

## Wire Probe Antenna and Electric Field Detector of Plasma Wave Experiment aboard ARASE: Evaluation results – II

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This paper shows the evaluation results of Wire Probe Antenna (WPT) and Electric Field Detector (EFD), which are one of the key parts of Plasma Wave Experiment (PWE) aboard the Arase (ERG) Satellite. The data qualifications and cautions revised from the first-year observations are shown for the scientists who expect to utilize this data sets.

It is well known that the potential and electric field measured by WPT and EFD has the tricky characteristics, which is common in the similar instruments aboard the MMS, Themis, and many previous spacecraft. Even though the Level-2 calibrated data are distributed, we need to summarize the potential problems for the data analyses of electric field in low frequency range caused by the effects of surrounding electron plasma characteristics on the spacecraft potential, wake effect caused by the spacecraft motions, and possible artificial contaminations, in order to support the fruitful scientific results from this valuable data sets with careful treatments. Possible comparisons with electron density and temperature with magnetic field data are newly added.