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Observation of neutrinos with JEM-EUSO: an updated view

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Similarly to extreme energy cosmic rays (EECRs), neutrinos at energies exceeding 5×10^{19} eV are expected to interact in the Earth's atmosphere and create extensive air showers. The JEM-EUSO mission, developed to be hosted onboard the JEM module of the International Space Station, aims at detecting these extensive air showers from space by means of the fluorescent and diffusively reflected Cherenkov light they produce. In the present paper we investigate the capability of JEM-EUSO to trigger, and detect neutrino induced events. We also discuss the reconstruction of the primary particles' main properties. In this study we consider the most recent design of JEM-EUSO, which will be launched with Falcon 9 and delivered to the ISS by the SpaceX Dragon free-flying spacecraft.

Collaboration

JEM-EUSO

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