Radionuclides from sediment cores from RVIB Nathaniel B. Palmer NBP-98-2 cruises in the Southern Ocean in 1998 (U.S. JGOFS AESOPS project)

Website: https://www.bco-dmo.org/dataset/2762
Version: October 1, 2002
Version Date: 2002-10-01

Project
» U.S. JGOFS Antarctic Environment and Southern Ocean Process Study (AESOPS)

Program
» U.S. Joint Global Ocean Flux Study (U.S. JGOFS)

Contributors	Affiliation	Role
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Dataset Description

Radionuclides from sediment cores

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Data Files

File
sed_rad.csv (Comma Separated Values (.csv), 7.27 KB) MD5:bd59f5deb83094bdf5fe1204940e2003 Primary data file for dataset ID 2762

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Parameters

Parameter	Description	Units
event	event number from event log	
sta	station number from event log	
lat	latitude, minus value means South	decimal degrees
lon	longitude, minus value means West	decimal degrees
core_type	type of coring instrument used, where GC = gravity core where PC = piston core	
depth_w	water depth	meters
depth_core	depth in core, mid-point of interval sampled	centimeters
depth_core_sd	depth in core, standard deviation	centimeters
U238	uranium-238	dpm/gram
U238_err	uranium-238 error, plus/minus one sigma	dpm/gram
Th232	thorium-232	dpm/gram
Th232_err	thorium-232 error, plus/minus one sigma	dpm/gram
Th230	thorium-230	dpm/gram
Th230_err	thorium-230 error, plus/minus one sigma	dpm/gram
Pa231	protactinium-231	dpm/gram
Pa231_err	protactinium-231 error, plus/minus one sigma	dpm/gram
Be10	beryllium-10	atoms/gram
Be10_err	beryllium-10 error, plus/minus one sigma	atoms/gram
Ba	barium	ppm
CaCO3	calcium carbonate	percent
opal	opal	percent
C_org	organic carbon	percent

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Instruments

Dataset-specific Instrument Name	Gravity Corer
Generic Instrument Name	Gravity Corer
Generic Instrument Description	The gravity corer allows researchers to sample sediment layers at the bottom of lakes or oceans. The coring device is deployed from the ship and gravity carries it to the seafloor. (http://www.whoi.edu/instruments/viewInstrument.do?id=1079).

Dataset-specific Instrument Name	Piston Corer
Generic Instrument Name	Piston Corer
Generic Instrument Description	The piston corer is a type of bottom sediment sampling device. A long, heavy tube is plunged into the seafloor to extract samples of mud sediment. A piston corer uses a "free fall" of the coring rig to achieve a greater initial force on impact than gravity coring. A sliding piston inside the core barrel reduces inside wall friction with the sediment and helps to evacuate displaced water from the top of the corer. A piston corer is capable of extracting core samples up to 90 feet in length.

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Deployments

NBP-98-2

Website	https://www.bco-dmo.org/deployment/57723
Platform	RVIB Nathaniel B. Palmer
Report	http://usjgofs.whoi.edu/aesops/nbp-bp_mr.html
Start Date	1998-02-25
End Date	1998-04-03
Description	Benthic Process and Moorings Recovery **Methods & Sampling** PI: Bob Anderson of: Lamont-Doherty Earth Observatory dataset: Radionuclides from sediment cores dates: March 03, 1998 to March 15, 1998 location: N: -60.244 S: -66.1175 W: -170.1888 E: -169.4922 project/cruise: AESOPS/NBP98-2 Ross Sea Benthic Processes Cruise ship: R/V Nathaniel B. Palmer Methodology

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Project Information

U.S. JGOFS Antarctic Environment and Southern Ocean Process Study (AESOPS)

Website: http://usjgofs.whoi.edu/research/aesops.html

Coverage: Southern Ocean, Ross Sea

The U.S. Southern Ocean JGOFS program, called Antarctic Environment and Southern Ocean Process Study (AESOPS), began in August 1996 and continued through March 1998. The U.S. JGOFS AESOPS program focused on two regions in the Southern Ocean: an east/west section of the Ross-Sea continental shelf along 76.5°S, and a second north/south section of the Southern Ocean spanning the Antarctic Circumpolar Current (ACC) at ~170°W (identified as the Polar Front). The science program, coordinated by Antarctic Support Associates (ASA), comprised eleven cruises using the R.V.I.B Nathaniel B. Palmer and R/V Roger Revelle as observational platforms and for deployment and recovery of instrumented moorings and sediment-trap arrays. The Ross-Sea region was occupied on six occasions and the Polar Front five times. Mapping data were obtained from SeaSoar, ADCP, and bathymetric systems. Satellite coverage was provided by the NASA SeaWiFS and the NOAA/NASA Pathfinder programs.

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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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