

JGR Special Issue Topics

1. MMS observations of cold ion heating in asymmetric reconnection
Statistics of energetic particle escape at the magnetopause
2. Species dependent leakage of energetic particles across Earth's magnetopause
3. A survey of substorm particle injections observed concurrently by the MMS constellation and the Van Allen Probes spacecraft
4. Examining the relationship between energetic particle injections, chorus waves, and Earth's outer radiation belt: A case study with Magnetospheric Multiscale (MMS) and Van Allen Probes
5. Anatomy of a hot flow anomaly shock and its role in energetic particle acceleration: A case study with Magnetospheric Multiscale (MMS)
6. Advances in our understanding of the Generalized Ohm's Law using in-situ data from MMS in the context of magnetic reconnection
7. MMS observations of intrusive fast flows and cold plasma in the inner magnetosheath generated in association with an interplanetary pressure pulse.
8. Wave-particle interactions in the flux-pileup region of asymmetric reconnection at the magnetopause
9. Rapid changes in field-line connectivity observed by EDI on MMS
10. Simulation analysis of microinjections
11. A theory of microinjection formation and their consequences
12. Generation of current sheets in the terrestrial magnetosheath
13. Cold ions in reconnection region
14. Electron heating at thin current sheets in magnetosheath
15. Anisotropic electron distributions and waves in the EDR
16. A nearly continuous observation of the plasmasphere from near the dayside reconnection site to the inner radiation belt
17. Conjugate observations of dipolarization front evolution by MMS and Geotail

18. Evolution of standing toroidal Alfvén waves
19. Kinetic-scale structures and correlations in the turbulent magnetosheath
20. Plasma density estimates from spacecraft potential using MMS observations in the dayside magnetosphere
21. Force balance and magnetopause structure and dynamics
22. Force-free and non force-free flux transfer events
23. Whistler-mode waves observed at the Earth's bow shock by MMS
24. Identifying guide field reconnection in the tail
25. Magnetospheric Multiscale observations of field-aligned currents at the magnetopause
26. Fine structures of secondary flux rope at Earth's magnetopause observed by MMS
27. Statistics of solitary waves in the magnetotail using using the solitary wave detector
28. A statistical study of electromagnetic and electrostatic waves near the diffusion region and on the separatrix.
29. High latitude convection dynamics during Magnetospheric Multiscale magnetopause magnetic reconnection observations
30. Bifurcated electron scale current sheet at the magnetopause
31. Dissipation of magnetic fields in the reconnection region by wave-particle interactions.
32. Observations of electron-scale current sheets and associated electron energization in magnetosheath turbulence
33. A statistical study of small-scale magnetic holes in turbulent magnetosheath plasma: MMS observations
34. New insights on whistler turbulence in Earth's magnetosheath using MMS data
35. Electron-scale current sheets at the vicinity of active magnetopauses
36. Experimental evaluation of the Ohm's law in the diffusion region around reconnection onset
37. Non-stationarity of the magnetopause: analysis of sublayers

38. MMS observations of protons and heavy ions energization by stochastic fluctuations in the Earth's magnetotail
39. The role of turbulence in the dynamics magnetic reconnection.
40. Parallel electric fields and waves at the earth's bow shock.
41. Electrostatic waves driven by cold electrons associated with dayside reconnection.
42. Interplay between mirror mode waves and electron whistler waves in the magnetosheath.
43. Flux rope dynamics associated vortex-induced reconnection.
44. Mapping the geometry of the inner plasma sheet boundary using the MMS solitary wave detector.
45. MMS observations of heavy ion heating in a dayside reconnection exhaust
46. Distribution of Dayside Magnetopause Reconnection locations observed by MMS during Phase 1x
47. Magnetospheric ion contributions to magnetopause reconnection
48. Heavy ion dynamics in FTEs
49. Examining the spectral break between ion and electron velocity fluctuations
50. MMS Observations of Diamagnetic Drift at Earth's Dayside Magnetopause
51. Comparison of MMS Sub-ion Scale Current Sheet Crossings with Global MHD Simulations
52. MMS encountered the tail lobes on 23 June 2015, observing multiple counter-streaming ion beams traveling parallel/antiparallel to the local magnetic field in the plasma sheet boundary layer, illuminating the processes through which local wind ionospheric outflows are processed to supply the hot plasma sheet
53. Particle dynamics at and near the electron and ion diffusion regions
54. Plasma Turbulence in Earth's Magnetosheath Observed by the Magnetospheric
55. Multiscale Mission over the First Sub-Solar Apogee Pass
56. MMS FPI observations of low energy ions coexisting with, or possibly effecting, Flux Transfer Events
57. A New Understanding of Agyrotropy in Magnetic Reconnection

58. Ion heating rates in the lobe/plasmasheet transition region
59. During a plasma sheet boundary layer encounter on 23 June 2015, MMS observed multiple field-aligned counterstreaming ion beams. Using our combined MHD/test particle approach we identified a possible source mechanism for these beams: single and multiple acceleration at a near-tail reconnection site and earthward propagating dipolarization fronts with intermediate mirroring closer to Earth.
60. Detecting a Measure of Field Line Violation and Associated Length Scales in MMS Data
61. Analysis of MMS observations of Ion Cyclotron Waves in the Magnetosheath