



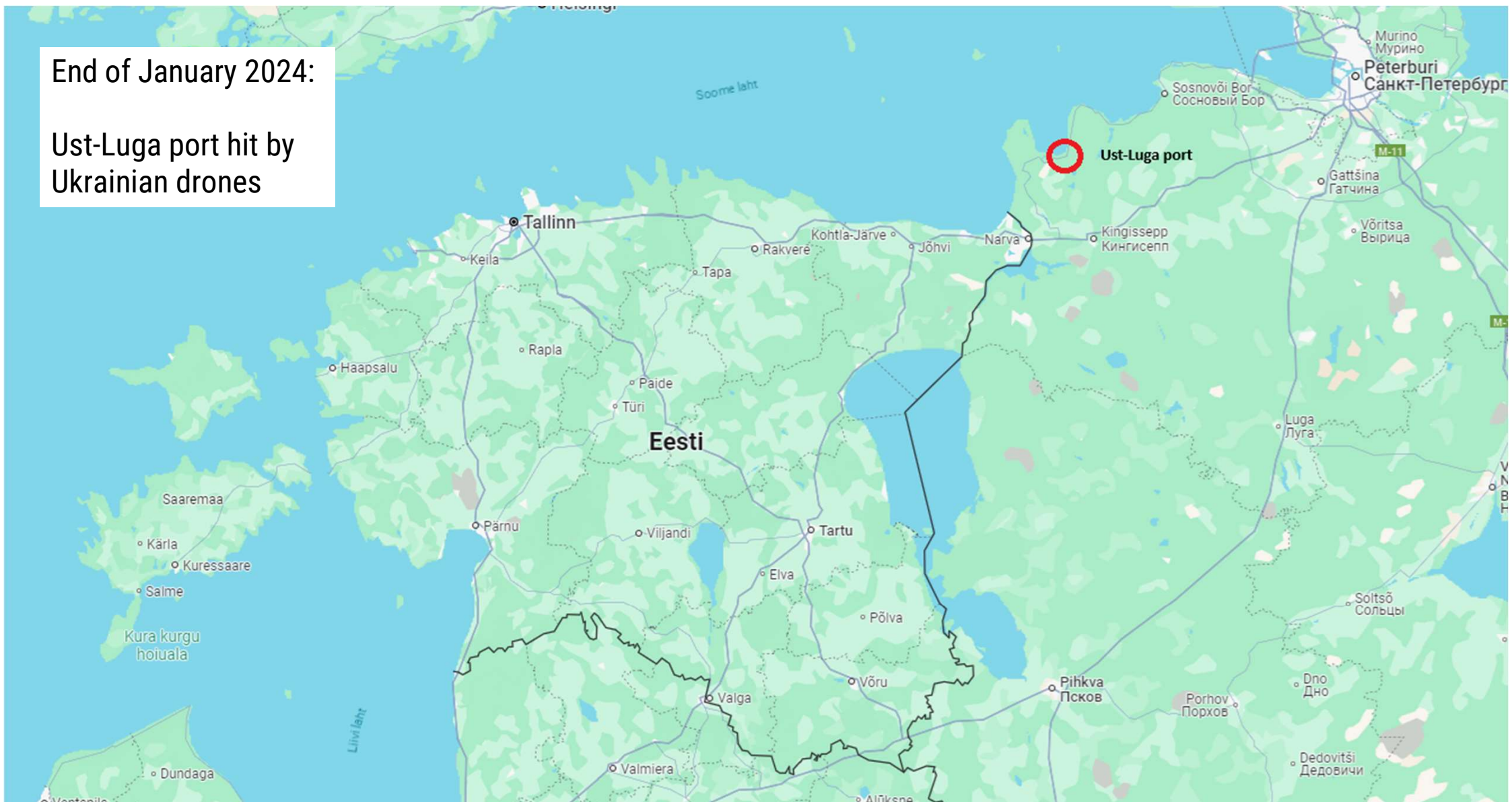
MAA- JA RUUMIAMET

# **GNSS interference in Estonia**

**Jaanus Metsar**

End of January 2024:

Ust-Luga port hit by  
Ukrainian drones





End of April 2024:

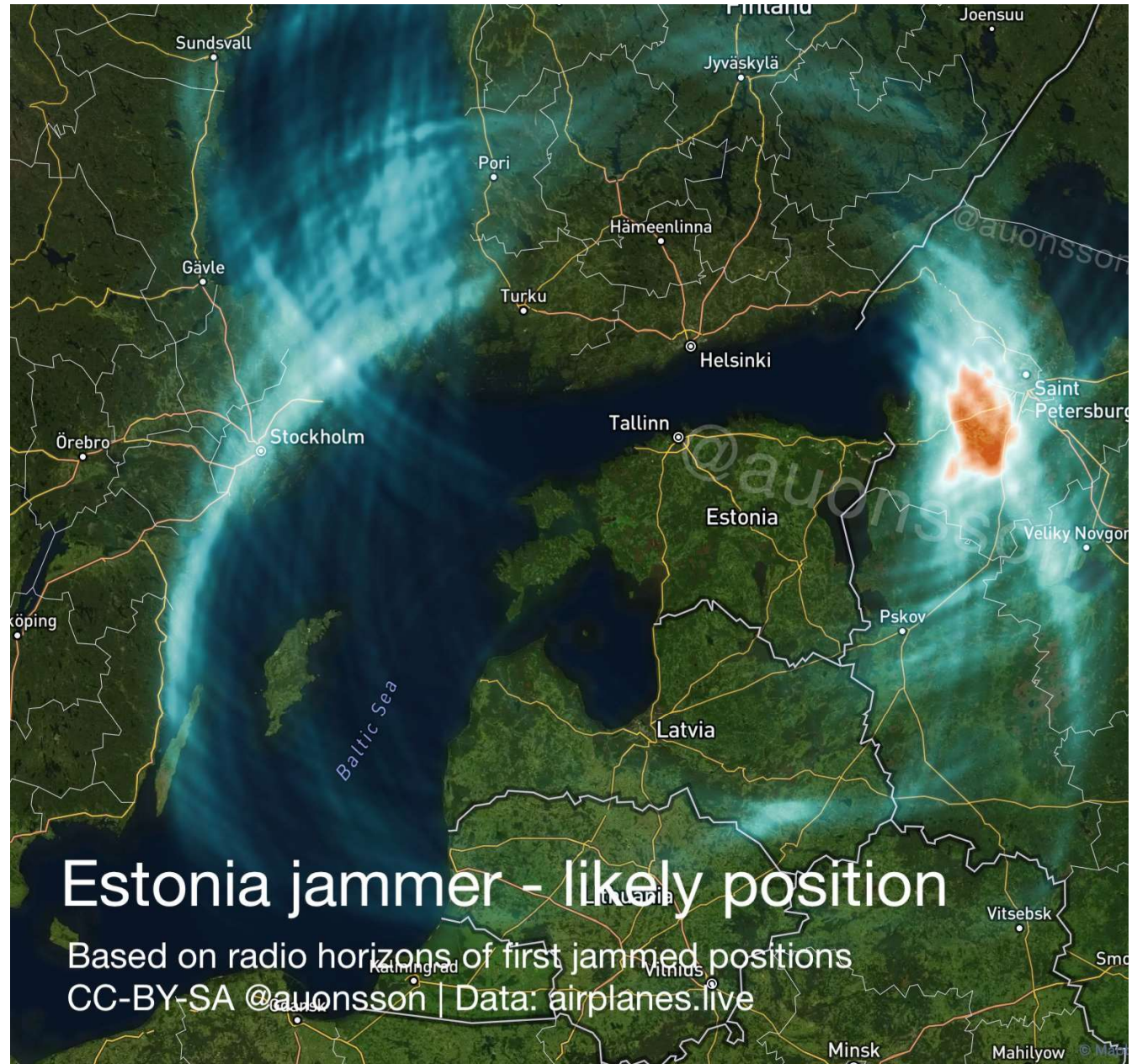
Heavy GNSS jamming  
detected in Estonian and  
Finnish airspace

Jammer believed to be near  
Ust-Luga port

Location confirmed by  
authorities

Jamming ongoing

All L1 frequency GNSS  
signals affected





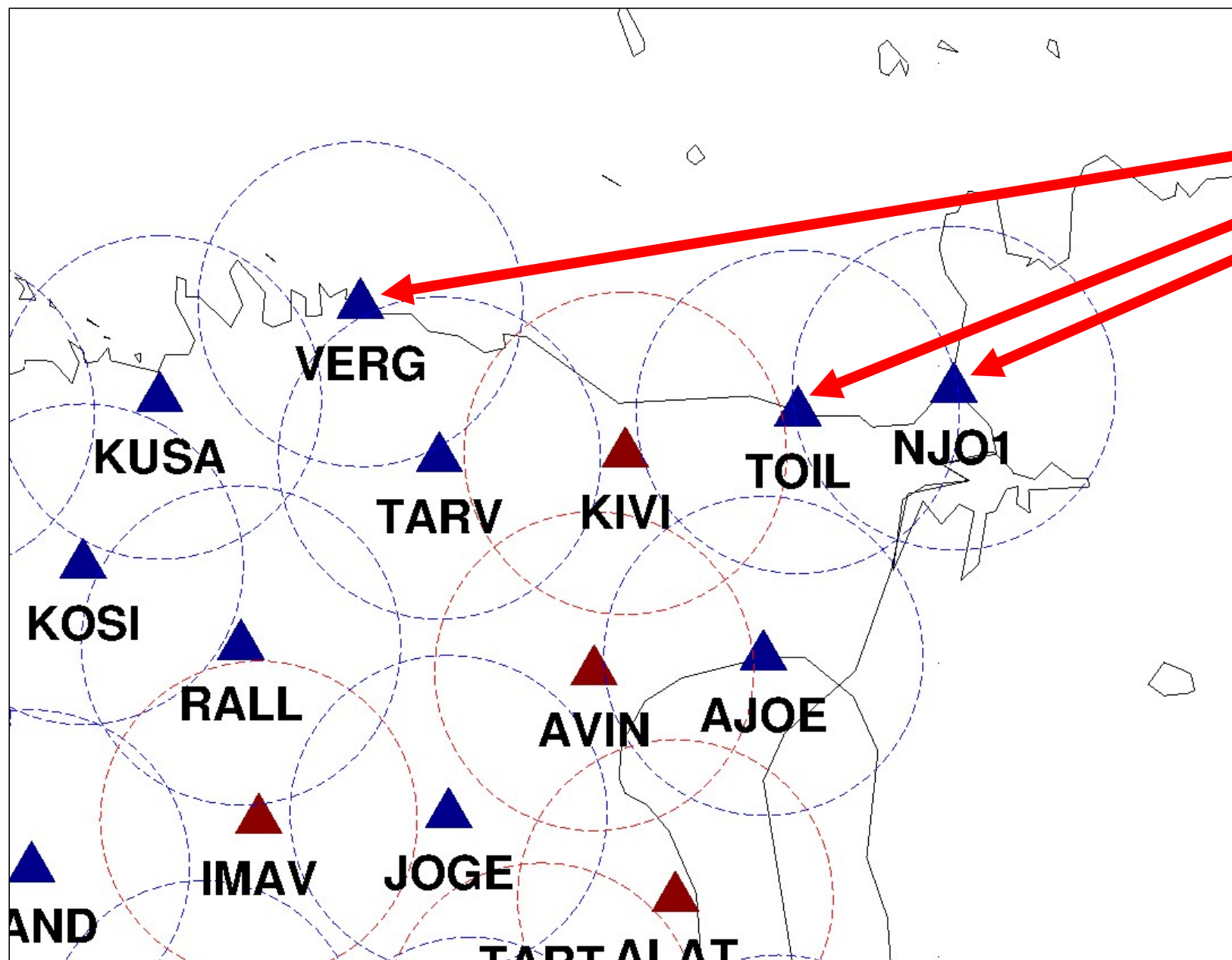
In the spring of 2024 ELB planned to do aerial surveying mostly in the North-Eastern part of Estonia

Some flights could be done on lower altitudes or when jammer was not working

A lot of the flights had to be cancelled

No solution to the problem







# TOIL - ESTPOS





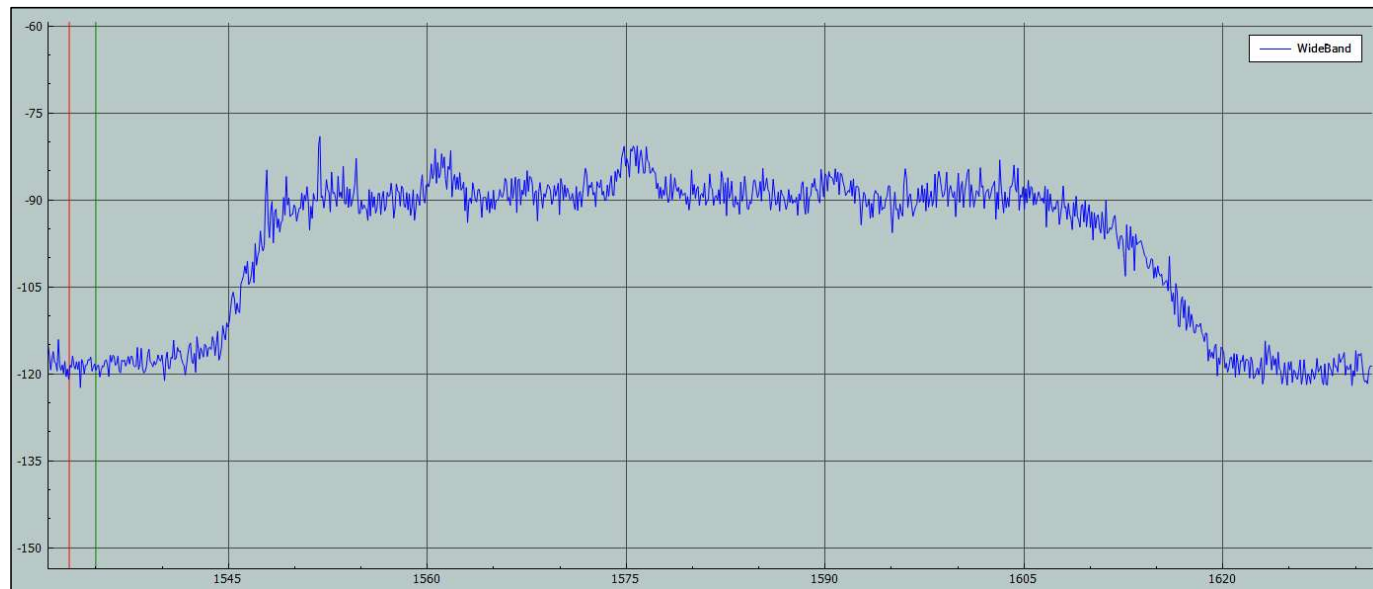


**NJO1 - ESTPOS**

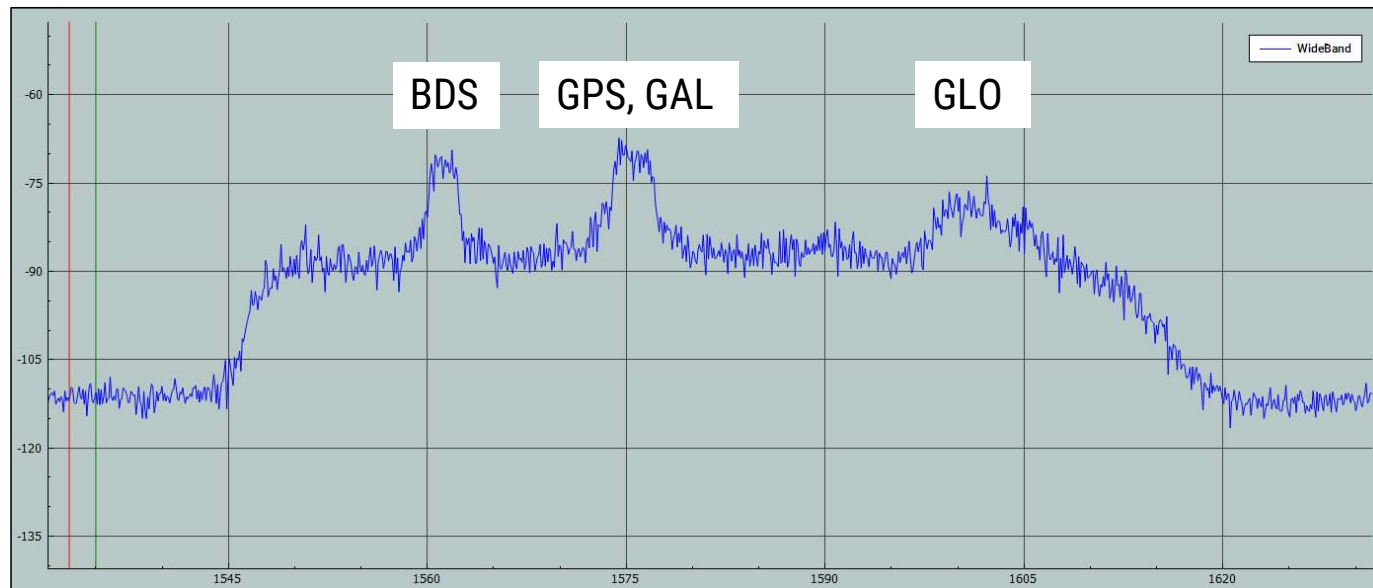


**VERG - ESTPOS**

L1 - normal



L1 - jammed

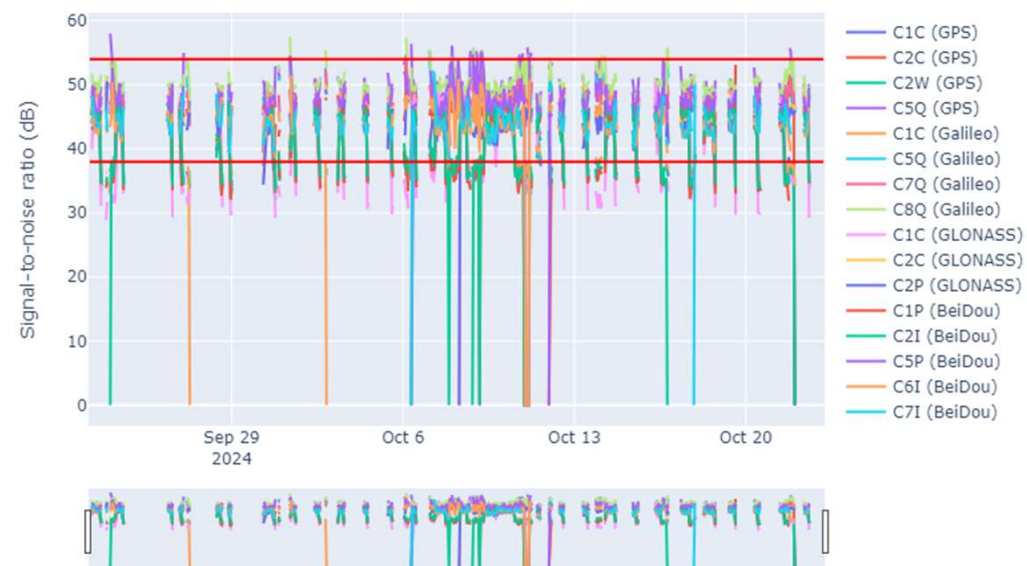




Number of observed satellites



Signal-to-noise ratio



Network RTK measurement  
tests in august 2024

Ca 30 km radius from TOIL  
station

On the ground the situation  
is fine

If one station is affected  
there should be little to no  
affect on network RTK  
corrections quality

