

Aurora Australis JGOFS Cruises in the Southern Ocean

Cruise Summary: AU9501

Oceanographic measurements were conducted along the WOCE Southern Ocean meridional section SR3 between Tasmania and Antarctica, and around the boundary of a square-plan test volume south of the Antarctic Divergence from July to September 1995. Only the SR3 line results are reported here: a total of 52 CTD stations were done along this transect. Water bottle samples were collected for the measurement of salinity, dissolved oxygen, nutrients, dissolved organic and inorganic carbon, iodate/iodide, primary productivity, and biological parameters using both a 24 and a 12 bottle rosette sampler. Measurement and data processing techniques are summarised in Rosenberg et al, 1997.

Fluorescence and PAR profiles were collected within half an hour of the CTD casts using a Sea Bird CTD and a Sea Tech fluorometer.

Data included in this JGOFS data report include CTD, nutrients, HPLC chlorophyll-a, photosynthetic parameters determined using a production vs irradiance technique, and modelled water column primary production along the SR3 transect. The fluorescence profiles from each station were converted to chlorophyll-a profiles using the discrete depth HPLC chlorophyll-a samples from the same station.

References:

Rosenberg, M., Bray, S., Bindoff, N., Rintoul, S., Johnston, N., Bell, S., and Towler, P. 1997. *Aurora Australis marine Science cruises AU9501, AU9604, and AU9601 – oceanographic field measurements and analysis, intercruise comparisons and data quality notes*. Antarctic Cooperative Marine Research Centre, Research Report No. 12, September 1997. 150 pp.