Venus Science Conference 2025 (Venus-SC 2025)

Online Conference: 25-26 September 2025

Physical Research Laboratory, Ahmedabad, INDIA

Programme

Day 1: 25 September, Thursday

Indian Standard Time (IST) in Hours

Inaugural Session: 9:25 to 10:15 Hours

Plenary Talk

No.	IST (Hours)	Local Time (Other than India)	Title of the Talk	Speaker	Affiliation
1.	10:15-10:45	12:45-1:15 AM EDT	Major Outstanding Questions: Venus Geology, Geochemistry, Geophysics, Atmospheric and Thermal Evolution to be Addressed by Future Venus Missions	James Head	Brown University, RI, USA
10:45-11:00	**Break**				

Session 1 (Special Session): Planetary Lightning and Network in India

Session Chairs: T. Maria Antonita (SPO), Abhineet Shyam (SAC), Jayesh Pabari (PRL)

No.	IST (Hours)	Local Time (Other than India)	Title of the Talk	Speaker	Affiliation
2.	11:00-11:10	12:30-12:40 AM CDT	Venusian Lightning: An Overview of Detection Results	Dinesh Kumar V R	UTSA/SwRI, USA
3.	11:10-11:20	-	A Multi-Purpose VLF Receiver Network for Lightning, Whistlers, and Ionospheric Disturbance Monitoring over the Indian Subcontinent	Anirban Guha	Tripura University, Tripura
4.	11:20-11:30	-	Advancing Lightning Research in India using the Indian Lightning Location Network	Rupraj Biswasharma	IITM, Pune
5.	11:30-11:40	-	District-Wise Validation of Multi-Model Lightning density using Observed Lightning data Over the Indian Region	Trisanu Banik	IMD, New Delhi
6.	11:40-11:50	-	Terrestrial Lightning: Ground based lightning network and satellite coverage over India	Abhay Srivastava	NESAC, Umiam
7.	11:50-12:00	-	Characterizing Lightning Activity Over Southwest India Using High-Resolution Ground-Based Lightning Location Observations	C. K. Unnikrishnan	NCESS, Thiruvananthapuram

8.	12:00-12:10	-	Integrated Approach in Designing Space Based VLF Receiver - Antenna System	Sneha Gokani	Amity University, Mumbai
12:10-12:45			**Panel Discussion:** Earth Lightning Network **Preamble:** Lightning Network and Utilization of Data for Societal Aspect (Srirag Nambiar, PRL, Ahmedabad) **Panellist:** S. D. Pawar (IITM, Pune) Anirban Guha (Tripura University) Trisanu Banik (IMD, New Delhi) Abhay Srivastava (NESAC, Umiam) C. K. Unnikrishnan (NCESS, Thiruvananthapuram) **Moderator:** Jayesh Pabari (PRL, Ahmedabad)		
12:45-13:30		**Lunch Break**			

Session 2: Short Oral Presentation

Session Chairs: Rajesh Upadhyaya (SAC), Kinsuk Acharyya (PRL)

13:30-16:15 Hours (IST)		Short Oral (5 Min Each)	
No.	**Speaker**	**Affiliation**	**Title of the Talk**
S1	Erin Duxbury	Carleton University, Ottawa, Canada	Dyke swarm and mantle plume history of the Tefnut Mons region, Venus.
S2	Fawzan M. K. Navaz	Amity University, Dubai, UAE	Computational Fluid Dynamics (CFD) Simulation of Venus Atmospheric Entry for Future Exploration Missions
S3	Jayadev Pradeep	SPL, Thiruvananthapuram	Comparative Analysis of Venusian Atmospheric Structure using Models and Observations
S4	Saumya Sahu	BHU, Varanasi	Dyke swarm history of the eastern lobe of Lakshmi Planum, Venus
S5	Prasad Rathod	Syzygy Outreach, Hyderabad	Monte Carlo Based Spectroscopic Algorithm for Short-Term and Short-Scale Modeling of Venusian Aerosols
S6	Naima Hannour	Carleton University, Ottawa, Canada	Dyke swarm history of northeastern Central Ovda Regio, Venus: Detailed mapping and geological history
S7	Varun Nikam	SPL, Thiruvananthapuram	Chemical Species and their Variabilities in the Venusian Atmosphere: An Inter-comparison of Models and Observations
S8	Mohamed Ben Marzoug	Carleton University, Ottawa, Canada	Detailed mapping of Quetzalpetlatl Corona nearly triples its radius and disclosing new radiating and circumferential graben swarms and their interactions with adjacent Lada Terra coronae on Venus
S9	Roshny Antony	CUSAT, Cochin	High-Resolution Radiative Transfer Simulations of the Venus Atmosphere in the 0.3–5 μm Spectral Range
S10	Priya Tripathi	BHU, Varanasi	Mapping of Dyke Swarms in Bereghinya Planitia, North of Central Eistla Regio, Venus
S11	Tisyagupta Pyne	IIA, Bangalore	Analysis of the Venus Transit using Solar Dynamics Observatory White Light and UV Data
S12	Kelsey P. Sullivan	Carleton University, Ottawa, Canada	Mafic dyke swarms and magmatic centers of Tilli-Hanum Planitia and Ananke Tessera, Venus: Insights from detailed geologic mapping

S13	J. Sharmila	Amity University, Mumbai	Lightning effects on habitability on Venus/planetary atmospheres
S14	Astha Singh	BHU, Varanasi	Dyke swarm history of northeastern Bereghinya Planitia, Venus
S15	Swathi Raviprakash	St Joseph's University, Bengaluru	A Comparative Habitability Study of Mars and Venus
S16	Abderrazzak Hasanaine	CA University, Morocco	Relative chronology of magmatic centers in the eastern Eistla region using relationships between dyke swarms and flows
S17	Saniya Begum	Anna University, Chennai	Magnetic Connectivity and Ionisation in Venus's Induced Magnetosphere: A Multi-Mission Perspective
S18	Aastha Mishra	IITB, Odisha	Mantle Plume–Driven Magmatism and Dyke Swarms of Libera Corona, Anala and Irnini Montes, and Central Eistla Regio, Venus
S19	Abishek P. S.	Bharata Mata College, Kerala	Ion Acoustic Solitary Waves in Magnetized Plasma of Venus Ionosphere
S20	Tancrède Bichon	Sorbonne University, France	Dyke swarm and rift history of the Otygen Corona region of Venus
S21	Krishnaprasad Chirakkil	PRL, Ahmedabad	2-D Photochemical Modeling of the Venus Thermosphere and Ionosphere
S22	Shivam Mishra	CHARUSAT, Gujarat	Martian and Venusian Science: A Comparative Study of Divergent Planetary Evolution
S23	Satyandra Sharma	PRL, Ahmedabad	Ion-diffusion Model for the Venusian Ionosphere
S24	Srikanth Kodeboyina	Blue Eye Soft Corp, Greer, SC	Space Weather Anomalies in the Venusian Atmosphere
S25	Umberto Rollero	Swedish Institute of Space Physics, Sweden	Return flows in Venus' magnetotail in relation to magnetic reconnection
S26	Hailey M.E. McAlpine	Carleton University, Ottawa, Canada	Dyke swarm history of the Bagbartu Mons region in metis quadrangle (V-6), northern Venus
Q & A			

Special Talk: PRL Ka Amrut Vyakhyaan (PKAV)

No.	IST (Hours)	Local Time (Other than India)	Title of the Talk	Speaker	Affiliation
16:15-16:30		**Log-in for the PKAV**			
9.	16:30-18:00	7:00-8:30 PM CST	The interplanetary dust particle environment from the Sun to Venus	Wing-Huen Ip	National Central University, Taiwan
18:00		**End of Session on Day 1**			

Day 2: 26 September, Friday

Session 3: Atmosphere and Ionosphere

Session Chairs: M. V. Sunil Krishna (IITR), Sanjay Mishra (PRL)

No.	IST (Hours)	Local Time (Other than India)	Title of the Talk	Speaker	Affiliation
10.	9:30-9:50	11:00-11:20 PM CDT (Previous Day)	Life on Venus?	Sanjay Limaye	University of Wisconsin, USA
11.	9:50-10:10	12:20-12:40 AM EDT	Venus Atmospheric Chemistry: Perspectives for Future Space Exploration	Ananyo Bhattacharya	University of Michigan, Ann Arbor, USA
12.	10:10-10:30	1:40-2:00 PM JST	Angular momentum balance of the atmospheric superrotation in the Venusian upper atmosphere	Masahiro Takagi	Kyoto Sangyo University, Japan
13.	10:30-10:50	-	A Simulation Framework for Solar Occultation Experiments in the Venusian Atmosphere	S. V. Sunilkumar	SPL, Thiruvananthapuram
14.	10:50-11:10	10:20-10:40 PM PDT (Previous Day)	Water, iron sulfate, and sulfuric acid are major components in the Venus aerosols	Rakesh Mogul	California State Polytechnic University, Pomona, USA
15.	11:10-11:30	7:40-8:00 AM CEST	A review of Venus Express/ASPERA-4 findings, and its implication for future missions	Yoshifumi Futaana	IRF/Swedish Institute of Space Physics, Sweden
11:30-11:45		**Break**			

Scientific Discussion on Venusian Science

IST (Hours)	Local Time	Scientific Discussion	Panellists	Affiliation
11:45-13:00	2:15 AM-3:30 AM EDT - 11:15 PM-12:30 AM PDT (Previous Day) 3:15-4:30 PM JST - 8:15-9:30 AM CEST -	Surface Science, Atmosphere, Dust, Ionosphere, Lightning, Solar Wind Moderator: T. K. Pant (SPL)	1. James Head 2. Varun Sheel 3. Rakesh Mogul 4. Masahiro Takagi 5. Jayesh Pabari 6. Yoshifumi Futaana 7. R. Satheesh Thampi	Brown University, RI, USA PRL, Ahmedabad CSPU, Pomona, USA Kyoto Sangyo Uni., Japan PRL, Ahmedabad IRF, Sweden SPL, Thiruvananthapuram
13:00-14:00	**Lunch Break**			

Session 4: Surface Science

Session Chairs: V. J. Rajesh (IIST), Rishitosh Sinha (PRL)

No.	IST (Hours)	Local Time (Other than India)	Title of the Talk	Speaker	Affiliation
16.	14:00-14:20	-	Active Volcanoes on the Venus: Inferences from Theory and Observations	Varnana M Kumar	Cambridge Institute of Technology, Bangalore
17.	14:20-14:40	9:50-10:10 AM BST	From Earth to Venus: Advancing Surface Characterization and Change Detection for EnVision's VenSAR Using Earth-Based Observations	Shubham Awasthi	Imperial College London, UK
18.	14:40-15:00	5:10-5:30 AM EDT	The International Venus Research Group (IVRG): Detailed Mapping to Develop Geological Histories of 40+ Areas of Venus	Hafida El Bilali	Carleton University, Ottawa, Canada
19.	15:00-15:20	5:30-5:50 AM EDT	Mafic Dyke Swarms: Key to Understanding Magmatism and Tectonics on Venus	Richard Ernst	Carleton University, Ottawa, Canada
15:20-15:45		**Break**			

Session 5: Interplanetary Dust and Ionosphere

Session Chairs: Radhakrishna V. (URSC), D. Banerjee (PRL)

No.	IST (Hours)	Local Time (Other than India)	Title of the Talk	Speaker	Affiliation
20.	15:45-16:05	6:15-6:35 PM CST	The interplanetary dust particle environment from the Sun to Venus	Wing-Huen Ip	National Central University, Taiwan
21.	16:05-16:25	-	Interplanetary dust and its measurement in Solar system	Jayesh Pabari	PRL, Ahmedabad
22.	16:25-16:45	7:55-8:15 PM JST	Akatsuki radio occultation results on the Venusian neutral atmosphere	Takeshi Imamura	University of Tokyo, Japan
23.	16:45-17:05	-	Testing, Calibration and characterisation of RPA payload for Venus ionospheric studies	Umesh Khadane	IIST, Thiruvananthapuram
24.	17:05-17:25	8:35-8:55 PM JST	Characterizing the Thermal Structure of the Upper Venusian Atmosphere via Radio Occultation	Keshav Tripathi	University of Tokyo, Japan
17:25-17:45			**Concluding Session**		

Programme Summary (25-26 September, 2025)

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Inaugural Session		**Day 1, 9:25-10:00**
Plenary Talk		Day 1, 10:15-10:45
Session 1: Planetary Lightning and Network in India	T. Maria Antonita (SPO), Abhineet Shyam (SAC), Jayesh Pabari (PRL)	Day 1, 11:00-12:45
Session 2: Short Oral Presentation	Rajesh Upadhyaya (SAC), Kinsuk Acharyya (PRL)	Day 1, 13:30-16:15
Special Talk: PRL Ka Amrut Vyakhyaan		Day 1, 16:30-18:00
Session 3: Atmosphere and Ionosphere	M. V. Sunil Krishna (IITR), Sanjay Mishra (PRL)	Day 2, 9:30-11:30
Scientific Discussion on Venusian Science		Day 2, 11:45-13:00
Session 4: Surface Science	V. J. Rajesh (IIST), Rishitosh Sinha (PRL)	Day 2, 14:00-15:20
Session 5: Interplanetary Dust and Ionosphere	Radhakrishna V. (URSC), D. Banerjee (PRL)	Day 2, 15:45-17:25
Concluding Session		**Day 2, 17:25-17:45**