Abstract Submitted for the APR14 Meeting of The American Physical Society

Extreme Energy Particles with JEM-EUSO ANGELA V. OLINTO,

The University of Chicago, JEM-EUSO COLLABORATION — The origin of the highest energy cosmic rays is still a great mystery. Recent observations have confirmed the extragalactic origin of cosmic rays above tens of EeV, whose sources should be among the most powerful extragalactic objects. The spectrum shows the effect of propagation from cosmological distances or possibly the maximum energy reach of cosmic accelerators. The lack of significant anisotropies and a possible change of composition are surprising. Not a single source of these extremely energetic events has been identified. To identify the sources a significant increase in statistics is necessary. The pioneering Extreme Universe Space Observatory (EUSO) on the Japanese Experiment Module (JEM) of the International Space Station, JEM-EUSO, will detect a large number of extreme energy cosmic rays finally leading to an identification of these mysterious extreme accelerators.

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Date submitted: 10 Jan 2014 Electronic form version 1.4