

## **The OMPS Limb Profiler Stratospheric Aerosol Products and Comparisons to the GEOS-5 Chemistry-Climate Model**

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The Ozone Mapping and Profiler Suite (OMPS) on board the Suomi National Polar-orbiting Partnership (S-NPP) spacecraft was launched on October 28, 2011. The Limb Profiler instrument on OMPS (OMPS LP) is designed to provide high vertical resolution ozone and aerosol profiles from measurements of the scattered solar radiation in the 290 – 1000 nm spectral range. OMPS LP collected its first Earth limb measurements on January 10, 2012, and continues to provide daily, global measurements from cloud top to altitudes of 60 km for ozone and 40 km for aerosols. Although the instrument was designed primarily for vertical ozone profile measurement, it has a high sensitivity to stratospheric aerosols, cirrus clouds in the upper troposphere, and stratospheric and mesospheric clouds. The relatively high vertical and spatial sampling allow detection and tracking of periodic events when aerosol particles are injected into the stratosphere, including volcanic eruptions and meteor explosions. Here we review the OMPS LP aerosol products and present highlights of its recent measurements. We will also compare OMPS stratospheric aerosol products to model results from the NASA Goddard Earth Observing System (GEOS-5) chemistry-climate model, which has been updated to include a sectional aerosol microphysical module for simulating stratospheric aerosol lifecycle.