

THE SPACE WEATHER MODELING FRAMEWORK: PROGRESS AND CHALLENGES

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The Space Weather Modeling Framework (SWMF) is a powerful tool for coupling regional models describing the space environment from the solar photosphere to the bottom of the ionosphere. Presently, SWMF contains 13 components: the solar corona (SC), eruptive event generator (EE), inner heliosphere (IE), outer heliosphere (OH), solar energetic particles (SE), global magnetosphere (GM), inner magnetosphere (IM), radiation belts (RB), plasmasphere (PS), ionospheric electrodynamics (IE), polar wind (PW), upper atmosphere (UA) and lower atmosphere (LA). This talk will present an overview of SWMF, new results obtained with improved physics (Hall MHD and multifluid MHD) as well as some validation studies.

Space weather; global models; model validation

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