



VESOG GNSS Network in Czech Republic

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CzechGeo/EPOS Workshop

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VESOG GNSS network

VESOG = Research and Experimental Network for GNSS Observations



VESOG GNSS network

Stations partly established at academic universities



VESOG GNSS network

Stations partly established at research institutions and other public objects



VESOG GNSS network

- 11 stations are operated by their owners.
- Operation center GOP provides operation of whole network.
- First data: GOPE 1996, ..., VSBO 2004, ..., UPOL 2016
- Available data:
 - from GPS NAVSTAR and GLONASS; for some stations also Galileo, Beidou
 - RINEX format (phase and pseudo-ranges, no coordinates)
 - minimal sampling rate 1 second
 - hourly and daily files
- 30 seconds/daily files are available free, shorter sampling rate for scientific purpose only – in the frame of CzechGeo/EPOS project.
- Real-time data in RTCM format available at nearly all stations.
- Some stations provide data also to International GNSS Service and to EUREF Permanent Network.
- Processed at GOP analytic center (another presentation).





PPGNet GNSS Network in Greece

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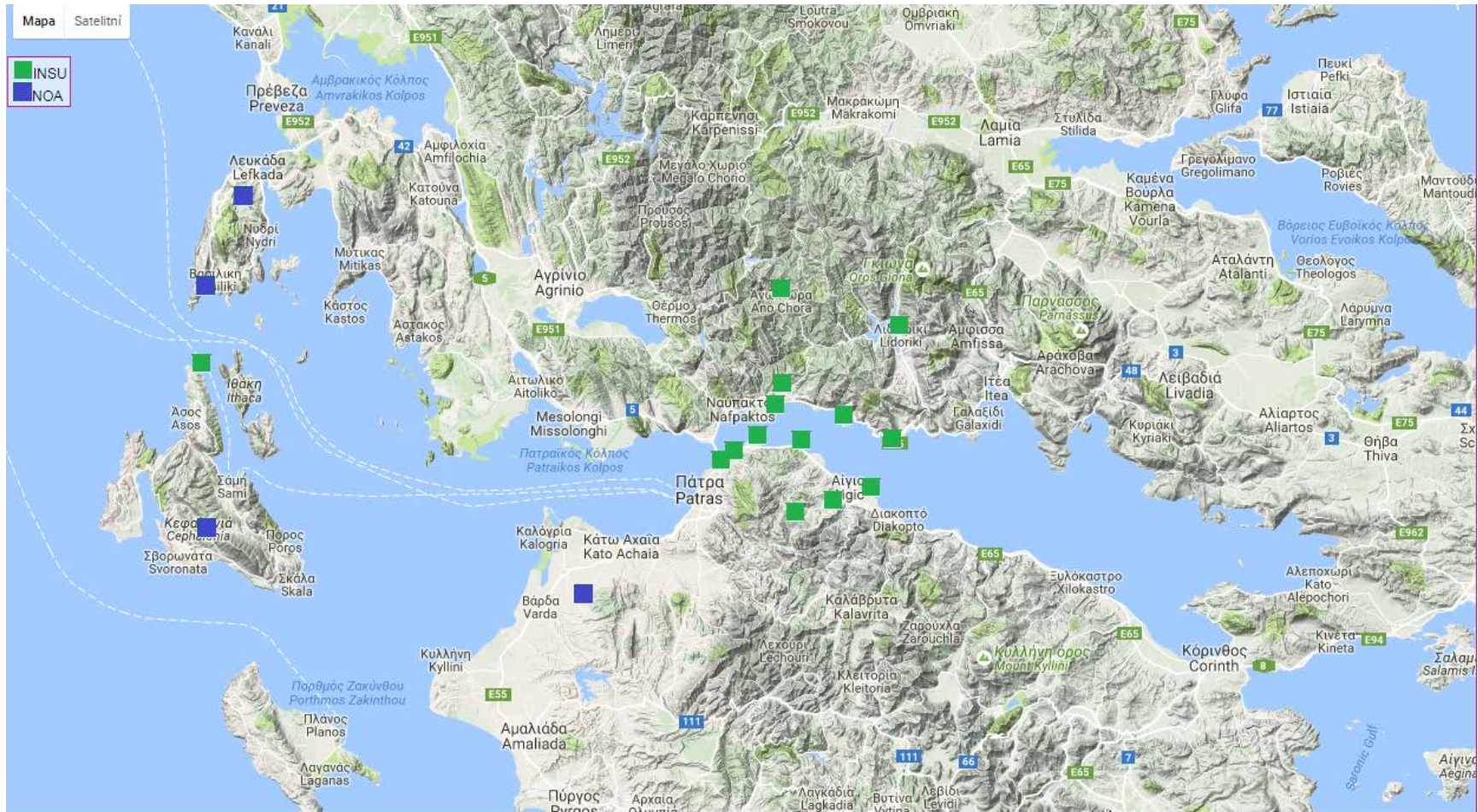
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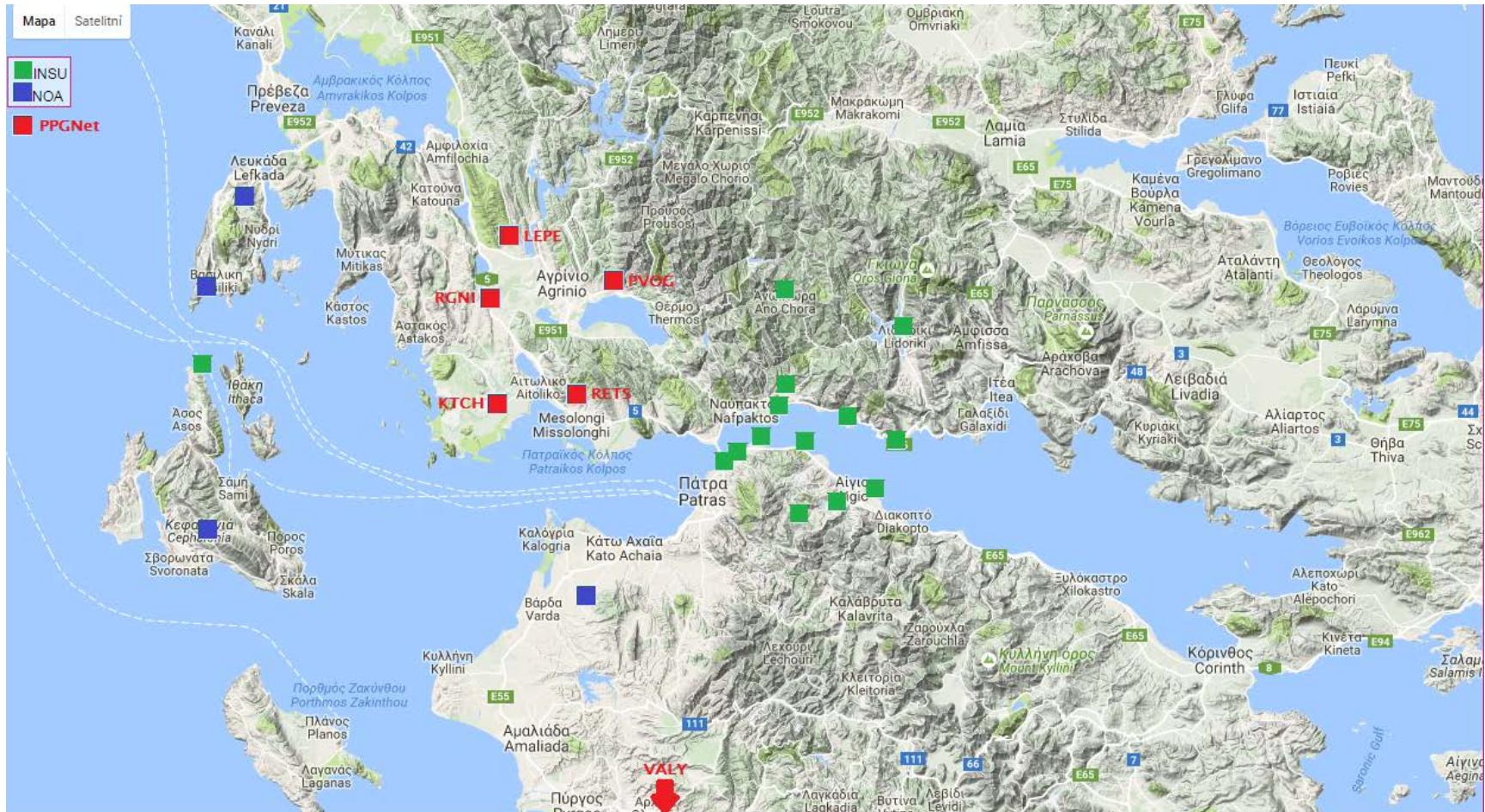
PPGNet GNSS Network

6 stations: VALY on south-west part of Peloponnesian peninsula, 5 stations north from Corinthian gulf



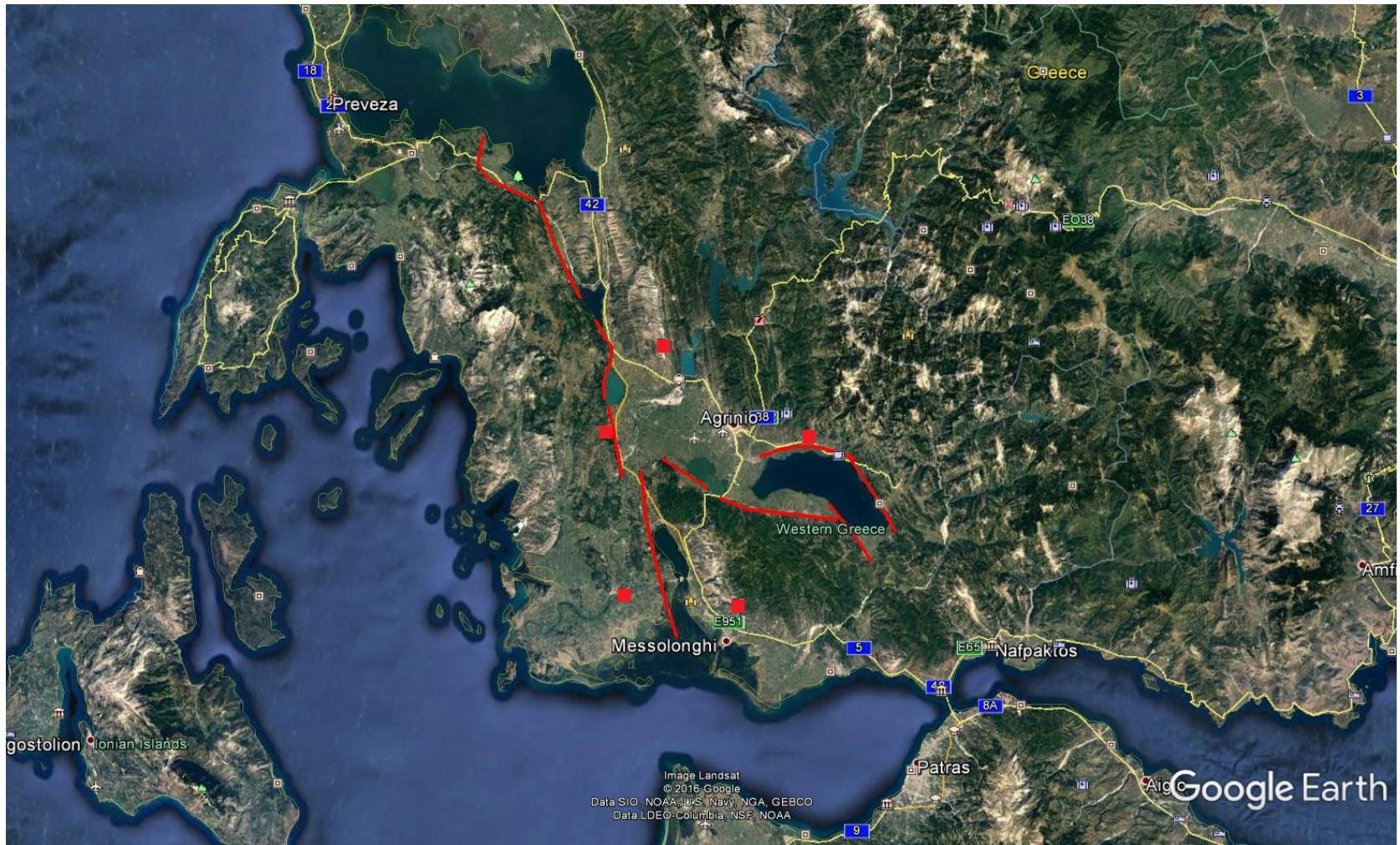
PPGNet GNSS Network

6 stations: VALY on south-west part of Peloponnesian peninsula, 5 stations north from Corinthian gulf



PPGNet GNSS Network

5 stations north from Corinthian gulf – determination of surface deformations along regional fractures



Map of faults received from E. Sokos, University of Patras, Greece

PPGNet GNSS Network

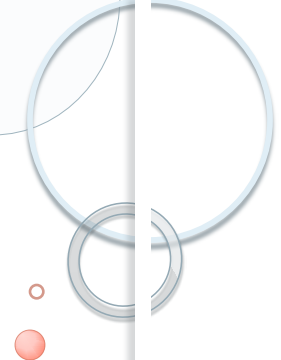
Stations are on public buildings (schools, municipal offices and health centers)



PPGNet GNSS Network

- **FMP-CUP: 3 stations, RIGTC-GOP: 3 stations.**
- **University of Patras ensures all local activities in close cooperation with CUP and GOP.**
- **Operation center GOP provides data management of whole network.**
- **First data: VALY 2011, ..., RGNI 2014**
- **Available data:**
 - from GPS NAVSTAR and GLONASS; for some stations also Galileo
 - RINEX format
 - minimal sampling rate 1 second; for some stations 0.1 second (10 Hz)
 - hourly and daily files
- **30 seconds/daily files are available free, short sampling rate for scientific purpose only – in the frame of CzechGeo/EPOS project.**
- **Real-time data in RTCM format available for some stations.**
- **Some stations provide data also to National Observatory of Athens and to METRICA company.**
- **Processed at GOP analytic center (another presentation).**





CZEPOS – cooperating GNSS Network

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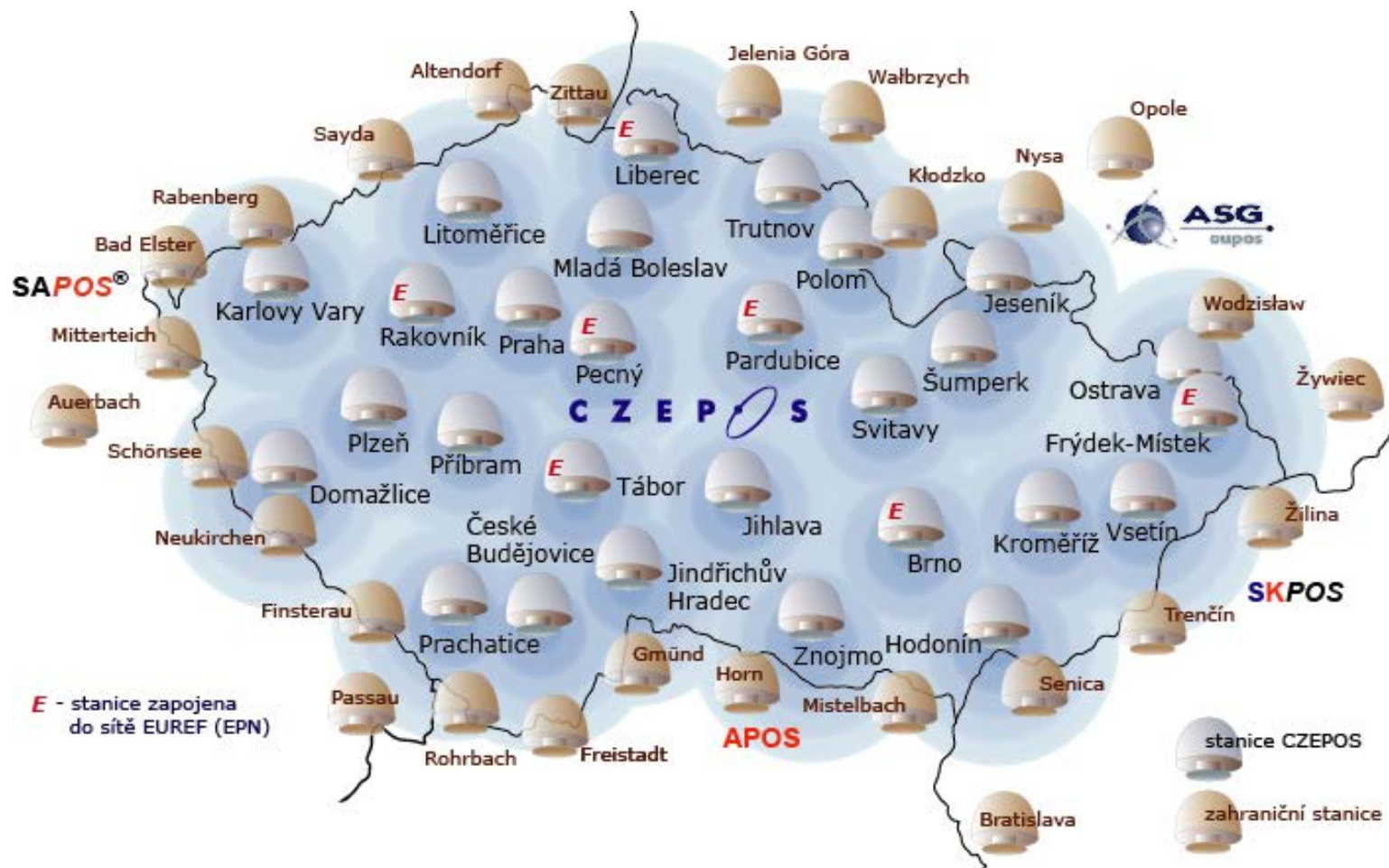
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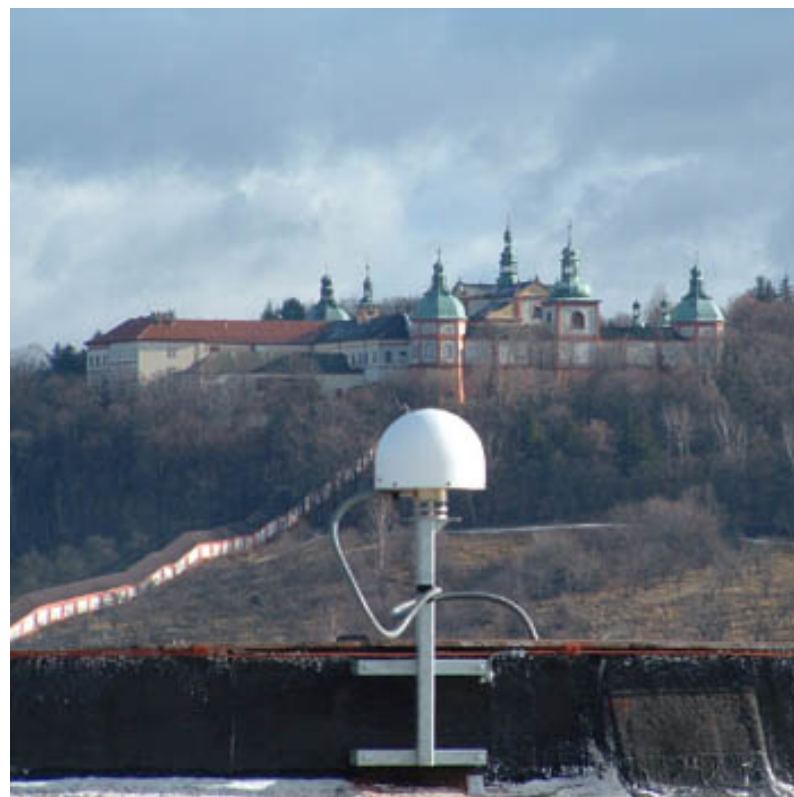
CZEPOS GNSS Network



Map from <http://czeupos.cuzk.cz>

CZEPOS GNSS Network

- **State GNSS network managed by Land Survey Office in Prague**
- **23 stations established at buildings of Cadastral Offices**
- **Use cadastral intranet (WAN) for communications**
- **Primary for commercial purposes – provides data for commercial surveyors**
- **For scientific purposes in the frame of CzechGeo/EPOS project are available data:**
 - **from GPS NAVSTAR and GLONASS**
 - **RINEX format**
 - **sampling rate 30 second**
 - **hourly and daily files**
 - **minimally 18 months old**
(i.e. unusable for commercial surveyors)
- **Some stations also provide data to EUREF Permanent Network**



Picture from <http://czepos.cuzk.cz>