Abstract Submitted
for the APR15 Meeting of
The American Physical Society

The JEM-EUSO mission LAWRENCE WIENCKE, Colorado School of Mines — The mission of Extreme Universe Space Observatory (EUSO) on the Japanese Experiment Module (JEM) of the International Space Station (ISS) will be to study the origin of extreme energy cosmic rays (EECRs) above 100 EeV. JEM-EUSO will measure the energy spectrum and arrival directions of EECRs over the full sky with a single instrument designed to achieve an exposure an order of magnitude above ground-based detectors. A wide-field (60 degrees) telescope with 2.5 m diameter entrance aperture will look down on the earth from the space and record data during night segments of the ISS orbit. It will detect near UV photons emitted by the extensive air showers created by EECRs that impact the earth's atmosphere. The arrival direction map of these air showers will allow the identification of the nearest EECR sources with known astronomical objects and the understanding of the acceleration and propagation mechanisms. If their fluxes are sufficiently large, neutrinos and gamma rays may also be observed.

Lawrence Wiencke
Colorado School of Mines

Date submitted: 09 Jan 2015 Electronic form version 1.4