# CTD station map from R/V Oceanus, R/V Weatherbird II OC404-01, OC415-03, WB0409, WB0508 cruises in the Sargasso Sea, 2004-2005 (EDDIES project)

**Website**: https://www.bco-dmo.org/dataset/3064
**Version**: final
**Version Date**: 2009-10-13

**Project**
» Eddies Dynamics, Mixing, Export, and Species composition (EDDIES)

**Program**
» Ocean Carbon and Biogeochemistry (OCB)

| Contributors | Affiliation | Role |
|---|---|---|
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## Dataset Description

CTD station map

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## Parameters

*Parameters for this dataset have not yet been identified*

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## Deployments

**OC404-01**

| | |
|---|---|
| **Website** | https://www.bco-dmo.org/deployment/57956 |
| **Platform** | R/V Oceanus |
| **Report** | http://ocb.whoi.edu/EDDIES/CRUISES/2004/OC404-1_Draft_Cruise_Report.pdf |
| **Start Date** | 2004-06-11 |
| **End Date** | 2004-07-03 |
| **Description** | EDDIES 2004 Survey 1 cruise Funded by: NSF OCE-0241310 Original cruise data are available from the NSF R2R data catalog (Cruise DOI: 10.7284/900337) |

**OC415-03**

| | |
|---|---|
| **Website** | https://www.bco-dmo.org/deployment/57965 |
| **Platform** | R/V Oceanus |
| **Report** | http://ocb.whoi.edu/EDDIES/CRUISES/2005/OC415-3_CrRptDraft_091405.pdf |
| **Start Date** | 2005-08-07 |
| **End Date** | 2005-08-26 |
| **Description** | EDDIES project 2005 Survey 2 cruise Funded by: NSF OCE-0241310 Original cruise data are available from the NSF R2R data catalog |

**WB0409**

| | |
|---|---|
| **Website** | https://www.bco-dmo.org/deployment/57955 |
| **Platform** | R/V Weatherbird II |
| **Start Date** | 2004-06-23 |
| **End Date** | 2004-07-02 |
| **Description** | EDT1 2004 Transect 1 cruise Funded by: NSF OCE-0241310 |

**WB0508**

| | |
|---|---|
| **Website** | https://www.bco-dmo.org/deployment/57966 |
| **Platform** | R/V Weatherbird II |
| **Start Date** | 2005-08-17 |
| **End Date** | 2005-08-26 |
| **Description** | EDT4 2005 Transect 2 Funded by: NSF OCE-0241310 |

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## Project Information

**Eddies Dynamics, Mixing, Export, and Species composition (EDDIES)**

**Website**: http://science.whoi.edu/users/olga/eddies/EDDIES_Project.html

**Coverage**: Sargasso Sea

The original title of this project from the NSF award is: Collaborative Research: Impacts of Eddies and Mixing on Plankton Community Structure and Biogeochemical Cycling in the Sargasso Sea".

Prior results have documented eddy-driven transport of nutrients into the euphotic zone and the associated accumulation of chlorophyll. However, several key aspects of mesoscale upwelling events remain unresolved by the extant database, including: (1) phytoplankton physiological response, (2) changes in community structure, (3) impact on export out of the euphotic zone, (4) rates of mixing between the surface mixed layer and the base of the euphotic zone, and (5) implications for biogeochemistry and differential cycling of carbon and associated bioactive elements. This leads to the following hypotheses concerning the complex, non-linear biological regulation of elemental cycling in the ocean:

H1: Eddy-induced upwelling, in combination with diapycnal mixing in the upper ocean, introduces new nutrients into the euphotic zone.

H2: The increase in inorganic nutrients stimulates a physiological response within the phytoplankton

community.

H3: Differing physiological responses of the various species bring about a shift in community structure.

H4: Changes in community structure lead to increases in export from, and changes in biogeochemical cycling within, the upper ocean.

**Publications**


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## Program Information

**Ocean Carbon and Biogeochemistry (OCB)**

**Website**: http://us-ocb.org/

**Coverage**: Global

The Ocean Carbon and Biogeochemistry (OCB) program focuses on the ocean's role as a component of the global Earth system, bringing together research in geochemistry, ocean physics, and ecology that inform on and advance our understanding of ocean biogeochemistry. The overall program goals are to promote, plan, and coordinate collaborative, multidisciplinary research opportunities within the U.S. research community and with international partners. Important OCB-related activities currently include: the Ocean Carbon and Climate Change (OCCC) and the North American Carbon Program (NACP); U.S. contributions to IMBER, SOLAS, CARBOOCEAN; and numerous U.S. single-investigator and medium-size research projects funded by U.S. federal agencies including NASA, NOAA, and NSF.

The scientific mission of OCB is to study the evolving role of the ocean in the global carbon cycle, in the face of environmental variability and change through studies of marine biogeochemical cycles and associated ecosystems.

The overarching OCB science themes include improved understanding and prediction of: 1) oceanic uptake and release of atmospheric CO2 and other greenhouse gases and 2) environmental sensitivities of biogeochemical cycles, marine ecosystems, and interactions between the two.

The OCB Research Priorities (updated January 2012) include: ocean acidification; terrestrial/coastal carbon fluxes and exchanges; climate sensitivities of and change in ecosystem structure and associated impacts on biogeochemical cycles; mesopelagic ecological and biogeochemical interactions; benthic-pelagic feedbacks on biogeochemical cycles; ocean carbon uptake and storage; and expanding low-oxygen conditions in the coastal and open oceans.

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