Present Status of NICT Space Weather Informatics Project: OneSpaceNet

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Variation of space environment, which causes failure of manmade infrastructure, such as satellites, is called space weather. Research of space weather covers vast geospace. Observation by spacecraft is important for space weather. However, it is difficult to cover whole area of geospace. We need a new research environment, which enables to analyze observation and simulation data together. For this, NICT starts to develop a new research environment called "Space Weather Cloud" Service. Core part of "Space Weather Cloud" Service is called "OneSpaceNet". Computing resources and data are shared among research institutes and universities in the OneSpaceNet. Now, the OneSpaceNet contains a high performance computer (NEX SX-8R), distributed mass storage system using the Gfarm technology, servers for visualization using AVS and IDL programs, RCM (R&D Chain Management) System for job service, servers for Solar-Terrestrial data Analysis and Reference System (STARS). It is possible to access the OneSpaceNet using the JGN2plus. A database of NICT ground-based observation is prepared for the OneSpaceNet now.

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