

# Chloropigment flux data collected from the U.S. JGOFS Eqpac Moored Sediment Trap Array in the Equatorial Pacific in 1992 during the U.S. JGOFS Equatorial Pacific (EqPac) project

**Website:** <https://www.bco-dmo.org/dataset/2619>

**Version:** January 2, 2002

**Version Date:** 2002-01-02

## Project

» [U.S. JGOFS Equatorial Pacific](#) (EqPac)

## Program

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

| Contributors                         | Affiliation   | Role                   |
|--------------------------------------|---|------------------------|
| <a href="#">Lee, Cindy</a>           | Stony Brook University (SUNY Stony Brook)           | Principal Investigator |
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## Dataset Description

Chloropigment flux from moored sediment traps

## Methods & Sampling

**PI:** Cindy Lee  
**of:** State University New York, Stony Brook  
**dataset:** Chloropigment fluxes from moored sediment traps  
**dates:** February 3, 1992 to December 13, 1992  
**location:** N: 9 S: 0 W: -140 E: -140  
**project:** EqPac/W9201B, Sediment trap mooring deployment cruise  
**cruise/ship:** R/V Wecoma

[Methodology](#)

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## Data Files

| File  |
|---|
| <b>pigments_trap.csv</b> (Comma Separated Values (.csv), 536 bytes)<br>MD5:f82b90a3c4223ec3df74c70c3d55b58b |
| Primary data file for dataset ID 2619   |

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## Parameters

| Parameter     | Description  | Units             |
|---------------|--|-------------------|
| mooring       | mooring identification   |                   |
| lat_n         | nominal latitude, minus = south  | degrees           |
| lon_n         | nominal longitude, minus = west  | degrees           |
| depth_trap    | depth of trap  | meters            |
| trap_type     | type of trap where: IRS = Indented Rotary Sphere NVC = Non-Valve Control |                   |
| p_phorbide_f  | pheophorbide-a flux  | micrograms/m2/day |
| pp_phorbide_f | pyropheophorbide-a flux  | micrograms/m2/day |
| chl_a_f       | chlorophyll-a flux   | micrograms/m2/day |
| p_phytin_f    | pheophytin-a flux  | micrograms/m2/day |
| chlpi_g_f     | sum, chloropigment fluxes  | micrograms/m2/day |

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## Instruments

|   |  |
|---|--|
| <b>Dataset-specific Instrument Name</b> | IRS Sediment Trap  |
| <b>Generic Instrument Name</b>          | Sediment Trap - IRS  |
| <b>Generic Instrument Description</b>   | <p>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. The Indented Rotating Sphere (IRS) Sediment Trap is described in Peterson et al. (Field evaluation of a valved sediment trap. 1993. Limnology and Oceanography, 38, pp. 1741-1761 and Novel techniques for collection of sinking particles in the ocean and determining their settling rates. 2005. Limnology and Oceanography Methods 3, pp. 520-532). The IRS trap consists of four cylindrical modules; a particle interceptor, an IRS valve; a skewed funnel, and an eleven sample carousel (designated IRSC trap). The key to the trap design is the patented IRS valve located between the particle interceptor and particle accumulator portions of the trap. The valve and carousel are regulated by a TattleTale IVA (manufactured by Onset Computer Corp.) microprocessor and custom software. The IRS sediment trap was specifically designed to exclude zooplankton (Trull et al. 2008. Deep-Sea Research II v.55 pp. 1684-1695).</p> |

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## Deployments

### EqPac-Array

|                    |   |
|--------------------|---|
| <b>Website</b>     | <a href="https://www.bco-dmo.org/deployment/57749">https://www.bco-dmo.org/deployment/57749</a> |
| <b>Platform</b>    | JGOFS Sediment Trap   |
| <b>Start Date</b>  | 1992-01-12  |
| <b>End Date</b>    | 1992-02-08  |
| <b>Description</b> | Sediment Trap Deployments at 140°W that relate to seven locations between 9°N and 12°S          |

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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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