Department of Physics
Integral University

Guest Lecture Report

Topic: Intermittent propagation of positive lightning leader and impact on attachment process

Department of Physics, Integral University organized a Guest lecture on the "**Intermittent propagation of positive lightning leader and impact on attachment process**" by **Dr. Abhay Srivastava**, Post Doc Fellow at the Institute of Atmospheric Physics, Chinese Academy of Sciences, Beijing, China on 18th February, 2020 at 11:00 A.M. in academic block III, room no. NLT-5. This lecture was attended by all the faculty members of Department and more than 150 students from the B. Tech., B. Sc. and M. Sc. Courses.

Summary of Lecture:

Lightning leader propagation mechanism, which is significantly influencing atmosphere (troposphere to ionosphere), plays important role in attachment process. Leader is the process that establishes lightning flashes, which forms due to successive breakdown in the atmosphere. The propagation characteristics and physical mechanism of polarity asymmetry are the reason for the macro effects of lightning, such as lightning intensity, flash ratio, polarity of the thunderstorm and further effects on the middle and upper atmosphere, global electric circuit and

ionospheric parameters. Presently, my focus is concentrated on lightning leader propagation mechanism, lightning attachment process, thunderstorm electrification, and its associated phenomena at middle and upper atmosphere.

To throw more light on this subject, Dr. Abhay Srivastava, delivered a lecture on **Intermittent propagation of positive lightning leader and impact on attachment process**. The main aim of the lecture was to educate the students and the faculty members about the lightning phenomena in the atmosphere, its propagation, benefits, hazards and common safty measures for the humans. Apart from this, he has also motivated the students by explaining the importance of lighning and the advancement of of reseach in this field. Students were very enthusiastic to know how the climate can be controlled, how is it possiple to shift the forcasted rain to other region, etc. etc. He also emphasized that scientists in India are not working currently in this field, so it is a good oportunity for the young researchers to lead in this field.

It was a learning and interactive session for the students as well as faculty members where He answered all the queries put up by the students to their full satisfaction.

The Lecture started with the introduction of Dr. Abhay Srivastava by Ms. Supriya Babiah (Very talented final year MSc student), Department of Physics. Dr. Abhay Srivastava was welcomed by Ms. Preeti Dixit of M.Sc. 1st Year by presenting him a bouquet on the behalf of Department of Physics, Integral University. Dr. Seema Srivastava, Head, Department of Physics, presented him with a memento as a gesture of honour. The lecture ended on a very enthusiastic and satisfying note by vote of thanks given by Dr. Haroon, Assistant Professor, Department of Physics, Integral University.