PROGRESS REPORT ON THE STUDY OF THE AMINO AMIDE VALINAMIDE

RICHARD J. LAVRICH, CHARLES R. TOROK, and MICHAEL J. TUBERGEN, *Department of Chemistry, Kent State University, Kent, OH 44242*.

We have continued our study of the amide derivatives of amino acids by measuring the rotational spectrum of the most abundant isotopic species of valinamide. Because of its isopropyl side chain, valinamide has greater conformational flexibility than alaninamide. The rotational transitions are split into many nuclear quadrupole hyperfine components by the two ^{14}N nuclei; preliminary estimates for the line centers were used in fitting the 23 *a*-, *b*-, and *c*-type transitions, resulting in rotational constants of A = 3019.10 (4), B = 1472.97 (2), and C = 1252.48 (2) MHz. A comparison of the experimental data with ab initio calculations will be presented.