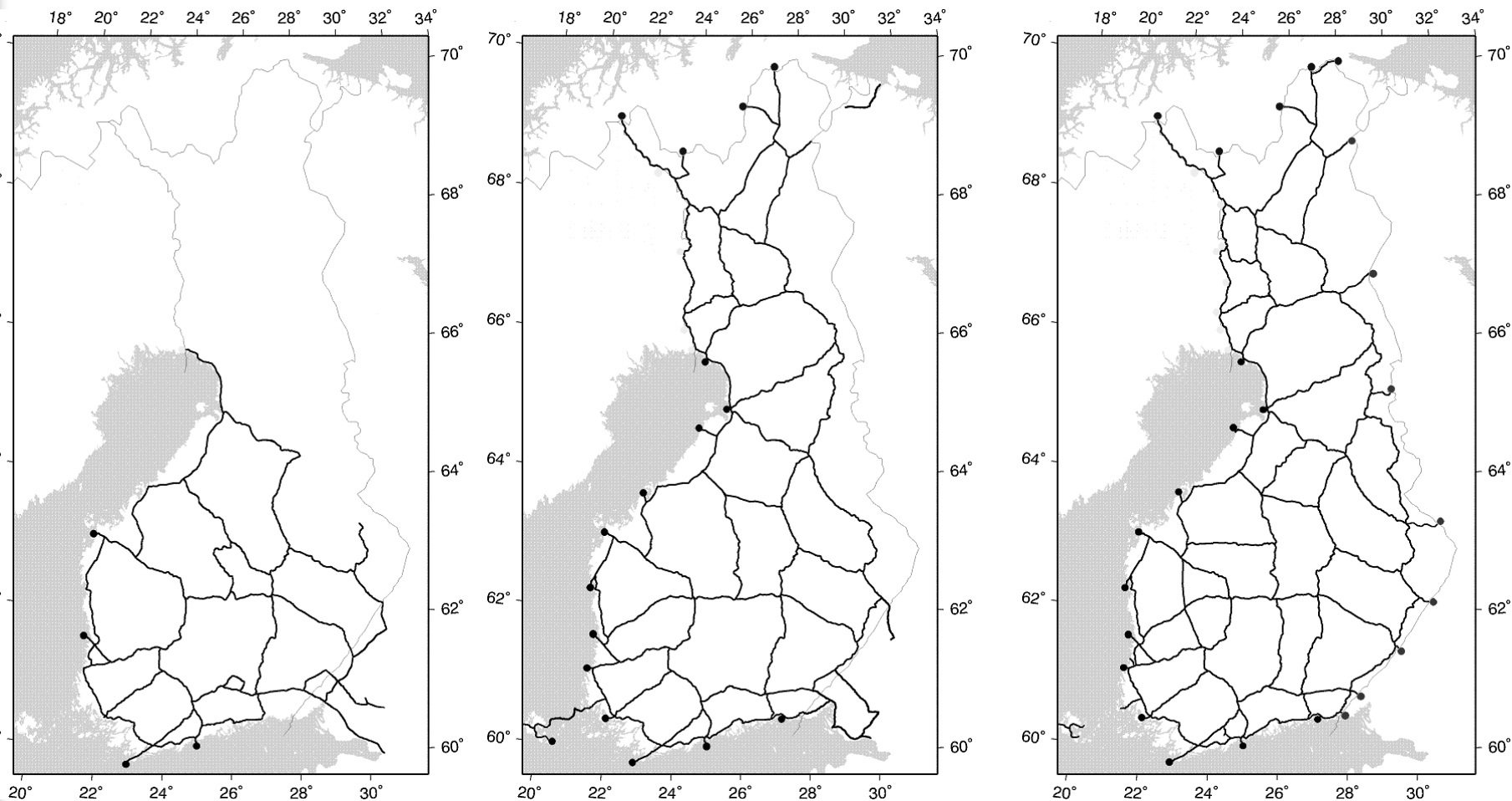
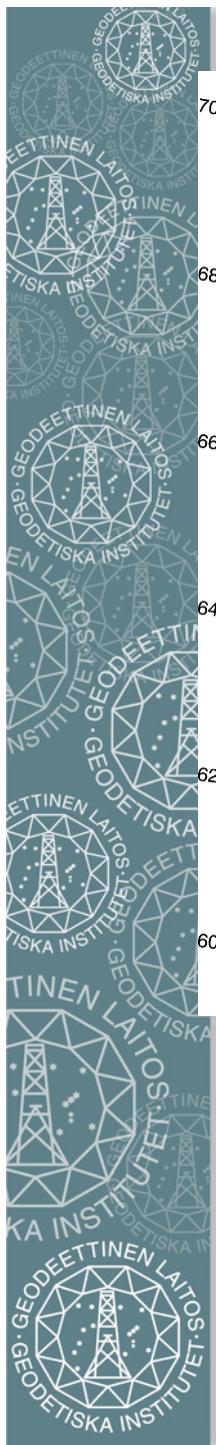


# **The new Finnish height system N2000**

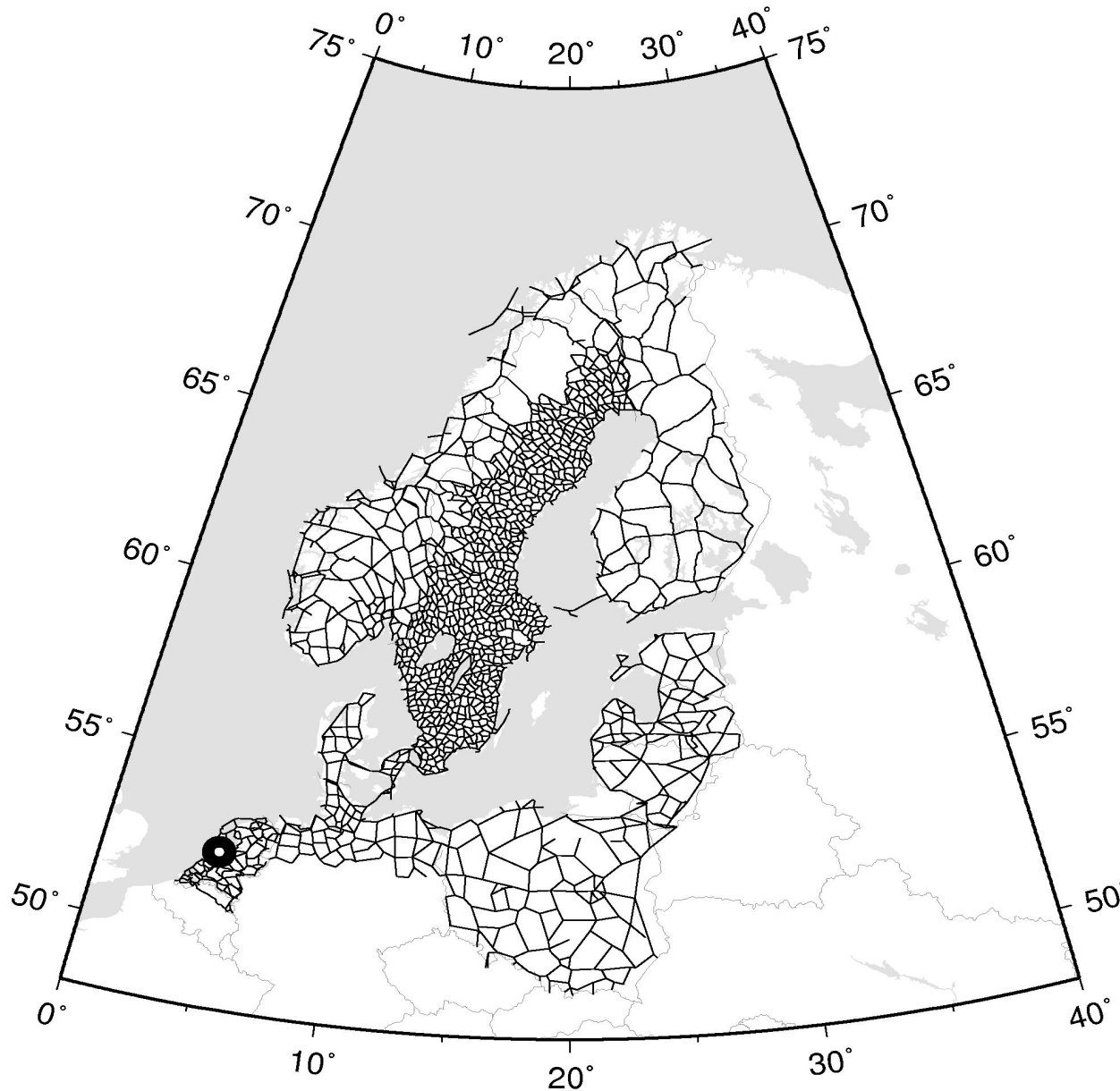
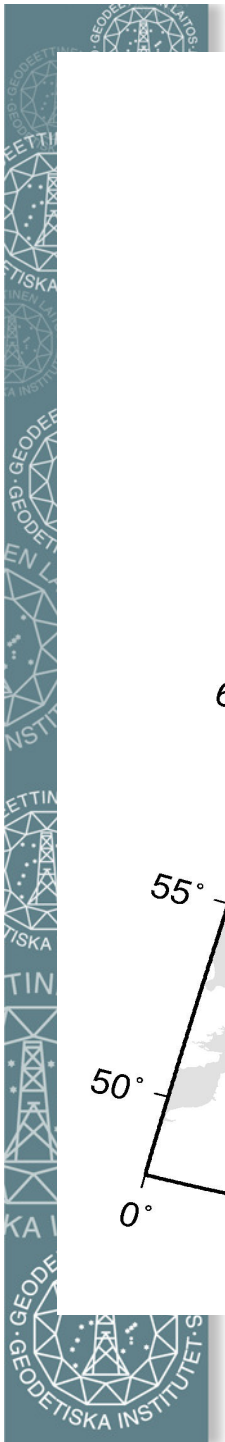
V.Saaranen, P. Lehmuskoski, P. Rouhiainen,  
M. Takalo, J. Mäkinen

Finnish Geodetic Institute



First (1892-1910), Second (1935-1975) and  
Third Levelling of Finland

Accuracies are 1.3, 0.7, and 0.8 mm/ $\sqrt{\text{km}}$

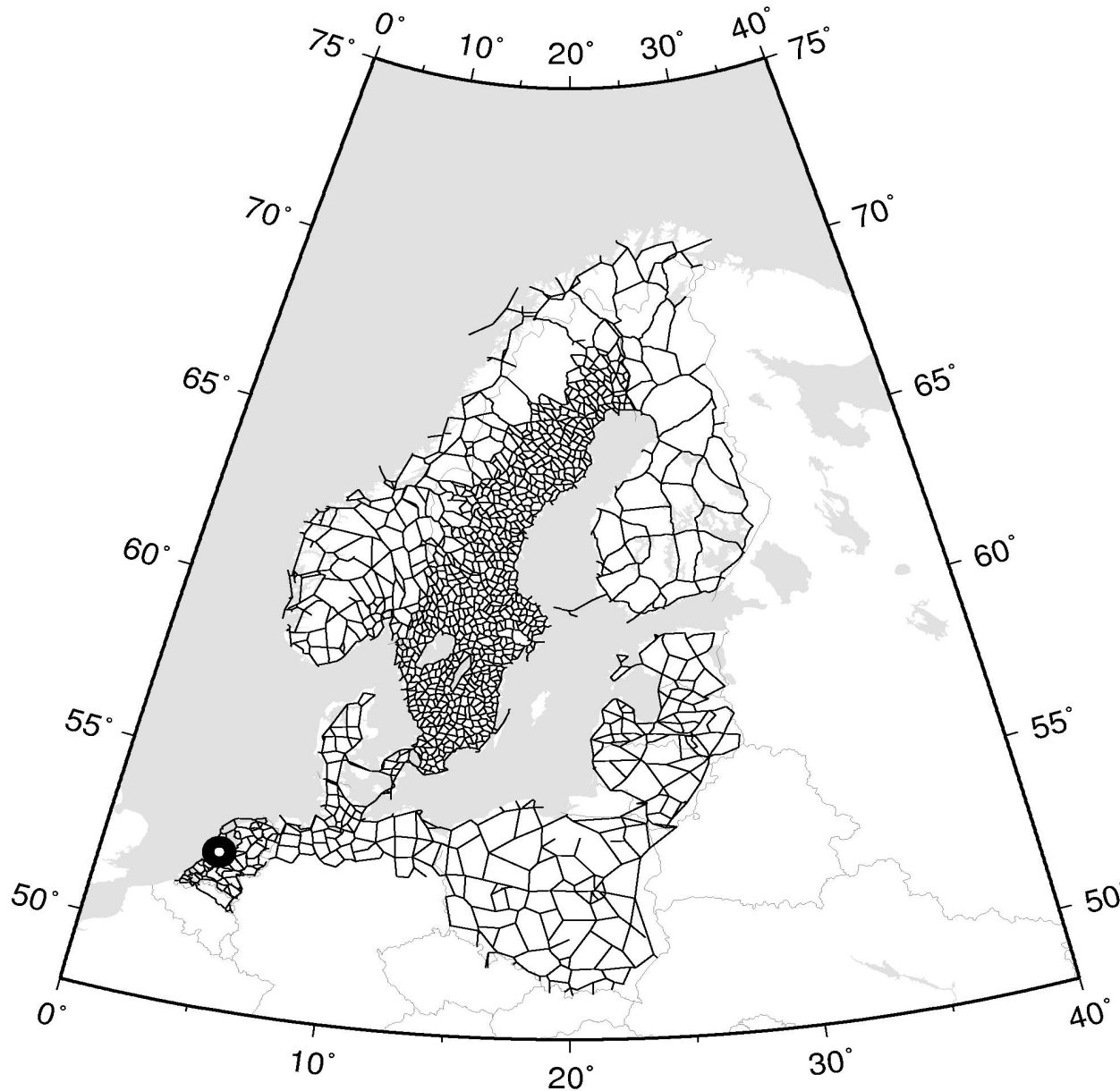
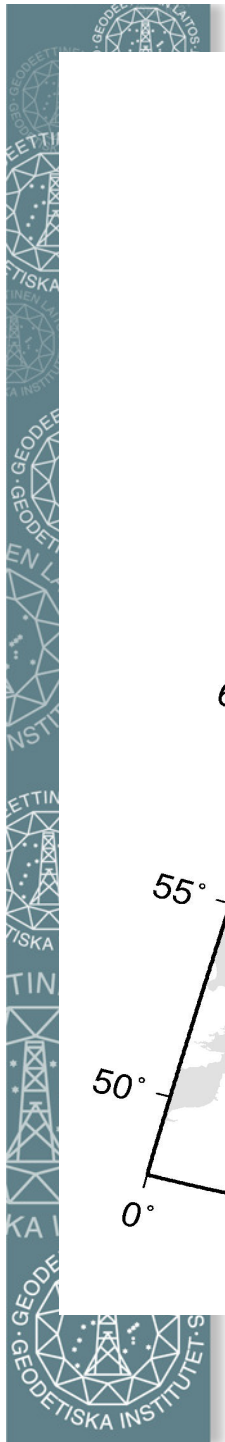


Baltic Levelling  
Ring in Nordic  
(NKG) and  
international  
cooperation

NKG2005 Land  
Uplift model,

Height  
differences  
reduced to  
epoch 2000.0

Zero system for  
permanent tide



1) Finnish  
adjustment of  
Baltic levelling  
ring (slight  
differences in  
data in Finland)


EVRF2000  
datum point  
13600 fixed

2) This gives  
value for  
National Datum  
Point in  
Metsähovi

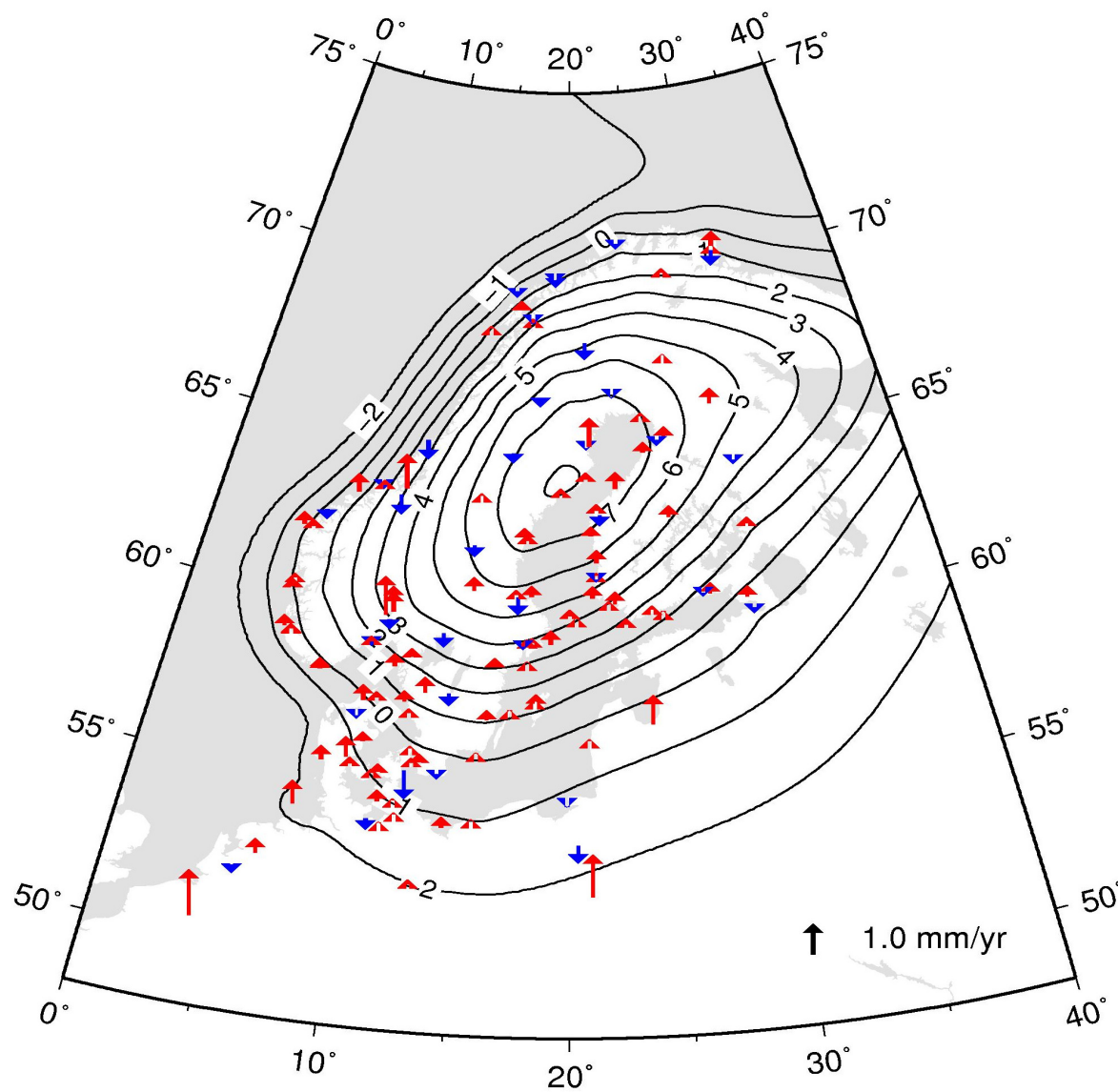








We are using the hybrid (= empirical + geophysical GIA) uplift model NKG2005 LU, although in Finland repeated levellings alone are sufficient to resolve uplift rates.

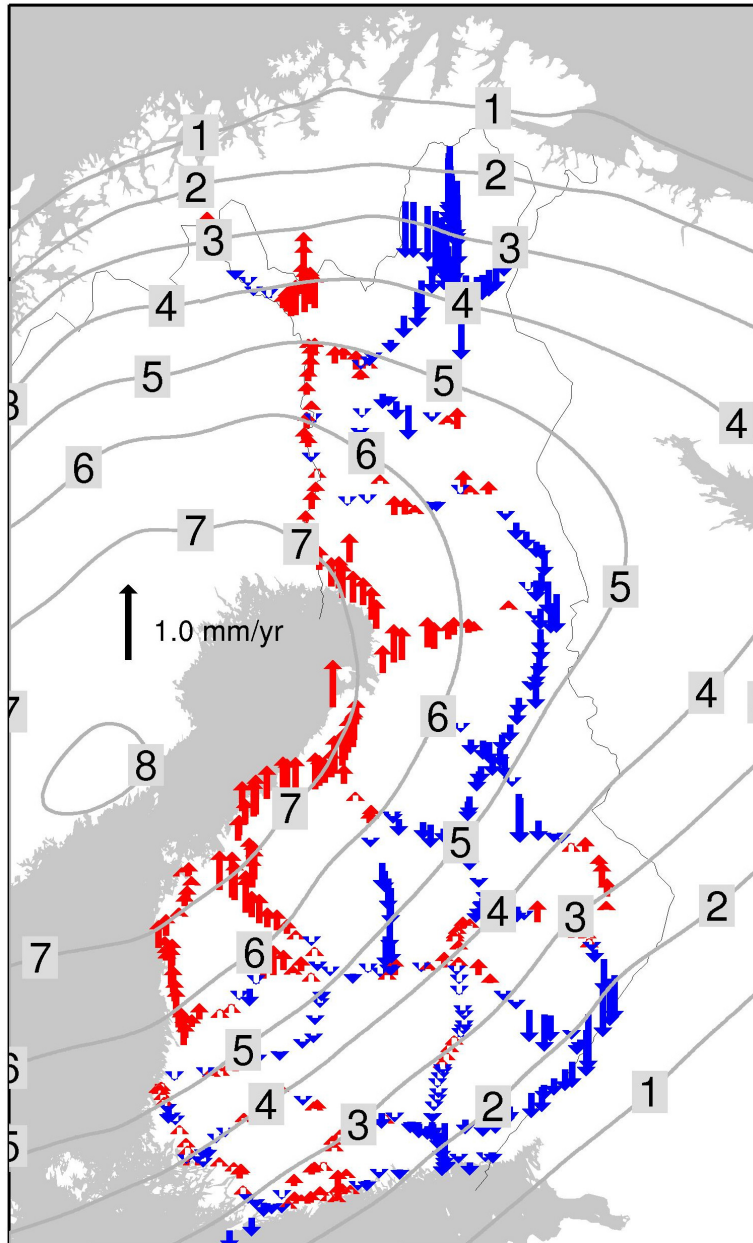


NKG2005  
Land  
Uplift  
model

Fit to  
CGPS and  
TG data







Uplift from  
repeated  
levelling

minus

NKG2005 LU

= Arrows

Grey curves=  
NKG2005 LU

# Old height system in Finland is N60

- Datum is MSL in Helsinki 1960.0
- Orthometric heights
- Mean tidal system













# Summary

- New Finnish N2000 height system released this summer
- Height differences refer to 2000.0, NKG2005 Land Uplift model
- Zero tidal system
- NAP "transported" to National Reference Point from 13600 using BLR, also in 2000.0 and in zero tidal system
- Normal heights
- Minimal differences to RH2000 of Sweden