



REPUBLIC OF ESTONIA
LAND BOARD

National report of Estonia

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Vallner**

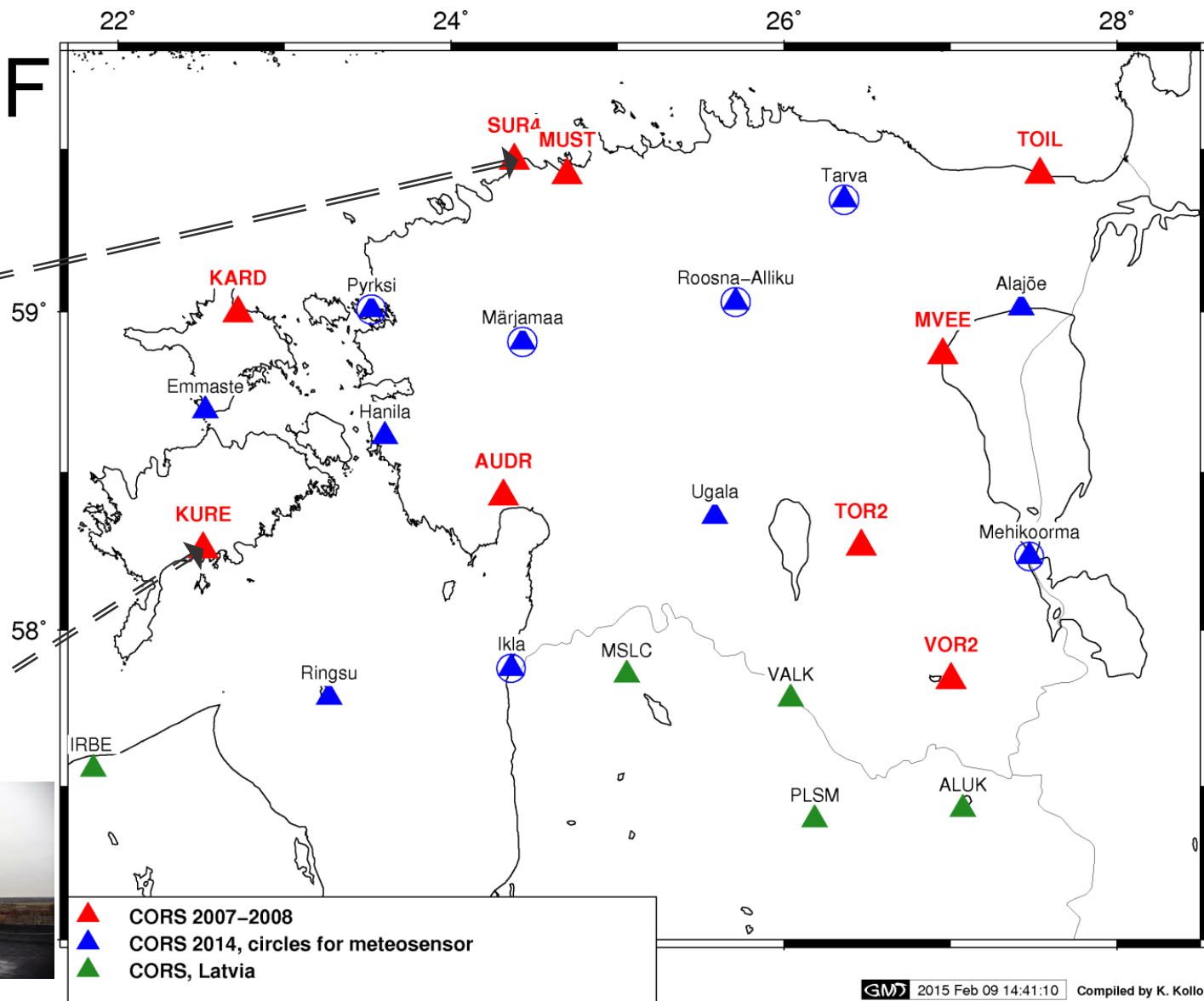
Republic of Estonia
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ESTREF: Estonian Reference Station Network

- Altogether 20 stations
 - Leica GR25 receivers and LEIAR25.R4 antenna with radome LEIT (15)
 - Leica GRX1200GG receivers and LEIAT504GG antenna with radome LEIS (5)
- ESTPOS – GNSS-RTK Permanent Station Network
 - Leica Spider – Network-RTK software and quality control

- GNSS data exchange:
 - Latvian Geospatial Information Agency
 - Estonian Maritime Administration
 - Estonian Agricultural Registers and Information Board

ESTREF



Precise Levelling Network

- 1st order levelling in year 2014 – 100 km (levelling line Kauksi-Vasknarva-Jõhvi)
- Projects for levelling network reconstruction in 10 settlements (Pärnu, Narva, Kohtla-Järve, Jõhvi, Rakvere, Viljandi, Haapsalu, Kuressaare, Võru, Valga)

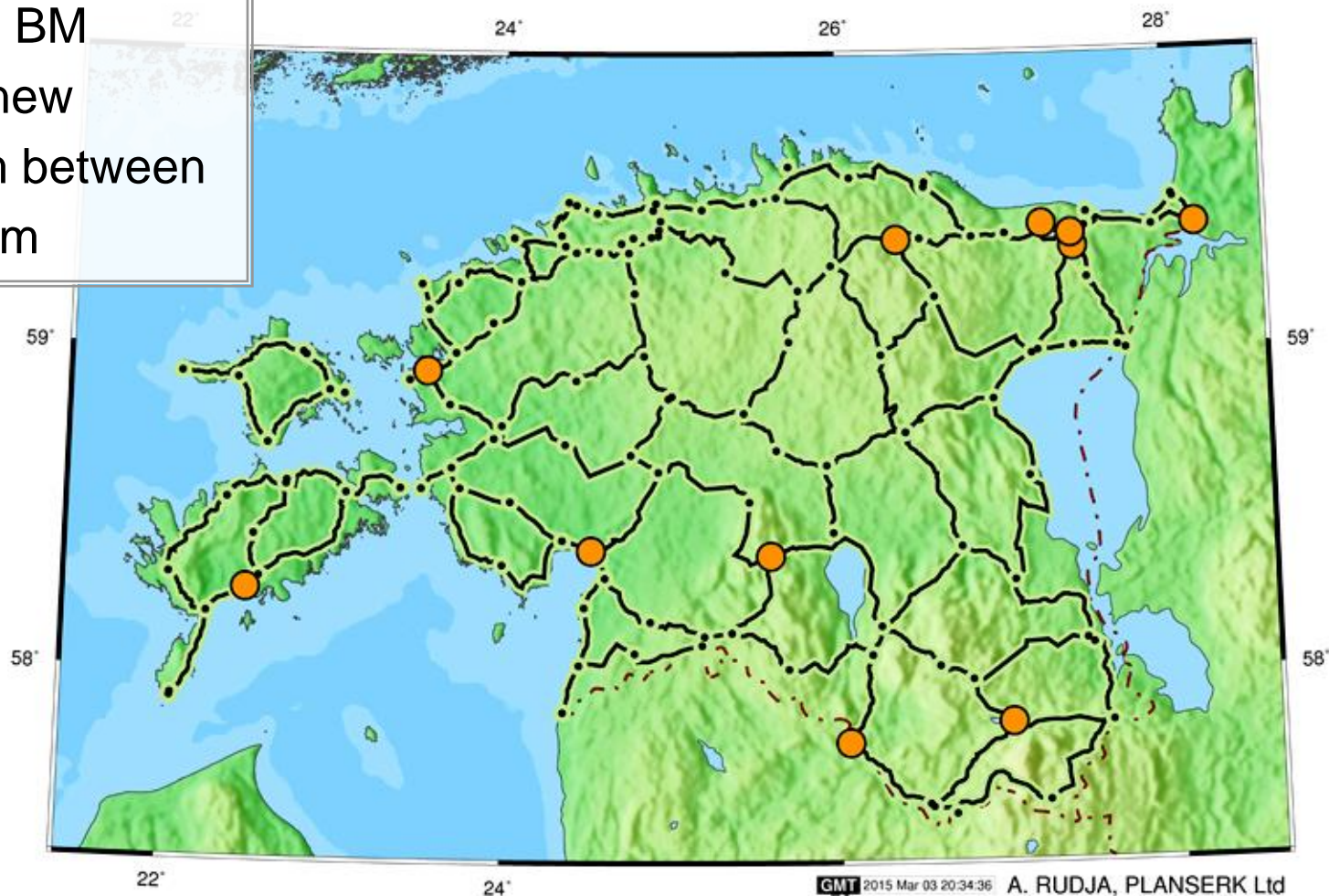
Estonian levelling network

- ca 2 800 BM
- ca 45% new
- ca 1.4 km between
- ca 4 000 km
- $\pm 0.23 \text{ mm} \sqrt{\text{km}}$



Municipalities: Tallinn (2003 – 09) + 11 (2014 – 15)

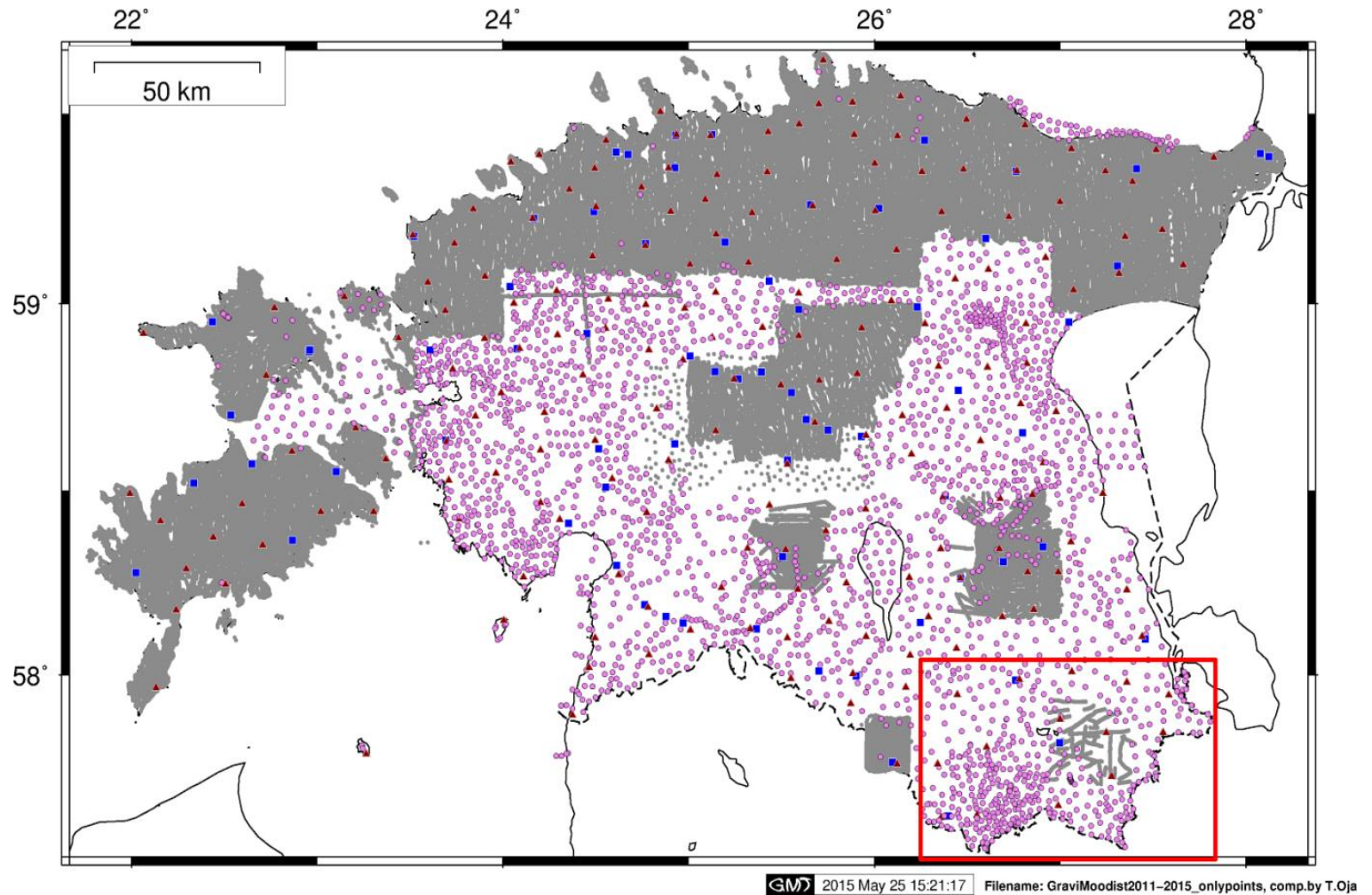
- ca 1 050 BM
- ca 20% new
- ca 350 m between
- ca 390 km



Gravity activities

- The main works in 2014-15:
 - Additional gravity surveys were made in southeast Estonia (using gravimeter Scintrex CG-5 and GNSS & network-RTK positioning)
 - New version of Estonian gravity database (EGA) was compiled
 - Participation in the NKG2015 gravity field and geoid modelling project

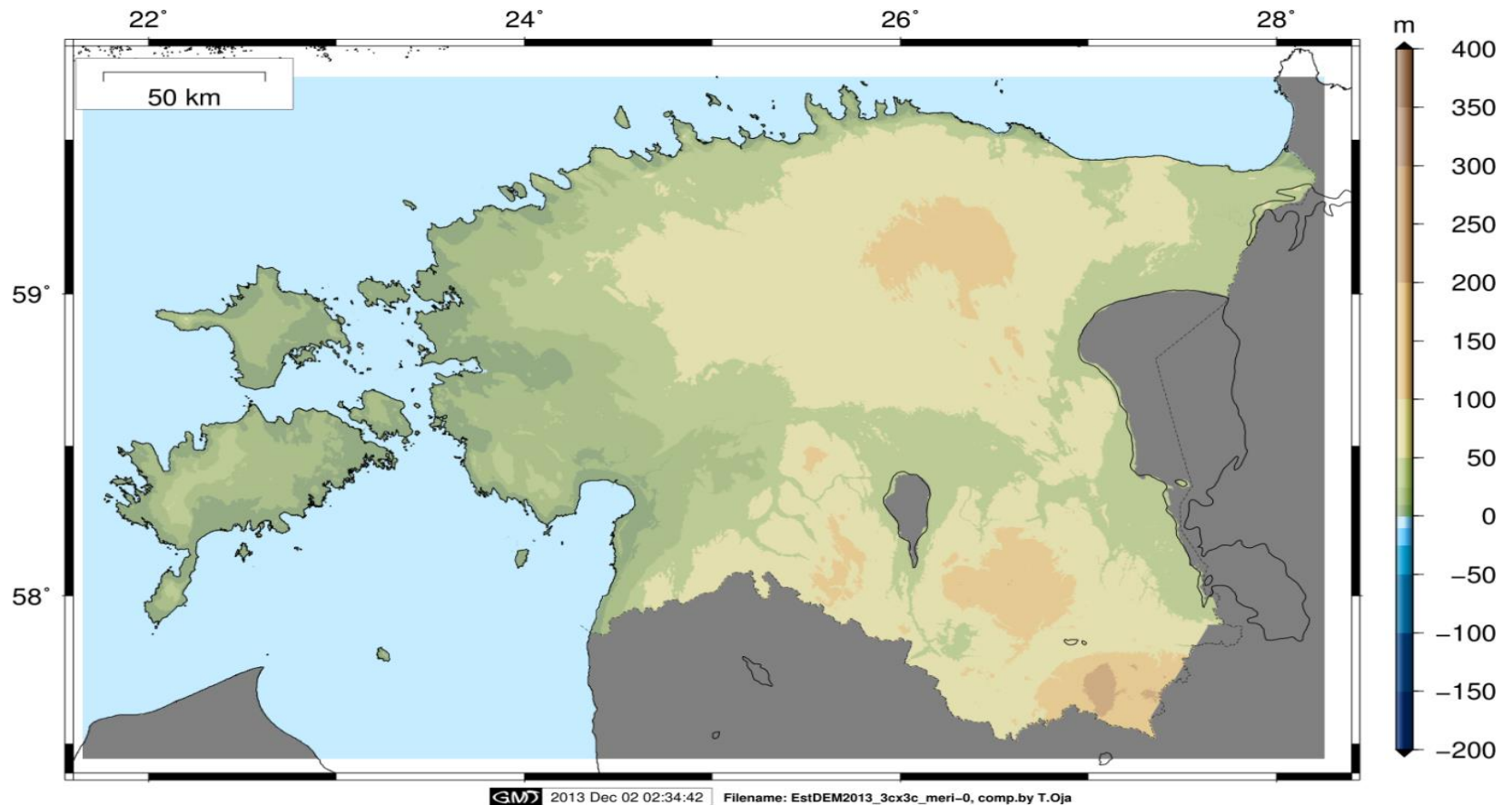
Densified gravity data in southeast Estonia



Gravity activities

- In 2014 the information about 31 000 points from EGA were retrieved and delivered to the gravity database of NKG.
- National DEM with 3" resolution was compiled on the basis of the latest airborne laser scanning data and merged into NKG DEM.
- New set of transformation parameters (to compute the normal heights from Baltic Height System to EVRF2007) was estimated.

The EstDEM2013 with 3''





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Thank you!

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