

# Workshop on “Magnetic Reconnection: Explosive Energy Conversion in Space Plasmas” 27 June – 1 July 2022

<b>Monday, 27 June 2022</b>		
<b>Time</b>	<b>Topic</b>	<b>Chair/ Speaker</b>
<b>08:30</b>	<b>Registration ISSI, Hallerstrasse 6, 1<sup>st</sup> floor</b>	
09:00-09:30	Welcome and introduction	Director, Conveners
	<b>Chapter 1: Micro-scale processes of magnetic reconnection</b>	<b>Chair: Hoshino</b>
09:30-09:50	Generalized Ohm's Law, Reconnection rate – I	Burch
09:50-10:10	Generalized Ohm's Law, Reconnection rate –II	Hesse
10:10-10:30	Effects of different conditions: oxygen, electron-only reconnection	Toledo-Redondo
	<b>Coffee Break</b>	
11:00-11:20	Electron diffusion region: observations - I	Argall
11:20-11:40	Electron diffusion region: observations - II	Webster
11:40-12:00	Electron diffusion region: observations / analysis scheme	Hasegawa
12:00-12:20	Electron diffusion region: theory/modelling - I	Bessho
	<b>Lunch</b>	
13:50-14:10	Electron diffusion region: theory/modelling - II	Shay
14:10-14:30	Ion diffusion region –I	Lavraud
14:30-14:50	Ion diffusion region – II	Giles
14:50-15:10	Waves, wave-particle interaction, LH, KAW, whistler	Cozzani
	<b>Coffee Break</b>	
15:40-16:00	Effects of different conditions: guide field, symmetry, beta	Genestreti,
16:00-17:00	<b>Chapter 1 Discussion</b>	<b>Leads: Argall, Toledo-Redondo</b>
<b>17:00</b>	<b>Welcome Reception - Hallerstrasse 6, 1<sup>st</sup> floor</b>	



<b>Tuesday, 28 June 2022</b>		
<b>Time</b>	<b>Topic</b>	<b>Chair/ Speaker</b>
	<b>Chapter 2: Wave and Turbulence</b>	<b>Chair: Lavraud</b>
09:00-09:20	Wave-particle interaction, anomalous resistivity - I	Graham
09:20-09:40	Wave-particle interaction, anomalous resistivity - II	Khotyaintsev
09:40-10:00	Wave -particle interaction, anomalous resistivity - III	Wilder
10:00-10:20	Waves, wave-particle interaction, UH	Dokgo
10:20-10:40	Micro-scale Separatrix Processes Near the X-line	Holmes
	<b>Coffee Break</b>	
11:10-11:30	Reconnection in turbulent media, turbulence due to reconnection	Stawarz
11:30-11:50	Large-scale waves (KH, flapping)	Eriksson
11:50-12:30	<b>Chapter 2 Discussion</b>	<b>Leads: Khotyaintsev, Stawarz</b>
	<b>Lunch</b>	
	<b>Chapter 3: Large-scale processes of magnetic reconnection</b>	<b>Chair: Hesse</b>
14:00-14:20	Global magnetospheric context, mixing of plasma, solar wind driver	Fuselier
14:20-14:40	Global magnetospheric context, cold ion contribution	Moore
14:40-15:00	Global magnetospheric context, driving condition, onset conditions	Reiff
15:00-15:20	Consequence of reconnection, interaction with inner magnetosphere	Baker
	<b>Coffee Break</b>	
15:50-16:10	Consequence of reconnection, particle acceleration – I	Cohen
16:10-16:30	Consequence of reconnection, particle acceleration – II	Ergun
16:30-16:50	Electron Acceleration in Solar Flares and Earth's Magnetotail	Oka
16:50-17:10	Consequence of reconnection, particle acceleration - IV	Turner

<b>Wednesday, 29 June 2022</b>		
<b>Time</b>	<b>Topic</b>	<b>Chair / Speaker</b>
09:00-09:20	Consequence of reconnection, outflows, PSBL flows, flow braking	R.Nakamura
09:20-09:40	Multiple reconnection, flux ropes, plasmoid- I	Eastwood
09:40-10:00	Multiple reconnection, flux ropes, plasmoid- II	Hwang
10:00-10:40	<b>Chapter 3 Discussion</b>	<b>Leads: Hwang, Turner</b>
<b>Coffee Break</b>		
	<b>Chapter 5 Data analysis techniques, simulation theory</b>	<b>Chair: Giles</b>
11:10-11:30	Reconnection rate	Liu
11:30-11:50	Polynomial, Coordinate determination schemes	Torbert
11:50-12:15	GS reconstructions, other new analysis methods, comparison with models	Hasegawa*, Cozanni*,
12:15-12:30	Simulation, simulation validation, new theory, comparison with data	Drake*, Bessho* Shay*,
<b>12:30-13:10</b>	<b>Chapter 5 Discussion</b>	<b>Leads: Drake, Hasegawa</b>
<b>Lunch</b>		
	<i>Free time to visit the attractions of Bern (Excursion to Gulten) NB: All ISSI facilities are available for small group discussions Book coordinators/conveners meeting</i>	
<b>19:00</b>	<b>Workshop Dinner at the Restaurant Kornhauskeller</b>	

**Thursday, 30 June 2022**

<b>Time</b>	<b>Topic</b>	<b>Chair/ Speaker</b>
	<b>Chapter 4: Magnetic Reconnection beyond Geospace</b>	<b>Chair: Torbert</b>
09:00-09:20	Solar atmosphere	Longcope
09:20-09:40	Solar atmosphere, solar wind near sun, PSP-I	Drake*
09:40-10:00	Solar atmosphere, solar wind near sun, PSP-II	Phan
10:00-10:20	Heliosphere	Büchner
10:20-10:40	Planets & Heliopause	Gershman
	<b>Coffee Break</b>	
11:10-11:30	Relativistic reconnection, rotating black-hole, jets	Guo
11:30-11:50	Reconnection in astrophysical plasma, particle acceleration	Hoshino
11:50-12:10	Laboratory plasma reconnection, in particular comparison to space plasma - I	L.Chen
12:10-12:30	Reconnection in astrophysical plasma, particle acceleration	Egedal
	<b>Lunch</b>	
<b>14:00-14:40</b>	<b>Chapter 4 Discussion</b>	<b>Leads: L.Chen, Guo</b>
14:40-14:50	Introduction on Book content	Conveners
14:50-15:30	Splinter Discussions – I	Chaired by chapter coordinators
	<b>Coffee Break</b>	
16:00-	Splinter Discussions - II	Chaired by chapter coordinators

**Friday, 1 July 2022**

<b>Time</b>	<b>Topic</b>	<b>Chair/ Speaker</b>
09:00-10:40	Splinter Discussion - III	Chaired by chapter coordinators
<b>10:40-11:10</b>	<b><i>Coffee Break</i></b>	
11:10-12:30	Splinter results presentations and Discussions	Chapter Coordinators
	<b><i>Lunch</i></b>	
14:00-15:20	Plenary Discussions on “Introduction” and “Summary”	
<b><i>End of Workshop</i></b>		

Last update: 21 June 2022