CIMEL

EXPLORE THE CLIMATE

ACTRiS
Exploring the Atmosphere

CE710

High-power Mie-Raman Fluorescence LiDAR

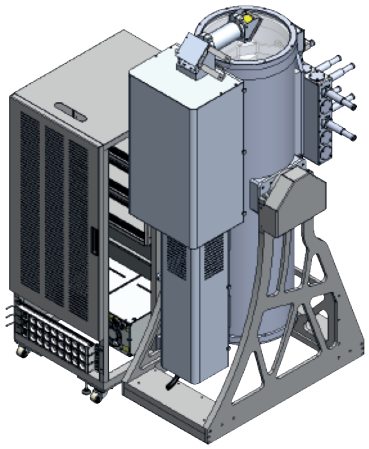
Atmosphere & aerosol monitoring

Our ACTRIS (Aerosols, Clouds and Trace gases Research InfraStructure) high-power aerosol LiDAR, born from the collaboration of CIMEL and LOA within the joint laboratory AGORA-Lab, is a sophisticated multi-wavelength Raman LiDAR that measures the aerosol extinction, backscatter fluorescence and depolarization profiles at 355, 532 and 1064 nm.

The CE710 LiDAR is designed for flexibility and upgradeability, offering customizable options for lasers, detection channels, and automation.

It includes all the essential features for users to perform the quality assurance and quality control procedures required for acceptance into ACTRIS.

With its advanced technology and reliable performance, the CE710 LiDAR plays an important role in enhancing our understanding of atmospheric aerosols and their impact on climate and air quality.



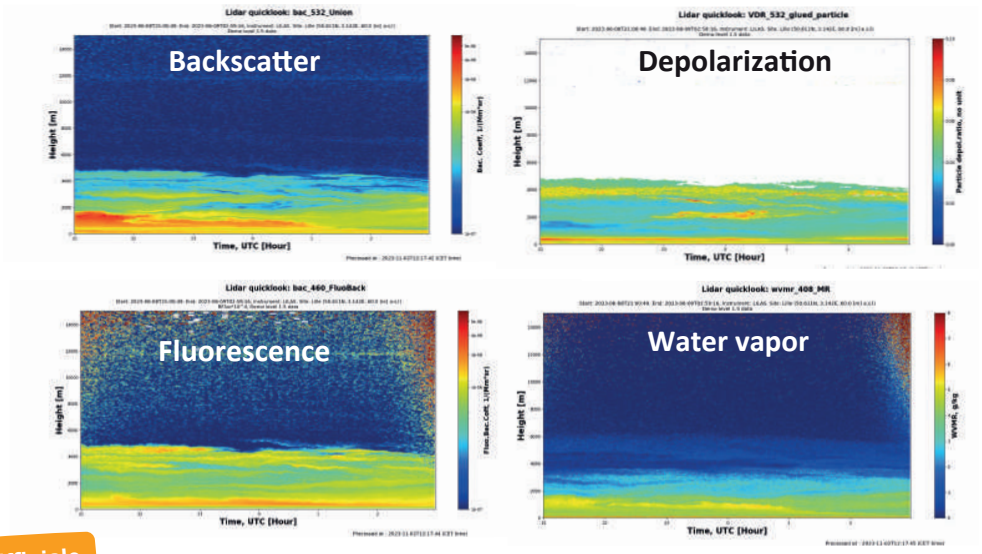
Features

- ACTRIS ready
- Up to 15 detection channels (Mie-Depolarization-Raman-Fluorescence)
- Easily upgradable (additional channels)
- Integrated system, including calibration tools and remote control
- Easily transportable (compact design)
- Thermal enclosure (in option)
- Complete data processing software (AUSTRAL) integrating data from our CE318-T photometer

Applications

- Climate Sciences
- Air quality
- Aerosols and clouds
- Meteorology
- Satellite validation

Software



Distributore Ufficiale

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Technical specifications

	Examples of configurations		
Parameters	**ACCESS**	**PRO**	**XPERT**
Channels	1β + 1α + 1δ at 355 nm OR 1β + 1α + 1δ at 532 nm	1β + 1α + 1δ at 355 nm and 1β + 1α + 1δ at 532 nm	1β + 1α + 1δ at 355 nm and 1β + 1α + 1δ at 532 nm and 1β + 1δ at 1064 nm
Elastic channels	355 OR 532 nm	355, 532 nm	355, 532, 1064 nm
Rotational Raman channels	353 OR 530 nm	353, 530 nm	353, 530, 1056 nm
Laser energy at 355 nm	100 mJ / 20 Hz	120 mJ / 20 Hz	100 mJ / 100 Hz
Laser energy at 532 nm	100 mJ / 20 Hz	100 mJ / 20 Hz	100 mJ / 100 Hz
Laser energy at 1064 nm	N/A	160 mJ / 20 Hz	200 mJ / 100 Hz
Height resolution	3.75 - 15 m		
Temporal resolution	≥ 10 s		
Overlap	≤ 750 m		
Acquisition electronics	Licel (Analog, PhC)		
Operating temperature	23 ± 5°C (w/o a thermal enclosure) -10°C to 55°C (with a thermal enclosure)		
Operating Relative humidity	< 50%		
Storage temperature	0 to 40°C		
Operating system (OS)	• Windows 10 / MacOSX Catalina and recent Linux (minimum 2020) • Minimum 8 GB memory recommended		
Dimensions (H x L x W)	• CE710 control bay unit: 1080 x 600 x 600 mm • CE710 optical unit (horizontal position): 1650 x 1700 x 520 mm • CE710 optical unit (vertical position): 1950 x 970 x 520 mm		
Weight	• CE710 control bay unit: 40 kg • CE710 optical unit: 187 kg		
Power requirements	• Power supply: 200-240 VAC, 50/60 Hz, 1600 VA • Cooling group: 200-240 VAC, 50/60 Hz, 2200 VA		
Water vapor	○	●	●
Fluorescence	○	●	●

QA features - ACTRIS ready

Dark signal measurement	●	●	●
Alignment camera	●	●	●
Polarization calibration	●	●	●
Telecover	●	●	●
Pre-trigger	●	●	●

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