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Near real-time estimation of tropospheric path delay from European permanent GPS Sites

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The estimation of the tropospheric path delay with means of satellite navigation is well established in the geodetic world. For example, the computation of the total zenith path delay (ZTD) with a resolution of one or two hours from daily solutions in post-processing has been carried out by the International GNSS Service (IGS) or the European Permanent GNSS Network (EPN) for several years. Beyond this, since a few years the estimation of the ZTD values from GPS hourly data, so-called near real-time (NRT) processing, has been arranged. These values can be converted into integrated water vapour, a weather parameter quickly varying in time and space.

The Bundesamt fuer Kartographie und Geodaesie (BKG) is running one analysis centre for NRT processing since two years on a routine basis. Within this presentation the main steps of this work will be presented. Comparisons with results from postprocessing showing the achievable precision will be shown. Future developments will be outlined, e.g. the extension of the data by GLONASS observations or the shortening of the computation interval.