

## THE ROTATIONAL SPECTRUM OF AMINOETHANOL (NH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>OH)

SUSANNA L. WIDICUS, *Division of Chemistry, California Institute of Technology, Pasadena, CA 91125*;  
BRIAN J. DROUIN, *California Institute of Technology, Jet Propulsion Laboratory, Microwave Millimeter and  
Submillimeter Spectroscopy Lab, Pasadena, CA 91109*; KATHRYN A. DYL, and GEOFFREY A. BLAKE,  
*Division of Geology and Planetary Science, California Institute of Technology, Pasadena, CA 91125*.

The rotational spectrum of aminoethanol (NH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>OH) has been characterized in the 75 – 120 GHz region using the 1-meter flow cell apparatus at the Jet Propulsion Laboratory. Previous studies of the rotational spectrum of aminoethanol in the 8 – 40 GHz region probed the ground state to the J = 8 level and included determination of the dipole moment and rotational constants.<sup>a</sup> Fourth-order centrifugal distortion constants were subsequently determined from these data.<sup>b</sup> We present here extended measurements of the ground state transitions up to J = 51, as well as  $\nu_{27}=1$  transitions up to J = 50,  $\nu_{26}=1$  transitions up to J = 35, and  $\nu_{25}=1$  transitions up to J = 29. Rotational transitions from the  $\nu_{27}=2$ ,  $\nu_{26}=2$ , and  $\nu_{25}=2$  states as well as three combination bands have also been assigned. Spectroscopic parameters, including standard rotational constants and fourth- and sixth-order centrifugal distortion constants, were determined using the SPFit/SPCat program suite.

---

<sup>a</sup>Penn R. E. and Curl R. F. (1971) *J. Chem. Phys.* **53**, 651 - 658.

<sup>b</sup>Kaushik V. K. and Woods R. C. (1982) *Z. Phys. Chem. Neue Fol.* **132**, 117 – 120.