^{81}Ga β^- decay 1981Ho24

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 109, 2257 (2008)	15-Aug-2008

Parent: ^{81}Ga: E=0; J^π=(5/2$^-$); $T_{1/2}$=1.217 s *5*; Q(β^-)=8664 *4*; %β^- decay=100.0

See also 1980HoZN, in which Eγ, Iγ and $\gamma\gamma$ coin data used in 1981Ho24 are tabulated.

Others: 1981Al20, 1981Ho07, 1990Ru05.

Source: from mass-separated fission products.

1981Ho24, 1980HoZN: singles γ and $\gamma\gamma$-coincidences measured with Ge(Li); x-ray detector for low energy γ search (E$\gamma\geq$15 keV); Si(Li) detector for simultaneous measurement of ce and γ spectra for α(K)exp determination.

^{81}Ge Levels

E(level)[†]	J^π[#]	$T_{1/2}$[‡]	Comments
0	(9/2$^+$)	7.6 s *6*	
679.14 *4*	(1/2$^+$)	7.6 s *6*	γ-ray decay intensity<1 per 100 isomeric decays (1981Ho24). E(level): 710 *310* from difference in measured β endpoint energies for various γ(^{81}As)-gated B(^{81}Ge) spectra for ^{81}Ge g.s. and isomeric state decays (1981Al20).
711.207 *23*	(5/2$^+$)	3.9 ns *2*	$T_{1/2}$: from 1981Ho24.
895.63 *4*	(1/2$^-$)	<0.5 ns	$T_{1/2}$: from 1981Ho24.
1241.44 *3*	(1/2$^+$,3/2,5/2$^+$)		
1286.466 *23*	(5/2$^+$,7/2$^-$)		
1303.23 *3*	(5/2$^+$,7/2,9/2$^+$)		
1409.93 *4*			
1548.505 *24*	(5/2$^+$,7/2,9/2$^+$)		
1577.02 *11*			
1723.97 *3*	(3/2$^-$,5/2$^-$)		
1731.04 *4*	(5/2$^+$,7/2,9/2$^+$)		
1805.54 *7*	(5/2$^+$,7/2,9/2$^+$)		
1816.23 *5*	(3/2$^-$)		
1832.23 *4*	(3/2,5/2$^-$)		
1855.34 *5*			
2138.38 *4*	(5/2$^+$,7/2,9/2$^+$)		
2174.87 *7*			
2419.90 *4*			
2529.30 *5*	(3/2,5/2$^-$)		
2549.97 *11*	(5/2$^+$,7/2,9/2$^+$)		
2563.18 *5*	(3/2,5/2$^-$)		
2693.67 *10*			
2996.71 *3*	(3/2$^-$,5/2$^-$,7/2$^-$)		
3021.39 *6*	(3/2,5/2$^-$)		
3129.05 *5*	(3/2,5/2,7/2)		
3437.23 *4*	(3/2$^-$,5/2$^-$)		
3503.08 *4*	(7/2$^-$)		
3665.56 *8*	(7/2$^-$)		
3697.95 *10*	(7/2)$^-$		
3772.88 *4*	(7/2$^-$)		
3820.15 *19*	(3/2,5/2,7/2)		
4012.91 *4*	(3/2$^-$,5/2$^-$,7/2$^-$)		
4035.31 *7*	(7/2$^-$)		
4168.17 *5*	(3/2$^-$)		
4276.77 *16*	(3/2,5/2,7/2)		
4470.53 *20*	(7/2$^-$)		

[†] From least-squares fit to Eγ, omitting Eγ for uncertain or doubly-placed lines and for lines whose Eγ deviates from

Continued on next page (footnotes at end of table)

^{81}Ga β^- decay 1981Ho24 (continued)

^{81}Ge Levels (continued)

least-squares adjusted value by At least 3σ (991γ, 1941γ, 2436γ and 2955γ).

‡ From analysis of ^{81}Ga decay and $\beta\gamma$ coin measurements, it is evident that there are two β^- decaying isomers in ^{81}Ge but, in multispectrum analysis of mass number 81, it was not possible to differentiate between the two half-lives. Hence, 1981Ho24 conclude that the isomers possess similar $T_{1/2}$ values.

From Adopted Levels.

β^- radiations

From Eβ(max) for eight $\gamma\beta$ coin spectra, 1981Al20 obtain Q(β^-)=8320 *150* (adopted in 2003Au03).
Measured average Eβ=2240 *20* (1990Ru05).

E(decay)†	E(level)	Iβ^-‡#	Log *ft*	Comments
(4193 *4*)	4470.53	0.87 *9*	5.85 *5*	av Eβ=1852.1 *20* E(decay): β endpoint: 4150 *960* (1981Al20).
(4387 *4*)	4276.77	0.36 *5*	6.32 *6*	av Eβ=1945.7 *20*
(4496 *4*)	4168.17	7.0 *5*	5.08 *4*	av Eβ=1998.2 *20* E(decay): β endpoint: 4400 *380* (1981Al20).
(4629 *4*)	4035.31	2.42 *22*	5.60 *4*	av Eβ=2062.4 *20* E(decay): β endpoint: 4170 *490* (1981Al20).
(4651 *4*)	4012.91	8.6 *6*	5.06 *3*	av Eβ=2073.3 *20* E(decay): β endpoint: 4460 *510* (1981Al20).
(4844 *4*)	3820.15	0.63 *10*	6.27 *7*	av Eβ=2166.6 *20*
(4891 *4*)	3772.88	5.8 *4*	5.33 *3*	av Eβ=2189.5 *20*
(4966 *4*)	3697.95	1.13 *11*	6.07 *5*	av Eβ=2225.8 *20*
(4998 *4*)	3665.56	2.35 *21*	5.76 *4*	av Eβ=2241.5 *20*
(5161 *4*)	3503.08	7.8 *6*	5.30 *4*	av Eβ=2320.2 *20* E(decay): weighted average of 4580 *520* and 4850 *590* (1981Al20) is 4700 *390*.
(5227 *4*)	3437.23	6.1 *5*	5.43 *4*	av Eβ=2352.2 *20* E(decay): β endpoint: 5100 *340* (1981Al20).
(5535 *4*)	3129.05	0.94 *8*	6.36 *4*	av Eβ=2501.6 *20*
(5643 *4*)	3021.39	1.13 *12*	6.32 *5*	av Eβ=2553.9 *20*
(5667 *4*)	2996.71	6.9 *7*	5.54 *5*	av Eβ=2565.9 *20* E(decay): β endpoint: 5200 *290* (1981Al20).
(5970 *4*)	2693.67	0.65 *7*	6.67 *5*	av Eβ=2713.0 *20*
(6101 *4*)	2563.18	2.44 *18*	6.14 *4*	av Eβ=2776.3 *20*
(6114 *4*)	2549.97	0.73 *7*	6.66 *5*	av Eβ=2782.7 *20*
(6135 *4*)	2529.30	1.50 *12*	6.36 *4*	av Eβ=2792.8 *20*
(6489 *4*)	2174.87	0.40 *4*	7.04 *5*	av Eβ=2964.9 *20*
(6526 *4*)	2138.38	0.91 *13*	6.70 *7*	av Eβ=2982.6 *20*
(6809 *4*)	1855.34	0.39 *4*	7.15 *5*	av Eβ=3120.1 *20*
(6832 *4*)	1832.23	1.9 *5*	6.47 *12*	av Eβ=3131.3 *20*
(6848 *4*)	1816.23	1.68 *14*	6.53 *4*	av Eβ=3139.1 *20*
(6858 *4*)	1805.54	0.98 *9*	6.76 *4*	av Eβ=3144.3 *20*
(6933 *4*)	1731.04	1.09 *15*	6.74 *6*	av Eβ=3180.5 *20*
(6940 *4*)	1723.97	4.0 *13*	6.18 *15*	av Eβ=3183.9 *20*
(7087 *4*)	1577.02	0.26 *6*	7.41 *10*	av Eβ=3255.3 *20*
(7115 *4*)	1548.505	2.18 *25*	6.49 *5*	av Eβ=3269.1 *20*
(7254 *4*)	1409.93	0.54 *11*	7.14 *9*	av Eβ=3336.4 *20*
(7361 *4*)	1303.23	0.24 *14*	7.5 *3*	av Eβ=3388.3 *20*
(7378 *4*)	1286.466	3.3 *5*	6.38 *7*	av Eβ=3396.4 *20*
(7768@ *4*)	895.63	2.1 *19*	6.7 *4*	av Eβ=3586.2 *20*
(7953 *4*)	711.207	3.6 *9*	6.50 *11*	av Eβ=3675.8 *20*
(7985@ *4*)	679.14	≤5.1	≥8.5[1*u*]	av Eβ=3692.2 *20*
(8664@ *4*)	0	≤8.7	≥8.5[1*u*]	av Eβ=4023.1 *20*

Continued on next page (footnotes at end of table)

^{81}Ga β^- decay 1981Ho24 (continued)

β^- radiations (continued)

† From adopted Q(β^-) and E(level). measured endpoint energies from 1981Al20 are given In comments.
‡ From intensity imbalance, except as noted. Iβ(g.s.) and Iβ(679 level) are deduced to be≤7.7% and≤5.1%, respectively, under the assumption that log $f^{1u}t$≥8.5.
# Absolute intensity per 100 decays.
@ Existence of this branch is questionable.

^{81}Ga β^- decay 1981Ho24 (continued)

$\gamma(^{81}Ge)$

Iγ normalization: From [Σ (I(γ+ce) to g.s.)+Σ (I(γ+ce) to 679 level)]=[100−(% delayed n)-%Iβ(g.s.)-%Iβ(679)]=81 *5*, assuming %β^-n=11.9 *7* (from ^{81}Ga Adopted Levels), Iβ(to g.s.)=4.4 *43* and Iβ(to 679 level)=2.6 *25* (<8.7% and <5.1%, respectively, based on log $f^{1u}t$>8.5).
Measured average Eγ=2730 *30* (1990Ru05).

E$_\gamma$ [†]	I$_\gamma$ [†][b]	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.	α[c]	Comments
216.47 *3*	100 *4*	895.63	(1/2$^-$)	679.14	(1/2$^+$)	E1	0.00692	α(K)=0.00619 *9*; α(L)=0.000634 *9*; α(M)=9.43×10^{-5} *14*; α(N+..)=6.01×10^{-6} *9* α(N)=6.01×10^{-6} *9* α(K)exp=0.0066 *20* %Iγ=36.7 *25* assuming recommended decay-scheme normalization. I(216γ)/I(delayed n)=2.9 *2* (1981Ho07). Mult.: from α(K)exp (1981Ho24).
256.6 *3*	0.45 *9*	1805.54	(5/2$^+$,7/2,9/2$^+$)	1548.505	(5/2$^+$,7/2,9/2$^+$)			
262.03 *4*	0.76 *5*	1548.505	(5/2$^+$,7/2,9/2$^+$)	1286.466	(5/2$^+$,7/2$^-$)			
437.42 *4*	0.44 *3*	1723.97	(3/2$^-$,5/2$^-$)	1286.466	(5/2$^+$,7/2$^-$)			
482.51 *3*	8.9 *5*	1723.97	(3/2$^-$,5/2$^-$)	1241.44	(1/2$^+$,3/2,5/2$^+$)			
501.90 *17*	0.94 *10*	1805.54	(5/2$^+$,7/2,9/2$^+$)	1303.23	(5/2$^+$,7/2,9/2$^+$)			
530.22 *4*	12.0 *6*	1241.44	(1/2$^+$,3/2,5/2$^+$)	711.207	(5/2$^+$)			
562.37 *5*	1.98 *10*	1241.44	(1/2$^+$,3/2,5/2$^+$)	679.14	(1/2$^+$)			
574.83 *5*	2.32 *16*	1816.23	(3/2$^-$)	1241.44	(1/2$^+$,3/2,5/2$^+$)			
613.89 *4*	0.65 *5*	1855.34		1241.44	(1/2$^+$,3/2,5/2$^+$)			
626.36 *6*	0.60 *5*	2174.87		1548.505	(5/2$^+$,7/2,9/2$^+$)			
698.69 *3*	4.5 *2*	1409.93		711.207	(5/2$^+$)			
711.19 *3*	47 *2*	711.207	(5/2$^+$)	0	(9/2$^+$)	[E2]	8.42×10^{-4}	α(K)=0.000751 *11*; α(L)=7.79×10^{-5} *11*; α(M)=1.161×10^{-5} *17*; α(N+..)=7.51×10^{-7} *11* α(N)=7.51×10^{-7} *11*
728.32 *6*	1.60 *14*	2138.38	(5/2$^+$,7/2,9/2$^+$)	1409.93				
730.84 *5*	2.55 *12*	2563.18	(3/2,5/2$^-$)	1832.23	(3/2,5/2$^-$)			
776.21 *4*	3.5 *2*	3772.88	(7/2$^-$)	2996.71	(3/2$^-$,5/2$^-$,7/2$^-$)			
805.32 *5*	1.99 *10*	2529.30	(3/2,5/2$^-$)	1723.97	(3/2$^-$,5/2$^-$)			
828.26 *5*	59 *3*	1723.97	(3/2$^-$,5/2$^-$)	895.63	(1/2$^-$)			
865.81 *10*	2.00 *12*	1577.02		711.207	(5/2$^+$)			
920.7 *3*	0.3 *1*	1816.23	(3/2$^-$)	895.63	(1/2$^-$)			
933	0.5	2174.87		1241.44	(1/2$^+$,3/2,5/2$^+$)			
936.62 *4*	25.6 *11*	1832.23	(3/2,5/2$^-$)	895.63	(1/2$^-$)			
962.64 *11*	1.08 *7*	2693.67		1731.04	(5/2$^+$,7/2,9/2$^+$)			
991.06[&] *7*	1.81 *12*	4012.91	(3/2$^-$,5/2$^-$,7/2$^-$)	3021.39	(3/2,5/2$^-$)			
1016.42 *14*	2.5 *3*	4012.91	(3/2$^-$,5/2$^-$,7/2$^-$)	2996.71	(3/2$^-$,5/2$^-$,7/2$^-$)			
1019.80 *4*	6.6 *3*	1731.04	(5/2$^+$,7/2,9/2$^+$)	711.207	(5/2$^+$)			

$^{81}_{32}Ge_{49}$-4

γ(^{81}Ge) (continued)

E_γ[†]	I_γ[†b]	E_i(level)	J^π_i	E_f	J^π_f	Comments
1083.22 6	2.22 12	3503.08	$(7/2^-)$	2419.90		
1104.93 9	1.14 10	1816.23	$(3/2^-)$	711.207	$(5/2^+)$	
1116.63 5	3.2 2	2419.90		1303.23	$(5/2^+,7/2,9/2^+)$	
1137.07 4	1.83 9	1816.23	$(3/2^-)$	679.14	$(1/2^+)$	
1144	0.4	1855.34		711.207	$(5/2^+)$	
1164.53 3	3.5 2	2996.71	$(3/2^-,5/2^-,7/2^-)$	1832.23	$(3/2,5/2^-)$	
1189.16 6	1.59 9	3021.39	$(3/2,5/2^-)$	1832.23	$(3/2,5/2^-)$	
[x]1203.17 15	0.51 5					
1272.71 3	18.0 9	2996.71	$(3/2^-,5/2^-,7/2^-)$	1723.97	$(3/2^-,5/2^-)$	
1286.39 3	16.2 8	1286.466	$(5/2^+,7/2^-)$	0	$(9/2^+)$	
1303.20 3	4.8 3	1303.23	$(5/2^+,7/2,9/2^+)$	0	$(9/2^+)$	
[x]1339.83 12	1.01 8					
1352.87 7	3.4 2	3772.88	$(7/2^-)$	2419.90		
1405.07 4	2.57 14	3129.05	$(3/2,5/2,7/2)$	1723.97	$(3/2^-,5/2^-)$	
1448.25 7	1.37 9	2996.71	$(3/2^-,5/2^-,7/2^-)$	1548.505	$(5/2^+,7/2,9/2^+)$	
1483.45 12	0.78 5	4012.91	$(3/2^-,5/2^-,7/2^-)$	2529.30	$(3/2,5/2^-)$	
1548.51 3	13.0 5	1548.505	$(5/2^+,7/2,9/2^+)$	0	$(9/2^+)$	
1604.93 7	1.48 8	3437.23	$(3/2^-,5/2^-)$	1832.23	$(3/2,5/2^-)$	
1633.47 9	2.35 13	2529.30	$(3/2,5/2^-)$	895.63	$(1/2^-)$	
1667.61 6	2.60 14	2563.18	$(3/2,5/2^-)$	895.63	$(1/2^-)$	
1671.4 4	0.34 8	3503.08	$(7/2^-)$	1832.23	$(3/2,5/2^-)$	
1710.2 2	2.0 7	2996.71	$(3/2^-,5/2^-,7/2^-)$	1286.466	$(5/2^+,7/2^-)$	
1713.26 4	10.3 4	3437.23	$(3/2^-,5/2^-)$	1723.97	$(3/2^-,5/2^-)$	
1730.95 7	1.47 8	1731.04	$(5/2^+,7/2,9/2^+)$	0	$(9/2^+)$	
[x]1770.52 11	0.44 5					
1779.05 3	5.1 3	3503.08	$(7/2^-)$	1723.97	$(3/2^-,5/2^-)$	
1805.61 7	1.29 8	1805.54	$(5/2^+,7/2,9/2^+)$	0	$(9/2^+)$	
1818.15 7	0.52 4	2529.30	$(3/2,5/2^-)$	711.207	$(5/2^+)$	
1852.37 15	1.49 12	2563.18	$(3/2,5/2^-)$	711.207	$(5/2^+)$	
1874.36 9	2.92 16	4012.91	$(3/2^-,5/2^-,7/2^-)$	2138.38	$(5/2^+,7/2,9/2^+)$	
1940.97[&] 6	2.94 15	3772.88	$(7/2^-)$	1832.23	$(3/2,5/2^-)$	
1955.61[d#]	1.5[d]	3503.08	$(7/2^-)$	1548.505	$(5/2^+,7/2,9/2^+)$	E_γ: 1955.61 7 for doublet.
1955.61[d#]	1[d]	3772.88	$(7/2^-)$	1816.23	$(3/2^-)$	E_γ: 1955.61 7 for doublet.
1982.4 2	0.70 10	2693.67		711.207	$(5/2^+)$	
2041.62 9	1.49 9	3772.88	$(7/2^-)$	1731.04	$(5/2^+,7/2,9/2^+)$	
2049.61[ae] 9	1.43 10	3772.88	$(7/2^-)$	1723.97	$(3/2^-,5/2^-)$	
2095.6 5	0.6 2	3820.15	$(3/2,5/2,7/2)$	1723.97	$(3/2^-,5/2^-)$	
2116.6 2	0.67 10	3665.56	$(7/2^-)$	1548.505	$(5/2^+,7/2,9/2^+)$	
2125.69 11	2.79 18	3021.39	$(3/2,5/2^-)$	895.63	$(1/2^-)$	
2138.39 5	3.8 2	2138.38	$(5/2^+,7/2,9/2^+)$	0	$(9/2^+)$	
2180.66 4	6.7 4	4012.91	$(3/2^-,5/2^-,7/2^-)$	1832.23	$(3/2,5/2^-)$	
2216.24 15	1.48 12	3503.08	$(7/2^-)$	1286.466	$(5/2^+,7/2^-)$	

^{81}Ga β^- decay 1981Ho24 (continued)

$\gamma(^{81}Ge)$ (continued)

E_γ [†]	I_γ [†b]	E_i(level)	J_i^π	E_f	J_f^π	Comments
2271.7 *2*	1.12 *11*	3820.15	(3/2,5/2,7/2)	1548.505	(5/2$^+$,7/2,9/2$^+$)	
2281.72 *11*	2.54 *14*	4012.91	(3/2$^-$,5/2$^-$,7/2$^-$)	1731.04	(5/2$^+$,7/2,9/2$^+$)	
2288.58 *14*	1.98 *10*	4012.91	(3/2$^-$,5/2$^-$,7/2$^-$)	1723.97	(3/2$^-$,5/2$^-$)	
2311.14[d@]	0.5[d]	3021.39	(3/2,5/2$^-$)	711.207	(5/2$^+$)	E_γ: 2311.14 *19* for doublet.
2311.14[d@] *19*	1[d]	4035.31	(7/2$^-$)	1723.97	(3/2$^-$,5/2$^-$)	
2335.75 *13*	1.28 *9*	4168.17	(3/2$^-$)	1832.23	(3/2,5/2$^-$)	
[x]2343.15 *16*	0.50 *6*					
2362.91 *14*	1.44 *14*	3772.88	(7/2$^-$)	1409.93		
2379.0 *4*	1.5 *3*	3665.56	(7/2$^-$)	1286.466	(5/2$^+$,7/2$^-$)	
2419.94 *15*	2.00 *16*	2419.90		0	(9/2$^+$)	
2436.54[&] *15*	1.30 *9*	4012.91	(3/2$^-$,5/2$^-$,7/2$^-$)	1577.02		
2444.15 *4*	15.0 *5*	4168.17	(3/2$^-$)	1723.97	(3/2$^-$,5/2$^-$)	
2464.67 *12*	1.92 *14*	4012.91	(3/2$^-$,5/2$^-$,7/2$^-$)	1548.505	(5/2$^+$,7/2,9/2$^+$)	
2541.39 *11*	1.96 *14*	3437.23	(3/2$^-$,5/2$^-$)	895.63	(1/2$^-$)	
2549.93 *11*	2.00 *14*	2549.97	(5/2$^+$,7/2,9/2$^+$)	0	(9/2$^+$)	
2552.76 *15*	0.98 *10*	4276.77	(3/2,5/2,7/2)	1723.97	(3/2$^-$,5/2$^-$)	
[x]2650.35 *16*	1.08 *10*					
2726.11 *9*	2.79 *14*	3437.23	(3/2$^-$,5/2$^-$)	711.207	(5/2$^+$)	
[x]2754.77 *26*	1.49 *15*					
2771.85 *16*	0.88 *9*	4012.91	(3/2$^-$,5/2$^-$,7/2$^-$)	1241.44	(1/2$^+$,3/2,5/2$^+$)	
2792.02 *12*	1.81 *15*	3503.08	(7/2$^-$)	711.207	(5/2$^+$)	
[x]2845.8 *3*	0.93 *14*					
2881.6 *3*	0.93 *16*	4168.17	(3/2$^-$)	1286.466	(5/2$^+$,7/2$^-$)	
2922[‡]	0.2	4470.53	(7/2$^-$)	1548.505	(5/2$^+$,7/2,9/2$^+$)	
2926.4 *3*	0.44 *9*	4168.17	(3/2$^-$)	1241.44	(1/2$^+$,3/2,5/2$^+$)	
2955.0[&] *2*	1.26 *15*	3665.56	(7/2$^-$)	711.207	(5/2$^+$)	
2986.4 *2*	1.41 *17*	3697.95	(7/2)$^-$	711.207	(5/2$^+$)	
[x]3061.7 *2*	0.98 *12*					
[x]3169.22 *19*	0.24 *5*					
3272.82 *17*	0.34 *5*	4168.17	(3/2$^-$)	895.63	(1/2$^-$)	
[x]3448.64 *19*	1.13 *10*					
3489.01 *10*	1.17 *7*	4168.17	(3/2$^-$)	679.14	(1/2$^+$)	
3503.24 *8*	8.8 *5*	3503.08	(7/2$^-$)	0	(9/2$^+$)	
[x]3539.97 *14*	0.46 *5*					
3665.54 *8*	2.96 *12*	3665.56	(7/2$^-$)	0	(9/2$^+$)	
3697.95 *11*	1.68 *10*	3697.95	(7/2)$^-$	0	(9/2$^+$)	
3773.08 *18*	1.94 *17*	3772.88	(7/2$^-$)	0	(9/2$^+$)	
4035.20 *7*	5.6 *4*	4035.31	(7/2$^-$)	0	(9/2$^+$)	
4470.4 *2*	2.16 *16*	4470.53	(7/2$^-$)	0	(9/2$^+$)	

$^{81}_{32}Ge_{49}$-6

^{81}Ga β^- decay 1981Ho24 (continued)

$\gamma(^{81}Ge)$ (continued)

† From 1980HoZN. Eγ, Iγ for placed lines also given in 1981Ho24, but uncertainties are omitted there. The evaluator suspects ΔE may be slightly underestimated, since an unusually large number of Eγ values lie 1σ or 2σ from least-squares adjusted value.
‡ Absent from table 9 (1980HoZN), but shown in drawing (1981Ho24).
# Iγ from drawing (1981Ho24), Eγ from table 9 (1980HoZN); Iγ=2.46 *16* for doublet (1980HoZN).
@ Iγ from drawing (1981Ho24), Eγ from table 9 (1980HoZN); Iγ=1.86 *15* for doublet (1980HoZN).
& Eγ for this line differs by 3σ or 4σ from least-squares adjusted value; the evaluator assumes that either the uncertainty given in 1980HoZN is underestimated or the γ is incorrectly placed in the decay scheme. Consequently, this Eγ was excluded from the least-squares energy adjustment for this decay scheme.
[a] Eγ is 6σ from least-squares adjusted value; evaluator, therefore, shows its placement as questionable here and excludes it from Adopted Gammas.
[b] For absolute intensity per 100 decays, multiply by 0.367 *24*.
[c] 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.
[d] Multiply placed with intensity suitably divided.
[e] Placement of transition in the level scheme is uncertain.
[x] γ ray not placed in level scheme.

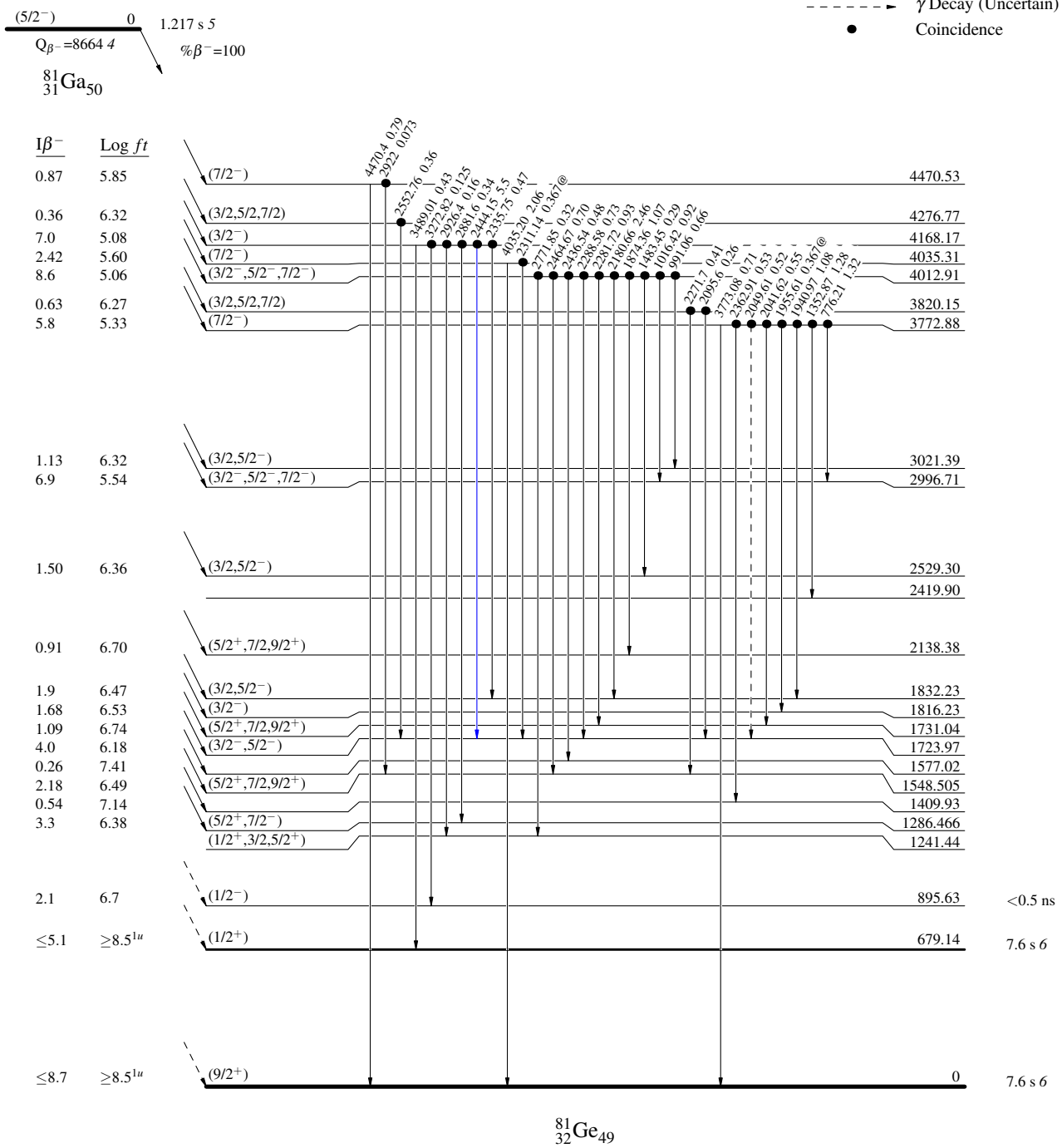
$^{81}_{32}Ge_{49}$-7

^{81}Ga β^- decay 1981Ho24

Decay Scheme

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays
@ Multiply placed: intensity suitably divided

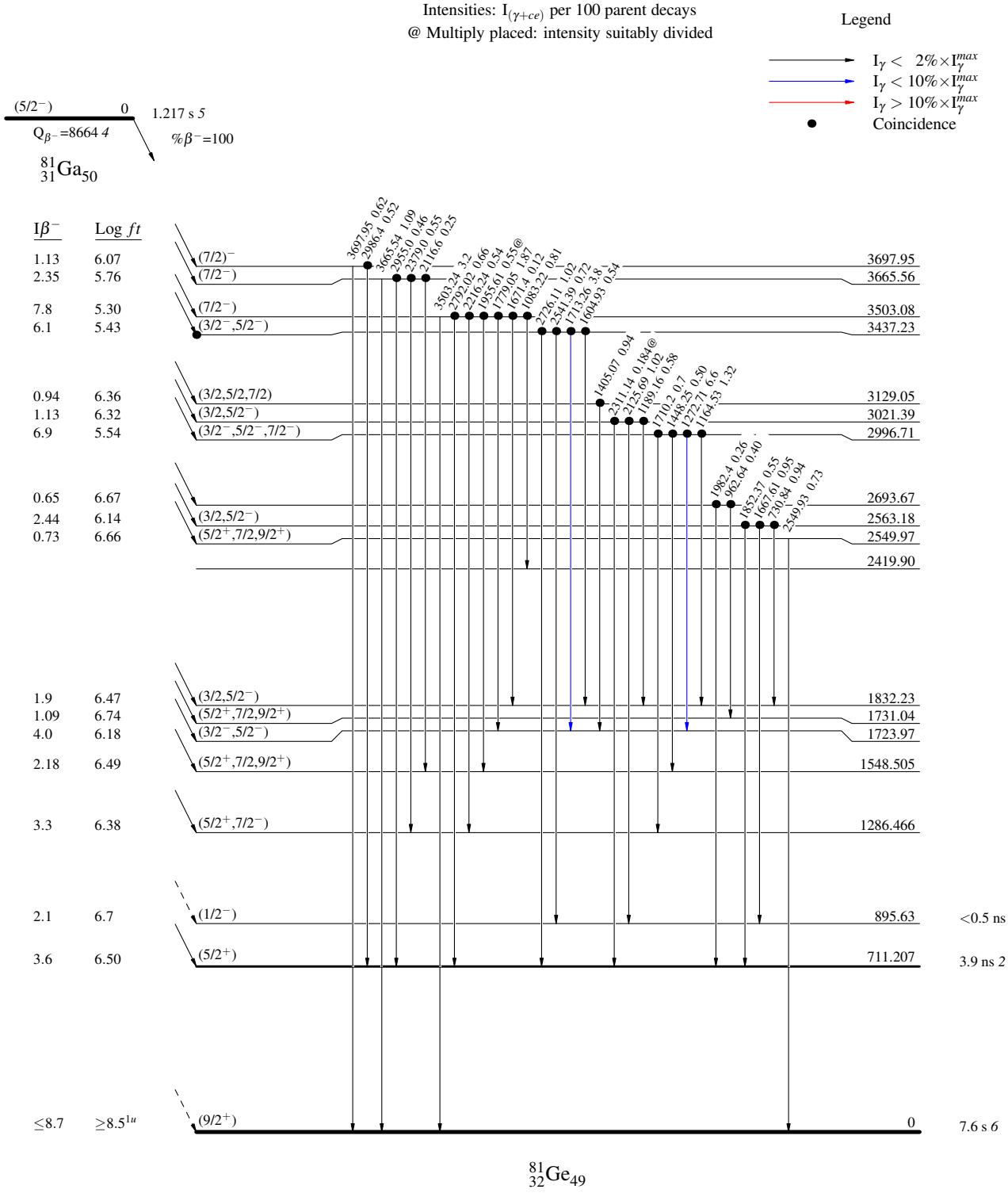
Legend
$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$
γ Decay (Uncertain)
Coincidence



^{81}Ga β^- decay 1981Ho24

Decay Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays
@ Multiply placed: intensity suitably divided



^{81}Ga β^- decay 1981Ho24

Decay Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays
@ Multiply placed: intensity suitably divided