Adopted Levels, Gammas

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

Q(β^-)=2.93×10^3 *3*; S(n)=5.85×10^3 *3*; S(p)=7.42×10^3 *7*; Q(α)=−4.1×10^2 *11* 2012Wa38
Note: Current evaluation has used the following Q record 2930 30 *5850* 30 *7420* 70-4.1E2 10 2003Au03,2009AuZZ.

^{168}Ho Levels

Cross Reference (XREF) Flags

A ^{168}Dy β^- decay
B ^{168}Ho IT decay (132 s)

E(level)†	J$^\pi$	T$_{1/2}$	XREF	Comments
0.0	3$^+$	2.99 min *7*	AB	%β^-=100 J$^\pi$: log *ft*=5.45 to 2$^+$ 821, log *ft*=6.9 to 4$^+$ 995 in ^{168}Ho β^- decay. Suggested configuration: (π 7/2[523])-(ν 1/2[521]) (1973Ti02), based on systematics. T$_{1/2}$: weighted average of 3.3 min *5* (1960Wi10), 3.0 min *1* (1963Ka10), and 2.98 min *9* (1973Ka07).
≈59	(6$^+$)	132 s *4*	B	%IT≥99.5; %β^-≤0.5 %β^-: limit consistent with apparent absence of β^- decay to low-lying 4$^+$ and 6$^+$ states in ^{168}Er (1990Ch37). J$^\pi$: possible (M3) γ to 3$^+$ g.s.; no β^- branch from 0$^+$. Suggested configuration: (π 7/2[523])+(ν 5/2[512]) (1990Ch37). T$_{1/2}$: from 1990Ch37.
143.43 *17*	(1)$^-$	>4 μs	A	J$^\pi$: M2 144γ to 3$^+$ g.s.; γ from 1$^+$. T$_{1/2}$: estimate from intensity ratios in singles and coincidence spectra in ^{168}Dy β^- decay (1990Ch37).
187.17 *22*	1$^{(-)}$		A	J$^\pi$: log *ft*=6.0 (log $f^{1u}t$<8.5) from 0$^+$.
192.57 *20*	1$^+$	108 ns *11*	A	J$^\pi$: log *ft*=5.4 from 0$^+$; E2 193γ to 3$^+$. T$_{1/2}$: $\beta\gamma$(t), $\gamma\gamma$(t) in ^{168}Dy β^- decay (1990Ch37).
630.41 *19*	1$^+$		A	J$^\pi$: log *ft*=4.5 from 0$^+$ ^{168}Dy; γ to 3$^+$ g.s.. Allowed unhindered β^- decay to level suggests presence of (π 5/2[532]) or (π 7/2[523]) in its configuration.

† From least-squares fit to Eγ.

γ(^{168}Ho)

E$_i$(level)	J$_i^\pi$	E$_\gamma$‡	I$_\gamma$†‡	E$_f$	J$_f^\pi$	Mult.‡	α#	Comments
≈59	(6$^+$)	(≈59)	100	0.0	3$^+$	(M3)	2.41×10^3	B(M3)(W.u.)=0.090 *12* E$_\gamma$,I$_\gamma$,Mult.: from ^{168}Ho IT decay (132 s).
143.43	(1)$^-$	143.5 *2*	100	0.0	3$^+$	M2	6.55	B(M2)(W.u.)<0.56
187.17	1$^{(-)}$	43.8 *2*	100	143.43	(1)$^-$	(M1)	4.64 *9*	
192.57	1$^+$	192.5 *2*	100	0.0	3$^+$	E2	0.277	B(E2)(W.u.)=0.28 *3*
630.41	1$^+$	437.0 *7*	38 *5*	192.57	1$^+$	[M1]	0.0456	
		443.3 *2*	69 *5*	187.17	1$^{(-)}$	[E1]	0.00703	
		487.0 *2*	100 *7*	143.43	(1)$^-$	[E1]	0.00568	
		630.4 *3*	60 *5*	0.0	3$^+$	[E2]	0.00888	

† Relative photon branching from each level.

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

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

‡ From ^{168}Dy β^- decay, except as noted.

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

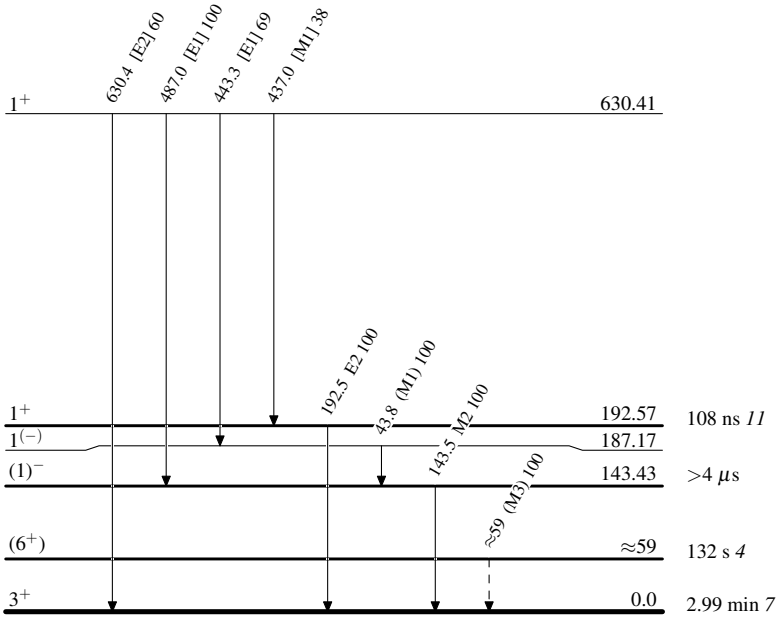
Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{168}_{67}Ho_{101}$