TM cast fluorometric chlorophyll a and total phaeopigment 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/2654
Version: June 24, 2002
Version Date: 2002-06-24

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
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Dataset Description

TM cast Fluorometric chlorophyll a and total phaeopigment

Methods & Sampling

See Platform deployments for cruise specific documentation

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Data Files

File	
chlTM_TT007.csv	(Comma Separated Values (.csv), 15.38 KB) MD5:086a3d5e17dc190a4aa6d9975dbc3522
version June 24, 2002 (previous version June 10, 1994) Jan Newton fluorometric chlorophyll_a and total phaeopigment, from TM (trace metal free rosette) Primary Production casts Thomas Thompson cruise TT007	
chlTM_TT011.csv	(Comma Separated Values (.csv), 25.10 KB) MD5:fb07b489fed2e6b428df99d5a0365c90
version June 24, 2002 (previous version June 10, 1994) J. Newton fluorometric chlorophyll_a and total phaeopigment, from TM (trace metal free rosette) Primary Production casts Thomas Thompson cruise TT011 NOTE: Bottle numbers were not reported. However, the data are reported in the order in which they were collected (bottle order) and as a result some of the depths are out of sequence.	

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Parameters

Parameter	Description	Units
event	event/operation number from event log	
sta	station number from event log	
cast	TM cast number from event log	
comment	free text quality statement	
bot	TM rosette bottle number	
depth_n	nominal sample depth based on wire out	meters
fluor_vol_filt	volume of sample filtered	liters
scale	sensitivity scale on the fluorometer	
df	door factor; true value of sensitivity scale	
B	calibration factor	
Fo	original fluorometer reading	
Fa	fluorometer reading after 2 drops 1N HCL	
chl_a_fluor	chlorophyll a; fluorometric method	micrograms/liter
phaeo	total phaeopigment	micrograms/liter
Fo_to_Fa	Fo/Fa ratio; ranges between: max. 2.10, meaning all chlorophyll-a and no Phaeopigment min. 1.00, meaning no chlorophyll-a and all Phaeopigment	

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Instruments

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

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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: TM cast Fluorometric chlorophyll a and total phaeopigment dates: February 04, 1992 to March 09, 1992 location: N: 11.972 S: -12.1113 W: -140.3975 E: -135.0183 project/cruise: EQPAC/TT007 - Spring Survey ship: R/V Thomas Thompson PI note: Due to chlorophyll degradation by the acetone (reagent grade, in cans) the data for the following Station/TM casts have been deleted from the file: 2/5, 2/6, and 3/3. For cruise TT007, TM casts were numbered consecutively within Station and as a result the cast number is not unique for the cruise. When comparing with other data sets be sure the station/cast numbers agree.

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 and James Murray of: University of Washington dataset: TM cast Fluorometric chlorophyll a and total phaeopigment dates: August 10, 1992 to September 15, 1992 location: N: 12.0333 S: -11.9717 W: -140.8067 E: -134.8217 project/cruise: EQPAC/TT011 - Fall Survey ship: Thomas Thompson PI Note: Bottle numbers were not reported. However, the data are reported in the order in which they were collected (bottle order) and as a result some of the depths are out of sequence.

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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.

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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).

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