^{120}Ag β^- decay (0.32 s) 1971Fo22,1973Fr19

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	K. Kitao, Y. Tendow and A. Hashizume	NDS 96, 241 (2002)	1-Dec-2001

Parent: ^{120}Ag: E=203 *1*; $J^\pi=6^{(-)}$; $T_{1/2}$=0.32 s *4*; Q(β^-)=8325 *71*; %β^- decay=100.0
1971Fo22: ^{235}U(n,F) E=th, on-line mass separation; semi γ, ce, $\gamma\gamma$.
1973Fr19: ^{238}U(α,F) E=43 MeV, on-line mass separation; semi G.
See also ^{120}Ag IT decay and ^{120}Ag β^- decay (1.23 s).

^{120}Cd Levels

E(level)‡	J^π†	$T_{1/2}$
0.0	0^+	50.80 s *21*
505.90 *20*	2^+	
1203.7 *3*	(4^+)	
2033.7 *4*	(6^+)	
2129.5 *4*		

† From Adopted Levels.
‡ From a least-squares fit to E(γ's) by the evaluators.

β^- radiations

E(decay)	E(level)	Iβ^-†‡	Log *ft*	Comments
(6.40×10^3 *7*)	2129.5	≈40	≈4.7	av Eβ=2861 *34*
(6.49×10^3 *7*)	2033.7	≈17	≈5.1	av Eβ=2907 *34*

† From 1971Fo22. The Iβ sum to≈57% although the authors claim %β^-≈63%. The difference is probably due to an allowance being made for the large number of unplaced γ transitions.
‡ Absolute intensity per 100 decays.

γ(^{120}Cd)

Iγ normalization: assumed no β^- to g.s. and≈10% β^- to unknown levels.
No Iγ's are given in either reference. Values are deduced from the Iβ's of 1971Fo22; however, the evaluators regard the Iβ's given by 1971Fo22 as uncertain.
Authors (1971Fo22) observed≈100 transitions in the decay of ^{120}Ag.

E$_\gamma$	I$_\gamma$†	E$_i$(level)	J_i^π	E$_f$	J_f^π	Comments
505.9 *2*	≈57	505.90	2^+	0.0	0^+	
697.8 *2*	≈57	1203.7	(4^+)	505.90	2^+	
830.0 *2*	≈17	2033.7	(6^+)	1203.7	(4^+)	
925.8 *2*	≈40	2129.5		1203.7	(4^+)	
x1330.0‡						E$_\gamma$: assigned only by 1973Fr19.

† Absolute intensity per 100 decays.
‡ Placement of transition in the level scheme is uncertain.
x γ ray not placed in level scheme.

^{120}Ag β^- decay (0.32 s) 1971Fo22,1973Fr19

Decay Scheme

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays