

# Dissolved iron and aluminum concentrations from bottle casts from R/V Roger Revelle KIWI6, KIWI7, KIWI8, KIWI9 cruises in the Southern Ocean, 1998 (U.S. JGOFS AESOPS project)

**Website:** <https://www.bco-dmo.org/dataset/2774>

**Version:** March 13, 2002

**Version Date:** 2002-03-13

## Project

» [U.S. JGOFS Antarctic Environment and Southern Ocean Process Study](#) (AESOPS)

## Program

» [U.S. Joint Global Ocean Flux Study](#) (U.S. JGOFS)

Contributors	Affiliation	Role
<a href="#">Measures, Christopher L.</a>	University of Hawai'i at Mānoa (SOEST)	Principal Investigator
<a href="#">Chandler, Cynthia L.</a>	Woods Hole Oceanographic Institution (WHOI BCO-DMO)	BCO-DMO Data Manager

## Table of Contents

- [Dataset Description](#)
- [Data Files](#)
- [Parameters](#)
- [Instruments](#)
- [Deployments](#)
- [Project Information](#)
- [Program Information](#)

---

## Dataset Description

Dissolved iron and aluminum concentrations from bottle casts

[ [table of contents](#) | [back to top](#) ]

---

## Data Files

## File

**trace\_Fe\_AI\_KIWI6.csv** (Comma Separated Values (.csv), 3.03 KB)  
MD5:b0db60ccd86c1ecfb67204c008445eed

Version March 13, 2002 (previous version June 12, 2000)  
PI: Christopher Measures  
of: School of Ocean and Earth Science and Technology at the University of Hawaii  
dataset: Dissolved iron and aluminum concentrations from bottle casts  
cruise: AESOPS KIW06, APFZ Survey 1 cruise  
ship: R/V Roger A. Revelle

**trace\_Fe\_AI\_KIWI7.csv** (Comma Separated Values (.csv), 9.18 KB)  
MD5:748ec24d0d1dcf21588947c77f185a72

Version March 13, 2002 (previous version June 12, 2000)  
PI: Christopher Measures  
of: School of Ocean and Earth Science and Technology at the University of Hawaii  
dataset: Dissolved iron and aluminum concentrations from bottle casts  
cruise: AESOPS KIW07, APFZ Process 1 cruise  
ship: R/V Roger A. Revelle

**trace\_Fe\_AI\_KIWI8.csv** (Comma Separated Values (.csv), 4.68 KB)  
MD5:3cd1b2c4bcf0d28a977642c30bda95f9

Version March 13, 2002 (previous version June 12, 2000)  
PI: Christopher Measures  
of: School of Ocean and Earth Science and Technology at the University of Hawaii  
dataset: Dissolved iron and aluminum concentrations from bottle casts  
cruise: AESOPS KIW08, APFZ Survey 2 cruise  
ship: R/V Roger A. Revelle

**trace\_Fe\_AI\_KIWI9.csv** (Comma Separated Values (.csv), 12.57 KB)  
MD5:a7d9dfa1b515d3589e4ddc34e0ed50f2

Version March 13, 2002 (previous version June 12, 2000)  
PI: Christopher Measures  
of: School of Ocean and Earth Science and Technology at the University of Hawaii  
dataset: Dissolved iron and aluminum concentrations from bottle casts  
cruise: AESOPS KIW09, APFZ Process 2 cruise  
ship: R/V Roger A. Revelle

[ [table of contents](#) | [back to top](#) ]

---

## Parameters

Parameter	Description	Units
event	event number from event log	
sta	station number from event log	
cast	cast number	
cast_type	CTD = CTD rosette TM = Trace Metal rosette Go_Flo	
bot	bottle number	
depth_n	nominal sample depth	meters
Al_diss_lt0d2	dissolved aluminum conc. <0.2 microns	nanomoles/liter
Fe_diss_lt0d2	dissolved iron conc. <0.2 microns	nanomoles/liter

[ [table of contents](#) | [back to top](#) ]

## Instruments

<b>Dataset-specific Instrument Name</b>	Niskin Bottle
<b>Generic Instrument Name</b>	Niskin bottle
<b>Dataset-specific Description</b>	CTD clean rosette (Niskin) bottles were used to collect water samples.
<b>Generic Instrument Description</b>	A Niskin bottle (a next generation water sampler based on the Nansen bottle) is a cylindrical, non-metallic water collection device with stoppers at both ends. The bottles can be attached individually on a hydrowire or deployed in 12, 24, or 36 bottle Rosette systems mounted on a frame and combined with a CTD. Niskin bottles are used to collect discrete water samples for a range of measurements including pigments, nutrients, plankton, etc.

<b>Dataset-specific Instrument Name</b>	Trace Metal Bottle
<b>Generic Instrument Name</b>	Trace Metal Bottle
<b>Dataset-specific Description</b>	Trace metal (TM) clean rosette bottles were used to collect water samples.
<b>Generic Instrument Description</b>	Trace metal (TM) clean rosette bottle used for collecting trace metal clean seawater samples.

## Deployments

### KIWI6

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57724">https://www.bco-dmo.org/deployment/57724</a>
<b>Platform</b>	R/V Roger Revelle
<b>Report</b>	<a href="http://usjgofs.whoi.edu/aesops/RRs1.html">http://usjgofs.whoi.edu/aesops/RRs1.html</a>
<b>Start Date</b>	1997-10-20
<b>End Date</b>	1997-11-24
<b>Description</b>	<p>Polar Front Survey I. Additional information about this cruise can be found at <a href="https://usjgofs.whoi.edu/aesops/aboutrr6.html">https://usjgofs.whoi.edu/aesops/aboutrr6.html</a></p> <p><b>Methods &amp; Sampling</b> PI: Christopher Measures of: School of Ocean and Earth Science and Technology at the University of Hawaii dataset: Dissolved iron and aluminum conc. from bottle casts dates: October 31, 1997 to November 18, 1997 location: N: -59.333 S: -61 W: -171.9 E: -168.0622 project/cruise: AESOPS/KIWI6, APFZ Polar Front Survey cruise 1 ship: R/V Roger Revelle Notes and Methodology</p>

### KIWI7

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57725">https://www.bco-dmo.org/deployment/57725</a>
<b>Platform</b>	R/V Roger Revelle
<b>Report</b>	<a href="http://usjgofs.whoi.edu/aesops/RRp1.html">http://usjgofs.whoi.edu/aesops/RRp1.html</a>
<b>Start Date</b>	1997-12-02
<b>End Date</b>	1998-01-03
<b>Description</b>	<p>Polar Front Process I. Additional information about this cruise can be found at <a href="https://usjgofs.whoi.edu/aesops/aboutrr7.html">https://usjgofs.whoi.edu/aesops/aboutrr7.html</a></p> <p><b>Methods &amp; Sampling</b> PI: Christopher Measures of: School of Ocean and Earth Science and Technology at the University of Hawaii dataset: Dissolved iron and aluminum conc. from bottle casts dates: December 09, 1997 to December 30, 1997 location: N: -52.9143 S: -64.7222 W: -174.7303 E: -168.8302 project/cruise: AESOPS/KIWI7, APFZ Polar Front Process cruise 1 ship: R/V Roger Revelle Notes and Methodology</p>

### KIWI8

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57726">https://www.bco-dmo.org/deployment/57726</a>
<b>Platform</b>	R/V Roger Revelle
<b>Report</b>	<a href="http://usjgofs.whoi.edu/aesops/RRs2.html">http://usjgofs.whoi.edu/aesops/RRs2.html</a>
<b>Start Date</b>	1998-01-08
<b>End Date</b>	1998-02-08
<b>Description</b>	<p>Polar Front Survey II. Additional information about this cruise can be found at <a href="https://usjgofs.whoi.edu/aesops/aboutrr8.html">https://usjgofs.whoi.edu/aesops/aboutrr8.html</a></p> <p><b>Methods &amp; Sampling</b>  PI: Christopher Measures of: School of Ocean and Earth Science and Technology at the University of Hawaii dataset: Dissolved iron and aluminum conc. from bottle casts dates: January 12, 1998 to January 29, 1998 location: N: -57 S: -67.7872 W: -170.1283 E: -169.9983 project/cruise: AESOPS/KIWI8, APFZ Polar Front Survey cruise 2 ship: R/V Roger Revelle Notes and Methodology</p>

## KIWI9

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57727">https://www.bco-dmo.org/deployment/57727</a>
<b>Platform</b>	R/V Roger Revelle
<b>Report</b>	<a href="http://usjgofs.whoi.edu/aesops/RRp2.html">http://usjgofs.whoi.edu/aesops/RRp2.html</a>
<b>Start Date</b>	1998-02-13
<b>End Date</b>	1998-03-19
<b>Description</b>	<p>Polar Front Process II. Additional information about this cruise can be found at <a href="https://usjgofs.whoi.edu/aesops/aboutrr9.html">https://usjgofs.whoi.edu/aesops/aboutrr9.html</a></p> <p><b>Methods &amp; Sampling</b>  PI: Christopher Measures of: School of Ocean and Earth Science and Technology at the University of Hawaii dataset: Dissolved iron and aluminum conc. from bottle casts dates: February 18, 1998 to March 15, 1998 location: N: -52.967 S: -71.3072 W: -174.7297 E: -165.9143 project/cruise: AESOPS/KIWI9, APFZ Polar Front Process cruise 2 ship: R/V Roger Revelle Notes and Methodology</p>

[ [table of contents](#) | [back to top](#) ]

## Project Information

### U.S. JGOFS Antarctic Environment and Southern Ocean Process Study (AESOPS)

**Website:** <http://usjgofs.whoi.edu/research/aesops.html>

**Coverage:** Southern Ocean, Ross Sea

The U.S. Southern Ocean JGOFS program, called Antarctic Environment and Southern Ocean Process Study (AESOPS), began in August 1996 and continued through March 1998. The U.S. JGOFS AESOPS program focused on two regions in the Southern Ocean: an east/west section of the Ross-Sea continental shelf along 76.5°S, and a second north/south section of the Southern Ocean spanning the Antarctic Circumpolar Current (ACC) at ~170°W (identified as the Polar Front). The science program, coordinated by Antarctic Support Associates (ASA), comprised eleven cruises using the R.V.I.B Nathaniel B. Palmer and R/V Roger Revelle as observational platforms and for deployment and recovery of instrumented moorings and sediment-trap arrays. The Ross-Sea region was occupied on six occasions and the Polar Front five times. Mapping data were obtained from SeaSoar, ADCP, and bathymetric systems. Satellite coverage was provided by the NASA

SeaWiFS and the NOAA/NASA Pathfinder programs.

[ [table of contents](#) | [back to top](#) ]

---

## **Program Information**

### **U.S. Joint Global Ocean Flux Study (U.S. JGOFS)**

**Website:** <http://usjgofs.whoi.edu/>

**Coverage:** Global

The United States Joint Global Ocean Flux Study was a national component of international JGOFS and an integral part of global climate change research.

The U.S. launched the Joint Global Ocean Flux Study (JGOFS) in the late 1980s to study the ocean carbon cycle. An ambitious goal was set to understand the controls on the concentrations and fluxes of carbon and associated nutrients in the ocean. A new field of ocean biogeochemistry emerged with an emphasis on quality measurements of carbon system parameters and interdisciplinary field studies of the biological, chemical and physical process which control the ocean carbon cycle. As we studied ocean biogeochemistry, we learned that our simple views of carbon uptake and transport were severely limited, and a new "wave" of ocean science was born. U.S. JGOFS has been supported primarily by the U.S. National Science Foundation in collaboration with the National Oceanic and Atmospheric Administration, the National Aeronautics and Space Administration, the Department of Energy and the Office of Naval Research. U.S. JGOFS, ended in 2005 with the conclusion of the Synthesis and Modeling Project (SMP).

[ [table of contents](#) | [back to top](#) ]