



Global Near Real-time GNSS Troposphere Product

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During last years, the EUMETNET EIG GNSS Water Vapour Programme (EGVAP-II) is responsible for the coordination of near real-time GNSS zenith total delay production in Europe and for the development of their assimilation into numerical weather models.

Since 2000, the Geodetic observatory Pecny (GOP) has been routinely monitoring the troposphere in order to support a weather forecasting. Although the original GOP processing network stretched over Europe, the main focus was on the territory of the Czech Republic and its surrounding. At the beginning, GOP strategy has been developed for a high accuracy and reliability on one side and for a processing efficiency and self-sufficiency on another. Both were demanded because of a limited computer power, volatile quality of the data transfer and a lower quality of predicted GPS orbits at that time.

In early 2010, the GOP original routine processing was revised towards new demands. One of them is a support of global numerical models with GNSS products, which are operated e.g. by Meteo France and Met Office UK. To provide near real-time troposphere zenith path delays on a global scale we could make use of our specific processing features together with a long-term experience of near real-time orbit determination for IGS. Since July 2010, a new GOP operational system for the global tropospheric product has been deployed and it has contributed to the EGVAP-II database.

In the presentation, we give a brief description of the processing strategy and the adaptation to the global near real-time troposphere monitoring. We show the results of a combined - regional and global - ZTD solution. The half-year results from the operational processing are evaluated with respect to the post-processing GNSS products and radiosonde data sets. Additionally, we present the evaluation of the global IGS final and repro1 tropospheric products.