^{234}U(d,d′) 1973Bo27

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli	NDS 108, 681 (2007)	1-Jun-2006

Additional information 1.
E(d)=16 MeV (1973Bo27).

^{234}U Levels

B(EL) values were deduced by 1973Bo27 from measured and calculated DWBA cross sections. B(EL)′s were calculated using both real and complex form factors. Averages of values from these two calculations are given here. See also Coulomb excitation for comparison of B(EL) values.

E(level)[†]	Jπ[‡]	Comments
0[#]	0^+	
43[#]	2^+	B(E2)=11.7 *4*.
144[#]	4^+	
295[#]	6^+	
504[#]	8^+	
787[@]	1^-	
810[&]	0^+	
850[@]	3^-	B(E3)=0.65 *4*.
927[a]	2^+	B(E2)=0.15 *1*.
964[@]	5^-	
1023[b]	3^-	B(E3)=0.42 *3*.
1126[b]	5^-	
1150		
1174		
1218		
1238[c]	1^-	
1278[b]	(7^-)	
1312[c]	3^-	B(E3)=0.37 *3*.
1339		
1446[c]	5^-	
1486[d]	(3^-)	B(E3)=0.04 *1*.
1555		
1586[d]	(5^-)	
1652		
1675		
1696		
1721[e]	(3^-)	B(E3)=0.05 *1*.
1786		
1863		

[†] Uncertainties are ±2 keV (1973Bo27).
[‡] Assignments made by 1973Bo27; they are based on intensity patterns, ratio of cross sections at 90° and 125°.
[#] Band(A): $K^\pi=0^+$ g.s. rotational band.
[@] Band(B): $K^\pi=0^-$ octupole-vibrational band.
[&] Band(C): $K^\pi=0^+$ band.
[a] Band(D): $K^\pi=2^+$ γ-vibrational band.

Continued on next page (footnotes at end of table)

^{234}U(d,d′) 1973Bo27 (continued)

^{234}U Levels (continued)

[b] Band(E): $K^{\pi}=2^{-}$ band. Strong excitation suggests high collectivity.
[c] Band(F): $K^{\pi}=(0^{-})$ band. Strongly collective.
[d] Band(G): $K^{\pi}=(1^{-})$ band. Probably two-quasiparticle state, not highly excited.
[e] Band(H): $K^{\pi}=(3^{-})$ state. Predominantly two-quasiparticle state, not highly excited.

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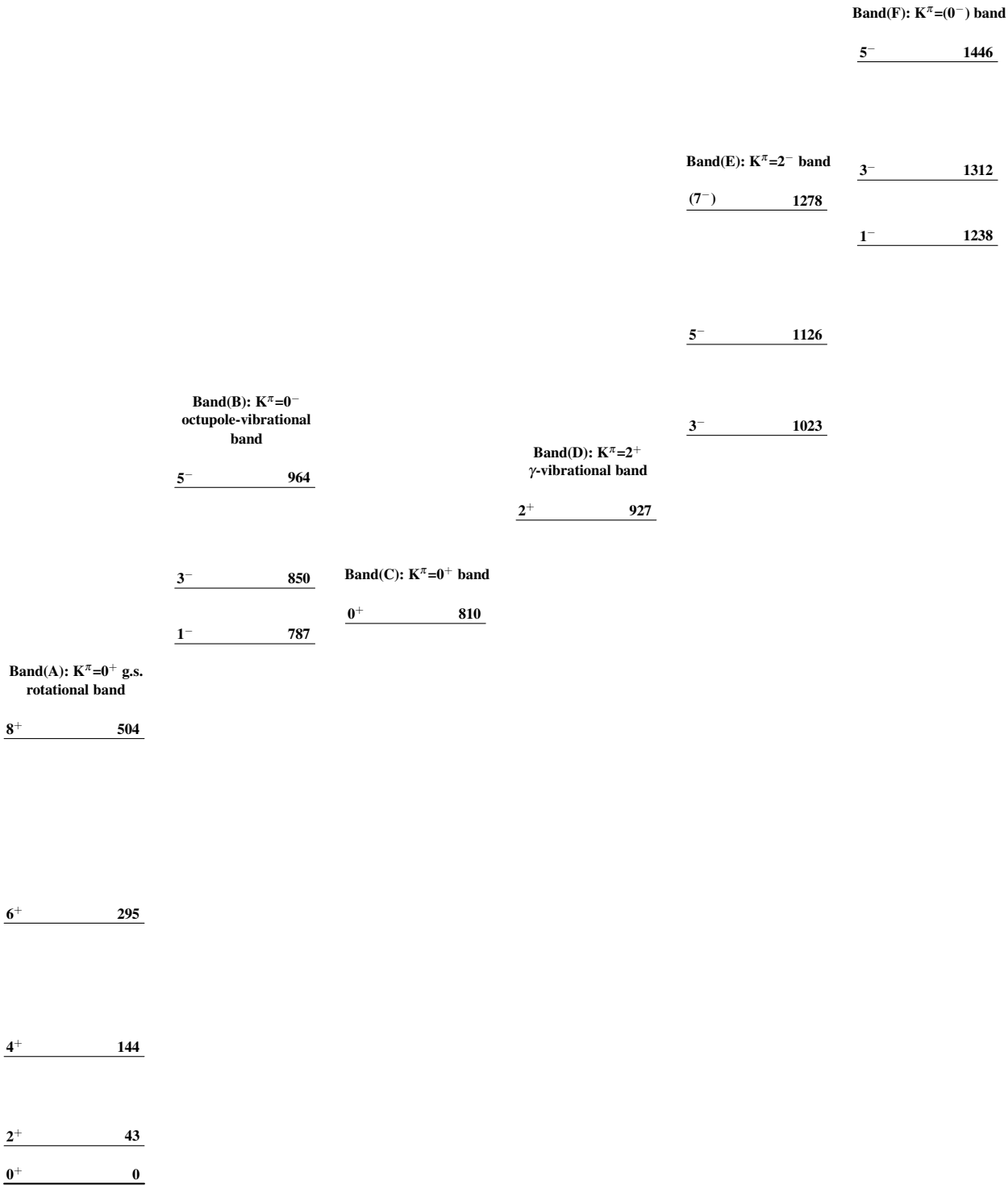

$^{234}_{92}U_{142}$

^{234}U(d,d′) 1973Bo27 (continued)

Band(H): $K^{\pi}=(3^{-})$ state

(3^{-}) 1721

Band(G): $K^{\pi}=(1^{-})$ band

(5^{-}) 1586

(3^{-}) 1486

$^{234}_{92}U_{142}$