

OceanScope

Rossby, Thomas

“A proposed partnership between the Maritime Industries and the Ocean Observing Community to Monitor the Global Ocean Water Column” is the subtitle of a recent SCOR/IAPSO report. The foreword notes that: The ocean is vastly under-observed, particularly below the ocean surface, where satellites cannot measure the ocean’s properties, and that industry has cooperated with the scientific community for more than 50 years to collect information on plankton, marine meteorology and basic water column properties. The report proposes building upon this cooperation and suggests a new and integrated framework for future ocean observation.

This paper will discuss how OceanScope can be of great value to CLIVAR, first in the North Atlantic, and later globally. Central to the OceanScope concept is that all vessels will measure currents (ADCP) and temperature (XBT) in the top kilometer at high vertical and horizontal resolution. Surface water properties and selected chemical and biological parameters will round out the proposed measurement suite.

Twenty vessels operating on 14 routes in the North Atlantic will be instrumented (2 vessels on some of the longer routes for improved temporal sampling). Roughly half of the routes span subtropical waters; the others span principally the subpolar gyre. All routes would be sampled on a roughly bi-weekly schedule. Examples will be given of how this OceanScope framework can significantly improve our ability to quantify ocean currents and fluxes of heat, fresh water and other properties. All data will be publicly available in near real-time.

The report can be obtain at http://www.scor-int.org/Publications/OceanScope_Final_report.pdf