

Altimetry and new applications at the CTOH – Centre for Topographic studies of the Oceans and Hydrosphere

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The Centre de Topography des Oceans et de l'Hydrosphère (CTOH) is a French National Observational Service dedicated to satellite altimetry studies. Our main objective is to maintain up-to-date, homogeneous altimetric data bases for studying long-term changes in the ocean or hydrosphere topography, with emphasis on climate studies. These data bases provides particular support for engineers preparing future altimetric missions and for scientists working in the emerging fields of coastal satellite altimetry, satellite hydrography (over lakes and rivers), and the cryosphere. For these new altimetry applications, the standard altimetry products which are tuned for open ocean conditions are either absent or the data is not accurate enough. At the CTOH, we are working on developing and validating new algorithms and products which are complementary to the standard products produced by AVISO, before their further integration in the AVISO processing chains. We distribute our products to scientific users via our web site (<http://www.legos.obs-mip.fr/observations/ctoh/>) and may educate scientists and students on their use.

One of our main branches of research and product development concerns the coastal region, rivers and lakes and ice, where altimetric data are currently under-utilised due to the technical problems of land contamination on the altimeter and radiometer signals and poorly adapted corrections. We are developing improved coastal and in-land/ice altimetry products at a number of test sites, working in collaboration with scientists at LEGOS, CLS, and Noveltis. Our altimetric data products have improved editing of corrections in these coastal, in-land/ice regions. These data products are made publicly available via the CTOH web site. Examples of such dedicated altimetric products with adapted corrections and emphasis on their quality and interest for new altimetric applications will be presented.