History								
Туре	Author	Citation	Literature Cutoff Date					
Full Evaluation	Balraj Singh and Jun Chen	NDS 185, 2 (2022)	23-Aug-2022					

 $Q(\beta^{-})=-7900 \ 30$; $S(n)=11730 \ 80$; $S(p)=1075 \ 12$; $Q(\alpha)=2.33\times10^{3} \ 11 \ 2021$ Wa16 $Q(\varepsilon)=6048 \ 13, \ Q(\varepsilon p)=1602 \ 15, \ S(2n)=22031 \ 13, \ S(2p)=5481 \ 14 \ (2021$ Wa16).

¹⁴⁹Ho produced and identified by 1979To01, followed by later studies of its decay.

2012Th13: deduced mass excess.

Theoretical studies: consult the NSR database at www.nndc.bnl.gov/nsr/ for eight references for structure and three for radioactive decay listed under 'document records' which can be accessed through web retrieval of the ENSDF database at www.nndc.bnl.gov/ensdf/.

Additional information 1.

149Ho Levels

Band assignments are from 2010Ko12 in (40 Ar,p2n γ).

Cross Reference (XREF) Flags

			A ¹⁴⁹ E B ¹⁴⁹ E C ¹⁵⁰ T D ¹⁵³ T	$\begin{array}{lll} \varepsilon \ \varepsilon \ decay \ (4 \ s) & E & {}^{153} \mathrm{Tm} \ \alpha \ decay \ (2.5 \ s) \\ \varepsilon \ \varepsilon \ decay \ (9.6 \ s) & F & {}^{112} \mathrm{Sn}({}^{40} \mathrm{Ar}, \mathrm{p2n}\gamma) \\ \varepsilon \ m \ \varepsilon \ p \ decay \ (1.48 \ s) & G & {}^{121} \mathrm{Sb}({}^{32} \mathrm{S}, 4\mathrm{n}\gamma), \end{array}$
E(level) [†]	$J^{\pi \ddagger}$	T _{1/2}	XREF	Comments
0.0 ^e	(11/2 ⁻) ^c	21.0 s 2	A CD FG	$\%\varepsilon + \%\beta^+ = 100$ T _{1/2} : weighted average of 21.1 s 2 (1993Al03), 20.5 s 5 (1994Me13), 23 s 4 (1982Ba75), and 21 s 2 (1979To01). Configuration= $\pi h_{11/2}$.
48.8 2	(1/2 ⁺)	56 s <i>3</i>	ABCDE	$\%\varepsilon + \%\beta^+ = 100$ Additional information 2. $T_{1/2}$: from 1994Me13. Others: 58 s 3 (1989Me13, superseded by 1994Me13), 54 s 5 (1988ToZW). Configuration= $s_{1/2}$.
220.23 22	$(3/2^+)$		ABCDE	J^{π} : M1 171.5 γ to (1/2 ⁺).
564.17 23	(5/2+)		ABCDE	Configuration= $\pi d_{3/2}$. J^{π} : (M1) 343.9 γ to (3/2 ⁺). Configuration= $\pi d_{5/2}$.
1000.91 23	$(7/2^+)$		BC	J^{π} : (M1) 436.7 γ to (5/2 ⁺). Configuration= $\pi g_{7/2}$.
1171.08 [@] 7	@		В	
1183.71 [@] 20	@		В	
1277.11 [@] 10	$(9/2^{-})^{@}$		В	
1380.09 <i>^f 10</i> 1415.0 <i>4</i>	(15/2 ⁺) (7/2 ⁺)		BC FG B	J ^{π} : probable configuration= $\pi h_{11/2} \otimes (3^- \text{ in } {}^{148}\text{Dy})$ (1980Wi11) and systematics. J ^{π} : 1194.5 γ to (3/2 ⁺), 413.0 γ to (7/2 ⁺); possible ε feeding from (11/2 ⁻) in ${}^{149}\text{Er}$.
1530.94 [@] 8	@		В	
1552.10 [@] 8	@		В	
1560.12 ^e 10	$(15/2^{-})^{c}$		BC FG	
1601.9 ^{<i>@</i>} 5	e Ø		В	
1648.91 ^{^w} 10	س ه		В	
1706.92 ^w 20	^w		В	

¹⁴⁹Ho Levels (continued)

E(level) [†]	$J^{\pi \ddagger}$	T _{1/2}	XRI	EF	Comments
$1735 31^{@} 20$	@		R		
1755.51 20 1765.90 0 10	@		Б		
1707.30 23	$(3/2^{+})$		•		I^{π} : probable allowed a decay from $(1/2^+)$ in ¹⁴⁹ Er:
1191.30 23	(3/2)		л		configuration= $\pi s_{1/2} \otimes (2^+ \text{ in } {}^{148}\text{Dy})$ (1989Fi01).
1828.9 [@] 3	<i>w</i>		В		
1997.46 [@] 18	@		В		
2024.3 ^{<i>f</i>} 3	$(19/2^+)$			FG	J ^{π} : probable configuration= $\pi h_{11/2} \otimes (5^{-1} \text{ in } {}^{148}\text{Dy}) (1980\text{Will}).$
2071.92 [@] 20	@		В		
2135.0 [@] 5	@		В		
2148.72 [@] 20	@		В		
$2177.52^{@}$ 10	@		В		
2209.1 3	$(9/2^{-})^{a}$		B		
$2221.92^{\textcircled{0}}$ 10	@		В		
2226.82 15	$(9/2^{-})^{a}$		В		
2267.28 10	$(9/2^{-})^{a}$		В		
2286.0 ^e 3	$(19/2^{-})^{C}$			FG	
2297.3 5	$(9/2^{-})^{a}$		В		
2317.62 [@] 20	@		В		
2321.71 10	$(9/2^{-})^{a}$		В		
2326.82 [@] 20	<i>w</i>		В		
2367.9 [@] 11	@		В		
2381.32 ^(@) 20	@		В		
2407.3 ^{<i>f</i>} 4	$(23/2^+)$			FG	J^{π} : probable configuration= $\pi h_{11/2} \otimes (7^{-1} in^{-148} Dy)$ (1980Wi11).
2449.7 6	$(9/2^{-})^{a}$		В		
2469.37 19	$(9/2^{-})^{a}$		В		
2493.2 6	(9/2 ⁻) ⁴		В		
2499.4? ^{&} 5	æ		В		
2512.52 ^{^w} 20	e		В		
2580.42 ^{^w} 20	<i>w</i>		В		
2591.4 [@] 4	@		В		
2592.1 ^e 4	$(23/2^{-})^{c}$		_	FG	
2607.41 10	$(9/2^{-})^{\alpha}$		В		
2633.3 ^w 4			В		
2077.03	(9/2) ^a		В		
2/14.8 3	(27/2-)(50 1	В	TC	T = (1) : (320.4) (1000W/11)
2735.9° 5	(27/2) ^e	59 ns 4	_	FG	$1_{1/2}$: from $\gamma\gamma(t)$ in (525,4n γ) (1980 w111).
2804.5? 5	$(0/2^{-})^{a}$		В		
2024.9 11	(9/2)		D	-	
2849.10 0	$(29/2, 51/2)^{2}$		_	r	
2851.2?*** 11	&r		В		
2901.7?** 4	$(0/2-)^{a}$		В		
2913.9 11	(9/2)		В Р		
2935.7 = 0	&		В		
2939.3? 9	~ @		В		
2965.5 ^w 3			В		
2977.8 ^w 3			В		
2992.3 3	$(9/2^{-})^{u}$		В		
2996.63 ^w 24	*		В		

¹⁴⁹Ho Levels (continued)

E(level) [†]	Jπ‡	XR	EF
3000.9 11	$(9/2^{-})^{a}$	В	
3005.0 3	$(9/2^{-})^{a}$	В	
3049.0 [@] 3	@	В	
3061.0? ^{&} 9	&	В	
3124.9 11	$(9/2^{-})^{a}$	В	
3174.9? ^{&} 5	&	В	
3226.2? ^{&} 4	&	В	
3263.1? ^{&} 3	&	В	
3305.8? ^{&} 3	&	В	
3325.2? ^{&} 4	&	В	
3338.4? ^{&} 3	&	В	
3536.3? ^{&} 8	&	В	
3790 [#]	$(1/2,3/2)^{b}$	Α	
3795.1? ^{&} 6	&	В	
3828.3? ^{&} 12	&	В	
3885.6? ^{&} 5	&	В	
3931.2 ^h 7	$(31/2,33/2)^d$		F
3990 [#]	$(1/2,3/2)^{b}$	A	
4003.2? ^{&} 4	&	В	
4029.2 ^g 7	$(33/2,35/2)^d$		F
4037.3? ^{&} 13	&	В	
4086.4? ^{&} 5	&	В	
4236.0? ^{&} 10	&	В	
4240 [#]	$(1/2,3/2)^{b}$	A	
4330.6 ^h 7	$(35/2,37/2)^d$		F
4386.0? ^{&} 7	&	В	
4413.5 [@] 3	@	В	
4433.9? ^{&} 4	&	В	
4441.4 [@] 3	@	В	
4470 [#]	$(1/2,3/2)^{b}$	A	
4552.5? ^{&} 8	&	В	
4616.8? ^{&} 5	&	В	
4622.4? ^{&} 3	&	В	
4645.6? ^{&} 4	&	В	
4652.1 [@] 4	@	В	
4661.68 [@] 20	@	В	
4676.7? ^{&} 4	&	В	
4680.3 6	$(31/2^{-})^{d}$		F
4699.68 [@] 20	@	В	
4706.1 [@] 10	@	В	
4750.0? ^{&} 8	&	В	
4765.3 ^h 8	(39/2,41/2) ^d		F
4820.9 ^g 7	(37/2,39/2) ^d		F
4822.9? ^{&} 6	&	В	
4851.1? ^{&} 9	&	В	

¹⁴⁹Ho Levels (continued)

E(level) [†]	$J^{\pi \ddagger}$	T _{1/2}	XREF	Comments
4970 [#]	(1/2,3/2) ^b		A	
5050 [#]	(1/2,3/2) ^b		Α	
5079.2 [@] 10	@		В	
5098.7 [@] 10	@		В	
5210.9 7	$(35/2^{-})^{d}$		F	
5505.9 <mark>8</mark> 8	(39/2,41/2) ^d		F	
7.20×10^3 ? 35		≥100 ns	G	1980Bo07 propose the following γ rays deexciting this isomer: 337, 436, 636, 648, 671, 777, 896. But no level scheme is proposed.
				$T_{1/2}$: from $\gamma(t)$ in (⁵⁰ Ti,xn γ) (1980Bo07).

[†] From a least-squares fit to γ -ray energies where available, assuming $\Delta E \gamma = 0.3$ keV, when uncertainty of $E \gamma$ is not stated.

[‡] From Shell-Model predictions and systematics, unless otherwise noted. Orbital configurations are given under comments.

[#] Level deexcites by proton emission (1989Fi01). No γ rays are known. The uncertainty is \approx 50 keV.

^(a) Weakly populated level in ¹⁴⁹Er ε decay (9.6 s). Possible allowed or first-forbidden $\varepsilon + \beta^+$ feeding from (11/2⁻) parent and γ to (11/2⁻) g.s. suggests 9/2, 11/2, 13/2.

& Weakly populated uncertain level in ¹⁴⁹Er ε decay (9.6 s). Possible allowed or first-forbidden $\varepsilon + \beta^+$ feeding from (11/2⁻) parent and γ to (11/2⁻) g.s. suggests 9/2, 11/2, 13/2.

^{*a*} Probable allowed or first-forbidden $\varepsilon + \beta^+$ feeding from (11/2⁻) parent and γ to 7/2⁺ suggest 9/2, 11/2⁺. $J^{\pi} = (9/2^-)$ is supported by expected dominance of h_{11/2} proton to h_{9/2} neutron component in the β transitions (1989Fi01).

^b Evidence of allowed or first-forbidden ε feeding from (1/2⁺) parent.

^c Probable member of configuration= $\pi h_{11/2}^3$ (1980Wi11) in (³²S,4n γ).

^d Proposed by 2010Ko12 in (⁴⁰Ar,p2nγ), based on measured anisotropies, band assignments, and shell-model predictions.

^e Band(A): Band based on g.s.

^f Band(B): Band based on $(15/2^+)$.

^g Band(C): Band based on (29/2,31/2).

^h Band(D): Band based on (31/2, 33/2).

E _i (level)	\mathbf{J}_i^{π}	E_{γ}^{\dagger}	I_{γ}^{\dagger}	E_f	\mathbf{J}_f^{π}	Mult.	α^{a}
220.23	$(3/2^+)$	171.5 <i>1</i>	100	48.8	$(1/2^+)$	M1 [@]	0.566 8
564.17	$(5/2^+)$	343.9 <i>1</i>	100 12	220.23	$(3/2^+)$	(M1) [@]	0.0853 12
		515.4 <mark>b</mark>	<18	48.8	$(1/2^+)$		
1000.91	$(7/2^+)$	436.7 1	100 17	564.17	$(5/2^+)$	(M1) [@]	0.0456 6
		780.7 1	69 29	220.23	$(3/2^+)$		
1171.08		1171.0 <i>1</i>	100	0.0	$(11/2^{-})$		
1183.71		1183.7 2	100	0.0	$(11/2^{-})$		
1277.11	$(9/2^{-})$	106.0 10	≈12	1171.08			
		1277.1 <i>1</i>	100 12	0.0	$(11/2^{-})$		
1380.09	$(15/2^+)$	1380.1 <i>1</i>	100	0.0	$(11/2^{-})$	[M2]	0.00621 9
1415.0	$(7/2^+)$	413.0 10	33 17	1000.91	$(7/2^+)$		
		851.0 5	50 17	564.17	$(5/2^+)$		
		1194.5 5	100 33	220.23	$(3/2^+)$		
1530.94		359.9 1	17 4	1171.08			
		1530.9 <i>1</i>	100 11	0.0	$(11/2^{-})$		
1552.10		172.4 10	≈16	1380.09	$(15/2^+)$		

 $\gamma(^{149}\text{Ho})$

γ ⁽¹⁴⁹Ho) (continued)</sup>

E _i (level)	\mathbf{J}_i^{π}	E_{γ}^{\dagger}	I_{γ}^{\dagger}	E_f	\mathbf{J}_f^{π}	Mult.
1552.10		380.9 1	37 11	1171.08	$(11/2^{-})$	
1560 12	$(15/2^{-})$	1552.2 1	100 10	0.0	(11/2) $(11/2^{-})$	
1601.9	(13/2)	222 0 10	≈50	1380.09	(11/2) $(15/2^+)$	
1001.7		323.8.10	25.8	1277 11	$(9/2^{-})$	
		1602.0 10	100.33	0.0	$(11/2^{-})$	
1648.91		1648.9 /	100	0.0	$(11/2^{-})$	
1706.92		327.1 10	≈9	1380.09	$(15/2^+)$	
		1706.9 2	100 12	0.0	$(11/2^{-})$	
1735.31		1735.3 2	100	0.0	$(11/2^{-})$	
1765.80		163.1 10	≈11	1601.9		
		1765.8 <i>1</i>	100 11	0.0	$(11/2^{-})$	
1797.30	$(3/2^+)$	1233.0 ^b 10	≈6	564.17	$(5/2^+)$	
		1577.9 3	28 8	220.23	$(3/2^+)$	
		1748.4 <i>1</i>	100 11	48.8	$(1/2^+)$	
1828.9		1828.9 <i>3</i>	100	0.0	$(11/2^{-})$	
1997.46		826.4 2	88 25	1171.08		
		1997.4 <i>3</i>	100 25	0.0	$(11/2^{-})$	
2024.3	$(19/2^+)$	644.3 [‡]	100	1380.09	$(15/2^+)$	
2071.92		2071.9 2	100	0.0	$(11/2^{-})$	
2135.0		2135.0 5	100	0.0	$(11/2^{-})$	
2148.72		2148.7 2	100	0.0	$(11/2^{-})$	
2177.52		2177.5 <i>1</i>	100	0.0	$(11/2^{-})$	
2209.1	$(9/2^{-})$	1208.5 5	60 20	1000.91	$(7/2^+)$	
		2209.0 3	100 40	0.0	$(11/2^{-})$	
2221.92	(0.10-)	2221.9 1	100	0.0	$(11/2^{-})$	
2226.82	$(9/2^{-})$	1225.8 2	75 25	1000.91	$(7/2^{+})$	
00(7.00	(0/2-)	2226.9 2	100 17	0.0	(11/2)	
2267.28	(9/2)	1267.9 5	5729 10020	1000.91	$(1/2^{-})$	
2206.0	(10/2-)	2207.2 I	100 29	0.0	(11/2)	
2286.0	(19/2)	125.8*	50.25	1560.12	(15/2)	
2297.3	(9/2)	1295.0 10	50 25	1000.91	$(1/2^{-})$	
2217 62		2297.0 3	100 50	0.0	(11/2) $(11/2^{-})$	
2317.02	$(0/2^{-})$	1045 6 10	20.10	1277-11	(11/2) $(0/2^{-})$	
2321.71	(9/2)	1320 4 5	20 10	1000.01	$(\frac{3}{2})$ $(\frac{7}{2}^{+})$	
		2321 7 1	100 15	0.0	$(11/2^{-})$	
2326.82		2326.8.2	100 10	0.0	$(11/2^{-})$	
2367.9		1367.0 10	≈7	1000.91	$(7/2^+)$	
		2368.3 <mark>b</mark> 2	100 17	0.0	$(11/2^{-})$	
2381.32		2381.3 2	100	0.0	$(11/2^{-})$	
2407.3	$(23/2^+)$	383.1 [‡]		2024.3	$(19/2^+)$	
2449.7	$(9/2^{-})$	1448.8 5	100	1000.91	$(7/2^+)$	
2469.37	$(9/2^{-})$	1468.1 5	100 50	1000.91	$(7/2^+)$	
		2469.4 2	79 22	0.0	$(11/2^{-})$	
2493.2	$(9/2^{-})$	1492.3 5	67 <i>34</i>	1000.91	$(7/2^+)$	
		2491.9 <mark>6</mark> 5	100 50	0.0	$(11/2^{-})$	
2499.4?		2499.4 <mark>6</mark> 5	100	0.0	$(11/2^{-})$	
2512.52		2512.5 2	100	0.0	$(11/2^{-})$	
2580.42		2580.4 2	100	0.0	$(11/2^{-})$	
2591.4		2591.4 4	100	0.0	$(11/2^{-})$	
2592.1	$(23/2^{-})$	185.0 [‡]	28 [‡] 8	2407.3	$(23/2^+)$	#
		306.0 [‡]	100 [‡] 11	2286.0	(19/2 ⁻)	

Continued on next page (footnotes at end of table)

γ ⁽¹⁴⁹Ho) (continued)</sup>

E _i (level)	\mathbf{J}_i^π	E_{γ}^{\dagger}	I_{γ}^{\dagger}	E_f	${ m J}_f^\pi$	Mult.	α ^{<i>a</i>}	Comments
2607.41	(9/2-)	1605.0 <i>10</i>	≈13 100_20	1000.91	$(7/2^+)$ $(11/2^-)$			
2633.3		2633.3 4	100 20	0.0	$(11/2^{-})$ $(11/2^{-})$			
2677.0	(9/2 ⁻)	1676.1 4	100	1000.91	$(7/2^+)$			
2714.8	$(27/2^{-})$	2/14.8 5 143.8 [‡]	100	2592-1	(11/2) $(23/2^{-})$	(F2) [#]	0 755 11	$B(F2)(W_{11}) = 1.89 \pm 15 = 12$
2804.5?	(21/2)	2804.5^{b} 5	100	0.0	$(23/2^{-})$ $(11/2^{-})$	(12)	0.755 11	B(E2)(()=1.0) +15 +12
2824.9	(9/2 ⁻)	1824.0 10	≈7	1000.91	$(7/2^+)$			
		2824.9 ⁶ 4	100 29	0.0	$(11/2^{-})$			
2849.1	(29/2,31/2)	113.2 [‡]	100	2735.9	$(27/2^{-})$			
2851.2?		2851.2 ⁰ 11	100	0.0	$(11/2^{-})$			
2901.7?	(0/2-)	2901.7 ⁰ 4	100	0.0	$(11/2^{-})$			
2913.9	(9/2)	1913.010	≈27 100-22	1000.91	$(1/2^{+})$			
2935.7		2913.5 3	100 55	0.0	(11/2) $(11/2^{-})$			
2939.3?		2939.3 ^b 9	100	0.0	$(11/2^{-})$			
2965.5		2965.5 3	100	0.0	$(11/2^{-})$			
2977.8	(0.10-)	2977.8 3	100	0.0	$(11/2^{-})$			
2992.3	(9/2)	1991.0 10	≈150 100 50	1000.91	$(1/2^{-})$			
2996.63		1581.6 2	100 50	1415.0	$(7/2^+)$			
		2996.7 <i>3</i>	57 29	0.0	$(11/2^{-})$			
3000.9	$(9/2^{-})$	2000.0 10	≈100	1000.91	$(7/2^+)$			
2005.0	(0/2-)	3001.1° 4	67 34	0.0	$(11/2^{-})$			
5005.0	(9/2)	3005.0.3	≈ 135 100 33	0.0	$(1/2^{-})$			
3049.0		3049.0 <i>3</i>	100 00	0.0	$(11/2^{-})$			
3061.0?		3061.0 <mark>b</mark> 9	100	0.0	$(11/2^{-})$			
3124.9	(9/2 ⁻)	2124.0 10	≈23	1000.91	$(7/2^+)$			
		3125.3 ⁰ 3	100 33	0.0	$(11/2^{-})$			
3174.9?		3174.9 ⁰ 5	100	0.0	$(11/2^{-})$			
3226.2?		3226.2 ⁰ 4	100	0.0	$(11/2^{-})$			
3263.1?		3263.1 ⁰ 3	100	0.0	$(11/2^{-})$			
3305.8?		3305.8° 3	100	0.0	$(11/2^{-})$			
3325.2?		3325.2° 4	100	0.0	(11/2)			
3338.4?		3338.4° 3	100	0.0	(11/2)			
3330.3? 2705.12		3536.3° 8	100	0.0	(11/2)			
3838 39		3793.0^{2} 0	100	0.0	(11/2) $(11/2^{-})$			
3885.62		3826.2 12 $3885 5^{b} 5$	100	0.0	(11/2) $(11/2^{-})$			
3031.2	(31/2, 33/2)	1082.0^{\ddagger}	100	28/0 1	(11/2) (20/2)(31/2)	۵۵		
4003.22	(31/2,33/2)	4003.1^{b} A	100	0.0	(29/2, 31/2) $(11/2^{-})$	D		
4029.2	(33/2,35/2)	1180.0^{\ddagger}	100	2849 1	(11/2)	0 <mark>&</mark>		
4037.3?	(00/2,00/2)	4037.2 ^b 13	100	0.0	$(11/2^{-})$	×		
4086.4?		4086.3 ^b 5	100	0.0	$(11/2^{-})$			
4236.0?		4235.9 ^b 10	100	0.0	$(11/2^{-})$			
4330.6	(35/2,37/2)	399.4 [‡]	100	3931.2	(31/2,33/2)	Q ^{&}		
4386.0?	/	4385.9 <mark>b</mark> 7	100	0.0	$(11/2^{-})$	-		
4413.5		4413.4 <i>3</i>	100	0.0	$(11/2^{-})$			

Continued on next page (footnotes at end of table)

 $\gamma(^{149}\text{Ho})$ (continued)

E _i (level)	\mathbf{J}_i^{π}	E_{γ}^{\dagger}	I_{γ}^{\dagger}	E_f	J_f^π	Mult.
4433.9?		4433.8 ^b 4	100	0.0	$(11/2^{-})$	
4441.4		4441.3 <i>3</i>	100	0.0	$(11/2^{-})$	
4552.5?		4552.4 <mark>b</mark> 8	100	0.0	$(11/2^{-})$	
4616.8?		4616.7 <mark>b</mark> 5	100	0.0	$(11/2^{-})$	
4622.4?		4622.3 <mark>b</mark> 3	100	0.0	$(11/2^{-})$	
4645.6?		4645.5 ^b 4	100	0.0	$(11/2^{-})$	
4652.1		4652.0 4	100	0.0	$(11/2^{-})$	
4661.68		4661.6 2	100	0.0	$(11/2^{-})$	
4676.7?		4676.6 <mark>b</mark> 4	100	0.0	$(11/2^{-})$	
4680.3	$(31/2^{-})$	1944.3 [‡]	100	2735.9	$(27/2^{-})$	Q ^{&}
4699.68		4699.6 2	100	0.0	$(11/2^{-})$	
4706.1		4706.0 10	100	0.0	$(11/2^{-})$	
4750.0?		4749.9 <mark>b</mark> 8	100	0.0	$(11/2^{-})$	
4765.3	(39/2,41/2)	434.7 [‡]	100	4330.6	(35/2,37/2)	Q ^{&}
4820.9	(37/2,39/2)	791.7 [‡]	100	4029.2	(33/2,35/2)	Q ^{&}
4822.9?		4822.8 <mark>b</mark> 6	100	0.0	$(11/2^{-})$	
4851.1?		4851.0 ^b 9	100	0.0	$(11/2^{-})$	
5079.2		5079.1 10	100	0.0	$(11/2^{-})$	
5098.7		5098.6 10	100	0.0	$(11/2^{-})$	
5210.9	$(35/2^{-})$	530.6 [‡]	100	4680.3	$(31/2^{-})$	Q ^{&}
5505.9	(39/2,41/2)	685.0 [‡]	100	4820.9	(37/2,39/2)	D <mark>&</mark>

 † From $^{149}\text{Er}\ \varepsilon$ decay (9.6 s) (1989Fi01), unless otherwise noted.

[‡] From (⁴⁰Ar,p2n γ) (2010Ko12). [#] From α deduced (1980Wi11) from intensity balance in (³²S,4n γ).

[@] From summed x-ray and γ -intensities in ¹⁴⁹Er ε decay (9.6 s).

[&] From γ anisotropy in (⁴⁰Ar,p2nγ) (2010Ko12).

^a 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.

^b Placement of transition in the level scheme is uncertain.

Legend

Level Scheme

Intensities: Relative photon branching from each level

 $--- \rightarrow \gamma$ Decay (Uncertain)



 $^{149}_{67}\mathrm{Ho}_{82}$



 $^{149}_{67}\mathrm{Ho}_{82}$

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

 $--- \sim \gamma$ Decay (Uncertain)





¹⁴⁹₆₇Ho₈₂



¹⁴⁹₆₇Ho₈₂