A REINVESTIGATION OF THE C-O STRETCHING REGION OF THE FORMIC ACID DIMER: ROTATIONAL ANALYSIS OF THE FERMI-TRIAD SYSTEM

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The IR high resolution jet spectrum of the formic acid dimer (FAD) has been recorded in the region of the antisymmetric C-O stretch vibration at 1210 - 1250 cm$^{-1}$. The previous study suggested that there was a Fermi-triad system which consisted of the $\nu_{22}$ fundamental band and two combination bands, $\nu_{16} + \nu_{11}$ and $\nu_{14} + \nu_{12}$. The $\nu_{14} + \nu_{12}$ band has been rotationally analyzed but no perturbation was indicated. We have performed a rotational analysis of the $\nu_{22}$ band and found this band was heavily perturbed. The progress on the deperturbation analysis of the Fermi-triad system will be presented.

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