Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	N. Nica and B. Singh	NDS 181, 1 (2022)	9-Mar-2022

Q(β^-)=−9150 *40*; S(n)=12590 *8*; S(p)=491 *8*; Q(α)=2240 *50* 2021Wa16
S(2n)=22780 *9*, S(2p)=3940 *110*, Q(εp)=4720 *50* (2021Wa16).
1995Mo29: β_2=−0.156, β_4=−0.029, β_6=−0.004.
1995Ab38: β_2=−0.18, β_4=−0.02.

^{147}Ho Levels

Cross Reference (XREF) Flags

A ^{92}Mo(^{58}Ni,3pγ)

E(level)†	Jπ‡	$T_{1/2}$	XREF	Comments
0.0#	(11/2$^-$)	5.8 s *4*	A	%ε+%β^+=100 Jπ: based on shell model (three valence protons in ($3s_{1/2}$, $1h_{11/2}$, $2d_{3/2}$) subshells) and log *ft*=5.0 to ^{147}Dy (11/2$^-$), 750 keV (1982No08). $T_{1/2}$: from 1982No08.
584.96@ *14*	(13/2$^-$)		A	configuration: $\pi h_{11/2}\otimes\nu^{-2}(2^+)$ 3qp state analogous to 11$^+$ in ^{148}Er (2001Ro15 in (^{58}Ni,3pγ)).
764.71# *10*	(15/2$^-$)		A	configuration: $\pi h_{11/2}\otimes\nu^{-2}(2^+)$ 3qp state analogous to 13$^+$,4532 keV in ^{148}Er (2001Ro15 in (^{58}Ni,3pγ)).
1526.67@ *18*	(17/2$^-$)		A	configuration: $\pi h_{11/2}\otimes\nu^{-2}(4^+)$ state analogous to 12$^+$ in ^{148}Er (2001Ro15 in (^{58}Ni,3pγ)).
1540.22 *23*	(15/2$^+$)		A	
1735.93# *17*	(19/2$^-$)		A	configuration: $\pi h_{11/2}\otimes\nu^{-2}(4^+)$ state analogous to 14$^+$, 4704 keV in ^{148}Er (2001Ro15 in (^{58}Ni,3pγ)).
1983.08 *18*	(19/2$^-$)		A	
2054.92 *22*	(19/2$^+$)		A	
2188.24 *19*	(19/2$^+$)		A	
2353.40a *18*	(21/2$^+$)	<20 ns	A	$T_{1/2}$: from 1982No07.
2431.06c *25*	(23/2$^+$)		A	
2469.31a *20*	(23/2$^+$)		A	
2541.9@ *4*	(21/2$^-$)		A	
2654.8# *3*	(23/2$^-$)		A	configuration: $\pi h^3_{11/2}$ state analogous to 23/2$^-$, 2593 keV in ^{149}Ho (2001Ro15 in (^{58}Ni,3pγ)).
2687.1& *4*	(27/2$^-$)	315 ns *30*	A	E(level): from 32 keV gap in γ energy loops (2001Ro15 in (^{58}Ni,3pγ)). $T_{1/2}$: from 1982No07. configuration: $\pi h^3_{11/2}$ state analogous to 27/2$^-$, 2687 keV in ^{149}Ho (2001Ro15 in (^{58}Ni,3pγ)).
3025.4a *3*	(25/2$^+$)		A	
3089.6 *3*	(25/2$^+$)		A	
3198.15 *22*	(25/2$^+$)		A	
3357.3 *7*	(25/2$^+$)		A	
3391.3 *4*	(27/2$^-$)		A	
3396.4 *4*	(27/2$^-$)		A	
3422.85c *25*	(27/2$^+$)		A	
3472.2& *4*	(29/2$^-$)		A	
3700.6 *6*	(27/2$^+$)		A	
3733.8 *9*	(27/2$^+$)		A	
3758.2 *5*	(29/2$^-$)		A	

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Adopted Levels, Gammas (continued)

^{147}Ho Levels (continued)

E(level)†	Jπ‡	XREF	E(level)†	Jπ‡	XREF	E(level)†	Jπ‡	XREF
3905.5[a] *3*	(29/2+)	A	5252.7 *4*	(35/2−)	A	6440.5 *5*	(41/2+)	A
3937.9[d] *4*	(31/2−)	A	5319.9[b] *5*	(37/2−)	A	6466.2 *7*	(41/2−)	A
4060.3 *4*	(31/2−)	A	5335.3[d] *5*	(37/2−)	A	6505.2[a] *5*	(41/2+)	A
4193.9 *6*	(31/2−)	A	5381.7 *4*	(35/2−)	A	6527.5[&] *5*	(43/2−)	A
4220.9[c] *3*	(31/2+)	A	5444.0[a] *4*	(37/2+)	A	6558.6[d] *7*	(43/2−)	A
4322.2[&] *4*	(33/2−)	A	5561.5 *6*	(37/2+)	A	6637.5 *5*	(43/2−)	A
4509.0[b] *5*	(31/2−)	A	5562.8[d] *6*	(39/2−)	A	6779.1[a] *5*	(43/2+)	A
4604.2 *8*	(31/2+)	A	5580.6 *4*	(37/2+)	A	6855.5 *6*	(43/2+)	A
4689.0[a] *4*	(33/2+)	A	5685.3[&] *4*	(37/2−)	A	6895.7 *5*	(43/2+)	A
4765.8 *9*	(33/2−)	A	5873.2[b] *6*	(39/2−)	A	7022.4[d] *8*	(45/2−)	A
4839.3 *4*	(33/2+)	A	5953.3 *6*	(39/2+)	A	7096.3[a] *5*	(45/2+)	A
4881.9 *5*	(33/2+)	A	6000.7[d] *7*	(41/2−)	A	7099.4 *5*	(45/2−)	A
4889.0 *5*	(33/2−)	A	6016.5[&] *4*	(39/2−)	A	7205.0 *5*	(45/2−)	A
4903.7 *4*	(35/2−)	A	6019.7 *4*	(39/2+)	A	7250.0 *6*	(45/2−)	A
4936.7 *5*	(33/2−)	A	6093.2[a] *4*	(39/2+)	A	7327.8 *7*	(45/2+)	A
4980.9[b] *5*	(33/2−)	A	6155.7[&] *4*	(41/2−)	A	7395.1[&] *5*	(47/2−)	A
4984.3[&] *4*	(35/2−)	A	6186.5 *8*	(39/2−)	A	7531.9[d] *11*	(47/2−)	A
5033.9 *5*	(35/2−)	A	6248.5[c] *9*	(39/2+)	A	7568.5[a] *7*	(47/2+)	A
5060.1[a] *4*	(35/2+)	A	6291.9 *10*	(39/2−)	A	7580.8[&] *5*	(49/2−)	A
5081.8[d] *4*	(35/2−)	A	6332.9 *10*	(39/2−)	A	7600.4 *13*	(43/2−)	A
5184.6[b] *4*	(35/2−)	A	6364.4[b] *8*	(41/2−)	A	8105.0[&] *6*	(51/2−)	A
5189.8[c] *4*	(35/2+)	A	6434.0 *5*	(41/2+)	A	8661.3[&] *8*	(53/2−)	A

† From least-squares fit to Eγ′s.
‡ From (^{58}Ni,3pγ) based on measured anisotropies, shell-model calculations, and comparison with ^{146}Dy, ^{148}Er, and ^{149}Ho (2001Ro15). 2001Ro15 also assumed that $J_i \geq J_f$ (with strict inequality for most cases). All assignments are tentative (evaluator).
# Band(A): yrast sequence based on g.s..
@ Band(a): yrast sequence based on 13/2−.
& Seq.(C): γ sequence based on 27/2−.
a Seq.(D): γ sequence based on 21/2+.
b Seq.(E): γ sequence based on 31/2−.
c Band(B): γ sequence based on 23/2+.
d Seq.(F): γ sequence based on 31/2−.

γ(^{147}Ho)

E_i(level)	J_i^π	E_γ†	I_γ†#	E_f	J_f^π	Mult.‡	α@	Comments
584.96	(13/2−)	585.0 *2*	100	0.0	(11/2−)	D		
764.71	(15/2−)	179.8 *2*	100 *8*	584.96	(13/2−)	D		
		764.7 *1*	<2800	0.0	(11/2−)	E2	0.00569	α(K)=0.00471 *7*; α(L)=0.000764 *11*; α(M)=0.0001703 *24* α(N)=3.93×10^{-5} *6*; α(O)=5.54×10^{-6} *8*; α(P)=2.68×10^{-7} *4*
1526.67	(17/2−)	762.2 *3*	<890	764.71	(15/2−)			
		941.7 *2*	100 *3*	584.96	(13/2−)	E2	0.00362	α(K)=0.00303 *5*; α(L)=0.000464 *7*; α(M)=0.0001027 *15* α(N)=2.38×10^{-5} *4*; α(O)=3.39×10^{-6} *5*; α(P)=1.736×10^{-7} *25*

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Adopted Levels, Gammas (continued)

γ(^{147}Ho) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†#]	E_f	J_f^π	Mult.[‡]	α[@]	Comments
1540.22	(15/2$^+$)	775.5 *4*	98 *5*	764.71	(15/2$^-$)			
		955.3 *4*	100 *7*	584.96	(13/2$^-$)			
1735.93	(19/2$^-$)	971.1 *2*	100	764.71	(15/2$^-$)	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)=1.630×10^{-7} *23*
1983.08	(19/2$^-$)	1218.4 *2*	100	764.71	(15/2$^-$)	(E2)	0.00215	α(K)=0.00181 *3*; α(L)=0.000263 *4*; α(M)=5.79×10^{-5} *9* α(N)=1.340×10^{-5} *19*; α(O)=1.93×10^{-6} *3*; α(P)=1.039×10^{-7} *15*; α(IPF)=7.27×10^{-6} *11*
2054.92	(19/2$^+$)	72.2 *3*	100 *18*	1983.08	(19/2$^-$)			
		318.7 *3*	<350	1735.93	(19/2$^-$)			
		514.6 *3*	<430	1540.22	(15/2$^+$)			
2188.24	(19/2$^+$)	452.2 *3*	100 *17*	1735.93	(19/2$^-$)			
		648.2 *4*	<510	1540.22	(15/2$^+$)			
		661.6 *2*	<1440	1526.67	(17/2$^-$)			
2353.40	(21/2$^+$)	165.2 *2*	20.0 *11*	2188.24	(19/2$^+$)	D		
		298.4 *5*	<23.3	2054.92	(19/2$^+$)	D		
		370.2 *2*	<78	1983.08	(19/2$^-$)			
		617.5 *1*	100.0 *11*	1735.93	(19/2$^-$)			
2431.06	(23/2$^+$)	77.8 *3*	100	2353.40	(21/2$^+$)	D		
2469.31	(23/2$^+$)	115.9 *1*	100	2353.40	(21/2$^+$)	D		
2541.9	(21/2$^-$)	805.6 *5*	59 *9*	1735.93	(19/2$^-$)			
		1015.5 *4*	100 *9*	1526.67	(17/2$^-$)	E2	0.00310	α(K)=0.00260 *4*; α(L)=0.000391 *6*; α(M)=8.64×10^{-5} *13* α(N)=2.00×10^{-5} *3*; α(O)=2.86×10^{-6} *4*; α(P)=1.489×10^{-7} *21*
2654.8	(23/2$^-$)	918.9 *2*	100	1735.93	(19/2$^-$)	E2	0.00382	α(K)=0.00319 *5*; α(L)=0.000491 *7*; α(M)=0.0001088 *16* α(N)=2.52×10^{-5} *4*; α(O)=3.58×10^{-6} *5*; α(P)=1.83×10^{-7} *3*
2687.1	(27/2$^-$)	(32.3)	100	2654.8	(23/2$^-$)	[E2]	398	B(E2)(W.u.)=2.78 *+33−28* α(L)=306 *5*; α(M)=73.6 *11* α(N)=16.49 *23*; α(O)=1.91 *3*; α(P)=0.000646 *9* Predicted to decay from the 315-ns state by 2001Ro15 and 1982No07 in (^{58}Ni,3pγ); Eγ is from 2001Ro15. E_γ: from level energy difference.
3025.4	(25/2$^+$)	556.2 *3*	100.0 *17*	2469.31	(23/2$^+$)	D		
		594.2 *3*	10.6 *9*	2431.06	(23/2$^+$)	D		
3089.6	(25/2$^+$)	620.4 *5*	100.0 *38*	2469.31	(23/2$^+$)	D		
		658.5 *3*	75.7 *38*	2431.06	(23/2$^+$)	D		
3198.15	(25/2$^+$)	728.8 *1*	100	2469.31	(23/2$^+$)	D		
3357.3	(25/2$^+$)	1003.9 *6*	100	2353.40	(21/2$^+$)	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*
3391.3	(27/2$^-$)	736.5 *2*	100	2654.8	(23/2$^-$)	E2	0.00619	α(K)=0.00511 *8*; α(L)=0.000840 *12*; α(M)=0.000187 *3* α(N)=4.32×10^{-5} *6*; α(O)=6.08×10^{-6} *9*; α(P)=2.91×10^{-7} *4*
3396.4	(27/2$^-$)	741.6 *3*	100	2654.8	(23/2$^-$)	E2	0.00609	α(K)=0.00503 *7*; α(L)=0.000825 *12*;

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Adopted Levels, Gammas (continued)

$\gamma(^{147}Ho)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†#]	E_f	J_f^π	Mult.[‡]	α[@]	Comments
								α(M)=0.000184 *3* α(N)=4.25×10^{-5} *6*; α(O)=5.98×10^{-6} *9*; α(P)=2.87×10^{-7} *4*
3422.85	(27/2$^+$)	224.6 *2*	28 *3*	3198.15	(25/2$^+$)	D		
		333.5 *5*	<260	3089.6	(25/2$^+$)			
		397.6 *4*	21.9 *19*	3025.4	(25/2$^+$)	D		
		991.8 *1*	100 *3*	2431.06	(23/2$^+$)	E2	0.00325	α(K)=0.00273 *4*; α(L)=0.000412 *6*; α(M)=9.12×10^{-5} *13* α(N)=2.11×10^{-5} *3*; α(O)=3.01×10^{-6} *5*; α(P)=1.562×10^{-7} *22*
3472.2	(29/2$^-$)	785.1 *1*	100	2687.1	(27/2$^-$)	D		
3700.6	(27/2$^+$)	1231.3 *5*	100	2469.31	(23/2$^+$)	E2	0.00211	α(K)=0.001774 *25*; α(L)=0.000257 *4*; α(M)=5.66×10^{-5} *8* α(N)=1.310×10^{-5} *19*; α(O)=1.89×10^{-6} *3*; α(P)=1.018×10^{-7} *15*; α(IPF)=8.87×10^{-6} *14*
3733.8	(27/2$^+$)	1264.5 *8*	100	2469.31	(23/2$^+$)			
3758.2	(29/2$^-$)	361.8 *3*	100	3396.4	(27/2$^-$)	D		
3905.5	(29/2$^+$)	707.1 *4*	18.4 *15*	3198.15	(25/2$^+$)	E2	0.00679	α(K)=0.00559 *8*; α(L)=0.000932 *14*; α(M)=0.000208 *3* α(N)=4.81×10^{-5} *7*; α(O)=6.74×10^{-6} *10*; α(P)=3.18×10^{-7} *5*
		815.9 *3*	67.7 *22*	3089.6	(25/2$^+$)	E2	0.00493	α(K)=0.00409 *6*; α(L)=0.000651 *10*; α(M)=0.0001449 *21* α(N)=3.35×10^{-5} *5*; α(O)=4.73×10^{-6} *7*; α(P)=2.34×10^{-7} *4*
		880.1 *1*	100.0 *22*	3025.4	(25/2$^+$)	E2	0.00418	α(K)=0.00349 *5*; α(L)=0.000543 *8*; α(M)=0.0001205 *17* α(N)=2.79×10^{-5} *4*; α(O)=3.96×10^{-6} *6*; α(P)=2.00×10^{-7} *3*
3937.9	(31/2$^-$)	465.5 *4*	100 *4*	3472.2	(29/2$^-$)	D		
		1250.9 *3*	<490	2687.1	(27/2$^-$)	E2	0.00205	α(K)=0.001720 *24*; α(L)=0.000249 *4*; α(M)=5.47×10^{-5} *8* α(N)=1.267×10^{-5} *18*; α(O)=1.83×10^{-6} *3*; α(P)=9.87×10^{-8} *14*; α(IPF)=1.152×10^{-5} *17*
4060.3	(31/2$^-$)	588.0 *2*	<221	3472.2	(29/2$^-$)			
		1373.5 *4*	100.0 *21*	2687.1	(27/2$^-$)	(E2)	1.73×10^{-3}	α(K)=0.001437 *21*; α(L)=0.000205 *3*; α(M)=4.50×10^{-5} *7* α(N)=1.042×10^{-5} *15*; α(O)=1.506×10^{-6} *21*; α(P)=8.25×10^{-8} *12*; α(IPF)=3.52×10^{-5} *5*
4193.9	(31/2$^-$)	435.7 *3*	100	3758.2	(29/2$^-$)	D		
4220.9	(31/2$^+$)	315.5 *7*	14 *3*	3905.5	(29/2$^+$)	D		
		798.1 *1*	100.0 *24*	3422.85	(27/2$^+$)	E2	0.00517	α(K)=0.00429 *6*; α(L)=0.000687

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Adopted Levels, Gammas (continued)

$\gamma(^{147}Ho)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†#]	E_f	J_f^π	Mult.[‡]	α[@]	Comments
								10; α(M)=0.0001530 *22* α(N)=3.53×10^{-5} *5*; α(O)=4.99×10^{-6} *7*; α(P)=2.45×10^{-7} *4*
4322.2	(33/2$^-$)	261.9 *1*	59 *3*	4060.3	(31/2$^-$)	D		
		383.9 *2*	<111	3937.9	(31/2$^-$)			
		850.1 *1*	100 *3*	3472.2	(29/2$^-$)	E2	0.00451	α(K)=0.00375 *6*; α(L)=0.000590 *9*; α(M)=0.0001310 *19* α(N)=3.03×10^{-5} *5*; α(O)=4.29×10^{-6} *6*; α(P)=2.14×10^{-7} *3*
4509.0	(31/2$^-$)	1036.6 *3*	100	3472.2	(29/2$^-$)	D		
4604.2	(31/2$^+$)	903.6 *5*	100	3700.6	(27/2$^+$)	E2	0.00395	α(K)=0.00330 *5*; α(L)=0.000510 *8*; α(M)=0.0001132 *16* α(N)=2.62×10^{-5} *4*; α(O)=3.72×10^{-6} *6*; α(P)=1.89×10^{-7} *3*
4689.0	(33/2$^+$)	366.5 *4*	17.4 *15*	4322.2	(33/2$^-$)			
		628.6 *3*	15.3 *15*	4060.3	(31/2$^-$)			
		751.1 *1*	80 *2*	3937.9	(31/2$^-$)			
		783.5 *2*	100 *3*	3905.5	(29/2$^+$)	E2	0.00539	α(K)=0.00447 *7*; α(L)=0.000719 *10*; α(M)=0.0001602 *23* α(N)=3.70×10^{-5} *6*; α(O)=5.22×10^{-6} *8*; α(P)=2.55×10^{-7} *4*
4765.8	(33/2$^-$)	1293.6 *8*	100	3472.2	(29/2$^-$)			
4839.3	(33/2$^+$)	933.8 *3*	100	3905.5	(29/2$^+$)	E2	0.00369	α(K)=0.00308 *5*; α(L)=0.000473 *7*; α(M)=0.0001048 *15* α(N)=2.42×10^{-5} *4*; α(O)=3.45×10^{-6} *5*; α(P)=1.766×10^{-7} *25*
4881.9	(33/2$^+$)	976.4 *4*	100	3905.5	(29/2$^+$)	E2	0.00336	α(K)=0.00281 *4*; α(L)=0.000427 *6*; α(M)=9.45×10^{-5} *14* α(N)=2.19×10^{-5} *3*; α(O)=3.12×10^{-6} *5*; α(P)=1.612×10^{-7} *23*
4889.0	(33/2$^-$)	1416.6 *5*	100	3472.2	(29/2$^-$)	E2	1.65×10^{-3}	α(K)=0.001355 *19*; α(L)=0.000192 *3*; α(M)=4.22×10^{-5} *6* α(N)=9.78×10^{-6} *14*; α(O)=1.414×10^{-6} *20*; α(P)=7.78×10^{-8} *11*; α(IPF)=4.69×10^{-5} *7*
4903.7	(35/2$^-$)	581.5 *1*	100	4322.2	(33/2$^-$)	D		
4936.7	(33/2$^-$)	427.6 *3*	100	4509.0	(31/2$^-$)			
4980.9	(33/2$^-$)	471.8 *5*	100	4509.0	(31/2$^-$)			
4984.3	(35/2$^-$)	80.5 *2*	100 *30*	4903.7	(35/2$^-$)			
		295.2 *2*	<2090	4689.0	(33/2$^+$)	(D)		
		661.9 *2*	<1730	4322.2	(33/2$^-$)			
5033.9	(35/2$^-$)	1095.5 *9*	100	3937.9	(31/2$^-$)			
5060.1	(35/2$^+$)	156.4 *1*	100 *8*	4903.7	(35/2$^-$)	D		
		371.1 *2*	<440	4689.0	(33/2$^+$)	D		
5081.8	(35/2$^-$)	1144.0 *3*	100	3937.9	(31/2$^-$)	E2	0.00243	α(K)=0.00205 *3*; α(L)=0.000301 *5*; α(M)=6.63×10^{-5} *10* α(N)=1.534×10^{-5} *22*;

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Adopted Levels, Gammas (continued)

$\gamma(^{147}Ho)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†#]	E_f	J_f^π	Mult.[‡]	α[@]	Comments
								α(O)=2.20×10^{-6} *3*; α(P)=1.175×10^{-7} *17*; α(IPF)=1.279×10^{-6} *22*
5184.6	(35/2$^-$)	103.5 *4*	21 *4*	5081.8	(35/2$^-$)			
		150.7 *3*	<98	5033.9	(35/2$^-$)			
		203.7 *4*	81 *8*	4980.9	(33/2$^-$)	D		
		247.6 *4*	63 *6*	4936.7	(33/2$^-$)	D		
		295.5 *5*	440 *4*	4889.0	(33/2$^-$)			
		1246.7 *4*	100 *4*	3937.9	(31/2$^-$)	E2	0.00206	α(K)=0.001732 *25*; α(L)=0.000250 *4*; α(M)=5.51×10^{-5} *8* α(N)=1.276×10^{-5} *18*; α(O)=1.84×10^{-6} *3*; α(P)=9.94×10^{-8} *14*; α(IPF)=1.093×10^{-5} *17*
5189.8	(35/2$^+$)	969.0 *3*	100	4220.9	(31/2$^+$)	E2	0.00341	α(K)=0.00286 *4*; α(L)=0.000434 *6*; α(M)=9.62×10^{-5} *14* α(N)=2.22×10^{-5} *4*; α(O)=3.17×10^{-6} *5*; α(P)=1.638×10^{-7} *23*
5252.7	(35/2$^-$)	1315.4 *4*	100	3937.9	(31/2$^-$)	E2	0.00187	α(K)=0.001561 *22*; α(L)=0.000224 *4*; α(M)=4.92×10^{-5} *7* α(N)=1.140×10^{-5} *16*; α(O)=1.645×10^{-6} *23*; α(P)=8.96×10^{-8} *13*; α(IPF)=2.21×10^{-5} *4*
5319.9	(37/2$^-$)	135.4 *5*	100 *6*	5184.6	(35/2$^-$)	D		
		238.0 *3*	48 *4*	5081.8	(35/2$^-$)	D		
5335.3	(37/2$^-$)	253.5 *2*	100	5081.8	(35/2$^-$)	D		
5381.7	(35/2$^-$)	299.7 *3*	<700	5081.8	(35/2$^-$)			
		1444.0 *7*	100 *17*	3937.9	(31/2$^-$)			
5444.0	(37/2$^+$)	384.0 *2*	<270	5060.1	(35/2$^+$)			
		459.6 *2*	100 *4*	4984.3	(35/2$^-$)	D		
		755.0 *9*	80 *4*	4689.0	(33/2$^+$)			
5561.5	(37/2$^+$)	501.4 *4*	100	5060.1	(35/2$^+$)	D		
5562.8	(39/2$^-$)	227.5 *4*	100	5335.3	(37/2$^-$)	D		
5580.6	(37/2$^+$)	520.3 *3*	100 *3*	5060.1	(35/2$^+$)			
		596.5 *5*	<23.6	4984.3	(35/2$^-$)			
5685.3	(37/2$^-$)	303.5 *3*	9.3 *9*	5381.7	(35/2$^-$)	D		
		432.7 *2*	22.2 *14*	5252.7	(35/2$^-$)	D		
		701.0 *1*	100.0 *19*	4984.3	(35/2$^-$)	(D)		
5873.2	(39/2$^-$)	553.3 *4*	100	5319.9	(37/2$^-$)	D		
5953.3	(39/2$^+$)	509.3 *4*	100	5444.0	(37/2$^+$)	D		
6000.7	(41/2$^-$)	437.9 *2*	100	5562.8	(39/2$^-$)			
6016.5	(39/2$^-$)	331.2 *1*	100	5685.3	(37/2$^-$)	D		
6019.7	(39/2$^+$)	438.8 *4*	<144	5580.6	(37/2$^+$)	D		
		575.7 *2*	100 *6*	5444.0	(37/2$^+$)	D		
6093.2	(39/2$^+$)	512.5 *4*	<112	5580.6	(37/2$^+$)			
		648.9 *3*	<145	5444.0	(37/2$^+$)	D		
		903.8 *5*	<67	5189.8	(35/2$^+$)			
		1033.5 *4*	100 *7*	5060.1	(35/2$^+$)	E2	0.00299	α(K)=0.00251 *4*; α(L)=0.000376 *6*; α(M)=8.30×10^{-5} *12* α(N)=1.92×10^{-5} *3*; α(O)=2.75×10^{-6} *4*; α(P)=1.438×10^{-7} *21*
6155.7	(41/2$^-$)	139.2 *1*	100	6016.5	(39/2$^-$)	D		
6186.5	(39/2$^-$)	1104.7 *6*	100	5081.8	(35/2$^-$)	E2	0.00261	α(K)=0.00220 *3*; α(L)=0.000324 *5*; α(M)=7.16×10^{-5} *10* α(N)=1.656×10^{-5} *24*; α(O)=2.38×10^{-6} *4*; α(P)=1.259×10^{-7} *18*; α(IPF)=3.18×10^{-7} *9*
6248.5	(39/2$^+$)	1058.7 *8*	100	5189.8	(35/2$^+$)	E2	0.00284	α(K)=0.00239 *4*; α(L)=0.000356 *5*;

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

γ(^{147}Ho) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†#]	E_f	J_f^π	Mult.[‡]	α[@]	Comments
								α(M)=7.86×10^{-5} *11* α(N)=1.82×10^{-5} *3*; α(O)=2.61×10^{-6} *4*; α(P)=1.370×10^{-7} *20*
6291.9	(39/2$^-$)	1210.1 *9*	100	5081.8	(35/2$^-$)			
6332.9	(39/2$^-$)	1251.1 *9*	100	5081.8	(35/2$^-$)			
6364.4	(41/2$^-$)	491.2 *4*	100	5873.2	(39/2$^-$)	D		
6434.0	(41/2$^+$)	414.3 *3*	100	6019.7	(39/2$^+$)	D		
6440.5	(41/2$^+$)	420.7 *5*	100	6019.7	(39/2$^+$)	D		
6466.2	(41/2$^-$)	1146.3 *5*	100	5319.9	(37/2$^-$)	E2	0.00242	α(K)=0.00204 *3*; α(L)=0.000299 *5*; α(M)=6.60×10^{-5} *10* α(N)=1.528×10^{-5} *22*; α(O)=2.20×10^{-6} *3*; α(P)=1.171×10^{-7} *17*; α(IPF)=1.37×10^{-6} *3*
6505.2	(41/2$^+$)	412.0 *2*	100	6093.2	(39/2$^+$)	D		
6527.5	(43/2$^-$)	371.8 *2*	100	6155.7	(41/2$^-$)	D		
6558.6	(43/2$^-$)	557.9 *3*	100	6000.7	(41/2$^-$)	D		
6637.5	(43/2$^-$)	481.8 *2*	100	6155.7	(41/2$^-$)	D		
6779.1	(43/2$^+$)	274.0 *2*	100 *5*	6505.2	(41/2$^+$)	D		
		338.6 *4*	16 *5*	6440.5	(41/2$^+$)			
6855.5	(43/2$^+$)	350.3 *4*	100	6505.2	(41/2$^+$)			
6895.7	(43/2$^+$)	390.3 *3*	100	6505.2	(41/2$^+$)	D		
7022.4	(45/2$^-$)	463.8 *4*	100	6558.6	(43/2$^-$)	D		
7096.3	(45/2$^+$)	200.5 *3*	100 *17*	6895.7	(43/2$^+$)			
		317.4 *3*	<211	6779.1	(43/2$^+$)	D		
7099.4	(45/2$^-$)	571.7 *3*	100	6527.5	(43/2$^-$)	D		
7205.0	(45/2$^-$)	567.5 *2*	100	6637.5	(43/2$^-$)	D		
7250.0	(45/2$^-$)	150.3 *3*	100	7099.4	(45/2$^-$)			
7327.8	(45/2$^+$)	893.8 *4*	100	6434.0	(41/2$^+$)	E2	0.00405	α(K)=0.00338 *5*; α(L)=0.000524 *8*; α(M)=0.0001162 *17* α(N)=2.68×10^{-5} *4*; α(O)=3.82×10^{-6} *6*; α(P)=1.93×10^{-7} *3*
7395.1	(47/2$^-$)	144.7 *3*		7250.0	(45/2$^-$)			
		867.8 *3*	100	6527.5	(43/2$^-$)	(E2)	0.00431	α(K)=0.00359 *5*; α(L)=0.000561 *8*; α(M)=0.0001247 *18* α(N)=2.88×10^{-5} *4*; α(O)=4.09×10^{-6} *6*; α(P)=2.05×10^{-7} *3*
7531.9	(47/2$^-$)	509.5 *7*	100	7022.4	(45/2$^-$)			
7568.5	(47/2$^+$)	472.2 *4*	100	7096.3	(45/2$^+$)	D		
7580.8	(49/2$^-$)	185.6 *3*	100 *5*	7395.1	(47/2$^-$)	D		
		481.5 *2*	<197	7099.4	(45/2$^-$)			
7600.4	(43/2$^-$)	1267.5 *8*	100	6332.9	(39/2$^-$)			
8105.0	(51/2$^-$)	524.2 *2*	100	7580.8	(49/2$^-$)	D		
8661.3	(53/2$^-$)	556.3 *5*	100	8105.0	(51/2$^-$)	D		

[†] From (^{58}Ni,3pγ) (2001Ro15).

[‡] 2001Ro15 measure γ-ray anisotropies but do not adopt multipolarities (see (^{58}Ni,3pγ)). Based on their measurements, the evaluator adopts D, or for stretched Q, E2 (based on the simplifying assumption sustained by 2001Ro15 that only ΔJ=2, Δπ=no transitions are associated with Q).

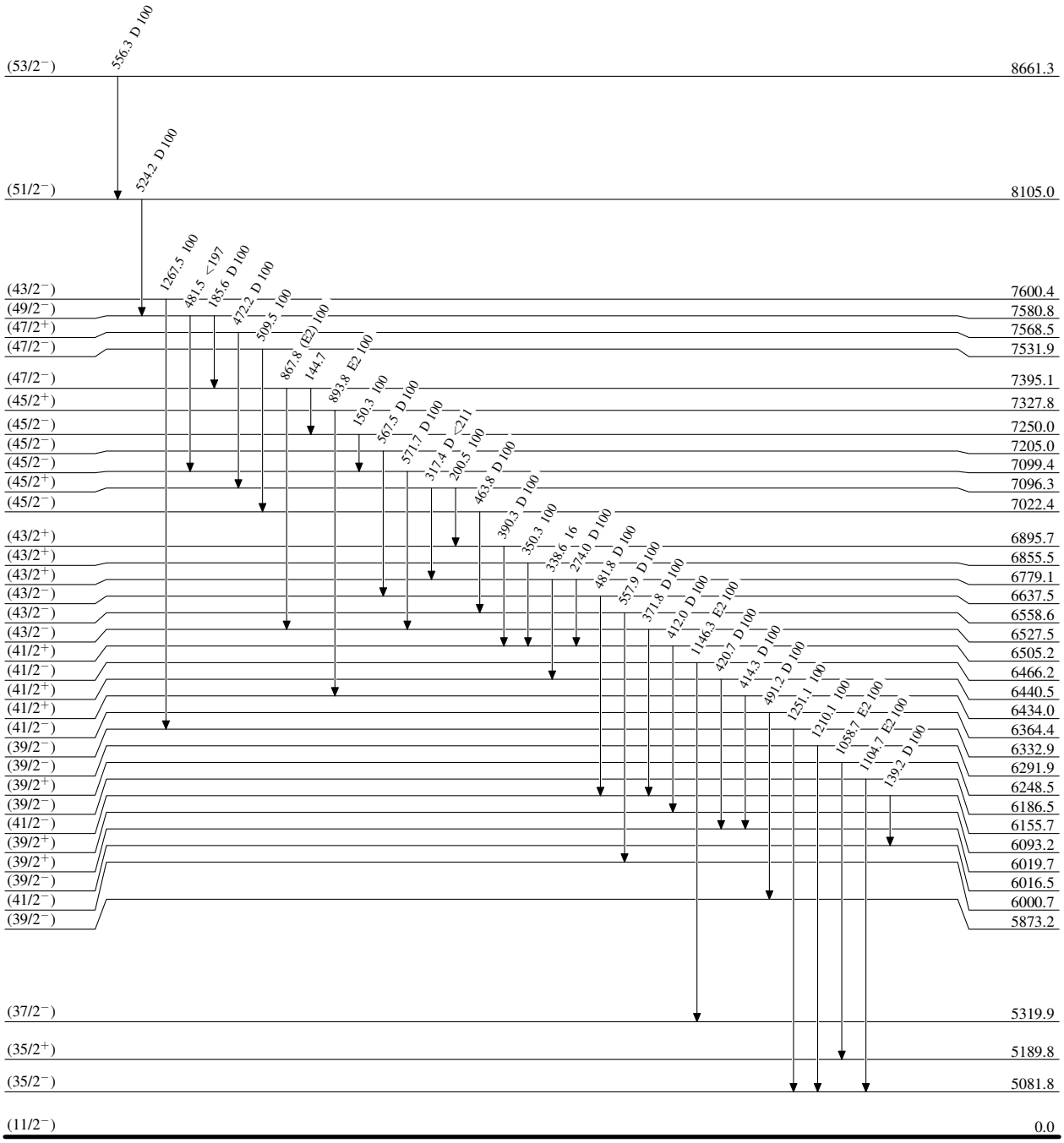
[#] Limits are from the unresolved structures – see (^{58}Ni,3pγ) dataset for the structure of the respective multiplets.

[@] 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

Level Scheme

Intensities: Relative photon branching from each level

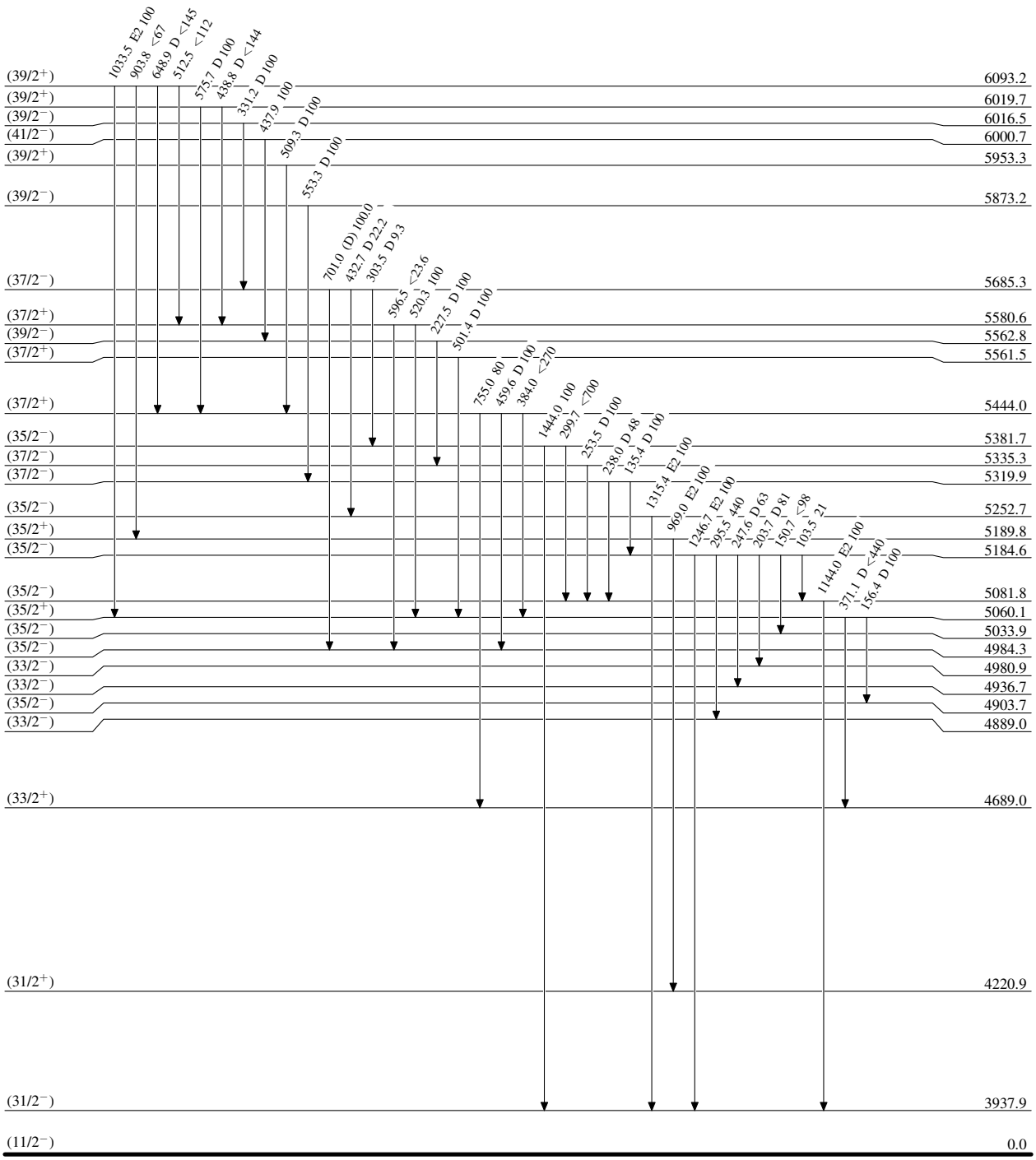


$^{147}_{67}Ho_{80}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

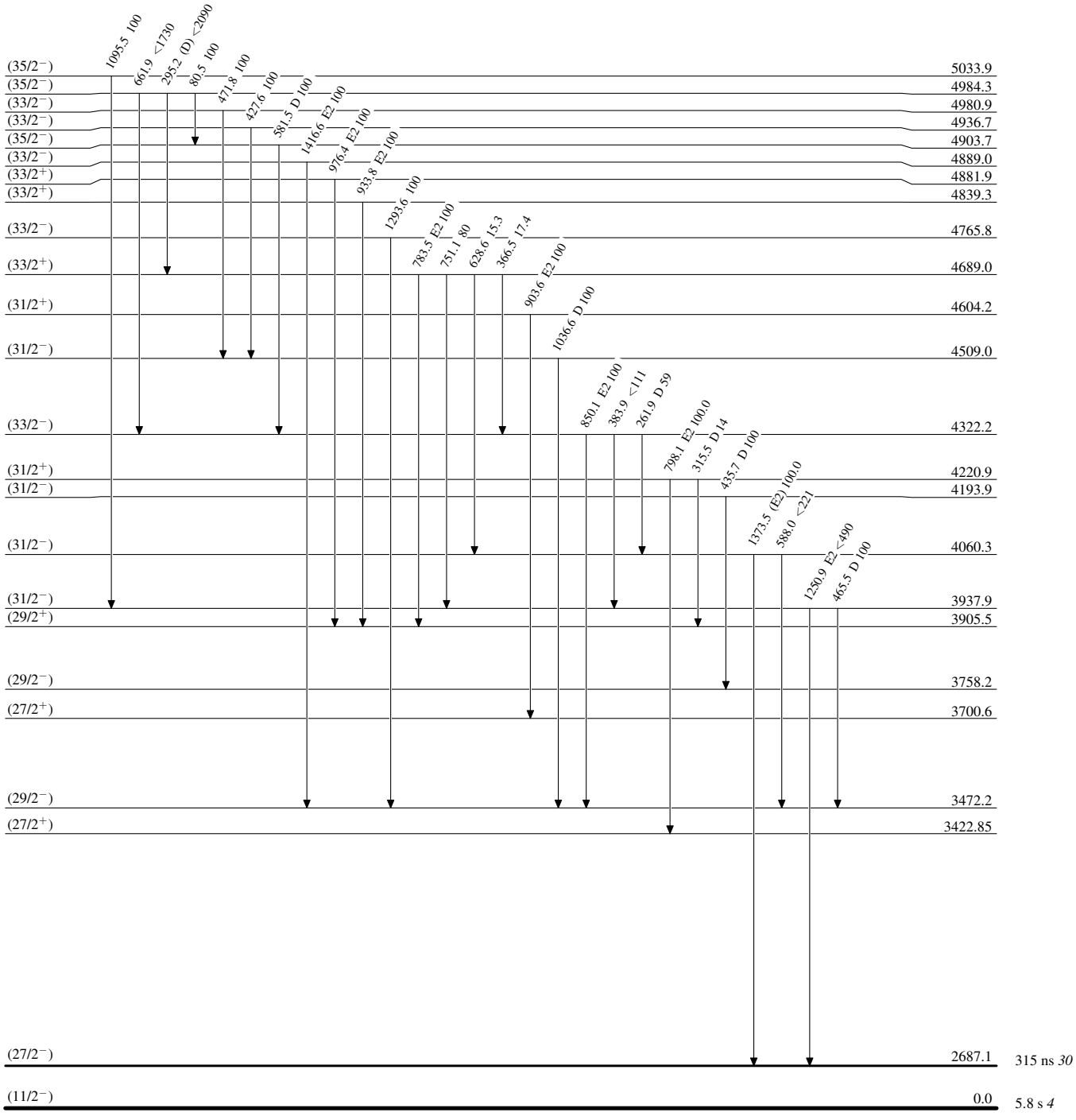


$^{147}_{67}Ho_{80}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{147}_{67}Ho_{80}$

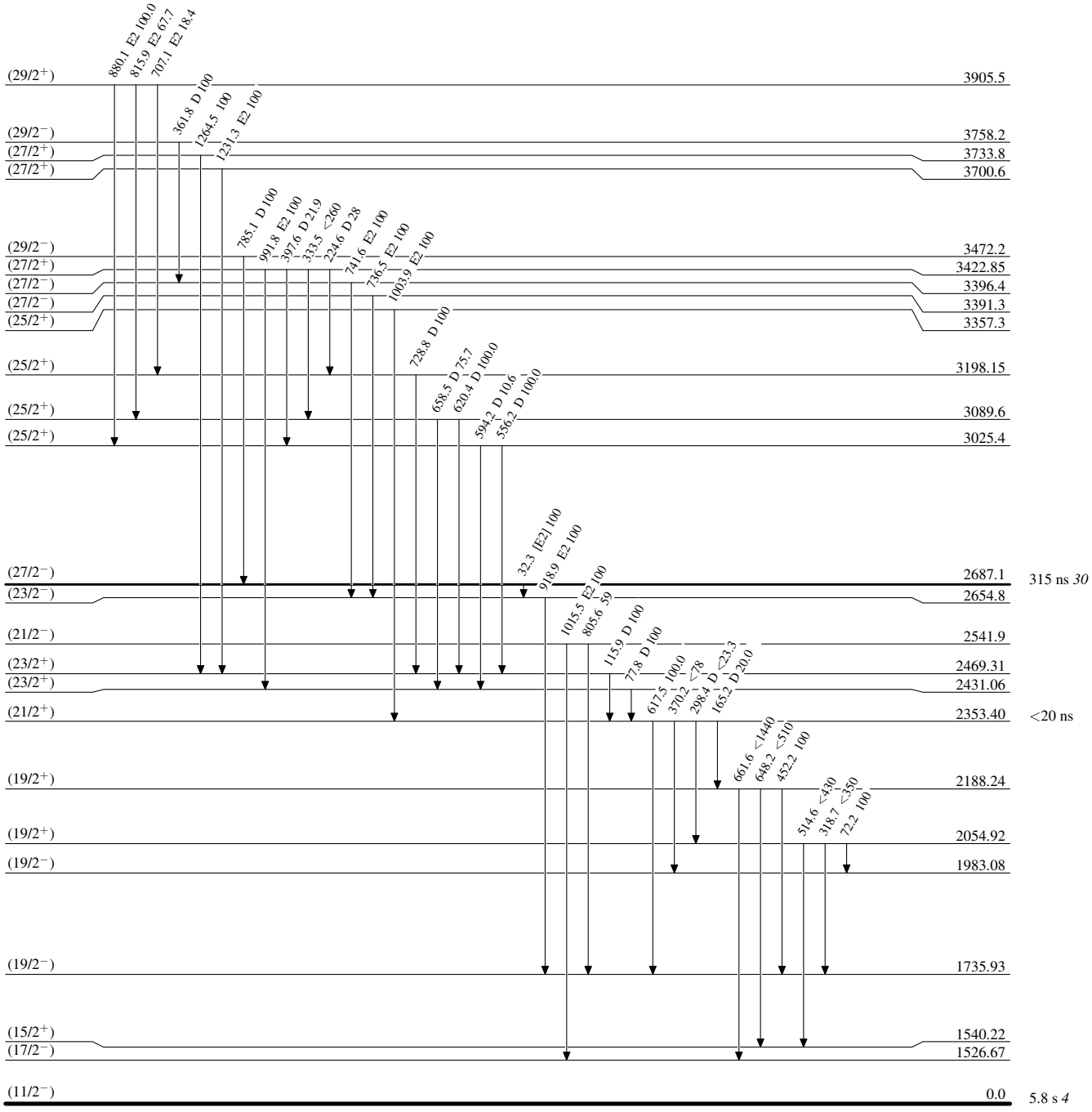
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



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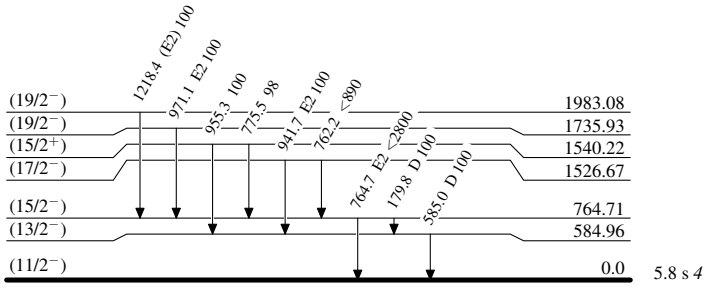
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



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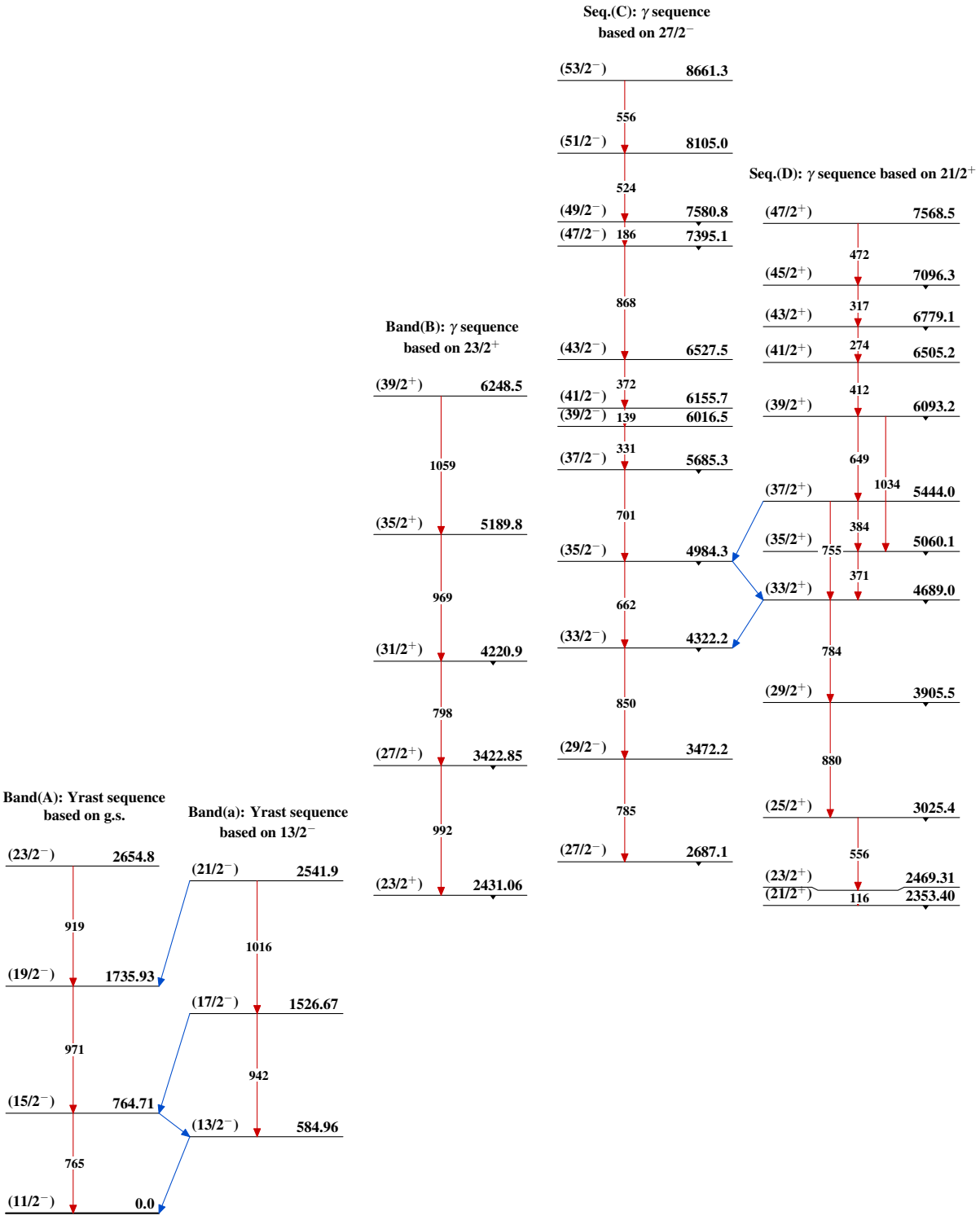
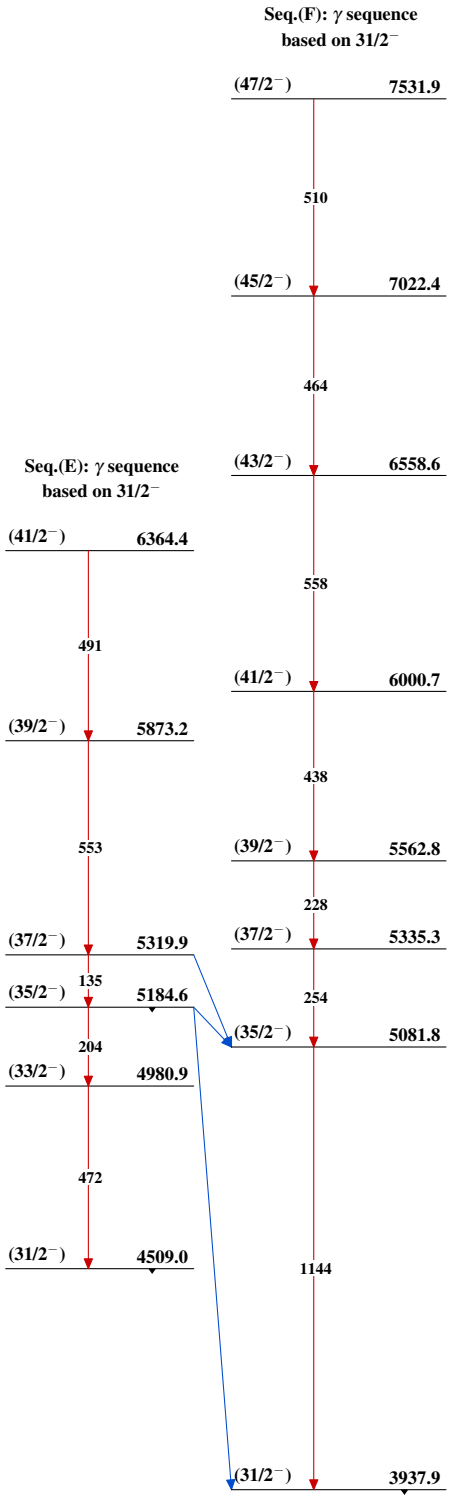
Adopted Levels, Gammas



Adopted Levels, Gammas (continued)



$^{147}_{67}Ho_{80}$