

21 **ArClH₂⁺**

 IR, *ab initio* calculations
(MP2/aug-cc-pVTZ[#])

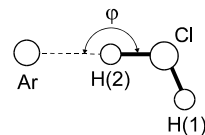
Chloronium – argon (1/1)

(weakly bound complex)

C_s

 (effective symmetry class)
(large-amplitude motion)
H₂Cl⁺ · Ar

r_e	Å ^{a)}	θ_e	deg ^{a)}
Cl–H(1)	1.3008(10)	H(1)–Cl–H(2)	94.39(10)
Cl–H(2)	1.3359(10)	$\varphi^b)$	178.26(10)
H(2)...Ar	1.9703(10)		



The structure was determined from the rotationally resolved Cl–H stretching fundamentals.
The complex has a H-bond equilibrium structure.

^{a)} Uncertainties were not given in the original paper.

^{b)} See figure for definition.

Dopfer, O., Roth, D., Maier, J.P.: J. Chem. Phys. **113** (2000) 120.