

**Table 1.2: Palmer LTER Datasets.**

**Note:** Palmer LTER datasets have been used extensively for site data exchange (informal communication) and for outside community use (e.g. Constible et al. 2007). Electronic logging of data access was implemented in January 2007 within the new DataZoo information system and will enable a statistical summary of data access in the next year. This summary will become meaningful when data migration to the new system is complete and access to the old system closed. See <http://oceaninformatics.ucsd.edu/datazoo/pallter> for details.

**Status and availability:** All data are online in the original data system ([http://pal.lternet.edu/data/study\\_catalog.php](http://pal.lternet.edu/data/study_catalog.php)). Many datasets have been transferred to the new DataZoo information system (<http://pal.lternet.edu/datazoo>). See Section 4 for details.

<b>Dataset Title*</b>	<b>Description</b>	<b>Current Lead PI (2003-08)</b>
<b>CRUISE STUDY</b>		
Bacterial Abundance - Cruise	Bacterial properties in discrete water column samples	H.Ducklow
Bird Census - Transect - Moving	Bird and marine mammal observations made shipboard during transect between stations in the LTER sampling grid	W.Fraser
Bird Census - Transect - Stationary	Bird and marine mammal observations made shipboard while on station during a cruise sampling the LTER grid	W.Fraser
Carbon - Dissolved Inorganic - Cruise	Dissolved inorganic carbon and alkalinity of discrete water column samples	H.Ducklow
Carbon - Dissolved Organic - Cruise	Dissolved organic carbon taken from discrete water column samples	H.Ducklow
Carbon and Nitrogen - Particulate Organic - Cruise	Particulate carbon and nitrogen taken from water column sample bottles	M.Vernet
Chlorophyll - Cruise	Chlorophyll and phaeopigments determined by extraction and measured from a discrete sample using a bench fluorometer	M.Vernet
Dissolved Oxygen - Cruise	Dissolved oxygen of discrete water column samples	H.Ducklow
Hydrographic - CTD Bottle Data	Conductivity Temperature Depth (CTD) generated data associated with each bottle sample collected	D.Martinson
Hydrographic - CTD Field Profiles	CTD full binned data - Conductivity Temperature Depth (CTD) binned into depth intervals but no qa/qc	D.Martinson
Hydrographic - CTD Processed Profiles	CTD reduced binned data - Conductivity Temperature Depth (CTD) binned into depth intervals that have survived qa/qc	D.Martinson
Krill Growth	Zooplankton krill growth from samples collected by zodiacs in the Palmer Basin grid	L.Quetin; R.Ross
Krill Spawning Frequency	Krill spawning frequency and egg production experiments were conducted on board in a flow-through aquarium at ambient temperature	L.Quetin; R.Ross
Log - PAL Events	Palmer (PAL) log of events (cruise happenings ordered by time) is a meta dataset, including lat-lon, datetime, activity, events, etc.Cruise events	PaLTER
Log - Water Sample	List of water samples taken for each study with links to the study event log	PaLTER
Nutrients - Dissolved Inorganic - BP	Silicate, phosphate, nitrate and ammonium concentrations (in uMoles/liter)	B.Prezelin
Nutrients - Dissolved Inorganic - DK	Silicate, phosphate, nitrate and ammonium concentrations (in uMoles/liter)	D.Karl

Nutrients - Dissolved Inorganic - MV	Dissolved inorganic nutrients including 5 macro nutrients: silicate, phosphate, nitrate, nitrite, and ammonium from water column bottle samples	M.Vernet
Optics	Profiling irradiance measurements	R.Smith
Pigments - HPLC	Samples taken from rosette Go-Flo bottles and analyzed with High Performance Liquid Chromatography (HPLC) for pigments	M.Vernet
Primary Production - SIS	Water column primary production from inorganic carbon uptake for 24h at simulated in situ (SIS) light levels in deck incubators	M.Vernet
Sea Ice	Field Measurements: Depth surveys, optical measurements and discrete samples for T, S, d18O, density (Jun-Jul 1999, Sep-Oct 2001); digital library of ice core thick/thin sections	M. Vernet
Sea Ice	Underway Observations: Hourly underway observations of sea ice concentration, thickness, floe type/topography, snow type/thickness using the ASPECT protocol	M.Vernet
Ship / Met	Underway ship measurements of temperature, wind speed/direction, pressure, humidity	PAL
Ship / Nav	Underway navigation of time, location, ship speed, heading,	PAL
Zooplankton Bioacoustics	Zooplankton bioacoustics work from zodiacs in Palmer Basin grid	L.Quetin; R.Ross
Zooplankton Trawls 2m	Zooplankton trawls made shipboard with 2m net in the Palmer regional grid	L.Quetin; R.Ross
Zooplankton Trawls General	Zooplankton trawls made shipboard with general net in the Palmer regional grid	L.Quetin; R.Ross
<b>SEASONAL STUDY</b>		
Bacterial Abundance	Bacterial properties in discrete water column samples	H.Ducklow
Carbon - Dissolved Organic	Dissolved organic carbon measurements	H.Ducklow
Carbon and Nitrogen - Particulate Organic	Particulate carbon and nitrogen taken from water column sample bottles	M.Vernet
Krill Growth	Zooplankton krill growth from samples collected by zodiacs in the Palmer Basin grid	L.Quetin; R.Ross
Nutrients - Dissolved Inorganic	Dissolved inorganic nutrients including 5 macro nutrients: silicate, phosphate, nitrate, nitrite, and ammonium from water column bottle samples	M.Vernet
Optics	Profiling irradiance measurements	R.Smith
Penguin Adelie Breeding	Penguin breeding observations made on islands in the Palmer LTER sampling region	W.Fraser
Penguin Adelie Demography	Penguin demography observations made on islands in the Palmer LTER sampling region	W.Fraser
Penguin Adelie Foraging	Penguin foraging observations made on islands in the Palmer LTER sampling region	W.Fraser
Penguin Adelie Telemetry	Penguin telemetry observations made on islands in the Palmer LTER sampling region	W.Fraser

Table 1.2 Page 2

Pigments - HPLC	Samples taken from rosette Go-Flo bottles and analyzed with High Performance Liquid Chromatography (HPLC) for pigments	M.Vernet
Primary Production - SIS	Water column primary production from inorganic carbon uptake for 24h at simulated in situ (SIS) light levels in deck incubators	M.Vernet
Zooplankton Bioacoustics	Zooplankton bioacoustics work from zodiacs in Palmer Basin grid	L.Quetin; R.Ross
Zooplankton Zodiac Trawls	Zooplankton trawls made from zodiacs in the Palmer Basin grid	L.Quetin; R.Ross
<b>EXTERNAL CROSS-STUDY</b>		
Ice Coverage - Monthly Averages	Average monthly sea ice coverage for the PAL LTER region West of the Antarctic Peninsula derived from passive microwave	S.Stammerjohn
Model Met	SLP, surface winds of the WAP region extracted from NCEP/NCAR numerical re-analyses	S.Stammerjohn
Sediment Trap Fluxes - Inshore	Sediment trap in nearshore waters (1992-1995)	D.Karl
Sediment Trap Fluxes - Offshore	Vertical sea fluxes of particulate carbon, nitrogen and phosphorus from a sediment trap deployed southeast of Palmer Station, Antarctica at a depth of 150 meters (1993 - present)	H.Ducklow
Weather - Palmer Daily	Daily weather observations (air temperature, pressure, wind, precipitation) at Palmer Station, Antarctica starting in April of 1989; also Faraday/Vernadsky data	K.Baker
Weather - Palmer Temperature - Derived Monthly Averages	Monthly weather (air temperature) at Palmer Station, Antarctica for the period 1974-1998	K.Baker
<b>TRENDS - DERIVED</b>		
Ice Coverage - Derived Annual Averages	Average yearly sea ice coverage for the PAL LTER region West of the Antarctic Peninsula derived from passive microwave	S.Stammerjohn
Krill Counts - Derived Annual Totals	Annual counts of krill and salp near Palmer Station, Antarctica starting in 1992	L.Quetin; R.Ross
Penguin Counts - Derived Annual Totals	Annual counts of penguin breeding pairs near Palmer Station, Antarctica starting in 1970	W.Fraser
Sedimentation and Primary Production - Derived Annual Averages	Annual sedimentation and primary production in the Palmer LTER study grid	H.Ducklow
<p><b>*Study types:</b> <b>Cruise:</b> data derived from annual offshore cruise aboard research vessel. <b>Seasonal:</b> data derived from land-based studies at Palmer Station during October to April penguin breeding season. <b>External cross-study:</b> data derived from independent observation systems (to include physical oceanographic moorings from 2007 on (in preparation)). <b>Trends-Derived.</b> Selected, merge datasets from the other 3 categories assembled for the LTER TRENDS project (updated annually).</p>		