

UNDERWAY MEASUREMENTS OF PCO₂ IN THE SURFACE LAYER DURING PROSOPE CRUISE

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The measurements of CO₂ partial pressure were performed according to the principle described by Copin-Montégut (1985).

Data of pCO₂ and physical properties of surface waters are presented in form of daily files, beginning the 7th of September to 4th October 1999. Data have been acquired each minute, so length of file is 1440 rows. Files are named as pco_ddmm.dat (29 files at all).

Numbers columns of each file are:

- Col. #1: time in Julian days since the 1st January 1999 (UT)
- Col. #2: time in seconds since the first day of the cruise (7th September 1999) (UT)
- Col. #3: latitude (in degree and hundredth of degree)
- Col. #4: longitude (in degree and hundredth of degree)
- Col. #5: atmospheric pressure (in mbar)
- Col. #6: wind speed (in m s⁻¹, measured from the boat anemometer at 29.2 meters height)
- Col. #7: measured temperature (in °C)
- Col. #8: measured pCO₂ (in µatm)
- Col. #9: salinity (from the thermosalinograph)
- Col. #10: temperature in situ (in °C, from the thermosalinograph)
- Col. #11: fluorescence expressed in equivalent of chl_a (in mg/l) (from the Wetstar fluorimeter)
- Col. #12: in situ pCO₂ (in µatm)
- Col. #13: pCO₂ at 13°C (in µatm)
- Col. #14: density excess (in kg m⁻³)

Reference:

Copin-Montégut, C. (1985). A method for the continuous determination of the partial pressure of carbon dioxide in the upper ocean. *Marine Chemistry*, **17**, 13-21.