Deep sea sediment trap particle flux; carbon and nitrogen 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/2585
Data Type: Other Field Results
Version: April 12, 2000
Version Date: 2000-04-12

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

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

Contributors	Affiliation	Role
Hedges, John	University of Washington (UW)	Principal Investigator
Lee, Cindy	Stony Brook University (SUNY Stony Brook)	Co-Principal Investigator
Wakeham, Stuart	Skidaway Institute of Oceanography (SkIO)	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 and carbon and nitrogen composition 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. 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
sedtrap_carbon.csv(Comma Separated Values (.csv), 30.54 KB)   MD5:57f4d2db4e72ce6b4f6c9f8d2ae304e3   Primary data file for dataset ID 2585

[table of contents | back to top]

Parameters

Parameter	Description	Units
site	Arabian Sea site designation	
mooring	Mooring identification	
trap_type	WM= wide mouth particle interceptor (xs area 0.33 m2) NM= narrow mouth particle interceptor (xs area 0.017 m2) IRS=indented rotating sphere valve in line C=sample carousel in line NVC=No Valve (and no carousel) Control	
deploy	Deployment number	
depth_trap	Depth of trap	meters
date_set	Date of trap deployment	YYYYMMDD
lat	Latitude	decimal degrees
lon	Longitude	decimal degrees
carousel	Identification number of sample carousel on multi-trap arrays 1 = carousel #1 2 = carousel #2 3 = carousel #1 and #2 combined	
cup	Sample cup number (position) in carousel	
date_open	Date sample cup opened	YYYYMMDD
time_open	Time sample cup opened	hhmm
days_open	Elapsed time sample cup collected particle flux	days
sample_id	Unique analytical ID# given to each sample	
flux_tot	Particulate mass flux	mg/m2/day
N_tot	Total nitrogen content of trapped particulate matter	percent
C_org	Organic carbon content of trapped particulate matter	percent
C_inog	Inorganic carbon content of trapped particulate matter	percent
C_org_sol_flux	Total organic carbon dissolved in a sample's brine solution expressed as carbon flux	mg C/m2/day

[table of contents | back to top]

Instruments

Dataset-specific Instrument Name	IRS Sediment Trap
Generic Instrument Name	Sediment Trap - IRS
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. 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).

[ ]

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: John Hedges of: University of Washington dataset: Deep sea sediment trap particle flux and carbon and nitrogen composition data project/cruise: Arabian Sea set: TTN-041, serviced: TTN-047, recovered: TTN-055 ship: Thomas Thompson Organic geochemistry deep sea sediment trap particle flux and composition data Drs. John Hedges, Cindy Lee and Stuart Wakeham, principal investigators US JGOFS Arabian Sea 1994-1996 PI notes and methodology: Sediment trap arrays -------------------- 1. Organic geochemistry sediment trap arrays were deployed on the WHOI-OSU sediment trap moorings at 3 of the 5 mooring sites, 1, 3, and 4. See Honjo et al 1999 Monsoon-controlled export fluxes to the interior of the Arabian Sea. Deep-Sea Research Part II: Topical Studies in Oceanography. 46, 1859-1902. 2. Arrays deployed during the winter monsoon consisted of 2 NM-IRSC traps, 1 WM-IRS trap, and 1 NVC trap. 3. Arrays deployed during the summer monsoon consisted of 1 NM-IRSC traps, 1 WM-IRSC trap, 1 NM-IRS trap, and 1 NVC trap. 4. Non-carousel traps (IRS and NVC traps) collected material from the time of deployment until the time of retrieval. 5. Closing date and time of each cup is the opening date and time of each succeeding cup. 6. The IRS valved sediment trap design is described in Peterson et al. 1993. Field evaluation of a valved sediment trap. Limnology and Oceanography, 38, 1741-1761. 7. Photographs of the IRS traps and actual ASPS deployments are available at http://boto.ocean.washington.edu/aog/traps/irs_traps.html Sample treatment ---------------- Samples were treated similarly to those described in Hernes et al 2000 (submitted DSR) with the exception that only HgCl2 was used to poison the samples. All sample splits were made using a McClean WSD-10 wet sample splitter. CHN analyses were done according to the method of Hedges and Stern, 1984. Carbon and Nitrogen determinations of carbonate containing solids. Limnology and Oceanography, 29, 657-663.

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: John Hedges of: University of Washington dataset: Deep sea sediment trap particle flux and carbon and nitrogen composition data project/cruise: Arabian Sea set: TTN-041, serviced: TTN-047, recovered: TTN-055 ship: Thomas Thompson Organic geochemistry deep sea sediment trap particle flux and composition data Drs. John Hedges, Cindy Lee and Stuart Wakeham, principal investigators US JGOFS Arabian Sea 1994-1996 PI notes and methodology: Sediment trap arrays -------------------- 1. Organic geochemistry sediment trap arrays were deployed on the WHOI-OSU sediment trap moorings at 3 of the 5 mooring sites, 1, 3, and 4. See Honjo et al 1999 Monsoon-controlled export fluxes to the interior of the Arabian Sea. Deep-Sea Research Part II: Topical Studies in Oceanography. 46, 1859-1902. 2. Arrays deployed during the winter monsoon consisted of 2 NM-IRSC traps, 1 WM-IRS trap, and 1 NVC trap. 3. Arrays deployed during the summer monsoon consisted of 1 NM-IRSC traps, 1 WM-IRSC trap, 1 NM-IRS trap, and 1 NVC trap. 4. Non-carousel traps (IRS and NVC traps) collected material from the time of deployment until the time of retrieval. 5. Closing date and time of each cup is the opening date and time of each succeeding cup. 6. The IRS valved sediment trap design is described in Peterson et al. 1993. Field evaluation of a valved sediment trap. Limnology and Oceanography, 38, 1741-1761. 7. Photographs of the IRS traps and actual ASPS deployments are available at http://boto.ocean.washington.edu/aog/traps/irs_traps.html Sample treatment ---------------- Samples were treated similarly to those described in Hernes et al 2000 (submitted DSR) with the exception that only HgCl2 was used to poison the samples. All sample splits were made using a McClean WSD-10 wet sample splitter. CHN analyses were done according to the method of Hedges and Stern, 1984. Carbon and Nitrogen determinations of carbonate containing solids. Limnology and Oceanography, 29, 657-663.

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: John Hedges of: University of Washington dataset: Deep sea sediment trap particle flux and carbon and nitrogen composition data project/cruise: Arabian Sea set: TTN-041, serviced: TTN-047, recovered: TTN-055 ship: Thomas Thompson Organic geochemistry deep sea sediment trap particle flux and composition data Drs. John Hedges, Cindy Lee and Stuart Wakeham, principal investigators US JGOFS Arabian Sea 1994-1996 PI notes and methodology: Sediment trap arrays -------------------- 1. Organic geochemistry sediment trap arrays were deployed on the WHOI-OSU sediment trap moorings at 3 of the 5 mooring sites, 1, 3, and 4. See Honjo et al 1999 Monsoon-controlled export fluxes to the interior of the Arabian Sea. Deep-Sea Research Part II: Topical Studies in Oceanography. 46, 1859-1902. 2. Arrays deployed during the winter monsoon consisted of 2 NM-IRSC traps, 1 WM-IRS trap, and 1 NVC trap. 3. Arrays deployed during the summer monsoon consisted of 1 NM-IRSC traps, 1 WM-IRSC trap, 1 NM-IRS trap, and 1 NVC trap. 4. Non-carousel traps (IRS and NVC traps) collected material from the time of deployment until the time of retrieval. 5. Closing date and time of each cup is the opening date and time of each succeeding cup. 6. The IRS valved sediment trap design is described in Peterson et al. 1993. Field evaluation of a valved sediment trap. Limnology and Oceanography, 38, 1741-1761. 7. Photographs of the IRS traps and actual ASPS deployments are available at http://boto.ocean.washington.edu/aog/traps/irs_traps.html Sample treatment ---------------- Samples were treated similarly to those described in Hernes et al 2000 (submitted DSR) with the exception that only $HgCl_2$ was used to poison the samples. All sample splits were made using a McClean WSD-10 wet sample splitter. CHN analyses were done according to the method of Hedges and Stern, 1984. Carbon and Nitrogen determinations of carbonate containing solids. Limnology and Oceanography, 29, 657-663.

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: John Hedges of: University of Washington dataset: Deep sea sediment trap particle flux and carbon and nitrogen composition data project/cruise: Arabian Sea set: TTN-041, serviced: TTN-047, recovered: TTN-055 ship: Thomas Thompson Organic geochemistry deep sea sediment trap particle flux and composition data Drs. John Hedges, Cindy Lee and Stuart Wakeham, principal investigators US JGOFS Arabian Sea 1994-1996 PI notes and methodology: Sediment trap arrays -------------------- 1. Organic geochemistry sediment trap arrays were deployed on the WHOI-OSU sediment trap moorings at 3 of the 5 mooring sites, 1, 3, and 4. See Honjo et al 1999 Monsoon-controlled export fluxes to the interior of the Arabian Sea. Deep-Sea Research Part II: Topical Studies in Oceanography. 46, 1859-1902. 2. Arrays deployed during the winter monsoon consisted of 2 NM-IRSC traps, 1 WM-IRS trap, and 1 NVC trap. 3. Arrays deployed during the summer monsoon consisted of 1 NM-IRSC traps, 1 WM-IRSC trap, 1 NM-IRS trap, and 1 NVC trap. 4. Non-carousel traps (IRS and NVC traps) collected material from the time of deployment until the time of retrieval. 5. Closing date and time of each cup is the opening date and time of each succeeding cup. 6. The IRS valved sediment trap design is described in Peterson et al. 1993. Field evaluation of a valved sediment trap. Limnology and Oceanography, 38, 1741-1761. 7. Photographs of the IRS traps and actual ASPS deployments are available at http://boto.ocean.washington.edu/aog/traps/irs_traps.html Sample treatment ---------------- Samples were treated similarly to those described in Hernes et al 2000 (submitted DSR) with the exception that only HgCl2 was used to poison the samples. All sample splits were made using a McClean WSD-10 wet sample splitter. CHN analyses were done according to the method of Hedges and Stern, 1984. Carbon and Nitrogen determinations of carbonate containing solids. Limnology and Oceanography, 29, 657-663.

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: John Hedges of: University of Washington dataset: Deep sea sediment trap particle flux and carbon and nitrogen composition data project/cruise: Arabian Sea set: TTN-041, serviced: TTN-047, recovered: TTN-055 ship: Thomas Thompson Organic geochemistry deep sea sediment trap particle flux and composition data Drs. John Hedges, Cindy Lee and Stuart Wakeham, principal investigators US JGOFS Arabian Sea 1994-1996 PI notes and methodology: Sediment trap arrays -------------------- 1. Organic geochemistry sediment trap arrays were deployed on the WHOI-OSU sediment trap moorings at 3 of the 5 mooring sites, 1, 3, and 4. See Honjo et al 1999 Monsoon-controlled export fluxes to the interior of the Arabian Sea. Deep-Sea Research Part II: Topical Studies in Oceanography. 46, 1859-1902. 2. Arrays deployed during the winter monsoon consisted of 2 NM-IRSC traps, 1 WM-IRS trap, and 1 NVC trap. 3. Arrays deployed during the summer monsoon consisted of 1 NM-IRSC traps, 1 WM-IRSC trap, 1 NM-IRS trap, and 1 NVC trap. 4. Non-carousel traps (IRS and NVC traps) collected material from the time of deployment until the time of retrieval. 5. Closing date and time of each cup is the opening date and time of each succeeding cup. 6. The IRS valved sediment trap design is described in Peterson et al. 1993. Field evaluation of a valved sediment trap. Limnology and Oceanography, 38, 1741-1761. 7. Photographs of the IRS traps and actual ASPS deployments are available at http://boto.ocean.washington.edu/aog/traps/irs_traps.html Sample treatment ---------------- Samples were treated similarly to those described in Hernes et al 2000 (submitted DSR) with the exception that only HgCl2 was used to poison the samples. All sample splits were made using a McClean WSD-10 wet sample splitter. CHN analyses were done according to the method of Hedges and Stern, 1984. Carbon and Nitrogen determinations of carbonate containing solids. Limnology and Oceanography, 29, 657-663. |

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: John Hedges of: University of Washington dataset: Deep sea sediment trap particle flux and carbon and nitrogen composition data project/cruise: Arabian Sea set: TTN-041, serviced: TTN-047, recovered: TTN-055 ship: Thomas Thompson Organic geochemistry deep sea sediment trap particle flux and composition data Drs. John Hedges, Cindy Lee and Stuart Wakeham, principal investigators US JGOFS Arabian Sea 1994-1996 PI notes and methodology: Sediment trap arrays -------------------- 1. Organic geochemistry sediment trap arrays were deployed on the WHOI-OSU sediment trap moorings at 3 of the 5 mooring sites, 1, 3, and 4. See Honjo et al 1999 Monsoon-controlled export fluxes to the interior of the Arabian Sea. Deep-Sea Research Part II: Topical Studies in Oceanography. 46, 1859-1902. 2. Arrays deployed during the winter monsoon consisted of 2 NM-IRSC traps, 1 WM-IRS trap, and 1 NVC trap. 3. Arrays deployed during the summer monsoon consisted of 1 NM-IRSC traps, 1 WM-IRSC trap, 1 NM-IRS trap, and 1 NVC trap. 4. Non-carousel traps (IRS and NVC traps) collected material from the time of deployment until the time of retrieval. 5. Closing date and time of each cup is the opening date and time of each succeeding cup. 6. The IRS valved sediment trap design is described in Peterson et al. 1993. Field evaluation of a valved sediment trap. Limnology and Oceanography, 38, 1741-1761. 7. Photographs of the IRS traps and actual ASPS deployments are available at http://boto.ocean.washington.edu/aog/traps/irs_traps.html Sample treatment ---------------- Samples were treated similarly to those described in Hernes et al 2000 (submitted DSR) with the exception that only HgCl2 was used to poison the samples. All sample splits were made using a McClean WSD-10 wet sample splitter. CHN analyses were done according to the method of Hedges and Stern, 1984. Carbon and Nitrogen determinations of carbonate containing solids. Limnology and Oceanography, 29, 657-663.

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: John Hedges of: University of Washington dataset: Deep sea sediment trap particle flux and carbon and nitrogen composition data project/cruise: Arabian Sea set: TTN-041, serviced: TTN-047, recovered: TTN-055 ship: Thomas Thompson Organic geochemistry deep sea sediment trap particle flux and composition data Drs. John Hedges, Cindy Lee and Stuart Wakeham, principal investigators US JGOFS Arabian Sea 1994-1996 PI notes and methodology: Sediment trap arrays -------------------- 1. Organic geochemistry sediment trap arrays were deployed on the WHOI-OSU sediment trap moorings at 3 of the 5 mooring sites, 1, 3, and 4. See Honjo et al 1999 Monsoon-controlled export fluxes to the interior of the Arabian Sea. Deep-Sea Research Part II: Topical Studies in Oceanography. 46, 1859-1902. 2. Arrays deployed during the winter monsoon consisted of 2 NM-IRSC traps, 1 WM-IRS trap, and 1 NVC trap. 3. Arrays deployed during the summer monsoon consisted of 1 NM-IRSC traps, 1 WM-IRSC trap, 1 NM-IRS trap, and 1 NVC trap. 4. Non-carousel traps (IRS and NVC traps) collected material from the time of deployment until the time of retrieval. 5. Closing date and time of each cup is the opening date and time of each succeeding cup. 6. The IRS valved sediment trap design is described in Peterson et al. 1993. Field evaluation of a valved sediment trap. Limnology and Oceanography, 38, 1741-1761. 7. Photographs of the IRS traps and actual ASPS deployments are available at http://boto.ocean.washington.edu/aog/traps/irs_traps.html Sample treatment ---------------- Samples were treated similarly to those described in Hernes et al 2000 (submitted DSR) with the exception that only HgCl2 was used to poison the samples. All sample splits were made using a McClean WSD-10 wet sample splitter. CHN analyses were done according to the method of Hedges and Stern, 1984. Carbon and Nitrogen determinations of carbonate containing solids. Limnology and Oceanography, 29, 657-663.

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: John Hedges of: University of Washington dataset: Deep sea sediment trap particle flux and carbon and nitrogen composition data project/cruise: Arabian Sea set: TTN-041, serviced: TTN-047, recovered: TTN-055 ship: Thomas Thompson Organic geochemistry deep sea sediment trap particle flux and composition data Drs. John Hedges, Cindy Lee and Stuart Wakeham, principal investigators US JGOFS Arabian Sea 1994-1996 PI notes and methodology: Sediment trap arrays -------------------- 1. Organic geochemistry sediment trap arrays were deployed on the WHOI-OSU sediment trap moorings at 3 of the 5 mooring sites, 1, 3, and 4. See Honjo et al 1999 Monsoon-controlled export fluxes to the interior of the Arabian Sea. Deep-Sea Research Part II: Topical Studies in Oceanography. 46, 1859-1902. 2. Arrays deployed during the winter monsoon consisted of 2 NM-IRSC traps, 1 WM-IRS trap, and 1 NVC trap. 3. Arrays deployed during the summer monsoon consisted of 1 NM-IRSC traps, 1 WM-IRSC trap, 1 NM-IRS trap, and 1 NVC trap. 4. Non-carousel traps (IRS and NVC traps) collected material from the time of deployment until the time of retrieval. 5. Closing date and time of each cup is the opening date and time of each succeeding cup. 6. The IRS valved sediment trap design is described in Peterson et al. 1993. Field evaluation of a valved sediment trap. Limnology and Oceanography, 38, 1741-1761. 7. Photographs of the IRS traps and actual ASPS deployments are available at http://boto.ocean.washington.edu/aog/traps/irs_traps.html Sample treatment ---------------- Samples were treated similarly to those described in Hernes et al 2000 (submitted DSR) with the exception that only HgCl2 was used to poison the samples. All sample splits were made using a McClean WSD-10 wet sample splitter. CHN analyses were done according to the method of Hedges and Stern, 1984. Carbon and Nitrogen determinations of carbonate containing solids. Limnology and Oceanography, 29, 657-663.

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: John Hedges of: University of Washington dataset: Deep sea sediment trap particle flux and carbon and nitrogen composition data project/cruise: Arabian Sea set: TTN-041, serviced: TTN-047, recovered: TTN-055 ship: Thomas Thompson Organic geochemistry deep sea sediment trap particle flux and composition data Drs. John Hedges, Cindy Lee and Stuart Wakeham, principal investigators US JGOFS Arabian Sea 1994-1996 PI notes and methodology: Sediment trap arrays -------------------- 1. Organic geochemistry sediment trap arrays were deployed on the WHOI-OSU sediment trap moorings at 3 of the 5 mooring sites, 1, 3, and 4. See Honjo et al 1999 Monsoon-controlled export fluxes to the interior of the Arabian Sea. Deep-Sea Research Part II: Topical Studies in Oceanography. 46, 1859-1902. 2. Arrays deployed during the winter monsoon consisted of 2 NM-IRSC traps, 1 WM-IRS trap, and 1 NVC trap. 3. Arrays deployed during the summer monsoon consisted of 1 NM-IRSC traps, 1 WM-IRSC trap, 1 NM-IRS trap, and 1 NVC trap. 4. Non-carousel traps (IRS and NVC traps) collected material from the time of deployment until the time of retrieval. 5. Closing date and time of each cup is the opening date and time of each succeeding cup. 6. The IRS valved sediment trap design is described in Peterson et al. 1993. Field evaluation of a valved sediment trap. Limnology and Oceanography, 38, 1741-1761. 7. Photographs of the IRS traps and actual ASPS deployments are available at http://boto.ocean.washington.edu/aog/traps/irs_traps.html Sample treatment ---------------- Samples were treated similarly to those described in Hernes et al 2000 (submitted DSR) with the exception that only HgCl2 was used to poison the samples. All sample splits were made using a McClean WSD-10 wet sample splitter. CHN analyses were done according to the method of Hedges and Stern, 1984. Carbon and Nitrogen determinations of carbonate containing solids. Limnology and Oceanography, 29, 657-663.

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.

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).