Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	N. Nica	NDS 132, 1 (2016)	4-Dec-2015

Q(β^-)=−3.42×10^3 *3*; S(n)=9.43×10^3 *6*; S(p)=3593 *23*; Q(α)=2056 *24* 2017Wa10
Q(ε)=2592 *24*; S(2n)=1.694×10^4 *6*; S(2p)=1.016×10^4 *23* 2017Wa10
Additional information 1.
Scheme is primarily from (HI,xnγ) study of 1992Ra17. A triaxial collective band of high dynamic moments of inertia from same dataset is not adopted here because of its tentative assignment to ^{157}Ho (2012Wa39).

^{157}Ho Levels

Model calculations of interest include: 1989Ba43, 1993Ba55 (Δ<r^2>); 1989Ik01, 1990Ik01 (signature inversion); 1989Ma10 (BE2); 1989Sa09, 1990Ha37, 1990Na14, 1992Ba42 (alignment); 1992Bo45 (configurations); 1993Ha11 (BE1); and 1993Pa04 (moments, deformation); as well as those listed under (HI,xnγ) reactions.
Additional information 2.

Cross Reference (XREF) Flags

A ^{157}Er ε decay
B ^{156}Dy(^{3}He,d),^{156}Dy(α,t)
C (HI,xnγ)

E(level)[†]	J$^\pi$[‡]	T$_{1/2}$	XREF	Comments
0[#]	7/2$^-$	12.6 min *2*	ABC	%ε+%β^+=100 μ=+4.35 *3*; Q=+2.97 *13* J$^\pi$: J from atomic-beam magnetic resonance (1969Ek01) and laser spectroscopy (1988NeZZ) and π from 7/2[523] Nilsson state assignment. The log *ft*=4.87 gives unique Nilsson orbitals for both initial and final states. T$_{1/2}$: From 1972To05. Others: 18 m *+2−4* (1965Zh02) and 14 m *1* (1966La11). μ: Value from 1989Al27 and sign from 1989Ra17 evaluation and 2011StZZ compilation; uncertainty is the statistical contribution only. Calculated μ=3.94 for 7/2[523] state (1989Al27). Q: Value from 1989Al27 and 1989Ra17 evaluation and sign from 1989Ra17 and 2011StZZ compilation; uncertainty is statistical contribution only. From 1989Al27, Δ<r^2>(157-165)=0.490 fm^2 *2*, and by subtraction of values therein Δ<r^2>(157-158)=0.036 fm^2 *4*, Δ<r^2>(156-157)=0.343 fm^2 *4*. Others: 1987AlZU, 1987AlZB and 1988NeZZ (data given in graphs). Related calculations: 1989Ba43. RMS charge radius <r^2>$^{1/2}$=5.1535 fm *316* (2013An02).
53.048[&] *20*	5/2$^+$	20 ns *1*	ABC	J$^\pi$: From E1 γ to 7/2$^-$ level and L=2 in (^{3}He,d). T$_{1/2}$: From ^{157}Er ε decay (1979Al33).
66.911[b] *20*	7/2$^+$		ABC	J$^\pi$: From E1 γ to 7/2$^-$ level, L=4 in (^{3}He,d), and expected presence of 7/2[404] state.
83.58[@] *3*	9/2$^-$	≤0.3 ns	A C	J$^\pi$: From M1 γ to 7/2$^-$ level and band structure. T$_{1/2}$: From ^{157}Er ε decay (1979Al33).
91.18 *12*			A	E(level): Reported in ^{157}Er ε decay, but no depopulating transitions were reported. However, several γ's reported feeding this level. J$^\pi$: 3/2$^+$,3/2[411] assigned in ^{157}Er ε decay and in the review by 1990Ja11.
150.6? *3*			A	J$^\pi$: 5/2$^+$,3/2[411] assigned in ^{157}Er ε decay.
174.55[d] *7*	(3/2$^+$)	0.58 ns *8*	AbC	XREF: b(176).

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Adopted Levels, Gammas (continued)

^{157}Ho Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$	XREF	Comments
				E(level): In the ^{157}Er ε decay, a γ of 83 keV is placed from the 174 level, but this placement is not adopted here. Jπ: From (M1) γ to 5/2+ level and band structure. L=2 in (^{3}He,d) agrees, but this could include 177 level. $T_{1/2}$: From ^{157}Er ε decay.
177.07 *10*			Ab	XREF: b(176). E(level): Reported in ^{157}Er ε decay, but no depopulating transitions were reported. Jπ: 3/2+,1/2[411] assigned in ^{157}Er ε decay.
188.07[#] *3*	11/2−	46 ps *12*	BC	Jπ: From L=5 in (^{3}He,d), M1 γ to 9/2− level, and band structure. $T_{1/2}$: From (HI,xnγ) (1984Ha35).
203.54[a] *8*	7/2+		C	Jπ: From M1 γ to 5/2+ level and band structure.
215	3/2+,5/2+		B	Jπ: From L=2 in (^{3}He,d).
228.10[c] *5*	9/2+		C	Jπ: From E1 γ's to 7/2− and 9/2− levels and band structure.
271.09 *19*	3/2+,5/2+		AB	Jπ: 5/2+,1/2[411] assigned in ^{157}Er ε decay and L=2 in (^{3}He,d) suggests 3/2+ or 5/2+ and authors give (3/2)+.
355.52[@] *4*	13/2−	12.6 ps *21*	C	Jπ: From M1 γ to 11/2− level and band structure. $T_{1/2}$: From (HI,xnγ) (1984Ha35).
356	3/2+,5/2+		B	Jπ: From L=2 in (^{3}He,d), authors give (5/2)+.
358.03[d] *8*	(7/2+)		C	Jπ: From E2 γ to (3/2+) level, (M1) γ to 9/2+, and band structure.
374.53[&] *11*	9/2+		BC	Jπ: From M1 γ to 7/2+ level, L=4 in (^{3}He,d), and band structure.
375.93 *14*			A	
391.32[f] *9*	5/2−		A	Jπ: From (M1) γ to 7/2− level and log*ft*=6.0 from 3/2− level.
408.13[b] *6*	11/2+		C	Jπ: From E1 γ to 9/2− level and band structure.
431	3/2+,5/2,7/2−		B	Jπ: L(^{3}He,t), (α,t)=2,3.
453	7/2+,9/2+		B	Jπ: From L=4 in (^{3}He,d).
482.29[e] *13*	1/2−,3/2−		AB	Jπ: From L=1 in (^{3}He,d); band assignment assumes 1/2−.
503.81[#] *4*	15/2−	10.3 ps *15*	BC	Jπ: From M1 γ to 13/2− level and band structure. $T_{1/2}$: From (HI,xnγ) (1984Ha35).
525.5[e] *5*	5/2−		BC	Jπ: From L=3 in (^{3}He,d) and band structure.
527.82[p] *10*			A	Jπ: (3/2−,5/2,7/2,9/2,11/2−) from γ to 7/2− level; band assignment assumes 3/2−.
531.54 *16*			A	
549	5/2−,7/2−		B	E(level): Could be same level as 549.15 keV. Jπ: From L=3 in (^{3}He,d).
549.15[q] *7*	3/2−,5/2		A	Jπ: From log*ft*=6.6 from ε decay from 3/2− level and γ to 7/2− level; band assignment assumes 5/2+.
566.55[a] *13*	11/2+		C	Jπ: From M1 γ to 9/2+ level and band structure.
570	3/2−		B	Jπ: From L=1 in (^{3}He,d) and assigned 3/2− there.
570.39 *17*			A	Jπ: γ to 7/2+, so level probably different from 570.
573.41 *17*			A	
584.07 *9*			AB	
610.06[c] *7*	13/2+		C	Jπ: From E1 γ to 11/2− level and band structure.
628[r]	1/2+		B	Jπ: From L=0 in (^{3}He,d).
638[r]	3/2+		B	Jπ: From L=2 in (^{3}He,d) and band structure.
654.37[e] *10*	9/2−		BC	XREF: B(652). Jπ: From (E1) γ to (7/2+) level, L=(5) in (^{3}He,d), and band structure.
661.80[d] *11*	(11/2+)		C	Jπ: From E2 γ to (7/2+) level and band structure.
692			B	
705			B	
729			B	Jπ: L=4 reported in (^{3}He,d) which implies 7/2+ or 9/2+, but assigned there as 7/2−,1/2[541] which requires L=3.
749.26[@] *4*	17/2−	6.1 ps *6*	C	Jπ: From M1 γ to 15/2− level and band structure. $T_{1/2}$: From (HI,xnγ) (1984Ha35).

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Adopted Levels, Gammas (continued)

^{157}Ho Levels (continued)

E(level)[†]	J$^{\pi}$[‡]	$T_{1/2}$	XREF	Comments
762			B	
786.65[&] *19*	13/2$^+$		C	J$^{\pi}$: From M1 γ to 11/2$^+$ level and band structure.
817	3/2$^+$,5/2$^+$		B	J$^{\pi}$: From L=2 in (^{3}He,d).
832.53[b] *8*	15/2$^+$		C	J$^{\pi}$: From E1 γ to 13/2$^-$ level and band structure.
873.32[e] *10*	13/2$^-$		BC	J$^{\pi}$: From E1 γ to 11/2$^+$ level and band structure.
894			B	
910.1[g] *3*	15/2$^-$		BC	J$^{\pi}$: From M1 γ to 15/2$^-$ level and band structure.
927.98[#] *5*	19/2$^-$	6.2 ps *10*	C	J$^{\pi}$: From M1 γ to 17/2$^-$ level and band structure. $T_{1/2}$: From (HI,xnγ) (1984Ha35).
946			B	
966	7/2$^+$,9/2$^+$		B	J$^{\pi}$: From L=4 in (^{3}He,d).
996[s]	11/2$^-$		B	J$^{\pi}$: From L $\geq$ 5 in (^{3}He,d) and band assignment.
1002.31[a] *20*	15/2$^+$		C	J$^{\pi}$: From M1 γ to 13/2$^+$ level and band structure.
1070.41[c] *8*	17/2$^+$		C	J$^{\pi}$: From E1 γ to 15/2$^-$ level and band structure.
1141	5/2$^-$,7/2$^-$		B	J$^{\pi}$: From L=3 in (^{3}He,d).
1158			B	
1176			B	
1179.55[e] *12*	17/2$^-$		C	J$^{\pi}$: From E2 γ to 13/2$^-$ and band structure.
1195.92 *12*	5/2$^-$,7/2,9/2$^+$		AB	XREF: B(1200). J$^{\pi}$: From L=3 or 4 in (^{3}He,d).
1203.37 *16*			A	
1238			B	
1238.04[@] *5*	21/2$^-$	1.6 ps *4*	C	J$^{\pi}$: From M1 γ to 19/2$^-$ level and band structure. $T_{1/2}$: From (HI,xnγ) (1984Ha35).
1252			B	
1275.9[&] *7*	(17/2$^+$)		BC	J$^{\pi}$: From (E2) γ to 13/2$^+$ level and band structure.
1292			B	
1327.80[b] *9*	19/2$^+$		C	J$^{\pi}$: From E1 γ to 17/2$^-$ level and band structure.
1342.43[g] *19*	19/2$^-$		C	J$^{\pi}$: From M1 γ's to 17/2$^-$ and 19/2$^-$ levels and band structure.
1345			B	
1362			B	
1380			B	
1403.41 *23*			AB	
1430			B	
1440.72[#] *5*	23/2$^-$	2.4 ps *6*	C	J$^{\pi}$: From M1 γ to 21/2$^-$ level and band structure. $T_{1/2}$: From (HI,xnγ) (1984Ha35).
1442			B	
1456			B	
1487.21 *19*			AB	XREF: B(1484).
1489.1[a] *3*	19/2$^+$		C	J$^{\pi}$: From E2 γ to 15/2$^+$ and band structure.
1508			B	
1518			B	
1532			B	
1548			B	
1569.49[e] *14*	21/2$^-$		C	J$^{\pi}$: From E2 γ to 17/2$^-$ level and band structure.
1593.17[c] *9*	21/2$^+$		C	J$^{\pi}$: From E1 γ to 19/2$^-$ level and band structure.
1602			B	
1627			B	
1634			B	
1658			B	
1690			B	
1695.56 *18*	19/2$^+$		C	J$^{\pi}$: From E1 γ's to 17/2$^-$ and 19/2$^-$ levels.
1707			B	
1739			B	

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Adopted Levels, Gammas (continued)

^{157}Ho Levels (continued)

E(level)[†]	J$^{\pi}$[‡]	$T_{1/2}$	XREF	Comments
1758			B	
1799.38[@] *6*	25/2$^-$	1.5 ps *7*	C	J$^{\pi}$: From M1 γ to 23/2$^-$ level and band structure. $T_{1/2}$: From (HI,xnγ) (1984Ha35).
1816			B	
1822.0[&] *8*	(21/2$^+$)		C	J$^{\pi}$: From (E2) γ to (17/2$^+$) level and band structure.
1852.09[g] *17*	23/2$^-$		C	J$^{\pi}$: From M1 γ to 23/2$^-$ level, E2 γ to 19/2$^-$, and band structure.
1861.8 *3*	(19/2$^+$)		C	J$^{\pi}$: From (E1) γ to 17/2$^-$ level and (E2) from 23/2$^+$.
1876.32[b] *10*	23/2$^+$		C	J$^{\pi}$: From E1 γ to 21/2$^-$ level and band structure.
2022.3[a] *5*	23/2$^+$		C	J$^{\pi}$: From E2 γ to 19/2$^+$ level and band structure.
2023.60[#] *6*	27/2$^-$	2.1 ps *3*	C	J$^{\pi}$: From M1 γ to 25/2$^-$ level and band structure. $T_{1/2}$: From (HI,xnγ) (1984Ha35).
2036.70[e] *16*	25/2$^-$		C	J$^{\pi}$: From E2 γ to 21/2$^-$ level and band structure.
2055.77 *19*	(21/2$^+$)		C	J$^{\pi}$: From (E1) γ to 19/2$^-$ level.
2156.91 *25*	(23/2$^+$)		C	J$^{\pi}$: From (E1) γ to 21/2$^-$ level.
2160.08[c] *10*	25/2$^+$		C	J$^{\pi}$: From E1 γ to 23/2$^-$ level and band structure.
2270.27[h] *14*	23/2$^+$		C	J$^{\pi}$: From E1 γ's to 21/2$^-$ and 23/2$^-$ levels and band structure.
2367.56[j] *12*	25/2$^+$		C	J$^{\pi}$: From E1 γ to 23/2$^-$ level and band structure.
2369.53[i] *14*	25/2$^+$		C	J$^{\pi}$: From M1 γ to 23/2$^+$ level and band structure.
2405.39[g] *12*	27/2$^-$		C	J$^{\pi}$: From M1 γ to 27/2$^-$ level and band structure.
2412.70[@] *6*	29/2$^-$	1.5 ps *7*	C	J$^{\pi}$: From M1 γ to 27/2$^-$ level and band structure. $T_{1/2}$: From (HI,xnγ) (1984Ha35).
2453.92[b] *10*	27/2$^+$		C	J$^{\pi}$: From E1 γ to 25/2$^-$ level and band structure.
2513.52[h] *14*	27/2$^+$		C	J$^{\pi}$: From M1 γ to 25/2$^+$ level and band structure.
2554.72[k] *10*	27/2$^+$		C	J$^{\pi}$: From E1 γ to 25/2$^-$ level and band structure.
2573.54[e] *19*	29/2$^-$		C	J$^{\pi}$: From E2 γ to 25/2$^-$ level and band structure.
2589.6[a] *6*	(27/2$^+$)		C	J$^{\pi}$: From (E2) γ to 23/2$^+$ level and band structure.
2654.08[#] *6*	31/2$^-$	0.7 ps *6*	C	J$^{\pi}$: From M1 γ to 29/2$^-$ level and band structure. $T_{1/2}$: From (HI,xnγ) (1984Ha35).
2692.78[i] *14*	29/2$^+$		C	J$^{\pi}$: From M1 γ to 27/2$^+$ level and band structure.
2696.69[l] *12*	29/2$^-$		C	J$^{\pi}$: From M1 γ to 27/2$^-$ level and band structure.
2720.93[j] *10*	29/2$^+$		C	J$^{\pi}$: From E1 γ to 27/2$^-$ level and band structure.
2740.28[c] *12*	29/2$^+$		C	J$^{\pi}$: From E1 γ to 27/2$^-$ level and band structure.
2852.84[m] *8*	31/2$^-$		C	J$^{\pi}$: From M1 γ's to 29/2$^-$ levels and band structure.
2903.47[h] *14*	31/2$^+$		C	J$^{\pi}$: From M1 γ to 29/2$^+$ level and band structure.
2927.89[k] *10*	31/2$^+$		C	J$^{\pi}$: From M1 γ to 29/2$^+$ level and band structure.
2995.75[b] *11*	31/2$^+$		C	J$^{\pi}$: From M1 γ to 29/2$^+$ level and band structure.
3015.56[l] *7*	33/2$^-$	<0.7 ps	C	J$^{\pi}$: From M1 γ to 31/2$^-$ level and band structure. $T_{1/2}$: From (HI,xnγ) (1984Ha35).
3076.66[@] *10*	33/2$^-$		C	J$^{\pi}$: From M1 γ's to 31/2$^-$ levels and band structure.
3142.44[i] *15*	33/2$^+$		C	J$^{\pi}$: From M1 γ to 31/2$^+$ level and band structure.
3164.20[j] *11*	33/2$^+$		C	J$^{\pi}$: From M1 γ to 31/2$^+$ level and band structure.
3173.17[e] *23*	33/2$^-$	1.2 ps *+7–5*	C	J$^{\pi}$: From E2 γ to 29/2$^-$ level and band structure. $T_{1/2}$: From (HI,xnγ) (1990Ga15).
3219.64[m] *7*	35/2$^-$	1.5 ps *7*	C	J$^{\pi}$: From M1 γ's to 33/2$^-$ levels and band structure. $T_{1/2}$: From (HI,xnγ) (1984Ha35).
3242.37[c] *12*	33/2$^+$		C	J$^{\pi}$: From E1 γ to 31/2$^-$ level and band structure.
3350.20[#] *13*	35/2$^-$		C	J$^{\pi}$: From M1 γ to 33/2$^-$ level and band structure.
3406.90[h] *15*	35/2$^+$		C	J$^{\pi}$: From M1 γ to 33/2$^+$ level and band structure.
3408.33[k] *10*	35/2$^+$		C	J$^{\pi}$: From M1 γ to 33/2$^+$ level and band structure.
3457.18[l] *7*	37/2$^-$	2.6 ps *4*	C	J$^{\pi}$: From M1 γ's to 35/2$^-$ levels and band structure.

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Adopted Levels, Gammas (continued)

^{157}Ho Levels (continued)

E(level)[†]	J$^{\pi}$[‡]	$T_{1/2}$	XREF	Comments
				$T_{1/2}$: From (HI,xnγ) (1984Ha35).
3478.96[b] *12*	35/2$^+$		C	J$^{\pi}$: From M1 γ to 33/2$^+$ level and band structure.
3695.04[i] *17*	37/2$^+$		C	J$^{\pi}$: From M1 γ to 35/2$^+$ level and band structure.
3708.53[n] *16*	37/2$^-$		C	J$^{\pi}$: From M1 γ to 35/2$^-$ level and band structure.
3710.73[j] *12*	37/2$^+$		C	J$^{\pi}$: From M1 γ's to 35/2$^+$ levels and band structure.
3720.94[m] *7*	39/2$^-$	1.0 ps *3*	C	J$^{\pi}$: From M1 γ to 37/2$^-$ level and band structure. $T_{1/2}$: From (HI,xnγ) (1984Ha35).
3741.98[c] *12*	37/2$^+$		C	J$^{\pi}$: From E1 γ to 35/2$^-$ level and band structure.
3822.9[e] *3*	37/2$^-$	0.18 ps *+11−10*	C	J$^{\pi}$: From E2 γ to 33/2$^-$ level and band structure. $T_{1/2}$: From (HI,xnγ) (1990Ga15).
3994.50[k] *12*	39/2$^+$		C	J$^{\pi}$: From M1 γ to 37/2$^+$ level and band structure.
3994.55[l] *8*	41/2$^-$	<2.5 ps	C	J$^{\pi}$: From M1 γ to 39/2$^-$ level and band structure. $T_{1/2}$: From (HI,xnγ) (1984Ha35).
4000.34[o] *16*	39/2$^-$		C	J$^{\pi}$: From M1 γ to 37/2$^-$ level and band structure.
4003.71[h] *18*	39/2$^+$		C	J$^{\pi}$: From M1 γ to 37/2$^+$ level and band structure.
4017.52[b] *12*	39/2$^+$		C	J$^{\pi}$: From M1 γ to 37/2$^+$ level and band structure.
4310.33[c] *13*	41/2$^+$		C	J$^{\pi}$: From M1 γ's to 39/2$^+$ levels and band structure.
4311.39[m] *8*	43/2$^-$		C	J$^{\pi}$: From M1 γ to 41/2$^-$ level and band structure.
4330.68[i] *18*	41/2$^+$		C	J$^{\pi}$: From M1 γ to 39/2$^+$ level and band structure.
4334.62[n] *18*	41/2$^-$		C	J$^{\pi}$: From M1 γ to 39/2$^-$ level and band structure.
4340.14[j] *16*	41/2$^+$		C	J$^{\pi}$: From M1 γ's to 39/2$^+$ levels and band structure.
4512.6[e] *4*	41/2$^-$	0.38 ps *10*	C	J$^{\pi}$: From E2 γ to 37/2$^-$ level and band structure. $T_{1/2}$: From (HI,xnγ) (1990Ga15).
4616.07[b] *13*	43/2$^+$		C	J$^{\pi}$: From M1 γ to 41/2$^+$ level and band structure.
4632.48[l] *8*	45/2$^-$	0.19 ps *+12−8*	C	J$^{\pi}$: From M1 γ to 43/2$^-$ level and band structure. $T_{1/2}$: From (HI,xnγ) (1990Ga15).
4643.85[o] *22*	43/2$^-$		C	J$^{\pi}$: From M1 γ to 41/2$^-$ level and band structure.
4673.68[h] *23*	43/2$^+$		C	J$^{\pi}$: From M1 γ to 41/2$^+$ level and band structure.
4684.18[k] *20*	43/2$^+$		C	J$^{\pi}$: From M1 γ to 41/2$^+$ level and band structure.
4951.28[c] *14*	45/2$^+$		C	J$^{\pi}$: From E1 γ to 43/2$^-$ level and band structure.
4977.44[n] *23*	45/2$^-$		C	J$^{\pi}$: From M1 γ to 43/2$^-$ level and band structure.
4993.44[m] *9*	47/2$^-$	0.19 ps *+8−9*	C	J$^{\pi}$: From M1 γ to 45/2$^-$ level and band structure. $T_{1/2}$: From (HI,xnγ) (1990Ga15).
5029.43[j] *22*	45/2$^+$		C	J$^{\pi}$: From M1 γ to 43/2$^+$ level and band structure.
5031.9[i] *3*	45/2$^+$		C	J$^{\pi}$: From E2 γ's to 41/2$^+$ levels and band structure.
5234.2[e] *4*	45/2$^-$	0.19 ps *+10−7*	C	J$^{\pi}$: From E2 γ to 41/2$^-$ level and band structure. $T_{1/2}$: From (HI,xnγ) (1990Ga15).
5290.99[b] *14*	47/2$^+$		C	J$^{\pi}$: From E1 γ to 45/2$^-$ level and band structure.
5315.2[o] *3*	47/2$^-$		C	J$^{\pi}$: From M1 γ to 45/2$^-$ level and band structure.
5363.17[l] *9*	49/2$^-$	0.14 ps *5*	C	J$^{\pi}$: From M1 γ to 47/2$^-$ level and band structure. $T_{1/2}$: From (HI,xnγ) (1990Ga15).
5399.3[h] *3*	47/2$^+$		C	J$^{\pi}$: From E2 γ to 43/2$^+$ level and band structure.
5418.3[k] *3*	47/2$^+$		C	J$^{\pi}$: From M1 γ to 45/2$^+$ level and band structure.
5655.60[c] *16*	49/2$^+$		C	J$^{\pi}$: From M1 γ to 47/2$^+$ level and band structure.
5677.6[n] *3*	49/2$^-$		C	J$^{\pi}$: From M1 γ to 47/2$^-$ level and band structure.
5760.48[m] *10*	51/2$^-$	0.23 ps *+4−6*	C	J$^{\pi}$: From M1 γ to 49/2$^-$ level and band structure. $T_{1/2}$: From (HI,xnγ) (1990Ga15).
5763.8[j] *3*	49/2$^+$		C	J$^{\pi}$: From M1 γ to 47/2$^+$ level and band structure.
5777.0[i] *4*	49/2$^+$		C	J$^{\pi}$: From E2 γ's to 45/2$^+$ levels and band structure.
5986.8[e] *5*	49/2$^-$	0.20 ps *+17−14*	C	J$^{\pi}$: From E2 γ to 45/2$^-$ level and band structure. $T_{1/2}$: From (HI,xnγ) (1990Ga15).

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Adopted Levels, Gammas (continued)

^{157}Ho Levels (continued)

E(level)[†]	J$^{\pi}$[‡]	$T_{1/2}$	XREF	Comments
6025.69[b] *18*	51/2$^+$		C	J$^{\pi}$: From M1 γ to 49/2$^+$ level and band structure.
6045.4[o] *4*	51/2$^-$		C	J$^{\pi}$: From M1 γ to 49/2$^-$ level and band structure.
6163.1[h] *4*	51/2$^+$		C	J$^{\pi}$: From E2 γ to 47/2$^+$ level and band structure.
6176.6[k] *3*	51/2$^+$		C	J$^{\pi}$: From M1 γ to 49/2$^+$ level and band structure.
6178.96[l] *11*	53/2$^-$	0.17 ps *6*	C	J$^{\pi}$: From M1 γ to 51/2$^-$ level and band structure. $T_{1/2}$: From (HI,xnγ) (1990Ga15).
6416.99[c] *19*	53/2$^+$		C	J$^{\pi}$: From M1 γ to 51/2$^+$ level and band structure.
6451.4[n] *4*	53/2$^-$		C	J$^{\pi}$: From M1 γ to 51/2$^-$ level and band structure.
6530.4[j] *4*	53/2$^+$		C	J$^{\pi}$: From M1 γ to 51/2$^+$ level and band structure.
6557.3[i] *4*	53/2$^+$		C	J$^{\pi}$: From E2 γ to 49/2$^+$ level and band structure.
6603.34[m] *13*	55/2$^-$	0.12 ps *3*	C	J$^{\pi}$: From M1 γ to 53/2$^-$ level and band structure. $T_{1/2}$: From (HI,xnγ) (1990Ga15).
6782.3[e] *6*	53/2$^-$	0.13 ps *+16−7*	C	J$^{\pi}$: From E2 γ to 49/2$^-$ level and band structure. $T_{1/2}$: From (HI,xnγ) (1990Ga15).
6814.66[b] *21*	55/2$^+$		C	J$^{\pi}$: From M1 γ to 53/2$^+$ level and band structure.
6844.4[o] *4*	55/2$^-$		C	J$^{\pi}$: From M1 γ to 53/2$^-$ level and band structure.
6961.0[h] *4*	55/2$^+$		C	J$^{\pi}$: From E2 γ to 51/2$^+$ level and band structure.
6970.8[k] *4*	55/2$^+$		C	J$^{\pi}$: From M1 γ to 53/2$^+$ level and band structure.
7073.23[l] *15*	57/2$^-$	0.12 ps *+10−5*	C	J$^{\pi}$: From M1 γ to 55/2$^-$ level and band structure. $T_{1/2}$: From (HI,xnγ) (1990Ga15).
7231.33[c] *23*	57/2$^+$		C	J$^{\pi}$: From M1 γ to 55/2$^+$ level and band structure.
7302.7[n] *5*	57/2$^-$		C	J$^{\pi}$: From M1 γ to 55/2$^-$ level and band structure.
7336.1[j] *4*	57/2$^+$		C	J$^{\pi}$: From M1 γ to 55/2$^+$ level and band structure.
7377.7[i] *5*	57/2$^+$		C	J$^{\pi}$: From E2 γ to 53/2$^+$ level and band structure.
7511.77[m] *15*	59/2$^-$	0.08 ps *+5−4*	C	J$^{\pi}$: From M1 γ to 57/2$^-$ level and band structure. $T_{1/2}$: From (HI,xnγ) (1990Ga15).
7621.4[e] *9*	(57/2$^-$)		C	J$^{\pi}$: From (E2) γ to 53/2$^-$ level and band structure.
7654.79[b] *25*	59/2$^+$		C	J$^{\pi}$: From M1 γ to 57/2$^+$ level and band structure.
7715.2[o] *5*	59/2$^-$		C	J$^{\pi}$: From M1 γ to 57/2$^-$ level and band structure.
7808.3[h] *7*	59/2$^+$		C	J$^{\pi}$: From E2 γ's to 55/2$^+$ levels and band structure.
7810.6[k] *7*	59/2$^+$		C	J$^{\pi}$: From E2 γ's to 55/2$^+$ levels and band structure.
8044.23[l] *18*	61/2$^-$		C	J$^{\pi}$: From M1 γ to 59/2$^-$ level and band structure.
8097.5[c] *3*	61/2$^+$		C	J$^{\pi}$: From M1 γ to 59/2$^+$ level and band structure.
8193.6[j] *5*	61/2$^+$		C	J$^{\pi}$: From E2 γ to 57/2$^+$ level and band structure.
8232.9[n] *6*	61/2$^-$		C	J$^{\pi}$: From M1 γ to 59/2$^-$ level and band structure.
8252.5[i] *7*	61/2$^+$		C	J$^{\pi}$: From E2 γ to 57/2$^+$ level and band structure.
8470.40[m] *18*	63/2$^-$		C	J$^{\pi}$: From M1 γ to 61/2$^-$ level and band structure.
8510.4[e] *11*	(61/2$^-$)		C	J$^{\pi}$: From (E2) γ to (57/2$^-$) level and band structure.
8546.1[b] *3*	63/2$^+$		C	J$^{\pi}$: From M1 γ to 61/2$^+$ level and band structure.
8658.8[o] *8*	63/2$^-$		C	J$^{\pi}$: From E2 γ to 59/2$^-$ level and band structure.
8708.2[k] *12*	63/2$^+$		C	J$^{\pi}$: From E2 γ to 59/2$^+$ level and band structure.
8713.6[h] *13*	(63/2$^+$)		C	J$^{\pi}$: From (E2) γ to 59/2$^+$ level and band structure.
9015.5[c] *4*	65/2$^+$		C	J$^{\pi}$: From M1 γ to 63/2$^+$ level and band structure.
9080.1[l] *3*	65/2$^-$		C	J$^{\pi}$: From E2 γ to 61/2$^-$ level and band structure.
9108.6[j] *6*	65/2$^+$		C	J$^{\pi}$: From E2 γ to 61/2$^+$ level and band structure.
9192.5[i] *9*	65/2$^+$		C	J$^{\pi}$: From E2 γ to 61/2$^+$ level and band structure.
9228.0[n] *7*	65/2$^-$		C	J$^{\pi}$: From E2 γ's to 61/2$^-$ levels and band structure.
9447.84[m] *21*	67/2$^-$		C	J$^{\pi}$: From M1 γ to 65/2$^-$ level and band structure.
9449.3[e] *16*	(65/2$^-$)		C	J$^{\pi}$: From (E2) γ to (61/2$^-$) level and band structure.
9489.9[b] *4*	67/2$^+$		C	J$^{\pi}$: From M1 γ to 65/2$^+$ level and band structure.

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Adopted Levels, Gammas (continued)

^{157}Ho Levels (continued)

E(level)[†]	J$^\pi$[‡]	XREF	Comments
9670.7[k] *15*	(67/2$^+$)	C	J$^\pi$: From (E2) γ to 63/2$^+$ level and band structure.
9688.4[h] *16*	(67/2$^+$)	C	J$^\pi$: From (E2) γ to (63/2$^+$) level and band structure.
9984.7[c] *6*	69/2$^+$	C	J$^\pi$: From E2 γ to 65/2$^+$ level and band structure.
10078.8[j] *7*	69/2$^+$	C	J$^\pi$: From E2 γ to 65/2$^+$ level and band structure.
10149.9[l] *4*	69/2$^-$	C	J$^\pi$: From E2 γ to 65/2$^-$ level and band structure.
10203.4[i] *12*	(69/2$^+$)	C	J$^\pi$: From (E2) γ to 65/2$^+$ level and band structure.
10264.9[n] *14*	(69/2$^-$)	C	J$^\pi$: From (E2) γ to 65/2$^-$ level and band structure.
10396.64[m] *25*	71/2$^-$	C	J$^\pi$: From M1 γ to 69/2$^-$ level and band structure.
10439.8[e] *19*	(69/2$^-$)	C	J$^\pi$: From (E2) γ to (65/2$^-$) level and band structure.
10487.3[b] *5*	71/2$^+$	C	J$^\pi$: From E2 γ to 67/2$^+$ level and band structure.
10683.3[k] *18*	(71/2$^+$)	C	J$^\pi$: From (E2) γ to (67/2$^+$) level and band structure.
10735.0?[h] *20*	(71/2$^+$)	C	J$^\pi$: From (E2) γ to (67/2$^+$) level and band structure.
11002.0[c] *6*	73/2$^+$	C	J$^\pi$: From E2 γ to 69/2$^+$ level and band structure.
11088.3[j] *9*	73/2$^+$	C	J$^\pi$: From E2 γ to 69/2$^+$ level and band structure.
11189.4 *4*	75/2$^-$	C	J$^\pi$: From E2 γ to 71/2$^-$ level and band segment.
11280.6[i] *18*	(73/2$^+$)	C	J$^\pi$: From (E2) γ to (69/2$^+$) level and band structure.
11412.4[m] *6*	75/2$^-$	C	J$^\pi$: From E2 γ to 71/2$^-$ level and band structure.
11482.5[e] *27*	(73/2$^-$)	C	J$^\pi$: From (E2) γ to (69/2$^-$) level and band structure.
11537.1[b] *6*	75/2$^+$	C	J$^\pi$: From E2 γ to 71/2$^+$ level and band structure.
12055.6[c] *11*	77/2$^+$	C	J$^\pi$: From E2 γ to 73/2$^+$ level and band structure.
12306.6[m] *5*	79/2$^-$	C	J$^\pi$: From E2 γ's to 75/2$^-$ levels and band segment.
12566.3 *14*	(79/2$^-$)	C	J$^\pi$: From (E2) γ to 75/2$^-$ level and band structure.
12636.3[b] *9*	(79/2$^+$)	C	J$^\pi$: From (E2) γ to 75/2$^+$ level and band structure.
13108.4[c] *23*	(81/2$^+$)	C	J$^\pi$: From (E2) γ to 77/2$^+$ level and band structure.
13369.6[m] *7*	83/2$^-$	C	J$^\pi$: From E2 γ to 79/2$^-$ level and band segment.
14507.8[m] *10*	87/2$^-$	C	J$^\pi$: From E2 γ to 83/2$^-$ level and band segment.
15875.7[m] *13*	(91/2$^-$)	C	J$^\pi$: From (E2) γ to 87/2$^-$ level and band segment.

[†] From least-squares fit to γ energies for levels involving γ's, with uncertain γ's omitted.
[‡] Although arguments are given for the individual J^π assignments, most original assignments come from the consideration of the whole scheme in the (HI,xnγ) study.
[#] Band(A): Signature=−1/2 sequence. At low spins, the levels can be associated with the 7/2[523] Nilsson orbital; A=8.85, B=0.011.
[@] Band(B): Signature=+1/2 sequence. At low spins, the levels can be associated with the 7/2[523] Nilsson orbital.
[&] Band(C): Signature=+1/2 sequence. At low spins, the levels can be associated with the 5/2[402] Nilsson orbital; A=25.3, B=−0.16.
[a] Band(D): Signature=−1/2 sequence. At low spins, the levels can be associated with the 5/2[402] Nilsson orbital.
[b] Band(E): Signature=−1/2 sequence. At low spins, the levels can be associated with the 7/2[404] Nilsson orbital; A=21.0, B=−0.08.
[c] Band(F): Signature=+1/2 sequence. At low spins, the levels can be associated with the 7/2[404] Nilsson orbital.
[d] Band(G): Signature=−1/2 sequence. At low spins, the levels can be associated with the 3/2[411] or 1/2[411] Nilsson orbital.
[e] Band(H): Signature=+1/2 sequence. At low spins, the levels can be associated with the 1/2[541] Nilsson orbital.
[f] Band(I): 5/2[532] bandhead.
[g] Band(J): Signature=−1/2 sequence. At low spins, the levels can be associated with the 5/2[532] Nilsson orbital.
[h] Band(K): Signature=−1/2 sequence of positive-parity band.
[i] Band(L): Signature=+1/2 sequence of positive-parity band.
[j] Band(M): Signature=+1/2 sequence of positive-parity band.
[k] Band(N): Signature=−1/2 sequence of positive-parity band.
[l] Band(O): Signature=+1/2 sequence of negative-parity band.

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Adopted Levels, Gammas (continued)

^{157}Ho Levels (continued)

[m] Band(P): Signature=−1/2 sequence of negative-parity band.
[n] Band(Q): Signature=+1/2 sequence of negative-parity band.
[o] Band(R): Signature=−1/2 sequence of negative-parity band.
[p] Band(S): K=2 γ-vibrational bandhead based on $7/2^-$ ground state.
[q] Band(T): 5/2[413] bandhead.
[r] Band(U): K=2 γ-vibrational band. based on 5/2[402] state with mixture of 1/2[400] state.
[s] Band(V): 9/2[514] band member.

Adopted Levels, Gammas (continued)

γ(^{157}Ho)

Unplaced γ's are not included here; see ^{157}Er ε decay.

E_i(level)	J_i^π	E_γ †	I_γ	E_f	J_f^π	Mult.‡	δ#	α&	Comments
53.048	5/2$^+$	53.05 *2*	100	0	7/2$^-$	(E1)		0.312	B(E1)(W.u.)=5.9×10^{-5} *3* α(L)=0.244 *4*; α(M)=0.0541 *8* α(N)=0.01220 *18*; α(O)=0.001566 *22*; α(P)=5.65×10^{-5} *8*
66.911	7/2$^+$	66.91 *2*	100	0	7/2$^-$	E1		0.912	α(K)=0.749 *11*; α(L)=0.1277 *18*; α(M)=0.0282 *4* α(N)=0.00639 *9*; α(O)=0.000838 *12*; α(P)=3.24×10^{-5} *5* Mult.: From (HI,xnγ) study, assigned as M1+E2 from ^{157}Er ε decay.
83.58	9/2$^-$	83.58 *3*	100	0	7/2$^-$	M1+E2	+0.16 *4*	4.40	α(K)=3.62 *6*; α(L)=0.61 *4*; α(M)=0.136 *9* α(N)=0.0315 *19*; α(O)=0.00447 *22*; α(P)=0.000224 *4* B(M1)(W.u.)>0.022; B(E2)(W.u.)>22 δ: Other: +0.23 *5* (1987AlZP).
150.6?		150.4[b] *1*	100	0	7/2$^-$				E$_\gamma$: This γ may be from the 203 level. Mult.: Multipolarity assignment of (M1+E2) by 1977BoYR is inconsistent with J^π assignments in ^{157}Er ε decay which require E1.
174.55	(3/2$^+$)	121.57 *11*	100	53.048	5/2$^+$	(M1)		1.494	α(K)=1.256 *18*; α(L)=0.186 *3*; α(M)=0.0411 *6* α(N)=0.00954 *14*; α(O)=0.001388 *20*; α(P)=7.78×10^{-5} *11* B(M1)(W.u.)=0.0085 *12*
188.07	11/2$^-$	104.49 *3*	100 *5*	83.58	9/2$^-$	M1+E2	+0.15 *5*	2.30	α(K)=1.91 *4*; α(L)=0.305 *14*; α(M)=0.068 *4* α(N)=0.0157 *8*; α(O)=0.00225 *9*; α(P)=0.0001182 *21* B(M1)(W.u.)=0.12 *4*; B(E2)(W.u.)=1.2×10^2 *9*
		188.08 *5*	15.2 *7*	0	7/2$^-$	E2		0.300	α(K)=0.192 *3*; α(L)=0.0828 *12*; α(M)=0.0196 *3* α(N)=0.00444 *7*; α(O)=0.000552 *8*; α(P)=8.97×10^{-6} *13* B(E2)(W.u.)=45 *13*
203.54	7/2$^+$	150.50 *8*	100	53.048	5/2$^+$	M1		0.816	α(K)=0.687 *10*; α(L)=0.1014 *15*; α(M)=0.0224 *4* α(N)=0.00520 *8*; α(O)=0.000757 *11*; α(P)=4.25×10^{-5} *6*
228.10	9/2$^+$	144.55 *13*	31 *4*	83.58	9/2$^-$	E1		0.1186	α(K)=0.0995 *15*; α(L)=0.01499 *22*; α(M)=0.00330 *5* α(N)=0.000755 *11*; α(O)=0.0001040 *15*; α(P)=4.78×10^{-6} *7*
		161.17 *6*	100 *9*	66.911	7/2$^+$	M1		0.674	α(K)=0.567 *8*; α(L)=0.0836 *12*; α(M)=0.0185 *3* α(N)=0.00429 *6*; α(O)=0.000624 *9*; α(P)=3.50×10^{-5} *5*
		228.13 *10*	52 *6*	0	7/2$^-$	E1		0.0357	α(K)=0.0301 *5*; α(L)=0.00438 *7*; α(M)=0.000962 *14* α(N)=0.000221 *4*; α(O)=3.10×10^{-5} *5*; α(P)=1.531×10^{-6} *22*
271.09	3/2$^+$,5/2$^+$	179.8 *2*	100	91.18					
355.52	13/2$^-$	167.45 *3*	100 *4*	188.07	11/2$^-$	M1+E2	+0.24 *4*	0.596	α(K)=0.496 *9*; α(L)=0.0783 *16*; α(M)=0.0174 *4* α(N)=0.00403 *9*; α(O)=0.000578 *11*; α(P)=3.04×10^{-5} *6* B(M1)(W.u.)=0.18 *4*; B(E2)(W.u.)=1.9×10^2 *7*
		271.94 *4*	35.5 *12*	83.58	9/2$^-$	E2		0.0904	B(E2)(W.u.)=107 *19* α(K)=0.0655 *10*; α(L)=0.0193 *3*; α(M)=0.00449 *7* α(N)=0.001023 *15*; α(O)=0.0001316 *19*; α(P)=3.32×10^{-6} *5*

Adopted Levels, Gammas (continued)

γ(^{157}Ho) (continued)

E_i(level)	J_i^π	E_γ [†]	I_γ	E_f	J_f^π	Mult.[‡]	δ[#]	α[&]	Comments
358.03	(7/2$^+$)	129.98 *16*	51 *9*	228.10	9/2$^+$	(M1)		1.235	α(K)=1.039 *15*; α(L)=0.1537 *23*; α(M)=0.0339 *5* α(N)=0.00788 *12*; α(O)=0.001147 *17*; α(P)=6.43×10^{-5} *10*
		154.51 *20*	40 *6*	203.54	7/2$^+$	(M1)		0.758	α(K)=0.638 *10*; α(L)=0.0942 *14*; α(M)=0.0208 *3* α(N)=0.00483 *7*; α(O)=0.000702 *11*; α(P)=3.94×10^{-5} *6*
		183.44 *9*	100 *13*	174.55	(3/2$^+$)	E2		0.326	α(K)=0.207 *3*; α(L)=0.0918 *13*; α(M)=0.0218 *3* α(N)=0.00493 *7*; α(O)=0.000611 *9*; α(P)=9.60×10^{-6} *14*
		305.0[@b] *4*	34 *9*	53.048	5/2$^+$	(M1)		0.1174	α(K)=0.0990 *15*; α(L)=0.01439 *21*; α(M)=0.00317 *5* α(N)=0.000737 *11*; α(O)=0.0001074 *16*; α(P)=6.07×10^{-6} *9*
		358.1 *5*	29 *9*	0	7/2$^-$	(E1)		0.01159	α(K)=0.00982 *15*; α(L)=0.001388 *20*; α(M)=0.000304 *5* α(N)=7.02×10^{-5} *11*; α(O)=9.98×10^{-6} *15*; α(P)=5.20×10^{-7} *8*
374.53	9/2$^+$	170.99 *9*	100 *10*	203.54	7/2$^+$	M1		0.571	α(K)=0.480 *7*; α(L)=0.0708 *10*; α(M)=0.01562 *22* α(N)=0.00363 *6*; α(O)=0.000528 *8*; α(P)=2.97×10^{-5} *5*
		321.5 *7*	37 *8*	53.048	5/2$^+$	E2		0.0542 *9*	α(K)=0.0407 *7*; α(L)=0.01043 *17*; α(M)=0.00241 *4* α(N)=0.000551 *9*; α(O)=7.21×10^{-5} *12*; α(P)=2.13×10^{-6} *4*
375.93		199.0 *2*	27	177.07					
		201.4 *2*	100 *27*	174.55	(3/2$^+$)				
		284.6 *2*	57 *7*	91.18					
391.32	5/2$^-$	391.32 *9*	100	0	7/2$^-$	(M1)		0.0607	α(K)=0.0513 *8*; α(L)=0.00740 *11*; α(M)=0.001628 *23* α(N)=0.000378 *6*; α(O)=5.52×10^{-5} *8*; α(P)=3.13×10^{-6} *5*
408.13	11/2$^+$	180.04 *9*	56 *4*	228.10	9/2$^+$	M1		0.494	α(K)=0.416 *6*; α(L)=0.0613 *9*; α(M)=0.01352 *19* α(N)=0.00314 *5*; α(O)=0.000457 *7*; α(P)=2.57×10^{-5} *4*
		324.58 *21*	47 *5*	83.58	9/2$^-$	E1		0.01471	α(K)=0.01245 *18*; α(L)=0.001770 *25*; α(M)=0.000388 *6* α(N)=8.94×10^{-5} *13*; α(O)=1.269×10^{-5} *18*; α(P)=6.54×10^{-7} *10*
		341.21 *10*	100 *8*	66.911	7/2$^+$	E2		0.0454	α(K)=0.0345 *5*; α(L)=0.00846 *12*; α(M)=0.00195 *3* α(N)=0.000446 *7*; α(O)=5.87×10^{-5} *9*; α(P)=1.83×10^{-6} *3*
482.29	1/2$^-$,3/2$^-$	305.1 *1*	100 *16*	177.07					
		308.2 *2*	81 *19*	174.55	(3/2$^+$)				
503.81	15/2$^-$	148.29 *3*	99 *4*	355.52	13/2$^-$	M1+E2	+0.17 *4*	0.846 *13*	α(K)=0.706 *11*; α(L)=0.1092 *23*; α(M)=0.0242 *6* α(N)=0.00561 *13*; α(O)=0.000809 *15*; α(P)=4.35×10^{-5} *8* B(M1)(W.u.)=0.22 *4*; B(E2)(W.u.)=1.5×10^2 *7*
		315.74 *4*	100 *3*	188.07	11/2$^-$	E2		0.0572	α(K)=0.0428 *6*; α(L)=0.01113 *16*; α(M)=0.00258 *4* α(N)=0.000588 *9*; α(O)=7.68×10^{-5} *11*; α(P)=2.24×10^{-6} *4* B(E2)(W.u.)=121 *19*
525.5	5/2$^-$	350.8[@b] *6*	100	174.55	(3/2$^+$)	(E1)		0.01218	α(K)=0.01032 *15*; α(L)=0.001460 *22*; α(M)=0.000320 *5* α(N)=7.38×10^{-5} *11*; α(O)=1.050×10^{-5} *16*; α(P)=5.45×10^{-7} *8*
527.82		436.7 *2*	15 *5*	91.18					
		527.8 *1*	100 *12*	0	7/2$^-$				
531.54		354.6 *3*	49 *9*	177.07					
		357.0 *2*	100 *17*	174.55	(3/2$^+$)				
		440.2 *3*	34 *11*	91.18					
549.15	3/2$^-$,5/2	157.8 *2*	5.8 *9*	391.32	5/2$^-$				
		372.1 *1*	9.4 *10*	177.07					

$^{157}_{67}Ho_{90}$-10

Adopted Levels, Gammas (continued)

γ(^{157}Ho) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ	E_f	J_f^π	Mult.[‡]	δ[#]	α[&]	Comments
549.15	3/2⁻,5/2	374.6 *1*	3.2 *7*	174.55	(3/2⁺)				
		482.4[a] *3*	5.2[a]	66.911	7/2⁺				
		549.1 *1*	100 *11*	0	7/2⁻				
566.55	11/2⁺	192.03 *10*	100 *9*	374.53	9/2⁺	M1		0.413	α(K)=0.348 *5*; α(L)=0.0512 *8*; α(M)=0.01129 *16* α(N)=0.00262 *4*; α(O)=0.000382 *6*; α(P)=2.15×10⁻⁵ *3*
		363.0 *3*	70 *9*	203.54	7/2⁺	E2		0.0379	α(K)=0.0291 *5*; α(L)=0.00683 *10*; α(M)=0.001571 *23* α(N)=0.000359 *6*; α(O)=4.76×10⁻⁵ *7*; α(P)=1.557×10⁻⁶ *22*
570.39		503.5 *2*	100 *7*	66.911	7/2⁺				
		517.3[a] *3*	31[a] *8*	53.048	5/2⁺				
573.41		302.2 *2*	100 *17*	271.09	3/2⁺,5/2⁺				
		398.9 *2*	42 *12*	174.55	(3/2⁺)				
		422.8[b] *2*	88 *17*	150.6?					
		482.4[a] *3*	42[a]	91.18					
584.07		493.1 *2*	30 *6*	91.18					
		517.3[a] *3*	49[a] *14*	66.911	7/2⁺				
		584.0 *1*	100 *11*	0	7/2⁻				
610.06	13/2⁺	201.92 *11*	26.9 *18*	408.13	11/2⁺	M1		0.360	α(K)=0.303 *5*; α(L)=0.0445 *7*; α(M)=0.00982 *14* α(N)=0.00228 *4*; α(O)=0.000332 *5*; α(P)=1.87×10⁻⁵ *3*
		381.96 *7*	100 *5*	228.10	9/2⁺	E2		0.0328	α(K)=0.0254 *4*; α(L)=0.00575 *8*; α(M)=0.001319 *19* α(N)=0.000302 *5*; α(O)=4.02×10⁻⁵ *6*; α(P)=1.367×10⁻⁶ *20*
		422.02 *22*	37 *3*	188.07	11/2⁻	E1		0.00787	α(K)=0.00668 *10*; α(L)=0.000935 *14*; α(M)=0.000205 *3* α(N)=4.73×10⁻⁵ *7*; α(O)=6.75×10⁻⁶ *10*; α(P)=3.57×10⁻⁷ *5*
654.37	9/2⁻	128.9 *5*	3.7 *11*	525.5	5/2⁻	E2		1.113 *22*	α(K)=0.568 *10*; α(L)=0.419 *10*; α(M)=0.1006 *23* α(N)=0.0227 *5*; α(O)=0.00274 *6*; α(P)=2.43×10⁻⁵ *5*
		296.34 *7*	100 *9*	358.03	(7/2⁺)	(E1)		0.0184	α(K)=0.01557 *22*; α(L)=0.00222 *4*; α(M)=0.000488 *7* α(N)=0.0001125 *16*; α(O)=1.592×10⁻⁵ *23*; α(P)=8.11×10⁻⁷ *12*
661.80	(11/2⁺)	303.76 *11*	100	358.03	(7/2⁺)	E2		0.0643	α(K)=0.0477 *7*; α(L)=0.01279 *18*; α(M)=0.00297 *5* α(N)=0.000677 *10*; α(O)=8.81×10⁻⁵ *13*; α(P)=2.48×10⁻⁶ *4*
749.26	17/2⁻	245.46 *3*	100 *4*	503.81	15/2⁻	M1+E2	+0.24 *4*	0.206 *4*	α(K)=0.173 *3*; α(L)=0.0261 *4*; α(M)=0.00578 *9* α(N)=0.001340 *19*; α(O)=0.000194 *3*; α(P)=1.057×10⁻⁵ *19* B(M1)(W.u.)=0.104 *12*; B(E2)(W.u.)=51 *17*
		393.75 *4*	99 *3*	355.52	13/2⁻	E2		0.0301	α(K)=0.0234 *4*; α(L)=0.00520 *8*; α(M)=0.001191 *17* α(N)=0.000273 *4*; α(O)=3.64×10⁻⁵ *6*; α(P)=1.266×10⁻⁶ *18* B(E2)(W.u.)=87 *10*
786.65	13/2⁺	220.10 *20*	73 *9*	566.55	11/2⁺	M1		0.284	α(K)=0.239 *4*; α(L)=0.0351 *5*; α(M)=0.00773 *11* α(N)=0.00180 *3*; α(O)=0.000262 *4*; α(P)=1.473×10⁻⁵ *21*
		412.1 *3*	100 *14*	374.53	9/2⁺	E2		0.0265	α(K)=0.0207 *3*; α(L)=0.00448 *7*; α(M)=0.001023 *15* α(N)=0.000234 *4*; α(O)=3.15×10⁻⁵ *5*; α(P)=1.129×10⁻⁶ *16*
832.53	15/2⁺	222.46 *13*	22.0 *17*	610.06	13/2⁺	M1		0.276	α(K)=0.232 *4*; α(L)=0.0340 *5*; α(M)=0.00751 *11* α(N)=0.001744 *25*; α(O)=0.000254 *4*; α(P)=1.431×10⁻⁵ *21*
		424.39 *10*	100 *6*	408.13	11/2⁺	E2		0.0244	α(K)=0.0192 *3*; α(L)=0.00407 *6*; α(M)=0.000929 *13* α(N)=0.000213 *3*; α(O)=2.87×10⁻⁵ *4*; α(P)=1.049×10⁻⁶ *15*

$^{157}_{67}Ho_{90}$-11

Adopted Levels, Gammas (continued)

γ(^{157}Ho) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ	E_f	J_f^π	Mult.[‡]	δ[#]	α[&]	Comments
832.53	15/2$^+$	477.03 *20*	38 *3*	355.52	13/2$^-$	E1		0.00595	α(K)=0.00505 *7*; α(L)=0.000703 *10*; α(M)=0.0001538 *22* α(N)=3.55×10^{-5} *5*; α(O)=5.09×10^{-6} *8*; α(P)=2.72×10^{-7} *4*
873.32	13/2$^-$	211.52 *9*	67 *4*	661.80	(11/2$^+$)	(E1)		0.0435	α(K)=0.0366 *6*; α(L)=0.00535 *8*; α(M)=0.001175 *17* α(N)=0.000270 *4*; α(O)=3.78×10^{-5} *6*; α(P)=1.84×10^{-6} *3*
		218.94 *6*	100 *5*	654.37	9/2$^-$	E2		0.181	α(K)=0.1230 *18*; α(L)=0.0446 *7*; α(M)=0.01051 *15* α(N)=0.00239 *4*; α(O)=0.000301 *5*; α(P)=5.96×10^{-6} *9*
		306.8 *3*	18.8 *20*	566.55	11/2$^+$	E1		0.01689	α(K)=0.01429 *21*; α(L)=0.00204 *3*; α(M)=0.000447 *7* α(N)=0.0001030 *15*; α(O)=1.460×10^{-5} *21*; α(P)=7.47×10^{-7} *11*
		517.87 *20*	42 *4*	355.52	13/2$^-$	M1		0.0294	α(K)=0.0249 *4*; α(L)=0.00356 *5*; α(M)=0.000782 *11* α(N)=0.000182 *3*; α(O)=2.65×10^{-5} *4*; α(P)=1.511×10^{-6} *22*
910.1	15/2$^-$	406.3 *4*	100 *24*	503.81	15/2$^-$	M1		0.0551	α(K)=0.0465 *7*; α(L)=0.00670 *10*; α(M)=0.001474 *21* α(N)=0.000343 *5*; α(O)=5.00×10^{-5} *8*; α(P)=2.84×10^{-6} *4*
		554.6[@b] *8*	76 *24*	355.52	13/2$^-$	M1		0.0247	α(K)=0.0209 *3*; α(L)=0.00298 *5*; α(M)=0.000655 *10* α(N)=0.0001522 *22*; α(O)=2.22×10^{-5} *4*; α(P)=1.267×10^{-6} *19*
		722.0[@b] *15*	24 *24*	188.07	11/2$^-$	E2		0.00647	α(K)=0.00534 *8*; α(L)=0.000883 *14*; α(M)=0.000197 *3* α(N)=4.55×10^{-5} *7*; α(O)=6.39×10^{-6} *10*; α(P)=3.04×10^{-7} *5*
927.98	19/2$^-$	178.72 *3*	34.7 *11*	749.26	17/2$^-$	M1+E2	+0.19 *4*	0.500 *8*	α(K)=0.418 *7*; α(L)=0.0639 *11*; α(M)=0.0142 *3* α(N)=0.00329 *6*; α(O)=0.000474 *8*; α(P)=2.57×10^{-5} *5* B(M1)(W.u.)=0.135 *23*; B(E2)(W.u.)=8.E+1 *4*
		424.18 *4*	100 *3*	503.81	15/2$^-$	E2		0.0245	α(K)=0.0192 *3*; α(L)=0.00408 *6*; α(M)=0.000931 *13* α(N)=0.000213 *3*; α(O)=2.87×10^{-5} *4*; α(P)=1.050×10^{-6} *15* B(E2)(W.u.)=86 *15*
1002.31	15/2$^+$	215.66 *16*	52 *5*	786.65	13/2$^+$	M1		0.300	α(K)=0.253 *4*; α(L)=0.0371 *6*; α(M)=0.00818 *12* α(N)=0.00190 *3*; α(O)=0.000277 *4*; α(P)=1.558×10^{-5} *22*
		435.76 *20*	100 *9*	566.55	11/2$^+$	E2		0.0227	α(K)=0.0179 *3*; α(L)=0.00374 *6*; α(M)=0.000853 *12* α(N)=0.000196 *3*; α(O)=2.64×10^{-5} *4*; α(P)=9.83×10^{-7} *14*
1070.41	17/2$^+$	237.9 *5*	5.7 *13*	832.53	15/2$^+$	M1		0.230	α(K)=0.193 *3*; α(L)=0.0283 *5*; α(M)=0.00624 *10* α(N)=0.001450 *22*; α(O)=0.000211 *4*; α(P)=1.190×10^{-5} *18*
		460.35 *6*	100 *5*	610.06	13/2$^+$	E2		0.0196	α(K)=0.01556 *22*; α(L)=0.00315 *5*; α(M)=0.000716 *10* α(N)=0.0001643 *23*; α(O)=2.23×10^{-5} *4*; α(P)=8.59×10^{-7} *12*
		566.6 *5*	28 *3*	503.81	15/2$^-$	E1		0.00408	α(K)=0.00347 *5*; α(L)=0.000477 *7*; α(M)=0.0001043 *15* α(N)=2.41×10^{-5} *4*; α(O)=3.47×10^{-6} *5*; α(P)=1.88×10^{-7} *3*
1179.55	17/2$^-$	306.23 *7*	100	873.32	13/2$^-$	E2		0.0627	α(K)=0.0467 *7*; α(L)=0.01242 *18*; α(M)=0.00288 *4* α(N)=0.000657 *10*; α(O)=8.56×10^{-5} *12*; α(P)=2.42×10^{-6} *4*
1195.92	5/2$^-$,7/2,9/2$^+$	1129.0 *2*	57 *19*	66.911	7/2$^+$				

$^{157}_{67}Ho_{90}$-12

Adopted Levels, Gammas (continued)

γ(^{157}Ho) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ	E_f	J_f^π	Mult.[‡]	δ[#]	α[&]	Comments
1195.92	5/2$^-$,7/2,9/2$^+$	1142.8 *2*	90 *24*	53.048	5/2$^+$				
		1196.0 *2*	100 *19*	0	7/2$^-$				
1203.37		1026.4 *2*	100 *27*	177.07					
		1028.7 *2*	73 *36*	174.55	(3/2$^+$)				
1238.04	21/2$^-$	310.05 *4*	65.8 *21*	927.98	19/2$^-$	M1+E2	+0.24 *5*	0.1095 *20*	α(K)=0.0920 *18*; α(L)=0.01367 *20*; α(M)=0.00302 *5* α(N)=0.000701 *10*; α(O)=0.0001016 *15*; α(P)=5.62×10^{-6} *12* B(M1)(W.u.)=0.16 *5*; B(E2)(W.u.)=50 *24*
		488.77 *4*	100 *3*	749.26	17/2$^-$	E2		0.01675	B(E2)(W.u.)=1.4×10^2 *4* α(K)=0.01338 *19*; α(L)=0.00262 *4*; α(M)=0.000594 *9* α(N)=0.0001365 *20*; α(O)=1.86×10^{-5} *3*; α(P)=7.43×10^{-7} *11*
1275.9	(17/2$^+$)	489.3 *6*	100	786.65	13/2$^+$	(E2)		0.01670	α(K)=0.01334 *20*; α(L)=0.00261 *4*; α(M)=0.000592 *9* α(N)=0.0001360 *20*; α(O)=1.85×10^{-5} *3*; α(P)=7.41×10^{-7} *11*
1327.80	19/2$^+$	257.39 *17*	12.5 *10*	1070.41	17/2$^+$	M1		0.185	α(K)=0.1562 *22*; α(L)=0.0228 *4*; α(M)=0.00503 *7* α(N)=0.001168 *17*; α(O)=0.0001702 *24*; α(P)=9.60×10^{-6} *14*
		495.27 *7*	100 *4*	832.53	15/2$^+$	E2		0.01618	α(K)=0.01294 *19*; α(L)=0.00252 *4*; α(M)=0.000571 *8* α(N)=0.0001311 *19*; α(O)=1.79×10^{-5} *3*; α(P)=7.19×10^{-7} *10*
		578.5 *5*	19.0 *19*	749.26	17/2$^-$	E1		0.00390	α(K)=0.00332 *5*; α(L)=0.000456 *7*; α(M)=9.97×10^{-5} *14* α(N)=2.30×10^{-5} *4*; α(O)=3.32×10^{-6} *5*; α(P)=1.80×10^{-7} *3*
1342.43	19/2$^-$	414.4 *3*	100 *13*	927.98	19/2$^-$	M1		0.0523	α(K)=0.0442 *7*; α(L)=0.00636 *9*; α(M)=0.001400 *20* α(N)=0.000325 *5*; α(O)=4.74×10^{-5} *7*; α(P)=2.69×10^{-6} *4*
		432.4 *3*	93 *13*	910.1	15/2$^-$	E2		0.0232	α(K)=0.0183 *3*; α(L)=0.00383 *6*; α(M)=0.000875 *13* α(N)=0.000201 *3*; α(O)=2.70×10^{-5} *4*; α(P)=1.002×10^{-6} *15*
		593.2 *7*	80 *16*	749.26	17/2$^-$	M1		0.0208	α(K)=0.0176 *3*; α(L)=0.00251 *4*; α(M)=0.000551 *8* α(N)=0.0001280 *19*; α(O)=1.87×10^{-5} *3*; α(P)=1.068×10^{-6} *16*
		838.6[@b] *9*	116 *34*	503.81	15/2$^-$	E2		0.00464	α(K)=0.00386 *6*; α(L)=0.000609 *9*; α(M)=0.0001354 *20* α(N)=3.13×10^{-5} *5*; α(O)=4.43×10^{-6} *7*; α(P)=2.21×10^{-7} *4*
1403.41		1226.2 *5*	≤35	177.07					
		1228.9 *3*	100 *24*	174.55	(3/2$^+$)				
		1403.4 *4*	59	0	7/2$^-$				
1440.72	23/2$^-$	202.69 *4*	20.4 *7*	1238.04	21/2$^-$	M1+E2	+0.15 *3*	0.353	α(K)=0.297 *5*; α(L)=0.0444 *7*; α(M)=0.00982 *15* α(N)=0.00228 *4*; α(O)=0.000330 *5*; α(P)=1.82×10^{-5} *3* B(M1)(W.u.)=0.17 *5*; B(E2)(W.u.)=48 *23*
		512.74 *3*	100 *3*	927.98	19/2$^-$	E2		0.01480	B(E2)(W.u.)=1.0×10^2 *3*

$^{157}_{67}Ho_{90}$-13

Adopted Levels, Gammas (continued)

γ(^{157}Ho) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ	E_f	J_f^π	Mult.[‡]	δ[#]	α[&]	Comments
									α(K)=0.01188 *17*; α(L)=0.00227 *4*; α(M)=0.000514 *8* α(N)=0.0001181 *17*; α(O)=1.616×10^{-5} *23*; α(P)=6.62×10^{-7} *10*
1487.21		1310.2 *2*	100 *36*	177.07					
		1312.5 *3*	64 *27*	174.55	(3/2$^+$)				
1489.1	19/2$^+$	486.81 *20*	100	1002.31	15/2$^+$	E2		0.01692	α(K)=0.01351 *19*; α(L)=0.00265 *4*; α(M)=0.000602 *9* α(N)=0.0001382 *20*; α(O)=1.88×10^{-5} *3*; α(P)=7.50×10^{-7} *11*
1569.49	21/2$^-$	389.94 *7*	100	1179.55	17/2$^-$	E2		0.0309	α(K)=0.0240 *4*; α(L)=0.00537 *8*; α(M)=0.001230 *18* α(N)=0.000282 *4*; α(O)=3.76×10^{-5} *6*; α(P)=1.297×10^{-6} *19*
1593.17	21/2$^+$	265.37 *22*	13.2 *12*	1327.80	19/2$^+$	M1		0.1707	α(K)=0.1438 *21*; α(L)=0.0210 *3*; α(M)=0.00463 *7* α(N)=0.001075 *16*; α(O)=0.0001566 *23*; α(P)=8.84×10^{-6} *13*
		522.76 *7*	100 *5*	1070.41	17/2$^+$	E2		0.01408	α(K)=0.01133 *16*; α(L)=0.00214 *3*; α(M)=0.000485 *7* α(N)=0.0001114 *16*; α(O)=1.528×10^{-5} *22*; α(P)=6.33×10^{-7} *9*
		665.2 *3*	36.4 *29*	927.98	19/2$^-$	E1		0.00291	α(K)=0.00247 *4*; α(L)=0.000338 *5*; α(M)=7.38×10^{-5} *11* α(N)=1.707×10^{-5} *24*; α(O)=2.46×10^{-6} *4*; α(P)=1.354×10^{-7} *19*
1695.56	19/2$^+$	767.6 *7*	64 *9*	927.98	19/2$^-$	E1		0.00217	α(K)=0.00185 *3*; α(L)=0.000251 *4*; α(M)=5.48×10^{-5} *8* α(N)=1.268×10^{-5} *18*; α(O)=1.83×10^{-6} *3*; α(P)=1.018×10^{-7} *15*
		946.3 *4*	100 *11*	749.26	17/2$^-$	E1		1.45×10^{-3}	α(K)=0.001238 *18*; α(L)=0.0001659 *24*; α(M)=3.62×10^{-5} *5* α(N)=8.38×10^{-6} *12*; α(O)=1.216×10^{-6} *17*; α(P)=6.83×10^{-8} *10*
1799.38	25/2$^-$	358.66 *4*	51.3 *17*	1440.72	23/2$^-$	M1+E2	+0.18 *4*	0.0752 *12*	α(K)=0.0634 *11*; α(L)=0.00925 *14*; α(M)=0.00204 *3* α(N)=0.000474 *7*; α(O)=6.89×10^{-5} *10*; α(P)=3.87×10^{-6} *7* B(M1)(W.u.)=0.10 *5*; B(E2)(W.u.)=13 *9*
		561.34 *4*	100 *3*	1238.04	21/2$^-$	E2		0.01177	B(E2)(W.u.)=9.E+1 *4* α(K)=0.00953 *14*; α(L)=0.001744 *25*; α(M)=0.000393 *6* α(N)=9.05×10^{-5} *13*; α(O)=1.248×10^{-5} *18*; α(P)=5.35×10^{-7} *8*
1822.0	(21/2$^+$)	546.1 *5*	100	1275.9	(17/2$^+$)	(E2)		0.01261	α(K)=0.01018 *15*; α(L)=0.00189 *3*; α(M)=0.000426 *6* α(N)=9.80×10^{-5} *14*; α(O)=1.349×10^{-5} *20*; α(P)=5.71×10^{-7} *8*
1852.09	23/2$^-$	411.4 *3*	31 *4*	1440.72	23/2$^-$	M1		0.0533	α(K)=0.0450 *7*; α(L)=0.00648 *10*; α(M)=0.001427 *21* α(N)=0.000331 *5*; α(O)=4.83×10^{-5} *7*; α(P)=2.75×10^{-6} *4*
		509.66 *19*	100 *8*	1342.43	19/2$^-$	E2		0.01503	α(K)=0.01206 *17*; α(L)=0.00231 *4*; α(M)=0.000523 *8*

$^{157}_{67}Ho_{90}$-14

Adopted Levels, Gammas (continued)

γ(^{157}Ho) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ	E_f	J_f^π	Mult.[‡]	δ[#]	α[&]	Comments
									α(N)=0.0001202 *17*; α(O)=1.645×10^{-5} *23*; α(P)=6.72×10^{-7} *10*
1852.09	23/2$^-$	614.0[@b] *12*	20 *8*	1238.04	21/2$^-$	M1		0.0191	α(K)=0.01616 *24*; α(L)=0.00230 *4*; α(M)=0.000505 *8* α(N)=0.0001172 *18*; α(O)=1.71×10^{-5} *3*; α(P)=9.78×10^{-7} *15*
		924.1[@b] *13*	35 *10*	927.98	19/2$^-$	E2		0.00377	α(K)=0.00315 *5*; α(L)=0.000484 *7*; α(M)=0.0001074 *16* α(N)=2.48×10^{-5} *4*; α(O)=3.54×10^{-6} *5*; α(P)=1.80×10^{-7} *3*
1861.8	(19/2$^+$)	1112.5 *8*	100	749.26	17/2$^-$	(E1)		1.08×10^{-3} *2*	α(K)=0.000918 *13*; α(L)=0.0001223 *18*; α(M)=2.66×10^{-5} *4* α(N)=6.17×10^{-6} *9*; α(O)=8.97×10^{-7} *13*; α(P)=5.09×10^{-8} *8*; α(IPF)=2.51×10^{-6} *8*
1876.32	23/2$^+$	283.15 *25*	10.8 *12*	1593.17	21/2$^+$	M1		0.1433	α(K)=0.1208 *18*; α(L)=0.01760 *25*; α(M)=0.00388 *6* α(N)=0.000901 *13*; α(O)=0.0001313 *19*; α(P)=7.42×10^{-6} *11*
		548.52 *8*	100 *4*	1327.80	19/2$^+$	E2		0.01247	α(K)=0.01008 *15*; α(L)=0.00186 *3*; α(M)=0.000421 *6* α(N)=9.67×10^{-5} *14*; α(O)=1.332×10^{-5} *19*; α(P)=5.65×10^{-7} *8*
		638.3 *6*	21.2 *26*	1238.04	21/2$^-$	E1		0.00317	α(K)=0.00269 *4*; α(L)=0.000369 *6*; α(M)=8.06×10^{-5} *12* α(N)=1.86×10^{-5} *3*; α(O)=2.69×10^{-6} *4*; α(P)=1.472×10^{-7} *21*
2022.3	23/2$^+$	533.2 *3*	100	1489.1	19/2$^+$	E2		0.01339	α(K)=0.01079 *16*; α(L)=0.00202 *3*; α(M)=0.000457 *7* α(N)=0.0001051 *15*; α(O)=1.444×10^{-5} *21*; α(P)=6.04×10^{-7} *9*
2023.60	27/2$^-$	224.22 *4*	15.2 *5*	1799.38	25/2$^-$	M1+E2	+0.10 *4*	0.269	α(K)=0.226 *4*; α(L)=0.0334 *5*; α(M)=0.00737 *11* α(N)=0.001711 *25*; α(O)=0.000249 *4*; α(P)=1.392×10^{-5} *21* B(M1)(W.u.)=0.116 *18*; B(E2)(W.u.)=12 *10*
		582.88 *4*	100 *3*	1440.72	23/2$^-$	E2		0.01073	B(E2)(W.u.)=66 *10* α(K)=0.00872 *13*; α(L)=0.001567 *22*; α(M)=0.000353 *5* α(N)=8.12×10^{-5} *12*; α(O)=1.124×10^{-5} *16*; α(P)=4.91×10^{-7} *7*
2036.70	25/2$^-$	467.21 *7*	100	1569.49	21/2$^-$	E2		0.0189	α(K)=0.01499 *21*; α(L)=0.00301 *5*; α(M)=0.000684 *10* α(N)=0.0001569 *22*; α(O)=2.13×10^{-5} *3*; α(P)=8.28×10^{-7} *12*
2055.77	(21/2$^+$)	1127.8 *7*	100	927.98	19/2$^-$	(E1)		1.05×10^{-3}	α(K)=0.000896 *13*; α(L)=0.0001192 *17*; α(M)=2.60×10^{-5} *4* α(N)=6.02×10^{-6} *9*; α(O)=8.75×10^{-7} *13*; α(P)=4.96×10^{-8} *7*; α(IPF)=4.13×10^{-6} *11*
2156.91	(23/2$^+$)	918.9 *4*	100	1238.04	21/2$^-$	(E1)		1.53×10^{-3}	α(K)=0.001308 *19*; α(L)=0.0001756 *25*; α(M)=3.83×10^{-5} *6* α(N)=8.87×10^{-6} *13*; α(O)=1.286×10^{-6} *18*; α(P)=7.22×10^{-8} *11*

$^{157}_{67}Ho_{90}$-15

Adopted Levels, Gammas (continued)

γ(^{157}Ho) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ	E_f	J_f^π	Mult.[‡]	α[&]	Comments
2160.08	25/2$^+$	283.8 *3*	8.6 *10*	1876.32	23/2$^+$	M1	0.1424	α(K)=0.1200 *18*; α(L)=0.01749 *25*; α(M)=0.00385 *6* α(N)=0.000895 *13*; α(O)=0.0001305 *19*; α(P)=7.37×10^{-6} *11*
		566.90 *11*	100 *4*	1593.17	21/2$^+$	E2	0.01149	α(K)=0.00931 *13*; α(L)=0.001695 *24*; α(M)=0.000382 *6* α(N)=8.79×10^{-5} *13*; α(O)=1.214×10^{-5} *17*; α(P)=5.23×10^{-7} *8*
		719.4 *3*	28.7 *22*	1440.72	23/2$^-$	E1	0.00248	α(K)=0.00211 *3*; α(L)=0.000287 *4*; α(M)=6.26×10^{-5} *9* α(N)=1.449×10^{-5} *21*; α(O)=2.09×10^{-6} *3*; α(P)=1.157×10^{-7} *17*
2270.27	23/2$^+$	214.50 *13*	31 *3*	2055.77	(21/2$^+$)	(M1)	0.305	α(K)=0.257 *4*; α(L)=0.0376 *6*; α(M)=0.00830 *12* α(N)=0.00193 *3*; α(O)=0.000281 *4*; α(P)=1.582×10^{-5} *23*
		408.47 *24*	30 *3*	1861.8	(19/2$^+$)	(E2)	0.0272	α(K)=0.0212 *3*; α(L)=0.00461 *7*; α(M)=0.001054 *15* α(N)=0.000241 *4*; α(O)=3.24×10^{-5} *5*; α(P)=1.154×10^{-6} *17*
		470.9 *3*	34 *4*	1799.38	25/2$^-$	E1	0.00613	α(K)=0.00520 *8*; α(L)=0.000724 *11*; α(M)=0.0001584 *23* α(N)=3.66×10^{-5} *6*; α(O)=5.24×10^{-6} *8*; α(P)=2.80×10^{-7} *4*
		574.71 *13*	100 *9*	1695.56	19/2$^+$	E2	0.01111	α(K)=0.00901 *13*; α(L)=0.001631 *23*; α(M)=0.000367 *6* α(N)=8.46×10^{-5} *12*; α(O)=1.169×10^{-5} *17*; α(P)=5.07×10^{-7} *8*
		829.5 *5*	38 *5*	1440.72	23/2$^-$	E1	0.00187	α(K)=0.001592 *23*; α(L)=0.000215 *3*; α(M)=4.69×10^{-5} *7* α(N)=1.085×10^{-5} *16*; α(O)=1.571×10^{-6} *22*; α(P)=8.76×10^{-8} *13*
		942.5 *4*	70 *7*	1327.80	19/2$^+$	E2	0.00362	α(K)=0.00303 *5*; α(L)=0.000463 *7*; α(M)=0.0001025 *15* α(N)=2.37×10^{-5} *4*; α(O)=3.38×10^{-6} *5*; α(P)=1.733×10^{-7} *25*
		1032.2[@b] *10*	26 *7*	1238.04	21/2$^-$	E1	1.23×10^{-3}	α(K)=0.001053 *15*; α(L)=0.0001406 *20*; α(M)=3.07×10^{-5} *5* α(N)=7.10×10^{-6} *10*; α(O)=1.031×10^{-6} *15*; α(P)=5.82×10^{-8} *9*
2367.56	25/2$^+$	210.7 *4*	9.9 *15*	2156.91	(23/2$^+$)	(M1)	0.320	α(K)=0.269 *4*; α(L)=0.0396 *6*; α(M)=0.00873 *13* α(N)=0.00203 *3*; α(O)=0.000295 *5*; α(P)=1.662×10^{-5} *25*
		774.4 *9*	24 *3*	1593.17	21/2$^+$	E2	0.00553	α(K)=0.00458 *7*; α(L)=0.000740 *11*; α(M)=0.0001650 *24* α(N)=3.81×10^{-5} *6*; α(O)=5.37×10^{-6} *8*; α(P)=2.61×10^{-7} *4*
		926.85 *25*	100 *8*	1440.72	23/2$^-$	E1	1.51×10^{-3}	α(K)=0.001287 *18*; α(L)=0.0001727 *25*; α(M)=3.77×10^{-5} *6* α(N)=8.72×10^{-6} *13*; α(O)=1.265×10^{-6} *18*; α(P)=7.10×10^{-8} *10*
2369.53	25/2$^+$	99.26 *6*	100	2270.27	23/2$^+$	M1	2.67	α(K)=2.24 *4*; α(L)=0.333 *5*; α(M)=0.0735 *11* α(N)=0.01708 *24*; α(O)=0.00248 *4*; α(P)=0.0001390 *20*
2405.39	27/2$^-$	381.8 *6*	14 *3*	2023.60	27/2$^-$	M1	0.0648	α(K)=0.0547 *8*; α(L)=0.00790 *12*; α(M)=0.00174 *3* α(N)=0.000404 *6*; α(O)=5.89×10^{-5} *9*; α(P)=3.34×10^{-6} *5*
		553.31 *20*	100 *8*	1852.09	23/2$^-$	E2	0.01220	α(K)=0.00987 *14*; α(L)=0.00182 *3*; α(M)=0.000410 *6* α(N)=9.43×10^{-5} *14*; α(O)=1.300×10^{-5} *19*; α(P)=5.54×10^{-7} *8*
		606.0[@b] *4*	63 *12*	1799.38	25/2$^-$	M1	0.0197	α(K)=0.01671 *24*; α(L)=0.00237 *4*; α(M)=0.000522 *8* α(N)=0.0001212 *17*; α(O)=1.770×10^{-5} *25*; α(P)=1.011×10^{-6} *15*
		964.7 *7*	63 *8*	1440.72	23/2$^-$	E2	0.00345	α(K)=0.00288 *4*; α(L)=0.000439 *7*; α(M)=9.71×10^{-5} *14* α(N)=2.25×10^{-5} *4*; α(O)=3.21×10^{-6} *5*; α(P)=1.652×10^{-7} *24*
2412.70	29/2$^-$	389.10 *5*	44.2 *15*	2023.60	27/2$^-$	M1	0.0616	B(M1)(W.u.)=0.07 *4* α(K)=0.0520 *8*; α(L)=0.00751 *11*; α(M)=0.001653 *24* α(N)=0.000384 *6*; α(O)=5.60×10^{-5} *8*; α(P)=3.18×10^{-6} *5*
		613.32 *5*	100 *3*	1799.38	25/2$^-$	E2	0.00948	B(E2)(W.u.)=6.E+1 *3* α(K)=0.00773 *11*; α(L)=0.001361 *19*; α(M)=0.000306 *5* α(N)=7.04×10^{-5} *10*; α(O)=9.78×10^{-6} *14*; α(P)=4.37×10^{-7} *7*

$^{157}_{67}Ho_{90}$-16

Adopted Levels, Gammas (continued)

γ(^{157}Ho) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ	E_f	J_f^π	Mult.[‡]	δ[#]	α[&]	Comments
2453.92	27/2$^+$	293.85 *20*	13.6 *12*	2160.08	25/2$^+$	M1		0.1297	α(K)=0.1093 *16*; α(L)=0.01591 *23*; α(M)=0.00351 *5* α(N)=0.000815 *12*; α(O)=0.0001187 *17*; α(P)=6.71×10^{-6} *10*
		577.60 *11*	100 *5*	1876.32	23/2$^+$	E2		0.01097	α(K)=0.00891 *13*; α(L)=0.001608 *23*; α(M)=0.000362 *5* α(N)=8.34×10^{-5} *12*; α(O)=1.153×10^{-5} *17*; α(P)=5.01×10^{-7} *7*
		654.5 *4*	20.4 *19*	1799.38	25/2$^-$	E1		0.00300	α(K)=0.00256 *4*; α(L)=0.000349 *5*; α(M)=7.64×10^{-5} *11* α(N)=1.766×10^{-5} *25*; α(O)=2.55×10^{-6} *4*; α(P)=1.399×10^{-7} *20*
2513.52	27/2$^+$	143.99 *5*	100 *5*	2369.53	25/2$^+$	M1		0.925	α(K)=0.778 *11*; α(L)=0.1150 *17*; α(M)=0.0254 *4* α(N)=0.00589 *9*; α(O)=0.000857 *12*; α(P)=4.81×10^{-5} *7*
		243.24 *14*	42 *3*	2270.27	23/2$^+$	E2		0.1286	α(K)=0.0904 *13*; α(L)=0.0295 *5*; α(M)=0.00691 *10* α(N)=0.001572 *23*; α(O)=0.000200 *3*; α(P)=4.48×10^{-6} *7*
2554.72	27/2$^+$	187.16 *8*	86 *6*	2367.56	25/2$^+$	M1		0.444	α(K)=0.374 *6*; α(L)=0.0550 *8*; α(M)=0.01213 *17* α(N)=0.00282 *4*; α(O)=0.000410 *6*; α(P)=2.31×10^{-5} *4*
		397.8 *4*	32 *4*	2156.91	(23/2$^+$)	(E2)		0.0292	α(K)=0.0228 *4*; α(L)=0.00502 *8*; α(M)=0.001150 *17* α(N)=0.000263 *4*; α(O)=3.52×10^{-5} *5*; α(P)=1.234×10^{-6} *18*
		532.4[b] *5*	31.6 *26*	2022.3	23/2$^+$	E2		0.01344	α(K)=0.01083 *16*; α(L)=0.00203 *3*; α(M)=0.000459 *7* α(N)=0.0001056 *15*; α(O)=1.450×10^{-5} *21*; α(P)=6.06×10^{-7} *9*
		755.3 *3*	100 *8*	1799.38	25/2$^-$	E1		0.00224	α(K)=0.00191 *3*; α(L)=0.000259 *4*; α(M)=5.66×10^{-5} *8* α(N)=1.311×10^{-5} *19*; α(O)=1.89×10^{-6} *3*; α(P)=1.051×10^{-7} *15*
2573.54	29/2$^-$	536.84 *11*	100	2036.70	25/2$^-$	E2		0.01316	α(K)=0.01062 *15*; α(L)=0.00198 *3*; α(M)=0.000448 *7* α(N)=0.0001030 *15*; α(O)=1.416×10^{-5} *20*; α(P)=5.94×10^{-7} *9*
2589.6	(27/2$^+$)	567.3 *4*	100	2022.3	23/2$^+$	(E2)		0.01147	α(K)=0.00929 *14*; α(L)=0.001692 *24*; α(M)=0.000381 *6* α(N)=8.78×10^{-5} *13*; α(O)=1.212×10^{-5} *18*; α(P)=5.22×10^{-7} *8*
2654.08	31/2$^-$	241.38 *4*	13.6 *5*	2412.70	29/2$^-$	M1+E2	+0.11 *3*	0.220 *4*	α(K)=0.185 *3*; α(L)=0.0272 *4*; α(M)=0.00601 *9* α(N)=0.001396 *20*; α(O)=0.000203 *3*; α(P)=1.136×10^{-5} *17* B(M1)(W.u.)=0.26 *22*; B(E2)(W.u.)=3.E+1 *3*
		630.48 *4*	100 *3*	2023.60	27/2$^-$	E2		0.00887	B(E2)(W.u.)=1.4×10^2 *12* α(K)=0.00725 *11*; α(L)=0.001262 *18*; α(M)=0.000283 *4* α(N)=6.53×10^{-5} *10*; α(O)=9.09×10^{-6} *13*; α(P)=4.10×10^{-7} *6*
2692.78	29/2$^+$	179.27 *8*	55 *4*	2513.52	27/2$^+$	M1		0.500	α(K)=0.421 *6*; α(L)=0.0620 *9*; α(M)=0.01368 *20* α(N)=0.00318 *5*; α(O)=0.000463 *7*; α(P)=2.60×10^{-5} *4*
		323.26 *7*	100 *5*	2369.53	25/2$^+$	E2		0.0533	α(K)=0.0401 *6*; α(L)=0.01023 *15*; α(M)=0.00237 *4* α(N)=0.000540 *8*; α(O)=7.08×10^{-5} *10*; α(P)=2.10×10^{-6} *3*
2696.69	29/2$^-$	291.30 *13*	97 *8*	2405.39	27/2$^-$	M1		0.1328	α(K)=0.1119 *16*; α(L)=0.01629 *23*; α(M)=0.00359 *5* α(N)=0.000834 *12*; α(O)=0.0001216 *17*; α(P)=6.87×10^{-6} *10*
		897.3 *6*	100 *11*	1799.38	25/2$^-$	E2		0.00401	α(K)=0.00335 *5*; α(L)=0.000519 *8*; α(M)=0.0001151 *17* α(N)=2.66×10^{-5} *4*; α(O)=3.78×10^{-6} *6*; α(P)=1.92×10^{-7} *3*
2720.93	29/2$^+$	166.20 *10*	32 *3*	2554.72	27/2$^+$	M1		0.618	α(K)=0.520 *8*; α(L)=0.0767 *11*; α(M)=0.01692 *24* α(N)=0.00393 *6*; α(O)=0.000572 *8*; α(P)=3.21×10^{-5} *5*
		267.00 *16*	19.8 *14*	2453.92	27/2$^+$	M1		0.1679	α(K)=0.1414 *20*; α(L)=0.0206 *3*; α(M)=0.00455 *7* α(N)=0.001057 *15*; α(O)=0.0001540 *22*; α(P)=8.69×10^{-6} *13*
		353.4 *3*	16.9 *20*	2367.56	25/2$^+$	E2		0.0410	α(K)=0.0313 *5*; α(L)=0.00749 *11*; α(M)=0.001724 *25* α(N)=0.000394 *6*; α(O)=5.21×10^{-5} *8*; α(P)=1.668×10^{-6} *24*

$^{157}_{67}Ho_{90}$-17

Adopted Levels, Gammas (continued)

γ(^{157}Ho) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ	E_f	J_f^π	Mult.[‡]	δ[#]	α[&]	Comments
2720.93	29/2$^+$	560.85 *13*	100 *6*	2160.08	25/2$^+$	E2		0.01180	α(K)=0.00955 *14*; α(L)=0.001748 *25*; α(M)=0.000394 *6* α(N)=9.07×10^{-5} *13*; α(O)=1.251×10^{-5} *18*; α(P)=5.36×10^{-7} *8*
		697.33 *19*	78 *5*	2023.60	27/2$^-$	E1		0.00264	α(K)=0.00225 *4*; α(L)=0.000306 *5*; α(M)=6.68×10^{-5} *10* α(N)=1.546×10^{-5} *22*; α(O)=2.23×10^{-6} *4*; α(P)=1.231×10^{-7} *18*
2740.28	29/2$^+$	286.4 *4*	9.3 *14*	2453.92	27/2$^+$	M1		0.1390	α(K)=0.1171 *17*; α(L)=0.01706 *25*; α(M)=0.00376 *6* α(N)=0.000873 *13*; α(O)=0.0001273 *19*; α(P)=7.19×10^{-6} *11*
		580.20 *14*	100 *7*	2160.08	25/2$^+$	E2		0.01085	α(K)=0.00881 *13*; α(L)=0.001588 *23*; α(M)=0.000358 *5* α(N)=8.23×10^{-5} *12*; α(O)=1.138×10^{-5} *16*; α(P)=4.96×10^{-7} *7*
		716.7 *7*	19 *3*	2023.60	27/2$^-$	E1		0.00249	α(K)=0.00213 *3*; α(L)=0.000289 *4*; α(M)=6.31×10^{-5} *9* α(N)=1.460×10^{-5} *21*; α(O)=2.11×10^{-6} *3*; α(P)=1.166×10^{-7} *17*
2852.84	31/2$^-$	156.15 *11*	25.7 *21*	2696.69	29/2$^-$	M1		0.736	α(K)=0.619 *9*; α(L)=0.0914 *13*; α(M)=0.0202 *3* α(N)=0.00469 *7*; α(O)=0.000682 *10*; α(P)=3.83×10^{-5} *6*
		440.1 *3*	29 *3*	2412.70	29/2$^-$	M1		0.0447	α(K)=0.0378 *6*; α(L)=0.00543 *8*; α(M)=0.001195 *17* α(N)=0.000278 *4*; α(O)=4.05×10^{-5} *6*; α(P)=2.30×10^{-6} *4*
		447.45 *14*	60 *4*	2405.39	27/2$^-$	E2		0.0212	α(K)=0.01674 *24*; α(L)=0.00344 *5*; α(M)=0.000784 *11* α(N)=0.000180 *3*; α(O)=2.43×10^{-5} *4*; α(P)=9.20×10^{-7} *13*
		829.25 *20*	100 *6*	2023.60	27/2$^-$	E2		0.00476	α(K)=0.00395 *6*; α(L)=0.000626 *9*; α(M)=0.0001392 *20* α(N)=3.22×10^{-5} *5*; α(O)=4.55×10^{-6} *7*; α(P)=2.26×10^{-7} *4*
2903.47	31/2$^+$	210.68 *9*	30.2 *16*	2692.78	29/2$^+$	M1		0.320	α(K)=0.270 *4*; α(L)=0.0396 *6*; α(M)=0.00873 *13* α(N)=0.00203 *3*; α(O)=0.000295 *5*; α(P)=1.662×10^{-5} *24*
		389.95 *7*	100 *4*	2513.52	27/2$^+$	E2		0.0309	α(K)=0.0240 *4*; α(L)=0.00537 *8*; α(M)=0.001230 *18* α(N)=0.000282 *4*; α(O)=3.76×10^{-5} *6*; α(P)=1.297×10^{-6} *19*
2927.89	31/2$^+$	187.62[@] *25*	10.1 *20*	2740.28	29/2$^+$	M1		0.441	α(K)=0.371 *6*; α(L)=0.0546 *8*; α(M)=0.01205 *18* α(N)=0.00280 *4*; α(O)=0.000407 *6*; α(P)=2.29×10^{-5} *4*
		206.97 *5*	100 *4*	2720.93	29/2$^+$	M1		0.336	α(K)=0.283 *4*; α(L)=0.0416 *6*; α(M)=0.00917 *13* α(N)=0.00213 *3*; α(O)=0.000310 *5*; α(P)=1.746×10^{-5} *25*
		373.17 *7*	81 *3*	2554.72	27/2$^+$	E2		0.0350	α(K)=0.0270 *4*; α(L)=0.00622 *9*; α(M)=0.001428 *20* α(N)=0.000327 *5*; α(O)=4.34×10^{-5} *6*; α(P)=1.451×10^{-6} *21*
2995.75	31/2$^+$	255.47 *21*	14.3 *11*	2740.28	29/2$^+$	M1		0.189	α(K)=0.1594 *23*; α(L)=0.0233 *4*; α(M)=0.00513 *8* α(N)=0.001192 *17*; α(O)=0.0001737 *25*; α(P)=9.80×10^{-6} *14*
		541.82 *9*	100 *5*	2453.92	27/2$^+$	E2		0.01286	α(K)=0.01038 *15*; α(L)=0.00193 *3*; α(M)=0.000436 *7* α(N)=0.0001003 *14*; α(O)=1.379×10^{-5} *20*; α(P)=5.81×10^{-7} *9*
3015.56	33/2$^-$	162.72 *7*	10.0 *5*	2852.84	31/2$^-$	M1		0.656	B(M1)(W.u.)>0.35 α(K)=0.552 *8*; α(L)=0.0814 *12*; α(M)=0.0180 *3* α(N)=0.00417 *6*; α(O)=0.000607 *9*; α(P)=3.41×10^{-5} *5*
		318.9 *3*	4.8 *4*	2696.69	29/2$^-$	E2		0.0555	B(E2)(W.u.)>1.1×10^2 α(K)=0.0416 *6*; α(L)=0.01074 *16*; α(M)=0.00248 *4* α(N)=0.000567 *9*; α(O)=7.42×10^{-5} *11*; α(P)=2.18×10^{-6} *3*
		361.48 *5*	80 *3*	2654.08	31/2$^-$	M1+E2	+0.12 *2*	0.0743	α(K)=0.0626 *9*; α(L)=0.00910 *13*; α(M)=0.00200 *3* α(N)=0.000466 *7*; α(O)=6.78×10^{-5} *10*; α(P)=3.83×10^{-6} *6* B(M1)(W.u.)>0.25; B(E2)(W.u.)>9.5
		602.87 *5*	100 *3*	2412.70	29/2$^-$	E2		0.00988	B(E2)(W.u.)>97

$^{157}_{67}Ho_{90}$-18

Adopted Levels, Gammas (continued)

γ(^{157}Ho) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ	E_f	J_f^π	Mult.[‡]	δ[#]	α[&]	Comments
									α(K)=0.00805 *12*; α(L)=0.001427 *20*; α(M)=0.000321 *5* α(N)=7.39×10^{-5} *11*; α(O)=1.025×10^{-5} *15*; α(P)=4.54×10^{-7} *7*
3076.66	33/2$^-$	223.8 *4*	7.0 *13*	2852.84	31/2$^-$	M1		0.271	α(K)=0.228 *4*; α(L)=0.0335 *5*; α(M)=0.00738 *11* α(N)=0.00172 *3*; α(O)=0.000250 *4*; α(P)=1.407×10^{-5} *21*
		380.0 *12*	3.9 *11*	2696.69	29/2$^-$	E2		0.0333 *6*	α(K)=0.0257 *5*; α(L)=0.00585 *11*; α(M)=0.001342 *24* α(N)=0.000307 *6*; α(O)=4.09×10^{-5} *8*; α(P)=1.385×10^{-6} *23*
		422.57 *21*	28.4 *22*	2654.08	31/2$^-$	M1		0.0497	α(K)=0.0420 *6*; α(L)=0.00604 *9*; α(M)=0.001329 *19* α(N)=0.000309 *5*; α(O)=4.51×10^{-5} *7*; α(P)=2.56×10^{-6} *4*
		663.96 *10*	100 *4*	2412.70	29/2$^-$	E2		0.00785	α(K)=0.00644 *9*; α(L)=0.001099 *16*; α(M)=0.000246 *4* α(N)=5.67×10^{-5} *8*; α(O)=7.93×10^{-6} *12*; α(P)=3.65×10^{-7} *6*
3142.44	33/2$^+$	238.99 *20*	14.4 *13*	2903.47	31/2$^+$	M1		0.227	α(K)=0.191 *3*; α(L)=0.0279 *4*; α(M)=0.00616 *9* α(N)=0.001432 *21*; α(O)=0.000208 *3*; α(P)=1.176×10^{-5} *17*
		449.66 *7*	100 *4*	2692.78	29/2$^+$	E2		0.0209	α(K)=0.01653 *24*; α(L)=0.00339 *5*; α(M)=0.000771 *11* α(N)=0.0001770 *25*; α(O)=2.39×10^{-5} *4*; α(P)=9.09×10^{-7} *13*
3164.20	33/2$^+$	236.31 *7*	60 *3*	2927.89	31/2$^+$	M1		0.234	α(K)=0.197 *3*; α(L)=0.0288 *4*; α(M)=0.00636 *9* α(N)=0.001477 *21*; α(O)=0.000215 *3*; α(P)=1.212×10^{-5} *17*
		443.27 *9*	100 *4*	2720.93	29/2$^+$	E2		0.0217	α(K)=0.01715 *24*; α(L)=0.00354 *5*; α(M)=0.000807 *12* α(N)=0.000185 *3*; α(O)=2.50×10^{-5} *4*; α(P)=9.42×10^{-7} *14*
3173.17	33/2$^-$	599.63 *12*	100	2573.54	29/2$^-$	E2		0.01001	α(K)=0.00815 *12*; α(L)=0.001448 *21*; α(M)=0.000326 *5* α(N)=7.50×10^{-5} *11*; α(O)=1.040×10^{-5} *15*; α(P)=4.60×10^{-7} *7* B(E2)(W.u.)=120 *+90−40*
3219.64	35/2$^-$	143.0 *4*	1.20 *23*	3076.66	33/2$^-$	M1		0.943 *16*	B(M1)(W.u.)=0.028 *15* α(K)=0.793 *13*; α(L)=0.1172 *19*; α(M)=0.0259 *5* α(N)=0.00601 *10*; α(O)=0.000874 *14*; α(P)=4.91×10^{-5} *8*
		204.7 *3*	66.5 *23*	3015.56	33/2$^-$	M1(+E2)	+0.05 *6*	0.346 *6*	α(K)=0.291 *5*; α(L)=0.0429 *7*; α(M)=0.00946 *15* α(N)=0.00220 *4*; α(O)=0.000320 *5*; α(P)=1.80×10^{-5} *3* B(M1)(W.u.)=0.5 *3*
		366.79 *9*	18.8 *8*	2852.84	31/2$^-$	E2		0.0368	B(E2)(W.u.)=1.0×10^2 *5* α(K)=0.0283 *4*; α(L)=0.00659 *10*; α(M)=0.001515 *22* α(N)=0.000347 *5*; α(O)=4.60×10^{-5} *7*; α(P)=1.516×10^{-6} *22*
		565.56 *4*	100 *3*	2654.08	31/2$^-$	E2		0.01156	B(E2)(W.u.)=6.E+1 *3* α(K)=0.00936 *14*; α(L)=0.001707 *24*; α(M)=0.000385 *6* α(N)=8.85×10^{-5} *13*; α(O)=1.222×10^{-5} *18*; α(P)=5.26×10^{-7} *8*
3242.37	33/2$^+$	246.62 *12*	35.1 *23*	2995.75	31/2$^+$	M1		0.208	α(K)=0.1753 *25*; α(L)=0.0256 *4*; α(M)=0.00565 *8* α(N)=0.001313 *19*; α(O)=0.000191 *3*; α(P)=1.079×10^{-5} *16*
		502.09 *12*	100 *6*	2740.28	29/2$^+$	E2		0.01562	α(K)=0.01251 *18*; α(L)=0.00242 *4*; α(M)=0.000547 *8* α(N)=0.0001258 *18*; α(O)=1.719×10^{-5} *24*; α(P)=6.96×10^{-7} *10*
		588.3 *5*	30 *4*	2654.08	31/2$^-$	E1		0.00376	α(K)=0.00320 *5*; α(L)=0.000439 *7*; α(M)=9.61×10^{-5} *14* α(N)=2.22×10^{-5} *4*; α(O)=3.20×10^{-6} *5*; α(P)=1.742×10^{-7} *25*
3350.20	35/2$^-$	273.5 *3*	17.7 *21*	3076.66	33/2$^-$	M1		0.1573	α(K)=0.1326 *19*; α(L)=0.0193 *3*; α(M)=0.00426 *7* α(N)=0.000990 *15*; α(O)=0.0001442 *21*; α(P)=8.14×10^{-6} *12*

$^{157}_{67}Ho_{90}$-19

Adopted Levels, Gammas (continued)

γ(^{157}Ho) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ	E_f	J_f^π	Mult.[‡]	δ[#]	α[&]	Comments
3350.20	35/2$^-$	497.4 *6*	11.4 *21*	2852.84	31/2$^-$	E2		0.01600	α(K)=0.01281 *19*; α(L)=0.00248 *4*; α(M)=0.000563 *9* α(N)=0.0001294 *19*; α(O)=1.77×10^{-5} *3*; α(P)=7.12×10^{-7} *11*
		696.13 *15*	100 *6*	2654.08	31/2$^-$	E2		0.00704	α(K)=0.00579 *9*; α(L)=0.000970 *14*; α(M)=0.000217 *3* α(N)=5.01×10^{-5} *7*; α(O)=7.02×10^{-6} *10*; α(P)=3.29×10^{-7} *5*
3406.90	35/2$^+$	264.5 *4*	8.2 *13*	3142.44	33/2$^+$	M1		0.172	α(K)=0.1451 *22*; α(L)=0.0212 *3*; α(M)=0.00467 *7* α(N)=0.001084 *16*; α(O)=0.0001580 *23*; α(P)=8.92×10^{-6} *13*
		479.0 *6*	17.9 *24*	2927.89	31/2$^+$	E2		0.0177	α(K)=0.01407 *21*; α(L)=0.00279 *4*; α(M)=0.000633 *10* α(N)=0.0001452 *21*; α(O)=1.98×10^{-5} *3*; α(P)=7.80×10^{-7} *12*
		503.43 *9*	100 *5*	2903.47	31/2$^+$	E2		0.01551	α(K)=0.01243 *18*; α(L)=0.00240 *4*; α(M)=0.000543 *8* α(N)=0.0001248 *18*; α(O)=1.705×10^{-5} *24*; α(P)=6.92×10^{-7} *10*
3408.33	35/2$^+$	244.13 *7*	53 *3*	3164.20	33/2$^+$	M1		0.214	α(K)=0.180 *3*; α(L)=0.0264 *4*; α(M)=0.00581 *9* α(N)=0.001350 *19*; α(O)=0.000197 *3*; α(P)=1.109×10^{-5} *16*
		480.44 *7*	100 *4*	2927.89	31/2$^+$	E2		0.01752	α(K)=0.01397 *20*; α(L)=0.00276 *4*; α(M)=0.000627 *9* α(N)=0.0001439 *21*; α(O)=1.96×10^{-5} *3*; α(P)=7.74×10^{-7} *11*
		504.88 *25*	22.9 *21*	2903.47	31/2$^+$	E2		0.01540	α(K)=0.01234 *18*; α(L)=0.00238 *4*; α(M)=0.000538 *8* α(N)=0.0001237 *18*; α(O)=1.691×10^{-5} *24*; α(P)=6.87×10^{-7} *10*
3457.18	37/2$^-$	107.0 *5*	0.85 *22*	3350.20	35/2$^-$	M1		2.15 *5*	B(M1)(W.u.)=0.030 *9* α(K)=1.81 *4*; α(L)=0.268 *6*; α(M)=0.0592 *12* α(N)=0.0138 *3*; α(O)=0.00200 *4*; α(P)=0.0001120 *22*
		237.54 *3*	100 *3*	3219.64	35/2$^-$	M1+E2	+0.08 *6*	0.230	α(K)=0.194 *3*; α(L)=0.0284 *4*; α(M)=0.00628 *9* α(N)=0.001457 *21*; α(O)=0.000212 *3*; α(P)=1.191×10^{-5} *19* B(M1)(W.u.)=0.32 *5*; B(E2)(W.u.)=18 *+28−18*
		380.52 *18*	7.4 *6*	3076.66	33/2$^-$	E2		0.0331	B(E2)(W.u.)=20 *4* α(K)=0.0256 *4*; α(L)=0.00582 *9*; α(M)=0.001336 *19* α(N)=0.000306 *5*; α(O)=4.07×10^{-5} *6*; α(P)=1.380×10^{-6} *20*
		441.61 *4*	62.6 *20*	3015.56	33/2$^-$	E2		0.0219	B(E2)(W.u.)=82 *13* α(K)=0.01731 *25*; α(L)=0.00359 *5*; α(M)=0.000817 *12* α(N)=0.000187 *3*; α(O)=2.53×10^{-5} *4*; α(P)=9.51×10^{-7} *14*
3478.96	35/2$^+$	236.58 *20*	27.2 *25*	3242.37	33/2$^+$	M1		0.233	α(K)=0.196 *3*; α(L)=0.0287 *4*; α(M)=0.00634 *9* α(N)=0.001472 *21*; α(O)=0.000214 *3*; α(P)=1.209×10^{-5} *18*
		463.4[@] *3*	28 *5*	3015.56	33/2$^-$	E1		0.00635	α(K)=0.00539 *8*; α(L)=0.000751 *11*; α(M)=0.0001644 *24* α(N)=3.80×10^{-5} *6*; α(O)=5.44×10^{-6} *8*; α(P)=2.90×10^{-7} *4*
		483.20 *9*	100 *4*	2995.75	31/2$^+$	E2		0.01726	α(K)=0.01377 *20*; α(L)=0.00271 *4*; α(M)=0.000616 *9* α(N)=0.0001414 *20*; α(O)=1.93×10^{-5} *3*; α(P)=7.63×10^{-7} *11*
3695.04	37/2$^+$	288.1 *6*	4.4 *9*	3406.90	35/2$^+$	M1		0.1368 *21*	α(K)=0.1153 *18*; α(L)=0.0168 *3*; α(M)=0.00370 *6* α(N)=0.000859 *13*; α(O)=0.0001252 *19*; α(P)=7.08×10^{-6} *11*
		552.59 *9*	100 *4*	3142.44	33/2$^+$	E2		0.01224	α(K)=0.00990 *14*; α(L)=0.00182 *3*; α(M)=0.000412 *6* α(N)=9.47×10^{-5} *14*; α(O)=1.304×10^{-5} *19*; α(P)=5.55×10^{-7} *8*
3708.53	37/2$^-$	358.32 *21*	39 *3*	3350.20	35/2$^-$	M1		0.0766	α(K)=0.0646 *9*; α(L)=0.00934 *14*; α(M)=0.00206 *3* α(N)=0.000478 *7*; α(O)=6.97×10^{-5} *10*; α(P)=3.95×10^{-6} *6*
		631.87 *19*	100 *8*	3076.66	33/2$^-$	E2		0.00883	α(K)=0.00722 *11*; α(L)=0.001255 *18*; α(M)=0.000282 *4* α(N)=6.49×10^{-5} *10*; α(O)=9.03×10^{-6} *13*; α(P)=4.08×10^{-7} *6*

$^{157}_{67}Ho_{90}$-20

Adopted Levels, Gammas (continued)

γ(^{157}Ho) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ	E_f	J_f^π	Mult.[‡]	δ[#]	α[&]	Comments
3708.53	37/2$^-$	693.0[@b] *9*	18 *5*	3015.56	33/2$^-$	E2		0.00711	α(K)=0.00585 *9*; α(L)=0.000982 *15*; α(M)=0.000220 *4* α(N)=5.07×10^{-5} *8*; α(O)=7.10×10^{-6} *11*; α(P)=3.32×10^{-7} *5*
3710.73	37/2$^+$	302.40 *10*	49.7 *25*	3408.33	35/2$^+$	M1		0.1201	α(K)=0.1013 *15*; α(L)=0.01473 *21*; α(M)=0.00325 *5* α(N)=0.000754 *11*; α(O)=0.0001099 *16*; α(P)=6.21×10^{-6} *9*
		303.9 *6*	8.2 *18*	3406.90	35/2$^+$	M1		0.1185	α(K)=0.0999 *15*; α(L)=0.01453 *22*; α(M)=0.00320 *5* α(N)=0.000744 *12*; α(O)=0.0001084 *17*; α(P)=6.13×10^{-6} *10*
		546.53 *12*	100 *4*	3164.20	33/2$^+$	E2		0.01259	α(K)=0.01017 *15*; α(L)=0.00188 *3*; α(M)=0.000425 *6* α(N)=9.78×10^{-5} *14*; α(O)=1.346×10^{-5} *19*; α(P)=5.70×10^{-7} *8*
3720.94	39/2$^-$	263.76 *3*	100 *3*	3457.18	37/2$^-$	M1+E2	+0.09 *3*	0.1729	α(K)=0.1456 *21*; α(L)=0.0213 *3*; α(M)=0.00471 *7* α(N)=0.001093 *16*; α(O)=0.0001591 *23*; α(P)=8.94×10^{-6} *13* B(M1)(W.u.)=0.56 *17*; B(E2)(W.u.)=33 *25*
		501.30 *5*	93 *3*	3219.64	35/2$^-$	E2		0.01568	B(E2)(W.u.)=1.6×10^2 *5* α(K)=0.01256 *18*; α(L)=0.00243 *4*; α(M)=0.000550 *8* α(N)=0.0001264 *18*; α(O)=1.727×10^{-5} *25*; α(P)=6.99×10^{-7} *10*
3741.98	37/2$^+$	263.02 *15*	26.7 *21*	3478.96	35/2$^+$	M1		0.1748	α(K)=0.1473 *21*; α(L)=0.0215 *3*; α(M)=0.00474 *7* α(N)=0.001101 *16*; α(O)=0.0001604 *23*; α(P)=9.05×10^{-6} *13*
		499.60 *11*	100 *5*	3242.37	33/2$^+$	E2		0.01582	α(K)=0.01267 *18*; α(L)=0.00245 *4*; α(M)=0.000556 *8* α(N)=0.0001277 *18*; α(O)=1.744×10^{-5} *25*; α(P)=7.05×10^{-7} *10*
		522.3[@] *5*	20 *5*	3219.64	35/2$^-$	E1		0.00487	α(K)=0.00413 *6*; α(L)=0.000572 *8*; α(M)=0.0001251 *18* α(N)=2.89×10^{-5} *4*; α(O)=4.15×10^{-6} *6*; α(P)=2.24×10^{-7} *4*
3822.9	37/2$^-$	649.69 *14*	100	3173.17	33/2$^-$	E2		0.00827	α(K)=0.00677 *10*; α(L)=0.001164 *17*; α(M)=0.000261 *4* α(N)=6.02×10^{-5} *9*; α(O)=8.39×10^{-6} *12*; α(P)=3.84×10^{-7} *6* B(E2)(W.u.)=5.E+2 *+3−4*
3994.50	39/2$^+$	283.77 *14*	33.7 *22*	3710.73	37/2$^+$	M1		0.1424	α(K)=0.1201 *17*; α(L)=0.01749 *25*; α(M)=0.00386 *6* α(N)=0.000896 *13*; α(O)=0.0001305 *19*; α(P)=7.37×10^{-6} *11*
		515.5 *3*	32 *3*	3478.96	35/2$^+$	E2		0.01459	α(K)=0.01172 *17*; α(L)=0.00223 *4*; α(M)=0.000506 *8* α(N)=0.0001162 *17*; α(O)=1.591×10^{-5} *23*; α(P)=6.54×10^{-7} *10*
		586.17 *15*	100 *5*	3408.33	35/2$^+$	E2		0.01058	α(K)=0.00860 *12*; α(L)=0.001543 *22*; α(M)=0.000347 *5* α(N)=8.00×10^{-5} *12*; α(O)=1.107×10^{-5} *16*; α(P)=4.84×10^{-7} *7*
		587.6 *3*	39 *3*	3406.90	35/2$^+$	E2		0.01052	α(K)=0.00855 *12*; α(L)=0.001532 *22*; α(M)=0.000345 *5* α(N)=7.94×10^{-5} *12*; α(O)=1.099×10^{-5} *16*; α(P)=4.82×10^{-7} *7*
3994.55	41/2$^-$	273.60 *4*	77 *3*	3720.94	39/2$^-$	M1+E2	+0.08 *6*	0.1567 *24*	B(M1)(W.u.)>0.17 α(K)=0.1320 *21*; α(L)=0.0193 *3*; α(M)=0.00426 *6* α(N)=0.000989 *14*; α(O)=0.0001440 *21*; α(P)=8.11×10^{-6} *13*
		537.37 *4*	100 *3*	3457.18	37/2$^-$	E2		0.01313	B(E2)(W.u.)>53 α(K)=0.01059 *15*; α(L)=0.00198 *3*; α(M)=0.000447 *7* α(N)=0.0001027 *15*; α(O)=1.412×10^{-5} *20*; α(P)=5.93×10^{-7} *9*
4000.34	39/2$^-$	291.82 *15*	31 *3*	3708.53	37/2$^-$	M1		0.1321	α(K)=0.1114 *16*; α(L)=0.01622 *23*; α(M)=0.00357 *5* α(N)=0.000830 *12*; α(O)=0.0001210 *17*; α(P)=6.84×10^{-6} *10*
		650.14 *14*	100 *6*	3350.20	35/2$^-$	E2		0.00825	α(K)=0.00676 *10*; α(L)=0.001162 *17*; α(M)=0.000261 *4* α(N)=6.00×10^{-5} *9*; α(O)=8.38×10^{-6} *12*; α(P)=3.83×10^{-7} *6*

$^{157}_{67}Ho_{90}$-21

Adopted Levels, Gammas (continued)

γ(^{157}Ho) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ	E_f	J_f^π	Mult.[‡]	α[&]	Comments
4003.71	39/2$^+$	308.7[@b] *7*	6.2 *14*	3695.04	37/2$^+$	M1	0.1137 *18*	α(K)=0.0959 *15*; α(L)=0.01393 *22*; α(M)=0.00307 *5* α(N)=0.000713 *11*; α(O)=0.0001039 *16*; α(P)=5.88×10^{-6} *9*
		595.4 *3*	39 *3*	3408.33	35/2$^+$	E2	0.01019	α(K)=0.00829 *12*; α(L)=0.001477 *21*; α(M)=0.000332 *5* α(N)=7.65×10^{-5} *11*; α(O)=1.060×10^{-5} *15*; α(P)=4.67×10^{-7} *7*
		596.81 *14*	100 *5*	3406.90	35/2$^+$	E2	0.01013	α(K)=0.00824 *12*; α(L)=0.001467 *21*; α(M)=0.000330 *5* α(N)=7.60×10^{-5} *11*; α(O)=1.054×10^{-5} *15*; α(P)=4.65×10^{-7} *7*
4017.52	39/2$^+$	275.54 *13*	44 *3*	3741.98	37/2$^+$	M1	0.1542	α(K)=0.1299 *19*; α(L)=0.0189 *3*; α(M)=0.00418 *6* α(N)=0.000970 *14*; α(O)=0.0001413 *20*; α(P)=7.98×10^{-6} *12*
		538.56 *16*	100 *6*	3478.96	35/2$^+$	E2	0.01306	α(K)=0.01053 *15*; α(L)=0.00196 *3*; α(M)=0.000444 *7* α(N)=0.0001021 *15*; α(O)=1.403×10^{-5} *20*; α(P)=5.90×10^{-7} *9*
		609.18 *19*	58 *6*	3408.33	35/2$^+$	E2	0.00964	α(K)=0.00786 *11*; α(L)=0.001387 *20*; α(M)=0.000312 *5* α(N)=7.18×10^{-5} *10*; α(O)=9.96×10^{-6} *14*; α(P)=4.44×10^{-7} *7*
		610.6 *6*	39 *4*	3406.90	35/2$^+$	E2	0.00958	α(K)=0.00781 *11*; α(L)=0.001378 *20*; α(M)=0.000310 *5* α(N)=7.13×10^{-5} *11*; α(O)=9.90×10^{-6} *15*; α(P)=4.41×10^{-7} *7*
4310.33	41/2$^+$	292.81 *16*	21.5 *18*	4017.52	39/2$^+$	M1	0.1309	α(K)=0.1104 *16*; α(L)=0.01607 *23*; α(M)=0.00354 *5* α(N)=0.000823 *12*; α(O)=0.0001199 *17*; α(P)=6.77×10^{-6} *10*
		315.8[@] *4*	16 *4*	3994.50	39/2$^+$	M1	0.1070	α(K)=0.0902 *13*; α(L)=0.01310 *19*; α(M)=0.00289 *5* α(N)=0.000671 *10*; α(O)=9.78×10^{-5} *14*; α(P)=5.53×10^{-6} *8*
		568.35 *11*	100 *5*	3741.98	37/2$^+$	E2	0.01142	α(K)=0.00925 *13*; α(L)=0.001683 *24*; α(M)=0.000379 *6* α(N)=8.73×10^{-5} *13*; α(O)=1.206×10^{-5} *17*; α(P)=5.20×10^{-7} *8*
4311.39	43/2$^-$	316.85 *4*	93 *3*	3994.55	41/2$^-$	M1	0.1061	α(K)=0.0894 *13*; α(L)=0.01299 *19*; α(M)=0.00286 *4* α(N)=0.000665 *10*; α(O)=9.69×10^{-5} *14*; α(P)=5.48×10^{-6} *8*
		590.45 *5*	100 *3*	3720.94	39/2$^-$	E2	0.01040	α(K)=0.00845 *12*; α(L)=0.001512 *22*; α(M)=0.000340 *5* α(N)=7.83×10^{-5} *11*; α(O)=1.085×10^{-5} *16*; α(P)=4.76×10^{-7} *7*
4330.68	41/2$^+$	327.0[@b] *6*	6.0 *15*	4003.71	39/2$^+$	M1	0.0975	α(K)=0.0823 *13*; α(L)=0.01193 *18*; α(M)=0.00263 *4* α(N)=0.000611 *9*; α(O)=8.90×10^{-5} *14*; α(P)=5.04×10^{-6} *8*
		635.64 *11*	100 *4*	3695.04	37/2$^+$	E2	0.00870	α(K)=0.00712 *10*; α(L)=0.001235 *18*; α(M)=0.000277 *4* α(N)=6.38×10^{-5} *9*; α(O)=8.89×10^{-6} *13*; α(P)=4.03×10^{-7} *6*
4334.62	41/2$^-$	334.27 *20*	26 *3*	4000.34	39/2$^-$	M1	0.0920	α(K)=0.0776 *11*; α(L)=0.01125 *16*; α(M)=0.00248 *4* α(N)=0.000576 *9*; α(O)=8.39×10^{-5} *12*; α(P)=4.75×10^{-6} *7*
		626.09 *13*	100 *4*	3708.53	37/2$^-$	E2	0.00902	α(K)=0.00737 *11*; α(L)=0.001286 *18*; α(M)=0.000289 *4* α(N)=6.65×10^{-5} *10*; α(O)=9.26×10^{-6} *13*; α(P)=4.17×10^{-7} *6*
4340.14	41/2$^+$	322.6[@] *6*	12 *3*	4017.52	39/2$^+$	M1	0.1011	α(K)=0.0853 *13*; α(L)=0.01237 *19*; α(M)=0.00273 *4* α(N)=0.000633 *10*; α(O)=9.23×10^{-5} *14*; α(P)=5.22×10^{-6} *8*
		345.64 *18*	49 *7*	3994.50	39/2$^+$	M1	0.0842	α(K)=0.0710 *10*; α(L)=0.01029 *15*; α(M)=0.00227 *4* α(N)=0.000526 *8*; α(O)=7.67×10^{-5} *11*; α(P)=4.35×10^{-6} *7*
		629.40 *18*	100 *6*	3710.73	37/2$^+$	E2	0.00891	α(K)=0.00728 *11*; α(L)=0.001268 *18*; α(M)=0.000285 *4* α(N)=6.56×10^{-5} *10*; α(O)=9.13×10^{-6} *13*; α(P)=4.12×10^{-7} *6*
4512.6	41/2$^-$	689.74 *17*	100	3822.9	37/2$^-$	E2	0.00719	B(E2)(W.u.)=1.9×10^2 *5* α(K)=0.00591 *9*; α(L)=0.000994 *14*; α(M)=0.000222 *4* α(N)=5.13×10^{-5} *8*; α(O)=7.18×10^{-6} *10*; α(P)=3.36×10^{-7} *5*

$^{157}_{67}Ho_{90}$-22

Adopted Levels, Gammas (continued)

γ(^{157}Ho) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ	E_f	J_f^π	Mult.[‡]	δ[#]	α[&]	Comments
4616.07	43/2$^+$	305.74 *13*	27.9 *16*	4310.33	41/2$^+$	M1		0.1166	α(K)=0.0984 *14*; α(L)=0.01430 *20*; α(M)=0.00315 *5* α(N)=0.000732 *11*; α(O)=0.0001067 *15*; α(P)=6.03×10^{-6} *9*
		598.55 *12*	100 *5*	4017.52	39/2$^+$	E2		0.01006	α(K)=0.00819 *12*; α(L)=0.001456 *21*; α(M)=0.000327 *5* α(N)=7.54×10^{-5} *11*; α(O)=1.045×10^{-5} *15*; α(P)=4.62×10^{-7} *7*
		621.56 *18*	57 *3*	3994.50	39/2$^+$	E2		0.00918	α(K)=0.00750 *11*; α(L)=0.001312 *19*; α(M)=0.000295 *5* α(N)=6.79×10^{-5} *10*; α(O)=9.44×10^{-6} *14*; α(P)=4.24×10^{-7} *6*
4632.48	45/2$^-$	321.09 *4*	49.0 *16*	4311.39	43/2$^-$	M1+E2	+0.11 *6*	0.1018 *17*	α(K)=0.0858 *14*; α(L)=0.01251 *18*; α(M)=0.00276 *4* α(N)=0.000640 *9*; α(O)=9.32×10^{-5} *14*; α(P)=5.25×10^{-6} *9* B(M1)(W.u.)=1.1 *+5−7*; B(E2)(W.u.)=70 *+50−30*
		637.94 *5*	100 *3*	3994.55	41/2$^-$	E2		0.00863	α(K)=0.00706 *10*; α(L)=0.001223 *18*; α(M)=0.000274 *4* α(N)=6.32×10^{-5} *9*; α(O)=8.81×10^{-6} *13*; α(P)=4.00×10^{-7} *6* B(E2)(W.u.)=3.6×10^2 *+27−14*
4643.85	43/2$^-$	309.23 *22*	28 *3*	4334.62	41/2$^-$	M1		0.1132	α(K)=0.0954 *14*; α(L)=0.01387 *20*; α(M)=0.00306 *5* α(N)=0.000710 *10*; α(O)=0.0001034 *15*; α(P)=5.85×10^{-6} *9*
		643.51 *22*	100 *8*	4000.34	39/2$^-$	E2		0.00845	α(K)=0.00692 *10*; α(L)=0.001194 *17*; α(M)=0.000268 *4* α(N)=6.17×10^{-5} *9*; α(O)=8.61×10^{-6} *12*; α(P)=3.92×10^{-7} *6*
4673.68	43/2$^+$	343.0[@] *8*	4.6 *12*	4330.68	41/2$^+$	M1		0.0859 *14*	α(K)=0.0725 *11*; α(L)=0.01050 *17*; α(M)=0.00231 *4* α(N)=0.000537 *9*; α(O)=7.83×10^{-5} *12*; α(P)=4.44×10^{-6} *7*
		669.96 *14*	100 *5*	4003.71	39/2$^+$	E2		0.00769	α(K)=0.00631 *9*; α(L)=0.001073 *15*; α(M)=0.000240 *4* α(N)=5.54×10^{-5} *8*; α(O)=7.74×10^{-6} *11*; α(P)=3.58×10^{-7} *5*
4684.18	43/2$^+$	344.02 *23*	26 *3*	4340.14	41/2$^+$	M1		0.0852	α(K)=0.0719 *11*; α(L)=0.01042 *15*; α(M)=0.00229 *4* α(N)=0.000533 *8*; α(O)=7.77×10^{-5} *11*; α(P)=4.40×10^{-6} *7*
		666.7 *6*	33 *5*	4017.52	39/2$^+$	E2		0.00778	α(K)=0.00638 *9*; α(L)=0.001087 *16*; α(M)=0.000243 *4* α(N)=5.61×10^{-5} *8*; α(O)=7.84×10^{-6} *12*; α(P)=3.62×10^{-7} *6*
		689.7 *3*	100 *10*	3994.50	39/2$^+$	E2		0.00719	α(K)=0.00591 *9*; α(L)=0.000994 *14*; α(M)=0.000222 *4* α(N)=5.13×10^{-5} *8*; α(O)=7.18×10^{-6} *10*; α(P)=3.36×10^{-7} *5*
4951.28	45/2$^+$	335.21 *15*	28.8 *19*	4616.07	43/2$^+$	M1		0.0913	α(K)=0.0770 *11*; α(L)=0.01117 *16*; α(M)=0.00246 *4* α(N)=0.000571 *8*; α(O)=8.33×10^{-5} *12*; α(P)=4.72×10^{-6} *7*
		639.9 *3*	55 *4*	4311.39	43/2$^-$	E1		0.00315	α(K)=0.00268 *4*; α(L)=0.000367 *6*; α(M)=8.01×10^{-5} *12* α(N)=1.85×10^{-5} *3*; α(O)=2.67×10^{-6} *4*; α(P)=1.464×10^{-7} *21*
		640.95 *15*	100 *5*	4310.33	41/2$^+$	E2		0.00853	α(K)=0.00698 *10*; α(L)=0.001207 *17*; α(M)=0.000271 *4* α(N)=6.24×10^{-5} *9*; α(O)=8.70×10^{-6} *13*; α(P)=3.95×10^{-7} *6*
4977.44	45/2$^-$	333.59 *13*	57 *5*	4643.85	43/2$^-$	M1		0.0925	α(K)=0.0780 *11*; α(L)=0.01131 *16*; α(M)=0.00249 *4* α(N)=0.000579 *9*; α(O)=8.44×10^{-5} *12*; α(P)=4.78×10^{-6} *7*
		642.8 *3*	100 *9*	4334.62	41/2$^-$	E2		0.00848	α(K)=0.00694 *10*; α(L)=0.001198 *17*; α(M)=0.000269 *4* α(N)=6.19×10^{-5} *9*; α(O)=8.63×10^{-6} *13*; α(P)=3.93×10^{-7} *6*
4993.44	47/2$^-$	360.96 *8*	54.7 *22*	4632.48	45/2$^-$	M1		0.0751	B(M1)(W.u.)=0.8 *4* α(K)=0.0634 *9*; α(L)=0.00916 *13*; α(M)=0.00202 *3* α(N)=0.000469 *7*; α(O)=6.84×10^{-5} *10*; α(P)=3.87×10^{-6} *6*
		682.05 *6*	100 *3*	4311.39	43/2$^-$	E2		0.00738	α(K)=0.00606 *9*; α(L)=0.001024 *15*; α(M)=0.000229 *4* α(N)=5.28×10^{-5} *8*; α(O)=7.39×10^{-6} *11*; α(P)=3.44×10^{-7} *5* B(E2)(W.u.)=2.5×10^2 *+23−8*

$^{157}_{67}Ho_{90}$-23

Adopted Levels, Gammas (continued)

γ(^{157}Ho) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ	E_f	J_f^π	Mult.[‡]	δ[#]	α[&]	Comments
5029.43	45/2$^+$	345.3[@] *6*	10 *10*	4684.18	43/2$^+$	M1		0.0844	α(K)=0.0712 *11*; α(L)=0.01031 *16*; α(M)=0.00227 *4* α(N)=0.000528 *8*; α(O)=7.69×10^{-5} *12*; α(P)=4.36×10^{-6} *7*
		689.3 *3*	100 *10*	4340.14	41/2$^+$	E2		0.00720	α(K)=0.00592 *9*; α(L)=0.000996 *14*; α(M)=0.000223 *4* α(N)=5.14×10^{-5} *8*; α(O)=7.19×10^{-6} *11*; α(P)=3.36×10^{-7} *5*
		698.74 *24*	75 *6*	4330.68	41/2$^+$	E2		0.00698	α(K)=0.00574 *8*; α(L)=0.000961 *14*; α(M)=0.000215 *3* α(N)=4.96×10^{-5} *7*; α(O)=6.95×10^{-6} *10*; α(P)=3.26×10^{-7} *5*
5031.9	45/2$^+$	691.7 *4*	87 *9*	4340.14	41/2$^+$	E2		0.00714	α(K)=0.00588 *9*; α(L)=0.000987 *14*; α(M)=0.000221 *4* α(N)=5.09×10^{-5} *8*; α(O)=7.13×10^{-6} *10*; α(P)=3.34×10^{-7} *5*
		701.2 *3*	100 *9*	4330.68	41/2$^+$	E2		0.00692	α(K)=0.00570 *8*; α(L)=0.000952 *14*; α(M)=0.000213 *3* α(N)=4.91×10^{-5} *7*; α(O)=6.89×10^{-6} *10*; α(P)=3.24×10^{-7} *5*
5234.2	45/2$^-$	721.58 *20*	100	4512.6	41/2$^-$	E2		0.00648	α(K)=0.00535 *8*; α(L)=0.000885 *13*; α(M)=0.000198 *3* α(N)=4.56×10^{-5} *7*; α(O)=6.40×10^{-6} *9*; α(P)=3.04×10^{-7} *5* B(E2)(W.u.)=3.0×10^2 *+18−10*
5290.99	47/2$^+$	339.71 *13*	26.4 *15*	4951.28	45/2$^+$	M1		0.0881	α(K)=0.0744 *11*; α(L)=0.01077 *16*; α(M)=0.00237 *4* α(N)=0.000551 *8*; α(O)=8.04×10^{-5} *12*; α(P)=4.55×10^{-6} *7*
		658.5 *3*	19.5 *16*	4632.48	45/2$^-$	E1		0.00297	α(K)=0.00253 *4*; α(L)=0.000345 *5*; α(M)=7.54×10^{-5} *11* α(N)=1.744×10^{-5} *25*; α(O)=2.51×10^{-6} *4*; α(P)=1.382×10^{-7} *20*
		674.92 *10*	100 *4*	4616.07	43/2$^+$	E2		0.00756	α(K)=0.00621 *9*; α(L)=0.001052 *15*; α(M)=0.000236 *4* α(N)=5.43×10^{-5} *8*; α(O)=7.60×10^{-6} *11*; α(P)=3.52×10^{-7} *5*
5315.2	47/2$^-$	337.81 *16*	69 *5*	4977.44	45/2$^-$	M1		0.0895	α(K)=0.0755 *11*; α(L)=0.01094 *16*; α(M)=0.00241 *4* α(N)=0.000560 *8*; α(O)=8.16×10^{-5} *12*; α(P)=4.62×10^{-6} *7*
		671.4 *3*	100 *10*	4643.85	43/2$^-$	E2		0.00765	α(K)=0.00628 *9*; α(L)=0.001067 *15*; α(M)=0.000239 *4* α(N)=5.51×10^{-5} *8*; α(O)=7.70×10^{-6} *11*; α(P)=3.57×10^{-7} *5*
		1003.9[@b] *9*	58 *12*	4311.39	43/2$^-$	E2		0.00317	α(K)=0.00266 *4*; α(L)=0.000401 *6*; α(M)=8.87×10^{-5} *13* α(N)=2.05×10^{-5} *3*; α(O)=2.93×10^{-6} *5*; α(P)=1.524×10^{-7} *22*
5363.17	49/2$^-$	369.73 *6*	36.5 *14*	4993.44	47/2$^-$	M1(+E2)	−0.09 *13*	0.0702 *17*	α(K)=0.0592 *15*; α(L)=0.00858 *15*; α(M)=0.00189 *3* α(N)=0.000439 *8*; α(O)=6.40×10^{-5} *12*; α(P)=3.62×10^{-6} *10* B(M1)(W.u.)=0.8 *3*
		730.69 *6*	100 *3*	4632.48	45/2$^-$	E2		0.00630	B(E2)(W.u.)=2.8×10^2 *10* α(K)=0.00520 *8*; α(L)=0.000857 *12*; α(M)=0.000191 *3* α(N)=4.41×10^{-5} *7*; α(O)=6.21×10^{-6} *9*; α(P)=2.96×10^{-7} *5*
5399.3	47/2$^+$	725.60 *14*	100	4673.68	43/2$^+$	E2		0.00640	α(K)=0.00528 *8*; α(L)=0.000872 *13*; α(M)=0.000195 *3* α(N)=4.49×10^{-5} *7*; α(O)=6.32×10^{-6} *9*; α(P)=3.01×10^{-7} *5*
5418.3	47/2$^+$	388.9 *6*	17 *3*	5029.43	45/2$^+$	M1		0.0617	α(K)=0.0521 *8*; α(L)=0.00752 *11*; α(M)=0.001655 *25* α(N)=0.000385 *6*; α(O)=5.61×10^{-5} *9*; α(P)=3.18×10^{-6} *5*
		734.1 *3*	100 *11*	4684.18	43/2$^+$	E2		0.00623	α(K)=0.00515 *8*; α(L)=0.000847 *12*; α(M)=0.000189 *3* α(N)=4.36×10^{-5} *7*; α(O)=6.13×10^{-6} *9*; α(P)=2.93×10^{-7} *5*
5655.60	49/2$^+$	364.61 *25*	15.1 *14*	5290.99	47/2$^+$	M1		0.0731	α(K)=0.0617 *9*; α(L)=0.00892 *13*; α(M)=0.00196 *3* α(N)=0.000456 *7*; α(O)=6.66×10^{-5} *10*; α(P)=3.77×10^{-6} *6*
		704.32 *10*	100 *4*	4951.28	45/2$^+$	E2		0.00685	α(K)=0.00564 *8*; α(L)=0.000941 *14*; α(M)=0.000210 *3* α(N)=4.85×10^{-5} *7*; α(O)=6.81×10^{-6} *10*; α(P)=3.21×10^{-7} *5*

$^{157}_{67}Ho_{90}$-24

Adopted Levels, Gammas (continued)

γ(^{157}Ho) (continued)

E_i(level)	J_i^π	E_γ [†]	I_γ	E_f	J_f^π	Mult.[‡]	δ[#]	α[&]	Comments
5677.6	49/2$^-$	362.3 *4*	24 *5*	5315.2	47/2$^-$	M1		0.0744	α(K)=0.0627 *9*; α(L)=0.00907 *13*; α(M)=0.00200 *3* α(N)=0.000464 *7*; α(O)=6.77×10^{-5} *10*; α(P)=3.84×10^{-6} *6*
		700.13 *25*	100 *8*	4977.44	45/2$^-$	E2		0.00694	α(K)=0.00572 *8*; α(L)=0.000956 *14*; α(M)=0.000214 *3* α(N)=4.93×10^{-5} *7*; α(O)=6.91×10^{-6} *10*; α(P)=3.25×10^{-7} *5*
		1045.1[@b] *10*	40 *19*	4632.48	45/2$^-$	E2		0.00292	α(K)=0.00245 *4*; α(L)=0.000366 *6*; α(M)=8.10×10^{-5} *12* α(N)=1.87×10^{-5} *3*; α(O)=2.68×10^{-6} *4*; α(P)=1.406×10^{-7} *20*
5760.48	51/2$^-$	397.31 *7*	45.3 *16*	5363.17	49/2$^-$	M1+E2	+0.15 *8*	0.0577 *12*	α(K)=0.0487 *11*; α(L)=0.00706 *12*; α(M)=0.001555 *25* α(N)=0.000361 *6*; α(O)=5.26×10^{-5} *9*; α(P)=2.97×10^{-6} *7* B(M1)(W.u.)=0.46 *+16−7*; B(E2)(W.u.)=33 *+12−5*
		767.04 *7*	100 *4*	4993.44	47/2$^-$	E2		0.00565	α(K)=0.00468 *7*; α(L)=0.000758 *11*; α(M)=0.0001690 *24* α(N)=3.90×10^{-5} *6*; α(O)=5.50×10^{-6} *8*; α(P)=2.67×10^{-7} *4* B(E2)(W.u.)=124 *+44−19*
5763.8	49/2$^+$	345.6 *3*	33 *7*	5418.3	47/2$^+$	M1		0.0842	α(K)=0.0711 *10*; α(L)=0.01029 *15*; α(M)=0.00227 *4* α(N)=0.000527 *8*; α(O)=7.68×10^{-5} *11*; α(P)=4.35×10^{-6} *7*
		732.0 *9*	19 *5*	5031.9	45/2$^+$	E2		0.00627	α(K)=0.00518 *8*; α(L)=0.000853 *13*; α(M)=0.000190 *3* α(N)=4.39×10^{-5} *7*; α(O)=6.18×10^{-6} *9*; α(P)=2.95×10^{-7} *5*
		734.4 *3*	100 *10*	5029.43	45/2$^+$	E2		0.00623	α(K)=0.00514 *8*; α(L)=0.000846 *12*; α(M)=0.000189 *3* α(N)=4.36×10^{-5} *7*; α(O)=6.13×10^{-6} *9*; α(P)=2.93×10^{-7} *5*
5777.0	49/2$^+$	745.1 *3*	100 *7*	5031.9	45/2$^+$	E2		0.00603	α(K)=0.00498 *7*; α(L)=0.000815 *12*; α(M)=0.000182 *3* α(N)=4.20×10^{-5} *6*; α(O)=5.91×10^{-6} *9*; α(P)=2.84×10^{-7} *4*
		747.6 *5*	41 *5*	5029.43	45/2$^+$	E2		0.00598	α(K)=0.00495 *7*; α(L)=0.000808 *12*; α(M)=0.000180 *3* α(N)=4.16×10^{-5} *6*; α(O)=5.86×10^{-6} *9*; α(P)=2.82×10^{-7} *4*
5986.8	49/2$^-$	752.64 *22*	100	5234.2	45/2$^-$	E2		0.00589	α(K)=0.00487 *7*; α(L)=0.000795 *12*; α(M)=0.0001773 *25* α(N)=4.09×10^{-5} *6*; α(O)=5.76×10^{-6} *8*; α(P)=2.78×10^{-7} *4* B(E2)(W.u.)=2.3×10^2 *+17−20*
6025.69	51/2$^+$	370.1 *4*	8.4 *13*	5655.60	49/2$^+$	M1		0.0703	α(K)=0.0593 *9*; α(L)=0.00857 *13*; α(M)=0.00189 *3* α(N)=0.000439 *7*; α(O)=6.40×10^{-5} *10*; α(P)=3.63×10^{-6} *6*
		734.69 *13*	100 *5*	5290.99	47/2$^+$	E2		0.00622	α(K)=0.00514 *8*; α(L)=0.000845 *12*; α(M)=0.000189 *3* α(N)=4.35×10^{-5} *6*; α(O)=6.12×10^{-6} *9*; α(P)=2.93×10^{-7} *4*
6045.4	51/2$^-$	367.9 *3*	42 *5*	5677.6	49/2$^-$	M1		0.0714	α(K)=0.0603 *9*; α(L)=0.00871 *13*; α(M)=0.00192 *3* α(N)=0.000446 *7*; α(O)=6.50×10^{-5} *10*; α(P)=3.68×10^{-6} *6*
		730.2 *4*	100 *9*	5315.2	47/2$^-$	E2		0.00631	α(K)=0.00521 *8*; α(L)=0.000858 *12*; α(M)=0.000192 *3* α(N)=4.42×10^{-5} *7*; α(O)=6.22×10^{-6} *9*; α(P)=2.97×10^{-7} *5*
		1052.0[@b] *9*	57 *19*	4993.44	47/2$^-$	E2		0.00288	α(K)=0.00242 *4*; α(L)=0.000361 *6*; α(M)=7.98×10^{-5} *12* α(N)=1.85×10^{-5} *3*; α(O)=2.64×10^{-6} *4*; α(P)=1.388×10^{-7} *20*
6163.1	51/2$^+$	763.78 *20*	100	5399.3	47/2$^+$	E2		0.00570	α(K)=0.00472 *7*; α(L)=0.000766 *11*; α(M)=0.0001708 *24* α(N)=3.94×10^{-5} *6*; α(O)=5.56×10^{-6} *8*; α(P)=2.69×10^{-7} *4*
6176.6	51/2$^+$	412.8 *3*	33 *3*	5763.8	49/2$^+$	M1		0.0528	α(K)=0.0446 *7*; α(L)=0.00642 *9*; α(M)=0.001414 *20* α(N)=0.000328 *5*; α(O)=4.79×10^{-5} *7*; α(P)=2.72×10^{-6} *4*
		758.32 *25*	100 *7*	5418.3	47/2$^+$	E2		0.00579	α(K)=0.00479 *7*; α(L)=0.000780 *11*; α(M)=0.0001740 *25* α(N)=4.02×10^{-5} *6*; α(O)=5.66×10^{-6} *8*; α(P)=2.73×10^{-7} *4*

$^{157}_{67}Ho_{90}$-25

Adopted Levels, Gammas (continued)

γ(^{157}Ho) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ	E_f	J_f^π	Mult.[‡]	δ[#]	α[&]	Comments
6178.96	53/2$^-$	418.48 *8*	27.7 *12*	5760.48	51/2$^-$	M1(+E2)	+0.12 *12*	0.0506 *13*	α(K)=0.0427 *11*; α(L)=0.00617 *12*; α(M)=0.001358 *25* α(N)=0.000316 *6*; α(O)=4.60×10^{-5} *10*; α(P)=2.60×10^{-6} *8* B(M1)(W.u.)=0.37 *14*; B(E2)(W.u.)=16 *+9−4*
		815.79 *8*	100 *3*	5363.17	49/2$^-$	E2		0.00493	B(E2)(W.u.)=1.4×10^2 *5* α(K)=0.00409 *6*; α(L)=0.000651 *10*; α(M)=0.0001449 *21* α(N)=3.35×10^{-5} *5*; α(O)=4.74×10^{-6} *7*; α(P)=2.34×10^{-7} *4*
6416.99	53/2$^+$	391.3 *4*	16.8 *18*	6025.69	51/2$^+$	M1		0.0607	α(K)=0.0513 *8*; α(L)=0.00740 *11*; α(M)=0.001629 *24* α(N)=0.000378 *6*; α(O)=5.52×10^{-5} *8*; α(P)=3.13×10^{-6} *5*
		761.39 *13*	100 *5*	5655.60	49/2$^+$	E2		0.00574	α(K)=0.00475 *7*; α(L)=0.000772 *11*; α(M)=0.0001722 *25* α(N)=3.97×10^{-5} *6*; α(O)=5.60×10^{-6} *8*; α(P)=2.71×10^{-7} *4*
6451.4	53/2$^-$	406.0 *3*	30 *4*	6045.4	51/2$^-$	M1		0.0552	α(K)=0.0466 *7*; α(L)=0.00671 *10*; α(M)=0.001477 *21* α(N)=0.000343 *5*; α(O)=5.01×10^{-5} *7*; α(P)=2.84×10^{-6} *4*
		773.83 *16*	100 *7*	5677.6	49/2$^-$	E2		0.00554	α(K)=0.00459 *7*; α(L)=0.000742 *11*; α(M)=0.0001653 *24* α(N)=3.82×10^{-5} *6*; α(O)=5.38×10^{-6} *8*; α(P)=2.62×10^{-7} *4*
		1088.2[@b] *25*	8 *5*	5363.17	49/2$^-$	E2		0.00269	α(K)=0.00226 *4*; α(L)=0.000335 *5*; α(M)=7.40×10^{-5} *11* α(N)=1.71×10^{-5} *3*; α(O)=2.46×10^{-6} *4*; α(P)=1.297×10^{-7} *20*
6530.4	53/2$^+$	353.9 *5*	18.3 *23*	6176.6	51/2$^+$	M1		0.0791	α(K)=0.0667 *10*; α(L)=0.00966 *14*; α(M)=0.00213 *3* α(N)=0.000494 *8*; α(O)=7.21×10^{-5} *11*; α(P)=4.08×10^{-6} *6*
		766.60 *25*	100 *7*	5763.8	49/2$^+$	E2		0.00566	α(K)=0.00468 *7*; α(L)=0.000759 *11*; α(M)=0.0001692 *24* α(N)=3.91×10^{-5} *6*; α(O)=5.51×10^{-6} *8*; α(P)=2.67×10^{-7} *4*
6557.3	53/2$^+$	780.30 *20*	100	5777.0	49/2$^+$	E2		0.00544	α(K)=0.00451 *7*; α(L)=0.000726 *11*; α(M)=0.0001619 *23* α(N)=3.74×10^{-5} *6*; α(O)=5.27×10^{-6} *8*; α(P)=2.57×10^{-7} *4*
6603.34	55/2$^-$	424.38 *19*	36.8 *24*	6178.96	53/2$^-$	M1		0.0492	α(K)=0.0415 *6*; α(L)=0.00597 *9*; α(M)=0.001315 *19* α(N)=0.000305 *5*; α(O)=4.46×10^{-5} *7*; α(P)=2.53×10^{-6} *4* B(M1)(W.u.)=0.64 *17*
		842.86 *9*	100 *4*	5760.48	51/2$^-$	E2		0.00459	B(E2)(W.u.)=1.6×10^2 *4* α(K)=0.00382 *6*; α(L)=0.000602 *9*; α(M)=0.0001338 *19* α(N)=3.09×10^{-5} *5*; α(O)=4.38×10^{-6} *7*; α(P)=2.18×10^{-7} *3*
6782.3	53/2$^-$	795.5 *4*	100	5986.8	49/2$^-$	E2		0.00521	α(K)=0.00432 *6*; α(L)=0.000693 *10*; α(M)=0.0001542 *22* α(N)=3.56×10^{-5} *5*; α(O)=5.03×10^{-6} *7*; α(P)=2.47×10^{-7} *4* B(E2)(W.u.)=2.7×10^2 *+15−27*
6814.66	55/2$^+$	397.7 *5*	7.9 *14*	6416.99	53/2$^+$	M1		0.0582	α(K)=0.0492 *7*; α(L)=0.00709 *11*; α(M)=0.001560 *23* α(N)=0.000362 *6*; α(O)=5.29×10^{-5} *8*; α(P)=3.00×10^{-6} *5*
		788.97 *13*	100 *4*	6025.69	51/2$^+$	E2		0.00531	α(K)=0.00440 *7*; α(L)=0.000707 *10*; α(M)=0.0001574 *22* α(N)=3.63×10^{-5} *5*; α(O)=5.13×10^{-6} *8*; α(P)=2.51×10^{-7} *4*
6844.4	55/2$^-$	393.0 *5*	40 *6*	6451.4	53/2$^-$	M1		0.0601	α(K)=0.0507 *8*; α(L)=0.00731 *11*; α(M)=0.001610 *24* α(N)=0.000374 *6*; α(O)=5.46×10^{-5} *8*; α(P)=3.10×10^{-6} *5*
		799.0 *3*	100 *8*	6045.4	51/2$^-$	E2		0.00516	α(K)=0.00428 *6*; α(L)=0.000685 *10*; α(M)=0.0001526 *22* α(N)=3.52×10^{-5} *5*; α(O)=4.98×10^{-6} *7*; α(P)=2.44×10^{-7} *4*
		1084[@b] *4*	14 *6*	5760.48	51/2$^-$	E2		0.00271 *5*	α(K)=0.00228 *4*; α(L)=0.000338 *6*; α(M)=7.46×10^{-5} *13* α(N)=1.73×10^{-5} *3*; α(O)=2.48×10^{-6} *4*; α(P)=1.307×10^{-7} *21*

$^{157}_{67}Ho_{90}$-26

Adopted Levels, Gammas (continued)

γ(^{157}Ho) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ	E_f	J_f^π	Mult.[‡]	δ[#]	α[&]	Comments
6961.0	55/2$^+$	797.95 *22*	100	6163.1	51/2$^+$	E2		0.00517	α(K)=0.00429 *6*; α(L)=0.000687 *10*; α(M)=0.0001531 *22* α(N)=3.53×10^{-5} *5*; α(O)=5.00×10^{-6} *7*; α(P)=2.45×10^{-7} *4*
6970.8	55/2$^+$	440.4 *5*	34 *5*	6530.4	53/2$^+$	M1		0.0446	α(K)=0.0377 *6*; α(L)=0.00542 *8*; α(M)=0.001193 *17* α(N)=0.000277 *4*; α(O)=4.04×10^{-5} *6*; α(P)=2.30×10^{-6} *4*
		794.2 *4*	100 *8*	6176.6	51/2$^+$	E2		0.00523	α(K)=0.00434 *6*; α(L)=0.000695 *10*; α(M)=0.0001549 *22* α(N)=3.58×10^{-5} *5*; α(O)=5.05×10^{-6} *8*; α(P)=2.48×10^{-7} *4*
7073.23	57/2$^-$	469.89 *20*	15.1 *11*	6603.34	55/2$^-$	M1+E2	+0.18 *10*	0.0372 *10*	α(K)=0.0314 *9*; α(L)=0.00452 *10*; α(M)=0.000996 *20* α(N)=0.000231 *5*; α(O)=3.37×10^{-5} *8*; α(P)=1.91×10^{-6} *6* B(M1)(W.u.)=0.22 *+16−10*; B(E2)(W.u.)=17 *+20−17*
		894.26 *17*	100 *4*	6178.96	53/2$^-$	E2		0.00404	α(K)=0.00337 *5*; α(L)=0.000523 *8*; α(M)=0.0001160 *17* α(N)=2.68×10^{-5} *4*; α(O)=3.81×10^{-6} *6*; α(P)=1.93×10^{-7} *3* B(E2)(W.u.)=1.4×10^2 *+10−6*
7231.33	57/2$^+$	416.7 *4*	12.5 *16*	6814.66	55/2$^+$	M1		0.0515	α(K)=0.0435 *7*; α(L)=0.00627 *9*; α(M)=0.001379 *20* α(N)=0.000320 *5*; α(O)=4.67×10^{-5} *7*; α(P)=2.65×10^{-6} *4*
		814.34 *15*	100 *5*	6416.99	53/2$^+$	E2		0.00495	α(K)=0.00411 *6*; α(L)=0.000654 *10*; α(M)=0.0001455 *21* α(N)=3.36×10^{-5} *5*; α(O)=4.76×10^{-6} *7*; α(P)=2.35×10^{-7} *4*
7302.7	57/2$^-$	458.3[@b] *13*	7.4 *29*	6844.4	55/2$^-$	M1		0.0403 *7*	α(K)=0.0340 *6*; α(L)=0.00488 *8*; α(M)=0.001074 *17* α(N)=0.000250 *4*; α(O)=3.64×10^{-5} *6*; α(P)=2.07×10^{-6} *4*
		851.3 *3*	100 *8*	6451.4	53/2$^-$	E2		0.00449	α(K)=0.00374 *6*; α(L)=0.000588 *9*; α(M)=0.0001306 *19* α(N)=3.02×10^{-5} *5*; α(O)=4.28×10^{-6} *6*; α(P)=2.14×10^{-7} *3*
		1124[@b] *4*	8 *5*	6178.96	53/2$^-$	E2		0.00252	α(K)=0.00212 *4*; α(L)=0.000312 *5*; α(M)=6.89×10^{-5} *11* α(N)=1.59×10^{-5} *3*; α(O)=2.29×10^{-6} *4*; α(P)=1.217×10^{-7} *19*; α(IPF)=6.6×10^{-7} *10*
7336.1	57/2$^+$	365.3 *4*	15.7 *21*	6970.8	55/2$^+$	M1		0.0728	α(K)=0.0614 *9*; α(L)=0.00888 *13*; α(M)=0.00195 *3* α(N)=0.000454 *7*; α(O)=6.62×10^{-5} *10*; α(P)=3.75×10^{-6} *6*
		805.70 *19*	100 *5*	6530.4	53/2$^+$	E2		0.00507	α(K)=0.00421 *6*; α(L)=0.000671 *10*; α(M)=0.0001494 *21* α(N)=3.45×10^{-5} *5*; α(O)=4.88×10^{-6} *7*; α(P)=2.40×10^{-7} *4*
7377.7	57/2$^+$	820.4 *3*	100	6557.3	53/2$^+$	E2		0.00487	α(K)=0.00405 *6*; α(L)=0.000642 *9*; α(M)=0.0001429 *20* α(N)=3.30×10^{-5} *5*; α(O)=4.67×10^{-6} *7*; α(P)=2.31×10^{-7} *4*
7511.77	59/2$^-$	438.54 *13*	27.6 *14*	7073.23	57/2$^-$	M1		0.0451	α(K)=0.0381 *6*; α(L)=0.00548 *8*; α(M)=0.001206 *17* α(N)=0.000280 *4*; α(O)=4.09×10^{-5} *6*; α(P)=2.32×10^{-6} *4* B(M1)(W.u.)=0.7 *+7−3*
		908.43 *11*	100 *4*	6603.34	55/2$^-$	E2		0.00391	α(K)=0.00326 *5*; α(L)=0.000504 *7*; α(M)=0.0001118 *16* α(N)=2.58×10^{-5} *4*; α(O)=3.68×10^{-6} *6*; α(P)=1.87×10^{-7} *3* B(E2)(W.u.)=1.8×10^2 *+18−7*
7621.4	(57/2$^-$)	839.1 *6*	100	6782.3	53/2$^-$	(E2)		0.00464	α(K)=0.00386 *6*; α(L)=0.000608 *9*; α(M)=0.0001352 *19* α(N)=3.12×10^{-5} *5*; α(O)=4.43×10^{-6} *7*; α(P)=2.20×10^{-7} *4*
7654.79	59/2$^+$	423.5 *5*	14 *3*	7231.33	57/2$^+$	M1		0.0494	α(K)=0.0417 *6*; α(L)=0.00601 *9*; α(M)=0.001322 *19* α(N)=0.000307 *5*; α(O)=4.48×10^{-5} *7*; α(P)=2.54×10^{-6} *4*
		840.12 *19*	100 *5*	6814.66	55/2$^+$	E2		0.00462	α(K)=0.00385 *6*; α(L)=0.000607 *9*; α(M)=0.0001348 *19* α(N)=3.11×10^{-5} *5*; α(O)=4.42×10^{-6} *7*; α(P)=2.20×10^{-7} *3*

$^{157}_{67}Ho_{90}$-27

Adopted Levels, Gammas (continued)

γ(^{157}Ho) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ	E_f	J_f^π	Mult.[‡]	α[&]	Comments
7715.2	59/2$^-$	412.5 *4*	29 *4*	7302.7	57/2$^-$	M1	0.0529	α(K)=0.0447 *7*; α(L)=0.00644 *10*; α(M)=0.001417 *21* α(N)=0.000329 *5*; α(O)=4.80×10^{-5} *7*; α(P)=2.73×10^{-6} *4*
		870.8 *4*	100 *7*	6844.4	55/2$^-$	E2	0.00428	α(K)=0.00357 *5*; α(L)=0.000557 *8*; α(M)=0.0001236 *18* α(N)=2.86×10^{-5} *4*; α(O)=4.06×10^{-6} *6*; α(P)=2.04×10^{-7} *3*
		1111.8[@b] *9*	45 *11*	6603.34	55/2$^-$	E2	0.00258	α(K)=0.00217 *3*; α(L)=0.000320 *5*; α(M)=7.06×10^{-5} *10* α(N)=1.633×10^{-5} *23*; α(O)=2.34×10^{-6} *4*; α(P)=1.243×10^{-7} *18*; α(IPF)=4.20×10^{-7} *16*
7808.3	59/2$^+$	837.5 *14*	61 *17*	6970.8	55/2$^+$	E2	0.00466	α(K)=0.00387 *6*; α(L)=0.000611 *9*; α(M)=0.0001359 *20* α(N)=3.14×10^{-5} *5*; α(O)=4.45×10^{-6} *7*; α(P)=2.21×10^{-7} *4*
		847.3 *7*	100 *17*	6961.0	55/2$^+$	E2	0.00454	α(K)=0.00378 *6*; α(L)=0.000594 *9*; α(M)=0.0001321 *19* α(N)=3.05×10^{-5} *5*; α(O)=4.33×10^{-6} *7*; α(P)=2.16×10^{-7} *3*
7810.6	59/2$^+$	839.8 *8*	100 *25*	6970.8	55/2$^+$	E2	0.00463	α(K)=0.00385 *6*; α(L)=0.000607 *9*; α(M)=0.0001350 *20* α(N)=3.12×10^{-5} *5*; α(O)=4.42×10^{-6} *7*; α(P)=2.20×10^{-7} *4*
		849.6 *8*	100 *20*	6961.0	55/2$^+$	E2	0.00451	α(K)=0.00376 *6*; α(L)=0.000591 *9*; α(M)=0.0001312 *19* α(N)=3.03×10^{-5} *5*; α(O)=4.30×10^{-6} *6*; α(P)=2.15×10^{-7} *3*
8044.23	61/2$^-$	532.5[@] *7*	8.9 *18*	7511.77	59/2$^-$	M1	0.0274	α(K)=0.0232 *4*; α(L)=0.00331 *5*; α(M)=0.000727 *11* α(N)=0.0001690 *25*; α(O)=2.47×10^{-5} *4*; α(P)=1.407×10^{-6} *21*
		971.00 *15*	100 *4*	7073.23	57/2$^-$	E2	0.00340	α(K)=0.00285 *4*; α(L)=0.000432 *6*; α(M)=9.57×10^{-5} *14* α(N)=2.21×10^{-5} *3*; α(O)=3.16×10^{-6} *5*; α(P)=1.631×10^{-7} *23*
8097.5	61/2$^+$	442.7 *8*	11 *3*	7654.79	59/2$^+$	M1	0.0441	α(K)=0.0372 *6*; α(L)=0.00535 *8*; α(M)=0.001176 *18* α(N)=0.000273 *4*; α(O)=3.99×10^{-5} *6*; α(P)=2.27×10^{-6} *4*
		866.12 *17*	100 *5*	7231.33	57/2$^+$	E2	0.00433	α(K)=0.00361 *5*; α(L)=0.000564 *8*; α(M)=0.0001252 *18* α(N)=2.89×10^{-5} *4*; α(O)=4.11×10^{-6} *6*; α(P)=2.06×10^{-7} *3*
8193.6	61/2$^+$	857.46 *18*	100	7336.1	57/2$^+$	E2	0.00442	α(K)=0.00368 *6*; α(L)=0.000578 *8*; α(M)=0.0001283 *18* α(N)=2.96×10^{-5} *5*; α(O)=4.21×10^{-6} *6*; α(P)=2.11×10^{-7} *3*
8232.9	61/2$^-$	517.7[@b] *10*	12 *5*	7715.2	59/2$^-$	M1	0.0294	α(K)=0.0249 *4*; α(L)=0.00356 *6*; α(M)=0.000782 *12* α(N)=0.000182 *3*; α(O)=2.65×10^{-5} *4*; α(P)=1.512×10^{-6} *23*
		930.2 *4*	100 *9*	7302.7	57/2$^-$	E2	0.00372	α(K)=0.00311 *5*; α(L)=0.000477 *7*; α(M)=0.0001057 *15* α(N)=2.44×10^{-5} *4*; α(O)=3.48×10^{-6} *5*; α(P)=1.780×10^{-7} *25*
		1159.7[@b] *19*	29 *7*	7073.23	57/2$^-$	E2	0.00237	α(K)=0.00199 *3*; α(L)=0.000292 *5*; α(M)=6.43×10^{-5} *10* α(N)=1.490×10^{-5} *22*; α(O)=2.14×10^{-6} *3*; α(P)=1.144×10^{-7} *17*; α(IPF)=2.03×10^{-6} *12*
8252.5	61/2$^+$	874.8 *4*	100	7377.7	57/2$^+$	E2	0.00424	α(K)=0.00353 *5*; α(L)=0.000551 *8*; α(M)=0.0001223 *18* α(N)=2.83×10^{-5} *4*; α(O)=4.01×10^{-6} *6*; α(P)=2.02×10^{-7} *3*
8470.40	63/2$^-$	426.18 *15*	24.0 *17*	8044.23	61/2$^-$	M1	0.0486	α(K)=0.0411 *6*; α(L)=0.00591 *9*; α(M)=0.001300 *19* α(N)=0.000302 *5*; α(O)=4.41×10^{-5} *7*; α(P)=2.50×10^{-6} *4*
		958.63 *11*	100 *4*	7511.77	59/2$^-$	E2	0.00349	α(K)=0.00292 *4*; α(L)=0.000445 *7*; α(M)=9.86×10^{-5} *14* α(N)=2.28×10^{-5} *4*; α(O)=3.25×10^{-6} *5*; α(P)=1.674×10^{-7} *24*
8510.4	(61/2$^-$)	889.0 *7*	100	7621.4	(57/2$^-$)	(E2)	0.00409	α(K)=0.00341 *5*; α(L)=0.000530 *8*; α(M)=0.0001177 *17* α(N)=2.72×10^{-5} *4*; α(O)=3.87×10^{-6} *6*; α(P)=1.95×10^{-7} *3*

$^{157}_{67}Ho_{90}$-28

Adopted Levels, Gammas (continued)

γ(^{157}Ho) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ	E_f	J_f^π	Mult.[‡]	α[&]	Comments
8546.1	63/2$^+$	448.7[b] *8*	6.6 *17*	8097.5	61/2$^+$	M1	0.0425	α(K)=0.0359 *6*; α(L)=0.00516 *8*; α(M)=0.001136 *17* α(N)=0.000264 *4*; α(O)=3.85×10^{-5} *6*; α(P)=2.19×10^{-6} *4*
		891.36 *17*	100 *5*	7654.79	59/2$^+$	E2	0.00407	α(K)=0.00340 *5*; α(L)=0.000527 *8*; α(M)=0.0001169 *17* α(N)=2.70×10^{-5} *4*; α(O)=3.84×10^{-6} *6*; α(P)=1.94×10^{-7} *3*
8658.8	63/2$^-$	943.6 *6*	100	7715.2	59/2$^-$	E2	0.00361	α(K)=0.00302 *5*; α(L)=0.000462 *7*; α(M)=0.0001023 *15* α(N)=2.36×10^{-5} *4*; α(O)=3.37×10^{-6} *5*; α(P)=1.729×10^{-7} *25*
8708.2	63/2$^+$	897.6 *10*	100	7810.6	59/2$^+$	E2	0.00401	α(K)=0.00335 *5*; α(L)=0.000518 *8*; α(M)=0.0001150 *17* α(N)=2.66×10^{-5} *4*; α(O)=3.78×10^{-6} *6*; α(P)=1.92×10^{-7} *3*
8713.6	(63/2$^+$)	905.3 *11*	100	7808.3	59/2$^+$	(E2)	0.00394	α(K)=0.00329 *5*; α(L)=0.000508 *8*; α(M)=0.0001127 *17* α(N)=2.61×10^{-5} *4*; α(O)=3.71×10^{-6} *6*; α(P)=1.88×10^{-7} *3*
9015.5	65/2$^+$	469.4[b] *14*	5.8 *22*	8546.1	63/2$^+$	M1	0.0379	α(K)=0.0320 *6*; α(L)=0.00459 *8*; α(M)=0.001009 *17* α(N)=0.000234 *4*; α(O)=3.42×10^{-5} *6*; α(P)=1.95×10^{-6} *4*
		918.09 *21*	100 *6*	8097.5	61/2$^+$	E2	0.00382	α(K)=0.00319 *5*; α(L)=0.000492 *7*; α(M)=0.0001090 *16* α(N)=2.52×10^{-5} *4*; α(O)=3.59×10^{-6} *5*; α(P)=1.83×10^{-7} *3*
9080.1	65/2$^-$	1035.9 *3*	100	8044.23	61/2$^-$	E2	0.00297	α(K)=0.00250 *4*; α(L)=0.000374 *6*; α(M)=8.26×10^{-5} *12* α(N)=1.91×10^{-5} *3*; α(O)=2.74×10^{-6} *4*; α(P)=1.431×10^{-7} *20*
9108.6	65/2$^+$	915.0 *4*	100	8193.6	61/2$^+$	E2	0.00385	α(K)=0.00322 *5*; α(L)=0.000496 *7*; α(M)=0.0001099 *16* α(N)=2.54×10^{-5} *4*; α(O)=3.62×10^{-6} *5*; α(P)=1.84×10^{-7} *3*
9192.5	65/2$^+$	940.0 *6*	100	8252.5	61/2$^+$	E2	0.00364	α(K)=0.00304 *5*; α(L)=0.000466 *7*; α(M)=0.0001032 *15* α(N)=2.39×10^{-5} *4*; α(O)=3.40×10^{-6} *5*; α(P)=1.742×10^{-7} *25*
9228.0	65/2$^-$	995.1 *5*	100 *11*	8232.9	61/2$^-$	E2	0.00323	α(K)=0.00271 *4*; α(L)=0.000409 *6*; α(M)=9.05×10^{-5} *13* α(N)=2.09×10^{-5} *3*; α(O)=2.99×10^{-6} *5*; α(P)=1.552×10^{-7} *22*
		1183.8[@] *16*	31 *9*	8044.23	61/2$^-$	E2	0.00228	α(K)=0.00192 *3*; α(L)=0.000279 *4*; α(M)=6.15×10^{-5} *9* α(N)=1.425×10^{-5} *21*; α(O)=2.05×10^{-6} *3*; α(P)=1.099×10^{-7} *16*; α(IPF)=3.71×10^{-6} *15*
9447.84	67/2$^-$	367.7 *3*	13.8 *15*	9080.1	65/2$^-$	M1	0.0715	α(K)=0.0604 *9*; α(L)=0.00872 *13*; α(M)=0.00192 *3* α(N)=0.000446 *7*; α(O)=6.51×10^{-5} *10*; α(P)=3.69×10^{-6} *6*
		977.44 *13*	100 *4*	8470.40	63/2$^-$	E2	0.00335	α(K)=0.00281 *4*; α(L)=0.000426 *6*; α(M)=9.43×10^{-5} *14* α(N)=2.18×10^{-5} *3*; α(O)=3.11×10^{-6} *5*; α(P)=1.609×10^{-7} *23*
9449.3	(65/2$^-$)	938.9 *11*	100	8510.4	(61/2$^-$)	(E2)	0.00365	α(K)=0.00305 *5*; α(L)=0.000467 *7*; α(M)=0.0001035 *15* α(N)=2.39×10^{-5} *4*; α(O)=3.41×10^{-6} *5*; α(P)=1.746×10^{-7} *25*
9489.9	67/2$^+$	474.4 *6*	14.9 *19*	9015.5	65/2$^+$	M1	0.0368	α(K)=0.0311 *5*; α(L)=0.00446 *7*; α(M)=0.000982 *15* α(N)=0.000228 *4*; α(O)=3.33×10^{-5} *5*; α(P)=1.89×10^{-6} *3*
		943.8 *3*	100 *7*	8546.1	63/2$^+$	E2	0.00361	α(K)=0.00302 *5*; α(L)=0.000461 *7*; α(M)=0.0001022 *15* α(N)=2.36×10^{-5} *4*; α(O)=3.37×10^{-6} *5*; α(P)=1.728×10^{-7} *25*
9670.7	(67/2$^+$)	962.5 *9*	100	8708.2	63/2$^+$	(E2)	0.00346	α(K)=0.00290 *4*; α(L)=0.000441 *7*; α(M)=9.77×10^{-5} *14* α(N)=2.26×10^{-5} *4*; α(O)=3.22×10^{-6} *5*; α(P)=1.660×10^{-7} *24*
9688.4	(67/2$^+$)	974.8 *9*	100	8713.6	(63/2$^+$)	(E2)	0.00337	α(K)=0.00282 *4*; α(L)=0.000428 *6*; α(M)=9.48×10^{-5} *14* α(N)=2.19×10^{-5} *4*; α(O)=3.13×10^{-6} *5*; α(P)=1.618×10^{-7} *23*
9984.7	69/2$^+$	969.1 *4*	100	9015.5	65/2$^+$	E2	0.00341	α(K)=0.00286 *4*; α(L)=0.000434 *6*; α(M)=9.61×10^{-5} *14* α(N)=2.22×10^{-5} *4*; α(O)=3.17×10^{-6} *5*; α(P)=1.637×10^{-7} *23*

$^{157}_{67}Ho_{90}$-29

Adopted Levels, Gammas (continued)

γ(^{157}Ho) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ	E_f	J_f^π	Mult.[‡]	α[&]	Comments
10078.8	69/2$^+$	970.2 *4*	100	9108.6	65/2$^+$	E2	0.00341	α(K)=0.00285 *4*; α(L)=0.000433 *6*; α(M)=9.59×10^{-5} *14* α(N)=2.22×10^{-5} *4*; α(O)=3.17×10^{-6} *5*; α(P)=1.633×10^{-7} *23*
10149.9	69/2$^-$	1069.8 *5*	100	9080.1	65/2$^-$	E2	0.00279	α(K)=0.00234 *4*; α(L)=0.000348 *5*; α(M)=7.68×10^{-5} *11* α(N)=1.778×10^{-5} *25*; α(O)=2.55×10^{-6} *4*; α(P)=1.342×10^{-7} *19*
10203.4	(69/2$^+$)	1010.9 *8*	100	9192.5	65/2$^+$	(E2)	0.00313	α(K)=0.00262 *4*; α(L)=0.000395 *6*; α(M)=8.73×10^{-5} *13* α(N)=2.02×10^{-5} *3*; α(O)=2.89×10^{-6} *4*; α(P)=1.503×10^{-7} *22*
10264.9	(69/2$^-$)	1036.9 *12*	100	9228.0	65/2$^-$	(E2)	0.00297	α(K)=0.00249 *4*; α(L)=0.000373 *6*; α(M)=8.24×10^{-5} *12* α(N)=1.91×10^{-5} *3*; α(O)=2.73×10^{-6} *4*; α(P)=1.428×10^{-7} *21*
10396.64	71/2$^-$	246.7 *3*	9.0 *11*	10149.9	69/2$^-$	M1	0.208	α(K)=0.175 *3*; α(L)=0.0256 *4*; α(M)=0.00565 *9* α(N)=0.001312 *19*; α(O)=0.000191 *3*; α(P)=1.078×10^{-5} *16*
		948.79 *14*	100 *4*	9447.84	67/2$^-$	E2	0.00357	α(K)=0.00298 *5*; α(L)=0.000456 *7*; α(M)=0.0001010 *15* α(N)=2.33×10^{-5} *4*; α(O)=3.33×10^{-6} *5*; α(P)=1.709×10^{-7} *24*
10439.8	(69/2$^-$)	990.5 *11*	100	9449.3	(65/2$^-$)	(E2)	0.00326	α(K)=0.00273 *4*; α(L)=0.000413 *6*; α(M)=9.14×10^{-5} *13* α(N)=2.11×10^{-5} *3*; α(O)=3.02×10^{-6} *5*; α(P)=1.566×10^{-7} *23*
10487.3	71/2$^+$	997.33 *25*	100	9489.9	67/2$^+$	E2	0.00322	α(K)=0.00270 *4*; α(L)=0.000407 *6*; α(M)=9.00×10^{-5} *13* α(N)=2.08×10^{-5} *3*; α(O)=2.98×10^{-6} *5*; α(P)=1.545×10^{-7} *22*
10683.3	(71/2$^+$)	1012.6 *9*	100	9670.7	(67/2$^+$)	(E2)	0.00312	α(K)=0.00261 *4*; α(L)=0.000393 *6*; α(M)=8.69×10^{-5} *13* α(N)=2.01×10^{-5} *3*; α(O)=2.88×10^{-6} *4*; α(P)=1.498×10^{-7} *22*
10735.0?	(71/2$^+$)	1046.6[@] *12*	100	9688.4	(67/2$^+$)	(E2)	0.00291	α(K)=0.00245 *4*; α(L)=0.000365 *6*; α(M)=8.07×10^{-5} *12* α(N)=1.87×10^{-5} *3*; α(O)=2.67×10^{-6} *4*; α(P)=1.402×10^{-7} *20*
11002.0	73/2$^+$	1017.3 *3*	100	9984.7	69/2$^+$	E2	0.00309	α(K)=0.00259 *4*; α(L)=0.000389 *6*; α(M)=8.60×10^{-5} *12* α(N)=1.99×10^{-5} *3*; α(O)=2.85×10^{-6} *4*; α(P)=1.484×10^{-7} *21*
11088.3	73/2$^+$	1009.5 *5*	100	10078.8	69/2$^+$	E2	0.00314	α(K)=0.00263 *4*; α(L)=0.000396 *6*; α(M)=8.76×10^{-5} *13* α(N)=2.03×10^{-5} *3*; α(O)=2.90×10^{-6} *4*; α(P)=1.507×10^{-7} *22*
11189.4	75/2$^-$	792.78 *20*	100	10396.64	71/2$^-$	E2	0.00525	α(K)=0.00435 *6*; α(L)=0.000699 *10*; α(M)=0.0001556 *22* α(N)=3.59×10^{-5} *5*; α(O)=5.07×10^{-6} *8*; α(P)=2.49×10^{-7} *4*
11280.6	(73/2$^+$)	1077.2 *13*	100	10203.4	(69/2$^+$)	(E2)	0.00275	α(K)=0.00231 *4*; α(L)=0.000343 *5*; α(M)=7.57×10^{-5} *11* α(N)=1.751×10^{-5} *25*; α(O)=2.51×10^{-6} *4*; α(P)=1.324×10^{-7} *19*
11412.4	75/2$^-$	1015.8 *5*	100	10396.64	71/2$^-$	E2	0.00310	α(K)=0.00260 *4*; α(L)=0.000390 *6*; α(M)=8.63×10^{-5} *13* α(N)=2.00×10^{-5} *3*; α(O)=2.86×10^{-6} *4*; α(P)=1.489×10^{-7} *21*
11482.5	(73/2$^-$)	1042.7 *19*	100	10439.8	(69/2$^-$)	(E2)	0.00293	α(K)=0.00246 *4*; α(L)=0.000368 *6*; α(M)=8.14×10^{-5} *12* α(N)=1.88×10^{-5} *3*; α(O)=2.70×10^{-6} *4*; α(P)=1.412×10^{-7} *21*
11537.1	75/2$^+$	1049.8 *3*	100	10487.3	71/2$^+$	E2	0.00289	α(K)=0.00243 *4*; α(L)=0.000363 *5*; α(M)=8.01×10^{-5} *12* α(N)=1.85×10^{-5} *3*; α(O)=2.66×10^{-6} *4*; α(P)=1.393×10^{-7} *20*
12055.6	77/2$^+$	1053.6 *9*	100	11002.0	73/2$^+$	E2	0.00287	α(K)=0.00241 *4*; α(L)=0.000360 *5*; α(M)=7.95×10^{-5} *12* α(N)=1.84×10^{-5} *3*; α(O)=2.64×10^{-6} *4*; α(P)=1.383×10^{-7} *20*
12306.6	79/2$^-$	894.2[@] *14*	38 *12*	11412.4	75/2$^-$	E2	0.00404	α(K)=0.00337 *5*; α(L)=0.000523 *8*; α(M)=0.0001160 *17* α(N)=2.68×10^{-5} *4*; α(O)=3.81×10^{-6} *6*; α(P)=1.93×10^{-7} *3*
		1117.2 *4*	100 *8*	11189.4	75/2$^-$	E2	0.00255	α(K)=0.00215 *3*; α(L)=0.000316 *5*; α(M)=6.98×10^{-5} *10* α(N)=1.616×10^{-5} *23*; α(O)=2.32×10^{-6} *4*; α(P)=1.231×10^{-7} *18*; α(IPF)=5.14×10^{-7} *11*

$^{157}_{67}Ho_{90}$-30

Adopted Levels, Gammas (continued)

γ(^{157}Ho) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ	E_f	J_f^π	Mult.[‡]	α[&]	Comments
12566.3	(79/2$^-$)	1153.9 *12*	100	11412.4	75/2$^-$	(E2)	0.00239	α(K)=0.00201 *3*; α(L)=0.000295 *5*; α(M)=6.51×10^{-5} *10* α(N)=1.506×10^{-5} *22*; α(O)=2.16×10^{-6} *3*; α(P)=1.155×10^{-7} *17*; α(IPF)=1.72×10^{-6} *7*
12636.3	(79/2$^+$)	1099.2 *7*	100	11537.1	75/2$^+$	(E2)	0.00264	α(K)=0.00222 *4*; α(L)=0.000328 *5*; α(M)=7.24×10^{-5} *11* α(N)=1.674×10^{-5} *24*; α(O)=2.40×10^{-6} *4*; α(P)=1.272×10^{-7} *18*
13108.4	(81/2$^+$)	1052.8 *20*	100	12055.6	77/2$^+$	(E2)	0.00288	α(K)=0.00242 *4*; α(L)=0.000360 *6*; α(M)=7.96×10^{-5} *12* α(N)=1.84×10^{-5} *3*; α(O)=2.64×10^{-6} *4*; α(P)=1.385×10^{-7} *21*
13369.6	83/2$^-$	1063.0 *4*	100	12306.6	79/2$^-$	E2	0.00282	α(K)=0.00237 *4*; α(L)=0.000353 *5*; α(M)=7.79×10^{-5} *11* α(N)=1.80×10^{-5} *3*; α(O)=2.58×10^{-6} *4*; α(P)=1.359×10^{-7} *19*
14507.8	87/2$^-$	1138.2 *7*	100	13369.6	83/2$^-$	E2	0.00246	α(K)=0.00207 *3*; α(L)=0.000304 *5*; α(M)=6.70×10^{-5} *10* α(N)=1.551×10^{-5} *22*; α(O)=2.23×10^{-6} *4*; α(P)=1.187×10^{-7} *17*; α(IPF)=1.06×10^{-6} *3*
15875.7	(91/2$^-$)	1367.9 *9*	100	14507.8	87/2$^-$	(E2)	1.75×10^{-3}	α(K)=0.001449 *21*; α(L)=0.000206 *3*; α(M)=4.54×10^{-5} *7* α(N)=1.051×10^{-5} *15*; α(O)=1.518×10^{-6} *22*; α(P)=8.31×10^{-8} *12*; α(IPF)=3.38×10^{-5} *6*

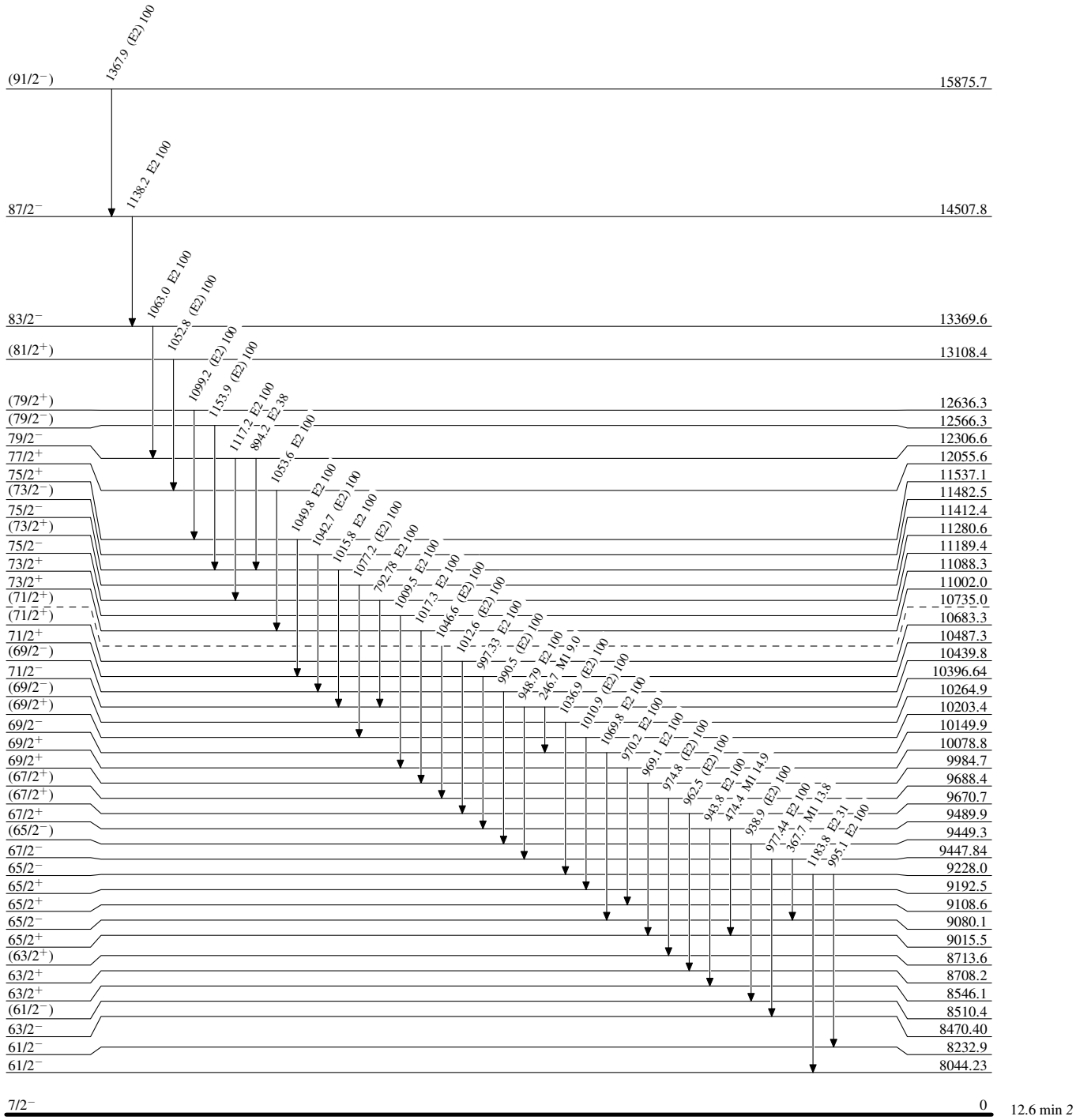
[†] From reaction or decay that has the most precise value.
[‡] Most are from (HI,xnγ) (1992Ra17) and based on analysis of the data for the whole scheme including γ(θ) data, γ intensities in coincidence spectra, and J^π assignments; and a few are from ^{157}Er ε decay (1975AlYW,1977BoYR).
[#] From (HI,xnγ) studies (1984Ha35,1992Ra17), unless noted otherwise.
[@] Transition tentative in (HI,xnγ).
[&] Additional information 3.
[a] Multiply placed with undivided intensity.
[b] Placement of transition in the level scheme is uncertain.

$^{157}_{67}Ho_{90}$-31

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level



$^{157}_{67}Ho_{90}$

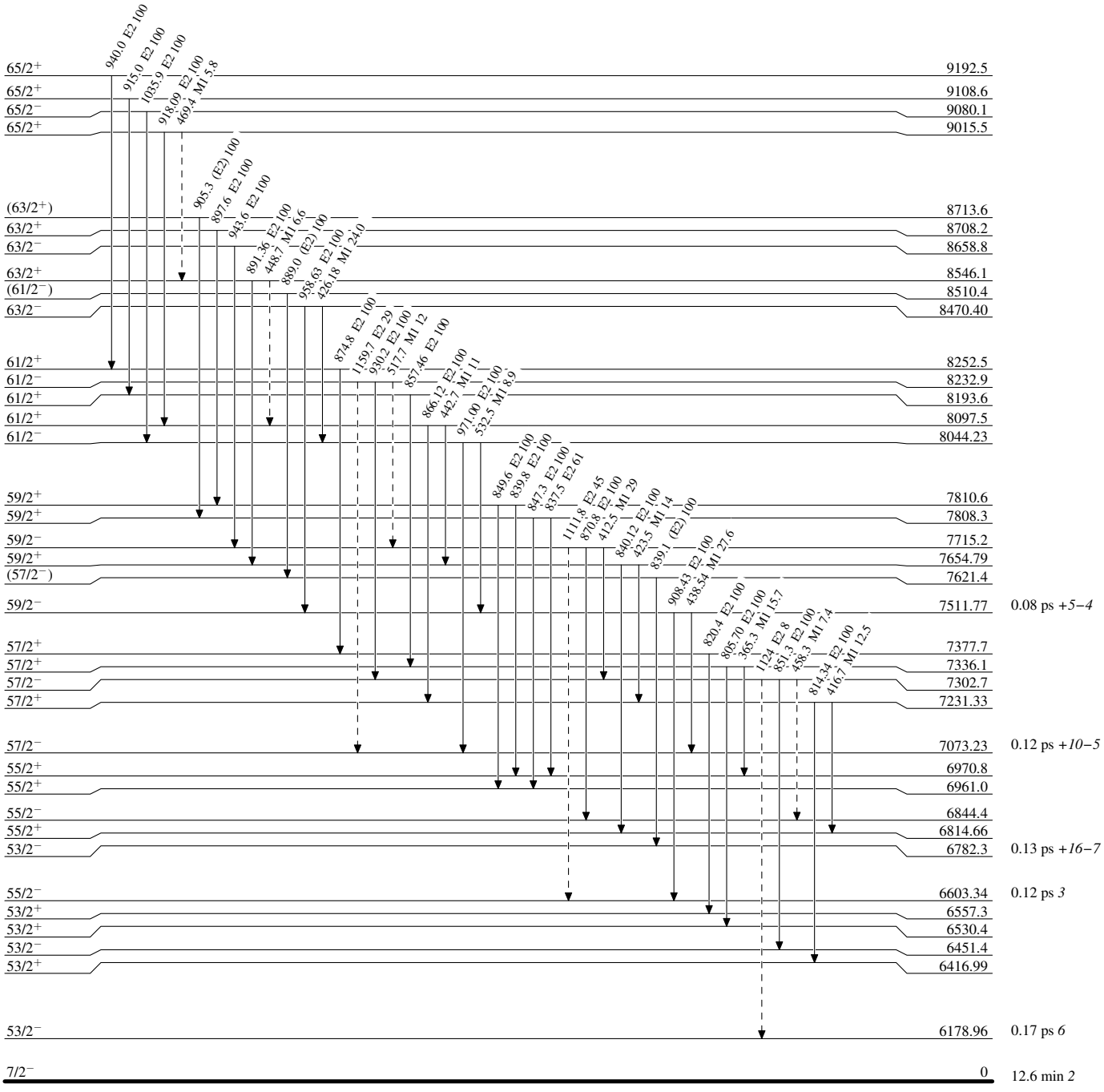
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{157}_{67}Ho_{90}$

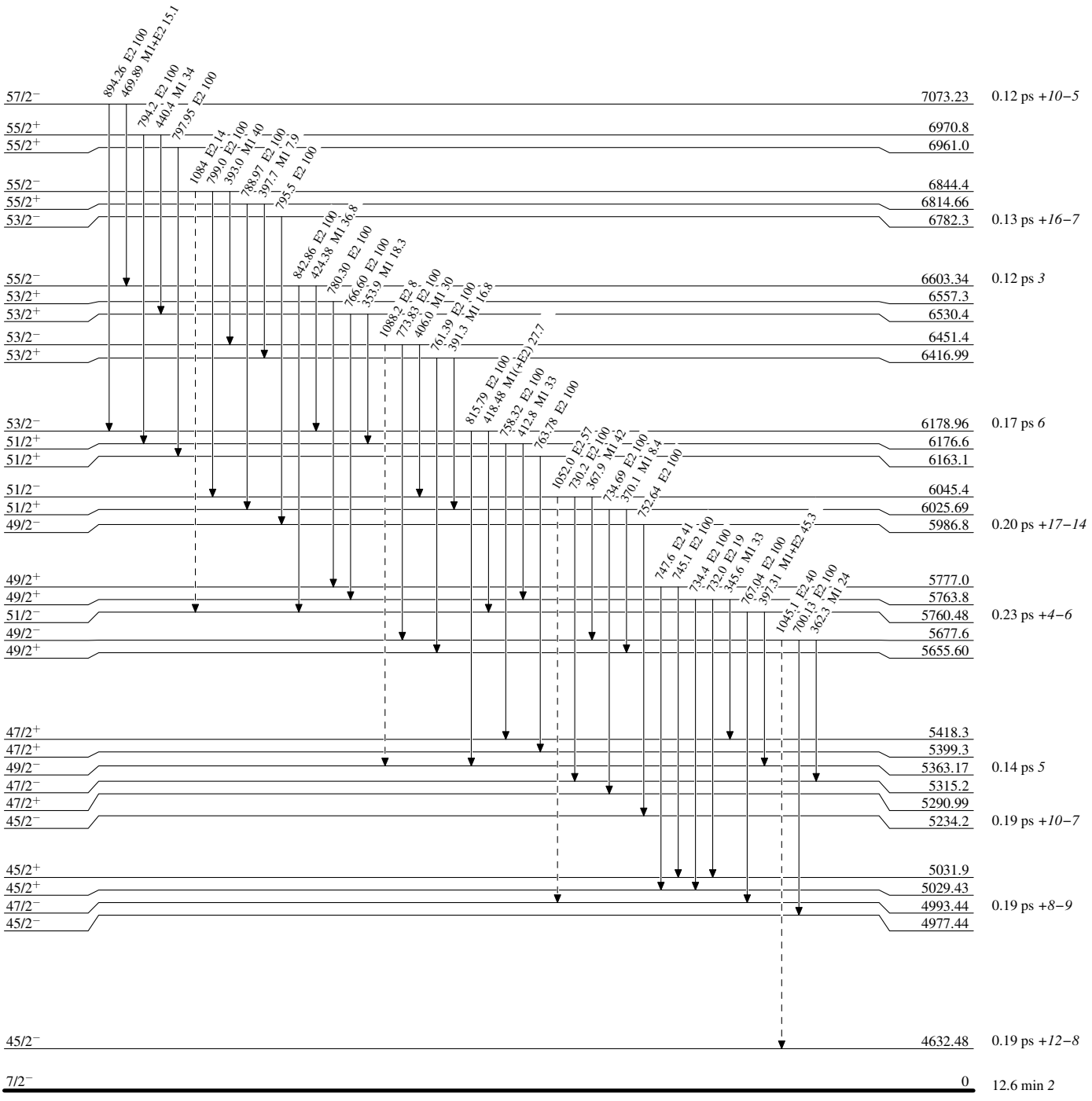
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{157}_{67}Ho_{90}$

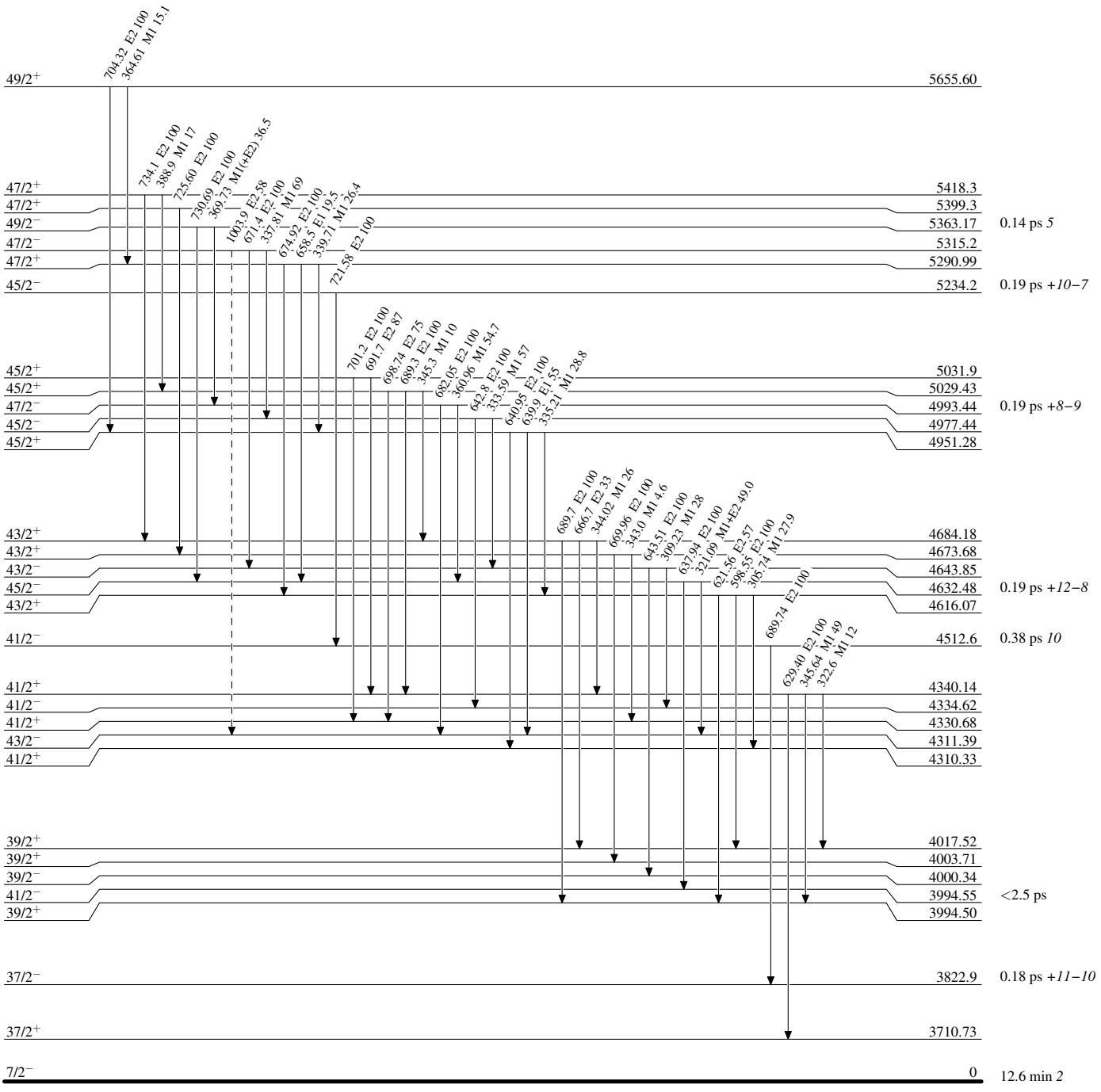
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{157}_{67}Ho_{90}$

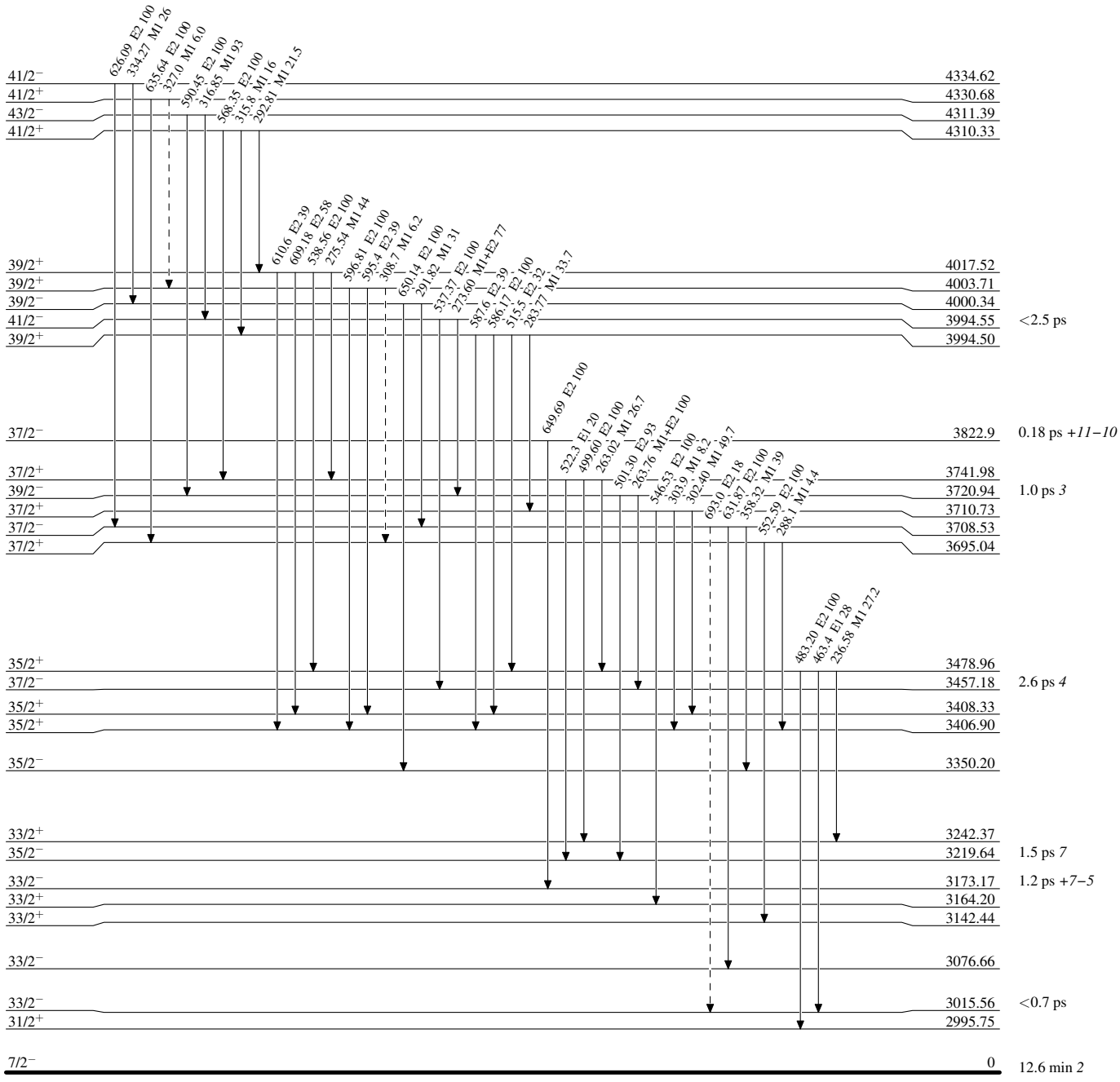
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)

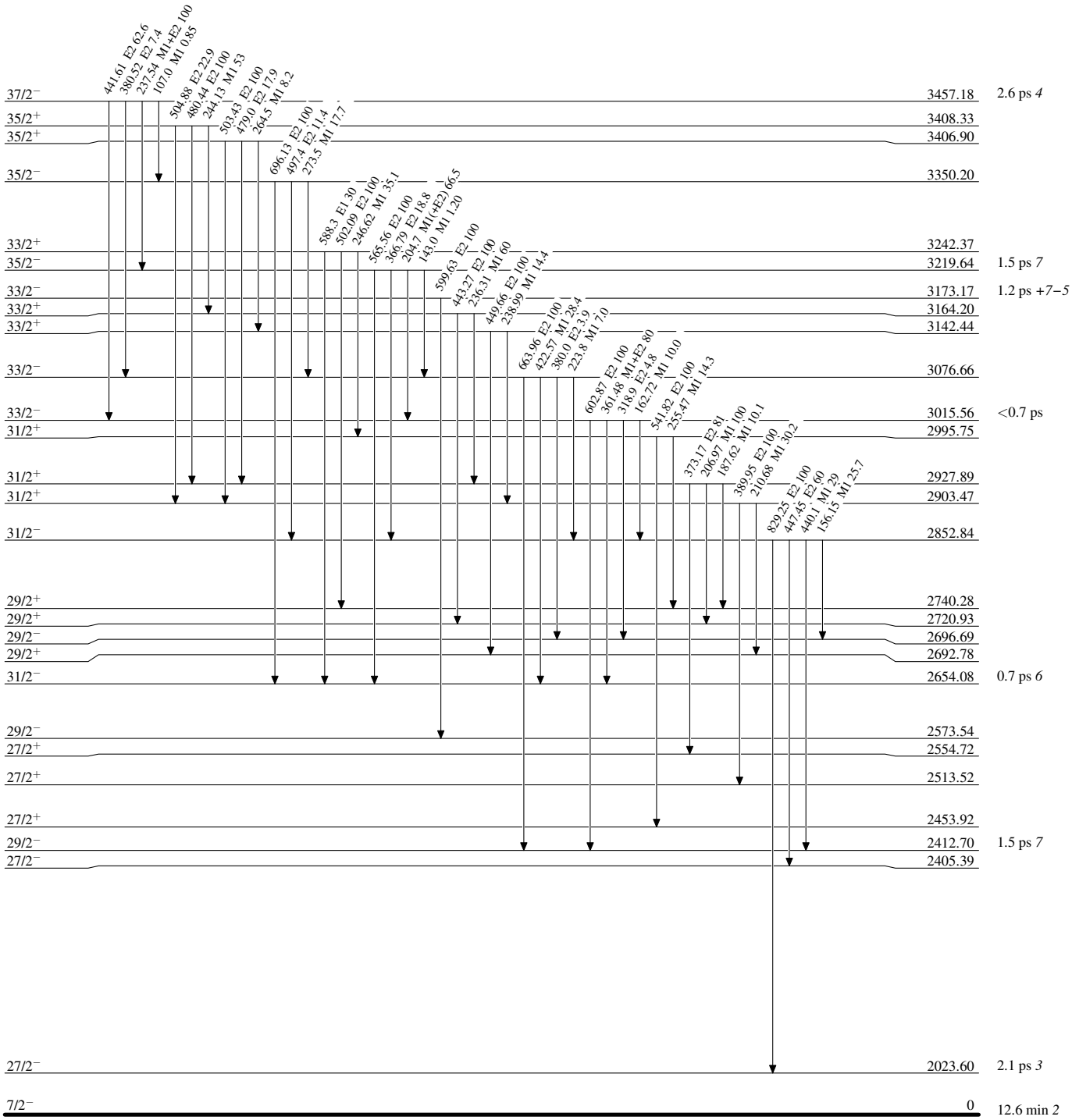


$^{157}_{67}Ho_{90}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{157}_{67}Ho_{90}$

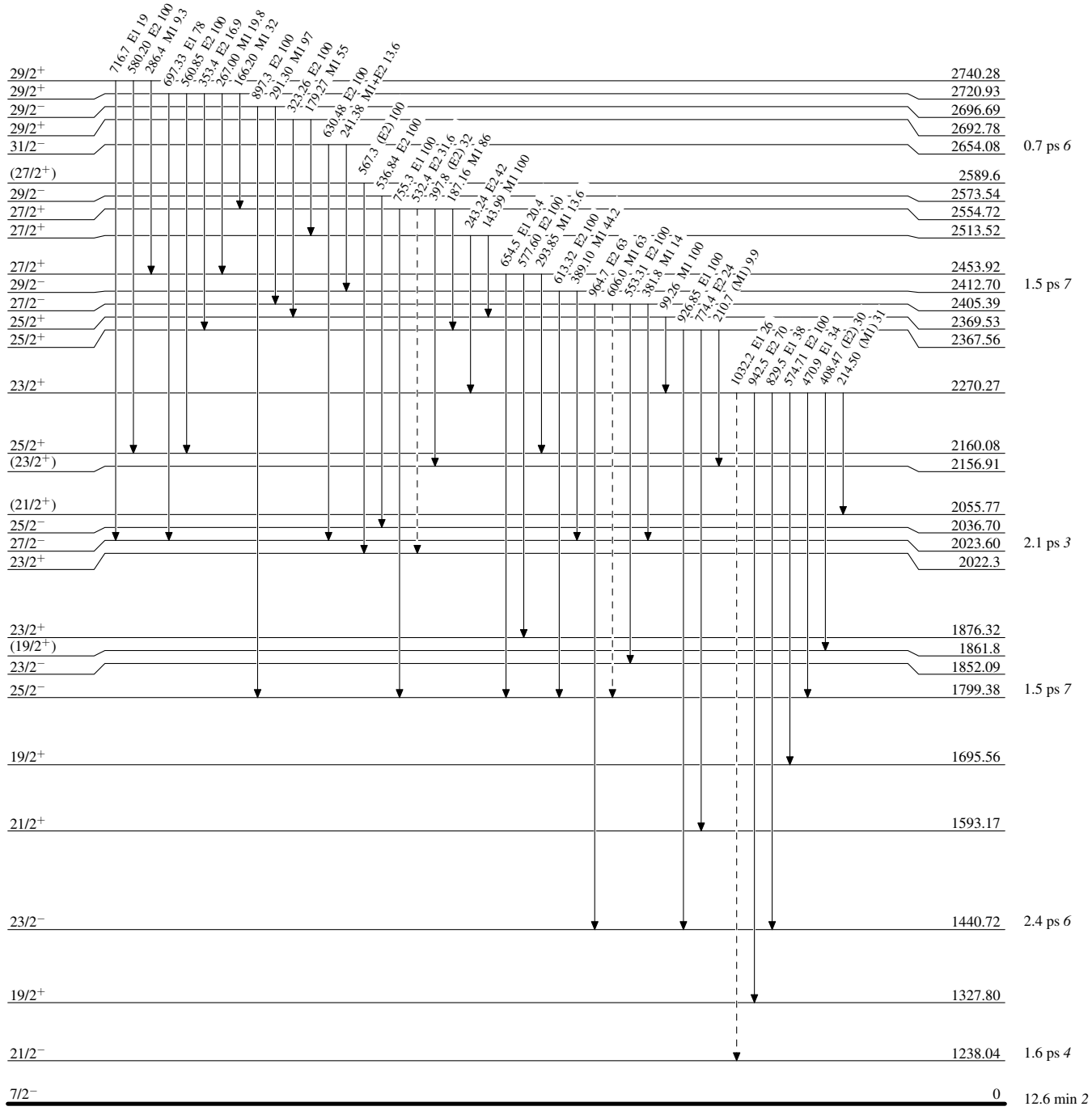
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

– – – – – – ► γ Decay (Uncertain)



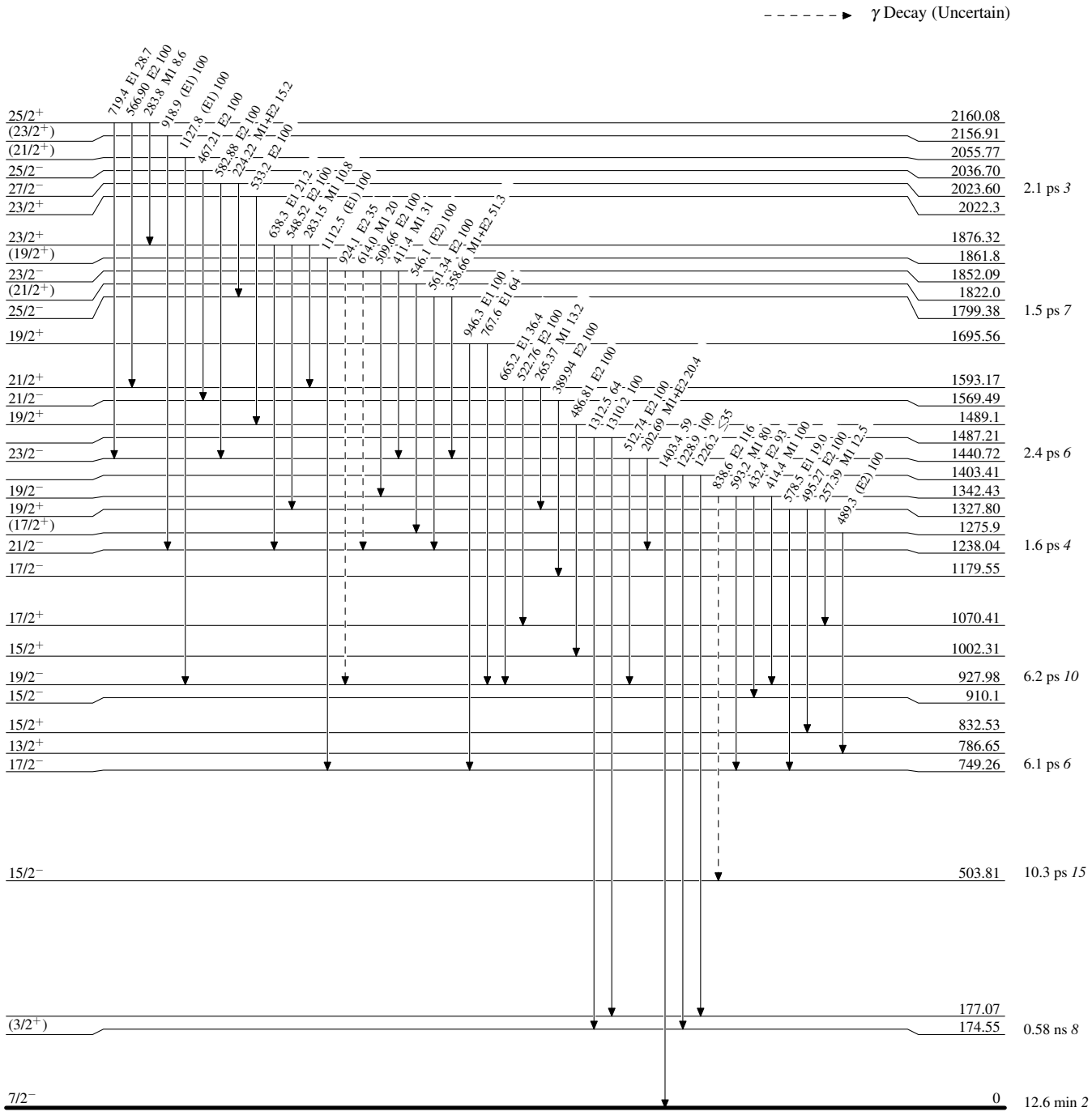
$^{157}_{67}Ho_{90}$

Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{157}_{67}Ho_{90}$

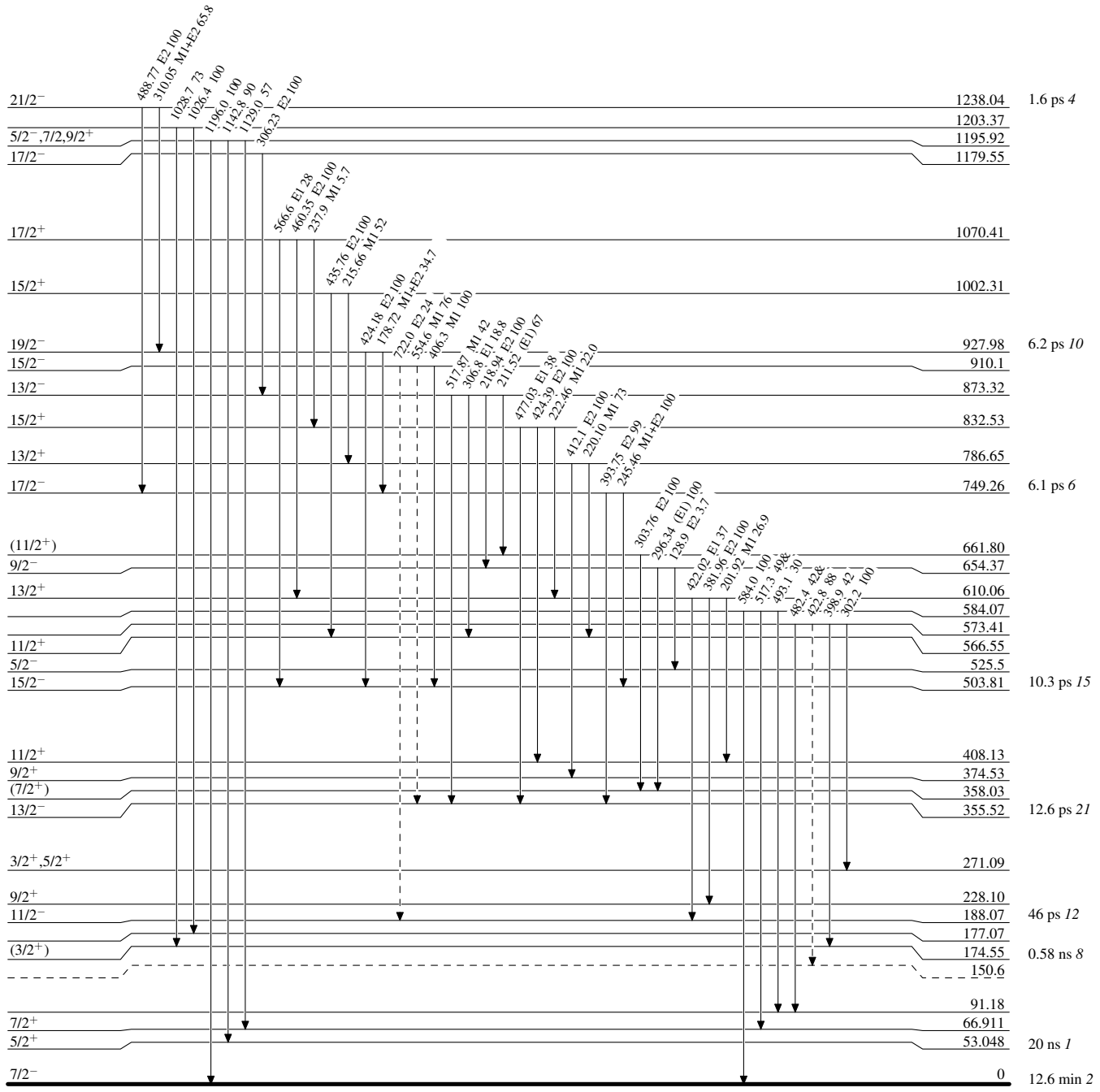
Adopted Levels, Gammas

Legend

Level Scheme (continued)

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

- - - - - - ► γ Decay (Uncertain)



$^{157}_{67}Ho_{90}$

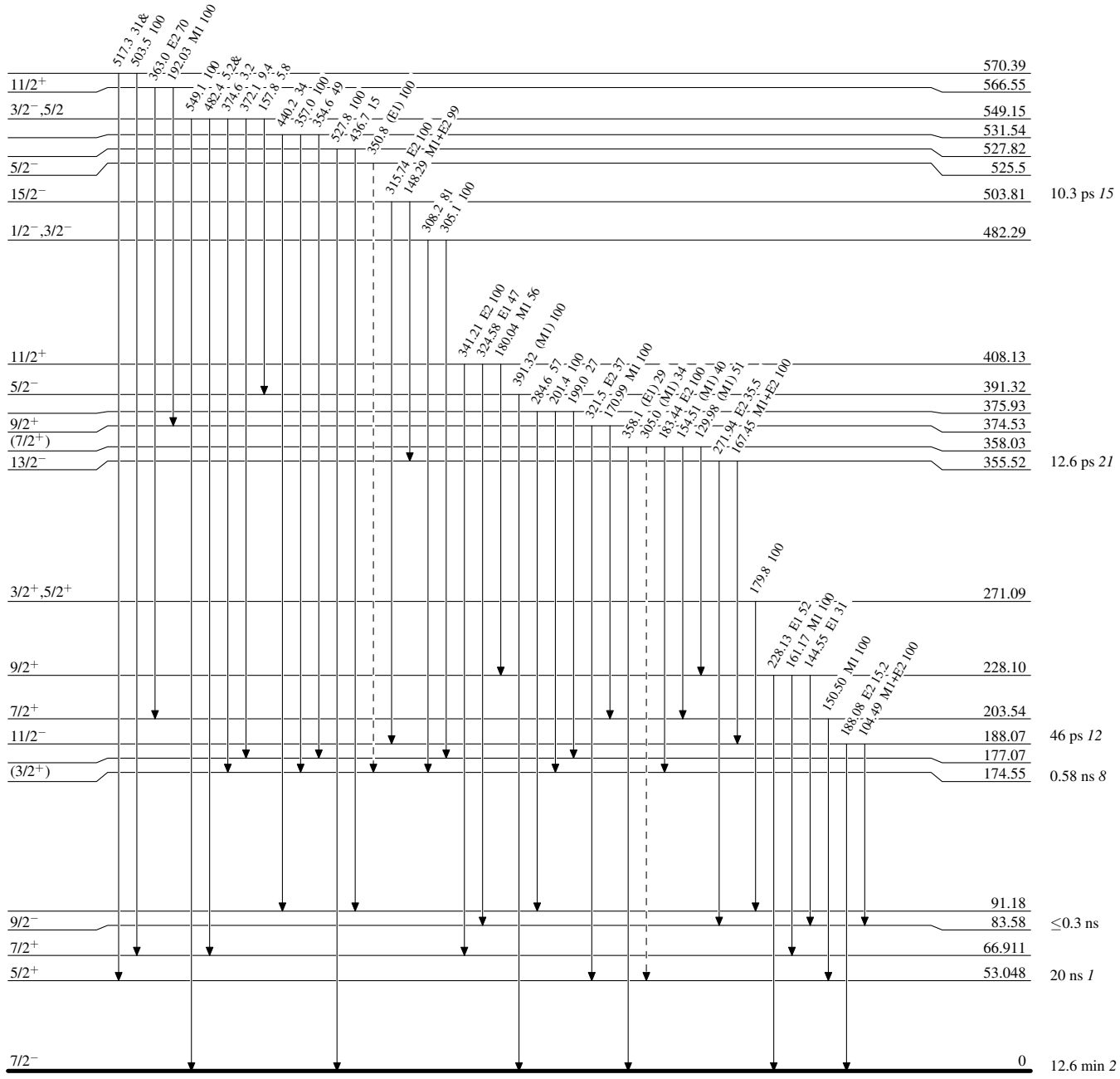
Adopted Levels, Gammas

Legend

Level Scheme (continued)

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

- - - - - - ► γ Decay (Uncertain)

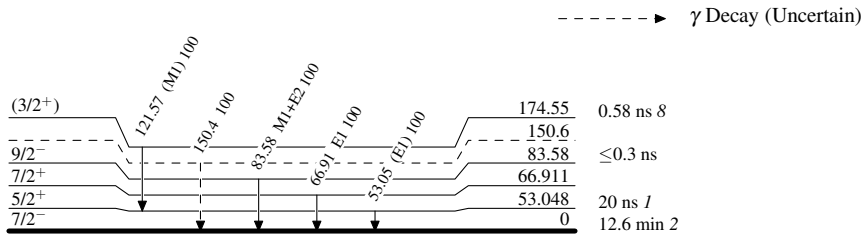


$^{157}_{67}Ho_{90}$

Adopted Levels, Gammas

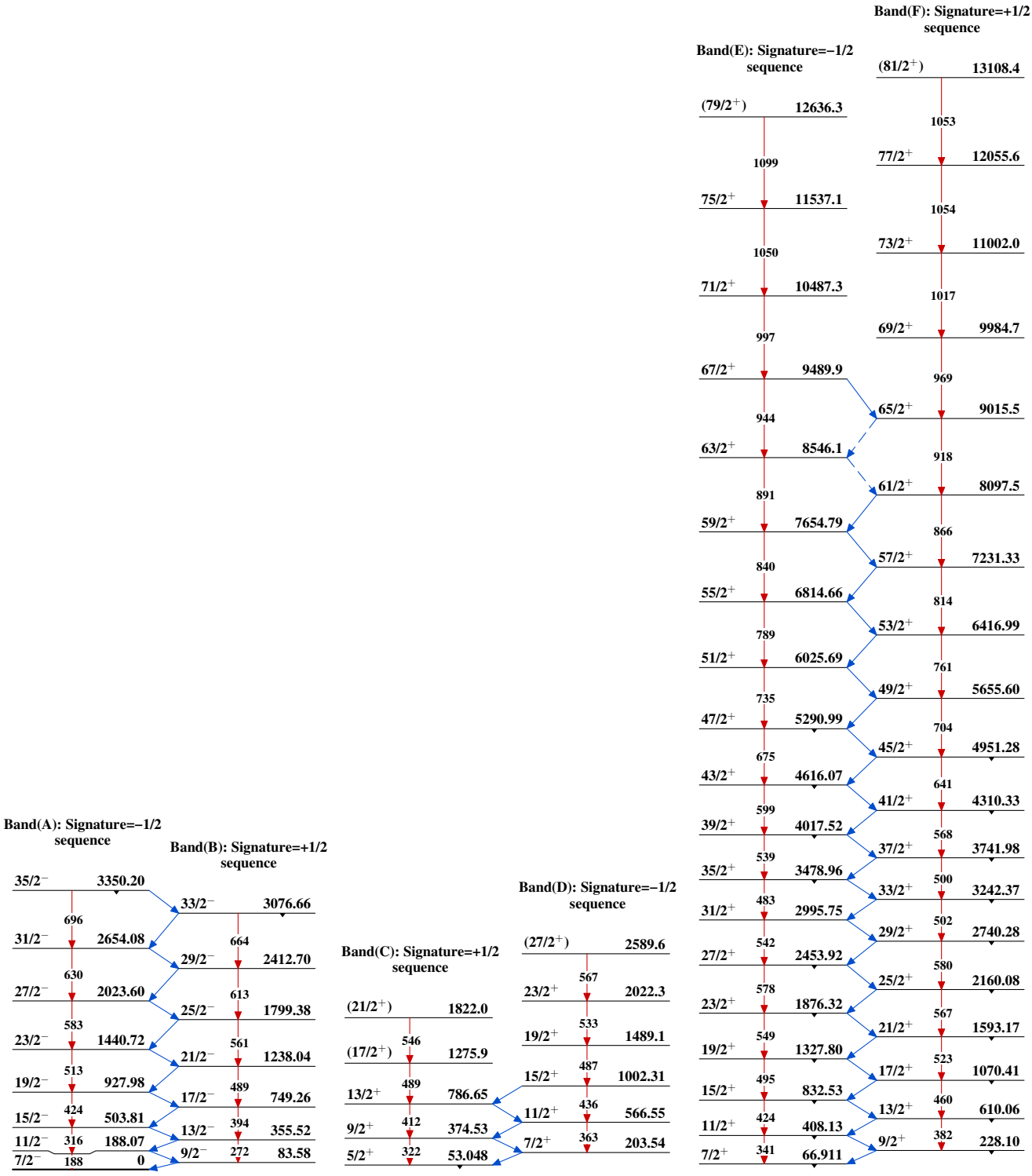
Level Scheme (continued)

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

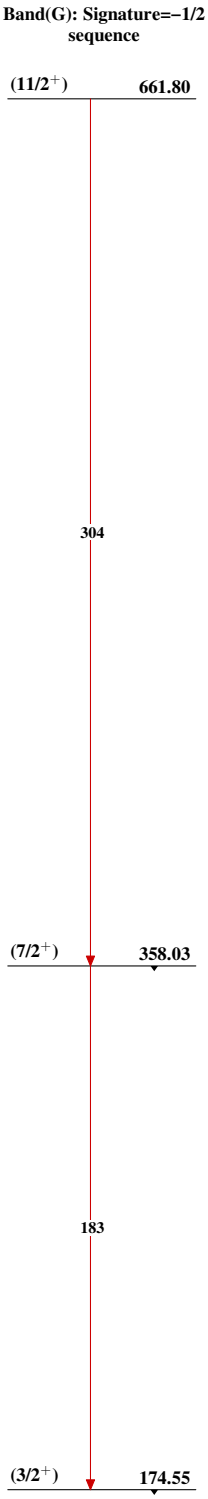


$^{157}_{67}Ho_{90}$

Adopted Levels, Gammas

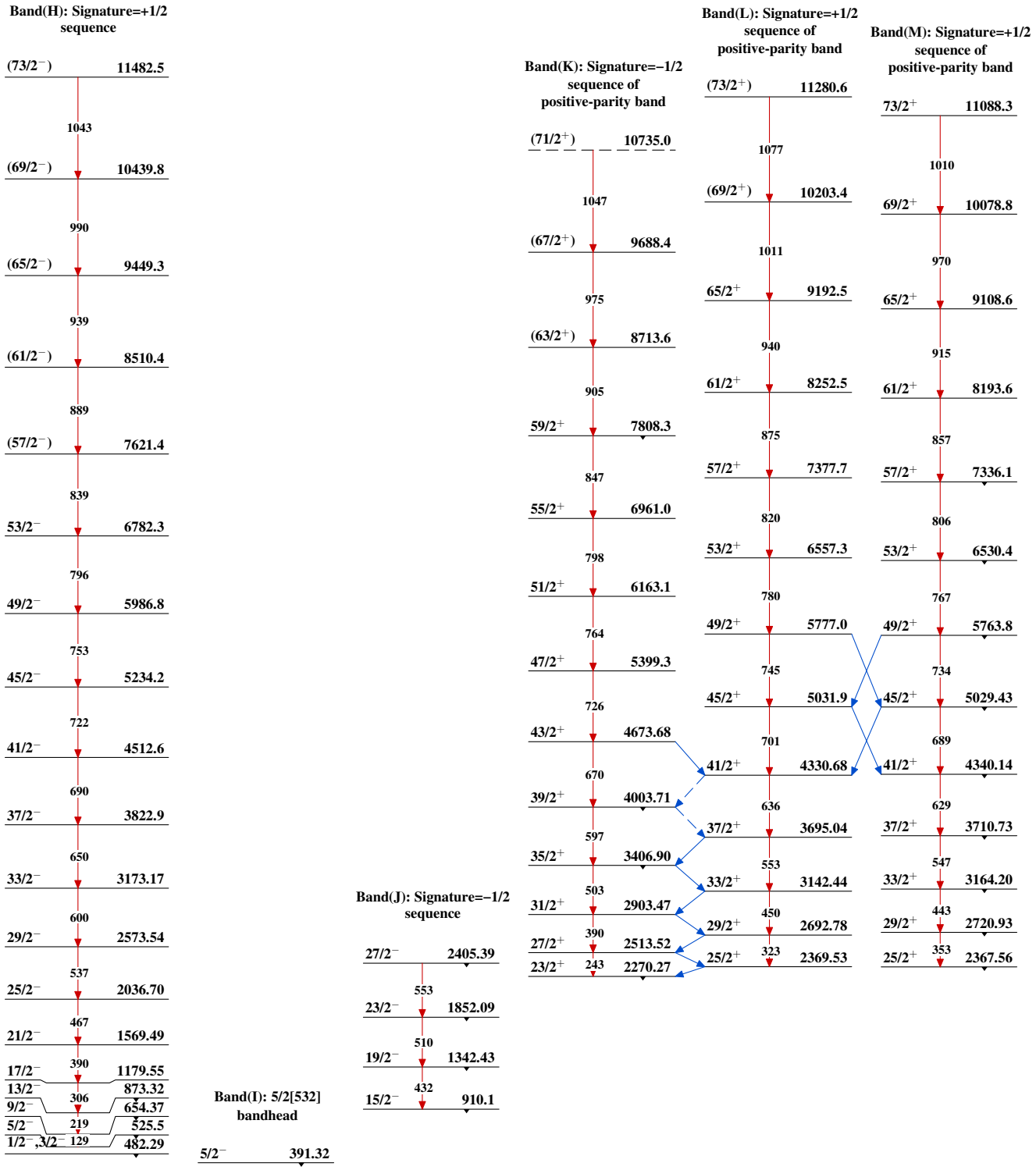


Adopted Levels, Gammas (continued)



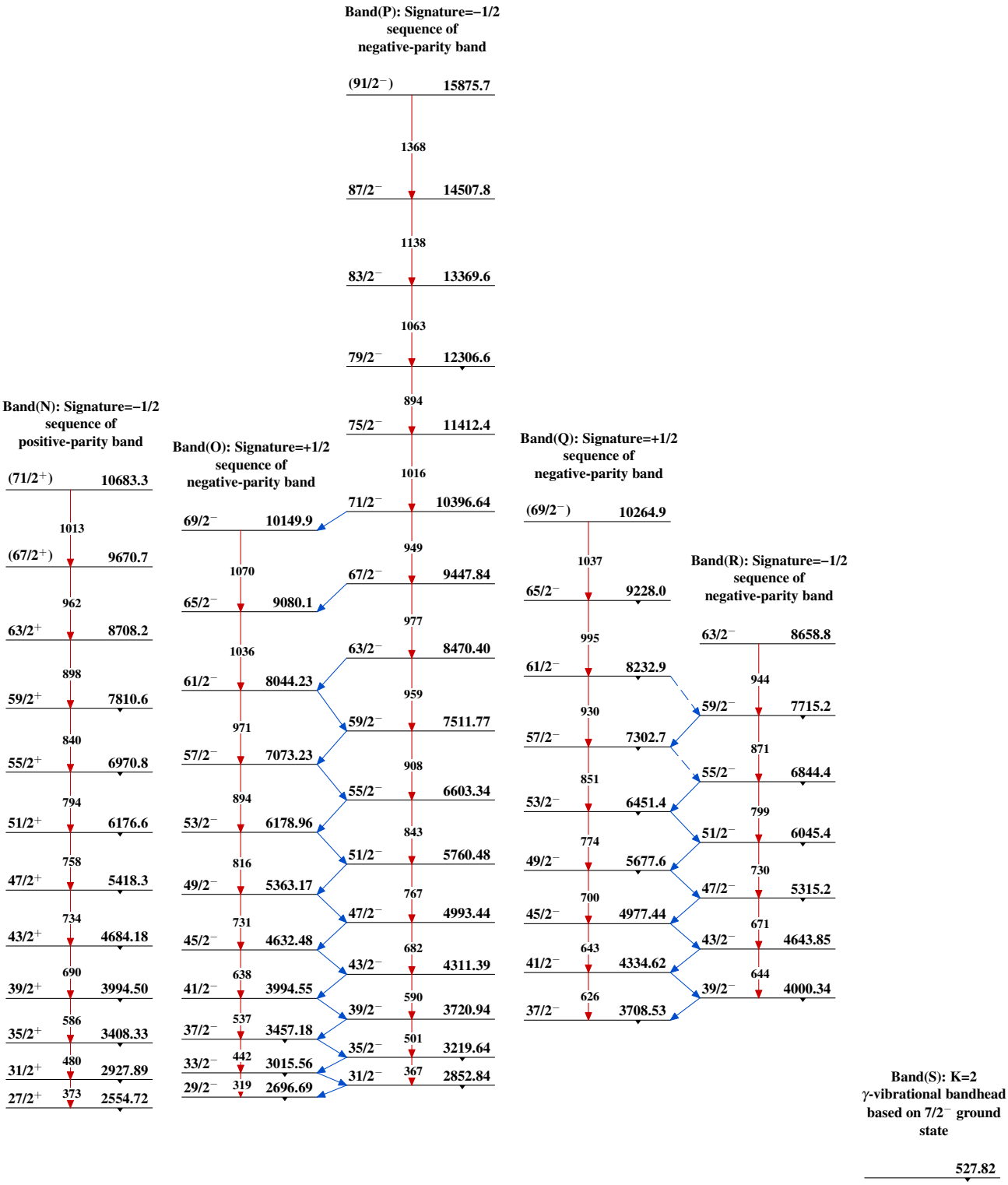
$^{157}_{67}Ho_{90}$

Adopted Levels, Gammas (continued)



$^{157}_{67}Ho_{90}$

Adopted Levels, Gammas (continued)



Adopted Levels, Gammas (continued)

Band(V): 9/2[514] band member

$11/2^-$ 996

Band(U): K=2 γ-vibrational band

$3/2^+$ 638

$1/2^+$ 628

Band(T): 5/2[413] bandhead

$3/2^-$,5/2 549.15

$^{157}_{67}Ho_{90}$