

¹⁵⁹Tb(p,t) 1972Go30,1971GoYX

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	N. Nica	NDS 132, 1 (2016)	4-Dec-2015

Data are from ¹⁵⁹Tb(p,t) reaction with E_p=30 MeV and tritons measured in magnetic spectrometer from 10° to 75° in 5° steps with FWHM=15-20 keV (1972Go30 and 1971GoYX). Target J^π=3/2⁺.

1971GoYX: Thesis version of material in 1972Go30.

¹⁵⁷Tb Levels

E(level) [†]	J ^π [‡]	L [#]	Comments
0.0@	3/2 ⁺	0	
61@ 3	5/2 ⁺	2	
144@ 3	7/2 ⁺	2	
254@ 3	9/2 ⁺		
325 10			J ^π : Assigned 5/2 ⁻ in 1971GoYX which is the Adopted assignment.
379@ 3	11/2 ⁺		
527@ 3	13/2 ⁺		
598& 3	1/2 ⁺		
640& 3	3/2 ⁺		
699& 3	5/2 ⁺		
795& 3	7/2 ⁺		
896& 3	9/2 ⁺		
927@ 3	17/2 ⁺		
947 10			
994 ^a 3	3/2 ⁺	0	
1048 ^a 3	5/2 ⁺	2	
1080 10			
1120 ^a 3	7/2 ⁺	2	
1207 10			
1238 ^a 5	(9/2 ⁺)		
1276			
1318			
1352			
1417			
1454			
1487			
1535			
1578			
1602			
1631			
1659			
1695			
1749			

[†] From 1972Go30 below 1250 keV and from 1971GoYX above that energy.

[‡] Assignments of 1972Go30 based on L transfers, association of peaks with levels of previously established J^π, and expected rotational band structure. All assignments agree with those in the Adopted Levels.

[#] For states below 1250 keV without L values, angular distributions imply complex L values (1972Go30).

@ Band(A): 3/2[411] band.

& Band(B): 1/2[411] band and γ-vibration based on 3/2[411] ground state.

^a Band(C): β-vibrational band based on 3/2[411] ground state.

$^{159}\text{Tb}(\text{p,t})$ 1972Go30,1971GoYX

		Band(C): β-vibrational band based on $3/2[411]$ ground state	
		<u>$(9/2^+)$</u>	<u>1238</u>
		<u>$7/2^+$</u>	<u>1120</u>
		<u>$5/2^+$</u>	<u>1048</u>
		<u>$3/2^+$</u>	<u>994</u>
Band(A): $3/2[411]$ band	Band(B): $1/2[411]$ band and γ-vibration based on $3/2[411]$ ground state		
<u>$17/2^+$</u>	<u>927</u>	<u>$9/2^+$</u>	<u>896</u>
		<u>$7/2^+$</u>	<u>795</u>
		<u>$5/2^+$</u>	<u>699</u>
		<u>$3/2^+$</u>	<u>640</u>
		<u>$1/2^+$</u>	<u>598</u>
<u>$13/2^+$</u>	<u>527</u>		
<u>$11/2^+$</u>	<u>379</u>		
<u>$9/2^+$</u>	<u>254</u>		
<u>$7/2^+$</u>	<u>144</u>		
<u>$5/2^+$</u>	<u>61</u>		
<u>$3/2^+$</u>	<u>0.0</u>		