

$^{89}\text{Y}(\text{d},\text{d}')$ 1962Ha39

| Type | Author | History Citation | Literature Cutoff Date |
|-----------------|--------------|-------------------|------------------------|
| Full Evaluation | Balraj Singh | NDS 114, 1 (2013) | 20-Oct-2012 |

1962Ha39: E=15 MeV. Deduced levels and cross sections.

1961Co07 (also 1962Jo05): E=15 MeV. Levels reported at 1410, 1530, 1810, 2290, 2590, 2920, 3170 and 3780.

1988Tu01: E=83 MeV. Measured giant-quadrupole resonance (GQR).

(d,d) and deduced optical-model parameters: 1988Bo23 (E=58.7, 85 MeV), 1987Bo01, 1980Da08 (12-90 MeV), 1975WiYT (22 MeV), 1974Ch27 and 1977ChYO (17 MeV), 1973Hr01 (60-90 MeV), 1971Du09 (80 MeV), 1968Ko20 (136 MeV), 1966Du03 and 1966Du08 (52 MeV).

Additional information 1.

 ^{89}Y Levels

| E(level) [†] | L | σ At 30° (mb/sr) [‡] | Comments |
|------------------------|---|--------------------------------------|--|
| 0 | | | |
| 1510 10 | | 0.35 4 | |
| 1742 10 | | 0.41 4 | |
| 2227 10 | | 0.48 4 | |
| 2533 15 | | 0.66 4 | |
| 2866 15 | | 0.56 4 | |
| 3135 20 | | 0.25 3 | E(level): broad peak. |
| 3740 20 | | 0.18 3 | |
| 4020 30 | | 0.16 3 | |
| 4200 30 | | 0.23 3 | |
| 4340 30 | | 0.07 4 | |
| 4490 30 | | 0.07 4 | |
| 4790? 40 | | | |
| 14.5×10 ³ 3 | 2 | | E(level),L: GQR from 1988Tu01, FWHM=4.7 MeV 6. |

[†] From 1962Ha39, unless otherwise stated.

[‡] Cross section at 30° (1962Ha39). Values at $\theta=60^\circ$ and 85° are also available from 1962Ha39.