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## The JEM-EUSO mission

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### Abstract content

JEM-EUSO is a science mission to explore extremes of the Universe. It will observe the darkside of the Earth and detects UV photons emitted from the extensive air shower caused by an extreme energy particle (about 1020 eV). Such a particle arrives almost straightly through our Milky Way Galaxy and is expected to allow us to trace the source location by its arrival direction. This nature can open the door to the new astronomy with charged particles. In its five years operation including the tilted mode, JEM-EUSO will detect at least 1,000 events with  $E > 7\text{-}10^{19}$  eV and determine the energy spectrum of trans-GZK region with a statistical accuracy of several percent. JEM-EUSO is planned to be transported by HTV (H2 Transfer Vehicle) and will be attached to the Japanese Experiment Module/ Exposure Facility (JEM/EF) of International Space Station. JAXA has selected JEM-EUSO as one of the mission candidates of the second phase utilization of JEM/EF for the launch of early 2010s. The phase-A study is being carried out under JAXA.

### Summary

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