

## “Auroral Physics”

### ISSI Workshop Program, 6-10 August 2018

<b>Monday, 6 August 2018</b>		
<b>Time</b>	<b>Topic</b>	<b>Speaker</b>
08:30-09:30	<i>Registration ISSI, Hallerstrasse 6, 1<sup>st</sup> floor</i>	
09:30-09:45	Welcome and Introduction to ISSI	Rudolf von Steiger
09:45-10:00	Workshop Objectives	Convener team
<b>Session 1a</b>	<b>Quiet and Discrete Arcs – Observations</b>	<b>Chairperson: Ryuhō Kataoka</b>
10:00-10:30	The auroral theory-observation gap	David Knudsen
10:30-11:00	Ground-based observations of auroral arcs	Noora Partamies
11:00-11:30	<i>Coffee Break</i>	
11:30-12:00	Discrete auroral arcs: Quiet versus oscillating	Megan Gillies
12:00-12:30	Optical auroral structures and energy characteristics of their source populations	Nithin Sivas
12:30-14:00	<i>Lunch</i>	
14:00-14:30	Electrodynamics of multiple quiet-arc systems	Jiashu Wu
<b>Session 1b</b>	<b>Quiet and discrete arcs - Theories</b>	<b>Chairperson: Tomas Karlsson</b>
14:30-15:00	Quasi-stationary coupling between magnetospheric plasma interfaces/generators and the auroral ionosphere	Marius Echim
15:00-15:30	Structure formation and arc dynamics in the feedback M-I coupling	Tomo-Hiko Watanabe
15:30-16:00	Why does the quiet arc occur and why does the onset arc start from its equatorward edge?	Shigeru Fujita
16:00-16:30	<i>Coffee Break</i>	
16:30-17:00	A Satellite Mission to Determine the Magnetospheric Processes Driving Aurora	Joe Borovsky
17:00-18:00	General discussion	All participants
18:00	<i>Welcome Reception - Hallerstrasse 6, 1<sup>st</sup> floor</i>	

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Tuesday, 7 August 2018		
Time	Topic	Speaker
<b>Session 2</b>	<b>Auroral arcs and M-I Coupling</b>	<b>Chairperson: Noora Partamies</b>
09:00-09:30	The acceleration region of quiet discrete arcs	Thomas Karlsson
09:30-10:00	Comparison of low altitude observations of discrete arcs with high altitude observations and global simulations	Bob Strangeway
10:00-10:30	On the magnetospheric sources of active auroral forms	Victor Sergeev
10:30-11:00	TBD	Joachim Birn
11:00-11:30	<i>Coffee Break</i>	
11:30-12:00	Solar wind-magnetosphere-ionosphere coupling and auroral dynamics	Steve Milan
12:00-12:30	Magnetosphere-ionosphere coupling and the dynamics of auroral arcs	Bob Lysak
12:30-14:00	<i>Lunch</i>	
<b>Session 3</b>	<b>Dynamic Aurora – Substorm-related</b>	<b>Chairperson: Joe Borovsky</b>
14:00-14:30	Morphology of Substorm Aurora - Equatorward Motion and Poleward Expansion	Antonius Otto
14:30-15:00	Beads and substorm breakup aurora	Colin Forsyth
15:00-15:30	Transient auroral brightenings and their M-I coupling processes	Toshi Nishimura
15:30-16:00	<i>Coffee Break</i>	
16:00-16:30	Auroral Streamers, Omega Bands, Contact Breakups and Substorm Onsets	Mike Henderson
16:30-18:00	General discussion	All participants

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<b>Wednesday, 8 August 2018</b>		
<b>Time</b>	<b>Topic</b>	<b>Speaker</b>
<b>Session 4</b>	<b>Dynamic Aurora – Small scale</b>	<b>Chairperson: Kristina Lynch</b>
09:00-09:30	Fine structures of aurora	Ryuho Kataoka
09:30-10:00	Small-scale auroras associated with Alfvén waves and pitch-angle scattering, and a future formation-flight satellite project FACTORS	Takeshi Sakanoi
10:00-10:30	High-resolution optical observations of dynamic small-scale aurora	Dan Whiter
10:30-11:00	General discussion	
<i>11:00-11:30</i>	<i>Coffee Break</i>	
11:30-12:00	Some 'new' physics observed in the auroral acceleration region	Chris Chaston
12:00-12:30	In-situ observation of the return current of FAC and Aurora at other planets	Laila Andersson
	<i>Free afternoon</i>	

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<b>Thursday, 9 August 2018</b>		
<b>Time</b>	<b>Topic</b>	<b>Speaker</b>
<b>Session 5</b>	<b>Characterizing and explaining auroral structure in space and time</b>	<b>Chairperson: Laila Andersson</b>
09:00-09:30	Combining groundbased and in situ observations: Isinglass and ARCS	Kristina Lynch
09:30-10:00	Gradients along auroral arcs	Octav Marghitu
10:00-10:30	Formation of Alfvénic Electrostatic Plasma Structures and High Energy Auroral Particle Acceleration	Yan Song
10:30-11:00	<i>Coffee Break</i>	
11:00-11:30	Spatio-temporal structure of discrete arcs associated with Alfvén waves	Robert Rankin
11:30-12:00	Magnetospheric and auroral observations of pre-onset dynamics	Larry Kepko
12:00-14:00	<i>Lunch</i>	
<b>Session 6</b>	<b>Diffuse and Pulsating Aurora</b>	<b>Chairperson: Toshi Nishimura</b>
14:00-14:30	Periodicity and spatial scale of wave-particle interactions in the magnetosphere	Yuto Katoh
14:30-15:00	Diffuse and pulsating aurora and electrostatic electron cyclotron harmonic waves	Mizuki Fukizawa
15:00-15:30	Spatio-temporal dynamics of cusp aurora and pulsating aurora	Marc Lessard
15:30-16:00	<i>Coffee Break</i>	
16:00-16:30	Morphological characteristics of polar cap aurora (+ some recent observations of pulsating aurora)	Keisuke Hosokawa
16:30-17:00	Differentiating pulsating auroral patches	Eric Grono
17:00-18:00	General Discussion	All participants
19:00	<i>Workshop Dinner at the Altes Tramdepot (organized by ISSI)</i>	

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Friday, 10 August 2018		
Time	Topic	Speaker
<b>Session 7</b>	<b>Dayside, polar cap, and sub-auroral</b>	<b>Chairperson: Steve Milan</b>
09:00-09:30	Dayside aurora	Harald Frey
09:30-10:00	Solar wind influence on formation and motion of polar cap aurora	Anita Kullen
10:00-10:30	Polar cap aurora and its relation to nightside auroral activity	Ying Zou
10:30-11:00	<i>Coffee Break</i>	
11:00-11:30	Mesoscale structures in the auroral and sub-auroral regions	Beatrice Gallardo-Lacourt
11:30-12:00	Studying polar cap aurora using observations from ground-based and spacecraft instruments	Jade Reidy
12:00-13:30	<i>Lunch</i>	
13:30-16:30	Discussion and planning for special issue	

**End of meeting**