

OPB201 – On-board teaching
TD 2 – Analysis of PHYBIO data with Matlab

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For the same station on which you did the TD1 work, examine the fluorescence/light transmission relationship, distinguishing between phytoplankton layers and nepheloid layers, if present.

Save the figure as a jpg with your last name (e.g., OPB201_TD2_2021_familyname.jpg) ensuring that it contains all the explanations needed for its comprehension. Otherwise, you can insert it into a file where you then add the explanations separately and save the file as a pdf (OPB201_TD2_2021_familyname.pdf).

Send me this jpg or pdf by email, as well as your script (using the same naming convention: Script_OPB201_TD2_2021_familyname.m).

Additional Bonus Once you are done, you can choose to look at other data from the PHYBIO data archive available on Ametice:

- 1) repeat the TD1/TD2 studies and compare different stations; or focus on other parameters.
- 2) study the horizontal current as measured by the ADCP (using the m_map and m_quiver packages)
- 3) Study vertical sections of data obtained by the MVP.
- 4) Study the surface measurements obtained by the hull-mounted thermosalinometer and fluorometer of RV Téthys II.

%%%%%%%%%%%%% **Notes on Matlab** %%%%%%%%%%%%%%
For the scripts using Tcons., Sabs. (gsw_###.m), you can download the TEOS10 toolbox as indicated in Chapter 4 of this course (<http://www.teos-10.org/software.htm#1>; McDougall and Barker, 2011).

To draw a map of the Gulf of Lion with the isobaths, you can retrieve the **bathymetric data** in the lineX.txt files (with X = depth of the isobath), each file contains 3 columns: latitude, longitude, and X.

Site: https://people.mio.osupytheas.fr/~petrenko/TEACHING/OPB305/TD_OPB305/BATHY

Alternatively you can create nautical chart type maps by downloading:

<http://www.eos.ubc.ca/~rich/map.html> (+ help file:

https://people.mio.osupytheas.fr/~petrenko/TEACHING/OPB305/TD_OPB305/Trucs_matlab.pdf; page 6)

To analyse the MVP data, you can use these scripts:

https://people.mio.osupytheas.fr/~petrenko/TEACHING/OPB201/MVP_PHYBIO/SCRIPTS/
follow the instructions in the Readme [MVP_HELP_ap.txt](#); you need m_map and the LATEXtools <http://www.mio.univ-amu.fr/?LATEX-tools>