

## **Aurora Australis JGOFS Cruises in the Southern Ocean Cruise Summary: AU9309 and AU9391**

Oceanographic measurements were conducted along the WOCE Southern Ocean meridional sections SR3 (AU9309) and P11 (AU9391) between Tasmania and Antarctica from March to May, 1993. Water bottle samples were collected for the measurement of salinity, dissolved oxygen, nutrients, dissolved inorganic carbon, carbon isotopes, barium, 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, 1995a. Fluorescence and PAR profiles were collected within half an hour of the CTD casts using a Sea Bird CTD and a Sea Tech fluorometer. Dissolved oxygen profiles determined using an oxygen electrode on the CTD are given for some CTD profiles in AU9309, but not for AU9391 due to problems with the sensor.

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., Eriksen, R. and Rintoul, S. 1995a. *Aurora Australis marine Science cruise AU9303/AU9391 – oceanographic field measurements and analysis*. Antarctic Cooperative Marine Research Centre, Research Report No. 2, July 1995. 103 pp.