^{96}Ag ε decay (6.9 s) 2003Ba39,1997Sc30

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	D. Abriola(a), A. A. Sonzogni	NDS 109, 2501 (2008)	1-Apr-2008

Parent: ^{96}Ag: E=0.0+y; J^π=(2$^+$); $T_{1/2}$=6.9 s *6*; Q(ε)=1.17×10^4 *SY*; %ε+%β$^+$ decay=100.0

2003Ba39: ^{96}Ag produced by ^{60}Ni(^{40}Ca,p3n) E=4.35 MeV/nucleon; separated by GSI online separator. Measured Eγ, Iγ, γγ, β, βγ, βγγ, delayed protons, x rays, pγ coin using three different systems: 1. plastic scintillator combined with Ge array (15 detectors: two clovers and one Euroball cluster) for βγ and βγγ measurement. 2. Large NaI detector for total absorption spectrum (tas) combined with a Ge detector and two Si detectors for βγ, βp, pγ and xγ events. 3. Two Si detector ΔE-E telescopes for delayed protons (FWHM=80 keV).

1997Sc30: ^{96}Ag produced by ^{60}Ni(^{40}Ca,p3n) E=4.1 MeV/nucleon. Measured Eγ, Iγ, γγ, xγ, Ep, Ip, pγ coin using Ge and Si(Li) detectors.

Branching: %εp= 18 *5* (2003Ba39).

α: Additional information 1.

^{96}Pd Levels

E(level)	J$^\pi$[†]
0.0	0$^+$
1415.31 *10*	2$^+$
2099.01 *14*	(4$^+$)
2391.4? *3*	≤4

[†] From Adopted Levels.

ε,β$^+$ radiations

E(decay)	E(level)	Iβ$^+$ [‡]	Iε[‡]	Log *ft*	I(ε+β$^+$)[†‡]	Comments
(9308[#] *SY*)	2391.4?	<5	<0.04	>6.5	<5	av Eβ=3.89×10^3 *12*; εK=0.0066 *6*; εL=0.00081 *8*; εM+=0.000197 *18*
(9600 *SY*)	2099.01	<5	<0.03	>6.6	<5	av Eβ=4.03×10^3 *12*; εK=0.0059 *6*; εL=0.00074 *7*; εM+=0.000178 *16*
(10284 *SY*)	1415.31	33 *5*	0.18 *3*	5.90 *10*	33 *5*	av Eβ=4.37×10^3 *12*; εK=0.0048 *4*; εL=0.00059 *5*; εM+=0.000142 *12*

[†] From Total Absorption Spectrometer (TAS, 2003Ba39). a large fraction of β$^+$ and ε feeding proceeds to high-lying states as indicated by total absorption spectrum. Logft values calculated assuming Y=0.

[‡] Absolute intensity per 100 decays.

[#] Existence of this branch is questionable.

γ(^{96}Pd)

Eγ	Ei(level)	J_i^π	Ef	J_f^π	Mult.[†]	I(γ+ce)[‡]	Comments
683.7 *1*	2099.01	(4$^+$)	1415.31	2$^+$	[E2]	<5	ce(K)/(γ+ce)=0.00219 *3*; ce(L)/(γ+ce)=0.000268 *4*; ce(M)/(γ+ce)=5.03×10^{-5} *7*; ce(N)/(γ+ce)=8.41×10^{-6} *12* ce(N+)/(γ+ce)=8.41×10^{-6} *12*
976.1 *3*	2391.4?	≤4	1415.31	2$^+$		<5	
1415.3 *1*	1415.31	2$^+$	0.0	0$^+$	[E2]	38 *5*	ce(K)/(γ+ce)=0.000421 *6*; ce(L)/(γ+ce)=4.87×10^{-5} *7*; ce(M)/(γ+ce)=9.11×10^{-6} *13*; ce(N)/(γ+ce)=1.534×10^{-6} *22* ce(N+)/(γ+ce)=5.57×10^{-5} *8*

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^{96}Ag ε decay (6.9 s) 2003Ba39,1997Sc30 (continued)

$\gamma(^{96}Pd)$ (continued)

† From Adopted Gammas.
‡ Absolute intensity per 100 decays.

^{96}Ag ε decay (6.9 s) 2003Ba39,1997Sc30

Decay Scheme