



The Atlantic Meridional Transect Programme

C. Robinson (1) and the AMT Team

(1) Plymouth Marine Laboratory, Plymouth, UK (crob@pml.ac.uk)

The Atlantic Meridional Transect (AMT) programme (www.amt-uk.org) is a time series of stations along a 13,500 km transect in the Atlantic Ocean. The programme began in 1995, utilising the passage of the Royal Research Ship James Clark Ross between the UK and the Falkland Islands (50°N to 52°S) southwards in September and northwards in April each year. The programme aims to quantify the nature and causes of ecological and biogeochemical variability in the planktonic ecosystems of the Atlantic Ocean, and the effects of this variability on biological carbon cycling and air-sea exchange of radiatively active gases and aerosols. Marine and atmospheric data are collected from a range of ecosystems from sub-polar to tropical and from eutrophic shelf seas and upwelling systems to oligotrophic mid-ocean gyres.

Between 1995 and 2005, the AMT programme has included 18 research cruises, involving 180 scientists from 11 countries, and has contributed to 110 ISI refereed publications and 68 PhD theses. This unique spatially extensive decadal dataset continues to be deposited and made available to the wider community through the British Oceanographic Data Centre (www.bodc.ac.uk). The next phase of the AMT programme (8 cruises between 2007-2012) is currently being planned. Funding mechanisms are being explored to maintain the programme as a long-term multi-disciplinary ocean observation programme, and to encourage national and international scientific collaboration, education and technology development.

This presentation will describe the scientific questions addressed and summarise the results obtained thus far in relation to the seasonal, inter-annual and latitudinal distributions of biogenic gases and plankton functional biodiversity.