^{115}Sb IT decay (6.2 ns) 1978Su05,1978Ke04

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

Parent: ^{115}Sb: E=1300.21 *5*; $J^{\pi}=11/2^{-}$; $T_{1/2}$=6.2 ns *3*; %IT decay=100.0

^{115}Sb Levels

E(level)	J^{π}	$T_{1/2}$	Comments
0.0	$5/2^{+}$	32.1 min *3*	
723.6	$7/2^{+}$		
1300.21 *5*	$11/2^{-}$	6.2 ns *3*	$T_{1/2}$: 6.2 ns *3* from 1300γ(t), 6.4 ns *10* from 576γ(t) (1978Su05) via ^{115}In(^{3}He,3nγ) pulsed 25-MeV ^{3}He. Others: 6.7 ns *4* (1976Ka25,1977Br08), 8.4 ns *7* (1978Ke04), 7.0 ns *4* (1980Le05). g factor=+0.97 *10* (1978Ke04) $\gamma(\theta$,H,t) via ^{116}Sn(p,2nγ), +1.06 *10* (1979Fa03) $\gamma(\theta$,H,t) via ^{115}In(α,4nγ) +1.004 *13* (1980Le05). ^{117}Sb analog: 3.9-ns, 1323-keV state, g factor=+1.02 *7* (1978Ke04). Branching: Iγ(577γ)/Iγ(1300γ)=0.087 *3* (1978Su05). Others: 0.085 *4* (1977Br08) via (α,2nγ), 0.09 *2* (1977Br08) via (p,2nγ).

$\gamma(^{115}Sb)$

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
576.50 *13*	8.7 *3*	1300.21	$11/2^{-}$	723.6	$7/2^{+}$	M2	0.0190	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* E_γ: from 1977Br08. Others: 576.8 *4* (1975WiZX), 576.6 (1978Su05), 576.3 *3* (1979Sh03). Mult.: from α(K)exp=0.019 *4* (1977Br08). Reduced matrix element and coupling constant are determined for h11/2 to g7/2 M2 transition (1978Su05).
723.57 *4*	8.8 *3*	723.6	$7/2^{+}$	0.0	$5/2^{+}$	M1(+E2)		I_γ: calc from Ti(723γ)=Ti(576γ). Mult.: from α(K)exp=0.0030 *6* (1977Br08), 0.0034 *2* (1974Ch51).
1300.25 *10*	100	1300.21	$11/2^{-}$	0.0	$5/2^{+}$	E3	0.0015	α(K)=0.00130; α(L)=0.00017 E_γ: from 1977Br08. Others: 1300.3 *2* (1975WiZX), 1300.0 (1978Su05), 1300.2 *10* (1979Sh03). Mult.: from α(K)exp=0.0013 *3* (1977Br08). Reduced matrix element and coupling constant are determined for h11/2 to d5/2 E3 transition (1978Su05).

[†] For absolute intensity per 100 decays, multiply by 0.917 *3*.

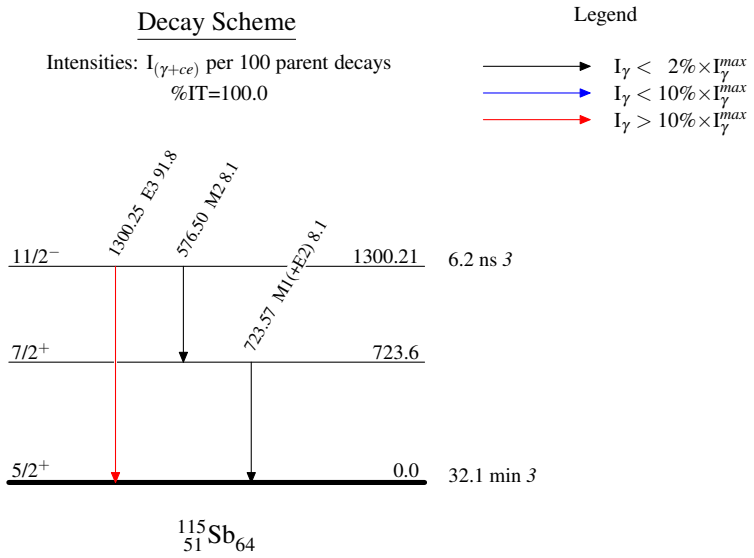
[‡] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

^{115}Sb IT decay (6.2 ns) 1978Su05,1978Ke04

Decay Scheme

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

%IT=100.0



$^{115}_{51}Sb_{64}$