^{80}Sr ε decay (106.3 min) 1973Br32

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 105, 223 (2005)	22-Jun-2005

Parent: ^{80}Sr: E=0; $J^\pi=0^+$; $T_{1/2}$=106.3 min *15*; Q(ε)=1865 *10*; %ε+%$β^+$ decay=100.0
1973Br32: Measured γ, γγ, $T_{1/2}$. Source produced by ^{65}Cu(^{20}Ne,5n)^{80}Y. ^{80}Y decays by ε to ^{80}Sr.
1961Ho13, measured γ, $T_{1/2}$(^{80}Sr).

^{80}Rb Levels

E(level)†	J^π‡
0.0	1^+
174.9 *4*	(2^-)
236.1? *8*	
553.5 *4*	1^+
589.0 *4*	1^+

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

ε,$β^+$ radiations

E(decay)	E(level)	Iβ+ †	Iε†	Log *ft*	I(ε+β+)†	Comments
(1276 *10*)	589.0	0.14 *3*	42 *5*	4.32 *6*	42 *5*	av Eβ=115.9 *43*; εK=0.8720 *5*; εL=0.10280 *8*; εM+=0.02174 *2*
(1312 *10*)	553.5	0.070 *13*	12.0 *13*	4.89 *5*	12.1 *13*	av Eβ=131.0 *43*; εK=0.8700 *7*; εL=0.1025 *1*; εM+=0.02168 *3*
(1629‡ *10*)	236.1?	0.27 *5*	2.8 *5*	5.70 *7*	3.1 *5*	av Eβ=266.2 *43*; εK=0.800 *5*; εL=0.0938 *5*; εM+=0.01983 *11*
(1690 *10*)	174.9	0.32 *15*	2.4 *11*	5.81 *21*	2.7 *13*	av Eβ=292.5 *43*; εK=0.772 *5*; εL=0.0906 *6*; εM+=0.01914 *13*
(1865 *10*)	0.0	9.2 *16*	31 *5*	4.79 *8*	40 *7*	av Eβ=368.2 *44*; εK=0.674 *7*; εL=0.0789 *8*; εM+=0.01667 *16* I(ε+β+): from Iγ(589γ)(absolute)=39 *3* (1973Br32) deduced from intensities of annihilation radiation, 617γ and 589γ when ^{80}Sr and ^{80}Rb were in equilibrium.

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

γ(^{80}Rb)

Iγ normalization: from Iγ(589γ)(absolute)=39 *3* deduced by 1973Br32 from I($γ^±$)/Iγ(617γ from ^{80}Rb ε)=7.95, Iγ(617γ) and Iγ(589γ) when ^{80}Sr and ^{80}Rb were in equilibrium.

E_γ	I_γ†	E_i(level)	J^π_i	E_f	J^π_f
175.0 *5*	26 *3*	174.9	(2^-)	0.0	1^+
235.9‡ *8*	10.7 *11*	236.1?		0.0	1^+
316.0‡ *15*	2.7 *3*	553.5	1^+	236.1?	
378.8 *5*	10.7 *11*	553.5	1^+	174.9	(2^-)

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^{80}Sr ε decay (106.3 min) 1973Br32 (continued)

γ(^{80}Rb) (continued)

E_γ	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π
414.1 *5*	8.3 *8*	589.0	1^+	174.9	(2^-)
553.4 *5*	17.6 *18*	553.5	1^+	0.0	1^+
589.0 *5*	100 *10*	589.0	1^+	0.0	1^+

[†] For absolute intensity per 100 decays, multiply by 0.39 *3*.
[‡] Placement of transition in the level scheme is uncertain.

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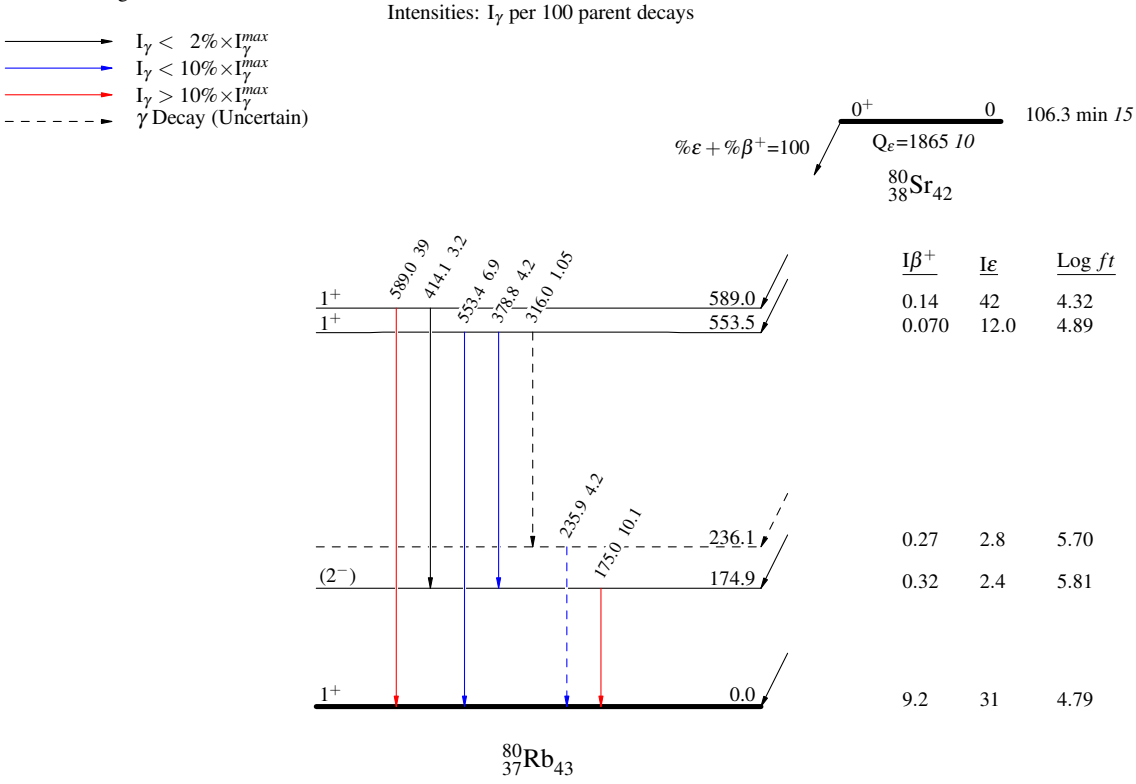
Decay Scheme

Intensities: I_γ per 100 parent decays



	Iβ+	Iε	Log *ft*
589.0	0.14	42	4.32
553.5	0.070	12.0	4.89
236.1	0.27	2.8	5.70
174.9	0.32	2.4	5.81
0.0	9.2	31	4.79