

$^{122}\text{Sn}(p,t)$ 1999Gu21

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	K. Kitao, Y. Tendow and A. Hashizume		NDS 96,241 (2002)	1-Dec-2001

1999Gu21: E=26 MeV; Q3D magnetic spectrograph, FWHM=8 keV mainly due to the target thickness; $\sigma(\theta)$ $\theta=5^\circ-75^\circ$ (5° step), $\theta=15^\circ-25^\circ$ (2.5° step); enriched target (96.0% ^{122}Sn); DWBA, shell model calculation with seniority scheme.

1970F108: E=20 MeV; magnetic spectrograph FWHM=25 keV $\sigma(\theta)$ $\theta=10^\circ-50^\circ$.

Others: [1977Cr04](#), [1981Cr01](#), [1985Mi06](#).

 ^{120}Sn Levels

E(level) [†]	J ^π [‡]	L	S [#]	Comments
0.0	0 ⁺	0	1	
1171 3	2 ⁺	2	0.60	
1874 3	0 ⁺	0	0.025	
2099 3	2 ⁺	2	0.002	
2161 3	0 ⁺	0	0.013	
2195 3	4 ⁺	4	0.032	
2282 3	5 ⁻	5	0.45	E(level): other: 2300 15 (1970F108).
2356 3	2 ⁺	2	0.034	E(level): other: 2365 15 (1970F108).
2400 3	3 ⁻	3	0.20	E(level): other: 2420 (1970F108).
2421 3	2 ⁺	2	0.060	E(level): other: 2440 (1970F108).
2465 3	4 ⁺	4	0.082	
2480 3	7 ⁻	7	0.59	
2587 3	0 ⁺	0	0.025	Other: 2620 (1970F108).
2643 3	4 ⁺	4	0.008	
2691 3	(2 ⁺ &6 ⁺)	2+6		E(level): unresolved peak. DWBA shows the doublet with components having L=2 (10%) and L=6 (90%) respectively.
2728 3	2 ⁺	2	0.026	
2751 3	4 ⁺	4	0.002	
2801 3	5 ⁻	5	0.048	
2840 3	(1 ⁻ &8 ⁺)	1+8		E(level): unresolved peak. DWBA shows the doublet with components having L=1 (3%) and L=8 (97%) respectively.
2931 3	(2 ⁺ ,3 ⁻)	2,3	0.19	
2976 3	(4 ⁺ ,5 ⁻)	4,5	0.0018,0.0 12	
3009 3	2 ⁺	2	0.0005	
3059 3	4 ⁺	4	0.17	E(level): other: 3050 (1970F108).
3100 3	(1 ⁻)	(1)	0.007	
3159 3	2 ⁺	2	0.012	
3179 3	4 ⁺	4	0.31	E(level): other: 3170 (1970F108).
3208 3	0 ⁺	0	0.008	
3252 3	5 ⁻	5	0.023	
3280 3	(1 ⁻)	(1)	0.016	
3341 3	(3 ⁻ &4 ⁺)	3+4		E(level): unresolved peak. DWBA shows the doublet with components having L=3 (40%) and L=4 (60%) respectively.
3388 3	(2 ⁺ ,3 ⁻)	2,3	0.0078,0.007 9	
3442 3	(4 ⁺ ,5 ⁻)	4,5	0.007,0.02 0	
3455 3	(3 ⁻ &7 ⁻)	3+7		E(level): unresolved peak. DWBA shows the doublet with components having L=3 (10%) and L=7 (90%) respectively.
3470 3	3 ⁻	3	0.027	

[†] A broad peak was observed at 8.53 MeV 8 (FWHM=2.53 10) ([1981Cr01](#),[1977Cr04](#)).

[‡] From L values from DWBA.

[#] Relative to the spectroscopic factor for transfer to g.s. ([1999Gu21](#)).