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High quality reprocessed GPS Zenith Total Delay dataset over Europe

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The present availability of 18 years of GPS data belonging to the European Permanent Network (EPN, http://www.epncb.oma.be/) is a valuable database for the development of a climate data record of GPS tropospheric products. We homogeneously reprocessed the whole EPN network for the period 1996-2013 in a consistent way using GIPSY-OASIS II software and applying the state-of-the-art models. This ongoing reprocessing effort, part of the EPN Repro2 initiative, will provide a GPS climate data record over Europe with high potential for monitoring trend and variability in atmospheric water vapour thus improving the knowledge of climatic trends of atmospheric water vapour, being useful for global and regional NWP reanalyses and climate model simulations. These reprocessed ZTD time series will be evaluated against radiosonde data as well as independently reprocessed GPS ZTD time-series.