

# Overview 13M-S<sup>3</sup> Program

## THE THIRTEENTH MOSCOW SOLAR SYSTEM SYMPOSIUM (13M-S<sup>3</sup>)

Space Research Institute, 10-14 October 2022

	10 October	11 October	12 October	13 October	14 October	
10.00	OPENING SESSION	MN SESSION	MN SESSION	SB SESSION	VN SESSION	EP SESSION
11.00	MS SESSION					
11.40	COFFEE	COFFEE	COFFEE	COFFEE	COFFEE	COFFEE
12.00						
13.00	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH
14.00			GP SESSION			EP POSTERS
			GP POSTERS			SOCIAL EVENTS IN MOSCOW
			AB SESSION			
16.00	COFFEE	COFFEE	COFFEE	COFFEE	COFFEE	
16.20						
18.00	MS POSTER SESSION	MN POSTER SESSION		SB POSTER SESSION	VN POSTERS	
19.00	WELCOME PARTY		AB POSTER SESSION	RECEPTION	SOCIAL EVENTS IN MOSCOW	
20.00			SOCIAL EVENTS IN MOSCOW			

**MS SESSION: MARS SESSION**

**MN SESSION: MOON AND MERCURY SESSION**

**GP SESSION: GIANT PLANETS SESSION**

**AB SESSION: ASTROBIOLOGY SESSION**

**SB SESSION: SMALL BODIES SESSION**

**VN SESSION: VENUS SESSION**

**EP SESSION: EXTRASOLAR PLANETS SESSION**

# 13M-S<sup>3</sup> Scientific Program

<b>Monday, 10 October 2022</b>			
	<b>Lev ZELENYI</b>	Opening Remarks	<b>10.00-11.00</b>
<b>Session 1. MARS</b>			<b>11.00-18.45</b>
<b>Convener: Oleg KORABLEV</b> <b>conference hall, second floor</b>			
<b>13MS3-MS-01</b>	<b>Denis BELYAEV et al</b>	Thermal structure of the middle and upper atmosphere of Mars as seen by ACS MIR spectroscopy	11.00-11:20
<b>13MS3-MS-02</b>	<b>Ekaterina STARICHENKO et al</b>	Gravity wave statistics in the Martian atmosphere from the ACS/TGO solar occultation experiment	11.20-11.40
<b>Coffee-break</b>			<b>11.40-12.00</b>
<b>13MS3-MS-03</b>	<b>Anna FEDOROVA et al</b>	A two-Martian year survey of the water vapor saturation state on Mars based on ACS NIR/TGO occultations	12.00-12:20
<b>13MS3-MS-04</b>	<b>Pavel VLASOV et al</b>	Overview of Martian Year 34 atmospheric thermal structure and dust distribution from ACS TIRVIM nadir observations onboard ExoMars TGO	12.20-12.40
<b>13MS3-MS-05</b>	<b>Mikhail LUGININ et al</b>	Observations of 2.7 micrometer CO <sub>2</sub> ice band on Mars from ACS solar occultations onboard TGO/ExoMars	12.40-13.00
<b>Lunch</b>			<b>13.00-14.00</b>
<b>13MS3-MS-06</b>	<b>Valery SHEMATOVICH et al</b>	Kinetic modeling of hot fraction in the extended hydrogen corona of Mars	14.00-14.20
<b>13MS3-MS-07</b>	<b>Artyom SHESTAKOV and S. SHUVALOV</b>	Planetary ions acceleration inside Martian hot flow anomaly	14.20-14.40
<b>13MS3-MS-08</b>	<b>Jordanka SEMKOVA et al</b>	Radiation environment in ExoMars TGO Mars orbit during solar energetic particle events in July 2021-March 2022	14.40-15.00
<b>13MS3-MS-09</b>	<b>Victor BENGHIN et al</b>	Comparison of the flux and dose rate measured by the Liulin-MO device aboard ExoMars TGO with calculated estimations	15.00-15.20
<b>13MS3-MS-10</b>	<b>Alexey MALAKHOV et al</b>	Global map of water abundance in the upper regolith layer of the equatorial region on Mars	15.20-15.40
<b>13MS3-MS-11</b>	<b>James HEAD et al</b>	When did Mars become bipolar? Outstanding issues in a conceptual model of a Noachian-Amazonian climate transition from an altitude-dominant temperature environment (ADD) to a latitude-dominant temperature environment (LDD)	15.40-16.00
<b>Coffee-break</b>			<b>16.00-16.20</b>
<b>13MS3-MS-12</b>	<b>Benjamin BOATWRIGHT and James HEAD</b>	Constraining Early Mars Glacial Conditions from Paleodischarge Estimates of Intracrater Inverted Channels	16.20-16.40
<b>13MS3-MS-13</b>	<b>Elena PODOBNAYA et al</b>	Fragmentation model for impact clusters on Mars	16.40-17.00
<b>13MS3-MS-14</b>	<b>Ekaterina FABER et al</b>	Mineralogical variations of deposits in the Utopia Planitia region of Mars measured by CRISM and OMEGA spectrometers	17.00-17.20
<b>13MS3-MS-15</b>	<b>Jun CHU et al</b>	Lateral extension of layered deposits in S-W portion of Holden crater, Mars	17.20-17.40
<b>13MS3-MS-16</b>	<b>Egor KULIK and Tamara GUDKOVA</b>	On model values of Chandler wobble period for Mars	17.40-18.00
<b>POSTER SESSION, Session Mars</b>			<b>18.00-18.45</b>
<b>9 posters*5min</b>			
<b>13MS3-MS-PS-01</b>	<b>Oleg VAISBERG</b>	Mars magnetopause	
<b>13MS3-MS-PS-02</b>	<b>Sergei KULIKOV et al</b>	Study of wave phenomena in the plasma environment of Mars: simultaneous observations at ground and on orbits	
<b>13MS3-MS-PS-03</b>	<b>Inna STEPANOVA et al</b>	Combined approach in finding analytical continuations of the Mars magnetic field from satellite data	

<b>13MS3-MS-PS-04</b>	<b>Ekaterina MELIKHOVA et al</b>	The activity of the young Sun and isotopic composition evolution of the atmospheres of Mars and Venus
<b>13MS3-MS-PS-05</b>	<b>Daria EVDOKIMOVA et al</b>	Upper limits of Mars atmospheric trace gases from the thermal spectra by ACS-TIRVIM/ExoMars
<b>13MS3-MS-PS-06</b>	<b>Vladimir OGIBALOV</b>	Radiative transfer in the Martian atmosphere taking account line-mixing in the 15 $\mu\text{m}$ $\text{CO}_2$ band
<b>13MS3-MS-PS-07</b>	<b>Vladimir OGIBALOV</b>	Modelling of the non-equilibrium emissions of the Martian atmosphere in the near-IR $\text{CO}_2$ bands taking account aerosol extinction
<b>13MS3-MS-PS-08</b>	<b>Alexey BATOV et al</b>	On model crust thickness variations of Mars and Venus with love numbers
<b>13MS3-MS-PS-09</b>	<b>Nikolai KASATIKOV et al</b>	Using neural networks to search for information about Mars remotely

WELCOME PARTY

**19.00-20.00**

<b>Tuesday, 11 October 2022</b>			
<b>Session 2. MOON AND MERCURY</b>			<b>10.00-20.00</b>
<b>Conveners: Igor MITROFANOV, Maxim LITVAK conference hall, second floor</b>			
<b>Mercury</b>			
<b>13MS3-MN -01</b>	<b>Johannes BENKHOFF</b>	BepiColombo Status	10.00-10.20
<b>13MS3-MN-02</b>	<b>James HEAD et al</b>	Mercury magmatic, tectonic and geodynamic history a comparative planetology analysis	10.20-10.40
<b>13MS3-MN-03</b>	<b>Alexander LAVRUKHIN et al</b>	Mercury's magnetosphere variations	10.40-11.00
<b>13MS3-MN-04</b>	<b>Alexander KOZYREV et al</b>	A comparative analysis of neutron flux data measured by MGNS/BepiColombo experiment for Venus and Mercury flybys	11.00-11.20
<b>The studies of the Moon as celestial body</b>			
<b>13MS3-MN-05</b>	<b>Lionel WILSON et al</b>	Modeling the eruption and the cooling times of the lavas sampled by the Chang'e 5 mission	11.20-11.40
<b>Coffee-break</b>			<b>11.40-12.00</b>
<b>13MS3-MN-06</b>	<b>Sergey KRASILNIKOV et al</b>	Northern oblique impact formation of the South Pole-Aitken basin	12.00-12.20
<b>13MS3-MN-07</b>	<b>Ksenia KOCHUBEY and Mikhail IVANOV</b>	Degradation of fresh-looking craters in Mare Fecunditatis, Moon	12.20-12.40
<b>13MS3-MN-08</b>	<b>Alexander BASILEVSKY et al</b>	Surface morphology inside the PSR area of polar crater Shoemaker in comparison with that of the sunlit areas	12.40-13.00
<b>Lunch</b>			<b>13.00-14.00</b>
<b>13MS3-MN-09</b>	<b>Evgeny SLYUTA et al</b>	Site selection problems of the Moon research station	14.00-14.20
<b>13MS3-MN-10</b>	<b>Mikhail IVANOV et al</b>	Absolute model age estimates of the Fecunditatis basin and Mare Fecunditatis in the region of Luna-16 landing site	14.20-14.40
<b>13MS3-MN-11</b>	<b>Chunyu DING et al</b>	Yutu-2 Radar sounding over the Chinese Chang'E-4 landing site on the far-side of the Moon	14.40-15.00
<b>13MS3-MN-12</b>	<b>Sergey VOROPAEV and Artem KRIVENKO</b>	Some features of the early Moon' degassing	15.00-15.20
<b>13MS3-MN-13</b>	<b>Alexander GUSEV et al</b>	Geological exploration of the Moon III: water ice in near polar regions of the Moon	15.20-15.40
<b>13MS3-MN-14</b>	<b>Maya DJACHKOVA et al</b>	The water abundance at Artemis landing sites	15.40-16.00
<b>Coffee-break</b>			<b>16.00-16.20</b>
<b>The experiments on the Moon</b>			
<b>13MS3-MN-15</b>	<b>Andrey SHUGAROV et al</b>	The concept of Moon-based UV survey to study transients and variables	16.20-16.40
<b>13MS3-MN-16</b>	<b>Huijuan WANG et al</b>	Science of the lunar-based UV-OPTICAL-IR telescope for ILRS	16.40-17.00
<b>13MS3-MN-17</b>	<b>Iliia KUZNETSOV et al</b>	Investigation of the lunar dusty plasma and electric field dynamics with lunar dust monitoring instrument	17.00-17.20
<b>13MS3-MN-18</b>	<b>Andrey KIM et al</b>	Testing SLM technology with simulants of lunar regolith: applications to Lunar Printer experiment	17.20-17.40
<b>13MS3-MN-19</b>	<b>Maxim MOKROUSOV et al</b>	Space gamma-ray spectroscopy experiment with tags of Galactic cosmic rays	17.20-18.00
<b>POSTER SESSION , Session Moon and Mercury</b>			<b>18.00-20.00</b>
<b>29 posters*4 min</b>			
<b>13MS3-MN-PS-01</b>	<b>Maxim LITVAK et al</b>	Experiment MGNS onboard ESA BepiColombo mission	
<b>13MS3-MN-PS-02</b>	<b>Yongliao ZOU et al</b>	Studying lunar evolution based on comprehensive physical field exploration for International Lunar Research Station program	
<b>13MS3-MN-PS-03</b>	<b>Shaopeng HUANG et al</b>	Heat flow measurement a priority for upcoming lunar missions	
<b>13MS3-MN-PS-04</b>	<b>Bingxian LUO et al</b>	Moon-based space weather station for Sun-Earth-Moon environment interaction monitoring and research	
<b>13MS3-MN-PS-05</b>	<b>Jiajie FENG and Hong LIU</b>	Key Scientific Questions of Lunar Life Sciences	

13MS3-MN-PS-06	Zhiguo MENG et al	Probing surface deposits in heavily ejecta-contaminated Mare Frigoris using CE-2 MRM data
13MS3-MN-PS-07	Xuelei CHEN	Low Frequency Radio Interferometry from the Lunar Orbit
13MS3-MN-PS-08	Mikhail PODZOLKO and Vladimir KALEGAEV	Suggestion of an experiment for measuring the fluxes of energetic galactic and solar protons and nuclei onboard future lunar station
13MS3-MN-PS-09	Andrey TURUNDAEVSKIY et al	The Neutronium experimental complex for the Russian Lunar Scientific Observatory
13MS3-MN-PS-10	Natalia KOZLOVA et al	Availability of LROC NAC stereo images for construction of detailed DEMS at the south subpolar region of interest for Russian lunar missions
13MS3-MN-PS-11	Olga SHEVALDYSHEVA et al	Stationary and mobile lunar gravimeters
13MS3-MN-PS-12	Olga TURCHINSKAYA and Evgeny SLYUTA	Development of routes for the heavy rover «Lunar Robot-Geologist» on the territory of the volcanic province of Mons Rumker
13MS3-MN-PS-13	Anatoly MANUKIN et al	The SEISMO-LR is a three-coordinate seismometer for measurements on the Moon
13MS3-MN-PS-14	Vladimir CHEPTSOV et al	Applicability of LASMA-LR mass-spectrometer for the water ice detection within lunar regolith
13MS3-MN-PS-15	Kirill ZAKHARCHENKO et al	Durable diamond detector of cosmic radiation
13MS3-MN-PS-16	Egor SOROKIN et al	Natural lunar test site on Earth
13MS3-MN-PS-17	Alexandra UVAROVA	Consideration of ashes from the Kamchatka peninsula as lunar soil-analogues on the basis of physical and mechanical properties
13MS3-MN-PS-18	Ivan AGAPKIN	The Kamchatka volcanic ashes as a lunar soil analogue (physical properties)
13MS3-MN-PS-19	Alexandr KRASILNIKOV and Mikhail IVANOV	Estimates of the Local/Foreign Material Mixing on the Moon: the Crater Langrenus Case
13MS3-MN-PS-20	Alexandr KRASILNIKOV et al	Geological Structure of the Main Landing Ellipses of Luna-25
13MS3-MN-PS-21	Vladimir AFANASYEV and G.PECHERNIKOVA	The new analytical approach for calculation of craters ejecta thickness
13MS3-MN-PS-22	Ekaterina KRONROD et al	Thermal evolution of the Moon with geophysical constraints
13MS3-MN-PS-23	Mikhail IVANOV and Evgeniya GUSEVA	Automatic method to estimate the steepness of walls of small impact craters on the Moon
13MS3-MN-PS-24	Ekaterina FEOKTISTOVA et al	Morphological features of craters in the polar regions of the Moon
13MS3-MN-PS-25	Ekaterina FEOKTISTOVA et al	Hermite A crater as a cold trap near the north pole of the Moon
13MS3-MN-PS-26	Nadezhda CHUJKOVA et al	Dynamics of the Moon-Earth system and its impact on climate
13MS3-MN-PS-27	Boris EPISHIN and Michael SHPEKIN	Autonomous electronic Yearbook for observations from the surface of the Moon
13MS3-MN-PS-28	Gennady KOCHEMASOV	Moon-Earth' comparable fine wave structures created by equal orbits (around Sun and in Galaxy)
13MS3-MN-PS-29	Gennady KOCHEMASOV	Moon-dichotomous as other cosmic bodies (from asteroids to Universe)

<b>Wednesday, 12 October 2022</b>			
<b>Session 2. MOON AND MERCURY</b>			<b>10.00-13.00</b>
<b>Conveners: Igor MITROFANOV, Maxim LITVAK</b>			
<b>conference hall, second floor</b>			
<b>The experiments on the Moon</b>			
<b>13MS3-MN-20</b>	<b>Vladislav YAKOVLEV et al</b>	The ground tests of Lunar Manipulator Complex for Luna-25	10.00-10.20
<b>13MS3- MN -21</b>	<b>Svetlana PONOMAREVA et al</b>	Drilling of Ice-rich Regolith: Vibration and Blocking Issues	10.20-10.40
<b>13MS3- MN- 22</b>	<b>Mikhail MALENKOV et al</b>	Discussion of the concept of mobile robotic complexes for the International Lunar Research Station	10.40-11.00
<b>13MS3- MN -23</b>	<b>Guang LIU et al</b>	Developing the Lunar-based Earth observation platform	11.00-11.20
<b>Lunar exploration programs/perspectives</b>			
<b>13MS3- MN -24</b>	<b>Chi WANG et al</b>	Preliminary scientific objectives of the International Lunar Research Station program	11.20-11.40
<b>Coffee-break</b>			<b>11.40-12.00</b>
<b>13MS3- MN -25</b>	<b>Anatoly PETRUKOVICH et al</b>	The International Lunar Research Station from science perspective	12.00-12.20
<b>13MS3- MN -26</b>	<b>Lev ZELENYI et al</b>	Science objectives of lunar exploration	12.20-12.40
<b>13MS3- MN- 27</b>	<b>Igor MITROFANOV et al</b>	The “Korvet” Program: Integrated Human and Robotic Missions to Moon	12.40-13.00
<b>Lunch</b>			<b>13.00-14.00</b>
<b>Session 3. GIANT PLANETS</b>			<b>14.00-15.00</b>
<b>Convener: Valery SHEMATOVICH</b>			
<b>conference hall, second floor</b>			
<b>13MS3-GP-01</b>	<b>Nikolai SLODARZH et al</b>	Hyperion (C7): control point network and shape model. Difficulties and solutions	14.00-14.20
<b>13MS3-GP-02</b>	<b>Anatoly ZUBAREV et al</b>	Updated Ganymede control point network based on JUNO mission data	14.20-14.40
<b>POSTER SESSION , Session Giant Planets</b>			<b>14.40-15.00</b>
<b>4 posters*5 min</b>			
<b>13MS3- GP-PS-01</b>	<b>Anna DUNAEVA et al</b>	Organic matter in the structure of partially differentiated Titan	
<b>13MS3- GP-PS-02</b>	<b>Victor KRONROD et al</b>	Convection in the rock-ice mantle of partially differentiated Titan	
<b>13MS3-GP-PS-03</b>	<b>Margarita MELNIKOVA et al</b>	New global mosaic of Ganymede, detailed DEMs and maps	
<b>13MS3-GP-PS-04</b>	<b>Azariy BARENBAUM</b>	Measuring the precession period of Solar System ecliptic plane using Galactic model	
<b>Session 4. ASTROBIOLOGY</b>			<b>15.00-19.35</b>
<b>Convener: Oleg KOTSYURBENKO</b>			
<b>conference hall, second floor</b>			
<b>13MS3-AB-01</b>	<b>Sohan JHEETA</b>	Electron irradiation of a homogeneous mixture of ammonia and carbon dioxide (NH <sub>3</sub> :CO <sub>2</sub> ) ice at simulated planetary temperatures	15.00-15.20
<b>13MS3-AB-02</b>	<b>Martin DOMINIK</b>	The cosmic context of planet Earth – Don't buy a roadmap that only shows a single road	15.20-15.40
<b>13MS3-AB-03</b>	<b>Oleg KOTSYURBENKO et al</b>	Life on Venus: different concepts of its origin and evolution	15.40-16.00
<b>Coffee-break</b>			<b>16.00-16.20</b>
<b>13MS3-AB-04</b>	<b>Dmitry SKLADNEV et al</b>	The simplest Lab-on-Chip for detecting living cells in the acidic environment of Venusian clouds	16.20-16.40
<b>13MS3-AB-05</b>	<b>Anatoliy PAVLOV et al</b>	The effects of nearby Supernova and solar superflares on Earth biosphere evolution: mass extinctions and “flash of mutations”	16.40-17.00
<b>13MS3-AB-06</b>	<b>Valery SHEMATOVICH et al</b>	Kinetic Monte Carlo model of the auroral electron precipitation into the N <sub>2</sub> -O <sub>2</sub> planetary atmosphere	17.00-17.20
<b>13MS3-AB-07</b>	<b>Iren KUZNETSOVA et al</b>	Application of acoustoelectronic techniques to registration microbial objects in liquid	17.20-17.40

13MS3-AB-08	David SMITH	The Functioning Microbiome as Link between Genes and Microbial Environment	17.40-18.00
13MS3-AB-09	Ahya REZAEI	Remote Sensing in Agriculture	18.00-18.20
13MS3-AB-10	Nikita DEMIDOV and Mikhail IVANOV	Speculative history of life on Mars	18.20-18.40
13MS3-AB-11	Daniil MIRONOV	Geochemical indication of desert overgrowth (by the example of the Sarykum sand complex)	18.40-19.00

**POSTER SESSION , Session Astrobiology**

**19.00-19.35**

**7 posters \* 5 min**

13MS3-AB-PS-01	Viacheslav ILYIN et al	Prospects for the application of microbial fuel cells in regenerative biological life support systems
13MS3-AB-PS-02	Savio Torres DE FARIAS	Life on Mars: What can the use of biosignatures tell us?
13MS3-AB-PS-03	Vladimir CHEPTSOV et al	Peptides preservation under high-dose irradiation with accelerated electrons
13MS3-AB-PS-04	Andrey BELOV and Vladimir CHEPTSOV	Biodiversity of drought-tolerant bacteria: Astrobiological concern
13MS3-AB-PS-05	Denis VEDENEV et al	Influence of perchlorates on water crystallization temperature and bacterial survivability in mechanical simulants of Mars regolith
13MS3-AB-PS-06	Daniil BARBASHIN et al	Tolerance of arid ecosystems bacteria to sodium perchlorate: implications for Mars' habitability
13MS3-AB-PS-07	Daniil BARBASHIN and Daniil MIRONOV	Growing pea plants in Martian soil analogue with the addition nitrogen fixer bacteria

<b>Thursday, 13 October 2022</b>			
<b>Session 5. SMALL BODIES(including cosmic dust)</b>			<b>10.00-18.20</b>
<b>Conveners: Alexander BASILEVSKY, Alexander ZAKHAROV</b>			
<b>conference hall, second floor</b>			
13MS3-SB-01	<b>Vladimir BUSAREV et al</b>	Only a quarter of newly observed primitive asteroids are active	10.00-10.20
13MS3-SB-02	<b>Boris SHUSTOV et al</b>	Collisions as a possible reason of sublimation-dusty activity of main belt asteroids	10.20-10.40
13MS3-SB-03	<b>Thomas DUXBURY and Natalia SEREGINA</b>	ESA MEX astrometric observations of the asteroid Psyche: the target of a NASA mission	10.40-11.00
13MS3-SB-04	<b>Anton KOCHERGIN et al</b>	Motion of dust in comet C/2021 A1 (Leonard)	11.00-11.20
13MS3-SB-05	<b>Maxim ZHELTOBRYUKHOV et al</b>	Microphysics of dust in comet C/2021 A1 (Leonard) inferred by means of polarimetry	11.20-11.40
<b>Coffee-break</b>			<b>11.40-12.00</b>
13MS3-SB-06	<b>Tatiana SALNIKOVA et al</b>	On the conjecture of formation of the Martian moons Phobos and Deimos	12.00-12.20
13MS3-SB-07	<b>Sergey POPEL et al</b>	Electrostatically produced dusty plasmas near the surface of Mercury	12.20-12.40
13MS3-SB-08	<b>Vladimir TCHERNYI and S. KAPRANOV</b>	Role of Magnetism in the Separation of the Particles of the Saturn's rings	12.40-13.00
<b>Lunch</b>			<b>13.00-14.00</b>
13MS3-SB-09	<b>Yulia REZNICHENKO et al</b>	Dusty clouds evolution in the Martian atmosphere	14.00-14.20
13MS3-SB-10	<b>Irina NADEZHINA et al</b>	Hyperion (C7) cartography: challenges and the first surface map	14.20-14.40
13MS3-SB-11	<b>Sergei IPATOV</b>	Probabilities of collisions of bodies ejected from the Earth with the terrestrial planets and the Moon	14.40-15.00
13MS3-SB-12	<b>Dmitry GLAZACHEV et al</b>	Assessing the consequences of asteroid and comet impacts on the Earth	15.00-15.20
13MS3-SB-13	<b>Tatyana GALUSHINA et al</b>	Modification of technique of asteroid observations on Terskol observatory	15.20-15.40
13MS3-SB-14	<b>Iliia KUZNETSOV et al</b>	Experimental investigation of the dust particles lofting processes	15.40-16.00
<b>Coffee-break</b>			<b>16.00-16.20</b>
13MS3-SB-15	<b>Ekaterina CHORNAYA et al</b>	The 10-micron silicate feature in heterogeneous dust particles	16.20-16.40
13MS3-SB-16	<b>Anna KARTASHOVA et al</b>	The mass estimations of faint meteors	16.40-17.00
13MS3-SB-17	<b>Roman ZOLOTAREV and Boris SHUSTOV</b>	On the mass indices of meteor bodies	17.00-17.20
13MS3-SB-18	<b>Dominik BELOUSOV and Anatoliy PAVLOV</b>	Energy accumulation in icy bodies during long-term irradiation	17.20-17.40
<b>POSTER SESSION ,</b>			<b>17.40-18.20</b>
<b>8 posters * 5 min</b>			
13MS3-SB-PS-01	<b>Stanislav KUZNETSOV and Vladimir BUSAREV</b>	Statistic analysis of dynamic parameters and sizes of asteroids of the Adeona Family	
13MS3-SB-PS-02	<b>Tatiana MOROZOVA and Sergey POPEL</b>	Influence of meteor flares on the development of modulation instability of electromagnetic waves in meteoroid tails	
13MS3-SB-PS-03	<b>Dmitry PETROV and E. ZHUZHULINA</b>	Influence of the internal structure of dust on the light-scattering properties of comet 29P/Schwassmann-Wachmann 1	
13MS3-SB-PS-04	<b>Mariia VASILEVA and Eduard KUZNETSOV</b>	Age estimation of Brugmansia asteroid family	
13MS3-SB-PS-05	<b>Yulia IZVEKOVA and Sergey POPEL</b>	Drift turbulence in dusty plasma near the Moon	
13MS3-SB-PS-06	<b>Elena PETROVA and Vladimir BUSAREV</b>	Properties of particles in the exospheres of active asteroids: estimates based on the spectral features in the UV-Visible range	
13MS3-SB-PS-07	<b>Habibullo ABDUSSAMATOV</b>	Lunar observatory aimed at monitoring and study of energy imbalance and climate of the Earth, near-Earth asteroids and comets, exoplanets, supernovae, and novae	
13MS3-SB-PS-08	<b>Alexander SAMOKHIN and M. SAMOKHINA</b>	About the 11th edition of the global trajectory optimization competition held in 2021 – “Dyson sphere” building	
<b>RECEPTION</b>			<b>18.30-21.00</b>



<b>Friday, 14 October 2022</b>			
<b>Session 6. VENUS</b>			<b>10.00-18.05</b>
<b>Convener: Ludmila ZASOVA conference hall, second floor</b>			
<b>13MS3-VN-01</b>	<b>Vadim ROZHIN et al</b>	Geological history of the north region of Polik-mana Mons, Venus	10.00-10.20
<b>13MS3-VN-02</b>	<b>Arina SHIMOLINA et al</b>	Mapping of lava flows of Theia Mons, Beta regio, Venus	10.20-10.40
<b>13MS3-VN-03</b>	<b>Danil MALYSHEV et al</b>	Geological history of Samodiva Mons region, Devana Chasma Quadrangle V-29, VENUS.	10.40-11.00
<b>13MS3-VN-04</b>	<b>Dargilan OLIVEIRA AMORIM and Tamara GUDKOVA</b>	PREM-based models of Venus' interior structure	11.00-11.20
<b>13MS3-VN-05</b>	<b>Tamara MENSCHCHIKOVA et al</b>	Model stress values for Venus: elastic case	11.20-11.40
<b>Coffee-break</b>			<b>11.40-12.00</b>
<b>13MS3-VN-06</b>	<b>Boris IVANOV</b>	Footprints of asteroid atmospheric explosions at the surface of Venus	12.00-12.20
<b>13MS3-VN-07</b>	<b>Piero D'INCECCO et al</b>	Idunn Mons as the landing site of the Venera-D mission: scientific relevance and possible operational tests on Mount Etna	12.20-12.40
<b>13MS3-VN-08</b>	<b>Dmitry GORINOV et al</b>	Winds in the lower cloud level on the nightside of Venus from IR2 (AKATSUKI) 1.74 $\mu$ m images	12.40-13.00
<b>Lunch</b>			<b>13.00-14.00</b>
<b>13MS3-VN-09</b>	<b>Mikhail ZOLOTOV et al</b>	Exploration of Venus atmosphere and surface with the upcoming NASA DAVINCI mission	14.00-14.20
<b>13MS3-VN-10</b>	<b>Ludmila ZASOVA et al</b>	The Venera-D mission: progress in study	14.20-14.40
<b>13MS3-VN-11</b>	<b>Gaurav SETH</b>	Case study of Venus Surface Studies using PolSAR	14.40-15.00
<b>13MS3-VN-12</b>	<b>Elias CHATZITHEODORIDIS et al</b>	New instruments, methods, and experiments in astrobiology research: Venus and Mars	15.00-15.20
<b>13MS3-VN-13</b>	<b>Vladislav ZUBKO et al</b>	Mission scenario of flight to Venus with landing at desired location on its surface	15.20-15.40
<b>13MS3-VN-14</b>	<b>Mikhail GERASIMOV and JSD Team</b>	Scientific Goals of the Venera-D Lander	15.40-16.00
<b>Coffee-break</b>			<b>16.00-16.20</b>
<b>13MS3-VN-15</b>	<b>Imant VINOGRADOV et al</b>	Study of sulphurous and other components of the Venus atmosphere by laser absorption spectroscopy at the Venera-D mission	16.20-16.40
<b>13MS3-VN-16</b>	<b>Denis BELYAEV et al</b>	Venus Infrared Atmospheric Gases Linker (VIRAL): scientific concept for solar occultation experiment on board Venus Orbiter Mission	16.40-17.00
<b>13MS3-VN-17</b>	<b>Vladimir GUBENKO and I. KIRILLOVICH</b>	Reanalysis of internal waves in the Venus's atmosphere by using Magellan radio occultation data	17.00-17.20
<b>POSTER SESSION , Session Venus</b>			<b>17.20-18.05</b>
<b>9 posters * 5 min</b>			
<b>13MS3-VN-PS-01</b>	<b>Igor KHATUNTSEV et al</b>	Winds from the visible (513 nm) images obtained by the Venus Monitoring Camera onboard Venus Express	
<b>13MS3-VN-PS-02</b>	<b>Marina PATSAEVA et al</b>	From VMC/Venus Express to UVI/Akatsuki. long-term and longitude variations of zonal wind speed at the cloud top level near noon	
<b>13MS3-VN-PS-03</b>	<b>Denis BELYAEV et al</b>	Descent in the atmosphere of Venus with the Ultraviolet Spectrometer (DAVUS): scientific concept for a landing mission	
<b>13MS3-VN-PS-04</b>	<b>Vladimir GUBENKO et al</b>	Diffraction phenomena in radio occultation studies of the atmosphere of Venus by the satellites Venera-15 and -16	
<b>13MS3-VN-PS-05</b>	<b>Evgeniya GUSEVA and Mikhail IVANOV</b>	The spatial-genetic relationships of coronae, lobate plains and rift zones on Venus	
<b>13MS3-VN-PS-06</b>	<b>Carlos BRAGA et al</b>	Detailed mapping of large shield volcanoes on Venus – challenges and perspectives based on the study of Atira Mons, BAT region, Venus	
<b>13MS3-VN-PS-07</b>	<b>Ekaterina ANTROPOVA et al</b>	Characterization of the elongate cluster of "splotches" in the Phoebe Regio, Venus	
<b>13MS3-VN-PS-08</b>	<b>Valery KOTOV</b>	Motion of the Sun, Earth and Venus	
<b>13MS3-VN-PS-09</b>	<b>Natalia BULATOVA</b>	The role of Russian science in the development of planetary science of the Solar System(from the XVIII century to the present day)	

<b>Friday, 14 October 2022</b>			
<b>Session 7. EXTRASOLAR PLANETS</b>			<b>10.00-14.20</b>
<b>Convener: Alexander TAVROV room 200, second floor</b>			
<b>13MS3-EP-01</b>	<b>Oleg YAKOVLEV et al</b>	Transiting exoplanet detection project at SAO RAS	10.00-10.20
<b>13MS3-EP-02</b>	<b>Shingo KAMEDA et al</b>	Upper atmospheres of Earth-like exoplanets around low-temperature stars	10.20-10.40
<b>13MS3-EP-03</b>	<b>Marina RUMENSKIKH et al</b>	Insights from a Non-detection of HeI 23S Absorption of GJ436b	10.40-11.00
<b>13MS3-EP-04</b>	<b>Valery SHEMATOVICH and A. AVTAEVA</b>	Non-thermal atmospheric loss for hot Neptune GJ3470 b	11.00-11.20
<b>13MS3-EP-05</b>	<b>Igor SAVANOV</b>	Activity of the young star KEPLER-1627 with exoplanet	11.20-11.40
<b>Coffee-break</b>			<b>11.40-12.00</b>
<b>13MS3-EP-06</b>	<b>Ildar SHAIKHISLAMOV et al</b>	Space weather around hot exoplanets inferred from transit observations	12.00-12.20
<b>13MS3-EP-07</b>	<b>Artem SHEPELIN et al</b>	Simulation of Aeronomy and Transit Absorption of Trace Elements in Atmosphere of Hot Exoplanets: Development of General Kinetic non-LTE Model	12.20-12.40
<b>13MS3-EP-08</b>	<b>Sergei IPATOV</b>	Scattering of planetesimals from the feeding zone of Proxima Centauri c	12.40-13.00
<b>Lunch</b>			<b>13.00-14.00</b>
<b>POSTER SESSION , Session Extrasolar Planets</b>			<b>14.00-14.20</b>
<b>4 posters*5 min</b>			
<b>13MS3-EP-PS-01</b>	<b>Artem BEREZUTSKY et al</b>	Possible transit features of the TOI-421b and TOI-421c in Ly $\alpha$ and HeI 10830 A lines	
<b>13MS3-EP-PS-02</b>	<b>Sergei IPATOV</b>	Mixing of planetesimals in the TRAPPIST-1 exoplanetary system	
<b>13MS3-EP-PS-03</b>	<b>Mikhail EFIMOV et al</b>	On the transit spectroscopy features of warm mini-Neptunes in the HD-63433 system, revealed with their 3D numerical simulations	
<b>13MS3-EP-PS-04</b>	<b>Eduard KUZNETSOV and Alexander PERMINOV</b>	Search for chains of resonances in the compact planetary system K2-72	