^{110}Pd(pol t,α) E=17 MeV 1981Fl02

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	S. Kumar(a), J. Chen(b) and F. G. Kondev	NDS 137, 1 (2016)	31-May-2016

Target $J^\pi(^{110}Pd)=0^+$.

1981Fl02: E(^{3}H)=17 MeV, polarized beam with 0.75 polarization, Los Alamos Tandem Van de Graaff facility. Target: 152 μg/cm^2 of ^{110}Pd (isotopic purity>95%). Detectors: quadrupole-three-dipole (Q3D) spectrometer (FWHM=20 keV), 1-m helical focal plane detector (Proportional chamber and a scintillator detector). Measured: $\sigma(\theta)$ (Angular distributions from 10° to 45°), analyzing powers. Deduced: levels, J^π, L, spectroscopic factors.

^{109}Rh Levels

E(level)[†]	J$^\pi$[‡]	L[#]	C^{2}S[@]	E(level)[†]	J$^\pi$[‡]	L[#]	C^{2}S[@]
0	7/2$^+$	4	0.05	1207 *7*	(3/2$^-$)	(1)	(0.10)
206 *3*	9/2$^+$	4	3.7	1272 *10*	(5/2$^-$)	(3)	(0.33)
374 *3*	1/2$^-$	1	1.4	1331 *10*	(5/2$^+$)	(2)	(0.11)
424 *3*	(5/2$^+$)	(2)	(0.21)	1430 *10*			
566 *3*	(3/2$^-$)	(1)	(0.85)	1459 *10*	(9/2$^+$)	(4)	(0.40)
737 *5*	3/2$^-$	1	1.7	1513 *10*	(1/2$^-$)	(1)	(0.18)
852 *5*	5/2$^-$	3	2.3	1627 *10*	(5/2$^+$,3/2$^-$)	(2,1)	0.44,0.83
923 *5*	(5/2$^-$)	(3)	(0.72)	1746 *10*			
1006 *5*				1914 *10*			
1091 *5*	9/2$^+$	4	1.90	2019 *10*	(1/2$^-$)	(1)	(0.58)
1155 *5*	(3/2$^-$)	(1)	(0.19)	2261 *10*			

[†] From 1981Fl02.
[‡] From 1981Fl02 based on L+1/2 or L-1/2 transfers from analyzing power fits to measured cross-sections spectroscopic factors.
[#] From comparisons of experimental cross-section data with the DWBA predictions (1981Fl02).
[@] From 1981Fl02, $S=(2j+1)/N\times(d\sigma/d\Omega)_{exp}/\sigma_{DWBA}$, N=23 and j is the angular momentum of transferred particle.