

¹⁶⁰Gd(p,2nγ) 1974Wi22

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	C. W. Reich	NDS 113, 157 (2012)	31-Dec-2010

Additional information 1.

¹⁶⁰Gd(p,2nγ) with E(p)=10 MeV. Measured γ singles and γγ coincidences. The authors' level scheme is from these results "and previously known data".

¹⁵⁹Tb Levels

E(level)	J ^π †	E(level)	J ^π †	E(level)	J ^π †	E(level)	J ^π †
0.0‡	3/2 ⁺	363.6#	5/2 ⁻	580.9&	1/2 ⁺	778.0 ^a	7/2 ⁺
58.0‡	5/2 ⁺	389.5#	7/2 ⁻	617.7&	3/2 ⁺	823@	(11/2 ⁻)
137.5‡	7/2 ⁺	455.2#	9/2 ⁻	674.3&	5/2 ⁺	857.6&	(9/2 ⁺)
241.3‡	9/2 ⁺	545.7#	11/2 ⁻	678.7@	(9/2 ⁻)	1009&	(11/2 ⁺)
362.4‡	11/2 ⁺	548.3@	7/2 ⁻	761.3&	(7/2 ⁺)		

† J^π and band assignments are from 1974Wi22. These agree with those in the ¹⁵⁹Tb Adopted Levels.

‡ Band(A): K^π=3/2⁺, π3/2[411] band.

Band(B): K^π=5/2⁻, π5/2[532] band.

@ Band(C): K^π=7/2⁻, π7/2[523] band.

& Band(D): K^π=1/2⁺, π1/2[411] band.

^a Band(E): K^π=7/2⁺, π7/2[404] bandhead.

γ(¹⁵⁹Tb)

E _γ †	I _γ	E _i (level)	J _i ^π	E _f	J _f ^π	E _γ †	I _γ	E _i (level)	J _i ^π	E _f	J _f ^π
58.0		58.0	5/2 ⁺	0.0	3/2 ⁺	304.4	2.5	545.7	11/2 ⁻	241.3	9/2 ⁺
65.7	3	455.2	9/2 ⁻	389.5	7/2 ⁻	317.7	13	455.2	9/2 ⁻	137.5	7/2 ⁺
79.5		137.5	7/2 ⁺	58.0	5/2 ⁺	331.5	92	389.5	7/2 ⁻	58.0	5/2 ⁺
90.5	5	545.7	11/2 ⁻	455.2	9/2 ⁻	363.6	100	363.6	5/2 ⁻	0.0	3/2 ⁺
103.8		241.3	9/2 ⁺	137.5	7/2 ⁺	388.5	5	778.0	7/2 ⁺	389.5	7/2 ⁻
121.1		362.4	11/2 ⁺	241.3	9/2 ⁺	495.2	2.2	857.6	(9/2 ⁺)	362.4	11/2 ⁺
130.4	3.2	678.7	(9/2 ⁻)	548.3	7/2 ⁻	520.0	6.6	761.3	(7/2 ⁺)	241.3	9/2 ⁺
137.5		137.5	7/2 ⁺	0.0	3/2 ⁺	536.8	14	674.3	5/2 ⁺	137.5	7/2 ⁺
144.3	0.7	823	(11/2 ⁻)	678.7	(9/2 ⁻)	559.7	25	617.7	3/2 ⁺	58.0	5/2 ⁺
156.2	0.7	545.7	11/2 ⁻	389.5	7/2 ⁻	580.9	35	580.9	1/2 ⁺	0.0	3/2 ⁺
158.8	4	548.3	7/2 ⁻	389.5	7/2 ⁻	616.3	12	674.3	5/2 ⁺	58.0	5/2 ⁺
183.3		241.3	9/2 ⁺	58.0	5/2 ⁺	616.3	6	857.6	(9/2 ⁺)	241.3	9/2 ⁺
184.7	22	548.3	7/2 ⁻	363.6	5/2 ⁻	617.7	20	617.7	3/2 ⁺	0.0	3/2 ⁺
223.5	1.5	678.7	(9/2 ⁻)	455.2	9/2 ⁻	623.8	8.3	761.3	(7/2 ⁺)	137.5	7/2 ⁺
224.9		362.4	11/2 ⁺	137.5	7/2 ⁺	646.6	1.2	1009	(11/2 ⁺)	362.4	11/2 ⁺
229.7	5.4	778.0	7/2 ⁺	548.3	7/2 ⁻	674.3	3	674.3	5/2 ⁺	0.0	3/2 ⁺
289.2	4.3	678.7	(9/2 ⁻)	389.5	7/2 ⁻	703.3	1.7	761.3	(7/2 ⁺)	58.0	5/2 ⁺

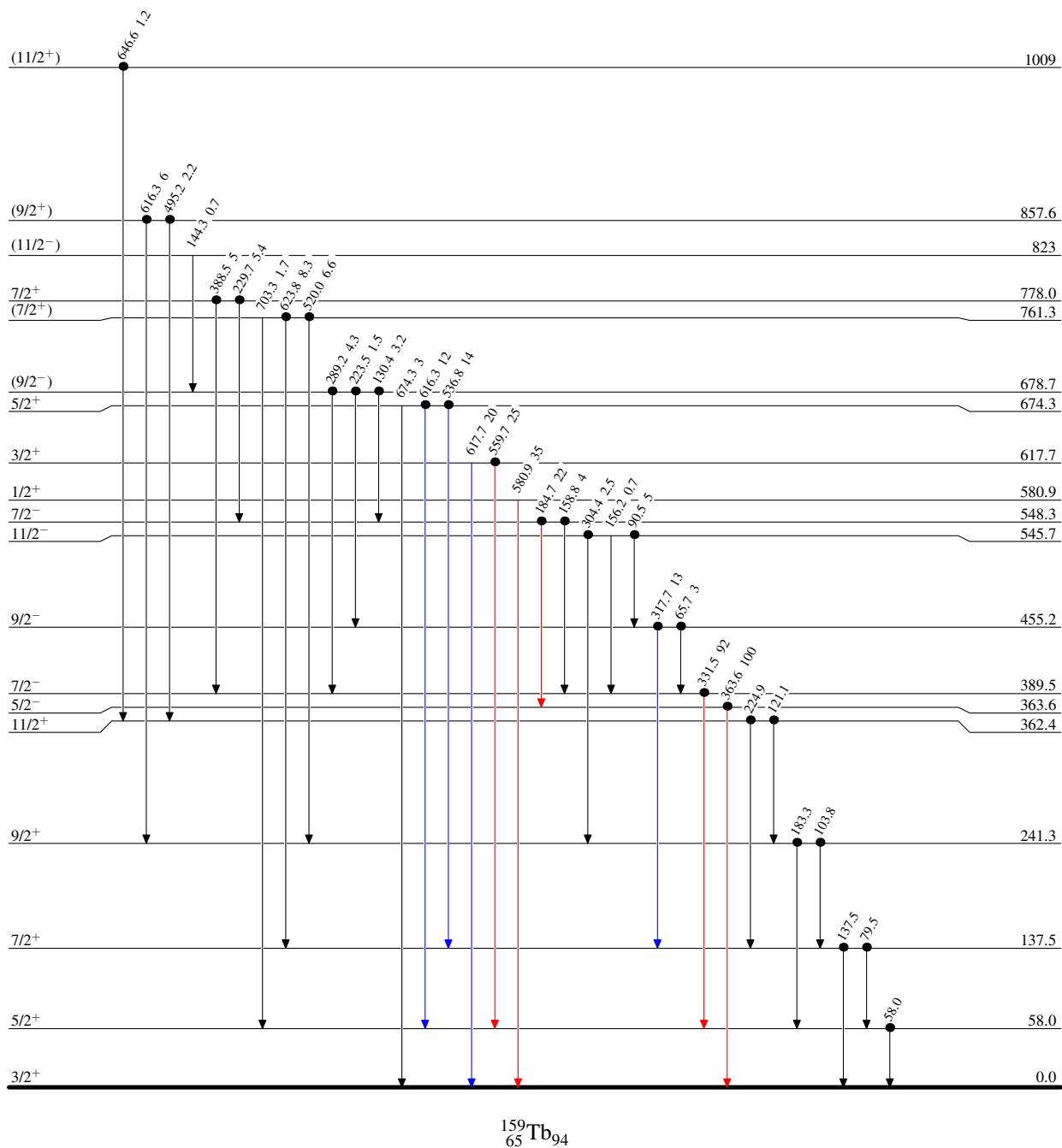
† Calculated by evaluator from level energies of 1974Wi22.

$^{160}\text{Gd}(p,2n\gamma)$ 1974Wi22

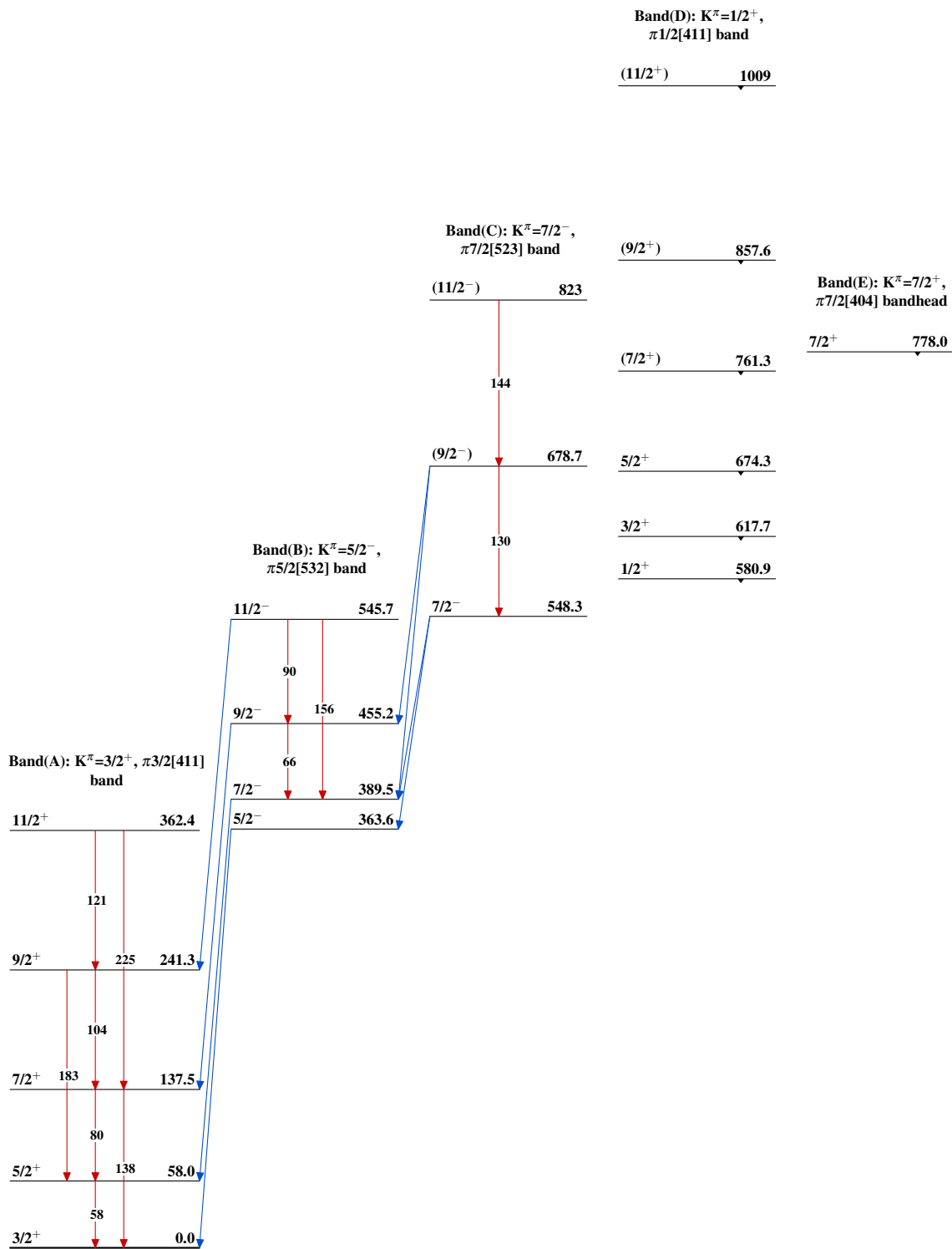
Legend

Level Scheme
Intensities: Relative I_γ

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



$^{159}\text{Tb}_{94}$

$^{160}\text{Gd}(p,2n\gamma)$ 1974Wi22 $^{159}\text{Tb}_{94}$