

## ***Interactive comment on “Atmospheric data set from the Geodetic Observatory Wettzell during the CONT-17 VLBI campaign” by Thomas Klügel et al.***

**Anonymous Referee #2**

Received and published: 13 December 2018

Comment on the manuscript by Thomas Klügel, Armin Böer, Torben Schüler, and Walter Schwarz: Atmospheric data set from the Geodetic Observatory Wettzell during the CONT-17 VLBI campaign.

CONT-17 is the most recent continuous VLBI campaign over two weeks organized by the International VLBI Service for Geodesy and Astrometry (IVS) to assess and push the frontiers of current geodetic VLBI capabilities. For example, it is the ideal test bed to determine high-resolution Earth rotation parameters and other geodetic quantities from three different networks (A, B, and VGOS). One very important error source in VLBI is the modelling of tropospheric delays. Consequently, CONT-17 is perfectly suited to assess the modelled and estimated tropospheric delays at the participating sites, e.g. by comparison with other techniques like GNSS, water vapor radiometers or numerical

C1

weather models. In the past, it has always been rather difficult and cumbersome to collect information from other sources. Here, the authors provide a unique data set to the scientific community, which can be used for many studies related to the geodetic observatory in Wettzell and CONT-17 in general. In the following, I am going to highlight a few of those: The data set, in particular the radiosonde data but also the weather modes, are well suited to derive the best possible models like mapping functions. These mapping functions can then be used to validate existing models like the Vienna Mapping Functions. Moreover, locally measured meteorological data are very useful for the determination of local atmospheric ties. The combination of the various data sets can be used to derive information about turbulence, etc.

The manuscript is very clear and well written. I randomly checked the provided datasets on Pangaea, and I could well assess the content. I very much appreciate the possibility to see the data in html and to plot time series. Thanks to the authors and the team at the Geodetic Observatory Wettzell for providing this special and unique dataset! The scientific community will certainly use the data.

I just found two typos on page 16: contrubution, confindence

---

Interactive comment on Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2018-135>, 2018.

C2