^{120}Sn(d,p) 1975Be30

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

1975Be30: E(d)=17 MeV, enriched target (98.39%), magnetic spectrograph, FWHM=10 keV, θ=8°−60°, E(levels)≥899 are approximately 9 keV lower than those from other measurements.
1967Sc12: E(d)=15 MeV, magnetic spectrograph, FWHM=40 keV, θ=8°−50° deduced E(levels), L, S; level data are presented in comments. Authors also studied ^{122}Sn(d,t).
Others: 1959Pe31, 1961Co33, 1962Ne15.

^{121}Sn Levels

E(level)[†]	L	S[‡]	Comments
0.0[#]	(2)	0.439	L=2, S=0.43 (1967Sc12).
6.31? *6*	(5)	0.488	E(level): from Adopted Levels. E=50, L=5, S=0.21 (1967Sc12).
58 *1*	0	0.302	
899[#] *3*	(2)	0.014	
916 *3*	(4)	0.033	E=930, L=4, S=0.19 (1967Sc12).
941 *3*	3	0.024	
1022 *3*		@	
1058 *3*		@	
1089[&] *3*			
1113 *3*	2	0.075	E=1120, L=2, S=0.065 (1967Sc12).
1147 *3*		@	
1328 *4*		@	
1355 *4*	(4)	0.004	
1395 *4*	2	0.023	E=1400, L=2, S=0.029 (1967Sc12).
1441 *4*		*c*	
1489 *4*		*c*	
1528 *4*		*c*	
1562 *4*		@	
1700 *5*	2	0.006	E=1710, L=2, S=0.004 (1967Sc12).
1857 *5*	1	0.007	
1901 *5*	1	0.006	E=1919, L=(1), S=0.007 (1967Sc12).
1950 *5*	(1)	0.002	
2066 *6*	(3)[*b*]	@	E=2060, L=(3), S=0.005 (1967Sc12).
2156 *6*		*c*	
2181 *6*		*c*	
2233 *6*		*c*	
2247 *6*	(2)[*b*]	*c*	E=2250, L=(2), S=0.027 (1967Sc12).
2289 *6*		*c*	
2361 *6*		*c*	
2424 *7*		*d*	
2451 *7*	(3)[*b*]	*d*	E=2450, L=(3), S=0.021 (1967Sc12).
2578 *7*	3	0.045	E=2590, L=(3), S=0.035 (1967Sc12).
2660 *7*	3	0.079	
2682 *7*	3	0.092	E=2690, L=(3), S=0.185 (1967Sc12).
2739 *7*		*c*	
2768 *7*		*c*	
2799 *7*		*c*	
2906 *8*	(3)	0.023	
2921[&] *8*			

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^{120}Sn(d,p) 1975Be30 (continued)

^{121}Sn Levels (continued)

E(level)†	L	S‡	Comments
2946& *8*			
2990& *8*			
3019 *8*	(3,1)	0.41,0.53	
3060& *8*			
3087 *8*		*c*	
3098 *8*	(1)[b]	*c*	E=3100, L=(1), S=0.13 (1967Sc12).
3136 *8*		*c*	
3159 *8*		*c*	
3176 *8*		*c*	
3214 *9*		*c*	
3312[a] *9*	(1)	0.031	
3341& *9*			
3369 *9*		*e*	E=3370, L=(1), S=0.077 (1967Sc12).
3390& *9*			
3425 *9*	(0)	0.014	
3450 *9*			
3490 *9*	(3,4)	0.024,0.110	
3506 *9*	(1)	0.086	E=3510, L=(1), S=0.15 (1967Sc12).
3570 *10*		*e*	
3611 *10*	(3)	0.013	
3667 *10*	1	0.059	E=3690, L=(1), S=0.14 (1967Sc12).
3721 *10*	1	0.059	
3757 *10*	1	0.023	
3789# *10*	1	0.004	
3805 *10*	1	0.011	
3848 *10*	1	0.024	E=3850, L=(1), S=0.037 (1967Sc12).
3866 *10*	1	0.027	
3926 *10*	1	0.044	E=3930, L=(1), S=0.095 (1967Sc12).
3951 *10*	1	0.022	
3975 *10*	1	0.025	
4011& *11*			
4037& *11*			
4064& *11*			
4085& *11*			
4102& *11*			
4135& *11*			
4162 *11*	1	0.044	E=4160, L=(1), S=0.073 (1967Sc12).
4190 *11*		*e*	
4255# *11*	(1)[b]	*e*	E=4250, L=(1), S=0.053 (1967Sc12).
4268 *11*		*e*	
4321& *11*			
4392 *11*		*e*	
4444& *12*			
4459& *12*			
4489& *12*			
4530& *12*			
4646& *12*			
4680 *12*	(1)	0.029	
4736 *12*	(3,4)	0.018,0.070	
4773& *12*			

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^{120}Sn(d,p) 1975Be30 (continued)

^{121}Sn Levels (continued)

E(level)[†]	L	S[‡]
4826 *13*	(3,4)	0.017,0.070
4905[&] *13*		

† From 1975Be30, unless noted otherwise; A comparison of the energies with adopted values indicates that the (d,p) values of 1975Be30 are about 9 keV low. When the (d,p) energies are used in Adopted Levels, the values shown here are increased by 9 keV.

‡ From 1975Be30, unless noted otherwise; DWBA calculation assuming $3s_{1/2}$, $3p_{3/2}$, $2d_{3/2}$ (g.s. only) and $2d_{5/2}$, $2f_{7/2}$, $1g_{7/2}$, $1h_{11/2}$ single particle orbit for L=0, 1, 2, 3, 4, 5 transfer, respectively.

This level and the next one are members of an unresolved doublet.

@ Statistics are poor to fit DWBA curves.

& This level was not completely resolved from the neighboring level.

a Unresolved doublet.

b From 1967Sc12.

c $\sigma(\theta)$ was determined for $\theta \geq 20°$.

d $\sigma(\theta)$ was determined for $\theta \leq 20°$, $\geq 30°$.

e $\sigma(\theta)$ does not show a stripping pattern.