^{52}Fe ε decay (45.9 s) 1979Ge02

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Yang Dong, Huo Junde	NDS 128, 185 (2015)	10-Jul-2015

Parent: ^{52}Fe: E=6958.0 *4*; $J^{\pi}=12^+$; $T_{1/2}$=45.9 s *6*; Q(ε)=2375 *6*; %ε+%β^+ decay=100.0
^{52}Fe-$T_{1/2}$: From 1979Ge02.
Source produced in ^{40}Ca(^{14}N,pn), measured γ-ray singles and $\gamma\gamma$-coin, Ge(Li) detectors.
Others: 1977KaZV, 1975Ge01, 1978GeZZ.

^{52}Mn Levels

E(level)	J^{π}†	$T_{1/2}$	Comments
0.0	6^+	5.591 d *3*	$T_{1/2}$: From Adopted Levels.
869.90 *19*	7^+		
2285.98 *23*	8^+		
2907.7 *3*	(9^+)		
3837.2 *4*	11^+		

† From Adopted Levels.

ε,β^+ radiations

E(decay)	E(level)	Iβ^+ †	Iε†	Log *ft*	I($\varepsilon+\beta^+$)†	Comments
5.35×10^3 *13*	3837.2	99.620 *4*	0.380 *4*	4.899 *7*	100	av Eβ=2058.1 *30*; εK=0.003386 *14*; εL=0.0003552 *1*; εM+=6.190×10^{-5} *25* E(decay): from E(β^+)=4330 *130* as quoted by 1979Ge02. The authors estimate direct $\varepsilon+\beta^+$ feeding to other excited levels to be <5%.

† Absolute intensity per 100 decays.

γ(^{52}Mn)

E$_\gamma$	I$_\gamma$†	E$_i$(level)	J^{π}_i	E$_f$	J^{π}_f
621.7 *2*	51 *3*	2907.7	(9^+)	2285.98	8^+
869.9 *2*	93 *5*	869.90	7^+	0.0	6^+
929.5 *2*	100	3837.2	11^+	2907.7	(9^+)
1416.1 *2*	48 *3*	2285.98	8^+	869.90	7^+
2037.6 *4*	50 *3*	2907.7	(9^+)	869.90	7^+
2285.9 *4*	5 *1*	2285.98	8^+	0.0	6^+

† Absolute intensity per 100 decays.

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Decay Scheme

Intensities: I(γ+ce) per 100 parent decays