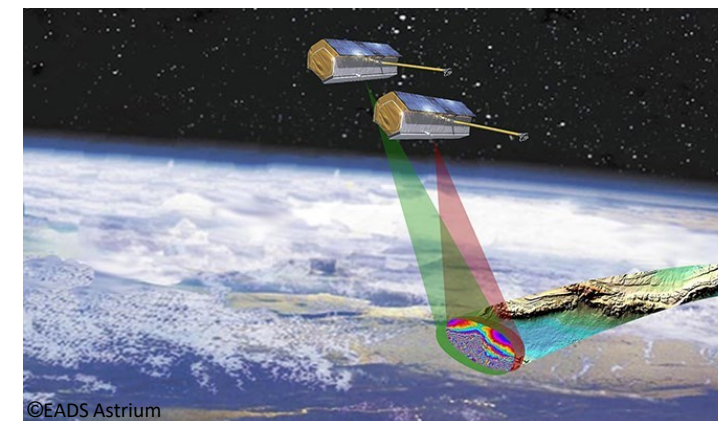
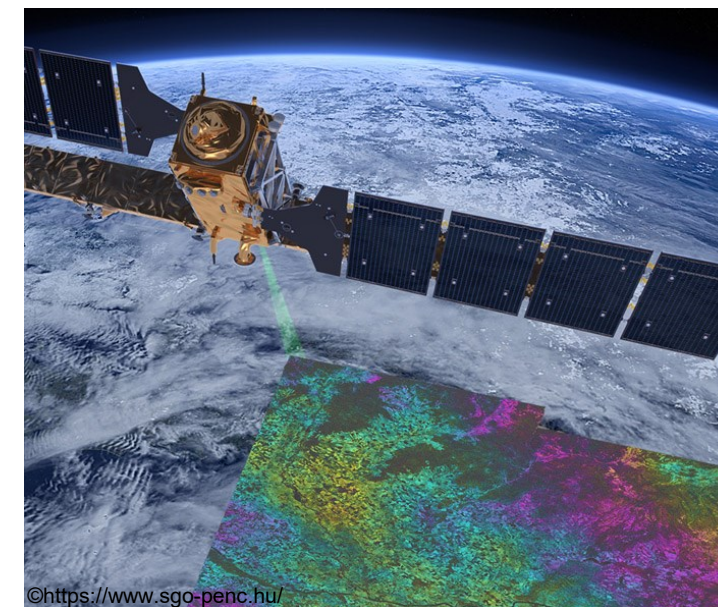


InSAR-based Ground Motion Service of Sweden: evaluation and benefit analysis of a nationwide InSAR service

Mehdi Darvishi, postdoctoral researcher, Chalmers University
mehdi.darvishi@chalmers.se

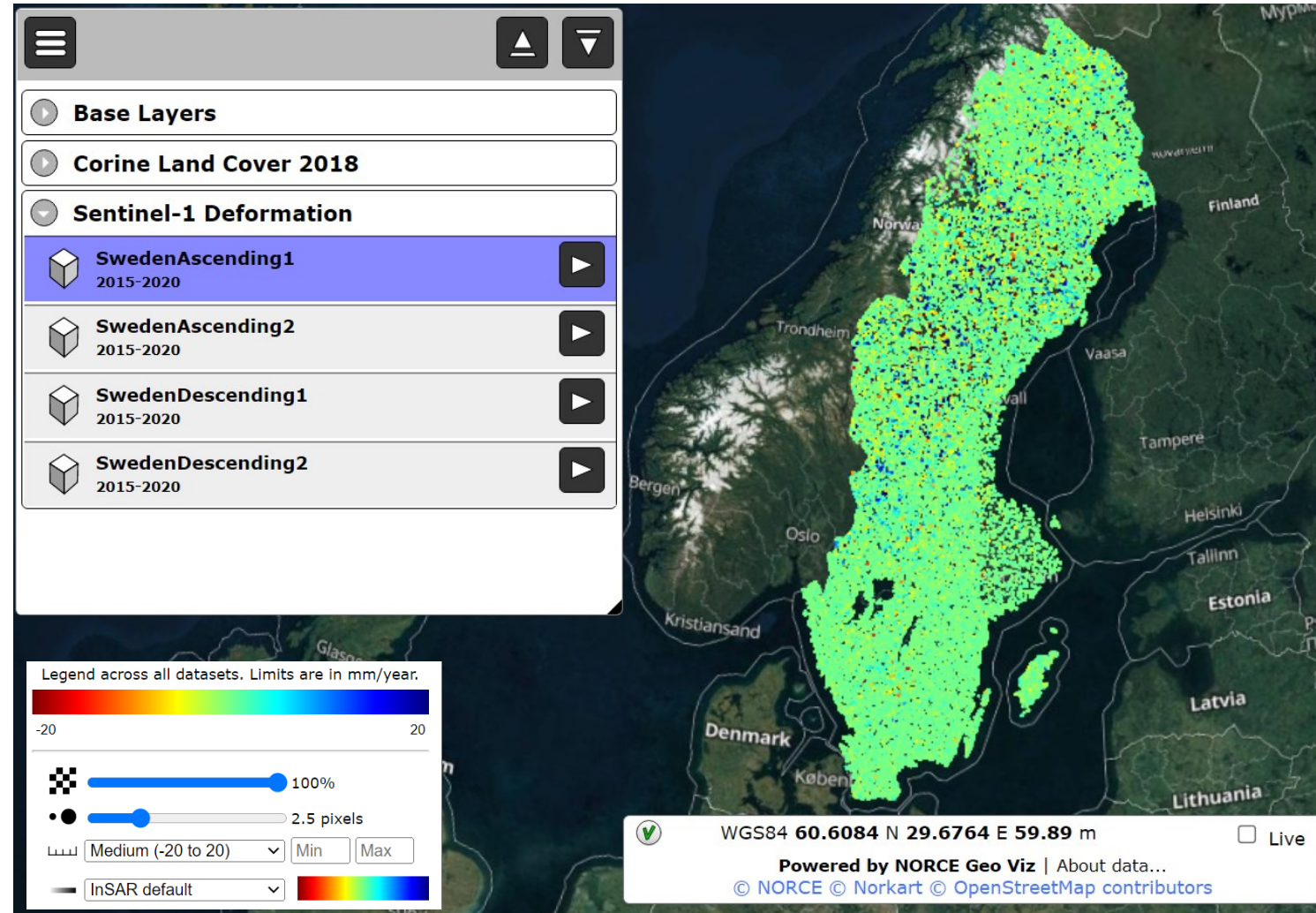


About the project

- ❑ **Title:** Evaluation and benefit analysis of a nationwide InSAR service
- ❑ **Objective:** introducing a nationwide ground motion service for Sweden that is based on Sentinel-1 data at millimeter level (2015-2021)
- ❑ **Work packages:**
 - Project management
 - Production of deformation data
 - **Validation of deformation data**
 - Geotechnical applications
 - Climate adaptation
 - Social benefit/User needs
 - Confidentiality and export control
 - Operationalization/Handover
- ❑ **Period:** from 2021/10/15 to 2022/12/31

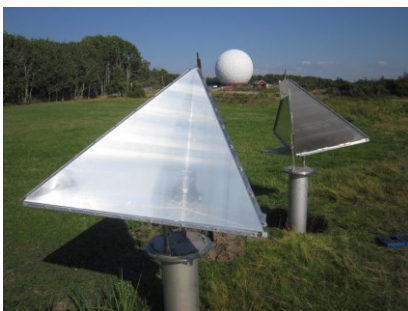
Sweden InSAR map

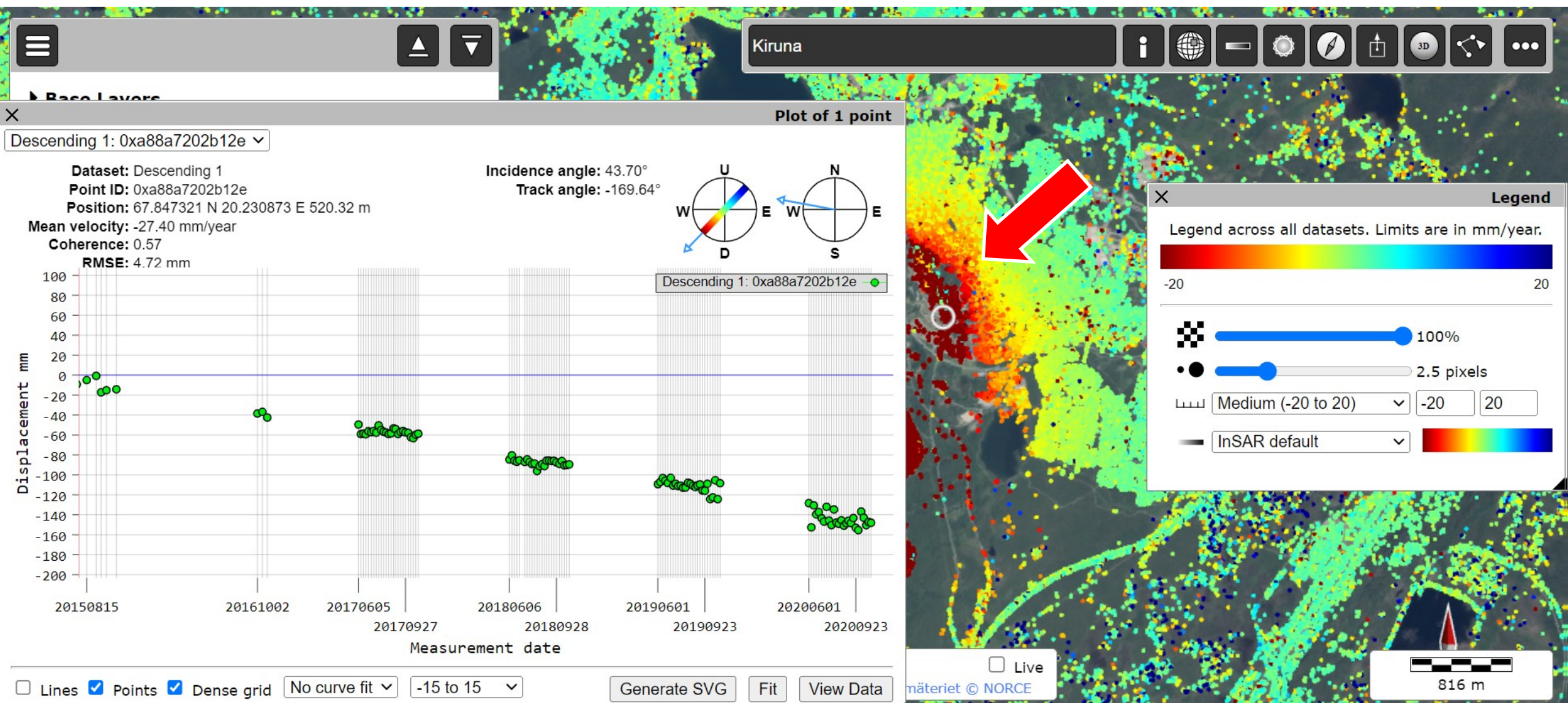
- Sentinel-1 data across Sweden
- 10 billion measuring points
- Web-GIS portal
- Two descending and ascending coverage

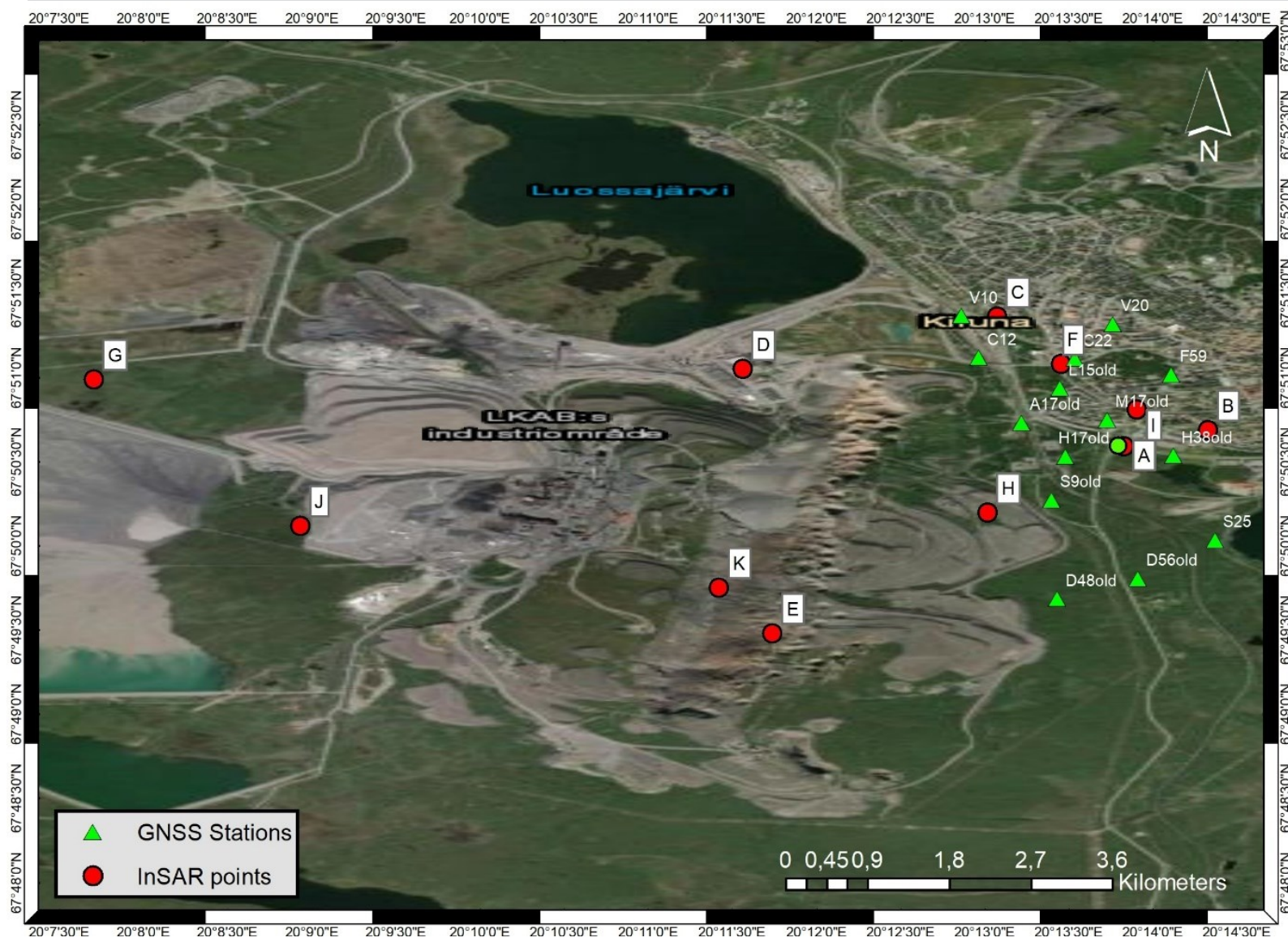


□ Validation strategy:

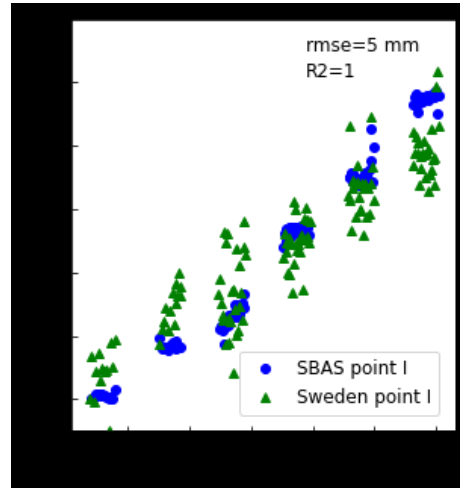
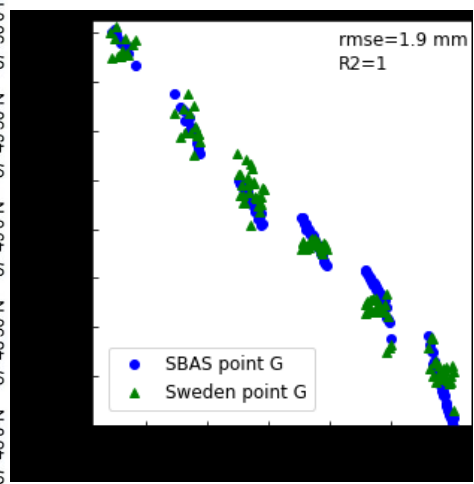
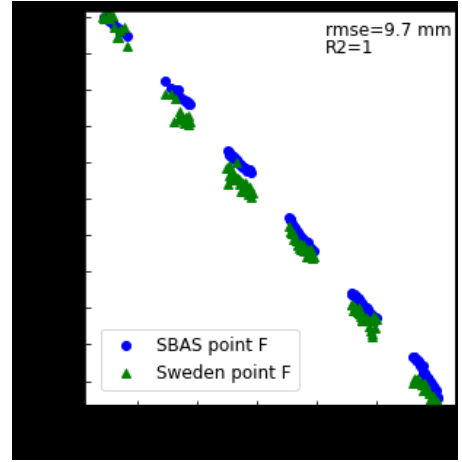
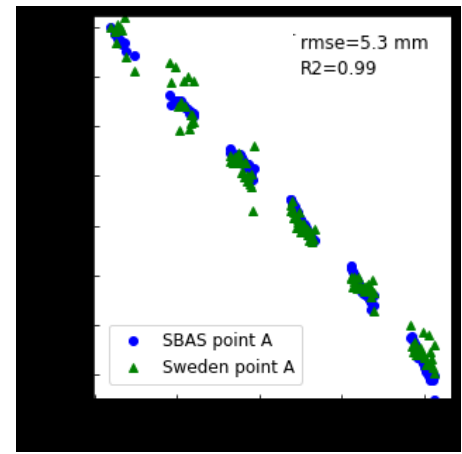
- Survey (leveling) data
- GNSS data
- Independent InSAR measurements (PSI and SBAS)



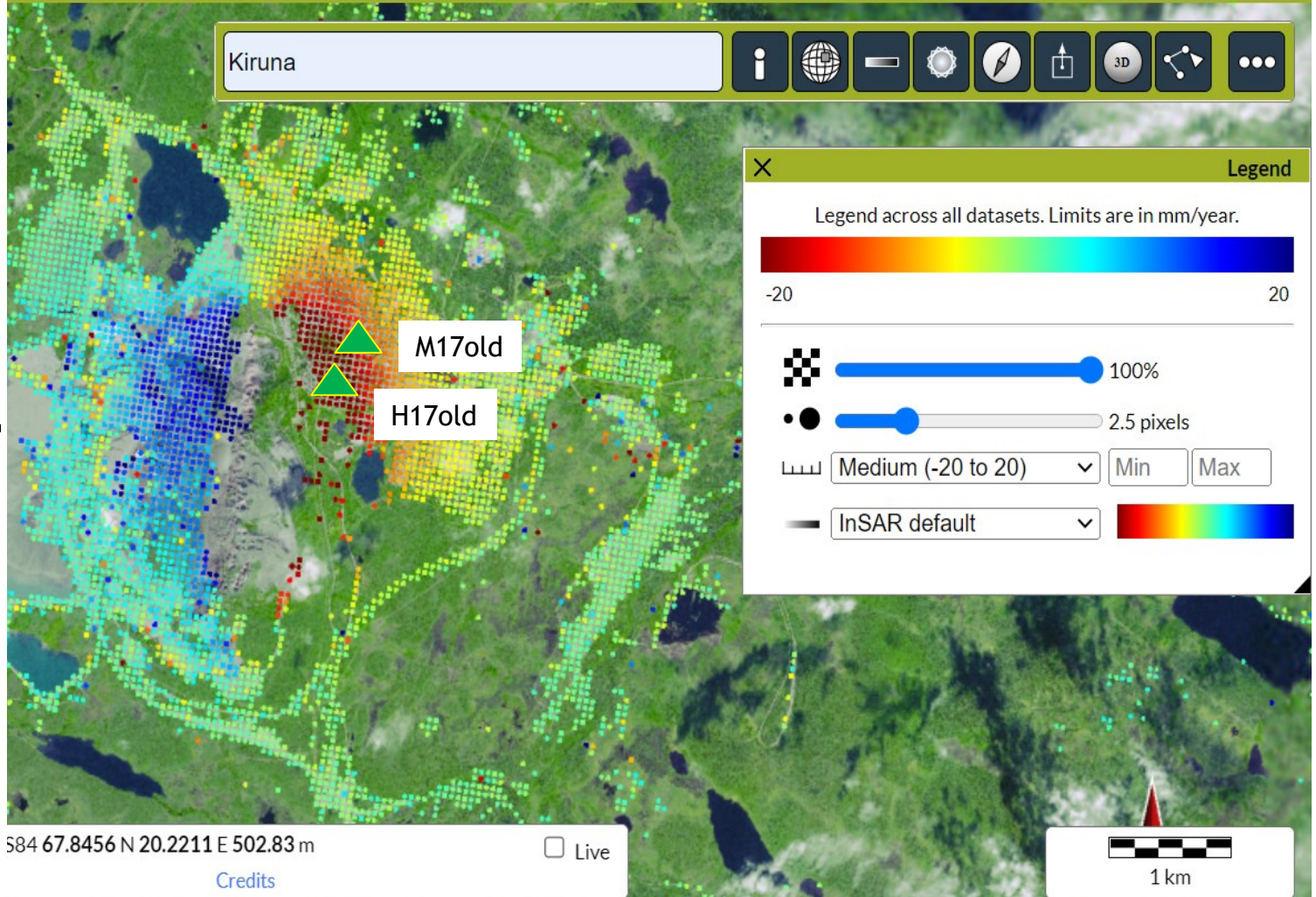
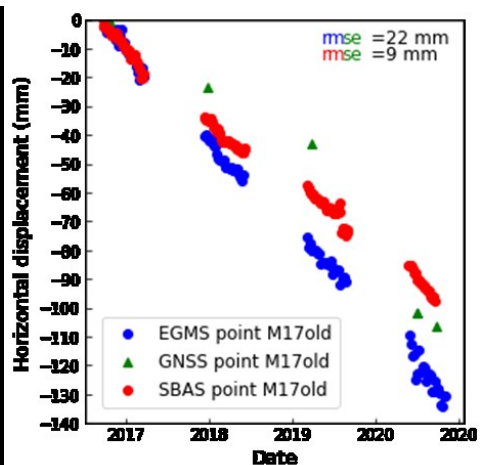
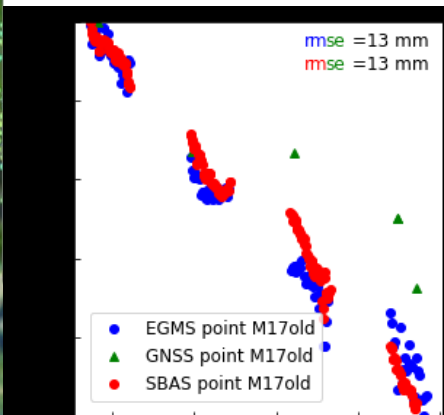
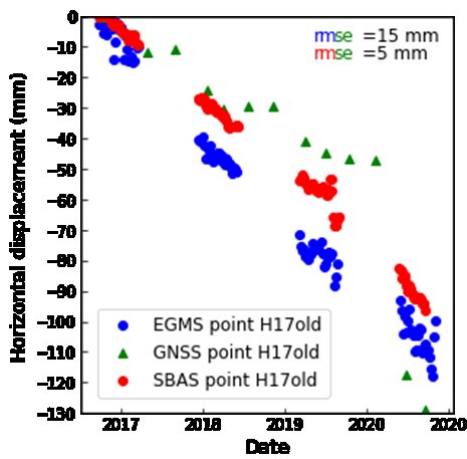
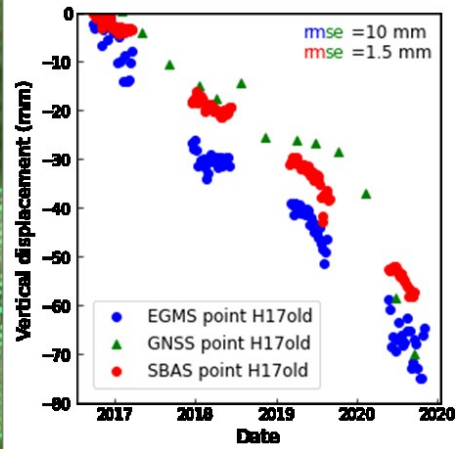


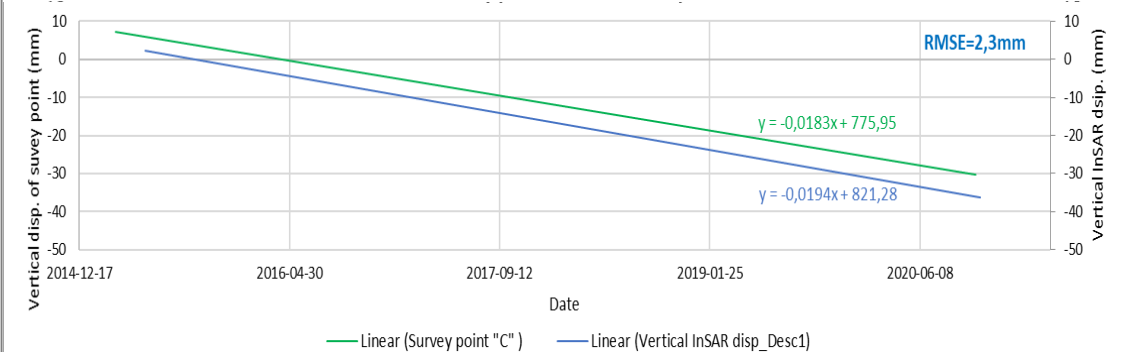
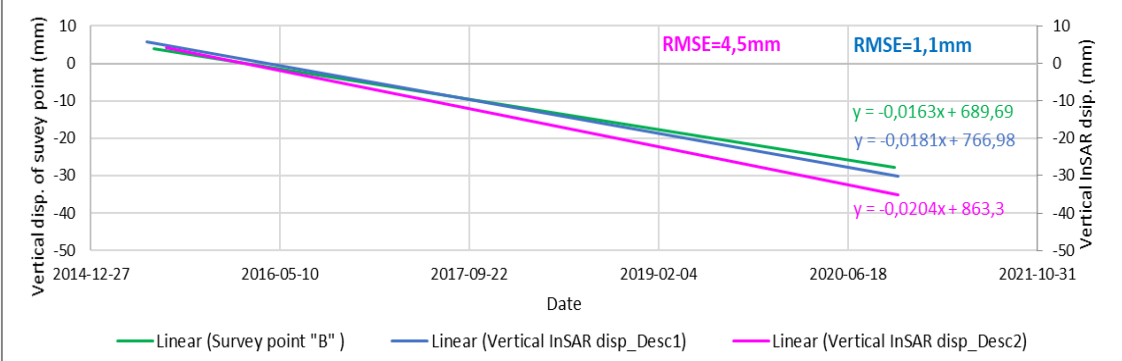
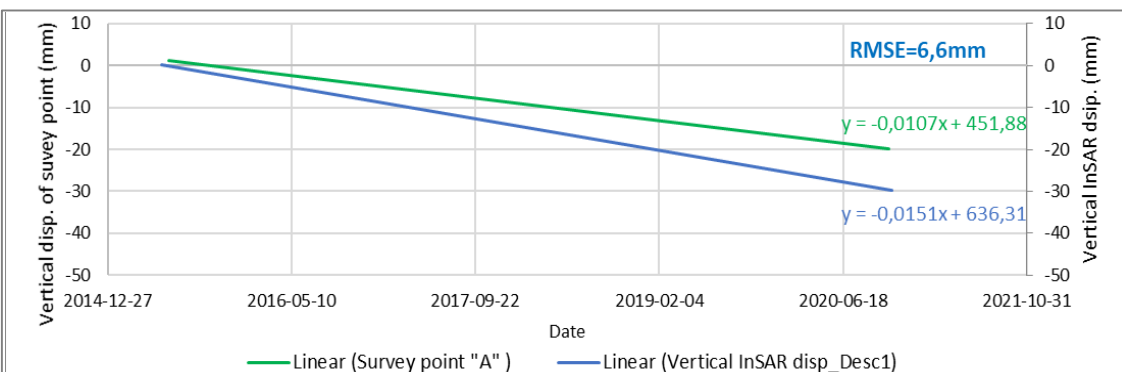


LOS InSAR-Sweden vs. LOS InSAR-SBAS

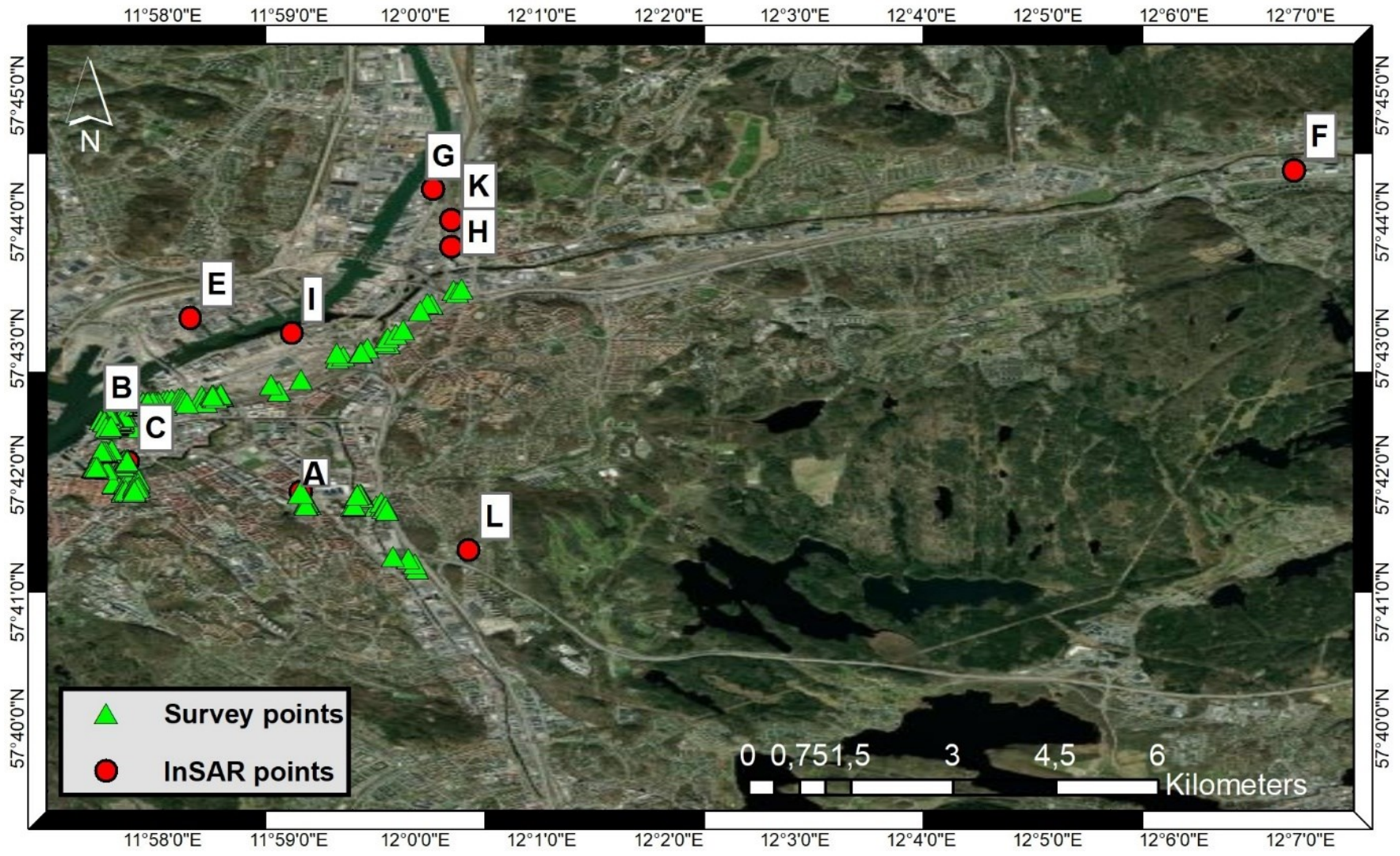


2D InSAR-EGMS vs. 2D InSAR-SBAS and GNSS

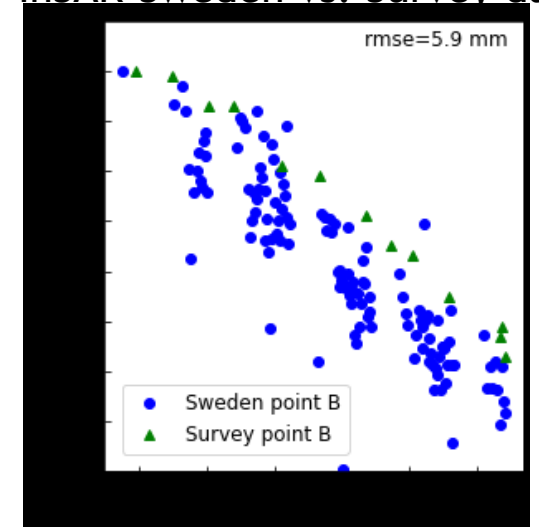




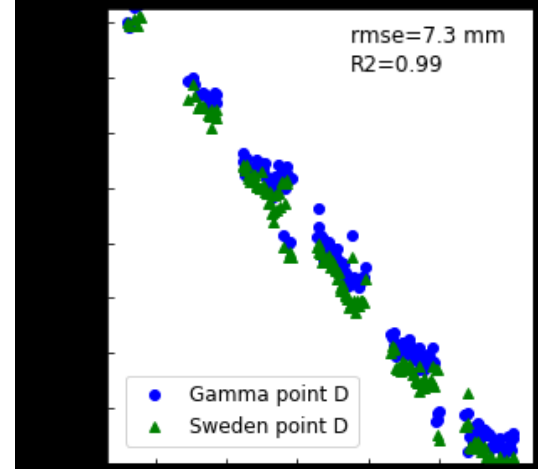
Gothenburg case study



InSAR-Sweden vs. Survey data



InSAR-Sweden vs. InSAR-PSI





Thanks for
your attention