

## Integrated geodetic infrastructure at the Geodetic Observatory Pecný (CZE) in service of national and international GNSS projects

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## Geodetic Observatory Pecný (GOP)

- one component of RIGTC
- observatory founded in 1957
- located 35 km SE from Prague, Czech Republic



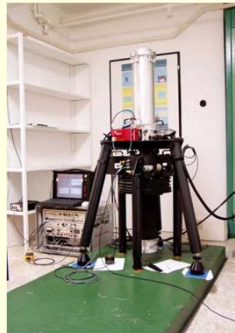
## Research activities at GOP

- observation systems
- GNSS data and analysis centers
- monitoring permanent GNSS arrays in CZE
- NGC integration into European frames
- development of scientific databases
- maintenance of reference frames in CZE
- theory of detailed gravity field modeling

## Main observing systems at GOP



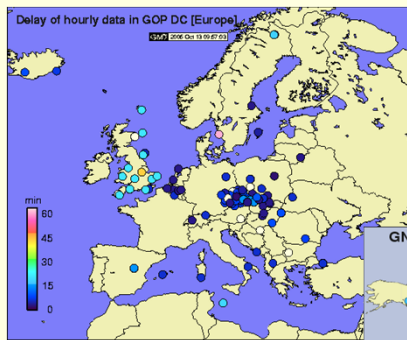
Permanent GNSS station.  
Absolute gravimeter.  
Cryogenic gravimeter.



Supporting instruments.

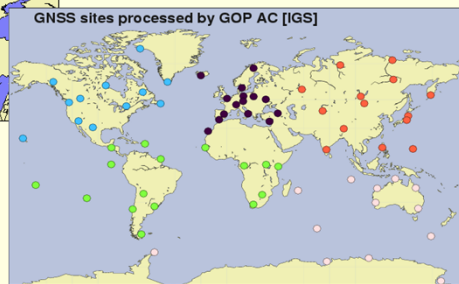


# GNSS data & analysis centres at GOP

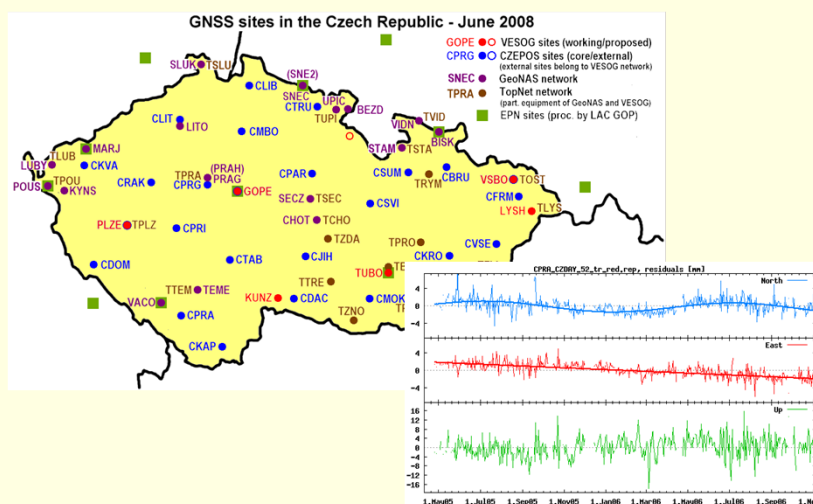


Processing of 55 EPN stations.  
 Processing of 39 GNSS permanent stations from CZE.  
 Processing of 79 stations within projects of GNSS meteorology.

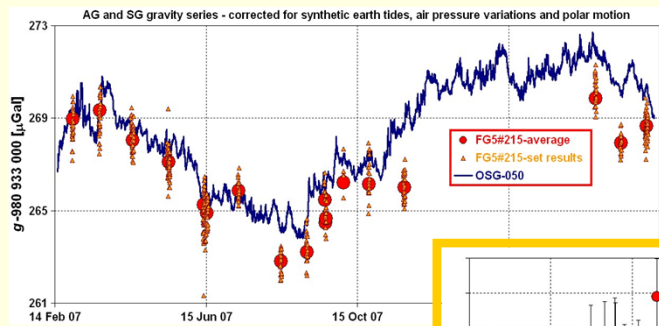
Observation files for more than 150 globally distributed stations.



# Permanent GNSS stations in CZE

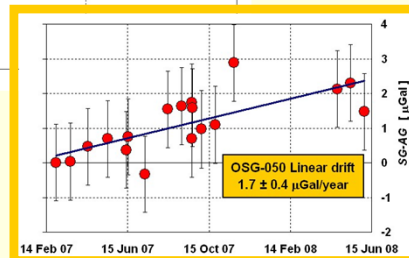


## Comparison of AG and SCG



Accurate detection of systematic error variations for absolute gravimeters.

Drift determination for superconducting gravimeters.



## Supporting instruments at GOP



## Conclusions

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- **monitoring permanent GNSS arrays in CZE**
- **activities of the observatory support international GNSS projects and campaigns**
- **collocation between geometric and gravity field reference frames**
- **data collected & analyzed by the observatory allow for integration of national geodetic controls into European and international reference frames**