

$^{160}\text{Gd}(^{37}\text{Cl},\text{X}\gamma)$ 2001Li13

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	N. Nica	NDS 195,1 (2024)	19-Sep-2023

Data set based on the information in the XUNDL file compiled by G. Reed and B. Singh, McMaster University (March 8, 2001).

2001Li13 used this “deep-inelastic” reaction to study the yrast and near-yrast decay sequences in ^{159}Dy through ^{162}Dy .

$E(^{37}\text{Cl})=234$ MeV. Enriched (98.2% ^{160}Gd) target, 12 mg/cm² thick on an isotopically enriched (99.47%) ^{208}Pb backing. γ 's detected using the EUROBALL IV array. Measured $E\gamma$ and $\gamma\gamma$. The sequence of yrast levels up to the probable 20^+ member were reported.

 ^{162}Dy Levels

E(level)	J^π	Comments
0 [†]	0 ⁺	
80 [†]	2 ⁺	
265 [†]	4 ⁺	
548 [†]	6 ⁺	
920 [†]	8 ⁺	
1374 [†]	10 ⁺	
1901 [†]	12 ⁺	
2492 [†]	14 ⁺	
3138 [†]	16 ⁺	
3831 [†]	18 ⁺	
4572? [†]	(20 ⁺)	2001Wu05 and 2002Ju08 report this level as being deexcited by a 746.4 γ and a 747 γ , respectively.

[†] Band(A): yrast band.

 $\gamma(^{162}\text{Dy})$

E_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π
80	80	2 ⁺	0	0 ⁺
185	265	4 ⁺	80	2 ⁺
283	548	6 ⁺	265	4 ⁺
372	920	8 ⁺	548	6 ⁺
454	1374	10 ⁺	920	8 ⁺
527	1901	12 ⁺	1374	10 ⁺
591	2492	14 ⁺	1901	12 ⁺
646	3138	16 ⁺	2492	14 ⁺
693	3831	18 ⁺	3138	16 ⁺
741 [†]	4572?	(20 ⁺)	3831	18 ⁺

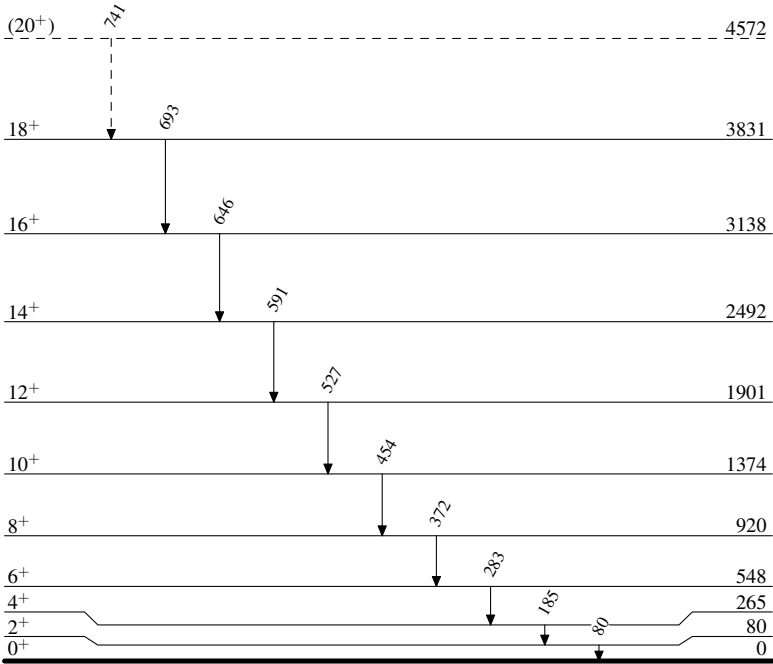
[†] Placement of transition in the level scheme is uncertain.

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Legend

Level Scheme

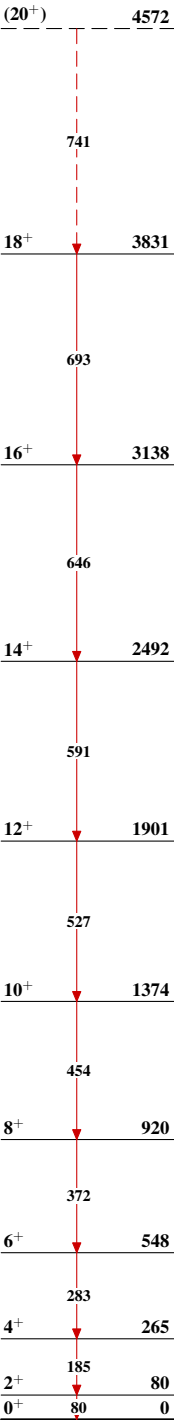
-----> γ Decay (Uncertain)



$^{162}_{66}\text{Dy}_{96}$

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Band(A): Yrast band



$^{162}_{66}\text{Dy}_{96}$