

## INFRARED HIGH RESOLUTION SPECTRA OF $^{16}\text{O}_3$ : THE WEAK $3\nu_2+3\nu_3$ AND $4\nu_2+4\nu_3$ BANDS

A. BARBE, M.-R. DE BACKER-BARILLY, VI.G. TUYTEREV, *Groupe de Spectrométrie Moléculaire et Atmosphérique, U.M.R. CNRS 6089, Université de REIMS, Moulin de la Housse, B.P. 1039, 51687 REIMS cedex 2, FRANCE*; A. CAMPARGUE, S. KASSI, *Laboratoire de Spectrométrie Physique, U.M.R. CNRS 5588, Université Joseph Fourier B.P. 87, 38402 Saint Martin d'Hères cedex, FRANCE*.

Recent progress in theory and improvement of sensitivity of experiments allow assigning new very weak bands of ozone,  $^{16}\text{O}_3$ . The  $3\nu_2+3\nu_3$  near  $5000\text{ cm}^{-1}$  and the  $4\nu_2+4\nu_3$  near  $6500\text{ cm}^{-1}$  are reported for the first time from the FTS and CRDS spectra respectively. The second band is particularly interesting, as transitions involving vibrational states with a  $\nu_2 = 4$  bending excitation were never observed so far. Hamiltonian and dipole moment parameters, range of observed quantum numbers, statistics of the fits, comparison of band centres with predictions, as well as several agreements between observed and calculated spectra will be presented and discussed.