

Report of Expert Lecture on "Space Weather and Role of ISRO's Latest Mission Aditya-L1" organized by Department of Physics

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INTEGRAL UNIVERSITY



Department of Physics
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Report of Expert Lecture
on
Space Weather and Role of ISRO's Latest Mission Aditya-L1
Date: 4th February, 2025

Introduction: An expert lecture on "Space Weather and Role of ISRO's Latest Mission Aditya-L1" was conducted by Department of Physics on February 4, 2025, at 10:30 AM in Hall – 1, Central Auditorium Building. The session was held in offline (face-to-face) mode and witnessed an enthusiastic participation of students, faculty members, and researchers.

Objective of the Lecture: The primary objective of the lecture was to provide insights into space weather phenomena and highlight the role of ISRO's latest mission, Aditya-L1, in studying and monitoring solar activities. The session aimed to enhance awareness about the impact of solar storms, coronal mass ejections, and other space weather events on Earth's communication systems, satellites, and power grids.

Speaker Profile: The session was led by Dr. Ajeet Kumar Maurya, Assistant Professor, Professor in School of Physical and Decision Sciences, Babasaheb Bhimrao Ambedkar University and also an expert in solar physics and satellite-based space weather monitoring.

Key Highlights of the Lecture The expert lecture covered various aspects related to space weather and the Aditya-L1 mission, including:

- **Understanding Space Weather:** Definition, components (solar wind, geomagnetic storms, solar flares, coronal mass ejections), and its influence on Earth.
- **Importance of Studying the Sun:** How solar activity affects Earth's atmosphere, satellite operations, GPS navigation, and power infrastructure.
- **Introduction to Aditya-L1 Mission:** Objectives, scientific payloads, and how it will enhance our understanding of the Sun's outermost layer, the corona.
- **Technological and Scientific Contributions:** Discussion on instruments like the Visible Emission Line Coronagraph (VELC), Solar Ultraviolet Imaging Telescope (SUIT), and Plasma Analyser Package for Aditya (PAPA).
- **Impact on Future Research and Applications:** How the data from Aditya-L1 can help in space weather prediction, improve satellite operations, and protect technological infrastructure.

Interactive Session and Audience Engagement: The session concluded with an interactive question & Answer segment, where students and faculty actively engaged with the speaker. Questions ranged from Basics of Space

Weather to the role of Aditya-L1 in forecasting solar storms to its potential applications in space exploration and communication technology.

Conclusion: The lecture was attended by 42 students of various disciplines. The expert lecture proved to be an enlightening experience for all attendees, broadening their understanding of space weather and the pioneering efforts of ISRO through the Aditya-L1 mission. The insights shared by Dr. Ajeet Kumar Maurya emphasized the significance of solar research and its impact on technological advancements and daily life.

Acknowledgments: We extend our sincere gratitude to Dr. Ajeet Kumar Maurya for sharing valuable knowledge, as well as to the organizing committee for ensuring the smooth execution of the event. The lecture served as an important step in fostering curiosity and research interests in space sciences among students and faculty members.

Glimpses of the Events



Ayushi Singh Presenting Bouquet to Dr. Ajeet Kumar Maurya



Dr. Ajeet Kumar Maurya Explaining about the Solar Weather



Dr. Ajeet Kumar Maurya Answering Questions about the Mission Aditya-L1



Dr. Ajeet Kumar Maurya along with Faculty Members and Participants outside the Central Auditorium

With warm regards

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