

# Areal Summary, daily N-15 uptake rates and f-ratios from R/V Thomas G. Thompson TT043, TT053 cruises in the Arabian Sea in 1995 (U.S. JGOFS Arabian Sea project)

Website: <https://www.bco-dmo.org/dataset/2540>

Version: September 10, 1999

Version Date: 1999-09-10

## Project

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

## Program

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

Contributors	Affiliation	Role
<a href="#">McCarthy, James J.</a>	Harvard University	Principal Investigator
<a href="#">Chandler, Cynthia L.</a>	Woods Hole Oceanographic Institution (WHOI BCO-DMO)	BCO-DMO Data Manager

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## Dataset Description

Areal Summary, daily N-15 uptake rates and f-ratios

## Methods & Sampling

See Platform deployments for cruise specific documentation

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## Parameters

Parameter	Description	Units
sta	station number, from event log	
sta_std	Arabian Sea standard station identifier	
lat_n	nominal latitude of station (minus = south)	decimal degrees
lon_n	nominal longitude of station (minus = west)	decimal degrees
pNO2	N-15 uptake from nitrite labeled substrate	mMol N /m <sup>2</sup> /d
pNO3	N-15 uptake from nitrate labeled substrate	mMol N /m <sup>2</sup> /d
pNH4	N-15 uptake from ammomium labeled substrate	mMol N /m <sup>2</sup> /d
f_ratio	f ratio define as follows: pNO3/(pNO2+pNO3+NH4)	

## Instruments

<b>Dataset-specific Instrument Name</b>	Niskin Bottle
<b>Generic Instrument Name</b>	Niskin bottle
<b>Dataset-specific Description</b>	CTD/Niskin Rosette bottles were used during cruise ttn-053.
<b>Generic Instrument Description</b>	A Niskin bottle (a next generation water sampler based on the Nansen bottle) is a cylindrical, non-metallic water collection device with stoppers at both ends. The bottles can be attached individually on a hydrowire or deployed in 12, 24, or 36 bottle Rosette systems mounted on a frame and combined with a CTD. Niskin bottles are used to collect discrete water samples for a range of measurements including pigments, nutrients, plankton, etc.

<b>Dataset-specific Instrument Name</b>	Trace Metal Bottle
<b>Generic Instrument Name</b>	Trace Metal Bottle
<b>Dataset-specific Description</b>	Trace Metal (TM) Rosette bottles were used during cruise ttn-043.
<b>Generic Instrument Description</b>	Trace metal (TM) clean rosette bottle used for collecting trace metal clean seawater samples.

## Deployments

### TT043

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57704">https://www.bco-dmo.org/deployment/57704</a>
<b>Platform</b>	R/V Thomas G. Thompson
<b>Report</b>	<a href="http://osprey.bcodmo.org/datasetDeployment.cfm?ddid=2580&amp;did=353&amp;flag=view">http://osprey.bcodmo.org/datasetDeployment.cfm?ddid=2580&amp;did=353&amp;flag=view</a>
<b>Start Date</b>	1995-01-08
<b>End Date</b>	1995-02-05
<b>Description</b>	<p>Purpose: Process Cruise #1 (Late NE Monsoon)</p> <p><b>Methods &amp; Sampling</b>            PI: James J. McCarthy of: Harvard University dataset: Areal Summary, daily N-15 uptake rates and f-ratios dates: January 9, 1995 to January 30, 1995 location: N: 22.5 S: 10 W: 58 E: 68.4 project/cruise: Arabian Sea/TTN-043 - Process Cruise 1 ship: Thomas Thompson Data and Documentation Revised 09/10/1999 Note: These data have been revised with new integrations to the mixed layer depth or the 1% light depth, which ever is shallower. Methodology: McCarthy, J.J., C. Garside, and J.L. Nevins. (1999) Nitrogen Dynamics during the Arabian Sea Northeast Monsoon. Deep-Sea Research II 46 (1999) 1623-1664.</p>

### TT053

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57714">https://www.bco-dmo.org/deployment/57714</a>
<b>Platform</b>	R/V Thomas G. Thompson
<b>Start Date</b>	1995-10-29
<b>End Date</b>	1995-11-26
<b>Description</b>	<p><b>Methods &amp; Sampling</b>  PI: James J. McCarthy of: Harvard University dataset: Areal Summary, daily N-15 uptake rates and f-ratios dates: October 29, 1995 to November 21, 1995 location: N: 23.9 S: 10.1 W: 56.5 E: 67.2 project/cruise: Arabian Sea/TTN-053 - Process Cruise 6 (bio-optics) ship: Thomas Thompson Data and Documentation Revised 09/10/1999 Note: These data have been revised with new integrations to the mixed layer depth or the 1% light depth, which ever is shallower. Methodology: McCarthy, J.J., C. Garside, and J.L. Nevins. (1999) Nitrogen Dynamics during the Arabian Sea Northeast Monsoon. Deep-Sea Research II 46 (1999) 1623-1664.</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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## Funding

Funding Source	Award
National Science Foundation (NSF)	<a href="#">unknown Arabian Sea NSF</a>

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