

Crabeater Seal location data from satellite tags deployed during ARSV Laurence M. Gould cruises LMG0104, LMG0106, LMG0203, and LMG0205 in the Southern Ocean from 2001-2002 (SOGLOBEC project)

Website: <https://www.bco-dmo.org/dataset/2382>

Data Type: Cruise Results

Version: 1

Version Date: 2005-03-31

Project

- » [U.S. GLOBEC Southern Ocean](#) (SOGLOBEC)
- » [Foraging Ecology of Crabeater Seals \(Lobodon Carcinophagus\)](#) (Crabeater Seal Foraging)

Programs

- » [U.S. GLOBal ocean ECosystems dynamics](#) (U.S. GLOBEC)
- » [U.S. GLOBal ocean ECosystems dynamics](#) (U.S. GLOBEC)

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Abstract

Crabeater Seal location data from satellite tags deployed during ARSV Laurence M. Gould cruises LMG0104, LMG0106, LMG0203, and LMG0205 in the Southern Ocean from 2001-2002 (SOGLOBEC project)

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Coverage

Spatial Extent: N:-62.266 E:-55.901 S:-73.433 W:-98.078

Temporal Extent: 2001-05-07 - 2002-10-18

Dataset Description

Tagged Seal Location Data from SOGLOBEC

For additional details on sampling and analytical methods see:

Burns, Jennifer M., Daniel P. Costa, Michael A. Fedak, Mark A. Hindell, Corey J.A. Bradshaw, Nicholas C. Gales, Birgitte McDonald, Stephan J. Trumble, Daniel E. Crocker, 2004. [Winter habitat use and foraging behavior of crabeater seals along the Western Antarctic Peninsula](#). Deep-Sea Research II vol 51, pp 2279-2303.

Links to companion seal files:

[General Seal Background Information](#)

[Seal Physiology](#)

[Seal Morphometrics](#)

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Data Files

File
seals_loc_test.csv (Comma Separated Values (.csv), 3.27 MB) MD5:1506ac48bc635eb3ef80329cdfa4e1a8 Primary data file for dataset ID 2382

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Parameters

Parameter	Description	Units
year	year cruise occurs	
refno	Reference number consisting of: cruise number (cr1-4), seal name, and last two digits of year (i.e. cr1_Bertha_01)	
pttno	PTTNo = ID of satellite tag. Not unique because ARGOS recycles them year to year.	
month_gmt	month of year, reported as GMT	
day_gmt	day of month (1-31) reported as GMT	
time_gmt	time of day 24 hr. clock, reported as GMT	hhmm
qual_loc	Location quality as determined by Service Argos. Range (best to worst): 3 to -2	
lat	Latitude of position fix judged to be the most likely, negative = South.	dec. degrees
lon	Longitude of position fix judged to be the most likely, negative = West.	dec. degrees
vmask	Initial screening of received positions. Positions judged unlikely if vmask .ne. 0	
source_sat	Satellite that received signal from tag	
speed_est	Estimated rate of travel between locations. Determined as the average of the distance to the previous location divided by the time difference between locations and the distance to the next location divided by the time difference.	
temp_tag	Sea surface temperature, determined by the tag. Only measured in 2001.	degrees C

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Deployments

LMG0104

Website	https://www.bco-dmo.org/deployment/57637
Platform	ARSV Laurence M. Gould
Report	http://www.ccpo.odu.edu/Research/globec/cruises/gould0103_0104.doc
Start Date	2001-04-20
End Date	2001-06-05

LMG0106

Website	https://www.bco-dmo.org/deployment/57639
Platform	ARSV Laurence M. Gould
Report	http://www.ccpo.odu.edu/Research/globec/cruises01/lmg0106_menu.html
Start Date	2001-07-21
End Date	2001-09-01

LMG0203

Website	https://www.bco-dmo.org/deployment/57642
Platform	ARSV Laurence M. Gould
Report	http://www.ccpo.odu.edu/Research/globec/main_cruises02/lmg0203/menu.html
Start Date	2002-04-07
End Date	2002-05-20

LMG0205

Website	https://www.bco-dmo.org/deployment/57644
Platform	ARSV Laurence M. Gould
Report	http://www.ccpo.odu.edu/Research/globec/main_cruises02/lmg0205/report_lmg0205.pdf
Start Date	2002-07-29
End Date	2002-09-18

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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.

Foraging Ecology of Crabeater Seals (*Lobodon Carcinophagus*) (Crabeater Seal Foraging)

Coverage: Southern Ocean

The U.S. Global Ocean Ecosystems Dynamics (U.S. GLOBEC) program has the goal of understanding and ultimately predicting how populations of marine animal species respond to natural and anthropogenic changes in climate. Research in the Southern Ocean (SO) indicates strong coupling between climatic processes and ecosystem dynamics via the annual formation and destruction of sea ice. The Southern Ocean GLOBEC Program (SO GLOBEC) will investigate the dynamic relationship between physical processes and ecosystem responses through identification of critical parameters that affect the distribution, abundance and population dynamics of target species. The overall goals of the SO GLOBEC program are to elucidate shelf circulation processes and their effect on sea ice formation and krill distribution, and to examine the factors which govern krill survivorship and availability to higher trophic levels, including penguins, seals and whales. The focus of the U.S. contribution to the international SO GLOBEC program will be on winter processes. This component will focus on the distribution and foraging behavior of adult female crabeater seals, using a combination of satellite-linked tracking, specialized diver recorders, and stable isotopic tracers. This research will be coordinated with components focused on prey (krill) distribution and the physical environment. The results will be analyzed using an optimality model. The result of the integrated SO GLOBEC program will be to improve the predictability of

living marine resources, especially with respect to local and global climatic shifts.

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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-0003956
NSF Antarctic Sciences (NSF ANT)	ANT-9981683

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