RESEARCH
(see graphic inside)

TRAINING
contact : denis.petitprez@univ-lille1.fr

- Master 2 international "Atmospheric Environment" : scholarships "Labex CaPPA" based on academic records
- Enhancement of international doctoral degree : co-supervision, trainings in english
- Summer schools and workshops

KNOWLEDGE DISSEMINATION
contact : anne.burlet-parendel@univ-lille1.fr

- Events promoting research and science culture : "Fête de la science", visits of laboratories, exhibitions
- Public conferences
- Initiatives with regional and local authorities
- Creation of learning materials

ECONOMY TRANSFER
contact : patrice.coddeville@mines-douai.fr

- Creation of partnerships and collaborations
- Development of instruments and softwares
- Patent registration
- Strategic monitoring board on economy transfer

LABEX CaPPA'S MISSIONS

a central field for environmental and health issues

ACTIVITIES AND SERVICES ARE OFFERED TO OUR PARTNERS AND STAKEHOLDERS, SUCH AS :

- Access to data bases
- Use of innovative instrumentation or use of tools and methods to better identify pollution sources
- Financial support to scientific trainings, international conferences, etc.

The project Labex CaPPA provides state-of-the-art facilities for research teams, allowing them to conduct research at the highest level. A strong dynamism has been created thanks to the project through human resources and financial support along with the multidisciplinary scientific expertise.

PRACTICAL INFORMATION

Executive board of the Labex CaPPA
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FOLLOW US, JOIN US

www.labex-cappa.fr

CaPPA IS A MULTI-PARTNER PROJECT AND 5 HIGHER EDUCATION & RESEARCH ESTABLISHMENTS AND RESEARCH ORGANISATIONS SUPERVISE ITS ACTIVITIES :

Check the full list of structures supporting our activities at
http://www.labex-cappa.fr/en/economic-impact/partners

The project Labex CaPPA is co-financed by the European Union with the European Regional Development Fund.

UNION EUROPEENNE

l'Europe s'engage en Hauts-de-France avec le FEDER

PHYSICS AND CHEMISTRY OF THE ATMOSPHERE,

a central field for environmental and health issues

Labex CaPPA

LABORATORY OF EXCELLENCE

Chemical and Physical Properties of the Atmosphere

LABEX CaPPA

INVESTISSEMENTS D'AVENIR

7 LABORATORIES *in northern France*

LILLE · PC2A · PhLAM · IMT Lille Douai · SAGE Sciences de l'Atmosphère et Génie de l'Environnement · LPCA Laboratoire de Physico-Chimie de l'Atmosphère · Acare · LASIR

CONTEXT

Scientific activities of the Labex CaPPA (2012-2019) enhance observation database and models, allowing to map and quantify aerosol sources and transport.

The labex CaPPA gathers seven teams and laboratories with uncommon skills. It promotes a multidisciplinary synergistic partnership strongly contributing to **metrological innovations** in the field of **atmospheric environment**. It therefore takes fully part in the regional and national socio-economic development.

- A theoretical and experimental approaches at local, and global scales.
- Lab studies and field studies are carried out, in northern France and worldwide.

KEY FIGURES

- **4 missions :** research, training, knowledge dissemination, economy transfer
- **7,5 millions** euros for **8 years**
- **7 research laboratories**
- **5 higher education & research establishments and research organisations**

RESEARCH ACTIVITIES

7 laboratories in northern France gathered in 6 workpackages :

01 BIOGENIC VOLATILE ORGANIC COMPOUNDS (BVOCS) AS PRECURSORS FOR PARTICLES

Study of the physicochemical properties and the atmospheric reactvity of biogenic VOCs and their degradation.

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02 AEROSOL MICROPHYSICAL, CHEMICAL AND OPTICAL PROPERTIES

Study of physicochemical reactions occuring at the surface and within particles: nucleation, condensation, coagulation, hygroscopicity, etc.

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03 AEROSOL OBSERVATIONS

Development of innovative instruments ; setup of unique innovative observation systems ; monitoring from ground-based networks and satellites ; intensive field campaigns.

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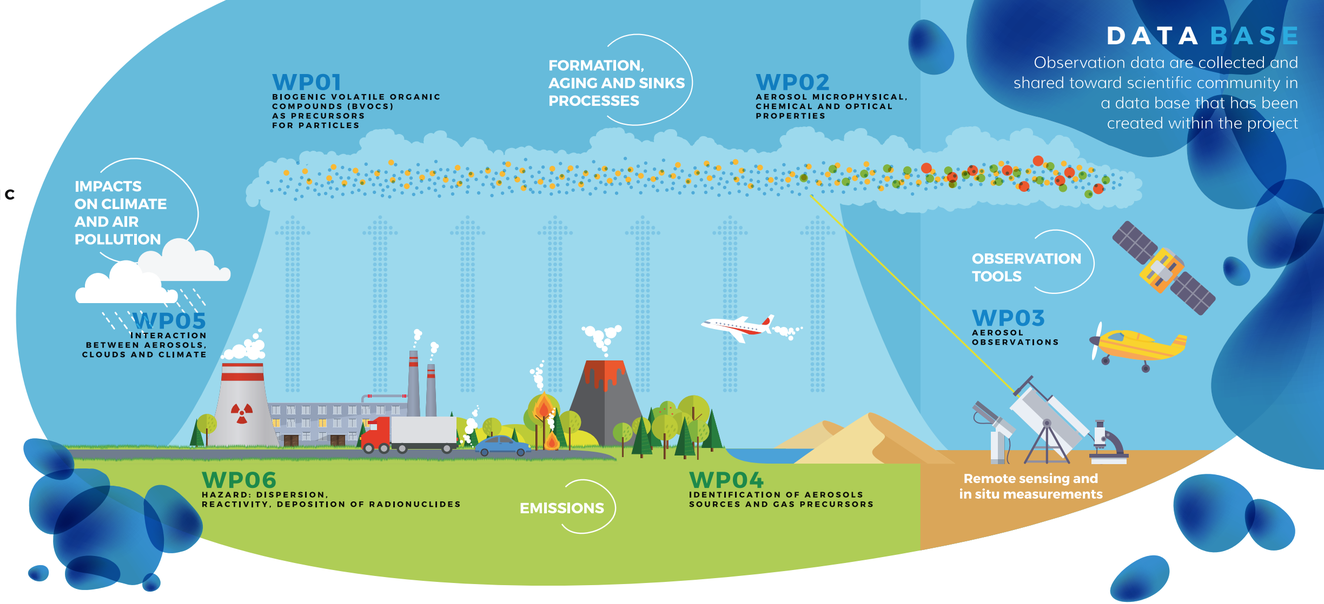

DATA BASE

Observation data are collected and shared toward scientific community in a data base that has been created within the project

04 IDENTIFICATION OF AEROSOLS SOURCES AND GAS PRECURSORS

Extracting the relevant information on aerosols from satellites data and development of a new inverse modelling algorithm to identifiy their worldwide origins.

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05 INTERACTION BETWEEN AEROSOLS, CLOUDS AND CLIMATE

Study of the aerosol hygroscopic properties (soots, pollens), their effect on the microphysics and radiative cloud properties and their role in the atmospheric radiation budget.

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06 HAZARD: DISPERSION, REACTIVITY, DEPOSITION OF RADIONUCLIDES

Caracterizing radionuclides dispersion mechanisms released in the atmosphere during a severe accident and evaluating the impact on health and environment.

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