# HIGH RESOLUTION INFRARED SPECTRA OF THE $^{18}O^{16}O^{18}O(C_2\nu)$ OZONE MOLECULE (1200 TO 500 $cm^{-1}$. LINE POSITIONS

M. R. DE BACKER-BARILLY, A. BARBE, V. G. TYUTEREV, and A. CHICHERY, *Groupe de Spectrométrie Moléculaire et Atmosphérique; UMR CNRS 6089 Université de Reims - Moulin de la Housse - BP 1039; 51687 Reims Cedex 2 - France.*

After the previous systematic analysis of $^{16}O_3$ [1], $^{18}O_3$ [2], $^{16}O^{18}O^{16}O$ [3,4] in medium infrared, we present here the results of the analysis of new $^{18}O^{16}O^{18}O$ observed bands. The spectra have been recorded with the FTS of Reims[5,6], with a resolution of 0.006$cm^{-1}$, and products pathlength x pressure up to 32 m x 3 Torr. The data reduction to derive line positions uses a new multifit program [7].

The analysis of spectra is performed using the same formalism as in references [1-4], using standard Watson's Hamiltonian for diagonal blocks and Coriolis and Fermi resonances for off diagonal blocks.

8 polyads have been analysed , among them 7 being analysed for the first time. They correspond to 10 observed bands (underlined) in interaction with "dark" bands.

$(\underline{\nu_1}, \underline{\nu_3})$ ; $(\underline{\nu_2 + \nu_3}, \nu_1 + \nu_2)$ ; $(\nu_2 + 2\nu_3, \underline{\nu_1 + \nu_2 + \nu_3}, 2\nu_1 + \nu_2)$ ; $(\underline{3\nu_3}, \nu_1 + 2\nu_3, \underline{2\nu_1 + \nu_3})$ ; $(\underline{\nu_2 + 3\nu_3})$ ;
$(\underline{\nu_1 + 3\nu_3}, 4\nu_3)$ ; $(\underline{\nu_1 + \nu_2 + 3\nu_3}, \nu_2 + 4\nu_3)$ and $(\underline{5\nu_3})$.

We give here the range of J and $K_a$ for observed transitions, statistics for energy levels, spectroscopic parameters and resonance coupling parameters.

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