

SPECTROSCOPIC STUDY OF AIR-BROADENED NITROUS OXIDE IN THE ν_3 BAND

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We present results of a recent analysis of laboratory spectra to determine line positions, intensities, air-broadened half-widths and pressure-induced shifts and their temperature dependences in the ν_3 fundamental band of N_2O . The spectra used in this study were recorded using the 1-m McMath-Pierce Fourier transform spectrometer while it was located at the National Solar Observatory on Kitt Peak, AZ. Multispectrum analysis software^a was used to retrieve the line parameters using the Voigt and speed-dependent Voigt line profiles. The line mixing coefficients were calculated using the Exponential Power Gap scaling law. Comparisons with similar published results will be presented.

^aD. C. Benner, C. P. Rinsland, V. Malathy Devi, M. A. H. Smith, D. Atkins, *JQSRT* **53** (1995) 705-721.