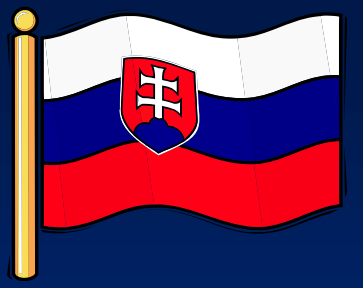


National Report of SLOVAKIA 07

Dušan FERIANC, Elena ŠALÁTOVÁ, Miroslav ROHÁČEK [1)],
Katarína LEITMANNOVÁ [2)], Jan HEFTY [3)]

1) Geodetický a kartografický ústav Bratislava

2) Úrad geodézie a kartografie SR

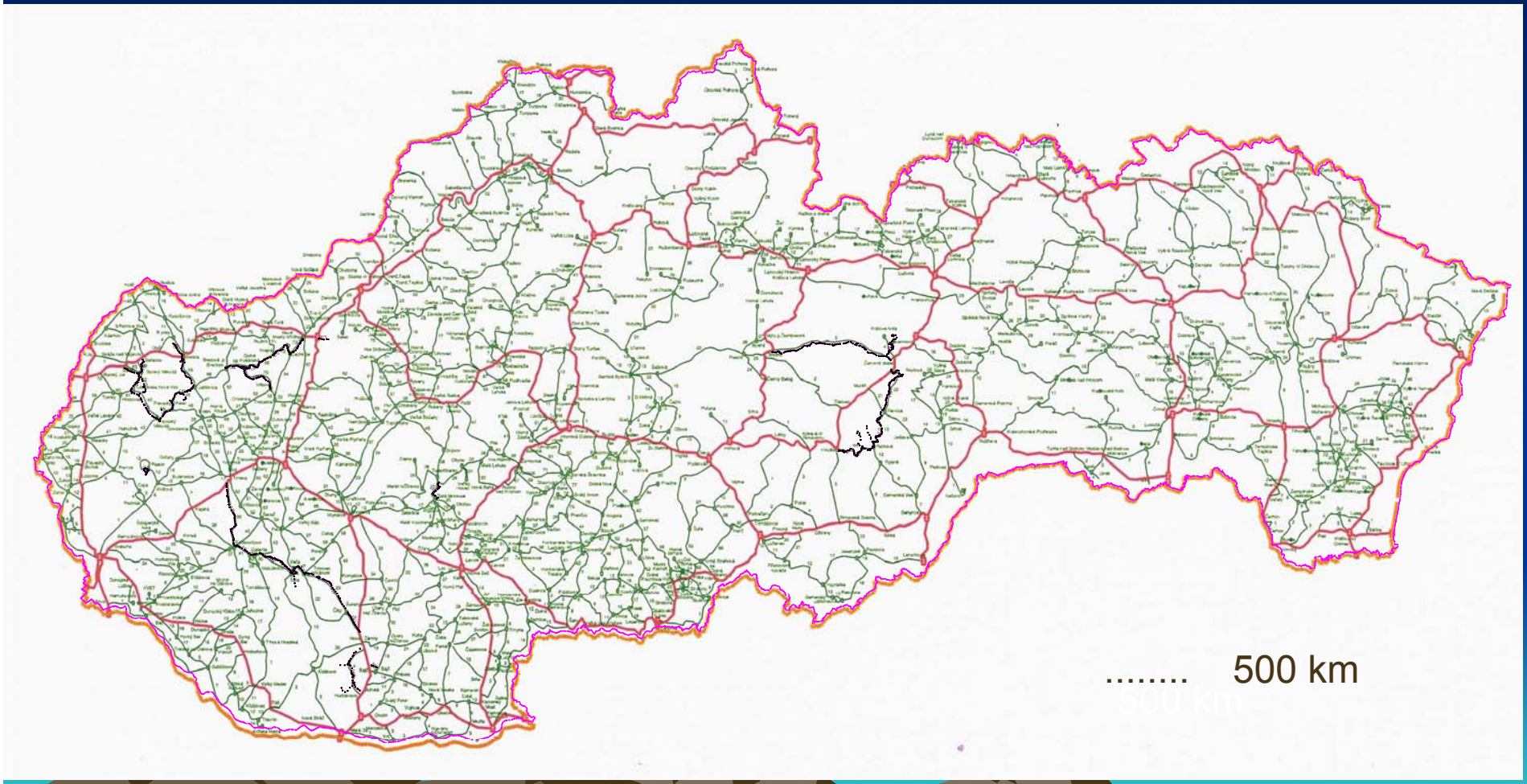
3) Slovak University of Technology, Bratislava, Faculty of Civil Engineering, Department of Theoretical Geodesy

Brusel

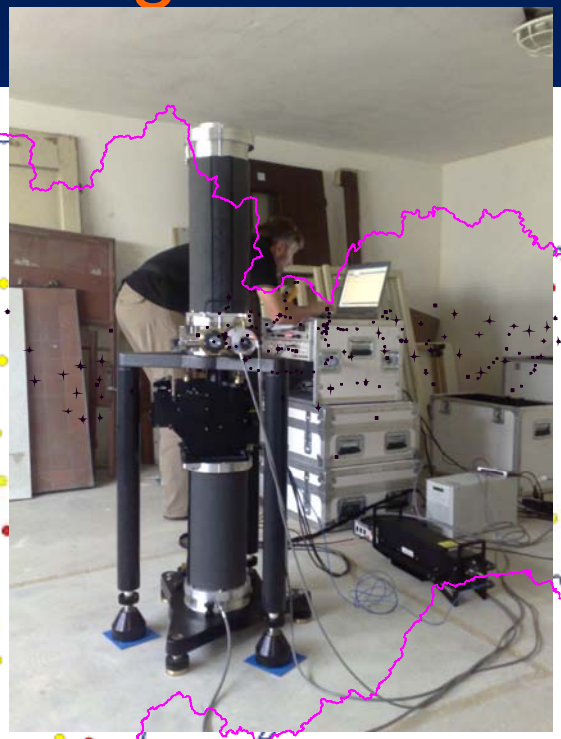
18. – 20. June 2008

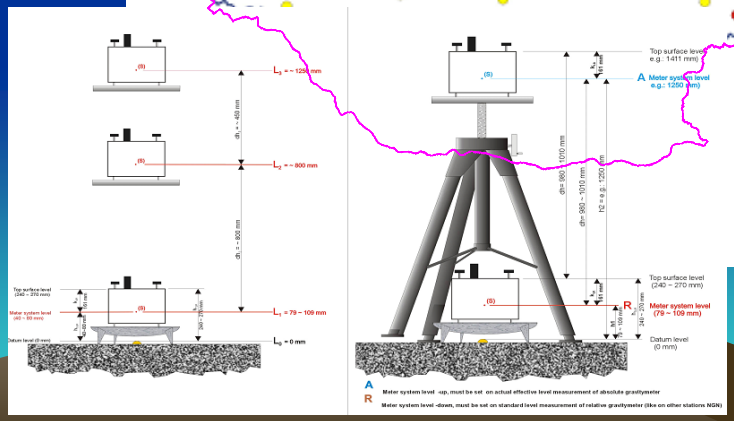
Štátna nivelačná sieť ŠNS (Bpv; Ams)
National levelling network

Štátna nivelačná sieť ŠNS (Bpv; Ams)
National levelling network



Štátna gravimetrická sieť ŠGS (UEGN)
National gravimetric network





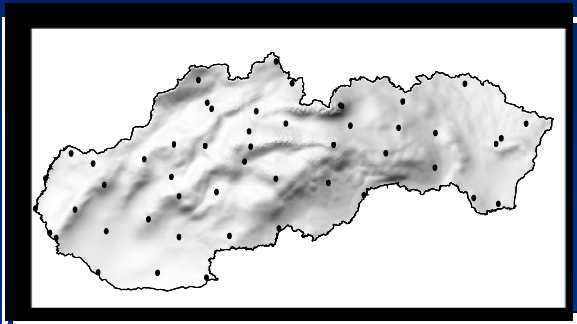
.... 280 points in 3. order

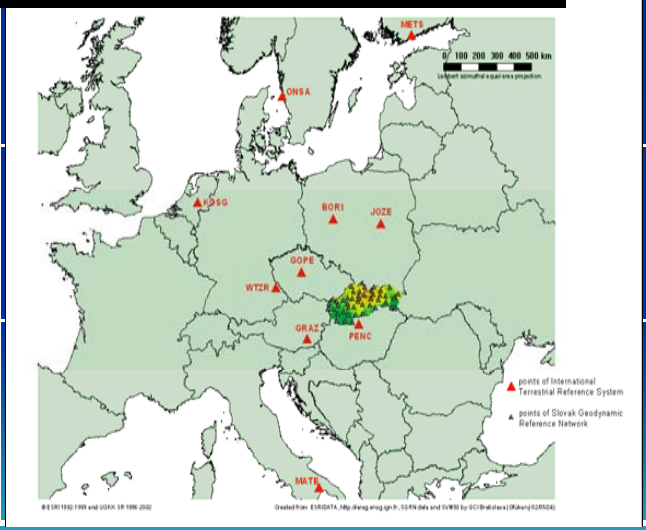
KEY:
- 0 order of network – Absolute stations (measured)
- 0 order of network – Absolute stations (prepared)
- 1st order of network – Relative gravity stations integrated in UEGN
- 2nd order of network – Relative gravity stations

Štátna priestorová sieť ŠPS (ETRS89)
National space network

Densification and Verificati
of the ŠPS class C

SKTRF 2007



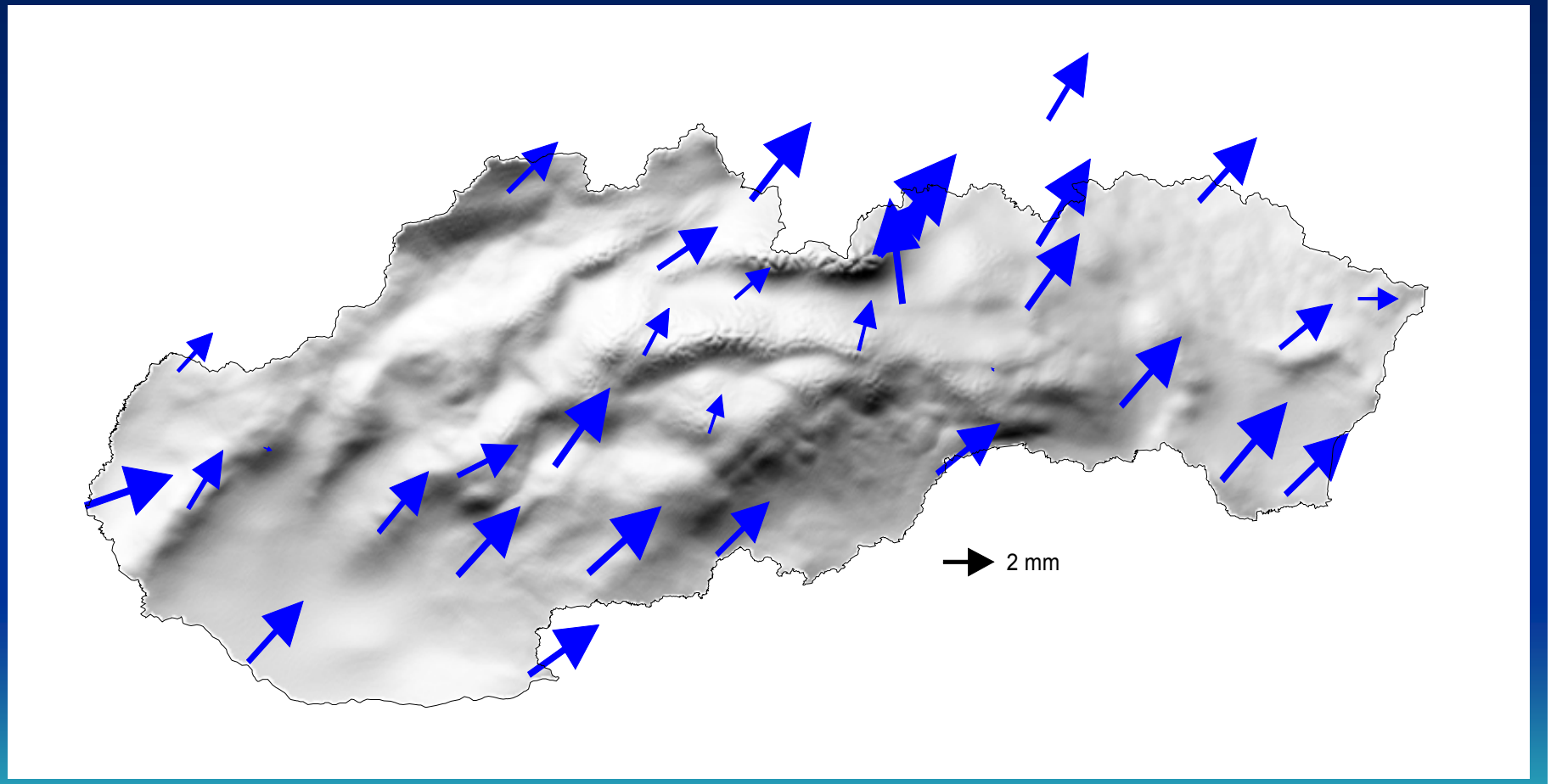


- SW Bernese 5.0
- global and local velocities of points SGRN (class B - ŠPS)

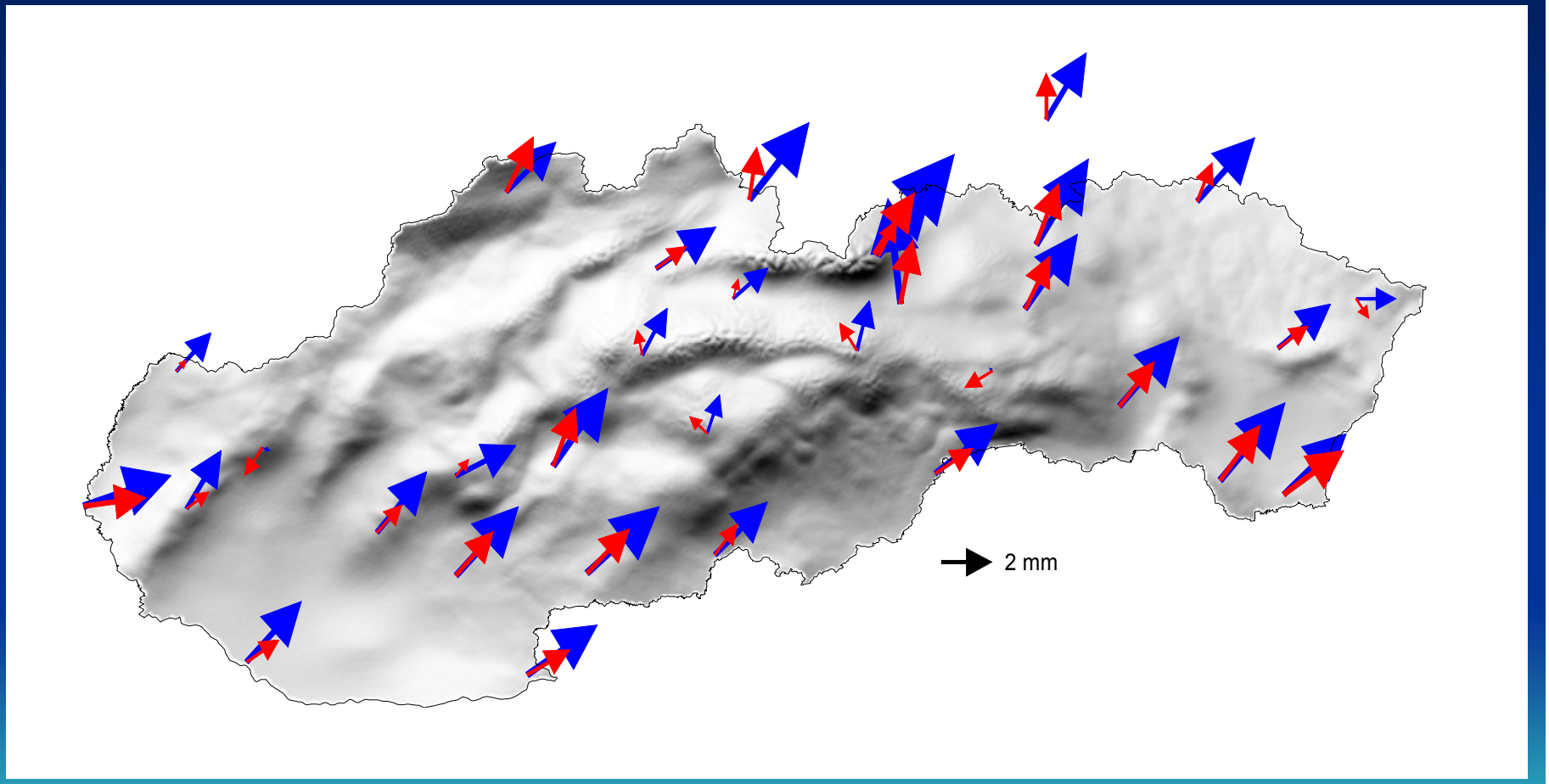
- ITRF 2000, epoch 1997.0,
- ETRF2000, epoch 1997.0

- since 1999 model NNR-NUVEL1A
- until 2001 model ITRF2000

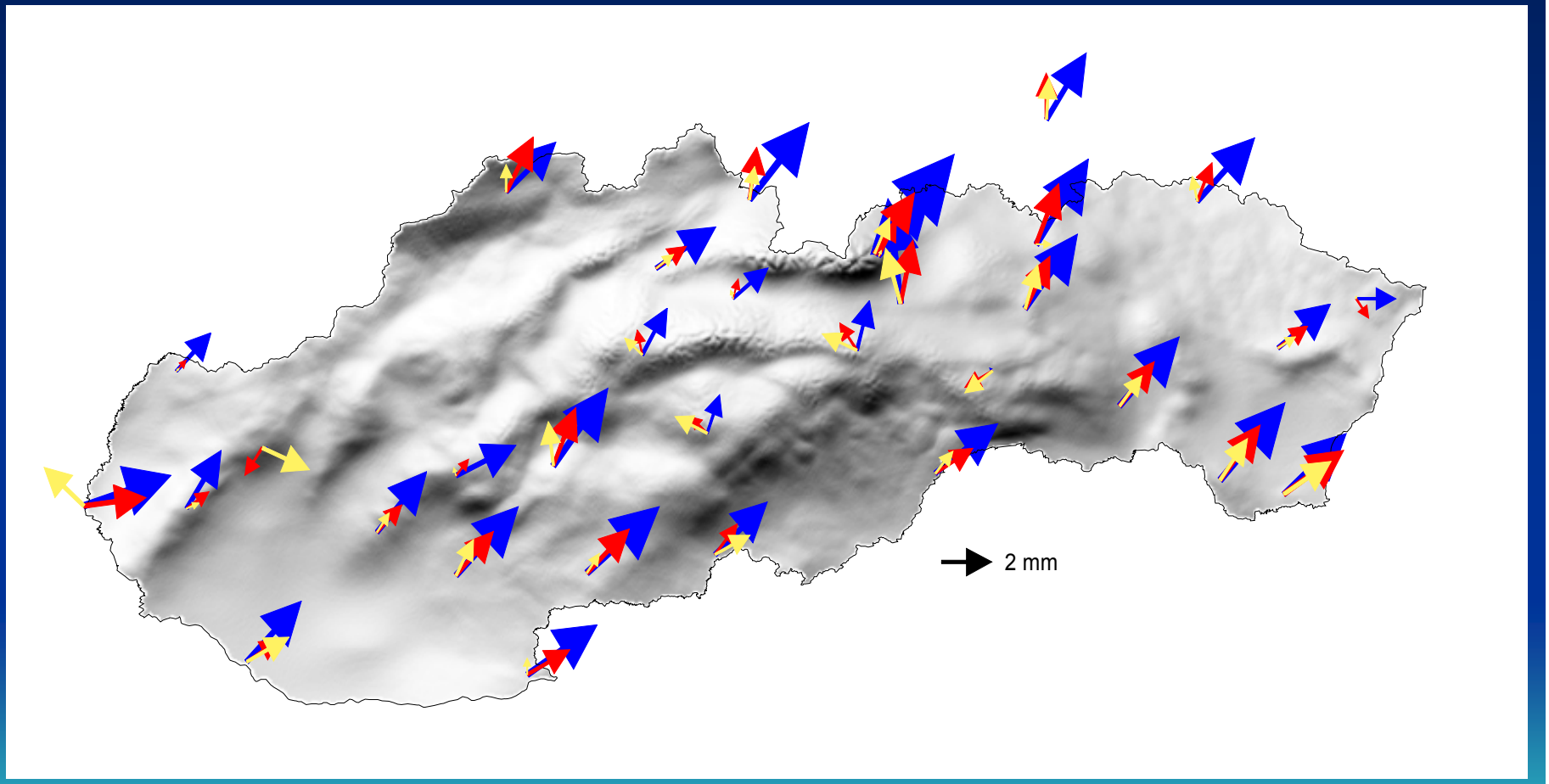
SKTRF 2001



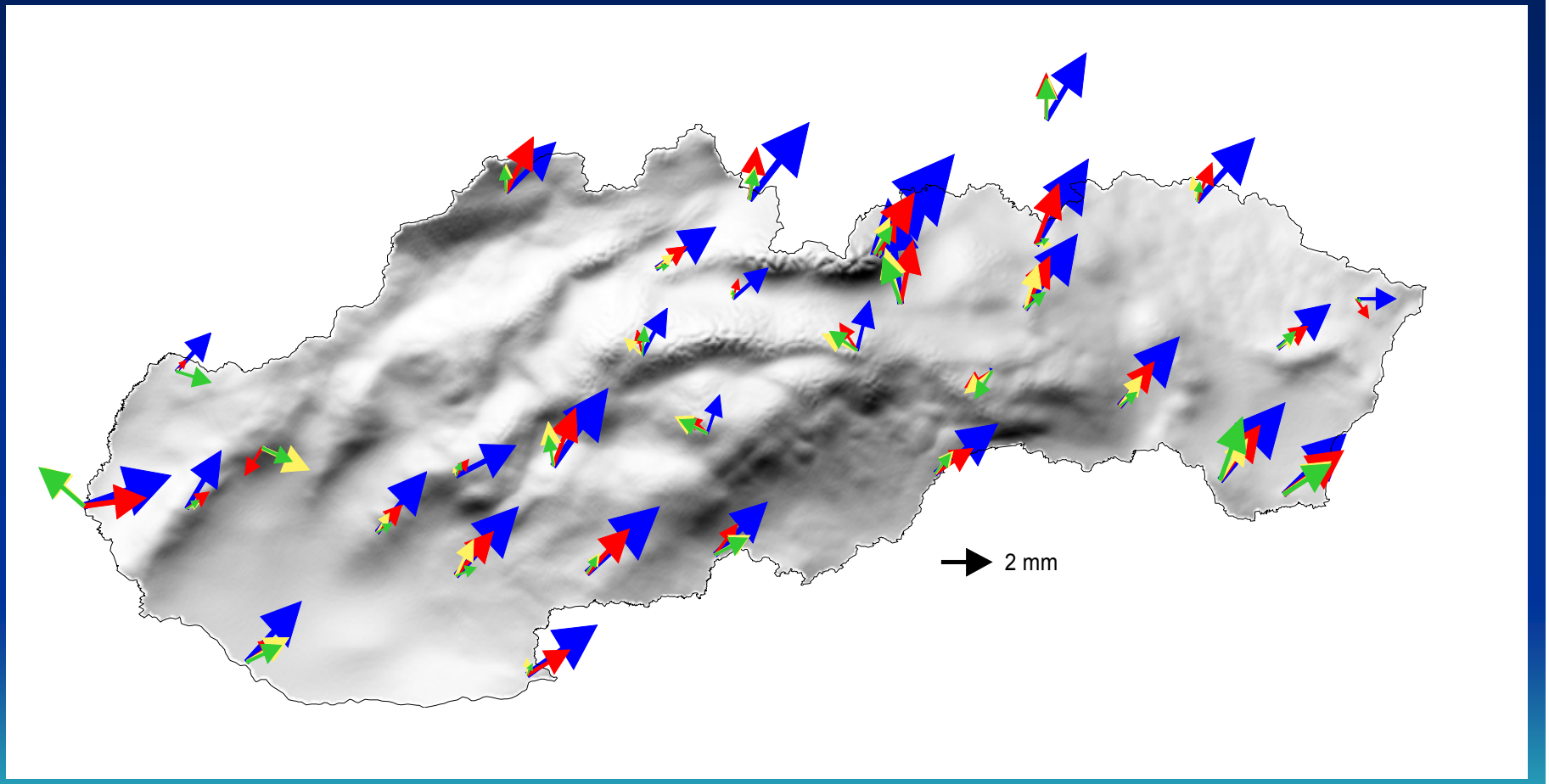
SKTRF 2003



SKTRF 2005



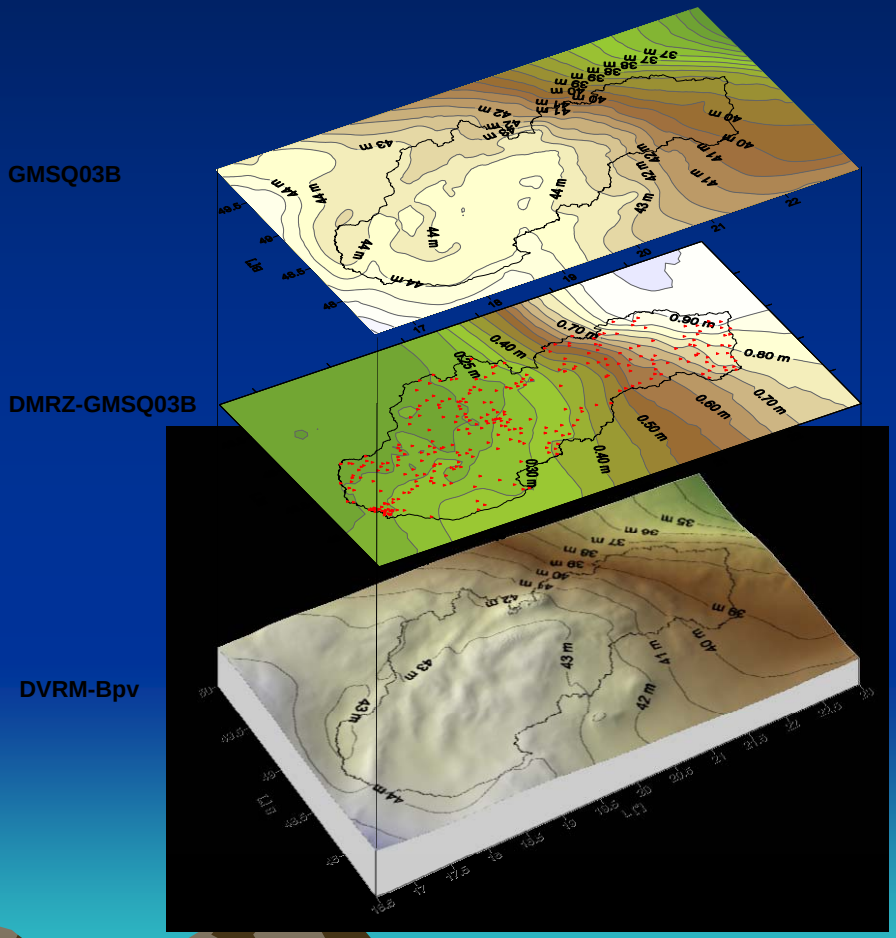
SKTRF 2007



Current Realisations of the DVRM-Bpv

DVRM - grid for:

Trimble - DVRM.ggf
Leica - DVRM.gem
Topcon - DVRM.gff



SKPOS (ETRS89)
Slovak permanent observation service GNSS

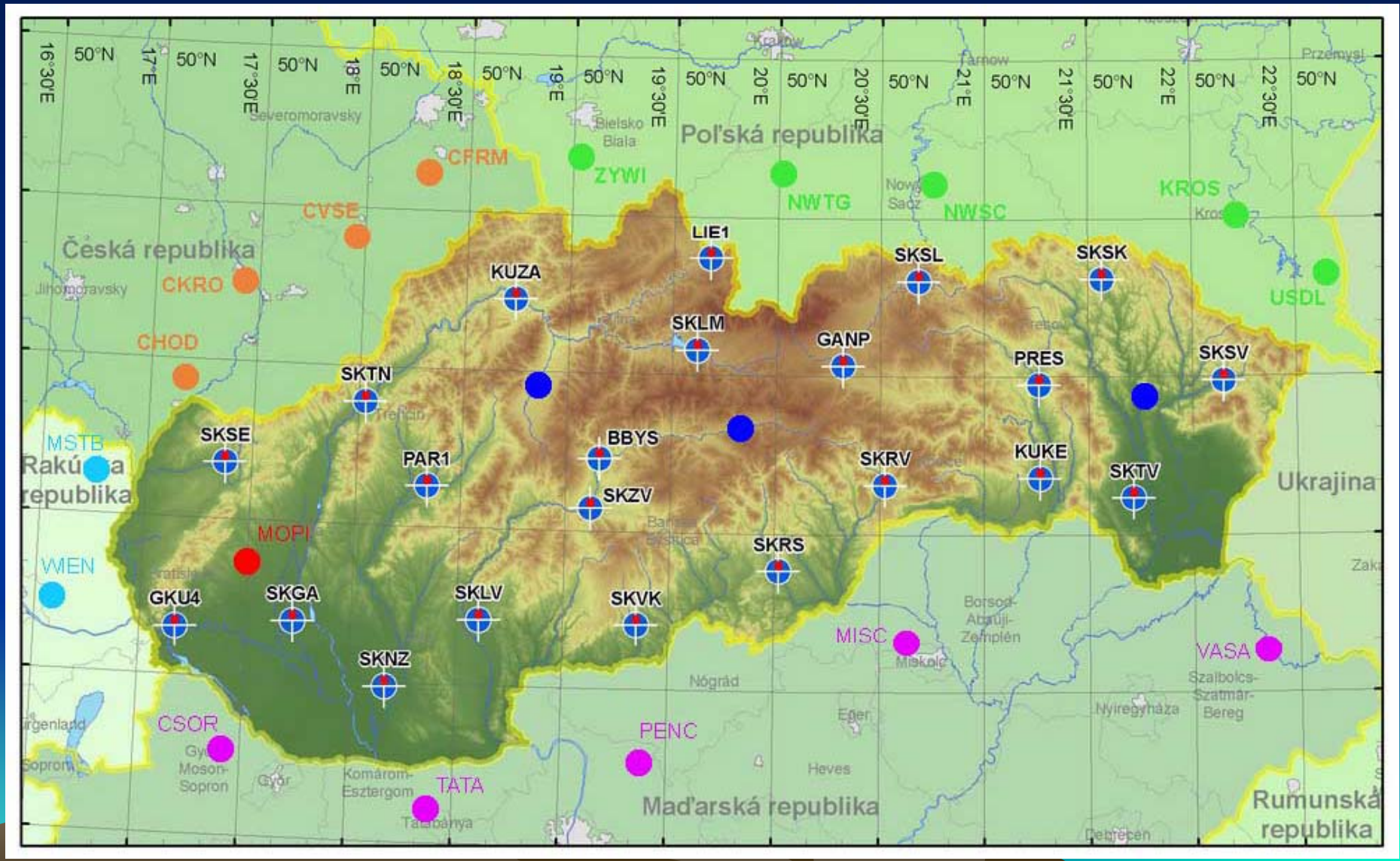
Infrastructure

- RS Trimble Net R5 - 21 stations
- Integrity and quality control Trimble R8
- Zephyr Geodetic Model 2 (GPS-L1,L2C,L5, GLONASS-L1,L2)
- Trimble software
- VPN-WAN UGKK SR
- ETRS89, ETRF2000, epoch 2006,6

Services

- **SKPOS-*dm* (DGNSS)**
- **SKPOS-*cm* (RTK VRS)**
- **SKPOS-*mm* (RINEX 2.11 postprocessing)**

SKPOS – EUPOS 2008



LAC

Slovak University of Technology

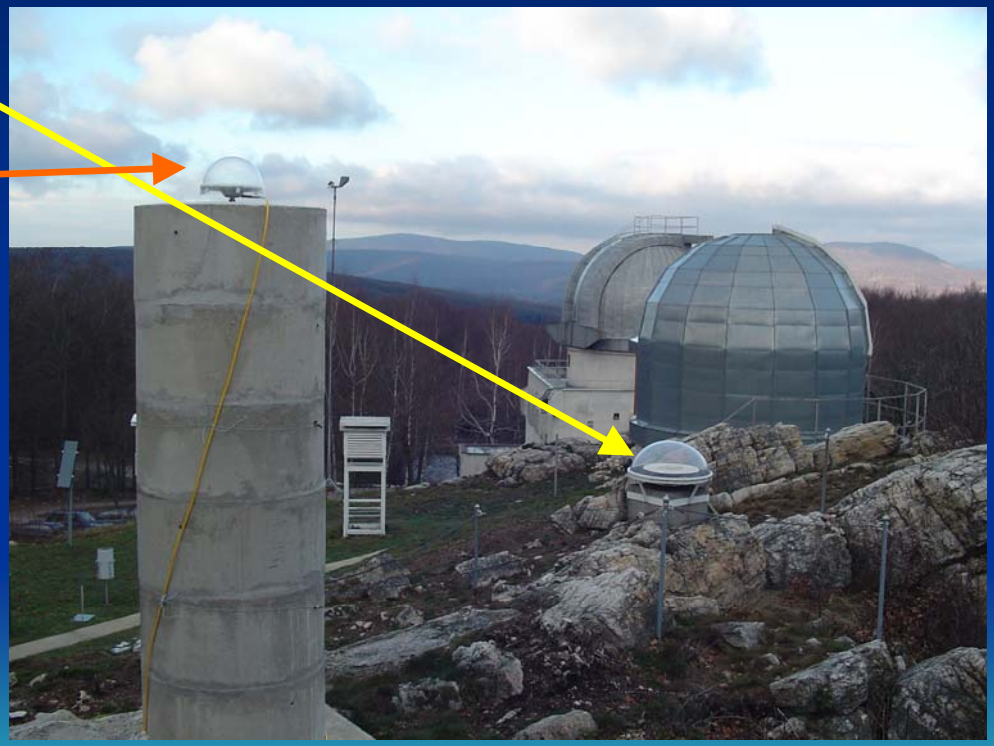
Bratislava

Faculty of Civil Engineering

Department of Theoretical Geodesy

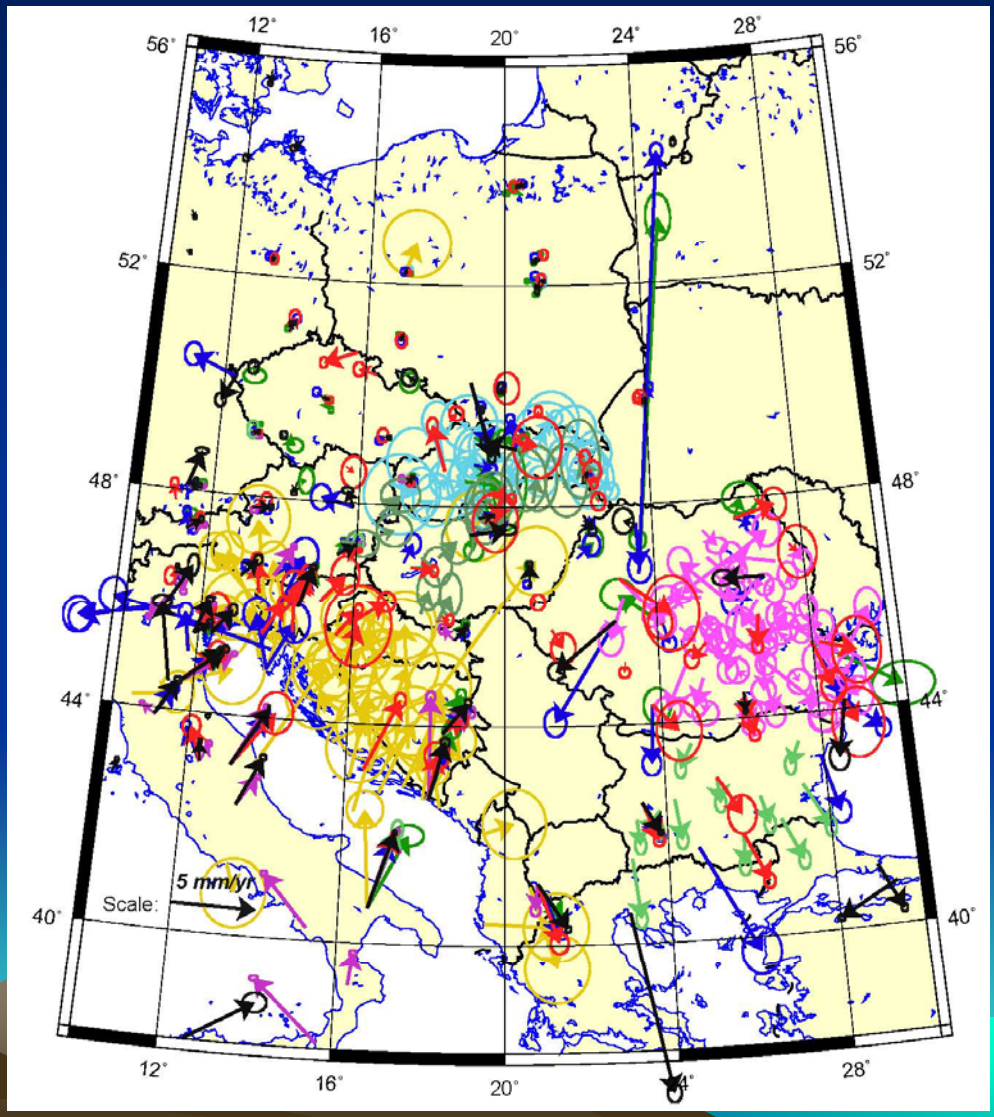
The new GNSS permanent station at Modra-Piesok

- The EPN MOPI station working permanently since 199.8 will be superseded by a new station MOP2
- The MOP2 equipped with Trimble NETR5 GPS/GLONASS receiver with individually calibrated TRM55971.00 TZGD antenna started observations in 2007.95
- MOP2 is recently among the proposed EPN stations



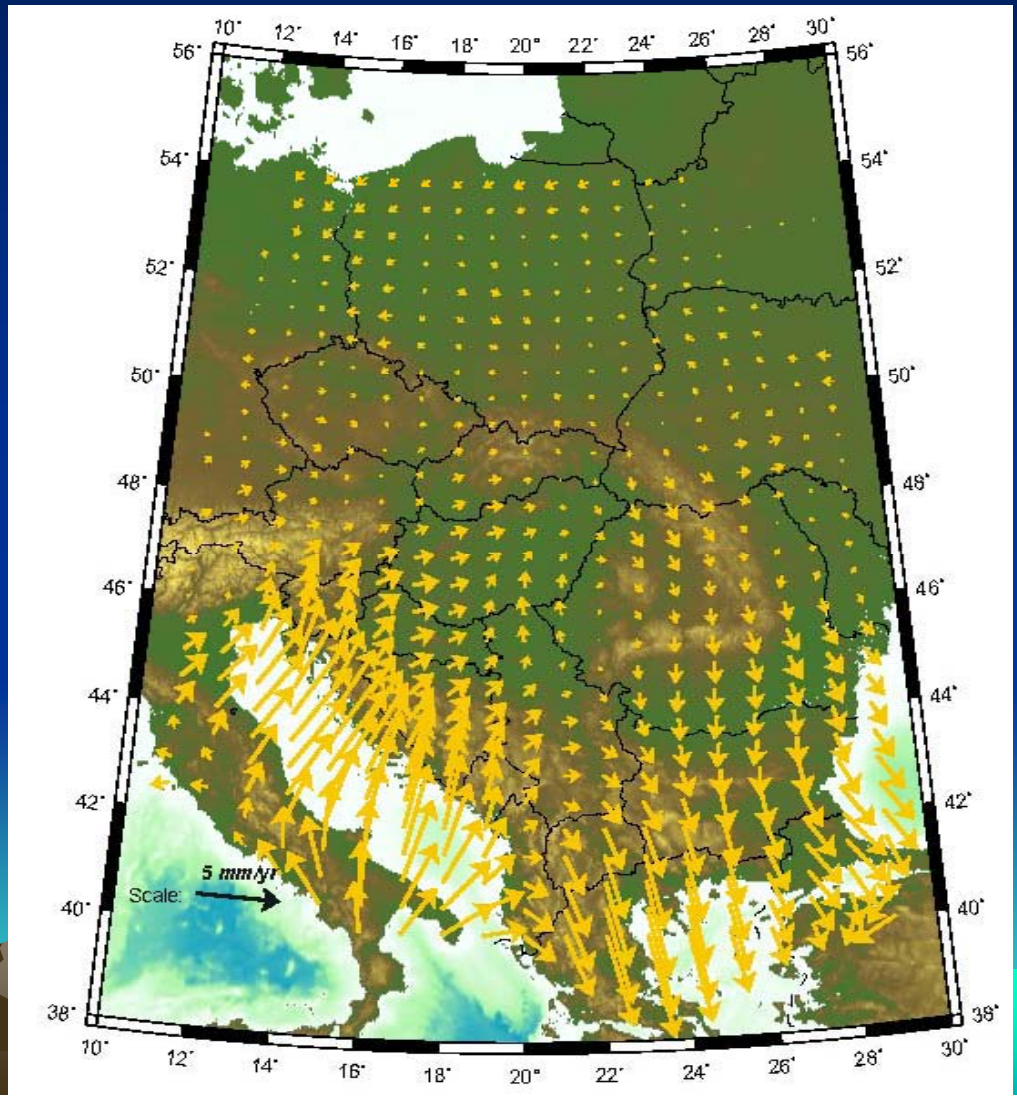
The horizontal velocity field in Central Europe and Balkan Peninsula

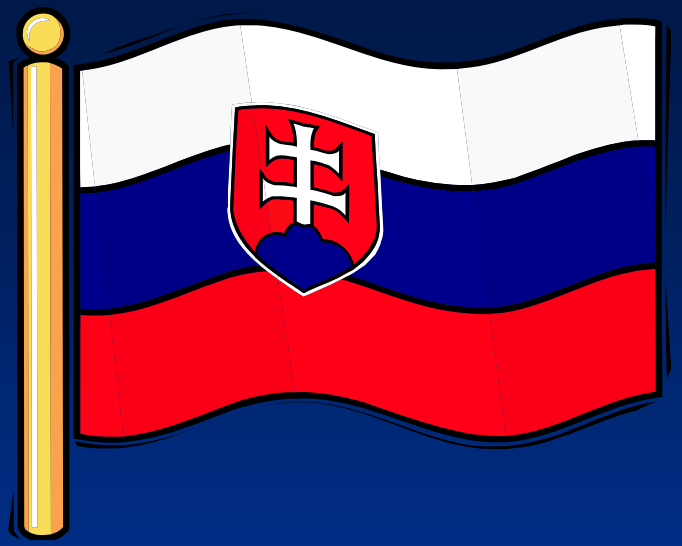
- The horizontal velocity field was compiled at the Slovak University of Technology in Bratislava on the basis of EPN and other 14 individual regional and national velocity fields
- The stochastic modeling respecting the error propagation in velocities obtained from permanent or epoch observations was applied
- The velocity field contains velocities and their uncertainties at more than 300 sites in the region of interest



Model of horizontal velocities in Central Europe and Balkan Peninsula

- The intraplate velocities in regular 1.0 deg x 0.5 deg grid were evaluated using the least square collocation approach
- Main features of the regional geokinematics are clearly pronounced
- At about 50 sites were recognized discrepancies with respect to regional behavior indicating local phenomena like landslides, enviroment changes, monumentation instabilities, etc.





Thank You

www.gku.sk

www.skpos.gku.sk

dusan.ferianc@skgeodesy.sk