



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

armasuisse
Swiss Federal Office of Topography swisstopo

wissen wohin
savoir où
sapere dove
knowing where



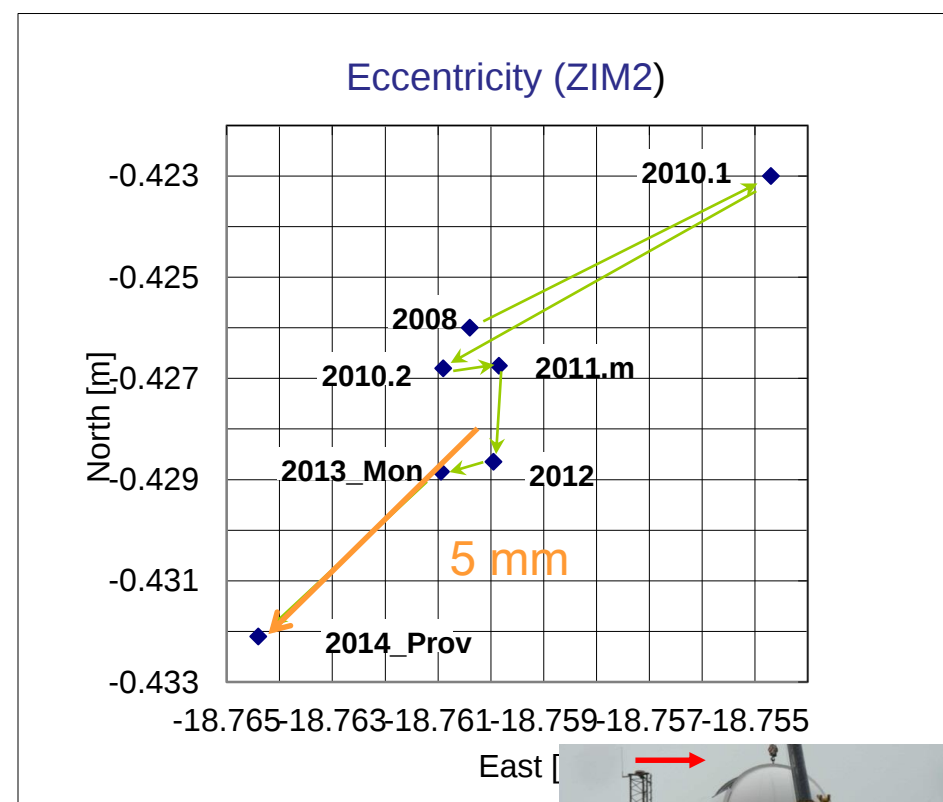
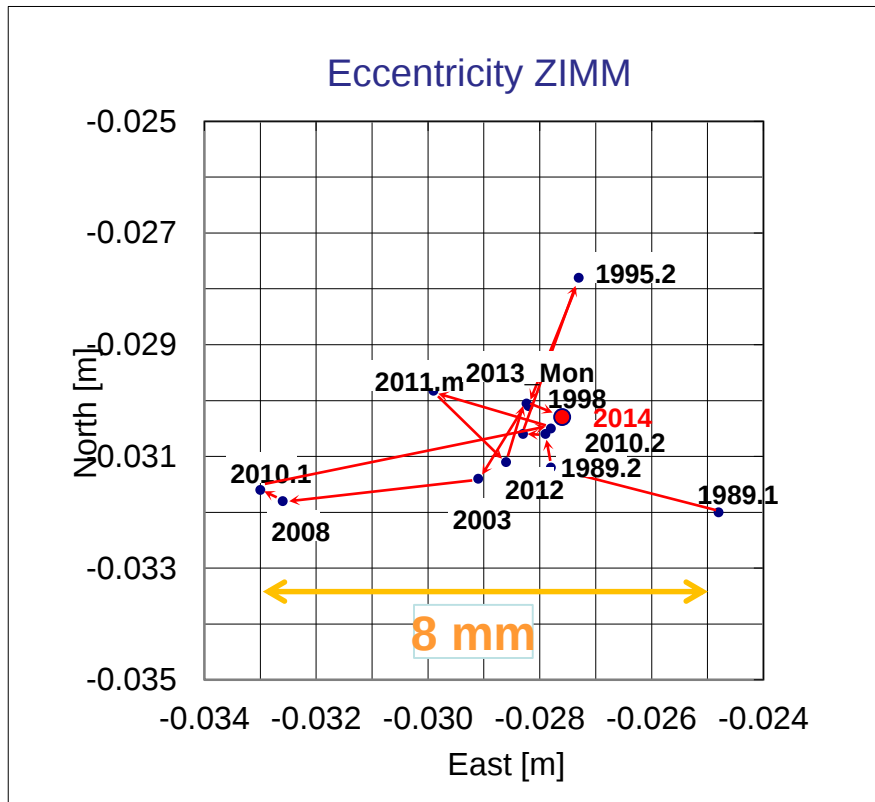
National Report of Switzerland

E. Brockmann, M. Kistler, U. Marti, A. Schlatter, A. Wiget,
U. Wild



Zimmerwald: local tie 2014

- Measurements under cloudy conditions (mast movements!)



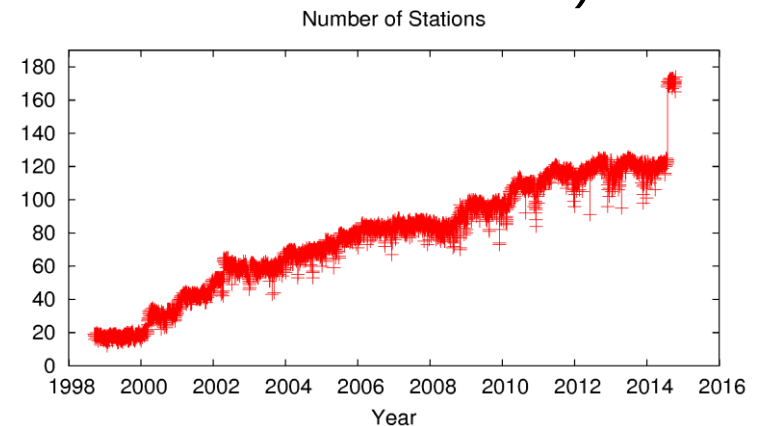
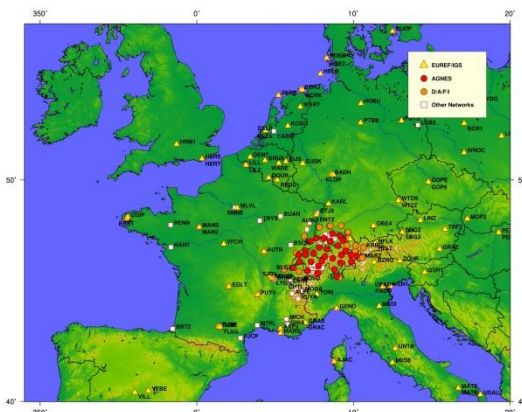
(“accident” 10.10.2014)





Analysis Center

- Operational contribution to EPN (50 stations) as LAC
 - Final weekly
 - Rapid and Ultra-Rapid based on NRT processing
- Operational NRT processing (EGVAP/EUMETNET) (October 2, 2014: increase of stations to 170 stations)

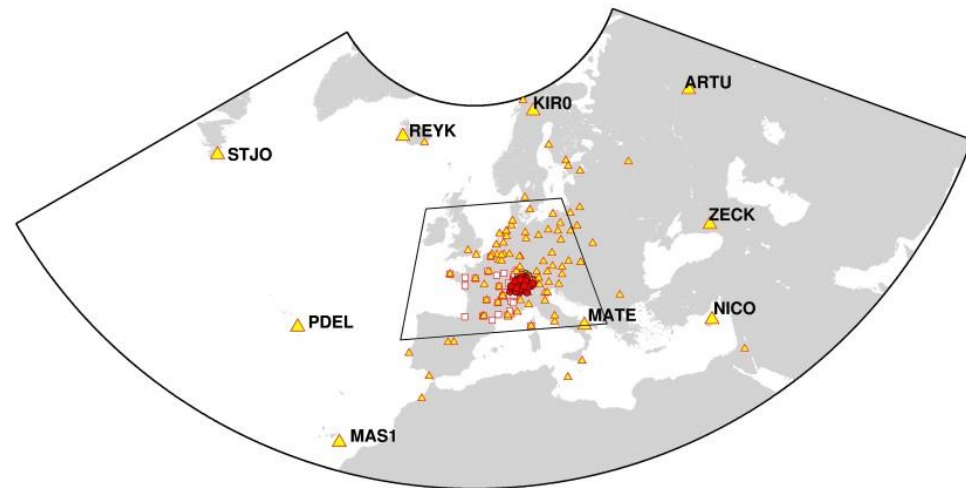
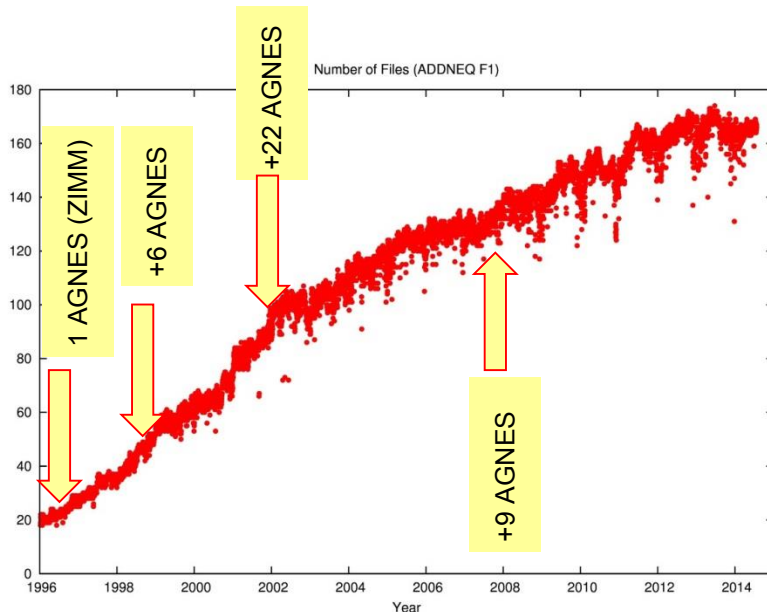


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Analysis Center: Reprocessing

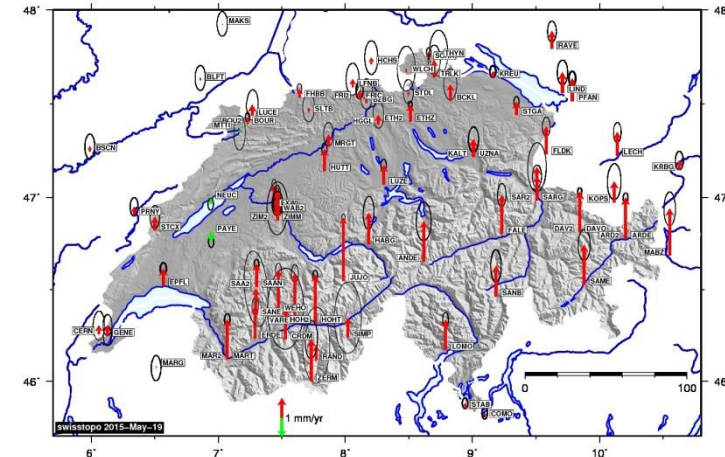
- 2 reprocessing solutions available for 1996-2014 (20 -> 170 stations) and submitted to EPN Repro2 (CRD+TRP)
 - GMF + group antenna PCV (LP0: Oct. 23. 2014)
 - VMF + indiv. antenna PCV + ALP (LP1: March 20, 2015)
- 50 additional well performing stations added





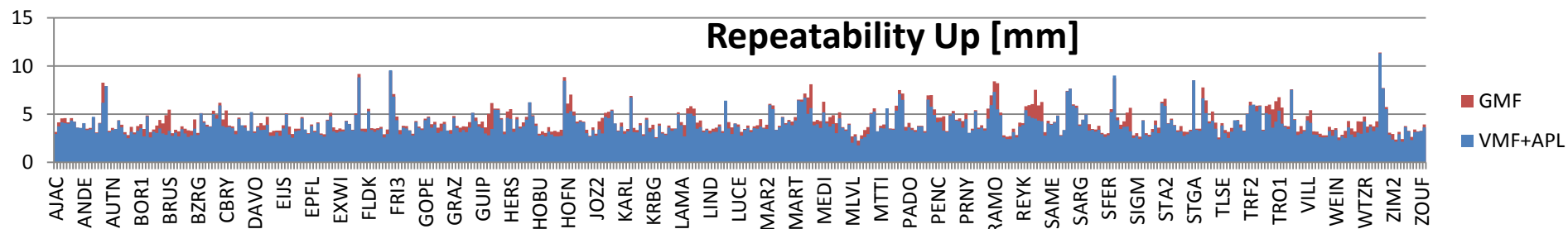
Reprocessing: coordinates / velocities

- Velocity estimates based on repro + operational; impact small: standard dev. vertical ± 0.25 mm/yr
- Coordinate repeatability based on Vienna mapping is slightly better (height component)



434 stations	North [mm]	East [mm]	Up [mm]
GMF	1.54	1.41	4.53
VMF+APL	1.51	1.37	4.08

- 10 %

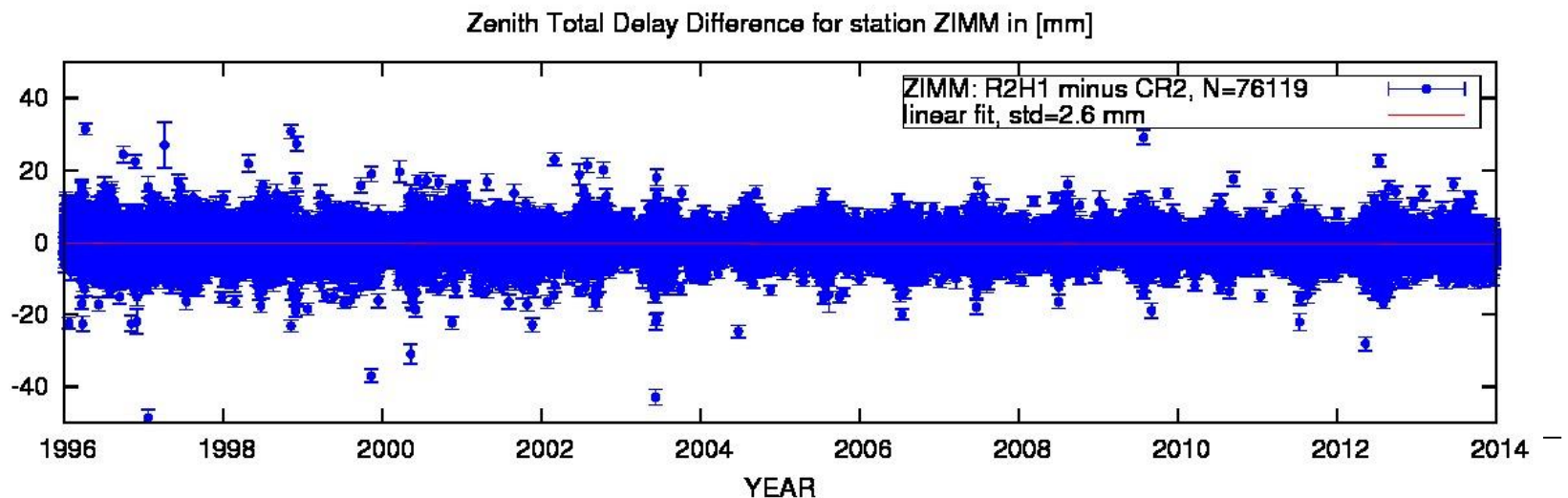




Reprocessing: ZTDs



- Participation to COST GNSS4SWEC project
- Reprocessing is essential for meteo applications
- Good agreements:
 - Comparisons of the internal swisstopo reprocessing solutions
 - Comparisons with CODE global reprocessing results
 - Comparisons with radio sonde data (PAYE)



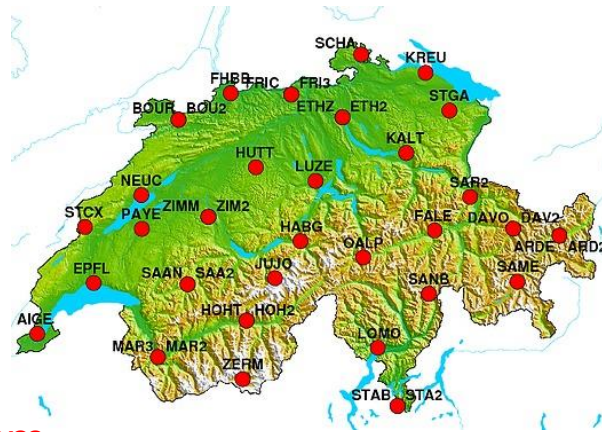
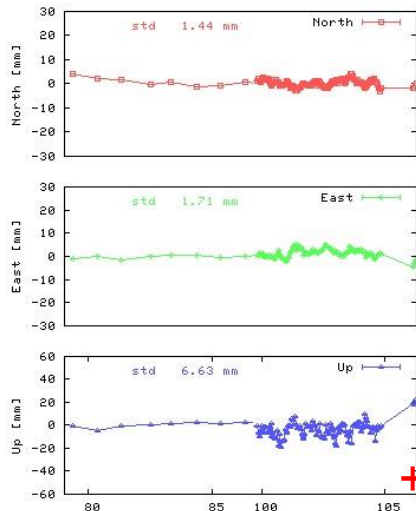


Multi-GNSS

see Multi-GNSS presentation

- Feb-May 2015: **all 41 Swiss stations are enhanced from GPS/GLO receivers to Multi-GNSS** (+ 15 chokering antennas: causing jumps of ~ 2 cm despite individual antenna PCVs)
- Tools in use to monitor the quality of new RINEX3 Files
- First GNSS analysis using BSW53

PAYE



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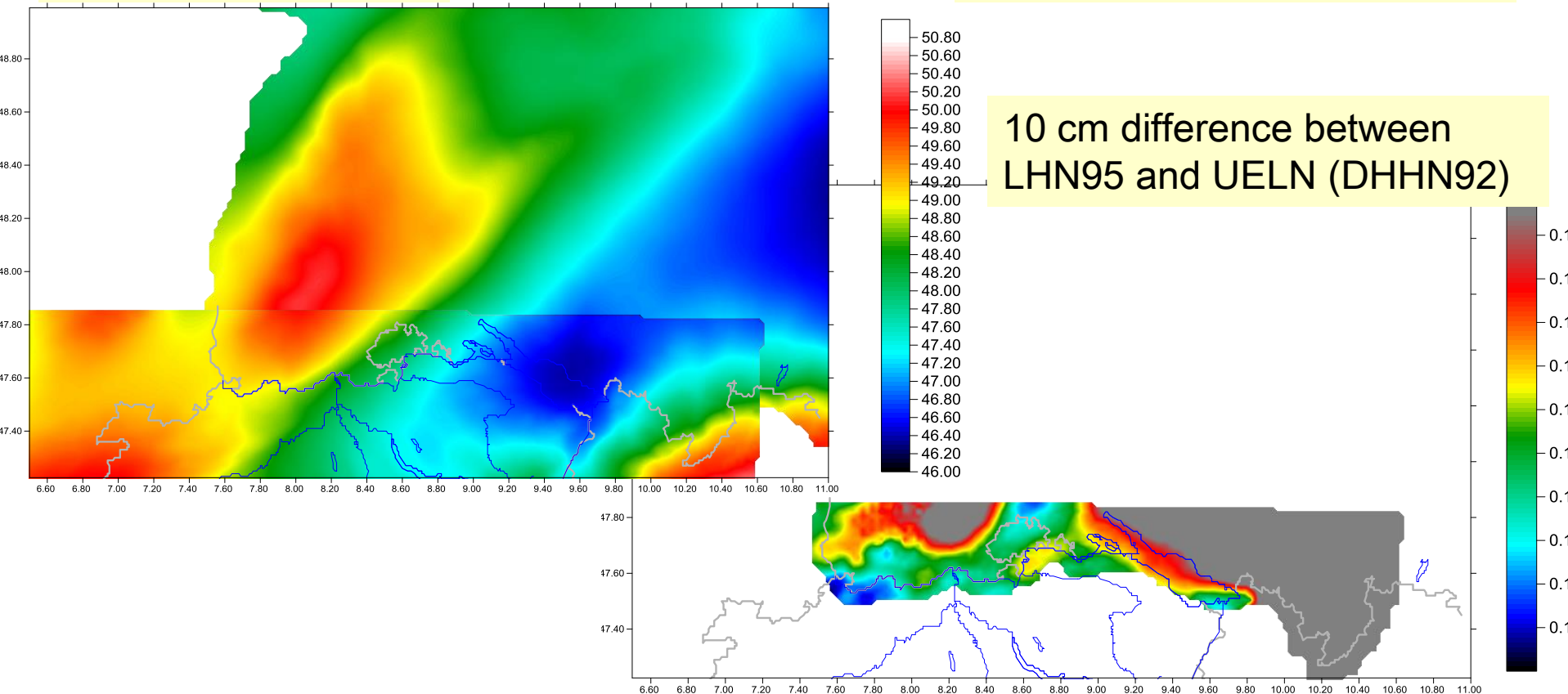


Geoid comparison CH - D

Switzerland
CHGeo2004 Q-Geoid
Ref.:CH1903+,PRN
Resolution 1x1 km

Difference:
+11 cm (Basel)
+17 cm (Bodensee)

Germany:
Quasigeoid GCG2011-South
Ref.:ETRS89,NAP
Resolution W-E: 1.5', N-S 1.0'



Thank YOU!

Zimmerwald:
reference station for federal surveying
in Switzerland

