OVERTONE JET SPECTROSCOPY OF ETHYLENE

M. BACH, R. GEORGES, and M. HERMAN, *Laboratoire de Chimie Physique Moléculaire, CP160/09, Université Libre de Bruxelles, B-1050, Belgium*; A. PERRIN, *Laboratoire de Photophysique Moléculaire, Batiment 210, Université PARIS 11, Campus d'ORSAY, 91405 ORSAY CEDEX, FRANCE.*

We have recorded the slit-jet cooled overtone absorption spectrum of ethylene between 3000 and 7000 cm^{-1}, at a spectral resolution of 0.02 cm^{-1}, using a Fourier transform interferometer[a]. 11 bands are observed, some not reported before. They are all vibrationally identified and for the first time rotationally analysed. Anharmonic and Coriolis-type perturbations are considered. The vibrational energy pattern in ethylene is discussed.

[a]R. Georges, M. Bach and M. Herman, Mol. Phys., 90 (1997) 381.