

Physical Research Laboratory MetMeSS-2023

3rd Symposium on “Meteoroids, Meteors and Meteorites: Messengers from Space”

Programme

1st November, Wednesday

9:00	Registration
9:30	Inauguration
10:30	Vote of Thanks

Session- II: Chandrayan Mission and Moon

Session Chair: Dr. T.P Das and Mr. Satadru Bhattacharya

Abstract#	Time	Speaker	Title	Affiliation
Invited	11:15 – 11:35	Neeraj Srivastava	Overview of Lunar geology	PRL, Ahmedabad
	11:35 – 11:55	T. P. Das	Overview of Lunar exploration from Chandrayaan mission.	SSPO, ISRO, Head Quarter, Bangalore
	11:55 – 12:10	M. Shanmugam	The first in-situ elemental composition measurement on lunar south pole with APXS onboard Chandrayaan-3 Rover	PRL, Ahmedabad
	12:10 - 12:25	Satadru Bhattacharya	Constraining lunar crustal composition and hydration through imaging spectroscopy from recent lunar missions.	SAC, Ahmedabad
	12:25 - 12:40	Nizy Mathew	ChaSTE: Precise Probing.	SPL, Kerala
	12:40 - 12:55	Manju G.	Lunar ionosphere: A true plasma laboratory?	SPL, Kerala
Lunch Break 13:00-14:00				
	14:00 - 14:15	Netra S Pillai	Mapping Lunar Surface Chemistry with CLASS	URSC, Bangalore
	14:15 - 14:30	Durga Prasad	Perspective of Lunar Thermo-physics and Volatiles	PRL, Ahmedabad
S2-02	14:30 - 14:45	Sachana Sathyan	Investigating Lunar Polar Water Ice Distribution	PRL, Ahmedabad

Session- I: Early Solar System

Session Chair: Dr. G. Srinivasan and Dr. Ritesh Mishra

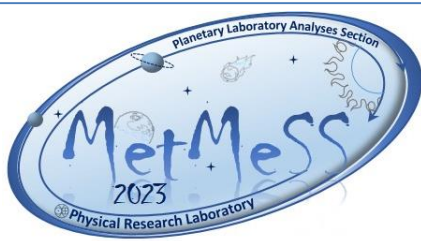
Abstract#	Time	Speaker	Title	Affiliation
Invited	14:45 – 15:05	Kuljeet K Marhas	Interstellar heritage and birth of the Early solar system.	PRL, Ahmedabad
S1-01	15:05 – 15:20	Ritesh Mishra	Superflares during pre-main sequence stage of the Sun recorded in meteorites.	National Museum of Natural History,

				Smithsonian Institution, Washington DC USA
S1-02	15:20 - 15:30	Advait Unnithan	The Role of Volatile-rich Reservoirs in Production of ³⁶ Cl in Solar Protoplanetary Disk.	PRL Ahmedabad
S1-03	15:30 – 15:40	Ankit P Singh	Asteroidal heritage of CV3 chondrite through Mid-IR spectroscopy of matrix and Calcium Aluminum-rich inclusions.	PRL Ahmedabad
	15:40 – 16:00	Tea Break		
	16:00-16:55	1 min Poster presentation		

Session- III: Shock effects

Session Chair: Dr. Dwijesh ray

Abstract#	Time	Speaker	Title	Affiliation
S3-01	16:55 – 17:05	Rajesh K Behera	Formation mechanism of ringwoodite and dissociation of olivine in Bori L6 chondrite	IIT, Kharagpur
S3-02	17:05 – 17:15	Priyanka Pandit	Phase stability of MgSiO ₃ silicate minerals at the mantle transition zone (MTZ)	IISER Kolkata
	17:30 - 18:30	Interaction with students & Lab visit		
		19:30 : Director Dinner		



Physical Research Laboratory MetMeSS-2023

2nd November, Thursday

Session- IV: Mars

Session Chair: Dr. Amit Basu Sarbadhikari and Dr. A.D Shukla

Abstract#	Time	Speaker	Title	Affiliation
Invited	9:30 - 9:50	Amit Basu	Geological history/formation of Mars	PRL, Ahmedabad
Invited (Online)	9:50 - 10:30	Sujoy Mukhopadhyay	Noble gases in Martian Meteorites	UC Davis, California
10:30 - 11:05		Tea Break & Poster Viewing		
S4-01 (Online)	11:05 - 11:20	Gurpreet Kaur Bhatia	Early thermal evolution and core-mantle differentiation of Mars: Implications for its volatile rich core	Maharishi Markandeshwar University, Mullana
S4-02	11:20 – 11:30	Subham Sarkar	Smectite Detection on Jezero Delta front using Perseverance's SuperCam instruments	PRL, Ahmedabad
S4-03	11:30 – 11:40	Aditya Das	Martian crustal alteration: A perspective from meteorite and terrestrial sample	PRL, Ahmedabad
S4-04	11:40 – 11:50	Varsha M. Nair	Unveiling Mars' Magmatic History through Geochemical Analysis of Enriched to Intermediate Poikilitic Shergottites	PRL, Ahmedabad

Session- V: Achondrites

Session Chair: Prof. D. Banerjee and Dr. Nachiketa Rai

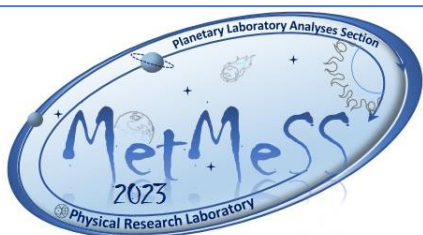
Abstract#	Time	Speaker	Title	Affiliation
Invited	11:50 - 12:10	Nachiketa Rai	Ureilites: An end member model for Planetesimal formation	IIT, Roorkee
S5-01	12:10 - 12:25	G. Srinivasan	Constraints on Heterogeneous Earth Accretion Model	Centre for Space Sciences and Earth Habitability, Bhopal
Invited	12:25 – 12:45	Sujoy Ghosh	High-pressure mineral assemblages in shocked chondrites.	IIT Kharagpur
S5-02	12:45: - 13:00	Yogita Kadlag	Diyodar is Aubrite: Confirmation from Cr isotopes	PRL, Ahmedabad
S5-03	13:00 – 13:10	Yash Srivastava	Petrogenesis of Diyodar aubrite: Implication to origin of aubrite parent body	PRL, Ahmedabad
13:00 - 14:00		Lunch		

Session- VI: Analogue studies

Session Chair: Prof. Sujoy Ghosh and Dr. Naveen Chauhan

Abstract#	Time	Speaker	Title	Affiliation
Key Note	14:00 - 14:20	Dwijesh Ray	Analogue studies and their importance	PRL, Ahmedabad
S6-01	14:20 - 14:30	V. Deepchand	Comparative Spectrochemical Analysis of Lodestones of Southern India and Martian Meteorites: Exploring Potential Functional Analogues	University of Kerala, Thiruvananthapuram
S6-02	14:30 – 14:40	M. Singhal	Luminescence Characteristics of terrestrial Jarosite from Kachchh, India: A Martian Analogue	PRL, Ahmedabad

S6-03	14:40 - 14:50	Preeti Kumari	Thenardite and Mirabilite of Hypersaline Lake, Rajasthan: Implications to Martian analogue and Astrobiology.	IIST, Thiruvananthapuram
S6-04	14:50-15:00	Saptarshi Lohia	Spectral Characterization of Red Sands from Muttom, Tamil Nadu, India: Implications to Mars	IIST, Thiruvananthapuram
15:00-16:00		Tea Break & Poster Viewing		
	16:00 – 16-30	Ms. Laura Creon	1300HR SIMS and it's Application	Ameket, India.
	16:30 – 17:30	Oikawa San	Recent Developments in Field of JEOL TEM	Jeol, India Pct Ltd
17:30 to Hotel				



Physical Research Laboratory

MetMeSS-2023

3rd November, Friday

Session- VII: Meteorites and Returned Sample

Session Chair: Dr. Arindam Dutta and Dr. Neeraj Srivastava

Abstract#	Time	Speaker	Title	Affiliation
Invited	9:30 – 9:50	Arindam Dutta	Meteorite field studies, collection and characterization at GSI	GSI, Kolkata
S7-01	9:50 - 10:05	Anil D Shukla	Overview of New meteorites study	PRL, Ahmedabad
S7-02	10:05 – 10:15	Dipak K Panda	National Curation facility at PRL	PRL, Ahmedabad
S7-03	10:15 - 10:25	Neeraj Srivastava	Reflectance spectroscopy of Diyodar meteorite	PRL, Ahmedabad
S7-04	10:25 - 10:35	Swarna Prava Das	Peak Metamorphic Temperature of CI/CM-type clasts, CM and CV chondrites	NISER, Bhubaneswar
S7-05	10:35 - 10:45	Subhasmita Swain	Correlating cosmic ray track density and exposure ages of chromite grains from regolith breccia meteorites	NISER, Bhubaneswar
S7-06	10:45 -10:55	Ramakant Mahajan	Future Sample return mission	PRL, Ahmedabad
S7-07	10:55 - 11::05	Abhishek Verma	Planetary Core Drilling technique	PRL, Ahmedabad
Tea Break 11:05 – 11:30 & Poster viewing				

Session- VIII: Meteors, Dust, Comet

Session Chair: Prof Varun Sheel and Dr. Yogita Kadlag

Abstract#	Time	Speaker	Title	Affiliation
Invited (Online)	11:30 - 11:50	N. G. Rudraswami	Cosmic dust from sky	PRL, Ahmedabad
S8-01	11:50 – 12:00	M. Pandey	Geochemical appraisal of unmelted micrometeorites collected from Maitri Station Antarctica	Goa University, Goa
S8-02	12:00 – 12:10	Goldy Ahuja	Monitoring of a long-period comet C/2020 V2 (ZTF) from Indian telescopes	PRL, Ahmedabad
S8-03	12:10 - 12:20	Sreekuttan S.	Deep sea: Largest repository of extraterrestrial dust	NIO, Goa
S8-04	12:20 – 12:30	V. P. Singh	Control of precursor composition and atmospheric entry on the texture of micrometeorites	NIO, Goa
S8-05	12:30-12:40	Balaji Prasath S	CSTERC Meteor Activity Monitoring System: Raspberry Pi Built 720px Low-Light Camera	Open Space Foundation, Tamilnadu.
S8-06	12:40-12:50	Kanak Patel	A Novel Approach to Meteoroid and Meteorite Detection and Recovery for Planetary Exploration	Ddu, Nadia

Session- IX: Astrobiology and Organics

Session Chair: Prof. Kuljeet K Marhas and Dr. S Vijayan

Abstract#	Time	Speaker	Title	Affiliation
Invited	14:00 - 14:20	Vijay Thiruvankatam	Exploring the Metabolomic Diversity in microorganisms identified in the International Space Station and Rann of Kutch.	IIT, Gandhinagar
	14:20 – 14:35	Kinsuk Acharya	Organic in Comets	PRL, Ahmedabad

S9-01	14:35 - 14:50	Shreeya Natrajan	Compositional diversity in type 1 & 2 chondrites: An insight into evolution of Ryugu like planetesimals.	PRL, Ahmedabad
S9-02	14:50 – 15:05	Arijit Roy	Shock Processing of Smaller PAHs	PRL, Ahmedabad
S9-03	15:05 – 15:15	Rachana Singh	Conformational and Electro-Optical analysis of Interstellar Cyanopropene at Different Temperatures	University of Lucknow
S9-04	15:15 - 15:25	W. Khan	Mid-IR spectroscopy of pure phenylacetylene at low temperature	PRL, Ahmedabad
S-9-05	15:25-15:35	Deep Thakkar	Crystallographic analysis of different layers of Haematite bearing concretions from the Laiari riverbed, Kutch, India	IIT, Gandhinagar
Tea Break 15:35 - 16:00				

Conclusion Session:

Award

Discussion

Feedback

Vote of thanks

Poster Session:

P-01	Vikram Goyal	Contribution of ^3He irradiation in the production of Short-lived radionuclides	PRL, Ahmedabad
P-02	Dibyendu Misra	Lunar Volcanic Glasses: Compositional Analysis of Lunar Dark Mantle Deposits	PRL, Ahmedabad
P-03	Ghosh S.	Akimotoite formation mechanisms in the Bori L6 chondrite: Insights from high-pressure shock events	IIT, Kharagpur
P-04	Kanak Sharma	Rann of Kutch a potential Astrobiological Analogue for Mars	Mumbai University
P-05	Anjana Shaju	Mineralogical Studies of Calcium-Aluminum Inclusion in Mukundpura (CM2) Chondrite	ISER, Mohali
P-06	Anusha G	Neutron and X-ray tomography of three CM chondrites	NISER, Bhubaneswar
P-07	Shehzade M K	Neon composition Study in bulk Carbonaceous Chondrites	NISER, Bhubaneswar
P-08	Avadh Kumar	Collisional History of parent bodies of Ordinary Chondrites using Cosmic-Ray Exposure (CRE) Ages	PRL, Ahmedabad
P-09	S.K.T. Basil	Quantitative and qualitative analysis of effect of etching on Micrometeorites	Nio, GO
P-10	Gopalan Srinivasan	Understanding building blocks of terrestrial planets: A case for Asteroid sample Return	Centre for Space Sciences and Earth Habitability,, Bhopal
P-11	N. G. Rudraswami	Understanding the Micrometeorites entry heating through CI chondrite	NIO, Goa

P-12	Parmanand Pandey	Thermochemical analysis of the reaction mechanism that leads to the formation of the propargyl radical (CH ₂ CCH) using Quantum Chemistry.	University of Lucknow
P-13	Manisha Yadav	A Theoretical Study of Formation of Methane in Interstellar ice	
P-14	Neha	Organic Derived Temperature Calculation of Parent body Metamorphism through X-Ray Absorption Near Edge Structure Spectroscopy of Enstatite Achondrites	PRL, Ahmedabad
P-15	Pravi Mishra	A Reaction Pathway for the formation of Interstellar Allylimine: Theoretical Approach	University of Lucknow
P-16	R. Ramachandran	Thermal and electron induced chemistry of the three-ringed PAH under astrochemical conditions	PRL, Ahmedabad
P-17	Deep Thakkar	Understanding the limits of Life: Extremophiles from potholes in Khari, Gorge, Kutch	IIT, Gandhinagar
P-18	Dipen Shau	Origin of Complex Organics in Presolar (Protostellar) Stages and Comets as Witness	PRL, Ahmedabad
P-19	Sayanee Haldar	Martian ionospheric disturbances induced by consecutive solar eclipse and strong solar flare	PRL, Ahmedabad
P-20	K. Nagalakshmi	Study the impact of El Niño case study with Biporjoy over A S during 2023	IITM, Pune