Operation Plan and Data Processing System of JEM-GLIMS Mission

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In order to study the occurrence conditions and generation mechanisms of Transient Luminous Events (TLEs), lightning and TLE observations named JEM-GLIMS (Global Lightning and sprIte MeasurementS on JEM-EF) will start this year. JEM-GLIMS instruments will be launched by H-IIB rocket with HTV carrier and installed at Exposed Facility of Japanese Experiment Module (JEM-EF) of International Space Station (ISS). In this mission two kinds of optical instruments and two sets of radio receivers are employed. After the installation, JEM-GLIMS instruments will be checked their health during the initial operation phase, which is planned to take a few months. After the initial operation, nominal operation phase will start. In this nominal operation, JEM-GLIMS instruments will be operated by TLE mode mainly, which is the observation mode of lightning and TLEs when ISS located night-side. All science data acquired by optical and electromagnetic instruments are continuously transmitted to the ground with a 5.8 kbps telemetry speed, which enables to obtain 53 optically transient events. All these level-0 data are stored in JAXA data server and transmitted to ISAS/JAXA data processing system. After these level-0 data are converted into level-1 data, they will be distributed to the JEM-GLIMS mission members. We will present the mission schedule, operation mode and data processing system more in detail at the presentation.

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