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Regional troposphere modeling over Central Europe

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Processing of permanent GPS network and combination with known meteorological data allow determination of Precipitable Water Vapour on separate GPS sites. If the network is sufficiently dense the regional modeling of PWV spatial distribution can be performed. We demonstrate troposphere modeling based on processing outputs from two separate permanent GPS networks. The first one is the Central European network consisting of 35 stations with relative dense distribution. The second one is the EPN subnetwork processed at LAC SUT in Bratislava comprising of 34 stations over the whole continent. We compare results of these networks in region of Central Europe at various levels: station ZTD, station PWV, interpolated PWV, correlation versus distance dependences and radiosondes versus GPS integrated PWV. Data from 5-years interval are analyzed, which allows investigation of seasonal and diurnal variations of ZTD too.