

PEM005-P02

Room:Convention Hall

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Analysis of real-time magnetosphere simulation data using location of magnetopause

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It is possible to study responses of magnetosphere to various solar wind conditions using the large data set of the real-time magnetosphere simulation, which runs routinely in the National Institute of Information and Communications Technology (NICT).

There are several previous works using the data of the real-time simulation such as comparison between observed and calculated AE-index (Kitamura et al., 2008), analysis of geomagnetic fields at geostational orbit (Watari et al, 2010 SGEPPS meeting), and so on.

Here, we analyzed location of magnetopause obtained by the result of the real-time magnetosphere simulation. There is an empirical model called the Shue model on the location of magnetopause. This model takes account of dynamic pressure and south-ward IMF of solar wind. Locations of magnetopause obtained by the result of the real-time simulation were compared with those calculated using the Shue model. It is found that magnetopause location obtained by the simulation shows good agreement with that calculated by the Shue model.

Keywords: magnetopause, magnetosphere, simulation