

^{56}V β^- decay (216 ms) 2003Ma02,1998So03

Type	History		Literature Cutoff Date
	Author	Citation	
Full Evaluation	Balraj Singh	ENSDF	25-Mar-2022

Parent: ^{56}V : $E=0.0$; $J^\pi=1^+$; $T_{1/2}=216$ ms 4; $Q(\beta^-)=910\times 10^1$ 18; $\% \beta^-$ decay=100.0

^{56}V - $J^\pi, T_{1/2}$: From ^{56}V Adopted Levels.

^{56}V - $Q(\beta^-)$: From 2021Wa16.

2003Ma02: ^{56}V isotope produced in $^9\text{Be}(^{86}\text{Kr}^{14+}, X)$ at $E(^{86}\text{Kr})=140$ MeV/nucleon, followed by separation of fragments using A1900 fragment separator at NSCL-MSU facility. Measured E_γ , I_γ , $\gamma\gamma$ -coin, $\beta\gamma$ -coin, half-life of decay of ^{56}V using a double-sided Si microstrip detector (DSSD) and Segmented Germanium Array (SeGA) surrounding the β counting system.

1998So03: ^{56}V isotope produced in $^9\text{Be}(^{65}\text{Cu}, X)$ at $E(^{65}\text{Cu})=64.5$ MeV/nucleon, followed by separation of fragments using LISE-3 separator at GANIL facility Measured E_γ , I_γ , $\beta\gamma$ -coin and $T_{1/2}$ using Si telescope surrounded by $4\pi\gamma$ detection system of eight BGO crystals.

 ^{56}Cr Levels

E(level) [†]	J^π [‡]
0.0	0^+
1006.1 3	2^+
1674.5 4	(0^+)
1830.2 10	2^+
2324.0 6	2^+

[†] From E_γ data.

[‡] From the Adopted Levels.

 β^- radiations

E(decay)	E(level)	$I\beta^-$ [†]	Log ft	Comments
$(6.78\times 10^3$ 18)	2324.0	1.0 5	5.9 2	av $E\beta=3129$ 89
$(7.27\times 10^3$ 18)	1830.2	1.0 5	6.0 2	av $E\beta=3371$ 89
$(7.43\times 10^3$ 18)	1674.5	26 2	4.65 6	av $E\beta=3447$ 89
$(8.09\times 10^3$ [‡] 18)	1006.1	<4	>5.6	av $E\beta=3774$ 89
$(9.10\times 10^3$ 18)	0.0	70 2	4.63 5	av $E\beta=4267$ 89

[†] Absolute intensity per 100 decays.

[‡] Existence of this branch is questionable.

 $\gamma(^{56}\text{Cr})$

A γ ray of $E_\gamma=340$ 50, $I_\gamma=40$ 15 reported by 1998So03 was not confirmed by 2003Ma02.

E_γ [†]	I_γ [‡]	E_i (level)	J_i^π	E_f	J_f^π	Comments
668.4 3	26 2	1674.5	(0^+)	1006.1	2^+	$E_\gamma=700$ 50, $I_\gamma=50$ 20 (1998So03).
824.1 9	1.0 5	1830.2	2^+	1006.1	2^+	
1006.1 3	30 2	1006.1	2^+	0.0	0^+	$E_\gamma=1000$ 50, $I_\gamma=30$ 10 (1998So03).
1317.9 5	1.0 5	2324.0	2^+	1006.1	2^+	

[†] From 2003Ma02.

[‡] Absolute intensity per 100 decays.

$^{56}\text{V} \beta^-$ decay (216 ms) 2003Ma02,1998So03**Decay Scheme**Intensities: I_γ per 100 parent decays

Legend

