ROOM-TEMPERATURE CHIRPED-PULSE FOURIER TRANSFORM MICROWAVE (RT-CP-FTMW) SPECTRUM OF PYRIDINE

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The pure rotational spectrum of pyridine has been measured from 10-18 GHz by room-temperature chirped-pulse Fourier transform microwave (RT-CP-FTMW) spectroscopy. The measurement and analysis of the spectrum will be discussed and compared to previous reports. Anharmonic ab initio calculations complemented the spectroscopy and aided in its interpretation. The design and construction of the RT-CP-FTMW spectrometer will be discussed. It is based on a similar design developed in the Pate laboratory at the University of Virginia, but it is less expensive than the original design. Due to its low cost, the RT-CP-FTMW spectrometer is ideally suited for primarily undergraduate institutions (PUIs).