SUBMILLIMETER ROTATIONAL SPECTRA OF FORMALDIMINE

BRIAN J. DROUIN, *Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA 91109-8099*; ADAM WALTERS, *Centre d'Etude Spatiale des Rayonnements, 9, avenue du Colonel Roche - BP 44346 31028 Toulouse Cedex 4, France*.

Formaldimine (CH_2NH) is a known astrophysical molecule with detections in giant molecular clouds, star-forming regions, hot cores and tentatively an external galaxy. It is also linked to the process of Tholin formation and hence of interest to pre-biotic chemistry schemes. The ground-state rotational spectrum is a simple asymmetric top and has been previously analyzed up to 110 GHz[a]. We present an experiment designed to study the Tholin formation process using the submillimeter wavelengths (up to 900 GHz) and discuss the resulting new spectroscopy for formaldimine.

[a]Kirchhoff, W. H., Johnson, D. R., & Lovas, F. J. 1973, Journal of Physical and Chemical Reference Data, 2, 1