



The MMS Science Data Center. Operations, Capabilities, and Data Availability.

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On September 1, 2015 the Magnetospheric MultiScale (MMS) constellation of satellites completed their six-month commissioning period and began collecting data under nominal conditions. Science operations for the mission are conducted at the Science Operations Center (SOC) at the Laboratory for Atmospheric and Space Physics, University of Colorado, Boulder, Colorado, USA. The Science Data Center (SDC) is a component of the SOC responsible for the data production, management, distribution, archiving, and visualization of the data from the Solving Magnetospheric Acceleration, Reconnection, and Turbulence (SMART) instrument package on board the spacecraft. The mission collects several gigabytes of particle and field data per day, but the constraints on download volumes require efficient tools to manage the selection, transmission, and analysis of data to determine the highest value science data to downlink. This is the Scientist-in-the-Loop (SITL) program and is a critical piece of the MMS science data operations.

As of March 2016, MMS science data is available to the entire science community. This includes both the survey data as well as the ultra-high resolution burst data downlinked through the SITL process. This presentation will explain the data and demonstrate the tools available to the community via the SDC so as to encourage as many scientists as possible to look at the wealth of magnetospheric data being produced and made available from MMS.