

SEA LEVEL ANOMALIES PRODUCT

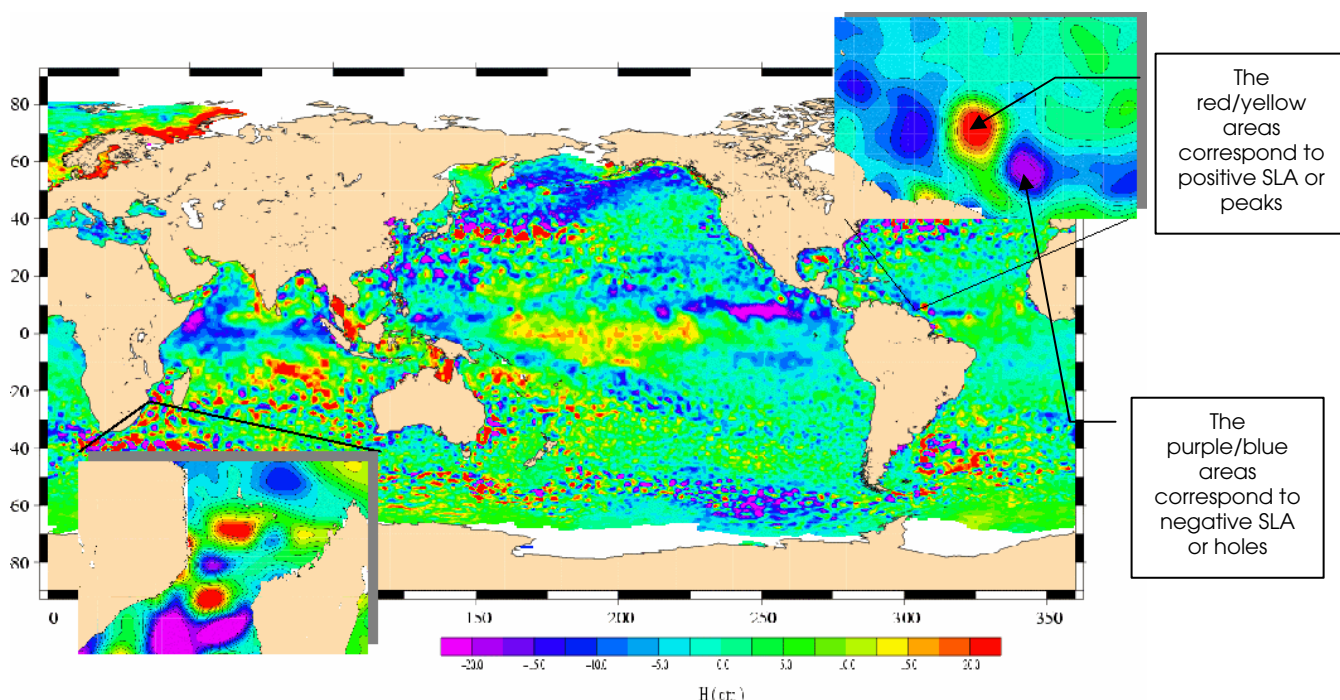


Description

The CLS Space Oceanography Division has developed over the last 10 years a unique expertise in the field of altimeter data processing and analysis. The SSALTO/DUACS system, developed and maintained at CLS, collects these data from several satellites (GeoSat, ERS 1/2, Topex/Poseidon, Envisat, Jason) and processes them in Near Real Time -NRT- to supply along-track Sea Level Anomalies -SLA-. These along-track SLA are combined to provide maps of SLA every week.

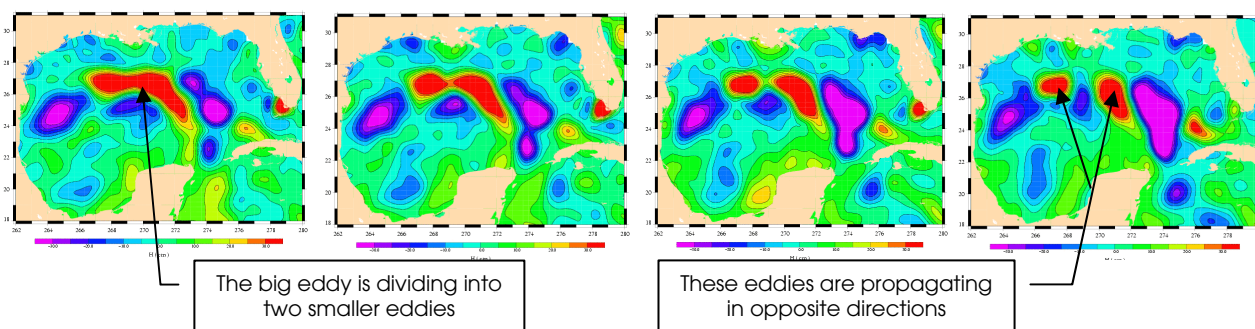
Products

Maps of SLA with zooms on Trinidad area and Mozambique strait



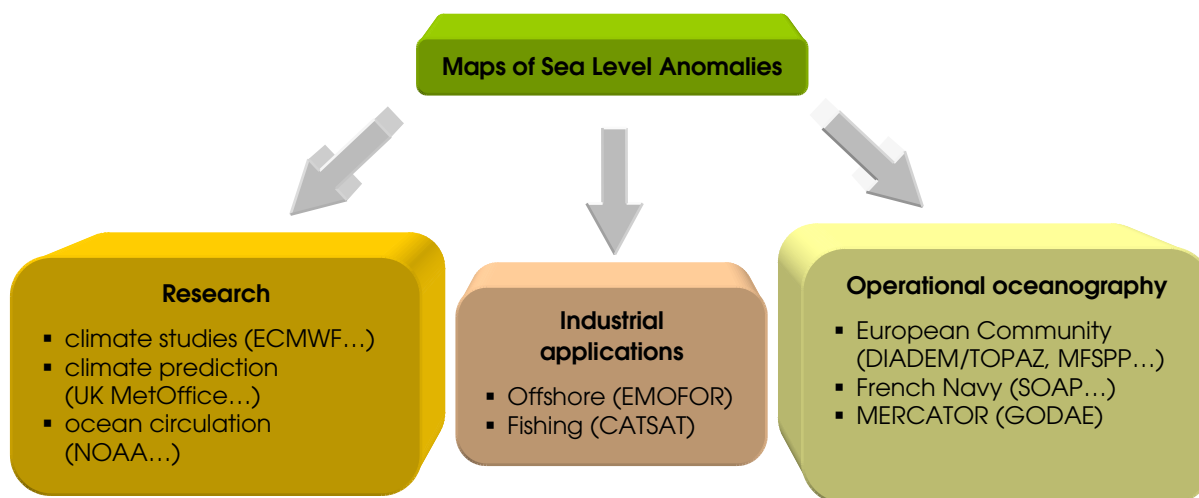
- Maps of SLA are generated weekly since 10 years
- On the ocean surface, peaks and holes can reach several tens of centimetres
- These anomalies generate eddies and oceanic fronts
- Maps of SLA allow the user to locate eddies and fronts
- Coverage is global in space and in time since altimetry data are not affected by clouds
- Maps indicate mesoscale features and seasonal signal
- Oceanic signals can be tracked over the time with a set of maps of SLA

Series of weekly maps which indicate the propagation of eddies in the Gulf of Mexico



Applications

Radar altimetry is a leading-edge technology used in space oceanography that is now finding a growing number of scientific and commercial applications. Applications and products in oceanography are derived from the maps of sea level anomalies delivered by the SSALTO/DUACS system. Specific oceanography needs can be covered by statistical and near real time altimetry products.



Operational mode

High resolution maps of SLA are available on a 1/3° MERCATOR grid. Two types of data are available depending on the needed operational mode:

- Hindcast data with Homogeneous historical products (HH products)
- Nowcast data with Near Real Time products (NRT products)

HH products:

- Are available with a two months delay
- Take into account homogeneous and inter-calibrated sea surface height between the different satellites and the best geophysical corrections
- Provide **weekly ocean variability over the past since October, 14th 1992.**
- Supply a **statistical view** of the ocean features

NRT products

- Are delivered as weekly along-track or gridded products updated with a **time delay between 48 to 72 hours**
- Give a **synoptic view of the NRT sea level variation** every week
- Are directly used in operational oceanography systems
- Are processed to calculate derived products such as current maps

The CLS products are useful to give a statistical view of the ocean variability over a long period of time as well as a near real time snapshot of the sea surface height of the ocean at the eddy scale.

Contact points

Web sites:

- http://www.cls.fr/html/oceano/welcome_en.html
- <http://www.catsat.com>
- <http://www-aviso.cls.fr/html/donnees/duacs/>

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