

Monitoring and forecasting of the solar and inner heliophere disturbances

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NICT is in charge of operation of the Japanese space weather forecast center (RWC) and development of forecasting and alert technique. In this report, we will introduce our R & D activity toward the solar and inner heliosphere monitoring and forecast.

In a decade, geomagnetic field disturbance prediction technique has made great stride such as real-time MHD simulation by using real-time solar wind data from ACE spacecraft. In contrast, forecasting capability of the solar flare and solar energetic particles (SEP) is still infant although requirement by user such as manned space mission operation is urgent. In this report, some topics toward real-time alert of solar flare and SEP are introduced:

- Space weather monitoring with small satellite
- Leading patrol experiment by using STEREO RT beacon
- Solar observation by NICT
- RT event detection and alert service (operational)

As an example of recent outcome, a topic of manned space flight support activity by NICT will be also included.