Atmos. Meas. Tech. Discuss.,
doi:10.5194/amt-2016-369-RC2, 2017

Atmospheric Measurement Techniques Discussions

Interactive comment on "EPN Repro2: A reference GNSS tropospheric dataset over Europe" *by* Rosa Pacione et al.

Anonymous Referee #2

Received and published: 16 January 2017

The article contributes to an important issue on homogenization and processing of GNSS tropospheric products for climate research. The article is timely and actual. It gives systematic overview about the reprocessing campaign and combination of data products from different ACs with additional attention on impact of GLONASS data, different antenna calibration models and non-tidal atmospheric loading. The results are evaluated with independent data sources (radiosondes and ERA-Interim) and illustrated with appropriate figures and tables. The article includes adequate references on related scientific research papers.

The manuscript needs some minor revision before getting ready for publication.

Figure 1: could look better with smaller markers.

The http-links should be checked. However, they may be broken only in this

version of discussion paper due to automatic document processing during its upload. In this case the remark on the next 3 links is not relevant. Line 36: https://www.iers.org/IERS/EN/Organization/AnalysisCoordinator/SinexFormat/sinex.html Line 45: http://www.euref.eu/documentation/MoU/EUREF-EUMETNET-MoU.pdf Line 566: http://www.epncb.oma.be/_documentation/papers/eurefsymposium2011/an_update_on

Line 230: small TYPO ". . . homogeneously reprocessed solutions (seeTable 2)".

Some questions:

Lines 346-352: Compared Repro1 and Repro2 with ERA-Interim, Figure 11, distribution of station means and standard deviations – over which time period the mean is calculated? ERA-Interim has 6 hrs time resolution, Repro1 and Repro2 have 1 hrs (Table 2). Could the result depend on interpolation made for synchronisation of time-stamps for ERA-Interim and Repro2?

Lines 353-360: monthly mean biases, ZTD mean biases, Figure 12 – "There is no seasonal signal observed in time series of ZTD mean biases . . .", but looking at the figure (upper part – monthly mean biases) – if it isn't a seasonal signal, then what is it?

Interactive comment on Atmos. Meas. Tech. Discuss., doi:10.5194/amt-2016-369, 2016.