

# ENVISAT (MIPAS & SCIAMACHY)



Brought to you by John Mrziglod. Image source: ESA-ENVISAT

# Fact sheet

- ▶ **Environmental Satellite**
- ▶ **Orbit:** sunsynchronous, quasi-polar
- ▶ **Operation time:** 2002 – 2012 (inactive)
- ▶ **Mass:** 8.1t, one of the heaviest
- ▶ **Instruments:**
  - ▶ **MIPAS**
  - ▶ **SCIAMACHY**
  - ▶ ...

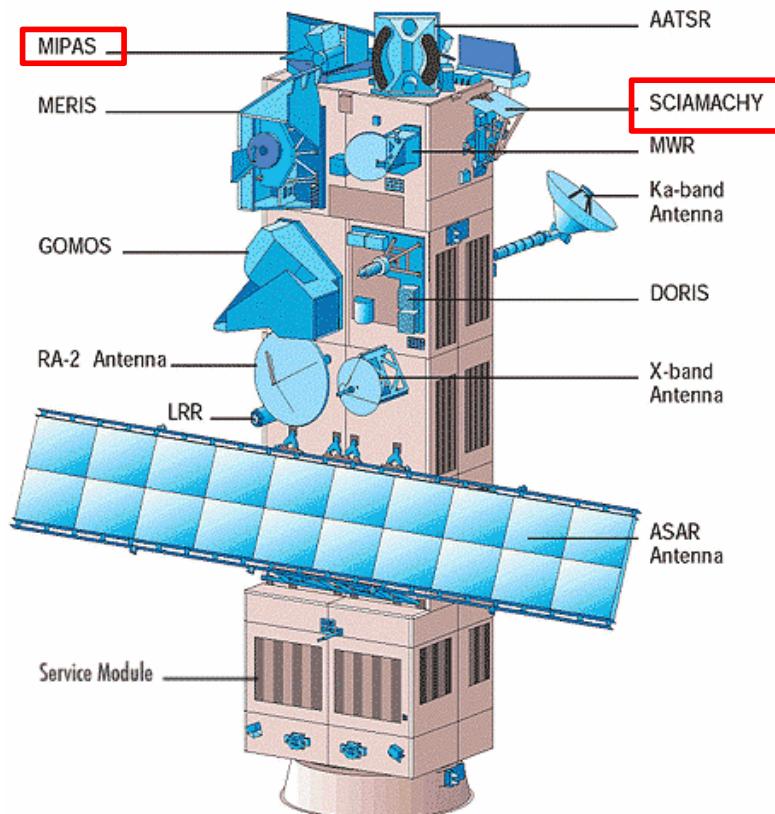


Image source: AVISO

# MIPAS (Michelson Interferometer for Passive Atmospheric Sounding)

- ▶ **Purpose:** Chemistry and temperature of the higher atmosphere
- ▶ **Scanning:** Limb, fore- and side
- ▶ **Measurements:**  
From MWIR to TIR

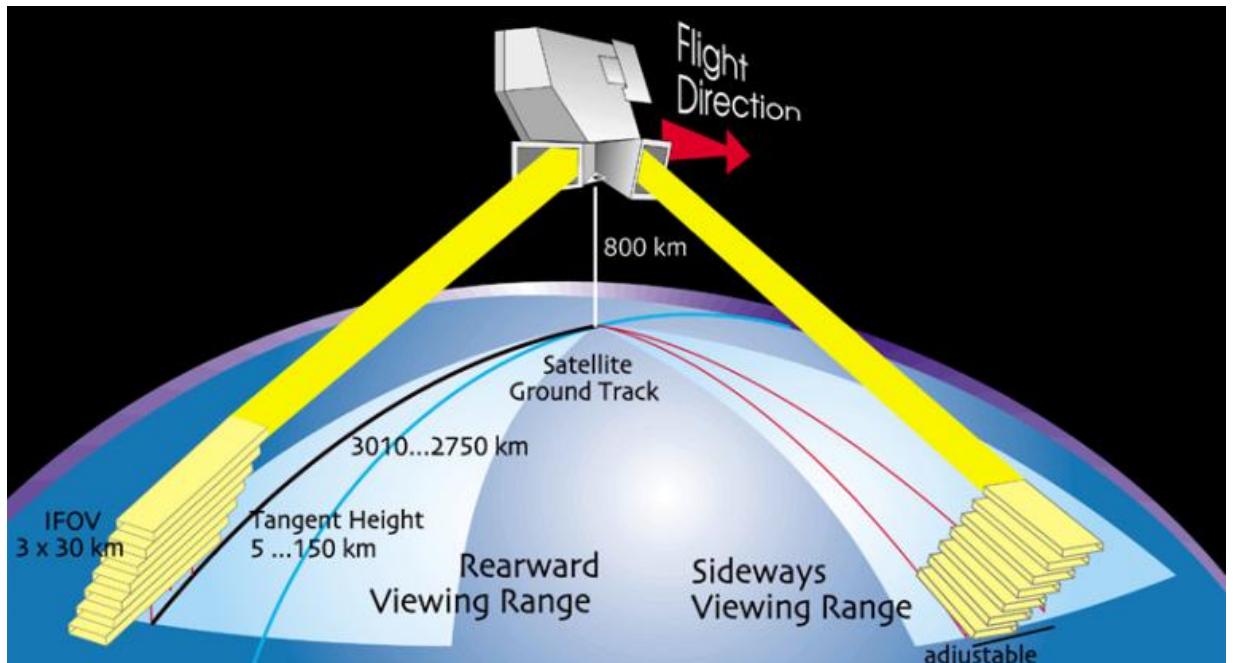
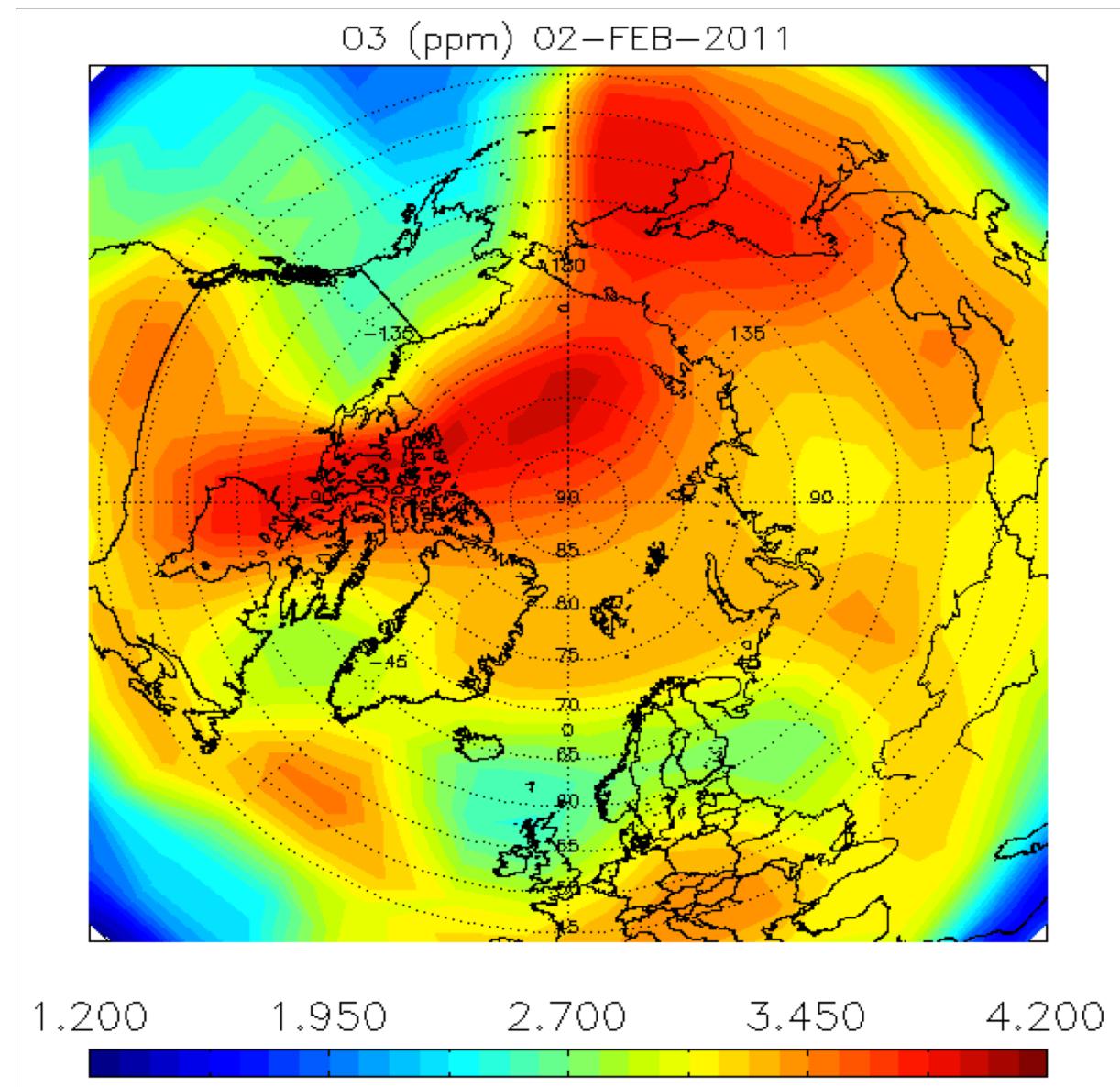


Image source: ESA-MIPAS

# MIPAS (Michelson Interferometer for Passive Atmospheric Sounding)

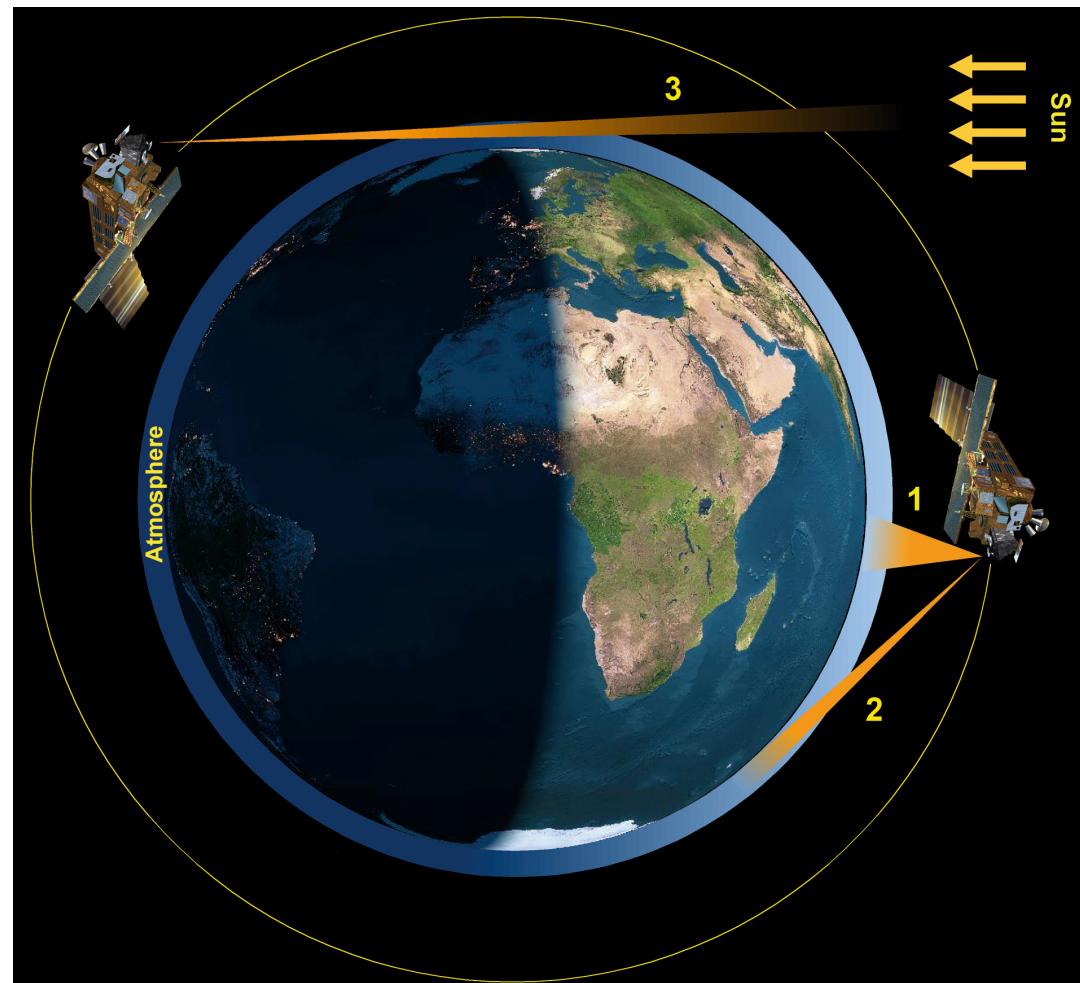
Ozone at 19 km  
observed by the MIPAS  
instrument from 1  
February to 1 May 2011.

Image source: ESA-MIPAS-OZONE



# SCIAMACHY (Scanning Imaging-Absorption Spectrometer for Atmospheric Cartography)

- ▶ **Purpose:** Atmospheric chemistry (trace gases)
- ▶ **Scanning:** Nadir, limb, and solar- and lunar occultation
- ▶ **Measurements:** From UV to SWIR



SCIAMACHY's observation modes: 1) nadir, 2) limb and 3) occultation.

Image source: DLR-IMF

# SCIAMACHY (Scanning Imaging-Absorption Spectrometer for Atmospheric Cartography)

SCIAMACHY Water Vapour: Monthly Mean October 2003

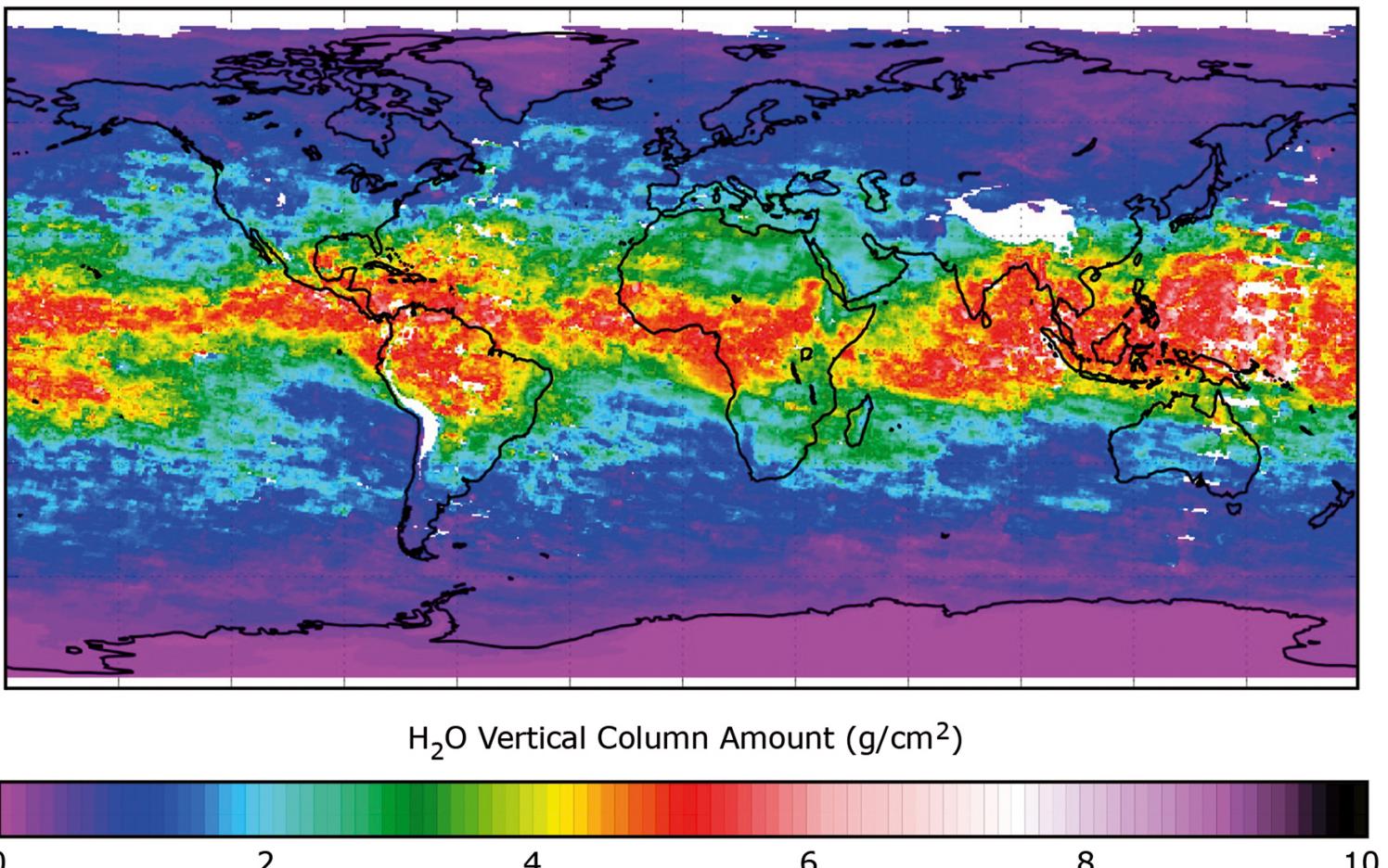


Image source: DLR-WV

# Image Sources

**AVISO:** <https://www.aviso.altimetry.fr/fr/missions/missions-passees/envisat/instruments.html>, last access 29<sup>th</sup> May 2017

**DLR-IMF:**

[http://atmos.caf.dlr.de/projects/scops/sciamachy\\_book/sciamachy\\_book\\_figures/chapter\\_4/fig\\_4\\_1.jpg](http://atmos.caf.dlr.de/projects/scops/sciamachy_book/sciamachy_book_figures/chapter_4/fig_4_1.jpg), last access 29<sup>th</sup> May 2017

**DLR-WV:**

[http://atmos.caf.dlr.de/projects/scops/sciamachy\\_book/sciamachy\\_book\\_figures/chapter\\_10/fig\\_10\\_15.jpg](http://atmos.caf.dlr.de/projects/scops/sciamachy_book/sciamachy_book_figures/chapter_10/fig_10_15.jpg), last access 10<sup>th</sup> May 2017

**ESA-ENVISAT:** <https://earth.esa.int/web/guest/missions/esa-operational-eo-missions/envisat>, last access 2<sup>th</sup> May 2017

**ESA-MIPAS:** <https://earth.esa.int/handbooks/mipas/CNTR.html>, last access 10<sup>th</sup> May 2017

**ESA-MIPAS-OZONE:** <https://earth.esa.int/web/sppa/mission-performance/esa-missions/envisat/mipas/sensor-description>, last access 29<sup>th</sup> May 2017