^{183}W(d,t) 1973Kl06

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 130, 21 (2015)	15-Jul-2015

$J^{\pi}(^{183}W \text{ target})=1/2^{-}$.

E(d)=12.08 MeV, FWHM=7-8 keV. Measured $\sigma(\theta)$ at three angles 60°, 90° and 125°, broad-range magnetic spectrograph. Absolute cross section uncertainties are 20%.

^{182}W Levels

Band assignments proposed by 1973Kl06 from comparison of calculated and Q-reduced experimental cross sections (finger-print method).

E(level)[†]	J$^{\pi}$[‡]	L[#]	dσ/dΩ (90°) (μb/sr)[a]	Comments
0[b]	0$^+$		4	
100[b] 2	2$^+$	1,3	169	
329[b] 2	4$^+$	3	39	
≈678[b]	6$^+$	>3	1.8	
≈1137[c]	0$^+$		0.9	
1221[d] 3	2$^+$	1,3	3	
1258[c] 3	2$^+$	1,3	11	
≈1288[e]	2$^-$		0.6	
1331[d] 3	3$^+$	3	36	
1442[d] 4	4$^+$	3,>3	4	
1510[c] 4	4$^+$	3,>3	8	
1553[f] 4	4$^-$	4	5	
1623[d] 5	5$^+$	(4)	2.1	J$^{\pi}$: (5)$^+$ in Adopted Levels.
≈1664[f]	5$^-$	(4)	2.1	
1768[f] 5	6$^-$	6	14	J$^{\pi}$: (6)$^-$ in Adopted Levels.
1811[g] 6	5$^-$	4	11	
1831[h] 6	6$^-$	(6)	5	
1857[k] 6	2$^+$	(1,3)	19	J$^{\pi}$: (2$^+$) in Adopted Levels.
1916[f] 6	7$^-$	6	16	J$^{\pi}$: (7)$^-$ in Adopted Levels.
1923 6			≤4	
≈1957[@l]	3$^+$		≈21	J$^{\pi}$: (2$^+$) in Adopted Levels.
≈1961[@l]	6$^-$	6	≈12	
≈1966[@l]			≈21	
1985 6			≈5	
2016 7		1,3	8	
2057[@l] 7	1$^+$	1,3	11	
≈2071			≈3	
≈2086[k]	4$^+$		5	
≈2110[&i]	1$^+$	1	107	
2131[g] 7	7$^-$	6	12	
≈2148[@&l]	2$^+$		22	
2171 7		3,1	17	
2204 7		3,>3	13	
≈2217			7	
≈2240[&j]	(0,1)$^+$	1	127	
≈2270			≈3	
≈2284[&j]	(0,1)$^+$	1	147	

Continued on next page (footnotes at end of table)

^{183}W(d,t) 1973Kl06 (continued)

^{182}W Levels (continued)

E(level)†	L#	dσ/dΩ (90°) (μb/sr)a	E(level)†	L#	dσ/dΩ (90°) (μb/sr)a
≈2322&	3	≥61	2427& *8*	3	18
2359 *8*	3	22	2453 *8*	3,>3	62
≈2376	4	≈37	2471 *8*	3	14
≈2384	1,3	≈26	2492 *8*		16
2395 *8*	3,1	38			

† Uncertainty for well-resolved peaks is quoted by 1973Kl06 as ranging from 2 keV for levels below 1200 to 8 keV at 2500. The evaluators have assigned 3 keV for levels 1221-1331, 4 keV for levels 1442-1553, 5 keV for level 1623-1768, 6 keV for levels 1811-1985, 7 keV for levels 2131-2204 and 8 keV for levels above 2204.

‡ As proposed by 1973Kl06 based on L-transfers and band assignments. The corresponding assignments are different in some cases from those in Adopted Levels.

Approximate assignments within one unit from cross section data at three angles: 60°, 90°, and 125°.

@ Component of a composite peak, resolved with difficulty.

& Multiplet.

a Q-reduced cross sections at 90°. Experimental cross sections are listed by 1973Kl06 at 60°, 90° and 125°.

b Band(A): $K^\pi=0^+$, g.s. band.

c Band(B): $K^\pi=0^+$. From analysis of transition rates and other considerations, 2001Ga02 conclude that this band is not due to β-vibration.

d Band(C): $K^\pi=2^+$, γ band.

e Band(D): $K^\pi=2^-$, octupole band.

f Band(E): probable $K^\pi=4^-$, 9/2[624]⊗1/2[510].

g Band(F): probable $K^\pi=5^-$, 9/2[624]⊗1/2[510].

h Band(G): possible $K^\pi=6^-$, 9/2[624]⊗3/2[512].

i Band(H): possible $K^\pi=1^+$, 1/2[521]⊗1/2[510].

j Band(I): possible $K^\pi=0^+$, 1/2[521]⊗1/2[510].

k Band(J): probable $K^\pi=2^+$, 3/2[512]⊗1/2[510].

l Band(K): probable $K^\pi=1^+$, 3/2[512]⊗1/2[510].

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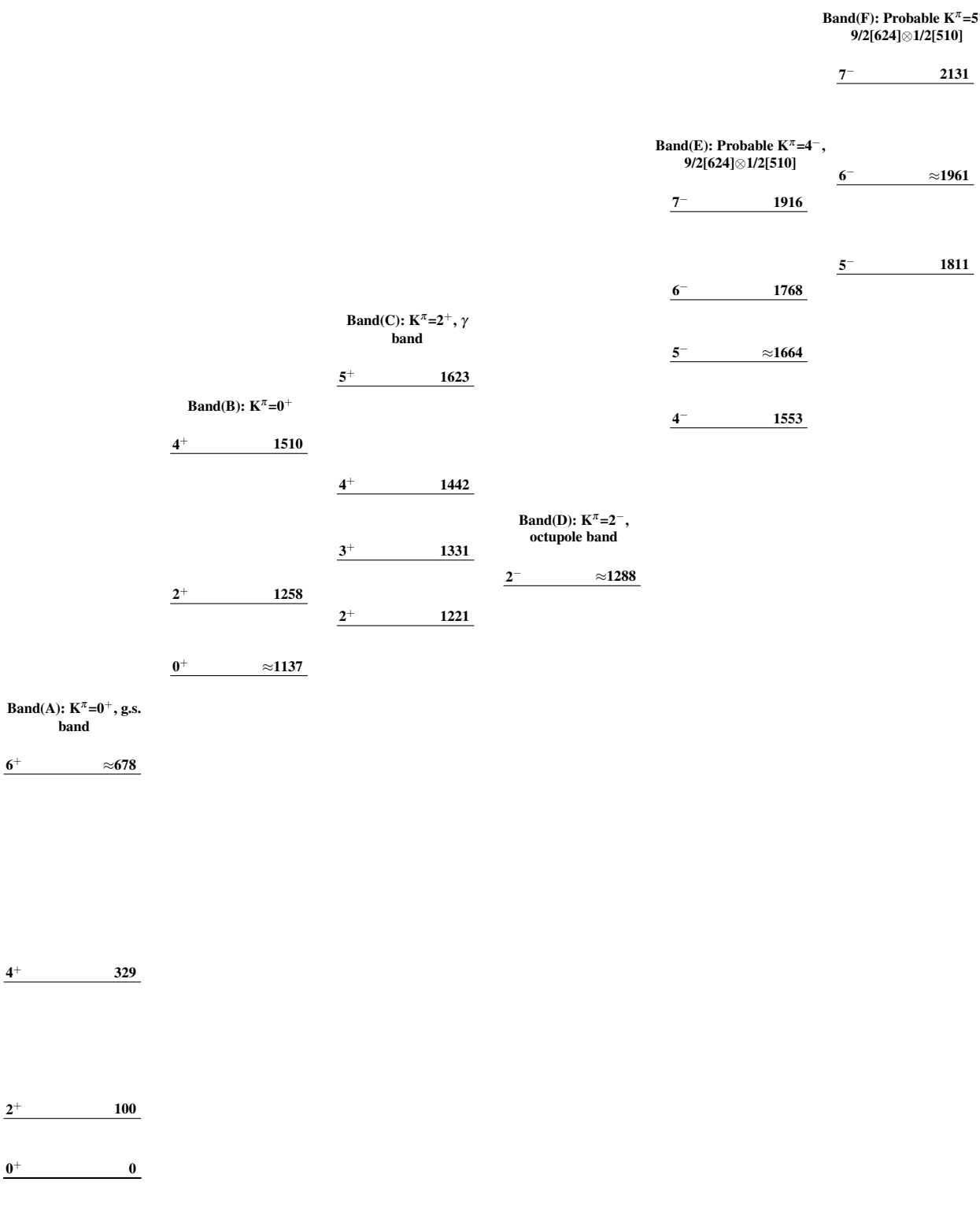

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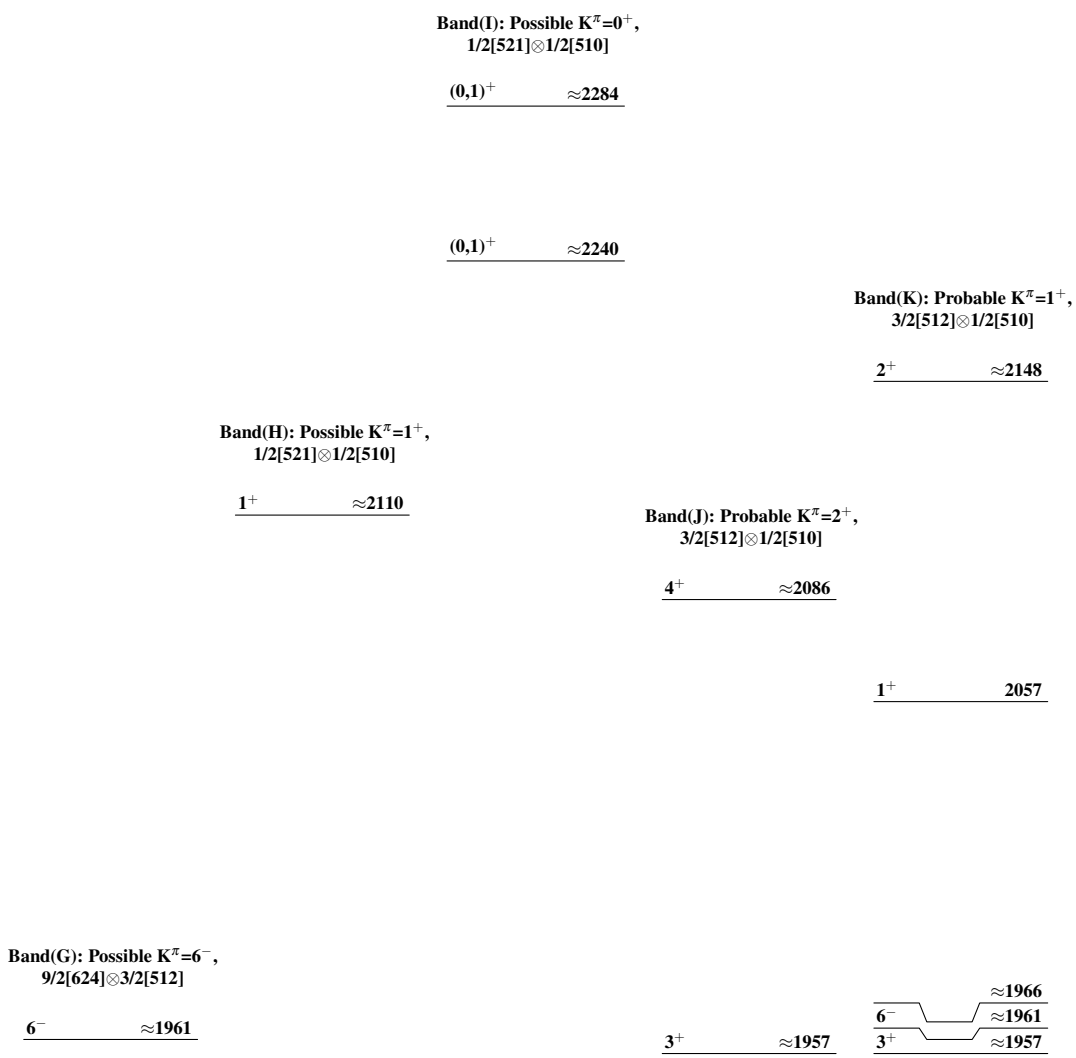
^{183}W(d,t) 1973Kl06 (continued)



$^{182}_{74}W_{108}$