

1st INIOAS Training Course on Ocean Remote Sensing, 2023



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<https://www.inio.ac.ir/ORSA>

Fundamentals of Ocean Remote Sensing

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Interactive Lecture

NASA Worldview

<https://worldview.earthdata.nasa.gov/>

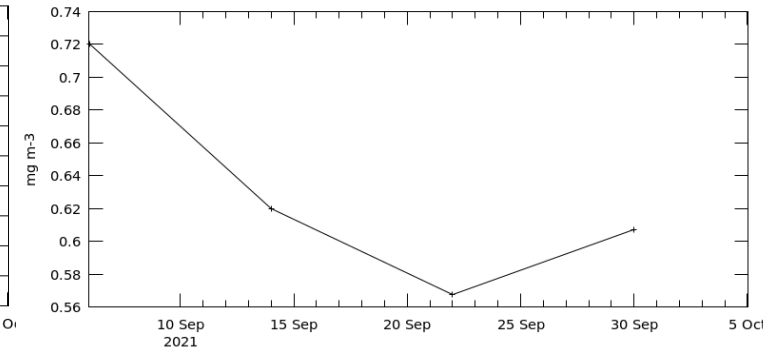
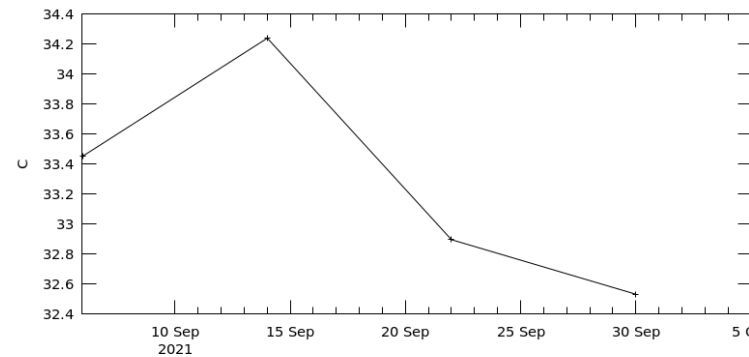
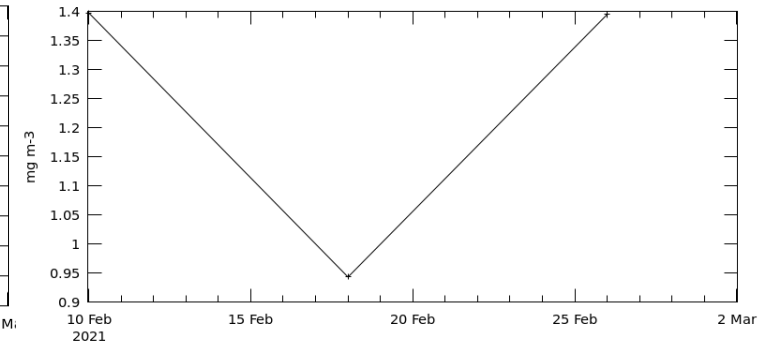
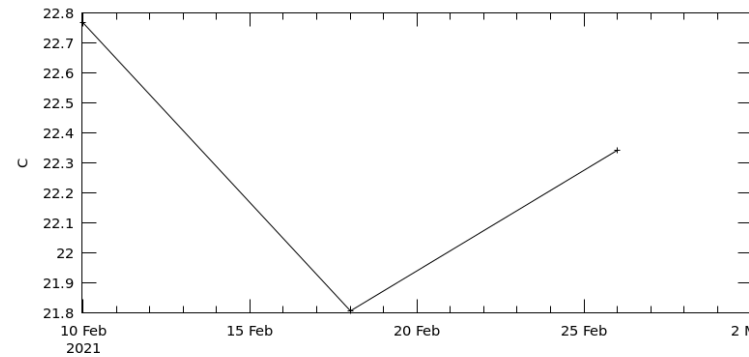
- Open Worldview
- Zoom on the Persian Gulf Area
- Add Layer:
 - Chlorophyll-a
 - Sea Surface Temperature
- Set Time: 2021 Sep 17
- Review the spatial distribution of selected layers
- Again Set Time: 2021 Feb 17
- Again: Review the spatial distribution of selected layers
- Share your findings
- Download Data
- Export Layers

Interactive Lecture

NASA Giovanni

<http://giovanni.gsfc.nasa.gov/giovanni/>

- Open Giovanni
- Select Oceanography Discipline
- Select Chlorophyll-a product, 8-day, 4km
- Select SST product, 8-day, 4km
- Set Time: 2021 Feb 10 – 28
- Select Time-series area average plot
- Select the middle area of the Persian Gulf
- Draw Chart



Interactive Lecture

ESA Ocean Data Lab

<http://ovl.oceandatalab.com>

- Open Ocean Data Lab
- Zoom on the Persian Gulf Area
- Add Layer:
 - Chlorophyll-a from MODIS
 - Chlorophyll-a from Sentinel-2
- Set Time: 2021 Sep 17
- Review the difference between the two selected Chlorophyll-a layers
- Draw a longitudinal transect, click line, click processing tool (UR), Draw a transect

Interactive Lecture

ESA Ocean Data Lab

<http://ovl.oceandatalab.com>

Examples

Sea Surface Temperature (SST), Chlorophyll-a (Chl) from MODIS and VIIRS are well correlated with GlobCurrent:

<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 temperature gradient in the SST but signature of the eddy can be seen on the Chl from MODIS:

<https://odl.bzh/s5J6GP9Y>

Thank You