

BKG Institute Report

BKG has continued the works for the maintenance of gravity reference sites.

These are the stations Bad Homburg, Wettzell, Medicina (Italy) and Concepcion (Chile).

- Bad Homburg with SG30 and SG44, repeated AG measurements with FG5-101 and FG5-301. A10#002 and #012 have been repaired and work well. Investigations for a careful survey of A10 standards and repeat observations demonstrate a good reliability of the instruments.
- Wettzell (geodetic observatory) with SG29 and semi-annual AG measurements. The construction of a new VLBI twin telescope made it necessary to move the gravity site. Detailed hydrological investigations have been carried out at the Wettzell site together with GFZ (Potsdam). It is planned to move SG44 from Bad Homburg to Wettzell and carry out a period of parallel SG observations.
- Medicina (Italy) with a continuous time series of SG23 since 1996. Semi-annual AG measurements.
- Concepcion (Chile) (TIGO geodetic observatory) with a time series of SG38 from Dec 2002 – to June 2008, repaired at GWR and on the way back to Chile. AG measurements with FG5-206 (by Bonvalot in 2005) and FG5-226 (weekly AG 2006-2007, restarted after repair 2008)
- Repeated AG observations in integrated networks ECGN and GREF.
- Continuation of the database development AGrav and operation together with BGI
- Development of a 3D-weather model for the improved determination of atmospheric effects upon gravity

Gävle, 10 March 2009