

PEM021-P20

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Space Environment and Effects System (SEES)

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Space environment group in JAXA has installed instruments to measure space environment on eleven satellites. In the last year, the biggest instrument called SEDA-AP (Space Environment Data Acquisition equipment ?Attached Payload) was attached to the palette of JEM (ISS). On the other hand, we have a web site, Space Environment and Effects System(SEES). This system consists of four parts. First part is to provide data that were obtained from these instruments. There are 18 kinds of measurements, for example, radiation, magnetic field and so on. In 1994, Anik E-1 and Anik E-2 were broken by solar storm and we could catch the abnormal data from our instrument. Second part is a warning system. Many Japanese satellites are working around the earth and they are always exposed to radioactivity in space. So we predict the radiation data in two days and if the expected value is over the threshold of safety, we inform a warning message to users who want to keep their satellites safe. And we also provide the warning message for Japanese astronauts who stay at ISS. Third part is the tool of the space environment /satellite environment models. There are 12 kinds of environment models which are constructed from 90 space environment models, for example, radiation model, solar activity model and so on. If you register your information in the SEES web site, you can simulate space environment by using them. Fourth part is providing the 2D and 3D informations of satellite's orbits. This shows the satellite's position on the world map at a particular time. If you want to use this system, please visit our SEES page at (<http://seesproxy.tksc.jaxa.jp/fw/dfw/SEES/index.html>).

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