

# National Space Science Symposium 2026

## PS-1

**Space-Based Meteorology, Oceanography,  
Geosphere–Biosphere Interactions, and  
Climate Change**

### Daily Schedule

Chairperson: **Dr. S. Suresh Babu**, SPL, VSSC, Trivandrum;  
Convener: **Dr. D. Jagadheesha**, ISRO HQ, Bangalore;  
Co-convener: **Dr. Mukunda M. Gogoi**, SPL, VSSC, Trivandrum;  
Rapporteur: **Dr. Arup Borgohain**, NESAC, Shillong

## Day-1

(23.02.2026 Monday)

### Technical Session- **PS1-01** (14:15 - 16:00 Hrs)

### Theme: Innovative Retrivel Techniques & Radiative Transfer

Chair: Prof. P K Bhuyan, Professor (Retd), DU

Co-Chair: Dr. Mukunda Gogoi, SPL

### Oral Presentations (PS1-01)

SN	Abstract ID	Title of Abstract	First Author
1	NSSS2026ABS560	Retrieval of Aerosol Optical Depth from Ocean Color Monitor-3: Refinement using SCAT-3 ocean surface winds	S. S. Prijith
2	NSSS2026ABS854	A Hybrid PINN-Transformer Model for Near Real-Time 3D Reconstruction of Ocean State from Satellite Imagery	Siddhartha Mahesha Pundit
3	NSSS2026ABS622	Column CO <sub>2</sub> a priori estimation for upcoming EnSAC on-board G20 mission	Imran A. Girach
4	NSSS2026ABS395	Retrieval of High-Precision Columnar Greenhouse Gases from the Ground-based Remote Sensing FTIR Spectrometer data over Hyderabad, India	Alla SaiKrishna
5	NSSS2026ABS866	Estimates of Aerosol Emission Fluxes from Crop Residue Burning in North-west India Using Bayesian Inversion Model	H. S. Gadhavi
6	NSSS2026ABS486	Retrieval of Sub-Hourly Aerosol Optical Depth from INSAT-3DR Geostationary Satellite using a Fusion-Enhanced Machine Learning Framework	Chakradhar Rao Tandule
7	NSSS2026ABS338	Estimation of Surface Particulate Matter Concentration over Indian region using Statistical Model	Nilanjana Sengupta
8	NSSS2026ABS730	3D line-by-line radiative transfer over Polyhedron multi-scale meshes	Amit P Kesarkar
9	NSSS2026ABS459	Reliable satellite link via data relay transponder payload for meteorological data from automatic weather stations	Mynam Harinath
10	NSSS2026ABS824	A Spatially Coherent Sparse Unmixing Approach for Next-Generation Trace Gas Retrieval from TROPOMI Level-1B Data	Touseef Ahmad
11	NSSS2026ABS209	Nowcasting Cloud Motion and Detecting Extreme Weather Anomalies using Enhanced U-Net, Diffusion Models, and Self Supervised Retraining	Heli Shah

### Short-Oral Presentations (PS1-01)

SN	Abstract ID	Title of Abstract	First Author
1	NSSS2026ABS118	Design, Development, and Launching techniques for Small Scientific Balloons in Atmospheric Science Research	B S Mallikarjuna
2	NSSS2026ABS425	Detection of Methane Emissions over India Using EnMAP-A Hyperspectral Imaging Sensor	Sathyaseelan M
3	NSSS2026ABS502	Impact of INSAT-3DR sounder data assimilation in predicting thunderstorms over North-east India	Arundhati Kundu
4	NSSS2026ABS566	Synergistic Fusion of Aerosol Optical Depth from Satellite and Ground based Observations using Machine Learning Enhanced Geo-statistics	Shiba Shankar Gouda
5	NSSS2026ABS576	Detection of Smoke Aerosols Using HARP2/PACE Polarization Measurements	C. B. Lima
6	NSSS2026ABS610	Application of Multi-Satellite Data Observations for Identifying Meteorological Conditions in Transitioning Black Carbon Aerosols	Karthik V
7	NSSS2026ABS651	Hybrid Approach: Combining Physical and CNN-Based Cloud Fraction Parametrizations for Enhanced NWP Performance	Subhrajit Rath
8	NSSS2026ABS700	Radiative Fluxes Over the Himalayan Region: Evaluating Parameterization Schemes and Exploring the Potential of the XGBoost Machine Learning Algorithm for Downward Longwave Radiation	Mayank Kumar Chauhan
9	NSSS2026ABS721	INSAR Data Analysis and Usage Software (INDUS) - A Containerized GUI based Software Application for Interferometric Synthetic Aperture Radar (InSAR) Analysis	Wasim Akram
10	NSSS2026ABS778	LinearSVR Technique for Retrieving High Resolution 3D Wind Field from Single Doppler Weather Radar	Vaibhav Tyagi
11	NSSS2026ABS530	Development of a UAV based Pollution Sensing System	Lakshya Rasaprolu
12	NSSS2026ABS657	Hybrid Radiative Transfer–Machine Learning Framework for Estimating Vegetation Biophysical Variables from TRISHNA Estimating Vegetation Biophysical	Dr. Anand S Sahadevan
13	NSSS2026ABS719	MODIS Satellite Data for Aerosols Measurements	Dr A N Satyanarayana

### Poster Presentations (PS1-01 & 02) | 16:00-17:30 Hrs

SN	Abstract ID	Title of Abstract	First Author
<b>PS1-01</b>			
1	NSSS2026ABS118	Design, Development, and Launching techniques for Small Scientific Balloons in Atmospheric Science	B S Mallikarjuna

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		Research	
2	NSSS2026ABS425	Detection of Methane Emissions over India Using EnMAP-A Hyperspectral Imaging Sensor	Sathyaseelan M
3	NSSS2026ABS502	Impact of INSAT-3DR sounder data assimilation in predicting thunderstorms over North-east India	Arundhati Kundu
4	NSSS2026ABS566	Synergistic Fusion of Aerosol Optical Depth from Satellite and Ground based Observations using Machine Learning Enhanced Geo-statistics	Shiba Shankar Gouda
5	NSSS2026ABS576	Detection of Smoke Aerosols Using HARP2/PACE Polarization Measurements	C. B. Lima
6	NSSS2026ABS610	Application of Multi-Satellite Data Observations for Identifying Meteorological Conditions in Transitioning Black Carbon Aerosols	Karthik V
7	NSSS2026ABS651	Hybrid Approach: Combining Physical and CNN-Based Cloud Fraction Parametrizations for Enhanced NWP Performance	Subhrajit Rath
8	NSSS2026ABS700	Radiative Fluxes Over the Himalayan Region: Evaluating Parameterization Schemes and Exploring the Potential of the XGBoost Machine Learning Algorithm for Downward Longwave Radiation	Mayank Kumar Chauhan
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11	NSSS2026ABS657	Hybrid Radiative Transfer–Machine Learning Framework for Estimating Vegetation Biophysical Variables from TRISHNA Estimating Vegetation Biophysical	Dr. Anand S Sahadevan
12	NSSS2026ABS719	MODIS Satellite Data for Aerosols Measurements	Dr A N Satyanarayana
13	NSSS2026ABS778	LinearSVR Technique for Retrieving High Resolution 3D Wind Field from Single Doppler Weather Radar	Vaibhav Tyagi
<b>PS1-02</b>			
16	NSSS2026ABS454	Estimating Background PM2.5 Concentrations Using a Wavelet-Based Convolution Framework	Vikas and Jyoti Bhate
17	NSSS2026ABS456	Long-Term Columnar and Near-Surface Air Pollution over Hyderabad, India: A 17-Year Multi-Platform Assessment of Urban Urban-Regional Air Quality	Jayachandran V
18	NSSS2026ABS490	Global Aerosol Classification Machine Learning vs Non machine learning approaches	Swagata Mukhopadhyay
19	NSSS2026ABS505	Two decades of aerosol optical depth change over India's million-plus cities: disentangling emissions growth from meteorology (2005-2024)	Sukanya Bhattacharya
20	NSSS2026ABS343	Aerosol physical optical and radiative properties over central India from Atmospheric Research Testbed and satellite observations	Shravani Banerjee

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21	NSSS2026ABS666	Evaluation of aerosol scattering coefficient using an Integrating Nephelometer and a Cavity attenuated phase shift-based (CAPS) extinction monitor.	Bhaves Kuli
22	NSSS2026ABS725	Satellite-Based Short-Lead Severe-Weather Nowcasting and Monitoring over India	Abhishek Chhari

## Day-2

(24.02.2026 Tuesday)

### Technical Session- **PS1-02** (11:45 - 13:15 Hrs) Theme: **Spaceborne Observations of Aerosols and Trace Gases**

Chair: Dr. M. Venkat Ratnam, NARL

Co-Chair: Dr. D. Jagadheesha, ISRO HQ

#### Oral Presentations (PS1-02)

SN	Abstract ID	Title of Abstract	First Author
1	NSSS2026ABS233	Understanding the Chemical Sensitivity of Ozone and Particulate Nitrate using Multi-Satellite Observations and Ground observation over Delhi	Vikrant Tomar
2	NSSS2026ABS057	AI-Powered CubeSat Constellation for Microplastic Detection and Classification Using Sentinel-1 SAR and Sentinel-2 Multispectral Imagery	Shambhavi Shukla
3	NSSS2026ABS431	Balloon-Borne measurement of aerosol particle aize: B-Maps	V. Ravi Kiran
4	NSSS2026ABS827	Aerosol-Cloud-Radiative Interactions over the Central Himalayas: Insights from Decadal Trends	Priyanka Srivastava
5	NSSS2026ABS242	Effect of CO and CH4 on O3 near surface air temperature and Surface skin temperature, and their relation with relative humidity in Alwar, Rajasthan	Pranjal Joshi
6	NSSS2026ABS424	Geospatial-Based Web Framework for Real-Time Monitoring of Environmental Air Pollution and AQI over India	Mahesh P
7	NSSS2026ABS205	Satellite Based Insights into Cloud-Aerosol Coupling and Global SST Feedbacks Driving Monsoon Drying over the Gangetic Plains	Amita Prabhu
8	NSSS2026ABS819	Study of the vertical distribution and optical-physical properties of aerosols over Delhi during the Pre-Monsoon season using Raman Lidar	Vasundhara Sharma
9	NSSS2026ABS422	Global Aerosol Classification Using Particle Linear Depolarization Ratio Data from AERONET	Shantikumar Singh Ningombam
10	NSSS2026ABS543	Adjusted Optical Design for Sunphotometer	Malaidevan P

#### Short Oral Presentations (PS1-02)

SN	Abstract ID	Title of Abstract	First Author
1	NSSS2026ABS454	Estimating Background PM2.5 Concentrations Using a Wavelet-Based Convolution Framework	Vikas and Jyoti Bhate
2	NSSS2026ABS456	Long-Term Columnar and Near-Surface Air Pollution	Jayachandran V

		over Hyderabad, India: A 17-Year Multi-Platform Assessment of Urban Urban-Regional Air Quality	
3	NSSS2026ABS490	Global Aerosol Classification Machine Learning vs Non machine learning approaches	Swagata Mukhopadhyay
4	NSSS2026ABS505	Two decades of aerosol optical depth change over India's million-plus cities: disentangling emissions growth from meteorology (2005-2024)	Sukanya Bhattacharya
5	NSSS2026ABS343	Aerosol physical optical and radiative properties over central India from Atmospheric Research Testbed and satellite observations	Shravani Banerjee
6	NSSS2026ABS666	Evaluation of aerosol scattering coefficient using an Integrating Nephelometer and a Cavity attenuated phase shift-based (CAPS) extinction monitor.	Bhavesh Kuli
7	NSSS2026ABS725	Satellite-Based Short-Lead Severe-Weather Nowcasting and Monitoring over India	Abhishek Chhari

**Technical Session- PS1-03 (14:15 - 16:00 Hrs)**  
**Theme: Aerosols, Trace gases and Climate: Observations and Modelling**

**Chair: Dr. Som Kumar Sharma, PRL**

**Co-Chair: Dr. Imran A. Girach, SAC**

**Oral Presentations (PS1-03)**

SN	Abstract ID	Title of Abstract	First Author
1	NSSS2026ABS108	Sources and photochemical processes of reactive trace gases over the Indian subcontinent and northern Indian Ocean: Aspects of chemistry-climate interactions	L. K. Sahu
2	NSSS2026ABS554	Future Climate Influence on PM2.5 Levels in India using WRF-Chem under CMIP6 Pathway SSP3-7.0	Vaishnavi
3	NSSS2026ABS538	Molecular-Level Understanding of PAH Transformation and their effect on Biosphere: Structural and Toxicity Analysis of Pyrene and Benzo-e-pyrene	Dhyani Vadgama
4	NSSS2026ABS830	Inferring baseline atmospheric composition and regional influences over the Indian Subcontinent through model simulations	N. Ojha
5	NSSS2026ABS614	A Hybrid Deep-Learning Framework for Regional Air Quality Modeling over the Indian Subcontinent	S. Harithasree
6	NSSS2026ABS412	Quantification of aerosol-induced radiative perturbations and their influence on non-radiative fluxes over Indo-Gangetic Plain	Anas Ibnu Basheer/VS Nair (presenting Author)
7	NSSS2026ABS814	Leveraging a Network of Low-Cost Sensors for Air Quality Monitoring and Modeling over India	Aditya Vaishya /S. Harithasree (presenting Author)

8	NSSS2026ABS319	Long-Term Assessment of Meteorological Influences on PM10 Concentrations over the Central Himalayan Region and Indo-Gangetic Plain of India	Preeti Tiwari
9	NSSS2026ABS208	Long term comparative study of Aerosol Radiative Forcing between Indus, Ganges and Brahmaputra river basins	Manoj K. Srivastava
10	NSSS2026ABS201	Influence of Aerosol Mixing State on Hygroscopic Growth and Fog Formation in New Delhi: Insights from HTDMA Measurements	Chaitrali Shinde
11	NSSS2026ABS018	Polarizability Affecting Nucleation of Water Vapour Condensation in Presence of External Electric Field	Mukesh Chandra

### Short Oral Presentations (PS1-03)

SN	Abstract ID	Title of Abstract	First Author
1	NSSS2026ABS269	Temporal and Seasonal Variations of Fine-mode Absorbing Aerosols over Gorakhpur in the Central Indo-Gangetic Plain during 2021-2025	Ayush Singh
2	NSSS2026ABS399	Comparative Rainwater Chemistry during Southwest and Northeast Monsoons at a Tropical Rural Site	Sanjana Mukherjee
3	NSSS2026ABS550	Assessment of Atmospheric Aerosols : Concentrations and Emission Sources in a Rapidly Urbanizing Environment	Pragya Parmita Konwar
4	NSSS2026ABS607	Seasonal Trends, Health Risks, and Ozone Formation Potential of Benzene, Toluene, and Xylene in Agra (2020–2024)	Richa Bhardwaj
5	NSSS2026ABS609	Hygroscopicity of Dicarboxylic Acids and Sugars as Drivers of Cloud Condensation Nuclei Activity: Insights from Climate Change	Muskan Agarwal
6	NSSS2026ABS617	Urbanization, Air Pollution, and Local Climate Shifts: Evidence from a Five-Year Study in Agra	Neha
7	NSSS2026ABS619	Physicochemical Properties of Atmospheric Aerosols in a Semi-Arid Region of Southern India.	Shaik Fasiha Begum
8	NSSS2026ABS621	Local and Non-Local Sources of Black Carbon and the Role of Meteorology in a Tropical Semi-Arid Region of India	Annareddy Ramanjula Reddy
9	NSSS2026ABS681	Insights into the Dynamics of the Atmospheric Boundary Layer over Delhi during Severe Air Pollution and Fog Conditions	Dharmendra Kumar Kamat
10	NSSS2026ABS781	Black Carbon Dynamics and Middle-Atmosphere Coupling over the Indo-Gangetic Basin: Implications for Regional Climate Change	Vaishnav Bartaria
11	NSSS2026ABS817	Drivers of Urban Ozone Variability in Semi-Arid Western India	Tapaswini Sarangi
12	NSSS2026ABS836	Assessment of Diwali Associated Air Pollution Using APCB Monitoring Data from Various Locations of Guwahati in North East India	Chinmoy Patar



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13	NSSS2026ABS840	Influence of Meteorological Parameters on Seasonal Ozone Variation over a low latitude region of Rajasthan	Vimal Saraswat
14	NSSS2026ABS157	Chemistry of southwest monsoon rainfall at a high-altitude site in Western Ghats, India	Vinayak Waghmare
15	NSSS2026ABS202	CCN Activity and Aerosols Chemical Composition During Fog and Haze Episodes in New Delhi, India.	Mrunal Naik
16	NSSS2026ABS206	A Comprehensive Assessment of PM <sub>2.5</sub> in the Central Himalayan Region: Observations, trends and Modeling, using a unique CUPi sensor network	Vikas Rawat
17	NSSS2026ABS217	Impact of two distinct types of crop residue burning emissions on ambient black carbon over the Northwestern IGP	Vaneet Kumar
18	NSSS2026ABS281	Measurements of Size-Resolved Activation Properties of Aerosol Particles and Three Possible Pathways of Activation in Urban Fog.	Sandeep Wagh
19	NSSS2026ABS313	A study on Aerosol volatility under varying environmental conditions over an high altitude Site in Western Ghat India, HACPL, Mahabaleshwar.	M.Y. Aslam
20	NSSS2026ABS333	Assessing the Impact of Climate Variability on Rainfed Sorghum Productivity in the Western Vidarbha Central Plateau Agroclimatic Zone	Mrinalini Srivastava
21	NSSS2026ABS352	Role of Local and Advected Aerosols on Cloud Microphysics in the Western Ghats, India	Arindam Das
22	NSSS2026ABS393	Disentangling Meteorological and Emission Drivers of PM <sub>2.5</sub> Variability in Kolkata Using Explainable Machine Learning	Bijoy Krishna Gayen
23	NSSS2026ABS480	Long term estimation of the net ecosystem exchange over India using model simulations	S Akshay
24	NSSS2026ABS537	Impact of Monoterpenes Ozonolysis at an Indian Urban Site	Dibyani Singh
25	NSSS2026ABS563	Assessing Seasonal and Annual Impacts of Aerosols on Radiative Forcing in Two Distinct Urban Climates of India	Kankana Ghosh
26	NSSS2026ABS588	Implications of Sea Breeze Circulation on the Atmospheric Aerosol Environment in the Houston Coastal Region	Tamanna Subba
27	NSSS2026ABS613	Seasonal Variability in Ultrafine PM <sub>1</sub> Pollution the northwestern Indian Himalayan Region: Ground monitoring and Machine Learning	Anil Singh Salal
28	NSSS2026ABS627	Impact of Atmospheric Parameters on PM <sub>2.5</sub> and Black Carbon Variability in Delhi	Anjali Rana
29	NSSS2026ABS628	Physicochemical Properties of Atmospheric Aerosols in a Semi-Arid Region of Southern India	Shaik Fasiha Begum
30	NSSS2026ABS689	A pathway to improve CCN activity by synergic approach of observation, laboratory experiment, numerical simulations	Avishek Ray
31	NSSS2026ABS706	Lidar-Based Characterization of atmospheric properties variability during a Dust Event Over the	Shishir Kumar Singh

		complex terrain of central Himalayan region	
32	NSSS2026ABS744	Temporal Evolution of Atmospheric Trace Gases Driven by Boundary Layer Dynamics	Pranami Mahanta
33	NSSS2026ABS746	Winter Emissions vs. Summer Photochemistry: Seasonal Variability of Particle-Bound Oxy-PAHs in Agra, India	Simran Bamola
34	NSSS2026ABS783	Sustainable Synthesis of Bio-Waste-Derived Graphene for Bioaerosol Mitigation in Ambient Air	Mohammad Ikbāl
35	NSSS2026ABS860	Predicting atmospheric Black Carbon using Machine Learning Models at a Forested Himalayan Site	Archana Bawari
36	NSSS2026ABS869	Observational evidence of anomalous cloud response during South Asian winter	Aakash Kumar

### Poster Presentations (PS1-03 & 04) | 16:00 – 17:30 Hrs

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6	NSSS2026ABS617	Urbanization, Air Pollution, and Local Climate Shifts: Evidence from a Five-Year Study in Agra	Neha
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8	NSSS2026ABS621	Local and Non-Local Sources of Black Carbon and the Role of Meteorology in a Tropical Semi-Arid Region of India	Annareddy Ramanjula Reddy
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13	NSSS2026ABS840	Influence of Meteorological Parameters on Seasonal Ozone Variation over a low latitude region of Rajasthan	Vimal Saraswat
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29	NSSS2026ABS628	Physicochemical Properties of Atmospheric Aerosols in a Semi-Arid Region of Southern India	Shaik Fasiha Begum
30	NSSS2026ABS689	A pathway to improve CCN activity by synergic approach of observation, laboratory experiment, numerical simulations	Avishek Ray

31	NSSS2026ABS706	Lidar-Based Characterization of atmospheric properties variability during a Dust Event Over the complex terrain of central Himalayan region	Shishir Kumar Singh
32	NSSS2026ABS744	Temporal Evolution of Atmospheric Trace Gases Driven by Boundary Layer Dynamics	Pranami Mahanta
33	NSSS2026ABS746	Winter Emissions vs. Summer Photochemistry: Seasonal Variability of Particle-Bound Oxy-PAHs in Agra, India	Simran Bamola
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35	NSSS2026ABS860	Predicting atmospheric Black Carbon using Machine Learning Models at a Forested Himalayan Site	Archana Bawari
36	NSSS2026ABS869	Observational evidence of anomalous cloud response during South Asian winter	Aakash Kumar
<b>PS1-04</b>			
37	NSSS2026ABS102	Cloud Base Distribution over a Tropical Urban Region, Hyderabad, India	H. Z. Vanlalrochana
38	NSSS2026ABS443	Atmospheric boundary layer and elevated aerosol layer characteristics over a valley and a mountainous location of North-East India	Partha Jyoti Sahu
39	NSSS2026ABS452	Investigating the influence of Vertically Integrated Moisture Flux Divergence and Evapotranspiration on Precipitation Variability in North-East India	Anindita Borah
40	NSSS2026ABS511	Atmospheric Boundary Layer Dynamics over Agartala, a North-Eastern Indian Location: Insights from Ground-based Lidar Observations and Reanalysis Datasets	Sukanya Bhattacharya
41	NSSS2026ABS599	Land surface feedback and rainfall bias in the dynamical models with different physical parametrizations	Pratibha Gautam
42	NSSS2026ABS606	Cloud and Boundary Layer Dynamics in Response to a Dust Storm during May 2025 over Western India	Aniket
43	NSSS2026ABS867	Vertical Coupling and Momentum Transportation during Mesoscale Convective Systems over the Complex Terrain of Northeast India: Insights from ST Radar Observations	Samiran Patgiri
44	NSSS2026ABS812	Asymptotic Drag Laws in the Truly Neutral Atmospheric Boundary Layer	Abhishek Gupta
45	NSSS2026ABS865	Eddy Covariance Measurements of Surface Energy Budget Components Over a Coastal Station in Southwest Peninsular India	Sandhya K Nair
46	NSSS2026ABS161	Impact of Lightning Activity on Atmospheric Boundary Layer Parameters and their consequences over Pune, India and its surrounding region	Aditi Yadav
47	NSSS2026ABS185	Variation in surface latent heat flux and surface temperature during high magnitude earthquakes	Ananna Bardhan
48	NSSS2026ABS200	LES Simulated Turbulence Characteristics During Winter Fog Events: A WiFEX case study over IGI Airport, New Delhi.	Priyangshu Choudhury
49	NSSS2026ABS223	Unravelling The Spectral Variability Of Equivalent Temperature Over Chennai	Athira Sasikumar

50	NSSS2026ABS389	Declining trends of Atmospheric Boundary Layer Height over India: Relation and Implications on Surface temperature, fluxes and aerosols	Ghouse Basha
51	NSSS2026ABS400	Convective Transport of Lower-Atmospheric Pollutants to the UTLS: Insights into ATAL Formation from Rainwater and Aerosol Chemistry	Chaithanya D. Jain
52	NSSS2026ABS682	Application of aerial LiDAR mapping for characterizing meter-scale turbulence in the ABL.	Harish Varma
53	NSSS2026ABS797	Parameter estimation for vadose-zone and surface-layer interface solver over polyhedron meshes	Jyoti Bhate and Amit Kesarkar

## Day-3

(25.02.2026 Wednesday)

### Technical Session- **PS1-04** (11:45 - 13:15 Hrs)

### Theme: **ABL Process, Stratosphere-troposphere exchange and TTL dynamics**

Chair: Dr. Narendra Ojha, PRL

Co-Chair: Dr. Binita Pathak, DU

### Oral Presentations (PS1-04)

SN	Abstract ID	Title of Abstract	First Author
1	NSSS2026ABS390	Balloon borne measurement campaigns of Asian Tropopause Aerosol Layer, BATAL, Insights from a decade of observations	M. Venkat Ratnam
2	NSSS2026ABS716	Investigations of Atmospheric Clouds and Boundary Layer Dynamics over the Indian Region using PRL's Indian Lidar Network (ILIN)	Som Kumar Sharma
3	NSSS2026ABS148	Assessment of Diurnally Evolving Atmospheric Boundary Layer over the Central India under the Influence of Extreme Heat Waves	Adarsh Jain
4	NSSS2026ABS598	Leveraging gridded datasets to assess atmospheric boundary layer height over North-East Indian region	Rohit Gautam
5	NSSS2026ABS308	Investigating the role of water vapor and ozone in the formation of tropopause inversion layer	K. P. Aathira
6	NSSS2026ABS391	Shortwave radiative impacts of the asian tropopause aerosol layer from in situ balloon measurements and regional satellite analyses	B.L. Madhavan
7	NSSS2026ABS769	Long-Term Trends and Driving Mechanisms of Atmospheric Boundary Layer Height over Northeast India: A Reanalysis Data Assessment.	Manasi Gogoi
8	NSSS2026ABS795	Convective moistening of the upper troposphere as inferred from INSAT-3D imager observations	Mata Mahakur

### Short Oral Presentations (PS1-04)

SN	Abstract ID	Title of Abstract	First Author
1	NSSS2026ABS102	Cloud Base Distribution over a Tropical Urban Region, Hyderabad, India	H. Z. Vanlalrochana
2	NSSS2026ABS443	Atmospheric boundary layer and elevated aerosol layer characteristics over a valley and a mountainous location of North-East India	Partha Jyoti Sahu
3	NSSS2026ABS452	Investigating the influence of Vertically Integrated Moisture Flux Divergence and Evapotranspiration on Precipitation Variability in North-East India	Anindita Borah

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4	NSSS2026ABS511	Atmospheric Boundary Layer Dynamics over Agartala, a North-Eastern Indian Location: Insights from Ground-based Lidar Observations and Reanalysis Datasets	Sukanya Bhattacharya
5	NSSS2026ABS599	Land surface feedback and rainfall bias in the dynamical models with different physical parametrizations	Pratibha Gautam
6	NSSS2026ABS606	Cloud and Boundary Layer Dynamics in Response to a Dust Storm during May 2025 over Western India	Aniket
7	NSSS2026ABS867	Vertical Coupling and Momentum Transportation during Mesoscale Convective Systems over the Complex Terrain of Northeast India: Insights from ST Radar Observations	Samiran Patgiri
8	NSSS2026ABS161	Impact of Lightning Activity on Atmospheric Boundary Layer Parameters and their consequences over Pune, India and its surrounding region	Aditi Yadav
9	NSSS2026ABS185	Variation in surface latent heat flux and surface temperature during high magnitude earthquakes	Ananna Bardhan
10	NSSS2026ABS200	LES Simulated Turbulence Characteristics During Winter Fog Events: A WiFEX case study over IGI Airport, New Delhi.	Priyangshu Choudhury
11	NSSS2026ABS223	Unravelling The Spectral Variability Of Equivalent Temperature Over Chennai	Athira Sasikumar
12	NSSS2026ABS389	Declining trends of Atmospheric Boundary Layer Height over India: Relation and Implications on Surface temperature, fluxes and aerosols	Ghouse Basha
13	NSSS2026ABS400	Convective Transport of Lower-Atmospheric Pollutants to the UTLS: Insights into ATAL Formation from Rainwater and Aerosol Chemistry	Chaithanya D. Jain
14	NSSS2026ABS682	Application of aerial LiDAR mapping for characterizing meter-scale turbulence in the ABL.	Harish Varma
15	NSSS2026ABS797	Parameter estimation for vadose-zone and surface-layer interface solver over polyhedron meshes	Jyoti Bhate
16	NSSS2026ABS812	Asymptotic Drag Laws in the Truly Neutral Atmospheric Boundary Layer	Abhishek Gupta
17	NSSS2026ABS865	Eddy Covariance Measurements of Surface Energy Budget Components Over a Coastal Station in Southwest Peninsular India	Sandhya K Nair

**Technical Session- PS1-05 (14:15 - 16:00 Hrs)**  
**Theme: Understanding clouds from space-borne observations**

**Chair: Dr. Amit P Kesarkar, NARL**

**Co-Chair: Dr. Prijith S. S., SPL**

**Oral Presentations (PS1-05)**

SN	Abstract ID	Title of Abstract	First Author
1	NSSS2026ABS392	Aerosol-cloud interaction observed in the mixed-phase cloud using ground-based, in-situ, and satellite observations	Trishna Bhattacharyya
2	NSSS2026ABS564	Monsoonal Cloud Microphysics over the Eastern Himalayan Region: Insights from EarthCARE Cloud Profiling Radar	Arban Shongdor Youroi
3	NSSS2026ABS676	A Multi-Platform Approach to Investigate Orographic Clouds and Rainfall Variability over the Indian Himalayan Region	Ruchita Shah
4	NSSS2026ABS546	Clouds characterization over an Extreme easternmost valley location of India: First-time results	Binita Pathak
5	NSSS2026ABS323	Evolving Patterns of Lightning Activity in Indian Lightning Hotspots	CK Unnikrishnan
6	NSSS2026ABS491	The Indian Lightning Detection Network (ILDN): A Citizen Science Framework for Lightning Nowcasting and Hazard Mitigation	Anirban Guha
7	NSSS2026ABS078	Roll Clouds and Closed Convective Cloud Cells - Lesser-known monsoon clouds	Swathi .B
8	NSSS2026ABS685	Investigation of Seasonal Dynamics of Clouds over the Northwestern Region of Himalayas using Ground-Based Lidar, Satellite, and Reanalysis	Ankit Tandon
9	NSSS2026ABS831	Impact of non-precipitating clouds on surface radiation components based on high-resolution in situ data over tropical station in southeast peninsular India	Bonu Koteswara Rao
10	NSSS2026ABS779	Impact of lead time in the simulation of an MCS event during 15-17 September 2023	Parvathy Thankachy P

**Short Oral Presentations (PS1-05)**

SN	Abstract ID	Title of Abstract	First Author
1	NSSS2026ABS312	Investigation of Cloud Properties over Gorakhpur using ground-based and satellite measurements	Minakshi Singh
2	NSSS2026ABS314	Understanding Lightning Activity over Southern India: Evidence from the Indian Lightning Location Network	Abhinav Kumar Shukla
3	NSSS2026ABS394	Diurnal Variations of Cirrus Cloud Properties observed Using Micro Pulse Lidar Observations over a tropical latitude	P. Riya Mol



4	NSSS2026ABS405	A Machine Learning Framework For Identification Of Factors Influencing Cloud Condensation Nuclei	V. Ravi Kiran
5	NSSS2026ABS519	Characteristics and Dynamics of Atmospheric Clouds over a Northeastern Indian Region Agartala: Insights from Ground-based Lidar, Satellite, and Reanalysis Datasets	Dipanjana De
6	NSSS2026ABS534	Key Atmospheric Drivers of Monsoon Lightning: Insights from Machine Learning and Deep Learning Models	Mili Ghosh Nee Lala
7	NSSS2026ABS595	Urban Heat Island Influence on Lightning Activity Across Indian Cities during Pre-Monsoon and Monsoon (2022–2025)	Dipanjana De
8	NSSS2026ABS620	Cloud Characteristics over the Indian Oceanic Regions using Machine Learning Frameworks: A Comprehensive Study of Data-Driven Approaches	Niyati Mevadaa
9	NSSS2026ABS638	Study of the Atmospheric Clouds and Boundary Layer Dynamics over the Indian Western Ghats using Lidar, Satellites and Reanalysis Data	Aniket
10	NSSS2026ABS653	Mesoscale Convective Systems and Associated Lightning Activity over Southern India	Amrutha K U
11	NSSS2026ABS055	The study of lightning activity in association with aerosols over Indian region	Swapnil S Potdar
12	NSSS2026ABS079	Evaluation of suitable microphysics schemes for lightning prediction over complex terrain of Western Himalaya region, Uttarakhand India	Sanjeev Kumar
13	NSSS2026ABS153	Aerosol's effects on lightning and cloud microphysics across North-East and North-West India	Deen Mani Lal
14	NSSS2026ABS506	Understanding the cloud microphysical processes during extreme rainfall over southern peninsular India in the NE-monsoon using satellite observations	Jeni N Victor
15	NSSS2026ABS648	Characterization of cloud properties governing lightning activity over the Indian region	Goriparthi Pavani
16	NSSS2026ABS683	A Study on Cloud Characteristics and Variability over Central India	Dizna James
17	NSSS2026ABS870	Improved estimates of mass absorption cross-section of Black carbon in New Delhi in the Indo-Gangetic Plain	S. S. Pasupuleti

### Poster Presentations (PS1-05 & 06) | 16:00 - 17:30 Hrs

SN	Abstract ID	Title of Abstract	First Author
<b>PS1-05</b>			
1	NSSS2026ABS312	Investigation of Cloud Properties over Gorakhpur using ground-based and satellite measurements	Minakshi Singh
2	NSSS2026ABS314	Understanding Lightning Activity over Southern India: Evidence from the Indian Lightning Location Network	Abhinav Kumar Shukla

3	NSSS2026ABS394	Diurnal Variations of Cirrus Cloud Properties observed Using Micro Pulse Lidar Observations over a tropical latitude	P. Riya Mol
4	NSSS2026ABS405	A Machine Learning Framework For Identification Of Factors Influencing Cloud Condensation Nuclei	V. Ravi Kiran
5	NSSS2026ABS519	Characteristics and Dynamics of Atmospheric Clouds over a Northeastern Indian Region Agartala: Insights from Ground-based Lidar, Satellite, and Reanalysis Datasets	Dipanjana De
6	NSSS2026ABS534	Key Atmospheric Drivers of Monsoon Lightning: Insights from Machine Learning and Deep Learning Models	Mili Ghosh Nee Lala
7	NSSS2026ABS595	Urban Heat Island Influence on Lightning Activity Across Indian Cities during Pre-Monsoon and Monsoon (2022–2025)	Dipanjana De
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9	NSSS2026ABS638	Study of the Atmospheric Clouds and Boundary Layer Dynamics over the Indian Western Ghats using Lidar, Satellites and Reanalysis Data	Aniket
10	NSSS2026ABS653	Mesoscale Convective Systems and Associated Lightning Activity over Southern India	Amrutha K U
11	NSSS2026ABS079	Evaluation of suitable microphysics schemes for lightning prediction over complex terrain of Western Himalaya region, Uttarakhand India	Sanjeev Kumar
12	NSSS2026ABS055	The study of lightning activity in association with aerosols over Indian region	Swapnil S Potdar
13	NSSS2026ABS153	Aerosol's effects on lightning and cloud microphysics across North-East and North-West India	Deen Mani Lal
14	NSSS2026ABS506	Understanding the cloud microphysical processes during extreme rainfall over southern peninsular India in the NE-monsoon using satellite observations	Jeni N Victor
15	NSSS2026ABS648	Characterization of cloud properties governing lightning activity over the Indian region	Goriparthi Pavani
16	NSSS2026ABS683	A Study on Cloud Characteristics and Variability over Central India	Dizna James
17	NSSS2026ABS870	Improved estimates of mass absorption cross-section of Black carbon in New Delhi in the Indo-Gangetic Plain	S. S. Pasupuleti
<b>PS1-06</b>			
18	NSSS2026ABS125	Intercomparison of Atmospheric Turbulence obtained by X-band DWR and MST Radar	Ramyakrishna Enugonda
19	NSSS2026ABS336	Rising Trend of Catastrophic Positive Cloud-to-Ground Lightning in Maharashtra: Climate Change and Its Relation to Long-Range Dust Transport	Abhijeet Gangane
20	NSSS2026ABS429	Landslide Early Warning System for North East India using Radar Rainfall and Soil Water	Sumon Kumar Mondal

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21	NSSS2026ABS528	Impact of Orography on Extreme Rainfall Event in Thoothukudi, Tamil Nadu, December 2023	K.L. Arunkumar
22	NSSS2026ABS597	Microphysical features of Rainfall over Dibrugarh using Laser-Optical Disdrometer	Uday Bhattacharjee
23	NSSS2026ABS754	Effect of Raindrop Size Distribution on Radar Rainfall Estimation in Rain Shadow Region: A Dual-Polarization Composite Framework for C-DWR	Nitig Singh
24	NSSS2026ABS107	Lightning Polarity and Thermodynamic Fingerprints of Indian Hailstorms: A Multi-Satellite Comparison with Non-Hail Thunderstorms	Akshay Patil
25	NSSS2026ABS218	Integrated Remote Sensing of MCSs in the Monsoon Core Zone: 3D Structure and Evolution via Satellite, Polarimetric Radar, and Lightning Data	Sachin M. Deshpande
26	NSSS2026ABS359	Rainfall characteristics over the Lakshadweep Islands using satellite and disdrometer observations	Ambuj K Jha
27	NSSS2026ABS539	Observational studies of Atmospheric Electric Field Effects on the Drop Size Distribution and Rainfall Rate of thunderstorms	Lapynsuk Thabah
28	NSSS2026ABS578	Interpretable Machine Learning for Rainfall Forecasting: A ClimateChange Perspective in Meghalaya, India	Abinaya Devi N
29	NSSS2026ABS637	Tracking and Statistics of Mesoscale Convective Cells during the Indian Summer Monsoon	Alok Sharma
30	NSSS2026ABS686	Characterizing Diurnal Rainfall Variability in Monsoon-Controlled Oceanic Domains: Bay of Bengal vs Arabian Sea	Patita Kalyana Sahoo
31	NSSS2026ABS690	Potential Role of Eurasian Soil Moisture in Shaping Recent ISMR Trends: A Satellite and Reanalysis Perspective	Nishant Gautam
32	NSSS2026ABS640	Tracking and Statistics of Mesoscale Convective Cells during the Indian Summer Monsoon	Alok Sharma

## Day-4

(26.02.2026 Thursday)

### Technical Session- **PS1-06** (11:45 - 13:15 Hrs) Theme: **RADAR meteorology: Precipitation and hydrological cycles**

Chair: Dr. Anirban Guha, TU

Co-Chair: Dr. Prince Prakash, NCPOR

#### Oral Presentations (PS1-06)

SN	Abstract ID	Title of Abstract	First Author
1	NSSS2026ABS401	First Insights from NISAR L- and S-Band Dual-Frequency SAR Data in Characterising Ocean Surface Features	Swapna M
2	NSSS2026ABS457	From Sea Surface Anomalies to Mountain Floods: Dynamics of the July 2024 Mesoscale Convective Complex Over the Western Ghats	Subin Jose/ Jayachandran V (presenting Author)
3	NSSS2026ABS612	Integrated satellite observations and a modelling approach for the identification of cloudburst events	Debojit Sarkar
4	NSSS2026ABS586	Vertical and horizontal characteristics of precipitation during active and break spells over South Asia using multiple space based radar	Shailendra Kumar
5	NSSS2026ABS756	Temperature Dependence and Sub-seasonal Modulation of Indian Monsoon Hourly Rainfall Extremes	Bijit Kumar Banerjee
6	NSSS2026ABS433	From Space to Resilience: AI-Driven Flood Hazard Mapping Using SAR-Optical Fusion and Optimization Techniques	Rahul Das
7	NSSS2026ABS851	Indian Precipitation Experiment (IPEX): First Results from the 2025 Pilot Study on Contrasting Microphysical Features of Indian Monsoon Rainfall	Kaustav Chakravarty

#### Short Oral Presentations (PS1-06)

SN	Abstract ID	Title of Abstract	First Author
1	NSSS2026ABS125	Intercomparison of Atmospheric Turbulence obtained by X-band DWR and MST Radar	Ramyakrishna Enugonda
2	NSSS2026ABS336	Rising Trend of Catastrophic Positive Cloud-to-Ground Lightning in Maharashtra: Climate Change and Its Relation to Long-Range Dust Transport	Abhijeet Gangane
3	NSSS2026ABS429	Landslide Early Warning System for North East India using Radar Rainfall and Soil Water	Sumon Kumar Mondal
4	NSSS2026ABS528	Impact of Orography on Extreme Rainfall Event in	K.L. Arunkumar

		Thoothukudi, Tamil Nadu, December 2023	
5	NSSS2026ABS597	Microphysical features of Rainfall over Dibrugarh using Laser-Optical Disdrometer	Uday Bhattacharjee
6	NSSS2026ABS754	Effect of Raindrop Size Distribution on Radar Rainfall Estimation in Rain Shadow Region: A Dual-Polarization Composite Framework for C-DWR	Nitig Singh
7	NSSS2026ABS107	Lightning Polarity and Thermodynamic Fingerprints of Indian Hailstorms: A Multi-Satellite Comparison with Non-Hail Thunderstorms	Akshay Patil
8	NSSS2026ABS218	Integrated Remote Sensing of MCSs in the Monsoon Core Zone: 3D Structure and Evolution via Satellite, Polarimetric Radar, and Lightning Data	Sachin M. Deshpande
9	NSSS2026ABS359	Rainfall characteristics over the Lakshadweep Islands using satellite and disdrometer observations	Ambuj K Jha
10	NSSS2026ABS539	Observational studies of Atmospheric Electric Field Effects on the Drop Size Distribution and Rainfall Rate of thunderstorms	Lapynsuk Thabah
11	NSSS2026ABS578	Interpretable Machine Learning for Rainfall Forecasting: A ClimateChange Perspective in Meghalaya, India	Abinaya Devi N
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13	NSSS2026ABS686	Characterizing Diurnal Rainfall Variability in Monsoon-Controlled Oceanic Domains: Bay of Bengal vs Arabian Sea	Patita Kalyana Sahoo
14	NSSS2026ABS690	Potential Role of Eurasian Soil Moisture in Shaping Recent ISMR Trends: A Satellite and Reanalysis Perspective	Nishant Gautam
15	NSSS2026ABS640	Tracking and Statistics of Mesoscale Convective Cells during the Indian Summer Monsoon	Alok Sharma

**Technical Session- PS1-07 (14:15 - 16:00 Hrs)**  
**Theme: Space based Meteorology and Monsoon**

**Chair: Dr. Harish Gadhavi, PRL**

**Co-Chair: Dr. C. K. Unnikrishnan, NCESS**

**Oral Presentations (PS1-07)**

SN	Abstract ID	Title of Abstract	First Author
1	NSSS2026ABS052	Inferring cyclone landfall from outgoing longwave radiation	Deveerappa Jagadheesha
2	NSSS2026ABS601	Recent Intensification of the Asian Summer Monsoon Anticyclone and Its Coupling to Rainfall Shifts over South and East Asia	V. N. Santhosh
3	NSSS2026ABS256	Characterizing Rain Effects on Surface Wind Retrievals from the Newly Launched EOS-06 OSCAT-3 Scatterometer over the Indian Summer Monsoon	Vaibhav Tyag

		Region	
4	NSSS2026ABS340	Flood monitoring using RISAT 1A MRS SAR-EOS 4 data: A cases study on 2025 western Punjab flood, India	Pradip Sarkar
5	NSSS2026ABS421	Tibetan Plateau Amplification and Its Contrasting Impacts on Indian Summer Monsoon Rainfall: Insights from Satellite Observations of 2022 and 2023	Shreyasi Upadhyay
6	NSSS2026ABS473	Changing Northeast India Summer Monsoon Onset Dynamics in a Warming World	Simanta Das
7	NSSS2026ABS028	Impact of DWR Data Assimilation in the NCUM-R 4D-VAR system on Lightning and Rainfall forecast	Joydeb Saha
8	NSSS2026ABS070	Analysis of tropical cyclone evolution related to its impact on aviation at two coastal airports	Arpita Munsu

### Short Oral Presentations (PS1-07 & 08)

SN	Abstract ID	Title of Abstract	First Author
<b>PS1-07</b>			
1	NSSS2026ABS069	A Comparative Analysis of Environmental Factors and Vortex Structure in Developing and Non-Developing Tropical Disturbances over the Bay of Bengal	Arpita Munsu
2	NSSS2026ABS089	AI use technology based on satellite used in flood mechanism	Dr. Rakesh Kumar Mishra
<b>PS1-08</b>			
3	NSSS2026ABS040	Miyawaki Plantation for Sustainable Urban Greening- A Case Study on Soil Physicochemical Improvement at IESD BHU Varanasi.	Isha Singh
4	NSSS2026ABS224	An Investigation on the Geophysical Drivers and Biophysical Responses to the 2022 Flood over the Morigaon-Nagaon Districts of Assam in North-East India	Aniket Chakraborty
5	NSSS2026ABS261	Spatiotemporal analysis of Land Use Land Cover changes over Dibrugarh, Sibsagar, and Charaideo Districts of Upper Assam	Himashree Das
6	NSSS2026ABS455	Characterizing Recent Decade of Arctic Sea Ice Dynamics: Application of Validated SARAL-AltiKa Data to Uncover Dominant Modes of Variability and their Climatic Precursors	Chungkham Thomson
7	NSSS2026ABS462	A Tale of Four Cities: Remote Sensing Analysis of the Dual Impact of Urbanization on Temperature and Vegetation in Central India	Dr. Mrunmayee Lokhande
8	NSSS2026ABS468	Spatiotemporal Analysis of the Biophysical Parameters on Primary Productivity in the North Indian Ocean	Anju Kumari
9	NSSS2026ABS596	Long-term climate characteristics of Sea Breeze phenomena over Sriharikota using Met-tower observations and ERA-5 reanalysis dataset	K K Amal
10	NSSS2026ABS646	Integrated Multi-Model Framework for multi hazard and	Balaramdas K R

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		its impact on forest Carbon under Climate change Scenarios	
11	NSSS2026ABS664	Assessing the Influence of Land Use/Land Cover on Regional Meteorology over the Tropical Inland Urban City of Hyderabad	T.V Ramesh Reddy
12	NSSS2026ABS722	High-resolution UAV survey and thermal baseline of the Luna crater, Kutch, India.	Nitesh Vinodbhai Pandey
13	NSSS2026ABS767	Exploring Gross Primary Productivity variability and its environmental drivers in Meghalaya using Microwave Remote Sensing and Regional Reanalysis	Anusuya Gogoi
14	NSSS2026ABS768	Snow-to-Rain Transition: Microphysical and Atmospheric Insights from the Arctic	Lekhraj Saini
15	NSSS2026ABS016	Performance Analysis of a Solar-Electric High-Altitude UAV for Climate Monitoring in Polar Regions	Adwait Agnihotri
16	NSSS2026ABS027	Biomass and carbon sequestration modelling through optical and SAR data for dry deciduous forests of UK district, Karnataka India	A.G.Koppad
17	NSSS2026ABS051	Climate and agricultural nexus in semi-arid regions of Nashik district Maharashtra	Rajaram A Jadhav
18	NSSS2026ABS166	Millennial Scale Exhumation Rates of Western Himalayas: Constraints from Luminescence Thermochronology	Malika Singhal
19	NSSS2026ABS197	Satellite Meteorology of the Cryosphere: Linking Arctic Sea Ice Decline to Precipitation and Snow Variability over the Hindu Kush-Himalaya	Siddhant Arya
20	NSSS2026ABS305	Evaluating Climatic Variability and Land Atmosphere Feedbacks in the Western Himalayan Ecosystem	Rahul Jaiswal
21	NSSS2026ABS326	Digital soil mapping of Soil Organic Carbon stocks in West Bengal: A Climate Change Perspective	Progya Mukherjee
22	NSSS2026ABS329	Comparative Assessment of BiLSTM and GRU for High-Resolution Downscaling of Tmin Across India	Manisha Chaturvedi
23	NSSS2026ABS375	Urban Heat Mitigation through Green Infrastructure: A Coupling Coordination Analysis of Bengaluru Urban Growth	Rupam Singh
24	NSSS2026ABS451	Geospatial assessment of space-based AWiFS derived NDVI pattern with respect to ground-based IMD rainfall data over Assam, India	Sudip Kumar Kundu
25	NSSS2026ABS503	Utilisation of Machine learning to predict the air temperature and Relative Humidity at a glacier site (Yala) of Eastern Himalaya	Dr Nilamoni Barman
26	NSSS2026ABS509	Assessing Precipitation Extremes in the Arctic: Observations, Reanalysis, and PGW Experiments over Ny-Alesund	R. Athulya and Nuncio Murukesh
27	NSSS2026ABS535	Unraveling Snow Cover Dynamics and Responses to Climate Change in the Indian Himalayan Region	Khushboo
28	NSSS2026ABS574	Influence of Atmospheric aerosols on ET at locations having different soil moisture	J. Murmu R
29	NSSS2026ABS626	Basin-Scale Reorganization Of Climate-Phytoplankton Linkages In The Indian Ocean: Enso Emergence And Iod Retreat	Haritha M

30	NSSS2026ABS688	Spatio-Temporal Dynamics of Net Ecosystem Productivity over India during 2001-2024.	Lipsa Shibu
31	NSSS2026ABS696	Impact of cloud datasets on Solar Radiation Estimates: An RTM-Based Case Study Over Shillong	Manasa M
32	NSSS2026ABS728	Assessing the Methodological Differences in the Estimation of Cropland NPP across Indian States	Umayal S
33	NSSS2026ABS801	Effects of Monsoonal Dynamics on Phytoplankton Photosynthetic Performance in the Sundarbans Using Fast Fluorometry	Abhinav G

### Poster Presentations (PS1-07& 08) | 1600 - 1730 Hrs

SN	Abstract ID	Title of Abstract	First Author
<b>PS1-07</b>			
1	NSSS2026ABS052	Inferring cyclone landfall from outgoing longwave radiation	Deveerappa Jagadheesha
2	NSSS2026ABS601	Recent Intensification of the Asian Summer Monsoon Anticyclone and Its Coupling to Rainfall Shifts over South and East Asia	V. N. Santhosh
3	NSSS2026ABS069	A Comparative Analysis of Environmental Factors and Vortex Structure in Developing and Non-Developing Tropical Disturbances over the Bay of Bengal	Arpita Munsii
4	NSSS2026ABS089	AI use technology based on satellite used in flood mechanism	Dr. Rakesh Kumar Mishra
<b>PS1-08</b>			
5	NSSS2026ABS040	Miyawaki Plantation for Sustainable Urban Greening- A Case Study on Soil Physicochemical Improvement at IESD BHU Varanasi.	Isha Singh
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8	NSSS2026ABS455	Characterizing Recent Decade of Arctic Sea Ice Dynamics: Application of Validated SARAL-AltiKa Data to Uncover Dominant Modes of Variability and their Climatic Precursors	Chungkham Thomson
9	NSSS2026ABS462	A Tale of Four Cities: Remote Sensing Analysis of the Dual Impact of Urbanization on Temperature and Vegetation in Central India	Dr. Mrunmayee Lokhande
10	NSSS2026ABS468	Spatiotemporal Analysis of the Biophysical Parameters on Primary Productivity in the North Indian Ocean	Anju Kumari
11	NSSS2026ABS596	Long-term climate characteristics of Sea Breeze phenomena over Sriharikota using Met-tower observations and ERA-5 reanalysis dataset	K K Amal



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12	NSSS2026ABS646	Integrated Multi-Model Framework for multi hazard and its impact on forest Carbon under Climate change Scenarios	Balaramdas K R
13	NSSS2026ABS664	Assessing the Influence of Land Use/Land Cover on Regional Meteorology over the Tropical Inland Urban City of Hyderabad	T.V Ramesh Reddy
14	NSSS2026ABS722	High-resolution UAV survey and thermal baseline of the Luna crater, Kutch, India.	Nitesh Vinodbhai Pandey
15	NSSS2026ABS767	Exploring Gross Primary Productivity variability and its environmental drivers in Meghalaya using Microwave Remote Sensing and Regional Reanalysis	Anusuya Gogoi
16	NSSS2026ABS768	Snow-to-Rain Transition: Microphysical and Atmospheric Insights from the Arctic	Lekhraj Saini
17	NSSS2026ABS016	Performance Analysis of a Solar-Electric High-Altitude UAV for Climate Monitoring in Polar Regions	Adwait Agnihotri
18	NSSS2026ABS027	Biomass and carbon sequestration modelling through optical and SAR data for dry deciduous forests of UK district, Karnataka India	A.G.Koppad
19	NSSS2026ABS051	Climate and agricultural nexus in semi-arid regions of Nashik district Maharashtra	Rajaram A Jadhav
20	NSSS2026ABS166	Millennial Scale Exhumation Rates of Western Himalayas: Constraints from Luminescence Thermochronology	Malika Singhal
21	NSSS2026ABS197	Satellite Meteorology of the Cryosphere: Linking Arctic Sea Ice Decline to Precipitation and Snow Variability over the Hindu Kush-Himalaya	Siddhant Arya
22	NSSS2026ABS305	Evaluating Climatic Variability and Land Atmosphere Feedbacks in the Western Himalayan Ecosystem	Rahul Jaiswal
23	NSSS2026ABS326	Digital soil mapping of Soil Organic Carbon stocks in West Bengal: A Climate Change Perspective	Progya Mukherjee
24	NSSS2026ABS329	Comparative Assessment of BiLSTM and GRU for High-Resolution Downscaling of Tmin Across India	Manisha Chaturvedi
25	NSSS2026ABS375	Urban Heat Mitigation through Green Infrastructure: A Coupling Coordination Analysis of Bengaluru Urban Growth	Rupam Singh
26	NSSS2026ABS451	Geospatial assessment of space-based AWiFS derived NDVI pattern with respect to ground-based IMD rainfall data over Assam, India	Sudip Kumar Kundu
27	NSSS2026ABS503	Utilisation of Machine learning to predict the air temperature and Relative Humidity at a glacier site (Yala) of Eastern Himalaya	Dr Nilamoni Barman
28	NSSS2026ABS509	Assessing Precipitation Extremes in the Arctic: Observations, Reanalysis, and PGW Experiments over Ny-Alesund	R. Athulya and Nuncio Murukesh
29	NSSS2026ABS535	Unraveling Snow Cover Dynamics and Responses to Climate Change in the Indian Himalayan Region	Khushboo
30	NSSS2026ABS574	Influence of Atmospheric aerosols on ET at locations having different soil moisture	J. Murmu R. Latha M. Kumar
31	NSSS2026ABS626	Basin-Scale Reorganization Of Climate-Phytoplankton Linkages In The Indian Ocean: Enso Emergence And	Haritha M

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		Iod Retreat	
32	NSSS2026ABS688	Spatio-Temporal Dynamics of Net Ecosystem Productivity over India during 2001-2024.	Lipsa Shibu
33	NSSS2026ABS696	Impact of cloud datasets on Solar Radiation Estimates: An RTM-Based Case Study Over Shillong	Manasa M
34	NSSS2026ABS728	Assessing the Methodological Differences in the Estimation of Cropland NPP across Indian States	Umayal S
35	NSSS2026ABS801	Effects of Monsoonal Dynamics on Phytoplankton Photosynthetic Performance in the Sundarbans Using Fast Fluorometry	Abhinav G

## Day-5

(27.02.2026 Friday)

### Technical Session- **PS1-08** (11:45 - 13:15 Hrs)

**Theme: Space based monitoring of ocean cryosphere, geosphere and biosphere**

**Chair: Dr. Vijayakumar S. Nair, SPL**

**Co-Chair: Dr. Rahul Mahanta, CU**

### Oral Presentations (PS1-08)

SN	Abstract ID	Title of Abstract	First Author
1	NSSS2026ABS181	Two Decades from Space: Tracking Phytoplankton Variability in the Antarctic Marginal Ice Zone	Prince Prakash
2	NSSS2026ABS674	AI-Driven Assessment of Liquefaction Probability in Shillong City Using Remote Sensing Data Inputs	Sananda Mondal
3	NSSS2026ABS742	Growth of UHI Intensity over Delhi using MODIS Observations from 2000–2025	Disha B. Kardani
4	NSSS2026ABS026	Understanding the Interactions between Biosphere and Atmosphere in India by Synthesising the Carbon, Water, and Energy Fluxes across its Dominant Ecosystems	Pramit Kumar Deb Burman
5	NSSS2026ABS793	Estimates of Realizable Wind and Solar Power Potential over India	S.V.S. Sai Krishna
6	NSSS2026ABS448	Deciphering the variability of Urban Heat Island effect over a tropical metro region of Hyderabad using dense ground network of observations	Satheesh Kumar Shekatam
7	NSSS2026ABS764	Predictive Modelling of Arctic Microbial Communities for finding Biohydrogen producers Using Geosphere Indicators	Shwetakshi Mishra
8	NSSS2026ABS034	Satellite-Based AI Natural Disaster Impact Mapping For Coastal Regions.	Amlan Upadhyaya
9	NSSS2026ABS460	Tracking the changes in tropical forests using time-series Synthetic Aperture Radar Data	Unmesh Khati
10	NSSS2026ABS298	Validation And Performance Analysis Of OCM-3 Sensor For Chlorophyll-a Detection In Coastal And Offshore Waters Of Southwest Bay Of Bengal	Alexkirubakaran A
11	NSSS2026ABS376	Impact Assessment of the Haryana Pond and Wastewater Management Authority HPWWMA A Geosphere Biosphere Social Perspective on Groundwater Management	Kanika Chowdhary