

**$^{69}\text{Zn}$  IT decay (13.756 h) 1970Ra08,1969Zo01**

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	C. D. Nesaraja	NDS 115, 1 (2014)	31-Jul-2013

Parent:  $^{69}\text{Zn}$ : E=438.636 18;  $J^\pi=9/2^+$ ;  $T_{1/2}=13.756$  h 18; %IT decay=99.967 3

$^{69}\text{Zn}$ -%IT decay: 99.967 3.  $I_\gamma(1+ce)(438.6) > 99.9\%$  in  $\hat{\text{I}}\text{T}$  decay and  $I_\gamma(574.3) = 0.033\%$  3 in  $\beta^-$  decay, from  $I_\gamma(438.6)/I_\gamma(574.3)$ , theoretical  $\alpha$  values and decay scheme (1970Ra08).

1974Ro18: NaI(Tl) detector, measured  $T_{1/2}$ .

1970Ra08: GeLi detector(FWHM)=2.5 keV at 1.333 keV, measured  $E_\gamma$ ,  $I_\gamma$ .

1968Sc08: measured  $\beta^-$  spectrum of  $^{69}\text{Zn}$  and conversion electrons.

1969Zo01: GeLi detector(FWHM)=2.8 keV at 1.332 keV, measured  $E_\gamma$ ,  $I_\gamma$ ,  $T_{1/2}$ .

 $^{69}\text{Zn}$  Levels

E(level) <sup>†</sup>	$J^\pi$ <sup>†</sup>	$T_{1/2}$	Comments
0.0	$1/2^-$	56.4 min 9	$T_{1/2}$ : from adopted.
438.635 18	$9/2^+$	13.756 h 18	$T_{1/2}$ : From 1977He20. Others: 13.59 h 18 (2006Ab30) and 13.76 h 3 (1974Ro18).

<sup>†</sup> From Adopted Levels.

 $\gamma(^{69}\text{Zn})$ 

$E_\gamma$	$I_\gamma$ <sup>‡</sup>	$E_i(\text{level})$	$J_i^\pi$	$E_f$	$J_f^\pi$	Mult.	$\alpha$ <sup>†</sup>	$I_{(\gamma+ce)}$ <sup>‡</sup>	Comments
438.634 18	94.88 7	438.635	$9/2^+$	0.0	$1/2^-$	M4	0.0540 8	100	ce(K)/( $\gamma+ce$ )=0.0452 6; ce(L)/( $\gamma+ce$ )=0.00531 8; ce(M)/( $\gamma+ce$ )=0.000766 11; ce(N+)/( $\gamma+ce$ )= $2.80 \times 10^{-5}$ 4 ce(N)/( $\gamma+ce$ )= $2.80 \times 10^{-5}$ 4 $E_\gamma$ : From 1974HeYW. $\alpha(\text{exp})$ : 0.054 3 (1968Sc08). $I_\gamma$ : from $I_\gamma(1+ce)=100$ and M4 $\alpha$ . Mult.: from $\alpha(\text{exp})$ (1968Sc08).

<sup>†</sup> Additional information 1.

<sup>‡</sup> For absolute intensity per 100 decays, multiply by 0.99967 3.

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Decay Scheme

Intensities:  $I_{(\gamma+ce)}$  per 100 parent decays  
%IT=99.967 3

