



Venus Science Conference 2024 (Venus-SC 2024)

Online Conference: 23-24 September 2024
Physical Research Laboratory, Ahmedabad, INDIA



Programme

Day 1: 23 September, Monday

Indian Standard Time (IST) in Hours

Inaugural Session

IST (hrs)	Event	Speaker
9:25 IST* hrs	Log-in for the Inaugural Session	
9:30-9:35 hrs	Welcome	Prof. Anil Bhardwaj, Director, PRL
9:35-9:45 hrs	Key-Note Address	Shri A. S. Kiran Kumar, Council Chair, PRL
9:45-9:55 hrs	Chief Guest Address	Dr. S. Somanath, Chairman ISRO & Secretary, DoS
9:55-10:05 hrs	Overview of Venus-SC 2024	Prof. Jayesh Pabari, Convener, Venus-SC 2024
10:05-10:10 hrs	Vote of Thanks	Prof. D. Banerjee
10:10-10:15 hrs	Break	

*IST = GMT + 5:30

Session 1-A: Atmosphere and Ionosphere

Session Chairs: R. Satheesh Thampi (SPL), Venkatesh Kavutarapu (PRL)

No.	IST (hrs)	Local Time (Other than India)	Title of the Talk	Speaker	Affiliation
1.	10:15-10:35	-	Effects of magnetic fields on Venus and Mars's ionospheres	S. A. Haider	PRL, Ahmedabad
2.	10:35-10:55	2:05-2:25 PM JST	Latest results from Akatsuki radio occultation	Takeshi Imamura	University of Tokyo, Japan
3.	10:55-11:15	-	Interaction of Solar wind with Mars and Venus	Dibyendu Chakrabarty	PRL, Ahmedabad
4.	11:15-11:30	-	The Ionospheres of Venus and Mars: Similarities, Differences, and Future Prospects	N. V. Rao	National Atmospheric Research Laboratory, Gadanki
5.	11:30-11:45	-	Radiative transfer model simulations of VSEAM observations	Satya Ojha	Space Applications Centre, Ahmedabad
6.	11:45-12:00	-	Probing Microorganisms in Venus Clouds and Challenges	Rajagopal S.	PSG College of Arts and Science, Coimbatore
7.	12:00-12:15	3:30-3:45 PM JST	Planetary-scale waves and their dynamical effect on the general circulation in the Venusian cloud layer	Masahiro Takagi	Kyoto Sangyo University, Japan

IST	Local Time	Scientific Discussion	Panellists	Affiliation
12:15-13:00	- - - 8:45-9:30 AM CEST 9:45-10:30 AM MSK	Atmosphere and Ionosphere Moderator: D. Pallamraju (PRL)	1. S. A. Haider 2. S. Thampi 3. Rajagopal S. 4. Masatoshi Yamauchi 5. Oleg Korablev	PRL, Ahmedabad SPL, Thiruvananthapuram PSGCAS, Coimbatore IRF, Sweden SRI, IKI, Moscow, Russia
13:00-13:30	Lunch Break			

Session 2: Surface Science and Exploration

Session Chairs: Satadru Bhattacharya (SAC), K. Satheesan (CUSAT), Neeraj Srivastava (PRL)

No.	IST (hrs)	Local Time (Other than India)	Title of the Talk	Speaker	Affiliation
8.	13:30-13:45	9:00-9:15 AM BST	Sedimentary Processes on Venus	Richard Ghail	University of London, UK
9.	13:45-14:00	-	Plume-Induced Dyke Swarms in Anala and Irnini Montes, Central Eistla Regio, Venus	Aastha Mishra	IIT Bhubaneswar
10.	14:00-14:15	4:30-4:45 AM EDT	The >3700 km long Great Dyke of Atla Regio (GDAR), Venus: Longest continuously traced individual mafic dyke in the Solar System	Hafida El Bilali	Carleton University, Ottawa, Canada
11.	14:15-14:30	4:45-5:00 AM EDT	Crustal extension due to dyke swarms: Influence on Venusian surface topography including the formation of coronae	Richard Ernst	Carleton University, Ottawa, Canada
12.	14:30-14:45	4:00-4:15 AM CDT	AVENGERS (Analog for VENus' Geologically Recent Surfaces) initiative	Justin R. Filiberto	ARES, NASA JSC, USA
13.	14:45-15:00	3:15-3:30 AM MDT	Thermal maps of Venus	Mark Bullock	Science and Technology Corporation, Boulder, USA
14.	15:00-15:20	1:30-1:50 AM AKDT	Potential Science Enabled by a Long-Duration Venus Lander	Robert Herrick	Uni. Alaska, Fairbanks, USA
15.	15:20-15:40	5:50-6:10 AM EDT	Update on activities of the International Venus Research Group (IVRG): detailed mapping to develop geological histories of 40+ areas of Venus.	James Head	Brown University, RI, USA

IST	Local Time	Scientific Discussion	Panellists	Affiliation
15:40-16:30	6:10-7:00 AM EDT 4:10-5:00 AM MDT - 6:10-7:00 AM EDT 2:10-3:00 AM AKDT 6:10-7:00 AM EDT 11:10 AM-12:00 PM BST	Surface Science and Exploration Moderator: Amit B. Sarbadhikari (PRL)	1. James Head 2. Mark Bullock 3. S. Vijayan 4. Richard Ernst 5. Robert Herrick 6. Hafida El Bilali 7. Richard Ghail	Brown Uni., RI, USA STC, Boulder, USA PRL, Ahmedabad Carleton Uni., Canada Uni. Alaska, Fairbanks, USA Carleton Uni., Canada Uni. London, UK
16:30-16:45	Break			

Session 3: Lightning and Habitability

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

No.	IST (hrs)	Local Time (Other than India)	Title of the Talk	Speaker	Affiliation
16.	16:45-17:00	-	Studying Venus using Balloon Probe	Kinsuk Acharyya	PRL, Ahmedabad
17.	17:00-17:15	-	Venusian Lightning and possibility of ground based observation	Sonam Jitarwal	PRL, Ahmedabad
18.	17:15-17:35	7:45-8:05 AM EDT	Summary of Venusian Lightning observations through Akatsuki	Ralph Lorenz	Johns Hopkins Applied Physics Lab, USA
19.	17:35-17:55	8:05-8:25 PM CST	Chemical impacts on the Venusian atmosphere by lightning-inducing discharges	Chengling Kuo	National Central University, Taiwan
IST		Local Time	Scientific Discussion	Panellists	Affiliation
17:55-18:45		8:25-9:15 AM EDT - 7:25-8:15 AM CDT 8:25-9:15 PM CST 8:25-9:15 AM EDT	Lightning and Habitability Moderator: Kinsuk Acharyya (PRL)	1. Janusz Petkowski 2. Jayesh Pabari 3. Sanjay Limaye 4. Chengling Kuo 5. Michael Way	MIT, Cambridge, MA, USA PRL, Ahmedabad Uni. Wisconsin, USA NCU, Taiwan NASA GISS, USA

Day 2: 24 September, Tuesday

Session 1-B: Atmosphere and Ionosphere

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

No.	IST (hrs)	Local Time (Other than India)	Title of the Talk	Speaker	Affiliation
20.	9:30-9:50	9:00-9:20 PM PDT (Previous Day)	Signs of Heterogeneously Composed Aerosols in Pioneer Venus Mass Spectra	Rakesh Mogul	California State Polytechnic University, Pomona, USA
21.	9:50-10:10	9:20-9:40 PM PDT (Previous Day)	The Solar Wind Interaction with an Orbiting Venus	Stephen Ledvina	University of California, Berkeley, USA
22.	10:10-10:30	9:40-10:00 PM PDT (Previous Day)	Observations of Venus' O ₂ Airglow from Ground-Based Instruments	Emilie Royer	California State University, Los Angeles, USA
23.	10:30-10:50	-	VASP - Venus Atmospheric Spectro-Polarimeter	Anand Jain	U. R. Rao Satellite Centre, Bangalore
24.	10:50-11:10	8:20-8:40 AM MSK	Venera-D: A Mission for Comprehensive Study of Venus	Dmitry Gorinov	Space Research Institute, IKI, Moscow, Russia
25.	11:10-11:30	8:40-9:00 AM MSK	Experiment VIRAL to study Venus upper atmosphere: scientific concept	Denis Belyaev	Space Research Institute, IKI, Moscow, Russia

IST	Local Time	Scientific Discussion	Panellists	Affiliation
11:30-12:30	11:00 PM-12:00 AM PDT (Previous Day)	Atmosphere and Ionosphere	1. Rakesh Mogul	CSP Uni., Pomona, USA
	11:00 PM-12:00 AM PDT (Previous Day)		2. Emilie Royer	CSU, Los Angeles, USA
	9:00-10:00 AM MSK		3. Oleg Korablev	SRI, IKI, Moscow, Russia
	-		4. Varun Sheel	PRL, Ahmedabad
	11:00 PM-12:00 AM PDT (Previous Day)		Moderator: D. Chakrabarty (PRL)	5. Stephen Ledvina
12:30-13:00	Lunch Break			

Session 4: Short Oral Presentation

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

13:00-16:20 hrs IST		Short Oral (8 Min Each)	
No.	Speaker	Affiliation	Title of the Talk
S1	Srirag Nambiar	PRL, Ahmedabad	Sporadic nature of meteor layer in planetary atmosphere
S2	Soumyaneal Banerjee	SPL, Thiruvananthapuram	Estimation of the H ₂ SO ₄ and SO ₂ vapor concentrations below the Clouds of Venus using Radio Occultation Technique by the Akatsuki Spacecraft
S3	Ramdayal Singh	Space Applications Centre, Ahmedabad	Observations of Stationary Waves in Venusian Clouds
S4	Ancy Jerald	Mahatma Gandhi College, Thiruvananthapuram	Cyclostrophic wind retrieval using Akatsuki radio occultation data in the middle atmosphere of planet Venus
S5	Rahul Pathak	PRL, Ahmedabad	Prototype Development for future Airglow Photometer Experiments on-board terrestrial and planetary missions
S6	Ankita	Amity University, Noida	Lightning generated whistler wave propagation through ionosphere of Venus
S7	K. M. Ambili	SPL, Thiruvananthapuram	Development of ionospheric model for the Venus ionosphere
S8	Keshav R Tripathi	University of Tokyo, Japan	Venusian Ionosphere as Observed by Akatsuki Radio Science Experiments
S9	Xu Huang	Sun Yat-sen Uni., China & Swedish Institute of Space Physics, Kiruna, Sweden	Venus Express IMA measurements on precipitating solar wind proton
S10	Satyandra Sharma	PRL, Ahmedabad	One-Dimensional Photochemical Venusian Ionosphere Model
S11	Lorenzo Obersnel	Physics Institute University Bern, Switzerland	Energetic neutral atom and ion precipitation at Venus

S12	Umberto Rollero	Swedish Institute of Space Physics, Kiruna, Sweden	Comprehensive Venus boundaries model
S13	Aarti	PRL, Ahmedabad	Flux rope observations near Venus
S14	Rashmi	PRL, Ahmedabad	Acquisition and analysis of lightning generated signals captured by Lightning Instrument for VEnus (LIVE)
S15	Diptiranjana Rout	National Atmospheric Research Laboratory, Gadanki	The response of the Venusian upper atmosphere during the passage of interplanetary coronal mass ejections
S16	Harshita	University of Delhi, Delhi	Image analysis of dust ring in the orbit of Venus
S17	Sriram Sharan	SAC, Ahmedabad	Terrestrial Analogue studies from ISRO's Venus mission perspective: Polarimetric radar properties of Hawaiian Lava Flows
S18	Manasa, M. J.	Mangalore Uni., Mangalore	Anorthosite rocks of the Holenarasipura Greenstone belt, Karnataka, India: A comparative analysis for planetary analogues on the Moon, Mars, and Venus
S19	KVNG Vikram	Space Applications Centre, Ahmedabad	Micro-spectroscopic characterization of alunite from the Puga hot springs, Ladakh (UT), India: Implications for future rover-based IR-spectroscopy of altered Venusian basalts
S20	Lomash Relia	CHARUSAT, Anand	Radar imaging of Venus surface characteristics
S21	Akshita Gaba	Amity University Noida	Comparative Analysis of the Magnetic Fields of Venus and Mars
S22	Ike Fardy	Carleton University, Ottawa, Canada	Dyke Swarm History of the Eve Corona Region on the Southern Side of Alpha Regio, Venus, and Potential Implications for the Upcoming DAVINCI Mission
S23	Naima Hannour	Carleton University, Ottawa, Canada	Graben systems of Mbokomu Mons region, SE of Atla Regio along Parga Chasmata, Venus: Detailed mapping and geological history
S24	Mohamed Ben Marzoug	Carleton University, Ottawa, Canada	Dyke swarms of Onenhste and nearby coronae within Parga Chasmata, SE of Atla Regio, Venus: An in-depth analysis of mapping, interactions within the swarms, and geological history
S25	Erin Duxbury	Carleton University, Ottawa, Canada	Dyke swarm and mantle plume/diapir history of the Tefnut Mons region, east of Themis Regio, Venus
16:20-16:30 hrs		Tea Break	

Session 5: Interplanetary Dust Science

Session Chairs: N. V. Rao (NARL), D. Banerjee (PRL)

No.	IST (hrs)	Local Time (Other than India)	Title of the Talk	Speaker	Affiliation
26.	16:30-16:50	2:00-2:20 PM MSK	Comparative Analysis of Dust Phenomena and Electromagnetic Discharge Processes on Venus and Mars	Mohamad Abdelaal	MIPT, Moscow, Russia
27.	16:50-17:10	7:20-7:40 PM CST	On Cometary-Ion-Tail-Disconnection-Like Events on Mars and Venus	Wing-Huen Ip	National Central University, Taiwan
28.	17:10-17:30	-	Interplanetary dust in inner solar system and its detection	Jayesh Pabari	PRL, Ahmedabad
IST		Local Time	Scientific Discussion	Panellists	Affiliation
17:30-18:20		8:00-8:50 PM CST - 3:00-3:50 PM MSK	Interplanetary Dust Science Moderator: V. K. Yadav (SPL)	1. Wing-Huen Ip 2. Shashikiran G. 3. Jayesh Pabari 4. Mohamad Abdelaal	Nati. Central Uni., Taiwan PRL, Ahmedabad PRL, Ahmedabad MIPT, Moscow, Russia
18:20-18:30		Concluding Session			

Programme Summary (23-24 September, 2024)

Session	Session Chairs	Day, Time (IST, hrs)
Inaugural Session	Day 1, 9:25-10:10 hrs	
Session 1-A: Atmosphere and Ionosphere	R. Satheesh Thampi (SPL), Venkatesh Kavutarapu (PRL)	Day 1, 10:15-13:00
Session 2: Surface Science and Exploration	S. Bhattacharya (SAC), K. Satheesan (CUSAT), Neeraj Srivastava (PRL)	Day 1, 13:30-16:30
Session 3: Lightning and Habitability	T. Maria Antonita (SPO), Jayesh Pabari (PRL)	Day 1, 16:45-18:45
Session 1-B: Atmosphere and Ionosphere	S. V. Sunilkumar (SPL), M. V. Sunil Krishna (IITR), Sanjay Mishra (PRL)	Day 2, 09:30-12:30
Session 4: Short Oral Presentation	Rajesh Upadhyaya (SAC), Rishitosh Sinha (PRL), Kinsuk Acharyya (PRL)	Day 2, 13:00-16:20
Session 5: Interplanetary Dust Science	N. V. Rao (NARL), D. Banerjee (PRL)	Day 2, 16:30-18:20
Concluding Session	Day 2, 18:20-18:30 hrs	