

Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	E. A. McCutchan	NDS 113,1735 (2012)	1-Mar-2012

$Q(\beta^-)=8.1\times 10^3$ 4; $S(n)=5.8\times 10^3$ 5; $S(p)=1.78\times 10^4$ syst; $Q(\alpha)=-1.28\times 10^4$ syst 2012Wa38

Note: Current evaluation has used the following Q record 8.78E+3 71 5.51e+381 17573 syst -12289 syst 2011AuZZ.

$\Delta S(p)=805$; $\Delta Q(\alpha)=760$.

$S(2n)=9203$ 699; $S(2p)=33366$ syst 861; $Q(\beta^-n)=4122$ 699 (2011AuZZ).

 ${}^{68}\text{Fe}$ LevelsCross Reference (XREF) Flags

A ${}^{68}\text{Mn}$ β^- decay
 B ${}^9\text{Be}({}^{69}\text{Co}, X\gamma), ({}^{70}\text{Ni}, X\gamma)$

E(level) [†]	J ^π [‡]	T _{1/2}	XREF	Comments
0.0	0 ⁺	188 ms 4	AB	$\% \beta^- = 100$; $\% \beta^- n > 0$ T _{1/2} : weighted average of 187 ms 6 (2003So21), 180 ms 19 (2011Da08) and 189 ms 6 (2012Li02). Others: 155 ms +34-18 (2005NiZZ), 155 ms 50 (1999So20), 100 ms 60 (1991Be33). 1999So20, 2012Li02 observe that the $\beta(t)$ curve indicates feeding of the longer-lived isomer in ${}^{68}\text{Co}$. $\% \beta^- n$: from the existence of β -delayed neutrons (1999Ha05). This level is expected to undergo β -delayed neutron emission with $\% \beta^- n = 1.8$ (1997Mo25).
522.0 10	(2 ⁺)		AB	
1389.0 14	(4 ⁺)		AB	

[†] From least-squares fit to E_γ 's by evaluator.

[‡] Tentative assignments based on systematics of neighboring even-even Fe isotopes.

 $\gamma({}^{68}\text{Fe})$

E _i (level)	J _i ^π	E _γ [†]	I _γ	E _f	J _f ^π
522.0	(2 ⁺)	522 1	100	0.0	0 ⁺
1389.0	(4 ⁺)	867 1	100	522.0	(2 ⁺)

[†] From ${}^{68}\text{Mn}$ β^- decay.

Adopted Levels, GammasLevel Scheme

Intensities: Type not specified

Legend

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

