



NATIONAL REPORT – SWEDEN

NKG WORKING GROUP OF REFERENCE FRAMES

MAY 19-20, 2022

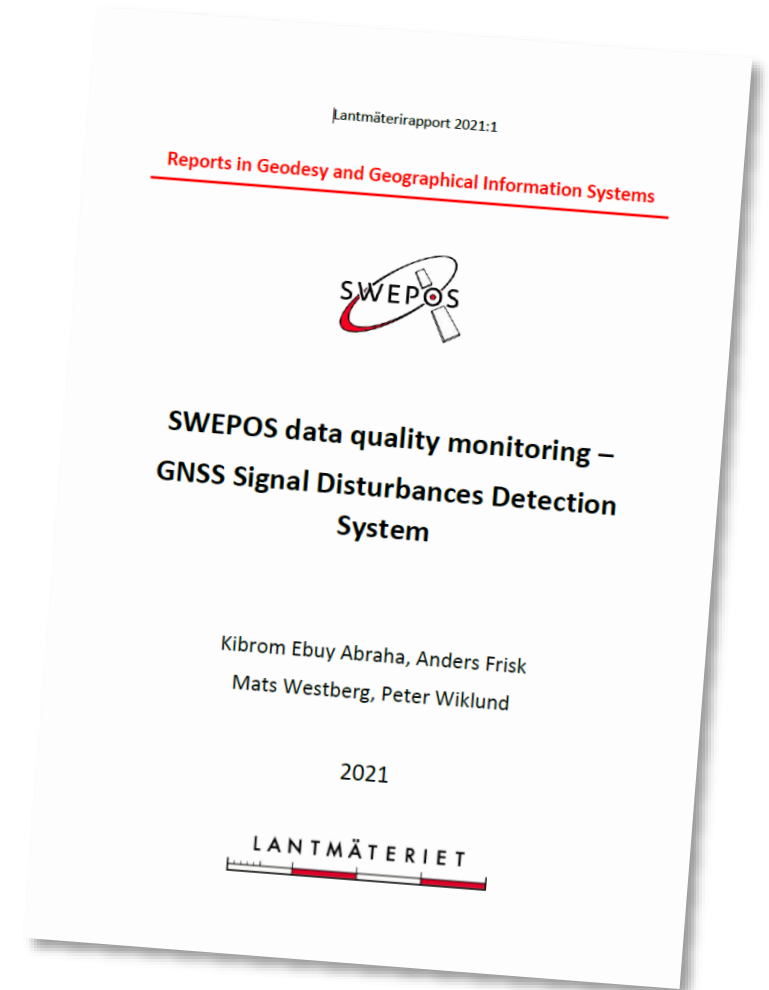
LANTMÄTERIET



STATUS OF SWEPOS™

- 459 stations – of which 53 class A and 406 are class B
- Approx. 9000 Network RTK users
- Developed a Signal Disturbances Detection System

Lantmäterirapport 2021:1



EXCHANGE OF ANTENNAS AT SWEPOS FUNDAMENTAL STATIONS

- A few original antennas went out of order the last years → had to be exchanged
- However, still many old antennas
 - Might break down any time
 - Not tracking Galileo very well
 - Want to exchange them in good order → allow for individual calibration
- ONSA is an exception

July 2021

Age of antenna

- < 10 yr
- 10-20 yr
- > 20 yr

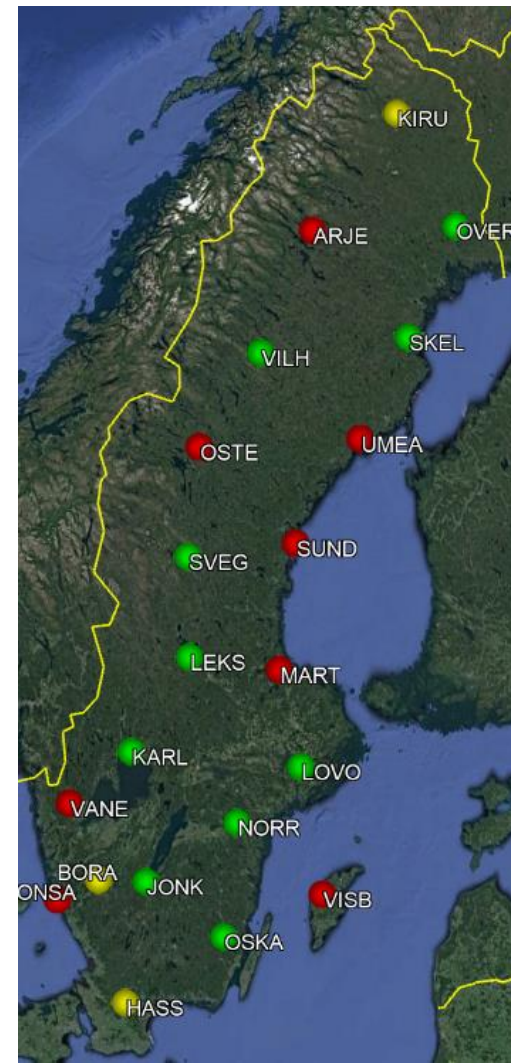


EXCHANGE OF ANTENNAS AT SWEPOS FUNDAMENTAL STATIONS

Autumn 2021



Spring 2022



Age of antenna

- < 10 yr
- 10-20 yr
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EXCHANGE OF ANTENNAS AT SWEPOS FUNDAMENTAL STATIONS

Autumn 2022



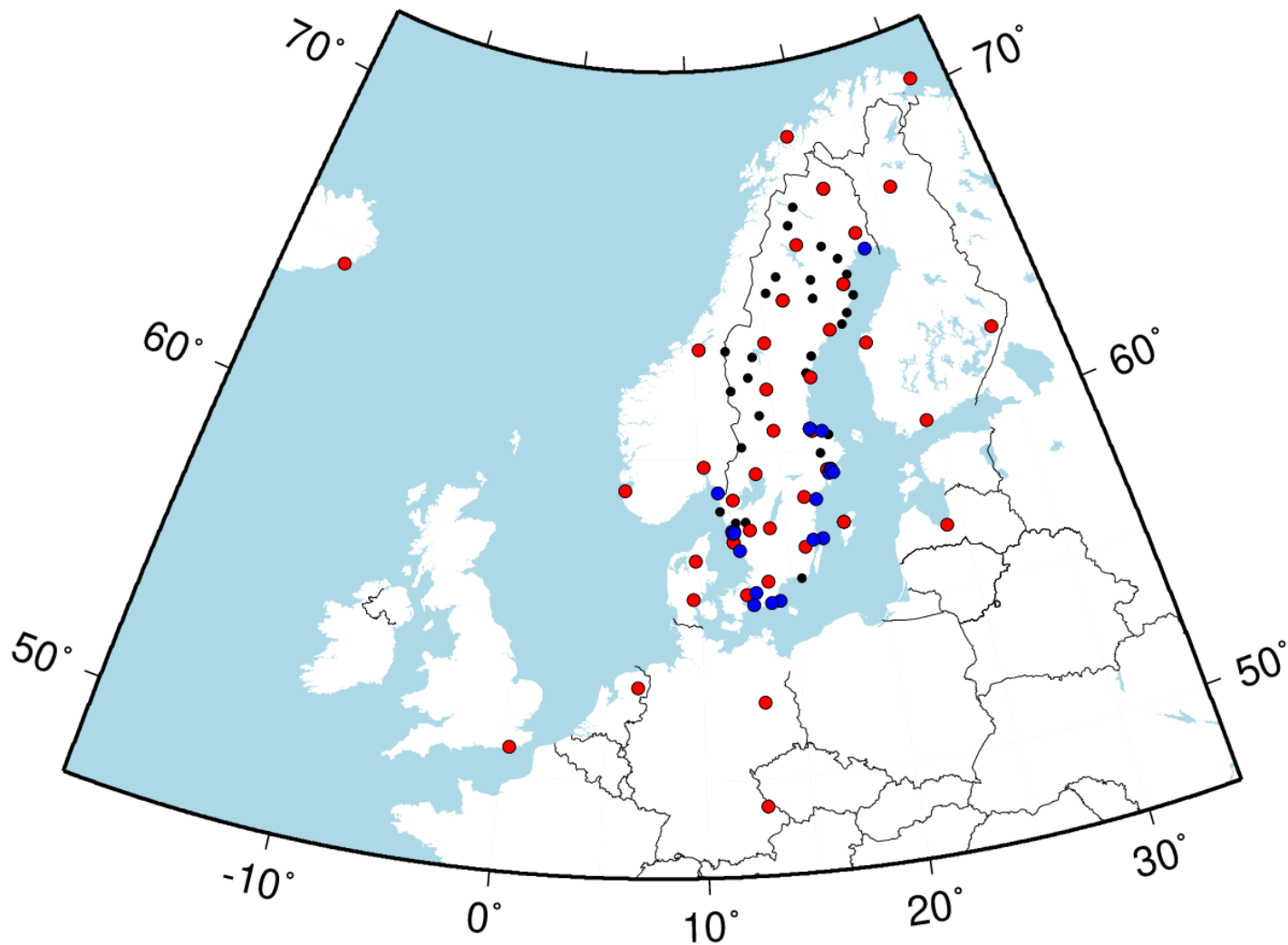
Spring 2023



Age of antenna

- < 10 yr
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- > 20 yr

LM_LAC



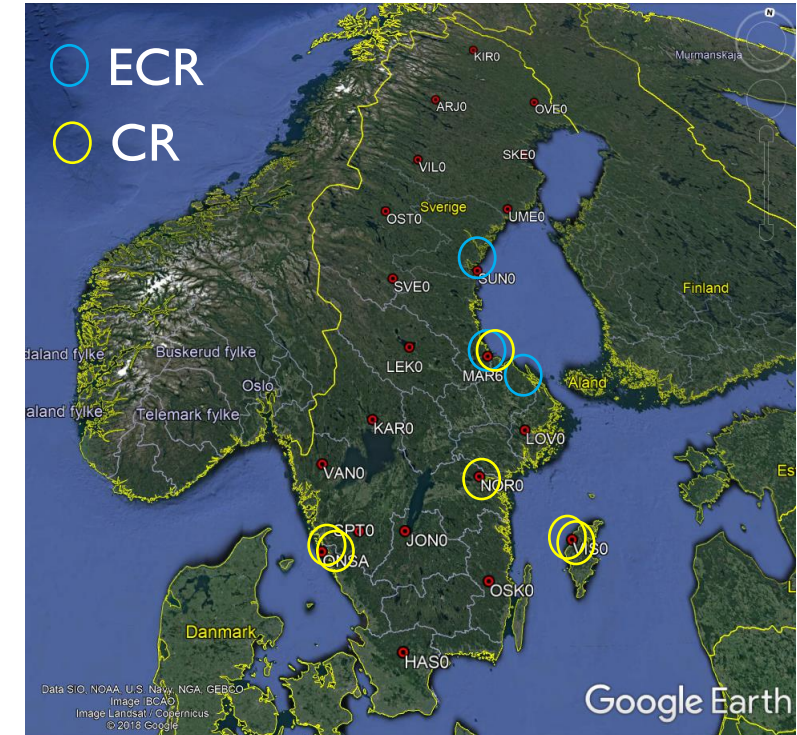
- No new stations added since last WG meeting – 88 stations in total
- Contributes to EPN densification x2 on a regular basis
- Considers if some of the stations from ITRF2020 should be added (blue)

TRANSFORMATION ITRF2014 – SWEREF 99

- Basic instructions on how to access NKG transformations via PROJ (in Swedish) were published
 - Hopefully it will decrease the need of "simplified transformations" (7-parameter transformations with limited applicability in time and space)
- New version of coordinate transformation software Gtrans released this week (!)
 - Can utilise PROJ for transformations

DESIGN, TEST AND INSTALLATION OF InSAR CORNER REFLECTORS

- 3 ECRs/transponders (installed during the Geodetic SAR project)
- 6 CRs (Mårtsbo, Norrköping, two in Onsala, two in Visby)

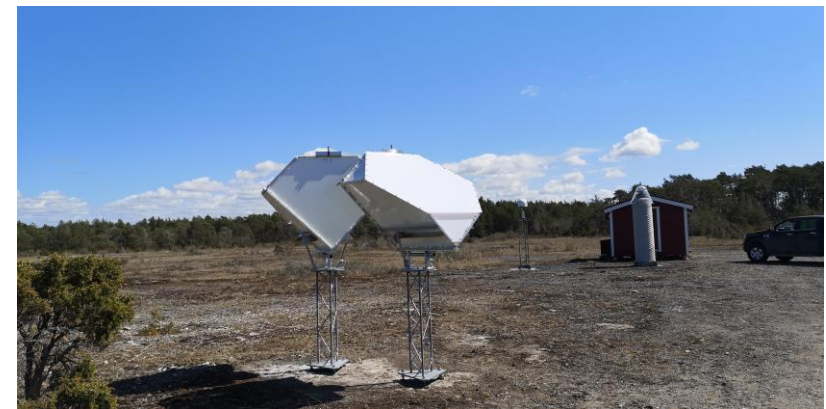


SWEPOS fundamental stations (red) and locations of CRs/ECRs installed so far.

- Aim is to install another 15 CRs in the coming years – planning of locations is in progress



Photo: Gunnar Elgered



Visby

THANKS FOR YOUR ATTENTION!

Tina Kempe et al.

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