

Coulomb excitation 1981Jo03

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

1981Jo03 (¹⁶O,¹⁶Oγ) E=48 MeV; γ, γγ coin, γp coin.
 1970St20 (α,α'γ) E=10 MeV, (¹⁶O,¹⁶Oγ) E=45.5 MeV; γ, γγ coin.
 1975Gr30 (α,α'γ) E=10.0,10.5,10.6 MeV, (¹⁶O,¹⁶Oγ) E=42,46 MeV.
 1980Ha19 (³⁵Cl,³⁵Cl'γ) E=108 MeV.
 1981Ba05 (¹⁶O,¹⁶Oγ) E=48 MeV,Ge(Li), Si(Li), γγ-coin; E2 and E0 strength from 0⁺ states.
 1989Sp03 (¹²C,¹²C'γ) E=37,38 MeV.
 Others: 1957Al43, 1961An07, 1964Al26, 1965Ro09, 1968St14.

¹¹⁸Sn Levels

E(level) [†]	J ^π [†]	T _{1/2}	Comments
0.0	0 ⁺		
1229.666 16	2 ⁺	0.485 ps 19	Q=-0.05 14 (1975Gr30) B(E2)↑=0.209 9. Weighted average of 0.216 5 (1981Jo03) and 0.199 6 (1975Gr30) 0.204 4 (1989Sp03). Other: Q=-0.23 16 (1970St20). g(2 ⁺)=+0.02 10. g-factor is based on dynamic magnetic field technique for fast ion in polarized thin iron foil (1980Ha19). T _{1/2} : from B(E2).
1758.31 3	0 ⁺	21 ps 3	T _{1/2} : from B(E2) by assuming constructive interference (1981Ba05).
2042.882 19	2 ⁺	2.9 ps 4	T _{1/2} : from B(E2), with 40% ambiguity due to unknown sign of interference term (1981Jo03).
2056.91 4	0 ⁺	<200 ps	T _{1/2} : from Adopted Levels.
2280.342 21	4 ⁺	0.76 ps 13	T _{1/2} : from B(E2)(2 ⁺ to 4 ⁺), with 15% ambiguity due to unknown sign of interference term (1981Jo03).
2324.846 22	3 ⁻	2.1 ps 2	T _{1/2} : from B(E3) with E _γ =2324.9 keV and Branching given in the Adopted Levels. B(E3)↑=0.118 10. From weighted av of 0.097 14 (1981Jo03), and 0.122 6 (1989Sp03).
2403.22 3	2 ⁺		
2496.88 5	0 ⁺		

[†] From Adopted Levels.

γ(¹¹⁸Sn)

E(β),M(α) From adopted gammas.

E _γ [†]	E _i (level)	J _i ^π	E _f	J _f ^π	Comments
237	2280.342	4 ⁺	2042.882	2 ⁺	B(E2)=0.062 17 (2280 level to 2043 level) (1981Jo03).
528.2	1758.31	0 ⁺	1229.666	2 ⁺	B(E2)=0.064 10 (1758 level to 1229 level) (1981Ba05).
813.5	2042.882	2 ⁺	1229.666	2 ⁺	
826.9	2056.91	0 ⁺	1229.666	2 ⁺	
1050.7	2280.342	4 ⁺	1229.666	2 ⁺	B(E2)=0.058 10 (2280 level to 1229 level) (1981Jo03).
1095.19 2	2324.846	3 ⁻	1229.666	2 ⁺	E _γ : from adopted gammas. 1981Jo03 proposed the 1098.1γ as a deexciting transition of the 3 ⁻ level, but this transition deexcites the 2 ⁺ 2328-keV level based on results of ¹¹⁸ Sn(n,n'γ).
1173.59 5	2403.22	2 ⁺	1229.666	2 ⁺	
1229.6 5	1229.666	2 ⁺	0.0	0 ⁺	B(E2)=0.0432 10 (1229 level to g.s.) (1981Jo03).
1267.0	2496.88	0 ⁺	1229.666	2 ⁺	

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Coulomb excitation [1981Jo03](#) (continued) $\gamma(^{118}\text{Sn})$ (continued)

<u>E_γ^\dagger</u>	<u>$E_i(\text{level})$</u>	<u>J_i^π</u>	<u>E_f</u>	<u>J_f^π</u>	<u>Mult.</u>	<u>Comments</u>
1757.8	1758.31	0 ⁺	0.0	0 ⁺	E0	
2043.1	2042.882	2 ⁺	0.0	0 ⁺		B(E2)= 2.7×10^{-4} 4 (2043 level to g.s.) (1981Jo03).
2056.5	2056.91	0 ⁺	0.0	0 ⁺	E0	

[†] From authors drawings ([1981Jo03](#)) unless otherwise noted.

Coulomb excitation 1981Jo03Level Scheme