WAVEGUIDE CHIRPED-PULSE FOURIER TRANSFORM MICROWAVE SPECTROSCOPY OF 1-PROPANETHIOL

BRITTANY P. GORDON and STEVEN T. SHIPMAN, *Division of Natural Sciences, New College of Florida, Sarasota, FL 34243*.

The rotational spectrum of 1-propanethiol was measured from 8.7 to 26.5 GHz at 250 K with a waveguide chirped-pulse Fourier transform microwave spectrometer. This thiol has a dense spectrum containing contributions from multiple conformers, excited vibrational states, and singly-substituted isotopomers (^{34}S and ^{13}C) in natural abundance. Further, the spectrum shows complications due to the presence of internal rotation. Despite this complexity, some progress has been made, and preliminary work on this molecule will be presented.