

Development of a real-time Geospace integrated simulator

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Space weather studies requires real-time numerical models of space environment along with various real-time observational data. Real-time numerical models not only give present information on space environment, but also predict upcoming space weather disturbances. Recently, a real-time magnetospheric MHD model has been developed by T. Tanaka of Kyushu University. The model is now operated at NICT to understand present state of the magnetosphere and to predict magnetic disturbances. However, it does not fully include particle effects and a realistic ionosphere-thermosphere model. To predict the environment of the upper atmosphere, we are developing a real-time Geospace model for space weather forecast. We will describe the current status and future prospect of the model.