



PROGRESS: Fusion of forecasts from the Sun to the Earth

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The particle environment of the inner magnetosphere is strongly coupled to variations in the solar wind. The introduction of large fluxes of electrons into the radiation belts and their subsequent acceleration to high energies can result in the internal and surface charging of space assets, possibly leading to disruption and even cessation of essential services. Reliable forecast of the fluences of these electrons can assist in the mitigation of undesirable effects on spacecraft.

PROGRESS, an EU Horizon 2020 funded project, aims to provide forecasts of the evolution of the geospace environment beginning from the surface of the sun to the radiation belts. We review the current status of the projects and the challenges that still lie ahead.