

OCEANOGRAPHY ALONG EAST ANTARCTICA (30 - 80° E) DURING THE BROKE-WEST SURVEY (CCAMLR AREA 58.4.2) IN THE AUSTRAL SUMMER OF 2006.

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A second East Antarctic Baseline Regional Oceanography Krill and Environment survey, termed BROKE-West, was conducted January 10th – February 25th 2006 and covered CCAMLR Area 58.4.2 west of the Princess Elizabeth Trough in the Weddell-Enderby Basin. This survey comprised 6 meridional Conductivity-Temperature-Depth (CTD) transects between 30 - 80° E from 62° S to the Antarctic coastal shelf, and a zonal CTD transect along 62° S. A ship-borne Acoustic Doppler Current Profile (ADCP) instrument and CTD-mounted Lowered ADCP were employed to measure surface and full-depth velocity profiles of the region. We describe the spatial variability in the properties of the Antarctic shelf and continental slope water masses: Antarctic Surface Water; Shelf Water; Tmin Water; Upper, Lower and Modified Circumpolar Deep Water and Antarctic Bottom Water. The position and properties of the major ocean fronts, i.e. the Antarctic Slope Front (ASF), Southern Boundary (SB) and Southern Antarctic Circumpolar Current Front (SACCF) are identified. These fronts, defined by sub-surface features, are examined with respect to the distribution of surface mixed layer properties from the CTD survey, including ship-based fluorometry and thermosalinograph data. Initial comparisons with preliminary results from the parallel biological and biogeochemical surveys demonstrate the importance of the physical environment to the structure of the marine ecosystem in this sector of East Antarctica.