

“Plasma Sources for Solar System Magnetospheres”

ISSI Workshop Program, September 23-27, 2013

Monday, 23 September 2013		
Time	Topic	Speaker
8:30-9:00	Registration in ISSI, Hallerstrasse 6, 1 st floor	
9:00	Welcome and Introducing ISSI	Michel Blanc
9:20-9:50	Historical Introduction	Andrew Nagy (U. of Michigan) and Rick Chappell (Vanderbilt U.)
<i>General Overview of Solar System Magnetospheres</i>		
9:50-10:30	A comparison of planetary ion dynamics in the magnetospheres of Mercury and Earth	Kanako Seki (Solar-Terrestrial Env. Lab.)
10:30-10:45	<i>Coffee Break</i>	
10:45-11:25	General discussion of ionosphere-magnetosphere coupling at Earth, Jupiter and Saturn	Dominique Fontaine (LPP-CNRS/Ecole Polytechnique)
11:25-12:05	Sputtering and space weathering of solar system surfaces	Peter Wurz (U. of Bern)
12:05-12:45	How dynamics change the plasma flows and mass contents of outer planet magnetotails	Caitriona Jackman (UCL)
12:45-14:00	<i>Lunch Break</i>	
14:00-14:40	Global configuration and dynamics of outer planet magnetospheres	Norbert Krupp (Max-Planck, Lindau)
14:40-15:20	Plasma populations in the outer planet magnetospheres	Frank Crary (U. of Colorado):
15:20-15:35	<i>Coffee Break</i>	
15:35-16:15	How to populate a giant planet magnetosphere	Nicolas André (IRAP)
16:15-16:55	Constraints on plasma populations and acceleration processes from planetary radio emissions	Philippe Zarka (Obs Meudon)
16:55-17:35	Energetic charged particle populations of the magnetospheres of the outer planets.	Anna Kotova (Max-Planck-Inst., Lindau)
17:35	<i>Welcome Reception</i>	

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Tuesday, 24 September 2013		
<i>Mercury</i>		
9:00-9:40	Overview of our current understanding of the plasma environment of Mercury	Jim Slavin (U. of Michigan)
9:40-10:20	Messenger observations of the plasma population at Mercury	Jim Raines
10:20-10:35	<i>Coffee Break</i>	
10:35-11:15	An MHD model of the solar wind interaction with Mercury	Xianzhe Jia (U. of Michigan)
11:15-11:55	Sources of the plasma at Mercury	M. Sarantos (NASA/GSFC)
11:55-12:35	Reconnection at Mercury	Gina DiBraccio
12:35-14:00	<i>Lunch Break</i>	
14:00-14:40	The expected science return from Bepi-Colombo	Masaki Fujimoto (Japan Aerospace Expl. Ag.)
14:40-15:20	First discussion of the book	All
15:20-15:35	<i>Coffee Break</i>	
<i>Earth</i>		
15:35-16:15	The transformation of planetary particles to magnetospheric particles: Test particle modeling at Earth and Mercury	Dominique Delcourt (LPP-Ecole Polytechnique)
16:15-16:55	Modelling ionospheric outflow	Bob Schunk (Utah State)
16:55-17:35	Measurements of the ionospheric outflow source of plasma	Andrew Yau, (U. of Calgary)

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Wednesday, 25 September 2013		
Time	Topic	Speaker
9:00-9:40	The effects of ionospheric flows on the terrestrial magnetosphere I	Dan Welling (U. Michigan)
9:40-10:20	The effects of ionospheric flows on the terrestrial magnetosphere II	Michael Wiltberger (NCAR)
10:20-10:35	<i>Coffee Break</i>	
10:35-11:15	Relative contributions of solar wind and ionospheric sources to the magnetosphere	Michael Liemohn (U. of Michigan)
11:15-11:55	Storm enhanced plasmasphere ionosphere coupling	John Foster (MIT)
11:55-12:35	Low energy plasma measurements	Mats Andre (IRF)
12:35 -14:00	<i>Lunch Break</i>	
14:00-14:40	Variations in O ⁺ abundance in the tail and inner magnetosphere and their impacts	Lynn Kistler (U. of New Hampshire)
14:40-15:20	New relevant results from the Van Allen Probes	Lou Lanzerotti (New Jersey Inst. of Tech.)
15:20-15:35	<i>Coffee Break</i>	
15:35-16:15	Ion observations from Cluster	Iannis Dandouras (CNRS)
16:15-16:55	Electron observations from Cluster	Andrew Fazakerly (UCL)
16:55-17:35	Relevant Themis results	C.-P. Wang (UCLA)
19:00	<i>Workshop Dinner at the Restaurant Casino</i>	

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Thursday, 26 September 2013		
Time	Topic	Speaker
9:00-9:40	Cold ions in the inner magnetosphere	*Justin Lee (UCLA)
9:40-10:20	Sources and sinks of the ring current plasma	Raluca Ilie (U. of Michigan)
10:20-10:35	<i>Coffee Break</i>	
Jupiter		
10:35-11:15	Overview of the current understanding of Jupiter's plasma environment	Scott Bolton (SWRI)
11:15-11:55	The role of the Io plasma torus in populating Jupiter's magnetosphere as studied by a model of the interaction of Jupiter with the solar wind	Emmanuel Chané (U. of New Hampshire)
11:55-12:35	MHD modeling of Ganymede's magnetosphere; Jupiter's plasma as a source of Ganymede's magnetosphere	Xianzhe Jia (U. of Michigan)
12:35-14:00	<i>Lunch Break</i>	
14:00-14:40	Europa's self-limiting, possibly unstable, interaction with Jupiter's magnetosphere	Tim Cassidy (U. of Colorado)
14:40-15:20	Plasma-icy surface interactions and the resulting neutral-ion exosphere	Anna Milillo (INAF)
15:20-15:45	Further discussion of book (if needed)	All
15:45-16:00	<i>Coffee Break</i>	
Saturn		
16:00-16:40	Enceladus and the rings as sources of magnetospheric plasma	Mishiko Morooka (Tohoku U.)
16:40-17:20	Plasma source rates and variability at Enceladus	Todd Smith (Johns Hopkins U.)
17:20-18:00	Low energy plasma sources in the inner Saturnian magnetosphere	Hunter Waite (SWRI)

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Friday, 27 September 2013		
Time	Topic	Speaker
9:00-9:40	Electron populations in the magnetosphere of Saturn	Andrew Coates (UCL)
9:40-10:20	Modeling the magnetospheric plasma behavior at Saturn	Xianzhe Jia (U. Michigan)
10:20-10:35	<i>Coffee Break</i>	
10:35-11:15	High energy plasma sources in the inner magnetosphere	Doug Hamilton (U. Maryland)
11:15-11:55	Planetary period oscillations at Saturn: Consequences for magnetospheric plasma circulation	David Andrews (IRF)
11:55-14:00	What did we learn and what still needs to be explored? Norbert Krupp (Max-Planck, Lindau) General discussion by the participants. Finalizing book details	