THE MILLIMETER- AND SUBMILLIMETER-WAVE SPECTRUM OF CYANOFORMAMIDE ($NCCONH_2$)

M. WINNEWISSER, R. A. H. BUTLER and F. C. DE LUCIA, *Department of Physics, The Ohio State University, Columbus, OH 43210*; K. V. L. N. SASTRY, *Department of Physics, University of New Brunswick, Fredericton, New Brunswick E3B 5A3, Canada*.

If water (H_2O) and cyanogen ($NCCN$) are made to react in the presence of a catalyst, the product is cyanoformamide ($NCCONH_2$). Using this procedure Christiansen[a] in the GIESSEN Laboratory has synthesized this molecule and has measured for the first time the microwave spectrum between 18 and 40 GHz with a Hewlett-Packard spectrometer. Employing a more convenient synthesis for $NCCONH_2$, we were able to extend the measurements into the millimeter- and submillimeter region using the fast-scan spectrometer (FASSST). The chemical synthesis, the measurements, the laboratory data and their analysis will be discussed. They should provide the information necessary to search for this species in space.

[a] J. J. Christiansen, *to be published*