

Space Plasmas in the Solar System, including Planetary Magnetospheres (D)
Energetic Solar Particle Events - Past, Present, Future / Joint with E33 (D23)

INNER HELIOSPHERIC ENERGETIC PARTICLE OBSERVATIONS FROM MESSENGER

Dr. George Ho, george.ho@jhuapl.edu

Johns Hopkins University Applied Physics Laboratory, Laurel, Maryland, United States

David Lario, david.lario@jhuapl.edu

Johns Hopkins University Applied Physics Laboratory, Laurel, Maryland, United States

Robert Gold

Johns Hopkins University Applied Physics Laboratory

Stamatios M. Krimigis

Johns Hopkins University Applied Physics Laboratory (and Academy of Athens), Laurel, Maryland, United States

Barry Mauk

Johns Hopkins University Applied Physics Laboratory

Ralph L. McNutt, Jr.

Johns Hopkins University Applied Physics Laboratory, Laurel, Maryland, United States

NASA's MESSENGER mission to the planet Mercury includes a comprehensive set of advanced instruments. Launched in August 2004, MESSENGER thus far has successfully completed four planetary flybys (one of Earth, two of Venus, and one of Mercury) and is well on its way to complete two more Mercury flybys before insertion into orbit about Mercury in 2011. The spacecraft is currently cruising the inner heliosphere (0.3-0.6 AU), and a number of instruments are making cruise observations. Since June 2006, the Energetic Particle Spectrometer (EPS), one of two sensors for the Energetic Particle and Plasma Spectrometer (EPPS) instrument, has been measuring ions and electrons at energies greater than 30 keV, providing us the first energetic particle measurements in the inner heliosphere since the Helios mission in the 1970s. We present EPS observations from both solar energetic particles and in-situ shock-related energetic particle events, and we compare those observations with measurements made by the Advanced Composition Explorer spacecraft at 1 AU.