

An overview of the JEM-EUSO mission

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JEM-EUSO will be the first observatory to explore from space the universe at ultra-high energies. Hosted on the JEM platform on board the ISS, it will use an innovative refractive optics and sophisticated focal surface to observe the UV fluorescence light emitted, in the 320-400 nm band, by extensive air showers generated by primary particles interacting in the atmosphere. The telescope will achieve an unprecedentedly large effective aperture and a very uniform exposure in declination over the whole celestial sphere, which are beyond the capabilities of present ground-based observatories. The main scientific objectives will include the measurement of the energy spectrum at the highest energies of the cosmic ray spectrum, including the yet unexplored region of a possible recovery, and anisotropy studies with large statistics which will allow for the possibility of point-source charged-particle astronomy. In this presentation, the status of the mission, its scientific potential and performance will be reviewed.

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