



IVS contribution to the next ITRF

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Generating the contribution of the International VLBI Service (IVS) to the next ITRF (ITRF2013 or ITRF2014) was the main task of the IVS Combination Center at the Federal Agency for Cartography and Geodesy (BKG, Germany) in 2014. Starting with the ITRF2005, the IVS contribution to the ITRF is an intra-technique combined solution using multiple individual contributions from different institutions.

For the upcoming ITRF ten international institutions submitted data files for a combined solution. The data files contain 24h VLBI sessions from the late 1970s until the end of 2014 in SINEX file format containing datum free normal equations with station coordinates and Earth Orientation Parameters (EOP). All contributions have to meet the IVS standards for ITRF contribution in order to guarantee a consistent combined solution.

In the course of the generation of the intra-technique combined solution, station coordinate time series for each station as well as a Terrestrial Reference Frame based on the contributed VLBI data (VTRF) were generated and analyzed.

Preliminary results using data until the end of 2013 show a scaling factor of -0.47 ppb resulting from a 7-parameter Helmert transformation of the VTRF w.r.t. ITRF2008, which is comparable to the scaling factor that was determined in the precedent ITRF generation.

An internal comparison of the EOPs between the combined solution and the individual contributions as well as external comparisons of the EOP series were carried out in order to assure a consistent quality of the EOPs.

The data analyses, the combination procedure and results of the combined solution for station coordinates and EOP will be presented.