

PREBIOSWOT cruise

SPASSO Images Analysis

02/05/2018 10:06 UTC

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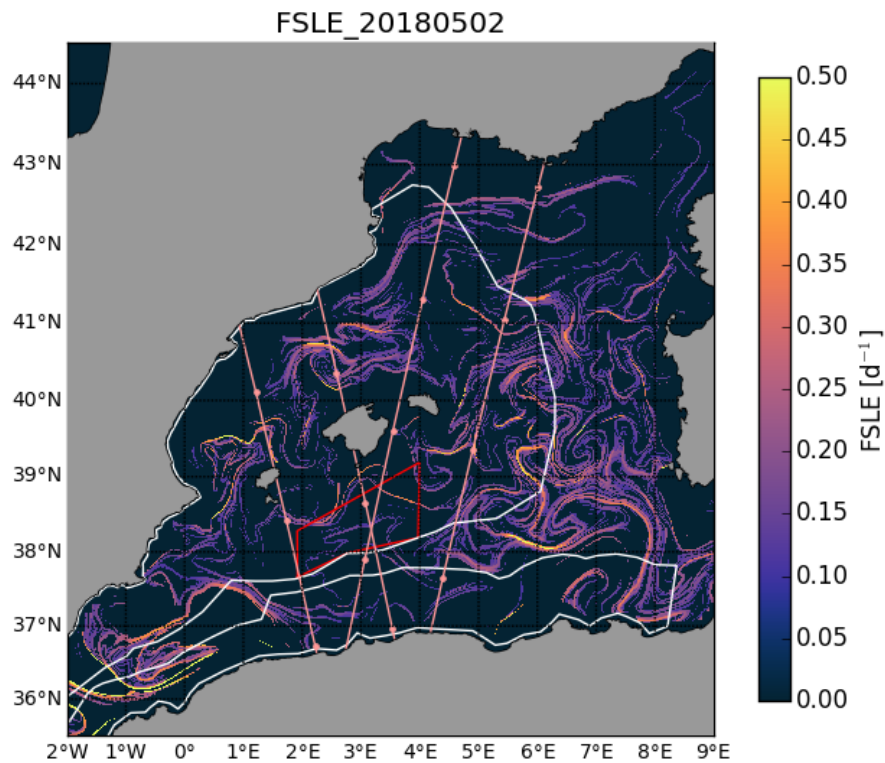
Executive Summary

The Chl images are still cloudy. The two interesting FSLE zones are still there :

- a) Southwest of Majorqua (38 and 39°N and between 2 and 3°E),
- b) Inside the eastern SWOT track (3°E -4.5°E ,38°N -39.5°N).

The planned zone is missing most of the a) FSLE, since this FSLE corresponds to the northern limit of the zone; and is catching only a part of the b) FSLE.

A current toward the West can be seen in the zone around 38.2°N .

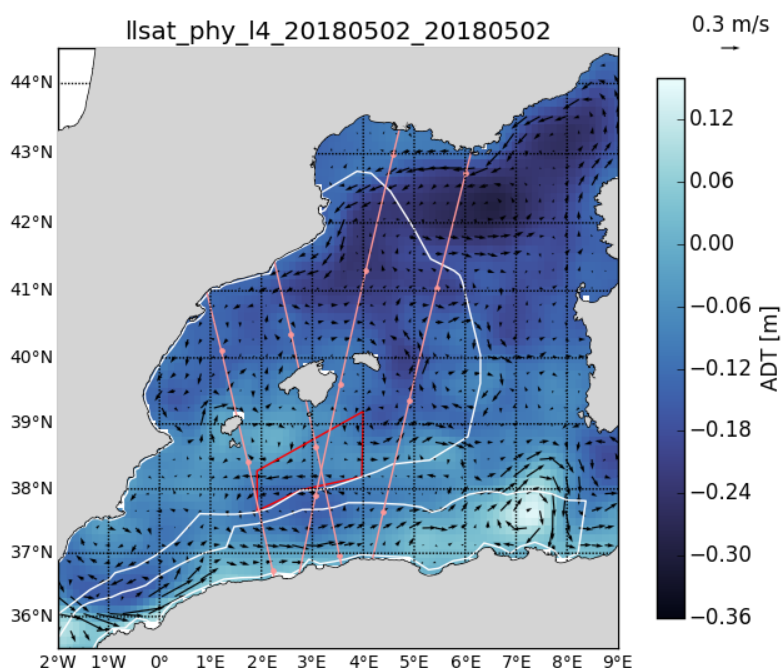


1 Ongoing operations and upcoming stations

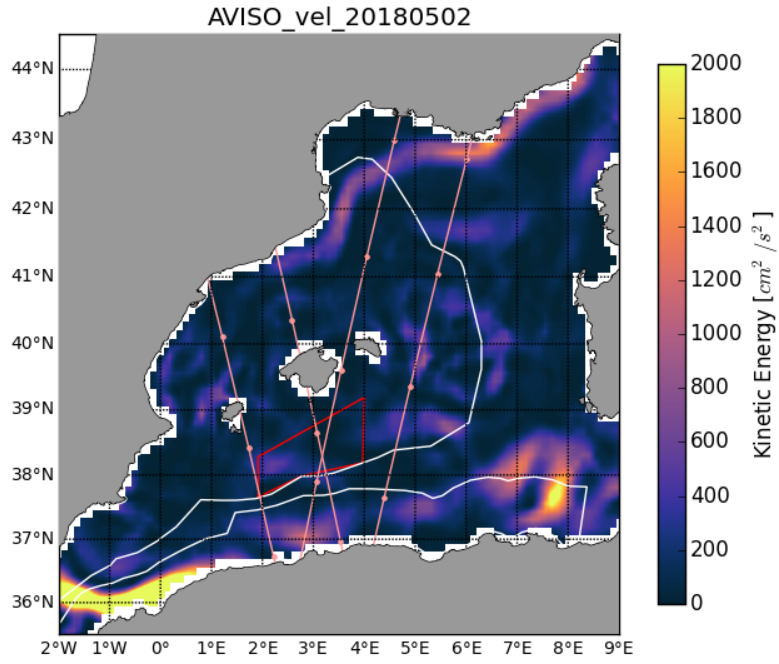
The cruise has started. A first survey is currently performed in the area between 2°E -4°E and 38.2°N -39.2°N with the Seasor in order to determine the exact location of the cruise sampling. On May 5th, the Garcia del Cid (GC) should arrive in the fixed sampling area and should start a CTD sampling (with casts down to 800 m) on a 10 km regular grid (Eulerian sampling strategy). At the same time the BB would perform a Lagrangian sampling in a smaller area. Drifters deployment could be realized during this Lagrangian sampling.

2 Daily figures analysis

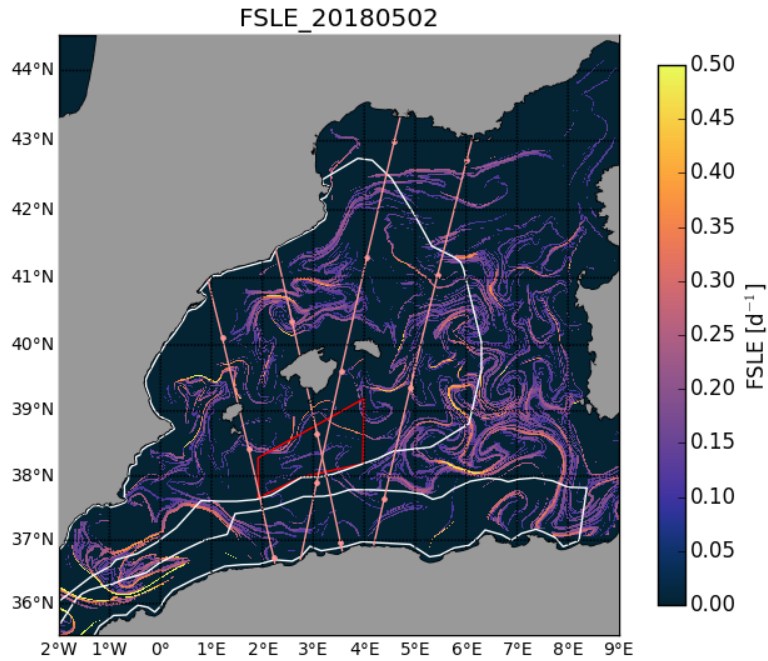
2.1 Altimetry, derived currents and Lagrangian analysis



We added the ship location planned for today until Saturday. A current toward the West can be seen in the zone around 38.2°N .

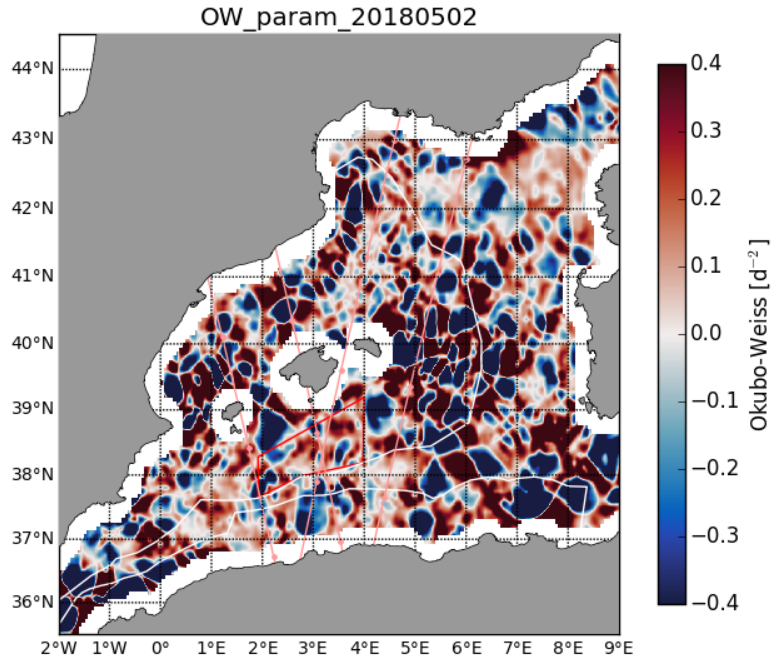


The area between 2-4°E and 38.2-39.2°N has very low kinetic energy, but a slightly stronger energy can be seen on the western part of the planned zone.

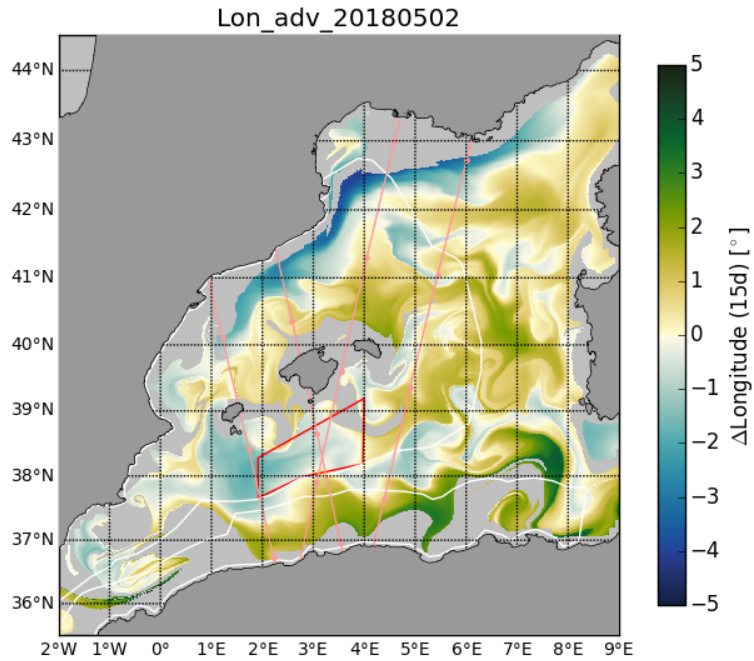
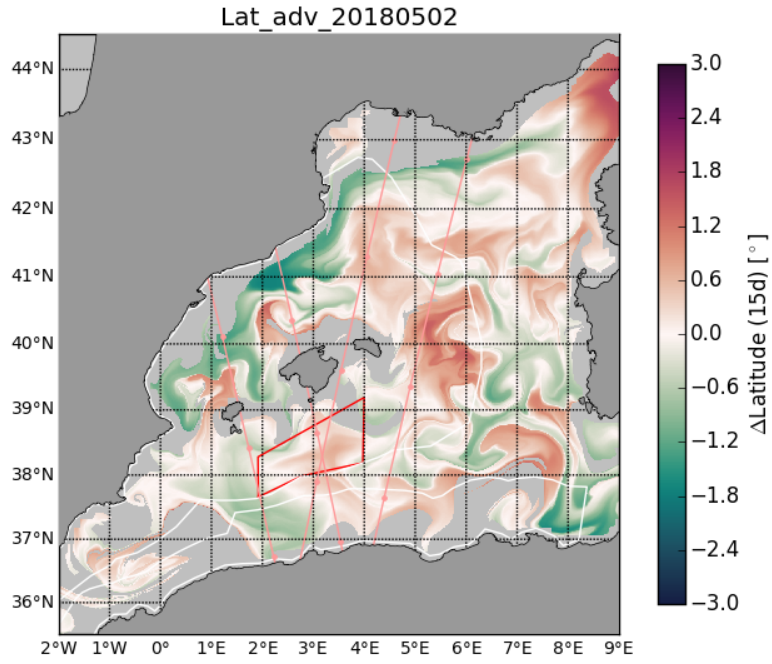


Both interesting FSLE are still there:

- a) Southwest of Majorqua (38 and 39°N and between 2 and 3°E)
- b) Inside the eastern SWOT track (3°E -4.5°E ,38°N -39.5°N) Nonetheless, the planned zone is missing most of the a) FSLE, since this FSLE corresponds to the northern limit of the zone; and is catching only a part of the b) FSLE.

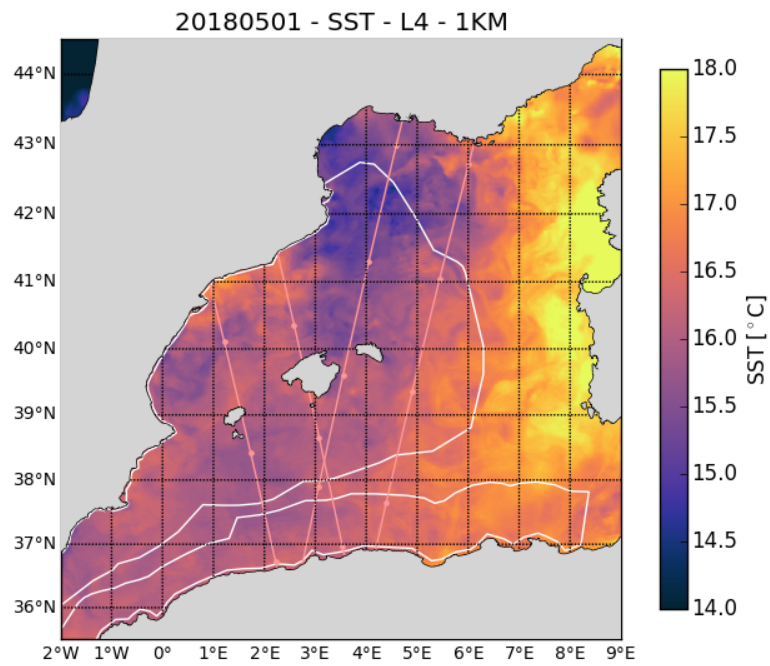
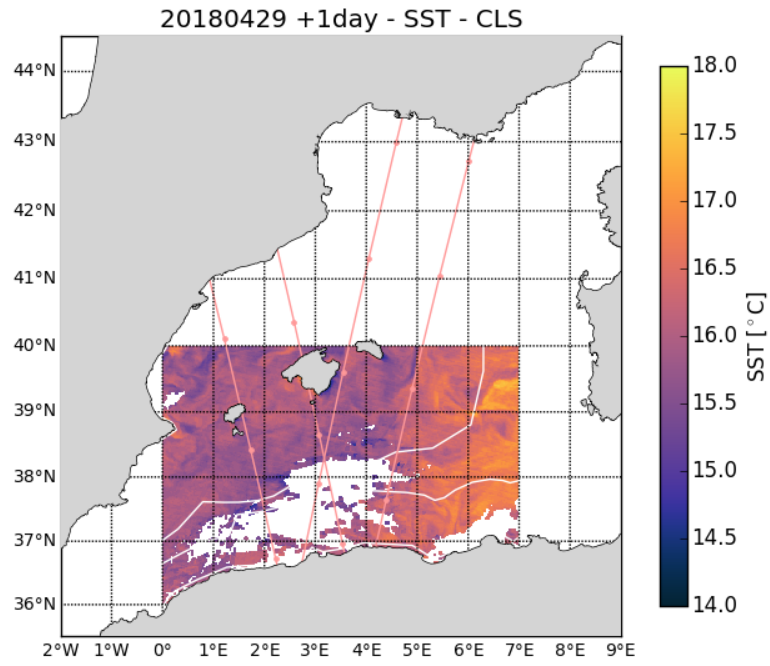


The mesoscale structure mentioned in the last bulletins (just north of the FSLE feature located between Ibiza and Majorqua) maintains its distorted shape and grows. It is just outside of the planned zone.



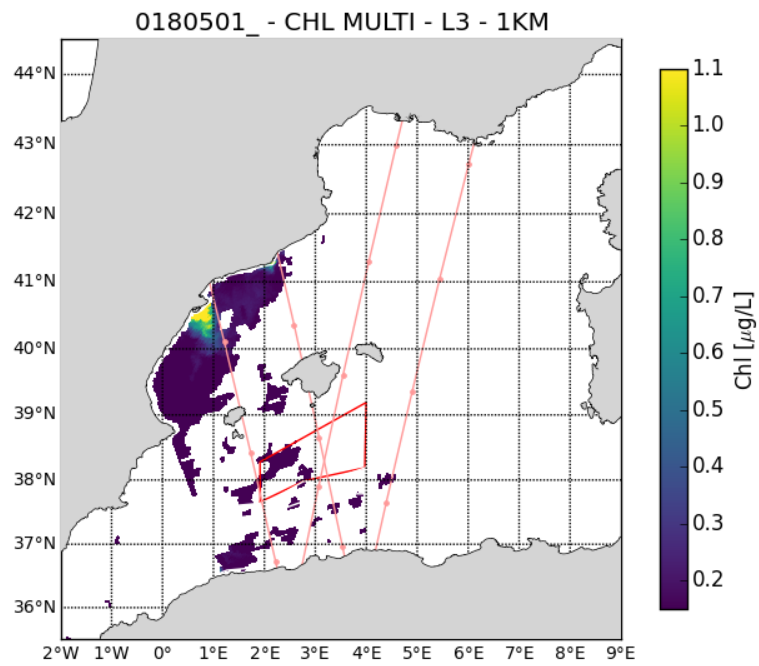
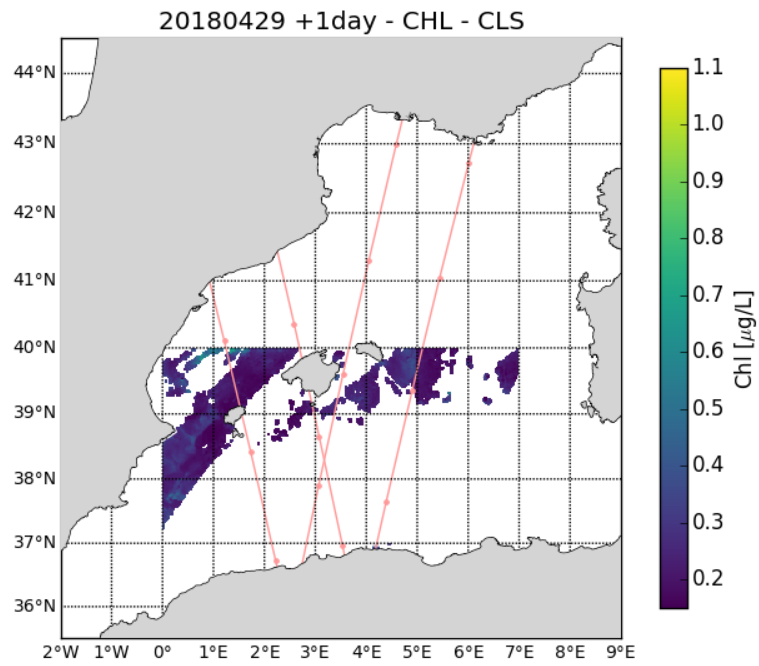
The Lat_adv and Lon_adv images agree with the FSLE structures. These images show that the waters north of the FSLE structure a) seem to have coastal origins, originating either from Majorqua or Ibiza, potentially leading to interesting enrichment with maybe biogeochemical and biological implications. On the Lon_adv figure, these coastal waters are either grey or yellowish green. On the Lat_adv figure, these coastal waters are either grey or greenish. The waters south of this FSLE structure are coming from the East and they are blueish in the Lon_adv.

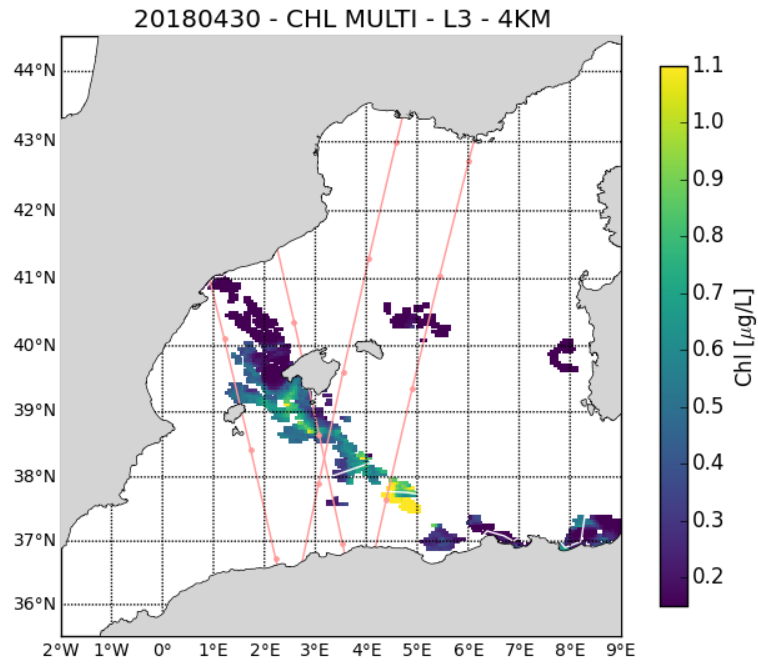
2.2 SST analysis



The SWOT sampling area has colder temperature than east of the tracks.

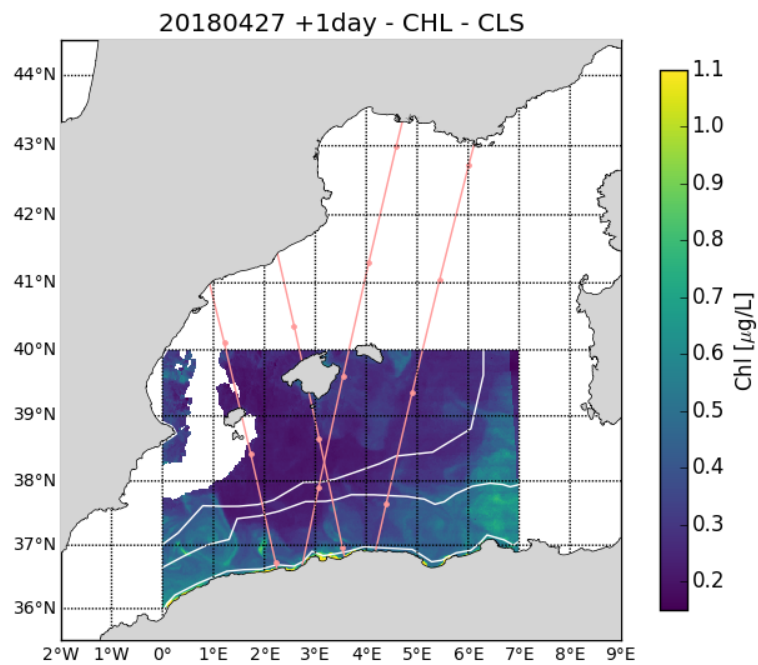
2.3 Chlorophyll analysis





The Chl figures are cloudy.

The last clear Chl figure is from the bulletin 2 days ago, April 30 (shown below) and show some Chl on the eastern track.



Acknowledgements

The altimetry data are the AVISO Mediterranean regional product:

<http://www.aviso.altimetry.fr/index.php?id=1275>.

The derived currents are processed by SPASSO to derive Eulerian and Lagrangian diagnostics of ocean circulation: OkuboWeiss parameter, particle retention time and advection, Lagrangian Coherent Structures. CLS provided the SST and surface CHL concentration composite products. Sea surface temperature (level 3 and 4, 1 km resolution) and chlorophyll concentration (level 3, 1km resolution, MODISAqua and NPPVIIRS sensors combined (after May 27, 2017) into a new product called MULTI) have been provided by CMEMS Copernicus Marine Environment Monitoring Service (<http://marine.copernicus.eu>). Another SST product (level 4, composite, 1 km resolution) is provided by the Jet Propulsion Laboratory (JPL), Pasadena, CA.

PREBIOSWOT project webpages

(à définir)

SPASSO PREBIOSWOT webpages

<http://www.mio.univ-amu.fr/SPASSO/PREBIOSWOT/>