^{174}Yb(p,t) 1973Oo01

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 75,199 (1995)	31-May-1995

1973Oo01 (also 1970Oo01, and thesis by 1973OoZY): E=19 MeV. Measured $\sigma(\theta)$ at θ(lab)=12.5°, 27.5°, 42.5° and 55°. FWHM≈12 keV. In a later study (1976OoZZ) at E(p)=30 MeV several 0^+ and 4^+ states were identified, but detailed results of this study are not available.

Q(p,t)=−5359 *5*, S(2n)=13841 *5* (1973Oo01).

Others:

1985Mi06: E=51.9 MeV. Measured $\sigma(\theta)$ and g.s. transition strength.

Theoretical work: 1973Ab06, 1972As10, 1971Ud01.

^{172}Yb Levels

E(level)	L[†]	dσ/dΩ (μb/sr)[‡]	Comments
0	0	886 *11*	dσ/dΩ=545 μb/sr 11 (at 27.5°) for lowest L=0 transfers (probably g.s.+1040). β_4=0.049 *3* (1971Su01) from ^{172}Yb(p,t) at 51.7 MeV.
78 *5*	(2)	288 *6*	
258 *5*		80.1 *23*	
539 *5*		15.9 *11*	
911 *10*		1.6 *11*	
1040 *5*	0	37.0 *16*	
1115 *5*	*b*	29.6 *15*	
1154[#] *5*		14.1 *10*	
1171 *5*		8.6 *9*	
1218 *5*		18.2 *12*	
1260[&] *5*		48.9 *20*	
1281 *5*		7.5 *10*	
1350 *5*		8.9 *8*	
1410 *5*	*a*	4.8 *7*	
1467[@] *5*	*b*	68.1 *22*	
1508 *5*		10.2 *10*	
1536 *10*		6.7 *7*	
1556 *10*		7.5 *8*	
1604 *5*		7.0 *9*	Additional information 1.
1628 *10*		4.1 *7*	
1656[@] *5*		24.5 *19*	
1705 *5*		18.9 *16*	
1757 *5*		4.2 *8*	
1791 *5*	0	25.6 *15*	
1819 *5*		32.0 *22*	
1846 *5*	*b*	13.3 *14*	
1892 *5*	0	22.4 *18*	
1916 *5*		14.0 *10*	
1954 *5*	*b*	17.5 *11*	
2004 *7*		6.7 *10*	
2025 *7*		4.5 *8*	
2041 *7*		8.2 *11*	
2060[&] *7*		9.2 *9*	
2098 *7*		3.2 *6*	
2184 *7*	*b*	5.3 *9*	
2224 *7*		25.6 *13*	
2254 *12*	*b*	5.4 *7*	
2337[#] *7*		32.9 *16*	

Continued on next page (footnotes at end of table)

^{174}Yb(p,t) 1973Oo01 (continued)

^{172}Yb Levels (continued)

E(level)	L[†]	dσ/dΩ (μb/sr)[‡]	E(level)	dσ/dΩ (μb/sr)[‡]
2364[#] *7*		15.8 *14*	2580 *10*	13.3 *18*
2396 *12*		4.8 *13*	2734 *10*	6.8 *16*
2436 *7*		10.1 *11*	2786 *10*	6.3 *14*
2460 *7*		11.0 *11*	2817 *10*	9.2 *19*
2483[#] *7*	*b*	32.0 *28*	2832 *10*	8.7 *18*
2540[#] *10*	(0)	30.7 *23*		

[†] From comparison of $\sigma(\theta)$ shapes to those of known states.
[‡] Summed for four angles (12.5°, 27.5°, 42.5°, 55°).
[#] Possible doublet.
[@] Doublet.
[&] Possible doublet, contaminant subtracted.
[a] $\sigma(\theta)$ does not show L=0 character. 1973Oo01 mention that some background from the tritons could overlap expected minima for L=0 transfers.
[b] Possibly L=2 transfer, although no $\sigma(\theta)$ data are shown by 1973Oo01 to support this assignment.