→ EARTH OBSERVATION SUMMER SCHOOL

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EXPLORATION OF REMOTE SENSING DATA USING SYNTOOL AND SEASCOPE

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Play with Syntool

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

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 , explore datasets available
- Open Settings, Play with transparency, order of products, filters …
- Click on to display collocated data in timeline (red days contains all the selected products)

Explore remote sensing observation 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

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

Data synergy with Syntool

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 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.

Explore data synergy using SEAScope

- Go to directory C:\OVL\seascope

- Click on SEAScope to open SEAScope

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