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## Microwave spectrum and hindered pseudorotation of tetrahydrofuran

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### Abstract

Pseudorotation-rotational transitions between pseudorotational states  $v = 4, 5$  of tetrahydrofuran have been observed in the 11-52 GHz frequency range. The joint analysis of pseudorotation-rotational and rotational transitions of three pseudorotational states  $v = 4, 5, 6$  has been carried out. The types of symmetry of these states were established and energy intervals  $\Delta E_{45}$ ,  $\Delta E_{56}$  were determined. By the data of  $\Delta E_{45}$ ,  $\Delta E_{56}$ , the reported earlier  $\Delta E_{01}$ ,  $\Delta E_{02}$ ,  $\Delta E_{23}$ ,  $\Delta E_{78}$  and a set of pseudorotational transitions from the far IR-field spectroscopy there was determined the potential function of hindered pseudorotation of the molecule.