



Towards development of optimal strategy for real-time troposphere products estimation

Pavel Václavovic (1), Jan Douša (1), and Kryštof Eben (2)

(1) RIGTC/GOP, Geodetic Observatory Pecny, Zdiby, Czech Republic, (2) Institute of Computer Science of the Czech Academy of Sciences, Prague, Czech Republic

The Real-Time Demonstration campaign (RT-Demo) was established within the COST Action ES 1206 GNSS4SWEC in April 2015 for the development and improvement of ultra-fast GNSS tropospheric products. Additionally, we developed an estimation of tropospheric corrections for selected stations using the regional numerical weather forecast. Available real-time tropospheric products are visualized via a dedicated web portal monitoring and evaluated in long-term via the GOP-TropDB database capable of inter-comparing different solutions. Additionally, for the development and optimization of the processing strategy in offline mode, we used the GNSS4SWEC Benchmark data set providing observations from a dense GNSS network and orbit and clock corrections stored from real-time streams. Optimization from the simulated real-time solutions were applied in the RT-Demo processing afterwards. Findings from both campaigns together with the evaluation of results will be presented. In addition, we will validate results of GNSS-based tropospheric products supported with meteorological parameters from numerical weather forecasts including their conversion into maps of integrated water vapour content.