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The U.S. Navy GEOSAT altimetric mission was the first mission to provide global altimeter data over a long period (from 1985 to early 1990). During the first 18 months, Geosat was on a geodetic orbit, afterwards it was on a 17-day exact repeat track. The last official release of Geosat data was in 1997 (http://ibis.grdl.noaa.gov/SAT/gdrs/geosat_handbook/). Even if the data set is less precise than data sets from recent altimeters such as Jason-2, the Geosat data are the only global altimeter data available before the 1990's and are therefore very interesting. Furthermore over the years updated geophysical standards (ionospheric model, wet and dry tropospheric correction from models, … ) are available. A recent release of precise orbit ephemeris from the National Aeronautics and Space Administration is also available (GSFC 0905). In addition, the geodetic phase was retracked and is available as "20th Anniversary GEOSAT Geodetic Mission Product" (Lillibridge et al. 2006).

Hereafter we used the Geosat 1-Hz data set from the RADS database (http://rads.tudelft.nl/rads/rads.shtml) which contains already the updated standards. The quality of the updated data set is analysed and compared to the previous dataset (1997). Among others, analyses of sea level anomaly and sea surface height differences at mono-mission crossovers are done.

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