

^{85}Kr β^- decay (10.739 y) 1980Me06

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh and Jun Chen		NDS 116, 1 (2014)	31-Dec-2013

Parent: ^{85}Kr : $E=0.0$; $J^\pi=9/2^+$; $T_{1/2}=10.739$ y 14; $Q(\beta^-)=687.0$ 20; $\% \beta^-$ decay=100.0

^{85}Kr - $J^\pi, T_{1/2}$: From ^{85}Kr Adopted Levels.

^{85}Kr - $Q(\beta^-)$: From 2012Wa38.

1980Me06: Radiochemical separation from fission products, Ge(Li) detectors, measured γ spectra.

Others: 2002Un02, 2004Sc04, 1996Er06, 1994Va37, 1993Ca41, 1992Mo10, 1992Un01, 1987Da33.

 ^{85}Rb Levels

E(level)	J^π [†]	$T_{1/2}$ [†]	Comments
0.0	$5/2^-$	stable	
151.183 24	$3/2^-$		
280.99 4	$1/2^-$		
513.999 5	$9/2^+$	1.015 μs 1	$\%IT=100$

[†] From Adopted Levels.

 β^- radiations

E(decay)	E(level)	$I\beta^-$ [†]	Log ft	Comments
(173.0 20)	513.999	0.434 10	9.51 2	av $E\beta=$ 47.65 7
(406.0 [‡] 20)	280.99	$\leq 4.7 \times 10^{-7}$	$\geq 16.7^{3u}$	av $E\beta=$ 124.03 8
(687.0 20)	0.0	99.563 10	9.446 ^{1u} 7	av $E\beta=$ 251.59 8

[†] Absolute intensity per 100 decays.

[‡] Existence of this branch is questionable.

 $\gamma(^{85}\text{Rb})$

I_γ normalization: $I_\gamma(514)/I\beta=0.00434$ 10; average of 1964Ea01 and 1967De05.

E_γ	I_γ [‡]	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. [†]	δ [†]	α [#]	Comments
129.81 2	≤ 0.0001	280.99	$1/2^-$	151.183	$3/2^-$	(M1)		0.0710	$\alpha(K)=0.0627$ 9; $\alpha(L)=0.00704$ 10; $\alpha(M)=0.001165$ 17; $\alpha(N)=0.0001316$ 19
151.18 3	0.0005 3	151.183	$3/2^-$	0.0	$5/2^-$	M1+E2	0.072 4	0.0481 7	$\alpha(K)=0.0424$ 6; $\alpha(L)=0.00477$ 7; $\alpha(M)=0.000788$ 12; $\alpha(N)=8.89 \times 10^{-5}$ 13
362.81 4	0.0005 1	513.999	$9/2^+$	151.183	$3/2^-$	(E3)		0.0338	$\alpha(K)=0.0291$ 4; $\alpha(L)=0.00391$ 6; $\alpha(M)=0.000647$ 9; $\alpha(N)=6.96 \times 10^{-5}$ 10
513.997 5	100.0	513.999	$9/2^+$	0.0	$5/2^-$	M2		0.00712	$\alpha(K)=0.00628$ 9; $\alpha(L)=0.000711$ 10; $\alpha(M)=0.0001177$ 17; $\alpha(N)=1.332 \times 10^{-5}$ 19

[†] From Adopted Gammas.

Continued on next page (footnotes at end of table)

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$\gamma(^{85}\text{Rb})$ (continued)

‡ For absolute intensity per 100 decays, multiply by 0.00434 *I*0.

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

Legend

