

## SPECTROSCOPY OF THE $A^3\Pi - X^3\Sigma^-$ TRANSITIONS OF NH-He AND NH-H<sub>2</sub>

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Complex features of NH-He were observed in conjunction with the A-X 1-0 and 0-0 transitions. Bands appear to be clustered around the lowest rotational line of the monomer. The energy range spanned by the sharp structure is only  $6.5\text{ cm}^{-1}$ . The lowest energy feature is red shifted from the monomer by about  $3\text{ cm}^{-1}$ .

A bound-free continuum spectrum was observed for NH-H<sub>2</sub> in the region of the A-X 0-0 transition. Excitation to the A state is speculated to result in rapid NH-H<sub>2</sub>  $\rightarrow$  NH<sub>2</sub> + H reaction. The ground state dissociation energy of  $D_0'' = 32.4\text{ cm}^{-1}$  was deduced from the spectrum.

Theoretical analyses of the NH-He and NH-H<sub>2</sub> A-X bands are in progress.