

NATIONAL REPORT

EUREF RELATED ACTIVITIES OF HUNGARY 2010-2011

Kenyeres A - Horváth T - P Braunmüller - Virág G

FÖMI Satellite Geodetic Observatory
Penc, Hungary

EUREF/EPN CONTRIBUTION

- 4 EPN stations (PENC, OROS, BUTE, SPRN)
 SPRN - GALILEO ready
 PENC - new station - PEN2 has been installed
- EPN LAC, EPN repro1
- **EPN Reference Frame Coordinator**
 EPN ITRF2008 / IGS08 densification solution
 EPN cumulative solutions (15 weeks update)
 maintenance of the ETRS89 at the EPN sites
- TWG activities

NEW EPN SITE - PEN2



EUREF/EPN CONTRIBUTION

- 4 EPN stations (PENC, OROS, BUTE, SPRN)
 - SPRN - GALILEO ready
 - PENC - new station - PEN2 has been installed
- EPN LAC, EPN repro1
- EPN Reference Frame Coordinator
 - EPN ITRF2008 / IGS08 densification solution
 - EPN cumulative solutions (15 weeks update)
 - maintenance of the ETRS89 at the EPN sites
- TWG activities

EUREF/EPN CONTRIBUTION

SGO Local Analysis Centre

- **ROUTINE GNSS ANALYSIS OF 35 EPN STATIONS**
- **CONTRIBUTION TO THE EPN RAPID ANALYSIS (DAILY SINEX SUBMISSION)**
- **ROUTINE GNSS ANALYSIS OF ~80 GNSSNET.HU AND EPN STATIONS**
- **DAILY RAPID CUMULATIVE SOLUTION (BERNESE+CATREF)**
- **EPN REPRO1: COMPLETE RE-ANALYSIS**
- **EPN_REPRO2: MAY STEP BACK, BUT ...**

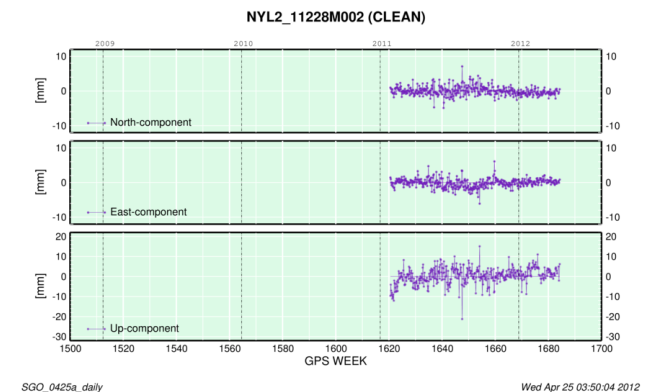
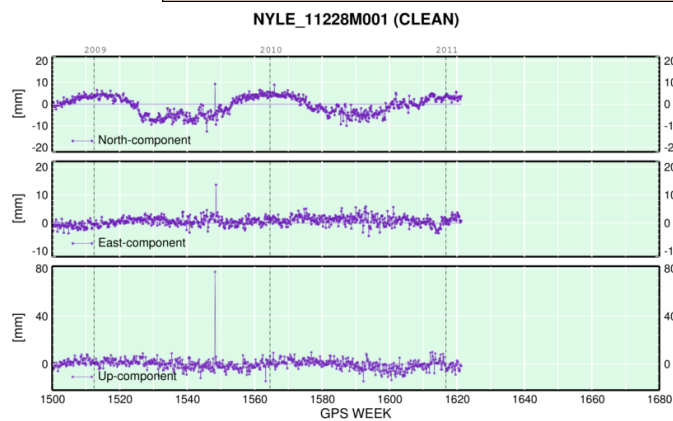
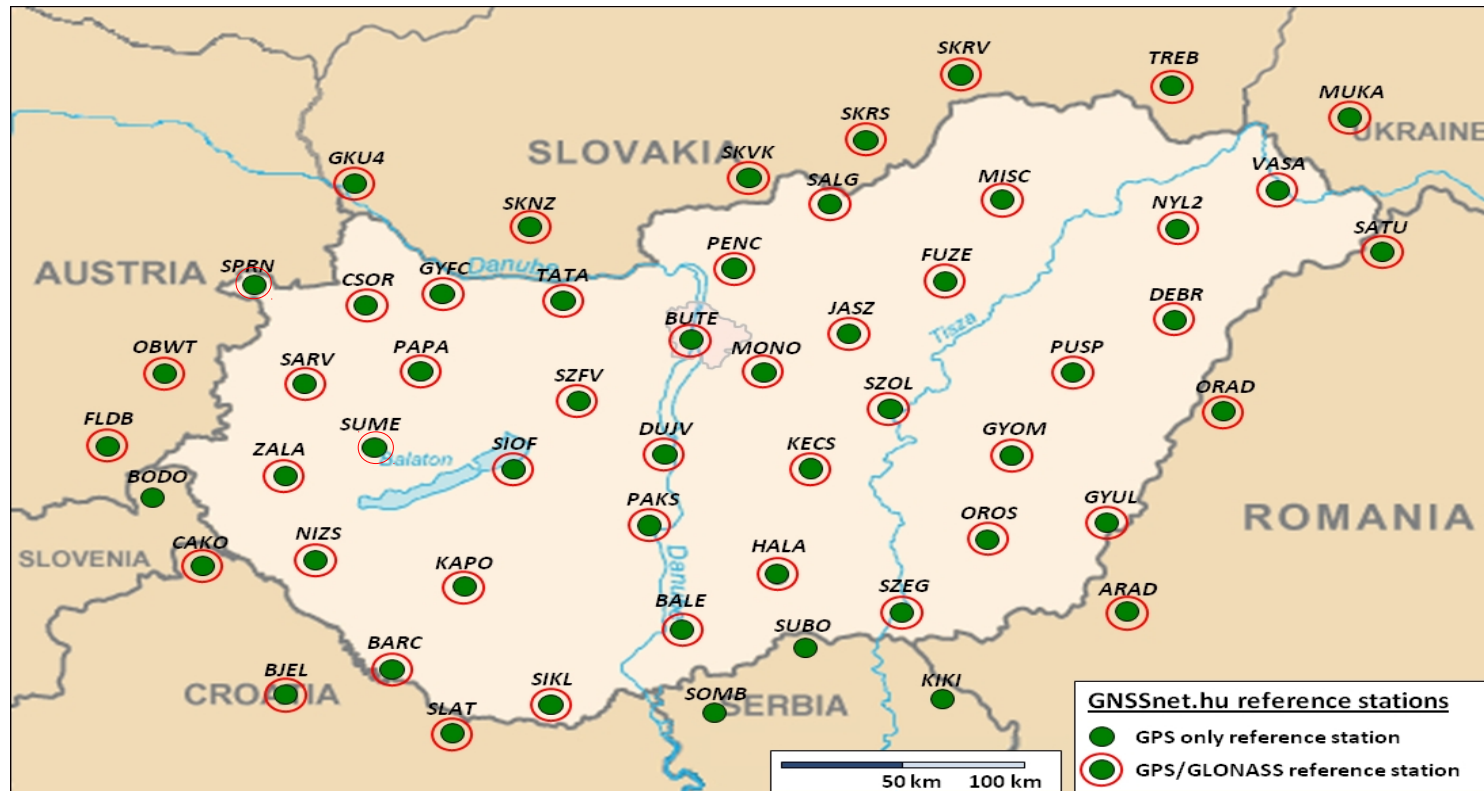
GNSS NETWORK DEVELOPMENT

RTK NETWORK - GNSSNET.HU

- **35 STATIONS all (excl.BUTE) Leica GNSS,
5 Galileo-ready with INDIVIDUALLY CALIBRATED
ABSOLUTE PCV + 19 STATIONS FROM NEIGHBORING
COUNTRIES**
- **NETWORKED RTK SERVICE / GEO++ GNSMART
SOFTWARE - GNSS VENDOR-INDEPENDENT SERVICE**
- **BUILD UP A COMPLETE BACKUP SYSTEM**
- **PARTICIPATION IN EUPOS COOPERATION**
- **LEGAL PROTECTION (DECREE 47/2010)**

GNSS NETWORK DEVELOPMENT

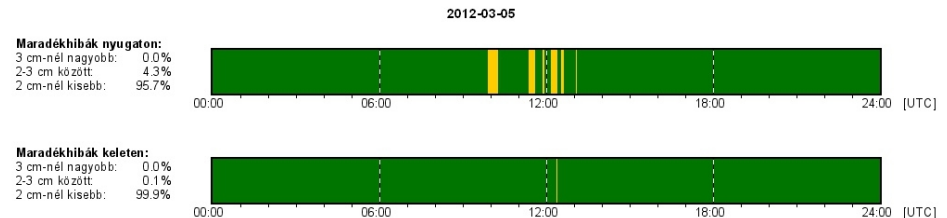
RTK network - GNSSNET.HU



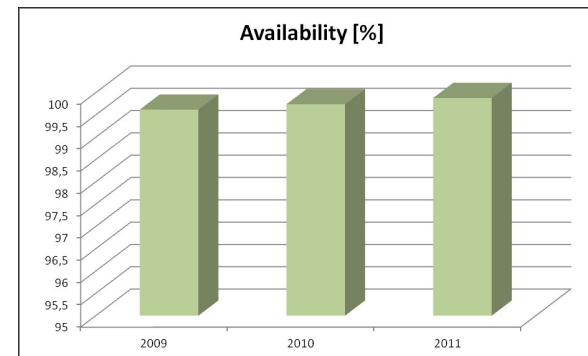
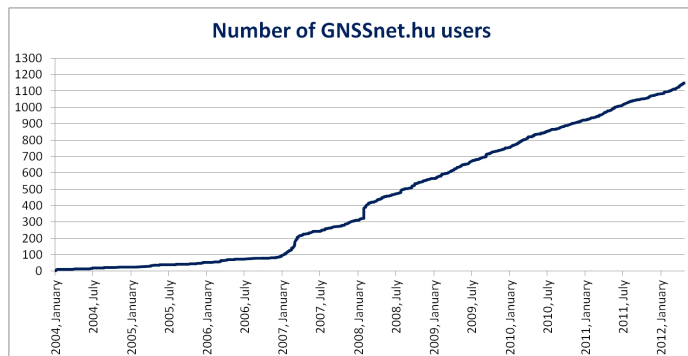
GNSS NETWORK DEVELOPMENT

RTK network - GNSSNET.HU

- New RTCM message type 1033 on 3 dedicated mountpoints (dealing with the effect of GLONASS biases) was introduced
- New monitoring page especially for the ionospheric residuals (beside the real-time monitor page posteriorly for PP)



- The number of users and the availability is still increasing



INTEGRATED GEODETIC NETWORK (INGA) DEVELOPMENT

- INTEGRATED NETWORK (GNSS, LEVELING, GRAVIMETRY, PSI) : TOGETHER WITH GNSSnet.HU THE INTEGRATED NETWORK WILL BE THE MAIN BEARER OF THE GEODETIC REFERENCE IN HUNGARY
- 2007 - 20???: RE-LEVELING OF THE 1ST ORDER HEIGHT NETWORK (EOMA) + PARALLEL GNSS CAMPAIGNS
- **STOPPED in 2009 - MISSING FINANCIAL BACKGROUND - FOCUS ON THE OFFICE WORK**
- STUDIES OF THE GEODETIC APPLICATIONS OF THE InSAR TECHNOLOGY
- RE-ADJUSTMENT OF THE EARLIER LEVELLING DATA