^{152}Gd(α,6nγ) 1980LuZV,1979LuZZ

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	S. K. Basu, A. A. Sonzogni	NDS 114, 435 (2013)	1-Apr-2013

E=75-98 MeV.
In addition to (α,6n) reactions, ^{136}Ce(^{18}O,4nγ) experiments were performed at 83 MeV in which ce spectra were measured using a transport solenoid backed by silicon detector.

^{150}Dy Levels

E(level)	J$^\pi$‡	T$_{1/2}$	E(level)	J$^\pi$‡	T$_{1/2}$	E(level)	J$^\pi$‡
0	0$^+$	7.17# min *5*	3025.6 *22*	10$^+$	1.1@ ns *3*	5416?† *3*	17$^{(+)}$
803.4 *10*	2$^+$		3472.2 *24*	(11$^-$)		5613† *3*	18
1456.7 *14*	4$^+$		3834.5 *24*	12$^+$		5813 *3*	19$^-$
1850.6 *17*	6$^+$		4337 *3*	14$^+$		6019 *3*	20$^-$
2401.5 *20*	8$^+$		4567 *3*	16$^+$	1.7@ ns *2*	6395 *3*	(21$^-$)
2812.7 *22*	9$^-$		5071 *3*	18$^+$			

† The order of the 200-, 197-, and 849-keV γ rays was not established in this experiment; however, the 5416, 5613, and 6395 levels are confirmed in (^{40}Ar,4nγ).
‡ Spin and parity assignments were made on the basis of $\gamma(\theta)$ and deduced multipolarity.
# Adopted value.
@ From adopted values.

γ(^{150}Dy)

E$_\gamma$	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.†	E$_\gamma$	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.†
197.3	5613	18	5416?	17$^{(+)}$		504.3	5071	18$^+$	4567	16$^+$	E2
200.2	5813	19$^-$	5613	18		550.9	2401.5	8$^+$	1850.6	6$^+$	E2
205.9	6019	20$^-$	5813	19$^-$	M1	624.1	3025.6	10$^+$	2401.5	8$^+$	E2
212.9	3025.6	10$^+$	2812.7	9$^-$		653.3	1456.7	4$^+$	803.4	2$^+$	E2
229.6	4567	16$^+$	4337	14$^+$	E2	659.5	3472.2	(11$^-$)	2812.7	9$^-$	
376.3‡	6395	(21$^-$)	6019	20$^-$	M1	742.0	5813	19$^-$	5071	18$^+$	E1
393.9	1850.6	6$^+$	1456.7	4$^+$	E2	803.4	803.4	2$^+$	0	0$^+$	E2
411.2	2812.7	9$^-$	2401.5	8$^+$	E1	808.9	3834.5	12$^+$	3025.6	10$^+$	E2
502.7	4337	14$^+$	3834.5	12$^+$	E2	849.0	5416?	17$^{(+)}$	4567	16$^+$	(M1)

† Multipolarities were determined from α(K)exp, but no details are given.
‡ Placement of transition in the level scheme is uncertain.

Legend

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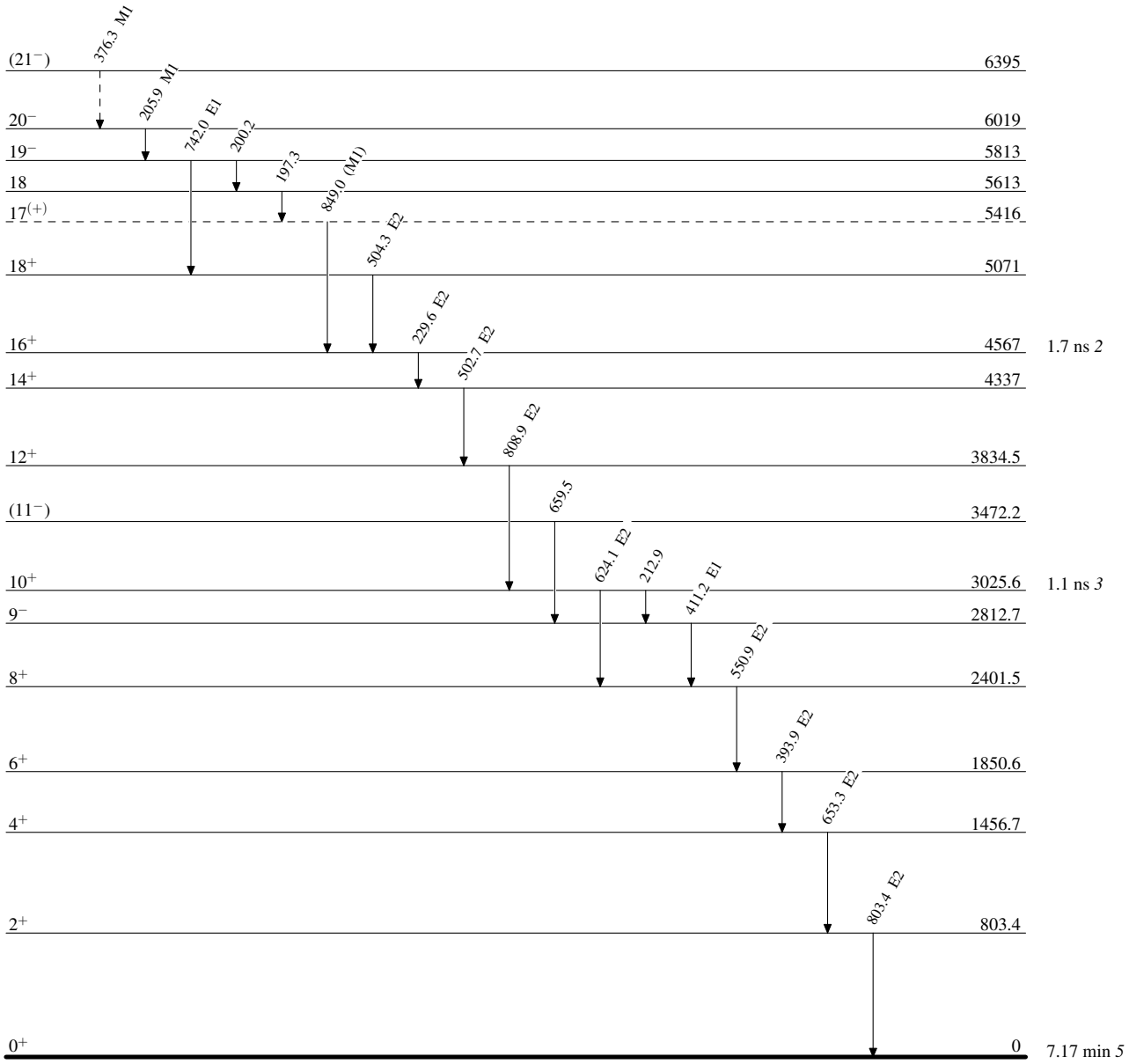
Level Scheme

γ Decay (Uncertain)



$^{150}_{66}Dy_{84}$