

^{58}Sc β^- decay (12 ms) [2005Ga01](#),[1999So20](#)

<u>Type</u>	<u>History</u>		<u>Literature Cutoff Date</u>
	<u>Author</u>	<u>Citation</u>	
Full Evaluation	Balraj Singh	ENSDF	27-May-2014

Parent: ^{58}Sc : $E=0.0$; $T_{1/2}=12$ ms 5; $Q(\beta^-)=16240$ SY; $\% \beta^-$ decay=100.0

^{58}Sc - $T_{1/2}$: From [2005Ga01](#) (also [2003So21](#)).

^{58}Sc - $Q(\beta^-)$: 16240 720 (syst,[2012Wa38](#)).

^{58}Sc - $\% \beta^-$ decay: assumed $\% \beta^- = 100$.

[2005Ga01](#) (also [2003So21](#)): ^{58}Sc produced in fragmentation of $^{76}\text{Ge}^{30+}$ beam on a ^{58}Ni target. LISE3 achromatic spectrometer used to separate fragments; time-of-flight method, energy loss and magnetic rigidity used to identify fragments. Measured $E\gamma$, $I\gamma$, $I\beta$, $\gamma\gamma$, $\beta\gamma$ coin, $\gamma(t)$, lifetimes with four Ge detectors placed around a thick Si telescope. Half-lives determined by fitting procedure involving five parameters: half-lives of mother, daughter and grand-daughter nuclei, the β -efficiency and the background rate over the 1 s collecting time. No γ rays were detected from ^{58}Sc decay.

[2002MaZN](#): Fragmentation of ^{86}Kr beam, LISE spectrometer, measured isotopic half-life.

[1999So20](#) (also [1999Le67](#)): ^{58}Ti from $^{58}\text{Ni}(^{86}\text{Kr},X)$ reaction at 60.4 MeV/nucleon. Measured $E\beta$, $I\beta(t)$, isotopic half-life.

 ^{58}Ti Levels

<u>E(level)</u>	<u>J^π</u>
0.0	0^+