^{118}Sn(p,p′),(p,p′γ) 1970Be20,1968Al10,1981Jo03

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

(p,p′): 1970Be20 E=24.5 MeV, enriched target, magnetic spectrograph
1968Al10 E=8-12 MeV, enriched target, magnetic spectrograph
others: 1965Al11, 1967Ma23, 1968Ma34
(p,p′γ): 1981Jo03, 1981Ba05: E=6-8 MeV, γ, γp coin

^{118}Sn Levels

E(level)[†]	J$^{\pi}$	L[a]	Comments
0		0	
1223 *10*		2	β_2=0.134.
1740[@] *10*			
2040 *10*			
2056.5[&]			
2275 *10*		4	β_4=0.046.
2318 *10*		3+(5)	β_3=0.174 if (L=3).
2327.7[&]			
2399 *10*		2	
2487 *10*		4	β_4=0.047.
2496.6[&]	0$^+$		
2573 *10*		7	
2676 *10*		2	
2733 *10*		4	β_4=0.064.
2769[@] *10*			
2886 *10*		(8)	
2907 *10*		2	E(level): other: 2892 (1968Al10).
2934 *10*		(2)	
2979 *10*		4	β_4=0.049. E(level): other: 2959 (1965Al11,1968Al10).
3063 *10*		2	E(level): other: 3048 (1968Al10).
3103 *10*			
3138 *10*			
3231 *10*		(8)	E(level): other: 3214 (1968Al10).
3241[@]			
3277 *10*		(7)	
3310 *10*			
3352 *10*		(3)	E(level): other: 3332 (1968Al10).
3383 *10*			
3423[‡] *10*			
3461 *10*		(4)	
3541 *10*		(6,7)	E(level): other: 3520 (1968Al10).
3555[@] *10*			
3595 *10*		2	β_2=0.044. E(level): others: 3575 (1968Al10), 3569 (1965Al11).
3667 *10*		4	β_4=0.032.
3705 *10*		(6)	
3720[@] *10*			
3746[@] *10*			
3773[#] *10*		4	
3801 *10*			
3847 *10*		2	

Continued on next page (footnotes at end of table)

^{118}Sn(p,p′),(p,p′γ) 1970Be20,1968Al10,1981Jo03 (continued)

^{118}Sn Levels (continued)

E(level)[†]	Comments
3883 *10*	
3895[@] *10*	
3950 *10*	E(level): other: 3932 (1968Al10).
3977[@] *10*	
4008[@] *10*	
4059 *10*	E(level): other: 4041 (1968Al10).
4109[@] *10*	

[†] From (p,p′) (1970Be20) but values are added 10 keV based on comparing with γ-connecting levels in the Adopted Levels, unless otherwise noted. Uncertainty of 10 keV are assigned by evaluator.
[‡] Unweighted average of 1965Al11 and 1968Al10.
[#] Unweighted average of 1965Al11 and 1970Be20.
[@] From 1968Al10.
[&] From (p,p′γ).
[a] From DWBA analysis (1970Be20).

γ(^{118}Sn)

E_γ[†]	E_i(level)	J_i^π	E_f	Comments
528.2	1740		1223	
826.9	2056.5		1223	
1050.7	2275		1223	
1098.1	2327.7		1223	E_γ: assigned by authors as a transition from the 3^- level, but the transition seems a doublet and the component from the 3^- level to be weak based on (p,p′γ) spectra from neighboring even tin isotopes.
1229.6	1223		0	
1267.0	2496.6	0^+	1223	
1508	2733		1223	

[†] From authors′ drawing (1981Jo03).

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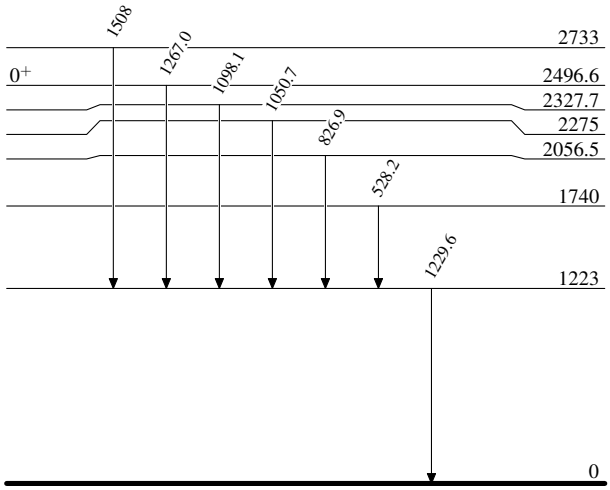
Level Scheme



$^{118}_{50}Sn_{68}$