PRESSURE BROADENING AND SPECTRAL OVERLAP IN THE MILLIMETER WAVE SPECTRUM OF OZONE

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Our understanding of propagation and remote sensing in the atmosphere is typically based on pressure broadening and line frequency measurements made at relatively low pressures, extended to atmospheric pressure theoretically. This is especially true for reactive species such as ozone. We will report on a series of measurements made over a range of pressures typical of the atmosphere. These measurements were made with a FASSST cavity ring down system that measures the absolute absorption of broad and continua effects across the 170 – 260 GHz window on a time scale that minimizes time variations that might be caused by the reactive ozone. Pressure broadening parameters will be presented and the remaining residuals discussed.