FAST SCAN MILLIMETER-WAVE SPECTRUM OF CH_2DOH

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The Millimeter-wave (MMW) spectrum of CH_2DOH has been recorded in the extended ranges of 128-360, 462-506 and 598-610 GHz using the FAst Scan Sub-millimeter Spectroscopy Technique (FASSST). Assignments of various parallel and perpendicular type transitions have been made for a large number of transitions. These include quite a few inter-species transitions similar to the one observed earlier [1]. The assignments proved fruitful for confirmation of FIR assignments in terms of combination loops. We employed the energy expansion model to represent the energy levels. The completeness of the data generated by FASSST and the success of the power series model suggest that many parts of the spectrum of CH_2DOH may be far more tractable than previously believed.

[1] I. Mukhopadhyay, D.S. Perry, Y-B Duan, J.C. Peterson, S. Albert, R.A.H. Butler, E. Herbst and F.C. DeLucia, J. Chem. Phys. 116, (2002).