

REPORT ON THE RADIOPNET3 NETWORKING ACTIVITY

TITLE: 12TH INTERNATIONAL SCHOOL AND SYMPOSIUM FOR SPACE-PLASMA SIMULATIONS – ISSS-12

DATE:	<i>JULY 3 – 10, 2015</i>	TIME: (WHOLE DAY)
LOCATION:	<i>PRAGUE, CZECH REPUBLIC</i>	
MEETING WEBPAGE:	<i>http://wave.asu.cas.cz/iss12</i>	
HOST INSTITUTE:	<i>ASTRONOMICAL INSTITUTE OF ACADEMY OF SCIENCES CR AND CHARLES UNIVERSITY IN PRAGUE</i>	
PARTICIPANTS NO:	<i>121 (OF THAT 73 STUDENTS AND EARLY-STAGE RESEARCHERS)</i>	
MAIN LEADER:	<i>INAF</i>	

REPORT:

1. Programme of the meeting

Programme is attached.

The *ISSS-12 School & Symposium* has been organized as a sequel in successful series of prestigious international ISSS meetings that bring together students and early-stage researchers with renowned experts acting as *School* lecturers, and senior researchers attending the subsequent *Symposium*.

The meeting had, traditionally, two parts: the *ISSS School* (July 2-6, 2015) and subsequent *ISSS Symposium* (July 7-10, 2015). The ISSS School (which is the main part of the event) aims at making the attending students and young researchers from all around the world familiar with the basics and recent development in advanced numerical simulations and radio diagnostics of the space, solar, and astrophysical plasmas. In order to accomplish this goal, twelve tutorials (during the morning sessions) complemented by following hands-on practical sessions (afternoon; work with data and codes) have been given by invited renowned lecturers from Belgium, Canada, Germany, Italy, Japan, UK and USA. The evening session is devoted to the students work poster presentations and networking activities among the students and their School lecturers. The best three student's poster presentation have been awarded during the meeting closing ceremonial. The School was attended by 73 students and early-stage (ES) researchers (plus two senior non-lecturing participants) from 20 countries. In order to allow participation of those young researchers and students at the ISSS-12 event in total 38 has been given a full stipend thanks to the kind contributions by *RadioNet3*, Czech Academy of Sciences, and UCLA (the US students only).

The *School* has been immediately followed by the *ISSS-12 Symposium*. The idea of such arrangement is that the students, who just continue their participation in the meeting, can meet with experienced researchers coming for the *Symposium* and apply and deepen their newly acquired expertise from the preceding *School*. During the morning and afternoon sessions of the *Symposium* the standard conference review and contributed talks are presented, the evening session is, however, devoted to discussions between students/ES-researchers with their experienced colleagues, frequently over the student's poster presentations.

Detailed programs of the School and Symposium for ISSS-12 meeting are attached at the end of this document.

2. Scientific Summary

The ISSS-12 School & Symposium – in line with the idea of ISSS meetings – aimed at bringing together the PhD students and ES researchers in the field of space and astrophysical plasmas with their experienced colleagues in order to transfer knowledge and expertise to the young generation. While the *School* focused on education of the students and ES researchers in the field of numerical treatment and radio diagnostics of astrophysical and space plasma in a broader and more general sense, the contributions presented at the subsequent *Symposium* aimed at applications and brought a fresh view to the recent development in the more specific areas.

The main topics treated during the School and Symposium included: Numerical simulations in space, astrophysical and solar plasmas (MHD, PIC/hybrid, Vlasov, gyro-kinetic) including extension calculations of possibly observable outputs in radio, optical and UV/EUV domains, advanced numerical techniques (HPC/exa-scale computing) for computations and handling/visualizations of large data sets (both numerical outputs and observations), turbulence in astrophysical and interplanetary plasmas, in-situ radio diagnostics of space plasmas – interplanetary type II and type III radio bursts, low-frequency radio emissions in magnetospheres, whistler-mode generation in ionosphere, remote radio diagnostics of the

solar plasma (radio spectroscopy, solar research with ALMA), radio emissions from relativistic astrophysical jets, particle acceleration and synchrotron emission, etc.

The meeting also touched possible applications of the space plasma simulations and radio diagnostics for the *space weather* predictions via advanced modelling and combined radio/optical observations of interplanetary Coronal Mass Ejections (CME).

Moreover, the current and planned space missions for in-situ and remote space plasma diagnostics have been presented by the representatives of three space agencies (ESA, NASA, *RosKosmos*) during the meeting.

The School has been attended by 73 students and ES-researchers (+ two senior attendants) from 20 countries all around the world who have been taught by twelve international renowned tutors. All these School participants continued their attendance also during the subsequent Symposium for which next 35 senior researchers came on July 6, 2015 eve, making the total number of the Symposium participants 121. In total 38 students and ES researchers, selected in a high competition by the ISSS *International Programme Committee (IPC)* received a stipend covering their full local expenses (ISSS-12 attendance, accommodation, full board, and the local transportation), next five students have been waived the attendance fee. This has been possible thanks to kind contribution of *RadioNet3*, Czech Academy of Sciences, UCLA (for US students) and the Faculty of Mathematics and Physics, Charles University in Prague that hosted the event and supported it materially and by non-commercial rental and services.

Detailed lists of all ISSS-12 School & Symposium participants, the School attendants and the students/ES- researchers supported by the ISSS-12 stipends, including the gender and geographical distributions are attached at the end of this document.



Figure 1: ISSS-12 School participants in front of the ISSS-12 School & Symposium venue.

3. Attendance list (incl. participant names, affiliation and country) signed by the participants and confirmed by the organizer

Attendance list is attached at the end of this document.

4. Financial Report / RadioNet3 contribution

The *RadioNet3* contribution of 5000 EUR was used for supporting 15 students and ES researchers attending the School and Symposium. The stipend has a value of 9000 CZK (approx. 340 EUR), and covered the attendance fee, free board and accommodation.

5. Conference Proceedings and Web page

All the ISSS-12 School materials – tutorials and the hands-on practical sessions matters (data, codes), the Symposium talks, and poster presentations have been made available for ISSS-12 participants at the dedicated part of the ISSS-12 webpage <http://wave.asu.cas.cz/isss12> □ *Proceedings* (or directly following the link https://wave.asu.cas.cz/isss_12/contents/proceedings/). Because of the possibly sensitive content (unpublished research, solar test/CSV data from ALMA) an access has been limited by password protection (login: *isss12*, password: *simulant*; please do not wide-spread).

In addition to that, the ISSS-12 event had a public outreach. Prof. Büchner (*Max Planck Institute for Solar System Research* in Göttingen, Germany, head of the IPC/SOC), Prof. Němeček (*Faculty of Math. and Physics, Charles Uni. In Prague*) and Dr. Bárta (*Astronomical Inst. AS CR*) provided interviews to the *Academic Bulletin* (http://abicko.avcr.cz/sd/novinky/hlavni-stranka/news_1662.html, in Czech; the journal is a local counterpart of, e.g., *Max Planck Journal*). A brief report with excerpt of the interviews has been also broadcasted by the public *Czech Radio Broadcasting*.

In Ondrejov, August 24, 2015



Dr. Miroslav Bárta,
ISSS-12 LOC chair

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ISSS12 School — Daily Schedule

	Thursday July 2nd	Friday July 3rd	Saturday July 4th	Sunday July 5th	Monday July 6th
9.00–10.30		Tutorials Omura Marchand	Tutorials Jenko	Tutorials Otto Huba	Tutorials Gombosi Innocenti & Lapenta
10.30–11.00		Coffee & Posters	Coffee & Posters	Coffee & Posters	Coffee & Posters
11.00–12.30		Tutorials Califano & Briand	Tutorials Omura Usui	Tutorials Burgess Rampp	Tutorials Decyk Rampp
12.30–14.00		Lunch	Lunch	Lunch	Lunch
14.00–15.30		Hands-on Sessions (parallel)	Hands-on Sessions (parallel)	Hands-on Sessions (parallel)	Hands-on Sessions (parallel)
15.30–16.00		Coffee & Posters	Coffee & Posters	Coffee & Posters	Coffee & Posters
16.00–17.30	17.00–18.00 Registration	Hands-on Sessions (parallel)	Hands-on Sessions (parallel)	Hands-on Sessions (parallel)	Hands-on Sessions (parallel)
17.30–18.00		Discussion & Posters			Discussion & Posters
18.00–20.00	18.00–20.00 Welcome Drink		Discussion & Posters	Discussion & Posters	ISSS12 SYMPOSIUM begins

Color Codes

Symposium Office S6	Lecture Hall S5	Computer LABs SU2 & SW2	Hall in front of Lecture Hall	Restaurant "Profesní dům" (basement)	Various Places (for details, see program below)
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ISSS12 School — Program

Thursday — July 2nd

17.00–18.00	Registration	Restaurant "Profesní dům"
18.00–20.00	Welcome Drink	Restaurant "Profesní dům"

Friday — July 3rd

9.00	Y. Omura	Introduction: History and Purpose of ISSS
9.30	R. Marchand	Test Particle Calculations
10.30	Coffee Break & Posters	
11.00	F. Califano, C. Briand	Vlasov Code Kinetic Simulation
12.30	Lunch Break	
14.00 room SU2	R. Marchand	Test Particle Calculations
14.00 room SW2	F. Califano, C. Briand	Vlasov Code Kinetic Simulation
15.30	Coffee Break & Posters	
16.00 room SU2	F. Califano, C. Briand	Vlasov Code Kinetic Simulation
16.00 room SW2	R. Marchand	Test Particle Calculations
17.30	Discussion & Posters	
18.00	End of Session	

Saturday — July 4th

9.00	F. Jenko	Gyrokinetics: Theory and Simulation
10.30	Coffee Break & Posters	
11.00	Y. Omura	PIC 1D–2D
12.00	H. Usui	PIC: Spacecraft Charging
12.30	Lunch Break	
14.00 room SU2	F. Jenko, T. Görler	Gyrokinetics
14.00 room SW2	Y. Omura	PIC 1D & 2D
15.30	Coffee Break & Posters	
16.00 room SU2	Y. Omura	PIC 1D & 2D
16.00 room SW2	F. Jenko, T. Görler	Gyrokinetics
17.30	Discussion & Posters	
18.00	End of Session	

Sunday — July 5th

9.00	A. Otto	MHD
9.45	J. Huba	Hall MHD
10.30	Coffee Break & Posters	
11.00	D. Burgess	Hybrid Simulation
11.45	M. Rampp	High Performance Supercomputing
12.30	Lunch Break	
14.00 room SU2	F. Widmer, P. Muñoz Sepúlveda	MHD
14.45 room SU2	J. Huba	Hall MHD
14.00 room SW2	D. Burgess	Hybrid Simulation
15.30	Coffee Break & Posters	
16.00 room SU2	D. Burgess	Hybrid Simulation
16.00 room SW2	F. Widmer, P. Muñoz Sepúlveda	MHD
16.45 room SW2	J. Huba	Hall MHD
17.30	Discussion & Posters	
18.00	End of Session	

Monday — July 6th

9.00	T. Gombosi	Fully Two-way Coupled 3D PIC–MHD Simulation
9.45	M. E. Innocenti, G. Lapenta	Multi-Level Multi-Domain Method in PIC Simulation
10.30	Coffee Break & Posters	
11.00	V. Decyk	Exascale Computing
12.00	M. Rampp	Visualization: VisIt, ParaView
12.30	Lunch Break	
14.00 room SU2	V. Decyk	Exascale Computing
14.00 room SW2	M. Rampp, J. Skála	Visualization by VisIt and ParaView
15.30	Coffee Break & Posters	
16.00 room SU2	M. Rampp, J. Skála	Visualization by VisIt and ParaView
16.00 room SW2	V. Decyk	Exascale Computing
17.30	Discussion & Posters	
18.00	End of Session	

POSTERS — July 2nd–10th

poster #10	A. A. Ilyasov , A. A. Chernyshov, M. M. Mogilevsky, I. V. Golovchanskaya, B. V. Kozelov	Sources of the Broadband Electrostatic Turbulence in the High-latitude Ionosphere
poster #11	A. Barik , J. Wicht	Spherical Couette Dynamos
poster #12	A. Kumar Singh , P. Kuamr	Harmonic Generation in Quantum Plasma
poster #13	B. Remya , B. T. Tsurutani, R. V. Reddy, G. S. Lakhina, R. Hajra, E. Echer	Cyclotron Waves and Pitch Angle Scattering in the Magnetosphere
poster #14	B. Ferdousi , J. Raeder	Travel Time of MHD Waves in the Magnetosphere: OpenGGCM Simulation
poster #15	C. K. Chang , L. N. Hau, B. J. Wang	Fluid Simulations of Mirror Instabilities
poster #16	C. Gonzalez , P. Minnini, P. Dmitruk	Test Particle Acceleration in Compressible and Incompressible MHD Turbulence
poster #17	E. Gordeev , V. Sergeev, M. Kuznetsova, L. Rastaetter, A. Pembroke, I. Honkonen, A. Chulaki, M. Mendoza, M. Palmroth	Testing the Global Magnetohydrodynamic Models Against the Empirical Statistical Relationships
poster #18	F. Cruz , E. P. Alves, R. A. Bamford, R. Bingham, R. Fonseca, L. O. Silva	PIC Simulations of Collisionless Shocks in Mini Magnetospheres
poster #19	F. Widmer , J. Büchner	Turbulent Magnetic Reconnection using Sub-Grid Scale MHD Modelling
poster #20	G.-W. Chen , L.-N. Hau, B. J. Wang	On Two-dimensional Magnetopause Structure Reconstructed Based on the Grad-Shafranov Solver
poster #21	H. Tsuji , Y. Ebihara, Y. Omura, T. Tanaka	Impact of Impulse of Solar Wind on Ions in the Inner Magnetosphere
poster #22	J. Dargent , N. Aunai, G. Belmont, N. Dorville, B. Lavraud, M. Hesse	Asymmetric Kinetic Equilibria for Full PIC Simulations of Asymmetric Magnetic Reconnection
poster #23	J. J. Reed , C. M. Jackman, M. P. Freeman	The Role of Io in the Dynamics of Jupiter's Magnetosphere: A Sandpile Modelling Approach
poster #24	K. Hirai , Y. Katoh, N. Terada, S. Kawai	Nonlinear Evolution of MRI Studied by an MHD Code with the Compact Difference and the LAD Method
poster #25	L. Franci , S. Landi, L. Matteini, A. Verdini, P. Hellinger	Plasma Turbulence from MHD to Proton Scales: Results from High-resolution Hybrid Simulations
poster #26	M. Basovník	Modifications of PIC Simulation for Plasma Plane Waves
poster #27	M. Bedford , N. Pogorelov	Investigating Heliospheric Structure with a Multi-fluid Model for Pickup Ions
poster #28	M. Cvengros	Reconnection of Magnetic Field Lines on Ion Scale
poster #29	M. Horký , W. J. Miloch	Numerical Instabilities in PIC Simulations of Plasmas in $E \times B$ Fields
poster #30	M. Shevelev	Relevance of the Magnetic Field Shear Scale in the Kelvin–Helmholtz Instability Dynamics
poster #31	M. Shoji , Y. Omura	Simulations on Electromagnetic Ion Cyclotron Rising Tone Emissions in the Inner Magnetosphere
poster #32	N. Ahmad , H. Usui, Y. Miyake	Preliminary Simulation Study on LEO Spacecraft Charging for Satellite Anomaly Information System
poster #33	O. Šebek , P. M. Trávníček, R. J. Walker, P. Hellinger	Plasma Interaction at Io: Multi-species Hybrid Simulations
poster #34	P. Carneiro , T. Grismayer , R. A. Fonseca, L. O. Silva	QED Multi-dimensional Vacuum Polarization Solver
poster #35	S. Devanandhan , T. Sreeraj, S. V. Singh, G. S. Lakhina	Ion Acoustic Solitons in Magnetoplasmas with Helium Ions and Superthermal Electrons
poster #36	S. Dyadechkin , E. Kallio, P. Wurz	New Fully Kinetic Model for the Study of Electric Potential, Plasma and Dust Above Lunar Landscapes
poster #37	S. S. A. Silva , J. Buchner, M. V. Alves, J. C. Santos	Non Local Heat Flux in Solar Flares
poster #38	S. V. Steffy , S. S. Ghosh	Ion Acoustic Solitary Waves in Two Electron Temperature Warm Multi-ion Plasma
poster #39	S. Takeshige , S. Takasao, K. Shibata	The Formation and Propagation of MHD Shock Waves During the Plasmoid Coalescence Process

poster #40	S. Fu, B. Ni, J. Li	Wave-particle Interaction Between Fast Magnetosonic Wave and Energetic Electrons Based on Numerical
poster #41	T. Elsden, A. N. Wright	Numerical Simulations of MHD waves in Earth's Magnetospheric Waveguide
poster #42	T. Furuzono, A. Kageyama	Stellar Dynamo Simulation with Radiative Zone
poster #43	V. Kiselev, V. Grechnev	The 26 December 2001 Solar Event Responsible for Ground Level Enhancement 63
poster #44	X. An, B. Van Compernolle, J. Bortnik, R. M. Thorne, P. Pribyl, W. Gekelman	Excitation of Whistler Waves in a Laboratory Plasma
poster #45	X. Cao, B. Ni	Resonant Scattering of Outer Zone Relativistic Electrons by Multi-band EMIC Waves
poster #46	Y. Hsieh, Y. Omura	Test Particle Simulation of Energetic Electrons Interacting with Whistler-mode Chorus Waves at Oblique Angles
poster #47	A. Pitna, J. Safrankova, Z. Nemecek, F. Nemec, L. Prech, C. H. K. Chen, G. N. Zastenker	Evolution of Turbulence Through Interplanetary Shocks
poster #X01	L. Liuzzo, M. Feyerabend, S. Simon	A Hybrid Simulation Study of Moon-Magnetosphere Interactions at Callisto and Titan
poster #X02	L. Liuzzo, M. Feyerabend, S. Simon	Hybrid Simulation of Callisto's Interaction with Jovian Magnetosphere
poster #X03	D. Kramoliš, M. Varady, M. Bárta	Particle Acceleration in Cascading Current Sheet
poster #X04	Y. Kubota, Y. Omura	Test Particle Simulation of Radiation Belt Electrons Interacting with EMIC Triggered Emissions
poster #X05	D. Koronczay, B. Heilig, A. Jorgensen, J. Lichtenberger	Data Assimilation with Plasmaspheric Density Measurements from VLF Whistlers — Preliminary Results
poster #X06	M. Nakanotani, S. Matsukiyo, T. Hada	Electron Acceleration in Two Colliding Shocks
poster #X07	I. V. Kuzichev, D. R. Shklyar	On Non-diffusive Energization of Suprathermal Ions by Lightning-generated Ion Cyclotron Waves
poster #X08	A. Yu. Malykhin, E. E. Grigorenko, KH. V. Malova	The Kinetic Effects in Ion Dynamics in Closed Magnetic Configurations
poster #X09	Y. Miyake, M. N. Nishino	Full-Particle Simulations on Plasma Environment Around Lunar Vertical Hole

ISSS12 Symposium — Daily Schedule

	Monday	Tuesday	Wednesday	Thursday	Friday
	July 6th	July 7th	July 8th	July 9th	July 10th
9.00–10.30	ISSS12 SCHOOL	Welcome Session: Němeček / Hellinger	Session: Colangeli / Valentini / Zelený	Session: Bhattacharjee / Amaya / Horuchi	Session: Ono / Büchner / Chan
10.30–11.00		Coffee & Posters	Coffee & Posters	Coffee & Posters	Coffee & Posters
11.00–12.30		Session: Escoubet / Toffoletto / Ashour-Abdalla	Session: Lembège / Katoh / Miyake	Session: Muñoz / Jain / Cai	Session: Barta / Samsonov / Schriver
12.30–14.00		Lunch	Lunch	Lunch	Lunch
14.00–15.30		Session: Poedts / Walker / Chanteur	Excursion	Session: Hoshino / Spanier / Nishikawa	
15.30–16.00		Coffee & Posters		Coffee & Posters	
16.00–17.30		Session: Travniček / Schriver / Liuzzo		Session: Deca / Jao / Sauer	
18.00–22.00	18.00–19.00 Registration			19.00–22.00 Conference Dinner	
	19.00–22.00 Welcome Party				

Color Codes

Symposium Office S6	Lecture Hall S5	Computer LABs SU2 & SW2	Hall in front of Lecture Hall	Restaurant "Profesní dům" (basement)	Various Places (for details, see program below)
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Monday — July 6th

18.00–19.00	Registration	at the entrance to the Assembly Hall ("Refektář") of Mala Strana
19.00–22.00	Welcome Party	Assembly Hall / House of Professed ("Refektář") of Mala Strana

Tuesday — July 7th

Chair: J. Büchner

9.00	J. Buechner, V. Karas, Z. Nemecek	Welcome
9.30	Z. Nemecek, J. Safránková	Fast Variations of Solar Wind Parameters: What do we Need from Models?
10.00	P. Hellinger, L. Matteini, Simone Landi, A. Verdini, L. Franci, P. M. Travniček	Plasma Turbulence at Ion Scales: Hybrid Simulations
10.30	Coffee Break & Posters	

Chair: P. Hellinger

11.00	C. P. Escoubet, A. Masson, H. Laakso, M. L. Goldstein	Dynamics and Structures Observed by Cluster: Open Questions for Simulations
11.30	F. Toffoletto, J. Yang, R. Wolf, S. Sazykin, J. Lyon, S. Merkin, M. Wilberger	Modeling of Plasmashell Convection
12.00	M. Ashour-Abdalla, G. Lapenta, R. J. Walker, M. El-Alaoui	Simulation Studies of Magnetotail Reconnection: The Ion and Electron Diffusion Regions
12.30	Lunch Break	

Chair: M. Ashour-Abdalla

14.00	S. Poedts, J. Pomoell	Evolution of Magnetized CMEs in the Inner Heliosphere
14.30	R. J. Walker, K. Fukazawa	Simulation Studies of Plasma Transport in Outer Planet Magnetospheres
15.00	G. M. Chanteur	Global Hybrid Simulations of the Hermean Magnetosphere
15.30	Coffee Break & Posters	

Chair: B. Lembege

16.00	P. Travniček, P. Hellinger, O. Šebek, S. Šverák	Global Hybrid Simulations of Space Plasmas
16.30	D. Schriver, P. Travniček	Global Kinetic Simulations of Plasma Transport, Acceleration, and Loss in Mercury's Magnetosphere
17.00	L. Liuzzo, M. Feyerabend, S. Simon	Hybrid Simulation of Callisto's Interaction with Jovian Magnetosphere
17.30	End of Session	

Wednesday — July 8th

Chair: J. Büchner

9.00	L. Colangeli	Present and Future Solar System Missions in the Framework of the ESA Science Programme
9.30	F. Valentini & the Thor team	Numerical Simulation Support to the ESA/THOR Mission
10.00	L. M. Zelenyi	Milestones of the Russian Space Program
10.30	Coffee Break & Posters	
11.00	B. Lembège, P. Savoini	2D PIC simulation of the quasi-perpendicular Earth's bow shock and associated foreshock region.
11.30	Y. Katoh, Y. Omura, Y. Miyake, H. Usui, H. Nakashima	Electron-hybrid simulations of the dependencies of the generation process of whistler-mode emissions
12.00	Y. Miyake, M. N. Nishino	Full-Particle Simulations on Plasma Environment around Lunar Vertical Hole
12.30	Lunch Break	
14.00	Excursion (meeting point is entrance to the building)	Prague in History of Physics and Astronomy (guided tour) Brewery "Novoměstský pivovar" (tour of the brewery)

Thursday — July 9th

Chair: M. Barta

9.00	A. Bhattacharjee	Integration of Kinetic Effects in Multi-Fluid Models of Reconnection
9.30	J. Amaya, J. Deca, S. Markidis, G. Lapenta	The Numerical Magnetosphere: Fully Kinetic Simulations of the Solar Wind–Magnetosphere Interaction
10.00	R. Horiuchi, H. Ohtani, S. Usami	Macro–Micro Interlocked Simulation for Multiscale Plasma Phenomena Like Magnetic Reconnection
10.30	Coffee Break & Posters	

Chair: H. Usui

11.00	P. A. Muñoz, D. Told, P. Kilian, J. Büchner, F. Jenko	Gyrokinetic and Kinetic Particle-in-cell Simulations of Guide-field Reconnection
11.30	N. Jain, J. Buchner	Electron-MHD Simulations: Reach and Caveats
12.00	D. Cai, B. Lembege, K.-I. Nishikawa	Large Scale PIC Simulations and Their Application to Satellite Data Focusing on Vortex
12.30	Lunch Break	

Chair: Y. Ono

14.00	M. Hoshino	PIC Simulation of MRI in Accretion Disks: Angular Momentum Transport and Particle Acceleration
14.30	F. Spanier, P. Kilian, U. Ganse, C. Schreiner	Kinetic Simulations of Shock Formation and Particle Acceleration in Non-relativistic Shocks
15.00	K.-I. Nishikawa, P. Hardee, Y. Mizuno, H. Sol, J. Niemiec, M. Pohl, A. Meli	Radiation from Accelerated Particles in Relativistic Jets with Shocks and Shear-flow
15.30	Coffee Break & Posters	

Chair: Z. Nemecek

16.00	J. Deca, A. Divin, G. Lapenta, B. Lembège, S. Markidis, X. Wang, M. Horányi	PIC Simulations of the Solar Wind Interaction with Lunar Magnetic Anomalies: Ion and Electron Dynamics
16.30	C.-S. Jao, L.-N. Hau	Fluid Theory and Particle Simulation of Electrostatic Streaming Instabilities
17.00	End of Session	

19.00–22.00	Conference Dinner	Dinner will take place on a boat (Natal & Porto comp.). We will board at the right side of the river under the bridge "Čechův most." For details see map.
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Friday — July 10th

Chair: Y. Omura

9.00	Y. Ono	High Power Heating of Magnetic Reconnection in Merging Tokamak Experiments
9.30	J. Büchner	Simulation of the Solar Corona
10.00	A. Chan, L. Zheng	Application of Stochastic Methods to Modeling Earth's Radiation Belts
10.30	Coffee Break & Posters	

Chair: D. Schriver

11.00	M. Barta	1. Magnetic Reconnection in Flares: Modelling and Radio, Optical and EUV diagnostics 2. Solar Radioastronomy in the Age of ALMA
11.30	A. Samsonov, M. Kuznetsova, D. Sibeck, V. Sergeev, Z. Nemecek, J. Safrankova	MHD Simulation of the Magnetospheric Response to Interplanetary Shocks
12.00	D. Schriver	Final Round Table Discussion: What Should be Done Better at the Next ISSS
12.30	End of Session & Lunch	

ISSS-12 Symposium: All participants

Num.	Title	First name	Family name	Institution	Town	Country	Email
1	Dr.	Jorge	Amaya	CmPA, KU Leuven	Leuven	Belgium	jorge.amaya@wis.kuleuven.be
2	Mr.	Xin	An	University of California, Los Angeles	Los Angeles	United States	xinan@atmos.ucla.edu
3	Prof.	Maha	Ashour-Abdalla	UCLA	Los Angeles, CA	United States	mabdalla@igpp.ucla.edu
4	Mr.	Fabio	Bacchini	KU Leuven	Leuven	Belgium	fabio.bacchini@wis.kuleuven.be
5	Mr.	Ankit	Barik	MPS; Uni Göttingen	Göttingen	Germany	barik@mps.mpg.de
6	Dr.	Miroslav	Bárta	Astronomical Institute AS CR	Ondrejov	Czech Republic	barta@asu.cas.cz
7	Mr.	Marek	Basovník	Institute of Atmospheric Physics	Prague	Czech Republic	mb@ufa.cas.cz
8	Mr.	Matthew	Bedford	University of Alabama in Huntsville	Huntsville, AL	United States	mcb0035@uah.edu
9	Mr.	Jan	Benáček	Masaryk University	Brno	Czech Republic	jbenacek@physics.muni.cz
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