

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

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	C. W. Reich	NDS 112,2497 (2011)	1-Jun-2011

Additional information 1.

Deep-inelastic reaction, $E(^{37}\text{Cl})=234$ MeV. Enriched (98.2%) target, thickness=12 mg/cm², on a 40 mg/cm² backing of enriched ^{208}Pb to stop the recoil reaction fragments. γ radiation detected using the EUROBALL IV array. Measured $E\gamma$, $\gamma\gamma$.

Data reported In the form of a level scheme listing only the $E\gamma$ values and J^π values for the levels.

 ^{161}Dy Levels

$E(\text{level})^\dagger$	$J^\pi^\ddagger$	$E(\text{level})^\dagger$	$J^\pi^\ddagger$	$E(\text{level})^\dagger$	$J^\pi^\ddagger$	$E(\text{level})^\dagger$	$J^\pi^\ddagger$
0 [#]	5/2 ⁺	508 [#]	17/2 ⁺	1693 [#]	29/2 ⁺	4225 [#]	45/2 ⁺
44 [@]	7/2 ⁺	719 [@]	19/2 ⁺	2161 [@]	31/2 ⁺	4991? [#]	49/2 ⁺
100 [#]	9/2 ⁺	826 [#]	21/2 ⁺	2234 [#]	33/2 ⁺	5801? [#]	53/2 ⁺
184 [@]	11/2 ⁺	1119 [@]	23/2 ⁺	2790? [@]	35/2 ⁺		
267 [#]	13/2 ⁺	1222 [#]	25/2 ⁺	2841 [#]	37/2 ⁺		
407 [@]	15/2 ⁺	1602 [@]	27/2 ⁺	3506 [#]	41/2 ⁺		

[†] Computed from the listed γ -ray energies. 2001Li13 do not report level energies.

[‡] From the Adopted Values and considerations of expected band structure.

[#] Band(A): 5/2[642] band, $\alpha=+1/2$ branch.

[@] Band(a): 5/2[642] band, $\alpha=-1/2$ branch.

 $\gamma(^{161}\text{Dy})$

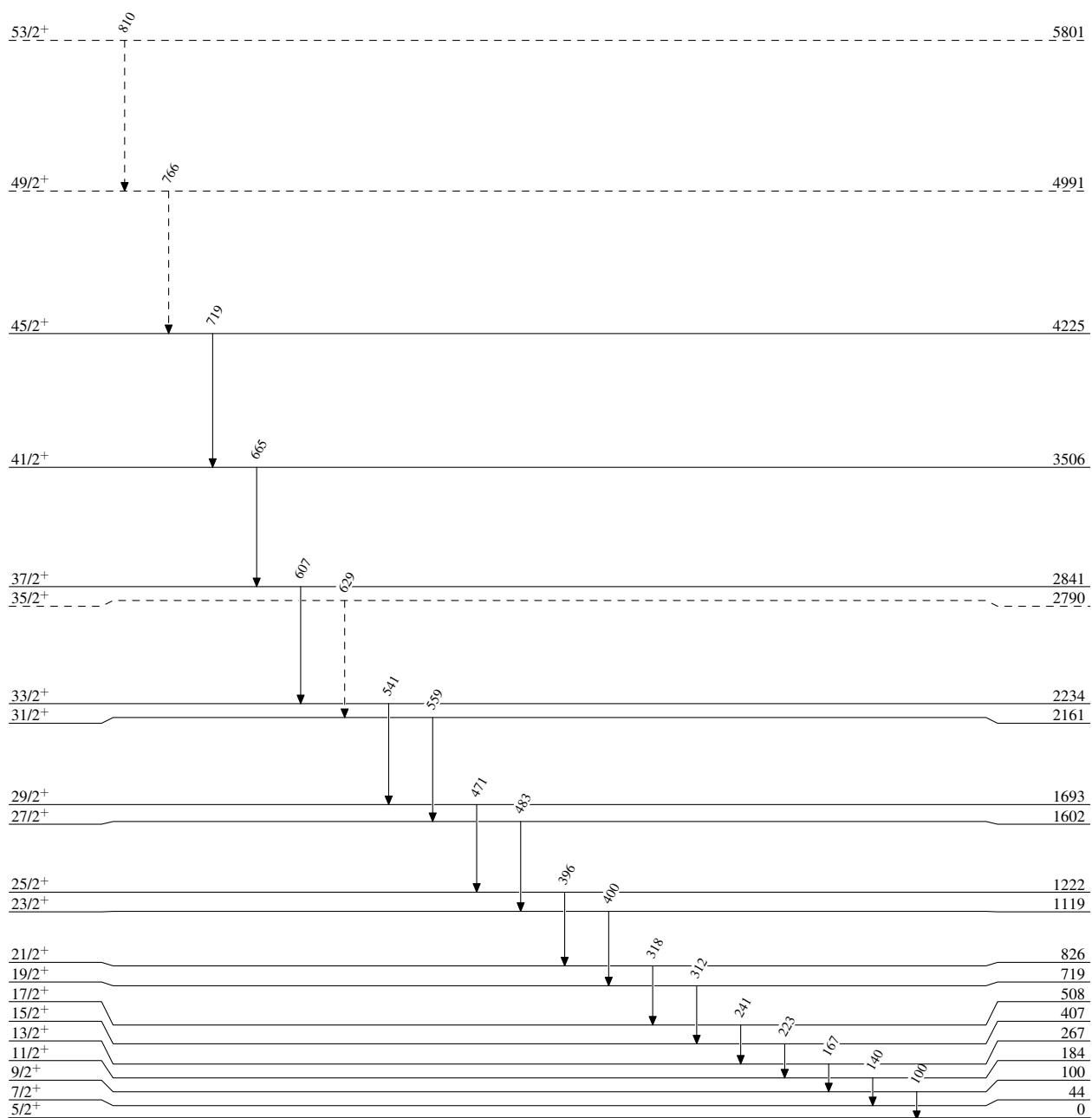
E_γ	$E_i(\text{level})$	J^π_i	E_f	J^π_f	Comments
(44)	44	7/2 ⁺	0	5/2 ⁺	E_γ : nominal value from the Adopted Values. γ not listed by 2001Li13.
100	100	9/2 ⁺	0	5/2 ⁺	
140	184	11/2 ⁺	44	7/2 ⁺	
167	267	13/2 ⁺	100	9/2 ⁺	
223	407	15/2 ⁺	184	11/2 ⁺	
241	508	17/2 ⁺	267	13/2 ⁺	
312	719	19/2 ⁺	407	15/2 ⁺	
318	826	21/2 ⁺	508	17/2 ⁺	
396	1222	25/2 ⁺	826	21/2 ⁺	
400	1119	23/2 ⁺	719	19/2 ⁺	
471	1693	29/2 ⁺	1222	25/2 ⁺	
483	1602	27/2 ⁺	1119	23/2 ⁺	
541	2234	33/2 ⁺	1693	29/2 ⁺	
559	2161	31/2 ⁺	1602	27/2 ⁺	
607	2841	37/2 ⁺	2234	33/2 ⁺	
629 [†]	2790?	35/2 ⁺	2161	31/2 ⁺	
665	3506	41/2 ⁺	2841	37/2 ⁺	
719	4225	45/2 ⁺	3506	41/2 ⁺	
766 [†]	4991?	49/2 ⁺	4225	45/2 ⁺	
810 [†]	5801?	53/2 ⁺	4991?	49/2 ⁺	

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

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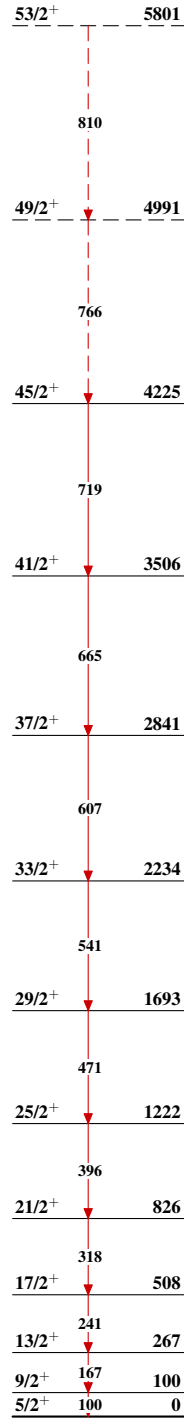
Legend

Level Scheme

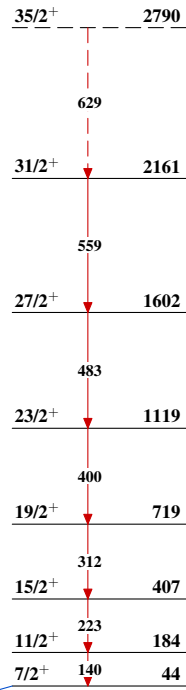
-----► γ Decay (Uncertain) $^{161}_{66}\text{Dy}_{95}$

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Band(A): 5/2[642] band,
 $\alpha=+1/2$ branch



Band(a): 5/2[642] band,
 $\alpha=-1/2$ branch



$^{161}_{66}\text{Dy}_{95}$