

# **OVERVIEW ON STELLAR OCCULTATION WITH HIGHLIGHTS FROM GOMOS AND BEYOND**

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GOMOS (Global Ozone Monitoring by Occultation of Stars) on ESAs Envisat-satellite measures transmission of light through the Earth's atmosphere in the limb direction using the stellar occultation method. From transmissions it is possible to retrieve vertical density profiles of ozone, NO<sub>2</sub>, NO<sub>3</sub>, H<sub>2</sub>O, O<sub>2</sub>, and aerosols in the stratosphere and ozone also in the MLT region. High-resolution temperature profiles in the 15-35 km altitude range can be retrieved using data from the two fast photometers. In this presentation we will show main scientific results from GOMOS during the eight years in operation. We will show climatological and time series analysis of ozone, NO<sub>2</sub>, NO<sub>3</sub> from 2002-2008. Results about OClO, sodium layer, polar mesospheric clouds, gravity waves and turbulence and impact of energetic particles on polar NO<sub>y</sub> and ozone will be highlighted. We also review the development of the GOMOS data quality during 2002-2008.