^{116}Sn(α,p) 1979Sm04

History

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

1979Sm04: E=35.6 MeV; magnetic spectrograph, FWHM=50 keV, enriched target (≈250 μg/cm^2 thick); measured p(θ); cluster DWBA analysis.

^{119}Sb Levels

E(level)	J$^\pi$ †	E(level)	E(level)	J$^\pi$ †	L
0.0	5/2$^+$	1742 *8*	2624 *8*		
266 *8*	7/2$^+$	1829 *8*	2749 *8*		
642 *8*	1/2$^+$	1972 *8*	3778 *15*		
700 *8*	3/2$^+$	2121 *8*	3830 *15*		
1217 *8*	9/2$^+$	2223 *8*	4020 *15*	(23/2$^+$,25/2$^+$)	12,14#
1366 *8*	11/2$^-$	2298 *8*	4120 *15*	(19/2$^+$,21/2$^+$)	10@
1450 *8*		2384 *8*	4210 *15*	(19/2$^+$,21/2$^+$)	10@
1660 *8*	(7/2$^+$)‡	2508 *8*			

† From 1979Sm04. Authors state that σ(θ) for the states below 3000 keV have shapes similar to the angular distributions of the known particle states with 1/2$^+$,3/2$^+$,5/2$^+$, 7/2$^+$ and 11/2$^-$.

‡ J ≠ 1/2 (1979Sm04). Authors state that σ(θ) is fit by an empirical shape obtained from the known 7/2$^+$ at 266 keV.

L=11 gives equally good fit (1979Sm04). But authors rule out the odd-L transitions on the basis of the small spectroscopic factors calculated for the likely Configuration=$(\pi\ 1h_{11/2})^3$.

@ L=9 gives equally good fit (1979Sm04). See comment for 4020-keV level.