

# MMS Spring 2024 Science Working Team Meeting

April 8th-11th, 2024 [Agenda to MMS Spring 2024 SWT Meeting](#)

[Hotel reservation link](#)

[Registration link](#)

**April 8 — Splinter** and meetup location for the extended eclipse viewing trip  
Holiday Inn SeaWorld  
10135 TX-151  
San Antonio, TX 78251

**April 9-11 — SWT**  
Southwest Research Institute  
6220 Culebra Road  
Bldg. 263  
San Antonio, TX 78238

\*Use the left entrance lane at the main gate. Security at the gate may request identification.

## April 9- Team reception

Viola's Ventanas

9660 Westover Hills Blvd

San Antonio, TX 78251

Tuesday, from 5:30 – 7:00 pm

Only In-person presenters. Submit the title to secure a presenter time slot by **Monday, March 25th**. To add your information, log-in, click the 'Edit' icon, fill out information on the table below, click 'update'.

Presenters, upload your presentation in the appropriate folder once the schedule is released. There will be a presenter's computer on the podium, please upload before your session starts.

Please include in the focus column, any that apply: 'team/mission updates', 'reconnection, turbulence, & waves', 'electron-only reconnection', 'collisionless shocks',

'particle acceleration', 'transient magnetopause processes', 'solar wind interactions near Earth', 'MMS among HSO (heliophysics system observatory)', and 'science methods and techniques'.

NAME (Affiliation)	TITLE	Focus
Joey Mukherjee (SwRI)	About data mining and ML tools and their application to MMS data	science methods/technique
Justyna Sokol (SwRI)	Preliminary results for an automated search for pristine solar wind intervals for HPCA PUI analysis	science methods/technique
Micheal Starkey (SwRI)	Enhanced Helium Concentrations in CMEs	solar wind interactions near Earth
Mitsuo Oka (UC Berkeley)	Evolution and effect of pre-existing non-thermal (PENT) particles in magnetic reconnection	particle acceleration
Katariina Nykyri (NASA GSFC)	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?	ion&electron heating /methods/technique



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Stefan Eriksson (CU/LASP)	MMS observations of oscillating energy conversion and electron vorticity in an electron-scale layer within a southward magnetopause reconnection exhaust	reconnection, turbulence, & waves
Chris Riley (KBR /GSFC)	MMS Operations Status	Operations
Trevor Williams (NASA/GSFC)	FDOA Status and String of Pearls	Operations
Gina Lafferty / Marcus Piquette (LASP)	POC/IS Status	Operations
Weijie Sun (SSL /UC Berkeley)	Relativistic electrons in Earth's plasma sheet during magnetic reconnection	Particle acceleration
Marit Oieroset (UC Berkeley)	Scaling of ion bulk heating in magnetic reconnection outflows for the high Alfvén speed and low beta regime in Earth's magnetotail	reconnection, turbulence, & waves
Prayash Sharma Pyakurel (UC Berkeley)	Detection of large guide field electron-only reconnection in a filamentary current sheet immersed in a large-scale magnetopause reconnection exhaust	'electron-only reconnection' and 'Reconnection, turbulence, & waves'
Kevin Genestreti (SwRI)	Normalized rate of electron-only reconnection	Magnetic reconnection
Steven Heuer (UNH)	Scaling of the normalized reconnection rate with background plasma parameters	Magnetic reconnection (after Kevin G's talk please)
Li-Jen Chen (GSFC)	Earth's Alfvén wing magnetosphere: Sun-Earth connection in the new light from MMS, HSO, and simulations	solar wind interactions near Earth/MMS among HSO /magnetic reconnection
Jason Beedle (UNH)	Field-Aligned Current Structures during the Terrestrial Magnetosphere's Transformation into Alfvén Wings and Recovery	solar wind interactions near Earth
Kylie Sullivan (UTSA/SwRI)	An Investigation into Far-Flank Magnetic Reconnection at Earth's Magnetopause	reconnection, turbulence, & waves
Dinesh Radhakrishnan (UTSA/SwRI)	Non-Linear KHI's at flanks of Earth's Magnetopause	transient magnetopause processes,solar wind interactions near Earth
Riddhi Bandyopadhyay (Princeton)	Energy Transfer Across Scales in Turbulent Reconnection	reconnection, turbulence, & waves
Neha Pathak (LASP/ CU Boulder)	Detailed Observations of Parallel Electric Field Structures at the Plasma Sheet Boundary Layer	Reconnection, turbulence & waves
Brandon Burkholder (UMBC/GSFC)	Comparison of Foreshock Magnetic Fluctuations observed by MMS, MESSENGER, MAVEN, and Cassini	MMS among HSO
Abhishek Rajhans (UC Berkeley)	Energy partition between thermal and non-thermal components during magnetotail reconnection	particle acceleration
Evgeny Panov (IWF-OeAW)	Midtail Ballooning-Interchange Heads as observed by MMS and in the conjugate ionospheric data	reconnection, turbulence and waves
Jim Burch (SwRI)	Pressure-Strain Interactions and Parallel Electric Fields	reconnection, turbulence and waves
Rachel Rice (UMD/NASA GSFC)	Magnetopause Boundary Layers during Storm Recovery and Low Mach Solar Wind	transient magnetopause processes, sw interactions
Yi Qi (LASP)	Investigation of a magnetic reconnection event with extraordinarily high particle energization in magnetotail turbulence	Reconnection, turbulence & waves
Dominic Payne (UMD)	Multiscale Energy Exchange from Magnetic Shear Equilibration and Reconnection	Reconnection, turbulence & waves, electron-only reconnection,
Naoki Bessho (UMD/GSFC)	Electron and ion acceleration in magnetic islands in shock turbulence	Reconnection, turbulence

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