

THE INFRARED SPECTRUM of H_2S from 1 to 5 μm

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The absorption spectra of H_2S from 2000 to 11,147 cm^{-1} have been obtained with spectral resolutions of 0.006, 0.012 and 0.021 cm^{-1} and optical paths of 1.5m to 433 m using the Fourier transform spectrometer at Kitt Peak National Observatory / National Solar observatory. The 20 new vibrational bands have been assigned for the first time and 8 others re-analyzed so that accurate energy levels, band origins and rotational parameters could be determined for a total of 29 states. Experimental band centers have been modelled by vibrational calculations. Line intensity measurements and analysis are in progress. A prediction of the 4 μm bands of 1 H_2S is currently available.

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