Play with Syntool

List of available syntool portal is available at https://www.oceandatalab.com/0b052d80-d47c-46c5-a602-c86c8196cbc1#SyntoolWeb

Open in a browser ovl.oceandatalab.com

- Open product panel and explore products, you can edit the list of products by clicking on ⚙ , select your products and click apply

- Explore timeline, deploy timeline by clicking on ▲ above the calendar, explore datasets available, you can scroll on the timeline to go futher or back in time

- Open Settings, Play with transparency, order of products, filters …

- Click on Ⓒ to display collocated data in timeline (in the calendar, grey days means no data available, days are white if parts of the date are avalaible and all the selected products are available in the area on red days)

Play with Syntool

Explore geophysical ocean observation using Syntool.

- Sea Surface Temperature at different resolution: https://odl.bzh/F4jt3cvK
- Ocean Color / Chlorophyll_a: https://odl.bzh/qw4Y12Ep
- Sea Surface Salinity: https://odl.bzh/SxoJTq9X
- Sea Surface Height: https://odl.bzh/d23hdg1c
- Wind: https://odl.bzh/1mKLZ5o0 , https://odl.bzh/38eSNS6-
- Roughness:https://odl.bzh/qxSzs-az
- Waves:https://odl.bzh/MpZgU3Xw
- Current: https://odl.bzh/oqZQ8oGS
- Sea ice:https://odl.bzh/xq06XafB

European Space Agency

Explore data using Syntool to find illustrations of data synergy.

•Examples of good tracer-current synergy:
   Sea Surface Temperature (SST), Chlorophyll-a (Chl) from MODIS and VIIRS are well correlated with GlobCurrent current (Along track Jason-2 above mesoscale eddies): https://odl.bzh/Y5qf38AZ
   SAR from Sentinel-1, SST and Chl from VIIRS are in good agreement with altimetry: https://odl.bzh/mHBb6Qdu, https://odl.bzh/pVtY88ZD
   SAR from Sentinel-1, true RGB from OLCI Sentinel-3 and altimetry from SRAL Sentinel-3 are all clearly showing a mesoscale eddy: https://odl.bzh/PjgWbs5H

•No front can be detected in one of the tracer:
      No temperature gradient in the SST but signature of the eddy can be seen on the Chl   from MODIS: https://odl.bzh/s5J6GP9Y
      Wind is blowing, no features are visible in the SST but Chl from MODIS is in good agreement with GlobCurrent current: https://odl.bzh/AZHQK04E

European Space Agency

Play with Syntool: ovl.oceandatalab.com

Explore data using Syntool to find illustrations of issues in currents derived from altimetry due to the lack of resolution.

• SST and Chl from MODIS and VIIRS and GlobCurrent currents are showing some discrepancies:
https://odl.bzh/a0sC8gGL
It highlights the lack of temporal resolution in currents derived from altimetry as there is no altimeter track above the missed turn.

• In-situ LASER drifters are in good agreement with SST fronts and reveal errors in GlobCurrent currents:
https://odl.bzh/SoXTEbpL

Play with Syntool: ovl.oceandatalab.com

Play with user shapes:

Go to this example: https://odl.bzh/uwocFnAP

- Select User shapes product (top in the list) if it is not selected already.

- Draw an eddy: Select the eddy shape , click on the map to draw the eddy shape, resize it to fit your eddy, explore the options available on the right panel

- Draw a front: Select the polyline button , click on the map to draw the polyline, each click will draw a point. Turn arrows on or off, explore the options in the right panel.

- You can also draw other shapes such as mushroom , polygon , add text

- Try exporting and importing user shapes.

Start SEAScope

- Start SEAScope of the day:
  - Go to the seascope directory
  - Double-click on the seascope_day1.bat file

- SEAScope may notify you (with a dialog window) that it must update its index. Accept the update, but note that it may take some time depending on your computer.

Play with SEAScope

In SEAScope:

- Look at all the collections using the right panel

  - Ocean Circulation : drifters, altimetry, globcurrent, cmems

  - Wind : ECMWF

  - Wave : Sentinel-1 SAR, Sentinel-2 RGB

  - Ocean color : Sentinel-3 OLCI RGB and Chlorophyll, Sentinel-2 RGB

  - SSS: ESACCI Level4 multimission

  - SST : Level2 IR Sentinel-3, Level4 multimission (ODYSSEA)

  - Ice: AMSR sea ice concentration, Sentinel-1 SAR, Sentinel-3 OLCIRGB

Play with SEAScope

In SEAScope:

- Look at the calendar and the availability using the bottom panel

- Select a collection, go to a date where a granule is available (i.e. a date displayed in white) and play with the settings of the collection using the top left panel (min, max, colorbar, transparency, order of collections …)

- To draw a polyline, use *Middle button* (or *Ctrl+right click*) to place vertices then press *Enter* to end the drawing

- To draw a polygon, use *Middle button* (or *Ctrl+right click*) to place vertices then press *Shift+Enter* to close the shape (note that you don't need to close the polygon, *Shift+Enter* will close it).

- Look for all the functionalities in the manual: seascope.oceandatalab.com

 (e.g. north always up, collocation enabled , time span, …).