Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	ENSDF	20-Aug-2015

Q(β^-)=912×10[1] *60*; S(n)=610×10[1] *65*; S(p)=12970 *SY*; Q(α)=−10230 *SY* 2012Wa38
Estimated uncertainties (2012Wa38): 670 for S(p) and Q(α).
S(2n)=10820 *600*, S(2p)=29320 *700* (syst), Q(β^-n)=4400 *600* (2012Wa38).
1994Be24, 1998Do08: ^{125}Ag produced and identified in Pb(^{238}U,F), E=750 MeV/nucleon reaction using FRS separator and TOF at GSI.
1995Fe12: U(p,F),E=1 GeV, ISOLDE-CERN facility, measured half-life.
Additional information 1.
2015Lo04: ^{125}Ag nuclide produced at RIBF-RIKEN facility in ^{9}Be(^{238}U,F) reaction at E=345 MeV/nucleon with an average intensity of 6×10[10] ions/s. Measured half-life by ion-β correlation and maximum likelihood fits to the decay curve.

^{125}Ag Levels

Cross Reference (XREF) Flags

A ^{125}Ag IT decay (0.491 μs)
B ^{125}Ag IT decay (80 ns)

E(level)[†]	J$^\pi$[‡]	$T_{1/2}$	XREF	Comments
0.0	(9/2$^+$)	159 ms *8*	A	%β^-=100; %β^-n=? Theoretical $T_{1/2}$=111 ms, %β^-n=4.1 (2003Mo09). J$^\pi$: others: 7/2$^+$ from systematics (2012Au07), 9/2$^+$ in theoretical calculations (1997Mo25). $T_{1/2}$: weighted average of 166 ms *7* (1995Fe12, delayed neutron decay curve) and 150 ms *8* (2015Lo04, ion-β correlated decay curve).
0+x			B	Additional information 2.
310.6+x *5*			B	
525.6+x *7*			B	
669.9 *5*	(11/2$^+$)	<25[#] ns	A	
712.9+x *9*			B	
714.2 *5*	(13/2$^+$)	<25[#] ns	A	
859.9+x *14*		80[#] ns *17*	B	%IT=100
1398.3 *5*	(13/2$^-$)		A	
1479.0 *7*	(15/2$^+$)		A	
1501.2 *6*	(17/2$^-$)	0.491 μs *20*	A	%IT=100 $T_{1/2}$: from γ(t); weighted average of 0.474 μs *35* (2013La11), 0.498 μs *+21−20* (2012Ka36), and 0.47 μs *11* (2009St28, earlier value: 0.44 μs *9* in 2006ToZW and 2007To23). Other: 240 ns *50* (2005WaZY, many authors are same as for 2009St28).

[†] From least-squares fit to Eγ data.
[‡] From 2013La11 based on systematics and decay pattern.
[#] From γ(t) (2013La11).

Adopted Levels, Gammas (continued)

$\gamma(^{125}Ag)$

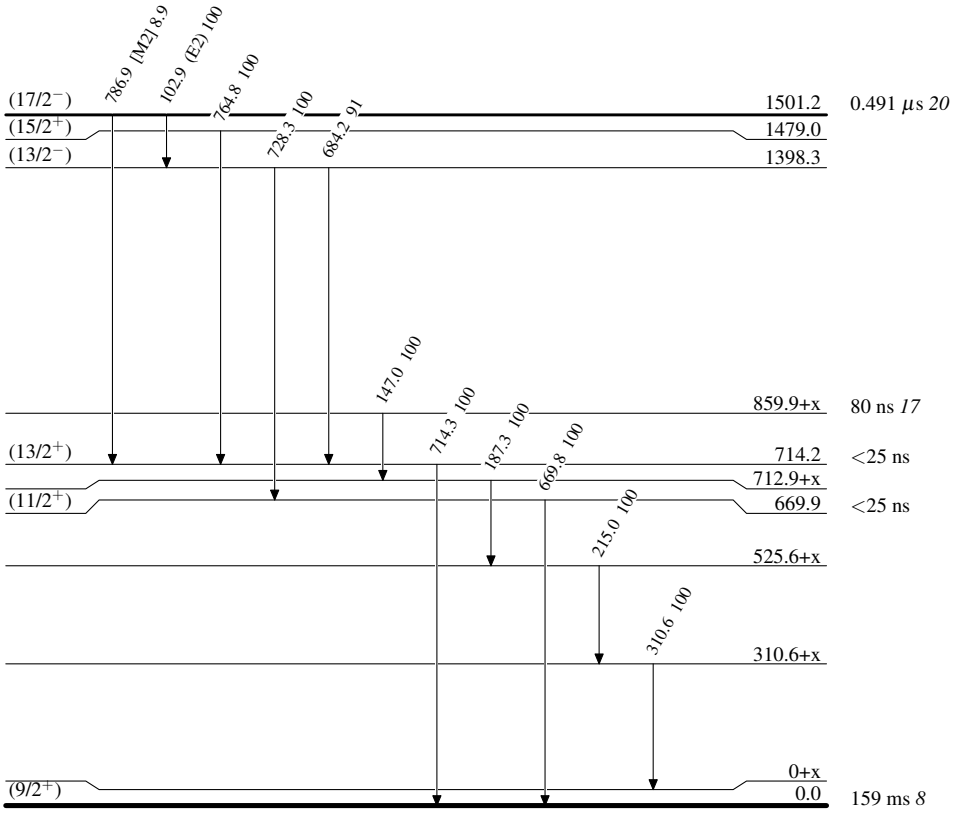
E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.	α[†]	Comments
310.6+x		310.6 *5*	100	0+x				
525.6+x		215.0 *5*	100	310.6+x				
669.9	$(11/2^+)$	669.8 *5*	100	0.0	$(9/2^+)$			
712.9+x		187.3 *5*	100	525.6+x				
714.2	$(13/2^+)$	714.3 *5*	100	0.0	$(9/2^+)$			
859.9+x		147.0 *10*	100	712.9+x				
1398.3	$(13/2^-)$	684.2 *5*	91 *4*	714.2	$(13/2^+)$			
		728.3 *5*	100 *4*	669.9	$(11/2^+)$			
1479.0	$(15/2^+)$	764.8 *5*	100	714.2	$(13/2^+)$			
1501.2	$(17/2^-)$	102.9 *5*	100 *20*	1398.3	$(13/2^-)$	(E2)	1.31	B(E2)(W.u.)=1.14 *11*
		786.9 *5*	8.9 *19*	714.2	$(13/2^+)$	[M2]	0.00557	B(M2)(W.u.)=0.00031 *8*

[†] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level



$^{125}_{47}Ag_{78}$