



The Austrian near real-time multi-GNSS troposphere products – current status and future plans

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Within EU COST action ES1206 (GNSS4SWEC), the near real-time (NRT) GNSS processing routines at TU Wien have been re-established for tropospheric delay parameter estimation. Since March 2017, NRT tropospheric estimates (ZTDs and gradients) are provided on an hourly basis to the Zentralanstalt für Meteorologie und Geodynamik (ZAMG) and E-GVAP for data assimilation purposes.

The currently processed GNSS reference network consists of 39 Austrian sites and 34 sites in neighbouring countries. So far, most GNSS stations are operated with GPS+GLONASS equipment. However, in the beginning of 2018 a changeover takes place. Until summer 2018, each Austrian GNSS site will be equipped with multiGNSS antennas and receivers. In consequence, the NRT processing strategy at TU Wien has to be extended to fully exploit the potential of the new GNSS signals. Therefore, ultra rapid multi-GNSS orbit and clock products as provided by the German Research Center for Geosciences (GFZ) are integrated into the processing routines and the Bernese v5.2 double-difference processing strategy is extended for Galileo and Beidou observations.

Within this presentation, the NRT processing strategy for multiGNSS observations is introduced and the quality of the derived tropospheric parameters is evaluated by comparison with post-processed and Numerical Weather Model (NWM) derived tropospheric parameters. Thereby, the impact of the new GNSS observations on data processing and possible systematic effects are investigated for selected GNSS sites in the Alpine region.