



Training school on Atmospheric observations of aerosols, clouds and trace gases

May 15-22, 2020 at Hyttiälä forestry field station, Finland

This is an advanced course on atmospheric observations of aerosols, clouds and trace gases. The topics covered on the course include: in-situ measurements of aerosol concentration, size distribution, optical properties and chemical composition, measurement of reactive trace gases, ice nuclei and clouds as well as remote sensing of trace gases, aerosols and clouds.

The students are expected to learn to understand the basic principles behind each measurement method, to know the most important instrumentation (including their advantages and limitations), and to discuss current research questions in the field. We will also address issues related to data management, data analysis and integration of different observations.

The 5 ECTS course consists of lectures, group work, poster presentation, visit to SMEAR II measurement station and a final report written after the course. As a pre-assignment, the participants should prepare a poster about their current research or studies and their expectations about the course.

Target Group:

Doctoral students, advanced master students, young scientist (e.g. post docs), and personnel from aerosol measuring stations and research institutes involved in ACTRIS, CRAICC, GAW, GUAN, and EMEP. Good English understanding and speaking skills, as well as basic knowledge about atmospheric science is required. Master and doctoral students will obtain 5 ECTS after successful participation.

Participation Costs:

The **course fee is 900 €** which covers transportation from Helsinki to Hyttiälä and back to Helsinki; all academic and social programme during the course; access to electronically provided course material; accommodation in two-person rooms and all meals during the course. Travel expenses to Finland, personal expenses or insurance is not included. For master and doctoral students of University of Helsinki the fee is covered by ATM-MP. Doctoral students and staff members from Nordic and Baltic countries (Denmark, Estonia, Finland, Iceland, Latvia, Lithuania, Norway, and Sweden) are required to pay only direct costs for accommodation and meals at the station.

Teachers:

The course is led by *Associate Prof. Katrianne Lehtipalo* (University of Helsinki, INAR). Lectures are given by various experts, including *Prof. Paolo Laj* (CNRS/INAR), *Dr. Jean-Philippe Putaud* (Joint Research Centre, Ispra), *Assoc. Prof. Dmitri Moisseev* (INAR), *Prof. Ewan O'Connor* (Finnish Meteorological Institute) etc.

Application:

Please fill in the online application form by **March 30** at:

<https://elomake.helsinki.fi/lomakkeet/103608/lomake.html>

We will inform applicants about the acceptance to the course by 17th April.

Requests of information:

For any additional information about the course, please contact:

katrianne.lehtipalo@helsinki.fi

Course organizer:

The summer school is organized by University of Helsinki, Institute of Atmospheric and Earth System Research (INAR), within the framework of the European research infrastructure ACTRIS, as well as iLEAPS, PEEEX, the National ATM-DP Doctoral Program, the Nordic Graduate School “Biosphere-Carbon-Aerosol-Cloud-Climate Interactions” (CBACCI) and Nordic Master’s Degree Program “Atmosphere-Biosphere-Studies” (ABS).



Hyytälä forestry field station. More information about the station at [Hyytälä website](#)