



LIETUVOS RESPUBLIKOS
ŽEMĖS ŪKIO MINISTERIJA



**VILNIUS
TECH**

Vilnius Gediminas
Technical University

Atkurtai
Lietuvai



NATIONAL REPORT OF LITHUANIA

NKG WGRF meeting

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Rimvydas Baniulis, Žygimantas Kizla

2022-05-19

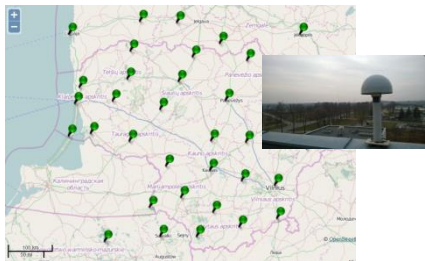


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- CORS Network **LitPOS**
- Harmonization of Lithuanian and Latvian geodetic systems
- ITRF transformations

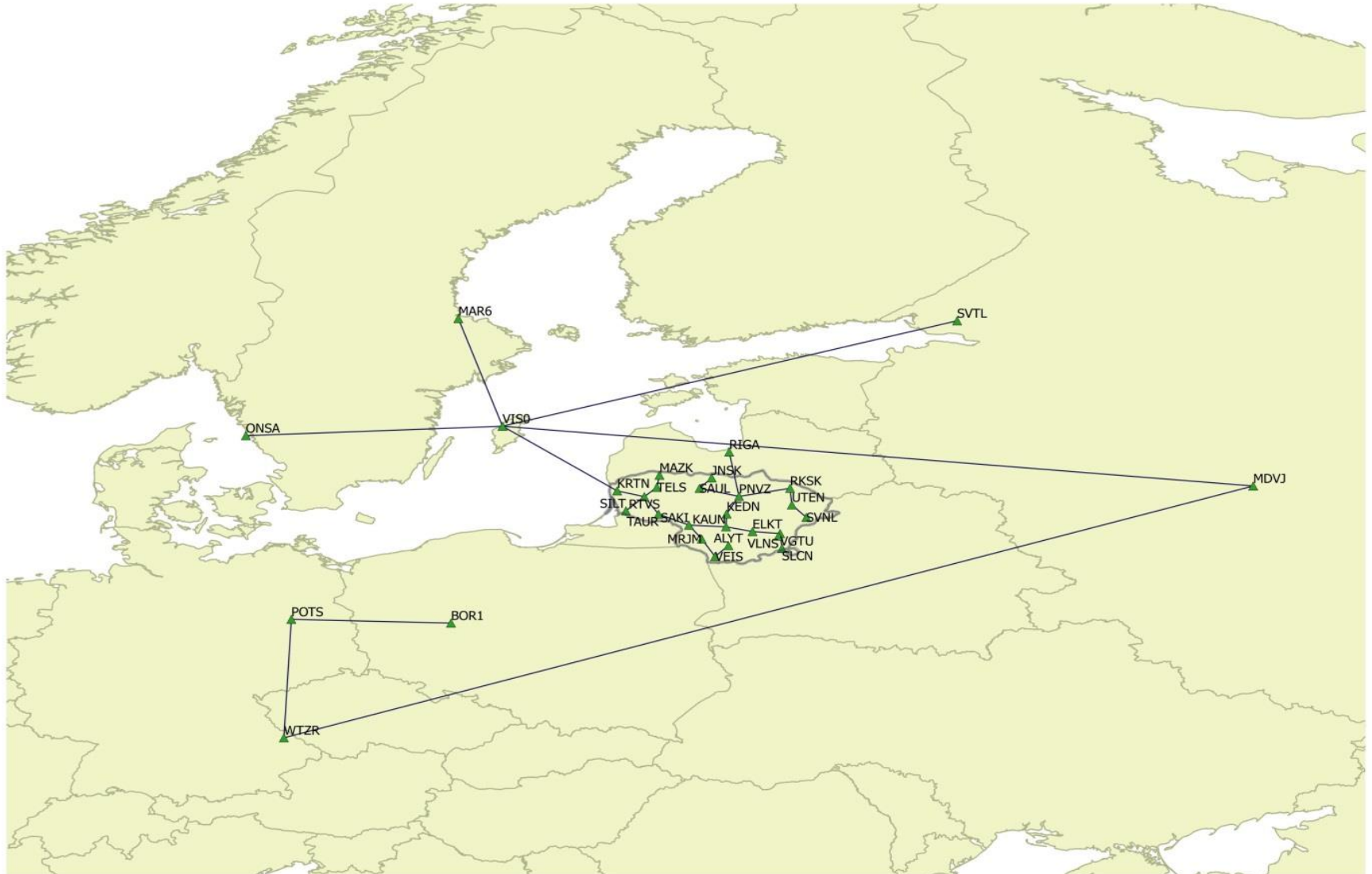




- CORS Network **LitPOS**



LitPOS processing



LitPOS processing

- **Operational processing** started from **GPS week 1934**.
 - Currently working on **2208** week processing.
 - Manual processing ☹️
-
- **2008-2021 weekly SINEX** files (with **COV matrix**) was uploaded to **EPN ftp server** with intention to fill the gap of Lithuania in European dense velocity field.

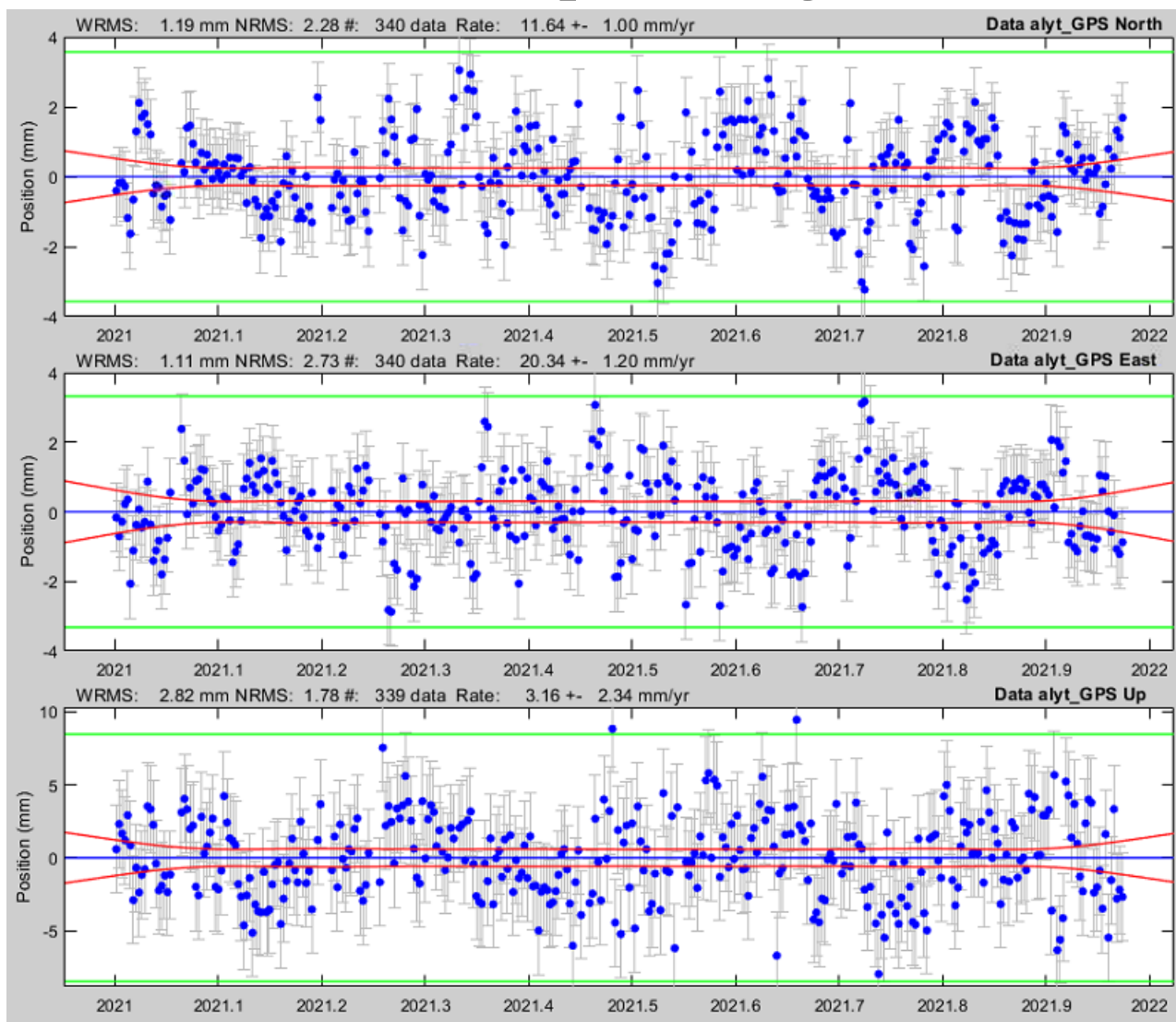
LitPOS processing

- Operating system used – **Windows 10 education.**
- Software: **BSW5.2** update **2021-03-27.**
- Network: **43** (34+6+3) stations +**10** IGS/EPN fiducial stations.
- GNSS: **ALL**
- Antennas PCV: **absolute** and **individual calibration**
- Precise orbits: **CODE**
- Tropospheric refraction: **VMF**
- Ocean tide model: **FES2004**
- Baselines processing strategy: **OBS-MAX**
- Ambiguities resolution strategy: **QIF**
- Cut-off angle: **3, 10, 25**
- Products: **Daily** and **weekly SNX (NEQ + COV)**
- Coordinates Time Series: analysis by **GITSA, FODITS, TSview**

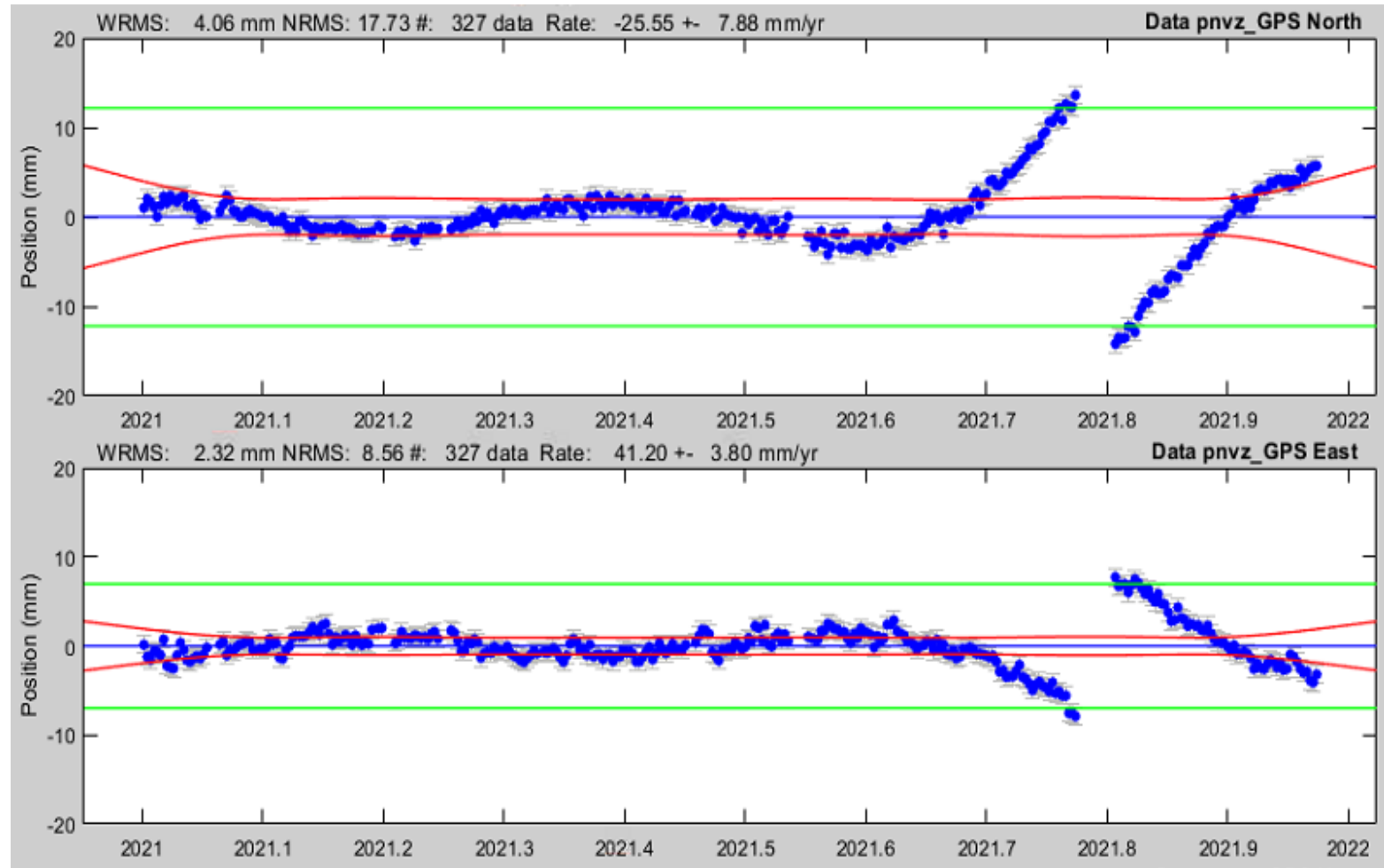


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LitPOS processing

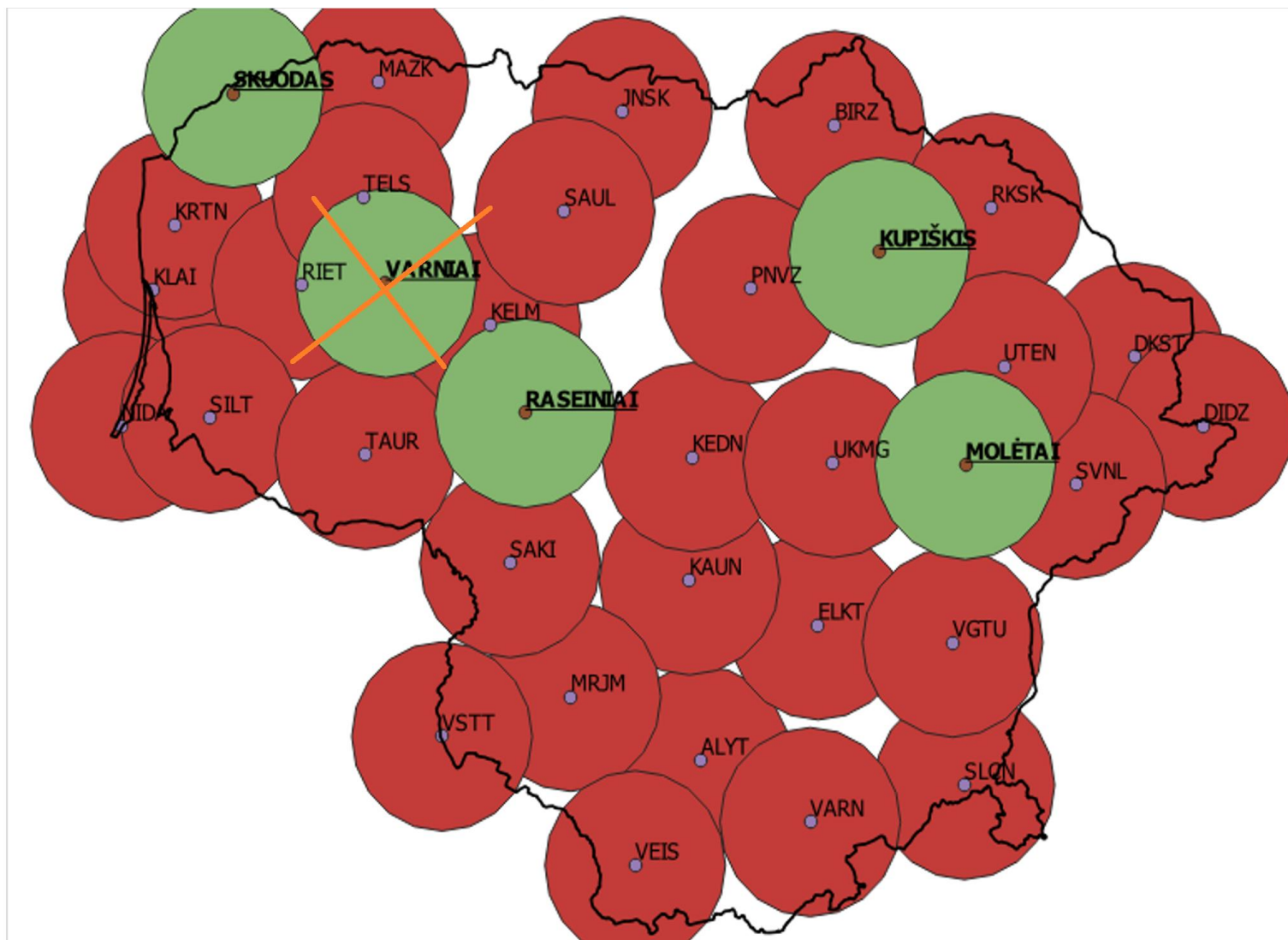


LitPOS processing



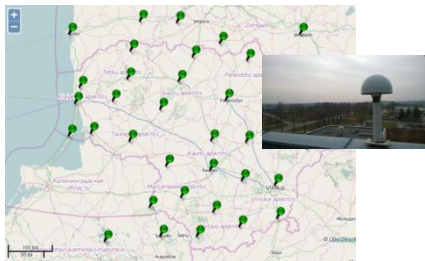


LitPOS new stations





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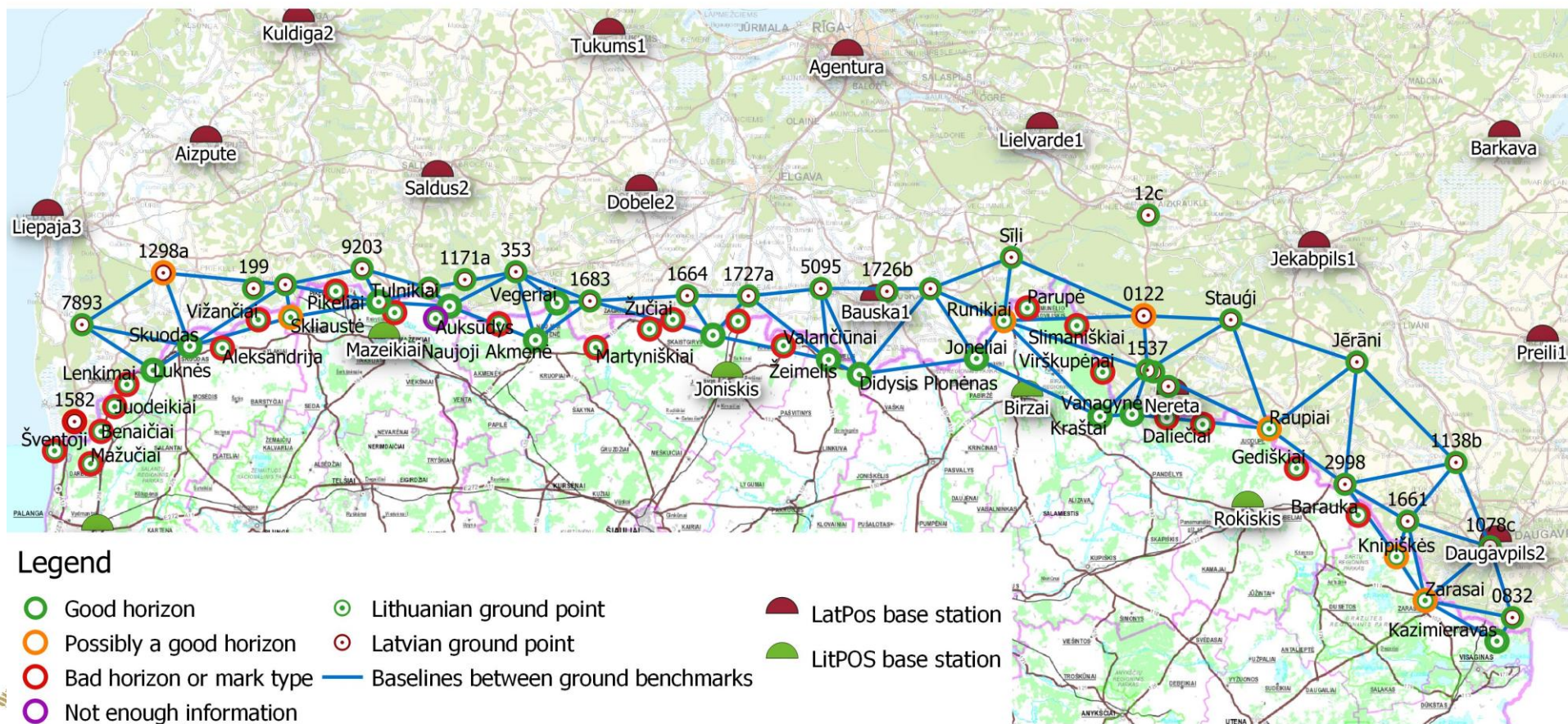


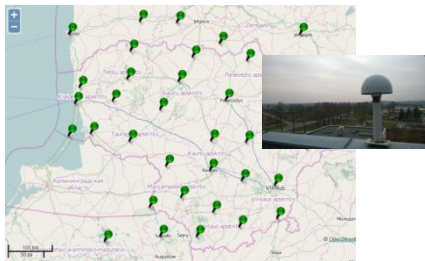
Latvia – Lithuania border



Harmonization of Lithuanian and Latvian geodetic systems in border areas

Scheme of Lithuanian and Latvian cross border GNSS observations





- ITRF transformations





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NKG2020 transformation

Future plans

- **Second Re-measurement of the Ird order Vertical Network of Lithuania in 2023-2025 (1800 km)**



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Thank You for your attention!