QUERY:
* from OCEAN Underway

**Current Database: OCEAN Underway**

**Dataset ID:** R/V Nathaniel B. Palmer Lines

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**Dataset Info:**
- Dataset ID: R/V Nathaniel B. Palmer Lines
- Submission Dates:
  - Initial Submission:
  - Revised Submission:

**Cruise Info:**
- **Experiment:**
  - Experiment Name: VOS Underway Measurements
- **Cruise:**
  - Cruise ID: R/V Nathaniel B. Palmer Lines
  - Section: R/V Nathaniel B. Palmer Lines
- **Geographical Coverage:**
  - **Geographical Region:**
  - **Bounds:**
  - **Temporal Coverage:**
  - **Start Date:** 19960101 **End Date:** 20061231

**Vessel:**
- **Vessel Name:** R/V Nathaniel B. Palmer
- **Vessel ID:** 3206
- **Country:** USA
- **Vessel Owner:** Edison Chouest Offshore

**Variables Info:**

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>Description of Variable</th>
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### Method Description:

**Equilibrator Design:**

- **Equilibrator Type:** Infra-red CO2 Gas Analyzer
- **Equilibrator Volume:** 30
- **Water Flow Rate:** 10
- **Headspace Gas Flow Rate:** 60 mL/min
- **Vented:**

**Measurement Method:** infra-red analysis on dry gas

**Manufacturer of Calibration Gas:**

**CO2 Sensors:**

- **Manufacturer:** LI-COR
- **Model:** Model 6251, Lincoln, NB

**Environmental Control:**

**Resolution:**

**Uncertainty:**

**CO2 Sensor Calibration:**

The system for underway measurements of pCO2 in surface waters consists of a) a water-air equilibrator, b) a non-dispersive infra-red CO2 gas analyzer and c) a data logging system. The measurement system is schematically shown in Fig. 1, and is similar with the one described in Bates et al. (1998).

**Method References:**


**Data set References:**

**Citation:**

B. Palmer Expeditions.  
http://cdiac.ornl.gov/oceans/VOS_Program/palmer.htm

Underway measurements during R/V Nathaniel B.  
Palmer Expeditions