

A STUDY OF 4,4-DIMETHYLAMINOBEZONITRILE BY CHIRPED-PULSED FOURIER TRANSFORM MICROWAVE SPECTROSCOPY<sup>a</sup>

RYAN G. BIRD, VALERIE J. ALSTADT, and DAVID W. PRATT, *Department of Chemistry, University of Pittsburgh, Pittsburgh, Pa 15213*; JUSTIN L. NEILL and BROOKS H. PATE, *Department of Chemistry, University of Virginia, Charlottesville, Va 22904*.

The ground state rotational spectrum of 4,4-dimethylaminobenzonitrile (DMABN) was studied using chirped-pulsed Fourier transform microwave spectroscopy (CP-FTMW). The rotational spectrum from 6.5 to 18 GHz was collected using a compilation of 250 MHz chirped pulses and pieced together. DMABN is widely known as an important model for excited state twisted intramolecular charge transfer dynamics. It has been previously studied in our group using high resolution electronic spectroscopy, in which a strong coupling between methyl group internal rotation and overall rotation was discovered. We have recently determined that these couplings are not present in the ground state spectrum. The ground state structure and nuclear quadrupole coupling terms will also be discussed.

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