Deep sea sediment trap particle flux 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/2587
Data Type: Other Field Results
Version: June 26, 1997
Version Date: 1997-06-26

Project
» U.S. JGOFS Arabian Sea (Arabian Sea)

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

Contributors	Affiliation	Role
Honjo, Susumu	Woods Hole Oceanographic Institution (WHOI)	Principal Investigator
Dymond, Jack	Oregon State University (OSU)	Co-Principal Investigator
Chandler, Cynthia L.	Woods Hole Oceanographic Institution (WHOI BCO-DMO)	BCO-DMO Data Manager

Table of Contents

Dataset Description

Deep sea sediment trap particle flux

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. Ittekot. 1999. Monsoon-controlled export fluxes to the interior of the Arabian Sea. Deep Sea Research II. 46: 1859-1902

[table of contents | back to top]

Data Files

File
sediment_traps.csv (Comma Separated Values (.csv), 61.40 KB) MD5:538556c0b5d9a187353aa05fe73f1af9 Primary data file for dataset ID 2587

[table of contents | back to top]

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
sample_loc	location of archived samples (WHOI or OSU)	
cup	sediment trap cup number	
date_open	date sediment trap opened	YYYYMMDD
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/m2/day
C_org	organic carbon, particle size < 1mm	% of total flux
C_inorg	inorganic carbon, particle size < 1mm	% of total flux

N_tot	total nitrogen, particle size < 1mm	% of total flux
Si_bio	biogenic silicon, particle size < 1mm	% of total flux
Al	aluminum, particle size < 1mm	% of total flux

[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.

[table of contents | back to top]

Deployments

TT041

Website	https://www.bco-dmo.org/deployment/57702
Platform	R/V Thomas G. Thompson
Start Date	1994-10-28
End Date	1994-11-21
Description	**Methods & Sampling** PI: Susumu Honjo (Woods Hole Oceanographic Institution) and Jack Dymond (Oregon State University) dataset: Deep sea sediment trap particle flux dates: October 31, 1994 to May 15, 1995 location: N: 17.69 S: 10.00333 W: 57.8475 E: 65.005 project/cruise: Arabian Sea set: TTN-041, serviced: TTN-047, recovered: TTN-055 ship: Thomas Thompson Arabian Sea sediment trap particle flux data Susumu Honjo and Jack Dymond For Methods protocol: Refer to North Atlantic Bloom Experiment (NABE) methods document, particularly the sections: A.2. Time-series sediment traps A.3. Mooring array Laboratory methodology described in NABE has been modified. Contact Steve Manganini (smanganini@whoi.edu) for details. Notes: 1. Each sediment trap had an aperture of 0.5 square meters. 2. The closing date and time of each cup is the opening date and time of each succeeding cup.

TT047

Website	https://www.bco-dmo.org/deployment/57708
Platform	R/V Thomas G. Thompson
Start Date	1995-05-03
End Date	1995-05-22
Description	Sediment Trap Servicing, Coring, Process 3 **Methods & Sampling** PI: Susumu Honjo (Woods Hole Oceanographic Institution) and Jack Dymond (Oregon State University) dataset: Deep sea sediment trap particle flux dates: October 31, 1994 to May 15, 1995 location: N: 17.69 S: 10.00333 W: 57.8475 E: 65.005 project/cruise: Arabian Sea set: TTN-041, serviced: TTN-047, recovered: TTN-055 ship: Thomas Thompson Arabian Sea sediment trap particle flux data Susumu Honjo and Jack Dymond For Methods protocol: Refer to North Atlantic Bloom Experiment (NABE) methods document, particularly the sections: A.2. Time-series sediment traps A.3. Mooring array Laboratory methodology described in NABE has been modified. Contact Steve Manganini (smanganini@whoi.edu) for details. Notes: 1. Each sediment trap had an aperture of 0.5 square meters. 2. The closing date and time of each cup is the opening date and time of each succeeding cup.

TT055

Website	https://www.bco-dmo.org/deployment/57716
Platform	R/V Thomas G. Thompson
Start Date	1995-12-31
End Date	1996-01-16
Description	Sediment Trap Recovery **Methods & Sampling** PI: Susumu Honjo (Woods Hole Oceanographic Institution) and Jack Dymond (Oregon State University) dataset: Deep sea sediment trap particle flux dates: October 31, 1994 to May 15, 1995 location: N: 17.69 S: 10.00333 W: 57.8475 E: 65.005 project/cruise: Arabian Sea set: TTN-041, serviced: TTN-047, recovered: TTN-055 ship: Thomas Thompson Arabian Sea sediment trap particle flux data Susumu Honjo and Jack Dymond For Methods protocol: Refer to North Atlantic Bloom Experiment (NABE) methods document, particularly the sections: A.2. Time-series sediment traps A.3. Mooring array Laboratory methodology described in NABE has been modified. Contact Steve Manganini (smanganini@whoi.edu) for details. Notes: 1. Each sediment trap had an aperture of 0.5 square meters. 2. The closing date and time of each cup is the opening date and time of each succeeding cup.

JGOFS_sedTrap_S1d1

Website	https://www.bco-dmo.org/deployment/57858
Platform	JGOFS Sediment Trap
Start Date	1994-11-11
End Date	1995-04-30
Description	U.S. JGOFS Arabian Sea Sediment Trap Mooring Latitude = 17.690 ° N Longitude = 57.852 ° 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. Ittekot. 1999. Monsoon-controlled export fluxes to the interior of the Arabian Sea. Deep Sea Research II. 46: 1859-1902 **Methods & Sampling** PI: Susumu Honjo (Woods Hole Oceanographic Institution) and Jack Dymond (Oregon State University) dataset: Deep sea sediment trap particle flux dates: October 31, 1994 to May 15, 1995 location: N: 17.69 S: 10.00333 W: 57.8475 E: 65.005 project/cruise: Arabian Sea set: TTN-041, serviced: TTN-047, recovered: TTN-055 ship: Thomas Thompson Arabian Sea sediment trap particle flux data Susumu Honjo and Jack Dymond For Methods protocol: Refer to North Atlantic Bloom Experiment (NABE) methods document, particularly the sections: A.2. Time-series sediment traps A.3. Mooring array Laboratory methodology described in NABE has been modified. Contact Steve Manganini (smanganini@whoi.edu) for details. Notes: 1. Each sediment trap had an aperture of 0.5 square meters. 2. The closing date and time of each cup is the opening date and time of each succeeding cup.

JGOFS_sedTrap_S1d2

Website	https://www.bco-dmo.org/deployment/57859
Platform	JGOFS Sediment Trap
Start Date	1995-05-17
End Date	1995-12-24
Description	U.S. JGOFS Arabian Sea Sediment Trap Mooring Latitude = 17.690 ° N Longitude = 57.852 ° 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. Ittekot. 1999. Monsoon-controlled export fluxes to the interior of the Arabian Sea. Deep Sea Research II. 46: 1859-1902 **Methods & Sampling** PI: Susumu Honjo (Woods Hole Oceanographic Institution) and Jack Dymond (Oregon State University) dataset: Deep sea sediment trap particle flux dates: October 31, 1994 to May 15, 1995 location: N: 17.69 S: 10.00333 W: 57.8475 E: 65.005 project/cruise: Arabian Sea set: TTN-041, serviced: TTN-047, recovered: TTN-055 ship: Thomas Thompson Arabian Sea sediment trap particle flux data Susumu Honjo and Jack Dymond For Methods protocol: Refer to North Atlantic Bloom Experiment (NABE) methods document, particularly the sections: A.2. Time-series sediment traps A.3. Mooring array Laboratory methodology described in NABE has been modified. Contact Steve Manganini (smanganini@whoi.edu) for details. Notes: 1. Each sediment trap had an aperture of 0.5 square meters. 2. The closing date and time of each cup is the opening date and time of each succeeding cup.

JGOFS_sedTrap_S2d1

Website	https://www.bco-dmo.org/deployment/57921
Platform	JGOFS Sediment Trap
Start Date	1994-11-11
End Date	1995-04-30
Description	U.S. JGOFS Arabian Sea Sediment Trap Mooring Latitude = 17.400 ° N Longitude = 58.800 ° 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. Ittekot. 1999. Monsoon-controlled export fluxes to the interior of the Arabian Sea. Deep Sea Research II. 46: 1859-1902 **Methods & Sampling** PI: Susumu Honjo (Woods Hole Oceanographic Institution) and Jack Dymond (Oregon State University) dataset: Deep sea sediment trap particle flux dates: October 31, 1994 to May 15, 1995 location: N: 17.69 S: 10.00333 W: 57.8475 E: 65.005 project/cruise: Arabian Sea set: TTN-041, serviced: TTN-047, recovered: TTN-055 ship: Thomas Thompson Arabian Sea sediment trap particle flux data Susumu Honjo and Jack Dymond For Methods protocol: Refer to North Atlantic Bloom Experiment (NABE) methods document, particularly the sections: A.2. Time-series sediment traps A.3. Mooring array Laboratory methodology described in NABE has been modified. Contact Steve Manganini (smanganini@whoi.edu) for details. Notes: 1. Each sediment trap had an aperture of 0.5 square meters. 2. The closing date and time of each cup is the opening date and time of each succeeding cup.

JGOFS_sedTrap_S2d2

Website	https://www.bco-dmo.org/deployment/57922
Platform	JGOFS Sediment Trap
Start Date	1995-05-17
End Date	1995-12-24
Description	U.S. JGOFS Arabian Sea Sediment Trap Mooring Latitude = 17.400° N Longitude = 58.800° 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. Ittekot. 1999. Monsoon-controlled export fluxes to the interior of the Arabian Sea. Deep Sea Research II. 46: 1859-1902 **Methods & Sampling** PI: Susumu Honjo (Woods Hole Oceanographic Institution) and Jack Dymond (Oregon State University) dataset: Deep sea sediment trap particle flux dates: October 31, 1994 to May 15, 1995 location: N: 17.69 S: 10.00333 W: 57.8475 E: 65.005 project/cruise: Arabian Sea set: TTN-041, serviced: TTN-047, recovered: TTN-055 ship: Thomas Thompson Arabian Sea sediment trap particle flux data Susumu Honjo and Jack Dymond For Methods protocol: Refer to North Atlantic Bloom Experiment (NABE) methods document, particularly the sections: A.2. Time-series sediment traps A.3. Mooring array Laboratory methodology described in NABE has been modified. Contact Steve Manganini (smanganini@whoi.edu) for details. Notes: 1. Each sediment trap had an aperture of 0.5 square meters. 2. The closing date and time of each cup is the opening date and time of each succeeding cup.

JGOFS_sedTrap_S3d1

Website	https://www.bco-dmo.org/deployment/57923
Platform	JGOFS Sediment Trap
Start Date	1994-11-11
End Date	1995-04-30
Description	U.S. JGOFS Arabian Sea Sediment Trap Mooring Latitude = 17.200° N Longitude = 59.600° 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. Ittekot. 1999. Monsoon-controlled export fluxes to the interior of the Arabian Sea. Deep Sea Research II. 46: 1859-1902 **Methods & Sampling** PI: Susumu Honjo (Woods Hole Oceanographic Institution) and Jack Dymond (Oregon State University) dataset: Deep sea sediment trap particle flux dates: October 31, 1994 to May 15, 1995 location: N: 17.69 S: 10.00333 W: 57.8475 E: 65.005 project/cruise: Arabian Sea set: TTN-041, serviced: TTN-047, recovered: TTN-055 ship: Thomas Thompson Arabian Sea sediment trap particle flux data Susumu Honjo and Jack Dymond For Methods protocol: Refer to North Atlantic Bloom Experiment (NABE) methods document, particularly the sections: A.2. Time-series sediment traps A.3. Mooring array Laboratory methodology described in NABE has been modified. Contact Steve Manganini (smanganini@whoi.edu) for details. Notes: 1. Each sediment trap had an aperture of 0.5 square meters. 2. The closing date and time of each cup is the opening date and time of each succeeding cup.

JGOFS_sedTrap_S3d2

Website	https://www.bco-dmo.org/deployment/57924
Platform	JGOFS Sediment Trap
Start Date	1995-05-17
End Date	1995-12-24
Description	U.S. JGOFS Arabian Sea Sediment Trap Mooring Latitude = 17.200° N Longitude = 59.600° 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. Ittekot. 1999. Monsoon-controlled export fluxes to the interior of the Arabian Sea. Deep Sea Research II. 46: 1859-1902 **Methods & Sampling** PI: Susumu Honjo (Woods Hole Oceanographic Institution) and Jack Dymond (Oregon State University) dataset: Deep sea sediment trap particle flux dates: October 31, 1994 to May 15, 1995 location: N: 17.69 S: 10.00333 W: 57.8475 E: 65.005 project/cruise: Arabian Sea set: TTN-041, serviced: TTN-047, recovered: TTN-055 ship: Thomas Thompson Arabian Sea sediment trap particle flux data Susumu Honjo and Jack Dymond For Methods protocol: Refer to North Atlantic Bloom Experiment (NABE) methods document, particularly the sections: A.2. Time-series sediment traps A.3. Mooring array Laboratory methodology described in NABE has been modified. Contact Steve Manganini (smanganini@whoi.edu) for details. Notes: 1. Each sediment trap had an aperture of 0.5 square meters. 2. The closing date and time of each cup is the opening date and time of each succeeding cup.

JGOFS_sedTrap_S4d1

Website	https://www.bco-dmo.org/deployment/57925
Platform	JGOFS Sediment Trap
Start Date	1994-11-11
End Date	1995-04-30
Description	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. Ittekot. 1999. Monsoon-controlled export fluxes to the interior of the Arabian Sea. Deep Sea Research II. 46: 1859-1902 **Methods & Sampling** PI: Susumu Honjo (Woods Hole Oceanographic Institution) and Jack Dymond (Oregon State University) dataset: Deep sea sediment trap particle flux dates: October 31, 1994 to May 15, 1995 location: N: 17.69 S: 10.00333 W: 57.8475 E: 65.005 project/cruise: Arabian Sea set: TTN-041, serviced: TTN-047, recovered: TTN-055 ship: Thomas Thompson Arabian Sea sediment trap particle flux data Susumu Honjo and Jack Dymond For Methods protocol: Refer to North Atlantic Bloom Experiment (NABE) methods document, particularly the sections: A.2. Time-series sediment traps A.3. Mooring array Laboratory methodology described in NABE has been modified. Contact Steve Manganini (smanganini@whoi.edu) for details. Notes: 1. Each sediment trap had an aperture of 0.5 square meters. 2. The closing date and time of each cup is the opening date and time of each succeeding cup.

JGOFS_sedTrap_S4d2

Website	https://www.bco-dmo.org/deployment/57926
Platform	JGOFS Sediment Trap
Start Date	1995-05-17
End Date	1995-12-24
Description	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. Ittekot. 1999. Monsoon-controlled export fluxes to the interior of the Arabian Sea. Deep Sea Research II. 46: 1859-1902 **Methods & Sampling** PI: Susumu Honjo (Woods Hole Oceanographic Institution) and Jack Dymond (Oregon State University) dataset: Deep sea sediment trap particle flux dates: October 31, 1994 to May 15, 1995 location: N: 17.69 S: 10.00333 W: 57.8475 E: 65.005 project/cruise: Arabian Sea set: TTN-041, serviced: TTN-047, recovered: TTN-055 ship: Thomas Thompson Arabian Sea sediment trap particle flux data Susumu Honjo and Jack Dymond For Methods protocol: Refer to North Atlantic Bloom Experiment (NABE) methods document, particularly the sections: A.2. Time-series sediment traps A.3. Mooring array Laboratory methodology described in NABE has been modified. Contact Steve Manganini (smanganini@whoi.edu) for details. Notes: 1. Each sediment trap had an aperture of 0.5 square meters. 2. The closing date and time of each cup is the opening date and time of each succeeding cup.

JGOFS_sedTrap_S5d1

Website	https://www.bco-dmo.org/deployment/57927
Platform	JGOFS Sediment Trap
Start Date	1994-11-11
End Date	1995-04-30
Description	U.S. JGOFS Arabian Sea Sediment Trap Mooring Latitude = 10.000° N Longitude = 65.000° 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. Ittekot. 1999. Monsoon-controlled export fluxes to the interior of the Arabian Sea. Deep Sea Research II. 46: 1859-1902 **Methods & Sampling** PI: Susumu Honjo (Woods Hole Oceanographic Institution) and Jack Dymond (Oregon State University) dataset: Deep sea sediment trap particle flux dates: October 31, 1994 to May 15, 1995 location: N: 17.69 S: 10.00333 W: 57.8475 E: 65.005 project/cruise: Arabian Sea set: TTN-041, serviced: TTN-047, recovered: TTN-055 ship: Thomas Thompson Arabian Sea sediment trap particle flux data Susumu Honjo and Jack Dymond For Methods protocol: Refer to North Atlantic Bloom Experiment (NABE) methods document, particularly the sections: A.2. Time-series sediment traps A.3. Mooring array Laboratory methodology described in NABE has been modified. Contact Steve Manganini (smanganini@whoi.edu) for details. Notes: 1. Each sediment trap had an aperture of 0.5 square meters. 2. The closing date and time of each cup is the opening date and time of each succeeding cup.

[table of contents | back to top]

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.

[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]

Funding

Funding Source	Award
National Science Foundation (NSF)	unknown Arabian Sea NSF

[table of contents | back to top]