^{206}Pb(p,t) 1977La10,1983Ta05

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	C. J. Chiara and F. G. Kondev	NDS 111,141 (2010)	1-Oct-2009

1977La10: ^{206}Pb target enriched to 97% on C backing; E(p)=35 MeV; magnetic spectrometer; energy measured with emulsion plates, FWHM=15 keV; $\sigma(\theta)$ measured with proportional counter, FWHM=30 keV. DWBA calculations.

1983Ta05: 5-mg/cm^2 ^{206}Pb target enriched to >99%; E(p)=51.9 MeV; magnetic spectrometer, FWHM=90 keV; measured energy and $\sigma(\theta)$. DWBA calculations.

1981We03: 900−μg/cm^2 ^{206}Pb target enriched to 99.8%; E(p)=26.2 MeV; energy-loss spectrometer, FWHM=30 keV; measured energy and $\sigma(\theta)$. DWBA calculations.

1980KuZT:≈1−mg/cm^2 enriched ^{206}Pb target; E(p)=54.9 MeV; magnetic spectrometer, FWHM=15 keV; measured energy and $\sigma(\theta)$. DWBA calculations.

1974Or01: 14.0-mg/cm^2 ^{206}Pb target; E(p)=51.9 MeV; magnetic spectrometer, FWHM=100 keV; measured energy and $\sigma(\theta)$. DWBA calculations.

^{204}Pb Levels

E(level)[†]	J$^\pi$[‡]	L[#]	S[@&]	Comments
0	0^+	0	6.11	
899 *1*	2^+	2	5.03	
1274 *1*	4^+	4	15.0	
1351 *1*	2^+	2	0.15	
1563 *2*	4^+	4	0.37	
1582 *2*				J$^\pi$: Only one level indicated by 1977La10, but probably unresolved 0^+ and 2^+ levels (see Adopted Levels).
1663 *2*	2^+	2	1.02	
1728 *2*	0^+	0	0.69	
1816 *2*	4^+	4	5.53	
1958 *2*	2^+	2	0.37	
2103 *2*	2^+	2		
2156 *2*				
2186 *2*	9^-	9		
2257[a] *2*		5+7		J$^\pi$: Probably unresolved 5^- and 7^- levels (see Adopted Levels).
2399 *2*	(7^-)	(7)		Additional information 1.
2430 *2*				
2500[b] *30*	2^+	2[b]		
2505 *3*	5^-	5		
2620 *3*	3^-	3[b]		
2660 *3*				
2808 *3*	6^+	6		Proposed dominant configuration=$\nu[(f_{5/2})^{-1}(f_{7/2})^{-1}](\nu^{-2})_{0+}$.
2829 *3*				
2897 *3*	4^+	4		
3147 *3*	2^+	2[b]		
3226 *3*	2^+	2[b]		
3420[b] *30*	3^-	3[b]		
3450[c]	10^+	10[c]		Proposed configuration=$\nu[(i_{13/2})^{-2}](\nu^{-2})_{0+}$.
3510[c]	12^+	12[c]		Proposed configuration=$\nu[(i_{13/2})^{-2}](\nu^{-2})_{0+}$.
3810[b] *30*	2^+	2[b]		
3949 *4*	6^+	6[b]		
4100[b] *30*	7^-	7[b]		
4853[d] *10*	11^-	11		L: Deduced to be tentatively L=(11) in 1974Or01 and 1983Ta05, but there is good agreement between the L=11 DWBA calculations and the data in these two works as well as in 1980KuZT, hence a firm L assignment has been adopted. Proposed configuration=$\nu[(i_{13/2})^{-1}(h_{9/2})^{-1}](\nu^{-2})_{0+}$.

Continued on next page (footnotes at end of table)

^{206}Pb(p,t) 1977La10,1983Ta05 (continued)

^{204}Pb Levels (continued)

E(level)[†]	J$^{\pi}$[‡]	L[#]
5000[b] *30*	6^+	6[b]
5100[b] *30*	9^-	9[b]
5520[b] *30*	9^-	9[b]
5910[b] *30*	9^-	9[b]

† From 1977La10, unless otherwise noted.
‡ From 1977La10, 1980KuZT, 1974Or01 based on deduced L values.
# From 1977La10 or otherwise noted, based on $\sigma(\theta)$ comparison with DWBA calculations.
@ Relative enhancement factors from DWBA calculations in 1981We03, giving the degree of enhancement of $d\sigma/d\Omega$ beyond the shell model. Two-step processes were neglected.
& Additional information 2.
a Complex.
b From 1983Ta05.
c From 1980KuZT.
d From 1974Or01.