



Daily Solar Flare Forecasts Based on SDO Observations of Solar Magnetic Complexity

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We herewith present a new empirical model of strong solar flares. Neural networks have been trained to recognise the relationship between the magnetic field complexity of active regions and strong solar flares. SHARP (Space weather HMI Active Region Patches) parameters have been used as indicators of the magnetic complexity. GOES 1-8 Å X-ray fluxes described intensities of solar flares.

The model's operational space weather forecast capabilities was tested against SHARP near real-time data.

An operational version of the model will be available on the website of the Swedish Space Weather Center (SRC) of International Space Environment Service (ISES).