ABSOLUTE INTENSITIES IN ACETYLENE: THE $7.5\mu m$ REGION

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Spectra of C_2H_2 have been recorded at room temperature in the range from 1140 to 1490 cm^{-1} using a Bruker IFS120HR spectrometer. The interferograms were collected with a maximum optical path difference of 300 cm. Sample pressure/absorption path length products ranging from 1.3 to 330 hPa*cm were used. Absolute line intensities have been measured using direct non-linear least squares fitting of Voigt profiles — convoluted with an instrument line shape function — to the observed spectral data. Measurements have been performed in the $\nu_4 + \nu_5$ cold band and in hot bands originating from levels involving the bending modes ν_4 and ν_5 [a]. The results and analysis of the measurements will be presented and discussed.

[a] Y. Kabbadj, M. Herman, G. Di Lonardo, L. Fusina, and J. W. C. Johns, J. Mol. Spectrosc. 150, 535 (1991)