ROTATIONALLY-RESOLVED SPECTRA OF 2-METHYLFURAN FROM THE CM-WAVE TO THE FAR INFRARED

STEVEN T. SHIPMAN and IAN A. FINNERAN, *Division of Natural Sciences, New College of Florida, Sarasota, FL 34243*; SUSANNA L. WIDICUS WEAVER, *Department of Chemistry, Emory University, Atlanta, GA 30322*; JENNIFER VAN WIJNGAARDEN, *Department of Chemistry, University of Manitoba, Winnipeg MB R3T 2N2 Canada*.

Rotationally-resolved spectra of 2-methylfuran have been acquired in several spectral regions. Spectra from 8.7 to 26.5 GHz were collected with a waveguide chirped-pulse Fourier transform microwave spectrometer at New College of Florida. Spectra from 75 to 960 GHz were collected with a single-pass direct absorption mm-/submm-wave spectrometer at Emory University. Spectra in selected regions from 200 to 700 cm^{-1} were collected using far infrared radiation from the Canadian Light Source synchrotron facility coupled to a Bruker IFS125HR Fourier transform spectrometer. A complete analysis of the combined data set is ongoing. Here, we will present our current results, which include assignments of over 25,000 transitions from the ground vibrational state and the first excited state of the methyl torsional mode.