

¹⁵⁸Dy(d,d') 1968Gr08

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	N. Nica	NDS 141, 1 (2017)	1-Feb-2017

E(d)=12 MeV, spectrometer resolution=8 keV. Observed deuterons at 60°, 90° and 125°.

¹⁵⁸Dy Levels

E(level)	J ^π †	dσ/dΩ(μb/sr)‡	Comments
0 [#]	0 ⁺	51800	
99 [#]	2 ⁺	5200	
317 [#]	4 ⁺	151	
638 [#]	6 ⁺	6	
948&	2 ⁺	144	B(E2)=0.164 from dσ/dΩ(90°), if (dσ/dΩ)/B(E2)†=880.
993@	0 ⁺	4	
1087@	2 ⁺	36	
1164&	4 ⁺	10	
1279@	4 ⁺	2	
1398	3 ⁻	218	B(E3)=0.164 from dσ/dΩ(90°), if (dσ/dΩ)/B(E3)†=1400.
1440		4	J ^π : Assigned 1 ⁻ in Adopted Levels.
1513		9	J ^π : Assigned 2 ⁺ , 3, 4 ⁺ in Adopted Levels.
1527	(5 ⁻)	4	
1546		8	J ^π : Assigned 6 ⁺ in Adopted Levels.
1709		4	
1821		4	
1838		2	J ^π : Assigned 2 ⁺ , 3, 4 ⁺ in Adopted Levels.
1924		5	J ^π : Assigned 3 ⁺ , 4 ⁺ , 5 ⁺ in Adopted Levels.
1974		10	J ^π : Assigned 1 ⁺ , 2 ⁺ in Adopted Levels.
2034		3	
2048		7	
2101		13	J ^π : In Adopted Levels 2096 level has no J ^π assignment and 2107 level is assigned 4 ⁺ .
2151		2	J ^π : Assigned 6 ⁺ in Adopted Levels.

† Authors' J^π and band assignments and based on "semi-empirical rules governing intensities and angular distributions."

Assignments agree with those in Adopted Levels, unless noted otherwise.

‡ Cross section for (α,t) reaction at 90°.

Band(A): ground-state band.

@ Band(B): K=0⁺ β-vibrational band.

& Band(C): K=2⁺ γ-vibrational band.

 $^{158}\text{Dy}(\text{d,d}') \quad 1968\text{Gr08}$

Band(B): K=0⁺
 β -vibrational band

4⁺ 1279

Band(C): K=2⁺
 γ -vibrational band

4⁺ 1164

2⁺ 1087

0⁺ 993

2⁺ 948

Band(A): Ground-state
band

6⁺ 638

4⁺ 317

2⁺ 99

0⁺ 0