

Figure Captions

Fig. 1. Map of WOCE Indian Ocean line locations, superimposed over 3500 m isobath, names of major topographic features included. The map includes the following lines: I1 August-October 1995; I2 December 1995-January 1996; I3 April-June 1995; I4 and I5W June-July 1995; I6S February-March 1996; I7 July-August 1995; I8N and I5E March-April 1995; I9N January-March 1995; I8S and I9S December 1994-January 1995; I10 November 1995; S4I May-July 1996. The abbreviations are B. for Basin, and P. for Plateau.

Fig. 2. Sections of CFC-11 versus pressure 0-2000 db are given for select one time WOCE cruises in the Indian Ocean. All CFC concentrations are in picomoles per kilogram seawater (pmol kg^{-1}). Full water column sections are presented where there are CFCs at concentrations exceeding $0.015 \text{ pmol kg}^{-1}$ below 2000 db (I6S and I8S). Top axis shows station numbers and locations, bottom axis shows distance along track and latitude or longitude. The dots show location of the discrete samples. The sections presented and their nominal latitudes and longitudes are: a) I6S (30°E), b) I8S (90°E), c) I7C-I7N (65°E), d) I9N (90°E). Dashed curves show contours for 24.7 , 25.7 , 26.2 , 26.7 , 27.1 , and $27.3 \sigma_\theta$.

Fig. 3. Maps of pCFC-12 ages (panels a-f for 24.0 , 24.7 , 25.7 , 26.2 , 26.7 , $27.1 \sigma_\theta$) and pCFC-11/pCFC-12 ratio ages (panels g-h for 27.1 and $27.3 \sigma_\theta$) in the Indian Ocean using one time WOCE lines. In the North Indian Ocean, ratio ages on $27.3 \sigma_\theta$ (panel h) could

not be calculated as the CFC concentrations there are too low. The dots only show locations of stations for which data are used in mapping (e.g., CFC >0.02 pmol/kg), dashed contours show the location of the surface austral winter outcrop. Unit of contour is 2 years. In areas with gray tones there are not enough data to contour.

Fig. 4. Map of CFC-11 concentrations (pmol kg⁻¹) on the 27.1 σ_θ isopycnal in the subtropical and tropical Indian Ocean using one time WOCE cruises. The dots only show locations of stations for which data are used in mapping. In areas with gray tones there are not enough data to contour.

Fig. 5. Map of CFC-11 concentrations (pmol kg⁻¹) using bottom bottles >3500 m. Unit of contour is the same as for the sections in Fig. 2 with the addition of 0.01 pmol kg⁻¹ contour. Bottom topography shallower than 3500 m is shaded in gray tones. The CFC-11 data are scarce in the area 50°-65°S, 40°-70°E. To compensate, we used the correlation between oxygen >5.7 ml/l and CFC-11 >0.35 pmol/kg in Enderby Basin Bottom Water along I6S. We then used the placement of oxygen contours on Mantyla and Reid's (1995) map of bottom oxygen (their Fig. 2d) as a guide for CFC-11 contours.