^{79}As β^- decay (9.01 min) 1969Ba34

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

Parent: ^{79}As: E=0.0; J^π=3/2$^-$; $T_{1/2}$=9.01 min *15*; Q(β^-)=2281 *5*; %β^- decay=100.0
^{79}As-J^π,$T_{1/2}$: From ^{79}As Adopted Levels.
^{79}As-Q(β^-): From 2012Wa38.
Others: 1961Yt01, 1961Ku09, 1960Ku06.

^{79}Se Levels

E(level)†	J^π‡	$T_{1/2}$‡	Comments
0.0	7/2$^+$	3.27×10^5 y *28*	
95.5 *5*	1/2$^-$	3.92 min *1*	%IT=99.944 *11* Evaluator deduced %feeding=94.2 *5* of this isomer from the decay scheme.
364.5 *5*	5/2$^-$		
527.4 *6*	3/2$^-$		
571.6? *6*	5/2$^-$		
974.0 *6*	3/2$^-$		
1079.6 *6*	(3/2)		
1088.5? *8*	(3/2$^-$)		

† From least-squares fit to Eγ data.
‡ From Adopted Levels.

β^- radiations

$\beta\gamma$ data from 1961Ku09.

E(decay)	E(level)	Iβ^-†	Log *ft*	Comments
(1193 *5*)	1088.5?	0.25 *5*	6.79 *9*	av Eβ=441.2 *22*
(1201 *5*)	1079.6	0.44 *6*	6.56 *6*	av Eβ=445.1 *22*
(1307 *5*)	974.0	1.77 *17*	6.10 *5*	av Eβ=491.3 *23* E(β^-)=1250 (1961Ku09).
(1709 *5*)	571.6?	0.26 *5*	7.39 *9*	av Eβ=671.8 *23*
(1754 *5*)	527.4	1.10 *11*	6.81 *5*	av Eβ=692.0 *23* E(β^-)=1700 (1961Ku09).
(1917 *5*)	364.5	1.46 *15*	6.85 *5*	av Eβ=766.7 *24* E(β^-)=1800 (1961Ku09).
(2186 *5*)	95.5	94.2 *5*	5.27 *1*	av Eβ=891.4 *24* Iβ^-: 100−(summed feeding for higher levels+0.5 *5* for g.s.). E(β^-)=2300 *100* (1953Cu33).
(2281‡ *5*)	0.0	<1	>8.5[1u]	av Eβ=947.1 *23*

† Absolute intensity per 100 decays.
‡ Existence of this branch is questionable.

^{79}As β^- decay (9.01 min) 1969Ba34 (continued)

$\gamma(^{79}Se)$

Iγ normalization: Ti(96γ)+Ti(365γ)=99.5 *5* (assuming Iβ(g.s.)<1 for log $f^{1u}t$>8.5).

E_γ	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.	α[‡]	Comments
95.5 *5*		95.5	1/2$^-$	0.0	7/2$^+$	E3	9.48	α(K)=7.26 *11*; α(L)=1.90 *3*; α(M)=0.296 *5*; α(N)=0.0197 *3* I$_\gamma$: 621 *56*, deduced by evaluator from measured equilibrium intensity of 1099 *100* (1969Ba34) for 95.5γ from ^{79}Se isomer decay, and half-lives of 9.01 min *15* for ^{79}As and 3.92 min *1* for ^{79}Se isomer. This value is not given in the data field since it is time-dependent, based on counting schedule.
364.5 *5*	125 *4*	364.5	5/2$^-$	0.0	7/2$^+$			
402.3 *7*	6.5 *15*	974.0	3/2$^-$	571.6?	5/2$^-$			
432.0 *5*	100 *2*	527.4	3/2$^-$	95.5	1/2$^-$			
446.8 *5*	17.5 *20*	974.0	3/2$^-$	527.4	3/2$^-$			
476.0 *5*	24.0 *25*	571.6?	5/2$^-$	95.5	1/2$^-$			
552.0 *7*	9.0 *16*	1079.6	(3/2)	527.4	3/2$^-$			
715.1 *5*	20.0 *20*	1079.6	(3/2)	364.5	5/2$^-$			
723.6 *10*	7.6 *8*	1088.5?	(3/2$^-$)	364.5	5/2$^-$			
878.5 *5*	94 *4*	974.0	3/2$^-$	95.5	1/2$^-$			
993.4 *9*	8.8 *25*	1088.5?	(3/2$^-$)	95.5	1/2$^-$			

[†] For absolute intensity per 100 decays, multiply by 0.0150 *13*.

[‡] 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.

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Decay Scheme

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