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Space weather monitor KSEM on board the Korean geostationary satellite GEO-KOMPSAT-2A

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A suite of space weather monitors aboard the second Korean geostationary satellite GEO-KOMPSAT-2A has been developed for monitoring of the space weather. The instrument consists of a set of three energetic particle detectors, a magnetometer with four sensors, and a spacecraft charging monitor. The energetic particle detectors simultaneously measure the population of charged particles in the energy range of at least 100 keV ~ 2 MeV for electrons and 100 keV ~ 12 MeV for protons, respectively, over the six different viewing angles [1]. The magnetometer, as contributed from the European Space Agency (ESA), collects magnetic field vectors at four different locations, two on a deployable boom and two within the spacecraft [2]. These vectors combine to cancel magnetic fields from the spacecraft and yield accurate measurements of geomagnetic field. The flight model development of KSEM is now complete. In this presentation, results of KSEM development are summarized together with a description of the expected performance and data from the instrument.

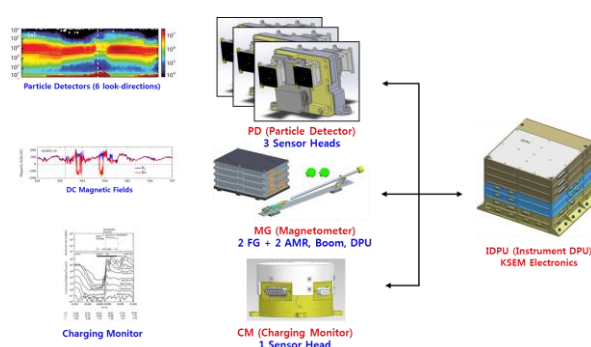


Fig. 1 Configuration of space weather monitor KSEM aboard GK2A geosynchronous satellite

References

- [1] Seon et al. Proc. Korean Space Science Society, Spring meeting, II-2-2 (2017)
- [2] Auster et al., Proc. ESA Workshop on Aerospace EMC (2016)