

²⁷Al(p,p') 1972Ka46,1976Mo09,1968Sm02

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia		NDS 112,1875 (2011)	30-Nov-2010

Others: 1970Ro11, 1967Wa24, 1958Ra26, 1978We06.

1976Mo09: ²⁷Al(p,p'), E=16.0; Q3d magnetic spectrometer; measured $\sigma(E(p)')$, deduced excited level energies.

1972Ka46: ²⁷Al(p,p'), E=11.5 and 11.0 MeV; scattered protons recorded at 90° and 100°; 110° and 125°, respectively, for two bombarding energies; Notre Dame broad range spectrograph, deduced excited level energies.

1968Sm02: ²⁷Al(p,p' γ), E=4.5 and 6.0 MeV, Ge(Li) surrounded by NaI detector; measured meanlife of excited states using Doppler-shift attenuation method (DSM).

1978We06: ²⁶Mg(p,p), E=1.54-3.06 MeV.

²⁷Al Levels

E(level) [†]	T _{1/2} [@]	E(level) [†]	E(level) [†]	E(level) [†]
0		7280.3 27	8733 3	9819 3
843.0 10		7288.9 27	8755 3	9836 3
1013.8 10	1.0 ns 3	7399.8 27	8775 3	9867 3
2210.6 10	38 fs 6	7412.6 27	8803 3	9883 3
2733.8 10	11 fs 5	7440.8 27	8825 3	9893 3
2980.3 10	10 fs 6	7475.8 27	8861 3	9921 3
3003.5 10	58 fs 5	7548.7 27	8897 3	9930 3
3678.3 10	<21 fs	7577.9 28	8905 3	9943 3
3955.2 10	<14 fs	7661.9 28	8953 3	9963 3
4053.9 10	<14 fs	7678.5 28	8963 3	9983 3
4408.9 10	<15 fs	7721.1 28	9001 3	9992 3
4509.3 10	208 fs 2I	7798.5 28	9051 3	10008 3
4579.6 10	<21 fs	7807.5 28	9060 3	10027 3
5417.4 20		7857.9 29	9080 3	10075 3
5432.3 20		7900.0 29	9189 3	10092 3
5437.4 20		7934.8 29	9216 3	10108 3
5498.9 20		7949.3 29	9238 3	10117 3
5549.3 20		7996.2 29	9274 3	10132 3
5666.0 21		8037.0 29	9299 3	10148 3
5748.7 21		8043.3 29	9308 3	10163 3
5825.6 21		8065.6 29	9322 3	10209 3
5959.5 22		8097.1 29	9359 3	10248 3
6079.0 22		8129.5 29	9371 3	10260 3
6113.8 22		8135.5 29	9390 3	10281 3
6157.4 22		8181.3 30	9399 3	10288 3
6281.7 23		8286.8 30	9427 3	10307 3
6461.6 24		8324 [‡] 3	9476 3	10316 3
6475.0 24		8361 [#] 3	9488 3	10332 3
6511.4 24		8375 3	9503 3	10340 3
6533.1 24		8396 3	9513 3	10360 3
6603.5 24		8408 3	9530 3	10370 3
6649.8 24		8420 3	9552 3	10406 3
6712.5 25		8443 3	9603 3	10421 3
6765.1 25		8492 3	9619 3	10448 3
6775.9 25		8522 3	9636 3	10456 3
6811.9 25		8537 3	9659 3	10478 3
6820.3 25		8554 3	9664 3	10506 3
6948.5 25		8588 3	9692 3	10516 3
6992.4 26		8597 3	9713 3	10527 3
7070.5 26		8676 3	9742 3	10553 3
7173.2 26		8696 3	9759 3	10566 3
7226.3 26		8716 3	9792 3	10590 3

Continued on next page (footnotes at end of table)

 $^{27}\text{Al}(\text{p},\text{p}')$ [1972Ka46](#),[1976Mo09](#),[1968Sm02](#) (continued) ^{27}Al Levels (continued)

<u>E(level)[†]</u>	<u>E(level)[†]</u>	<u>E(level)[†]</u>
10598 3	10674 3	10718 3
10625 3	10694 3	10735 3
10647 3	10715 3	10749 3

[†] Excitation energies 0 to 4579 keV are from Adopted Levels, from 5417 to 8375 keV are from [1972Ka46](#), and above 8375, from [1976Mo09](#), except otherwise noted.

[‡] From [1976Mo09](#). This level is considered uncertain in [1972Ka46](#).

From [1976Mo09](#).

@ From [1968Sm02](#), using the Doppler-shift attenuation method (DSM).