^{79}Ge β^- decay (18.98 s) 1981Ho24

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 135, 193 (2016)	31-May-2016

Parent: ^{79}Ge: E=0.0; $J^\pi=(1/2)^-$; $T_{1/2}$=18.98 s *3*; Q(β^-)=4110 *40*; %β^- decay=100.0

Measured γ, $\gamma\gamma$, ce. See also 1980HoZN for detailed data.

Others: 1981Al20, 1977Al17, 1975Al11, 1974Gr29, 1972MaWL, 1970OsZZ. All references are from the same laboratory.

^{79}As Levels

E(level)†	J^π‡
0.0	$3/2^-$
100.46 *5*	$(1/2^-)$
109.51 *5*	$(3/2)^-$
230.60 *5*	$(5/2^-)$
603.69 *4*	(1/2,3/2)
634.04 *6*	(5/2,7/2)
1412.00 *6*	
1490.26 *9*	
1505.90 *4*	$(3/2)^-$
1869.42 *6*	$(1/2^-,3/2^-)$

† From least-squares fit to Eγ data.

‡ See Adopted Levels.

β^- radiations

E(decay)	E(level)	Iβ^-†	Log *ft*	Comments
$(2.24\times10^3$ *4*)	1869.42	0.92 *7*	5.86 *5*	av Eβ=918 *19*
$(2.60\times10^3$ *4*)	1505.90	12.1 *8*	5.01 *4*	av Eβ=1089 *19*
$(2.62\times10^3$ *4*)	1490.26	0.332 *22*	6.59 *4*	av Eβ=1097 *19*
$(2.70\times10^3$ *4*)	1412.00	1.29 *8*	6.05 *4*	av Eβ=1134 *19*
$(3.51\times10^3$ *4*)	603.69	2.65 *18*	6.23 *4*	av Eβ=1519 *20*
$(4.00\times10^3$ *4*)	109.51	22.4 *14*	5.56 *4*	av Eβ=1757 *20*
$(4.01\times10^3$ *4*)	100.46	0.78 *20*	7.0 *1*	av Eβ=1761 *20*
$(4.11\times10^3$ *4*)	0.0	60 *3*	5.18 *3*	av Eβ=1810 *20*

† Absolute intensity per 100 decays.

$\gamma(^{79}As)$

Iγ normalization: from absolute γ-ray intensity measurement (1981Ho24).

E_γ [†]	I_γ [†‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.	δ	α [#]	Comments
100.48 *6*	12.6 *7*	100.46	(1/2$^-$)	0.0	3/2$^-$	(M1)		0.0888	α(K)=0.0788 *12*; α(L)=0.00855 *12*; α(M)=0.001306 *19*; α(N)=9.85×10^{-5} *14* Mult.: from α(K)exp=0.07 *3* (1981Ho24). α(K)exp also allows mult=E1, but ΔJ$^\pi$ implies M1. α(K)(M1)=0.079, α(K)(E1)=0.065, α(K)(E2)=0.67.
109.58 *6*	100	109.51	(3/2)$^-$	0.0	3/2$^-$	M1+E2	0.37 *8*	0.129 *24*	α(K)=0.113 *21*; α(L)=0.014 *3*; α(M)=0.0021 *4*; α(N)=0.00015 *3* Mult.,δ: from α(K)exp=0.112 *17* (1981Ho24).
230.62 *5*	7.9	230.60	(5/2$^-$)	0.0	3/2$^-$	[M1,E2]		0.023 *13*	α(K)=0.020 *12*; α(L)=0.0022 *13*; α(M)=0.00034 *20*; α(N)=2.5×10^{-5} *14*
x287.8 *2*	0.61 *15*								
x306.98 *16*	0.53 *10*								
x325.50 *8*	1.15 *10*								
503.26 *6*	10.1 *5*	603.69	(1/2,3/2)	100.46	(1/2$^-$)				
524.45 *6*	0.39	634.04	(5/2,7/2)	109.51	(3/2)$^-$				
x551.21 *10*	0.58 *5*								
603.70 *6*	5.1 *3*	603.69	(1/2,3/2)	0.0	3/2$^-$				
634.00 *20*	1.22	634.04	(5/2,7/2)	0.0	3/2$^-$				
x724.13 *8*	2.2 *2*								
x749.10 *8*	2.0 *2*								
x774.74 *10*	1.36 *8*								
808.22 *8*	1.62 *10*	1412.00		603.69	(1/2,3/2)				
x825.03 *10*	1.73 *12*								
871.78 *6*	1.62 *10*	1505.90	(3/2)$^-$	634.04	(5/2,7/2)				
x1031.59 *8*	1.17 *8*								
1181.44 *6*	4.4 *2*	1412.00		230.60	(5/2$^-$)				
1259.65 *7*	1.55 *7*	1490.26		230.60	(5/2$^-$)				
1265.80 *6*	1.20 *7*	1869.42	(1/2$^-$,3/2$^-$)	603.69	(1/2,3/2)				
1275.26 *10*	1.92 *10*	1505.90	(3/2)$^-$	230.60	(5/2$^-$)				
1396.53 *6*	9.8 *4*	1505.90	(3/2)$^-$	109.51	(3/2)$^-$				
x1418.02 *6*	2.6 *2*								
1505.85 *5*	43 *2*	1505.90	(3/2)$^-$	0.0	3/2$^-$				
x1538.44 *8*	1.14 *7*								
x1557.26 *8*	1.42 *8*								
x1571.33 *15*	1.52 *12*								
x1845.37 *7*	1.02 *6*								
1869.25 *8*	3.1 *2*	1869.42	(1/2$^-$,3/2$^-$)	0.0	3/2$^-$				
x2594.2 *3*	1.22 *9*								

$^{79}_{33}As_{46}$-2

^{79}Ge β^- decay (18.98 s) 1981Ho24 (continued)

$\gamma(^{79}As)$ (continued)

† From 1980HoZN.
‡ For absolute intensity per 100 decays, multiply by 0.214 *10*.
# 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.
x γ ray not placed in level scheme.

$^{79}_{33}As_{46}$-3

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Decay Scheme

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays