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FOR IMMEDIATE RELEASE

Siena Physics Department Awarded NASA Grant

Loudonville, NY -- February 26, 2008 -- Siena College was awarded a \$655,000 NASA grant to provide support for the Vector Electric Field Instrument (VEFI) on the U.S. Air Force's Communication/Navigation Outage Forecasting System (C/NOFS) and design a portion of the Fast Plasma Imager (FPI) instrument for NASA's Magnetospheric Multiscale (MMS) mission.

The Air Force commissioned the C/NOFS mission to study the effects of the ionosphere on radio signals sent from space-based assets to the ground. Two phenomenon in particular (Spread-F and Scintillation) can interfere with the radio signals associated with GPS and communications signals. Interference with GPS can result in anything from slightly degraded accuracy of ground-based receivers to full loss of GPS signals while the interference with communications systems range from a degradation of satellite based voice and data systems through full loss of communications. The C/NOFS satellite (pictured) has completed integration at General Dynamics in Gilbert, AZ and is scheduled to launch April 14, 2008.



MMS is a Solar-Terrestrial Probe mission comprising four identically instrumented spacecraft that will use Earth's magnetosphere as a laboratory to study the microphysics of three fundamental plasma processes: magnetic reconnection, energetic particle acceleration, and turbulence. These processes occur in all astrophysical plasma systems but can be studied in situ only in our solar system and most efficiently only in Earth's magnetosphere, where they control the dynamics of the geospace environment and play an important role in the processes known as "space weather." Siena College engineer, Joe Kujawski, is working on the design of the Dual Electron Spectrometer. His work involves undergraduate students and is being conducted in the Space Sciences Lab in the Department of Physics at Siena College.

Figure 1 - Siena College's Engineer-in-Residence Joe Kujawski standing next to the Air Force's Communications/ Navigation Forecasting System (C/NOFS) satellite. Photo courtesy of General Dynamics.

Further information on Siena College's role with NASA can be obtained by contacting Dr. Allan Weatherwax or Mr. Joe Kujawski.