^{165}Ho(d,t) 1970Jo11

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh and Jun Chen[#]	NDS 147, 1 (2018)	30-Nov-2017

E=12 MeV. Measured triton spectra with a broad-range magnetic spectrograph.

^{164}Ho Levels

Q value=−1730 *15* (1970Jo11).

E(level)	J^π[†]	dσ/dΩ (μb/sr) (At 95°)[‡]	Comments
0[@]	1^+	7	
37[@] *1*	2^+	9	
94[@] *1*	3^+	13	
139[a] *1*	6^-	8	
166[@] *1*	4^+	10	
191[&] *2*	6^+	24	
204[a] *2*	7^-	22	
234[b] *3*	(3^-)	7	
262[@] *3*	5^+	6	
275[a] *2*	8^-	10	
294[b] *2*	(4^-)	17	
318[&] *2*	7^+	19	
343[c] *1*	5^+	111	
367[a] *4*	(9^-)	13	J^π: assignment by 1970Jo11 is tentative as the peak at 367 keV is weak and unresolved from a stronger peak at 343 keV. Note that 9^- member of the $K^\pi=6^-$ band is assigned to a 407-keV level in the heavy-ion γ-ray work by 2004Ho19.
394 *4*		24	
421 *1*		51	Possible J=3 from $K^\pi=3^+$, $\pi 7/2[523]\uparrow$-$\nu 1/2[521]\downarrow$, but a state with a similar configuration is proposed at 188.6 in (p,nγ).
454[c] *1*	6^+	76	
486[d] *2*	(2^+)	79	
499 *2*		54	Possible $(K=6,\pi 7/2[523]\uparrow+\nu 5/2[642]\uparrow)+Q_{22}$.
558[d] *1*	(3^+)	44	
583[c] *2*	7^+	47	
620[e] *1*	2^-	131	
650[d] *3*	(4^+)	59	
670[e] *2*	3^-	88	
691 *4*		54	Possible $(K=1,\pi 7/2[523]\uparrow$-$\nu 5/2[642]\uparrow)+Q_{22}$.
733[f] *1*	(5^-)	186	
777[d] *2*	(5^+)	46	
833[g] *1*	(4^-)	167	
863 *4*		46	
925[h] *1*	(3^-)	107	
967 *5*		30	
994[h] *4*	(4^-)	43	
1084?			E(level): corresponds to peak #32 in the spectrum figure of 1970Jo11.
1160?			E(level): corresponds to peak #33 in the spectrum figure of

Continued on next page (footnotes at end of table)

^{165}Ho(d,t) 1970Jo11 (continued)

^{164}Ho Levels (continued)

E(level)	Comments
	1970Jo11.
1356?[#]	
1432?[#]	
1490?[#]	

† From 1970Jo11, based on the 'fingerprint' method, by requiring relative energies to fit the rotational-model formula and comparison of the relative intensity pattern within a band to the calculated theoretical cross sections.

‡ The quoted values are normalized (by 1970Jo11) to the total theoretical cross sections (in μb/sr) of all the observed levels from $\pi 7/2[523]\uparrow \pm \nu 5/2[523]\downarrow$. Uncertainty=15% for strong peaks. 1970Jo11 also provide such data at 75° and 85°.

This level is given only in the level scheme (figure 4 of 1970Jo11).

@ Band(A): $K^\pi=1^+, \pi 7/2[523]\uparrow - \nu 5/2[523]\downarrow$.

& Band(B): $K^\pi=6^+, \pi 7/2[523]\uparrow + \nu 5/2[523]\downarrow$.

a Band(C): $K^\pi=6^-, \pi 7/2[523]\uparrow + \nu 5/2[642]\uparrow$.

b Band(D): $K^\pi=1^-, \pi 7/2[523]\uparrow - \nu 5/2[642]\uparrow$ (?). Band assignment is tentative.

c Band(E): $K^\pi=5^+, \pi 7/2[523]\uparrow + \nu 3/2[521]\uparrow$.

d Band(F): $K^\pi=2^+, \pi 7/2[523]\uparrow - \nu 3/2[521]\uparrow$ (?). Band assignment is tentative.

e Band(G): $K^\pi=2^-, \pi 7/2[523]\uparrow - \nu 3/2[402]\downarrow$.

f Band(H): $K^\pi=5^-, \pi 7/2[523]\uparrow + \nu 3/2[402]\downarrow$ (?). Band assignment is tentative.

g Band(I): $K^\pi=4^-, \pi 7/2[523]\uparrow + \nu 1/2[400]\uparrow$ (?). Band assignment is tentative.

h Band(J): $K^\pi=3^-, \pi 7/2[523]\uparrow - \nu 1/2[400]\uparrow$ (?). Band assignment is tentative.

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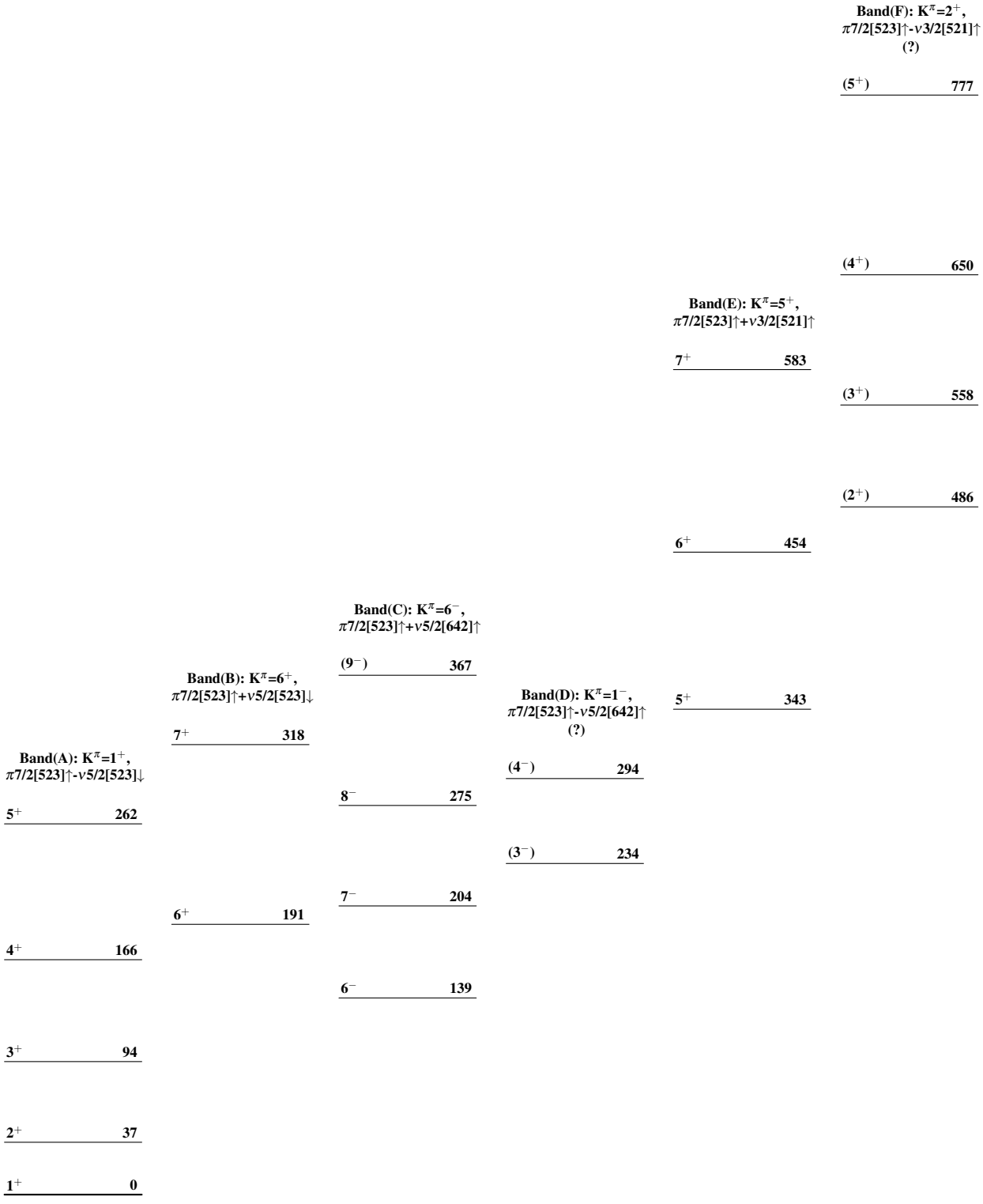

$^{164}_{67}Ho_{97}$

^{165}Ho(d,t) 1970Jo11 (continued)

Band(J): $K^{\pi}=3^{-}$, π7/2[523]↑-ν1/2[400]↑ (?)

(4^{-}) 994

(3^{-}) 925

Band(I): $K^{\pi}=4^{-}$, π7/2[523]↑+ν1/2[400]↑ (?)

(4^{-}) 833

Band(H): $K^{\pi}=5^{-}$, π7/2[523]↑+ν3/2[402]↓ (?)

(5^{-}) 733

Band(G): $K^{\pi}=2^{-}$, π7/2[523]↑-ν3/2[402]↓

3^{-} 670

2^{-} 620

$^{164}_{67}Ho_{97}$