^{159}Tb(^{14}N,4nγ) 1975Re05

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 109, 2033 (2008)	1-Jun-2022

E(^{14}N)=56-92 MeV; metallic Tb targets (99.9% pure); measured excit, Eγ, Iγ; Ge(Li) (FWHM=1.5-2.0 keV at 662 keV), prompt and delayed $\gamma\gamma$ coin, $\gamma(\theta)$ (θ=30° to 120°); used pulsed beam to look for isomeric states (except for 28.8 level, no γ-emitting isomers were found in the 50-ns to 200-ms range). Used Nilsson model (including Coriolis-coupling effects) to interpret level structure.

^{169}Hf Levels

E(E),J(E) Not adopted; deexciting γ not confirmed in other (HI,xnγ) reaction studies.

E(level)	J$^\pi$[†]	T$_{1/2}$	E(level)	J$^\pi$[†]
0.0[‡]	5/2$^-$		790.5[‡] *2*	17/2$^-$
28.8[#] *1*	7/2$^+$	82[&] ns *+40−15*	820.5[@] *2*	15/2$^-$
34.7[#] *3*	9/2$^+$		998.4[‡] *3*	19/2$^-$
38.18[#] *4*	(5/2$^+$)		1077.7[#] *3*	23/2$^+$
59.2[@] *1*	5/2$^-$		1110.9[#] *3*	25/2$^+$
77.7[‡] *1*	7/2$^-$		1201.7[‡] *2*	21/2$^-$
102.0[#] *3*	11/2$^+$		1443.6[‡] *3*	23/2$^-$
142.6[#] *3*	13/2$^+$		1605.7[#] *3*	27/2$^+$
158.8[@] *1*	7/2$^-$		1616.3[#] *3*	29/2$^+$
177.2[‡] *1*	9/2$^-$		1662.3[‡] *3*	25/2$^-$
288.7[@] *1*	9/2$^-$		1941.2[‡] *3*	27/2$^-$
302.7[‡] *2*	11/2$^-$		2152.5[‡] *5*	29/2$^-$
309.1[#] *3*	15/2$^+$		2186.0[#] *4*	33/2$^+$
361.2[#] *3*	17/2$^+$		2208.4[#] *3*	31/2$^+$
442.9[@] *2*	11/2$^-$		2484.7[‡] *4*	31/2$^-$
444.3[‡] *2*	13/2$^-$		2801.6[#] *4*	37/2$^+$
613.9[‡] *2*	15/2$^-$		2871.4?[#] *6*	(35/2$^+$)
622.2[@] *2*	13/2$^-$		3451.1[#] *7*	41/2$^+$
639.8[#] *3*	19/2$^+$		4138?[#] *2*	45/2$^+$
687.5[#] *3*	21/2$^+$		4856?[#] *3*	(49/2$^+$)

[†] Authors′ values from coincidence data, rotational structure, and γ-ray multipolarities. These are consistent with values in Adopted Levels and differ only with regard to the addition of parentheses to most adopted values.
[‡] Band(A): 5/2[523] band.
[#] Band(B): 5/2[642] band. Structure strongly perturbed.
[@] Band(C): 5/2[512] band.
[&] From $\gamma\gamma$(t).

^{159}Tb(^{14}N,4nγ) 1975Re05 (continued)

$\gamma(^{169}Hf)$

Iγ(K x ray) (relative to Iγ(207.1γ)=100).

K x ray	Eγ	Iγ
Hf Kα$_2$	x ray + Lu Kα$_1$	x ray 54.3 1020
Hf Kα$_1$	x ray	55.9 450
Hf Kβ$_1'$	x ray	63.1 190
Hf Kβ$_2'$	x ray	65.1 60

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[@]	Comments
(5.9 2)		34.7	9/2$^+$	28.8	7/2$^+$			E_γ: from energy difference between Eγ=73.2 *2* and Eγ=67.3 *1*.
[x]22.0 *2*	54							
[x]23.1 *1*	260							
[x]26.1 *1*	45							
28.8 *1*	150 *15*	28.8	7/2$^+$	0.0	5/2$^-$			
[x]32.1 *1*	710							
[x]33.2 *2*	120							
[x]34.2 *1*	350							
(38.18 *4*)		38.18	(5/2$^+$)	0.0	5/2$^-$			E_γ: from Adopted Gammas.
59.1 *1*	[&]	59.2	5/2$^-$	0.0	5/2$^-$			
[x]61.3 *1*	220							
67.3 *1*	30 *6*	102.0	11/2$^+$	34.7	9/2$^+$			
[x]68.6 *1*	17							
73.2 *2*	17 *4*	102.0	11/2$^+$	28.8	7/2$^+$			
[x]75.0 *1*	23							
[x]76.4 *2*	25							
77.8 *1*	53 *11*	77.7	7/2$^-$	0.0	5/2$^-$			Mult.: A_2=+0.32 *21*, A_4=+0.1 *3*.
[x]84.8 *1*	15							
[x]88.5 *1*	43							
[x]92.9 *2*	9							Mult.: A_2=−0.1 *3*, A_4=+0.3 *5*.
[x]94.5 *1*	23							
99.6[b] *1*	26[b] *3*	158.8	7/2$^-$	59.2	5/2$^-$	D+Q		I_γ: deduced from Iγ=29 *3* for both placements of 99.6γ and Iγ=3.4 for placement from 177.2 level (based on adopted branching). Mult.,δ: A_2=−0.19 *11*, A_4=+0.14 *16* for doublet dominated by this transition.
99.6[b] *1*	3.4[b] *5*	177.2	9/2$^-$	77.7	7/2$^-$			I_γ: from adopted Iγ(99.6γ)/Iγ(177.1γ)=0.078 *11* and Iγ(177.1γ)=44.0. Iγ=29 *3* for 99.6γ doublet. 1975Re05 deduce δ(D,Q)=0.70 *21* from branching ratio and and rotational model assuming K=5/2, but it is unclear how, or if, they divided I(99.6γ) between its two placements.
107.8 *1*	41 *4*	142.6	13/2$^+$	34.7	9/2$^+$	Q		Mult.: A_2=+0.34 *4*, A_4=+0.03 *7*.
[x]111.3 *2*	3							
[x]113.4 *1*	9							Mult.: A_2=+0.13 *17*, A_4=+0.3 *3*.
[x]117.3 *1*	7							Mult.: A_2=+0.32 *20*, A_4=+0.4 *3*.
[x]119.9 *2*	18							Mult.: A_2=+0.2 *5*, A_4=+0.6 *6*.
[x]122.3 *2*	24							
[x]125.5 *2*	9.4					D(+Q)		Mult.: A_2=−0.16 *21*, A_4=0.0 *3*.
130.0 *1*	29 *3*	288.7	9/2$^-$	158.8	7/2$^-$	D+Q	−2 *2*	Mult.: A_2=−0.40 *8*, A_4=+0.11 *13*. δ: −4.0≤δ≤−0.05 from γ(θ). 0.35 *10* based on branching.
[x]133.4 *1*	3.3							Mult.: A_2=+0.08 *19*, A_4=+0.1 *3*.

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^{159}Tb(^{14}N,4nγ) 1975Re05 (continued)

$\gamma(^{169}Hf)$ (continued)

E_γ [†]	I_γ [‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [#]	δ [@]	Comments
[x]139.6 *1*	6.6							Mult.: A_2=+0.33 *22*, A_4=+0.3 *3*.
[x]146.8 *1*	35.1					D(+Q)		Mult.: A_2=−0.17 *7*, A_4=+0.09 *12*.
148.4 *1*	50[a] *10*	177.2	9/2−	28.8	7/2+	D(+Q)		I_γ: much larger than expected based on adopted branching. Mult.: A_2=−0.13 *4*, A_4=+0.02 *8*.
[x]152.5 *1*	7.3							Mult.: A_2=+0.4 *6*, A_4=+0.9 *8*.
154.1 *1*	22.8 *23*	442.9	11/2−	288.7	9/2−	D+Q	−3 *3*	Mult.: A_2=−0.47 *14*, A_4=−0.11 *21*. δ: −6.0≤δ≤−0.03 from $\gamma(\theta)$. 0.22 *7* based on branching.
[x]157.2 *1*	9.2							Mult.: A_2=+0.27 *14*, A_4=+0.39 *22*.
158.9 *1*	12.1[a] *24*	158.8	7/2−	0.0	5/2−			Mult.: A_2=+0.17 *20*, A_4=+0.4 *3*.
[x]162.7 *1*	4.8							
[x]164.8 *1*	33.5					D+Q		Mult.: A_2=−0.69 *16*, A_4=−0.30 *25*.
166.5 *1*	112 *11*	309.1	15/2+	142.6	13/2+	D+Q	−0.8 *1*	Mult.: A_2=−0.88 *4*, A_4=+0.12 *8*.
[x]169.3 *2*	6.8							
[x]170.8 *2*	7.3							
[x]172.0 *4*	3.2							
177.1 *1*	44 *5*	177.2	9/2−	0.0	5/2−	Q		Mult.: A_2=+0.17 *6*, A_4=−0.06 *10*.
179.3 *1*	24.8 *25*	622.2	13/2−	442.9	11/2−	D+Q	≤0	Mult.: A_2=−0.32 *11*, A_4=0.00 *17*. δ: −10≤δ≤+0.02 from $\gamma(\theta)$. 0.18 *5* based on branching.
[x]182.0 *1*	21.8							Mult.: A_2=+0.13 *20*, A_4=+0.2 *3*.
[x]187.9 *3*	6.1							Mult.: A_2=0.0 *3*, A_4=+0.7 *4*.
[x]189.0 *2*	6.0							Mult.: A_2=−0.1 *3*, A_4=−0.5 *5*.
[x]191.2 *1*	21.2							Mult.: A_2=+0.37 *20*, A_4=+0.6 *3*.
[x]192.7 *1*	13.7							Mult.: A_2=+0.09 *11*, A_4=+0.21 *18*.
198.3 *1*	51[a] *6*	820.5	15/2−	622.2	13/2−			Mult.: A_2=+0.13 *6*, A_4=+0.24 *10*.
207.1 *1*	100 *10*	309.1	15/2+	102.0	11/2+	Q		Mult.: A_2=+0.28 *2*, A_4=−0.02 *5*.
[x]213.8 *2*	15.2					D+Q		Mult.: A_2=−0.46 *19*, A_4=−0.3 *3*.
[x]216.9 *2*	12.1							Mult.: A_2=+0.12 *17*, A_4=+0.20 *26*.
218.6 *1*	241 *24*	361.2	17/2+	142.6	13/2+	Q		Mult.: A_2=+0.26 *2*, A_4=−0.07 *5*.
[x]223.3 *3*	19.7							Mult.: A_2=+0.6 *3*, A_4=0.0 *4*.
225.0 *1*	122[a] *13*	302.7	11/2−	77.7	7/2−			Mult.: A_2=+0.08 *2*, A_4=+0.01 *5*.
229.3 *3*	17.4 *18*	288.7	9/2−	59.2	5/2−	Q		Mult.: A_2=+0.18 *18*, A_4=−0.14 *26*.
[x]238.6 *1*	18.1					D+Q		Mult.: A_2=+0.78 *19*, A_4=+0.7 *3*.
[x]240.6 *1*	6.9							Mult.: A_2=−0.2 *3*, A_4=−0.6 *4*.
[x]241.9 *2*	6.9							
[x]243.2 *2*	9.1							Mult.: A_2=−0.03 *26*, A_4=−0.2 *4*.
[x]246.9 *2*	4.2							
[x]249.5 *2*	4.7							
[x]265.0 *1*	16.0					D(+Q)		Mult.: A_2=−0.19 *17*, A_4=−0.07 *26*.
267.1 *1*	62 *7*	444.3	13/2−	177.2	9/2−	Q		Mult.: A_2=+0.30 *4*, A_4=0.00 *7*.
[x]270.5 *2*	8.2							
278.5 *1*	47 *5*	639.8	19/2+	361.2	17/2+	D+Q	−1.0 *5*	Mult.: A_2=−0.81 *7*, A_4=+0.25 *11*.
284.1 *1*	13 *2*	442.9	11/2−	158.8	7/2−	Q		Mult.: A_2=+0.26 *13*, A_4=0.00 *21*.
288.5 *2*	5.1 *10*	288.7	9/2−	0.0	5/2−			
[x]295.5 *2*	10							
[x]304.6 *1*	5.5							
311.2 *1*	47 *5*	613.9	15/2−	302.7	11/2−	Q		Mult.: A_2=+0.21 *4*, A_4=−0.09 *7*.
[x]316.1 *2*	16							Mult.: A_2=+0.21 *21*, A_4=+0.5 *3*.
326.3 *1*	194 *20*	687.5	21/2+	361.2	17/2+	Q		Mult.: A_2=+0.29 *2*, A_4=−0.07 *5*.
330.8 *1*	132 *13*	639.8	19/2+	309.1	15/2+	Q		Mult.: A_2=+0.19 *2*, A_4=−0.02 *5*.
333.4 *4*	20 *2*	622.2	13/2−	288.7	9/2−	(Q)		Mult.: A_2=+0.22 *12*, A_4=+0.37 *17*.
[x]339.0 *2*	10					D(+Q)		Mult.: A_2=−0.18 *13*, A_4=+0.09 *20*.
[x]340.0 *2*	9.3							
346.2 *1*	67 *7*	790.5	17/2−	444.3	13/2−	Q		Mult.: A_2=+0.29 *4*, A_4=−0.05 *7*.

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^{159}Tb(^{14}N,4nγ) 1975Re05 (continued)

$\gamma(^{169}Hf)$ (continued)

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	δ[@]	Comments
[x]348.7 *2*	19							
[x]350.7 *2*	19					D+Q		Mult.: A_2=−0.49 *13*, A_4=+0.65 *20*.
[x]352.0 *2*	24							Mult.: A_2=+0.5 *3*, A_4=+1.1 *4*.
[x]354.4 *2*	6.8							
[x]367.0 *3*	9.7							Mult.: A_2=+0.22 *21*, A_4=+0.1 *3*.
377.6 *1*	15 *2*	820.5	15/2$^-$	442.9	11/2$^-$	Q		Mult.: A_2=+0.41 *10*, A_4=−0.13 *15*.
[x]379.6 *2*	6.1							
[x]381.2 *2*	14.3							Mult.: A_2=+0.7 *4*, A_4=−0.2 *5*.
[x]383.6 *3*	17.9							
384.5 *2*	36[a] *8*	998.4	19/2$^-$	613.9	15/2$^-$	(Q)		Mult.: A_2=+0.29 *7*, A_4=+0.02 *11*.
[x]387.8 *2*	7.7							
[x]389.5 *2*	17.9							
390.3 *2*	17 *3*	1077.7	23/2$^+$	687.5	21/2$^+$	D+Q	−1.0 *5*	Mult.: A_2=−0.94 *17*, A_4=+0.17 *24*.
[x]392.3 *3*	7.9							Mult.: A_2=+0.3 *3*, A_4=+0.1 *5*.
[x]394.9 *3*	3.0							
[x]406.3 *1*	13.3							Mult.: A_2=+0.33 *12*, A_4=−0.13 *19*.
411.2 *1*	52 *5*	1201.7	21/2$^-$	790.5	17/2$^-$	Q		Mult.: A_2=+0.25 *8*, A_4=+0.07 *13*.
[x]415.0 *4*	2.6							
[x]416.2 *10*	2.1							
423.4 *1*	129 *13*	1110.9	25/2$^+$	687.5	21/2$^+$	Q		Mult.: A_2=+0.29 *3*, A_4=−0.08 *5*.
[x]436.1 *3*	13							Mult.: A_2=+0.17 *26*, A_4=0.0 *4*.
437.9 *1*	77 *8*	1077.7	23/2$^+$	639.8	19/2$^+$	Q		Mult.: A_2=+0.26 *4*, A_4=−0.10 *6*.
[x]439.9 *2*	10.1							Mult.: A_2=−0.07 *15*, A_4=+0.41 *22*.
[x]442.0 *2*	12.4							Mult.: A_2=+0.14 *22*, A_4=+0.2 *3*.
[x]443.5 *2*	15.9							Mult.: A_2=+0.12 *13*, A_4=−0.04 *19*.
445.2 *1*	43 *4*	1443.6	23/2$^-$	998.4	19/2$^-$	Q		Mult.: A_2=+0.26 *6*, A_4=+0.01 *9*.
[x]458.6 *2*	11.2							
460.6 *1*	48 *5*	1662.3	25/2$^-$	1201.7	21/2$^-$	Q		Mult.: A_2=+0.26 *5*, A_4=−0.05 *8*.
[x]463.1 *2*	15.8							
[x]468.4 *1*	8.5					D(+Q)		Mult.: A_2=−0.30 *20*, A_4=+0.4 *3*.
[x]470.5 *2*	5.0							Mult.: A_2=+0.41 *17*, A_4=−0.01 *25*.
[x]475.5 *3*	8.3							Mult.: A_2=+0.38 *15*, A_4=+0.13 *22*.
[x]478.8 *2*	12.8					D(+Q)		Mult.: A_2=−0.31 *16*, A_4=+0.18 *23*.
[x]482.1 *4*	&							Mult.: A_2=+0.43 *22*, A_4=+0.2 *3*.
[x]484.2 *4*	&							Mult.: A_2=+0.14 *25*, A_4=−0.4 *4*.
490.2 *5*	6.0 *12*	2152.5	29/2$^-$	1662.3	25/2$^-$	Q		Mult.: A_2=+0.25 *14*, A_4=−0.06 *20*.
494.9[c] *6*	&	1605.7	27/2$^+$	1110.9	25/2$^+$			
497.6 *2*	22.8 *23*	1941.2	27/2$^-$	1443.6	23/2$^-$	Q		Mult.: A_2=+0.12 *7*, A_4=−0.31 *10*.
505.4 *1*	76 *8*	1616.3	29/2$^+$	1110.9	25/2$^+$	Q		Mult.: A_2=+0.26 *3*, A_4=−0.10 *5*.
528.0 *1*	36 *4*	1605.7	27/2$^+$	1077.7	23/2$^+$	Q		Mult.: A_2=+0.26 *5*, A_4=−0.07 *8*.
[x]531.6 *3*	9.0							
[x]533.6 *3*	18.8							Mult.: A_2=+0.24 *23*, A_4=+0.4 *4*.
[x]536.0 *2*	20.8							
543.5 *2*	9.5 *19*	2484.7	31/2$^-$	1941.2	27/2$^-$	Q		Mult.: A_2=+0.35 *17*, A_4=+0.08 *24*.
[x]545.5 *2*	14.3							
[x]546.7 *2*	13.1							
[x]553.1 *2*	11.4							Mult.: A_2=+0.33 *13*, A_4=+0.01 *19*.
[x]560.9 *3*	5.1							Out of energy sequence in authors' γ-ray table; evaluator assumes that 1975Re05 intended Eγ=506.9 to be Eγ=560.9.
[x]562.8 *3*	4.4							
[x]568.7 *2*	12							
569.7 *2*	34 *3*	2186.0	33/2$^+$	1616.3	29/2$^+$	Q		Mult.: A_2=+0.20 *4*, A_4=−0.13 *6*.
[x]573.1 *2*	2.2							
[x]577.1 *5*	&							Mult.: A_2=+0.28 *26*, A_4=−0.3 *4*.

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^{159}Tb(^{14}N,4nγ) 1975Re05 (continued)

γ(^{169}Hf) (continued)

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	Comments
x578.3 2	11.6						Mult.: A_2=0.0 *4*, A_4=−0.3 *5*.
x582.4 2	30.2						Mult.: A_2=−0.07 *25*, A_4=+0.1 *4*.
602.7 2	18.8 *19*	2208.4	31/2$^+$	1605.7	27/2$^+$	Q	Mult.: A_2=+0.15 *8*, A_4=−0.16 *13*.
x609.2 2	19.3						
x612.6 2	6.6						
615.6 2	36 *4*	2801.6	37/2$^+$	2186.0	33/2$^+$		Mult.: A_2=+0.01 *23*, A_4=−0.4 *3*.
x619.5 5	5.4						
x621.3 3	6.8						
649.5 5	&	3451.1	41/2$^+$	2801.6	37/2$^+$		Mult.: A_2=+0.1 *3*, A_4=−0.7 *5*.
663.0[c] 5	&	2871.4?	(35/2$^+$)	2208.4	31/2$^+$		Mult.: A_2=+0.1 *4*, A_4=−0.5 *6*.
687[c] 2	&	4138?	45/2$^+$	3451.1	41/2$^+$		
x706.3 5	&						Mult.: A_2=+0.5 *4*, A_4=0.0 *5*.
x708 2	&						
718[c] 2	&	4856?	(49/2$^+$)	4138?	45/2$^+$		
x719.7 2	17.0					D(+Q)	Mult.: A_2=−0.38 *14*, A_4=−0.19 *20*.
x727.0 2	6.9						
x729.8 3	6.3						
x752.8 *10*	&						Mult.: A_2=−0.12 *24*, A_4=+0.8 *4*.
x833.9 *10*	&						Mult.: A_2=+0.22 *18*, A_4=+0.4 *3*.
x836.3 *10*	&						
x838.9 *10*	&						
x843.2 5	&					D(+Q)	Mult.: A_2=−0.35 *25*, A_4=+0.1 *3*.
x846.1 5	&						
x849.0 *10*	&						
x870.7 *10*	&					D(+Q)	Mult.: A_2=−0.6 *4*, A_4=−0.5 *5*.
x883.9 *10*	&						Mult.: A_2=+0.17 *11*, A_4=+0.12 *17*.
x895.4 *10*	&						Mult.: A_2=+0.30 *16*, A_4=+0.13 *23*.
x911.4 2	16.3						
x916.8 3	10.6						
x922.5 3	5.0						
x937.5 2	17.9					D(+Q)	Mult.: A_2=−0.17 *19*, A_4=+0.3 *3*.
x946.8 2	7.3						
x958.2 *10*	&						Mult.: A_2=+0.2 *4*, A_4=+0.8 *6*.
x960.0 *10*	&						
x978.2 *10*	&						
x983.0 2	&						
x991.0 2	&						
x1014.5 2	23.9						
x1116.1 3	10.1						
x1121.3 3	65.3						
x1173.3 6	14.3						
x1189.1 3	25.8						
x1220.1 *11*	23.4						
x1221.9 5	36.7						

[†] 1975Re05 indicate ^{169}Hf assignments for all placed transitions, but do not show isotopic assignments for any of the unplaced γ's listed here; thus, the latter may belong to nuclides other than ^{169}Hf.

[‡] Arbitrary units for E(^{14}N)=70 MeV, θ=90°. $\Delta I\gamma$=10% for well-resolved transitions with Iγ>10, 20% for others (evaluator lists

Continued on next page (footnotes at end of table)

^{159}Tb(^{14}N,4nγ) 1975Re05 (continued)

$\gamma(^{169}Hf)$ (continued)

specific uncertainties for placed transitions only). See 1975Re05 for photon intensities for many transitions after correction for anisotropy.

[#] Inferred from measured $\gamma(\theta)$. Stretched Q assignments were based on large positive A_2 and small negative A_4, and D(+Q) assignments, on negative A_2 and placement relative to cascading Q transitions within the same band.

[@] From γ-ray angular distributions; model-dependent values based on crossover-to-cascade branching ratios are given in comments.

[&] Weak; observed only in $\gamma\gamma$-coin spectrum.

[a] Includes possible component from contaminant. See 1975Re05 for source.

[b] Multiply placed with intensity suitably divided.

[c] Placement of transition in the level scheme is uncertain.

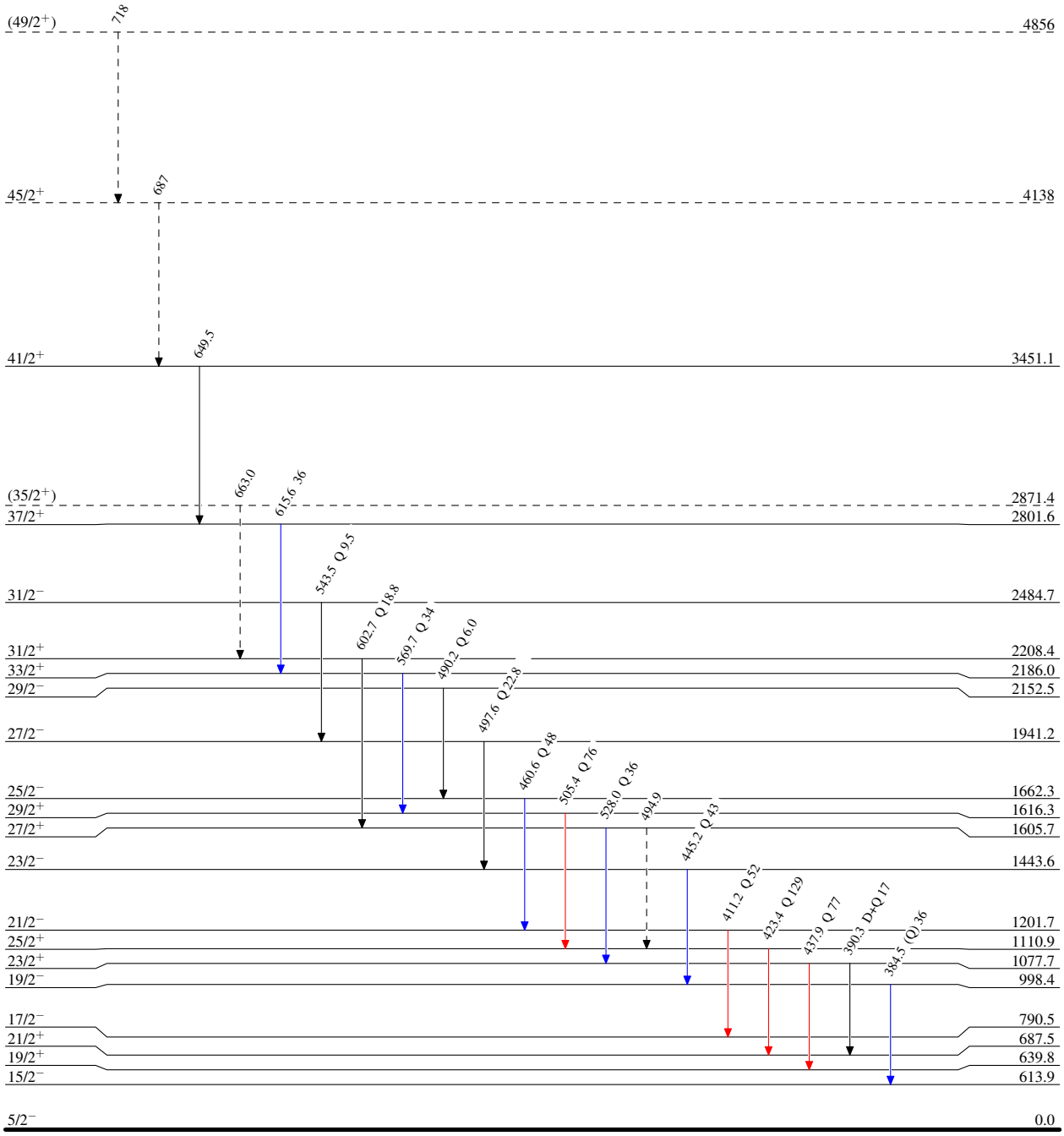
[x] γ ray not placed in level scheme.

^{159}Tb(^{14}N,4nγ) 1975Re05

Level Scheme

Intensities: Relative Iγ for E(^{14}N)=70 MeV, θ=90°

Legend
- $I_\gamma < 2\% \times I_\gamma^{max}$
- $I_\gamma < 10\% \times I_\gamma^{max}$
- $I_\gamma > 10\% \times I_\gamma^{max}$
- γ Decay (Uncertain)



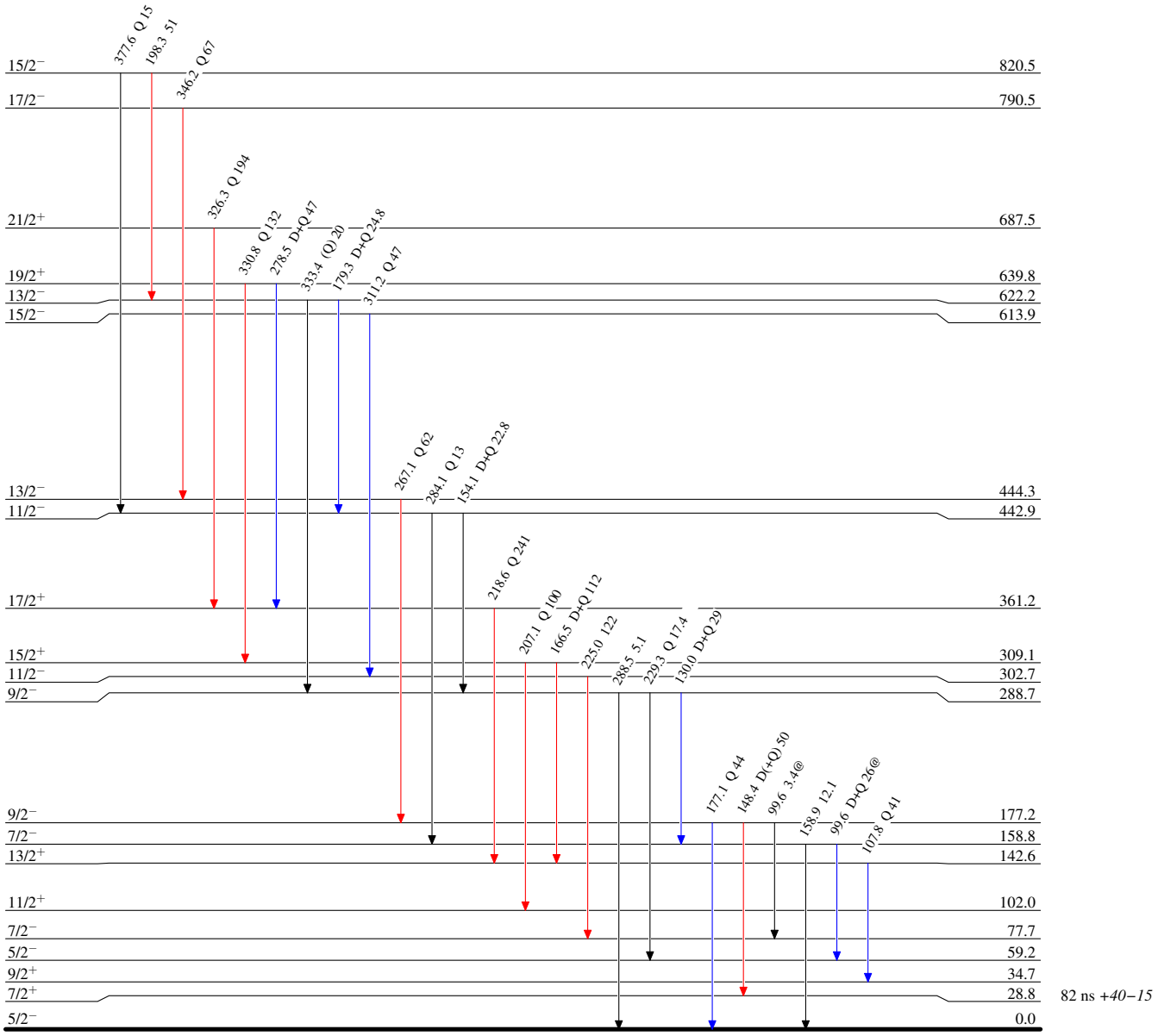
$^{169}_{72}Hf_{97}$

^{159}Tb(^{14}N,4nγ) 1975Re05

Level Scheme (continued)

Intensities: Relative Iγ for E(^{14}N)=70 MeV, θ=90°
@ Multiply placed: intensity suitably divided

Legend
$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$



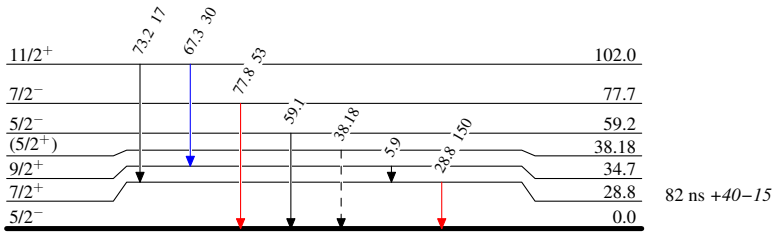
$^{169}_{72}Hf_{97}$

^{159}Tb(^{14}N,4nγ) 1975Re05

Level Scheme (continued)

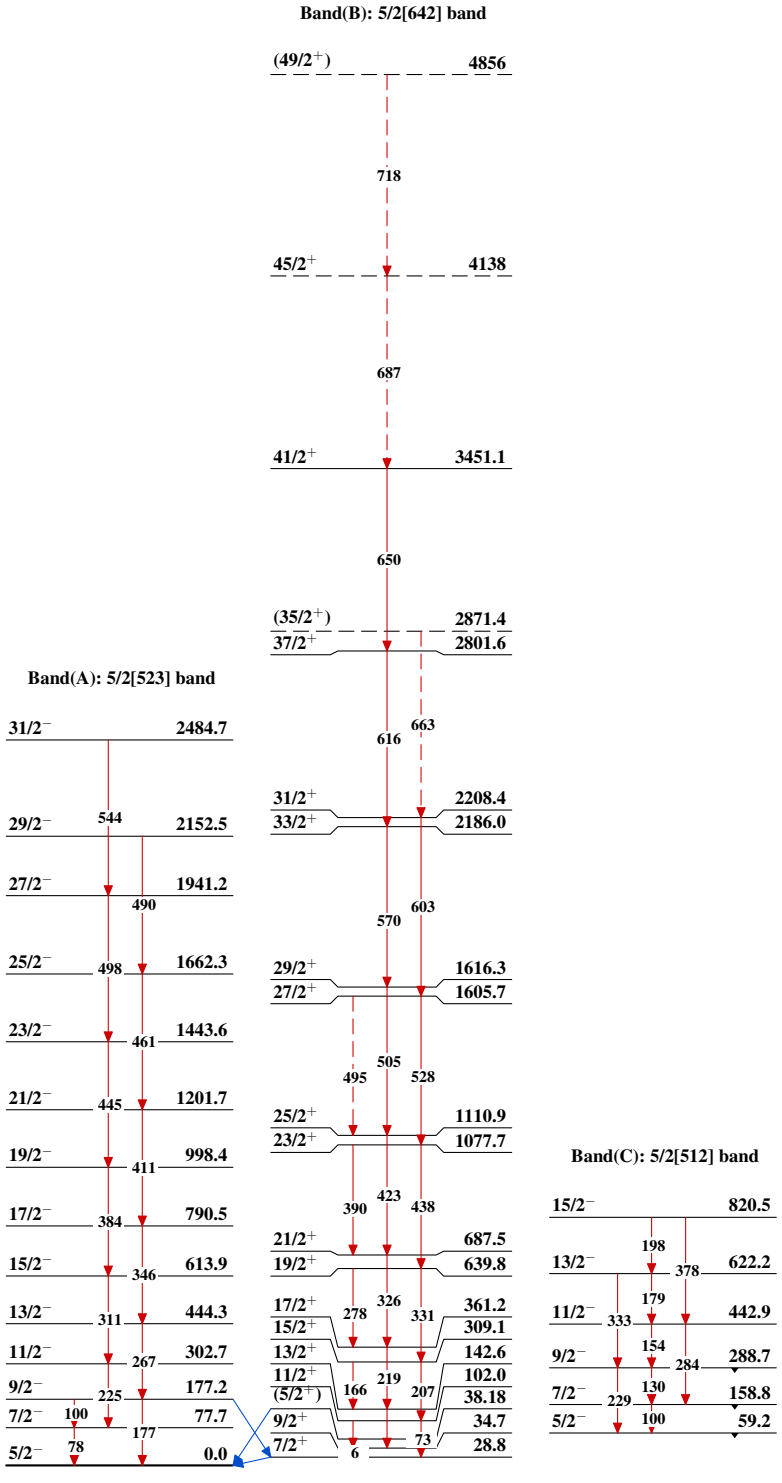
Intensities: Relative Iγ for E(^{14}N)=70 MeV, θ=90°
@ Multiply placed: intensity suitably divided

Legend
- $I_\gamma < 2\% \times I_\gamma^{max}$
- $I_\gamma < 10\% \times I_\gamma^{max}$
- $I_\gamma > 10\% \times I_\gamma^{max}$
- γ Decay (Uncertain)



$^{169}_{72}Hf_{97}$

^{159}Tb(^{14}N,4nγ) 1975Re05



$^{169}_{72}Hf_{97}$