

National Report of Germany

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EUREF Symposium 2006, Riga

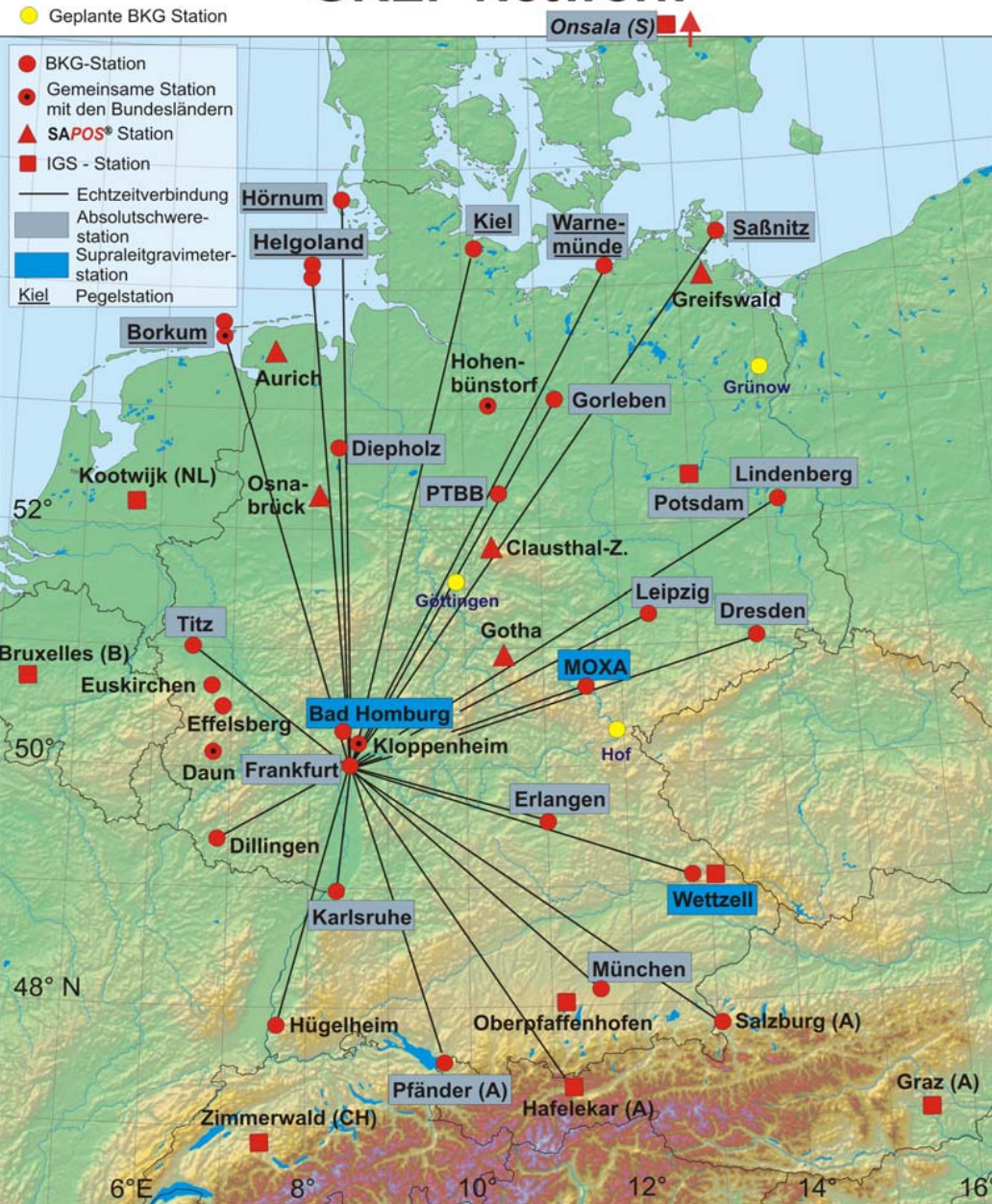
GREF - German integrated geodetic fundamental network

SAPOS – RTK network of NMA´s of German Länder

DHHN – Height network combined with gravity and geometry

FS Wettzell – Contribution to the global geodetic reference system

GRES Network



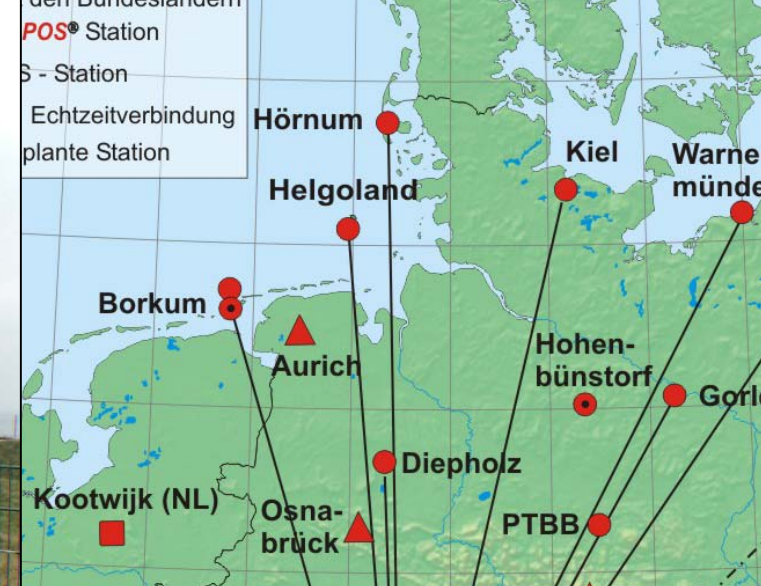
Densification of EUREF's Networks

Integrated German Reference Network GREF (30 stations):

- **GPS/GLONASS (25)**
- **Absolute gravity (19)**
- **Tide Gauges (6)**
- **superconducting gravimeter (3)**
- **Real-time networking (20 NTRIP)**
- **Local monitoring networks (15)**

Integration of several stations in to EPN, ECGN and basis for SAPOS monitoring

Helgoland



SAPOS®

Satellitenpositionierungsdienst
der deutschen Landesvermessung
Copyright: Landesbetrieb Geoinformation und Vermessung Hamburg

Echtzeit- Vernetzung

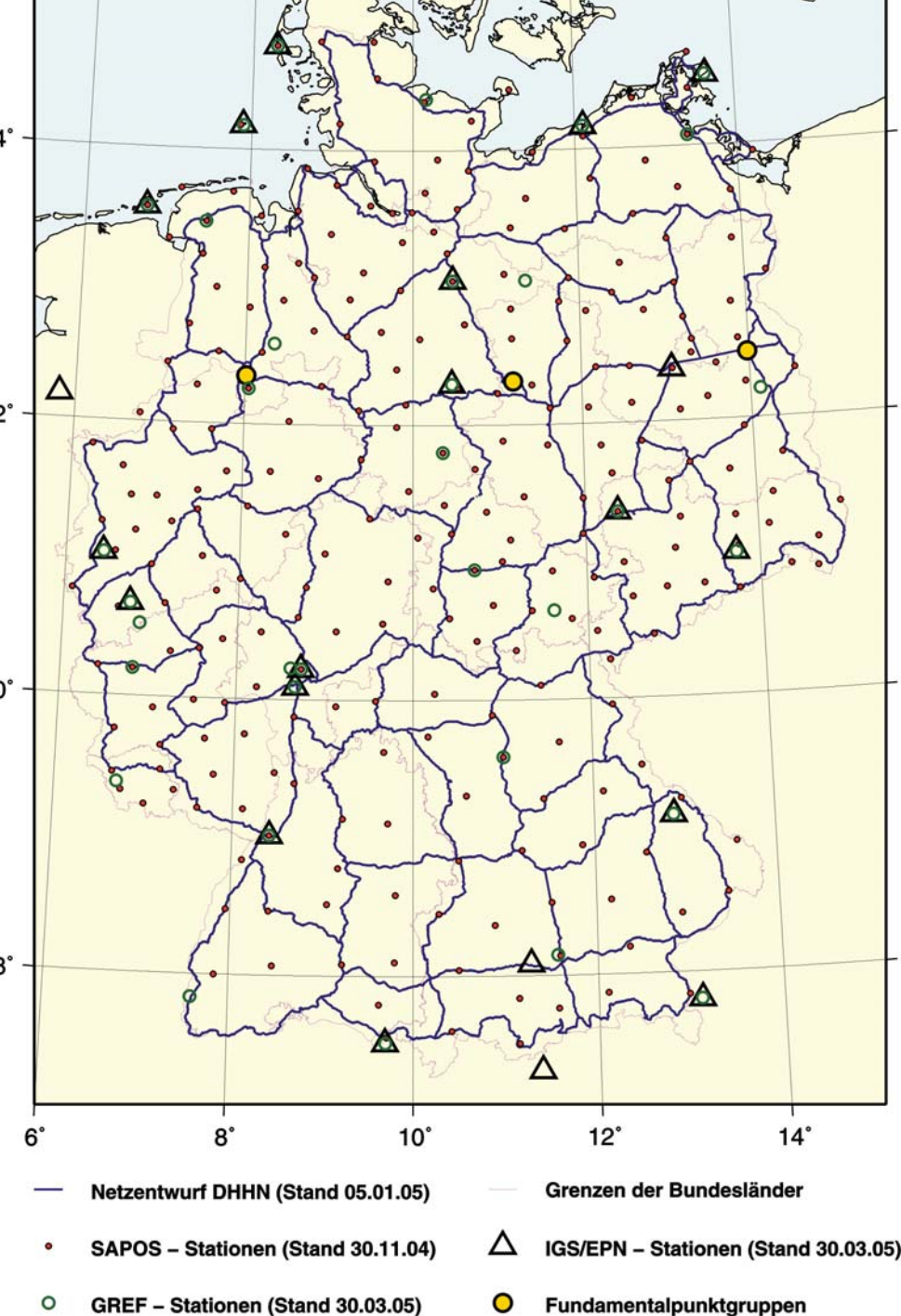


● BB BE BW BY HB HE HH LSA MV

NI NW RP SL SN TH sowie Elbe und Küste in Betrieb

Satellite Positioning Service SAPOS®

- RTK network of NMA's of German Länder
- 250 permanently operated GPS reference stations
- For surveying and cadastre and also other applications
- Central Bureau SAPOS® is the relevant contact agency for SAPOS® users operating in Germany



DHHN – Height network combined with gravity and geometry

Measurements between 2006-2011

- 18000 km levelling
- 250 GNSS stations
- 100 abs. Grav.

Fundamental Station Wettzell – Contribution to the global geodetic reference system

VLBI twin telescope
2012

New Satellite Laser
1 kHz, 2008 (SOS-W)

