Geophysical Research Abstracts, Vol. 8, 07833, 2006
SRef-ID: 1607-7962/gra/EGU06-A-07833

A 36N Atlantic Ocean transect, May – June 2005. Charles Darwin Cruise 171.

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A new hydrographic section was taken across 36N in the Atlantic Ocean during May/June 2005 aboard RRS Charles Darwin. The primary objectives of this work were to measure the meridional fluxes of heat, nutrients and CO_2. A total of 144 CTD/LADCP stations were sampled across the North Atlantic subtropical gyre. Hydrographic sections from this transect will be presented. In addition to high quality temperature and salinity profiles from the CTD, water samples from a 24-bottle rosette were analysed for salinity, dissolved oxygen and inorganic nutrients at each station. In addition water samples were collected and analysed onboard ship for CFCs, pCO_2, TIC and alkalinity and samples were collected for shore-based analyses for He/Tr and organic nutrients. Full depth velocity measurements were made at every station by up to two ADCPs mounted on the rosette frame. Throughout the cruise velocity data in the upper few hundred meters of the water column were provided by an ADCP mounted in the ship's hull. This coast-to-coast, zonal data set represents the first full repeat of this section since 1981.