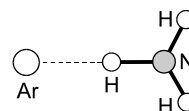


31  
IR $\text{ArH}_3\text{N}^+$ **Ammoniumyl – argon (1/1)**  
(weakly bound complex) $\text{C}_{2v}$   
(effective symmetry class)  
(large-amplitude motion) $\text{NH}_3^+ \cdot \text{Ar}$ 

State	$R_{\text{cm}} [\text{\AA}]^{\text{a}}$	$r(\text{H}\dots\text{Ar}) [\text{\AA}]^{\text{a}}$
$\nu=0$	3.300(1)	2.268(1)
$\nu_3=1$	3.297(1)	2.259(1)



Structure is planar in the  $^2\text{B}_1$  electronic ground state.

The structure was determined from the rotationally resolved IR photodissociation spectrum of the N–H stretch vibrations ( $\nu_1$  and  $\nu_3$ ) under the assumption that the geometry of the ammoniumyl subunit was unchanged upon complexation.

<sup>a</sup>) Uncertainties were unidentified.

Dopfer, O., Solcà, N., Olkhov, R.V., Maier, J.P.: Chem. Phys. **283** (2002) 85.