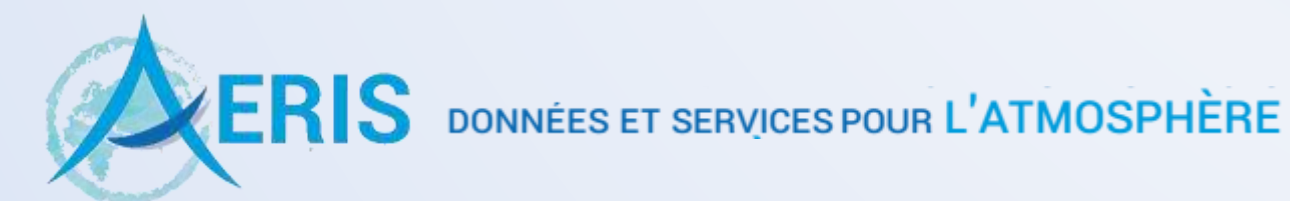


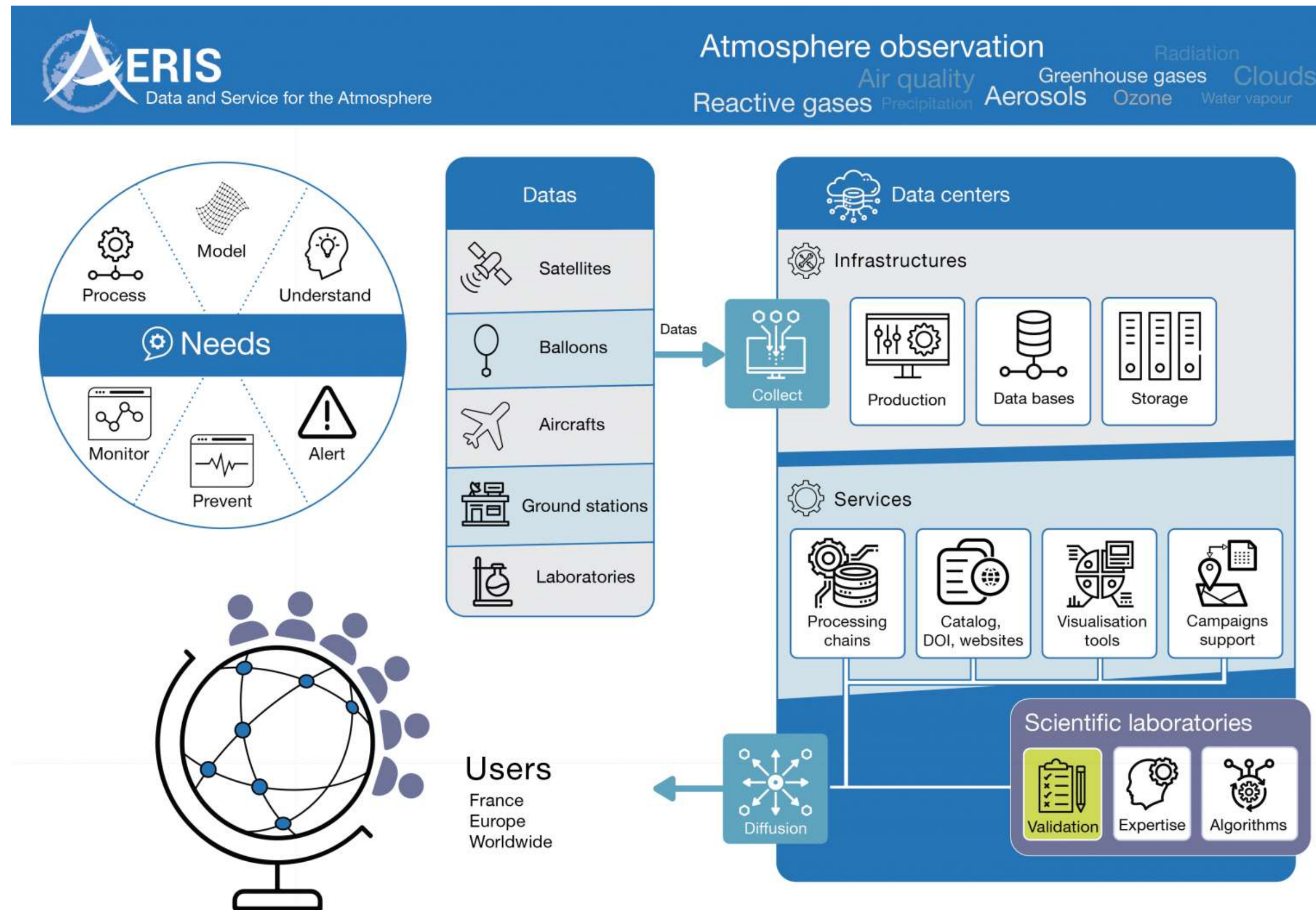
THE IASI/AERIS PORTAL: DISSEMINATION OF ATMOSPHERIC DATA IN OPEN ACCESS

ANNE BOYNARD, CATHY BOONNE
AND THE LATMOS, LISA, LMD, ULB CONTRIBUTIONS

IASI conference – 5 December 2024 – Nancy, France



AERIS: A unique hub for atmospheric data



AERIS within Data Terra research infrastructure

- **Role:** AERIS (Atmosphere) is one of five national centers dedicated to observing the Earth System, alongside:
 - ODATIS (Oceans)
 - THEIA (Land Surfaces)
 - FORMATER (Solid Earth)
 - PNDB (Biodiversity)
- **Strategic Importance:** These centers are federated under the **Data Terra infrastructure** to support Earth system science, aligned with national research priorities



AERIS: Mission & strengths

Mission

- make atmospheric data easily accessible for research at all scales, from local to global.

A 20-year heritage



Strengths

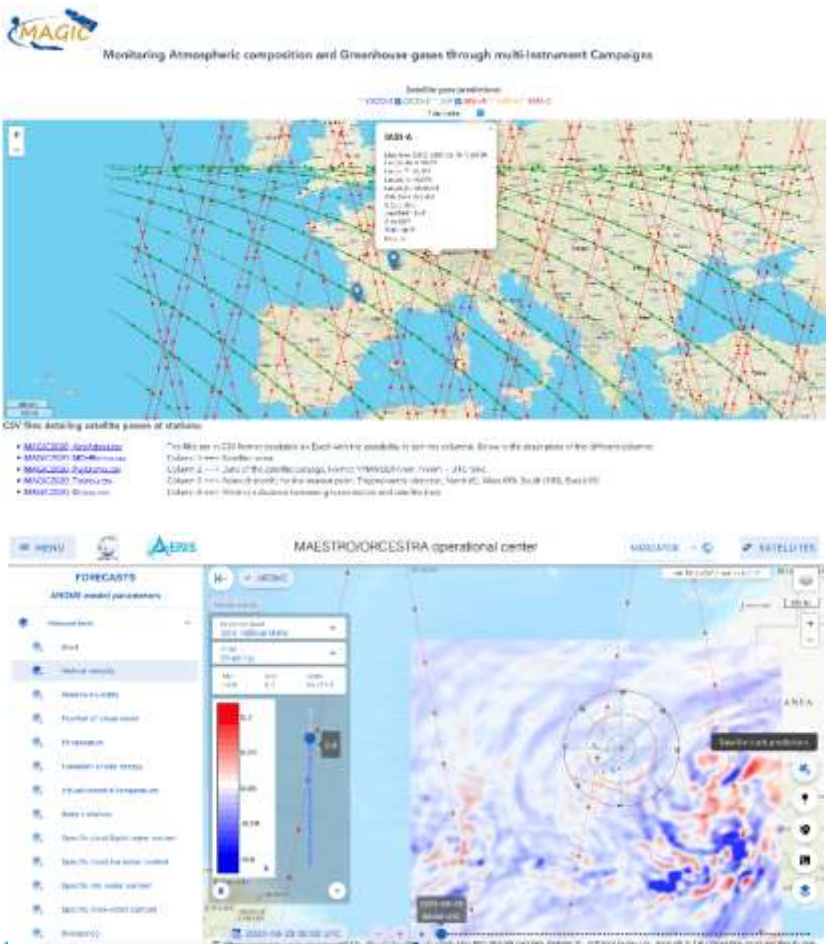
- More than 40 people working for AERIS
- 4 Integrated data centers (many joint projects)
- Shared work (working groups, European projects, ...)

Project management

- + 200 projects including European projects (ACTRIS, HEMERA, Eurochamp)
- +80 projects submitted by the way of the AERIS call for projects
- 90% projects concentrated in 3 areas of activity: campaigns, satellites, ACTRIS-FR

Website hosting

Website hosting service for projects selected via calls, offering dedicated sites for individual projects, campaigns, and regular updates



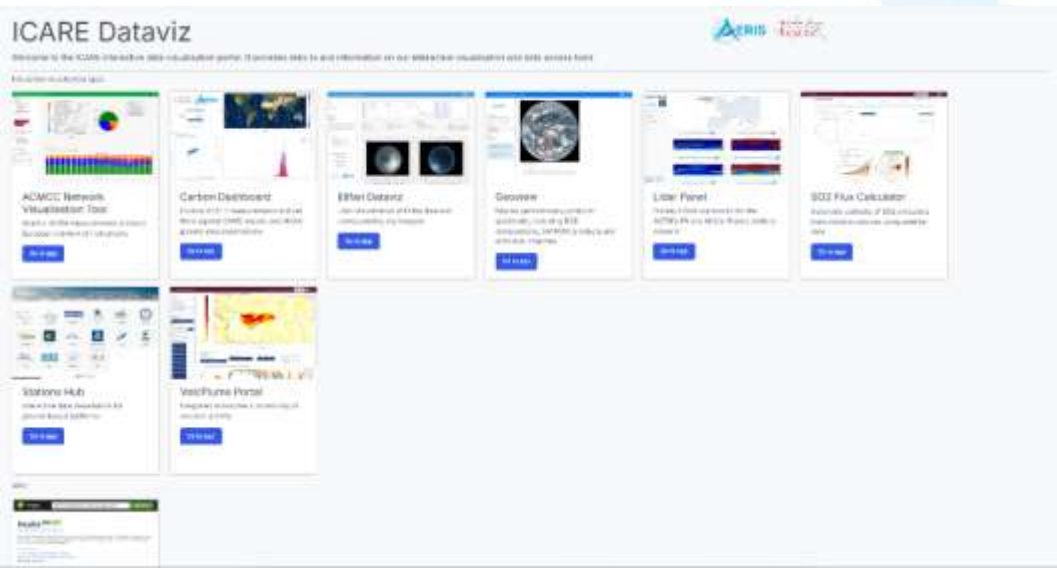
Campaign support

A unique service with a dedicated website:

- Real-time operational support during campaigns
- Full post-survey archive (reports, flight plans, etc.)

Data visualization

Platforms for monitoring volcanic plumes and visualizing satellite/ground data (AERIS/ICARE Dataviz <https://dataviz.icare.univ-lille.fr/>)



A unique catalogue

One-stop access to all AERIS data and products, with selection criteria for matching complementary datasets

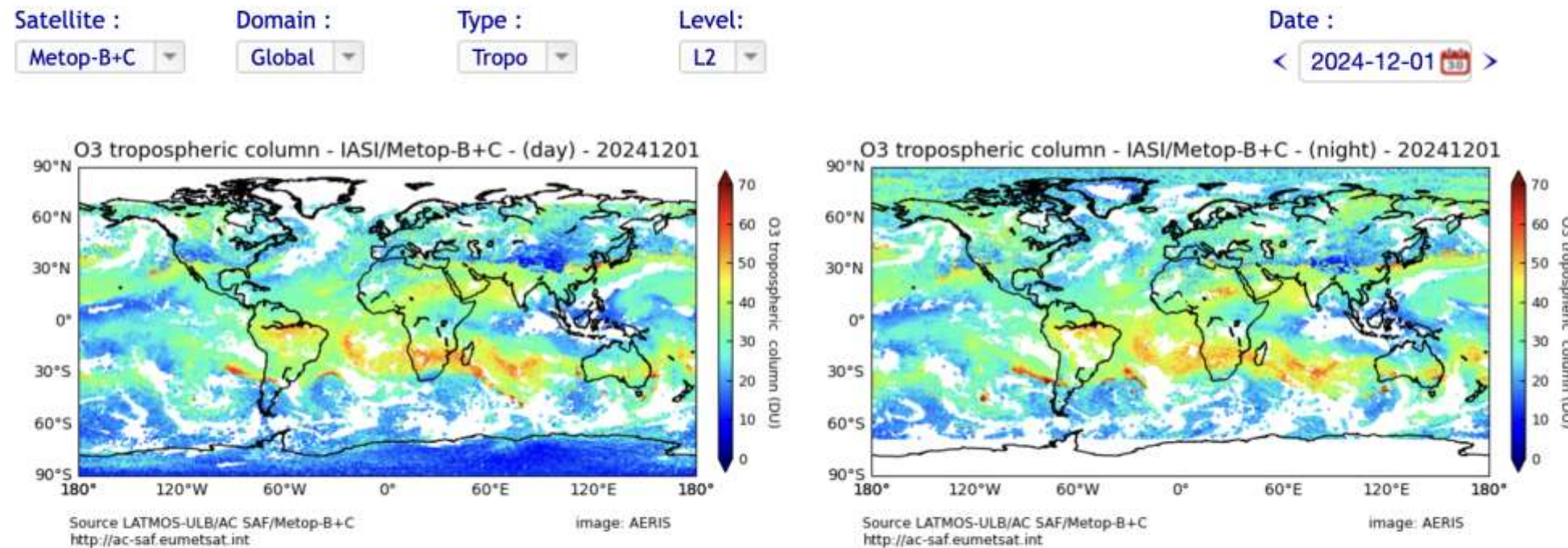
Welcome to the IASI/AERIS portal



DATA ACCESS QUICKLOOKS TIMELINE GALLERIES PUBLICATIONS COVID-19 CONTACT

Admin

O3 tropospheric column from IASI (Level 2)



[IASI/Metop-B data access](#)

[IASI/Metop-C data access](#)

Explore atmospheric data

Access a wide range of atmospheric data from IASI, such as surface temperature, cloud and trace gases at global scales.

Real-time atmospheric data

Access up-to-date atmospheric data in near real time

User-friendly interface

Navigate the portal with ease to explore, download, and analyze atmospheric data for a wide range of research applications

Quick looks

Use quick looks to quickly visualize and access the data, providing an overview before deeper analysis.

IASI Mission exploitation and data delivery

Mission exploitation

- **IASI/Metop-B (2012) & Metop-C (2018):** ongoing exploitation of data
- **From NRT reception (+3 hours) to data availability,** including the production of Level 2 and Level 3 data
- **IASI-NG:** Continuation of data exploitation with enhanced monitoring and data quality

Products available on AERIS catalogue:

- **54 products (L2/L3)** with DOI available on the AERIS catalogue
- **Main species:** CO, O₃ (IASI & IASI+GOME-2), SO₂, NH₃, HCOOH, Cloud, CO₂, CH₄, DUST, SST,...

New products

2023

- **O₃/CO:** New Version 6.7.0 (daily update)
- **NH₃:** New Version V4.0.0 (quarterly update)
- **Dust-Mean Layer Altitude:** New data and quick Looks
- **Sea Surface Temperature (SST):** New data and quick Looks

2024

- **HCOOH:** New Version V4.0.0 (quarterly update)
- **CO:** Climate Data Record (CDR)
- **O₃:** CDR (soon)

**See Poster S12-42
by Marie Doutriaux-Boucher**

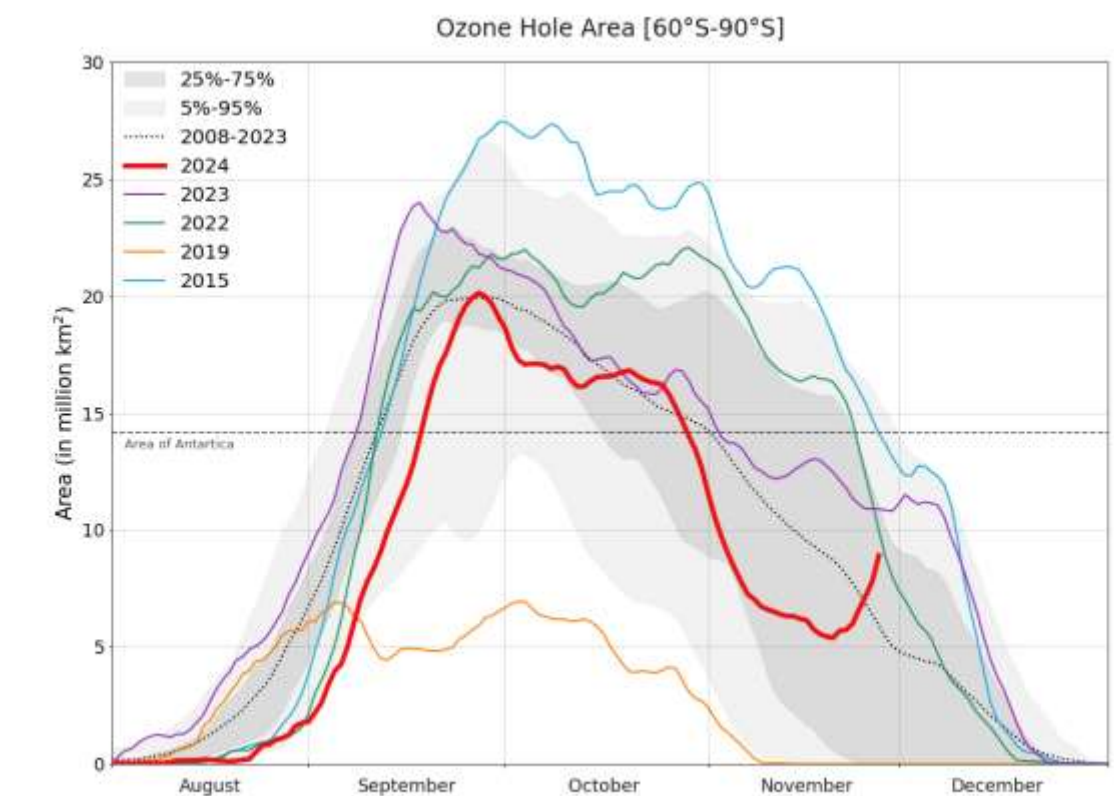
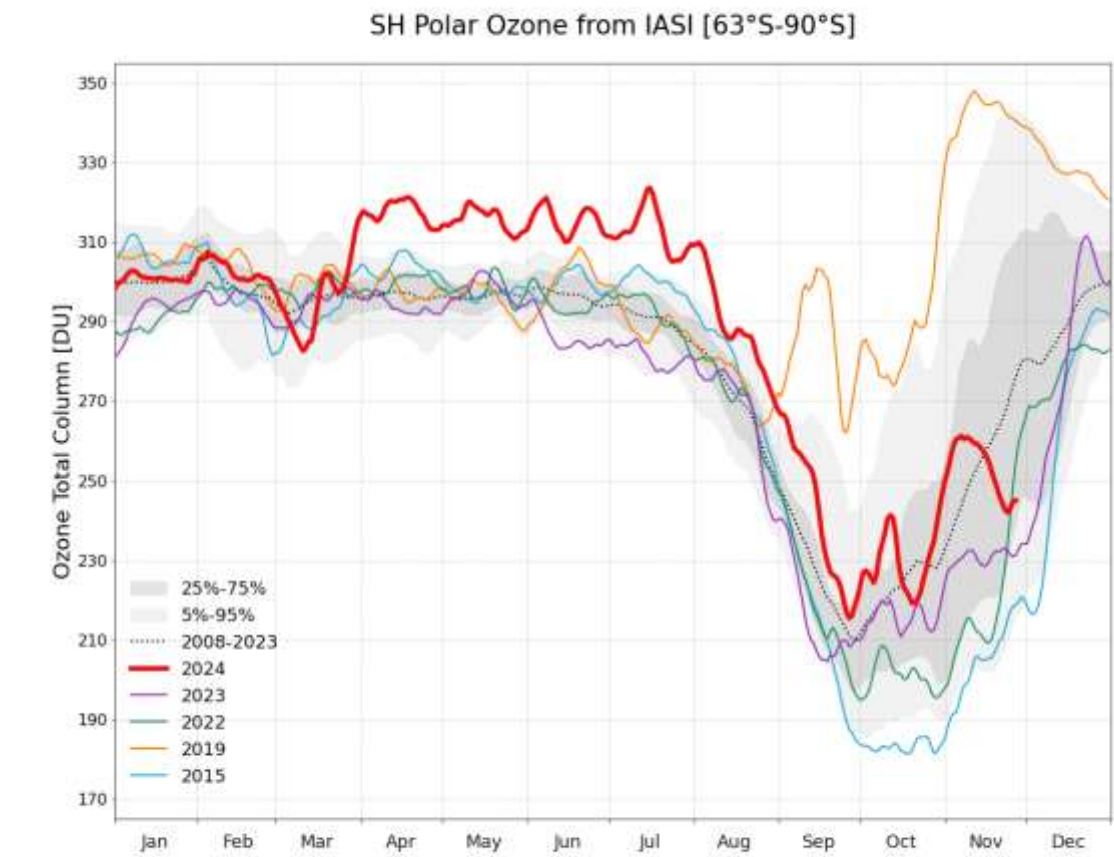
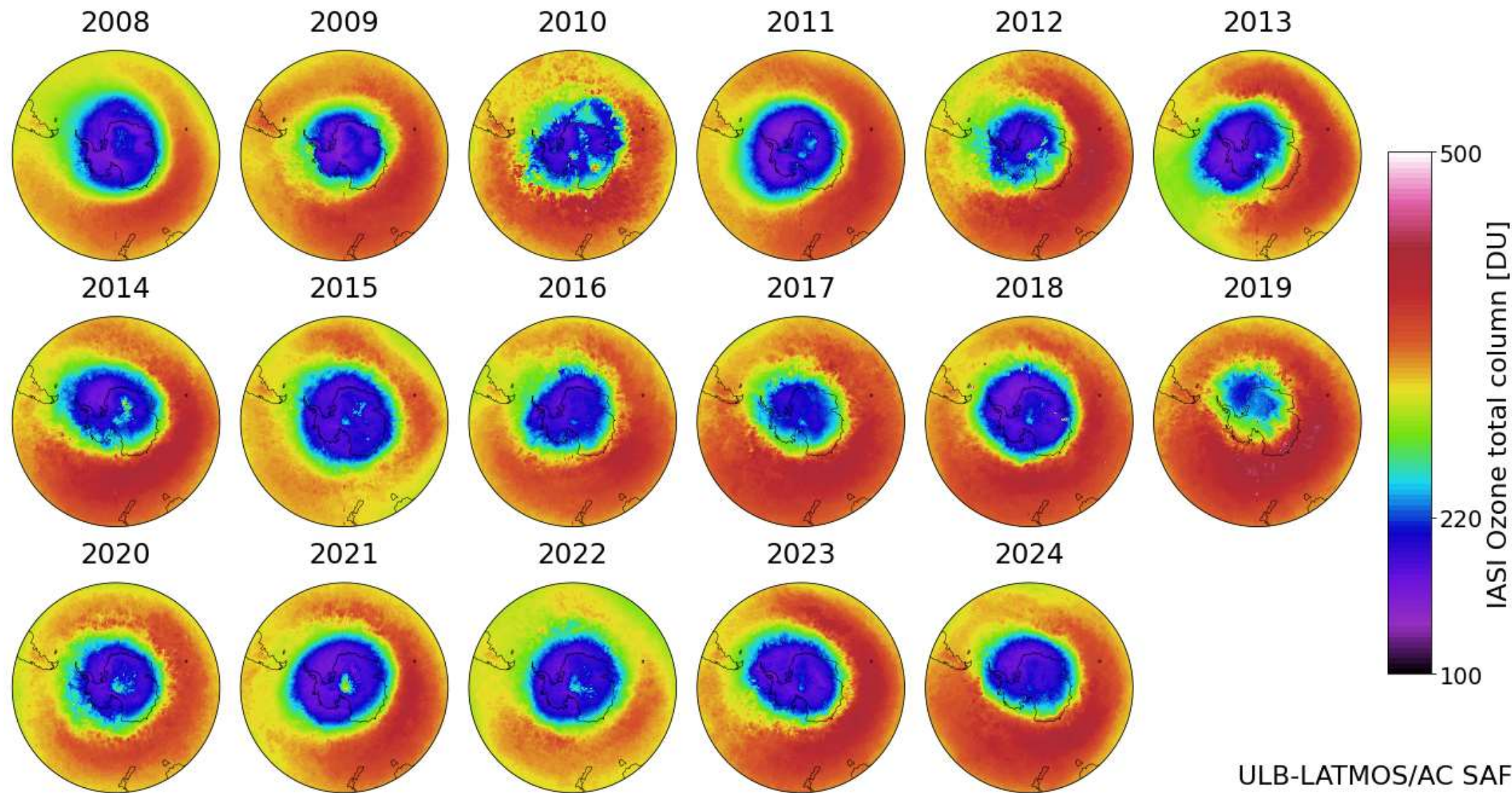
Ongoing projects and updates

- **Copernicus Climate Change Service (C3S) Project:** IASI O₃ L₃ data production & delivery
- **Data/QL:** Continuous updates
- **IASI/AERIS portal:** Continuous updates to the portal

<https://iasi.aeris-data.fr/>

IASI Applications: Ozone hole monitoring

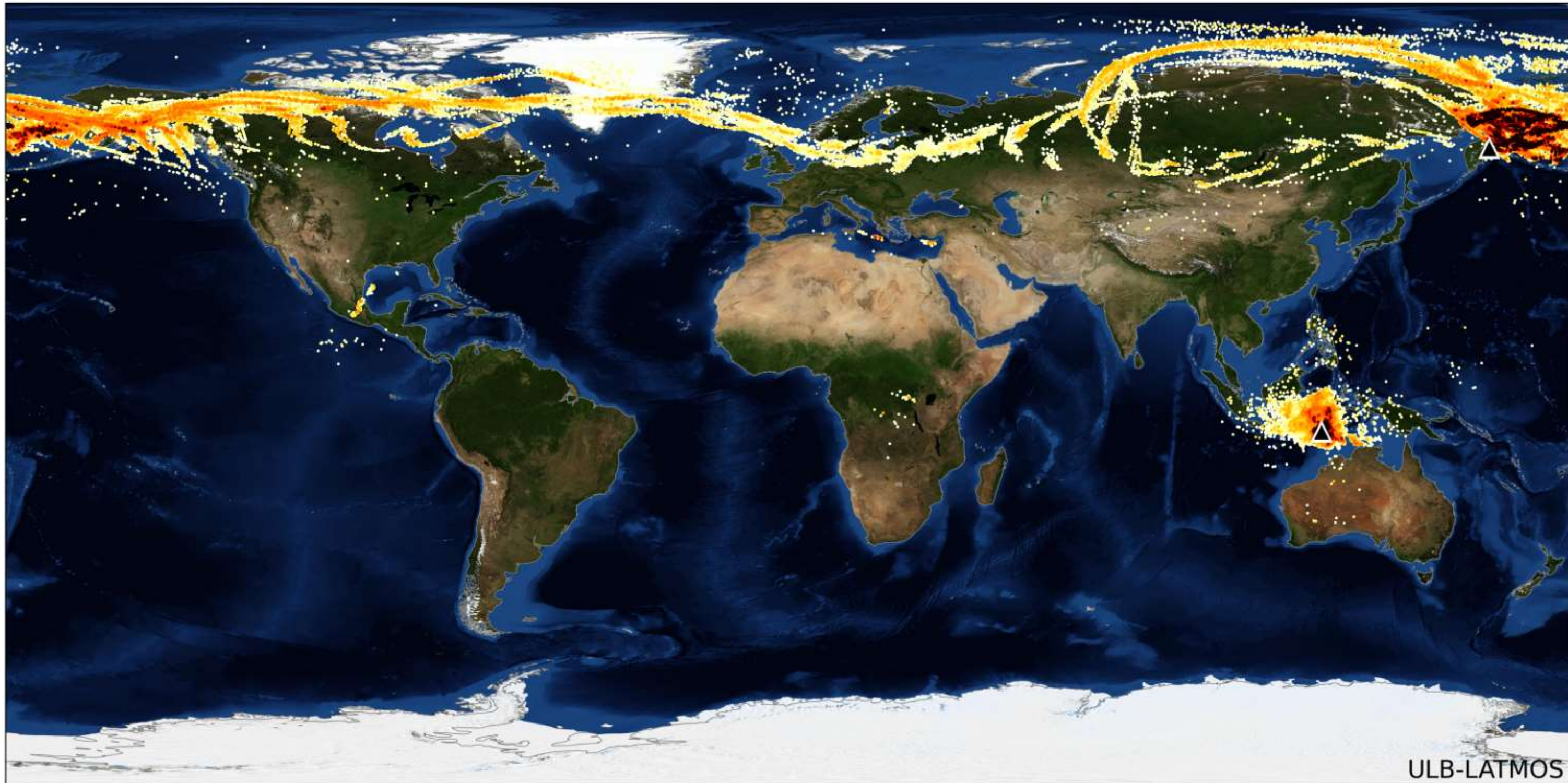
Antarctic Ozone Hole
15 Sep. - 15 Oct. average



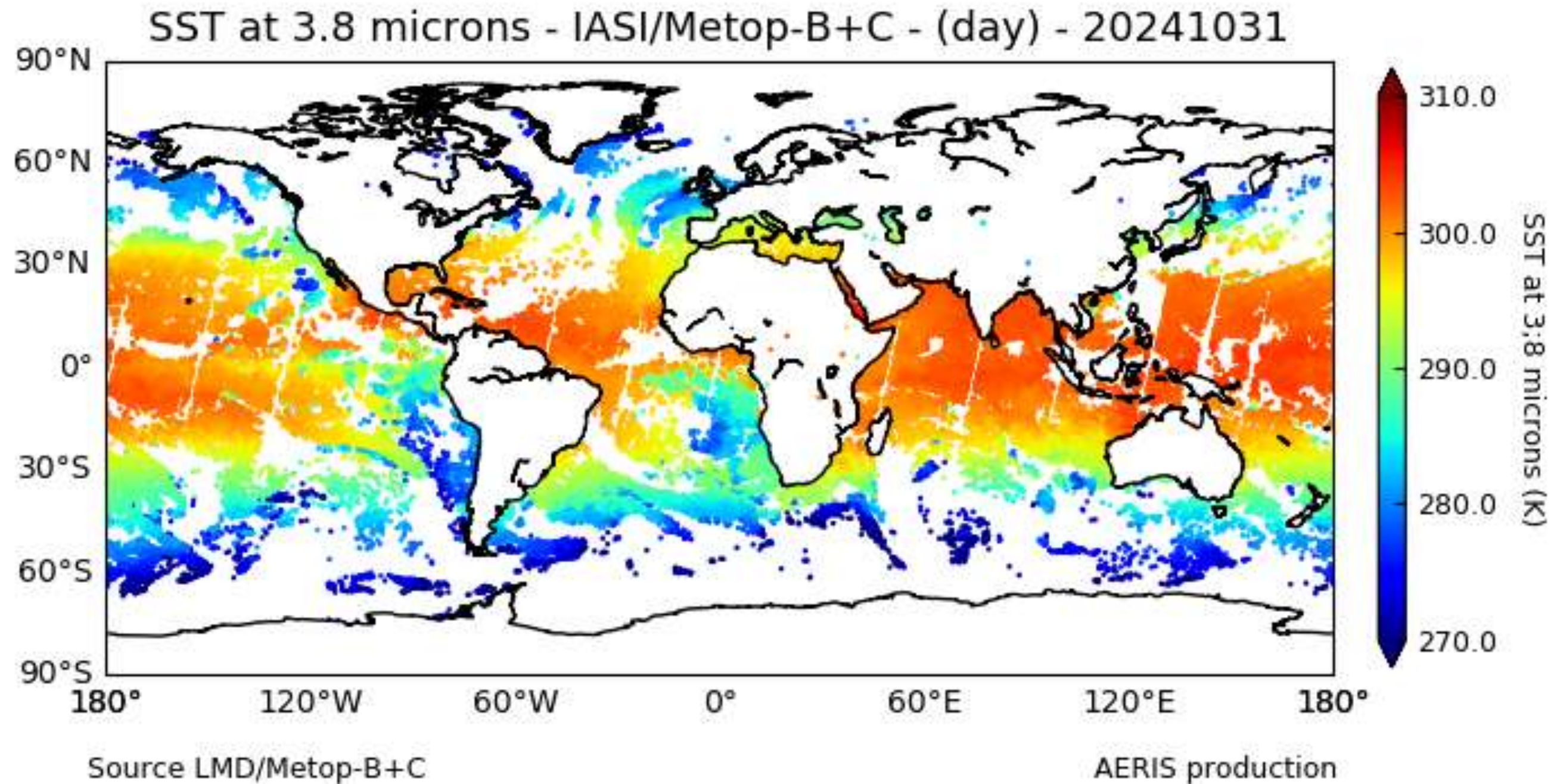
IASI Applications: Volcanic plume monitoring

SO₂ volcanic plumes - IASI/Metop

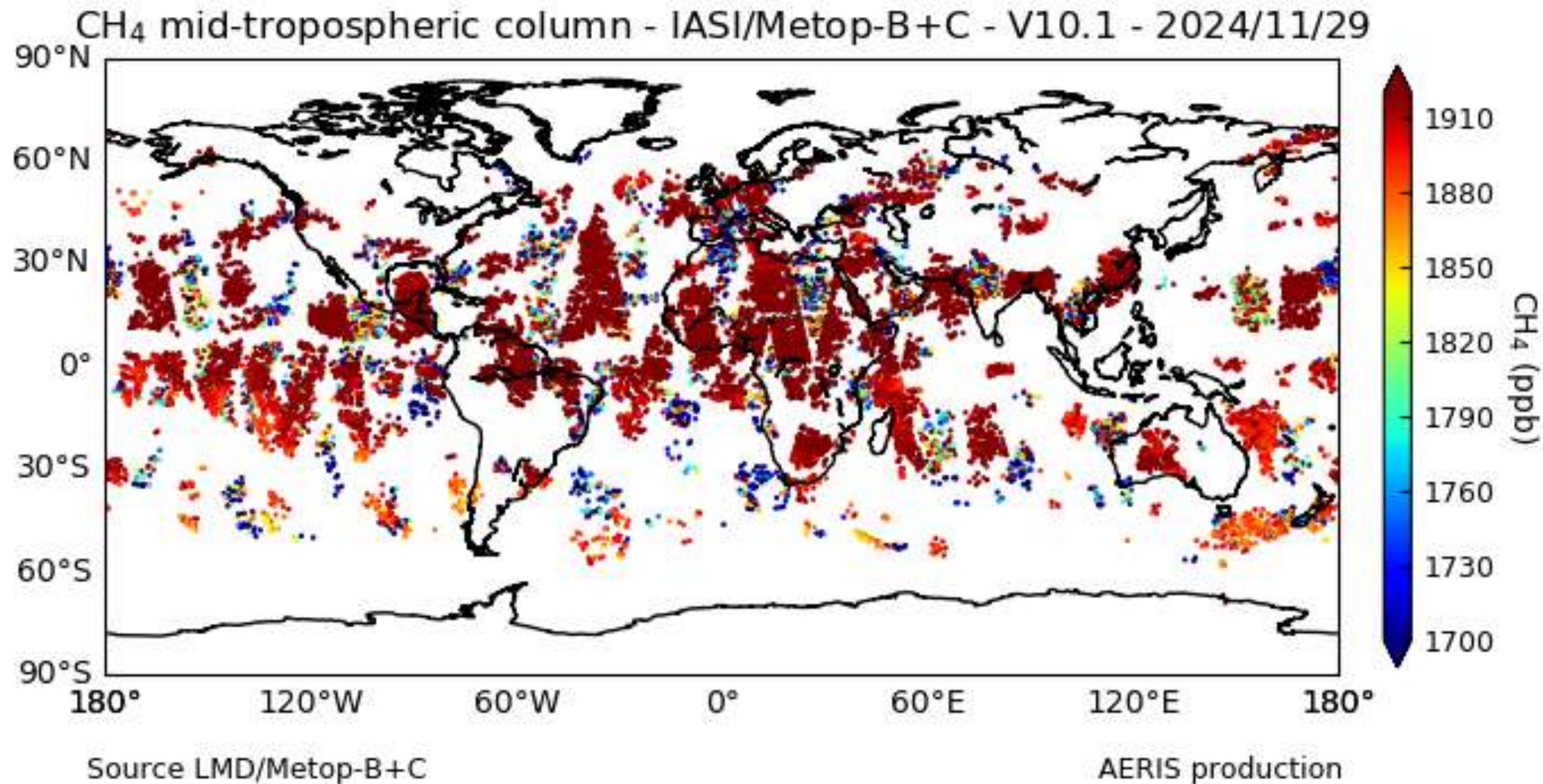
Nov. 2024



IASI Applications: Climate evolution monitoring

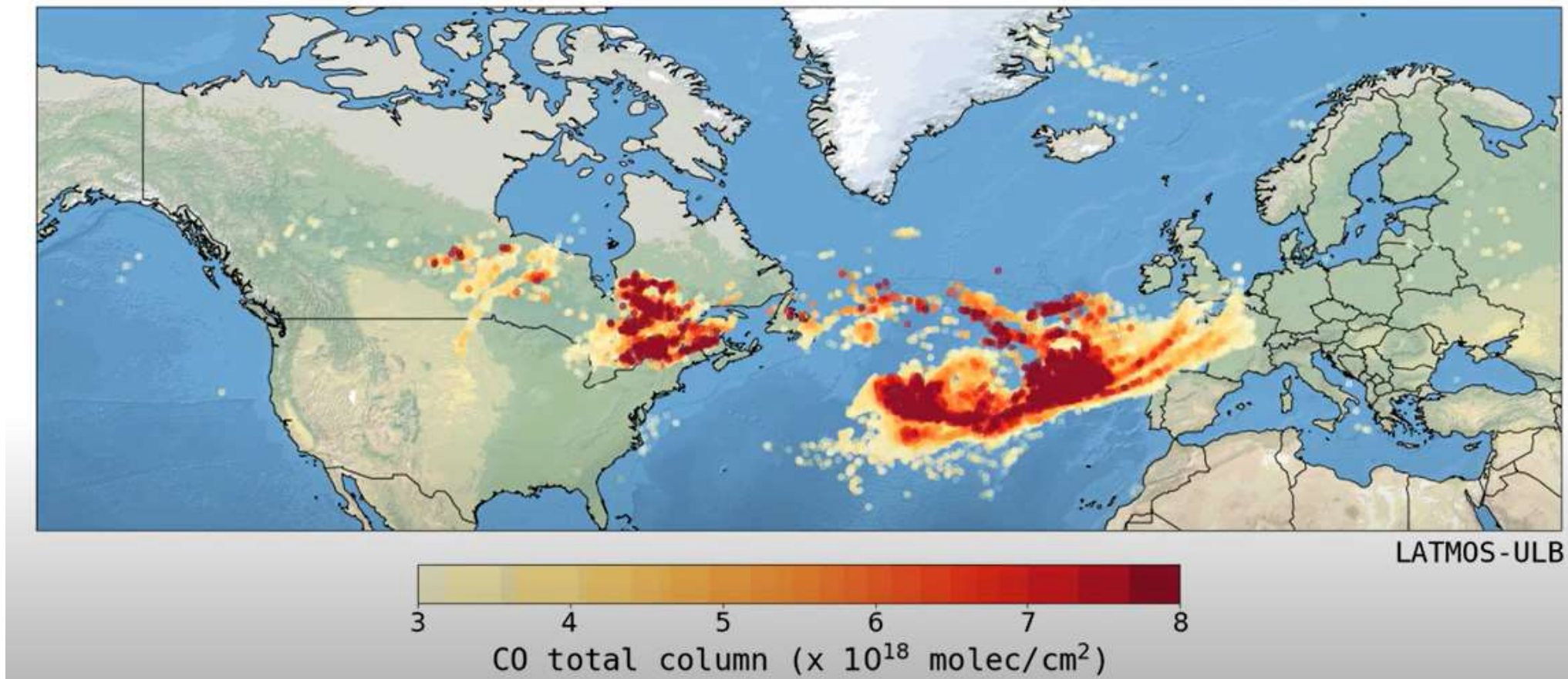


IASI Applications: Greenhouse gases emitted by biomass burnings

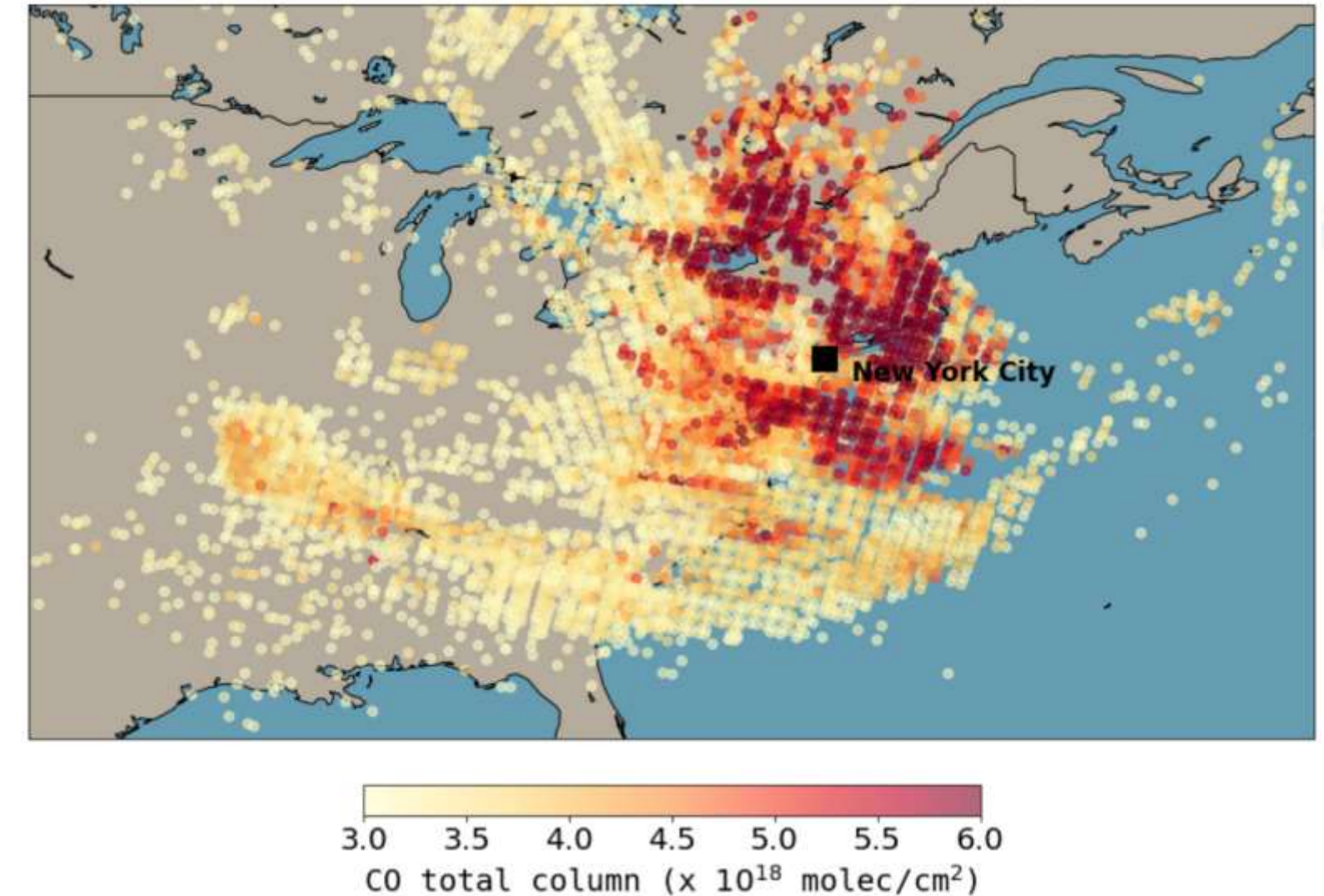


IASI Applications: Fire emission transport

IASI/Metop B+C - 2023/06/25

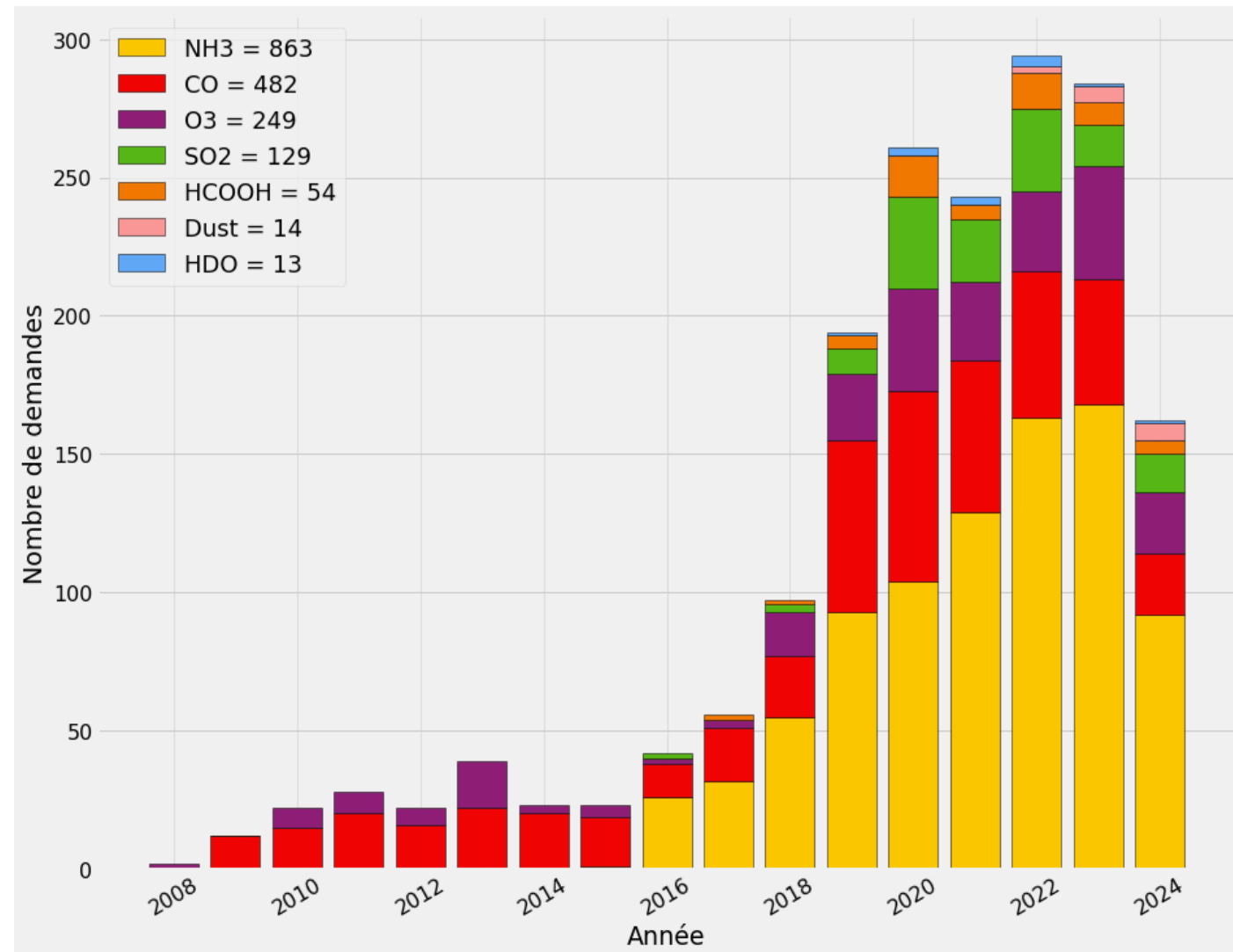


IASI/Metop B+C - 2023/06/06



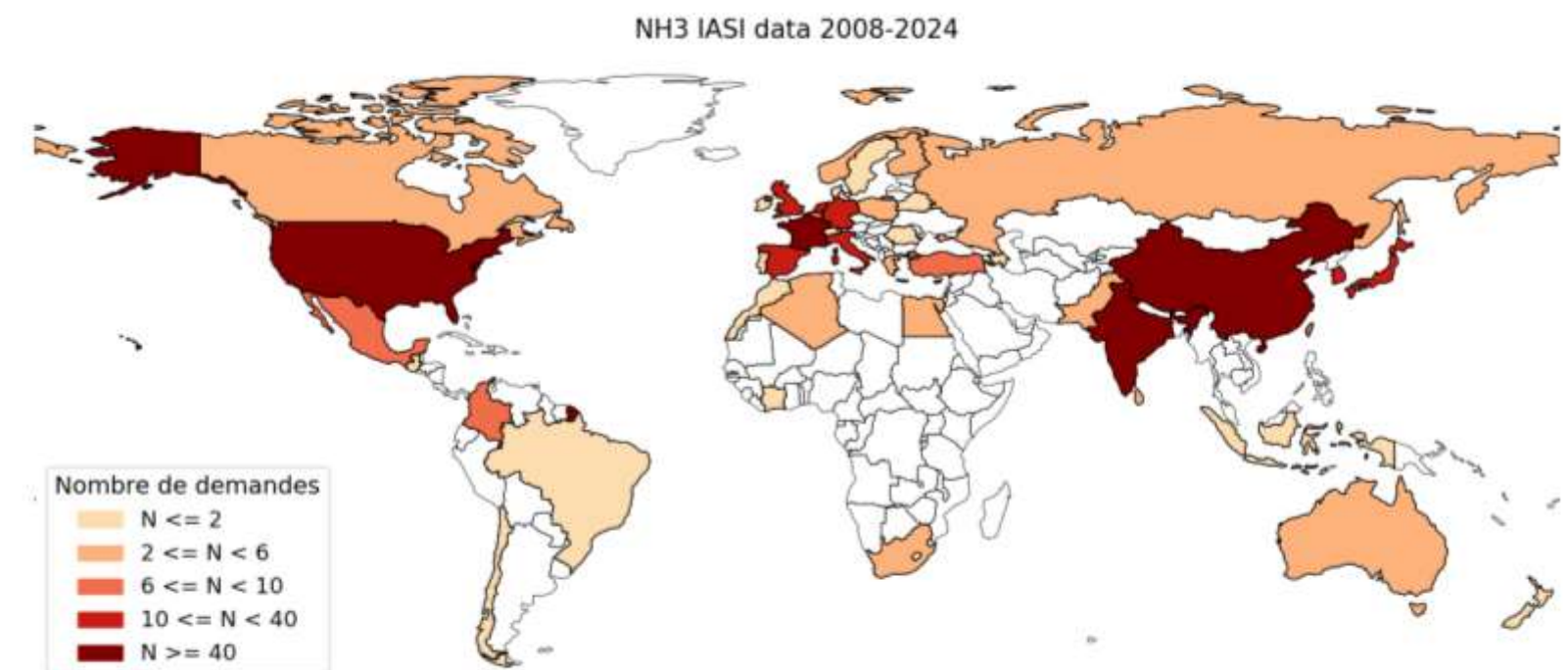
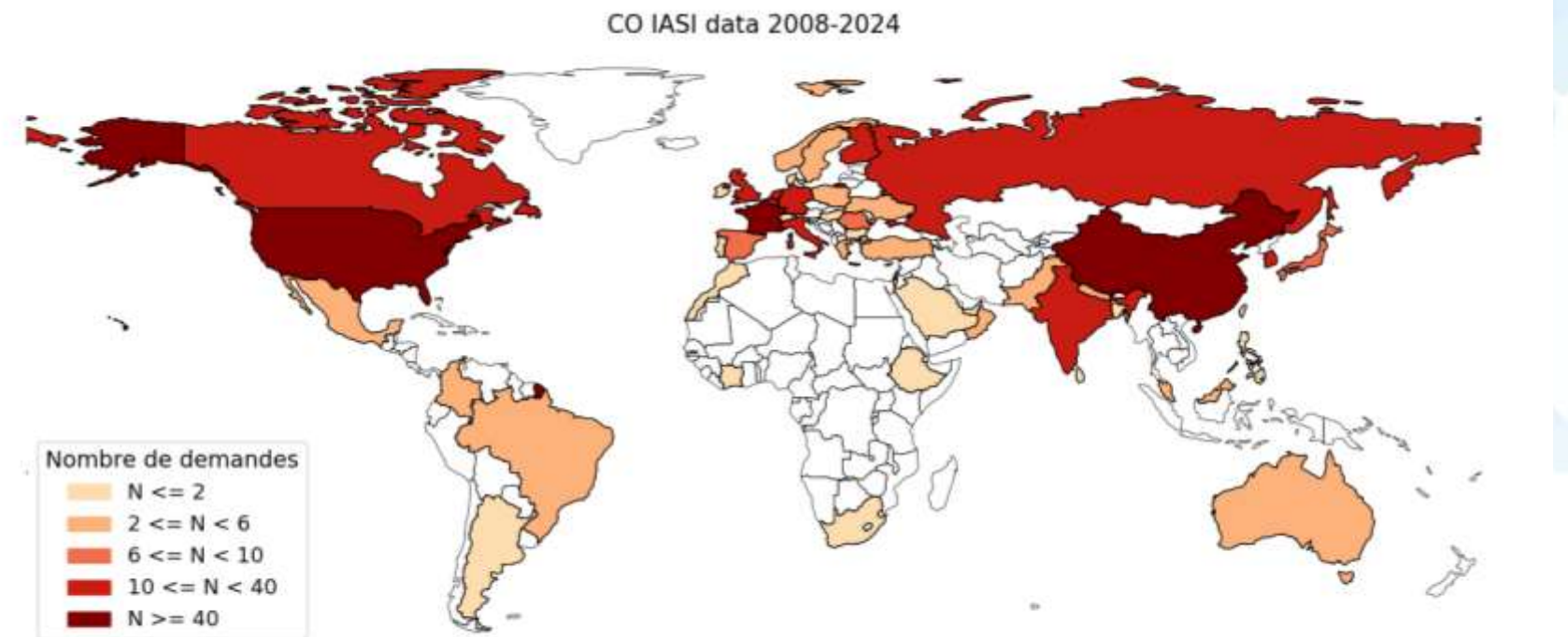
IASI Portal: Connecting users worldwide

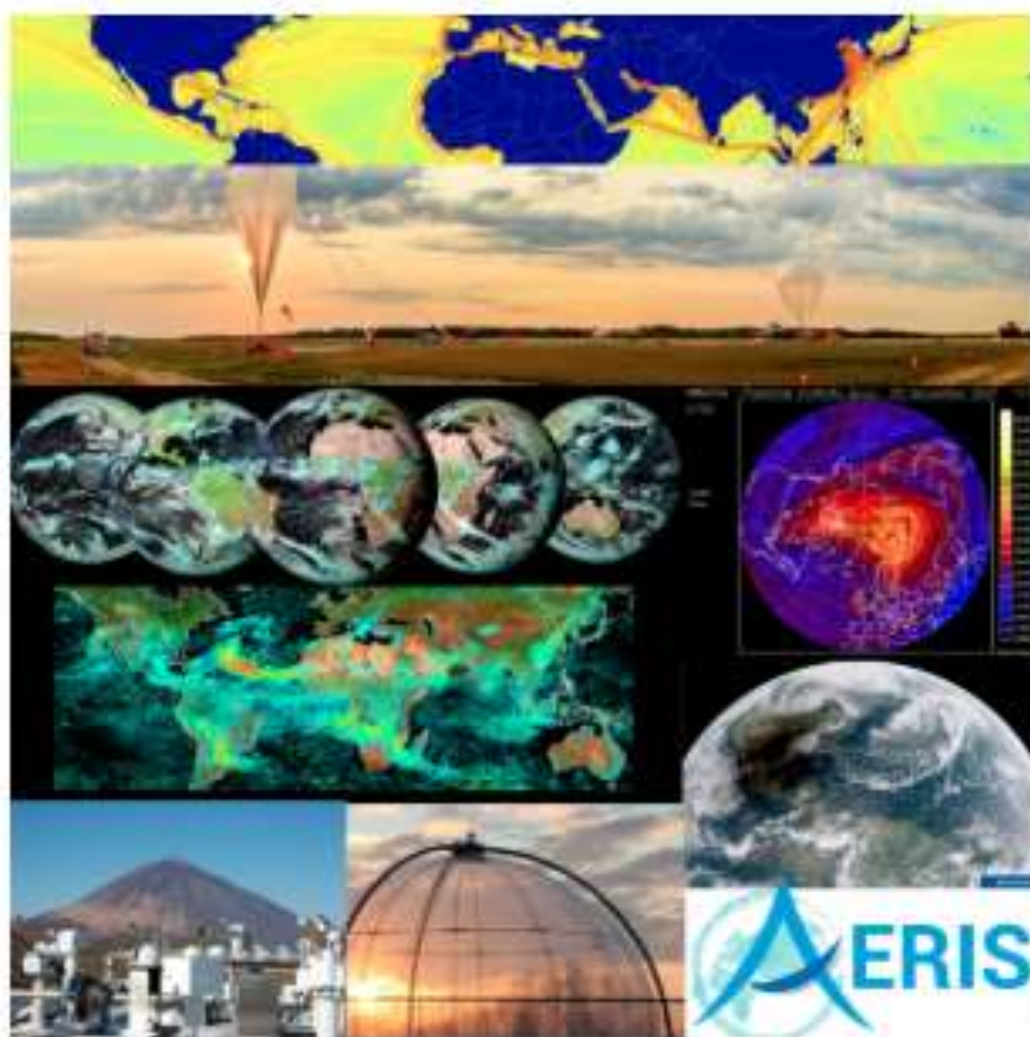
Number of requests over the years



- Only the **first connection** per user is included in the count
- Statistics cover data requests from **January 2008 to mid-2024**

Geographic distribution of data users





10 ans du pôle AERIS



27-28 janvier 2025



Centre des Congrès
Cité des Sciences de
Paris

Don't miss the 10 years of AERIS Data!
Link for registration and program :

<https://10ansaeris.sciencesconf.org/>

Registration is opened until
20 December 2024



Thank you for your attention! ☺