



## **DAILY RECORD OF MID-ATMOSPHERIC OZONE ZONAL MEAN AND WAVE NUMBER 1 AND 2 FROM SAGE III: PRELIMINARY RESULTS**

**P.-H. Wang** (1), C.R. Trepte (2) and W.P. Chu (2)

(1) STC/NASA-LaRC, (2) NASA-LaRC (p.wang@larc.nasa.gov/Fax: 757-864-2671)

This report presents a study of the properties of the middle atmospheric zonal mean ozone and the associated wave number 1 and 2 using data from the Stratospheric Aerosol and Gas Experiment (SAGE) III at mid-latitudes in the Southern Hemisphere (SH) on a daily basis. Operating at the solar occultation mode, the SAGE III satellite instrument provides 14 spacecraft sunrise measurements and 14 spacecraft sunset measurements during a 24-hour period. These 14 sunrise (sunset) events are distributed almost evenly in the longitude along a nearly constant latitude in the Southern Hemisphere (Northern Hemisphere), facilitating the study of ozone zonal mean and long wave features on a daily basis. The instrument was launched in December 2002. Currently, six months SAGE III data (version v02) collected between May and October 2002 are available for the study. The preliminary results indicate that the SH middle atmospheric ozone zonal mean increased during the data period, while the amplitude of wave number 1 and 2 increased from May to August and then decreased from August to October. A study on the ozone data pair comparison between SAGE III and SAGE II indicates an excellent agreement of the two instruments with the mean ozone pair differences within 7% in the stratosphere. In addition, both instruments reveal nearly identical ozone zonal features.