

Coulomb excitation

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	ENSDF	1-Mar-2009

$^{117}\text{Sn}(^{14}\text{N}, ^{14}\text{N}'\gamma)$: E=42 MeV, DSA (1974Er05); E=18.5 MeV (1961An07).

$^{117}\text{Sn}(\alpha, \alpha'\gamma)$: E=3.5, 10-11 MeV, $\gamma(\theta)$ (1972St16); E=6-9 MeV (1965Ro09); E=9.5-10 MeV, $\gamma\gamma(\theta)$ (1969Ro03).

$^{117}\text{Sn}(^{16}\text{O}, ^{16}\text{O}\gamma)$: E=45 MeV, DSA (1972St16).

$^{117}\text{Sn}(p, p'\gamma)$: E=2 MeV (1972St16).

$^{117}\text{Sn}(^{20}\text{Ne}, ^{20}\text{Ne}'\gamma)$: E=26.5 MeV (1961An07).

Others: 1966Gu10, 1959A104, 1957A143.

 ^{117}Sn Levels

E(level) [†]	J ^π [‡]	T _{1/2}	Comments
0	1/2 ⁺		
158	3/2 ⁺		B(E2) [†] =0.00062 7 (1972St16); B(E2) [†] <0.00074 (1961An07)
1005	3/2 ⁺	1.1 ps 3	B(E2) [†] =0.073 3 (1972St16) T _{1/2} : =1.2 ps 4 (1972St16)\$ 1.0 ps 3 (1974Er05).
1020	5/2 ⁺	0.49 ps 10	B(E2) [†] =0.062 3 (1972St16) T _{1/2} : 0.55 ps 14 (1974Er05), 0.42 ps 14 (1972St16).
1180	5/2 ⁺		B(E2) [†] =0.0068 6 (1972St16)
1446	5/2 ⁺	0.35 ps 10	B(E2) [†] =0.0360 20 (1972St16) T _{1/2} : from 1972St16.
1497?			B(E2) [†] <0.0004
1578?			B(E2) [†] <0.0010

[†] Rounded values from Adopted Levels.

[‡] From Adopted Levels.

 $\gamma(^{117}\text{Sn})$

E _γ	I _γ [†]	E _i (level)	J _i ^π	E _f	J _f ^π	Mult.	δ	Comments
158.7		158	3/2 ⁺	0	1/2 ⁺			
846.2 11	16.8 3	1005	3/2 ⁺	158	3/2 ⁺	M1+E2	+0.13 2	B(M1)(W.u.)=0.0055 15; B(E2)(W.u.)=0.10 4 δ: +0.14 2 (1972St16), +0.117 24 (1969Ro03).
861.4 6	81.3 10	1020	5/2 ⁺	158	3/2 ⁺			δ: -0.145 15 (1972St16), -0.169 20 (1969Ro03).
1004.3 8	83.2 3	1005	3/2 ⁺	0	1/2 ⁺	M1+E2	-24 +6-10	B(M1)(W.u.)=2.8×10 ⁻⁵ 17; B(E2)(W.u.)=12 4
1019.1 12	18.7 10	1020	5/2 ⁺	0	1/2 ⁺			
1021	>97	1180	5/2 ⁺	158	3/2 ⁺			δ: +0.58 14 (1972St16), +0.6 +15-1 (1969Ro03).
1180	<3	1180	5/2 ⁺	0	1/2 ⁺			
1288	42.0 15	1446	5/2 ⁺	158	3/2 ⁺			δ: -0.40 19 (1972St16), -0.187 31 (1969Ro03).
1447	58.0 15	1446	5/2 ⁺	0	1/2 ⁺			

[†] % photon branching from each level.

Coulomb excitation**Level Scheme**Intensities: Relative I_γ

Legend

- $I_\gamma < 2\% \times I_\gamma^{\text{max}}$
- $I_\gamma < 10\% \times I_\gamma^{\text{max}}$
- $I_\gamma > 10\% \times I_\gamma^{\text{max}}$

