ROTATIONAL ANALYSIS OF THE $5_{60}^1$ BAND OF FORMYL CHLORIDE

BY

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ABSTRACT

The $5_{60}^{1}$ band of formyl chloride under the conditions of high resolution was analyzed. Prominent band heads were observed in the $P_p$ sub-bands. Comparison with the computed spectrum indicates that it is principally a perpendicular band. A parallel band is also observed due to Herzberg-Teller interaction but at much lower intensity. The molecule is nonplanar in the first excited electronic state with a hydrogen out-of-plane displacement of $35^\circ$ and the OCCl bond angle reduced by $15^\circ$. 