



National Report of Estonia 2012

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- **Main activities**

GNSS stations

Levelling network

Gravity and geoid

Local networks



GNSS stations

- 3 antenna replasement
 - 2 EPN stations SUUR and TORA

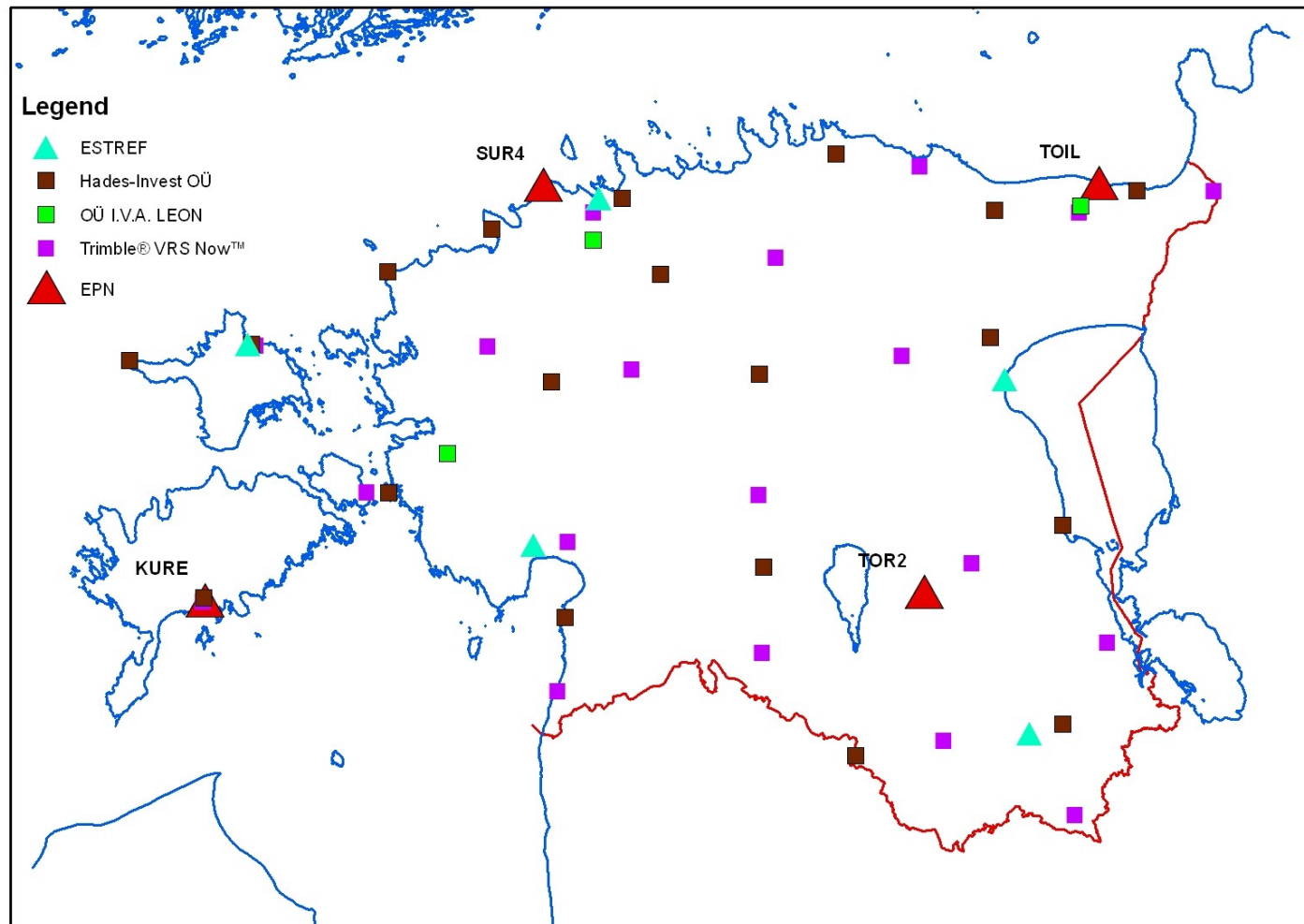


Fig. 1. GNSS Station Network



Precise Levelling Network

- 6 new additional lines 428 km
 - Old benchmarks – 113
 - New benchmarks – 237
- 1st order levelling in year 2011 – 75 km
 - Estonian-Latvian connection line
 - 9 tide gauges
 - repeated levelling (30.7 km) from 2001
- 2nd order levelling on island Hiiumaa – 50 km

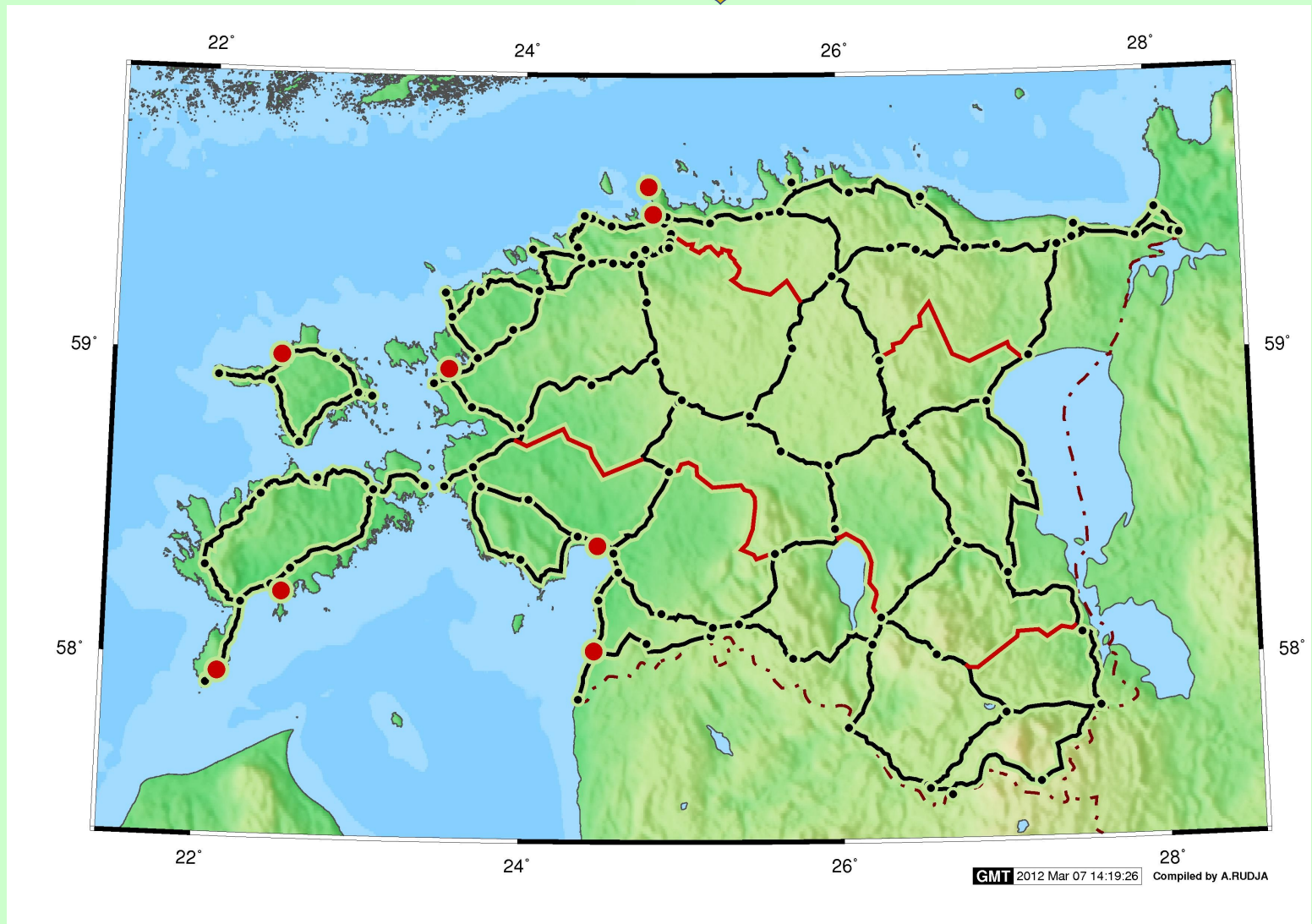


Fig. 2 The I order levelling network



- 1st order levelling in year 2011 – 75 km
 - Estonian-Latvian connection line
 - 9 tide gauges
 - repeated levelling (30.7 km) from 2001
- 2nd order levelling on island Hiiumaa – 50 km



Gravity activities

- Updating gravity database with new gravity survey points
 - About 1000 new gravity points measured in southern, south-eastern and central part of Estonia
- Computation of new national geoid model
 - New reference surface ESTGEOID2011 of the national height system BK77

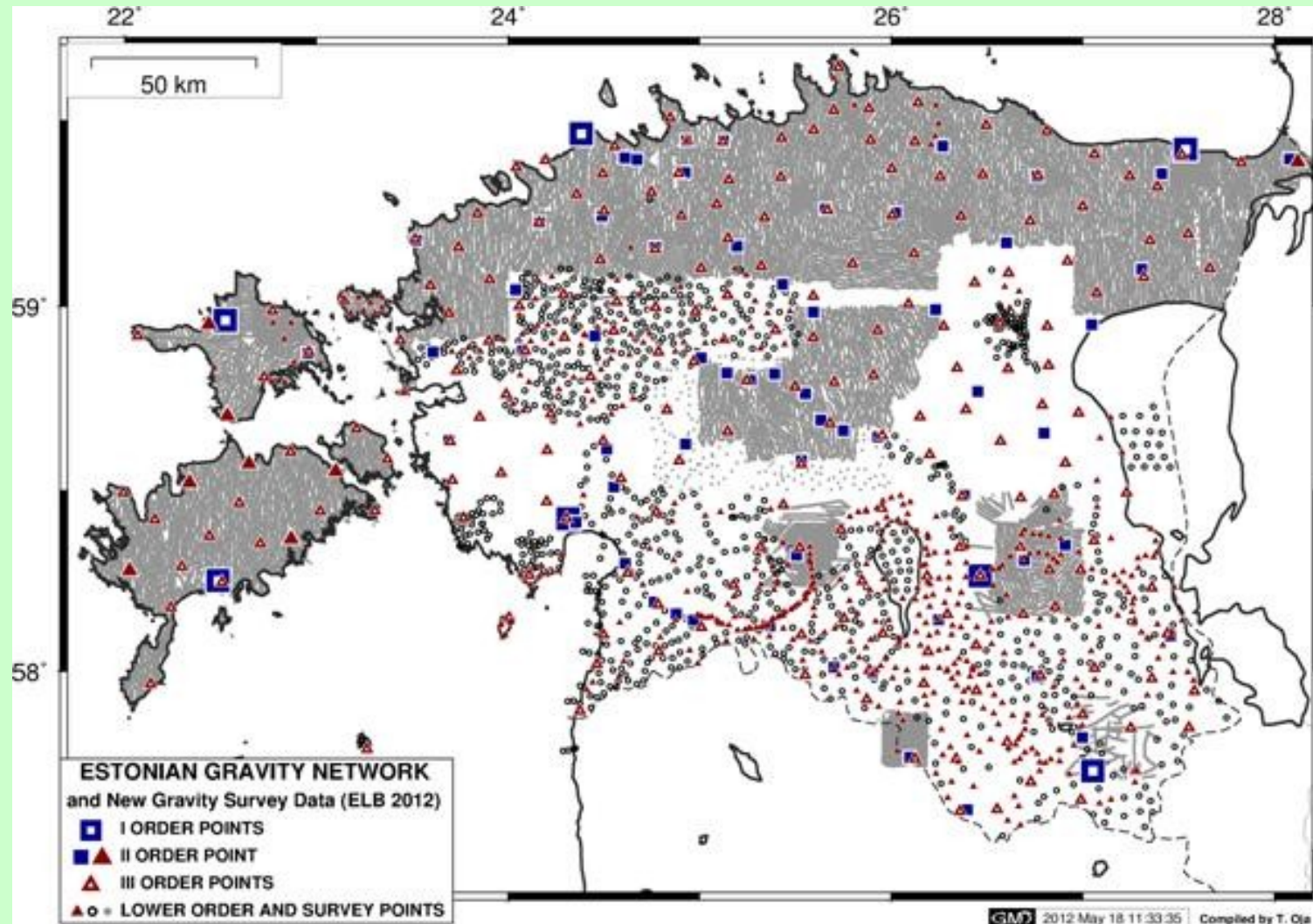


Fig. 3. The database of gravity network and survey points

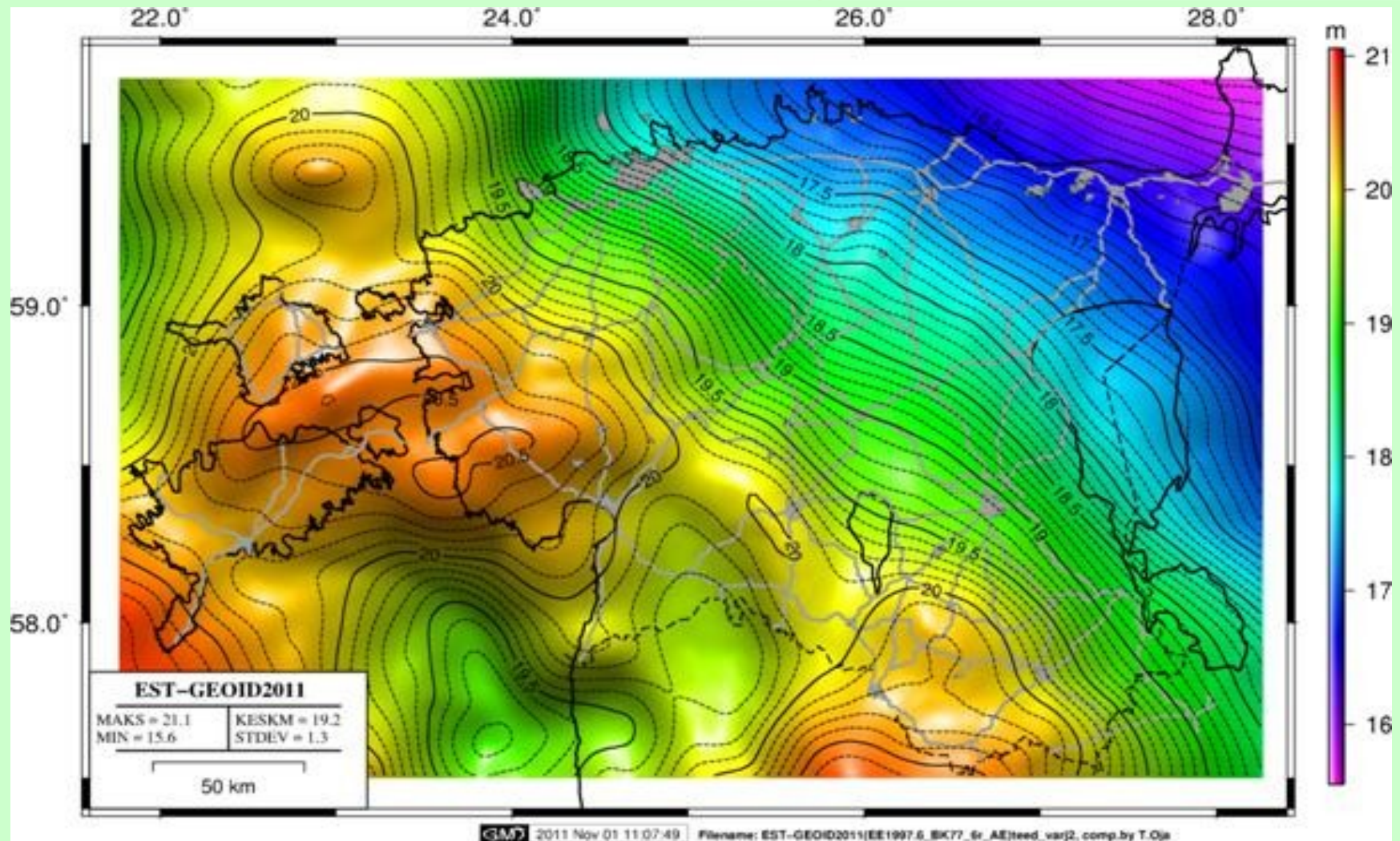


Fig. 4. The new reference surface EST-GEOID2011



Laser Scanning

- In years 2008-2011 with Leica ALS50-II
- Aircraft Cessna Grand Caravan 208B
- Flight level 2400 m
- Maximum distance between points 2.6 m
- Estimated accuracy for the dataset 0.17 m
- Maximum difference on control points ± 0.34 m



Local networks, maintenance of geodetic marks and legislation

- 1st order local network reconstructed in 2 communities
- In 2011 about 600 points inspected
- In connection of Spatial Data Act
 - Decree of Geodetic System
 - Statute of Geodetic Point Database



Thank you for the attention!