MILLIMETER WAVE RING DOWN SPECTROSCOPY: LABORATORY MEASUREMENTS OF ATMOSPHERIC CONTINUA

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Our previously described FASSST ring down technique makes it possible to measure the absorption in $\sim$6000 cavity modes over 90 GHz in a few seconds. These near simultaneous measurements can include both regions dominated by contributions from near line center effects and other regions where 'continua' effects are important. The result is a data set that contains, without the use of parameters from other experiments, all of the required experimental information. This approach significantly reduces systematic effects and makes possible more realistic assessment of errors. Oxygen, Nitrogen, dry air and moist air measurements in 170-260 GHz frequency range will be presented along with the strategies for parameterization and global analysis of the absorption data.