



## **A small and lightweight telemetry buoy module for open ocean moorings**

**J. Karstensen** (1), U. Send (2), A. Pinck (1), M. Busack (1, 3)

(1) Leibniz-Institut für Meereswissenschaften IFM-GEOMAR, Kiel, Germany (Contact email: jkarstensen@ifm-geomar.de); (2) Scripps Institution of Oceanography, San Diego, La Jolla, USA; (3) now at: Optimare Sensorsysteme AG, Bremerhaven, Germany

Real time access to data from instruments moored in the open ocean is of increasing importance in the framework of operational oceanography to assess and predict the ocean physical and biogeochemical state. The harsh open ocean environment often prohibits the use of large surface buoys if long deployment periods (>0.5 yr) are aimed for. Here we report on the design and application of a small (17") and light (ca. 60 kg) open-ocean telemetry module. The module has a low energy requirement and uses an ARGOS based communication protocol. It has been tested on standard steel wire moorings. Experiences from multiple deployments in the high and low latitude ocean for periods up to 19 month and using a suite of different instruments will be discussed.