



Repeated absolute gravity measurements and continuous GPS observations in Dronning Maud Land, Antarctica

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The Finnish Geodetic Institute has made absolute gravity measurements at the Finnish Antarctic Research Station Aboa (73.05 S, 13.4 W) in 1994, 2001, 2004 and 2006. Measurements at the South African station Sanae IV and at the Russian station Novolazarevskaya were performed in 2004 and 2006.

In February 2003 a GPS receiver was installed at Aboa and it has collected continuous data at this summer-only base. Winter-time electricity for the GPS and for the geophysical instrumentation at Aboa is provided by solar panels, wind generators, and a battery pack. The GPS observations are downloaded once a year by the summer expedition.

The work is performed under the auspices of the Finnish Antarctic Research Program FINNARP. The aim is to detect crustal motion and gravity change due to postglacial rebound (PGR) and to present-day variation in Antarctic mass balance. We describe the results and compare them with models of the PGR and with results from GRACE. The field work will be continued during the International Polar Year 2007/8.