

## Observation results and current status of SEDA-AP on the ISS - "Kibo" Exposed Facility

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To support future space activities, it is very important to acquire space environmental data related to space radiation degradation of space parts and materials and spacecraft anomalies. Such data are useful for spacecraft design and manned space activity.

On several satellite of the Japan Aerospace Exploration Agency (JAXA) since the Engineering Test Satellite-V (ETS-V), Technical Data Acquisition Equipment (TEDA) and SEDA have been installed for obtaining the data described above.

SEDA-AP measures space environment data on ISS orbit. SEDA-AP comprises common bus equipment supporting launch, RMS handling, the power/communication interface with JEM-EF, an extendible mast that extends the neutron monitor sensor 1 m separate from the bus structure, and equipment that measures space environment data. It has eight environment monitoring sensors, which measure neutrons, heavy ions, plasma, high-energy electrons and protons, atomic oxygen, space debris and dusts.

SEDA-AP was lanced on July 16 in 2009, and attached to Exposed Facility (EF) of "Kibo" on July 25 using the robot arm of "Kibo". Initial checkout was started on August 4 and successfully ended on September 17. The regular operation period ended in 2011. Afterwards, later operation period of three years has started, and operation is being continued now.

We will report the observation results and the current status of SEDA-AP.

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