

Structure Data of Free Polyatomic Molecules

15	ArAuF	Argon – gold monofluoride (1/1)	C_{∞v}
MW		(weakly bound complex)	(effective symmetry class)
			(large-amplitude motion)
			Ar · AuF

r_0	Å ^{a)}
Ar...Au	2.391(5)
Au–F	1.918 ^{b)}

The complex is linear and rather rigid in the ground vibrational state, with the Ar...Au stretching wavenumber estimated as *ca.* 200 cm^{−1} and the stretching force constant as 97.0 N m^{−1}. The Ar...Au bond is weakly covalent.

^{a)} Uncertainty was not estimated in the original paper.

^{b)} Assumed.

Evans, C.J., Rubinoff, D.S., Gerry, M.C.L.: Phys. Chem. Chem. Phys. **2** (2000) 3943.