

PANAME : un portail pour les données environnementales de la ville, mais pas seulement

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Valérie Gros
Christopher Cantrell, Vincent Michoud

AERIS
IPSL
CNRM - Météo France
LSCE
LISA

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

Atelier THEIA Télédétection pour l'étude du milieu urbain

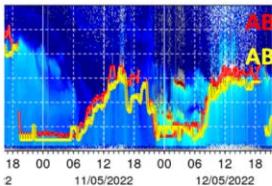


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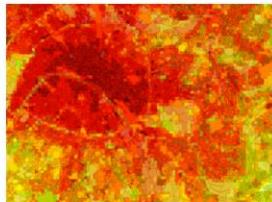
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Multidisciplinary rEsearch

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Scientific Objectives. The thermodynamic state of the atmosphere and dynamics characteristics within and above the urb...

[Read more →](#)



"Heat and health in cities" Scientific Objectives. Measurement plan. Labs and institutes. Project website:

[Read more →](#)



THE RESEARCH
DEMONSTRATION PROJECT
« PARIS 2024 »

The Research Demonstration Project « Paris 2024 RDP » is endorsed by the World Meteorological Organization, which is ...

[Read more →](#)



RI-URBANS

Scientific Objectives. Measurement plan. Labs and institutes. Project website:

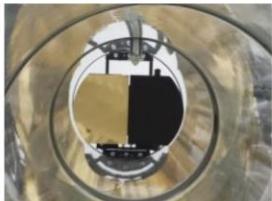
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MOSAI

Model and Observation for Surface-Atmosphere Interactions Scientific Objectives. Surface fluxes are the second leading cause of errors ...

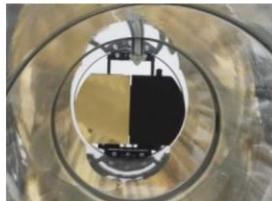
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PAUL

Scientific Objectives. Measurement plan. Labs and institutes. Project website:

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POLLUSPORT

Scientific Objectives. Measurement plan. Labs and institutes. Project website:

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STREET

Scientific Objectives. Impact of street on city air quality Measurement plan. Labs and institutes. Project website:

[Read more →](#)

irbisP

URBISPHERE

Scientific Objectives. Measurement plan. Labs and institutes. Project website:

[Read more →](#)



ACROSS

Scientific Objectives. ACROSS (Atmospheric ChemistRy Of the Suburban forest) is an integrative, innovative, multi-scale proj...

[Read more →](#)



Cities and Air Quality

- Anthropogenic and biogenic emissions
- Ultrafine particles
- Hydric stress ☐ tree

Cities and Meteorology

- Urban ABL dynamics
- Local circulations
- Urban heat island effects
- Effects on thunderstorms



Cities and Climate

- GHG emissions and concentrations
- Effect of urban transformation

Impacts

- Interdisciplinary studies
- Impact on human health
- Impact on human activities



PANAME variable list



radiometer
Cloud band RH All VAISALA
Standard sensors CHM vapor Citizen in Doppler micro and Radar stations
Scanning 95 camera Windsond lo sonic G 31F 15 AQ LUFFT M 61 network
Radiosonde CL Water 15 Onde DIAL Weather Pyrheliometer
Sunphotometer Microwave Scintillomètre
Pyranometer

Aerosol irradiances depolarization
Doppler height cloud components
downwelling temperature profile
aerosol humidity radiative SW
Dir LW pressure profiles
LW Dir up vent caméra
humidity pressure depths
pressure and Wind Glo cloud
ABL surface IR Air heat Humidity
relative fluxes D fields fraction température
Sensible optical backscatter down Temperature velocity
reflectivity

PANAME metadata catalogue



Each Data Product is described in a specific **Data Sheet**



SIGN IN

RESET SEARCH

Full text search

Temporal extents

Spatial extents

Platforms

- + Earth Observation Satellites
- In Situ Land-based Platforms
 - Air monitoring Stations/Networks
 - Atmospheric simulation chambers
 - Ground Stations
 - Ground-based Observations
- Observatories
 - OHP
 - P2OA
 - SIRTA
- + Models/Analyses

Parameters

Instruments

1 Results found

ACSM - SIRTA station - Level 2

ACSM

ACSM - SIRTA station - Level 2

ACTRIS FR

INFORMATION

DOWNLOAD

INTEROPERABILITY

Abstract

Spatial extents

Temporal extents

Platforms

Instruments

Parameters

Contacts

Information links

Resource type

Abstract

Time series of L2 Aerodyne ACSM_140-113 Aerosol Chemical Speciation Monitor of the Gif Sur Yvette (91) station. Available acquisitions start from 2011-01-01 01:00:00 to 2016-10-01 01:00:00

Spatial extents



PANAME visualisation interface



PANAME
2022

Paris region urban campaigns

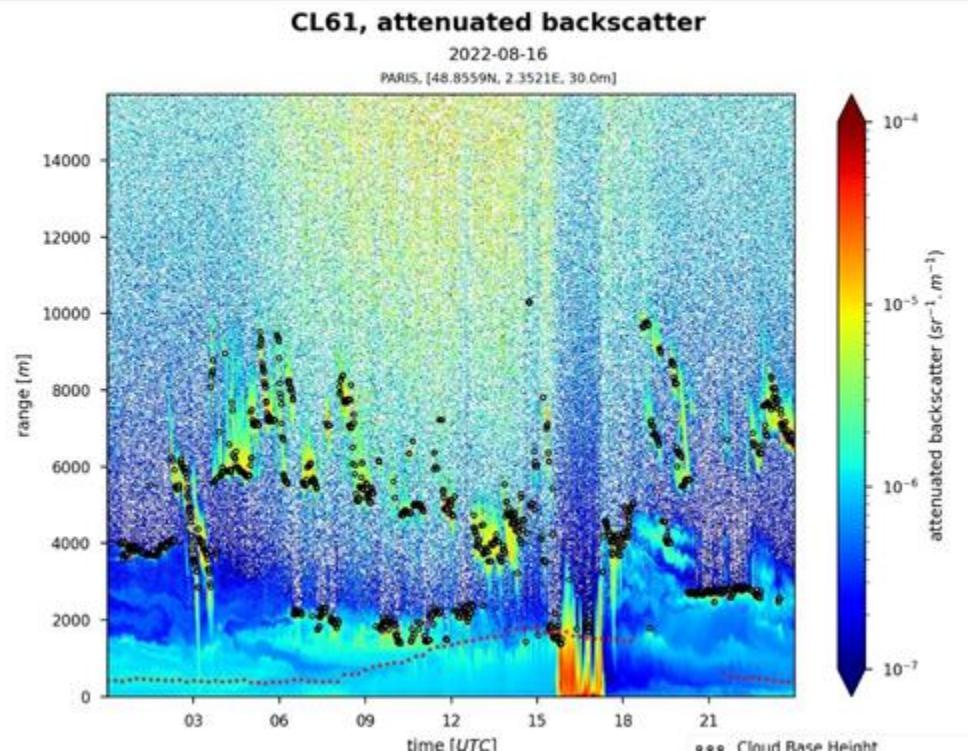
MAP

- > Projects
- > Reports and forecasts
- Surface observations
 - > Meteorology
 - + Radiation
 - > Turbulent fluxes
 - > Air temperature mapping
- Atmospheric profiling
 - > In-situ profiling
 - Thermodynamic profiling
 - ↳ Microwave radiometers
 - ? DIAL
- > Wind and turbulence profiling
- Aerosol profiling and atmospheric boundary layer height
 - Automatic LiDARs and ceilometers
 - CHM15k
 - CL31
 - CL61

CL61

Hôtel de Ville

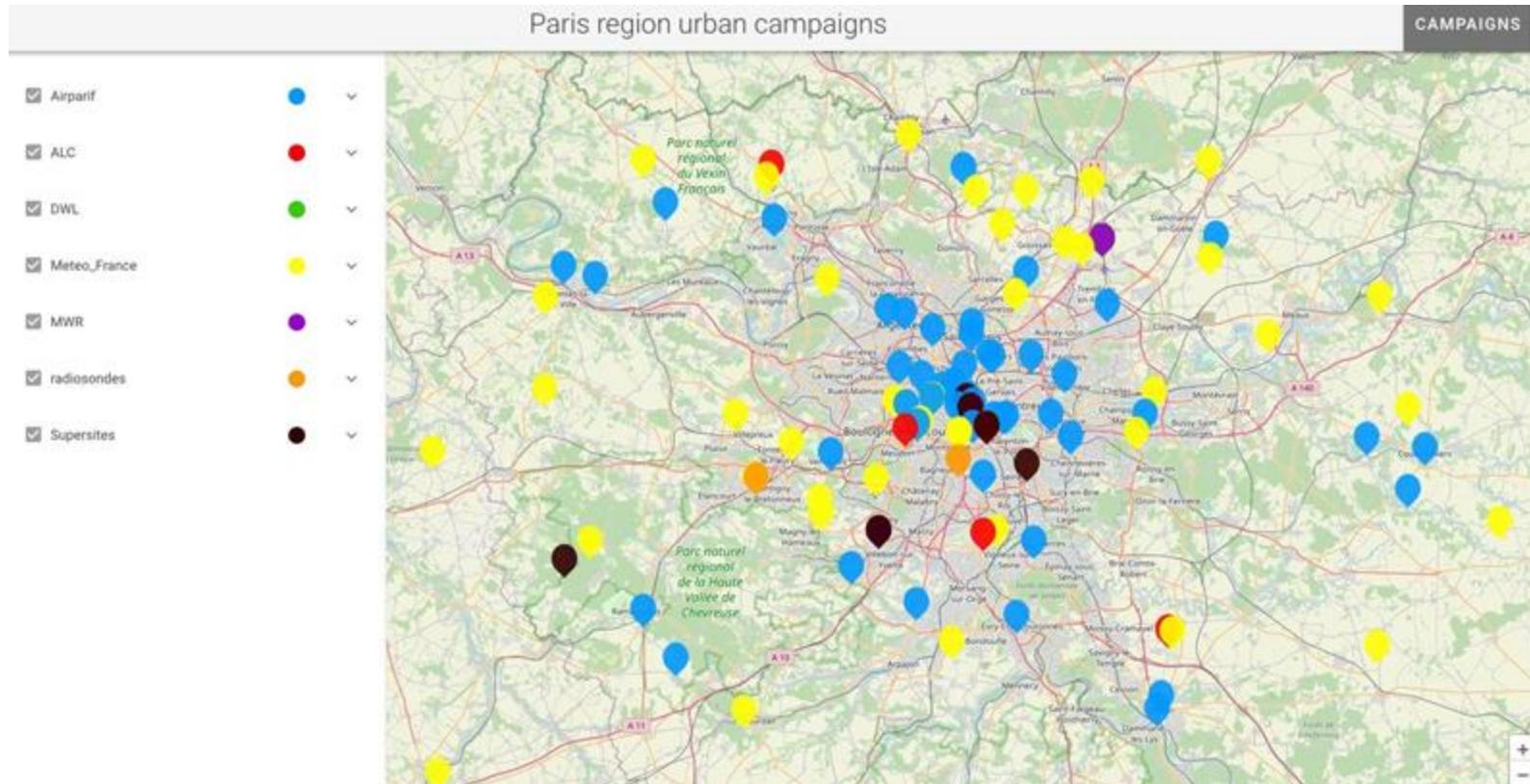
2022-08-16



PANAME measurement map



PANAME
BAIJI 2022





PANAME

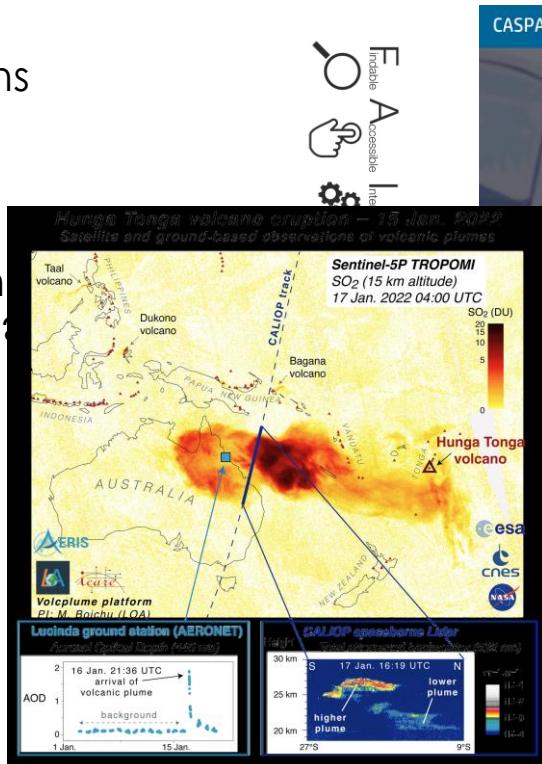
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Développements / améliorations

- Croisement des données
- Outils graphiques
- Paname Jupiter Hub
- Données/Sciences citoyenne
- Nouveaux portails (par ville)



CASPA

Accueil Projets Contributeurs Colloque 2019

Capteurs et Sciences Participatives

Apolline

ACCUEIL ACTEURS DU PROJET CAPTEURS CAPTEURS DANS LE MONDE DÉPLACEMENTS PRODUCTION CONTACT

apolline

AIR POLLUTION AND INDIVIDUAL EXPOSURE

Apolline est un projet collectif développé au sein de l'Université de Lille qui vise à :

- Développer des instruments mobiles, fiables, pas onéreux, pour la mesure des polluants de l'air
- Déployer ces instruments dans des environnements intérieurs et extérieurs
- Déterminer les paramètres influant sur la qualité de l'air
- Évaluer les impacts de la qualité de l'air sur la santé, l'environnement, l'économie...
- Sensibiliser et éduquer les publics

Hélicoptère des capteurs
QA: sécurité, puissance, capacités, gestion des bâtiments
Air extérieur: carte, cartographie
Exposition des personnes
Planification urbaine
Santé publique
Science participative
Éducation, sensibilisation
Sécurité des données
Communications



DataViz et API d'accès aux données

ICARE Dataviz

Welcome to the ICARE interactive data visualisation portal. It provides links to and information on our interactive visualisation and data access tools.



Interactive visualisation apps:

Carbon Dashboard
Explore OCO-2 measurements and set them against CAMS models and NOAA ground sites observations.

[Go to app](#)

Geoview
Display geostationary products quicklooks, including RGB compositions, SAFNWC products and individual channels.

[Go to app](#)

Lidar Panel
Display LiDAR quicklooks for the ACTRIS-FR and Météo-France stations network.

[Go to app](#)

ACMCC Network Visualisation Tool
Monitor ACSM measurements across a European network of instruments.

[Go to app](#)

VolcPlume Portal
Integrated atmospheric monitoring of volcanic activity.

[Go to app](#)

APIs:

Daalia
Data access API stands for exposing 1D and 2D data hosted on ICARE Data centre to other CGS. Thus, it makes possible the validation of data by other AERIS actors. Finally, the validated data can be used in ICARE Datacentre.

Services
André TANZI for ICARE-CARMEN - Météo-France
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Servers
<https://odataservice.icare.uclouvain.be/> (part) (basePath) (version) - Production server

[Go to app](#)

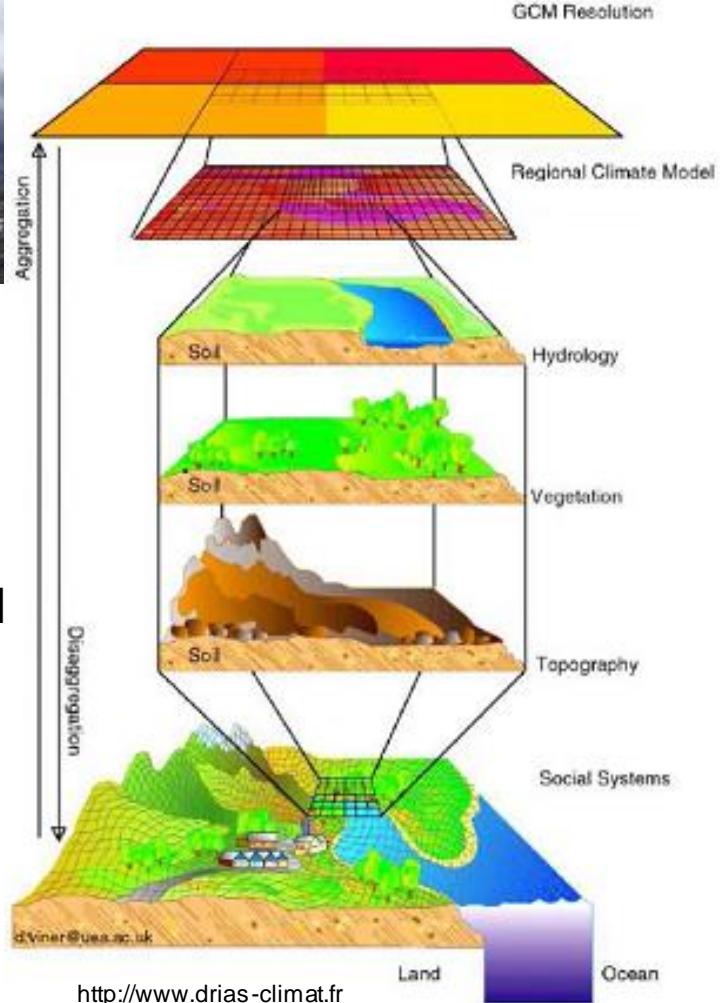
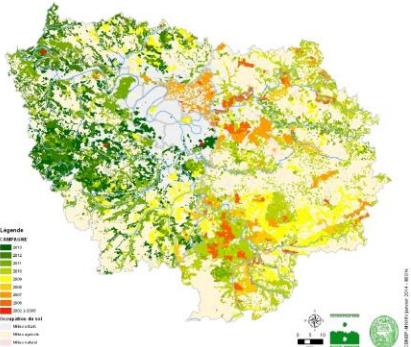
Objectifs du DataViz

- Opérer une refonte globale des moyens de visualisation des données sols et satellites couplés avec une architecture backend permettant une haute disponibilité des services
- Mutualiser les développements entre les outils dédiés et génériques; Fournir des API REST
- Améliorer des rendus et l'ergonomie des applications
- Explorer de nouvelles interfaces interactives et permettant du calcul à la demande
- Améliorer le suivi et l'analyse des usages



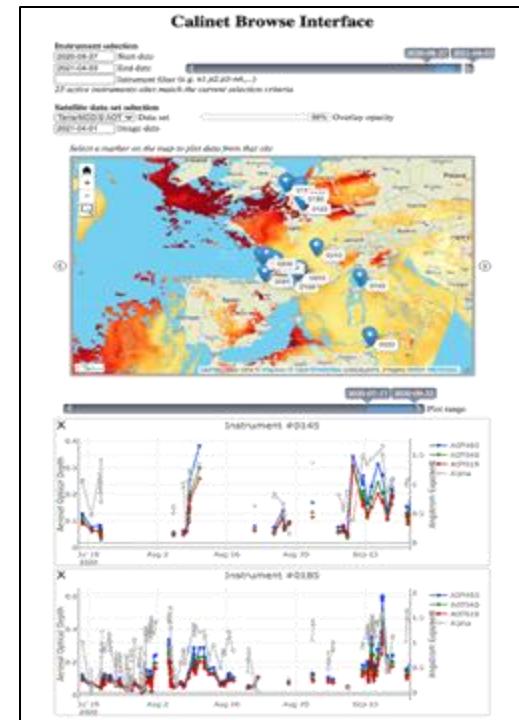
PANAME & Spatial :

- Import/export régio
- Météorologie
- Assimilation
- Descente en échelle

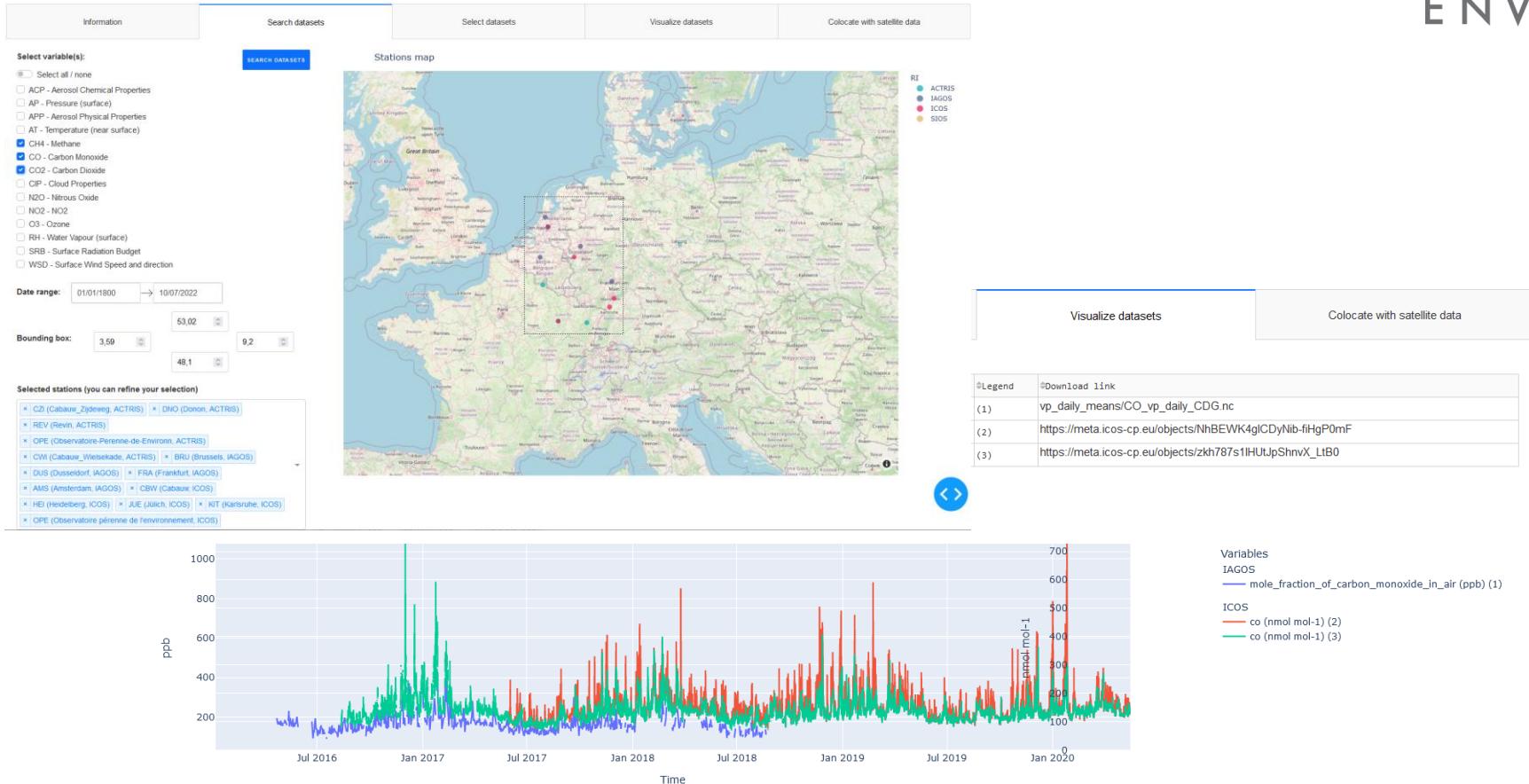


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tresearch in Paris.

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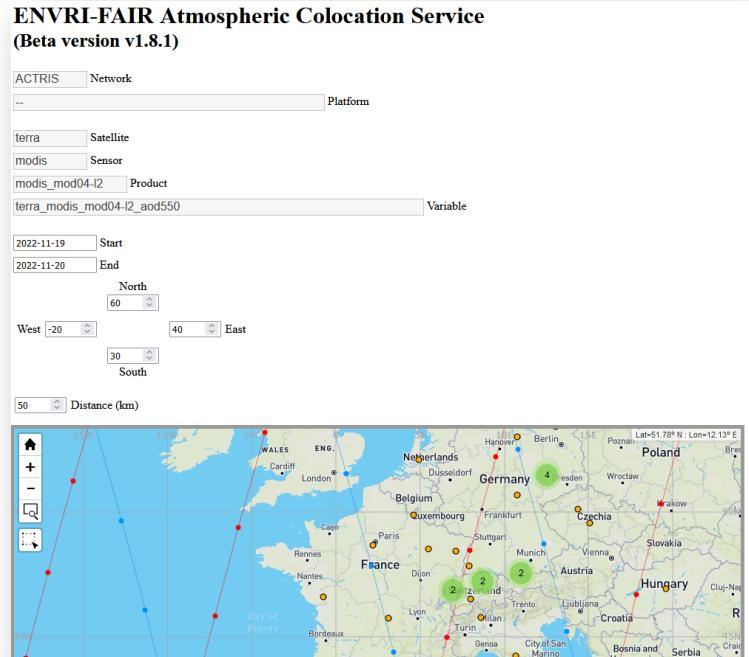


Démonstrateur ENVRI-FAIR



Service de colocalisation

- Implémenté par ICARE
- Services
 - 2 services pour l'inventaire des réseaux de mesures/plateformes et satellites/instruments/produits/variables
 - 3 services de colocalisation: orbites, fichiers et pixels
- API REST
 - Documentation: <https://www.icare.univ-lille.fr/asd-content/colocation/documentation>
 - Interface web: <https://www.icare.univ-lille.fr/asd-content/colocation/ui>
- Un des services les plus mûrs d'ENVRI-FAIR
- Suite planifiée dans ACTRIS





DATA TERRA
•••

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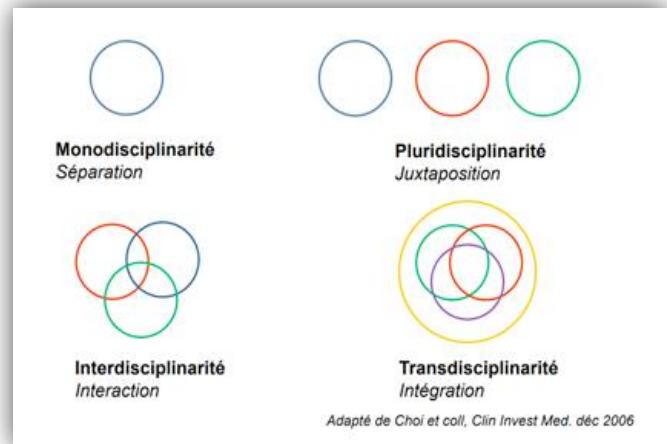
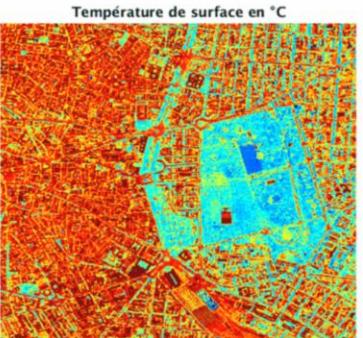
<https://paname.aeris-data.fr>

Plusieurs portails Interopérables ?

- Pas de besoins de

Quelles Questions scientifiques transdisciplinaires ?

- co-construction / vocabulaire
- Besoin de temps spécifiques
- Produits spécifiques



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« Alignement planétaire » sur l'urbain ?

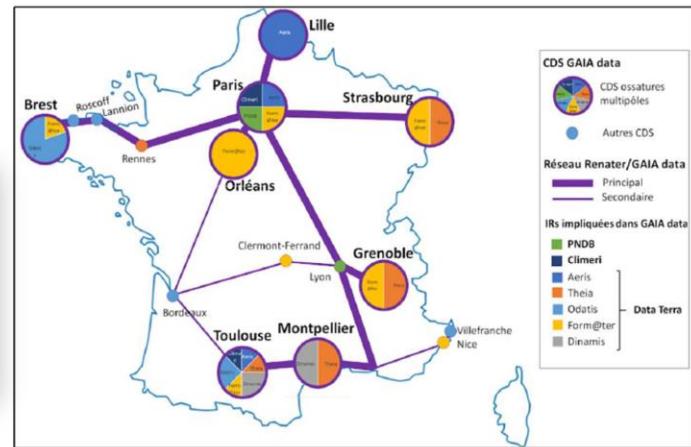
IR/SNO/Equiex

- Gaia Data
- Data Forma
- Obs4Clim
- Obesrvil



Horizon/EOSC/ASA

Prospective transverse INSU
Prospective du domaine OA
Feuille de route transverse IRD
INSU, INSIS, NHSH, INEE, MITI ...



ENVRI
FAIR

R
I
URBANS

Des idées ?

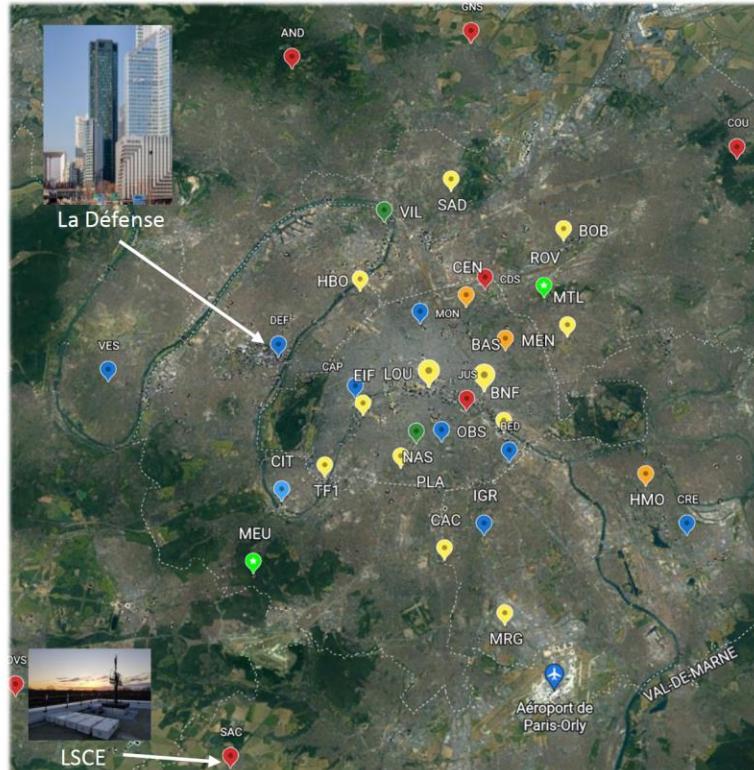
Sebastien.payan@sorbonne-universite.fr



Paris CO2 MidCost Sensor Network

30 MidCost sensors in the process of being deployed:

- Continuous CO₂ & H₂O measurement with NDIR sensors (Senseair HPP and K96, Vaisala GMP343)
- Continuous wind measurement (Gill WindSonic)
- 6 sites will be also equipped with Air Quality sensors (NOx, O₃, CO, PM...)



- Existing Mid-Cost CO2 sensor (V1) network (SUEZ)
- Installed Mid-Cost CO2 sensor (V2) network (LSCE)
- ICOS Cities Mid-Cost CO2 sensor (V2) network (under deployment)
- ICOS Cities supersites (total colum, flask, AQ...)
- Existing CRDS urban Network (LSCE)

