Low-energy particle instruments (LEPe and LEPi) to be onboard ERG spacecraft

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ERG spacecraft, which explores terrestrial inner magnetosphere, is planned to be launched in fiscal year 2016. We have developped LEPe (Low-energy electron energy spectrum analyzer) and LEPi (Low-energy ion energy mass spectrometer) instruments to be onboard ERG. They cover particle energies 19-19000eV (LEPe) and 10-25000eV/q (LEPi). Three dimensional distribution functions of electrons and ions in these energy ranges are believed to play significant roles on excitation of plasma waves such as Whistler waves, EMIC waves, and magnetosonic waves.These waves are considered to be closely related to acceleration and loss mechanisms of high-energy electrons in the inner magnetosphere. We will present performance and planned observation modes of the instruments.