

⁷¹Ga(d,t) 1975Do02,1973Yn01

Type	Author	History	Citation	Literature Cutoff Date
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Target: $J^\pi=3/2^-$.

1975Do02: E(d)=16 MeV. Measured $\sigma(\theta)$ for $\theta=15^\circ$ to 90° in 5° steps using Enge split-pole magnetic spectrograph and Ilford K-1 emulsions (FWHM=5-8 keV); DWBA analysis.

1973Yn01: E(d)=22.6 MeV. Measured $\sigma(\theta)$ for $\theta=15^\circ$ to 53° in 3° steps using E-dE/dx telescope; DWBA analysis.

1971Ar12: E(d)=12.1 MeV. Measured $\sigma(\theta)$ at 60° and 90° using single-gap, broad-range, magnetic spectrograph and photographic plates (FWHM=3-8 keV).

⁷⁰Ga Levels

E(level) [†]	L [‡]	C ² S [#]	Comments
0.0	1+3	0.30+0.19	L,C ² S: other: L=1, C ² S=0.33 (1973Yn01).
507 1	1+3	0.50+0.46	E(level): others: 509 10 (1973Yn01), 505 5 (1971Ar12). L,C ² S: other: L=1, C ² S=0.5 (1973Yn01).
649 2	1+3	0.18+0.15	E(level): others: 663 10 (1973Yn01), 646 6 (1971Ar12). L,C ² S: other: L=1, C ² S=0.17 (1973Yn01).
686 10			E(level): from 1971Ar12, level observed only at 60°.
876 2	2+4	0.02+0.11	
899 2	3	1.38	E(level): others: 904 10 (1973Yn01), 897 5 (1971Ar12). L,C ² S: other: L=1, C ² S=1.5 (1973Yn01).
995 2	1+3	0.37+0.36	E(level): other: 991 5 (1971Ar12).
1010 2	1 [@]	0.10	C ² S: sum for doublet at 1010 keV and 1014 keV. E(level): others: 1018 10 (1973Yn01), 1019 5 (1971Ar12), likely both correspond to unresolved doublet.
1014 2	1 [@]	0.10	C ² S: sum for doublet at 1010 keV and 1014 keV. E(level): others: 1018 10 (1973Yn01), 1019 5 (1971Ar12), likely both correspond to unresolved doublet.
1023 2	1+3	0.09+1.03	
1035 4	4	0.50	
1098 4			
1138 4			
1202 3	1	0.03	E(level): other: 1195 10 (1971Ar12).
1231 3	4	0.33	E(level): other: 1227 10 (1971Ar12).
1250 4	1	0.1	E(level): others: 1250 10 (1973Yn01), 1256 6 (1971Ar12). L,C ² S: from 1973Yn01.
1262 4	1	0.02	
1306 2	1 [@]	0.11	C ² S: sum for doublet at 1306 keV and 1313 keV. E(level): other: 1303 6 (1971Ar12).
1313 4	1 [@]	0.11	C ² S: sum for doublet at 1306 keV and 1313 keV. E(level): other: 1320 10 (1973Yn01). L,C ² S: L=1, C ² S=0.12 (1973Yn01).
1357 3	1	0.11	E(level): other: 1353 6 (1971Ar12).
1443 4	1	0.11	
1455 2	1	0.23	E(level): others: 1450 10 (1973Yn01), 1445 10 (1971Ar12). L,C ² S: other: L=1, C ² S=0.25 (1973Yn01).
1498 4	1	0.03	
1517 2	1+3	0.13+0.06	
1532 2	1+3	0.12+0.03	
1554 3	1	0.63	E(level): other: 1570 10 (1973Yn01). L,C ² S: other: L=1, C ² S=0.5 (1973Yn01).
1620 3	2+4	0.03+0.08	
1718 3	1	0.20	
1734 3	1	0.14	E(level): L=2 in (d,p) for E=1734 indicates a doublet.

Continued on next page (footnotes at end of table)

$^{71}\text{Ga}(\text{d,t})$ 1975Do02,1973Yn01 (continued) ^{70}Ga Levels (continued)

<u>E(level)[†]</u>	<u>L[‡]</u>	<u>C²S[#]</u>	<u>Comments</u>
1793 3	1	0.03	
1805 3			
1823 3	1	0.06	E(level): L=2 in (d,p) for E=1822 indicates a doublet.
1865 3			
1906 3	1	0.06	
1928 3	1	0.08	
1937 3	1	0.04	
1968 2	1	0.12	
2012 4			

[†] From 1975Do02, except where noted.

[‡] From DWBA analysis of $\sigma(\theta)$ in 1975Do02, except where noted.

[#] From 1975Do02, except where noted. Derived using $d\sigma/d\Omega_{\text{exp}}=3.33C^2S(d\sigma/d\Omega)_{\text{DWBA}}$.

[@] From closely spaced doublet.