

expressed in the Polar Cap (PC) index. The PC index can be considered an index for the power input from the solar wind to the magnetosphere. Part of this power is subsequently dissipated in substorm events, which cause the large magnetic disturbances at auroral and subauroral latitudes that may endanger power grids. On-line space weather monitoring from Thule in the central polar cap is an affordable enterprise, which is proposed to be included in space weather projects as an important supplement to space-based monitoring.

EISCAT_3D - Next Generation Incoherent Scatter Radar in Europe

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The EISCAT Scientific Association operates three incoherent scatter radars in Tromsø (Norway) and on Svalbard as well as additional receiver sites in Kiruna (Sweden) and Sodankylä (Finland). Currently the EISCAT Associates comprise Finland, China, Germany, Japan, Norway, Sweden, Ukraine, and the United Kingdom, as well as supporting partners France and Russia.

In the future, EISCAT will build the next generation incoherent scatter radar, which will provide comprehensive 3D monitoring of the atmosphere and ionosphere above Northern Fenno-Scandinavia. The EISCAT_3D radar system will consist of multiple phased arrays, using the latest digital signal processing to achieve ten times higher temporal and spatial resolution than the present radars.

The **European Strategy Forum on Research Infrastructures** (ESFRI) selected EISCAT_3D for the **Roadmap 2008** for Large-Scale European Research Infrastructures for the next 20-30 years. The facility will be constructed as a modular system by 2015.

EISCAT_3D will be a volumetric radar capable of imaging an extended spatial area with simultaneous full-vector drift velocities, having continuous operation modes, short baseline interferometry capability for imaging sub-beamwidth scales, real-time data access for applications and extensive data archiving facilities.

Here we will give an overview of this ambitious project, and invite interested parties to contribute to the planning of EISCAT_3D.

Radio Solar Flux Measurements in Belgium: 50 Years of Observations and Current Developments

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For nearly 50 years, measurements of the solar flux at 610 MHz have been performed daily by the Royal Observatory of Belgium in its radioastronomy station in Humain. These measurements have been recently digitized and will be put online.

New developments are currently ongoing to ultimately restart these measurements at 610 MHz, and to extend them to the microwave range between 1 and 10 GHz. One of the goal is to provide a local measurement of the F10.7 cm index for the operational space weather forecast activities of the SIDC. A collaboration, lead by our canadian partners from the DRAO and NRCan institutes has been set up to develop a new generation of solar flux monitors that will ensure high quality and calibrated measurements.

We present in this poster the status of the ongoing developments.

The Open Data Interface - ODI

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The Open Data Interface (ODI) is a database system for storing space environment data using MySQL. In addition to storing the actual data it is equally important to handle the metadata. The ODI systems stores the metadata and their association with the data. The system is compliant with the CDF/ISTP and COSPAR/PRBEM Guidelines. Currently there are about 50 datasets in the database such as IMP8/GME, SREM, XMM/ERMD, GOES particle and radiation data, and indices such as Dst, Kp, and SSN. Adding new datasets is straightforward and includes the editing of a CDF-style skeleton file to describe the metadata. If the raw data to be ingested are CDF files these are automatically converted before the data are stored into ODI. For non-CDF files, like plain text files, a few lines of code need to be edited to correctly parse the raw data files. As ODI is based on MySQL it is accessible to a large range of different software platforms. As part of the development, interfaces to IDL, PHP and Java have been developed, but the ODBC interface also can provide direct access from Excel, Matlab and many other programs. Interfaces to existing platforms can therefore be set up and the system has been integrated into three on-line systems: SAAPS, SEDAT, and SPENVIS.