

Overview

Prof. Sachin's Aerosol group of MS, PhD, Post doc and researchers from the Center for Atmospheric and Climate Sciences (CACCS), IIT Madras, visited the NARL (Andhra Pradesh), a premier autonomous research institute under the Department of Space, engaged in fundamental and applied research in atmospheric and space sciences.

Over the years, NARL has emerged as one of the country's leading center for atmospheric research. The laboratory operates a state-of-the-art **53 MHz high-power MST radar**, along with advanced observational facilities including **Rayleigh/Mie Lidar, Boundary Layer Lidar, Sodium Lidar, Lower Atmospheric Wind Profiler, Sodar, Sky radiometer, pyranometer, Disdrometer, Optical Rain Gauge, GNSS-NavIC receiver, High Performance Computation lab (HPC) and Automatic Weather Stations**, in addition to regular **GPS radiosonde launches**. The NARL is also involved in regional short-range and daily forecasting of wind, rainfall, surface temperature, and other parameters.



Front row - Left to right: Dr. Pavan, Dr. A.K. Patra; Prof. Sachin S. Gunthe; Dr. Ramkumar

Back row- Left to right: Dr. Devaprasad M; Ms. Swathi; Ms Arjuman Rishi; Ms. Anu; Ms. Vysakhi Kottada; Mr. Athul C P; Mr. Ankit Patel; Mr. Chakradhar Reddy; Mr. Yougal S; Ms. Malavika; Ms. Insha Amin; Mr. Tanmay Joshi; Ms. Rizana Salim; Dr. Supriya Dey



The NARL has given Prof. Sachin the opportunity to release a weather balloon fitted with in-situ sondes that measure atmospheric pressure, temperature, relative humidity, wind speed, and wind direction at the balloon's burst altitude, typically 30-35 km.

Key takeaways to the team:

- Understanding of upper-atmospheric measurement techniques
- Insight into operational atmospheric research (weather forecasting, climate studies, and atmospheric processes)
- Exposure to interdisciplinary research approaches (atmospheric physics, remote sensing, instrumentation, and data analysis)
- Motivation toward collaborative research (future academic collaboration, data usage, and joint research efforts)
- Memorable journey with immeasurable knowledge

Team CACS expresses its sincere gratitude to **Dr. A. K. Patra**, Director, NARL, for hosting the visit and sparing his valuable time to interact with and encourage the students to contribute to the nation through pioneering atmospheric research.