



RSPP seminars

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“The US National Science Foundation’s Active Magnetosphere and Planetary Electrodynamics Experiment (AMPERE): What is it? What has it done? What is NEXT?”

Brian J Anderson, Haje Korth, Sarah K Vines, Robin J Barnes, Colin L Waters, Regupathi Angappan, and Sabine Stanley

“The AMPERE project was begun in 2008 and relies on a flight software upgrade to the 66-satellite Iridium Communications constellation to downlink 10 to 100 times more data than designed for engineering needs. This presentation gives a brief overview of how AMPERE was implemented and the challenges faced in data processing and data product generation. Some of the many new science results based on AMPERE data products are reviewed and then the future plans are discussed, including the Iridium NEXT satellites, more than 2/3 of which have already been launched. Finally, one upgrade in the works for AMPERE is an improvement of the baselines (zero levels) for the Birkeland current analysis. The Iridium data which provide complete coverage over the Earth with 2 degrees in longitude by 1.5 degrees in latitude in just two hours and it turns out that a single day of data from Iridium can yield spherical harmonic amplitudes of Earth’s main field up to degree and order 12 with accuracies of 2 to 3 nT suggesting that the data can prove valuable for much more than Birkeland currents alone”.



Thursday, April 19th at 2 pm in Physics LTD