Geophysical Research Abstracts,
Vol. 11, EGU2009-11970, 2009
EGU General Assembly 2009

Overview of recent full depth observations in Drake Passage

C. PROVOST
LOCEAN UMR 7159 Paris, France

The Southern Ocean is particularly sensitive to climate change, responding to winds that have increased over the past 50 years and warming significantly more than the global ocean over the past 50 years. The Antarctic Circumpolar Current (ACC), the world's largest current, is a key element of the global climate system. The Drake Passage (DP) chokepoint is not only well suited geographically (ACC constricted to its narrowest extent, 700 km), but observations and model suggest that dynamical balances which control the ACC transport are particularly effective through the DP. The heart of the Drake project is an experiment with in-situ measurements for 4 years which is coupled with the satellite altimetric observations. The experimental in situ work started with cruise ANTXXIII-3 on board Polarstern in January-February 2006 during which 10 moorings were deployed across Drake Passage below Jason-1 track #104 and onefull depth high resolution hydrographic section with LADCP and tracers was performed twice. Eight of the 10 moorings were retrieved during ANTXXIV-3 in March April 2008 and 5 moorings were redeployed. Hydrography with LADCP and tracers were performed again along the same section. At the time of the EGU meeting, we shall be just coming back from ANTXXIV-3. We shall review the data collected and the first results obtained from the Drake project.