³⁵Cl(α,**p**) **1980Ke01,1974Be68**

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

 $J^{\pi}(^{35}Cl \text{ g.s.})=3/2^+$.

1980Ke01: E=16 MeV alpha beam was produced from the 7-MV Van de Graaff accelerator of the University of Freiburg. Target was 140 μ g/cm² AgCl (98% in ³⁵Cl) evaporated onto a 10 μ g/cm² carbon backing. Charged particles were detected with an Δ E-E telescope of two annular surface barrier detectors. Measured proton spectra. Deduced levels up to 11614. Comparisons with shell-model calculations.

1974Be68: E=14 and 14.5 MeV alphas beams were produced from the 7-MV Van de Graaff accelerator of the University of Freiburg. Targets were AgCl evaporated on carbon or gold backings. Charged particles were detected with an ΔE-E telescope of two annular surface barrier detectors. Measured proton spectra. Deduced levels up to 9341.

Others:

1967Ro16: E=10.6 MeV. Measured proton spectrum. Deduced levels up to 5670. Measurement was at the same laboratory with similar setup as 1980Ke01 and 1974Be68.

1972St27: E=27.2 MeV; measured $\sigma(E(p),\theta)$ for g.s. and 2170 level.

1972Ba15: E=11.5 MeV. Measured proton spectrum. Seven groups shown in a spectrum below 6 MeV.

³⁸Ar Levels

E(level) [†]	L	S	Comments
0	0+2	12	$d\sigma/d\Omega$ (at 20°)=12 µb/sr (1972St27). L: 36% L=0, 64% L=2 (1972St27).
2170 [‡]	0+2+4	150	$d\sigma/d\Omega$ (at 20°)=150 µb/sr (1972St27). 24% L=0, 20% L=2 and 56% L=4 (1972St27). Proton(θ): A ₁ =+0.137, A ₂ =+0.171, A ₃ =-0.076, A ₄ =-0.085 (1972St27).
3380 [‡] 3810			
3937			
4480 4565 [#]			
4586 [#]			
4710 4877			E(level): reported in 1967Ro16 only, not resolved from 4386+4365+4480.
5084 [#]			
5350			E(level): reported in 19/4Beo8 for 5084+5157 doublet.
5513 5658			
5825 [#]			
5857# 6042 [#]			E(level): reported in 1974Be68 for 5825+5857 doublet.
6053 [#]			E(level): reported in 1974Be68 for 6042+6053 doublet.
6211 [#] 6250 [#]			F(level): reported in 1974Be68 for 6211+6250+6338 triplet
6338 [#]			E(level): reported in $1974Be68$ for $6211+6250+6338$ triplet.
6408 [#]			
6485" 6601 [#]			E(level): reported in $1974Be68$ for $6408+6485$ doublet. E(level): reported in $1974Be68$ for $6601+6674$ doublet.
6674 [#]			
6870 7045 [#]			E(level): reported in 1974Be68 for 7045+7070+7192 triplet.

Continued on next page (footnotes at end of table)

35 Cl(α ,p) 1980Ke01,1974Be68 (continued)

³⁸Ar Levels (continued)

E(level) [†]	Comments
7070 [#]	
7192 [#]	E(level): reported in 1974Be68 for 7045+7070+7192 triplet.
7289	E(level): reported in 1974Be68; could be unresolved from 7350 reported in 1980Ke01.
7350	
7451	E(level): reported in 19/4Be68, could be unresolved from 7508 reported in 1980Ke01.
7684	
7859 [#]	
7893 [#]	E(level): reported in 1974Be68 for 7859+7893 doublet.
8077	
8233	
8370	E(level): reported in 1974Be68, could be unresolved from 8233 reported in 1980Ke01.
8491 8522	E(level), reported in 107/Be68, could be unresolved from 8/01 reported in 1080Ke01
8804	Elevely. reported in 1974beoo, could be unesorved from 6491 reported in 1960keo1.
8972	
9338	
9535	
9928 10174	
10455	
10634	
10947	
11175	
11290	
11011	

[†] Read from proton spectrum in 1980Ke01, unless otherwise noted. Uncertainty is expected to be 20-30 keV, as estimated from the proton spectra in 1980Ke01. Above 6 MeV, groups listed here probably correspond to multiplets as suggested by the high level density in Adopted Levels. Values are also available from proton spectrum in 1974Be68 of the same laboratory and are consistent.

[±] From 1972Ba15 and 1967Ro16.
[#] Unresolved doublet or multiplet (1980Ke01,1974Be68).