Particulate carbon, nitrogen and chlorophyll pigments from R/V Thomas G. Thompson cruises TT007, TT011 in the Equatorial Pacific in 1992 during the U.S. JGOFS Equatorial Pacific (EqPac) project

Website: https://www.bco-dmo.org/dataset/2656
Version: November 27, 1995
Version Date: 1995-11-27

Project
» U.S. JGOFS Equatorial Pacific (EqPac)

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

Contributors	Affiliation	Role
Newton, Jan	University of Washington (UW)	Principal Investigator
Murray, James W.	University of Washington (UW)	Co-Principal Investigator
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Table of Contents

Dataset Description

Particulate Carbon, Nitrogen and chlorophyll pigments from sediment trap samples

Methods & Sampling

See Platform deployments for cruise specific documentation

[table of contents | back to top]

Data Files

File
poc_pn_trap_TT007.csv (Comma Separated Values (.csv), 2.29 KB) MD5:f5622a2bb219552f23cf946d3bbec3e9 version November 27, 1995 Jan Newton and Jim Murray, Univ. of Washington Particulate Carbon and Nitrogen and chlorophyll pigments from floating sediment trap samples Thomas Thompson, cruise TT007 to the Equatorial Pacific
poc_pn_trap_TT011.csv (Comma Separated Values (.csv), 2.76 KB) MD5:e85b41ecb25ccdd8140763cfac4c5183 version November 27, 1995 Jan Newton and Jim Murray, Univ. of Washington Particulate Carbon and Nitrogen and chlorophyll pigments from floating sediment trap samples Thomas Thompson, cruise TT011 to the Equatorial Pacific sta = station number from event log event = event number from event log, can be translated into date/time (MMDDHHmm) sediment trap deployed date_re = date/time (MMDDHHmm) sediment trap recovered depth = depth of trap below water surface, units = meters POC_f = Particulate organic carbon flux, units = mg C/m^2/d PN_f = Particulate nitrogen flux, units = mg N/m^2/d chl_f = chlorophyll flux, units = mg chl/m^2/d (fluorometer detects chlorophyll-a and chlorophyllide-a) phaeo_f = phaeopigment flux, units = mg chl/m^2/d (fluorometer detects phaeophorbide-a, phaeophytin-a, and other phaeopigments of chl-a) nd = chlorophyll-b interference

[table of contents | back to top]

Parameters

Parameter	Description	Units
sta	station number from event log	
event	event number from event log, can be translated into date/time (MMDDHHmm) sediment trap deployed	
date_re	date/time (MMDDHHmm) sediment trap recovered	
depth	depth of trap below water surface	meters
POC_f	Particulate organic carbon flux	mg C/m^2/d
PN_f	Particulate nitrogen flux	mg N/m^2/d
chl_f	chlorophyll flux (fluorometer detects chlorophyll-a and chlorophyllide-a)	mg chl/m^2/d
phaeo_f	phaeopigment flux (fluorometer detects phaeophorbide-a, phaeophytin-a, and other phaeopigments of chl-a)	mg chl/m^2/d

[table of contents | back to top]

Instruments

Dataset-specific Instrument Name	Sediment Trap
Generic Instrument Name	Sediment Trap
Generic Instrument Description	Sediment traps are specially designed containers deployed in the water column for periods of time to collect particles from the water column falling toward the sea floor. In general a sediment trap has a jar at the bottom to collect the sample and a broad funnel-shaped opening at the top with baffles to keep out very large objects and help prevent the funnel from clogging. This designation is used when the specific type of sediment trap was not specified by the contributing investigator.

Dataset-specific Instrument Name	Floating Sediment Trap
Generic Instrument Name	Sediment Trap - Floating
Generic Instrument Description	Floating sediment traps are specially designed sampling devices deployed to float in the water column (as opposed to being secured to a mooring at a fixed depth) for periods of time to collect particles from the water column that are falling toward the sea floor. In general a sediment trap has a container at the bottom to collect the sample and a broad funnel-shaped opening at the top with baffles to keep out very large objects and help prevent the funnel from clogging. The 'Sediment Trap -Floating' designation is used for a floating type of sediment trap about which no other design details are known.

[table of contents | back to top]

Deployments

TT007

Website	https://www.bco-dmo.org/deployment/57728
Platform	R/V Thomas G. Thompson
Start Date	1992-01-30
End Date	1992-03-13
Description	Purpose: Spring Survey Cruise; 12°N-12°S at 140°W TT007 was one of five cruises conducted in 1992 in support of the U.S. Equatorial Pacific (EqPac) Process Study. The five EqPac cruises aboard R/V Thomas G. Thompson included two repeat meridional sections (12°N - 12°S), 2 equatorial surveys, and a benthic survey (all at 140° W). The scientific objectives of this study were to observe the processes in the Equatorial Pacific controlling the fluxes of carbon and related elements between the atmosphere, euphotic zone, and deep ocean. As luck would have it, the survey window coincided with an El Nino event. A bonus for the research team. **Methods & Sampling** PI: Jan Newton, James Murray of: University of Washington dataset: Particulate Carbon, Nitrogen and chlorophyll pigments sediment trap samples dates: February 04, 1992 to March 07, 1992 location: N: 11.9988 S: -12.0013 W: -140.0383 E: -134.9993 project/cruise: EqPac/TT007 - Spring Survey ship: Thomas Thompson

TT011

Website	https://www.bco-dmo.org/deployment/57730
Platform	R/V Thomas G. Thompson
Start Date	1992-08-05
End Date	1992-09-18
Description	Purpose: Fall Survey; 12°N-12°S at 140°W TT011 was one of five cruises conducted in 1992 in support of the U.S. Equatorial Pacific (EqPac) Process Study. The five EqPac cruises aboard R/V Thomas G. Thompson included two repeat meridional sections (12°N - 12°S), 2 equatorial surveys, and a benthic survey (all at 140° W). The scientific objectives of this study were to observe the processes in the Equatorial Pacific controlling the fluxes of carbon and related elements between the atmosphere, euphotic zone, and deep ocean. As luck would have it, the survey window coincided with an El Nino event. A bonus for the research team. **Methods & Sampling** PI: Jan Newton, James Murray of: University of Washington dataset: Particulate Carbon, Nitrogen and chlorophyll pigments sediment trap samples dates: August 09, 1992 to September 12, 1992 location: N: 12.0033 S: -12.0067 W: -140.035 E: -134.9917 project/cruise: EqPac/TT011 - Fall Survey ship: Thomas Thompson

[table of contents | back to top]

Project Information

U.S. JGOFS Equatorial Pacific (EqPac)

Website: http://usjgofs.whoi.edu/research/eqpac.html

Coverage: Equatorial Pacific

The U.S. EqPac process study consisted of repeat meridional sections (12°N -12°S) across the equator in the central and eastern equatorial Pacific from 95°W to 170°W during 1992. The major scientific program was focused at 140° W consisting of two meridional surveys, two equatorial surveys, and a benthic survey aboard the R/V Thomas Thompson. Long-term deployments of current meter and sediment trap arrays augmented the survey cruises. NOAA conducted boreal spring and fall sections east and west of 140°W from the R/V Baldridge and R/V Discoverer. Meteorological and sea surface observations were obtained from NOAA's in place TOGA-TAO buoy network.

The scientific objectives of this study were to determine the fluxes of carbon and related elements, and the processes controlling these fluxes between the Equatorial Pacific euphotic zone and the atmosphere and deep ocean. A broad overview of the program at the 140°W site is given by Murray et al. (Oceanography, 5: 134-142, 1992). A full description of the Equatorial Pacific Process Study, including the international context and the scientific results, appears in a series of Deep-Sea Research Part II special volumes:

Topical Studies in Oceanography, A U.S. JGOFS Process Study in the Equatorial Pacific (1995), Deep-Sea Research Part II, Volume 42, No. 2/3.

Topical Studies in Oceanography, A U.S. JGOFS Process Study in the Equatorial Pacific. Part 2 (1996), Deep-Sea Research Part II, Volume 43, No. 4/6.

Topical Studies in Oceanography, A U.S. JGOFS Process Study in the Equatorial Pacific (1997), Deep-Sea Research Part II, Volume 44, No. 9/10.

Topical Studies in Oceanography, The Equatorial Pacific JGOFS Synthesis (2002), Deep-Sea Research Part II, Volume 49, Nos. 13/14.

[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]