4$^+$				
		1529.68 *16*	18.7 *15*	76.471	2$^+$	D+Q[c]	*c*		
1624.40	(1)$^+$	1547.97 *10*	100 *7*	76.471	2$^+$	E2[‡]		0.00133	
		1624.28 *23*	50 *5*	0.0	0$^+$				
1633.973	(2)$^+$	1380.98 *15*	14 *5*	253.117	4$^+$				
		1557.49 *10*	100 *4*	76.471	2$^+$	E2[‡]			B(E2)(W.u.)=2.5 *5*
		1634.2[f] *3*	53[f]	0.0	0$^+$				I_γ: from 1981Gr01.
1671.216	(7$^+$)	153.074 *20*	100	1518.148	6$^+$				
1674.82	2$^+$	1598.36 *10*	100 *8*	76.471	2$^+$	E2[‡]			Mult.: D+Q from $\gamma(\theta)$ in ^{174}Yb(n,n′γ).
		1674.76 *10*	139 *8*	0.0	0$^+$	E2			
1701.68	4$^+$	95.212 *2*	31 *6*	1606.358	(3)$^+$	M1+E2[‡]	0.56 *18*	3.97	δ: from ^{174}Yb(n,γ) E=thermal.
		233.376[#] *5*	≈33[#]	1468.195	(4)$^-$				
		319.546 *5*	100 *8*	1382.013	3$^-$	E1[‡]		0.0171	
		1175.38 *10*	20.1 *19*	526.034	6$^+$				M1 multipolarity in ^{173}Yb(n,γ) E=thermal is not consistent with decay scheme.
		1448.46 *8*	61 *5*	253.117	4$^+$	M1+E2[‡]	0.5 *+5−5*	0.0028 *4*	δ: from ^{174}Yb(n,γ) E=thermal.
1709.42	(3)$^+$	1456.15 *7*	38 *4*	253.117	4$^+$	E2[‡]		0.00178	
		1632.92 *20*	100 *16*	76.471	2$^+$	D+Q[c]	−3.8[c] *+14−8*		
1710.859	(1$^-$)	149.832[e] *7*	≈3[e]	1561.021	(2)$^+$				
		1634.2[f] *3*	107[f]	76.471	2$^+$	[E1]			I_γ: from 1981Gr01.
		1710.87 *20*	100 *14*	0.0	0$^+$				E_γ: from ^{174}Yb(n,γ) E=thermal (1981Gr01).
1715.449	4$^+$	1189.44 *9*	20.9 *2*	526.034	6$^+$				
		1462.32 *6*	100 *6*	253.117	4$^+$	E2[‡]		0.00177	
		1639.4 *4*	15 *3*	76.471	2$^+$				
1733.64	(3)$^+$	172.64[e] *8*	1.7[e] *6*	1561.021	(2)$^+$				
		351.615[e] *6*	22[e] *4*	1382.013	3$^-$				
		1480.78 *7*	26 *3*	253.117	4$^+$	E2[‡]		0.00173	
		1657.33 *10*	100 *5*	76.471	2$^+$	E2[‡]			
1785.90	3$^-$	1532.79 *10*	100 *5*	253.117	4$^+$	E1[‡]			
		1709.05 *20*	91 *10*	76.471	2$^+$				
1805.40	4$^+$	1552.13 *10*	100 *7*	253.117	4$^+$	E2[‡]			
		1729.4 *5*	36 *4*	76.471	2$^+$				
1819.817	(5$^+$)	86.181[e] *2*	100[e] *34*	1733.64	(3)$^+$				
		118.272 *9*	53 *4*	1701.68	4$^+$				
		213.458[e] *4*	68[e] *9*	1606.358	(3)$^+$				
		247.675[e] *25*	19[e] *3*	1572.126	(5$^-$)				
		351.615[e] *6*	130[e] *17*	1468.195	(4)$^-$				

$^{174}_{70}Yb_{104}$-10

Adopted Levels, Gammas (continued)

γ(^{174}Yb) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.	δ	α[d]	Comments
1819.817	(5$^+$)	1293.64 *15*	100 *13*	526.034	6$^+$	D+Q[c]	−0.43[c] *4*		
1851.408	(3)$^-$	217.434 *4*	25.5 *24*	1633.973	(2)$^+$				
		245.044 *4*	100 *8*	1606.358	(3)$^+$	E1[‡]		0.0331	
		383.02[e] *8*	12[e] *5*	1468.195	(4)$^-$				
		469.398[e] *22*	9.7[e] *11*	1382.013	3$^-$				
		533.039 *8*	67 *5*	1318.361	2$^-$				
1859.232	(4$^+$)	341.090[e] *23*	5.6[e] *12*	1518.148	6$^+$				
		1333.10 *11*	17.9 *24*	526.034	6$^+$				
		1782.3 *3*	100 *11*	76.471	2$^+$				
1861	(12$^+$)	524.4[&] *13*	100	1336	10$^+$	[E2]		0.016	B(E2)(W.u.)=369 *23*
1884.674	(5)$^-$	366.526 *5*	100 *4*	1518.148	6$^+$	E1		0.0123	Mult.: from α(K)exp, ^{174}Tm β$^-$ decay.
		1358.7[#] *3*	0.07[#] *3*	526.034	6$^+$				
		1631.5[#] *3*	0.20[#] *4*	253.117	4$^+$				
1886.0	0$^+$	1809.6 *2*	100	76.471	2$^+$				E_γ: from ^{174}Yb(n,n′γ) (1986Yo08).
1933.951		1681.13 *17*	100 *13*	253.117	4$^+$				
		1858.00 *19*	87 *7*	76.471	2$^+$				
1949.696	(4$^-$)	248.138[e] *4*	59[e] *7*	1701.68	4$^+$				
		343.321 *5*	100 *7*	1606.358	(3)$^+$				
		567.688 *8*	68 *6*	1382.013	3$^-$				
1958.52	(2$^+$)	172.64[e] *8*	2.8[e] *9*	1785.90	3$^-$				
		247.675[e] *25*	5.0[e] *8*	1710.859	(1$^-$)				
		1882.07 *20*	100 *8*	76.471	2$^+$	(E2)[‡]			
2016.126	3$^+$	314.546 *13*	10.1 *13*	1701.68	4$^+$	M1[‡]		0.142	
		409.768 *8*	100 *6*	1606.358	(3)$^+$	M1[‡]		0.0705	
		1763.5 *2*	26 *6*	253.117	4$^+$				From ^{174}Yb(n,n′γ) (1986Yo08).
2020.622	(6$^-$)	136.0[#] *5*	23[#] *10*	1884.674	(5)$^-$				
		349.421[#] *5*	65[#] *36*	1671.216	(7$^+$)				
		502.46 *4*	44 *11*	1518.148	6$^+$				
2037	1	1960[b]	64[b] *40*	76.471	2$^+$				
		2037[b]	100[b]	0.0	0$^+$	D[b]			
2038.83		233.376 *5*	1.25×10^3 *10*	1805.40	4$^+$				
		570.60 *9*	100 *30*	1468.195	(4)$^-$				
2049.967	(3)$^-$	198.560 *7*	100 *20*	1851.408	(3)$^-$				
		348.395[#] *8*	24[#] *12*	1701.68	4$^+$				
		443.60[#] *4*	100[#] *10*	1606.358	(3)$^+$				E_γ: from ^{174}Tm β$^-$ decay.
2068.984	(1)$^+$	750.632[e] *28*	21[e] *8*	1318.361	2$^-$				
		1992.3 *5*	100 *10*	76.471	2$^+$				

$^{174}_{70}Yb_{104}$-11

Adopted Levels, Gammas (continued)

γ(^{174}Yb) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.	Comments
2068.984	$(1)^+$	2068[b]	[b]	0.0	0^+	D[b]	
2088.46	$(4)^-$	268.944 *9*	5.1 *6*	1819.817	(5^+)		
		387.19[#] *4*	100[#] *18*	1701.68	4^+		
		482.385 *17*	42 *16*	1606.358	$(3)^+$		I_γ: from ^{174}Tm β^- decay.
2101.209		399.638 *16*	5.3 *6*	1701.68	4^+		
		2024.79 *14*	100 *6*	76.471	2^+	(E1)[‡]	
2111.876		291.977 *23*	100 *20*	1819.817	(5^+)		
		643.57 *5*	16 *3*	1468.195	$(4)^-$		
		793.36 *3*	59 *10*	1318.361	2^-		
2123.04	$(4)^+$	1869.87 *20*	100	253.117	4^+	E2[‡]	
2160.918	4^+	341.090[e] *23*	29[e] *6*	1819.817	(5^+)		E_γ: not seen in ^{174}Tm β^- decay.
		458.400 *15*	69 *6*	1701.68	4^+		E_γ: placed by evaluator in the decay scheme.
		554.56 *1*	100 *12*	1606.358	$(3)^+$		
		779.01[e] *8*	50[e] *13*	1382.013	3^-		
2163.144	(2^+)	213.458[e] *4*	13.3[e] *17*	1949.696	(4^-)		
		2085.9 *5*	100 *5*	76.471	2^+		
		2163.1 *4*	56 *8*	0.0	0^+		
2171.982	(2^+)	213.458[e] *4*	12.9[e] *16*	1958.52	(2^+)		
		456.4 *4*	4.8 *8*	1715.449	4^+		
		497.120 *21*	4.8 *8*	1674.82	2^+		
		1918.96 *18*	72 *6*	253.117	4^+		
		2095.64 *25*	100 *7*	76.471	2^+		
		2171.0 *2*	60 *7*	0.0	0^+		E_γ,I_γ: from ^{174}Yb(n,n′γ).
2186.864		718.67 *3*	39 *6*	1468.195	$(4)^-$		
		1933.66 *25*	100 *10*	253.117	4^+		
2198.6	(1^-)	2198.55 *30*	100	0.0	0^+		
2237.715	$(1^+,2^+)$	526.830 *17*	72 *8*	1710.859	(1^-)		
		603.290[e] *19*	45[e] *7*	1633.973	$(2)^+$		
		631.394 *18*	88 *11*	1606.358	$(3)^+$		
		676.68 *8*	100 *33*	1561.021	$(2)^+$		
		750.632[e] *28*	133[e] *67*	1487.12	0^+		
2246.825	$(2^+,3^+)$	612.841 *16*	100 *15*	1633.973	$(2)^+$		
		622.432[e] *8*	274[e] *36*	1624.40	$(1)^+$		
		685.808 *21*	85 *15*	1561.021	$(2)^+$		
2256.416	(3^+)	240.291[e] *7*	60[e] *7*	2016.126	3^+		
		547.15 *25*	79 *13*	1709.42	$(3)^+$		
		622.432[e] *8*	100[e] *13*	1633.973	$(2)^+$		
		695.46 *3*	23 *3*	1561.021	$(2)^+$		
		788.29 *4*	47 *13*	1468.195	$(4)^-$		

$^{174}_{70}Yb_{104}$-12

Adopted Levels, Gammas (continued)

γ(^{174}Yb) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.	δ	α[d]	Comments
2256.416	(3$^+$)	938.07 *5*	40 *7*	1318.361	2$^-$				
2295.773	(2)$^+$	172.64[e] *8*	6.8[e] *22*	2123.04	(4)$^+$				
		586.282 *13*	21.9 *24*	1709.42	(3)$^+$				
		661.758 *9*	100 *11*	1633.973	(2)$^+$	M1+E2[‡]	0.9 *+7−4*	0.0155 *21*	
		808.26 *12*	62 *19*	1487.12	0$^+$				
2320.6		2067.5[a] *3*	100[a] *10*	253.117	4$^+$				
		2244.2[a] *3*	100[a] *10*	76.471	2$^+$				
2336.7	(4$^-$,5)	315.8[#] *8*	≈30[#]	2020.622	(6$^-$)				
		452.2[#] *2*	100[#] *24*	1884.674	(5)$^-$				
2336.876	(4$^+$)	248.138[e] *4*	29[e] *4*	2088.46	(4)$^-$				
		517.048 *8*	18 *4*	1819.817	(5$^+$)				
		603.29[e] *19*	4.9[e] *7*	1733.64	(3)$^+$				
		2083.6 *2*	100 *16*	253.117	4$^+$				
2338	1	2261[b]	74[b] *20*	76.471	2$^+$				
		2338[b]	100[b]	0.0	0$^+$	D[b]			
2341.502	1,2$^+$	240.291[e] *7*	100[e] *11*	2101.209					
		383.02[e] *8*	89[e] *33*	1958.52	(2$^+$)				
		854.48 *6*	78 *22*	1487.12	0$^+$				
2350.3		2273.8[a] *3*	74[a] *11*	76.471	2$^+$				
		2350.5[a] *3*	100[a] *16*	0.0	0$^+$				
2361.838		105.421 *5*	3.3 *8*	2256.416	(3$^+$)				
		652.64 *7*	4.2 *17*	1709.42	(3)$^+$				
		2285.1 *3*	100 *17*	76.471	2$^+$				
2377.9		661.9[a] *2*	80[a] *10*	1715.449	4$^+$				
		2124.7[a] *2*	100[a] *10*	253.117	4$^+$				
2378.7	(5)$^-$	358.1[#] *2*	4.6[#] *5*	2020.622	(6$^-$)				
		494.164 *16*	100 *5*	1884.674	(5)$^-$	M1		0.0433	I_γ: from ^{174}Tm β^- decay. Mult.: from α(K)exp, ^{174}Tm β^- decay.
		860.75[#] *10*	14.2[#] *8*	1518.148	6$^+$				
2384.056	(4$^+$)	88.23 *4*	100 *20*	2295.773	(2)$^+$				
		578.605 *17*	15.6 *22*	1805.40	4$^+$				
		866.04[e] *5*	13[e] *4*	1518.148	6$^+$				
2403.332		291.662 *8*	94 *31*	2111.876					
		469.398[e] *22*	100[e] *11*	1933.951					
		779.01[e] *8*	125[e] *31*	1624.40	(1)$^+$				
2436.4		2360.0[a] *3*	79[a] *14*	76.471	2$^+$				
		2436.4[a] *4*	100[a] *21*	0.0	0$^+$				
2438.165	(4$^+$)	349.421[e#] *5*	≈30[e#]	2088.46	(4)$^-$				

$^{174}_{70}Yb_{104}$-13

Adopted Levels, Gammas (continued)

γ(^{174}Yb) (continued)

E_i(level)	J_i^π	E_γ [†]	I_γ [†]	E_f	J_f^π	Mult.	δ	α [d]	Comments
2438.165	(4$^+$)	763.22 *6*	75 *25*	1674.82	2$^+$				
		866.04[e] *5*	75[e] *25*	1572.126	(5$^-$)				
		1056.13 *3*	100 *50*	1382.013	3$^-$				
2457	(14$^+$)	595.9[&] *17*	100	1861	(12$^+$)	[E2]		0.0117	B(E2)(W.u.)=3.2×10^2 *8*
2464.965	(2$^+$,3$^+$)	763.22 *6*	11 *4*	1701.68	4$^+$				
		2388.96 *25*	100 *21*	76.471	2$^+$				
2500	1	2423[b]	60[b] *16*	76.471	2$^+$				
		2500[b]	100[b]	0.0	0$^+$	D[b]			
2581.4	1	2504[b]	46[b] *14*	76.471	2$^+$				
		2581[b]	100[b]	0.0	0$^+$	D[b]			
2601.2		532.8[a] *2*	100[a] *4*	2068.984	(1)$^+$	D+Q[c]	+1.1[c] *3*		
		885.3[a] *2*	24[a] *6*	1715.449	4$^+$				
		2524.8[a] *3*	82[a] *12*	76.471	2$^+$				
2796.1		1094.4[a] *2*	100[a] *6*	1701.68	4$^+$				
		2719.7[a] *4*	89[a] *17*	76.471	2$^+$				
2813.8	1	2738[b]	90[b] *38*	76.471	2$^+$				
		2815[b]	100[b]	0.0	0$^+$	D[b]			
2918.2	1	2843[b]	41[b] *7*	76.471	2$^+$				
		2920[b]	100[b]	0.0	0$^+$	D[b]			
3009	(1$^-$)	2932[b]	100[b]	76.471	2$^+$	[E1]			
		3009[b]	39[b] *7*	0.0	0$^+$	D[b]			
3049.0	(1$^-$)	2973[b]	100[b]	76.471	2$^+$	[E1]			
		3050[b]	94[b] *37*	0.0	0$^+$	D[b]			
3117	(16$^+$)	660[&] *2*	100	2457	(14$^+$)				
3122.3	1	3045[b]	50[b] *27*	76.471	2$^+$				
		3122[b]	100[b]	0.0	0$^+$	D[b]			
3145	1	3068[b]	76[b] *29*	76.471	2$^+$				
		3145[b]	100[b]	0.0	0$^+$	D[b]			
3222	(1$^-$)	3145[b]	100[b]	76.471	2$^+$	[E1]			
		3222[b]	54[b] *15*	0.0	0$^+$	D[b]			
3327	(1$^-$)	3250[b]	100[b]	76.471	2$^+$	[E1]			
		3327[b]	88[b] *11*	0.0	0$^+$	D[b]			
3349.1	1$^+$	3272[b]	58[b] *18*	76.471	2$^+$				
		3349[b]	100[b]	0.0	0$^+$	D[b]			

$^{174}_{70}Yb_{104}$-14

Adopted Levels, Gammas (continued)

$\gamma(^{174}Yb)$ (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult.
3387	(1⁻)	3310[b]	100[b]	76.471	2⁺	[E1]
		3387[b]	47[b] *7*	0.0	0⁺	D[b]
3402.9		1934.5[a] *3*	33[a] *6*	1468.195	(4)⁻	
		2084.6[a] *2*	100[a] *8*	1318.361	2⁻	
3427.0		1711.0[a] *1*	100[a] *2*	1715.449	4⁺	
		2044.7[a] *4*	13[a] *3*	1382.013	3⁻	
3485	1	3409[b]	68[b] *18*	76.471	2⁺	
		3485[b]	100[b]	0.0	0⁺	D[b]
3527	(1⁻)	3451[b]	100[b]	76.471	2⁺	[E1]
3527	(1⁻)	3527[b]	57[b] *8*	0.0	0⁺	D[b]
3553.4	1⁺	3485[b]	47[b] *8*	76.471	2⁺	
		3562[b]	100[b]	0.0	0⁺	D[b]
3648.1	(1⁻)	3571[b]	100[b]	76.471	2⁺	[E1]
		3647[b]	83[b] *48*	0.0	0⁺	D[b]
3692.2	1	3619[b]	48[b] *16*	76.471	2⁺	
		3695[b]	100[b]	0.0	0⁺	D[b]
3836	(18⁺)	719[&] *3*	100	3117	(16⁺)	
4610	(20⁺)	774[&] *5*	100	3836	(18⁺)	

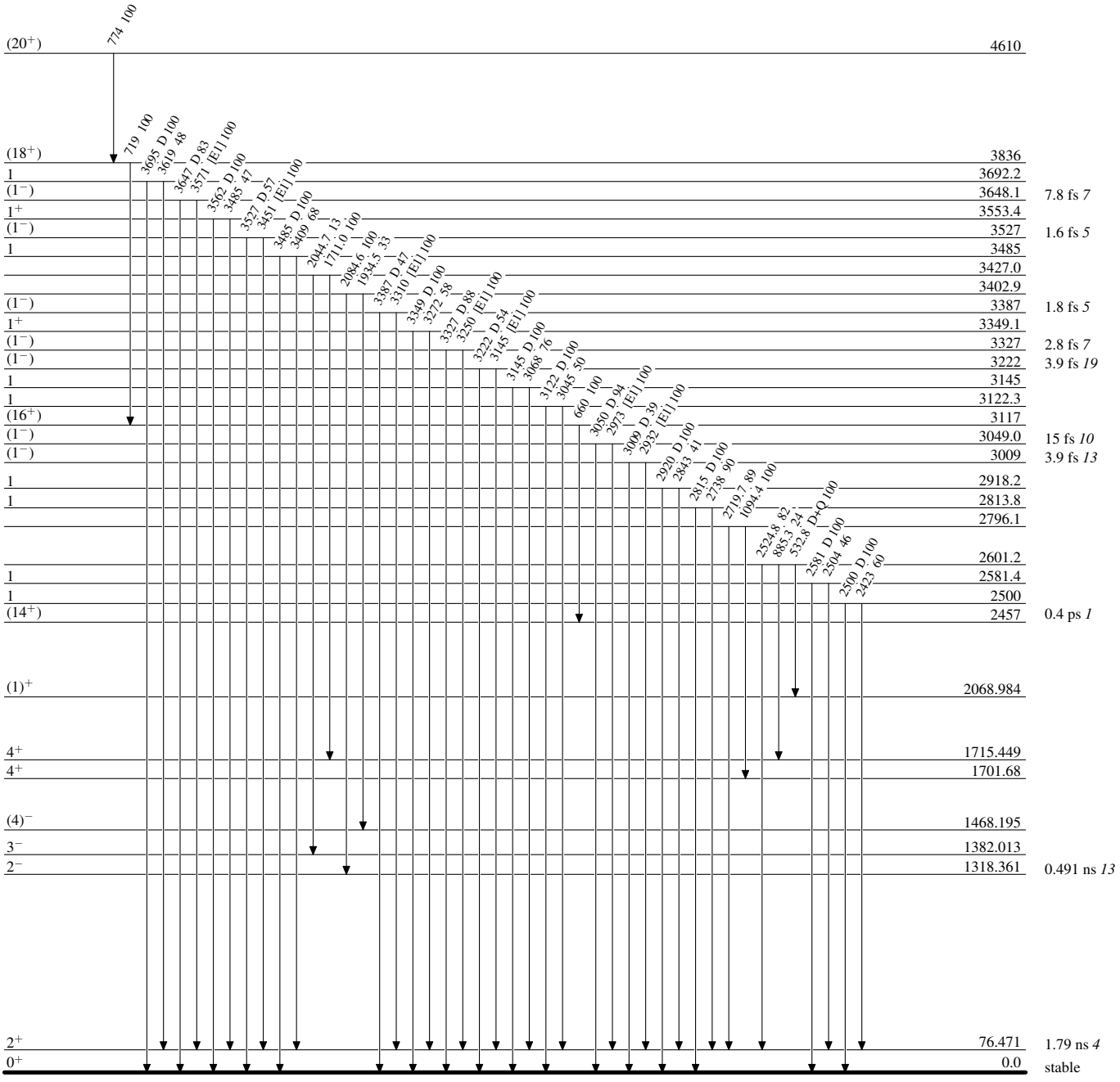
† From (n,γ), E=thermal, unless otherwise specified.
‡ From ^{173}Yb(n,γ) E=thermal.
# From ^{174}Tm β^- decay.
@ From ^{174}Lu ε decay (3.31 y).
& From Coulomb excitation.
[a] From ^{174}Yb(n,n′γ).
[b] From ^{174}Yb(γ,γ').
[c] From $\gamma(\theta)$ in ^{174}Yb(n,n′γ).
[d] Total theoretical internal 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.
[e] Multiply placed with undivided intensity.
[f] Multiply placed with intensity suitably divided.
[g] Placement of transition in the level scheme is uncertain.

$^{174}_{70}Yb_{104}$-15

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level

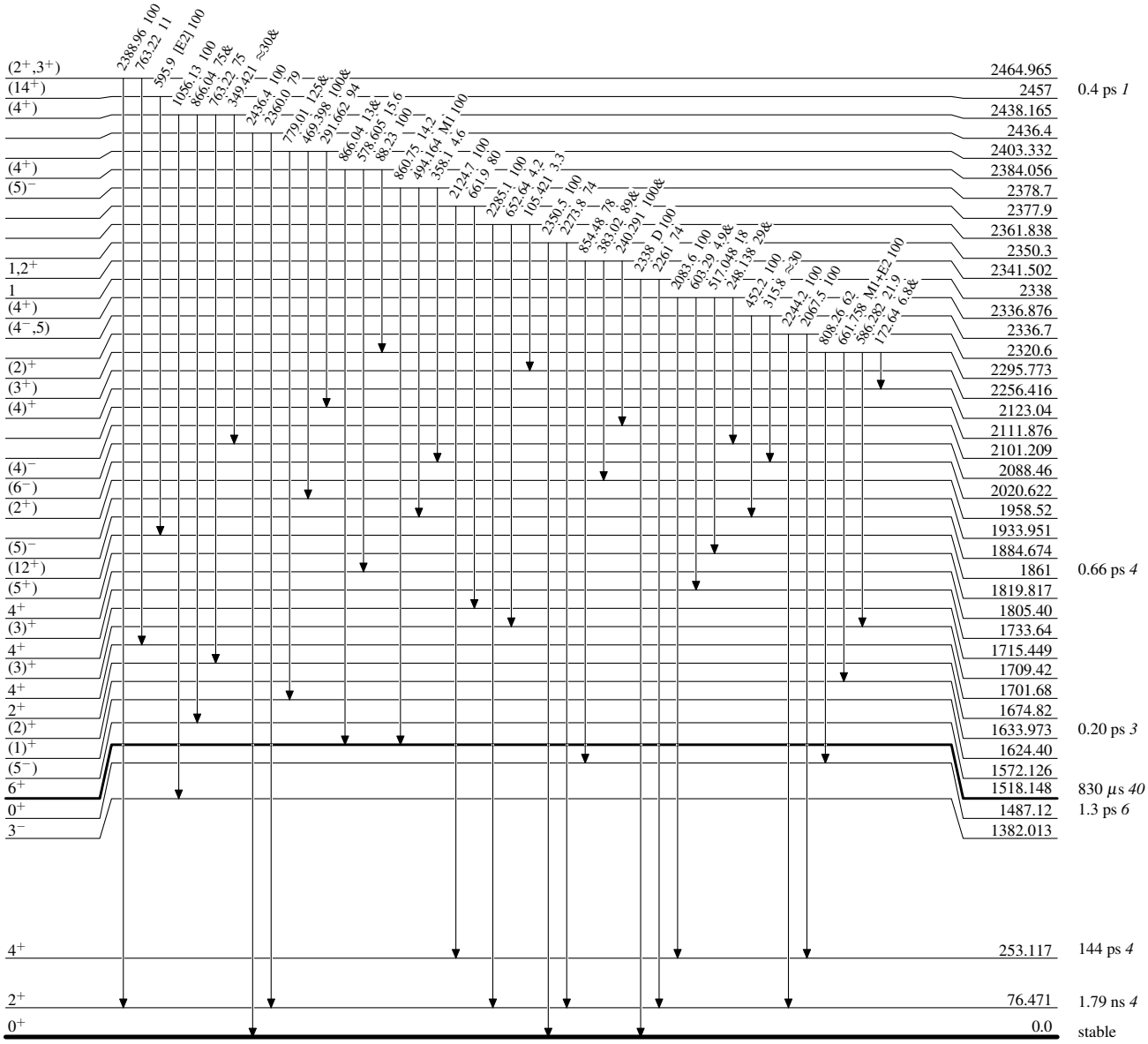


$^{174}_{70}Yb_{104}$

Adopted Levels, Gammas

Level Scheme (continued)

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

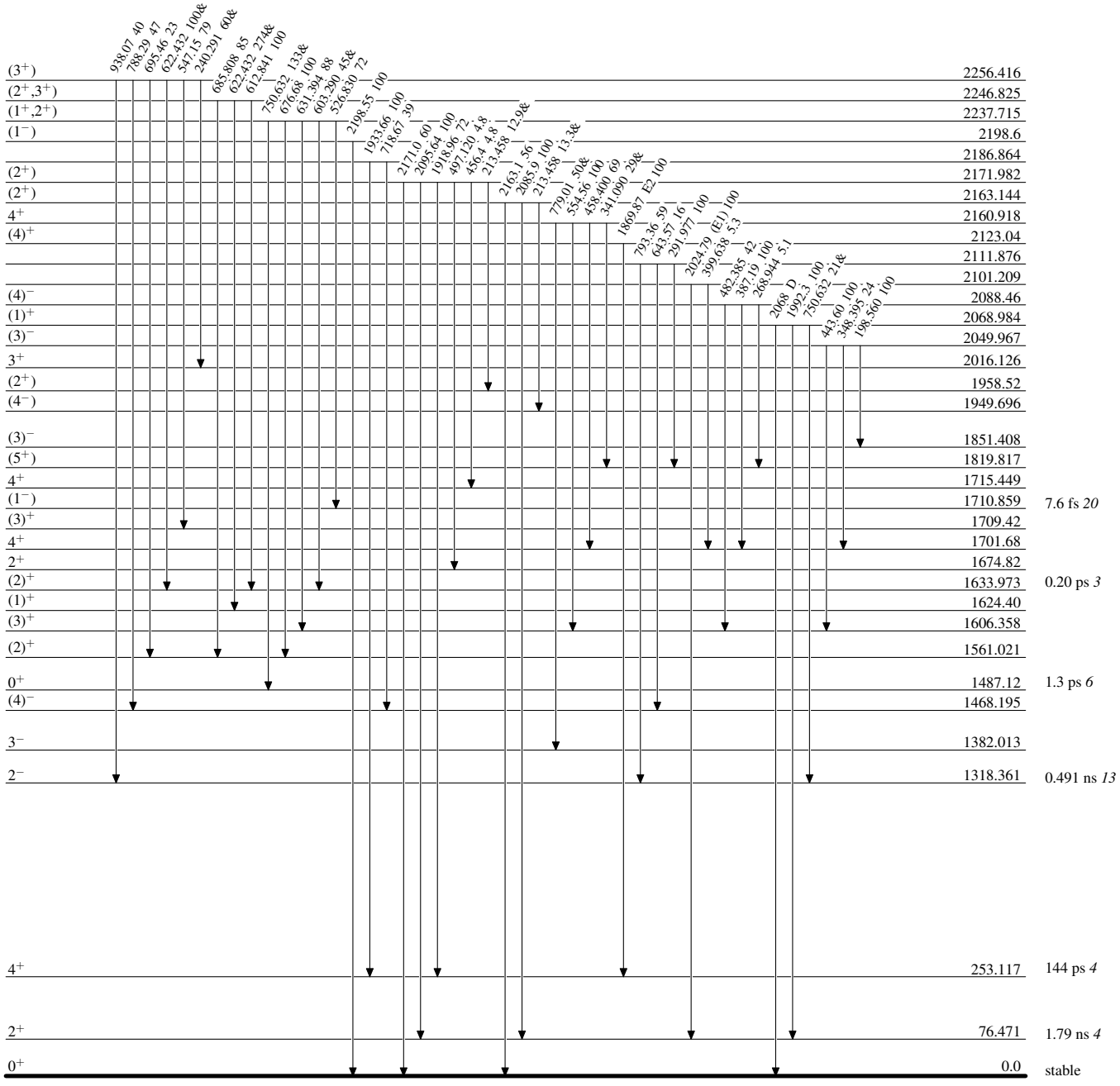


$^{174}_{70}Yb_{104}$

Adopted Levels, Gammas

Level Scheme (continued)

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

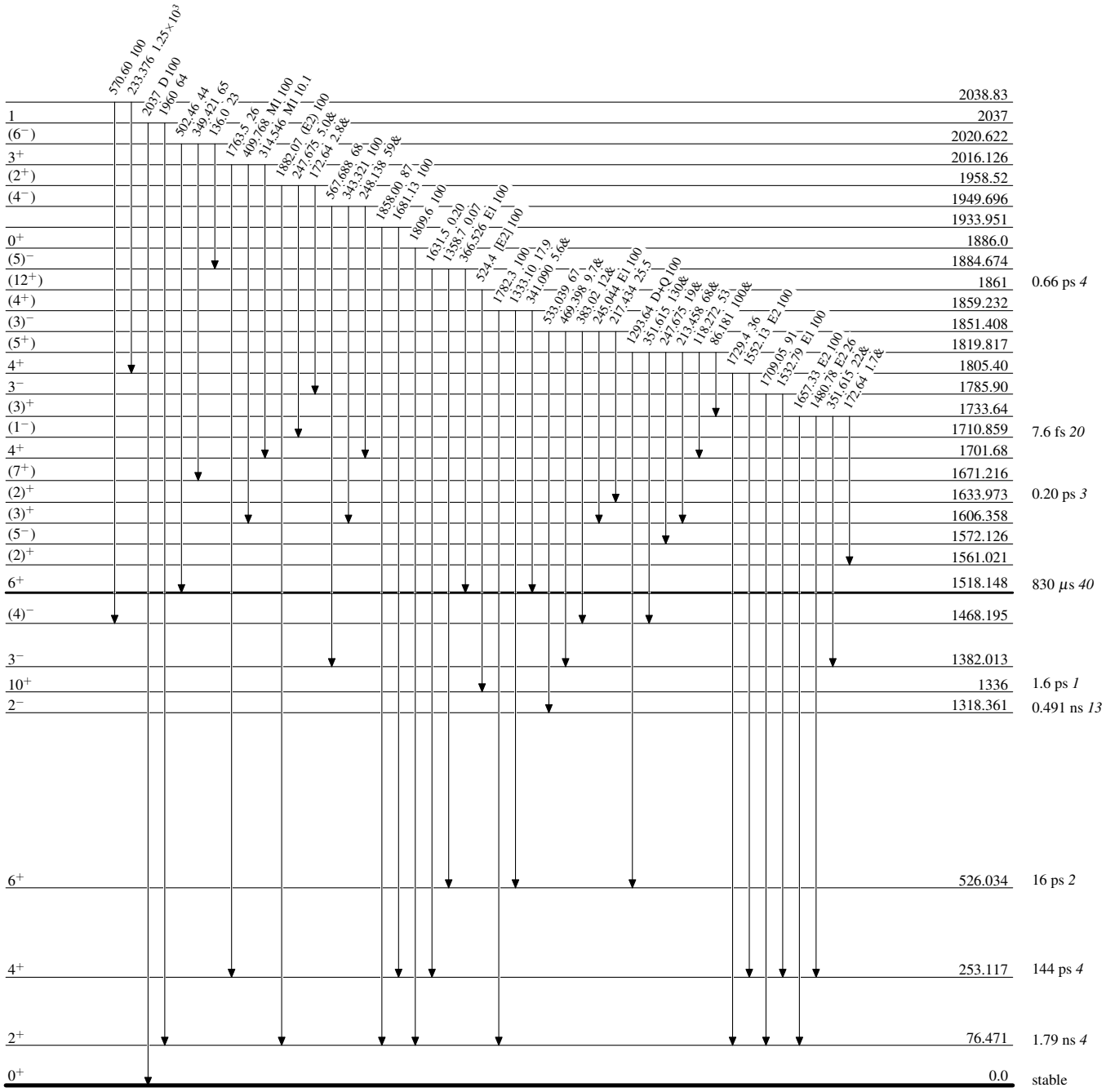


$^{174}_{70}Yb_{104}$

Adopted Levels, Gammas

Level Scheme (continued)

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



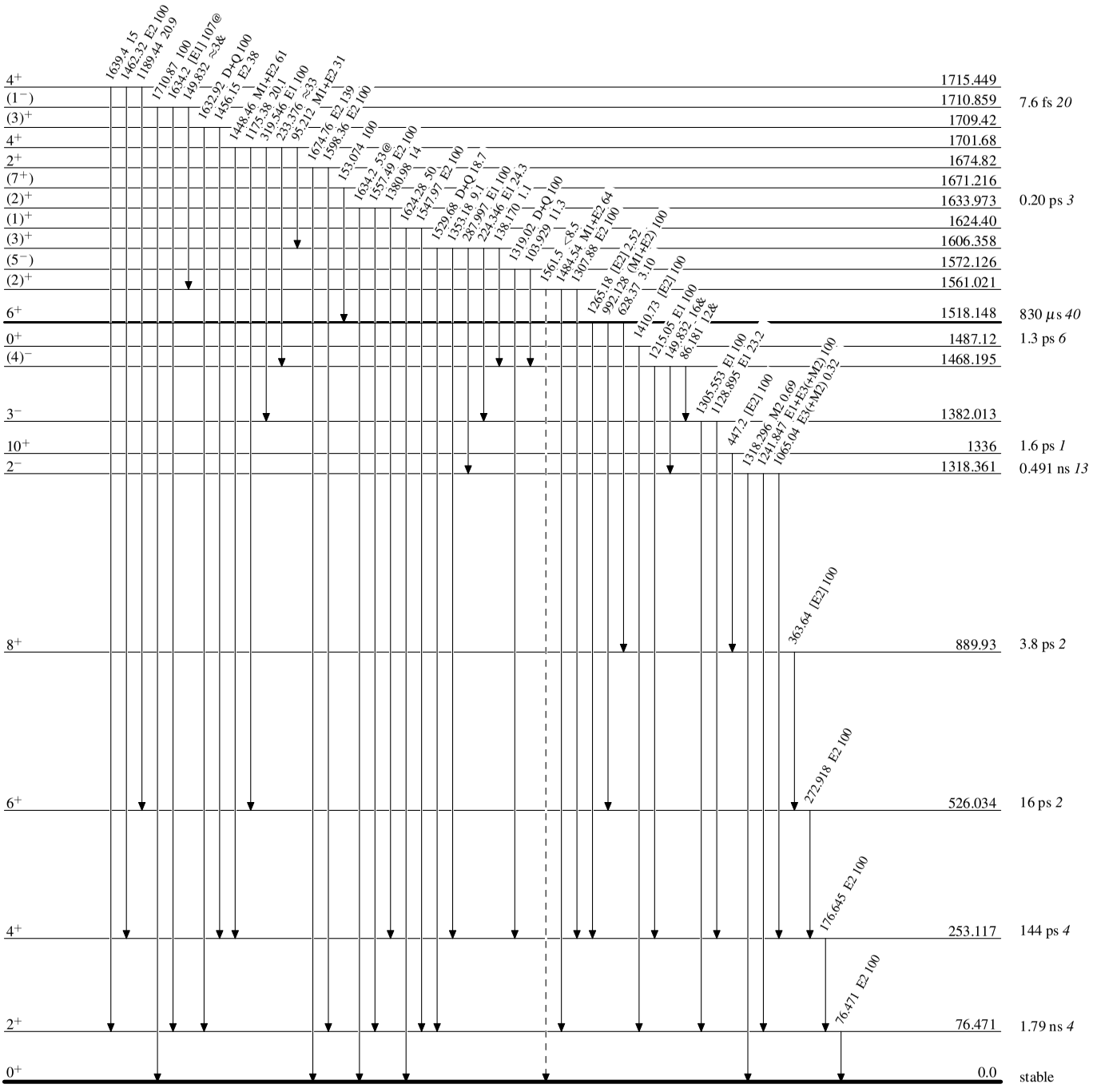
$^{174}_{70}Yb_{104}$

Adopted Levels, Gammas

Level Scheme (continued)

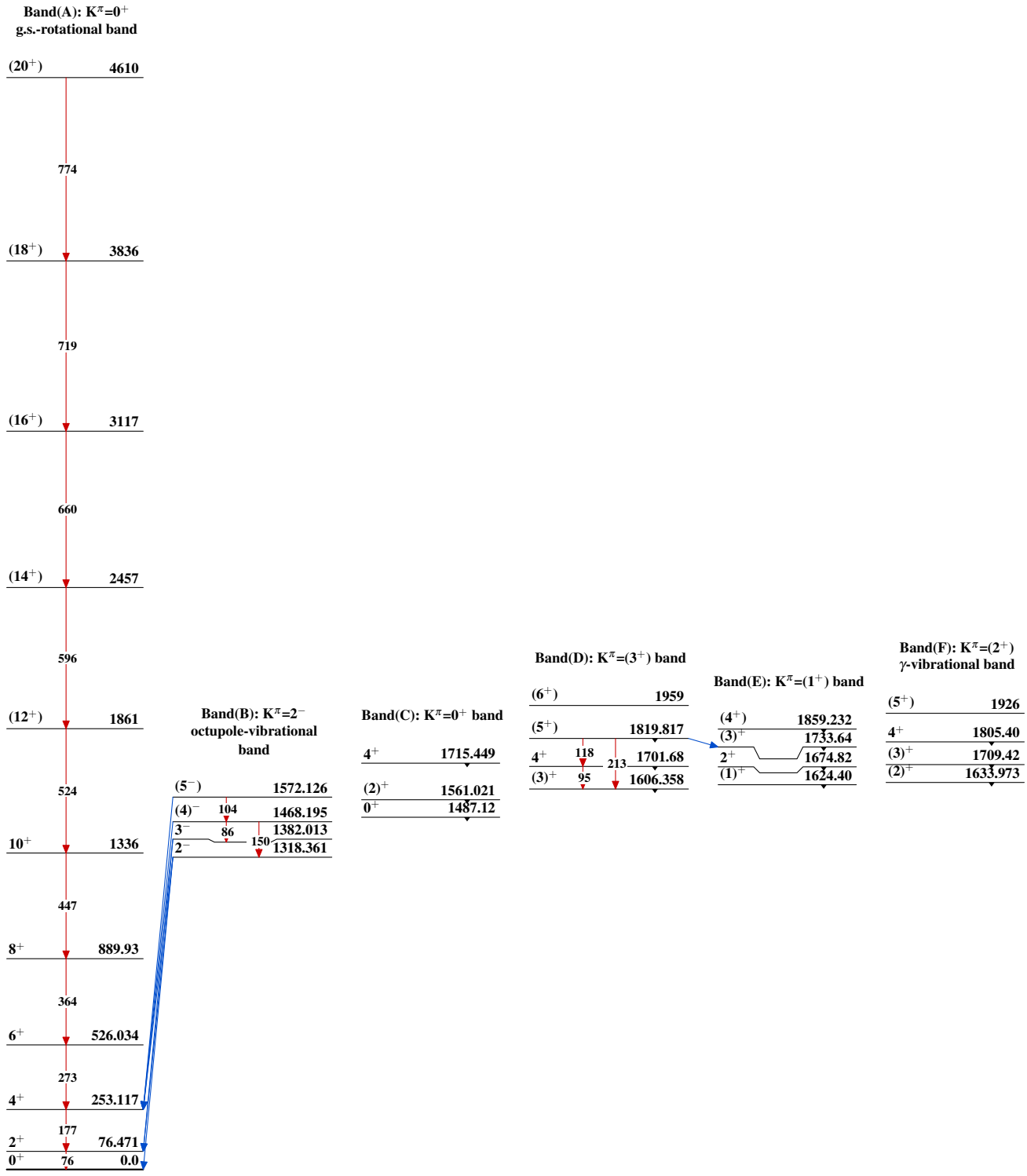
Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

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

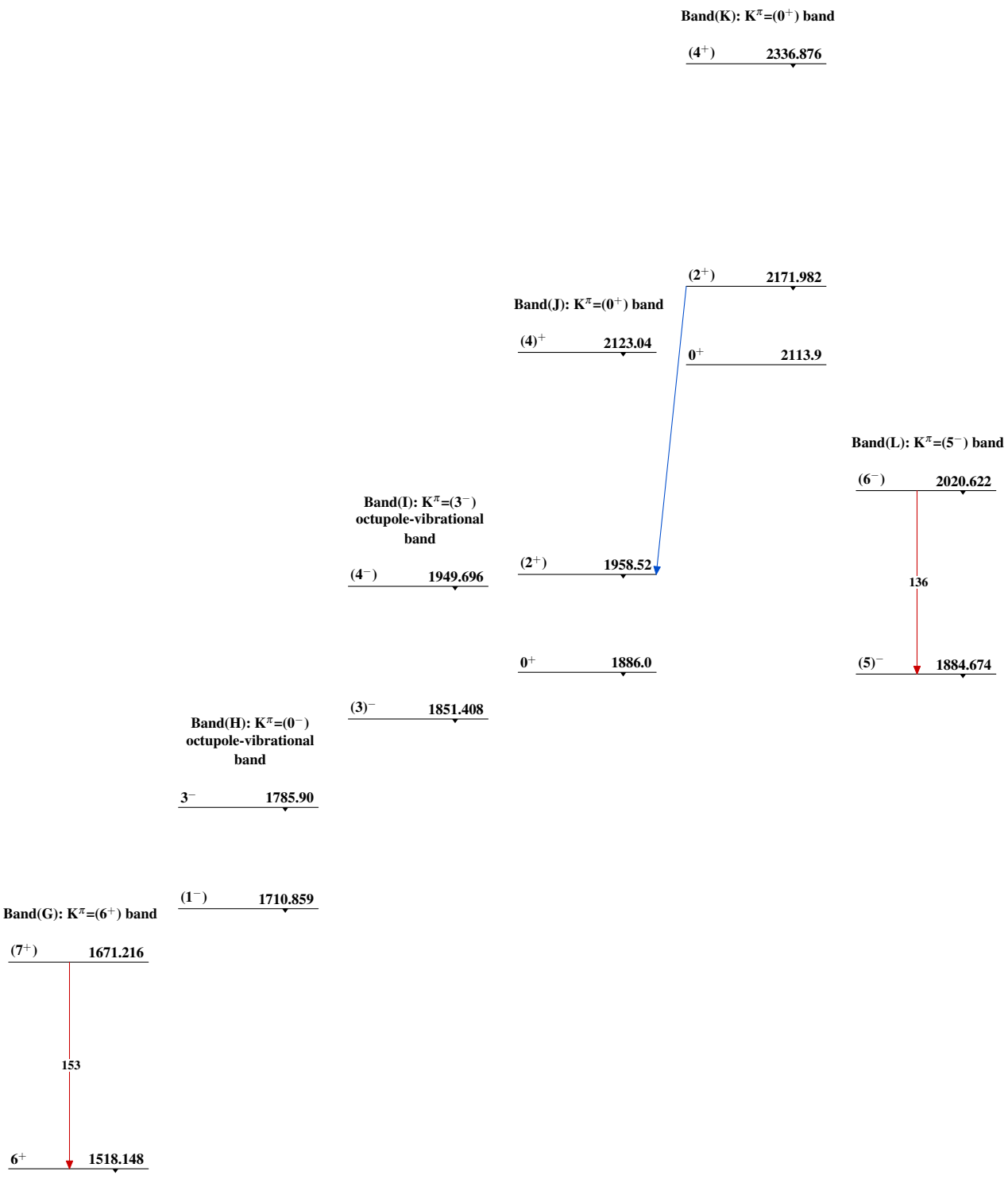


$^{174}_{70}Yb_{104}$

Adopted Levels, Gammas



Adopted Levels, Gammas (continued)



$^{174}_{70}Yb_{104}$

Adopted Levels, Gammas (continued)

Band(Q): $K^{\pi}=(2^{+})$ band

(4^{+}) 2882.8

3^{+} 2793.1

2^{+} 2728.1

Band(O): $K^{\pi}=7^{-}$ band

9^{-} 2683

Band(N): $K^{\pi}=(5^{+})$ band

(6^{+}) 2572

Band(M): $K^{\pi}=(3^{+})$ band

8^{-} 2496

(5^{+}) 2482

5^{+} 2434

(4^{+}) 2370

7^{-} 2329

Band(P): $K^{\pi}=4^{+}$ band

5^{+} 2290

(3^{+}) 2284

**4^{+} 2160.918

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