

# High Resolution Microwave Spectroscopy of Ethyl Vinyl Ether: Accurate Determination of the Methyl Top Internal Rotation Barrier

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We have performed an investigation of the internal rotation of the methyl group in *trans-cis* ethyl vinyl ether by using molecular beam-Fourier transform Microwave (MB-FTMW) spectroscopy. Rotational spectra (up to  $J = 20$ ) were recorded in the frequency region 4 - 19 GHz. Due to the internal rotation of the methyl group, some rotational transitions were split and the torsional barrier could be determined to  $V_3(\text{CH}_3) = 1074.4(4) \text{ cm}^{-1}$ .

*Key words:* Molecular Beam; Microwave Spectroscopy; Internal Rotation.