

Information services and data analysis using space weather cloud

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It is called space weather that variation of space environment affects on artificial satellites, power grids, Global Navigation Satellite System (GNSS), and so on. It is difficult to cover only for observations to cover vast domain from the Sun to the Earth. Therefore, we need a computing environment where observation data and simulation data can be analyzed together. Moreover, amount of data which we need to handle has increased every year. To resolve those situation, National Institute of Information and Communications Technology (NICT) has developed "Space Weather Cloud computing system" which consists of a supercomputer, large storage system based on Grid Data Farm (Gfarm) technology. There are several information services using Space Weather Cloud. A web application called "Space Weather Board" enables users to make their customized data arrangement. Three-dimensional visualization of result of real-time space weather simulation is provided from a web server in the Space Weather Cloud. A movie program on weekly summary of space weather called "Weekly Space Weather News" is provided by a streaming server of the Space Weather Cloud. We will also report an example of analysis of the real-time simulation data of Earth magnetosphere and observation data using the Space Weather Cloud.

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