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On the velocity variability in Drake Passage over the period 2006-2008: First results from the analyses of new in-situ data

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A current meter array is deployed across Drake Passage from 2006 to 2009 to monitor the Antarctic Circumpolar Current (ACC) as part of project DRAKE. Current meters data, i.e. temperature, salinity and velocity, are analyzed to investigate the dynamic role that eddies play in the ACC.
Here we present the first results obtained by the analysis of data collected between 2006 and 2008 by four moorings, each of them equipped of current meters installed at three different depths. These moorings were deployed in the south part of the passage along a section following the track #104 of the satellite Jason-1. Analyses of spatial and temporal variability of the velocity field are performed. In addition, mooring-derived eddy heat fluxes over the 2 years are analyzed in a similar fashion. Then, the dynamical response of the Austral Ocean to the long-term changes in wind forcing is discussed in terms of spatial and temporal variability of eddies.