

# Panel discussion "User needs for GNSS at high latitudes"

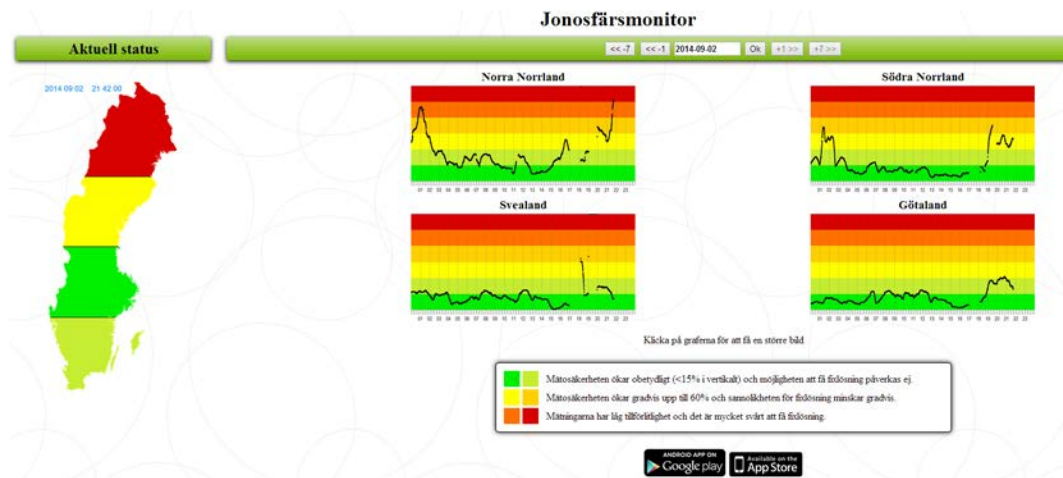
NKG General Assembly, Gothenburg Sweden  
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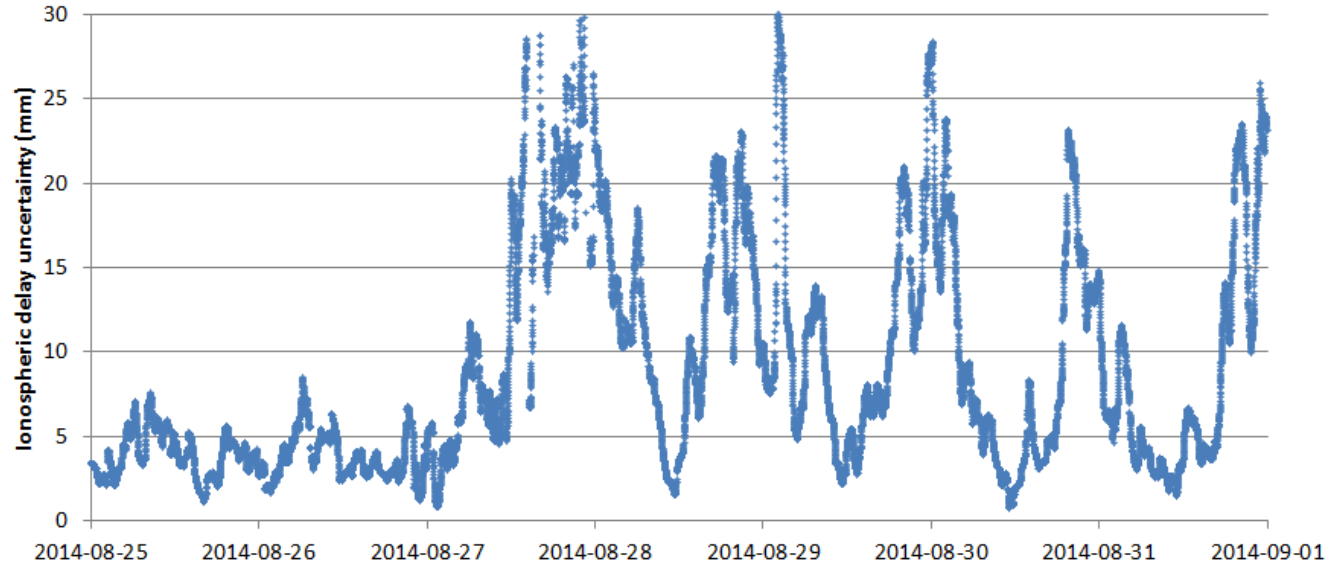
[www.swepos.se](http://www.swepos.se)

Sweden stretches almost 1600 km from north to south, so we can expect quite large differences in ionospheric variability

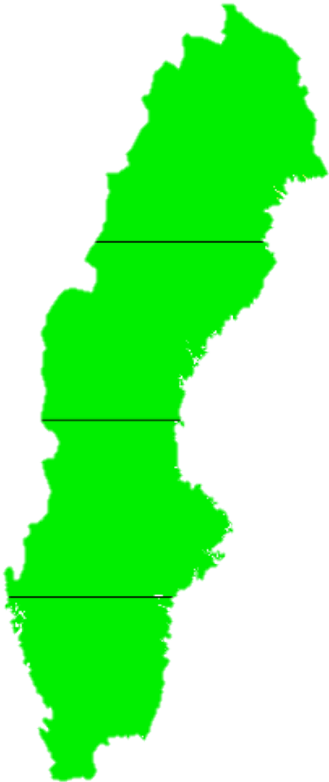
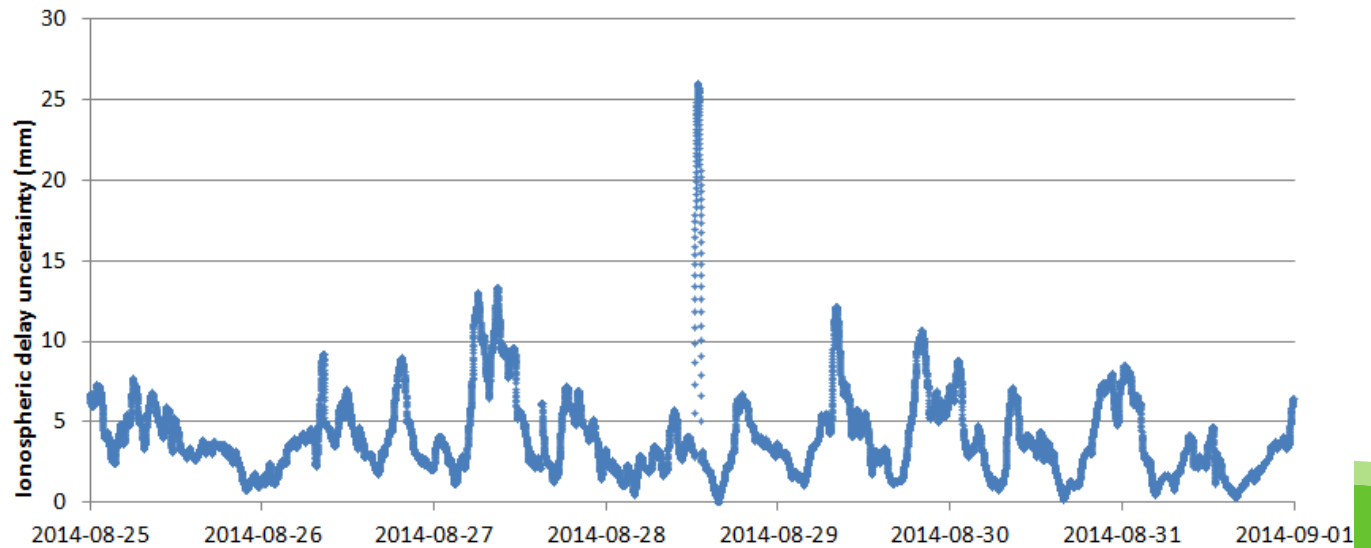


We track this variability with data from our GNSS stations track and pass it on to GNSS users as a **real-time ionosphere monitoring service** (@swepos.se)

Last week in northern Sweden:



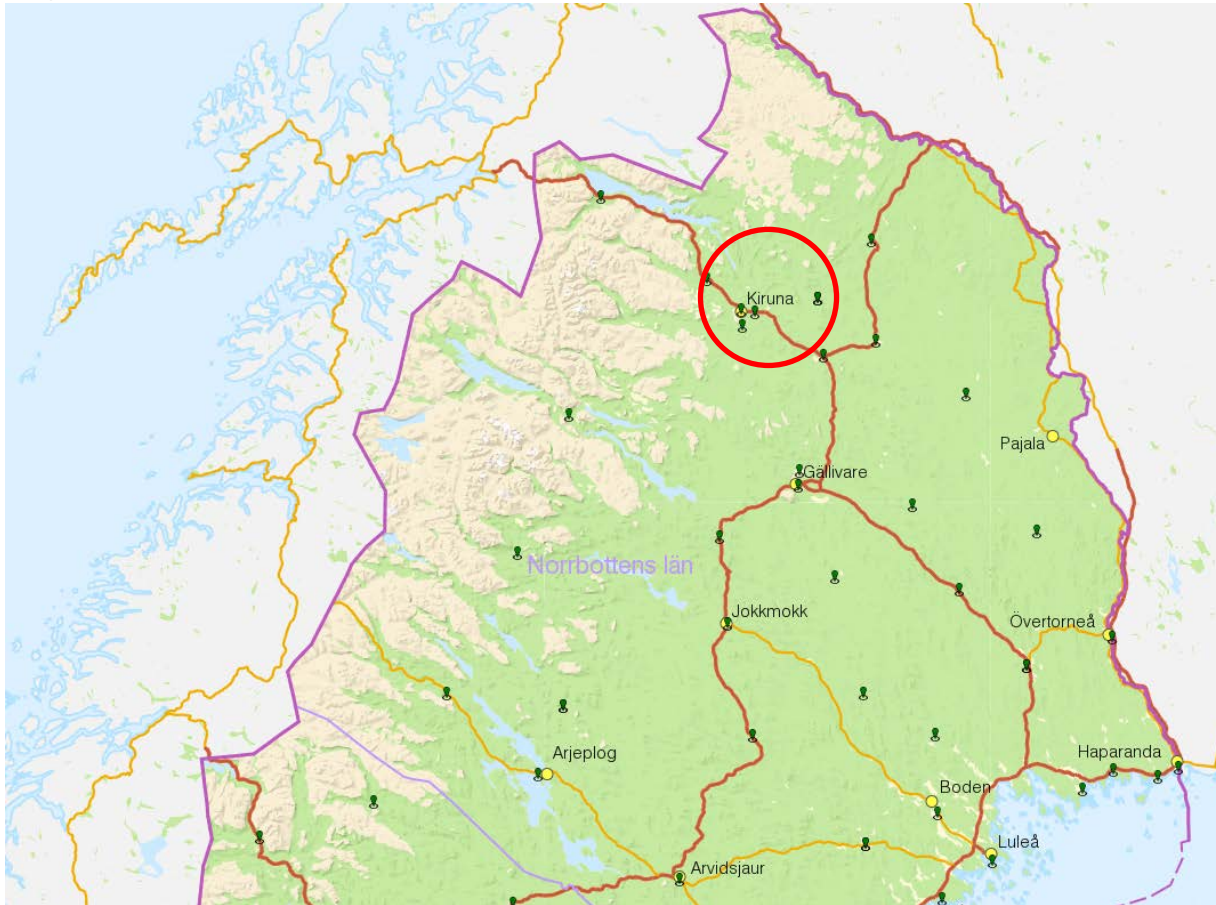
...and in southern Sweden:



RTK monitoring stations track the performance of the real-time positioning service(s)



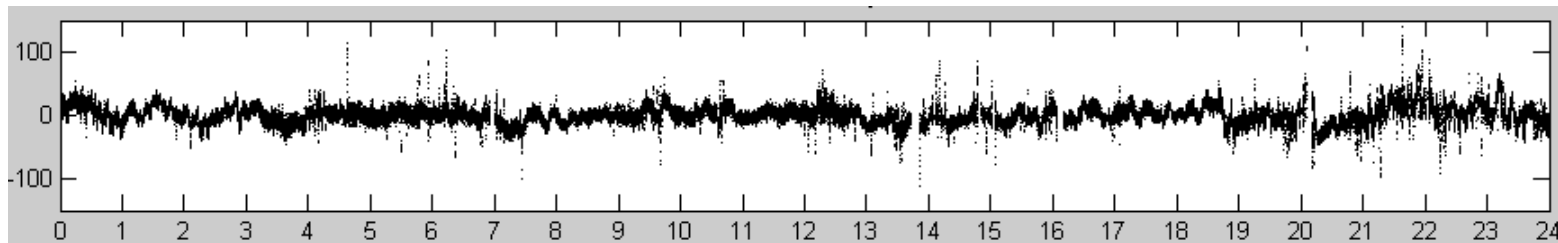
A number of GNSS stations have been added to the SWEPOS network in and around the city of Kiruna. The average distances between reference stations here are less than 10 km.



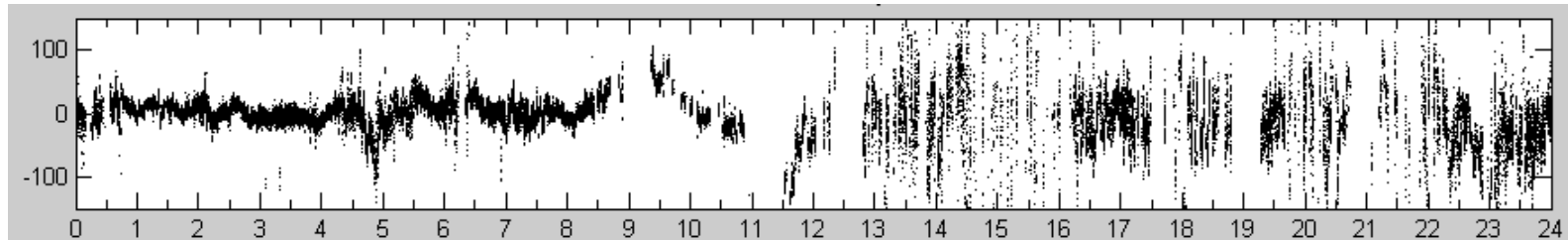
Example of time series from the Kiruna RTK monitoring station.

Height position residuals are in mm

25 August (1 outlier per hour)

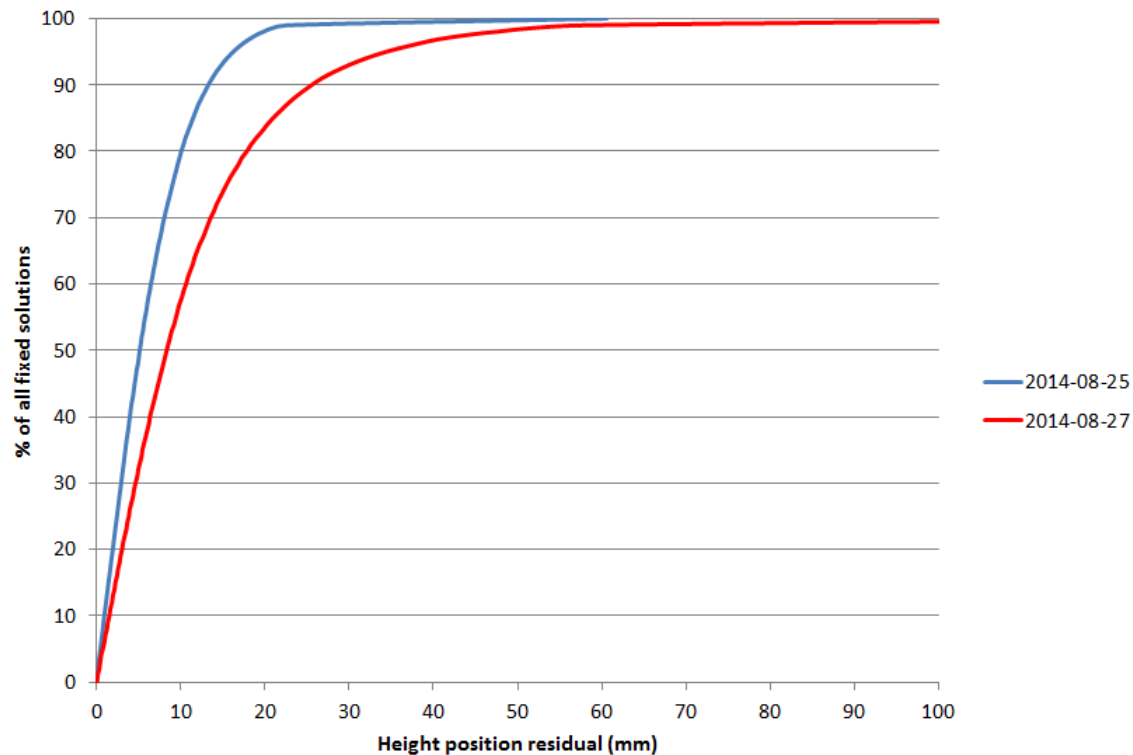


27 August (more than 50 outliers per hour)



The effect of the ionosphere on real-time positioning becomes apparent when we look at data from the Kiruna RTK monitoring station. Again, from last week:

- a 2 km baseline



The effect of the ionosphere on real-time positioning becomes apparent when we look at data from the Kiruna RTK monitoring station. Again, from last week:

- a 8 km baseline

