

# Photosynthetically Available Radiation (PAR) from R/V Thomas G. Thompson TT043, TT045, TT049, TT050, TT053, TT054 cruises in the Arabian Sea in 1995 (U.S. JGOFS Arabian Sea project)

**Website:** <https://www.bco-dmo.org/dataset/2538>

**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
<a href="#">Marra, John F.</a>	Lamont-Doherty Earth Observatory (LDEO)	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

Photosynthetically Available Radiation (PAR)

## Methods & Sampling

See Platform deployments for cruise specific documentation

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## Data Files

File
<b>PAR.csv</b> (Comma Separated Values (.csv), 7.02 KB) MD5:4805f95243a9983fdaca01aaf5ee1508 Primary data file for dataset ID 2538

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## Parameters

Parameter	Description	Units
cruise_id	cruise designation	
event	event number, from event log	
sta	station number, from event log	
sta_std	Arabian Sea standard station identifier	
lat_n	latitude (minus = South)	decimal degrees
lon_n	longitude (minus = West)	decimal degrees
Epar	photosynthetically available radiation	mol photons/m2/day
Zpar	depth at which measurement taken	meters

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## Instruments

<b>Dataset-specific Instrument Name</b>	Photosynthetically Available Radiation Sensor
<b>Generic Instrument Name</b>	Photosynthetically Available Radiation Sensor
<b>Generic Instrument Description</b>	A PAR sensor measures photosynthetically available (or active) radiation. The sensor measures photon flux density (photons per second per square meter) within the visible wavelength range (typically 400 to 700 nanometers). PAR gives an indication of the total energy available to plants for photosynthesis. This instrument name is used when specific type, make and model are not known.

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## 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: John Marra of: Lamont-Doherty Earth Observatory dataset: Photosynthetically available radiation dates: January 11, 1995 to January 30, 1995 location: N: 19.1664 S: 18.0835 W: 58.0012 E: 67.1666 project/cruise: Arabian Sea/TTN-043 - Process Cruise 1 (Late NE Monsoon) ship: Thomas Thompson Methods reported in: J. Marra, C. Trees, R.R. Bidigare and R.T. Barber, Pigment absorption and quantum yields in the Arabian Sea, Deep-Sea Res. II 47, 1279-1299</p>

### TT045

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57706">https://www.bco-dmo.org/deployment/57706</a>
<b>Platform</b>	R/V Thomas G. Thompson
<b>Start Date</b>	1995-03-14
<b>End Date</b>	1995-04-10
<b>Description</b>	<p><b>Methods &amp; Sampling</b>  PI: John Marra of: Lamont-Doherty Earth Observatory dataset: Photosynthetically available radiation dates: March 19, 1995 to April 05, 1995 location: N: 19.1623 S: 10.01 W: 57.9986 E: 67.1644 project/cruise: Arabian Sea/TTN-045 - Process Cruise 2 (Spring Intermonsoon) ship: Thomas Thompson Methods reported in: J. Marra, C. Trees, R.R. Bidigare and R.T. Barber, Pigment absorption and quantum yields in the Arabian Sea, Deep-Sea Res. II 47, 1279-1299</p>

#### TT049

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57710">https://www.bco-dmo.org/deployment/57710</a>
<b>Platform</b>	R/V Thomas G. Thompson
<b>Start Date</b>	1995-07-17
<b>End Date</b>	1995-08-15
<b>Description</b>	<p><b>Methods &amp; Sampling</b>  PI: John Marra of: Lamont-Doherty Earth Observatory dataset: Photosynthetically available radiation dates: July 21, 1995 to August 11, 1995 location: N: 19.1976 S: 9.9964 W: 57.3014 E: 67.1711 project/cruise: Arabian Sea/TTN-049 - Process Cruise 4 (Middle SW Monsoon) ship: Thomas Thompson Methods reported in: J. Marra, C. Trees, R.R. Bidigare and R.T. Barber, Pigment absorption and quantum yields in the Arabian Sea, Deep-Sea Res. II 47, 1279-1299</p>

#### TT050

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57711">https://www.bco-dmo.org/deployment/57711</a>
<b>Platform</b>	R/V Thomas G. Thompson
<b>Start Date</b>	1995-08-18
<b>End Date</b>	1995-09-15
<b>Description</b>	<p><b>Methods &amp; Sampling</b>  PI: John Marra of: Lamont-Doherty Earth Observatory dataset: Photosynthetically available radiation dates: August 22, 1995 to September 10, 1995 location: N: 19.1981 S: 9.9586 W: 58.0017 E: 67.1666 project/cruise: Arabian Sea/TTN-050 - Process Cruise 5 (Late SW Monsoon) ship: Thomas Thompson Methods reported in: J. Marra, C. Trees, R.R. Bidigare and R.T. Barber, Pigment absorption and quantum yields in the Arabian Sea, Deep-Sea Res. II 47, 1279-1299</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: John Marra of: Lamont-Doherty Earth Observatory dataset: Photosynthetically available radiation dates: November 01, 1995 to November 21, 1995 location: N: 23.0515 S: 10.0823 W: 57.3007 E: 67.1664 project/cruise: Arabian Sea/TTN-053 - Process Cruise 6 (bio-optics) ship: Thomas Thompson Methods reported in: J. Marra, C. Trees, R.R. Bidigare and R.T. Barber, Pigment absorption and quantum yields in the Arabian Sea, Deep-Sea Res. II 47, 1279-1299</p>

## TT054

<b>Website</b>	<a href="https://www.bco-dmo.org/deployment/57715">https://www.bco-dmo.org/deployment/57715</a>
<b>Platform</b>	R/V Thomas G. Thompson
<b>Start Date</b>	1995-11-30
<b>End Date</b>	1995-12-28
<b>Description</b>	<b>Methods &amp; Sampling</b> PI: John Marra of: Lamont-Doherty Earth Observatory dataset: Photosynthetically available radiation dates: December 04, 1995 to December 23, 1995 location: N: 19.1986 S: 10.0002 W: 58.0027 E: 67.1654 project/cruise: Arabian Sea/TTN-054 - Process Cruise 7 (Early NE Monsoon) ship: Thomas Thompson Methods reported in: J. Marra, C. Trees, R.R. Bidigare and R.T. Barber, Pigment absorption and quantum yields in the Arabian Sea, Deep-Sea Res. II 47, 1279-1299

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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
Office of Naval Research (ONR)	<a href="#">unknown Arabian Sea ONR</a>
National Science Foundation (NSF)	<a href="#">unknown Arabian Sea NSF</a>

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