



Latvian Geospatial
Information Agency

Latvian Geospatial Information agency national report

Nordic Geodetic Commission working group of Reference Frame, in Estonian
Zoom 22nd and 23rd of March 2021

Department of Geodesy
Director Ivars Liepiņš



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Modernization of Latvian geodetic coordinate system 2020 or LKS-20

Huge expert group from state organizations, universities, private sector and surveyors organizations.

Two meetings face to face 29th of September and 2nd of October year 2020. At moment pause till can meet again face to face.

Main working topics:

1. LATREF and LatPos coordinate, LKS definition
2. Transformation parameters in space and directly plane TM
3. Geospatial data which will be affected and needed changes in program files
4. Form of transition and changes in normative documents



LATREF base stations



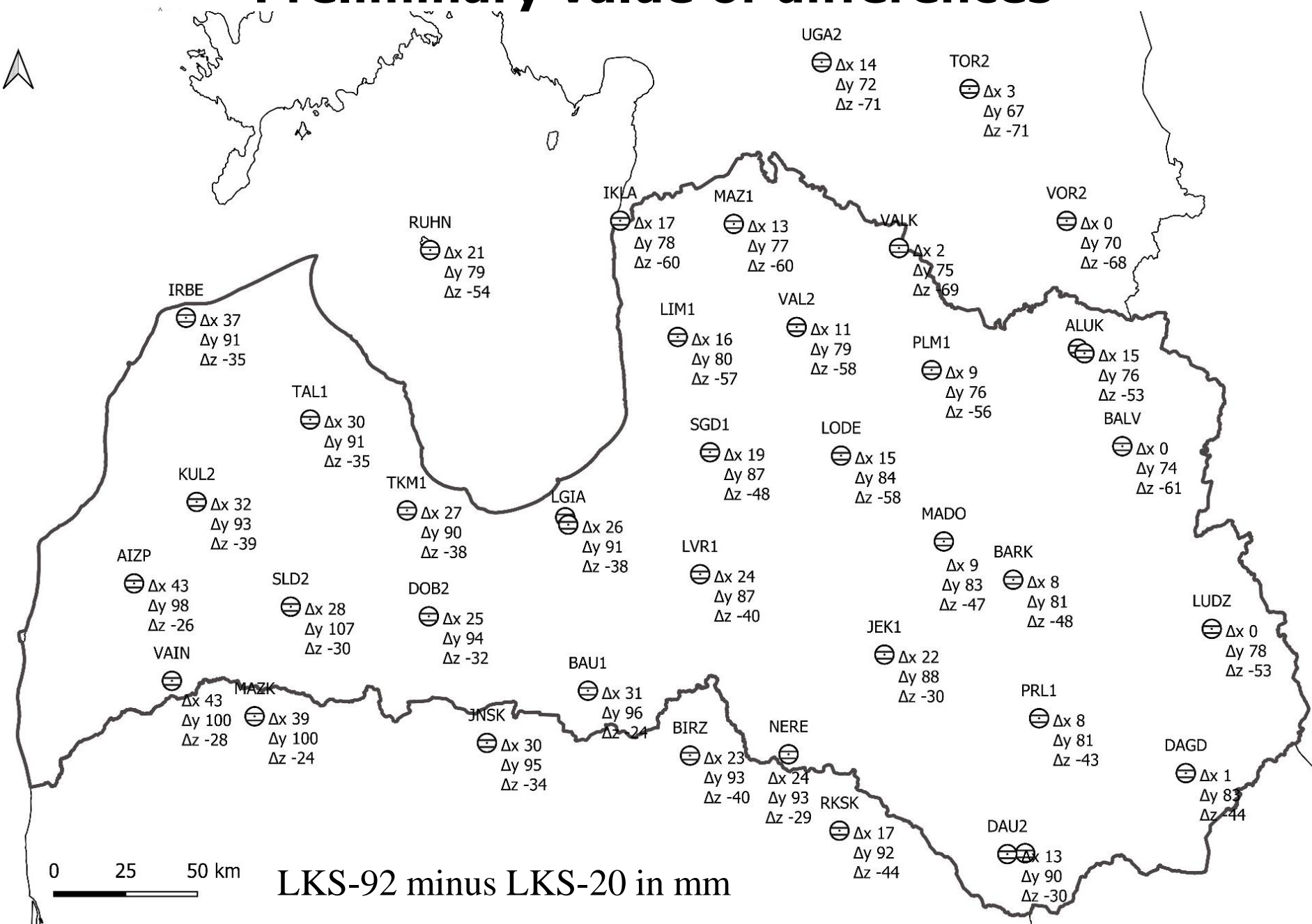
Local tie SLR Riga, EPN/IGS Riga and zero order point Riga



Legend

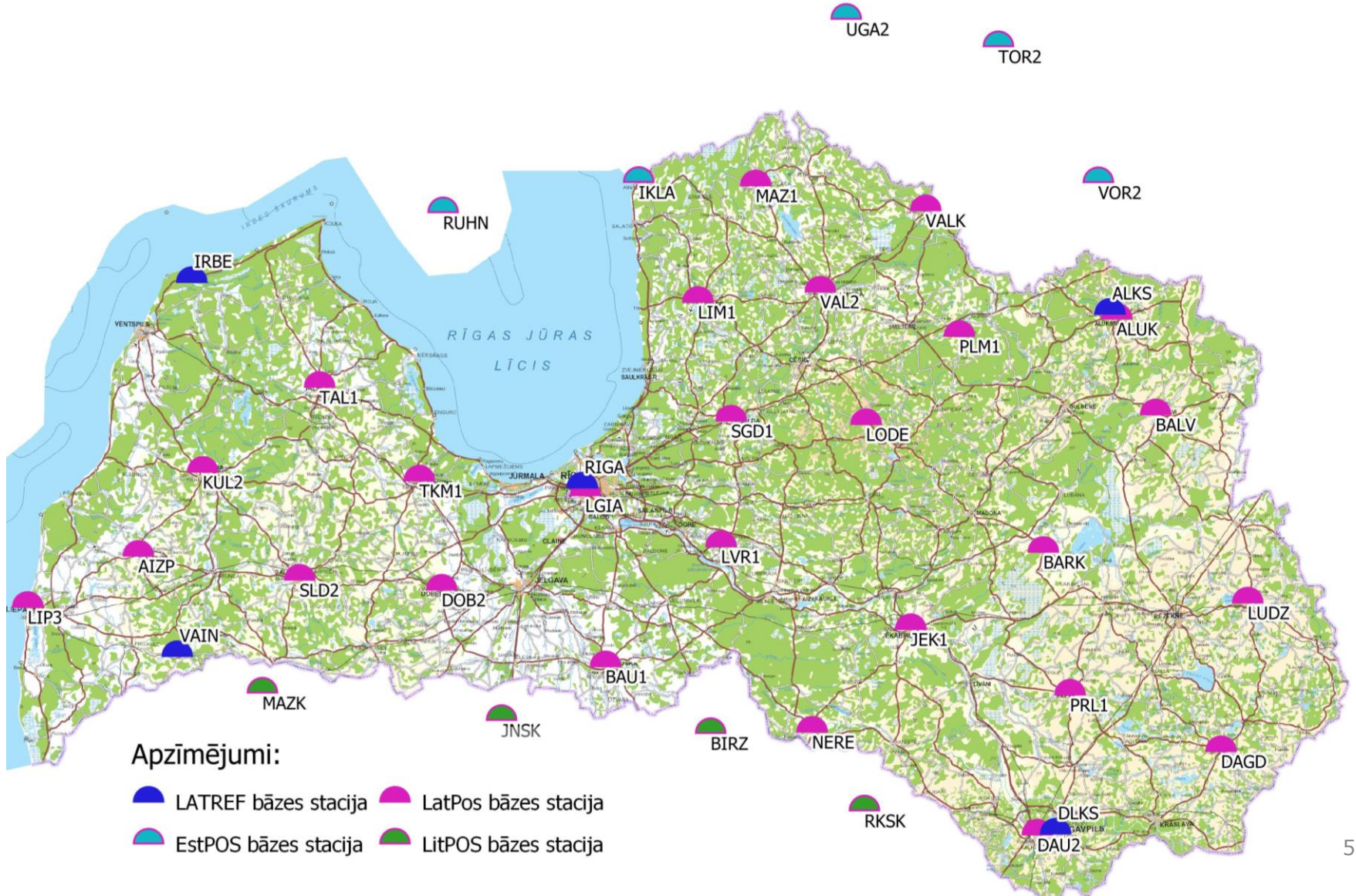
-  LATREF station
-  Calibrated antenna

Preliminary value of differences



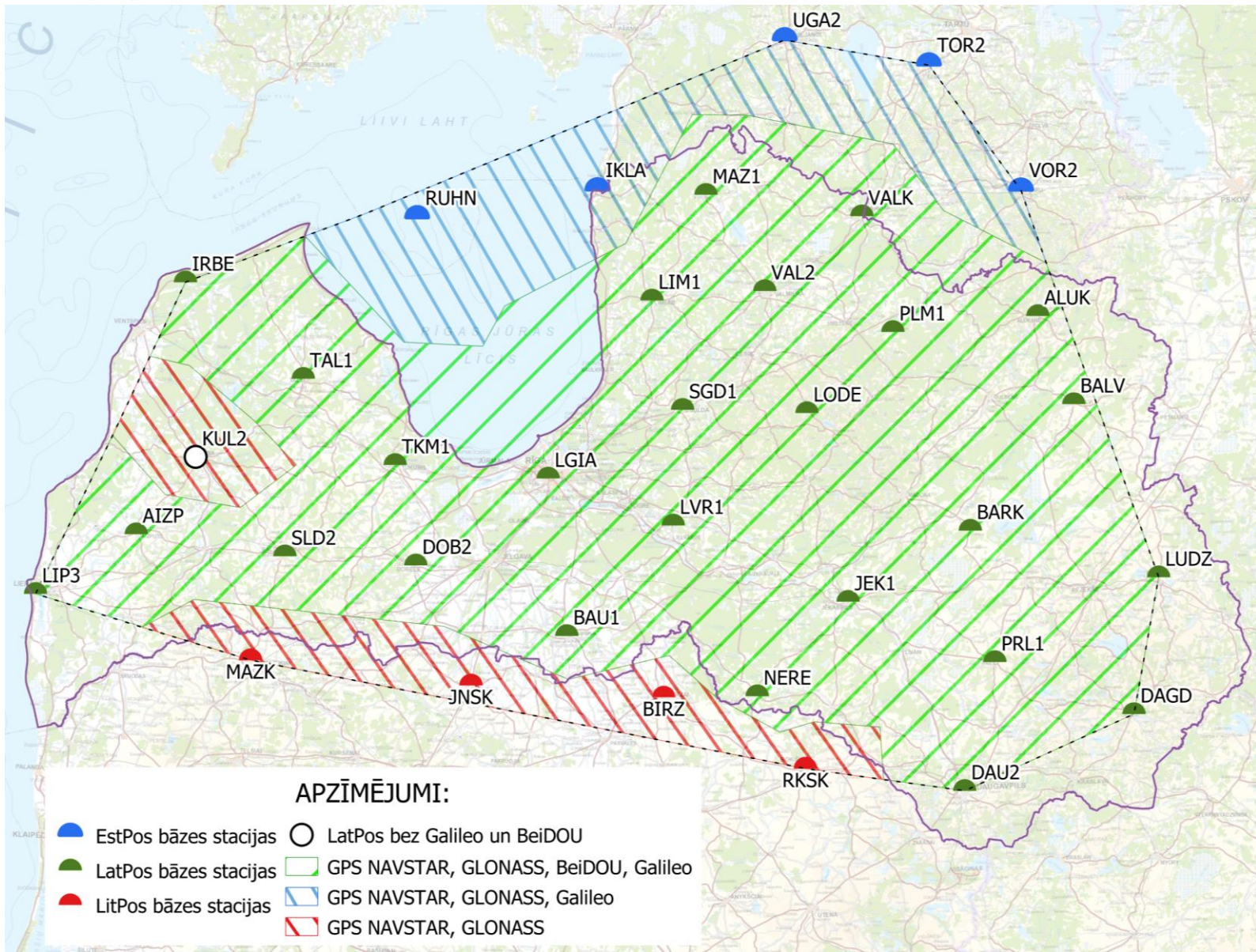
LKS-92 minus LKS-20 in mm

LATREF and LatPos stations





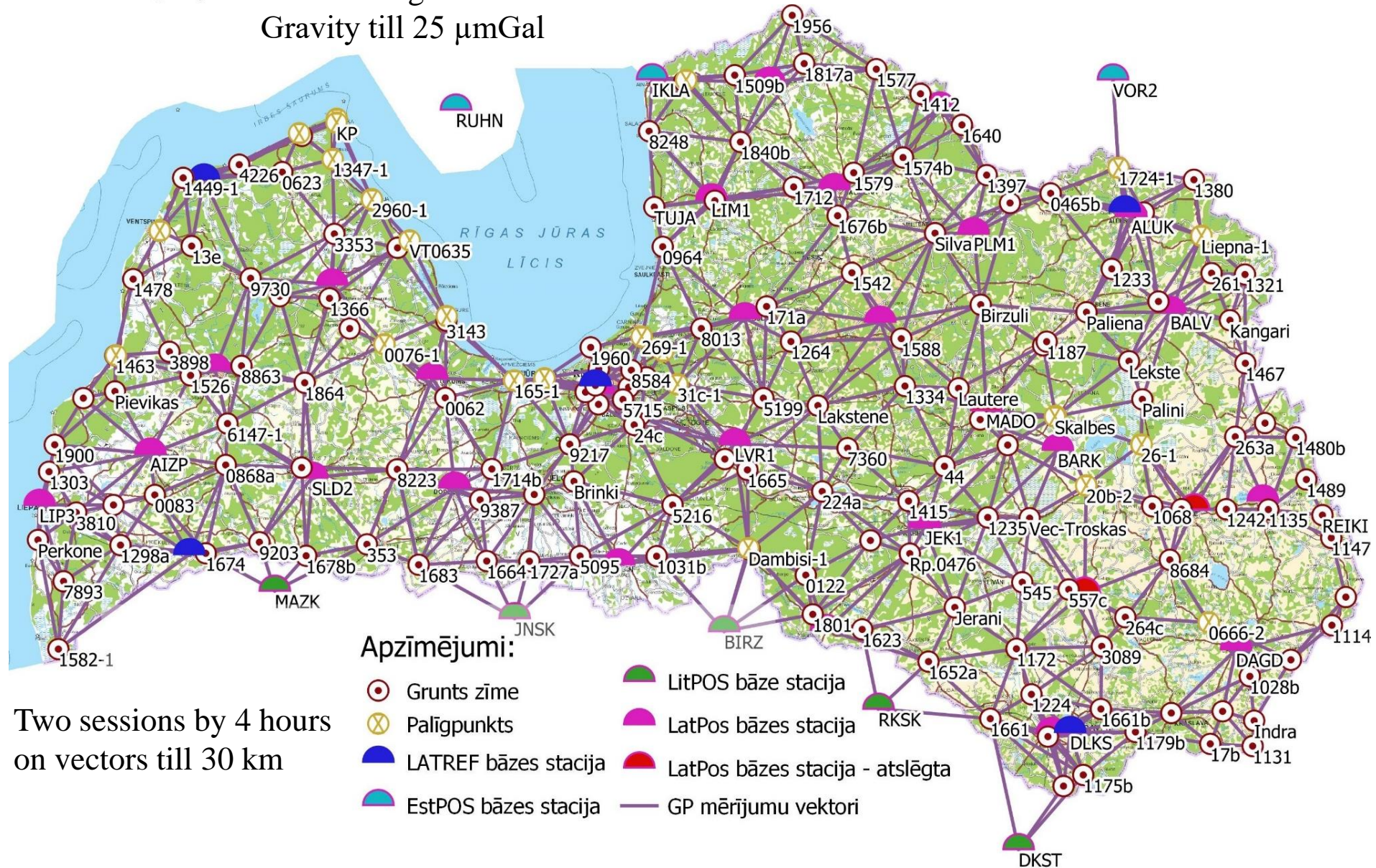
LatPos RTK network covering



Combine network status on 2021

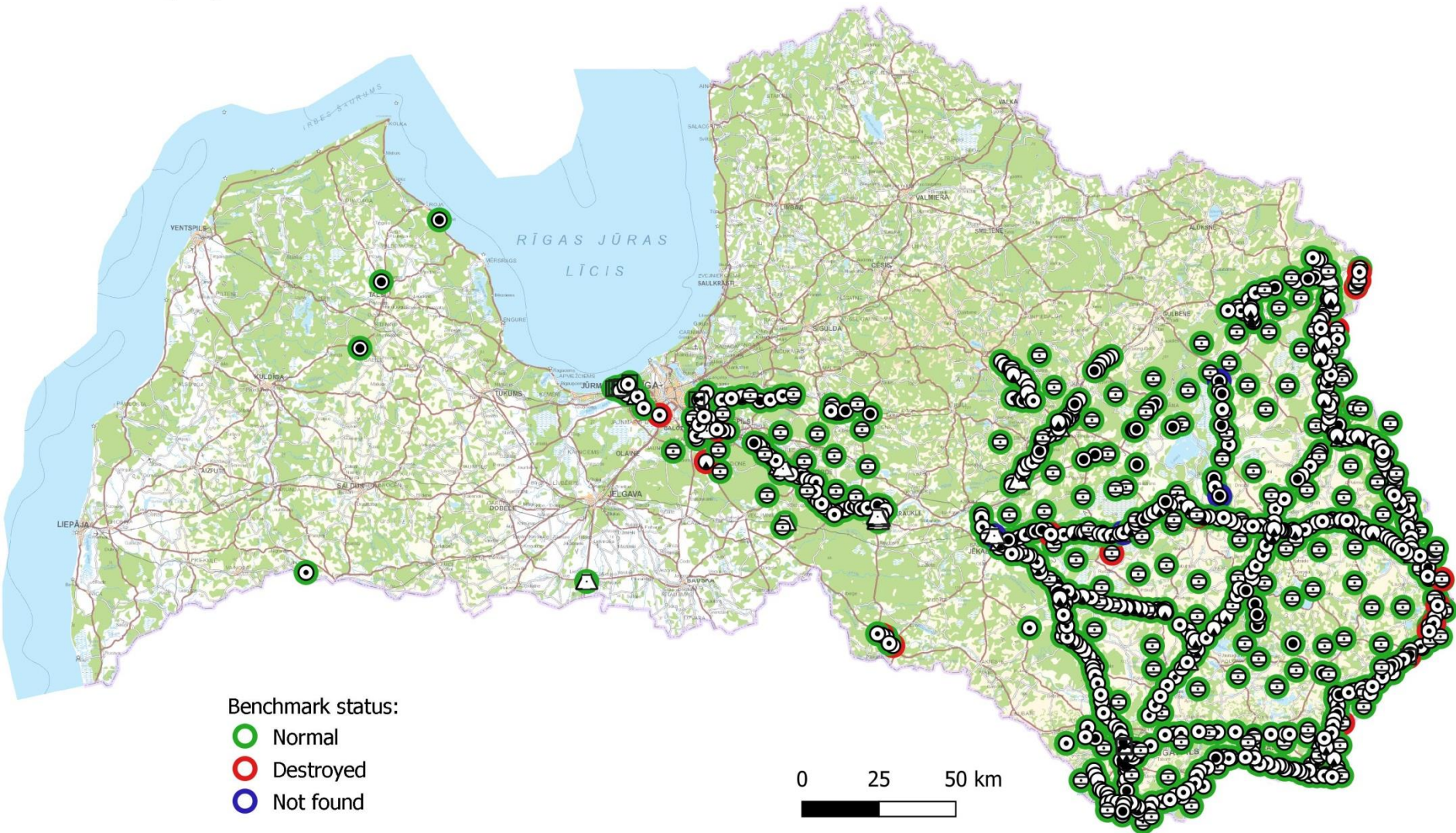


Coordinates till 10 mm
Normal height around 2 mm
Gravity till 25 μmGal





Benchmark inventory in Latgale region 2020



ECR-C transponders

Four ECR-C transponders from MetaSensing

Tutorial period from 29th of September till 1st of October:

✓29.09. theoretical part

✓30.09. – 1.10. practical part



Test measurements



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ECR-C test measurements in LU Botanical garden on
clock silo roof

✓ Check all
transponders

Period:

✓ 25th of
September–
29th of
October

ECR-C
change each
7 days



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Struve Geodetic arc room in Jekabpils museum (1)



Author
Mētra Štelmahere



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Struve Geodetic arc room in Jekabpils museum (2)



Author
Mētra Štelmahere



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Outreach

“Geodesist day 2020” on 3rd of February information on <https://www.lgia.gov.lv/lv/geodezistu-diena-2020> around 120 listeners in internet and one credit point for certificated surveyors

News about NKG transformation

<https://www.lgia.gov.lv/lv/zinas/pieejami-jauni-riki-transformacijai-no-starptautiskam-koordinatu-sistemam-uz-latvijas>

Seminars “State geodetic network in surveying” on 10th and 17th of March (around 180 listeners in total) for certificate surveyors in internet. Each 4 hours long and 4 credit points. Information will be in Agency web.



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Thank you for your attention!
Paldies par uzmanību!