LABORATORY SPECTROSCOPY OF ALLYLIMINE AND ITS TENTATIVE DETECTION IN THE INTERSTELLAR MEDIUM

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The millimeter spectrum of allylimine has been recorded between 80 and 300 GHz with a frequency-modulation absorption spectrometer. Two conformers, *syn* and *anti*, have been observed in the gas-phase products of the pyrolysis of diallylamine at 500°C. The analysis of an extended data set allowed us to determine rotational constants and centrifugal distortion terms up to the sixth power of the angular momentum operators with high accuracy. The new set of spectroscopic constants has been used to search for allylimine signatures in the spectral survey of the quiescent giant molecular cloud G+0.693-0.027, nearby the Galactic center. A tentative detection of both allylimine conformers is reported.