THE ROTATIONAL SPECTRUM OF AMINOETHANOL ($NH_2CH_2CH_2OH$)

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The rotational spectrum of aminoethanol ($NH_2CH_2CH_2OH$) 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.[a] Fourth-order centrifugal distortion constants were subsequently determined from these data.[b] We present here extended measurements of the ground state transitions up to J = 51, as well as ν_{27}=1 transitions up to J = 50, ν_{26}=1 transitions up to J = 35, and ν_{25}=1 transitions up to J = 29. Rotational transitions from the ν_{27}=2, ν_{26}=2, and ν_{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.

[a]Penn R. E. and Curl R. F. (1971) *J. Chem. Phys.* **53**, 651 - 658.

[b]Kaushik V. K. and Woods R. C. (1982) *Z. Phys. Chem. Neue Fol.* **132**, 117 – 120.