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Space and time scales are smaller than in the open ocean over continental shelves, shelf-breaks and close to the coast. The Patagonian continental shelf (PCS) and Malvinas Current (MC) environments not being an exception, on the contrary, large non-linear interactions are expected due to strong tides and winds and a complex bathymetry. Because of the large size of the PCS and shelf-break regions, satellite altimetry data combined with in-situ observations offer a unique dataset to study oceanic processes and validate altimetry data. In-situ time-series measurements are necessary to provide information on the vertical structure of the ocean and quantify the missing portion of the high-frequency variability that cannot be determined from the altimeter because of its limited time and space sampling. Scarcity of in-situ data prevented such quantification in the PCS and shelf-break regions.

A recently project approved and funded by EUMETSAT/CNES, presented here, will deploy an array of current meter moorings, bottom pressure recorders (BPR), conductivity-temperature (CT) sensors and a fully equipped oceanographic buoy during two years to simultaneously monitor the PCS and MC flows. The new data will allow accurate CAL/VAL exercises for the variety of satellite altimetry data. Furthermore, data analysis will improve understanding on the dynamics of both regions. It is expected that such analysis will have an important socio-economical impact since the PCS and adjacent shelf-break are one of the most productive areas of the World Ocean. The importance of obtaining accurate measures of flow variability on both environments resides on the fact that analytical studies indicated that the PCS circulation is dominated by a cross-shelf pressure gradient imposed by the MC.
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