

MGI015-P07

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Tracing the motion of magnetic field line from three-dimensional global MHD simulation with extreme-high time resolution

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Comprehension on physics via numerical simulations is always restricted to its finite properties such as time steps and spatial grids. When we take enough resolution in a simulation settings for identifying physics ideally, it is indispensable to use the computing system where various resources are reliably and seamlessly interconnected, such as super-computer, huge data storage, and high-performance analyzing server. NICT currently develops such a system, called "Space Weather Cloud" service. As a practical example of using this Space Weather Cloud system, we will investigate in the present study how the temporal resolution in three-dimensional MHD simulations affects the features of magnetic field line motions during its interaction with the magnetosphere, including magnetic reconnection.