

# Deep sea sediment trap biomarker data from U.S. JGOFS Sediment Traps from the Arabian Sea in 1995 (U.S. JGOFS Arabian Sea project)

**Website:** <https://www.bco-dmo.org/dataset/2589>

**Data Type:** Other Field Results

**Version:** April 12, 2002

**Version Date:** 2002-04-12

## Project

» [U.S. JGOFS Arabian Sea](#) (Arabian Sea)

## Program

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

Contributors	Affiliation	Role
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## Dataset Description

Deep Sea Sediment Trap Biomarker Data

## Methods & Sampling

See Platform deployments for cruise specific documentation

Note: MS-1, MS-2, MS-3, MS-4, MS-5 in published article are equivalent to J1, J2, J3, J4, J5 in the online data files

Honjo, S., J. Dymond, W. Prell, V. Ittekkot. 1999. Monsoon-controlled export fluxes to the interior of the Arabian Sea. Deep Sea Research II. 46: 1859-1902

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## Data Files

File
<b>sedtrap_biomarker.csv</b> (Comma Separated Values (.csv), 9.90 KB) MD5:60e253a43db4bbe7cc38a8f5d6acd37c
Primary data file for dataset ID 2589

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## Parameters

Parameter	Description	Units
site	Arabian Sea site designation	
mooring	mooring identification	
trap_type	sediment trap type: shallow, middle, deep; 13 or 21 cups	
trap_id	unique identifier for each sediment trap	
deploy	deployment number	
depth_trap	depth of trap	meters
date_set	date of trap deployment	YYYYMMDD
lat	latitude (negative = south)	decimal degrees
lon	longitude (negative = west)	decimal degrees
cup	sediment trap cup number	
date_open	date sediment trap opened	YYMMDD
time_open	time of day sediment trap opened	hhmm
days_open	number of days trap remained open	day
flux_tot	total particle flux recovered	mg/m <sup>2</sup> /day
C_org	organic carbon, particle size < 1mm	% of total flux
C27_to_31	sum of C27, C29, C31 n-alkanes	micrograms/gram dry
Cmax	maximum C measured in n-alkanes	
LCK	C37, C38, C39 alkenones	micrograms/gram dry

Uk37	alkenone unsaturation	
HBI	total highly branched C25 isoprenoid alkenes	micrograms/gram dry
Cholesterol	cholesterol	micrograms/gram dry
OHC28FA_12	12-hydroxyoctacosanoic acid	micrograms/gram dry
EtChol_24	24-ethylcholesta-5-enol	micrograms/gram dry
Dinosterol	dinosterol	micrograms/gram dry
C32Hop	C32 hopan-32-ol	micrograms/gram dry

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## Instruments

<b>Dataset-specific Instrument Name</b>	Sediment Trap
<b>Generic Instrument Name</b>	Sediment Trap
<b>Generic Instrument Description</b>	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.

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## Deployments

**TT041**

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57702">https://www.bco-dmo.org/deployment/57702</a>
<b>Platform</b>	R/V Thomas G. Thompson
<b>Start Date</b>	1994-10-28
<b>End Date</b>	1994-11-21
<b>Description</b>	<p><b>Methods &amp; Sampling</b>  PI: Fredrick G. Prah of: Oregon State University dataset: deep sea sediment trap biomarker data dates: November 06, 1994 to May 07, 1995 location: N: 15.985 S: 15.9845 W: 61.49617 E: 61.49917 project/cruise: Arabian Sea set: TTN-041 serviced: TTN-047 recovered: TTN-055 ship: R/V Thomas Thompson Reference: Prah, F.G., Diamond, J. and Sparrow, M.A., 2000, Annual biomarker record for export production in the central Arabian Sea, Deep-Sea Research II 47, 1581-1604</p>

#### TT047

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57708">https://www.bco-dmo.org/deployment/57708</a>
<b>Platform</b>	R/V Thomas G. Thompson
<b>Start Date</b>	1995-05-03
<b>End Date</b>	1995-05-22
<b>Description</b>	<p>Sediment Trap Servicing, Coring, Process 3</p> <p><b>Methods &amp; Sampling</b>  PI: Fredrick G. Prah of: Oregon State University dataset: deep sea sediment trap biomarker data dates: November 06, 1994 to May 07, 1995 location: N: 15.985 S: 15.9845 W: 61.49617 E: 61.49917 project/cruise: Arabian Sea set: TTN-041 serviced: TTN-047 recovered: TTN-055 ship: R/V Thomas Thompson Reference: Prah, F.G., Diamond, J. and Sparrow, M.A., 2000, Annual biomarker record for export production in the central Arabian Sea, Deep-Sea Research II 47, 1581-1604</p>

#### TT055

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57716">https://www.bco-dmo.org/deployment/57716</a>
<b>Platform</b>	R/V Thomas G. Thompson
<b>Start Date</b>	1995-12-31
<b>End Date</b>	1996-01-16
<b>Description</b>	<p>Sediment Trap Recovery</p> <p><b>Methods &amp; Sampling</b>  PI: Fredrick G. Prah of: Oregon State University dataset: deep sea sediment trap biomarker data dates: November 06, 1994 to May 07, 1995 location: N: 15.985 S: 15.9845 W: 61.49617 E: 61.49917 project/cruise: Arabian Sea set: TTN-041 serviced: TTN-047 recovered: TTN-055 ship: R/V Thomas Thompson Reference: Prah, F.G., Diamond, J. and Sparrow, M.A., 2000, Annual biomarker record for export production in the central Arabian Sea, Deep-Sea Research II 47, 1581-1604</p>

#### JGOFS\_sedTrap\_S4d1

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57925">https://www.bco-dmo.org/deployment/57925</a>
<b>Platform</b>	JGOFS Sediment Trap
<b>Start Date</b>	1994-11-11
<b>End Date</b>	1995-04-30
<b>Description</b>	<p>U.S. JGOFS Arabian Sea Sediment Trap Mooring Latitude = 15.985° N Longitude = 61.500° E  Note: MS-1, MS-2, MS-3, MS-4, MS-5 are equivalent to J1, J2, J3, J4, J5 in the data files Honjo, S., J. Dymond, W. Prell, V. Ittekkot. 1999. Monsoon-controlled export fluxes to the interior of the Arabian Sea. Deep Sea Research II. 46: 1859-1902</p> <p><b>Methods &amp; Sampling</b>  PI: Fredrick G. Prahl of: Oregon State University dataset: deep sea sediment trap biomarker data dates: November 06, 1994 to May 07, 1995 location: N: 15.985 S: 15.9845 W: 61.49617 E: 61.49917 project/cruise: Arabian Sea set: TTN-041 serviced: TTN-047 recovered: TTN-055 ship: R/V Thomas Thompson Reference: Prahl, F.G., Diamond, J. and Sparrow, M.A., 2000, Annual biomarker record for export production in the central Arabian Sea, Deep-Sea Research II 47, 1581-1604</p>

### JGOFS\_sedTrap\_S4d2

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57926">https://www.bco-dmo.org/deployment/57926</a>
<b>Platform</b>	JGOFS Sediment Trap
<b>Start Date</b>	1995-05-17
<b>End Date</b>	1995-12-24
<b>Description</b>	<p>U.S. JGOFS Arabian Sea Sediment Trap Mooring Latitude = 15.985° N Longitude = 61.500° E  Note: MS-1, MS-2, MS-3, MS-4, MS-5 are equivalent to J1, J2, J3, J4, J5 in the data files Honjo, S., J. Dymond, W. Prell, V. Ittekkot. 1999. Monsoon-controlled export fluxes to the interior of the Arabian Sea. Deep Sea Research II. 46: 1859-1902</p> <p><b>Methods &amp; Sampling</b>  PI: Fredrick G. Prahl of: Oregon State University dataset: deep sea sediment trap biomarker data dates: November 06, 1994 to May 07, 1995 location: N: 15.985 S: 15.9845 W: 61.49617 E: 61.49917 project/cruise: Arabian Sea set: TTN-041 serviced: TTN-047 recovered: TTN-055 ship: R/V Thomas Thompson Reference: Prahl, F.G., Diamond, J. and Sparrow, M.A., 2000, Annual biomarker record for export production in the central Arabian Sea, Deep-Sea Research II 47, 1581-1604</p>

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## Project Information

### U.S. JGOFS Arabian Sea (Arabian Sea)

**Website:** <http://usjgofs.whoi.edu/research/arabian.html>

**Coverage:** Arabian Sea

The U.S. Arabian Sea Expedition which began in September 1994 and ended in January 1996, had three major components: a U.S. JGOFS Process Study, supported by the National Science Foundation (NSF); Forced Upper Ocean Dynamics, an Office of Naval Research (ONR) initiative; and shipboard and aircraft measurements supported by the National Aeronautics and Space Administration (NASA). The Expedition consisted of 17 cruises aboard the R/V Thomas Thompson, year-long moored deployments of five instrumented surface buoys and five sediment-trap arrays, aircraft overflights and satellite observations. Of the seventeen ship cruises, six were allocated to repeat process survey cruises, four to SeaSoar mapping cruises, six to mooring and benthic

work, and a single calibration cruise which was essentially conducted in transit to the Arabian Sea.

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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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