International Conference on Substorms

Lüneburg, September 2-7, 2012

Preliminary Program as of July 26, 2012

Monday, September 3

08:30	**Karl-Heinz Glaßmeier**:	Opening remarks
	Herbert Gleiter:	Welcome address of the Leopoldina, National Academy of Science
08:45	**Karl Schindler**:	Landmarks of magnetospheric activity **(invited)**
09:30	**Vytenis Vasyliunas**:	When you know How, you know Who: Search for perpetrator of substorm onset
09:45	**Olaf Amm**:	On the importance of the Cowling/polarization mechanism in the ionosphere for substorm electrodynamics
10:00 -10:30	*Coffee break*	
10:30	**Ryoichi Fujii**:	IS radar observations of auroral substorm processes **(invited)**
11:00	**Octav Marghitu**:	The ionospheric end of the auroral arc current system during the substorm cycle
11:15	**Michael Connors:**	The substorm current wedge from AMPERE, ground magnetic data, and DMSP
11:30	**Xiangning Chu:**	Statistical relation between substorm current wedge and geosynchronous dipolarization
11:45	**Lutz Rastaetter:**	Linking plasma conditions in the magnetosphere with ionospheric signatures
12:00	Open discussion	
12:15 -13:30	*Lunch*	
13:30	**Emma Spanswick:**	The relationship between arc characteristics and magnetotail topology in the late growth phase **(invited)**
14:00	**Alexander Nikolaev:**	Substorm current wedge revisited: Interpretation of GOES and THEMIS spacecraft magnetic field observations during substorm expansion phase in terms of a revised SCW model
14:15	**Zhonghua Yao:**	Substorm Current Wedge formation: THEMIS case study
14:30	**Lasse Clausen:**	Region 1 currents during the substorm cycle
14:45	**Jian Yang :**	A magnetic field model for substorm growth phase derived from RCM-E simulations

15:00 -15:30	*Coffee break*	
15:30	**Mark Lessard:**	Auroral precipitation and substorm phases **(invited)**
16:00	**Feifei Jiang:**	What is the magnetospheric source of the preexisting auroral arc?
16:15	**David Knudsen**	Breakup Arcs: A Potential Source Mechanism
16:30	**Akimasa Ieda:**	FAST and DMSP observations of precipitating electrons at auroral breakup
16:45	**Kazuo Shiokawa:**	Pressure-driven instability in auroral images to cause auroral patches
17:00	Open discussion	

Tuesday, September 4

08:30	**Toshi Nishimura:**	Pre-onset time sequence of auroral substorms **(invited)**
09:00	**Jonathan Rae:**	ULF waves as diagnostics of pre-onset topology and onset characteristics
09:15	**Xiaoyan Xing:**	On the formation of pre-onset azimuthal pressure gradient in the near-Earth plasma sheet
09:30	**Andreas Keiling:**	Recent developments of Pi2 research
09:45	**Anatoli Petrukovich:**	Statistics of dB_z/dx gradients in the magnetotail during substorm growth phase
10:00 -10:30	*Coffee break*	
10:30	**Marius Echim:**	Quasi-stationary magnetosphere-ionosphere coupling and auroral acceleration from satellite observations and kinetic models **(invited)**
11:00	**Min Shiu Hsieh:**	Flux tube properties and ionospheric maps of magnetotail current sheet thinning
11:15	**Maria Shukhtina:**	On the magnetotail conditions necessary to initiate sudden explosive unloading in the magnetotail
11:30	**Yasutaka Hiraki:**	Alfven-slow mode coupling in the ionospheric feedback system
11:45	**Kyle Murphy:**	The spatio-temporal evolution of FACs through substorm onset
12:00	Open discussion	
12:15 -13:30	*Lunch*	
13:30	**Joachim Birn:**	The physics of substorm injections **(invited)**
14:00	**Stanislav Sazykin:**	Modeling of substorms and their auroral signatures
14:15	**Jun Liang:**	In-situ calculation of magnetic field-line curvature and its application in M-l mapping during substorms
14:30	**H.S. Fu**:	Occurrence rate of earthward-propagating dipolarization fronts
14:45	Pat Newell:	Characteristic substorm scales
15:00 -15:30	*Coffee break*	

15:30	**Rumi Nakamura:**	Multi-point observations of flow braking **(invited)**
16:00	**M. Wu:**	Proton temperature anisotropy development associated with bursty bulk flows in the magnetotail
16:15	**Hiroshi Hasegawa:**	Reconstruction of the velocity field in the front part of tail reconnection jets
16:30	**Lisa Juusula:**	Earthward plasma sheet flows during substorm phases
16:45	**Larry Lyons:**	Flow channel contributions to traditional space and ground features of substorm onset and current wedge formation
17:00	Open discussion	
17:30 -19:30	**Poster session**	

Wednesday, September 5

08:30	**Amitava Bhattacharjee:**	Role of reconnection and secondary instabilities in triggering substorm onset **(invited)**
09:00	**Masayuki Ugai:**	Substorm onset by fast reconnection evolution
09:15	**Joachim Raeder:**	Role of ballooning modes for substorm onset
09:30	**Dmitri Klimushkin:**	The drift compressional instability in a curved magnetic field
09:45	**Ping Zhu:**	Axial tail instability and bubble-blob formation in near-Earth plasma sheet

10:00-10:30 Coffee break

10:30	**Yasong Ge:**	Ion dynamics associated with dipolarization fronts and auroral effects **(invited)**
11:00	**Victor Sergeev**:	Energetic particle injections to geostationary orbit: Relationship to flow bursts and magnetospheric state
11:15	**Kanako Seki**:	Simulation of ion injections into the inner magnetosphere based on the GEMSIS-RC model
11:30	**Peter Boakes:**	A superposed epoch analysis on the impact of differing solar wind-magnetosphere driving conditions on substorm particle injection and ionospheric Substorm Convection
11:45	**Masatoshi Yamauchi:**	Inbound-outbound asymmetry of Cluster perigee traversals as indicator of substorm dynamics

12:15-13:30 Lunch

13:30-19:00 **Excursion: Cruise on the Elbe river and a little beer tasting**

Thursday, September 6

08:30	**Miho Saito:**	Formation and its consequences of high beta plasma sheet in the magnetotail **(invited)**
09:00	**Antonius Otto:**	Convection constraints and current sheet thinning during the substorm growth phase
09:15	**Chih-Ping Wang:**	3D force balanced magnetic field configuration during the substorm growth phase based on equatorial THEMIS/Geotail pressure and DMSP low-altitude observations
09:30	**Yukinaga Miyashita:**	Relationship between substorm-associated processes in the magnetotail and plasma sheet structure
09:45	**Koji Kondoh:**	Three-dimensional structure of the magnetic field around the high-pressure plasma propagating in the plasma sheet
10:00-10:30	*Coffee break*	
10:30	**Andrei Runov:**	Multi-point observations and modeling of energetic particle spectra at dipolarization fronts in the near-Earth plasma sheet **(invited)**
11:00	**Vera Nikolaeva:**	A giant short-lived storm of March 1989 imposed on standard development of a magnetic substorm
11:15	**Maria Hamrin:**	The role of the plasma sheet in channeling solar wind power to the ionosphere
11:30	**Elizaveta Antonova:**	Topological features of magnetospheric domains and magnetospheric substorms
11:45	**Robert McPheron:**	Quantitative prediction of global measures of geomagnetic activity
12:00	Open discussion	
12:15-13:30	*Lunch*	
13:30	**Shinichi Ohtani:**	The Double Auroral Oval: Formation, mapping and dynamics in the dusk-midnight sector **(invited)**
14:00	**Jörg-Micha Jahn:**	Substorm Triggering and Solar Wind Driving
14:15	**Marina Kubyshkina:**	Solar wind control of magnetospheric neutral sheet position – results obtained with adjusted empirical magnetic field models
14:30	**Aimin Du:**	Solar wind energy input during prolonged, intense northward interplanetary magnetic fields: A new coupling function
14:45	**Noora Partamies:**	Solar cycle dependence of storm and substorm phase

15:00-15:30	*Coffee break*	
15:30	**Sarah Jones:**	Ground-based observations of recovery phase aurora **(invited)**
16:00	**Natalya Podorozhkina:**	Relation of PC index to magnetic disturbances triggered by sharp northward turning of the IMF B_Z component
16:15	**Oleg Troshichev:**	Sawtooth substorms generated under conditions of the steadily high solar wind energy input into the magnetosphere: principal difference from isolated substorms
16:30	**Evgeny Gordeev:**	IMF Bx - induced dynamics of neutral sheet during magnetospheric substorms
17:00	***End of afternoon session!!!!***	
19:30	**Workshop dinner**	

Friday, September 7

08:30	**Minna Palmroth:**	Quantifying substorm dynamics using global simulation **(invited)**
09:00	**Tung-Shin Hsu:**	A comparative study of CIR substorms and ICME substorms
09:15	**Alexander Chernyshov:**	Study the auroral region using nonlinear dynamics methods
09:30	**Yan Song:**	Magnetotail transients and substorm Onset
09:45	**Ching-Chang Cheng:**	Association of consecutive Pi2-Ps6 band pulsation bursts and earthward fast flows in the plasma sheet with IMF variations
10:00-10:30	*Coffee break*	
10:30	**Caitriona Jackman:**	Evidence for substorm-like processes at Mercury, Jupiter and Saturn **(invited)**
11:00	**Mervyn Freeman:**	A common process for magnetic reconfigurations at Earth, Jupiter and Saturn
11:15	**Martin Volwerk:**	Comparative magnetotail flapping: An overview of selected events at Earth, Jupiter and Saturn
11:30	**Robert Lysak:**	Generation of ULF waves by fast flows and their coupling to the ionosphere
11:45	Open discussion	
12:15-13:30	*Lunch*	
13:30	**Eric Donovan:**	What will constitute “closure” of the question of what causes onset? **(invited)**
14:15	**Ian Mann :**	Observations of high frequency harmonics of the Ionospheric Alfven Resonator
14:30	**Sungeun Lee:**	Correlation between pulsating auroras and chorus waves observed at Athabasca (L=4.4), Canada
14:45	**Olga Mager:**	Variations of electric field and plasma parameters during the formation of plasmaspheric plumes at geostationary orbit, according to LANL MPA data
15:00	Open discussion	
15:15-15:30	*Coffee break*	

15:30	**James LaBelle:**	Auroral Radio Emissions and substorm onset
15:45	**Matt Broughton:**	Ground-level observations of a new type of auroral radio emission
16:00	**Reiko Nomura:**	Rising tone Pc1 pulsations and related intensity variation of isolated proton auroras at subauroral latitudes
16:15	**N. Zolotukhina**:	Variations of electric and plasma parameters during the formation of plasmaspheric plumes at geostationary orbit, according to LANL MPA data
16:30	**Pavel Sedykh**:	The mystery of a substorm
16:45	Farewell remarks	

Poster Presentations

Peter Boakes:	ECLAT Cluster magnetotail plasma region identifications
Ching-Chang Cheng:	Consecutive bursts of Pi2-band and long-period pulsations observed by SMALL, Cluster and Double Star under a northward and low-clock-angle IMF period
Kirsti Kauristie:	Case studies on isolated nightside substorms and associated morning sector Pc5 pulsation activity as observed with ground-based and Themis instrumentation
Natalia Kleimenova:	Polar substorms and associated activity of Pi2-Pi3 geomagnetic pulsations and auroras
Olga Kozyreva:	Huge high latitude substorm associated with SC of the magnetic storm on 05 April 2010
I. Yu. Lobycheva:	Magnetospheric storms and tropical cyclogenesis
Slava Pilipenko:	Stability of the ballooning modes in the near-Earth plasma
K. G. Simi:	Extreme changes in the equatorial electrojet under the influence of interplanetary electric field and the associated modification in the low-latitude F-region plasma distribution
P. A. Sedykh:	Effects of magnetosphere-ionosphere disturbances on the atmosphere
P. A. Sedykh:	Earth's bow shock: Energy aspects
Zhonghua Yao:	Substorm current wedge formation: statistics