^{38}Ar(^{6}Li,d) 1978Fo02

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen[#] and Balraj Singh	NDS 135, 1 (2016)	31-May-2016

Target ^{38}Ar g.s. $J^{\pi}=0^{+}$.

1978Fo02: E=17.0 MeV ^{6}Li beam. 95% enriched ^{38}Ar gas target. Reaction particles were momentum analyzed with a multi-range magnetic spectrograph. Measured $\sigma(\theta)$. Deduced levels, relative α-strengths and major configurations for 0^{+} states from DWBA calculations.

^{42}Ca Levels

All data are from 1978Fo02.

E(level)	L	Relative strength	E(level)	Relative strength
0[#]	0	1.00	4440[†]	
1520			4450[†]	
1840	0	0.22	5860	0.31
2420			6020[@]	
2750			6350	
3300	0	0.81	6520[‡]	0.13[&]
3650			6700[‡]	0.26[&]

[†] Unresolved doublet.
[‡] α-unbound level.
[#] $d\sigma/d\Omega(7.5°)=3.8$ μb/sr.
[@] Very weakly populated.
[&] DWBA cross section obtained by extrapolation.