

LINE LISTS AND ASSIGNMENTS OF HOT AMMONIA IN THE INFRARED

CHRISTOPHER A. BEALE, *Department of Ocean, Earth and Atmospheric Sciences, Old Dominion University, Norfolk, VA, USA*; ROBERT J. HARGREAVES, ANDY WONG, PETER F. BERNATH, *Department of Chemistry and Biochemistry, Old Dominion University, Norfolk, VA, USA*.

Transmission spectra for hot ammonia (23-700 °C) have been recorded in the region 5500-8800 cm^{-1} and line lists have been produced from these spectra that include line positions, intensities and empirical lower state energies. Transmission spectra were obtained at high resolution (0.02 cm^{-1}) by recording absorption, emission and background spectra using a Bruker IFS 125HR with a hot quartz cell heated by a tube furnace. Temperature-appropriate line lists for the 2500-5500 cm^{-1} region have been completed and assignment of both regions is underway. These empirical line lists will be compared to the theoretical line lists for ammonia available from the ExoMol project and can be used in efforts to model the atmospheres of exoplanets and brown dwarfs.