

Processed CTD data from TM casts from RVIB Nathaniel B. Palmer, R/V Roger Revelle NBP-96-4A, NBP-97-3, NBP-97-8, KIWI6, KIWI8, KIWI9 cruises in the Southern Ocean, 1997-1998 (U.S. JGOFS AESOPS project)

Website: <https://www.bco-dmo.org/dataset/2742>

Version: July 8, 1999

Version Date: 1999-07-08

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
Morrison, John M.	North Carolina State University - Marine, Earth and Atmospheric Sciences (NCSU MEAS)	Principal Investigator
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Dataset Description

Processed CTD data from TM casts

Methods & Sampling

PI: John Morrison
of: North Carolina State University
dataset: Processed CTD data from TM casts

AESOPS Investigators, Please note:

Begin and end parameters for time, latitude and longitude are provided in the core CTD and Bottle data. Investigators submitting data related to CTD/Bottle casts are urged to use the single lat/lon entry from the Chief Scientist's event log.

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Data Files

File	
TMctd_KIWI6.csv	(Comma Separated Values (.csv), 180.48 KB) MD5:f15403aa7bf51a922108de1f9c3cf5e9 version January 8, 1999 John Morrison CTD data for TM casts AESOPS KIW06, Survey Cruise 1
TMctd_KIWI8.csv	(Comma Separated Values (.csv), 370.88 KB) MD5:618a4152f28ab04db549c854fa6621ab version January 15, 1999 John Morrison CTD data for TM casts AESOPS KIW08, Survey Cruise 2
TMctd_KIWI9.csv	(Comma Separated Values (.csv), 966.40 KB) MD5:8932e80a7ab8b3cd1793702543ff8a3e version July 8, 1999 John Morrison CTD data from TM casts AESOPS/RR_KIW09, APFZ Process 2 cruise
TMctd_NBP-96-04A.csv	(Comma Separated Values (.csv), 272.15 KB) MD5:96c3c26eba80535e39fa28fd8219d03 version October 1, 1998 John Morrison CTD data for TM casts AESOPS NBP96-4A, Process Cruise 1
TMctd_NBP-97-03.csv	(Comma Separated Values (.csv), 515.06 KB) MD5:6304dc41e7781413aa0569e2b3cd71ed version October 1, 1998 John Morrison CTD data for TM casts AESOPS NBP97-3, Process Cruise 3
TMctd_NBP-97-08.csv	(Comma Separated Values (.csv), 1.43 MB) MD5:2fcf6316b1dbdb7c46a59decb039ad27 version November 10, 1998 John Morrison CTD data for TM casts AESOPS NBP97-8, Process Cruise 4

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Parameters

Parameter	Description	Units
event	event number from event log	
sta	station number from event log	

cast	CTD rosette cast number	
date	date (YYYYMMDD) decoded as follows YYYY = year, MM = month, DD = day Date converted to GMT.	
time_begin	starting time of cast in UTC	decimal hours
time_end	ending time of cast in UTC	decimal hours
lat_begin	starting latitude of cast, negative = south	decimal degrees
lon_begin	starting longitude of cast, negative = west	decimal degrees
lat_end	ending latitude of cast	decimal degrees
lon_end	ending longitude of cast	decimal degrees
depth	depth of sample	meters
press	depth of sample reported as pressure	decibars
temp	temperature	degrees C
cond	conductivity CTD	millimohs
sal	salinity	
potemp	potential temperture	degrees C
sigma_t	sigma t	kilograms/meter ³
sigma_0	potential density	kilograms/meter ³
par	PAR (Irradiance)	uEinsteins/cm ² /sec
O2_1	oxygen	milliliters/liter
O2_2	oxygen	micromoles/kilogram

O2_3	oxygen	micromoles/liter
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Instruments

Dataset-specific Instrument Name	CTD Sea-Bird
Generic Instrument Name	CTD Sea-Bird
Generic Instrument Description	A Conductivity, Temperature, Depth (CTD) sensor package from SeaBird Electronics. This instrument designation is used when specific make and model are not known or when a more specific term is not available in the BCO-DMO vocabulary. Refer to the dataset-specific metadata for more information about the specific CTD used. More information from: http://www.seabird.com/

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Deployments

NBP-96-04A

Website	https://www.bco-dmo.org/deployment/57718
Platform	RVIB Nathaniel B. Palmer
Report	http://usjgofs.whoi.edu/aesops/p1.html
Start Date	1996-10-02
End Date	1996-11-08
Description	<p>Ross Sea Process Study 1</p> <p>Methods & Sampling PI: John Morrison of: North Carolina State University dataset: Processed CTD data from TM casts dates: October 08, 1996 to November 06, 1996 location: N: -63.454 S: -77.9638 W: 168.9967 E: -170.5822 project/cruise: AESOPS/NBP-96-4A - Ross Sea Process 1 Cruise ship: R/V Nathaniel B. Palmer Sampling Methodology PI-Note: The CTD transmissometer, fluorometer, light scattering and PAR measurements are currently being calibrated by other investigators AESOPS Investigators, Please note: Begin and end parameters for time, latitude and longitude are provided in the core CTD and Bottle data. Investigators submitting data related to CTD/Bottle casts are urged to use the single lat/lon entry from the Chief Scientist's event log.</p>

NBP-97-03

Website	https://www.bco-dmo.org/deployment/57721
Platform	RVIB Nathaniel B. Palmer
Report	http://usjgofs.whoi.edu/aesops/p3.html
Start Date	1997-04-04
End Date	1997-05-11
Description	<p>Ross Sea Process Study 3</p> <p>Methods & Sampling PI: John Morrison of: North Carolina State University dataset: Processed CTD data from TM casts dates: April 09, 1997 to April 24, 1997 location: N: -67.6378 S: -77.9962 W: 169.0144 E: -176.0121 project/cruise: AESOPS/NBP-97-3 - Ross Sea Process Cruise 3 ship: R/V Nathaniel B. Palmer Sampling Methodology PI-Note: The CTD transmissometer, fluorometer, light scattering and PAR measurements are currently being calibrated by other investigators AESOPS Investigators, Please note: Begin and end parameters for time, latitude and longitude are provided in the core CTD and Bottle data. Investigators submitting data related to CTD/Bottle casts are urged to use the single lat/lon entry from the Chief Scientist's event log.</p>

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: John Morrison of: North Carolina State University dataset: Processed CTD data from TM casts dates: November 14, 1997 to December 11, 1997 location: N: -71.4372 S: -76.6287 W: 168.9257 E: -177.9637 project/cruise: AESOPS/NBP-97-8 - Ross Sea Process Cruise 4 ship: R/V Nathaniel B. Palmer Sampling Methodology PI-Note: The CTD transmissometer, fluorometer, light scattering and PAR measurements are currently being calibrated by other investigators AESOPS Investigators, Please note: Begin and end parameters for time, latitude and longitude are provided in the core CTD and Bottle data. Investigators submitting data related to CTD/Bottle casts are urged to use the single lat/lon entry from the Chief Scientist's event log.</p>

KIWI6

Website	https://www.bco-dmo.org/deployment/57724
Platform	R/V Roger Revelle
Report	http://usjgofs.whoi.edu/aesops/RRs1.html
Start Date	1997-10-20
End Date	1997-11-24
Description	<p>Polar Front Survey I. Additional information about this cruise can be found at https://usjgofs.whoi.edu/aesops/aboutrr6.html</p> <p>Methods & Sampling PI: John Morrison of: North Carolina State University dataset: Processed CTD data from TM casts dates: October 24, 1997 to November 04, 1997 location: N: -57 S: -62.3658 W: -170.0765 E: -168.9993 project/cruise: AESOPS/KIWI06 - APFZ Polar Front Survey Cruise 1 ship: R/V Roger Revelle Sampling Methodology PI-Note: The CTD transmissometer, fluorometer, light scattering and PAR measurements are currently being calibrated by other investigators AESOPS Investigators, Please note: Begin and end parameters for time, latitude and longitude are provided in the core CTD and Bottle data. Investigators submitting data related to CTD/Bottle casts are urged to use the single lat/lon entry from the Chief Scientist's event log.</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. Additional information about this cruise can be found at https://usjgofs.whoi.edu/aesops/aboutrr8.html</p> <p>Methods & Sampling PI: John Morrison of: North Carolina State University dataset: Processed CTD data from TM casts dates: January 16, 1998 to January 28, 1998 location: N: -60 S: -67.7842 W: -170.1283 E: -170.1 project/cruise: AESOPS/KIWI08 - APFZ Polar Front Survey Cruise 2 ship: R/V Roger Revelle Sampling Methodology Beware! PI-Note All of the casts made with the TM Rosette CTD were mostly within the high salinity gradient surface region. Because of the slow time constant response of the SeaCat CTD, the conductivity data are quite noisy. No effort has been made to clean up this data as it would basically have made the profile worthless. Therefore, the TM Rosette CTD data reported here has been calibrated for conductivity difference between the bottles, but otherwise are "raw" data which might be at least of some use in identifying the conductivity(salinity) gradients in the upper layer. AESOPS Investigators, Please note: Begin and end parameters for time, latitude and longitude are provided in the core CTD and Bottle data. Investigators submitting data related to CTD/Bottle casts are urged to use the single lat/lon entry from the Chief Scientist's event log.</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. Additional information about this cruise can be found at https://usjgofs.who.edu/aesops/aboutrr9.html</p> <p>Methods & Sampling PI: John Morrison of: North Carolina State University dataset: Processed CTD data from TM casts dates: February 18, 1998 to March 14, 1998 location: N: -54.3333 S: -71.3072 W: -173.3333 E: -165.9132 project/cruise: AESOPS/KIWI09 - APFZ Polar Front Process Cruise 2 ship: R/V Roger Revelle Sampling Methodology Beware! PI-Note All of the casts made with the TM Rosette CTD were mostly within the high salinity gradient surface region. Because of the slow time constant response of the SeaCat CTD, the conductivity data are quite noisy. No effort has been made to clean up this data as it would basically have made the profile worthless. Therefore, the TM Rosette CTD data reported here has been calibrated for conductivity difference between the bottles, but otherwise are "raw" data which might be at least of some use in identifying the conductivity(salinity) gradients in the upper layer. AESOPS Investigators, Please note: Begin and end parameters for time, latitude and longitude are provided in the core CTD and Bottle data. Investigators submitting data related to CTD/Bottle casts are urged to use the single lat/lon entry from the Chief Scientist's event log.</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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