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Site Coordinates Monitoring for Near Real Time GPS Zenith Tropospheric Delays.

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GPS tropospheric zenith delay is correlated with the site coordinates, especially with the vertical one. For meteorological application there is no need to estimate them when processing GPS data, but to get the 'best' possible ZTD estimates, there is the need to know site coordinates with a certain level of accuracy. In Near Real Time GPS data processing they are fixed onto weekly or monthly averages and although this reduces the noise, it may causes small time varying biases. So even for pure meteorological application there is the need of station coordinates monitoring. The geodetic reference frame is always being improved; there are occasionally slight changes, which can lead to offsets in the long-term trend of GPS ZTD. In the framework of the EC TOUGH project, the analysis centres use different software packages, analysis strategies and handle the site coordinates in different ways. An overview of the processing options used by the ACs focusing on those differences related to site coordinates handling will be presented and for a subset of IGS/EUREF stations a time series of daily ZTD bias and std between ASI and the other ACs involved in the project will be discussed together with site coordinate time series extracted from the COST hourly files. Guidelines to take into account in GPS ZTD data processing will be discussed as well.