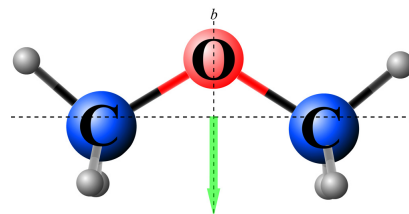


FIRST ANALYSIS OF DOUBLY DEUTERATED DIMETHYL ETHER

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Dimethyl ether is one of the most abundant molecule in star-forming regions. Like other complex organic molecules, its formation process is not yet clearly established. The study of deuteration may provide crucial hints. The mono-deuterated species (CH_2DOCH_3) was studied in 2012. This analysis led to a detection in ISM and results have been published by Richard et al.^a. The spectra of the doubly deuterated species were recorded in Lille from 150 to 1500 GHz. We used the ERHAM code to treat the torsion of the methyl-group. So far, the analysis of both conformer symmetric and asymmetric are still in progress and we will present the first spectroscopic results, and their ISM search as well.

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^aC. Richard et al., A&A, 552, A117, 2013