LINE PARAMETERS OF CO_2 BETWEEN 4500 AND 7000 cm^{-1}.

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To enable column CO_2 measurements from space with 0.3% precisions by the Orbital Carbon Observatory, positions and intensities were measured for 125 near-IR CO_2 bands using Voigt line shapes. Self- and air-broadening coefficients were obtained for the stronger bands as well. In addition, measurement of the 30012 - 00001 band at 6348 cm^{-1} was repeated using constrained multispectrum fitting [a] employing a speed dependent Voigt profile and the off-diagonal relaxation matrix elements (RME) formulation for line mixing. For this, high resolution, high signal-to-noise ratio spectra were recorded at room temperature with the McMath-Pierce Fourier transform spectrometer on Kitt Peak.

[a] D. Chris Benner et al. *JQSRT,* **53**, 705-721, 1995. Benner et al. in preparation.