



Space Weather Timeline Viewer

application to 2024's active space weather events

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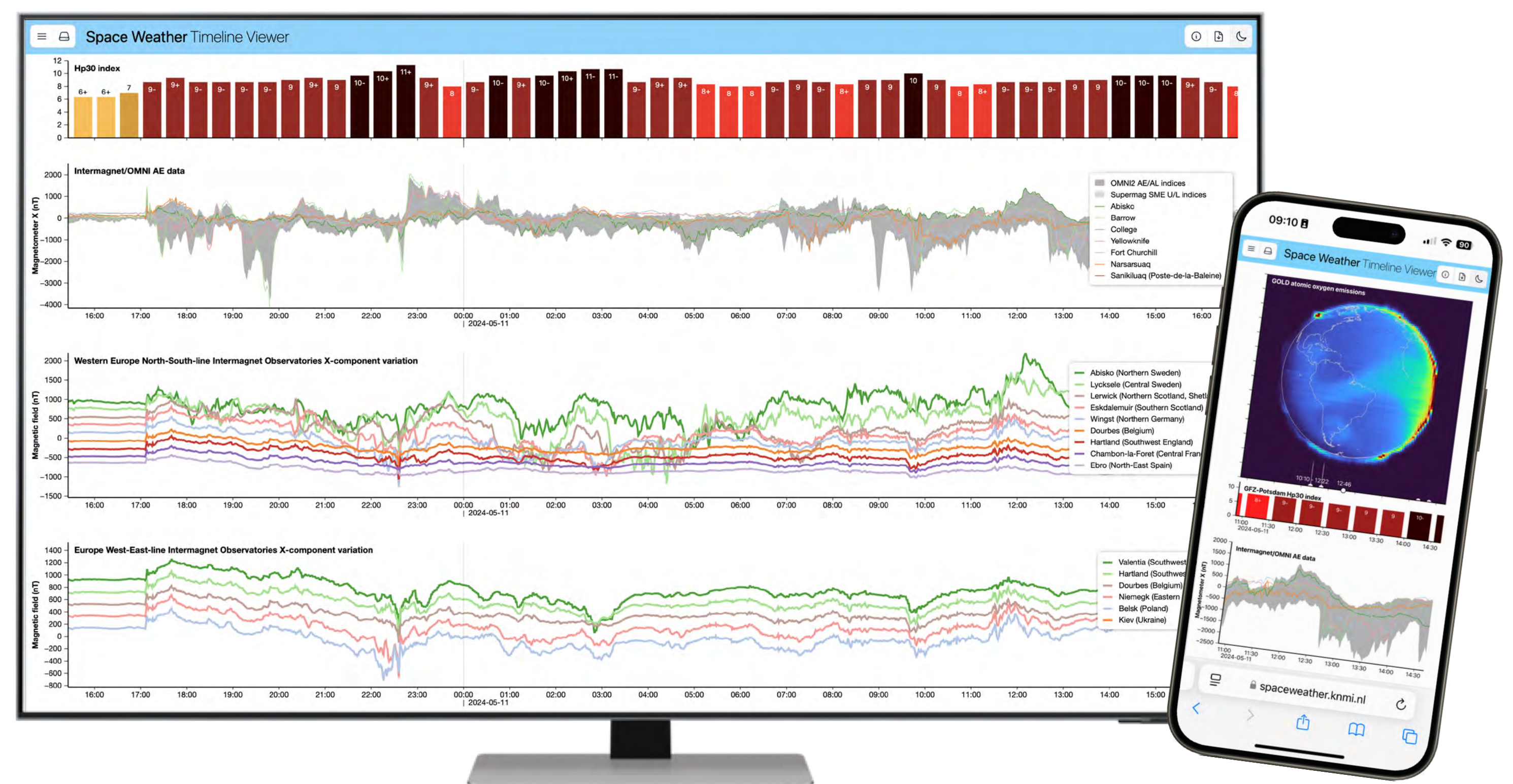
Introduction

The Space Weather Timeline Viewer is an easy-to-use interactive web application, providing quick access to visualisations of space weather data. The tool is free to use without registration, and works in web browsers on desktop computers and most mobile devices.

The Timeline Viewer makes use of HAPI servers, to provide time series data. It comes with a server containing up-to-date real-time and archived space weather data, so it can be used for live monitoring, as well as training and education for historic space weather events.

It can also be used for scientific space weather case studies, through the inclusion of data such as NASA GOLD images of ionospheric UV emissions, ESA Swarm in-situ measurements of magnetic perturbations and thermosphere-ionosphere parameters and JPSS VIIRS Day-Night-Band imaging of visible aurora.

This presentation highlights the large variety of data and visualisation possibilities, in the context of the space weather events in 2024.



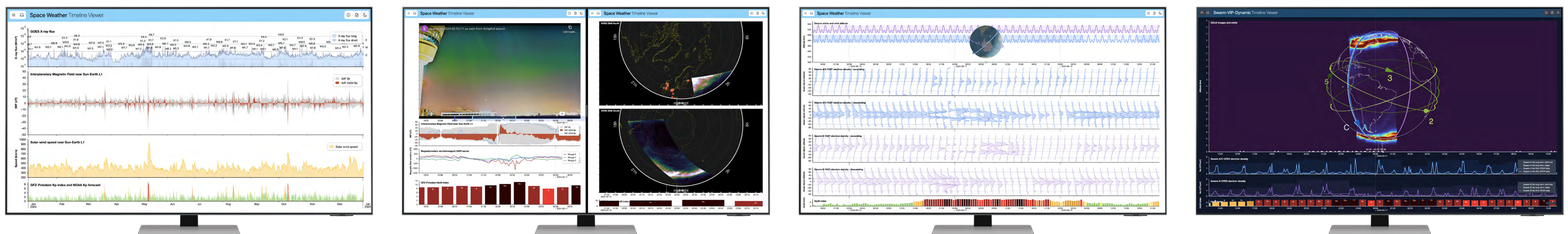
Try out the timeline viewer

The space weather timeline viewer is available at:
<https://spaceweather.knmi.nl/viewer/>

Or just scan the QR code and add it to your bookmarks.



Examples of data and visualisation layouts in the Space Weather Timeline Viewer



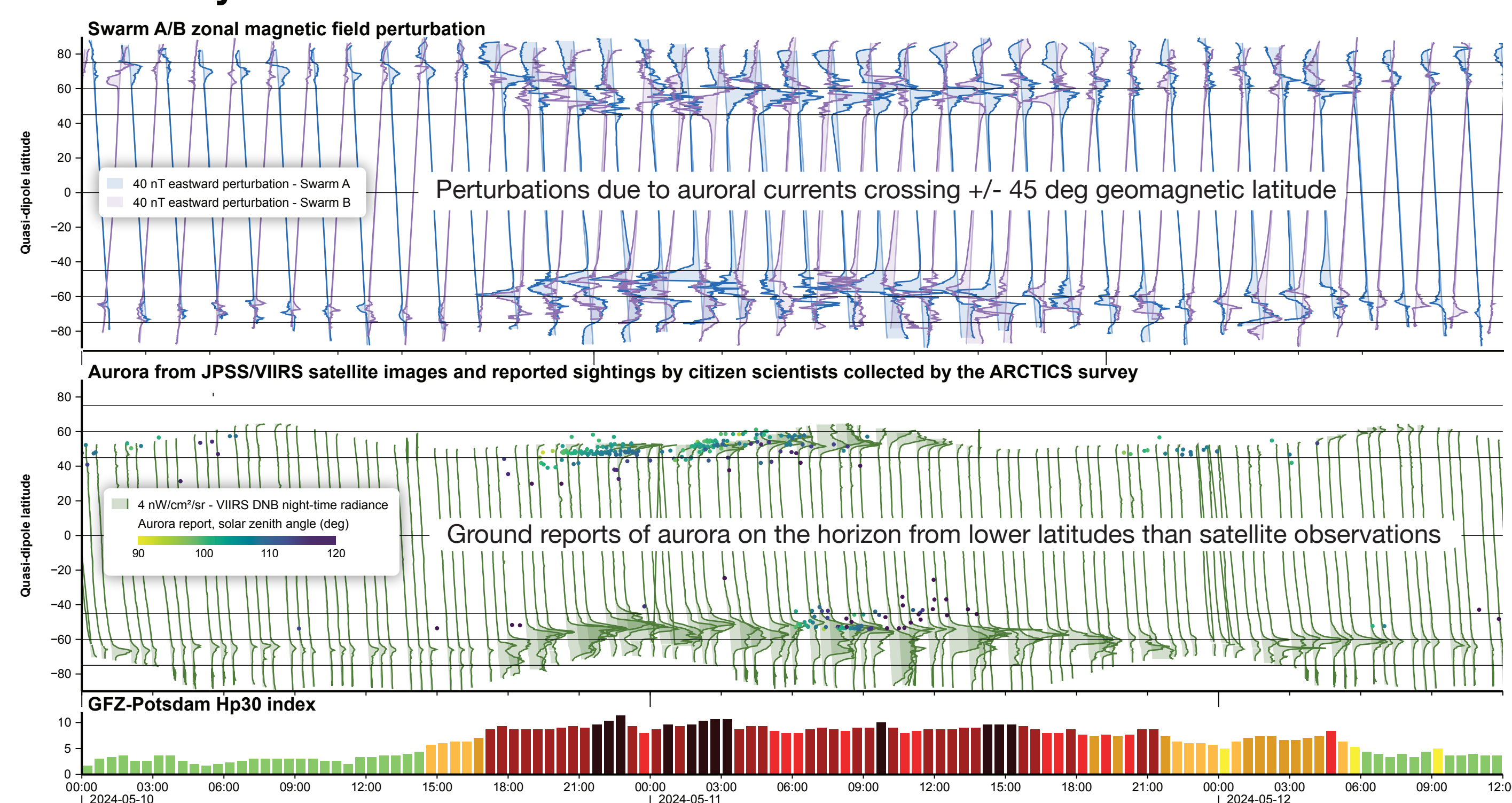
Comparison of the May and October 2024 geomagnetic storms

These figures highlight the latitude extent of geomagnetic perturbations due to auroral currents, as well as visible aurora, from the ESA Swarm and JPSS VIIRS Day-Night-Band.

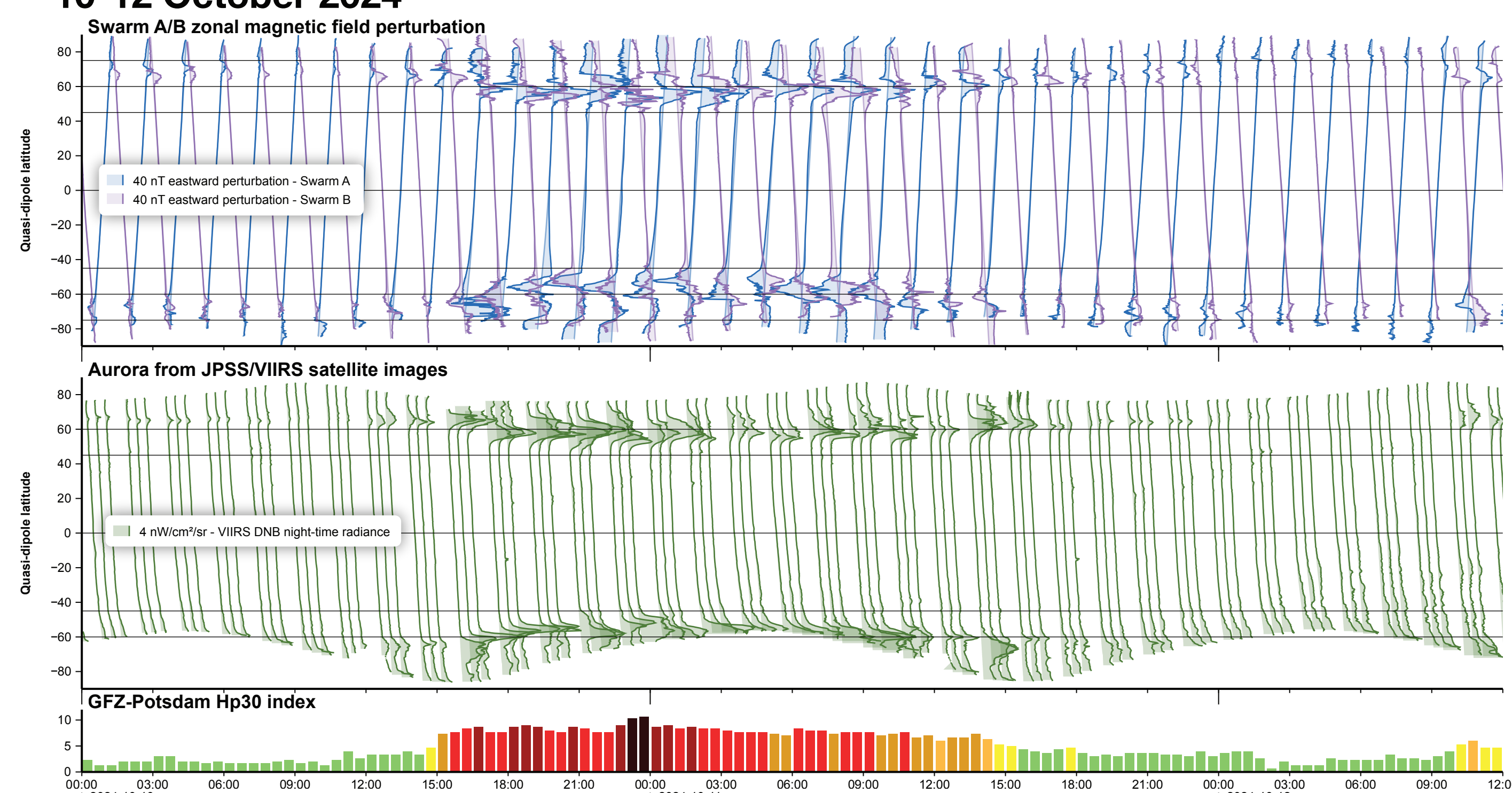
The figures on the right show the enhancement in satellite drag measured by the three Swarm satellites. These figures were created by exporting the vector graphics from the viewer, allowing for further editing and annotation in software like Inkscape or Illustrator, without loss of detail.

Latitude extent of magnetic perturbations and visible aurora

10-12 May 2024

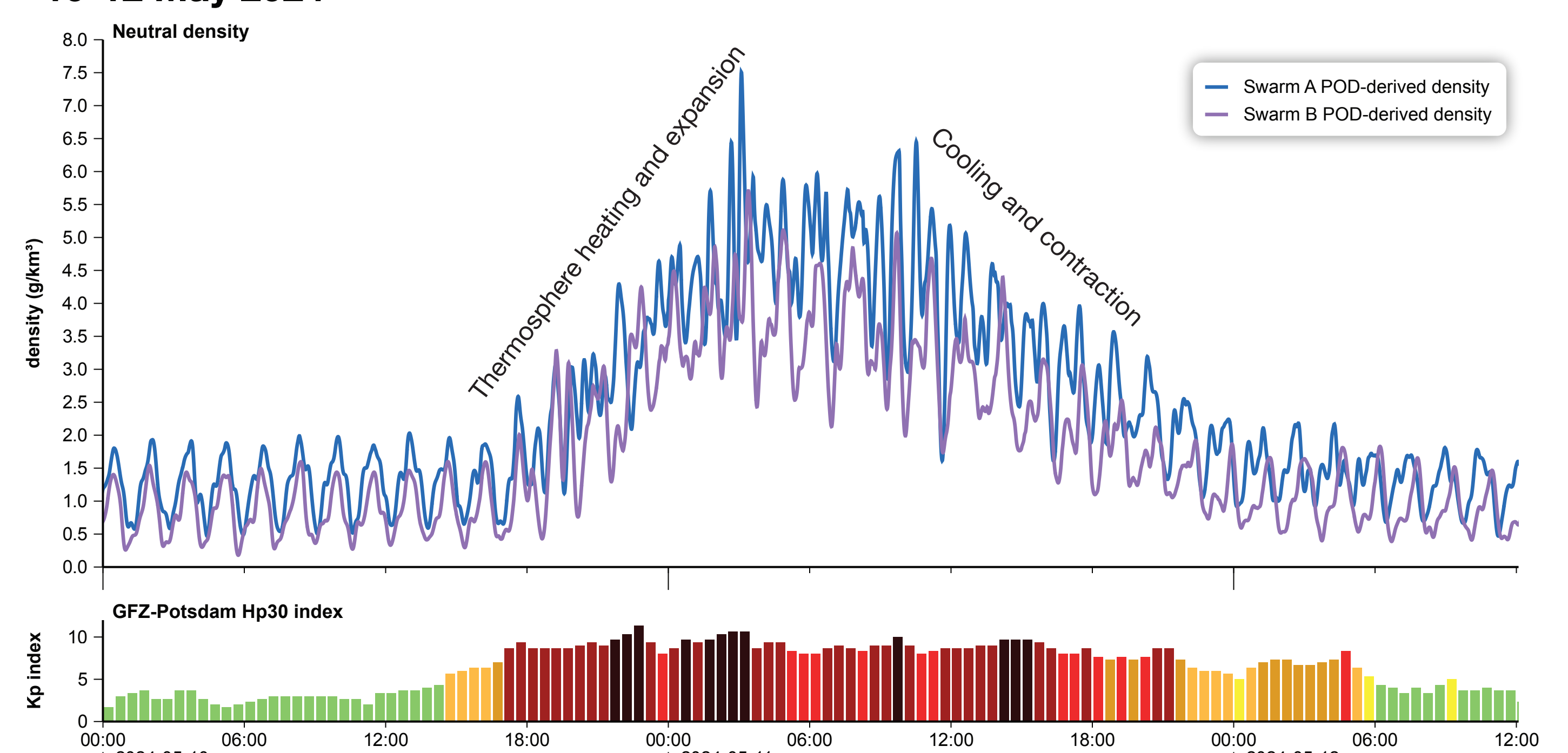


10-12 October 2024



Satellite drag

10-12 May 2024



10-12 October 2024

