

## Operational space weather monitoring from Japanese geostationary satellites: future mission

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Operational space weather monitoring in space, which means routine observations of space environment for long years from spacecraft and its data distribution in quasi-realtime to public, is necessary for space weather forecasting and end users. We are proposing two space weather monitoring missions as hosted payloads on future Japanese geostationary satellite. The first mission aims to monitor space radiation that cause spacecraft malfunction and exposure of astronauts and aircrews. Currently, space radiation in the geostationary orbit of Japanese meridian is observed by SEDA (Space Environment Data Acquisition monitor) onboard Himawari 8 and 9. We consider continuing space radiation monitoring by next Japanese meteorological satellite with new sensors which can observe wider energy ranges and higher sensitivities than current one, and with a new charging monitor for the purpose of measuring distribution of charges in spacecraft materials. The second mission aims to monitor disturbances of ionosphere and plasmasphere that affect radio propagation, e.g., satellite communications, navigations, etc. We consider developing two sensors for the second mission: one is a global imager of far ultraviolet emission that can detect occurrences of equatorial plasma bubbles, second is a multi-frequency GNSS receiver for the purpose of plasma observation in the plasmasphere by radio-occultation diagnostics. These sensors are considered as hosted payloads on a geostationary satellite near the Japanese meridian. We will present details and latest status of our mission.

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