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The Center for Topography of the Oceans and Hydrosphere (CTOH) is a French Observation Service created in 1989 and dedicated to satellite altimetry studies. Its objectives are to 1) maintain and distribute homogeneous altimetric databases for ocean, hydrosphere and cryosphere applications, 2) help scientific users develop new altimetry derived products and 3) contribute to the development and validation of new processing approaches of the altimetric data for emerging research domains.

The CTOH maintains homogeneous altimetric GDR data bases for the following missions : Topex/Poseidon ; GFO ; ENVISAT ; Jason-1; Jason-2 ; Saral/Altika ; Cryosat2. Retracking of ERS-1 and ERS-2 waveform with the ICE-2 algorithm is underway (see dedicated poster). Both 1Hz and 10-20-40Hz data are available over all possible oceanic and continental surfaces.

In addition we add about 20 recent corrections in a homogeneous way to all of the missions. These include tide models, DAC, MSS, geoids, and new tropospheric corrections. In addition, the CTOH works on developing and distributing new altimetric products which today can be accessed from the web site (http://ctoh.legos.obs-mip.fr/products). In the future, these will be distributed via the new AVISO ODES Online Data Extraction Service (see dedicated poster). These include :

Coastal products : Alongtrack data are available in a dozen regions, with specific X-TRACK processing in the coastal band. SLA are available on a nominal groundtrack (1hz and 20hz for some regions), as well as a high-resolution MSS (…/products/coastal-products). This product includes tidal constants : amplitude and phase lag with error estimations for each tidal constituent (see dedicated poster).

Continental hydrology products : including the “Hydroweb” data base for monitoring river and lake levels (…/products/hydroweb). Hydroweb now integrates the CASH project Topex reprocessed data over terrestrial surface waters.

Global SubMesoscale filaments. Amplitude and position of sub-mesoscale filament barriers calculated from gridded AVISO surface currents using the Finite-Size Lyapunov Elements (d’Ovidio et al., 2009), at 4 km resolution from 1993 to today (…/products/submesoscalefilaments).

Advection products: Surface tracer fields, such as SSS and SST, are stirred by AVISO surface currents. This allows us to simulate submesoscale structures in observed large-scale tracer fields (see dedicated poster).

The CTOH also provides altimetric expertise to users and the space agencies based on

waveform analyses over all surfaces, and analyses of corrections and algorithms adapted to different surfaces, for past, present (Jason-2, Cryosat-2 and SARAL), and future altimetric missions such as SWOT.

OSTS session

Outreach, Education and Altimetric Data Services

Meeting name

Ocean Surface Topography Science Team (OSTST) Meeting

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