ANALYSIS OF INTENSITIES OF SPECTRAL FEATURES OF GASEOUS NO IN VIBRATION-ROTATIONAL BAND 6-0 IN ABSORPTION

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We have detected for the first time the fifth overtone of vibration-rotational transitions of NO in the near infrared region. Despite its small extent of absorption even with an optical path of length 107 m and pressure 10^5 N m^{-2} of our sample, we have measured strengths of individual vibration-rotational features, but effects of Λ-doubling were unresolved under those conditions. An electric dipolar moment for the transition and a parameter for the effect of vibration-rotational interaction[a] have been quantitatively evaluated.

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[a]J. F. Ogilvie, *The Vibrational and Rotational Spectrometry of Diatomic Molecules* [Academic Press, London U.K., 1998]