



Database for Hydrological Time Series of Inland Waters (DAHITI)

Christian Schwatke and Denise Dettmering

Deutsches Geodätisches Forschungsinstitut (DGFI), München, Germany (christian.schwatke@tum.de)

Satellite altimetry was designed for ocean applications. However, since some years, satellite altimetry is also used over inland water to estimate water level time series of lakes, rivers and wetlands. The resulting water level time series can help to understand the water cycle of system earth and makes altimetry to a very useful instrument for hydrological applications.

In this poster, we introduce the "Database for Hydrological Time Series of Inland Waters" (DAHITI). Currently, the database contains about 350 water level time series of lakes, reservoirs, rivers, and wetlands which are freely available after a short registration process via <http://dahiti.dgfi.tum.de>. In this poster, we introduce the product of DAHITI and the functionality of the DAHITI web service. Furthermore, selected examples of inland water targets are presented in detail.

DAHITI provides time series of water level heights of inland water bodies and their formal errors. These time series are available within the period of 1992-2015 and have varying temporal resolutions depending on the data coverage of the investigated water body. The accuracies of the water level time series depend mainly on the extent of the investigated water body and the quality of the altimeter measurements. Hereby, an external validation with in-situ data reveals RMS differences between 5 cm and 40 cm for lakes and 10 cm and 140 cm for rivers, respectively.