IITM NEWSLETTER

Quarterly e-Newsletter of
Indian Institute of Tropical Meteorology

Volume 8 | Issue 1

JAN 2026

Achievements

Inauguration of Urban Testbed Facilities:

The Mission Mausam–Urban Testbed Facility in Chennai was inaugurated on 13 October 2025 at Sathyabama Institute of Science and Technology (SIST) by **Dr. M. Ravichandran, Secretary, MoES,** in the presence of Dr. A. Suryachandra Rao, Director, IITM, and MoES leadership. The programme included the inauguration of the Testbed Facility and the Data Recording & Processing Centre at the SIST Research Park, followed by a formal session in the Dr. Remibai Jeppiaar Auditorium, featuring a Welcome Address by Dr. B. Sheela Rani (Director Research, SIST), Programme Highlights by Dr. A. Suryachandra Rao (Director, IITM), Presidential Address by Dr. Mariazeena Johnson (Chancellor, SIST), and the Inaugural Address by Dr. M. Ravichandran (Secretary, MoES). On this occasion, an MoU between IITM and SIST was signed in the presence of the Secretary, MoES, to formalize collaboration in research and academic activities under Mission Mausam.

Inauguration of Urban Testbed Facilities and MoU signed between IITM and SIST

DESK in association with the IITM-HPC, conducted : A mini workshop on **AI in Weather and Climate Modelling** by French Team, EVIDEN. on **09 October 2025.** The Resource Persons Dr. Erwan Raffin, Collaborative project leader of the Center for Excellence in Performance Programming (CEPP), EVIDEN and Dr. Mikaël Jacquemont, EVIDEN (AI expert, AI Technical Consultant in the HPC, AI & Quantum Global Business) were invited for the workshop.

Inauguration of the Multi-Facility Tensile Structure "Govardhan" and Laying of the Foundation Stone for the Visiting Scientist Facility at IITM were carried out at the hands of Dr. M. Ravichandran, Secretary, MoES on 18 November 2025.

Inauguration of the Multi-Facility Tensile Structure "Govardhan" and Laying of the Foundation Stone for the Visiting Scientist Facility at IITM

MoU between Geological Survey of India (GSI) and Indian Institute of Tropical Meteorology (IITM) on Institutional Cooperation Program on Rainfall Induced Landslide Forecasting was signed on 27th November 2025 at IITM.

MoU between Geological Survey of India (GSI) and Indian Institute of Tropical Meteorology (IITM)

A training for IAF MET officers: Course on Tropical Meteorology was conducted at IITM, Pune from 24-28 November 2025. Nine IAF officers of the rank Squadron Leader and Flight Lieutenant participated in the training.

A training for IAF MET officers: Course on Tropical Meteorology was conducted at IITM, Pune

Memorandum of Understanding (MoU) between IITM, Pune, and Bikaner Technical University, Bikaner, Rajasthan

Bharat Climate Observation Network (BCON):

Six locations Climate Reference Station sites were selected: Hanle Ladakh, Binaker Technical University Rajasthan, Devasthal Nainital, Bhitarkanika Odisha, Ponmudi Munnar Kerala, and Minicoy Island Lakshwadweep. MoUs are being established with various organizations, and GHG, meteorological, and soil sensors will be deployed at these sites.

Mission Mausam: The following installations & commissioning of various atmospheric observation systems are carried out at various ART sites:

- Cloud Condensation Nuclei (CCN) counter installed as part of the process testbed at Visakhapatnam. The CCN measures activated ambient aerosol particle number concentration as a function of supersaturation.
- SP2-XR (Single Particle Soot Photometer - Extended Range) installed as part of the process testbed at Visakhapatnam. SP2-XR measures real-time data on the size distribution and mixing state of black carbon aerosols in the atmosphere.

Eddy covariance (EC) system installed at the High Altitude Cloud Physics Laboratory (HACPL), Mahabaleshwar, for measuring ecosystem fluxes (carbon dioxide, water vapor, etc.). An aerosol experiment for winter observations was also set up.

11th WMO Conference on Weather Modification :

The Eleventh WMO Scientific Conference on Weather Modification was hosted by IITM, Pune with support from WMO's World Weather Research Programme from 3-7 November 2025. The conference aimed to bring together scientists and practitioners to share advances in cloud physics, weather modification research and responsible governance.

Dr. M. Ravichandran, Secretary, (MoES), addressed the inaugural session.
Dr. Suryachandra Rao, Director, IITM Pune, welcomed delegates, followed by insights from Dr. M. Mohapatra, DGM, (IMD).

Dr. Abdulla Al Mandous, President, WMO, delivered the inaugural address as Chief Guest, with Dr. Thara Prabhakaran, Project Director, CAIPEEX, highlighting India's research efforts. Iranian Deligation, participating in had discussions with Dr.Suryachandra Rao, Director and Dr. Thara Prabhakaran, Project Director on mutually interested research in the areas of cloud physics and Weather modification and also possible research collaboration.







Visit of Dr. Abdulla Al Mandous, President of the World Meteorological Organization (WMO)

INTROMET-2025

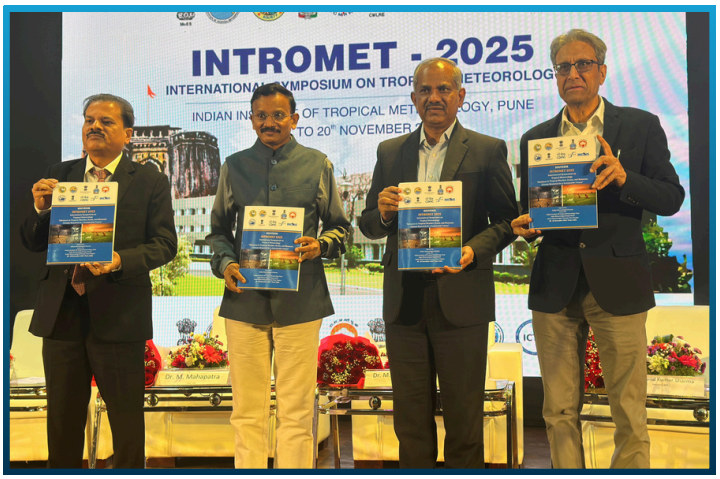
The Indian Meteorological Society (IMS) International Symposium on Tropical Meteorology (INTROMET-2025) was inaugurated at the IITM, Pune on 18 November 2025. The flagship IMS was held from 18–20 November 2025 with the theme: "Advances in Tropical Weather, Ocean, and Monsoon Climate Research for a Sustainable Future." Bringing together more than 800 participants, INTROMET-2025 featured an unprecedented level of global engagement. About 50 international experts from the USA, Australia, Japan, Switzerland, France, the UK, and other countries participated, reflecting the symposium's growing international relevance in the areas of tropical weather, monsoon prediction, and climate research. The inaugural ceremony was held in the presence of Dr. M. Ravichandran, Secretary, Ministry of Earth Sciences (MoES) (Chief Guest); Dr. M. Mohapatra, Director General of Meteorology, IMD (Guest of Honour); Shri Anand Kumar Sharma, President, IMS; Dr. A. Suryachandra Rao, Director, IITM; and senior officials, invited scientists, and international delegates. In his welcome address, Dr. Rao, Director, IITM welcomed all the delegates. The lighting of the lamp was followed by the presentation of mementoes to the dignitaries and addresses by IMS leadership.

As part of the ceremony, the INTROMET-2025 Souvenir, a special issue of the IMS journal Vayumandal, and the newly launched Vayumandal website were released.

Website | Photo Gallery

Glimpses of INTROMET-2025

The Early Career Researcher (ECR) Session at INTROMET-2025, titled "Indian Climate – 2025" was held on 19 November 2025. The Session aimed to bring together early-career scientists and professionals working across disciplines of the Indian climate system — from atmosphere and ocean to cryosphere and land interactions. This session offers a collaborative platform for discussing recent advancements, emerging research challenges, and opportunities for interdisciplinary collaboration.



The Early Career Researcher (ECR) Session of INTROMET-2025

Institutional Curtain Raiser for the (IISF) 2025

The event also featured the **Institutional Curtain Raiser for the India International Science Festival (IISF) 2025**, highlighting the theme *"Vigyan Se Samruddhi: For Aatmanirbhar Bharat"* and the Ministry's commitment to science outreach and public engagement.

IITM 64th Foundation Day Celebration

- The celebrations began with the welcoming of dignitaries, followed by the invocation and lighting of the lamp. Dr. Thara Prabhakaran delivered the welcome address, leading into the presentation of mementos.
- Dr. Suryachandra A Rao, Director of IITM, presented *"IITM at a Glance: The Past Year and Way Forward."* This was followed by an address by Dr. V. S. Prasad, Director, NCMRWF, and a guest address by Dr. Mrutyunjay Mohapatra, DGM, IMD.
- Awards and felicitations were presented to former employees who completed 75 years of age.The Chief Guest Dr. Roger Pulwarty delivered the IITM Foundation Day Lecture titled "Drought Science, Impacts, and Services: Addressing Compounding and Cascading Risks." The program continued with the Best Research Paper (Young Scientist) Award Lecture, followed by the Research Category—Modeling Research Award Lecture. The session concluded with the Vote of Thanks and the National Anthem. Post-lunch interactions continued, culminating in a vibrant cultural evening, followed by dinner.

Youtube Link Photo Gallery

Glimpses of IITM's 64th Foundation Day Celebration

Research Highlights

Advancing MoES Air Quality Monitoring and Forecasting in Indian Cities: Insights from SAFAR and MAPAN, Towards MAPAN-II

Ambient air pollution remains a critical environmental and public health issue, particularly in Indian metropolitan cities. The System of Air Quality and Weather Forecasting and Research (SAFAR), developed by the Ministry of Earth Sciences in 2010, provides high-resolution air quality monitoring and forecasting and has been expanded to Delhi, Pune, Mumbai, and Ahmedabad. Complementing this, the Modeling Air Pollution and Networking (MAPAN) system integrates air pollution data from across India for improved forecasting. Long-term observations indicate a decline in $PM_{2.5}$ levels in Delhi, reflecting the positive impact of sustained monitoring and policy interventions, along with an increasing frequency of "good" and "satisfactory" AQI days. The study also highlights the integration of SAFAR and MAPAN with the Air Quality Warning and Integrated Decision Support System for Emissions (AIRWISE) for high-resolution forecasting and decision-making. Following the success of these initiatives, the MAPAN programme is being expanded to include air quality monitoring and modelling in the Himalayan and oceanic outflow regions. *(Anand V., Ghude S.D., Panicker A.S., Govardhan G., Jat R., Maji S., Rathod A., Shinde R., Kori P., Soni V.K., Nageswar Rao M., Mukherjee A., Khamgaonkar K., Anoop P., Varghese A., Yadav P.P., Roy C., Wagh S., Kadam V., Advancing MoES Air Quality Monitoring and Forecasting in Indian Cities: Insights from SAFAR and MAPAN, Towards MAPAN-II, with focus on the Himalayas and Oceanic Outflows. Bulletin of the American Meteorological Society, Online, November 2025, DOI:10.1175/BAMS-D-24-0220.1, 1-31)*

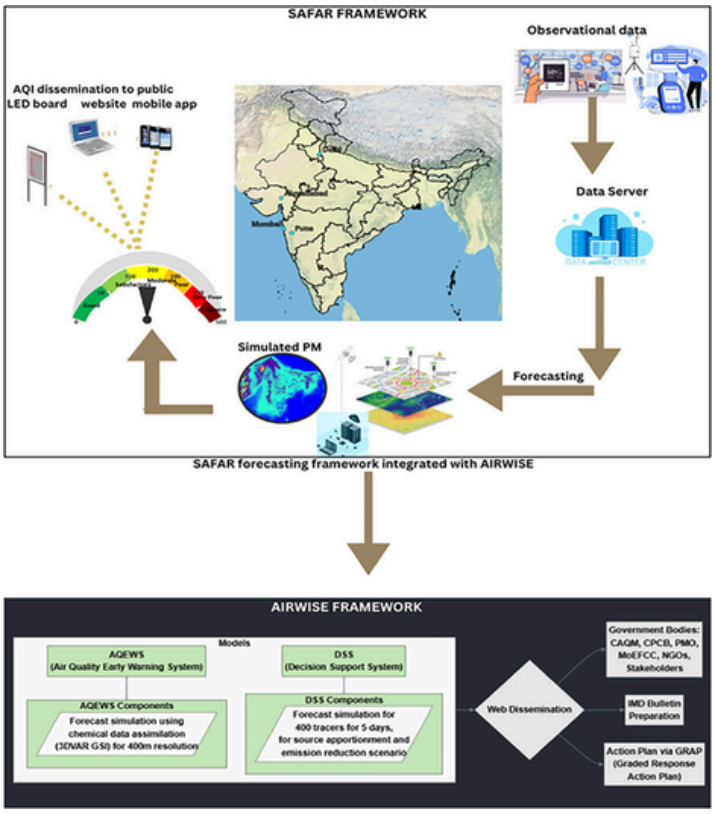


Figure 1: SAFAR observational network and forecasting framework integrated with the AIRWISE system for air quality forecasting.

Persistence in Physical Systems: An Application to Soil Moisture Memory

Several physical variables and fluid systems exhibit memory effects arising from their internal dynamics and interactions with external forcings. Various existing techniques are either complex or face limitations due to the usual nonlinear nature of the time series, typically overestimating memory timescales. We overcome this by considering a nonparametric, model-free framework grounded in information theory, with methodological with methodological modifications to estimate memory timescales. We show that there is a good agreement between the estimated memory and the known Markov order of some synthetic time series. Leveraging this method, we analyzed observational and reanalysis datasets of soil moisture (SM) time series over India's core monsoon zone and quantified SM memory. Results indicate that SM behaves as a finitary, higher order Markov process, revealing a memory

Results indicate that SM behaves as a finitary, higher order Markov process, revealing a memory timescale of ~35 days on core monsoon zone. The proposed treatment offers methodological simplicity and generalization beyond conventional linear approaches for analyzing stationary time series. (***Ingale M., Singh B.B., Mujumdar M., Goswami M., Ganeshi N., Aju C.D., Krishnan R., Ravichandran M.***, *Persistence in Physical Systems: An Application to Soil Moisture Memory, Physical Review Letters, 135, October 2025, DOI:0.1103/djz5-2lsn, 1-5)*

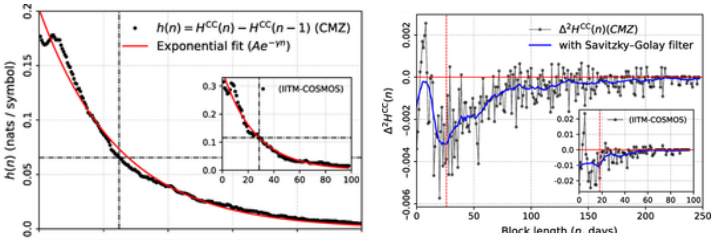


Figure 2: Upper panel: First derivatives of BSE [h(n)] for modeled datasets as a function of block length n. Red solid line indicate exponential fit. Dot-dashed lines marks the 1/e value of h(n). The inset figure has the same configuration but for the observed SM (IITM-COSMOS) time series. Lower panel: second derivative of BSE Δ2H(n) as a function of n. The blue solid line indicates smoothed (using Savitzky-Golay filter) approximation hinting to the memory timescale might lie ~26 days (red dashed line). The inset figure is for observed time series.

The influence of short-lived halogens on atmospheric chemistry and climate

Observations have demonstrated the ubiquity of short-lived halogens (SLHs)—defined as organic and inorganic chlorine, bromine and iodine compounds with an overall atmospheric lifetime of less than 6 months—in the global atmosphere. They are primarily emitted naturally from the ocean, cryosphere, volcanoes, salt lakes and the biosphere. However, unregulated anthropogenic sources are increasingly contributing to their atmospheric loading. Some of their natural emissions have increased over time due to anthropogenic pollution, for example, the increased oceanic emissions of iodine compounds due to the deposition of ozone on the sea surface. SLHs affect chemical processes, such as ozone and methane chemistry, and therefore influence air quality and climate. Nevertheless, some of their sources and chemistry are not included in air-quality and climate models used in international assessment reports. Here we describe in detail the various impacts of SLHs on air quality and climate, and make a case for the inclusion of more comprehensive SLH chemistry in future atmospheric, air-quality and climate assessments. In doing so, we also identify gaps in our knowledge of SLH emissions, chemistry, and environmental and climate impacts *(Saiz-Lopez A., **Mahajan A. S.**, Abbatt J , The influence of short-lived halogens on atmospheric chemistry and climate, Nature, 648, December 2025, DOI:10.1038/s41586-025-09753-x, 289-299).*

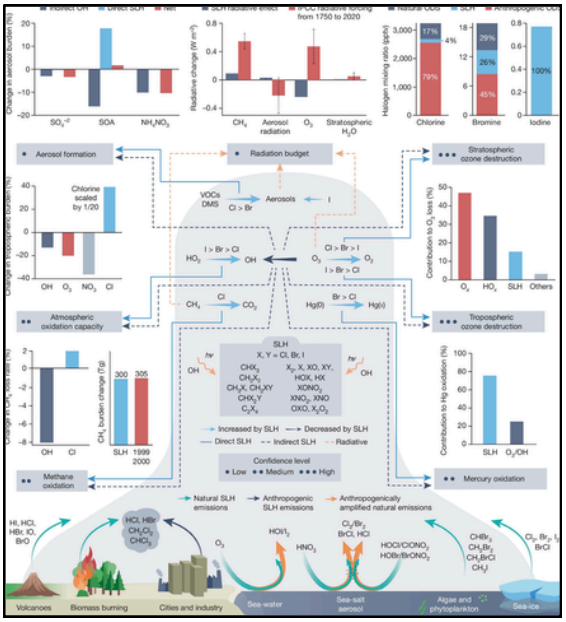


Figure 3: Direct and indirect influence of SLHs on atmospheric composition, radiation and climate

Assessment of Indian Summer Monsoon in Seasonal Hindcasts From Next-Generation GFDL and IITM Models

This study evaluates the performance of the next-generation seasonal prediction systems, GFDL-SPEAR and MMCFSv2, in forecasting Indian Summer Monsoon Rainfall (ISMR) during 1991–2020. Both models show a 2–16% improvement in ISMR prediction skill compared to their predecessor versions. While GFDL-SPEAR better represents sea surface temperature (SST) mean states, MMCFSv2 more effectively captures ENSO and Indian Ocean Dipole variability, resulting in higher ISMR prediction skill (0.58) than

GFDL-SPEAR (0.47). The study highlights that accurate representation of tropical SST–ISMR teleconnections, rather than mean-state biases alone, is key to improving seasonal monsoon prediction and climate services over South Asia. *(Suneeth K.V., Pillai P.A., **Rao Suryachandra A.**, Jain D., **Pradhan M.**, Srivastava A. Assessment of Indian Summer Monsoon in Seasonal Hindcasts From Next-Generation GFDL and IITM Models International Journal of Climatology, 45: e70068, November 2025, DOI:10.1002/joc.70068, 1-20).*

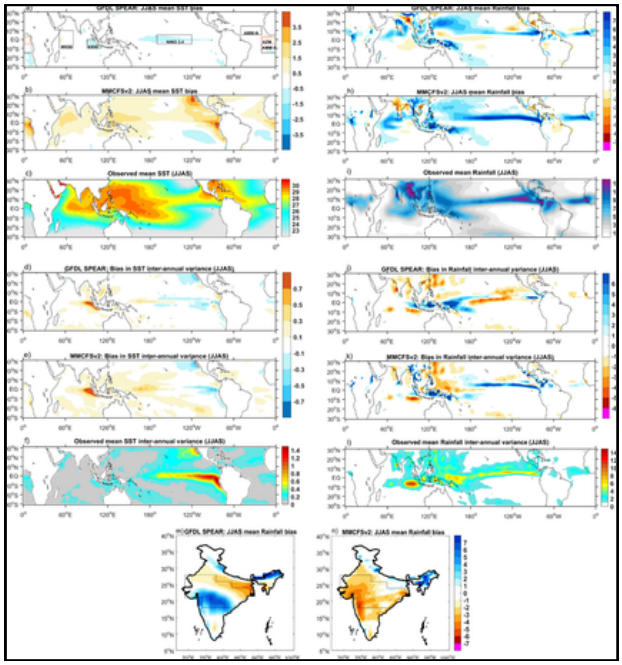


Figure 4 : Bias in JJAS seasonal mean SST for GFDL-SPEAR and MMCFSv2 relative to observations (HadISST). (c) Observed JJAS mean SST from HadISST. Boxes in (a) indicate regions use to define key SST indices. (d, e) Bias in interannual variance of JJAS SST for both models. (f) Observed JJAS mean SST variance from HadISST. (g, h) Bias in JJAS seasonal mean rainfall for both models relative to observations (GPCP). (i) Observed JJAS mean rainfall from GPCP. (j, k) Bias in interannual variance of JJAS rainfall for both models. (l) Observed JJAS rainfall variance from GPCP. (m, n) Bias in JJAS seasonal mean rainfall over India from GFDL-SPEAR and MMCFSv2, with the 'core monsoon zone' outlined by a polygon. All analyses are based on the 1991–2020 period.

Seasonal and interannual variability of biogeochemical parameters in the Arabian sea and its relation to extreme climatic events

The seasonal and interannual variability of physicochemical (temperature, salinity, dissolved oxygen, and nutrients) and productivity characteristics of the Arabian Sea (AS) are studied using 30 years (1993–2022) of datasets. Chlorophyll-a (Chl-a) variance at specific depths identified four core variability regions: Western AS (WAS), Eastern AS (EAS), Northern AS (NAS), and Central AS (CAS). The highest Chl-a content was observed in the WAS region during the summer monsoon, followed by the NAS region, where the winter monsoon dominated productivity. Nutrient entrainment from the WAS to the open ocean enhances productivity in the CAS, which lags by over a month compared to other regions. It appears that nitrate and phosphate contribute to productivity in all regions. However, silicate has no contribution in the EAS region, but iron does. Parameters like Chl-a, net primary production, nitrate, and phosphate in all regions have decreased, and on the contrary, iron has increased, but increase of silicate in the EAS region. This study also unveils the El-Niño/Southern Oscillation (ENSO) and Indian Ocean Dipole (IOD) effects on biogeochemistry parameters across AS regions. During ENSO/IOD years, Chl-a anomaly reveals a strong correlation between IOD and EAS suggesting more substantial influence on the productivity of this region *(Paul M., Nayak R.R., **Gnanaseelan C., Chakraborty A.** Seasonal and interannual variability of biogeochemical parameters in the Arabian sea and its relation to extreme climatic events,Journal of Operational Oceanography, 118, October 2025, DOI:10.1080/1755876X.2025.2581419, 244-262).*

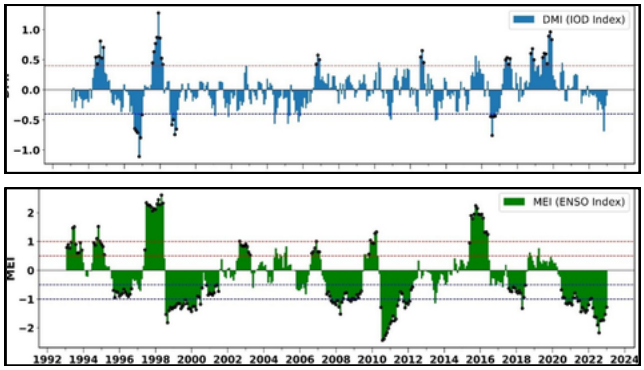


Figure 5 : DMI (IOD) and MEI (ENSO) index time series from 1993 to 2022. The black circles represent index at or above/below the specified threshold values.

Understanding Indian Summer Monsoon Rainfall Variability Through the Lens of Tropospheric Biennial Oscillation: A Study of Temporal and Spatial Patterns in CMIP6 Models

This study evaluates 33 CMIP6 climate models for

their ability to simulate Indian Summer Monsoon Rainfall (ISMR) variability and the Tropical Biennial Oscillation (TBO). Models were classified into two groups based on their skill in capturing biennial monsoon variability. About 70% of the models (CAT1) showed stronger TBO representation, better agreement with observed rainfall patterns, and improved simulation of monsoon–ocean interactions compared to CAT2 models. The analysis indicates that CAT1 models more accurately reproduce ISMR variability and its relationship with ENSO and Indian Ocean SST anomalies. However, most models overestimate the ENSO influence on ISMR and have limited skill in representing regional monsoon variability. The findings highlight the need for improved simulation of ocean–atmosphere feedbacks and teleconnections to enhance the reliability of future monsoon projections under climate change. *(**Arora A., Valsala V., Pillai P. A., Phani M. K. R.**, Understanding Indian summer monsoon rainfall variability through the lens of tropospheric biennial oscillation: a study of temporal and spatial patterns in CMIP6 models, Climate Dynamics, 63: 389, October 2025, DOI:10.1007/s00382-025-07858-7, 1-24)*

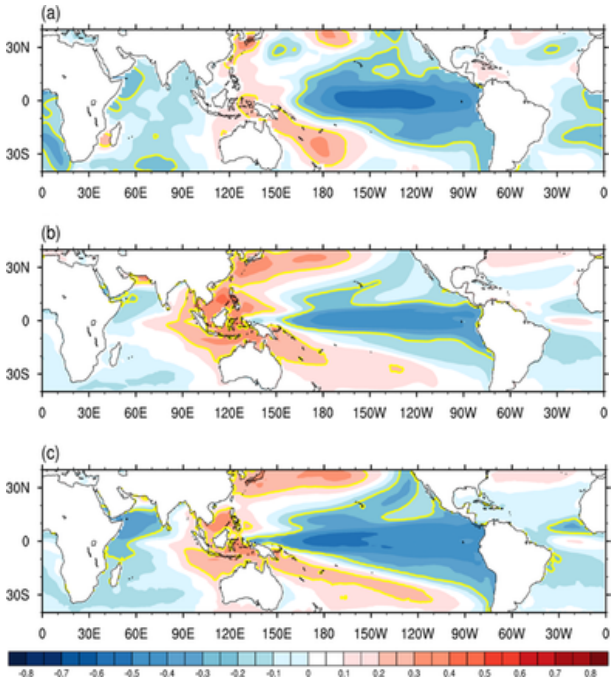


Figure 6: Correlation of ISMR (rainfall anomaly averaged over India) with SST anomaly in the Tropics for (a) observations and multimodel mean of (b) CAT1 and (c) CAT2 models for the JJAS annual mean. Yellow contours indicate regions of statistical significance at the 95% confidence level

Exacerbation of lightning activity during Indian summer monsoon season over India: Estimation of cloud-to-ground lightning activity in wet and dry convective regimes

This study investigates lightning activity during active and break phases of the Indian Summer Monsoon (ISM) using observational datasets and the Weather Research and Forecasting (WRF) model. The analysis reveals that break periods, characterized by dry convective conditions and localized strong updrafts, are associated with enhanced lightning activity due to the prolonged presence of mixed-phase cloud hydrometeors that facilitate charge separation. In contrast, active monsoon periods exhibit widespread strong convection, larger hydrometeors, and increased rainout processes, resulting in comparatively lower lightning occurrence. The study highlights the importance of accurately representing the vertical distribution of hydrometeors in numerical weather prediction models and demonstrates how improved simulation of lightning processes, including intracloud/cloud-to-ground interactions and aerosol–cloud–electrification mechanisms, can help reduce model biases and enhance thunderstorm and lightning hazard forecasting. *(**Ghosh R., Bhowmik M., Hazra A., Pawar S. D.**, Mohan G.M., **Domkawale M. A.**, Gopalakrishnan V., Exacerbation of lightning activity during Indian summer monsoon season over India: Estimation of cloud-to-ground lightning activity in wet and dry convective regimes, Quarterly Journal of the Royal Meteorological Society, 151: e70007, October 2025, DOI:10.1002/qj.70007, 1-24)*

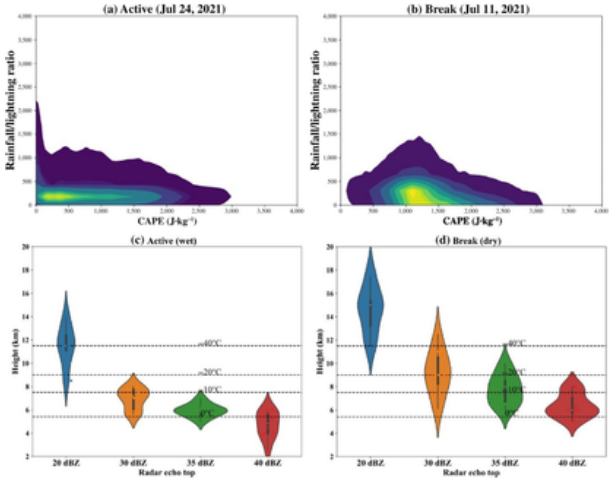


Figure 7: (a, b) The joint probability distribution function between rainfall yield (rainfall/lightning) and convective available potential energy (CAPE) reveals the actual

characteristics of active and break periods. (c, d) The reflectivity echo top heights with lightning-producing cells of active (wet) and break (dry) events from observation.

An Optimized Method for the Boundary Layer Height Estimation Using Dual-Polarization C-Band Radar Over the Core Monsoon Zone in India

This study introduces a modified radar-based technique to estimate planetary boundary layer (PBL) height using dual-polarization radar observations. Synergistic measurements from C-band dual-polarization radar and GPS radiosonde (RS) collected during July-September 2023 at the Atmospheric Research Testbed - Central India (ART - CI), Silkheda (N, E; 563 m amsl), were used to validate the method and examine the diurnal variation of the PBL. Utilizing a sequence of radar volume scans, quasi-vertical profiles (QVPs) were generated to construct height-time cross sections. The PBL is delineated by identifying the sharp gradient in the differential reflectivity ratio to spectral width, a distinct signature attributed to Bragg scattering at the interface between the boundary layer and the free troposphere. Validation against concurrent GPS RS data reveals a striking correlation ( ) with a root mean square error (RMSE) of ~149 m. Additionally, our estimation of the entrainment zone (EZ) depth, which shows a moderate correlation (, RMSE ~155 m) with RS measurements, underscores the robustness of the approach. This radar-based technique offers strong potential for routine application across operational weather radar networks, enabling high-resolution spatiotemporal monitoring of PBL dynamics under varying meteorological conditions. *(Jaiswal A., **Das Subrata K.**, Murali Krishna U.V., Deshpande S.M., An Optimized Method for the Boundary Layer Height Estimation Using Dual-Polarization C-Band Radar Over the Core Monsoon Zone in India, IEEE Transactions on Geoscience and Remote Sensing, 63: 4114207, pp. 1-7, November 2025, DOI:10.1109/TGRS.2025.3636407, 1-7)*

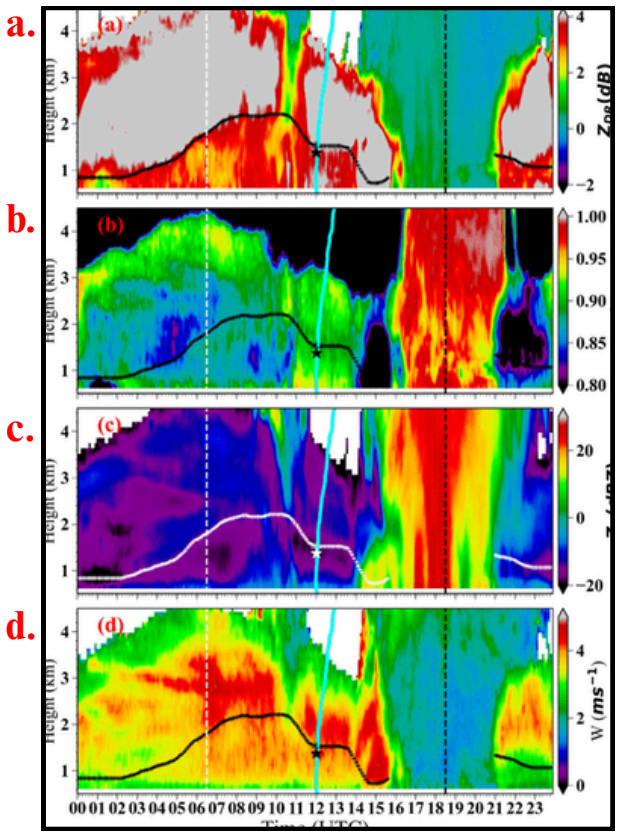


*Figure 8: Temporal evolution obtained from QVPs of (a) Z_{DR} (dB), (b) (c) (dBZ), and (d) ( ) on July 6, 2024. The white and black dashed line denotes the solar noon and solar midnight periods, respectively. The aqua color curve in each panel represents the vertical profile of the virtual potential temperature derived from the GPS RS (12 UTC). PBL height estimated using DWR and using GPS RS is marked by + and *, respectively, in all the panels.*

Reconciling observed and predicted droplet concentration at the Indian summer monsoon cloud base

This study presents the first cloud droplet closure analysis from the Indian subcontinent using measurements collected during the CAIPEEX Phase IV campaign. By combining sub-cloud aerosol, cloud condensation nuclei (CCN), and cloud-base droplet observations, the study evaluated an adiabatic parcel model and commonly used droplet nucleation parameterizations for predicting cloud droplet number concentrations. The parcel model showed better agreement with observations, particularly at higher updrafts, highlighting the importance of aerosol kinetic limitations during cloud formation. The results indicate that increasing Aitken-mode aerosol hygroscopicity improved model performance, while continental air-mass cases required the inclusion of finer aerosols for finer

aerosols for accurate predictions. The study demonstrates that region-specific aerosol size distributions and hygroscopicity characteristics can effectively reproduce observed cloud droplet concentrations, emphasizing the importance of accurate aerosol representation in cloud-resolving models and improving our understanding of aerosol–cloud interactions over the Indian monsoon region. (***Varghese R.***, *Behera S., Behera M.D., Reconciling observed and predicted droplet concentration at the Indian summer monsoon cloud base, Science of The Total Environment, 973: 179077, April 2025, DOI:10.1016/j.scitotenv.2025.179077, 1-13).*

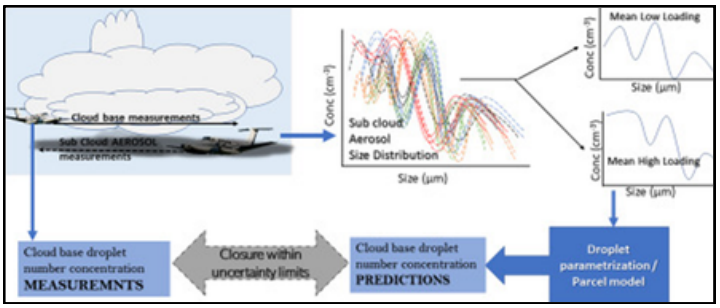


Figure 9: Graphical abstract.

Future intensification of Northern Hemisphere monsoons due to declining remote aerosol pollution

Anthropogenic aerosol emissions have significantly shaped historical monsoon precipitation, yet uncertainties persist in the projected response to future emissions. This study employs models contributing at least ten ensemble members to the Detection and Attribution Model Intercomparison Project—MIROC6 and CanESM5—to examine the mid-century response of the Northern Hemisphere (NH) summer monsoons to changes in aerosol burdens. We focus on a scenario characterized by an increase in aerosol burdens over South Asia, but strong reductions over the NH extra-tropics, since this is consistent with observed trends. These anomalous reductions induce an inter-hemispheric energy imbalance, prompting a large-scale response in the atmospheric meridional overturning circulation. The upper-tropospheric levels of the overturning circulation enhance heat transport towards the Southern Hemisphere, while the lower levels bring enhanced moisture convergence into the NH, leading to more rainfall across NH monsoon regions. Our findings highlight that global air pollution control measures may have wide-ranging impacts well beyond the aerosol source regions. For South Asia, these findings suggest that widespread remote aerosol reductions could offset the precipitation suppression from rising local aerosol pollution. *(Sooraj K.P., Dhara C., Ayantika D.C., Vishisth K., Sumit K.M., Turner A.G., Krishnan R. Future intensification of Northern Hemisphere monsoons due to declining remote aerosol pollution, Environmental Research Letters, 20, October 2025, DOI: 10.1088/1748-9326/ae0f41, 1-12).*

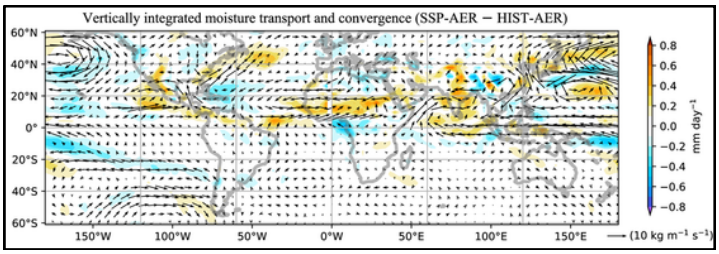
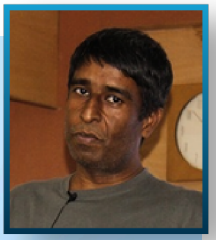


Figure 10: Boreal summer (JJAS) grand-ensemble-mean anomaly of vertically integrated moisture transport (vectors, ×10 kg m^{-1} s^{-1}) and vertically integrated moisture convergence (VIMC; shading, ×10^{-6} kg m^{-2} s^{-1}). Vertically integrated moisture convergence is positive for net moisture convergence into the atmospheric column.

Prof. R. Ananthakrishnan Colloquium Series



Anurag Dipankar, Senior Scientist at the Institute for Atmospheric and Climate Science, ETH Zürich, delivered the 83rd Series on 14 October 2025 on the topic *"Into the Storm: Towards a Computing Platform for Global Kilometer-Scale Simulations."*

Youtube Link

Siddharth Chakravarty from the School of Business and Management, Queen Mary University of London, delivered the 84th Series on 13 November 2025 on the topic *"Human-Nature Interactions: Technological Innovations, Social Relations and Market Dynamics in the Trawling Industry in Karnataka."*

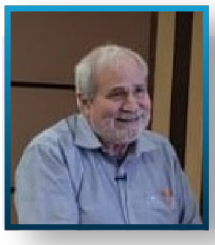
Youtube Link

Sneha Aggarwal, Early Career Researcher in the Department of Environmental Science and Analytical Chemistry at Stockholm University, delivered the 85th Series on 21 November 2025 on the topic *"Can Sea Spray Aerosol be a Source of Gas-Phase PFAS? Insights from High Resolution Mass Spectrometry."*

Youtube Link

Henrik Holf, Global Product Manager – Environmental Monitoring at PALAS, Germany, delivered the 86th Series on 4 December 2025 on the topic *"Aerosol Instrumentation."*

Youtube Link



Douglas R. Worsnop from Aerodyne Research Inc., USA, delivered the 87th Series on 11 December 2025 on the topic *"Atmospheric Aerosol Chemistry: Climate and Air Quality."*

Youtube Link

Jim Thomas from the International Centre for Theoretical Sciences and Centre for Applicable Mathematics at Tata Institute of Fundamental Research, Bangalore, delivered the 88th Prof. R. Ananthakrishnan Colloquium on 18 December 2025 on the topic *"Data-Driven Models for Turbulent Submesoscale Flow in the Ocean."*

Youtube Link

Vigilance Awareness Week – 2025

As part of the ongoing Three Months Vigilance Awareness Campaign and Vigilance Awareness Week 2025, a series of activities viz. talks and competitions were arranged:

Talks:

- Cyber Hygiene and Security' by Dr. Phani Murali Krishna, Scientist-F on 03 October 2025.
- "खरीद प्रक्रिया (Procurement)" by Shri Irfan Pathan, Section Officer on 07 October 2025.
- 'Prevention of Sexual Harassment (POSH) Act' by Dr. (Smt.) Amita Prabhu, Scientist-F on 09 October 2025.
- 'Conduct Rules' by Speaker: Shri Kaushal Kumar, Controller of Administration, National Chemical Laboratory, Pune on 17 October 2025.
- 'Ethics and Governance' by Shri Hans Pratap Singh on 27 October 2025.

- "Vigilance: Our Shared Responsibility" by Cdr. V.K. Vijay Balaji, Senior Administrative Officer, Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune on 31 October 2025
- Competitions including Vigilance Awareness Quiz, Essay Writing and Debate Competitions were held on 06 October 2025, 13 October 2025 and 15 October 2025 respectively.
- An Integrity Pledge was taken by the IITM staff administered by the Director on 27 October 2025.
- The concluding function on 31 October 2025, Cdr. V.K. Vijay Balaji, Senior Administrative Officer, IUCAA, Pune, invited as a distinguished guest, delivered a talk and felicitated winners of the competitions.
- The concluding function was arranged on 04 November 2025. Dr. Suchit Kamble, Senior Scientist from ICMR – NITVAR was invited as a distinguished guest. He felicitated winners of the competitions.

Vigilance Awareness Week – 2025

Glimpses of Swachhata Hi Seva Campaign

Swachhata Hi Seva Campaign: Swachhata Campaign SCDPM 5.0 (02-10 October 2025): During this period, all the employees of the institute took Swachhata pledge administered by the Director, IITM and a felicitation programme of Safai Karmacharis of the Institute was also held on 02 October 2025. A new automated flag pole was inaugurated by the Director, IITM at IITM. The flag post is 20 meters in height and hoists a flag of size 16 x 24 feet.

The **first General Body meeting of Earth System Sciences Council** was held on 17th November 2025. 5 institutes of the Ministry of Earth Sciences (MoES) were brought under a single umbrella by merging five separate Societies into one. The meeting was chaired by the Chairman of the Governing body, Dr.M.Ravichandran, Secretary, MoES.

General Body meeting of Earth System Sciences Council

The **19th Research Advisory Committee** meeting of IITM was held on 18th November 2025 under the chairmanship of Dr. Shailesh Nayak to review progress of IITM research activities.

19th Research Advisory Committee Meeting

A proposal to host the **South Asia Regional Heat Health Hub** under the WMO/WHO Global Heat Health Information Network (GHHIN) at CCCR/IITM, was submitted to the United Nations on 20 October 2025. The Hub will strengthen regional collaboration, science-to-policy translation, and capacity building on heat and health, while aligning with MoES's Mission Mausam. IITM will serve as the Lead and Hosting Institution, with key MoES and national partners including IMD, NCMRWF, and regional partners from South Asia.

The **first meeting of the proposed South Asia Heat Health Hub** with the consortium partners from India, Nepal, Bangladesh, Malaysia, and Thailand was hosted online by IITM on 10 October 2025. The consortium partners agreed to work together on strengthening science, research, disaster management, governance, policy, and communication in relation to the heat-health impacts over South Asia.

IITM Pune conducted the 3rd Long Meteorology Course - School of Naval Oceanology and Meteorology (SNOM), Kochi for Navy officers at IITM, from 30 October to 01 November 2025. 8 officers (four Indian Navy officers and four International officers) participated in the training. Training on different topics were organized by the DESK, IITM. A lab visit to HPC lab was organized during the training program. Also, a lab visits to HAPCL, Mahabaleshwar were organized by for them on 1st November 2025.

3rd Long Meteorology Course - School of Naval Oceanology and Meteorology (SNOM)

Outreach Activities:

- **The 11th India International Science Festival (IISF) 2025** took place in Panchkula, Haryana, from December 6–9, 2025. As a flagship national event, IISF 2025 featured exhibitions, business-to-business meetings, competitions, and cultural programs aimed at strengthening the connection between scientific laboratories and society. With the theme "Vigyan Se Samruddhi: for Aatmanirbhar Bharat," the festival emphasized science-led growth, integration of traditional knowledge with modern research, and the role of scientific innovation in advancing self-reliance and sustainable national development.

The 11th India International Science Festival (IISF) 2025

- IISF 2025 organised by the Ministry of Earth Sciences (MoES) and coordinated by Indian Institute of Tropical Meteorology (IITM) Pune, aligns thematic areas with national science priorities and coordinating participation from key government agencies, research institutions and academic partners. As the coordinating institute, IITM provided scientific and technical leadership for the event.

- **India International Science Festival (IISF) 2025 curtain raiser at IITM:** The IITM, under Ministry of Earth Sciences Government of India, hosted the Curtain Raiser for IISF 2025 on 18 November 2025 at IITM. The event brings together scientists, students, and young innovators to explore India's progress in atmospheric sciences, climate and monsoon research, and emerging scientific frontiers under Mission Mausam.

- **Dr. Suryachandra Rao, Director, IITM, delivered the welcome address at the IISF 2025 Curtain Raiser held alongside INTROMET 2025.** Also, emphasized IITM's pioneering role in advancing tropical meteorology and climate research and highlighted the importance of collaborative efforts and innovation in addressing emerging challenges in atmospheric sciences.

- As a part of IMS INTROMET 2025 and IISF curtain raiser, an interactive outreach programme, **"The Young Thinkers Exchange,"** aimed to connect eminent scientists with 100 school students on 18 November 2025, enabling the next generation to engage with climate science.

India International Science Festival (IISF) 2025 curtain raiser at IITM

EIACP centre successfully conducted various activities during IISF-2025:

- An online Map Creation Competition on "Mapping Climate and Environmental Issues" was organized as part of **International GIS Day 2025**, with participation from 49 students, researchers, and professionals on 10 November 2025.

- **Webinar on *"Youth Leadership in Action: Empowering Young Change-Makers to Accelerate India's Circular Electronics Transition & E-Waste Management"* by Dr. Renu Sharma**, Head (Research & Advocacy), H.M.E. Waste Management and Editor-in-Chief, EcoTech Talks. on 19 November 2025)

- Model Making Competition on 24 November 2025

- Walkathon on with 154 students and 14 teachers from Appasaheb Birnale Public School, Sangli, promoting science communication and environmental awareness on 28 November 2025. A Mission LiFE awareness session was conducted for the same group, explaining the 7 themes of Mission LiFE and encouraging sustainable lifestyle practices among student, they were facilitated for multiple labs visit and interaction.

Visit of 154 students and 14 teachers from Appasaheb Birnale Public School, Sangli, at IITM

- Elocution, Slogan, and Quiz competitions with 46 students from 5 different schools. followed by an expert talk on *"Clouds and Cloud Seeding"* by Dr. Thara Prabhakaran, engaging 53 participants on 27 November 2025.

- **National Pollution Control Day 2025 (03 December 2025)**: an environmental awareness program was conducted at PES's Modern High School, NCL, Pune, engaging 120 students through an interactive game to promote pollution control and sustainable actions.

National Pollution Control Day 2025

- **Eco-Solutions Hackathon (11 December 2025):** a hackathon was organized at PES's Modern High School, NCL, Pune, where 120 students of Class 9 presented innovative solutions to environmental challenges. The top three teams were felicitated.

Eco-Solutions Hackathon

- **Public Survey on Air Pollution & Climate Change:** EIACP Centre launched and started a public survey on 14 December 2025 to collect citizens' feedback through online and offline modes for informed environmental improvement and action.

- Twenty One students along with faculty from Professor Rajendra Singh Science Exploratory, Nagpur visited the EIACP Centre on 29 December 2025 and were briefed on air pollution, climate change, and Mission LiFE themes.

faculty and Students of Professor Rajendra Singh Science Exploratory, Nagpur visited the EIACP Centre, IITM

- In observance of Sexual Harassment Prevention Week from 10-17 December 2025, the Institute organized a talk on by Major Sheetal Deshmukh Barapatre entitled "The POSH Act – The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal)" on 17 December 2025.

A talk on Sexual Harassment Prevention at workplace

Rajbhasha Activities

Rajbhasha Workshop on "Official Language and Standard Spelling-Hindi" by Shri Hans Pratap Singh, Hindi Officer was conducted on 16 December 2025.

Rajbhasha Workshop on "Quarterly Report and Annual Programme: 2025-26" was conducted for Rajbhasha Representatives on 31 December 2025.

IITM participated in the All India Official Language Scientific Seminar held at the National Institute of Ocean Technology (NIOT), Chennai, during December 18–19, 2025. Total 06 Officers/Employees from the institute participated in the seminar.

'Rajbhasha Utsav-2025: celebrated in the Institute from 01st August 2025 to 30th September 2025. A total of 07 Competitions were organised. A Valedictory Function and Prize Distribution to winners of all the Hindi Competitions of Rajbhasha Utsav - 2025 were held on 23 December 2025.

Rajbhasha Utsav-2025

IITM Participation in Important Meetings/Events

- Enhancing Knowledge of the Arabian Sea Marine environment through Science and Advanced Training (EKAMSAT) workshop, INCOIS Hyderabad, 06-10 October 2025.
- Third International Multidisciplinary Conference on Aerosols, Air Quality and Climate Change (IMCAAC-2025), Hemvati Nandan Bahuguna (HNB) Garhwal University, Srinagar (Uttarakhand), 13-16 October 2025.
- India International Science Festival (IISF) 2025 Curtain raiser, National Media Center (NMC), New Delhi, 17 October 2025.
- Meeting for Indian International Science Festival (IISF) 2025 to be held in Panjab University, Chandigarh, 24 October 2025.
- Emerging Science and Technology Innovation Conclave (ESTIC) 2025, Bharat Mandapam, New Delhi, 3-5 November 2025.
- 33rd session of South Asian Climate Outlook Forum (SASCOF 33), 27 November 2025.
- Emerging Science and Technology Innovation Conclave (ESTIC) 2025, Bharat Mandapam, New Delhi, 3-5 November 2025.
- Earth System Science Organization (ESSO) Review Meeting, IMD Shillong, 19-20 December 2025.
- General Assembly of the American Geophysical Union (AGU), 15-19 December 2025.
- Pre-AI Impact Summit 2026, 15 December 2025.

Visitors

Academic and Student Visits

- Twenty Three M.Sc. Environmental Science students and two faculty members from Fergusson College visited IITM on 03 October 2025.

- Eighteen students from NICMAR University visited the Dendro and Paleo laboratories on 17 October 2025.
- One hundred and sixty-eight students and faculty members from Appasaheb Birnale Public School, Sangli, visited IITM on 28 November 2025.
- Students and teachers from Giristhan Prashala and Junior College, Mahabaleshwar, visited HACPL, Mahabaleshwar on 06 December 2025.
- Fifty students and faculty members from the Computer Science branch of an engineering college in Kolhapur visited IITM on 19 December 2025.
- Students and a faculty member from Amity University visited BO on 16 December 2025 as part of an excursion tour.

Public Outreach Visits

50 visitors from Bhavtal NGO visited IITM on 17 December 2025.



International Delegations and Collaborations

Dr. Fred, owner of OEM M/s Brechtel, visited the IITM Delhi Lab from 29 September to 04 October 2025 to oversee GCVI inlet installation and provide technical guidance and training.


Dr. Erwan Raffin


Dr. Mikaël Jacquemon

A French delegation from EVIDEN, including **Dr. Erwan Raffin** and **Dr. Mikaël Jacquemon,** visited IITM on 09 October 2025 for a workshop.

Fifteen meteorological officers from the Maldives Meteorological Service visited the Dendro and Paleo laboratories on 27 October 2025.

A research team from the Maldives Climate Observatory, Hanimaadhoo, visited IITM on 27 October 2025 and interacted with CCCR scientists on soil moisture observing systems.

Dr. Ousmane Ndiaye, Dr. Godefroid Nshimirimana, and Dr. Wendlasida Combere from ACMAD visited IITM and CCCR on 27 November 2025 for collaboration and capacity building in weather and climate research.

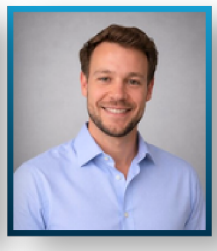

Dr. Ousmane Ndiaye


Dr. Godefroid Nshimirimana


Dr. Wendlasida Combere


Mr. Henrik Hof


Mr. Volker Zeigler


Mr. Maximilian Uebach

Four representatives from PALAS, Germany, namely **Ms. Soumya Saxena**, **Mr. Henrik Hof, Mr. Volker Zeigler,** and **Mr. Maximilian Uebach,** visited IITM on 04 December 2025.

Distinguished Visitors and Dignitaries

Lieutenant General Yogendra Dimri visited IITM on 29 October 2025.

Dr. Abdulla Al Mandous

Dr. Mrutyunjay Mohapatra

Dr. Abdulla Al Mandous and **Dr. Mrutyunjay Mohapatra** visited IITM on 01 November 2025 and toured several IITM laboratories and facilities.

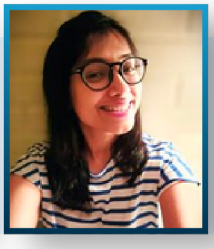
Scientific Visits, Colloquia and Expert Interactions

Dr. Anurag Dipankar visited IITM and delivered the Prof. R. Ananthakrishnan Colloquium on 14 October 2025.

Trainers **David Johnson, Jeffrey Lee Throckmorton, Kristie Stowers, Dagen Hughes, Satyanarayan Pabbhati,** and **Anilkumar V.** from Droplet Measurement Technologies, USA, visited IITM during 10–14 November 2025 for a DMT training session.

Prof. Alexander Khain and **Ehud Gavze** from the Hebrew University visited the IITM urban observational facility at NCMRWF.

Siddharth Chakravarty

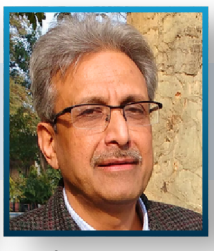


Dr. Sneha Aggarwal

Siddharth Chakravarty from Queen Mary University of London and **Dr. Sneha Aggarwal** from Stockholm University visited IITM and delivered the Prof. R. Ananthakrishnan Colloquium on 13 and 21 November 2025, respectively.

Prof. Avijit Gangopadhya from the University of Massachusetts visited the CVP group on 21 November 2025 for scientific discussions.

Dr. Roger S. Pulwarty



Prof. Anand Sharma

Dr. Roger S. Pulwarty and **Prof. Anand Sharma** visited the IITM-COSMOS site on 17 November 2025 and discussed ongoing scientific activities.

Dr. Sneha Aggarwal and **Dr. Anahit Hovsepyan** visited the Dendroclimatology Lab on 21 November 2025 and discussed the importance of tree rings in climate change research.

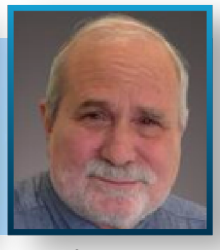

Dr. Anahit Hovsepyan


Drs. Resmi E. A.

Drs. Resmi E. A. and **Sumesh R. K.** from NCESS, Kerala, visited the Dendroclimatology Lab on 06 November 2025 for discussions on dendroclimate research.

Mr. Henrik Hof from PALAS, Germany, **Prof. Douglas R.** Worsnop from Aerodyne Research Inc., USA, and Prof. Jim Thomas from ICTS-TIFR delivered the Prof. R. Ananthakrishnan Colloquium on 04, 11, and 18 December 2025, respectively.


Mr. Henrik Hof


Prof. Douglas R.

Prof. Jim Thomas from ICTS-TIFR visited IITM and delivered a talk on “Data-driven models for turbulent submesoscale flows in the ocean” on 18 December 2025.

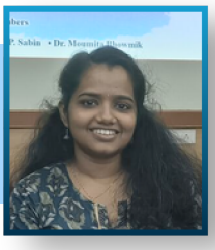
Academic Cell Activities

05 New IITM JRFs joined IITM in October 2025 and started their coursework. Now total 15 JRFs have been enrolled and applied forPh.D. course through AcSIR for January 2026 session.

As per the AcSIR Timeline, interviews were held on 28 November 2025. A total of 23 candidates were shortlisted, and 20 candidates were selected to pursue Ph.D. through AcSIR at IITM. The list of the selected candidates for AcSIR January 2026 session is published on the IITM website.

Ph.D. Proposal and Synopsis

Ms. Arunima J. from SPPU presented her proposal titled *“Understanding Carbon Water Nexus of a Forested Ecosystem in India using Observation and Model Simulations”* on 03 October 2025 under the guidance of Dr. Pramit Kumar Deb Burman and Dr. Yogesh Tiwari.



Ms. Simran Jeet Kaur presented her proposal titled *"Understanding Atmospheric Methane (CH4) Sinks over India"* on 28 October 2025 under the guidance of Dr. Anoop Mahajan.

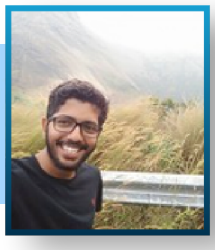
Ms. Prajna Priyadarshini presented her proposal titled *"Investigation of Lightning Characteristics and Charge Structure in Cyclonic Disturbances over Peninsular India"* under the guidance of Dr. Hamza Varikoden.

Mr. Pavankumar Olekar from AcSIR presented his proposal titled "Radar Investigations of Sub-Hourly Evolutions in Tropical Rainfall Extreme Events" on 22 December 2025 under the guidance of Dr. M.C. Kalapureddy.

Ph.D. Thesis Submissions

Ms. Arora Anika from Savitribai Phule Pune University, Pune presented her proposal titled *"Biennial Variability of Rainfall over the Western Ghats and Governing Mechanisms"* in December 2025 under the guidance of Dr. Valsala Vinu and Dr. Pillai Prashanth.

Ph.D. Award



Mr. Sagar Aswin from SPPU presented his proposal titled *"Investigating the Response of Global and Regional Monsoons to Climate Change"* in August 2025 under the guidance of Dr. Krishnan R. and Dr. Sabin T.P.

Honors & Awards

Awards and Recognitions

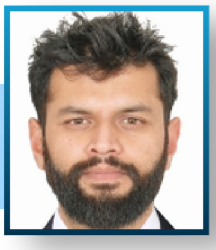
- **Dr. Pramit Kumar Deb Burman** received the AsiaFlux Scholarship from the AsiaFlux Secretariat, Japan.

- **Mr. Abhijeet Gangane** conferred the Vigyan Ratna Puraskaar at IMCAAC-2025 held at Hemvati Nandan Bahuguna Garhwal University, Srinagar, Uttarakhand, in recognition of his academic excellence and early career achievements.
- Received the AGU Travel Grant Award of USD 1000 along with travel support from CSIR for participation in AGU 2025.

- **Ms. Fathima Fitha** received the Best Poster Award at the International Society for Ecological Modelling Conference in Japan on 20 October 2025 for her poster on future projections of Indian forest carbon stocks.

- **Dr. Bhupendra Bahadur Singh** received the Best Oral Presentation Award at the Rajbhasha Scientific Conference held at NIOT, Chennai, for his presentation titled *"Study of Mutual Relation of Rain and Mrida's Humidity"*.

Editorial Roles, Nominations and Professional Recognition



- **Dr. Anoop Mahajan** nominated to the Atmosphere Assessment Team of the UArctic Climate Interventions project.

- **Dr. Ramesh Kumar Yadav** selected as an editor for the research topic *"Climate Variability and Dynamics"* in the journal Frontiers in Climate.

- **Dr. Preethi Bhaskar** listed as co-editor of the research topic "Climate Variability and Dynamics" in Frontiers in Climate.

- **Dr. Bipin Kumar** selected as a member of the Technical Program Committee for the MAHA AI for Science & Engineering Mission of ANRF for a three-year term beginning 03 December 2025.

Session Chairs, Panel Experts and Scientific Leadership

- **Dr. Atul Kumar Srivastava** and **Dr. Deewan Singh Bisht** served as panel experts during the 3rd International Conference on Aerosol, Air Quality and Climate Change over the Himalayan Region held at HNB Garhwal University, Srinagar, from 13–16 October 2025.

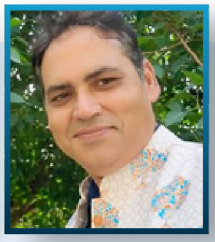
Dr. Atul Kumar Srivastava

Dr. Deewan Singh Bisht

- **Dr. Roxy Mathew Koll** chaired the session on *"Climate Change and Extreme Weather Events"* during INTROMET 2025.

- **Dr. Atul Kumar Srivastava** also chaired a session on *"Aerosols, Clouds and Precipitation Processes"* at INTROMET 2025.

Dr. Pramit Kumar Deb Burman



Dr. Yogesh K. Tiwari

- **Dr. Pramit Kumar Deb Burman** and **Dr. Yogesh K. Tiwari** chaired and co-chaired sessions on "Biosphere-Atmosphere Interactions" during INTROMET 2025.
- **Dr. Pramit Kumar Deb Burman** also chaired a session on "Bio-Atmosphere Interactions" at the National Symposium 2025 organised by IIT Kharagpur.

IITM Foundation Day Awards 2025

- During the 64th Foundation Day of IITM on 17 November 2025, several staff members were recognised for their contributions in research, administration, scientific project work, and Swachh Bharat Mission-related activities.

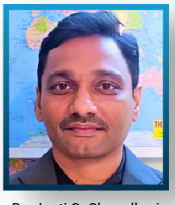
IITM Foundation Day Awards 2025

- Awardees included **Dr. Moumta Bhowmik**, **Shri Sandeep J.**, **Dr. Deen Mani Lal**, **Dr. Jasti S. Chowdhuri**, **Shri Kunal Vishnu Yenul**, **Dr. Vidya Pawar**, **Shri Harish Chaudhary**, **Dr. P.V. Rajesh**, **Dr. Rajmal Jat**, **Smt. Vishakha Chandiwade**, **Dr. Medha Sachin Deshpande**, **Miss Tiasha Dev**, and **Shri Prakash Pandurang Vyavhare.**

Dr. Moumta Bhowmik

Shri Sandeep J.

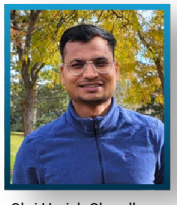
Dr. Deen Mani Lal



Dr. Jasti S. Chowdhuri

Shri Kunal Vishnu Yenul

Dr. Vidya Pawar



Shri Harish Chaudhary

Dr. P.V. Rajesh

Dr. Rajmal Jat

Smt. Vishakha Chandiwade

Dr. Medha Sachin Deshpande

Miss Tiasha Dev

Shri Prakash Pandurang Vyavhare.

IMS Awards at INTROMET 2025

- **Dr. Suryachandra Rao A.** and **Dr. Swapna Panickal** were conferred IMS Fellowships during INTROMET 2025.

- **Dr. Madhusudan Ingale** received the Best Oral Presentation Award for his talk on soil moisture memory.


Mr. Amey Datye


Dr. Roma Varghese


Dr. Rajmal Jat


Ms. Tanvi Desai

- Poster presentation awards were received by **Mr. Amey Datye, Dr. Roma Varghese, Dr. Rajmal Jat, and Ms. Tanvi Desai.**

Awards at the 11th WMO Scientific Conference on Weather Modification

- Oral Presentation Awards were received by **Milin Sebastian (1st prize)**, **Lois Thomas (2nd prize)**, and **Caleb Stele (3rd prize).**
- Posters Oral Explanation Awards were received by **Amita Prabhu (1st prize), Shreyasi Upadhyay (2nd prize)**, and **Josin Sanal Thomas (3rd prize).**
- Posters Science and Significance Awards were received by **Betsy K. B. (1st prize), Amita Prabhu (2nd prize),** and **Shreyasi Upadhyay (3rd prize).**
- Overall Best Poster Awards were received by **Amita Prabhu (1st prize), Shreyasi Upadhyay (2nd prize), Josin Sanal Thomas (3rd prize), Kedar Tahashildar (4th prize),** and **Rajmal Jat (5th prize).**

International Engagment

- **Dr. Swapna Panickal** and **Dr. Ayantika Dey Choudhury** were deputed to Beijing from 28 October to 01 November 2025 to attend the final collaborative meeting of the DST-funded BRICS Project AIESMx with partners from Brazil and China, and the CAS-TWAS-WMO meeting on Land Surface Ecology-Hydrological Process under Changing Climate, where they also presented a paper.


Dr. Swapna Panickal

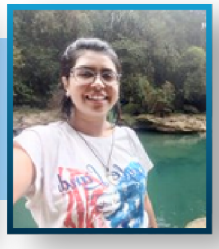

Dr. Ayantika Dey Choudhury

- **Dr. Yogesh Kumar Tiwari** attended the "G3W Network Design Workshop" hosted by the World Meteorological Organization in Geneva during 07–09 October 2025 as an acknowledged expert.

- **Dr. Pramit Kumar Deb Burman** was deputed to Indonesia during 20–25 October 2025 to present a paper at AsiaFlux Conference 2025, participate in the Flux Measurement Training Program and AsiaFlux Young Scientists Meeting, and join a field excursion to a riparian forest flux measurement station.

- **Mr. Sunil Kumar** and **Dr. Begum Abida Choudhury** participated in the 45th Indian Scientific Expedition to Antarctica from 23 October 2025 to 28 February 2026 via South Africa.


Mr. Sunil Kumar


Dr. Begum Abida Choudhury

- **Ms. Kalyani Panchamwar** was deputed to Morocco during 20–26 October 2025 to attend the S4 Speleothem Summer School and present a paper on drip water isotope variability and paleomonsoon reconstruction.

- **Dr. Ankur Srivastava** participated in the 40th session of the Working Group on Numerical Experimentation of the WCRP Earth System Modelling Observations core activity in Beijing during 03–07 November 2025, and later attended the Asia Climate Risk and Impact Strategic Workshop 2025 in Qui Nhon during 25–27 November 2025.


Dr. Swapna Panickal


Dr. Roxy Mathew Koll


Dr. Ayantika Dey Choudhury

- **Dr. Swapna Panickal, Dr. Roxy Mathew Koll,** and **Dr. Ayantika Dey Choudhury** attended the first Lead Author Meeting of the Intergovernmental Panel on Climate Change Seventh Assessment Report in Paris from 01–05 December 2025 as lead authors for Chapters 5, 6, and 7.

- **Dr. Bhupendra Bahadur Singh** visited Peking University in Beijing during 08–12 December 2025 for discussions on an international joint research project on teleconnections among the Tibetan Plateau, Amazon Rainforest, and Indian Monsoon.

- **Dr. Anoop P.** and **Shri Vikram Satish Kadam** were deputed to the Maldives from 07–28 December 2025 for on-site training, instrument maintenance, data management, and capacity building at MCOH Maldives under the IITM-MMS collaboration.

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