Scientific Program for MOP-2013 (Athens, July 8-12, 2013)

Scientific Organizing Committee (SOC)

Nick Achilleos, UCL / JAXA Visitor (Chair)
Sarah Badman (JAXA)
Ioannis Dandouras (Institut de Recherche en Astrophysique et Planétologie)
K. C. Hansen (University of Michigan)
Amanda Hendrix (PSI)
Yasumasa Kasaba (Tohoku University)
Krishan Khurana (UCLA)
Norbert Krupp (MPS)
Bill Kurth (University of Iowa) Laurent Lamy (LESIA)
Adam Masters (JAXA)
Chris Paranicas (APL / JHU)
Carol Paty (Georgia Tech)

Timings
Tutorial Reviews: 25 + 5 = 30 min
Invited Talks: 20 + 5 = 25 min
Contributed Talks: 13 + 2 = 15 min

Sunday July 7	
Time	**Activity**
Approx. 7:00 pm onwards	**Pre-Conference Reception:** Welcome / Registration/ Reception. (Drings, finger food etc. at the roof garden of the Royal Olympic).

Monday July 8	
Start Time	**Topic**
08:30-08:35	***Admin/Welcome:*** Sergis
08:35-08:50	***Admin/Welcome***: E. T. Sarris (Professor of Space Physics, University of Thrace) 'Space Physics in Greece: from Geospace to the Outer Planets'.
08:50 – 10:35	***'Moons and Moon-Magnetosphere Interactions', Session Chairs: Khurana, Dandouras***
08:50 - 09:20	*Tutorial Review:* 'Observed interactions between Saturn's magnetosphere and moons' – *A. J. Coates (UCL/MSSL)*
09:20 - 09:35	(Paty) Ion Interactions at Enceladus: Observations in a Multifluid Modeling Context
09:35 - 09:50	(Snowden) The global precipitation of magnetospheric electrons into Titan's atmosphere
09:50 - 10:05	(Wellbrock) Heavy negative ion trends at Titan
10:05 - 10:20	(Nordheim) Surface charging at Hyperion, a possible remote detection
Break	Duration: ~40 min
11:00 – 12:45	***'Moons and Moon-Magnetosphere Interactions', Session Chairs: Hendrix, Masters***
11:00 - 11:25	*Invited Talk:* 'Magnetosphere interactions with the surfaces of icy satellites' – *C. Plainaki (INAF/IAPS)*
11:25-11:40	(Yoneda) Io's volcanic role on Jupiter's magnetosphere
11:40-11:55	(Schneider) Eclipse Effects on Supply to the Neutral Clouds and Torus
11:55-12:10	(Burger) Modeling New Horizons Observations of Io's Extended Atmosphere
12:10-12:25	(Payan) Effect of Plasma Torus Density Variations on Morphology and Brightness of Io Footprint
12:25-12:40	(Saur) New and Consistent Boundary Conditions at Non-Conducting Planetary Bodies: Applications for Ganymede
Lunch	Duration: ~1h 45 min
14:30 – 16:05	***'Moons and Moon-Magnetosphere Interactions', Session Chairs: Hendrix, Masters***
14:30-14:55	*Invited Talk:* 'Effects of radiolysis on icy moon surfaces' – *Giovanni Strazzulla*
14:55-15:10	(Hendrix) Ganymede: Effects of Plasma Interactions as seen in UV Spectra
15:10-15:25	(Roth) New HST STIS Observations of Europa's UV Aurora Morphology
15:25-15:40	(Khurana) Why is Europa's Interaction with the Jovian Magnetosphere so Variable?
15:40-16:05	*Invited Talk:* 'Formation and evolution of neutral and / or plasma tori' (T. Todd Smith *(JHU-APL*)
Break	Duration: ~25 min
16:30 – 17:30	***'Magnetospheric Structure and Dynamics', Session Chairs: Khurana, Dandouras***
16:30 – 17:00	*Tutorial Review:* 'Global Configuration, Stress Balance and Energy Flow in Giant Planet Magnetospheres' – *F. Bagenal (LASP)*
17:00 – 17:15	(Girard) First look at Jupiter's radiation belts with LOFAR
17:15 – 17:30	(Woodfield) Cyclotron-resonant electron acceleration at Jupiter by whistler-mode chorus waves, a source for the radiation belts

Tuesday July 9	
Start Time	**Topic**
08:30 – 10:10	***'Magnetospheric Structure and Dynamics', Session Chairs: Krupp, Paranicas***
08:30 – 08:45	(Paranicas) Comparative planetary radiation belts
08:45 – 09:00	(Vogt) Long term variability of Jupiter's magnetodisk and implications for the aurora
09:00 – 09:15	(Chane) How is the Main Auroral Emission Affected by the Solar Wind at Jupiter?
09:15 – 09:40	*Invited Talk:* 'Dynamics of giant magnetospheres' – *P. Louarn*
09:40 – 09:55	(Kotova) Simulation of the Galactic Cosmic Rays interaction with Saturn's atmosphere and rings
09:55 – 10:10	(Kollmann) Why and to what extent do Saturn's proton belts change in time?
Break	~35 min
10:45 – 12:15	***'Magnetospheric Structure and Dynamics', Session Chairs: Achilleos, Badman***
10:45 – 11:00	(Crary) Ion cyclotron waves and pickup ions in Saturn's magnetosphere
11:00 – 11:15	(Rajendar) Incorporation of Neutral Cloud Interactions into a Global Multifluid Simulation of Saturn's Magnetosphere
11:15 – 11:30	(Masters) Magnetic reconnection at Saturn's magnetopause
11:30 – 11:45	(Delamere) The interaction between magnetic reconnection and the Kelvin-Helmholtz instability at Saturn's magnetopause
11:45 – 12:00	(Sulaiman) How accurately can we reconstruct the IMF upstream of Saturn's bow shock from measurements downstream?
12:00 – 12:15	(Andriopoulou) A Study of the Convective Electric Field in the Inner Magnetosphere of Saturn Using Moon Microsignatures
Lunch	Duration: ~1h45min
14:00 – 15:40	***'Magnetospheric Structure and Dynamics', Session Chairs: Krupp, Paranicas***
14:00 – 14:25	*Invited Talk:* 'Observations of Magnetotail Dynamics' – *C. M. Jackman (given by N. Achilleos)*
14:25 – 14:40	(Nemeth) The structure of the outer magnetodisk of Saturn – as revealed by velocity moments of thermal ions
14:40 – 14:55	(Nikolaou) Plasma fluid properties in the distant Jovian magnetosheath and tail derived from New Horizon's Solar Wind Around Pluto (SWAP) instrument data
14:55 – 15:10	(Vasyliunas) Plasma flow and formation of planetary magnetotails
15:10 – 15:25	(Jinks) Cassini Multi-instrument Assessment of the Open-closed Field Line Boundary of Saturn's Magnetosphere
15:25 – 15:40	(Jasinski) Cassini Observations of Saturn's Magnetospheric Cusps
Break	~35 min
16:15 – 18:15	*Posters (Viewing)*

Wednesday July 10	
Start Time	**Topic**
08:45 – 09:25	**Keynote Lecture (introduced by Sergis):** 'The quest for discovery of planetary radiation belts and the role of the Outer Planets' – *S. Krimigis*
09:25 – 10:35	***'Planetary Rotation and Periods'*** ***Session Chairs: Lamy, Paranicas***
09:25 – 09:50	*Invited Talk: 'Magnetospheric oscillations at Saturn: Seasonal behaviour' – D. J. Andrews (Uppsala)*
09:50 – 10:05	(Provan) 'Planetary period magnetic field oscillations in Saturn's magnetosphere: Post-equinox abrupt non-monotonic transitions to northern system dominance'
10:05 – 10:20	(Khurana) 'Variable Tilt of Saturn's Current Sheet'
10:20 – 10:35	(Lecacheux) On the rotational modulation of Saturn's magnetosphere
Break	~25 min
11:00 – 12:45	***'Planetary Rotation and Periods'*** ***Session Chairs: Lamy, Ray***
11:00 – 11:30	*Tutorial Review:* 'Saturn's rotational modulations : a comparative review of theoretical approaches' – *M. G. Kivelson (UCLA/UMich)*
11:30 – 11:45	(Southwood) The Origin of the 10.7 hr Magnetic Periodicities in Saturn's Magnetosphere
11:45 – 12:10	*Invited Talk: 'Rotational dynamics of the Jovian system, and comparison with Saturn' – P. Zarka (LESIA)*
12:10 – 12:25	(Panchenko) 'Periodic non-Io DAM simultaneously observed by STEREO/ WAVES and ground-based radio telescope URAN-2'
12:25 – 12:40	(Steffl) 'Quasi-periodic electron bursts in the Jovian magnetosphere'
Lunch	Duration: 1h 50 min
14:30 – 19:30	***'Study Period':*** *Free time, or time for splinter meetings / instrument team meetings / informal poster viewing. Contact Nick Sergis if you wish to book a space for your meeting*
~19:30-21:30	***Visit*** *to Gardens of the Athens Observatory*, Food and drink provided, moon / sunset viewing.

Thursday July 11	
Start Time	**Topic**
08:30 – 10:15	***Auroral Phenomena / M-I Coupling*** ***Session Chairs: Badman, Achilleos***
08:30 – 09:00	*Tutorial Review: 'Auroral Processes at the Giant Planets: Overview' – E. J. Bunce (Leicester)*
09:00 – 09:15	(Gérard) 'Jupiter 's conjugate ultraviolet aurora'
09:15 – 09:30	(Meredith) 'Simultaneous conjugate observations of small-scale structures in Saturn's dayside ultraviolet auroras – implications for physical origins'
09:30 – 09:45	(Kimura) 'Long-Term variations of Saturn's Auroral Radio Emissions by the Solar Ultraviolet Flux and Solar Wind'
09:45 – 10:00	(Rymer) 'A Paradigm Shift in our Understanding of the Origin of Bi-Modal Electron Distributions at Saturn'
10:00 – 10:15	(Ozak) 'Auroral Ion Precipitation at Jupiter: Secondary Electrons and Atmospheric Effects'
Break	~30 min
10:45 – 12:35	***Auroral Phenomena*** ***Session Chairs: Ray, Yates***
10:45 – 11:10	*Invited Talk: 'Multi-instrument studies of auroral processes at Saturn' – A. Radioti (Liege)*
11:10 – 11:25	(Melin) 'Simultaneous infrared and ultraviolet observations of Saturn's aurorae using Cassini VIMS and UVIS'
11:25 – 11:40	(Nichols) 'Saturn's northern auroras as observed by HST'
11:40 – 11:55	(Badman) 'Cassini VIMS observations of Saturn's infrared H3+ aurora during the 2013 multi-instrument campaign'
11:55 – 12:10	(Lamy) 'Multi-spectral simultaneous diagnosis of Saturn's aurorae throughout a planetary rotation'
12:10 – 12:25	(Prangé) 'Observation of FUV auroral emissions on Uranus'
12:25 – 12:35	(Lamy) 'APIS : an interactive database of HST-UV observations of the outer planets'
Lunch	Duration: 1h 25 min
14:00 – 16:00	***Auroral Phenomena*** ***Session Chairs: Badman, Lamy***
14:00 – 14:25	*Invited Talk:* 'Variability of the Jovian aurorae' – B. Bonfond (SWRI)
14:25 – 14:40	(Dumont) 'Isolated transient UV auroral structures at Jupiter: possible signatures of magnetospheric injections'
14:40 – 14:55	(Grodent) 'Jupiter's elusive bald patch'
14:55 – 15:20	*Invited Talk:* '(Auroral) Energy Inputs in Giant Planet Atmospheres – T. Stallard (Leicester)
15:20 – 15:35	(Clarke) 'Jupiter's Auroral Energy Input to the Upper Atmosphere'
15:35 – 15:50	(O'Donoghue) 'It's raining on Saturn and the rings are responsible'
15:50 – 16:15	*Discussion (if necessary) of venue for next MOP meeting (see also Fri morning schedule)*
Break	~30 min
16:45 – 18:15	*Posters (Viewing)*
~19:30 onwards	*MOP Dinner*

Friday July 12	
Start Time	**Topic**
08:45 – 08:50	*Announcement of venue for next MOP meeting*
08:50 - 09:20	***Auroral Phenomena, continued*** ***Session Chairs: Badman, Lamy***
08:50 – 09:05	(Imai) 'Jupiter's Decametric Modulation Lanes Observed by the Long Wavelength Array (LWA)'
09:05 – 09:20	(Gautier) 'A parametric study of the propagation of auroral radio emissions through auroral cavities'
09:20 – 09:25	***Changeover***
09:25 – 10:20	***Magnetosphere-Moon Coupling - Simulations*** ***Session Chairs: Hansen, Paty***
09:25 – 09:55	*Tutorial Review: 'Techniques in icy moon modelling' – Sven Simon*
09:55 – 10:20	*Invited Talk: 'Icy moon – dust – neutral interactions at Enceladus' – Hendrik Kriegel*
Break	~25 mins
10:45 – 12:20	***Magnetosphere-Ionosphere Coupling - Simulations*** ***Session Chairs: Hansen, Paty***
10:45 – 11:15	*Tutorial Review: 'The influence of ionospheric boundary conditions on magnetospheric dynamics' – Xianzhe Jia*
11:15 – 11:30	(Hansen) 'Further Comparison of Cassini Data to our Global MHD Model of Saturn's Magnetosphere'
11:30 – 11:55	*Invited Talk: 'Overview of models of M-I coupling and current-voltage relations' – Licia Ray (UCL)*
11:55 – 12:20	*Invited Talk: 'Modelling auroral precipitation and energy deposition' – Chihiro Tao*
12:20 – 12:35	(Yates) 'The Jovian thermospheric response to multiple solar wind shocks'
Lunch	**Duration** 1h 25 min
14:00 – 15:30	***Deep Space Missions: Status and Development*** ***Session Chairs: Achilleos, Masters***
14:00 – 14:25	*Invited Talk: 'ESA's JUICE mission to Ganymede and the Jupiter system' – M. K. Dougherty (Imperial College)*
14:25 – 14:40	(Krupp) 'Charged and Neutral Particle Measurements in the Jovian Magnetosphere: Science goals for JUICE'
14:40 – 15:05	*Invited Talk: 'Plasmas in the Deep Jovian Magnetotail and Magnetosheath Observed by New Horizons' – D. McComas*
15:05 – 15:30	*Invited Talk: 'Comparing planetary environments: The MESSENGER-Cassini example' – (A. Masters, JAXA)*
Break	~30 mins
16:00 – 16:45	***Deep Space Missions: Status and Development*** ***Session Chairs: Achilleos***
16:00 – 16:15	(Yoshikawa) 'The observation for Jovian inner magnetosphere from the Earth orbiting EUV spectroscope, EXCEED'
16:15 – 16:30	(Morgenthaler) 'The IoI/O Concept: Synoptic Monitoring of Io's Volcanic Output and the System IV Periodicity'
16:30 – 16:45	(Goyal) 'Design of miniature magnetosphere as a shield for manned Mars Reentry Vehicle'

POSTERS

Moon-Magnetosphere Interaction

1	Karin	Ågren	Negative ions detected in the deep ionosphere of Titan
2	Jason	Corliss	The Post-Eclipse Growth of Io's Sodium Emissions and a Unique Glance at the Distinct Velocity Populations of Sodium near Io's Disk.
3	Vincent	Dols	Hybrid Simulations of the Plasma Interaction with Europa's Atmosphere
4	Niklas	Edberg	Solar cycle modulation of Titan's ionosphere
5	Niklas	Edberg	The T85 magnetosheath encounter: extreme densities in Titan's ionosphere
6	Moritz	Feyerabend	A new hybrid model approach for Titan: Modelling the dynamics of the ionosphere and the interaction with the ambient plasma flow
7	Geraint	Jones	Negatively-charged particle pickup in the Enceladus plume
8	Jeffrey	Morgenthaler	Short Term Variation in Oxygen Emission from Io: The Distribution of Positive and Negative "Departure Events"
9	John	Richardson	The Time Dependence of Saturn's Tori
10	Ondřej	Šebek	Io's interaction with the plasma torus: Hybrid simulations
11	Sven	Simon	Structure of Titan's induced magnetosphere under varying background magnetic field conditions: survey of Cassini magnetometer data from flybys TA-T85
12	Darci	Snowden	Estimates of energy sources and sinks in Titan's upper atmosphere

Magnetosphere Structure and Dynamics

13	Christopher	Arridge	Survey of electron temperature anisotropies in the saturnian magnetosphere
14	Emma	Bunnell	Plasma Properties in the Magnetospheric Plasmasheet of Saturn
15	Stanley	Cowley	Response of Uranus' auroras to solar wind compressions at equinox
16	Sebastien	Hess	Update to the Jovian internal magnetic field model
17	Jamie	Jasinski	Theory and modelling of cusp particle signatures at Saturn and Jupiter
18	Hajime	Kita	Investigation of the solar UV/EUV heating effect on the Jovian radiation belt based on radio/infrared observation
19	Nathan	Pilkington	Observations of the Polar Flattening of Saturn's Magnetosphere using in-situ Cassini Data
20	Elias	Roussos	MeV electrons near Saturn's cusp
21	Patricia	Schippers	The electron core properties in the innermost Saturn's magnetosphere from radio measurements on Cassini
22	Scott	Siler	Plasma Properties in the Magnetospheric Plasmasheet of Jupiter
23	Hiroyasu	Tadokoro	Test-particle simulation of pitch angle scattering of magnetospheric electron due to neutral H2O from Enceladus
24	George	Clark	Evolution of pitch angle distributions across Saturn's 10 Rs magnetospheric region from MIMI/LEMMS

Planetary Rotation and Periods

25	Marcia	Burton	Analysis of Saturn's non-axisymmetric planetary magnetic field

Auroral Phenomena

26	**Nicholas**	**Achilleos**	Jupiter's Auroral Oval as a Probe of Magnetospheric Configuration
27	**Fabrizio**	**Musacchio**	HST/STIS observation of Ganymede's aurora: Investigating the variability of the auroral ovals
28	**Jacques**	**Gustin**	Maps of the Jovian auroral electron energy precipitation obtained with HST/STIS observations
29	**Masafumi**	**Imai**	Ray Tracing Study on Attenuation Bands within Jovian Hectometric Radiation
30	**Daichi**	**Maruno**	Short-term intense burst of Saturn kilometric radiation: Its relationship to the rotational phase and the north-south asymmetry
31	**Yasumasa**	**Kasaba**	Vertical profiles of Jovian H$_2$ and H$_3^+$ infrared auroras observed by SUBARU/IRCS
32	**Chihiro**	**Tao**	Jovian thermospheric variation due to solar EUV variations
33	**Luke**	**Moore**	Low-Altitude Ionospheric Structure at Jupiter and Saturn: Radio attenuation and conductances

Space Missions

34	**Anne-Lise**	**Gautier**	ARTEMIS-P: A general Ray Tracing code in anisotropic plasma for radioastronomical applications.
35	**Walter**	**Harris**	Prospects for Velocity Resolved Observations of Visible and Ultraviolet Emissions from the Io Torus
36	**Sebastien**	**Hess**	JUNO and JUICE preparation: online tools to model and analyze the outer planet radio emissions
37	**Yuto**	**Katoh**	Wave-Particle Interaction Analyzer (WPIA): Direct Measurements of Wave-Particle Interactions in Planetary Magnetospheres
38	**Fuminori**	**Tsuchiya**	Mission data processing and attitude control of the SPRINT-A satellite