



ESA - MOST Dragon 2 Programme

2011 DRAGON 2 SYMPOSIUM

中国科技部-欧洲空间局合作“龙计划”二期

“龙计划”二期2011年学术研讨会

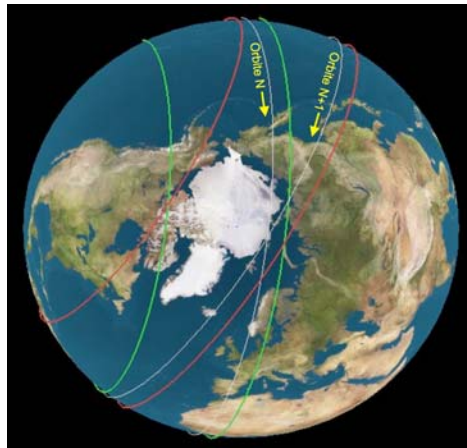
Project Summary

5311 EGOMO

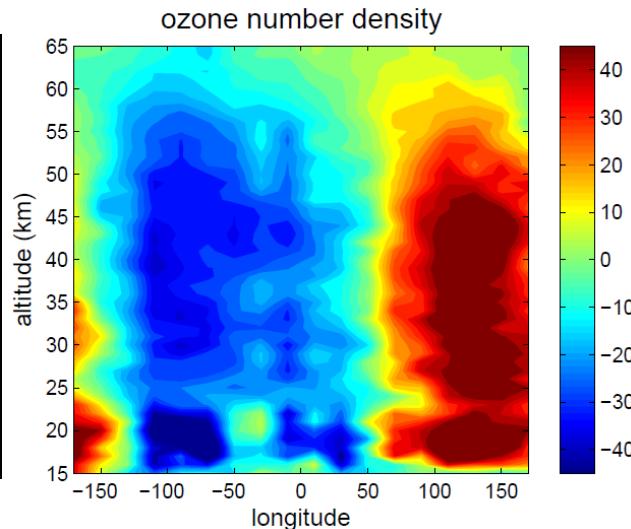
24.6. 2011

- Trace gas climatologies from satellite data
- Sudden Stratospheric Warming (SSW) and other natural variations
- Long term change of stratosphere and its effect on the tropospheric climate

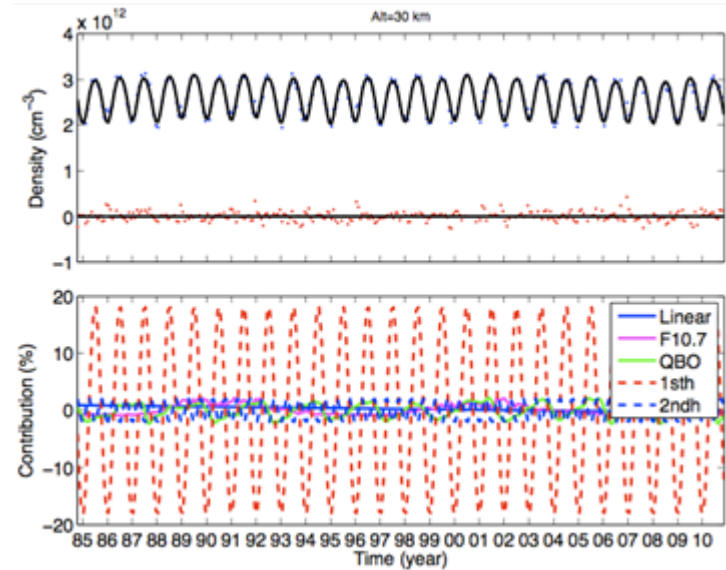
Main results



Ozone variability by GOMOS-GOMOS obs.

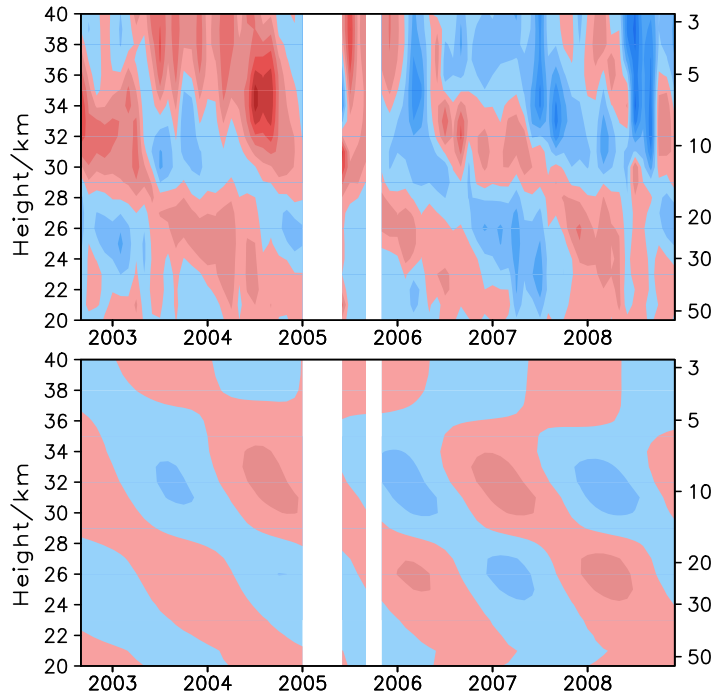


Ozone hole revisited: asymmetry from waves. GOMOS obs.



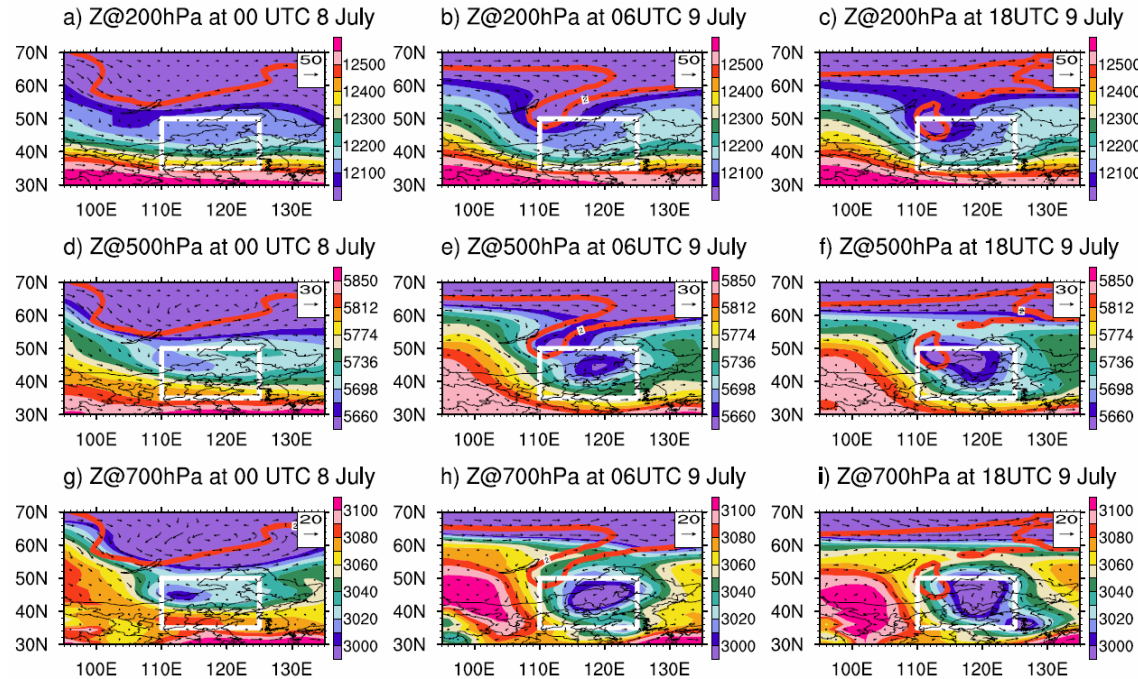
Long ozone time series by combining NASA SAGE II 1984-2005 and ESA GOMOS 2002- measurements.

Main results



Equatorial ozone is closely connected to residual circulation dynamics.

GOMOS and ECMWF data.



A cut off low pressure system in north-east China is enhanced by intrusion of stratospheric air to troposphere.

HIRDLS, MLS, OMI, ECMWF data.

List of Publications

1. Liu Yi, Lu Chunhui, Wang Yong, Kyrola Erkki., The quasi-biennial and semi-annual oscillation features of tropical O₃, NO₂, and NO₃ revealed by GOMOS satellite observations for 2002–2008, **Chinese Science Bulletin**, Vol.56, No.18:1921-1929, doi:10.1007/s11434-011-4519-7.2011
2. Liu Yi, Liu Chuanxi, Tie Xuexi, and GAO Shouting, Middle stratospheric polar vortex ozone budget during the warming Arctic winter, 2002–2003. **Advances in Atmospheric Sciences**. In press, 2011.
3. Lu, Chunhui , Liu, Yi and Liu, Chuanxi(2011) 'Middle Atmosphere Response to ENSO Events in Northern Hemisphere Winter by the Whole Atmosphere Community Climate Model', *Atmosphere-Ocean*, 49: 2, 95 —111, First published on: 13 May 2011 (iFirst)
4. Sudden Stratospheric Warmings, Sofieva et al., to be submitted
5. GOMOS special issue in ACP

Project Planning – 2011 and 2012

- FMI will provide new reprocessed GOMOS data to IAP
- Algorithm comparison between GOME-2 and Tropomi
- One IAP PhD student will visit FMI to work on assimilation technique or model comparison
- Joint work on SSW
- Dragon 3 preparation