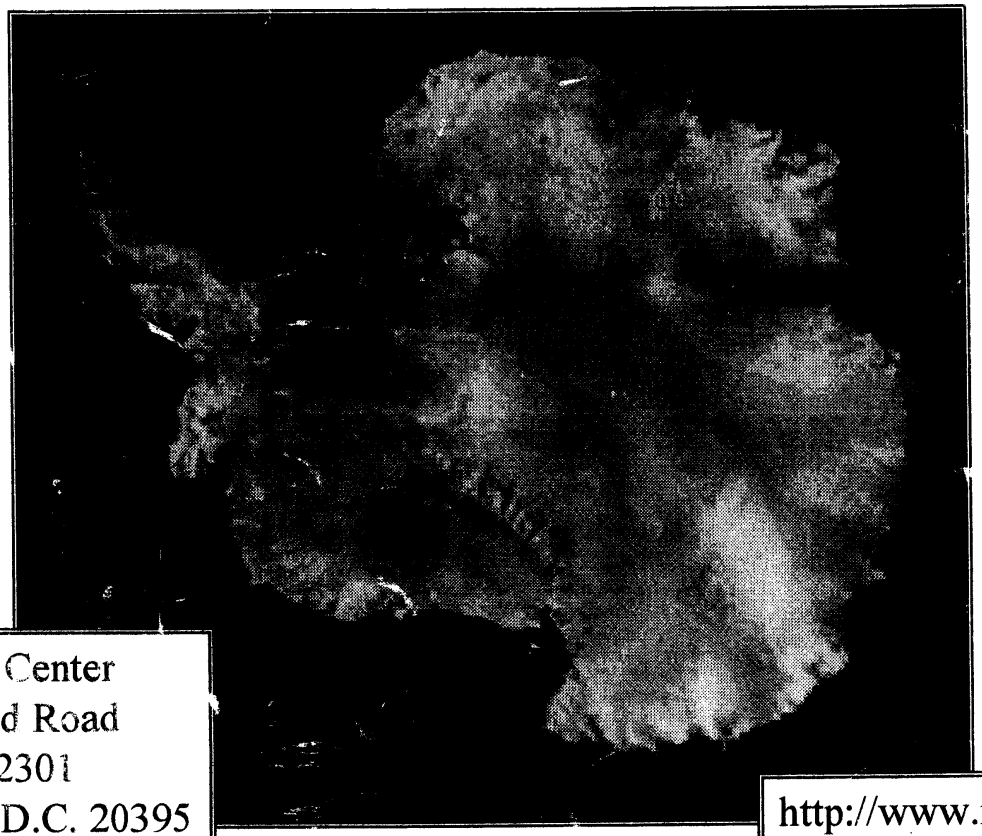
National Ice Center Antarctic Sea Ice Atlas 1997



National Ice Center
4251 Suitland Road
FB4, Room 2301
Washington D.C. 20395

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PREFACE

The National Ice Center (NIC), under sponsorship of the United States Navy, the United States Coast Guard, and the National Oceanic and Atmospheric Administration (NOAA), provides sea ice analyses encompassing the "Arctic" and the "Antarctic". These analyses continue the data set established under our previous name, the Joint Ice Center. These atlases continue the near real-time integration of remotely sensed data and point observations and differ only in that the Arctic and Antarctic are split into two separate publications per hemisphere per year.

This publication is the 12th edition of the annual "Antarctic Sea Ice Atlas" published in hard copy format by the NIC. The atlas contains weekly charts depicting the sea ice extent and coverage in the Southern Hemisphere from the first week of January through October 1997. During the last week of October 1997, the Antarctic paper charts were replaced by digital charts in a Graphics Interface Format (*.GIF). Printouts of the digital GIF charts for all Antarctic regions are contained in Supplement I to the "Antarctic Sea Ice Atlas". Future annual atlases will be available in a digital format on CD-ROM through the National Snow and Ice Data Center (http://www-nsidc.colorado.edu). NSIDC is the official archive center for the NIC.

The NIC uses a wide variety of data sources in the production of sea ice analyses. Table 1 lists the data sources used to produce the Antarctic weekly ice analyses contained in this publication. The line types used in the analyses provide metadata information with regard to sensor type. Solid lines depict boundaries derived from: point observations, Defense Meteorological Satellite Program Operational Line Scan (DMSP OLS) and NOAA Advanced Very High-Resolution Radiometer (AVHRR) data. Dash-dash-dotted line depicts boundaries derived from DMSP Special Sensor Microwave Imager (SSM/I), and dashed lines depict boundaries derived from forecast models and climatology.

Please direct questions or comments to the NIC Liaison Branch, at phone number (301) 457-5303 extension 311 or 303, facsimile number (301)457-5300, or electronic mail address: liaison@natice.noaa.gov

Atlas addendum: This publication is intended to serve as an interim solution, while transitioning to distribution via CD-ROM. The purpose of this atlas is to make all National Ice Center (NIC) sea ice charts available to customers using NIC designated archive centers. By fall 1999, it is anticipated that NIC will complete and distribute Arctic/Antarctic ice atlases on CD-ROM for 1995, 1996, 1997 and 1998. It should be noted that the charts presented in this atlas have been drawn by hand for operational use. Corrections to "hand annotations" are visible on some of the charts in the atlas.

From	To	Sensor Platform	Sensor and Type	Spectral Region	Resolution	Coverage
01-97	12-97	DMSP F-10, 11, 12, 13, 14	OLS Fine: VIS IR SSM/I	 0.4 to 1.1 μm 10.2 to 12.8 μm 19.35 and 37GHz	0.55 km 25 km	3,012km 3,012km
01-97	12-97	NOAA 12, 14	AVHRR: HRPT/LAC VIS NIR IR	 0.58 to 0.68 μm 0.72 to 1.10 μm 3.55 to 3.93μm	1.1km at nadir; 2.5km at swath edge	4,000km

TABLE 1. 1997 Antarctic Satellite Data Sources

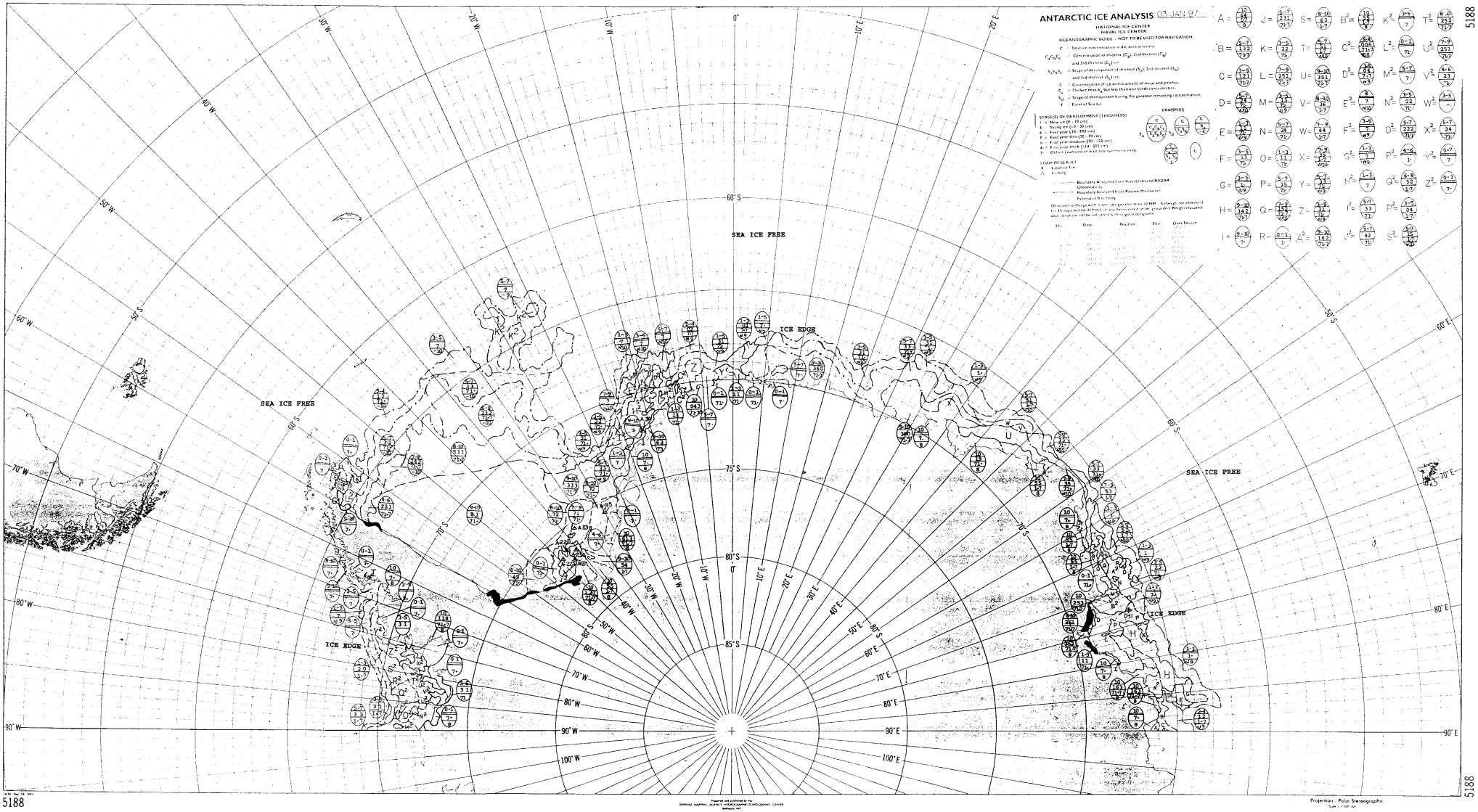
Note: DMSP F-14 launched 04/15/97

Abbreviations and Acronyms:

AVHRR- Advanced Very High Resolution Radiometer
cm- centimeter
GHz- GigaHertz
HRPT- High Resolution Picture transmission
IR- Infrared
km- kilometer
LAC- Local Area Coverage
NIR- Near Infrared
OLS- Operational Linescan System
SSM/I- Special Sensor Microwave Imager
μm- micrometer
VIS- Visible

Antarctica satellite composite courtesy of United States Geological Survey, Flagstaff, AZ.
(http://TerraWeb.wr.usgs.gov/TRS/projects/Antarctica/color/images).

Prepared under the authority of Commander, Naval Oceanography Command, Stennis Space Center, MS 39529-5000


ANTARCTIC ICE ANALYSIS 03 JAN 97
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
EXAMPLES
STAGES OF DEVELOPMENT (THICKNESS)
FORM OF SEA ICE
Boundary Analyzed from Visual/Infrared RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary
SEA ICE FREE
ICE EDGE
0°
10° W
20° W
30° W
40° W
50° W
60° W
70° W
80° W
90° W
100° W
10° E
20° E
30° E
40° E
50° E
60° E
70° E
80° E
90° E
100° E
60° S
70° S
75° S
80° S
85° S
90° S
Projection - Polar Stereographic

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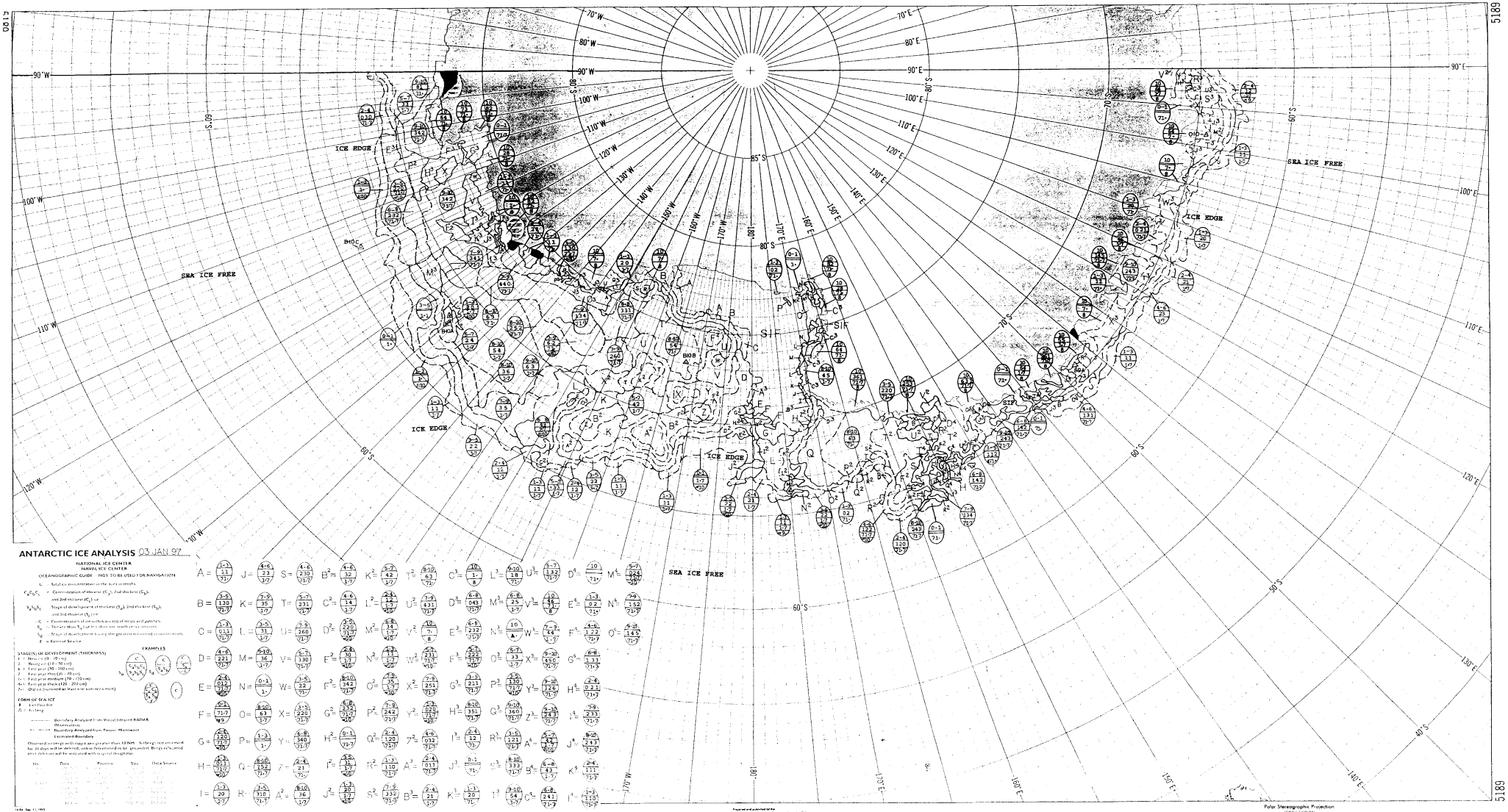
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NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
ICE EDGE
SEA ICE FREE
Polar Stereographic Projection
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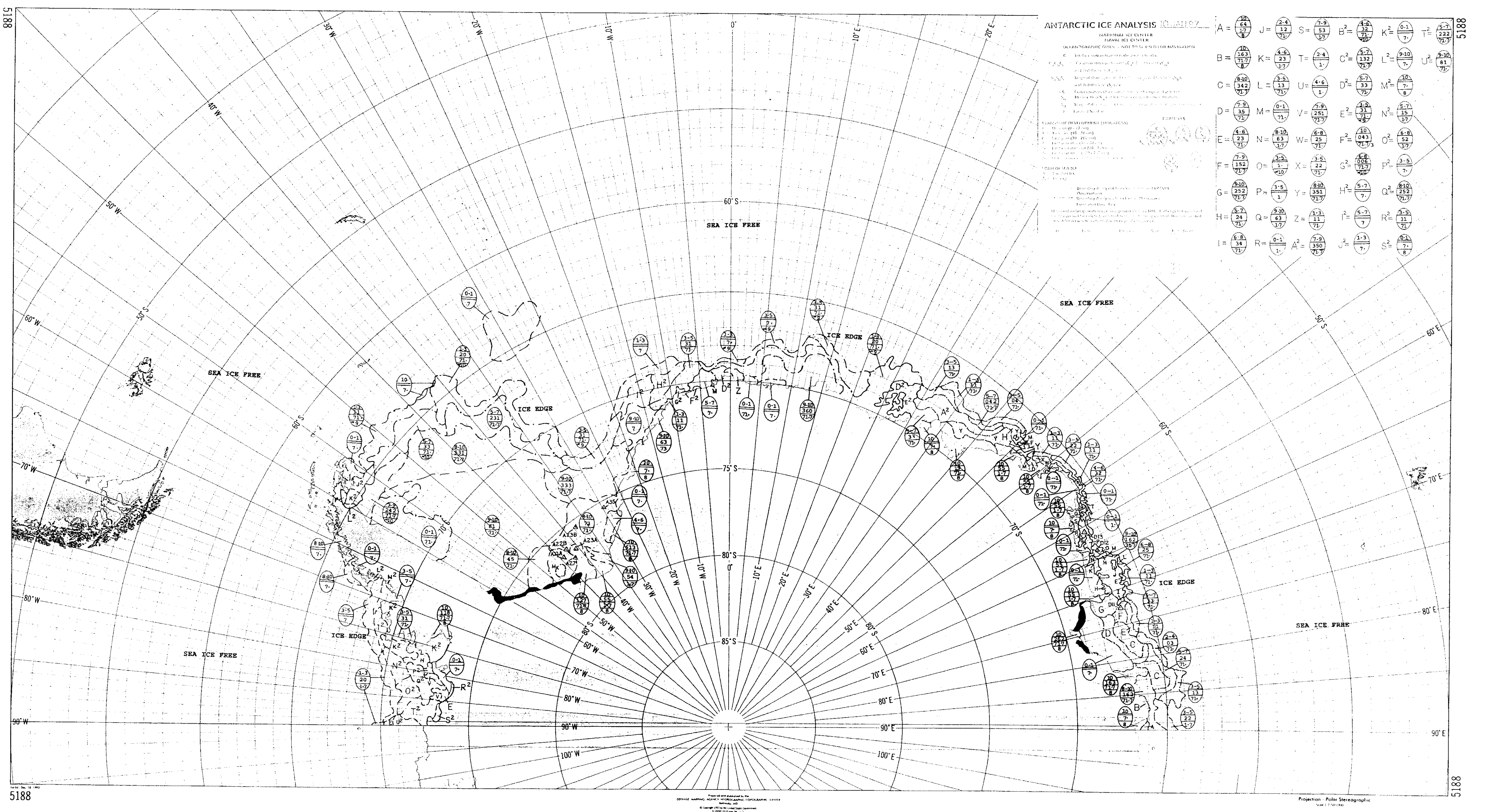
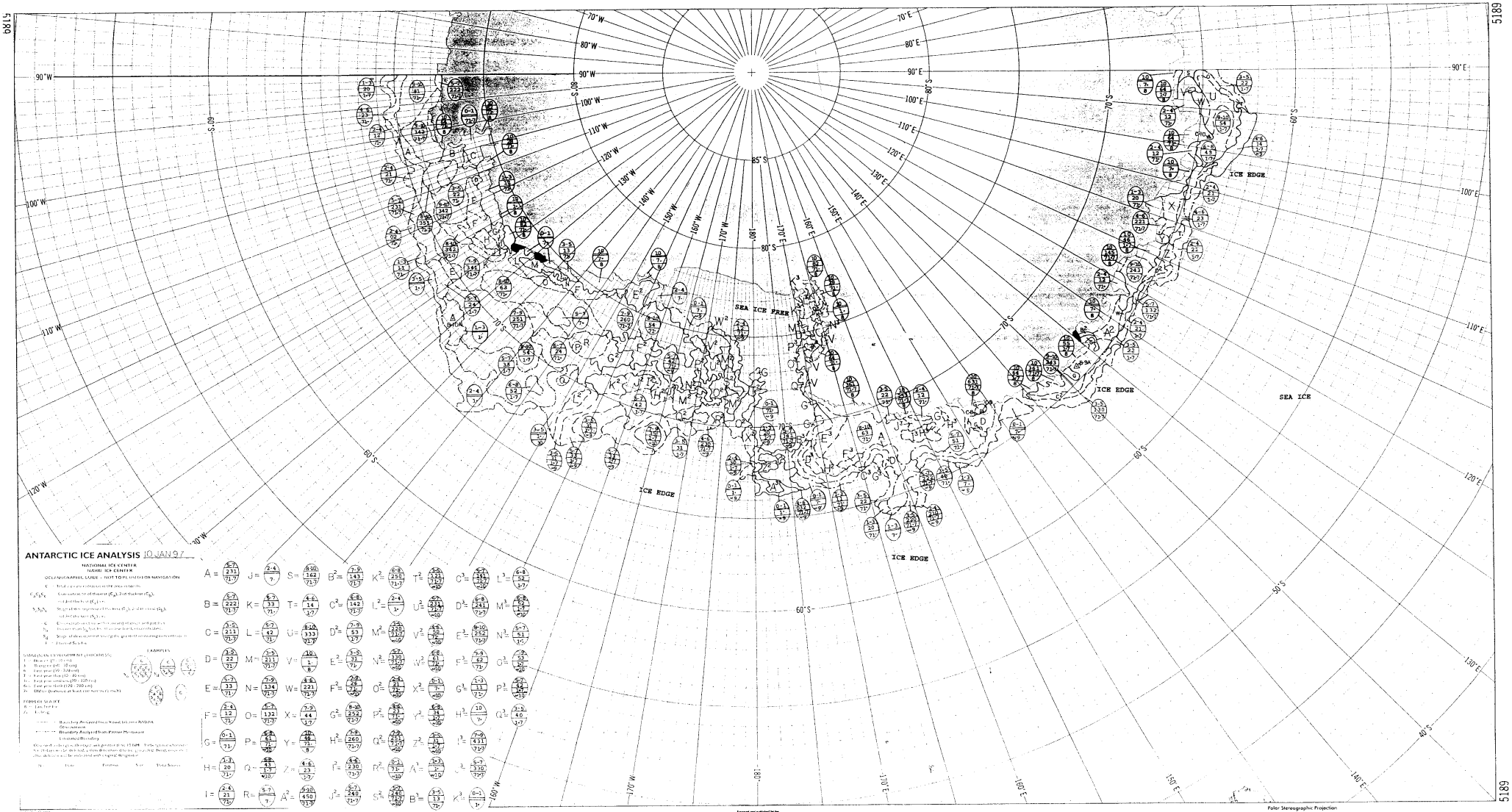


ANTARCTIC ICE ANALYSIS
NATIONAL ICE CENTER
NAVAL ICE CENTER
SEA ICE FREE
ICE EDGE
60° S
75° S
80° S
85° S
Projection - Polar Stereographic
5188


ANTARCTIC ICE ANALYSIS 10 JAN 97
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NAVAL ICE CENTER
OCEANOGRAPHIC CODE - NOT TO BE USED FOR NAVIGATION
EXAMPLES
SEA ICE FREE
ICE EDGE
SEA ICE
Polar Stereographic Projection

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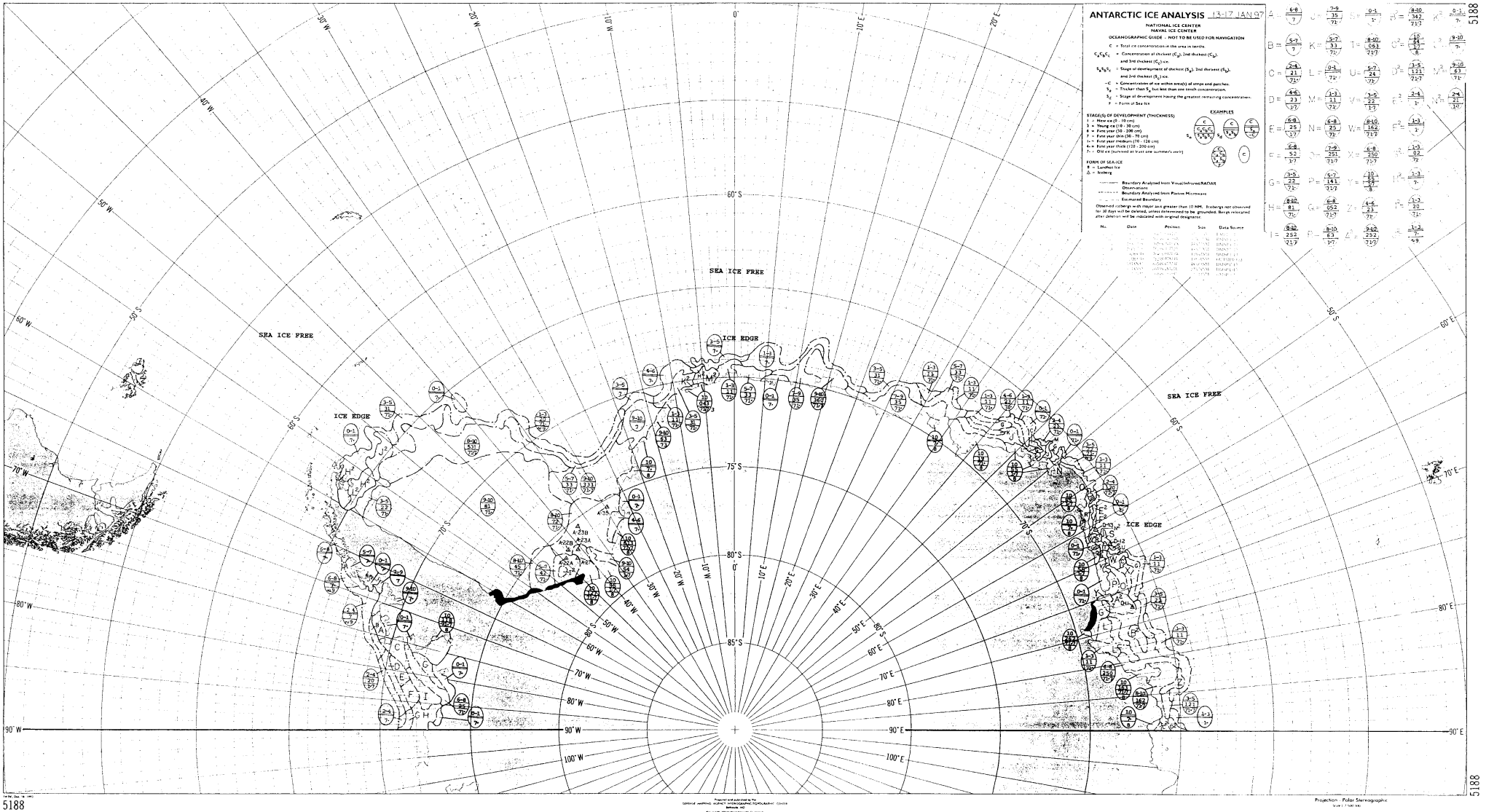

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DEFENSE MAPPING AGENCY HYDROGRAPHIC/TOPOGRAPHIC CENTER
Bethesda, MD

Projection - Polar Stereographic

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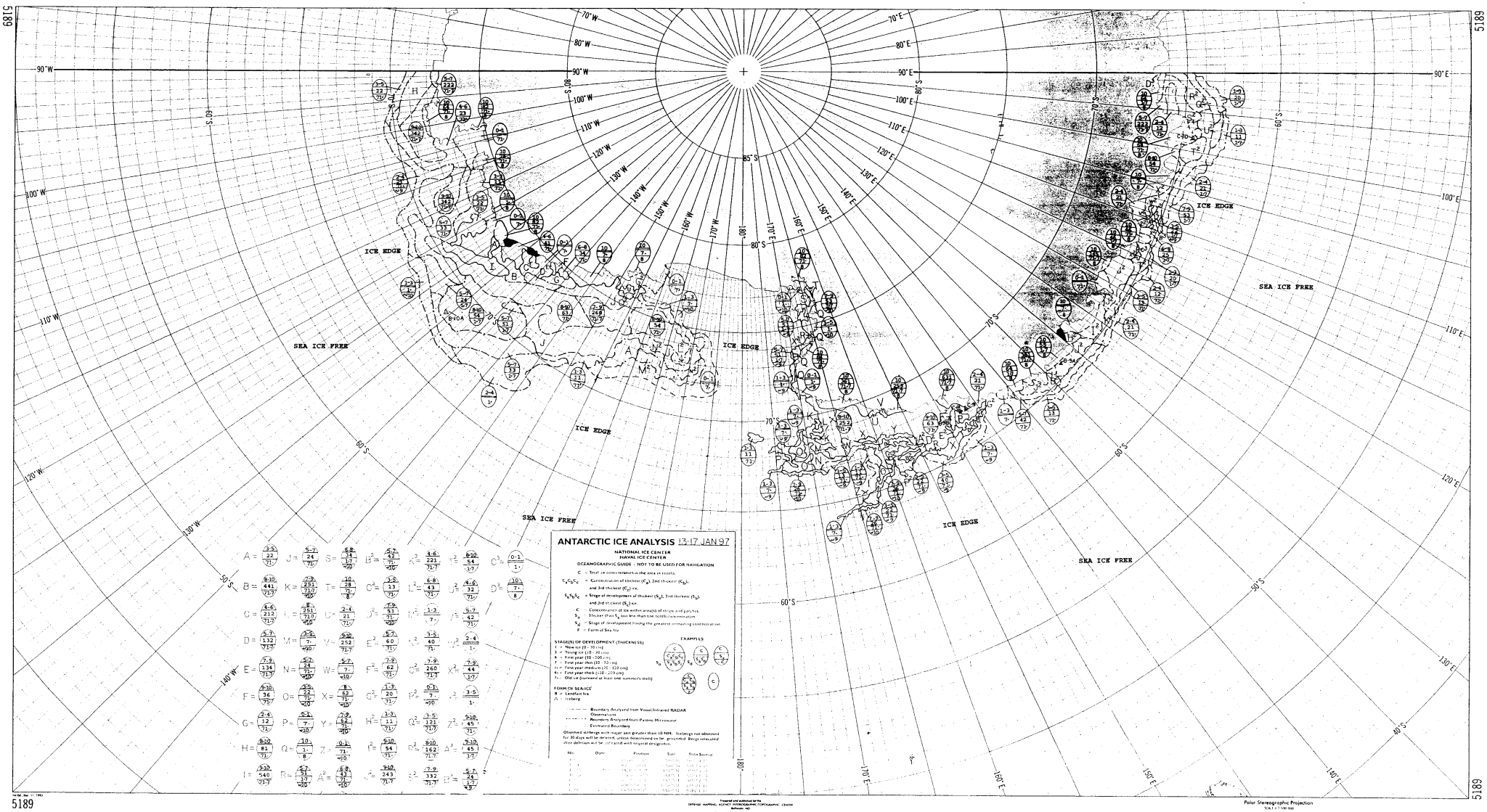
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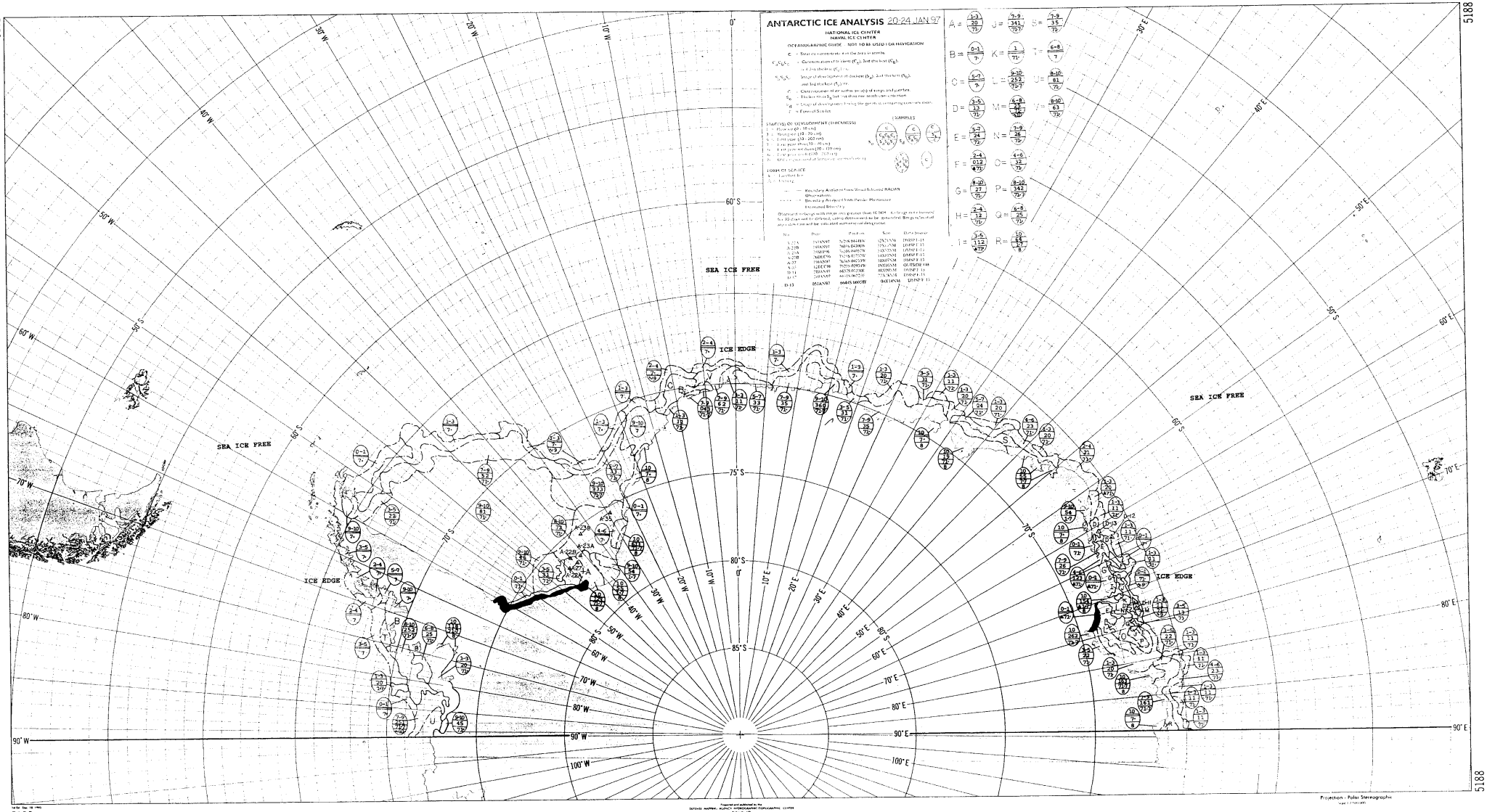
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
ICE EDGE
SEA ICE FREE
Polar Stereographic Projection


ANTARCTIC ICE ANALYSIS 20-24 JAN 97
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
SEA ICE FREE
ICE EDGE
SEA ICE FREE
ICE EDGE
SEA ICE FREE
ICE EDGE
0°
30° W
20° W
10° W
10° E
20° E
30° E
40° W
40° E
50° W
50° E
60° W
60° E
70° W
70° E
80° W
80° E
90° W
90° E
100° W
60° S
70° S
75° S
80° S
85° S

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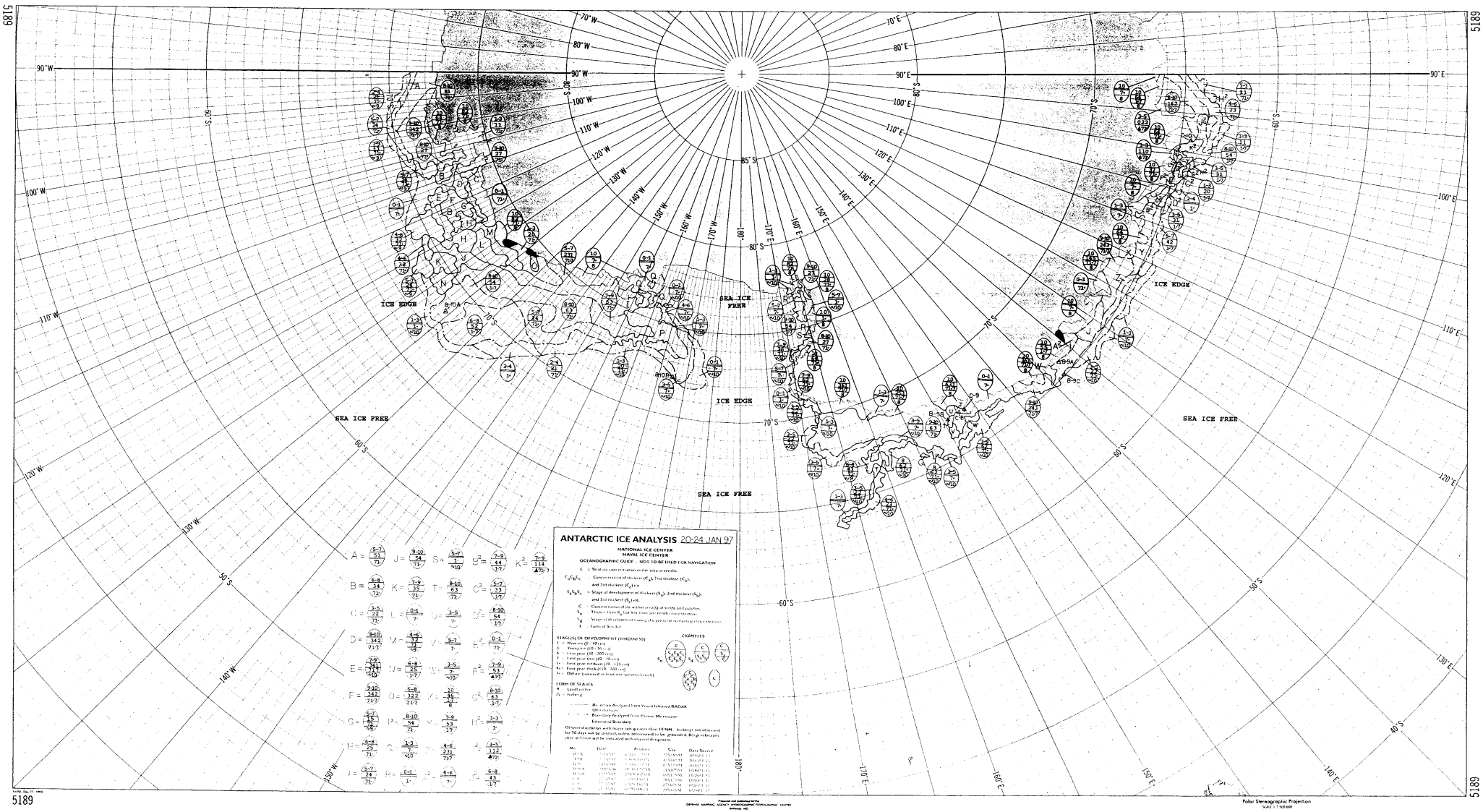
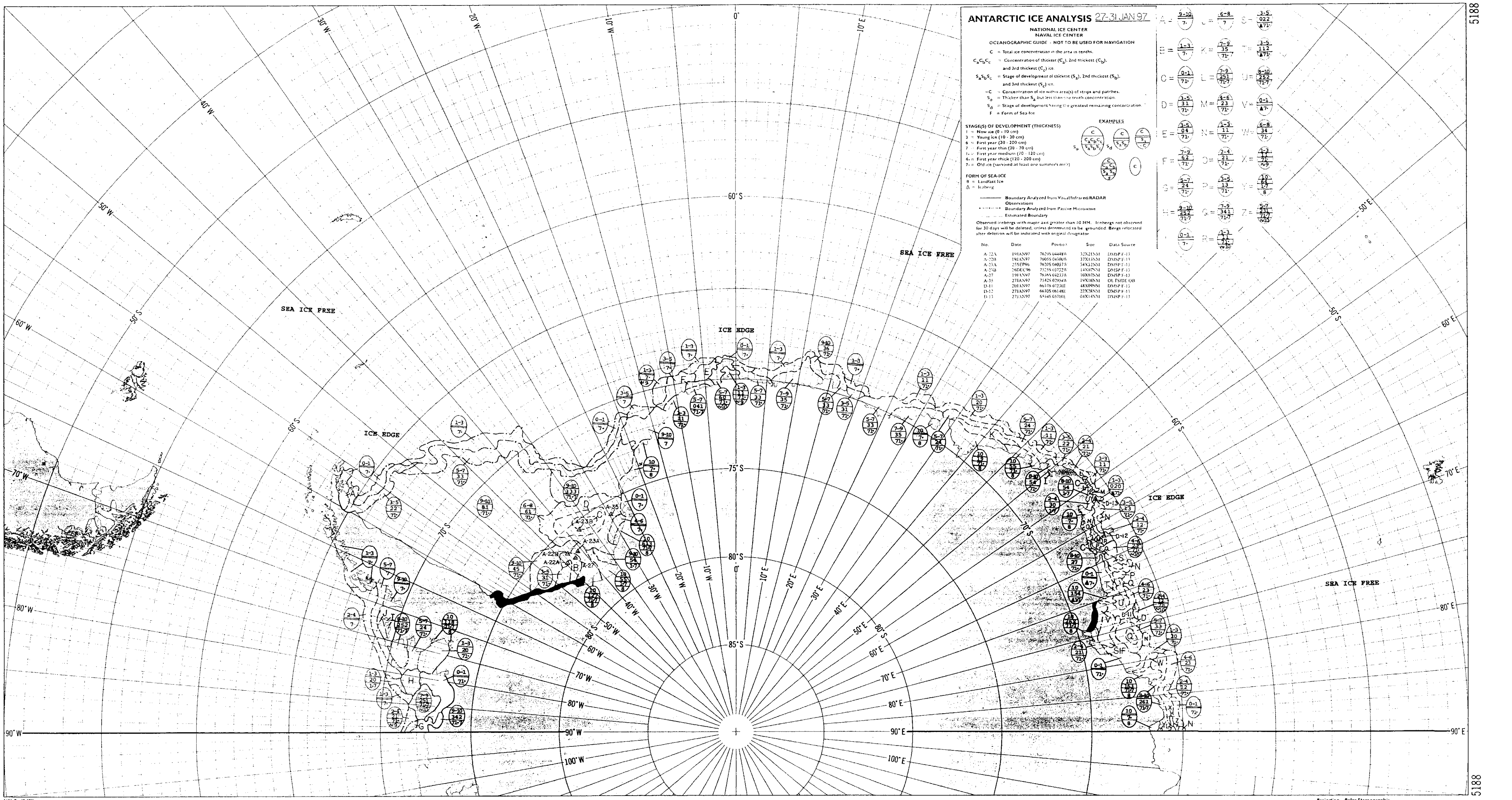
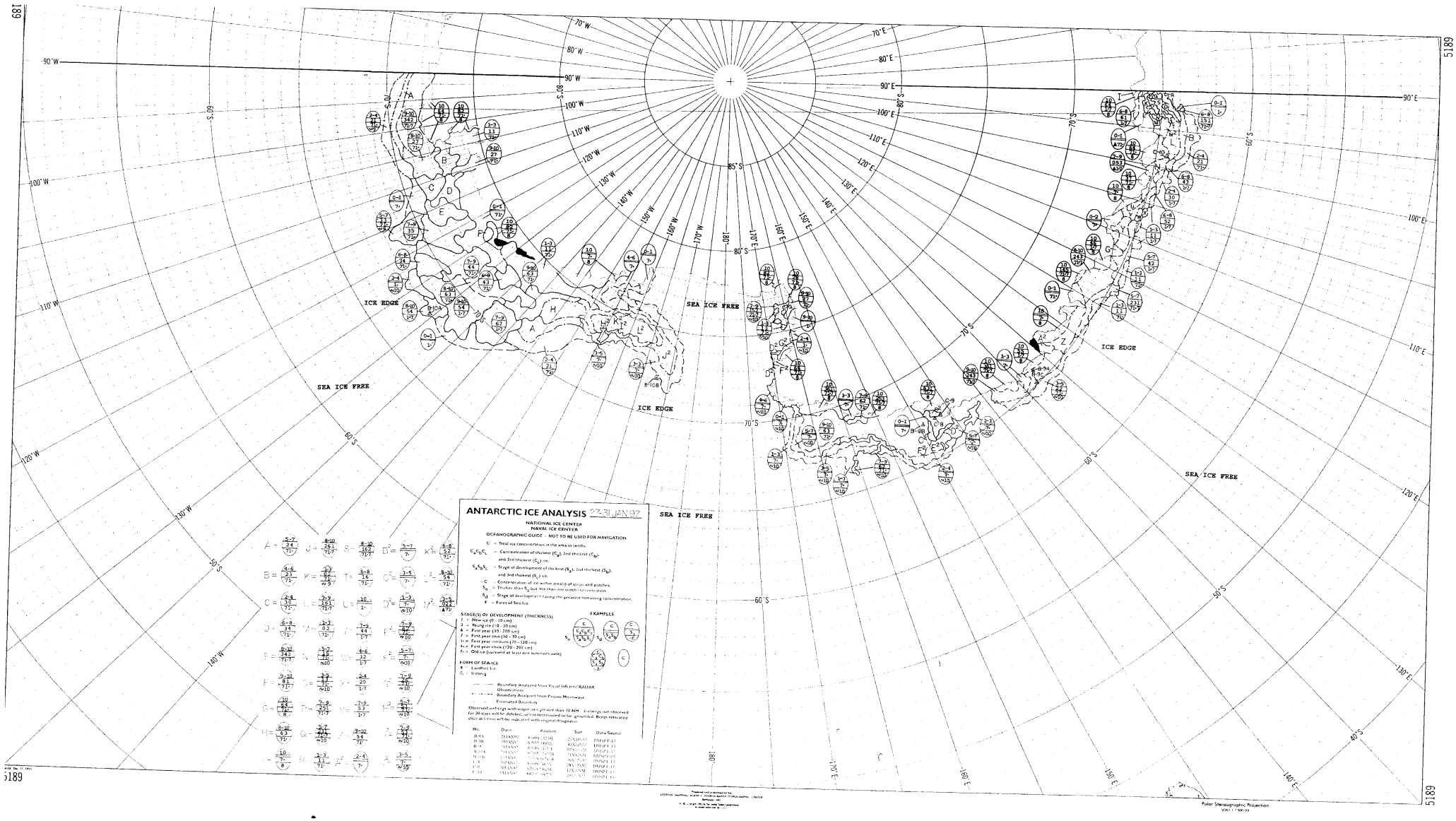

ANTARCTIC ICE ANALYSIS 20-24 JAN 97
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
ICE EDGE
SEA ICE FREE
SEA ICE FREE
ICE EDGE
ICE EDGE
SEA ICE FREE
SEA ICE FREE
EXAMPLES
STAGE(S) OF DEVELOPMENT (THICKNESS)
FORM OF SEA ICE
Polar Stereographic Projection
SCALE 1:7,500,000


ANTARCTIC ICE ANALYSIS 27-31 JAN 97
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
C = Total ice concentration in the area in tenths.
$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.
$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
-C = Concentration of ice within area(s) of strips and patches.
S_o = Thicker than S_a but less than one tenth concentration.
S_d = Stage of development having the greatest remaining concentration.
F = Form of Sea-Ice
EXAMPLES
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
6 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)
FORM OF SEA-ICE
8 = Landfast Ice
Δ = Iceberg
Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary
Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator
No. Date Position Size Data Source
A-22A 19JAN97 7629S 04448W 32X21NM DMSP F-13
A-22B 19JAN97 7605S 04506W 37X13NM DMSP F-13
A-23A 25SEP96 7620S 04057W 54X32NM DMSP F-13
A-23B 26DEC96 7525S 03732W 14X07NM DMSP F-13
A-27 19JAN97 7636S 04233W 10X07NM DMSP F-13
A-35 27JAN97 7542S 02954W 19X16NM OUTSIDE OB
D-11 20JAN97 6637S 07230E 48X09NM DMSP F-13
D-12 27JAN97 6630S 06148E 22X28NM DMSP F-13
D-13 27JAN97 6554S 05700E 04X14NM DMSP F-13
SEA ICE FREE
ICE EDGE
60°S
70°S
75°S
80°S
85°S
0°
10°E
20°E
30°E
40°E
50°E
60°E
70°E
80°E
90°E
100°E
10°W
20°W
30°W
40°W
50°W
60°W
70°W
80°W
90°W
100°W
Projection - Polar Stereographic


ANTARCTIC ICE ANALYSIS 27-31 JAN 97
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC CHART - NOT TO BE USED FOR NAVIGATION
ICE EDGE
SEA ICE FREE
Polar Stereographic Projection

ANTARCTIC ICE ANALYSIS 03-07 FEB 97

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NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thinkest (C_c) ice.

$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

–C = Concentration of ice within area(s) of strips and patches.

S_x = Thicker than S_a but less than one tenth concentration.

S_d = Stage of development having the greatest remaining concentration.

F = Form of Sea-Ice

STAGE(S) OF DEVELOPMENT (THICKNESS)

1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
4 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)

EXAMPLES

FORM OF SEA-ICE

8 = Landfast Ice
A = Iceberg

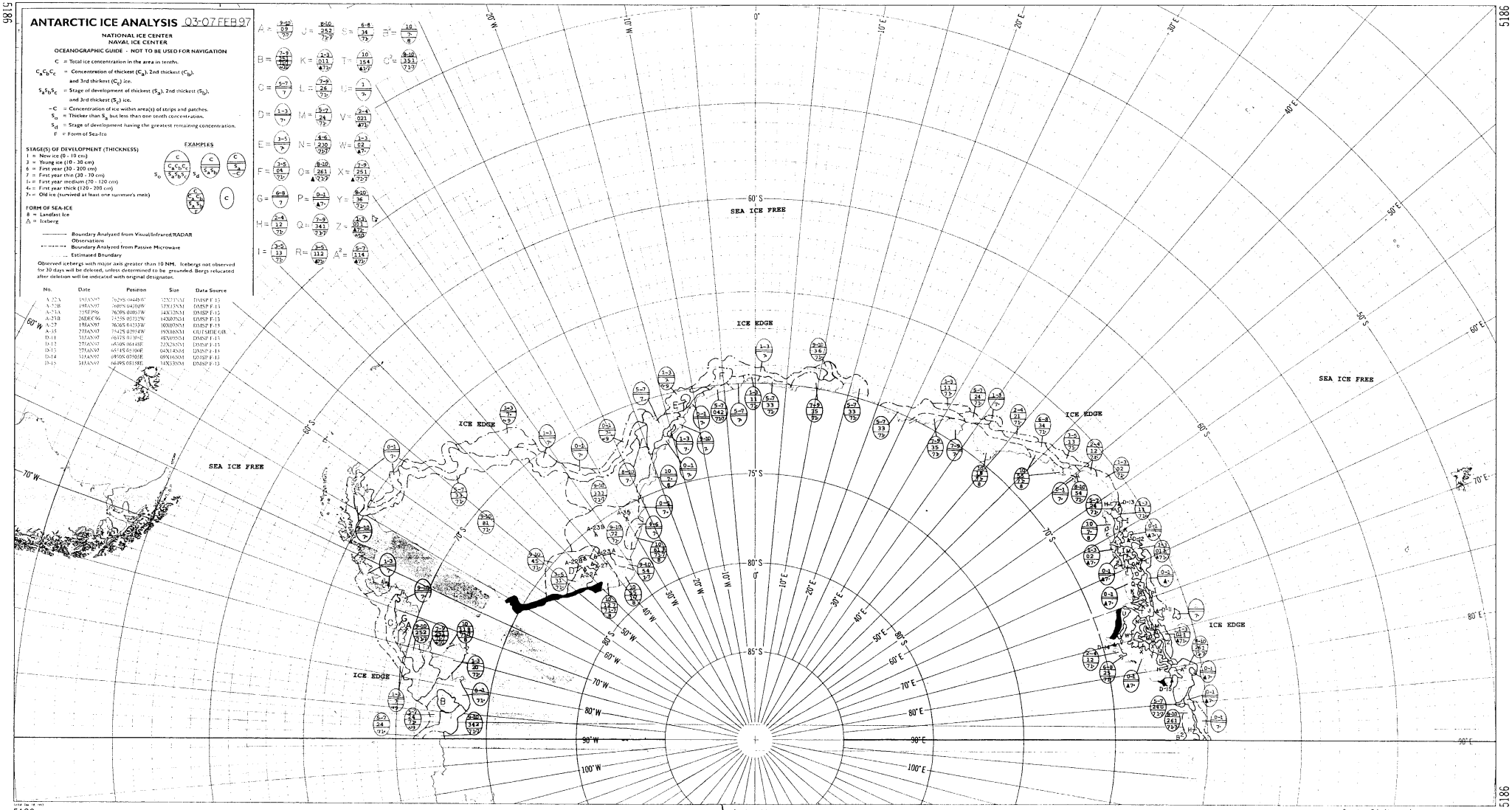
Boundary Analyzed from Visual/Infrared/RADAR Observations

Boundary Analyzed from Passive Microwave

Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Data Source
A-22A	19JAN97	76?9S 084?W	32X27NM	DMSP F-13
A-23B	19JAN97	7695S 0420W	37X12NM	DMSP F-13
A-23A	25SEP96	7670S 0480?W	34X12NM	DMSP F-13
A-21B	26DEC96	7455S 0373?W	14X07NM	DMSP F-13
A-27	19JAN97	7636S 0433?W	10X07NM	DMSP F-13
A-18	27JAN97	7742S 0291?W	19X08NM	OUTSIDE GR
D-11	31JAN97	6832S 0130?E	45X09NM	DMSP F-13
D-12	27JAN97	6450N 0614?E	22X20NM	DMSP F-13
D-13	27JAN97	6454S 0610?E	04X14NM	DMSP F-13
D-14	31JAN97	6950S 0750?E	09X16NM	DMSP F-13
D-15	31JAN97	6439S 0815?E	34X33NM	DMSP F-13



Projection Polar Stereographic

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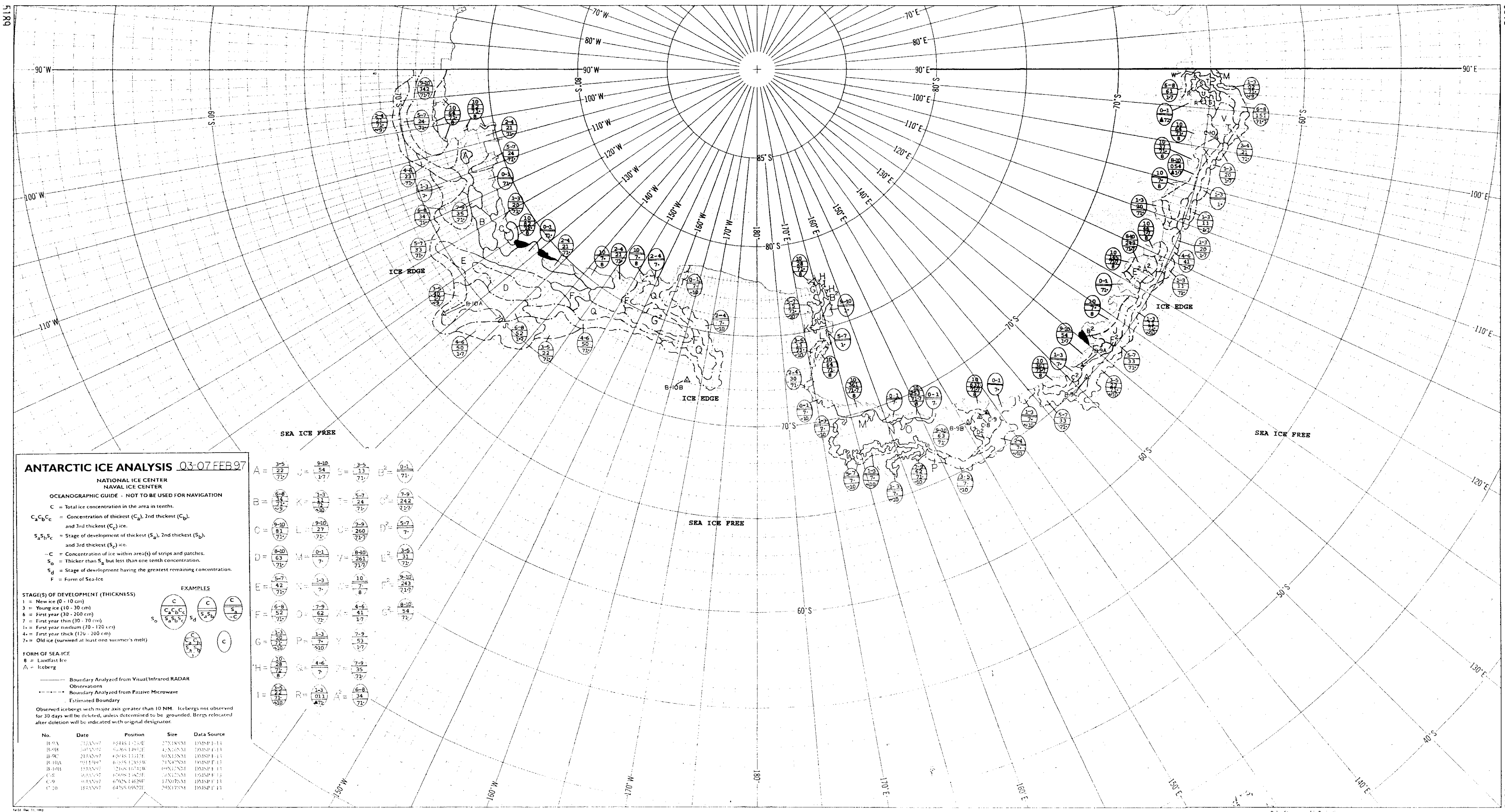

ANTARCTIC ICE ANALYSIS 03-07 FEB 97
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NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
C = Total ice concentration in the area in tenths.
CaCbCc = Concentration of thickest (Ca), 2nd thickest (Cb), and 3rd thickest (Cc) ice.
SaSbSc = Stage of development of thickest (Sa), 2nd thickest (Sb), and 3rd thickest (Sc) ice.
~C = Concentration of ice within area(s) of strips and patches.
So = Thicker than Sa but less than one tenth concentration.
Sd = Stage of development having the greatest remaining concentration.
F = Form of Sea-Ice
EXAMPLES
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
6 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)
FORM OF SEA-ICE
B = Landfast Ice
A = Iceberg
Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary
Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.
No. Date Position Size Data Source
B-9A 27X18NM DMSP F-13
B-9B DMSP F-13
B-9C 07X15NM DMSP F-13
B-10A DMSP F-13
B-10B DMSP F-13
C-8 DMSP F-13
C-9 17X07NM DMSP F-13
C-20 29X17NM DMSP F-13
SEA ICE FREE
ICE EDGE
90°W
100°W
110°W
120°W
130°W
140°W
150°W
160°W
170°W
180°
170°E
160°E
150°E
140°E
130°E
120°E
110°E
100°E
90°E
80°E
70°E
80°W
70°W
85°S
80°S
70°S
60°S
50°S
40°S
Polar Stereographic Projection
5189

ANTARCTIC ICE ANALYSIS 10-14 FEB 97

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C = Total ice concentration in the area in tenths.

$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

C = Concentration of ice within area(s) of strips and patches.

S_o = Thicker than S_a but less than one tenth concentration.

S_d = Stage of development having the greatest remaining concentration.

F = Form of Sea-Ice

STAGE(S) OF DEVELOPMENT (THICKNESS)

1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
6 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)

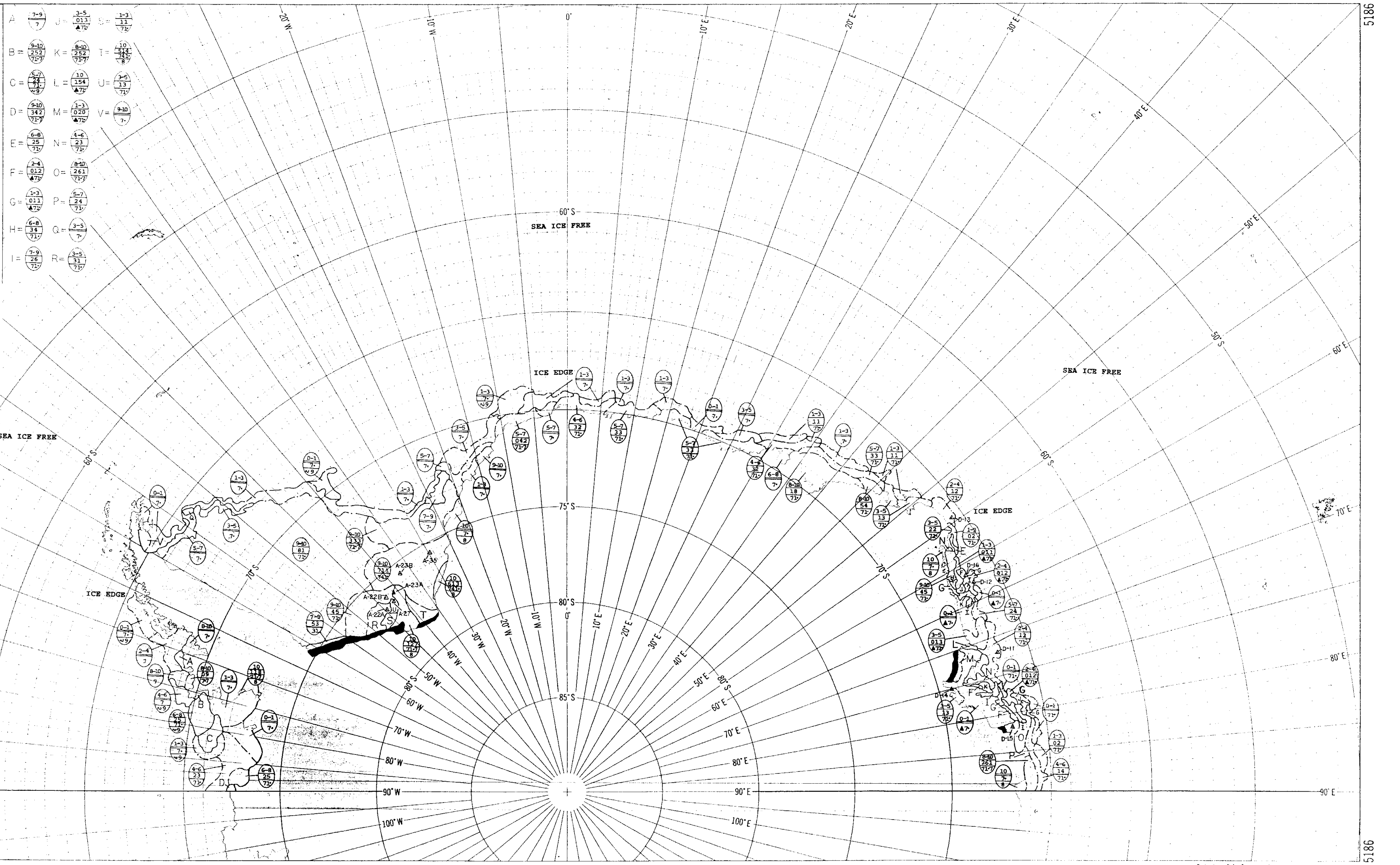
FORM OF SEA ICE

8 = Landfast Ice
▲ = Iceberg

Boundary Analyzed from Visual/Infrared RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Data Source
A-22A	09FEB97	7630S 04455W	32X21NM	DMSP F-13
A-22B	09FEB97	7604S 04300W	37X13NM	DMSP F-13
A-23A	09FEB97	7609S 04100W	34X32NM	DMSP F-13
A-23B	09FEB97	7535S 03719W	14X07NM	DMSP F-13
A-27	09FEB97	7630S 04228W	10X07NM	DMSP F-13
A-35	09FEB97	7530S 02947W	19X16NM	OUTSIDE OB
D-11	31JAN97	6637S 07205E	48X09NM	DMSP F-13
D-12	11FEB97	6624S 06245E	22X28NM	DMSP F-13
D-13	11FEB97	6536S 05424E	04X14NM	DMSP F-13
D-14	31JAN97	6930S 07505E	09X16NM	DMSP F-13
D-15	31JAN97	6649S 08158E	34X53NM	DMSP F-13
D-16	11FEB97	6636S 06135E	05X13NM	DMSP F-13



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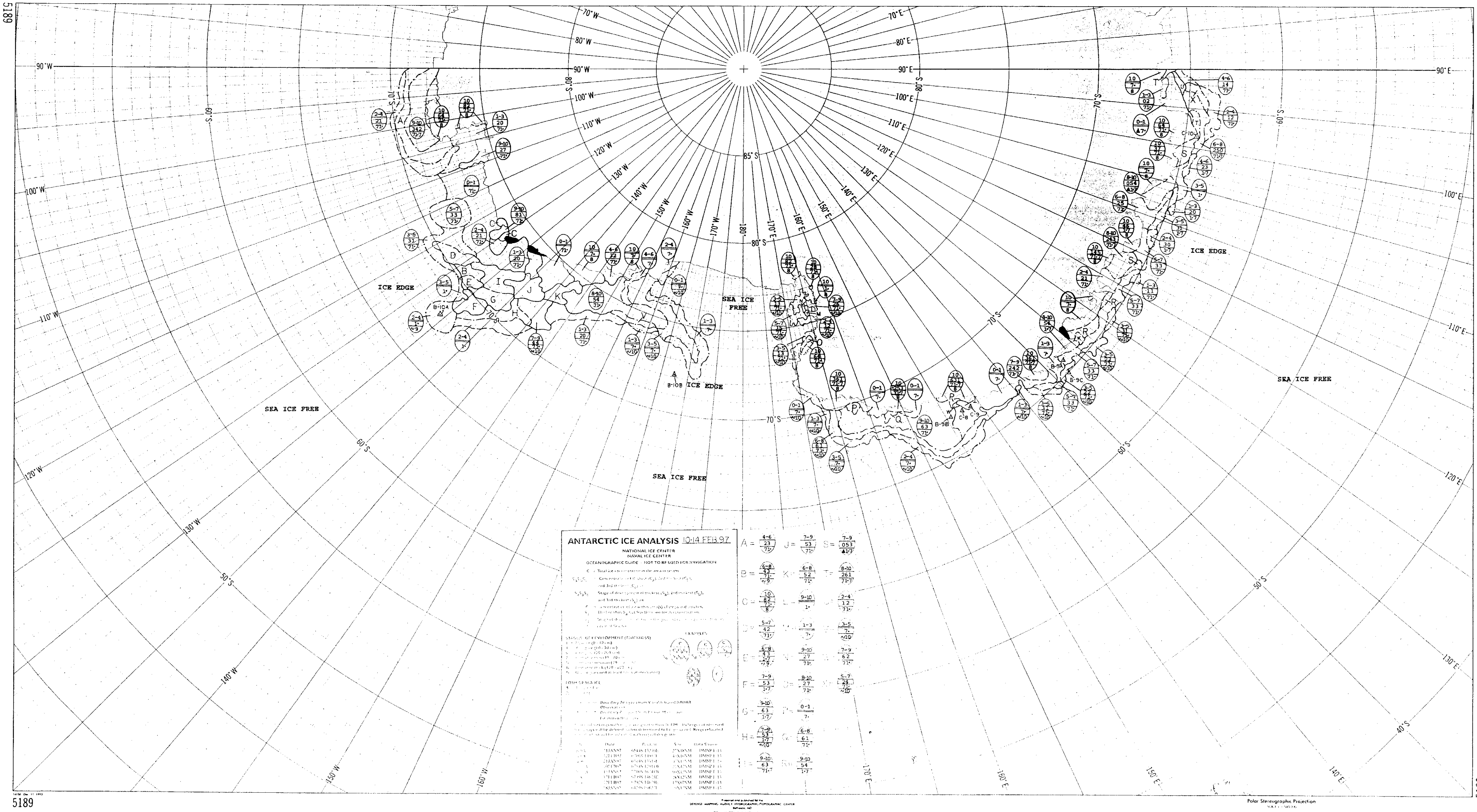
Projection - Polar Stereographic



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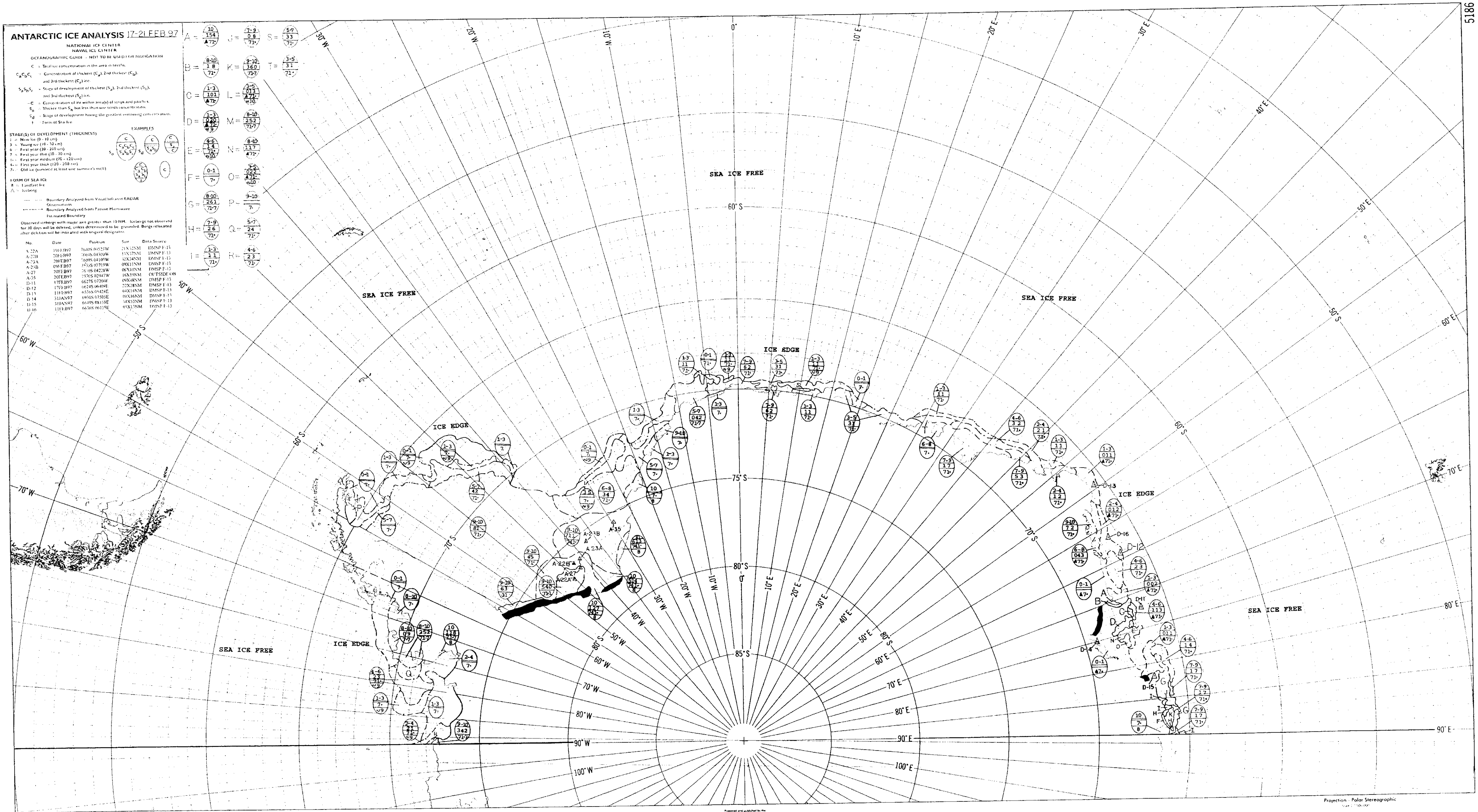
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
SEA ICE FREE
ICE EDGE
SEA ICE FREE
B-10B
Polar Stereographic Projection
5189



ANTARCTIC ICE ANALYSIS 17-21 FEB 97

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NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.
$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.
$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
~C = Concentration of ice within area(s) of strips and patches.
S_o = Thicker than S_a but less than one tenth concentration.
S_d = Stage of development having the greatest remaining concentration.
F = Form of Sea-Ice

EXAMPLES

STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
6 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)

FORM OF SEA-ICE
8 = Landfast Ice
A = Iceberg

Boundary Analyzed from Visual/Infrared RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Data Source
A-22A	19FEB97	7640S 04523W	21X32NM	DMSP F-13
A-22B	20FEB97	7604S 04300W	33X37NM	DMSP F-13
A-23A	20FEB97	7609S 04100W	32X34NM	DMSP F-13
A-23B	09FEB97	7535S 03719W	09X11NM	DMSP F-13
A-27	20FEB97	7640S 04228W	06X10NM	DMSP F-13
A-35	20FEB97	7530S 02947W	16X19NM	OUTSIDE OB
D-11	17FEB97	6627S 07206E	09X48NM	DMSP F-13
D-12	17FEB97	6624S 06409E	22X28NM	DMSP F-13
D-13	11FEB97	6536S 05424E	64X14NM	DMSP F-13
D-14	31JAN97	6930S 07505E	09X16NM	DMSP F-13
D-15	31JAN97	6649S 08158E	34X53NM	DMSP F-13
D-16	11FEB97	6636S 06135E	05X13NM	DMSP F-13

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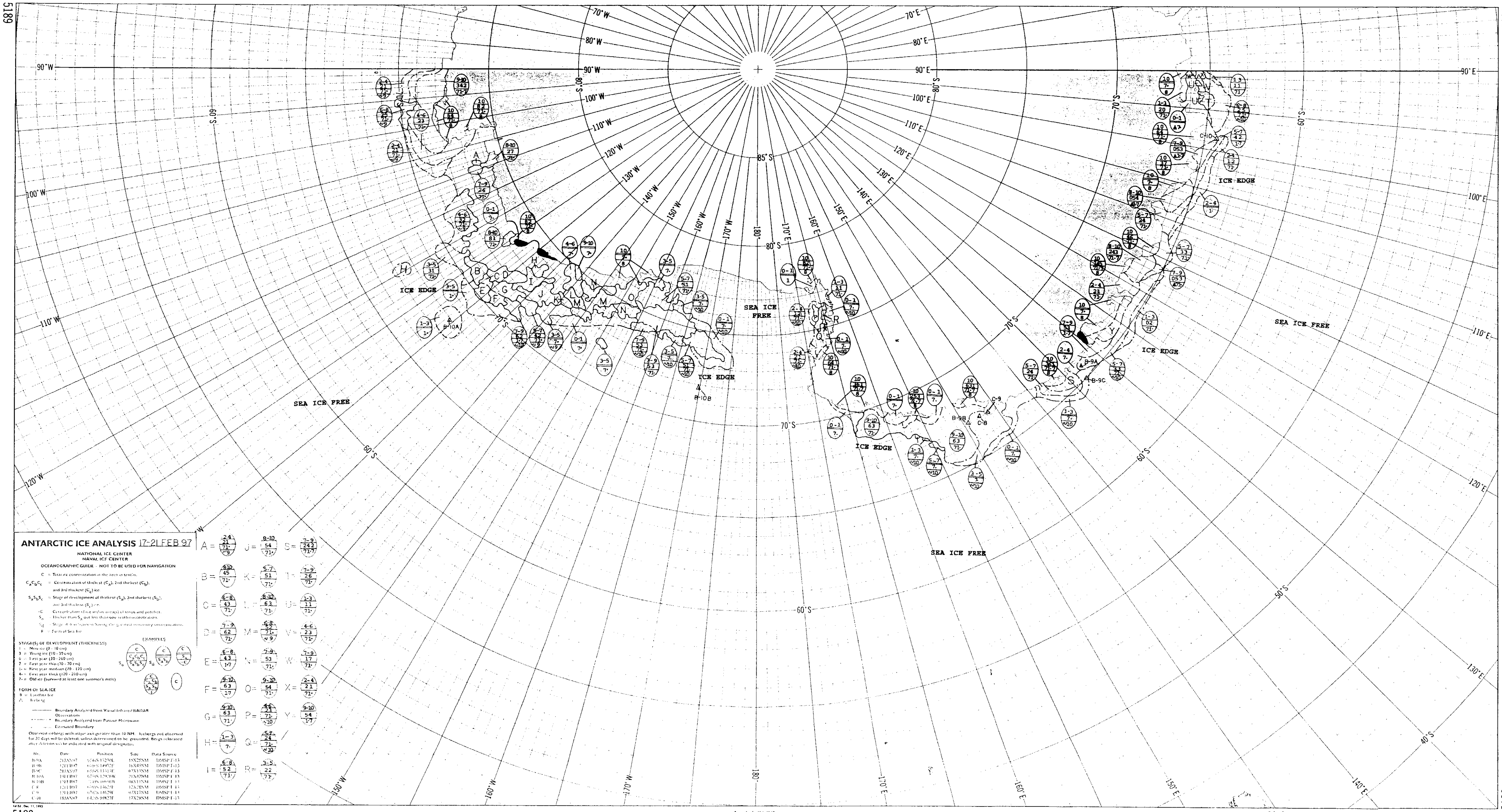
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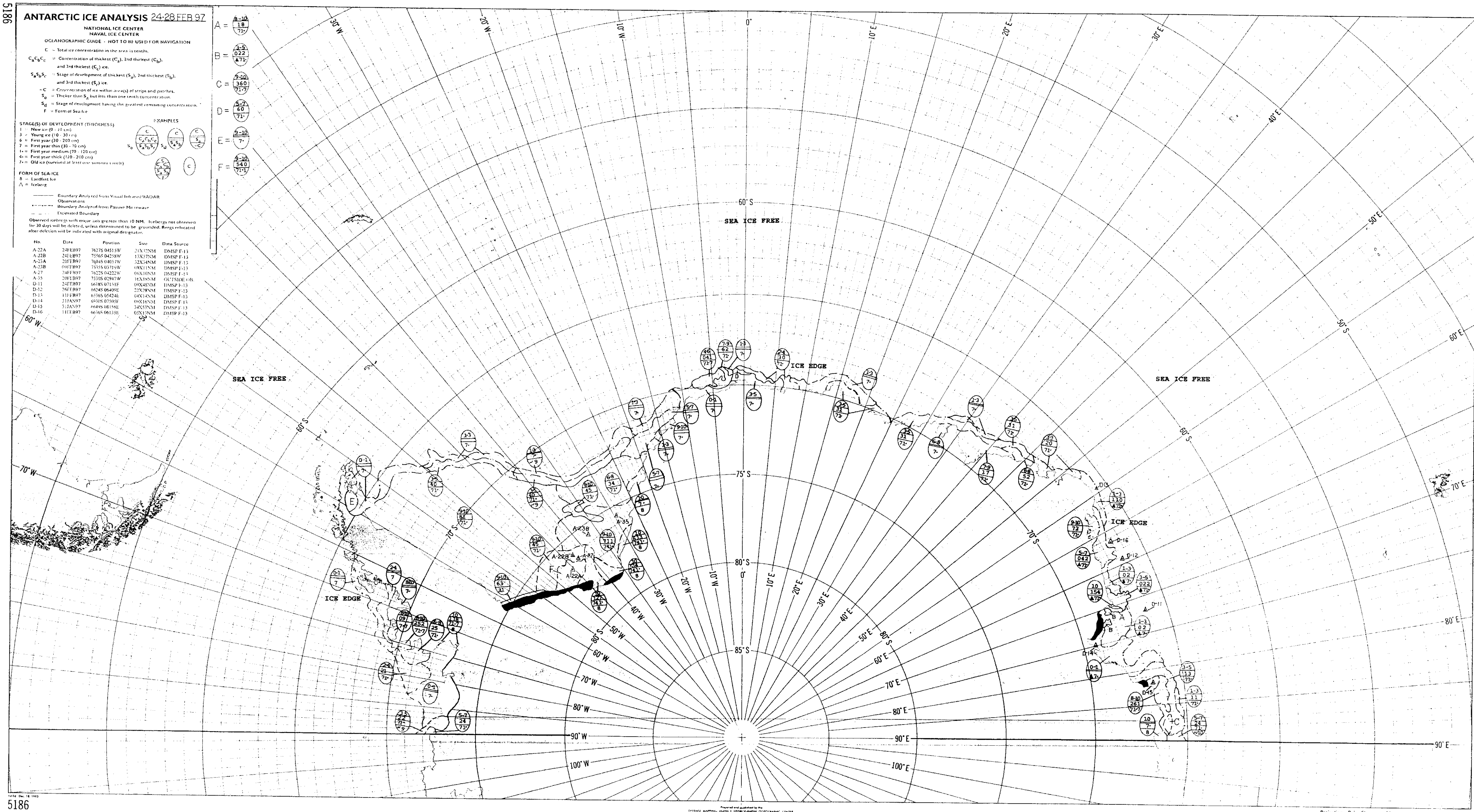
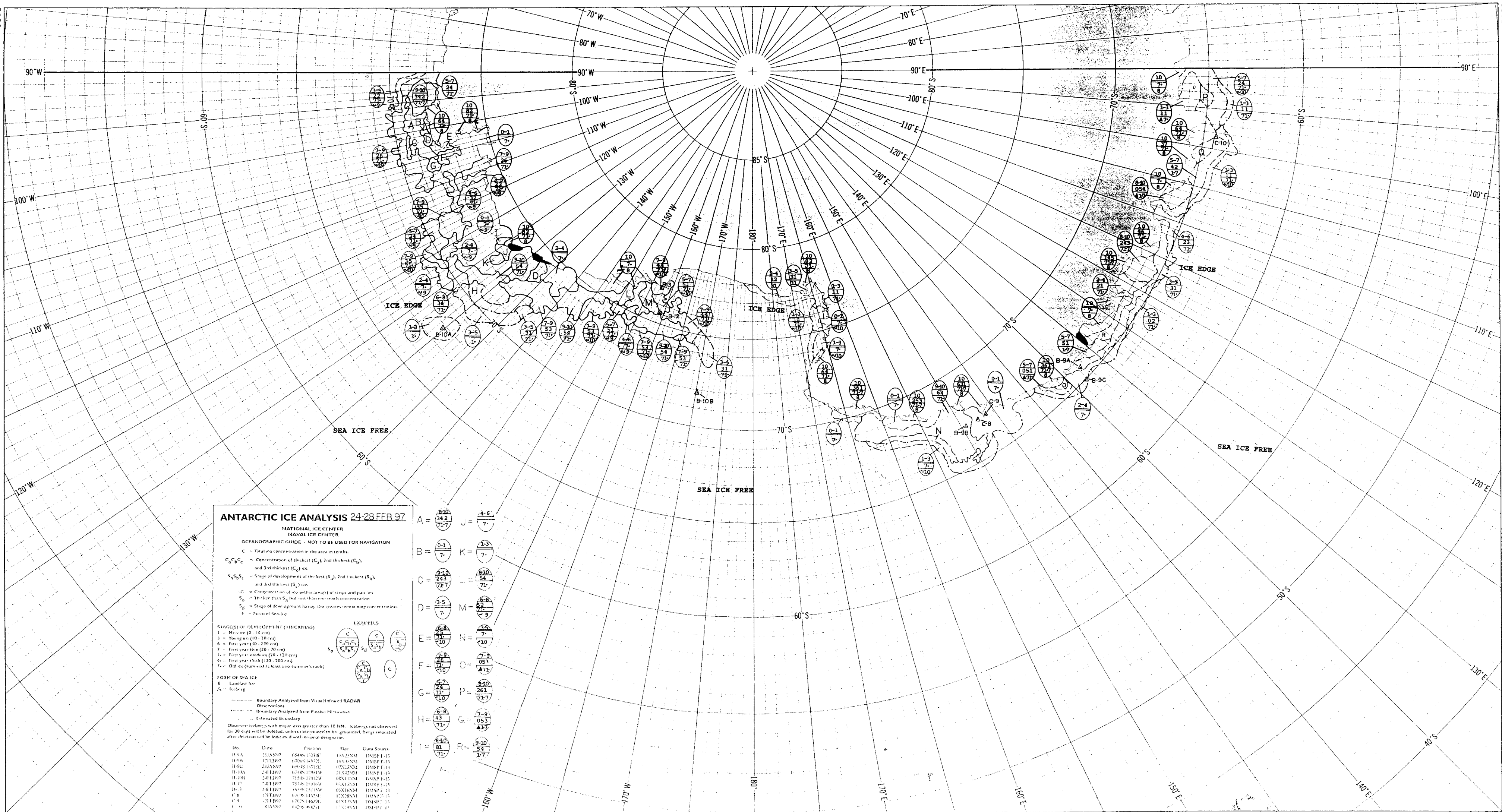
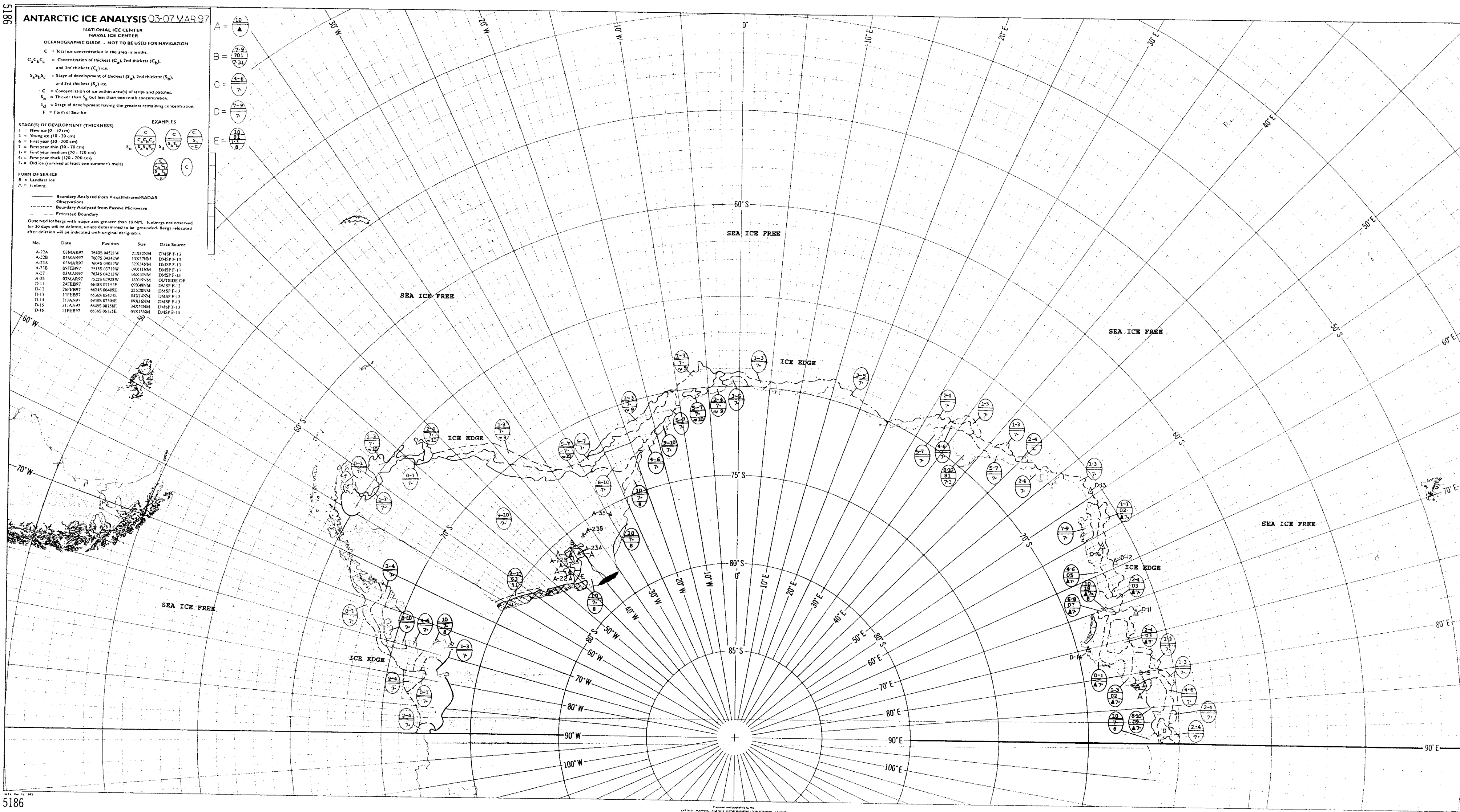
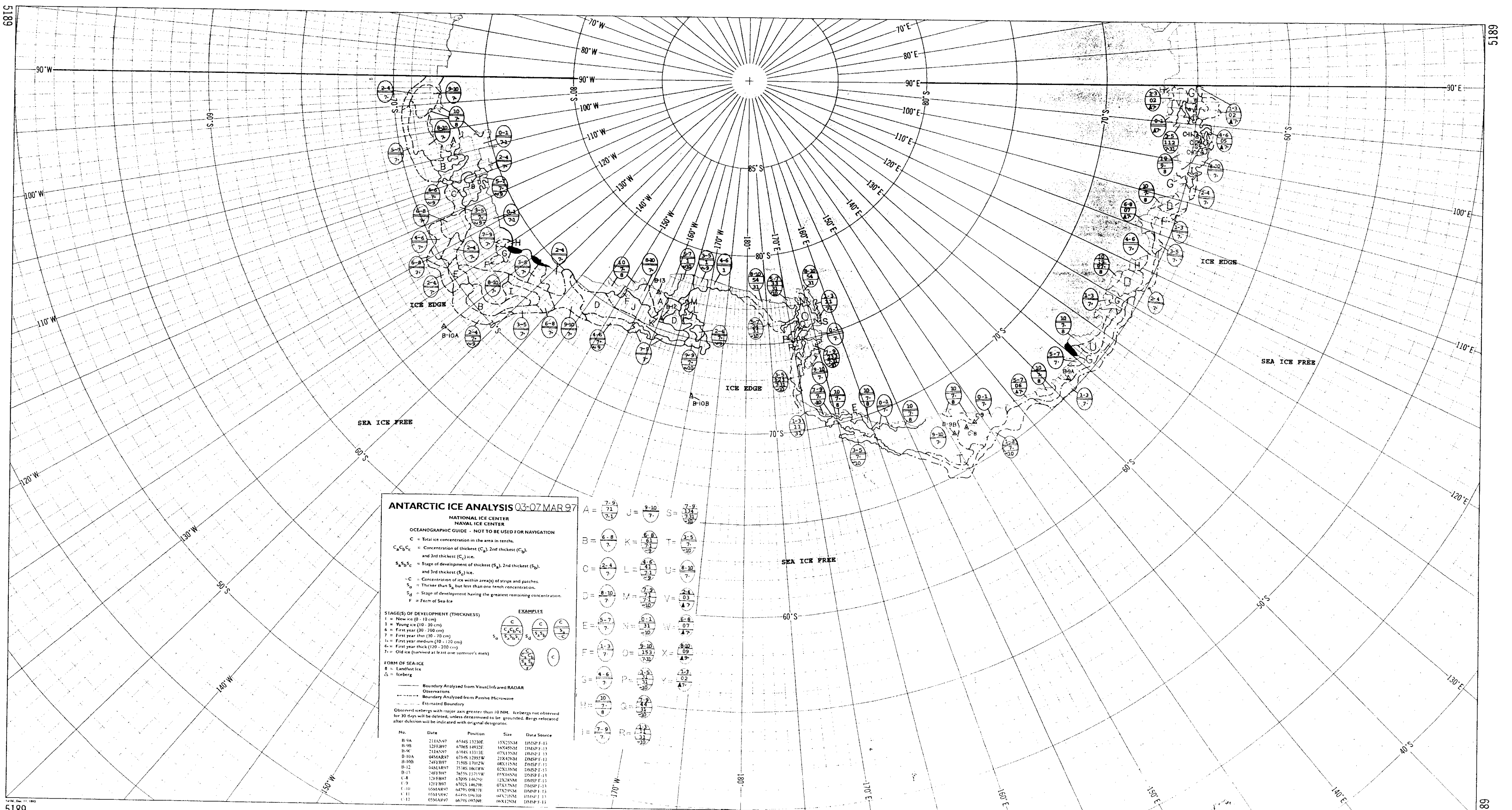
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
6 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)
FORM OF SEA ICE
EXAMPLES
Boundary Analyzed from Visual Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary
Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.
ICE EDGE
SEA ICE FREE
Polar Stereographic Projection
1st Ed., Dec. 11, 1993

5189


5186
ANTARCTIC ICE ANALYSIS 24-28 FEB 97
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
C = Total ice concentration in the area in tenths.
CaCbCc = Concentration of thickest (Ca), 2nd thickest (Cb), and 3rd thickest (Cc) ice.
SaSbSc = Stage of development of thickest (Sa), 2nd thickest (Sb), and 3rd thickest (Sc) ice.
-C = Concentration of ice within area(s) of strips and patches.
So = Thicker than Sa but less than one tenth concentration.
Sd = Stage of development having the greatest remaining concentration.
F = Form of Sea-Ice
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
6 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)
EXAMPLES
FORM OF SEA-ICE
8 = Landfast Ice
Δ = Iceberg
Boundary Analyzed from Visual Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary
Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.
No. | Date | Position | Size | Data Source
A-22A | 24FEB97 | 7627S 04515W | 21X32NM | DMSP F-13
A-22B | 24FEB97 | 7556S 04258W | 13X37NM | DMSP F-13
A-23A | 20FEB97 | 7604S 04057W | 32X34NM | DMSP F-13
A-23B | 09FEB97 | 7535S 03719W | 09X11NM | DMSP F-13
A-27 | 24FEB97 | 7622S 04222W | 06X10NM | DMSP F-13
A-35 | 20FEB97 | 7330S 02947W | 16X19NM | OUTSIDE OB.
D-11 | 24FEB97 | 6618S 07151E | 09X48NM | DMSP F-13
D-12 | 26FEB97 | 6624S 06409E | 22X28NM | DMSP F-13
D-13 | 11FEB97 | 6536S 05424E | 04X14NM | DMSP F-13
D-14 | 31JAN97 | 6930S 07505E | 09X16NM | DMSP F-13
D-15 | 31JAN97 | 6649S 08158E | 34X53NM | DMSP F-13
D-16 | 11FEB97 | 6636S 06135E | 05X13NM | DMSP F-13
SEA ICE FREE
ICE EDGE
60°S
70°S
75°S
80°S
85°S
0°
10°E
20°E
30°E
40°E
50°E
60°E
70°E
80°E
90°E
100°E
10°W
20°W
30°W
40°W
50°W
60°W
70°W
80°W
90°W
100°W
Projection: Polar Stereographic
5186


ANTARCTIC ICE ANALYSIS 24-28 FEB 97
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
C = Total ice concentration in the area in tenths.
CaCbCc = Concentration of thickest (Ca), 2nd thickest (Cb), and 3rd thickest (Cc) ice.
SaSbSc = Stage of development of thickest (Sa), 2nd thickest (Sb), and 3rd thickest (Sc) ice.
~C = Concentration of ice within area(s) of strips and patches.
So = Thicker than Sa but less than one tenth concentration
Sd = Stage of development having the greatest remaining concentration.
F = Form of Sea-Ice
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
6 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7•• = Old ice (survived at least one summer's melt)
EXAMPLES
FORM OF SEA-ICE
8 = Landfast Ice
A = Iceberg
Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary
Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.
No. Date Position Size Data Source
B-9A
B-9B
B-9C
B-10A
B-10B
B-12
B-13
C-8
C-9
C-10
ICE EDGE
SEA ICE FREE
Polar Stereographic Projection


5186
ANTARCTIC ICE ANALYSIS 03-07 MAR 97
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
C = Total ice concentration in the area in tenths.
$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.
$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
~C = Concentration of ice within area(s) of strips and patches.
S_o = Thicker than S_a but less than one tenth concentration.
S_d = Stage of development having the greatest remaining concentration.
F = Form of Sea-Ice
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
6 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)
EXAMPLES
FORM OF SEA-ICE
8 = Landfast Ice
A = Iceberg
Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary
Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.
No. Date Position Size Data Source
A-22A 03MAR97 7640S 04521W 21X32NM DMSP F-13
A-22B 03MAR97 7607S 04242W 13X37NM DMSP F-13
A-23A 03MAR97 7604S 04057W 32X34NM DMSP F-13
A-23B 09FEB97 7535S 03719W 09X11NM DMSP F-13
A-27 03MAR97 7634S 04212W 06X10NM DMSP F-13
A-35 03MAR97 7522S 02928W 16X19NM OUTSIDE OB.
D-11 24FEB97 6618S 07151E 09X48NM DMSP F-13
D-12 26FEB97 6624S 06409E 22X28NM DMSP F-13
D-13 11FEB97 6536S 05424E 04X14NM DMSP F-13
D-14 31JAN97 6930S 07505E 09X16NM DMSP F-13
D-15 31JAN97 6649S 08158E 34X53NM DMSP F-13
D-16 11FEB97 6636S 06135E 05X13NM DMSP F-13
SEA ICE FREE
ICE EDGE
60° S
75° S
80° S
85° S
Projection - Polar Stereographic
5186



5189
ANTARCTIC ICE ANALYSIS 03-07 MAR 97
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
C = Total ice concentration in the area in tenths.
$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.
$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
~C = Concentration of ice within area(s) of strips and patches.
S_o = Thicker than S_a but less than one tenth concentration.
S_d = Stage of development having the greatest remaining concentration.
F = Form of Sea-Ice
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
6 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)
EXAMPLES
FORM OF SEA-ICE
8 = Landfast Ice
Δ = Iceberg
Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary
Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.
SEA ICE FREE
ICE EDGE
Polar Stereographic Projection

No.	Date	Position	Size	Data Source
B-9A	21JAN97	6544S 13230E	15X25NM	DMSP F-13
B-9B	12FEB97	6706S 14932E	16X45NM	DMSP F-13
B-9C	21JAN97	6504S 13313E	07X13NM	DMSP F-13
B-10A	04MAR97	6759S 12955W	21X42NM	DMSP F-13
B-10B	24FEB97	7150S 17012W	08X11NM	DMSP F-13
B-12	04MAR97	7538S 16018W	02X13NM	DMSP F-13
B-13	24FEB97	7655S 15715W	05X16NM	DMSP F-13
C-8	12FEB97	6709S 14625E	12X28NM	DMSP F-13
C-9	12FEB97	6702S 14629E	07X17NM	DMSP F-13
C-10	05MAR97	6429S 09827E	17X29NM	DMSP F-13
C-11	05MAR97	6449S 09630E	04X21NM	DMSP F-13
C-12	05MAR97	6639S 09709E	06X12NM	DMSP F-13

ANTARCTIC ICE ANALYSIS 10-14 MAR 97

NATIONAL ICE CENTER
NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

$-C$ = Concentration of ice within area(s) of strips and patches.

S_w = Thicker than S_a but less than one tenth concentration.

S_d = Stage of development having the greatest remaining concentration.

F = Form of Sea-Ice

EXAMPLES

STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
6 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1- = First year medium (70 - 120 cm)
4- = First year thick (120 - 200 cm)
7- = Old ice (survived at least one summer's melt)

FORM OF SEA ICE
B = Lacefloor Ice
△ = Iceberg

——— Boundary Analyzed from Visual-Infrared RADAR Observations
– – – – Boundary Analyzed from Passive Microwave
– – – – Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 10 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Data Source
A-22A	10MAR97	76605 04521W	21X22NM	DMSP F-13
A-22B	10MAR97	76675 04247W	13X37NM	DMSP F-13
A-22A	10MAR97	76045 04057W	32X34NM	DMSP F-13
A-23B	10MAR97	75355 05719W	09X11NM	DMSP F-13
A-27	10MAR97	76345 04127W	06X10NM	DMSP F-13
A-35	10MAR97	75220 02929W	16X19NM	OUTSIDE OB
D-11	24FEB97	66185 07151E	09X48NM	DMSP F-13
D-12	26FEB97	66245 06409E	22X29NM	DMSP F-13
D-13	11FEB97	65345 05424E	04X14NM	DMSP F-13
D-14	31JAN97	69405 07505E	09X16NM	DMSP F-13
D-15	31JAN97	66496 08158E	34X58NM	DMSP F-13
D-16	11FEB97	66365 06135E	05X12NM	DMSP F-13

SEA ICE FREE

ICE EDGE

Projection - Polar Stereographic

5186

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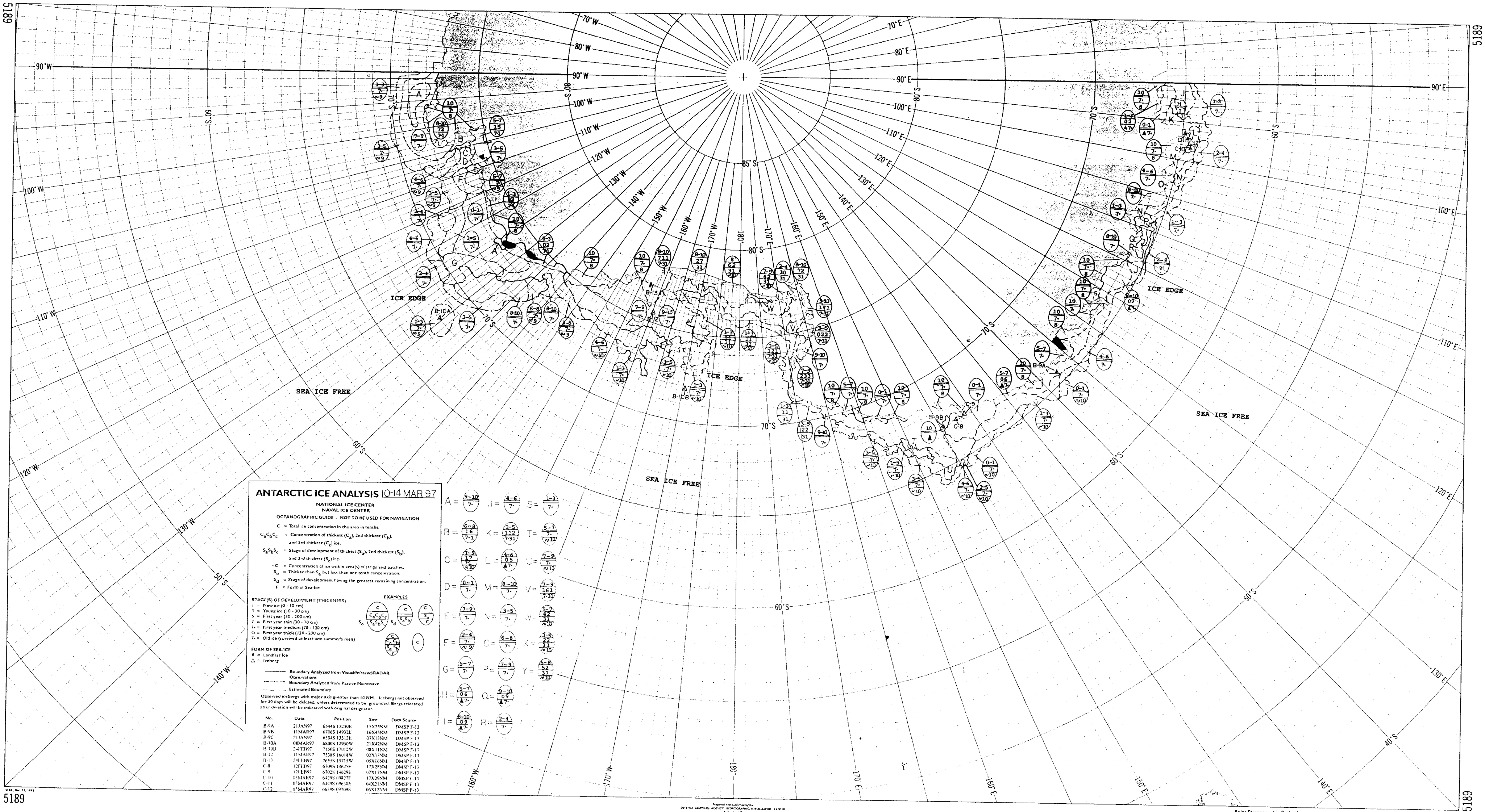

5189
ANTARCTIC ICE ANALYSIS 10-14 MAR 97
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
C = Total ice concentration in the area in tenths.
CaCbCc = Concentration of thickest (Ca), 2nd thickest (Cb), and 3rd thickest (Cc) ice.
SaSbSc = Stage of development of thickest (Sa), 2nd thickest (Sb), and 3rd thickest (Sc) ice.
-C = Concentration of ice within area(s) of strips and patches.
So = Thicker than Sa but less than one tenth concentration.
Sd = Stage of development having the greatest remaining concentration.
F = Form of Sea-Ice
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
6 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)
EXAMPLES
FORM OF SEA-ICE
8 = Landfast Ice
Δ = Iceberg
Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary
Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.
No. Date Position Size Data Source
B-9A 21JAN97 6544S 13230E 15X25NM DMSP F-13
B-9B 11MAR97 6706S 14932E 16X45NM DMSP F-13
B-9C 21JAN97 6504S 13313E 07X13NM DMSP F-13
B-10A 08MAR97 6800S 12950W 21X42NM DMSP F-13
B-10B 24FEB97 7150S 17012W 08X11NM DMSP F-13
B-12 11MAR97 7538S 16018W 02X13NM DMSP F-13
B-13 24FEB97 7655S 15715W 05X16NM DMSP F-13
C-8 12FEB97 6709S 14625E 12X28NM DMSP F-13
C-9 12FEB97 6702S 14629E 07X17NM DMSP F-13
C-10 05MAR97 6429S 09827E 17X29NM DMSP F-13
C-11 05MAR97 6449S 09630E 04X21NM DMSP F-13
C-12 05MAR97 6639S 09709E 06X12NM DMSP F-13
ICE EDGE
SEA ICE FREE
Polar Stereographic Projection

ANTARCTIC ICE ANALYSIS 17-21 MAR 97

NATIONAL ICE CENTER
NAVAL ICE CENTER

OCTANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

$-C$ = Concentration of ice within area(s) of ridge and patches.

S_a = Thicker than S_b but less than one tenth concentration.

S_d = Stage of development having the greatest remaining concentration.

F = Form of Sea-Ice

EXAMPLES

STAGE(S) OF DEVELOPMENT (THICKNESS):
1 = New ice (0 - 10 cm)
2 = Young ice (10 - 30 cm)
4 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
8 = First year medium (70 - 120 cm)
9 = First year thick (120 - 200 cm)
7+ = Old ice (survived at least one summer's melt)

FORM OF SEA-ICE
$ = Landfast Ice
△ = Iceberg

Boundary Analyzed from Visual/Infrared/RADAR
Observation
Boundary Analyzed from Passive Microwave
Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Data Source
A-22A	97069	76405 04321W	27X21NM	DMSP F13
A-22B	97069	76975 04242W	33X37NM	DMSP F13
A-22A	97069	76945 04037W	32X16NM	DMSP F13
A-23B	97069	75355 03719W	09X11NM	DMSP F13
A-27	97069	76185 04521W	04X10NM	DMSP F13
A-35	97069	75225 02928W	16X19NM	OUTSIDE OB
D-11	97055	66185 07151E	09X48NM	DMSP F13
D-12	97077	66215 06404E	22X28NM	DMSP F13
D-14	97021	69305 07105E	09X16NM	DMSP F13
D-15	97031	66495 08118E	34X51NM	DMSP F13

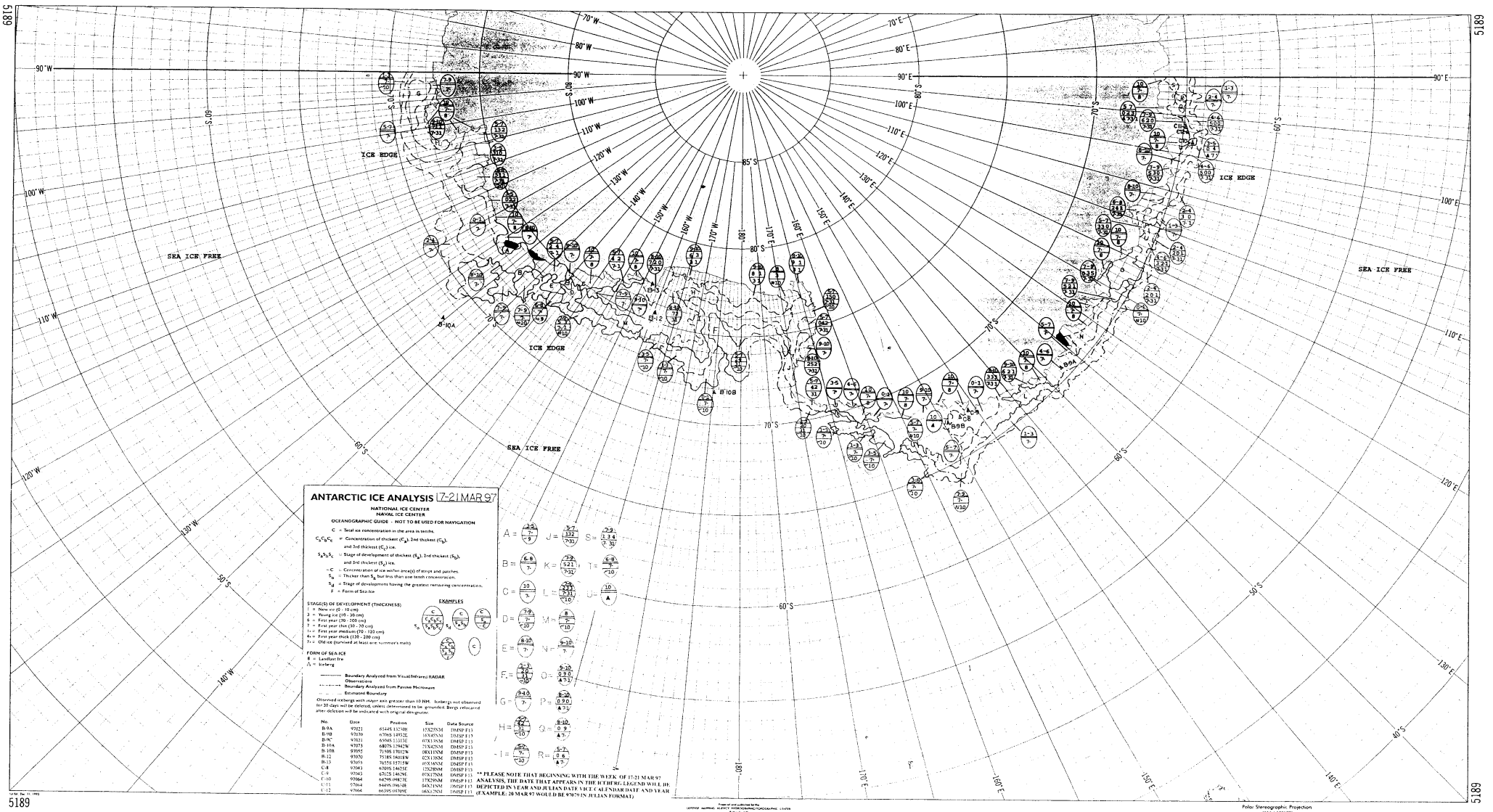
** PLEASE NOTE THAT BEGINNING WITH THE WEEK OF 17-21 MAR 97 ANALYSIS, THE DATE THAT APPEARS IN THE ICEBERG LEGEND WILL BE DEPICTED IN YEAR AND JULIAN DATE VICE CALENDAR DATE AND YEAR (EXAMPLE: 20 MAR 97 WOULD BE 97079 IN JULIAN FORMAT)

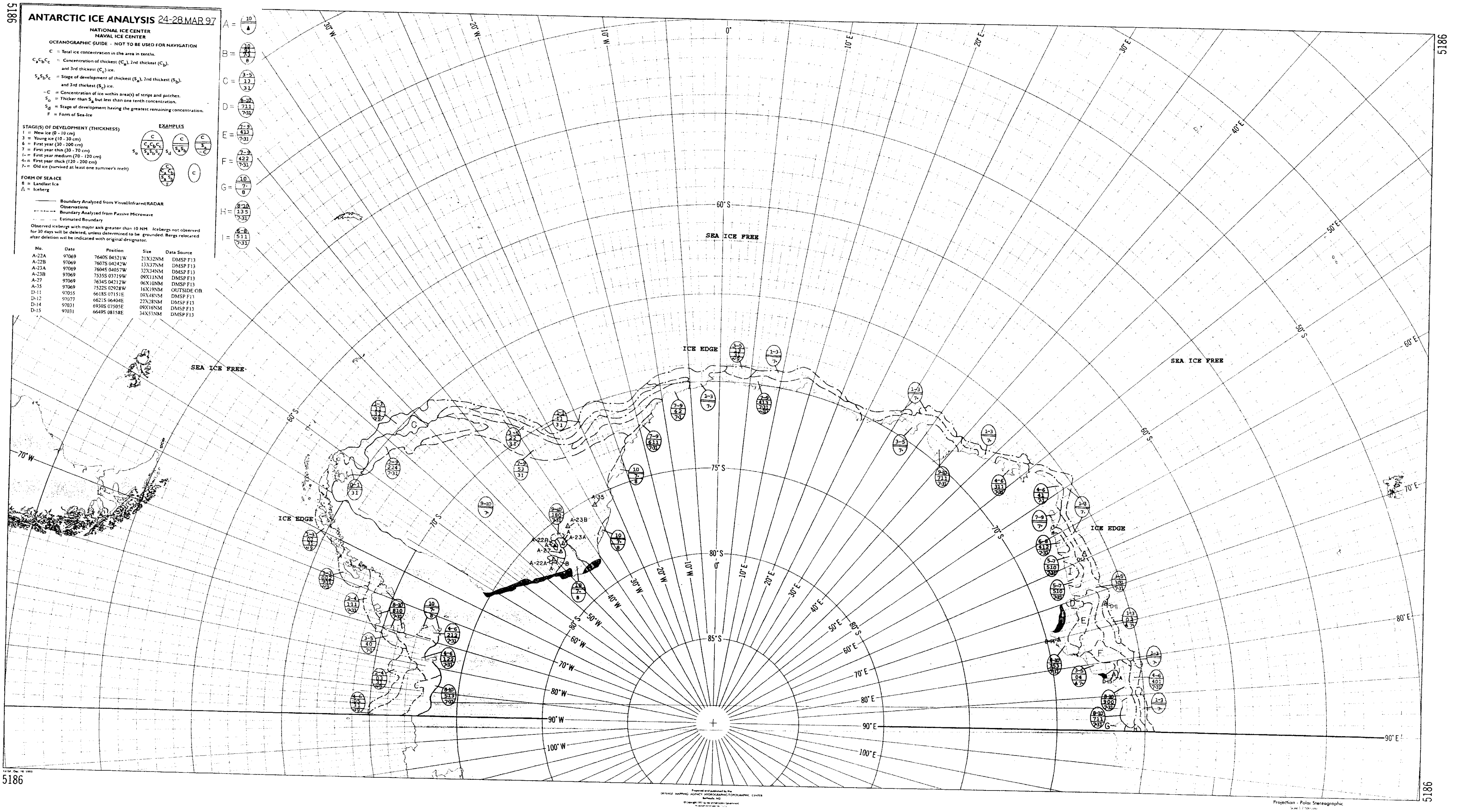
A = (10 / A)
B = (1-3 / 7-)
C = (4-6 / 500 / 7-3+)
D = (7-9 / 134 / 9-3+)
E = (7-9 / 702 / 7-3+)
F = (4-6 / 050 / A 7-)
G = (7-9 / 422 / 935)
H = (5-7 / 042 / A 9-)
I = (7-9 / 071 / A 9-)
J = (4-6 / 2 3 / 7- 3-)
K = (10 / 2-3 / 8)
L = (10 / A)
M = (5-7 / 222 / 7-3+)
N = (0-1 / 7-1)

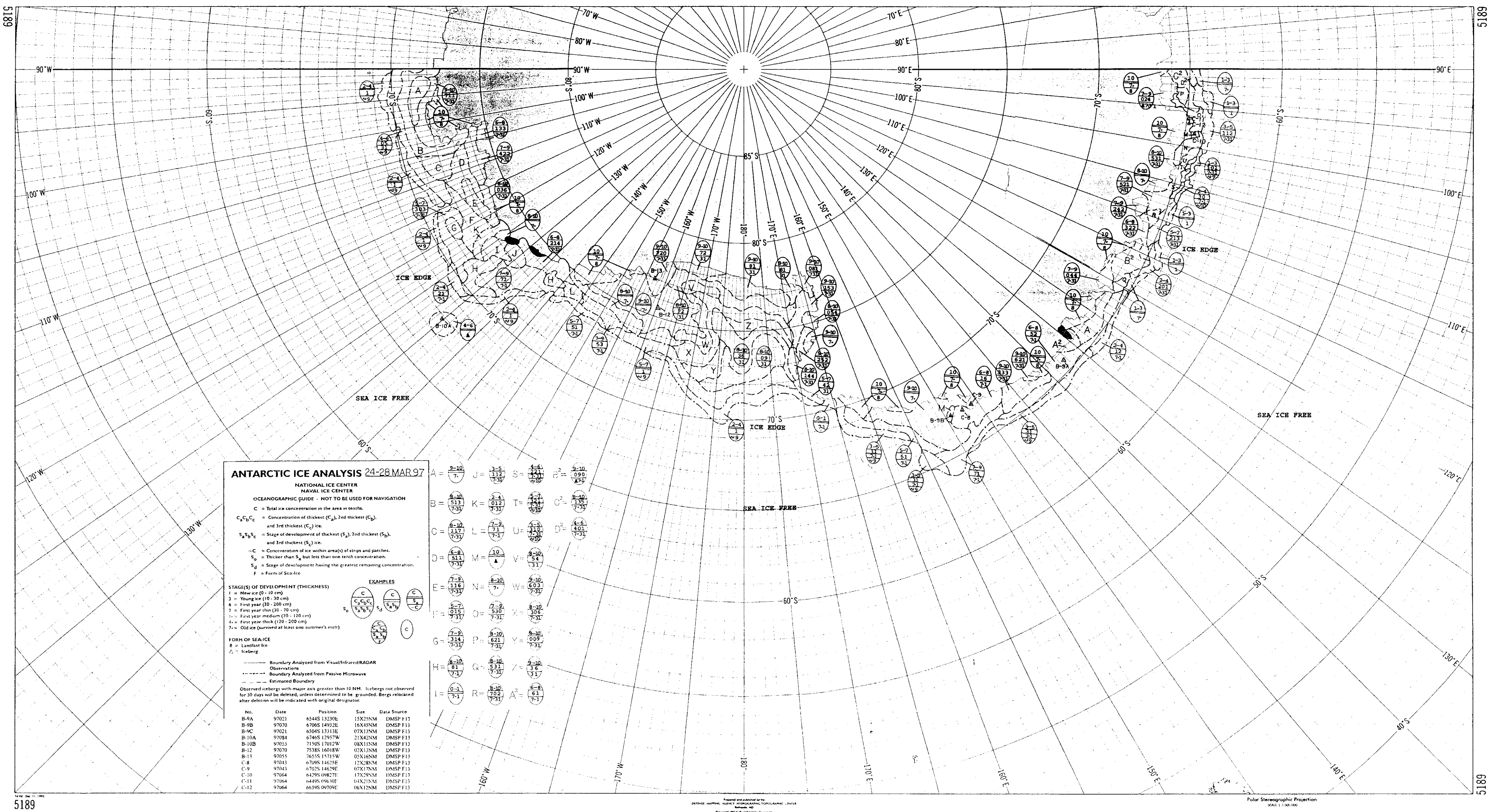
SEA ICE FREE
ICE EDGE
SEA ICE FREE
ICE EDGE
SEA ICE FREE
ICE EDGE

60°S 70°S 75°S 80°S 85°S
0° 10°W 20°W 30°W 40°W 50°W 60°W 70°W 80°W 90°W 100°W
10°E 20°E 30°E 40°E 50°E 60°E 70°E 80°E 90°E 100°E

Projection - Polar Stereographic


ANTARCTIC ICE ANALYSIS 17-21MAR97
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
C = Total ice concentration in the area in tenths.
$C_TC_bC_c$ = Concentration of thickest (C_T), 2nd thickest (C_b), and 3rd thickest (C_c) ice.
$S_TS_bS_c$ = Stage of development of thickest (S_T), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
–C = Concentration of ice water area(s) of strips and patches.
S_o = Thicker than S_d but less than one tenth concentration.
S_d = Stage of development having the greatest remaining concentration.
F = Form of Sea Ice
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
2 = Young ice (10 - 30 cm)
3 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1= First year medium (70 - 120 cm)
4= First year thick (120 - 200 cm)
7= Old ice (survived at least one summer's melt)
FORM OF SEA ICE
B = Landfast Ice
A = Iceberg
Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary
EXAMPLES
Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after definition will be indicated with original designator.
No. Date Positions Size Data Source
B-9A 97021 65245 152°08E 15X25NM DMSP F13
B-9B 97030 67065 149°52E 16X45NM DMSP F13
B-9C 97021 65945 153°35E 07X13NM DMSP F13
B-10A 97073 68075 179°42W 21X42NM DMSP F13
B-10B 97095 71595 178°02W 08X11NM DMSP F13
B-12 97070 75385 160°18W 02X13NM DMSP F13
B-13 97053 70355 157°15W 05X16NM DMSP F13
C-8 97043 67095 146°25E 12X28NM DMSP F13
C-9 97043 67625 146°29E 07X17NM DMSP F13
C-10 97064 64295 148°27E 07X17NM DMSP F13
C-11 97064 64495 156°20E 04X21NM DMSP F13
C-12 97064 66395 163°39W 08X12NM DMSP F13
** PLEASE NOTE THAT BEGINNING WITH THE WEEK OF 17-21 MAR 97 ANALYSIS, THE DATE THAT APPEARS IN THE ICEBERG LEGEND WILL BE DEPICTED IN YEAR AND JULIAN DATE VICE CALENDAR DATE AND YEAR (EXAMPLE: 26 MAR 97 WOULD BE 97079 IN JULIAN FORMAT)
ICE EDGE
SEA ICE FREE
B-9A
B-9B
B-9C
B-10A
B-10B
B-12
B-13
C-8
C-9
C-10
C-11
C-12
Polar Stereographic Projection
SCALE 1:7500000
5189


5186
ANTARCTIC ICE ANALYSIS 24-28 MAR 97
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
C = Total ice concentration in the area in tenths.
CaCbCc = Concentration of thickest (Ca), 2nd thickest (Cb), and 3rd thickest (Cc) ice.
SaSbSc = Stage of development of thickest (Sa), 2nd thickest (Sb), and 3rd thickest (Sc) ice.
-C = Concentration of ice within area(s) of strips and patches.
So = Thicker than Sa but less than one tenth concentration.
Sd = Stage of development having the greatest remaining concentration.
F = Form of Sea-Ice
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
6 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)
EXAMPLES
FORM OF SEA-ICE
8 = Landfast Ice
Δ = Iceberg
Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary
Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.
No. Date Position Size Data Source
A-22A 97069 7640S 04521W 21X32NM DMSP F13
A-22B 97069 7607S 04242W 13X37NM DMSP F13
A-23A 97069 7604S 04057W 32X34NM DMSP F13
A-23B 97069 7535S 03719W 09X11NM DMSP F13
A-27 97069 7634S 04212W 06X10NM DMSP F13
A-35 97069 7522S 02928W 16X19NM DMSP F13
D-11 97055 6618S 07151E 09X48NM OUTSIDE OB
D-12 97077 6621S 06404E 22X28NM DMSP F13
D-14 97031 6930S 07505E 09X16NM DMSP F13
D-15 97031 6649S 08158E 34X53NM DMSP F13
SEA ICE FREE
ICE EDGE
60°S
70°S
75°S
80°S
85°S
0°
10°E
20°E
30°E
40°E
50°E
60°E
70°E
80°E
90°E
100°E
10°W
20°W
30°W
40°W
50°W
60°W
70°W
80°W
90°W
100°W
Projection - Polar Stereographic
5186


5189
ANTARCTIC ICE ANALYSIS 24-28 MAR 97
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
C = Total ice concentration in the area in tenths.
CaCbCc = Concentration of thickest (Ca), 2nd thickest (Cb), and 3rd thickest (Cc) ice.
SaSbSc = Stage of development of thickest (Sa), 2nd thickest (Sb), and 3rd thickest (Sc) ice.
~C = Concentration of ice within area(s) of strips and patches.
So = Thicker than Sa but less than one tenth concentration.
Sd = Stage of development having the greatest remaining concentration.
F = Form of Sea-Ice
EXAMPLES
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
6 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)
FORM OF SEA-ICE
8 = Landfast Ice
△ = Iceberg
Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary
Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.
ICE EDGE
SEA ICE FREE
90°W
100°W
110°W
120°W
130°W
140°W
150°W
160°W
170°W
180°
170°E
160°E
150°E
140°E
130°E
120°E
110°E
100°E
90°E
80°E
70°E
80°W
70°W
85°S
80°S
70°S
60°S
50°S
40°S
Polar Stereographic Projection

No.	Date	Position	Size	Data Source
B-9A	97021	6544S 13230E	15X25NM	DMSP F13
B-9B	97070	6706S 14932E	16X45NM	DMSP F13
B-9C	97021	6504S 13313E	07X13NM	DMSP F13
B-10A	97084	6746S 12957W	21X42NM	DMSP F13
B-10B	97055	7150S 17012W	08X11NM	DMSP F13
B-12	97070	7538S 16018W	02X13NM	DMSP F13
B-13	97055	7655S 15715W	05X16NM	DMSP F13
C-8	97043	6709S 14625E	12X28NM	DMSP F13
C-9	97043	6702S 14629E	07X17NM	DMSP F13
C-10	97064	6429S 09827E	17X29NM	DMSP F13
C-11	97064	6449S 09630E	04X21NM	DMSP F13
C-12	97064	6639S 09709E	06X12NM	DMSP F13

5186

ANTARCTIC ICE ANALYSIS 31 MAR-04 APR 97

NATIONAL ICE CENTER
NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

$-C$ = Concentration of ice within area(s) of strips and patches.

S_x = Thicker than S_b but less than one tenth concentration.

S_d = Stage of development having the greatest remaining concentration.

F = Form of Sea-Ice

STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
2 = Young ice (10 - 30 cm)
3 = First year (30 - 206 cm)
4 = First year thin (30 - 70 cm)
5 = First year medium (70 - 120 cm)
6 = First year thick (120 - 200 cm)
7+ = Old ice (survived at least one summer's melt)

EXAMPLES

FORM OF SEA-ICE
8 = Landfast Ice
△ = Iceberg

Boundary Analysed from Visual/Infrared/RADAR Observation

Boundary Analysed from Passive Microwave

Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletions will be indicated with original designator.

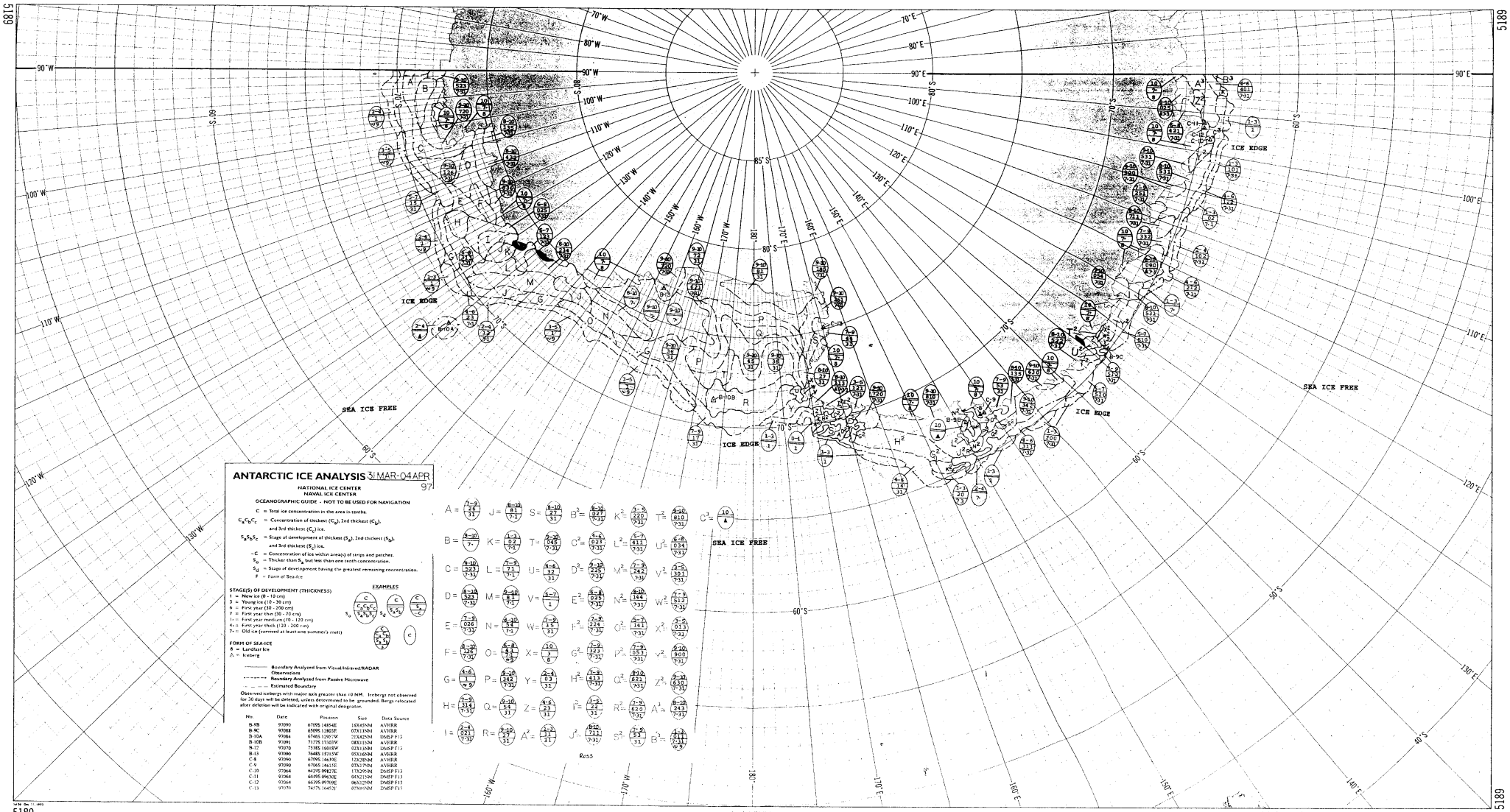
No.	Date	Position	Size	Data Source
A-22A	97091	76406 04521W	21X32NM	AVHRR
A-22B	97091	76075 04242W	12X37NM	AVHRR
A-23A	97091	76045 04057W	32X39NM	AVHRR
A-23B	97069	75355 03719W	09X11NM	DMSP F15
A-27	97069	76345 04212W	06X10NM	DMSP F13
A-35	97069	75275 02928W	16X19NM	OUTSIDE OB
D-11	97055	66185 07151E	09X46NM	DMSP F15
D-12	97091	66275 06415E	22X28NM	AVHRR
D-14	97031	69105 07505E	09X16NM	DMSP F13
D-15	97031	66495 08138E	34X35NM	DMSP F15

SEA ICE FREE

ICE EDGE

Projection - Polar Stereographic

5186


ANTARCTIC ICE ANALYSIS 31 MAR-04 APR 97
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
C = Total ice concentration in the area in tenths.
$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.
$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
–C = Concentration of ice within area(s) of strips and patches.
S_o = Thicker than S_a but less than one tenth concentration.
S_d = Stage of development having the greatest remaining concentration.
F = Form of Sea Ice
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
4 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1- = First year medium (70 - 120 cm)
4- = First year thick (120 - 200 cm)
7- = Old ice (survived at least one summer's melt)
EXAMPLES
FORM OF SEA ICE
R = Landfast Ice
A = Iceberg
Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary
Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.
No. Date Position Size Data Source
B-9B 97090 67095 14854E 140X45NM AVHRR
B-9C 97088 65095 13803E 07X13NM AVHRR
B-10A 97084 67465 12957W 21X42NM DMSP F15
B-10B 97091 71795 17503W 08X18NM AVHRR
B-12 97070 75385 16918W 02X13NM DMSP F15
B-13 97090 76485 15151W 05X16NM AVHRR
C-8 97090 67095 14619E 12X28NM AVHRR
C-9 97090 67065 14615E 07X17NM AVHRR
C-10 97064 64295 09827E 17X29NM DMSP F13
C-11 97064 64495 09630E 04X21NM DMSP F13
C-12 97064 66395 09709E 06X32NM DMSP F15
C-13 97070 74575 16452E 03X09NM DMSP F15
ICE EDGE
SEA ICE FREE
Ross
Polar Stereographic Projection
5189

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ANTARCTIC ICE ANALYSIS 07-11 APR 97

NATIONAL ICE CENTER
NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

~C = Concentration of ice within area(s) of strips and patches.

S_o = Thicker than S_a but less than one tenth concentration.

S_d = Stage of development having the greatest remaining concentration.

F = Form of Sea-Ice

STAGE(S) OF DEVELOPMENT (THICKNESS)

1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
6 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)

EXAMPLES

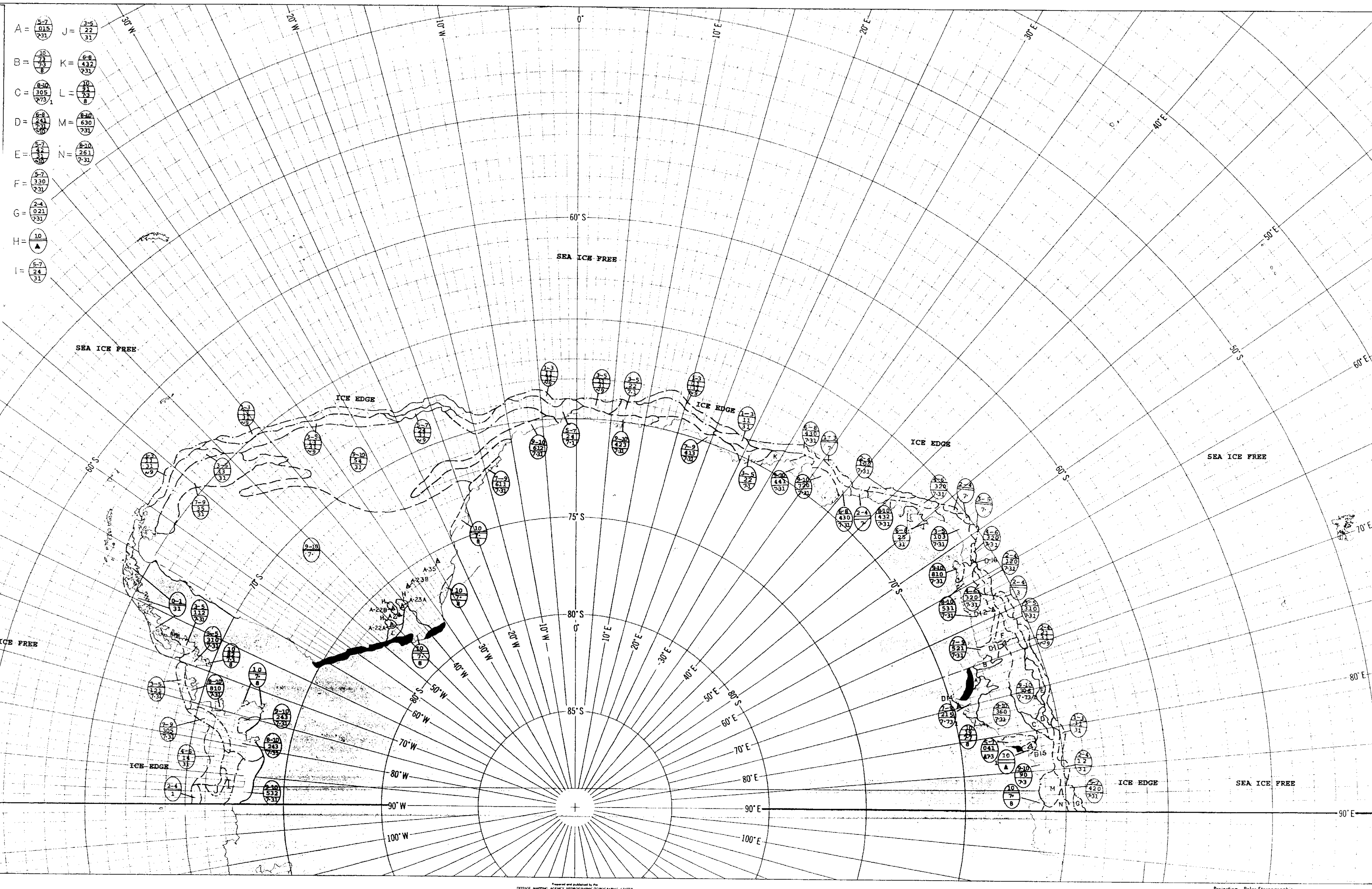
FORM OF SEA-ICE

8 = Landfast Ice
Δ = Iceberg

——— Boundary Analyzed from Visual/Infrared/RADAR Observations
-·-·-·- Boundary Analyzed from Passive Microwave
— — — Estimated Boundary

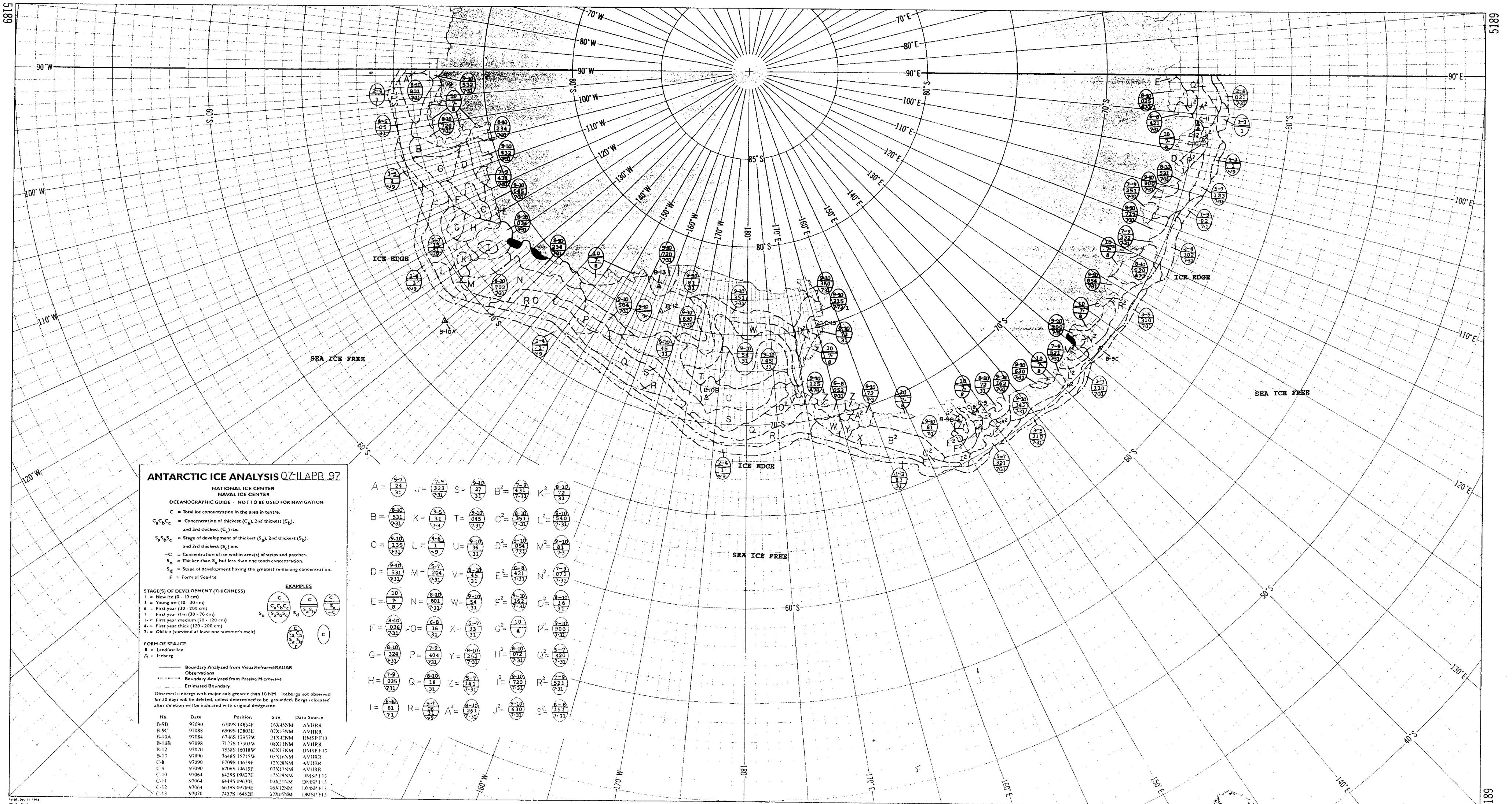
Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Data Source
A-22A	97098	7640S 04521W	21X32NM	AVHRR
A-22B	97098	7607S 04242W	13X37NM	AVHRR
A-23A	97098	7604S 04057W	32X34NM	AVHRR
A-23B	97098	7535S 03719W	09X11NM	DMSP F13
A-27	97098	7634S 04212W	06X10NM	DMSP F13
A-35	97098	7522S 02928W	16X19NM	OUTSIDE OB
D-11	97096	6633S 06839E	09X48NM	AVHRR
D-12	97097	6627S 06415E	22X28NM	AVHRR
D-14	97097	6942S 07451E	09X16NM	AVHRR
D-15	97098	6649S 08158E	34X53NM	AVHRR
D-16	97098	6606S 05754E	05X13NM	AVHRR



Projection - Polar Stereographic

5186


5189
ANTARCTIC ICE ANALYSIS 07-11 APR 97
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
C = Total ice concentration in the area in tenths.
$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.
$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
~C = Concentration of ice within area(s) of strips and patches.
S_o = Thicker than S_a but less than one tenth concentration.
S_d = Stage of development having the greatest remaining concentration.
F = Form of Sea-Ice
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
6 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)
EXAMPLES
FORM OF SEA-ICE
8 = Landfast Ice
Δ = Iceberg
Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary
Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.
No. Date Position Size Data Source
B-9B 97090 6709S 14854E 16X45NM AVHRR
B-9C 97088 6509S 12803E 07X13NM AVHRR
B-10A 97084 6746S 12957W 21X42NM DMSP F13
B-10B 97098 7127S 17303W 08X11NM AVHRR
B-12 97070 7538S 16018W 02X13NM DMSP F13
B-13 97090 7648S 15715W 05X16NM AVHRR
C-8 97090 6709S 14639E 12X28NM AVHRR
C-9 97090 6706S 14615E 07X17NM AVHRR
C-10 97064 6429S 09827E 17X29NM DMSP F13
C-11 97064 6449S 09630E 04X21NM DMSP F13
C-12 97064 6639S 09709E 06X12NM DMSP F13
C-13 97070 7457S 16452E 02X05NM DMSP F13
ICE EDGE
SEA ICE FREE
90°W
100°W
110°W
120°W
90°E
100°E
110°E
120°E
130°E
140°E
180°
60°S
70°S
80°S
85°S
Polar Stereographic Projection

ANTARCTIC ICE ANALYSIS 4-18APR 97

NATIONAL ICE CENTER
NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

-C = Concentration of ice within area(s) of strips and patches.

S_b = Thicker than S_a but less than one tenth concentration.

S_{ra} = Stage of development having the greatest remaining concentration.

F = Form of Sea-Ice

STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
4 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)

EXAMPLES

FORM OF SEA-ICE
8 = Limiting ice
△ = Iceberg

——— Boundary Analyzed from Visual/Infrared/RADAR Observations
– – – – Boundary Analyzed from Passive Microwave
– – – – Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Barge relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Data Source
A-22A	97098	76605 04551W	21X12NM	AVHRR
A-22B	97098	76075 04242W	13X33NM	AVHRR
A-23A	97098	76045 04057W	32X34NM	AVHRR
A-23B	97098	75355 03719W	09X11NM	AVHRR
A-27	97098	76745 04312W	16X10NM	AVHRR
A-35	97098	75225 02928W	16X19NM	OUTSIDE OB
D-11	97096	66335 06839E	09X48NM	AVHRR
D-12	97097	66275 06415E	27X28NM	AVHRR
D-14	97097	69425 07451E	09X16NM	AVHRR
D-15	97098	66495 08158E	34X53NM	AVHRR
D-16	97098	66065 05754E	05X13NM	AVHRR

SEA ICE FREE

ICE EDGE

SEA ICE FREE

ICE EDGE

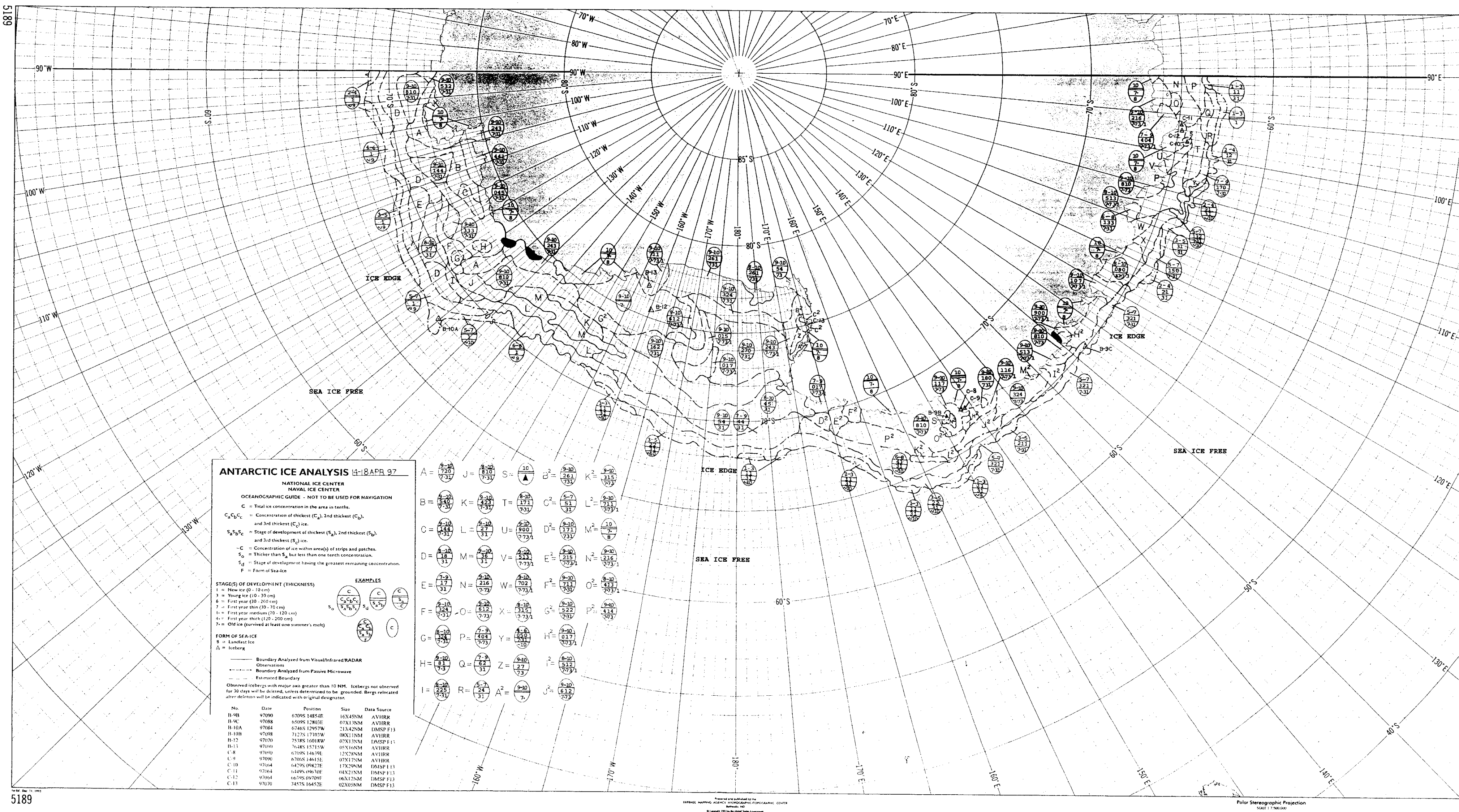
SEA ICE FREE

ICE EDGE

Prepared and published by the
DEFENSE MAPPING AGENCY HYDROGRAPHIC/TOPOGRAPHIC CENTER
Washington, DC

Projection - Polar Stereographic

5189



ANTARCTIC ICE ANALYSIS 14-18 APR 97
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
C = Total ice concentration in the area in tenths.
CaCbCc = Concentration of thickest (Ca), 2nd thickest (Cb), and 3rd thickest (Cc) ice.
SaSbSc = Stage of development of thickest (Sa), 2nd thickest (Sb), and 3rd thickest (Sc) ice.
~C = Concentration of ice within area(s) of strips and patches.
So = Thicker than Sa but less than one tenth concentration.
Sd = Stage of development having the greatest remaining concentration.
F = Form of Sea-Ice
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
6 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)
FORM OF SEA-ICE
8 = Landfast Ice
Δ = Iceberg
EXAMPLES
Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary
Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.
No. Date Position Size Data Source
B-9B 97090 6709S 14854E 16X45NM AVHRR
B-9C 97088 6509S 12803E 07X13NM AVHRR
B-10A 97084 6746S 12957W 21X42NM DMSP F13
B-10B 97098 7127S 17303W 08X11NM AVHRR
B-12 97070 7538S 16018W 02X13NM DMSP F13
B-13 97090 7648S 15715W 05X16NM AVHRR
C-8 97090 6709S 14639E 12X28NM AVHRR
C-9 97090 6706S 14615E 07X17NM AVHRR
C-10 97064 6429S 09827E 17X29NM DMSP F13
C-11 97064 6449S 09630E 04X21NM DMSP F13
C-12 97064 6639S 09709E 06X12NM DMSP F13
C-13 97070 7457S 16452E 02X05NM DMSP F13
ICE EDGE
SEA ICE FREE
Polar Stereographic Projection

5189

ANTARCTIC ICE ANALYSIS 21-25 APR 97

NATIONAL ICE CENTER
NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

–C = Concentration of ice within area(s) of strips and patches.

S_d = Thicker than S_a but less than one tenth concentration.

S_d = Stage of development having the greatest remaining concentration.

F = Form of Sea-ice

EXAMPLES

STAGE(S) OF DEVELOPMENT (THICKNESS)

1 = New ice (0 - 10 cm)
2 = Young ice (10 - 30 cm)
4 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)

FORM OF SEA-ICE

B = Landfast Ice
A = Iceberg

——— Boundary Analyzed from Visual/Infrared/RADAR Observations
– – – – Boundary Analyzed from Passive Microwave
— — — Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.

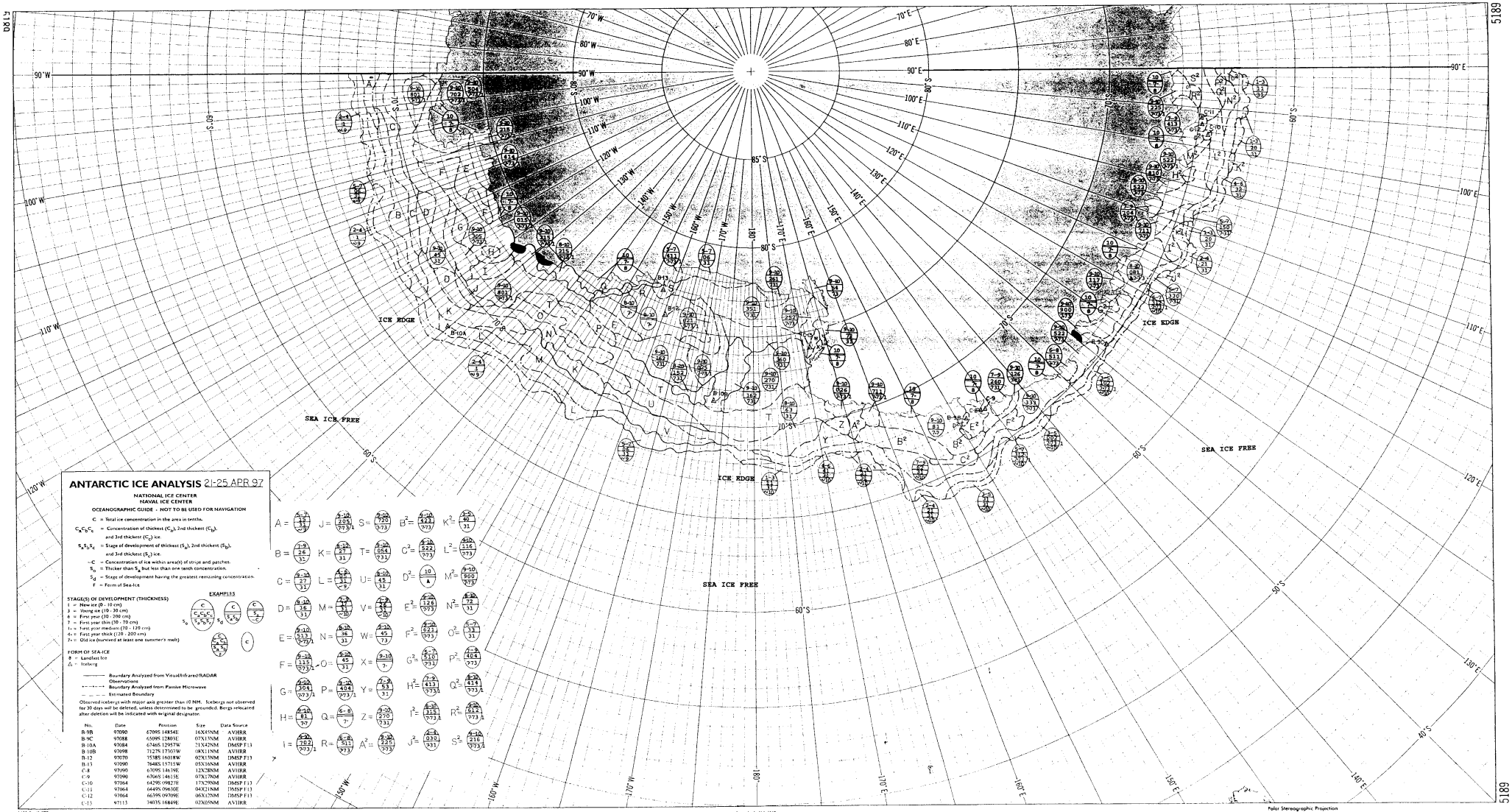
No	Date	Position	Size	Data Source
A-22A	97113	7640S 04521W	21X32NM	AVHRR
A-22B	97113	7607S 04242W	13X37NM	AVHRR
A-23A	97113	7604S 04937W	32X24NM	AVHRR
A-23B	97113	7535S 03719W	09X11NM	AVHRR
A-27	97113	7616S 04212W	06X10NM	AVHRR
A-35	97113	7525S 02928W	16X19NM	OUTSIDE OB
D-11	97112	6667S 06557E	09X48NM	AVHRR
D-12	97112	6618S 06209E	22X28NM	AVHRR
D-14	97097	6942S 07431E	09X16NM	AVHRR
D-15	97098	6645S 08139E	34X21NM	AVHRR
D-16	97098	6606S 05754E	05X12NM	AVHRR

SEA ICE FREE

ICE EDGE

Projection - Polar Stereographic
Scale 1:7,500,000

5186


ANTARCTIC ICE ANALYSIS 21-25 APR 97
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
C = Total ice concentration in the area in tenths.
$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.
$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
–C = Concentration of ice within area(s) of strips and patches.
S_b = Thicker than S_a but less than one tenth concentration.
S_d = Stage of development having the greatest remaining concentration.
F = Form of Sea-Ice
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
2 = Young ice (10 - 30 cm)
4 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1. = First year medium (70 - 120 cm)
4. = First year thick (120 - 200 cm)
7. = Old ice (survived at least one summer's melt)
EXAMPLES
FORM OF SEA-ICE
B = Landfast Ice
△ = Iceberg
Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary
Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.
No. Date Position Size Data Source
B-9B 97090 6709S 14854E 16X45NM AVHRR
B-9C 97088 6509S 12801E 07X13NM AVHRR
B-10A 97084 6746S 12957W 21X42NM DMSP F13
B-10B 97098 7127S 17303W 08X11NM AVHRR
B-12 97070 7558S 16018W 02X15NM DMSP F13
B-13 97090 76845 15715W 05X16NM AVHRR
C-8 97095 67095 14639E 12X28NM AVHRR
C-9 97090 67065 14615E 07X17NM AVHRR
C-10 97064 64295 09827E 17X29NM DMSP F13
C-11 97064 64495 09630E 04X21NM DMSP F13
C-12 97064 66395 09709E 06X12NM DMSP F13
C-13 97113 74035 16849E 02X05NM AVHRR
ICE EDGE
SEA ICE FREE
Polar Stereographic Projection
SCALE 1:1 500 000
5189

ANTARCTIC ICE ANALYSIS 28 APR-02 MAY 97

NATIONAL ICE CENTER
NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

--C = Concentration of ice within area(s) of strips and patches.

S_o = Thicker than S_a but less than one tenth concentration.

S_d = Stage of development having the greatest remaining concentration.

F = Form of Sea-Ice

STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
6 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)

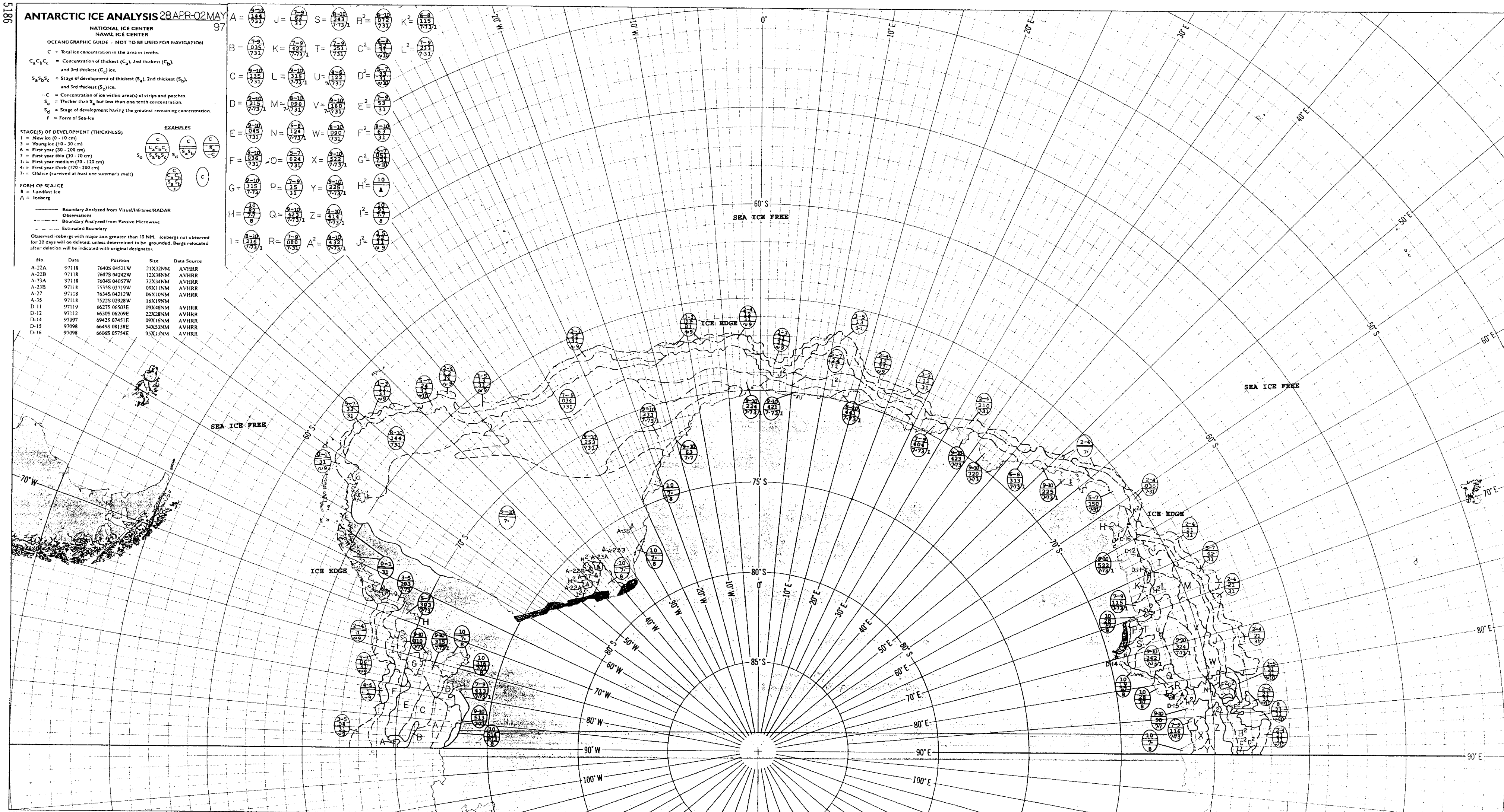
EXAMPLES

FORM OF SEA-ICE
8 = Landfast Ice
Δ = Iceberg

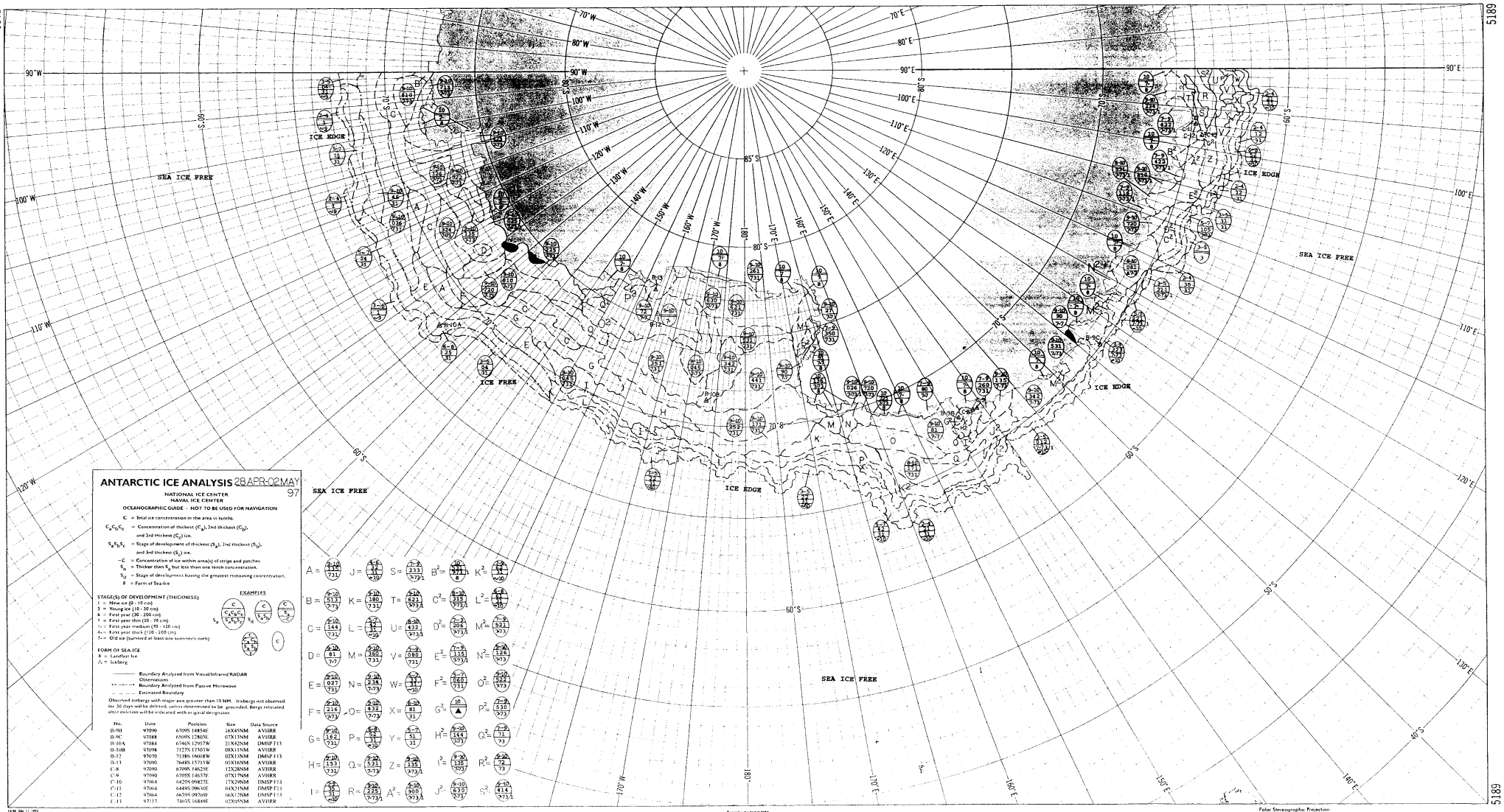
Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Data Source
A-22A	97118	7640S 04521W	21X32NM	AVHRR
A-22B	97118	7607S 04242W	12X38NM	AVHRR
A-23A	97118	7604S 04057W	32X34NM	AVHRR
A-23B	97118	7535S 03719W	09X11NM	AVHRR
A-27	97118	7634S 04212W	06X10NM	AVHRR
A-35	97118	7522S 02928W	16X19NM	
D-11	97119	6627S 06503E	09X48NM	AVHRR
D-12	97112	6630S 06209E	22X28NM	AVHRR
D-14	97097	6942S 07451E	09X16NM	AVHRR
D-15	97098	6649S 08158E	34X53NM	AVHRR
D-16	97098	6606S 05754E	05X13NM	AVHRR



Projection - Polar Stereographic


ANTARCTIC ICE ANALYSIS 28APR-02MAY 97
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
C = Total ice concentration in the area in tenths.
$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.
$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
–C = Concentration of ice within area(s) of strips and patches.
S_o = Thicker than S_d but less than one tenth concentration.
S_d = Stage of development having the greatest remaining concentration.
F = Form of Sea Ice
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
2 = Young ice (10 - 30 cm)
3 = First year (30 - 200 cm)
4 = First year thin (30 - 70 cm)
5 = First year medium (70 - 120 cm)
6 = First year thick (120 - 200 cm)
7 = Old ice (survived at least one summer's melt)
EXAMPLES
FORM OF SEA ICE
8 = Level Ice
9 = Iceberg
Boundary Analyzed from Visual/Infrared RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary
Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.
No. Date Position Size Data Source
B-9B 97090 67095 14854E 16X45NM AVHRR
B-9C 97088 65698 12805E 07X13NM AVHRR
B-10A 97084 67465 12957W 21X42NM DMSP F13
B-10B 97098 71275 17305W 08X11NM AVHRR
B-12 97070 75385 19018W 02X11NM DMSP F13
B-13 97090 76485 15725W 05X16NM AVHRR
C-8 97090 67095 14825E 12X28NM AVHRR
C-9 97090 67055 14637E 07X17NM AVHRR
C-10 97064 64295 09827E 17X29NM DMSP F13
C-11 97064 64495 09610E 04X21NM DMSP F13
C-12 97064 66395 09700E 06X12NM DMSP F13
C-13 97115 74055 16849E 02X05NM AVHRR
ICE EDGE
SEA ICE FREE
ICE FREE
Polar Stereographic Projection
SCALE 1 / 7 500 000
5189

ANTARCTIC ICE ANALYSIS 05-09MAY97

NATIONAL ICE CENTER
NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

$-C$ = Concentration of ice within area(s) of strips and patches.

S_o = Thicker than S_a but less than one tenth concentration.

S_d = Stage of development having the greatest remaining concentration.

F = Form of Sea-Ice

EXAMPLES

STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
4 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1. = First year medium (70 - 120 cm)
4. = First year thick (120 - 200 cm)
7. = Old ice (survived at least one summer's melt)

FORM OF SEA-ICE
$ = Landfast Ice
△ = Iceberg

Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Data Source
A-22A	97118	7640S 04521W	21X32NM	AVHRR
A-22B	97118	7607S 04247W	13X38NM	AVHRR
A-23A	97118	7604S 04657W	32X34NM	AVHRR
A-23B	97118	7535S 05719W	09X11NM	AVHRR
A-23	97118	7654S 04232W	06X10NM	AVHRR
A-35	97118	7527S 07978W	18X19NM	AVHRR
D-11	97126	6633S 06736E	09X48NM	AVHRR
D-12	97126	6606S 05724E	22X28NM	AVHRR
D-13	97126	6620S 04848E	04X14NM	AVHRR
D-14	97097	6942S 07451E	09X16NM	AVHRR
D-15	97098	6649S 08158E	34X53NM	AVHRR
D-16	97098	6606S 05754E	03X13NM	AVHRR

SEA ICE FREE

ICE EDGE

SEA ICE FREE

ICE EDGE

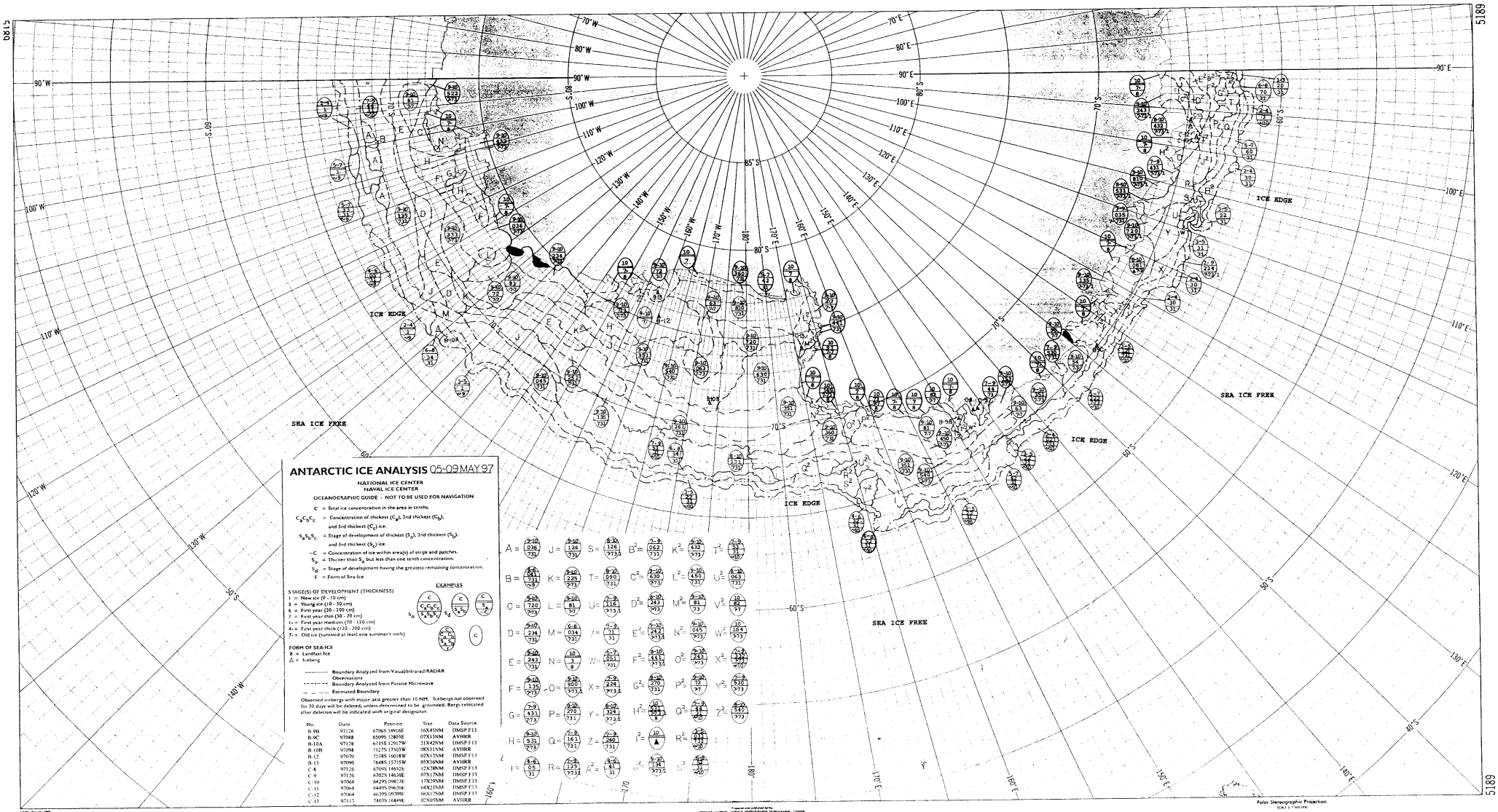
SEA ICE FREE

Projection - Polar Stereographic
Scale 1 / 5,000,000

Prepared and published by the
DEFENSE MAPPING AGENCY HYDROGRAPHIC/TOPOGRAPHIC CENTER
Bethesda, MD

5186

5186


ANTARCTIC ICE ANALYSIS 05-09 MAY 97
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
C = Total ice concentration in the area in tenths.
CaCbCc = Concentration of thickest (Ca), 2nd thickest (Cb), and 3rd thickest (Cc) ice.
SaSbSc = Stage of development of thickest (Sa), 2nd thickest (Sb), and 3rd thickest (Sc) ice.
–C = Concentration of ice within area(s) of strips and patches.
Sd = Thicker than Sa but less than one tenth concentration.
Sd = Stage of development having the greatest remaining concentration.
F = Form of Sea-Ice
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
2 = Young ice (10 - 30 cm)
3 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1= First year medium (70 - 120 cm)
4= First year thick (120 - 200 cm)
7.= Old ice (survived at least one summer's melt)
EXAMPLES
FORM OF SEA-ICE
8 = Landfast Ice
△ = Iceberg
Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary
Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.
No. Date Position Size Data Source
B-9B 97126 67.06S 149.16E 16X45NM DMSP F13
B-9C 97088 65.09S 128.03E 07X15NM AVHRR
B-10A 97128 67.33S 129.17W 21X42NM DMSP F13
B-10B 97098 71.27S 173.03W 08X11NM AVHRR
B-12 97070 73.38S 160.18W 02X17NM DMSP F13
B-13 97090 76.48S 157.15W 05X16NM AVHRR
C-8 97126 67.09S 146.52E 12X29NM DMSP F13
C-9 97126 67.02S 146.58E 07X17NM DMSP F13
C-10 97064 64.29S 098.27E 17X29NM DMSP F13
C-11 97064 64.49S 096.59E 04X21NM DMSP F13
C-12 97064 66.39S 097.09E 06X17NM DMSP F13
C-13 97115 74.03S 168.49E 02X6NM AVHRR
ICE EDGE
SEA ICE FREE
Polar Stereographic Projection
SCALE 1:7 500 000
5189

ANTARCTIC ICE ANALYSIS 12-16 MAY 97

NATIONAL ICE CENTER
NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

~C = Concentration of ice within area(s) of strips and patches.

S_o = Thicker than S_a but less than one tenth concentration.

S_d = Stage of development having the greatest remaining concentration.

F = Form of Sea-Ice

STAGE(S) OF DEVELOPMENT (THICKNESS)

1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
6 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)

FORM OF SEA-ICE

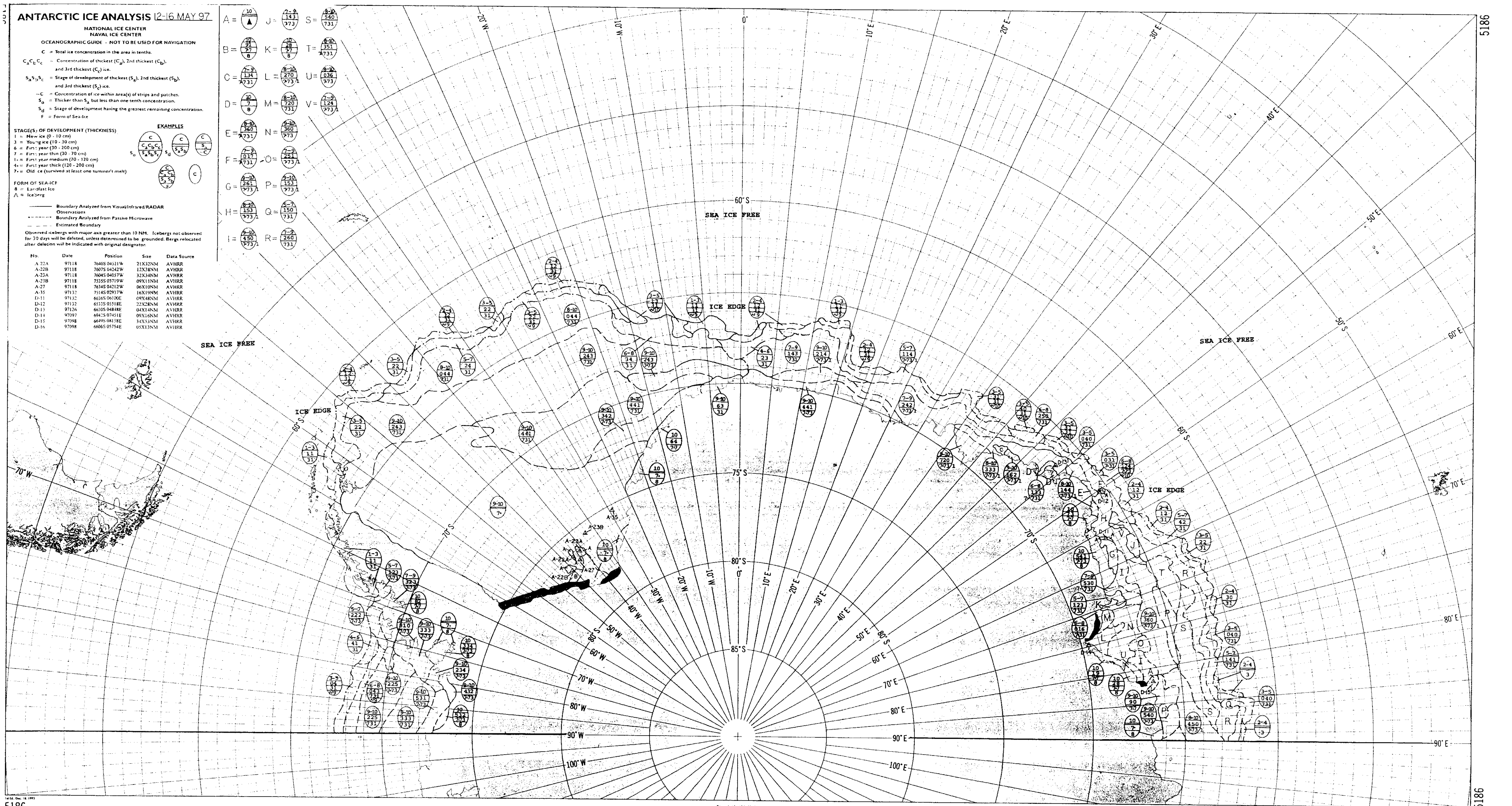
8 = Landfast Ice
A = Iceberg

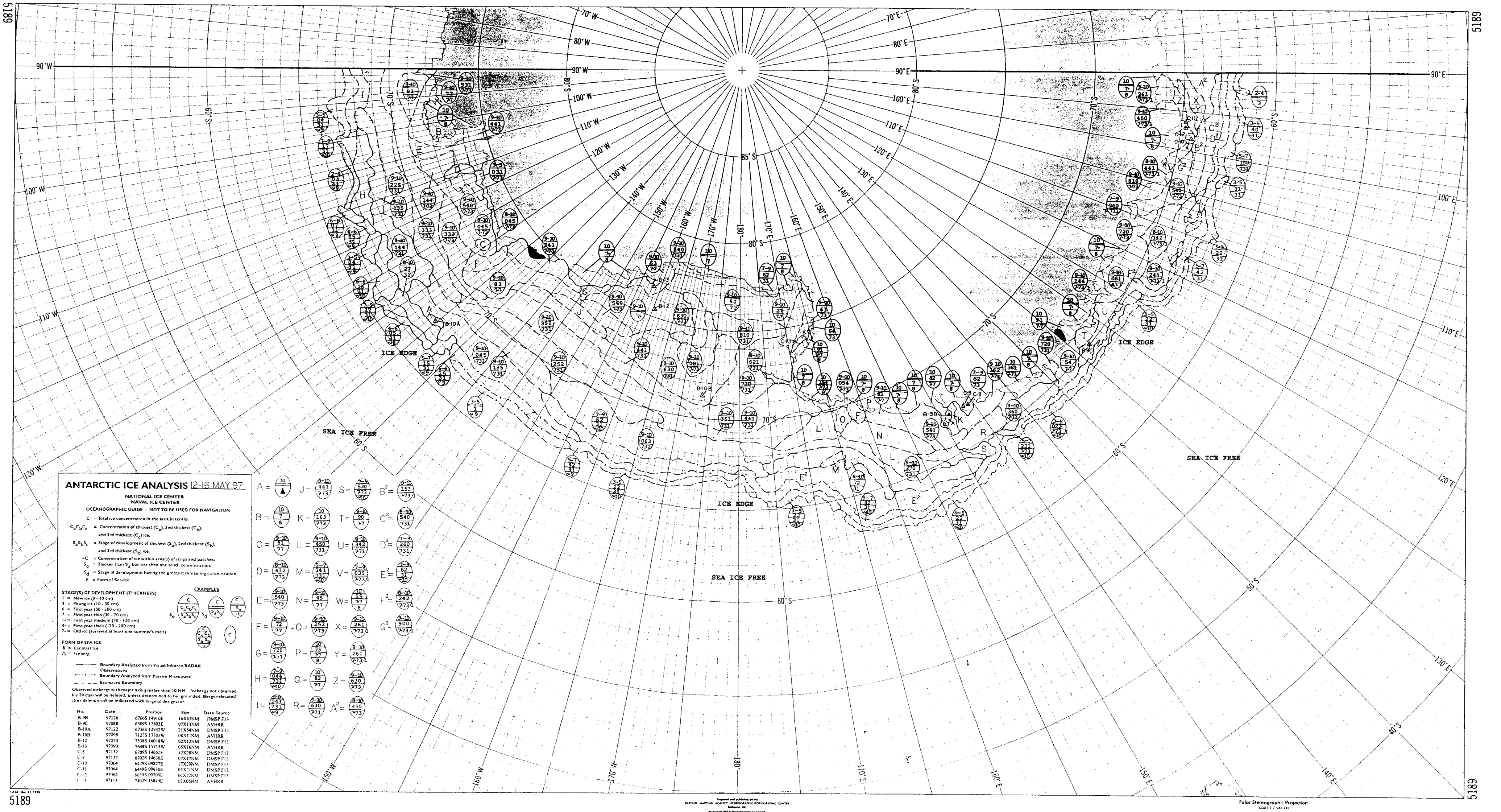
EXAMPLES

——— Boundary Analyzed from Visual/Infrared/RADAR Observations
-•-•-• Boundary Analyzed from Passive Microwave
— — — Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Data Source
A-22A	97118	7640S 04521W	21X32NM	AVHRR
A-22B	97118	7607S 04242W	12X38NM	AVHRR
A-23A	97118	7604S 04057W	32X34NM	AVHRR
A-23B	97118	7535S 03719W	09X11NM	AVHRR
A-27	97118	7634S 04212W	06X10NM	AVHRR
A-35	97132	7514S 02937W	16X19NM	AVHRR
D-11	97132	6636S 06100E	09X48NM	AVHRR
D-12	97132	6533S 05518E	22X28NM	AVHRR
D-13	97126	6630S 04848E	04X14NM	AVHRR
D-14	97097	6942S 07451E	09X16NM	AVHRR
D-15	97098	6649S 08158E	34X53NM	AVHRR
D-16	97098	6606S 05754E	05X13NM	AVHRR




5189
ANTARCTIC ICE ANALYSIS 12-16 MAY 97
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
C = Total ice concentration in the area in tenths.
CaCbCc = Concentration of thickest (Ca), 2nd thickest (Cb), and 3rd thickest (Cc) ice.
SaSbSc = Stage of development of thickest (Sa), 2nd thickest (Sb), and 3rd thickest (Sc) ice.
~C = Concentration of ice within area(s) of strips and patches.
So = Thicker than Sa but less than one tenth concentration.
Sd = Stage of development having the greatest remaining concentration.
F = Form of Sea-Ice
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
6 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)
EXAMPLES
FORM OF SEA-ICE
8 = Landfast Ice
Δ = Iceberg
Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary
Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.
No. Date Position Size Data Source
B-9B 97126 6706S 14916E 16X45NM DMSP F13
B-9C 97088 6509S 12803E 07X13NM AVHRR
B-10A 97132 6736S 12942W 21X54NM DMSP F13
B-10B 97098 7127S 17303W 08X11NM AVHRR
B-12 97070 7538S 16018W 02X13NM DMSP F13
B-13 97090 7648S 15715W 05X16NM AVHRR
C-8 97132 6709S 14652E 12X28NM DMSP F13
C-9 97132 6702S 14630E 07X17NM DMSP F13
C-10 97064 6429S 09827E 17X29NM DMSP F13
C-11 97064 6449S 09630E 04X21NM DMSP F13
C-12 97064 6639S 09709E 06X12NM DMSP F13
C-13 97113 7403S 16849E 02X05NM AVHRR
SEA ICE FREE
ICE EDGE
90°W
90°E
180°
60°S
70°S
80°S
85°S
Polar Stereographic Projection

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ANTARCTIC ICE ANALYSIS 19-23 MAY 97

NATIONAL ICE CENTER
NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

–C = Concentration of ice within area(s) of strips and patches.

S_D = Thicker than S_a but less than one tenth concentration.

S_M = Stage of development having the greatest remaining concentration.

F = Form of Sea-Ice

STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
4 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)

EXAMPLES

FORM OF SEA-ICE
= Landfast Ice
△ = Iceberg

——— Boundary Analysed from Visual/Infrared/RADAR Observations
– – – – Boundary Analysed from Passive Microwave
— — — Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Data Source
A-22A	97137	76?9S 04457W	21X32NM	AVHRR
A-22B	97137	75?6S 04145W	12X38NM	AVHRR
A-23A	97137	76?7S 04026W	32X38NM	AVHRR
A-23B	97118	7535S 01719W	09X11NM	AVHRR
A-27	97118	7634S 04213W	06X10NM	AVHRR
A-35	97137	7521S 02948W	16X19NM	AVHRR
D-11	97140	66?6S 05948E	09X48NM	AVHRR
D-12	97132	6533S 05538E	22X28NM	AVHRR
D-13	97126	6630S 04848E	04X14NM	AVHRR
D-14	97097	6942S 07451E	09X16NM	AVHRR
D-15	97098	6649S 08158E	34X53NM	AVHRR
D-16	97098	6606S 05754E	05X13NM	AVHRR

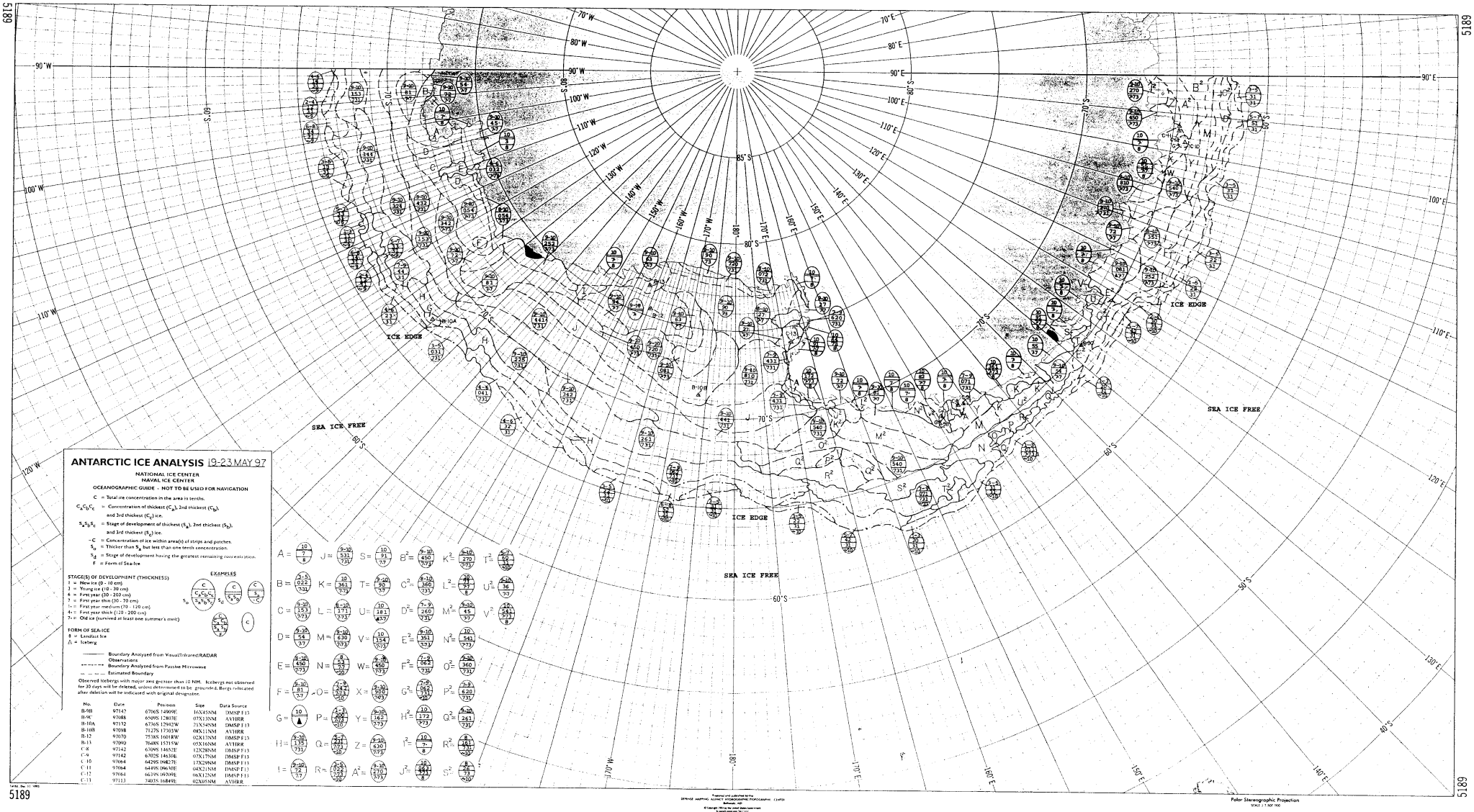
SEA ICE FREE

ICE EDGE

Projection - Polar Stereographic

5186

5189


ANTARCTIC ICE ANALYSIS 19-23 MAY 97
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
C = Total ice concentration in the area in tenths.
$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.
$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
-C = Concentration of ice within area(s) of strips and patches.
S_d = Thicker than S_b but less than one-tenth concentration.
S_d = Stage of development having the greatest remaining concentration.
F = Form of Sea-Ice
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
2 = Young ice (10 - 30 cm)
4 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1= = First year medium (70 - 120 cm)
4= = First year thick (120 - 200 cm)
7= = Old ice (survived at least one summer's melt)
EXAMPLES
FORM OF SEA-ICE
8 = Landfast Ice
△ = Iceberg
Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary
Observed Icebergs with major axis greater than 10 NM. Icebergs not observed for 20 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.
No. Date Position Size Data Source
B-9B 97147 6706S 14909E 16X45NM DMSP F13
B-9C 97088 6590S 12803E 07X13NM AVHRR
B-10A 97132 6736S 12942W 21X34NM DMSP F13
B-10B 97098 7127S 17303W 08X11NM AVHRR
B-12 97070 7558S 16018W 02X11NM DMSP F13
B-13 97090 7648S 15715W 03X16NM AVHRR
C-8 97142 6706S 14853E 12X29NM DMSP F13
C-9 97142 6702S 14630E 07X17NM DMSP F13
C-10 97064 6429S 09827E 17X29NM DMSP F13
C-11 97064 6449S 09630E 04X21NM DMSP F13
C-12 97064 6639S 09709E 08X12NM DMSP F13
C-13 97113 7403S 16849E 02X05NM AVHRR
ICE EDGE
SEA ICE FREE
Polar Stereographic Projection

5189

ANTARCTIC ICE ANALYSIS 26-30 MAY 97

NATIONAL ICE CENTER
NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

−C = Concentration of ice within area(s) of strips and patches.

S_o = Thicker than S_a but less than one tenth concentration.

S_d = Stage of development having the greatest remaining concentration.

F = Form of Sea-Ice

STAGE(S) OF DEVELOPMENT (THICKNESS)

1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
6 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)

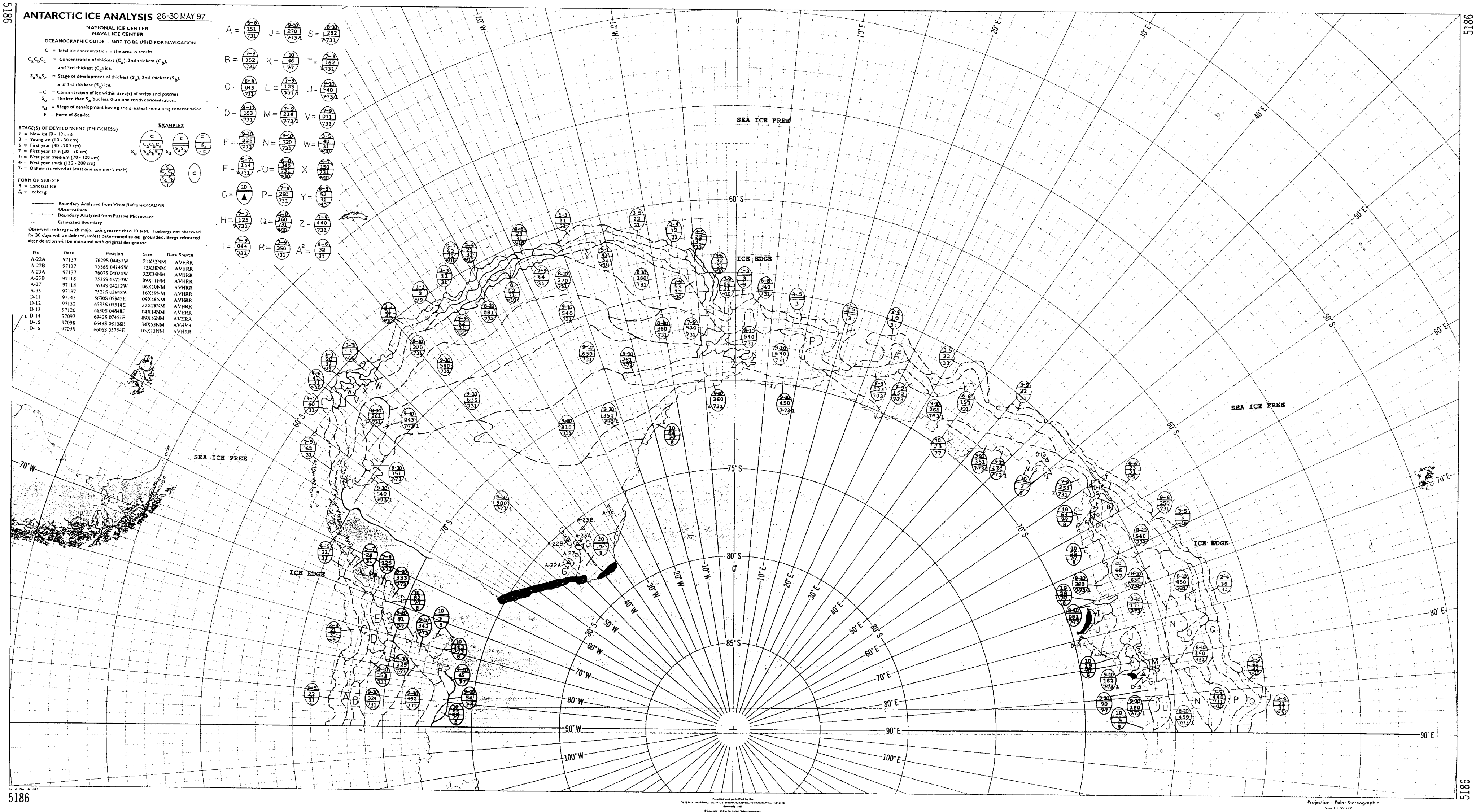
FORM OF SEA-ICE

8 = Landfast Ice
△ = Iceberg

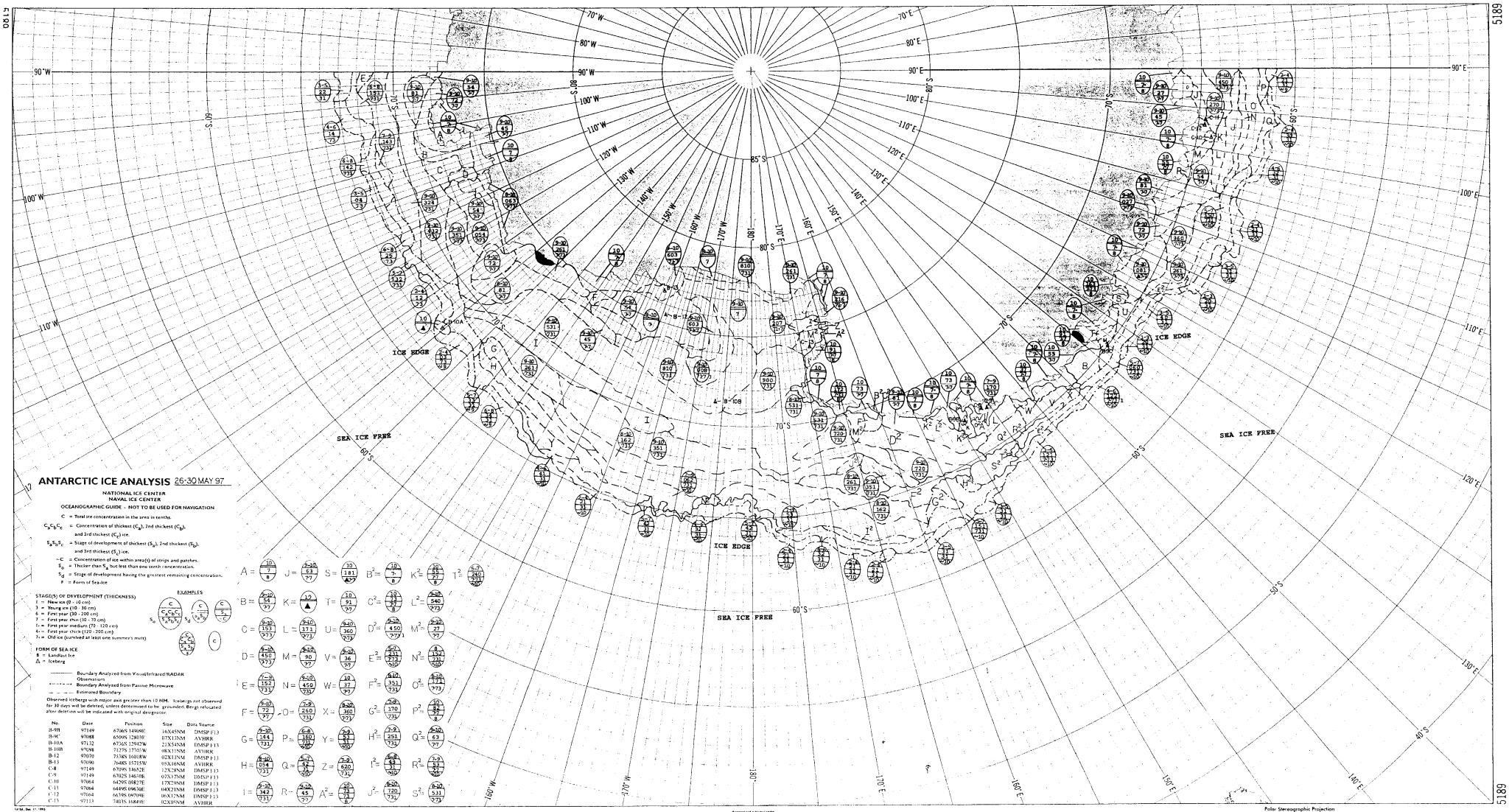
Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Data Source
A-22A	97137	7629S 04457W	21X32NM	AVHRR
A-22B	97137	7536S 04145W	12X38NM	AVHRR
A-23A	97137	7607S 04024W	32X34NM	AVHRR
A-23B	97118	7535S 03719W	09X11NM	AVHRR
A-27	97118	7634S 04212W	06X10NM	AVHRR
A-35	97137	7521S 02948W	16X19NM	AVHRR
D-11	97145	6630S 05845E	09X48NM	AVHRR
D-12	97132	6533S 05518E	22X28NM	AVHRR
D-13	97126	6630S 04848E	04X14NM	AVHRR
D-14	97097	6942S 07451E	09X16NM	AVHRR
D-15	97098	6649S 08158E	34X53NM	AVHRR
D-16	97098	6606S 05754E	05X13NM	AVHRR



Projection - Polar Stereographic



ANTARCTIC ICE ANALYSIS 26-30 MAY 97

NATIONAL ICE CENTER
NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

–C = Concentration of ice within area(s) of strips and patches.

S_g = Thicker than S_a but less than one tenth concentration.

S_d = Stage of development having the greatest remaining concentration.

F = Form of Sea Ice

STAGE(S) OF DEVELOPMENT (THICKNESS)

1 = New ice (0 - 10 cm)
2 = Young ice (10 - 30 cm)
3 = First-year (30 - 200 cm)
4 = First year thin (30 - 70 cm)
5 = First year medium (70 - 120 cm)
6 = First year thick (120 - 200 cm)
7 = Old ice (survived at least one summer's melt)

EXAMPLES

FORM OF SEA ICE

B = Landfast Ice
Δ = Iceberg

Boundary Analyzed from Visual/Infrared/RADAR Observations

Boundary Analyzed from Passive Microwave

Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after detection will be indicated with original designator.

No.	Date	Position	Size	Data Source
B-9B	97149	67.06S 149.49E	16X145NM	DMSP F13
B-9C	97088	65.09S 128.03E	07X11NM	AVHRR
B-10A	97132	67.56S 129.27W	21X54NM	DMSP F13
B-10B	97098	71.37S 127.05W	08X11NM	AVHRR
B-12	97070	71.38S 160.18W	02X11NM	DMSP F13
B-13	97090	76.48S 157.15W	05X16NM	AVHRR
C-8	97149	67.09S 136.52E	12X28NM	DMSP F13
C-9	97149	67.02S 146.10E	07X17NM	DMSP F13
C-10	97064	64.29S 098.27E	17X29NM	DMSP F13
C-11	97064	64.49S 096.30E	04X21NM	DMSP F13
C-12	97064	66.39S 097.09E	06X12NM	DMSP F13
C-13	97113	74.03S 168.04E	02X05NM	AVHRR

Prepared and published by the
DEFENSE MAPPING AGENCY HYDROGRAPHIC/TOPOGRAPHIC CENTER
Washington, DC

Polar Stereographic Projection
SCALE 1:9 000 000

ANTARCTIC ICE ANALYSIS 2-6 JUN 97

NATIONAL ICE CENTER
NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.
$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.
$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
$-C$ = Concentration of ice within area(s) of strips and patches.
S_o = Thicker than S_a but less than one tenth concentration.
S_d = Stage of development having the greatest remaining concentration.
F = Form of Sea-Ice

STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
6 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)

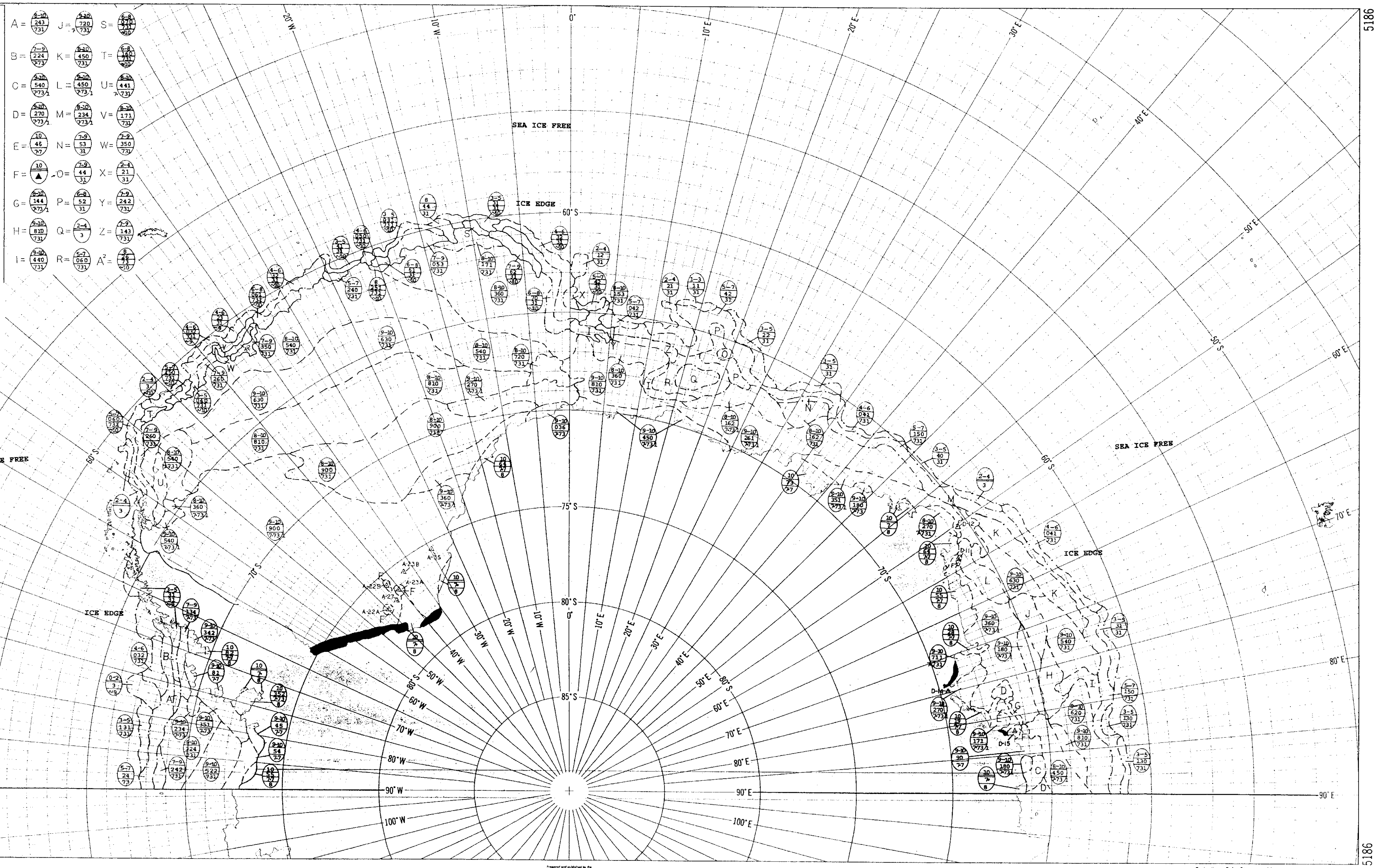
FORM OF SEA-ICE
8 = Landfast Ice
△ = Iceberg

EXAMPLES

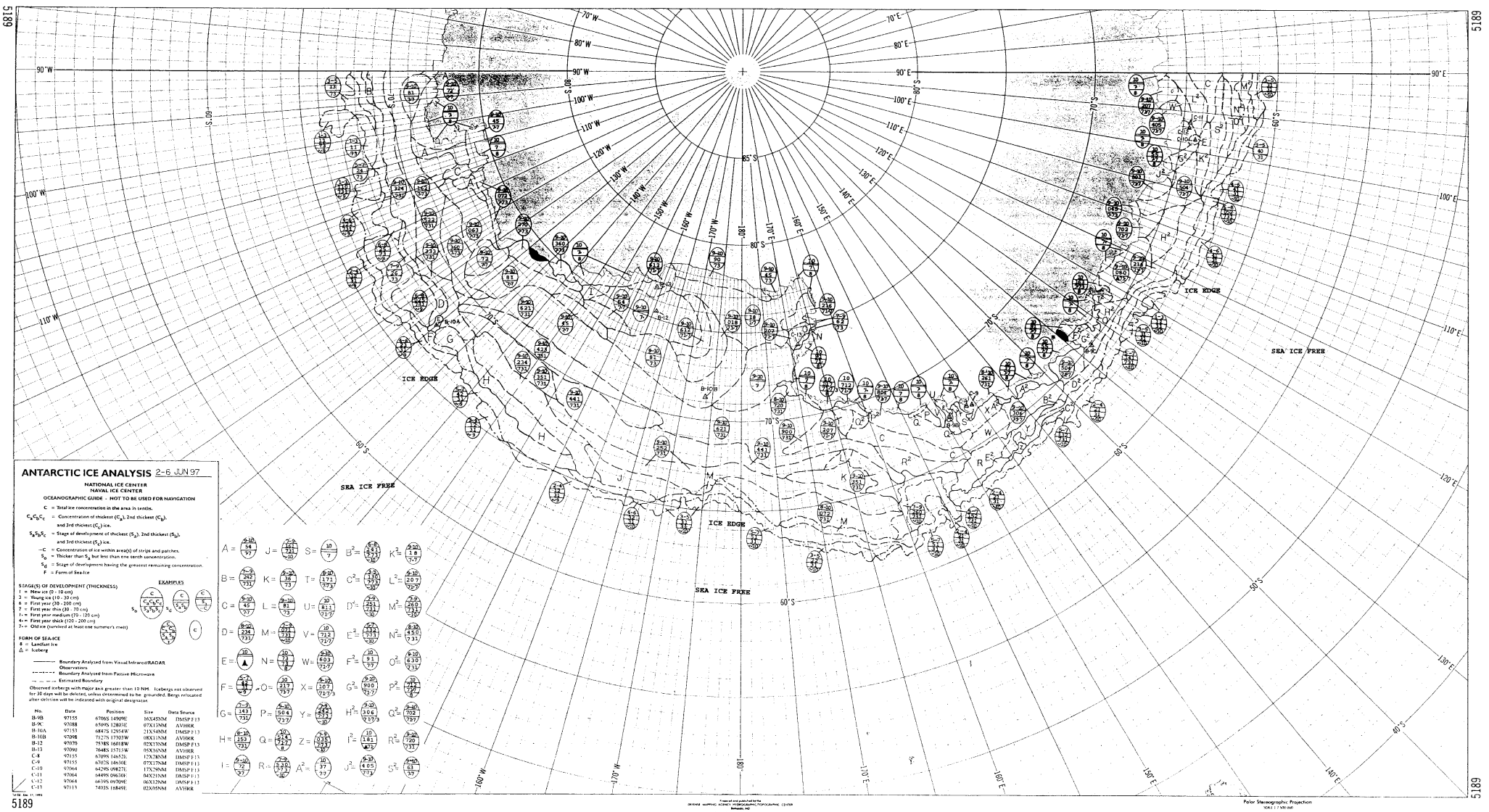
Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Data Source
A-22A	97156	7629S 04457W	21X32NM	AVHRR
A-22B	97156	7536S 04145W	12X38NM	AVHRR
A-23A	97156	7607S 04024W	32X34NM	AVHRR
A-23B	97156	7535S 03719W	09X11NM	AVHRR
A-27	97156	7634S 04212W	06X10NM	AVHRR
A-35	97137	7521S 02948W	16X19NM	AVHRR
D-11	97145	6630S 05845E	09X48NM	AVHRR
D-12	97132	6533S 05518E	22X28NM	AVHRR
D-13	97126	6630S 04848E	04X14NM	AVHRR
D-14	97097	6942S 07451E	09X16NM	AVHRR
D-15	97098	6649S 08158E	34X53NM	AVHRR
D-16	97098	6606S 05754E	05X13NM	AVHRR



Projection - Polar Stereographic


ANTARCTIC ICE ANALYSIS 2-6 JUN 97
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
C = Total ice concentration in the area in tenths.
$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.
$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
–C = Concentration of ice within area(s) of strips and patches.
S_p = Thicker than S_a but less than one tenth concentration.
S_d = Stage of development having the greatest remaining concentration.
F = Form of Sea Ice
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
4 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1- = First year medium (70 - 120 cm)
4- = First year thick (120 - 200 cm)
7- = Old ice (survived at least one summer's melt)
EXAMPLES
FORM OF SEA ICE
B = Landfast Ice
△ = Iceberg
Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary
Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after collision will be indicated with original designator.
No. Date Position Size Data Source
B-9B 97155 6706S 14909E 16X45NM DMSP F13
B-9C 97088 6509S 12801E 07X11NM AVHRR
B-10A 97151 6847S 12954W 21X54NM DMSP F13
B-10B 97098 71Z2S 17303W 08X11NM AVHRR
B-12 97070 75?8S 16018W 02X17NM DMSP F13
B-13 97090 76?8S 15715W 09X16NM AVHRR
C-8 97155 67?9S 14653E 12X28NM DMSP F13
C-9 97155 67?2S 14636E 07X17NM DMSP F13
C-10 97064 64?9S 09827E 17X29NM DMSP F13
C-11 97064 64?9S 09630E 04X21NM DMSP F13
C-12 97064 66?8S 09709E 06X12NM DMSP F13
C-13 97113 74?3S 16?49E 02X05NM AVHRR
ICE EDGE
SEA ICE FREE
Polar Stereographic Projection
SCALE 1 / 5 000 000

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ANTARCTIC ICE ANALYSIS 9-13 JUN 97

NATIONAL ICE CENTER
NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

$-C$ = Concentration of ice within area(s) of strips and patches.

S_a = Thicker than S_b but less than one tenth concentration.

S_d = Stage of development having the greatest remaining concentration.

F = Form of Sea-Ice.

EXAMPLES

STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
4 = First year (30 - 100 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)

FORM OF SEA-ICE
8 = Landfast Ice
△ = Iceberg

——— Boundary Analyzed from Visual/Infrared/RADAR Observations
- - - - - Boundary Analyzed from Passive Microwave
– – – – Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Data Source
A-22A	97160	76235 04536W	21X32NM	AVHRR
A-22B	97160	75075 04114W	12X38NM	AVHRR
A-23A	97160	76105 04050W	32X34NM	AVHRR
A-23B	97156	75355 03719W	09X11NM	AVHRR
A-27	97156	76345 04212W	06X10NM	AVHRR
A-35	97137	75215 02948W	16X19NM	AVHRR
D-11	97145	66305 03845E	09X48NM	AVHRR
D-13	97126	66305 04848E	04X16NM	AVHRR
D-14	97097	69425 07451E	09X16NM	AVHRR
D-15	97098	66495 08158E	34X53NM	AVHRR
D-16	97098	66065 05754E	05X13NM	AVHRR

SEA ICE FREE

ICE EDGE

SEA ICE FREE

SEA ICE FREE

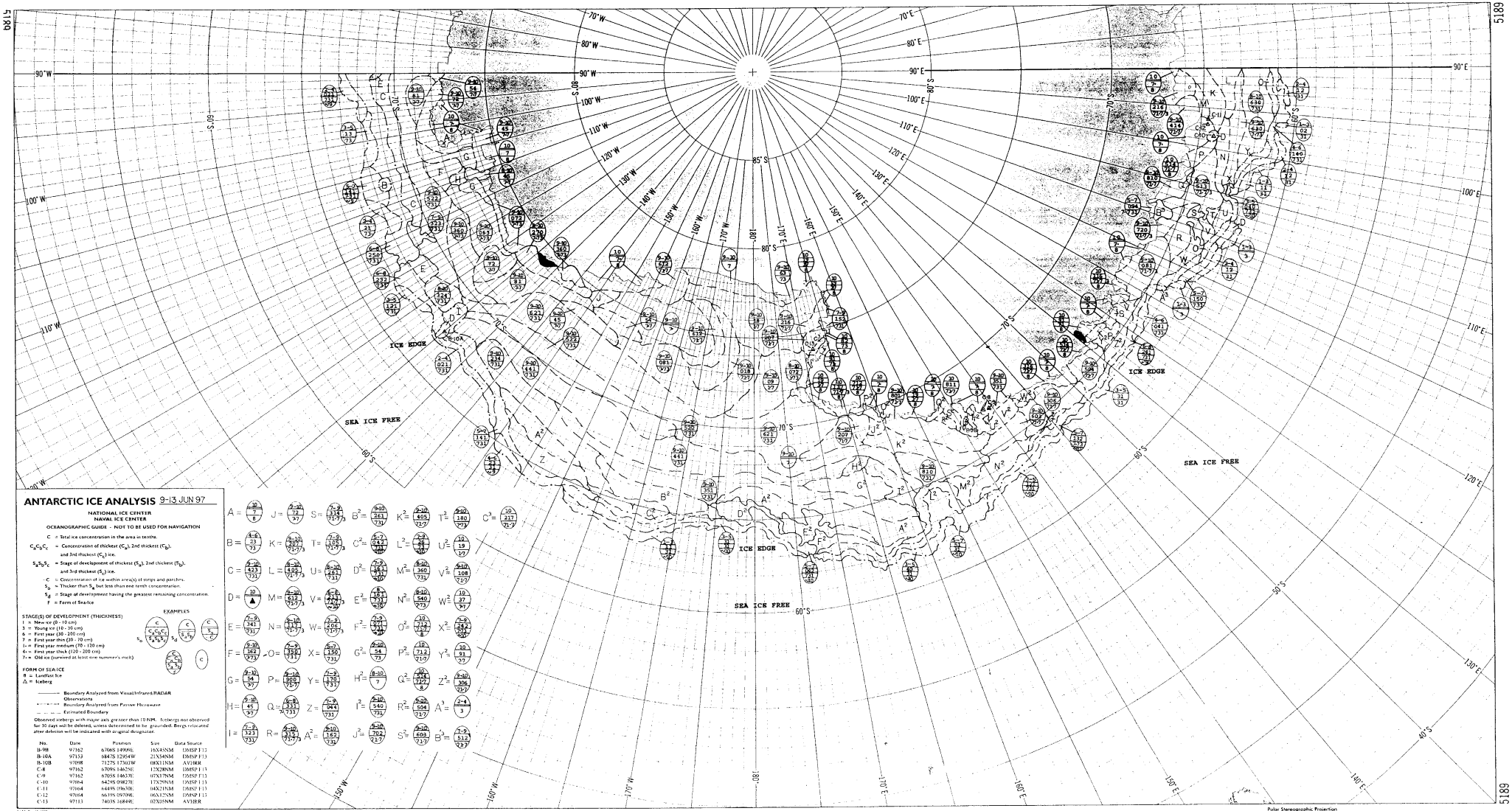
ICE EDGE

ICE EDGE

0°
10° W
20° W
30° W
40° W
50° W
60° W
70° W
80° W
90° W
100° W
10° E
20° E
30° E
40° E
50° E
60° E
70° E
80° E
90° E
100° E
60° S
70° S
75° S
80° S
85° S

Projection - Polar Stereographic

5186



ANTARCTIC ICE ANALYSIS 9-13 JUN 97

NATIONAL ICE CENTER
NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

-C = Concentration of ice within area(s) of strips and patches.

S_b = Thicker than S_a but less than one tenth concentration.

S_d = Stage of development having the greatest remaining concentration.

F = Form of Sea Ice

STAGE(S) OF DEVELOPMENT (THICKNESS)

1 = New ice (0 - 10 cm)
2 = Young ice (10 - 30 cm)
4 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1= = First year medium (70 - 120 cm)
4= = First year thick (120 - 200 cm)
7= = Old ice (survived at least one summer's melt)

EXAMPLES

FORM OF SEA ICE

R = Landfast Ice
△ = Iceberg

——— Boundary Analyzed from Visual/Infrared/RADAR Observations

·-·-·-· Boundary Analyzed from Passive Microwave

– – – – Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Data Source
B-9B	97162	67068 14909E	16X45NM	DMSP F13
B-10A	97153	68478 12054W	21X54NM	DMSP F13
B-10B	97098	71275 17503W	08X11NM	AVHRR
C-8	97162	67098 14623E	12X28NM	DMSP F13
C-9	97162	67058 14637E	07X17NM	DMSP F13
C-10	97064	64298 09827E	17X39NM	DMSP F13
C-11	97064	64498 09670E	04X21NM	DMSP F13
C-12	97064	66198 09709E	06X12NM	DMSP F13
C-13	97133	74038 16849E	02X05NM	AVHRR

Polar Stereographic Projection
SCALE 1 / 5 000 000

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ANTARCTIC ICE ANALYSIS 16–20 JUN 97

NATIONAL ICE CENTER
NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

$\sim C$ = Concentration of ice within area(s) of strips and patches.

S_o = Thicker than S_a but less than one tenth concentration.

S_d = Stage of development having the greatest remaining concentration.

F = Form of Sea-Ice

STAGE(S) OF DEVELOPMENT (THICKNESS)
- 1 = New ice (0 - 10 cm)
- 3 = Young ice (10 - 30 cm)
- 6 = First year (30 - 200 cm)
- 7 = First year thin (30 - 70 cm)
- 1• = First year medium (70 - 120 cm)
- 4• = First year thick (120 - 200 cm)
- 7• = Old ice (survived at least one summer's melt)

FORM OF SEA-ICE
- 8 = Landfast Ice
- △ = Iceberg

EXAMPLES

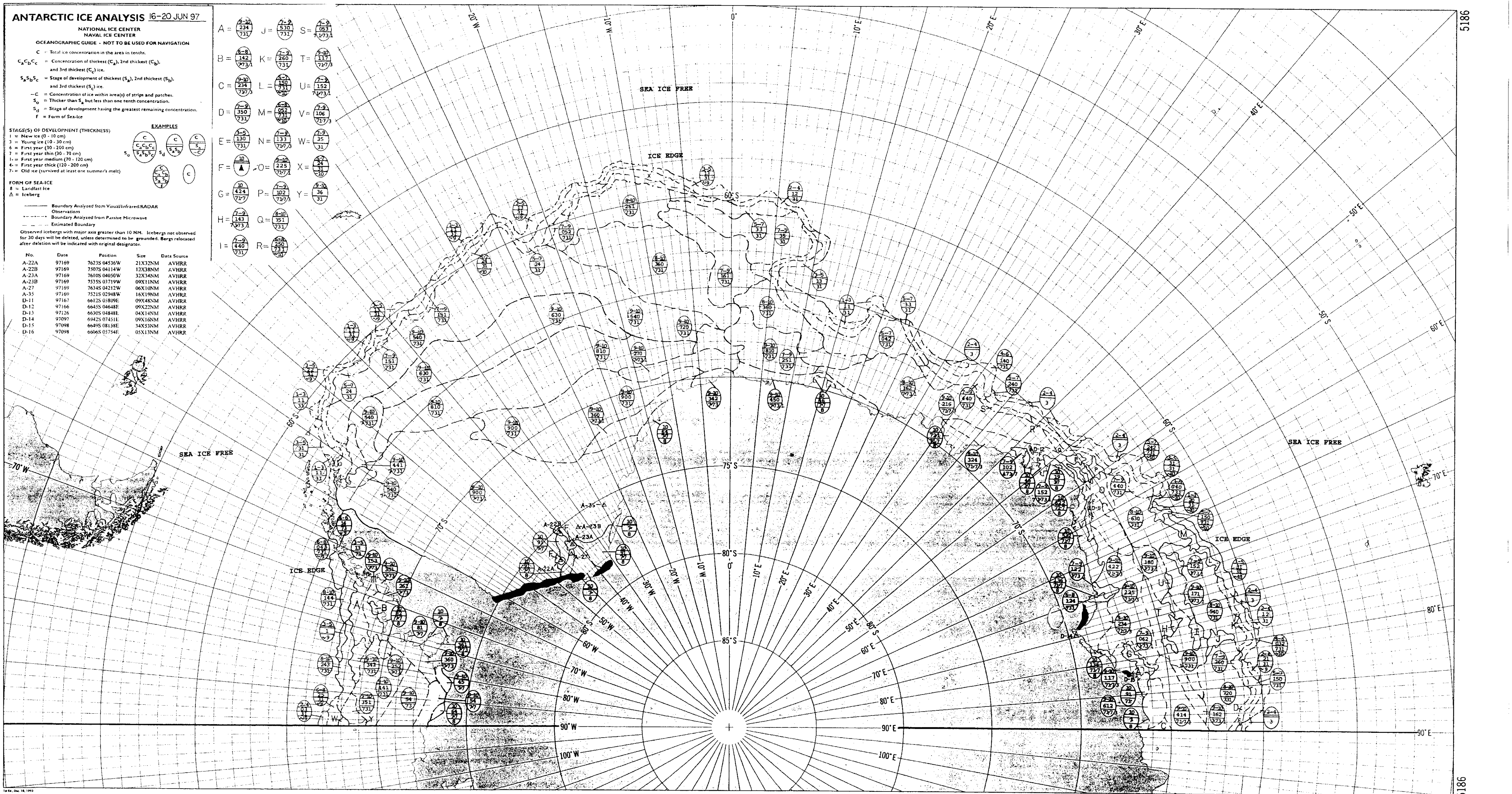
Boundary Analyzed from Visual/Infrared/RADAR Observations

Boundary Analyzed from Passive Microwave

Estimated Boundary

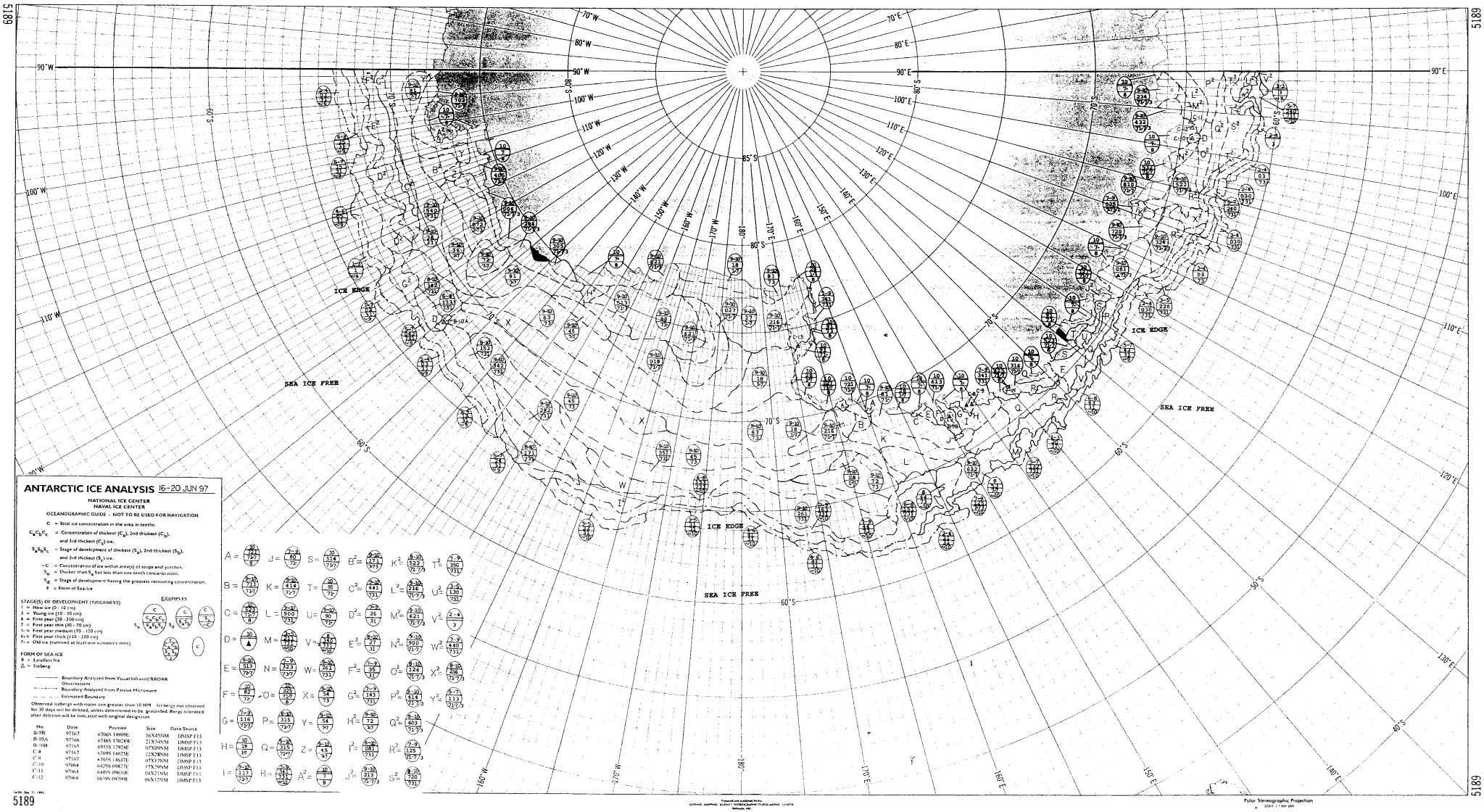
Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.

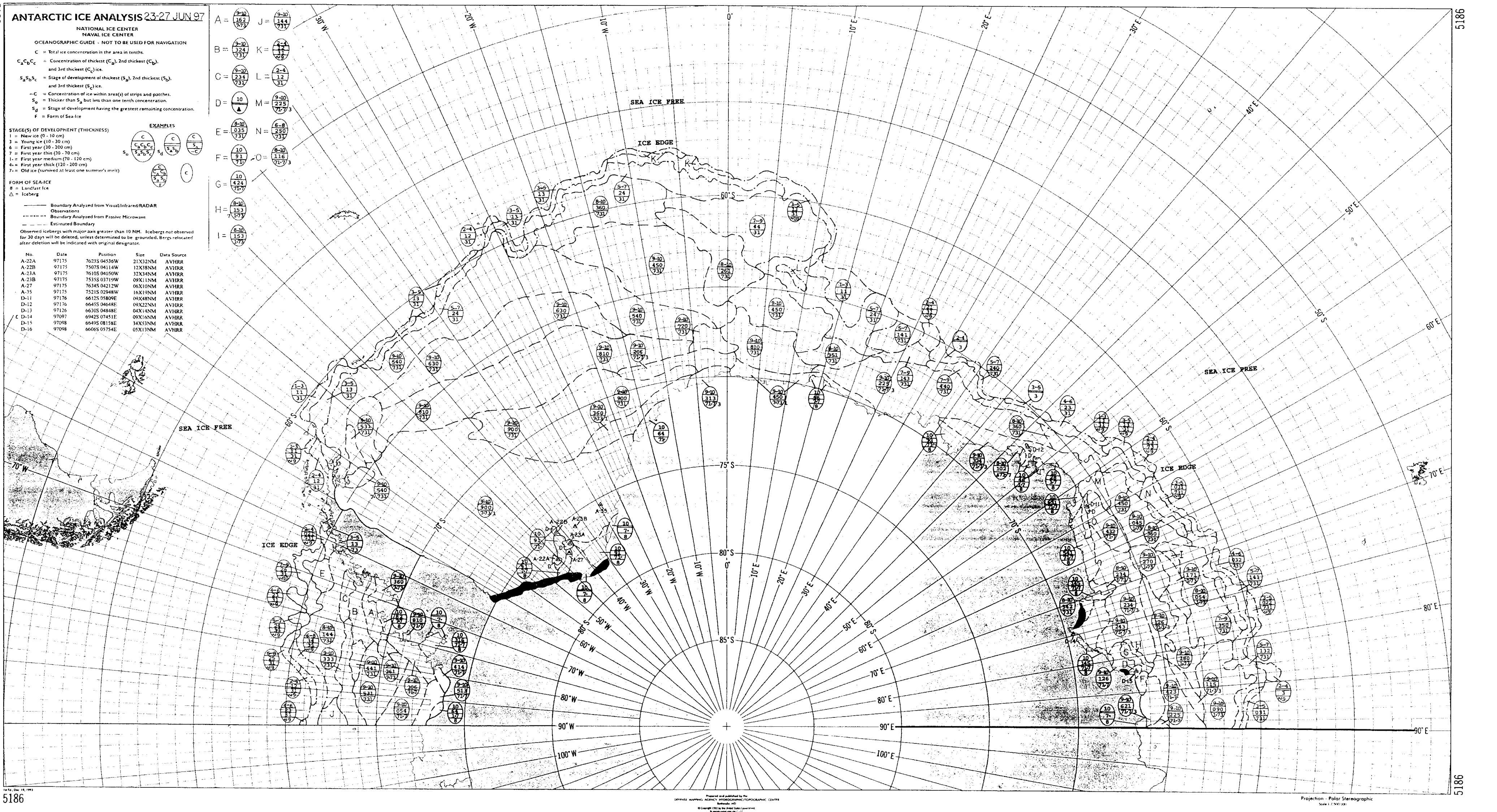
No.	Date	Position	Size	Data Source
A-22A	97169	7623S 04536W	21X32NM	AVHRR
A-22B	97169	7507S 04114W	12X38NM	AVHRR
A-23A	97169	7610S 04050W	32X34NM	AVHRR
A-23B	97169	7535S 03719W	09X11NM	AVHRR
A-27	97169	7634S 04212W	06X10NM	AVHRR
A-35	97169	7521S 02948W	16X19NM	AVHRR
D-11	97167	6612S 05809E	09X48NM	AVHRR
D-12	97166	6645S 04648E	09X22NM	AVHRR
D-13	97126	6630S 04848E	04X14NM	AVHRR
D-14	97097	6942S 07451E	09X16NM	AVHRR
D-15	97098	6649S 08158E	34X53NM	AVHRR
D-16	97098	6606S 05754E	05X13NM	AVHRR

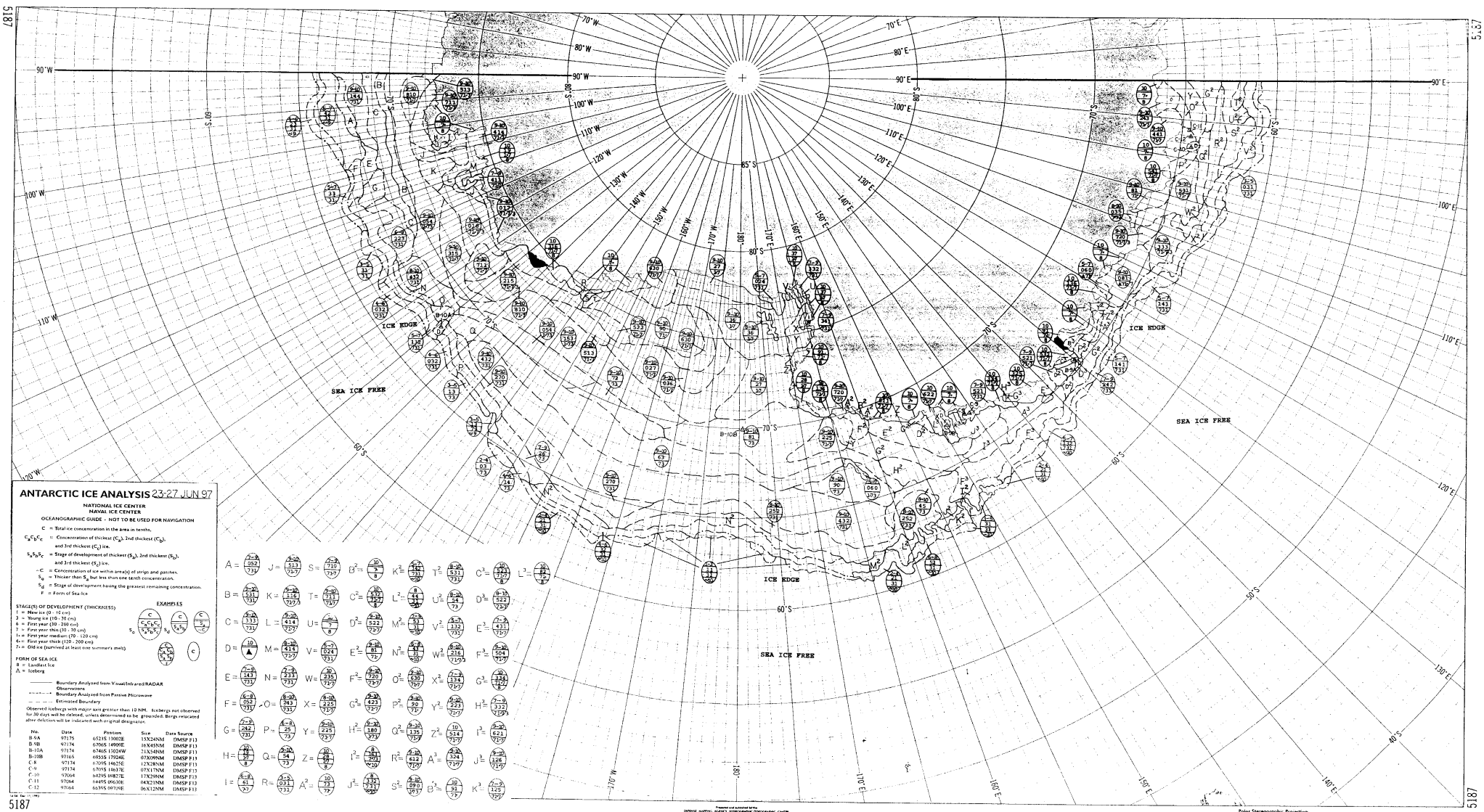


Projection - Polar Stereographic

5186


ANTARCTIC ICE ANALYSIS 16-20 JUN 97
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
C = Total ice concentration in the area in tenths.
$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.
$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
-C = Concentration of ice within area(s) of strips and patches.
S_b = Thicker than S_a but less than one tenth concentration.
S_d = Stage of development having the greatest remaining concentration.
F = Form of Sea-Ice
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
2 = Young ice (10 - 30 cm)
3 = Young ice (30 - 70 cm)
4 = First year thin (30 - 70 cm)
5 = First year medium (70 - 120 cm)
6 = First year thick (120 - 200 cm)
7 = Old ice (survived at least one summer's melt)
EXAMPLES
FORM OF SEA-ICE
B = Landfast Ice
△ = Iceberg
Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary
Observed icebergs with major axis greater than 10 NM Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after detection will be indicated with original designator.
No. Date Position Size Data Source
B-9B 97167 6706S 14909E 16X45NM DMSP F13
B-10A 97166 6746S 13024W 21X54NM DMSP F13
B-10B 97165 6955S 13924E 07X09NM DMSP F13
C-8 97167 6709S 14625E 12X28NM DMSP F13
C-9 97167 6705S 14637E 07X17NM DMSP F13
C-10 97064 6429S 09837E 17X79NM DMSP F13
C-11 97064 6449S 09636E 04X21NM DMSP F13
C-12 97064 6659S 09309E 06X12NM DMSP F13
ICE EDGE
SEA ICE FREE
Polar Stereographic Projection
SCALE 1:7 500 000


ANTARCTIC ICE ANALYSIS 23-27 JUN 97
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
C = Total ice concentration in the area in tenths.
$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.
$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
~C = Concentration of ice within area(s) of strips and patches.
S_o = Thicker than S_a but less than one tenth concentration.
S_d = Stage of development having the greatest remaining concentration.
F = Form of Sea-Ice
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
6 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)
EXAMPLES
FORM OF SEA-ICE
8 = Landfast Ice
Δ = Iceberg
Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary
Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.
No. Date Position Size Data Source
A-22A 97175 7623S 04536W 21X32NM AVHRR
A-22B 97175 7507S 04114W 12X38NM AVHRR
A-23A 97175 7610S 04050W 32X34NM AVHRR
A-23B 97175 7535S 03719W 09X11NM AVHRR
A-27 97175 7634S 04212W 06X10NM AVHRR
A-35 97175 7521S 02948W 16X19NM AVHRR
D-11 97176 6612S 05809E 09X48NM AVHRR
D-12 97176 6645S 04648E 09X22NM AVHRR
D-13 97126 6630S 04848E 04X14NM AVHRR
D-14 97097 6942S 07451E 09X16NM AVHRR
D-15 97098 6649S 08158E 34X53NM AVHRR
D-16 97098 6606S 05754E 05X13NM AVHRR
SEA ICE FREE
ICE EDGE
60°S
75°S
80°S
85°S
0°
10°E
20°E
30°E
40°E
50°E
60°E
70°E
80°E
90°E
100°E
10°W
20°W
30°W
40°W
50°W
60°W
70°W
80°W
90°W
100°W
5186
Projection - Polar Stereographic


ANTARCTIC ICE ANALYSIS 23-27 JUN 97
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
C = Total ice concentration in the area in tenths.
$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.
$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
-C = Concentration of ice within area(s) of strips and patches.
S_d = Thicker than S_a but less than one tenth concentration.
S_d = Stage of development having the greatest remaining concentration.
F = Form of Sea Ice
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
2 = Young ice (10 - 70 cm)
3 = First-year (30 - 200 cm)
4 = First-year thin (30 - 70 cm)
5 = First-year medium (70 - 120 cm)
6 = First-year thick (120 - 200 cm)
7 = Old ice (survived at least one summer's melt)
EXAMPLES
FORM OF SEA ICE
B = Landfast Ice
A = Iceberg
Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary
Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after detection will be indicated with original designator.
No. Date Position Size Data Source
B-9A 97175 6521S 11002E 15X24NM DMSP F13
B-9B 97174 6706S 14909E 16X45NM DMSP F13
B-10A 97174 6746S 11024W 21X34NM DMSP F13
B-10B 97165 6935S 17924E 07X09NM DMSP F13
C-8 97174 6709S 14625E 12X28NM DMSP F13
C-9 97174 6705S 14637E 07X17NM DMSP F13
C-10 97064 b6259S 09872E 17X29NM DMSP F13
C-11 97064 6449S 09630E 04X21NM DMSP F13
C-12 97064 6639S 09709E 06X12NM DMSP F13
ICE EDGE
SEA ICE FREE
Polar Stereographic Projection
SCALE 1:7,500,000

ANTARCTIC ICE ANALYSIS 01-04 JUL 97

NATIONAL ICE CENTER
NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

$-C$ = Concentration of ice within area(s) of strips and patches.

S_o = thicker than S_a but less than one tenth concentration.

S_d = Stage of development having the greatest remaining concentration.

F = Form of Sea-Ice

STAGE(S) OF DEVELOPMENT (THICKNESS)

1 = New ice (0 - 10 cm)
2 = Young ice (10 - 30 cm)
3 = Young ice (10 - 30 cm)
4 = First year (30 - 70 cm)
5 = First year thin (30 - 70 cm)
1- = First year medium (70 - 120 cm)
4- = First year thick (120 - 200 cm)
7- = Old ice (survived at least one summer's melt)

EXAMPLES

FORM OF SEA-ICE

B = Landfast Ice
△ = Iceberg

Boundary Analyzed from Visual/Infrared/RADAR Observations

Boundary Analyzed from Passive Microwave

Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after detection will be indicated with original designator.

No.	Date	Position	Size	Data Source
A-22A	97182	76235 04536W	21X32NM	AVHRR
A-23B	97182	75075 04114W	12X18NM	AVHRR
A-23A	97182	76105 04050W	32X34NM	AVHRR
A-23B	97182	75355 03719W	09X11NM	AVHRR
A-27	97182	76345 04215W	06X10NM	AVHRR
A-35	97182	75215 02948W	16X19NM	AVHRR
D-11	97176	66125 05806E	09X48NM	AVHRR
D-12	97178	67005 04515E	09X22NM	AVHRR
D-14	97097	69425 07451E	09X16NM	AVHRR
D-15	97098	69495 08158E	34X51NM	AVHRR

SEA ICE FREE

ICE EDGE

SEA ICE FREE

ICE EDGE

ICE EDGE

SEA ICE FREE

Projection - Polar Stereographic

Prepared and published by the
DEFENSE MAPPING AGENCY HYDROGRAPHIC/TOPOGRAPHIC CENTER
Bethesda, MD

5186

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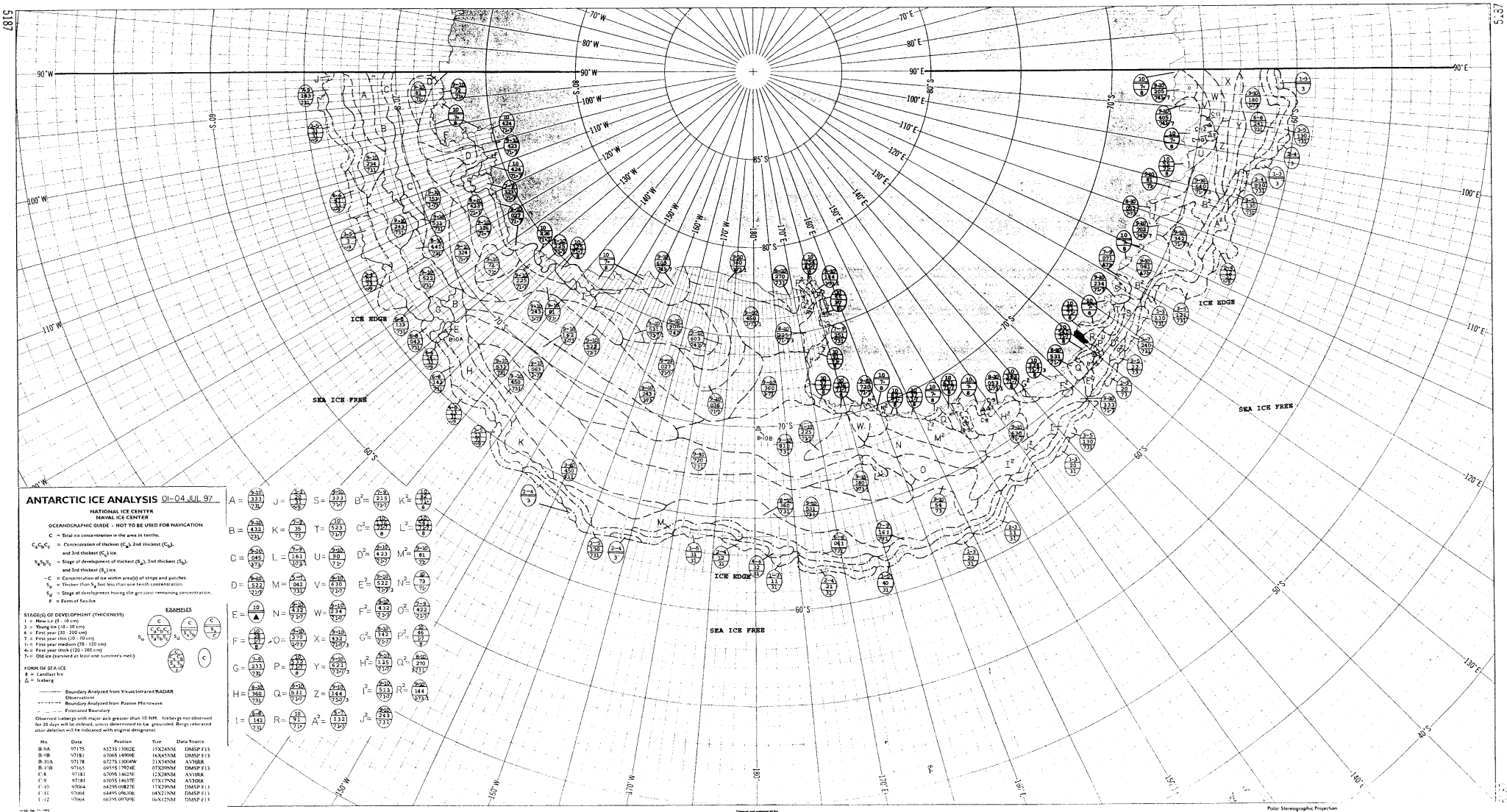

ANTARCTIC ICE ANALYSIS 01-04 JUL 97

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NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

$C_tC_bC_c$ = Concentration of thickest (C_t), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

$S_tS_bS_c$ = Stage of development of thickest (S_t), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

–C = Concentration of ice within area(s) of strips and patches.

S_o = Thicker than S_d but less than one tenth concentration.

S_d = Stage of development having the greatest remaining concentration.

F = Form of Sea-Ice

STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
2 = Young ice (10 - 30 cm)
3 = Grey ice (30 - 70 cm)
4 = Grey-white ice (70 - 120 cm)
5 = First year thin (120 - 200 cm)
6 = First year thick (120 - 200 cm)
7 = First year medium (70 - 120 cm)
1= First year thick (120 - 200 cm)
4= First year thick (120 - 200 cm)
7= Old ice (survived at least one summer's melt)

EXAMPLES

FORM OF SEA ICE
8 = Landfast Ice
△ = Iceberg

——— Boundary Analyzed from Visual/Infrared/RADAR Observation
– – – – Boundary Analyzed from Passive Microwave
– – – – Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated since deletion will be indicated with original designator.

No.	Date	Position	Size	Data Source
B-9A	97175	65?3S 13002E	15X24NM	DMSP F13
B-9B	97181	67065 14909E	16X45NM	DMSP F13
B-10A	97178	67275 13004W	21X54NM	AVHRR
B-10B	97165	69?5S 17924E	07X09NM	DMSP F13
C-8	97181	67095 14625E	12X28NM	AVHRR
C-9	97181	67055 14637E	07X17NM	AVHRR
C-10	97064	64295 09827E	17X29NM	DMSP F13
C-11	97064	64495 09630E	04X21NM	DMSP F13
C-12	97064	66395 09709E	16X12NM	DMSP F13

Polar Stereographic Projection
SCALE 1:7,500,000

ANTARCTIC ICE ANALYSIS 07-11 JUL 97

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NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

$-C$ = Concentration of ice within area(s) of strips and patches.

S_o = Thicker than S_a but less than one tenth concentration.

S_d = Stage of development having the greatest remaining concentration.

F = Form of Sea Ice

STAGE(S) OF DEVELOPMENT (THICKNESS)

1 = New ice (0 - 10 cm)
2 = Young ice (10 - 30 cm)
4 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
4- = First year medium (70 - 120 cm)
4+ = First year thick (120 - 200 cm)
7- = Old ice (survived at least one summer's melt)

EXAMPLES

FORM OF SEA ICE

B = Landfast Ice
A = Iceberg

Boundary Analyzed from Visual/Infrared RADAR Observations

Boundary Analyzed from Passive Microwave

Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated since deletion will be indicated with original designator.

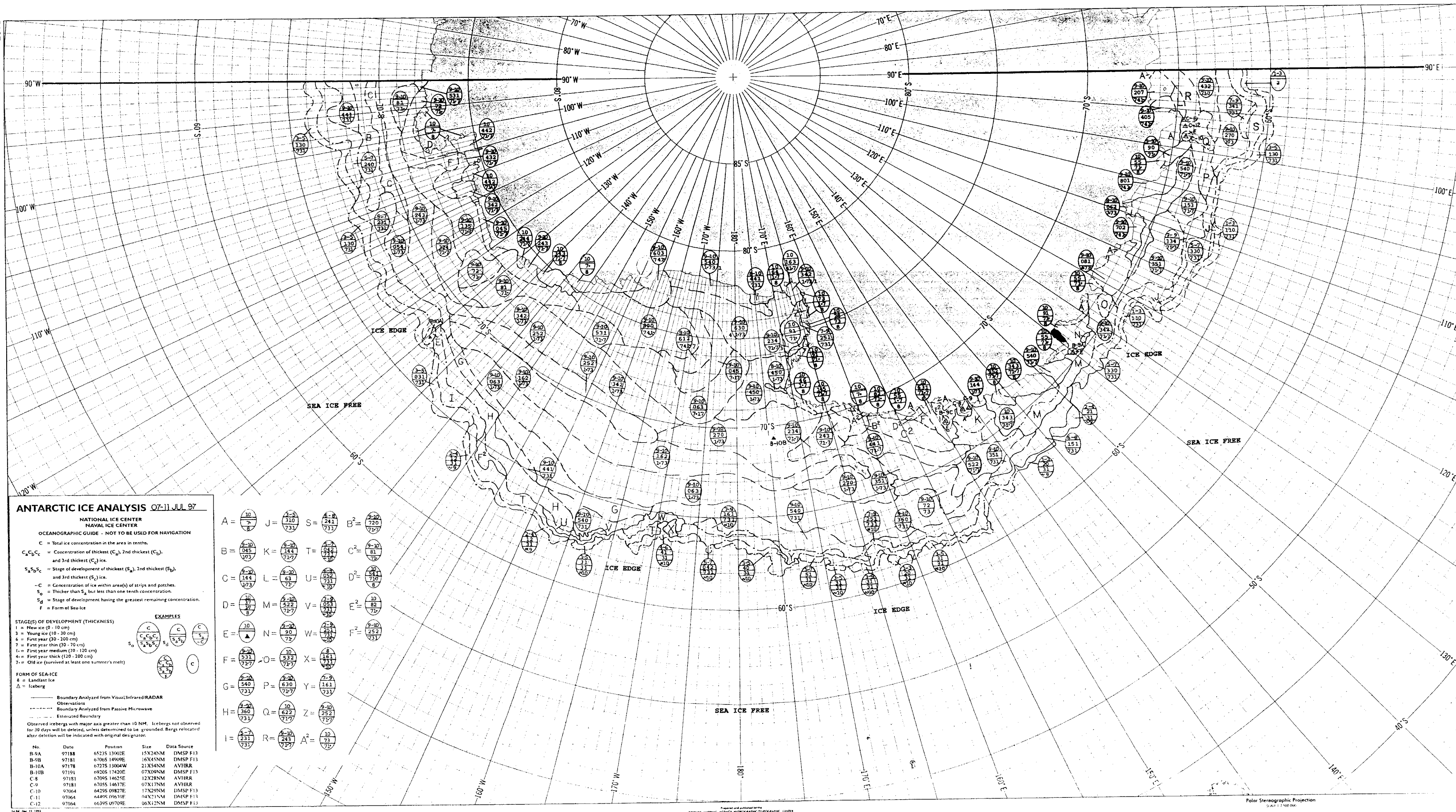
No.	Date	Position	Size	Data Source
A-22A	97190	76235 04536W	21X22NM	AVHRR
A-22B	97190	75907S 04114W	12X8NM	AVHRR
A-23A	97190	76105 04030W	32X34NM	AVHRR
A-23B	97190	75355 03719W	09X11NM	AVHRR
A-27	97190	76345 04212W	06X10NM	AVHRR
A-35	97190	75215 02948W	16X19NM	AVHRR
D-11	97185	65315 05706E	09X48NM	AVHRR
D-12	97178	67005 04915E	09X22NM	AVHRR
D-14	97097	69425 07451E	09X16NM	AVHRR
D-15	97098	66495 08158E	34X31NM	AVHRR

SEA ICE FREE

ICE EDGE

Projection - Polar Stereographic
Scale 1:7,500,000

5186



ANTARCTIC ICE ANALYSIS 07-11 JUL 97

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OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

$\sim C$ = Concentration of ice within area(s) of strips and patches.

S_o = Thicker than S_a but less than one tenth concentration.

S_d = Stage of development having the greatest remaining concentration.

F = Form of Sea-Ice

EXAMPLES

STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
6 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)

FORM OF SEA-ICE
8 = Landfast Ice
Δ = Iceberg

Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Data Source
B-9A	97188	6523S 13002E	15X24NM	DMSP F13
B-9B	97181	6706S 14909E	16X45NM	DMSP F13
B-10A	97178	6727S 13004W	21X54NM	AVHRR
B-10B	97191	6920S 17420E	07X09NM	DMSP F13
C-8	97181	6709S 14625E	12X28NM	AVHRR
C-9	97181	6705S 14637E	07X17NM	AVHRR
C-10	97064	6429S 09827E	17X29NM	DMSP F13
C-11	97064	6449S 09630E	04X21NM	DMSP F13
C-12	97064	6639S 09709E	06X12NM	DMSP F13

1st Ed., Dec 11 1993

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ANTARCTIC ICE ANALYSIS 14-18 JUL 97

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OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

–C = Concentration of ice within area(s) of strips and patches.

S_d = Thicker than S_b but less than one tenth concentration.

S_d = Stage of development having the greatest remaining concentration.

F = Form of Sea Ice

STAGE(S) OF DEVELOPMENT (THICKNESS)

1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
4 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)

EXAMPLES

FORM OF SEA ICE

B = Landfast Ice
△ = Iceberg

——— Boundary Analyzed from Visual/Infrared/RADAR Observations
– – – – Boundary Analyzed from Passive Microwave
– – – – Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.

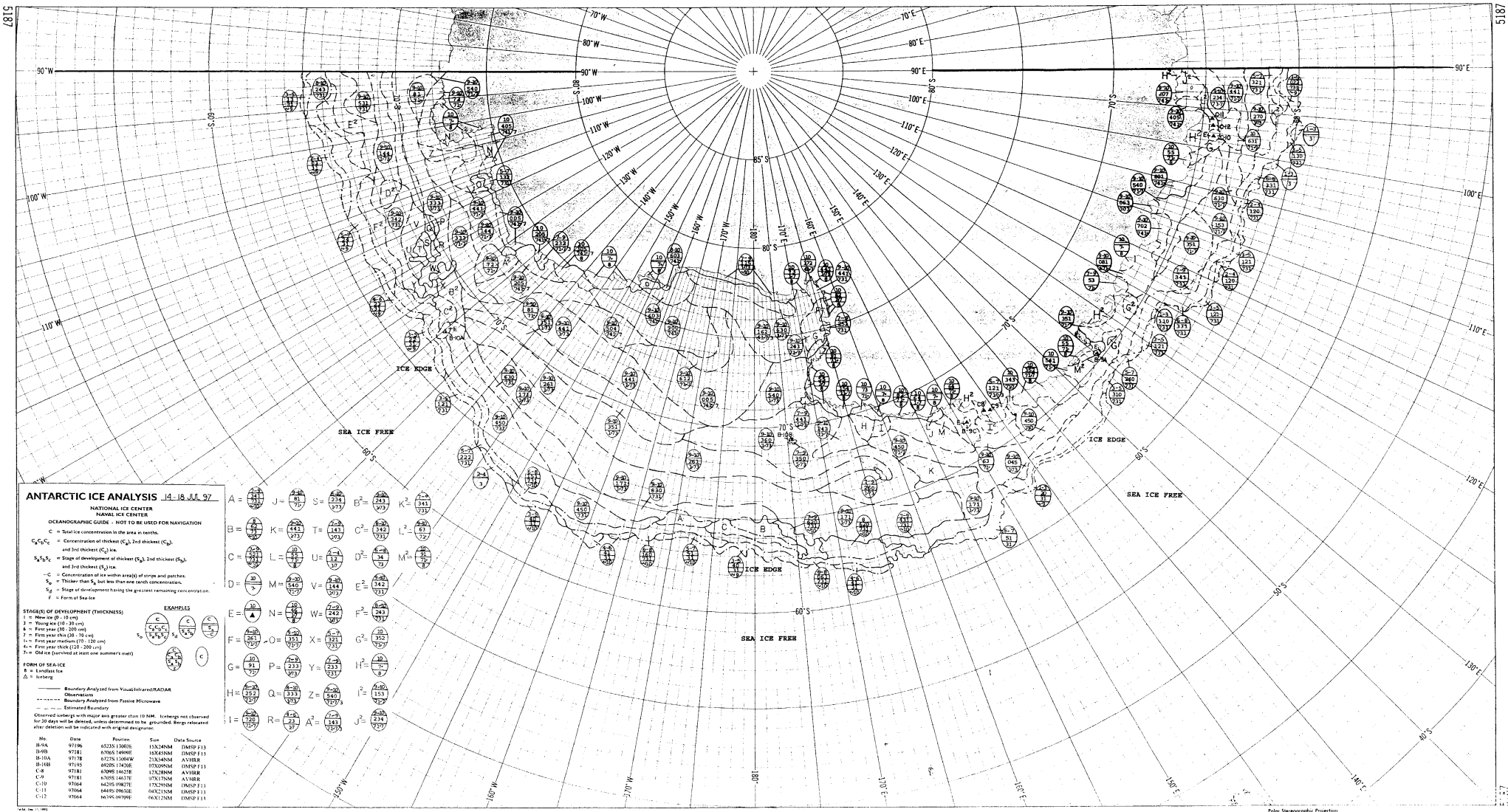
No.	Date	Position	Size	Data Source
A-22A	97197	76?3S 04536W	21X32NM	AVHRR
A-22B	97197	75?7S 04114W	17X18NM	AVHRR
A-23A	97197	76?0S 04050W	32X34NM	AVHRR
A-23B	97197	75?5S 03719W	09X11NM	AVHRR
A-27	97197	76?4S 04212W	06X10NM	AVHRR
A-35	97197	75?1S 02948W	16X19NM	AVHRR
D-11	97195	65?1S 05706E	09X48NM	AVHRR
D-12	97178	67?0S 04511E	09X22NM	AVHRR
D-14	97194	69?2S 07451E	09X16NM	AVHRR
D-15	97194	66?9S 08158E	14X53NM	AVHRR

SEA ICE FREE

ICE EDGE

Projection – Polar Stereographic

5186



ANTARCTIC ICE ANALYSIS 14-18 JUL 97

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NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

$C_tC_{1t}C_{2t}$ = Concentration of thickest (C_t), 2nd thickest (C_{1t}), and 3rd thickest (C_{2t}) ice.

$S_tS_{1t}S_{2t}$ = Stage of development of thickest (S_t), 2nd thickest (S_{1t}), and 3rd thickest (S_{2t}) ice.

–C = Concentration of ice within area(s) of strips and patches.

S_w = Thicker than S_t but less than one tenth concentration.

S_d = Stage of development having the greatest remaining concentration.

F = Form of Sea-Ice

STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
2 = Young ice (10 - 30 cm)
3 = First year (30 - 200 cm)
4 = First year thin (30 - 70 cm)
5 = First year medium (70 - 120 cm)
6 = First year thick (120 - 200 cm)
7 = Old ice (survived at least one summer's melt)

EXAMPLES

FORM OF SEA-ICE
R = Landlast Ice
△ = Iceberg

——— Boundary Analyzed from Visual/Infrared/RADAR Observations
– – – – – Boundary Analyzed from Passive Microwave
— — — — Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Data Source
B-9A	97196	6533S 13003E	15X24NM	DMSP F13
B-9B	97181	6706S 14990E	16X45NM	DMSP F13
B-10A	97178	6727S 15004W	21X34NM	AVHRR
B-10B	97195	6920S 17420E	07X09NM	DMSP F13
C-8	97181	6709S 14625E	17X28NM	AVHRR
C-9	97181	6705S 14637E	07X19NM	AVHRR
C-10	97064	6429S 09827E	17X29NM	DMSP F13
C-11	97064	6449S 09630E	04X21NM	DMSP F13
C-12	97064	6659S 09709E	06X12NM	DMSP F13

Polar Stereographic Projection
SCALE 1:7 500 000

ANTARCTIC ICE ANALYSIS 21-25 JUL 97

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NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.
$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.
$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
~C = Concentration of ice within area(s) of strips and patches.
S_o = Thicker than S_a but less than one tenth concentration.
S_d = Stage of development having the greatest remaining concentration.
F = Form of Sea-Ice

EXAMPLES

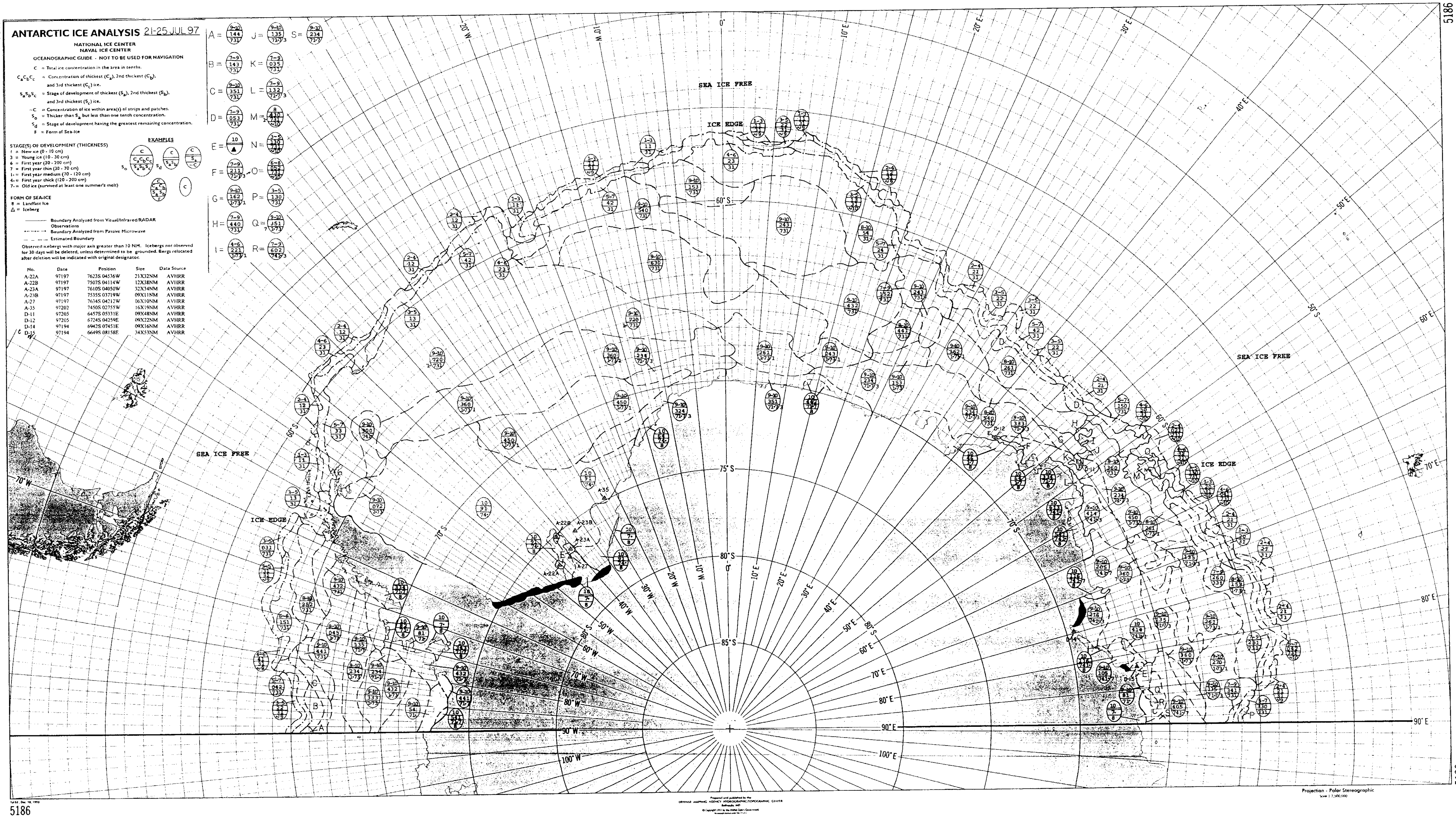
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
6 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)

FORM OF SEA-ICE
8 = Landfast Ice
△ = Iceberg

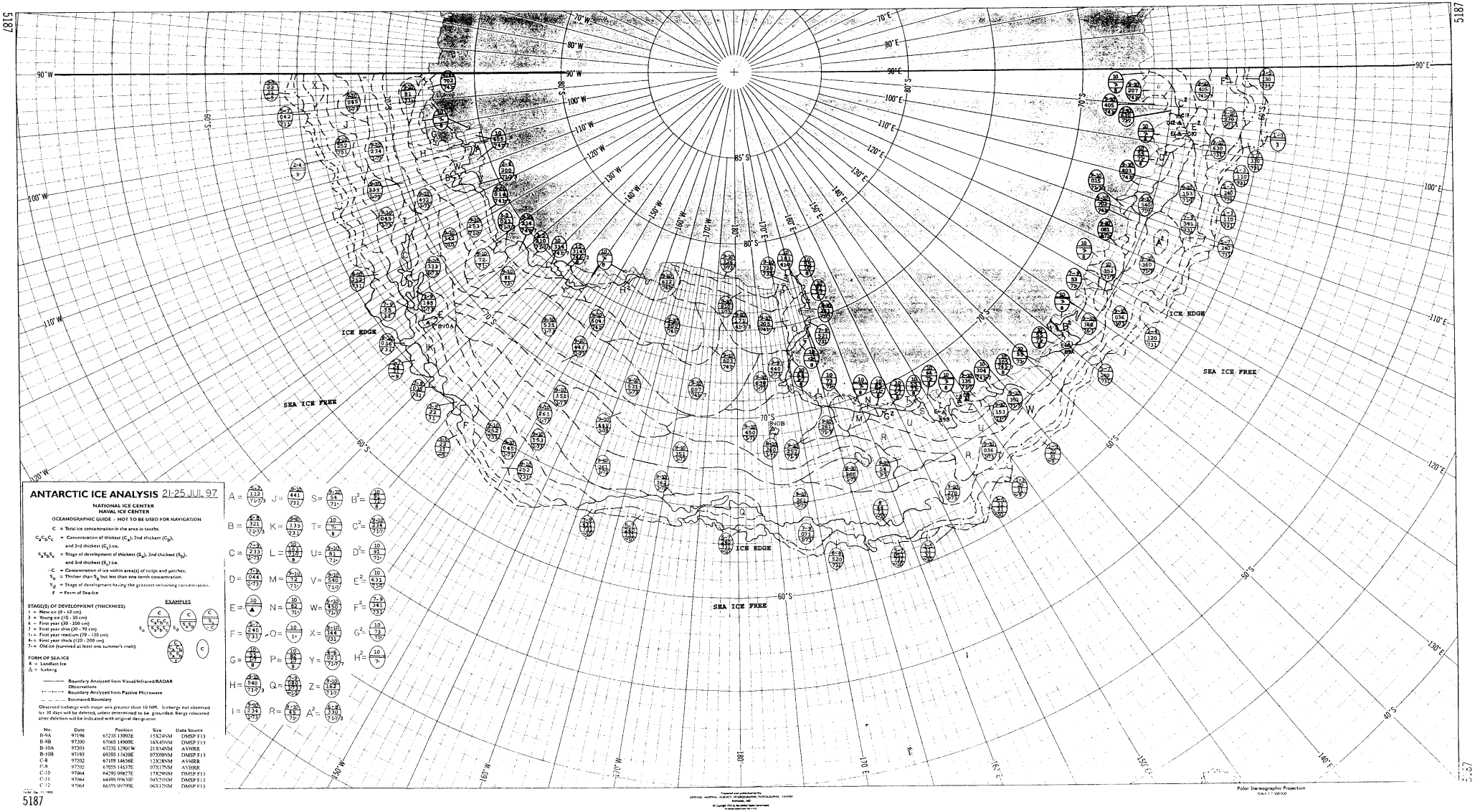
Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Data Source
A-22A	97197	7623S 04536W	21X32NM	AVHRR
A-22B	97197	7507S 04114W	12X38NM	AVHRR
A-23A	97197	7610S 04050W	32X34NM	AVHRR
A-23B	97197	7535S 03719W	09X11NM	AVHRR
A-27	97197	7634S 04212W	06X10NM	AVHRR
A-35	97202	7450S 02755W	16X19NM	AVHRR
D-11	97205	6457S 05331E	09X48NM	AVHRR
D-12	97205	6724S 04259E	09X22NM	AVHRR
D-14	97194	6942S 07451E	09X16NM	AVHRR
D-15	97194	6649S 08158E	34X53NM	AVHRR



Projection - Polar Stereographic


ANTARCTIC ICE ANALYSIS 21-25 JUL 97
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
C = Total ice concentration in the area in tenths.
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$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
C_t = Concentration of ice within area(s) of strips and patches.
S_t = Thicker than S_b but less than one tenth concentration.
S_d = Stage of development having the greatest remaining concentration.
F = Form of Sea-ice
EXAMPLES
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
4 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1= First year medium (70 - 120 cm)
4= First year thick (120 - 200 cm)
7= Old ice (survived at least one summer's melt)
FORM OF SEA-ICE
8 = Landfast Ice
Δ = Iceberg
Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary
Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.
No. Date Position Size Data Source
B-9A 97196 65235 13002E 15X24NM DMSP F13
B-9B 97200 67065 14909E 16X45NM DMSP F13
B-10A 97203 67235 12901W 21X34NM AVHRR
B-10B 97193 69205 17430E 07X09NM DMSP F13
C-8 97202 67105 14454E 12X18NM AVHRR
C-9 97202 67055 14637E 07X17NM AVHRR
C-10 97064 64295 09827E 17X29NM DMSP F13
C-11 97064 64495 09630E 04X31NM DMSP F13
C-12 97064 66395 09709E 06X12NM DMSP F13
ICE EDGE
SEA ICE FREE
Polar Stereographic Projection
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ANTARCTIC ICE ANALYSIS 28-31 JUL 97

NATIONAL ICE CENTER
NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

--C = Concentration of ice within area(s) of strips and patches.

S_o = Thicker than S_a but less than one tenth concentration.

S_d = Stage of development having the greatest remaining concentration.

F = Form of Sea-ice

STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
2 = Young ice (10 - 30 cm)
4 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
8 = First year medium (70 - 120 cm)
9 = First year thick (120 - 200 cm)
7- = Old ice (survived at least one summer's melt)

EXAMPLES

FORM OF SEA-ICE
8 = Landfast Ice
△ = Iceberg

Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary

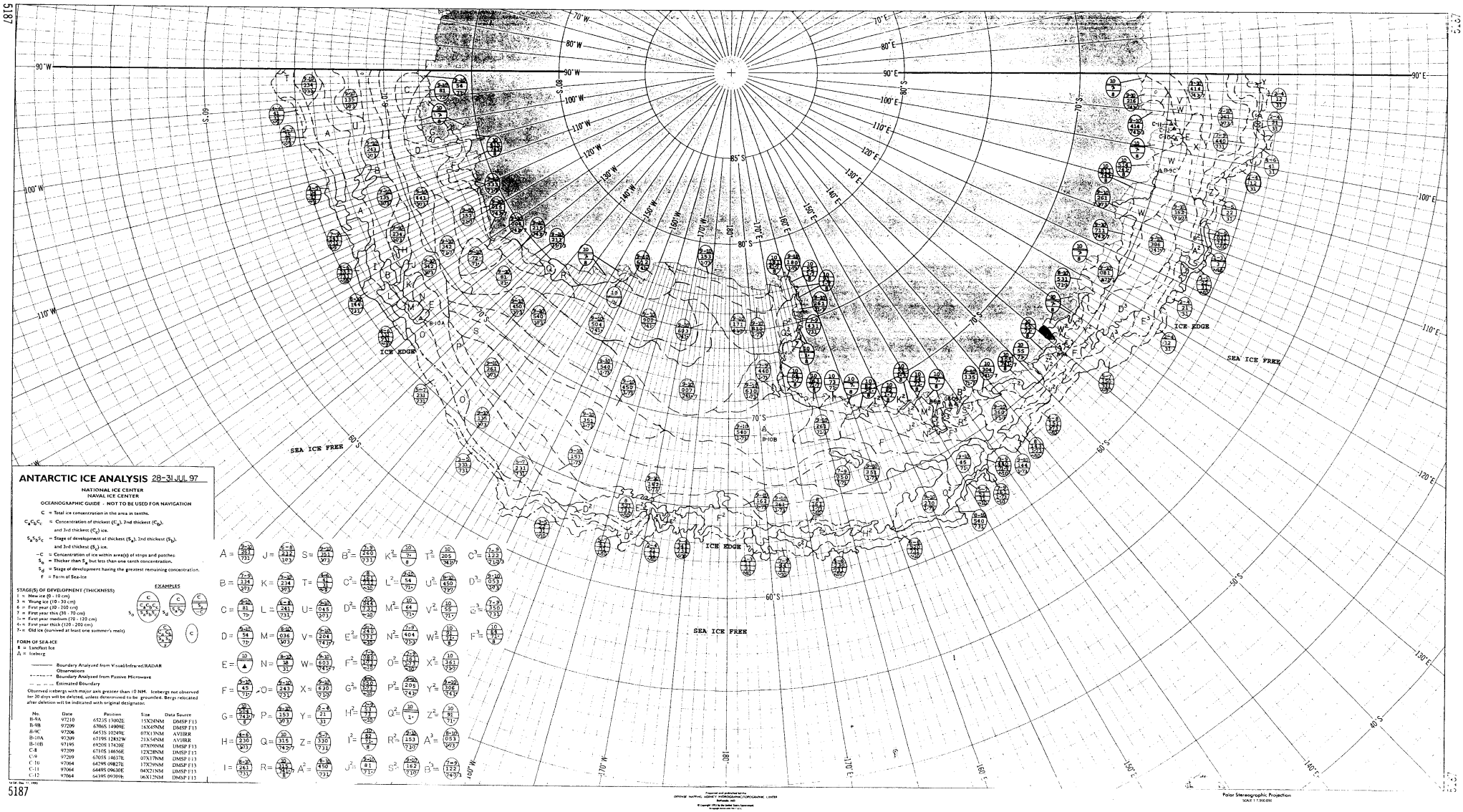
Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Data Source
A-22A	97210	76?3S 04456W	21X32NM	AVHRR
A-22B	97210	75?7S 04414W	12X38NM	AVHRR
A-23A	97210	7610S 04050W	32X34NM	AVHRR
A-23B	97197	7535S 03719W	09X11NM	AVHRR
A-27	97210	7634S 04212W	06X10NM	AVHRR
A-35	97210	7450S 02755W	16X19NM	AVHRR
D-11	97208	6457S 05306E	09X48NM	AVHRR
D-12	97208	6728S 04227E	09X22NM	AVHRR
D-14	97194	6942S 07451E	09X16NM	AVHRR
D-15	97194	6649S 08158E	34X51NM	AVHRR

SEA ICE FREE
ICE EDGE
SEA ICE FREE
ICE EDGE
SEA ICE FREE
ICE EDGE

Prepared and published by the DEFENSE MAPPING AGENCY HYDROGRAPHIC/TOPOGRAPHIC CENTER

Projection - Polar Stereographic



ANTARCTIC ICE ANALYSIS 28-31 JUL 97

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NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

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$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

–C = Concentration of ice within area(s) of strips and patches

S_d = Thicker than S_a but less than one tenth concentration.

S_g = Stage of development having the greatest remaining concentration.

F = Form of Sea-Ice

STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
4 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)

EXAMPLES

FORM OF SEA-ICE
B = Landfast Ice
A = Iceberg

Boundary Analysed from Visual/Infrared/RADAR Observations
Boundary Analysed from Passive Microwave
Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Data Source
B-9A	97210	65Z1S 11002E	15X24NM	DMSP F13
B-9B	97209	67065 14909E	16X45NM	DMSP F13
B-9C	97206	64S3S 10249E	07X13NM	AVHRR
B-10A	97209	67189 12842W	21X54NM	AVHRR
B-10B	97195	69Z0S 17420E	07X09NM	DMSP F13
C-8	97209	67105 14656E	12X28NM	DMSP F13
C-9	97209	67058 14837E	07X17NM	DMSP F13
C-10	97064	64Z9S 09827E	17X29NM	DMSP F13
C-11	97064	64495 09630E	06X21NM	DMSP F13
C-12	97064	64395 09709E	06X13NM	DMSP F13

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ANTARCTIC ICE ANALYSIS 4-8 AUG 97

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NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

$-C$ = Concentration of ice within area(s) of strips and patches.

S_p = Thicker than S_a but less than one tenth concentration.

S_d = Stage of development having the greatest remaining concentration.

F = Form of Sea-Ice

STAGE(S) OF DEVELOPMENT (THICKNESS)

1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
4 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)

EXAMPLES

FORM OF SEA-ICE

• = Landfast Ice
△ = Iceberg

——— Boundary Analysed from Visual/Infrared/RADAR Observations
– – – – Boundary Analysed from Passive Microwave
— — — Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after detection will be indicated with original designation.

No.	Date	Position	Size	Data Source
A-22A	97214	7618S 04506W	21X32NM	AVHRR
A-22B	97214	7505S 03951W	12X38NM	AVHRR
A-23A	97210	7610S 04050W	32X34NM	AVHRR
A-23B	97214	7502S 03609W	09X11NM	AVHRR
A-27	97214	7620S 04341W	06X10NM	AVHRR
A-35	97214	7455S 02800W	16X19NM	AVHRR
D-11	97208	6457S 05306E	09X48NM	AVHRR
D-12	97208	6728S 04227E	09X22NM	AVHRR
D-14	97194	6642S 07451E	09X16NM	AVHRR
D-15	97194	6649S 08158E	34X53NM	AVHRR

SEA ICE FREE

ICE EDGE

SEA ICE FREE

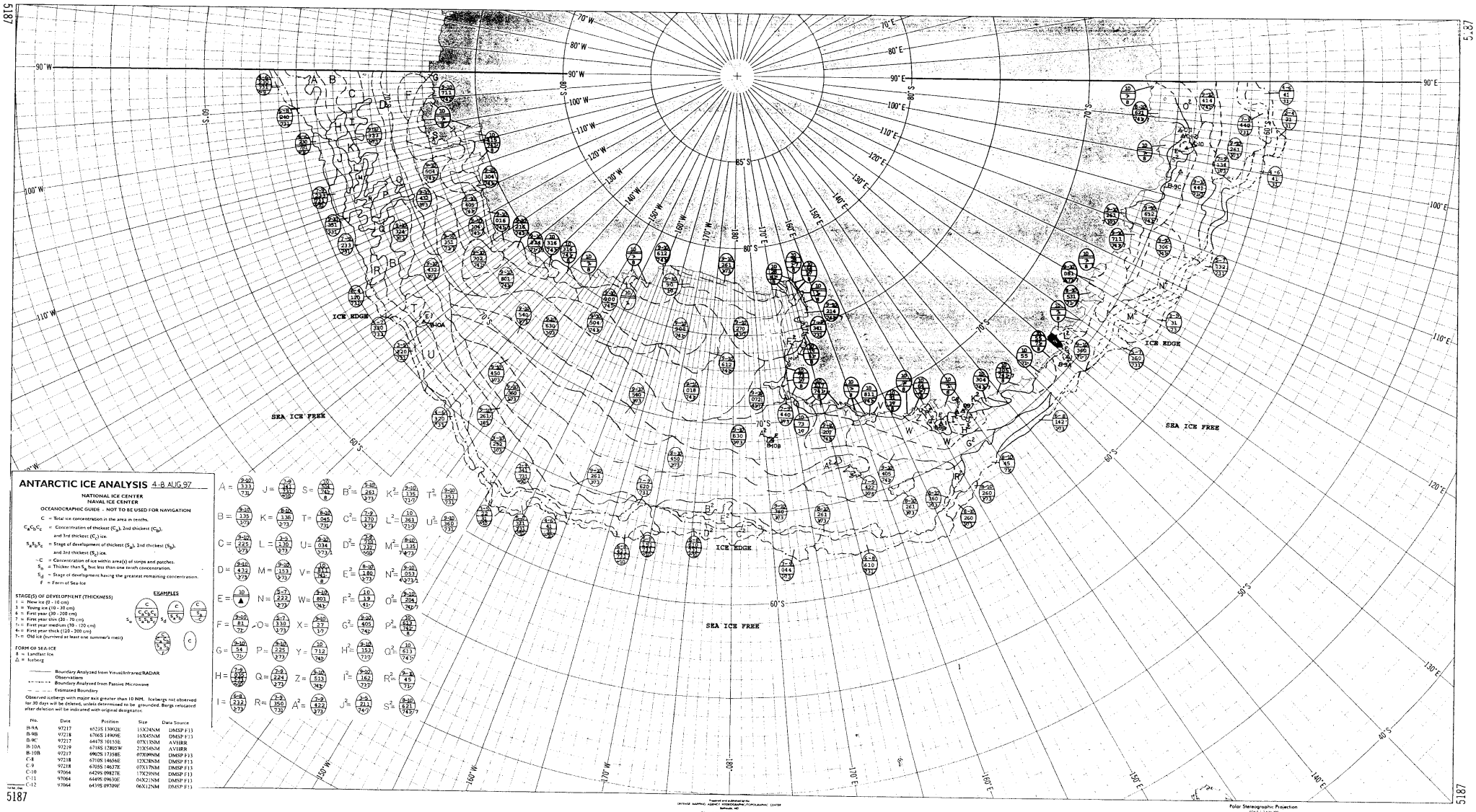
ICE EDGE

SEA ICE FREE

ICE EDGE

Projection - Polar Stereographic

5186



ANTARCTIC ICE ANALYSIS 4-8 AUG 97

NATIONAL ICE CENTER
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OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

-C = Concentration of ice within area(s) of strips and patches.

S_d = Thicker than S_a but less than one tenth concentration.

S_d = Stage of development having the greatest remaining concentration.

f = Form of Sea Ice

STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
2 = Young ice (10 - 30 cm)
3 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1- = First year medium (70 - 120 cm)
4- = First year thick (120 - 200 cm)
7- = Old ice (survived at least one summer's melt)

EXAMPLES

FORM OF SEA ICE
8 = Landfast Ice
△ = Iceberg

Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Data Source
B-9A	97217	65?3S 13002E	15X24NM	DMSP F13
B-9B	97218	67?6S 14909E	16X45NM	DMSP F13
B-9C	97217	64?7S 10155E	07X13NM	AVHRR
B-10A	97219	67?8S 17803W	21X54NM	AVHRR
B-10B	97217	69?2S 17358E	07X09NM	DMSP F13
C-8	97218	67?0S 14656E	12X28NM	DMSP F13
C-9	97218	67?0S 14627E	07X17NM	DMSP F13
C-10	97064	64?9S 09827E	17X29NM	DMSP F13
C-11	97064	64?9S 09630E	04X21NM	DMSP F13
C-12	97064	64?9S 09709E	06X12NM	DMSP F13

Polar Stereographic Projection
SCALE 1:7,500,000

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ANTARCTIC ICE ANALYSIS 11-15 AUG 97

NATIONAL ICE CENTER
NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice

$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

–C = Concentration of ice within area(s) of strips and patches.

S_b = Thicker than S_a but less than one tenth concentration.

S_d = Stage of development having the greatest remaining concentration.

F = Form of Sea-Ice

EXAMPLES

STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
2 = Young ice (10 - 30 cm)
3 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1.= First year medium (70 - 120 cm)
4.= First year thick (120 - 200 cm)
7.= Old ice (survived at least one summer's melt)

FORM OF SEA-ICE
B = Landfast Ice
△ = Iceberg

——— Boundary Analyzed from Visual/Infrared/RADAR Observations
– – – – – Boundary Analyzed from Passive Microwave
—— Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Data Source
A-23A	97214	76183 04506W	21X32NM	AVHRR
A-22B	97224	75055 03951W	32X38NM	AVHRR
A-23A	97224	76105 04050W	32X34NM	AVHRR
A-23B	97224	75025 01609W	09X11NM	AVHRR
A-27	97224	76205 04241W	06X10NM	AVHRR
A-35	97224	74555 02806W	10X19NM	AVHRR
D-11	97208	64575 03366E	09X48NM	AVHRR
D-12	97208	67285 04227E	09X32NM	AVHRR
D-14	97194	69425 07451E	09X16NM	AVHRR
D-15	97194	66495 08158E	34X51NM	AVHRR

A = (6-10 / 144 / 273) J = (7-9 / 105 / 243) S = (5-7 / 240 / 31)

B = (6-8 / 340 / 213) K = (7-9 / 260 / 213) T = (9-10 / 612 / 243)

C = (9-10 / 153 / 273) L = (5-7 / 42 / 31)

D = (9-10 / 450 / 273) M = (5-7 / 330 / 273)

E = (10 / ▲) N = (9-10 / 360 / 213)

F = (7-9 / 192 / 273) O = (6-10 / 144 / 4153)

G = (7-9 / 440 / 273) P = (7-9 / 35 / 31)

H = (7-9 / 440 / 273) Q = (9-10 / 213 / 243)

I = (9-10 / 171 / 273) R = (7-9 / 410 / 273)

SEA ICE FREE

ICE EDGE

0°

10° W

20° W

30° W

40° W

50° W

60° W

70° W

80° W

90° W

100° W

10° E

20° E

30° E

40° E

50° E

60° E

70° E

80° E

90° E

100° E

60° S

70° S

75° S

80° S

85° S

Projection - Polar Stereographic
Scale 1:7,500,000

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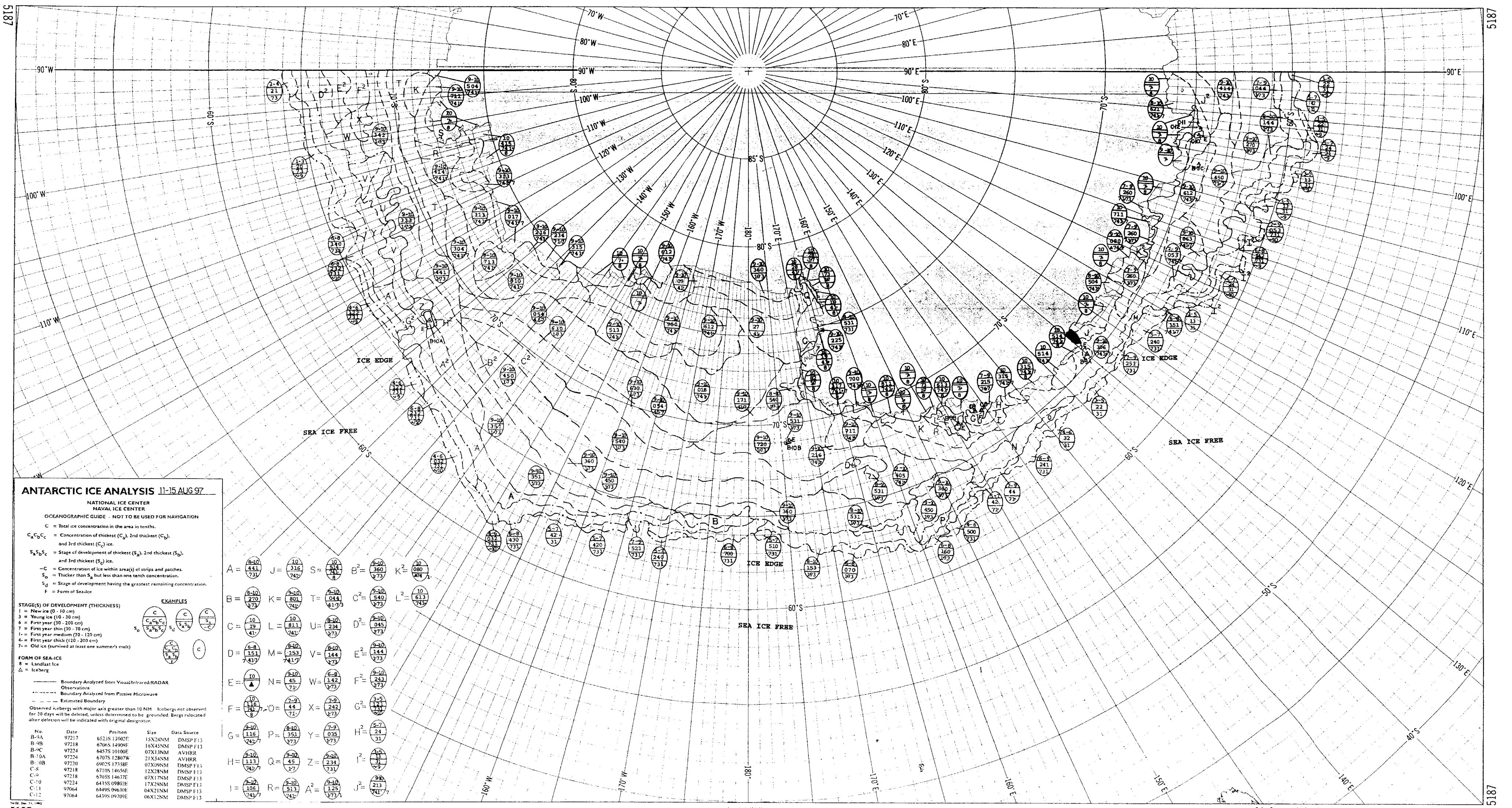
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ANTARCTIC ICE ANALYSIS 11-15 AUG 97
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
C = Total ice concentration in the area in tenths.
CaCbCc = Concentration of thickest (Ca), 2nd thickest (Cb), and 3rd thickest (Cc) ice.
SaSbSc = Stage of development of thickest (Sa), 2nd thickest (Sb), and 3rd thickest (Sc) ice.
-C = Concentration of ice within area(s) of strips and patches.
So = Thicker than Sa but less than one tenth concentration.
Sd = Stage of development having the greatest remaining concentration.
F = Form of Sea-Ice
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
6 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)
EXAMPLES
FORM OF SEA-ICE
8 = Landfast Ice
△ = Iceberg
Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary
Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.
No. Date Position Size Data Source
B-9A 97217 6523S 13002E 15X24NM DMSP F13
B-9B 97218 6706S 14909E 16X45NM DMSP F13
B-9C 97224 6457S 10100E 07X13NM AVHRR
B-10A 97224 6707S 12807W 21X54NM AVHRR
B-10B 97220 6902S 17358E 07X09NM DMSP F13
C-8 97218 6710S 14656E 12X28NM DMSP F13
C-9 97218 6705S 14637E 07X17NM DMSP F13
C-10 97224 6435S 09802E 17X29NM DMSP F13
C-11 97064 6449S 09630E 04X21NM DMSP F13
C-12 97064 6439S 09709E 06X12NM DMSP F13
ICE EDGE
SEA ICE FREE
Polar Stereographic Projection
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ANTARCTIC ICE ANALYSIS 18-22 AUG 97

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OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

- C = Total ice concentration in the area in tenths.
- $C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.
- $S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
- −C = Concentration of ice within area(s) of strips and patches.
- S_o = Thicker than S_a but less than one tenth concentration.
- S_d = Stage of development having the greatest remaining concentration.
- F = Form of Sea-Ice

EXAMPLES

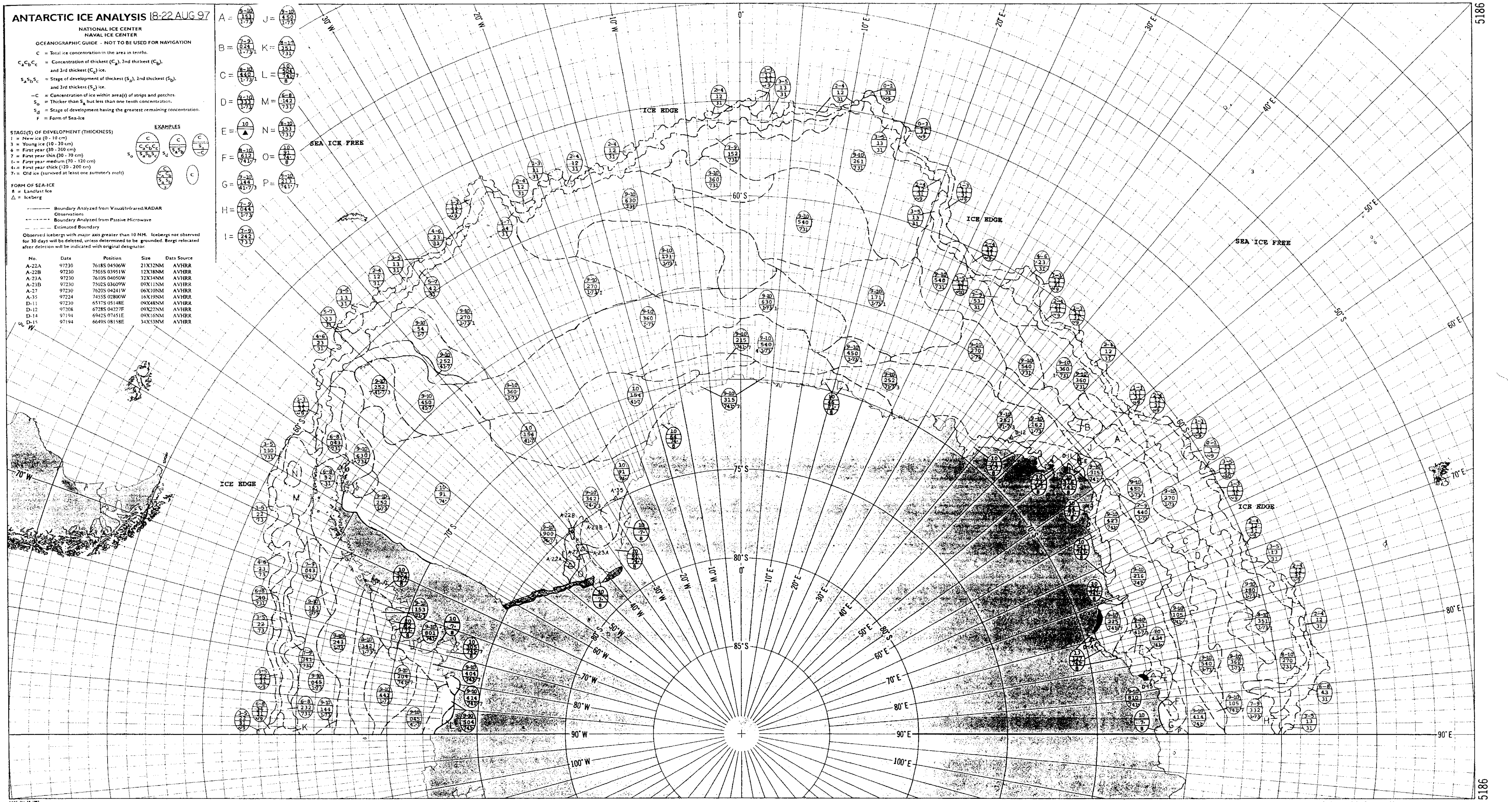
STAGE(S) OF DEVELOPMENT (THICKNESS)
- 1 = New ice (0 - 10 cm)
- 3 = Young ice (10 - 30 cm)
- 6 = First year (30 - 200 cm)
- 7 = First year thin (30 - 70 cm)
- 1• = First year medium (70 - 120 cm)
- 4• = First year thick (120 - 200 cm)
- 7• = Old ice (survived at least one summer's melt)

FORM OF SEA-ICE
- 8 = Landfast Ice
- △ = Iceberg

- Boundary Analyzed from Visual/Infrared/RADAR Observations
- Boundary Analyzed from Passive Microwave
- Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Data Source
A-22A	97230	7618S 04506W	21X32NM	AVHRR
A-22B	97230	7505S 03951W	12X38NM	AVHRR
A-23A	97230	7610S 04050W	32X34NM	AVHRR
A-23B	97230	7502S 03609W	09X11NM	AVHRR
A-27	97230	7620S 04241W	06X10NM	AVHRR
A-35	97224	7455S 02800W	16X19NM	AVHRR
D-11	97230	6537S 05148E	09X48NM	AVHRR
D-12	97208	6728S 04227E	09X22NM	AVHRR
D-14	97194	6942S 07451E	09X16NM	AVHRR
D-15	97194	6649S 08158E	34X53NM	AVHRR



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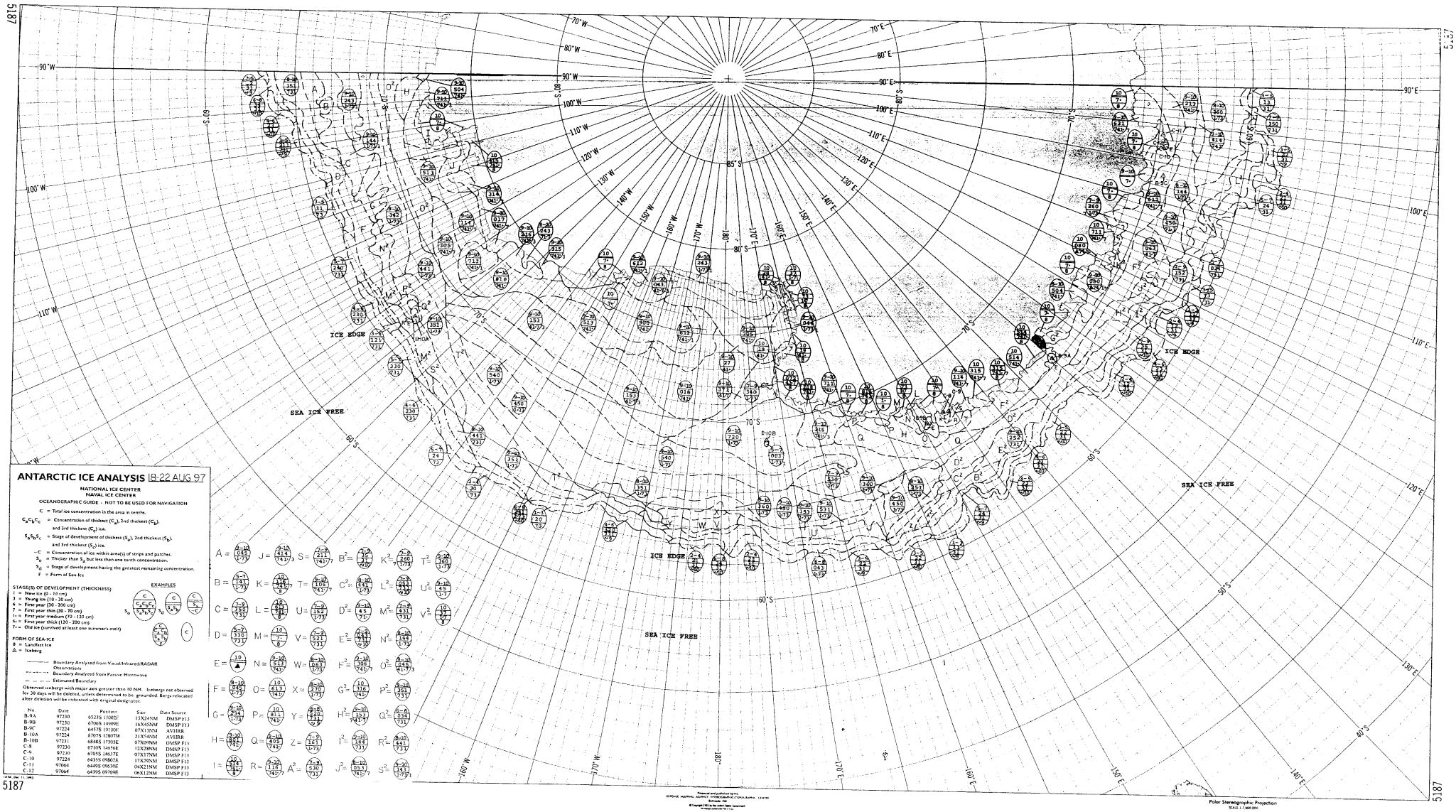
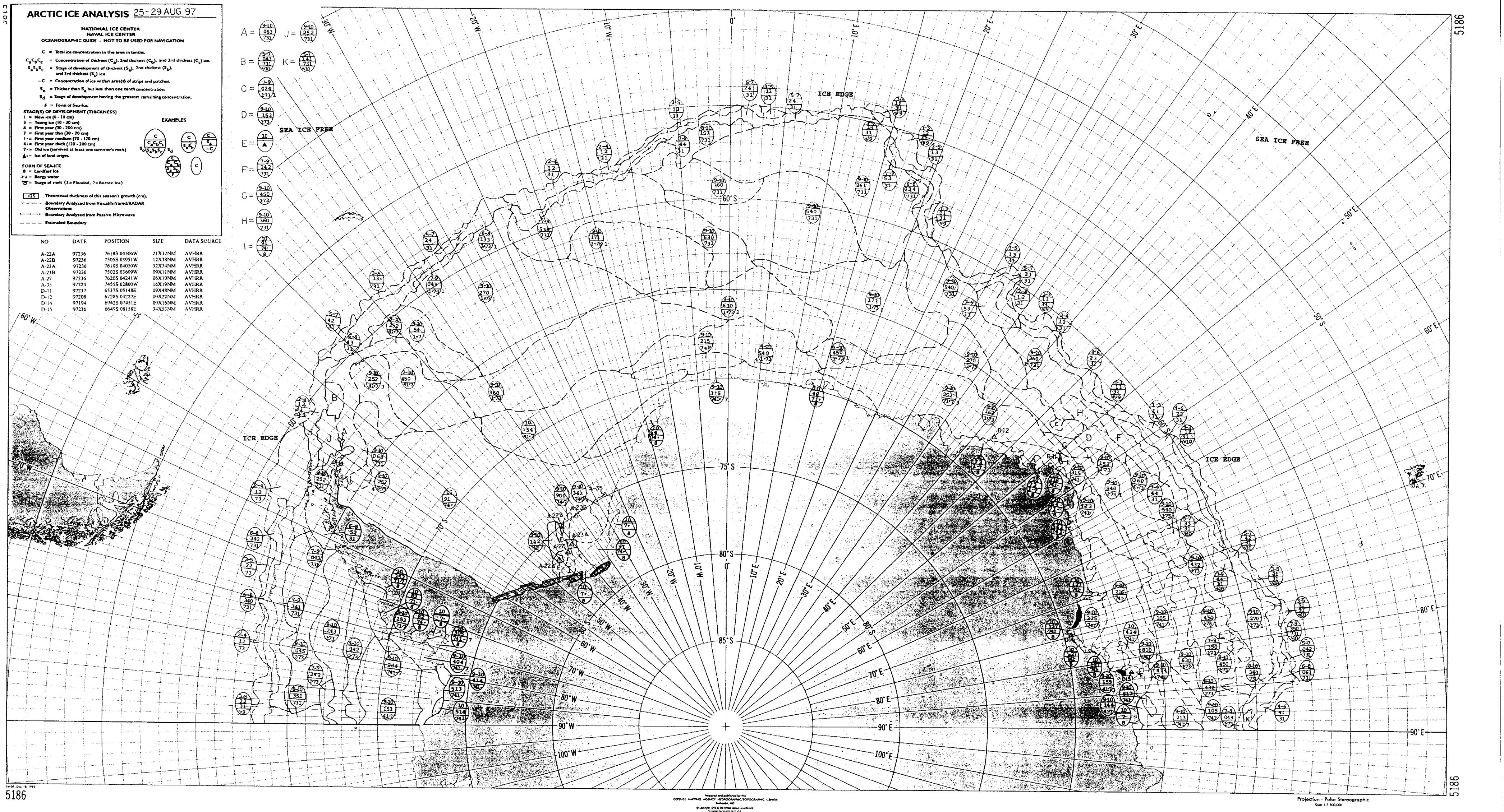

ANTARCTIC ICE ANALYSIS 18-22 AUG 97
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
C = Total ice concentration in the sea in tenths.
$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.
$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
–C = Concentration of ice within area(s) of strips and patches.
S_o = Thicker than S_d but less than one tenth concentration.
S_d = Stage of development having the greatest remaining concentration.
F = Form of Sea Ice
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
4 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1= First year medium (70 - 120 cm)
6 = First year thick (120 - 200 cm)
7+ = Old ice (survived at least one summer's melt)
EXAMPLES
FORM OF SEA-ICE
ß = Landfast Ice
Δ = Iceberg
Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary
Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 20 days will be deleted, unless determined to be grounded. Bergs relocated after detection will be indicated with original designator.
No. Date Position Size Data Source
B-9A 97230 6525S 13002E 15X24NM DMSP F13
B-9B 97230 6706S 14909E 16X45NM DMSP F13
B-9C 97234 6457S 10100E 07X12NM AVHRR
B-10A 97224 6707S 12807W 21X74NM AVHRR
B-10B 97231 6848S 17305E 07X09NM DMSP F13
C-8 97230 6710S 14676E 12X28NM DMSP F13
C-9 97230 6705S 14637E 07X17NM DMSP F13
C-10 97224 6433S 09807E 17X39NM DMSP F13
C-11 97064 6449S 09650E 04X21NM DMSP F13
C-12 97064 6439S 09709E 06X12NM DMSP F13
ICE EDGE
SEA ICE FREE
Polar Stereographic Projection
SCALE 1:7,500,000
5187
5187



ARCTIC ICE ANALYSIS 25-29 AUG 97

NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.
$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.
$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
~C = Concentration of ice within area(s) of strips and patches.
S_o = Thicker than S_a but less than one tenth concentration.
S_d = Stage of development having the greatest remaining concentration.
F = Form of Sea-Ice.

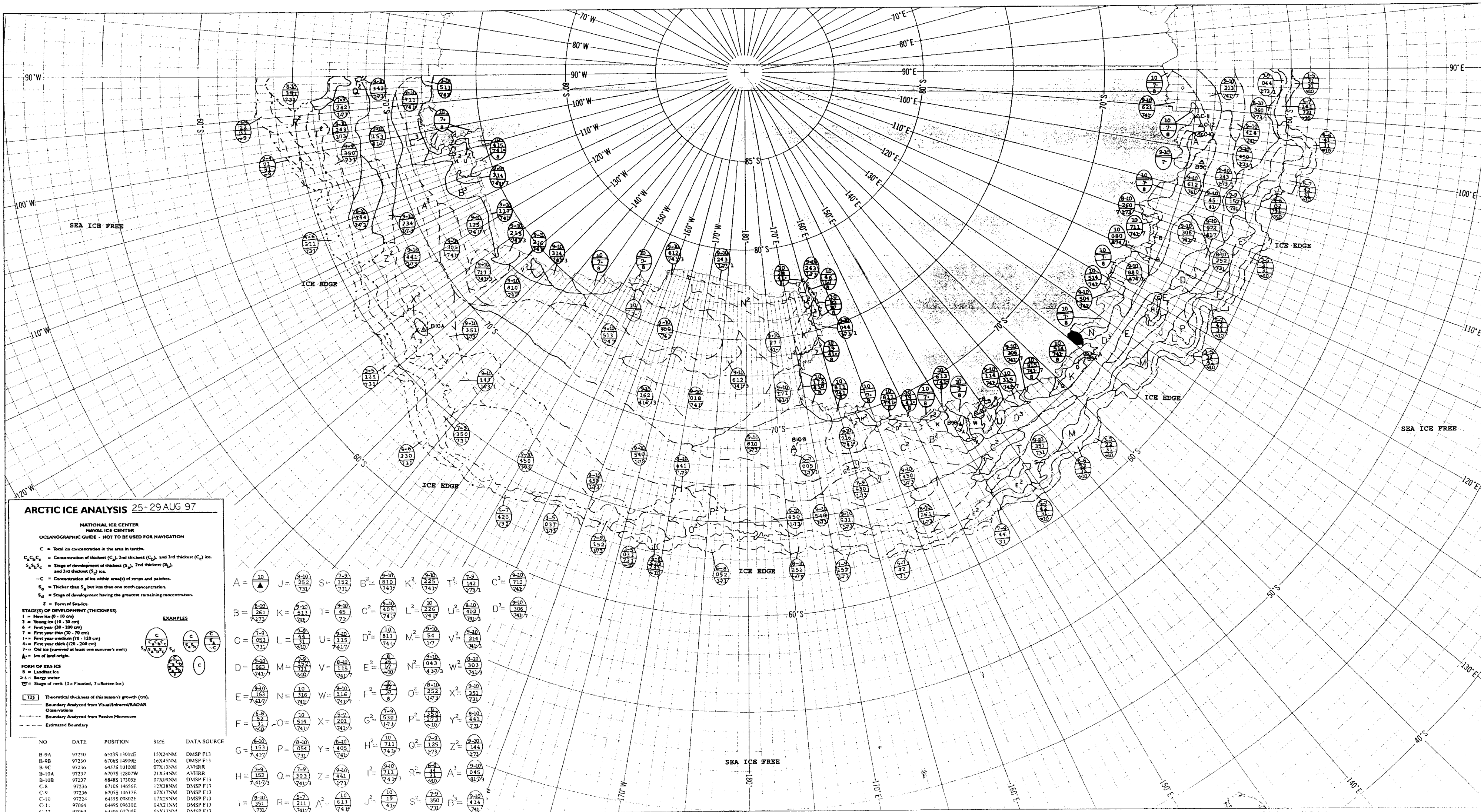
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
6 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)
▲• = Ice of land origin.

FORM OF SEA-ICE
8 = Landfast Ice
3-4 = Bergy water
Stage of melt (3 = Flooded, 7 = Rotten Ice)

125 Theoretical thickness of this season's growth (cm).
Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary

EXAMPLES

NO	DATE	POSITION	SIZE	DATA SOURCE
A-22A	97236	7618S 04506W	21X32NM	AVHRR
A-22B	97236	7505S 03951W	12X38NM	AVHRR
A-23A	97236	7610S 04050W	32X34NM	AVHRR
A-23B	97236	7502S 03609W	09X11NM	AVHRR
A-27	97236	7620S 04241W	06X10NM	AVHRR
A-35	97224	7455S 02800W	16X19NM	AVHRR
D-11	97237	6537S 05148E	09X48NM	AVHRR
D-12	97208	6728S 04227E	09X22NM	AVHRR
D-14	97194	6942S 07451E	09X16NM	AVHRR
D-15	97236	6649S 08158E	34X53NM	AVHRR



SEA ICE FREE
ICE EDGE
SEA ICE FREE
ICE EDGE
SEA ICE FREE
ARCTIC ICE ANALYSIS 25-29 AUG 97
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
C = Total ice concentration in the area in tenths.
CaCbCc = Concentration of thickest (Ca), 2nd thickest (Cb), and 3rd thickest (Cc) ice.
SaSbSc = Stage of development of thickest (Sa), 2nd thickest (Sb), and 3rd thickest (Sc) ice.
~C = Concentration of ice within area(s) of strips and patches.
So = Thicker than Sa but less than one tenth concentration.
Sd = Stage of development having the greatest remaining concentration.
F = Form of Sea-Ice.
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
6 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)
▲• = Ice of land origin.
FORM OF SEA-ICE
8 = Landfast Ice
= Bergy water
= Stage of melt (3= Flooded, 7=Rotten Ice)
EXAMPLES
125 Theoretical thickness of this season's growth (cm).
Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary
Polar Stereographic Projection
Prepared and published by the DEFENSE MAPPING AGENCY HYDROGRAPHIC/TOPOGRAPHIC CENTER
1st Ed., Dec. 11, 1993

NO	DATE	POSITION	SIZE	DATA SOURCE
B-9A	97230	6523S 13002E	15X24NM	DMSP F13
B-9B	97230	6706S 14909E	16X45NM	DMSP F13
B-9C	97236	6457S 10100E	07X13NM	AVHRR
B-10A	97237	6707S 12807W	21X54NM	AVHRR
B-10B	97237	6848S 17305E	07X09NM	DMSP F13
C-8	97236	6710S 14656E	12X28NM	DMSP F13
C-9	97236	6705S 14637E	07X17NM	DMSP F13
C-10	97224	6435S 09802E	17X29NM	DMSP F13
C-11	97064	6449S 09630E	04X21NM	DMSP F13
C-12	97064	6439S 09709E	06X12NM	DMSP F13

ANTARCTIC ICE ANALYSIS 01-05 SEP 97

NATIONAL ICE CENTER
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OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

$-C$ = Concentration of ice within area(s) of strips and patches.

S_x = Thicker than S_a but less than one tenth concentration.

S_d = Stage of development having the greatest remaining concentration.

F = Form of Sea Ice

STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
4 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1= First year medium (70 - 120 cm)
4= First year thick (120 - 200 cm)
7= Old ice (survived at least one summer's melt)

EXAMPLES

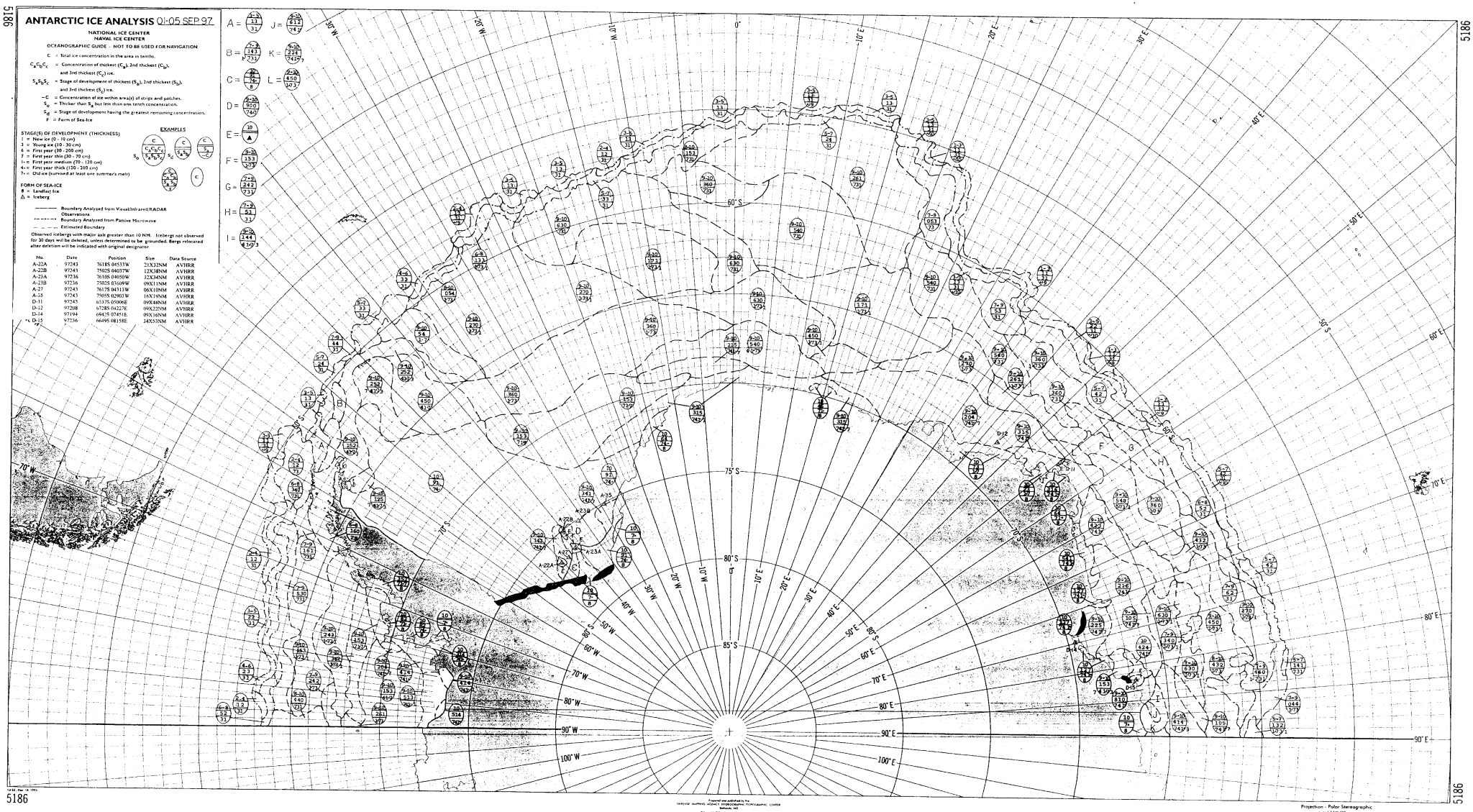
FORM OF SEA-ICE
B = Landfast Ice
△ = Iceberg

——— Boundary Analyzed from Visual/Infrared/RADAR Observations
– – – – Boundary Analyzed from Passive Microwave
— — — — Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Data Source
A-22A	97243	76185 04533W	21X33NM	AVHRR
A-22B	97243	75025 04037W	12X38NM	AVHRR
A-23A	97236	76108 04050W	32X34NM	AVHRR
A-23B	97236	75035 03609W	09X11NM	AVHRR
A-27	97243	76175 04313W	06X10NM	AVHRR
A-35	97243	75055 02903W	16X19NM	AVHRR
D-11	97245	65375 05006E	09X48NM	AVHRR
D-12	97208	67285 04227E	09X32NM	AVHRR
D-14	97194	68435 07451E	09X16NM	AVHRR
D-15	97236	66495 08158E	34X53NM	AVHRR

A = J =
B = K =
C = L =
D =
E =
F =
G =
H =
I =



Projection - Polar Stereographic

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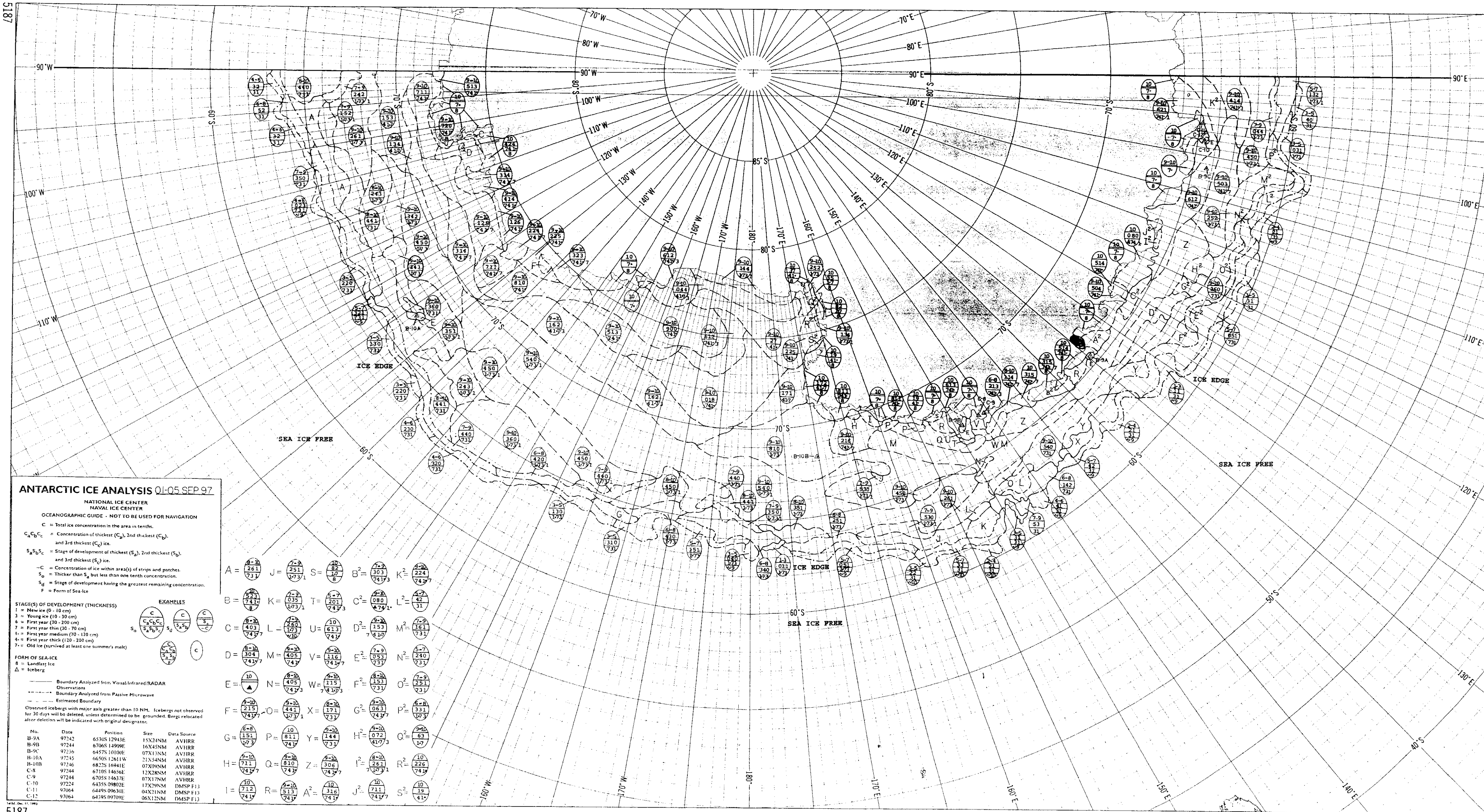
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ANTARCTIC ICE ANALYSIS 01-05 SEP 97
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
C = Total ice concentration in the area in tenths.
$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.
$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
~C = Concentration of ice within area(s) of strips and patches.
S_o = Thicker than S_a but less than one tenth concentration.
S_d = Stage of development having the greatest remaining concentration.
F = Form of Sea-Ice
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
6 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)
EXAMPLES
FORM OF SEA-ICE
8 = Landfast Ice
△ = Iceberg
Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary
Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.
No. | Date | Position | Size | Data Source
B-9A | 97242 | 6530S 12943E | 15X24NM | AVHRR
B-9B | 97244 | 6706S 14909E | 16X45NM | AVHRR
B-9C | 97236 | 6457S 10100E | 07X13NM | AVHRR
B-10A | 97245 | 6650S 12611W | 21X54NM | AVHRR
B-10B | 97246 | 6822S 16941E | 07X09NM | AVHRR
C-8 | 97244 | 6710S 14656E | 12X28NM | AVHRR
C-9 | 97244 | 6705S 14637E | 07X17NM | AVHRR
C-10 | 97224 | 6435S 09802E | 17X29NM | DMSP F13
C-11 | 97064 | 6449S 09630E | 04X21NM | DMSP F13
C-12 | 97064 | 6439S 09709E | 06X12NM | DMSP F13
SEA ICE FREE
ICE EDGE
Polar Stereographic Projection
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ANTARCTIC ICE ANALYSIS 08-12 SEP 97

NATIONAL ICE CENTER
NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

$C_aS_bS_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

–C = Concentration of ice within area(s) of strips and patches.

S_b = Thicker than S_a but less than one tenth concentration.

S_d = Stage of development having the greatest remaining concentration.

F = Form of Sea-Ice

STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
4 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1.= First year medium (70 - 120 cm)
4.= First year thick (120 - 200 cm)
7.= Old ice (survived at least one summer's melt)

EXAMPLES

FORM OF SEA-ICE
F = Level ice
△ = Iceberg

——— Boundary Analyzed from Visual/Infrared/RADAR Observations
------ Boundary Analyzed from Passive Microwave
– – – Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 20 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Data Source
A-22A	97251	7620S 04529W	21X32NM	AVHRR
A-22B	97251	7566S 04056W	12X38NM	AVHRR
A-23A	97251	7610S 04050W	37X14NM	AVHRR
A-23B	97251	7425S 03420W	09X11NM	AVHRR
A-27	97251	7613S 04306W	06X10NM	AVHRR
A-35	97251	7505S 02903W	16X19NM	AVHRR
D-11	97243	6537S 01006E	69X48NM	AVHRR
D-12	97251	6780S 03700E	09X22NM	AVHRR
D-14	97194	6942S 07451E	09X16NM	AVHRR
D-15	97236	6669S 08158E	14X51NM	AVHRR

SEA ICE FREE

ICE EDGE

SEA ICE FREE

ICE EDGE

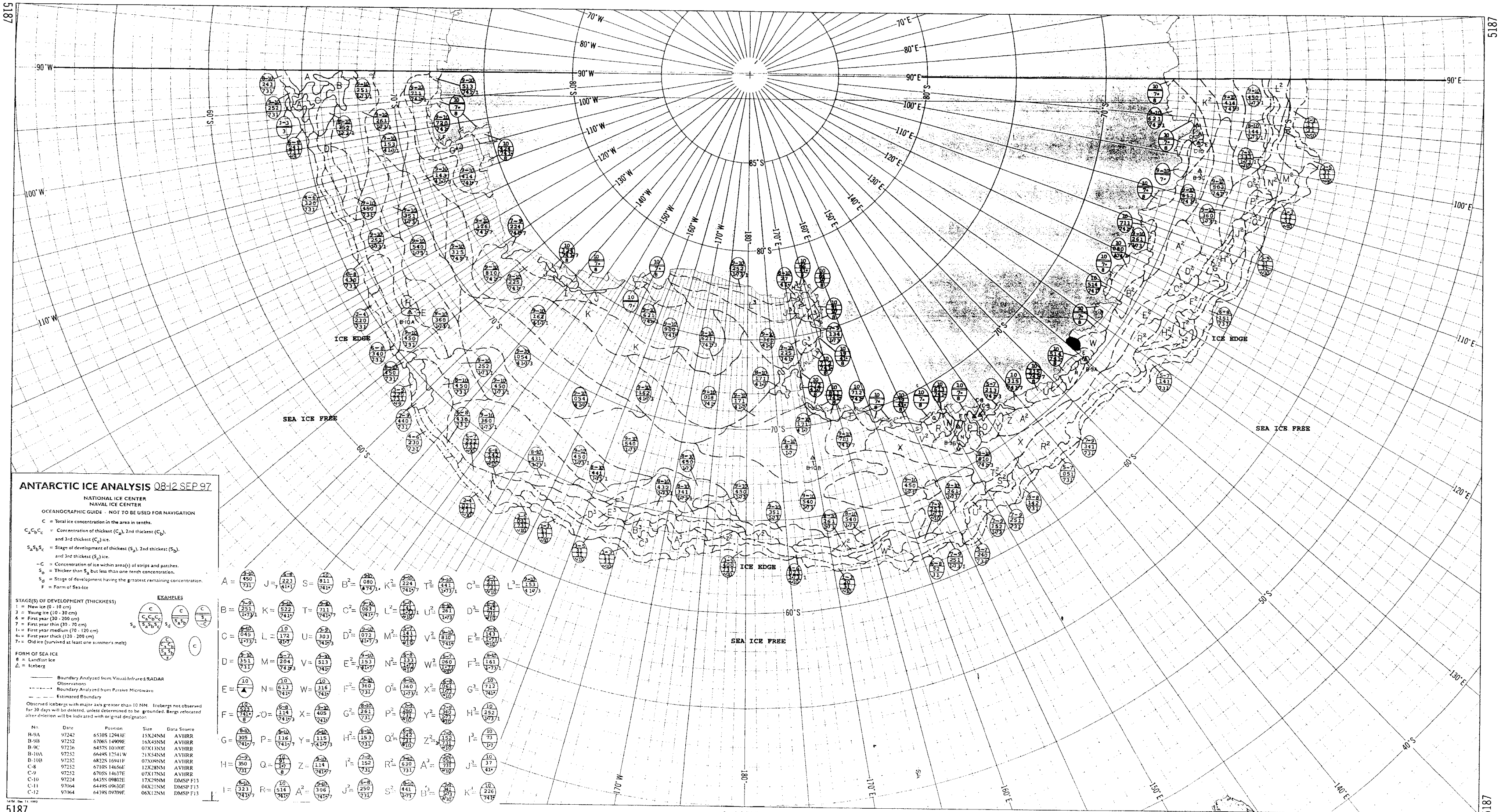
SEA ICE FREE

ICE EDGE

Prepared and published by the
DEFENSE MAPPING AGENCY HYDROGRAPHIC/TOPOGRAPHIC CENTER
Bethesda, MD

Projection: Polar Stereographic

5186



ANTARCTIC ICE ANALYSIS 08-12 SEP 97

NATIONAL ICE CENTER
NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

−C = Concentration of ice within area(s) of strips and patches.

S_o = Thicker than S_a but less than one tenth concentration.

S_d = Stage of development having the greatest remaining concentration.

F = Form of Sea-Ice

STAGE(S) OF DEVELOPMENT (THICKNESS)

1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
6 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)

EXAMPLES

FORM OF SEA-ICE

8 = Landfast Ice
△ = Iceberg

Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Data Source
B-9A	97242	6530S 12943E	15X24NM	AVHRR
B-9B	97252	6706S 14909E	16X45NM	AVHRR
B-9C	97236	6457S 10100E	07X13NM	AVHRR
B-10A	97252	6649S 12541W	21X54NM	AVHRR
B-10B	97252	6822S 16941E	07X09NM	AVHRR
C-8	97252	6710S 14656E	12X28NM	AVHRR
C-9	97252	6705S 14637E	07X17NM	AVHRR
C-10	97224	6435S 09802E	17X29NM	DMSP F13
C-11	97064	6449S 09630E	04X21NM	DMSP F13
C-12	97064	6439S 09709E	06X12NM	DMSP F13

1st Ed., Dec 11, 1993

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ANTARCTIC ICE ANALYSIS 15-19 SEP 97

NATIONAL ICE CENTER
NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

–C = Concentration of ice within area(s) of strips and patches.

S_b = Thicker than S_a but less than one tenth concentration.

S_d = Stage of development having the greatest remaining concentration.

F = Form of Sea Ice

STAGE(S) OF DEVELOPMENT (THICKNESS)

1 = New ice (0 - 10 cm)
2 = Young ice (10 - 30 cm)
4 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1= = First year medium (70 - 120 cm)
4= = First year thick (120 - 200 cm)
7= = Old ice (survived at least one summer's melt)

EXAMPLES

FORM OF SEA ICE

8 = Landfast Ice
△ = Iceberg

——— Boundary Analysed from Visual/Infrared/RADAR Observations
– – – – – Boundary Analysed from Passive Microwave
– – – – – Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Data Source
A-22A	97251	76.20S 064.52W	21X32NM	AVHRR
A-22B	97251	75.96S 064.06W	12X38NM	AVHRR
A-23A	97251	76.10S 040.00W	32X34NM	AVHRR
A-23B	97251	74.25S 036.29W	09X11NM	AVHRR
A-27	97251	76.13S 043.06W	06X10NM	AVHRR
A-35	97251	75.05S 029.03W	16X19NM	AVHRR
D-11	97243	65.37S 050.00E	09X48NM	AVHRR
D-12	97251	68.00S 053.00E	09X22NM	AVHRR
D-14	97194	69.42S 074.51E	09X16NM	AVHRR
D-15	97236	66.49S 081.58E	34X53NM	AVHRR

SEA ICE FREE

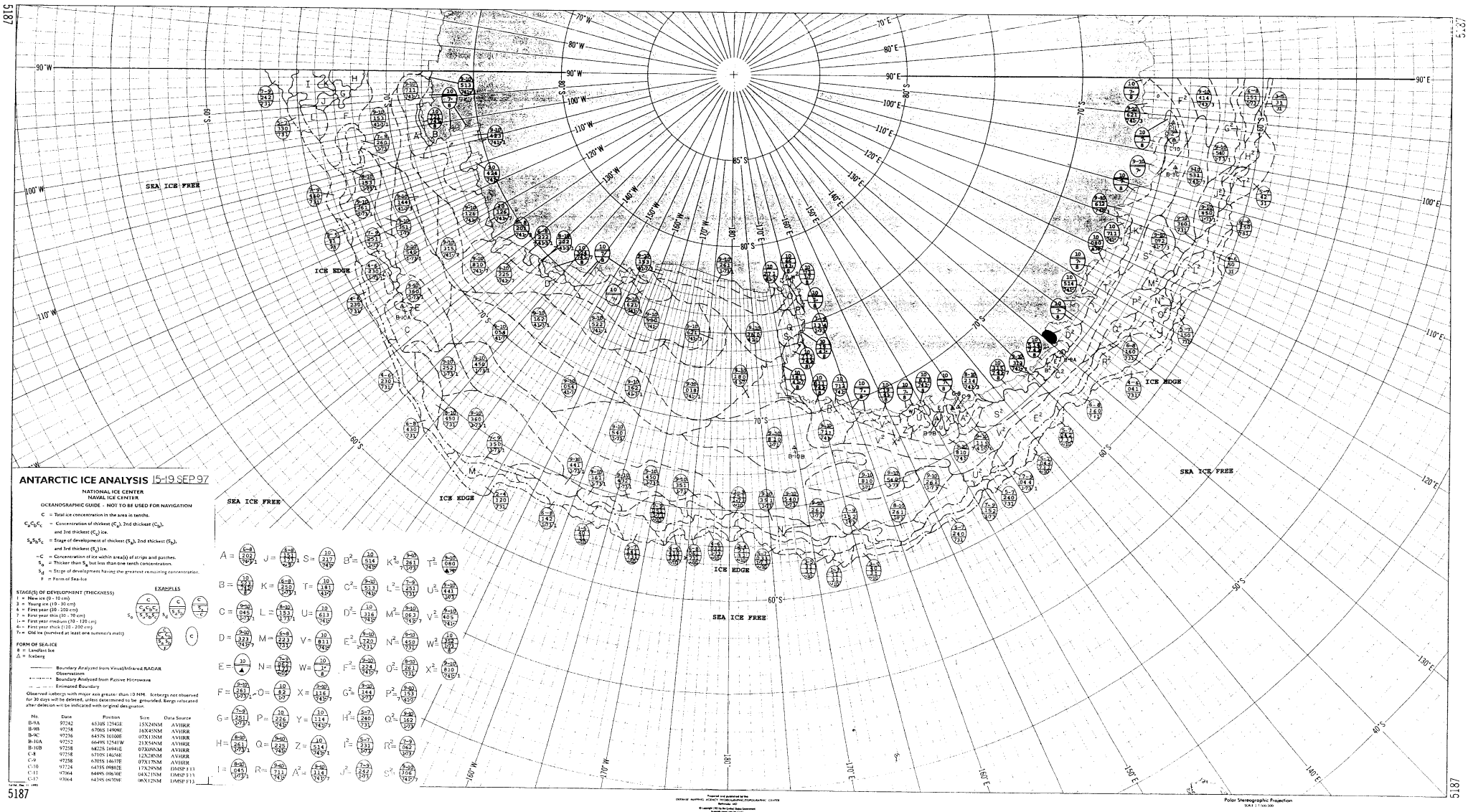
ICE EDGE

SEA ICE FREE

ICE EDGE

Projection - Polar Stereographic

5186



ANTARCTIC ICE ANALYSIS 15-19 SEP 97

NATIONAL ICE CENTER
NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

–C = Concentration of ice within area(s) of strips and patches.

S_b = Thicker than S_a but less than one tenth concentration.

S_d = Stage of development having the greatest remaining concentration.

\+ = Form of Sea-Ice

STAGE(S) OF DEVELOPMENT (THICKNESS)

1 = New ice (0 - 10 cm)
2 = Young ice (10 - 30 cm)
3 = First year (30 - 200 cm)
4 = First year thin (30 - 70 cm)
4+ = First year medium (70 - 120 cm)
5 = First year thick (120 - 200 cm)
7 = Old ice (survived at least one summer's melt)

FORM OF SEA-ICE

8 = Landfast Ice
9 = Iceberg

EXAMPLES

Boundary Analyzed from Visual/Infrared/RADAR Observations

Boundary Analyzed from Passive Microwave

Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designation.

No.	Date	Position	Size	Data Source
B-9A	97242	6530S 12945E	15X24NM	AVHRR
B-9B	97258	6706S 14909E	16X45NM	AVHRR
B-9C	97236	6457S 10300E	07X15NM	AVHRR
B-10A	97252	6649S 12541W	21X56NM	AVHRR
B-10B	97258	6822S 16941E	07X09NM	AVHRR
C-8	97258	6710S 14656E	12X28NM	AVHRR
C-9	97258	6705S 14637E	07X17NM	AVHRR
C-10	97124	6435S 09802E	17X29NM	DMSP F13
C-11	97064	6449S 09610E	04X21NM	DMSP F13
C-12	97064	6436S 09709E	09X12NM	DMSP F13

Polar Stereographic Projection
Scale 1 : 7 500 000

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ANTARCTIC ICE ANALYSIS 22-26 SEP 97

NATIONAL ICE CENTER
NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

C_a $b C_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

$S_a S_b S_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

–C = Concentration of ice within area(s) of strips and patches.

S_b = Thicker than S_a but less than one tenth concentration.

S_d = Stage of development having the greatest remaining concentration.

F = Form of Sea Ice

STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
2 = Young ice (10 - 30 cm)
3 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
4 = First year medium (70 - 120 cm)
5 = First year thick (120 - 200 cm)
8 = Old ice (survived at least one summer's melt)

EXAMPLES

FORM OF SEA ICE
▲ = Landfast Ice
△ = Iceberg

——— Boundary Analyzed from Visual/Infrared/RADAR Observations.
– – – – – Boundary Analyzed from Passive Microwave
— — — Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Data Source
A-22A	97251	76?0S 045?W	21X32NM	AVHRR
A-22B	97251	75?6S 040?W	12X38NM	AVHRR
A-23A	97251	76?0S 040?0W	32X34NM	AVHRR
A-23B	97266	74?0S 038?0W	09X11NM	AVHRR
A-27	97251	76?3S 043?6W	06X10NM	AVHRR
A-35	97251	75?5S 029?5W	16X19NM	AVHRR
D-11	97264	65?7S 050?6E	09X48NM	AVHRR
D-12	97264	68?0S 013?0E	09X22NM	AVHRR
D-14	97194	69?2S 074?1E	09X16NM	AVHRR
D-15	97256	66?4S 081?8E	34X13NM	AVHRR

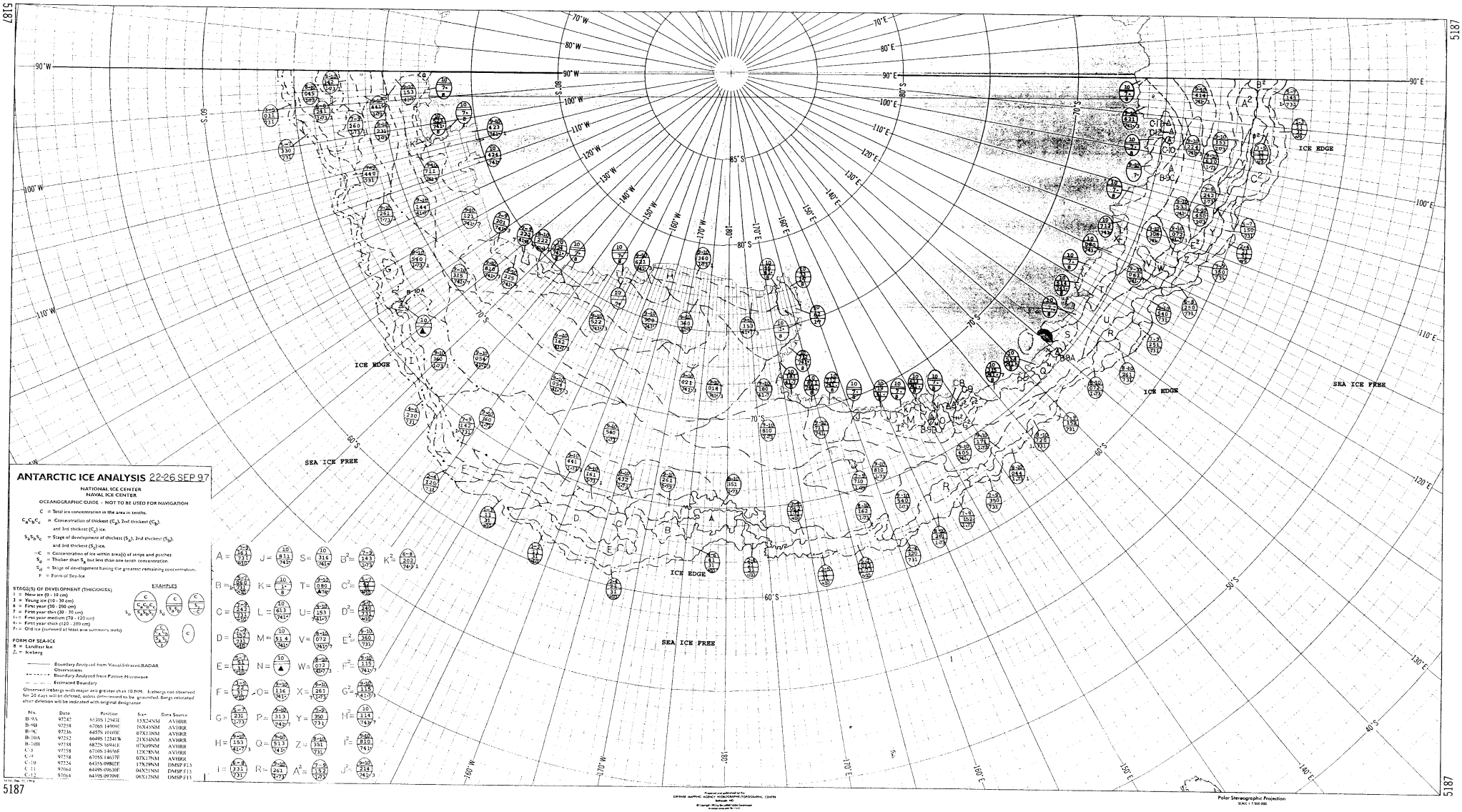
A = J = S =
B = K = T =
C = L = U =
D = M = V =
E = N = W =
F = O = X =
G = P = Y =
H = Q = Z =
I = R =

ICE EDGE
SEA ICE FREE
A-22A
A-22B
A-23A
A-23B
A-27
A-35
D-11
D-12
D-14
D-15

75°S 80°S 85°S
0° 10°W 20°W 30°W 40°W 50°W 60°W 70°W 80°W 90°W 100°W
10°E 20°E 30°E 40°E 50°E 60°E 70°E 80°E 90°E 100°E

Projection - Polar Stereographic

5186


ANTARCTIC ICE ANALYSIS 22-26 SEP 97
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
C = Total ice concentration in the area in tenths.
$C_a C_b C_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.
$S_a S_b S_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
–C = Concentration of ice within area(s) of strips and patches
S_o = Thicker than S_a but less than one tenth concentration.
S_d = Stage of development having the greatest remaining concentration.
F = Form of Sea Ice
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
2 = Young ice (10 - 30 cm)
4 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
8 = First year medium (70 - 120 cm)
9 = First year thick (120 - 200 cm)
7.= Old ice (survived at least one summer's melt)
EXAMPLES
FORM OF SEA ICE
8 = Landfast Ice
△ = Iceberg
Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary
Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 20 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.
No. Date Position Size Data Source
B-9A 97242 65°30S 129°45E 53X24NM AVHRR
B-9B 97258 67°06S 149°09E 76X41NM AVHRR
B-9C 97236 64°57S 101°05E 07X11NM AVHRR
B-10A 97252 66°49S 125°41W 21X54NM AVHRR
B-10B 97258 68°25S 169°41E 07X09NM AVHRR
C-8 97258 67°08S 146°56E 12X38NM AVHRR
C-9 97258 67°05S 146°37E 07X17NM AVHRR
C-10 97224 64°55S 098°02E 17X39NM DMSP F13
C-11 97064 64°49S 096°30E 04X31NM DMSP F13
C-12 97064 64°08S 097°09E 06X12NM DMSP F13
ICE EDGE
SEA ICE FREE
Polar Stereographic Projection
SCALE 1:7,500,000
5187

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ANTARCTIC ICE ANALYSIS 29 SEP-03 OCT 97

NATIONAL ICE CENTER
NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

–C = Concentration of ice within area(s) of strips and patches.

S_d = Thicker than S_a but less than one tenth concentration.

S_d = Stage of development having the greatest remaining concentration.

F = Form of Sea-Ice

STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
2 = Young ice (10 - 30 cm)
3 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1= First year medium (70 - 120 cm)
4= First year thick (120 - 200 cm)
7= Old ice (survived at least one summer's melt)

EXAMPLES

FORM OF SEA-ICE
B = Landfast Ice
△ = Iceberg

Boundary Analysed from Visual/Infrared/RADAR Observations
Boundary Analysed from Passive Microwave
Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Date Source
A-22A	97271	76?0S 04?5?W	21X32NM	AVHRR
A-22B	97271	75?6S 04?6?W	12X28NM	AVHRR
A-23A	97271	76?0S 04?6?W	32X34NM	AVHRR
A-23B	97266	74?0S 03?8?W	09X11NM	AVHRR
A-37	97231	76?3S 04?6?W	06X10NM	AVHRR
A-38	97271	75?0S 02?6?W	16X19NM	AVHRR
D-11	97264	65?7S 07?6?E	09X48NM	AVHRR
D-12	97264	68?0S 03?0?E	09X22NM	AVHRR
D-14	97194	69?42S 07?45?E	09X16NM	AVHRR
D-15	97236	66?9S 08?5?E	34X53NM	AVHRR

0° 10° W 20° W 30° W 40° W 50° W 60° W 70° W 80° W 90° W 100° W 10° E 20° E 30° E 40° E 50° E 60° E 70° E 80° E 90° E 100° E

60° S 70° S 75° S 80° S 85° S

A-22A A-22B A-23A A-23B A-37 A-38 D-11 D-12 D-14 D-15

Projection - Polar Stereographic

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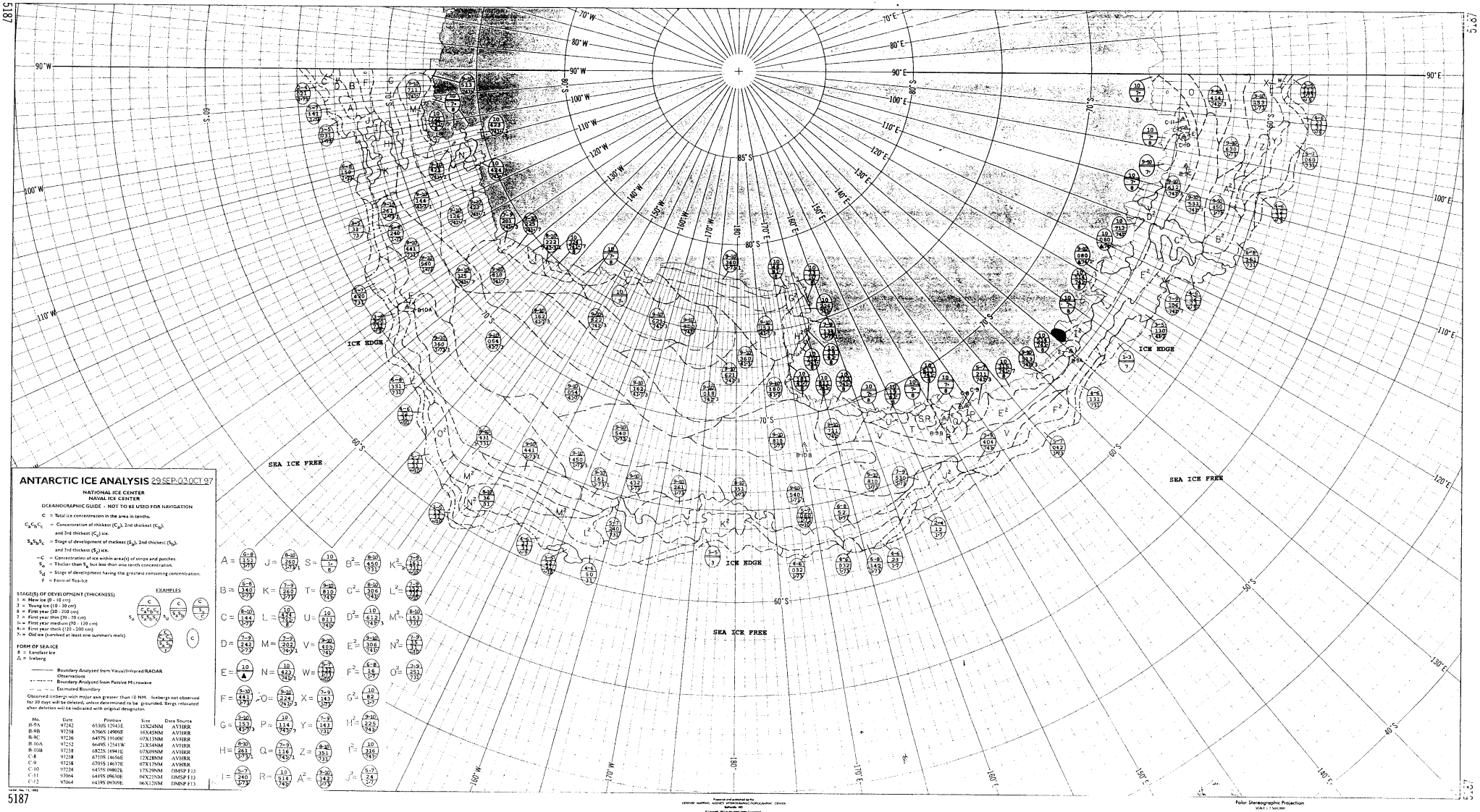
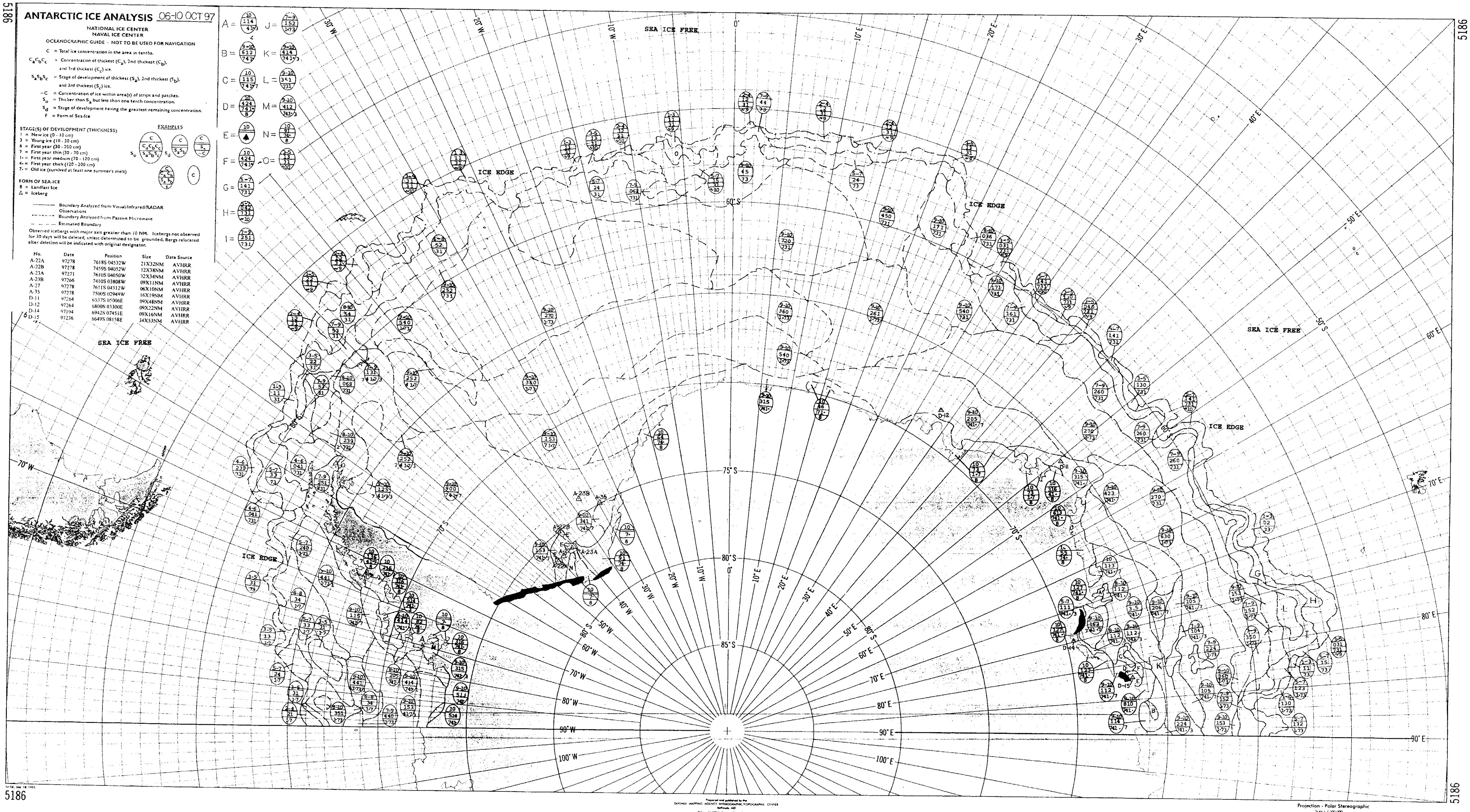

ANTARCTIC ICE ANALYSIS 29SEP-03OCT 97
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
C = Total ice concentration in the area in tenths.
$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.
$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
–C = Concentration of ice within area(s) of stripe and patches.
S_w = Thicker than S_b but less than one tenth concentration.
S_d = Stage of development having the greatest remaining concentration.
F = Form of floe.
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
4 = First year (30 - 200 cm)
7 = First year: thin (30 - 70 cm)
1a = First year medium (70 - 120 cm)
4= First year thick (120 - 200 cm)
7+ = Old ice (survived at least one summer's melt)
EXAMPLES
FORM OF SEA ICE
F = Fast ice
Δ = Iceberg
Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary
Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.
No. Date Position Size Data Source
B-9A 97242 6530S 12943E 15X24NM AVHRR
B-9B 97258 6706S 14909E 16X45NM AVHRR
B-9C 97236 6457S 10100E 07X13NM AVHRR
B-10A 97252 6649S 12541W 21X54NM AVHRR
B-10B 97258 6822S 16941E 07X09NM AVHRR
C-8 97258 6710S 14656E 12X28NM AVHRR
C-9 97258 6705S 14637E 07X17NM AVHRR
C-10 97224 6455S 09802E 17X29NM DMSP F13
C-11 97064 6449S 09630E 04X21NM DMSP F13
C-12 97064 6439S 09709E 16X32NM DMSP F13
ICE EDGE
SEA ICE FREE
70°W
80°W
90°W
100°W
110°W
120°W
130°W
140°W
150°W
160°W
170°W
180°
170°E
160°E
150°E
140°E
130°E
120°E
110°E
100°E
90°E
80°E
70°E
85°S
80°S
70°S
60°S
50°S
40°S
Polar Stereographic Projection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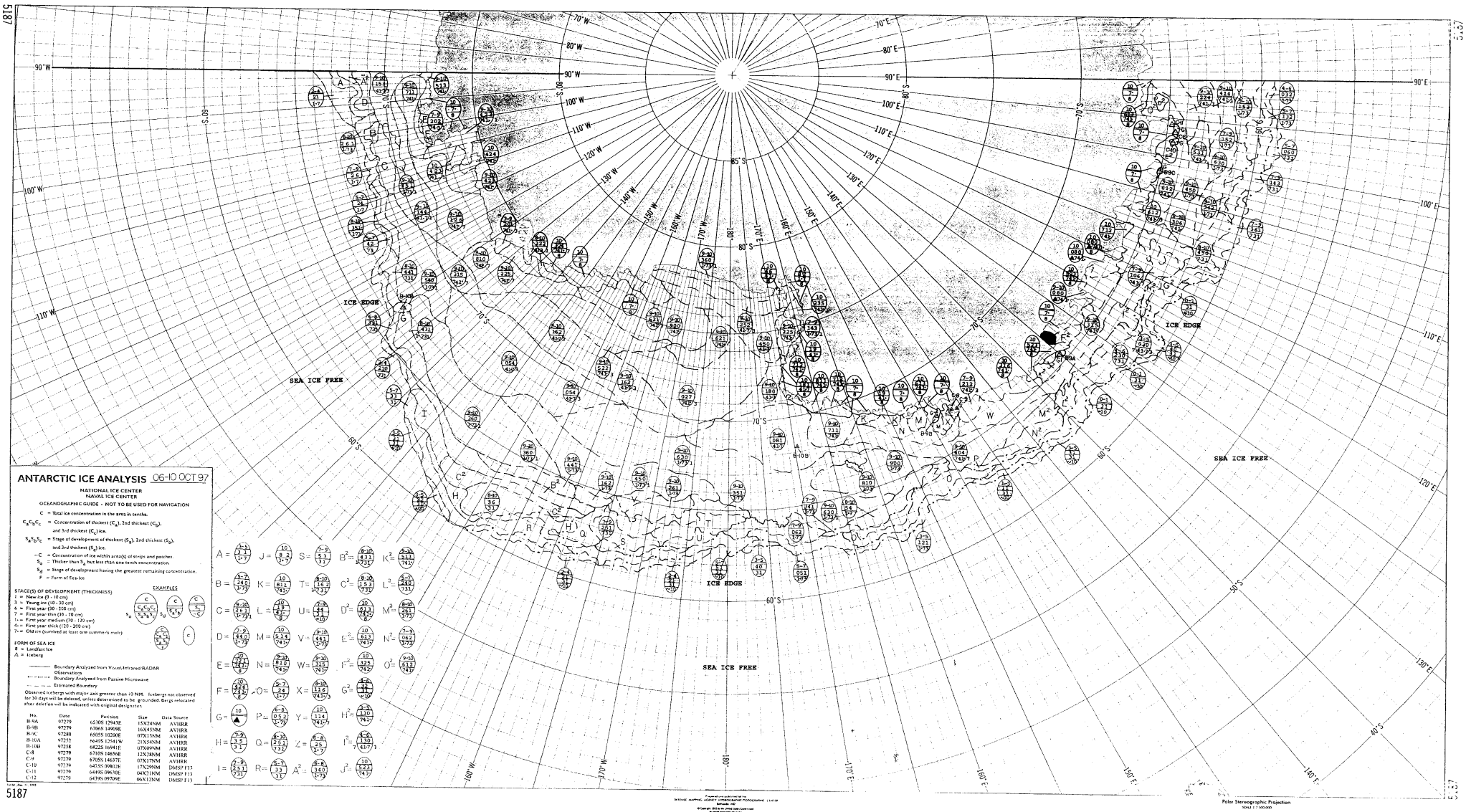
ANTARCTIC ICE ANALYSIS 06-10 OCT 97
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
C = Total ice concentration in the area in tenths.
CaCbCc = Concentration of thickest (Ca), 2nd thickest (Cb), and 3rd thickest (Cc) ice.
SaSbSc = Stage of development of thickest (Sa), 2nd thickest (Sb), and 3rd thickest (Sc) ice.
~C = Concentration of ice within area(s) of strips and patches.
So = Thicker than Sa but less than one tenth concentration.
Sd = Stage of development having the greatest remaining concentration.
F = Form of Sea-Ice
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
6 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)
EXAMPLES
FORM OF SEA-ICE
8 = Landfast Ice
△ = Iceberg
Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary
Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.
No. Date Position Size Data Source
A-22A 97278 7618S 04532W 21X32NM AVHRR
A-22B 97278 7459S 04052W 12X38NM AVHRR
A-23A 97271 7610S 04050W 32X34NM AVHRR
A-23B 97266 7410S 03808W 09X11NM AVHRR
A-27 97278 7611S 04312W 06X10NM AVHRR
A-35 97278 7500S 02949W 16X19NM AVHRR
D-11 97264 6537S 05006E 09X48NM AVHRR
D-12 97264 6800S 03300E 09X22NM AVHRR
D-14 97194 6942S 07451E 09X16NM AVHRR
D-15 97236 6649S 08158E 34X53NM AVHRR
SEA ICE FREE
ICE EDGE
SEA ICE FREE
ICE EDGE
ICE EDGE
SEA ICE FREE
ICE EDGE
60°S
70°S
75°S
80°S
85°S
0°
10°E
20°E
30°E
40°E
50°E
60°E
70°E
80°E
90°E
100°E
10°W
20°W
30°W
40°W
50°W
60°W
70°W
80°W
90°W
100°W
A-23B
A-35
A-22B
A-23A
A-22A
D-11
D-12
D-14
D-15
Projection - Polar Stereographic
5186


ANTARCTIC ICE ANALYSIS 06-10 OCT 97
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
C = Total ice concentration in the area in tenths.
$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.
$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.
-C = Concentration of ice within area(s) of strips and patches.
S_x = Thicker than S_a but less than one tenth concentration.
S_d = Stage of development having the greatest remaining concentration.
F = Form of Sea Ice
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
2 = Young ice (10 - 30 cm)
3 = First year (30 - 120 cm)
4 = First year thin (30 - 70 cm)
5 = First year medium (70 - 120 cm)
6 = First year thick (120 - 200 cm)
7 = Old ice (survived at least one summer's melt)
EXAMPLES
FORM OF SEA ICE
B = Landfast Ice
Δ = Iceberg
Boundary Analysed from Visual/Infrared RADAR Observations
Boundary Analysed from Passive Microwave
Estimated Boundary
Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.
No. Date Position Size Data Source
B-9A 97279 65109 12943E 15X24NM AVHRR
B-9B 97279 67065 14909E 16X45NM AVHRR
B-9C 97280 65055 10200E 07X13NM AVHRR
B-10A 97253 66495 12541W 21X50NM AVHRR
B-10B 97258 68225 16941E 07X09NM AVHRR
C-8 97279 67105 14656E 12X28NM AVHRR
C-9 97279 67055 14637E 07X17NM AVHRR
C-10 97279 64155 09812E 17X29NM DMSP F13
C-11 97279 64495 09630E 04X21NM DMSP F13
C-12 97259 64395 09709E 06X12NM DMSP F13
ICE EDGE
SEA ICE FREE
Polar Stereographic Projection

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ANTARCTIC ICE ANALYSIS 13-17 OCT 97

NATIONAL ICE CENTER
NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

$-C$ = Concentration of ice within area(s) of strips and patches.

S_o = Thicker than S_a but less than one tenth concentration.

S_d = Stage of development having the greatest remaining concentration.

F = Form of Sea-Ice

STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
6 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)

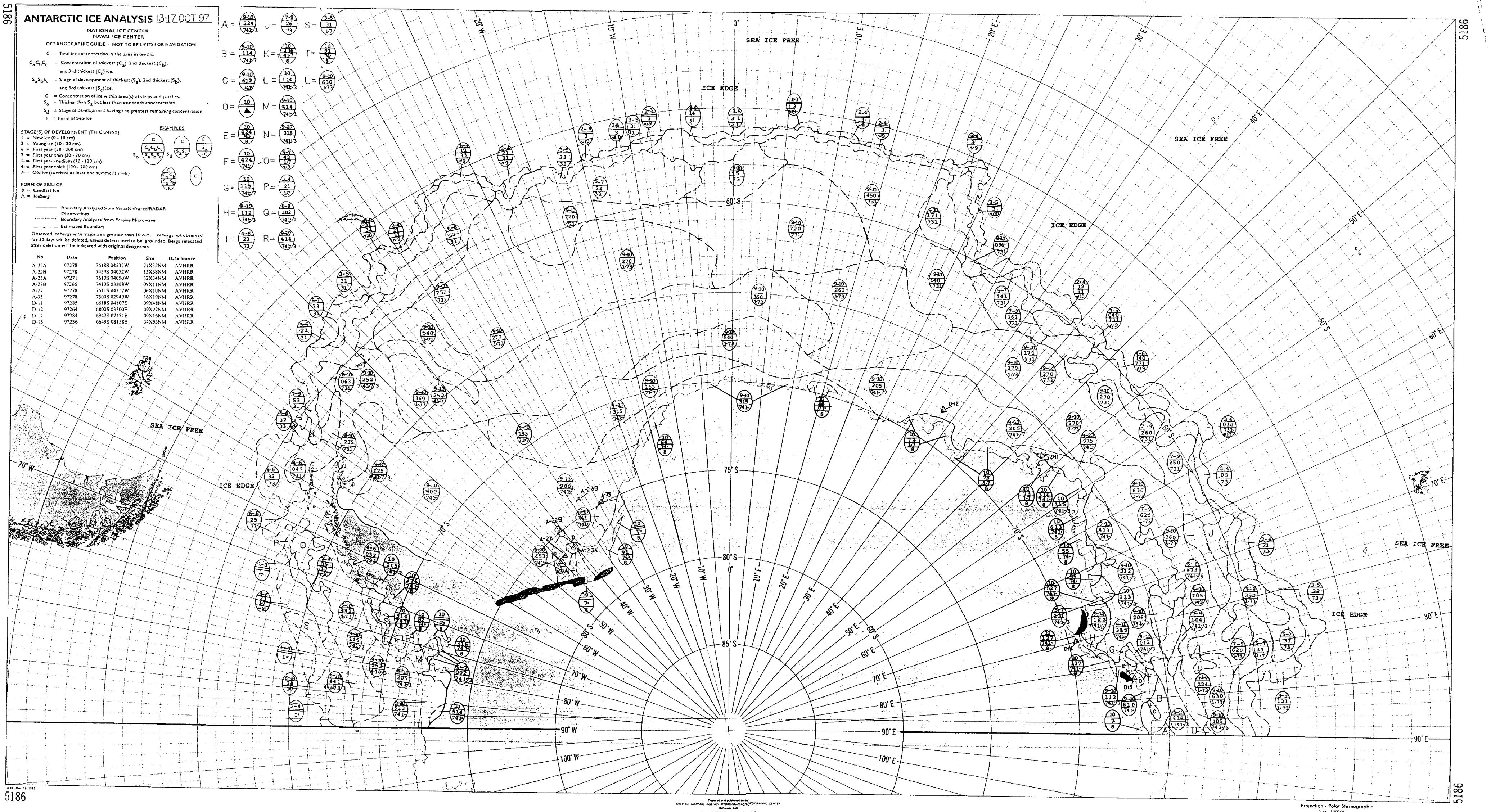
FORM OF SEA-ICE
8 = Landfast Ice
△ = Iceberg

EXAMPLES

Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Data Source
A-22A	97278	7618S 04532W	21X32NM	AVHRR
A-22B	97278	7459S 04052W	12X38NM	AVHRR
A-23A	97271	7610S 04050W	32X34NM	AVHRR
A-23B	97266	7410S 03308W	09X11NM	AVHRR
A-27	97278	7611S 04312W	06X10NM	AVHRR
A-35	97278	7500S 02949W	16X19NM	AVHRR
D-11	97285	6618S 04807E	09X48NM	AVHRR
D-12	97264	6800S 03300E	09X22NM	AVHRR
D-14	97284	6942S 07451E	09X16NM	AVHRR
D-15	97236	6649S 08158E	34X53NM	AVHRR



Projection - Polar Stereographic

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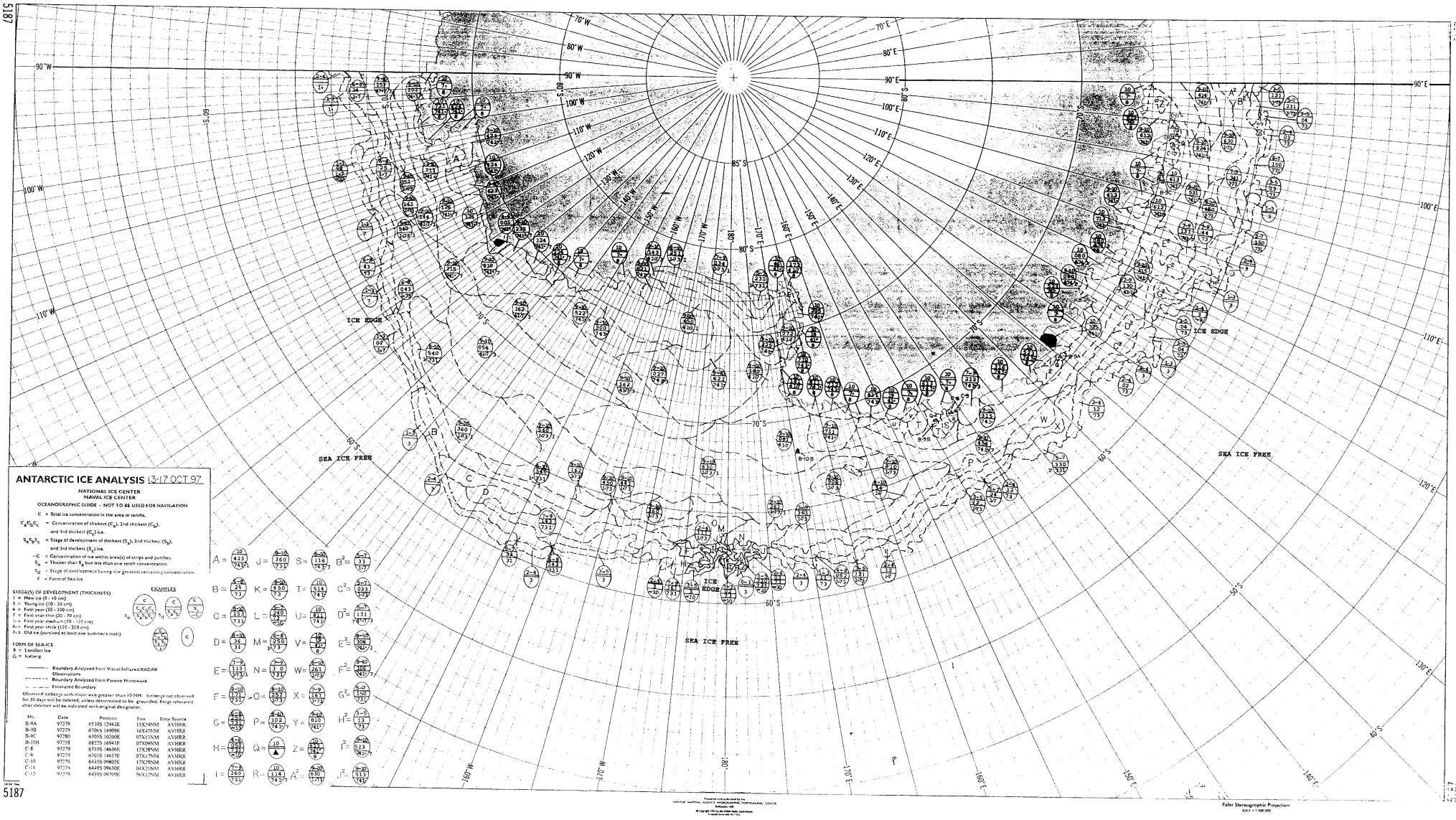
ANTARCTIC ICE ANALYSIS 13-17 OCT 97
NATIONAL ICE CENTER
NAVAL ICE CENTER
OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION
C = Total ice concentration in the area in tenths.
$C_tC_2C_3$ = Concentration of thickest (C_t), 2nd thickest (C_2), and 3rd thickest (C_3) ice.
$S_tS_2S_3$ = Stage of development of thickest (S_t), 2nd thickest (S_2), and 3rd thickest (S_3) ice.
-C = Concentration of ice within area(s) of strips and patches.
S_p = Thicker than S_t but less than one tenth concentration.
S_d = Stage of development having the greatest remaining concentration.
F = Form of Sea-Ice
EXAMPLES
STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
2 = Young ice (10 - 30 cm)
4 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1.= First year medium (70 - 120 cm)
4.= First year thick (120 - 200 cm)
7.= Old ice (survived at least one summer's melt)
FORM OF SEA-ICE
B = Landfast Ice
Δ = Iceberg
Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary
Observed icebergs with major axis greater than 10 NM. Iceberg not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.
No. Date Position Size Data Source
B-9A 97279 6530S 12943E 15X34NM AVHRR
B-9B 97279 6706S 14909E 16X45NM AVHRR
B-9C 97280 6505S 10200E 07X15NM AVHRR
B-10B 97258 6825S 16941E 07X09NM AVHRR
C-8 97279 6710S 14656E 12X38NM AVHRR
C-9 97279 6705S 14637E 07X17NM AVHRR
C-10 97279 6435S 09802E 17X29NM AVHRR
C-11 97279 6449S 09630E 04X21NM AVHRR
C-12 97279 6439S 09709E 06X12NM AVHRR
ICE EDGE
SEA ICE FREE
Polar Stereographic Projection
SCALE 1:1,500,000
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ANTARCTIC ICE ANALYSIS 20-21OCT97

NATIONAL ICE CENTER
NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

$-C$ = Concentration of ice within area(s) of strips and patches.

S_g = Thicker than S_a but less than one tenth concentration.

S_d = Stage of development having the greatest remaining concentration.

T = Form of Sea Ice

EXAMPLES

STAGE(S) OF DEVELOPMENT (THICKNESS)
1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
4 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)

FORM OF SEA-ICE
B = Landfast ice
△ = Iceberg

——— Boundary Analyzed from Visual/Infrared/RADAR Observations
– – – – Boundary Analyzed from Passive Microwave
— — — Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Data Source
A-22A	97278	7618S 04532W	21X32NM	AVHRR
A-22B	97278	7459S 04052W	12X38NM	AVHRR
A-23A	97271	7618S 04050W	32X34NM	AVHRR
A-23B	97292	7304S 01930W	09X11NM	AVHRR
A-27	97278	7611S 04312W	06X10NM	AVHRR
A-35	97278	7500S 02949W	16X19NM	AVHRR
D-11	97292	6628S 04729E	09X48NM	AVHRR
D-12	97292	6911S 02827E	09X22NM	AVHRR
D-14	97284	6942S 07451E	09X16NM	AVHRR
D-15	97236	6649S 08158E	34X53NM	AVHRR

SEA ICE FREE

ICE EDGE

Projection - Polar Stereographic
Scale 1:7,500,000

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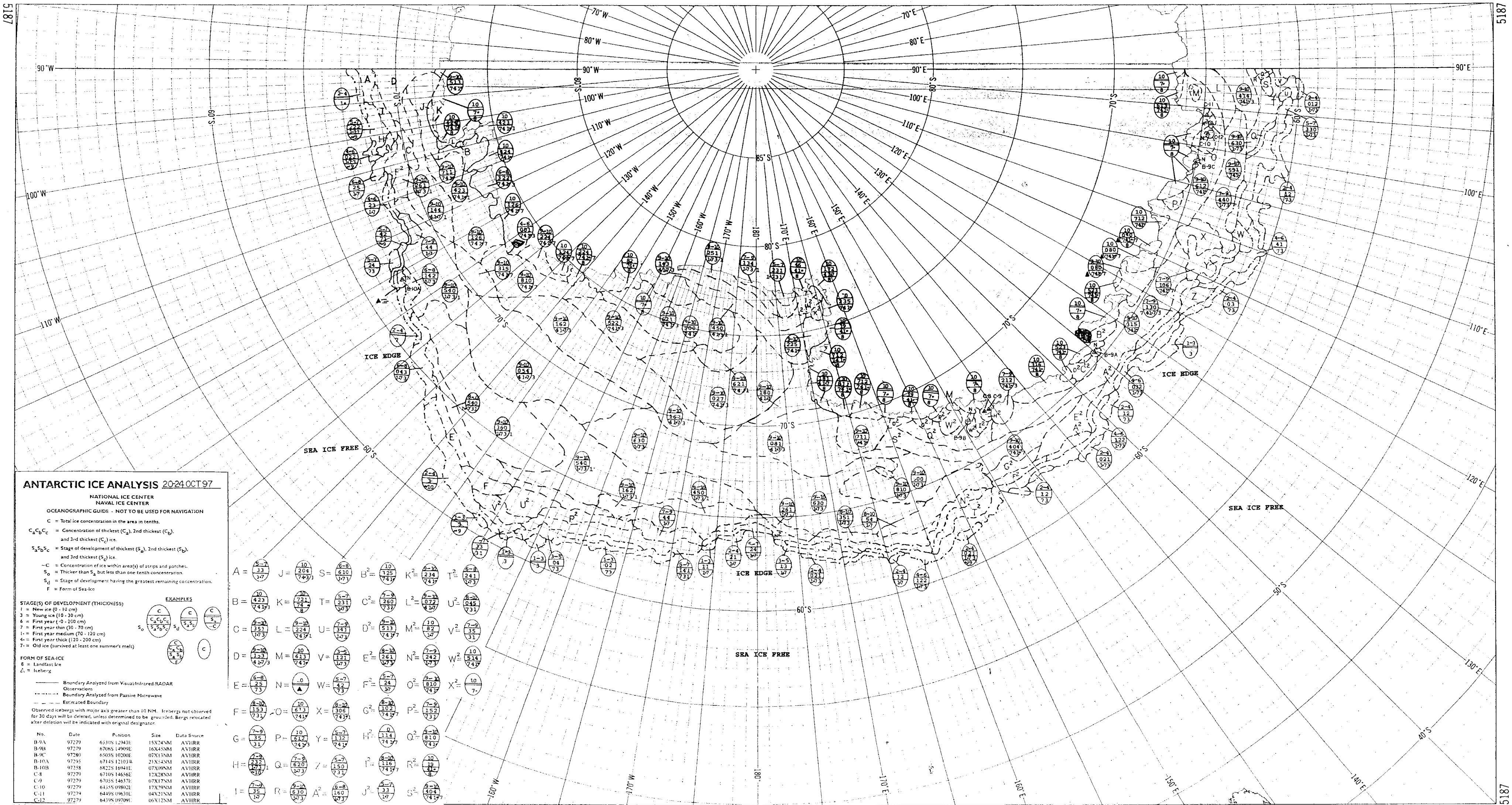

ANTARCTIC ICE ANALYSIS 20-24 OCT 97

NATIONAL ICE CENTER
NAVAL ICE CENTER

OCEANOGRAPHIC GUIDE - NOT TO BE USED FOR NAVIGATION

C = Total ice concentration in the area in tenths.

$C_aC_bC_c$ = Concentration of thickest (C_a), 2nd thickest (C_b), and 3rd thickest (C_c) ice.

$S_aS_bS_c$ = Stage of development of thickest (S_a), 2nd thickest (S_b), and 3rd thickest (S_c) ice.

~C = Concentration of ice within area(s) of strips and patches.

S_o = Thicker than S_a but less than one tenth concentration.

S_d = Stage of development having the greatest remaining concentration.

F = Form of Sea-Ice

EXAMPLES

STAGE(S) OF DEVELOPMENT (THICKNESS)

1 = New ice (0 - 10 cm)
3 = Young ice (10 - 30 cm)
6 = First year (30 - 200 cm)
7 = First year thin (30 - 70 cm)
1• = First year medium (70 - 120 cm)
4• = First year thick (120 - 200 cm)
7• = Old ice (survived at least one summer's melt)

FORM OF SEA-ICE

8 = Landfast Ice
Δ = Iceberg

Boundary Analyzed from Visual/Infrared/RADAR Observations
Boundary Analyzed from Passive Microwave
Estimated Boundary

Observed icebergs with major axis greater than 10 NM. Icebergs not observed for 30 days will be deleted, unless determined to be grounded. Bergs relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Data Source
B-9A	97279	6530S 12943E	15X24NM	AVHRR
B-9B	97279	6706S 14909E	16X45NM	AVHRR
B-9C	97280	6505S 10200E	07X13NM	AVHRR
B-10A	97295	6714S 12103W	21X54NM	AVHRR
B-10B	97258	6822S 16941E	07X09NM	AVHRR
C-8	97279	6710S 14656E	12X28NM	AVHRR
C-9	97279	6705S 14637E	07X17NM	AVHRR
C-10	97279	6435S 09802E	17X29NM	AVHRR
C-11	97279	6449S 09630E	04X21NM	AVHRR
C-12	97279	6439S 09709E	06X12NM	AVHRR

1st Ed., Dec. 11, 1993