

1.3-new Mission Phases and Science Regions of Interest

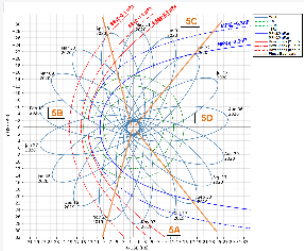
Resources and notes on MMS Operations through the years. Teams members are welcome to add additional notes as they deem helpful.

Contents

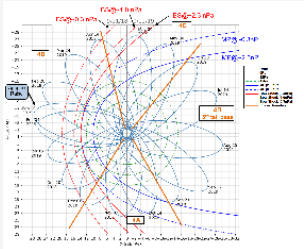
- [Current Year](#)
 - [Year 5: 1 Sept 2019 - 30 Sept 2020](#)
- [Previous Years](#)
 - [Year 4: 1 Sept 2018 - 30 Aug 2019](#)

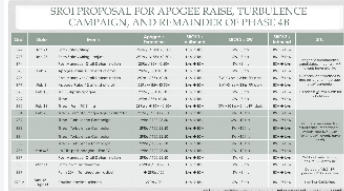
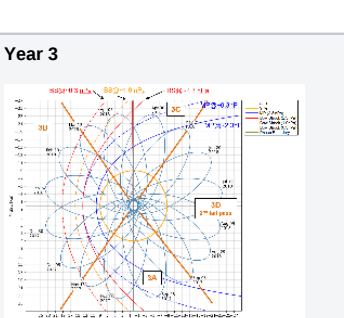
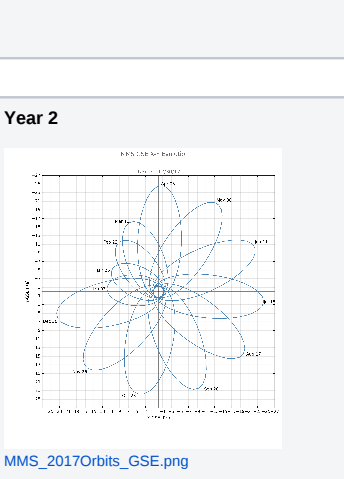
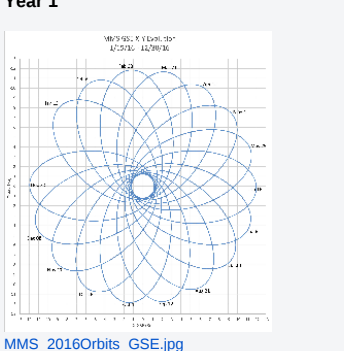
Current Year

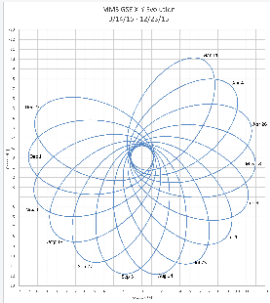
Year 5: 1 Sept 2019 - 30 Sept 2020

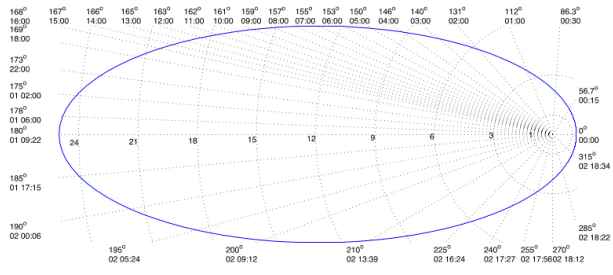
	Phase	Region	Timeline Files from S. Petrinec These are planning files, not actuals	Additional Notes
Year 5  MMS_Year5_Orbits&Phases.png	Extended Mission Year 3 Phase 5a: ~09/30/2019 - 11/24/2019	29 R _E Dusk Flank	MMS_EM5A_orbits_20190821.pptx timelines_orbs1046_1061.pdf fast_mode_times_agse1_EM5A.dat offsets submitted	3 SROI
	Phase 5b: ~11/24/2019 - 04/23/2020	29 R _E Dayside	MMS_Ph5B_ConOps_20191029.pptx	3 SROI Parker Solar Probe perihelion alignment 11/28-11/30 - formation resize to <20km> 11/26 (DOY 330) - 34% moon shadow 12/27 (DOY 361) - 73% moon shadow - timeline Solar Wind SROI: FPI electrons: 4eV-940eV / FPI ions: 197eV-9222eV
	Phase 5c: ~04/23/2020 - 06/19/2020	29 R _E Dawn Flank	MMS_Ph5C_ConOps_20200227.pptx	Formation resize to 40km: planned for 4/14-16/2020
	Phase 5d: ~06/22/2020 - 10/02/2020	29 R _E Nightside	MMS_Ph5D_ConOps_20200519.pptx	Long Eclipses (~5.124 hr): 8/13/2020 and 8/17/2020

Previous Years

Year 4: 1 Sept 2018 - 30 Aug 2019	Phase	Region	Timeline Files from S. Petrinec These are the planning files, not actuals	Additional Notes
Year 4  MMS_Year4_Orbits&Phases.png MMS_2019Orbits_GSE.tiff	Extended Mission Year 2 Phase 4a: September 28, 2018	25R _E Dusk Flank (Dwell time outside BS (0.3 nPa < 10 hrs)	MMS_4A_SROIs_v2.pptx	3 SROI 20 km Oct 18
	Phase 4b: November 29, 2018	25R _E Dayside (Dwell time outside BS (0.3 nPa) > 10 hrs)	before apogee raise: MMS_half4B_SROIs_v2.pptx after apogee raise: MMS_4B_turbulencecampaign_SROIs_Final.pptx + timeline charts Ref: from Ergun --> guidelines for Solar Wind Turbulence Campaign Ref: from MOC --> TurbulenceCampaignFinal Dates.ppt	3 SROI Apogee raise to 29R _E 20 km Mar 13 Solar Wind Turbulence Campaign

 SWC Campaign Timeline	Phase 4c: ~April 16, 2019 - ~June 28, 2019	29R_E Dawn Flank (Dwell time outside BS (2.3 nPa) < 10 hrs)	MMS_proposed_SROIs_EM4C_26mar2019.zip	3 SROI 40 km May 22
SWCCampaign_timeline.jpeg				
Year 3  MMS Year 3 Orbits&Phases.png	Extended Mission Year 1 Phase 3a: September 1, 2017 Phase 3b: November 14, 2017 Phase 3c: March 13, 2018 Phase 3d: May 25, 2018	25R_E Dusk Flank 25R_E Dayside 25R_E Dawn Flank 2nd 25R_E Nightside	MMS_3a_SROIs_792-817_dusk_timelines.pdf MMS_3b_SROIs_818-860_dayside_timelines.pdf MMS_orbs_860_885_mp_timelines.pdf xy_aGSE_orb EMC_mp_bs_sw_final.png MMS_3d_SROIs_886_930_mtail_timelines.pdf	1 SROI Perigee Raise Oct 3 30 km Oct 11 20 km Nov 8 3 SROI, 1st use of SW modes 3 SROI 40 km May 16 3 SROI
Year 2  MMS_2017Orbits_GSE.png	Prime Mission Phase 2a: January 31, 2017 Phase 2b: May 1, 2017	Apogee raise, Dawn 1st 25R_E Nightside Completion of Prime Mission	No science ROIs planned in Phase 2A MMS_2b_SROIs_748-793_mtail_timelines.pdf	No FPI ops 60 km Feb 1 Apogee Raise Feb 9 160 km Apr 26 1 SROI 60 km May 18 30 km Jun 1 20 km Jun 29
Year 1  MMS_2016Orbits_GSE.jpg	Prime Mission Phase 1a: September 1, 2015 Phase 1x: March 8, 2016 Phase 1b: Sept 12, 2016	1st 12R_E Dayside 12R_E Dawn, Nightside, Dusk 2nd 12R_E Dayside	Petrinic_UPDATE_Sliding_ROI_timelines_ph1a.pdf No science ROIs planned in Phase 1x MMS_ph1b_avg13.5hr_pref1_v2.pdf	60 km DOY 259/260 (Sept 16/17) 25 km DOY 273/274 (Sept 30/Oct 1) 10 km DOY 287/288 (Oct 14/15) 40 km Dec 16 10 km Jan 13 No FPI Ops 40 km Mar 24 10 km Sep 1 7 km Sep 15

 MMS 2015 Orbits GSE	Commissioning: March 15, 2015	Nightside --> Dusk Flank	160 km DOY 188/190 (July 7/9) Selected datasets only BBF campaign
--	--	--	---

12R _E Orbit	25R _E Orbit	29R _E Orbit
similar graphic needs to be created	 MMS_25RE_Orbit.jpg	similar graphic needs to be created