

Optics - particulate beam attenuation from RVIB Nathaniel B. Palmer, R/V Roger Revelle NBP-97-8, KIWI8, KIWI9 cruises in the Southern Ocean, 1997-1998 (U.S. JGOFS AESOPS project)

Website: <https://www.bco-dmo.org/dataset/2778>

Version: December 16, 2002

Version Date: 2002-12-16

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 |
|--------------------------------------|---|---------------------------|
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Dataset Description

Optics - particulate beam attenuation

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Parameters

| Parameter | Description | Units |
|-----------|--|--------|
| cruise_id | cruise designation | |
| event | event number from event log | |
| cast_type | up or down cast of instrument package | |
| depth_n | nominal depth | meters |
| cp_488 | particulate beam attenuation at 488 nm | 1/m |
| cp_660 | particulate beam attenuation at 660 nm | 1/m |

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Instruments

| | |
|---|---|
| Dataset-specific Instrument Name | Transmissometer |
| Generic Instrument Name | Transmissometer |
| Dataset-specific Description | These data are from the 2 Wetlabs c-Star 25cm transmissometers used on the JGOFS NBP9711 profiling package: the 488nm c-star (SN CST-165B) and the 660nm c-Star (SN CST-166R). The transmissometer data were collected with a MER 2040. |
| Generic Instrument Description | A transmissometer measures the beam attenuation coefficient of the lightsource over the instrument's path-length. This instrument designation is used when specific manufacturer, make and model are not known. |

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Deployments

NBP-97-08

| | |
|--------------------|---|
| Website | https://www.bco-dmo.org/deployment/57722 |
| Platform | RVIB Nathaniel B. Palmer |
| Report | http://usjgofs.whoi.edu/aesops/p4.html |
| Start Date | 1997-11-05 |
| End Date | 1997-12-13 |
| Description | <p>Ross Sea Process Study 4 SeaWiFS transmits images to U.S. JGOFS scientists aboard the Palmer, for first time on November 23, 1997.</p> <p>Methods & Sampling PI: Greg Mitchell of: Scripps Institution of Oceanography dataset: Optics - transmissometer particulate beam attenuation dates: November 09, 1997 to December 11, 1997 location: N: -60.1623 S: -76.6332 W: 168.7350 E: -169.9500 project/cruise: AESOPS/NBP97-8 - Process 4 cruise ship: R/V Nathaniel B. Palmer Methodology</p> |

KIWI8

| | |
|--------------------|--|
| Website | https://www.bco-dmo.org/deployment/57726 |
| Platform | R/V Roger Revelle |
| Report | http://usjgofs.whoi.edu/aesops/RRs2.html |
| Start Date | 1998-01-08 |
| End Date | 1998-02-08 |
| Description | <p>Polar Front Survey II</p> <p>Methods & Sampling PI: Greg Mitchell of: Scripps Institution of Oceanography dataset: Optics - transmissometer particulate beam attenuation dates: January 16, 1998 to January 28, 1998 location: N: -60 S: -67.7842 W: -170.1117 E: -170.0833 project/cruise: AESOPS/KIWI-8 - APFZ Survey 2 cruise ship: R/V Roger A. Revelle Methodology</p> |

KIWI9

| | |
|--------------------|--|
| Website | https://www.bco-dmo.org/deployment/57727 |
| Platform | R/V Roger Revelle |
| Report | http://usjgofs.who.edu/aesops/RRp2.html |
| Start Date | 1998-02-13 |
| End Date | 1998-03-19 |
| Description | <p>Polar Front Process II</p> <p>Methods & Sampling</p> <p>PI: Greg Mitchell of: Scripps Institution of Oceanography dataset: Optics - transmissometer particulate beam attenuation dates: February 14, 1998 to March 14, 1998 location: N: -49.9033 S: -71.3157 W: -178.8257 E: -165.9248 project/cruise: AESOPS/KIWI-9 - APFZ Process 2 cruise ship: R/V Roger A. Revelle Methodology</p> |

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Project Information

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

Website: <http://usjgofs.who.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.

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Program Information

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

Website: <http://usjgofs.who.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).

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