



ATMO ACCESS
Access to Atmospheric Research Facilities



Services provided by CIAO

CNR-IMAA Atmospheric Observatory



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atmo-access.eu

SERVICE 1 - Training on Lidar data analysis, SCC and on technical aspects of Lidar systems

LOCATION	Italy, Tito (Potenza) CIAO, the CNR-IMAA Atmospheric Observatory (40.60 N, 15.72 E, 760 m a.s.l.) is a research facilities managed by the National Research Council of Italy (CNR) at Institute of Methodologies for Environmental Analysis (IMAA). See http://www.ciao.ima.cnr.it/
TYPE OF SERVICE	Research/Technical service/Training
SERVICE DESCRIPTION	This service is meant to increase the expertise of the users but also to spread ACTRIS standards and methodologies to stakeholders and users. It can offer different possibilities related to: <ul style="list-style-type: none"> • application of algorithms for Lidar data analysis • experimental technical aspects typically encountered in Lidar systems • access and use of the ACTRIS Single Calculus Chain (SCC)
ATMOSPHERE TYPE	Ambient
TYPE OF ACCESS	Physical, remote
TARGET USERS	Academia, Business, Public sector
SERVICE STATUS	The service is available (operational and ready to be offered)
AVAILABILITY PERIOD	All year round
TIME CONSTRAINTS	Multi-day stay of external users at CIAO must be discussed and planned with CNR-IMAA. External users are allowed to access the “CIAO observatory only under CNR-IMAA personnel supervision. Accessibility rules can change as a function of the evolution of the COVID-19 pandemic.
CONTACT	tna-ciao@ima.cnr.it

SERVICE 2 – Intercomparison of Lidar systems at CIAO

LOCATION	Italy, Tito (Potenza)
TYPE OF SERVICE	Research/Technical service
SERVICE DESCRIPTION	The service will consist in the direct intercomparison of a lidar system with the ACTRIS lidar reference system operating at CIAO. At present it is able to provide aerosol backscatter at 1064, 532 and 355 nm, extinction at 532 and 355 nm, depolarization measurements at 532. In the future, the new reference lidar system will also be able to provide depolarization measurements at 1064 and 355 nm, and water vapor mixing ratio. The intercomparison will check the instrumental and technical performances of the lidar system in terms of range corrected signals, including several QA tests and correction procedures like

	trigger delay, first range bin, telecover, Rayleigh fit test, depolarization calibration, dead-time corrections.
ATMOSPHERE TYPE	Ambient
TYPE OF ACCESS	Physical
TARGET USERS	Academia, Business, Public sector
SERVICE STATUS	The service is available (operational and ready to be offered). At present, the reference system for the intercomparison is 1064, 532, 355, with Raman capability at 355 and 532 nm and depolarization at 532nm
AVAILABILITY PERIOD	All year round
TIME CONSTRAINTS	Multi-day stay of external users at CIAO must be discussed and planned with CNR-IMAA. External users are allowed to access the “CIAO observatory only under CNR-IMAA personnel supervision. Accessibility rules can change as a function of the evolution of the COVID-19 pandemic.
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SERVICE 3 – Access and integration of data using different active, passive and in-situ instruments at CIAO	
LOCATION	Italy, Tito (Potenza)
TYPE OF SERVICE	Research/Technical service
SERVICE DESCRIPTION	<p>Access and integration of data provided by different ACTRIS and ICOS (next future) active, passive and in-situ instruments operating at CIAO, included the possibility to carry out integrated studies through the access with the user instrument. Specific measurements campaign can be planned based on user request.</p> <p>CIAO geographic position, in the Mediterranean basin but on a mountain far from big cities, makes the observatory a perfect location for investigating different aerosol types and atmospheric processes and setting up experiments with the support of the researches and technicians operating CIAO.</p>
ATMOSPHERE TYPE	Ambient
TYPE OF ACCESS	Physical, remote
TARGET USERS	Academia, Business, Public sector
SERVICE STATUS	The service is available (operational and ready to be offered). At present the following instruments are available at CIAO: multi-wavelength Raman lidar, photometer, multiwavelength Raman lidar, Doppler lidar, cloud radar, microwave profiles, ceilometer, radio-sounding.

AVAILABILITY PERIOD	All year round
TIME CONSTRAINTS	Multi-day stay of external users at CIAO must be discussed and planned with CNR-IMAA. External users are allowed to access the “CIAO observatory only under CNR-IMAA personnel supervision. Accessibility rules can change as a function of the evolution of the COVID-19 pandemic.
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SERVICE 4 – Laboratory characterization of instruments and blocks

LOCATION	Italy, Tito (Potenza)
TYPE OF SERVICE	Research/Technical service/Training
SERVICE DESCRIPTION	A well-equipped laboratory is offered to test and characterize optical components typically used in Lidar systems. The laboratory is equipped with experimental setups for training in operation, calibration, quality control and basic debugging of Lidar related blocks.
ATMOSPHERE TYPE	Ambient
TYPE OF ACCESS	Physical
TARGET USERS	Academia, Business, Public sector
SERVICE STATUS	The service is in implementation (not yet available)
AVAILABILITY PERIOD	All year round
TIME CONSTRAINTS	Multi-day stay of external users at CIAO must be discussed and planned with CNR-IMAA. External users are allowed to access the “CIAO observatory only under CNR-IMAA personnel supervision. Accessibility rules can change as a function of the evolution of the COVID-19 pandemic.
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SERVICE 5 – Testing and building Lidar configurations

LOCATION	Italy, Tito (Potenza)
TYPE OF SERVICE	Research/Technical service
SERVICE DESCRIPTION	A modular Lidar laboratory is offered to set-up and test different lidar configurations: aerosol fluorescence; tropospheric aerosol optical properties; temperature with rotational Raman from troposphere to stratosphere; liquid water content; HSRL configuration; scanning measurements.
ATMOSPHERE TYPE	Ambient
TYPE OF ACCESS	Physical

TARGET USERS	Academia, Business, Public sector
SERVICE STATUS	The service is in implementation (not yet available)
AVAILABILITY PERIOD	All year round
TIME CONSTRAINTS	Multi-day stay of external users at CIAO must be discussed and planned with CNR-IMAA. External users are allowed to access the “CIAO observatory only under CNR-IMAA personnel supervision. Accessibility rules can change as a function of the evolution of the COVID-19 pandemic.
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