^{116}Sn(d,t), (pol d,t) 1977Be45,1981Pe02

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	NDS 113, 2391 (2012)	1-Sep-2012

E=23 MeV (1977Be45).
E=40 MeV, polarized deuteron (1981Pe02), analyzing power.
Others: E(d)=15 MeV (1967Sc12), E(d)=50 MeV (1977Va15).
1977Va15 determinations of L and C^2S up to 2.59 MeV are the same as those of 1977Be45.
Q(d,t)=−3309 *20* (1964Co11), −3305.0 *25* (1975Be09).

^{115}Sn Levels

ΔE: Uncertainty=±5 keV, except for weak excitations (±10 keV) and E(levels)>2.6 MeV (±20 keV) (1977Be45).

E(level)‡	J^π c	L#	C^2S&	Comments
0.0	1/2+	0	0.7	J^π: from Adopted Levels.
500	3/2−	2@	0.9	
614	7/2+	4	5.9	
714	11/2−	5	1.6	
987	5/2+	2@	4.0	
1282	3/2+	2@	0.1	
1420	5/2+	2	0.074	
1639	3/2+	2@	0.13	Broad peak, possible doublet.
1734	5/2+	2	0.15	
1805b		6	(0.14)	
1856	7/2+	4	0.33	
1944		5	(0.077)	
1964	1/2+	0	0.14	
1995b		(2)		
2061	5/2+	2	0.08	Broad peak, possible doublet.
2081				E(level): may correspond with 2084-keV (α,nγ) excitation.
2155		(4)		
2206	5/2+	2	0.13	Broad peak, possible doublet. E(level): may correspond with 2170-keV L=(2) (d,p) excitation.
2265a		1	0.032	
2302		(3)	(0.1)	
2322a		2	(0.018)	
2355	5/2+	2	0.05	E(level): may correspond with 2365-keV state; see ^{115}Sb decay, (α,nγ).
2371		4	0.35	
2520	5/2+	2	(0.014)	E(level): may correspond with L=(2) excitations at 2510 (p,d) and and 2490-keV L=(2) (d,p) excitations.
2553a		(2)		
2593	1/2−	1	0.16	
2805	5/2+	2	0.05	
2855		2	(0.007)	
2950	5/2+	2	0.03	Broad peak, possible doublet.
2980		2	(0.015)	
3000		2	0.026	
3025a		2	0.015	
3060		4	0.032	
3085				
3130a		2	0.018	
3190	5/2+	2	0.013	Complex peak (1981Pe02).
3215a		(2)		

Continued on next page (footnotes at end of table)

^{116}Sn(d,t), (pol d,t) 1977Be45,1981Pe02 (continued)

^{115}Sn Levels (continued)

E(level)‡	Jπ[c]	L[#]	C^{2}S[&]	Comments
3265[a]		(2)		Complex peak.
3300		(3)		
3345[a]		2	0.015	
3380[a]				
3405[b]		5		E(level): broad peak.
3420[a]		2	0.019	
3470[a]		2		
3500		4	0.055	
3550		2		
3590[b]		4,(5)		
3645		2		
3665	9/2$^+$	4	0.052	
3690				
3710		4	0.037	

† Uncertainty=±5 keV, except for weak excitations (±10 keV) and E(levels)>2.6 MeV (±20 keV) (1977Be45).
‡ Other high-lying states excited from 3750 to 3970 keV.
# Deduced from angular distributions (θ=10-35) compared with DWBA calc.
@ L=2 transition assignments (d3/2 or d5/2) are inferred from (d,p)/(d,t) cross-section ratio; (d,p) data from 1967Sc12.
& C^{2}S from 1977Be45.
a Not seen by 1981Pe02.
b Seen only by 1981Pe02.
c From analyzing power in (pol d,t) (1981Pe02).