

Recent Space Science Research at the University of New Hampshire



University of
New Hampshire

For the past sixty years, UNH researchers (including students) have provided hardware and science leadership for numerous NASA missions. Here we highlight some of our most recent projects.

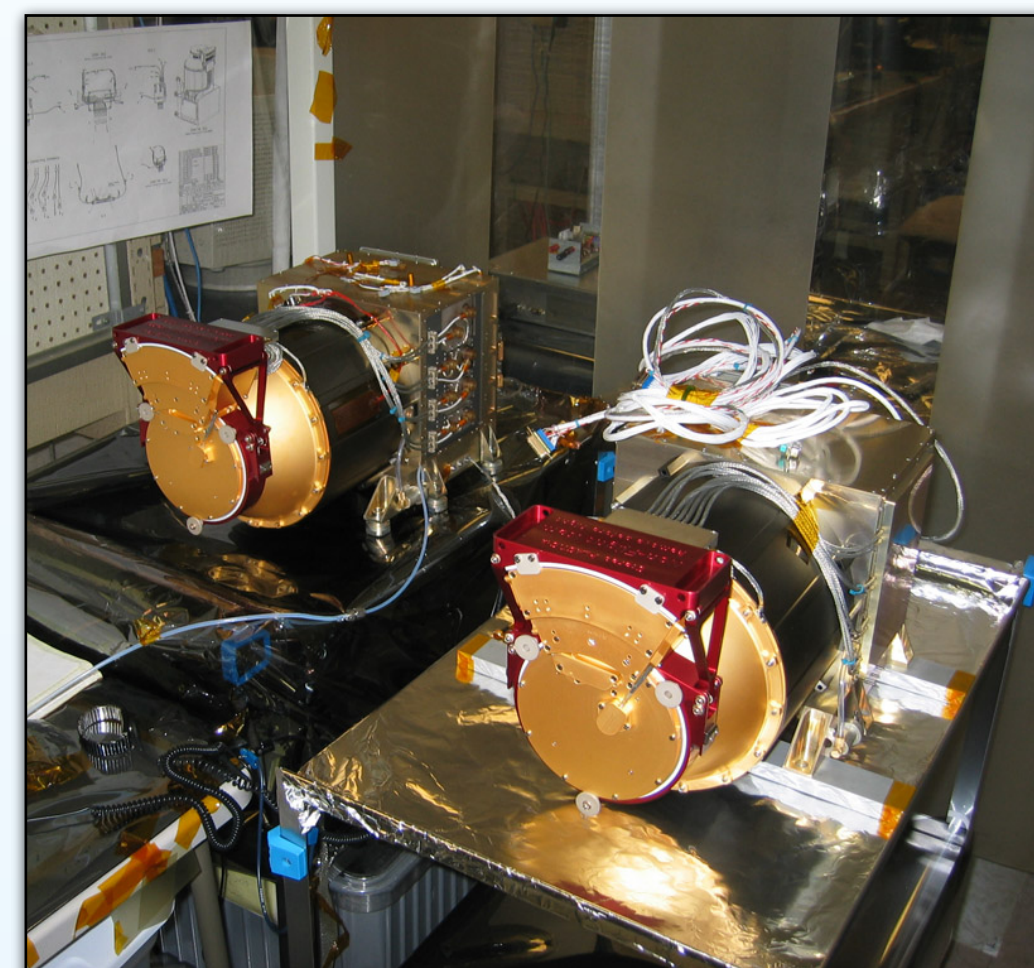
Magnetospheric MultiScale (MMS) Mission



MMS was launched in 2015 to study magnetic phenomena in the Earth's magnetosphere. Four identical spacecraft carry a total of 28 flight instruments that were designed and fabricated at UNH.



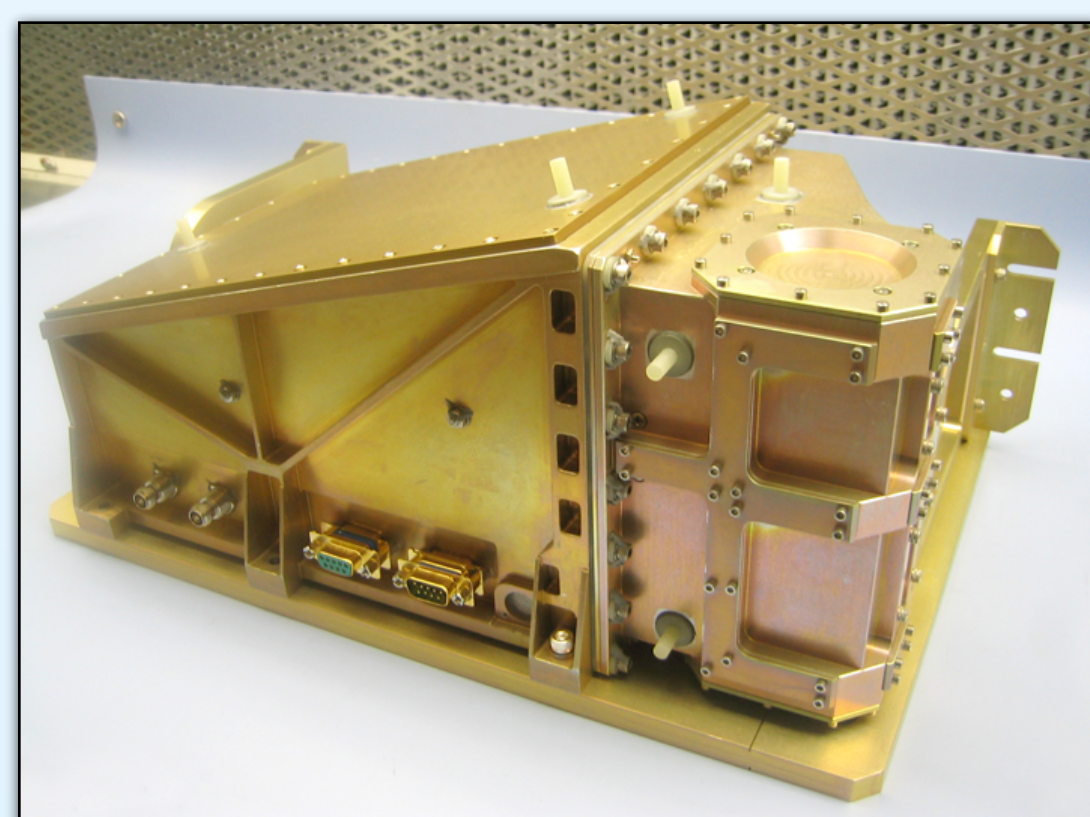
Solar Terrestrial Observatory (STEREO)



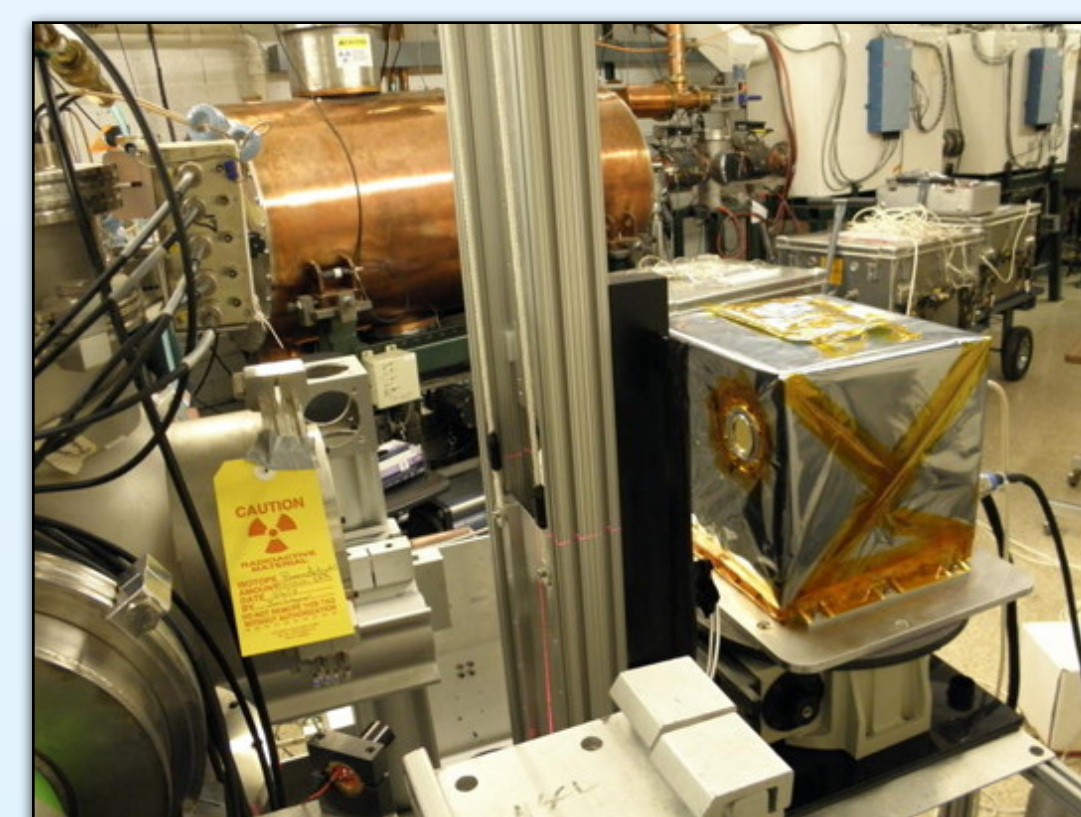
Launched in 2006, the two spacecraft STEREO mission a stereoscopic (3-D) view of the Sun and the interplanetary space environment. UNH provided, for each spacecraft, the The Plasma and Suprathermal Ion Composition (PLASTIC) instrument samples the solar wind and energetic particles.

Lunar Reconnaissance Orbiter (LRO)

UNH researchers provided the CRaTER instrument on LRO, which has been orbiting the Moon since 2009. CRaTER (Cosmic Ray Telescope for the Effects of Radiation) characterizes the global lunar radiation environment and its biological impacts.



GOES Energetic Heavy Ion Sensor (EHIS)



The energetic heavy ion sensor (EHIS) space weather instrument was designed, built and calibrated at UNH for the GOES-R weather satellite, which was launched in November of 2016.

Interstellar Boundary Explorer (IBEX)

The IBEX mission was launched in 2008 to sample particles from interstellar space. UNH played a major role in the development of the instruments, and provided important components of the instrument hardware.



Van Allen Probes (formerly RBSP)



The Van Allen Probes have been studying the Earth's radiation belts since 2012. The Energetic particle, Composition, and Thermal plasma (ECT) suite measures near-Earth space radiation particles to understand the processes that control the acceleration, global distribution, and variability of radiation belt electrons and ions.

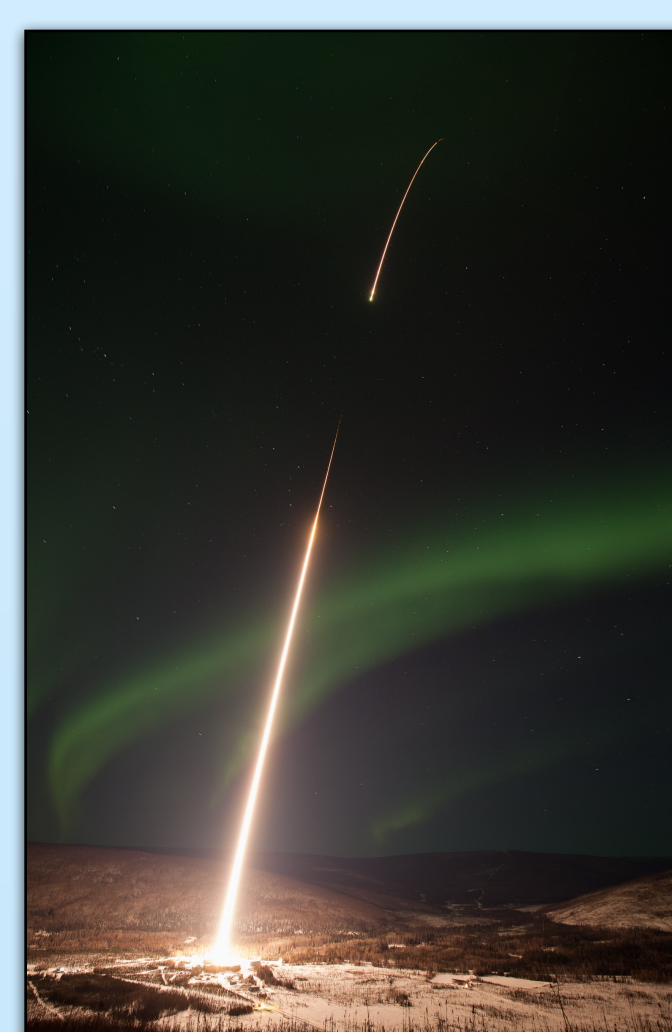
High Altitude Balloons

UNH has a long history of research with high altitude balloons, including a series of experiments in gamma-ray astronomy. The most recent flight took place in 2014.



Sounding Rockets

UNH has participated in a long series of sounding rocket launches to study particle interactions in the Earth's magnetic field. The first UNH rocket experiment took place in 1961. Recent missions concentrate on studies of the aurorae.



CubeSats

UNH provided the sensor assembly for the FIREBIRD (Focused Investigations of Relativistic Electron Burst Intensity, Range, and Dynamics) CubeSat mission launched in 2015.

