

Empirical Line Intensities of Methane in the Near-Infrared

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Some 10,000 line intensities of methane are being measured between 1100 and 2080 nm (1.09 to 2.08 microns) to promote better modeling of brown dwarf stars. Intensities are being retrieved line-by-line from laboratory spectra recorded at high resolution (resolving power = 350,000) using the McMath-Pierce Fourier transform spectrometer at the National Solar Observatory located at Kitt Peak. Empirical linelists of calibrated line positions and intensities are being compiled so that theoretical predictions (*ab initio* calculations) of the methane spectrum can be accurately normalized.

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