

The Prospects of Citizen Science Magnetometers: Simple Aurora Monitor - III (SAM-III)

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Introduction

This is an introduction that introduces

Geomagnetic Disturbances

SWUG Project

COPIED ABSTRACT FROM AUSTIN (CHANGE):

Dynamic interaction between the solar wind and the Earth's magnetosphere can create strong geomagnetic field disturbances and trigger Geomagnetically Induced Currents (GICs). GICs can cause dramatic space weather impact such as damage to high-voltage power transformers and increased corrosion of pipelines. Ground observations of geomagnetic fields are widely used for GIC studies, but their spatial coverages are not sufficient to capture a localized GIC event. The UAF Space Weather UnderGround (SWUG) education outreach program will build a cost-effective and research-capable array of magnetometers across Alaska and provide high-spatial resolution geomagnetic field data with $1 \frac{nT}{s}$ accuracy. Thus, the UAF SWUG array data will improve our understanding and prediction of GICs

More about: SWUG website, Austin's Capstone

SAM-III Magnetometers

Simple Aurora Monitor - III or SAM-III is...

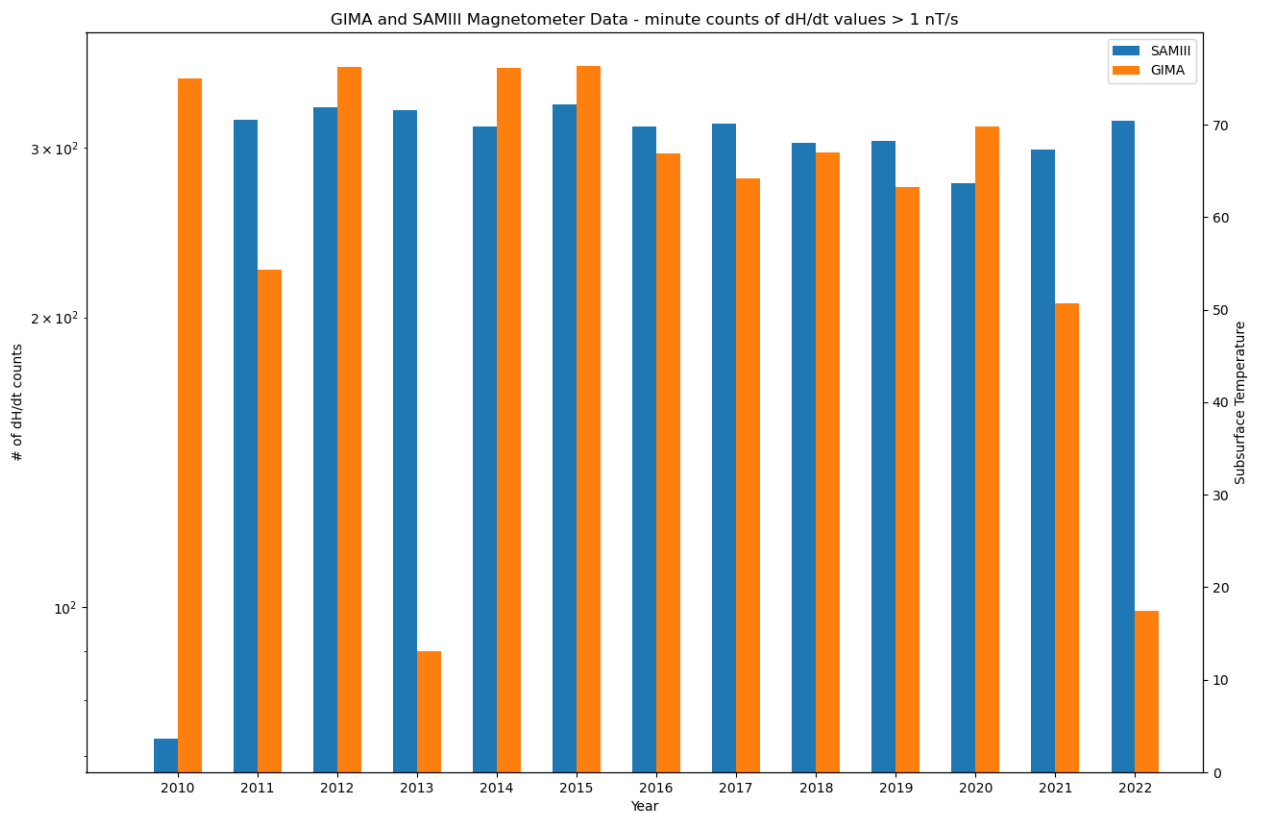
GIMA Magnetometers

Geophysical Institute Magnetometer Array or GIMA is...

Methodology

Python and pandas data processing...

Results



Conclusion

There is much potential with this data.