

CAVITY RINGDOWN SPECTROSCOPY OF THE ν_1 BAND OF HNO_3 : DERIVING ACCURATE INTEGRATED INTENSITIES FROM BROAD BAND MEASUREMENTS

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Cavity ringdown spectroscopy (CRDS) is a method which utilizes a highly reflective optical cavity to obtain high spectroscopic sensitivity. Given its sensitivity, it is desirable to use CRDS to make quantitative measurements of trace species. We have conducted a theoretical and experimental analysis of the ν_1 band of HNO_3 to evaluate the accuracy of our infrared-CRDS apparatus as a quantitative spectroscopic tool.