



# 2026 MMS SWT Meeting

## Scientific Program

### June 23-26

**Host's Name:** Dr. Nykyri & Dr. Liou  
**Host's Office Extension:** 386-226-6673  
**Host's Cell Phone Number:** 386-898-6648 (Nykyri), 386-333-1453 (Liou)  
**Embry-Riddle Aeronautical University, Daytona Beach, FL**

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<b>Tuesday, June 23, 2026 (Day 1)</b>		<b>Location: Henderson Welcome Center</b>
<b>Session 1:</b>	<b>09:00–10:30</b>	
<b>09:00–09:05</b>	<b>Welcome and Logistics</b>	<b>Katariina Nykyri</b>
<b>09:05–09:30</b>	<b>MMS Mission Status</b>	<b>Jim Burch</b>
<b>09:30–09:50</b>	<b>MMS MOC Status</b>	<b>James Clapsadle</b>
<b>09:50–10:05</b>	<b>MMS SDC update</b>	<b>Julie Barnum, Russell Bjella</b>
<b>10:05–10:30</b>	<b>MMS Senior Review</b>	<b>Kevin Genestreti</b>
<b>10:30–10:45</b>	<b>Coffee Break</b>	
<b>Session 2:</b>	<b>10:45–12:15</b>	<b>Alex Chasapis</b>
	<b>Foreshock/Magnetosheath Processes</b>	
<b>10:45–11:03</b>	<b>Recent Advancements in Transient Processes and Particle Energization at Collisionless Shocks</b>	<b>Savvas Raptis</b>
<b>11:03–11:21</b>	<b>Evidence of the Electron Cyclotron Drift Instability in an Oblique Shock Crossing</b>	<b>Katy Goodrich</b>
<b>11:21–11:39</b>	<b>Measuring Inertial-range Energy Transfer Using Multi-spacecraft Methods</b>	<b>Yan Yang, Zhuoran Gao</b>
<b>11:39–11:57</b>	<b>Energy Transfer and Conversion in Collisionless Shocks</b>	<b>Riddhi Bandyopadhyay</b>
<b>11:57–12:15</b>	<b>Velocity-Space Turbulence in the Earth's Magnetosheath</b>	<b>Tien Vo</b>
<b>12:15–13:45</b>	<b>Lunch</b>	
<b>Session 3:</b>	<b>13:45–15:12</b>	<b>Kevin Genestreti</b>
	<b>Magnetic Reconnection and EDR Physics</b>	
<b>13:45–14:00</b>	<b>Pressure-strain Interaction and Parallel Electric Field in Magnetotail Reconnection</b>	<b>Jim Burch</b>



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### Day 1 – Tuesday, June 23

<b>Tuesday, June 23, 2026 (Day 1)</b>		<b>Location: Henderson Welcome Center</b>
14:00–14:12	Reconnection Reconstruction Using Physics-Informed Neural Networks with MMS Data	Eunjin Choi
14:12–14:24	The Dependence of Electron-Only Magnetic Reconnection on Plasma Beta and Magnetic Shear: Theory and Observations	Prayash Pyakurel
14:24–14:36	The EDR for asymmetric guide field reconnection	Michael Hesse
14:36–14:48	Dayside Magnetopause Reconnection $\partial/\partial t$ and Discontinuous Reconfiguration	James Webster
14:48–15:00	Error-constrained Energy Budget Analysis in Magnetic Reconnection	Sohom Roy
15:00–15:12	Investigating the Role of Electron Anisotropy in Supporting the Reconnection Electric Field with a Strong Guide Field	Steven Heuer
15:12–15:30	Coffee Break	
<b>Session 4:</b>	<b>15:30–17:00</b>	<b>Bob Ergun</b>
	<b>Reconnection Impacts</b>	
15:30–15:45	The Role of Magnetic Reconnection in Turbulent Dissipation	Julia Stawarz (Virtual)
15:45–16:00	Multi-scale Picture of Electron Heating near X-lines from MMS String-of-pearls Campaign	Kevin Genestreti
16:00–16:15	Magnetic Reconnection–Spatial versus Temporal Variability	Stephen Fuselier
16:15–16:30	Simultaneous MMS and TRACERS Observations of Reconnection in the Exterior and Low-altitude Cusp	Marit Øieroset
16:30–16:45	On the Amount and Cause of Ion Heating in Asymmetric Anti-parallel Magnetic Reconnection	Paul Cassack
16:45–17:00	Investigating the Role of Turbulence in Acceleration at Dipolarization Fronts	Sanjay Chepuri
17:00–20:00	Poster Session and Reception	
17:20–18:20	Science Working Group Meeting at COAS 4F, Dean’s Conference Room	



# 2026 MMS SWT Meeting

## Scientific Program

### Day 2 – Wednesday, June 24

<b>Wednesday, June 24, 2026 (Day 2)</b>		<b>Location: Henderson Welcome Center</b>
<b>Session 1:</b>	<b>09:00–10:30</b>	<b>Joo Hwang</b>
	<b>Flank Processes and Plasma Transport</b>	
<b>09:00–09:05</b>	<b>Opening Remarks</b>	
<b>09:05–09:20</b>	<b>Kelvin–Helmholtz Instability at the Terrestrial and Planetary Magnetopause: Simulation and Observations</b>	<b>Xuanye Ma</b>
<b>09:20–09:35</b>	<b>Magnetosphere-Ionosphere Coupling via Kelvin–Helmholtz Waves</b>	<b>Kyunghwan Dokgo</b>
<b>09:35–09:45</b>	<b>MMS Observations of Extended Kelvin–Helmholtz Wave Activity and Associated Magnetic Reconnection Signatures at Distant Tailward Magnetopause Flanks</b>	<b>Christy Lentz</b>
<b>09:45–09:55</b>	<b>Visualization of reconnection embedded in Kelvin–Helmholtz structure</b>	<b>Richard Denton</b>
<b>09:55–10:10</b>	<b>Energy exchanges across the Earth magnetopause during Kelvin–Helmholtz Instability</b>	<b>Adriana Settino</b>
<b>10:10–10:20</b>	<b>Formation and Effects of Diamagnetic Cavities and interaction with KHI</b>	<b>Katariina Nykyri</b>
<b>10:20–10:30</b>	<b>Magnetospheric Sash and Mantle: MMS Observation and Global Hybrid Simulation</b>	<b>Chih-Ping Wang</b>
<b>10:30–10:45</b>	<b>Coffee Break</b>	
<b>Session 2:</b>	<b>10:45–12:15</b>	<b>William Matthaeus</b>
	<b>Turbulence</b>	
<b>10:45–10:55</b>	<b>Opening Remarks</b>	
<b>10:55–11:15</b>	<b>Evidence of a Sub-Electron Kinetic Range in Strong Magnetotail Turbulence</b>	<b>Tien Vo</b>
<b>11:15–11:35</b>	<b>Scaling Relationships of Skewness and Kurtosis with Reynolds Number in Kinetic Plasmas</b>	<b>Victoria Wang</b>
<b>11:35–11:55</b>	<b>Turbulent Fluctuations at the Outer Scale are the Driver of Magnetic Reconnection</b>	<b>Bilal Khan</b>
<b>11:55–12:15</b>	<b>Multispacecraft Measurement of Energy Dissipation Rate</b>	<b>Zhuoran Gao</b>
<b>12:15–13:45</b>	<b>Lunch</b>	



# 2026 MMS SWT Meeting

## Scientific Program

### Day 2 – Wednesday, June 24

<b>Wednesday, June 24, 2026 (Day 2)</b>		<b>Location: Henderson Welcome Center</b>
<b>Session 3:</b>	<b>13:45–15:15</b>	<b>Yu-Lun Liou</b>
	<b>Crossing-Scale Couplings in Space Plasmas</b>	
<b>13:45–13:58</b>	<b>The Role of Kinetic Instabilities and Waves in Collisionless Magnetic Reconnection</b>	<b>Daniel Graham (Virtual)</b>
<b>13:58–14:11</b>	<b>Local Cross-Scale Energy Transfer in Plasma Turbulence</b>	<b>Yan Yang</b>
<b>14:11–14:24</b>	<b>The Evolution of Parallel Electric Field across the Earth’s Magnetosheath</b>	<b>Yi Qi</b>
<b>14:24–14:37</b>	<b>Evolution of Dipolarization Fronts during Earthward Transport as Observed by the MMS</b>	<b>Tyler Metvier</b>
<b>14:37–14:50</b>	<b>Substorm vs Non-Substorm Reconnection in the Magnetotail</b>	<b>Andy Marshall</b>
<b>14:50–15:03</b>	<b>Evolution of the Kelvin–Helmholtz Instability in a Finite-Width Boundary Layer: MMS Observations and 2D MHD Simulations</b>	<b>Dinesh Veypatty Radhakrishnan</b>
<b>15:03–15:15</b>	<b>Identification of 3-D reconnection</b>	<b>Joo Hwang</b>
<b>15:15–15:30</b>	<b>Coffee Break</b>	
<b>Session 4:</b>	<b>15:30–17:00</b>	<b>Li-Jen Chen</b>
	<b>System Science and Space Weather: MMS as a Part of HSO</b>	
<b>15:30–15:48</b>	<b>The January 19-20, 2026 storm as seen from L1 and MMS</b>	<b>Roy Torbert</b>
<b>15:48–16:06</b>	<b>A Brief Summary of Recent Geoeffective CMEs</b>	<b>Steve Petriner</b>
<b>16:06–16:24</b>	<b>From L1 to MMS to ground: Capturing variability and impacts of solar wind transients</b>	<b>Sarah Vines</b>
<b>16:24–16:42</b>	<b>Simulating TRACERS and MMS during the January 2026 Storm with MAGE</b>	<b>Kevin Pham</b>
<b>16:42–17:00</b>	<b>Sampling the Magnetosphere with MMS, TRACERS, and OCHRE</b>	<b>Brendan Powers</b>
<b>18:30–21:30</b>	<b>Reception and Dinner at 31 Supper Club</b>	



# 2026 MMS SWT Meeting

## Scientific Program

### Day 3 – Thursday, June 25

<b>Thursday, June 25, 2026 (Day 3)</b>		<b>Location: Henderson Welcome Center</b>
<b>Session 1:</b>	<b>09:00–10:30</b>	<b>Yi Qi</b>
	<b>MMS Early Career Science Highlights</b>	
<b>09:00–09:15</b>	<b>Evidence for Nested Heavy-Ion (<math>O^+</math>, <math>He^+</math>) Diffusion Regions at the Dayside Magnetopause</b>	<b>Jason Beedle</b>
<b>09:15–09:30</b>	<b>Bursty Bulk Flow Identification with Machine Learning</b>	<b>Brendan Powers</b>
<b>09:30–09:45</b>	<b>Efficient Electron Heating in an Electron-Only Magnetic Reconnection in Earth’s Magnetotail</b>	<b>Jiutong Zhao</b>
<b>09:45–10:00</b>	<b>A New X-line Model: Comparison to MHD Magnetic Separator and Observations</b>	<b>Bayane Michotte de Welle</b>
<b>10:00–10:15</b>	<b>MMS Observations and MAGE Simulated Reconnection Rate During the January 19–21, 2026 Storm</b>	<b>Brandon Burkholder</b>
<b>10:15–10:30</b>	<b>Observation of Magnetic Reconnection Onset in a Fragmented Multi-layer Current Sheet in Earth’s Magnetotail</b>	<b>Xinmin Li</b>
<b>10:30–10:45</b>	<b>Coffee Break</b>	
<b>Session 2:</b>	<b>10:45–12:15</b>	<b>Stephen Fuselier</b>
	<b>Outstanding Science Questions</b>	
<b>12:15–13:45</b>	<b>Lunch</b>	
<b>Session 3:</b>	<b>13:45–17:00</b>	<b>Katariina Nykyri</b>
	<b>Roundtable Science Discussion</b>	
<b>13:45–14:05</b>	<b>Effective Viscosity and Energy Dissipation in Nearly Collisionless Plasmas</b>	<b>Subash Adhikari</b>
<b>14:05–14:25</b>	<b>Zeroth Law of Turbulence Extended to Collisionless Plasmas</b>	<b>Riddhi Bandyopadhyay</b>
<b>14:25–17:00</b>	<b>Roundtable Discussion</b>	

**Friday, June 26, 2026 (Day 4) Location: COAS 4F Dean’s Conference Room**