

PSEUDOROTATION IN TETRAHYDROFURAN: SUPPLEMENTARY DATA FROM THE FREE JET ROTATIONAL SPECTRUM OF THE d_8 SPECIES

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Tetrahydrofuran (THF) is a model molecule for the investigation of the hindered pseudorotation in saturated five-membered rings. Two recent papers, based on millimeter-wave investigations, reported the vibrational spacings among the four lowest pseudorotation states of normal THF, and obtained contrastant results on the potential energy function: four equivalent minima^a, or 2 sets of two equivalent minima^b. In order to have more information on this problem, we planned to investigate the millimeter wave spectrum of the d_8 species. We obtained a vibrational spacing of *ca* 15 GHz between the two lowest pseudorotation states: a result which is not in agreement with both the above mentioned potential energy functions.

^aR. Meyer, J. C. López, J. L. Alonso, S. Melandri, W. Caminati, and P. G. Favero, *J. Chem. Phys.* 1999, 111, 7871.

^bD. G. Melnik, S. Gopalakrishnan, T. A. Miller, F. C. D. Lucia, *J. Chem. Phys.* 2003, 118, 3589.