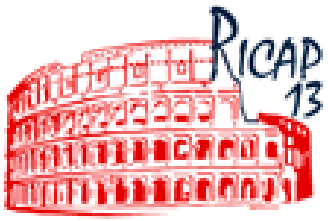

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UHECR observation by JEM-EUSO space mission: status and perspectives

Thursday, 23 May 2013 10:00 (20)

The JEM-EUSO experiment, Extreme Universe Space Observatory at the Japanese Module of the International Space Station, is the first space mission devoted to the scientific research of cosmic rays of highest energies. JEM-EUSO will address basic problems of fundamental physics and high-energy astrophysics studying the nature and origin of the Ultra High Energy Cosmic Rays (E > 3×10^19 eV). The JEM-EUSO instrument basically consists of an UHECR telescope assisted by an atmosphere monitoring device and controlled by a calibration system. Its super-wide-field telescope looks down from the International Space Station onto the night sky to detect UV photons emitted from air showers generated by UHECRs in the atmosphere. The optic system, the focal surface electronics and the infrared camera are in advanced stage of development and they will be tested and calibrated on ground (EUSO-TA) in the next months at (and with) the Telescope Array experiment in Utah, and next year on board of a stratospheric Balloon (EUSO-Balloon) in collaboration with the French Space Agency CNES.
13 Countries, 77 Institutes and about 280 researchers are collaborating in JEM-EUSO, with the support of the most important International and National Space Agencies and research funding institutions.

Summary

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