

30  
MW**ArH<sub>3</sub>N****Ammonia – argon (1/1)**  
(weakly bound complex)**C<sub>s</sub>**  
(effective symmetry class)  
(large-amplitude motion)  
NH<sub>3</sub> · Ar

Isotopic species	$r_0(R_{\text{cm}})$ [Å] <sup>a)</sup>
Ar · ND <sub>3</sub> s <sup>b)</sup>	3.8151(3)
a <sup>b)</sup>	3.8152(3)
Ar · NHD <sub>2</sub> s <sup>b)</sup>	3.8236(3)
a <sup>b)</sup>	3.8235(3)
Ar · NH <sub>2</sub> D s <sup>b)</sup>	3.8314(3)
a <sup>b)</sup>	3.8310(3)

The stretching force constant and wavenumber are 0.889 N m<sup>-1</sup> and 33.6 cm<sup>-1</sup>, respectively.

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

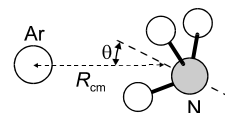
<sup>b)</sup> s and a denote the symmetric and antisymmetric inversion states, respectively.

van Wijngaarden, J., Jäger, W.: J. Chem. Phys. **114** (2001) 3968.

MW

$r_0$	Å	$\theta_0$	deg
$R_{\text{cm}}$ (s) <sup>a)</sup>	3.815158(4)	$\langle\theta\rangle$ (s) <sup>a)</sup> <sup>b)</sup>	62.00(50) <sup>c)</sup>
$R_{\text{cm}}$ (a) <sup>a)</sup>	3.802398(15)	$\langle\theta\rangle$ (a) <sup>a)</sup> <sup>b)</sup>	66.78(97)

Results obtained on <sup>40</sup>Ar · ND<sub>3</sub>.



<sup>a)</sup> s and a denote the symmetric ( $\Sigma 0_0$ ) and antisymmetric ( $\Pi 1_0$ ) inversion states, respectively.

<sup>b)</sup> Average angle between the  $C_3$  axis of the ND<sub>3</sub> and  $R_{\text{cm}}$ .

<sup>c)</sup> Uncertainty was not estimated in the original paper.

Melnik, D.G., Miller, T.A., De Lucia, F.C.: J. Mol. Spectrosc. **214** (2002) 202.

[II/25A\(2, 34\)](#)