Development of satellite operation warning system for spacecraft using Space Weather Forecast

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http://sees.tksc.jaxa.jp/

The Space Environment Measurement Group in Institute of Aerospace Technology (IAT) /Japan Aerospace Exploration Agency (JAXA) has been developing Space Environment Effects System (SEES).

SEES is a database of data and models about space environment (high-energy particles, cosmic ray, atomic oxygen, plasma, geomagnetic field, etc.) and the effects (electric static discharge, single events, radiation damage of solar cells and ICs, degradation of thermal control materials, etc.)

SEES also provides alert mailing service.

The purpose of this service is to prevent on-orbit satellite anomaly from the harsh space environment events, when large solar flares happen, and severe geomagnetic storms occur. This system is to generate space environment alerts that are based on real-time space environment data and solar X-ray data taken by geosynchronous satellites.

The alert mail system has been used in satellite operations and protection for astronauts on board international space station (ISS).

The SEES URL is "http://sees.tksc.jaxa.jp/". This web-page is written in Japanese, English and French.