

Carney

Bulletin No. 32
June 1976
FIELD DATA REPORT

AIDJEX BULLETIN

ARCTIC
ICE
DYNAMICS
JOINT
EXPERIMENT



AIDJEX BULLETIN No. 32

First Data Report

June 1976

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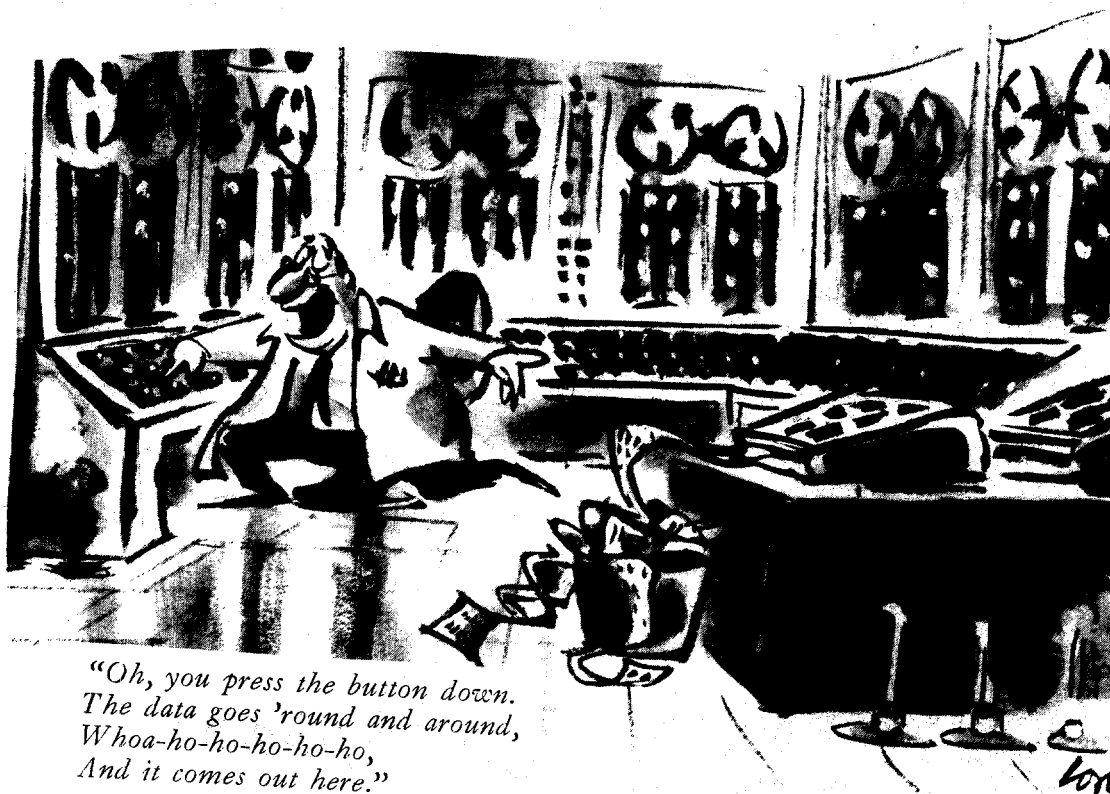
Front cover: Onan pensive after a campfire reading of "Ozymandias." Photo by Bill Myers.

Back cover: AIDJEX scientists employ a method devised by Nansen for measuring air stress. The weight of the men, frictional coefficient of the sledge runners, and the dog's trot can later be calibrated in the comfort of the laboratory. Photo by Bill Myers.

AIDJEX BULLETIN No. 32

June 1976

FIRST DATA REPORT



*"Oh, you press the button down.
The data goes 'round and around,
Whoa-ho-ho-ho-ho-ho,
And it comes out here."*

* * * * *

*Financial support for AIDJEX is provided by
the National Science Foundation,
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* * * * *

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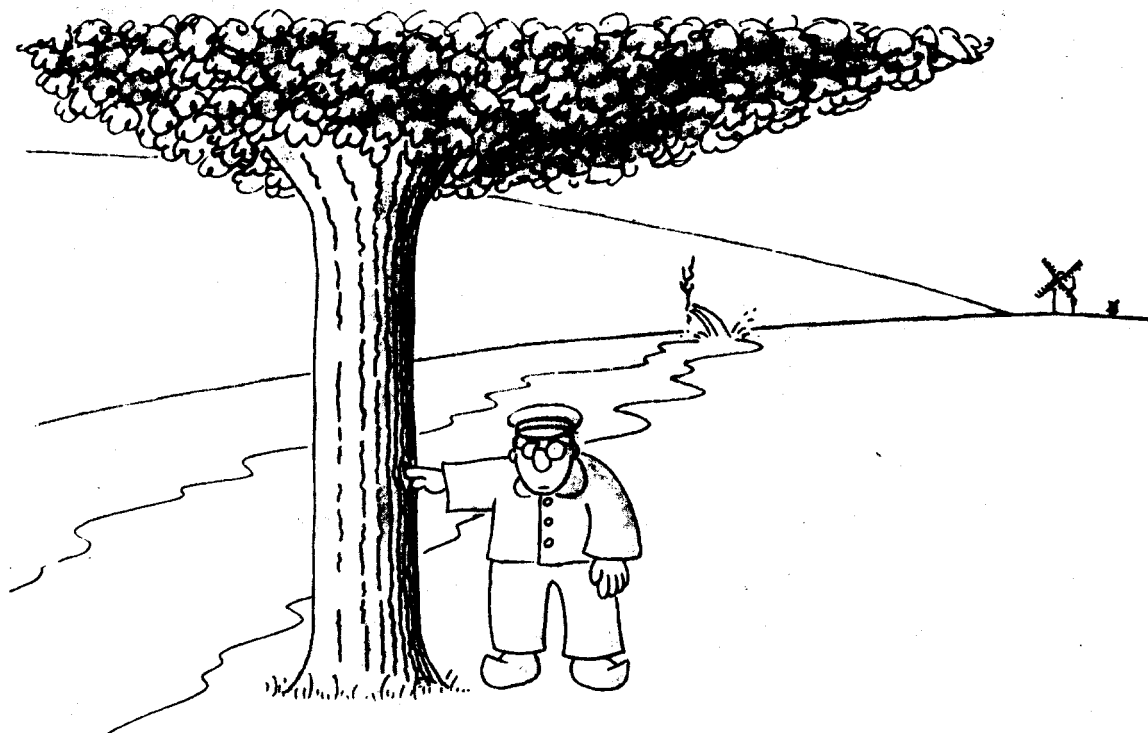
Division of Marine Resources
UNIVERSITY OF WASHINGTON

The AIDJEX Bulletin aims to provide both a forum for discussing AIDJEX problems and a source of information pertinent to all AIDJEX participants. Issues--numbered, dated, and sometimes subtitled--contain technical material closely related to AIDJEX, informal reports on theoretical and field work, translations of relevant scientific reports, and discussions of interim AIDJEX results.

Bulletin No. 32, the first in a series of data reports, contains data summaries for the period 11 April-29 June 1975, an 80-day sequence. The next data report will cover the next 80 days and perhaps backtrack to catch some projects absent from this one. We dedicate the data reports to the copy machine that reduces all those numbers to dinky little things that can go thousands to a page, and to the makers of transparent tape, miles of which went into this Bulletin. However, even with their help, putting out a data report is--to borrow Heinrich Böll's simile--a lot like being condemned to eat a sack of flour with a spoon.

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THE AIDJEX DATA REPORT SERIES

The main field program of AIDJEX was completed on 30 April 1976, after 13 months of continuous operation. During that time, data were collected at four manned camps and from as many as eight remote sensing buoys deployed in a ring around the manned array. The buoys were associated with a navigational satellite system from which geographic position can be determined; an HF link to the camps transmitted both navigation and meteorological data. Almost all the data were recorded on magnetic tape and sent to the AIDJEX office at the University of Washington for further processing.

As these data are validated and separated by station and time, they will be summarized and issued in a series of data reports. This is the first, covering 1975 calendar days 101-180 (11 April-29 June). The material is divided by project, each preceded by a short discussion of the experiment and the processing and accuracy of its data. Most tables consist of daily averages or instantaneous values at 1200 GMT in 20-day segments at a single station. Camps are identified by their radio call names and numerical codes--Big Bear (0), Caribou (1), Blue Fox (2), Snow Bird (3)--and buoys by numerical code alone (5 through 13). Data sets include

- Station position and velocity.
- Station azimuth (ice rotation at manned camps).
- Derived strain rates and vorticity of the manned triangle.

- Air pressure at the surface.
- Geostrophic wind velocity.
- Atmospheric inversion height.
- Oceanic mixed layer temperature, salinity, and depth.
- Ocean current velocity at 2 m and 30 m.
- Ice thickness.
- Snow depth.

All data reports will be printed on hole-punched paper so that the Bulletin can be stripped of its binding, unstapled, and inserted in a three-hole ring binder. Users can then interleave time series from the next data reports to keep projects together.

For inconvenience, the day counter will not be reset on 1 January 1976. Instead, we will denote 1 January 1976 as the 366th day of 1975, making it easier to compute time differences but, admittedly, harder to determine the calendar dates.

Detailed data sets can be requested from Murray J. Stateman, AIDJEX Data Manager, 4059 Roosevelt Way N.E., Seattle, Washington 98105. The cost of these sets depends on the processing required, the medium on which they are to be recorded, and mail charges.

ICE POSITION AND VELOCITY ESTIMATES

Frequent measurements of geographical position were made at the AIDJEX manned camps and data buoys, using the Navy Navigational Satellite System (NavSat). From these measurements, estimates have been made of the positions, velocities, and accelerations of each site at three-hour intervals following techniques of Kalman "smoothing." These results are catalogued in the AIDJEX Data Bank. Shown here are the estimates corresponding to noon GMT each day. Zero values indicate absence of data.

Measurement errors are about ± 50 m at the manned camps and ± 150 m at the buoys. The measurements are frequent enough that some

reduction of the errors is realized in the smoothed estimates. Errors in these estimates are typically ± 20 m for manned camp positions, ± 100 m for buoy positions, ± 0.2 cm sec⁻¹ for manned camp velocity components, and ± 1.0 cm sec⁻¹ for buoy velocity components. Since the data were processed in nonoverlapping 20-day blocks, the estimates at the end points are less reliable. Care should be used in interpreting the velocity estimates; they represent "instantaneous" velocities at noon. Better estimates of the low frequency velocities can be made by taking differences of the reported positions.

STATION 0 BIG BEAR
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

101	0.0000	0.0000	0.00	0.0
102	76.3543	-145.2517	1.00	210.9
103	76.3536	-145.2715	1.89	269.3
104	76.3915	-145.4130	16.50	44.5
105	76.5038	-145.6077	2.84	5.3
106	76.4934	-145.2704	9.89	65.3
107	76.5042	-144.9611	5.71	119.8
108	76.4806	-144.7822	3.51	97.5
109	76.4806	-144.5850	5.32	91.7
110	76.4792	-144.4344	.93	139.8
111	76.4918	-144.4602	1.61	63.0
112	76.4780	-144.5779	4.45	232.7
113	76.4451	-144.5370	2.72	141.9
114	76.4381	-144.5030	1.25	45.7
115	76.4294	-144.4663	.56	79.9
116	76.4435	-144.4440	1.43	44.0
117	76.4329	-144.4148	3.22	123.3
118	76.4187	-144.3481	.49	110.1
119	76.4197	-144.2970	.94	79.9
120	76.4724	-143.9507	21.04	68.1

STATION 1 CARIBOU
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

101	0.0000	0.0000	0.00	0.0
102	0.0000	0.0000	0.00	0.0
103	0.0000	0.0000	0.00	0.0
104	0.0000	0.0000	0.00	0.0
105	0.0000	0.0000	0.00	0.0
106	0.0000	0.0000	0.00	0.0
107	0.0000	0.0000	0.00	0.0
108	0.0000	0.0000	0.00	0.0
109	0.0000	0.0000	0.00	0.0
110	0.0000	0.0000	0.00	0.0
111	0.0000	0.0000	0.00	0.0
112	0.0000	0.0000	0.00	0.0
113	0.0000	0.0000	0.00	0.0
114	0.0000	0.0000	0.00	0.0
115	75.7256	-142.6441	.60	22.8
116	75.7401	-142.6712	2.19	88.0
117	75.7157	-142.7032	3.59	136.9
118	75.7051	-142.6363	.92	102.8
119	75.7060	-142.5795	1.17	82.5
120	75.7293	-142.3035	16.75	82.4

STATION 2 BLUE FOX
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

101	0.0000	0.0000	0.00	0.0
102	0.0000	0.0000	0.00	0.0
103	0.0000	0.0000	0.00	0.0
104	0.0000	0.0000	0.00	0.0
105	0.0000	0.0000	0.00	0.0
106	0.0000	0.0000	0.00	0.0
107	0.0000	0.0000	0.00	0.0
108	0.0000	0.0000	0.00	0.0
109	0.0000	0.0000	0.00	0.0
110	77.2760	-143.6596	1.33	128.4
111	77.2843	-143.6671	.73	55.1
112	77.2670	-143.7448	3.64	190.3
113	77.2164	-143.5684	2.89	142.7
114	77.2112	-143.5616	2.82	59.7
115	77.2128	-143.5969	.25	136.8
116	77.2250	-143.5419	.72	28.7
117	77.2214	-143.4418	3.19	116.7
118	77.2008	-143.3860	.49	101.0
119	77.2022	-143.3394	.68	72.5
120	77.2613	-142.9818	19.83	64.2

STATION 3 SNOW BIRD
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

101	0.0000	0.0000	0.00	0.0
102	0.0000	0.0000	0.00	0.0
103	0.0000	0.0000	0.00	0.0
104	0.0000	0.0000	0.00	0.0
105	76.2918	-147.9442	2.46	124.9
106	76.2890	-147.5886	10.94	61.4
107	76.2934	-147.2666	5.72	114.9
108	76.2759	-147.0973	3.67	86.0
109	76.2857	-146.8883	5.40	78.3
110	76.2903	-146.7744	4.27	71.7
111	76.3042	-146.7907	2.08	59.8
112	76.2928	-146.9326	3.86	243.1
113	76.2569	-146.9329	2.56	132.4
114	76.2530	-146.8911	.27	48.3
115	76.2447	-146.8200	.80	61.2
116	76.2616	-146.8148	1.53	43.4
117	76.2503	-146.7853	3.37	115.8
118	76.2389	-146.7193	.66	109.6
119	76.2383	-146.6671	.55	93.7
120	76.2944	-146.2973	20.15	73.2

STATION 5 BUOY 1
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

101	0.0000	0.0000	0.00	0.0
102	0.0000	0.0000	0.00	0.0
103	0.0000	0.0000	0.00	0.0
104	0.0000	0.0000	0.00	0.0
105	0.0000	0.0000	0.00	0.0
106	0.0000	0.0000	0.00	0.0
107	0.0000	0.0000	0.00	0.0
108	0.0000	0.0000	0.00	0.0
109	0.0000	0.0000	0.00	0.0
110	0.0000	0.0000	0.00	0.0
111	0.0000	0.0000	0.00	0.0
112	0.0000	0.0000	0.00	0.0
113	0.0000	0.0000	0.00	0.0
114	0.0000	0.0000	0.00	0.0
115	0.0000	0.0000	0.00	0.0
116	0.0000	0.0000	0.00	0.0
117	0.0000	0.0000	0.00	0.0
118	0.0000	0.0000	0.00	0.0
119	0.0000	0.0000	0.00	0.0
120	0.0000	0.0000	0.00	0.0

STATION 7 BUOY 3
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

101	0.0000	0.0000	0.00	0.0
102	0.0000	0.0000	0.00	0.0
103	0.0000	0.0000	0.00	0.0
104	0.0000	0.0000	0.00	0.0
105	0.0000	0.0000	0.00	0.0
106	0.0000	0.0000	0.00	0.0
107	0.0000	0.0000	0.00	0.0
108	0.0000	0.0000	0.00	0.0
109	0.0000	0.0000	0.00	0.0
110	0.0000	0.0000	0.00	0.0
111	0.0000	0.0000	0.00	0.0
112	0.0000	0.0000	0.00	0.0
113	0.0000	0.0000	0.00	0.0
114	0.0000	0.0000	0.00	0.0
115	0.0000	0.0000	0.00	0.0
116	0.0000	0.0000	0.00	0.0
117	0.0000	0.0000	0.00	0.0
118	0.0000	0.0000	0.00	0.0
119	0.0000	0.0000	0.00	0.0
120	0.0000	0.0000	0.00	0.0

STATION 8 BUOY 4
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

101	0.0000	0.0000	0.00	0.0
102	0.0000	0.0000	0.00	0.0
103	0.0000	0.0000	0.00	0.0
104	0.0000	0.0000	0.00	0.0
105	0.0000	0.0000	0.00	0.0
106	0.0000	0.0000	0.00	0.0
107	0.0000	0.0000	0.00	0.0
108	0.0000	0.0000	0.00	0.0
109	0.0000	0.0000	0.00	0.0
110	0.0000	0.0000	0.00	0.0
111	0.0000	0.0000	0.00	0.0
112	0.0000	0.0000	0.00	0.0
113	0.0000	0.0000	0.00	0.0
114	74.9693	-154.4023	4.09	94.6
115	74.9680	-154.1814	6.62	97.6
116	74.9567	-154.1550	4.55	255.2
117	74.9631	-154.3252	5.60	60.7
118	74.9722	-154.4040	2.57	197.3
119	74.9616	-154.3622	8.82	257.9
120	75.0179	-153.9342	13.37*	68.1*

STATION 9 BUOY 5
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

101	0.0000	0.0000	0.00	0.0
102	0.0000	0.0000	0.00	0.0
103	0.0000	0.0000	0.00	0.0
104	0.0000	0.0000	0.00	0.0
105	0.0000	0.0000	0.00	0.0
106	0.0000	0.0000	0.00	0.0
107	0.0000	0.0000	0.00	0.0
108	0.0000	0.0000	0.00	0.0
109	0.0000	0.0000	0.00	0.0
110	0.0000	0.0000	0.00	0.0
111	0.0000	0.0000	0.00	0.0
112	0.0000	0.0000	0.00	0.0
113	0.0000	0.0000	0.00	0.0
114	0.0000	0.0000	0.00	0.0
115	0.0000	0.0000	0.00	0.0
116	0.0000	0.0000	0.00	0.0
117	0.0000	0.0000	0.00	0.0
118	0.0000	0.0000	0.00	0.0
119	0.0000	0.0000	0.00	0.0
120	0.0000	0.0000	0.00	0.0

STATION 10 BUOY 6
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

101	0.0000	0.0000	0.00	0.0
102	0.0000	0.0000	0.00	0.0
103	0.0000	0.0000	0.00	0.0
104	0.0000	0.0000	0.00	0.0
105	0.0000	0.0000	0.00	0.0
106	0.0000	0.0000	0.00	0.0
107	0.0000	0.0000	0.00	0.0
108	0.0000	0.0000	0.00	0.0
109	0.0000	0.0000	0.00	0.0
110	0.0000	0.0000	0.00	0.0
111	0.0000	0.0000	0.00	0.0
112	0.0000	0.0000	0.00	0.0
113	0.0000	0.0000	0.00	0.0
114	0.0000	0.0000	0.00	0.0
115	0.0000	0.0000	0.00	0.0
116	0.0000	0.0000	0.00	0.0
117	0.0000	0.0000	0.00	0.0
118	0.0000	0.0000	0.00	0.0
119	0.0000	0.0000	0.00	0.0
120	0.0000	0.0000	0.00	0.0

STATION 11 BUOY 7
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

101	0.0000	0.0000	0.00	0.0
102	0.0000	0.0000	0.00	0.0
103	0.0000	0.0000	0.00	0.0
104	0.0000	0.0000	0.00	0.0
105	0.0000	0.0000	0.00	0.0
106	0.0000	0.0000	0.00	0.0
107	0.0000	0.0000	0.00	0.0
108	0.0000	0.0000	0.00	0.0
109	0.0000	0.0000	0.00	0.0
110	0.0000	0.0000	0.00	0.0
111	0.0000	0.0000	0.00	0.0
112	0.0000	0.0000	0.00	0.0
113	0.0000	0.0000	0.00	0.0
114	0.0000	0.0000	0.00	0.0
115	0.0000	0.0000	0.00	0.0
116	0.0000	0.0000	0.00	0.0
117	0.0000	0.0000	0.00	0.0
118	0.0000	0.0000	0.00	0.0
119	0.0000	0.0000	0.00	0.0
120	0.0000	0.0000	0.00	0.0

STATION 12 BUOY 8
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

101	0.0000	0.0000	0.00	0.0
102	0.0000	0.0000	0.00	0.0
103	0.0000	0.0000	0.00	0.0
104	0.0000	0.0000	0.00	0.0
105	0.0000	0.0000	0.00	0.0
106	0.0000	0.0000	0.00	0.0
107	0.0000	0.0000	0.00	0.0
108	0.0000	0.0000	0.00	0.0
109	0.0000	0.0000	0.00	0.0
110	0.0000	0.0000	0.00	0.0
111	0.0000	0.0000	0.00	0.0
112	0.0000	0.0000	0.00	0.0
113	0.0000	0.0000	0.00	0.0
114	0.0000	0.0000	0.00	0.0
115	0.0000	0.0000	0.00	0.0
116	0.0000	0.0000	0.00	0.0
117	0.0000	0.0000	0.00	0.0
118	0.0000	0.0000	0.00	0.0
119	0.0000	0.0000	0.00	0.0
120	0.0000	0.0000	0.00	0.0

STATION 13 BUOY 9
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

101	0.0000	0.0000	0.00	0.0
102	0.0000	0.0000	0.00	0.0
103	0.0000	0.0000	0.00	0.0
104	0.0000	0.0000	0.00	0.0
105	0.0000	0.0000	0.00	0.0
106	0.0000	0.0000	0.00	0.0
107	0.0000	0.0000	0.00	0.0
108	0.0000	0.0000	0.00	0.0
109	0.0000	0.0000	0.00	0.0
110	0.0000	0.0000	0.00	0.0
111	0.0000	0.0000	0.00	0.0
112	0.0000	0.0000	0.00	0.0
113	0.0000	0.0000	0.00	0.0
114	0.0000	0.0000	0.00	0.0
115	0.0000	0.0000	0.00	0.0
116	0.0000	0.0000	0.00	0.0
117	0.0000	0.0000	0.00	0.0
118	0.0000	0.0000	0.00	0.0
119	0.0000	0.0000	0.00	0.0
120	0.0000	0.0000	0.00	0.0

STATION 0 BIG BEAR				
DAY OF 1975 (NOON GMT)	LATITUDE (DEG.N)	LONGITUDE (DEG.E)	SPEED (CM/S)	DIRECTION (DEG.E OF N)
121	76.4640	-143.6609	.28	269.3
122	76.4528	-143.7131	2.53	83.6
123	76.4401	-143.8967	4.05	252.6
124	76.4274	-144.1060	4.84	260.2
125	76.4250	-144.4539	13.34	269.9
126	76.4422	-144.8609	11.08	82.1
127	76.4624	-145.1094	2.80	66.1
128	76.4666	-145.1929	3.15	79.7
129	76.4884	-145.2376	3.43	1.9
130	76.4923	-145.1927	3.12	136.5
131	76.4443	-145.0994	5.53	159.9
132	76.3989	-145.1178	5.47	179.3
133	75.3324	-145.2257	8.03	192.0
134	76.2741	-145.1331	8.75	135.9
135	76.2163	-144.9096	7.19	160.3
136	76.1829	-144.9167	4.74	27.2
137	76.2431	-145.0387	13.88	48.4
138	76.2767	-145.4112	9.06	87.1
139	76.2542	-145.7148	5.75	220.4
140	76.2130	-145.7816	2.31	150.1

STATION 1 CARIBOU				
DAY OF 1975 (NOON GMT)	LATITUDE (DEG.N)	LONGITUDE (DEG.E)	SPEED (CM/S)	DIRECTION (DEG.E OF N)
121	75.7324	-142.0540	.68	227.1
122	75.7115	-142.1861	7.94	247.0
123	75.6829	-142.4501	5.71	246.2
124	75.6684	-142.7191	7.93	268.3
125	75.6709	-143.1054	15.27	83.8
126	75.7023	-143.5154	11.46	75.0
127	75.7283	-143.7511	2.47	71.3
128	75.7103	-143.8125	1.13	212.8
129	75.7146	-143.8236	.93	4.0
130	75.7281	-143.7641	1.95	125.3
131	75.6953	-143.7300	3.50	176.4
132	75.6571	-143.8328	5.54	198.9
133	75.5883	-144.0020	9.72	208.2
134	75.5308	-143.9684	8.39	140.2
135	75.4754	-143.7601	6.49	140.7
136	75.4345	-143.7793	2.19	3.6
137	75.4898	-143.9151	13.91	48.4
138	75.5246	-144.3044	10.89	84.6
139	75.5118	-144.7184	7.73	244.7
140	75.4717	-144.7942	2.38	162.7

STATION 2 BLUE FOX				
DAY OF 1975 (NOON GMT)	LATITUDE (DEG.N)	LONGITUDE (DEG.E)	SPEED (CM/S)	DIRECTION (DEG.E OF N)
121	77.2511	-142.6382	.14	256.9
122	77.2400	-142.6239	.91	45.2
123	77.2400	-142.6260	1.32	75.6
124	77.2398	-142.6817	2.02	229.6
125	77.2352	-142.8167	5.68	82.7
126	77.2403	-143.1126	10.05	87.9
127	77.2606	-143.3966	4.76	77.0
128	77.2678	-143.5343	4.17	75.9
129	77.2934	-143.6202	5.02	16.9
130	77.2993	-143.5444	3.65	145.2
131	77.2428	-143.4228	7.66	153.6
132	77.1872	-143.3837	7.50	167.5
133	77.1078	-143.4405	8.56	182.1
134	77.0437	-143.3035	9.51	136.1
135	76.9768	-143.0658	9.95	159.8
136	76.9272	-143.0647	3.24	24.1
137	76.9758	-143.1746	9.62	50.2
138	76.9948	-143.4820	8.98	85.3
139	76.9605	-143.7303	6.62	199.4
140	76.9227	-143.8303	3.62	134.2

STATION 3 SNOW BIRD				
DAY OF 1975 (NOON GMT)	LATITUDE (DEG.N)	LONGITUDE (DEG.E)	SPEED (CM/S)	DIRECTION (DEG.E OF N)
121	76.2866	-146.0440	.26	37.9
122	76.2786	-146.1020	1.95	262.8
123	76.2632	-146.2844	4.38	251.2
124	76.2526	-146.5076	6.15	87.9
125	76.2561	-146.8796	14.69	86.1
126	76.2824	-147.3613	12.42	80.7
127	76.3003	-147.5862	2.65	66.5
128	76.3021	-147.6302	1.47	220.2
129	76.3164	-147.6399	1.09	23.1
130	76.3200	-147.5906	3.99	137.7
131	76.2840	-147.5049	2.59	168.7
132	76.2509	-147.5854	5.66	198.2
133	76.1928	-147.7236	6.60	194.2
134	76.1415	-147.6287	8.23	131.7
135	76.0876	-147.4174	6.96	170.2
136	76.0653	-147.4038	7.55	27.2
137	76.1385	-147.5382	14.53	53.3
138	76.1631	-147.9457	8.94	88.0
139	76.1493	-148.3617	7.06	227.8
140	76.1108	-148.3854	1.98	137.5

STATION 5 BUOY 1				
DAY OF 1975 (NOON GMT)	LATITUDE (DEG.N)	LONGITUDE (DEG.E)	SPEED (CM/S)	DIRECTION (DEG.E OF N)
121	0.0000	0.0000	0.00	0.0
122	0.0000	0.0000	0.00	0.0
123	0.0000	0.0000	0.00	0.0
124	0.0000	0.0000	0.00	0.0
125	0.0000	0.0000	0.00	0.0
126	0.0000	0.0000	0.00	0.0
127	0.0000	0.0000	0.00	0.0
128	0.0000	0.0000	0.00	0.0
129	0.0000	0.0000	0.00	0.0
130	0.0000	0.0000	0.00	0.0
131	0.0000	0.0000	0.00	0.0
132	0.0000	0.0000	0.00	0.0
133	0.0000	0.0000	0.00	0.0
134	0.0000	0.0000	0.00	0.0
135	0.0000	0.0000	0.00	0.0
136	0.0000	0.0000	0.00	0.0
137	0.0000	0.0000	0.00	0.0
138	0.0000	0.0000	0.00	0.0
139	0.0000	0.0000	0.00	0.0
140	0.0000	0.0000	0.00	0.0

STATION 7 BUOY 3				
DAY OF 1975 (NOON GMT)	LATITUDE (DEG.N)	LONGITUDE (DEG.E)	SPEED (CM/S)	DIRECTION (DEG.E OF N)
121	0.0000	0.0000	0.00	0.0
122	0.0000	0.0000	0.00	0.0
123	0.0000	0.0000	0.00	0.0
124	0.0000	0.0000	0.00	0.0
125	0.0000	0.0000	0.00	0.0
126	0.0000	0.0000	0.00	0.0
127	0.0000	0.0000	0.00	0.0
128	0.0000	0.0000	0.00	0.0
129	0.0000	0.0000	0.00	0.0
130	0.0000	0.0000	0.00	0.0
131	0.0000	0.0000	0.00	0.0
132	0.0000	0.0000	0.00	0.0
133	0.0000	0.0000	0.00	0.0
134	0.0000	0.0000	0.00	0.0
135	77.2012	-161.2109	4.50	175.3
136	77.2396	-160.9896	3.74	30.9
137	77.2425	-161.2818	14.69	82.7
138	77.2289	-161.8564	16.74	257.5
139	77.1933	-162.1555	5.48	228.7
140	77.1670	-162.1543	1.49	162.5

STATION 8 BUOY 4				
DAY OF 1975 (NOON GMT)	LATITUDE (DEG.N)	LONGITUDE (DEG.E)	SPEED (CM/S)	DIRECTION (DEG.E OF N)
121	75.0090	-153.8802	1.88	265.5
122	75.0008	-154.0109	4.58	237.6
123	74.9874	-154.2295	8.20	260.2
124	74.9900	-154.5543	14.94	82.0
125	75.0018	-154.9998	16.21	89.5
126	75.0226	-155.4380	13.20	61.0
127	75.0690	-155.6225	3.26	26.7
128	75.0827	-155.6202	2.24	39.1
129	75.0951	-155.6355	1.79	15.7
130	75.0990	-155.6112	.54	41.3
131	75.1013	-155.6171	3.39	247.3
132	75.0865	-155.8344	6.94	253.6
133	75.0667	-156.0722	5.74	259.1
134	75.0663	-156.1612	.91	35.2
135	75.0418	-156.1044	3.38	212.0
136	75.0178	-156.1219	1.12	23.8
137	75.0778	-156.2208	14.58	51.9
138	75.0990	-156.7370	18.95	261.7
139	75.0598	-157.1191	6.62	250.6
140	75.0329	-157.1489	1.14	150.9

STATION 9 BUOY 5				
DAY OF 1975 (NOON GMT)	LATITUDE (DEG.N)	LONGITUDE (DEG.E)	SPEED (CM/S)	DIRECTION (DEG.E OF N)
121	0.0000	0.0000	0.00	0.0
122	0.0000	0.0000	0.00	0.0
123	0.0000	0.0000	0.00	0.0
124	78.3474	-127.9453	.81	219.4
125	78.3353	-127.9786	1.18	224.8
126	78.3270	-128.0843	3.39	255.1
127	78.3238	-128.2893	4.73	77.6
128	78.3316	-128.5113	5.26	266.5
129	78.3437	-128.6330	3.53	7.8
130	78.3654	-128.5220	4.18	132.9
131	78.2860	-128.4798	12.93	173.9
132	78.1855	-128.4970	11.46	181.3
133	78.0771	-128.6100	17.36	198.0
134	77.9641	-128.5776	14.80	166.9
135	77.8948	-128.4851	2.70	181.9
136	77.8451	-128.5416	6.12	171.4
137	77.8188	-128.4959	2.46	176.1
138	77.7890	-128.5706	6.74	218.1
139	77.7480	-128.7351	5.81	217.6
140	77.7355	-128.8468	4.61	211.0

STATION 10 BUOY 6
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

121	0.0000	0.0000	0.00	0.0
122	0.0000	0.0000	0.00	0.0
123	0.0000	0.0000	0.00	0.0
124	0.0000	0.0000	0.00	0.0
125	0.0000	0.0000	0.00	0.0
126	0.0000	0.0000	0.00	0.0
127	0.0000	0.0000	0.00	0.0
128	0.0000	0.0000	0.00	0.0
129	0.0000	0.0000	0.00	0.0
130	0.0000	0.0000	0.00	0.0
131	0.0000	0.0000	0.00	0.0
132	0.0000	0.0000	0.00	0.0
133	0.0000	0.0000	0.00	0.0
134	0.0000	0.0000	0.00	0.0
135	74.1784	-137.6361	8.21	129.4
136	74.1280	-137.5585	.87	214.5
137	74.1708	-137.7027	11.96	45.0
138	74.2168	-137.9863	11.79	73.6
139	74.2262	-138.3289	8.40	264.0
140	74.1308	-138.4448	26.24*	178.3*

STATION 11 BUOY 7
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

121	0.0000	0.0000	0.00	0.0
122	0.0000	0.0000	0.00	0.0
123	0.0000	0.0000	0.00	0.0
124	0.0000	0.0000	0.00	0.0
125	73.7504	-142.9791	13.92	74.9
126	73.7950	-143.3504	11.51	68.2
127	73.7984	-143.5246	3.29	225.8
128	73.7821	-143.5604	.50	223.4
129	73.7834	-143.5668	.82	19.6
130	73.7992	-143.5646	2.74	226.2
131	73.7753	-143.6552	4.73	254.7
132	73.7713	-143.8867	7.38	266.4
133	73.7225	-144.1780	13.51	236.0
134	73.6764	-144.3266	4.41	179.1
135	73.6465	-144.2387	4.57	120.5
136	73.6223	-144.2974	4.27	41.6
137	73.6757	-144.4214	13.48	43.8
138	73.7402	-144.7963	17.51	77.8
139	73.7469	-145.2333	8.21	249.2
140	73.7115	-145.2709	1.99	166.6

STATION 12 BUOY 8
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

121	0.0000	0.0000	0.00	0.0
122	79.8546	-146.9369	9.49	84.6
123	79.8760	-146.5557	7.12	51.8
124	79.9095	-146.5098	3.75	30.4
125	79.9240	-146.5678	1.54	7.2
126	79.9403	-146.6435	4.53	65.4
127	79.9406	-146.8533	4.78	263.6
128	79.9606	-147.0643	5.24	26.7
129	79.9897	-147.1007	2.59	.4
130	80.0045	-147.0242	2.12	128.5
131	79.9659	-146.8115	11.87	123.2
132	79.8829	-146.5689	13.15	167.1
133	79.8206	-146.4843	7.37	148.5
134	79.7718	-146.1486	11.77	128.7
135	79.7083	-145.8826	7.28	161.5
136	79.6933	-145.8715	4.06	2.4
137	79.7398	-145.8926	4.64	23.5
138	79.7348	-146.0630	7.16	228.8
139	79.6906	-146.2669	6.54	208.0
140	79.6517	-146.3162	4.19	169.5

STATION 13 BUOY 9
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

121	0.0000	0.0000	0.00	0.0
122	0.0000	0.0000	0.00	0.0
123	0.0000	0.0000	0.00	0.0
124	0.0000	0.0000	0.00	0.0
125	0.0000	0.0000	0.00	0.0
126	0.0000	0.0000	0.00	0.0
127	0.0000	0.0000	0.00	0.0
128	79.0054	-157.4718	3.86	25.5
129	79.0326	-157.5690	3.84	25.8
130	79.0508	-157.4837	4.03	88.6
131	79.0280	-157.2082	9.06	135.7
132	78.9839	-157.0852	5.76	165.2
133	78.9507	-156.9918	6.48	109.3
134	78.9297	-156.6825	7.88	109.1
135	78.8789	-156.4337	5.99	167.6
136	78.9112	-156.3383	8.24	20.0
137	78.9452	-156.6736	10.84	82.2
138	78.9421	-157.0404	6.88	250.7
139	78.9132	-157.2471	4.69	205.1
140	78.8771	-157.2634	1.80	166.8

STATION 0 BIG BEAR
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

141	76.2038	-145.6919	3.68	83.8
142	76.2316	-145.5312	6.01	54.8
143	76.2424	-145.3863	3.02	76.0
144	75.2282	-145.2946	1.98	127.8
145	76.2388	-145.2672	4.12	7.0
146	76.2537	-145.4538	11.39	253.9
147	76.2465	-145.8270	10.01	81.1
148	76.2817	-146.1707	10.20	57.7
149	76.3338	-146.4938	10.34	53.6
150	76.3903	-146.7881	9.57	45.4
151	76.4207	-146.9561	4.18	66.0
152	76.4291	-147.1401	3.48	73.4
153	76.4338	-147.3423	4.98	70.1
154	76.4445	-147.4988	6.75	57.9
155	76.4652	-147.7615	9.23	83.3
156	76.4618	-148.0509	6.23	269.2
157	76.4449	-148.2372	5.23	240.8
158	76.4223	-148.4081	3.69	228.1
159	76.3972	-148.5031	5.35	199.9
160	76.3530	-148.4805	3.78	143.8

STATION 1 CARIBOU
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

141	75.4620	-144.7477	.99	44.4
142	75.4950	-144.6802	4.37	36.1
143	75.5027	-144.5967	2.86	88.8
144	75.4871	-144.5157	1.15	149.1
145	75.4977	-144.5213	4.50	30.5
146	75.5093	-144.7678	10.82	246.6
147	75.4962	-145.1414	12.99	75.2
148	75.5455	-145.5128	11.98	50.4
149	75.6047	-145.7821	10.37	54.5
150	75.6585	-146.0750	8.02	45.3
151	75.6820	-146.2614	4.80	74.6
152	75.6871	-146.4539	4.40	78.5
153	75.6897	-146.6551	5.49	72.6
154	75.7019	-146.8341	7.60	62.0
155	75.7219	-147.1251	10.31	83.7
156	75.7198	-147.4352	6.37	269.0
157	75.7026	-147.5990	4.70	228.3
158	75.6794	-147.7331	3.32	230.7
159	75.6564	-147.8292	5.38	209.7
160	75.6137	-147.8477	4.25	139.8

STATION 2 BLUE FOX
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

141	76.9143	-143.7161	3.92	70.7
142	76.9475	-143.5378	7.44	53.1
143	76.9567	-143.3345	4.44	93.0
144	76.9428	-143.2505	3.01	128.6
145	76.9478	-143.2009	3.53	5.6
146	76.9696	-143.3323	9.64	265.7
147	76.9670	-143.6817	8.80	81.2
148	76.9921	-144.0332	10.20	68.6
149	77.0424	-144.4043	9.59	55.4
150	77.0869	-144.6740	5.83	47.7
151	77.1025	-144.8339	4.33	71.9
152	77.1070	-145.0434	3.80	266.6
153	77.1061	-145.2469	3.29	83.7
154	77.1113	-145.4002	5.83	61.3
155	77.1264	-145.6348	7.72	88.6
156	77.1109	-145.9060	6.48	242.1
157	77.0769	-146.1120	6.50	220.8
158	77.0371	-146.2851	4.91	209.9
159	76.9833	-146.3984	8.07	187.0
160	76.9167	-146.3664	6.32	167.9

STATION 3 SNOW BIRD
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

141	76.1044	-148.3150	1.89	54.2
142	76.1396	-148.2282	5.17	42.3
143	76.1556	-148.0953	3.82	69.3
144	76.1452	-147.9909	1.08	120.7
145	76.1617	-147.9784	4.51	17.5
146	76.1792	-148.1894	9.17	248.4
147	76.1711	-148.5389	12.47	74.2
148	76.2153	-148.9555	13.03	63.6
149	76.2686	-149.2847	10.51	54.0
150	76.3284	-149.5912	9.89	36.8
151	76.3736	-149.7629	4.64	49.2
152	76.3901	-149.9301	4.01	61.4
153	76.4019	-150.1259	5.12	59.5
154	76.4158	-150.2920	7.06	58.2
155	76.4392	-150.5628	9.42	80.4
156	76.4356	-150.8669	6.28	89.6
157	76.4217	-151.0546	4.27	249.0
158	76.3986	-151.2179	4.20	223.3
159	76.3713	-151.3068	5.23	196.5
160	76.3321	-151.3078	3.41	175.9

STATION 5 BUOY 1
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

141	0.0000	0.0000	0.00	0.0
142	0.0000	0.0000	0.00	0.0
143	0.0000	0.0000	0.00	0.0
144	0.0000	0.0000	0.00	0.0
145	0.0000	0.0000	0.00	0.0
146	0.0000	0.0000	0.00	0.0
147	0.0000	0.0000	0.00	0.0
148	0.0000	0.0000	0.00	0.0
149	0.0000	0.0000	0.00	0.0
150	0.0000	0.0000	0.00	0.0
151	0.0000	0.0000	0.00	0.0
152	0.0000	0.0000	0.00	0.0
153	0.0000	0.0000	0.00	0.0
154	0.0000	0.0000	0.00	0.0
155	0.0000	0.0000	0.00	0.0
156	0.0000	0.0000	0.00	0.0
157	79.0831	-136.9565	13.57	257.7
158	79.0275	-137.3671	15.44	219.2
159	78.9260	-137.5910	12.04	194.2
160	78.8473	-137.6502	4.76	188.5

STATION 7 BUOY 3
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

141	77.1648	-162.0651	4.67	76.0
142	77.1916	-161.8868	6.70	49.7
143	77.2211	-161.6859	3.08	98.4
144	77.2137	-161.6381	1.21	47.3
145	77.2335	-161.6665	3.50	7.9
146	77.2501	-161.7792	4.95	82.9
147	77.2600	-162.0750	12.61	74.7
148	77.2909	-162.5949	15.07	77.3
149	77.3277	-163.0314	11.22	61.9
150	77.3910	-163.3876	12.95	45.0
151	77.4683	-163.5628	9.41	16.9
152	77.5225	-163.7074	8.21	34.2
153	77.5745	-163.8923	6.28	36.8
154	77.6126	-164.1008	7.16	63.2
155	77.6346	-164.4004	7.98	77.3
156	77.6298	-164.7893	11.14	250.7
157	77.5988	-165.2173	11.00	249.8
158	77.5661	-165.5349	6.85	224.8
159	77.5342	-165.6213	4.04	175.4
160	77.5093	-165.6310	2.37	225.5

STATION 8 BUOY 4
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

141	75.0300	-157.1410	.84	77.8
142	75.0474	-157.0996	1.82	29.1
143	75.0573	-157.0335	1.76	78.8
144	75.0627	-156.9939	2.71	17.1
145	75.0935	-157.0271	6.81	57.2
146	75.1068	-157.2300	7.91	269.6
147	75.1198	-157.5769	14.87	74.0
148	75.1661	-157.9987	12.86	64.9
149	75.2155	-158.2985	10.26	54.4
150	75.2834	-158.6035	13.03	37.7
151	75.3485	-158.7932	6.55	41.7
152	75.3928	-158.9697	11.07	44.9
153	75.4327	-159.1777	8.83	53.4
154	75.4667	-159.4316	9.50	70.9
155	75.4939	-159.7383	10.96	87.9
156	75.4920	-160.1214	10.39	254.0
157	75.4828	-160.3800	5.02	251.4
158	75.4632	-160.4818	4.29	204.7
159	75.4349	-160.5490	4.86	197.8
160	75.4126	-160.5991	1.88	220.3

STATION 9 BUOY 5
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

141	77.6927	-128.8249	4.99	141.9
142	77.6841	-128.6616	5.20	44.9
143	77.7040	-128.5372	2.11	70.6
144	77.6882	-128.5043	4.62	177.3
145	77.6604	-128.4625	1.27	126.2
146	77.6658	-128.4802	4.10	51.6
147	77.6692	-128.7487	11.11	252.9
148	77.6373	-128.9685	2.81	228.2
149	77.6237	-129.0692	4.03	245.6
150	77.5976	-129.2980	8.72	245.9
151	77.5623	-129.6589	10.04	244.0
152	77.5365	-129.9089	6.81	245.7
153	77.5149	-130.0731	4.68	236.5
154	77.5032	-130.2335	4.41	251.5
155	77.4868	-130.4037	6.49	242.1
156	77.4547	-130.6143	7.36	206.0
157	77.4178	-130.8181	7.53	242.4
158	77.3673	-130.9557	10.72	172.5
159	77.2770	-130.6755	11.90	171.3
160	77.1969	-130.7815	8.79	156.3

STATION 10 BUOY 6
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

141	74.1778	-138.3869	1.62*	72.5*
142	74.2027	-138.4451	3.78	33.0
143	74.2061	-138.4947	1.65	175.2
144	74.1816	-138.4799	2.37	156.9
145	74.1800	-138.5544	7.27	65.1
146	74.2048	-138.8450	10.04	259.2
147	74.1915	-139.2434	15.04	85.0
148	74.2387	-139.5541	10.83	45.3
149	74.2923	-139.8115	10.46	67.0
150	74.3236	-140.0875	7.93	75.4
151	74.3165	-140.3011	6.13	252.1
152	74.3089	-140.5158	9.24	263.8
153	74.3035	-140.7487	7.98	88.5
154	74.3095	-141.0077	10.56	77.9
155	74.3256	-141.2811	9.51	77.8
156	74.3252	-141.5213	5.21	249.6
157	74.3029	-141.6595	4.93	210.6
158	74.2754	-141.7074	3.23	193.9
159	74.2590	-141.6940	2.24	200.7
160	74.2346	-141.7423	4.82	169.5

STATION 11 BUOY 7
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

141	73.7085	-145.2609	1.79	41.1
142	73.7281	-145.3328	3.17	269.8
143	73.7196	-145.3396	2.05	158.1
144	73.7090	-145.3129	.52	248.0
145	73.7165	-145.3988	7.90	73.2
146	73.7245	-145.6348	8.63	244.7
147	73.7120	-146.0030	16.69	77.1
148	73.7711	-146.3592	13.26	45.4
149	73.8295	-146.6119	12.33	57.0
150	73.8868	-146.9317	12.15	60.8
151	73.9175	-147.1588	7.88	67.1
152	73.9277	-147.3745	8.57	264.1
153	73.9275	-147.6251	8.68	80.3
154	73.9491	-147.6876	11.50	70.5
155	73.9643	-148.2312	13.73	85.8
156	73.9752	-148.5544	7.88	267.1
157	73.9643	-148.7433	5.37	248.5
158	73.9465	-148.8413	1.74	249.1
159	73.9320	-148.9023	5.33	214.8
160	73.8957	-148.9527	3.37	139.1

STATION 12 BUOY 8
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

141	79.6640	-147.1464	30.95*	261.4*
142	79.6355	-148.1405	8.24*	80.1*
143	79.6914	-146.0464	58.93*	82.9*
144	79.6821	-145.4686	7.61	211.2
145	79.6862	-145.2801	7.00	22.4
146	79.7104	-145.3144	2.98	63.2
147	79.7141	-145.5096	6.70	268.0
148	79.7142	-145.8890	10.07	85.7
149	79.7415	-146.3033	9.17	58.8
150	79.7844	-146.5952	8.01	37.7
151	79.8369	-146.7584	6.31	59.5
152	79.8527	-146.9163	2.34	77.0
153	79.8578	-147.0124	1.56	262.1
154	79.8642	-147.1678	5.46	65.0
155	79.8779	-147.3889	5.97	85.8
156	79.8591	-147.7255	10.71	246.5
157	79.8295	-148.2580	13.92	250.5
158	79.7832	-148.6859	10.04	227.5
159	79.7249	-148.8477	7.89	185.6
160	79.6711	-148.8489	6.04	203.0

STATION 13 BUOY 9
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

141	78.8704	-157.0532	7.54	75.6
142	78.9074	-156.7767	6.13	54.2
143	78.9303	-156.6025	3.44	81.0
144	78.9194	-156.4647	2.95	116.5
145	78.9323	-156.4428	4.20	5.6
146	78.9535	-156.5012	2.86	74.5
147	78.9577	-156.6875	6.99	77.8
148	78.9746	-157.1110	13.77	77.1
149	79.0109	-157.6267	11.32	58.5
150	79.0743	-157.9624	11.61	37.6
151	79.1459	-158.1288	8.13	15.5
152	79.1862	-158.2239	5.41	34.3
153	79.2200	-158.3603	4.46	39.3
154	79.2417	-158.5303	5.83	59.8
155	79.2633	-158.8052	7.02	77.1
156	79.2529	-159.1666	11.30	249.9
157	79.2170	-159.7189	12.62	249.4
158	79.1759	-160.1252	8.87	228.0
159	79.1322	-160.2709	5.76	176.7
160	79.0875	-160.3518	4.84	219.8

STATION 0 BIG BEAR
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

161	75.3391	-148.4164	4.24	122.6
162	76.3169	-148.2367	2.76	91.1
163	76.3190	-148.2900	1.82	94.1
164	76.3103	-148.3461	2.52	248.3
165	76.3186	-148.3989	2.40	9.3
166	76.3478	-148.4482	5.36	88.0
167	76.3457	-148.6051	.74	220.5
168	76.3943	-148.7944	12.93	44.5
169	76.3979	-149.1273	12.56	225.5
170	76.3303	-149.2535	2.83	251.4
171	76.3347	-149.4098	3.07	72.1
172	76.3457	-149.4434	5.56	9.9
173	76.4178	-149.4994	6.58	53.5
174	76.4460	-149.5466	10.15	70.5
175	76.4479	-149.7092	2.44	215.1
176	76.4181	-149.6314	8.19	105.6
177	76.4094	-149.3604	4.38	69.1
178	76.4485	-149.4572	4.10	64.5
179	76.4708	-149.2222	9.60	89.4
180	76.4319	-148.8890	7.68	86.0

STATION 1 CARIBOU
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

161	75.5996	-147.8046	1.66	189.7
162	75.5944	-147.7198	3.29	86.4
163	75.5973	-147.7878	2.39	80.3
164	75.5989	-147.8778	3.13	266.3
165	75.6123	-147.9512	3.92	1.5
166	75.6424	-148.0659	6.24	265.4
167	75.6326	-148.2026	1.28	257.6
168	75.6862	-148.4291	12.65	39.4
169	75.6767	-148.6308	13.81	236.9
170	75.6131	-148.8257	5.37	83.8
171	75.6152	-149.0156	4.49	69.4
172	75.6328	-149.1385	8.53	28.9
173	75.7036	-149.1821	6.02	66.2
174	75.7300	-149.2544	8.28	72.8
175	75.7281	-149.3924	2.95	196.9
176	75.6975	-149.2692	9.35	103.6
177	75.6970	-149.0728	3.53	6.2
178	75.7329	-149.1744	6.00	89.4
179	75.7575	-148.9422	10.99	67.7
180	75.7222	-148.6040	6.22	88.1

STATION 2 BLUE FOX
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

161	76.8816	-146.2846	4.88	125.8
162	76.8630	-146.1643	2.71	103.2
163	76.8383	-146.1472	6.36	150.2
164	76.8051	-146.2113	3.21	224.6
165	76.7956	-146.2628	.34	185.4
166	76.8062	-146.2762	5.03	72.9
167	76.8083	-146.4059	1.74	186.1
168	76.8419	-146.5526	12.39	39.4
169	76.8490	-146.9500	13.99	223.5
170	76.7728	-147.0986	2.88	261.4
171	76.7556	-147.2117	3.37	201.9
172	76.7393	-147.2180	.25	68.3
173	76.7986	-147.2721	7.47	24.7
174	76.8258	-147.3037	9.09	70.3
175	76.8385	-147.4703	.46	117.9
176	76.8285	-147.4130	12.57	109.3
177	76.8062	-147.1577	3.63	52.4
178	76.8306	-147.2607	3.03	43.3
179	76.8452	-147.0279	11.54	90.4
180	76.7988	-146.6715	7.26	107.4

STATION 3 SNOW BIRD
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

161	76.3160	-151.2902	2.51	128.7
162	76.3065	-151.1724	.69	90.3
163	76.3165	-151.2314	2.19	1.6
164	76.3139	-151.3564	3.14	263.8
165	76.3250	-151.4488	3.96	56.4
166	76.3491	-151.5398	2.67	56.8
167	76.3476	-151.6250	.91	55.8
168	76.4001	-151.8964	14.20	61.0
169	76.3858	-152.2056	9.01	216.4
170	76.3393	-152.2973	2.55	262.7
171	76.3618	-152.4694	6.00	44.1
172	76.4113	-152.5479	9.36	20.1
173	76.4894	-152.6685	5.65	39.8
174	76.5231	-152.6988	10.79	63.3
175	76.5307	-152.9344	1.74	236.6
176	76.5201	-152.8622	3.40	84.3
177	76.5256	-152.6008	.24	192.0
178	76.5719	-152.6955	5.48	38.2
179	76.6035	-152.4824	10.14	103.6
180	76.5799	-152.2095	10.36	61.9

STATION 5 BUOY 1
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

161	78.8191	-137.6753	.81	163.3
162	78.8066	-137.6969	2.94	173.6
163	78.7580	-137.8199	8.74	232.7
164	78.7103	-137.9800	4.93	202.3
165	78.6716	-137.9518	4.27	159.4
166	78.6396	-137.8395	2.38	212.3
167	78.6316	-137.9156	1.87	198.2
168	78.6228	-137.9402	4.06	11.9
169	78.6244	-138.3428	21.14	240.5
170	78.5843	-138.6852	6.68	211.4
171	78.5295	-138.8123	8.11	203.6
172	78.4856	-138.9387	5.15	203.3
173	78.4899	-139.0257	6.67	18.8
174	78.5292	-139.0807	8.03	53.8
175	78.6087	-139.4233	10.57	29.4
176	78.6628	-139.5257	5.27	19.7
177	78.6476	-139.3391	7.38	137.7
178	78.6336	-139.3858	2.31	87.9
179	78.6283	-139.2170	6.24	22.5
180	78.6034	-139.0289	9.09	144.4

STATION 7 BUOY 3
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

161	77.5059	-165.6909	1.63	77.7
162	77.5188	-165.7928	4.50	66.0
163	77.5327	-165.9949	6.88	83.0
164	77.5220	-166.2102	2.99	214.7
165	77.5085	-166.2690	1.84	267.2
166	77.5084	-166.3701	3.57	261.8
167	77.5065	-166.4663	2.76	48.5
168	77.5077	-166.6254	5.49	245.5
169	77.4874	-166.6976	.84	201.5
170	77.4930	-166.7818	6.19	89.8
171	77.4991	-167.1679	12.11	81.4
172	77.5179	-167.6510	14.19	81.6
173	77.5257	-168.1034	9.90	84.1
174	77.5349	-168.3682	5.92	87.3
175	77.5059	-168.6105	8.92	219.6
176	77.4590	-168.6620	2.96	102.1
177	77.4829	-168.5039	9.04	41.5
178	77.5240	-168.5112	3.60	70.6
179	77.5048	-168.5213	3.54	93.6
180	77.5590	-168.4682	7.51	5.3

STATION 8 BUOY 4
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

161	75.4071	-160.6645	2.25	82.2
162	75.4215	-160.7704	4.12	54.7
163	75.4429	-160.9644	6.68	86.2
164	75.4347	-161.1719	3.59	226.8
165	75.4217	-161.2205	3.18	270.0
166	75.4250	-161.2718	1.91	11.7
167	75.4405	-161.3546	4.24	56.3
168	75.4317	-161.6584	10.03	219.6
169	75.3723	-161.6828	1.40	167.3
170	75.3892	-161.7628	9.97	64.9
171	75.4286	-162.1143	16.08	61.7
172	75.4860	-162.5196	13.29	61.5
173	75.5201	-162.7307	4.97	22.8
174	75.5503	-162.8521	8.85	268.2
175	75.5231	-163.1227	8.55	215.1
176	75.4780	-163.1414	3.67	118.0
177	75.4964	-163.0440	4.24	29.8
178	75.5204	-163.1914	4.91	69.2
179	75.5298	-162.8149	5.44	48.6
180	75.5840	-163.0056	8.20	10.9

STATION 9 BUOY 5
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

161	77.1491	-130.6497	6.42	135.5
162	77.1247	-130.5460	1.91	139.3
163	77.0948	-130.5562	5.80	193.8
164	77.0532	-130.6118	3.18	200.0
165	77.0290	-130.6151	3.38	164.5
166	76.9987	-130.5762	2.60	227.1
167	76.9819	-130.8074	7.77	221.8
168	76.9596	-130.9252	4.37	76.4
169	77.0098	-131.0929	5.66	61.8
170	76.9852	-131.2992	5.84	239.6
171	76.9441	-131.4466	11.01	206.2
172	76.8798	-131.6205	6.93	209.9
173	76.8440	-131.6176	1.15	25.9
174	76.8696	-131.6388	7.93	27.8
175	76.9352	-131.8124	9.39	38.3
176	76.9913	-131.9180	4.81	22.9
177	76.9592	-131.9180	7.13	191.0
178	76.9462	-132.0119	3.59	30.6
179	76.9170	-131.8710	7.59	116.8
180	76.8659	-131.5383	12.84	145.3

STATION 10 BUOY 6
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

161	74.2174	-141.6787	2.13	96.4
162	74.2114	-141.6738	2.42	238.5
163	74.2027	-141.7949	5.13	268.5
164	74.2030	-141.8618	2.07	76.6
165	74.2134	-141.9351	5.20	56.9
166	74.2403	-142.2059	10.31	84.2
167	74.2047	-142.2924	3.25	129.6
168	74.2583	-142.4117	13.59	25.6
169	74.2292	-142.1782	12.91	130.1
170	74.1923	-142.1765	4.16	254.9
171	74.1997	-142.3580	6.50	76.4
172	74.2166	-142.4573	5.88	33.7
173	74.2819	-142.4853	5.56	22.1
174	74.3089	-142.6345	7.93	75.0
175	74.3238	-142.7271	1.13	33.4
176	74.2903	-142.6400	4.92	165.4
177	74.2728	-142.7069	7.25	85.8
178	74.2916	-142.7941	2.49	102.7
179	74.3046	-142.6100	15.50	91.9
180	74.2662	-142.2787	2.28	124.7

STATION 11 BUOY 7
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

161	73.8865	-148.9315	2.99	235.5
162	73.8868	-148.9973	2.57	43.2
163	73.9006	-149.1468	8.01	81.4
164	73.9091	-149.3106	4.86	78.5
165	73.9322	-149.4375	9.44	61.9
166	73.9610	-149.6318	3.23	241.7
167	73.9492	-149.6696	2.43	47.5
168	74.0216	-149.7869	3.61	47.3
169	73.9840	-149.6321	9.22	173.8
170	73.9672	-149.7728	7.43	267.9
171	73.9884	-149.9834	9.04	46.3
172	74.0499	-150.1656	13.78	28.1
173	74.1098	-150.1625	2.08	34.2
174	74.1382	-150.3273	9.45	72.0
175	74.1448	-150.4112	3.16	193.8
176	74.1289	-150.3440	4.48	101.0
177	74.1406	-150.3726	10.64	56.8
178	74.1705	-150.4627	1.26	79.5
179	74.2022	-150.2008	20.65	95.7
180	74.1829	-149.9246	5.59	16.6

STATION 12 BUOY 8
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

161	79.6410	-148.8958	3.85	202.9
162	79.6229	-148.9763	1.63	151.8
163	79.5860	-149.0497	6.99	215.2
164	79.5589	-149.2017	3.32	230.7
165	79.5418	-149.2908	2.40	201.4
166	79.5330	-149.2321	1.77	75.9
167	79.5365	-149.2222	.78	87.9
168	79.5522	-149.1856	4.74	31.6
169	79.5513	-149.5082	11.76	228.6
170	79.4980	-149.7353	4.20	219.1
171	79.4815	-149.7867	2.08	197.9
172	79.4706	-149.9052	5.97	269.1
173	79.4893	-150.2676	9.97	61.9
174	79.5230	-150.4937	5.81	68.1
175	79.5357	-150.8803	6.38	54.9
176	79.5389	-150.9998	3.32	197.6
177	79.5171	-150.7693	10.69	101.4
178	79.5296	-150.6214	5.06	22.4
179	79.5518	-150.5642	5.50	90.9
180	79.5279	-150.2765	8.28	132.8

STATION 13 BUOY 9
 DAY OF 1975 LATITUDE LONGITUDE SPEED DIRECTION
 (NOON GMT) (DEG.N) (DEG.E) (CM/S) (DEG.E OF N)

161	79.0643	-160.4711	.89	202.7
162	79.0571	-160.5345	2.86	263.6
163	79.0504	-160.6795	4.60	263.6
164	79.0347	-160.8450	3.67	219.7
165	79.0202	-161.0365	2.40	241.9
166	79.0161	-161.0848	1.28	73.8
167	79.0233	-161.1291	2.15	1.5
168	79.0330	-161.1465	4.51	257.9
169	79.0236	-161.3886	5.49	249.7
170	79.0115	-161.5398	4.96	241.5
171	78.9981	-161.7860	6.35	264.5
172	78.9979	-162.1084	10.08	84.2
173	79.0134	-162.5637	9.86	81.0
174	79.0231	-162.8677	6.06	76.2
175	79.0129	-163.1855	8.34	212.7
176	78.9657	-163.2031	2.32	153.5
177	78.9718	-163.0088	10.76	70.7
178	79.0159	-162.8083	4.26	8.9
179	79.0298	-162.7857	2.35	115.1
180	79.0266	-162.6406	4.24	25.1

AZIMUTHS OF THE MANNED CAMPS

Since the floes on which the manned camps were located are free to rotate, the horizontal angle between true north and any reference line fixed to the ice can and does change with time. The azimuth of each camp is defined as the clockwise angle from true north to the line directed from the "A" NavSat antenna to the "B" NavSat antenna.

Two sets of measurements were made of the azimuth of this line. Weather permitting, celestial azimuth fixes were made once or twice daily at each camp. Errors in these measurements were less than $\pm 0.02^\circ$. More frequent but less accurate measurements were made using the differences in positions determined from the

two NavSat antennas. Errors in these measurements are typically $\pm 5^\circ$, but occasionally somewhat larger. At times a systematic unexplained discrepancy of as much as 3° existed between these two data sets. When this occurred, agreement was forced by adding a "correction" to the celestial fixes and assuming that the NavSat azimuths, although noisy, were unbiased.

Kalman smoothing techniques were used to merge the two data sets and produce estimates of the azimuth. Errors in these estimates are about 0.2° , with the possibility of a bias of as much as 3° at some of the camps some of the time.

Tabulated zero values indicate absence of data.

MANNED CAMP AZIMUTHS
 DAY OF YEAR BIG BEAR CARIBOU BLUE FOX SNOWBIRD
 (NOON GMT) (DEGREES CLOCKWISE FROM NORTH)

101	228.6	0.0	0.0	0.0
102	227.7	0.0	0.0	0.0
103	229.8	0.0	0.0	0.0
104	228.3	0.0	0.0	0.0
105	226.8	0.0	0.0	0.0
106	227.2	0.0	0.0	0.0
107	226.0	0.0	0.0	0.0
108	226.2	0.0	0.0	217.6
109	226.6	0.0	0.0	218.1
110	226.7	0.0	273.3	218.6
111	227.1	0.0	273.0	219.4
112	228.1	0.0	273.7	220.1
113	230.8	0.0	275.2	222.9
114	230.5	210.9	274.2	222.4
115	229.1	210.3	273.3	221.7
116	229.5	211.2	272.8	221.8
117	229.9	211.7	274.3	221.2
118	229.3	212.0	272.8	222.1
119	230.0	212.7	275.7	221.9
120	230.7	214.3	274.5	221.2

MANNED CAMP AZIMUTHS
 DAY OF YEAR BIG BEAR CARIBOU BLUE FOX SNOWBIRD
 (NOON GMT) (DEGREES CLOCKWISE FROM NORTH)

121	230.5	211.1	275.5	220.4
122	232.1	213.4	276.0	211.8
123	233.3	213.6	277.3	195.0
124	233.8	214.2	278.4	193.2
125	233.9	214.9	279.0	194.1
126	233.8	212.5	278.8	197.5
127	233.1	213.6	277.9	203.5
128	232.5	215.1	277.9	205.5
129	231.0	213.1	279.2	204.9
130	232.6	214.1	279.5	204.9
131	234.1	214.8	280.8	206.5
132	234.3	214.6	280.2	210.1
133	236.1	214.8	281.3	214.4
134	235.6	214.9	281.8	216.2
135	235.3	216.2	281.6	216.5
136	237.1	215.9	282.9	217.2
137	237.0	215.7	283.4	218.8
138	237.9	215.1	284.1	219.7
139	238.7	215.9	285.0	220.2
140	238.0	215.8	284.9	219.9

MANNED CAMP AZIMUTHS
 DAY OF YEAR BIG BEAR CARIBOU BLUE FOX SNOWBIRD
 (NOON GMT) (DEGREES CLOCKWISE FROM NORTH)

141	239.0	216.9	282.6	219.3
142	239.9	215.6	282.9	220.4
143	240.9	218.0	283.5	219.5
144	241.2	218.0	284.1	218.6
145	241.4	217.8	285.6	216.9
146	240.9	219.0	285.3	219.0
147	242.9	219.2	286.4	219.3
148	242.5	219.7	287.3	218.2
149	241.3	218.8	284.4	218.2
150	241.8	219.1	285.5	218.7
151	242.3	218.9	285.7	219.1
152	242.3	218.6	286.2	220.0
153	242.2	218.4	286.7	220.8
154	243.7	220.1	287.1	222.4
155	243.7	219.6	286.4	220.4
156	244.0	220.2	286.6	222.3
157	243.2	220.9	284.7	223.5
158	243.4	219.9	282.3	223.1
159	244.1	220.7	280.8	222.2
160	244.8	221.6	280.2	222.5

MANNED CAMP AZIMUTHS
 DAY OF YEAR BIG BEAR CARIBOU BLUE FOX SNOWBIRD
 (NOON GMT) (DEGREES CLOCKWISE FROM NORTH)

161	246.0	221.2	279.6	222.5
162	245.3	220.9	277.4	223.1
163	246.5	221.2	278.2	223.4
164	245.3	221.4	274.9	222.2
165	243.4	219.2	273.8	222.4
166	243.8	222.3	273.3	222.3
167	244.1	221.8	276.9	224.5
168	245.1	220.8	276.6	222.4
169	245.1	215.9	273.6	221.6
170	245.3	216.0	275.3	223.0
171	246.5	217.8	275.1	225.1
172	248.2	220.9	275.6	226.5
173	247.9	220.5	274.4	227.1
174	248.3	220.5	275.3	224.8
175	248.0	220.1	274.2	225.0
176	243.9	220.4	276.5	226.9
177	243.3	221.5	278.6	227.7
178	245.9	220.7	275.6	226.2
179	246.8	223.3	275.2	224.1
180	248.8	223.3	274.0	222.8

DEFORMATION OF THE MANNED ARRAY

Estimates of strain rate invariants have been made using as input the smoothed positions and velocities of the four manned camps. During the period covered in the data tables the camps formed a triangle roughly 100 km on a side with one station in the center. The strain rate tensor was assumed to be constant over this array, which is equivalent to assuming only a linear variation in velocity. Only three stations are required to estimate strain rate, but since four were available the calculations were done in a least squares sense.

The velocities of each camp were low-pass filtered to remove periods of less than two days, making the frequency content of the reported results compatible with the one-a-day reporting rate. Next, the estimated positions and velocities were used to calculate the velocity derivatives

$$L_{ij} = \frac{\partial u_i}{\partial x_j}, \quad i = 1, 2, \quad j = 1, 2. \quad \text{A tensor } D_{ij} \text{ was}$$

defined as the symmetric part of L_{ij} , and the eigenvalues of D_{ij} were found. These are the tabulated

principal values of strain rate. (A positive value indicates extension.) The direction of the eigenvectors corresponding to the larger of the eigenvalues is given. Thus, for example, on day 124 a line running NE-SW (angle $\sim -138^\circ$) was extending at a rate of $0.249 \times 10^{-6} \text{ sec}^{-1}$ ($\sim 2\%$ per day), and a perpendicular line running NW-SE was contracting at a rate of $-0.153 \times 10^{-6} \text{ sec}^{-1}$ (1.3% per day).

The vorticity is defined as

$$\frac{1}{2} \left(\frac{\partial u_2}{\partial x_1} - \frac{\partial u_1}{\partial x_2} \right)$$

so that a counterclockwise rotation gives positive vorticity. (Note: $0.1 \times 10^{-6} \text{ sec}^{-1}$ is approximately 0.5° counterclockwise per day.)

STATIONS 0-3 (MANNED CAMPS)				STATIONS 0-3 (MANNED CAMPS)					
DAY OF 1975 (NOON GMT)	PRINCIPAL VALUES OF STRAIN RATE (1/SEC)		DIRECTION (DEG.E OF N)	VORTICITY (1/SEC)	DAY OF 1975 (NOON GMT)	PRINCIPAL VALUES OF STRAIN RATE (1/SEC)		DIRECTION (DEG.E OF N)	VORTICITY (1/SEC)
121	.410E-07	-.953E-07	-114.	.711E-07	141	.981E-07	-.221E-08	-140.	.509E-07
122	.241E-06	-.168E-06	31.	.259E-06	142	.116E-06	-.345E-07	25.	.485E-07
123	.249E-06	-.153E-06	-138.	.239E-06	143	.354E-07	-.448E-07	15.	.736E-07
124	.209E-06	-.195E-06	-120.	.258E-06	144	.801E-08	-.173E-07	-17.	.577E-07
125	.261E-06	-.260E-06	-106.	.253E-06	145	.901E-07	-.196E-07	30.	.106E-06
126	.108E-06	-.120E-06	-92.	.869E-07	146	.101E-06	-.341E-07	24.	.122E-06
127	.890E-07	-.130E-06	-14.	.422E-08	147	.304E-07	-.442E-07	-74.	.971E-07
128	.158E-06	-.122E-06	-7.	.383E-08	148	.630E-07	-.140E-06	-64.	-.704E-08
129	.509E-07	-.599E-07	17.	-.187E-07	149	.411E-07	-.905E-07	-59.	.530E-07
130	.307E-08	-.156E-06	-96.	-.139E-08	150	.671E-07	-.712E-07	-54.	.184E-06
131	.899E-07	-.113E-06	-81.	.137E-06	151	.762E-07	-.116E-06	-31.	.148E-06
132	.143E-06	-.452E-07	-94.	.178E-06	152	.554E-07	-.106E-06	-32.	.101E-06
133	.332E-07	-.223E-07	-113.	.185E-06	153	.857E-08	-.364E-07	-52.	.104E-06
134	.229E-07	-.377E-07	-99.	.795E-07	154	.424E-08	-.276E-07	-123.	.101E-06
135	.579E-07	-.959E-07	-76.	.936E-07	155	.532E-07	-.513E-07	-106.	.132E-06
136	.601E-07	-.139E-06	-36.	.181E-06	156	.829E-07	-.915E-07	-81.	.933E-07
137	.100E-06	-.917E-07	-104.	.169E-06	157	.136E-06	-.133E-06	-71.	.761E-07
138	.196E-06	-.813E-07	-112.	.160E-06	158	.114E-06	-.172E-06	-83.	.777E-07
139	.390E-07	-.618E-08	-112.	.995E-07	159	.110E-06	-.166E-06	-90.	.126E-06
140	-.314E-08	-.454E-07	-130.	.728E-07	160	.162E-06	-.150E-06	-89.	.559E-07

STATIONS 0-3 (MANNED CAMPS)				
DAY OF 1975 (NOON GMT)	PRINCIPAL VALUES OF STRAIN RATE (1/SEC)		DIRECTION (DEG.E OF N)	VORTICITY (1/SEC)
161	-.130E-07	-.125E-06	-118.	-.118E-07
162	.105E-09	-.106E-06	-84.	.550E-07
163	.179E-06	-.213E-06	-86.	.204E-06
164	.109E-06	-.184E-06	-89.	.655E-07
165	.156E-06	-.158E-06	-101.	.757E-07
166	.588E-07	-.177E-07	-126.	.142E-06
167	.674E-07	-.208E-07	-83.	.122E-06
168	.192E-06	-.207E-07	-72.	-.629E-07
169	.696E-07	-.117E-06	-32.	.417E-07
170	.398E-08	-.964E-07	-44.	.248E-06
171	.108E-06	-.150E-06	-59.	.353E-06
172	.119E-06	-.166E-06	-68.	.253E-06
173	.546E-07	-.380E-07	-29.	.300E-07
174	.814E-07	-.138E-07	-22.	.335E-07
175	.219E-06	-.901E-07	-19.	-.430E-07
176	.671E-07	-.137E-06	-28.	.375E-07
177	-.570E-07	-.131E-06	-116.	.104E-06
178	.719E-07	-.107E-06	-48.	.664E-07
179	.144E-06	-.737E-07	-66.	-.243E-07
180	.234E-07	-.594E-07	-62.	.135E-06

SURFACE LAYER METEOROLOGICAL DATA

The data in the next tables comprise the following:

- WS--wind speed, in meters per second, at 10 m height, measured with a three-cup anemometer.
- WD--wind direction, in degrees, at 10 m height, measured with a wind vane. This is the direction *from which* the wind is blowing.
- T2--air temperature, in degrees Celsius, at 2 m height, measured with a platinum resistance bulb.
- T9--air temperature, in degrees Celsius, at 9 m height, measured with a platinum resistance bulb.
- TMIN--minimum air temperature, at 2 m, recorded in preceding 24 hours.
- TMAX--maximum air temperature, at 2 m, recorded in preceding 24 hours.
- FP--frost point, in degrees Celsius, at 2 m, measured with a dewpoint hygrometer. At Big Bear only.

Except for TMIN and TMAX, all data are one-hour averages centered on 1200 GMT at the specified day.

These data have been calculated using factory calibrations. Eventually corrections will be available, particularly for the temperature data, where the corrections typically will be tenths of a degree Celsius. This is a small change in the absolute value, but it can represent a relatively large change in the measured temperature gradients.

CAMP 0 = BIGBEAR

DAY	WS	WD	T2	T9	TMIN	TMAX	FP
101							
102							
103							
104							
105	4.0	287	-15.03	-15.04	-15.0	-15.0	-37.7
106	6.6	224	-24.53	-24.37	-28.0	-14.8	-28.9
107							
108	3.0	173	-30.78		-31.9	-26.5	
109							
110	4.4	232	-22.82		-22.8	-17.2	-20.8
111	2.1	223	-24.86		-24.9	-17.1	-29.6
112							
113	4.4	200	-28.78	-24.42	-29.2	-22.1	
114	2.5	239	-20.55	-17.24	-28.5	-20.1	-40.4
115	1.7	199	-28.86	-23.55	-28.9	-17.4	
116	1.1	174	-30.59	-22.31	-30.6	-21.0	
117	3.2	225	-28.33	-26.28	-30.4	-25.3	-29.1
118							
119	3.0	205	-28.83	-26.76	-28.8	-17.7	-28.9
120	9.9	210	-16.50	-16.19	-28.2	-16.0	-18.0

CAMP 1 = CARIBOU

DAY	WS	WD	T2	T9	TMIN	TMAX
101						
102						
103						
104						
105						
106						
107						
108						
109						
110						
111						
112						
113						
114						
115	2.6	274	-27.32	-25.99	-27.3	-20.6
116	2.0	30	-24.85	-23.77	-27.0	-20.3
117						
118						
119	2.9	213	-25.15	-22.98	-25.8	-18.0
120	8.5	211	-18.29	-17.65	-25.3	-16.2

CAMP 2 = BLUEFOX

DAY	WS	WD	T2	T9	TMIN	TMAX
101						
102						
103						
104						
105						
106						
107						
108						
109						
110						
111						
112						
113						
114						
115						
116						
117						
118						
119	2.0	193	-25.65	-26.24	-25.6	-23.3
120	10.4	212	-15.64	-16.13	-28.4	-15.5

CAMP 3 = SNOWBIRD

DAY	WS	WD	T2	T9	TMIN	TMAX
101						
102						
103						
104						
105						
106						
107						
108	3.9	208	-26.77	-26.95	-27.4	-23.4
109	4.9	226	-17.88	-17.99	-26.9	-16.1
110						
111						
112						
113						
114						
115	1.7	265	-25.16	-24.63	-25.2	-18.4
116	1.1	339	-27.26	-25.17	-27.5	-20.4
117	3.7	237	-25.11	-25.26	-28.2	-20.3
118	2.3	200	-20.65	-20.79	-25.1	-18.4
119	2.5	211	-25.73	-25.87	-25.7	-17.9
120	9.9	216	-16.10	-16.42	-26.4	-15.6

CAMP 0 - BIGBEAR

DAY	WS	WD	T2	T9	TMIN	TMAX	FP
121	2.0	246	-24.70	-22.31	-24.8	-13.4	-26.2
122	2.8	52	-26.40	-23.72	-26.4	-18.5	-26.1
123	3.5	48	-24.35	-23.34	-26.0	-17.7	-24.9
124	4.2	58	-22.05	-21.45	-23.7	-14.8	-23.1
125	7.3	48	-10.91	-11.04	-22.0	-10.9	-11.2
126	7.0	70	-8.11	-8.23	-10.4	-5.6	-8.7
127	3.7	77	-10.06	-9.98	-10.3	-5.3	-12.0
128	3.3	57	-6.22	-6.18	-13.3	-5.2	-8.0
129	2.4	138	-5.57	-5.34	-8.5	-4.8	-6.5
130	1.6	212	-3.81	-3.50	-5.5	-2.5	-4.4
131	4.5	319	-7.39	-7.35	-7.4	-3.0	-8.6
132	4.5	322	-9.96	-10.00	-10.5	-6.4	-11.1
133	4.1	348	-11.37	-11.43	-11.4	-7.6	-13.5
134	4.2	278	-12.98	-12.90	-14.8	-10.4	-12.8
135	5.4	311	-13.13	-12.95	-13.7	-9.4	-13.3
136	2.8	149	-10.10	-10.12	-11.8	-7.8	-10.5
137	8.1	101	-10.62	-10.68	-11.2	-8.9	-12.8
138	3.4	47	-17.82	-17.54	-17.8	-11.2	-17.9
139	4.2	6	-13.50	-13.49	-18.0	-9.6	-13.4
140	1.6	358	-9.26	-9.24	-13.6	-9.1	-10.6

CAMP 1 - CARIBOU

DAY	WS	WD	T2	T9	TMIN	TMAX
121	2.2	275	-13.56	-13.36	-13.6	-13.0
122	4.4	49	-22.06	-21.37	-22.2	-14.9
123	4.2	55	-20.24	-19.86	-22.6	-16.1
124	5.3	64	-19.09	-18.61	-20.0	-13.2
125	8.2	66	-9.24	-9.04	-18.8	-9.2
126	6.3	83	-8.11	-7.95	-9.1	-5.7
127	3.1	62	-12.58	-11.78	-12.6	-5.2
128	2.3	59	-5.55	-5.46	-13.5	-5.4
129	1.6	157	-5.86	-5.37	-6.6	-4.8
130	2.6	272	-3.51	-3.24	-5.9	-2.7
131	2.7	322	-8.52	-8.25	-10.2	-1.9
132	3.5	359	-10.02	-9.86	-10.2	-6.8
133						
134						
135	3.9	281	-15.44	-14.87	-15.4	-9.5
136	3.0	130	-10.16	-10.31	-14.4	-8.0
137						
138	4.7	59	-16.16	-15.82	-16.2	-11.0
139	4.6	27	-13.11	-12.12	-16.5	-9.4
140	1.9	104	-11.50	-11.60	-15.8	-11.4

CAMP 2 - BLUEFOX

DAY	WS	WD	T2	T9	TMIN	TMAX
121	3.3	237	-24.07	-23.81	-24.1	-17.9
122	1.4	257	-22.44	-21.81	-23.9	-18.5
123	3.1	50	-24.82	-23.70	-24.8	-18.3
124	3.6	54	-22.72	-22.40	-24.4	-15.8
125	5.2	59	-16.57	-17.09	-22.2	-14.8
126	7.1	74	-10.91	-11.32	-15.3	-6.8
127	3.7	70	-13.54	-13.49	-13.5	-6.2
128	3.4	56	-13.64	-13.89	-13.6	-5.8
129	3.1	151	-4.96	-5.24	-14.5	-4.5
130	1.4	245	-4.86	-4.66	-5.0	-3.4
131	3.1	305	-12.02	-12.44	-13.9	-3.6
132	5.4	318	-10.92	-11.51	-11.0	-7.1
133	5.8	328	-11.53	-12.20	-11.5	-7.7
134						
135	5.8	301	-10.24	-10.71	-12.8	-9.9
136	2.8	141	-12.17	-12.41	-12.2	-9.0
137	5.7	70	-11.66	-12.17	-11.9	-8.8
138	5.7	62	-15.80	-16.54	-15.8	-11.9
139						
140	2.3	358	-10.55	-10.69	-12.5	-8.2

CAMP 3 - SNOWBIRD

DAY	WS	WD	T2	T9	TMIN	TMAX
121	1.9	241	-21.97	-21.71	-22.8	-15.9
122	2.9	44	-24.20	-22.76	-24.4	-17.6
123	3.2	55	-22.77	-22.50	-24.1	-16.8
124	4.5	66	-20.05	-19.93	-22.6	-13.5
125	7.2	56	-10.60	-10.87	-20.2	-10.3
126	6.5	76	-7.55	-7.64	-10.3	-5.1
127	3.5	92	-6.11	-6.36	-9.4	-5.2
128	1.8	44	-5.71	-5.80	-9.9	-5.7
129	2.6	159	-4.14	-4.39	-5.7	-4.1
130	2.1	272	-2.70	-3.04	-4.1	-2.6
131	3.5	281	-7.22	-7.43	-7.2	-2.6
132	4.7	343	-9.51	-9.75	-9.5	-6.7
133	3.8	337	-10.59	-10.83	-10.6	-7.6
134	3.2	272	-12.17	-12.55	-12.2	-9.9
135	5.5	321	-12.43	-12.52	-14.1	-9.0
136						
137						
138	5.0	65	-16.48	-16.52	-16.5	-10.9

CAMP 0 - BIGBEAR

DAY	WS	WD	T2	T9	TMIN	TMAX	FP
141	1.8	141	-10.49	-10.43	-10.5	-8.7	-10.8
142	4.2	158	-12.04	-12.13	-12.0	-9.4	-14.1
143	2.5	251	-11.03	-10.92	-11.9	-10.4	-12.5
144	1.9	289	-10.79	-10.79	-11.3	-9.5	-12.9
145	3.8	127	-11.09	-11.18	-11.5	-10.2	-13.6
146	5.8	43	-13.49	-26.03	-13.5	-10.3	
147	6.3	79	-11.10	-11.25	-14.1	-8.0	-11.8
148	7.3	78	-13.32	-13.41	-13.3	-10.7	-13.6
149	6.3	98	-5.87	-5.92	-13.0	-5.0	-8.4
150							
151	3.7	66	-11.43	-11.11	-11.4	-8.2	-13.1
152	3.5	45	-11.55	-11.26	-11.7	-6.1	-12.8
153	2.0	97	-7.44	-7.51	-11.2	-5.7	-8.3
154	2.5	85	-9.08	-9.23	-9.1	-5.2	-10.2
155	4.5	54	-6.52	-6.65	-8.9	-6.5	-7.4
156	3.8	20	-7.71	-7.82	-7.7	-1.1	-8.2
157	3.3	336	-1.18	-1.27	-7.6	-1.2	-1.4
158	2.9	353	.03	-.06	-1.6	.6	-.2
159	4.4	356	-.87	-.96	-.9	1.0	-1.9
160	3.4	294	-4.20	-4.35	-4.2	.0	-5.5

CAMP 1 - CARIBOU

DAY	WS	WD	T2	T9	TMIN	TMAX
141	2.8	131	-11.47	-11.45	-11.5	-8.3
142	3.5	155	-12.11	-12.12	-12.2	-9.2
143	1.9	163	-11.27	-11.20	-12.5	-10.3
144	2.2	285	-10.97	-11.19	-12.5	-8.8
145	4.7	113	-11.47	-11.37	-11.5	-10.2
146	6.1	48	-10.08	-10.12	-11.4	-9.9
147	6.9	80	-11.28	-11.23	-11.3	-6.7
148	6.5	98	-10.40	-10.35	-12.5	-10.4
149	7.1	105	-7.94	-7.76	-10.1	-4.2
150						
151	4.0	68	-9.97	-10.00	-10.0	-4.1
152	3.5	65	-8.29	-8.49	-10.0	-5.8
153	3.7	72	-6.18	-6.59	-9.0	-6.2
154	3.8	79	-5.58	-5.82	-5.7	-3.5
155	5.3	53	-5.82	-6.03	-7.2	-5.8
156	2.1	35	-6.12	-5.96	-6.1	-.6
157	2.5	320	-4.35	-4.63	-6.7	-4.3
158	2.7	329	-.91	-1.23	-3.7	.5
159	2.6	356	-.43	-.57	-.9	.8

CAMP 2 - BLUEFOX

DAY	WS	WD	T2	T9	TMIN	TMAX
141	2.8	179	-9.80	-10.16	-10.5	-9.6
142						
143	2.6	187	-10.54	-10.85	-11.1	-10.1
144	4.6	285	-11.70	-12.16	-13.1	-9.3
145	1.3	134	-11.01	-11.55	-12.1	-10.0
146	5.9	57	-11.24	-11.61	-11.3	-10.2
147	5.8	68	-11.45	-11.74	-11.4	-8.7
148	5.4	80	-14.24	-14.40	-14.2	-11.3
149	6.1	106	-6.60	-6.80	-14.4	-6.5
150	4.4	89	-10.62	-10.74	-10.6	-5.9
151	3.3	56	-12.14	-12.06	-12.1	-5.2
152	3.8	55	-10.24	-10.22	-11.9	-6.0
153	2.5	70	-8.53	-8.94	-10.2	-5.4
154	3.0	99	-8.45	-8.87	-10.2	-7.5
155	3.2	32	-8.07	-8.23	-8.6	-5.6
156	3.1	8	-6.37	-6.64	-6.5	-2.3
157	3.6	353	-1.62	-1.59	-6.7	-.1
158	3.5	357	-.41	-.66	-1.6	.2
159	3.7	340	-1.08	-1.29	-1.4	.8
160	3.0	321	-3.60	-3.93	-3.7	-.6

CAMP 3 - SNOWBIRD

DAY	WS	WD	T2	T9	TMIN	TMAX
141	3.1	225	-13.23	-13.33	-17.4	-8.7
142	1.6	304	-11.83	-12.26	-12.6	-9.6
143	3.1	271	-10.99	-11.37	-11.8	-10.1
144	2.5	242	-11.32	-11.69	-11.3	-9.2
145	2.3	110	-11.31	-11.39	-11.7	-10.7
146	4.6	42	-11.84	-11.99	-11.8	-9.9
147	6.7	91	-10.97	-11.20	-11.5	-8.0
148	8.0	85	-12.19	-12.54	-12.6	-10.0
149	5.6	103	-7.39	-7.44	-12.1	-5.6
150	6.9	109	-8.28	-8.48	-8.3	-2.9
151	4.1	88	-9.99	-9.73	-10.0	-3.2
152	3.4	68	-10.05	-9.95	-10.3	-4.9
153	4.0	100	-7.95	-8.16	-10.3	-4.8
154	2.4	105	-8.61	-8.81	-8.6	-4.3
155	4.6	54	-8.31	-8.57	-9.3	-5.6
156	3.5	18	-6.83	-6.38	-7.9	-1.4
157	3.2	339	-3.15	-3.26	-7.7	-3.2
158	2.9	-2	-.63	-.53	-2.5	.3
159	4.1	6	-.96	-1.07	-1.0	.6
160	3.2	277	-6.38	-6.26	-6.4	-.3

CAMP 0 - BIGBEAR

DAY	WS	WD	T2	T9	TMIN	TMAX	FP
161	3.5	261	-3.82	-3.97	-4.6	-2.8	-4.2
162	1.3	357	-1.44	-1.51	-3.7	-.5	
163	2.8	268	-3.94	-4.04	-4.9	-2.0	-3.1
164	1.9	325	-4.59	-4.01	-4.6	-1.1	-5.2
165	3.0	47	-3.06	-3.25	-3.6	-2.6	-3.9
166	3.2	47	-3.54	-3.65	-4.6	-1.1	-4.4
167	1.8	54	-3.59	-3.70	-3.6	-2.3	-4.8
168	7.4	90	-.94	-.98	-4.6	-.7	-1.3
169	4.8	356	-3.60	-1.19	-3.6	-.8	-3.8
170	4.0	51	-1.31	-1.19	-3.2	-1.1	-1.9
171	3.0	62	-3.05	-2.99	-3.1	.0	-4.5
172	4.0	104	-4.59	-4.60	-5.6	-2.9	-5.1
173	4.6	194	.12	.23	-5.0	.1	.1
174	5.3	62	-.74	-.84	-1.3	.4	-.9
175	2.1	358	.17	.07	-.5	.7	.1
176	4.3	228	.01	.04	-1.1	1.1	-.5
177	.9	112	-2.51	-2.49	-2.5	.4	-2.7
178	3.1	194	.01	.02	-2.6	.3	-.2
179	4.7	201	-.15	-.20	-.3	.3	-.6
180	4.8	207	-.56	-.57	-1.6	.7	-.9

CAMP 2 - BLUEFOX

DAY	WS	WD	T2	T9	TMIN	TMAX
161	3.7	223	-2.76	-3.33	-3.9	-2.6
162	1.3	48	-5.09	-4.45	-6.6	-.4
163	3.7	309	-1.52	-1.89	-4.4	-1.5
164	2.6	347	-3.75	-3.86	-5.8	-.7
165	3.3	88	-2.70	-3.13	-3.6	-2.5
166	3.4	86	-3.25	-3.62	-3.5	-1.0
167	1.4	36	-3.16	-3.53	-7.1	-2.6
168	7.3	95	-1.06	-1.26	-3.3	-.7
169	6.9	350	-2.59	-2.82	-2.8	-1.1
170	4.1	53	-1.39	-1.63	-3.1	-.9
171	1.9	332	-4.67	-4.85	-4.7	-.2
172	3.3	100	-6.48	-6.42	-7.0	-3.8
173	4.9	174	.19	-.09	-6.0	.2
174	5.8	55	-.19	-.46	-1.1	1.2
175	2.3	81	.67	.41	-.3	.6
176	5.8	238	-.98	-1.29	-1.0	1.2
177	1.9	206	-1.16	-1.41	-1.2	.8
178	2.8	195	.32	.06	-1.1	.6
179	4.8	200	.04	-.28	.0	.9
180	4.1	220	-1.50	-1.94	-1.7	.9

CAMP 1 - CARIBOU

DAY	WS	WD	T2	T9	TMIN	TMAX
161	3.4	219	-4.92	-5.20	-5.0	-3.2
162	1.9	41	-5.07	-5.48	-5.1	-1.8
163	2.7	17	-2.24	-2.31	-5.8	-1.6
164	1.7	144	-1.95	-1.99	-2.6	-1.8
165	4.3	53	-3.66	-3.68	-4.3	-1.9
166	2.3	71	-3.11	-3.25	-3.6	-2.0
167	7.4	117	-.73	-.75	-2.9	-.7
168	5.7	14	-1.65	-1.84	-1.6	.4
169	3.5	20	-2.11	-2.27	-2.3	-1.5
170	2.5	58	-3.78	-3.35	-3.8	-.8
171	4.5	106	-2.14	-2.14	-4.4	-1.8
172	3.9	184	.22	.16	-2.0	.3
173	5.1	67	-.45	-.55	-.7	.9
174	2.5	16	-.24	-.34	-.4	.5
175	4.8	248	-.32	-.59	-1.5	.3
176	1.8	67	-.95	-1.05	-.9	.0
177	4.4	230	-.02	.08	-.6	.6
178	5.8	202	-.23	-.19	-1.0	.7
179	5.0	217	-1.00	-1.34	-1.3	.3

CAMP 3 - SNOWBIRD

DAY	WS	WD	T2	T9	TMIN	TMAX
161	1.9	322	-4.40	-4.62	-5.2	-4.0
162	1.5	338	-1.17	-1.33	-4.4	-.5
163	1.4	333	-4.84	-4.90	-4.8	-.3
164	2.7	13	-5.49	-5.02	-5.5	-.4
165	3.5	60	-3.82	-4.06	-4.9	-3.4
166	2.0	90	-4.23	-3.83	-4.2	-1.1
167	2.1	56	-3.69	-3.83	-5.3	-2.0
168	7.7	79	-1.02	-1.11	-4.0	-.6
169	4.3	15	-3.87	-3.66	-3.9	-.1
170	5.0	26	-2.12	-2.31	-3.7	-1.4
171	4.5	70	-2.91	-3.08	-2.9	.2
172	3.9	96	-3.57	-3.74	-4.6	-2.3
173	4.1	201	-.11	-.26	-3.5	-.1
174	4.8	77	-1.28	-1.43	-1.3	.2
175	2.4	218	-.38	-.48	-1.3	-.0
176	2.1	157	-2.23	-2.19	-2.2	.4
177	3.0	191	-.12	-.26	-2.3	.3
178	3.7	218	-.89	-1.07	-1.3	.1
179	5.0	186	-.85	-1.02	-1.9	.2

ATMOSPHERIC SURFACE PRESSURE

Atmospheric surface pressure was recorded at three-hour intervals for each manned camp and buoy. The daily pressures reported here are nearly instantaneous measurements at 1200 GMT. All pressures have been corrected to sea level. Zero values indicate absence of data.

At Big Bear (Station 0) pressure was measured with a mercury barometer which served as the standard against which all other pressure

sensors were calibrated. Its accuracy was about ± 0.1 mb. During this period the other manned camps (Stations 1-3) were equipped only with microbarographs accurate to approximately ± 0.5 mb. Each NavSat buoy installation (Stations 5-13) was equipped with two electronic pressure sensors which had an accuracy of about ± 0.2 mb.

STATION 0 BIG BEAR

1975	ATM PRESS(MB)
101	1020.0
102	1028.5
103	1032.3
104	1021.1
105	1002.4
106	1004.3
107	1000.1
108	1009.3
109	1013.8
110	1017.6
111	1014.4
112	1012.0
113	1004.3
114	1004.3
115	1007.1
116	1006.1
117	1005.4
118	1013.2
119	1017.9
120	1013.8

STATION 1 CARIBOU

1975	ATM PRESS(MB)
101	.0
102	.0
103	.0
104	.0
105	.0
106	.0
107	.0
108	.0
109	.0
110	.0
111	.0
112	.0
113	.0
114	.0
115	.0
116	1005.9
117	1006.9
118	1014.8
119	1019.5
120	1017.7

STATION 2 BLUE FOX

1975	ATM PRESS(MB)
101	.0
102	.0
103	.0
104	.0
105	.0
106	.0
107	.0
108	.0
109	1013.1
110	1016.5
111	1014.7
112	1011.6
113	1001.5
114	1004.3
115	1006.3
116	1005.6
117	1003.9
118	1012.7
119	1016.8
120	1010.8

STATION 3 SNOW BIRD

1975	ATM PRESS(MB)
101	.0
102	.0
103	.0
104	.0
105	1003.7
106	1003.8
107	1000.5
108	1009.0
109	1013.6
110	1017.9
111	1014.6
112	1012.0
113	1004.9
114	1003.7
115	1007.0
116	1006.0
117	1005.3
118	1012.6
119	1017.4
120	1013.4

STATION 5 BUOY ONE

1975	ATM PRESS(MB)
101	.0
102	.0
103	.0
104	.0
105	.0
106	.0
107	.0
108	.0
109	.0
110	.0
111	.0
112	.0
113	.0
114	.0
115	.0
116	.0
117	.0
118	.0
119	.0
120	.0

STATION 7 BUOY THREE

1975	ATM PRESS(MB)
101	.0
102	.0
103	.0
104	.0
105	.0
106	.0
107	.0
108	.0
109	.0
110	.0
111	.0
112	.0
113	.0
114	.0
115	.0
116	.0
117	.0
118	.0
119	.0
120	.0

STATION 8 BUOY FOUR

1975	ATM PRESS(MB)
101	.0
102	.0
103	.0
104	.0
105	.0
106	.0
107	.0
108	.0
109	.0
110	.0
111	.0
112	.0
113	1006.2
114	1002.6
115	1006.1
116	1005.9
117	1007.0
118	1012.7
119	1018.4
120	1015.5

STATION 9 BUOY FIVE

1975	ATM PRESS(MB)
101	.0
102	.0
103	.0
104	.0
105	.0
106	.0
107	.0
108	.0
109	.0
110	.0
111	.0
112	.0
113	.0
114	.0
115	.0
116	.0
117	.0
118	.0
119	.0
120	.0

STATION 10 BUOY SIX

1975	ATM PRESS(MB)
101	.0
102	.0
103	.0
104	.0
105	.0
106	.0
107	.0
108	.0
109	.0
110	.0
111	.0
112	.0
113	.0
114	.0
115	.0
116	.0
117	.0
118	.0
119	.0
120	.0

STATION 11 BUOY SEVEN

1975	ATM PRESS(MB)
101	.0
102	.0
103	.0
104	.0
105	.0
106	.0
107	.0
108	.0
109	.0
110	.0
111	.0
112	.0
113	.0
114	.0
115	.0
116	.0
117	.0
118	.0
119	.0
120	.0

STATION 12 BUOY EIGHT

1975	ATM PRESS(MB)
101	.0
102	.0
103	.0
104	.0
105	.0
106	.0
107	.0
108	.0
109	.0
110	.0
111	.0
112	.0
113	.0
114	.0
115	1009.0
116	1002.8
117	1000.1
118	1012.3
119	1014.1
120	1001.0

STATION 13 BUOY NINE

1975	ATM PRESS(MB)
101	.0
102	.0
103	.0
104	.0
105	.0
106	.0
107	.0
108	.0
109	.0
110	.0
111	.0
112	.0
113	.0
114	.0
115	.0
116	.0
117	.0
118	.0
119	.0
120	.0

STATION 0 BIG BEAR

1975 ATM PRESS(MB)

121 1026.6
 122 1031.9
 123 1027.5
 124 1019.6
 125 1014.0
 126 1013.4
 127 1017.9
 128 1023.9
 129 1027.3
 130 1027.2
 131 1034.9
 132 1037.7
 133 1039.1
 134 1032.3
 135 1017.2
 136 1014.2
 137 1012.1
 138 1014.1
 139 1018.9
 140 1021.0

STATION 1 CARIBOU

1975 ATM PRESS(MB)

121 1027.1
 122 1031.1
 123 1026.9
 124 1018.7
 125 1012.2
 126 1012.7
 127 1017.4
 128 1023.8
 129 1027.8
 130 1027.6
 131 1035.0
 132 1037.8
 133 1038.8
 134 1033.1
 135 1017.8
 136 1014.2
 137 1010.8
 138 1012.5
 139 1017.6
 140 1020.8

STATION 2 BLUE FOX

1975 ATM PRESS(MB)

121 1025.5
 122 1031.7
 123 1028.2
 124 1020.6
 125 1015.5
 126 1015.0
 127 1018.3
 128 1025.3
 129 1026.8
 130 1026.7
 131 1033.7
 132 1036.4
 133 1037.6
 134 1030.0
 135 1015.7
 136 1014.3
 137 1013.7
 138 1014.4
 139 1018.4
 140 1021.5

STATION 3 SNOW BIRD

1975 ATM PRESS(MB)

121 1026.4
 122 1031.8
 123 1027.7
 124 1019.4
 125 1013.2
 126 1013.2
 127 1017.2
 128 1023.3
 129 1026.3
 130 1026.8
 131 1034.7
 132 1037.8
 133 1039.1
 134 1032.7
 135 1018.5
 136 1013.4
 137 1011.0
 138 1013.9
 139 1019.8
 140 1022.0

STATION 5 BUDY ONE

1975 ATM PRESS(MB)

121 .0
 122 .0
 123 .0
 124 .0
 125 .0
 126 .0
 127 .0
 128 .0
 129 .0
 130 .0
 131 .0
 132 .0
 133 .0
 134 .0
 135 .0
 136 .0
 137 .0
 138 .0
 139 .0
 140 .0

STATION 7 BUDY THREE

1975 ATM PRESS(MB)

121 .0
 122 .0
 123 .0
 124 .0
 125 .0
 126 .0
 127 .0
 128 .0
 129 .0
 130 .0
 131 .0
 132 .0
 133 .0
 134 .0
 135 1021.6
 136 1008.2
 137 1011.2
 138 1017.5
 139 1022.3
 140 1022.9

STATION 8 BUDY FOUR

1975 ATM PRESS(MB)

121 1026.5
 122 1030.5
 123 1024.9
 124 1015.0
 125 1009.2
 126 1008.4
 127 1015.7
 128 1023.3
 129 1025.7
 130 1029.5
 131 1036.9
 132 1039.5
 133 1040.7
 134 1034.7
 135 1021.7
 136 1010.6
 137 1005.8
 138 1011.3
 139 1019.2
 140 1023.2

STATION 9 BUDY FIVE

1975 ATM PRESS(MB)

121 .0
 122 1031.5
 123 1028.9
 124 1021.4
 125 1018.9
 126 1018.7
 127 1021.4
 128 1028.5
 129 1033.1
 130 1026.0
 131 1028.1
 132 1030.9
 133 1031.7
 134 1021.9
 135 1010.3
 136 1014.5
 137 1015.5
 138 1011.7
 139 1013.8
 140 1019.7

STATION 10 BUOY SIX

1975 ATM PRESS(MB)

121	.0
122	.0
123	.0
124	.0
125	.0
126	.0
127	.0
128	.0
129	.0
130	.0
131	.0
132	.0
133	.0
134	.0
135	1017.1
136	1014.0
137	1010.6
138	1009.4
139	1014.1
140	1019.4

STATION 11 BUOY SEVEN

1975 ATM PRESS(MB)

121	.0
122	.0
123	1021.6
124	1012.4
125	1005.2
126	1008.2
127	1014.4
128	1021.8
129	1027.3
130	1027.7
131	1034.8
132	1036.5
133	1037.7
134	1034.1
135	1019.8
136	1014.1
137	1007.3
138	1006.8
139	1015.8
140	1021.6

STATION 12 BUOY EIGHT

1975 ATM PRESS(MB)

121	1020.0
122	1028.2
123	1024.6
124	1018.8
125	1018.6
126	1020.5
127	1023.0
128	1027.6
129	1027.5
130	1025.8
131	1031.2
132	1035.1
133	1035.9
134	1025.7
135	1015.7
136	1014.7
137	1017.8
138	1018.0
139	1019.3
140	1020.1

STATION 13 BUOY NINE

1975 ATM PRESS(MB)

121	.0
122	.0
123	.0
124	.0
125	.0
126	.0
127	1019.5
128	1026.0
129	1025.3
130	1026.6
131	1033.8
132	1038.7
133	1039.0
134	1029.4
135	1019.1
136	1009.4
137	1016.1
138	1018.7
139	1021.3
140	1021.2

STATION 0 BIG BEAR

1975 ATM PRESS(MB)

141 1021.0
 142 1018.1
 143 1019.8
 144 1027.4
 145 1029.6
 146 1024.6
 147 1027.1
 148 1028.4
 149 1033.1
 150 1037.7
 151 1037.5
 152 1032.1
 153 1026.5
 154 1020.8
 155 1018.5
 156 1014.4
 157 1013.9
 158 1018.8
 159 1023.4
 160 1021.7

STATION 1 CARIBOU

1975 ATM PRESS(MB)

141 1020.7
 142 1018.6
 143 1019.8
 144 1027.8
 145 1029.2
 146 1022.8
 147 1025.8
 148 1027.1
 149 1032.0
 150 1036.8
 151 1036.5
 152 1031.0
 153 1025.5
 154 1020.4
 155 1017.0
 156 1013.4
 157 1013.8
 158 1018.7
 159 1022.8
 160 1021.9

STATION 2 BLUE FOX

1975 ATM PRESS(MB)

141 1021.2
 142 1018.5
 143 1019.9
 144 1027.0
 145 1030.6
 146 1026.2
 147 1028.0
 148 1030.6
 149 1035.4
 150 1039.6
 151 1038.6
 152 1032.2
 153 1026.5
 154 1020.7
 155 1018.6
 156 1013.7
 157 1013.0
 158 1017.7
 159 1021.7
 160 1020.9

STATION 3 SNOW BIRD

1975 ATM PRESS(MB)

141 1020.7
 142 1018.0
 143 1019.8
 144 1027.6
 145 1029.3
 146 1025.3
 147 1027.0
 148 1027.3
 149 1031.9
 150 1036.4
 151 1037.5
 152 1032.4
 153 1026.5
 154 1021.3
 155 1019.3
 156 1015.3
 157 1015.0
 158 1019.8
 159 1024.3
 160 1021.8

STATION 5 BUOY ONE

1975 ATM PRESS(MB)

141 .0
 142 .0
 143 .0
 144 .0
 145 .0
 146 .0
 147 .0
 148 .0
 149 .0
 150 .0
 151 .0
 152 .0
 153 .0
 154 .0
 155 .0
 156 .0
 157 .0
 158 .0
 159 .0
 160 1018.5

STATION 7 BUOY THREE

1975 ATM PRESS(MB)

141 1018.9
 142 1014.5
 143 1018.0
 144 1025.7
 145 1026.2
 146 1027.3
 147 1028.2
 148 1027.1
 149 1028.9
 150 1030.5
 151 1033.1
 152 1030.8
 153 1026.5
 154 1021.6
 155 1020.3
 156 1019.0
 157 1017.9
 158 1023.2
 159 1027.8
 160 1024.1

STATION 8 BUOY FOUR

1975 ATM PRESS(MB)

141 1019.9
 142 1017.4
 143 1020.2
 144 1027.0
 145 1026.5
 146 1024.4
 147 1023.4
 148 1022.4
 149 1026.4
 150 1029.6
 151 1032.8
 152 1029.5
 153 1024.2
 154 1019.8
 155 1017.0
 156 1015.8
 157 1015.6
 158 1020.0
 159 1025.7
 160 1024.7

STATION 9 BUOY FIVE

1975 ATM PRESS(MB)

141 1021.0
 142 1022.1
 143 1020.2
 144 1025.5
 145 1031.7
 146 1028.2
 147 1027.7
 148 1032.1
 149 1038.8
 150 1038.8
 151 1037.0
 152 1031.3
 153 1026.0
 154 1021.5
 155 1017.9
 156 1010.0
 157 1008.9
 158 1012.7
 159 1015.8
 160 1017.4

STATION 10 BUOY SIX

1975	ATM PRESS(MB)
141	1021.4
142	1018.9
143	1018.8
144	1027.1
145	1028.3
146	1016.6
147	1023.1
148	1026.5
149	1031.3
150	1035.5
151	1034.0
152	1028.9
153	1023.5
154	1019.1
155	1013.4
156	1010.7
157	1012.3
158	1017.3
159	1022.2
160	1022.2

STATION 11 BUOY SEVEN

1975	ATM PRESS(MB)
141	1019.9
142	1017.6
143	1020.1
144	1028.1
145	1026.1
146	1020.2
147	1021.8
148	1023.0
149	1028.0
150	1033.0
151	1033.8
152	1029.1
153	1023.0
154	1018.0
155	1013.6
156	1011.8
157	1014.0
158	1018.8
159	1023.0
160	1024.0

STATION 12 BUOY EIGHT

1975	ATM PRESS(MB)
141	1018.2
142	1015.9
143	1016.8
144	1024.0
145	1029.8
146	1029.0
147	1031.5
148	1034.5
149	1038.8
150	1041.9
151	1040.9
152	1036.2
153	1030.1
154	1024.1
155	1022.0
156	1017.4
157	1018.5
158	1021.5
159	1022.6
160	1021.1

STATION 13 BUOY NINE

1975	ATM PRESS(MB)
141	1017.8
142	1014.0
143	1016.5
144	1025.7
145	1027.4
146	1028.2
147	1030.8
148	1031.7
149	1033.7
150	1035.7
151	1036.1
152	1033.9
153	1028.9
154	1022.6
155	1022.0
156	1019.2
157	1019.8
158	1023.5
159	1026.4
160	1023.3

STATION 0 BIG BEAR

1975 ATM PRESS(MB)

161 1017.9
 162 1015.8
 163 1018.3
 164 1014.1
 165 1016.8
 166 1019.6
 167 1023.4
 168 1016.6
 169 1017.8
 170 1023.4
 171 1021.8
 172 1017.0
 173 1007.8
 174 1004.4
 175 1002.5
 176 1008.3
 177 1017.9
 178 1010.2
 179 1001.9
 180 1009.2

STATION 1 CARIBOU

1975 ATM PRESS(MB)

161 1018.3
 162 1016.5
 163 1018.5
 164 1013.6
 165 1016.3
 166 1018.6
 167 1022.9
 168 1015.0
 169 1017.4
 170 1023.0
 171 1021.3
 172 1016.3
 173 1008.6
 174 1002.8
 175 1001.9
 176 1009.1
 177 1018.1
 178 1011.0
 179 1002.5
 180 1010.1

STATION 2 BLUE FOX

1975 ATM PRESS(MB)

161 1016.7
 162 1016.0
 163 1017.4
 164 1014.5
 165 1017.3
 166 1020.2
 167 1023.4
 168 1018.6
 169 1017.3
 170 1023.7
 171 1021.8
 172 1017.7
 173 1008.6
 174 1004.9
 175 1002.5
 176 1008.2
 177 1018.4
 178 1010.2
 179 1002.1
 180 1009.3

STATION 3 SNOW BIRD

1975 ATM PRESS(MB)

161 1018.1
 162 1015.9
 163 1018.9
 164 1014.6
 165 1016.5
 166 1019.6
 167 1023.3
 168 1015.7
 169 1019.3
 170 1023.7
 171 1021.7
 172 1016.4
 173 1007.2
 174 1004.7
 175 1003.3
 176 1007.9
 177 1017.7
 178 1010.1
 179 1001.9
 180 1008.3

STATION 5 BUOY ONE

1975 ATM PRESS(MB)

161 1016.1
 162 1016.9
 163 1016.3
 164 1013.6
 165 1016.4
 166 1021.8
 167 1023.5
 168 1024.9
 169 1013.4
 170 1024.6
 171 1020.8
 172 1018.5
 173 1013.0
 174 1009.7
 175 1007.0
 176 1007.1
 177 1017.4
 178 1012.0
 179 1003.4
 180 1006.3

STATION 7 BUOY THREE

1975 ATM PRESS(MB)

161 1020.4
 162 1018.9
 163 1021.3
 164 1017.4
 165 1018.4
 166 1020.9
 167 1022.6
 168 1021.3
 169 1023.3
 170 1026.2
 171 1022.3
 172 1014.5
 173 1004.6
 174 1004.9
 175 1006.9
 176 1008.7
 177 1013.9
 178 1008.7
 179 1001.9
 180 1001.7

STATION 8 BUOY FOUR

1975 ATM PRESS(MB)

161 1019.2
 162 1017.8
 163 1019.5
 164 1016.0
 165 1016.2
 166 1019.1
 167 1021.7
 168 1014.5
 169 1022.4
 170 1023.8
 171 1018.5
 172 1010.3
 173 1005.2
 174 1002.4
 175 1004.5
 176 1008.9
 177 1015.3
 178 1007.6
 179 1004.0
 180 1002.7

STATION 9 BUOY FIVE

1975 ATM PRESS(MB)

161 1017.1
 162 1016.0
 163 1013.1
 164 1011.7
 165 1017.2
 166 1021.0
 167 1020.4
 168 1023.9
 169 1007.3
 170 1021.5
 171 1018.2
 172 1017.5
 173 1015.0
 174 1008.6
 175 1007.6
 176 1009.3
 177 1017.8
 178 1013.2
 179 1006.7
 180 1007.5

STATION 10 BUOY SIX

1975	ATM PRESS(MB)
161	1018.8
162	1016.7
163	1017.5
164	1013.5
165	1016.6
166	1014.6
167	1022.2
168	1015.6
169	1016.4
170	1021.2
171	1019.5
172	1017.0
173	1010.5
174	999.3
175	999.9
176	1010.9
177	1017.4
178	1012.3
179	1007.7
180	1012.3

STATION 11 BUOY SEVEN

1975	ATM PRESS(MB)
161	1018.9
162	1017.1
163	1018.2
164	1013.9
165	1019.5
166	1016.8
167	1022.5
168	1013.8
169	1018.5
170	1022.2
171	1019.6
172	1014.1
173	1008.9
174	999.9
175	1002.8
176	1011.5
177	1016.1
178	1012.4
179	1006.2
180	1011.0

STATION 12 BUOY EIGHT

1975	ATM PRESS(MB)
161	1017.0
162	1017.8
163	1019.0
164	1014.6
165	1017.4
166	1020.6
167	1023.3
168	1023.1
169	1021.1
170	1026.0
171	1022.6
172	1019.0
173	1010.6
174	1008.6
175	1003.7
176	1005.2
177	1014.6
178	1011.2
179	1001.0
180	1005.2

STATION 13 BUOY NINE

1975	ATM PRESS(MB)
161	1019.7
162	1018.7
163	1021.2
164	1016.1
165	1019.0
166	1020.4
167	1022.6
168	1021.8
169	1022.7
170	1027.0
171	1024.0
172	1017.7
173	1007.6
174	1006.0
175	1005.6
176	1007.5
177	1013.5
178	1009.8
179	1000.4
180	1004.1

SURFACE GEOSTROPHIC WINDS

Surface geostrophic winds were computed for each manned camp at six-hour intervals. The daily values of geostrophic wind reported here are for 1200 GMT. The geostrophic wind direction is the direction from which the wind blows, measured clockwise from north.

The geostrophic wind was determined by fitting a two-dimensional polynomial function to the sea-level pressure data from AIDJEX platforms and shore weather stations. The two horizontal components of pressure gradient were evaluated by differentiating the polynomial function at grid points of a rectangular mesh covering the area inside the AIDJEX buoy ring. The geostrophic wind was then evaluated at all grid points and the geostrophic winds at manned camp determined

by linearly interpolating from the surrounding grid values.

The accuracy of the calculations is limited by two factors: (1) inadequate number of pressure measurements to properly define the pressure surface; and (2) errors in the pressure measurements themselves. The resulting errors in geostrophic wind are about 1 m sec^{-1} for speed and ± 10 degrees for direction. The errors are somewhat larger for the first 20-day period (days 101-120), since the first buoy was not installed until day 113.

Tabulated values of zero indicate absence of data.

GEOSTROPHIC WINDS AT MANNED CAMPS

1975 DAY	STATION BIG BEAR		STATION CARIBOU		STATION BLUE FOX		STATION SNOW BIRD	
	SPEED (M/SEC)	DIRECTION (DEGREES)	SPEED (M/SEC)	DIRECTION (DEGREES)	SPEED (M/SEC)	DIRECTION (DEGREES)	SPEED (M/SEC)	DIRECTION (DEGREES)
101	5.2	283	0.0	0	0.0	0	0.0	0
102	5.0	310	0.0	0	0.0	0	0.0	0
103	5.1	9	0.0	0	0.0	0	0.0	0
104	13.1	131	0.0	0	0.0	0	0.0	0
105	7.6	8	0.0	0	0.0	0	10.3	355
106	6.5	235	0.0	0	0.0	0	6.0	236
107	10.2	256	0.0	0	0.0	0	10.9	260
108	6.3	234	0.0	0	0.0	0	6.3	231
109	6.5	244	0.0	0	5.1	245	6.2	244
110	5.3	270	0.0	0	5.4	278	4.7	261
111	1.9	88	0.0	0	1.8	74	2.4	74
112	1.7	301	0.0	0	3.3	300	.9	314
113	10.3	273	0.0	0	10.9	269	10.6	266
114	5.5	183	0.0	0	7.4	169	6.0	198
115	2.4	98	0.0	0	2.1	72	2.9	93
116	.7	155	2.5	91	2.2	213	.3	164
117	6.5	260	5.3	275	6.4	246	7.3	258
118	4.0	212	5.2	212	3.4	223	3.2	208
119	6.6	235	6.5	237	6.6	227	6.6	239
120	18.5	243	16.7	245	19.0	239	18.8	245
121	4.7	244	2.7	232	6.6	251	4.4	242
122	1.6	94	4.1	79	1.0	233	1.7	105
123	5.9	95	8.7	89	2.6	112	6.2	96
124	8.3	104	11.0	97	5.0	114	8.8	106
125	14.1	98	15.7	101	11.0	100	14.8	95
126	11.6	108	11.4	111	10.5	107	12.1	107
127	6.9	85	6.8	74	7.9	90	5.9	91
128	5.1	102	4.7	95	6.1	110	4.4	96
129	5.1	177	4.8	176	6.2	173	4.2	181
130	3.8	321	3.5	325	3.4	319	4.0	321
131	6.2	319	5.1	330	7.5	316	5.3	319
132	5.4	338	4.5	354	7.0	328	4.7	344
133	5.1	350	5.2	6	6.4	337	4.2	352
134	9.3	313	8.4	319	11.2	313	7.9	307
135	10.8	327	10.4	322	11.2	335	9.6	326
136	2.5	224	1.3	229	1.6	249	4.4	199
137	11.3	121	11.5	124	9.3	117	12.4	120
138	9.5	70	11.1	83	7.7	46	11.1	76
139	8.2	22	8.3	32	9.1	10	7.2	33
140	2.2	343	3.1	349	1.1	359	2.8	327

GEOSTROPHIC WINDS AT MANNED CAMPS

1975 DAY	BIG BEAR		CARIBOU		BLUE FOX		SNOW BIRD	
	STATION SPEED (M/SEC)	DIRECTION (DEGREES)	STATION SPEED (M/SEC)	DIRECTION (DEGREES)	STATION SPEED (M/SEC)	DIRECTION (DEGREES)	STATION SPEED (M/SEC)	DIRECTION (DEGREES)
141	2.2	186	2.6	152	2.7	224	2.0	177
142	4.4	187	3.5	169	5.9	191	3.8	201
143	1.5	280	1.5	342	1.9	258	2.3	265
144	1.9	244	1.2	268	2.5	252	2.4	237
145	5.3	134	6.6	122	4.1	150	5.5	133
146	10.4	72	11.9	59	10.9	85	8.1	70
147	8.4	95	9.3	96	7.1	89	9.0	99
148	11.6	122	11.8	123	10.1	120	12.2	120
149	12.3	132	12.3	128	11.7	134	12.4	133
150	9.8	131	10.1	125	7.9	125	11.7	137
151	5.2	101	6.2	93	4.8	88	6.1	122
152	5.2	80	5.4	78	5.6	72	5.3	96
153	5.6	83	6.1	84	5.4	73	5.9	93
154	3.2	77	4.0	88	3.0	70	3.5	84
155	8.3	77	9.4	77	7.4	74	8.0	80
156	7.1	35	6.9	41	7.5	29	6.8	40
157	6.3	19	5.5	3	8.0	28	5.5	25
158	6.3	5	5.3	358	8.0	8	5.1	17
159	7.5	353	5.7	358	9.6	347	6.5	4
160	6.6	327	6.6	319	6.5	334	6.2	326
161	3.3	304	3.1	293	3.4	304	3.1	314
162	2.3	315	2.9	295	1.4	341	2.5	328
163	5.3	343	4.1	346	6.6	344	4.1	354
164	2.7	357	2.3	5	3.1	354	2.8	4
165	2.0	122	2.6	130	1.0	127	2.5	106
166	6.1	83	7.4	72	5.9	90	4.6	84
167	.8	111	1.2	87	1.0	58	1.6	154
168	10.8	124	9.4	129	12.0	127	10.0	115
169	13.3	358	11.0	353	15.2	359	11.3	5
170	4.1	58	3.6	52	4.5	60	3.9	60
171	3.1	86	3.8	95	2.9	46	4.3	110
172	7.4	145	8.5	143	5.0	146	9.3	141
173	6.5	176	5.8	198	7.8	165	5.8	180
174	9.6	93	10.2	86	10.1	98	8.3	95
175	2.6	72	3.1	22	4.6	106	1.8	25
176	6.5	260	7.0	262	6.0	261	6.0	259
177	2.7	184	3.6	139	2.7	223	3.3	185
178	3.8	211	4.9	237	3.3	187	4.1	202
179	7.6	245	9.5	249	7.3	231	6.5	259
180	7.5	228	7.3	226	6.9	247	8.9	211

THE INVERSION HEIGHT AS DETERMINED WITH ACOUSTIC RADAR

The planetary boundary layer, especially in the midlatitudes, is generally modeled as a neutral or weakly stable layer capped by an "inversion," a strongly stable layer of air in which the temperature increases with height, and enclosed below by a surface layer of air in which the temperature changes with height in transition from the surface temperature to the boundary layer temperature. The air above the inversion is also stable; the air near the earth's surface may be stable or unstable. The height of the base of the inversion layer is called the *inversion height*. In the Arctic the air above the inversion is nearly neutral while the planetary boundary layer itself is stable; in this case the point of the break from stable to neutral stratification is referred to as the inversion height. Typically the inversion is also the site of greater wind shear than is found elsewhere in the planetary boundary layer above the surface layer.

Because the presence of a temperature variation with height in a region with wind shear produces a turbulent layer of air that scatters sound waves very effectively, the height of these layers can be located by acoustic means. One of these is the acoustic radar. This instrument transmits short pulses of sound vertically and receives sound back-scattered from inversions, with the received sound delayed behind the transmitted sound by enough time to accommodate the round trip from antenna to scattering layer and back. The AIDJEX air

stress measurement program used an acoustic radar to locate inversion heights. The acoustic radar data usually show the surface layer and one or more layers aloft. Except in certain circumstances, the highest scattering layer height is taken to be the inversion height.

There are two meteorological regimes in which the height of the highest scattering layer may not be the inversion height in the sense that the inversion height is a lid on the planetary boundary layer and the lower limit of geostrophic behavior. These instances occur when the inversion is due to a cooling cloud top and when the inversion is due to subsiding air. Cooling cloud tops tend to set up circulation below and within a cloud to create a neutral layer topped by warmer air above the cloud. This phenomenon can be associated with boundary layer flow but need not be. This situation is common over pack ice in summer. High wind periods do not have this type of cloud cover and hence do not suffer this ambiguity. Subsiding air due to a synoptic high pressure is often characterized by as many as seven or more separate "inversions" which have little or nothing to do with planetary boundary layer flow. These periods also have very low winds. In this case the inversion capping the planetary boundary layer is taken to be the lowest instead of the highest layer. Clearly, periods of low wind are problem areas in the identification of capping inversions, especially in the summer months, when low-level stratus can also complicate the vertical structure.

Inherent errors in acoustic radar height determinations are due to timing problems and pulse length. For the system parameters and hardware of the AIDJEX instrumentation, this error ranges from ± 10 m to ± 50 m, the larger value being appropriate in very high winds. Part of this error is random and diminished by time averaging over several pulses. The resulting accuracy is never worse than ± 20 m in high winds, ± 10 m in low winds. An additional error of about ± 10 m

is introduced by the vertical movement of the inversion base as it is influenced by various fluctuations and waves. The heights listed in the data should therefore be taken as accurate to ± 30 m in high winds and ± 20 m in low winds.

The data recorded here are daily averages. In the Arctic, diurnal or synoptic variations, though usually small, can amount to a 10%-20% hourly difference from the daily average.

HEIGHT OF ATMOSPHERIC INVERSION MEASURED BY ACOUSTIC RADAR
CAMP 0 = BIG BEAR

1975 DAY	AVERAGE HEIGHT (M)	1975 DAY	AVERAGE HEIGHT (M)	1975 DAY	AVERAGE HEIGHT (M)	1975 DAY	AVERAGE HEIGHT (M)
101	000	121	100	141	120	161	480
102	000	122	140	142	140	162	90
103	120	123	100	143	200	163	250
104	190	124	110	144	220	164	450
105	290	125	260	146	190	165	130
106	640	126	560	146	230	166	280
107	550	127	340	147	470	167	340
108	360	128	180	148	300	168	280
109	210	129	120	149	250	169	320
110	180	130	250	150	180	170	300
111	90	131	220	151	150	171	240
112	80	132	220	152	240	172	180
113	120	133	140	153	360	173	160
114	70	134	220	154	430	174	260
115	50	135	210	155	210	175	170
116	110	136	140	156	300	176	380
117	150	137	240	157	270	177	130
118	230	138	400	158	170	178	230
119	220	139	320	159	360	179	240
120	280	140	290	160	390	180	270

OCEANIC MIXED LAYER CHARACTERISTICS

In the Arctic Ocean there is generally a layer at the surface which is well mixed in all of its characteristics. The mixing is due both to mechanical stirring by the rough underside of the drifting ice and to the convective stirring by brine released from the ice during freezing. Mechanical stirring is probably dominant during the summer and convective stirring during winter.

The mixed layer is important to the problems of vertical and horizontal exchange of heat, salt, and momentum. It is of special interest to the question of water drag on the ice since the momentum seems to be imparted almost exclusively to the mixed layer. The oceanographic data collected for one year at the four manned AIDJEX stations are expected to considerably increase our understanding of mixed layer dynamics in the Arctic Ocean.

The temperature and salinity values in the data for days 101-180 are based on observations with Plessey model 9040 salinity-temperature-depth (STD) systems. The four STDs used were reconditioned and calibrated by the manufacturer before shipment to the Arctic. The STD repeatability is good, but a correction is required to obtain absolute values of temperature and salinity. Deep-sea reversing thermometers and salinity measurements with laboratory salinometers on bottle samples were used for absolute calibration. The mean difference between the STD and the calibration reading was used to correct the STD measurement. The correction factor

and standard deviation of the differences are shown for each camp in the following table.

COMPARISON OF STD WITH CALIBRATION READINGS

Camp	No. of Samples	Calibrator Less STD	Standard Deviation
<i>Salinity (‰)</i>			
Big Bear	120	-0.0625	±0.0127
Caribou	34	-0.0196	±0.0113
Blue Fox	46	-0.0492	±0.0151
Snow Bird	33	-0.0429	±0.0134
<i>Temperature (°C)</i>			
Big Bear	98	+0.0355	±0.0138
Caribou	87	+0.0343	±0.0084
Blue Fox	99	+0.0526	±0.0162
Snow Bird	85	-0.0141	±0.0080

The salinity standard deviations range from ±0.0113 to ±0.0151 parts per thousand. These deviations seem larger than would normally be expected for the instruments used. This is apparently due to problems with the Hytech laboratory salinometer used during this initial period. Later laboratory salinity determinations were made with a different salinometer which gave more reliable results, and standard deviations are expected to be smaller for subsequent data.

Surface observations were taken 1 m below the base of the ice. Since ice thickness varied from camp to camp, the sample depths below sea level also differ. At Snow Bird and Caribou, sample depth was 4 m below sea level; at Big Bear, it was usually 4 m, although a few measurements were taken at 5 m; and at Blue Fox, where the ice was exceptionally thick, measurements were taken at 8 m below sea level. Samples were collected with Niskin bottles on a rosette sampler at Big Bear and with Nansen bottles at the other camps.

Oceanographic casts were taken twice a day, at 0500 GMT and 1800 GMT. (Only those taken at 1800 GMT are recorded in the data tables that follow.) Almost all casts were taken within an hour of these times, but the exact time is not given in order to conserve space.

The temperature and salinity generally apply to the entire mixed layer since it is quite well mixed. The mixed layer is defined by a sharp

increase in salinity at its base, and the depth of this sharp change is given as the mixed layer depth. Where there were small steps in the layer above the sharp change, the depths of these steps are given with slashes separating the levels. In those cases the surface salinity and temperature apply only to the uppermost layer.

The tabular format limits further information on other interesting changes involving the mixed layer. Future data reports will contain profiles which will better describe the mixed layer characteristics and their changes. It should be emphasized that these data are preliminary. It is expected that further refinements in the calibration procedure will change some of the values.

CAMP 0 - BIG BEAR

1975 DAY	SURFACE TEMPERATURE (°C)	SURFACE SALINITY (‰)	MIXED LAYER DEPTH (M)
101	-1.66	30.343	57
102	-1.66	30.345	55
103	-1.65	30.456	56
104	-1.65	30.382	56
105	-1.65	30.397	53
106	-1.65	30.413	55
107	-1.66	30.396	57
108	-1.66	30.393	58
109	-1.66	30.403	56
110	-1.66	30.411	55
111	-1.66	30.408	58
112	-1.66	30.401	56
113	-1.66	30.399	60
114	-1.66	30.399	57
115	-1.66	30.399	55
116	-1.65	30.410	52
117	-1.66	30.406	57
118	-1.64	30.411	58
119	-1.66	30.407	58
120	-1.66	30.243	40/48

No data for other camps
for this time period.

CAMP 0 = BIG BEAR				CAMP 1 = CARIBOU			
1975 DAY	SURFACE TEMPERATURE (°C)	SURFACE SALINITY (‰)	MIXED LAYER DEPTH (M)	1975 DAY	SURFACE TEMPERATURE (°C)	SURFACE SALINITY (‰)	MIXED LAYER DEPTH (M)
121	-1.66	30.483	52	121			
122	-1.66	30.473	46	122			
123	-1.65	30.465	57	123			
124*	-1.66	30.453	57	124			
125	-1.65	30.443	60	125			
126	-1.65	30.449	62	126			
127	-1.65	30.455	60	127			
128	-1.65	30.459	57/63	128			
129	-1.65	30.466	42/60	129			
130	-1.65	30.478	40/60	130			
131	-1.65	30.459	39/64	131			
132	-1.65	30.452	59/66	132			
133	-1.63	30.429	66	133			
134	-1.62	30.413	53/65	134	-1.66	30.401	20/54
135	-1.64	30.406	58	135	--	--	--
136	-1.65	30.406	50/64	136	--	--	--
137	-1.63	30.415	49/64	137	-1.66	30.400	55
138	-1.64	30.433	38/63	138	-1.66	30.417	54
139	-1.64	30.428	64	139	-1.66	30.417	54
140	-1.64	30.422	63	140	-1.66	30.422	56

(*) Cast taken at 0500 GMT.

1975 DAY	CAMP 2 - BLUE FOX		
	SURFACE TEMPERATURE (°C)	SURFACE SALINITY (‰)	MIXED LAYER DEPTH (M)
121			
122			
123			
124			
125			
126			
127			
128			
129			
130	-1.67	30.583	18/60
131	-1.67	--	5/43/60
132	--	--	--
133	-1.67	30.599	61
134	-1.67	30.607	19/55/60
135	-1.67	30.582	5/55/60
136	-1.67	30.593	46/58
137	-1.66	30.593	40/60
138	-1.66	30.604	35/62
139	-1.66	30.607	24/42/62
140	-1.67	--	62

1975 DAY	CAMP 3 - SNOW BIRD		
	SURFACE TEMPERATURE (°C)	SURFACE SALINITY (‰)	MIXED LAYER DEPTH (M)
121			
122			
123			
124			
125			
126			
127			
128			
129			
130			
131			
132			
133			
134			
135			
136	-1.65	--	53
137	-1.66	--	55
138	-1.67	--	50/59
139	-1.66	30.441	46/58
140	-1.66	--	58

CAMP 0 = BIG BEAR				CAMP 1 = CARIBOU			
1975 DAY	SURFACE TEMPERATURE (°C)	SURFACE SALINITY (‰)	MIXED LAYER DEPTH (M)	1975 DAY	SURFACE TEMPERATURE (°C)	SURFACE SALINITY (‰)	MIXED LAYER DEPTH (M)
141	-1.64	30.421	43/62	141	-1.66	30.421	56
142	-1.65	30.433	43/60	142	-1.66	30.417	28/54
143	-1.64	30.433	64	143	-1.66	30.425	57
144	--	30.437	45/60	144	-1.65	30.420	58
145	-1.65	30.433	45/58	145	-1.65	30.420	5/57
146	-1.65	30.445	58	146	-1.66	30.414	53
147	-1.64	30.443	64	147	-1.65	--	5/55
148	-1.64	30.436	64	148	-1.66	30.400	55
149	-1.64	30.442	65	149	-1.66	30.390	53
150	-1.64	30.447	49/60	150	-1.65	30.375	58
151	-1.64	30.456	49/64	151	-1.64	30.375	60
152	-1.63	30.462	40/64	152	-1.65	30.379	60
153	-1.63	30.464	34/65	153	-1.66	30.382	61
154	-1.64	30.470	29/65	154	-1.65	30.399	11/60
155	-1.62	30.464	42/62	155	-1.66	30.407	40/61
156	-1.62	30.460	53	156	-1.64	30.413	31/61
157	-1.63	30.463	58	157	-1.65	30.416	39/59
158	-1.63	30.469	54	158	-1.64	30.433	44/59
159	-1.63	30.464	55	159	-1.65	30.428	24/59
160	-1.62	30.469	25/54	160	-1.63	30.431	32/60

1975 DAY	CAMP 2 = BLUE FOX			1975 DAY	CAMP 3 = SNOW BIRD		
	SURFACE TEMPERATURE (°C)	SURFACE SALINITY (‰)	MIXED LAYER DEPTH (M)		SURFACE TEMPERATURE (°C)	SURFACE SALINITY (‰)	MIXED LAYER DEPTH (M)
141	-1.67	30.609	62	141	-1.67	--	61
142	-1.66	30.607	60	142	-1.67	30.456	57
143	-1.67	30.606	13/61	143	-1.66	30.456	55
144	-1.67	30.605	58	144	-1.66	30.449	55
145	-1.67	30.611	17/60	145	-1.66	30.455	55
146	-1.66	30.621	20/62	146	-1.66	30.464	59
147	-1.67	30.612	5/52/61	147	-1.67	30.457	60
148	-1.65	30.619	13/31/58	148	-1.67	30.487	60
149	-1.66	30.573	14/44/55	149	-1.66	30.487	58
150	-1.64	--	19/27/54	150	-1.67	30.490	29/56
151	-1.65	30.564	17/40/51	151	-1.66	--	54
152	-1.68	30.553	15/52	152	-1.66	30.501	35/58
153	-1.65	--	30/52	153	-1.66	30.461	41/60
154	-1.65	30.570	5/54	154	-1.66	30.450	60
155	-1.68	30.553	56	155	-1.65	30.430	62
156	-1.65	30.553	5/60/64	156	-1.66	30.421	60
157	-1.67	30.543	3/47/57	157	-1.66	30.415	58
158	-1.63	30.517	52	158	-1.66	30.412	33/60
159	-1.62	30.517	28/45/55	159	-1.65	30.427	38/64
160	-1.58	30.505	5/32/51	160	-1.66	30.415	21/34/62

CAMP 0 = BIG BEAR				CAMP 1 = CARIBOU			
1975 DAY	SURFACE TEMPERATURE (°C)	SURFACE SALINITY (‰)	MIXED LAYER DEPTH (M)	1975 DAY	SURFACE TEMPERATURE (°C)	SURFACE SALINITY (‰)	MIXED LAYER DEPTH (M)
161	-1.64	30.471	50	161	-1.63	30.434	32/59
162	-1.63	30.470	59	162	-1.65	30.442	35/49
163	-1.62	30.471	58	163	-1.64	30.433	18/50
164	-1.48	30.463	4/37/54	164	-1.59	30.419	5/35/57
165	-1.60	30.465	10/40/52	165	-1.60	30.406	14/48/64
166	-1.59	--	18/33/50	166	-1.60	30.405	15/47/62
167	-1.48	30.408	20/42/57	167	-1.62	30.405	18/40/61
168	-1.59	30.439	17/38/54	168	-1.64	30.428	10/54
169	-1.58	30.452	26/54	169	-1.64	30.440	59
170	-1.58	30.450	25/35/62	170	-1.64	30.435	38/58
171	-1.60	30.453	16/32/60	171	-1.61	30.424	20/55
172	--	30.447	10/40/64	172	-1.61	30.427	6/26/49
173	-1.57	30.450	44/59	173	-1.63	30.438	25/55
174	-1.59	30.438	28/50/59	174	-1.63	30.435	28/57
175	-1.57	30.407	10/42/55	175	-1.63	30.430	14/31/58
176	-1.59	30.430	16/39/55	176	-1.63	30.439	28/58
177	--	--	--	177	-1.63	30.426	13/40/55
178	--	--	13/45/57	178	-1.62	30.421	7/30/58
179	-1.56	--	--	179	-1.61	30.413	28/32/55
180	--	--	--	180	-1.59	30.381	24/39/50

CAMP 2 = BLUE FOX				CAMP 3 = SNOW BIRD			
1975 DAY	SURFACE TEMPERATURE (°C)	SURFACE SALINITY (‰)	MIXED LAYER DEPTH (M)	1975 DAY	SURFACE TEMPERATURE (°C)	SURFACE SALINITY (‰)	MIXED LAYER DEPTH (M)
161	-1.62	30.511	5/50/63	161	-1.63	30.415	60
162	-1.63	--	40/60	162	-1.63	30.425	60
163	-1.63	30.493	6/32/65	163	-1.62	--	22/40/65
164	-1.61	30.472	24/50/56	164	-1.65	30.424	63
165	-1.63	30.471	23/43/57	165	-1.65	30.418	56
166	-1.65	30.456	13/39/59	166	-1.65	30.431	21/55
167	-1.59	30.441	14/39/59	167	-1.65	--	55
168	-1.57	30.420	13/20/51	168	-1.65	30.414	48/50
169	-1.55	30.388	4/24/52	169	-1.64	--	53/57
170	-1.61	30.396	21/29/47	170	-1.63	30.395	42/59
171	-1.63	30.384	7/16/34	171	-1.63	30.365	34/57
172	-1.64	30.383	6/30/33	172	-1.61	30.368	38/55
173	-1.64	30.406	3/38/55	173	-1.62	30.357	41/55
174	-1.65	30.403	4/38/53	174	-1.63	30.345	42/59
175	-1.63	30.414	5/35/58	175	-1.64	30.344	34/55
176	-1.65	30.401	5/39/55	176	-1.62	30.344	29/59
177	-1.59	30.393	6/31/54	177	-1.60	30.343	30/57
178	-1.62	30.397	32/50/53	178	-1.61	30.339	43/57
179	-1.59	30.378	20/38/60	179	-1.57	30.319	19/54
180	-1.59	30.406	7/35/58	180	-1.55	--	19/35/41

OCEAN CURRENT VELOCITIES AT 2 M AND 30 M

Continuous current measurements at depths of 2 m and 30 m from the ice underside were made at all manned camps. Speed and bearing relative to the camp azimuth were sampled every 30 seconds and recorded digitally.

Data presented here have been calculated from vector averages of each day's samples with speed in centimeters per second and bearing corrected to degrees clockwise from true north. Nominal electronic and factory sensor calibrations have been used for these preliminary data

and do not account for systematic errors that may be associated with individual sensors. An estimate of random errors is ± 1 cm sec⁻¹ for speed and ± 5 degrees for bearing.

It should be noted that the flow is measured relative to the ice. The actual ocean current at each level is determined from the vector sum of the measured current and the ice velocity.

Values of zero indicate absence of data.

DAY	CAMP 0 - BIGBEAR			
	2 METER DEPTH SPEED	DEPTH BRG	30 METER DEPTH SPEED	DEPTH BRG
101	.74	303.5	.14	136.5
102	.00	.0	.00	.0
103	.00	.0	.00	.0
104	.00	.0	.00	.0
105	1.65	268.7	5.88	279.0
106	4.38	240.2	9.51	250.7
107	2.74	299.2	5.54	302.0
108	1.17	280.1	3.13	278.2
109	1.85	272.4	4.95	281.3
110	.30	193.9	.86	270.5
111	.24	69.3	1.76	102.0
112	1.03	55.3	3.68	50.4
113	.11	318.0	.09	281.0
114	.48	269.1	.14	263.7
115	.36	32.9	.50	170.6
116	.35	329.0	.94	198.5
117	.19	188.9	.56	307.4
118	.66	173.8	.18	144.9
119	1.33	253.8	2.36	261.2
120	8.74	236.2	13.70	262.6

No data for other camps
in this time period.

CAMP 0 - BIGBEAR				
DAY	2 METER DEPTH		30 METER DEPTH	
	SPEED	BRG	SPEED	BRG
121	.23	75.3	1.91	318.3
122	.58	59.9	2.44	56.7
123	3.10	51.3	6.76	56.2
124	3.94	65.3	7.56	67.9
125	8.33	72.0	13.23	82.3
126	6.80	88.9	11.45	99.4
127	.62	104.2	2.58	115.1
128	.59	283.5	.74	130.0
129	.46	162.9	2.80	194.4
130	.85	355.5	1.16	319.9
131	.44	346.5	2.22	333.8
132	1.83	3.2	3.67	11.8
133	3.37	356.3	6.71	4.6
134	3.58	299.4	7.76	325.1
135	2.71	321.2	5.88	340.1
136	1.56	159.0	3.69	178.9
137	7.02	111.6	11.79	132.0
138	6.85	69.7	11.34	84.5
139	3.20	30.5	6.02	36.7
140	.16	76.9	1.17	.9

CAMP 1 - CARIBOU				
DAY	2 METER DEPTH		30 METER DEPTH	
	SPEED	BRG	SPEED	BRG
121	.00	.0	.00	.0
122	.00	.0	.00	.0
123	.00	.0	.00	.0
124	.00	.0	.00	.0
125	.00	.0	.00	.0
126	.00	.0	.00	.0
127	.00	.0	.00	.0
128	.00	.0	.00	.0
129	.00	.0	.00	.0
130	.43	164.8	.60	136.3
131	.35	146.0	.59	190.5
132	1.07	15.7	1.72	17.1
133	.00	.0	.00	.0
134	2.08	348.9	2.93	20.0
135	3.39	326.7	5.18	283.2
136	1.05	357.0	.92	21.3
137	8.50	92.2	13.80	80.5
138	8.48	75.0	12.52	65.9
139	2.04	59.0	6.18	43.3
140	.99	340.3	.36	198.8

CAMP 2 - BLUEFOX				
DAY	2 METER DEPTH		30 METER DEPTH	
	SPEED	BRG	SPEED	BRG
121	.00	.0	.00	.0
122	.00	.0	.00	.0
123	.00	.0	.00	.0
124	.00	.0	.00	.0
125	.00	.0	.00	.0
126	.00	.0	.00	.0
127	.00	.0	.00	.0
128	.00	.0	.00	.0
129	.00	.0	.00	.0
130	.00	.0	.00	.0
131	.00	.0	.00	.0
132	.00	.0	.00	.0
133	.00	.0	.00	.0
134	.00	.0	.00	.0
135	.00	.0	.00	.0
136	.00	.0	.00	.0
137	.00	.0	.00	.0
138	.00	.0	.00	.0
139	.00	.0	.00	.0
140	.00	.0	.00	.0

CAMP 3 - SNOWBIRD				
DAY	2 METER DEPTH		30 METER DEPTH	
	SPEED	BRG	SPEED	BRG
121	.00	.0	.00	.0
122	.00	.0	.00	.0
123	.00	.0	.00	.0
124	.00	.0	.00	.0
125	.00	.0	.00	.0
126	.00	.0	.00	.0
127	.00	.0	.00	.0
128	.00	.0	.00	.0
129	.00	.0	.00	.0
130	.00	.0	.00	.0
131	.00	.0	.00	.0
132	.00	.0	.00	.0
133	.00	.0	.00	.0
134	.00	.0	.00	.0
135	.00	.0	.00	.0
136	.00	.0	.00	.0
137	.00	.0	.00	.0
138	5.58	132.8	9.53	158.6
139	.00	.0	.00	.0
140	.00	.0	.00	.0

CAMP 0 - BIGBEAR				
DAY	2 METER SPEED	DEPTH BRG	30 METER SPEED	DEPTH BRG
141	.44	254.7	1.34	247.1
142	2.66	219.6	6.01	229.8
143	.42	141.1	.45	278.0
144	.90	167.6	.03	63.8
145	.51	31.6	1.76	136.0
146	4.89	57.7	7.98	65.6
147	6.75	84.6	11.73	85.1
148	7.10	99.4	3.45	99.3
149	5.87	109.3	8.64	118.6
150	.00	.0	.00	.0
151	.77	100.9	2.93	88.1
152	1.40	79.6	3.62	88.3
153	1.41	82.1	3.21	94.5
154	2.05	92.9	4.45	111.9
155	5.19	75.2	8.20	89.8
156	2.50	59.3	4.44	77.8
157	1.55	50.8	2.53	61.9
158	.10	245.2	.27	80.9
159	.07	274.0	.51	354.1
160	1.17	298.7	2.16	330.5

CAMP 1 - CARIBOU				
DAY	2 METER SPEED	DEPTH BRG	30 METER SPEED	DEPTH BRG
141	.97	200.7	1.72	78.6
142	3.70	210.2	7.03	83.4
143	.00	.0	.00	.0
144	.00	.0	.00	.0
145	.00	.0	.00	.0
146	.00	.0	.00	.0
147	.00	.0	.00	.0
148	.00	.0	.00	.0
149	.00	.0	.00	.0
150	.00	.0	.00	.0
151	.00	.0	.00	.0
152	.00	.0	.00	.0
153	.00	.0	.00	.0
154	2.32	113.9	12.10	99.8
155	6.60	81.1	9.90	84.4
156	3.46	68.7	4.48	49.3
157	1.81	34.6	3.11	359.2
158	.02	209.3	.97	178.2
159	1.90	6.8	1.00	178.9
160	1.77	347.5	1.00	178.5

CAMP 2 - BLUEFOX				
DAY	2 METER SPEED	DEPTH BRG	30 METER SPEED	DEPTH BRG
141	.00	.0	.00	.0
142	.00	.0	.00	.0
143	.00	.0	.00	.0
144	.00	.0	.00	.0
145	.00	.0	.00	.0
146	.00	.0	.00	.0
147	.00	.0	.00	.0
148	.00	.0	.00	.0
149	.00	.0	.00	.0
150	.00	.0	.00	.0
151	.00	.0	.00	.0
152	.00	.0	.00	.0
153	.00	.0	.00	.0
154	.00	.0	.00	.0
155	2.75	91.2	3.71	80.3
156	1.92	58.9	1.65	80.1
157	1.76	43.3	.79	59.7
158	1.48	32.5	.92	34.8
159	.39	271.4	.36	240.4
160	1.32	340.1	1.29	334.1

CAMP 3 - SNOWBIRD				
DAY	2 METER SPEED	DEPTH BRG	30 METER SPEED	DEPTH BRG
141	.27	167.7	1.35	26.5
142	3.00	341.9	3.43	301.9
143	2.17	343.4	2.83	262.3
144	.05	247.7	.18	176.1
145	2.68	350.0	3.89	258.8
146	2.05	104.9	6.04	125.4
147	7.29	119.2	12.11	127.3
148	7.77	106.4	13.02	134.8
149	6.25	96.5	10.86	135.1
150	5.84	91.2	10.18	136.1
151	2.22	86.0	3.56	136.9
152	4.81	119.6	6.60	139.5
153	1.89	111.8	2.98	158.3
154	3.51	110.4	5.42	141.4
155	5.42	129.2	9.06	160.2
156	2.82	144.0	4.64	185.7
157	1.44	156.7	2.56	205.0
158	1.06	189.3	2.27	212.1
159	1.90	223.3	2.63	245.9
160	.77	257.5	.44	253.2

CAMP 0 - BIGBEAR				
DAY	2 METER DEPTH		30 METER DEPTH	
	SPEED	BRG	SPEED	BRG
161	.81	275.4	2.03	301.9
162	.06	84.5	.64	308.7
163	.62	55.0	.07	46.8
164	.48	204.3	.09	54.1
165	.84	149.2	1.93	170.1
166	1.60	96.5	2.60	112.9
167	.21	134.1	1.85	153.9
168	6.53	98.0	8.40	125.0
169	5.90	17.7	7.77	37.7
170	.96	35.4	1.58	79.0
171	.33	58.8	.07	225.7
172	2.54	122.8	4.37	160.2
173	2.67	147.2	1.82	158.1
174	3.74	95.2	4.52	103.9
175	.34	278.0	.62	200.1
176	2.91	273.3	2.68	291.2
177	.90	190.9	1.59	135.3
178	.77	202.3	.51	5.2
179	4.47	237.7	5.21	294.8
180	5.49	240.5	4.60	248.1

CAMP 1 - CARIBOU				
DAY	2 METER DEPTH		30 METER DEPTH	
	SPEED	BRG	SPEED	BRG
161	.70	40.5	.83	158.9
162	.16	94.5	.69	85.6
163	.13	70.1	1.01	271.6
164	.55	96.3	.68	268.2
165	2.33	151.2	2.68	156.7
166	2.77	81.5	2.71	86.2
167	1.16	135.1	1.94	138.9
168	5.42	115.0	6.82	127.1
169	6.39	3.9	6.49	26.0
170	1.91	41.4	2.82	60.2
171	2.36	79.6	3.16	85.4
172	5.23	134.8	6.60	150.7
173	2.45	177.0	3.68	210.2
174	3.91	96.7	5.08	111.6
175	.83	339.6	.49	353.0
176	4.40	278.7	6.69	299.2
177	.80	166.0	1.87	147.2
178	1.05	218.4	1.41	217.6
179	5.95	259.5	8.64	279.4
180	3.55	263.2	4.61	278.9

CAMP 2 - BLUEFOX				
DAY	2 METER DEPTH		30 METER DEPTH	
	SPEED	BRG	SPEED	BRG
161	.87	269.8	.96	281.6
162	.20	222.1	.03	8.5
163	1.12	314.5	.90	300.8
164	.92	22.1	.09	114.5
165	.41	138.6	1.97	171.6
166	3.13	103.3	2.24	79.1
167	.57	113.6	.70	121.8
168	7.17	96.8	7.37	100.7
169	5.20	3.2	6.59	16.2
170	.50	343.9	.12	142.4
171	.38	328.4	.29	346.0
172	1.11	170.6	2.29	139.3
173	3.28	139.2	4.23	147.6
174	3.43	92.8	4.65	81.4
175	.44	229.0	.25	150.7
176	3.49	175.7	4.43	251.9
177	1.88	225.8	1.40	165.7
178	2.25	128.6	1.30	163.4
179	4.59	240.1	5.07	235.6
180	5.55	243.8	6.50	246.1

CAMP 3 - SNOWBIRD				
DAY	2 METER DEPTH		30 METER DEPTH	
	SPEED	BRG	SPEED	BRG
161	.58	302.4	.71	323.8
162	.13	292.4	.33	231.0
163	.39	296.3	1.05	168.1
164	1.25	144.7	1.19	181.8
165	1.96	84.2	3.09	141.5
166	1.61	92.5	2.44	84.7
167	1.71	96.4	2.61	108.2
168	7.04	121.0	11.45	140.5
169	3.43	205.0	4.34	77.6
170	1.46	125.3	3.49	45.8
171	2.69	103.4	2.73	48.5
172	6.32	89.3	9.36	42.9
173	3.47	81.9	5.14	46.9
174	3.60	123.9	6.10	44.3
175	1.06	170.9	.70	44.4
176	2.36	319.0	2.33	86.7
177	2.25	336.4	3.96	48.4
178	2.73	55.9	6.05	56.5
179	4.35	318.7	8.61	49.7
180	5.12	343.8	6.86	36.1

Ocean Current Velocity at 2 m and 30 m, AIDJEX Bulletin No. 32 (June 1976), First Data Report

ICE THICKNESS

Ice thickness was determined by drilling holes and measuring the thickness with the standard tape measure and crossbar or by measuring the length of drill-string in the hole at break-through. In the latter case, error estimates were made at the time and a magnitude of error recorded in most instances.

Ice thickness gauges were installed in some of the holes. The thickness gauge operates essentially like a tape measure. It has a crossbar which comes up against the bottom of the floe and a fixed length of wire. Because the upper surface melts in the summer, a reference stake is frozen into the ice to hold the handle and to maintain a "zero point." Differences in touch between gauges when bringing them up for measurement exist because of bottom irregularities, but most of the readings were reproducible to ± 0.2 cm, frequently to ± 0.1 cm.

The estimated error is given for the first reading of each gauge. For subsequent readings, the error is assumed to be the gauge reading error-- ± 0.2 cm, unless otherwise noted.

Snow depth at the gauge was measured only at time of installation. It is given in parentheses directly below the first measurement of each gauge.

Ed. Note: The data tabulated for Big Bear are only part of the measurements taken. They include neither measurements from gauges showing fewer than five readings (gauges 01, 09, 10, 11, 12, 13, 20, 21, 1201, 1400, and 1500) nor measurements of holes that could not be separated and identified with any certainty in the field log.

ICE THICKNESS (CM)

CAMP 0 = BIG BEAR

1975 Day	Gauge No. and Initial Ice Type						
	02 young	03 young	04 two-year	05 two-year	06 two-year	07 young	08 young
107	161.2±0.2 (33)	161.3±0.2 (31)					
108	.....	.....	268.0±1 (21)				
109	.....	.....	.....	284.5±0.3 (15)	285.5±0.3 (14)		
110	.....	.....	.....	.....	.....	149.6±0.2 (21)	143.3±0.2 (27)
112	163.5	163.7	--	--	--	--	--
118	166.6	166.9	272.1	287.5	288.5	--	--
132	171.7	171.9	275.3	291.2	292.1	158.9	152.4
137	173.1	173.0	275.9	291.8	293.0	159.6	153.2
140	173.5	173.5	276.5	292.4	293.5	160.5	154.0
144	174.5	174.6	--	293.4	294.4	161.4	154.8
148	174.5	174.6	277.6	293.6	294.7	161.9	155.3
152	175.0	175.1	278.1	293.9	295.0	162.0	155.5
156	175.6	175.6	278.2	294.4	295.4	--	--
161	175.7	175.9	278.3	294.4	295.6	162.5	156.1
163	175.5	175.8	278.5	294.5	295.7	--	--
169	175.0	175.4	--	--	--	--	--
171	174.6	174.9	277.6	293.7	294.8	161.3	154.9
174	173.9	174.1	277.0	293.1	294.1	--	--
176	173.7	174.0	276.9	292.9	294.0	160.7	154.0
179	172.9	173.2	276.0	292.2	293.3	159.8	153.3

ICE THICKNESS (CM)

CAMP 1 = CARIBOU

1975 Day	Gauge No. and Ice Type		
	01 -----	02 multiyear	03 -----
124	414±5 (3)	351±5 (25)	422±5 (5)
129	415.1	352.7	422.6
135	415.8	353.5	423.0
139	416.7	354±1	423.3
144	417.5	354.8	423.9
149	418.0	355.4	424.3
155	417.0	356.2	424.9
159	418.7	356.2	425.0
164	419.2	356.5	425.2
170	418.5	355.8	424.7
175	418.8	355.4	424.9
180	418.2	355.6	424.3

CAMP 2 = BLUE FOX

1975 Day	Gauge No. and Ice Type		
	01 -----	02 multiyear	03 -----
121	333±3 (3)	317±3 (4)	304±5 (3)
127	333.8	317.9	305.1
132	335.2	319.2	306.6
137	336.2	320.1	307.3
142	337.1	321.2	308.6
147	337.7	321.4	309.0
151	338.4	321.6	309.6
156	339.0	322.3	310.0
161	338.6	322.3	310.2
167	338.7	322.4	310.0
174	337.1	320.8	308.7
176	337.0	320.9	309.0

CAMP 3 = SNOW BIRD

1975 Day	Gauge No. and Ice Type		
	01 -----	02 multiyear	03 -----
153	288.3±0.3 --	409.0±2 --	398.0±2 --
158	288.3	409.0	397.8
162	288.1	409.1	398.0
168	287.8	408.6	397.5

SNOW DEPTH

Snow depth was measured at all manned camps to determine the initial quantity of snow for calculating mass balance, for adding to the general climatology literature, for providing input to thermodynamic models, and for allowing a preliminary evaluation of snow catchment in the rough ice area.

Grid surveys were used to determine the initial depth of snow and its variability. Ablation stakes were set in to follow the change in depth with time at specific sites. Since a stake disrupts the path of blowing snow and causes drifts to form near and against it, the height of the stake was measured as if the stake were not there; in other words, the degree of surface disturbance was evaluated in each instance and then added to or subtracted from the measured depth. Stake heights were recorded to within ± 0.5 mm, with the average error presumably zero.

All snow depths (except for some of those measured by ablation stakes and along the 99 m line) were taken with an avalanche probe 1.7 cm in diameter. No correction was made for penetration of the ice by the probe, since it was assumed that ice with such low strength as to allow penetration would be no denser than the snow. A 1 m ruler with a crosspiece 20 cm wide was placed with the crosspiece parallel to the strike of the surface where pierced by the probe and read at 1 m, 2 m, or 3 m marks on the probe. Up-slope and down-slope depth differences were averaged in the field before being tabulated as one reading. Thus the error of measurement includes one systematic but unfixed error to increase the real snow depth (perhaps as great as 2 mm on old floes) and a random error of ± 0.5 mm in selecting the nearest millimeter to record. Depths at the ablation stakes were taken before drilling by using the probe as described above or by directly inserting the ruler itself, a method also used for the 99 m line.

CAMP 0 = BIG BEAR

1975 DAY	GRID SIZE (M ²)*	NUMBER OF SAMPLES	MAXIMUM DEPTH (CM)	MINIMUM DEPTH (CM)	MEAN DEPTH (CM)	STANDARD DEVIATION (CM)
92	10 ⁴	119	52.4	7.9	23.6	8.9
92	10 ⁴	121	175.2	0.8	39.8	31.8
93	a	20	26.0	4.0	14.0	6.0
106	s	100	57.8	4.4	29.5	12.6
107	a	11	30.1	12.4	28.7	6.9
110	10 ⁴	121	50.5	5.5	22.6	9.3
149	10 ⁴	121	49.5	5.2	23.2	8.1
152	a	20	29.0	3.9	17.1	8.0
152	a	11	28.9	11.4	21.8	6.7
158	a	20	28.1	3.5	16.7	7.9
159	a	10	125.3	88.8	108.6	12.9
170	a	10	122.4	86.1	108.1	12.8
174	a	10	121.6	80.2	105.1	13.2
179	a	10	105.2	66.2	89.4	13.1

CAMP 1 = CARIBOU

1975 DAY	GRID SIZE (M ²)	NUMBER OF SAMPLES	MAXIMUM DEPTH (CM)	MINIMUM DEPTH (CM)	MEAN DEPTH (CM)	STANDARD DEVIATION (CM)
124	a	20	44.0	9.6	20.8	8.8
126	10 ⁴	121	42.9	6.9	29.0	8.8
130	900	121	55.1	4.5	31.5	10.7
131	7.3×10 ⁴	119	50.6	1.3	27.1	10.0
144	a	20	44.0	9.1	20.7	8.9
152	a	20	43.2	8.9	20.1	8.9
157	a	20	43.2	8.7	20.0	8.9

CAMP 2 = BLUE FOX

1975 DAY	GRID SIZE (M ²)*	NUMBER OF SAMPLES	MAXIMUM DEPTH (CM)	MINIMUM DEPTH (CM)	MEAN DEPTH (CM)	STANDARD DEVIATION (CM)
100	10 ⁴	121	50.6	3.3	19.1	9.7
121	a	20	49.0	2.5	20.1	9.8
122	10 ⁴	121	122.7	0.0	30.8	26.1
130	a	20	49.5	3.0	20.6	9.8
134	a	20	49.0	2.6	20.1	9.7
142	a	20	47.8	2.4	20.1	9.5
147	a	20	47.7	1.8	19.8	9.7
155	a	20	47.0	1.7	19.7	9.5

CAMP 3 = SNOW BIRD

1975 DAY	GRID SIZE (M ²)	NUMBER OF SAMPLES	MAXIMUM DEPTH (CM)	MINIMUM DEPTH (CM)	MEAN DEPTH (CM)	STANDARD DEVIATION (CM)
111	10 ⁴	121	115.3	1.0	42.0	22.8
152	a	20	37.0	1.0	16.3	8.8
153	1.6×10 ⁴	176	53.2	0.8	26.9	11.7

(*) In this column, "a" means that ablation stakes were used, "s" that a 99 m line was sampled.

