

$^{157}\text{Gd}(t,p)$ 1989Lo07

| Type | Author | History Citation | Literature Cutoff Date |
|-----------------|-------------|---------------------|------------------------|
| Full Evaluation | C. W. Reich | NDS 113, 157 (2012) | 31-Dec-2010 |

Additional information 1.

$E(t)=17$ MeV, $\text{FWHM}\approx 25$ keV, and $J^\pi(^{157}\text{Gd})=3/2^-$, $\text{conf}=\nu 3/2^-$ [521].

 ^{159}Gd Levels

| <u>E(level)[†]</u> | <u>L#</u> | <u>S@&</u> | <u>E(level)[†]</u> | <u>L#</u> | <u>S@&</u> | <u>E(level)[†]</u> | <u>L#</u> | <u>S@&</u> | <u>E(level)[†]</u> | <u>L#</u> | <u>S@&</u> |
|-----------------------------|-----------|----------------|-----------------------------|-----------|----------------|-----------------------------|-----------|----------------|-----------------------------|-----------|----------------|
| 0 | 0 | 91 | 871 | | 3 | 1520 | | 2 | 2044 | | 4 |
| 53 | | 5 | 945 | | 3 | 1585 | | 3 | 2163 [‡] | | 4 |
| 121 [‡] | | 5 | 1054 [‡] | | 3 | 1600 [‡] | (0) | 4 | 2191 [‡] | | 4 |
| 151 | | 2 | 1111 | 0 | 29 | 1671 [‡] | | 3 | 2274 | | 5 |
| 186 | | 3 | 1147 | | 10 | 1694 | | 4 ^a | 2358 | | 4 |
| 220 [‡] | | 5 | 1190 | | 4 | 1781 | | 7 ^a | 2448 [‡] | | 6 ^a |
| 507 | | 5 | 1281 [‡] | | 4 | 1848 | (0) | 13 | 2492 [‡] | | 6 ^a |
| 558 | | 2 | 1327 | | 4 | 1871 | | 1 | 2616 | | 8 |
| 589 | | 5 | 1430 | | 9 | 1895 [‡] | | 2 | 2648 | | 5 |
| 706 [‡] | | 6 | 1471 [‡] | | 1 | 1920 [‡] | | 3 | 2708 [‡] | (0) | 5 |
| 760 | | 4 | 1502 | | 2 | 1990 | | 4 | 2733 [‡] | | 4 |

[†] From a general statement, the uncertainties are ≈ 7 keV.

[‡] Association of this peak with a specific final state is problematic, in that it can overlap more than one final state.

Except for those with $L=0$, the angular distributions by themselves are not sufficient to allow an unambiguous determination of the J^π values for the final states.

@ Label= $d\sigma/d\Omega(\mu\text{b/sr})$.

& Cross section at 30° , unless otherwise noted.

^a Cross section at 20° .