

An Introduction to Ocean Remote Sensing

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Earth observing satellites have become a key tool to study the oceans since they are the only observing platform able to synoptically observe the ocean at high spatial resolution. During the seminar we will review the fundamentals of ocean remote sensing (techniques, interpretation of the observations, data sources) and we'll focus on their practical use. In particular, we'll explore the use of SeaDAS, a free software create by the European Space Agency (ESA) and the North American Space Agency (NASA) for the analysis of infrared and ocean color measurements. We will complement this approach with the use of altimetric data

Contents

1. **Remote sensing techniques.** The different remote sensing techniques will be introduced focusing on how they can be used to observe the upper layers of the ocean.
2. **Moderate Resolution Imaging Spectroradiometer.** The data provided by the MODIS will be explored with more detail and they will be used as sample data to introduce the use of SeaDAS.
3. **SeaDAS 7.2.** The basic use of SeaDAS 7.2 will discussed with practical examples taken from the observations provided by MODIS. SeaDAS will be introduced.
4. **Altimetry.** Altimetry provides a complementary dynamical view of MODIS observations. The different available altimetric products and tools will be discussed and explored.

Bibliography

- Robinson 2004. Measuring the oceans from space. Springer-Praxis
- Robinson 2010. Discovering the Ocean from Space. Springer-Praxis
- Martin 2014. An Introduction to Ocean remote Sensing. Cambridge 2n Ed.