Production vs Irradiance data from RVIB Nathaniel B. Palmer cruise NBP0103 in the Southern Ocean in 2001 (SOGLOBEC project)

Website: https://www.bco-dmo.org/dataset/2375
Data Type: Cruise Results
Version: 1
Version Date: 2004-11-18

Project
» U.S. GLOBEC Southern Ocean (SOGLOBEC)

Program
» U.S. GLOBal ocean ECosystems dynamics (U.S. GLOBEC)

Contributors	Affiliation	Role
Vernet, Maria	University of California-San Diego Scripps (UCSD-SIO)	Principal Investigator
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Abstract
Production vs Irradiance data from RVIB Nathaniel B. Palmer cruise NBP0103 in the Southern Ocean in 2001 (SOGLOBEC project)

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Coverage

Spatial Extent: **N**:-65.65 **E**:-67.397 **S**:-70.325 **W**:-77.762
Temporal Extent: 2001 - 2001

Dataset Description

Production vs Irradiance

A short note on the "Southern Ocean Grid System": The grid is a Cartesian plane covering the sample region in which distances are easy to calculate. The grid system used for SOGLOBEC is a universal transverse mercator (UTM) projection with a certain base point and rotation. The base point was chosen in the far south and the rotation was chosen to create one axis along the peninsula, and the other offshore. The units of UTM are meters, but the points are chosen in km rounded to the nearest km. Negative numbers mean that samples were taken southwest of the y axis or southeast of the x axis. For more details see: Complete explanation of the Southern Ocean grid system.

Reference:
Platt, T, and Jassby, A.D., 1976. The relationship between Photosynthesis and Light for Natural Assemblages of Coastal Marine Phytoplankton. *Journal of Phycology*. **Vol. 12**; p. 421-430.

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Methods & Sampling

roduction vs Irradiance data from Southern Ocean Globec for NBP0103 cruise

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Data Files

File
fullprodpi.csv (Comma Separated Values (.csv), 15.96 KB) MD5:338947acffaa87d86f87059d189ac2fd Primary data file for dataset ID 2375

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Parameters

Parameter	Description	Units
cruiseid	cruise identification. (e.g. NBP0104)	
year	year, GMT, (e.g. 2001)	
station_desc	station description, as defined in a grid system, or plain text	
station	station number, generally numbered consecutively within cruise	
grid_line	standard grid line, a grid location system used by GLOBEC Southern Ocean, see grid notes below	

grid_sta	a grid location for a sampling obseration/station, used with grid_line	
yrday_gmt	year day, based on Julian Calendar	YYY.Y
lat	latitude, negative = South	degrees
lon	longitude, negative = West	degrees
event	event number, a unique number assigned to a specific sampling event.	
cast	cast number, or text description	
bottle	CTD rosette bottle number, or text description	
depth	depth of sample collected	meters
diff_from_8C	deviation from 8 degrees C., the incubation temperature	degrees C
replicate	replicate samples, marked as A or B	
alpha	light limited photosynthesis, calculated from curve	(mgC/chla/h)/(uE/m²/s)
beta	rate of photoinhibition, calculated from curve	(mgC/chla/h)/(uE/m²/s)
Ik	light intensity where Pmax is reached	(uE/m²/s)
Pmax	maximum rate of photosynthesis, at given incubation temperature, under light-limiting conditions	(mgC/chla/h)

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Instruments

Dataset-specific Instrument Name	Niskin Bottle
Generic Instrument Name	Niskin bottle
Dataset-specific Description	Niskin bottle cast used to collect water samples for pigment, nutrient, plankton, etc. analysis
Generic Instrument Description	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.

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Deployments

NBP0103

Website	https://www.bco-dmo.org/deployment/57636
Platform	RVIB Nathaniel B. Palmer
Report	http://globec.whoi.edu/so-dir/reports/nbp0103/nbp0103.html
Start Date	2001-04-24
End Date	2001-06-05
Description	**Methods & Sampling** roduction vs Irradiance data from Southern Ocean Globec for NBP0103 cruise

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Project Information

U.S. GLOBEC Southern Ocean (SOGLOBEC)

Website: http://www.ccpo.odu.edu/Research/globec_menu.html

Coverage: Southern Ocean

The fundamental objectives of United States Global Ocean Ecosystems Dynamics (U.S. GLOBEC) Program are dependent upon the cooperation of scientists from several disciplines. Physicists, biologists, and chemists must make use of data collected during U.S. GLOBEC field programs to further our understanding of the interplay of physics, biology, and chemistry. Our objectives require quantitative analysis of interdisciplinary data sets and, therefore, data must be exchanged between researchers. To extract the full scientific value, data must be made available to the scientific community on a timely basis.

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Program Information

U.S. GLOBal ocean ECosystems dynamics (U.S. GLOBEC)

Website: http://www.usglobec.org/

Coverage: Global

U.S. GLOBEC (GLOBal ocean ECosystems dynamics) is a research program organized by oceanographers and fisheries scientists to address the question of how global climate change may affect the abundance and production of animals in the sea.

The U.S. GLOBEC Program currently had major research efforts underway in the Georges Bank / Northwest Atlantic Region, and the Northeast Pacific (with components in the California Current and in the Coastal Gulf of Alaska). U.S. GLOBEC was a major contributor to International GLOBEC efforts in the Southern Ocean and Western Antarctic Peninsula (WAP).

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Funding

Funding Source	Award
NSF Antarctic Sciences (NSF ANT)	ANT-9910175

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