^{108}Ag β^- decay (2.382 min)

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	ENSDF	1-Jul-2008

Parent: ^{108}Ag: E=0.0; $J^\pi=1^+$; $T_{1/2}$=2.382 min *11*; Q(β^-)=1650 *7*; %β^- decay=97.15 *20*

^{108}Ag-%β^- decay: from I(β^- to g.s.)+I(633γ)+I(β^+ to g.s.)(1+ε/β^+)+ I(434+931+1441+1540 γ's)=100 and I(633γ)/β^-=0.0181 *10* (1962Fr07), I(β^+)/I(633γ)=0.160 *7* (1962Fr07) and ε/β^+(g.s.)=7.33 *22* (theory). The data quoted from 1962Fr07 are not given explicitly by the authors although they are the experimentally determined quantities. The values were deduced by the evaluators from the β^-, β^+, and ε branchings given by the authors.

%β^-= 97.15 *20*.

See also ^{108}Ag ε decay (2.382 min).

^{108}Cd Levels

E(level)	J^π	$T_{1/2}$
0.0	0^+	stable
632.98 *5*	2^+	

β^- radiations

1962Fr07 measured β^- branches of 1650 keV and 1018 keV. In addition, 1962Fr07 report the existence of a β-branch of 177 keV, ≈0.02%. Such a branch implies the existence of a level at ≈1470. However, as has been shown by 1973Si02, such a level probably does not exist. Other β^- measurements: 1960Wa10, 1956Jo23, 1953Pe16, 1952Go02.

E(decay)	E(level)	Iβ^-[†][‡]	Log *ft*	Comments
1017 *8*	632.98	1.76 *10*	5.35 *3*	av Eβ= 356 *4*
1650 *8*	0.0	95.4 *3*	4.425 *9*	av Eβ= 629 *4*

† From I(γ+ce)-imbalance at each level.

‡ Absolute intensity per 100 decays.

$\gamma(^{108}Cd)$

Iγ normalization: from I(β^- to g.s.)+I(633γ)+I(β^+ to g.s.)(1+ε/β^+)+ I(434+931+1441+1540 γ's)=100 and I(633γ)/β^-=0.0181 *10* (1962Fr07), I(β^+)/I(633γ)=0.160 *7* (1962Fr07) and ε/β^+(g.s.)=7.33 *22* (theory). The data quoted from 1962Fr07 are not given explicitly by the authors although they are the experimentally determined quantities. The values were deduced by the evaluators from the β^-, β^+, and ε branchings given by the authors.

E_γ[†]	I_γ[‡#]	E_i(level)	J_i^π	E_f	J_f^π
632.98 *5*	350 *18*	632.98	2^+	0.0	0^+

† Eγ is from 1973Si02.

‡ From 1973Si02 relative to I(433γ in ^{108}Pd)=100.

For absolute intensity per 100 decays, multiply by 0.00503 *12*.

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Decay Scheme

Intensities: I_γ per 100 parent decays