



Reduce latency NRT GNSS processing for station stability monitoring and geophysical processes retrieval.

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The EPOS project is The European Plate Observing System which integrate the existing and newly created research infrastructures to facilitate use the multidisciplinary data and products in the field of Earth sciences in Europe. One of the tasks in EPOS project is creation the service which will by monitoring GNSS station positions in Real- Time and Near Real- Time processing.

The Near Real- Time GNSS processing uses the most current data- with a latency of maximum of one day and perform multiple tasks after data collection. Currently, NRT standard processing is based on one hour processing. The availability of real-time clocks and orbits in ultra-rapid files available on IGS FTP servers allows to further improve accuracy and reduce latency of solution. The NRT solution may be used for monitoring of coordinates and NRT models of water vapour distribution in the troposphere. In this paper we show the results of processing with 15 minutes calculations interval with comparison to one hour process outcomes and daily solution based on rapid orbits. The test will cover coordinates and troposphere delay estimates, we will also review the computing power requirements with respect to increasing number of stations. The research was carried out on around 200 GNSS stations located in the area of Poland and neighbouring countries. The expected outcome is getting a similar results in 15 minutes and hourly processing with respect to daily processing.