



## **Contributions to sea surface height and ocean bottom pressure, from in situ recorders, GRACE, radar altimetry, and Argo in the South Atlantic**

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Depending on the location in the ocean, sea surface height changes are dominated by steric signals or are related to barotropic signals which are also visible in bottom pressure. From an observational point of view, how ocean bottom pressure is related to sea surface height changes, could be studied when SSH, OBP and steric changes would all be measured.

The deployment of a series of 14 ocean bottom pressure recorders in a transect from the South of Africa towards Antarctica from 2011 to 2014 by the Alfred Wegener Institute, in principle allows for such a consistency check. The transect spans multiple Southern ocean fronts, and the northernmost records are situated in an eddy-active region, which makes it sensitive to local ocean bottom pressure signals.

In this contribution, we compare the measurements with daily large scale ocean bottom variations from GRACE, sea surface heights from radar altimetry and Argo derived steric changes in the vicinity of the ocean bottom pressure recorders. In addition, time series from a joint inversion of GRACE, Swarm and radar altimetry data is also evaluated at the OBP sites. The observed time series are then compared to simulations from the FESOM ocean model.