

Agenda to MMS Spring 2024 SWT Meeting

The meeting will be held in the Presentation room of Building 263.

Refreshments and snacks are available in the lobby throughout the day. Breakfast is available at the hotel. Lunch is provided daily.

Virtual Attendees, [Join over Teams](#).

Time	Speaker	Title
April 9th, Tuesday AM: Leadership kick-off and Programmatic (Chair: Kristie LLera, kristie.llera@swri.org)		
Upload a talk for this session		
09:15-09:20	Kristie LLera	Welcome & Logistics
09:20-09:30	Jim Burch	Mission Status
09:30-10:00	Chris Riley	MMS Operation Status
10:00-10:15	Gina Lafferty and Marcus Piquette	POC/IS Status
10:15-10:40	Bob Ergun	Large Separation
10:40-11:00	Coffee Break	
11:00-11:15	Trevor Williams	FDOA Status and String of Pearls
11:15-11:30	Rick Wilder	SITL update
April 9th, Tuesday late-AM: Data Mining -Science Methods and Techniques (Chair: Justyna Sokó, justyna.sokol@swri.org)		
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11:30-11:45	Joey Mukherjee	About data mining and ML tools and their application to MMS data
11:45-11:55	Justyna Sokó	Preliminary results for an automated search for pristine solar wind intervals for HPCA PUI analysis
11:55-12:00	Justyna Sokó (Leads)	Open Discussion
12-13:30	Lunch Break	*SWG meeting
April 9th, Tuesday PM: Special Topic (Chair: Kristie LLera, kristie.llera@swri.org)		
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13:30-13:45	Michael Starkey and Jason Beedle	MMS-inspired mission concept for 2024 Heliophysics Mission Design School
		*Call for Total Solar Eclipse Media and/or stories for compilation on Wednesday
April 9th, Tuesday mid-PM: Transient Magnetopause (Chair: Katariina Nykyri, katariina.nykyri@nasa.gov)		
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13:45-14:00	Dinesh Radhakrishnan	Non-Linear KHI's at flanks of Earth's Magnetopause
14:00-14:15	Rachel Rice	Magnetopause Boundary Layers during Storm Recovery and Low Mach Solar Wind

14:15-14:30	Andrew Marshall	Substorm Triggered by an IMF By Reversal During a Period of Northward IMF
14:30-14:45	Katariina Nykyri	Fingerprinting plasma heating mechanisms during boundary layer/current sheets crossings using MMS FPI and FGM data: Are the power laws in kappa distributions of the heating rate universal for specific cross-scale heating mechanism?
14:45-15:55	Chair (Leads)	Open Discussion
14:55-15:15	Coffee Break	
April 9th, Tuesday late-PM: Solar Wind Interactions near Earth (Chairs: Brandon Burkholder and Jason Beedle, burkbran@umbc.edu, jason.beedle@unh.edu) Upload a talk for this session		
15:15-15:30	Micheal Starkey	Enhanced Helium Concentrations in CMEs
15:30-15:45	Harsha Gurram	Earth's Alfvén wings from the perspective of electron distributions
15:45-16:00	Jason Beedle	Field-Aligned Current Structures during the Terrestrial Magnetosphere's Transformation into Alfvén Wings and Recovery
16:00-16:15	Li-Jen Chen	Earth's Alfvén wing magnetosphere: Sun-Earth connection in the new light from MMS, HSO, and simulations
16:15-16:30	Marc Swisdak	Numerical Simulations of Turbulence in the Structured Solar Wind
16:30-16:40	Chairs (Leads)	Open discussions
17:30-19:00	Reception	*off-site venue: Viola's Ventana, 9660 Westover Hills Blvd
April 10th, Wednesday AM: Particle Acceleration (Chair: Jonathan Ng, jonng@umd.edu) Upload a talk for this session		
9:15-9:30	James Drake	Electron and proton powerlaw formation during magnetic reconnection
9:30-9:45	Mitsuo Oka	Evolution and effect of pre-existing non-thermal (PENT) particles in magnetic reconnection
9:45-10:00	Abhishek Rajhans	Energy partition between thermal and non-thermal components during magnetotail reconnection
10:00-10:15	Joachim Birn	Electron acceleration in magnetotail reconnection events
10:15-10:30	Weijie Sun	Relativistic electrons in Earth's plasma sheet during magnetic reconnection
10:30-10:40	Chair (Leads)	Open discussion
10:40-11:00	Coffee Break	
April 10th, Wednesday late-AM: Reconnection, Turbulence, & Waves (Chair: Harsa Gurram, hgurram@umd.edu) Upload a talk for this session		
11:00-11:15	Neha Pathak	Detailed Observations of Parallel Electric Field Structures at the Plasma Sheet Boundary Layer
11:15-11:30	Jim Burch	Pressure-Strain Interactions and Parallel Electric Fields

11:30-11:45	Evgeny Panov	Midtail Ballooning-Interchange Heads as observed by MMS and in the conjugate ionospheric data
11:45-12:00	Yi Qi	Investigation of a magnetic reconnection event with extraordinarily high particle energization in magnetotail turbulence
12:00-13:30	Lunch Break	
13:30-13:40	Team Photo	*Assemble in front of Bldg. 263
13:40-13:45		**Total Eclipse compilation back in presentation room

April 10th, Wednesday PM: Part-2 of reconnection, Turbulence, & Waves (Chairs: Kyunghwan Dokgo and Kylie Sullivan, kyunghwan.dokgo@swri.org, kylie.sullivan@contractor.swri.org)

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13:45-14:00	Jonathan Ng	Electron acceleration by Lower hybrid waves in guide field reconnection
14:00-14:15	Naoki Bessho	Electron and ion acceleration in magnetic islands in shock turbulence
14:15-14:30	Riddhi Bandyopadhyay	Energy Transfer Across Scales in Turbulent Reconnection
14:30-14:45	Marit Oieroset	Scaling of ion bulk heating in magnetic reconnection outflows for the high Alfvén speed and low beta regime in Earth's magnetotail
14:45-14:55	Chairs (Lead)	Open discussion
14:55-15:15	Coffee Break	

April 10th, Wednesday mid-PM: Continuing with RxN, Turbulence, & Waves (Chair: Rachel Rice, rrice@umd.edu)

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15:15-15:30	Dominic Payne	Multiscale Energy Exchange from Magnetic Shear Equilibration and Reconnection
15:30-15:45	Kylie Sullivan	An Investigation into Far-Flank Magnetic Reconnection at Earth's Magnetopause
15:45-16:00	Dan Baker	Long-duration Kelvin-Helmholtz wave activity along the magnetotail flanks
16:00-16:15	Stefan Eriksson	MMS observations of oscillating energy conversion and electron vorticity in an electron-scale layer within a southward magnetopause reconnection exhaust
16:15-16:30	Alex Chasapis	Unbiased Magnetosheath Campaigns 2023 & 2024: Unravelling the Turbulent Dynamics of Earth's Magnetosheath
16:30-16:45	Brandon Burkholder	Comparison of Foreshock Magnetic Fluctuations observed by MMS, MESSENGER, MAVEN, and Cassini
16:45-17:00	Chair (Leads)	Open discussion

April 11th, Thursday AM: Electron-only Reconnection (Chair: Joo Hwang, joo.hwang@swri.org)

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9:15-9:30	Prayash Sharma Pyakurel	Detection of large guide field electron-only reconnection in a filamentary current sheet immersed in a large-scale magnetopause reconnection exhaust
9:30-9:45	Kevin Genestreti	Normalized rate of electron-only reconnection

9:45-10:00	Steven Heuer	Scaling of the normalized reconnection rate with background plasma parameters- Magnetic reconnection
10:00-10:15	Tak Chu Li	Electron-only and ion-coupled reconnection in plasma turbulence: magnetic flux transport signatures
10:15-10:30	Katy Goodrich	An Update from GLIMPSE: Magnetic Holes and Waves at Shocks with MMS and Future Projects
10:30-10:40	Chair (Leads)	Open discussion
10:40-11:00	Coffee Break	Grab-n-go/Boxed-up Lunch
11:00-12:00		*walk-in talks (virtual presenters possible in this session) sign up below.
	Chole Liebenthal	
	Joachim Birn	