CAVITY RING-DOWN SPECTROSCOPY OF THE 3-0 QUADRUPOLE OVERTONE BAND OF HYDROGEN

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We have used cavity ring-down spectroscopy to observe several lines in the 3-0 band of the quadrupole overtone spectrum of H_2. At pressures up to 2 bar in a cavity 1 m long, we have baseline losses less than 30 ppm and a signal-to-noise ratio above 40. New measurements of the line positions, linestrengths, pressure-broadening and pressure-shift coefficients will be presented, and compared with theoretical calculations.