

Mini-EUSO: a precursor mission on the International Space Station for the observation of Atmosphere and Earth in the UV light

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For any experiment aiming at the observation of Ultra High Energy Cosmic Rays (UHECR's) from space, one key measurement is related to the UV emissions produced in the Earth's atmosphere. In view of planned missions under study (KLYPVE/K-EUSO, JEM-EUSO, EUSO-FF) at the International Space Station (ISS) and on board of free-flyer satellites, a small, compact UV telescope, Mini-EUSO, is being developed by the JEM-EUSO International Collaboration to be placed –in the second half of 2017 - at the UV-transparent, nadir looking window of the Russian module of the ISS. In addition to the main purpose of studying the UV background, Mini-EUSO will also perform studies of atmospheric phenomena, observation of meteors, strange quark matter search and space debris tracking. It will as well enhance the technological readiness level of the EUSO concept and instruments. Mini-EUSO is a mission approved and selected by the Italian Space Agency (ASI) and, under the name “UV atmosphere”, by the Russian Space Agency Roscosmos. Scientific, technical and programmatic aspects of this project will be discussed.

Presentation type

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