^{57}Zn β^+ decay:? 1976Vi02

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	M. R. Bhat	NDS 85, 415 (1998)	24-Sep-1998

Parent: ^{57}Zn: E=0.0; J^π=(7/2$^-$); $T_{1/2}$=40 ms *10*; Q(β^+)=14.62×10^3 *14*; %β^+ decay=100.0

Additional information 1.

See the production of ^{57}Zn by the reaction ^{40}Ca(^{20}Ne,3n) for details.

^{57}Cu Levels

E(level)	J^π	Comments
(0.0)		
3.28×10^3 *5*	(5/2$^-$ to 9/2$^-$)	%p=100 T=(1/2) E(level): from Adopted Levels. J^π,T: if 2.58-MeV proton decay is isospin allowed and β^+-decay to state is allowed.
5.35×10^3 *5*	(7/2$^-$)	%p=100 T=(3/2) E(level): calculated by evaluator based on the s(p)(^{57}Cu)=695 keV *18*. J^π,T: syst. E(level) agrees well with the ^{57}Ni analog. Additional information 2.

ε,β^+ radiations

av Eβ: Additional information 3.

E(decay)	E(level)	Iβ^+‡	Log *ft*	I($\varepsilon+\beta^+$)†‡	Comments
(9.27×10^3# *15*)	5350	≈50		≈50	av Eβ=3.95×10^3 *7* I(p to ^{56}Ni g.s.)/I(p to ^{56}Ni 2701)≈0.6.
(1.134×10^4# *15*)	3280	≈15	≈4.4	≈15	av Eβ=4.97×10^3 *7* Log *ft*: if γ-deexcitation of 3.57-MeV state is possible, this value would increase.

† Estimated branching ratios, assuming no γ deexcitation of states and log *ft*=3.3 for feeding of 5.45-MeV state (super-allowed decay of ^{57}Zn to its analog in ^{57}Cu). %β^+p≥65.

‡ Absolute intensity per 100 decays.

Existence of this branch is questionable.