CTD - Bottles from R/V Hugh R. Sharp HRS070714AB in the Chesapeake Bay from July 2007 (Assessing Roseobacter activities project)

Website: https://www.bco-dmo.org/dataset/3490
Version: 16 January 2014
Version Date: 2014-01-16

Project
» Determining growth rates of specific bacterioplankton (Assessing Roseobacter activities)

Contributors	Affiliation	Role
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Dataset Description

CTD Bottle Data - avg and stdev values at bottle firings for various parameters

Methods & Sampling

* Sea-Bird SBE 9 Data File:
* FileName = D:DataCTDCTD020.dat
* Software Version Seasave Win32 V 5.37m
* Temperature SN = 2631
* Conductivity SN = 2603
* Number of Bytes Per Scan = 41
* Number of Voltage Words = 4
* Number of Scans Averaged by the Deck Unit = 1
* Append System Time to Every Scan
* System UpLoad Time = Jul 18 2007 17:00:34
* NMEA Latitude = 37 58.00 N
* NMEA Longitude = 076 16.01 W
* NMEA UTC (Time) = 17:03:01
* Store Lat/Lon Data = Append to Every Scan
** R/V HUGH R. SHARP
** Cruise: 070714AB
** Station: CB 61
** Latitude: 37 58.00 N
** Longitude: 076 16.01 W
# interval = seconds: 0.0416667
# start_time = Jul 18 2007 17:00:34

sensor 0 = Frequency 0 temperature, primary, 2631, 12-sep-06
sensor 1 = Frequency 1 conductivity, primary, 2603, 11-jan-07, cpcor = -9.5700e-08
sensor 2 = Frequency 2 pressure, 0445, 07-APRIL-06
sensor 3 = Frequency 3 temperature, secondary, 2572, 11-jan-07
sensor 4 = Frequency 4 conductivity, secondary, 2208, 11-jan-07, cpcor = -9.5700e-08
sensor 5 = Extrnl Volt 0 WET Labs, ECO_AFL
sensor 6 = Extrnl Volt 1 userpoly 0, 090, 01-FEB-07
sensor 7 = Extrnl Volt 2 Oxygen, SBE, primary, 0540, 10-FEB-07
sensor 8 = Extrnl Volt 6 altimeter
datcnv_date = Jul 18 2007 17:34:29, 5.35
datcnv_in = D:DataCTDCTD020.dat D:DataCTD2007-J.con
datcnv_bottle_scan_range_source = scans marked with bottle confirm bit, 0, 2
bottlesum_date = Jul 18 2007 17:34:54, 5.35
bottlesum_in = D:DataCTDCTD020.ros D:DataCTD2007-J.con D:DataCTDCTD020.BL

Data Processing Description

BCO-DMO Processing Notes
- Awk written to reformat original .btl files contributed by Allison Buchan
- AWK: HRS070714AB_CTDbtl_2_BCODMO.awk
- Update of 16January2014/srg
- Awk routine edited to correct read of seconds in the time string
- No other changes to the data

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Data Files

File
CTD_Bottles.csv (Comma Separated Values (.csv), 16.74 KB) MD5:a88e668284059194c20fda1dfffed7d5 Primary data file for dataset ID 3490

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Parameters

Parameter	Description	Units
CTD_DataSet_Id	CTD Dataset Id	text
station	station id	text
date	Station date	YYYYMMDD
time	Station time	HHMMSS
lat	Station latitude from header record (South is negative)	decimal degrees

lon	Station longitude from header record (West is negative)	decimal degrees
bottle	Bottle number	integer
date_bottle	Date of bottle firing	YYYYMMDD
time_bottle	Time of bottle firing	HHMMSS
PrDM_avg	PrDM average	decibars
PrDM_sdev	PrDM standard of deviation	decibars
T090C_avg	T090C average	degrees Celsius
T090C_sdev	T090C standard of deviation	degrees Celsius
Sal00_avg	Sal00 average	PSU
Sal00_sdev	Sal00 standard of deviation	PSU
Sbeox0Mm_Kg_avg	Sbeox0Mm Kg average	umol/Kg
Sbeox0Mm_Kg_sdev	Sbeox0Mm Kg standard of deviation	umol/Kg
FlECO_minus_AFL_avg	FlECO minus AFL (Fluorescence, Wetlab ECO-AFL) average	mg/m^3
FlECO_minus_AFL_sdev	FlECO minus AFL (Fluorescence, Wetlab ECO-AFL) standard of deviation	mg/m^3

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Instruments

Dataset-specific Instrument Name	CTD Sea-Bird SBE 911plus
Generic Instrument Name	CTD Sea-Bird SBE 911plus
Dataset-specific Description	CTD System: SeaBird Electronics 911 plus CTD, Rosette is a 12-bottle General Oceanic Model 1015, outfitted with an array of 10 liter bottles.
Generic Instrument Description	The Sea-Bird SBE 911 plus is a type of CTD instrument package for continuous measurement of conductivity, temperature and pressure. The SBE 911 plus includes the SBE 9plus Underwater Unit and the SBE 11plus Deck Unit (for real-time readout using conductive wire) for deployment from a vessel. The combination of the SBE 9 plus and SBE 11 plus is called a SBE 911 plus. The SBE 9 plus uses Sea-Bird's standard modular temperature and conductivity sensors (SBE 3 plus and SBE 4). The SBE 9 plus CTD can be configured with up to eight auxiliary sensors to measure other parameters including dissolved oxygen, pH, turbidity, fluorescence, light (PAR), light transmission, etc.). more information from Sea-Bird Electronics

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Deployments

HRS070714AB

Website	https://www.bco-dmo.org/deployment/58668
Platform	R/V Hugh R. Sharp
Start Date	2007-07-14
End Date	2007-07-19
Description	Funded by: NSF OCE-0550485 Original cruise data are available from the NSF R2R data catalog (http://www.rvdata.us/catalog/HRS070714AB)

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Project Information

Determining growth rates of specific bacterioplankton (Assessing Roseobacter activities)

Coverage: Chesapeake Bay, 38N 76W

While an improved picture of the diversity and metabolic capabilities of environmentally significant microorganisms now exists, direct links between phylogenetic diversity and activity of heterotrophic marine bacterioplankton remain elusive. We propose to address this gap with a series of laboratory and field experiments designed with the ultimate goal of measuring in situ growth rates of specific members of the bacterioplankton by direct measurement of the expression of genes involved in fundamental cellular processes (e.g. cellular division, DNA replication, etc.). An advantage of this approach is that instantaneous population parameters are measured directly without labile DOC amendment or incubation. Also, the activity of specific bacterial populations, rather than entire communities, will be monitored and thus provide an improved understanding of the significance of community structure to ecosystem function. Efforts will focus on the Roseobacter lineage of marine bacteria. Members of this clade are ubiquitous and often abundant in marine plankton, have been linked to specific and significant biogeochemical roles and are a main focus of recent whole genome sequencing efforts.

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Funding

Funding Source	Award
NSF Division of Ocean Sciences (NSF OCE)	OCE-0550485

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