

^{53}Fe IT decay [1975BI01](#)

<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}Fe : E=3040.4 3; $J^\pi=19/2^-$; $T_{1/2}=2.54$ min 2; %IT decay=100.0

Produced in $^{55}\text{Mn}(p,3n)$ at E=34 MeV, measured: γ , $\gamma\gamma$.

Others: [1975AnZN](#), [1972EvZY](#), [1971BI01](#), [1996Fe09](#).

 ^{53}Fe Levels

<u>E(level)</u>	<u>$J^\pi^\dagger$</u>	<u>$T_{1/2}^\dagger$</u>
0.0	$7/2^-$	
1328.16 8	$9/2^-$	
2339.71 8	$11/2^-$	
3040.81 12	$19/2^-$	2.54 min 2

† From adopted values.

 $\gamma(^{53}\text{Fe})$

I γ normalization: Sum of I(γ +ce) from isomer=100%.

<u>E_γ</u>	<u>$I_\gamma^\dagger$</u>	<u>$E_i(\text{level})$</u>	<u>J_i^π</u>	<u>E_f</u>	<u>J_f^π</u>	<u>Mult.</u>
701.1 1	100	3040.81	$19/2^-$	2339.71	$11/2^-$	[E4]
1011.5 1	86 9	2339.71	$11/2^-$	1328.16	$9/2^-$	
1328.1 1	87 8	1328.16	$9/2^-$	0.0	$7/2^-$	
1712.6 3	1.3 1	3040.81	$19/2^-$	1328.16	$9/2^-$	[M5]
2339.7 1	13 2	2339.71	$11/2^-$	0.0	$7/2^-$	
3040.6 5	0.06 1	3040.81	$19/2^-$	0.0	$7/2^-$	[E6]

† For absolute intensity per 100 decays, multiply by 1.00 8.

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Decay Scheme

Legend

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays
%IT=100.0

- $I_{\gamma} < 2\% \times I_{\gamma}^{max}$
- $I_{\gamma} < 10\% \times I_{\gamma}^{max}$
- $I_{\gamma} > 10\% \times I_{\gamma}^{max}$

