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Sensitivity of the orbiting JEM-EUSO mission to large-scale anisotropies

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The two main advantages of space-based observation of extreme-energy (>~10^19 eV) cosmic-rays (EECRs) over ground-based observatories are the increased field of view and the all-sky coverage with nearly uniform systematics. The former guarantees increased statistics whereas the latter enables a partitioning of the sky into spherical harmonics. We have begun an investigation, using the spherical harmonic technique, of the reach of JEM-EUSO into potential anisotropies in the extreme-energy cosmic-ray sky-map for several different source models. The technique is explained here, and first results are presented. The discovery of anisotropies would help to identify the long-sought origin of EECRs.

Primary authors: Prof. ANCHORDOQUI, Luis (University of Wisconsin Milwaukee); Mr DENTON, Peter (Vanderbilt University); WEILER, thomas (vanderbilt university)

Co-authors: Prof. BERLIND, Andreas (Vanderbilt University); Mr RICHARDSON, Matthew (Vanderbilt University)

Presenter: Mr DENTON, Peter (Vanderbilt University)

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