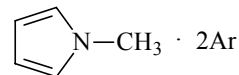


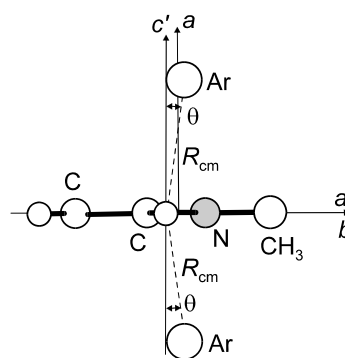
640  
MW $\text{C}_5\text{H}_7\text{Ar}_2\text{N}$ *N*-Methyl-1*H*-pyrrole – argon (1/2)  
(weakly bound complex) $\text{G}_{12}$   
(effective symmetry class)  
(large-amplitude motion)

$$\frac{r_0}{R_{\text{cm}}} \frac{\text{\AA}^{\text{a)}}}{3.458(5)}$$

$$\frac{\theta_0}{\theta^{\text{b)}}} \frac{\text{deg}^{\text{a)}}}{4.86(50)}$$



All rotational transitions were found to be split into A–E doublets because of the internal rotation of the methyl group. The potential barrier was determined to be  $V_6 = 55.6882 \text{ cm}^{-1}$ . The derived moments of inertia of the complex and its isotopomers led to a structure where the two argon atoms are found to lie on the opposite sides of the aromatic ring plane. The substitution structure of the aromatic ring was shown to coincide almost exactly with that of the *N*-methylpyrrole monomer. The rotational spectra of the complex with a partially deuterated methyl group led to a staggered conformation with one of the C–H bonds perpendicular to the ring plane.



<sup>a)</sup> Uncertainties were not estimated in the original paper.

<sup>b)</sup> See figure for the definition, where  $a'$  and  $c'$  are the principal axes of the methylpyrrole.

Huber, S., Makarewicz, J., Bauder, A.: Mol. Phys. **95** (1998) 1021.