^{120}Sn(^{3}He,α) 1980Ge01

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	D. M. Symochko, E. Browne, J. K. Tuli	NDS 110,2945 (2009)	1-Dec-2008

E=39 MeV; mag spect, FWHM=38 keV; σ(Eα,θ), θ=4°, 12°; 98.4% enriched target (380μg/cm^2); observed the fragmentation of the 1g$_{9/2}$ hole-state orbital between 3.8 and 6.5 MeV.
See also ^{120}Sn(p,d),(^{3}He,α) IAS for levels above 14000 keV.

^{119}Sn Levels

E(level)	$T_{1/2}$	L[#]	C^2S[@]	Comments
0		0		
24 *8*		2	1.8	
89 *8*	293 d *1*	5	3.5	$T_{1/2}$: From Adopted Levels.
788 *8*		4	6.0	
920[†] *8*		(2)	0.16[c]	
1090 *8*		2	2.6	
1240[‡] *8*				
1303[‡] *8*				
1355 *8*		2	1.32	
≈1385		>2	*e*	
1635[‡] *8*				
1725[‡] *8*				
1810[‡] *8*				
1935[‡] *8*				
2075[‡] *8*				
2155[‡] *8*				
2350[‡] *8*				
2535[‡] *8*				
2635[‡] *8*				
2760[‡] *8*				
2820[‡] *8*				
2870[‡] *8*				
3010[‡] *8*				
3120[‡] *8*				
3200[‡] *8*				
3300[‡] *8*				
3355[‡] *8*				
3405[‡] *8*				
3470[‡] *8*				
3590[‡] *8*				
3735[‡] *8*				
3890 *8*		4	0.07	
3980 *8*		4	0.08	
4050 *8*		4	0.06	
4210 *8*		4	0.11	
4350[‡] *8*				
4470 *8*		4	0.03	
4660 *8*			&	
4800 *8*			&	

Continued on next page (footnotes at end of table)

^{120}Sn(^{3}He,α) 1980Ge01 (continued)

^{119}Sn Levels (continued)

E(level)	L[#]	C^{2}S[@]	E(level)	L[#]	C^{2}S[@]	E(level)	L[#]	C^{2}S[@]	E(level)
4900 *8*		*a*	5200 *8*	4	0.10	5710 *8*		*b*	6120 *15*
4950 *8*		*a*	5330 *8*	4	0.33	5820 *8*	4	0.2	6300 *15*
5050 *8*	4	0.18	5480 *8*	4	0.18	5960[†] *8*		*c*	6360 *15*
5120 *8*	4	0.15	5600 *8*		*b*	6020[†] *15*		*c*	6460 *15*

[†] Doublet, from Adopted Levels.
[‡] From figure of the energy spectrum in 1980Ge01.
[#] From DWBA analysis.
[@] C^{2}S from DWBA analysis. Authors assumed $d_{5/2}$ for L=2, except $d_{3/2}$ for 24 level, $g_{9/2}$ for L=4, except $g_{7/2}$ for 78-keV level, and $h_{11/2}$ for L=5.
[&] 0.10 if L=4 for sum of transitions to 4660- and 4800-keV levels.
[a] 0.14 if L=4 for sum of transitions to 4900- and 4950-keV levels.
[b] 0.55 if L=4 for sum of transitions to 5600- and 5710-keV levels.
[c] 0.27 if $1G_{9/2}$ and L=4+(1) for sum of transitions to 5960- and 6020-keV levels.
[d] ≈0.3 if $1G_{9/2}$ and L=4+1 for sum of transitions to 6120-, 6300-, 6360-, and 6460-keV levels.
[e] not fully resolved from known 1355 level. Strong population in (^{3}He,α) suggests L>2.