

Performance of the Extreme Ultraviolet Imager (EUVI) of ISS-IMAP mission

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The Extreme Ultraviolet Imager (EUVI), which is the part of ISS-IMAP (Ionosphere, Mesosphere, upper Atmosphere and Plasmasphere mapping) mission, was successfully launched in July 2012 and began its on-orbit operations. EUVI has two prime-focus telescopes that are designed to detect the resonantly scattered emissions from He⁺ (at the wavelength of 30.4 nm) and O⁺ (83.4 nm) respectively. In order to clarify the plasma transport process in Earth's upper atmosphere, EUVI observes distributions of He⁺ and O⁺ in the ionosphere and plasmasphere.

The optical instruments consist of multilayer coated mirrors, metallic thin filters and microchannel plate detectors. The EUVI ground calibration has been carried out and the total sensitivities are estimated to be 0.060 cps/R for He⁺ and 0.0023 cps/R for O⁺.

In this poster, the instrumental design and performance of EUVI are presented.

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