



**23rd NATIONAL SPACE SCIENCE
SYMPOSIUM - 2026**

TECHNICAL PROGRAM

23rd - 27th February 2026

NESAC, Umiam, Shillong, Meghalaya

Jointly organized by

**Indian Space Research Organization
&**

North Eastern Space Applications Centre

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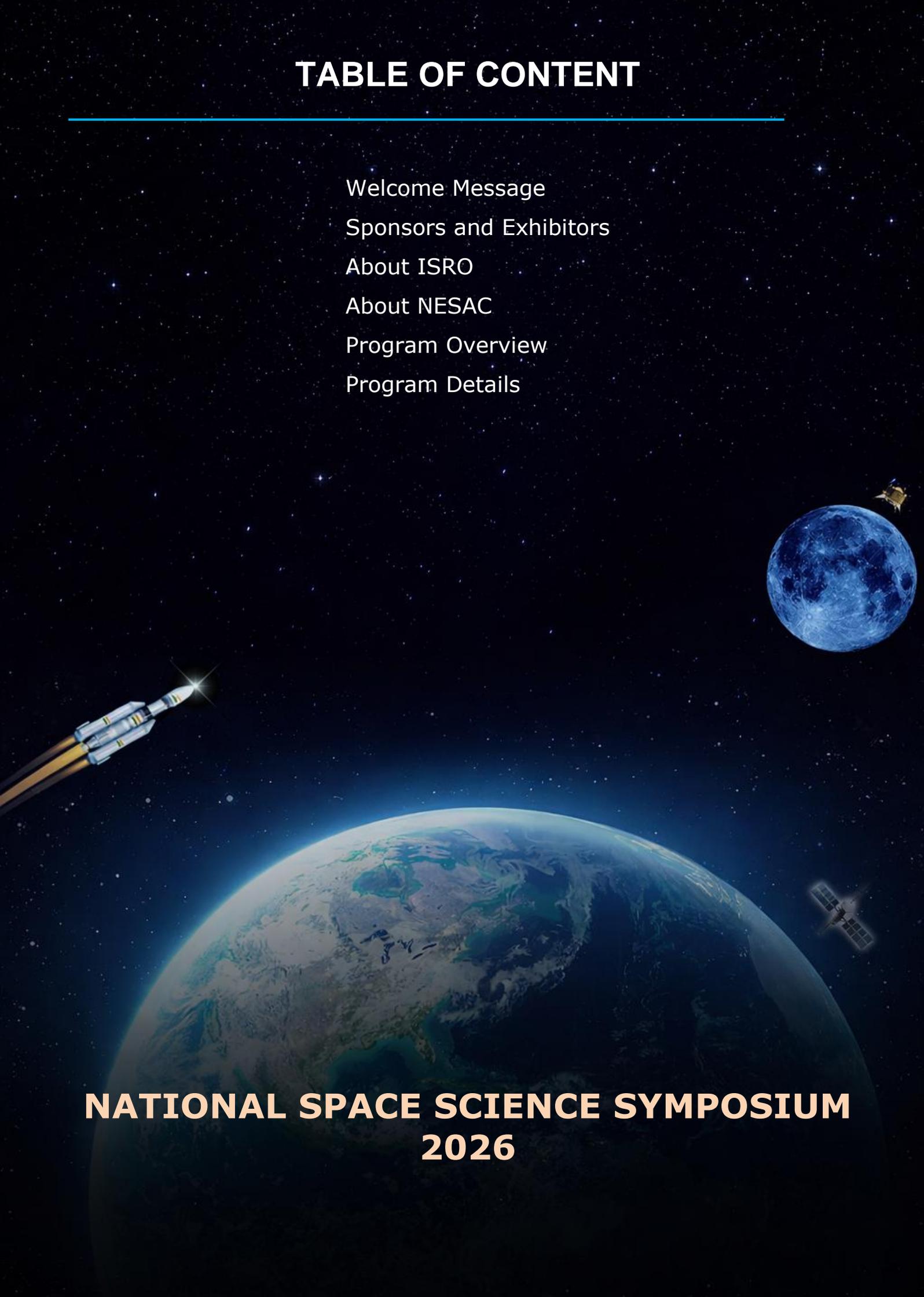
Sponsors and Exhibitors

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Program Overview

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The background of the page is a deep space scene. At the bottom, the curved horizon of Earth is visible, showing continents and oceans. In the upper right, the blue and white surface of the Moon is shown. On the left side, a rocket is depicted in flight, angled upwards. In the lower right, a satellite with solar panels is visible. The sky is filled with numerous small, distant stars.

**NATIONAL SPACE SCIENCE SYMPOSIUM
2026**

WELCOME MESSAGE



It is with immense pride and a deep sense of purpose that we present the Technical Programme for the **23rd National Space Science Symposium (NSSS-2026)** at NESAC, Shillong. NSSS has come a long way since its **genesis in 1978 at Andhra University**, evolving from a specialized rocket society meeting into India's premier biennial confluence that explores the universe from "**surface to the deep space**". This journey reflects our enduring spirit of inquiry and our commitment to building a robust national scientific identity.

The National Space Science Symposium held its first edition in 1978 at Andhra University, Visakhapatnam. In the earlier scientific landscape, the event was strategically timed to precede the international COSPAR meetings, acting as a forum where papers intended for the international stage were first presented. As the symposium matured, its scope was broadened to encompass everything from "surface to the deep space," integrating both ground-based and space-borne studies. A significant historical shift occurred under the leadership of respected Dr. Kasturirangan, former Chairman, ISRO / Secretary, Department of Space, who sought to bridge the gap between disparate scientific groups—such as the Astronomical Society, which traditionally held separate meetings—and the atmospheric and space research communities. This evolution has transformed NSSS from a narrow focus on rocketry and related experiments into ISRO's premier biennial scientific forum, facilitating a unique multidisciplinary confluence of researchers in atmospheric, space, and planetary sciences, as well as astronomy and astrophysics.

The symposium has witnessed transformative enhancements in its recent editions, reflecting the changing landscape of our space sector. In **2022**, we expanded our horizons by introducing "**Enabling Technologies**" as a parallel session, acknowledging that scientific discovery and technological innovation are two sides of the same coin. ISRO also organized scientific **outreach in regional languages**, ensuring that the wonders of space science are accessible to the non-experts. The **2024 edition** marked yet another milestone by establishing a **dedicated Student Session** as a permanent parallel feature, providing a national platform for young minds to share their innovative "idea papers".

The **NSSS-2026 edition** not only retains the values added in the previous editions, but also continues this tradition of growth with two more significant value additions: a comprehensive **Regional Outreach Programme across nine regions of North-Eastern India** and the **strategic inclusion of start-ups and industries**. By conducting outreach and integrating industry partners, the symposium aims at breaking academic silos and create a unified national innovation pipeline that transforms scientific research into tangible technological capabilities.

These milestone events are the bedrock of our **Space Vision 2047**. As we work toward the **commissioning of the Bharatiya Antariksha Station (BAS)** by 2035 and the **landing of Indian Gaganyatris (Astronauts) on the Moon** by 2040 using indigenous technologies, NSSS acts as a primary catalyst. It provides the Space Science Exploration idea pool necessary to guide our deep-space ambitions. Today, NSSS is **no longer a conventional symposium**; it has gradually gained the status of a vital vehicle to take forward the country's space exploration programme, fuelled by **integrated national wisdom** from scientists, engineers, students, and entrepreneurs alike. The Technical Programme of NSS-2026 stands as a testament to that endeavor.

I wish this event all success.

Dr. Tirtha Pratim Das

Director, Science Programme Office
ISRO Headquarter, Bengaluru

Convener, National Organising Committee, NSSS-2026

WELCOME MESSAGE



It is my great pleasure to welcome you to the 23rd National Space Science Symposium (NSSS-2026), being hosted at the North Eastern Space Applications Centre (NESAC), Umiam, Meghalaya. This symposium represents one of the most important scientific gatherings in the North Eastern Region of India and is going to be a milestone towards advancing space science research and fostering collaboration among scientists, academicians, students, and industry partners.

After more than a year of dedicated planning and coordinated efforts by the various stakeholders, we are delighted to present a comprehensive and vibrant technical program for NSSS-2026. The enthusiastic response from the scientific community has been truly encouraging. We received a total of 931 abstracts, reflecting the diversity, depth, and growing momentum of space science research in India. Following a careful review process, 32 were not accepted and another 82 abstracts were withdrawn, resulting in a strong and high-quality technical program comprising contributions from leading researchers, emerging scientists, and students from across the country.

The symposium features a rich blend of plenary talks, invited lectures, oral and poster presentations, and focused technical sessions spanning key domains including space astronomy, planetary sciences, atmospheric and space physics, solar physics, and Earth and planetary exploration. To encourage the young researchers, we have specially kept the provision for SHORT ORAL oral presentation and a large number of abstracts shall be presented in this format.

Organizing this symposium at NESAC has been challenging but inspirational at the same time, as it reflects our collective commitment to give our best to organize such a vibrant and multi-faceted event eventually expanding our scientific engagement and capacity building across all regions of the country. We hope that NSSS-2026 will serve as a catalyst for enhanced research collaboration and increased participation of students and institutions from this region in the national space science programme.

On behalf of the Local Organizing Committee, I extend my sincere gratitude to Chair and Members of National Organizing Committee and Scientific Organizing Committee, all authors, reviewers, session chairs, speakers, sponsors, and volunteers whose dedicated efforts have made this symposium possible. Most importantly, I thank all participants for their valuable contributions and for being part of this important scientific event.

I wish you a productive, engaging, and inspiring NSSS-2026.

Sincerely,

Shyam S Kundu, Ph. D.

Organizing Secretary, NSSS-2026

Head, Space & Atmospheric Science Division, NESAC

ABOUT ISRO



Indian Space Research Organisation (ISRO)

Indian Space Research Organisation (ISRO) is the space agency of India. The organisation is involved in science, engineering and technology to harvest the benefits of outer space for India and the mankind. ISRO is a major constituent of the Department of Space (DOS), Government of India. The department executes the Indian Space Programme primarily through various Centres or units within ISRO.

ISRO was previously the Indian National Committee for Space Research (INCOSPAR), set up by the Government of India in 1962, as envisioned by Dr. Vikram A Sarabhai. ISRO was formed on August 15, 1969 and superseded INCOSPAR with an expanded role to harness space technology. DOS was set up and ISRO was brought under DOS in 1972.

The prime objective of ISRO/DOS is the development and application of space technology for various national needs. To fulfill this objective, ISRO has established major space systems for communication, television broadcasting and meteorological services; resources monitoring and management; space-based navigation services. ISRO has developed satellite launch vehicles, PSLV and GSLV, to place the satellites in the required orbits.

Alongside its technological advancement, ISRO contributes to science and science education in the country. Various dedicated research centres and autonomous institutions for remote sensing, astronomy and astrophysics, atmospheric sciences and space sciences in general function under the aegis of Department of Space. ISRO's own Lunar and interplanetary missions along with other scientific projects encourage and promote science education, apart from providing valuable data to the scientific community which in turn enriches science.

ISRO has its headquarters in Bengaluru. Its activities are spread across various centres and units. Launch Vehicles are built at Vikram Sarabhai Space Centre (VSSC), Thiruvananthapuram; Satellites are designed and developed at U R Rao Satellite Centre (URSC), Bengaluru; Integration and launching of satellites and launch vehicles are carried out from Satish Dhawan Space Centre (SDSC), Sriharikota; Development of liquid stages including cryogenic stage is carried out at Liquid Propulsion Systems Centre (LPSC), Valiamala & Bengaluru; Sensors for Communication and Remote Sensing satellites and application aspects of the space technology are taken up at Space Applications Centre (SAC), Ahmedabad and Remote Sensing satellite data reception processing and dissemination is entrusted to National Remote Sensing Centre (NRSC), Hyderabad.

The activities of ISRO are guided by its Chairman, who would also be the secretary of DOS and Chairman of Space commission – the apex body that formulates the policies and oversees the implementation of the Indian Space Programme.

ABOUT NESAC



NESAC was established on 5th September, 2000 at Umiam, Shillong, Meghalaya, as an autonomous institution under Dept. of Space (DOS), Govt. of India. The Centre has provided more than 25 years of dedicated service to the eight states of North Eastern Region (NER) of India using space science and technology. NESAC is mandated to provide space technology inputs and services to the process of developmental planning in the North Eastern Region (NER). The major roles of the Centre include:

- a) Providing operational remote sensing-based inputs for the development and management of natural resources and infrastructure in the region,
- b) Providing satellite communication-based applications in education, health, and disaster management support,
- c) Research on space and atmospheric science area and establish linkage with various academic institutions of NE region,
- d) Providing space-based support for management of disasters affecting NE region,
- e) Capacity building in different areas of space applications.

Management of NESAC is guided by the policy guidelines framed by NESAC Society, presided over by the Chairman, North Eastern Council. The administration of the Centre is looked after by the Governing Council under the Chairmanship of Secretary, Dept. of Space/ Chairman, ISRO. Secretary, NEC is the Alternate Chairman of the Governing Council. Director, NESAC is the Member Secretary of the Governing Council and Secretary of the Society.

The Centre is located at Umiam, about 20 km north of Shillong city in Meghalaya state covering an area of 10 acres. NESAC outreach facility along with hostel, residential complex and guest house are located within a distance of about one kilometer from the office in two separate campus covering about one acre and 10 acres respectively.

The Centre is actively supported by a core team of 41 Scientists/Engineers with expertise in diversified fields of technologies and applied science, meeting the centre's requirements and are supported by four technical support staff and eight office staff. The Centre also effectively utilizes the services of one INSPIRE Faculty Fellow, Research Scientists, Research Fellows and Project Associates, who are primarily involved in research projects while also contributing in ongoing application projects. NESAC has successfully completed over 400 projects to date.

OUR SPONSORS & EXHIBITORS



SPONSORS



PLATINUM



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मेघालय सरकार
Government of Meghalaya

SILVER



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Ministry of Earth Sciences



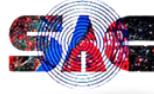
OTHERS



GOVERNMENT OF ASSAM
SCIENCE AND TECHNOLOGY DEPARTMENT
DIRECTORATE OF SCIENCE AND TECHNOLOGY



EXHIBITORS



भारत सरकार
Government of India
पृथ्वी विज्ञान मंत्रालय
Ministry of Earth Sciences



मेघालय सरकार
Government of Meghalaya



PROGRAM OVERVIEW



WEBSITE LINK

<https://nsss2026.in/program.php>



National Space Science Symposium - 2026

23rd – 27th February, 2026

NESAC, Umiam, Shillong, Meghalaya



PROGRAM SCHEDULE

Date	08:00 – 09:00	09:00 – 10:30	10:30 – 11:15	11:15 – 11:45	11:45 – 13:15	13:15 – 14:15	14:15 – 16:00	16:00 – 17:30	17:30 – 18:30	19:00 – 21:00
23 Feb, 2026 Monday	Registration (08:00 – 09:30)	Inaugural Session (09:30 – 11:00 Hrs)	Inauguration of Exhibition & High Tea (11:00 – 11:45 Hrs)		Special Session	Lunch Break	Technical Session – 1 (6 Parallel Sessions)	Poster Session, Exhibition & Tea/Coffee break	Breakout Meet (5 parallel sessions)	Cultural Program and Dinner
24 Feb, 2026 Tuesday	Registration	Plenary Session - 1	Interdisciplinary Talk – 1	Tea/Coffee break	Technical Session – 2 (6 Parallel Sessions)	Lunch Break	Technical Session – 3 (6 Parallel Sessions)	Poster Session, Exhibition & Tea/Coffee break	Breakout Meet (5 parallel sessions)	Dinner
25 Feb, 2026 Wednesday	Registration	Plenary Session - 2	Interdisciplinary Talk – 2	Tea/Coffee break	Technical Session – 4 (6 Parallel Sessions)	Lunch Break	Technical Session – 5 (6 Parallel Sessions)	Poster Session, Exhibition & Tea/Coffee break	Breakout Meet (5 parallel sessions)	
26 Feb, 2026 Thursday	Registration	Plenary Session - 3	Interdisciplinary Talk – 3	Tea/Coffee break	Technical Session – 6 (6 Parallel Sessions)	Lunch Break	Technical Session – 7 (6 Parallel Sessions)	Poster Session, Exhibition & Tea/Coffee break	Breakout Meet (5 parallel sessions)	
27 Feb, 2026 Friday	Registration	Plenary Session - 4	Interdisciplinary Talk - 3	Tea/Coffee break	Technical Session – 8 (6 Parallel Sessions)	Lunch Break	Valedictory Session			

KEYNOTE SPEAKERS

Public Lectures	Special Session	Plenary Session - 1	Plenary Session - 2	Plenary Session - 3	Plenary Session - 4
<ul style="list-style-type: none"> Shri A S Kiran Kumar, ISRO HQ Prof Dipankar Banerjee, IIST 	<ul style="list-style-type: none"> Dr. Ajit Kembhavi, IUCAA Dr. Prakash Chouhan, NRSC 	<ul style="list-style-type: none"> Prof. K. P. Singh, IISER, Mohali Dr. K. Sankarasubramanian, URSC Prof. Anil Bhardwaj, PRL 	<ul style="list-style-type: none"> Prof. Anandmayee Tej, IIST Dr. Annapurni Subramaniam, IIA Prof. D. Pallamraju, PRL 	<ul style="list-style-type: none"> Shri Robert P, URSC Shri Rijesh R, URSC Shri Gowrishankar C.K, URSC 	<ul style="list-style-type: none"> Dr. Tapan Mishra, Sisir Radar Dr. Rajeev Jyoti, InSPACE Shri Tanveer Ahmed, Digantara
		Interdisciplinary Talk – 1	Interdisciplinary Talk – 2	Interdisciplinary Talk - 3	Interdisciplinary Talk – 4
		Dr. Biman Nath, RRI	Gaganyatri Gr. Captain Shubhanshu Shukla AC, ISRO	Dr. S. P. Aggarwal, NESAC	Dr. Mayank Vahia, TIFR

VENUE

Inaugural & Valedictory Sessions	Special & Plenary Session & ID Talks	PS-1	PS-2	PS-3	PS-4	PS-5	PS-6
New Auditorium (Main Hall)	New Auditorium (Main Hall)	New Auditorium (Main Hall)	Hall-1 (New Auditorium)	Conference Hall (Outreach facility)	Smart classroom (Outreach facility)	Hall-2 (New Auditorium)	NESAC main campus Auditorium

DETAILED TECHNICAL PROGRAM



MONDAY

23.02.2026

PROGRAM AGENDA

TIME	INFORMATION	LOCATION
08:00-09:30	Registration	Outreach Facility
09:30-11:00	Inaugural Session	New Auditorium (Main Hall)
11:00-11:45	Inauguration Exhibition and High Tea	
11:45-13:15	Special Session Speaker 1- Dr. Ajit Kembhavi, IUCAA Speaker 2- Dr. Prakash Chouhan, NRSC	New Auditorium (Main Hall)
13:15-14:15	Lunch Break	
14:15-16:00	Technical Session (6 Parallel Sessions)	Several locations. See following pages for details
16:00-17:30	Poster Session & Tea/Coffee Break	
17:30-18:30	Break Out Session (5 Parallel Session)	
19:00-21:00	Cultural program & dinner (Hosted by Secretary, Department of Space)	



MONDAY 23 rd FEBRUARY 2026	🕒 11:45 – 13:15	📍 NEW AUDITORIUM (MAIN HALL)
SPECIAL SESSION Convener: Dr S. P. Aggarwal, Director, NESAC	AI for Space and Astronomy in India - Exciting Prospects Speaker: Dr. Ajit Kembhavi, Former Director, IUCAA	
	Hydrated Moon: Recent Findings and Future Plans Speaker: Dr. Prakash Chouhan, Director, NRSC	

13:15 – 14:15

LUNCH BREAK

MONDAY 23rd FEBRUARY 2026 14:15-16:00 Hrs PS-1	TECHNICAL SESSION-1 SPACE-BASED METEOROLOGY, OCEANOGRAPHY, GEOSPHERE- BIOSPHERE INTERACTIONS, AND CLIMATE CHANGE	LOCATION NEW AUDITORIUM (MAIN HALL)
	CHAIR : Prof. P K Bhuyan, Professor (Retd), DU CO-CHAIR : Dr. Mukunda Gogoi, SPL	

SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
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ORAL PRESENTATION

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 ₂ 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 PRESENTATION

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	Subhrajit Rath

8	NSSS2026ABS700	Fraction Parametrizations for Enhanced NWP Performance 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

MONDAY 23rd FEBRUARY 2026 14:15-16:00 Hrs PS-2	TECHNICAL SESSION-1 MIDDLE ATMOSPHERE, ATMOSPHERIC COUPLING, DYNAMICS, AERONOMY, CLIMATE CHANGE AND SUN-EARTH CONNECTION	LOCATION HALL-1 (NEW AUDITORIUM)
	CHAIR : Dr Tarun Pant CO-CHAIR : Dr N Dashora	

SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
ORAL PRESENTATION			
1	NSSS2026ABS701 (Lead Talk)	First multi-beam radar studies of F region irregularities beyond the equatorial ionization crest using the Haringhata radar in India	A. K. Patra
2	NSSS2026ABS737	Transient Jets in the Mesosphere Lower Thermosphere over the Southern Polar Latitudes Triggered by Geomagnetic Storms	Karanam Kishore Kumar
3	NSSS2026ABS214	Investigating Solar-Interplanetary Drivers of Three Extreme Geomagnetic Storms of Solar Cycles 23, 24, and 25	Swapnil Garg
4	NSSS2026ABS567	Proton Precipitation Driven Enhancements in Field-Aligned Currents During Solar Proton Events	Nishant Tiwari
5	NSSS2026ABS702	Geomagnetic Storms and their influence on Earth's upper and lower atmosphere over equatorial anomaly station	Bornali Chetia
6	NSSS2026ABS871	Ionospheric TEC Response to X-Class Solar Flares and Severe Geomagnetic Activity over India Using National CORS GNSS Data	Rani T.E
7	NSSS2026ABS475	Risk Assessment of Geomagnetically Induced Currents Over the Indian Sector in Comparison With American and African Sectors	Vishnupriya K S
8	NSSS2026ABS044	Ionospheric Perturbations at Mid and High Latitudes During the May 2024 Geomagnetic Superstorm from VLF and Satellite Observations	Jitiprova Ghosh
9	NSSS2026ABS579	Geomagnetic Control of Gravity Wave Dynamics in the Mid-Latitude Upper Atmosphere Under Daytime Conditions	Kshitiz Upadhyay
SHORT ORAL PRESENTATION			
1	NSSS2026ABS726	Impact of the May 2024 Geomagnetic Storm on Atmospheric Electric Field Variations in the Arctic	Kavita Meena
2	NSSS2026ABS572	Morphology of Quiet time Equatorial Ionization Anomaly over the Indian Region during Solar Cycle 24-25	Ayushi Srivastava
3	NSSS2026ABS737	Prediction of Total Electron Content by using Machine Learning Approach over Low Latitude Regions during Low Solar Activity Period	Barsha Dutta
4	NSSS2026ABS334	Ionospheric Response to the May 2024 Geomagnetic Superstorm: Insights from Mid-Latitude Observations	Dr. Tiju Joseph Mathew
5	NSSS2026ABS712	Pre-earthquake anomalous ionospheric signatures observed at low-mid latitude Indian station (Delhi and Pantnagar) during the August-September 2025 Earthquakes	Aastha Rawat

MONDAY 23rd FEBRUARY 2026 14:15-16:00 Hrs	TECHNICAL SESSION-1 SOLAR AND PLANETARY SCIENCES	LOCATION CONFERENCE HALL (OUTREACH FACILITY)
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PS-3		CHAIR : Dibyendu Chakrabarty CO-CHAIR : Girijesh Gupta	
SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
1	NSSS2026ABS377 (Lead Talk)	Coronal magnetometry through Hanle effect in EUV spectral lines	K. Nagaraju
2	NSSS2026ABS029	Dynamics of Reconnection Nanojets in Eruptive and Confined Solar Flares	Annu Bura
3	NSSS2026ABS675	Estimating physical parameters of filaments using Bayesian Inference	Upasana Baweja
4	NSSS2026ABS232	Connecting spicules and propagating coronal disturbances using radiative MHD simulations of the solar atmosphere	Sankalp Srivastava
5	NSSS2026ABS176	Seismological applications of 3-min slow magnetoacoustic waves propagating along individual umbral fan loops	Ananya Rawat
6	NSSS2026ABS061	Estimating Solar Wind Velocities Using Spacecraft Radio Signals	Keshav Aggarwal
7	NSSS2026ABS704	Towards a Solar Imaging X-ray Spectrograph: Science Drivers and Feasibility	Sreejith P

MONDAY 23rd FEBRUARY 2026 14:15-16:00 Hrs	TECHNICAL SESSION-1 ASTRONOMY AND ASTROPHYSICS	LOCATION SMART CLASS ROOM (OUTREACH FACILITY)
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PS-4		CHAIR : Dr Sarita Vig	
SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
1	NSSS2026ABS164 (Lead talk)	From Gas to Stars: Scaling Laws and Conversion Efficiencies in Dense Cluster-Forming Clumps	Manash Samal
2	NSSS2026ABS225	Unraveling the Feedback-regulated Star Formation Activities around the Expanding Galactic Mid-infrared Bubble HKS2019 E71	Aayushi Verma
3	NSSS2026ABS236	Dissecting Massive Stars in the SMC Shell with UVIT: From Main-Sequence to Stripped Binaries	Sipra Hota
4	NSSS2026ABS188	ATOMS and QUARKS: Gas kinematics in massive protocluster G318.049plus00.086: Evidence of competitive accretion	Shivani Gupta
5	NSSS2026ABS192	TRAO Survey of the Nearby Filamentary Molecular Clouds the Universal Nursery of Stars TRAO FUNS IV Filaments and Dense Cores in the W40 and Serpens South Regions of Aquila	Satyajeet Moharana
6	NSSS2026ABS162	The ALMA-QUARKS study: Evidence of an Explosive Molecular Outflow in IRAS 15520-5234	Ariful Hoque

MONDAY 23rd FEBRUARY 2026 14:15-16:00 Hrs	TECHNICAL SESSION-1 ENABLING TECHNOLOGIES FOR SPACE EXPLORATION	LOCATION HALL-2 (NEW AUDITORIUM)
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PS-5		CHAIR : Dr. Mehul Pandya CO-CHAIR : Dr. Raghu Ningthoujam	
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SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
ORAL PRESENTATION			
1	NSSS2026ABS711	Design of S band RF Diplexers for Spacecraft Testing applications	Raja Sharma
2	NSSS2026ABS133	Design and Realization of Single ended Subharmonic Mixer at K Band	Doki Venkata Vinay Kumar
3	NSSS2026ABS315	Reconfigurable multimode digital modem for spacecraft TTC applications employing a highly reliable reprogrammable flash based FPGA	Shravani Y
4	NSSS2026ABS331	Design of integrated waveguide to microstrip filter transition for mm-wave space applications	Rahul Menon

5	NSSS2026ABS636	Miniature programmable High voltage DC DC converter for Space application	Manan Shah
6	NSSS2026ABS335	Cost effective TMTC system for nanosatellite missions in Low Earth Orbit	Mohanbabu K
7	NSSS2026ABS796	Redundant Spatial Orientation Estimation Using IMU Sensors and EKF	Vedant Kothari
8	NSSS2026ABS349	Sustainable software development practices for mission critical space software	Savitha A
9	NSSS2026ABS541	Chip-scale Rubidium Vapour Cell based Atomic Magnetometer	Ishan Gunjal
10	NSSS2026ABS575	Simulation-Based Analysis of Inter-Satellite Link Requirements for Satellite Constellations	PVB Shilpa
11	NSSS2026ABS353	Optical Design of Compact Off Axis Three Mirror Anastigmat Telescope for Earth Observations	Madhavi Thakre

SHORT ORAL PRESENTATION

1	NSSS2026ABS170	Vibrational-Structural Analysis using Nanomaterials for re-entry module	Geetanjali Sambhaji
2	NSSS2026ABS122	Biofilm or Melanin-Based Lightweight Radiation Shielding for CubeSats	Bivanjit Paul
3	NSSS2026ABS618	Diagnostic systems for electric thruster characterization at Large Vacuum Test Facility	Vara Prasad K
4	NSSS2026ABS697	Distance-Based Localization and Vision-Guided Landing for Autonomous Planetary Rotorcraft	Atharva Sunil Chavan
5	NSSS2026ABS346	High Precision Indigenous Hybrid Optical Encoder for Satellite Applications	Ponmalar M

MONDAY
23rd FEBRUARY 2026
15:00-16:00 Hrs

PS-6

TECHNICAL SESSION-1

FROM EARTH OBSERVATION TO INTERPLANETARY MISSIONS: SHAPING THE FUTURE WITH SPACE SCIENCE

LOCATION

NESAC MAIN CAMPUS AUDITORIUM

CHAIR : Dr. Praveen Kumar

CO-CHAIR : Ms. Prapti Mittal

SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
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ORAL PRESENTATION

1	NSSS2026ABS903	Design And Analysis of a Cubesat Platform with Sintered Ndfeb Magnets for Active Decay Management	Sathiyavel C
2	NSSS2026ABS906	Optical Design and Analysis of Miniaturized Zoom Lenses for Remote Sensing Applications	Siba Prasad Pattnaik
3	NSSS2026ABS915	Optical Design and Analysis of a Widefield Reflective Imager For Remote Sensing Applications.	Ankit Kumar Pandey
4	NSSS2026ABS919	Machine learning based early prediction of solar flares using multi-payload data from Aditya-L1	Mrigna Narain
5	NSSS2026ABS953	Hydrated Minerals and Clay Minerals of Meridiani Planum, Mars: An Integrated Geomorphological and Spectral Analysis Using Multi-Resolution Orbital Datasets	Rozi Baishya
6	NSSS2026ABS954	Mineralogical Characterisation and Geomorphological Insights of Wapowski Crater	Sakthi Saravanan S

SHORT ORAL PRESENTATION

1	NSSS2026ABS934	Modelling the Lower Earth Orbit (Leo) Space Debris using Python: Implications for Future	Ahamika Pattnaik
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16:00 – 17:30

TEA / COFFEE + POSTER SESSION

MONDAY
23rd FEBRUARY 2026
16:00-17:30 Hrs

PS-1

SPACE-BASED METEOROLOGY, OCEANOGRAPHY, GEOSPHERE-BIOSPHERE INTERACTIONS, AND CLIMATE CHANGE

SL NO	ABSTRACT ID	ABSTRACT TITLE	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	NSSS2026ABS530	Development of a UAV based Pollution Sensing System	Lakshya Rasaprolu
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
14	NSSS2026ABS454	Estimating Background PM _{2.5} Concentrations Using a Wavelet-Based Convolution Framework	Vikas and Jyoti Bhat
15	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
16	NSSS2026ABS490	Global Aerosol Classification Machine Learning vs Non machine learning approaches	Swagata Mukhopadhyay
17	NSSS2026ABS505	Two decades of aerosol optical depth change over India's million-plus cities: disentangling emissions growth from meteorology (2005-2024)	Sukanya Bhattacharya
18	NSSS2026ABS343	Aerosol physical optical and radiative properties over central India from Atmospheric Research Testbed and satellite observations	Shravani Banerjee
19	NSSS2026ABS666	Evaluation of aerosol scattering coefficient using an Integrating Nephelometer and a Cavity attenuated phase shift-based (CAPS) extinction monitor.	Bhavesh Kuli
20	NSSS2026ABS725	Satellite-Based SHORT ORAL-Lead Severe-Weather Nowcasting and Monitoring over India	Abhishek Chhari

MONDAY 23 rd FEBRUARY 2026 16:00-17:30 Hrs		PS-2 MIDDLE ATMOSPHERE, ATMOSPHERIC COUPLING, DYNAMICS, AERONOMY, CLIMATE CHANGE AND SUN-EARTH CONNECTION	
SL NO	ABSTRACT ID	ABSTRACT TITLE	FIRST AUTHOR
1	NSSS2026ABS272	3D Tomographic Investigation of the Ionosphere During the May 2024 Geomagnetic Storm	Saurabh Jha
2	NSSS2026ABS152	Evidence of association of lower atmospheric gravity waves with the equatorial plasma bubbles	R. N. Ghodpage
3	NSSS2026ABS712	Pre-earthquake anomalous ionospheric signatures observed at low-mid latitude Indian station (Delhi and Pantnagar) during the August-September 2025 Earthquakes	Aastha Rawat
4	NSSS2026ABS297	Unusual Propagation of MSTIDs Observed on 31 January 2017: Evidence of Complex Electrodynamical Modulation over Low-Latitude Ionosphere	O. B. Gurav
5	NSSS2026ABS128	Solar cycle dependence of quasi two wave in the low latitude mesosphere and lower thermosphere region	S. Sathishkumar
6	NSSS2026ABS726	Impact of the May 2024 Geomagnetic Storm on Atmospheric Electric Field Variations in the Arctic	Kavita Meena
7	NSSS2026ABS572	Morphology of Quiet time Equatorial Ionization Anomaly over the Indian Region during Solar Cycle 24-25	Ayushi Srivastava
8	NSSS2026ABS737	Prediction of Total Electron Content by using Machine Learning Approach over Low Latitude Regions during Low Solar Activity Period	Barsha Dutta
9	NSSS2026ABS334	Ionospheric Response to the May 2024 Geomagnetic Superstorm: Insights from Mid-Latitude Observations	Dr. Tiju Joseph Mathew

MONDAY 23 rd FEBRUARY 2026 16:00-17:30 Hrs		PS-3 SOLAR AND PLANETARY SCIENCES	
SL NO	ABSTRACT ID	ABSTRACT TITLE	FIRST AUTHOR
1	NSSS2026ABS092	Investigating propagation of small-scale flare heat flux in the lower and upper atmosphere of solar active region	Girjesh Gupta
2	NSSS2026ABS760	Relation Between UV Emission and Magnetic Complexity in NOAA 14056	Munjiba M M
3	NSSS2026ABS265	Long-term Study of Active Longitudes from Kodaikanal Ca II K data	Dibya Kirti Mishra
4	NSSS2026ABS397	An Investigation into the Solar Origins of Geoeffective Coronal Mass Ejections from 1997 to 2024	Saurabh Tripathi
5	NSSS2026ABS736	Probing Coronal Magnetism and Space Weather with the Wide-Band Solar Radio Spectrograph (WBSRS): A Ground-Based Full-Stokes Instrument at USO-PRL	Kushagra Upadhyay
6	NSSS2026ABS762	Space Weather during Extremely Disturbed Geomagnetic Conditions and Associated Cosmic Rays Intensity Variation	Subhash Chandra Kaushik

MONDAY 23 rd FEBRUARY 2026 16:00-17:30 Hrs		PS-4 ASTRONOMY AND ASTROPHYSICS	
SL NO	ABSTRACT ID	ABSTRACT TITLE	FIRST AUTHOR
1	NSSS2026ABS239	Astrosat detection of Lyman continuum leakers at z 1-2	Suraj Dhiwar
2	NSSS2026ABS284	Unravelling the kinematic morpholgy of the Small Magellanic Cloud	Dhanush S R
3	NSSS2026ABS229	Investigating Spectral Lag Evolution and Pulse Correlations in Gamma-Ray Bursts	Khushboo Sharma
4	NSSS2026ABS080	Joint Investigation in Optical and X-ray Galaxies-AGN connection	Navya Saraswat
5	NSSS2026ABS076	Investigating the Relationship between Black Hole Mass and Galaxy Dynamics in Seyfert Type II via Spectropolarimetry Data	Jashanpreet Singh Dingra
6	NSSS2026ABS184	Epeak and Alpha Correlation in Time Resolved GRB spectra: A Bottom to top Approach with Synchrotron and Inverse Compton	Pragyan Pratim Bordoloi

		Models	
7	NSSS2026ABS713	Investigating the temporal and spectral nature of Mrk 590 through multiwavelength signatures	Arya Sudhakaran
8	NSSS2026ABS226	Periodic signal in chaos: detection of quasi periodic oscillations in the blazar 3C 454.3	Karan Dogra
9	NSSS2026ABS231	Unveiling Cold Accretion Streams Through a Partial Lyman Limit System	Sumukha R Bharadwaj
10	NSSS2026ABS344	Some Consequences of MONG for Tidal Forces in Fornax cluster	Louise Rebecca
11	NSSS2026ABS484	Role of CMB Photon Density in Shaping AGN Jet Emissions Across Cosmic Time	Aditya Sharma
12	NSSS2026ABS117	Baryonic Ecosystem IN Galaxies BEINGMgII III Cool gas reservoirs at 03 z 16 in the Dark Energy Survey	Reena Chaudhary
13	NSSS2026ABS119	Constraining the Hubble parameter with the 21-cm brightness temperature signal in a universe with inhomogeneities	Subhadeep Mukherjee
14	NSSS2026ABS126	Bar Formation in Low-Surface-Brightness Galaxies: Testing the Role of Dark Matter Halo Spin	Neha
15	NSSS2026ABS175	Broadband Spectral Modeling of Blazars: Constraining the Lorentz Factor and Gamma-Ray Emission Site	Ajay Sharma
16	NSSS2026ABS190	Quantifying uncertainties in CatWISE 2020 quasar survey:Is there really a cosmic dipole anomaly.	Masroor Bashir
17	NSSS2026ABS142	Physics of the fractal-nature of star formation in nearby galaxies	Shashank Gairola
18	NSSS2026ABS516	Unveiling the 2024 Outburst of the SMC Pulsar RX J0032.9-7348: Broadband Timing and Spectral Insights	Birendra Chhotaray
19	NSSS2026ABS252	Investigating Temporal Features in 200 Swift GRB Afterglows: A Comparative Study of UVOT and XRT Data	Amit Kumar
20	NSSS2026ABS130	Exploring the Diversity of Type Ia Supernovae: Insights from SN 2022eyw and Ongoing Studies	Hrishav Das

MONDAY
23rd FEBRUARY 2026
16:00-17:30 Hrs

PS-5

ENABLING TECHNOLOGIES FOR SPACE EXPLORATION

SL NO	ABSTRACT ID	ABSTRACT TITLE	FIRST AUTHOR
1	NSSS2026ABS293	First Light Results of the DMD based Multi Object Spectrograph	Vineeth Valsan
2	NSSS2026ABS820	Autonomous Rover and Swarm-Assisted Sample Return with Dust-Resistant and Soft Robotic Arm Mechanisms for Next-Generation Planetary Exploration	Ananta
3	NSSS2026ABS361	In-Situ Resource Utilization for sustained human presence on Mars	Arun Nyamagoudar
4	NSSS2026ABS436	Iono Delay of Super Storm, 10th May, 2024-A Comparison of Equator and Pole	Shubhadeep Biswas
5	NSSS2026ABS017	Technology Design And Simulation Of Mars Habitat For Human Settlement	Shubham Bagade
6	NSSS2026ABS300	Elevating India's Cosmic Odyssey : AI Driven Sustainable Communication Architectures for Deep Space Exploration	Devanshi Verma
7	NSSS2026ABS845	Electromagnetic Dust Shielding for Lunar Surface Applications	Devansh Bhatia
8	NSSS2026ABS847	Origami-Inspired Expandable Habitats for Lunar Surface Missions	Devansh Bhatia
9	NSSS2026ABS472	Renewable and Hybrid Power Architectures for Human Deep Space Exploration	Manoj Kumar Singh
10	NSSS2026ABS139	Development of Communication System Technologies for Deep Space Exploration	Yogesh Parth
11	NSSS2026ABS818	Space Weather RAdio (SWARA) Polarimeter - A radio and plasma wave payload for future Indian Space missions	Mugundhan Vijayaraghavan
12	NSSS2026ABS240	Liquid Breathing G Protection for Human Piloted Hypersonic Entry: Perfluorocarbon Ventilation with One Atmosphere Suit	Allen John Darin J
13	NSSS2026ABS292	Geant4-based application to calculate dosimetric parameters of Galactic Cosmic Rays	Vivek Kaushik

MONDAY
23rd FEBRUARY 2026
16:00-17:30 Hrs

PS-6

FROM EARTH OBSERVATION TO INTERPLANETARY MISSIONS: SHAPING THE FUTURE WITH SPACE SCIENCE

SL NO	ABSTRACT ID	ABSTRACT TITLE	FIRST AUTHOR
1	NSSS2026ABS934	Modelling the Lower Earth Orbit (Leo) Space Debris using Python: Implications for Future	Ahamika Pattnaik

17:30 – 18:30

BREAKOUT MEET

19:00 – 21:00

**CULTURAL PROGRAM & DINNER
(HOSTED BY SECRETARY, DEPARTMENT OF SPACE)**



TUESDAY

24.02.2026

PROGRAM AGENDA

TIME	INFORMATION	LOCATION
08:00-09:00	Registration	Outreach Facility
09:00-10:30	Plenary Session-1 India's Space Science Missions and outcomes (3 Talks)	New Auditorium (Main Hall) See following pages for details
10:30-11:15	Interdisciplinary Talk-1 Animal Astronomers: How animals see stars Speaker – Dr. Biman Nath, RRI	New Auditorium (Main Hall)
11:15-11:45	Tea/Coffee Break	
11:45-13:15	Technical Session (6 Parallel Session)	Several locations See following pages for details
13:15-14:15	Lunch Break	
14:15-16:00	Technical Session (6 Parallel Session)	Several locations See following pages for details
16:00-17:30	Poster Session, Exhibition, and Tea/Coffee Break	
17:30 – 18:30	Breakout Sessions (5 parallel sessions)	
19:00-21:00	Dinner (Hosted by Director, NESAC)	

TUESDAY 24th FEBRUARY 2026 09:00-10:30 Hrs	PLENARY SESSION-1	LOCATION NEW AUDITORIUM (MAIN HALL)
	CONVENER : Dr. Tirtha P. Das, SPO, ISRO HQ	
SI. NO	TOPIC	SPEAKER
1	Scientific results from Astrosat	Prof. K. P. Singh, IISER, Mohali
2	Scientific results from Aditya-L1	Dr. K. Sankarasubramanian, URSC
3	Scientific Results from Recent Lunar Missions of India	Prof. Anil Bhardwaj, PRL

TUESDAY 24th FEBRUARY 2026 10:30-11:15 Hrs	INTERDISCIPLINARY TALK-1	LOCATION NEW AUDITORIUM (MAIN HALL)
SI. NO	TOPIC	SPEAKER
1	Animal Astronomers: How animals see stars	Dr. Biman Nath, RRI

11:15 – 11:45

TEA/COFFEE BREAK

TUESDAY 24th FEBRUARY 2026 11:45-13:15 Hrs PS-1	TECHNICAL SESSION-2 SPACE-BASED METEOROLOGY, OCEANOGRAPHY, GEOSPHERE-BIOSPHERE INTERACTIONS, AND CLIMATE CHANGE	LOCATION NEW AUDITORIUM (MAIN HALL)	
	CHAIR : Dr. M. Venkat Ratnam, NARL CO-CHAIR : Dr. D. Jagadheesha, ISRO HQ		
SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
ORAL PRESENTATION			
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 size: 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 PRESENTATION			
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 over Hyderabad, India: A 17-Year Multi-Platform Assessment of	Jayachandran V

		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 ORAL-Lead Severe-Weather Nowcasting and Monitoring over India	Abhishek Chhari

TUESDAY 24th FEBRUARY 2026 11:45-13:15 Hrs PS-2	TECHNICAL SESSION-2 MIDDLE ATMOSPHERE, ATMOSPHERIC COUPLING, DYNAMICS, AERONOMY, CLIMATE CHANGE AND SUN-EARTH CONNECTION	LOCATION HALL-1 (NEW AUDITORIUM)
	CHAIR : Dr. Jayachandran P T CO-CHAIR : Dr T.K. Ramkumar	

SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
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ORAL PRESENTATION

1	NSSS2026ABS011 (Lead Talk)	Precision of Total Electron Content Estimated Using GPS Observables	Jayachandran P T
2	NSSS2026ABS081	NARL-Gadanki Airglow Imager Observation of Latitude vs. Time Dependence of Getting Pinched Off of Field-aligned Equatorial-Ionospheric Plasma-Irregularities	T. K. Ramkumar
3	NSSS2026ABS565	Solar Wind Density Pulse Effects on FAC Under Variable IMF Orientations.	Sirsha Nandy
4	NSSS2026ABS264	Modelling the Magnetic Local Time asymmetry in the ring current	Deeksha Rai
5	NSSS2026ABS423	Quantifying Global Ionospheric TEC Response to Geomagnetic Storms: Seasonal, Latitudinal, and Local Time Perspectives	Shubham Mehta
6	NSSS2026ABS476	Statistical Investigation of Intense Geomagnetic Storms with SYMH between -150 nT and -100 nT Using GOLD Observations During Solar Cycle 25	Shimna Kannoth
7	NSSS2026ABS187	Overestimation of the bottom-side ionospheric TEC in the IRI model over low latitude regions	K. Venkatesh
8	NSSS2026ABS325	Trans-Atmospheric Coupling of a Greenland Megatsunami: Fjord-Seiche Forcing, Acoustic-Gravity Wave Excitation, and Multi-Day Ionospheric Imprints from the 16 September 2023 Rock-Ice Avalanche	Tamanna Singh
9	NSSS2026ABS631	MIGHTI observations of thermospheric O(1D) dayglow emission and its comparison with the GLOW model over Ahmedabad, India	Dheerajkumar Khonde

SHORT ORAL PRESENTATION

1	NSSS2026ABS432	Modeling Storm-Time Response of the Equatorial Ionosphere: Coupled Roles of Electric Fields and Meridional Winds	Arya Ashok
2	NSSS2026ABS759	Quantification of the Variability of Thermospheric O/N2 Density during Recent Geomagnetic Storms - Inferences from GOLD and GUVI Observations	Archana R.K
3	NSSS2026ABS435	Effect of solar forcing and tropospheric convection in OH intensity and temperature variabilities over Ahmedabad.	Kiran
4	NSSS2026ABS442	Scales of perturbations in long time series of GPS scintillations over multiple stations in the Indian sector	Ram Kumar Vankadara
5	NSSS2026ABS561	Distinct impacts of the extreme space weather events of 2024 on the low latitude ionospheric dynamics in the Indian sector as captured by combined) space and ground-based plasma measurements	K. Venkatesh

TUESDAY 24 th FEBRUARY 2026 11:45-13:15 Hrs PS-3		TECHNICAL SESSION-2 SOLAR AND PLANETARY SCIENCES	LOCATION CONFERENCE HALL (OUTREACH FACILITY)
		CHAIR : K. Sankarasubramanian CO-CHAIR : Sreejith P	
SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
1	NSSS2026ABS427	ASPEX-STEPS on board Aditya-L1: Configuration, Performance and High-energy particle measurements from the Sun-Earth L1 point	Bijoy Dalal
2	NSSS2026ABS525	Multi-directional investigations of suprathermal ions during quiet and disturbed times using ASPEX/Aditya L1 measurements	Aakash Gupta
3	NSSS2026ABS557	Strong energization of solar energetic particles as evident from measurements by ASPEX-STEPS on board Aditya-L1	Bijoy Dalal
4	NSSS2026ABS668	A spatio-temporal hybrid deep learning model for forecasting multiple solar wind parameters at L1 point	Santanu Maity

TUESDAY 24 th FEBRUARY 2026 11:45-13:15 Hrs PS-4		TECHNICAL SESSION-2 ASTRONOMY AND ASTROPHYSICS	LOCATION SMART CLASS ROOM (OUTREACH FACILITY)
		CHAIR : Prof. K P Singh	
SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
ORAL PRESENTATION			
1	NSSS2026ABS863 (Lead Talk)	Multi-Messenger Astronomy and SED Modeling of Blazars: A tool to understand the cosmic accelerators in our universe	Sunil Chandra
2	NSSS2026ABS438	Revisiting the Boundaries of Radio Relics: Insights from uGMRT, and MeerKAT Observations	Nasmi S Anand
SHORT ORAL PRESENTATION			
1	NSSS2026ABS212	Signatures of gas inflow and infall in a massive star forming region G339.88-1.26 .	Tunir Kundu
2	NSSS2026ABS835	Developing an XMM-Newton Pipeline for Galaxy Cluster X-ray Analysis: A Framework Inspired by ClusterPyXT	Riya Rathore
3	NSSS2026ABS409	A Low cost Instructional Interferometer using DIY Horn Antenna	Sangeetha A
4	NSSS2026ABS792	Small telescope astronomy : lessons from PRL's 50cm telescope and indigenous supporting equipments	Alka
5	NSSS2026ABS439	Probing the Epoch of Reionization with the uGMRT Band-2: Challenges and Opportunities in Foreground Mitigation	Rashmi Sagar
6	NSSS2026ABS388	Search for Megaparsec size Giant Radio Sources from TIFR GMRT Sky Survey	Netai Bhukta

TUESDAY 24 th FEBRUARY 2026 11:45-13:15 Hrs PS-5		TECHNICAL SESSION-2 ENABLING TECHNOLOGIES FOR SPACE EXPLORATION	LOCATION HALL-2 (NEW AUDITORIUM)
		CHAIR : Dr. Mehul Pandya CO-CHAIR : Dr. Dinakar Prasad Vajja	
SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
ORAL PRESENTATION			
1	NSSS2026ABS332 (Lead Talk)	Bhaskaracharya Observatory for Search of Exoplanets A futuristic space mission for the search of Earth Twins	Abhijit Chakraborty
2	NSSS2026ABS823	Vacuum Pyrolysis Characterisation of Lunar Regolith Simulant	Dr. Ganesh P
3	NSSS2026ABS259	SEAMS: A space mission dedicated to ultra-low frequency radio observations	Abhirup Datta
4	NSSS2026ABS837	Hybrid Dust Mitigation System For Solar Panels On Lunar And Martian Surfaces.	Yashasvi C Patil

5	NSSS2026ABS587	Evolution of a unique method for thermal conductivity measurement of Lunar Regolith using ChaSTE probe in Chandrayaan 3 mission.	Fazil Mohammad1
6	NSSS2026ABS747	Self-cleaning strategy for solar panels in the dusty Lunar/Martian environment	Nazeer Ahmad
7	NSSS2026ABS750	Operations-aware Tisserand Graphs for Arbitrary Multi-Planet Flyby Chains	Sourav Ghosh
8	NSSS2026ABS291	Polarization study of Platinum coated mirrors in EUV for Spectropolarimeter	Savitha M S
9	NSSS2026ABS132	Real-time data broadcast system for dissemination of astronomical events detected by satellite to ground	Rahul G Waghmare
10	NSSS2026ABS743	Advancements in the Airglow Photometry/Imaging Experiment for upcoming Space Missions: Transition from CCD to High-Speed CMOS Detectors and Prototype Development	R. Pathak
11	NSSS2026ABS115	Dynamic UV sky simulation with transient M dwarf Flares	Akshank Tyagi

SHORT ORAL PRESENTATION

1	NSSS2026ABS293	First Light Results of the DMD based Multi Object Spectrograph	Vineeth Valsan
2	NSSS2026ABS820	Autonomous Rover and Swarm-Assisted Sample Return with Dust-Resistant and Soft Robotic Arm Mechanisms for Next-Generation Planetary Exploration	Ananta
3	NSSS2026ABS361	In-Situ Resource Utilization for sustained human presence on Mars	Arun Nyamagoudar

TUESDAY
24th FEBRUARY 2026
12:15-13:15 Hrs

PS-6

TECHNICAL SESSION-2

FROM EARTH OBSERVATION TO INTERPLANETARY MISSIONS: SHAPING THE FUTURE WITH SPACE SCIENCE AND HUMAN SPACE EXPLORATION

CHAIR : Dr. Harish Karnatak

CO-CHAIR : Shri M Somorjit Singh

LOCATION

NESAC MAIN CAMPUS AUDITORIUM

SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
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ORAL PRESENTATION

1	NSSS2026ABS966	Edge-ai enabled semanticcompression for satellite image transmission	Hitesh Sunkari
2	NSSS2026ABS895	Cryogenic "laser-based space debris mitigation and active removal system (CLDDS)"	N T Keerrthana
3	NSSS2026ABS939	A Study of Stars with Extragalactic Origin in the Stellar Halo of the Milky Way	Kshitij Chandrakar
4	NSSS2026ABS962	information centric networking (ICN) paradigm in satellite	Abi

SHORT ORAL PRESENTATION

1	NSSS2026ABS895	Space junk and its effects on re-entry into the earth	Nishanth M
2	NSSS2026ABS935	Planetary data explorer: a web platform with a conversational interface	Harshal Paliwal
3	NSSS2026ABS929	Supplementation of controlled vitamin d through biodegradable oral dissolving strip using carboxymethyl nanocellulose	Adithya S R

13:15 – 14:15

LUNCH BREAK



TUESDAY
24th FEBRUARY 2026
15:00-16:00 Hrs

PS-1

TECHNICAL SESSION 3

HUMAN SPACE EXPLORATION AND INTERDISCIPLINARY APPROACHES: SPACE SCIENCE MEETS LIFE AND EARTH SCIENCES

LOCATION

NEW AUDITORIUM (MAIN HALL)

CHAIR : Dr. Som Kumar Sharma, PRL

CO-CHAIR : Dr. Imran A. Girach, SAC

SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
ORAL PRESENTATION			
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 PRESENTATION			
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
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 _{2.5} 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 _{2.5} 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	Kankana Ghosh

26	NSSS2026ABS588	Radiative Forcing in Two Distinct Urban Climates of India Implications of Sea Breeze Circulation on the Atmospheric Aerosol Environment in the Houston Coastal Region	Tamanna Subba
27	NSSS2026ABS613	Seasonal Variability in Ultrafine PM1 Pollution the northwestern Indian Himalayan Region: Ground monitoring and Machine Learning	Anil Singh Salal
28	NSSS2026ABS627	Impact of Atmospheric Parameters on PM2.5 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 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
34	NSSS2026ABS783	Sustainable Synthesis of Bio-Waste-Derived Graphene for Bioaerosol Mitigation in Ambient Air	Mohammad Ikbal
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

TUESDAY 24th FEBRUARY 2026 14:15-16:00 Hrs PS-2	TECHNICAL SESSION-3 MIDDLE ATMOSPHERE, ATMOSPHERIC COUPLING, DYNAMICS, AERONOMY, CLIMATE CHANGE AND SUN-EARTH CONNECTION	LOCATION HALL-1 (NEW AUDITORIUM)
	CHAIR : Dr. P K Bhuyan CO-CHAIR : Dr. Arup Borgohain	

SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
ORAL PRESENTATION			
1	(Lead Talk)	Storm induced F layer uplift at midlatitudes during an intense geomagnetic disturbance	Dr. P K Bhuyan
2	NSSS2026ABS741	Evening Vertical Plasma Drift at Midlatitudes: Comparative Study from Nicosia and Eglin	Dr. Tiju Joseph Mathew
3	NSSS2026ABS465	Equatorial Variation of Nitric Oxide Emission during Mother's Day Superstorm May 2024	Gaurav Bharti
4	NSSS2026ABS146	NARL All Sky CCD Imager Observations of Sodium Gravity Wave Activity, OH Filamentary Structures and Depletion Dominated Signatures	Suparba Goswami
5	NSSS2026ABS569	Characterization of the Rayleigh Surface Waves from Ionospheric Observations during the Mw 9.1 Tohoku-Oki Earthquake	Sunil Saini
6	NSSS2026ABS198	Quiet time enhancements and decrements in the day-to-day TEC variations over the Indian equatorial and low latitudes	Sandip Bhattacharyya
7	NSSS2026ABS140	Dynamics of Ionospheric Plasma Bubbles with stand alone NavIC receiver	Bhuvnesh Brawar
8	NSSS2026ABS215	EMIC wave-driven energetic particle precipitation during the recovery phase of a geomagnetic storm.	S. Deepak
SHORT ORAL PRESENTATION			
1	NSSS2026ABS386	Role of background meteorological and thermo-dynamical parameters on the Lightning activity over two contrasting rural and urban locations	Ghanashyam Sharma
2	NSSS2026ABS033	Atmospheric Electric Field as a Potential Indicator of Air Quality Index during Severe Winter Pollution	Rakhijul Alam Faruque
3	NSSS2026ABS048	Solar Transient Plasma Flows and Space Weather during	Sonia Kaushik

		Recent Solar Cycles	
4	NSSS2026ABS071	10-11 May 2024 geomagnetic superstorm impact on the d-region ionosphere over the Indian low-latitude region	Debarchan Kar
5	NSSS2026ABS718	Unveiling Polar Ionospheric Dynamics During the May 2024 Superstorm: Insights from High-Latitude GNSS Observations (with an addendum on the 10–11 October 2024 geomagnetic storm)	Tamanna Singh
6	NSSS2026ABS047	Dynamics of the Geophysical Plasma Events and Their Interplanetary Consequences	Subhash Chandra Kaushik

TUESDAY 24th FEBRUARY 2026 14:15-16:00 Hrs PS-3	TECHNICAL SESSION-3 SOLAR AND PLANETARY SCIENCES	LOCATION CONFERENCE HALL (OUTREACH FACILITY)
	CHAIR : K. Sankarasubramanian CO-CHAIR : Sreejith P	

SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
1	NSSS2026ABS150	An intense geomagnetic storm originated from stealth Coronal Mass Ejection: remote and in situ observations by near radially aligned spacecraft	P Vemareddy
2	NSSS2026ABS273	A Comparative Analysis of Earth Magnetopause Response During the Mother's Day Storm Based on Multi Satellite Data	Amar Deep
3	NSSS2026ABS106	Geomagnetic storm induced attitude disturbance in GEO spacecraft	R. Subramani
4	NSSS2026ABS110	Impact of space weather parameters on evolution of GEO Transfer Orbit - a sensitivity analysis	M. R. Rajesh Kannan

TUESDAY 24th FEBRUARY 2026 14:15-16:00 Hrs PS-4	TECHNICAL SESSION-3 ASTRONOMY AND ASTROPHYSICS	LOCATION SMART CLASS ROOM (OUTREACH FACILITY)
	CHAIR : Dr. Sachindra Naik	

SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
1	NSSS2026ABS296 (Lead talk)	AstroSat, Chandra, and HST Observations of two nearby galaxies: NGC 3627 and NGC 4321	Dr. K. P. Singh
2	NSSS2026ABS131	Dwarf-dwarf interactions and their impact on Star formation	Rakshit Chauhan
4	NSSS2026ABS156	Role of Galaxy Cluster Environments in Shaping Galactic Outflows: Insights from Abell 2199	Chandan Watts
5	NSSS2026ABS083	Tracing Galaxy Evolution through Interactions in Roberts Quartet with MUSE and Multiwavelength Observations	Saili Keshri
6	NSSS2026ABS498	Probing Radio Source Populations with uGMRT Deep Field Observations	Pritam Hore

TUESDAY 24th FEBRUARY 2026 14:15-16:00 Hrs PS-5	TECHNICAL SESSION-3 ENABLING TECHNOLOGIES FOR SPACE EXPLORATION	LOCATION HALL-2 (NEW AUDITORIUM)
	CHAIR : Shri Sivasubramony S CO-CHAIR : Ms. Arpita Gajaria	

SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
ORAL PRESENTATION			
1	NSSS2026ABS204 (Lead Talk)	Transcriptomic Profiling of C2C12 Cells Exposed to Microgravity and Radiation: Identifying Stress-Responsive Genes and Therapeutic Targets	Subhrajit Barua
2	NSSS2026ABS545	ECHO Capsule: A Narrative Mental Systems Check-Up	Dr Ch N Sowgandhi
3	NSSS2026ABS134	High temperature crystal growth experiments under microgravity on board the International Space Station and Recoverable Satellite: A leap towards space manufacturing	Nirmal Kumar Velu

4	NSSS2026ABS450	Human rating in space operations	Dr YS Dahiya
5	NSSS2026ABS103	Design of Crew Quarters Structure for Bharatiya Antariksha Station	Priyansh Jain
6	NSSS2026ABS065	Smart Autonomous Health Monitoring Space Suit with predictive Safety System for Astronauts	Peddireddy Akhila
7	NSSS2026ABS514	Medical Emergency Simulation in Space Analogue Experiment: Implication for Human Spaceflight Missions	Dr Polash Sannigrahi
8	NSSS2026ABS513	Head-Down Tilt Bed Rest as a Microgravity Analogue: Quantifying Physiological Responses Over Seven Days	Dr Divya N
9	NSSS2026ABS257	Ergonomic Evaluation of Space Station Crew Quarters Using Virtual Fit Mapping and Indian Anthropometric Data	Hitesh Arvindan R
10	NSSS2026ABS667	Enhancement of an Antecedent Lunar Landing Pad Fabrication System via Material Optimization and Advanced Device Integration	Atharva Deshmukh
11	NSSS2026ABS246	Physics of space physiology - 2: The precarious biosphere of life support systems	Gp Capt P Biswal

SHORT ORAL PRESENTATION

1	NSSS2026ABS139	Development of Communication System Technologies for Deep Space Exploration	Yogesh Parth
2	NSSS2026ABS818	Space Weather RAdio (SWARA) Polarimeter - A radio and plasma wave payload for future Indian Space missions	Mugundhan Vijayaraghavan
3	NSSS2026ABS240	Liquid Breathing G Protection for Human Piloted Hypersonic Entry: Perfluorocarbon Ventilation with One Atmosphere Suit	Allen John Darin J
4	NSSS2026ABS292	Geant4-based application to calculate dosimetric parameters of Galactic Cosmic Rays	Vivek Kaushik

TUESDAY
24th FEBRUARY 2026
15:00-16:00 Hrs

PS-6

TECHNICAL SESSION-3

HUMAN SPACE EXPLORATION AND INTERDISCIPLINARY APPROACHES: SPACE SCIENCE MEETS LIFE AND EARTH SCIENCES

CHAIR : Shri Himangshu Pandey

CO-CHAIR : Ms Prapti Mittal

LOCATION

NESAC MAIN CAMPUS AUDITORIUM

SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
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ORAL PRESENTATION

1	NSSS2026ABS936	INTEGRATED TEXTILE-BASED DUAL ECG/EMG SENSORS FOR ASTRONAUT HEALTH MONITORING	SREENIVASON A V
2	NSSS2026ABS892	SMART EMBEDDED LIFE SUPPORT SYSTEM (SELISA) FOR HUMAN SPACE EXPLORATION AND LUNAR SUIT ENVIRONMENTS	Peddireddy Akhila
3	NSSS2026ABS917	"HUMAN ADAPTABILITY IN SPACE THROUGH SYMBIOTIC MICRO-ORGANISMS"	Shreya Pandey
4	NSSS2026ABS941	MARS ANALOG MISSIONS: NASA'S CHAPEA AND ISRO'S HOPE	Avishi Gunjan Bidasaria
5	NSSS2026ABS926	InSight India	Sai Sidharth Parcha

SHORT ORAL PRESENTATION

1	NSSS2026ABS938	Human space exploration	Shubham Satyawali
2	NSSS2026ABS899	Low-cost infrared optical wireless communication system for real-time emg signal transmission	Bodireddy Jaswanth

16:00 – 17:30

TEA / COFFEE + POSTER SESSION



TUESDAY
24th FEBRUARY 2026
17:00-18:00 Hrs

PS-6

TECHNICAL SESSION-4

INTERDISCIPLINARY APPROACHES: SPACE SCIENCE MEETS
LIFE AND EARTH SCIENCES&NEXT-GENERATION SPACE
MISSIONS: MOON, MARS, AND BEYOND

CHAIR : Dr. D Chutia
CO-CHAIR : Ms Prapti Mittal

LOCATION

NESAC MAIN CAMPUS AUDITORIUM

SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
ORAL PRESENTATION			
1	NSSS2026ABS931	Dark matter density profiles in galaxies: constraints from neutron star merger rates	Shri Hari B.G
2	NSSS2026ABS951	Landslide spatial prediction using ai and geospatial technology for the nilgiris district of tamil nadu, india	Amlan Pal
3	NSSS2026ABS958	AI-Driven Assessment of Liquefaction Probability in Shillong City Using Remote Sensing Data Inputs	Sananda MONDAL
4	NSSS2026ABS925	Search for Extraterrestrial Life Through the Cosmic Life Viability Metric	Telikicherla V R R S Sritodbhav
5	NSSS2026ABS937	Identifying halo stars in the milky way using apogee-dr17 stellar parameters: an exploratory and feature selection analysis	Swasti Mathur
6	NSSS2026ABS959	The silent sentinels: using earth's endolithic microbiomes as a predictive model for biosignature detection on mars	Niva Sharma
7	NSSS2026ABS891	Lunar Crater Detection from Chandrayaan-2 OHRC Data using Deep Learning	Twarita Kasabe

TUESDAY
24th FEBRUARY 2026
16:00-17:30 Hrs

PS-1

SPACE-BASED METEOROLOGY, OCEANOGRAPHY, GEOSPHERE-BIOSPHERE INTERACTIONS, AND CLIMATE CHANGE

SL NO	ABSTRACT ID	ABSTRACT TITLE	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
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 _{2.5} 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 Advectioned Aerosols on Cloud Microphysics in the Western Ghats, India	Arindam Das
22	NSSS2026ABS393	Disentangling Meteorological and Emission Drivers of PM _{2.5} 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 ₁ Pollution the northwestern	Anil Singh Salal

		Indian Himalayan Region: Ground monitoring and Machine Learning	
28	NSSS2026ABS627	Impact of Atmospheric Parameters on PM2.5 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 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
34	NSSS2026ABS783	Sustainable Synthesis of Bio-Waste-Derived Graphene for Bioaerosol Mitigation in Ambient Air	Mohammad Iqbal
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
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

TUESDAY 24 th FEBRUARY 2026 16:00-17:30 Hrs		PS-2 MIDDLE ATMOSPHERE, ATMOSPHERIC COUPLING, DYNAMICS, AERONOMY, CLIMATE CHANGE AND SUN-EARTH CONNECTION	
SL NO	ABSTRACT ID	ABSTRACT TITLE	FIRST AUTHOR
1	NSSS2026ABS144	An Integrated Framework for Modeling Daytime and Seasonal Variability in VLF Signal Propagation	Sayak Chakraborty
2	NSSS2026ABS116	Ionospheric and Atmospheric Disturbances as Precursors to the 2025 Myanmar Earthquake	Gahul Amin
3	NSSS2026ABS251	Low Latitude Ionospheric Response to Severe Cyclonic Storm PHETHAI from Coordinated Ionosonde and GPS-TEC Observations	K. Muthu Vishali
4	NSSS2026ABS047	Dynamics of the Geophysical Plasma Events and Their Interplanetary Consequences	Subhash Chandra Kaushik
5	NSSS2026ABS386	Role of background meteorological and thermo-dynamical parameters on the Lightning activity over two contrasting rural and urban locations	Ghanashyam Sharma
6	NSSS2026ABS033	Atmospheric Electric Field as a Potential Indicator of Air Quality Index during Severe Winter Pollution	Rakhijul Alam Faruque
7	NSSS2026ABS048	Solar Transient Plasma Flows and Space Weather during Recent Solar Cycles	Sonia Kaushik
8	NSSS2026ABS071	10-11 May 2024 geomagnetic superstorm impact on the d-region ionosphere over the Indian low-latitude region	Debarchan Kar
9	NSSS2026ABS718	Unveiling Polar Ionospheric Dynamics During the May 2024 Superstorm: Insights from High-Latitude GNSS Observations (with an addendum on the 10-11 October 2024 geomagnetic storm)	Tamanna Singh
10	NSSS2026ABS432	Modeling Storm-Time Response of the Equatorial Ionosphere: Coupled Roles of Electric Fields and Meridional Winds	Arya Ashok
11	NSSS2026ABS759	Quantification of the Variability of Thermospheric O/N ₂ Density during Recent Geomagnetic Storms - Inferences from GOLD and GUVI Observations	Archana R.K
12	NSSS2026ABS435	Effect of solar forcing and tropospheric convection in OH intensity and temperature variabilities over Ahmedabad.	Kiran
13	NSSS2026ABS442	Scales of perturbations in long time series of GPS scintillations over multiple stations in the Indian sector.	Ram Kumar Vankadara .
14	NSSS2026ABS561	Distinct impacts of the extreme space weather events of 2024 on the low latitude ionospheric dynamics in the Indian sector as captured by combined) space and ground-based plasma measurements	K. Venkatesh

TUESDAY 24 th FEBRUARY 2026 16:00-17:30 Hrs		PS-3 SOLAR AND PLANETARY SCIENCES	
SL NO	ABSTRACT ID	ABSTRACT TITLE	FIRST AUTHOR
1	NSSS2026ABS536	A Study of the Impact of Solar flare X-ray flux and Interplanetary Conditions on the Geomagnetic Field and Their Effects Across Different Latitudes	Gopika S. Vijayan
2	NSSS2026ABS248	Long-term trend analysis on degradation of solar cells due to space weather	Mullapudi Balaram
3	NSSS2026ABS151	Characterization of plasma boundaries of Mars during CME event May 17-19, 2024	Pranjali Padhye
4	NSSS2026ABS227	Automated Detection of Solitary Waves Using MAVEN Spacecraft Data	Sahil Pandey
5	NSSS2026ABS234	Generation of Magnetosonic Waves in Planetary Ionospheres	Amrutha
6	NSSS2026ABS489	Seasonal Evolution of Titan's Middle Atmosphere as simulated by the Titan Weather Research and Forecasting Model	N. Koushik
7	NSSS2026ABS416	Enabling Safe Martian Landings through Dust Storm Monitoring with Radio Occultation Payloads	Kumar Harshit

8	NSSS2026ABS791	A Comparative Study of Venusian Atmospheric Structure using Models and Observations	Jayadev Pradeep
9	NSSS2026ABS254	Nonlinear analysis of Ion-acoustic Solitary Waves in Martian Induced Magnetosphere	Nivedita Chakraborty
10	NSSS2026ABS159	Deciphering Biosignatures in Hypersaline Environments: Insights from the Rann of Kutch as a Martian Analogue	Kanak B. Sharma
11	NSSS2026ABS708	Geological Mapping Automation Guided by Multi-mission Datasets	Shubhangi Singh
12	NSSS2026ABS732	Optimization of experimental parameters in Laser Induced Breakdown Spectroscopy of Rock Samples	Swetapuspa Soumyashree

TUESDAY
24th FEBRUARY 2026
16:00-17:30 Hrs

PS-4

ASTRONOMY AND ASTROPHYSICS

SL NO	ABSTRACT ID	ABSTRACT TITLE	FIRST AUTHOR
1	NSSS2026ABS318	Study of legacy deep fields using UVIT	Pranjal Chaturvedi
2	NSSS2026ABS841	Estimating the Hubble Constant and the Age of the Universe Using Cepheid and Type Ia Supernovae Host Galaxies	Rajaabirami Rajakumar
3	NSSS2026ABS404	Probing Planck Era Physics through CMB Polarization: A Review with Computational Insights	Sreenandan K J
4	NSSS2026ABS309	Variability Study of the blazar OI 158 with TESS during its Dec 2021 neutrino emission events	Shubham Kishore
5	NSSS2026ABS060	Study on gravitational waves from binary mergers and constraints on the Hubble parameter	Rishav Laloo
6	NSSS2026ABS277	Dark Matter Degenerate Object: 33 Polyhymnia	Arun Kenath
7	NSSS2026ABS289	Investigating Polarization characteristics of GRB200503A and GRB201009A	Divita Saraogi
8	NSSS2026ABS077	Bar Structure Identification In Galaxies Using CNNs	Rajit Shrivastava
9	NSSS2026ABS825	Fabrics of Space-Time: The Structural Dynamics of Space-Time Fabrics and Their Cosmological Implications on Inter Universe Interaction(Part I)	Noor Mohammadi
10	NSSS2026ABS439	Probing the Epoch of Reionization with the uGMRT Band-2: Challenges and Opportunities in Foreground Mitigation	Rashmi Sagar
11	NSSS2026ABS388	Search for Megaparsec size Giant Radio Sources from TIFR GMRT Sky Survey	Netai Bhukta
12	NSSS2026ABS138	Thermonuclear X-ray burst and disc reflection from accreting millisecond X-ray pulsar SRGA J144459.2-604207	Manoj Mandal
13	NSSS2026ABS784	Supernova Remnants to Stellar Mergers: A Study of Neutron Stars and Their Cosmic Significance	Anshika Mittal
14	NSSS2026ABS396	Systematic Effects of Chaotic Magnetic Fields on Neutron Star Tidal Deformability: Implications for Gravitational Wave Constraints on Dense Matter	Debarshi Mukherjee
15	NSSS2026ABS810	Understanding the CSM asymmetries of Interacting Supernovae	Naveen Dukiya
16	NSSS2026ABS095	Multi-wavelength study of an extremely X-ray variable WLQ SDSSJ1539: a dive into the radio properties of WLQs	Ayushi Chhipa
17	NSSS2026ABS327	From Design to Deployment: Opto-Mechanical Insights into Backend Instrumentation for the PRL 2.5m Telescope for Reliable On-Sky Operations	Kevikumar A. Lad
18	NSSS2026ABS639	Probing Star Formation and Feedback in Galactic Star-Forming Complexes Across the Spectrum	Harmeem Kaur
19	NSSS2026ABS382	Daksha: On Alert for High Energy Transients	Ashwin Devaraj

TUESDAY
24th FEBRUARY 2026
16:00-17:30 Hrs

PS-5

ENABLING TECHNOLOGIES FOR SPACE EXPLORATION

SL NO	ABSTRACT ID	ABSTRACT TITLE	FIRST AUTHOR
1	NSSS2026ABS611	Cognova: A Novel Task-based Approach for Real-Time Cognitive Training and Stress Assessment Framework for Human Spaceflight Missions	Jyoti
2	NSSS2026ABS772	regenerative mechanical energy	Yogesh verma
3	NSSS2026ABS362	Removal of Space Debris Using a DRM: A Hypothesis	Subhomoy Dutta

4	NSSS2026ABS805	Development of an ICN-based autonomous satellite swarm communication system for efficient inter-satellite data relay and ground transmission.	Abi .R
5	NSSS2026ABS755	Next-Generation Satellite Communication Networks for Crewed Space Missions: Architecture, Challenges and Enabling Technologies	Bhimeswara Rao M
6	NSSS2026ABS449	An Analytical Review of Different Spacecraft Docking Techniques	Ashish Kumar Sharma
7	NSSS2026ABS032	SPACE BASED SOLAR POWER AND ITS OPPORTUNITIES, CHALLENGES, AND FUTURE PROSPECTS	Pratiksha Madiwalayya Gaddigimath
8	NSSS2026ABS782	SolForge - Harnessing the Solar Energy Architecturally	Mr. Adwitiya
9	NSSS2026ABS249	A Low-Cost Satellite Testing Apparatus for ADCS	Abhirup Datta
10	NSSS2026ABS238	Integrated Self-Destruct Satellites: A Built-In End-of-Life Debris Mitigation Solution	Anmol Gandhi
11	NSSS2026ABS189	Stability Analysis with Bode and Nyquist plot for DC DC converters	Rupali Sahu
12	NSSS2026ABS290	Spacecraft configuration systems based on electric Propulsion systems with robotic arms	Vinod Kumar Gupta
13	NSSS2026ABS170	Vibrational-Structural Analysis using Nanomaterials for re-entry module	Geetanjali Sambhaji
14	NSSS2026ABS122	Biofilm or Melanin-Based Lightweight Radiation Shielding for CubeSats	Bivanjit Paul
15	NSSS2026ABS618	Diagnostic systems for electric thruster characterization at Large Vacuum Test Facility	Vara Prasad K
16	NSSS2026ABS697	Distance-Based Localization and Vision-Guided Landing for Autonomous Planetary Rotorcraft	Atharva Sunil Chavan
17	NSSS2026ABS346	High Precision Indigenous Hybrid Optical Encoder for Satellite Applications	Ponmalar M
18	NSSS2026ABS307	Optimization of spacecraft mmod shield mass through critical diameter predictions from ESA and NASA BLE equations	Umesh Singh
19	NSSS2026ABS816	Space Situational Awareness tool backed artificial intelligent agent	Harsha M

TUESDAY
24th FEBRUARY 2026
16:00-17:30 Hrs

PS-6

FROM EARTH OBSERVATION TO INTERPLANETARY MISSIONS: SHAPING THE FUTURE WITH SPACE SCIENCE AND HUMAN SPACE EXPLORATION

SL NO	ABSTRACT ID	ABSTRACT TITLE	FIRST AUTHOR
1	NSSS2026ABS895	Space junk and its effects on re-entry into the earth	Nishanth M
2	NSSS2026ABS935	Planetary data explorer: a web platform with a conversational interface	Harshal Paliwal
3	NSSS2026ABS929	Supplementation of controlled vitamin d through biodegradable oral dissolving strip using carboxymethyl nanocellulose	Adithya S R
4	NSSS2026ABS938	Human space exploration	Shubham Satyawali
5	NSSS2026ABS899	Low-cost infrared optical wireless communication system for real-time emg signal transmission	Bodireddy Jaswanth

17:30 – 18:30

BREAKOUT MEET

18:30 – 20:30

DINNER



WEDNESDAY

25.02.2026

PROGRAM AGENDA

TIME	INFORMATION	LOCATION
08:00-09:00	Registration	Outreach Facility
09:00-10:30	Plenary Session-2 Future of India's Space Exploration (3 Talks)	New Auditorium (Main Hall) See following pages for details
10:30-11:15	Interdisciplinary Talk-2- Axiom-4 experience with focus on the scientific experiments conducted on-board Internationa Speaker-Gaganyatri Gr Captain Shubhanshu Shukla AC	New Auditorium (Main Hall)
11:15-11:45	Tea/Coffee Break	
11:45-13:15	Technical Session (6 Parallel Session)	Several locations See following pages for details
13:15-14:15	Lunch Break	
14:15-16:00	Technical Session (6 Parallel Session)	Several locations See following pages for details
16:00-17:30	Poster Session, Exhibition, and Tea/Coffee Break	
17:30 - 18:30	Breakout Sessions (5 parallel sessions)	

WEDNESDAY 25th FEBRUARY 2026 09:00-10:30 Hrs	PLENARY SESSION-2 FUTURE OF INDIA'S SPACE EXPLORATION	LOCATION NEW AUDITORIUM.(MAIN HALL)
	CONVENER : Prof. Dipankar Banerjee, IIST	
SI. NO	TOPIC	SPEAKER
1	Atmospheres Revealed in Occultations: From Solar System to Exoplanets	Prof. Anandmayee Tej, IIST
2	Upcoming major facilities for multi-wavelength astronomy in India	Dr. Annapurni Subramaniam, Director, IIA
3	What is Space Weather and Why Should We Care About it?	Prof. D. Pallamraju, PRL

WEDNESDAY 25th FEBRUARY 2026 10:30-11:15 Hrs	INTERDISCIPLINARY TALK-2	LOCATION NEW AUDITORIUM (MAIN HALL)
	CONVENER : Prof. Dipankar Banerjee, IIST	
SI. NO	TOPIC	SPEAKER
1	Axiom-4 experience with focus on the scientific experiments conducted on-board International Space Station	Gaganyatri Gr. Captain Shubhanshu Shukla AC

11:15 – 11:45

TEA/COFFEE BREAK

WEDNESDAY 25th FEBRUARY 2026 11:45-13:15 Hrs PS-1	TECHNICAL SESSION-4 SPACE-BASED METEOROLOGY, OCEANOGRAPHY, GEOSPHERE-BIOSPHERE INTERACTIONS, AND CLIMATE CHANGE	LOCATION NEW AUDITORIUM.(MAIN HALL)
	CHAIR : Dr. Narendra Ojha, PRL CO-CHAIR : Dr. Binita Pathak, DU	

SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
ORAL PRESENTATION			
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	SHORT ORALwave 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 PRESENTATION			
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
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 vadoso-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

WEDNESDAY 25th FEBRUARY 2026 11:45-13:15 Hrs PS-2	TECHNICAL SESSION-4 MIDDLE ATMOSPHERE, ATMOSPHERIC COUPLING, DYNAMICS, AERONOMY, CLIMATE CHANGE AND SUN-EARTH CONNECTION	LOCATION HALL-1 (NEW AUDITORIUM)
	CHAIR : Dr. M V Ramana CO-CHAIR : Dr. Siddarth Shankar Das	

SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
ORAL PRESENTATION			
1	NSSS2026ABS806	DL-Based Approach for Eliminating Space Object-Induced Noise in Radar Data for Atmospheric and Ionospheric Studies.	R Ashrit
2	NSSS2026ABS123	An experiment-specific payload orientation platform for balloon-borne experiments	Ashish A. Rodi
3	NSSS2026ABS573	Compressional ULF Waves and Oxygen Ion Energization in Magnetospheric Boundary Layers During the May 2024 Storm	Indu Venugopal
4	NSSS2026ABS285	Anomalous redistribution of plasma during the recovery phase of the 11 May 2024 superstorm	K. Shimna
5	NSSS2026ABS228	Global Characterization of AO, SAO, and ISOs Amplitudes as observed using PAIRS and SABER temperatures	Kiran and R. P. Singh
6	NSSS2026ABS410	Evaluation of EOS 07 millimetre Wave Humidity Sounder MHS retrieved specific humidity using insitu and satellite observations	V. Varaprasad

7	NSSS2026ABS143	Simultaneous Modeling of Multi-Path Sub-Ionospheric VLF Signal Responses to the Total Solar Eclipse 2024	Tarakanth Bera
8	NSSS2026ABS444	Bridging Atmospheric-Ionospheric Science and LEO Satellite System Design: A Regional Study over the Indian Subcontinent	Naga Vijaya Deepthi Ayyagari
SHORT ORAL PRESENTATION			
1	NSSS2026ABS761	Afternoon Westward Enhancement in the Equatorial Ionosphere: New Evidence from Boa Vista	Blessy Varghese
2	NSSS2026ABS483	A Quantitative Analysis of the response of Green and Red Line dayglow Emissions to Solar Flares of varying magnitudes	Komal
3	NSSS2026ABS417	A comparative study of the data analysis of the Total Electron Content from the GNSS Receiver of a program led by the ESA and from a SeptentrioPolaRxS Receiver	Anamika Das
4	NSSS2026ABS348	Effect of inhomogeneous electric and magnetic fields in kinetic Alfvén wave in presence of ion and electron beam	D K Jaisawal
5	NSSS2026ABS757	Statistical study of the characteristics of Equatorial Electrojet and Counter Electrojet in the Indian Sector – A Comparative study between Satellite and ground based magnetic observations	Archana R.K

WEDNESDAY 25th FEBRUARY 2026 11:45-13:15 Hrs PS-3	TECHNICAL SESSION-4 SOLAR AND PLANETARY SCIENCES CHAIR : Mohammad Hasan CO-CHAIR : N V Rao	LOCATION CONFERENCE HALL (OUTREACH FACILITY)
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SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
1	NSSS2026ABS861 (Lead Talk)	Space Weather Effects on Venus Ionosphere – The Indian Venus Mission	Varun Sheel
2	NSSS2026ABS097	Digital cloud tracking of Venusian clouds for atmospheric winds	Abhineet Shyam
3	NSSS2026ABS469	Exploring Internal Gravity Waves in Venus Atmosphere with Akatsuki Observations	Deepa V
4	NSSS2026ABS351	Characterization of the Topside Ionospheric Bulge in the Venusian Ionosphere	Satyandra M. Sharma
5	NSSS2026ABS478	Magnetotail effect of electron plasma density from RAMBHA-LP payload of Pragyan rover	Soumyasree Guin

WEDNESDAY 25th FEBRUARY 2026 11:45-13:15 Hrs PS-4	TECHNICAL SESSION-4 ASTRONOMY AND ASTROPHYSICS CHAIR : Dr. Rwitika Chaterjee	LOCATION SMART CLASS ROOM (OUTREACH FACILITY)
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SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
1	NSSS2026ABS592 (Lead Talk)	Characterizing Flare Occurrence and Chromospheric Activity in M Dwarfs	Rajpurohit
2	NSSS2026ABS441	A Multi Functional Robotic Pickup Arm Positioning Pipeline for TIFR-ARIES Multi Object Optical to Near-infrared Spectrograph for the 3.6m DOT	Dr. Saurabh Sharma
3	NSSS2026ABS703	High-Resolution Spectroscopy of a Blue Straggler Candidate: Evidence from Binarity and Lithium	Krittika Roy
4	NSSS2026ABS833	Accretion Outbursts: A Challenge for Theory, and a Probe of Star-Disk Evolution	Koshvendra Singh

WEDNESDAY 25th FEBRUARY 2026 11:45-13:15 Hrs	TECHNICAL SESSION-4 ENABLING TECHNOLOGIES FOR SPACE EXPLORATION	LOCATION HALL-2 (NEW AUDITORIUM)
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PS-5		CHAIR : Dr. Mehul Pandya CO-CHAIR : Dr. Girach Imran A	
SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
ORAL PRESENTATION			
1	NSSS2026ABS780 (Lead Talk)	Assessment of Structural Integrity of Propellant Tanks using Acoustic Emission Technique	Amzad Amin Rahul
2	NSSS2026ABS822	Rotating detonation engine	Om Unnithan
3	NSSS2026ABS062	Design and Analysis of a Variable Pitch Propeller UAV for VTOL Applications	Pakhee Sinha
4	NSSS2026ABS177	Thermal Analysis of Propellant Storage in Orbital Environments Using ANSYS	Om karini Sarkar
5	NSSS2026ABS600	Realisation of orbital platform in upper stage for space exploration	K V Krishna Kumar
6	NSSS2026ABS677	Hot Stage Separation Contact Dynamics: A Simplified Rigid Body Approach	Jiljo K Moncy
7	NSSS2026ABS426	Development of Ultra high temperature Ceramics ZrB2-SiC from Zircon mineral by Thermal Plasma Process	K Jayasankar
8	NSSS2026ABS515	Liner Erosion Profile Measurements and Estimation for a High Power Stationary Plasma Thruster	Panuganti Shekhar
9	NSSS2026ABS789	High Performance Burn Rate Modifier for Sugar Rocket Propellant	Sanjay Ganesh
10	NSSS2026ABS278	An FPGA-SDR Platform for Real-Time Spectrum Sensing and Dynamic Modulation Recognition in Satellite Communication Links	Anismita Biswas
SHORT ORAL PRESENTATION			
1	NSSS2026ABS220	Space Saathi : Design and Simulation of an Autonomous Collision Prediction and Avoidance System for Space objects.	Sumedh S Bhat
2	NSSS2026ABS066	Space-based debris detection, tracking, and orbit determination in the LEO environment	Shubhi Tiwari
3	NSSS2026ABS068	Ballistic shields for spacecraft protection against Micrometeoroids and Orbital Debris	Dr Rajeev Chaturvedi

WEDNESDAY 25th FEBRUARY 2026 12:15-13:15 Hrs PS-6		TECHNICAL SESSION-5 NEXT-GENERATION SPACE MISSIONS: MOON, MARS, AND BEYOND CHAIR : Dr. K K Sharma CO-CHAIR : Shri Himangshu Pandey	LOCATION NESAC MAIN CAMPUS AUDITORIUM
SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
ORAL PRESENTATION			
1	NSSS2026ABS910	Exploring the surface of mars: advancements in rover technology	Ritesh Kumar Sharma
2	NSSS2026ABS918	Effect of geomagnetic storms on lunar exosphere	Soumyasree Guin
3	NSSS2026ABS921	Two-dimensional analysis, comparison, and improvement of the aerodynamic performance of high-camber aerofoils under martian atmospheric conditions	Girishankar Kanagaraj
4	NSSS2026ABS923	Mechanisms Shaping Space Missions for Tomorrow: An In-Depth Analysis of Future Technologies & Bio-	Harsh Matlani

		Adaptations	
5	NSSS2026ABS928	A conceptual framework for autonomous lunar navigation and landing site analysis using chandrayaan imagery	B Kiran
6	NSSS2026ABS930	Astroedge ai: an offline wearable system for astronaut assistance in long-duration space missions	Adithyan S

SHORT ORAL PRESENTATION

1	NSSS2026ABS932	Stellar engine	Radhakrishnan Vadivel
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13:15 – 14:15

LUNCH BREAK



WEDNESDAY
25th FEBRUARY 2026
14:15-16:00 Hrs

PS-1

TECHNICAL SESSION-5

SPACE-BASED METEOROLOGY, OCEANOGRAPHY,
GEOSPHERE-BIOSPHERE INTERACTIONS, AND CLIMATE
CHANGE

LOCATION

NEW AUDITORIUM.(MAIN HALL)

CHAIR : Dr. Amit P Kesarkar, NARL
CO-CHAIR : Dr. Prijith S. S., SPL

SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
ORAL PRESENTATION			
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 PRESENTATION

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

WEDNESDAY
25th FEBRUARY 2026
14:15-16:00 Hrs

PS-2

TECHNICAL SESSION-5

MIDDLE ATMOSPHERE, ATMOSPHERIC COUPLING, DYNAMICS, AERONOMY, CLIMATE CHANGE AND SUN-EARTH CONNECTION

LOCATION

HALL-1 (NEW AUDITORIUM)

CHAIR : Dr. Tarun Pant
CO-CHAIR : Dr. Ankit Tandon

SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
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ORAL PRESENTATION

1	NSSS2026REG2265 (Lead Talk)	Tracing Solar Influence Through Thermospheric Drag: What LEO Debris Reveals Across Solar Cycles	Dr Tarun Pant
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2	NSSS2026ABS127	Long Term Variability of Ionospheric Electron Density and Temperature: Insights from Swarm Satellites and IRI 2020 During Solar Cycle 24 to 25	Aaditya Sarda
3	NSSS2026ABS650	Quantitative Analysis of Arctic Polar Vortex Evolution during 2023/2024 winter: Intensity, Areal Extent and Persistence	Riya Raju K
4	NSSS2026ABS112	On the Realistic Reconstruction of the Topside Ionosphere over Equatorial Regions: A Study using ISR, Ionosonde, and Satellite Observations	K Siba Kiran Guru
5	NSSS2026ABS540	Evaluation of Multi-Model Lightning Density Against Observed Lightning Data at the District Scale in India	Trisanu Banik
6	NSSS2026ABS244	Impact of the May 2024 Super Geomagnetic Storm on the DC and AC Global Electric Circuit Across Mid- and Low-Latitude Regions	S. Pal
7	NSSS2026ABS495	A Multi-Definition Approach to the Tropopause: Implications for TTL Thickness and Tracer Transport	k. Siva Kumar
8	NSSS2026ABS072	Tropical cyclones induced atmospheric gravity waves- results from the Indian subcontinent	Omkar M. Patil
9	NSSS2026ABS041	Wavenumber-4 Longitudinal Structure in ICON-MIGHTI Thermospheric Meridional Wind	Meenakshi S

SHORT ORAL PRESENTATION

1	NSSS2026ABS194	A Multi-Parameter Analysis of Heliophysical and Geomagnetic Activity during SC-25 from 2019 to 2025	Omkar Prasad Tripathi
2	NSSS2026ABS590	Evolution of Turbulence Parameter(Cn2) During Severe Convective situation: few case studies through ST Radar observation	Pankaj Mili Nilotpal Nath Manoj Saikia
3	NSSS2026ABS317	An investigation of the response of the thermal field of the MLT region to the 'Severe' geomagnetic storm of 10-11 October 2024	Govind Narayanan K
4	NSSS2026ABS136	Effects of storm-time electric fields at low latitudes near the dawn terminator	Sneha Vengurlekar
5	NSSS2026ABS695	Development of AI/ML based ionospheric vertical ExB drift model and study on its longitudinal variation	P. Pavan Chaitanya

WEDNESDAY
25th FEBRUARY 2026
14:15-16:00 Hrs

PS-3

TECHNICAL SESSION-5
SOLAR AND PLANETARY SCIENCES

LOCATION
CONFERENCE HALL
(OUTREACH FACILITY)

CHAIR : Mohammad Hasan
CO-CHAIR : N V Rao

SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
1	NSSS2026ABS508	Influence of Water Ice Clouds on Martian Oxygen Corona over Tharsis and Hellas	Supratim Chatterjee
2	NSSS2026ABS580	Impact of 2024 Space-Weather Events on the Martian Ionosphere: A Comparative Analysis	Sahil Semwal
3	NSSS2026ABS665	Probing the Nightside Martian Ionosphere during the passage of Stealth CME and CIR Events	Arnob Sarkar
4	NSSS2026ABS694	Local Time and Altitude Variations of Protonated Ions in the Upper Atmosphere of Mars: Roles of Thermospheric CO2 and Chemical Pathways	Kritika Joshi
5	NSSS2026ABS216	Investigation of Martian UV Dayglow Emissions in the Southern Hemisphere during Solar Quiet-time Conditions: Insights from Multi-year MAVEN-IUVS Observations	Aadarsh Raj Sharma
6	NSSS2026ABS463	On the effect of H3+ ions on the characteristics of electrostatic solitary waves and double layers in Ganymede observed by Juno Spacecraft	R. Rubia
7	NSSS2026ABS109	Chandrayaan-3: Atmospheric corrections to raw tracking data	Garima Aggarwal

WEDNESDAY 25th FEBRUARY 2026 14:15-16:00 Hrs PS-4	TECHNICAL SESSION-5 ASTRONOMY AND ASTROPHYSICS	LOCATION SMART CLASS ROOM (OUTREACH FACILITY)
	CHAIR : Dr. Manash Samal	

SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
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ORAL PRESENTATION			
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1	NSSS2026ABS158 (Lead Talk)	Photospheric radius expansion and X-ray reflection in thermonuclear burst from the neutron star X-ray binary 4U 1702-429	Sachindra Naik and Manoj Mandal
2	NSSS2026ABS174	Photoionization Modeling of Nova V476 Scuti: Formation of Optically Thin Dust	Sakshi Chaudhary
3	NSSS2026ABS320	To Be or not to Be: Recurrent Nova M31N 2017-01e a BeWD System in M31	Shatakshi Chamoli
4	NSSS2026ABS856	Dust Factories of the Universe – The Role of Red Supergiants in Cosmic Dust Production	Das Sujit
5	NSSS2026ABS647	Photometric and Evolutionary Analysis of the sdB Binary System Lan 646	Devarapalli Shanti Priya

SHORT ORAL PRESENTATION			
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1	NSSS2026ABS190	Quantifying uncertainties in CatWISE 2020 quasar survey: Is there really a cosmic dipole anomaly.	Masroor Bashir
2	NSSS2026ABS318	Study of legacy deep fields using UVIT	Pranjal Chaturvedi
3	NSSS2026ABS342	Probing the Atmosphere of the Hot Jupiter KELT-7 b with JWST Transmission Spectroscopy	Aman Das
4	NSSS2026ABS309	Variability Study of the blazar OI 158 with TESS during its Dec 2021 neutrino emission events	Shubham Kishore
5	NSSS2026ABS077	Bar Structure Identification In Galaxies Using CNNs	Rajit Shrivastava

WEDNESDAY 25th FEBRUARY 2026 14:15-16:00 Hrs PS-5	TECHNICAL SESSION-5 ENABLING TECHNOLOGIES FOR SPACE EXPLORATION	LOCATION HALL-2 (NEW AUDITORIUM)
	CHAIR : Dr. Mehul Pandya CO-CHAIR : Dr. Raghu Ningthoujam	

SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
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ORAL PRESENTATION			
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1	NSSS2026ABS446 (Lead Talk)	Mission Design for MARS orbiter Mission with Aerobraking	Vikram Vishwanath
2	NSSS2026ABS179	A novel technique for interactive web-based visualization and analysis of GNSS-R Data	Chopda Mayur Dahyabhai
3	NSSS2026ABS398	Mineral Diversity mapping in Nidar region, Ladakh using Hyperspectral Imaging Spectroscopy	Saptarshi Lohia
4	NSSS2026ABS364	Compact Fabry Perot Cavity Based Planar Antenna array for S-Band Space Applications	Neha Agrawal
5	NSSS2026ABS838	High Density Power Supply for Cooler Driver Electronics in IDDCA Systems	Himanshu Gupta
6	NSSS2026ABS267	Novel Cost Effective Indigenous Design Approach for Ku band Waveguide Circulator and Termination for Space Applications	Rahul Gupta
7	NSSS2026ABS862	Material Compatibility and performance Optimization of Iodine-Fed Hall effect Thrusters for Small Satellite Constellations	Urjita S.
8	NSSS2026ABS434	Generalized On-Board SAA Algorithm	Thameemunnisha
9	NSSS2026ABS615	Compressed Sensing Framework for ECG Signal Processing in Space Exploration Missions	Anmol Jain
10	NSSS2026ABS247	Physics of space physiology - 1: human effects of the physical	Squadron Leader Gaurab Ghosh

		forces of spaceflight	
11	NSSS2026ABS786	Microgravity Assisted Crystallization of Macro and small Pharmaceutical Molecules	Dhavalkumar Solanki
SHORT ORAL PRESENTATION			
1	NSSS2026ABS135	Comparative Analysis of Adaptive Filtering Techniques for DVB OFDM Receivers in Satellite Communication Systems	Zarana Barot
2	NSSS2026ABS129	Radiation Tolerant SWaP-C efficient SerDes-FPGA Interoperability for ISRO's Space Systems	Nirbhay Tyagi
3	NSSS2026ABS279	Optimization and Development of an Electron Cyclotron Resonance Plasma Thruster for Orbital and Space Missions	Shubhankur Suvansh
4	NSSS2026ABS104	Unveiling On-Orbit Solar Panel Performance: Investigating Double Peaks in Photocurrent Dynamics	Prachi Bisht
5	NSSS2026ABS360	Formulation and Simulation of Multi-Orbit Transfer Dynamics for Efficient Orbital Transfer Vehicles	Archana Menon

WEDNESDAY 25th FEBRUARY 2026 15:00-16:00 Hrs PS-6	TECHNICAL SESSION-6 NEXT-GENERATION SPACE MISSIONS: MOON, MARS, AND BEYOND	LOCATION NESAC MAIN CAMPUS AUDITORIUM
	CHAIR : Dr. Bijoy Handique CO-CHAIR : Ms Prapti Mittal	

SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
ORAL PRESENTATION			
1	NSSS2026ABS949	Autonomous ai-driven navigation system for interplanetary rovers: a unified framework for moon and mars exploration	Florence Solomon
2	NSSS2026ABS952	Antrikhsutra – the unbreakable communication thread	Sankalp Pandey
3	NSSS2026ABS967	Project Sudarshan: AI based trajectory optimization for spacecrafts and rockets	Parineeta
4	NSSS2026ABS897	AI optimized hybrid chemical electric propulsion for faster mars transit missions	Raahul Badri
5	NSSS2026ABS900	A Polarimetric SAR-Thermal Infrared Fusion Framework for Predicting Lunar Surface Stability and Mobility Hazards for Future Exploration Missions	Rathinam Ramasamy
6	NSSS2026ABS913	Nuclear Thermal Rocket: Design Considerations and Efficiency Optimization for Deep-Space Explorations	Mahak
SHORT ORAL PRESENTATION			
1	NSSS2026ABS902	A feasibility study of x-ray pulsar navigation (xnav) for autonomous cruise-phase navigation on isro's future interplanetary missions	Suresh Kumar M

16:00 – 17:30

TEA / COFFEE + POSTER SESSION



WEDNESDAY 25 th FEBRUARY 2026 17:00-18:00 Hrs PS-6		TECHNICAL SESSION-7 NEXT-GENERATION SPACE MISSIONS: MOON, MARS, AND BEYOND & SPACE STATION AND HUMAN HABITAT BEYOND EARTH	LOCATION NESAC MAIN CAMPUS AUDITORIUM
		CHAIR : Dr. Tirtha P Das CO-CHAIR : Ms Prapti Mittal	
SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
ORAL PRESENTATION			
1	NSSS2026ABS927	Modeling of aerobraking for mars orbit insertion using realistic atmospheric model	Sumati Suhas Kulkarni
2	NSSS2026ABS961	Hybrid dust mitigation system for enhanced solar array performance on lunar and martian surfaces	Yashasvi Chandrakant Patil
3	NSSS2026ABS898	Siting a sustainable lunar habitat at the shackleton crater rim	Vivek Yadav
4	NSSS2026ABS956	Photonics-assisted genomic monitoring of indian crop "Microbe systems under simulated microgravity and altered atmospheric conditions"	Chakrala B N Siddhartha
SHORT ORAL PRESENTATION			
1	NSSS2026ABS922	Conceptual framework for integrating sustainable technologies into indian human spaceflight programme	Vijay Raghavan
2	NSSS2026ABS960	Designing the Future on the Moon: Challenges and Opportunities for Permanent Human Habitation	Sure Bala Saran
3	NSSS2026ABS893	Space station and human habitat beyond earth	Hritik Rana

POSTER SESSION	WEDNESDAY, 25th February, 2026
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WEDNESDAY 25 th FEBRUARY 2026 16:00-17:30 Hrs		PS-1 SPACE-BASED METEOROLOGY, OCEANOGRAPHY, GEOSPHERE-BIOSPHERE INTERACTIONS, AND CLIMATE CHANGE	
SL NO	ABSTRACT ID	ABSTRACT TITLE	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	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
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
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

WEDNESDAY
25th FEBRUARY 2026
16:00-17:30 Hrs

PS-2

MIDDLE ATMOSPHERE, ATMOSPHERIC COUPLING, DYNAMICS, AERONOMY, CLIMATE CHANGE AND SUN-EARTH CONNECTION

SL NO	ABSTRACT ID	ABSTRACT TITLE	FIRST AUTHOR
1	NSSS2026ABS542	Detection of Large-Scale Gravity Waves in Mid-Latitude foF2 and hmF2 Observations During Geomagnetically Quiet Periods	Ankitha N
2	NSSS2026ABS145	Modulation in Galactic Cosmic Rays during a Period of Anomalously low Solar Activity	B. K. Tiwari
3	NSSS2026ABS196	Effect of the Bottom side thickness parameter on the estimation of Bottom side TEC in the IRI model over the low latitudes	H. Kava
4	NSSS2026ABS211	Study of solar activities associated with Cosmic Ray intensity Variation	B.K.Tiwari
5	NSSS2026ABS042	Low-Cost Radiometric Monitoring of Ionospheric and Auroral	Harsha Avinash Tanti

		Variability in the Arctic	
6	NSSS2026ABS695	Development of AI/ML based ionospheric vertical ExB drift model and study on its longitudinal variation	P. PavanChaitanya
7	NSSS2026ABS194	A Multi-Parameter Analysis of Heliophysical and Geomagnetic Activity during SC-25 from 2019 to 2025	Omkar Prasad Tripathi
8	NSSS2026ABS590	Evolution of Turbulence Parameter(Cn2) During Severe Convective situation: few case studies through ST Radar observation	Pankaj Mili
9	NSSS2026ABS761	Afternoon Westward Enhancement in the Equatorial Ionosphere: New Evidence from Boa Vista	Blessy Varghese
10	NSSS2026ABS483	A Quantitative Analysis of the response of Green and Red Line dayglow Emissions to Solar Flares of varying magnitudes	Komal
11	NSSS2026ABS417) A comparative study of the data analysis of the Total Electron Content from the GNSS Receiver of a program led by the ESA and from a SeptentrioPolaRxS Receiver	Anamika Das
12	NSSS2026ABS348	Effect of inhomogeneous electric and magnetic fields in kinetic Alfven wave in presence of ion and electron beam	D K Jaisawal
13	NSSS2026ABS757	Statistical study of the characteristics of Equatorial Electrojet and Counter Electrojet in the Indian Sector – A Comparative study between Satellite and ground based magnetic observations	Archana R.K
14	NSSS2026ABS317	An investigation of the response of the thermal field of the MLT region to the 'Severe' geomagnetic storm of 10-11 October 2024	Govind Narayanan K
15	NSSS2026ABS136	Effects of storm-time electric fields at low latitudes near the dawn terminator	Sneha Vengurlekar
16	NSSS2026ABS695	Development of AI/ML based ionospheric vertical ExB drift model and study on its longitudinal variation	P. Pavan Chaitanya

WEDNESDAY
25th FEBRUARY 2026
16:00-17:30 Hrs

PS-3

SOLAR AND PLANETARY SCIENCES

SL NO	ABSTRACT ID	ABSTRACT TITLE	FIRST AUTHOR
1	NSSS2026ABS654	Lunar Sodium abundances at Shiv Shakti point during magnetotail from Chandrayaan-3 APXS	Moumita Roy
2	NSSS2026ABS471	Analysis of Aero-braking on Venus	Vikram V
3	NSSS2026ABS552	Design, Development and Performance Evaluation of Different Configurations of Lightning Instrument for VEnus (LIVE)	S. Jitarwal
4	NSSS2026ABS740	Venus Radiation environment monitor on-board Venus Orbiter Mission	Sushil Kumar
5	NSSS2026ABS738	Probing the Venusian ionosphere using a topside radar sounder	N. V. Rao
6	NSSS2026ABS036	Determination of lunar gamma continuum and lunar neutron leakage fluxes for different lunar compositions using GEANT4	Shipra
7	NSSS2026ABS420	Tracking magma ascent and storage in the martian crust with P zoning in olivines	Arka Pratim Chatterjee
8	NSSS2026ABS419	Linking planetary scale spatio temporal trends in magma compositions and volcanic resurfacing on Mars	Arka Pratim Chatterjee
9	NSSS2026ABS752	Palaeo-volatile Deposits: Implications for In-Situ Resource Utilization and Human Exploration of the Moon	Mishal K T and Deepak Dhingra
10	NSSS2026ABS570	Terraforming the mars for humans colonization: Problems and How we can solve it.	Parv Mangal
11	NSSS2026ABS275	Late Amazonian Volcanism, Tectonism, and Boulder Fall Activities in the Elysium Volcanic Complex, Mars	Vivek Krishnan
12	NSSS2026ABS124	Vegetation on planet Mars: Solutions for soil fertility challenges	Kuramapu Prem Sai Mahesh
13	NSSS2026ABS663	Proterozoic Stromatolites as Keys to Early Life Detection Strategies in Astrobiology	Preeti K.
14	NSSS2026ABS852	Compositional Stratigraphy of Mare Basalt	Somnath Adak
15	NSSS2026ABS440	A novel method for detection and characterization of lunar pyroclastic deposits	Dibyendu Misra

WEDNESDAY 25 th FEBRUARY 2026 16:00-17:30 Hrs		PS-4 ASTRONOMY AND ASTROPHYSICS	
SL NO	ABSTRACT ID	ABSTRACT TITLE	FIRST AUTHOR
1	NSSS2026ABS649	A comprehensive study of Cygnus Loop Supernova Remnant	Rupesh Behera
2	NSSS2026ABS481	Interpretation of high energy neutrino observations through the primordial black hole evaporation	Prabhav Singh
3	NSSS2026ABS633	Influence of Planetary Migration on Mean-Motion Resonance and Substructure Formation in Protoplanetary Disks	Ribanda Marbaniang
4	NSSS2026ABS763	Mid-Infrared Variability of Young Stellar Objects: NEOWISE-Based Classification and Long-Term Trends.	Shubham Yadav
5	NSSS2026ABS286	Stable Anisotropic Star Model in Generalized Tolman-Kuchowicz Spacetime with Nonlinear Quadratic Equation of State	Hemani R. Acharya
6	NSSS2026ABS046	Exoplanet Classification Through Vision Transformer	Anupma Choudhary
7	NSSS2026ABS020	Investigating the Kinematics of Molecular Gas in Cometary Globule L1616	Puja Porel
8	NSSS2026ABS306	Prediction of H4 α properties in star-forming region: A machine learning approach	Antara Dey
9	NSSS2026ABS461	UV-bright Stellar Populations in Galactic Globular Clusters	Ranjan kumar
10	NSSS2026ABS203	From Radiation Driven Implosion to Cloud-Cloud Collisions: Star Formation in Feedback Dominated Environments	Rishi C
11	NSSS2026ABS255	A980 and the Germanium Puzzle: New Clues from an Extreme Helium Star	Ajay Kumar Saini
12	NSSS2026ABS067	Study of Correlation between Accretion and Outflow in Young Stellar Objects	Manojit Chakraborty
13	NSSS2026ABS213	Investigating Cloud-Cloud Collisions and Hub-Filament Systems: Pathways to Massive Star Formation	Arup Kumar Maity
14	NSSS2026ABS237	Probing the Interstellar Medium of NGC 7380: Toward a Determination of the Gas-to-Dust Ratio	Pryanshu Basur
15	NSSS2026ABS660	Investigative studies of five SHORT ORAL-period totally eclipsing binaries in search of third bodies	Shanti Priya Devarapalli
16	NSSS2026ABS379	A Robust and Automated Planning and Scheduling Framework - XPoViewer	Thameemunnisha
17	NSSS2026ABS262	Impact of calibration errors and instrumental noise for SKA1-Low on HI 21-cm maps from the Epoch of Reionization	Samit Kumar Pal
18	NSSS2026ABS342	Probing the Atmosphere of the Hot Jupiter KELT-7 b with JWST Transmission Spectroscopy	Aman Das
19	NSSS2026ABS731	Volatile Snowlines in Taurus Disks: Chemical Zonation and the Origins of Planetary System Diversity	Soumik Kar

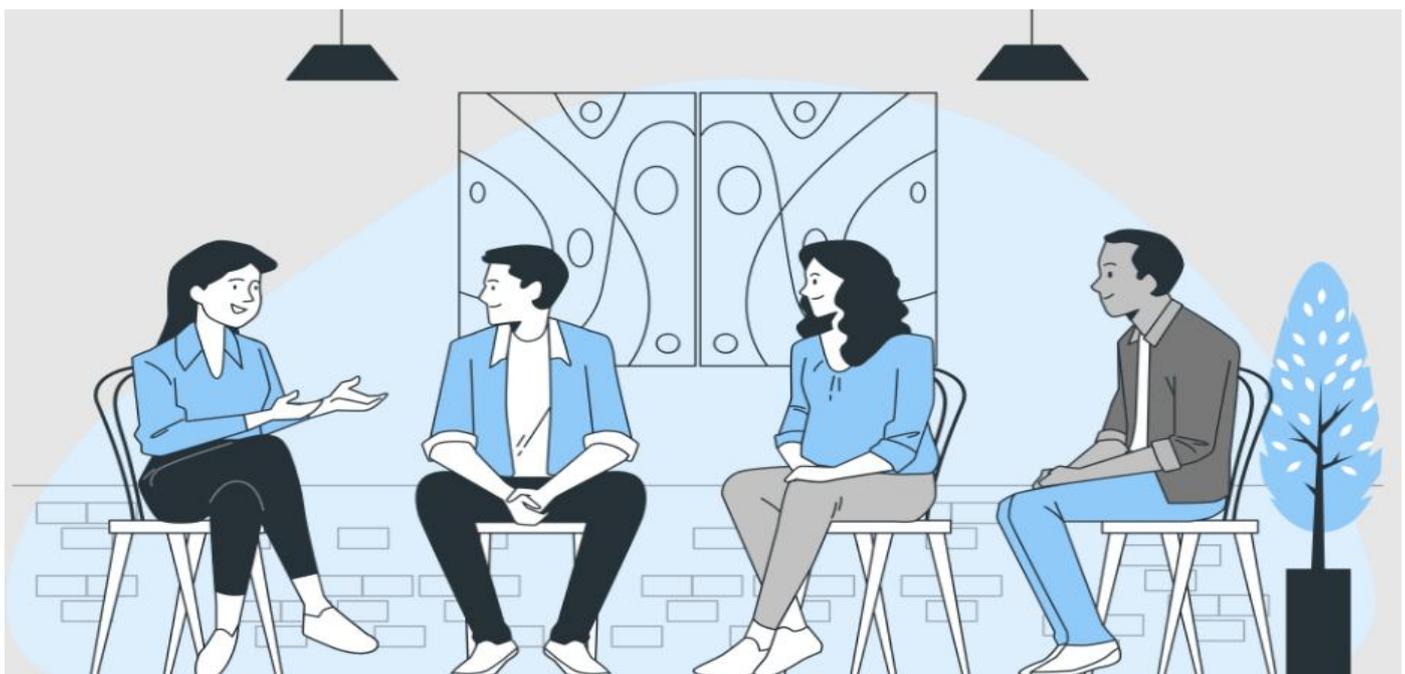
WEDNESDAY 25 th FEBRUARY 2026 16:00-17:30 Hrs		PS-5 ENABLING TECHNOLOGIES FOR SPACE EXPLORATION	
SL NO	ABSTRACT ID	ABSTRACT TITLE	FIRST AUTHOR
1	NSSS2026ABS086	Radiation Testing and Characterization of Radiation Hardened Dual Port SRAM	Pramod Mishra
2	NSSS2026ABS105	Artificial intelligence based risk assessment of commercial-of-the-shelf part for a satellite mission	Sachin Barthwal Siva Kumar Ambati
3	NSSS2026ABS056	Fault Tolerant Server Tuning for Latency Sensitive Applications	KM Deepshikha
4	NSSS2026ABS082	Identifying Stable Elliptical Frozen Orbits for Lunar Exploration	Parthiban P
5	NSSS2026ABS114	Space Gravitational Wave Observatory Around Earth	Priyansh Jain
6	NSSS2026ABS304	Reference Attitude design and analysis for Chandrayaan-3 Spacecraft	Manish Gupta
7	NSSS2026ABS220	Space Saathi : Design and Simulation of an Autonomous Collision Prediction and Avoidance System for Space objects.	Sumedh S Bhat
8	NSSS2026ABS066	Space-based debris detection, tracking, and orbit determination in the LEO environment	Shubhi Tiwari
9	NSSS2026ABS068	Ballistic shields for spacecraft protection against Micrometeoroids and Orbital Debris	Dr Rajeev Chaturvedi

10	NSSS2026ABS135	Comparative Analysis of Adaptive Filtering Techniques for DVB OFDM Receivers in Satellite Communication Systems	Zarana Barot
11	NSSS2026ABS129	Radiation Tolerant SWaP-C efficient SerDes-FPGA Interoperability for ISRO's Space Systems	Nirbhay Tyagi
12	NSSS2026ABS279	Optimization and Development of an Electron Cyclotron Resonance Plasma Thruster for Orbital and Space Missions	Shubhankur Suvansh;
13	NSSS2026ABS104	Unveiling On-Orbit Solar Panel Performance: Investigating Double Peaks in Photocurrent Dynamics	Prachi Bisht
14	NSSS2026ABS360	Formulation and Simulation of Multi-Orbit Transfer Dynamics for Efficient Orbital Transfer Vehicles	Archana Menon
15	NSSS2026ABS260	Automatic Parameterization of Ionospheric Plasma Structures from All-sky Airglow Images using Computer Vision and Deep Learning Techniques	Jeevan Upadhyaya
16	NSSS2026ABS101	Signal Parameter Estimation for Detector Systems Using Machine Learning on FPGA	Bhumi Patel
17	NSSS2026ABS553	ARUN-SSW: An Upcoming Solar Radio Imaging Facility	Anshu Kumari
18	NSSS2026ABS680	Design and Development of RF drive electronics for m/q scanning in the mass spectrometer	Pankaj Kushwaha
19	NSSS2026ABS765	Quick prediction of spacecraft dynamics using AI/ML	Akash Aditya

WEDNESDAY 25 th FEBRUARY 2026 16:00-17:30 Hrs		PS-6 NEXT-GENERATION SPACE MISSIONS: MOON, MARS, AND BEYOND	
1	NSSS2026ABS932	Stellar engine	Radhakrishnan vadivel
1	NSSS2026ABS932	Stellar engine	Radhakrishnan vadivel
2	NSSS2026ABS902	A feasibility study of X-ray pulsar navigation (xnav) for autonomous cruise-phase navigation on isro's future interplanetary missions	Suresh Kumar M
3	NSSS2026ABS922	Conceptual framework for integrating sustainable technologies into Indian human spaceflight programme	Vijay Raghavan
4	NSSS2026ABS960	Designing the Future on the Moon: Challenges and Opportunities for Permanent Human Habitation	Sure Bala Saran
5	NSSS2026ABS893	Space station and human habitat beyond earth	Hritik Rana

17:30 – 18:30

BREAKOUT MEET



THURSDAY

26.02.2026

PROGRAM AGENDA

TIME	INFORMATION	LOCATION
08:00-09:00	Registration	Outreach Facility
09:00-10:30	Plenary Session-3 Human Space Programme (3 Talks) Interdisciplinary Talk-3	New Auditorium.(Main Hall) See following pages for details
10:30-11:15	Space technology for development of North Eastern region of India Speaker- Dr S. P Aggarwal, NESAC	New Auditorium (Main Hall)
11:15-11:45	Tea/Coffee Break	
11:45-13:15	Technical Session (6 Parallel Session)	Several locations See following pages for details
13:15-14:15	Lunch Break	
14:15-16:00	Technical Session (6 Parallel Session)	Several locations See following pages for details
16:00-17:30	Poster Session, Exhibition, and Tea/Coffee Break	
17:30 - 18:30	Breakout Sessions (5 parallel sessions)	

THURSDAY 26th FEBRUARY 2026 09:00-10:30 Hrs	PLENARY SESSION-3 HUMAN SPACE PROGRAMME	LOCATION NEW AUDITORIUM.(MAIN HALL)
	CONVENER : Dr. Jasvinder Singh Khoral, URSC	
SI. NO	TOPIC	SPEAKER
1	Mission Operations in Human Space Missions	Robert P, DD MDA, URSC
2	Automatic and Manual Control in Human Space Missions	Rijesh R, DPD AOCS Gaganyaan, URSC
3	Project Management Aspects in Human Space Missions	Shri.Gowrishankar C.K, PD, Gaganyaan, URSC

THURSDAY 26th FEBRUARY 2026 10:30-11:15 Hrs	INTERDISCIPLINARY TALK-3	LOCATION NEW AUDITORIUM (MAIN HALL)
SI. NO	TOPIC	SPEAKER
1	Space technology for development of North Eastern region of India	Dr. S. P. Aggarwal, NESAC

11:15 – 11:45

TEA/COFFEE BREAK

THURSDAY 26th FEBRUARY 2026 11:45-13:15 Hrs PS-1	TECHNICAL SESSION-6 SPACE-BASED METEOROLOGY, OCEANOGRAPHY, GEOSPHERE-BIOSPHERE INTERACTIONS, AND CLIMATE CHANGE	LOCATION NEW AUDITORIUM.(MAIN HALL)	
	CHAIR : Dr. Anirban Guha, CO-CHAIR : Dr. Prince Prakash, NCPOR		
SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
ORAL PRESENTATION			
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 PRESENTATION			
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	Sumon Kumar Mondal

		Radar Rainfall and Soil Water	
4	NSSS2026ABS528	Impact of Orography on Extreme Rainfall Event in Thoothukudi, Tamil Nadu, December 2023	K.L. Arunkumar
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 Thabab
11	NSSS2026ABS578	Interpretable Machine Learning for Rainfall Forecasting: A ClimateChange Perspective in Meghalaya, India	Abinaya Devi N
12	NSSS2026ABS637	Tracking and Statistics of Mesoscale Convective Cells during the Indian Summer Monsoon	Alok Sharma
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

THURSDAY 26th FEBRUARY 2026 11:45-13:15 Hrs PS-2	TECHNICAL SESSION-6 MIDDLE ATMOSPHERE, ATMOSPHERIC COUPLING, DYNAMICS, AERONOMY, CLIMATE CHANGE AND SUN-EARTH CONNECTION	LOCATION HALL-1 (NEW AUDITORIUM)
	CHAIR : Dr. M V Sunil Krishna CO-CHAIR : Dr. Shyam S Kundu	

SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
ORAL PRESENTATION			
1	NSSS2026ABS811 (Lead Talk)	Thermospheric response to magnetospheric energy input during extreme space weather input	M V Sunil Krishna
2	NSSS2026ABS355	Using an in-house developed VLF receiver to probe D region dynamics over dip equatorial region	Reuben Samson Yaqub
3	NSSS2026ABS582	Study of seasonal variation of refractivity turbulence structure constant (Cn2) over Guwahati region using ST Radar data	Nilotpal Nath1
4	NSSS2026ABS527	Impact of Hunga-Tonga Hunga-Ha'apai volcanic eruption in increasing stratospheric water vapour and its impact of global ozone and surface temperature	Siddarth Shankar Das
5	NSSS2026ABS367	Impacts of SHORT ORAL term Stratospheric Ozone Variability on migrating diurnal tides in the Mesosphere Lower Thermosphere	Oindrila Nath
6	NSSS2026ABS270	Imprint of a quasi-16-day period in boreal summer through modulation of quasi-2-day wave: A signature of interhemispheric coupling	A. Guharay
7	NSSS2026ABS493	Intensification of the tropospheric warming and weakening of the lower stratospheric cooling: Insights from long-term (1980-2024) multi data sets	A. Kalyan Teja
8	NSSS2026ABS698	Development of AI/ML based electron density model for Indian low latitudes	P. Pavan Chaitanya
SHORT ORAL PRESENTATION			
1	NSSS2026ABS488	SHORT ORAL-term Variability of the Migrating Semidiurnal	N. Koushik

		Tide in the Mesosphere Lower Thermosphere region as observed by the JAGUAR-DAS Whole Neutral Atmosphere Reanalysis	
2	NSSS2026ABS294	Observational and Modelling Analysis of Thermospheric Nitric Oxide Emission During July 2004 Series of Geomagnetic Storms using TIMED-SABER and TIE-GCM	Shrivansh Panwar
3	NSSS2026ABS266	Role of Coupled Electrodynamics of E- and F-Regions on the Rapid Poleward Extension of EMSTID Fronts	Dipjyoti Patgiri
4	NSSS2026ABS357	Parameterisation of the Inertial Gravity Waves in the Upper Troposphere and Lower Stratosphere region over the Monsoon Core Zone	Aditya Jaiswal
5	NSSS2026ABS693	Development of new data analysis tool for DPS-4D digisonde observations for low-latitude ionospheric research	G. Janardana Reddy

THURSDAY 26th FEBRUARY 2026 11:45-13:15 Hrs PS-3	TECHNICAL SESSION-6 SOLAR AND PLANETARY SCIENCES	LOCATION CONFERENCE HALL (OUTREACH FACILITY)
	CHAIR : Deepak Dhingra CO-CHAIR : Megha Bhatt	

SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
ORAL PRESENTATION			
1	NSSS2026ABS661 (Lead Talk)	Terrestrial Analogue Sites in India and Their Implications for Planetary Exploration	Rajesh V J
2	NSSS2026ABS501	Crater Rim-Breaching Events as an Indicator of Paleofloods on Mars	Rishav Sahoo
3	NSSS2026ABS050	Magma Chamber Longevity on Mars and its Controls on Crustal Structure and Composition	Arka Pratim Chatterjee
4	NSSS2026ABS658	Hydrated Minerals and Clay Minerals of Meridiani Planum, Mars: An Integrated Geomorphological and Spectral Analysis Using Multi-Resolution Orbital Datasets	Rozi Baishya
5	NSSS2026ABS494	Cerberus Tholi region, Mars: Record of Volcanism, Glacial, Fluvial, and seismic activities	Vijayan S
6	NSSS2026ABS522	Martian analogues from the Indian subcontinent: Implications for hydrological activity on Mars	Anil Chavan
7	NSSS2026ABS411	cosmic ray exposure ages of meteorites	Ramakant R. Mahajan
8	NSSS2026ABS321	Mineralogical, chemical, and isotopic study of Martian meteorite NWA 7397	Amit Basu Sarbadhikari

THURSDAY 26th FEBRUARY 2026 11:45-13:15 Hrs PS-4	TECHNICAL SESSION-6 ASTRONOMY AND ASTROPHYSICS	LOCATION SMART CLASS ROOM (OUTREACH FACILITY)
	CHAIR : Dr. Yogesh Chandra Joshi	

SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
ORAL PRESENTATION			
1	NSSS2026ABS169 (Lead talk)	Co-evolution of Supermassive Black Holes and their Host Halos	Mahavir Sharma

SHORT ORAL PRESENTATION			
SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
1	NSSS2026ABS327	From Design to Deployment: Opto-Mechanical Insights into Backend Instrumentation for the PRL 2.5m Telescope for Reliable On-Sky Operations	Kevikumar A. Lad
2	NSSS2026ABS649	A comprehensive study of Cygnus Loop Supernova Remnant	Rupesh Behera
3	NSSS2026ABS763	Mid-Infrared Variability of Young Stellar Objects: NEOWISE-Based Classification and Long-Term Trends.	Shubham Yadav
4	NSSS2026ABS020	Investigating the Kinematics of Molecular Gas in Cometary Globule L1616	Puja Porel
5	NSSS2026ABS306	Prediction of H40alpha properties in star-forming region: A machine learning approach	Antara Dey
6	NSSS2026ABS203	From Radiation Driven Implosion to Cloud Cloud Collisions:	Rishi C

		Star Formation in Feedback Dominated Environments	
7	NSSS2026ABS255	A980 and the Germanium Puzzle: New Clues from an Extreme Helium Star	Ajay Kumar Saini
8	NSSS2026ABS237	Probing the Interstellar Medium of NGC 7380: Toward a Determination of the Gas-to-Dust Ratio	Pryanshu Basur
9	NSSS2026ABS363	Multiwavelength study of star formation within molecular clouds	Soumita Chakraborty

THURSDAY 26th FEBRUARY 2026 11:45-13:15 Hrs PS-5	TECHNICAL SESSION-6 ENABLING TECHNOLOGIES FOR SPACE EXPLORATION	LOCATION HALL-2 (NEW AUDITORIUM)
	CHAIR : Dr. Mehul Pandya CO-CHAIR : Mr. Dinakar Prasad Vajja	

SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
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ORAL PRESENTATION

1	NSSS2026ABS849 (Lead Talk)	Achieving Centimeter-Level Accuracy in Autonomous UAV Navigation	Dhruv Bhardwaj
2	NSSS2026ABS210	Automating spacecraft operations through discriminator loss based anomaly detection in spacecraft telemetry	Deepan M
3	NSSS2026ABS583	Self-Supervised Deep Learning based Approach for Change Detection using High-Resolution SAR Imagery	Vatsalya Gupta
4	NSSS2026ABS387	A comparative study of Deep learning based feature correspondence for Chandrayaan mission optical payload image fine registration	Rohit Mishra
5	NSSS2026ABS790	Machine Learning Models for Solar-Terrestrial Disturbance Prediction in Satellite Operations	Aadya Maheshwari
6	NSSS2026ABS035	Development, assembly, calibration and testing of the payload NUTEx designed for UV transient sky studies	Shubham Ghatul
7	NSSS2026ABS039	Indigenous Development of Integrated Detector Cooler Assembly for Infrared Focal Plane Arrays	Ankur Jain
8	NSSS2026ABS800	Solar Occultation Experiments (SOE) for Probing Venusian Atmosphere: A Simulation Framework	Sunil kumar S.V
9	NSSS2026ABS709	Development of a hard X-ray Compton polarimeter for small satellite mission	Adalja Hiteshkumar
10	NSSS2026ABS739	The Fusion of Generative and Agentic AI Next Generation Atmospheric and Space Science Research	Pinaki Ranjan Sarkar
11	NSSS2026ABS258	Evaluation of quantized deep learning models on edge hardware towards automated rover navigation on planetary bodies	Jai Singla

SHORT ORAL PRESENTATION

1	NSSS2026ABS260	Automatic Parameterization of Ionospheric Plasma Structures from All-sky Airglow Images using Computer Vision and Deep Learning Techniques	Jeevan Upadhyaya
2	NSSS2026ABS101	Signal Parameter Estimation for Detector Systems Using Machine Learning on FPGA	Bhumi Patel
3	NSSS2026ABS553	ARUN-SSW: An Upcoming Solar Radio Imaging Facility	Anshu Kumari
4	NSSS2026ABS680	Design and Development of RF drive electronics for m/q scanning in the mass spectrometer	Pankaj Kushwaha

THURSDAY 26th FEBRUARY 2026 12:15-13:15 Hrs PS-6	TECHNICAL SESSION-8 SPACE TECHNOLOGY	LOCATION NESAC MAIN CAMPUS AUDITORIUM
	CHAIR : Dr. Diganta Barman CO-CHAIR : Dr. Jonali Goswami	

SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
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ORAL PRESENTATION

1	NSSS2026ABS984	Analysis of solar irradiance pattern in India using Python based ML technique	Nidhi Mishra
2	NSSS2026ABS985	Machine learning algorithm to predict and improve the crop yield using the satellite data	Ritovas Bhattacharya
3	NSSS2026ABS971	Development of a Compact S-Band UAV-Borne Synthetic Aperture Radar (uSAR) using a Custom-Built Drone Platform for All-Weather Crop and Surface Monitoring	Anup Jyoti Sharma
4	NSSS2026ABS973	Probing the Hubble Tension: Supernovae Ia Constraints on Cosmic Expansion and the Age of the Universe	Bhaswat Sundar Das
5	NSSS2026ABS974	A study of potential for life in the subsurface oceans of icy moon: Europa	Nameirakpam Dhanapriya Devi

SHORT ORAL PRESENTATION

1	NSSS2026ABS986	Context -Aware computer vision enhancements for Illegal Mining Detection	Prashant Kauthekar
2	NSSS2026ABS987	Atomic recombination and the formation of the Cosmic Microwave Background spectrum	Sone Tayeng
3	NSSS2026ABS995	Climatology of monsoon rainfall over the NER of India using IMDAA reanalysis data	Nandini Gogoi
4	NSSS2026ABS991	Vikas-Sikhara (VS-1): A Monolithic, Topology-Optimised Aerospike Propulsion System for Enhanced PSLV Performance	Dawar Diganta J Kashyap
5	NSSS2026ABS980	Climate change, rocket launch, and its effect in the atmosphere	Thouchum Payal Chanu

13:15 – 14:15

LUNCH BREAK



THURSDAY
26th FEBRUARY 2026
14:15-16:00 Hrs

PS-1

TECHNICAL SESSION-7

SPACE-BASED METEOROLOGY, OCEANOGRAPHY, GEOSPHERE-BIOSPHERE INTERACTIONS, AND CLIMATE CHANGE

CHAIR : Dr. Harish Gadhavi, PRL
CO-CHAIR : C. K. Unnikrishnan, NCESS

LOCATION

NEW AUDITORIUM.(MAIN HALL)

SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
ORAL PRESENTATION			
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 Region	Vaibhav Tyag
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 Muni

SHORT ORAL PRESENTATION

1	NSSS2026ABS069	A Comparative Analysis of Environmental Factors and Vortex Structure in Developing and Non-Developing Tropical Disturbances over the Bay of Bengal	Arpita Muni
2	NSSS2026ABS089	AI use technology based on satellite used in flood mechanism	Dr. Rakesh Kumar Mishra
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 its impact on forest Carbon under Climate change Scenarios	Balaramdas K R
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	Siddhant Arya

		Ice Decline to Precipitation and Snow Variability over the Hindu Kush-Himalaya	
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

THURSDAY
26th FEBRUARY 2026
14:15-16:00 Hrs

PS-2

TECHNICAL SESSION-7

MIDDLE ATMOSPHERE, ATMOSPHERIC COUPLING, DYNAMICS, AERONOMY, CLIMATE CHANGE AND SUN-EARTH CONNECTION

LOCATION

HALL-1 (NEW AUDITORIUM)

CHAIR : Dr. Nirvikar Dashora

CO-CHAIR : Dr. R.N Ghodpage

SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
ORAL PRESENTATION			
1	NSSS2026ABS671	Experimenting with ground chain of GNSS and NavIC receivers in the Indian Sector: Salient features and research highlights	Nirvikar Dashora
2	NSSS2026ABS111	Validation of JAGUAR-DAS Whole Neutral Atmosphere Reanalysis JAWARA Zonal Winds with Independent Rocket Soundings from a tropical site	N. Koushik
3	NSSS2026ABS604	Background removal of satellite measurements for gravity wave analysis using a new python-based toolbox – GLOFI	Arun Jo Mathew
4	NSSS2026ABS474	Response of Equatorial and Low Latitude Thermosphere-Ionosphere to the Geomagnetic Storm of 01 January 2025	Manu T
5	NSSS2026ABS299	Gravity Wave Observations in the Mesosphere and Lower Thermosphere Using Medium Frequency Radar Over Kolhapur, India	H. P. Gaikwad
6	NSSS2026ABS571	New results on Midnight Temperature Maximum (MTM) obtained using Fabry-Perot Interferometer (FPI) from Thumba, a low latitude Indian station	Md Mosarraf Hossain

7	NSSS2026ABS616	Ionospheric irregularities during low solar June solstice	Soujan Ghosh
SHORT ORAL PRESENTATION			
1	NSSS2026ABS167	Towards High-Resolution 3D Lightning Flash Mapping: Development of SHORT ORAL-Baseline Array and Field Experiments	Jayant Chouragade
2	NSSS2026ABS624	Mesospheric dynamics using spectroscopic and imaging ground-based observations of OH(3-1) nightglow emission in the SWIR region	Ravindra. P. Singh
3	NSSS2026ABS165	Signature of intraseasonal oscillations during Hunga Tonga volcanic eruption.	A. Chaurasia
4	NSSS2026ABS499	Long-term characteristics of vertical air motion over the gateway of Indian summer monsoon using 205 MHz Stratopshere-Troposphere Radar	Nabarun Poddar
5	NSSS2026ABS577	Latitudinal Ionospheric Response to the Expansion of High-Latitude Convection During Geomagnetic Disturbances	Kshitiz Upadhyay
6	NSSS2026ABS707	Impact of sudden stratospheric warming events on ionospheric F2 region at low mid latitude Indian station, New Delhi.	Qadeer Ahmed

THURSDAY 26th FEBRUARY 2026 14:15-16:00 Hrs PS-3	TECHNICAL SESSION-7 SOLAR AND PLANETARY SCIENCES CHAIR : Amit Basu Sarbadhikari CO-CHAIR : Manju G	LOCATION CONFERENCE HALL (OUTREACH FACILITY)
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SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
1	NSSS2026ABS276 (Lead Talk)	New constraints on water ice content in the near surface of Cabeus crater floor near the lunar South Pole using Chandrayaan-2 DFSAR data	Sriram S. Bhivaravasu
2	NSSS2026ABS496	Spectral Insights into Carbonaceous Chondrites Origins: Correlating Main-Belt Asteroids with CV Chondrites	A P Singh
3	NSSS2026ABS271	A new global tectonic map of the moon with inclusion of newly identified lobate scarps	Abhisek Mishra
4	NSSS2026ABS834	First Ever Circular Polarization Ratio (CPR) and Radar Scattering Maps of Lunar Poles in L-band using Full-Polarimetric DFSAR data from Chandrayaan-2	Tathagata Chakraborty
5	NSSS2026ABS655	Ancient, now obliterated impact basins on the Moon: Host to recent volcanic activity	Neeraj Srivastava
6	NSSS2026ABS829	Fossilized Lunar Swirls: An Intriguing New Possibility and Its Implications	Deepak Dhingra
7	NSSS2026ABS842	Global-Scale Mapping of Lunar Sodium Using Integrated X-Ray and Near-Infrared Spectroscopy	Megha Bhatt
8	NSSS2026ABS402	The antiquity of feldspathic highland materials of Chandrayaan-3 soil and its potential geochemical match with lunar meteorites	Dwijesh Ray
9	NSSS2026ABS717	Indian on the Moon by 2040: Science strategy for implementation and sustenance	Megala S

THURSDAY 26th FEBRUARY 2026 14:15-16:00 Hrs PS-4	TECHNICAL SESSION-7 ASTRONOMY AND ASTROPHYSICS CHAIR : Dr. A. Tej	LOCATION SMART CLASS ROOM (OUTREACH FACILITY)
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SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
ORAL PRESENTATION			
1	NSSS2026ABS043	Multi-band and Multi-instrument study of the transiting exoplanets (Lead talk)	Yogesh Chandra Joshi
2	NSSS2026ABS356	Detection and Characterization of TOI-6651b: A Dense Sub-Saturn in the Neptunian Ridge Using PARAS-2	Rishikesh Sharma
3	NSSS2026ABS199	Tracing the cause of Abundance Discrepancies in PNe	K. Khushbu

SHORT ORAL PRESENTATION

1	NSSS2026ABS239	Astrosat detection of Lyman continuum leakers at z 1-2	Suraj Dhiwar
2	NSSS2026ABS713	Investigating the temporal and spectral nature of Mrk 590 through multiwavelength signatures	Arya Sudhakaran
3	NSSS2026ABS117	Baryonic Ecosystem IN Galaxies BEINGMgII III Cool gas reservoirs at $0.3 < z < 1.6$ in the Dark Energy Survey	Reena Chaudhary
4	NSSS2026ABS130	Exploring the Diversity of Type Ia Supernovae: Insights from SN 2022eyw and Ongoing Studies	Hrishav Das
5	NSSS2026ABS095	Multi-wavelength study of an extremely X-ray variable WLQ SDSSJ1539: a dive into the radio properties of WLQs	Ayushi Chhipa
6	NSSS2026ABS119	Constraining the Hubble parameter with the 21-cm brightness temperature signal in a universe with inhomogeneities	Subhadeep Mukherjee
7	NSSS2026ABS175	Broadband Spectral Modeling of Blazars: Constraining the Lorentz Factor and Gamma-Ray Emission Site	Ajay Sharma
8	NSSS2026ABS073	Feasibility Simulation Study of an Adaptive Optics FPGA Spectrometer for Exoplanetary Atmospheres and Transient Astronomy	Sahela Khalid

THURSDAY
26th FEBRUARY 2026
14:15-16:00 Hrs

PS-5

TECHNICAL SESSION-7

ENABLING TECHNOLOGIES FOR SPACE EXPLORATION

LOCATION

HALL-2 (NEW AUDITORIUM)

CHAIR : Dr. Mehul Pandya
CO-CHAIR : Mr. Raghu Ningthoujam

SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
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ORAL PRESENTATION

1	NSSS2026ABS594 (Lead Talk)	Quantum Secure Military CanSat	Milan Bhat
2	NSSS2026ABS406	Thermal Actuation and Capacitive Feedback Sensor Based Refocusing Mechanism for Optical Payloads	Tanishka Chauhan
3	NSSS2026ABS219	Dual-gimbal-antenna system for interplanetary missions	Dhruti Ranjan Gaan
4	NSSS2026ABS850	Attitude design for Instrument calibration of Aditya-L1 using celestial X-ray beacons	Madhav Haridas M.K.
5	NSSS2026ABS662	Incoherent Polarization Beam Combining and its application in active optical remote sensing systems	Abhishek A
6	NSSS2026ABS828	Quantifying the Impact of Perturbations on Earth-Mars Transfer Trajectory	Sidhartha AJ
7	NSSS2026ABS843	Self-Healing Lunar Concrete Using Microbial Biopolymers	Devansh Bhatia
8	NSSS2026ABS733	Venus Solar Soft X-ray Spectrometer (VS3) on-board Venus Orbiter Mission	Nishant Singh
9	NSSS2026ABS245	Orbital Electrically-Pumped Laser System for Active Space Debris Remediation	Rajnandni Bharti
10	NSSS2026ABS809	Dynamic Reinforcement Learning for effective Sensor Tasking in Space Situational Awareness	Harsha M
11	NSSS2026ABS551	Design and Optimization of a Three-Stage Planetary Gearbox for Space-Grade Gear Rotary Actuators.	Jyotirmoy Haloi and Dr. Tanmay Dutt Mathur
12	NSSS2026ABS337	High precision multi laser tracker measurement system for ground docking simulation experiments	Sudhanshu Tiwari

SHORT ORAL PRESENTATION

1	NSSS2026ABS844	Quantum-Entangled Navigation System for Deep-Space Applications	Devansh Bhatia
2	NSSS2026ABS765	Quick prediction of spacecraft dynamics using AI/ML	Akash Aditya
3	NSSS2026ABS487	Real-Time Anomaly Detection in Satellite Engineering Sensors	Sayantana Ghosh

4	NSSS2026ABS173	Computational Analysis of Fluidic Thrust Vector Control for Efficient Nozzle Design in Aerospace Propulsion	Samhitha V
5	NSSS2026ABS328	Design and development of a Waypoint guidance system for a sounding rocket	Anish Kumar
6	NSSS2026ABS241	Biomimetic Rotating Detonation Engine Shark Skin Textured Combustor for Pressure Gain Propulsion	Tumma Anusha

THURSDAY 26th FEBRUARY 2026 15:00-16:00 Hrs PS-6	TECHNICAL SESSION-9 SPACE TECHNOLOGY	LOCATION NESAC MAIN CAMPUS AUDITORIUM
	CHAIR : Shri Ramani K Das CO-CHAIR : Shri Himangshu Pandey	

SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
ORAL PRESENTATION			
1	NSSS2026ABS989	Ghost Satellites: Cyber-Deception for Securing Modern Satellite Constellations	Siddhartha Rajbongshi
2	NSSS2026ABS990	Active Space Debris Removal Using Tether-Based Capture and De-Orbiting Mechanisms	Dishita saikia
3	NSSS2026ABS978	A Data Assimilation Framework for Quantifying Martian Atmospheric Escape Uncertainty	Ishan Narayan Shukla
4	NSSS2026ABS979	Pineapple-Based Slope Reinforcement with Satellite-Sensor Early Warning for Multi-Hazard Disaster Prevention in Manipur Hills	Arpita Kumari
5	NSSS2026ABS976	Daily Variability of Ionospheric TEC Over North Eastern Region of India : Insights of the IRI Model	Vedika Sharma
6	NSSS2026ABS981	Timing Analysis of the Neutron Star 4U 1728-34 Using AstroSat Observations	Lalchhuanawmi Jinhlawng
7	NSSS2026ABS982	The Celestial Hunter: A Comparative Analysis of the Mizo Chhohhreibung and the Western Orion Constellation	Biakthansanga Ralte
8	NSSS2026ABS968	Transforming Space Debris into Space Assets through Robotic Orbital Recycling	Meghalina Chakraborty
SHORT ORAL PRESENTATION			
1	NSSS2026ABS996	A hybrid material as optical pre-seismic sensor for pre earthquake prediction: electro-mechano luminescence	Ashutosh Satapathy
2	NSSS2026ABS977	AI+Satellite System for Preventing Air Crashes	Happyiona Lyngdoh Mawphlang
3	NSSS2026ABS983	Adaptive Machine Learning-Driven Perovskite Solar Arrays for Resilient Spacecraft Power Systems	Tiya Jaman

16:00 – 17:30

TEA / COFFEE + POSTER SESSION



THURSDAY
26th FEBRUARY 2026
16:00-17:30 Hrs

PS-1

SPACE-BASED METEOROLOGY, OCEANOGRAPHY, GEOSPHERE-BIOSPHERE INTERACTIONS, AND CLIMATE CHANGE

SL NO	ABSTRACT ID	ABSTRACT TITLE	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	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
5	NSSS2026ABS040	Miyawaki Plantation for Sustainable Urban Greening- A Case Study on Soil Physicochemical Improvement at IESD BHU Varanasi.	Isha Singh
6	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
7	NSSS2026ABS261	Spatiotemporal analysis of Land Use Land Cover changes over Dibrugarh, Sibsagar, and Charaideo Districts of Upper Assam	Himashree Das
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 Thombson
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
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	Sudip Kumar Kundu

		pattern with respect to ground-based IMD rainfall data over Assam, India	
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 Iod Retreat	Haritha M
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

THURSDAY
26th FEBRUARY 2026
16:00-17:30 Hrs

PS-2

MIDDLE ATMOSPHERE, ATMOSPHERIC COUPLING, DYNAMICS, AERONOMY, CLIMATE CHANGE AND SUN-EARTH CONNECTION

SL NO	ABSTRACT ID	ABSTRACT TITLE	FIRST AUTHOR
1	NSSS2026ABS149	Study of the characteristics of Mesospheric Bores at the Indian Equatorial Station, Tirunelveli	Jennifer A
2	NSSS2026ABS167	Towards High-Resolution 3D Lightning Flash Mapping: Development of SHORT ORAL-Baseline Array and Field Experiments	Jayant Chouragade
3	NSSS2026ABS165	Signature of intraseasonal oscillations during Hunga Tonga volcanic eruption.	A. Chaurasia
4	NSSS2026ABS499	Long-term characteristics of vertical air motion over the gateway of Indian summer monsoon using 205 MHz Stratosphere-Troposphere Radar	Nabarun Poddar
5	NSSS2026ABS643	Determination of Electron Energy Distribution Function (EEDF) and Magnetic Confinement in Low-Temperature Plasmas using Single Langmuir probe	Pallab Gogoi
6	NSSS2026ABS693	Development of new data analysis tool for DPS-4D digisonde observations for low-latitude ionospheric research	G. Janardana Reddy
7	NSSS2026ABS568	Machine Learning Insights into Seasonal and Solar Cycle Variations of CO ₂ Cooling in the Upper Atmosphere	Dayakrishna Nailwal
8	NSSS2026ABS624	Mesospheric dynamics using spectroscopic and imaging ground-based observations of OH(3-1) nightglow emission in the SWIR region	Ravindra. P. Singh
9	NSSS2026ABS488	SHORT ORAL-term Variability of the Migrating Semidiurnal Tide in the Mesosphere Lower Thermosphere region as observed by the JAGUAR-DAS Whole Neutral Atmosphere Reanalysis	N. Koushik
10	NSSS2026ABS294	Observational and Modelling Analysis of Thermospheric Nitric Oxide Emission During July 2004 Series of Geomagnetic Storms using TIMED-SABER and TIE-GCM	Shrivansh Panwar
11	NSSS2026ABS707	Impact of sudden stratospheric warming events on ionospheric F2 region at low mid latitude Indian station, New Delhi.	Qadeer Ahmed
12	NSSS2026ABS266	Role of Coupled Electrodynamics of E- and F-Regions on the Rapid Poleward Extension of EMSTID Fronts	Dipjyoti Patgiri
13	NSSS2026ABS357	Parameterisation of the Inertial Gravity Waves in the Upper Troposphere and Lower Stratosphere region over the Monsoon Core Zone	Aditya Jaiswal
14	NSSS2026ABS577	Latitudinal Ionospheric Response to the Expansion of High-Latitude Convection During Geomagnetic Disturbances	Kshitiz Upadhyay

THURSDAY 26 th FEBRUARY 2026 16:00-17:30 Hrs		PS-3 SOLAR AND PLANETARY SCIENCES	
SL NO	ABSTRACT ID	ABSTRACT TITLE	FIRST AUTHOR
1	NSSS2026ABS848	Assessing the Vulnerability of Lunar Polar Ice to Human-Induced Thermal Perturbations	Preksha Choudhury
2	NSSS2026ABS652	Exploring the Mineralogical Diversity of the Lunar South Pole: Insights from Chandrayaan Datasets	Suyash Sharma
3	NSSS2026ABS787	Spatial and temporal variation of wrinkle ridge forming processes in the Mare Tranquillitatis: constraints from comprehensive morphometric and chronometric analysis	Shubham Magar
4	NSSS2026ABS358	L-Band Radar Study of Irregular Mare Patches on the Moon: Sosigenes, Hyginus, and Cauchy-5	Deepa Kumari
5	NSSS2026ABS322	Petrogenesis of Poikilitic Shergottite NWA 1950: Unravelling Martian Mantle Sources	Varsha M. Nair
6	NSSS2026ABS374	Modelling Thermophysical Environment of Lunar Poles: Implications to Future Exploration	K. Durgaprasad
7	NSSS2026ABS770	Shock-Driven Chemical Processing of Lunar Analogues	Roshan Nath
8	NSSS2026ABS437	Towards Understanding Bright and Dark Patterns of Lunar Swirls at the Global Scale	Subhangini Soni and Megha Bhatt
9	NSSS2026ABS562	Brill crater Moon: Insights into Polar Region Volatiles	Rama Subramanian V
10	NSSS2026ABS521	Micro-Raman Study of Graphite in IAB Iron Meteorites	Vikram Goyal
11	NSSS2026ABS529	CraterMorpho: A customized toolbox for automatic extraction of morphometric parameters and classification of Lunar craters using Chandrayaan-2 TMC-2 images	Mimansa Sinha
12	NSSS2026ABS802	Crater morphometry and scattering behaviour as a tool to understand lunar south polar PSRs	Sachana Sathyan
13	NSSS2026ABS500	Diverse carbon phases of insoluble organic matter (IOM) in enstatite meteorites: Existence of Nanoglobules and Graphitised carbons	Neha
14	NSSS2026ABS804	Discovery of high-pressure phases in shock lithified Lunar meteorite NWA 10989	Garima Arora
15	NSSS2026ABS710	Overview of Chandrayaan-4 Mission and plan for sample utilization	S. Megala

THURSDAY 26 th FEBRUARY 2026 16:00-17:30 Hrs		PS-4 ASTRONOMY AND ASTROPHYSICS	
SL NO	ABSTRACT ID	ABSTRACT TITLE	FIRST AUTHOR
1	NSSS2026ABS776	A Metrics-Based Catalogue of Potentially Habitable Exoplanets	Samridhi Dwivedi
3	NSSS2026ABS363	Multiwavelength study of star formation within molecular clouds	Soumita Chakraborty
4	NSSS2026ABS212	Signatures of gas inflow and infall in a massive star forming region G339.88-1.26 .	Tunir Kundu
5	NSSS2026ABS288	From Bubble to Cluster: Probing the Evolutionary History of BDS2003-52	Mamta
6	NSSS2026ABS835	Developing an XMM-Newton Pipeline for Galaxy Cluster X-ray Analysis: A Framework Inspired by ClusterPyXT	Riya Rathore
7	NSSS2026ABS430	Robotic DIMM for Mt Abu Observatory site	Neelam J S S V Prasad
8	NSSS2026ABS858	Development of a GUI-Controlled Fiber Positioner System for a Multi-Object Spectrograph	Nitish Singh
9	NSSS2026ABS758	Development of SHORT ORAL Wave Infrared Imaging System (SIRIS) for 1.2m telescope at PRL Mt Abu Observatory	Deekshya R.S
10	NSSS2026ABS013	Understanding SSM-IMRIs with LIGO-Virgo and Einstein Telescope	Devesh Giri
11	NSSS2026ABS409	A Low cost Instructional Interferometer using DIY Horn Antenna	Sangeetha A
12	NSSS2026ABS324	Design and Development of Scrambler for precision Doppler spectroscopy	Kapil Bharadwaj
14	NSSS2026ABS632	Indian Optical Telescopes and Their Role for High Resolution of Stellar Objects	Km Nitu Rai
15	NSSS2026ABS792	Small telescope astronomy : lessons from PRL's 50cm telescope and indigenous supporting equipments	Alka

16	NSSS2026ABS073	Feasibility Simulation Study of an Adaptive Optics FPGA Spectrometer for Exoplanetary Atmospheres and Transient Astronomy	Sahela Khalid
17	NSSS2026ABS467	Pre-Explosion Variability and the Period-Luminosity Relation of Type II Supernova Progenitors in Spitzer IRAC Bands	Snigdha Sarmah
18	NSSS2026ABS180	Spectral nature of Sco X 1 observed using the X ray SPECTroscopy and Timing XSPECT payload onboard XPoSAT	V. P. Shyam Prakash
19	NSSS2026ABS347	Investigating Oscillation Modes in Dark Matter-Enriched Neutron Stars	Vivek Baruah Thapa

THURSDAY
26th FEBRUARY 2026
16:00-17:30 Hrs

PS-5

ENABLING TECHNOLOGIES FOR SPACE EXPLORATION

SL NO	ABSTRACT ID	ABSTRACT TITLE	FIRST AUTHOR
1	NSSS2026ABS679	Enhancing Reliability of Space-based Plasma Science Data through Designed Electronic Calibration for future space missions	Pankaj Kumar Kushwaha
2	NSSS2026ABS556	Development of X-ray Optics for Future Indian Astronomy Missions at PRL	Neeraj K. Tiwari
3	NSSS2026ABS855	A Brief Review, Challenges and Development Trends in Quantum Key Distribution Protocols	Venugopal S
4	NSSS2026ABS844	Quantum-Entangled Navigation System for Deep-Space Applications	Devansh Bhatia
5	NSSS2026ABS487	Real-Time Anomaly Detection in Satellite Engineering Sensors	Sayantana Ghosh
6	NSSS2026ABS173	Computational Analysis of Fluidic Thrust Vector Control for Efficient Nozzle Design in Aerospace Propulsion	Samhitha V
7	NSSS2026ABS328	Design and development of a Waypoint guidance system for a sounding rocket	Anish Kumar
8	NSSS2026ABS241	Biomimetic Rotating Detonation Engine Shark Skin Textured Combustor for Pressure Gain Propulsion	Tumma Anusha
9	NSSS2026ABS642	HybridFusionLog: A Unified Template-Parameter-Context Framework for Space System Anomaly Detection	Swayam Kalburgi
10	NSSS2026ABS191	Naarad: Secure On-Premise AI Assistant for Astronaut Support and Space Mission Autonomy	Shaik Mohammed Muzammil Ali
11	NSSS2026ABS408	Space Refuelling Stations: A Comprehensive Review for Deep Space Exploration	Ateet Roy
12	NSSS2026ABS526	Dynamic launch environment simulation for solar array used in Human Space Flight mission of ISRO	Shilpi Sharma

THURSDAY
26th FEBRUARY 2026
16:00-17:30 Hrs

PS-6

SPACE TECHNOLOGY

1	NSSS2026ABS932	Stellar engine	Radhakrishnan vadivel
1	NSSS2026ABS986	Context -Aware computer vision enhancements for Illegal Mining Detection	Prashant Kauthekar
2	NSSS2026ABS987	Atomic recombination and the formation of the Cosmic Microwave Background spectrum	Sone Tayeng
3	NSSS2026ABS995	Climatology of monsoon rainfall over the NER of India using IMDAA reanalysis data	Nandini Gogoi
4	NSSS2026ABS991	Vikas-Sikhara (VS-1): A Monolithic, Topology-Optimised Aerospike Propulsion System for Enhanced PSLV Performance	Dawar Diganta J Kashyap
5	NSSS2026ABS980	Climate change, rocket launch, and its effect in the atmosphere	Thouchum Payal Chanu
6	NSSS2026ABS996	A hybrid material as optical pre-seismic sensor for pre earthquake prediction: electro-mechano luminescence	Ashutosh Satapathy
7	NSSS2026ABS977	AI+Satellite System for Preventing Air Crashes	Happyiona Lyngdoh Mawphlang
8	NSSS2026ABS983	Adaptive Machine Learning-Driven Perovskite Solar Arrays for Resilient Spacecraft Power Systems	Tiya Jaman
9	NSSS2026ABS970	HfO2 Based Memristors as Potential Candidate towards Radiation-Tolerant and Thermally Stable Electronics for Deep Space Environments	Utsav Neogi

10	NSSS2026ABS988	Multi-Layer Radiation shielding Materials for Sustainable Human Settlement in Outer Space	Sayeed Mohammad Choudhury
11	NSSS2026ABS994	A Modular Fully Reusable Two-Stage Launch System with Autonomous Health-Aware Recovery for Rapid Space Access	Ishan Singh

17:30 – 18:30

BREAKOUT MEET



FRIDAY

27.02.2026

PROGRAM AGENDA

TIME	INFORMATION	LOCATION
08:00-09:00	Registration	Outreach Facility
09:00-10:30	Plenary Session-4 Integrating India's Capabilities for Space Science and Technology (4 Talks)	New Auditorium.(Main Hall) See following pages for details
10:30-11:15	Interdisciplinary Talk-4 Origin and growth of astronomy in India Speaker- Dr. Mayank Vahia, TIFR	New Auditorium.(Main Hall)
11:15-11:45	Tea/Coffee Break	
11:45-13:15	Technical Session (6 Parallel Session)	Several locations See following pages for details
13:15-14:15	Lunch Break	
14:15 - 16:00	Valedictory Session	



FRIDAY 27th FEBRUARY 2026 09:00-10:30 Hrs	PLENARY SESSION-4 Integrating India's Capabilities for Space Science and Technology	LOCATION NEW AUDITORIUM (MAIN HALL)
	CONVENER : Dr. Soumya Sarkar, SAC	
SI. NO	TOPIC	SPEAKER
1	Space Situational Awareness	Dr. Tapan Mishra, Sisir Radar
2	TBD	Dr. Rajeev Jyoti, InSPACE
3	Detection and tracking of Satellites and Space Debris	Shri Tanveer Ahmed, Digantara
4	Presentation by Sponsors	Shri Anuj Sharma, Campbel Scientific India Pvt. Ltd

FRIDAY 27th FEBRUARY 2026 10:30-11:15 Hrs	INTERDISCIPLINARY TALK-4	LOCATION NEW AUDITORIUM (MAIN HALL)
SI. NO	TOPIC	SPEAKER
1	Origin and growth of astronomy in India	Dr. Mayank Vahia, TIFR

11:15 – 11:45

TEA/COFFEE BREAK

FRIDAY 27th FEBRUARY 2026 11:45-13:15 Hrs PS-1	TECHNICAL SESSION-8 SPACE-BASED METEOROLOGY, OCEANOGRAPHY, GEOSPHERE-BIOSPHERE INTERACTIONS, AND CLIMATE CHANGE	LOCATION NEW AUDITORIUM (MAIN HALL)	
	CHAIR : Dr. Vijayakumar S. Nair, SPL CO-CHAIR : Dr. Rahul Mahanta, CU		
SI. NO	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	Kanika Chowdhary

	Social Perspective on Groundwater Management	
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FRIDAY 27th FEBRUARY 2026 11:45-13:15 Hrs PS-2		TECHNICAL SESSION-8 MIDDLE ATMOSPHERE, ATMOSPHERIC COUPLING, DYNAMICS, AERONOMY, CLIMATE CHANGE AND SUN-EARTH CONNECTION CHAIR : Dr. Duggirala Pallamraju CO-CHAIR : Dr. Vikas Dubey	LOCATION HALL-1 (NEW AUDITORIUM)
SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
1	NSSS2026ABS466 (Lead talk)	Multi-technique observations of changes in the upper atmospheric phenomena during the two severe geomagnetic storms of May and October 2024	Duggirala Pallamraju
2	NSSS2026ABS808	Statistical Evaluation of Precise Point Positioning Accuracy under Geomagnetic Disturbances: Insights from ROTI and Solar Wind Data over Indian Antarctica Stations	Ipsita Katual
3	NSSS2026ABS634	New Insights into the Quasi 16-day Wave Dynamics in the Mesosphere Lower Thermosphere over North and South Polar Latitudes using Meteor Radar Observations.	Archa P Chandran
4	NSSS2026ABS492	Meteor Echo Characteristics, Mean Winds, and Tides Observed Using Long-Term (11-years) SVU Meteor Radar Observations	A. Kalyan Teja
5	NSSS2026ABS310	Long term variations in Brewer Dobson Circulation using ERA5 Reanalysis Data	R Lakshana
6	NSSS2026ABS482	First Insights into Unveiling Altitude-Specific Dynamics of Ionosphere-Thermosphere using Dual-Peak Green Line Dayglow Emissions	Komal
7	NSSS2026ABS727	Analysis of Tropical Stratospheric Ozone Layer Recovery Using Adaptive Trend Methods and inflection year detection.	Chhabeel Kumar

FRIDAY 27th FEBRUARY 2026 11:45-13:15 Hrs PS-3		TECHNICAL SESSION-8 SOLAR AND PLANETARY SCIENCES CHAIR : Neeraj Srivastava CO-CHAIR : Vijayan S	LOCATION CONFERENCE HALL. (OUTREACH FACILITY)
SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
1	NSSS2026ABS670 (Lead Talk)	Nickel Abundances Measured by Chandrayaan-3 APXS Reveal Primitive Mantle Signatures at Shiv Shakti Station	Rishitosh K. Sinha
2	NSSS2026ABS584	First in-situ thermophysical measurements of high latitude lunar regolith by Chandra's Surface Thermophysical Experiment (ChaSTE) instrument onboard Chandrayaan-3 lander	Nizy Mathew
3	NSSS2026ABS301	Changing Perspectives of Thermophysics, Water-ice and Volatiles on the Moon from Chandrayaan-3's in-situ observations	Durgaprasad K
4	NSSS2026ABS183	Thermophysical properties of lunar regolith at Chandrayaan-3 landing site using in-situ observations from ChaSTE onboard Chandrayaan-3 lander	R. Renju
5	NSSS2026ABS418	Concept Design of Impact Flux Monitor for Hypervelocity Particle Characterization in the Lunar Exosphere	Kiran Lakshminpathaiah
6	NSSS2026ABS544	Lunar near surface plasma environment results from rambha lp onboard chandrayaan 3 lander	Manju G
7	NSSS2026ABS295	Development of Data Archive Migration Plan from PDS3 to PDS4 for Chandrayaan 1 Terrain Mapping Camera and Hyper Spectral Imager	Ajay Kumar Prashar
8	NSSS2026ABS428	Miniaturized Neutral and Ion Mass Spectrometer for the Future Space Missions	Shiv Kumar Goyal
9	NSSS2026ABS705	Simulations to understand spectral emissions from planetary analogue samples analyzed through LIBS technique	Prashant Kumar
10	NSSS2026ABS775	Investigating Rocket Exhaust-Induced Spectral Variations on the Moon: Insights from M3 and IIRS Data	Marylina Das

FRIDAY 27 th FEBRUARY 2026 11:45-13:15 Hrs PS-4		TECHNICAL SESSION-8 ASTRONOMY AND ASTROPHYSICS	LOCATION SMART CLASS ROOM. (OUTREACH FACILITY)
		CHAIR : Dr. Mahavir Sharma	
SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
1	NSSS2026ABS593 (Lead talk)	Characteristic studies of seven totally eclipsing marginal contact binaries using ground and space based observations	J. Rukmini
2	NSSS2026ABS354	Formation Flying for a Deci-Hz Gravitational Wave Mission	Sayantana Pal
3	NSSS2026ABS635	Exploring GRB Localisation Capability of Proposed Daksha Mission using Coded Mask Imaging with its Low-Energy Detectors	Ashish Kumar Mandal
4	NSSS2026ABS692	A Wide Field X-ray Imaging and Spectroscopic mission using Lobster-eye optics: Performance parameters from a concept design	Debbijoy Bhattacharya
5	NSSS2026ABS549	Aperture Masking Interferometry for 3.6m DOT	Tushar Ubarhande

FRIDAY 27 th FEBRUARY 2026 11:45-13:15 Hrs PS-5		TECHNICAL SESSION-8 ENABLING TECHNOLOGIES FOR SPACE EXPLORATION	LOCATION HALL-2 (NEW AUDITORIUM)
		CHAIR : Dr. Mehul Pandya CO-CHAIR : Ms. Arpita Gajaria	
SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
ORAL PRESENTATION			
1	NSSS2026ABS372 (Lead Talk)	AI-enabled Autonomous Rover Navigation and a Case Study on Chandrayaan-3 Pragyan	K. Suresh
2	NSSS2026ABS453	A Novel Refueling Mechanism with Self Hold Feature for Future Docking Systems	Nirmit Nitin Mestry
3	NSSS2026ABS477	A Feedback-Controlled Underactuated Soft Robotic Gripper for Space Applications	Ankit Sharma
4	NSSS2026ABS857	Configuration Design of External Robotic Arm – An Enabling technology for sustainable Space Station	V. Sri Pavan Ravi Chand

FRIDAY 27 th FEBRUARY 2026 12:15-13:15 Hrs PS-6		TECHNICAL SESSION-10 SPACE TECHNOLOGY	LOCATION NESAC MAIN CAMPUS AUDITORIUM
		CHAIR : Dr. Kasturi Chakraborty CO-CHAIR : Dr. Jenita M Nongkynrieh	
SI. NO	ABSTRACT ID	TITLE OF ABSTRACT	FIRST AUTHOR
ORAL PRESENTATION			
1	NSSS2026ABS969	Hybrid Electronic Module: Paving the Way for Long-Duration Spacecraft	Madhumita Deb
2	NSSS2026ABS992	Insights from the Observations of the DESI (DarkEnergy Spectroscopic Instrument) Survey	Bindu chettri
3	NSSS2026ABS993	Use of Nanostructured 2D Materials for Hydrogen Storage in Spacecraft Fuel Systems	Brikchana Karki
4	NSSS2026ABS979	Pineapple-Based Slope Reinforcement with Satellite-Sensor Early Warning for Multi-Hazard Disaster Prevention in Manipur Hills	Aabhash Mukherjee
SHORT ORAL PRESENTATION			
1	NSSS2026ABS970	HfO ₂ Based Memristors as Potential Candidate towards Radiation-Tolerant and Thermally Stable Electronics for Deep Space Environments	Utsav Neogi
2	NSSS2026ABS988	Multi-Layer Radiation shielding Materials for Sustainable Human Settlement in Outer Space	Sayed Mohammad Choudhury
3	NSSS2026ABS994	A Modular Fully Reusable Two-Stage Launch System with Autonomous Health-Aware Recovery for Rapid Space Access	Ishan Singh

13:15 – 14:15

LUNCH BREAK



14:15 – 16:00

VALEDICTORY FUNCTION