^{115}Sb IT decay (159 ns) 1977Br08,1979Ko02,1979Fa03

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	NDS 113, 2391 (2012)	1-Sep-2012

Parent: ^{115}Sb: E=2796.26 *9*; $J^{\pi}=19/2^{-}$; $T_{1/2}$=159 ns *3*; %IT decay=100.0

Others: 1974GaZG, 1975FoZK, 1975HeZF.

^{113}In(α,2nγ) E=28 MeV (1979Ko02), E=27 MeV (1977Br08) pulsed α.

^{115}In(α,4nγ) E=48 MeV (1979Fa03) pulsed α.

^{112}Cd(^{6}Li,3nγ) E=34 MeV (1974GaZG,1975FoZK) pulsed ^{6}Li.

^{115}Sb Levels

E(level)	J^{π}[†]	$T_{1/2}$	Comments
0.0	$5/2^{+}$	32.1 min *3*	
723.6	$7/2^{+}$		
1300.2	$11/2^{-}$	6.2 ns *3*	
2516.9	$15/2^{-}$		
2638.5	$15/2^{-}$		
2796.26 *9*	$19/2^{-}$	159 ns *3*	$T_{1/2}$: 159 ns *3* (1979Sh03) 279γ(t) pulsed beam. Others: 156 ns *3* (1977Br08), 157 ns *5* (1979Ko02). Branching: Iγ(158γ)/Iγ(279γ)=0.33 *4* av of 0.324 *49* (1979Sh03), 0.338 *41* (1977Br08). g factor=+0.287 *4* (1979Fa03) $\gamma(\theta$,H,t). Others: +0.290 *5* (1979Sh03), +0.282 *6* (1979Ko02).

[†] From Adopted Levels.

$\gamma(^{115}$Sb)

Iγ normalization: for I(γ+ce)=100 transitions from isomeric state.

E_{γ}[†]	I_{γ}[#]	E_i(level)	J_i^{π}	E_f	J_f^{π}	Mult.[‡]	α[@]	Comments
157.82 *7*	33 *4*	2796.26	$19/2^{-}$	2638.5	$15/2^{-}$	E2	0.329	α(K)=0.259 *4*; α(L)=0.0561 *8*; α(M)=0.01144 *17*; α(N+..)=0.00229 *4* α(N)=0.00212 *3*; α(O)=0.0001714 *25* α(K)exp=0.29 *10*; α(L)exp=7.8 *18* Hf(E2,158γ)=4.2 W.u.
279.40 *14*	100	2796.26	$19/2^{-}$	2516.9	$15/2^{-}$	E2	0.0467	α(K)=0.0389 *6*; α(L)=0.00629 *9*; α(M)=0.001263 *18*; α(N+..)=0.000259 *4* α(N)=0.000238 *4*; α(O)=2.10×10^{-5} *3* α(K)exp=0.038 *6*; α(L)exp=0.0062 *10*; α(M)exp=0.0017 *4*
576.50 *13*	11.8 *CA*	1300.2	$11/2^{-}$	723.6	$7/2^{+}$	M2	0.0186	α(K)=0.01601 *23*; α(L)=0.00212 *3*; α(M)=0.000422 *6*; α(N+..)=8.95×10^{-5} *13* α(N)=8.15×10^{-5} *12*; α(O)=8.03×10^{-6} *12* α(K)exp=0.019 *4* Iγ: calc from Iγ(577γ)/Iγ(1300γ)=0.087 *3* (1978Su05) and I(γ+ce) balance about 1300 level.
723.57 *4*	12.0 *CA*	723.6	$7/2^{+}$	0.0	$5/2^{+}$	M1(+E2)		Iγ: calc from Ti(723γ)=Ti(576γ). Mult.: α(K)exp=0.0030 *6* (1977Br08), 0.0034 *2* (1974Ch51).
1216.70 *11*	104.6 *CA*	2516.9	$15/2^{-}$	1300.2	$11/2^{-}$	E2		α(K)=0.00078 α(K)exp=0.0008 *2* Iγ: calc from Ti(1217γ)=Ti(279γ).

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$\gamma(^{115}Sb)$ (continued)

E_γ [†]	I_γ [#]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [‡]	Comments
1300.25 *10*	136 *CA*	1300.2	11/2$^-$	0.0	5/2$^+$	E3	α(K)=0.00130; α(L)=0.00017 α(K)exp=0.0013 *3* I_γ: I(γ+ce) balance about 1300 level.
1338.23 *13*	43.9 *CA*	2638.5	15/2$^-$	1300.2	11/2$^-$	E2	α(K)=0.00064 I_γ: calc from Ti(1338γ)=Ti(158γ). α(K)exp=0.00062 *16*.

† From 1977Br08, except 723.57γ from 1974Ch51.
‡ Deduced from α(K)exp, α(L)exp, α(M)exp (1977Br08) ce/Iγ.
# For absolute intensity per 100 decays, multiply by 0.673 *25*.
@ 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.

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