^{100}In εp decay 2002Pl03

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli	NDS 145, 25 (2017)	1-Jul-2017

Parent: ^{100}In: E=0; J^π=(6$^+$); $T_{1/2}$=5.8 s *2*; Q(εp)=5.11×10^3 *18*; %εp decay=1.7 *4*

^{100}In-Q(εp): From 2017Wa10.

^{100}In-%εp decay: From 2002Pl03. Others:>3.9 (1995Sz01). I(β^+)/(I(β^+)+I(ε))=0.80 *+14−11* (1985Sz01) to proton-emitting states.

Measured Eγ, Iγ, γγ, βγγ, lifetimes in high-resolution experiment using a HPGe detector, an EUROBALL-type cluster, a superclover from the VEGA array, and a low-energy photon spectrometer, and in a total-absorption experiment using a large NaI crystal, ancillary detectors, two Si detectors and one Ge detector.

1995Sz01: produced by ^{50}Cr(^{58}Ni,3p5n) E=5.6 MeV/nucleon followed by mass separation. Measured εp by ΔE-E telescope. No decay to first excited state in ^{99}Ag (at 343) was observed by γ-ray study of 1995Sz01.

Other: 1982Ku15.

All data are from 2002Pl03.

Authors give the following partial εp spectrum via 6.2 MeV resonance, with FWHM=1 MeV, in ^{100}Cd.

Note that the intensity of all the delayed proton branches above adds to 1.49%. Total %εp=1.6 *3* as given by 2002Pl03,%εp=1.7 *4* (2012Lo08).

E(excit,^{100}Cd) (MeV)	I(εp) %
6.2×10^3	0.04
6.4×10^3	0.05
6.6×10^3	0.03
6.8×10^3	0.16
7.0×10^3	0.22
7.2×10^3	0.20
7.4×10^3	0.28
7.6×10^3	0.18
7.8×10^3	0.13
8.0×10^3	0.09
8.2×10^3	0.06
8.4×10^3	0.05

^{99}Ag Levels

E(level)	J^π	Comments
0	(9/2)$^+$	%εp=91 *11* (60 *6* by β^+ and 31 by ε).
342.0 *10*	(7/2$^+$)	%εp=2.8 *5* (mostly by β^+ and≤1 by ε).
916.0 *10*	(13/2)$^+$	%εp=67.2 *12* (mostly by β^+ and≤2 by ε).

γ(^{99}Ag)

E_γ	E_i(level)	J_i^π	E_f	J_f^π
342	342.0	(7/2$^+$)	0	(9/2)$^+$
916	916.0	(13/2)$^+$	0	(9/2)$^+$

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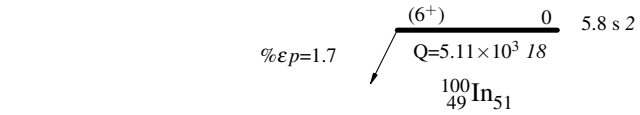
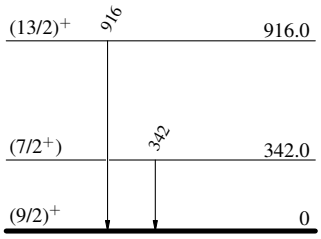
Decay Scheme





$^{99}_{47}Ag_{52}$