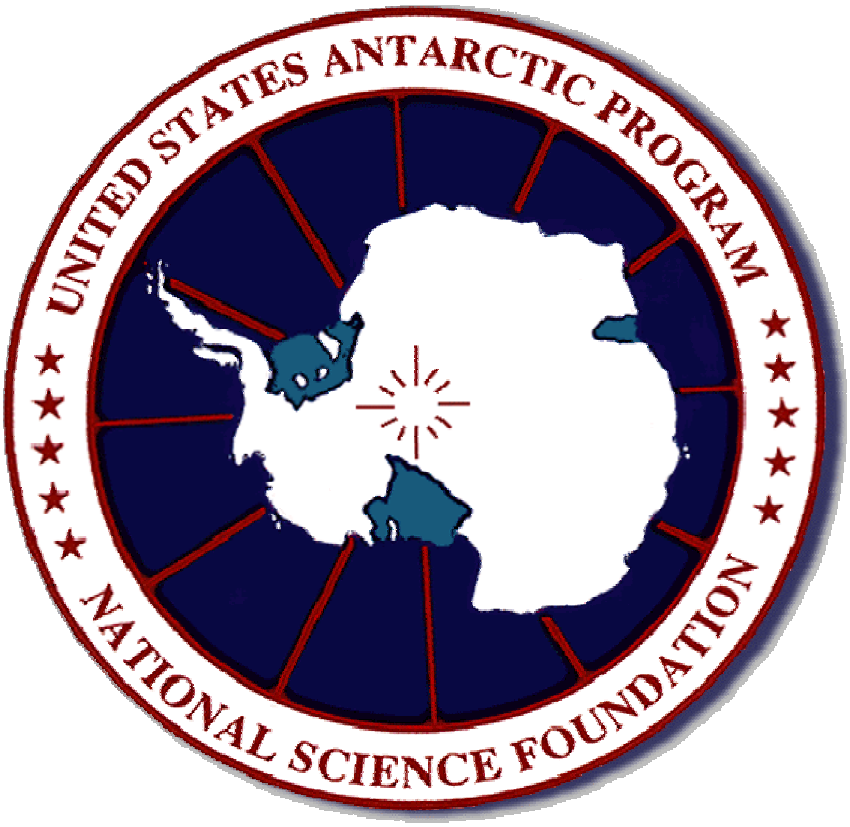
Advance Exchange of Operational Information on Antarctic Activities for the 2004–2005 season



United States Antarctic Program

Office of Polar Programs
National Science Foundation

Advance Exchange of Operational Information on Antarctic Activities for 2004/2005 Season

Country: **UNITED STATES**

Date Submitted: October 2004

SECTION 1	**SHIP OPERATIONS**

U.S. Coast Guard Breaker *POLAR STAR*

Nov. 1, 2004 Depart Seattle, Washington USA
Dec. 8-12, 2004 Port Call Hobart, Tasmania, Australia
Dec. 30, 2004 - Feb. 12, 2005 Break channel to McMurdo. Escort supply vessel to/from McMurdo. Provide science support in Ross Sea.
Feb. 12, 2005 Depart McMurdo. Provide support for Cape Hallet remediation.
April 15, 2005 Arrive Seattle

Commercial Icebreaker

Planning is underway for the possibility of contracting with a commercial icebreaker to assist the *POLAR STAR* in the channel break in operations.

M/V AMERICAN TERN

Jan. 23-25, 2005 Port Call Port Lyttleton, NZ
Feb 1, 2005 Arrive Ice edge, McMurdo Sound
Feb 2-10, 2005 At ice pier, McMurdo Sound
Feb 11, 2005 Depart McMurdo
Feb 18-20, 2005 Port Call Port Lyttleton, NZ

T-5 Tanker, (One of five possible vessels. Specific name of vessel to be determined)

Jan. 16, 2005 Arrive Ice Edge, McMurdo Sound
Jan. 17-19, 2005 At Ice Pier, McMurdo. Re-fuel Station
Jan. 20, 2005 Depart McMurdo

R/V LAURENCE M. GOULD

For detailed and updated schedule, log on to the Raytheon Polar Services Company Web page at:
http://www.polar.org/science/marine/pdf/lmg/lmgsched.pdf

R/V NATHANIEL B. PALMER

For detailed and updated schedule, log on to the Raytheon Polar Services Company Web page at:
http://www.polar.org/science/marine/pdf/nbp/nbpsched.pdf

SECTION 2	**AIR OPERATIONS** Information on planned air operations (see attached sheets)
SECTION 3	**STATIONS** a) New stations or refuges not previously notified: NONE b) Stations closed or refuges abandoned and not previously notified: NONE
SECTION 4	**LOGISTICS ACTIVITIES AFFECTING OTHER NATIONS** a) McMurdo airstrip will be used by Italian and New Zealand C-130's and Italian Twin Otters b) McMurdo Heliport will be used by New Zealand and Italian helicopters c) Extensive air, sea and land logistic cooperative support with New Zealand d) Twin Otters to pass through Rothera (UK) upon arrival and departure from Antarctica e) Italian Twin Otter will likely pass through South Pole and McMurdo. f) The USAP and British Antarctic Survey (BAS) will jointly operate a field camp at the Pine Island Glacier. Both programs will conduct air operations from this site
SECTION 5	**MAJOR FIELD ACTIVITIES** • **Field camps:** Byrd Surface Camp (80° 05' S, 119° 32' W) Dry Valleys (Multiple Locations) Sea Ice (Multiple Locations) Ross Island (Multiple locations) Thwaites Glacier (78° 30'S, 118°30'W) Pine Island Glacier (77° 34'S, 95°55'W) Byrd Station (80° 00'S, 120°00'W) Siple Dome (81° 30'S, 146°00'W) Odell Glacier (76° 63'S, 159º 95'E) • **Traverse** South Pole Proof of Concept, Heavy traverse. (Traverse expected to extend from McMurdo to the head of the Leverette Glacier dependant upon conditions encountered and return to McMurdo. Next year (2005/6) traverse expected to extend from McMurdo to South Pole and return)

SECTION 6 **OTHER ANTARCTIC ACTIVITIES**

(a) Governmental: (grantees, ICDS, RPSC) Persons will work with other contracting parties as follows:

David Ainley (+1)	Italian Program at Terra Nova Bay
Helen Fricker (+1)	Austrailian Antarctic Division
Stephen Warren (+2)	French and Italian program at Dome C and TNB
Steven Emslie (+3)	Italian Program at Terra Nova Bay
Charlie Stearns (+4)	French IPEV, British BAS Multiple AWS sites
Judd Case (+1-3)	Argentine Antarctic Program at Vega Island
George Parks (+1)	South African Antarctic Program at SANAE
Joseph Warren (+2)	NOAA on R/V Yuzmorgeologiya
Berry Lyons (+3)	New Zealand Antarctic Program at Cape Hallett
James Blake (+3)	German Antarctic Program on R/V Polarstern
William Wilcock (+6)	Spanish Antarctic Program on R/V Hesperidies & Las Palmas

(b) Non-governmental:

- *MV Amsterdam*
  Holland America Line
  2 cruises with approx. 1,000 passengers each
  December 2004 to January 2005
  Total number: max. 2,000 passengers
  (Cruising only, no landings)
  http://www.hollandamerica.com

- *MV Andrea*
  Elegant Cruises
  7 cruises with approx. 80 passengers each
  December 2004 to February 2005
  Total number: max. 560 passengers
  http://www.elegantcruises.com

- *MV Clipper Adventurer*
  Clipper Cruise Line
  7 cruises with approx.110 passengers each
  December 2004 to February 2005
  Total number: max. 770 passengers
  http://www.clippercruise.com

- *MV Crystal Symphony*
  Crystal Cruises
  1 cruise with approx. 940 passengers
  January 2005 to February 2005
  Total number: max. 940 passengers
  http://www.crystalcruises.com

- *MV Endeavour*
  Lindblad Expeditions
  7 cruises with approx. 100 passengers each
  November 2004 to March 2005
  Total number: max. 700 passengers
  http://www.expeditions.com

- *MV Explore II*
  Abercrombie & Kent
  9 cruises with approx. 175 passengers each
  November 2004 to March 2005
  Total number: max. 1,575 passengers
  http://www.abercrombiekent.com

- *MS Insignia*
  Oceania Cruises, Inc.
  1 cruise with approx. 777 passengers
  December 2004
  Total number: max. 777 passengers
  http://www.oceaniacruises.com

	o *MV Kapitan Khlebnikov* Quark Expeditions — 3 cruises with approx. 90 passengers each December 2004 to March 2005 Total number: max. 360 passengers o *MV Professor Molchanov* Quark Expeditions — 11 cruises with approx. 40 passengers each November 2004 to March 2005 Total number: max. 440 passengers o *MV Professor Multanovskiy* Quark Expeditions — 10 cruises with approx. 45 passengers each November 2004 to March 2005 Total number: max. 450 passengers o *MV Lyubov Orlova* Quark Expeditions — 7 cruises with approx. 80 passengers each November 2004 to February 2005 Total number: max. 560 passengers http://www.Quarkexpeditions.com o *MV Marco Polo* Orient Lines — 6 cruises with approx. 550 passengers each December 2004 to February 2005 Total number: max. 3,300 passengers http://www.orientlines.com o *MV Orion* Travel Dynamics — 7 cruises with approx. 100 passengers each December 2004 to February 2005 Total number: max. 700 passengers http://www.TravelDynamicsInternational.com o *MV Royal Princess* Princess Cruises — 1 cruise with approx. 1,200 passengers December 2004 to January 2005 Total number: max. 1,200 http://www.princess.com o *MV Discovery* Discovery World Cruises, Ltd. — 3 cruises with approx. 550 passengers January 2005 Total number: max. 1,650
SECTION 7	**EMERGENCY CONTACTS** **National Operator:** National Science Foundation United States Antarctic Program (USAP) 4201 Wilson Boulevard Arlington, Virginia 22230 USA Telephone +01-703-292-8030 Facsimile +01-703-292-9081
	Emergency Contacts *Karl Erb* Office Telephone +01-703-292-8030 E-mail Address kerb@nsf.gov *Erick Chiang* Office Telephone +01-703-292-8032 E-mail Address echiang@nsf.gov

	Operations duty officer (24 hr) **Telephone** **+01-703-819-0283**
	STATIONS Name — Commercial Telephone — Facsimile — E-mail **McMurdo** (summer) +01-509-689-6210 +01-509-689-6292 nsfrep@usap.gov (winter) +01-509-689-6212 +01-509-689-6292 nsfstmgr@usap.gov (24hr/365) +01-509-689-6200 **Palmer** +01-720-568-2775/6 +01-720-568-7868 pal.manager@usap.gov **Amundson-Scott** **South Pole** +01-720-568-2803 pol.nsfrep@usap.gov +881 676 312 608 (Iridium)
	SHIPS Name — Inmarsat Telephone — Facsimile — E-mail *Nathaniel B. Palmer* xxx-336-661-012 xxx-336-661-014 mpc@nbp.usap.gov *Laurence M. Gould* xxx-336-862-421 xxx-336-862-424 mpc@lmg.usap.gov *Polar Star* xxx-763-709851/3 postmasterpolarstar@polarstar.uscg.mil *Polar Star(Cont'd)* 808-659-3801/3802 (Iridium)

NOTES:

1. INMARSAT Area Codes xxx: Atlantic Ocean - 871 (East)/874 (West)
Pacific Ocean – 872;Indian Ocean – 873
Single Number Access Code (SNAC) - 800

Information on Air Operations (Section 2)

INFORMATION ON PLANNED AIR OPERATIONS IN ANTARCTICA FOR 2004/5 SEASON

CONTACT INFORMATION - AIR OPERATIONS

Part A

Country	Operations/Logistics Contact Officers	Position	Office Telephone/Fax E-mail
Address for correspondence National Science Foundation Office of Polar Programs Room 755 4201 Wilson Boulevard Arlington, Virginia 22230 USA	**Karl Erb** **Erick Chiang**	Director, Office of Polar Programs Head, Polar Research Support Section	**Tel:** +01-703-292-8030 **Fax:** +01-703-292-9081 **Tel:** +01-703-292-8032 **Fax:** +01-703-292-9080

Part B

• Please tick [4] appropriate box

☐ No, it is not intended to conduct air operations in Antarctica during the forthcoming summer season.

X Yes, it is intended to conduct air operations in Antarctica during the forthcoming summer season for which the following information sheets are attached:

		(*delete as appropriate)
Sheet 1	Intercontinental Operations	Yes
Sheet 2	Continental Operations	Yes
Sheet 3	Ship Based Operations	Yes
Sheet 4	Other Airborne Operations (Balloons)	Yes
Sheet 5	Aircraft Description	Yes

Part C

	Station	Lat/Long	INMARSAT Nos
Primary Air Information Stations 2004/05 SEASON	McMurdo Station	77-52S 166-11E	None. Station is accessable via regular telephone at 509-689-6200.
	Thwaites Glacier	78-30S 118-30W	Accessed via McMurdo Station telephone patch
	Pine Island Glacier	77-34S 095-55W	Accessed via McMurdo Station telephone patch
	Byrd Surface Camp	80-00S 120-00W	Accessed via McMurdo Station telephone patch
	South Pole Station	90-00 S	Accessed via McMurdo Station telephone patch
Secondary Air Information Stations	Siple Dome	81-30S 146W	Accessed via McMurdo Station telephone patch
	Odell Glacier	76-66S 159-95E	Accessed via McMurdo Station telephone patch

2004/05 SEASON

PART 1 INTER-CONTINENTAL FLIGHTS

Route	No. of Flights	Flight Level or Altitude (ft/m)	Approximate Date or Period of Flight(s)	No. and Type of Aircraft per Flight
Christchurch- McMurdo- Christchurch	19 10	Up to 41,000ft Up to 41,000ft	5 Oct - 12 Nov 04 4 Jan –4 Feb '05	One C-141 One C-141
Christchurch- McMurdo- Christchurch	20 10	Up to 45,000ft Up to 45,000ft	5 Oct - 19 Nov '04 7-26 Feb '05	One C-17 One C-17
Christchurch- McMurdo- Christchurch	60*	Up to 29,000ft	21 Oct – 24 Feb 05**	Six to Seven LC-130s
Christchurch- McMurdo- Christchurch	15	Up to 29,000ft	15 Nov – 16 Dec 04	C-130H (wheeled) RNZAF

*Approximately 3 flights per week
**Exclusive of 23-28 Dec 04

Note: Intercontinental flights are shared with the Italian and New Zealand Antarctic programs. See their submissions for flight data pertaining to their aircraft.

PART 2 INTRA-CONTINENTAL FLIGHTS 2004/2005 Season

Route	No. of Flights	Flight Level or Altitude (ft/m)	Approximate Date or Period of Flight(s)	No. and Type of Aircraft per Flight
McMurdo Station TO **Byrd Surface Camp** LOCATION: 80S/119-32W Elevation 5,230ft Fm. McM: 799mi	10	20,000-25,000ft	27 Oct – 29 Jan	any of 7 LC-130 aircraft; any of 3 Twin Otter aircraft
McMurdo Station TO **Beardmore Glacier** LOCATION: 84S/164-30E Elevation 5,900ft Fm. McM: 369mi	2	20,000-25,000ft	08 Dec – 11 Jan	any of 7 LC-130 aircraft; any of 3 Twin Otter aircraft
McMurdo station TO **AGO sites** (6 sites in/around polar plateau) Elevation: 6,100 – 11,700ft Fm. McM: 500-1,100mi	3	Up to 15,000ft	12 Dec – 11 Jan	any of 7 LC-130 aircraft
McMurdo station TO **Siple Dome** LOCATION: 81-40S/149-03W Elevation: 2,415FT Fm. McM: 540mi	9	20,000 – 25,000ft	25 Oct – 29 Jan	any of 7 LC-130 aircraft; any of 3 Twin Otter aircraft
McMurdo Station TO **Horlick Mountains** LOCATION: 85-22S/121-00W Elevation: Fm. McM: 695mi	1	20,000 – 25,000ft	03 Jan – 15 Jan	any of 7 LC-130 aircraft; any of 3 Twin Otter aircraft
McMurdo station TO **South Pole**	326	20,000 – 25,000ft	23 Oct – 19 Feb	any of 7 LC-130 aircraft;

Route	No. of Flights	Flight Level or Altitude (ft/m)	Approximate Date or Period of Flight(s)	No. and Type of Aircraft per Flight
LOCATION: 90S Elevation: 9,342Ft Fm. McM: 725mi				any of 3 Twin Otter aircraft
McMurdo station TO **Pine Island Glacier** LOCATION: 77-34S/95-55W Elevation: 4,921FT Fm. McM: 1088mi	10	20,000 – 25,000ft	01- Nov – 29 Jan	any of 7 LC-130 aircraft; any of 3 Twin Otter aircraft
McMurdo Station TO **Thwaites Glacier** LOCATION: 78-30S/118-30W Elevation: 6,070Ft Fm. McM: 870mi	23	20,000 – 25,000ft	01- Nov – 05 Feb	any of 7 LC-130 aircraft; any of 3 Twin Otter aircraft
McMurdo station TO **Long Duration Balloon payload drop point** *LOCATION: Unknown at this time* Elevation: Unknown this time Fm. McM: 300 – 700mi (est.)	2	20,000 – 25,000ft	03 Jan – 15 Jan	any of 7 LC-130 aircraft; any of 3 Twin Otter aircraft
South Pole Station TO **Deep Field Science Sites**, Rtn to Pole LOCATION: various in/around So.Pole Elevation: Various	9	20,000 – 25,000ft	15 Nov – 22 Jan	any of 7 LC-130 aircraft; any of 3 Twin Otter aircraft
In/Around McMurdo station (**Local helicopter operations**) Fm. McM: 1 – 150mi radius	350-400	500 – 10,000ft	6 Oct – 12 Feb	two AS-350B Helicopters two Bell 212 Helicopters

HELICOPTER OPERATIONS

Sites in/around McMurdo Station

2004/05 SEASON

Site	Latitude	Longitude
Allan Hills	S 76.68	E 159.91
Ant Hill	S 78.78	E 161.45
Arena Valley	S 77.86	E 160.94
Battleship Promontory	S 76.92	E 161.03
Beacon Valley	S 77.80	E 160.71
Beaufort Is (ASPA 105)	S 76.93	E 166.94
Black Is	S 78.13	E 166.15
Blood Falls	S 77.72	E 162.27
Blue Glacier	S 78.08	E 163.28
Bratina Is	S 78.01	E 165.55
Brimstone Pk	S 75.80	E 158.47
Brosnahan Is	S 79.47	E 161.02
Bull Pass	S 77.52	E 161.85
Butcher Ridge	S 79.18	E 156.38
Clark Gl	S 77.41	E 162.21
Commonwealth Gl	S 77.58	E 163.01
Cp Bird (ASPA 116)	S 77.22	E 166.43
Cp Chocolate	S 77.90	E 164.50
Cp Crozier (ASPA 124)	S 77.46	E 169.19

Site	Latitude	Longitude
Cp Evans (ASPA 155)	S 77.64	E 166.42
Cp Kerr	S 80.05	E 160.43
Cp Lankester	S 79.25	E 160.35
Cp Reynolds	S 75.47	E 162.45
Cp Roberts	S 77.03	E 163.17
Cp Royds (ASPA 121)	S 77.53	E 166.24
Cp Royds (ASPA 157)	S 77.55	E 166.17
Cp Selborne	S 80.43	E 160.62
DAIS	S 77.55	E 161.31
Darwin Gl Camp	S 79.79	E 157.88
Delbridge Islands	S 77.68	E 166.50
Don Juan Pond	S 77.56	E 161.18
Drygalski Ice Tongue	S 75.40	E 163.50
Explorers Cove	S 77.58	E 163.52
F6	S 77.61	E 163.25
Fishtail Pt	S 78.93	E 162.56
Franklin Is	S 76.08	E 168.32
Garwood Valley	S 78.03	E 164.29
Granite Harbor	S 77.01	E 162.86
Hidden Valley	S 78.17	E 163.78
Hjorth Hill	S 77.52	E 163.62
Howard Gl	S 77.67	E 163.08
Hughes Gl	S 77.74	E 162.46
Hutton Cliffs	S 77.73	E 166.86
Iceberg B-15J	S 77.21	E 168.92
Iceberg B-15K	S 77.32	E 167.20
Iceberg C-16	S 77.00	E 168.00
Icebreaker	S 77.50	E 165.00
IceRunway	S 77.85	E 166.41
Kennar Valley	S 77.77	E 160.36
Kukri Hills	S 77.83	E 162.25
Lk Bonney	S 77.72	E 162.32
Lk Brownworth	S 77.43	E 162.71
Lk Fryxell	S 77.61	E 163.12
Lk Hoare	S 77.62	E 162.91
Lk Joyce	S 77.72	E 161.61
Lk Vanda	S 77.53	E 161.68
Lk Vida	S 77.38	E 161.79
Marble Pt	S 77.41	E 163.68
Mason Spur	S 78.55	E 164.42
McMurdo Sound	S 77.50	E 165.00
Minna Bluff	S 78.55	E 166.69
Mt Crean	S 77.87	E 159.53
Mt DeWitt	S 77.22	E 159.85
Mt Doorly	S 77.38	E 162.89
Mt Erebus	S 77.53	E 167.14
Mt Feather	S 77.93	E 160.44
Mt Fleming	S 77.53	E 160.27
Mt Newall	S 77.50	E 162.62
New Harbor	S 77.58	E 163.52
North Conway Range	S 79.21	E 159.97
North Fork Basin	S 77.53	E 161.25
Odell Gl	S 76.66	E 159.96

Site	Latitude	Longitude
Odell Gl	S 76.63	E 160.05
Olympus Range	S 77.48	E 161.24
Pony Lk	S 77.55	E 166.15
Ross Ice Shelf	S 78.00	E 170.00
Round Mt	S 77.67	E 160.92
Saddle between Mt Bird and Mt Erebus	S 77.37	E 166.85
Scott Base	S 77.85	E 166.77
Suess Gl	S 77.65	E 162.70
Taylor Gl	S 77.74	E 162.13
Taylor Valley	S 77.67	E 163.08
Terra Nova Bay	S 74.69	E 164.11
The Pyramid	S 78.33	E 163.45
Turtle Rock	S 77.75	E 166.77
Victoria Upper Glacier	S 77.33	E 162.53
Victoria Valley	S 77.33	E 162.53
Warren Range	S 78.42	E 158.30
Westhaven Nun	S 79.85	E 154.23
White Is	S 78.19	E 167.50
Windless Bight Infrasound	S 77.74	E 167.59
Wohlschlag Bay	S 77.37	E 166.42
Wright Valley	S 77.55	E 161.31

TWIN OTTER OPERATIONS

Sites in/around McMurdo Station

2004/05 SEASON

Site	Latitude	Longitude
AFLT	83.96S	167.69W
AGO1	83.86S	129.59E
AGO2	85.67S	45.62W
AGO3	82.76S	28.59E
AGO4	82.00S	96.79E
AGO5	77.25S	123.50E
ANITA/TIGER	71.75S	58.75E
Beardmore Gl	84.00S	164.50E
Beaufort Is	76.93S	166.94E
Benson Gl	76.81S	161.32E
BFLT	82.53S	166.00W
BFLT010	83.59S	164.40W
BFLT090	84.07S	158.98W
BFLT140	84.19S	152.05W
BFLT190	83.91S	147.92W
BFLT320	83.45S	138.09W
Brianna	83.89S	134.15W
Buckley Is	84.95S	164.00E
Byrd Camp	80.03S	119.61W
Caloplaca Hill	86.05S	131.19W

Site	Latitude	Longitude
Casey Station	66.28S	110.53E
CFTL010	82.78S	154.15W
CFTL060	82.62S	147.17W
CIR1	83.03S	172.22W
Cp Hallett	72.32S	170.22E
Cp Lankester	79.25S	160.36E
Cp Reynolds	75.47S	162.45E
Cp Selborne	80.43S	160.62E
Cp Washington	74.65S	165.42E
Darwin Gl Camp	79.79S	157.88E
Davis Nuns	85.62S	166.60E
Davis Station	68.58S	77.98E
Deverall Is	81.47S	161.90E
DFLT	80.50S	151.02W
DFLT010	80.59S	148.50W
DFLT090	80.96S	144.49W
DFLT130	81.00S	141.96W
Dome C	75.10S	123.40E
Dominion Range	85.34S	164.76E
Doug	82.32S	113.24W
EFLT	79.92S	150.97W
EFLT010	80.13S	147.19W
Elaine	83.13S	174.17E
Far E Pecora	85.70S	63.50W
Gill	79.99S	178.61W
Harry	83.00S	121.39W
Henry	89.01S	1.03W
Hercules Dome	86.50S	107.92W
Horlick Mtns	85.38S	121.00W
Icestream C	82.37S	136.40W
LaPaz Icefields	86.33S	70.00W
Larkman Nun	85.77S	179.38E
LDB Site #1	79.50S	172.50E
Lettau	82.52S	174.45W
Leverett Gl	85.49S	149.72W
Lonewolf Nun	81.33S	152.83E
MacAlpine Hills	84.22S	160.50E
Main Pecora	85.67S	68.70W
Marilyn	79.95S	162.13E
Mauger Nun	85.73S	176.73E
Mawson	67.60S	62.88E
McMurdo Station	77.85S	166.67E
Megadunes	80.78S	124.50E
Midpoint C	75.54S	145.82E
Moody Camp	83.13S	159.64E
Mt Block	85.77S	176.22E
Mt Cecily	85.87S	174.25E
Mt Emily	85.83S	174.33E
Mt Moulton	76.05S	134.69W
Mt Pratt	85.40S	176.88E
Mt Waesche	77.62S	127.92W
N Pecora	85.32S	70.62W
Nico	89.00S	90.04E

Site	Latitude	Longitude
Nimrod Gl	82.32S	163.72E
Noel	79.33S	111.08W
Odell Gl	76.66S	159.95E
Otway Massif	85.45S	172.00E
Patriot Hills	80.27S	81.27W
Phillips Mtns	76.32S	144.30W
Pine Is	77.50S	98.00W
RBC1	83.69S	150.58W
RCD1	81.82S	135.75W
Reedy Gl	86.00S	131.86W
Roberts Massif	85.53S	177.08W
Roosevelt Is	79.35S	160.32W
Rothera	67.57S	68.13W
Round Mt	77.67S	160.92E
Schwerdtfeger	79.90S	169.97E
Scott Gl (SOAR)	85.83S	151.14W
Scott Icefalls	85.53S	170.25E
SDM1	81.62S	148.87W
Seismic Center	80.25S	140.63E
Shackelton Range	80.80S	25.40W
Shackleton Icefalls	85.13S	164.00E
Siple Dome	81.66S	149.02W
Site 3 (ITASE)	78.12S	95.65W
Site 5 (ITASE)	76.98S	88.82W
Site H (S-176)	81.95S	138.23W
Site J (S-176)	81.93S	131.67W
Site K (S-178)	81.90S	128.45W
Site L (S-178)	81.77S	125.43W
SOAR Site 1	79.32S	132.93W
SOAR Site 1 (OLD)	82.33S	163.72E
South Pole	90.00S	139.27E
Starr Nun	75.90S	162.56E
Storm Pk	84.57S	163.85E
SW Pecora Icefields	85.85S	71.40W
Swithinbank	81.20S	126.18W
TAMSEIS Camp	81.65S	122.59E
Taylor/McMurdo Dome	77.79S	158.79E
Terra Nova Bay	74.69S	164.12E
The Landing	78.33S	161.47E
The Pyramid	78.33S	163.45E
Theresa	84.60S	115.81W
Theron Mtns	79.08S	28.25W
Thwaites Gl	78.30S	118.00W
Up-C Camp	82.43S	135.80W
Up-D Camp	81.45S	140.65W
Vostok	78.47S	106.82E
Vostok East	78.48S	106.80E
Westhaven Nun	79.85S	154.23E
Zaneveld Gl	85.43S	176.42W

PART 3 SHIP-BASED OPERATIONS (USCG *POLAR STAR*)

2004/05 SEASON

Route	No. of Flights	Flight Level or Altitude (ft/m)	Approximate Date or Period of Flight(s)	No. and Type of Aircraft per Flight
Ship – Automated Weather Stations – Ship	3-5	0 – 7,000ft	20 – 27 Dec 04	two HH-65A Dauphin helicopters with flotation devices
In and around McMurdo Station	~20	0-7,000ft	27 Dec 04 – 20 Feb 05	two HH-65A Dauphin helicopters with flotation devices

PART 4 OTHER AIRBORNE OPERATIONS (e.g. balloons, rockets, etc.)

2004/05 SEASON

Route	No. of Flights	Flight Level or Altitude (ft/m)	Approximate Date or Period of Flight(s)	No. and Type of Aircraft per Flight
Possible balloon circumnavigation of the South Pole	7 flights total [5 pathfinders + 2 Data flights]. Two large Data balloon flights (28 million cubic ft.); 5 small pathfinder balloons (181,000 cubic ft.)	130,000 ft.	December 5 through January 25. Large balloons launched ~ mid-Dec; aloft 10-20 days.	1 balloon each flight, polyethylene, zero-pressure balloons

PART 5 AIRCRAFT DESCRIPTION 2004/05 SEASON

Full Name of Aircraft	Short Name	F/R [a]	W/S [b]	No. of Aircraft	Flight Level or Altitude (ft/m) [c]	Pax Capacity	Radio Equipment	Navigation Equipment	Max Range [d]	Type of Fuel Used	SAR Equipment
LC-130 Hercules	Herc	F	S	7	29,000ft	60	S/U/V/H	INS/GPS	2,500mi	JP-8	Yes
AS350B2	Squirrel	R	skids	2	14,000ft	5	S/U/V/H	GPS	325	JP-8	Yes
Bell 212	Huey	R	skids	2	12,000ft	9	S/U/V/H	GPS	200/350*	JP-8	Yes
DHC-6	Twin Otter	F	S	3	18,000ft	18	S/V/H	INS/GPS	700	JP-8	Yes
C-17	Globemaster III	F	W	1	45,000ft	102	S/U/V/H	INS/GPS	5000	JP-8	Yes
C-141	Starlifter	F	W	1	40,000ft	149/208	S/U/V/H	INS/GPS	5500	JP-8	Yes
HH-65 A	Dauphin	R	Skids	2/ship	7,500ft	3-4	S/U/V/H	GPS	248-471	JP-8	Yes

[a] Fixed (F) or rotary (R)
[b] Wheeled (W) or ski (S) Equipped
[c] Refer to Notes under Section 2
[d] For helicopters, also indicate maximum range over water (in brackets)
S=Satellite; U=UHF; V=VHF; H=HF;
* Aux Fuel Tanks