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PLASMON: Progress in Characterising the Plasmasphere

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Man and equipment in space are affected by the energetic charged particles in the radiation belts. The degree of exposure is determined by the rate of Relativistic Electron Precipitation (REP), which is driven by wave-particle interactions. The properties of the plasmasphere determine the interaction rate. Current models of the plasmasphere do not encompass all of the structure or physics, and observations are sparse. PLASMON will provide regular measurements of plasmaspheric electron and mass densities across all longitudes and incorporate them into a data assimilative model. The observations and model will also be linked to measurements of REP.

This poster describes the progress made during the first year of the PLASMON project.