# Microbial counts, Eukaryotes from the R/V Melville IronEx II cruise in the Equatorial Pacific Ocean in 1995 (IronEx II project)

**Website**: https://www.bco-dmo.org/dataset/3445
**Version**: 10 March 2011
**Version Date**: 2011-03-10

**Project**
» Iron Experiment II (IronExII)

**Program**
» Iron Synthesis (FeSynth)

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

Microbial counts - Eukaryote

Data were normalized with the following values:

```
#  values used for normalizing from "out" by group
#  group    fals(rel)   redFL(rel)   FL/fals ratio
#  group1  0.45       0.64        1.58
#  group2  2.55       9.01        3.57
#  group3  0.33       7.94        27.74
#  group4  nd         nd          nd
#
```

**Data Processing Description**

**BCO-DMO Processing Notes**
Prepared by WHOI OCB-DMO from original multi sheet file :FeEx2_summary01-(c).xls contributed by Doug Mackie
Sheets "euk data", IN (euk), OUT (euk), IN (euk-norm), OUT (euk_norm) used to prepare this dataset.

**Changes made to original file:**
- Data from the 5 individual sheets combined into one
- Parameter names extensively edited/modified to conform to BCO-DMO convention
- date manually inserted from Cast Log

- HHMM time calculated from supplied decimal hours

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## Data Files

| File |
|------|
| **Microbial_Euk.csv**(Comma Separated Values (.csv), 19.88 KB) |
| <div align="center">MD5:b8c40dde838878c876a458da48203081</div> |
| Primary data file for dataset ID 3445 |

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## Parameters

| Parameter | Description | Units |
|-----------|-------------|-------|
| filename | filename | text |
| description | description | text |
| cruise | cruise | text |
| experiment | experiment | text |
| date | date (GMT) | yyyymmdd |
| time | time (GMT) | hhmm |
| time_decimal | time decimal (GMT) | decimal hours |
| yrday | yrday | integer |
| lon | Longitude (West is negative) | decimal degrees |
| lat | Latitude (South is negative) | decimal degrees |
| cast | cast | integer |
| depth | depth | meters |
| Patch | Location relative to the Patch | text |
| experiment_day | experiment day | integer |
| time_of_day | time of day relative to daylight | text |
| beads_to_Fals | beads to Fals | ratio |
| redFL | redFL | (tbd) |
| group1_name | group1 name | text |
| group1_conc | group1 conc | cells/ml |
| group1_conc_mean | group1 conc mean | cells/ml |
| group1_conc_stddev | group1 conc stddev | cells/ml |
| group1_fals | group1 fals | relative |
| group1_redFL | group1 redFL | relative |
| group1_redFL_to_fals_ratio | group1 redFL to fals ratio | ratio |
| group1_fals_norm | group1 fals norm | (tbd) |
| group1_fals_norm_mean | group1 fals norm mean | (tbd) |

| group1_fals_norm_stddev | group1 fals norm stddev | (tbd) |
|---|---|---|
| group1_redFL_norm | group1 redFL norm | (tbd) |
| group1_redFL_norm_mean | group1 redFL norm mean | (tbd) |
| group1_redFL_norm_stddev | group1 redFL norm stddev | (tbd) |
| group1_redFL_norm_to_fals_norm_ratio | group1 redFL norm to fals norm ratio | ratio |
| group1_redFL_norm_to_fals_norm_ratio_mean | group1 redFL norm to fals norm ratio mean | (tbd) |
| group1_redFL_norm_to_fals_norm_ratio_stddev | group1 redFL norm to fals norm ratio stddev | (tbd) |
| group2_name | group2 name | text |
| group2_conc | group2 conc | cells/ml |
| group2_conc_mean | group2 conc mean | cells/ml |
| group2_conc_stddev | group2 conc stddev | cells/ml |
| group2_fals | group2 fals | relative |
| group2_redFL | group2 redFL | relative |
| group2_redFL_to_fals_ratio | group2 redFL to fals ratio | ratio |
| group2_fals_norm | group2 fals norm | (tbd) |
| group2_fals_norm_mean | group2 fals norm mean | (tbd) |
| group2_fals_norm_stddev | group2 fals norm stddev | (tbd) |
| group2_redFL_norm | group2 redFL norm | (tbd) |
| group2_redFL_norm_mean | group2 redFL norm mean | (tbd) |
| group2_redFL_norm_stddev | group2 redFL norm stddev | (tbd) |
| group2_redFL_norm_to_fals_norm_ratio | group2 redFL norm to fals norm ratio | (tbd) |
| group2_redFL_norm_to_fals_norm_ratio_mean | group2 redFL norm to fals norm ratio mean | (tbd) |
| group2_redFL_norm_to_fals_norm_ratio_stddev | group2 redFL norm to fals norm ratio stddev | (tbd) |
| group3_name | group3 name | text |
| group3_conc | group3 conc | cells/ml |
| group3_conc_mean | group3 conc mean | cells/ml |
| group3_conc_stddev | group3 conc stddev | cells/ml |
| group3_fals | group3 fals | relative |
| group3_redFL | group3 redFL | relative |
| group3_redFL_to_fals_ratio | group3 redFL to fals ratio | ratio |
| group3_fals_norm | group3 fals norm | (tbd) |
| group3_fals_norm_mean | group3 fals norm mean | (tbd) |
| group3_fals_norm_stddev | group3 fals norm stddev | (tbd) |
| group3_redFL_norm | group3 redFL norm | (tbd) |
| group3_redFL_norm_mean | group3 redFL norm mean | (tbd) |
| group3_redFL_norm_stddev | group3 redFL norm stddev | (tbd) |
| group3_redFL_norm_to_fals_norm_ratio | group3 redFL norm to fals norm ratio | (tbd) |
| group3_redFL_norm_to_fals_norm_ratio_mean | group3 redFL norm to fals norm ratio mean | (tbd) |

| group3_redFL_norm_to_fals_norm_ratio_stddev | group3 redFL norm to fals norm ratio stddev | (tbd) |
|---|---|---|
| group4_name | group4 name | text |
| group4_conc | group4 conc | cells/ml |
| group4_conc_mean | group4 conc mean | cells/ml |
| group4_conc_stddev | group4 conc stddev | cells/ml |
| group4_fals | group4 fals | relative |
| group4_reducedred | group4 reducedred | relative to red |
| group4_redFL_to_fals_ratio | group4 redFL to fals ratio | ratio |
| group4_fals_norm | group4 fals norm | (tbd) |
| group4_fals_norm_mean | group4 fals norm mean | (tbd) |
| group4_fals_norm_stddev | group4 fals norm stddev | (tbd) |
| group4_redFL_norm | group4 redFL norm | (tbd) |
| group4_redFL_norm_mean | group4 redFL norm mean | (tbd) |
| group4_redFL_norm_stddev | group4 redFL norm stddev | (tbd) |
| group4_redFL_norm_to_fals_norm_ratio | group4 redFL norm to fals norm ratio | (tbd) |
| group4_redFL_norm_to_fals_norm_ratio_mean | group4 redFL norm to fals norm ratio mean | (tbd) |
| group4_redFL_norm_to_fals_norm_ratio_stddev | group4 redFL norm to fals norm ratio stddev | (tbd) |

## Instruments

| Dataset-specific Instrument Name | CTD profiler |
|---|---|
| Generic Instrument Name | CTD - profiler |
| Generic Instrument Description | The Conductivity, Temperature, Depth (CTD) unit is an integrated instrument package designed to measure the conductivity, temperature, and pressure (depth) of the water column. The instrument is lowered via cable through the water column. It permits scientists to observe the physical properties in real-time via a conducting cable, which is typically connected to a CTD to a deck unit and computer on a ship. The CTD is often configured with additional optional sensors including fluorometers, transmissometers and/or radiometers. It is often combined with a Rosette of water sampling bottles (e.g. Niskin, GO-FLO) for collecting discrete water samples during the cast. This term applies to profiling CTDs. For fixed CTDs, see https://www.bco-dmo.org/instrument/869934. |

## Deployments

**IronExII_MV**

| | |
|---|---|
| **Website** | https://www.bco-dmo.org/deployment/57830 |
| **Platform** | R/V Melville |
| **Start Date** | 1995-05-13 |
| **End Date** | 1995-06-21 |
| **Description** | Cruise Summary: 5/14/95 Depart Papeete, Tahiti 5/14/95 to 5/23/95 Transit & Test stations 5/23/95 to 5/29/95 Survey for Fe release 5/29/95 to 5/30/95 Fe release #1 5/30/95 to 6/1/95 In & out sampling 6/1/95 to 6/1/95 Fe release #2 6/1/95 to 6/5/95 In & out sampling 6/5/95 to 6/5/95 Fe release #3 6/6/95 to 6/8/95 In & out sampling 6/8/95 to 6/9/95 Control patch (SF6 only), 2nd Fe patch release (0.4 nM Fe) 6/9/95 to 6/15/95 In & out sampling of all 3 patches 6/15/95 to 6/21/95 Transit to Acapulco, Mexico |

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## Project Information

**Iron Experiment II (IronExII)**

**Coverage**: Equatorial Pacific Ocean

One of two (see IronEx I Oct/Nov 1993) small scale iron fertilization experiments conducted in the Equatorial Pacific Ocean.

**Summary:**

5/14/95 Depart Papeete, Tahiti

5/14/95 to 5/23/95 Transit & Test stations

5/23/95 to 5/29/95 Survey for Fe release

5/29/95 to 5/30/95 Fe release #1

5/30/95 to 6/1/95 In & out sampling

6/1/95 to 6/1/95 Fe release #2

6/1/95 to 6/5/95 In & out sampling

6/5/95 to 6/5/95 Fe release #3

6/6/95 to 6/8/95 In & out sampling

6/8/95 to 6/9/95 Control patch (SF6 only), 2nd Fe patch release (0.4 nM Fe)

6/9/95 to 6/15/95 In & out sampling of all 3 patches

6/15/95 to 6/21/95 Transit to Acapulco, Mexico

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## Program Information

**Iron Synthesis (FeSynth)**

**Coverage**: Global

The two main objectives of the Iron Synthesis program (SCOR Working Group proposal, 2005), are:
1. Data compilation: assembling a common open-access database of the *in situ* iron experiments, beginning with the first period (1993-2002; Ironex-1, Ironex-2, SOIREE, EisenEx, SEEDS-1; SOFeX, SERIES) where primary articles have already been published, to be followed by the 2004 experiments where primary articles are now in progress (EIFEX, SEEDS-2; SAGE, FeeP); similarly for the natural fertilizations S.O.JGOFS (1992), CROZEX (2004/2005) and KEOPS (2005).

2. Modeling and data synthesis of specific aspects of two or more such experiments for various topics such as physical mixing, phytoplankton productivity, overall ecosystem functioning, iron chemistry, $CO_2$ budgeting, nutrient uptake ratios, DMS(P) processes, and combinations of these variables and processes.

SCOR Working Group proposal, 2005. "The Legacy of *in situ* Iron Enrichments: Data Compilation and Modeling".
http://www.scor-int.org/Working_Groups/wg131.htm

See also: SCOR Proceedings Vol. 42 Concepcion, Chile October 2006, pgs: 13-16 2.3.3 Working Group on The Legacy of *in situ* Iron Enrichments: Data Compilation and Modeling.

The first objective of the Iron Synthesis program involves a data recovery effort aimed at assembling a common, open-access database of data and metadata from a series of *in-situ* ocean iron fertilization experiments conducted between 1993 and 2005. Initially, funding for this effort is being provided by the Scientific Committee on Oceanic Research (SCOR) and the U.S. National Science Foundation (NSF).

Through the combined efforts of the principal investigators of the individual projects and the staff of Biological and Chemical Oceanography Data Management Office (BCO-DMO), data currently available primarily through individuals, disparate reports and data agencies, and in multiple formats, are being collected and prepared for addition to the BCO-DMO database from which they will be freely available to the community.

As data are contributed to the BCO-DMO office, they are organized into four overlapping categories:
1. Level 1, basic metadata
(e.g., description of project/study, general location, PI(s), participants);
2. Level 2, detailed metadata and basic shipboard data and routine ship's operations
(e.g., CTDs, underway measurements, sampling event logs);
3. Level 3, detailed metadata and data from specialized observations
(e.g., discrete observations, experimental results, rate measurements) and
4. Level 4, remaining datasets
(e.g., highest level of detailed data available from each study).

Collaboration with BCO-DMO staff began in March of 2008 and initial efforts have been directed toward basic project descriptions, levels 1 and 2 metadata and basic data, with detailed and more detailed data files being incorporated as they become available and are processed.

## Related file

Program Documentation

The Iron Synthesis Program is funded jointly by the Scientific Committee on Oceanic Research (SCOR) and the U.S. National Science Foundation (NSF).

## Funding

| Funding Source | Award |
|---|---|
| NSF Division of Ocean Sciences (NSF OCE) | OCE-9217518 |
| Office of Naval Research (ONR) | N00014-94-10125 |