

Figure 1.1: Cruise track for JR115.

The cruise track (using data from BestNav) is illustrated in red, with the locations of the CTD stations and the positions of the float deployments represented by red circles and yellow squares, respectively.

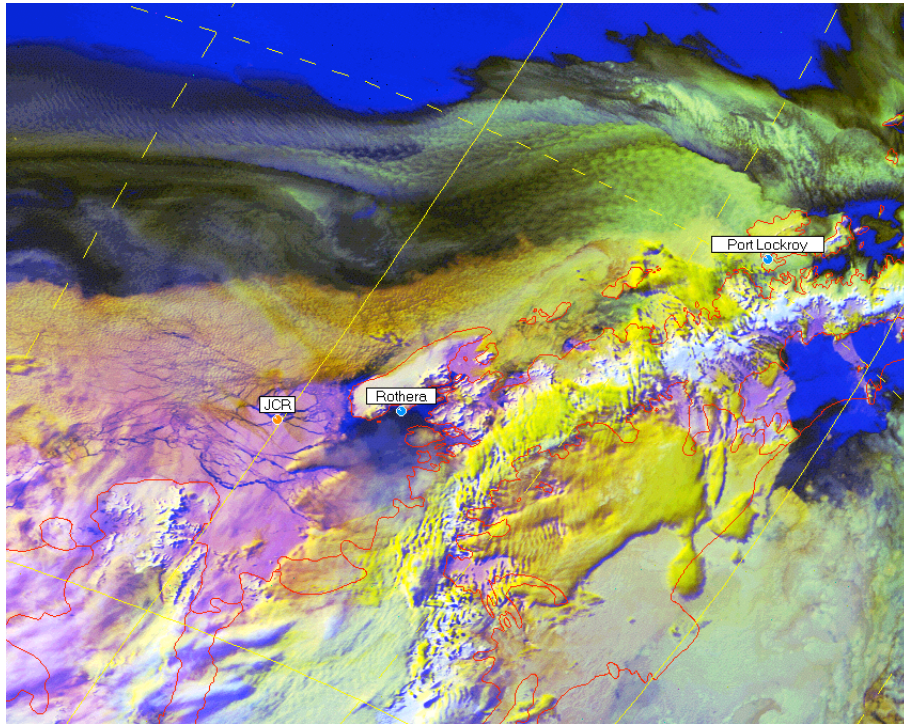


Figure 1.2: Extent of ice cover on Sunday 12th December 2004 at 20:51:02.
Data is from the NOAA H RTP multi-plane data.



Figure 1.3: The JCR in the ice off the Antarctic Peninsula.
Photograph taken from a Dash-7.

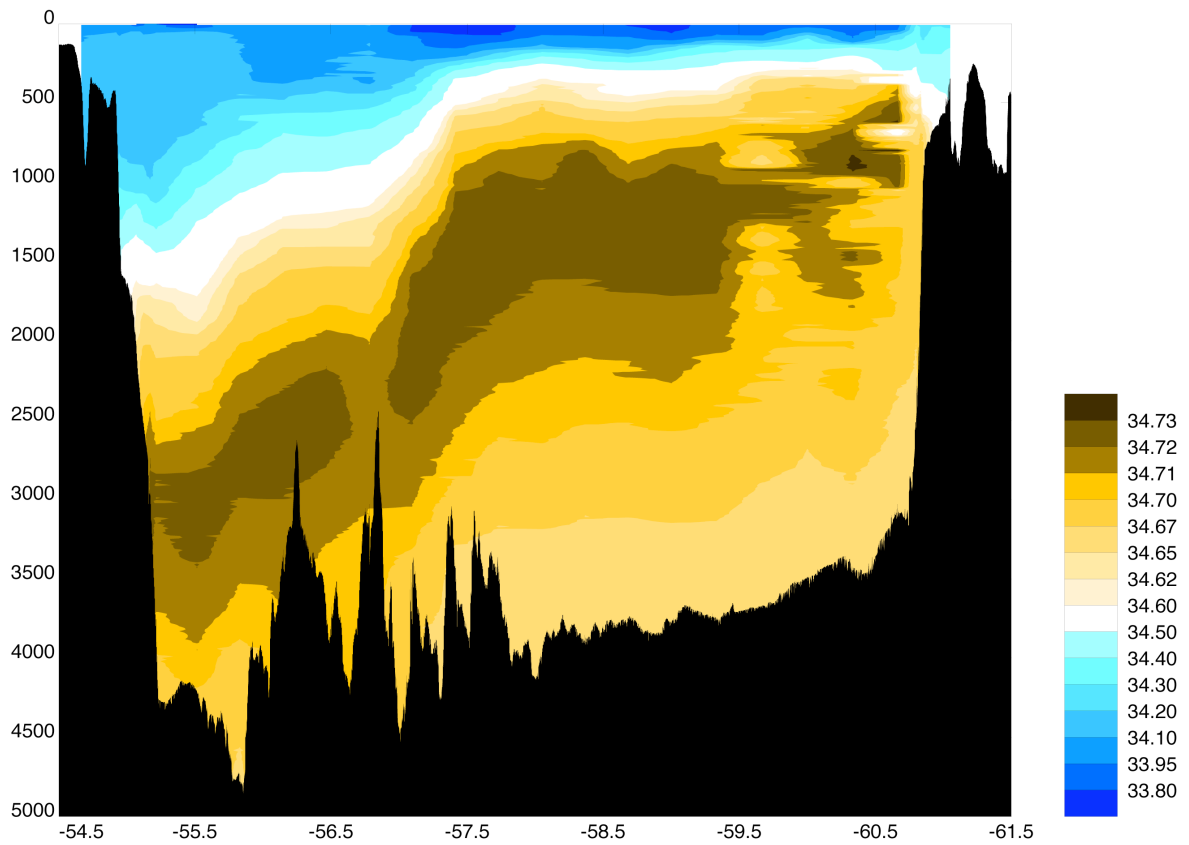


Figure 2.1: Contour plot of salinity for SR1b section across Drake Passage.

The section is plotted from north (left hand side) to south (right hand side). The x and y axes are latitude and pressure (db) respectively.

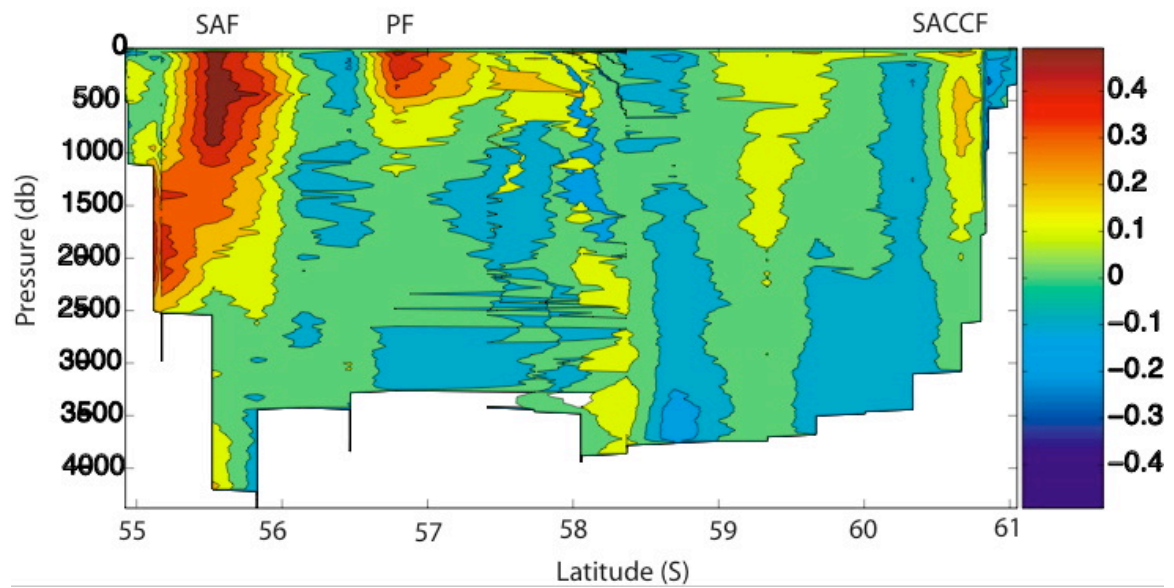


Figure 3.3: The zonal meridional velocity (cm s^{-1}) field from LADCP data across Drake Passage.

The major fronts are marked; Polar Front (PF), Sub-Antarctic Front (SAF), Southern ACC Front (SACCF). The major features observed in the geostrophic velocity field (Figure 2.3) are also seen here.

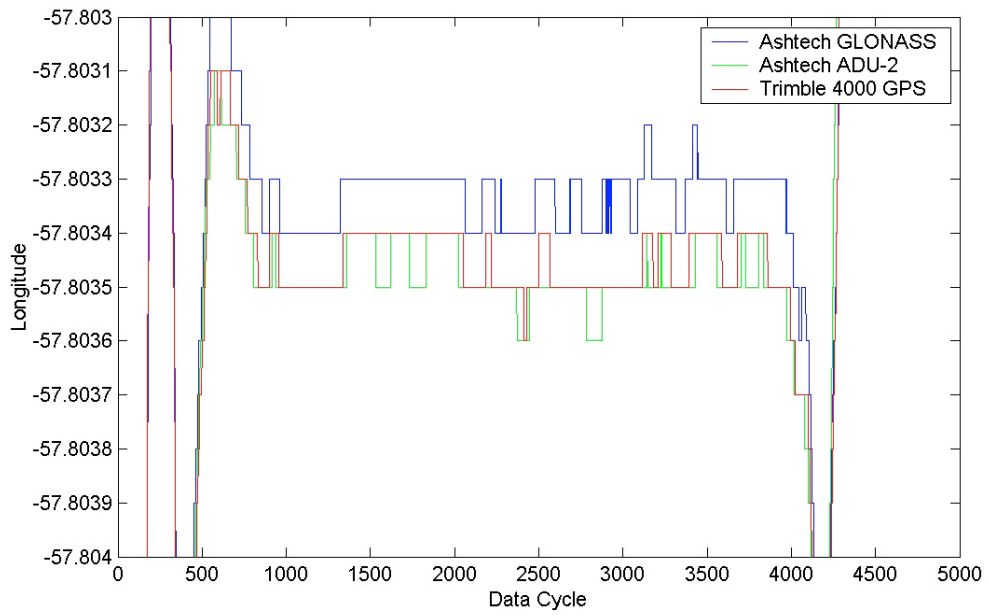
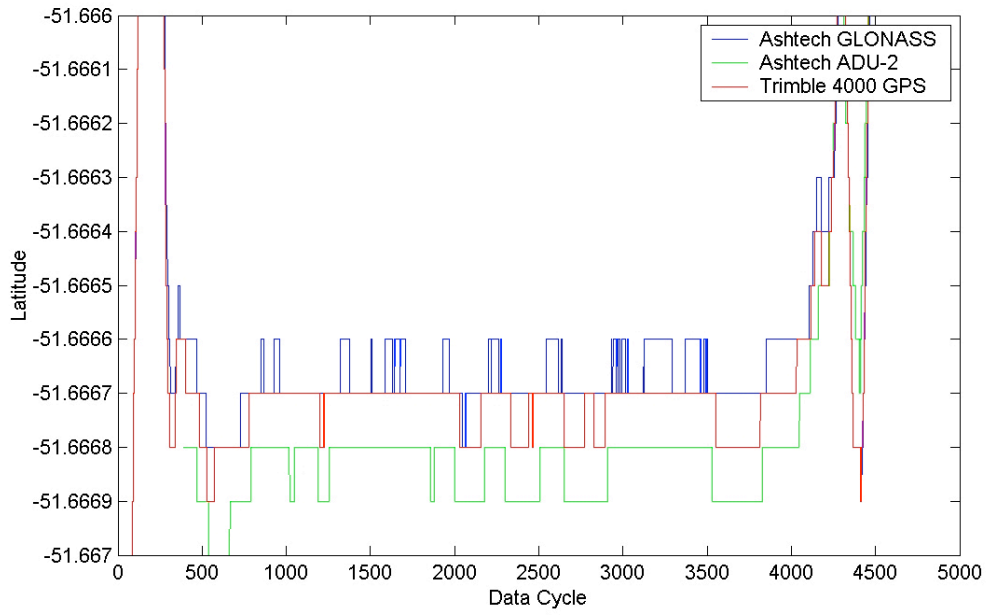


Figure 4.1: Positions derived from the three navigation streams during stationary periods.

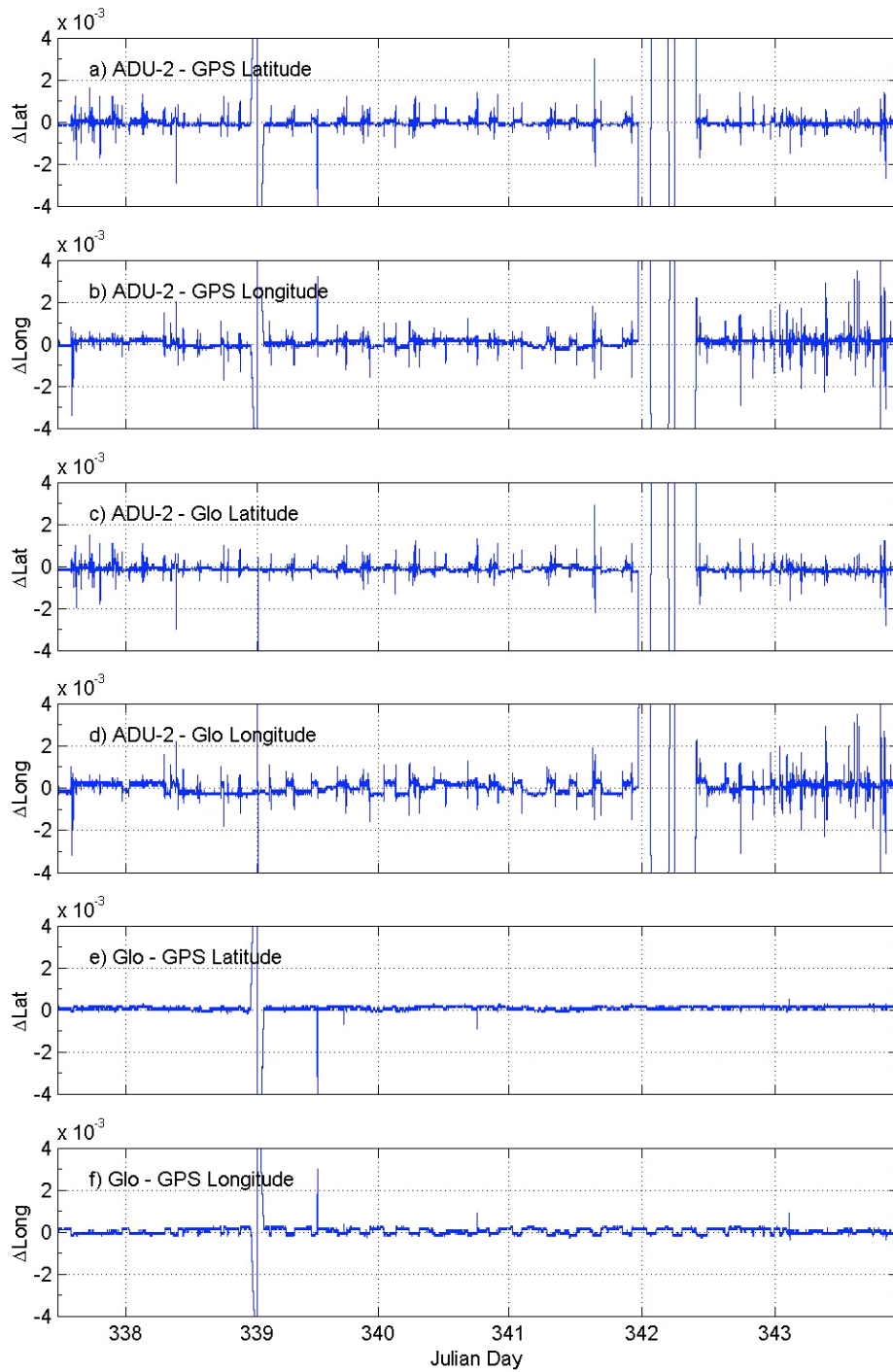


Figure 4.2: Differences between locations derived from the three navigation streams during the southbound Drake Passage section.

ADU-2 is the Ashtech ADU-2, GPS is the Trimble 4000 GPS and Glo is the Ashtech GLONASS system.

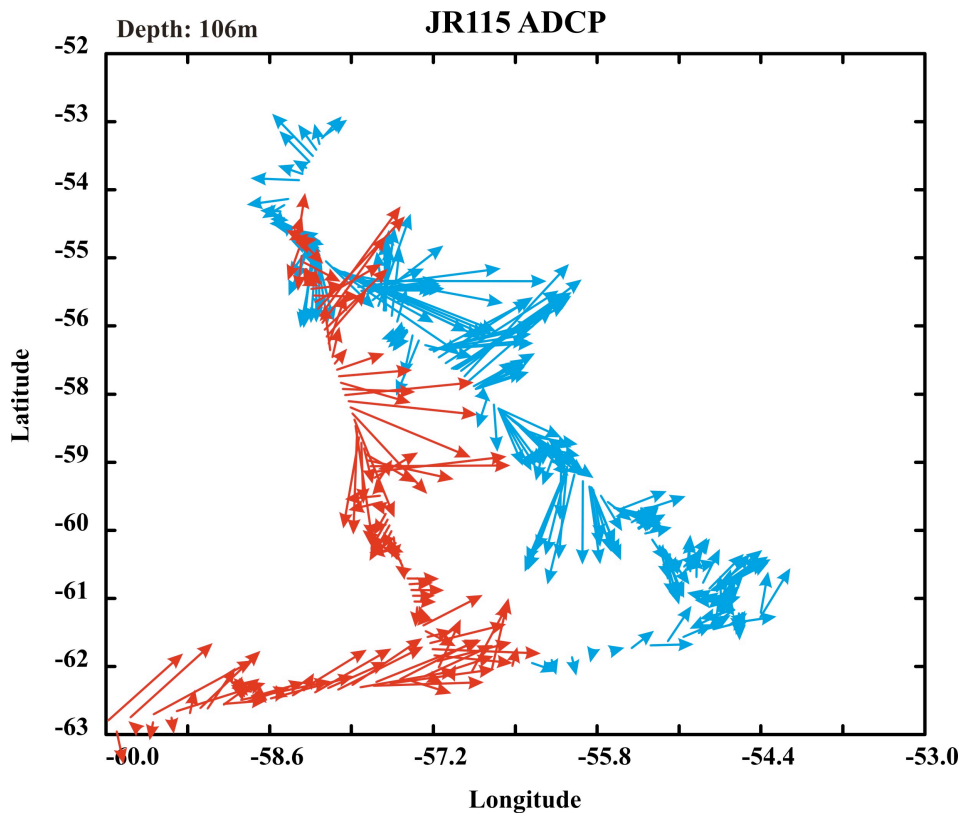


Figure 5.2: VM-ADCP Current vectors at a depth of 106 m across the Drake Passage. The southbound and northbound legs are represented in blue and red, respectively.

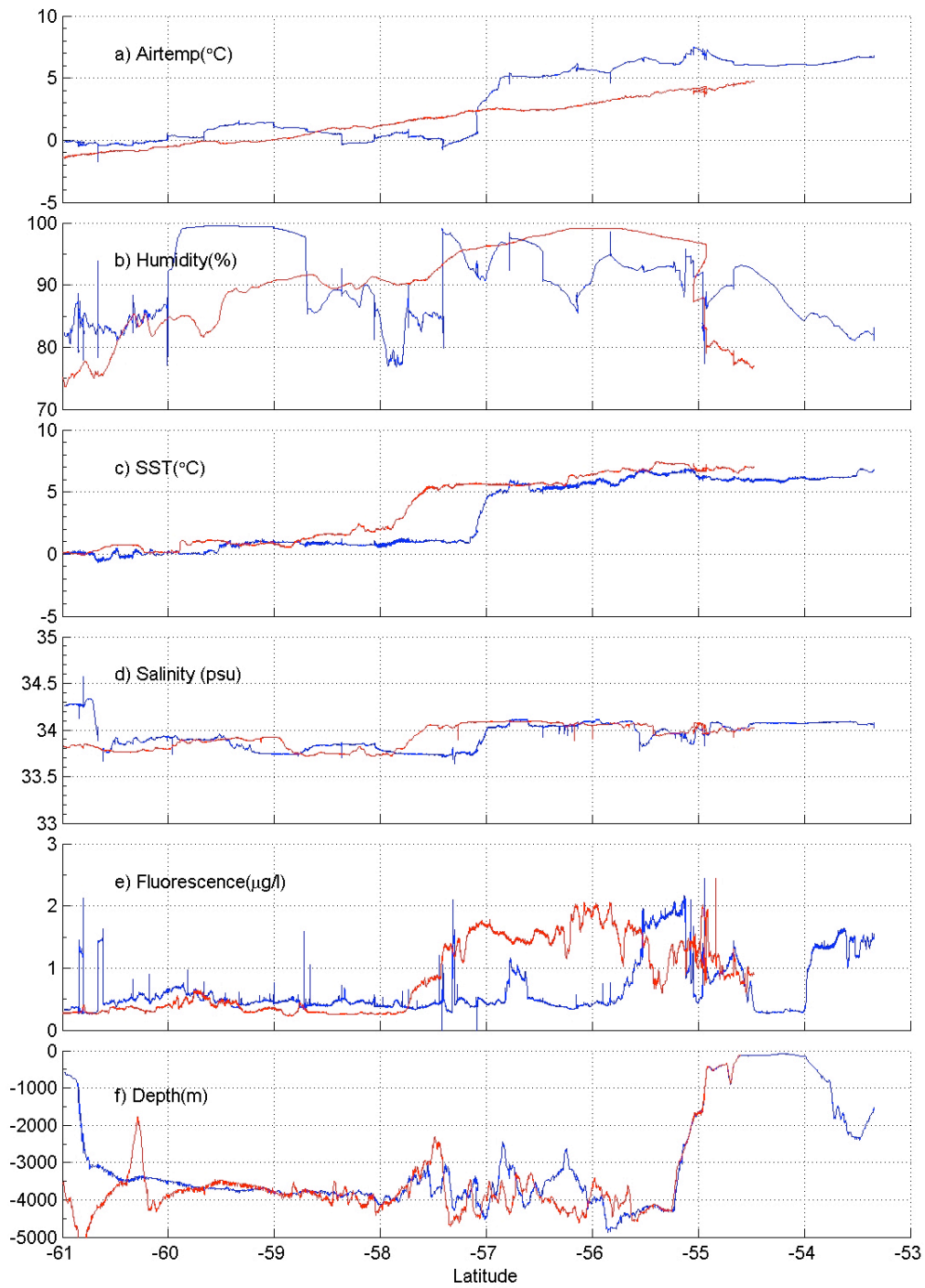


Figure 6.1: Plots of air temperature, humidity, SST, salinity, fluorescence and depth against latitude.

The southbound and northbound legs are represented in blue and red, respectively. For duplicate instruments, only the primary data is plotted.

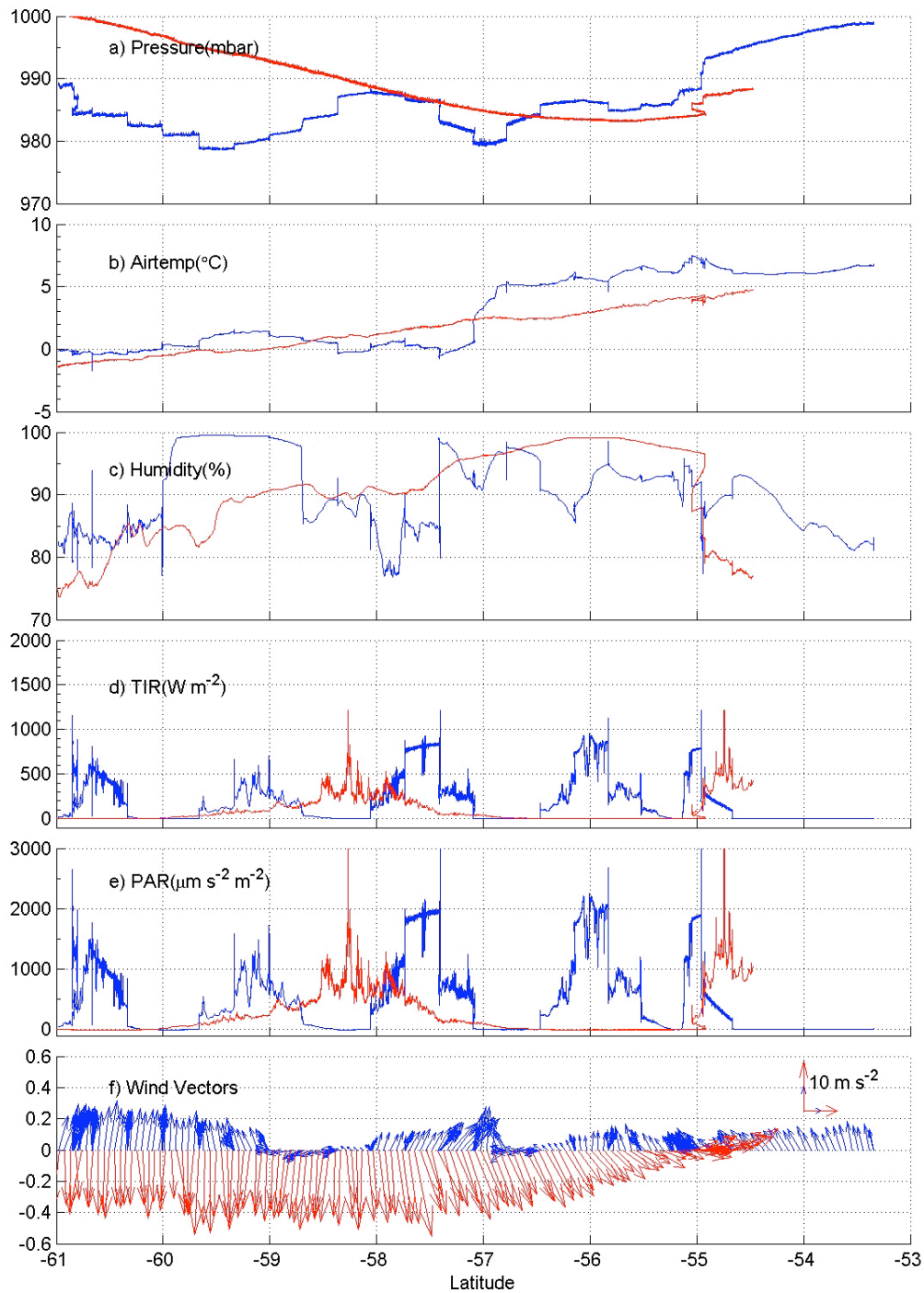


Figure 6.2: Plots of the meteorological parameters with latitude.

Data from the southbound leg is illustrated in blue, and from the northbound in red. For duplicate instruments, only data from the primary instrument is shown.

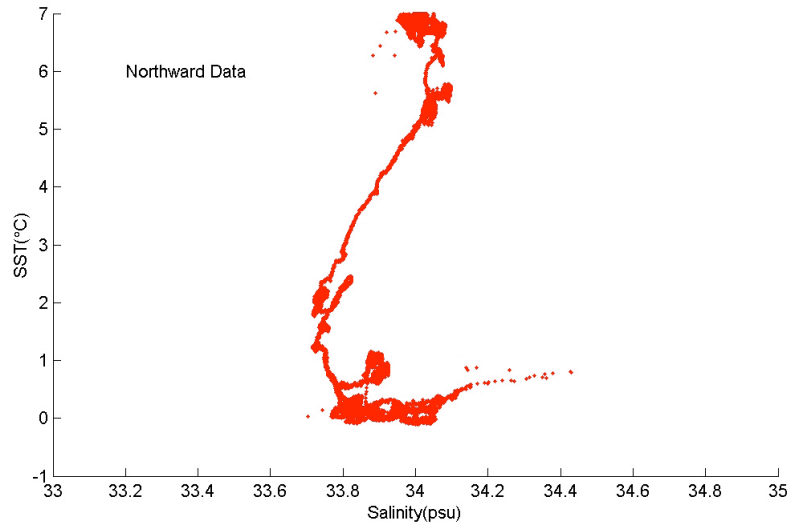
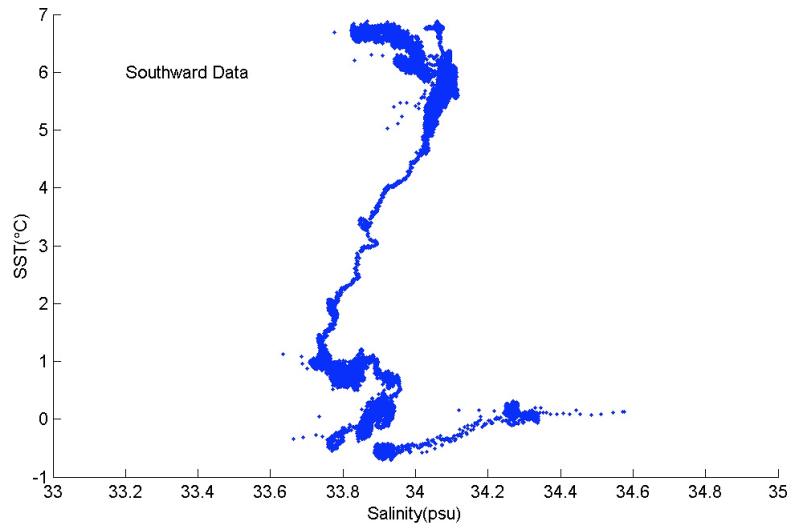


Figure 6.3: Plots of sea surface temperature (SST) against salinity.

The upper panel (blue) corresponds to data from the southbound leg across Drake Passage, and the lower panel (red) to data from the northbound leg.

Comparison of bathymetry systems

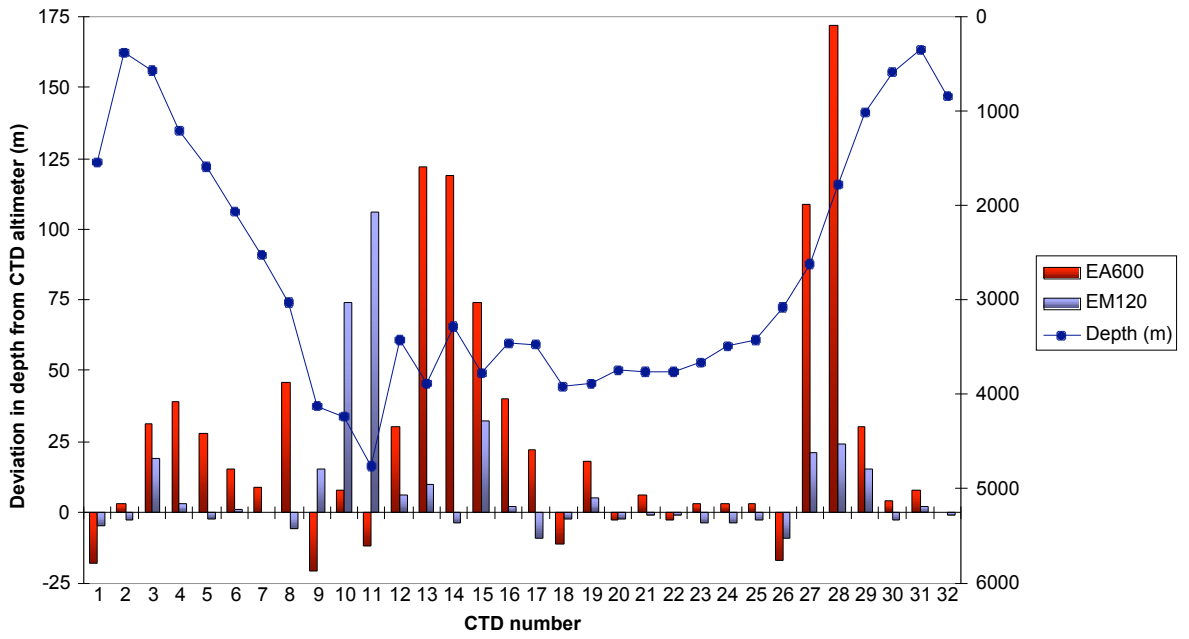


Figure 7.1: Comparison of EA600 and EM120 bathymetry systems