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Current Status of MPPE (Mercury Plasma Particle Experiment) on BepiColombo/MMO

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Mercury's plasma/particle environment has gradually become clear thanks to the new observations made by MESSENGER spacecraft orbiting around Mercury. However, it is also true that many questions will be left unsolved. In order to elucidate the detailed plasma structure and dynamics around Mercury, an orbiter BepiColombo MMO (Mercury Magnetospheric Orbiter) is going to be launched in 2016 as a joint mission between ESA and ISAS/JAXA. Mercury Plasma/Particle Experiment (MPPE) is a comprehensive instrument package for plasma, high-energy particle and energetic neutral atom measurements. It consists of 7 sensors: two Mercury Electron Analyzers (MEA1 and MEA2), Mercury Ion Analyzer (MIA), Mass Spectrum Analyzer (MSA), High Energy Particle instrument for electron (HEP-ele), High Energy Particle instrument for ion (HEP-ion), and Energetic Neutrals Analyzer (ENA). Currently, the MPPE sensors are on the MMO spacecraft under system integration test at ISAS/JAXA (Institute of Space and Astronautical Science / Japan Aerospace Exploration Agency). Evaluation of the sensor calibration data and the final check of the onboard processing software are being made in order to realize the flawless future plasma/particle observations around Mercury.