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SPACE ENVIRONMENT MONITORING SYSTEM IN NEW GENERATION GEOSTATIONARY
METEOROLOGICAL SATELLITE OF CHINA

Abstract

Feng Yun 4(FY-4) is a second-generation Meteorological Remote Sensing earth observation satellite of China, which has been launched in Dec.19th,2016. On board FY-4, Space Environment Monitoring System(SEMS) has four functions: Particle Detection, Magnetic Field Detection, Radiation Dose Detection and Satellite Surface Changing Detection. SEMS consisted of seven payloads, including 3 High Energy Particle Detector(HEPD), 1 Magnetometer(MTM),1 Charging Potential Probe(CPP), 1 Radiation Dosimeter(RD) and 1 Remote Control Center. The HEPD instruments will detect proton with 3 directions, electron with 9 directions. Magnetometer will monitor magnetic field intensity between -400nT and +400nT. CPP will monitor Relative Surface Voltage from -10KV to +1KV, Absolute Surface Voltage from -20KV to -100V, +100V to +1KV, Deep Surface Voltage from -2.5KV to 0V. RD will monitor dose from 0 rad to 200,000 rad. This report will show the lasted detection results, and SEMS will be playing more important role in space weather.