

Advanced analysis of atmospheric processes and feedbacks and biosphere-atmosphere interactions

University of Helsinki, together with the Aerosols, Clouds, and Trace gases Research InfraStructure Network (ACTRIS), Finnish Centre of Excellence "Physics, Chemistry, Biology and Meteorology of Atmospheric Composition and Climate Change", and Finnish Doctoral Programme "Atmospheric Composition and Climate Change: From Molecular Processes to Global Observations and Models" (ACCC) is proud to announce a two-week field course, "Advanced analysis of atmospheric processes and feedbacks and biosphere-atmosphere interactions". The course is given in collaboration with the Nordic Master's Degree Programme in Atmosphere-Biosphere Studies (ABS), iLEAPS, and Nordic Centre of Excellence CRAICC.

The course is based on intensive group works and topics included in the course are related to ACTRIS Work Packages 2-6:

- Remote sensing of vertical aerosol distribution
- In-situ chemical, physical and optical properties of aerosols
- Trace gases networking: Volatile organic carbon and nitrogen oxides
- Clouds and aerosol quality-controlled observations
- Integration, outreach, and sustainability

The specific training in core and transferable skills includes:

- Introduction to SMEAR II station
- Statistical analysis, MATLAB
- Analysis of data from ACTRIS stations
- Science philosophy
- Academic writing

The course involves 1-3 short lectures per day, but the main emphasis is on intensive group work, and writing a scientific report about the group work after the course. The course is aimed to PhD students and advanced MSc students of atmospheric sciences. In the course the students will utilize long-term aerosol, gas, ion, meteorological and ecophysiological data measured at the ACTRIS stations to learn advanced data treatment and data analysis methods. The main tool is MATLAB.

Location

Hyytiälä Forestry Field station in Southern Finland

Time

12-22 March, 2013

Teachers

Prof. Markku Kulmala is the corresponding teacher. There will be also other lecturers representing ACTRIS partners.

Credits, accrediting body and official name

5 ECTS, University of Helsinki

530258 Advanced analysis of atmospheric processes and feedbacks and biosphere-atmosphere interactions

Exam

Students write a scientific report based on results from analysis.

Costs

- 0 EUR for MSc students of ABS partner universities and PhD students of ACCC partner universities
- 700 EUR for all other MSc and PhD students
- 2000 EUR for others

The fee includes transfers between Helsinki and Hyytiälä, accommodation in two-person rooms, and full board (breakfast, lunch, afternoon coffee, dinner, evening meal) during the course. There is a limited number of travel grants available for participants from Nordic and Baltic countries (Denmark, Estonia, Iceland, Latvia, Lithuania, Norway, Sweden).

Further information and application

All who are willing to participate on the course have to fill in the application form available at <https://elomake.helsinki.fi/lomakkeet/40072/lomake.html> by February 8, 2013. Possible questions about the course should be sent to antti.lauri@helsinki.fi.