^{48}Ti(t,^{3}He) 1985Aj03

Type	Author	History Citation	Literature Cutoff Date
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1985Aj03: E=25 MeV triton beam from LANL. Targets were 140 and 223 μg/cm^2 99.1% enriched ^{48}Ti. 66.7% enriched target. Measured $\sigma(\theta$=5.5°−50°) with a Q3D magnetic spectrograph. Deduced levels, J, π, L-transfers from CCBA analysis. Comparisons with available data.

1985Aj03 do not observe groups at 2080, 2650, 3343, or 3526 reported by 1980An19, or 1980Ga04 but note that the contribution of weak groups could not be excluded. The present evaluation does not confirm but does not rule out the possible existence of these groups as distinct states.

All data are from 1985Aj03, unless otherwise noted.

^{48}Sc Levels

E(level)	J$^\pi$[†]	L[‡]	Comments
0.0	6$^+$[#]		
132 *5*	5$^+$[#]	4+6[#]	
252 *5*	4$^+$[#]	4[#]	
621 *5*	3$^+$[#]	2+4[#]	
1091 *8*	7$^+$[#]		
1144 *8*	2$^+$[#]	2[#]	
1404 *5*	2$^-$[#]	1+2[#]	
1892 *8*	2$^-$,3$^-$		J$^\pi$: comparison of CCBA to $\sigma(\theta)$ favors 2$^-$ over 3$^-$.
2061 *10*	5$^+$	4+6	
2101 *10*	3$^-$	3	J$^\pi$: discrepant with adopted J^π=4.
2158 *10*	4$^-$,5$^-$		
2195[@] *15*	3$^+$	2+4	
2280 *15*	2$^+$	2	
2390 *20*	2$^+$	2	
2519			energy from 1980An19 or 1980Ga04; very weakly populated relative to other 1$^+$ states in this reaction (at least a factor of 2 less than the 2989 state).
2567 *20*			
(2619[&])			
(2626[&])			
(2639[&])			
2677[@] *15*			J$^\pi$: $\sigma(\theta)$ is roughly constant to θ(c.m.)=30° then monotonically decreasing to 54°.
2739 *10*	2$^-$	1+3	
2789 *10*	2$^+$	2	
2813 *10*			
(2893[&])			
2934 *10*			
2969 *10*			
2989 *10*	1$^+$	0+2	
3064[@] *10*	1$^+$	0+2	
3160 *10*			
3230[a] *15*			
(3258[&])			
3281 *10*			
(3305[&])			
(3329[&])			
(3353[&])			
(3372[&])			

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^{48}Ti(t,^{3}He) 1985Aj03 (continued)

^{48}Sc Levels (continued)

E(level)	J$^{\pi}$[†]	L[‡]	Comments
3393 *10*			J$^{\pi}$,L: $J^{\pi}=2^{-}$, L=1+3 for 3393+3421 doublet.
3421 *15*			
(3481[&])			
3495 *15*	$2^{-},1^{-}$		
(3510[&])			
3576 *15*			
(3620[&])			
(3659[&])			
3679[a] *15*			
3719 *15*	1^{+}	0+2	
3751 *15*			
(3838[&])			
3887 *15*			
3999[a] *15*			J$^{\pi}$: could consist of a 1^{+} state of intensity similar to that of the 2989 and a state with J≥2 (1985Aj03).
(4062[&])			
4112[a] *15*			
4170 *15*			
4236 *15*			
4268 *20*			
(4330[&])			
(4396[&])			
4424 *15*			
4550[a] *20*			

[†] From comparison of CCBA to $\sigma(\theta)$, except as noted.
[‡] Assumed in the theoretical CCBA calculations. Angular momenta were not given by 1985Aj03 when more than one value of J^{π} were possible.
[#] Data could not be obtained at forward angles. $\sigma(\theta)$ consistent with the current adopted spins and parities.
[@] Unresolved multiplet.
[&] Energy taken by 1985Aj03 from literature. Not observed by 1985Aj03, but contribution of weak groups could not be excluded.
[a] The Γ of this group indicates that it is due to unresolved states.