

**ТРЕТИЙ  
МОСКОВСКИЙ  
СИМПОЗИУМ  
ПО СОЛНЕЧНОЙ СИСТЕМЕ**

**THE THIRD  
MOSCOW  
SOLAR SYSTEM  
SYMPOSIUM**



**8-12 ОКТЯБРЯ 2012  
ИНСТИТУТ  
КОСМИЧЕСКИХ  
ИССЛЕДОВАНИЙ  
РАН  
МОСКВА**

**8-12 OCTOBER 2012  
SPACE  
RESEARCH  
INSTITUTE  
MOSCOW**

## program committee

**co-chairs:** Acad. L.M. Zelenyi (IKI RAS)  
Acad. E.M Galimov (GEOHI RAS)

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# 3M-S<sup>3</sup> program overview

	8 october	9 october	10 october	11 october	12 october		
10.00	<b>OPENING SESSION</b>	<b>SESSION 3. VENUS</b>	<b>SESSION 5. DUST AND DUSTY PLASMA IN SPACE</b>	<b>SESSION 8. GIANT PLANETS AND THEIR MOONS</b>			
	10.40						11.00
							<b>POSTER SESSION</b>
11.40 - 12.00 coffee							
13.00	lunch	lunch	lunch	lunch	lunch		
14.00	<b>SESSION 1. MOON</b>		<b>SESSION 6. INTERACTION OF SOLAR WIND WITH MARS, VENUS, MERCURY, AND MOON</b>	<b>SESSION 9. NEW PROJECTS AND INSTRUMENTS</b>	<b>SOCIAL EVENTS IN MOSCOW DEPARTURE</b>		
		15.20					
16.00 - 16.20 coffee		<b>SESSION 4. MARS</b>					
						17.00	
						17.20	
	<b>SESSION 2. MERCURY</b>	<b>SESSION 7. PROBLEMS OF COSMOGONY</b>					
19.00	end of session		end of session	end of session			
	welcome party and <b>POSTER SESSION</b>	social events in Moscow	social events in IKI	social events in Moscow			

# 8 OCTOBER OPENING SESSION, SESSION 1 AND SESSION 2

10.00 - 10.10	<b>OPENING SESSION</b>	OS-1
10.10 - 10.40		OS-2
10.40 - 11.00	<b>SESSION 1. MOON</b>	MN-01
11.00 - 11.20		MN-02
11.20 - 11.40		MN-03
11.40 - 12.00		coffee
12.00 - 12.20		MN-04
12.20 - 12.40		MN-05
12.40 - 13.00		MN-06
13.00 - 14.00		
14.00 - 14.20	<b>SESSION 2. MERCURY</b>	MN-07
14.20 - 14.40		MN-08
14.40 - 15.00		MN-09
15.00 - 15.20		MN-10
15.20 - 15.40		MN-11
15.40 - 16.00		MN-12
16.00 - 16.20		coffee
16.20 - 16.40		MN-13
16.40 - 17.00		MN-14
17.00 - 17.20		MN-15
17.20 - 17.40	<b>SESSION 2. MERCURY</b>	MR-01
17.40 - 18.00		MR-02
18.00 - 18.20		MR-03
18.20 - 18.40		MR-04
18.40 - 19.00		MR-05
19.00	<b>end of session</b>	
	<b>welcome party and POSTER SESSION</b>	

## 8 October 2012

### OPENING SESSION

10.00 - 10.40

3MS <sup>3</sup> -OS-01	L. Zeleniy	Opening Remarks	10.00 - 10.10
3MS <sup>3</sup> -OS-02	V. Popovkin	Russian plans for studies of the Solar system: technical, scientific and international aspects	10.10 - 10.40

### SESSION 1. MOON convener: I. Mitrofanov

10.40 - 17.20

3MS <sup>3</sup> -MN-01	O. Aharonson	The Physics of Lunar Volatiles: How Wet is the Moon?	10.40 - 11.00
3MS <sup>3</sup> -MN-02	I. Mitrofanov	Neutron Suppression Regions on the lunar poles: recent data from LEND LRO	11.00 - 11.20
3MS <sup>3</sup> -MN-03	C. Pieters et al.	Different forms of space weathering processes found on the Moon and Vesta	11.20 - 11.40

### coffee-break

11.40 - 12.00

3MS <sup>3</sup> -MN-04	A. Bazilevsky et al.	Study of water resources on the Moon: first results and working plans	12.00 - 12.20
3MS <sup>3</sup> -MN-05	L. Jozwiak et al.	Lunar Floor-fractured Craters: Assessment of Formation by Magmatic Processes	12.20 - 12.40
3MS <sup>3</sup> -MN-06	J. Head	Lunar Orientale Basin: Characterization and insights into Multi-ringed basin formation	12.40 - 13.00

### lunch

13.00 - 14.00

3MS <sup>3</sup> -MN-07	M. Kreslavsky, J. Head	Statistics of subkilometer-scale topography of the Moon: Searches for signs of volatiles	14.00 - 14.20
3MS <sup>3</sup> -MN-08	K. Matsumoto et al.	Placing constraints on the lunar internal structure by SELENE-2 geodetic measurements	14.20 - 14.40
3MS <sup>3</sup> -MN-09	T. Gudkova, S. Raevskiy	Free oscillations for modern interior structure models of the Moon	14.40 - 15.00
3MS <sup>3</sup> -MN-10	H. Hanada et al.	The effects of the physical librations of the Moon, caused by liquid core, and their possible detection from the long-term laser observations and in the Japanese Lunar project ILOM	15.00 - 15.20
3MS <sup>3</sup> -MN-11	Y. Sikharulidze et al.	Landing dynamics on the Moon in Luna-Glob project	15.20 - 15.40
3MS <sup>3</sup> -MN-12	W. Vaughan et al.	Geology and petrology of enormous volumes of impact melt on the Moon: A case study of the Orientale basin impact melt sea	15.40 - 16.00

### coffee-break

16.00 - 16.20

3MS <sup>3</sup> -MN-13	D. Skhulachev	Is a lunar soil sticky?	16.20 - 16.40
3MS <sup>3</sup> -MN-14	V. Burmin	Structure of the Moon by seismic data	16.40 - 17.00
3MS <sup>3</sup> -MN-15	H. Noda et al.	Development status of lunar laser ranging experiment aboard Japanese lunar lander SELENE-2	17.00 - 17.20

### SESSION 2. MERCURY convener: L. Ksanfomality

17.20 - 19.00

3MS <sup>3</sup> -MR-01	J. Head et al.	Effusive volcanism on Mercury from MESSENGER mission data: nature and significance for lithospheric stress state and mantle convection	17.20 - 17.40
3MS <sup>3</sup> -MR-02	W. Vaughan, et al.	Very low- $fO_2$ crystallization of Mercury surface compositions: implications for the mineralogy of Mercury	17.40 - 18.00

3MS <sup>3</sup> -MR-03	J. Oberst et al.	Topography of Mercury from MESSENGER orbital stereo mapping	18.00 - 18.20
3MS <sup>3</sup> -MR-04	S. Elgner et al.	Mercury limb topography from MESSENGER images	18.20 - 18.40
3MS <sup>3</sup> -MR-05	A. Stark et al.	Measurement of Mercury's physical librations from orbital observations by the MESSENGER spacecraft	18.40 - 19.00

# 9 OCTOBER

## SESSION 3 AND SESSION 4

10.00 - 10.20	<b>SESSION 3. VENUS</b>	VN-01
10.20 - 10.40		VN-02
10.40 - 11.00		VN-03
11.00 - 11.20		VN-04
11.20 - 11.30		VN-05
11.30 - 11.40		VN-06
11.40 - 12.00		coffee
12.00 - 12.20		VN-07
12.20 - 12.40		VN-08
12.40 - 12.50		VN-09
12.50 - 13.00		VN-10
13.00 - 13.20	VN-11	
13.20 - 14.00		lunch
14.00 - 14.20	<b>SESSION 3. VENUS</b>	VN-12
14.20 - 14.30		VN-13
14.30 - 14.40		VN-14
14.40 - 14.50		VN-15
14.50 - 15.00		VN-16
15.00 - 15.20		VN-17
15.20 - 15.40	<b>SESSION 4. MARS</b>	MS-01
15.40 - 16.00		MS-02
16.00 - 16.20		coffee
16.20 - 16.40		MS-03
16.40 - 16.55		MS-04
16.55 - 17.15		MS-05
17.15 - 17.30		MS-06
17.30 - 17.45		MS-07
17.45 - 18.00		MS-08
18.00 - 18.15		MS-09
18.15 - 18.30		MS-10
18.30 - 18.45		MS-11
18.45 - 19.00	MS-12	
19.00	<b>end of session</b>	
	<b>social events in Moscow</b>	

**9 OCTOBER 2012****SESSION 3. VENUS****conveners: L. Zasova, H. Svedhem****10.00 - 15.20**

3M-S <sup>3</sup> -VN-01	M. Nakamura	Return to Venus of Akatsuki	10.00 - 10:20
3M-S <sup>3</sup> -VN-02	H. Svedhem et al.	Venus Express - new results and future plans	10:20 - 10:40
3MS <sup>3</sup> -VN-03	V. Krasnopolsky	Chemistry of Venus' Atmosphere	10:40 - 11:00
3MS <sup>3</sup> -VN-04	D. Titov et al.	Cloud morphology and dynamics of the Venus atmosphere from the Venus Express observations	11:00 - 11:20
3MS <sup>3</sup> -VN-05	S. Limaye et al.	Limb Altitude from Venus Monitoring Camera data	11:20 - 11:30
3MS <sup>3</sup> -VN-06	A. Migliorini et al.	Temperature structure of Venus nightside with VIRTIS/Venus Express	11:30 - 11:40

**coffee-break****11.40 - 12.00**

3MS <sup>3</sup> -VN-07	P. Drossart	Venus non-LTE emissions from Venus Express	12:00 - 12:20
3MS <sup>3</sup> -VN-08	G. Piccioni et al.	The airglows in the upper atmosphere of Venus observed by VIRTIS on Venus Express	12:20 - 12:40
3MS <sup>3</sup> -VN-09	L. Zasova et al.	Oxygen nightglow emission as a tracer of Venus' atmosphere circulation near mesopause	12:40 - 12:50
3MS <sup>3</sup> -VN-10	F. Altieri et al.	Modeling of VIRTIS/VEX O <sub>2</sub> ( $a^1\Delta_g$ ) nightglow profiles affected by gravity waves' action	12:50 - 13:00
3MS <sup>3</sup> -VN-11	L. Ksanfomality	Possible life found at a wrong place	13:00-13:20

**lunch****13.20-14.00**

3MS <sup>3</sup> -VN-12	G. Arnold et al.	Retrieval of surface properties in the NIR nightside windows of Venus	14:00-14:20
3MS <sup>3</sup> -VN-13	M. Ivanov	Evolution of volcanism on Venus	14:20-14:30
3MS <sup>3</sup> -VN-14	E. Shalygin et al.	Analysis of the images of the Venus surface taken by the Venus Monitoring Camera, Venus-Express	14:30-14:40
3MS <sup>3</sup> -VN-15	T. Lebrun et al.	Thermal evolution of an early magma ocean in interaction with the atmosphere	14:40 - 14:50
3MS <sup>3</sup> -VN-16	A. Rodin et al.	The effect of Venus topography on the dynamics of polar vortex: results from non-hydrostatic general circulation model	14:50 - 15:00
3MS <sup>3</sup> -VN-17	W. Markiewicz et al.	The results of the VMC/VEX photometry at small phase angles: glory and the properties of the upper clouds of Venus	15:00 - 15:20

**SESSION 4. MARS****conveners: O. Korablev, O. Witasse****15.20 - 19.00**

3MS <sup>3</sup> -MR-01	J. Head	Early climate history of Mars: a geological perspective	15.20 - 15.40
3MS <sup>3</sup> -MR-02	A. Frigeri et al.	Radar sounding of the North Polar cap of Mars	15.40 - 16.00

**coffee-break****16.00 - 16.20**

3MS <sup>3</sup> -MR-03	N. Schmedemann et al.	Surface chronology of Phobos - the age of Phobos and its largest crater, Stickney	16.20 - 16.40
3MS <sup>3</sup> -MR-04	A. Pasewaldt et al.	Photometric analysis of Martian moon Phobos with the HRSC on Mars Express	16.40 - 16.55



3MS <sup>3</sup> -MR-05	M. Litvak, I. Mitrofanov	First Data from DAN Instrument onboard MSL Curiosity Rover	16.55 - 17.15
3MS <sup>3</sup> -MR-06	R. Kuzmin et al.	Seasonal and inter-year variations of the water content within the surficial layer of the Martian soil revealed based on the TES, the OMEGA and the HEND data analysis	17.15 - 17.30
3MS <sup>3</sup> -MR-07	E. Chassefiere et al.	CO <sub>2</sub> -SO <sub>2</sub> clathrate hydrate formation on early Mars	17.30 - 17.45
3MS <sup>3</sup> -MR-08	V. Zharkov, T. Gudkova	On determination of the moment inertia and the radius of the Martian core	17.45 - 18.00
3MS <sup>3</sup> -MR-09	B. Ivanov	Mars/Moon impact rate ratio:2000/2012 comparison	18.00 - 18.15
3MS <sup>3</sup> -MR-10	M. Ivanov et al.	Evidence for effusive mud volcanism in Utopia Planitia on Mars	18.15 - 18.30
3MS <sup>3</sup> -MR-11	L. Vázquez	The Martian planetary boundary layer	18:30 - 18:45
3MS <sup>3</sup> -MR-12	A. Fedorova et al.	Study of the Martian atmosphere in SPICAM IR experiment on Mars Express	18:45 - 19:00

# 10 OCTOBER

## SESSION 5, SESSION 6 AND SESSION 7

10.00 - 10.20	<b>SESSION 5. DUST AND DUSTY PLASMA IN SPACE</b>	DP-01
10.20 - 10.40		DP-02
10.40 - 11.00		DP-03
11.00 - 11.10		DP-04
11.10 - 11.20		DP-05
11.20 - 11.40		DP-06
11.40 - 12.00		coffee
12.00 - 12.15		DP-07
12.15 - 12.30		DP-08
12.30 - 12.45		DP-09
12.45 - 13.00		DP-10
13.00 - 14.00		lunch
14.00 - 14.15	<b>SESSION 6. INTERACTION OF SOLAR WIND WITH MARS, VENUS, MERCURY, AND MOON</b>	SW-01
14.15 - 14.35		SW-02
14.35 - 14.55		SW-03
14.55 - 15.10		SW-04
15.10 - 15.25		SW-05
15.25 - 15.40		SW-06
15.40 - 16.00		SW-07
16.00 - 16.20		coffee
16.20 - 16.40		SW-08
16.40 - 17.00		SW-09
17.00 - 17.20	<b>SESSION 7. PROBLEMS OF COSMOGONY</b>	PC-01
17.20 - 17.40		PC-02
17.40 - 18.00		PC-03
18.00 - 18.20		PC-04
18.20 - 18.40		PC-05
18.40 - 19.00		PC-06
19.00	<b>end of session</b>	
	<b>social events in IKI</b>	

10 OCTOBER 2012

**SESSION 5. DUST AND DUSTY PLASMA  
IN SPACE**  
convener: A. Zakharov, M. Horanyi

10.00 - 13.00

3MS <sup>3</sup> -DP-01	O. Petrov et al.	Ordering and transport phenomena in systems of charged dust from ground to microgravity experiments	10.00 - 10.20
3MS <sup>3</sup> -DP-02	M. Horanyi	The lunar surface: a Dusty Plasma Laboratory	10.20 - 10.40
3MS <sup>3</sup> -DP-03	B. Atamaniuk, A. Volokitin	Dust in plasma, dusty plasma and plasma in lunar environment	10.40 - 11.00
3MS <sup>3</sup> -DP-04	V. Shevchenko	Possible origin of the fine dust in the lunar exosphere	11.00 - 11.10
3MS <sup>3</sup> -DP-05	V. Shevchenko et al.	Fine dust in the lunar environment	11.10 - 11.20
3MS <sup>3</sup> -DP-06	F. Esposito et al.	MICROMED: A compact dust detector for Martian airborne dust investigation	11.20 - 11.40
<b>coffee-break</b>			<b>11.40 - 12.00</b>
3MS <sup>3</sup> -DP-07	S. Popel et al.	Lunar Dusty Plasma Environment	12.00- 12.15
3MS <sup>3</sup> -DP-08	N. Borisov	Charging and motion of dust grains near the Moon and asteroids	12.15 - 12.30
3MS <sup>3</sup> -DP-09	G. Belokopytov, A. Zhuravlev	Modeling of light scattering by dust particle plasma near the Moon surface	12.30 - 12.45
3MS <sup>3</sup> -DP-10	V. Sizenkov et al.	Numerical simulation of the formation of dust ring around Mars	12.45-13.00

**SESSION 6. INTERACTION OF SOLAR WIND WITH  
MARS, VENUS, MERCURY, AND MOON**  
convener: O. Vaisberg

14.00 - 17.00

3MS <sup>3</sup> -SW-01	O. Vaisberg	Evolution of understanding of solar wind-gaseous obstacle interaction	14.00 - 14.15
3MS <sup>3</sup> -SW-02	C. Bertucci	Structure and dynamics of induced plasma tails	14.15 - 14.35
3MS <sup>3</sup> -SW-03	E. Dubinin	Solar wind induced escape on Mars and Venus. Mutual lessons from different space missions	14.35 - 14.55
3MS <sup>3</sup> -SW-04	V. Shematovich	Suprathermal hydrogen and oxygen atoms in the upper atmosphere of Mars	14.55 - 15.10
3MS <sup>3</sup> -SW-05	V. Shematovich et al.	Precipitation of high-energy electrons, protons, and hydrogen atoms into the upper atmospheres of Mars and Venus	15.10 - 15.25
3MS <sup>3</sup> -SW-06	O. Witasse et al.	Mars Express aeronomy and solar wind observation campaigns: overview and selection of results	15.25 - 15.40
3MS <sup>3</sup> -SW-07	Y. Saito et al.	Interaction between the solar wind and the Moon observed by MAP-PACE on Kaguya	15.40 - 16.00
<b>coffee-break</b>			<b>16.00 - 16.20</b>
3MS <sup>3</sup> -SW-08	I. Alekseev et al.	Paraboloid model of the Mercury magnetosphere as it looks from the MESSENGER orbital phase	16.20 - 16.40
3MS <sup>3</sup> -SW-09	V. Izmodenov	The solar wind interaction with the local interstellar medium - recent discoveries made by Voyagers and by Interstellar Boundary Explorer (IBEX)	16.40 - 17.00

**SESSION 7. PROBLEMS  
OF COSMOGONY**  
convener: **M. Marov**

**17.00 - 19.00**

3MS <sup>3</sup> -PC-01	M. Marov	Introduction	17.00 - 17.20
3MS <sup>3</sup> -PC-02	A. Kolesnichenko, M. Marov	Modeling of dust fractal cluster aggregation in the protoplanetary laminar disk	17.20 - 17.40
3MS <sup>3</sup> -PC-03	A. Makalkin, I. Ziglina	Modeling formation of self-gravitating dust condensations in a protoplanetary disk	17.40 - 18.00
3MS <sup>3</sup> -PC-04	I. Shevchenko	Planets and their dynamics in double stellar systems	18.00 - 18.20
3MS <sup>3</sup> -PC-05	D. Badjukov	Micrometeorites of the Novaya Zemlya archipelago	18.20 - 18.40
3MS <sup>3</sup> -PC-06		General debate	18.40 - 19.00

# 11 OCTOBER

## SESSION 8 AND SESSION 9

10.00 - 10.20	<b>SESSION 8. GIANT PLANETS AND THEIR MOONS</b>	GP-01
10.20 - 10.40		GP-02
10.40 - 11.00		GP-03
11.00 - 11.20		GP-04
11.20 - 11.40		GP-05
11.40 - 12.00		coffee
12.00 - 12.20		GP-06
12.20 - 12.40		GP-07
12.40 - 13.00		GP-08
13.00 - 14.00		
14.00 - 14.20	<b>SESSION 9. NEW PROJECTS AND INSTRUMENTS</b>	NP-01
14.20 - 14.40		NP-02
14.40 - 15.00		NP-03
15.00 - 15.20		NP-04
15.20 - 15.40		NP-05
15.40 - 16.00		NP-06
16.00 - 16.20		coffee
16.20 - 16.35		NP-07
16.35 - 16.50		NP-08
16.50 - 17.05		NP-09
17.05 - 17.20		NP-10
17.20 - 17.35		NP-11
17.35 - 17.50		NP-12
17.50 - 18.05		NP-13
18.05 - 18.20		NP-14
18.20 - 18.35		NP-15
18.35 - 18.50		NP-16
18.50 - 19.05	NP-17	
19.05	<b>end of session</b>	
	<b>social events in Moscow</b>	

11 OCTOBER 2012

**SESSION 8 GIANT PLANETS  
AND SATELLITES**  
convener: **A. Basilevsky**

**10.00 - 13.00**

3MS <sup>3</sup> -GP-01	A. Dunaeva, O. Kuskov	Water-ice content in Titan and Callisto	10:00 - 10.20
3MS <sup>3</sup> -GP-02	V. Dorofeeva	Ices of the Saturn system	10.20 - 10.40
3MS <sup>3</sup> -GP-03	L. Esposito et al.	Age and evolution of Saturn's rings	10.40 - 11.00
3MS <sup>3</sup> -GP-04	V. Krasnopolsky	Titan's photochemical model: Further update, oxygen species, and comparison with Triton and Pluto	11.00 - 11.20
3MS <sup>3</sup> -GP-05	M. Podzolkov et al.	Further development of the model of spatial distribution of energetic electron fluxes in vicinity of Europa	11.20 - 11.40

**coffee-break**

**11.40 - 12.00**

3MS <sup>3</sup> -GP-06	Yu. Golubev et al.	A method of orbits designing using gravity assist maneuvers to the landing on the Jupiter's moon Ganymede	12.00 - 12.20
3MS <sup>3</sup> -GP-07	V. Sidorenko et al.	Quasi-satellite orbits in the context of coorbital dynamics	12.20 - 12.40
3MS <sup>3</sup> -GP-08	Z. Dlugach, M. Mishchenko	Coherent backscattering and opposition phenomena exhibited by some atmosphereless solar system bodies	12.40 - 13.00

**lunch**

**13.00 - 14.00**

**SESSION 9. NEW PROJECTS  
AND INSTRUMENTS**  
convener: **O. Korablev**

**14.00 - 19.00**

3MS <sup>3</sup> -NP-01	L. Zelenyi et al.	The Russian Lunar Program: goals and missions	14.00 - 14.20
3MS <sup>3</sup> -NP-02	O. Witasse, J. Vago	The ExoMars Programme	14.20 - 14.40
3MS <sup>3</sup> -NP-03	L. Zelenyi et al.	Russian contribution to the ExoMars project	14.40 - 15.00
3MS <sup>3</sup> -NP-04	D. Titov et al.	Jupiter Icy Moons Explorer: an ESA mission to the Jovian system	15.00 - 15.20
3MS <sup>3</sup> -NP-05	L. Zasova et al.	Venus investigation after ESA Venus Express: Russian mission Venera-D	15.20 - 15.40
3MS <sup>3</sup> -NP-06	L. Esposito	SAGE mission to Venus	15.40 - 16.00
<b>coffee-break</b>			<b>16.00 - 16.20</b>
3MS <sup>3</sup> -NP-07	Ph. Lognonné et al.	Seismic reconnaissance of Mars with a VBB seismometer	16.20 - 16.35
3MS <sup>3</sup> -NP-08	T. Gudkova et al.	On scientific goals of the seismic experiment MISS	16.35 - 16.50
3MS <sup>3</sup> -NP-09	P. Rosenblatt et al.	Belgium geodesy experiment using direct to-earth radio-link: application to Mars and Phobos	16.50 - 17.05
3MS <sup>3</sup> -NP-10	A.-M. Harri et al.	MetNet: New kind of in situ observations network for Mars	17.05 - 17.20
3MS <sup>3</sup> -NP-11	I. Arruigo	INTA space instrumentation and capabilities for planetary exploration	17.20 - 17.35
3MS <sup>3</sup> -NP-12	M. Michelena	Compact miniaturized sensors for magnetic mineralogy on Mars	17.35 - 17.50
3MS <sup>3</sup> -NP-13	U. Boettger et al.	Raman spectroscopy for the detection of biological matter in Mars analogue material	17.50 - 18.05
3MS <sup>3</sup> -NP-14	G. Managadze et al.	Possible location and methodology for traces of organic compounds revealing in the Martian regolith	18.05 - 18.20
3MS <sup>3</sup> -NP-15	A. Tavrov et al.	Monitoring of Solar system planets and detection of exoplanets by space telescopes Planetary Monitoring and Stellar Patrol	18.20 - 18.35

3MS <sup>3</sup> -NP-16	H. Hanada et al.	Technical development of a small digital telescope for in-situ Lunar Orientation Measurements (ILOM)	18.35 - 18.50
3MS <sup>3</sup> -NP-17	E. Tasdelen et al.	Implementation of a Self-Consistent Stereo Processing Chain for 3D Stereo Reconstruction of the Lunar Surface	18.50 - 19.05

**8 OCTOBER 19.15-21.00**  
**12 OCTOBER 11.00-13.00**  
**POSTER SESSION**

**Moon**

3MS <sup>3</sup> -PS-01	A. Sanin et al.	Searching for water ice permafrost on lunar poles: lend results for about three years of observations
3MS <sup>3</sup> -PS-02	I. Vinogradov et al.	Near infrared diode laser spectroscopy of C <sub>2</sub> H <sub>2</sub> , H <sub>2</sub> O, CO <sub>2</sub> and their isotopologues and the application to a tunable diode laser spectrometer (TDLAS) for the martian Phobos-Grunt and lunar Luna-Resource and Luna-Glob space missions
3MS <sup>3</sup> -PS-03	V. Linkin et al.	Surface structure and mineralogical composition from lunar multichannel spectrometer.
3MS <sup>3</sup> -PS-04	N. Petrova et al.	Simulation of the lunar physical libration observations, using the lunar polar telescope
3MS <sup>3</sup> -PS-05	A. Abdrakhimov et al.	Photogeologic analysis of the North polar Luna-Glob candidate landing region
3MS <sup>3</sup> -PS-06	A. Gusev et al.	Big size hollow LLR and lunar physical librations for Selene-2, Chang'e-4,5,6 and Luna-Resource projects
3MS <sup>3</sup> -PS-07	Lu Yangxiaoyi	Iron abundances in slope avalanches in slope avalanches of lunar craters
3MS <sup>3</sup> -PS-08	M. Baskakova et al.	GIS mapping of the territory of the soviet lunar missions
3MS <sup>3</sup> -PS-09	A. Kokhanov et al.	GIS-analysis of Moon surface for the Luna-glob and Luna-Resource landing sites
3MS <sup>3</sup> -PS-10	M. Baskakova et al.	New names of lunar objects for Soviet lunar missions
3MS <sup>3</sup> -PS-11	E. Gusakova et al.	GIS-cartography of the Lunokhod-2 landing site
3MS <sup>3</sup> -PS-12	A. Gusev et al.	Radio-beacons on the moon and lunar physical libration for Selene-2, Chang'e-3/4, Luna-Glob and Luna-Resource projects
3MS <sup>3</sup> -PS-13	A. Zubarev et al.	High-resolution terrain models from LROC stereo images for Luna-Glob landing site selection
3MS <sup>3</sup> -PS-14	O. Khavroshkin et al.	Nonlinearity of Earth's and Lunar Oscillations.
3MS <sup>3</sup> -PS-15	J. Ping et al.	Applying the 1 way and/or 3-way radio phase counting for precise lunar ranging
3MS <sup>3</sup> -PS-16	A. Berezhnoy et al.	The Lunar Exosphere During Perseid 2009 Meteor Shower
3MS <sup>3</sup> -PS-17	A. Grumpe et al.	Full Topographic Correction of M <sup>3</sup> Reflectance Data for Lunar Elemental Abundance Estimation
3MS <sup>3</sup> -PS-18	G. Kochemasov	The Moon: gravity surveys reveal its real wave woven tectonics
3MS <sup>3</sup> -PS-19	V. Smirnov et al.	Influencing topography on formation of reflected signal of lunar radar
3MS <sup>3</sup> -PS-20	M. Sinitsyn	Small comets as a possible source of water deposits on the Moon
3MS <sup>3</sup> -PS-21	E. Kronrod et al.	Thermodynamic analysis of lunar seismic and temperature profiles
3MS <sup>3</sup> -PS-22	V. Rudakov	On the perspectives of radon monitoring on the Moon
3MS <sup>3</sup> -PS-23	O. Khavroshkin, V. Tsyplakov	Lunar seismicity, solar wind, solar oscillation.

**Mercury**

3MS <sup>3</sup> -PS-24	L. Jozwiak et al.	Models for the Ascent and Eruption of Magma on Mercury: Guidelines from Lunar Pyroclastic Vents and Mercury Pit-Floor Craters
3MS <sup>3</sup> -PS-25	G. Kochemasov	Mercury as a member of the terrestrial planets chain with regularly changing structural and compositional characteristics
3MS <sup>3</sup> -PS-26	E. Belenkaya et al.	Role of Bx IMF component for the structure of Mercury magnetosphere



3MS <sup>3</sup> -PS-27	S. Pugacheva, V. Shevchenko	Photometric relief of the unseen side of Mercury
3MS <sup>3</sup> -PS-28	L. Ksanfomality	Mercury studied by ground-based astronomical facilities

## Venus

3MS <sup>3</sup> -PS-29	I. Vinogradov et al.	ISKRA-V – a multi-channel diode laser spectrometer experiment for measurement of sulphurous components in the Venusian atmosphere from the level of clouds down to the surface during descent
3MS <sup>3</sup> -PS-30	N. Ignatiev et al.	Water vapour, clouds, and the UV absorber near the cloud tops of Venus from Venus Express data
3MS <sup>3</sup> -PS-31	D. Belyaev et al.	Sulphur oxides in Venus mesosphere detected from SPICAV/SOIR VEX solar occultation
3MS <sup>3</sup> -PS-32	A. Ekonomov	Twenty four hours watch on the Venus surface
3MS <sup>3</sup> -PS-33	I. Khatuntsev et al.	Circulation of mesosphere of Venus at cloud top level according to results obtained from monitoring camera (VMC) onboard Venus Express
3MS <sup>3</sup> -PS-34	A. Gavrik et al.	Oscillation of radio signal parameters near the lower boundary of the Venus ionosphere
3MS <sup>3</sup> -PS-35	A. Pavelyev et al.	Reanalysis of the bistatic radar data of Venera-9,10, and 1,16 satellites
3MS <sup>3</sup> -PS-36	Ya. Ilyushin, A. Gavrik	Simulation of the Venus ionospheric radio occultation experiment with the parabolic diffraction equation
3MS <sup>3</sup> -PS-37	O. Khavroshkin, V. Tsyplakov	The seismic research program for Venus landing station
3MS <sup>3</sup> -PS-38	E. Guseva et al.	Impact craters of Thetis Regio (V36 quadrangle), Venus.
3MS <sup>3</sup> -PS-39	V. Gubenko et al.	Derivation of atmospheric wave parameters from individual Magellan radio occultation retrievals of vertical temperature profiles in the Venus' atmosphere
3MS <sup>3</sup> -PS-40	V. Shishov et al.	Ballistics and navigation support for the Venera-D mission
3MS <sup>3</sup> -PS-41	D. Belyaev	SO <sub>2</sub> monitoring above Venus' clouds using VEX/SPICAV-UV nadir observations

## Mars

3MS <sup>3</sup> -PS-42	N. Bondarenko et al.	Polygons on Mars: topography details recovered from images with the improved photoclinometry method
3MS <sup>3</sup> -PS-43	K. Ramsley, J. W. Head	The proportion and distribution of Martian impact ejecta in the regolith of Phobos
3MS <sup>3</sup> -PS-44	M. Beach, J. Head	Age distribution of concentric crater fill deposits in the Southern mid-latitudes on Mars
3MS <sup>3</sup> -PS-45	A. Rauhala, V.-P. Kostama	Palos crater and Tinto Vallis, Mars: Analysis of proposed fluvial and volcanic scenarios, and further implications for local geology
3MS <sup>3</sup> -PS-46	S. Pavlov et al.	Raman spectroscopy of minerals at simulated planetary conditions for space exploration
3MS <sup>3</sup> -PS-47	S. Kukkonen, V.-P. Kostama	Crater counts on Martian outflow channels in Hellas region by using high resolution images
3MS <sup>3</sup> -PS-48	J. Brekhovskikh, Zh. Rodionova	3-D model of the Martian surface
3MS <sup>3</sup> -PS-49	X. Shi et al.	Surface gravity and dynamical environment of Phobos
3MS <sup>3</sup> -PS-50	V. Patsyn et al.	Analysis of spectral images of Phobos
3MS <sup>3</sup> -PS-51	E. Matveev et al.	Development Geoportal for access to Phobos data and scientific analyses
3MS <sup>3</sup> -PS-52	Yu. Barkin et al.	About some inner structures of the Earth, the Moon and Mars as geodynamical consequences of the action of mechanism of the forced relative oscillations of their core and mantle
3MS <sup>3</sup> -PS-53	V. Dmitriev et al.	Modeling martian meteoroid streams, generated by comets
3MS <sup>3</sup> -PS-54	V. Smirnov, O. Yushkova	Correction of the ionosphere influence in subsurface sounding of Mars ground

3MS <sup>3</sup> -PS-55	A. Morozhenko et al.	Explanation of the spectrophotometric properties of Moon and Mars by shadow mechanism
3MS <sup>3</sup> -PS-56	V. Gubenko et al.	Signatures and characteristics of internal gravity waves in the Mars' atmosphere as revealed by the MGS radio occultation temperature data analysis

### Dust and dusty plasma in space

3MS <sup>3</sup> -PS-57	M. Błęcka, L. Zašova	Influence of dust on radiance spectra of various astronomical objects
3MS <sup>3</sup> -PS-58	Y. Gavrik et al.	Radar image formation of near-Earth asteroids
3MS <sup>3</sup> -PS-59	A. Volokitin, B. Atamaniuk	Low frequency turbulence in inhomogeneous dusty plasmas

### Interaction of solar wind with Luna and planets

3MS <sup>3</sup> -PS-60	A. Pavelyev et al.	Principle of locality and analysis of radio occultation data
3MS <sup>3</sup> -PS-61	A. Pavelyev et al.	Monitoring solar wind influence on layers in the lower ionosphere using eikonal acceleration/intensity method from analysis of GPS occultation data

### Problems of Cosmogony

3MS <sup>3</sup> -PS-62	Yu. Krugly et al.	Ison cooperation for near-Earth asteroid research
3MS <sup>3</sup> -PS-63	F. Velichko	Phase function of brightness and circular polarization of the high-albedo asteroid 44 Nysa
3MS <sup>3</sup> -PS-64	O. Khavroshkin, V. Tsyplakov	Gas dust streams, crust seismic noise, exobiology
3MS <sup>3</sup> -PS-65	M. Zakhvatkin et al.	Navigation of the Radioastron Mission

### Giant planets and satellites

3MS <sup>3</sup> -PS-66	D. Zhukov et al.	Development of the coordinate and cartography support of future international mission "Laplace_P" to Jupiter's moon Ganymede
3MS <sup>3</sup> -PS-67	A. Klianchin, V. Prokofjeva- Mikhailovskaya.	The impact of the interplanetary medium on the Galilean satellites of Jupiter
3MS <sup>3</sup> -PS-68	V. Tejfel et al.	Seasonal changes in Saturn's atmosphere from the molecular absorption bands CCD-spectrophotometry in 1995-2012
3MS <sup>3</sup> -PS-69	F. Velichko et al.	Circular polarization of Galilean satellites of Jupiter
3MS <sup>3</sup> -PS-70	N. Andre et al.	Access and scientific exploitation of planetary plasma datasets at Mars, Venus, Mercury and Moon with CDP/AMDA web-based facility in relation to the EUROPLANET-RI IDIS plasma node activities

### New projects and instruments

3MS <sup>3</sup> -PS-71	M. Semenov et al.	MExRover – the new project of MIIGAIK in planetary geodesy, cartography, and photogrammetry
3MS <sup>3</sup> -PS-72	V. Marchuk et al.	Multi-channel ground penetrating radar for space applications
3MS <sup>3</sup> -PS-73	A. Pavelyev et al.	Bistatic radar for subsurface sounding of the Moon and planets using powerful artificial and sporadic space radio-emission
3MS <sup>3</sup> -PS-74	A. Gusev	Scientific-education project "Luna-2015+": spin-orbit evolution, selenodesy and geophysics of the Moon
3MS <sup>3</sup> -PS-75	D. Duev et al.	Planetary Radio Interferometry and Doppler Experiments (PRIDE) with Planetary Missions
3MS <sup>3</sup> -PS-76	O. Ugolnikov, I.Maslov	Aerosol Investigations in Martian Atmosphere Basing on the Wide-Angle Polarization Sky Background Measurements (the Astro-Dust project)
3MS <sup>3</sup> -PS-77	C. Acton	SPICE: An Architecture for Providing Observation Geometry Supporting Solar System Missions

3MS <sup>3</sup> -PS-78	I. Ilin et al.	Ballistic support of "Spectr-RG" spacecraft flight to the L2 point of Sun-Earth system
3MS <sup>3</sup> -PS-79	D. Moiseenko et al.	Mass-spectrometric methodology for signs of life search via analysis of the element composition of the supposed biomass extracted from an icy matrix
3MS <sup>3</sup> -PS-80	K. Antoniuk et al.	Transit observations exoplanets in the crimean astrophysical observatory