Enviro
Technology Services Ltd
part of CuraTerrae

MiniMPL

Mini Micro Pulse LiDAR (Mini MPL-532-S-HD)

Outcome

The Mini Micro Pulse LiDAR (MiniMPL) is a highly portable, automated backscatter lidar that has been perfected and hardened over many thousands of hours of running, and hundreds of campaigns. MiniMPL provide the real-time atmospheric structure data scientists, meteorologists and air quality professionals need to make decisions, improve forecast models, and understand the complexity of clouds and the atmosphere. MiniMPL units are in continuous, unattended operation from Everest to the Sahara, taking measurements of aerosol type and concentration, vertical structure, and boundary layer dynamics 24/7/365 from the ground up to 15km

Overview

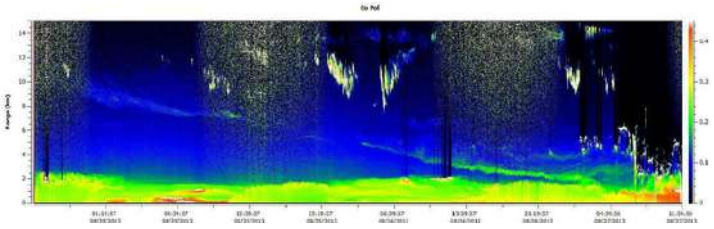
The MiniMPL delivers advanced cloud and planetary boundary layer data for atmospheric profiling up to 15 km. Make the fastest and most accurate decisions based on reliable information. The MiniMPL allows co-polarized and cross-polarized backscatter measurements that provide information on the cloud phase (liquid versus ice). The user can enable the cloud layer mapping feature that outperforms ceilometers by observing through moderately thick fog and low clouds for a greater number of detected layers, a better range resolution, and faster reporting times. Use data to calculate cloud phase and depolarizing aerosols, cloud scattering cross sections and optical thicknesses, planetary boundary layer heights, and aerosol extinction and optical thickness profiles–including those into the stratosphere in nighttime cases.

Applications

- Planetary boundary layer characterization
- Pollution characterization
- Weather modification research
- Volcanic ash studies
- Wildfire monitoring and prediction
- Urban air quality monitoring and prediction
- Aviation safety

Advantages

From enhancing weather forecasts to monitoring air quality and increasing air traffic control safety, Mini Micro Pulse LiDAR (MiniMPL) is your trusted partner in remote atmospheric monitoring. Providing data in real-time, this sophisticated laser remote sensing system uses the most advanced single-photon-counter detectors.MiniMPL are the only lidars simultaneously approved by NASA MPLNET, US Dept of Energy Atmospheric Radiation Program, and EUMETNET.



High altitude aerosols descends and merges into local a boundary layer over 3-day period

Product Specifications

Parameters:

- Range resolution: 5/15/30/75m (Software programmable)
- Minimum range: 100m
- Accumulation time: 1sec-15min
- Detection range*: Typically to 15km
- Polarization
- Scanning (optional)

Optics:

- Laser wavelength: 532nm
- Laser pulse energy: 3-4µJ @2500Hz
- Eye-safety: ANSI Z136.1, IEC 60825
- Receiver diameter: 80mm
- Pump laser diode: 10,000 hours
- Detector: Fiber coupled; user replaceable

*Choosing a coarser resolution results in longer detection range. Sample data is based on a 30second/30 m setting.

Environmental Operating Conditions:

- Temperature: +10°C to 35°C
- Relative humidity: 0-80%
- IP54 rated

Data System and Power Requirements:

- Operating system: WIN7/10
- Computer interface: USB
- Data transfer: LAN ethernet
- Power:
  - Supply: 110-240VAC 50-60HZ
- Consumption: 100W

Weight:

- 13kg
- Size: 240 x 305 x 480mm

Available Accessories

- All weather enclosure for MiniMPL with scanner option
- Science Care Program
- 1 and 2 Year Extended Warranty
- Lifecycle Care Program

The Droplet Guarantee

Droplet understands how the versatility and performance of an instrument can impact your research, career, and the world we live in. As you strive to provide a better understanding of our planet, we guarantee to be here to support you through your journey.

Whether you are establishing your first laboratory or are a tenured researcher; we have a team of scientists, engineers, and technical staff available to assist with application questions, technical support, data analysis, and training.

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