

MMS Fall 2023 Science Working Team Meeting

Breakfast and the SWT Meeting on Wednesday-Friday will be in Top of the 7's Ballroom (Penthouse level).

Time	Speaker	Title
10/25, Wednesday AM-1: Programmatic (Chair: Ian Cohen, Ian.Cohen@jhuapl.edu) Upload a talk for this session		
09:00-09:10	Marc Swisdak	Welcome & Logistics
09:10-09:20	Jim Burch	Mission Updates
09:20-09:30	Kevin Genestreti/Guan Le	MMS Senior Review Outcome
09:30-10:00	Chris Riley	Mission and Flight Dynamics Operations Status
10:00-10:15	Marcus Piquette/Gina Lafferty	POC Updates
10:15-10:30	Chris Pankratz	SDC/SOC Updates
10:30-11:00	AM Coffee Break	
10/25, Wednesday AM-2: String-of-Pearls Formation (Chairs: Neha Pathak, Neha.Pathak@lasp.colorado.edu; Yi Qi, Yi.Qi@lasp.colorado.edu) Upload a talk for this session		
11:00-11:25	Bob Ergun	Science Goals of the Large Separation Campaign
11:25-11:40	Trevor Williams	String-of-pearls formation (Fly dynamics)
11:40-11:55	Steve Petrinec	MMS String-of-Pearls Formation: Science Regions of Interest (SROIs)
11:55-12:10	Savvas Raptis	Transient phenomena in foreshock, shock, and magnetosheath – Expectations from large separation campaign
12:10-12:30	Alex Chasapis (lead)	Open discussion
12:30-13:30	Lunch - Salon C (Mezzanine level)	
10/25, Wednesday PM-1: Storms/Extreme Events (Co-chairs: Rachel Rice rcrice@umd.edu, Harsha Gurram hgurram@umd.edu) Upload a talk for this session		
13:30-13:45	Brandon Burkholder	Can magnetotail reconnection occur when the solar wind is sub-alfvenic? Case study of the April 2023 Storm
13:45-14:05	Mojtaba Akhavan-Tafti	(Invited) Magnetospheric Time History in Storm-Time Magnetic Flux Dynamics
14:05-14:20	Li-Jen Chen	Earth's dynamic filamentary Alfvén wings driven by the 2023 April CME
14:20-14:35	Harsha Gurram	3D Electron Distribution Functions from Earth's Alfvén Wings
14:35-14:50	Jason Beedle	Current structures in the vicinity of the magnetopause during the magnetosphere transformation into Alfvén wings and recovery
14:50-15:05	Rachel Rice	Comparing magnetopause boundary layers in storm time
15:05-15:30	PM Coffee Break	
10/25, Wednesday PM-2: General Reconnection 1 (Chair: Dominic Payne, dspayne@umd.edu) Upload a talk for this session		

15:30 - 15:50	Hasan Barbhuiya	Insights from Pressure-Strain Interaction about Magnetic Reconnection
15:50 - 16:05	Michael Hesse	What do we Know About the Reconnection Electric Field?
16:05 - 16:20	Richard Denton	Determining the orientation of a magnetic reconnection X line and implications for a 2D coordinate system
16:20 - 16:35	Neha Pathak	Evidence of a Non-Orthogonal X-Line in Guide-Field Magnetic Reconnection
16:35 - 16:50	Young Dae Yoon/Thom Moore	Reconnection Enabled by Plasma Beta
16:50 - 17:00		Open discussion
10/26, Thursday AM-1: Particle Acceleration (Chair: Mike Shumko, mike.shumko@jhuapl.edu) Upload a talk for this session		
9:00-9:20	Sanjay Chepuri	Testing Adiabatic Models of Energetic Particle Acceleration at Dipolarization Fronts
9:20-9:35	Naoki Bessho	Island betatron acceleration in magnetic flux ropes in the Earth's bow shock
9:35-9:50	Joo Hwang	Electron energization at a two-step dipolarization front
9:50-10:05	Yi Qi	Investigation of a magnetic reconnection event with extraordinarily high particle energization in magnetotail turbulence
10:05-10:20	Anthony Sciola	The contribution of BBFs to plasma energization and transport to the stormtime ring current
10:20-10:30		Open discussion
10:30-11:00	AM Coffee Break	
10/26, Thursday AM-2: Dayside Reconnection (Chair: Jonathan Ng, jonng@umd.edu) Upload a talk for this session		
11:00 - 11:20	Gabor Toth	Magnetospheric Applications of the MHD with Adaptively Embedded PIC model
11:20 - 11:35	Haoming Liang	Impact of out-of-plane flow shear on asymmetric reconnection and implication to flank magnetopause reconnection
11:35 - 11:50	Jason Beedle	Parallel Current in the Diffusion Regions: Comparing Statistical Results, Case Studies, and 2.5D PIC Simulations
11:50-12:05	Jim Drake	A few slides
11:50 - 12:05	Hanying Wei	Entangled flux ropes in the magnetosheath and in the solar wind
12:05-13:30	Lunch - Terrapin Ballroom (Lobby level)	
10/26, Thursday PM-1: Turbulence (Chair: Yan Yang, yanyang@udel.edu) Upload a talk for this session		
13:30-13:50	Alexandros Chasapis	Observations of turbulence and dissipation during the unbiased magnetosheath campaign
13:50-14:10	Subash Adhikari	Kinetic Reconnection and Associated Turbulence: A Scale Filtering Approach
14:10-14:30	Sohom Roy	Investigating the scale-dependent conversion of turbulent energy in the magnetosheath
14:30-14:45	Dominic Payne	Energy Exchange Mechanisms Associated with the Equilibration of Sheared Magnetic Fields
14:45-15:00	Yan Yang	Effective Viscosity, Resistivity and Reynolds Number in Weakly Collisional Plasma Turbulence
15:00-15:30	PM Coffee Break	
10/26, Thursday PM-2: Special Science Topics (Chair: Marc Swisdak, swisdak@umd.edu) Upload a talk for this session		

15:30-15:45	Owen Roberts	Case study of a magnetosheath jet
15:45-16:00	Gangkai Poh	Statistical Analysis of 3-second waves observed by MMS in the Earth's foreshock
16:15-16:30	Scott Boardsen	Event Study of ICW and Drift Mirror Waves observed by both MMS and Geotail while separated by a few wavelengths.
16:30-16:45	Bill Paterson	HERMES on Gateway: Science Objectives and Coordination With Other Missions
16:45-17:00		Open Discussion
10/27, Friday AM-1: General Reconnection 2 (Chair: Dominic Payne, dspayne@umd.edu) Upload a talk for this session		
09:00 - 09:15	Kyunghwan Dokgo	Rising tone whistler waves near the electron-scale reconnection
09:15 - 09:30	Yi-Hsin Liu	Modeling electron-only reconnection rate
09:30 - 09:45	Marc Swisdak	Magnetic reconnection on a Klein Bottle
09:45 - 10:00	Jonathan Ng	Electron acceleration near a magnetic null in shock turbulence
10:00 - 10:30		
10:30 - 11:00	AM Coffee Break	
10/27, Friday AM-2: Nightside Reconnection (Chair: Jonathan Ng, jonng@umd.edu) Upload a talk for this session		
11:00-11:15	Kevin Genestreti	Physics controlling the reconnection rate: magnetotail case study
11:15 - 11:30	Jim Burch	Parallel Electric Fields and Compressive Heating in Magnetotail Reconnection
11:30 - 11:45	Harry Arnold	PIC simulations of overstretched ion scale current sheets applicable to the magnetotail
12:00-13:00	Lunch - Salon C (Mezzanine level)	