

MGI032-04

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粒子フィルタのプラズマ圏データ同化への応用 Application of the particle filter to data assimilation for a plasmasphere model

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The particle filter (PF) is an algorithm applicable to general data assimilation problems including non-linear and non-Gaussian problems. Since the PF is suitable for parallel computing, it is considered to be one of promising algorithms for data assimilation problems with high nonlinearity. In this study, we applied the PF to data assimilation for the Earth's plasmasphere. The plasmasphere is the innermost region in the magnetosphere filled with cold dense plasma. We describe the technical aspect of our data assimilation method and show results of applying this data assimilation technique to the plasmasphere.

キーワード: 粒子フィルタ, データ同化, プラズマ圏 Keywords: particle filter, data assimilation, plasmasphere