^{186}W(pol t,α)   1980Lo10

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	S. -c. Wu	NDS 106, 619 (2005)	1-Nov-2005

Additional information 1.

Target: 97.06% enriched ^{186}W. Projectile: tritons, E=17 MeV. Measured scattered α particles. Detector: magnetic spectrometer, FWHM=24 keV. Determined analyzing powers, nuclear structure factors, Q(t,α)=11.430 MeV *20*.

^{185}Ta Levels

E(level)	J$^{\pi}$[†]	T$_{1/2}$	S[‡]	Comments
0.0	(7/2$^+$)[#]	49.4 min *15*	0.79	T$_{1/2}$: from Adopted Levels.
				J$^{\pi}$: analogy to ^{181}Ta suggests 7/2$^+$,7/2[404] state.
163 *4*	(9/2$^+$) & (9/2$^-$)			Doublet. 9/2$^+$,7/2[402] and 9/2$^-$,9/2[514]. Spectroscopic factors are: S(9/2$^+$)≈0.04, S(9/2$^-$)≈0.16.
336 *4*	(11/2$^-$)[@]		2.1	
409 *4*	(1/2$^+$) & (3/2$^+$)[&]			Doublet. 1/2$^+$,1/2[411] and 3/2$^+$,1/2[411]. Spectroscopic factor for J$^{\pi}$=3/2$^+$ is <1.3.
527 *4*				
590 *4*	(5/2$^+$) & (7/2$^+$)[&]			Doublet. 5/2$^+$,1/2[411] and 7/2$^+$,1/2[411]. Spectroscopic factors are: S(5/2$^+$)≈0.16, S(7/2$^+$)≈0.58.
689 *4*				
748 *4*	(15/2$^-$)[@]			
811 *4*	(3/2$^+$)		0.11	Possibly 3/2$^+$,3/2[402] state or K-2 γ vibration based on g.s.
890 *4*	(7/2$^-$)[a]		0.35	
980 *4*	(9/2$^-$)[a]			
1018 *4*				
1074 *4*				
1153 *4*	(11/2$^-$)[a]		1.4	
1223 *4*				
1378 *4*	(11/2$^-$)		0.71	
1409 *4*				
1475 *4*	(5/2$^+$)[b]		0.52	
1583 *4*				
1638 *4*				
1744 *4*				
1837 *4*				

[†] J$^{\pi}$ and Nilsson orbital assignments are based on measured angular distributions, on analyzing powers, and on the comparison of calculated cross sections with experimental values.

[‡] (dσ/dΩ(exp))/(2×N) (dσ/dΩ(DWBA)) with N=23. See 1980Lo10 for a comparison with calculated (including the Coriolis interaction) values.

[#] 7/2[404] rotational band.

[@] 9/2[514] rotational band. A strong Coriolis mixing with the 7/2[523] and 11/2[505] (unobserved) Nilsson orbitals is expected.

[&] 1/2[411] rotational band.

[a] 7/2[523] rotational band. A strong Coriolis mixing with the 9/2[514] and 5/2[532] (unobserved) Nilsson orbitals is expected.

[b] 3/2[411] rotational band member.