Geophysical Research Abstracts,
Vol. 10, EGU2008-A-06990, 2008
SRef-ID: 1607-7962/gra/EGU2008-A-06990
EGU General Assembly 2008

Combination of nutation time series based on VLBI and GNSS observations collected during CONT05 campaign

M. Kudryashova, R. Weber, R. Heinkelmann, H. Schuh

Institute of Geodesy and Geophysics, TU Vienna (E-mail: mvk@mars.hg.tuwien.ac.at, Fax: ++43-1-58801-12896)

VLBI is the unique space geodetic technique which allows to estimate nutation offsets with a long-term stability. Nevertheless, GNSS (Global Navigation Satellite Systems) in terms of real GPS and simulated complete constellation GLONASS observations can contribute essentially to the determination of nutation parameters in the high frequency domain (periods from 5 to 20 days). The main goal of this work is to simulate the observations of a complete constellation GLONASS satellite navigation system and to estimate its possible contribution to the estimation of high frequency nutation terms. The nutation parameters provided by both techniques (VLBI and GNSS) are combined by a smoothing method introduced by Vondrák and $\check{C}$epek in order to take the advantages of each particular technique. In this work we focus on the combination of the nutation offsets from VLBI and nutation rates from GNSS for the time span covered by the CONT05 observation campaign.