

INVESTIGATION OF THE COLLISION-INDUCED-ABSORPTION CONTRIBUTION TO THE  $1.27\mu\text{m } a^1\Delta_g - X^3\Sigma_g^-$  BAND OF  $\text{O}_2$

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The collision-induced absorption structure accompanying the magnetic-dipole-allowed  $1.27\mu\text{m } a^1\Delta_g - X^3\Sigma_g^-$  band of  $\text{O}_2$ , originally observed in the laboratory by Badger, Wright, and Whitlock, has been measured at  $0.03\text{ cm}^{-1}$  resolution using a Fourier-transform infrared spectrometer. Spectra were recorded at an optical pathlength of 84 m for pure  $\text{O}_2$ , at temperatures between 253 K to 293 K and pressures to 9 atm. Several spectra were also measured for room-temperature  $\text{O}_2/\text{N}_2$  mixtures. These results presently being analyzed will allow comparison with recent measurements of these bands in the atmosphere by Mlawer, Clough, Brown, Stephen, Landry, Goldman, and Murcray.