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armasuisse  
**Swiss Federal Office of Topography swisstopo**

# **swisstopo Report for EGVAP 2012**

E. Brockmann

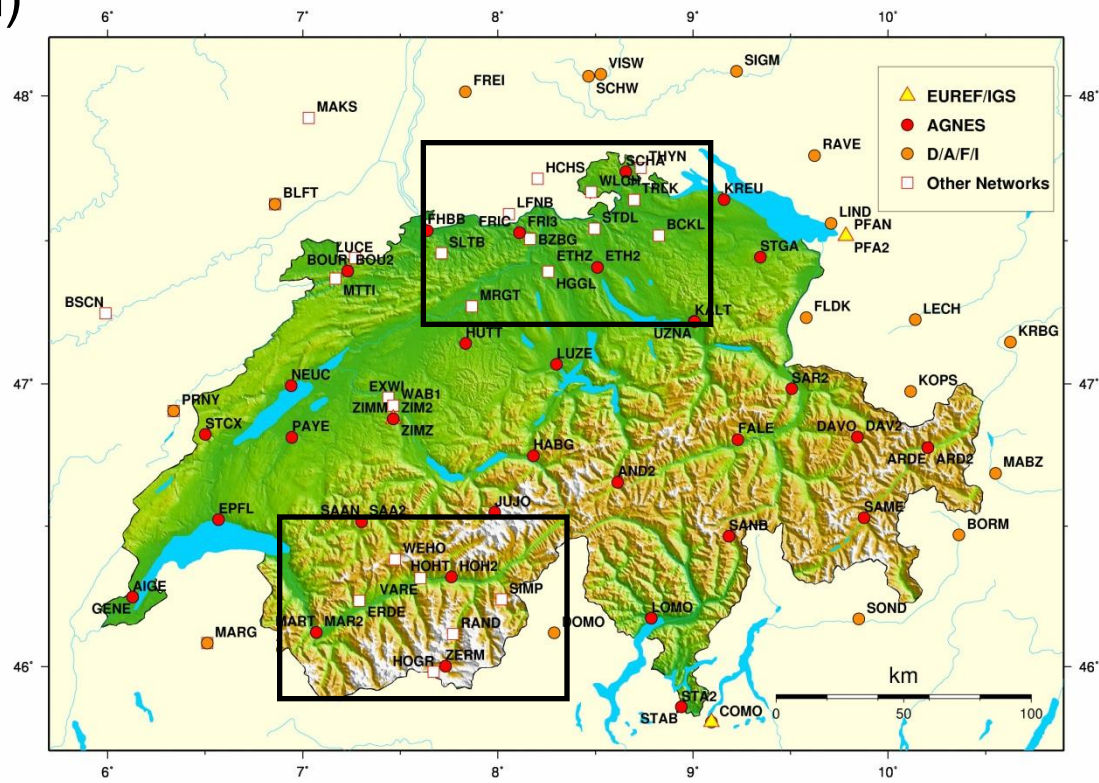


# Network

- Almost unchanged – included denser Swiss networks (mainly for tectonic purposes, but also with Tropo contribution)

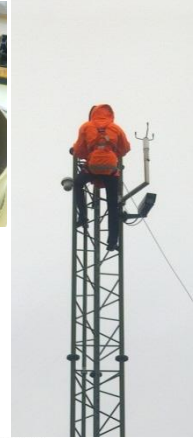
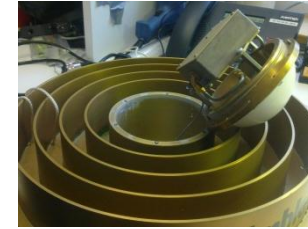
NaGNet-Netz

TECVAL/COGEAR-Netz



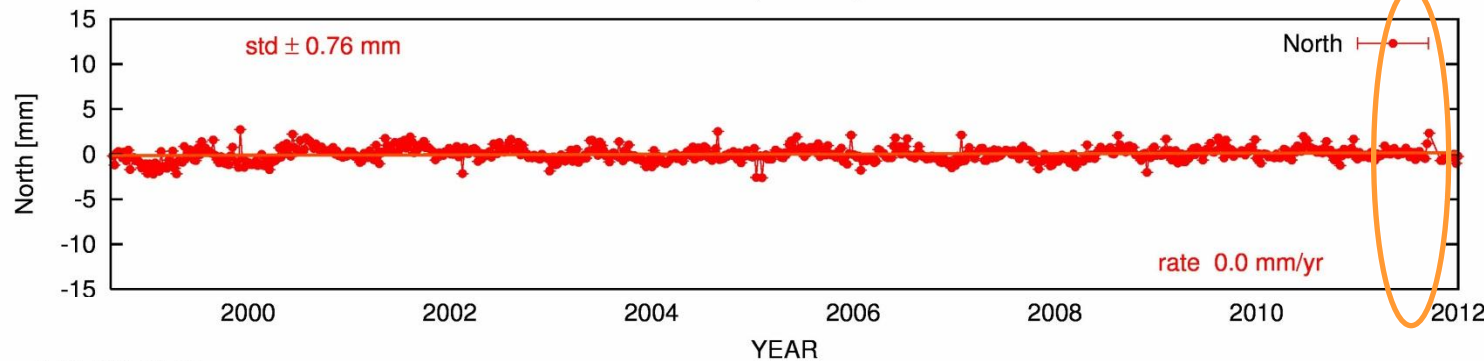


# „Rescue“ activity ZIMM

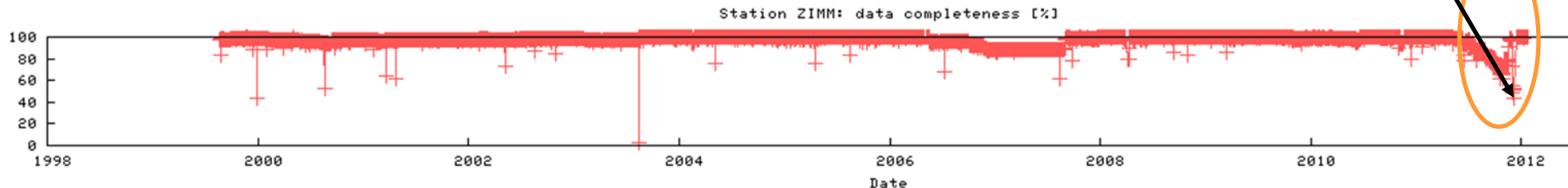
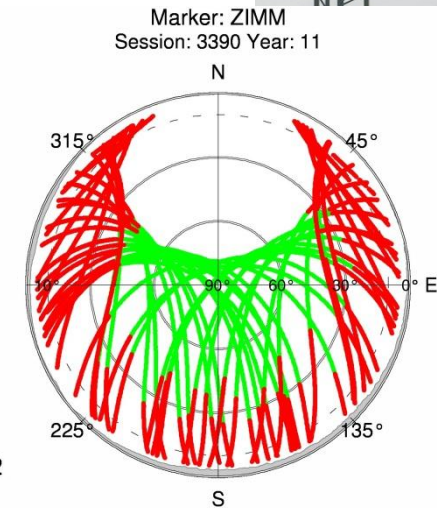


- Pre-amplifier replaced – time series since 1998 continued without jump

Coordinate repeatability of ZIMM



24/01/12 11:17





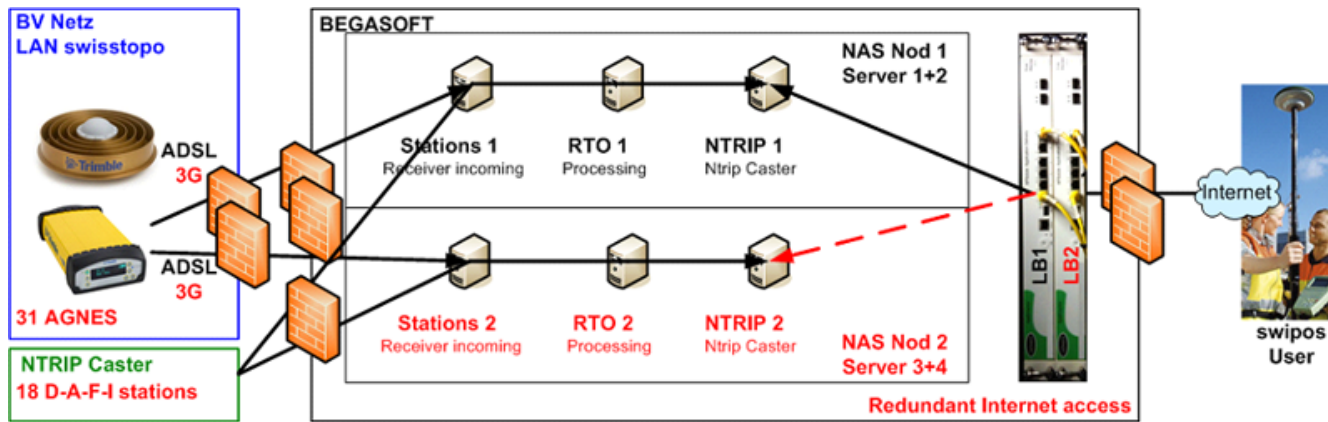
- 
- station name**  
 yy = year [00...09] 2010 = 10  
 add = day [001...366]  
 h = hour [a...z]
- Backup source**
- PNAC**
- Old receiver from double AGNES station i**  
 D:\AGNES-DATA-1h-1s\  
 (Format \*?7d.Z, \*?7y.Z, \*?7m.Z)
- SITE**
- Trimble NetRS AGNES stations**
- FTP push with NetRS, every hour
- Backup server at swisstopo**  
 Ltappl201.lt.admin.ch  
 10.131.48.115
- FTP get with T02toRINEX, every hour
- Delete every hour (with T02toRINEX)  
 C:\AGNES\AGNES-DATA-T02\  
 2010\01\181  
 SITEdddh.T02
- T02toRINEX.exe**  
 (Task Scheduler, every hour XX:00)
- Delete older than 5 days  
 C:\AGNES\AGNES-DATA  
 RefData.10\Month-Jan(Day.18)  
 \*.yyd.Z / 0..yyg.Z / \*.yyrn.Z
- Winscp (missing files)**  
 (Task Scheduler, every hour XX:10)
- Archive**
- Permanent  
 Z:\AGNES-DATA-1h-1s\  
 RefData.10\Month-Jan(Day.18)  
 \*.yyd.Z / \*.yyg.Z / \*.yyrn.Z
- FTP get with SwiposArchive on Itsy02, every hour XX:05
- Begasoft Stations1**
- FTP push with GP-Base every hour-XX:02
- RINEX Storage with VRS3Net for stations abroad**  
 every hour-XX:00
- Delete every hour  
 ...DAPICH-DATA-RINEX-Hatanaka-Z\  
 (Format \*?7d.Z, \*?7y.Z, \*?7m.Z)
- SwiposStatistics with teqc**  
 cyde slips, multipath, missing epochs=Hours  
 (Task Scheduler, every hour-XX:10)
- Delete every hour  
 D:\AGNES-DATA-T02\  
 2010\01\181\SITE\  
 SITEdddh.T02
- T02toRINEX.exe**  
 (Task Scheduler, every hour-XX:00)
- config, NoShop in every hour-XX:03
- ...XX:02
- Delete older than 2 days  
 ...AGNES-DATA-STATISTICS...  
 RefData.10\Month-Jan(Day.18)  
 \*.yyo / \*.yyg / \*.yyrn
- ...XX:06
- SwiposDecompress**  
 (Task Scheduler, every hour-XX:04)
- Delete older than 100 days  
 ...AGNES-DATA-RINEXSHOP...  
 RefData.10\Month-Jan(Day.18)  
 \*.yyd / \*.yyg / \*.yyrn
- ...XX:02
- Delete older than 7 days  
 ...AGNES-DATA-ARCHIVE...  
 RefData.10\Month-Jan(Day.18)  
 \*.yyd.Z / \*.yyg.Z / \*.yyrn.Z
- ...XX:04
- 24.10.2012

- 24.10.201.



# Processing remarks: LPTR

- Real-time solution: LPTR – generated by a new software (GPSNet -> VRS3Net): Dec. 2011; **redundant system**
  - Huge bias (2-5 cm ZTD) Dec. 2011 (not submitted)
  - significant bias of 5 mm ZTD compared to LPT (Jan – May 2012) – submitted to EGVAP
  - Bias now o.k.





# Tropo Bias

December 2011

PAYE: Zenith Total Delay in [m]

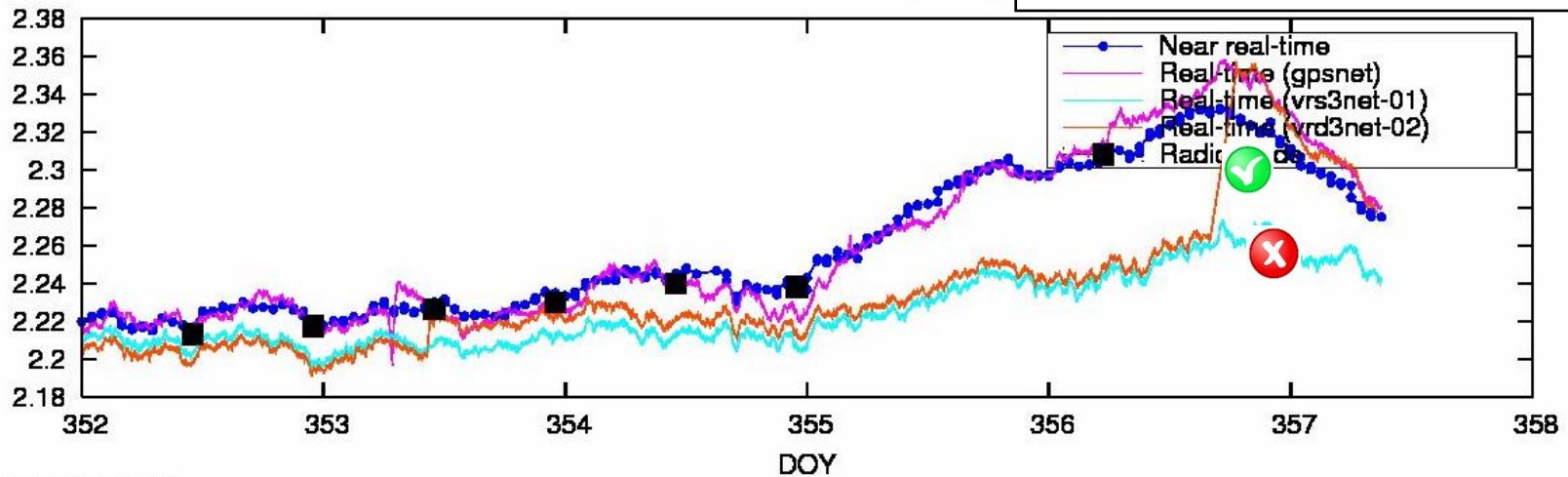
Bernese Near-Realtime (1 Stunde)

Trimble GPSNet (alt)

Trimble VRS3Net System 1 (neu) – „Tropomodell AUTO“

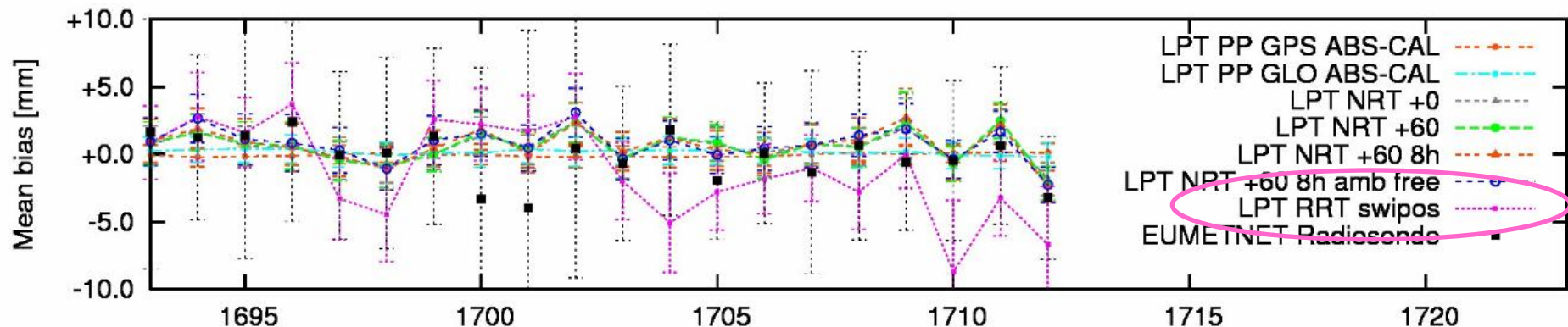
Trimble VRS3Net System 2 (neu) – „Tropomodell OPT“

Radiosonde (2 x pro Tag)



23/12/2011 11:05

Last 20 weeks: average bias







# PPP (BNC at BKG): Example ZIM2

EUREF GPS+GLO PPP in ETRF2000, Clock product EUREF02 by BKG & CTU – 12. Mai, 2012

with BNC in real-time 27 additional stations in real-time...

