

$^{160}\text{Gd}(^{14}\text{C},4n\gamma)$ 1973Ha35

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	C. M. Baglin ¹ , E. A. Mccutchan ² , S. Basunia ¹		NDS 153, 1 (2018)	1-Oct-2018

E=62 MeV; measured $E\gamma$, $I\gamma$, $\gamma(\theta)$, $\gamma\gamma$ coin, γ excit.

 ^{170}Yb Levels

$E(\text{level})^{\dagger}$	$J^{\pi\ddagger}$
0.0	0^{+}
84.3 3	2^{+}
277.3 5	4^{+}
573.0 6	6^{+}
962.9 6	8^{+}
1437.1 7	10^{+}
1983.0 8	12^{+}
2580.3 8	14^{+}
3195.6 9	16^{+}
3807.9 9	18^{+}

[†] From least-squares fit to $E\gamma$.

[‡] Authors' values, based on $\gamma(\theta)$ and reaction systematics.

 $\gamma(^{170}\text{Yb})$

$E\gamma$	$I\gamma^{\ddagger}$	$E_i(\text{level})$	J_i^{π}	E_f	J_f^{π}	Mult. [†]	$\alpha^{\#}$	Comments
84.3 3		84.3	2^{+}	0.0	0^{+}			
193.0 3	100	277.3	4^{+}	84.3	2^{+}	E2	0.303	$A_2=+0.19$ 1; $A_4=-0.10$ 2.
295.7 3	81 8	573.0	6^{+}	277.3	4^{+}	E2	0.0772	$A_2=+0.25$ 2; $A_4=-0.11$ 3.
389.9 3	64 6	962.9	8^{+}	573.0	6^{+}	E2	0.0346	$A_2=+0.28$ 2; $A_4=-0.09$ 4.
474.2 3	44 4	1437.1	10^{+}	962.9	8^{+}	E2	0.0204	$A_2=+0.30$ 4; $A_4=-0.09$ 6.
545.9 3	33 3	1983.0	12^{+}	1437.1	10^{+}	E2	0.01431	$A_2=+0.31$ 4; $A_4=-0.05$ 5.
597.3 3	28 3	2580.3	14^{+}	1983.0	12^{+}	E2	0.01151	$A_2=+0.31$ 5; $A_4=-0.10$ 10.
612.3 3	9.0 9	3807.9	18^{+}	3195.6	16^{+}	E2	0.01085	$A_2=+0.34$ 9; $A_4=-0.06$ 12.
615.3 3	16.0 16	3195.6	16^{+}	2580.3	14^{+}	E2	0.01073	$A_2=+0.36$ 8; $A_4=-0.04$ 10.

[†] $\gamma(\theta)$ consistent with stretched quadrupole; if $\gamma\gamma$ coin resolving time <40 ns (as in 1972Mo44), M2 is excluded (based on RUL) for $E\gamma < 500$. Authors assign E2 to higher energy Q transitions based on rotational band structure.

[‡] Relative photon intensities normalized so $I\gamma(193\gamma)=100$.

[#] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ -ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

