

PREBIOSWOT cruise

SPASSO Images Analysis

03/05/2018 09:21 UTC

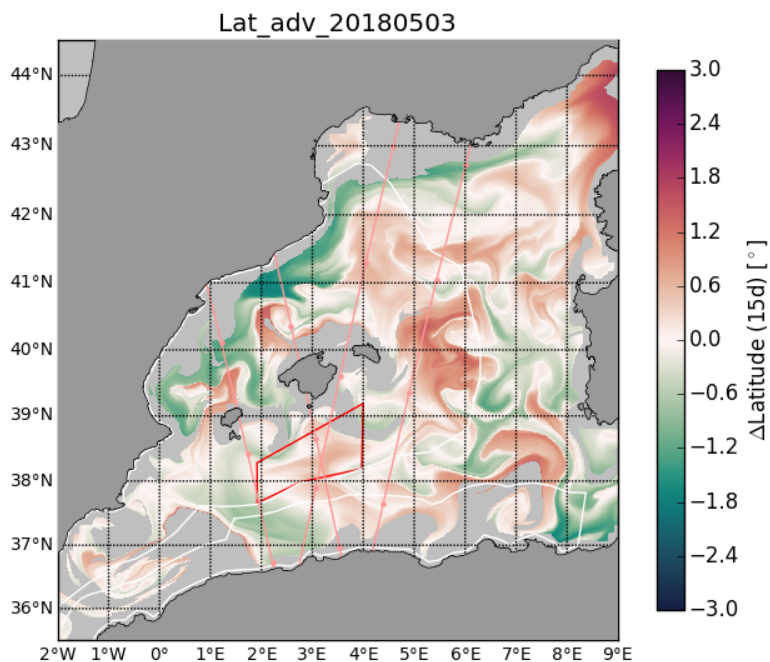
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Executive Summary

The Chl images are still cloudy.

The two interesting FSLE zones are still there, but they are off the planned and authorized zone. A rather weak FSLE can be seen in the middle of the operation zone, between 2.2°E -3.6°E and 38.2°N -38.4°N , probably interesting to cross.

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



1 Ongoing operations and upcoming stations

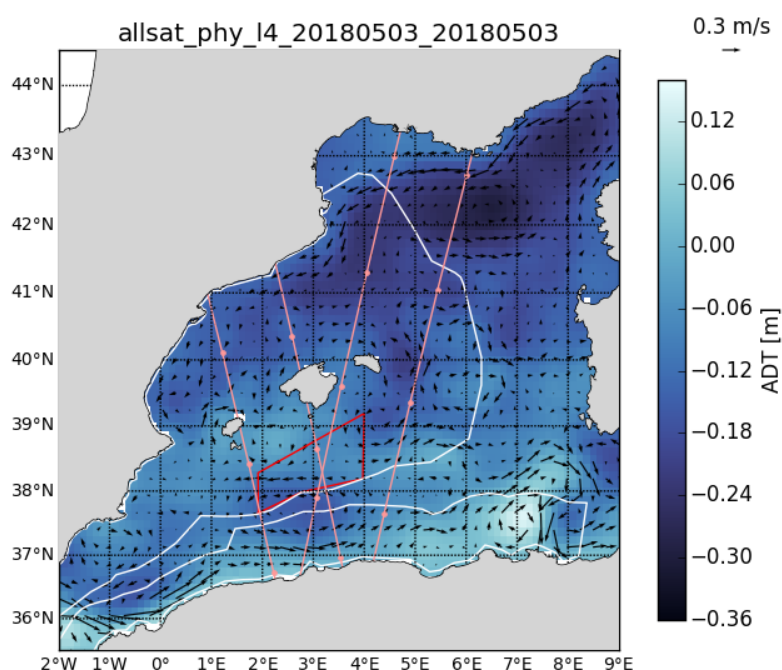
The BB is staying until Saturday in the zone shown in the plots in red (polygon between 2°E - 4°E and 37.6°N -39.2°N) and is performing a "butterfly" trajectory.

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).

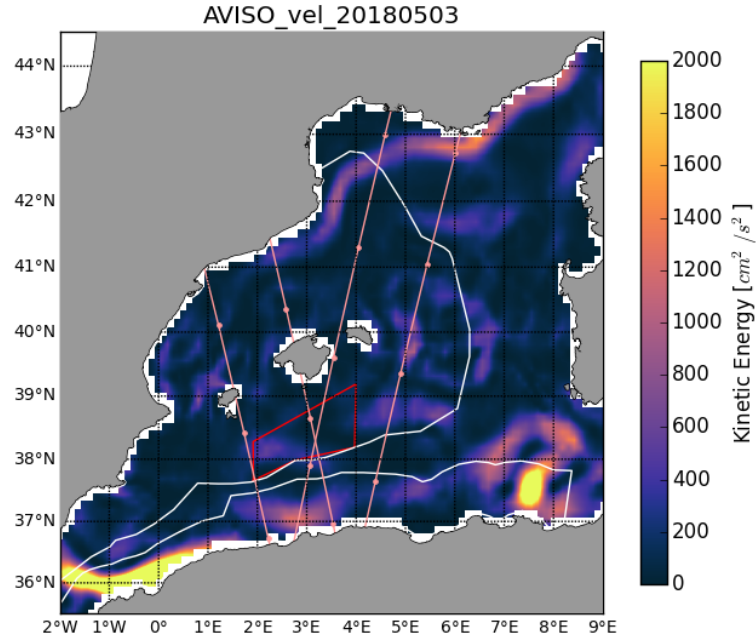
At the same time the BB would perform a Lagrangian sampling in a smaller area. Drifters deployment could be realized during this Lagrangian sampling.

2 Daily figures analysis

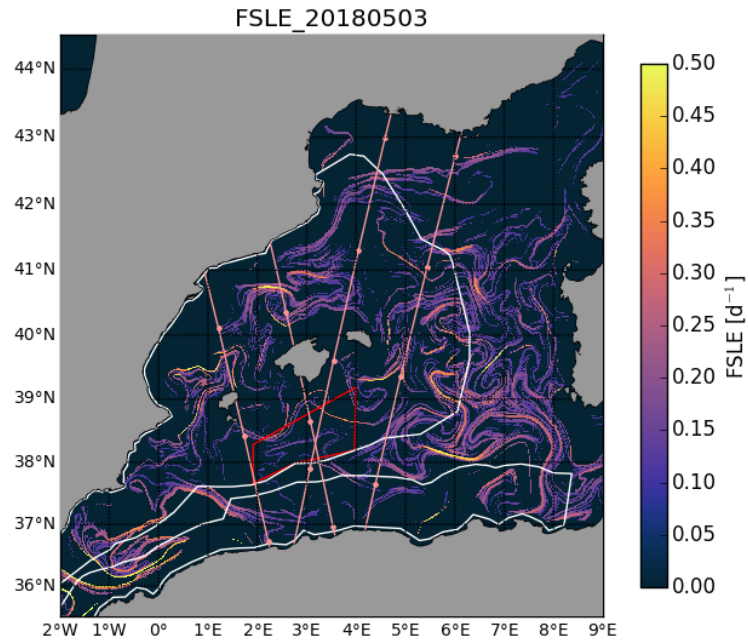
2.1 Altimetry, derived currents and Lagrangian analysis



The current toward the West mentioned in the last bulletin is still there in the zone around 38.2°N .



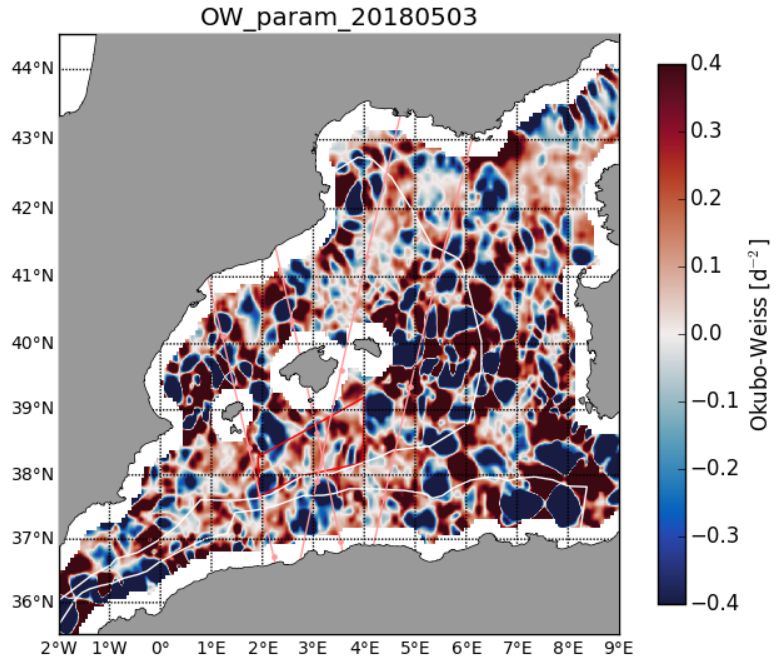
The area between 2-4°E and 38.2-39.2°N has very low kinetic energy, the slightly stronger energy can still be seen on the western part of the operation zone, probably associated with the current toward the West mentioned above.



Both interesting FSLE are still there:

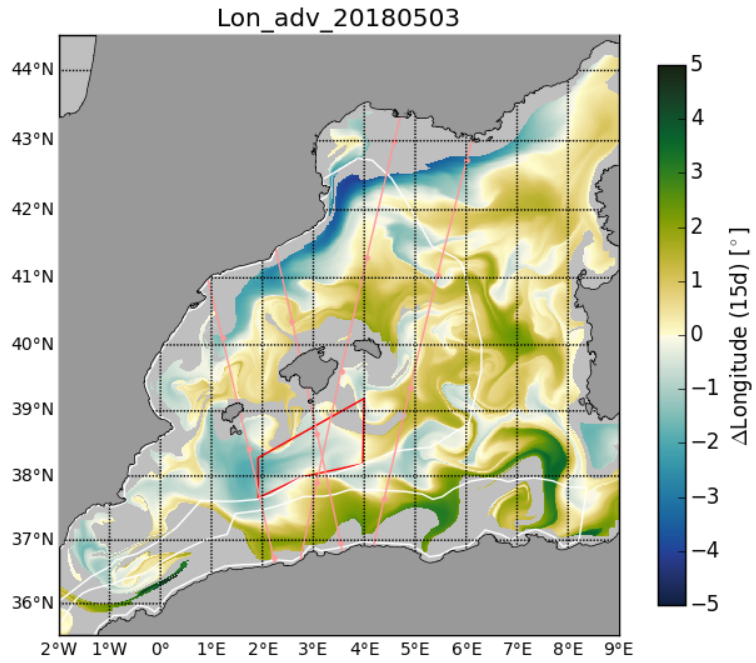
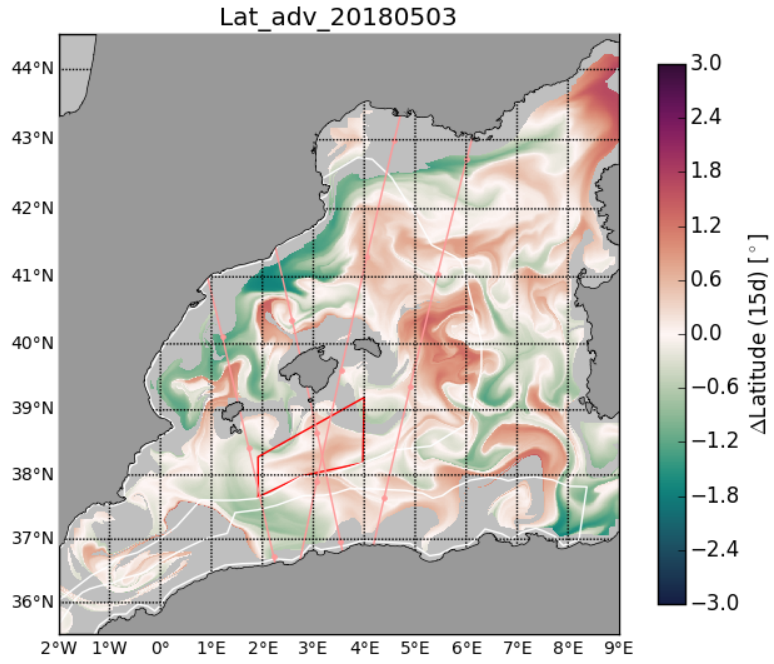
- a) Southwest of Majorqua (38 and 39°N and between 2 and 3°E)
- b) Inside the eastern SWOT track (3°E -4.5°E ,38°N -39.5°N)

A rather weak FSLE (c) can be seen in the middle of the operation zone, between 2.2°E - 3.6°E and 38.2°N -38.4°N ; it would probably be interesting to cross it.



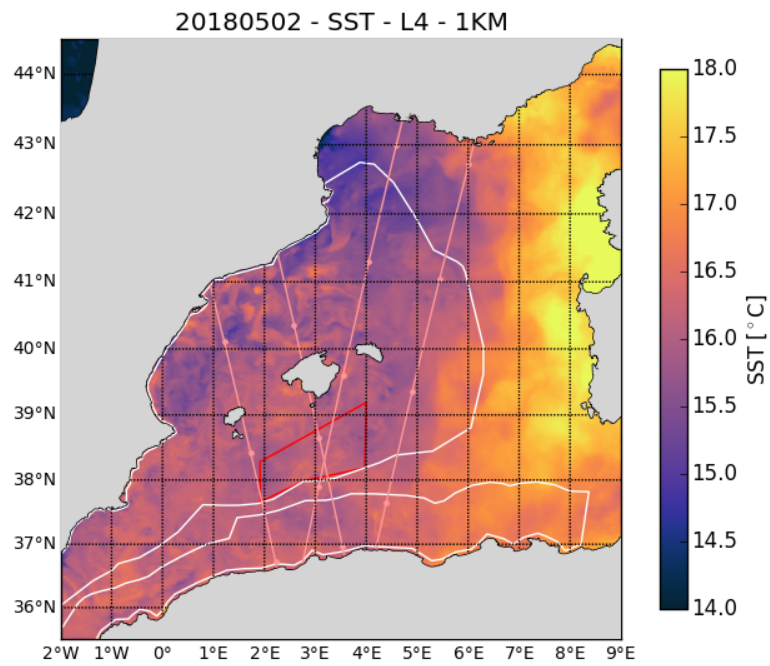
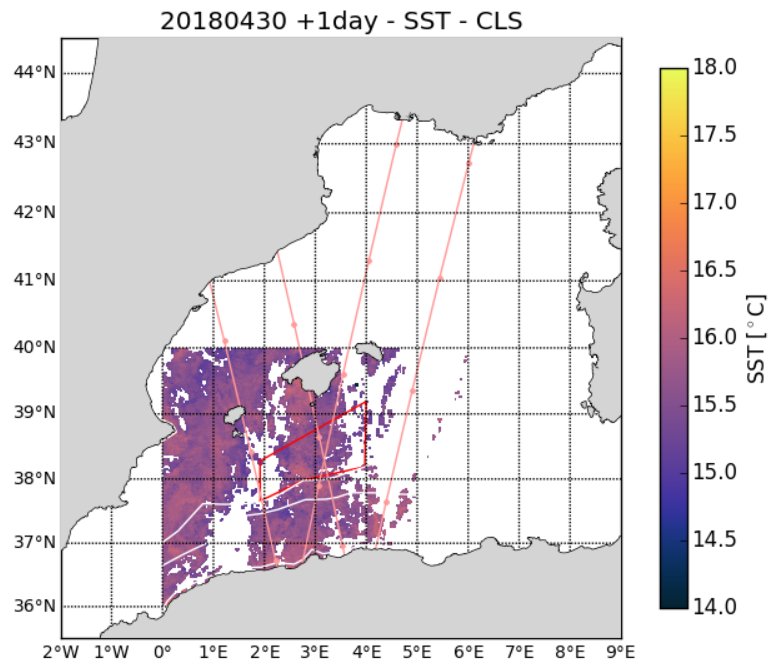
The mesoscale structure mentioned in the last bulletins (just north of the FSLE feature located between Ibiza and Majorqua) maintains its distorted shape and grows. It is entering the operation zone around the upper left corner.

Another mesoscale structure can be seen just East outside the operation zone. It may be an interesting feature to study for the planned Eastern zone beginning on Monday.



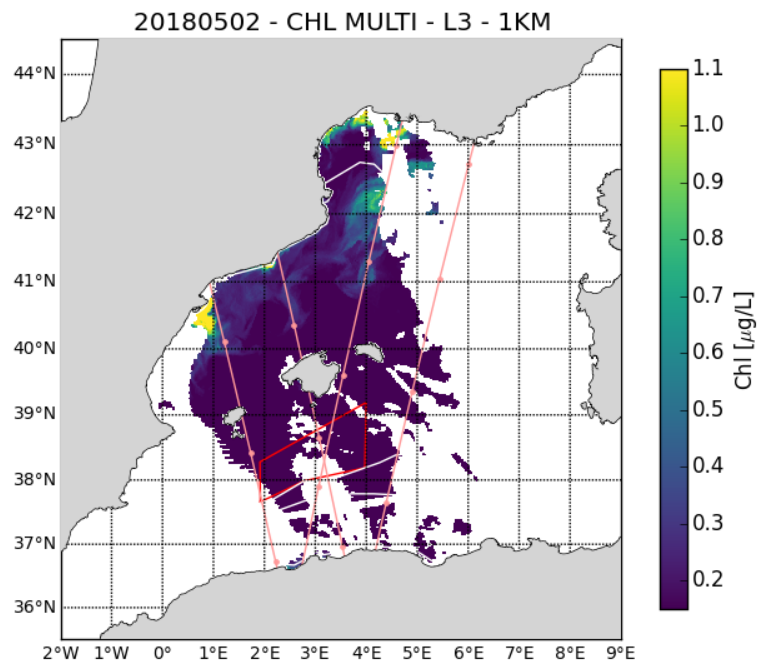
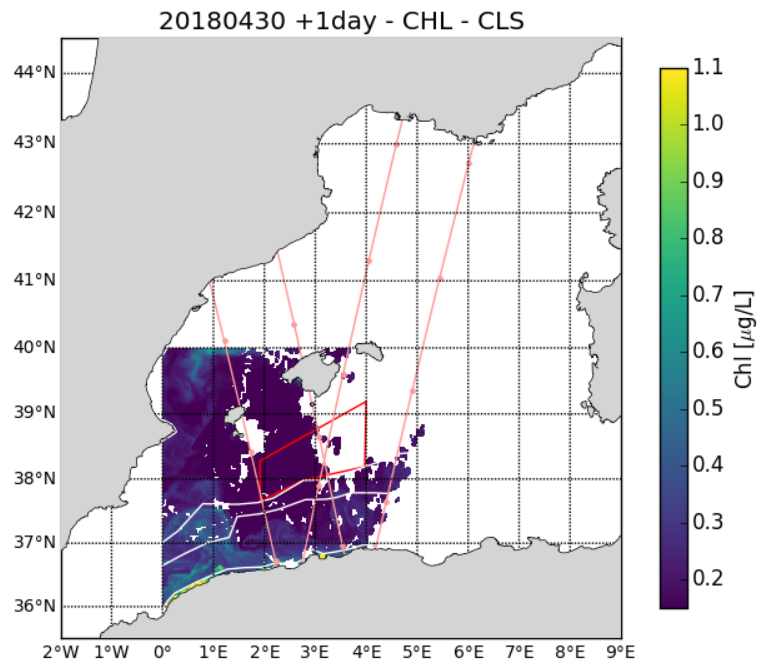
The Lat_adv and Lon_adv images agree with the FSLE structures. These images show that the waters North of the c) FSLE structure inside the operation zone seem to have northern/coastal origins, while the waters South of c) seem to have southern/eastern origins.

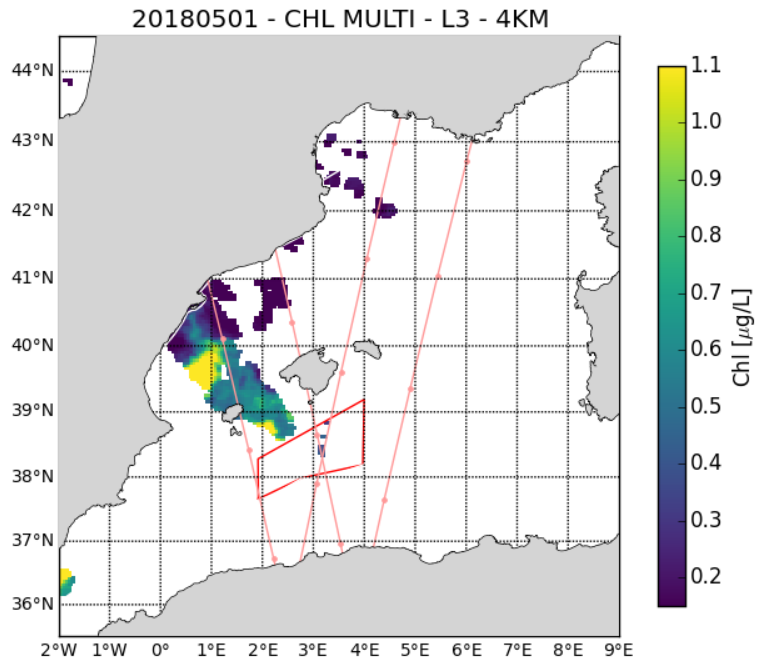
2.2 SST analysis



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

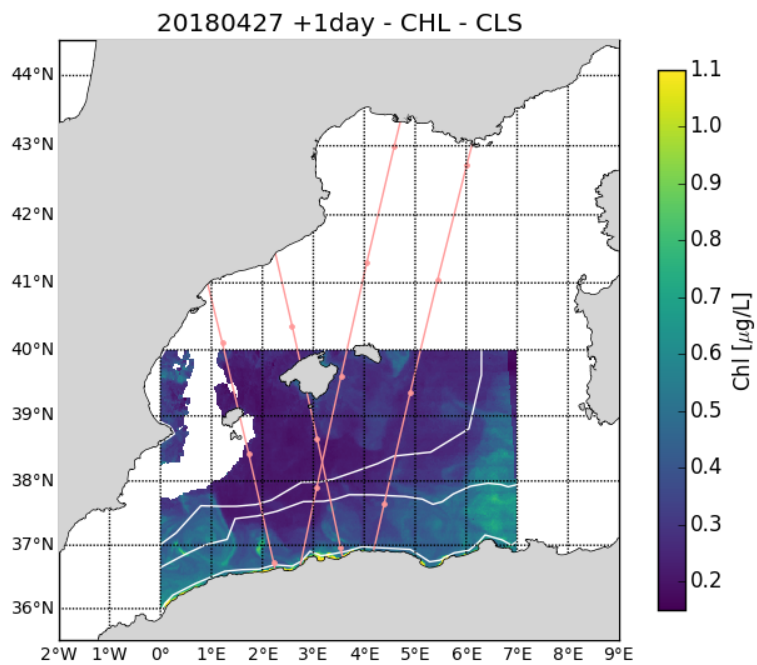
2.3 Chlorophyll analysis





The Chl figures are cloudy, and don't show a high Chl activity.

The last clear Chl figure is from the bulletin 3 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/>