

ADVANCES IN GLOBAL MODELLING OF METHYL MERCAPTAN CH<sub>3</sub><sup>32</sup>S<sup>32</sup>SH TORSION-ROTATION SPECTRUM

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A progress in the analysis of the methyl mercaptan CH<sub>3</sub>SH spectrum in its ground, first and second excited torsional states is reported <sup>a</sup>. The available in the literature data <sup>b</sup> were reanalyzed using RAM36 code <sup>c</sup> with the main improvement achieved for the root mean square deviation of the microwave data. The updated Hamiltonian model was applied to the further assignments of the methyl mercaptan spectrum using the records obtained in the THz region in the previous study <sup>b</sup>. Also a new measurement campaign in subTHz frequency range is planned for the nearest future using a set of spectrometers available in Köln. In the talk the details of this new study will be discussed.

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<sup>b</sup>L.-H. Xu, R. M. Lees, G. T. Crabbe, J. A. Myshrall, H. S. P. Müller, C. P. Endres, O. Baum, F. Lewen, S. Schlemmer, K. M. Menten, and B. E. Billinghurst *J. Chem. Phys.* 137, 104313 (2012).

<sup>c</sup>V. Ilyushin, Z. Kisiel, L. Pyszczółkowski, H. Mäder, J. T. Hougen // *J. Mol. Spectrosc.* Vol. 259, pp. 26-38 (2010).