

2009 Fall Meeting
Search Results

Cite abstracts as **Author(s) (2009), Title, *Eos Trans. AGU*, 90(52), Fall Meet. Suppl., Abstract xxxxx-xx**

Your query was:
au=ulich

HR: 0800h

AN: **SM11B-1582**

TI: [On the definition of geomagnetic activity: Case study at the auroral Sodankylä station](#)

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AB: Here we demonstrate that the traditional separation of regular (Sq) and irregular geomagnetic variations is not a straightforward process at high latitudes. We use various methods in estimating the local geomagnetic activity at the auroral Sodankylä station, and compare their long-term properties. We show that at high-latitude the magnetic quiet daily curve cannot be classified purely as regular variation but, rather, an imprint of such current systems in the ionosphere and magnetosphere that are the actual causes of the irregular variations. That is, in this region the Sq variation is an organic part of geomagnetic activity itself. We also show that excluding certain part of the daily activity when defining a geomagnetic index, as in case of the IHV (Inter-Hourly Variability) index, leads to an estimate that inherently differs in its response to solar wind drivers from the other three hourly K-based measures of geomagnetic activity with full day coverage.

DE: [1555] GEOMAGNETISM AND PALEOMAGNETISM / Time variations: diurnal to decadal

DE: [2784] MAGNETOSPHERIC PHYSICS / Solar wind/magnetosphere interactions

DE: [7900] SPACE WEATHER

SC: SPA – Magnetospheric Physics (SM)

MN: 2009 Fall Meeting

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