

SRL-300 LIDAR

Atmospheric Remote Sensing System



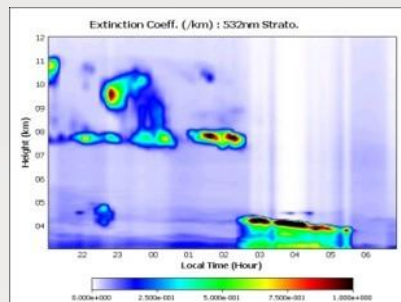
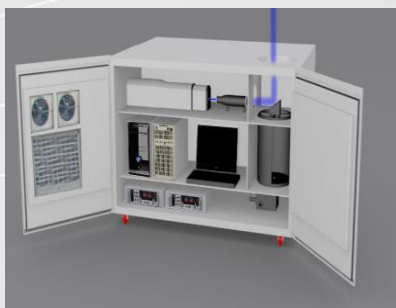
DESCRIPTION

Lidar is the optical equivalent of radar(LIDAR is an acronym of Light Detection And Ranging) an active remote sensing technique.

SRL-300 LIDAR is based on the particles of elastic and inelastic (Raman) backscatter. A pulsed laser beam is emitted into the atmosphere. The light is scattered by particles or molecular in the atmosphere. Some of the light reaches the receiving telescope where it is amplified and digitized. Interactions with nitrogen, water vapor(Raman scattering) and atmospheric gases, aerosol(Mie/Rayleigh scattering) can provide a wealth of information about the atmosphere.

SRL-300 LIDAR offers a well-established method of determining the vertical profile of the aerosol extinction coefficient independently from the aerosol backscatter coefficient.

SRL-300 LIDAR is suitable for multiple atmospheric monitoring applications, including advanced cloud analysis. We provide complete lidar solutions, including all hardware and software necessary to operate the system and analyses the data.

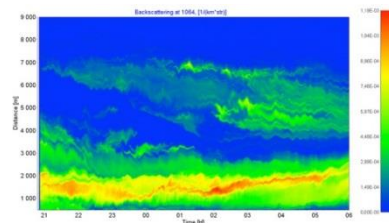


SRL-300 LIDAR

Transmitting System	1 Set
Receiving System	1 Set
Data acquisition System	1 Set
Data acquisition Software	1 Set

PARAMETERS

- Cloud layer, Dust layer
- PBL(Planetary boundary layer)
- Backscatter and extinction coefficient
- Aerosol optical depth(AOD)
- Aerosol type determination(dust, cloud, aerosol...)
- Aerosol microphysical properties(volume and surface concentration...)
- Depolarization ratio
- Lidar ratio
- Water vapor mixing ratio
- Cloud & Aerosol classification
- Visibility
- Color ratio*
- Angstrom exponent*
- SSA(Single scattering albedo)*
- Etc...



* : Option

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SPECIFICATIONS

CONFIGURATIONS	SPECIFICATIONS	
Transmitter	Laser source	Nd:YAG
	Wavelength	355 nm, 532* nm
	Pulse duration	6 ns
	Repetition rate	10 Hz
	Beam divergence	< 0.5 mrad after 5X beam expansion
Receiver	Telescope	Cassegrain (300, 400* mm)
	Field of view	0.5~2 mrad
	Focal length	3,000 mm
	Measurement range	20 km / 15 km @ Elastic signal (night/day) 15 km / 4 km @ Raman signal (night/day)
	Vertical range resolution	7.5, 15, 30 m (variable)
Detector	Detection channels	P-S-polarization signals (355, 532* nm) N ₂ Raman signals(387, 607* nm) Water vapor Raman signals (408, 660* nm) Liquid water Raman signals(404* nm)
	Elastic channels	Photomultiplier tubes for 355, 532*(P-S)nm (quantum efficiency: 42% @ 400 nm)
	Raman channels	Fast photon counting system(350 MHz) for Raman channels (386, 408, 404*, 607*, 660* nm)
Software	Automatic instrument control Automatic data processing Real time visualization * : Option	

