(HI,xnγ)   1985QuZZ

	Type	Author	History Citation	Literature Cutoff Date
	Full Evaluation	K. Kitao	NDS 75,99 (1995)	1-Feb-1993

1985QuZZ: ^{114}Cd(^{7}Li,3nγ) E=29 MeV, ^{110}Pd(^{11}B,3nγ) E=43 MeV; pulsed-beam, excitation functions, γ, γγ(t), γ(θ).
1983Va14: ^{114}Cd(^{7}Li,3nγ) E=29 MeV, ^{110}Pd(^{11}B,3nγ) E=51 MeV; pulsed-beam, excitation functions, γ, γγ(t), γ(θ).
The level scheme is that given by 1985QuZZ, but levels at 510- and 2917 keV has been not confirmed in (α,nγ).

^{118}Sb Levels

E(level)[†]	J^π[‡]	T$_{1/2}$	Comments
250 6	8$^-$	5.00 h 2	Additional information 1.
			E(level): from Adopted Levels.
511.0 3			
568.18 21	(7)$^-$ [@]		
964.80 21	7$^{(+)}$ [@]	22.4 ns 5	T$_{1/2}$: from 1983Va14. Other: 23 ns 5 (1985QuZZ).
1187.13 19	7$^-$ [@]		
1224.21[&] 21	8$^-$ [#]		
1426.81[&] 24	9$^-$		
1571.0 3	10$^-$		
1732.8 5	11$^+$		
1753.1[&] 4	10$^-$		
2115.2[&] 5	11$^-$		
2402.8 6	12$^+$		
2502.7[&] 5	12$^-$		
2918.1[&] 6	(13$^-$)		E(level): assigned as ΔJ=1 band member from γγ coin.

[†] From a least-squares fit to E(γ's) except for 250 level.
[‡] Suggested by authors based on results on γ(θ). See also the comment on each level.
[#] From systematics of the base level of the ΔJ=1 band in even Sb isotopes.
[@] From similar level sequence in decay of the band head with J^π=8$^-$ in the ΔJ=1 band in ^{116}Sb.
[&] Member of negative-parity ΔJ=1 band.

γ(^{118}Sb)

E$_γ$[†]	I$_γ$[†‡]	E$_i$(level)	J^π_i	E$_f$	J^π_f	Mult.[a]	δ	α[b]	Comments
37.1 1		1224.21	8$^-$	1187.13	7$^-$				E$_γ$: from adopted gammas.
161.8 3	45.2 3	1732.8	11$^+$	1571.0	10$^-$	D			Mult.: stretched d.
202.8 3	35.0 2	1426.81	9$^-$	1224.21	8$^-$				E$_γ$: doublet.
									Mult.: mult=(M1+E2) for a complex peak.
222.6 3	16.1 2	1187.13	7$^-$	964.80	7$^{(+)}$				Mult.: mult=stretched Q from A$_2$ and A$_4$ values, but this is inconsistent with J^π assignments for the 1187- or 964 level.
261.0 3	58.7 3	511.0		250	8$^-$				E$_γ$: doublet. A part of the intensity is considered as that of a transition depopulating the 1186 level from results of (α,nγ).
318.4 3	100.0 4	568.18	(7)$^-$	250	8$^-$				
326.3 3	29.8 2	1753.1	10$^-$	1426.81	9$^-$	(M1+E2)	≈0.2	≈0.0254	α(K)≈0.0220; α(L)≈0.00276; α(M)≈0.00054; α(N+..)≈0.00013
362.1 3	18.4 2	2115.2	11$^-$	1753.1	10$^-$	(M1+E2)	≈0.2	≈0.0194	α(K)≈0.0168; α(L)≈0.00210; α(M)≈0.00041
387.5 3	11.0 2	2502.7	12$^-$	2115.2	11$^-$	(M1+E2)	≈0.2	≈0.0164	α(K)≈0.0142; α(L)≈0.00176; α(M)≈0.00035

(HI,xnγ)   **1985QuZZ** **(continued)**

γ(^{118}Sb) (continued)

E$_\gamma$[†]	I$_\gamma$[†‡]	E$_i$(level)	J$^\pi_i$	E$_f$	J$^\pi_f$	Mult.[a]	Comments
396.8 *3*	37.1 *3*	964.80	7$^{(+)}$	568.18	(7)$^-$		
415.4[@] *3*		2918.1	(13$^-$)	2502.7	12$^-$		E$_\gamma$: other: 406 (1983Va14).
529.1[#c] *4*	&	1753.1	10$^-$	1224.21	8$^-$		
619.0[@] *3*	&	1187.13	7$^-$	568.18	(7)$^-$		
670.0 *3*	25.2 *4*	2402.8	12$^+$	1732.8	11$^+$	D	
675.9[@c] *3*		1187.13	7$^-$	511.0			
688.4[#c] *4*	&	2115.2	11$^-$	1426.81	9$^-$		
714.9 *3*	11.0 *4*	964.80	7$^{(+)}$	250	8$^-$	D	Mult.: stretched d.
749.6[#] *4*	&	2502.7	12$^-$	1753.1	10$^-$		
937.0 *3*	46.5 *4*	1187.13	7$^-$	250	8$^-$		
1176.6 *3*	14.5 *4*	1426.81	9$^-$	250	8$^-$	D	
1321.0 *3*	64.5 *5*	1571.0	10$^-$	250	8$^-$	Q	Mult.: stretched Q.

[†] From 1985QuZZ unless otherwise noted.

[‡] Normalized to I(318.4γ)=100.

[#] Given only in authors′ drawing. Energy value is from two cascading γ's (362.1γ, 326.3γ) from the 2115 level.

[@] Observed also in (α,nγ), but not considered as a transition depopulating this level.

[&] No intensity was given by authors.

[a] From γ(θ) (1985QuZZ).

[b] 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.

[c] Placement of transition in the level scheme is uncertain.

(HI,xnγ)   1985QuZZ

Legend

<u>Level Scheme</u>

Intensities: Relative I$_\gamma$

I$_\gamma$ < 2%×I$_\gamma^{max}$
I$_\gamma$ < 10%×I$_\gamma^{max}$
I$_\gamma$ > 10%×I$_\gamma^{max}$
γ Decay (Uncertain)