

# **EUREF 2013 Symposium**

## **National Report of Austria**

by

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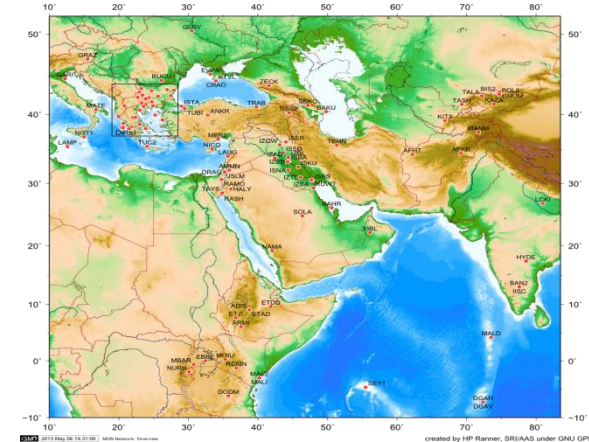
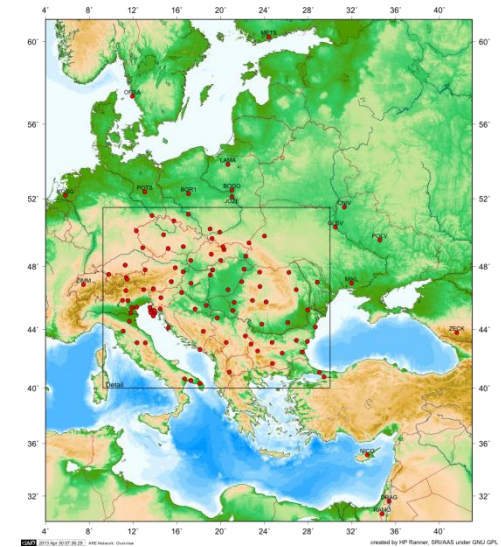
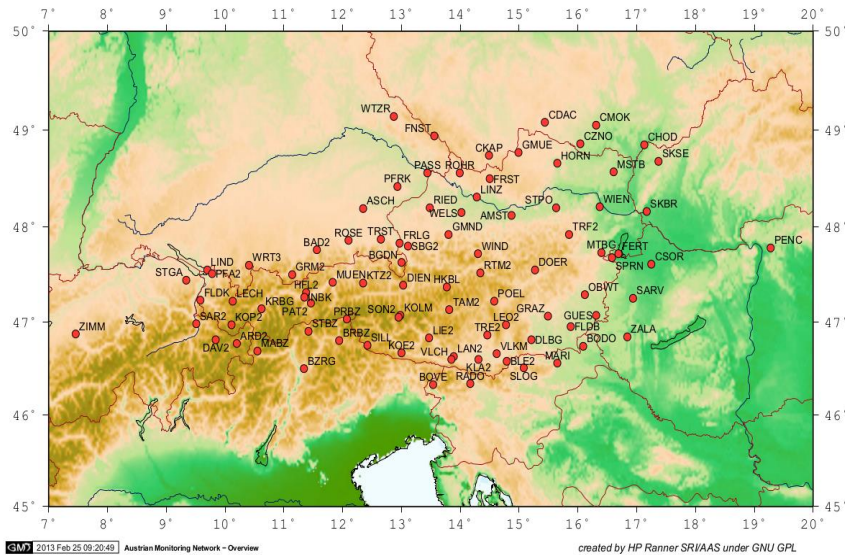
Budapest, Hungary

May 29<sup>th</sup> to May 31<sup>st</sup>, 2013

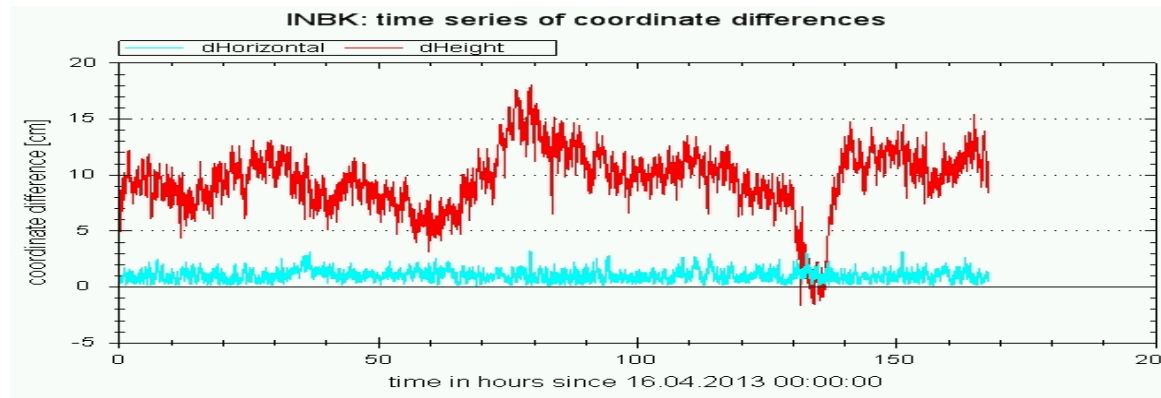
# Permanent Networks

At present 5 : AMON, CERGOP, EPN, GREECE, MON

- For reference and geokinematics
- Processed according to EPN guidelines
- Reprocessing started

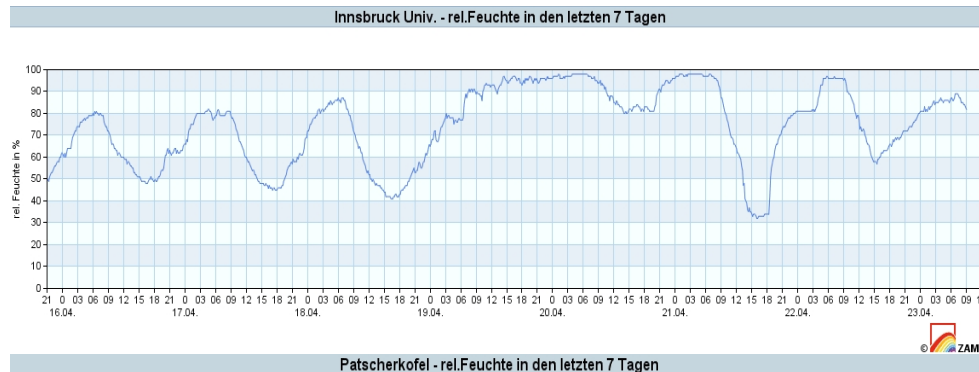


# APOS – Monitoringstation Innsbruck (INBK )

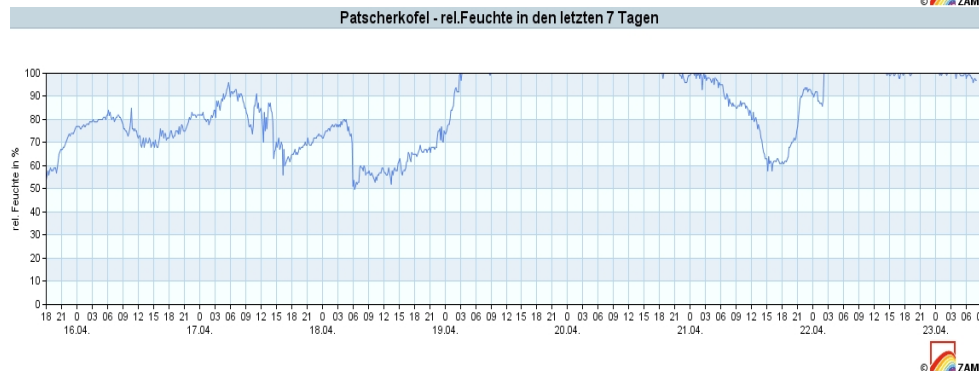


## • height offset vs. relative humidity

**Time series** (16th to 23rd of April) of coordinate differences; height offset (red graph) at INBK (university)  
(615 m above adriatic sea level)



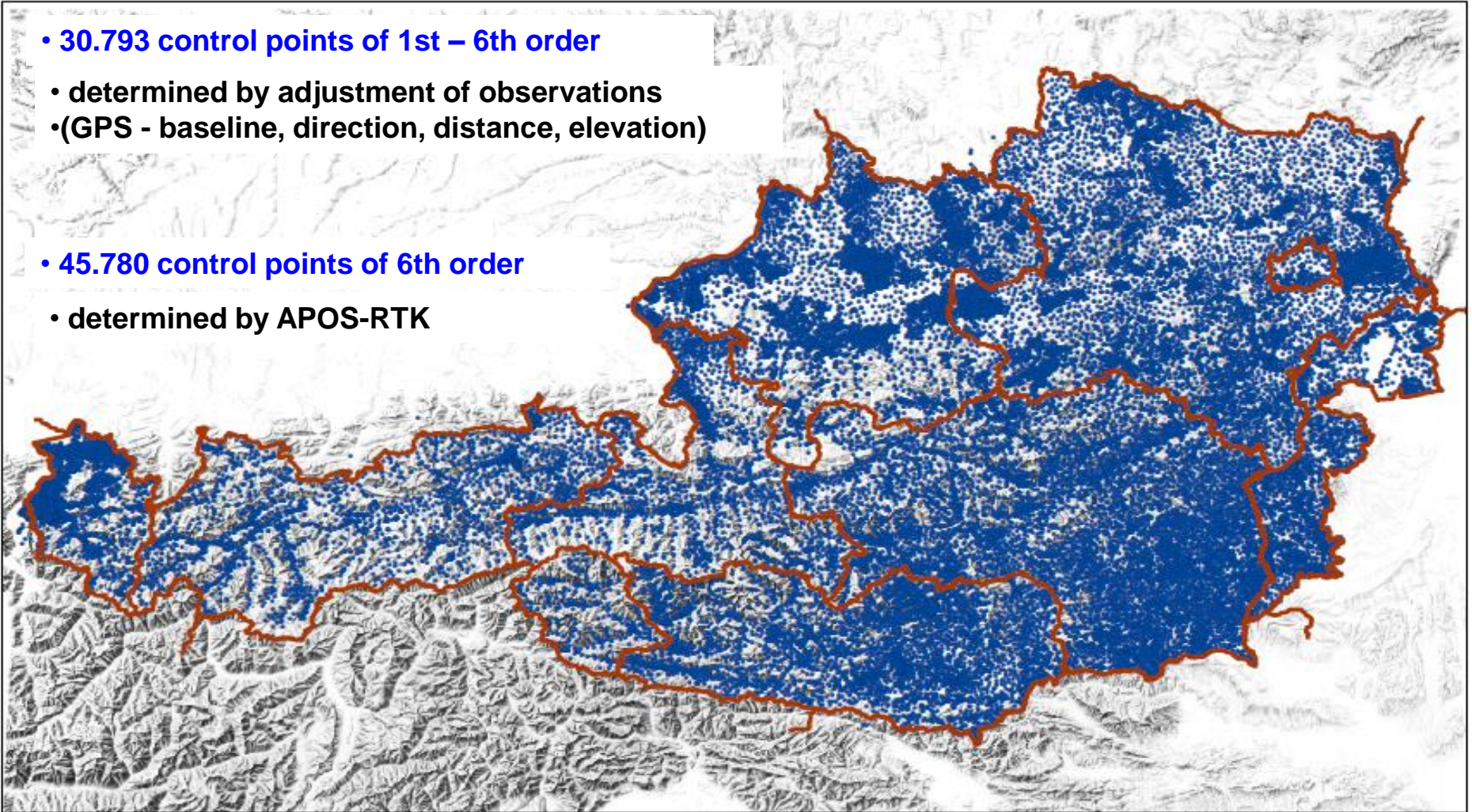
- **Relative humidity** of ZAMG sensor at INBK (university)
- (615 m above adriatic sea level)



**Relative humidity** of ZAMG sensor at PATK  
(2249 m above adriatic sea level)



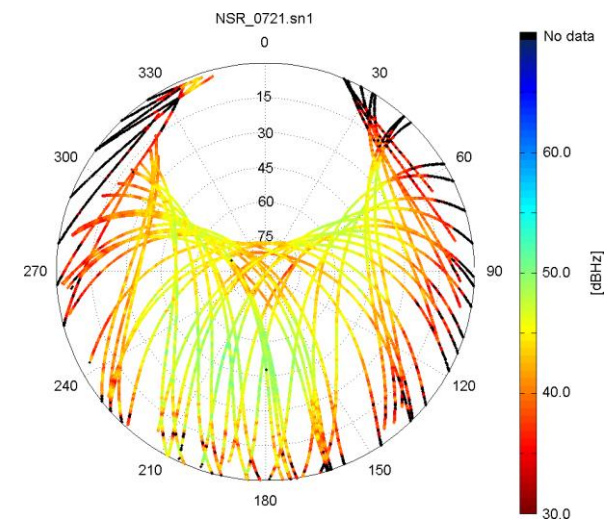
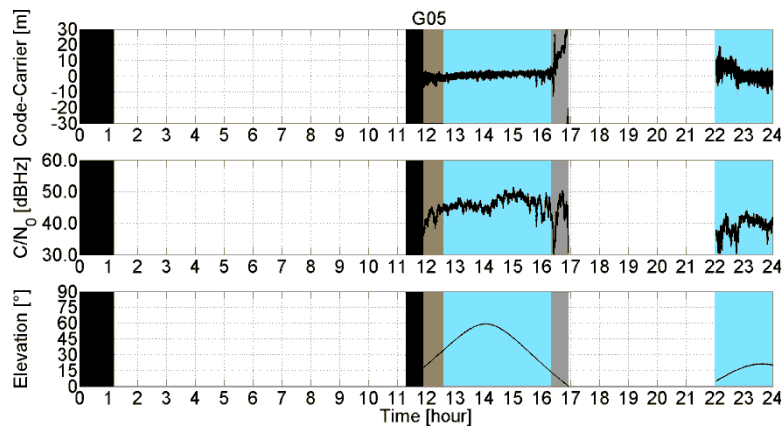
- **30.793 control points of 1st – 6th order**
  - determined by adjustment of observations
  - (GPS - baseline, direction, distance, elevation)
- **45.780 control points of 6th order**
  - determined by APOS-RTK



# Multipath Mitigation DISAP

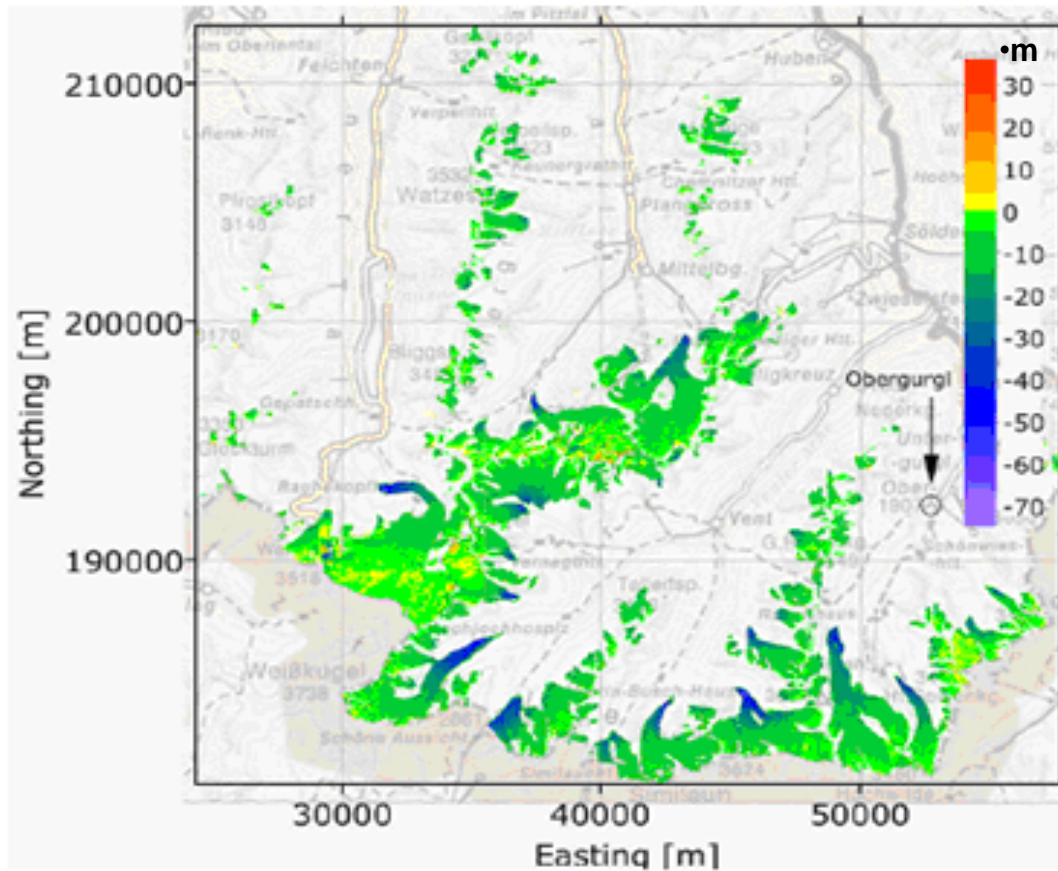


- Testbed at roof with reflectors
- Multipath signals tested with Code-carrier and signal/noise ratio
- Pre-Test with various antennas and 2 receivers
- Main Test with new antenna (moving) in summer 2013

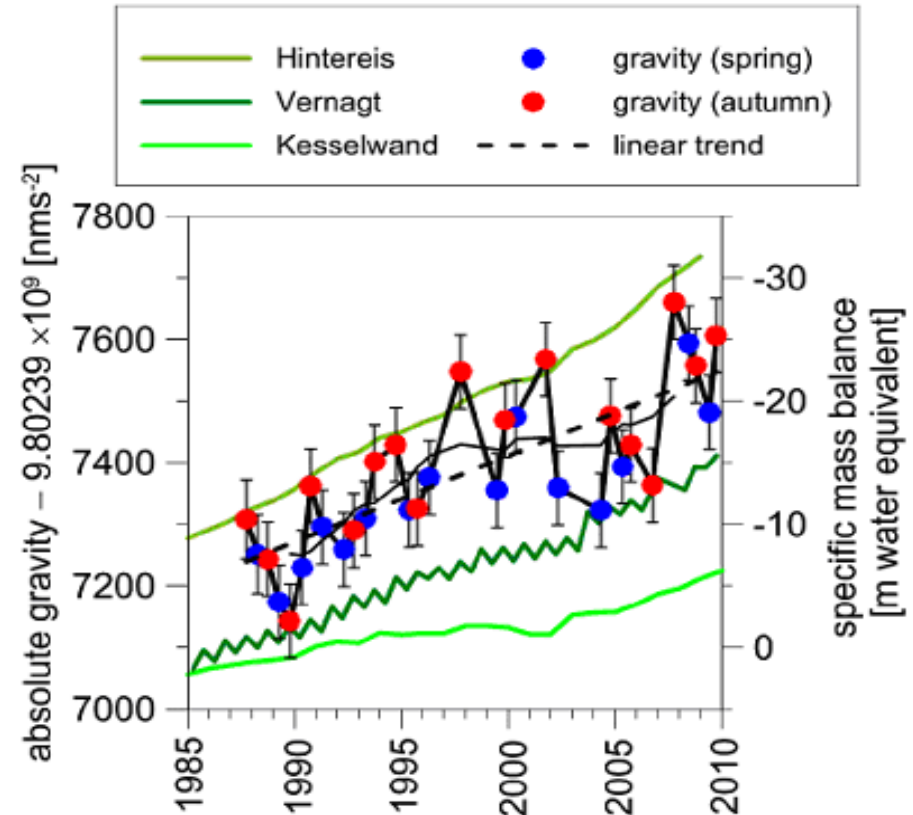




•Gravity changes in Obergurgl / Tyrol due to ablation of surrounding glaciers

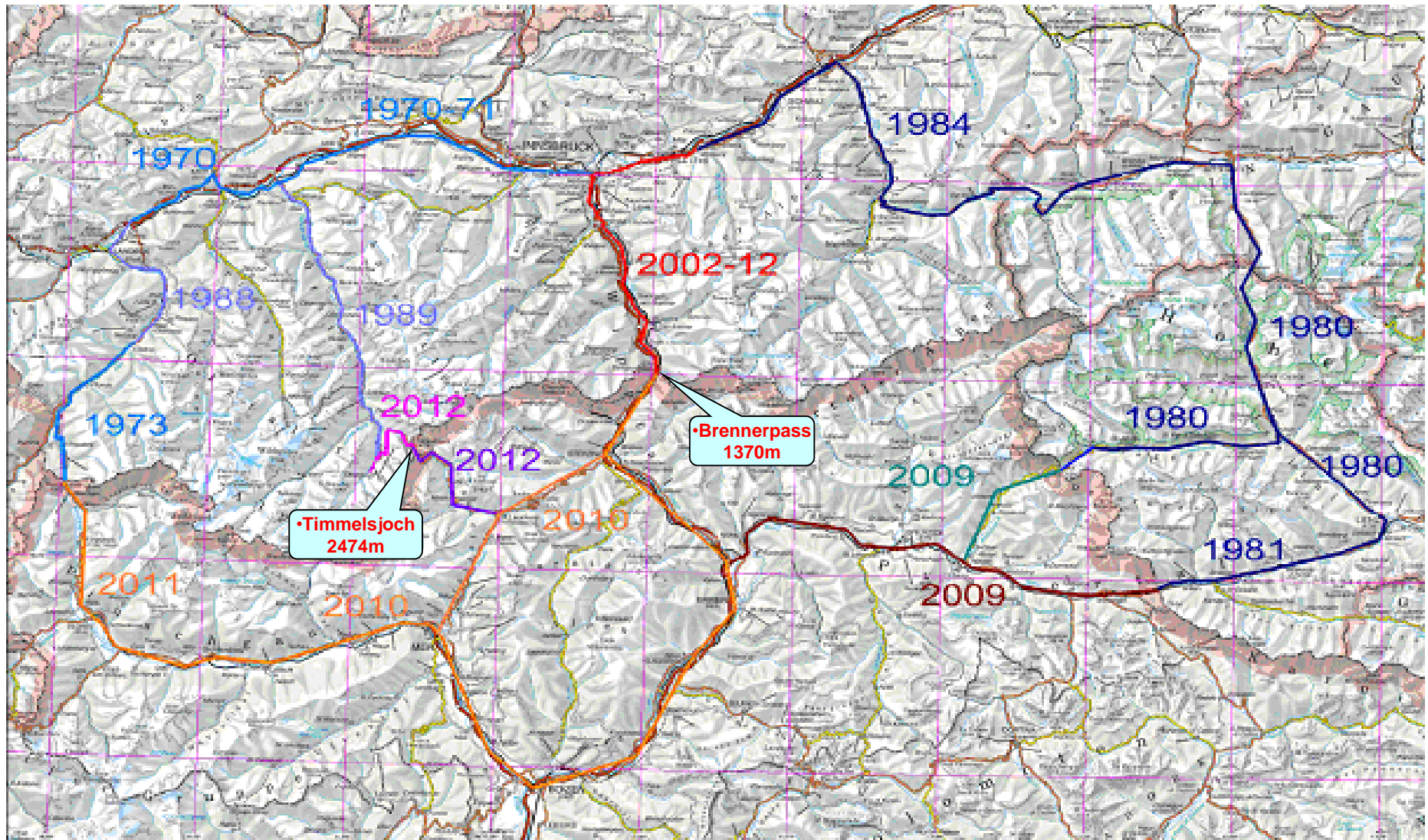


- Oetztal Alps
- Ice thickness variation 1997 - 2006



- Absolute gravity time series at Obergurgl 1987 - 2009 and cumulative ice-mass balance observations

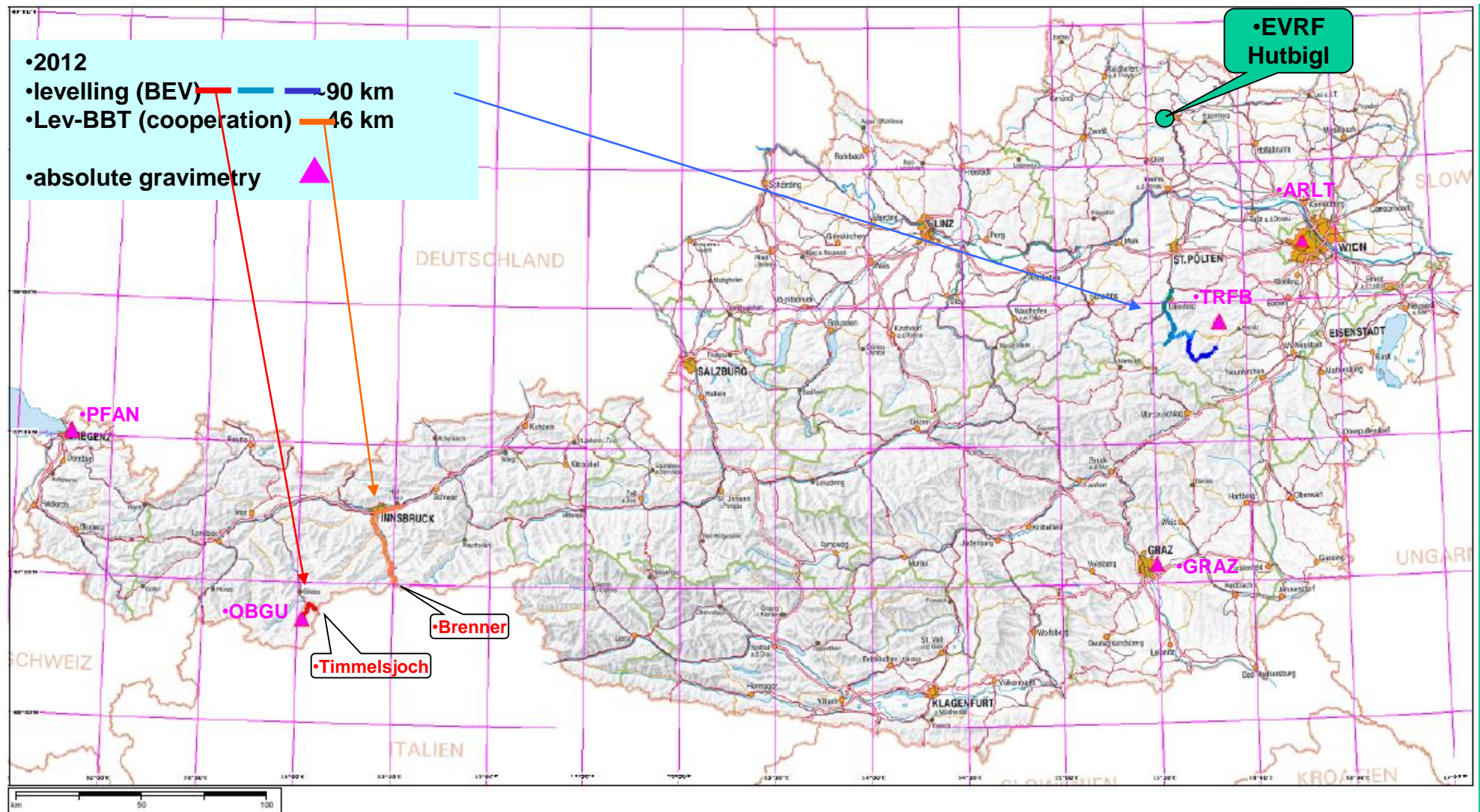
•published: P. Arneitz, B. Meurers, D. Ruess, Ch. Ullrich, J. Abermann, M. Kuhn, 2013: Gravity effect of glacial ablation in the Eastern Alps – observation and modeling. The Cryosphere, 7, 491–498, 2013



•2012 status of precise Levelling Loops between Austria (Tirol) and Italy (South Tyrol) and their datum



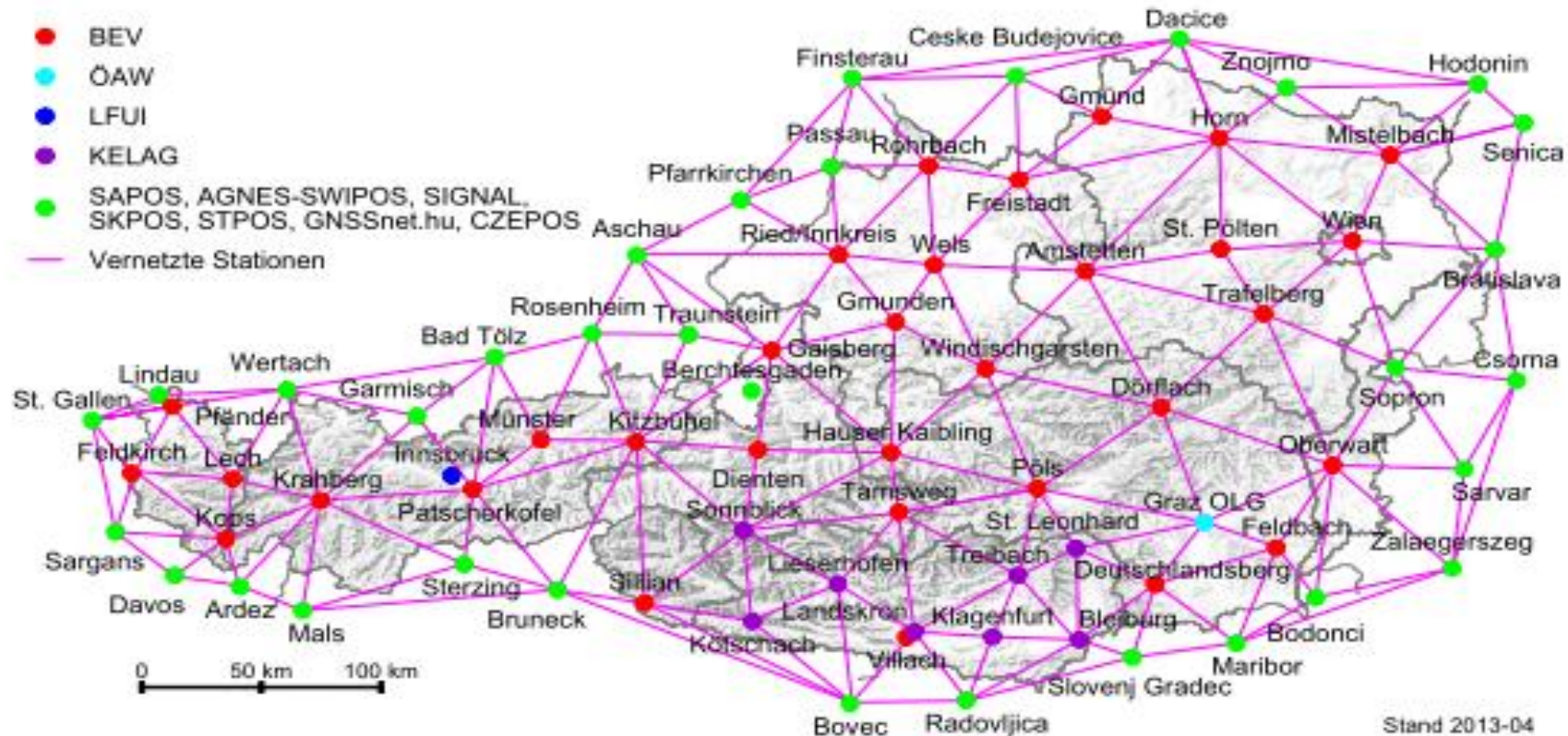
## •EVRF Hutbigl



•Beilage 1: Feldarbeit V11/2012 Übersicht



# APOS - Austrian Positioning Service



APOS - reference station network (currently 68 stations included) - status 2013-04