

S1/S2 atmosphere loading in VLBI analysis

J. Böhm, V. Tesmer

This presentation investigates the influence of a priori models for the tidal S1 and S2 part of atmosphere loading on VLBI solutions. We apply the model provided by T. van Dam which is based on the S1/S2 model by Ponte and Ray (2003) for the whole history of VLBI observations. The effect can be as large as 1 to 2 mm for station height components at equatorial regions and is significantly smaller at higher latitudes. Although there is a lack of VLBI stations near the equator, a very tiny reduction in the mean values of the RMS of fit per session is found. Also discussed is the application of the non-tidal part of atmosphere loading on the VLBI solutions.