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High-latitude space weather monitoring in Finland

Th. Ulich
Sodankylä Geophysical Observatory, Sodankylä, Finland (thu@sgo.fi, 358 16 619875)

Today, space weather is of important concern in many respects. Space weather phenomena are subject of extensive scientific research programmes and the consequences of space weather events are of great operational concern for a number of technologies including satellites, humans in space, and global positioning and communications. Due to the Earth's magnetic field, the high latitudes are most strongly affected by space weather phenomena. Naturally, monitoring and understanding of the high-latitude space environment is important for forecasting and modelling operational conditions.

The Sodankylä Geophysical Observatory (SGO) was established as a magnetic observatory in 1913. With the sole exception of a year at the end of WWII, the record of geomagnetic field variations is continuous. Since the IGY in 1957, many other routine measurements have been added to the observatory's operations and today SGO is a highly versatile observatory. Here we will present examples of high-latitude space weather data from a selection of instruments including the Sodankylä ionosonde, the Finnish Riometer Chain, and the Tomography (GNSS) receiver chain. We invite collaboration and use of our data products. We will further outline the current EU Framework VII "Access to Research Infrastructures" project of SGO "LAPBIAT2."