^{168}Yb(d,p), ^{170}Yb(d,t) 1966Bu16

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 109, 2033 (2008)	15-Jun-2008

^{168}Yb(d,p): E(d)=12 MeV, θ=56°, 60°, 85°.
^{170}Yb(d,t): E(d)=12 MeV, θ=60°, 90°.
Enriched Yb targets (>99% for ^{168}Yb, 85.4% for ^{170}Yb); measured E(level) (mag spect, resolution≈0.1%), differential cross sections.

^{169}Yb Levels

E(level)[†]	J^{π}[‡]	Comments
0.0?[#]	7/2$^+$	
24[@] *3*	1/2$^-$	
70[#] *3*	9/2$^+$	
84[@] *3*	3/2$^-$	
98[@] *3*	5/2$^-$	
162?[#]	11/2$^+$	E(level): Adopted value (rounded); level weakly populated and/or unresolved.
192[&] *3*	5/2$^-$	
244[@] *3*	7/2$^-$	
266[@] *3*	9/2$^-$	
266[#] *3*	13/2$^+$	
277[&] *3*	7/2$^-$	
390[&] *3*	9/2$^-$	
487[@] *3*	11/2$^-$	
523[&] *3*	11/2$^-$	
569[a] *3*	5/2$^-$	
584[b] *3*	5/2$^+$	
647[a] *3*	7/2$^-$	
657[c] *3*	3/2$^-$	
704[b] *3*	9/2$^+$	
718[c] *3*	5/2$^-$	
747[a] *3*	9/2$^-$	
805[c] *3*	7/2$^-$	
849 *3*		Possible J=3/2 member of K-2 γ-vibration built on 5/2[512].
871[a]	11/2$^-$	E(level): earlier value quoted by 1966Bu16 (source not cited).
877[b] *3*	13/2$^+$	
911 *3*		Possible J=5/2 member of K-2 γ-vibration built on 5/2[512].
925[c] *3*	(9/2$^-$)	J^{π}: assignment tentative.
959 *3*		
996 *3*		Possible J=7/2 member of K-2 γ-vibration built on 5/2[512].
1030 *3*		
1064 *3*		
1074 *3*		
1106 *3*		
1134 *3*		
1170 *3*		
1182 *3*		
1198 *3*		
1225 *3*		
1285 *3*		
1317[d] *3*	(1/2$^-$)	

Continued on next page (footnotes at end of table)

^{168}Yb(d,p), ^{170}Yb(d,t) 1966Bu16 (continued)

^{169}Yb Levels (continued)

E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†
1351[d] 3	(3/2⁻)	1473[d] 3	(7/2⁻)	1607 6
1395[d] 3	(5/2⁻)	1526 6		1640 6
≈1421		1553 6		1688 6
1459 3		1567 6		1733 6
				1767 6

† Authors′ weighted average from (d,p) and (d,t).
‡ Authors′ values from systematics of Yb isotopes and comparison of relative level populations with predictions from stripping theory. Consistent, apart from the use of parentheses, with adopted values.
# Band(A): 7/2[633] band.
@ Band(B): 1/2[521] band.
& Band(C): 5/2[512] band.
a Band(D): 5/2[523] band.
b Band(E): 5/2[642] band.
c Band(F): 3/2[521] band + K-2 γ vibration built on 1/2[521].
d Band(G): 1/2[510] band + possible K-2 γ vibration built on 5/2[512]. Tentative assignment; (d,p) populations are≈40% of expected strength.

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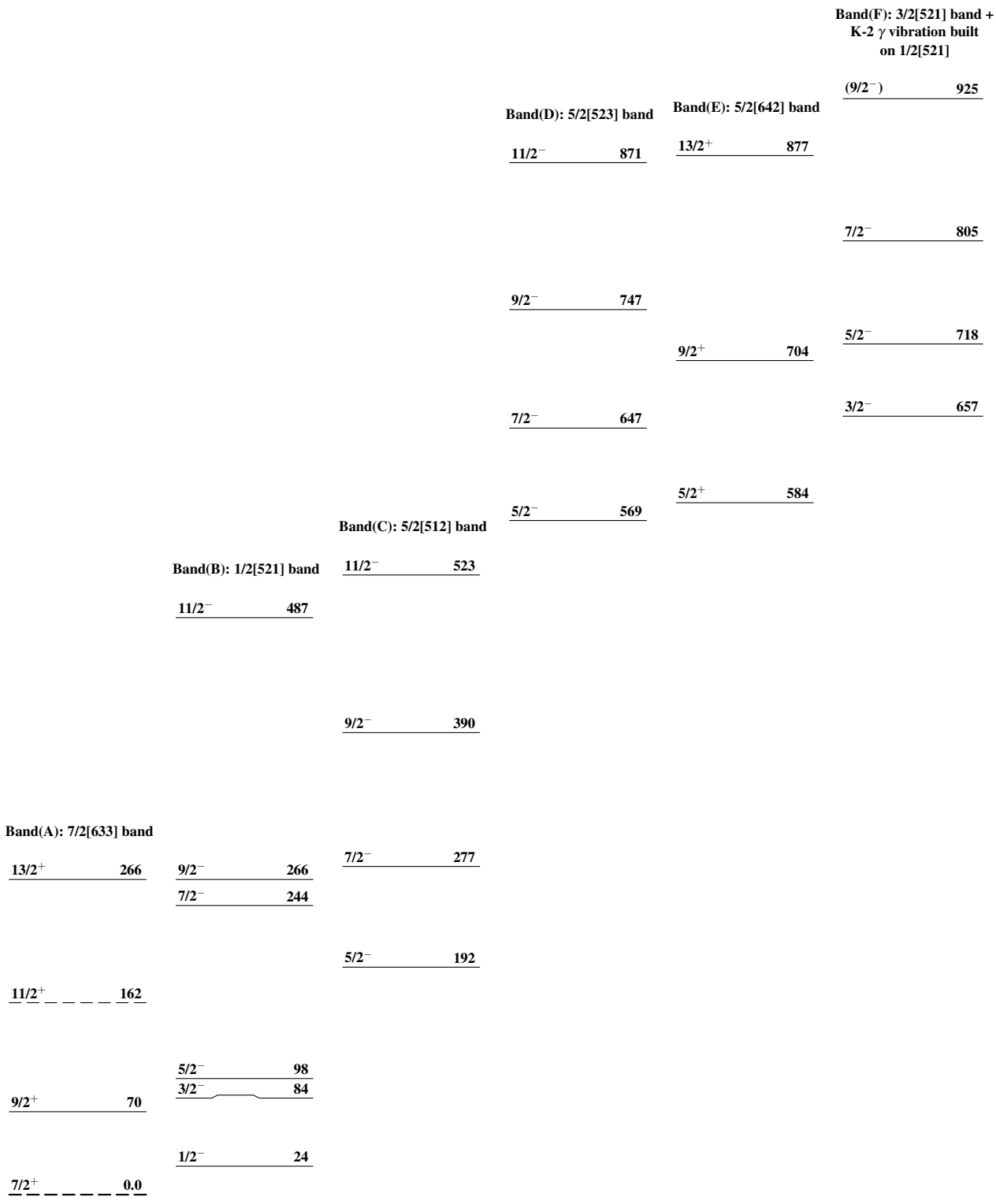

$^{169}_{70}Yb_{99}$

^{168}Yb(d,p), ^{170}Yb(d,t) 1966Bu16 (continued)

Band(G): 1/2[510] band + possible K-2 γ vibration built on 5/2[512]

(7/2$^-$) 1473

(5/2$^-$) 1395

(3/2$^-$) 1351

(1/2$^-$) 1317

$^{169}_{70}Yb_{99}$