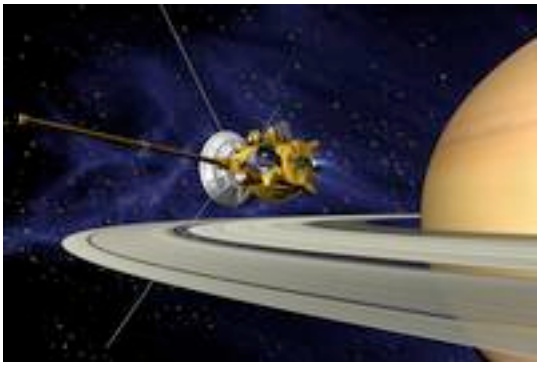


CASSINI/MAPS Workshop 2010

CIAS, Observatoire de Meudon, 7-9 April 2010

Foreword

The Organizing Committee is pleased to welcome you to the MAPS Workshop 2010 at the Observatoire de Meudon. This workshop will be the opportunity to discuss recent results on all aspects of Saturn's magnetospheric dynamics, as well as long term perspectives offered by the extension of the Cassini tour to 2017.

Organizing Comittee

- Baptiste Cecconi (LESIA, Meudon, FR)
- Nicolas André (CESR, Toulouse, FR)
- Laurent Lamy (Imperial College, London, UK)
- Philippe Zarka (LESIA, Meudon, FR)
- Tamas Gombosi (Cassini/MAPS-IDS, Univ. Michigan, USA)
- Michel Blanc (Cassini/MAPS-IDS, CESR, Toulouse; Ecole Polytechnique, Palaiseau, FR)
- Nicole Letourneur (LESIA, Meudon, FR)
- Renaud Romagnan (LESIA, Meudon, FR)
- Ourdya Achelhi (LESIA, Meudon, FR)
- Aurélie Sevellec (LESIA, Meudon, FR)

In case of problem, please contact:
- Entrance of Observatoire de Meudon: 01 45 07 75 30
- Baptiste Cecconi: 06 62 89 46 31 (mobile)
- Laurent Lamy: 06 07 67 84 04 (mobile)

Agenda

Tuesday, april 6th 2010

RPWS team meeting	09:00–17:00

Wednesday, april 7th 2010

Registration opening	08:00
Welcome	08:30
MAPS Workshop: Magnetospheric Studies	
External Magnetospheric Forcing	08:45–11:15
Magnetospheric Dynamics and Radial Coupling	11:15–15:15
Auroral Physics and Latitudinal Coupling	15:15–18:00
Cocktail Dinner (Paris Observatory, Historic Cassini Hall)	19:00–22:00

Thursday, april 8th 2010

MAPS Workshop: Satellites Interactions	
Titan	08:45–12:30
Enceladus and other icy moons	12:30–16:00
Dust/plasma interactions	16:00–18:15

Friday, april 9th 2010

MAPS Workshop: Other	
Saturn's atmosphere and ionosphere	09:00–09:30
Periodicities	09:30–11:30
Datasets Tools and Future Observations	11:30–14:30
Concluding remarks perspectives and open discussions	14:30–15:00
MIMI team meeting	
+ other rooms available for informal workshops or discussions.	15:00–19:00

Saturday, april 10th 2010

MIMI team meeting at Hotel Novotel near Montparnasse.

Reception at Observatoire de Paris

[wednesday, April 7th, 7pm]

You are invited to join us at the cocktail-dinner, which will be held at the Observatoire de Paris, in the historic Cassini Hall (Salle Cassini).

Going from the CIAS at Observatoire de Meudon to the Observatoire de Paris:

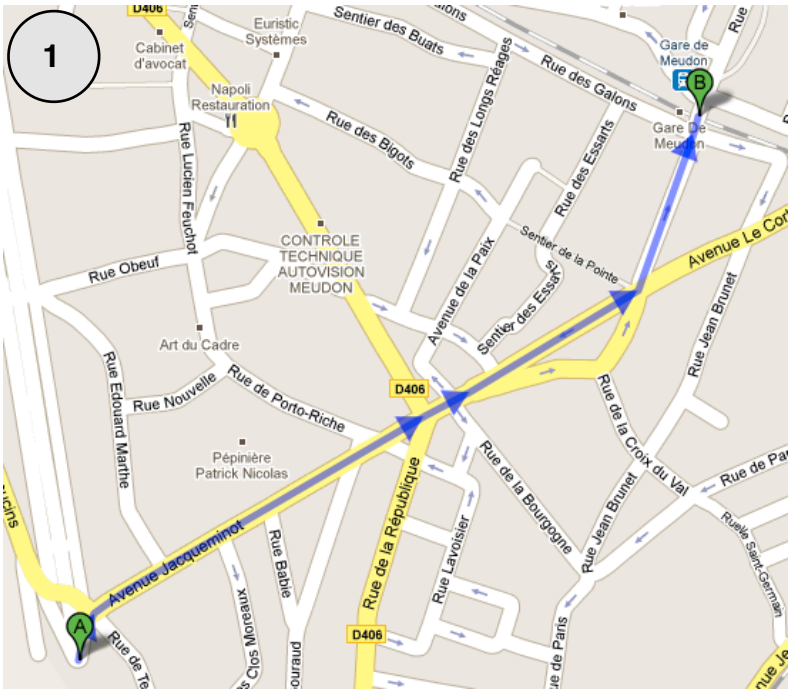
- Exit the Observatoire de Meudon taking the main entrance.

[MAP #1]
- From the Observatoire de Meudon (A), walk downhill to the «Meudon» train station (B).

- Take the suburban train to Montparnasse Station.

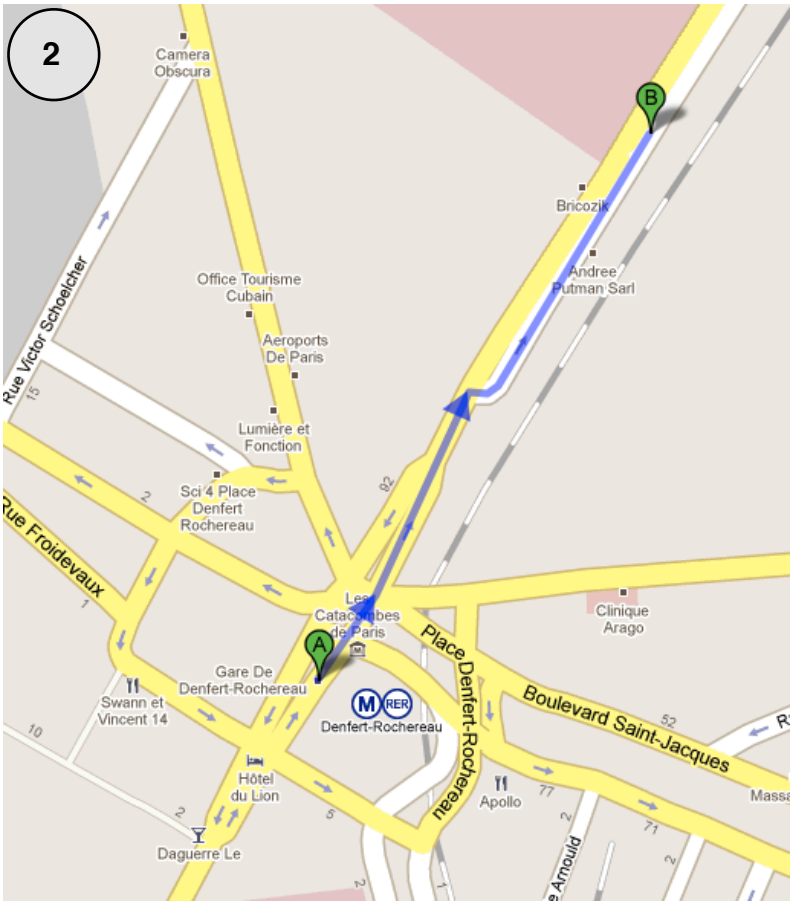
- At Montparnasse, take métro line 6 towards «Nation».

- Stop at station «Denfert-Rochereau» (3rd stop). You are then on «Place Denfert-Rochereau»



[MAP #2]
- Walk from Place Denfert-Rochereau (A) to the entrance of the Observatoire de Paris (B). The entrance the Observatoire de Paris is located at 77, Avenue Denfert-Rochereau (on the right hand side sidewalk coming from Place Denfert-Rochereau).

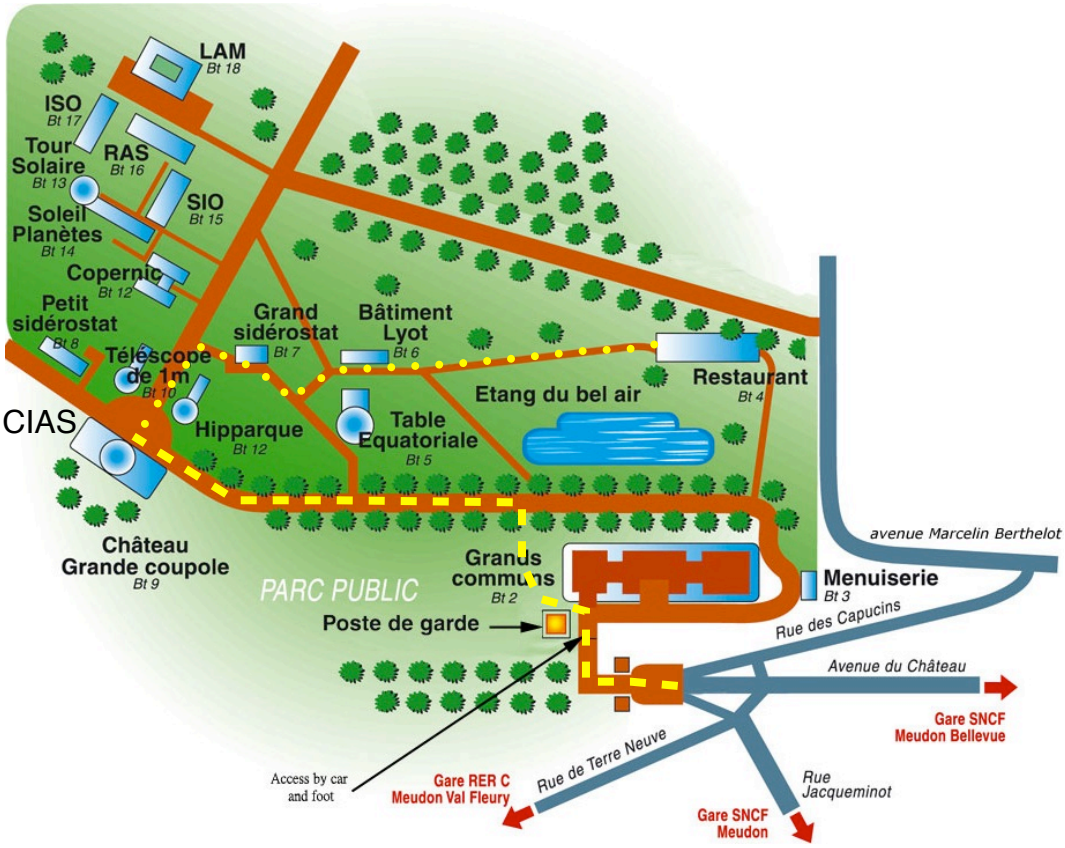
- Once in the Observatoire, there will be signs to guide you to the Cassini Hall.



This journey should take about 1 hour.

A short visit of the Council Room (Salle du Conseil) and of the Arago Cupola (Coupole Arago), with nice sightseeing on the roof of Paris, will be possible at the beginning of the reception.

Observatoire de Meudon Campus Map



Observatoire de Paris Campus Map

PROGRAM

Wednesday, April 7th 2010

08:00 - Registration opening
08:30 - Welcome (B. Cecconi)

External Magnetospheric Forcing

— Hours: 08:45-11:15
— Chairman: N. Sergis

08:45 - Magnetotail dynamics in response to solar wind perturbations (N. André)
09:00 - In situ observations of the effect of a solar wind compression on Saturn's magnetotail (C. Jackman)
09:15 - Solar cycle control of Saturn's radiation belts (E. Roussos)
09:30 - Multi-Instrument Upstream Events Statistics: Progress Report (S. Krimigis)
09:45 - Properties and variability of Saturn's low-latitude boundary layer (A. Masters)

[10:00-10:30] Coffee Break

10:30 - Possible signatures of Kelvin-Helmholtz waves on the dusk flank of the Kronian magnetopause (J. Cutler)
10:45 - Waves on Saturn's magnetopause boundary (A. Masters)
11:00 - Global simulations of the interaction between Saturn's magnetosphere and Corotating Interaction Regions (X. Jia)

Magnetospheric Dynamics and Radial Coupling

— Hours: 11:15-15:15
— Chairman: N. André

11:15 - Saturn dynamics: Lessons from Jupiter (M. Kivelson)
11:30 - Vasyliunas Return Flows: Jupiter and Saturn Compared (D. Went)
11:45 - Magnetic Nulls in the Kronian Magnetosphere (D. Went)
12:00 - Global configuration of Saturn's magnetosphere from MIMI/LEMMS (P. Kollmann)
12:15 - Influence of hot plasma pressure on magnetospheric structure at Saturn (N. Achilleos)
12:30 - MHD modeling of Saturn Current Sheet Location (K.C. Hansen)
12:45 - Properties of the magnetic field and plasma in the kronian magnetotail lobes and current sheet (C. Jackman)

[13:00-14:15] Lunch (Meudon Observatory Restaurant)

14:15 - Constraining neutral distributions at Saturn with charged particle measurements (C. Paranicas)
14:30 - Large temporal changes in the abundance of ions of solar wind/interplanetary origin (He+ and He++) in Saturn's magnetosphere (D. Hamilton)
14:45 - INMS Detection of Water-Group Ions in the Inner Magnetosphere (G. Fletcher)
15:00 - Variations of ~100keV H+, C+, N+, and W+ Abundances with L in Saturn's Magnetosphere (R. Di Fabio)

Auroral Physics and Latitudinal Coupling

— Hours: 15:15-18:00
— Chairman: N. Achilleos

15:15 - The SKR Source Region (W. Kurth)
15:30 - SKR properties measured within its source region (L. Lamy)
15:45 - Search for saturation evidences in Saturn Kilometric Radiation with Cassini/RPWS data (B. Cecconi)
16:00 - Auroral electrons in the vicinity of SKR source region (P. Schippers)

[16:15-16:45] Coffee Break

16:45 - CMI Growth Rates for SKR Emission: Matching Observed SKR Properties to Electron Distributions (R. Mutel, via internet)
17:00 - Ion composition above Saturn's auroral region (F. Crary)
17:15 - Steep Density Gradients and Field-Aligned Currents at High Latitudes in Saturn's Magnetosphere (A. Persoon)
17:30 - A Multi-Instrument Study of Auroral Hiss at Saturn (A. Kopf)
17:45 - Polarization and source direction of Saturnian low-frequency drifting radio bursts (U. Taubenschuss)
18:00 - Adjourn

[18:00-19:00] Travel time from Meudon to Paris (1 hour via Montparnasse Station)

[19:00-22:00] Cocktail Dinner

Cocktail Dinner (Paris Observatory, Historic Cassini Hall)

Thursday, April 8th

Titan

— Hours: 08:45-12:30
— Chairman: A. Rymer

08:45 - Dynamics of the magnetic field near Titan: Cassini MAG observations from flybys TA-T66 (S. Simon)
09:00 - Possible Remnant Interplanetary Magnetic Field in Titan's ionosphere during Cassini's T39 flyby (C. Bertucci)
09:15 - The induced magnetosphere of Titan: how similar to that at Mars, Venus and comets ? (C. Bertucci)
09:30 - Titan plasma interaction in weak magnetospheric flow (I. Sillanpää)
09:45 - The role of precipitation on Titan's ionosphere (A. Nagy)
10:00 - The Variability of the Titan ionosphere from RSS occultations (A. Kliore)

[10:15-10:45] Coffee Break

10:45 - Update on INMS data analysis and modeling of the Titan Upper Atmosphere (H. Waite)
11:00 - Atmospheric escape rates from Titan (D. Strobel)
11:15 - Electron heating regions at and near Titan's ionospheric pile-up boundary (A. Wellbrock)
11:30 - Titan's plasma wake geometry from RPWS and MAG observations (R. Modolo)
11:45 - The Titan interaction with Saturn's magnetosphere as observed by RPWS/LP (N. Edberg)
12:00 - Energetic electron absorption in the upper atmosphere of Titan (Z. Bebesi)
12:15 - Observations of ionospheric currents at Titan (K. Ågren)

Enceladus and other icy moons

— Hours: 12:30-16:00

— Chairman: J.-E. Wahlund

12:30 - Electron beams and whistler-mode auroral hiss emissions associated with Enceladus (D. Gurnett)
12:45 - Update on Enceladus Neutral Composition from E7 (H. Waite)

[13:00-14:15] Lunch (Meudon Observatory Restaurant)

14:15 - Variability of energetic ion and electron beams near Enceladus and Enceladus' L-shell (A. Rymer)
14:30 - Enceladus' plume: hybrid simulations and comparison with MAG data (H. Kreigel)
14:45 - Variation of structure in the Enceladus interaction (J. Leisner)
15:00 - Enceladus plume source rate determination and the effect on the neutral cloud (T. Smith)
15:15 - CAPS-ELS observations during the March 2nd Rhea encounter (G. Jones)
15:30 - RHEA flybys in the view of energetic particle measurements (N. Krupp)
15:45 - Global Hybrid and Full Particle Simulations of Lunar-type Moons (H. Karimabadi)

Dust/plasma interactions

— Hours: 16:00-18:15

— Chairman: P. Canu

16:00 - Cassini/RPWS Dust Measurements During Enceladus flybys (Z. Wang)
16:15 - Dust-plasma interaction near Enceladus South Pole (M. Shafiq)

[16:30-17:00] Coffee Break

17:00 - Dusty plasma near the Enceladus and the E ring (M. Morooka)
17:15 - Dust-Plasma Interaction in the E-ring (J.-E. Wahlund)
17:30 - Ion speed in the plasma disc observed by RPWS/LP and its relationship to dusty plasma (S. Sakai)
17:45 - Evidence for dust-driven interchange transport in Saturn's radiation belts (E. Roussos)
18:00 - In situ detecting nanometre-sized particles with Cassini radio experiment (A. Lecacheux)
18:15 - Adjourn

Friday, April 9th

Saturn's Atmosphere and Ionosphere

— Hours: 09:00-09:30

— Chairman: B. Cecconi

09:00 - Detection of visible lightning on Saturn (G. Fischer)
09:15 - Peak electron densities of Saturn's ionosphere (G. Fischer)

Periodicities

— Hours: 09:30-11:30
— Chairman: P. Zarka

09:30 - Dual periodicity in the rotational modulation of Saturn narrowband emissions (S. Ye)
09:45 - The enigma of apparent symmetry in the internal Saturnian magnetic field: clues from external periodic signals (D. Southwood)
10:00 - Magnetospheric-period oscillations in Saturn's equatorial magnetosphere and open tail lobes throughout the Cassini mission (D. Andrews)

[10:15-10:45] Coffee Break

10:45 - Evidence for the occurrence of ~10.6h magnetic field oscillations in Saturn's equatorial magnetosphere (G. Provan)
11:00 - A Preliminary Look at Saturn's Particle Periodicities at Equinox (J. Carbary)
11:15 - Saturn Magnetospheric periodicity by plasma release, subcorotation, and ionospheric feedback — an update (D. Mitchell)

Datasets, Tools and Future Observations

— Hours: 11:30-14:30
— Chairman: K.C. Hansen

11:30 - Saturn auroral science: connecting Cassini in-situ and HST remote observations in the Virtual Observatory (N. André)
11:45 - New Cassini/MAPS datasets for the CDPP/AMDA tool (B. Cecconi)
12:00 - RPWS/LP Proxy Density data base on IRFU website (M. Morooka)
12:15 - List of Cassini events and catalogues for the CDPP/AMDA tool (N. André)

[12:30-14:00] Lunch (Buffet, Uranie Hall)

14:00 - MIMI Data Analysis Tools that are Useful in a Larger MAPS Context (J. Vandegriff)
14:15 - Heliospheric ENA-future prospects for Cassini (D. Mitchell)

Concluding Remarks

— Hours: 14:30-15:00

14:30 - Summary, perspectives and open discussions. (T. Gombosi)

Splinter meetings

— Hours: 15:00-19:00

- MIMI Team Meeting
- 5 other rooms available for discussions or informal workshops, on subjects such as: 7th April Dione flyby data, periodicities, hands on AMDA...

[16:30-17:00] Coffee Break

19:00 - Adjourn

Participant List

Name	Institute	Country
Nicholas Achilleos	*University College London*	*United Kingdom*
John Aiello	*JHU/APL*	*USA*
David Andrews	*University of Leicester*	*United Kingdom*
Nicolas André	*CESR*	France
Zsofia Bebesi	*Max Planck Institute for Solar System Research*	*Germany*
Cesar Bertucci	*IAFE*	Argentina
Patrick Canu	*LPP*	France
James Carbary	*JHU/APL*	USA
Baptiste Cecconi	*LESIA, CNRS, Observatoire de Paris*	France
Frank Crary	*SwRI*	USA
Jack Cutler	*Imperial College London*	United Kingdom
Robert DiFabio	*University of Maryland*	USA
Michele Dougherty	*Imperial College London*	United Kingdom
Niklas Edberg	*Swedish Institute of Space Physics*	Sweden
Georg Fischer	*Austrian Academy of Sciences*	Austria
Gregory Fletcher	*SwRI*	USA
Patrick Galopeau	*LATMOS*	France
Natalia Ganushkina	*Finnish Meteorological Institute*	Finland
Magda Evgenia Gkini	*LESIA, CNRS, Observatoire de Paris*	France
Tamas Gombosi	*University of Michigan*	USA
Sandrine Grimald	*CESR*	France
Donald Gurnett	*University of Iowa*	USA
Douglas Hamilton	*University of Maryland*	USA
Kenneth Hansen	*University of Michigan*	USA
Taylor Hansen	*University of Michigan*	USA
George Hospodarsky	*University of Iowa*	USA
Caitriona Jackman	*Imperial College London*	United Kingdom
Xianzhe Jia	*University of Michigan*	USA
Geraint Jones	*MSSL, University College London*	United Kingdom
Homa Karimabadi	*UCSD / SciberQuest, Inc.*	USA
Margaret Kivelson	*UCLA and University of Michigan*	USA
Arvydas Kliore	*JPL*	USA
Peter Kollmann	*MPS*	Germany
Andy Kopf	*University of Iowa*	USA
Hendrik Kriegel	*TU Braunschweig*	Germany
Stamatios Krimigis	*JHU/APL*	USA
Norbert Krupp	*Max Planck Institute for Solar System Research*	Germany
William Kurth	*University of Iowa*	USA
Martha Kusterer	*JHU/APL*	USA

Name	Institute	Country
Laurent Lamy	*Imperial College London*	United Kingdom
Jean-Pierre Lebreton	*ESA/ESTEC*	France
Alain Lecacheux	*LESIA, CNRS, Observatoire de Paris*	France
Jared Leisner	*University of Iowa*	USA
Adam Masters	*MSSL, University College London*	United Kingdom
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Ronan Modolo	*LATMOS*	France
Michiko Morooka	*Swedish Institute of Space Physics*	Sweden
Robert Mutel	*University of Iowa*	USA
Andrew Nagy	*University of Michigan*	USA
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Renée Prangé	*LESIA, CNRS, Observatoire de Paris*	France
Gabby Provan	*University of Leicester*	United Kingdom
Elias Roussos	*Max Planck Institute for Solar System Research*	Germany
Abigail Rymer	*JHU/APL*	USA
Shotaro Sakai	*Hokkaido University*	Japan
Patricia Schippers	*University of Iowa*	USA
Nick Sergis	*Academy of Athens*	Greece
Muhammad Shafiq	*Swedish Institute of Space Physics*	Sweden
Ilkka Sillanpää	*SwRI*	USA
Sven Simon	*Institute of Geophysics, University of Cologne*	Germany
H. Todd Smith	*JHU/APL*	USA
David Southwood	*European Space Agency*	France
Darrell Strobel	*Johns Hopkins University*	USA
Ulrich Taubenschuss	*University of Iowa*	USA
Scott Turner	*JHU/APL*	USA
Jon Vandegriff	*JHU/APL*	USA
Jan-Erik Wahlund	*Swedish Institute of Space Physics*	Sweden
J. Hunter Waite	*SwRI*	USA
Zhenzhen Wang	*University of Iowa*	USA
Annie Wellbrock	*MSSL, University College London*	United Kingdom
Daniel Went	*Imperial College London*	United Kingdom
Shengyi Ye	*University of Iowa*	USA
David T Young	*Southwest Research Institute*	USA
Philippe Zarka	*CNRS - Observatoire de Paris*	France
Yannis Zouganelis	*LPP / Ecole Polytechnique*	France
Karin Ågren	*Swedish Institute of Space Physics*	Sweden