



## **VLBI with GNSS signals on intercontinental baselines**

Rüdiger Haas (1), Grzegorz Klopotek (1), Thomas Hobiger (2), Jun Yang (1), Alet de Witt (3), Marisa Nickola (3), Elena Skurikhina (4), and Andrey Mikhailov (4)

(1) Department of Space, Earth and Environment, Chalmers University of Technology, (rudiger.haas@chalmers.se), (2) Institute of Navigation, University of Stuttgart, Germany, (3) Hartebeesthoek Radio Astronomy Observatory, South Africa, (4) Institute of Applied Astronomy of the Russian Academy of Sciences, Russia

Since several years the idea of Very Long Baseline Interferometry (VLBI) observations using signals of Global Navigation Satellite System (GNSS) satellites is discussed as a potential approach to improve the accuracy of the terrestrial reference frame. The expectation is that such observations could improve the link between the two space geodetic techniques GNSS and VLBI. A number of experimental observing sessions have been performed during the last years to test this idea and to gain experience with this type of non-standard VLBI observations. These test sessions used primarily regional VLBI networks in Europe and Australia. We performed VLBI observations with GNSS-signals on intercontinental baselines, including the VLBI stations Onsala (Sweden), Hartebeesthoek (South Africa), Zelenchukskaya (Russia) and Svetloe (Russia). These observations are part of a pilot project of the European Space Agency (ESA) within their Alcantara programme and aim at achieving synergies between VLBI and GNSS. Data were successfully collected, correlated and post-processed, and analyzed with a geodetic VLBI data analysis software. We briefly describe these sessions, and present first preliminary results