Underway fluorescence measurements along the ship track from R/V Thomas G. Thompson TT049, TT053 cruises in the Arabian Sea in 1995 (U.S. JGOFS Arabian Sea project)

Website: https://www.bco-dmo.org/dataset/2556
Version: November 4, 1996
Version Date: 1996-11-04

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

Underway fluorescence measurements along ship track

Methods & Sampling

See Platform deployments for cruise specific documentation

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Data Files

File
fluor_underway_TT049.csv (Comma Separated Values (.csv), 2.11 MB) MD5:f29bbed87f81f54e808b8d23220a7ac8 version November 4, 1996 William Balch Underway fluorescence measurements along ship track Arabian Sea/TTN-049 - Process Cruise 4
fluor_underway_TT053.csv (Comma Separated Values (.csv), 168.21 KB) MD5:f635928cd60ed92cd73335deddb69eea version November 4, 1996 William Balch Underway fluorescence measurements along ship track Arabian Sea/TTN-053 - Process Cruise 6

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Parameters

Parameter	Description	Units
date	date reported as year, month, day	yymmdd
time	time expressed as hours, minutes, seconds	hh:mm:ss
day_dec	time expressed as a decimal	decimal day
lat	latitude (- notation = south)	decimal degrees
lon	longitude (- notation = west)	decimal degrees
chl	chlorophyll from fluorescence	mg/m3
on_station	1 = on station; nd = underway	

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Instruments

Dataset-specific Instrument Name	Fluorometer
Generic Instrument Name	Fluorometer
Dataset-specific Description	Sharon Smith's Turner Designs fluorometer plumbed to the ship's SAIL system.
Generic Instrument Description	A fluorometer or fluorimeter is a device used to measure parameters of fluorescence: its intensity and wavelength distribution of emission spectrum after excitation by a certain spectrum of light. The instrument is designed to measure the amount of stimulated electromagnetic radiation produced by pulses of electromagnetic radiation emitted into a water sample or in situ.

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Deployments

TT049

Website	https://www.bco-dmo.org/deployment/57710
Platform	R/V Thomas G. Thompson
Start Date	1995-07-17
End Date	1995-08-15
Description	**Methods & Sampling** PI: William Balch of: Bigelow Laboratory dataset: Underway fluorescence measurements along ship track dates: July 17, 1995 to August 15, 1995 location: N: 23.68654 S: 9.86851 W: 57.29937 E: 68.75642 project/cruise: Arabian Sea/TTN-049 - Process Cruise 4 (Middle SW Monsoon) ship: Thomas Thompson PI-Notes: The underway fluorescence data were logged every minute using Sharon Smith's Turner Designs fluorometer plumbed to the ship's SAIL system. The data were manually calibrated to discreet surface chlorophyll measurements in segments determined by the times of fluorometer cleanings, as well as any changes in water mass that might have affected the calibration. Quality control consisted of range checks and removal of any readings which were obviously bubble-contaminated.

TT053

Website	https://www.bco-dmo.org/deployment/57714
Platform	R/V Thomas G. Thompson
Start Date	1995-10-29
End Date	1995-11-26
Description	**Methods & Sampling** PI: William Balch of: Bigelow Laboratory dataset: Underway fluorescence measurements along ship track dates: October 29, 1995 to November 25, 1995 location: N: 24.26915 S: 0 W: 0 E: 67.15652 project/cruise: Arabian Sea/TTN-053 - Process Cruise 6 (bio-optics) ship: Thomas Thompson PI-Notes: The underway fluorescence data were recorded about every four minutes using a Turner 111 fluorometer equipped with a flow-through door and our own underway logging system. The instrument was shut down while on station. The data were manually calibrated to discreet surface chlorophyll measurements in segments determined by the times of fluorometer cleanings, as well as any changes in water mass that might have affected the calibration. Quality control consisted of range checks and removal of any readings which were obviously bubble-contaminated.

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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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