



ACTRIS aerosol vertical profile data and observations: potentiality and first examples of integrated studies with models

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The ACTRIS-2 project, funded by Horizon 2020, addresses the scope of integrating state-of-the-art European ground-based stations for long term observations of aerosols, clouds and short lived gases, capitalizing on the work of FP7-ACTRIS. It aims at achieving the construction of a user-oriented RI, unique in the EU-RI landscape for providing 4-D integrated high-quality data from near-surface to high altitude (vertical profiles and total-column) which are relevant to climate and air-quality research. ACTRIS-2 develops and implements, in a large network of stations in Europe and beyond, observational protocols that permit the harmonization of collected data and their dissemination.

ACTRIS secures provision and dissemination of a unique set of data and data-products that would not otherwise be available with the same level of quality and standardization. This results from a 10-year plus effort in constructing a research infrastructure capable of responding to community needs and requirements, and has been engaged since the start of the FP5 EU commission program. ACTRIS ensures compliance with reporting requirements (timing, format, traceability) defined by the major global observing networks.

EARLINET (European Aerosol research Lidar NETwork), the aerosol vertical profiling component of ACTRIS, is providing since May 2000 vertical profiles of aerosol extinction and backscatter over Europe. A new structure of the EARLINET database has been designed in a more user oriented approach reporting new data products which are more effective for specific uses of different communities. In particular, a new era is starting with the Copernicus program during which the aerosol vertical profiling capability will be fundamental for assimilation and validation purposes.

The new data products have been designed thanks to a strong link with EARLINET data users, first of all modeling and satellite communities, established since the beginning of EARLINET and re-enforced within ACTRIS2. The potentiality of the new EARLINET data products and first examples of integrated studies with models will be presented at the conference.

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