Updated: 17th May 2016 (v. 1.9)

Program for ELS 2016, the Fourth European Lunar Symposium

http://els2016.arc.nasa.gov/

Venue
Royal Netherlands Academy of Arts and Sciences (KNAW)
The Trippenhuis
Kloveniersburgwal 29
1011 JV Amsterdam, the Netherlands

Science Organizing Committee

- Wim van Westrenen - VU Univ. Amsterdam, NL (Chair)
- Mahesh Anand - Open University, UK (Co-Chair)
- Jessica Barnes - Open University, UK
- James Carpenter - ESA
- Doris Daou - NASA, PSD
- Simone Dell'Agnello - INFN, Italy
- Ralf Jaumann - DLR, Germany
- Maxim Litvak - Space Research Institute, RAS, Moscow
- Patrick Pinet - IRAP, France
- Katharine Robinson - Open University, UK
- Greg Schmidt - SSERVI, USA

Tuesday 17th May 2016	
ELS 2016 Onsite Registration	
18:00 - 19:00	Registration (Tea/Coffee/refreshments)
19:00 – 20:00	Inaugural lecture (**Prof. Harry Hiesinger**, University of Muenster and **Prof. Mark Robinson**, University of Arizona) – Seven Years Exploring the Moon: Highlights from Lunar Reconnaissance Orbiter (LRO) Mission; **Chair – Prof. Ralf Jaumann**
20:00 – 21:00	Welcome Reception with drinks and snacks

This abstract booklet was sponsored by HE Space Operations

Note: Names in bold are invited speakers.

Wednesday 18th May 2016				
08:15	Registration (Tea/Coffee/Refreshments)			
08:45	Welcome/Housekeeping			
All talks: 10 mins (10 minutes for Q&A at the end of each session for all speakers in that session)				
Session 1: Exploration and Future Missions 1 Chair: Wim van Westrenen				
SN	***Time***	**Abstract #**	**Author**	**Title**
1	*09:00*	017	**Messina, P.**	Moon Village
2	*09:10*	076	**Bussey, D.B.J.**	The ISECG Science White Paper – A Scientific Perspective on the Global Exploration Roadmap
3	*09:20*	051	Carpenter, J. (Houdou, B.)	Building ESA's Lunar Exploration Mission Capabilities
4	*09:30*	050	Wong, N.P.	Status of the Google Lunar XPRIZE
5	*09:40*	040	Zou, Y.L.	An Introduction: Scientific Objectives and its Possible Instruments of CE-4 Mission
	09:50 – 10:05	Q&As		
6	*10:05*	066	Savoia, M.	Prospect: Key Aspects of Drilling and Collecting Samples at Moon South Pole for Luna Resurs Mission
7	*10:15*	047	Barber, S.J.	ProSPA: the Chemical Laboratory for In-Situ Assessment of Lunar Volatile Resources within ESA's Prospect Package
8	*10:25*	060	Reiss, P.	In-Situ thermal Extraction and Analysis of Lunar Volatiles with the Lunar Volatiles Scouting Instrument
9	*10:35*	033	Lavagna, M.	Drill-Terrain Energy Exchange Model to Assess Moon Subsurface Icy Samples Specimen thermo-Physical Properties Preservation During the Acquisition Phases
	10:45 – 10:55	Q&As		
	Tea/coffee break (11:00-11:15)			
	Session 2: Exploration and Future Missions 2; Chair: Jessica Barnes			
10	*11:20*	080	Ferri, A.	Lunar Polar Sample Return Mission
11	*11:30*	079	Ferri, A. (Biggio, A.)	Lunar Volatile Prospector Mission
12	*11:40*	031	Diedrich, T.	Prospecting and Returning Lunar Surface Samples with Volatiles.
13	*11:50*	048	Richter, L.	Development of Sample Handling Systems at OHB Munich
14	*12:00*	012	**Zeigler, R. A.**	MOONRISE: Sampling the South Pole-Aitken Basin to Address Problems of Solar System Significance
	12:10 – 12:25	Q&As		
	Lunch (12:30-13:40)			
	Session 3: Mapping and Landing Sites; Chair: Greg Schmidt			
15	*13:45*	003	**Mitrofanov, I. G.**	Landing Sites Selection for the Russian Polar Lander Luna-25
16	*13:55*	004	**Flahaut, J.**	Candidate Landing Sites Near the Lunar Poles: A European Perspective
17	*14:05*	009	Rommel, D.	Petrological Map of the South Pole-Aitken Basin
18	*14:15*	041	Day, B.H.	Extending NASA's Lunar Mapping and Modelling Portal: Enhancements for a New Era of Lunar Exploration

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	14:25 – 14:35	Q&As		
	Session 4: Small Missions, Instruments and Simulants; Chair: Simone Dell'Agnello			
19	*14:35*	081	Friend, J. (Saunders, C.)	Solving Communications and Navigation Requirements for Small Lunar Missions
20	*14:45*	044	Stras, L. (Ghafoor, N.)	Small Mission Challenges and Developments in Advance of a Lunar Village
21	*14:55*	006	Pike, W.T.	A Silicon Seismic Package (SSP) for Lunar Seismology
22	*15:05*	039	Czeluschke, A.	Re-examination of Apollo 17 Lunar Seismic Profiling Experiment Data.
	15:15 – 15:25	Q&As		
	Tea/coffee break (15:30 – 15:45)			
23	*15:50*	045	Currie, D.G.	Science, Design and Flight Status of the Next Generation Retroreflector for Lunar Laser Ranging
24	*16:00*	077	**Taylor, L.A.**	Complexities of Lunar Soil: Need for Proper Simulants
25	*16:10*	023	Meurisse, A.	Solar 3D Printing of Lunar Regolith
26	*16:20*	026	Foing, B. (Schlacht, I.L.)	Walking on the Moon
	16:30 – 16:40	Q&As		
	Session 5: Remote sensing and Geological Implications; Chair: Katharine Robinson			
27	*16:40*	015	**Klima, R.L.**	Integrating Remote Sensing Observations to Assess the Diversity of Intrusive Magmatism on the Moon
28	*16:50*	065	Martinot, M.	Characterizing the Lunar Crust-Mantle Transition with the Moon Mineralogy Mapper (M^3)
29	*17:00*	068	Nahm, A.L.	Relative Ages of Graben and Wrinkle Ridges on the Nearside of the Moon Reveal Contradictory Relationships
30	*17:10*	053	Donaldson-Hanna, K.	Investigation of Young (<100 Million Years) Lunar Surface Features: Evidence for Outgassing or Basaltic Volcanism?
	17:20 – 17:30	Q&As		
	Session 6: Posters; Chair: Greg Schmidt			
	17:30	Poster intros		1 minute each presenter
	Poster session from ~17:45 to 20:30 with drinks and finger food.			

Note: Names in bold are invited speakers.

	Thursday 19th May 2016			
	08:45	Registration (Tea/Coffee/Refreshments)		
	All talks: 10 mins (10 minutes for Q&A at the end of each session for all speakers in that session)			
	Session 7: Remote sensing and Physical Implications; Chair: Patrick Pinet			
31	*09:10*	057	**Robinson, M.S.**	Lunar Reconnaissance Orbiter Camera: Exploring the Moon.
32	*09:20*	059	Greenhagen B.T.	The Diviner Lunar Radiometer: Cornerstone to thermal Infrared Studies of Airless Bodies.
33	*09:30*	073	Denevi, B.W.	Exploring the Effects of Space Weathering at Ultraviolet Wavelengths with the LROC Wide Angle Camera
34	*09:40*	067	Meyer, H.M.	The Origins of Lunar Light Plains: Implications for Exploration
	09:50 – 10:00	Q&As		
35	*10:00*	028	Arnold, J.A.	Modelling Thermal Infrared Spectra in a Lunar-Like Environment
36	*10:10*	064	Litvak, M.L.	Search for Lunar Water: From Current Lunar Reconnaissance Orbiter Global Mapping to the Sample Analysis at Surface onboard future Russian Lunar Landers
37	*10:20*	069	Patterson, G.W.	Mini-RF On LRO and Arecibo Observatory Bistatic Radar Observations of the Moon
38	*10:30*	071	Povilaitis, R.Z.	Global Crater Density: Equilibrium in the Lunar Highlands
	10:40 – 10:50	Q&As		
	Tea/coffee break (10:55-11:10)			
	Session 8: Lunar Volatiles and Laboratory Experiments; Chair: Mahesh Anand			
39	*11:15*	018	**Visscher, C. (Canup, R.M.)**	Incomplete Lunar Accretion and the Depletion of Volatile Elements in the Moon
40	*11:25*	075	Steenstra, E.S.	Metal-Silicate Partitioning of Volatile Siderophile Elements suggests Volatiles were not lost during Lunar Formation
41	*11:35*	034	Barnes, J.J.	The chlorine isotopic composition of lunar urKREEP
42	*11:45*	035	Lin, Y.H.	Hydrous Early Moon? Constraints from Hydrous Lunar Magma Ocean Solidification Experiments
	11.55 – 12:05	Q&As		
43	*12:05*	054	Robinson, K.L.	Connecting Hydrogen and Chlorine Isotopes in Evolved Lunar Rocks
44	*12:15*	~~030~~	~~Greenwood, J.P.~~	~~Water and Volatiles in Apollo Rocks: New Results from Sapporo and Connecticut~~ - cancelled
45	*12:25*	070	Potts, N.J.	Experimental Constraints on Volatile Partitioning Between Apatite and Silicate Melt under Lunar Conditions
46	*12:35*	052	Kelderman, E.	Compressibility and Density of Hydrous High-Ti Lunar Red and Black Glass
	12:45 – 12:55	Q&As		
	Lunch (13:00-14:10)			
	Session 9 starts at 14:15 (see next page)			

Note: Names in bold are invited speakers.

	Session 9: Differentiation and Evolution of the Moon. Chair: Maxim Litvak			
47	*14:15*	016	**Kruijer, T.S.**	Constraining the Origin and Differentiation of the Moon Using Tungsten Isotopes
48	*14:25*	072	**Snape, J.F.**	Pb Isotope Analyses of Lunar Samples: Implications for the Evolution of Major Lunar Silicate Reservoirs
49	*14:35*	061	Zhao, Y.	Influence of Variable thermal Conductivity On the thermal Evolution of the Moon.
50	*14:45*	022	Alexander, L.	Examining the History of the Solar System and the Galaxy through Cosmogenic Isotopes in Lunar Samples
	14:55 – 15:05	Q&As		
	Tea/coffee break (15:10-15:25)			
	Session 10: Impacts and Cratering on the Moon. Chair: James Carpenter			
51	*15:30*	020	**Oberst, J.**	Lunar Geodesy, Cartography, and Current Coordinate Knowledge
52	*15:40*	002	**Hiesinger, H.**	Recent Advancements in Lunar Impact Cratering
53	*15:50*	056	**Kring, D**	An Impact-Generated Lunar Magmatism Hypothesis
54	*16:00*	005	**Morbidelli, A.**	The Timeline of the Lunar Bombardment
	16:10 – 16:20	Q&As		
	Closing remarks (16:20 – 16.30) Announcement of awards and 2017 ELS Finish			

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Posters: ~17:45 – 20:30 Wednesday 18th May.
Presenters note that posters can be pinned up from pre-registration on Tuesday, 17th May; posters should be up to A0 in size (poster boards are 120 x 120 cm; pins/velcro/scotch tape will be provided).

S. No.	Poster No.	Abs#	Presenter	Title
55	1	042	Carpenter, J.	Challenges and Opportunities of Lunar Resource Prospecting
56	2	038	Chevrel, S.D.	Challenges in Robotic and Human Geological Field Work in Lunar Craters
57	3	013	Cowley, A.	Spaceship EAC – Enabling Activities Relevant to Lunar Exploration and 3D Printing ISRU
58	4	043	Crockett, M.	Metal-Silicate Partitioning of Siderophile Elements in the Moon: the effects of Oxygen Fugacity and Carbon.
59	5	062	de Vera J.-P.	Astrobiology and Life Sciences on the Moon
60	6	~~010~~	~~Durst, S.M.~~	~~International Lunar Observatory Association: 21st Century Education, Exploration and Enterprise~~ - cancelled
61	7	046	Foing, B.	Highlights From Moon Village Workshops and Studies
62	8	032	Glaeser, P.	Lunar Polar Illumination and Implications for Future Landing Sites
63	9	001	Guinet, V.	Preparation of Human-Telerobotics Operations Using EAC & ESTEC Facilities
64	10	024	Hausmann, G.	Moon-Based Plasma, Dust and Radio Science: Essentials for Preparation of Future Exploration and Scientific Breakthroughs
65	11	037	Jonglez, C.	Mineral Spectrometry & Remote Control of Exogeolab Lander Instruments
66	12	014	Kamps, O.M.	Exogeolab Moon Analogue Field Activities In Eifel, Germany
67	13	019	Maccone, C.	Protected Antipode Circle (PAC) with a "Moon Village" to its South
68	14	029	Makaya, A.	3D Printing Technologies for Enabling Human Exploration and Human Settlement on the Moon: The Viewpoint of ESA Materials Scientists
69	15	025	Marco Figuera, R.	Water Ice Characterization near Candidate Landing Sites at the Lunar South Pole.
70	16	083	Offringa, M.S.	UV-VIS, NIR and FTIR Spectroscopy of Moon Analogues
71	17	074	Pendleton, Y.J.	NASA's Solar System Exploration Research Virtual Institute: Merging Science and Exploration
72	18	036	Pinet, P.C.	MGM Deconvolution of Rock Slab Spectra with Plagioclase/Olivine Mineral Assemblages
73	19	007	Ping, J. S.	Promoting a Low Frequency Radio Observatory on the Farside of the Moon
74	20	~~008~~	~~Richter, Lutz~~	~~Development of Sample Handling Systems at OHB Munich~~ - moved to oral
75	21	055	Robinson, K.L.	The Lynch 002 Lunar Meteorite Revisited
76	22	058	Robinson, M.S.	Flexible to Focused: the Path to Extend Human Presence Beyond Low Earth Orbit.
77	23	082	Schmidt, G.	The Desert Fireball Network
78	24	011	Wang, M.Y.	Initial Observation of the Lunar Ionosphere from Radio Occultation based on the Service Module of the Circumlunar Return and Re-entry Spacecraft
79	25	078	Wüsthoff, M.	How does Obliquity affect Diurnal Tidal Stresses on the Moon?

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