Centre for Clouds and Climate Change Research
COTTON UNIVERSITY
Panbazar, Guwahati-781001, Assam, India

Organized by

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Workshop on

"Coordinated Observations and Modelling Strategies for Pre-monsoon Severe Storms in Northeast India"

A workshop is held under the International Collaborative Research, DPRI, Kyoto University entitled:
"Innovation in predictability and climate projection of hazards due to extreme severe stormsdeveloping over the Northeastern India in premonsoon season"

Date: March 5, 2025
Venue: Homen Borgohain Conference Hall, Cotton University

Time: 9 am

Organized by:

- **Centre for Clouds and Climate Change Research, Cotton University**
- **North Eastern Space Applications Centre (NESAC)**
- **Disaster Prevention Research Institute (DPRI), Kyoto University**

Supported by:

- **Core-to-Core Program, Japan Society for the Promotion of Science**
- **Institute of Education, Research and Regional Cooperation for Crisis Management Shikoku, Kagawa University**
- **International Consortium for Earth and Development Sciences, Kagawa University**

Introduction

Severe premonsoon storms, including Nor'westers and associated convective systems, significantly impact Northeast India, causing damage to infrastructure, agriculture, and human life. The need for a coordinated observational and modeling approach is crucial to improve forecasting capabilities, understand storm dynamics, and enhance disaster preparedness.

This workshop aims to bring together researchers, meteorologists, policymakers, and disaster management professionals to design an integrated observational and modeling framework for studying premonsoon severe storms in the region. The workshop will facilitate collaboration between institutions and set the foundation for a long-term research initiative.

Objectives

- To assess the current understanding of premonsoon severe storms in NE India.
- To discuss ongoing and planned observational campaigns and numerical modeling efforts.
- To develop a framework for coordinated field observations and high-resolution modeling studies.
- To explore technological advancements for improved storm prediction and risk mitigation.
- To foster collaboration between national and international research organizations.

Workshop Themes

1. **Observational Strategies for Premonsoon Storms**
    - Ground-based and satellite observations
    - Doppler radar network applications
    - Field campaigns and instrument deployment strategies
2. **Numerical Modeling and Prediction**
    - High-resolution weather prediction models
    - Data assimilation techniques
    - Simulation of severe convective events
3. **Impact Assessment and Risk Mitigation**

- Storm-induced hazards on agriculture and infrastructure
- Community-based disaster resilience strategies
- Early warning and communication systems

4. **Collaborative Research and Future Directions**
   - Institutional partnerships and funding opportunities
   - Capacity building and knowledge sharing

Expected Outcomes

- A roadmap for coordinated observational and modeling studies on premonsoon severe storms.
- Identification of research gaps and potential funding sources for collaborative projects.
- Strengthening of partnerships between Indian and international institutions.
- Development of policy recommendations for improved storm preparedness and response.

Target Participants

- Researchers and faculty members from meteorology, atmospheric science, and climate research.
- Scientists and experts from NESAC, IMD, IITM, DPRI Kyoto University, and other relevant institutions.
- Representatives from disaster management agencies and policymakers.
- Graduate students and early-career researchers interested in severe storm research.

Logistics & Venue

The workshop will be held on March 5, 2025, at Cotton University, Guwahati, Assam. Detailed information regarding registration, agenda, and accommodation will be shared with participants in due course.

Contact Information

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