

PREBIOSWOT cruise

SPASSO Images Analysis

09/05/2018 10:49 UTC

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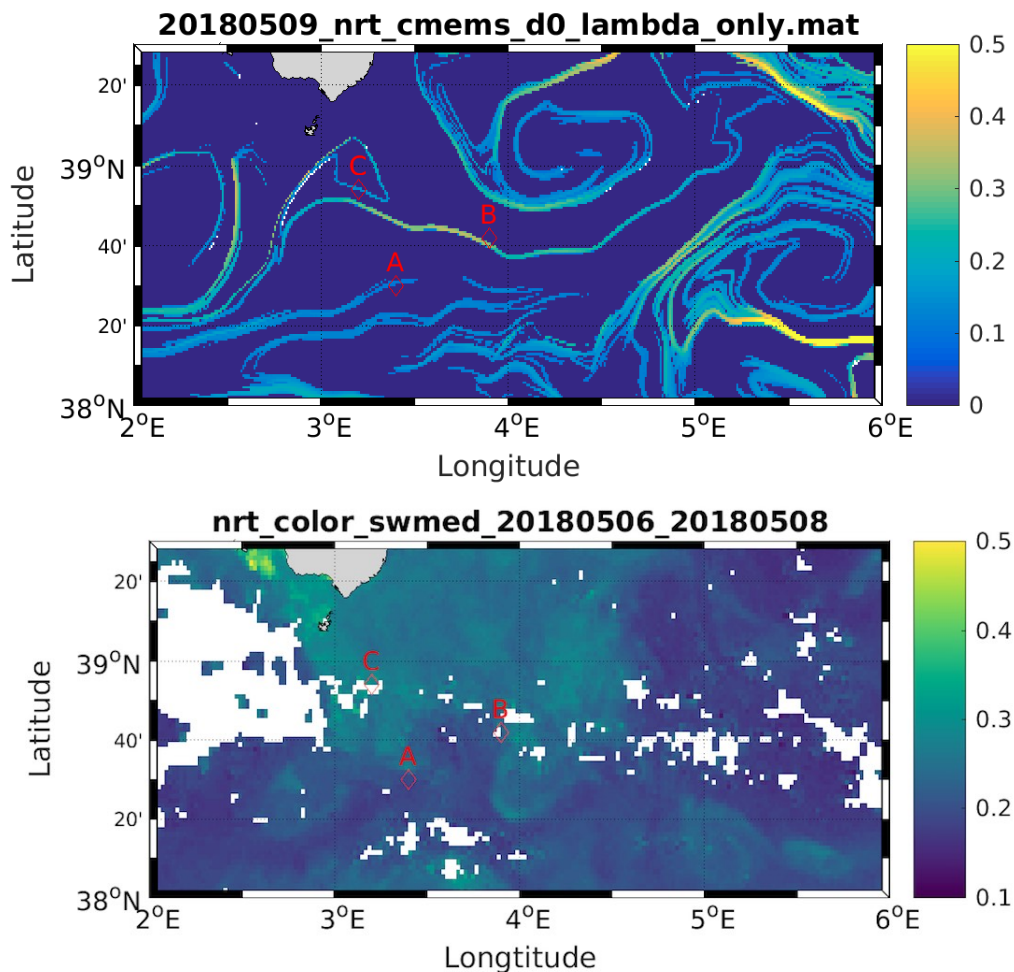
Executive Summary

The strategy for the BB has been adapted. 3 different areas are being sampled until Sunday (diamonds in the zoomed plots), with a back and forth hippodrome strategy between the points.

The Lagrangian adaptative strategy is focusing on an oblique NW-SE FSLE that will be crossed by the first transects between point A (about 3.4°E - 38.5°N) and B (about 3.9°E - 38.7°N) and crossed again by the other transects between A and C (about 3.2°E - 38.9°N).

It is worth mentioning that the end points need to be adapted according to the in situ data, in order to cross Chl or FSLE fronts completely (for example at B, which seems to be located very close to the Chl front).

The gliders are programed to turn back today (see new Section 2.4).

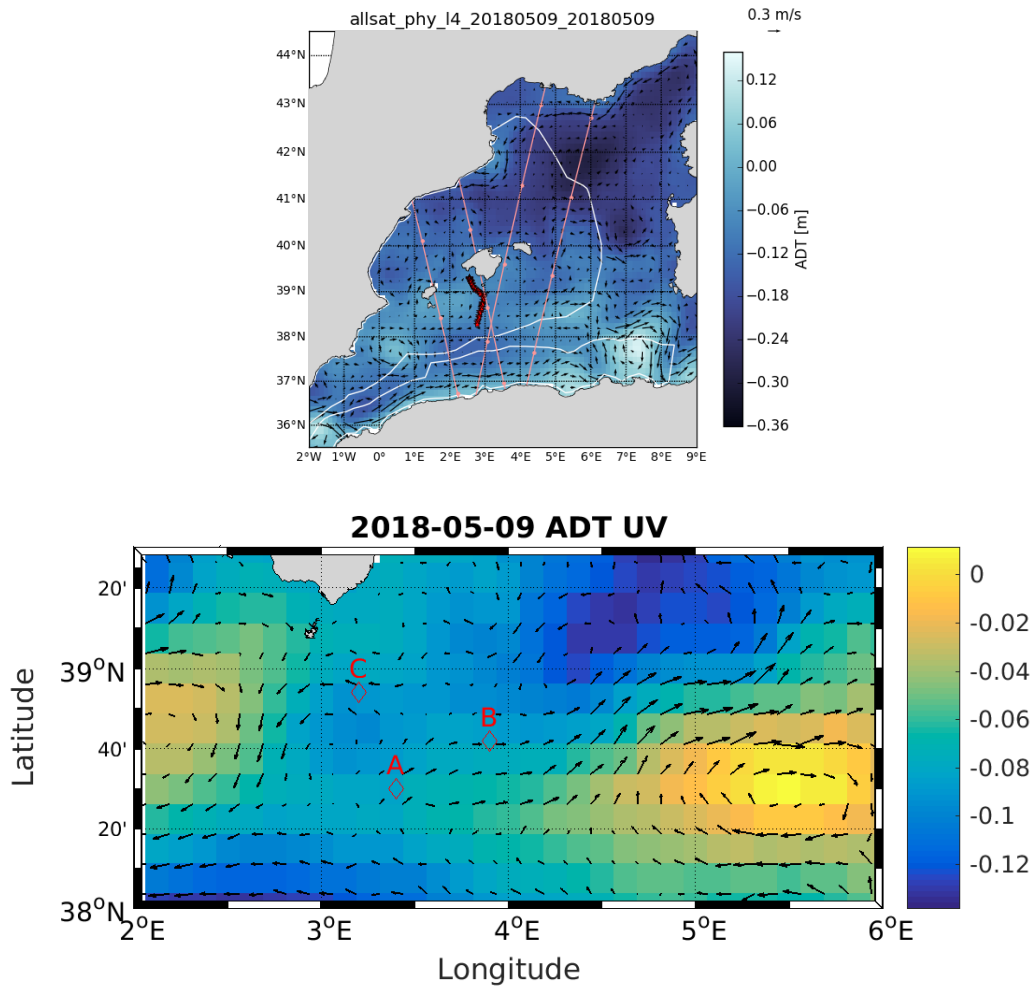


1 Ongoing operations and upcoming stations

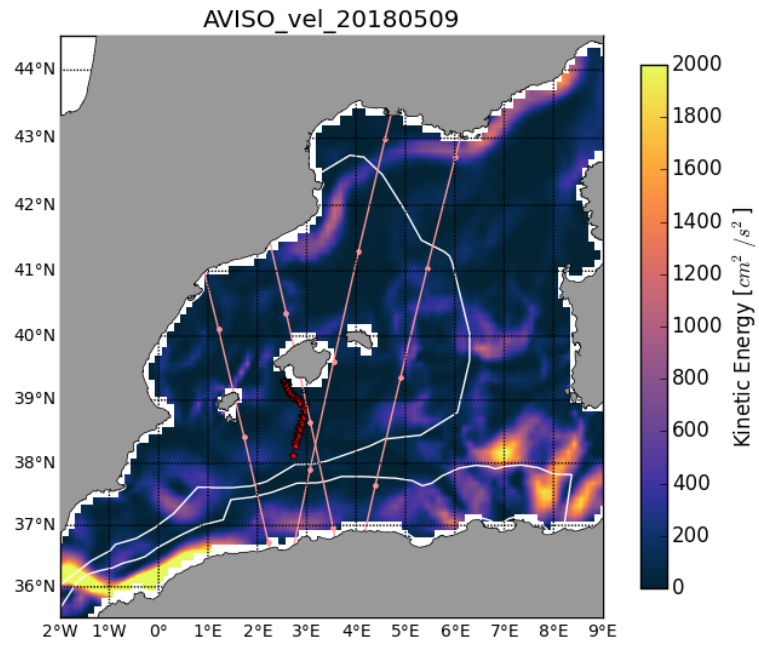
The strategy for the BB has been adapted. 3 different areas are being sampled until Sunday (diamonds in the zoomed plots), with a back and forth hippodrome strategy between the points, and with the seasoar undulating first in the range 0-250m and then between 0-400m. This new strategy favors the overlapping with the GdC area (between 2.5-3.5°E and 38-39°N). Moreover the 3 different areas cover quite well the satellite Chl patch observed in the CLS Chl figures.

2 Daily figures analysis

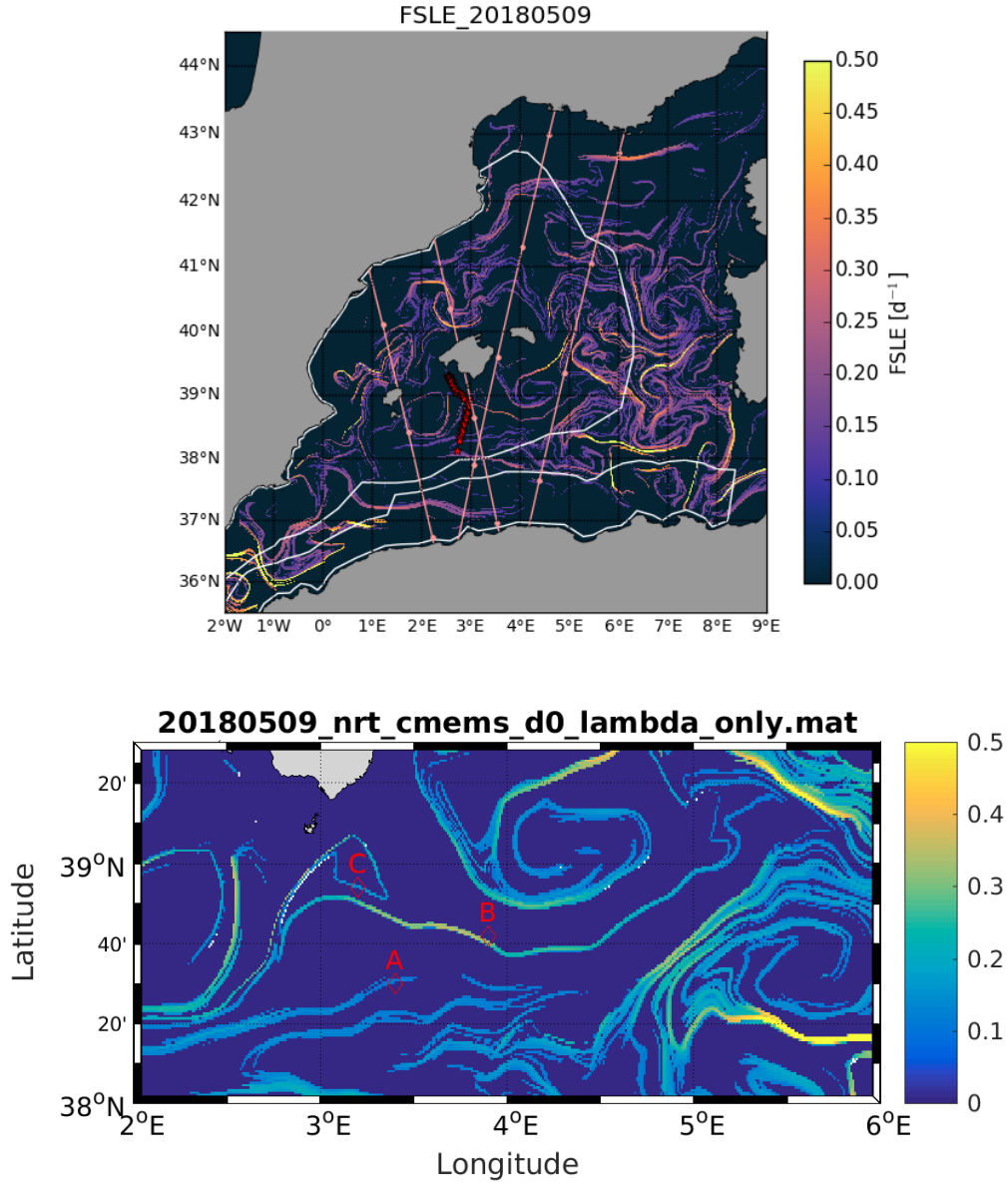
2.1 Altimetry, derived currents and Lagrangian analysis



The currents are relatively weak in the chosen area. Section AB crosses northeastward currents. Around C, the currents are rather westward. Nonetheless, in the previous cases when the BB crossed this FSLE, the AVISO currents were not in agreement with the ADCP currents. The eastern side of the AB hippodrome may touch the western side of the anticyclonic structure mentioned in the last bulletins and centered at 5.5°E - 38.4°N .

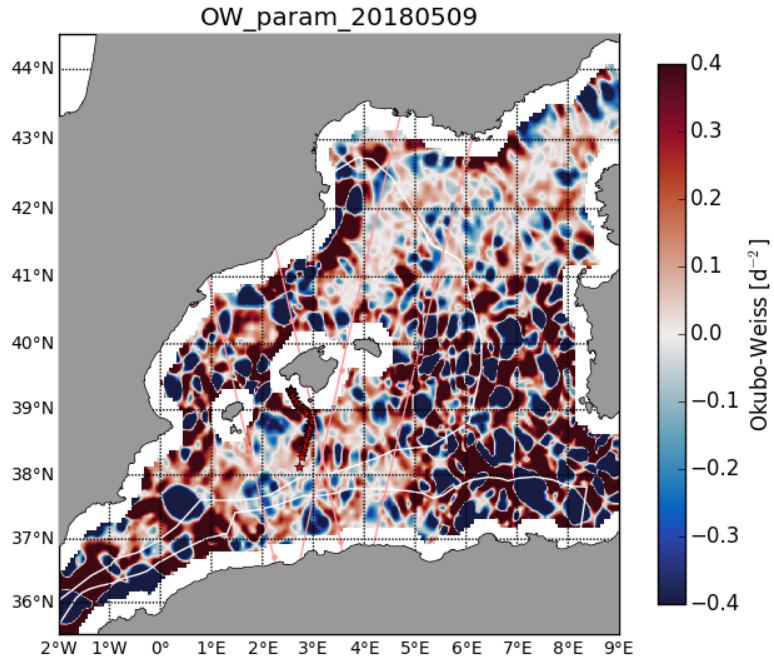


The area has low energy.

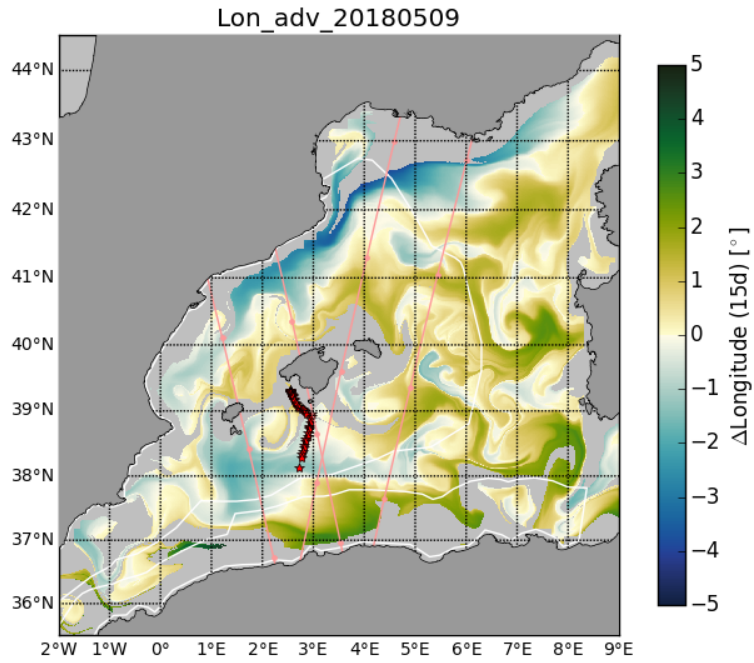
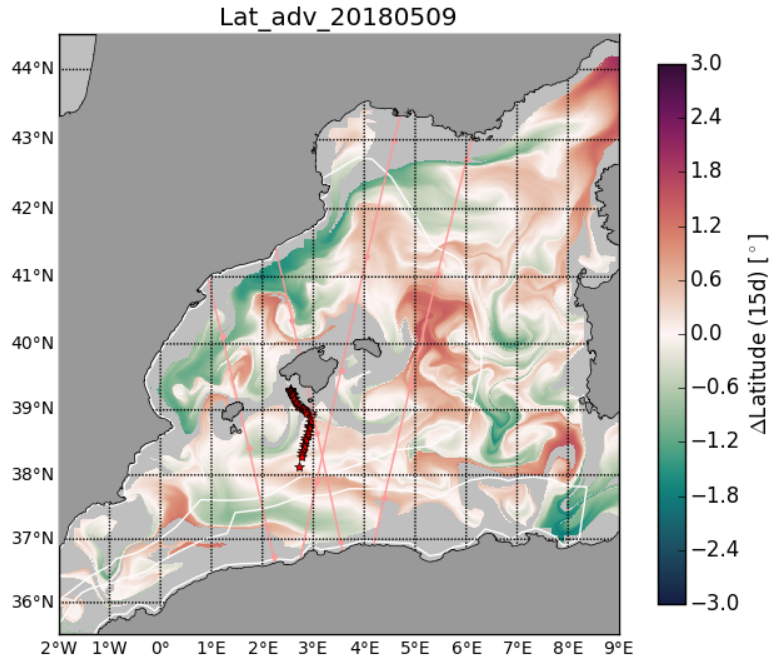


The Lagrangian adaptative strategy is focusing on an oblique NW-SE FSLE that is being crossed by the first transects between point A (about 3.4°E - 38.5°N) and B (about 3.9°E - 38.7°N) and crossed again by the following transects between A and C (about 3.2°E 38.9°N).

It is worth mentioning that the end points need to be adapted according to the in situ data, in order to cross Chl or FSLE fronts completely (for example at C, which seems to be located very close to the FSLE front).



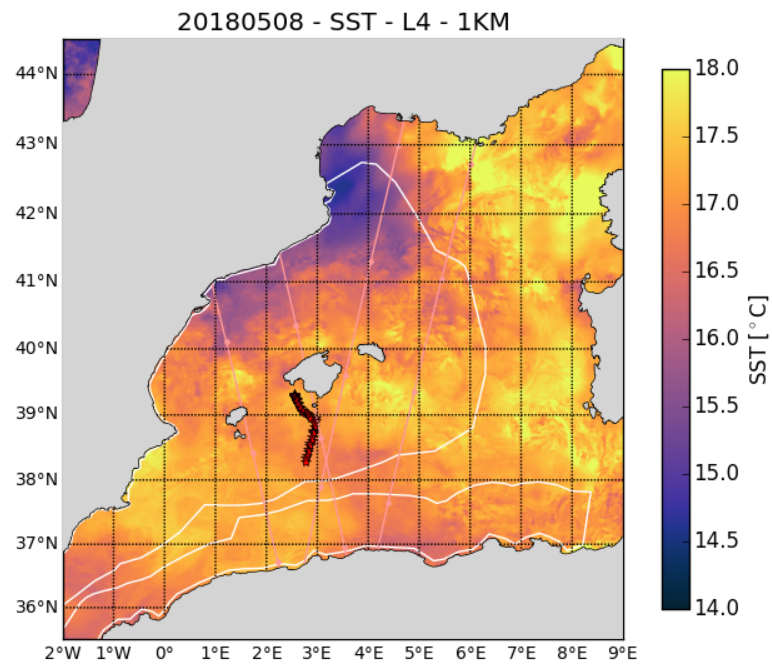
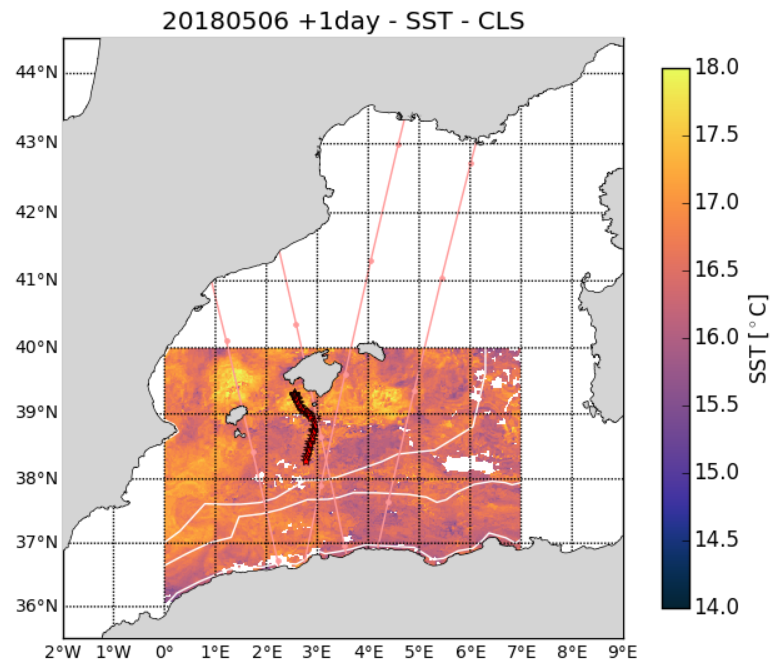
The gliders (see new Section 2.4 below) did their route east of the distorted mesoscale structure mentioned in the last bulletins (located southeast of Ibiza and southwest of Majorqua). The BB may cross a smaller feature between Ibiza and Majorqua on Sunday.



The Lat_adv and Lon_adv images agree with the FSLE structures.

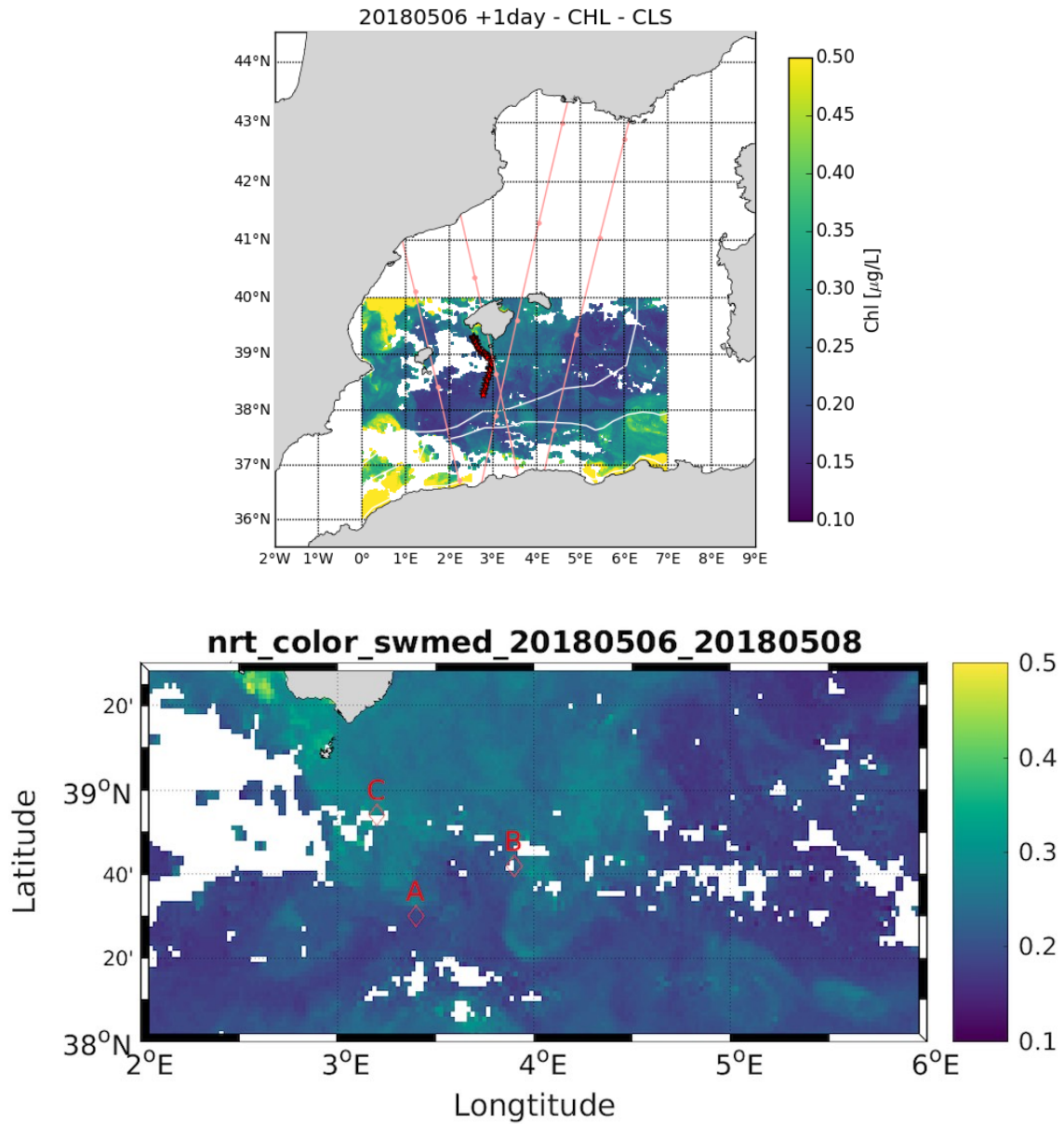
The FSLE structure crossed by the BB transects seems to separate local waters or waters originating slightly from the south on its south-west side (around A) and coastal waters on its north-east side (around B and C).

2.2 SST analysis



The waters seem to be slightly colder in the southeast part of the studied region.

2.3 Chlorophyll analysis



The CLS Chl figure is clear. It is worth mentioning that the end points need to be adapted according to the in situ data, in order to cross Chl or FSLE fronts completely (for example at B, which seems to be located very close to the Chl front).

2.4 Gliders

The SOCIB glider has nearly reached the end of its planned track and is going to turn around back on the same track this evening. The MIO glider has reached 3/4th of the track; for battery precaution (the energy level has dropped more than scheduled due to the heavy instrumental load); it will also turn around at the end of the afternoon to come back on the same track and is planned to be retrieved on May 15.

Note the space between the next-to-last position (118 on the web site) and the last position (124). It does not correspond to a more rapid displacement but to a lack of transmitted information due to a firewall server problem, now resolved.

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/>