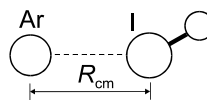


25
MW**ArHI****Argon – hydrogen iodide (1/1)**
(weakly bound complex)**C_s**
(effective symmetry class)
(large-amplitude motion)
Ar · HI

Isotopic species	$r_0(R_{\text{cm}})$ [Å]	$\theta_0[\text{Ar}\cdots\text{I}-\text{H}(\text{D})]$ [deg]
Ar · IH	3.9975(1)	149.33(1)
Ar · ID	3.9483(1)	157.11(1)



The ground state is shown to be in the isomeric form Ar · IH. The ground state potential energy surface has a barrier between the Ar · IH and Ar · HI isomers of 88.5 cm^{-1} with respect to the global minimum and predicts the presence of localized states in the secondary minimum associated with isomers Ar · H and Ar · D. Attempts to experimentally identify transitions associated with the latter were unsuccessful.

McIntosh, A., Wang, Z., Castillo-Chará, J., Lucchese, R.R., Bevan, J.W., Suenram, R.D., Legon, A.C.: J. Chem. Phys. **111** (1999) 5764.