Focusing on:

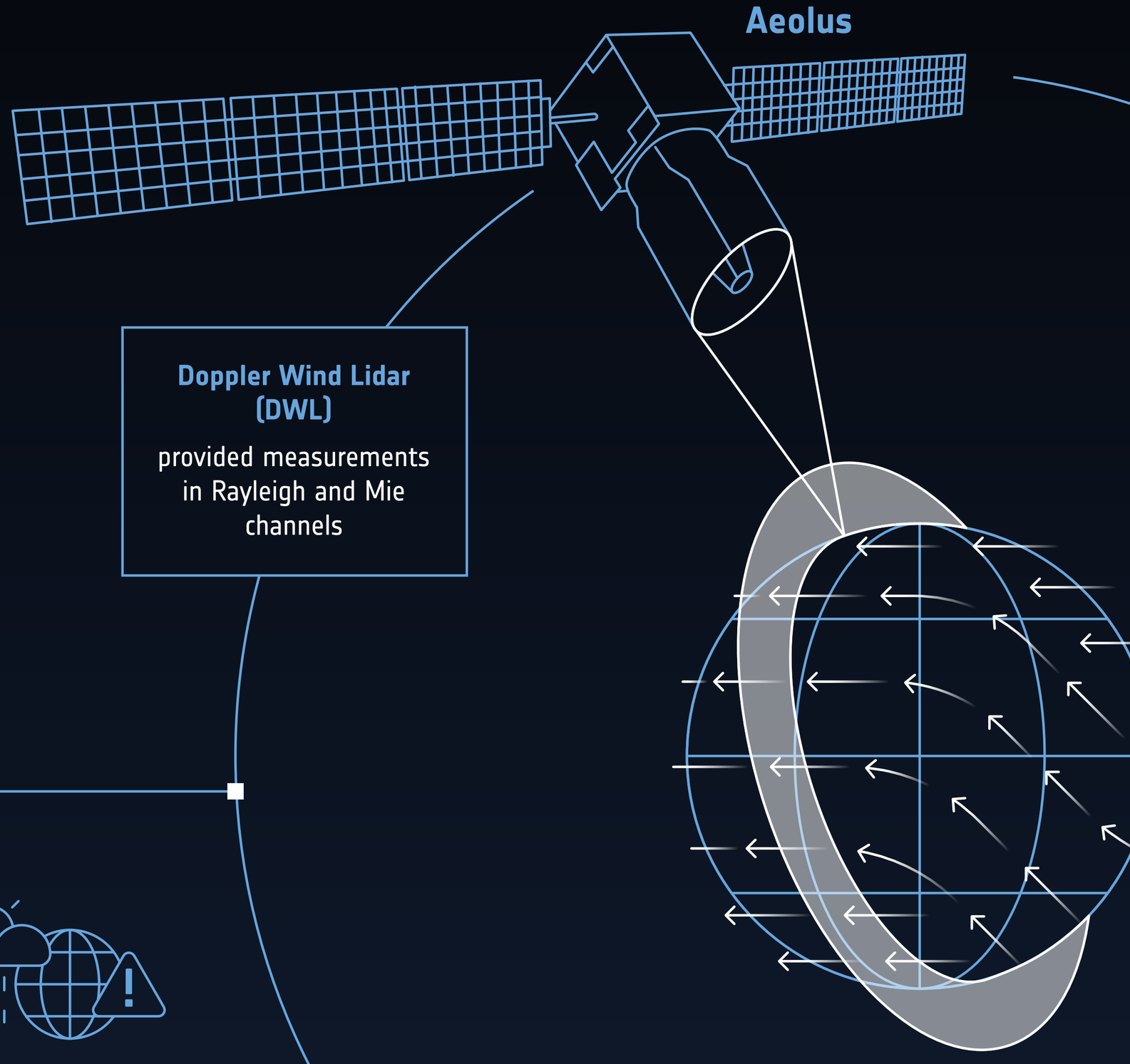
Aeolus Level-2b scientific wind data

The collection

The first space-based Doppler Wind Lidar (DWL) onboard the Aeolus satellite **measured global profiles of horizontal line-of-sight (HLOS) wind speed.**

The lidar provided separate measurements in Rayleigh and Mie channels, representing molecular (clear air) and particulate (aerosol and clouds) backscatter, respectively.

The Level-2b wind product of the Aeolus mission is a geo-located consolidated HLOS (horizontal line-of-sight) wind observation with actual atmospheric temperature and pressure correction applied to both Rayleigh and Mie channels



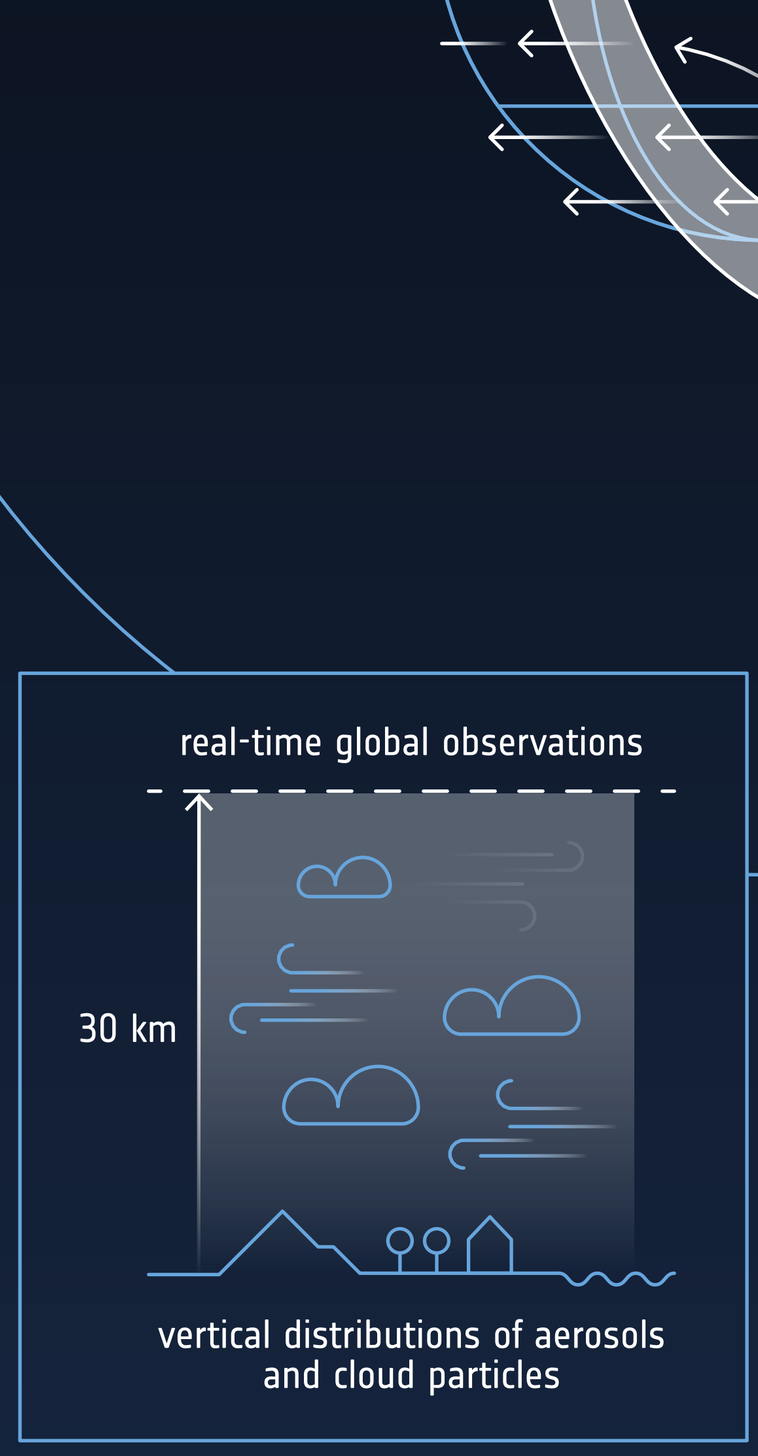
Applications

The Level-2b science data product enables a range of scientific research related to:

- **Weather forecasting**
- **Atmospheric processes**
- **Climate research**

Mission and instrument

Mission	The Aeolus mission forms part of ESA's Earth Explorers programme
Instrument	The Atmospheric Laser Doppler Instrument (ALADIN) is a direct detection of winds
Measurements	Global observations of wind profiles from Earth's surface up to 30 km altitude Vertical distributions of aerosols and clouds



Coverage

Temporal	Collection available from 20/04/2020 to 30/04/2023
Spatial	90 N, -90 S, -180 W, 180 E
Resolution	Horizontal resolution at observation scale for Rayleigh/Mie: **87/10 km** Vertical resolution: **0.5 - 2 km**
Wavelengths	Ultra violet spectral region 0.01 - 0.4 µm

Products

Standard atmospheric correction (Rayleigh and Mie channel), receiver response and bias correction are applied to Level-2b wind products

Data access type

Access to the collection is free and open:
earth.esa.int/eogateway/catalog/aeolus-preliminary-hlos-horizontal-line-of-sight-wind-observations-for-rayleigh-and-mie-receivers