

Space weather simulations with the Space Weather Modeling Framework

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The Space Weather Modeling Framework (SWMF) aims at providing a flexible framework for physics based space weather simulations. The SWMF combines numerical models of the Solar Corona, which includes the Eruptive Event Generator, the Inner Heliosphere, Solar Energetic Particles, Global Magnetosphere, Inner Magnetosphere, Radiation Belt, Ionosphere Electrodynamics and Upper Atmosphere into a parallel, high performance model. All the components can be replaced with alternatives, and one has the option to use only a subset of the components. The SWMF enables us to do simulations that were not possible with the individual components. We highlight some numerical simulations obtained with the SWMF.