^{234}U(p,t) 2004Wi06

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	E. Browne	NDS 107, 2579 (2006)	1-Nov-2004

2004Wi06: E=25 MeV. Triton spectra measured with Q3D magnetic spectrograph. FWHM=5-7 keV. Measured $\sigma(\theta)$ at ten angles. DWBA analysis.

1996Ba67: Enriched ^{234}U target. Projectile: protons, E=22 MeV. Measured relative cross-sections at θ=5°, 14°, and 25°. Scattered tritons were detected with a Q3D magnetic spectrometer.

1972Ma15: 98% enriched ^{234}U target. Projectile: protons, E=17 MeV. Measured absolute cross-sections at several angles. Scattered tritons were detected with a split-pole magnetic spectrograph. DWBA analysis.

^{232}U Levels

Additional information 1.

Uncertainties in cross-sections vary between 2%, for strong peaks, to 10% for weak ones (2004Wi06).

E(level)[†]	Jπ[‡]	L	S[a]	Comments
0.0[b]	0+	0	100.0	dσ/dΩ (θ=7.5°) = 235.5 μb/sr (2004Wi06).
46[@b] 5	2+			dσ/dΩ (θ=60°) = 62 μb/sr (1972Ma15).
156[@b] 5				dσ/dΩ (θ=20°) = 16 μb/sr (1972Ma15).
541[&b]	(8+)			
563[&c]	(1−)			
691.4[d] 3	0+	0	26.0	dσ/dΩ (θ=7.5°) = 71.4 μb/sr (2004Wi06).
736[@d] 5	2+			dσ/dΩ (θ=20°) = 4 μb/sr (1972Ma15).
833[#d]				
867[@] 5	2+			dσ/dΩ (θ=20°) = 10 μb/sr (1972Ma15).
927[#]				
970[#]				
1051[#]				
1194[#]				
1212[#]				
1227[#]				
1277.2 4	0+	0	5.7	dσ/dΩ (θ=7.5°) = 17.5 μb/sr (2004Wi06).
1301[#]				
1349[#]				
1392[#]				
1438[#]				
1482.0 4	0+	0	7.1	dσ/dΩ (θ=7.5°) = 22.5 μb/sr (2004Wi06).
1489[#]				
1520[#]				
1569.0 4	0+	0	1.7	dσ/dΩ (θ=7.5°) = 5.4 μb/sr (2004Wi06).
1600[#]				
1646[@] 5				dσ/dΩ (θ=20°) = 18 μb/sr (1972Ma15).
1746[#]				
1772[#]				
1797.0 4	0+	0	3.7	dσ/dΩ (θ=7.5°) = 12.3 μb/sr (2004Wi06).
1822.1 4	0+	0	9.8	dσ/dΩ (θ=7.5°) = 32.9 μb/sr (2004Wi06).
1861.5 4	0+	0	4.6	dσ/dΩ (θ=7.5°) = 15.7 μb/sr (2004Wi06).
1872[#]				

Continued on next page (footnotes at end of table)

^{234}U(p,t) 2004Wi06 (continued)

^{232}U Levels (continued)

E(level)[†]	J$^{\pi}$[‡]	L	S[a]	Comments
1931.8 *4*	0$^+$	0	13.0	dσ/dΩ (θ=7.5°) = 44.6 μb/sr (2004Wi06).
1972[#]				
1979[#]				
1998[#]				
2043[#]				
2061[#]				
2072[#]				
2147[#]				
2172[#]				
2204[#]				
2233[#]				
2284[#]				
2333[#]				

[†] From Table II in 2004Wi06, unless otherwise specified.
[‡] From Adopted Levels, unless otherwise specified.
[#] From Figure 4 in 2004Wi06.
[@] From 1972Ma15.
[&] From 1996Ba67.
[a] S=(dσ/dΩ)$_{expt}$/(dσ/dΩ)$_{theory}$, normalized to 100 for the g.s. (2004Wi06).
[b] Band(A): K$^{\pi}$=0$^+$ g.s. rotational band.
[c] Band(B): K$^{\pi}$=0$^-$ Octupole vibrational band.
[d] Band(C): K$^{\pi}$=0$^+$ Beta vibrational band.

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Band(C): $K^{\pi}=0^{+}$ Beta vibrational band

833

2^{+} 736

0^{+} 691.4

Band(B): $K^{\pi}=0^{-}$ Octupole vibrational band

(1^{-}) 563

Band(A): $K^{\pi}=0^{+}$ g.s. rotational band

(8^{+}) 541

156

2^{+} 46

0^{+} 0.0

$^{232}_{92}U_{140}$