

The AERONET-Europe calibration facility: access within the ACTRIS project

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The Aerosol Robotic Network (AERONET, Holben et al., 1998) is a well established ground-based network for aerosol and water vapor content monitoring and characterization. This program, initiated in the 90's by NASA and the University of Lille, is currently greatly expanded, aiming at global coverage and long-term measurements. To enable the development of the network, alternative calibration centers (besides the headquarters in NASA) have been developed in Europe, primarily in France and then in Spain.

Within the European infrastructure project ACTRIS (Aerosols, Clouds, and Trace gases Research Infrastructure Network), access to the AERONET-Europe calibration facility is provided. The AERONET-EUROPE Calibration Service is a scientific infrastructure composed by three separate but complementary installations located in France and Spain (Figure 1).

Three institutions collaborate to form AERONET-Europe: the Laboratory of Atmospheric Optics (LOA), University of Lille-CNRS (France); the Group of Atmospheric Optics (GOA), Valladolid University (Spain); and the Izaña Atmospheric Research Center (CIAI), Spanish Meteorological Agency (Spain). Three outdoor platforms for calibration of AERONET-Cimel sun photometers are available: Carpentras from LOA and Autilla from GOA are devoted to inter-calibration of field instruments; a unique facility for calibration of master instruments is provided by CIAI at Izaña. The indoor platforms in Lille and Valladolid include NASA-NIST traceable integrating spheres for radiance calibration, polarized light sources, solar-simulator, maintenance and repair room, spectrometer for filter characterization, thermal chamber for response to temperature characterization and computers linked to AERONET/NASA database for calibration coefficients computation and data reprocessing.

Both new users that want to join AERONET and institutions already participating in the network can apply to access to this facility and have their Cimel sun photometers calibrated and incorporated to the database. The access to the infrastructure is made under the modality of transnational access. The call for proposals is continuously open throughout the project duration. Visit <http://www.actris.net/AERONETEuroptabid/4321/Default.aspx> for further information.

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Figure 1: Location of the three calibration facilities of AERONET-Europe.

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