



Department of Electronics and Communication Engineering

Dhritvan Space Lab

Report on AMSAT-India Representatives' Visit to Dhritvan Space Lab

Department: Electronics and Communication Engineering

Location: Dhritvan Space Lab

Date of Visit:

1. Introduction

The Dhritvan Space Lab established a fully functional satellite ground station to support academic research, student projects, and collaborative space communication initiatives. To ensure proper installation and operational readiness, Mr Nitin Muttin, Secretary, AMSAT India and Mr. Subramani B A, Founder & Director- Educational Outreach from AMSAT-India visited the lab for technical inspection and assessment.

2. Purpose of the Visit

- To verify the structural alignment, antenna system, rotor mechanism, and RF chain.
- To ensure compliance with technical guidelines and safety standards.
- To provide expert recommendations for improving performance and reliability.

3. Activities during the Visit

- Examined the antenna mounting structure, tracking system, and cabling layout.
- Assessed the configuration of the SDR-based receiving chain and transceiver setup.
- Verified line-of-sight clearance and rooftop installation integrity.
- Checked calibration procedures for azimuth-elevation rotors.
- Reviewed power management, grounding, and lightning protection measures.
- Interacted with faculty and students about satellite communication activities, amateur radio operations, and expected mission outcomes.

4. Key Observations & Recommendations

Observations:

- The mechanical installation was found to be structurally stable.
- Antenna alignment procedures were correctly followed.

- RF equipment and cable routing were well organized.

Recommendations:

- Strengthen weatherproofing of coaxial connections to avoid long-term signal losses.
- Improve grounding and surge protection for sensitive RF components.
- Periodically calibrate the rotors and check lubrication.
- Maintain a logbook for tracking satellite passes and system health.

5. Outcome of the Visit

The visit was extremely beneficial to the institution. The AMSAT-India experts validated the installation progress and provided clear guidance to ensure full operational readiness. Their inputs will help in achieving reliable communication with satellites such as NOAA, Meteor, and amateur CubeSats.

Photos



GPS Map Camera

Kothanoor, Karnataka, India
9PWH+3HF, Kothanoor, Karnataka 562103, India
Lat 13.394865°
Long 77.729322°
07/03/25 02:53 PM GMT +05:30

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