HIGH RESOLUTION FITR SPECTROSCOPY IN C\textsubscript{2}H\textsubscript{4} USING A SLIT-JET: OVERTONE IN THE 5000cm\textsuperscript{-1} REGION

M. BACH, R. GEORGES and M. HERMAN, Laboratoire de Chimie Physique Moléculaire CP160/09, Université Libre de Bruxelles, Av Roosevelt, 50, B-1050 Bruxelles, Belgium; A. PERRIN, Laboratoire de Physique Moléculaire, CNRS, Université Paris Sud, Campus d’Orsay, Bat 210, 91405 Orsay Cedex, France.

A Fourier transform interferometer was used to record the slit jet cooled overtone absorption spectrum of \textsuperscript{12}C\textsubscript{2}H\textsubscript{4} between 3900 and 7900 cm\textsuperscript{-1} at a spectral resolution of 0.02 cm\textsuperscript{-1} and a rotational temperature of 53 K. In this high frequency range, we perform the analysis of 17 combination bands. For some of them located at 4206, 4322, 4328, 4515, 4730, 5995, and 6150 cm\textsuperscript{-1} the analysis was complicated by the existence of A-type, B-type, and C-type Coriolis-type resonances with dark states. For each analysed spectral region, a preliminary calculation of the energy levels was performed taking into account the observed resonances.