

Research Support Plan

I-164-S, Murat Aydin

Collaborative Research: A 1500-m ice core from South Pole

Award Number: PLR – 1142517

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2014-15 South Pole Station-Based Project

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Change Management and Tracking

This table documents and tracks major changes that develop following RSP distribution.

Date	Description
10/03/2014	RSP issued to PI for concurrence
11/02/2014	Final concurred RSP distributed

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COMPREHENSIVE RESEARCH SUPPORT INFORMATION

Purpose

This document summarizes and provides information about the resources allocated to the subject NSF-PLR award for the upcoming field season.

The support details have been developed in consultation with the Principal Investigator (PI), National Science Foundation (NSF), and Antarctic Support Contractor (ASC), and are based on the support levels approved in the Operational Notice for the award, and the specific seasonal needs as indicated in the 2014-15 season Support Information Package (SIP).

This document should be reviewed with all field team members. Any discrepancies should be presented to the ASC project point of contact (POC) prior to deployment to Antarctica.

Field Project Overview

The South Pole Ice Core Project will collect a 1500 meter ice core at the South Pole beginning in 2014 and ending in 2017 with the final core shipment. The main activities of the 2014/2015 season are setting up the drill camp, starting coring operations, shipping cores and winterizing the camp for the following season.

Outstanding Issues

Weather delays can delay the arrival of cargo and the availability of heavy equipment. Construction of the camp and thus the start of drilling operations may be delayed.

Deployment Dates

The table below shows the approved deployment plan for your group. The dates have been set by the PI, ASC and the NSF and cannot be changed without coordination and approval from your ASC Implementer. Any changes must be made no later than four weeks before scheduled deployment.

Last Name	First Name	Conus-CHC	CHC-MCM	MCM-NPX	NPX-MCM	MCM-CHC	Self Ticket
Aydin	Murat	11/08/2014	11/12/2014	11/13/2014	01/05/2015	01/06/2015	N
Boeckmann	Grant	11/01/2014	11/05/2014	11/06/2014	02/02/2015	02/03/2015	N
Casey	Kimberly	11/08/2014	11/12/2014	11/13/2014	02/02/2015	02/03/2015	N
Fudge	Tyler	12/26/2015	12/30/2014	12/31/2014	02/02/2015	02/03/2015	N
Kuhl	Tanner	11/01/2014	11/05/2014	11/06/2014	02/02/2015	02/03/2015	N
Morton	Elizabeth	11/01/2014	11/05/2014	11/06/2014	02/02/2015	02/03/2015	N
Nicewonger	Melinda	11/08/2014	11/12/2014	11/13/2014	02/02/2015	02/03/2015	N
Goetz	Josh	11/01/2014	11/05/2014	11/06/2014	02/02/2015	02/03/2015	N
Ferris	David	11/01/2014	11/05/2014	11/06/2014	02/02/2015	02/03/2015	N
Stapleton	Shawntel	11/01/2014	11/05/2014	11/06/2014	02/02/2015	02/03/2015	N
Wipperfurth	Nicholas	11/01/2014	11/05/2014	11/06/2014	02/02/2015	02/03/2015	N

(Dates are current as of 11/02/2014)

All dates are subject to change. The table below explains each column.

Column	Description
Conus-CHC	Dates participant is scheduled to leave the U.S (four days before Ice flight, with two nights in Christchurch).

Column	Description
CHC-McM	Date participant is scheduled to depart Christchurch for McMurdo Station.
McM-NPX	Date participant is scheduled to depart McMurdo for South Pole
NPX-McM	Date participant is scheduled to depart South Pole for McMurdo
McM-CHC	Date participant is scheduled to redeploy from McMurdo Station to Christchurch.
Self-Ticket	"Y" indicates the participant will purchase commercial airline tickets without support or reimbursement from ASC Travel. Self-tickers must provide their itinerary to ASC Travel (deploy@usap.gov or fax 303-705-0742). ASC Travel will make hotel reservations in Christchurch upon request.

Permits

The Principal Investigator is responsible for ensuring that all applicable permits have been obtained prior to deployment.

See appendix for more information.

Cargo

Direction	Weight (lbs)	ROS	Comments
Southbound	46,550	4312	Includes drilling fluid
Southbound	2,000	4319	
COMAIR Retrograde	4085	5073	
Vessel Retrograde	16,320	5094	Ice Cores to NICL

Keep in mind the following cargo-related information:

- Baggage and hand-carried items are not "cargo" and are not listed.
- Items purchased and shipped by ASC for grantees are also not listed here.
- ROS (Required On Site) is the Saturday closing the week that cargo will be delivered at the research station (McMurdo or South Pole Stations).
- Unapproved northbound COMAIR cargo will require approval from the NSF representative on station.

Environmental Documentation

The Principal Investigator is responsible for ensuring that all required environmental documentation has been completed before deployment.

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A project-specific Record of Environmental Review (ROER) is being prepared and will be approved by NSF prior to the project team arriving at South Pole Station.

Note Each grantee needs to complete an Environmental End-of-Season (EOS) Report at the end of the season to meet ACA reporting requirements. Further information and instructions will be provided in the RSP Appendix and at the Science In brief.

Science Construction

Construction activities will mainly be focused on setting up the drill camp and supporting ice core

shipments. At the beginning of the 2014/2015 field season the roads to the drill site will be groomed, the trench for ice core storage and drill structure will be excavated, the cargo will be moved in place, the Weatherhaven will be erected, support structures will be moved, power will be provided, and support to transport cores to the station side of the skiway will be provided. In McMurdo, the cores will be loaded into SafeCore containers and loaded onto the vessel. After arriving in Port Hueneme the cores will be escorted to National Ice Core Laboratory (NICL) in Denver, Colorado. At the end of the season, the camp will be winterized.

The schedule of the support activities are listed in the Aydin/SPIceCore project.

Computers and Communications

The following support will be provided:

- 10 MB/day of data transfers (SFTP) over the station's broadband satellite links will be supported on a best-level-of-effort basis.
- Four Land Mobile Radios with lapel mics, chargers, and spare batteries. (Chest harnesses are unavailable.)
- A wireless network link between the South Pole LAN and the drill camp.
- Please be aware that Microsoft support for the Windows XP operating system ended on April 8, 2014. Computers running Windows XP will not pass computer screening and will not be permitted to connect to the USAP network. Windows computers must be running Windows 7 or 8.
- Macintosh computers must also be running a supported version. As of the writing of this RSP, Mac OS X 10.7 is the minimum supported version, although users running 10.7 should confirm that it is still supported prior to deployment.
- Additional IT security guidelines are provided in the Appendix of this RSP.

Observatory/Laboratory Space

No laboratory/observatory space is requested. Portable structures will be supplied; the MECC and Graceland.

Laboratory Instruments and Equipment

No laboratory instruments or equipment has been requested.

Laboratory Chemicals, Gases, Cryogenics, Dry Ice, Blue Ice

The following will be provided:

- 2 - 5 gallon drums Ethanol
- Estisol140 drilling fluid

Laboratory Materials and Supplies

No laboratory materials and supplies have been requested.

Radioactive Materials

No radioactive materials have been requested.

Vehicles

There will be no shuttle service available at South Pole.

Science Support snowmobiles and light tracked vehicles will be available to members of the science community who undergo the vehicle operation instruction and licensing process.

A dedicated light vehicle will be provided for transportation to and from the drill site.

Scientific Services

Spatial Analysis, Remote Sensing, and GIS Support

GIS Support is provided by the Polar Geospatial Center (PGC). Please direct all support requests to:

Cole Kelleher
Cartographer and Support Coordinator
email: kell1026@umn.edu

Geodetic Support

UNAVCO will work with grantees to provide support as requested within the guidelines of the NSF/UNAVCO agreement. Please contact UNAVCO with any support related questions:

Joe Pettit
UNAVCO Antarctic Support Project Manager
email: pettit@unavco.org
phone: (303) 381-7615

Seismological Support

Seismological equipment and support is provided by IRIS/PASSCAL. Please contact IRIS/PASSCAL with any support related questions:

Paul Carpenter
PASSCAL Polar Manager
email: pcarpenter@passcal.nmt.edu
phone: (575) 835-6783

Ultraviolet Data Services

UV monitoring data is provided by NOAA. Please contact them with any support related questions:

Patrick Disterhoft
NOAA Antarctic UV Monitoring Program, NOAA-EPA Brewer UV-ozone Monitoring Network (NUEBrew) Central UV Calibration Facility NOAA GMD
email: patrick.disterhoft@noaa.gov
phone: (303) 497-6355

Ice Core Drilling Support

ICDS-IDDO will work with grantees to provide support as requested within the guidelines of the NSF. Please contact ICDS-IDDO with any support related questions:

Tony Wendricks
ICDS-IDDO Project Coordinator
e-mail: tonyw@ssec.wisc.edu
phone: (608) 263-6755
<http://www.ssec.wisc.edu/icds/>

National Ice Core Laboratory (NICL) Ice Core Support Service

NICL will work with grantees to provide support as requested within the guidelines of the NSF. Please contact NICL with any support related questions:

Geoffrey Hargreaves
 Curator, National Ice Core Laboratory
 e-mail: nicl@usgs.gov
 phone: (303) 202-4830
<http://nicl.usgs.gov/>

Meteorology Services

Access to data and meteorology reports including surface observations, upper air data and monthly climatological summaries for all Antarctic locations is available upon request. For questions or concerns regarding custom products, format changes or any other meteorological issues, please contact the Meteorology Operations Manager, Michael Carmody, at 720-568-2310 or Michael.Carmody.Contractor@usap.gov.

Research Associate Services

No Research Associate services have been requested.

Field Support & Training

Field Equipment (BFC)

The following field equipment has been requested and will be provided:

Product Name	Quantity
power strips	2
survival bags, deep field	2
black flags 8'	20
green flags 8'	20
red flags 8'	20
bung wrench, for 55 gal drum	2
funnel, plastic or metal (generic use)	1
hand fuel pump, hurdy gurdy	1
jerry can, 5 gal	1
crazy creek chairs	5
folding canvas chairs, with legs	5
folding metal chairs	5
high cots	3
table, allulite, 10"x60"	1
tables, allulite, 20"x72"	2
kitchen broom	1
whisk broom	1
5 gallon plastic buckets	4
dust pans	2
32 gallon metal garbage cans	2
waterless hand sanitizers	10

Product Name	Quantity
packages paper towels	10
tubs wet wipes	4
kitchen box plus French press coffee maker, Mr. Coffee 12 cup coffee maker, forks, hot water electric urn, insulated mugs, various sizes of Tupperware	1
cargo straps	20
feet parachute cord	100
5 lb fire extinguishers	6
pair hand warmers	200
pair toe warmers	200
banana sled, 2'x7'	1
komatik sled, 16'x4'	1
nansen sled, 2'x12', rigid towbar	1
siglinn sleds, 12'x32"	2
sled carabiner, steel (for sled use only)	4
ensolite pads	3
pile liner for sleep bag	3
camp pillows	3
sleeping bags, over 6' tall	3
grain scoop shovels	2
square with short handle shovels	4
1 qt thermos	6
water bottle warmers	11
32 oz water bottles	11
10 gal water cooler	1
electric chain saw	1
pair chain saw chaps	2
microwave	1
50 Kw generators	2
spill response kit	1

Field Training and Assistance (formerly FSTP)

No field training will be provided.

Field Medical Kit

No medical kit required.

Mechanical Equipment

No mechanical equipment has been requested.

Heavy Equipment and Explosives

A 953B loader, Felicia, will be dedicated to this project.