United States
Antarctic Activities 2000-2001

This site fulfills the annual obligation of the United States of America as an Antarctic Treaty signatory to report its activities taking place in Antarctica. This portion details planned activities for July 2000 through June 2001. Modifications to these plans will be published elsewhere on this site upon conclusion of the 2000-2001 season.

National Science Foundation
Arlington, Virginia 22230
November 30, 2000

Introduction

Organization and content of this site respond to articles III(1) and VII(5) of the Antarctic Treaty. Format is as prescribed in the Annex to Antarctic Treaty Recommendation VIII-6, as amended by Recommendation XIII-3.

The National Science Foundation, an agency of the U.S. Government, manages and funds the United States Antarctic Program. This program comprises almost the totality of publicly supported U.S. antarctic activities—performed mainly by scientists (often in collaboration with scientists from other Antarctic Treaty nations) based at U.S. universities and other Federal agencies; operations performed by firms under contract to the Foundation; and military logistics by units of the Department of Defense.

Activities such as tourism sponsored by private U.S. groups or individuals are included. In the past, some private U.S. groups have arranged their activities with groups in another Treaty nation; to the extent that these activities are known to NSF, they are included. Visits to U.S. Antarctic stations by non-governmental groups are described in Section XVI.

This document is intended primarily for use as a Web-based file, but can be printed using the PDF option. Its internal cross links and links to other sites present more information than in the print publications of past years. These links also are intended to facilitate easy use of the site.

Contents

Introduction ii

Contents iii

I. SHIPS AND AIRCRAFT 1

Ships 1

Aircraft 2
- Air Mobility Command 2
- Other Aircraft 2

II. EXPEDITION DATES 3

Winfly Activities 3

Mainbody Activities 3

Significant Dates 4

Ship Movements 4
- M/V GREEN WAVE 4
- R/V NATHANIEL B. PALMER 5
- R/V LAURENCE M. GOULD 5

III. STATIONS 6

Year Round Stations 6
- McMurdo Station 6
- Amundsen-Scott South Pole Station 6
- Palmer Station 6

Austral Summer Camps 7
- Siple Dome Camp 7
- Byrd Camp 7
- Icestream C Camp 7
- Darwin Glacier Camp 7
- East Camp (Co-located with Russian Vostok Camp) 8
- Pieter J. Lenie Field Station ("Copacabana"), King George Island 8
- Cape Shirreff Field Station, Livingston Island 8

IV. PERSONNEL 9

Oversight 9

Officers in Charge of Bases 9
- McMurdo Station 10
- Amundsen-Scott South Pole Station 10
- Palmer Station 10

Officers in Charge of Ships 10

Numbers, Occupations and Specialization of Personnel 10
- McMurdo 10
- South Pole 11
- Palmer Station 11
- Siple Dome Field Camp 12
- Byrd Camp 12
- Icestream C Camp 12
- Darwin Glacier Camp 13
- East Camp (Co-located with Russian Vostok Camp) 13
- SHIPS 13

Names and Professional Affiliation of Personnel Engaged in Scientific Activities 14
- MCMURDO STATION - ONLY (354 Scientists) 14
- MCMURDO AND SOUTH POLE STATIONS (15 Scientists) 17
- MCMURDO STATION AND USCGC POLAR STAR (9 Scientists) 17

MCMURDO STATION AND VOSTOCK STATIONS 18
OTHER ANTARCTIC PROGRAM STATIONS (13 Scientists) 18
PALMER STATION - ONLY (8 Scientist) 18
PALMER STATION and R/V LAURENCE M. GOULD 19
R/V LAURENCE M. GOULD - ONLY (59 Scientists) 19
R/V NATHANIEL B. PALMER - ONLY (90 Scientists) 20
R/V NATHANIEL B. PALMER and R/V LAURENCE M. GOULD (40 Scientists) 21
SOUTH POLE STATION - ONLY (174 Scientists) 22

V. ARMAMENTS 24

McMurdo Station 24

Palmer Station 24

South Pole Station 24

R/V NATHANIEL B. PALMER 24

R/V LAURENCE M. GOULD 25

VI. PROJECT DESCRIPTIONS 26

VII. SCIENTIFIC EQUIPMENT 27

VIII. TRANSPORTATION & COMMS 44

Surface, Marine, and Air Transportation Vehicles 44
McMurdo Station 44
Amundsen-Scott South Pole Station 45
Palmer Station 45

Description of Communications Facilities 45
McMurdo Station 45
South Pole Station 46
Palmer Station 46

Description of Airfields 46
McMurdo Station 46
Amundsen-Scott South Pole Station 47
Palmer Station 48
Marble Point Camp 48

IX. ASSISTANCE FACILITIES 49

McMurdo Station 49
Medical Facilities 49
Transport Services 49
Available Shelter 49

Amundsen-Scott South Pole Station 50
Medical Facilities 50
Transport Services 50
Available Shelter 50

Palmer Station 50
Medical Facilities 50
Transport Services 50
Available Shelter 51

Marble Point Camp 51
Medical Facilities 51
Transport Services 51
Available Shelter 51

X. TOURISM 52

Abercrombie & Kent International, Inc. 52
M/S EXPLORER 52

Quark Expeditions 56
PROFESSOR MULTANOVSKIY 56
M/V KAPITAN KHLEBNIKOV 59
KAPITAN DRANITSYN 62

Orient Lines, Inc. 65
MARCO POLO 65

Clipper Cruise Lines **69**
CLIPPER ADVENTURER 69

Special Expeditions, Inc. **71**
M/V CALEDONIAN STAR 72

Other **74**
SHIPBORNE 74
LANDBASED 75

XI. REFUGES **76**

McMurdo Area Antarctic Refuges and Survival Caches **76**
Mt. Erebus Hut and Cache 76
Cape Crozier Hut and Cache 76
Lake Bonney Hut and Cache 77
Lake Vida Cache 77
Lake Hoare Hut 77
Lake Fryxell Hut 77
New Harbor Hut 77

McMurdo Supported Remote Locations **78**
Siple Dome Camp 78
Byrd Surface Camp 78

Deactivated USAP Stations and Camps **78**
Byrd Aurora Substation 78
Camp Neptune 79
Patuxent Camp 79
Prebble Glacier Camp 79
Camp Gould 79
Amundsen Glacier Camp 79
Byrd Coast Camp 80
Camp Ohio 80
Camp Minnesota 80
Little Rockford 80
Plateau Station 80
Camp Ohio II 81
Roosevelt Island Hut 81
Hallett Station 81
Brockton Station 81
Marie Byrd Land Camp 81
Ellsworth Mountains Camp 81
McGregor Glacier Hut 82
Dome C Camp 82
Beardmore South Camp 82
Siple Station 82
Upstream Bravo 82

XII. PERMITS, SPECIES KILLED, CAPTURED **83**

XIII. RADIOACTIVE MATERIALS **84**

XIV. RESEARCH ROCKETS **87**

XV. OCEANOGRAPHY - GOVERNMENT **88**

R/V NATHANIEL B. PALMER **88**
Research Capabilities. 88
Scientific Programs in the Antarctic Treaty Area 89
Intended Tracks and Schedule 89

R/V LAURENCE M. GOULD **89**
Research Capabilities 89
Scientific Programs in the Antarctic Treaty Area 90
Intended Tracks and Schedule 90

XVI. VISITING EXPEDITIONS **91**

APPENDIX I- ENVIRONMENTAL EVALUATIONS & ASSESSMENTS

APPENDIX II- SCIENCE PROJECTS

ATTACHMENT A- COMMUNICATIONS FORMS

I. Ships and Aircraft

Section I of the 2000-2001 season plans lists the names, types, numbers, descriptions, and armament of ships, aircraft, and other vehicles introduced to the Antarctic Treaty area and information on military equipment, if any, and its location in the area.

Ships

- **Icebreakers**

Ship:	USCGC POLAR SEA (WAGB-11)
Aircraft:	2 each HH-65A helicopters
Armament:	Small arms only

- **Supply/Tankers**

Ship:	M/V GREEN WAVE - dry cargo
Armament:	None

Ship:	TBA - Champion Class T-5 Tanker
Armament:	None

- **Research Vessels**

Ship:	R/V LAURANCE M. GOULD
Armament:	None

Ship:	R/V NATHANIEL B. PALMER
Armament:	None

Aircraft

Five LC-130 transport aircraft operated by the 109th Air Wing.

One Bell 212 helicopter based at McMurdo Station.

Three Aerospatiale AS-350B-2 helicopters based at McMurdo Station

Note: No armament

Air Mobility Command

Between October and November 2000, C-141B and C-17 aircraft of the U.S. Air Force Air Mobility Command (AMC) will transport cargo and personnel to and from Christchurch, New Zealand, and McMurdo Station, Antarctica. Additionally, during January and February 2001, C-141 aircraft of the U.S. Air Force Air Mobility Command (AMC) will transport cargo and personnel to and from Christchurch, New Zealand and McMurdo Station, Antarctica.

Note: No armament

Other Aircraft

Royal New Zealand Air Force C-130 aircraft will transport cargo and personnel on intercontinental flights between Christchurch, New Zealand, and McMurdo Station, Antarctica, during November and December 2000 and January 2001 in support of the U.S. and New Zealand Antarctic Programs.

Note: Two DeHavilland DHC-6/300 Twin Otters will be used; both aircraft will arrive at McMurdo in early November 2000, and depart early February 2001.

Note: No armament

II. Expedition Dates

Section II of the 2000-2001 season plan includes information concerning vessel and aircraft operations along with estimated dates of expeditions and other significant events.

Winfly Activities

Annual augmentation of the U.S. Antarctic Program (USAP) begins with austral winter flights (WINFLY), departing Christchurch, New Zealand, and arriving McMurdo Station, Antarctica, about 21 August 2000. The aircraft will carry scientists and support personnel to start early pre-summer projects, to augment maintenance personnel, and to prepare skiways and ice runways at McMurdo Station. This will involve 4 U.S. Air Force C-141B flights and will increase station population from the winter-over level of about 154 to a transition level of about 371.

Mainbody Activities

Austral summer activities will be initiated in late September 2000 with wheeled aircraft operations between Christchurch, New Zealand and the sea-ice runways at McMurdo Station, Antarctica. This will involve approximately 18 C-141B flights and 4 C-17 flights of transport aircraft of the U.S. Air Force Air Mobility Command (AMC), and 12 flights by C-130 transport aircraft of the Royal New Zealand Air Force. The sea-ice runway and wheeled aircraft operations will cease about early December 2000, and then resume about mid-January to the end of the season with 10 C-141B and 3 C-130 flights. Between these two periods of wheeled aircraft operations, flights will be conducted by LC-130 ski-equipped aircraft flown by the New York Air National Guard 109th Air Wing. The aircraft will operate from Williams' Field , a prepared skiway.

The 109th Air Wing of the Air National Guard in Schenectady, New York will provide four LC-130 aircraft and four crews for intra-continental flights from late October 2000 through early December, and add a fifth aircraft and sixth crew from early December 2000 through February 2001 when McMurdo Station closes.

Significant Dates

Other significant dates for the summer season include:

1. 03 October 2000 - McMurdo Station-Summer Operations Commence
2. 19 September 2000 - Palmer Station – Summer Operations Commence
3. 09 October 2000 - Marble Point opens
4. 23 October 2000 - South Pole Station – Summer Operations Commence
5. 01 November 2000 - Siple Dome Camp opens
6. 06 November 2000 - Ice Stream "C" Camp opens
7. 10 November 2000 - Byrd Surface Camp opens
8. 07 October 2000 - Pieter J. Lenie Field Station ("Copacabana")opens
9. 16 November 2000 - Cape Shirreff Field Station opens

Ship Movements

M/V GREEN WAVE

The cargo ship, M/V GREEN WAVE, is scheduled to complete one trip to McMurdo this season. The ship will depart Port Hueneme, California, in early January 2001 after onloading cargo and transit directly to Port Lyttelton, New Zealand. The GREEN WAVE will again onload additional cargo and depart New Zealand for McMurdo Station, Antarctica. Cargo will be off-loaded between 03-10 February, after which the

ship will depart McMurdo and proceed to Lyttelton, New Zealand to offload cargo destined for the States. It will depart on approximately 18 February for Washington State to off-load waste and recyclable materials from McMurdo Station. From there it will transit to Port Hueneme, California, arriving there on 12 March 2001.

R/V NATHANIEL B. PALMER

The R/V NATHANIEL B. PALMER will conduct 8 scientific research cruises, totaling an estimated 252 days at sea, during the 2000-2001 season. The vessel will provide support throughout the season for biological, chemical, physical oceanographic, and marine geophysics investigations in the Weddell, Bellingshausen, and the Ross Seas. Ports of call include: Punta Arenas, Chile; San Juan, Puerto Rico; Ushuaia, Argentina; Hobart, Tasmania; Panama City, Panama; Palmer Station, Antarctica; Fourchon, Louisiana; New Orleans, Louisiana; and, Capetown, South Africa.

R/V LAURENCE M. GOULD

The R/V LAURENCE M. GOULD will conduct 7 scientific research cruises, totaling an estimated 143 days at sea, during the 2000-2001 season. The research supported will include at sea research, station work at Elephant, King George, Livingston, Deception, Low, Smith, and Greenwich Islands, and station support at Palmer Station. Ports of call include Talchauano and Punta Arenas, Chile.

III. Stations

Section III of the 2000-2001 season plans lists the names, locations, and opening dates of the Party's bases and subsidiary stations established in the Antarctic Treaty Area, and whether they are for summer and/or winter operations.

Year Round Stations

McMurdo Station

Location:	Hut Point Peninsula on Ross Island in McMurdo Sound
	77° 55'S Latitude 166° 39'E Longitude
Annual Relief:	3 October 2000

Amundsen-Scott South Pole Station

Location:	90° 00'S Latitude
Annual Relief:	1 November 2000

Palmer Station

Location:	Anvers Island near Bonaparte Point
	64° 46'S Latitude 64° 05'W Longitude
Annual Relief:	19 September 2000

Austral Summer Camps

Siple Dome Camp

Location:	81° 39'S Latitude 149° 04'W Longitude
Open:	25 October 2000
Close:	25 January 2001

Byrd Camp

Location:	80° 05'S Latitude 119° 32'W Longitude
Open:	01 November 2000
Close:	10 January 2001

Icestream C Camp

Location:	82° 22' S Latitude 136° 24' W Longitude
Open:	26 October 2000
Close:	25 January 2001

Darwin Glacier Camp

Location:	79° 45 'S Latitude 156° 30' E Longitude
Open:	05 November 2000
Close:	17 January 2001

East Camp (Co-located with Russian Vostok Camp)

Location:	78° 28' S Latitude 106° 48' E Longitude
Open:	22 November 2000
Close:	25 January 2001

Pieter J. Lenie Field Station ("Copacabana"), King George Island

Location:	62° 10'S Latitude 58° 28'W Longitude
Open:	07 October 2000
Close:	8 March 2001

Cape Shirreff Field Station, Livingston Island

Location:	62° 28'S Latitude 60° 47'W Longitude
Open:	16 November 2000
Close:	07 March 2001

IV. Personnel

Section IV gives the names of the officers in charge of each of these bases, subsidiary stations, ships and aircraft; the number, occupation and specialization of personnel (including any designated by other Governments), who are or will be stationed at each of these bases and subsidiary stations and onboard these ships and aircraft, including the number of personnel who are members of the military services, together with the rank of any officers and the names and professional affiliations of personnel engaged in scientific activities:

Oversight

The United States Antarctic Program is managed by the National Science Foundation (NSF). The NSF designates a Senior U.S. Representative in Antarctica, and designates an NSF Representative, Antarctica, to coordinate all field activities. Unless otherwise specified, the Senior U.S. Representative in Antarctica is the Director, Office of Polar Programs (OPP), located at the National Science Foundation.

NSF Representatives in Antarctica (TBA) will be stationed at McMurdo, Palmer, and South Pole Stations during the austral summer operating season. Additionally, Raytheon Polar Services Company (RPSC), under contract to the National Science Foundation, will provide station management year round.

Officers in Charge of Bases

Each U.S. station has a station manager for operations/logistics support and a station science leader. Station managers for the 1999-2000 season will be:

McMurdo Station

Terry Melton, Station Manager	(Oct 2000 – Oct 2001)
Larry Cook	(Feb 2001 – Oct 2001)

Amundsen-Scott South Pole Station

Katherine Jensen	(Oct 2000 - Feb 2001)
Gerald Macala	(Feb 2001 - Nov 2001)

Palmer Station

Ronald E. Nugent, Jr.	(Sep 2000 - Mar 2001)
Robert Ferril	(Mar 2001 - Sep 2001)

Officers in Charge of Ships

USCGC POLAR SEA (WAGB-11)	Captain Johnson, USCG
Champion Class T-5 Tanker (fuel tanker)	TBA
M/V GREEN WAVE (cargo ship)	Captain Peter Stalkus
R/V NATHANIEL B. PALMER	Captain Joe Bokowski
R/V LAURENCE M. GOULD	Captain Warren Sanamo

Numbers, Occupations and Specialization of Personnel

McMurdo

	Summer		Winter	
	Military	*Civilian*	*Military*	*Civilian*
Headquarters	0	33	0	6

	Summer		Winter	
	Military	*Civilian*	*Military*	*Civilian*
Science Support	0	69	0	7
Operations	0	286	0	66
Logistics	0	105	0	33
SPSE	0	29	0	2
Engineering /Construction	0	112	0	92
Information Systems	0	80	0	16
Aviation	0	0	0	0
Scientists	0	240	0	0
Working Visitors	0	144	0	0

South Pole

	Summer		Winter	
	Military	*Civilian*	*Military*	*Civilian*
Headquarters	0	6	0	3
Science Support	0	8	0	5
Operations	0	27	0	5
Logistics	0	11	0	3
SPSE	0	80	0	23
Engineering/Construction	0	12	0	3
Information Systems	0	10	0	4
Aviation	0	0	0	0
Scientists	0	50	0	11
Working Visitors	0	16	0	0

Palmer Station

	Summer		Winter	
	Military	*Civilian*	*Military*	*Civilian*
Headquarters	0	1	0	1
Science Support	0	4	0	1
Operations	0	6	0	4
Logistics	0	2	0	3
Engineering/Construction	0	7	0	9

Information Systems	0	3	0	2
Scientist	0	13	0	6
Working Visitors	0	13	0	7

Siple Dome Field Camp

	Summer Only	
	Military	*Civilian*
Camp Manager	0	1
Mechanic	0	1
Cook	0	1
Equipment Operator	0	1
Scientists	0	20
Carpenters	0	7

Byrd Camp

	Summer Only	
	Military	*Civilian*
Camp Manager	0	1
Mountaineer		1
Scientists	0	20

Icestream C Camp

	Summer Only	
	Military	*Civilian*
Camp Manager	0	1
Cook	0	1
Mechanic	0	1
Equipment Operator	0	1
Scientists	0	11
Meteorologist	0	1

Darwin Glacier Camp

	Summer Only	
	Military	*Civilian*
Camp Manager	0	1
Mountaineer	0	1
Scientists	0	14

East Camp (Co-located with Russian Vostok Camp)

	Summer Only	
	Military	*Civilian*
Camp Manager	0	1
Cook	0	1
Mechanic	0	1
Equipment Operator	0	1
Meteorologist	0	1
Paramedic	0	1
Scientists	0	11

SHIPS

USCGC POLAR STAR

	Number of Personnel
Crew	160

Champion Class T-5 Tanker

	Number of Personnel
Crew	24

M/V GREEN WAVE

	Number of Personnel
Crew	21

R/V NATHANIAL B. PALMER

	Number of Personnel
Crew	21
Scientists	37

R/V LAURENCE M. GOULD

	Number of Personnel
Crew	21
Scientists	37

Names and Professional Affiliation of Personnel Engaged in Scientific Activities

Further details are found in Section VI (Appendix II), and are cross-referenced here according to the project identification code (AO-XXX-X, BM-XXX-X, etc.). The numbers in parentheses besides the principal investigator's name represent the anticipated number of field party members. Projects are listed by scientific discipline under each major field location or platform.

MCMURDO STATION - ONLY (333 Scientists)

Aeronomy & Astrophysics (62 Scientists)

	I.D. No.	Institution
Peterzen (+16)	AB-145-O	National Scientific Balloon Facility (NSBF)
Meyer (+16)	AB-147-O	University of Chicago
Wefel (+19)	AB-149-O	Louisiana State University
Adriani (+1)	AO-107-O	Instituto De Fisica Dell'Atmosfera
Rosenberg (+0)	AO-112-O	University of Maryland
Deshler (+4)	AO-131-O	University of Wyoming

Biology & Medical Research (130 Scientists)

	I.D. No.	Institution
Doran (+3)	BM-042-D	University of Chicago
Fountain (+2)	BM-042-F	Portland State University
Lyons (+5)	BM-042-L	Ohio State University
McKnight (+4)	BM-042-M	University of Colorado, Boulder
Priscu (+4)	BM-042-P	Montana State University, Bozeman
Virginia (+3)	BM-042-V	Dartmouth College
Wall (+3)	BM-042-W	Colorado State University
DeVries (+6)	BO-005-M	University of Illinois, Urbana
Siniff (+9)	BO-009-O	University of Minnesota
Lisle (+2)	BO-024-O	Montana State University, Bozeman
Priscu (+5)	BO-025-O	Montana State University, Bozeman
Dudley (+4)	BO-030-O	University of Texas, Austin
Emslie (+2)	BO-034-O	University of North Carolina
Blanchette (+2)	BO-038-O	University of Minnesota
Green (+6)	BO-041-O	Miami University
Ponganis (+9)	BO-197-O	University of California, San Diego
Manahan (+39)	BO-301-O	University of Southern California
Ward (+4)	BO-310-O	Princeton University

Environmental Research (9 Scientists)

	I.D. No.	Institution
Kennicutt, II (+8)	EO-318-O	Texas A & M University

Geology & Geophysics (68 Scientists)

	I.D. No.	Institution
Luyendyk (+3)	GF-121-O	University of California ,Santa Barbara
Mullins (+9)	GO-052-M	United States Geological Survey
Hallet (+2)	GO-053-O	University of Washington
Marchant (+4)	GO-054-O	Boston University
Harvey (+7)	GO-058-O	Case Western Reserve University
Fitzgerald (+3)	GO-059-0	University of Arizona, Tucson
House (+2)	GO-066-O	California Institute of Technology

	I.D. No.	Institution
Mulcahy (+3)	GO-078-O	GSP Company
Raymond (+3)	GO-082-O	California Institute of Technology
Wiens (+4)	GO-089-O	Washington University
Isbell (+4)	GO-094-O	University of Wisconsin, Milwaukee
Wilson (+3)	GO-099-O	Ohio State University
Stump (+3)	GO-116-O	Arizona State University, Tempe
Anandakrishnan (+2)	GO-180-O	University of Alabama, Tuscaloosa
Johns (+1)	GO-295-O	UNAVCO/UCAR

Glaciology (46 Scientists)

	I.D. No.	Institution
Raymond (+4)	II-163-O	University of Washington
Alley (+1)	II-168-O	Pennsylvania State University
Waddington (+2)	II-171-O	University of Washington
Kamb (+10)	IO-157-O	California Institute of Technology
Bindschadler (+2)	IO-173-O	National Aeronautics and Space Administration
Stone (+3)	IO-175-O	University of Washington
Hall (+3)	IO-196-M	University of Maine, Orono
Mayewski (+13)	IU-153-A	University of New Hampshire

Ocean & Climate Systems (9 Scientists)

	I.D. No.	Institution
Wendler (+2)	OO-263-O	University of Alaska, Fairbanks
Hansen (+0)	OO-314-O	Magee Scientific Company
Dempsey (+4)	OO-316-O	Clarkson University

Technical Projects (3 Personnel)

	I.D. No.	Institution
Osborne (+2)	TO-396-O	University of Alaska, Fairbanks

Writers and Artists Program (6 Personnel)

	I.D. No.	Institution
Wu (+5)	WO-317-O	Norbert Wu Productions

MCMURDO AND SOUTH POLE STATIONS (15 Scientists)

Aeronomy and Astrophysics (4 Scientists)

	I.D. No.	Institution
Lanzerotti (+0)*	AO-101-O	Lucent Technologies
Engebretson (+0)*	AO-102-O	Augsburg College
Rosenberg (+1)	AO-111-O	University of Maryland
Rall (+1)	AO-126-O	National Aeronautics and Space Administration

* Non-deploying; experiments are supported on-site by contract personnel.

Geology and Geophysics (7 Scientists)

	I.D. No.	Institution
Kyle (+6)	GO-081-O	New Mexico Institute of Mining and Technology

Ocean and Climate Systems (4 Scientists)

	I.D. No.	Institution
Stearns (+3)	OO-283-M	University of Wisconsin, Madison

MCMURDO STATION AND USCGC POLAR STAR (12 Scientists)

Aeronomy & Astrophysics (2 Scientists)

Bieber (+1)	AO-120-O	University of Delaware

Biology & Medicine Program (10 Scientists)

	I.D. No.	Institution
Ainley (+9)	BO-031-O	H.T. Harvey & Associates

MCMURDO STATION AND VOSTOK STATIONS

Aeronomy & Astrophysics (21 Scientists)

	I.D. No.	*Institution*
Blankenship (+20)	GS-098-O	University of Texas, Austin

OTHER ANTARCTIC PROGRAM STATIONS

(11 Scientists)

Biology and Medicine (5 Scientists)

	I.D. No.	*Institution*
Trivelpiece (+2)	BO-040-O	University of California, San Diego
Costa (+1)	BO-267-O	University of California, Santa Cruz

Geology and Geophysics (6 Scientists)

	I.D. No.	*Institution*
Feldmann (+1)	GO-093-O	Kent State University
Wiens (+3)	GO-097-O	Washington University

PALMER STATION - ONLY (8 Scientist)

Aeronomy and Astrophysics (1 Scientist)

	I.D. No.	*Institution*
Inan (+0)	AO-106-P	Stanford University

Biology and Medicine (7 Scientists)

	I.D. No.	*Institution*
Fraser (+6)	BP-013-O	Montana State University, Bozeman

Geology and Geophysics (0 Scientists)

	I.D. No.	Institution
Mullins (+0)*	GO-052-P	US Geological Survey
Butler (+0)*	GO-090-P	Incorporated Research Institutions for Seismology

* Non-deploying; experiments are supported on-site by contract personnel.

Polar Climate and Ocean Systems (0 Scientists)

	I.D. No.	Institution
Keeling (+0)*	OO-204-O	University of California, San Diego
Rasmussen (+0)*	OO-254-O	Oregon Graduate Institute of Science & Technology
Hofmann +0)*	OO-264-O	National Oceanic and Atmospheric Administration
Sanderson (+0)*	OO-275-O	United States Department of Energy
Stearns (+0)*	OO-283-P	University of Wisconsin, Madison

* Non-deploying; experiments are supported on-site by contract personnel.

PALMER STATION and R/V LAURENCE M. GOULD

Biology and Medicine (29 Scientists)

	I.D. No.	Institution
Sidell (+4)	BO-036-O	University of Maine, Orono
Detrich, III (+5)	BO-037-O	Northeastern University
Vernet (+4)	BP-016-O	Scripps Institution of Oceanography
Quetin/Ross (+9)	BP-028-O	University of California, San Diego
Smith (+3)	BP-032-O	University of California, Santa Barbara

R/V LAURENCE M. GOULD - ONLY (59 Scientists)

Biology and Medicine Program (48 Scientists)

	I.D. No.	Institution
Fraser (+3)	BG-234-O	Montana State University
Fritsen (+1)	BG-235-O	Desert Research Institute
Harvey (+1)	BG-237-O	Chesapeake Biological Laboratory
Ross (+7)	BG-244-O	UC Santa Barbara
Smith (+13)	BO-050-O	University of California, San Diego
Dietzman (+1)	BO-282-O	White Point Systems, Inc.
Smith (+8)	BO-303-O	University of Hawaii, Manoa
Martinson (+0)	BP-021-O	Columbia University
Karl (+5)	BP-046-O	University of Hawaii, Manoa

Geology and Geophysics (4 Scientists)

	I.D. No.	Institution
Aronson (+3)	GO-065-O	Dauphin Island Sea Lab

Glaciology (2 Scientists)

	I.D. No.	Institution
Hall (+1)	IO-196-L	University of Maine, Orono

Ocean and Climate Systems (5 Scientists)

	I.D. No.	Institution
Martinson (+3)	OG-241-O	Lamont-Doherty Earth Observatory
Peterson (+0)	OO-260-O	University of California, San Diego

R/V NATHANIEL B. PALMER - ONLY (90 Scientists)

Biology and Medicine Program (26 Scientists)

	I.D. No.	Institution
Ribic (+1)	BG-243-O	University of Wisconsin

Vernet (+3)	BG-246-O	SCRIPPS Institute of Oceanography
Wiebe (+17)	BG-247-O	Woods Hole
Zhou (+2)	BG-248-O	University of Minnesota

Geology and Geophysics (39 Scientists)

	I.D. No.	*Institution*
Arrigo (+0)	GO-073-A	Stanford University
Leventer (+28)	GO-073-O	Colgate University
Austin (+8)	GO-306-O	University of Texas Institute for Geophysics

Ocean and Climate Systems (25 Scientists)

	I.D. No.	*Institution*
Fanning (+3)	OG-233-O	University of South Florida
Hallam (+7)	OG-236-O	University of Tennessee
Padman (+0)	OG-238-O	Oregon State University
Powell (+3)	OG-242-O	University of California, Berkeley
Fairbanks (+5)	OO-225-O	Columbia University
Pilskaln (+1)	OO-278-O	University of Maine, Orono

R/V NATHANIEL B. PALMER and R/V LAURENCE M. GOULD (40 Scientists)

Biology and Medicine Program (21 Scientists)

	I.D. No.	*Institution*
Hildebrand (+3)	BG-239-O	Scripps Institute of Oceanography
Torres (+8)	BG-245-O	University of South Florida
Costa (+7)	BO-267-O	University of California, Santa Cruz

Ocean & Climate Systems (19 Scientists)

	I.D. No.	*Institution*
Beardsley (+11)	OG-231-O	Woods Hole
Hofmann (+4)	OG-240-O	Old Dominion University
Chereskin (+1)	OO-315-O	University of California, San Diego

SOUTH POLE STATION - ONLY (175 Scientists)

Aeronomy & Astrophysics (120 Scientists)

	I.D. No.	Institution
Morse (+41)	AA-130-O	University of Wisconsin, Madison
Pernic (+11)	AC-370-O	University of Chicago
Stark (+13)	AC-371-O	Smithsonian Institution
Storey (+5)	AC-372-O	University of New South Wales
Carlstrom (+5)	AC-373-O	University of Chicago
Loewenstein (+0)	AC-374-O	University of Chicago
Peterson (+5)	AC-375-O	Carnegie-Mellon University
Novak (+1)	AC-376-O	Northwestern University
Ruhl (+8)	AC-378-O	University of California, Santa Barbara
Mende (+0)	AO-104-O	University of California, Berkeley
Gaisser (+3)	AO-109-O	University of Delaware
Hernandez (+2)	AO-110-O	University of Washington
Ejiri (+1)	AO-117-O	National Institute of Polar Research
Papen (+6)	AO-127-O	University of Illinois, Urbana
LaBelle (+0)*	AO-128-O	Dartmouth College
Sivjee (+2)	AO-129-O	Embry Riddle Aeronautical University
deZafra (+1)	AO-138-O	State University of New York

* Non-deploying; experiments are supported on-site by contract personnel.

Geology & Geophysics (4 Scientists)

	I.D. No.	Institution
Mullins (+1)	GO-052-S	U.S. Geological Survey
Butler (+1)	GO-090-O	Incorporated Research Institutions for Seismology

Glaciology (9 Scientists)

	I.D. No.	Institution
Bender (+5)	IO-162-O	Princeton University
Taylor (+2)	IO-192-O	US Army Cold Regions Research & Engineering Lab

Ocean & Climate Systems (42 Scientists)

	I.D. No.	Institution
Dibb (+0)*	OO-179-O	University of New Hampshire
Warren (+7)	OO-201-O	University of Washington
Lawson (+2)	OO-226-O	SPEC, Inc.
Hofmann (+10)	OO-257-O	National Oceanic and Atmospheric Administration
Davis (+11)	OO-270-O	Georgia Institute of Technology
Stearns (+1)	OO-283-S	University of Wisconsin, Madison
Avery (+2)	OO-284-O	University of Colorado, Boulder
McConnell (+1)	OO-324-O	Desert Research Institute

* Non-deploying; experiments are supported on-site by contract personnel.

V. Armaments

Section V details the number and type of armaments possessed by personnel at the main Antarctic stations and on research vessels. Signaling devices such as flare pistols are not included.

McMurdo Station

No armaments are currently stored or in use at McMurdo Station.

Palmer Station

- 2 pistols, 38-caliber, Smith and Wesson [SN: 2D09672; SN: 2D06268]
- 1 shotgun, 12-gauge, Magnum, pump action, Remington [SN: S346543M]
- 1 shotgun, 12-gauge, double barrel, Centrure Liege [SN: 6633]
- 1 shotgun, 12-gauge, over and under, Fabrica Haliana [SN: 77978]
- 1 mini ranch rifle, 223-calibre, Ruger [SN: 188-32652]

Note: SN = Serial Number

South Pole Station

No armaments are currently stored or in use at South Pole Station.

R/V NATHANIEL B. PALMER

No armaments are currently onboard the R/V NATHANIEL B. PALMER.

R/V LAURENCE M. GOULD

No armaments are currently onboard the R/V LAURENCE M. GOULD.

VI. Project Descriptions

Section VI details the planned field research projects for the 2000-2001 season and is available in Appendix II of this document.

VII. Scientific Equipment

Section VII lists the principal scientific equipment available at McMurdo, South Pole, and Palmer stations and onboard USAP research vessels.

	McMurdo	SPole	Palmer	LMG[1]	NBP[2]	AGO[3]
Astrophysics Aeronomy						
Analyzer, Logic		X				
Antenna, VLF Loop		X	X			
Camera, All-Sky		X				
Camera, Video, Towed Benthic, SCUDIVA				X	X	
Centrifuge, Refrigerated 12K RPM Micro				X	X	
Chart Recorder, Eight Channel		X				
Chart Recorder, Three Channel				X	X	
Chromatography, High Performance Liquid System (HPLC)				X		
Cryogen, Transfer Equipment	X	X	X	X	X	
Cryogen Transfer Lines	X	X				
Data Acquisition Unit (DAU)						X
Data Control Unit (DCU)						X
Dewar, Liquid Helium	X	X				
Dewar, Liquid Helium Storage	X	X				
Dewar, Liquid Nitrogen Storage	X	X				
Filtration Apparatus, Membrane				X	X	
Heating Unit, Air		X				
Hi-Vacuum System				X	X	
Ice Maker					X	

	McMurdo	SPole	Palmer	LMG[1]	NBP[2]	AGO[3]
Incubator, Percival					X	
Interferometer		X				
Ionosonde, Digital		X				
Laboratory, Portable (Radiation)				X	X	
Leak Detection and Vacuum Pump Equipment		X				
Lidar	X	X				
Line Connector, 1.2 KVA		X				
Liquid Nitrogen Plant	X	X				
Magnetometer, Three Component Air Core Induction		X				
Magnetometer, Three Axis Fluxgate	X					
Neutron Monitor, Super Multisection	X	X				
Nitrogen Liquifier	X	X				
Oscilloscope	X	X	X	X	X	
Oxygen-Analyzing System				X	X	
Photometer, Auroral		X				
Pipette Puller	X					
Power Conditioner		X		X	X	
Pump, Turbomolecular	X	X				
Radiotelescope, Microwave		X				
Receiving System, VLF			X			
Riometers, 30 & 50 MHz	X	X				
Scintillator Array, 16-element		X				
Sky Monitor, Mid Infrared		X				
Sky Monitor, Near Infrared		X				
Signal Generator		X				
Spectral Analyzer		X				
Spectrometer, X-ray (high altitude, long-duration)		X				

	McMurdo	SPole	Palmer	LMG[1]	NBP[2]	AGO[3]
Spectrometer, Infrared		X				
Spectroradiometer, Ultraviolet	X	X	X			
Tape Transport, Dual Density		X				
Tape Drive, Giga Tape 5 Mb		X				
Telescope, 12" (Optical)		X				
Telescope, Gamma Ray		X				
Telescope, Microwave		X				
Telescope, Mid-Infrared		X				
Telescope, NCAR Infrared		X				
Telescope, Optical		X				
Telescope, Submillimeter		X				
Telescopes, Astronomical		X				
Thermal Electric Generator (TEG)					X	
Time Domain Reflectometer (TDR)		X				
Transport, Liquid Helium (leased)		X				
Transport, Liquid Nitrogen	X	X				
Uninterrupted Power Supply (UPS)	X	X	X			
Water Chiller		X				
Biology						
Aquaria	X		X	X	X	
Analyzer, Carbon/Nitrogen/Sulfur	X					
Analyzer, Infrared,Carbon Dioxide	X					
Analyzer, Infrared, Hydrocarbon	X					
Analyzer, Lactate	X					
Analyzer, Total Organic Carbon	X					
Autoanalyzer			X	X	X	
Autoclave	X	X	X	X	X	
Balance, Electronic	X	X	X	X	X	

	McMurdo	SPole	Palmer	LMG[1]	NBP[2]	AGO[3]
Bath, Hybridization	X					
Bath, Water	X	X	X	X	X	
Bath, Water, Circulating	X		X	X	X	
Bath, Water, Shaking	X		X		X	
Calorimeter			X		X	
Camera, Digital Still	X	X	X	X	X	
Camera, Solid State, for Microscopic Image Analysis	X		X	X	X	
Camera, Still, Underwater	X					X
Camera, Video, for Microscopy	X				X	
Camera, Video, Underwater, w/time lapse capability and remote viewing	X		X			
Cell Disrupter	X		X			
Cell Injector, Micro	X					
Centrifuge, Clinical	X		X	X	X	
Centrifuge, 20K RPM	X		X			
Centrifuge, Refrigerated Speed Vac	X		X		X	
Chart Recorder, Single Channel	X		X			
Chart Recorder, Dual Channel	X		X			
Chart Recorder, Three Channel	X		X			
Chiller, Aquarium	X		X			
Chromatography Equipment	X		X			
Chromatography, High Performance Liquid System (HPLC)	X		X			
Chromatography, Gas, System	X					
Chromatography, Ion, System	X					
Collector, Fraction	X		X			
Colorimeter	X		X			
Compressor, Air, Scuba Tank	X		X	X	X	
Cooler, Immersion	X		X	X	X	

	McMurdo	SPole	Palmer	LMG[1]	NBP[2]	AGO[3]
Counter, Gamma	X					
Counter, Geiger Muller	X		X	X	X	
Counter, Particle	X		X			
Counter, Scintillation, DPM Output	X		X	X	X	
Counter, Liquid Scintillation			X	X	X	
Cryostat	X					
Data Acquisition System	X		X	X	X	
Datalogger	X		X	X	X	
Deck Unit/Transducer	X			X	X	
Detector, Column Absorbance	X					
Dewar, Liquid Nitrogen Storage	X		X	X	X	
Dive Propulsion Systems	X					
Dry Ice Maker	X		X	X		
Dry Shippers, Liquid Nitrogen	X		X	X	X	
Electrocardiograph	X	X	X			
Electrophoresis Equipment	X		X			
Electroporator	X					
Environmental Room, Temp. Controlled	X		X	X	X	
Evaporator, Rotary	X		X			
Filtration Apparatus, Water	X		X	X	X	
Filtration Apparatus, Membrane	X		X			
Fluorometer	X		X	X	X	
Fluorometer, DNA	X					
Freeze Dryer	X		X			
Freezer, to -20°C	X	X	X	X	X	
Freezer, to -70°C	X		X	X	X	
Freezer, Walk-in	X				X	
Furnace, Graphite	X					
Furnace, Muffle	X		X	X	X	

	McMurdo	SPole	Palmer	LMG[1]	NBP[2]	AGO[3]
Gas Partitioner	X					
Hematology Equipment	X	X	X			
Hi-Vacuum System	X					
Homogenizer	X		X	X		
Hood, Fume	X		X	X	X	
Hood, Portable Fume Absorber			X		X	
Ice Maker			X	X		
Incubator,Hybridization	X					
Incubator, Low Temperature	X		X	X	X	
Incubator, Percival				X		
Laboratory, Portable (for sea ice)	X			X		
Laminar Flow Bench	X		X		X	
Light Pipette	X					
Lipid Analysis System	X					
Luminometer			X			
Melter, Ice Hole	X				X	
Meter, Microoxygen	X					
Meter, Oxygen	X		X			
Meter, pH	X	X	X	X	X	
Microbalance	X		X			
Microcentrifuge	X		X	X	X	
Microscope, Compound, Epifluorescence	X		X	X	X	
Microscope, Compound (for light/dark field microscopy)	X	X	X	X	X	
Evap Microscope, Cold Stage	X					
Microscope, Differential Interference Contrast (DIC)	X		X		X	
Microscope, Dissecting (for light/dark field microscopy)	X	X	X	X	X	

	McMurdo	SPole	Palmer	LMG[1]	NBP[2]	AGO[3]
Microscope, Compound (for phase contrast microscopy)	X		X			
Microscope, Image Analysis System	X		X			
Microscope, Inverted, Epifluorescence	X		X			
Microplate Reader	X					
Microtome	X					
Microtome, Cryostat	X					
Oscillograph, Recording, Thermal, 8 Channel	X					
Oscilloscope	X	X	X	X	X	
Osmometer, Vapor Pressure	X		X			
Oven	X	X	X	X	X	
Oxygen-Analyzing System	X		X		X	
Photometer, Integrating (for ATP)	X					
Photometer, Flame	X					
Photosynthesis System	X					
Phototransilluminator	X		X			
Processor, Tissue	X		X			
Projector, Digital	X		X			
Pump, Suction		X	X	X	X	
Pump, Vacuum	X		X	X	X	
Receiver, ATS	X		X			
Receiver, VHF Radio	X		X	X	X	
Recorders, EPC Analog				X	X	
Refrigerator, Explosion Proof	X		X	X	X	
Respirometer, Gilson	X		X			
Scale, Platform, Sled Mountable	X					
Sensor, Irradiance (for dry use)	X		X	X	X	
Sensor, Irradiance (for submersible use)	X		X	X	X	
Sequencing System	X					

	McMurdo	SPole	Palmer	LMG[1]	NBP[2]	AGO[3]
Spectrophotometer, Atomic Absorption	X					
Spectrophotofluorometer	X		X	X	X	
Spectrophotometer	X		X	X	X	
Spectrophotometer, Diode Array	X					
Spectroradiometer	X		X	X	X	
Stage, Cooling, Microscope	X		X			
Thermocycler	X		X			
Thermocycler, PCR	X		X			
Thermometer, Digital	X		X	X	X	
Transponder Reader	X					
Ultracentrifuge	X		X		X	
Ultrafiltration Unit	X		X	X		
UV Sensor, Portable	X					
VCR, High Resolution	X					
Vibration-free table	X		X	X	X	
Video System, Underwater	X		X	X	X	
Voltage Clamp	X					
Water Purification System	X	X	X	X	X	
Workstation, PICO Tag	X					
Computers						
MacIntosh:						
Computer, G3	X					
Computer, iMac	X					
Computer, Desktop, LC		X				
Computer, Desktop, IICI	X		X		X	
Computer, Desktop, Pentium		X				
Computer, Portable, Powerbook 170	X		X			
Computer, Power 604 Clone	X			X	X	

	McMurdo	SPole	Palmer	LMG[1]	NBP[2]	AGO[3]
Computer, Powerbook 5300c	X		X	X		
Computer, Quadra, 700	X					
Computer, Quadra 950	X	X				
Computer, Classic		X				
Macintosh Power PC 63					X	
Macintosh, Duo Power PC, Portable				X		
Macintosh Power PC 7100	X	X			X	
Macintosh Power PC 7200	X		X			
Macintosh Power PC 7300				X		
Macintosh Power PC 8150						
Macintosh Power PC 8600				X		
Macintosh Power PC 9500					X	
Mini:						
DEC Microvax	X	X	X			
DEC PDP-II	X	X				
DEC PDP II-73		X				
PC:						
Computer, Desktop, XT	X	X	X			
Computer, Desktop, 286	X	X	X	X		
Computer, Desktop, 386	X	X	X	X	X	
Computer, Desktop, 486	X	X	X	X	X	
Computer, Desktop, Pentium	X		X	X	X	
Computer, Portable, 286	X					
Computer, Portable, 386	X		X		X	
Computer, Portable, 486	X		X	X	X	
Computer, Portable, 586	X					
Computer, Server, 486	X	X	X			
Computer, Server, 586	X			X	X	
Workstation:						

	McMurdo	SPole	Palmer	LMG[1]	NBP[2]	AGO[3]
HP 9000			X			
SGI 02					X	
SGI Challenge L (Multibeam computers)					X	
SGI Indigo R3000						
SGI Iris	X				X	
SPARC IPX	X	X				
Sun SPARC 10	X					
Sun U450	X					
Sun Ultra1	X					
Sun Ultra2	X					
Sun SPARC 2	X	X	X		X	
SGI Indy				X	X	
Printers						
Dot Matrix	X	X	X	X	X	
Dye Sublimation, Color	X				X	
Ink Jet, Color	X		X	X	X	
Laser	X	X	X	X	X	
Miscellaneous						
CDRom - R	X		X	X	X	
CD Writer	X		X			
Computer Interface						
Magneto-optical Drive	X				X	
Digitizer	X					
Plotter, Ink Jet, Monochrome	X			X	X	
Plotter, Pen, Color	X	X	X		X	
Zip Drive	X	X	X	X	X	

	McMurdo	SPole	Palmer	LMG[1]	NBP[2]	AGO[3]
Environmental Monitoring						
Acoustic Release	X			X	X	
Aethelometer		X				
Analyzer, CO	X				X	
Analyzer, NOx	X					
Analyzer, Pesticide/PUF	X					
Analyzer, SO_2	X					
Calibration System, Multigas	X				X	
Concentrator, Turbo-Vap II	X					
Current Meter	X			X	X	
Deck unit/Transducer	X			X	X	
Sampler, Air, Hi-Vol.	X					
Toxicity Analyzer	X					
Water Quality Logging System	X					
Water Quality System	X		X			
Geology/Geophysics						
Ball Mill	X					
Chronology Clock				X	X	
Data Translation D/A Converters				X	X	
Diamond Drill and Associated Equipment	X					
Echo Sounder, Bathy 2000 "chirp" sub-bottom profiler					X	
Echo Sounder, Knudsen, Sub-bottom Profiler				X		
Echo Sounder, Bathy 2000 "chirp" sub-bottom profiler					X	
Echo Sounder, Simrad EK500					X	
Gravimeter, Portable					X	
Gravimeter, Sea Fixed					X	

	McMurdo	SPole	Palmer	LMG[1]	NBP[2]	AGO[3]
Heliocoder	X					
Jack Hammer	X					
Jumbo Piston Corer					X	
Kasten Corer				X	X	
Microscope, Electronic Stage w/point counter	X					
Microscope, Polarizing with Camera	X					
Microscopes, Petrographic	X	X	X	X	X	
Petrographic Scope					X	
Recorders, EPC Analog				X	X	
Rock Saws	X					
Rock Polisher, Automatic	X			X		
Seismic, Benthos, Single Channel					X	
Seismic Bolt, Long-Life Array, 6 guns, 3000 cubic inches total					X	
Seismic, G/I air-guns (210 cu in)					X	
Seismic, G/I water-gun (25 cu in)					X	
Seismic, ITI multi-channel streamer (48 channel, 25m group interval)					X	
Seismic, ITI single channel streamer					X	
Survey System, GPS	X	X	X	X	X	
Swath bathymetric mapping system					X	
Thin-Section Machine	X			X		
Time Standard		X	X		X	
X-ray Instrument, Diffraction	X					
Geomagnetism						
Antennas, Dipole		X				
Gradiometer, Magnetic--towed						
Magnetometer, Portable	X	X				

	McMurdo	SPole	Palmer	LMG[1]	NBP[2]	AGO[3]
Magnetometer, Quartz, Horizontal		X				
Magnetometer, Standard Induction		X				
Magnetometer, Towed					X	
Magnetograph, Three-component, Standard, Low Sensitivity		X				
Magnetograph, Three-component, Rapid Run, Low Sensitivity		X				
Magnetometer, Visible Recording		X	X			
Time Standard		X			X	
Glaciology						
Drill, Jiffy w/ Power Head	X		X	X	X	
Drill, Shallow (100 meters)	X					
Drill, Ice Coring, Intermediate (500-1000m)	X					
Generator, Shear Wave	X					
Geoceivers	X	X				
Ice Auger, SIPRE	X	X	X			
Rigsby Stage	X					
Meteorology						
Barometers	X	X	X	X	X	
Data Loggers	X	X	X	X	X	
Detectors, Aerosol and CN (balloon-borne)		X				
Laser Ceilometer		X				
Precipitation Gauges	X		X			
Pressure Indicators		X	X			
Pyrgeometers	X			X	X	
Pyranometer	X		X	X	X	
Radiotheodolite System, Automatic		X				

	McMurdo	SPole	Palmer	LMG[1]	NBP[2]	AGO[3]
Receiver, High Resolution Picture	X		X			
Transmission (HRPT)						
Recorder, Four-Channel		X				
Satellite Receiving Data Manipulation System	X		X		X	
Set of Pyranometers, Tyrhelometers and Net Radiometers		X		X	X	
Temperature Probe Aspirators, Quali-metrics/Weather Measure		X				
Temperature Probes, RTD-Platinum	X	X	X			
Temperature Thermometers	X	X	X	X	X	
Transmitters, PTT	X					
Weather Station	X		X			
Weather Stations, Automatic	X	X	X			
Weather System				X	X	
Wind System and Recorder with Transmitter	X		X	X	X	
Wind Anemometers	X	X	X	X	X	
Wind Indicators	X	X	X	X	X	
Wind Translators		X		X	X	
Oceanography/Limnology						
A-Frame				X	X	
Acoustic Doppler Current Profiler				X	X	
Acoustic Release with Surface Command Unit	X		X	X	X	
Nutrient Analyzer	X		X	X	X	
Bottom Imaging System, Multibeam					X	
Conductivity Temperature Depth Instrument (CTD)	X		X	X	X	

	McMurdo	SPole	Palmer	LMG[1]	NBP[2]	AGO[3]
Current Meter, Electromagnetic	X					
Data Acquisition System	X			X	X	
Deep Sea Coring System				X	X	
Depth Finder	X		X	X	X	
Echo Sounder, Biosonics Acoustic Profiler			X			
Flourometer, Fast Repetition-Rate			X			
Flourometer, Flow-through				X	X	
Go-Flo Bottles	X		X	X	X	
Gradiometer, Magnetic						
Hood Laminar Flow, Portable			X		X	
Hydraulic Boom				X	X	
Hydrodavit				X	X	
Inflatable Boat, Zodiac			X	X	X	
Isotope Van				X	X	
Laboratory Van				X	X	
Launcher, XBT				X	X	
Liquid Helium Vapor Recovery System		X				
Magnetometers	X				X	
Messenger	X		X	X	X	
Metering Sheave	X		X	X	X	
Niskin Bottle	X		X	X	X	
PDR System, 3.5 and 12 KHz				X	X	
Plankton Net	X		X	X	X	
Pressure Transducer	X			X	X	
Radar				X	X	
Rosette				X	X	
Salinometer	X		X	X	X	
SAT P-Code GPS				X	X	
SAT VAV/GPS				X	X	

	McMurdo	SPole	Palmer	LMG[1]	NBP[2]	AGO[3]
Satellite Navigation				X	X	
Sediment Trap	X					
Seismic Systems, Single and Multi-channel					X	
Sonar, Side Scan				X	X	
Thermosalinograph				X	X	
Transmissometer				X		
Trawl Gear				X	X	
Winch, Deep Sea Trawl				X	X	
Winch, Hydrographic				X	X	
Winch, Portable, Electric	X		X	X	X	
Winch, Portable, Gasoline	X		X			
Winch, Portable Hand			X			
Seismology						
Gravimeters, Earth Tide						
Gravimeter		X				
Gravimeter, Lacoste & Romberg (Marine)					X	
IRIS System		X	X			X
Receiver, GPS	X	X	X	X	X	
Seismograph	X	X	X		X	
Other						
Cryogen Vaporizer	X					
Data Link, Satellite	X	X	X	X	X	
Drill Press	X	X	X	X	X	
Frequency Counter	X			X	X	
Global Positioning System	X	X	X	X	X	
Handheld Global Positioning System	X	X	X	X		
Lathe	X	X	X	X	X	

	McMurdo	**SPole**	**Palmer**	**LMG[1]**	**NBP[2]**	**AGO[3]**
LOX Transport	X					
Maritime Fixed Station (INMARSAT)	X		X	X	X	
Meter, Multi	X	X	X	X	X	
Meter, RCL	X				X	
Mill		X				
Milling Machine, Vertical		X				
Nitrogen Generator	X					
Projector, Video	X			X	X	
Resistors and Capacitors, Decade	X			X	X	
Scanner	X	X		X	X	
Tracking System, Satellite	X	X	X			
Transceivers, Satellite, ATS-3	X	X	X			
Un-interruptable power supply (UPS)	X	X	X	X	X	
Video Camcorder	X	X	X	X	X	

1 = R/V LAURENCE M. GOULD

2 = R/V NATHANIEL B. PALMER

3 = AUTOMATED GEOPHYSICAL OBSERVATORY

VIII. Transportation & Comms

Section VIII details the number and type transportation facilities and communications equipment for use within the Antarctic treaty area.

Surface, Marine, and Air Transportation Vehicles

McMurdo Station

Truck, (light and heavy)	227
Carrier, Personnel and Cargo (tracked and wheeled)	52
Trailer, (tracked and wheeled)	39
Front-end loader, bucket and forklift	45
Forklift, warehouse	20
Motor toboggans	90
Crane	2
Road grader	4
Roller	4
Tractor, crawler	26
Tractor, wheeled	2
Sweeper, magnet	1
Snow plane	6
Truck, fire, pumper	8
Trencher	2
Aircraft, LC-130	6
Helicopters, Aerospatiale AS-350B-2	3
Helicopters, Bell 212	1
Scraper	2
Backhoe	2

Amundsen-Scott South Pole Station

Cranes	3
Excavator	1
Front Loader, tracked	7
Motor Toboggans	2
Personnel Carrier	5
Snow Plane	2
Tele-handler	1
Tractor Crawler	3
Trencher	1
Truck, light and heavy	2

Palmer Station

Front-loader (wheeled)	2
Motor toboggans	2
Boats, rubber (Zodiac)	16
Forklift, all terrain	1
Telescopic material handler	1
Vehicle, all terrain, 4-wheel	4

Description of Communications Facilities

Note: For information on frequencies, see attached Comms forms (Attachment A). The following projects are contemplated for the FY 2000-2001 season in Antarctica.

McMurdo Station

1. HF modernization at the McMurdo transmitter facility.
2. Assist with the move of the older ASR-8 radome and install a second TDRSS link.

3. Provide support for a data link and equipment to be installed at Crater Hill as part of the Comprehensive Nuclear Test Ban Treaty Project.

4. Install equipment at the Cosray facility to provide network connectivity with the McMurdo LAN.

South Pole Station

1. Install a dedicated HF link to the South Pole to be used for operational requirements.

Palmer Station

No major communications projects are planned for Palmer Station during the reporting period.

Description of Airfields

McMurdo Station

Air Facilities

1. Williams Field - 10,000 ft. and 8,000 ft. skiways on ice shelf.

2. 10,000 ft. and 8,000 ft. ice runways (on annual sea ice)

3. 10,000 foot runway on glacial ice (Pegasus)

4. Helicopter landing pad.

Crash Equipment

1. Two Canadian Foremost Chieftains, 1200 gallons AFFF (each)

2. Two Nodwell Flex-Trac equipped with 1350 lb. PKP, 200 gallon AFFF

3. One Nodwell Flex-Trac equipped with 3,000 lb. PKP
4. Seven 150 lb. PKP sled-mounted extinguisher on the flight line
5. Two 3,000 lb. PKP sled-mounted extinguishers at the heli-pad
6. One Pumper/Tanker, 3,400 gallons of water.
7. Two Pumpers, 750 gallons (H2O), 1000 GPM

Navigation Aids

1. Precision (course & glide slope) Approach Radar (PAR) and Approach Surveillance Radar (ASR) on primary landing runways, AN/FPN-36 radar.
2. AN/TRN-26 TACAN.
3. AN/URN-25 TACAN
4. T-1109/GRT-22 UHF radio beacon.
5. Terminal Approach Control Radar (GPN-27)
6. Precision Approach Path Indicator (PAPI)
7. Mobile Microwave Landing System (MMLS).

Amundsen-Scott South Pole Station

Air Facilities

14,000 ft. skiway

Crash Equipment

Three 350 lb. dry chemical units

Navigation Aids

1. PAR and ASR radar, AN/FPN-36.
2. AN/URN-25 TACAN.
3. T-1109/GRT-22 UHF beacon.

Palmer Station

Air Facilities

None. Open field landings on glacier possible.

Crash Equipment

None

Navigation Aids

T-1109/GRT-22 UHF beacon.

Marble Point Camp

Air Facilities

One helicopter landing pad.

Crash Equipment

1. One 350 lb. dry chemical unit.
2. One 150 lb. dry chemical unit (PKP).

Navigation Aids

None.

IX. Assistance Facilities

Section IX details the facilities available for rendering assistance in Antarctica, including medical, transport services and emergency shelters.

McMurdo Station

Medical Facilities

During the winter-over period there is a four-bed medical and dental facility with 1 doctor and 2 medical assistants. These personnel are augmented with up to 12 emergency medical technicians assigned to the Fire Department. During the summer this facility is staffed with 2 physicians, 1 physicians' assistant or nurse practitioner, 1 dentist, 1 radiographic technician, 1 laboratory technician, 1 physical therapist, and 2 Nurses. These personnel are augmented with up to 40 emergency medical technicians assigned to the Fire Department.

Transport Services

From October to mid-December, airlift from McMurdo to Christchurch via C-5, C-141, and C-130 aircraft is available. From mid-December to mid-February, airlift by LC-130 aircraft is available. Possibility of transport via surface when available (see Section II for dates available).

Available Shelter

Over 90 covered structures are available at McMurdo Station.

Amundsen-Scott South Pole Station

Medical Facilities

1 civilian doctor is on-station at South Pole year round. There is limited x-ray and medical lab capability on station.

Transport Services

LC-130 aircraft are available only on-call from McMurdo Station from November to mid-February.

Available Shelter

South Pole Station consists of three buildings under a geodesic dome adjoined and connected to a series of four arches also containing buildings. From November through mid-February additional buildings and tent structures are available.

Palmer Station

Medical Facilities

1 civilian doctor is on-station at Palmer Station year round. There is limited x-ray and medical lab capability on station.

Transport Services

The R/V LAWRENCE M. GOULD is the primary means of transport to and from Palmer Station. In extreme circumstances, Twin Otter landings are possible on the glacier behind the station.

Available Shelter

Two buildings comprise the available shelter at Palmer Station.

Marble Point Camp

Medical Facilities

None

Transport Services

Helicopter support from McMurdo Station is available (weather dependent).

Available Shelter

Three structures comprise Marble Point Camp with two structures for berthing up to six persons, and one that houses a generator and workshop.

X. Tourism

Section X presents planned itineraries for U.S. based non-governmental activities in the Treaty area.

Abercrombie & Kent International, Inc.

Explorer Shipping Corporation and Abercrombie & Kent International, Inc. of Oak Brook, Illinois, are planning nine cruises to the Antarctic Peninsula during the 2000-2001 season using the M/S EXPLORER.

M/S EXPLORER

Call letters of the vessel are ELJD8; registry is Liberian. The EXPLORER was built in 1969 and is 72.86 meters in length, 14.02 meters in breadth, has a draft of 4.48 meters, and has a Det Norske Veritas +1A1 ICE-A rating. Power is provided by two MAK diesel engines of 1800 hp each, driving a single variable-pitch propeller, type LIANEN - 450 rpm. Navigation equipment includes a Decca radar 10cm, a Raytheon radar 3cm, a JCR radar 3cm, a Satellite Navigation System (SATNAV) and a Trimble global positioning system (GPS). The vessel has two primary transmitters (Main - ST1680A Marine Mobil Bands, 1500 W Pp; Emergency - EB50, 500 W) and 2 VHF Transceivers STR 67 25 W and a VHF Transceiver Shipmate RS 8000 25 W. INMARSAT number is 1241223 SOEX-X (with voice, telex and telefax capability). EXPLORER carries 9 Mark V heavy duty zodiacs, 4 motor life boats for 196 persons, and 4 automatically inflated life rafts for 66 persons. The vessel can accommodate 85-96 passengers, 10 cruise staff, and 60 crew.

Schedules for each of the cruises follows:

Cruise EX-#1
November 2000

Ports	Dates
Port Stanley, FALKLAND ISLANDS	06 NOV 2000
Falkland Islands	07-09 NOV 2000
At sea	10-11 NOV 2000
South Georgia	12-19 NOV 2000
at sea	20-21 NOV 2000
Port Stanley, FALKLAND ISLANDS	22 NOV 2000

Cruise EX-#2
November/December 2000

Ports	Dates
Port Stanley, FALKLAND ISLANDS	22 NOV 2000
Steeple Jason	23 NOV 2000
Carcass/Saunders	24 NOV 2000
Sea Lion Island	25 NOV 2000
at sea	26-27 NOV 2000
South Georgia	28 NOV- 5 DEC 2000
at sea	6-7 DEC 2000
Port Stanley, FALKLAND ISLANDS	8 DEC 2000

Cruise EX-#3
December 2000

Ports	Dates
Port Stanley, FALKLAND ISLANDS	8 DEC 2000
South East Falklands	09 DEC 2000
at sea	10-11 DEC 2000
South Georgia	12-14 DEC 2000
at sea	15-16 DEC 2000
Antarctic Peninsula	17-20 DEC 2000
at sea	21-22 DEC 2000
Port Stanley, FALKLAND ISLANDS	23 DEC 2000

Cruise EX-#4
December 2000/January 2001

Ports	Dates
Port Stanley, FALKLAND ISLANDS	23 DEC 2000
Steeple/Jason/Saunders	24 DEC 2000
New/ Carcass Island	25 DEC 2000
Drake	26-27 DEC 2000
Antarctic Peninsula	28 DEC-01 JAN 2001
at sea	02-03 JAN 2001
Ushuaia, ARGENTINA	04 JAN 2001

Cruise EX-#5
January 2001

Ports	Dates
Ushuaia, ARGENTINA	04 JAN 2001
at sea	05-06 JAN 2001
Antarctic Peninsula	07-11 JAN 2001
at sea	12-13 JAN 2001
Ushuaia, ARGENTINA	14 JAN 2001

Cruise EX-#6
January 2001

Ports	Dates
Ushuaia, ARGENTINA	14 JAN 2001
at sea	15-16 JAN 2001
Antarctic Peninsula	17-21 JAN 2001
At sea	22-23 JAN 2001
Ushuaia, Argentina	24 JAN 2001
Beagle Channel/Cook Bay	25 JAN 2001
Cape Horn/Harberton Farm	26 JAN 2001
Ushuaia, ARGENTINA	27 JAN 2001

Cruise EX-#7
January/February 2001

Ports	Dates
Ushuaia, ARGENTINA	27 JAN 2001
At sea	28-29 JAN 2001
Antarctic Peninsula	30 JAN –02 FEB 2001
South Orkneys	03 FEB 2001
at sea	04 FEB 2001
South Georgia	05-07 FEB 2001
At sea	08-09 FEB 2001
Southeast Falklands	10 FEB 2001
Port Stanley, FALKLAND ISLANDS	11 FEB 2001

Cruise EX-#8
February 2001

Ports	Dates
Port Stanley, FALKLAND ISLANDS	11 FEB 2001
Carcass/New Island	12 FEB 2001
At sea	13-14 FEB 2001
Antarctic Peninsula	15-21 FEB 2001
at sea	22-23 FEB 2001
Ushuaia, ARGENTINA	24 FEB 2001

Cruise EX #9
February/March 2001

Ports	Dates
Ushuaia, ARGENTINA	24 FEB 2001
at sea	25-26 FEB 2001
Antarctic Peninsula	27 FEB-02 MAR 2001
South Orkneys	03 MAR 2001
At sea	04 MAR 2001
South Georgia	05-07 MAR 2001
At sea	08-09 MAR 2001
Southeast Falklands	10-11 MAR 2001
Port Stanley, FALKLAND ISLANDS	12 MAR 2001

Quark Expeditions

Quark Expeditions of Darien, Connecticut, is planning approximately 22 cruises to the Antarctic during 2000-2001 season using three chartered vessels. The PROFESSOR MULTANOVSKIY will conduct 10 cruises, the KAPITAN DRANITSYN will conduct 9, and the KAPITAN KHLEBNIKOV will conduct three cruises.

PROFESSOR MULTANOVSKIY

The vessel is of Russian registry and is 235 feet long, 42 feet wide and has a draft of 15 feet. Its gross registered tonnage is 1754. The hull's ice classification is KM*UL[1]A2, Canadian Type A. The MULTANOVSKIY is powered by two 2,300 kW diesel engines and has both bow and stern thrusters. The vessel carries 44 passengers and 32 crew.

Schedules for each of the cruises follows:

Cruise MUL #1
November/December 2000

Port	Dates
Ushuaia, ARGENTINA	20 NOV 2000
at sea	21 NOV 2000
New Island	22 NOV 2000
Carcass/West Point	23 NOV 2000
Steeple Jason	24 NOV 2000
at sea	25-26 NOV 2000
at sea/South Georgia	27 NOV 2000
South Georgia	28 NOV-04 DEC 2000
at sea	05-06 DEC 2000
Antarctic Peninsula	07-11 DEC 2000
at sea	12-13 DEC 2000
Ushuaia, ARGENTINA	14 DEC 2000

Cruise MUL #2
December 2000

Port	Dates
Ushuaia, ARGENTINA	14 DEC 2000
at sea	15-16 DEC 2000
Antarctic Peninsula	17-21 DEC 2000
At sea	22-23 DEC 2000
Ushuaia, ARGENTINA	24 DEC 2000

Cruise MUL #3
December 2000/January 2001

Port	Dates
Ushuaia, ARGENTINA	24 DEC 2000
At sea	25-26 DEC 2000
Antarctic Peninsula	27 DEC-01 JAN 2001
at sea	02-03 JAN 2001
Ushuaia, ARGENTINA	04 JAN 2001

Cruise MUL #4
January 2001

Port	Dates
Ushuaia, ARGENTINA	04 JAN 2001
at sea	05-06 JAN 2001
Antarctic Peninsula	07 –10 JAN 2001
at sea	11-12 JAN 2001
Ushuaia, ARGENTINA	13 JAN 2001

Cruise MUL #5
January 2001

Port	Dates
Ushuaia, ARGENTINA	13 JAN 2001
At sea	14 JAN 2001
Westpoint/Carcass	15 JAN 2001
Stanley	16 JAN 2001
At sea	17-18 JAN 2001

South Georgia	19-22 JAN 2001
At sea	23-24 JAN 2001
Elephant Island	25 JAN 2001
Antarctic Peninsula	26-28 JAN 2001
At sea	29-30 JAN 2001
Ushuaia, ARGENTINA	31 JAN 2001

Cruise MUL #6
January/February 2001

Port	**Dates**
Ushuaia, ARGENTINA	31 JAN 2001
at sea	01-02 FEB 2001
Antarctic Peninsula	03-06 FEB 2001
at sea	07-08 FEB 2001
Ushuaia, ARGENTINA	09 FEB 2001

Cruise MUL #7
February 2001

Port	**Dates**
Ushuaia, ARGENTINA	09 FEB 2001
at sea	10-11 FEB 2001
Antarctic Peninsula	12-15 FEB 2001
at sea	16-17 FEB 2001
Ushuaia, ARGENTINA	18 FEB 2001

Cruise MUL #8
February 2001

Port	**Dates**
Ushuaia, ARGENTINA	18 FEB 2001
at sea	19-20 FEB 2001
Antarctic Peninsula	21-24 FEB 2001
at sea	25-26 FEB 2001
Ushuaia, ARGENTINA	27 FEB 2001

Cruise MUL #9
February/March 2001

Port	Dates
Ushuaia, ARGENTINA	27 FEB 2001
at sea	28- FEB- 01 MAR 2001
Antarctic Peninsula	02-05 MAR 2001
at sea/South Orkneys	06-07 MAR 2001
at sea/South Georgia	08 MAR 2001
South Georgia	09-11 MAR 2001
at sea	12-14 MAR 2001
Port Stanley	15 MAR 2001
New Island/Westpoint	16 MAR 2001
at sea	17 MAR 2001
Ushuaia, ARGENTINA	18 MAR 2001

Cruise MUL #10
March 2001 (Sub-chartered by Oceanwide Expeditions of the Netherlands)

Port	Dates
Ushuaia, ARGENTINA	19 MAR 2001
at sea	20 MAR 2001
at sea/Penguin Island	21 MAR 2001
Hope Bay/Brown Buff	22 MAR 2001
Dundee/Paulet	23 MAR 2001
at sea	24 MAR 2001
South Orkney	25 MAR 2001
at sea	26 MAR 2001
Grytviken	27 MAR 2001
Salisbury/Albatross/Prion	28 MAR 2001
Elsehul	29 MAR 2001
SAILING TO TRISTAN DE CUNHA	30 MAR 2001

M/V KAPITAN KHLEBNIKOV

The vessel was built in 1981 at the Waratsila Shipyard, Helsinki, Finland. The ship is owned by FESCO, Vladivostok. The call letters are UTSU. The KHLEBNIKOV is 132.4 meters in length, 26.5 meters in breadth, has a 8.5 meter draft and displacement of

18,000 tons. The vessel is powered by diesel-electric motors producing 22,000 h.p. driving 3 propellers permitting a maximum speed of 19 knots. The vessel is classified as an icebreaker. The KHLEBNIKOV carries four Mark V heavy-duty zodiacs, in addition to two MI2 helicopters for ice reconnaissance and passenger transport. Approximately 112 passengers and 50 crew members will be onboard for each cruise.

Schedules for each of the cruises follows:

Cruise KLB #1
December 2000

Port	Dates
Hobart, AUSTRALIA	04 DEC 2000
at sea	05-06 DEC 2000
Macquarie Island	07-08 DEC 2000
At sea	09-10 DEC 2000
Pack ice edge	11 DEC 2000
Pack ice	12-13 DEC 2000
Cape Washington	14 DEC 2000
Terra Nova Bay	15 DEC 2000
Coulman Island	16 DEC 2000
Cape Hallett/Cape Roget	17 DEC 2000
Possession Island	18 DEC 2000
Cape Adare	19 DEC 2000
Pack Ice	20 DEC 2000
Pack ice edge	21 DEC 2000
At sea	22-23 DEC 2000
Campbell Island	24 DEC 2000
Enderby Island	25 DEC 2000
At sea	26-27 DEC 2000
Hobart, AUSTRALIA	28 DEC 2000

Cruise KLB #2
December 2000/January 2001

Port	Dates
Hobart, AUSTRALIA	28 DEC 2000
at sea	29-30 DEC 2000

Macquarie Islands	31 DEC 2000
At sea	01-02 JAN 2001
Balleny Island	03 JAN 2001
Cape Adare	04 JAN 2001
Cape Roget/Cape Hallett	05 JAN 2001
Cape Hallett/Coulman Island	06 JAN 2001
Terra Nova Bay	07 JAN 2001
Dry Valleys	08 JAN 2001
McMurdo/Cape Evans	09 JAN 2001
Cape Royds/Ross Ice Shelf	10 JAN 2001
Ross Ice Shelf/Bay of Whales	11 JAN 2001
Ross sea	12 JAN 2001
Possession Island	13 JAN 2001
At sea	14-16 JAN 2001
Campbell Island	17 JAN 2001
Enderby Island	18 JAN 2001
Snares Island	19 JAN 2001
Bluff, NEW ZEALAND	20 JAN 2001

Cruise KLB #3
January/February 2001

Port	**Dates**
Bluff, NEW ZEALAND	21 JAN 2001
Port Ross/Carnley Harbour	22 JAN 2001
Campbell Island	23 JAN 2001
At sea	24-25 JAN 2001
Pack Ice	26 JAN 2001
Cape Adare	27 JAN 2001
Terra Nova Bay	28 JAN 2001
Dry Valleys/Cape Evans	29 JAN 2001
McMurdo/Cape Royds	30 JAN 2001
Ross Ice Shelf/Franklin Island	31 JAN 2001
Cape Hallett	01 FEB 2001
Pack Ice	02 FEB 2001
Balleny Islands	03 FEB 2001
Pack Ice	04 FEB 2001

Mertz Glacier/Commonwealth Bay	05 FEB 2001
Port Martin/Astrolabe Glacier/Dumont D'Urville	06 FEB 2001
At sea	07-09 FEB 2001
Macquarie Island	10-11 FEB 2001
Hobart, AUSTRALIA	14 FEB 2001

KAPITAN DRANITSYN

The vessel was built in 1981 at the Waratsila Shipyard, Helsinki, Finland. The ship is owned by FESCO, Vladivostok. The DRANITSYN is 132.4 meters in length, 26.5 meters in breadth, has a 8.5 meter draft and displacement of 18,000 tons. The vessel is powered by diesel-electric motors producing 22,000 h.p. driving 3 propellers permitting a maximum speed of 19 knots. The vessel is classified as an icebreaker. The DRANITSYN carries four Mark V heavy-duty zodiacs, in addition to two MI2 helicopters for ice reconnaissance and passenger transport. Approximately 112 passengers and 50 crew members will be onboard for each cruise.

Schedules for each of the cruises follows:

Cruise DSYN #1
November/December 2000

Port	**Dates**
Ushuaia, ARGENTINA	23 NOV 2000
At sea	24 NOV 2000
New Island/Westpoint	25 NOV 2000
Port Stanley	26 NOV 2000
At sea	27-28 NOV 2000
Elsehul Bay	29 NOV 2000
South Georgia	30 NOV-02 DEC 2000
At sea	03 DEC 2000
Antarctic Peninsula	04-08 DEC 2000
At sea	09-10 DEC 2000
Ushuaia, ARGENTINA	11 DEC 2000

Cruise DSYN #2
December 2000

Port	Dates
Ushuaia, ARGENTINA	11 DEC 2000
At sea	12-13 DEC 2000
Antarctic Peninsula	14-17 DEC 2000
At sea	18-19 DEC 2000
Ushuaia, ARGENTINA	20 DEC 2000

Cruise DSYN #3
December 2000

Port	Dates
Ushuaia, ARGENTINA	20 DEC 2000
At sea	21-22 DEC 2000
Antarctic Peninsula	23-26 DEC 2000
At sea	27-28 DEC 2000
Ushuaia, ARGENTINA	29 DEC 2000

Cruise DSYN #4
December 2000/January 2001

Port	Dates
Ushuaia, ARGENTINA	29 DEC 2000
At sea	30-31 DEC 2000
Antarctic Peninsula	01-05 JAN 2001
At sea	06-07 JAN 2001
Ushuaia, ARGENTINA	08 JAN 2001

Cruise DSYN #5
January 2001

Port	Dates
Ushuaia, ARGENTINA	08 JAN 2001
At sea	09 JAN 2001
New Island/Westpoint	10 JAN 2001
Port Stanley	11 JAN 2001
At sea	12-13 JAN 2001

Elsehul/Grytviken	14 JAN 2001
South Georgia	15-17 JAN 2001
At sea	18 JAN 2001
Elephant Island	19 JAN 2001
Antarctic Peninsula	20-23 JAN 2001
At sea	24-25 JAN 2001
Ushuaia, ARGENTINA	26 JAN 2001

Cruise DSYN #6
January/February 2001

Port	**Dates**
Ushuaia, ARGENTINA	26 JAN 2001
At sea	27-28 JAN 2001
Antarctic Peninsula	29 JAN -01 FEB 2001
At sea	02-03 FEB 2001
Ushuaia, ARGENTINA	04 FEB 2001

Cruise DSYN #7
February 2001

Port	**Dates**
Ushuaia, ARGENTINA	04 FEB 2001
At sea	05-06 FEB 2001
Antarctic Peninsula	07-10 FEB 2001
At sea	11-12 FEB 2001
Ushuaia, ARGENTINA	13 FEB 2001

Cruise DSYN #8
February 2001

Port	**Dates**
Ushuaia, ARGENTINA	13 FEB 2001
At sea	14-15 FEB 2001
Antarctic Peninsula	16-19 FEB 2001
At sea	20-21 FEB 2001
Ushuaia, ARGENTINA	22 FEB 2001

Cruise DSYN #9
February/March 2001

Port	Dates
Ushuaia, ARGENTINA	22 FEB 2001
At sea	23-24 FEB 2001
Antarctic Peninsula	25-28 FEB 2001
At sea	01 MAR 2001
At sea/South Orkneys	02 MAR 2001
At sea	03 MAR 2001
South Georgia	04-06 MAR 2001
At sea	07-08 MAR 2001
Port Stanley	09 MAR 2001
Carcass/West Point	10 MAR 2001
At sea	11 MAR 2001
Ushuaia, ARGENTINA	12 MAR 2001

Orient Lines, Inc.

Orient Lines, Inc. of Fort Lauderdale, Florida, plans to conduct 6 cruises to the Antarctic during the 2000-2001 season using the MARCO POLO.

MARCO POLO

The vessel is ice-strengthened and was built by VEB Mathias-Thesan Werft of Wismar, Germany in 1965 and re-built during 1991-93 under the supervision of Knud E. Hansen, naval architects, and A. & M. Katzourakis, ship designers. Call letters of the vessel are C6JZ7 and it is registered in the Bahamas. The MARCO POLO is 176.28 meters (578.4 feet) in length, 23.6 meters (77.4 feet) in breadth, has a draft of 8.2 meters (26.9 feet), and is 20,502 tons GRT. Power is provided by 2 Saulzer 7 RND 76 diesel engines with power output of 10,500 bhp each. The vessel has twin-screw propellers and is fitted with Denny Brown (UK) fin stabilizers. There are 6 SKL diesel generators capable of producing approximately 3,500 kw. The MARCO POLO is equipped with the latest radio and satellite communications systems (INMARSAT 1306215) and state-of-the-art navigation equipment. The vessel was redesigned to comply with all 1992

"Marpol" rules for waste disposal including an onboard biological treatment plant with a liquid waste disposal system, refuse sorting, pulping and a treatment plant, in addition to a modern refuse incinerator. All lifeboats are semi-enclosed, engine propelled and capable of saving 1,200 persons. The vessel is also equipped with two high-speed all-purpose passenger tenders and 10 inflatable zodiac landing craft. The staff and crew capacity is 350, whereas the passenger capacity is 850. However during cruises to the Antarctic Treaty area, Orient Lines only intends to carry 400-450 passengers.

Schedules for each of the cruises follows:

Cruise MP #1
December 2000/January 2001

Port	**Dates**
Buenos Aires, ARGENTINA	29 DEC 2000
at sea	30 DEC –1 JAN 2001
Westpoint Island	02 JAN 2001
Port Stanley	03 JAN 2001
At sea	04 JAN 2001
Deception Island/Pendulum Cove	05 JAN 2001
Lemaire Channel/Port Lockroy	06 JAN 2001
Waterboat Pt./Neumayer Channel	07 JAN 2001
Half Moon Island/at sea	08 JAN 2001
At sea	09 JAN 2001
Ushuaia, ARGENTINA	10 JAN 2001

Cruise MP #2
January 2001

Port	Dates
Ushuaia, ARGENTINA	11 JAN 2001
at sea	12 JAN 2001
Deception Island/Pendulum Cove	13 JAN 2001
Lemaire Channel/Port Lockroy	14 JAN 2001
Waterboat Point/Neumayer Channel	15 JAN 2001
Half Moon Island/at sea	16 JAN 2001
at sea	17 JAN 2001
Ushuaia, ARGENTINA	18 JAN 2001

Cruise MP #3
January 2001

Port	Dates
Ushuaia, ARGENTINA	19 JAN 2001
at sea	20 JAN 2001
Deception Island/Pendulum Cove	21 JAN 2001
Lemaire Channel/Port Lockroy	22 JAN 2001
Waterboat Point/Neumayer Channel	23 JAN 2001
Half Moon Island/at sea	24 JAN 2001
at sea	25 JAN 2001
Ushuaia, ARGENTINA	26 JAN 2001

Cruise MP#4
January/February 2001

Port	Dates
Ushuaia, ARGENTINA	27 JAN 2001
at sea	28 JAN 2001
Deception Island/Pendulum Cove	29 JAN 2001
Lemaire Channel/Port Lockroy	30 JAN 2001
Waterboat Point/Neumayer Channel	31 JAN 2001

Half Moon Island	01 FEB 2001
at sea	02 FEB 2001
Ushuaia, ARGENTINA	03 FEB 2001

Cruise MP#5
February 2001

Port	**Dates**
Ushuaia, ARGENTINA	04 FEB 2001
at sea	05 FEB 2001
Deception Island/Pendulum Cove	06 FEB 2001
Lemaire Channel/Port Lockroy	07 FEB 2001
Waterboat Point/Neumayer Channel	08 FEB 2001
Half Moon Island	09 FEB 2001
at sea	10 FEB 2001
Ushuaia, ARGENTINA	11 FEB 2001

Cruise MP#6
February 2001

Port	**Dates**
Ushuaia, ARGENTINA	12 FEB 2001
at sea	13 FEB 2001
Deception Island/Pendulum Cove	14 FEB 2001
Lemaire Channel/Port Lockroy	15 FEB 2001
Waterboat Point/Neumayer Channel	16 FEB 2001
Half Moon Island	17 FEB 2001
at sea	18 FEB 2001
At sea/Beagle Channel	19 FEB 2001
At sea/South Pacific	20 FEB 2001
Seno Eyre Fjord	21 FEB 2001
At Sea/South Pacific	22 FEB 2001
Port Montt	23 FEB 2001
At Sea/South Pacific	24 FEB 2001
Valparaiso, CHILE	25 FEB 2001

Clipper Cruise Lines

Clipper Cruise Lines, of St. Louis, Missouri, plans to conduct eight cruises to the Antarctic during the 2000-2001 season using the CLIPPER ADVENTURER.

CLIPPER ADVENTURER

The vessel was built in 1975 and rebuilt in 2000. The call letters are C6PG6. The CLIPPER ADVENTURER is 100 meters in length, 16.24 meters in breadth, has a 4.65 meter draft and displacement of 4,364 tons. The vessel has an average cruising speed of 14.5 knots. The vessel is classified by the Lloyd's Register as a 100 A1 Ice Class 1A Passenger Ship LMC. The CLIPPER ADVENTURER carries four 50-person life boats and three 25-person life rafts, in addition to ten 15-person Mark V heavy-duty zodiacs. Approximately 122 passengers and 79 crew members will be onboard for each cruise.

Schedules for each of the cruises follows:

Cruise CA #1
December 2000

Port	Dates
Ushuaia, ARGENTINA	01 DEC 2000
At sea	02-03 DEC 2000
Antarctic Peninsula	04-08 DEC 2000
At sea	09-10 DEC 2000
Ushuaia, ARGENTINA	11 DEC 2000

Cruise CA #2
December 2000

Port	Dates
Ushuaia, ARGENTINA	11 DEC 2000
at sea	12-13 DEC 2000
Antarctic Peninsula	14-18 DEC 2000
at sea	19-20 DEC 2000
Ushuaia, ARGENTINA	21 DEC 2000

Cruise CA #3
December 2000

Port	Dates
Ushuaia, ARGENTINA	21 DEC 2000
at sea	22-23 DEC 2000
Antarctic Peninsula	24-28 DEC 2000
at sea	29-30 DEC 2000
Ushuaia, ARGENTINA	31 DEC 2000

Cruise CA #4
December 2000/January 2001

Port	Dates
Ushuaia, ARGENTINA	31 DEC 2000
at sea	01-02 JAN 2001
Antarctic Peninsula	03-07 JAN 2001
at sea	08-09 JAN 2001
Westpoint/Carcass Island, Falkland Islands	10 JAN 2001
Port Stanley, FALKLAND ISLANDS	11 JAN 2001

Cruise CA #5
January 2001

Port	Dates
Port Stanley, FALKLAND ISLANDS	11 JAN 2001
Carcass/Westpoint/New Island	12 JAN 2001
New Island/Sea Lion Island	13 JAN 2001
at sea	14 JAN 2001
South Georgia	15-18 JAN 2001
At sea	19 JAN 2001
South Orkney	20 JAN 2001
Antarctic Peninsula	21-25 JAN 2001
At sea	26-27 JAN 2001
Ushuaia, ARGENTINA	28 JAN 2001

Cruise CA #6
January/February 2001

Port	Dates
Ushuaia, ARGENTINA	28 JAN 2001
at sea	29-30 JAN 2001
Antarctic Peninsula	31- JAN-04 FEB 2001
at sea	05-06 FEB 2001
Westpoint/Carcass	07 FEB 2001
Port Stanley, FALKLAND ISLANDS	08 FEB 2001

Cruise CA #7
February 2001

Port	Dates
Port Stanley, FALKLAND ISLANDS	08 FEB 2001
Carcass/Westpoint Island	09 FEB 2001
at sea	10-11 FEB 2001
Antarctic Peninsula	12-16 FEB 2001
At sea	17-18 FEB 2001
Ushuaia, ARGENTINA	19 FEB 2001

Cruise CA #8
February/March 2001

Port	Dates
Ushuaia, ARGENTINA	19 FEB 2001
at sea	20-21 FEB 2001
Antarctic Peninsula	22-26 FEB 2001
at sea	27-28 FEB 2001
Westpoint/Carcass	01 MAR 2001
Port Stanley, FALKLAND ISLANDS	02 MAR 2001

Special Expeditions, Inc.

Special Expeditions, Inc. of New York City, New York, plans to conduct six cruises to the Antarctic during the 2000-2001 season, using the M/V CALEDONIAN STAR.

M/V CALEDONIAN STAR

The M/V CALEDONIAN STAR was built in Germany in 1966, and is registered in the Bahamas. The vessel is 295 feet long, 46 feet wide, and has a draft of 21 feet. The ship can accommodate up to 108 passengers.

Cruise CS#1
December 2000

Port	Dates
Ushuaia, ARGENTINA	08 DEC 2000
At sea	09-10 DEC 2000
Antarctic Peninsula	11-15 DEC 2000
At sea	16 DEC 2000
Cape Horn	17 DEC 2000
Beagle Channel	18 DEC 2000
Punta Arenas, CHILE	19 DEC 2000

Cruise CS#2
December 2000/January 2001

Port	Dates
Punta Arenas, CHILE	20 DEC 2000
Beagle Channel	21 DEC 2000
Cape Horn	22 DEC 2000
At sea	23 DEC 2000
Antarctic Peninsula	24-30 DEC 2000
Elephant Island	31 DEC 2000
At sea	1 JAN 2001
New Island/Westpoint	2 JAN 2001
Carcass/Saunders	3 JAN 2001
Port Stanley, FALKLAND ISLANDS	04 JAN 2001

Cruise CS#3
January 2001

Port	Dates
Port Stanley, FALKLAND ISLANDS	04 JAN 2001
Saunders /Carcass	05 JAN 2001

Westpoint/New Island	06 JAN 2001
At sea	07 JAN 2001
Elephant Island	08 JAN 2001
Antarctic Peninsula	09-15 JAN 2001
At sea	16 JAN 2001
Cape Horn	17 JAN 2001
Beagle Channel	18 JAN 2001
Punta Arenas, CHILE	19 JAN 2001

Cruise CS#4
January 2001

Port	**Dates**
Punta Arenas, CHILE	19 JAN 2001
Beagle Channel	20 JAN 2001
At sea	21 JAN 2001
Antarctic Peninsula	22-27 JAN 2001
At sea	28 JAN 2001
Cape Horn	29 JAN 2001
Ushuaia, ARGENTINA	30 JAN 2001

Cruise CS#5
January/February 2001

Port	**Dates**
Ushuaia, ARGENTINA	30 JAN 2001
At sea	31 JAN 2001
At sea/King George Island	01 FEB 2001
Antarctic Peninsula	02-06 FEB 2001
At sea	07 FEB 2001
Cape Horn	08 FEB 2001
Beagle Channel	09 FEB 2001
Punta Arenas, CHILE	10 FEB 2001

Cruise CS#6
February 2001

Port	**Dates**
Punta Arenas, CHILE	10 FEB 2001

Beagle Channel	11 FEB 2001
Cape Horn	12 FEB 2001
At sea	13 FEB 2001
Antarctic Peninsula	14-18 FEB 2001
At sea	19 FEB 2001
South Orkneys	20 FEB 2001
At sea	21 FEB 2001
South Georgia	22-24 FEB 2001
Elsehul	25 FEB 2001
At sea	26-27 FEB 2001
Port Stanley, Falkland Islands	28 FEB 2001
Saunders/Carcass Island	01 MAR 2001
At sea	02 MAR 2001
Ushuaia, ARGENTINA	03 MAR 2001

Other

In addition, several other organizations plan to arrange/conduct or support tourism activities in the Antarctic during the 2000-2001 season. Although some of these organizations are not U.S. based, American citizens are most likely involved in their planned activities and for this reason are reported here.

SHIPBORNE

a) Hapag-Lloyd Cruises of Hamburg, Germany, will operate two vessels in the Antarctic Peninsula. The HANSEATIC will conduct 8 cruises, whereas the BREMEN will conduct only 2 cruises.

b) Marine Expeditions of Toronto, Canada, intends to conduct approximately 18 cruises to the Antarctic Peninsula using the MARIYA YERMALOVA and the LYUBOV ORLOVA.

LANDBASED

Adventure Network International (ANI), a Canadian company with an office in Beaconsfield, England, plans several 11-17-day excursions to the interior of the Antarctic continent. Travel from Punta Arenas, Chile, to Adventure Network's Patriot Hills base camp (80°20'S, 81°20'W) is via a South African chartered C-130 cargo/passenger aircraft. These various inland excursions will occur during November 2000 - mid-January 2001 using two chartered Twin Otters and their own Cessna C-A185F aircraft.

XI. Refuges

Section XI provides information on existing refuges and survival caches in the McMurdo area ,as well as, deactivated camps and stations elsewhere on the continent.

McMurdo Area Antarctic Refuges and Survival Caches

Following are the existing refuges consisting of huts or caches that may be used in emergency survival situations. These survival huts and survival caches are located within a 65 nautical mile radius of McMurdo Station and are inspected annually. Information provided includes position and description of location and accommodation, food, fuel, and supplies of other kinds. "Full provisions" indicates sleeping, eating, and cooking utensils.

Mt. Erebus Hut and Cache

Position: 77°30'S; 167°10'E
Hut: Partial provisions for 3 (no sleeping bags), oxygen, radio during summer.
Cache: Full provisions for 6. Located 50 meters from hut.

Cape Crozier Hut and Cache

Position: 77°30'S, 169°40'E
Hut: Wood structure with some provisions. No radio.
Cache: Full provisions for 6 located north of the hut.

Lake Bonney Hut and Cache

Position: 77°42'S, 162°27'E
Hut: Jamesway structure with provisions. No radio
Cache: Located on southeastern shore of Lake Bonney, approximately 30m from lake.

Lake Vida Cache

Position: 77°20'S, 162°00'E
Hut: Full provisions for 6, 30 man/days food. No radio.
Cache: Located approximately 183m from lake on southwestern shore.

Lake Hoare Hut

Position: 76°38'S, 162°57'E
Hut: Wood structure with provisions. No radio.

Lake Fryxell Hut

Position: 77°36'S, 163°07'E
Hut: Jamesway structure with provisions. No radio.

New Harbor Hut

Position: 77°34'S, 163°31'E
Hut: Jamesway structure with provisions. No radio.

McMurdo Supported Remote Locations

Siple Dome Camp

Position: 81°39'S, 149°04'E

Camp winterized for the season. Four (4) Jamesway structures remain standing. Food, fuel, survival cache, and heavy equipment were staged on site for use during the 1997-98 field season.

Byrd Surface Camp

Position: 80°01'S, 119°32'E

Survival cache and Jamesway, minimal food and fuel winterized for the season. All wooden structures, heavy equipment and materials removed from the camp.

Deactivated USAP Stations and Camps

Data on unoccupied United States facilities in Antarctica is listed here although such facilities are not considered usable as refuges. Some are so deeply buried in snow as to make them inaccessible, while others are difficult to locate. Information provided: (1) position and description of location; (2) dates established and deactivated or last visited; and (3) estimate of available accommodation, food, fuel, and supplies of other kinds.

Byrd Aurora Substation

Position: 79°26'S, 188°4'W, approximately 64km from present Byrd Station.

Dates of Operation: March 1963 - October 1963

Description: Prefabricated shelter, 16 man/months food and supplies, and 9,464 liters of diesel fuel

Camp Neptune

Position: 83°31'S, 57°15'W, Neptune Range of Pensacola Mountains
Dates of Operation: November 1963 - January 1966
Description: 4.9m x 7.3m Jamesway building, 32 drums fuel, 4-6 man/months food, 113 kg. explosives

Patuxent Camp

Position: 84°54'S, 63°W, Patuxent Range of Pensacola Mountains
Dates of Operation: November 1962 - December 1965
Description: 4.8m x 4.8m Jamesway building, 4 drums fuel, 458 man/days food plus cooking utensils

Prebble Glacier Camp

Position: 84°15'S, 164°10'E, at mouth of Prebble Glacier, Queen Alexandra Range
Dates of Operation: November 1966 - February 1967
Description: 4.8m x 4.8m Jamesway building, 4 drums fuel, 1 man/month food supplies

Camp Gould

Position: 78°57'S, 85°45'W, East Heritage Range
Dates of Operation: November 1962 - February 1967
Description: 4.8m x 4.8m Jamesway building, 48 drums fuel, 8-10 man/months food

Amundsen Glacier Camp

Position: 86°18'S, 160°55'W, adjacent to Amundsen Glacier on the Faulkner Escarpment
Dates of Operation: November 1963 - January 1964
Description: 4.8m x 4.8m Jamesway building, 4 fuel drums, 400 man/days food, cooking utensils

Byrd Coast Camp

Position: 76°55'S, 144°W, in Edsel Ford Range at Mount Farley
Dates of Operation: October 1966 - January 1967
Description: 4.8m x 4.8m Jamesway building, 2 man/months food and fuel

Camp Ohio

Position: 84°52'S, 114°20'W, Ohio Range, Horlick Mountains
Dates of Operation: November 1961 - January 1967
Description: 4.8m x 4.8m Jamesway building, 7 drums fuel, cooking utensils, 2 man/weeks food supplies

Camp Minnesota

Position: 73°30'S, 94°30'W, in northwestern side of Jones Mountain
Dates of Operation: November 1961 - January 1965
Description: 4.8m x 4.8m Jamesway building, unknown quantity of food and fuel

Little Rockford

Position: 79°30'S, 147°19'W, (relocated in 1959 from 79°35'S, 156°46'W)
Dates of Operation: December 1958 - February 1965
Description: 3 Wannigans, 1 improvised shelter, food and fuel unknown

Plateau Station

Position: 79°15'S, 40°30'E
Dates of Operation: December 1965 - January 1969
Description: Main building 21m x 7.6m van; emergency station separated from main building consists of 9m x 2.4m van attached to a 4.8m x 8m Jamesway; 3-4.8m x 8.5m' and 1-4.8m x 4.8m Jamesway huts with limited supply of DFA and mogas available; however, access may be difficult owing to snow cover; 100 man/months of food plus cooking utensils.

Camp Ohio II

Position: 86°S, 127°W, near crashed R4D aircraft
Dates of Operation: November 1962 - January 1965
Description: 4.8m x 7.3m Jamesway, 4 drums fuel, 2 man/months food plus cooking utensils

Roosevelt Island Hut

Position: 80°11'S, 161°39'W
Dates of Operation: 1969
Description: Provisions for 25. No radio

Hallett Station

Position: 72°19'S, 170°13'E
Dates of Operation: January 1957 - February 1973
Description: 4 buildings

Brockton Station

Position: 80°01'S, 178°02'W
Dates of Operation: October 1965 - February 1972
Description: 4 buildings, 14 drums fuel, and 4,164 liters bulk fuel

Marie Byrd Land Camp

Position: 75°45'S, 135°W
Dates of Operation: October - December 1977
Description: 5 Jamesway huts, bulk DFA, food

Ellsworth Mountains Camp

Position: 79°07'S, 85°39'W
Dates of Operation: November 1979 - January 1980
Description: 1 Jamesway hut

McGregor Glacier Hut

Position: 85°08'S, 174°50'E
Dates of Operation: 1982-83 season
Description: Camp buried under snow. No radio

Dome C Camp

Position: 74°39'S, 124°10'E
Dates of Operation: Camp active summer seasons through 1981/82. Last visited Jan. 1996
Description: 8 Jamesway huts, 3,785 liters POL, and 2,722 kg. food

Beardmore South Camp

Position: 85°2'S, 164°15'E
Dates of Operation: October 1984 - February 1986
Description: Wooden module buried under snow, mogas, some JP8 available.

Siple Station

Position: 75°56'S, 84°15'W
Dates of Operation: January 1979 - February 1988
Description: An unsafe enclosed area under-the-snow, and Jamesway huts on the surface.

Upstream Bravo

Position: 83°29'S, 138°06'W
Dates of Operation: February 1994
Description: All structures buried.

XII. Permits, Species Killed, Captured

Information regarding Antarctic Conservation Act Permits issued or species killed or captured during the 2000-2001 season will be reported in Section XII of the Modifications of the United States Antarctic Activities Planned for 2000-2001.

XIII. Radioactive Materials

Section XIII of the 2000-2001 season plans lists the radioactive materials to be used and provides information regarding their form, nuclide, site, and specific use.

PROJECT	NUCLIDE	FORM	SITE	USE
BP-016-O	^{14}C	^{14}C - Sodium bicarbonate	Palmer Station; R/V LAURENCE M. GOULD	Palmer Station/LM GOULD: LTER on the Antarctic Marine Ecosystem: An Ice Dominated Environment - Phytoplankton Ecology Component
BO-025-O	^{14}C ^{3}H ^{35}S	^{14}C - Bicarbonate Acetate ^{3}H - Thymidine ^{35}S - DMSP	McMurdo Station/Dry Valleys	McMurdo Dry Valleys: A Cold Desert Ecosystem
BO-037-O	^{35}S	^{35}S - L-methionine and L-cysteine mix	Palmer Station	Structure, Function, and Expression of Cold-Adapted Tubulins and Microtubule-Dependent Motors from Antarctic Fishes
BM-042-P	^{14}C ^{3}H	^{14}C - Bicarbonate ^{3}H - Thymidine	McMurdo Station/Dry Valleys	McMurdo Dry Valleys: A Cold Desert Ecosystem
BM-042-V	^{14}C	^{14}C - Sodium Bicarbonate	McMurdo Station	McMurdo Dry Valleys: A Cold Desert Ecosystem

PROJECT	NUCLIDE	FORM	SITE	USE
BM-042-W	^{14}C -	^{14}C - Sodium Bicarbonate	McMurdo Station	McMurdo Dry Valleys: A Cold Desert Ecosystem
BP-046-O	^{3}H ^{14}C ^{14}C ^{14}C ^{3}H	^{3}H - Leucine ^{14}C - Bicarbonate ^{14}C - Glucose ^{14}C - Acetate ^{3}H - Thymidine	R/V LAURENCE M. GOULD	LTER: Microbiology and carbon flux
BO-197-O	^{32}P	^{32}P - UTP	McMurdo Station	Diving Biology of Emperor Penguins
BO-200-O	^{3}H	^{3}H - Leucine ^{3}H - Thymidine	R/V NATHANIEL B. PALMER	Determination of bacteria plankton response to UV radiation in the Weddell Sea and Palmer Station LTER grid.
OO-257-O	^{63}Ni	^{63}Ni - Foil or Plated source	South Pole Station	South Pole Monitoring for Climatic Change: U.S. Department of Commerce; National Oceanic and Atmospheric Administration, Climate Monitoring and Diagnostics Laboratory (Source is inside an electron capture detector of a gas chromatograph)
OO-270-O	^{63}Ni	^{63}Ni	South Pole	An Investigation of Sulfur Chemistry in the Antarctic Troposphere (ISCAT)

PROJECT	NUCLIDE	FORM	SITE	USE
BO-301-O	^{35}S ^{14}C ^{32}P ^{3}H	^{35}S - Methionine ^{14}C - Amino Acids ^{32}P - Nucleic Acids ^{3}H - Amino Acid	McMurdo Station	Metabolic studies of various Antarctic organisms
BO-310-O	^{3}H	^{3}H - Thymidine	McMurdo Station	Determination of Dry Valley Lake Organisms
BO-313-O	^{35}S	^{35}S - Sulfur	R/V LAURENCE M. GOULD	Determination of Southern Ocean Sulfate Bacteria
GLOBEC/ Vernet	^{14}C	^{14}C - Sodium Bicarbonate	R/V NATHANIEL B. PALMER	Global Ocean Ecosystem Dynamics

XIV. Research Rockets

Section XIV reports the planned use of research rockets. The United States Antarctic Program will launch no research rockets during the 2000-2001 season.

XV. Oceanography - Government

Section XV outlines plans for United States Antarctic Program sponsored oceanographic expeditions during the 2000-2001 season.

R/V NATHANIEL B. PALMER

The R/V NATHANIEL B. PALMER first arrived in the Antarctic Peninsula area in April 1992. The vessel is owned by Edison Chouest Offshore and is of United States Registry. The vessel will be on long-term charter to support the United States Antarctic Program. The R/V NATHANIEL B. PALMER is ice-class ABS A2, is 93.9 meters long, has a beam of 18.3 meters, a design draught of 6.9 meters, and displaces 6800 long tons. The vessel has 13,000 shaft horsepower driving two controllable pitch propellers. The vessel has a crew of 26 and accommodation for 39 scientists.

Research Capabilities.

The vessel is equipped with a satellite precision navigation system, side-looking and fish-finding sonar, INMARSAT communications, TeraScan, and HF and VHF transceivers. The vessel is equipped with Dynamic Positioning. A deep sea trawl and coring winch and two hydro-winches are operated through stern and starboard A-frames. One hydro-winch, equipped with electromechanical cable, leads through a baltic-room arrangement, protected from the weather. The vessel is equipped with multi-channel seismic capability, a swath multibeam bathymetric system called SeaBeam, and is equipped with laboratories totaling approximately 520 square meters, all located contiguously on the main deck. The vessel also has a suite of portable lab vans.

Ship's Master: Captain Joe Borkowski.

Scientific Programs in the Antarctic Treaty Area

The R/V NATHANIEL B. PALMER will conduct cruises in the Southern Ocean surrounding Antarctica, for scientific research in the following disciplines: Physical and Chemical Oceanography, Marine Geology and Geophysics, and Marine Biology.

Intended Tracks and Schedule

The vessel is currently scheduled for work in the Weddell and the Ross Sea. Ports of call include: Punta Arenas and Talchuano, Chile; Hobart, Australia; Capetown, South Africa; and, New Orleans and Fouchon, Louisiana. The vessel will make a hazardous waste transport from Palmer Station to the United States in August 2000.

R/V LAURENCE M. GOULD

The R/V LAURENCE M. GOULD first arrived in the Antarctic Peninsula in January, 1998, and is owned by Edison Chouest Offshore and is of United States Registry. The vessel will be on long-term charter to support the United States Antarctic Program. The R/V LAURENCE M. GOULD is ice-class ABS A1, is 14.02 meters, has a design draught of 5.48 and displaces 3400 long tons. She will be a multidisciplinary research platform, designed for year-round operations in Polar regions.

Research Capabilities

The vessel is equipped with a satellite precision navigation system, side-looking and fish-finding sonar, INMARSAT communications and HF and VHF transceivers. A deep sea trawl winch and two hydro-winches are to be operated through a stern A-frame and starboard side-hydro davits. Various over-the-side sampling equipment will be handled through use of an articulated Hiab crane on the ship's fantail. The vessel will also have single channel seismic capability. In addition, it is equipped with laboratories totaling 99 square meters and an additional 27 square meters in portable laboratory vans. Zodiacs are available for ship-to-shore transport and sample collection.

Ship's Master: Captain Warren Sanamo

Scientific Programs in the Antarctic Treaty Area

The R/V LAURENCE M. GOULD will support research during 2000-2001 season that includes biological, chemical, and physical oceanography as well as marine geology and geophysics. The R/V LAURENCE M. GOULD will also provide logistic support to transport scientists, cargo, and personnel to/from Palmer Station.

Intended Tracks and Schedule

The R/V LAURENCE M. GOULD will transport support personnel to and from Palmer Station, provide research support, and enter a routine maintenance period, the month of August in Talcahuano, Chile. The vessel will perform approximately 19 cruises in the Antarctic Peninsula area during 2000-2001 season. The vessel will assist with the hazardous waste transport from Palmer Station in July 2000.

XVI. Visiting Expeditions

Section XVI provides information on expeditions visiting U.S. stations during the 2000-2001 austral summer. Data will be accumulated during the course of the season and reported in next year's report of modifications to these plans.