Federal Agency for
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Linkage to Global Reference systems

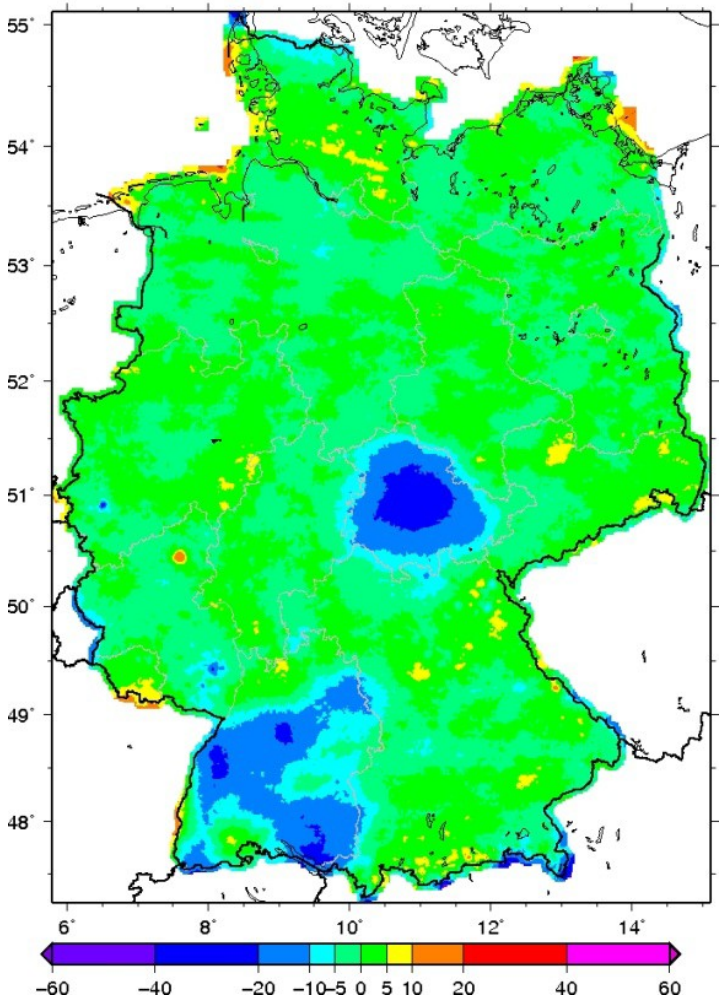
German Antarctic Receiving Station

View onto the twin telescope

- Geodetic observatories in
  - Wettzell (Bavarian Forest)
  - Conception (Chile)
  - O'Higgins (Antarctic)
- Contributions to IVS, IGS, ILRS, IERS, IGFS
- Completion of Twin Radio Telescope (except for VLBI receiver)
- Completion of the telescope of the new Satellite Observing System Wettzell (SOS-W T)
- overhaul of the telescope of Wettzell Laser Ranging System (WLRS) finished

New Solution of German Combined Quasigeoid: GCG2011

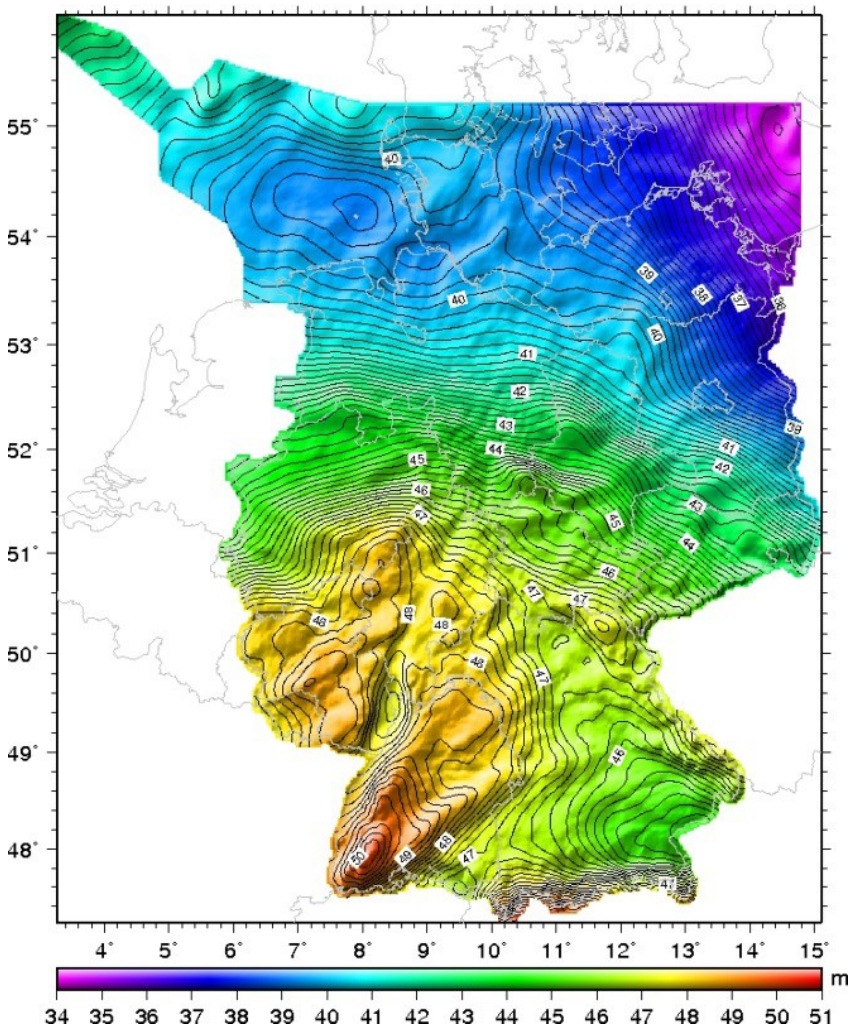
- replacement of GCG05
- Combination of independent solutions from BKG and IfE Hannover
- differences to GCG05 are mostly less than 5 mm
- Differences up to 2.5 cm because of:
  - New GNSS heights introduced in the German states Baden-Württemberg and Thuringia (heights were aligned to uniform SAPOS level)
- Differences up to 2 cm:
  - in areas with new and more closely gravity observations
  - in areas with variations within the DTM 25mx25m
  - result of validation of the gravity observations



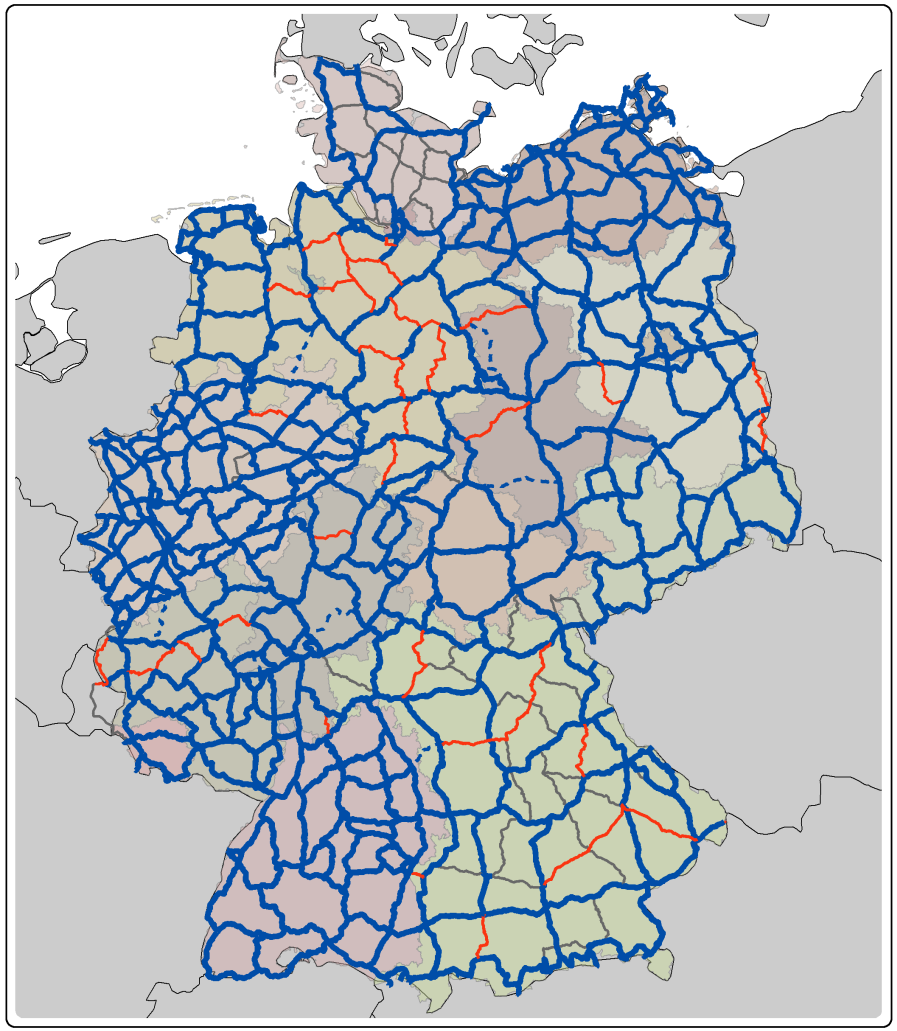
Differences between the solutions 2005 and 2011 in mm

New Solution of German Combined Quasigeoid: GCG2011

- Enlargement of the new solution to the exclusive economic zone (EEZ) of Germany in the North Sea
- Differences to results of GNSS-campaign 2008:
  - Comparison at 272 independent GNSS/leveling points
  - Mean difference: ±7.9 mm
  - Minimum: -19 mm
  - Maximum: +34 mm
  - Stand. Dev. ±8.6 mm
- Horizontal gradients of the quasigeoid come up to 10cm/km



Re-measurement of the German 1.O. Leveling Network (DHHN2006-2012)



- Measurements will be finished end of 2012
- Total length of lines 29 500 km
- 92% already measured (status March 2012)