

^{53}Ni ε decay [1976Vi02,1979ViZY](#)

<u>Type</u>	<u>Author</u>	<u>History Citation</u>	<u>Literature Cutoff Date</u>
Full Evaluation	Huo Junde	NDS 110,2689 (2009)	31-Mar-2007

Parent: ^{53}Ni : $E=0.0$; $J^\pi=(7/2^-)$; $T_{1/2}=45$ ms 15; $Q(\varepsilon)=1328\times 10^1$ 16; % ε +% β^+ decay=100.0

Produced in $^{40}\text{Ca}(^{16}\text{O},3n)$ at $E=65$ MeV.

Measured: delayed protons with $E(p)(\text{c.m.})=1940$ 50 and $I(p)\approx 0.45$ per decay (if $\log ft=3.3$ for ε to IAS of $^{53}\text{Ni}(\text{g.s.})$) were observed.

 ^{53}Co Levels

<u>E(level)</u>	<u>J^π[†]</u>	<u>Comments</u>
0	(7/2 ⁻)	
≈ 4390	(7/2 ⁻)	E(level): responsible for emission of delayed protons with $E(p)(\text{c.m.})=1940$ keV 50.

[†] From adopted values.

 ε, β^+ radiations

<u>E(decay)</u>	<u>E(level)</u>	<u>$I\beta^+$[†]</u>	<u>$I\varepsilon$[†]</u>	<u>$\log ft$</u>	<u>$I(\varepsilon + \beta^+)$[†]</u>	<u>Comments</u>
(8.89×10^3 16)	≈ 4390	45.0	0.0	3.4	45.0	av $E\beta=$ 3697 89; $\varepsilon K=$ 0.00086 7; $\varepsilon L=$ 9.3×10^{-5} 7; $\varepsilon M+=$ 1.61×10^{-5} 12 $I\beta^+$: if $\log ft=3.4$.
(1.328×10^4 16)	0					

[†] Absolute intensity per 100 decays.