



PROGRAMUL DE COOPERARE ELVEȚIANO-ROMÂN
SWISS-ROMANIAN COOPERATION PROGRAMME

Aerosols in Romania and Switzerland (AEROS)

Starting Date 01.10. 2012

Duration 36 Months

Discipline Impact of waste and pollutants on environment and climate

Main Goals

The AEROS project primary goals are to improve knowledge of the chemical composition, optical properties and source of particulate matter including the:

- Assessment of the chemical composition of particulate matter and quantification of the sources contributing to the organic fraction in Romania in comparison to Switzerland and other European countries.
- Integrated assessment of particulate matter concerning their optical and chemical properties combining lidar and in-situ measurements.



Activities

- Upgrade of the Romanian instruments (Integration of scattering module into the Romanian AMS).
- Intercomparison of the C-ToF-AMS and HR-ToF-AMS concerning average and single particle mass spectra using defined conditions in the PSI-smogchamber and ambient measurement.
- Field campaign in Romania and Switzerland in the context of the EMEP/ACTRIS intensive observation period.
- Field campaigns in Romania and Switzerland using both multiwavelength Lidar and AMS.
- Analysis and publication of data, with focus will on the source attribution of organic aerosols at the field sites. Analysis and publication of Summer campaigns and integrated analyses.
- Final meeting including summer school involving master and PhD students in Romania.

Expected results

- Strengthening scientific collaboration between Romanian and Swiss partners;
- Transfer of knowledge on atmospheric chemistry from the most experienced research group in PSI to the Romanian group;
- Diversification and improvement of Romanian team research topics;
- Detailed database on local and long-range transported aerosols' properties (optical and chemical) in Bucharest and Zurich;
- Increasing the visibility of atmospheric remote sensing in the scientific community and society.

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