A SLIT-JET INFRARED SPECTRUM OF 1,3-BUTADIENE

MARJO HALONEN, DAVID NESBITT, AND MICHAL FARNIK, JILA, University of Colorado, Campus Box 440, Boulder, Colorado 80309.

A slit-jet infrared spectrum of the CH stretching fundamental band $\nu_1$ of trans-1,3-butadiene has been measured with a difference frequency laser system in the wavenumber region 3090 - 3120 cm$^{-1}$. The optical resolution of the spectrum is about 100 MHz. An $a/b$-type hybrid band structure is observed. A detailed analysis of the spectrum will be presented, and the role of large amplitude motion and intramolecular vibrational energy redistribution will be discussed.