

BOUSSOLE Monthly Cruise Report

Cruise 27

October 16 – 19, 2003

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Vessel: R/V Téthys II

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Figure 1 Typical conditions for the Boussole 27cruise

BOUSSOLE project

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Foreword

This report is part of the technical report series that is being established by the BOUSSOLE project.

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Cruise Objectives

Multiple SPMR profiles are to occur within 1 hour of satellite overhead passes of SeaWiFS and MERIS and around solar noon. Optimal conditions: Clear blue skies and flat, calm sea surface. If the sky is clear and sea conditions are reasonably calm (no whitecaps or large swell), SIMBADA measurements are to be performed consecutively where possible with SPMR profiles. If sea conditions are poor but sky is good, SIMBADA sun photometer measurements can be made at intervals throughout the day to measure atmospheric optical thickness. A floating platform is to be used to support the SPMR Eu sensor approximately 20cm below the surface for up to 3 minutes of stable light field before a release mechanism triggers the release of the profiler to start a descent as normal. Multiple descents ideally will be started in this way and the data will be used to assess near-surface Eu extrapolation model calculations. CTD deployments are required at the start and end of the SPMR profiling day and around noon in the longer summer days or when there is a high possibility of a satellite matchup. In addition to the depth profile from the CTD, CDOM fluorometer, Chl fluorometer and AC9, seawater samples are to be collected, filtered and the filters stored in LN2 for HPLC pigment and particulate absorption filter analysis in the lab. A gimbal PAR sensor positioned on the foredeck and operated from the CTD computer serves as a light field stability indicator during SPMR profiling.

For each cruise, at the end of the optics measurements on site, there will be one ctd transect between the Boussole site and the Port of Nice. This transect consists of four fixed locations on-route from Boussole and a final two station positions to be decided during the transect in order to sample on both sides of the main frontal structure between the coastal waters and Ligurian Sea. The time of day of this transect should be similar for each cruise, if possible to minimise influence of diurnal variability. On other uninterrupted transits between Nice and Boussole, Simbada measurements of optical thickness should be taken every 30 minutes to characterise variability between the Cap Ferrat sun photometer site and the Boussole site.

Cruise Summary

Bad weather prevented departure until the 19th October. Unfortunately, technical problems with the CTD prevented any data collection and the sky and sea conditions were poor for optics work. A CTD profile was measured but no samples were collected.

Ligurian Sea Boussole Site Images

http://seawifs.gsfc.nasa.gov/cgi/seawifs_region_extracts.pl

SeaWiFS



19th October, 2003