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Comparing atmospheric data and models at station Wettzell during CONT17

Daniel Landskron (1), Johannes Böhm (1), Thomas Klügel (2), and Torben Schüler (2)

(1) Technische Universität Wien, Research Group Higher Geodesy, Department of Geodesy and Geoinformation, Wien, Austria (daniel.landskron@geo.tuwien.ac.at), (2) Federal Agency for Cartography and Geodesy, Geodetic Observatory Wettzell, 93444 Bad Kötzting, Germany

During the Continuous VLBI Campaign 2017 (CONT17) carried out from November 28 through December 12, 2017, an extensive data set of atmospheric observations was acquired at the Geodetic Observatory Wettzell. In addition to in situ measurements of temperature, humidity, pressure or wind speed at the surface, radiosonde ascents yielded meteorological parameters in different levels up to 20 km height, and Integrated Water Vapor (IWV) was obtained at several elevations and azimuths using a water vapor radiometer. Tropospheric delays estimated from GNSS observations plus comparative values from two different Numerical Weather Models (NWMs) complete the abundance of data. In this presentation, we compare these data sets to parameters of the Vienna Mapping Functions 1 and 3 (VMF1 & VMF3), which are based on NWM data by the ECMWF. On the one hand, we contrast the variety of tropospheric delays in zenith direction with each other, while on the other hand we use radiosonde data and meteorological observations at the site to create local mapping functions which can then be compared to VMF3 and VMF1 at Wettzell.