Technical Report #1

ANTARCTIC WEATHER STATISTICS

compiled by

RONNE ANTARCTIC RESEARCH EXPEDITION

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no. 1
c. 2

under contract with
Geophysics Branch
Physical Sciences Division
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CORRECTIONS

ANTARCTIC WEATHER STATISTICS

Page 2. Geological Sledge Party to Marguerite Bay Sledge Party

Page 5. Add to list of stations: Reykjavick, Iceland, 64°04'N-21°58'W.

Page 10. August peak wind is 27 MPH.

Page 11. Footnote b: Interchange "end of month" and"beginning of month".

Page 24. Footnote b: Interchange "end of month" and "beginning of month".

Page 27. Footnote b: Read" Plateau has lower temperature by (°F) -".

Page 28. Footnote a: Interchange "end of month" and "beginning of month".

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FOREWORD

Submitted herewith is a report entitled "Antarctic Weather Statistics" which was compiled by the Ronne Antarctic Research Expedition under contract with the Geophysics Branch of the Physical Sciences Division. This report is the first in a series of five of data gathered by the expedition.

J. A. Jordan
for Capt. W. H. Leahy, USN
Assistant Chief for Research

1 September 1948

PREFACE

Technical Report Number 1 is the first of a series of reports on projects completed by members of the Ronne Antarctic Research Expedition during 1947 and 1948.

In this report, statistics of weather data collected by the meteorological staff are presented. Included are shipboard observations to and from the Antarctic, observations taken at a main base station for nearly a year, at several outposts, and during trail parties whose operations extended 500 miles from base to latitude 75° South. The Main base was located at Stonington Island, Marguerite Bay, Palmer Peninsula, Antarctica, 68° 12′ S.-67° 00′ W., on the western coast of a glacier-clad mountainous plateau-peninsula projecting into prevailing westerly winds. During two and three months preceding the summer solstice, outposts were manned atop Palmer Peninsula and on the eastern coast at Cape Keeler.

The statistics presented herein conceal many interesting daily weather details, especially the effect of the plateau on storms traversing Stonington Island, Plateau, and Cape Keeler stations; however, this report is intended primarily as a basic summary of weather conditions likely to be encountered in the middle and southern portions of Palmer Peninsula. A special feature is the summaries of days suitable for flying in accordance with several classifications of weather conditions.

The over-all operation of antarctic weather services and specific antarctic meteorological problems will be dealt with in subsequent reports.

Equipment used to carry out these weather observations was, for the most part, loaned to the Expedition by the U. S. Weather Bureau under a cooperative agreement. The weather investigations are part of the general scientific program carried out by the Expedition and sponsored by the Geophysics Branch of ONR.

This report was prepared by H.-C. Peterson, Expedition Physicist, in charge of physical research investigations.

Commander Finn Ronne
USNR (Inactive)
Expedition Leader

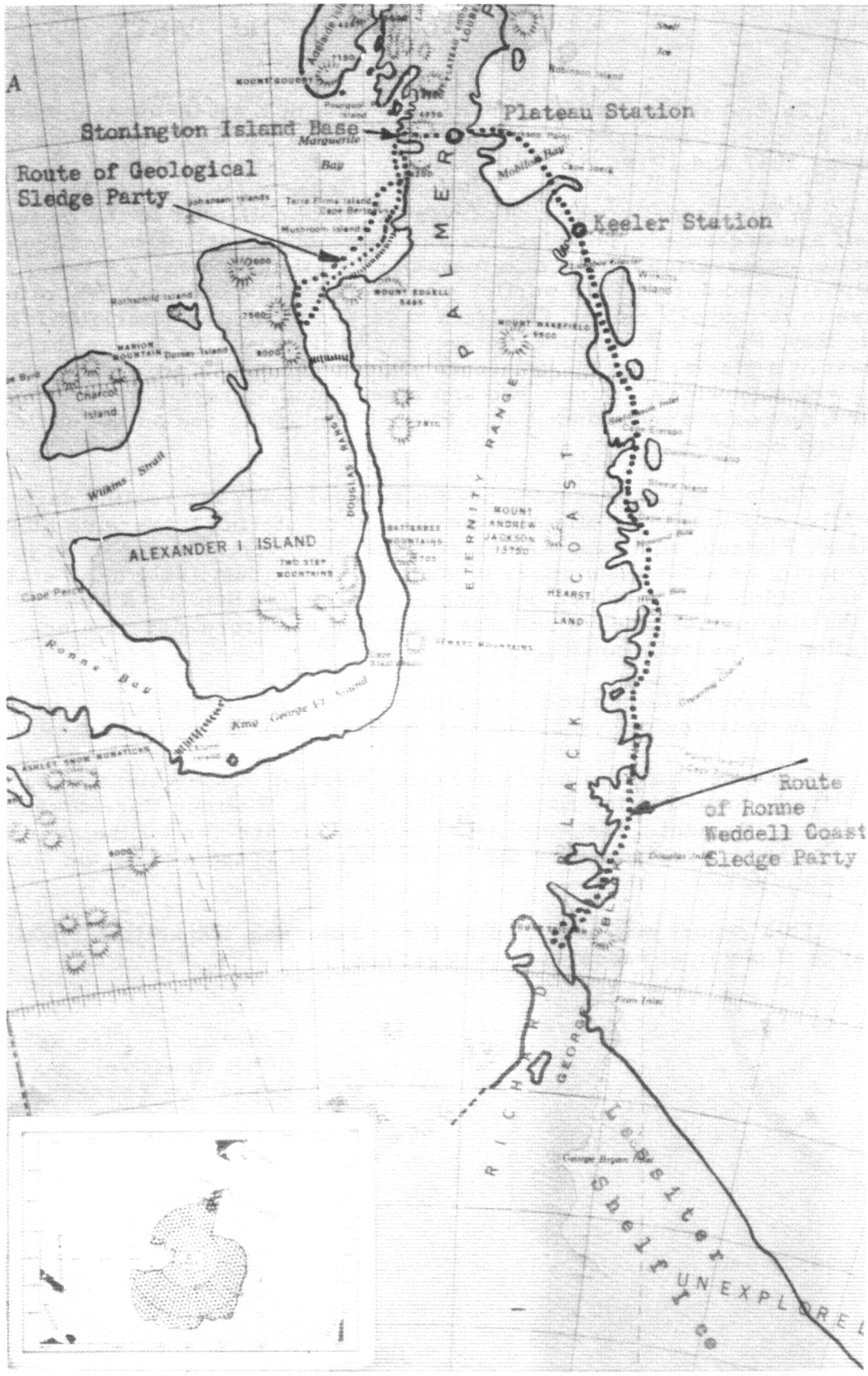

FIG. I. MAP SHOWING LOCATIONS OF METEOROLOGICAL STATIONS AND ROUTES OF TRAIL PARTIES.

TABLE 1, CONDENSED WEATHER SUMMARY OF ALL STATIONS

MONTH	STA-TION	AVG. TEMP. (°F)	AVG. PRESS. (mb.)	PRECIPITATION (in.)	PRECIPITATION (days)	PREDOM. WIND DIR.	AVG. WIND (mph)	MEAN TOTAL CLOUDI-NESS (0-10)	LOCAL FLYING DAYS[a]	SIMUL-TANEOUS FLYING DAYS[b]
JAN	SI	32	995	.8	13	Calm	4	7.8	23	----------
	WS	22	-------	------	10	N.	2	7.0	7	----------
FEB	SI	29	982	.6	7	SE.	11	8.2	18	----------
MAR	SI	34	987	.2	7	E.	5	7.0	23	----------
APR	SI	25	980	.8	7	SE.	11	8.5	25	----------
MAY	SI	14	995	2.6	17	NE.	8	7.1	12	----------
JUN	SI	1	992	.8	17	Calm	8	6.5	14	----------
JUL	SI	15	990	1.8	15	SE.	12	7.4	12	----------
AUG	SI	12	988	1.5	16	NE.	6	7.4	11	----------
SEP	SI	12	984	1.9	15	SE.	16	7.8	16	----------
	P	-6	-------	------	9	NE.	7	8.8	6	----------
OCT	SI	18	981	3.1	19	NW.	11	8.3	19	4
	P	1	-------	------	15	E.	11	9.1	6	4
	K	2	982	------	7	S.	8	7.0	9	4
	MB	11	982	------	13	Calm	5	7.0	19	----------
NOV	SI	25	980	1.4	19	SE.	8	8.4	12	3
	P	9	-------	------	19	SW.	11	9.3	7	3
	K	18	980	------	17	S.	6	7.5	13	3
	WS	17	-------	------	8	SE.	5	7.0	9	----------
	MB	26	979	------	11	Calm	4	8.0	14	----------
DEC	SI	30	991	.4	8	SE.	11	5.6	24	----------
	WS	17	-------	------	5	SE.	3	7.5	5	----------
	MB	30	990	------	2	E.	6	4.0	17	----------
YEAR	SI	21	987	15.8	160	SE.	9	7.5	209	----------

[a]Visibility over 30 miles; ceiling over 6000 ft.; duration over 6 hrs.
[b]Better than above minimums at all stations.
SI: Stonington Island; P: Plateau; K: Cape Keeler: WS: Weddell seacoast sledge party; MB: Marguerite Bay sledge party.

STONINGTON ISLAND STATION

These statistics are compiled from data gathered from 13 March 1947 to 20 February 1948 at Stonington Island, Marguerite Bay, Palmer Peninsula, Antarctica, 68°12′S.-67°00′W. Barometer elevation was 29 feet above mean sea level. The station was located on the windward coast of a glacier-clad mountainous peninsula a few degrees south of the Antarctic Circle.

Occupancy of the Stonington Island Station was a few weeks short of a year and statistics of the arrival and departure months of March 1947 and February 1948, respectively, are based on approximately three weeks' observations for each month. However, in presenting the number of days that certain phenomena occurred during these months, the statistical results obtained were extrapolated to represent full months.

Pressure and temperature statistics are determined by graphs made by continuously operated recording instruments. All other statistics, unless otherwise noted, are based on twice daily synoptic observations at 00h and 12h GMT during March through June and, during other months, three times daily at 12h, 18h, and 23h GMT. These regular synoptic observations were often supplemented by notes on interim precipitation, state of sky, frost, gale, etc. The principal observer was H.-C. Peterson.

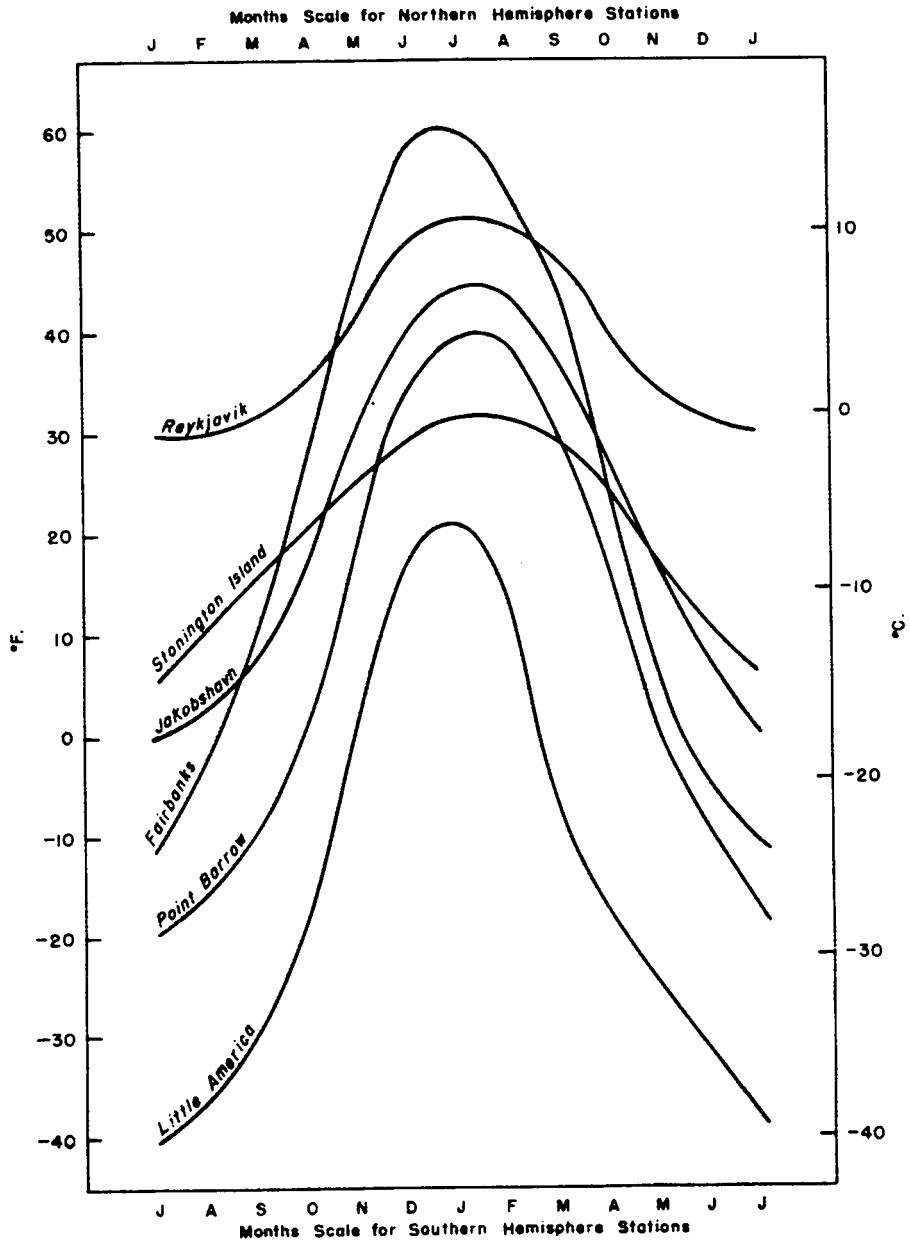

FIG. 2. CLIMATIC COMPARISON BY TEMPERATURE

Stations: Stonington Island, Antarctica, 68°12'S-67°00'W
Jakobshavn, Greenland, 69°13'N-51°02'W
Fairbanks, Alaska, 64°51'N-147°43'W
Point Barrow, Alaska, 71°23'N-156°17'W
Little America, Antarctica, 78°34'S-163°56'W

Please note that all curves have been smoothed.

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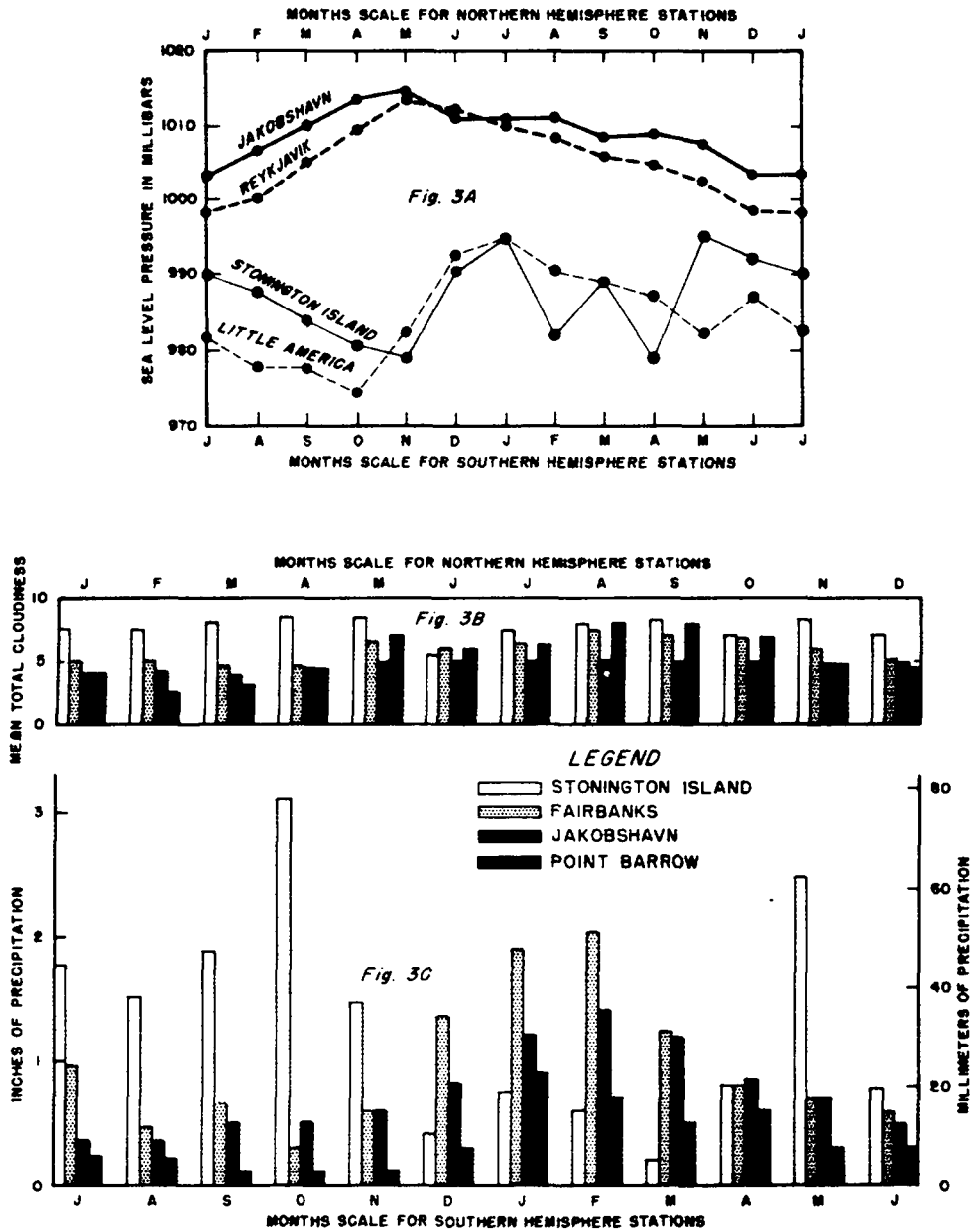

FIG. 3. PRESSURE, CLOUDINESS, AND PRECIPITATION COMPARISON

Stations: Stonington Island, Antarctica, 68°12'S-67°00'W
Fairbanks, Alaska, 64°51'N-147°43'W
Jakobshavn, Greenland, 69°13'N-51°02'W
Point Barrow, Alaska, 71°23'N-156°17'W
Little America, Antarctica, 78°34'S-163°56'W

Data are from Table 2, page 7; Table 5, page 11; and Table 6, page 12.

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TABLE 2, STONINGTON ISLAND PRESSURE, TEMPERATURE, RELATIVE HUMIDITY

MONTH	PRESSURE[a] (mb.)				TEMPERATURE (°F)					RELATIVE HUMIDITY (%)
	MEAN	AVERAGE DAILY VARIATION[c]	ABSOLUTE MAXIMUM	ABSOLUTE MINIMUM	MEAN	AVERAGE DAILY MAXIMUM	AVERAGE DAILY MINIMUM	ABSOLUTE MAXIMUM	ABSOLUTE MINIMUM	MEAN
JAN	995.1	5	1007	976	31.6	38.2	27.3	47.0	10	79
FEB	982.2	5	1006	972	28.7	32.6	25.2	40	20	72
MAR	988.6	no	1003	974	34.3	no	no	42[b]	27[b]	73
APR	979.6	6	1003	957	25.2	no	no	42[b]	9[b]	64
MAY	995.1	9	1018	964	14.4	no	no	31[b]	-10[b]	no
JUN	991.6	11	1013	962	1.0	9.7	-5.3	25	-27	no
JUL	990.4	11	1024.0	950	14.9	25.2	5.7	40	-30	71
AUG	987.6	11	1003	957	12.1	24.5	1.2	40	-24	77
SEP	984.3	12	1006	944.7	12.5	30.5	2.8	41	-31.0	67
OCT	981.0	10	1005	961	17.6	26.7	1.1	47.0	-22	77
NOV	979.6	9	999	948	24.8	32.2	18.2	46	-2	80
DEC	990.9	3	1002	975	29.6	34.9	23.9	46	16	70
YEAR	987.2	----------	1024.0	944.7	20.6	----------	----------	47.0	-31.0	----------

[a]Pressure at mean sea level reduced to 32°F and latitude 45°.
[b]Extreme of synoptic readings.
[c]Monthly average of extreme pressure range for each day.
no: No observation.

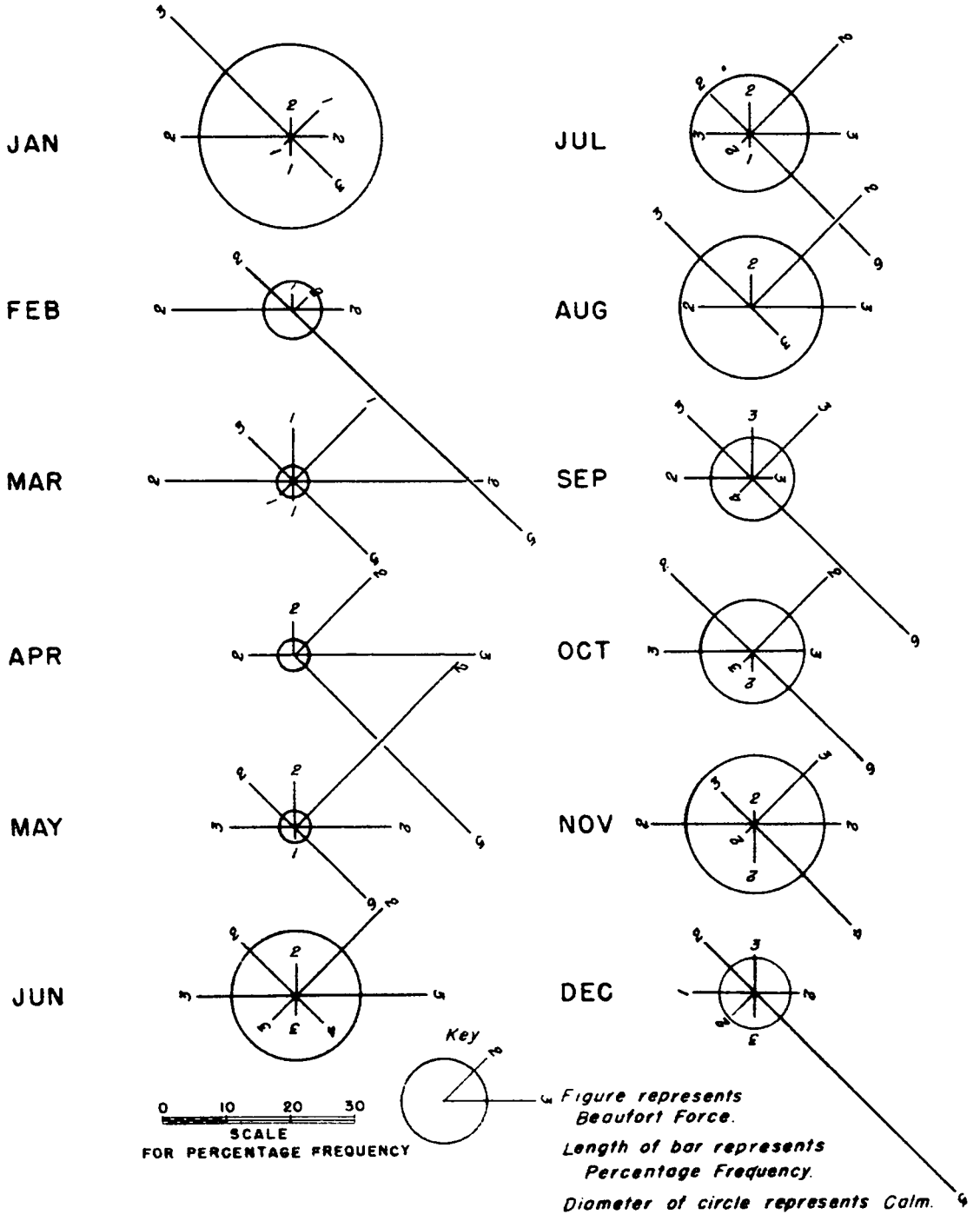

FIG. 4. STONINGTON ISLAND SURFACE WINDS

Data are from Table 3, page 9.

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TABLE 3, STONINGTON ISLAND SURFACE WIND DISTRIBUTION

For example, 3 percent of the observations for JAN recorded winds from the octant 337°30′ to 022°30′ (N) at an average of Beaufort Force 2. All intermediate wind directions were assigned to the next southerly octant. Direction of variable winds was assigned to the direction reported at the following observation.

MONTH	Percent: Force:	N.	NE.	E.	SE.	S.	SW.	W.	NW.	CALM
JAN	%	3	6	6	9	3	2	17	26	28
	F	2	1	2	3	1	1	2	3	
FEB		2	3	8	49	0	0	19	10	9
		1	2	2	5	0	0	2	2	
MAR		8	16	29	16	3	3	10	10	5
		1	1	2	5	1	1	2	3	
APR		5	17	28	39	0	0	7	0	5
		2	2	3	5	0	0	2	0	
MAY		7	36	15	15	2	0	10	10	5
		2	2	2	6	1	0	3	2	
JUN		5	19	17	6	3	5	13	12	20
		2	2	5	4	3	3	3	2	
JUL		5	17	14	26	2	2	7	9	18
		2	2	3	6	1	2	3	2	
AUG		5	24	16	6	0	0	8	19	22
		2	2	3	3	0	0	2	3	
SEP		8	14	3	34	0	3	11	14	13
		3	3	3	6	0	4	2	3	
OCT		0	16	8	24	3	2	14	17	16
		0	2	3	6	2	3	3	2	
NOV		1	14	14	22	3	2	16	7	21
		2	3	2	4	2	2	2	3	
DEC		6	0	7	44	4	5	10	13	11
		3	0	2	5	3	2	1	2	
YEAR		5	15	14	23	2	2	13	12	14
		2	2	3	5	2	2	2	2	

TABLE 4, STONINGTON ISLAND WIND VELOCITY DISTRIBUTION, GALES, PEAK WINDS						
MONTH	WIND VELOCITY DISTRIBUTION Percentage of observations reporting Beaufort force				OCCURRENCE OF GALES[a] No. of days	PEAK WIND[b] (mph)
	0	1-4	5-7	8, or over		
JAN	28	69	3	0	0	24
FEB	9	85	4	2	1	41
MAR	5	78	12	5	3	43
APR	5	57	38	0	1	54
MAY	5	79	10	6	4	63
JUN	20	68	9	3	2	54
JUL	18	56	19	7	3	26
AUG	22	68	10	0	0	73
SEP	13	49	28	10	4	72
OCT	16	59	11	14	6	72
NOV	21	63	14	2	1	61
DEC	11	61	23	5	4	73
YEAR	14	66	15	5	29	73

[a]Over 39 mph.
[b]Average for one minute, detected by spot observations subject to observer laxity.

TABLE 5, STONINGTON ISLAND PRECIPITATION AND SNOW COVER					
MONTH	PRECIPITATION			SNOW COVER	
	DAYS	AMOUNT IN INCHES[a]		NET[b] CHANGE IN INCHES	RANGE[c] IN INCHES
		MONTHLY TOTAL	HIGHEST DAILY TOTAL		
JAN	13	0.75	0.17	-13	23
FEB	7	0.61	0.31	-1	6
MAR	7	0.21	no	no	no
APR	7	0.79	no	no	no
MAY	17	2.56	no	no	no
JUN	17	0.79	0.24	-11	11
JUL	15	1.75	0.50	+4	4
AUG	16	1.49	0.42	+5	11
SEP	15	1.89	0.49	+2	14
OCT	19	3.14	0.76	+19	35
NOV	19	1.45	0.44	0	14
DEC	8	0.39	0.20	-14	14
YEAR	160	15.8	----------	----------	----------

[a]Water equivalent.

[b]Obtained by subtracting height of snow cover at end of month from height of snow cover at beginning of month.

[c]Obtained by subtracting minimum height of snow cover during month from maximum height of snow cover during month. Range of snow cover shows activity of snow surface during month.

no: No observation.

TABLE 6, CLOUDINESS AT STONINGTON ISLAND					
MONTH	AMOUNT OF LOW[e] CLOUDINESS PERCENTAGE OBS. REPORTING				MEAN AMOUNT OF LOW[e] CLOUDINESS (0-10)
	CLEAR[a]	PARTLY CLOUDY[b]	CLOUDY[c]	OVERCAST[d]	
JAN	18	41	15	26	5.2
FEB	16	40	21	23	5.8
MAR	26	32	8	34	4.7
APR	52	13	13	22	3.4
MAY	38	6	3	53	5.8
JUN	35	10	5	50	5.4
JUL	34	5	15	46	6.4
AUG	24	11	19	46	6.2
SEP	25	17	23	35	5.8
OCT	14	25	21	40	6.9
NOV	9	17	17	57	7.5
DEC	35	29	14	22	4.7
YEAR	27	21	14	38	5.6
	AMOUNT OF TOTAL[f] CLOUDINESS				MEAN AMOUNT OF TOTAL[f] CLOUDINESS
JAN	2	22	24	52	7.8
FEB	0	12	35	53	8.2
MAR	11	24	10	55	7.0
APR	12	27	18	43	8.5
MAY	18	13	10	59	7.1
JUN	19	14	8	59	6.5
JUL	9	17	18	56	7.4
AUG	10	13	24	53	7.4
SEP	10	3	36	51	7.8
OCT	4	14	29	53	8.3
NOV	6	8	14	72	8.4
DEC	14	34	24	28	5.6
YEAR	10	17	21	52	7.5

[a]Clear: 0-9% sky covered.
[b]Partly cloudy: 10-50% sky covered.
[c]Cloudy: 51-90% sky covered.
[d]Overcast: 91-100% sky covered
[e]Low clouds: all clouds under 6500 feet.
[f]Total clouds: amount of sky covered with clouds of all types at all levels.

TABLE 7, OCCURRENCE OF FOG AND FROST AT STONINGTON ISLAND				
MONTH	NUMBER OF DAYS			
	FOG AT STATION	FOG WITHIN SIGHT	FOG PERSISTING THRU NOON AT STATION	FROST OR GLAZE DEPOSITED
JAN	3	5	0	0
FEB	0	0	0	0
MAR	0	0	0	0
APR	0	0	0	0
MAY	1	1	0	0
JUN	2	5	0	5
JUL	2	3	1	1
AUG	5	7	1	4
SEP	0	1	0	3
OCT	0	0	0	2
NOV	0	0	0	0
DEC	0	0	0	0
YEAR	13	22	2	15

TABLE 8, VISIBILITY AT STONINGTON ISLAND										
MONTH	PERCENTAGE OF OBSERVATIONS REPORTING MAXIMUM VISIBILITY[a] AS (MILES)									NO. DAYS EXCEL-LENT VIS.[b]
	UNDER 1/2	1/2-1	1-2	2-5	6-10	11-20	21-50	51-99	OVER 100	
JAN	0	2	2	10	2	9	23	22	30	23
FEB	0	0	2	2	10	3	21	17	45	21
MAR	0	0	11	8	16	8		57[c]		16
APR	0	0	8	0	11	5		76[c]		20
MAY	0	4	11	14	18	13		40[c]		13
JUN	4	15	7	15	14	22	6	12	5	10
JUL	10	4	3	21	18	7	24	10	3	9
AUG	13	2	6	12	8	22	21	16	0	8
SEP	4	7	10	7	11	12	24	7	18	12
OCT	9	4	7	4	4	15	31	13	13	15
NOV	9	4	7	4	4	14	32	13	13	16
DEC	0	0	0	2	3	8	26	12	49	27
YEAR	4	4	6	8	10	12		56		190

[a]In best half of horizon.
[b]Visibility over 30 miles over 8 successive hours.
[c]Observations taken only of visibility over 30 miles.

TABLE 9, HEIGHT OF BASE OF LOW CLOUDS AT STONINGTON ISLAND					
MONTH	PERCENTAGE OF OBSERVATIONS REPORTING LOW CLOUDS AT (FEET)				
	UNDER 1000	FROM 1000-2000	FROM 2001-4000	FROM 4001-6500	NO LOW CLOUDS
JAN	24	21	24	17	14
FEB	6	22	33	16	23
MAR	no	no	no	no	27
APR	no	no	no	no	45
MAY	no	no	no	no	34
JUN	14	25	36	3	22
JUL	2	10	28	16	44
AUG	12	6	16	26	40
SEP	12	13	14	27	34
OCT	22	19	13	25	21
NOV	11	19	29	23	18
DEC	4	27	36	23	10

no: No observation.

TABLE 10, TYPES[a] OF PREDOMINANT LOW CLOUD OBSERVED FROM STONINGTON ISLAND											
MONTH	PERCENTAGE OF OBSERVATIONS REPORTING										
	CLO	CL1	CL2	CL3	CL4	CL5	CL6	CL7	CL8	CL9	CLX
JAN	14	12	6	0	2	52	8	3	3	0	0
FEB	23	4	2	0	2	55	12	0	2	0	0
MAR	27	3	0	0	21	38	3	3	0	0	5
APR	45	2	3	0	5	22	14	0	0	2	7
MAY	34	5	0	0	2	59	0	0	0	0	0
JUN	22	5	0	0	0	54	1	1	0	0	17
JUL	44	0	0	0	0	46	0	0	1	1	8
AUG	40	2	0	0	0	42	0	0	0	0	16
SEP	34	0	0	0	0	37	22	0	0	0	7
OCT	21	1	14	0	0	43	12	0	0	0	9
NOV	18	7	0	0	1	63	6	2	2	0	1
DEC	10	13	2	0	6	50	9	8	1	1	0
YEAR	28	4	2	0	3	47	7	1	1	1	7

[a]In accordance with the International System of Classification of 1929 as modified to 1946:

CLO: No low clouds.
CL1: Cumulus of fine weather.
CL2: Cumulus heavy and swelling, without anvil top.
CL3: Cumulonimbus.
CL4: Stratocumulus formed by flattening of cumulus.
CL5: Layer of stratus or stratocumulus.
CL6: Low broken up clouds of bad weather.
CL7: Cumulus of fine weather and stratocumulus.
CL8: Heavy or swelling cumulus, or cumulonimbus, and stratocumulus.
CL9: Heavy or swelling cumulus (or cumulonimbus) and low ragged clouds of bad weather.
CLX: Unobservable.

TABLE 11, TYPES[a] OF PREDOMINANT MIDDLE CLOUD OBSERVED FROM STONINGTON ISLAND											
MONTH	PERCENTAGE OF OBSERVATIONS REPORTING										
	CMO	CM1	CM2	CM3	CM4	CM5	CM6	CM7	CM8	CM9	CMX
JAN	3	0	12	2	4	16	1	26	3	8	25
FEB	8	0	22	8	3	16	0	0	18	9	16
MAR	21	16	21	0	0	0	0	5	3	0	34
APR	15	10	20	7	12	0	0	9	0	0	27
MAY	23	6	2	3	3	2	0	6	0	0	53
JUN	20	11	5	3	5	0	0	3	2	0	53
JUL	36	14	13	6	0	0	0	3	0	0	28
AUG	30	3	14	5	2	5	0	6	0	0	35
SEP	10	7	32	4	4	0	0	4	0	6	33
OCT	12	5	21	10	6	0	4	1	0	7	34
NOV	8	6	8	17	3	0	0	2	0	2	54
DEC	9	1	14	7	6	32	1	14	2	5	9
YEAR	17	6	15	6	4	6	1	7	2	3	34

[a]In accordance with the International System of Classification of 1929 as modified to 1946:

CMO: No middle clouds.
CM1: Typical altostratus, thin.
CM2: Typical altostratus, thick (or nimbostratus).
CM3: Altocumulus, or high stratocumulus, sheet at one level only.
CM4: Altocumulus in small isolated patches; individual clouds often show signs of evaporation and are more or less lenticular in shape.
CM5: Altocumulus arranged in more or less parallel bands, or an ordered layer advancing over sky.
CM6: Altocumulus formed by a spreading out of the tops of cumulus.
CM7: Altocumulus associated with altostratus or altostratus with a partially altocumulus character.
CM8: Altocumulus castellatus, or scattered cumuliform tufts.
CM9: Altocumulus in several sheets at different levels, generally associated with thick fibrous veils of cloud and a chaotic appearance of the sky.
CMX: Unobservable.

TABLE 12, TYPES[a] OF PREDOMINANT HIGH CLOUD OBSERVED FROM STONINGTON ISLAND											
MONTH	PERCENTAGE OF OBSERVATIONS REPORTING										
	CHO	CH1	CH2	CH3	CH4	CH5	CH6	CH7	CH8	CH9	CHX
JAN	19	1	0	1	3	3	6	0	2	10	55
FEB	16	5	4	0	5	3	3	0	5	7	52
MAR	24	8	5	0	3	0	0	0	0	3	57
APR	21	5	0	0	0	3	3	0	9	2	57
MAY	30	3	2	0	0	0	2	0	0	2	61
JUN	35	0	0	0	0	0	0	0	0	2	63
JUL	38	5	0	2	0	2	0	8	6	2	37
AUG	30	6	5	0	0	9	5	0	2	0	43
SEP	20	6	0	0	0	2	2	8	6	0	56
OCT	15	2	6	0	2	0	3	2	12	5	53
NOV	19	2	0	0	0	2	2	3	4	3	65
DEC	32	6	1	0	5	2	6	0	10	17	21
YEAR	24	4	2	1	2	2	3	2	6	4	51

[a]In accordance with the International System of Classification of 1929 as modified to 1946:

CHO: No high clouds (no cirrus clouds).
CH1: Cirrus, delicate, not increasing, scattered and isolated masses.
CH2: Cirrus, delicate, not increasing, abundant, but not forming a continuous layer.
CH3: Cirrus of anvil clouds, usually dense.
CH4: Cirrus, increasing, generally in the form of hooks ending in a point or in a small tuft.
CH5: Cirrus (often in polar bands) or cirrostratus advancing over the sky, but not more than 45° above the horizon.
CH6: Cirrus (often in polar bands) or cirrostratus advancing over the sky and more than 45° above the horizon.
CH7: Veil of cirrostratus covering the whole sky.
CH8: Cirrostratus, not increasing and not covering the whole sky.
CH9: Cirrocumulus predominating, associated with a small quantity of cirrus.
CHX: Unobservable.

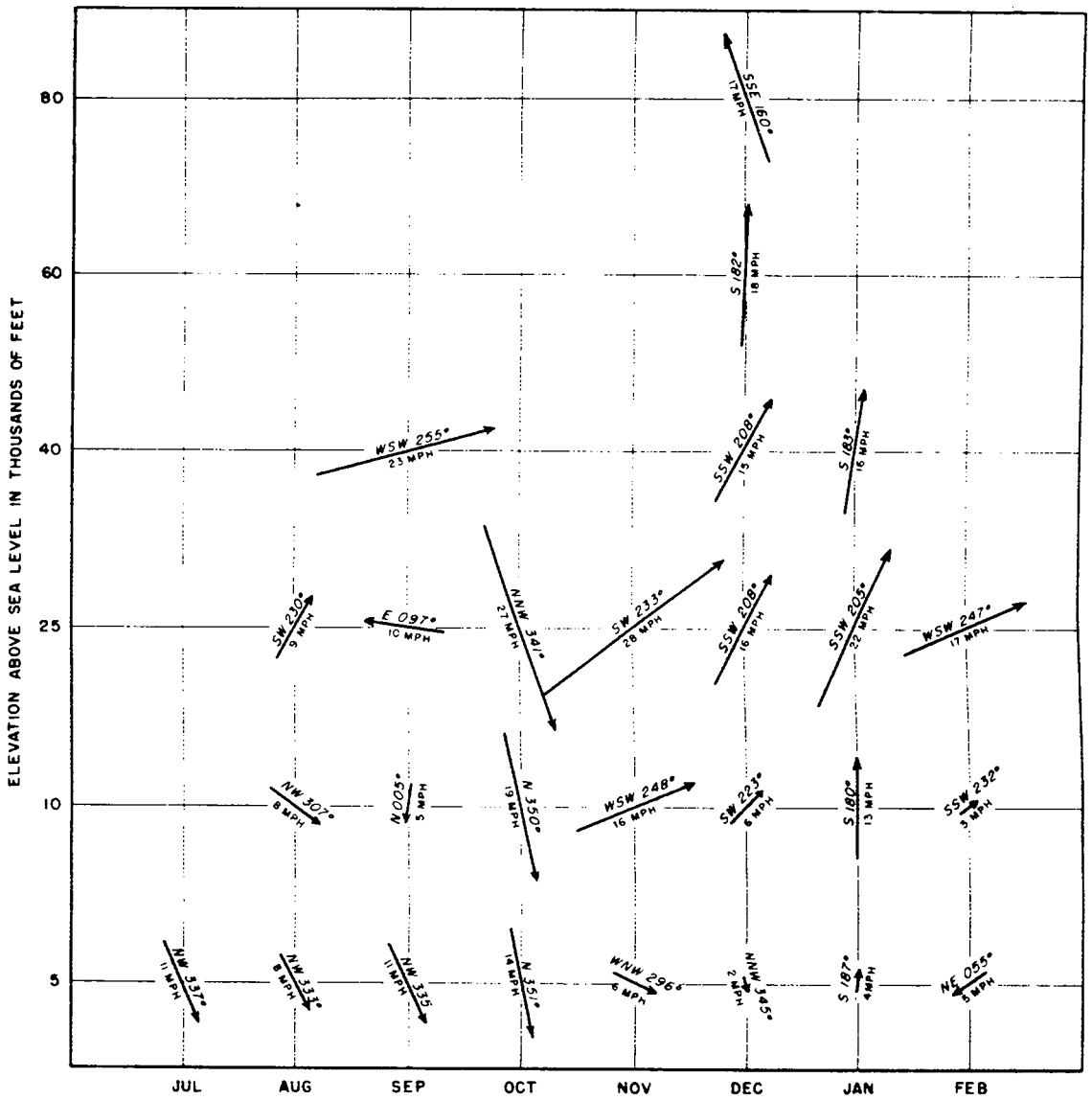

FIG. 5. RESULTANT WINDS ALOFT OF STONINGTON ISLAND

Data are from Table 13, pages 20-21

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TABLE 13, RESULTANT WINDS ALOFT OF STONINGTON ISLAND					
5,000 TO 6,000 FEET					
MONTH	NUMBER OF OBSERVATIONS	RESULTANT WIND DIRECTION FROM	RESULTANT WIND VELOCITY IN MPH (A)	AVERAGE WIND VELOCITY IN MPH (B)	WIND SHEAR RATIO (A/B)
JAN	35	187°	4	11	.35
FEB	12	055°	5	9	.53
MAR	0				
APR	0				
MAY	0				
JUN	2				
JUL	10	337°	11	19	.57
AUG	20	333°	8	16	.52
SEP	37	335°	11	20	.55
OCT	14	351°	14	20	.70
NOV	22	296°	6	16	.37
DEC	37	345°	2	9	.22
10,000 TO 12,000 FEET					
JAN	23	180°	13	22	.58
FEB	7	232°	3	11	.27
MAR	0				
APR	0				
MAY	0				
JUN	0				
JUL	0				
AUG	13	307°	8	19	.41
SEP	27	005°	5	26	.19
OCT	7	350°	19	23	.83
NOV	16	248°	16	23	.70
DEC	29	223°	6	15	.40

TABLE 13 (CONTINUED), RESULTANT WINDS ALOFT OF STONINGTON ISLAND					
20,000 TO 25,000 FEET					
MONTH	NUMBER OF OBSERVA-TIONS	RESULTANT WIND DIRECTION FROM	RESULTANT WIND VELOCITY IN MPH (A)	AVERAGE WIND VELOCITY IN MPH (B)	WIND SHEAR RATIO (A/B)
JAN	19	205°	22	36	.60
FEB	5	247°	17	19	.89
MAR	0				
APR	0				
MAY	0				
JUN	0				
JUL	0				
AUG	6	230°	9	31	.29
SEP	5	097°	10	25	.39
OCT	4	341°	27	33	.83
NOV	9	233°	28	42	.67
DEC	22	208°	16	26	.62
35,000 TO 45,000 FEET					
JAN	7	183°	16	27	.59
SEP	3	255°	23	27	.85
DEC	15	208°	15	23	.67
55,000 TO 65,000 FEET					
DEC	5	182°	18	20	.92
75,000 TO 85,000 FEET					
DEC	3	160°	17	24	.72

TABLE 14, LOCAL FLYING WEATHER AT STONINGTON ISLAND				
MONTH	NUMBER OF DAYS			
	EXCELLENT[a]	FLYABLE[b]	POOR[c]	HAZARDOUS[d]
JAN	0	8	23	29
FEB	1	5	18	28
MAR	1	10	23	31
APR	3	11	25	30
MAY	6	8	12	27
JUN	6	8	14	26
JUL	2	5	12	14
AUG	3	7	11	27
SEP	3	5	16	30
OCT	1	8	19	29
NOV	2	3	12	28
DEC	8	16	24	31
YEAR	36	94	209	330

[a]Less than 1/10th sky covered; visibility over 30 miles (usually over 100); duration more than 8 hours during daylight, twilight, or bright moonlight hours.

[b]Scattered clouds covering less than 5/10ths of sky; visibility over 30 miles; duration more than 6 hours during daylight or twilight hours.

[c]Visibility over 30 miles; ceiling over 6000 feet; duration more than 6 hours during daylight or twilight hours.

[d]Visibility over 1 mile; ceiling over 500 feet; duration more than 4 hours during daylight or twilight hours.

CAPE KEELER STATION

These statistics are compiled from data gathered from 30 September 1947 to 1 December 1947 at Cape Keeler, Weddell-Seacoast Palmer Peninsula, Antarctica, 69°42'S-62°48'W. The elevation was approximately 60 feet above mean sea level. This location was 125 miles Southeast of the main base at Stonington Island on the leeward coast of a glacier-clad mountainous peninsula several degrees south of the Antarctic Circle. Unless noted, all statistics are based on synoptic observations at 12h, 18h, and 23h GMT, supplemented by notes on interim conditions. The principal observer was C. O. Fiske.

TABLE 15, PRESSURE AND TEMPERATURE AT CAPE KEELER

HALF-MONTH PERIOD ENDING	PRESSURE[a] (MILLIBARS)				TEMPERATURE (°F)		
	AVERAGE	ABSOLUTE MAXIMUM[b]	ABSOLUTE MINIMUM[b]	AVERAGE DAILY VARIATION[c]	AVERAGE	ABSOLUTE MAXIMUM[b]	ABSOLUTE MINIMUM[b]
15OCT47	985	998.2	961	8	2	23	-23
1NOV47	978	991	969	5	3	28	-27
15NOV47	979	998	954.3	9	19	45	2
1DEC47	980	986	970	2	17	36	-13
OVERALL	975.5	988.2	954.3	6	10.6	45	-27

[a]Pressure at mean sea level reduced to 32°F and 45° latitude.
[b]Values obtained from instrument graphs.
[c]Average of extreme pressure range for each day.

TABLE 16, PRECIPITATION, GALE, FOG, VISIBILITY, CLOUDINESS, AT CAPE KEELER

HALF-MONTH PERIOD ENDING	PRECIPITATION			NUMBER OF DAYS			MEAN TOTAL CLOUDINESS (0-10)
	AMOUNT IN INCHES[a]	NO. OF DAYS	NET CHANGE[b] IN SNOW COVER IN INCHES	GALE[c]	FOG	EXCELLENT VISIBILITY[d]	
15OCT47	0.16	5	+4	2	0	7	7
1NOV47	0.04	2	+2	0	0	3	7
15NOV47	0.25	9	+10	2	1	8	7
1DEC47	0.15	8	0	0	0	5	8
OVERALL	0.60	24	+16	4	1	23	7

[a]Water equivalent.
[b]Obtained by subtracting the height of snow cover at the end of the period from the height of the snow cover at the beginning of the period.
[c]Over 39 miles per hour.
[d]Over 30 miles in best half of horizon for over 8 successive hours.

TABLE 17, CAPE KEELER SURFACE WIND DISTRIBUTION										
HALF-MONTH PERIOD ENDING	Percent: Force:	For example, 20 percent of the observations ending 15OCT47 recorded winds from the octant 337°30′ to 022°30′ (N) at an average Beaufort force of 2. All intermediate directions were assigned to the next southerly octant.								
		N.	NE.	E.	SE.	S.	SW.	W.	NW.	CALM
15OCT47	%	20	0	2	7	44	5	7	5	10
	F	2	0	3	2	4	3	2	5	
1NOV47		25	0	2	4	46	0	4	11	8
		3	0	1	1	4	0	3	3	
15NOV47		4	2	4	2	37	2	4	30	15
		2	1	1	1	4	6	1	4	
1DEC47		17	0	2	6	42	2	2	23	6
		3	0	1	2	3	1	2	2	
OVERALL		16	1	2	5	42	2	4	18	10
		3	1	1	2	4	3	2	3	

TABLE 18, LOCAL FLYING WEATHER AT CAPE KEELER				
HALF-MONTH PERIOD ENDING	NUMBER OF DAYS			
	EXCELLENT[a]	FLYABLE[b]	POOR[c]	HAZARDOUS[d]
15OCT47	1	4	6	10
1NOV47	1	2	3	11
15NOV47	0	5	9	12
1DEC47	0	3	4	15
OVERALL (61 DAYS)	2	14	22	48

[a]Less than 1/10th sky covered; visibility over 30 miles (usually over 100); duration more than 8 hours during daylight, twilight, or bright moonlight hours.

[b]Scattered clouds covering less than 5/10ths of sky; visibility over 30 miles; duration more than 6 hours during daylight or twilight hours.

[c]Visibility over 30 miles; ceiling over 6000 feet; duration more than 6 hours during daylight or twilight hours.

[d]Visibility over 1 mile; ceiling over 500 feet; duration more than 4 hours during daylight or twilight hours.

PLATEAU STATION

These statistics are compiled from data gathered from 28 August 1947 to 1 December 1947 at the Plateau Station, atop Palmer Peninsula Plateau, Antarctica, 68°06′S-66°24′W. The elevation was approximately 5800 feet above mean sea level. This location is 25 miles east of Stonington Island atop a mile-high, glacier-clad, mountainous plateau peninsula situated a few degrees south of the Antarctic Circle projecting into prevailing Westerly winds. All statistics are based on daily synoptic observations at 12h, 18h, and 23h GMT. The principal observer was E. A. Wood.

TABLE 19, PRESSURES AND TEMPERATURES AT THE PLATEAU STATION

HALF-MONTH PERIOD ENDING	PRESSURE (MILLIBARS)		TEMPERATURE (F)			
	AVERAGE[a]	AVERAGE DIFFERENCE BETWEEN PLATEAU AND STONINGTON ISLAND[b]	AVERAGE	ABSOLUTE MAXIMUM[c]	ABSOLUTE MINIMUM[c]	AVERAGE DIFFERENCE BETWEEN PLATEAU AND STONINGTON ISLAND[b]
15SEP47	no	no	-3.6	16	-30	11
1OCT47	984.4	+4.8	-5.7	20	-19	24
15OCT47	979.5	-3.8	-5.9	15	-19	15
1NOV47	979.1	+0.7	9.2	22	-25	19
15NOV47	980.1	+0.4	7.9	19	-18	10
1DEC47	977.4	-2.1	9.5	30	-10	16
OVERALL	980.1	0.0[a]	1.9	30	-30	16

[a]Reduced to mean sea level pressure by equalizing average Plateau and Stonington Island pressures for the overall period.
[b]Plateau has higher pressure by (°F).
[c]Values obtained from maximum and minimum thermometers.

no: No observation.

TABLE 20, PLATEAU STATION
SNOW COVER, PRECIPITATION, DRIFT, GALE, FOG, VISIBILITY, CLOUDINESS

HALF-MONTH PERIOD ENDING	NET CHANGE IN SNOW COVER (INCHES)[a]	NUMBER OF DAYS					MEAN TOTAL CLOUDINESS (0-10)
		PRECIPITATION	DRIFT	GALE[b]	FOG	EXCELLENT[c] VISIBILITY	
15SEP47	no	5	10	1	3	4	8.9
1OCT47	no	4	9	0	2	1	8.7
15OCT47	no	1	12	1	0	3	8.3
1NOV47	no	14	7	0	3	1	9.8
15NOV47	+23	10	15	0	4	1	9.6
1DEC47	- 4	9	3	0	6	6	9.0
OVERALL (92 DAYS)	no	43	56	2	18	16	9.1

[a]Obtained by subtracting the height of the snow cover at the end of the period from the height of the snow cover at the beginning of the period.
[b]Over 39 miles per hour
[c]Over 30 miles in best half of horizon for over 8 successive hours.

no: No observation.

TABLE 21, PLATEAU STATION SURFACE WIND DISTRIBUTION										
HALF-MONTH PERIOD ENDING	Percent: Force:	For example, 11 percent of the observations ending 15SEP47 recorded winds from the octant 337°30′ to 022°30′ (N) at an average Beaufort force of 3. All intermediate directions were assigned to the next southerly octant.								
		N.	NE.	E.	SE.	S.	SW.	W.	NW.	CALM
15SEP47	%	11	5	11	0	3	2	29	31	8
	F.	3	2	3	0	1	2	3	5	
1OCT47		13	41	33	0	0	0	0	13	0
		4	2	3	0	0	0	0	3	
15OCT47		13	11	52	0	0	2	16	6	0
		2	3	4	0	0	3	2	3	
1NOV47		14	4	6	4	0	0	22	50	0
		4	4	3	6	0	0	4	4	
15NOV47		0	20	0	0	8	22	22	24	4
		0	5	0	0	4	5	4	5	
1DEC47		6	14	0	2	8	36	22	10	2
		3	2	0	1	2	3	3	3	
OVERALL		10	16	17	1	3	10	19	22	2
		3	3	3	4	3	4	3	4	

TABLE 22. LOCAL FLYING WEATHER, PLATEAU STATION				
HALF-MONTH PERIOD ENDING	NUMBER OF DAYS			
	EXCELLENT[a]	FLYABLE[b]	POOR[c]	HAZARDOUS[d]
15SEP47	0	1	4	6
1OCT47	0	0	2	5
15OCT47	0	6	6	6
1NOV47	0	0	0	1
15NOV47	0	1	1	7
1DEC47	0	3	6	9
OVERALL (92 DAYS)	0	11	19	28

[a]Less than 1/10th sky covered; visibility over 30 miles (usually over 100); duration more than 8 hours during daylight, twilight, or bright moonlight hours.

[b]Scattered clouds covering less than 5/10ths of sky; visibility over 30 miles; duration more than 6 hours during daylight or twilight hours.

[c]Visibility over 30 miles; ceiling over 6000 feet; duration more than 6 hours during daylight or twilight hours.

[d]Visibility over 1 mile; ceiling over 500 feet; duration more than 4 hours during daylight or twilight hours.

WEDDELL-SEACOAST SLEDGE PARTY

These statistics were compiled from data gathered by the Palmerland Weddell-Seacoast Sledge Party during the summer of 1947-8 from the Plateau Station, 68°06'S-66°24'W, to the vicinity of Nantucket Inlet, 74°36'S-62°00'W, via the East Coast of Palmer Peninsula, and return. All statistics are based on once daily observations, generally taken at 12h GMT. The principal observer was Arthur E. Owen.

TABLE 23, WEDDELL-SEACOAST SLEDGE PARTY GEOGRAPHIC LOCATIONS

HALF-MONTH PERIOD ENDING	APPROXIMATE LOCATION DURING PERIOD	
1NOV47	Mobiloil Bay	68°00'S-65°18'W
15NOV47	Keeler Station	69°42'S-62°48'W
1DEC47	Cape Knowles	71°48'S-60°36'W
15DEC47	Mt. Tricorn	74°00'S-60°42'W
1JAN48	Cape Knowles	71°48'S-60°36'W
15JAN48	Keeler Station	69°42'S-62°48'W
22JAN48	Mobiloil Bay	68°00'S-65°18'W
	to Plateau Station	68°06'S-66°24'W

TABLE 24, WEDDELL SEACOAST SLEDGE PARTY
PRESSURE, TEMPERATURE, GALE, FOG, PRECIPITATION, VISIBILITY, CLOUDINESS

HALF-MONTH PERIOD ENDING	AVERAGE PRESSURE (MB)	TEMPERATURE			NUMBER OF DAYS				MEAN TOTAL CLOUDINESS (0-10)
		AVERAGE	ABSOLUTE MAXIMUM	ABSOLUTE MINIMUM	GALE[c]	FOG	PRECIPITATION	EXCELLENT[d] VISIBILITY	
1NOV47	----------	21	32	9	0	1	4	6	5
15NOV47	----------	20	30	2	0	0	4	5	7
1DEC47	----------	14	17	4	1	0	4	4	7
15DEC47	----------	17	32	-4	0	0	4	1	7
1JAN48	----------	17	30	5	0	3	1	3	8
15JAN48	----------	27	30	6	0	3	3	4	7
22JAN48	----------	------	----------	-5	0	0	4	0	7
OVERALL	984[a]	18[b]	32	-5	1	7	24	23	7

[a]Pressure at mean sea level reduced to 32°F and 45° latitude for the southernmost portion of the journey: Cape Knowles to Mt. Tricorn and return, 23Nov47 to 29Dec47. Stonington Island pressure at the same hours during this period averaged 986 mb.

[b]Stonington Island temperature at the same hours during this period averaged 30°F.

[c]Over 39 miles per hour.

[d]Over 30 miles in best half of horizon for over 8 successive hours.

TABLE 25, WEDDELL SEACOAST SLEDGE PARTY
SURFACE WIND DISTRIBUTION

HALF-MONTH PERIOD ENDING	Percent: Force:	N.	NE.	E.	SE.	S.	SW.	W.	NW.	CALM
		For example, 10 percent of the observations ending 1NOV47 recorded winds from the octant 337°30′ to 022°30′ (N) at an average Beaufort force of 1. All intermediate directions were assigned to the next southerly octant.								
1NOV47	%	10	0	15	0	15	0	10	35	15
	F	1	0	1	0	1	0	1	1	
15NOV47		14	6	6	6	30	6	6	14	12
		2	1	1	3	2	7	4	1	
1DEC47		29	0	14	45	6	0	6	0	0
		2	0	2	3	3	0	2	0	
15DEC47		0	0	0	66	20	7	0	0	7
		0	0	0	2	1	1	0	0	
1JAN48		23	0	18	25	8	18	0	8	0
		2	0	1	2	1	2	0	1	
15JAN48		58	7	7	14	7	7	0	0	0
		1	1	2	1	1	no	0	0	
22JAN48		0	0	0	14	0	0	14	72	0
		0	0	0	no	0	0	no	no	
OVERALL		19	2	9	24	12	5	5	18	6
		2	1	1	2	1	3	2	1	

No: No observation.

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TABLE 26, FLYING WEATHER, WEDDELL SLEDGE PARTY				
HALF-MONTH PERIOD ENDING	NUMBER OF DAYS			
	EXCELLENT[a]	FLYABLE[b]	POOR[c]	HAZARDOUS[d]
1NOV47	0	2	4	5
15NOV47	0	5	5	7
1DEC47	1	3	4	6
15DEC47	1	2	2	7
1JAN47	0	2	3	5
15JAN47	0	3	3	5
22JAN47	1	2	2	2
OVERALL (83DAYS)	3	19	23	37

[a]Less than 1/10th sky covered; visibility over 30 miles (usually over 100); duration more than 8 hours during daylight, twilight, or bright moonlight hours.

[b]Scattered clouds covering less than 5/10ths of sky; visibility over 30 miles; duration more than 6 hours during daylight or twilight hours.

[c]Visibility over 30 miles; ceiling over 6000 feet; duration more than 6 hours during daylight or twilight hours.

[d]Visibility over 1 mile; ceiling over 500 feet; duration more than 4 hours during daylight or twilight hours.

MARGUERITE BAY SLEDGE PARTY

The statistics presented here were compiled from data gathered by the Marguerite Bay Sledge Party enroute from Stonington Island, 68°12'S-67°00'W, to the Northeastern extremity of Alexander I Island, 69°24'S-69°36'W, and return. All statistics are based on once by daily observations, generally taken at 12h GMT. Robert H. T. Dodson was the principal observer.

TABLE 27. MARGUERITE BAY SLEDGE PARTY GEOGRAPHIC LOCATIONS

HALF-MONTH PERIOD ENDING	APPROXIMATE LOCATION DURING PERIOD	
15OCT47	Mushroom Island	68°54'S-67°54'W
1NOV47	Off NE extremity Alexander I Island	69°24'S-69°36'W
15NOV47	Off NE extremity Alexander I Island	69°24'S-69°36'W
1DEC47	Off Windy Valley Bay	68°30'S-67°24'W
15DEC47	Black Thumb Mountain	68°24'S-67°12'W
25DEC47	Red Rock Ridge	68°18'S-67°12'W

TABLE 28, MARGUERITE BAY SLEDGE PARTY
PRESSURE, TEMPERATURE, GALE, FOR, PRECIPITATION, VISIBILITY, CLOUDINESS

HALF-MONTH PERIOD ENDING	AVERAGE PRESSURE (MB)[a]	TEMPERATURE			NUMBER OF DAYS -				MEAN TOTAL CLOUD-INESS (0-10)
		AVERAGE	ABSOLUTE MAXIMUM	ABSOLUTE MINIMUM	GALE[c]	FOG	PRECIP-ITATION	EXCELLENT[d] VISIBILITY	
15OCT47	987	----------	20	-32	0	3	2	6	6
1NOV47	978	20	40	- 8	0	5	11	7	8
15NOV47	979	26	36	12	0	3	7	9	8
1DEC47	979	26	40	10	2	3	4	10	6
15DEC47	988	30	38	28	1	0	1	6	2
25DEC47	991	30	33	28	0	0	0	2	6
OVER-ALL	984	26[b]	40	-32	3	14	25	40	6

[a]Mean sea level pressure reduced to 32°F and 45° latitude.
[b]Stonington Island temperature at the same hours during the period averaged 23°F.
[c]Over 39 miles per hour.
[d]Over 30 miles in best half of horizon for over 8 successive hours.

TABLE 29, MARGUERITE BAY SLEDGE PARTY
SURFACE WIND DISTRIBUTION

HALF-MONTH PERIOD ENDING	Percent: Force:	N.	NE.	E.	SE.	S.	SW.	W.	NW.	CALM
		For example, 14 percent of the observations ending 15OCT47 recorded winds from the octant 337°30′ to 022°30′ (N) at an average Beaufort force of 2. All intermediate directions were assigned to the next southerly octant.								
15OCT47	%	14	0	14	6	0	0	0	6	60
	F	2	0	5	4	0	0	0	7	
1NOV47		17	0	0	13	30	9	0	13	18
		3	0	0	5	3	4	0	5	
15NOV47		6	40	0	6	6	6	0	7	27
		3	5	0	5	2	1	0	5	
1DEC47		6	6	0	6	0	6	0	7	69
		3	4	0	8	0	2	0	4	
15DEC47		15	0	18	28	0	0	9	0	28
		3	0	7	4	0	0	2	0	
25DEC47		33	0	58	0	0	0	0	0	9
		1	0	4	0	0	0	0	0	
OVERALL		15	8	5	19	6	4	2	6	35
		3	5	6	5	3	2	2	5	

TABLE 30, LOCAL FLYING WEATHER, MARGUERITE BAY SLEDGE PARTY				
HALF-MONTH PERIOD ENDING	NUMBER OF DAYS			
	EXCELLENT[a]	FLYABLE[b]	POOR[c]	HAZARDOUS[d]
15OCT47	3	5	8	10
1NOV47	1	5	11	12
15NOV47	1	5	7	7
1DEC47	4	7	7	7
15DEC47	6	10	10	12
25DEC47	2	4	6	6
OVERALL (86 DAYS)	17	36	49	54

[a]Less than 1/10th sky covered; visibility over 30 miles (usually over 100); duration more than 8 hours during daylight, twilight, or bright moonlight hours.

[b]Scattered clouds covering less than 5/10ths of sky; visibility over 30 miles; duration more than 6 hours during daylight or twilight hours.

[c]Visibility over 30 miles; ceiling over 6000 feet; duration more than 6 hours during daylight or twilight hours.

[d]Visibility over 1 mile; ceiling over 500 feet; duration more than 4 hours during daylight or twilight hours.

SHIPBOARD OBSERVATIONS

Table 31 presents a digest of ship's weather observations taken aboard the expedition ship MV Port of Beaumont, Texas, radio AYZH, enroute between Magallanes (Punta Arenas), Chile, and Marguerite Bay, Antarctica. The principal observer was H.-C. Peterson.

TABLE 31, SHIPBOARD OBSERVATIONS
(SOUTHBOUND FROM MAGALLANES, CHILE TO MARGUERITE BAY, ANTARCTICA, MARCH 1947)

HOUR IN GMT/DATE	DEGREES SOUTH LATITUDE	DEGREES WEST LONGITUDE	WIND DIRECTION/ BEAUFORT FORCE NUMBER	WEATHER	PRESSURE IN MILLIBARS	AIR/SEA TEMPER-ATURE IN °F	STATE OF SEA	VISIBILITY	REMARKS
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)
17/8Mar47	54.4	71.4	Calm/0	Lt rain	1009	52/47	Calm	Moderate	In Strait of Magellan.
05/9Mar47	55.8	72.1	ENE/1	Overcast	1011	47/44	Smooth	Good	StCu overcast.
17/9Mar47	58.4	71.9	NE/3	Ptly Cldy	1009	48/44	Slight	Excellent	Middle clouds.
05/10Mar47	60.5	71.2	NNE/3	Drizzle	1007	43/39	Moderate	Poor	StCu overcast.
17/10Mar47	63.3	71.4	NE/3	Fog	1002	39/36	Moderate	Thin fog.	
05/11Mar47	64.8	70.3	NE/3	Lt rain	999	35/33	Moderate	Poor	
17/11Mar47	66.5	70.0	NE/3	Fog	1002	35/35	Moderate	Thin fog	Crossed Antarctic Circle.
05/12Mar47	67.5	70.3	NE/3	Fog	999	34/32	Moderate	Poor	First growlers and tabular bergs sighted at 08h off S extremity Adelaide Island.
17/12Mar47	68.2	67.2	NNE/3	Overcast	1001	37/34	Slight	Excellent	Few bergs and growlers seen.

TABLE 31(Continued), SHIPBOARD OBSERVATIONS (SOUTHBOUND FROM MAGALLANES, CHILE TO MARGUERITE BAY, ANTARCTICA, MARCH 1947)									
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)
05/13Mar47	68.2	67.0	E/2	Ptly Cldy	996	37/30	Calm	Excellent	Anchored off Stonington Is.; growlers, bergs, brash in bay.
TABLE 31 (Continued), SHIPBOARD OBSERVATIONS (MARGUERITE BAY: STONINGTON ISLAND TO MT EDGELL AND RETURN, MARCH 1947)									
21/23Mar47	69.5	69.0	SSW/1	Ptly Cldy	990	30/31	Smooth	Excellent	Lying off Mt Edgell at head of Geo VI Sound; bay more than 2/3rds covered with ice flows and tabular bergs.
05/24Mar47	68.7	68.9	E/2	Overcast	988	27/31	Slight	Excellent	Night anchorage outside pack ice.
17/24Mar47	68.2	67.0	E/4	Ptly Cldy	974	36/31	Smooth	Excellent	Anchored off Stonington Is.
TABLE 31 (Continued), SHIPBOARD OBSERVATIONS (NORTHBOUND FROM MARGUERITE BAY, ANTARCTICA TO MAGALLANES, CHILE, FEBRUARY-MARCH 1948)									
12/20Feb48	68.2	67.0	E/2	Lt snow	979	28/ -	In ice	Good	In ice off Stonington Is.
00/21Feb48	68.1	68.1	SW/2	Cloudy	976	24/29.5	Slight	Excellent	Thru several packs; pronounced atmospheric refraction.
12/21Feb48	68.1	69.0	SW/2	Cloudy	979	23/28.6	Smooth	Excellent	Lying off group of small islands. Packs, bergs, on horizon. Visibility 150 miles.
00/22Feb48	68.1	69.0	SW/2	Cloudy	980	24/ -	Smooth	Excellent	
12/22Feb48	68.1	69.0	SSW/2	Ptly Cldy	987	21/28.8	Smooth	Excellent	StCu clouds.
00/23Feb48	68.1	69.0	WNW/1	Ptly Cldy	991	24/28.6	Calm	Excellent	

TABLE 31 (Continued), SHIPBOARD OBSERVATIONS
(NORTHBOUND FROM MARGUERITE BAY,
ANTARCTICA TO MAGALLANES, CHILE, FEBRUARY-MARCH 1948)

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)
12/23Feb48	68.1	69.0	SSW/1	Cloudy	996	24/28.6	Calm	Very good	At anchor. Low ragged clouds. Surface current from SW.
00/24Feb48	66.7	69.0	Calm/0	Cloudy	994	25/28.6	Calm	Excellent	
12/24Feb48	66.2	69.7	Calm/0	Overcast	996	23/29.2	Calm	Excellent	Crossed Antarctic Circle. Thru heavy pack ice. 50 bergs visible.
00/25Feb48	63.9	70.4	N/3	Snow shwrs	1000	29/32	Smooth	Very good	Thru some pack; 15 bergs visible.
12/25Feb48	62.4	71.2	NNE/3	Overcast	1002	34/32.5	Rough	Excellent	About 5 bergs visible. Last berg seen at 17h.
00/26Feb48	61.2	71.8	N/4	Overcast	996	33/35	Rough	Very good	
12/26Feb48	59.9	72.4	NNW/6	Overcast	972	43/45	Very rough	Good	
00/27Feb48	59.2	73.0	N/7	Overcast	965	45/49	High	Moderate	
12/27Feb48	58.0	73.5	SW/8	Overcast	964	39/49	High	Moderate	Wind shift and deep barogram minimum at 10h.
00/28Feb48	57.0	74.0	WSW/4	Ptly cldy	972	43/49	Very rough	Very good	
12/28Feb48	55.7	74.5	WSW/9	Ptly cldy	981	43/49	High	Good	Thunderstorms.
00/29Feb48	54.1	75.2	NW/8	Hail	982	43/49	High	Moderate	Thunderstorms.
12/29Feb48	53.3	74.7	NW/4	Ptly cldy	985	45/51	Very rough	Very good	
00/1Mar48	53.0	73.0	WNW/4	Thndr strm	985	42/51	Slight	Good	Entered Strait of Magellan at Cape Pilar.
12/1Mar48	53.2	73.3	NW/3	Showers	985	42/47	Smooth	Very good	
00/2Mar48	53.4	70.8	WNW/3	Ptly cldy	988	41/46	Smooth	Excellent	Anchored off Magallanes at 06h.

APPENDIX

BRIEF CONVERSION TABLES

PRESSURE

MB	MM	IN
960	720	28.35
980	735	28.94
1000	750	29.53
1020	765	30.12

TEMPERATURE

°F	°C	°A
-20	-29	244
-10	-23	250
0	-18	255
10	-12	261
20	- 7	266
30	- 1	272
40	4	277

WIND FORCE

BEAUFORT	MPH
1	1-3
2	4-7
3	8-12
4	13-18
5	19-24
6	25-31
7	32-38
8	39-46
9	47-54

WIND VELOCITY

MPH	MPS
2	.9
4	1.8
6	2.7
8	3.6
10	4.5

PRECIPITATION

IN	MM
2	51
4	102
6	152
8	203
10	254

VISIBILITY

MILES	KM
20	32
40	64
60	97
80	129
100	161

ALTITUDE

FEET	METERS
2000	610
4000	1220
6000	1830
8000	2440
10000	3050