

GSOP ACTIVITIES IN THE ATLANTIC SECTOR (Detlef Stammer)

Velocity Workshop

GSOP has promoted a "Workshop on Ocean Velocity Measurements and their Applications" which was held at SIO, La Jolla, USA, on 5-7 December 2007. The report can be found at http://eprints.soton.ac.uk/50803/01/129_GSOP_Workshop.pdf. The group has made several recommendations which are being evaluated by GSOP.

One issue raised was that the actual requirement for current measurements made by surface drifters is one measurement per month, per 5° box, with an accuracy of 2 cm/s. This is an issue that should be addressed by the Atlantic Panel and see if these requirements are still valid for the Atlantic sector.

The workshop participants also addressed the theme of western boundary currents and equatorial current systems as a gap in the velocity observing system. It is unclear whether the oceanographic community knows precisely what should be observed, or how those observations should be made. Analyses from process studies in these regions (e.g. KESS, CLIMODE, ...), however, may provide some guidance.

Repeat Hydrography

GSOP is a co-sponsor (together with IOCCP and the SOLAS-IMBER Carbon Coordination Group) of the Global Ocean Shipbased Hydrographic Investigations Panel (GO_SHIP). The panel is sponsored by IOCCP, CLIVAR, and the SOLAS-IMBER Carbon Coordination Group to bring together interests from physical hydrography, carbon, biogeochemistry, Argo, OceanSITES, and other users and collectors of hydrographic data,

The first panel meeting was held in Victoria B.C., Canada on 1-2 November 2007 to develop guidelines and advice for the development of a globally coordinated network of sustained ship-based hydrographic sections that will become an integral component of the ocean observing system.

One of the points identified by the group was that the Atlantic sections need to be redefined. There is also the issue of who is going to occupy them and that of a synthesis.

Ocean Synthesis and Reanalysis

GSOP is organising a 3rd Ocean Synthesis Evaluation Meeting, to be held at JAMSTEC Office in Tokyo, on 6-8 October 2008.

As done previously, one of the topics that will be compared among different products is the MOC behaviour, in addition to heat content, freshwater and sea level. This will be done globally but also for the Atlantic. Many of the GSOP synthesis activities are addressing specifically the Atlantic sector. It is hoped that more interaction will emerge between GSOP and AIP, also with respect to the use of existing syntheses/reanalyses for scientific studies in the Atlantic.

Decadal Predictions

GSOP plays a leading role in providing initial conditions for decadal predictions. First tests were performed and are promising. Nevertheless much needs to be learned about the proper use of ocean syntheses for the initialization of coupled climate models. Upcoming efforts in this respect are the EU effort THOR. But for AR5 a dedicated effort was formed

to produce initialized decadal predictions. GSOP will provide here fore all existing ocean syntheses fields.

Climate Datasets

GSOP started the effort to produce a climate-quality data set. Emphasis is first of all on an expansion of the data sets available on the WOCE data CD to present. In parallel efforts have started to clean up the historic in situ ocean data as well, which will also be made available.