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Arctic Mean Sea Surface, Mean Dynamic Topography and Sea Level Anomaly from satellite altimetry

Satellite radar altimeter data collected for more that 30 years provide a unique data source to estimate mean surface topography and sea level anomalies.

The radar altimeter data are provided by 5 polar orbiting satellites: ERS-1 (1991-1995), ERS-2 (1995-2003), Envisat (2003-2010), SARAL/AltiKa (2013-present); and CryoSat-2 (2010-present).

The data products from the merged data starting in 1991 are :

- DTU21 Mean Sea Surface (MSS) (1-min spatial resolution)
- DTU19 Mean Dynamic Topography (MDT) (1-min spatial resolution)







Figure 1. DTU21 Mean Sea Surface

Vertical Offshore Reference Surfaces (VORF) for the Pan-Arctic mean sea surface (Mean sea level) and mean dynamic topography. The new DTU21MSS is fundamental for studies of sea level variations and the DTU19MDT for the study of Arctic surface geostrophic currents.

Link: <u>https://catalog-</u>

intaros.nersc.no/dataset/altimetricsea-level

