

Medium-Energy Particle experiments - electron analyzer (MEP-e) for the ERG satellite mission

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Medium-Energy Particle experiments - electron analyzer (MEP-e) onboard Exploration of energization and Radiation in Geospace (ERG) spacecraft measures the energy and the direction of each incoming electron in the range of ~7 to 87 keV. The sensor covers 2-pi radian disk-like field-of-view with 16 detectors, and the solid angle coverage is achieved by using spacecraft spin motion. The electron energy is independently measured by an electrostatic analyzer and avalanche photodiodes, enabling the significant background reduction. We describe the technical approaches, data output, and examples of initial observations.