



NATIONAL REPORT OF SWEDEN – GEODETIC ACTIVITIES IN SWEDEN 2018–2022

19TH NKG GENERAL ASSEMBLY, COPENHAGEN, 5–8 SEPTEMBER 2022

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ORGANISATIONS



- Lantmäteriet, the Swedish mapping, cadastral and land registration authority
 - Department for Geodetic infrastructure
 - Approximately 50 employees
 - Head: Martin Lidberg
 - Geodesy 2018 – strategic plan 2018–2025
 - Amendment: Key activities 2021–2024
- Universities



ONSALA SPACE OBSERVATORY AT CHALMERS UNIVERSITY OF TECHNOLOGY, GÖTEBORG



- National facility for radio astronomy
- Bachelor, master and PhD programmes
- Geodetic VLBI, Gravimetry, atmospheric processes
- Agreement on financial support of the geodetic activities by Lantmäteriet signed in May 2021
- Twin Telescopes (OTT) inaugurated 2017 and operational 2020
 - Part of VGOS (VLBI Global Observing System)



Picture: Lars Wennerbäck

ONSALA SPACE OBSERVATORY AT CHALMERS UNIVERSITY OF TECHNOLOGY, GÖTEBORG



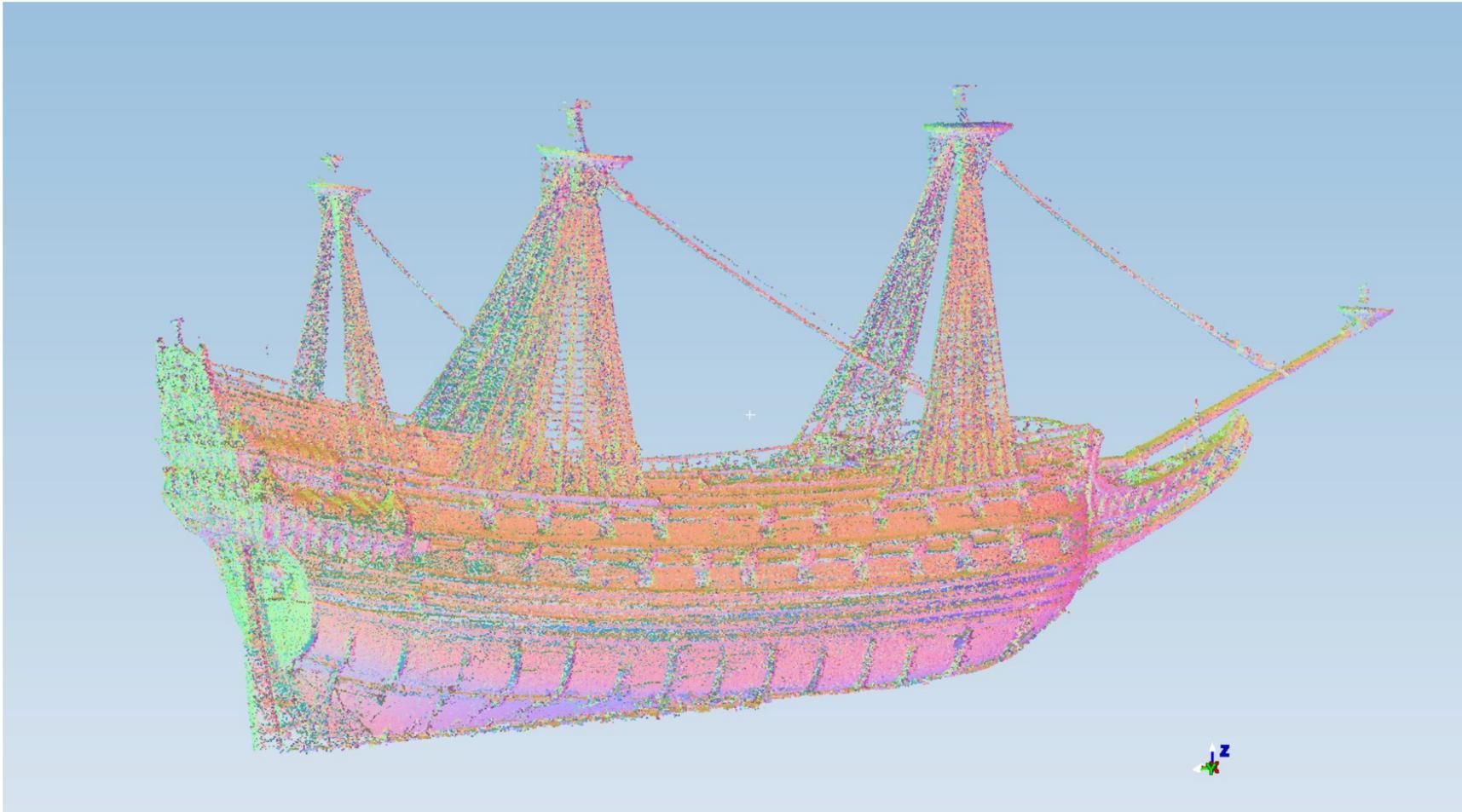
KTH ROYAL INSTITUTE OF TECHNOLOGY, STOCKHOLM



- Division of Geodesy and Satellite Positioning
- Working in bachelor, master and Ph.D. programmes
- Anna Jensen professor 2015–2018 and guest professor until 2021, 2 lecturers, 0.2 researchers, 4 PhD students 2019–2022 (3 completed so far)
- Research e.g. on GNSS, geodesy, laser scanning and BIM



KTH ROYAL INSTITUTE OF TECHNOLOGY, STOCKHOLM – DEFORMATION MONITORING OF WARSHIP VASA



UNIVERSITY OF GÄVLE



- Graduate and postgraduate education
 - Bachelor programme and master programme in Geospatial Information Science
 - Since 2020 a five-year Master of Science programme (“*Civilingenjörsexamen*”) in land surveying engineering
- 5 PhD lecturers in geodesy and land surveying engineering (2 full professors) and two instructors
- Research primarily focused on applied geodesy, land surveying engineering, and geospatial information science
 - 3 active PhD students within geodesy

UNIVERSITY WEST, TROLLHÄTTAN



- Graduate education in the Surveying engineering programme, which now unfortunately has been terminated
 - End of land surveying and geodetic activities
- Geodetic research with 46 peer-reviewed journal articles/books/book proceedings
- 11 examined PhD students
- 3 projects (SNSA, Richert foundation, Erasmus+)
- Many other international contributions within conferences, PhD students and other geodetic fields

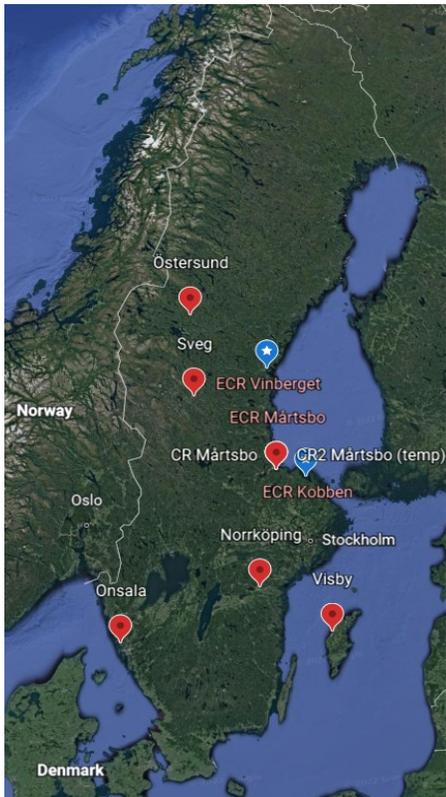
LANTMÄTERIET – SWEPOS



- 476 GNSS reference stations (401 in 2018)
- ≈8,500 network RTK users (3,900 in 2018)
- Galileo available since 1 February 2018

LANTMÄTERIET – SAR corner reflectors

- Installation of both passive and active (transponders) corner reflectors co-located with 21 fundamental SWEPOS stations
- So far 8 passive and 3 active reflectors installed



LANTMÄTERIET – FURTHER ACTIVITIES

- Several projects concerning use of GNSS (network RTK) for autonomous vehicles and mass-market applications
 - Including “*Prepare Ships*” for safer navigation at sea and “*Reference network in the air 2.0*”
- Increased gravity data set
 - Including five years of measurements with our ZLS dynamic gravimeter (ZLS D13)
- New transformation ITRF2014 – SWEREF 99
- New web-based service for access of the digital geodetic archive
 - <https://stompunkt.lantmateriet.se>
- Completely new version of transformation software Gtrans
- Review of the national boundary Sweden-Norway 2020–2024

QUESTIONS?



Thank you for your attention!

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