

$^{52}\text{Mn}$  IT decay (21.1 min) 1977Ya08

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

Parent:  $^{52}\text{Mn}$ :  $E=377.749$  5;  $J^\pi=2^+$ ;  $T_{1/2}=21.1$  min 2; %IT decay=1.75 2

Chemically separated sources from  $^{52}\text{Fe}$   $\varepsilon$  decay, measured  $E_\gamma$ ,  $I_\gamma$ , a Compton suppression spectrometer system, several large volume Ge(Li) detectors.

See also  $^{52}\text{Mn}$   $\varepsilon$  decay (21.1 min).

Feeding of 21.1-min  $^{52}\text{Mn}$  in  $^{52}\text{Fe}$   $\varepsilon$  decay (8.275 h)=100%.

 $^{52}\text{Mn}$  Levels

E(level) <sup>†</sup>	$J^\pi$ <sup>†</sup>	$T_{1/2}$ <sup>†</sup>	Comments
0.0	$6^+$	5.591 d 3	
377.749 5	$2^+$	21.1 min 2	% $\varepsilon$ +% $\beta^+$ =98.25 5; %IT=1.75 5

<sup>†</sup> From the Adopted Levels.

 $\gamma(^{52}\text{Mn})$ 

$E_\gamma$	$I_\gamma$ <sup>†</sup>	$E_i$ (level)	$J_i^\pi$	$E_f$	$J_f^\pi$	Mult.	$\alpha^\#$	$I_{(\gamma+ce)}$ <sup>‡</sup>	Comments
377.738 5	1.709 15	377.749	$2^+$	0.0	$6^+$	E4	0.0399	1.78	$\alpha(\text{K})=0.0356$ 5; $\alpha(\text{L})=0.00382$ 6; $\alpha(\text{M})=0.000515$ 8; $\alpha(\text{N+..})=2.13\times 10^{-5}$ 3 $\alpha(\text{N})=2.13\times 10^{-5}$ 3 $I_\gamma$ : Relative to 100 for 1434 $\gamma$ with $^{52}\text{Mn}$ (21.1 min) $\varepsilon$ decay.

<sup>†</sup> For absolute intensity per 100 decays, multiply by 0.982 15.

<sup>‡</sup> For absolute intensity per 100 decays, multiply by 0.0175 2.

<sup>#</sup> Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on  $\gamma$ -ray energies, assigned multiplicities, and mixing ratios, unless otherwise specified.

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Decay Scheme

Intensities:  $I(\gamma+ce)$  per 100 parent decays  
%IT=1.75 2

