Geophysical Research Abstracts
Vol. 14, EGU2012-2358, 2012
EGU General Assembly 2012

International VLBI Service for Geodesy and Astrometry: Challenges of the next ITRF

A. Nothnagel, T. Artz, and A. Iddink

Institute of Geodesy and Geoinformation of the University of Bonn, Bonn, Germany (nothnagel@uni-bonn.de, ++49 228 732988)

The IVS had contributed its combined results of VLBI observing sessions to previous ITRF computations and will continue to do so. The submissions consisted of datum-free normal equations for all station coordinates and the full set of Earth orientation parameters for each 24h observing session. For the next realization of the ITRS, the IVS will also include the positions of all radio sources observed in each session. This will create some level of complication for the ITRF computations, especially for those sources which are not stable in their position. However, this will eventually open up the path for a consistent determination of the terrestrial reference frame, Earth orientation parameters and the celestial reference frame.
For the IVS, it is also important how atmospheric loading will be dealt with in the next ITRF computations. We will present investigations of the impact of this phenomenon on the station coordinate time series and a TRF from VLBI alone.