

## **Comprehensive Plasma/Particle Observations in the ERG Project for the Ultimate Understanding of the Geospace**

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The comprehensive observations for the space plasma/particles in the Geospace are essential for the ultimate understanding of the geomagnetic/space storm in the Earth's magnetosphere. The complete energy coverage should be realized by the plasma/particle instrument package consisting of multiple sensors. The sufficient energy overlapping is required for the quantification of the Geospace plasma/particle parameters and dynamics through the inter-instrumental calibration. The wide field-of-view of each sensor could be established through considering the interference with the satellite structure. This advanced and well-qualified plasma/particle instrument package on the ERG satellite will bring us the fruitful comparison with the observations of both the other instruments for the electric/magnetic fields and the plasma waves and the other satellite missions like ORBITALS and RBSP. It should also be noted that we promote the integrated research based on the satellite and ground-based observations and the data analysis/modeling in this Geospace exploration, which is the novel and unique feature of the ERG project leading the next generation of the space physics and planetary missions.