

$^{36}\text{Ar}(t,p)$ 1975F108

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jun Chen	NDS 152, 1 (2018)	30-Sep-2017

1975F108, 1973Ca13: E=20 MeV triton beam was produced from the Los Alamos three-stage Van de Graaff. Target was 99.5% enriched ^{36}Ar gas. Reaction products were momentum-analyzed with a broad-range magnetic spectrograph (FWHM \approx 35 keV) and detected in nuclear emulsions. Measured $\sigma(E(p),\theta)$. Deduced levels, J, π , L-transfers from DWBA analysis. Comparisons with available data.

1979Fo17: E=15 MeV; measured $\sigma(E(p),\theta)$ for ground state.

All data are from 1975F108, unless otherwise noted.

 ^{38}Ar Levels

E(level) ‡	L	$d\sigma/d\Omega(\text{max})$ (mb/sr) †	E(level) ‡	L	$d\sigma/d\Omega(\text{max})$ (mb/sr) †
0	0	0.22 [@]	7920 15	(3,4)	0.034 [@]
2169 5	2	0.021 [#]	8050 20	3,4	0.091 [@]
3380 5	0	0.077	8111 20		0.039
3820 5	3,4	0.11 [#]	8185 20	3,4	0.047
3940 5	2	0.27 [#]	8243 20		0.18 [#]
4480 5		0.004	8405 20		0.045 [#]
4585 10		0.16 [#]	8520 20		0.076
4712 10	0	0.035 [#]	8680 20	2	0.085 [#]
4890 10	3,4	0.041 [#]	8760 20		0.014 [#]
5080 15		0.006 [#]	8817 20		0.018 [@]
5170 15	2	0.14 [#]	8950 20		0.026
5360 15	3,4	0.13	9029 20		0.007 [#]
5520 15	3,4	0.010 [#]	9100 20		0.042
5600 15	2	0.19 [#]	9170 20		0.013
5670 15		0.034	9288 20		0.10 [#]
5740 15	2	0.042 [#]	9401 20		0.026
5830 15	3,4	0.12 [#]	9435 20		0.12 [#]
6055 15		0.043	9481 20		0.068 [#]
6228 15		0.042	9530 20	2	0.075 [#]
6287 15	3,4	0.18	9623 20		0.13
6408 15		0.04 ^{&}	9720 20	2 ^b	0.068 [#]
6475 15		0.16	9770 20		0.069
6570 15	3,4	0.023 [#]	9863 20		0.034 [#]
6686 15		0.086	9923 20	3,4	0.071 [#]
6838 15	2	0.051 [#]	10003 20		0.055 [#]
6960 15	(2)	0.023 [#]	10050 20		0.037
7060 15	0	0.030 [@]	10100 20	3,4	0.060
7249 15	2	0.34 [#]	10182 20	3,4	0.084 [#]
7306 15	3,4	0.084 [#]	10424 20		0.041
7336 15		0.022	10510 20	(0) ^c	0.044 [#]
7484 15	3,4	0.018 [#]	10550 20	(0) ^c	0.38 [#]
7544 15		0.008	10595 20		0.038
7700 ^a 15	(3,4)	0.26 [#]	10694 20		0.16 [#]
7865 15		0.024			

Continued on next page (footnotes at end of table)

 $^{36}\text{Ar}(t,p)$ **1975FI08 (continued)** ^{38}Ar Levels (continued)

† At 20°, unless otherwise stated.

‡ For the 22 levels above 9 MeV the resolution is insufficient to establish possible correspondence with levels known with better precision from other reactions.

At 12.5°.

@ At 27.5°.

& At 35°.

^a Possible doublet.

^b Other: (0) from [1973Ca13](#).

^c From [1973Ca13](#).