R011-09
C 会場 ：11/7　AM2 （10:45-12:30）
11:15〜11:30

EISCAT_3D レーダーのデータベースシステム開発状況

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Development status of the database system for EISCAT_3D radar

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EISCAT_3D is an international research infrastructure consisting of three (or five in the final design) phased-array incoherent-scatter radars in the northmost areas of Norway, Finland, and Sweden. The radar system will cover vast research fields, including studies of the atmosphere and near-Earth space environment, the solar system and radio astronomy, space weather forecast, and space debris monitoring. The EISCAT_3D is planned to start its operation in 2023.

The EISCAT_3D is different from the current EISCAT radar system in many aspects, and thus special considerations are needed for its database system. The multistatic configuration and rapid beam scanning capability of EISCAT_3D enable volumetric and interferometric imaging with broad spatial coverage in fine resolution. Data products from all sites are then collected via an optical fiber network for further processing, and final data products are registered on metadata catalogs. Since EISCAT_3D is designed to operate all the time remotely, data processing and metadata management must be fully automated, and the database must handle huge physical storage. Also, in contrast to the current EISCAT database, users who have access rights to the data must be strictly controlled for security reasons.

To fulfill these specifications, we have been reviewing software for metadata catalogs and distributed file storage systems. In this presentation, we will report the current development status of the database system of the EISCAT_3D.

本発表では、EISCAT_3D レーダーのデータベース開発状況について報告する。