

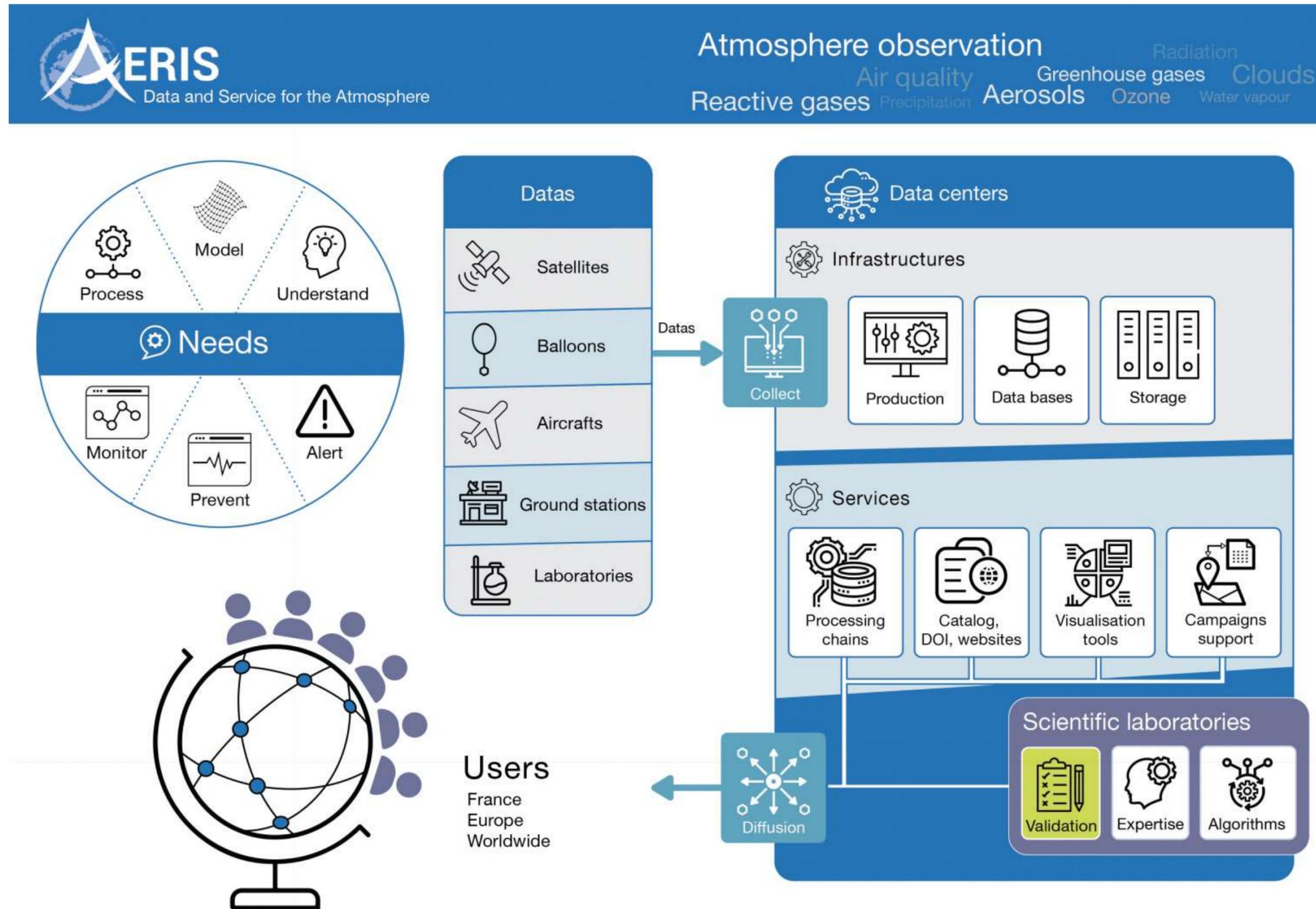
# THE IASI/AERIS PORTAL: DISSEMINATION OF ATMOSPHERIC DATA IN OPEN ACCESS

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AND THE LATMOS, LISA, LMD, ULB CONTRIBUTIONS

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# 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

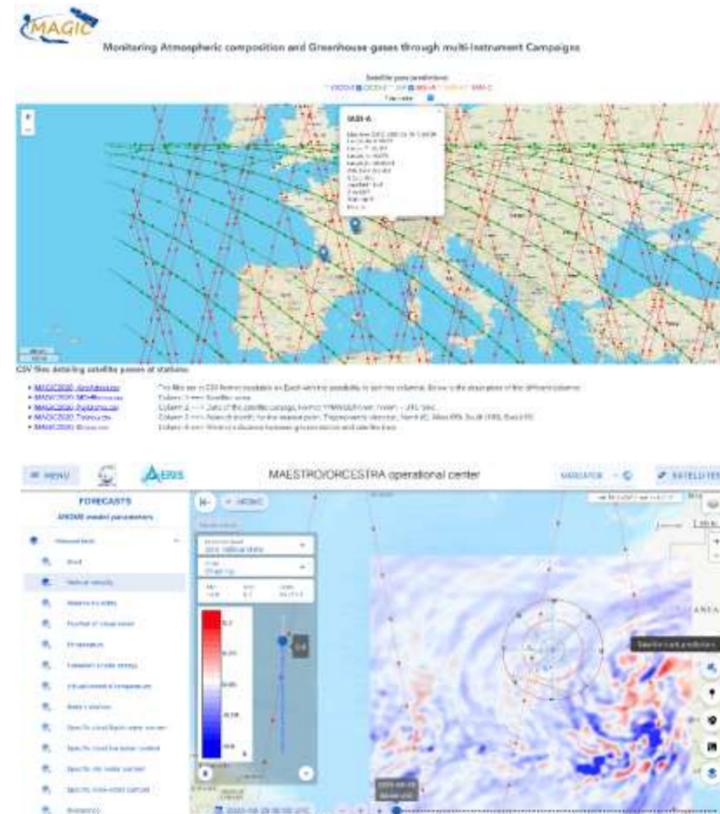
Website hosting service for projects selected via calls, offering dedicated sites for individual projects, campaigns, and regular updates



## Campaign support

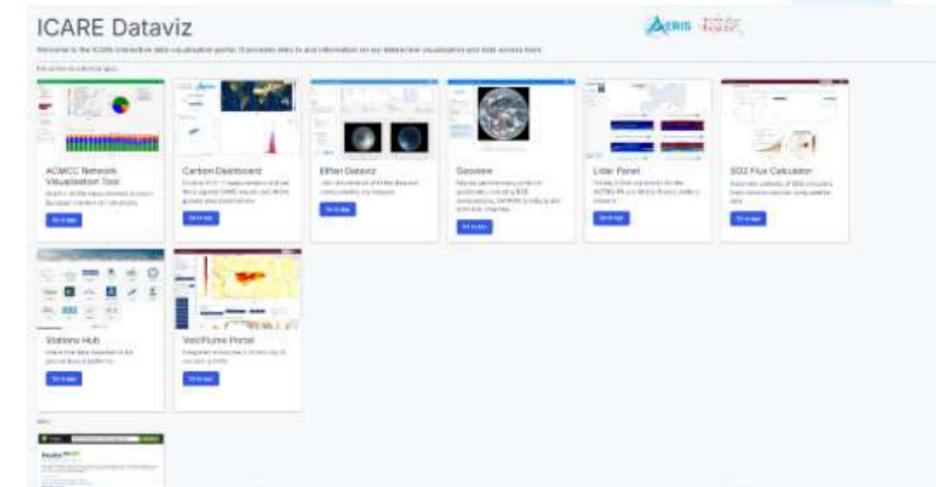
A unique service with a dedicated website:

- 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

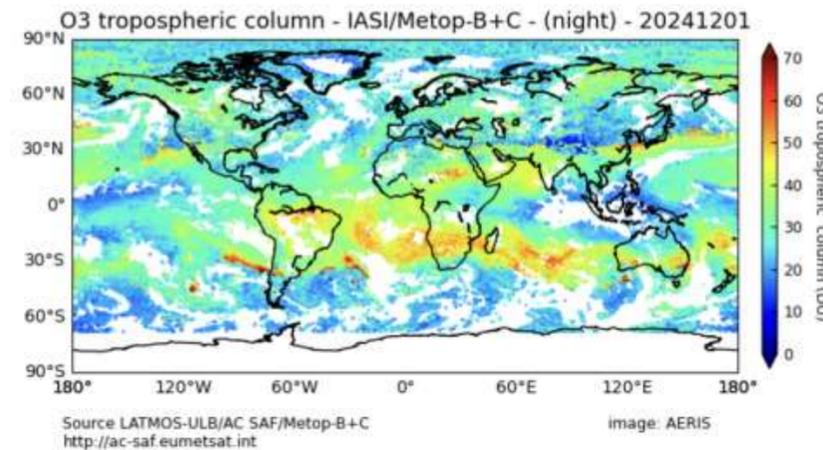
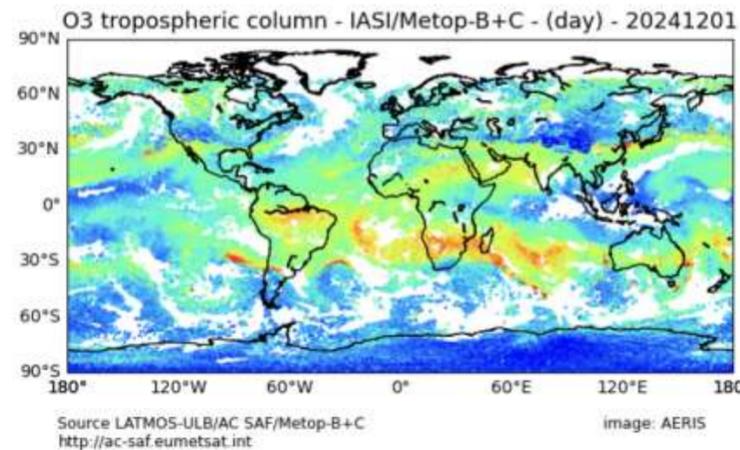
# Welcome to the IASI/AERIS portal



DATA ACCESS QUICKLOOKS TIMELINE GALLERIES PUBLICATIONS COVID-19 CONTACT Admin

## O3 tropospheric column from IASI (Level 2)

Satellite :  Domain :  Type :  Level :  Date :



[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, O<sub>3</sub> (IASI & IASI+GOME-2), SO<sub>2</sub>, NH<sub>3</sub>, HCOOH, Cloud, CO<sub>2</sub>, CH<sub>4</sub>, DUST, SST,...

## New products

2023

- O<sub>3</sub>/CO: New Version 6.7.0 (daily update)
- NH<sub>3</sub>: 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)
- O<sub>3</sub>: CDR (soon)

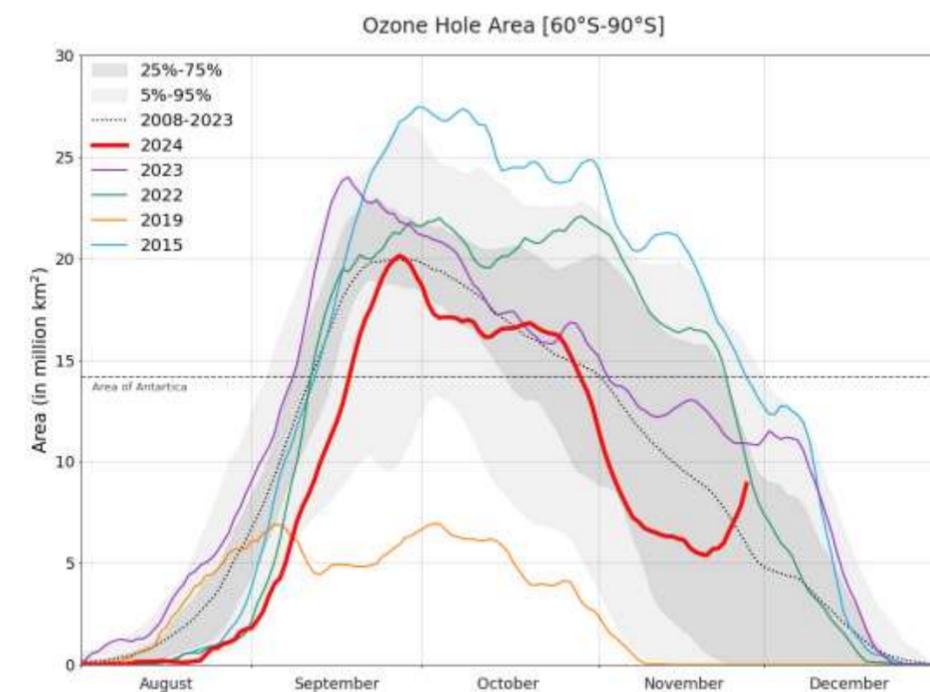
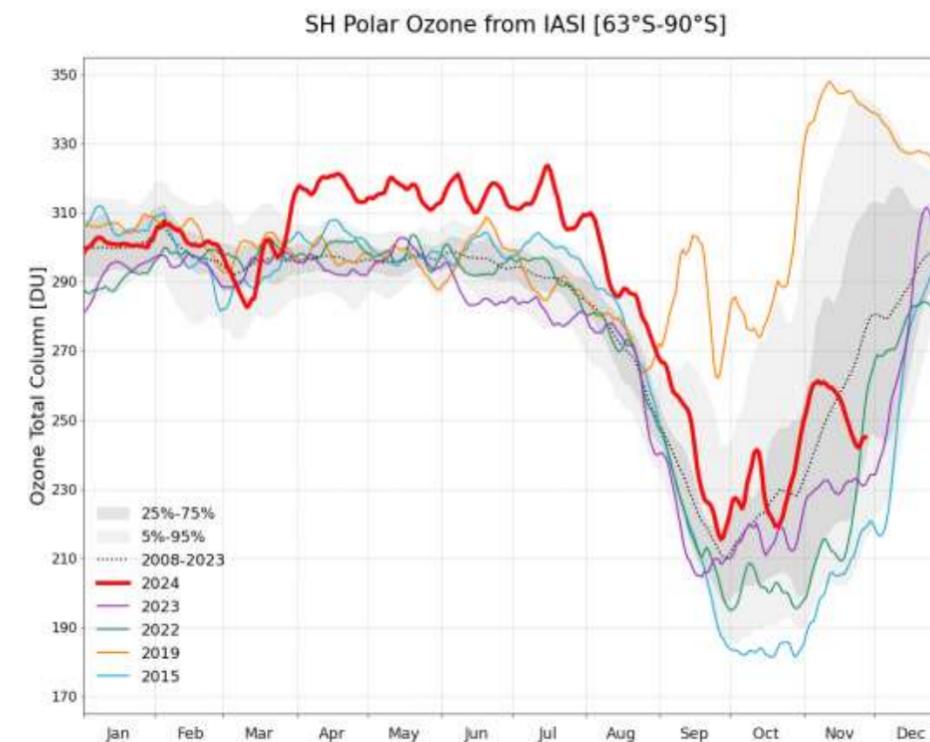
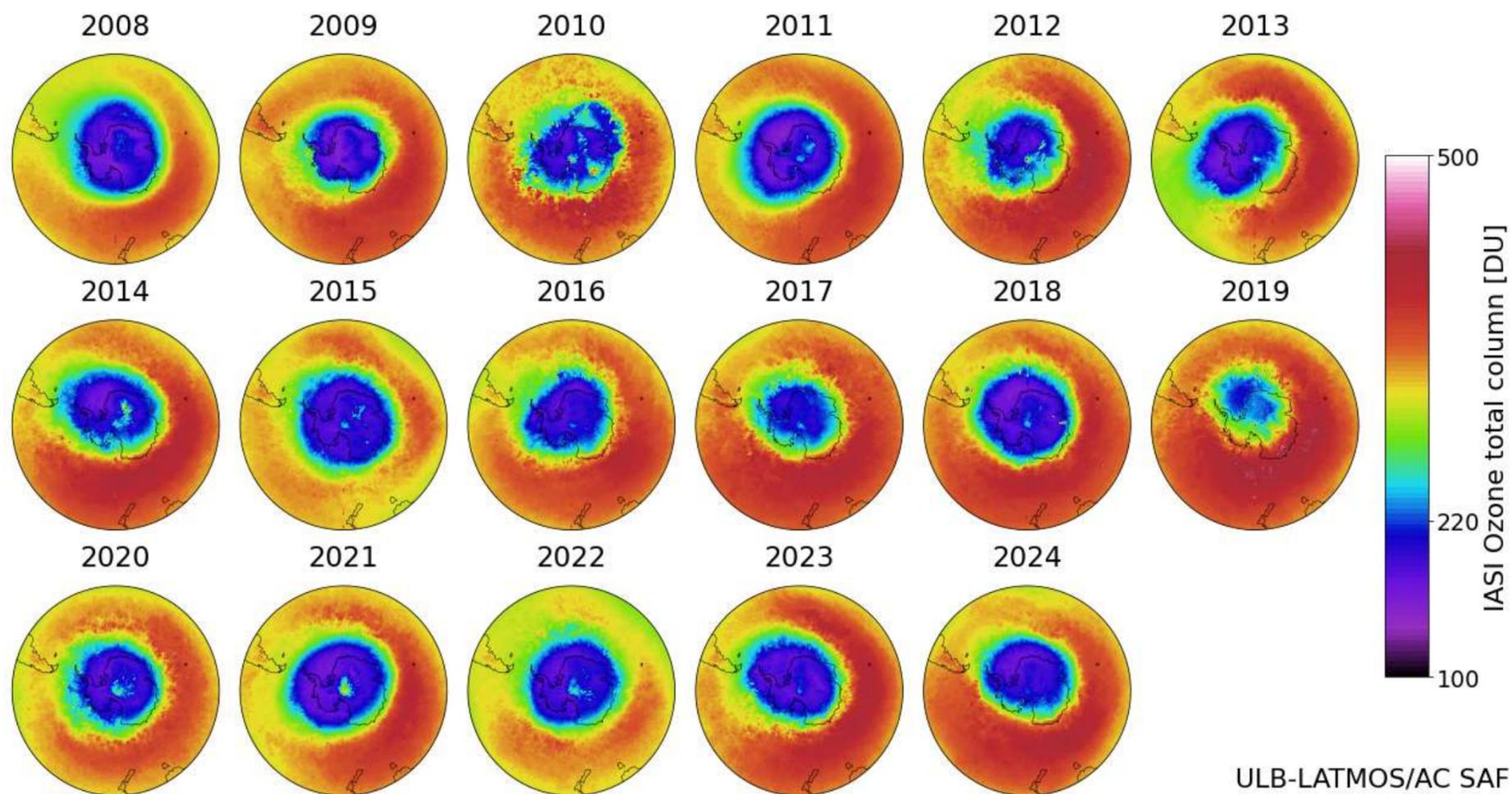
See Poster S12-42  
by Marie Doutriaux-Boucher

## Ongoing projects and updates

- Copernicus Climate Change Service (C3S) Project: IASI O<sub>3</sub> L<sub>3</sub> data production & delivery
- Data/QL: Continuous updates
- IASI/AERIS portal: Continuous updates to the portal

# IASI Applications: Ozone hole monitoring

**Antarctic Ozone Hole**  
15 Sep. - 15 Oct. average



# IASI Applications: Volcanic plume monitoring

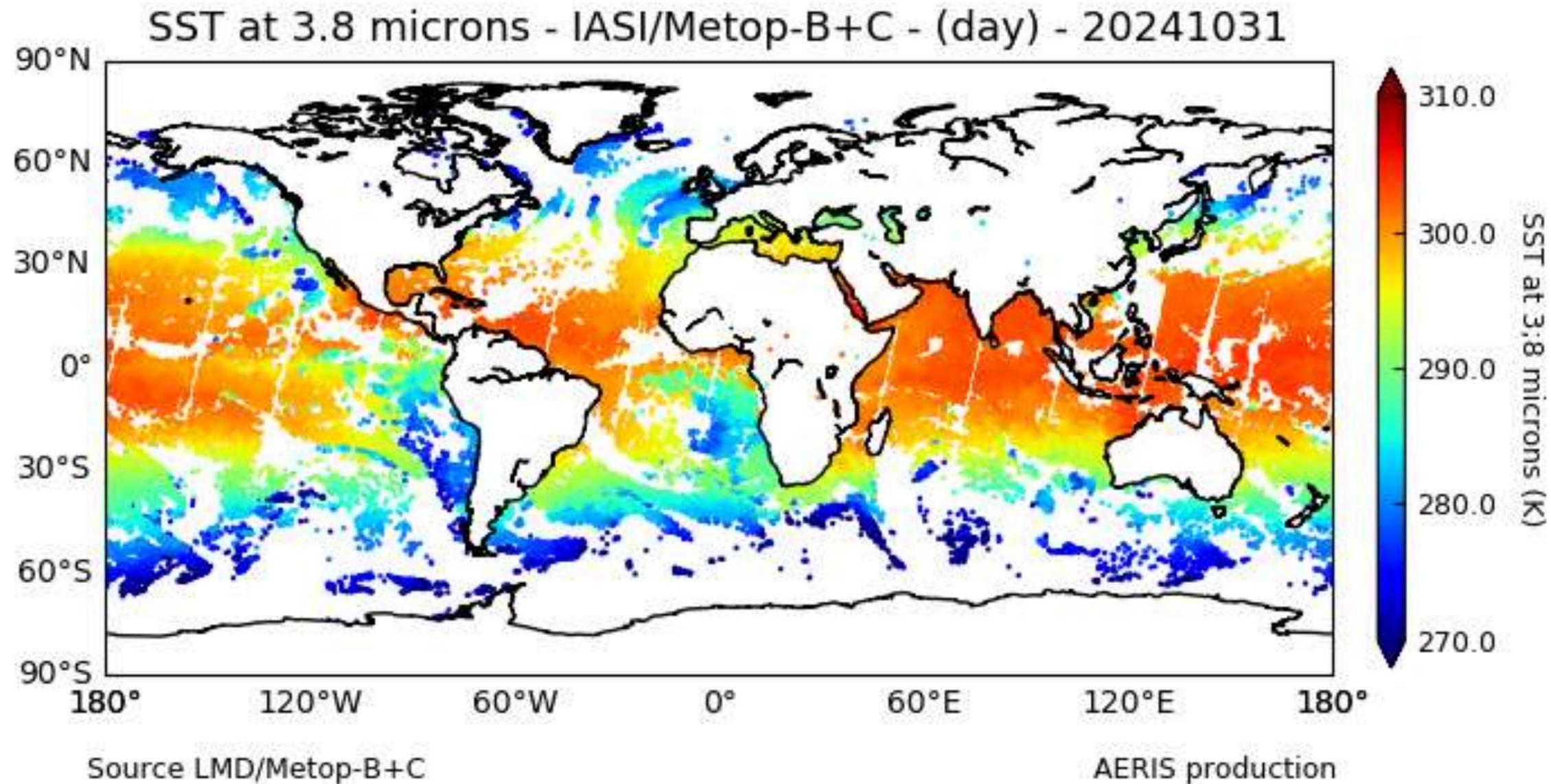
SO<sub>2</sub> volcanic plumes - IASI/Metop

Nov. 2024

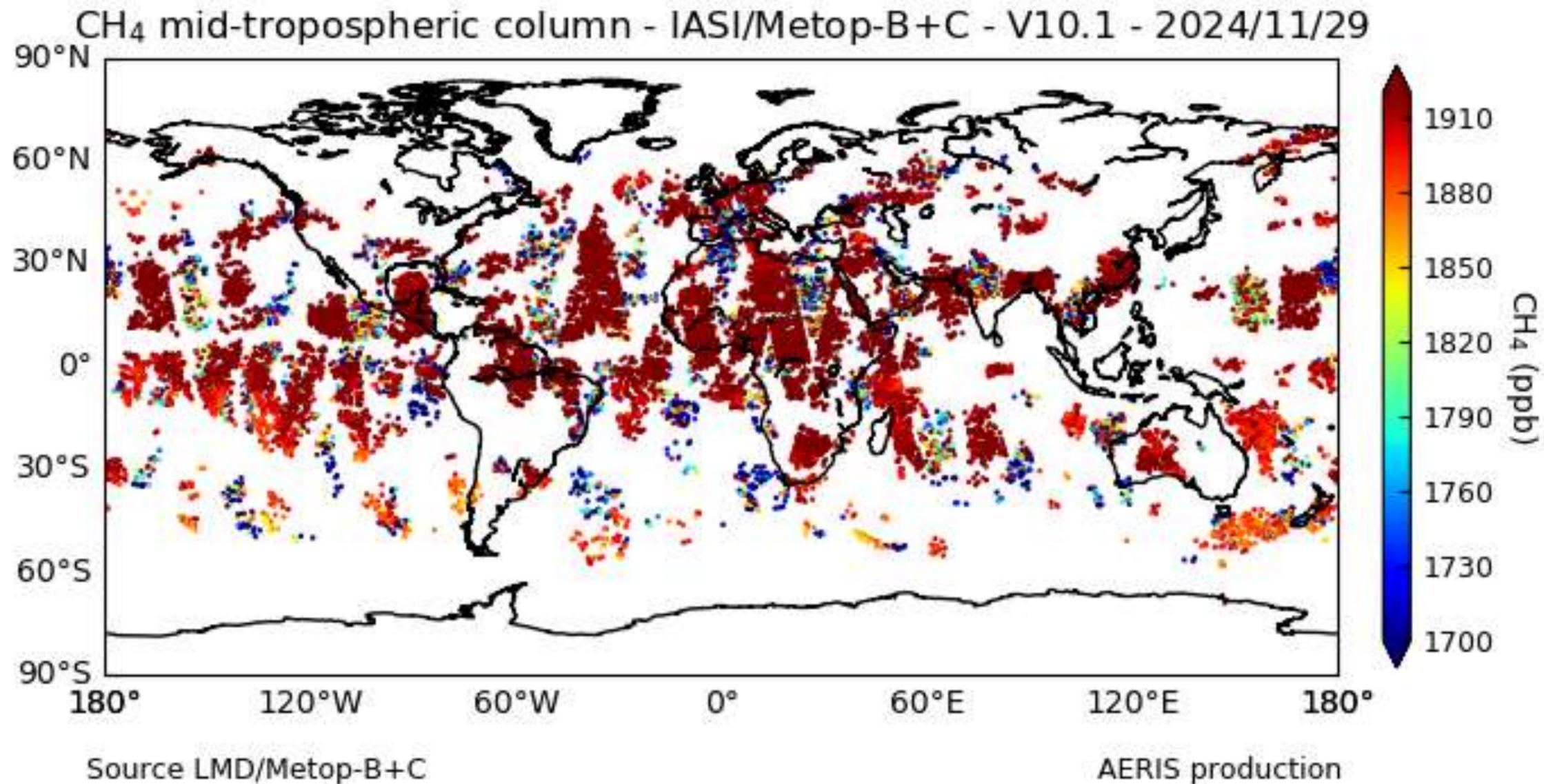


ULB-LATMOS

# IASI Applications: Climate evolution monitoring

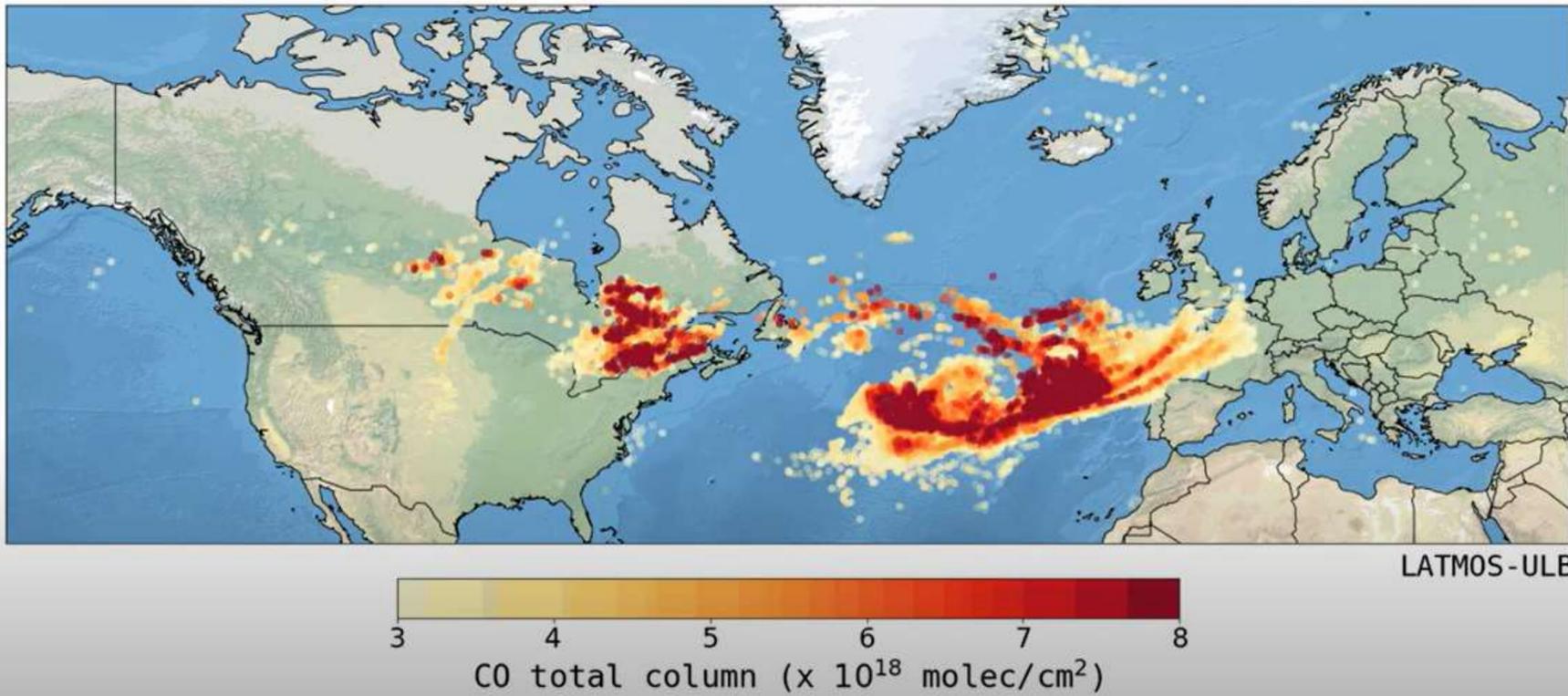


# IASI Applications: Greenhouse gases emitted by biomass burnings

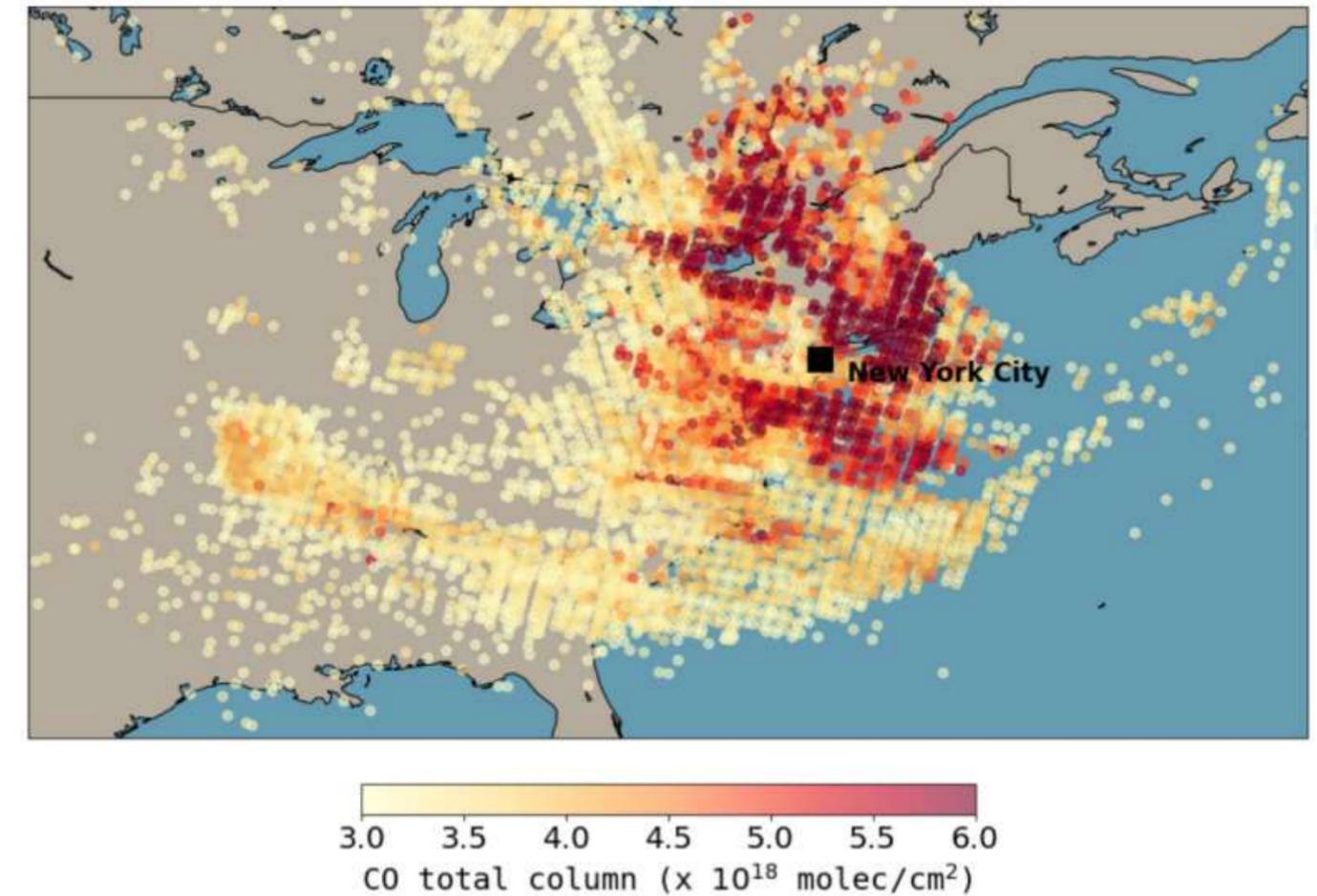


# IASI Applications: Fire emission transport

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

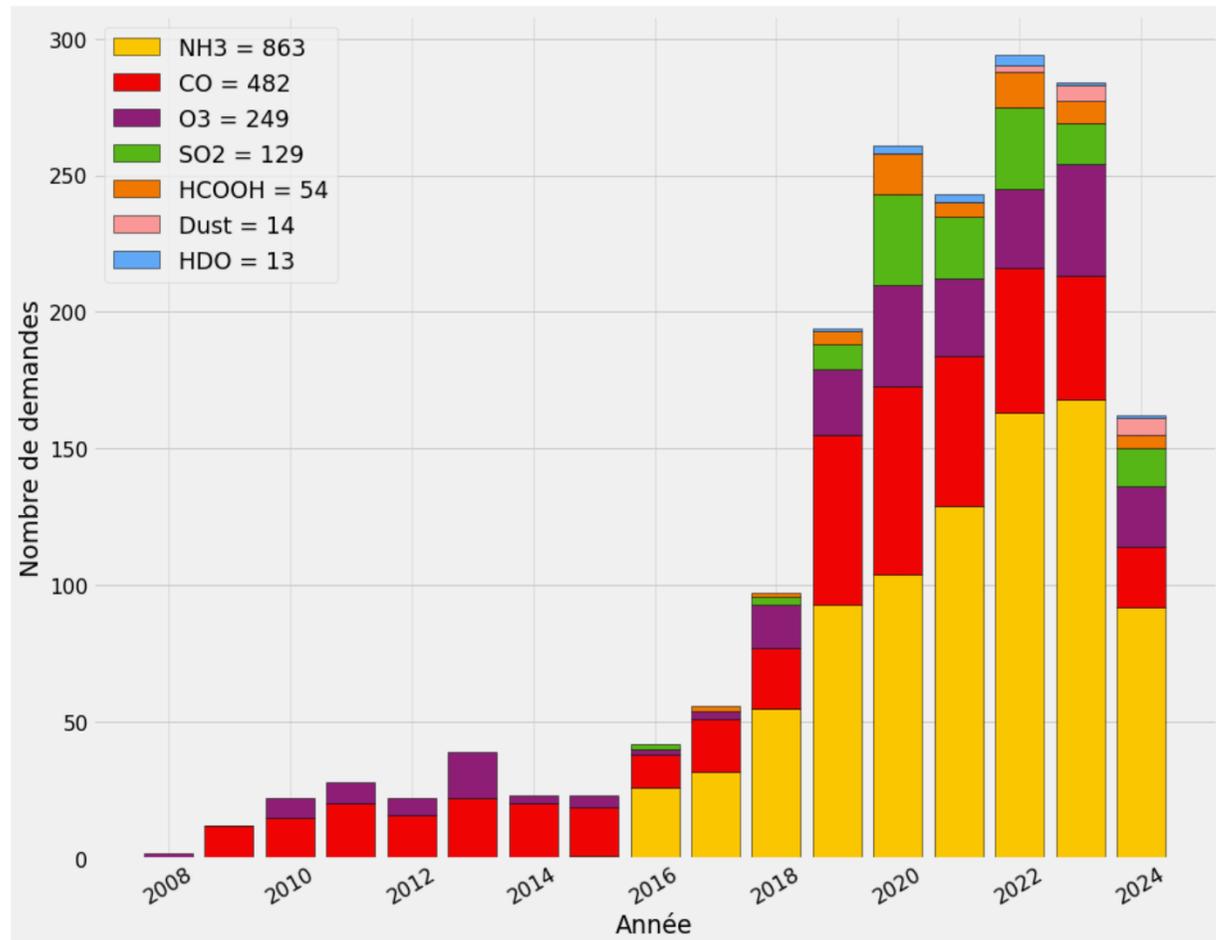


IASI/Metop B+C - 2023/06/06



# 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

