^{207}Pb(t,p),(pol t,p) 1971Fl06,1986Da15,1968Bj03

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	J. Chen [#] and F. G. Kondev	NDS 126, 373 (2015)	30-Sep-2013

Target ^{207}Pb J^{π}(g.s.)=1/2$^-$.

1971Fl06: E=20 MeV triton beam was produced from the Los Alamos accelerator. Data were obtained by two instruments. One was a ΔE-E counter telescope (FWHM=32 keV) and the other one is a magnetic spectrograph (FWHM=18 keV). Measured $\sigma(\theta)$. Deduced levels, J^{π}, L, spectroscopic factors from DWBA analysis. Data supersede authors' earlier data in 1969Fl01, 1970Fl06.

1986Da15: E=17 MeV polarized triton beam was produced from the tandem accelerator at the Los Alamos National Laboratory. A 0.97 mg/cm^2 enriched ^{207}Pb target was used. Reaction products were momentum analyzed with a magnetic Q3D spectrometer, FWHM≈19 keV. Measured $\sigma(\theta)$. Deduced levels, J^{π}, spectroscopic factors from DWBA analysis.

1968Bj03: E=13 MeV triton beam was produced from the Aldermaston tandem accelerator. Target was 95.12% enriched ^{207}Pb. Reaction products were momentum analyzed with a multi-angle spectrograph and detected in nuclear emulsions (FWHM=20 keV). Measured $\sigma(\theta)$. Deduced levels, J^{π}, L.

Other: 1962Er01 (E=7.5 MeV).

^{209}Pb Levels

E(level)[†]	L[‡]	E(level)[†]	L[‡]	E(level)[†]	E(level)[†]
0.0	5[#]	3708 *5*	(3)	4660 *8*	5400 *10*
779 *5*	5[#]	3743 *5*	(4)	4686 *8*	5423 *10*
1425 *5*	8[#]	3814 *5*		4715 *8*	5476 *10*
1568 *5*	3[#]	3854 *8*		4731 *8*	5513 *10*
2034 *5*	1[#]	3902 *8*		4743 *8*	5577 *10*
2153 *5*	0	3946 *8*		4754 *8*	5600 *10*
2496 *5*	3[#]	3989 *8*		4778 *8*	5637 *10*
2542 *5*	1[#]	4022 *8*	(4)	4813 *8*	5684 *10*
2591 *5*		4074 *8*		4843 *8*	5759 *10*
2738 *5*	2	4099 *8*	(3)	4877 *8*	5834 *10*
2868 *5*	2	4140 *8*		4904 *8*	5861 *10*
2903 *5*	2	4169 *8*	(6)	4931 *8*	5931 *10*
2992 *5*	2	4260 *8*		4966 *10*	5985 *10*
3028 *5*	4	4277 *8*		4997 *10*	6050 *10*
3072 *5*	6	4315 *8*		5026 *10*	6082 *10*
3100 *5*	(8)	4363 *8*	(2)	5057 *10*	6138 *10*
3206 *5*	4	4384 *8*	(6)	5083 *10*	6198 *10*
3308 *5*	6	4413 *8*		5107 *10*	6248 *10*
3384 *5*		4451 *8*	(6)	5134 *10*	6390 *10*
3432 *5*	8	4508 *8*		5161 *10*	6437 *10*
3477 *5*		4539 *8*		5211 *10*	
3559 *5*	8	4578 *8*	(4)	5241 *10*	
3659 *5*	(2)	4629 *8*	(6)	5326 *10*	

[†] Values for levels below E=4660 are from weighted average of 1971Fl06 and 1968Bj03. Others are from 1971Fl06.

[‡] From 1971Fl06, except where noted otherwise, based on DWBA fits and comparison with ^{208}Pb(t,p) states of known spin in ^{210}Pb.

[#] From 1986Da15 based on DWBA fits.