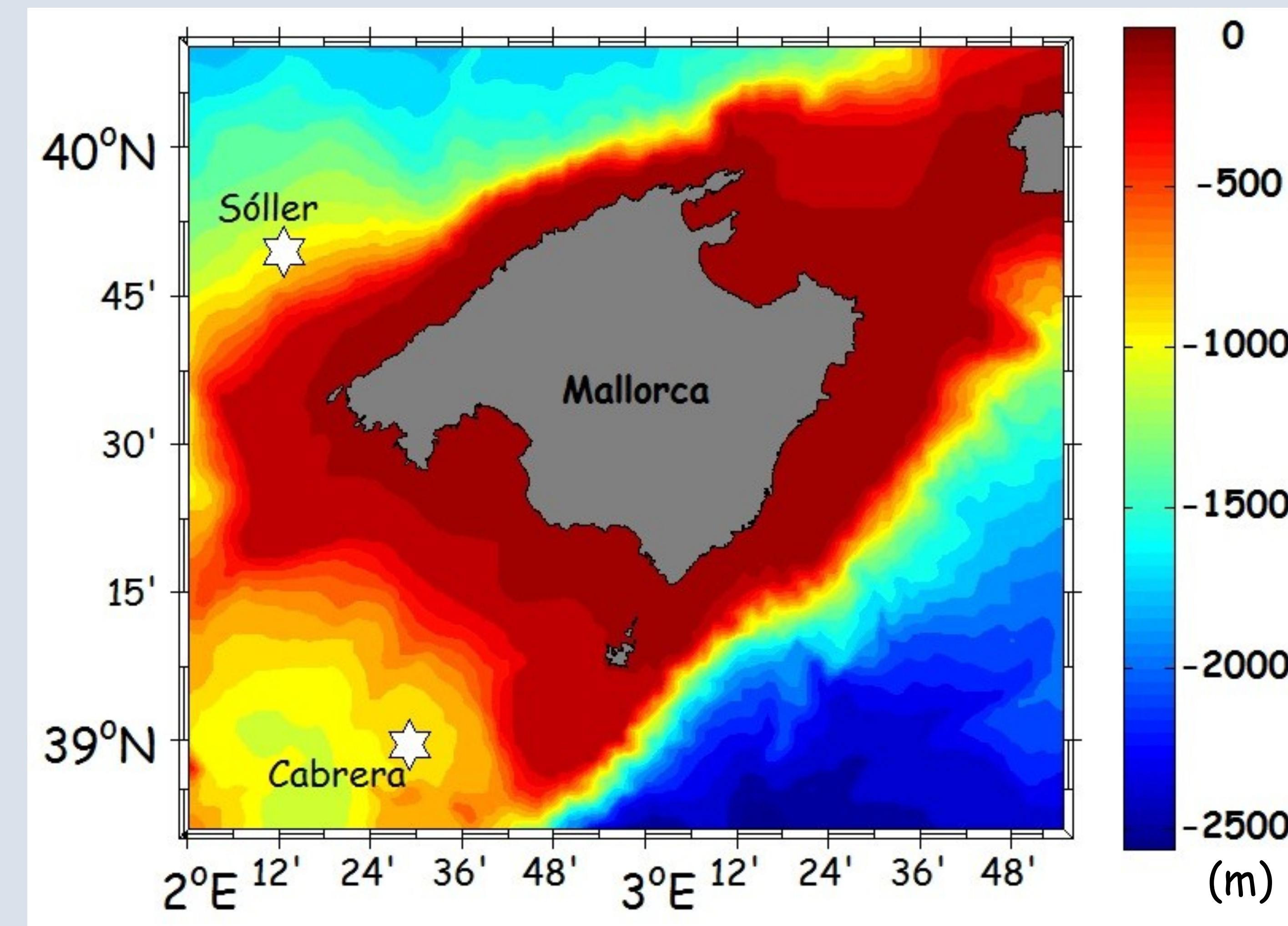


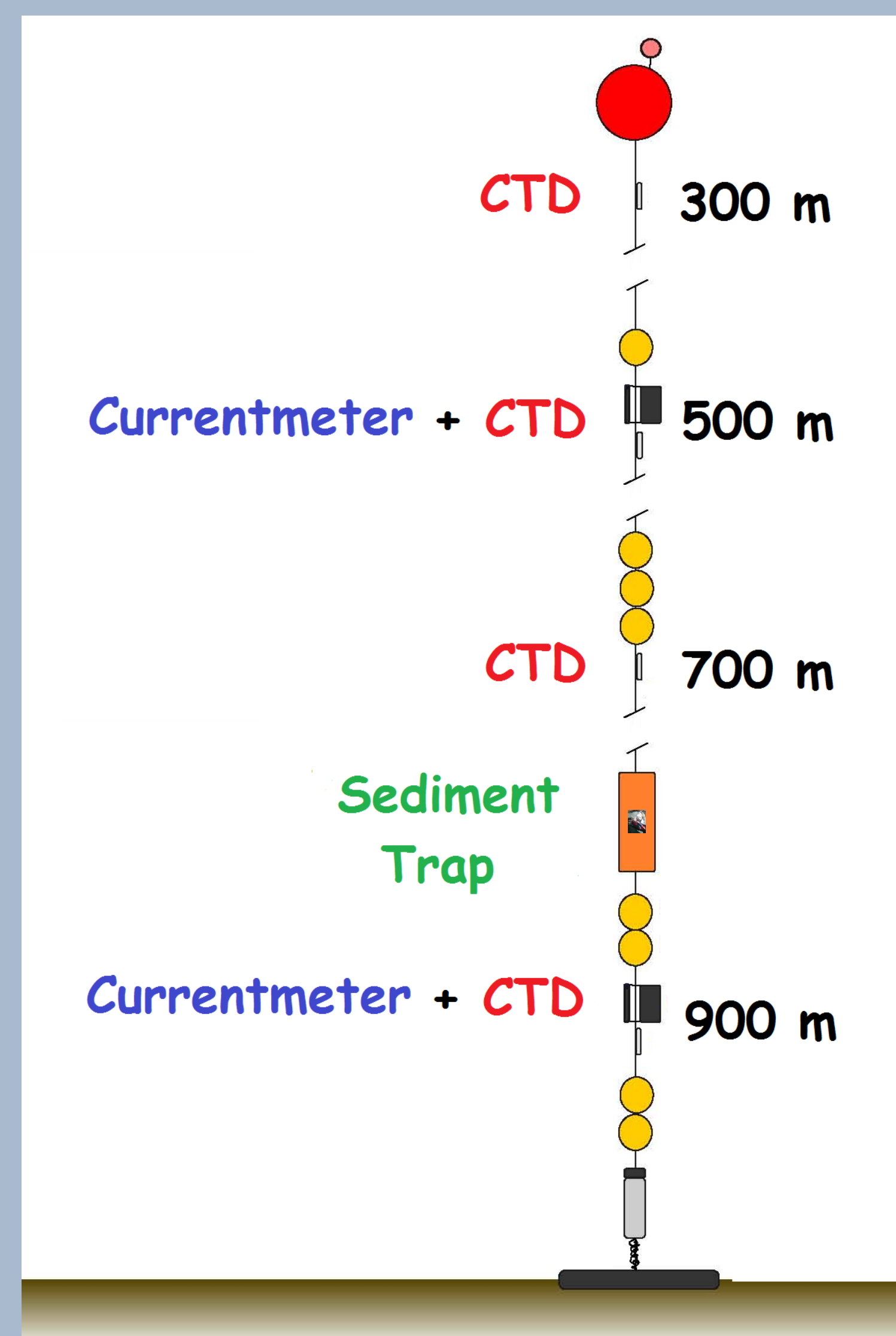
Motivation

Around Mallorca Island there are two fishing areas located at the north and south of the island where the red shrimp is mainly captured. The fishing fleet migrates seasonally from one fishing area to another following major catches. This behaviour has motivated the development of IDEADOS research project, whose primary goal is to investigate the reasons of such temporal variability in catches.

In this work we present preliminary results of the analysis of the hydrographical conditions in both areas provided by the observations of two mooring lines. In particular our aim is to seek for relationships between the local hydrographical conditions and the resources abundance.



Instrumentation and Data



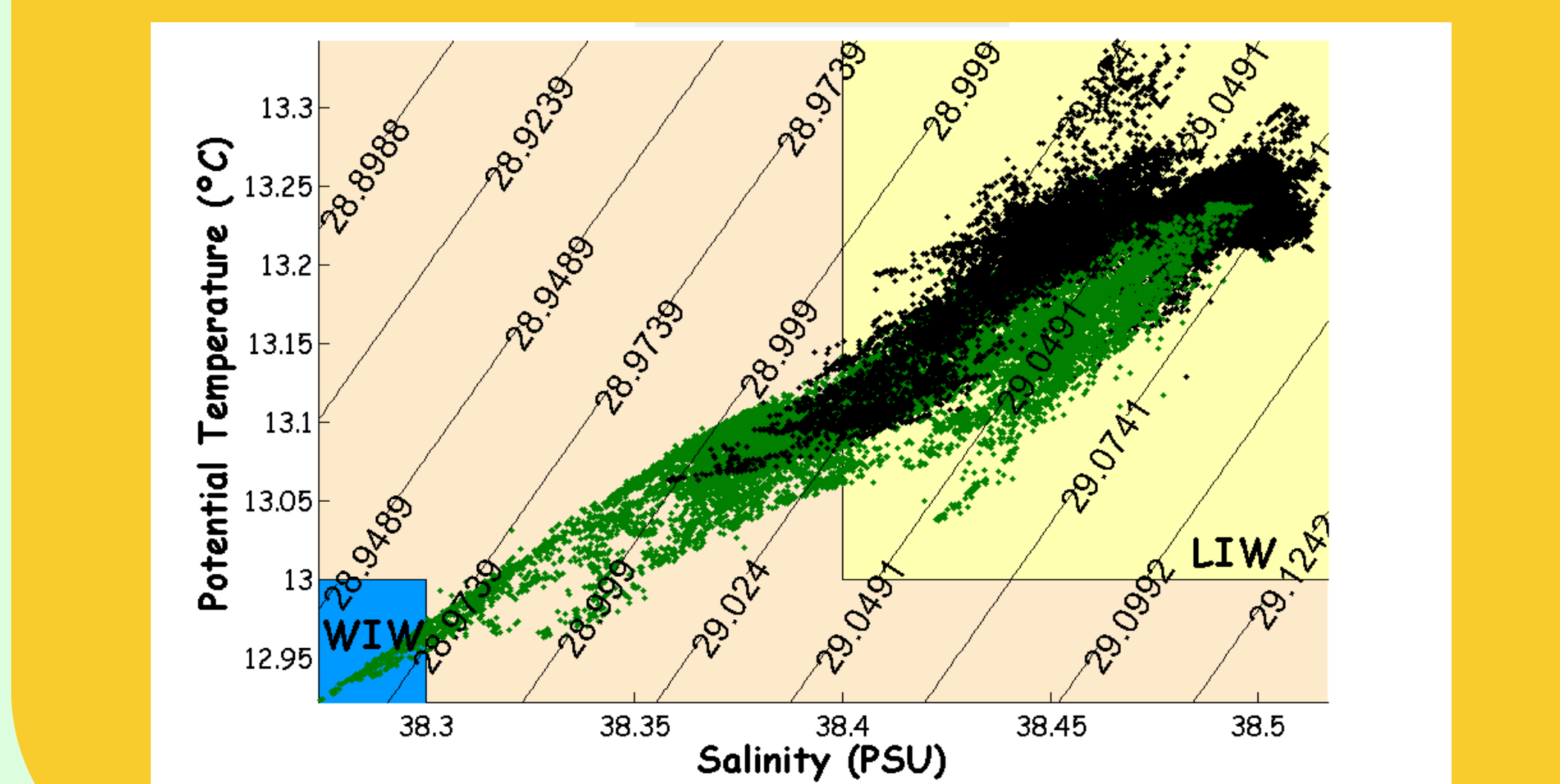
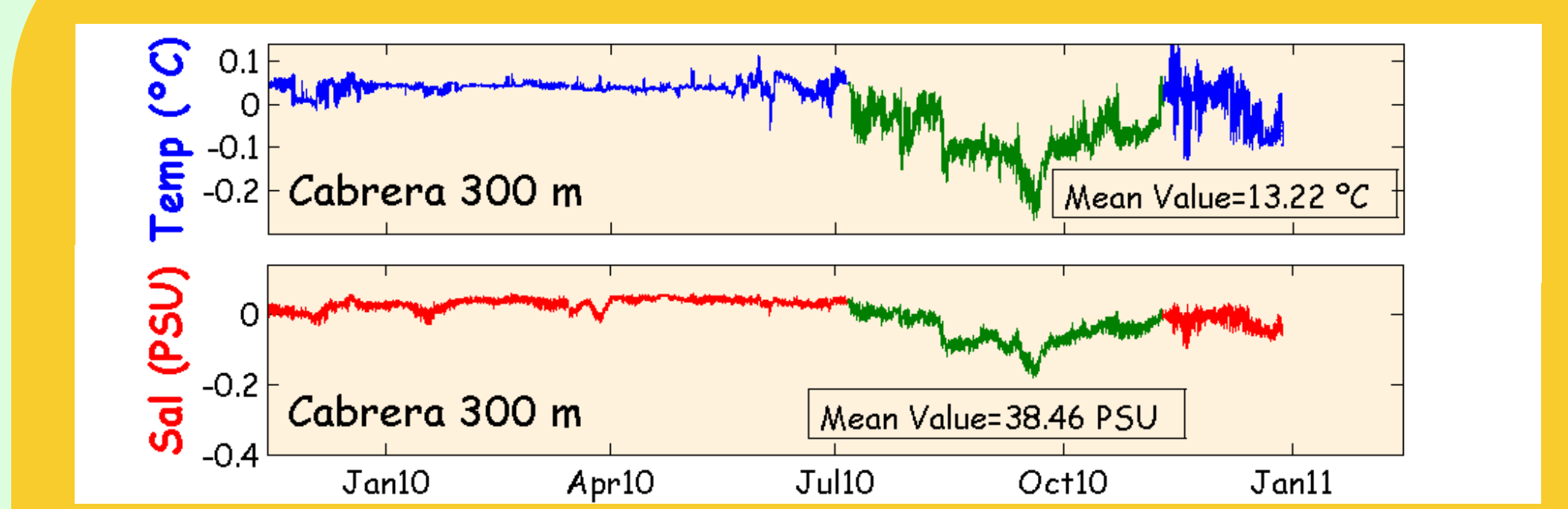
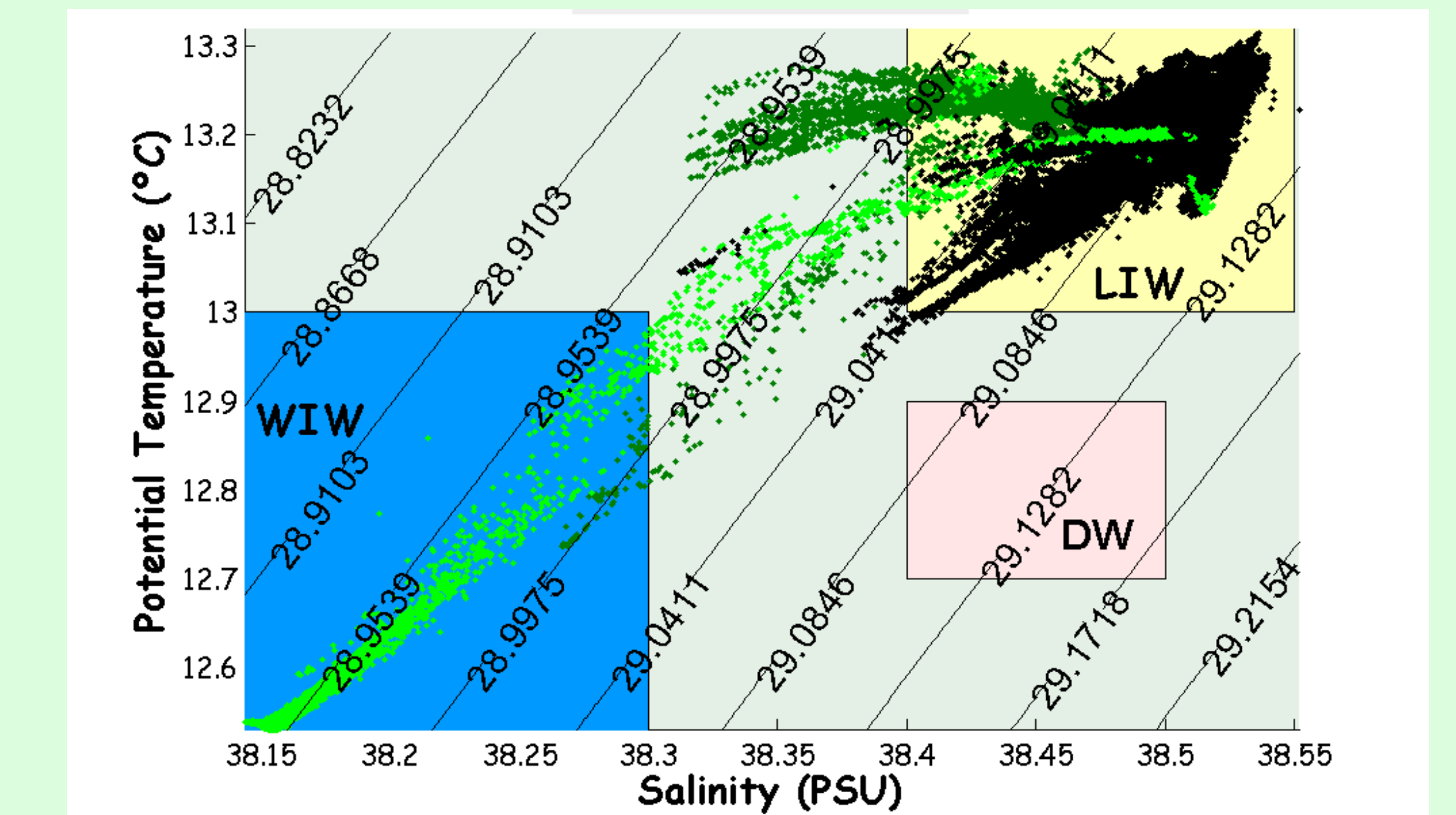
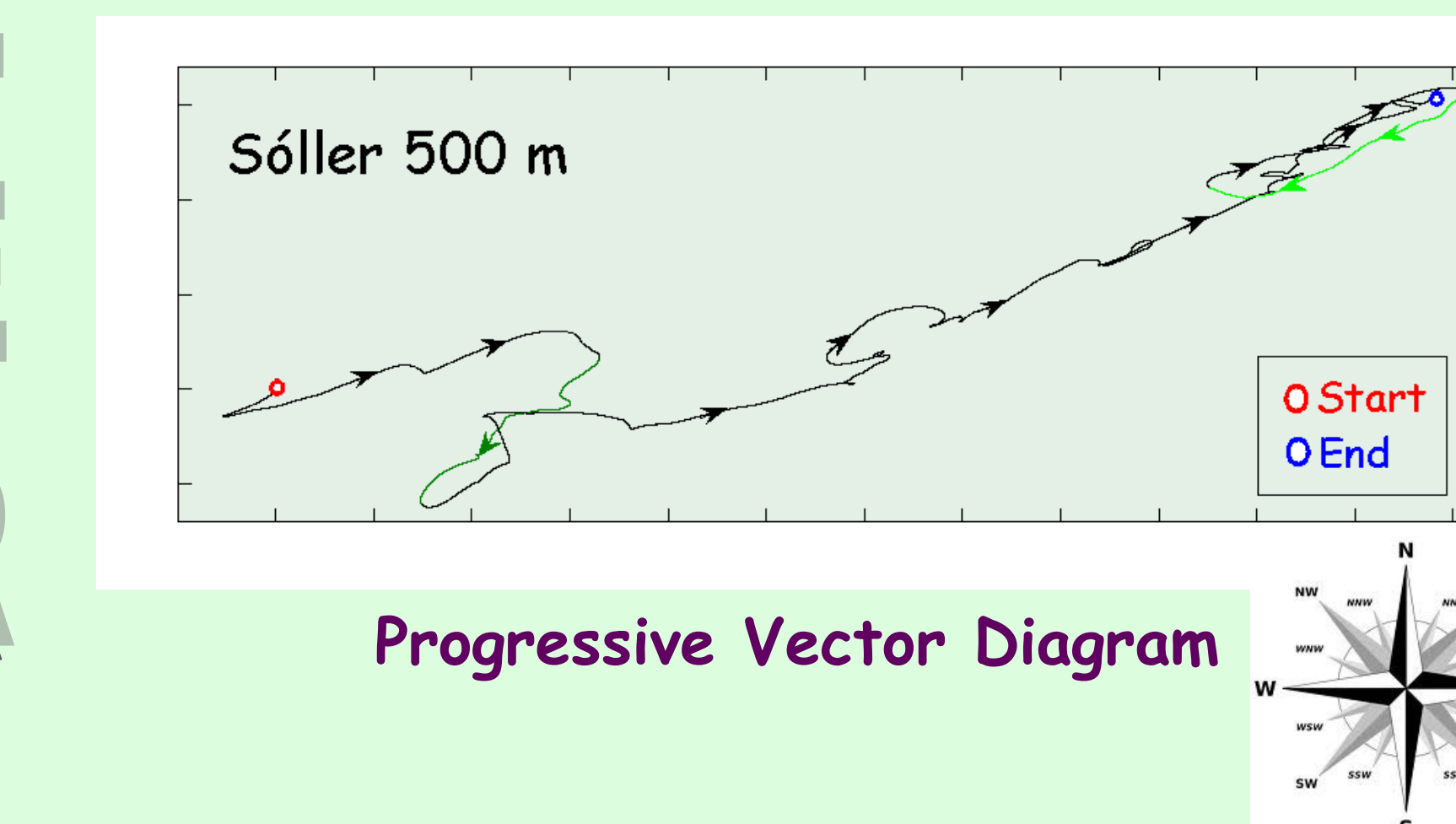
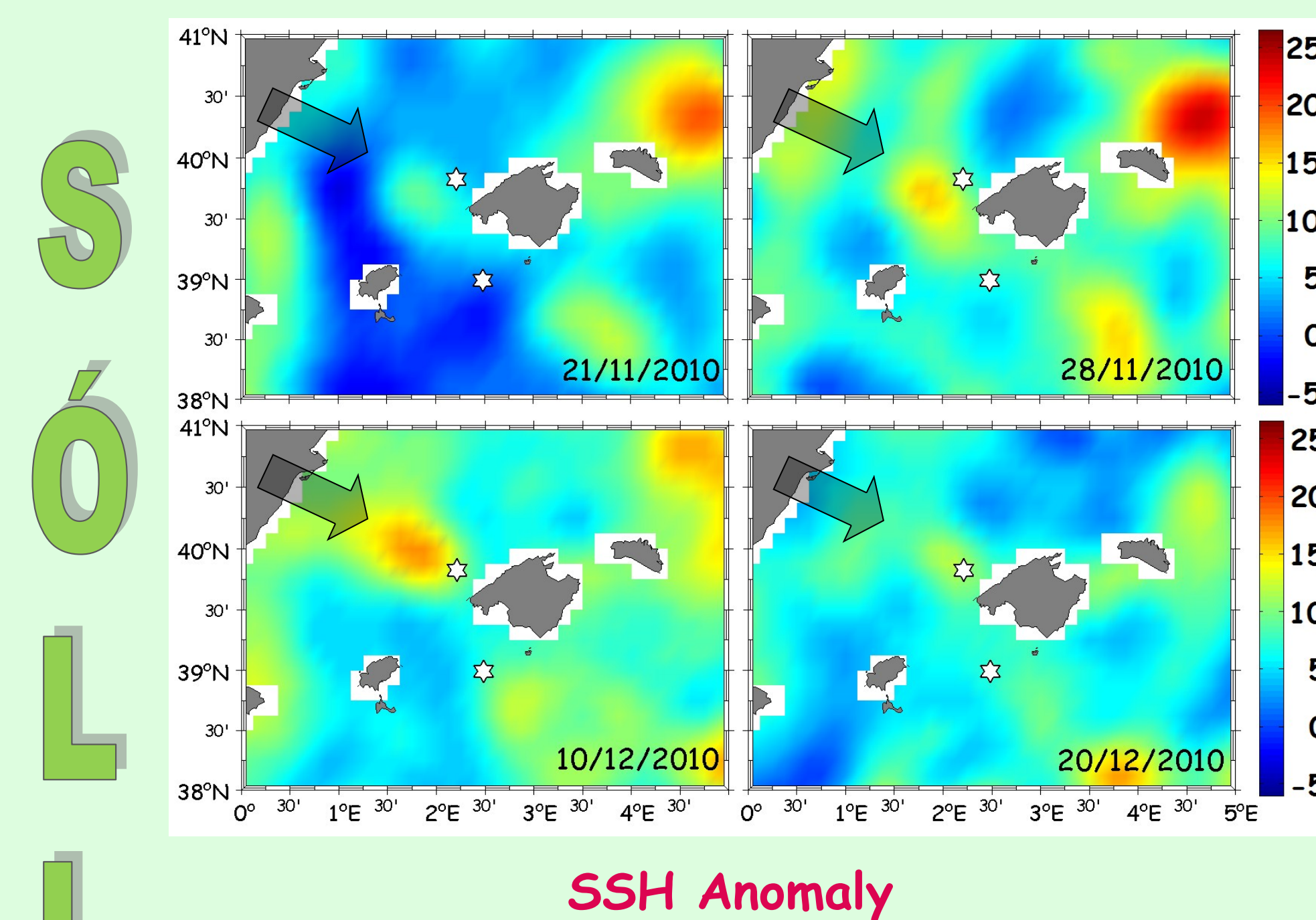
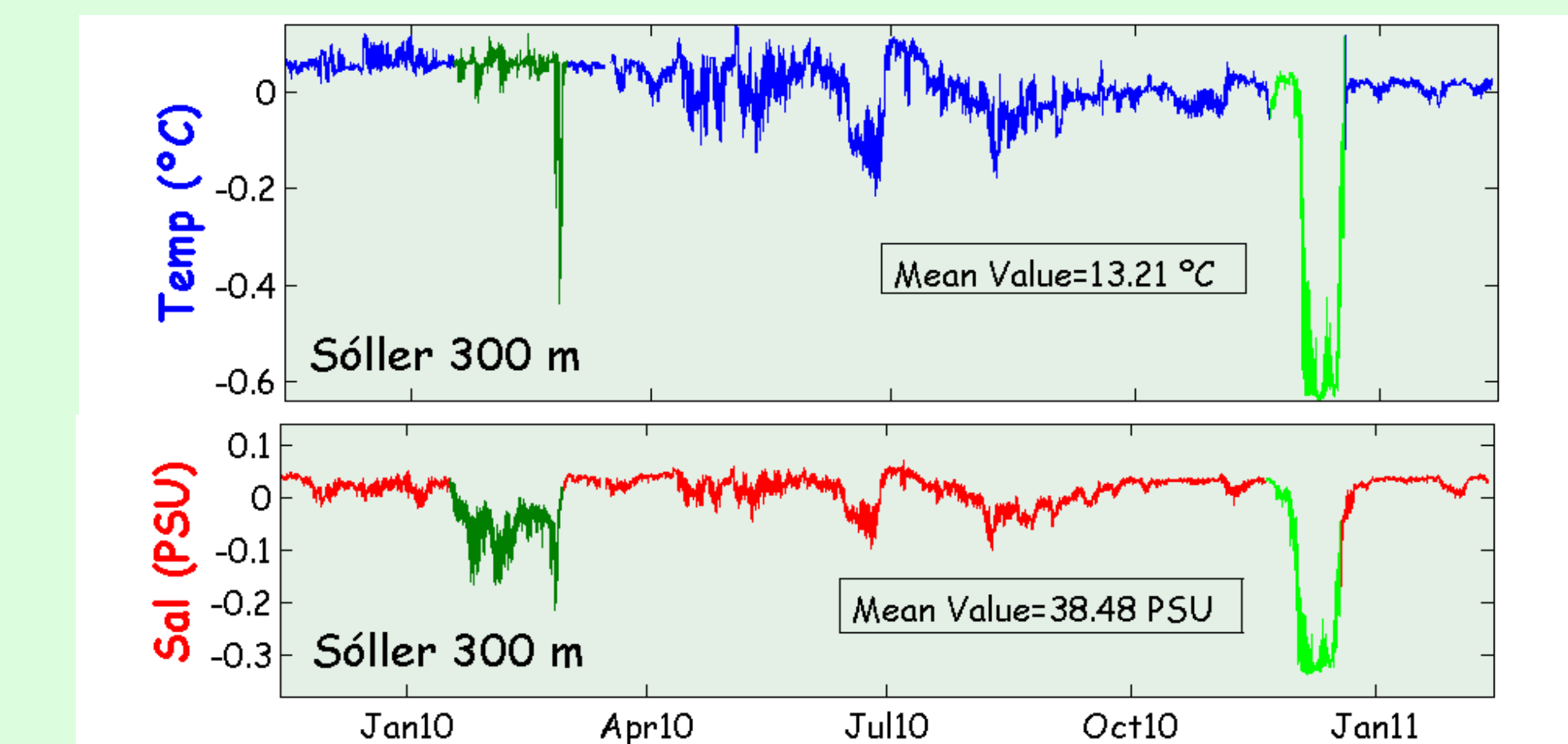
The two mooring lines deployed, one in the north of the island (Sòller) and the other in the south (Cabrera), were structurally identical. Each of them consists of four CTDs installed at the bottom (900m), 700m, 500m and 300m, respectively, two currentmeters, at the bottom and 500 m, and a sediment trap at about 30 m above the sea bed.

The temporal sampling interval was 10 minutes for the CTD's and 30 min for the currentmeters. The sediment trap had a 10 days resolution. The available data are from November 2009 to February 2011.

Observations

Hydrodynamics seem to be more active in **Sòller** than in **Cabrera**, with frequent significant temperature and salinity changes, associated with the presence of anticyclonic gyres generated over the mooring emplacement. These gyres are apparent in **SSH anomaly maps** and may modify the dominant currents in this region. **Progressive vector diagrams** clearly show that currents, normally to the northeast, along the northern Mallorca coast, reverse during the events.

Cabrera dynamics is more stable but presents a clear temperature and salinity decrease during summer months. These water changes could be related to the observed fishing boats migration between regions which annually happens during summer.



Summary and Conclusions

The clear different properties of the water mass in Cabrera region registered in summer 2010 might be related to the observed annual fishing migration between regions. Whether these are usual summer conditions or not, remains still unknown. The way this water mass properties may affect the different stages of the resource dynamics and then the fishing migration is under study.

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