



Gravity observation with superconducting gravimeter CT(#043) at Syowa Station, Antarctica

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A superconducting gravimeter (SG) TT-70(#016) was installed at Syowa Station in March, 1993 (Sato et al. 1995), since then, gravity observation with the SG had been continued until early November, 2003. Before the end of the observation, a new SG CT(#043) was installed temporarily on a pier for absolute gravimetry in the same building in April, 2003 (Ikeda et al. 2005) and simultaneous observations with the two SG were carried out for more than 6 months. After the parallel observation, TT-70(#016) was replaced by CT(#043) at the end of 2004, and gravity observation by a SG was restarted. Calibration of the CT(#043) was also conducted with an absolute gravimeter FG5(#210) around the same time, and a scale factor of -59.461 micro-gal/volt was obtained (Fukuda et al. 2005). CT(#043) is equipped with a 4 Kelvin cryocooler which enable it to operate without re-filling liquid helium. CT(#043) is operating properly by now, though the obtained data show nearly linear large trend of approximately 120 micro-gal/year. The trend is considered to be an instrumental drift. In this presentation, we will show the results from first 20 months data of the CT(#043). We will also compare gravimetric tidal factors and trends obtained from the two SG data during the parallel observation.