

## OZONE ISOTOPOLOGUE MEASUREMENTS FROM THE ATMOSPHERIC CHEMISTRY EXPERIMENT (ACE)

ANTON MADUSHANKA FERNANDO, *Department of Physics, Old Dominion University, Norfolk, VA, USA*; PETER F. BERNATH, *Department of Chemistry and Biochemistry, Old Dominion University, Norfolk, VA, USA*; CHRIS BOONE, *Department of Chemistry, University of Waterloo, Waterloo, ON, Canada*.

Near global ozone isotopologue distributions have been determined from infrared solar occultation measurements of the Atmospheric Chemistry Experiment (ACE) satellite mission. ACE measurements are made with a high resolution Fourier transform spectrometer. Annual and seasonal latitudinal fractionation ( $\delta$  value) distributions of the ozone isotopologues  $^{16}\text{O}^{16}\text{O}^{18}\text{O}$ ,  $^{16}\text{O}^{18}\text{O}^{16}\text{O}$  and  $^{16}\text{O}^{17}\text{O}^{16}\text{O}$  were obtained. Asymmetric ozone ( $^{16}\text{O}^{16}\text{O}^{18}\text{O}$ ) shows higher fractionation compared to symmetric ozone ( $^{16}\text{O}^{18}\text{O}^{16}\text{O}$ ). The maximum ozone fractionation occurs in the tropical stratosphere as expected. An enhancement of the heavy ozone isotopologues is also seen in the Antarctic polar vortex.