^{79}Y ε decay (14.8 s) 1992Mu12,1992Gr09

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

Parent: ^{79}Y: E=0.0; J^π=(5/2$^+$); $T_{1/2}$=14.8 s *6*; Q(ε)=7.12×10^3 *45*; %ε+%β^+ decay=100.0
^{79}Y-J^π,$T_{1/2}$: From ^{79}Y Adopted Levels.
^{79}Y-Q(ε): From 2012Wa38.
1992Mu12: measured $T_{1/2}$, γ, $\beta\gamma$, $\gamma\gamma$, $\beta\gamma$(t). Source produced by ^{54}Fe(^{28}Si,p2nγ) E=92 MeV.
1992Gr09: source produced by mass separation of fission fragments. Measured $T_{1/2}$(^{79}Y isotope) and one γ at 177 keV.
1987Lo10, 1987LeZT: source produced by ^{24}Mg(^{58}Ni,p2n) E=177 MeV.
The level scheme is not sufficiently well known to allow calculation of absolute γ-ray intensities.

^{79}Sr Levels

E(level)	J^π†	$T_{1/2}$	Comments
0	3/2$^{(-)}$		
177.4 *1*	(5/2$^+$)	23 ns *2*	$T_{1/2}$: $\beta\gamma$(t) (1992Mu12).
329.9 *1*	(7/2$^+$)		
1283.4 *10*			

† From Adopted Levels.

ε,β^+ radiations

The ε,β^+ feedings and log *ft* values should be considered as approximate because of high Q(ε) values and lack of knowledge of decay scheme above 1300 keV.

E(decay)	E(level)	Iβ^+ †	Iε†	Log *ft*	I($\varepsilon+\beta^+$)†	Comments
(5.8×10^3 *5*)	1283.4	<24.5	<0.5	>5.1	<25	av Eβ=2224 *220*; εK=0.014 *5*; εL=0.0016 *6*; εM+=0.00035 *12*
(6.8×10^3 *5*)	329.9	<14	<0.1	>5.7	<14	av Eβ=2686 *220*; εK=0.0082 *22*; εL=0.0010 *3*; εM+=0.00021 *6*
6.94×10^3 *45*	177.4	<60.5	<0.5	>5.1	<61	av Eβ=2761 *220*; εK=0.0076 *20*; εL=0.00088 *23*; εM+=0.00019 *5* E(decay): from β^+(177γ) (1992Mu12).

† Absolute intensity per 100 decays.

γ(^{79}Sr)

Iγ normalization: I(γ+ce)(177γ)=100, assuming no ε,β^+ feeding to g.s. In view of high Q(ε) value, the present decay scheme is not considered as well established, thus the deduced normalization factor is only an approximate value.

E_γ†	I_γ†#	E_i(level)	J_i^π	E_f	J_f^π	Mult.‡	δ‡	α@	Comments
152.5 *1*	1	329.9	(7/2$^+$)	177.4	(5/2$^+$)	M1+E2	−0.22 *8*	0.059 *6*	α(K)=0.052 *6*; α(L)=0.0061 *8*; α(M)=0.00102 *13* α(N)=0.000127 *15*; α(O)=7.8×10^{-6} *7*
177.4 *1*	7.3 *18*	177.4	(5/2$^+$)	0	3/2$^{(-)}$	(E1(+M2))	−0.01 *3*	0.0189 *4*	α(K)=0.0168 *4*; α(L)=0.00183 *5*; α(M)=0.000306 *8* α(N)=3.80×10^{-5} *10*; α(O)=2.35×10^{-6} *6* I_γ: uncertainty=+13-23 (1992Mu12).
1106 *1*	1.8 *5*	1283.4		177.4	(5/2$^+$)				

Continued on next page (footnotes at end of table)

^{79}Y ε decay (14.8 s) 1992Mu12,1992Gr09 (continued)

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

† From 1992Mu12. 1992Gr09 report only the 177γ.
‡ From Adopted Gammas.
# For absolute intensity per 100 decays, multiply by ≈14.
@ 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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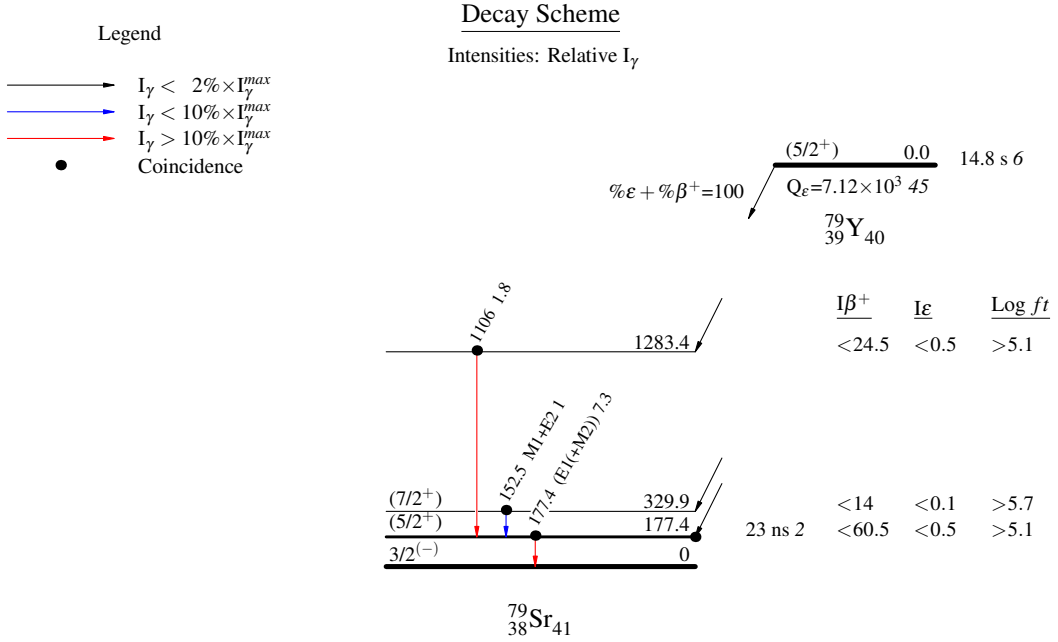
Decay Scheme

Intensities: Relative I_γ



	Iβ+	Iε	Log ft
1283.4	<24.5	<0.5	>5.1
329.9	<14	<0.1	>5.7
177.4	<60.5	<0.5	>5.1