

## EMPIRICAL LINE PARAMETERS OF $\text{NH}_3$ BETWEEN 6310 and 7070 $\text{cm}^{-1}$

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To support the interpretation of ground-based and spacecraft remote sensing, over 1600  $\text{NH}_3$  line positions, intensities, and empirical lower state energies were measured. Laboratory spectra of  $\text{NH}_3$  and enriched  $^{14}\text{NH}_3$  were recorded at 0.011  $\text{cm}^{-1}$  resolution with signal to noise ratios of 700:1 or better using the Fourier transform spectrometer (FTS) located at the McM ath telescope at Kitt Peak Nat'l Obs./ Nat'l Solar Obs. Multiple pressures and paths were used to observe transitions whose intensities cover three orders of magnitude.

To obtain experimental lower state energies  $E''$  in the manner done previously for methane, cold sample spectra were recorded using absorption cells coolable to 190 K with optical path lengths from 0.80 m to 2.4 meters.

The measurement accuracy of an isolated spectral line is  $\pm 0.0004$   $\text{cm}^{-1}$  for the positions,  $\pm 5\%$  for intensities and 10% for  $E''$ . Assignments of  $\nu$ ,  $+\nu_3$  and  $2\nu_3$  from prior studies account for only 20% of the region. Work is in progress to extend the identifications so that a reliable catalog of line parameters can be created in database format.

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