

MOI Events Timeline

Activity / Event	Time (Eastern)	Time (Mountain)
<ul style="list-style-type: none"> -Transition to Mars Orbit Insertion (MOI) Phase -Start MOI Nominal Sequence -Start Propellant Tank Pre-Heating for MOI -Open Latch Valve 30 (Main Engine Latch Valve) -Enable Automatic Safe Mode Recovery and MOI Sequence Restart 	MOI - 3 Days September 18, 2014	
Navigation Advisory Group (NAG) Recommendation for Trajectory Correction Maneuver (TCM)5a	MOI - 26:20 19:30 September 20, 2014	MOI - 26:20 17:30 September 20, 2014
Commanded Reaction Wheel Desat	MOI - 25:00 20:50 September 20, 2014	MOI - 25:00 18:50 September 20, 2014
Targeted TCM5a Burn Start Time (if required)	MOI - 23:37 22:13 September 20, 2014	MOI - 23:37 20:13 September 20, 2014
First Fault Protection Reconfiguration	MOI - 20:00 01:50 September 21, 2014	MOI - 20:00 23:50 September 20, 2014
NAG Recommendation for TCM5b	MOI - 07:20 14:30 September 21, 2014	MOI - 07:20 12:30 September 21, 2014
Targeted TCM5b Burn Start Time (if required)	MOI - 05:37 16:13 September 21, 2014	MOI - 05:37 14:13 September 21, 2014
<ul style="list-style-type: none"> -Disable Fault Protection Not Required to Complete the Burn -Pressurize the Propellant System -Configure the Vehicle for Fast Safe Mode Recovery 	MOI - 01:00 20:50 September 21, 2014	MOI - 01:00 18:50 September 21, 2014
Reconfigure for Low Gain Antenna (LGA) Communication throughout the Burn	MOI - 00:35 21:15 September 21, 2014	MOI - 00:35 19:15 September 21, 2014
Slew to the Burn Attitude	MOI - 00:20 21:30 September 21, 2014	MOI - 00:20 19:30 September 21, 2014

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Burn Attitude Slew Complete	MOI - 00:10 21:40 September 21, 2014	MOI - 00:10 19:40 September 21, 2014
MOI Burn Start – 01:50 UTC September 22, 2014		
-30 Second Settling Burn with 6 TCM Engines -Followed by Staggered Ignition of 6 Main Engines	MOI - 00:00 21:50 September 21, 2014	MOI - 00:00 19:50 September 21, 2014
Earliest Burn Completion	MOI + 00:32 22:22 September 21, 2014	MOI + 00:32 20:22 September 21, 2014
Nominal Burn Completion	MOI + 00:33 22:23 September 21, 2014	MOI + 00:33 20:23 September 21, 2014
Latest Burn Completion	MOI + 00:37 22:27 September 21, 2014	MOI + 00:37 20:27 September 21, 2014
Start the Slew Back to Earth Point	MOI + 00:45 22:36 September 21, 2014	MOI + 00:45 20:36 September 21, 2014
Earth Point Slew Completion	MOI + 00:55 22:46 September 21, 2014	MOI + 00:55 20:46 September 21, 2014
-Spacecraft Team verifies that it is safe to transition to High Gain Antenna (HGA) communication -Transition to HGA	MOI + 01:09 23:00 September 21, 2014	MOI + 01:09 21:00 September 21, 2014
-MOI Burn Confirmation -Detailed Vehicle State Assessment	MOI + 02:10 00:00 September 22, 2014	MOI + 02:10 22:00 September 21, 2014
Navigation Orbit Verification	MOI + 03:39 01:30 September 22, 2014	MOI + 03:39 23:30 September 21, 2014

Transition Events Timeline

Activity / Event	Date
-Transition to Transition Phase Configuration -Optional Imaging UltraViolet Spectrograph (IUVS) Observation	September 22, 2014
Periapsis Lowering Maneuver (PLM) 1	September 24, 2014
Period Reduction Maneuver (PRM) 1	September 26, 2014
PRM 2	October 2, 2014
-Background Sequence 2 -Thruster Calibration	October 3, 2014
PLM 2	October 5, 2014
-Particles and Fields Package Checkout -Periapse Time Estimation (PTE) Data Collection	October 6, 2014
Neutral Gas and Ion Mass Spectrometer (NGIMS) Pre-Deploy Checkout 1	October 7, 2014
PRM 3	October 9, 2014
Langmuir Probe and Waves (LPW) Deployment	October 10, 2014
Articulated Payload Platform (APP)/Solar Wind Electron Analyzer (SWEA) Deploy	October 11, 2014
APP Calibration/Remote Sensing (RS) Checkout	October 13, 2014
NGIMS Checkout 2/Cover Deploy	October 14, 2014
Comet Siding Spring (CSS) Science (IUVS Imaging)	October 16, 2014
CSS Preparation/Recover	October 19, 2014
Post CSS Spacecraft Checkouts	October 22, 2014
PLM 3	October 23, 2014
Extreme UltraViolet (EUV) Course and Fine Cruciform Scans	October 24, 2014
LPW Sync and Modes	October 26, 2014
APP Solar Energetic Particle (SEP) and Magnetometer (MAG) Scans	October 28, 2014
Electra Bit Error Rate (BER), Sniff, Switch Exercise	October 29, 2014
PLM 4	October 30, 2014
APP Calibration/RS Checkout Repeat	October 31, 2014
LPW Ping Test	November 3, 2014
MAG Roll	November 4, 2014
NGIMS Checkout 3	November 5, 2014
-Engineering Dry Run -Electra Mars Science Laboratory (MSL) Relay Pass	November 6, 2014
Orbit Trim Maneuver 0	November 7, 2014
Science Start	November 8, 2014