

Adopted Levels, Gammas

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Yang Dong, Huo Junde		NDS 121, 1 (2014)	20-Jun-2014

$Q(\beta^-)=1.200\times 10^4$ 38; $S(n)=3.56\times 10^3$ 45; $S(p)=12430$ SY; $Q(\alpha)=-1.030\times 10^4$ 36 [2012Wa38](#)
 $\Delta S(p)$: syst=540.

[Additional information 1.](#)

 ^{54}Sc LevelsCross Reference (XREF) Flags

- A** ^{54}Ca β^- decay:107 ms
B ^{54}Sc IT decay (2.77 μs)

E(level)	J^π	$T_{1/2}$	XREF	Comments
0.0	(3) ⁺	526 ms 15	AB	$\% \beta^- = 100$; $\% \beta^- n = 16$ 9 (2010Cr02) Mass excess=-34.4 MeV 5 (1994Se12). Mass excess=-33.5 MeV 5 (1990Tu01). $T_{1/2}$: from 2010Cr02 . Others: 360 ms 60 (2004Li75) and 225 ms 40 (1998So03). J^π : from 2004Li75 based on the β^- decay of ^{54}Sc , which populates the 2 ⁺ and 4 ⁺ excited states In the ^{54}Ti daughter.
110.0 10	(4,5) ⁺	2.77 μs 2	B	$\% \text{IT} = 100$ $T_{1/2}$: from 2010Cr02 . Others: 2.78 μs +31-25 (2012Ba36) nonpopulation of β^- decay, 4 ⁺ from configuration mixing.
247	1 ⁺		A	J^π : from $\log ft=4.25$ In ^{54}Ca ($J^\pi=0^+$) β^- decay and by Configuration=(π 1f3/2) ¹ ⊗(N ,1f5/2,1) (2012Cr02).

 $\gamma(^{54}\text{Sc})$

$E_i(\text{level})$	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.	Comments
110.0	(4,5) ⁺	110		0.0	(3) ⁺	E2	$B(E2)(\text{W.u.})=1.05$ 5 E_γ : from ^{54}Sc IT decay. Mult.: from 1998Gr14 (^{54}Sc IT decay), based on the comparison of the half-life of the isomer with Weisskopf estimates for given transition energy.
247	1 ⁺	247.2 2	100	0.0	(3) ⁺	E2	E_γ, I_γ : From ^{54}Ca β^- decay.

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Level Scheme

Intensities: Relative photon branching from each level

