

$^{118}\text{Sn}(\alpha,\alpha'),(\text{d},\text{d}'),(^3\text{He},^3\text{He}') \quad \mathbf{1961Co07,1966Ki04,1970Br07}$

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

(α,α') [1970Br07](#) $E(\alpha)=44$ MeV, FWHM=350 keV, semi
[1968Ku20](#) $E(\alpha)=34.4$ MeV, semi
 others: [1966Ba11](#), [1973Bi12](#)
 (d,d') [1966Ki04,1961Co07](#) $E(\text{d})=15$ MeV, wedge magnetic spectrograph,
 $\sigma(\text{d},\theta)$, FWHM=40-50 keV, enriched target
 $(^3\text{He},^3\text{He}')$ [1981Ya02](#) $E(^3\text{He})=110-140$ MeV, measured $\sigma(\theta,E)$,
 deduced E3 resonance

 ^{118}Sn Levels

E(level) $\dagger\dagger$	J^π &	L^a	Comments
0.0	0^+		
1220 20	2^+	2	Deformation parameter=0.105 10 from (α,α') (1968Ku20).
1740 20			
1990 20			E(level): other: 2060 (1961Co07).
2330 20	3^-	3	Deformation parameter=0.120 10 from (α,α') (1968Ku20). E(level): others: 2310 (1961Co07), 2320 (1968Ku20), 2300 (1970Br07).
2490 20			E(level): other: 2470 (1961Co07).
2740 20	4^+	4	E(level): others: 2710 (1961Co07), 2720 (1968Ku20).
2960 20	4^+	4	E(level): others: 2920 (1961Co07), 2970 (1968Ku20). Deformation parameter(2720+2970)=0.073 20 (1968Ku20).
3060 20			
3190 20			E(level): 3200 (1970Br07).
3290 20			
3530 20			
3650 20			
3720 20			
3840 20			E(level): 3800 (1970Br07).
4040 20			
4190 20			
4540 20			
4800 [#] 80	3^-	3	
5100 [#] 80	$+$		
5400 [#] 80	3^-	3	
6.9×10^3 @ 4		3	
24.3×10^3 @ 15		(3)	

\dagger E(level)<3100 are from [1966Ki04](#); higher levels are from [1961Co07](#) unless otherwise noted; uncertainties are assigned by evaluator.

$\dagger\dagger$ From [1961Co07](#) (d,d') unless otherwise noted; uncertainties are assigned by evaluator.

[#] From (α,α') ([1970Br07](#)).

@ From $(^3\text{He},^3\text{He}')$.

& Determined from austern-Blair analysis in (α,α') ([1970Br07](#)).

^a From (α,α') .