Coulomb excitation 1975An16,1966Ba45,1989Ja13

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	S. Ohya	NDS 111, 1619 (2010)	20-Jan-2009

1966Th07 (α,α') E=1.30-1.50 MeV.
1966Ba45 (d,d′) E=12 MeV, (^{16}O,^{16}O′) E=45 MeV.
1969Ga25 (^{14}N,^{14}N′) E=43.5 MeV.
1975An16 (^{12}C,^{12}C′) E=37 MeV, (α,α') E=12 MeV.
1977Ku23 (p,p′) E=2.5 MeV, (α,α') E=5.0-5.5 MeV.
1979Ho28 (p,p′) E=3.4 MeV.
1989Ja13 (p,p′) E=3.0-4.0 MeV.
The values reported by 1977Ku23 are significantly different from those reported by other authors.

^{121}Sb Levels

E(level)†	J$^\pi$‡	$T_{1/2}$	Comments
0.0	$5/2^+$	stable	
37.20 *9*	$7/2^+$		B(E2)↑≤0.018 (1966Th07)
507.80 *9*	$3/2^+$		B(E2)↑=0.0098 *12* B(E2)↑: weighted average of 0.007 *2* (1966Ba45), 0.013 *4* (1969Ga25), 0.011 *2* (1975An16), 0.010 *3* (1979Ho28), 0.0132 *41* (1989Ja13).
573.00 *10*	$1/2^+$	11.6 ps *9*	B(E2)↑=0.026 *2* B(E2)↑: weighted average of 0.027 *3* (1966Ba45), 0.020 *4* (1969Ga25), 0.028 *2* (1975An16), 0.024 *3* (1979Ho28), 0.027 *4* (1989Ja13) other: 0.012 *1* (1977Ku23). $T_{1/2}$: from B(E2) and adopted γ branching=0.9896 *12*.
947.0 *5*	$9/2^+$	20 ps *+9−5*	B(E2)↑=0.00066 *20* B(E2)↑: unweighted average of 0.0007 *2* (1975An16), 0.0007 *2* (1979Ho28), 0.0006 *2* (1989Ja13); other: 0.0180 *13* (1977Ku23). $T_{1/2}$: from B(E2) and adopted γ branching=0.105 *3*.
1024.90 *10*	$7/2^+$	0.14 ps *5*	B(E2)↑=0.072 *11* B(E2)↑: weighted average of 0.100 *16* (1966Ba45), 0.070 *5* (1975An16), 0.100 *16*(1979Ho28), 0.0180 *35* (1989Ja13); other: 0.0300 *22* (1977Ku23). $T_{1/2}$: from Doppler-shift attenuation (1975An16).
1035.52 *10*	$9/2^+$		B(E2)↑=0.0031 *4* B(E2)↑: unweighted average of 0.004 *1* (1969Ga25), 0.0029 *3* (1975An16), 0.004 *1* (1989Ja13); other: 0.0036 *4* (1977Ku23).
1144.88 *8*	$9/2^+$	0.21 ps *7*	B(E2)↑=0.063 *22* B(E2)↑: unweighted average of 0.120 *16* (1966Ba45), 0.03 *1* (1969Ga25). Others: 0.081 *5* (1975An16), 0.0224 *33* (1989Ja13). $T_{1/2}$: from Doppler-shift attenuation (1975An16).
1386.21 *10*			B(E2)↑=0.020 *5* B(E2)↑: unweighted average of 0.020 *5* (1966Ba45), 0.020 *5* (1979Ho28); Others: 0.007 *2* (1975An16), 0.0180 *17* (1977Ku23).
1412.0 *10*			B(E2)↑=0.0150 *14* B(E2)↑: from 1977Ku23.
1426.74 *8*	$(11/2)^-$		

† E(levels) are result of a least-squares fit to the E(γ′s) from 1975An16.
‡ From Adopted Levels.

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$\gamma(^{121}Sb)$

E_γ	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	E_γ	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π
(37.2)		37.20	$7/2^+$	0.0	$5/2^+$	998.4 *1*	100	1035.52	$9/2^+$	37.20	$7/2^+$
281.7[‡] *1*	25	1426.74	$(11/2)^-$	1144.88	$9/2^+$	1024.9 *1*	100	1024.90	$7/2^+$	0.0	$5/2^+$
391.3[‡] *1*	59	1426.74	$(11/2)^-$	1035.52	$9/2^+$	1107.6 *1*	41	1144.88	$9/2^+$	37.20	$7/2^+$
470.6 *1*	6	507.80	$3/2^+$	37.20	$7/2^+$	1144.8 *1*	59	1144.88	$9/2^+$	0.0	$5/2^+$
507.8 *1*	94	507.80	$3/2^+$	0.0	$5/2^+$	1386.2 *1*	100	1386.21		0.0	$5/2^+$
573.0 *1*	100	573.00	$1/2^+$	0.0	$5/2^+$	1412 *1*	100	1412.0		0.0	$5/2^+$
909.8[‡] *5*	92	947.0	$9/2^+$	37.20	$7/2^+$	1426.8[‡#] *1*	16	1426.74	$(11/2)^-$	0.0	$5/2^+$
947.0[‡]	8	947.0	$9/2^+$	0.0	$5/2^+$						

[†] Photon branching from each level from 1975An16, except where noted otherwise.
[‡] From (n,n′γ) (1971Ba47). The 1426γ was not reported in other ^{121}Sb γ ray studies.
[#] Placement of transition in the level scheme is uncertain.

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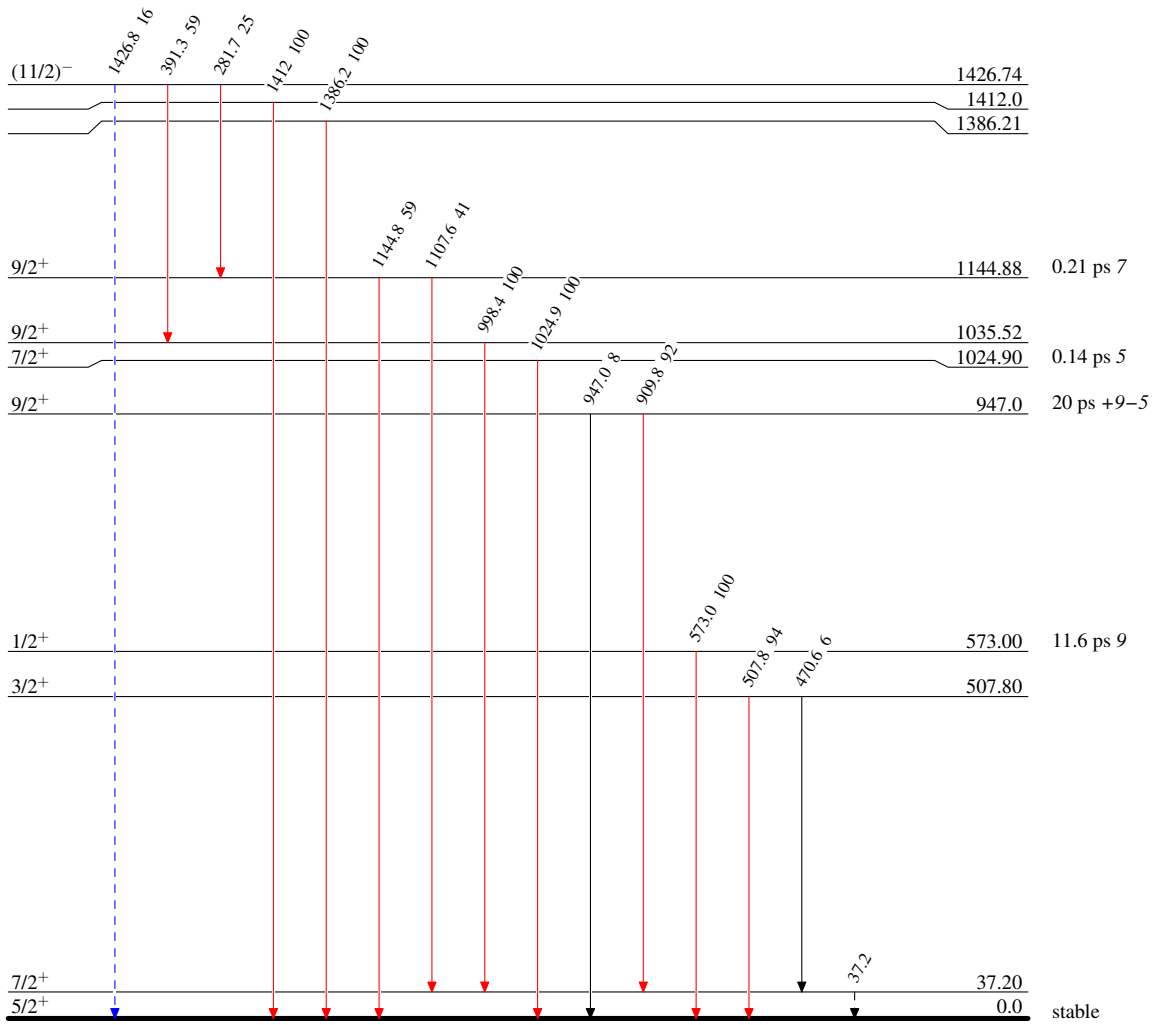
Level Scheme

Intensities: Relative I_γ

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$
γ Decay (Uncertain)



$^{121}_{51}Sb_{70}$