

DEVELOPMENT OF A REDUCED-COST CHIRPED PULSE MICROWAVE SPECTROMETER

IAN A. FINNERAN, DANIEL B. HOLLAND, P. BRANDON CARROLL, *Department of Chemistry, California Institute of Technology, Pasadena, CA 91125*; and GEOFFREY A. BLAKE, *Divisions of Geological & Planetary Sciences and Chemistry & Chemical Engineering, California Institute of Technology, Pasadena, CA 91125*.

Chirped pulse Fourier transform microwave (CP-FTMW) spectroscopy has become a ubiquitous technique in the high-resolution molecular spectroscopy community. Unfortunately, many components of CP-FTMW spectrometers are extremely expensive. Here we report of the development of an inexpensive microwave circuit and we present spectra of tetrahydrofuran and methanol collected between 8-16 GHz. Possible applications in remote sensing will also be discussed.