



ACTRIS aerosol RI

África Barreto
(Izaña Atmospheric Research Center,
State Meteorological Agency of Spain, AEMET)

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The Aerosol, Clouds and Trace Gases Research Infrastructure



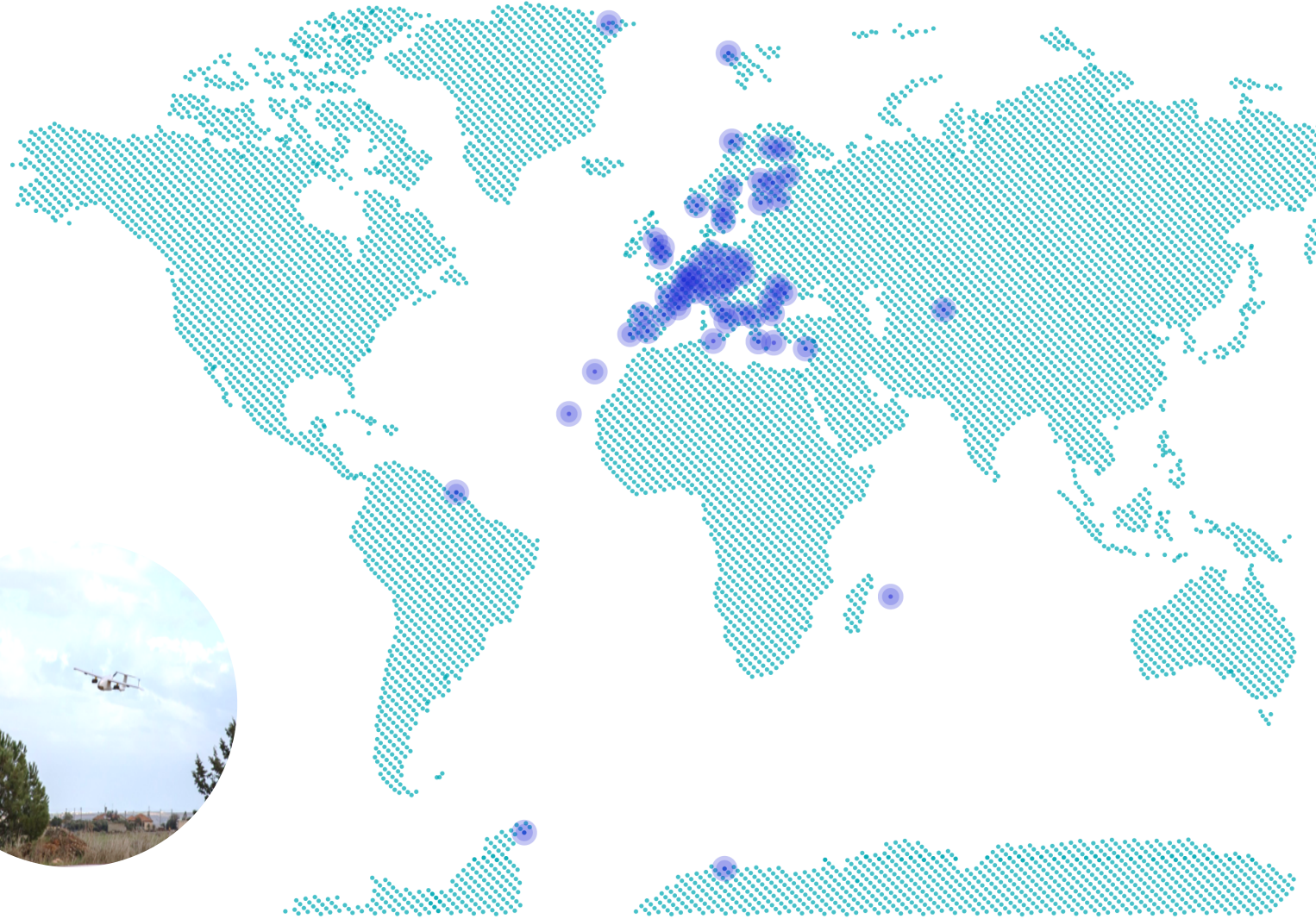
“[...]facilities that provide resources and services for the research communities to conduct research and foster innovation in their fields.”

ACTRIS is the pan-European research infrastructure producing high-quality data and information on short-lived atmospheric constituents and on the processes leading to the variability of these constituents in natural and controlled atmospheres.

	In Situ	Remote Sensing
Aerosol		
Clouds		
Trace Gases		

ACTRIS global footprint

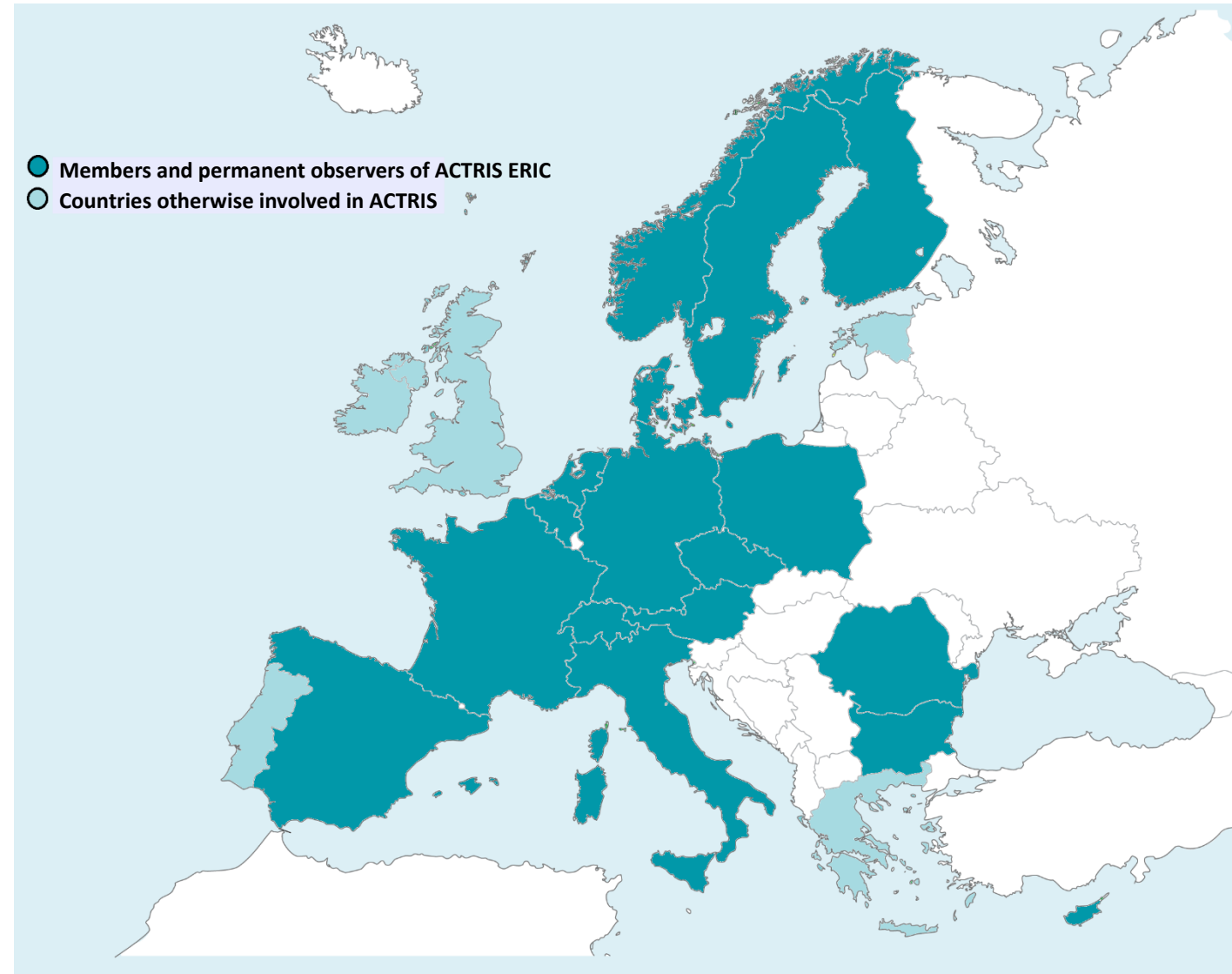
Over 120 measurement facilities in Europe and beyond



ACTRIS European Research Infrastructure



- ACTRIS became a European, legal entity based in Helsinki (Finland), since April 2023: ACTRIS ERIC.
- Shift from project funding to sustained national funding: ACTRIS facilities receive support from National ACTRIS.
- ACTRIS currently has 17 member and observer states.
- ACTRIS aims to be fully operational by 2026: Harmonized policy framework (data access, funding, SOP, ...)
- **most services** are available already



ACTRIS Atmospheric Monitoring



Harmonized
methods

Calibrated
instruments

Provision of
data

Qualified data
production

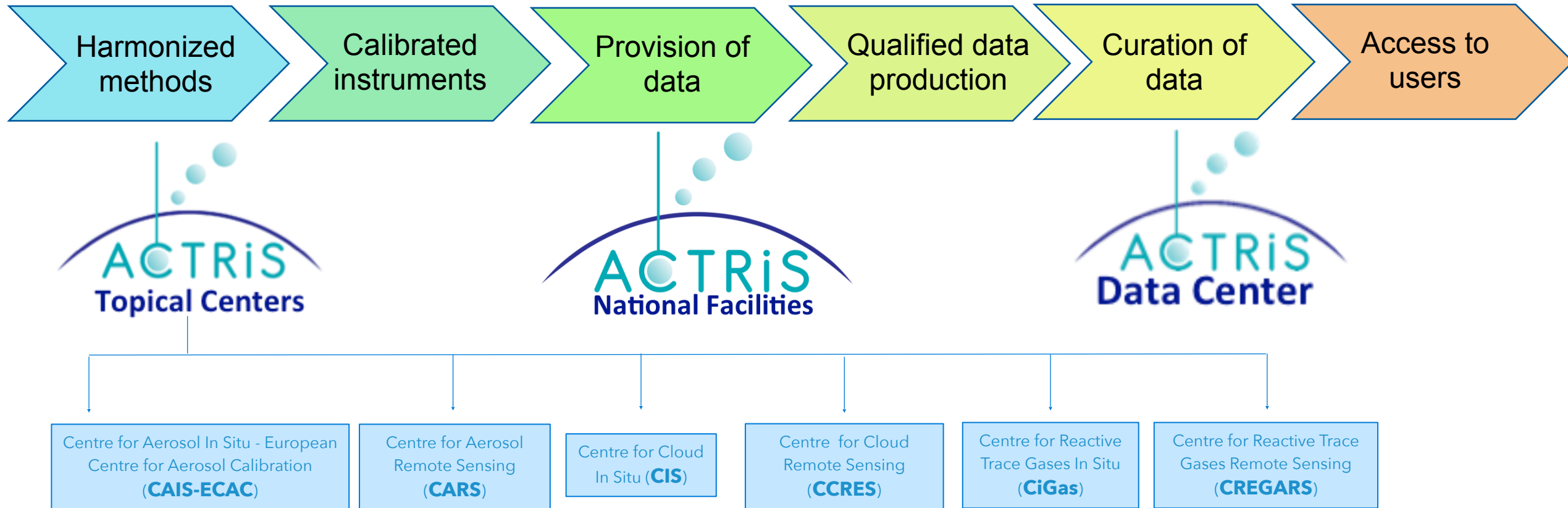
Curation of
data

Access to
users



Central facilities

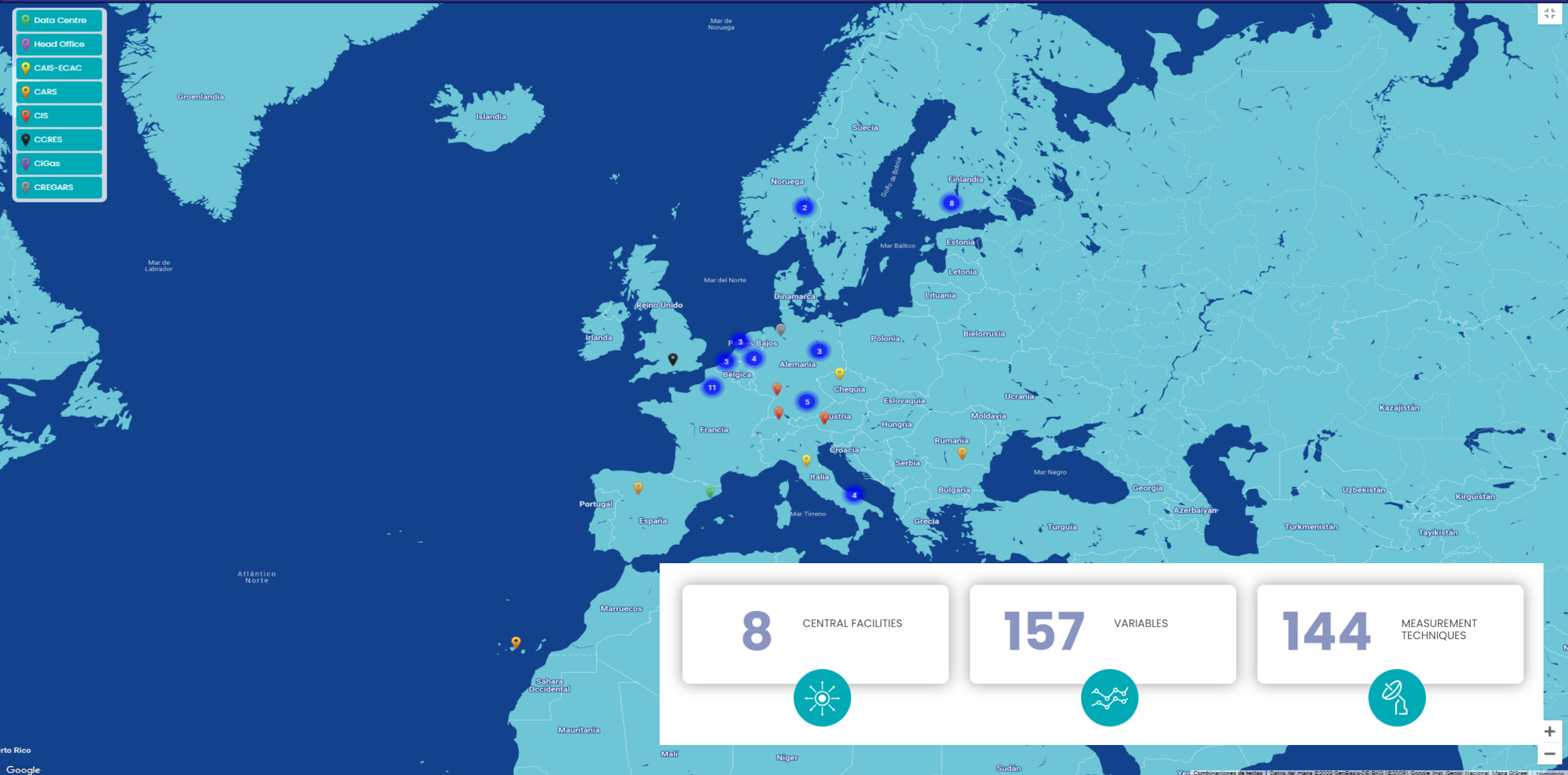
ACTRIS Topical Centers



- procedures and tools for quality assurance and quality control of ACTRIS measurements and data,
- transfer of knowledge and training to ACTRIS operators and users, and
- improvements of measurement methodologies for aerosols, clouds, and reactive trace gases.

ACTRIS Topical Centers

- Data Centre
- Head Office
- CAIS-ECAC
- CARS
- CIS
- CCRES
- CIGas
- CREGARS



8 CENTRAL FACILITIES



157 VARIABLES



144 MEASUREMENT TECHNIQUES



ACTRIS National Facilities



Harmonized methods

Calibrated instruments

Provision of data

Qualified data production

Curation of data

Access to users



Exploratory Platforms

Simulation chambers, laboratory and mobile platforms, ...

Observational Platforms

Long-term records based on regular schedule and common operation standards



Remote Sensing

In situ

ACTRIS National Facilities



Country

Components

Aerosol in situ measurements

Cloud in situ measurements

Trace gases in situ measurements

Aerosol remote sensing

Cloud remote sensing

Trace gases remote sensing

Platform type

 Chamber

 Mobile

 Observational

 Laboratory



112

NATIONAL FACILITIES



79

OBSERVATIONAL PLATFORMS



33

EXPLORATORY PLATFORMS



ACTRIS Data Center – Atmospheric Data Portal



Search Search Results Data Products Tools and Services Documents Most downloads since

Variables [136] ?

- n-hexanal
- n-hexane
- n-nonane
- n-octane
- n-pentane
- NH3.concentration
- NH4+.concentration
- NH4NO3.concentration
- NO.concentration
- NO2.concentration

Only ACTRIS Variables:

Check NRT data

Locations [179] ?

- [ALL]
- Agia Marina Xyliatou / Cyprus Atmospheric Observatory
- Ahtari
- Aliartos
- Amberd
- Anholt
- Appelscha
- Aspvreten
- Aston.hill
- Auchencorth.moss

Database / Network [12] ?

- [ALL]
- ACTRIS-INSITU
- AMAP
- EMEP
- EMEP-CAMPAIGNS
- EUSAAR
- GAW-WDCA
- GAWSIS-WDCGG
- HELCOM
- NDACC

Type [2] ?

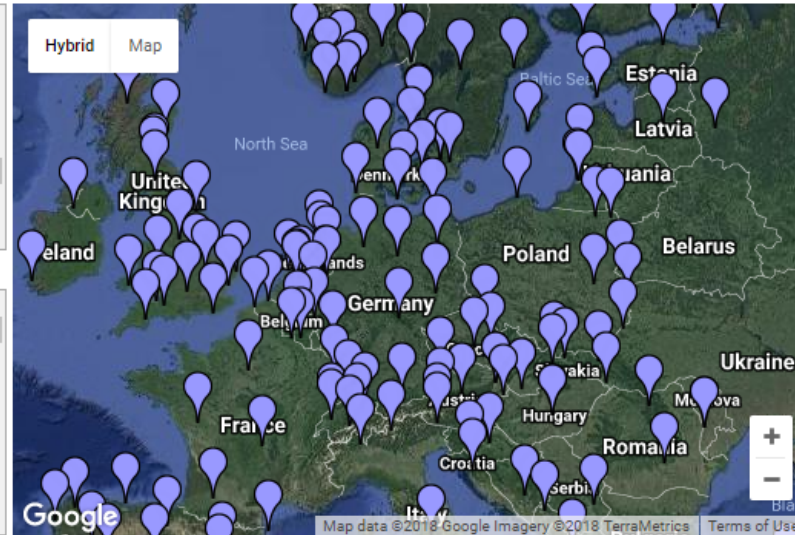
- [ALL]
- insitu
- remote.sensing

Platform [1] ?

- [ALL]
- groundbased

Matrix [1] ?

- [ALL]
- air



Freely available to use for non-commercial research purposes to individual users upon acceptance of this data usage policy (registration)

ACTRIS Data: actris.nilu.no

Latitude: from to
Longitude: from to
Altitude: from to
Date range: from to

>> Apply

Reset Filter

List Datasets >

Press the Ctrl-button (while selecting) for multiple selection.

Datasets total: 710

DATA

- available for free via the ACTRIS Data Centre
- common measurement and data processing protocols + QA/QC = intercomparability
- virtual tools for processing data online
- over 100 variables
- hosted by NILU

(a) Emission anomaly

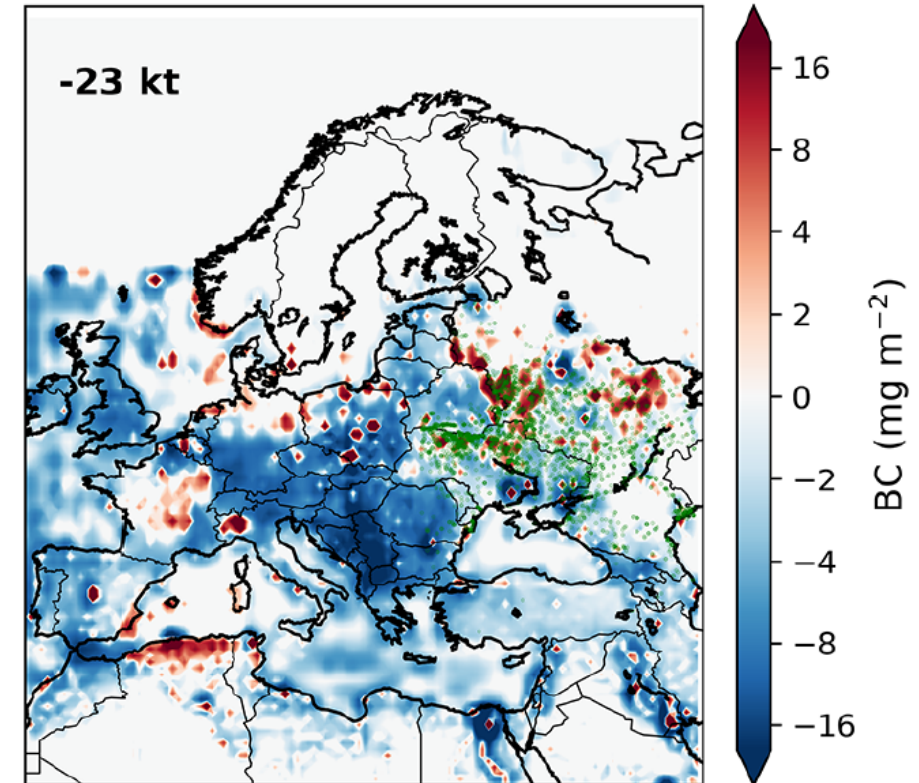


figure from Evangeliou et al. 2021, ACP

ACTRIS Data: actris.nilu.no

EBAS Near-Real-Time Data

Click on station to plot data



No station selected yet



Norsk institutt for luftforskning
Norwegian Institute for Air Research

<http://ebas.nilu.no>

ACTRIS in-situ NRT data submission to EBAS



- Using the e-infrastructure EBAS at NILU
- EBAS hosts data from numerous networks, sites and variables with data ranging back to 1970's.
- The data base was started in 1980's
- development in accordance with needs for users and producers

<http://ebas.nilu.no>

The screenshot displays the EBAS web interface. At the top, there are logos for NILU, emep, WMO Global Atmosphere Watch (GAW-WDCA and GAW-WDCRG), ACTRIS, AMAP GUAN HELCOM, OSPAR SIOS, and the European Union flag. Below the logos is a navigation bar with 'Home', 'Acknowledgment', 'Data policy', a 'username' field, and a 'Login' button. The main content area features several filter panels: 'Framework [55]' with options like ACTRIS, ACTRIS_NRT, and AMAP; 'Country [84]' with a list of countries; 'Station [1261]' with a list of station names; 'Instrument type [104]' with various instrument models; 'Component [737]' with chemical species like 1-2-3-4-tetrachlorobenzene; and 'Matrix [33]' with data types like aerosol and air. Below these filters are 'From' and 'To' dropdown menus set to '>>All'. At the bottom right of the filters, it says 'Available datasets: 131731' with 'Reset' and 'List datasets' buttons. Below the filters is a world map titled 'Map (Populate) (Show large)' showing terrain. To the right of the map is a section titled 'Additional resources' with a list of links: 'Near-Real-Time data', 'European Monitoring and Evaluation Programme (EMEP-CCC)', 'Site descriptions - EMEP', 'WMO Global Atmosphere Watch (GAW)', 'Site descriptions - GAW', 'Air mass trajectories', 'Data submission', 'About EBAS', and 'EBAS User Feedback Tracker'. At the bottom right of the map area are social media icons for Facebook and Twitter, and a 'Terms of Use' link.

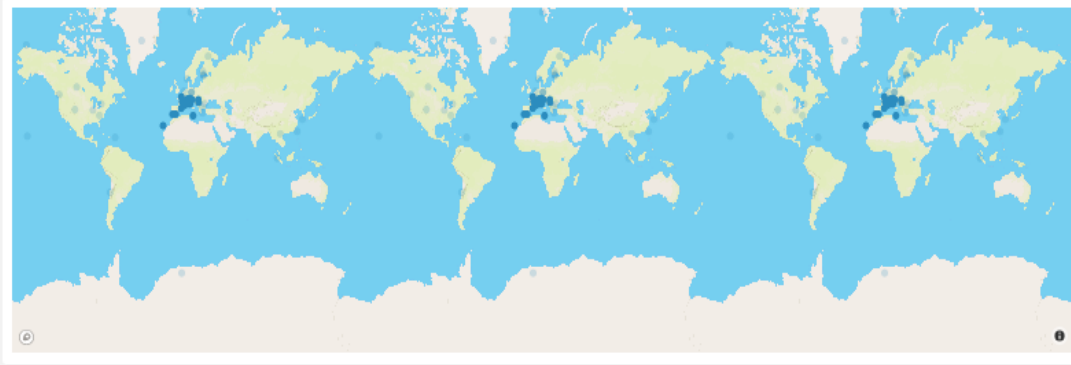
ACTRIS in-situ NRT data submission to EBAS



EBAS Near-Real-Time Data

Click on station to plot data

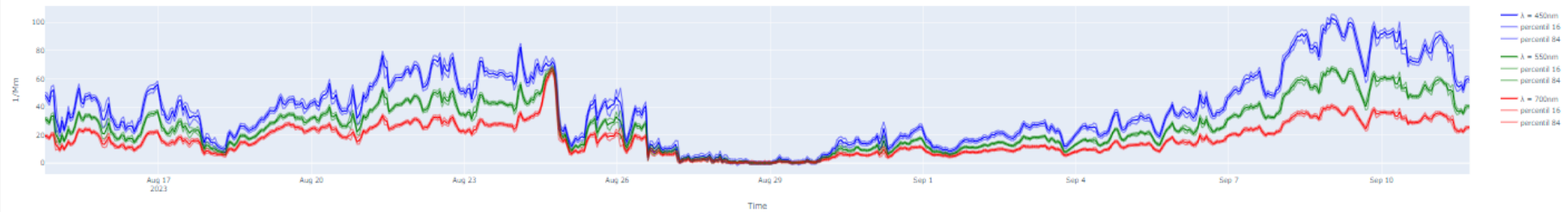
Hohenpeissenberg



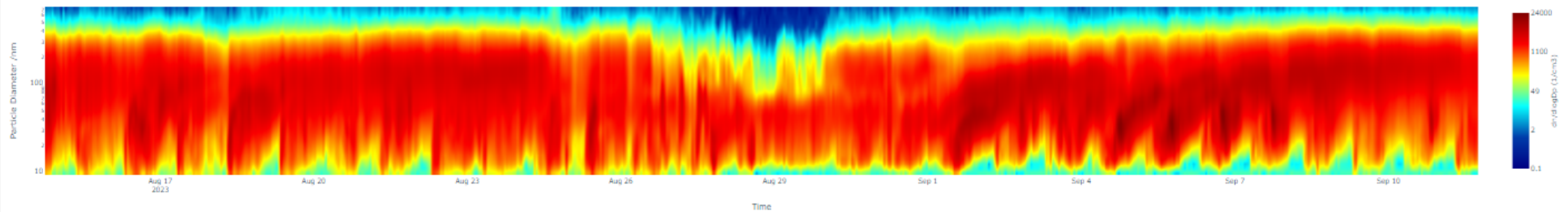
Station Hohenpeissenberg (DE0043G) at latitude 47.60 and longitude 11.01



nephelometer - aerosol_light_scattering_coefficient_amean - pm10 - Hohenpeissenberg



smps - Hohenpeissenberg



ACTRIS Remote Sensing NRT data submission




ACTRIS Data Centre
- an atmospheric data portal


User Manual | About

Search Search Results Data Products Tools and Services Documents 3 week EMEP (127 files) AMAP (110 files) OSPAI

Quicklooks of aerosol profiles



EARLINET Quicklook Interface



<http://actris.nilu.no>

◀ Prev Current Month Next ▶

September 2023

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

Fast Selection Sep 2023 Select

Show Quicklooks

Please select at least one date if available

- No Measurements
 - Available Measurements
 - Filtered Measurements - AND
 - Filtered Measurements - OR
- Right Click on Calendar cell to see measurements

Filter measurements by system :
Click on a Location in order to expand the view and see all the systems

- Select All
- Andoya, NO - arr
- Antikythera, GR - aky
- Athens, GR - atz
- Barcelona, ES - brc
- Belgrade, RS - bgd
- Belsk, PL - cog
- Bucharest, RO - ino
- Burjassot, ES - buj
- Cabauw, NL - cbw
- Cabo Verde
- Observatory@Mindelo, CV - cvo
- Catania, IT - ctn
- Clermont-Ferrand, FR - puy



ACTRIS Remote Sensing NRT data submission



EARLINET Quicklook Interface



← Go Back

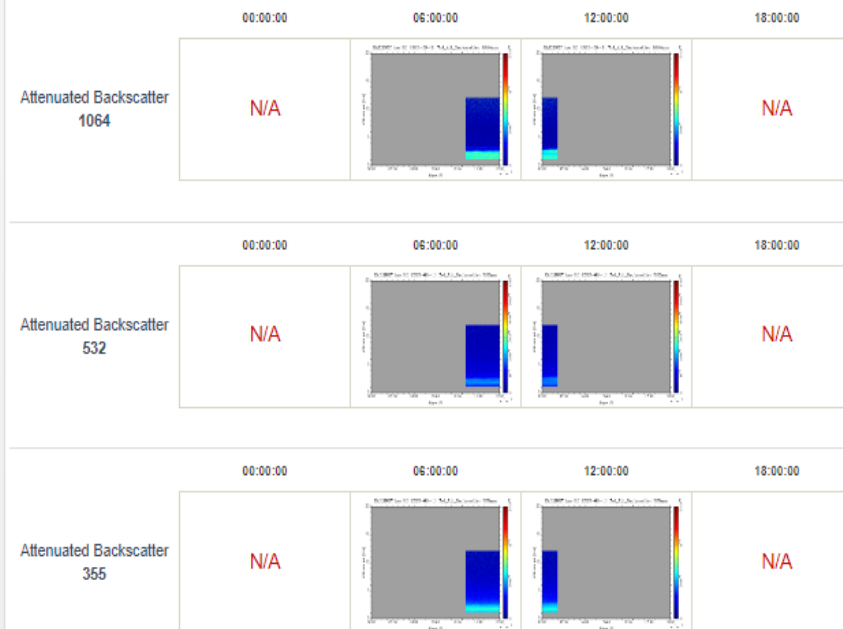
Select Day

▼ 2023-09-11

<http://actris.nilu.no>

Bucharest

RALI



Please note: The content above is retrieved from external source (URL: <http://www.meteo.physik.uni-muenchen.de/~atlidar/quicklooks/European-quicklooks.html>)

This is a collaboration with EARLINET, and they are highly acknowledged for their efforts. For more information about EARLINET, please enter [here](#).

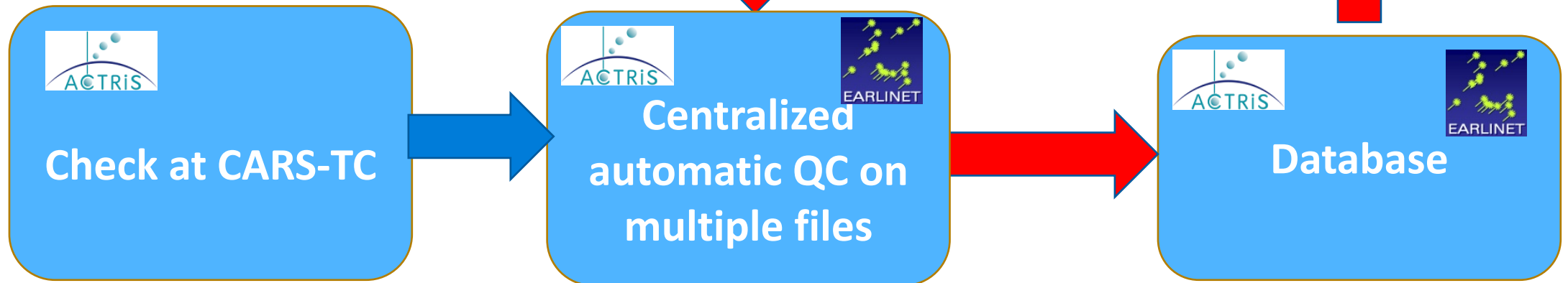
Copyright (c) 2011 - 2023 ACTRIS. All rights reserved. Build version: 2.4.200. This application is using cookies.
This project has received funding from the [European Union's Horizon 2020 research](#) and innovation programme under grant agreement No 654105.

ACTRIS Remote Sensing NRT data submission

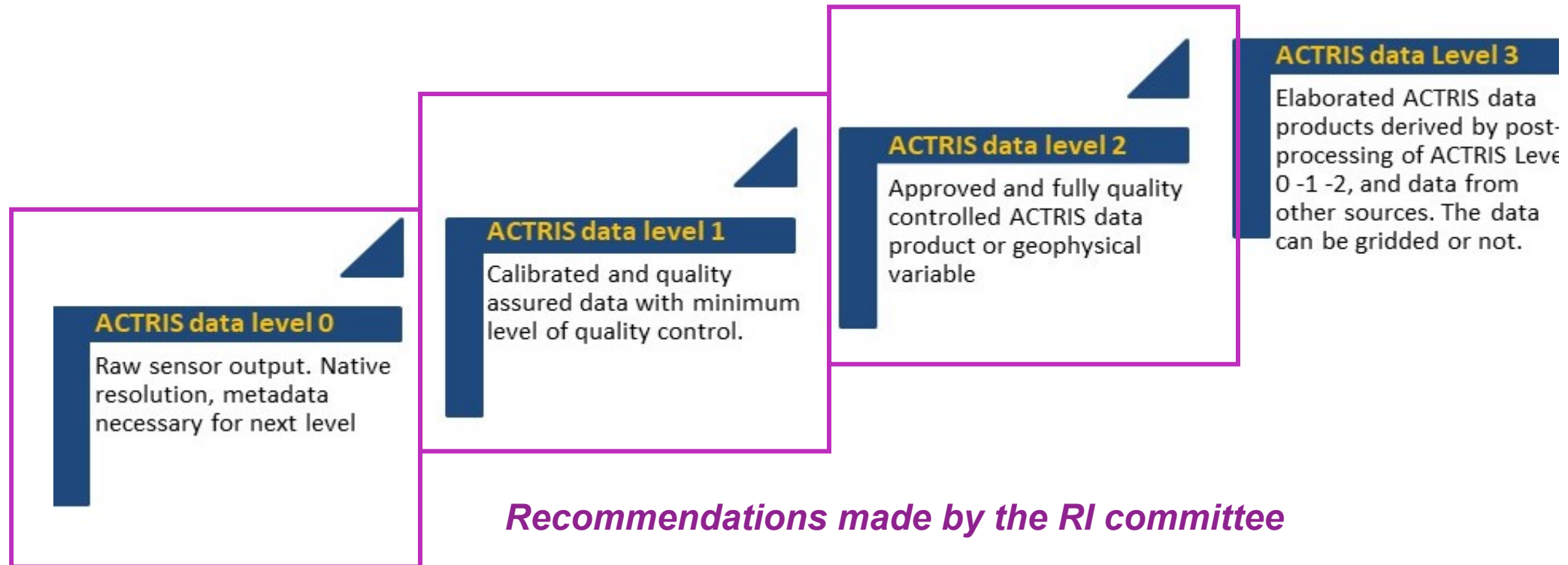
NRT



Level 2 delayed data



<http://actris.nilu.no>



The ACTRIS DC (and e.g. TCs) will also produce additional data products of interest of the scientific and other user communities. **ACTRIS synthesis product**: data products from e.g. research activities, not under direct ACTRIS responsibility, but for which ACTRIS offers repository and access.

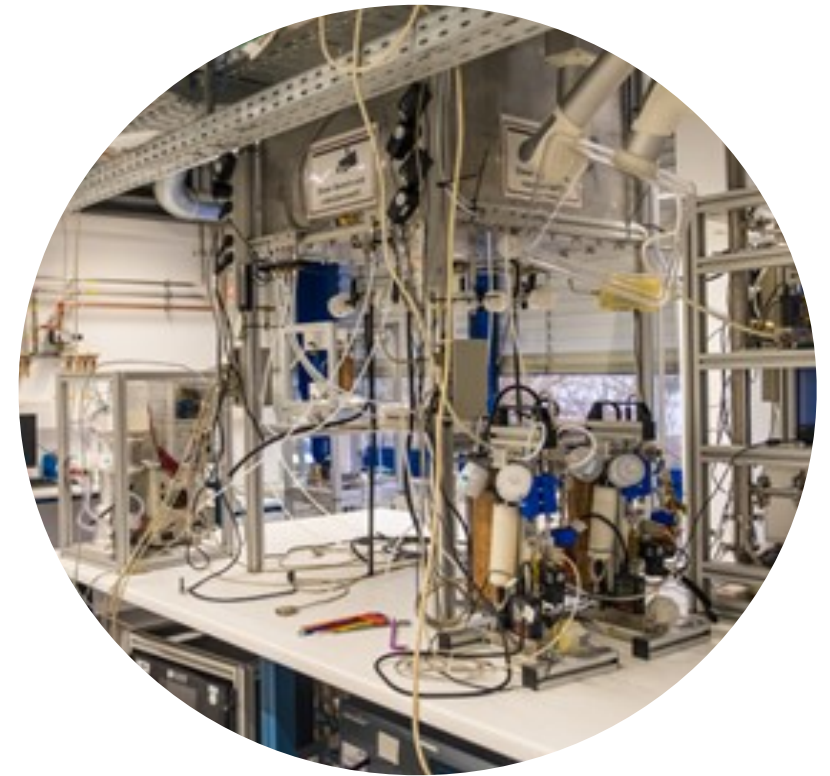
TRAINING & EXPERTISE



- Essential to ensure knowledge transfer and best practice
- Attract users from outside immediate ACTRIS network
- Over 30 training courses and workshops in 2020-2022, both in-person and virtual
- Over 1500 attendees, mostly engineers, technicians, PhD students and young scientists
- Technical, scientific and managerial training
- See Events on the ACTRIS website www.actris.eu

INNOVATION SUPPORT

- identifying new technologies and services
- fostering collaboration & offering opportunities through the access program
- co-creation between SMEs and ACTRIS RPOs



Conclusions

- ACTRIS is here to support you, the research community
- to provide you with resources and services to conduct cutting-edge scientific research
- contact your local National Contact Person or the ACTRIS Head Office

www.actris.eu



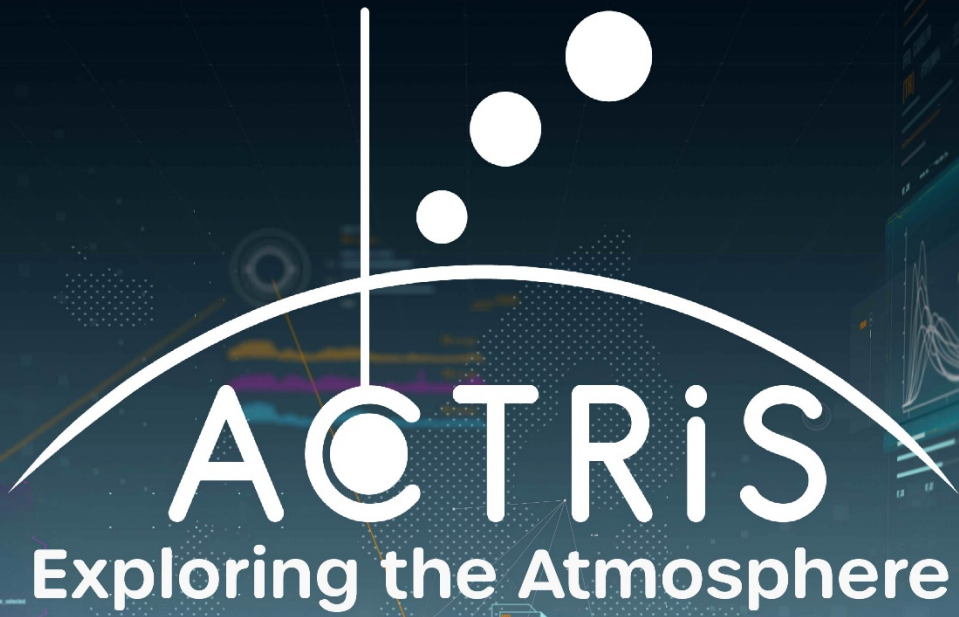
ACTRIS Science Conference 2024



- Rennes, France
- May 13-16, 2024
- the first in-person ACTRIS Science Conference
- a platform to highlight the ACTRIS research topics
- abstract submission to open in October

Save the dates & stay tuned!





ACTRIS

Exploring the Atmosphere



www.actris.eu