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Quality Check of GNSS data for tropospheric products estimation. Implementation to BeRTISS project

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The project BeRTISS (Balkan-Mediterranean Real TIme Severe weather Service) was launched in September 2017 of the European Territorial Cooperation Programme “Interreg V-B Balkan-Mediterranean 2014-2020" and is co-funded by the European Regional Development Fund (ERDF) and National Funds of the participating countries (Greece, Cyprus, Bulgaria). The main objective of BeRTISS is to develop and establish a pilot transnational severe weather service by exploiting Global Navigation Satellite Systems (GNSS) tropospheric products to enhance the safety, the quality of life and environmental protection in the Balkan-Mediterranean region. For the implementation of current project, we are producing (in operational basis) atmospheric parameters such as, Zenith Total Delay (ZTD), Precipitable Water (PW) and tropospheric gradients from Global Navigation Satellite Systems (GNSS) data from a dense network located in Greek area.
One of the scopes of the present research is the quality check of rinex data which retrieved on an hourly scenario. For that reason, several algorithms have been developed and installed in a local (AUTh) processing data server and special features for editing and quality control have been established, e.g. for multipath analyses (MP) and signal-to-noise ratio (SNR), Sky plots, Satellite Data visibility and a daily report provides additional statistics from those results are created and stored.
This presentation, also demonstrates the various features of used QC software for quality control especially for multi-GNSS data. The quality check procedure is linked with project’s website and graphical results are depicted under station selection. In addition the proposed strategic quality route plan finalizes the study.