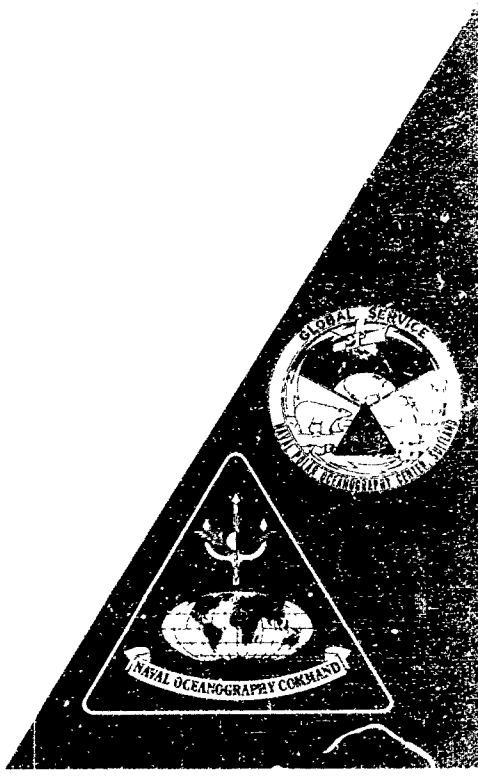
(1)

EASTERN—WESTERN ARCTIC SEA ICE ANALYSIS 1988

PREPARED BY
NAVAL POLAR OCEANOGRAPHY CENTER
SUITLAND, MD

PREPARED UNDER AUTHORITY OF
COMMANDER, NAVAL OCEANOGRAPHY COMMAND
STENNIS SPACE CENTER, MS 39529-5000



FOREWORD

The U.S. Navy has a long and eventful history of polar exploration from Robert E. Peary in the Arctic to Richard E. Byrd in the Antarctic. In recent years the strategic importance and expanded research pursuits in these areas have resulted in greater national and international requirements for environmental information. Since 1976, the National Oceanic and Atmospheric Administration (NOAA) and the Navy have worked together at the Joint Ice Center (JIC) in Suitland, Maryland. By combining the Navy's experience in observing and recording sea ice data, and NOAA's expertise in satellite data collection and interpretation, the JIC has been able to keep pace with that demand in both polar regions.

This publication is the 15th edition of the Arctic sea ice atlases prepared by the JIC. The atlas contains weekly charts depicting Northern Hemisphere and Great Lakes ice conditions and extent. The significant use of high resolution satellite imagery, combined with valuable ice reconnaissance data from various sources, has greatly improved the accuracy of these analyses.

The purpose of this atlas is to provide the user with reliable weekly hemispheric ice analyses. Both Navy and NOAA personnel with considerable experience in sea ice analysis prepare the analyses. The following procedures have been developed to ensure the quality of the final products:

a. Conventional shore station, ship and aerial ice reconnaissance observations are plotted and evaluated.

b. Satellite data from different sensors is compared and analyzed for ice information content. Table I, located on the inside back cover, summarizes satellite data availability for 1988.

c. A final product results from a. and b. However, where insufficient data is available, an estimated boundary will be depicted. Meteorological data and computer generated ice drift vectors are utilized to determine the estimated ice edge position.

Navy/NOAA Joint Ice Center
Naval Polar Oceanography Center
4301 Suitland Road
Washington, DC 20395-5180

SECURITY CLASSIFICATION OF THIS PAGE

REPORT DOCUMENTATION PAGE

1a REPORT SECURITY CLASSIFICATION UNCLASSIFIED	1b RESTRICTIVE MARKINGS
2a SECURITY CLASSIFICATION AUTHORITY	3 DISTRIBUTION / AVAILABILITY OF REPORT Public Release/Distribution Unlimited
2b DECLASSIFICATION / DOWNGRADING SCHEDULE	
4 PERFORMING ORGANIZATION REPORT NUMBER(S)	5 MONITORING ORGANIZATION REPORT NUMBER(S)
6a NAME OF PERFORMING ORGANIZATION National Climatic Data Center 6b OFFICE SYMBOL (*If applicable*)	7a. NAME OF MONITORING ORGANIZATION Naval Oceanography Command Detachment Asheville
6c ADDRESS (*City, State, and ZIP Code*) Federal Building Asheville, NC 28801-2696	7b ADDRESS (*City, State, and ZIP Code*) Federal Building Asheville, NC 28801-2696
8a NAME OF FUNDING / SPONSORING ORGANIZATION Naval Oceanography Command 8b OFFICE SYMBOL (*If applicable*)	9 PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER
8c ADDRESS (*City, State, and ZIP Code*) Stennis Space Center, MS 39529-5000	10 SOURCE OF FUNDING NUMBERS PROGRAM ELEMENT NO / PROJECT NO / TASK NO / WORK UNIT ACCESSION NO

11 TITLE (*Include Security Classification*)
EASTERN-WESTERN ARCTIC SEA ICE ANALYSIS:1988

12 PERSONAL AUTHOR(S)

13a TYPE OF REPORT	13b TIME COVERED	14 DATE OF REPORT (*Year, Month, Day*)	15 PAGE COUNT
Final	FROM _____ TO _____	1988	

16 SUPPLEMENTARY NOTATION

17 COSATI CODES			18 SUBJECT TERMS (*Continue on reverse if necessary and identify by block number*)
FIELD	GROUP	SUB-GROUP	Sea ice, polar ice fields, satellite imagery, concentration, stage of development, fast ice, concentration of thickness, theoretical thickness, Arctic

19 ABSTRACT (*Continue on reverse if necessary and identify by block number*)

These are approximately 7-day analyses of sea ice prepared by the Naval Polar Oceanography Center, Suitland, MD. Included are ice concentrations, and thickness of ice thickness (age) and age determination.

20. DISTRIBUTION / AVAILABILITY OF ABSTRACT ☐ UNCLASSIFIED/UNLIMITED ☒ SAME AS RPT ☐ DTIC USERS	21 ABSTRACT SECURITY CLASSIFICATION Unclassified
22a NAME OF RESPONSIBLE INDIVIDUAL Brian L. Wallace	22b TELEPHONE (*Include Area Code*) (704) 252-7865 22c OFFICE SYMBOL

DD FORM 1473, 84 MAR 83 APR edition may be used until exhausted
All other editions are obsolete

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INSTRUCTIONS FOR PREPARATION OF REPORT DOCUMENTATION PAGE

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Block 1a Report Security Classification Designate the highest security classification of the report (See DoD 5220 1-R, Chapters I, IV, VII, XI, Appendix A.)

Block 1b Restricted Marking: Enter the restricted marking or warning notice of the report (e g., CNWDI, RD, NATO).

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Block 5 Monitoring Organization Report Number(s) Enter the unique alphanumeric report number(s) assigned by the Monitoring Agency This should be a number assigned by a DoD or other government agency and should be in accordance with ANSI STD 239 23-74 If the Monitoring Agency is the same as the Performing Organization, enter the report number in Block 4 and leave Block 5 blank

Block 6a Name of Performing Organization For in-house reports, enter the name of the performing activity For reports prepared under contract or grant, enter the contractor or the grantee who generated the report and identify the appropriate corporate division, school, laboratory, etc., of the author

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Block 12. Personal Author(s): Give the complete name(s) of the author(s) in this order: last name, first name, and middle name. In addition, list the affiliation of the authors if it differs from that of the performing organization

List all authors. If the document is a compilation of pa s, it may be more useful to list the authors with the titles of their papers as a contents note in the abstract in Block 19. If appropriate, the names of editors and compilers may be entered in this block

Block 13a. Type of Report: Indicate whether the report is summary, final, annual, progress, interim, etc.

Block 13b. Time Covered: Enter the inclusive dates (*year, month, day*) of the period covered, such as the life of a contract in a final contractor report.

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Field - to indicate subject coverage of report.

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Example: The subject "Solid Rocket Motors" is Field 21, Group 08, Subgroup 2 (page 32, AD-624 000).

Block 18. Subject Terms: These may be descriptors, keywords, posting terms, identifiers, open-ended terms, subject headings, acronyms, code words, or any words or phrases that identify the principal subjects covered in the report, and that conform to standard terminology and are exact enough to be used as subject index entries Certain acronyms or "buzz words" may be used if they are recognized by specialists in the field and have a potential for becoming accepted terms. "Laser" and "Reverse Osmosis" were once such terms.

If possible, this set of terms should be selected so that the terms individually and as a group will remain UNCLASSIFIED without losing meaning. However, priority must be given to specifying proper subject terms rather than making the set of terms appear "UNCLASSIFIED " Each term on classified reports must be immediately followed by its security classification, enclosed in parentheses

For reference on standard terminology the "DTIC Retrieval and Indexing Terminology" DRIT-1979, AD-A068 500, and the DoD "Thesaurus of Engineering and Scientific Terms (TEST) 1968, AD-672 000, may be useful

Block 19. Abstract: The abstract should be a pithy, brief (preferably not to exceed 300 words), factual summary of the most significant information contained in the report. However, since the abstract may be machine-searched, all specific and meaningful words and phrases which express the subject content of the report should be included, even if the word limit is exceeded

If possible, the abstract of a classified report should be unclassified and consist of publicly releasable information (Unlimited), but in no instance should the report content description be sacrificed for the security classification

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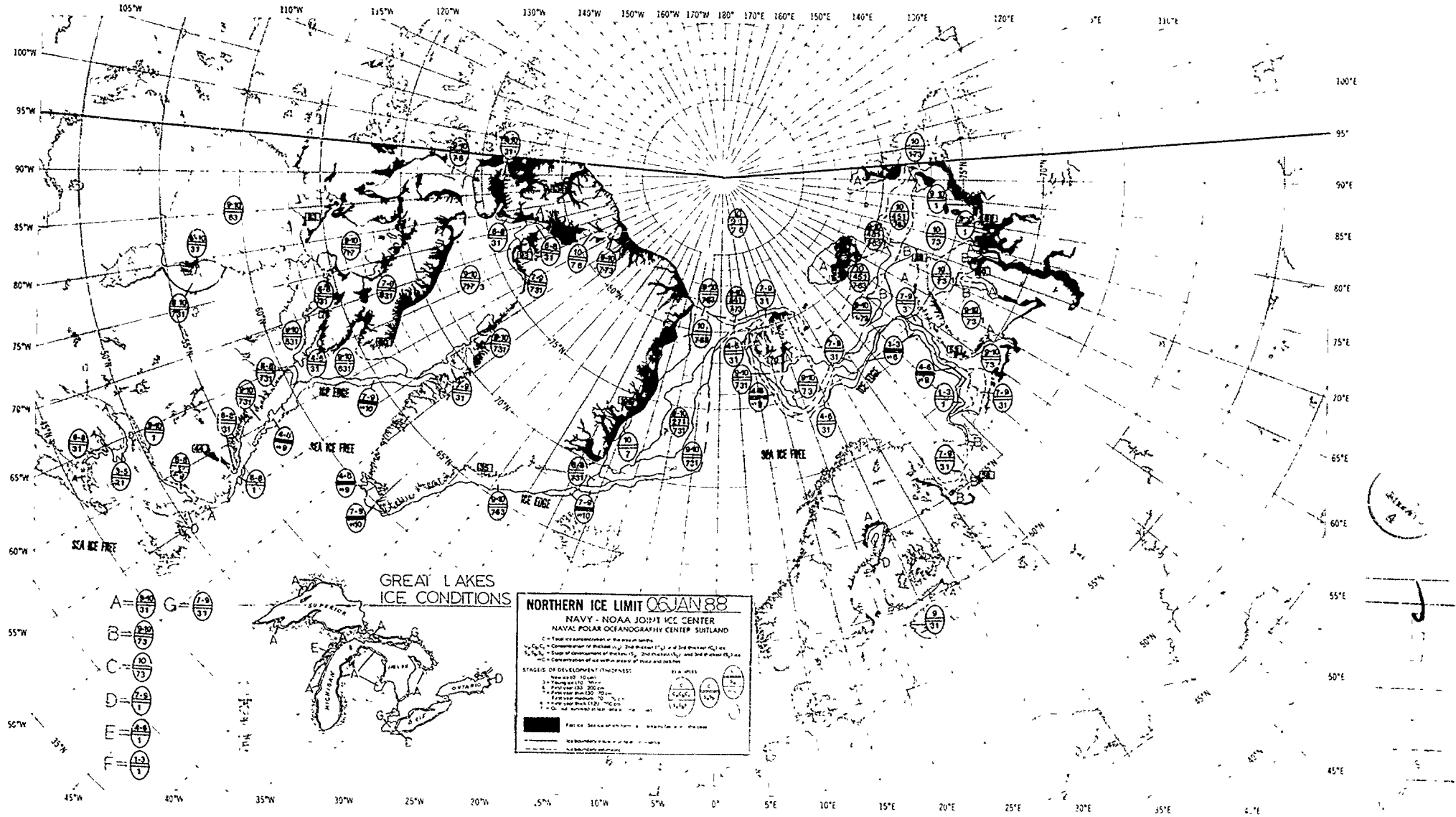
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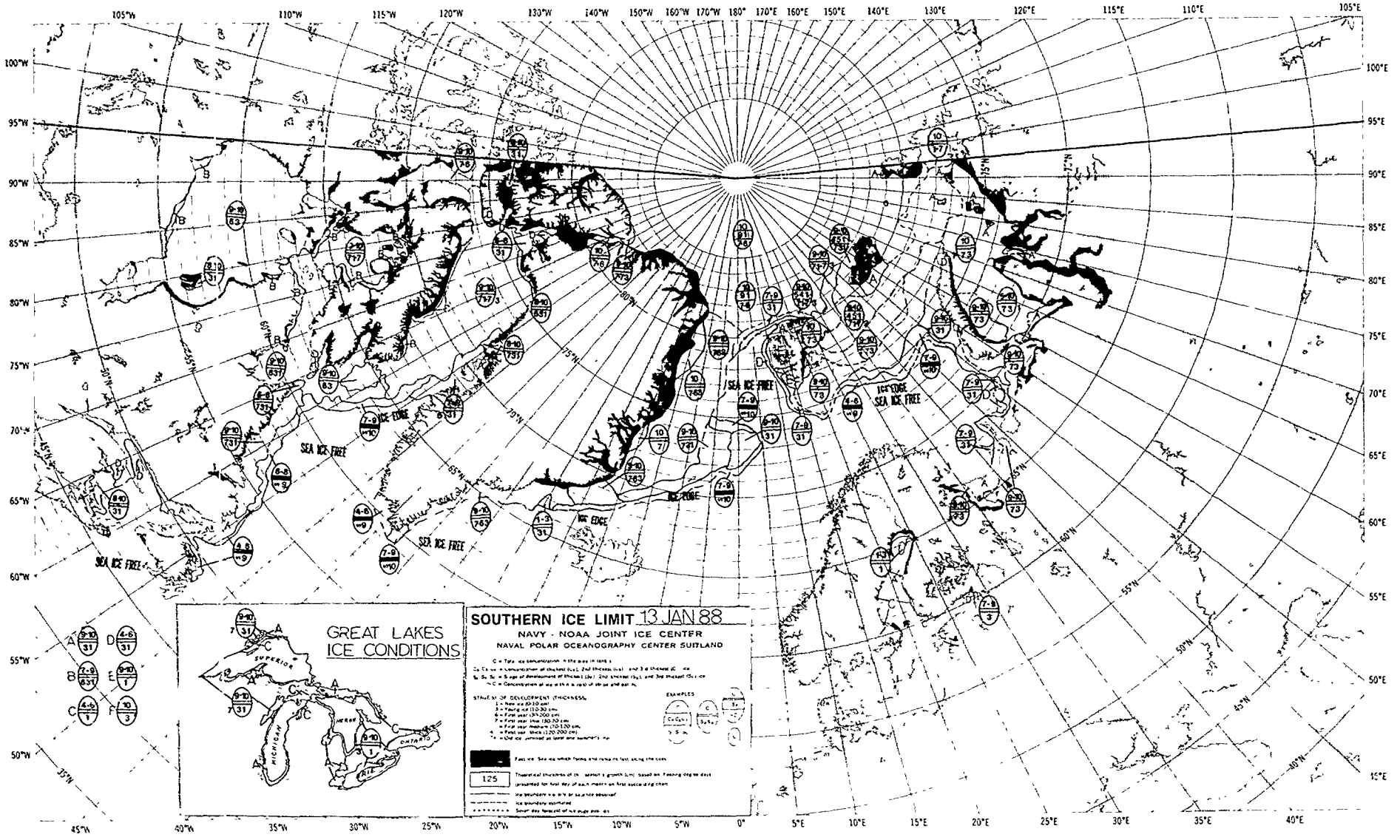
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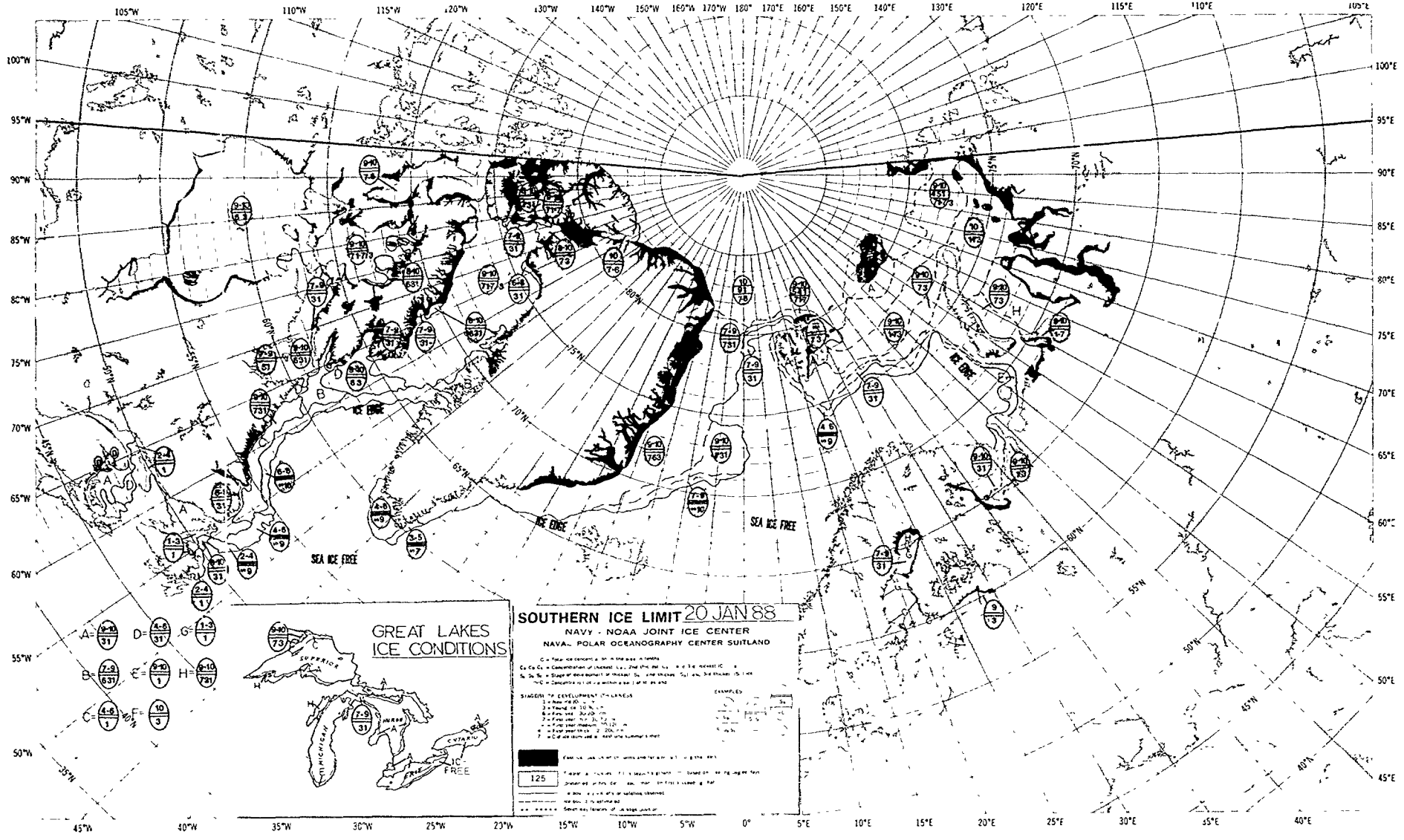
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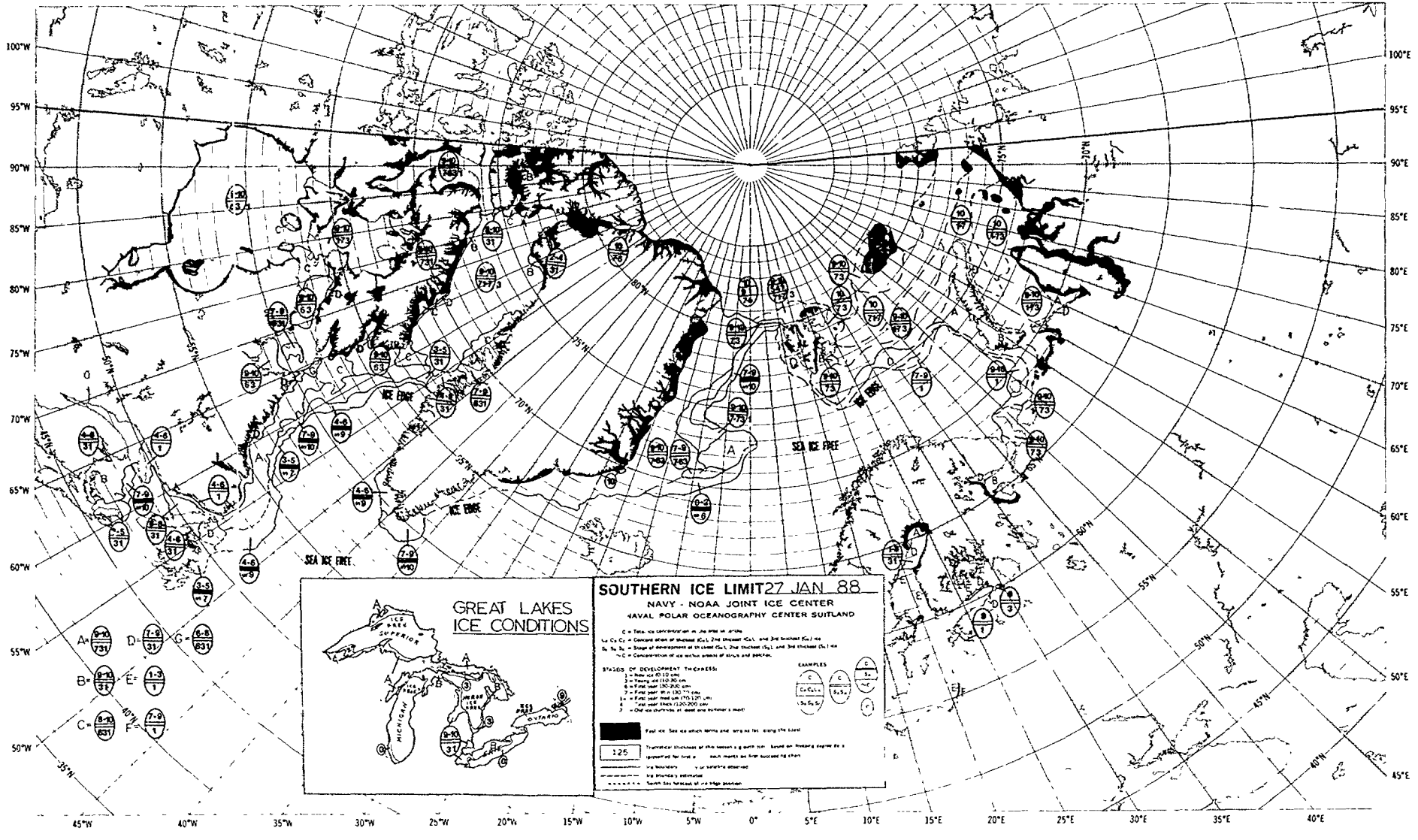
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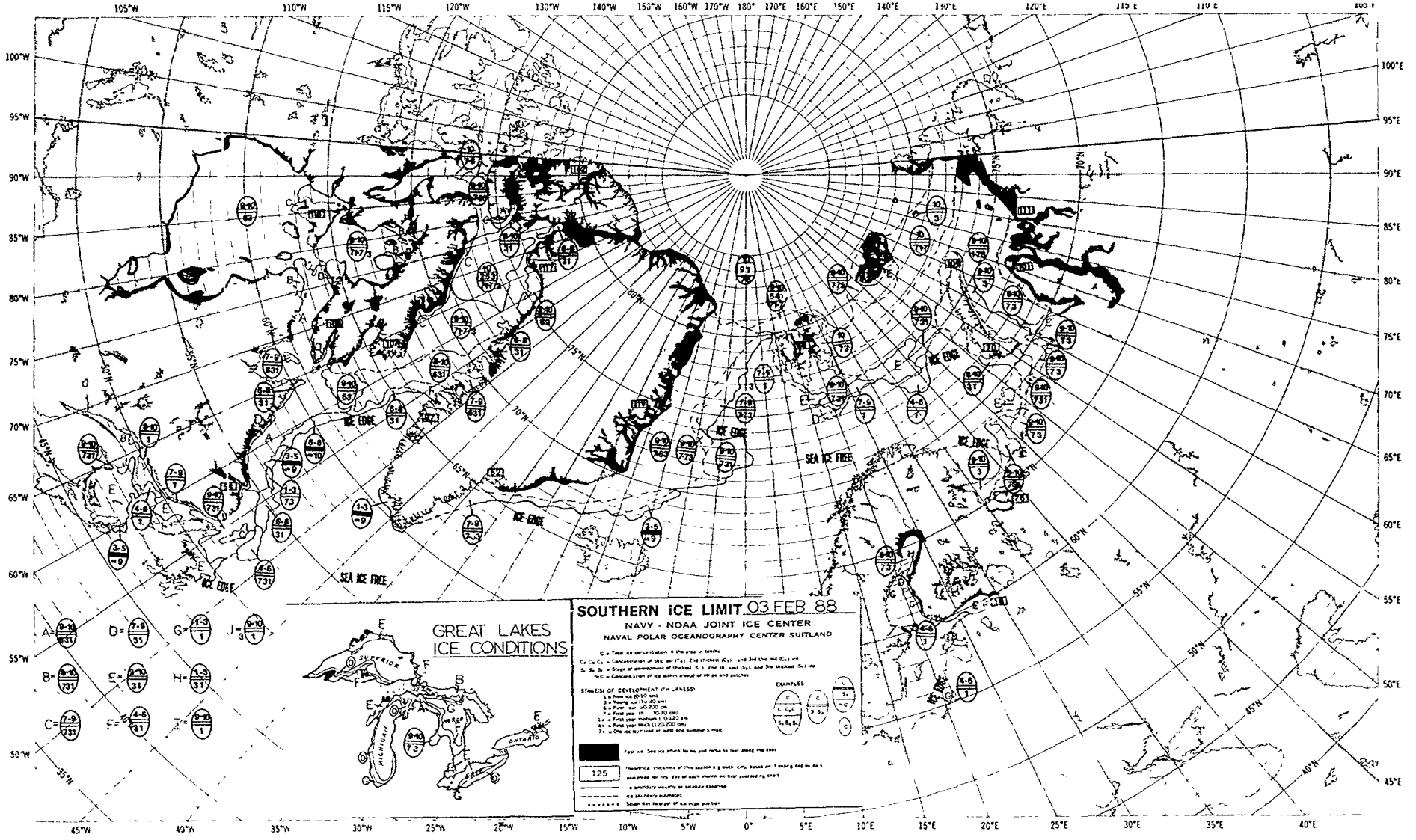
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EXAMPLES
STAGES OF DEVELOPMENT (Thickness)
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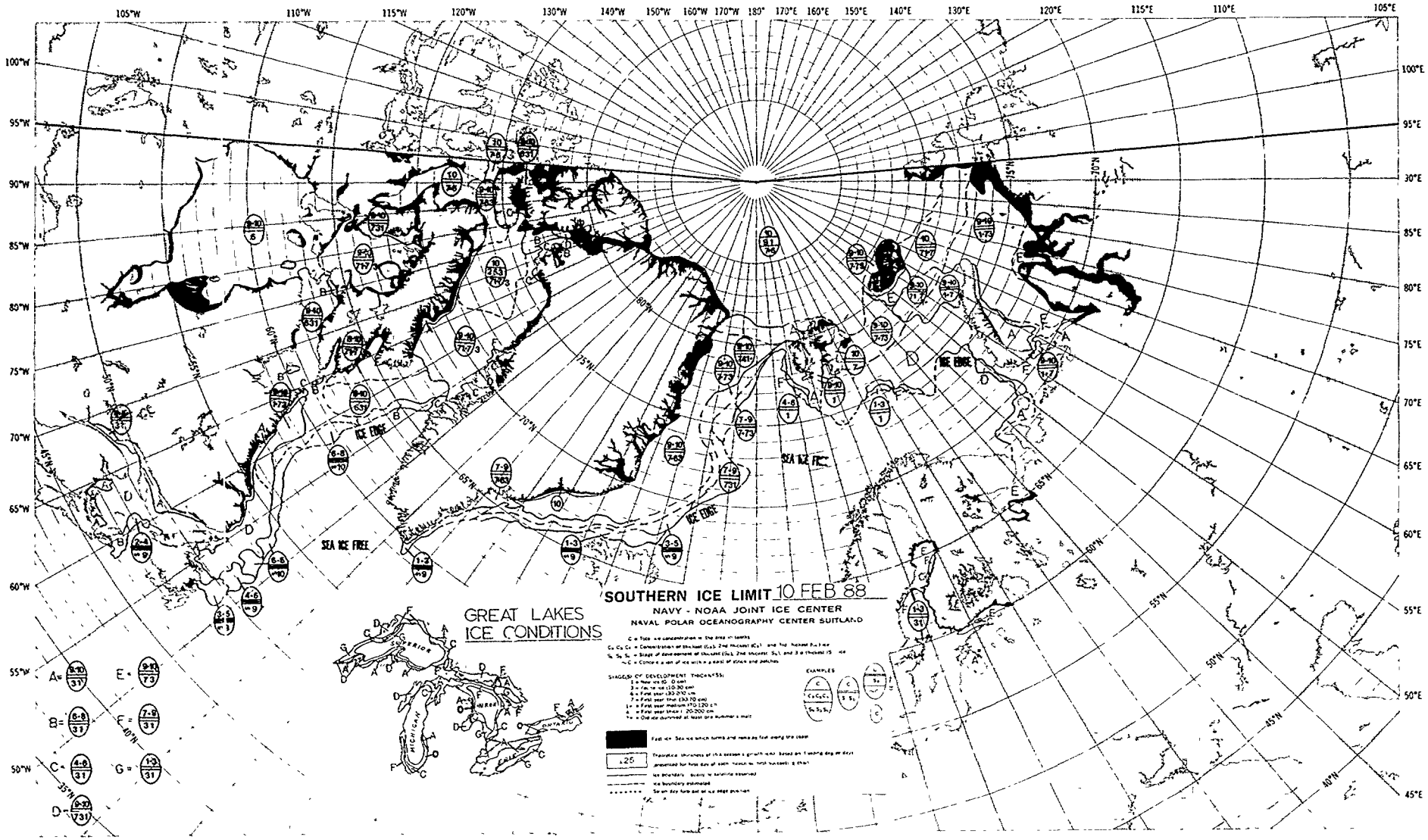
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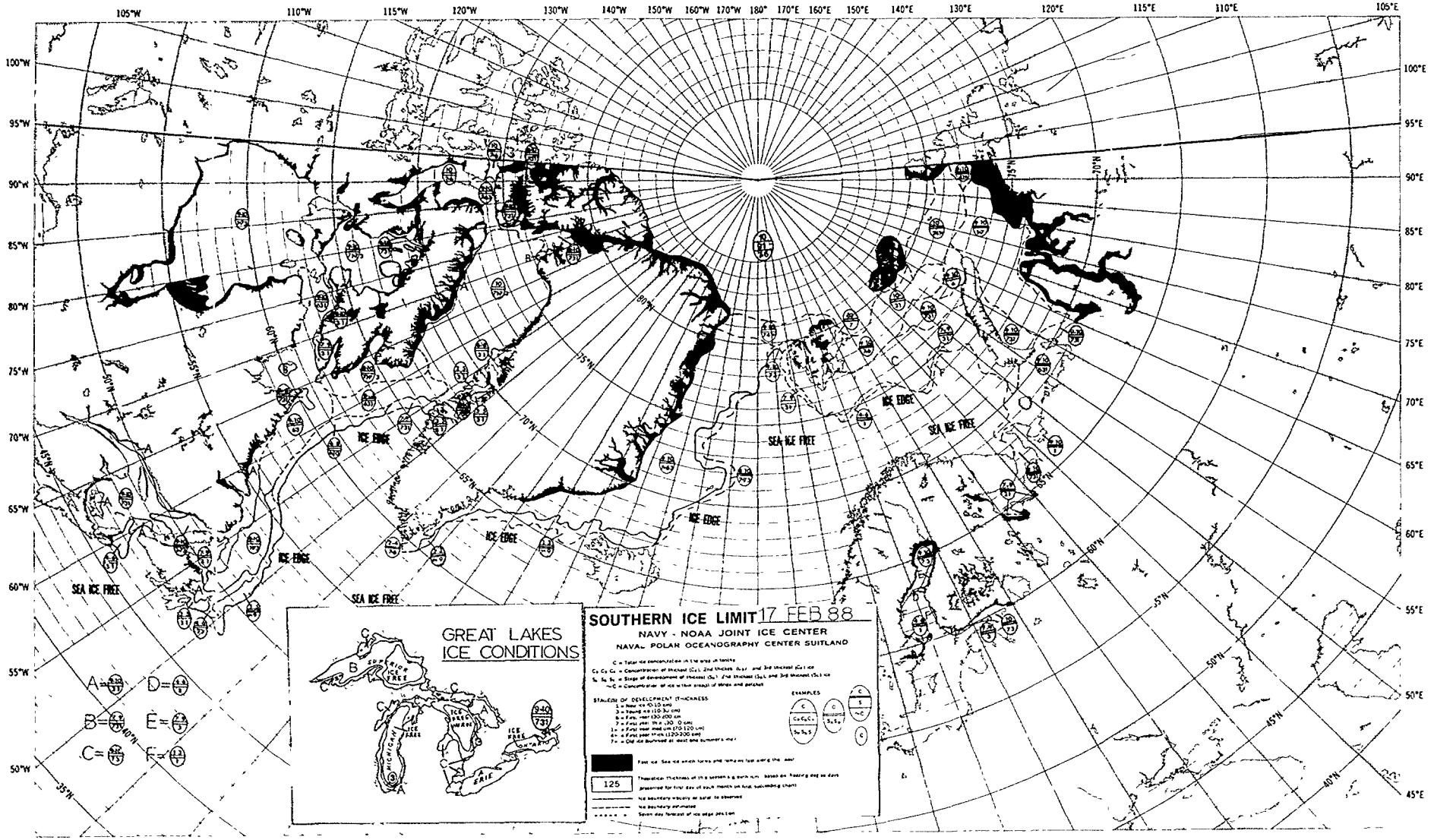
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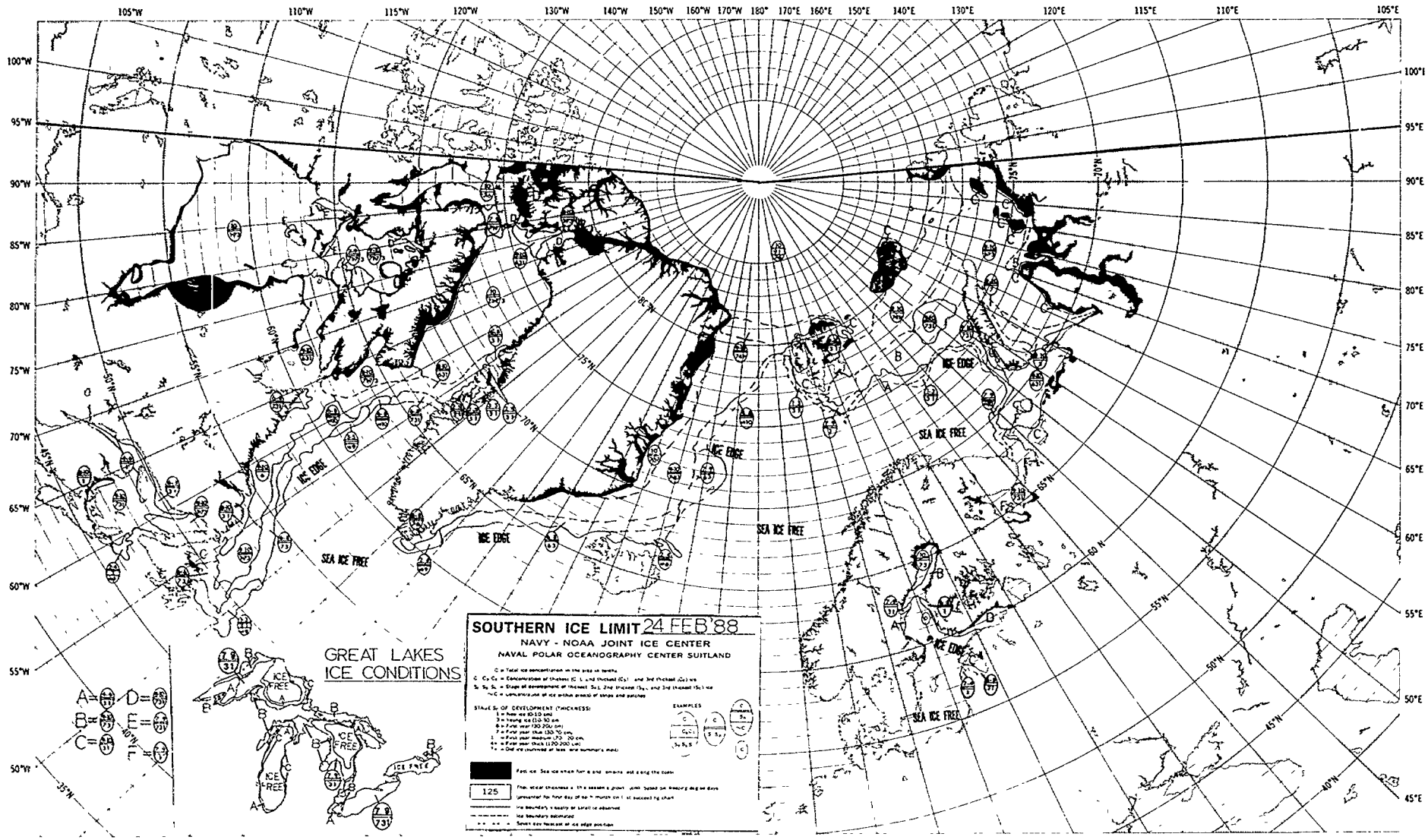
STAGES OF DEVELOPMENT (THICKNESS)
EXAMPLES
125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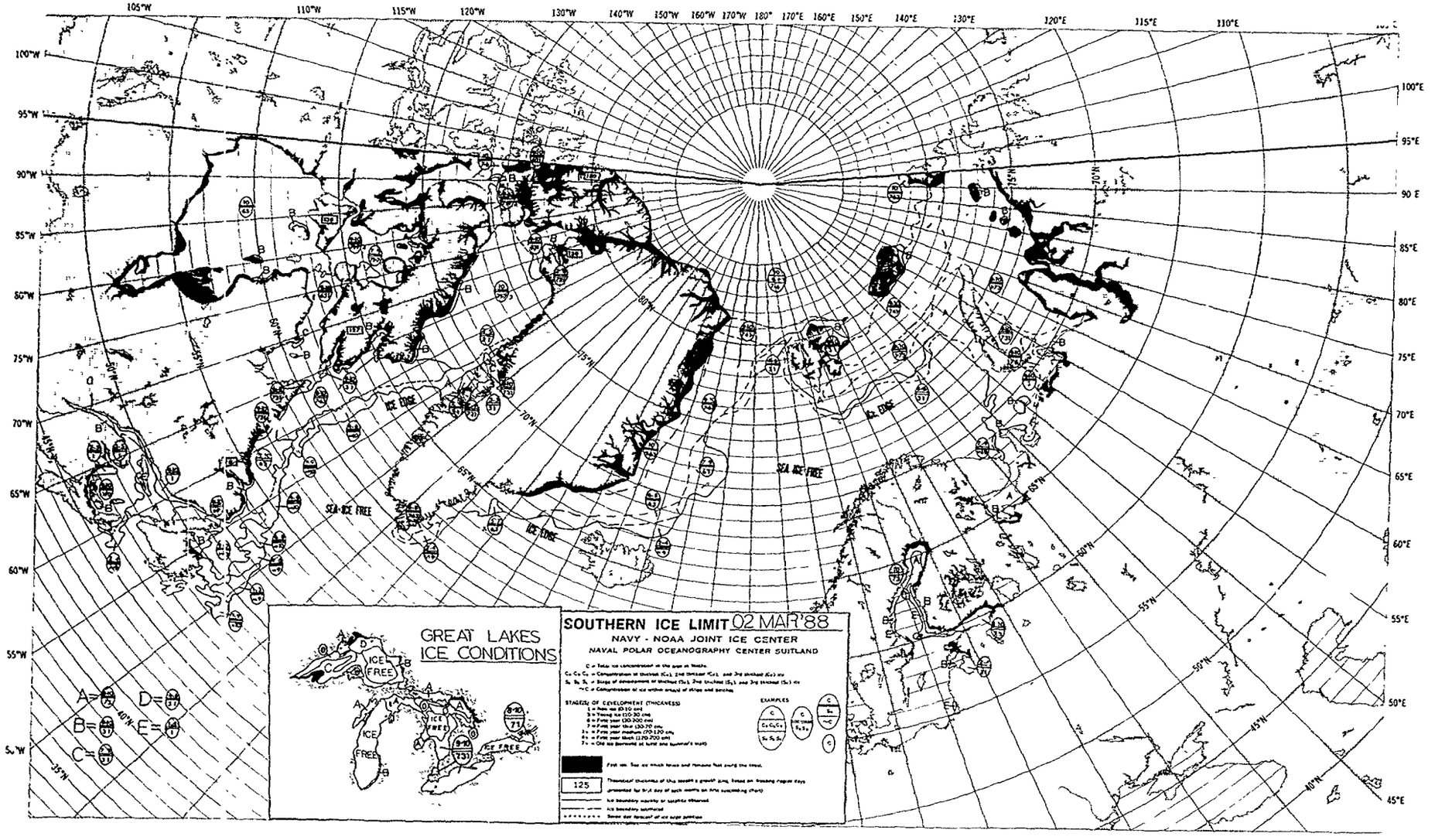
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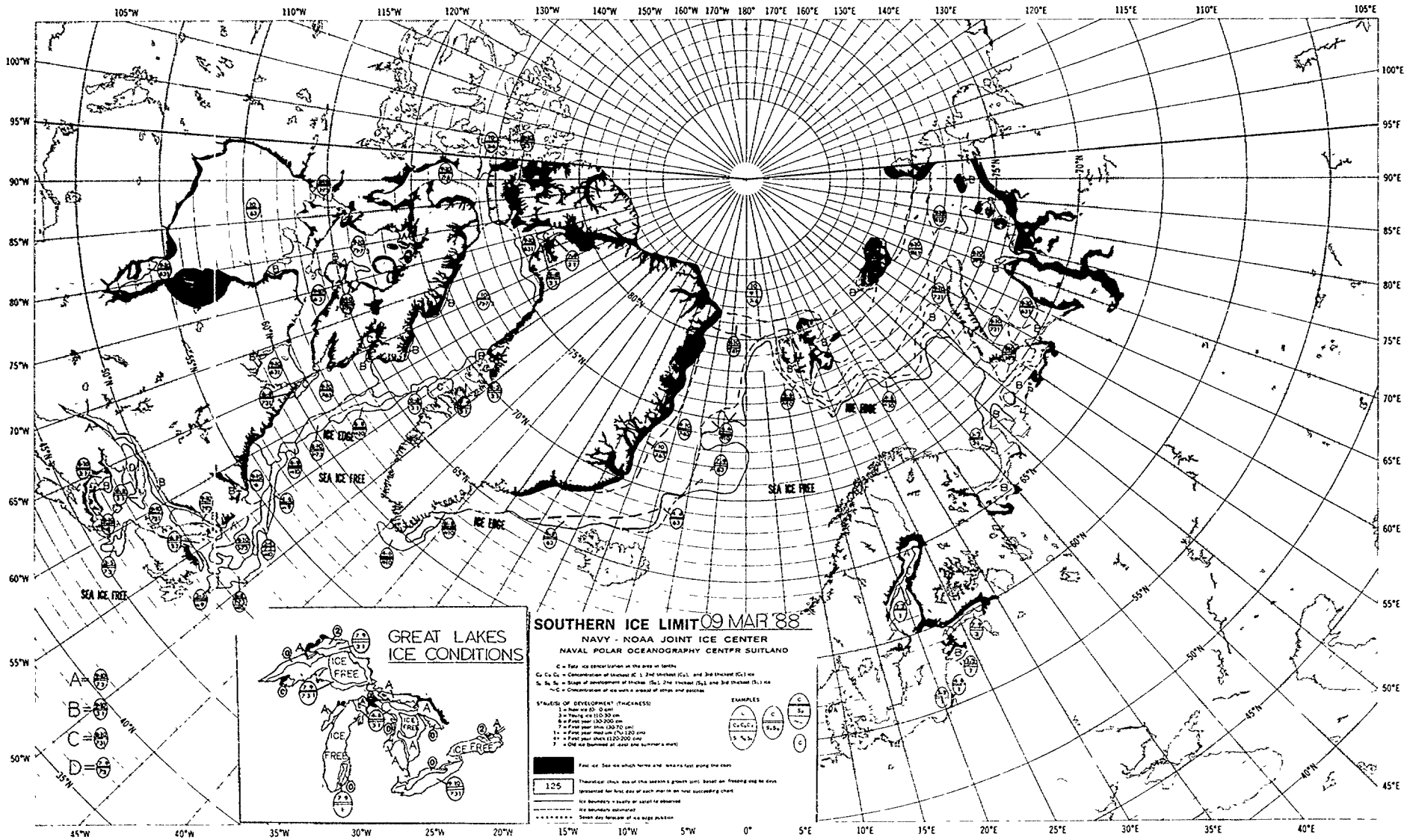
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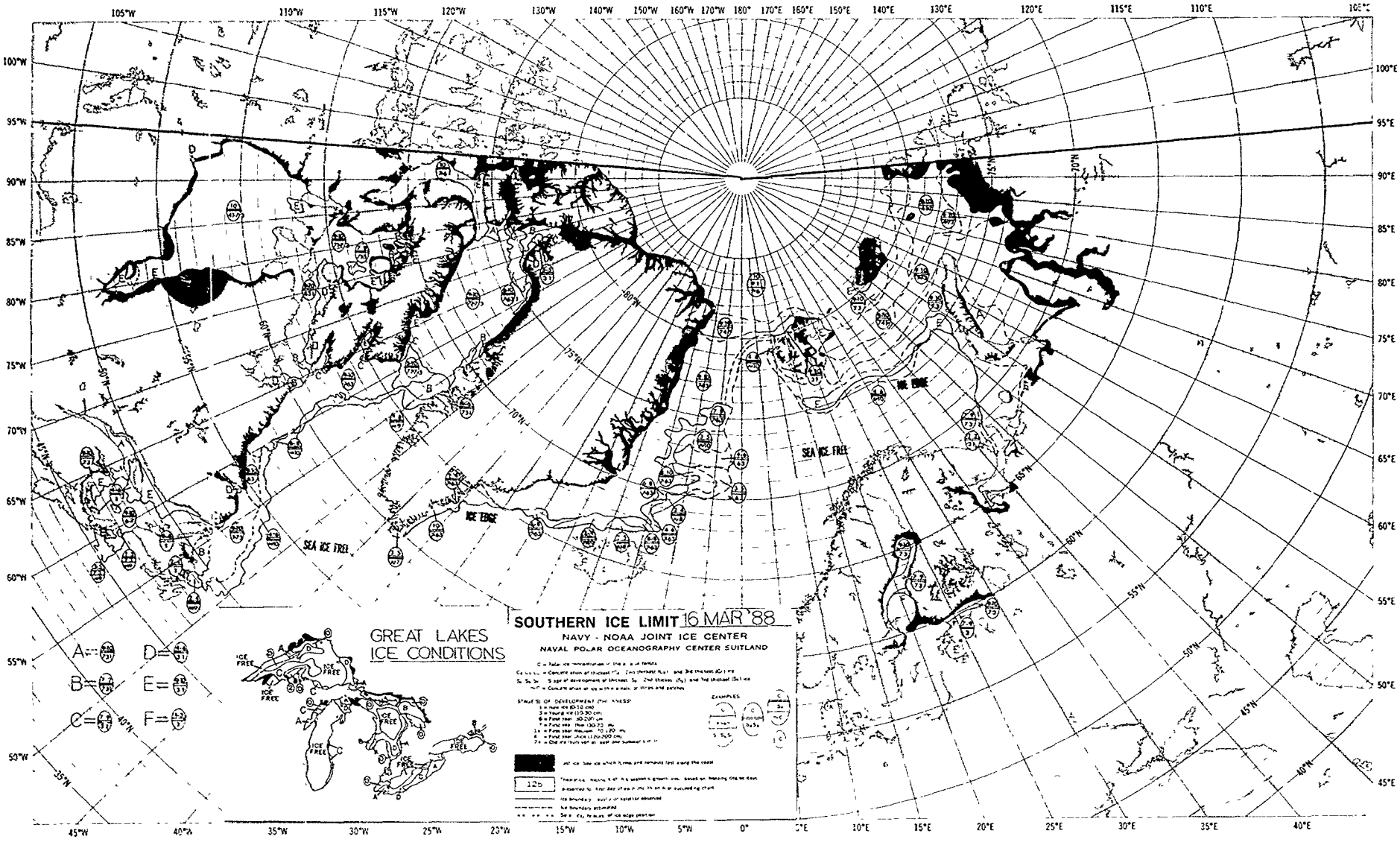
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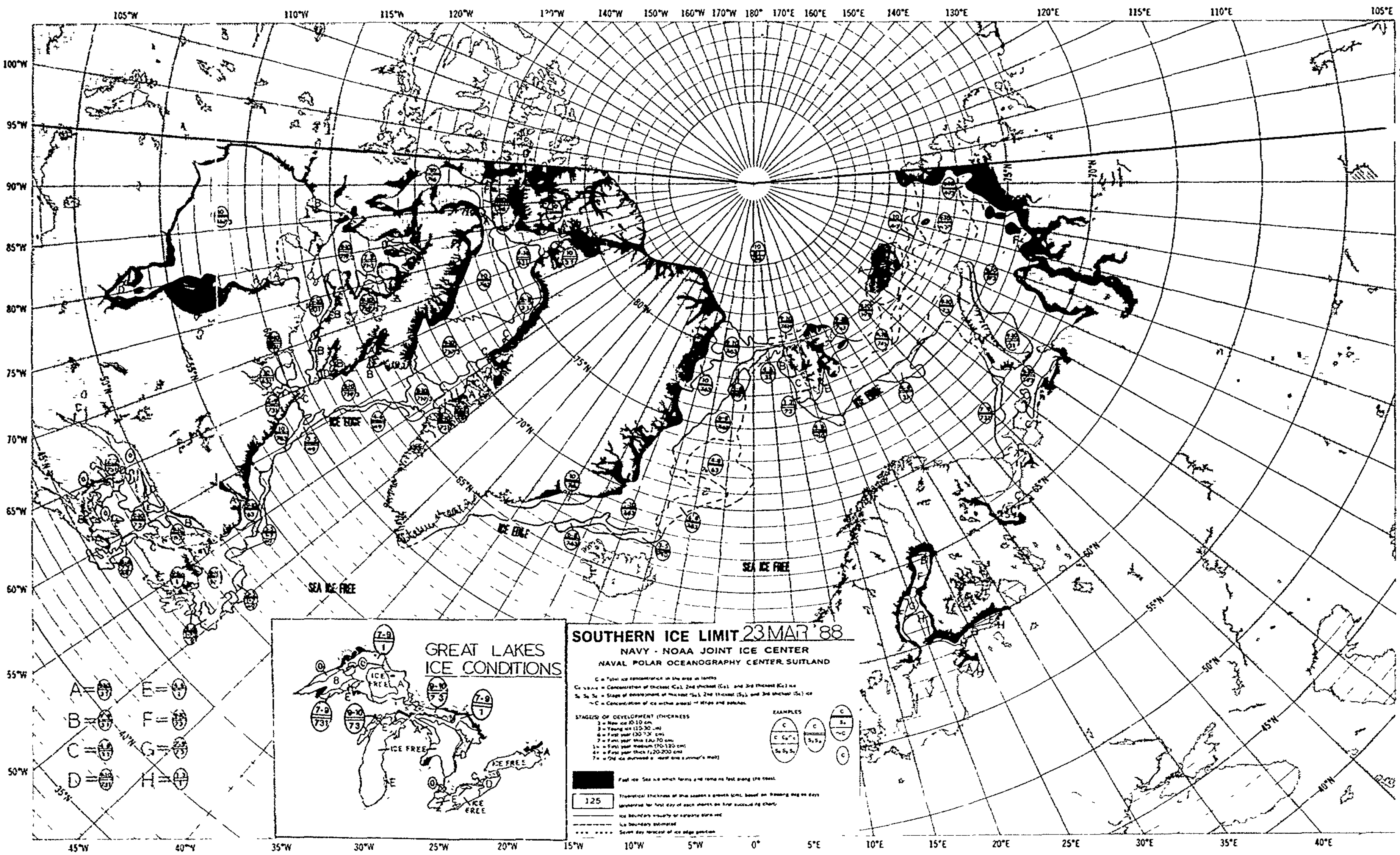

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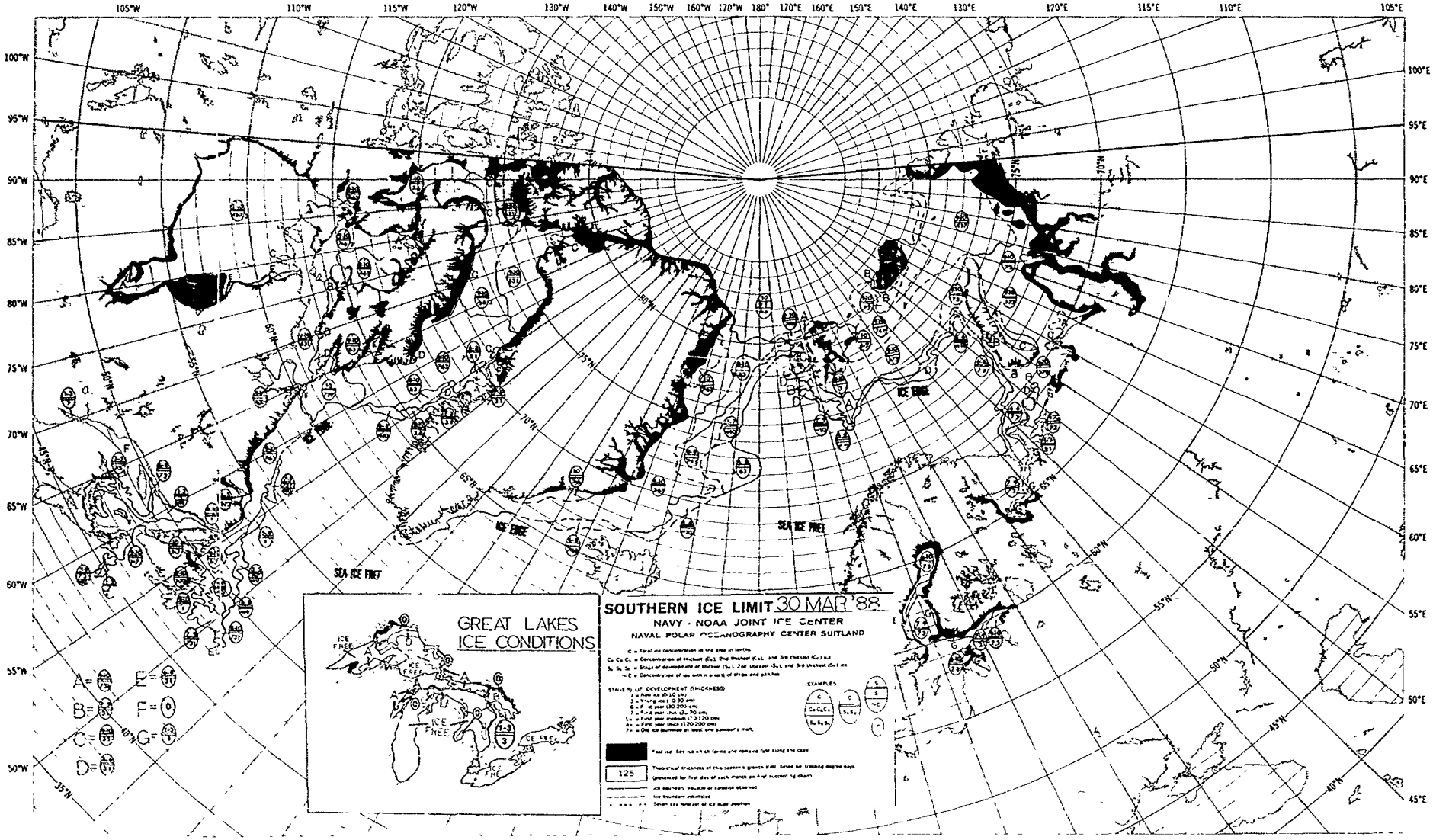
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
GREAT LAKES ICE CONDITIONS
ICE FREE
SEA ICE FREE
ICE EDGE
EXAMPLES
STAGE(S) OF DEVELOPMENT (THICKNESS)
125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115°W
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170°E
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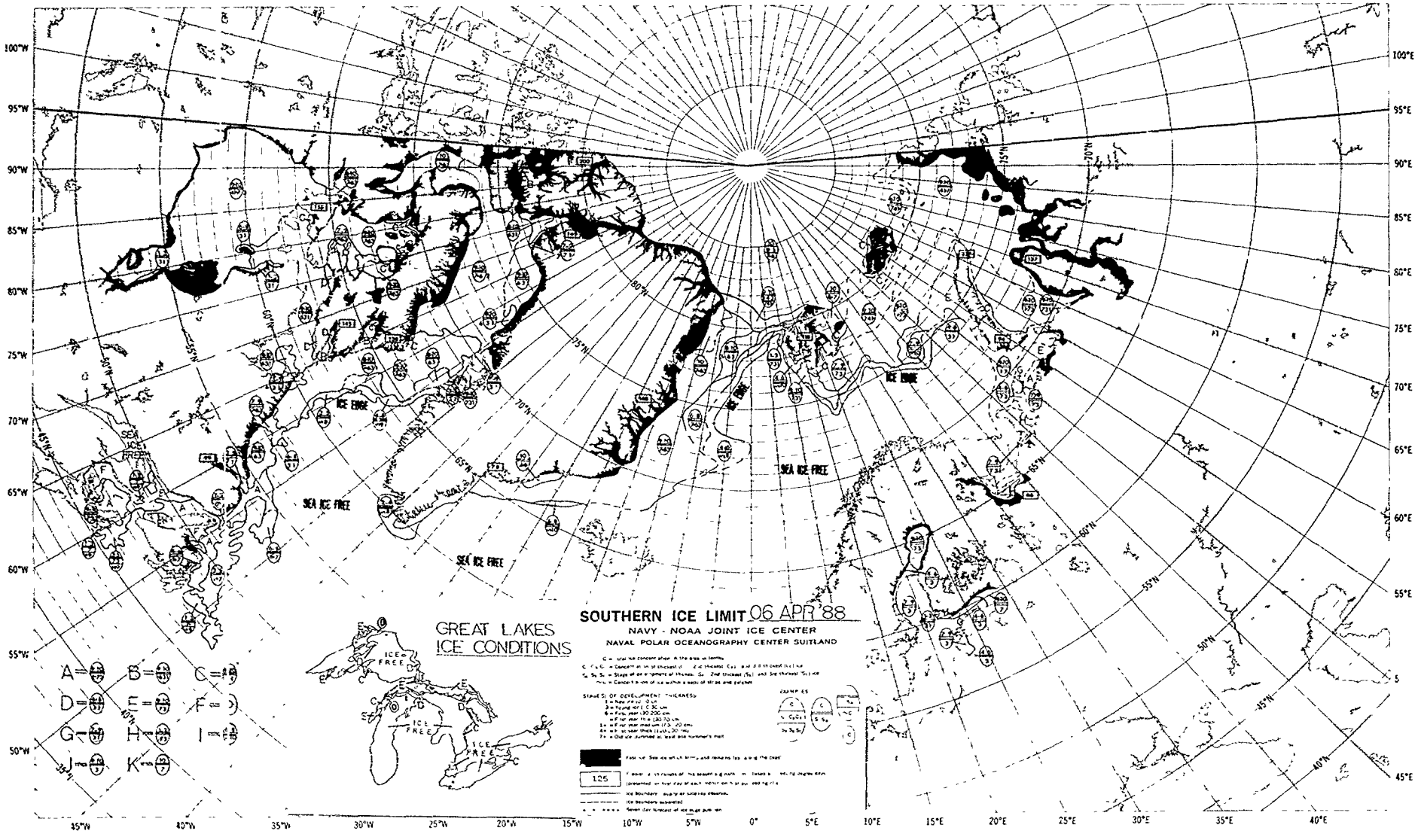
55°E
50°E
45°E
40°N
45°N
50°N
55°N
60°N
65°N
70°N
75°N
80°N
ICE EDGE
SEA ICE FREE
GREAT LAKES
ICE CONDITIONS
ICE FREE
A=
B=
C=
D=
E=
F=
G=
SOUTHERN ICE LIMIT 30 MAR '88
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
EXAMPLES
125


SOUTHERN ICE LIMIT 06 APR '88
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
GREAT LAKES
ICE CONDITIONS
ICE EDGE
SEA ICE FREE
ICE FREE
100°W
95°W
90°W
85°W
80°W
75°W
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65°W
60°W
55°W
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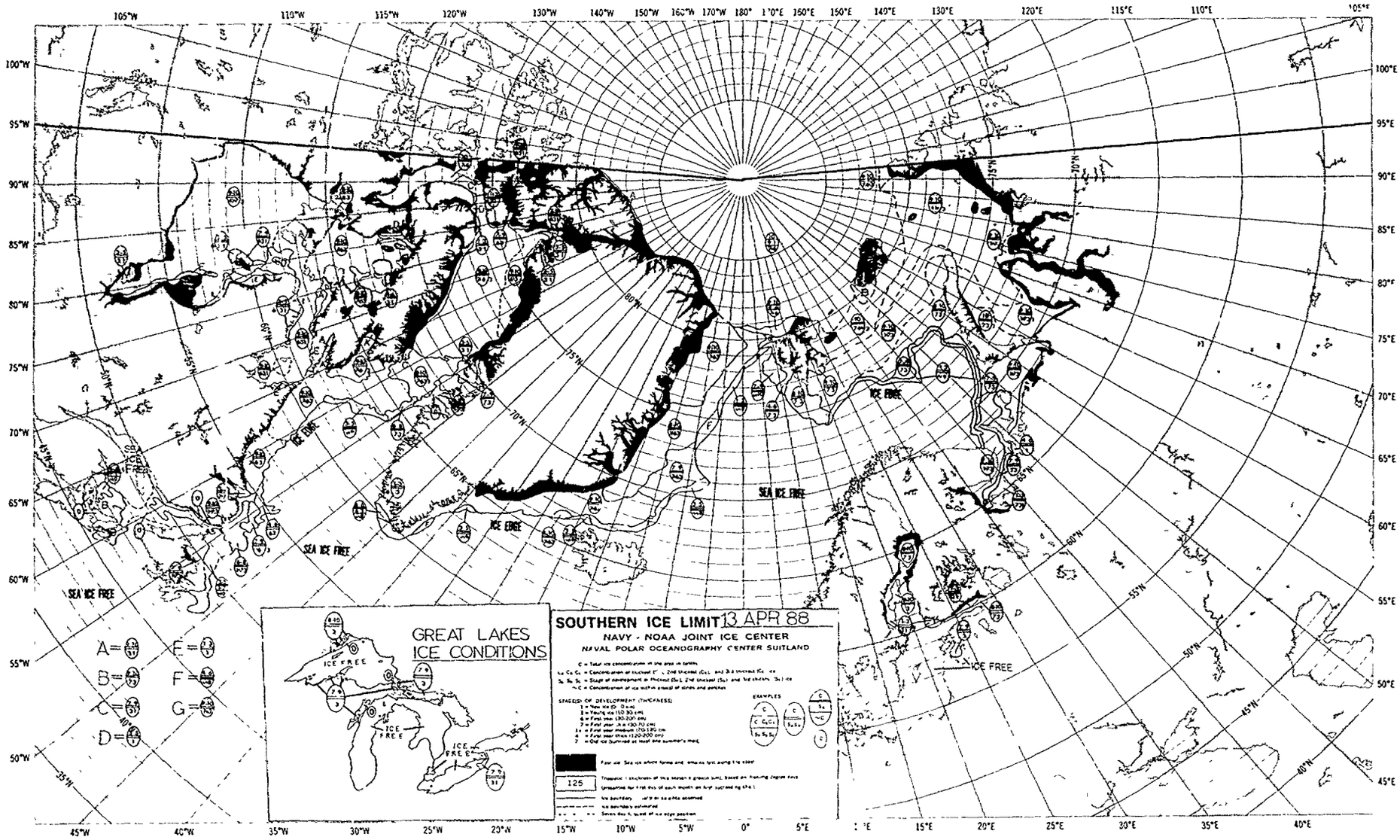
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ICE EDGE
ICE FREE
GREAT LAKES
ICE CONDITIONS
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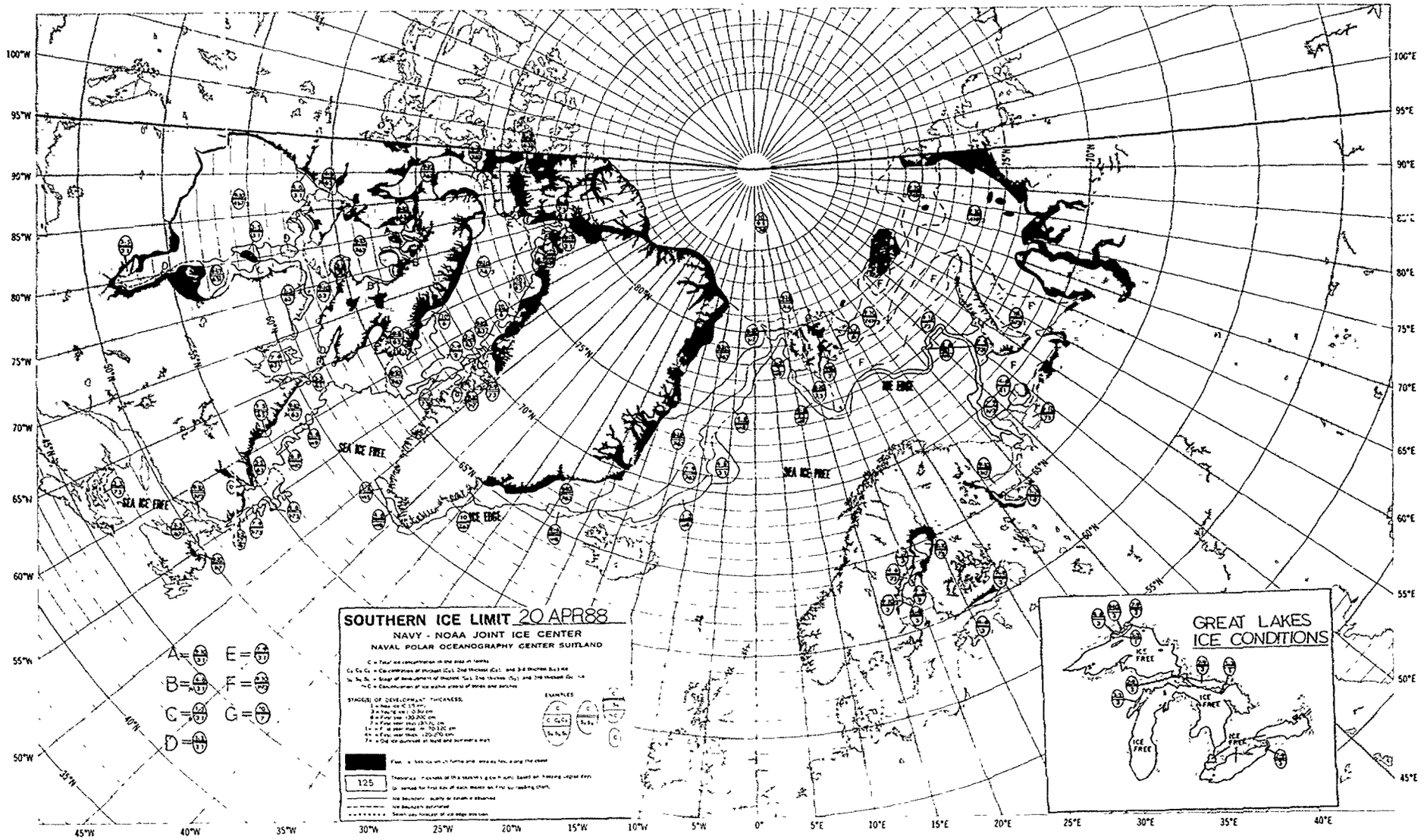
G=
SOUTHERN ICE LIMIT 13 APR 88
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND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NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
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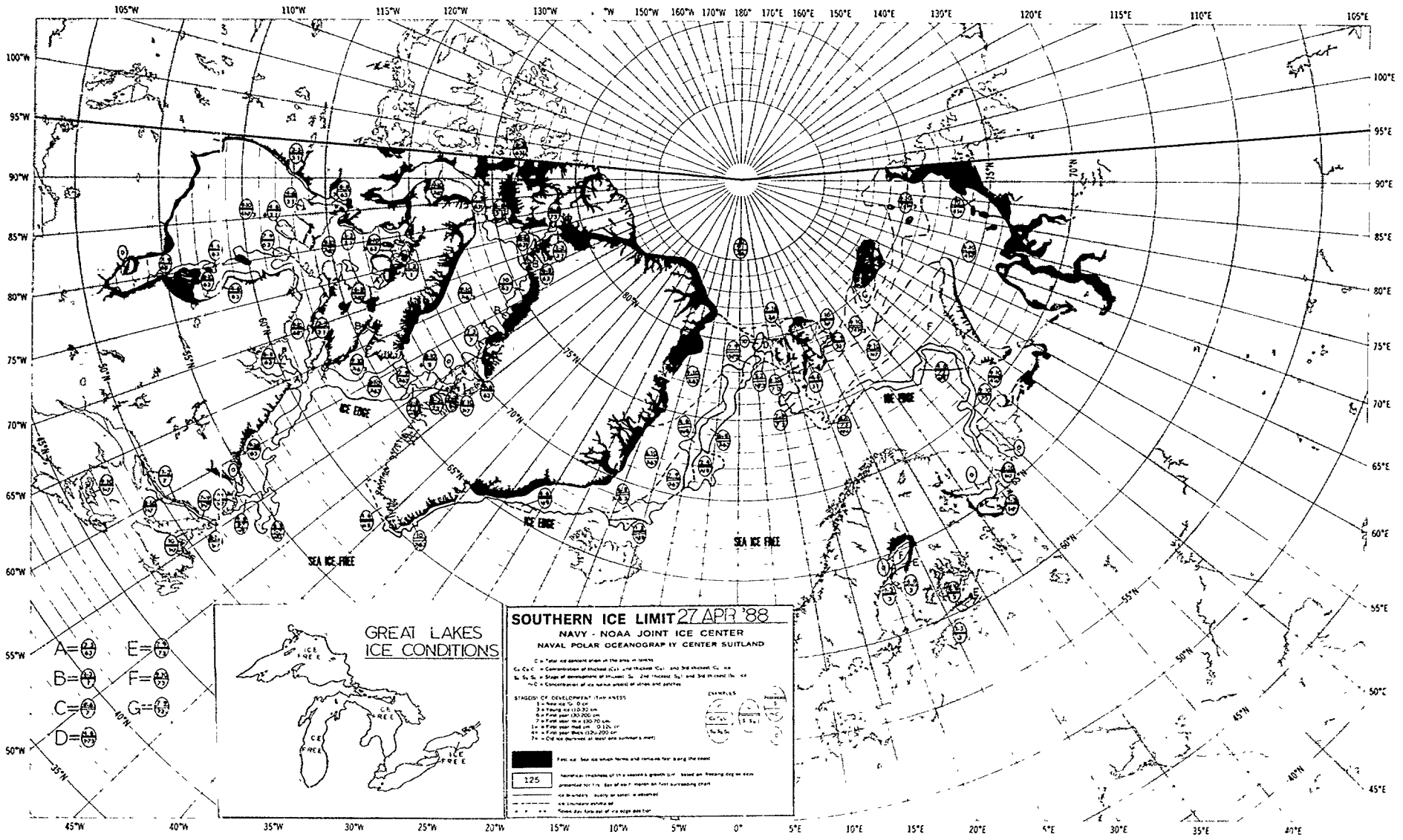
SEA ICE FREE
ICE EDGE
GREAT LAKES
ICE CONDITIONS
ICE FREE


SEA ICE FREE
ICE EDGE
GREAT LAKES
ICE CONDITIONS
ICE FREE
SOUTHERN ICE LIMIT 27 APR '88
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
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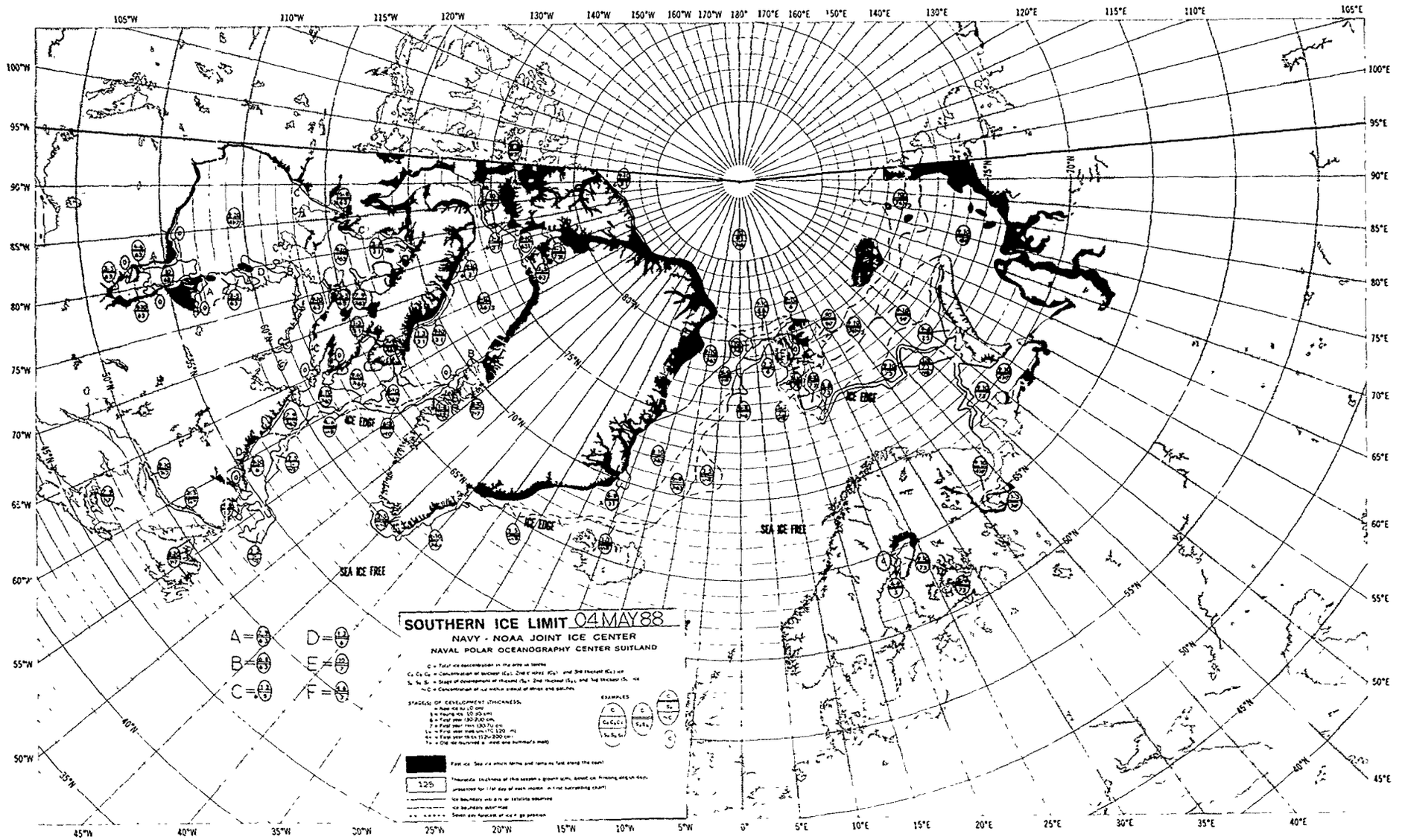
SOUTHERN ICE LIMIT 04MAY88
NAVY - NOAA JOINT ICE CENTER
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ICE EDGE
SEA ICE FREE
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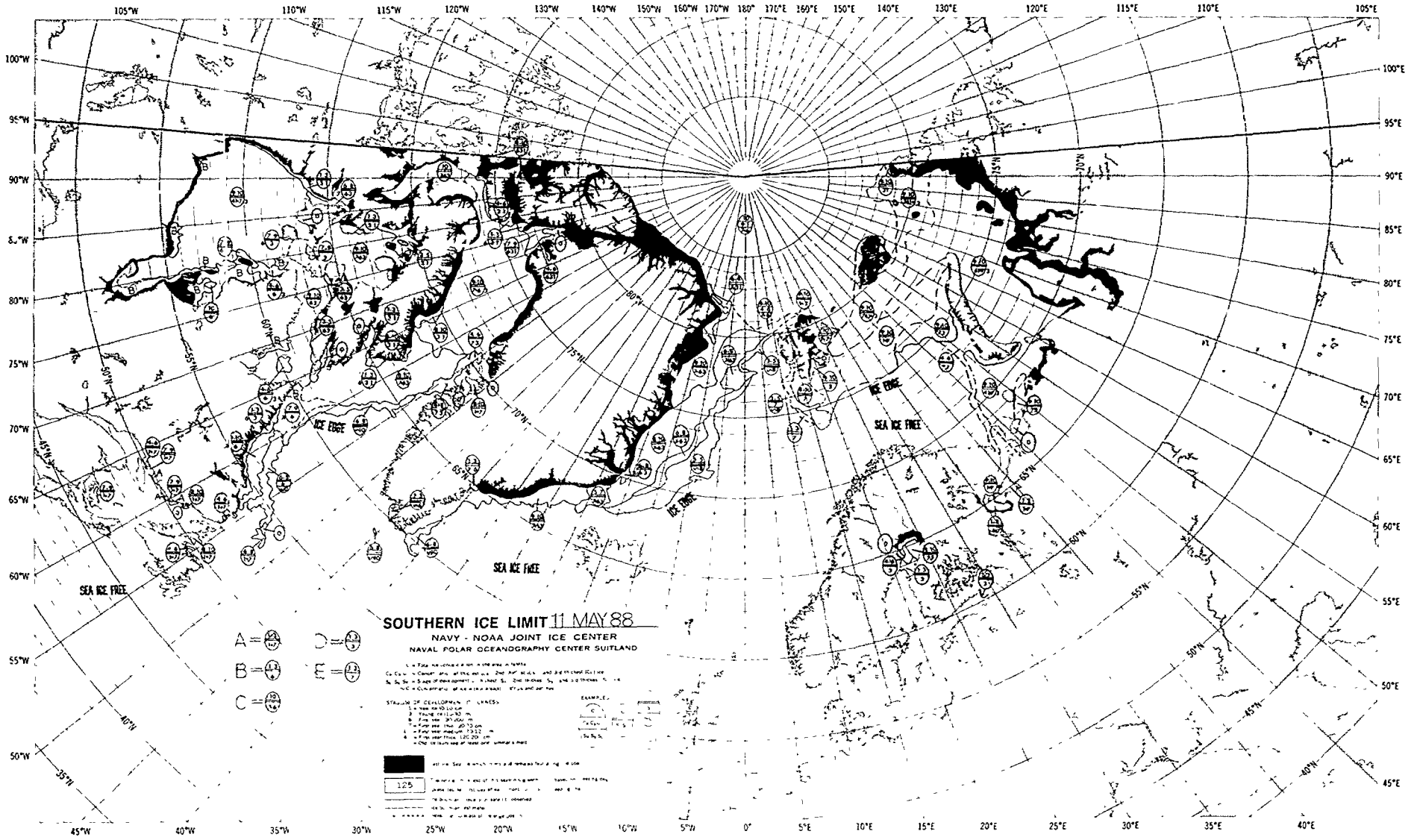
SOUTHERN ICE LIMIT 11 MAY 88
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
A =
B =
C =
D =
E =
SEA ICE FREE
ICE EDGE
105°W
110°W
115°W
120°W
130°W
140°W
150°W
160°W
170°W
180°
170°E
160°E
150°E
140°E
130°E
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115°E
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95°W
90°W
85°W
80°W
75°W
70°W
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55°W
50°W
45°W
40°W
35°W
30°W
25°W
20°W
15°W
10°W
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80°E
85°E
90°E
95°E
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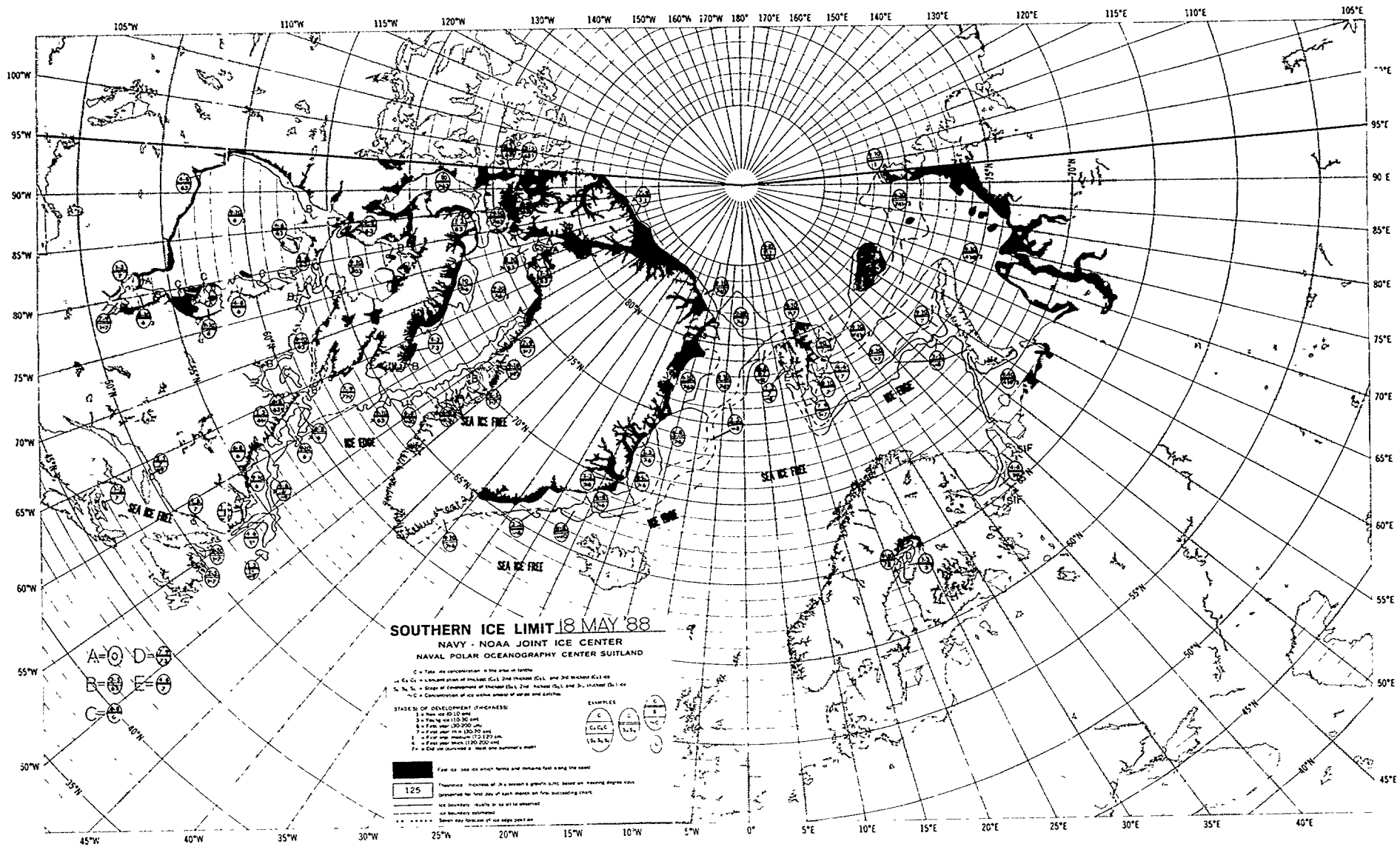
35°N


SOUTHERN ICE LIMIT 18 MAY '88
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
ICE EDGE
SEA ICE FREE
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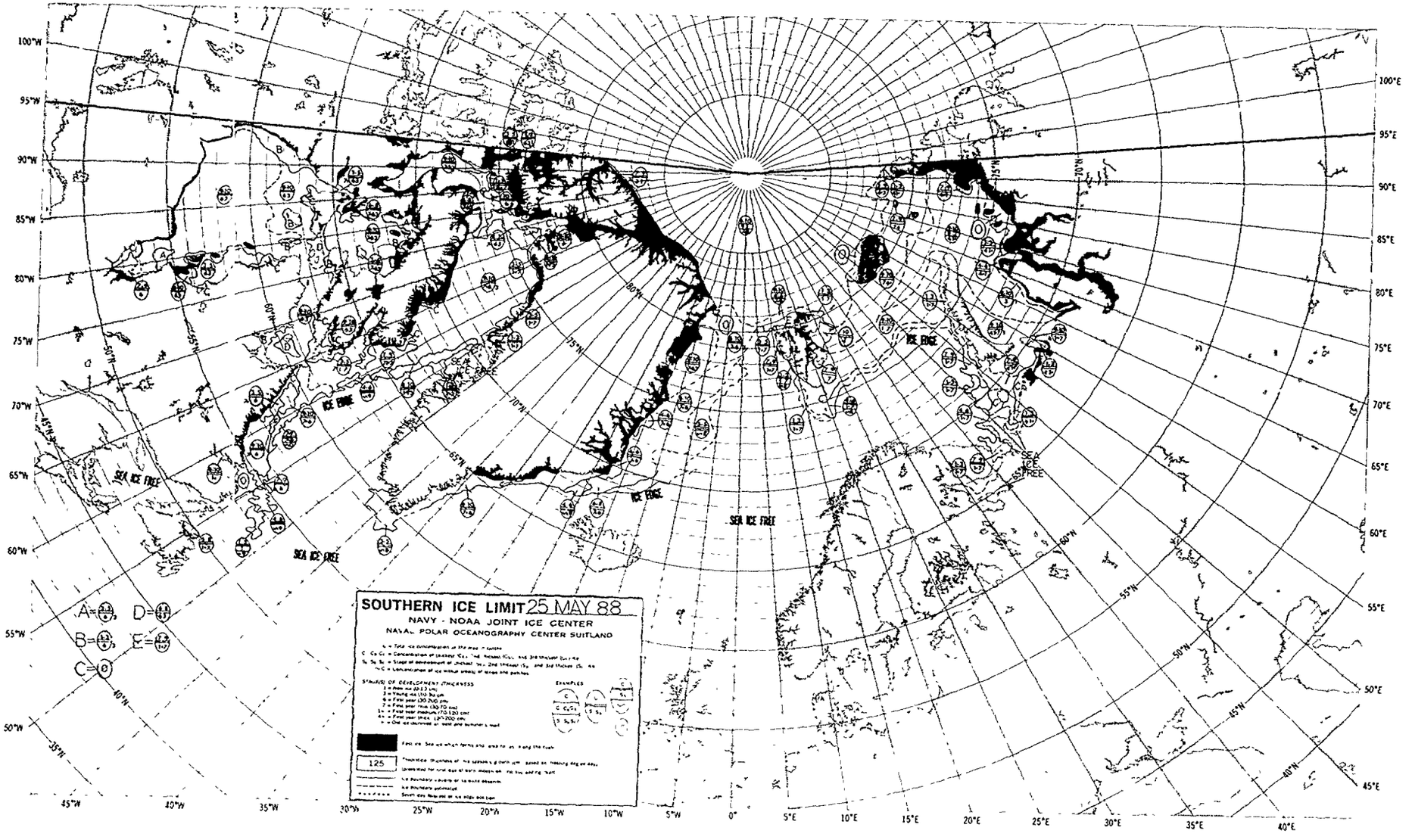
SOUTHERN ICE LIMIT 25 MAY 88
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
ICE EDGE
SEA ICE FREE
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B=
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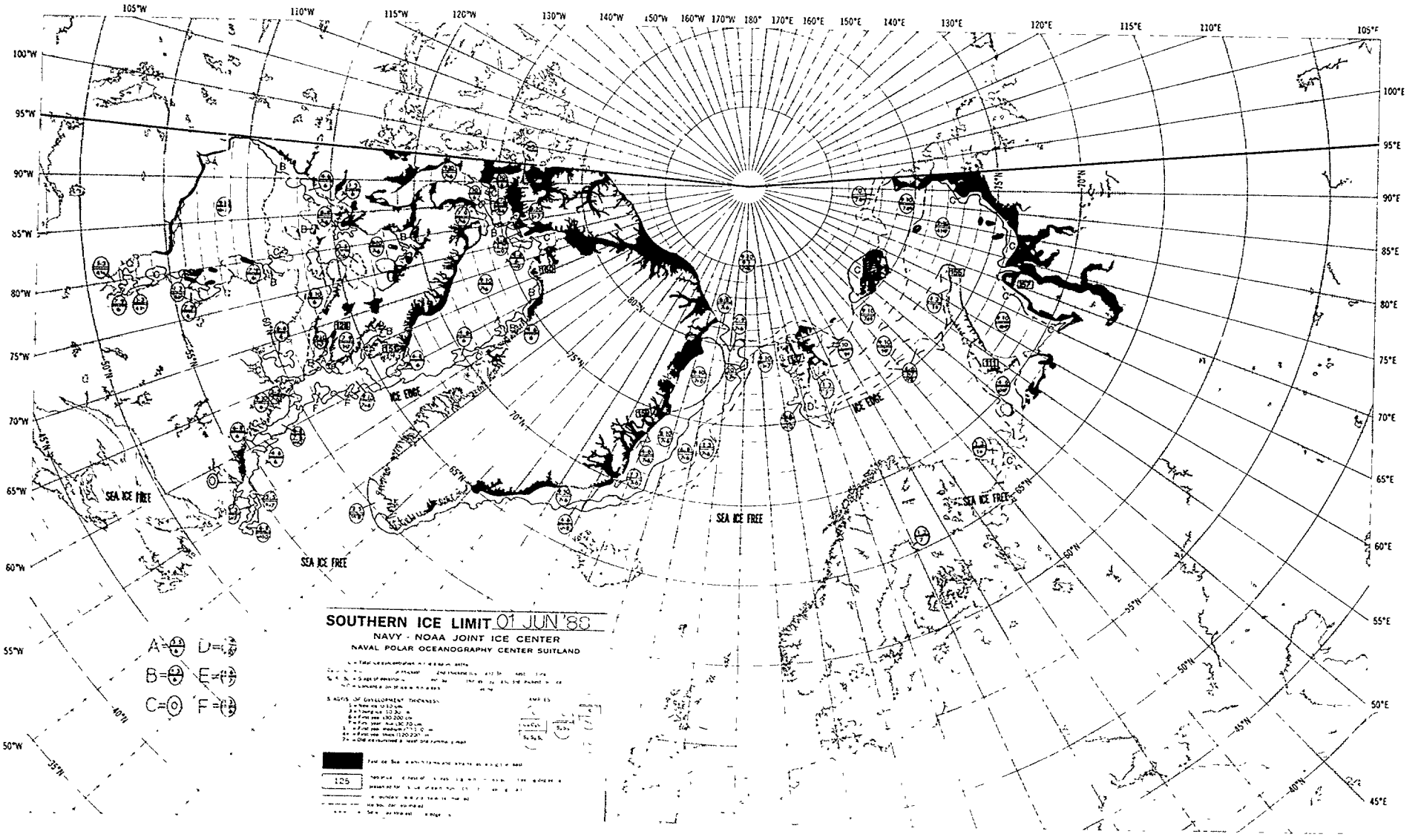
SOUTHERN ICE LIMIT 01 JUN '88
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SEA ICE FREE
ICE EDGE
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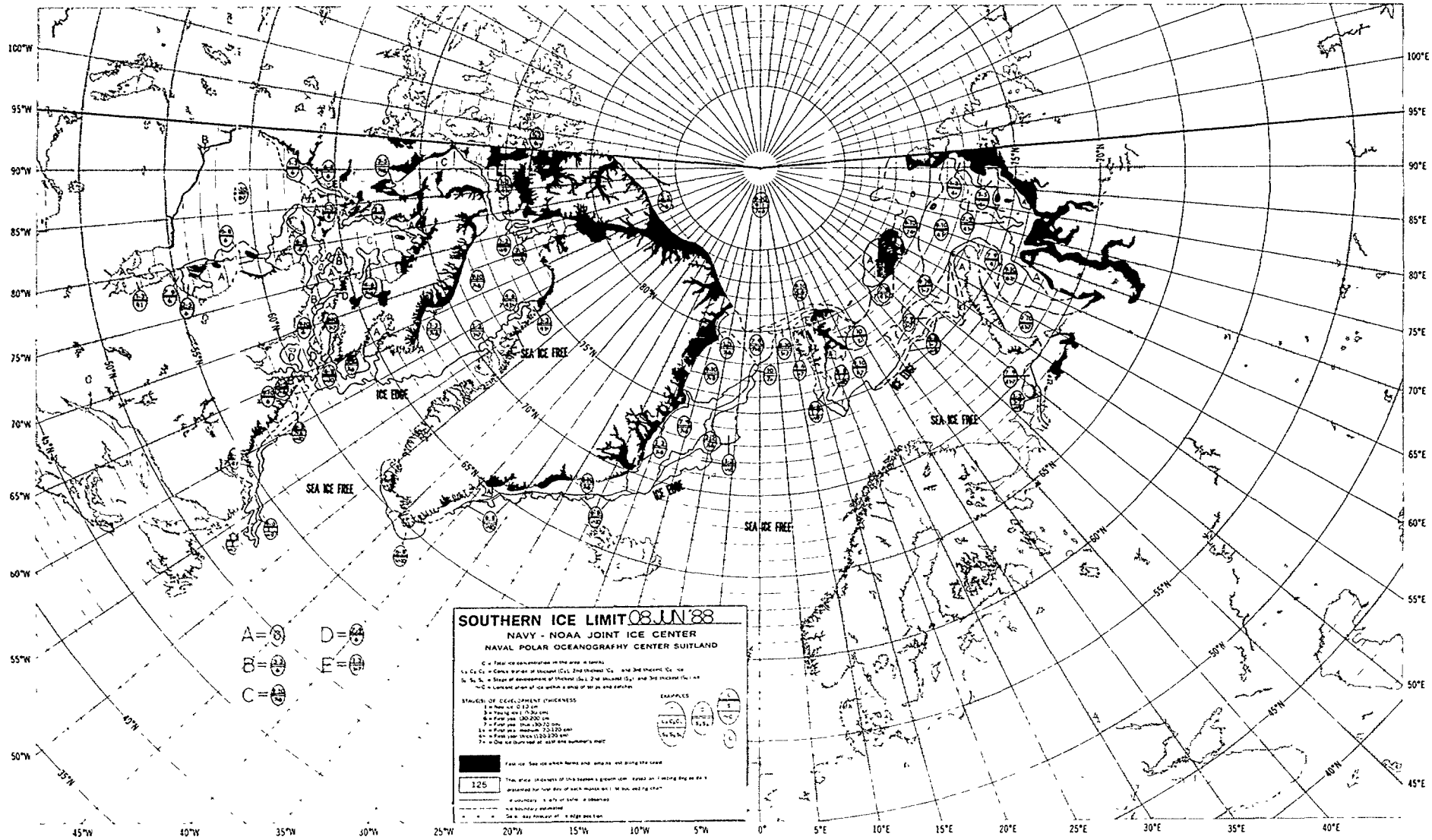
SOUTHERN ICE LIMIT 08 JUN 88
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
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B=
C=
D=
E=
SEA ICE FREE
ICE EDGE
100°W
95°W
90°W
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80°W
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65°W
60°W
55°W
50°W
45°W
40°W
35°W
30°W
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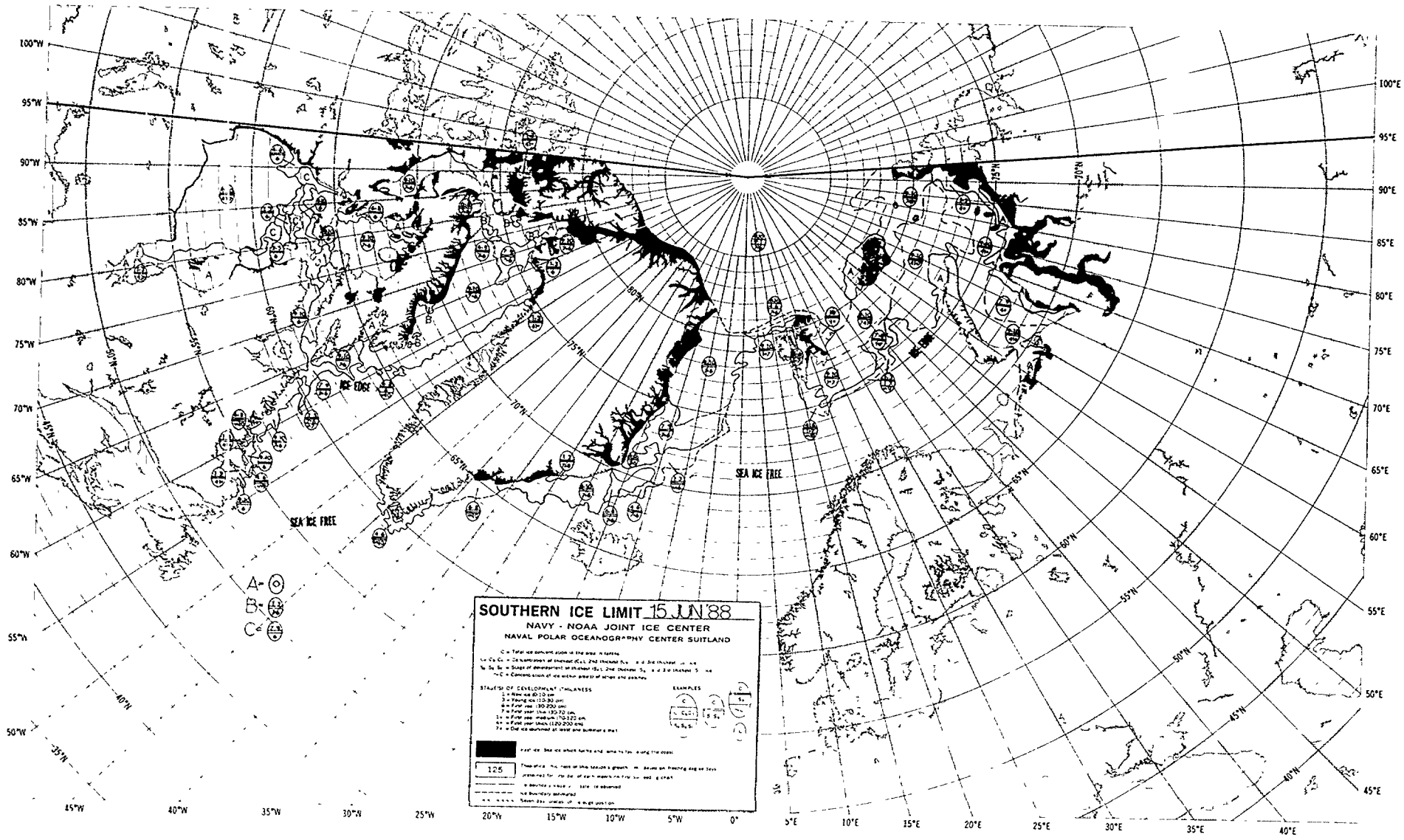
95°E
100°E


SOUTHERN ICE LIMIT 15 JUN'88
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
ICE EDGE
SEA ICE FREE
A-
B-
C-
100°W
95°W
90°W
85°W
80°W
75°W
70°W
65°W
60°W
55°W
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45°W
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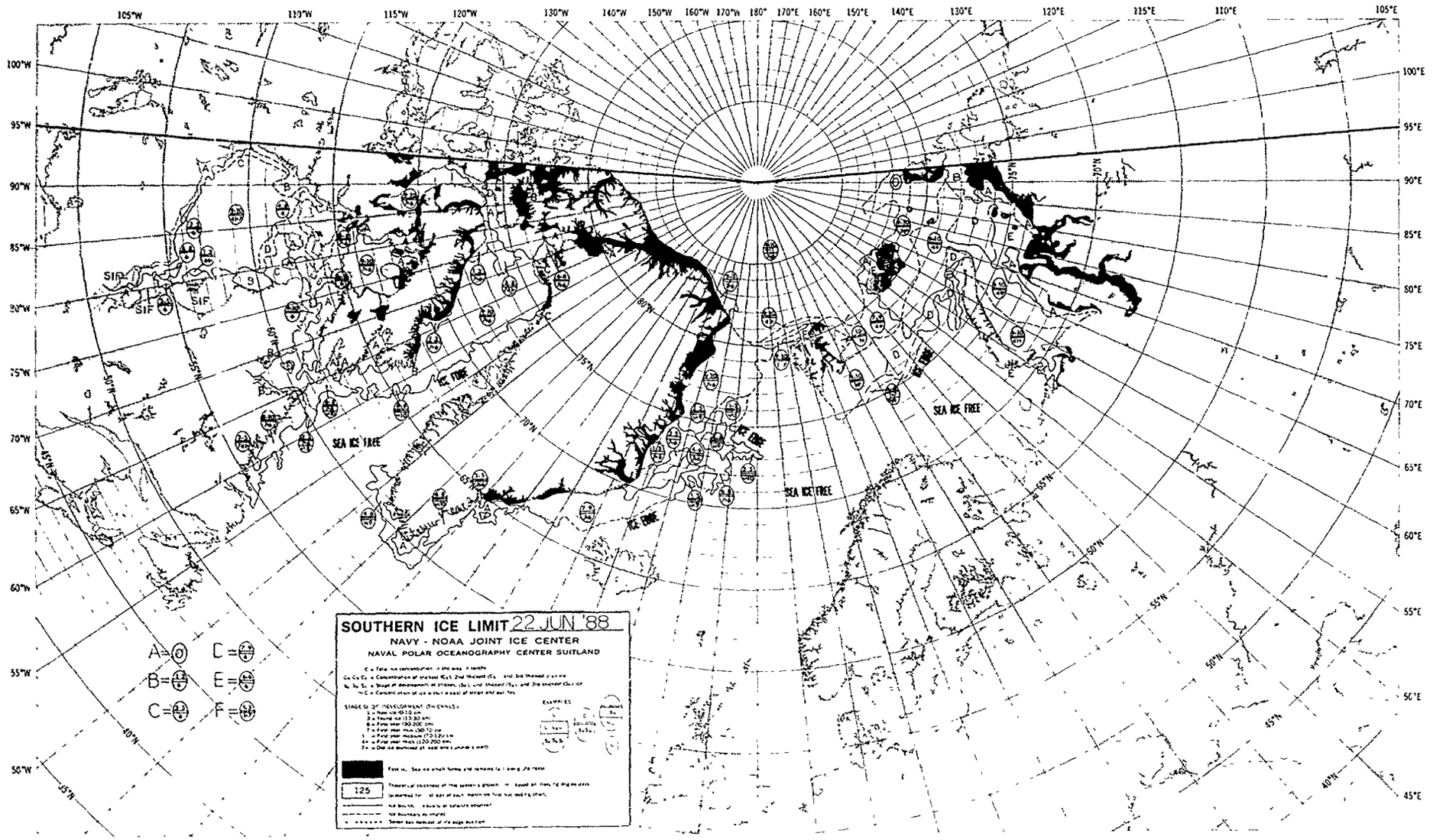
95°E
100°E


SOUTHERN ICE LIMIT 22 JUN '88
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
A=
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C=
E=
F=
SEA ICE FREE
ICE FREE
SIF
105°W
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120°W
130°W
140°W
150°W
160°W
170°W
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150°E
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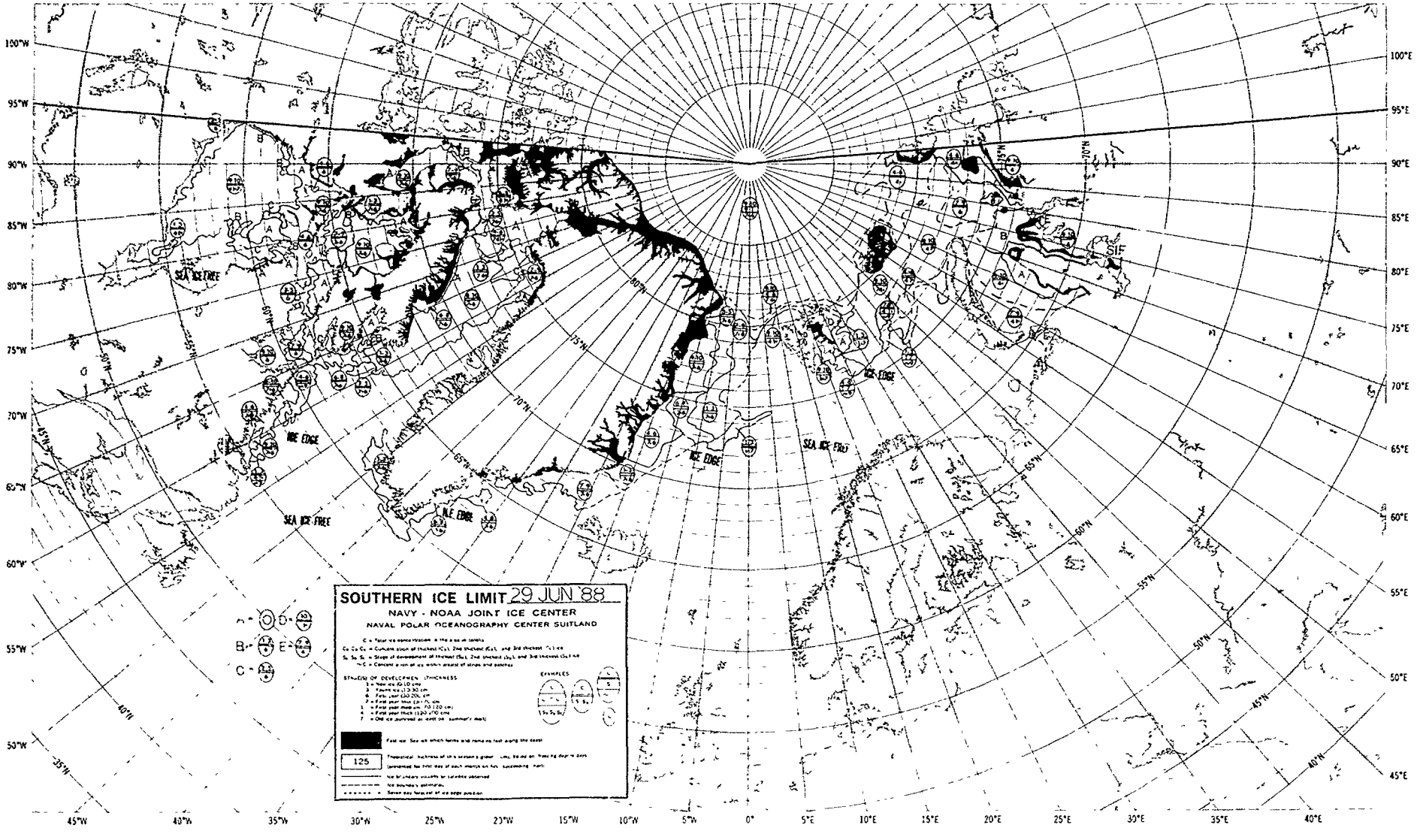
SOUTHERN ICE LIMIT 29 JUN 88
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SEA ICE FREE
ICE EDGE
SEA ICE FREE
ICE EDGE
ICE EDGE
SEA ICE FREE
SIF
100°W
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90°W
85°W
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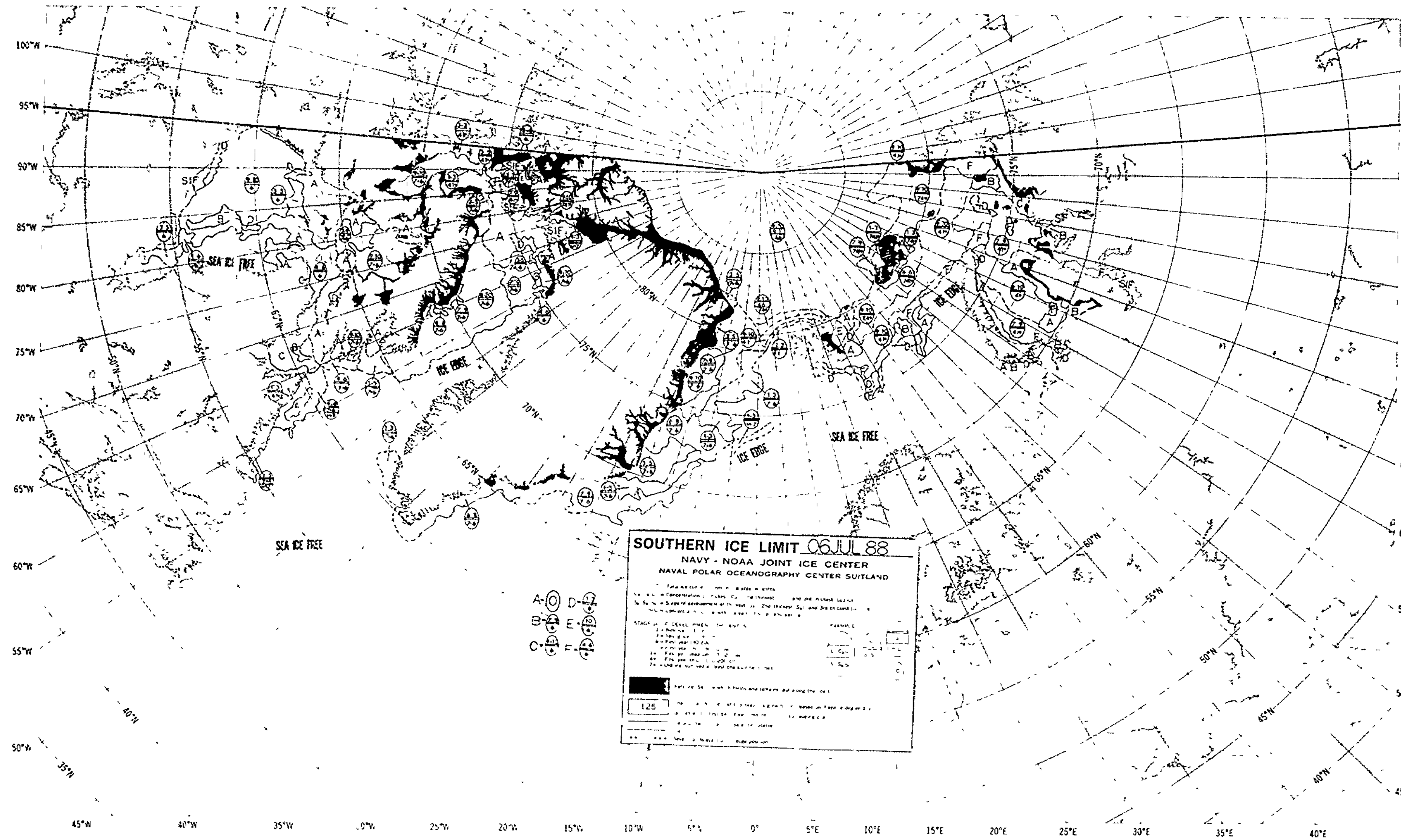
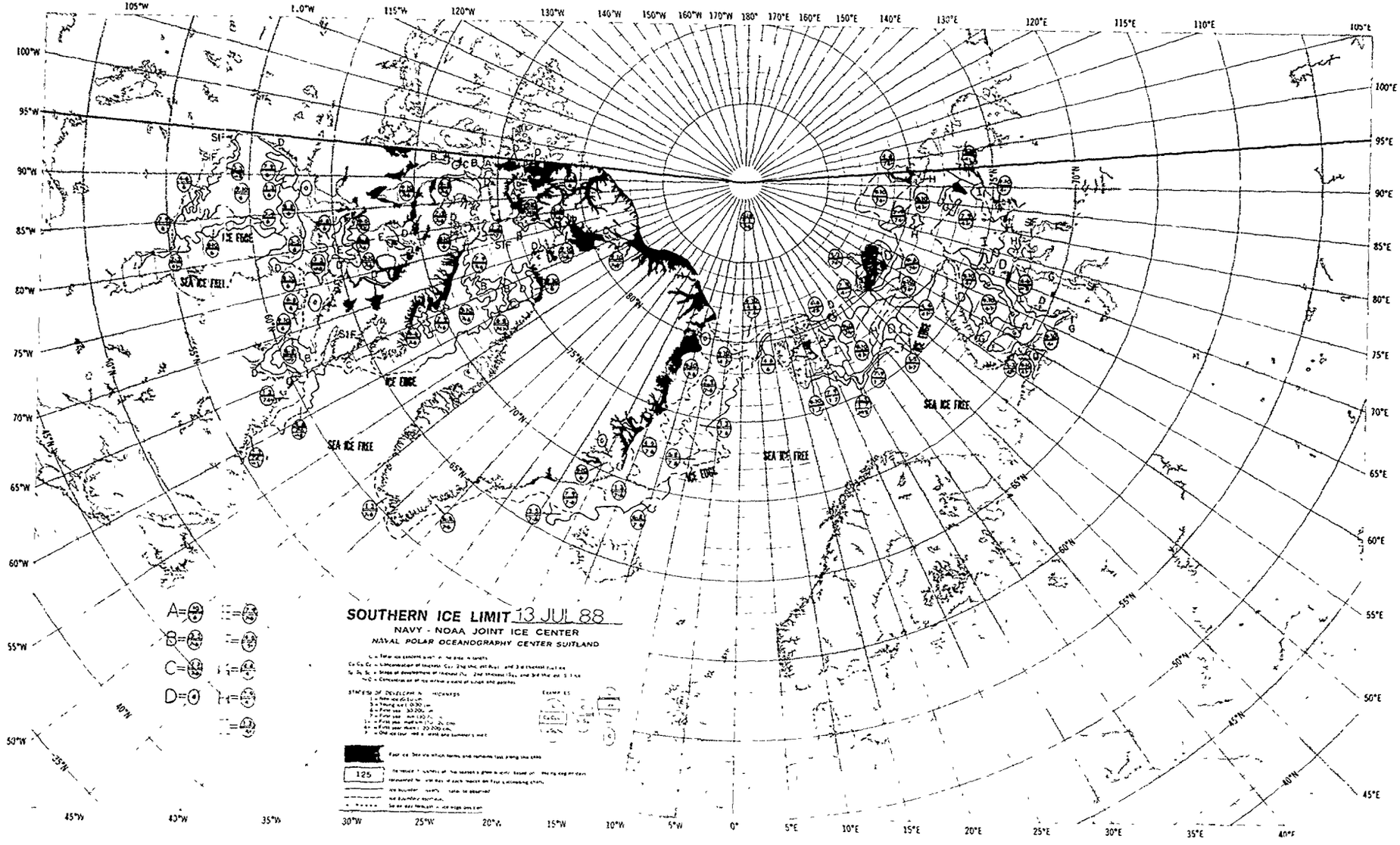
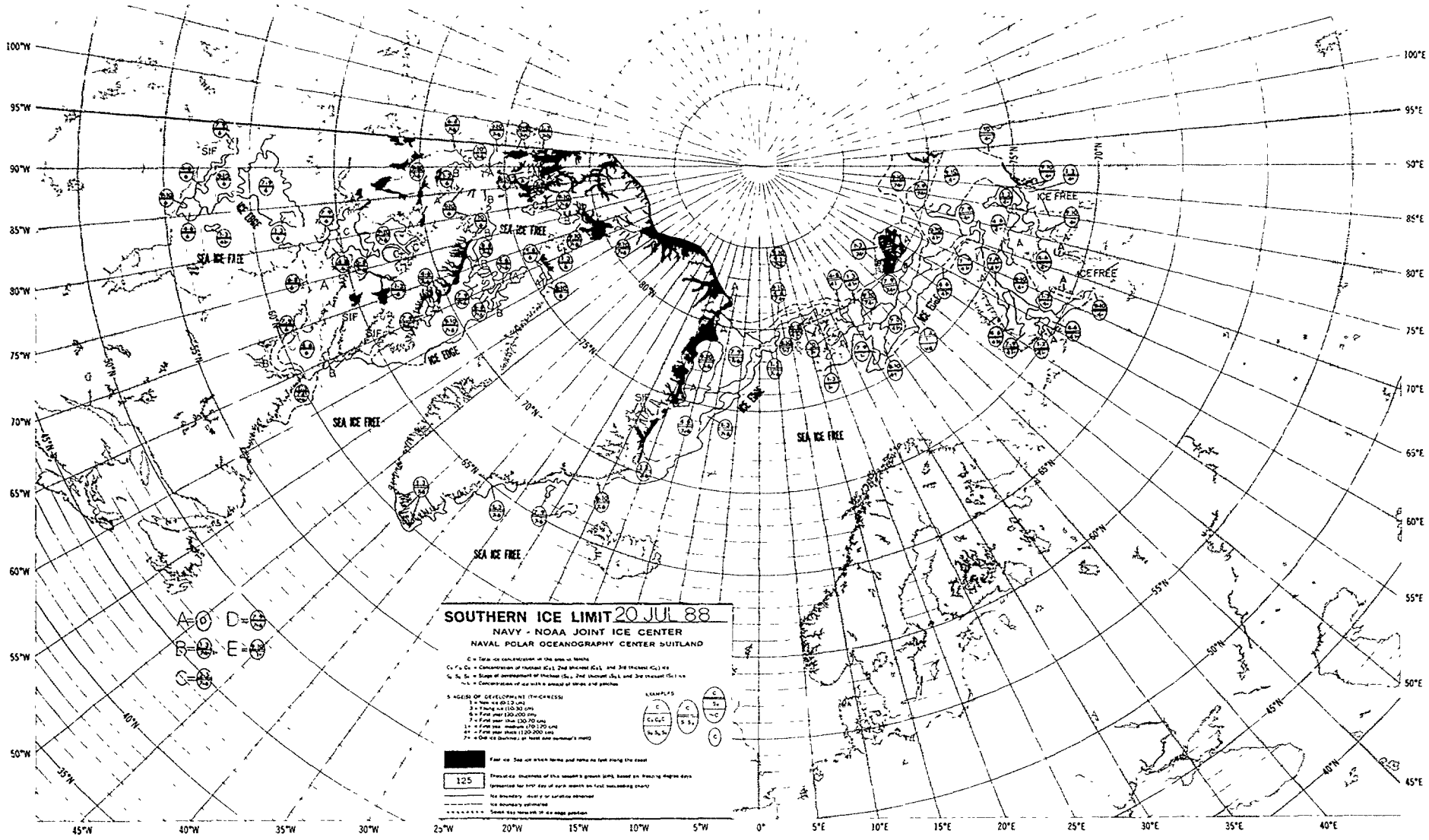


SOUTHERN ICE LIMIT 06JUL88
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SEA ICE FREE
SEA ICE FREE
SEA ICE FREE
ICE EDGE
ICE EDGE
ICE EDGE


SOUTHERN ICE LIMIT 13 JUL 88
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
ICE EDGE
SEA ICE FREE
SIF


SOUTHERN ICE LIMIT 20 JUL 88
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SEA ICE FREE
ICE FREE
ICE EDGE
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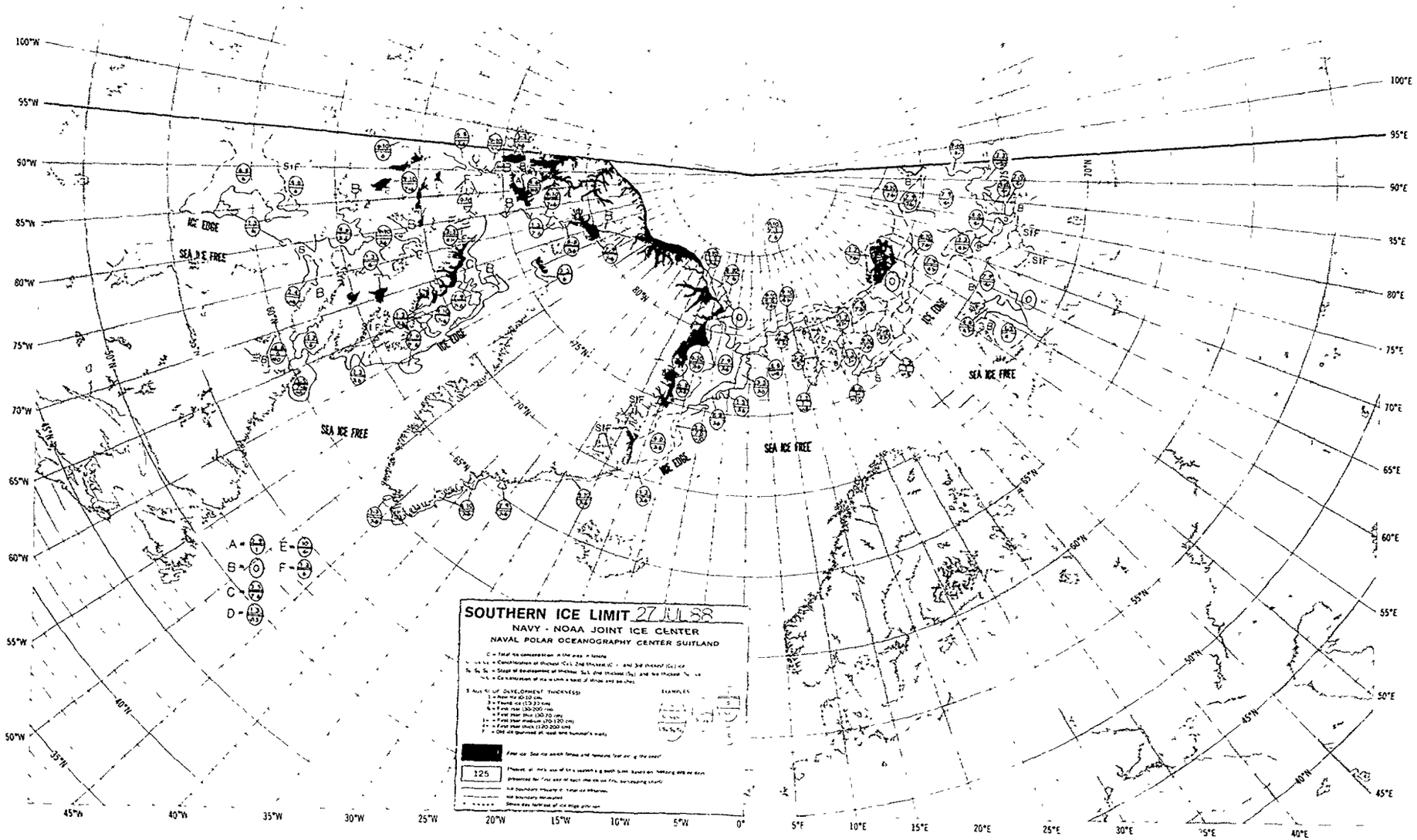
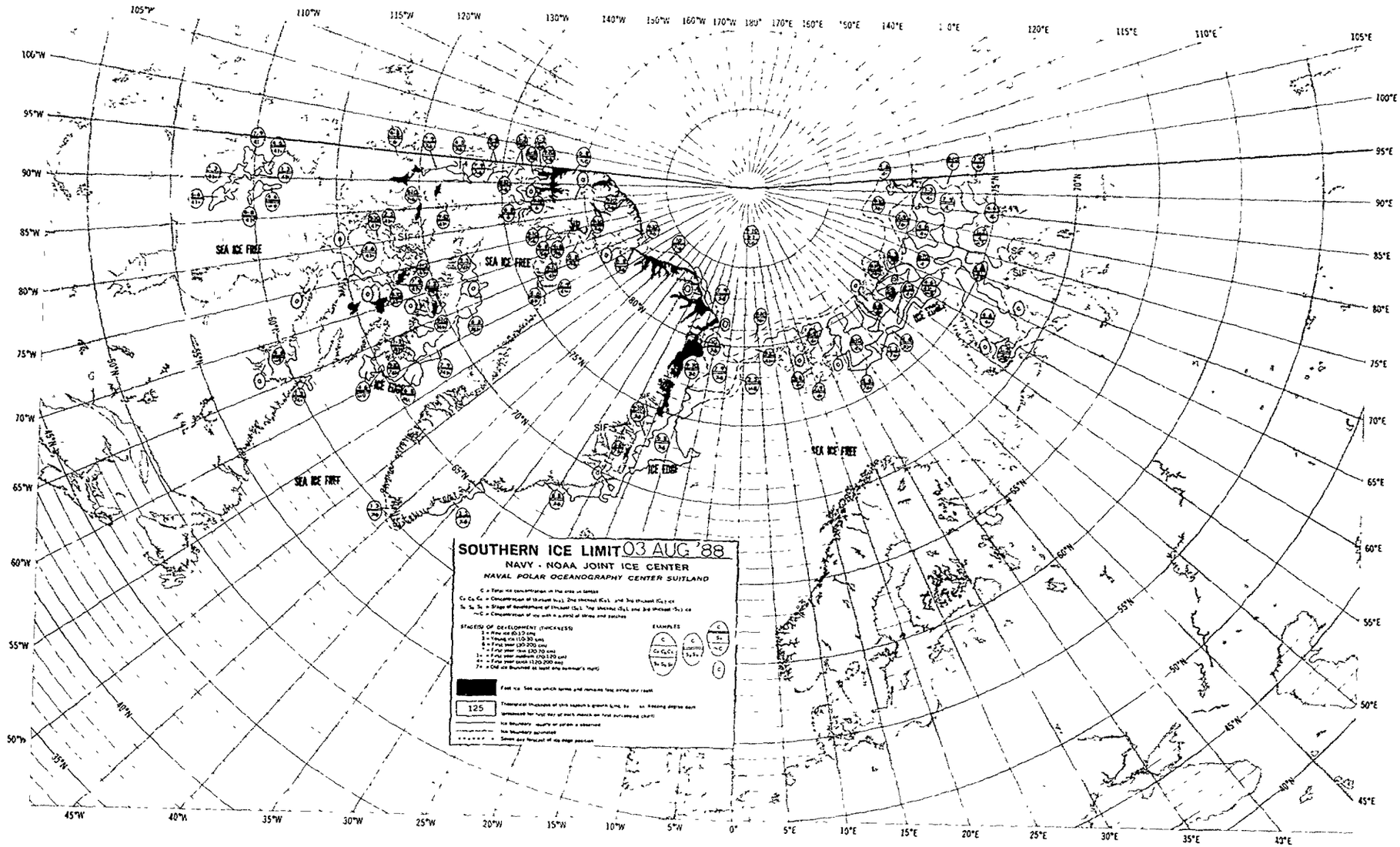

SOUTHERN ICE LIMIT 27 JUL 88
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
ICE EDGE
SEA ICE FREE
SIF
A =
B =
C =
D =
E =
F =


SOUTHERN ICE LIMIT 03 AUG '88
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SEA ICE FREE
SEA ICE FREE
SEA ICE FREE
SEA ICE FREE
ICE EDGE
ICE EDGE
ICE EDGE
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105°W
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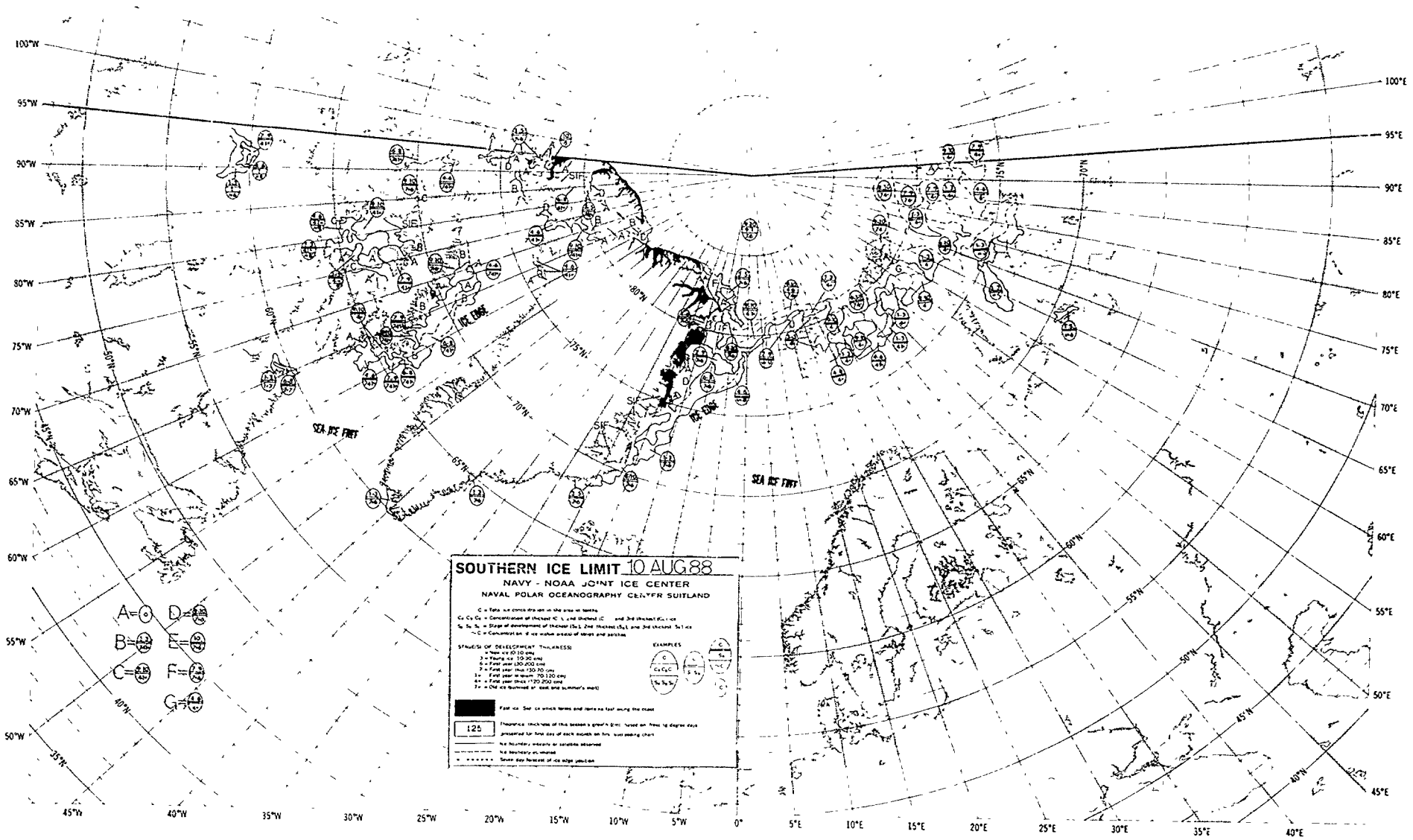
SOUTHERN ICE LIMIT 10 AUG 88
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
A= D=
B= E=
C= F=
G=
ICE EDGE
SEA ICE FIRST
100°W
95°W
90°W
85°W
80°W
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70°W
65°W
60°W
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50°W
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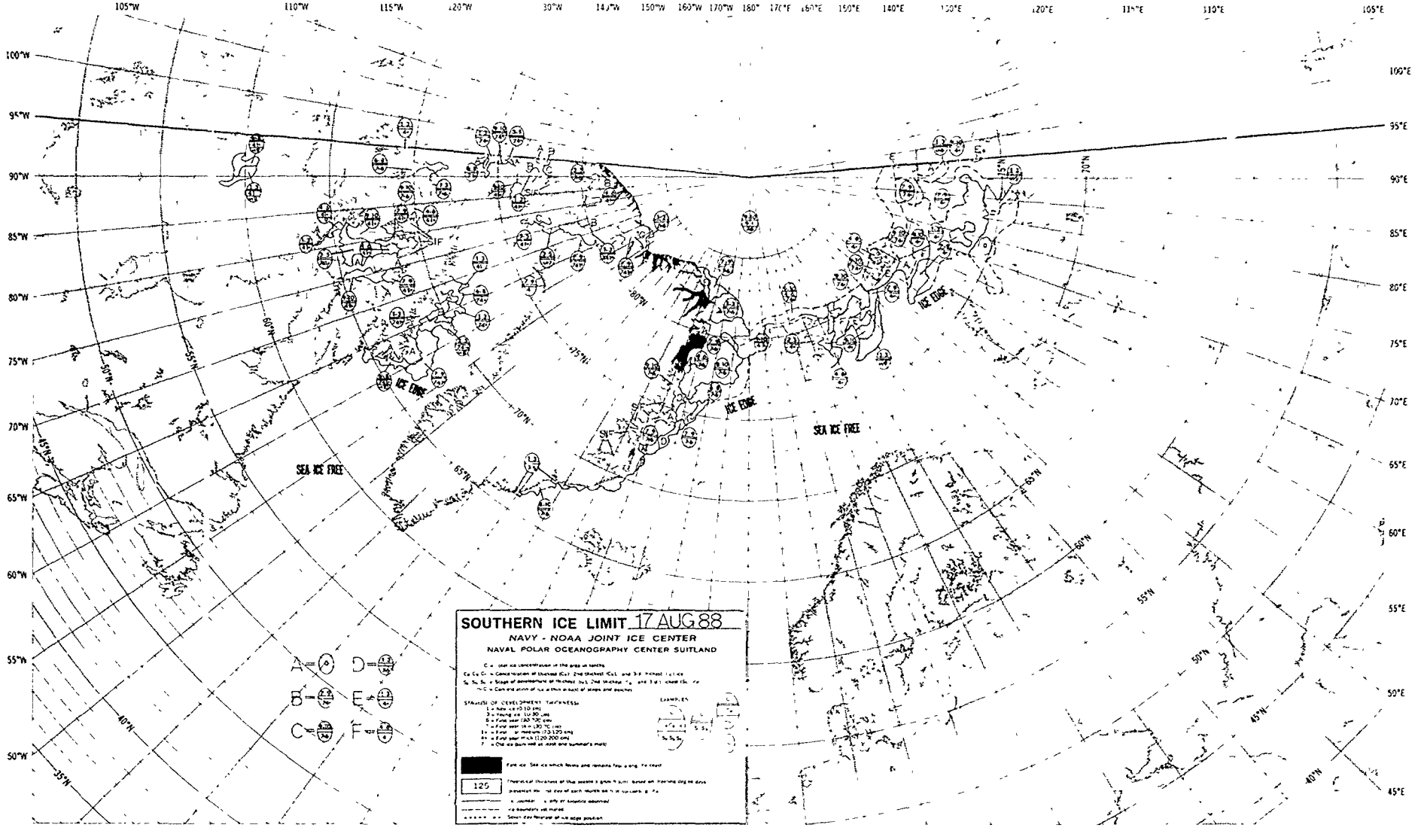
100°E


SOUTHERN ICE LIMIT 17 AUG 88
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SEA ICE FREE
ICE EDGE
105°W
110°W
115°W
120°W
130°W
140°W
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160°W
170°W
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170°E
160°E
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105°E
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60°W
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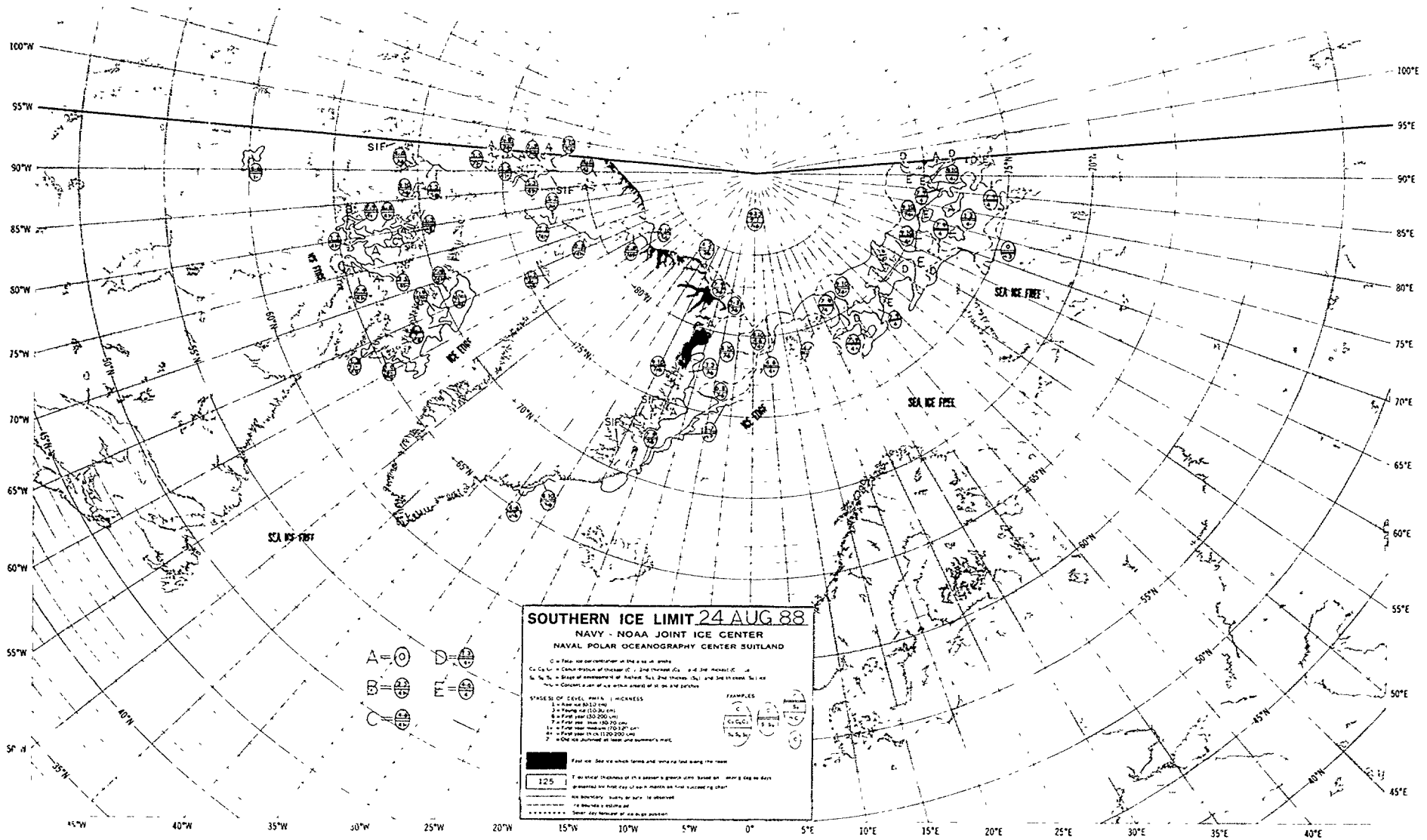
SOUTHERN ICE LIMIT 24 AUG 88
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SEA ICE FREE
SEA ICE FREE
SEA ICE FREE
SEA ICE FREE
SIF
SIF
SIF
SIF
A=
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95°W
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80°W
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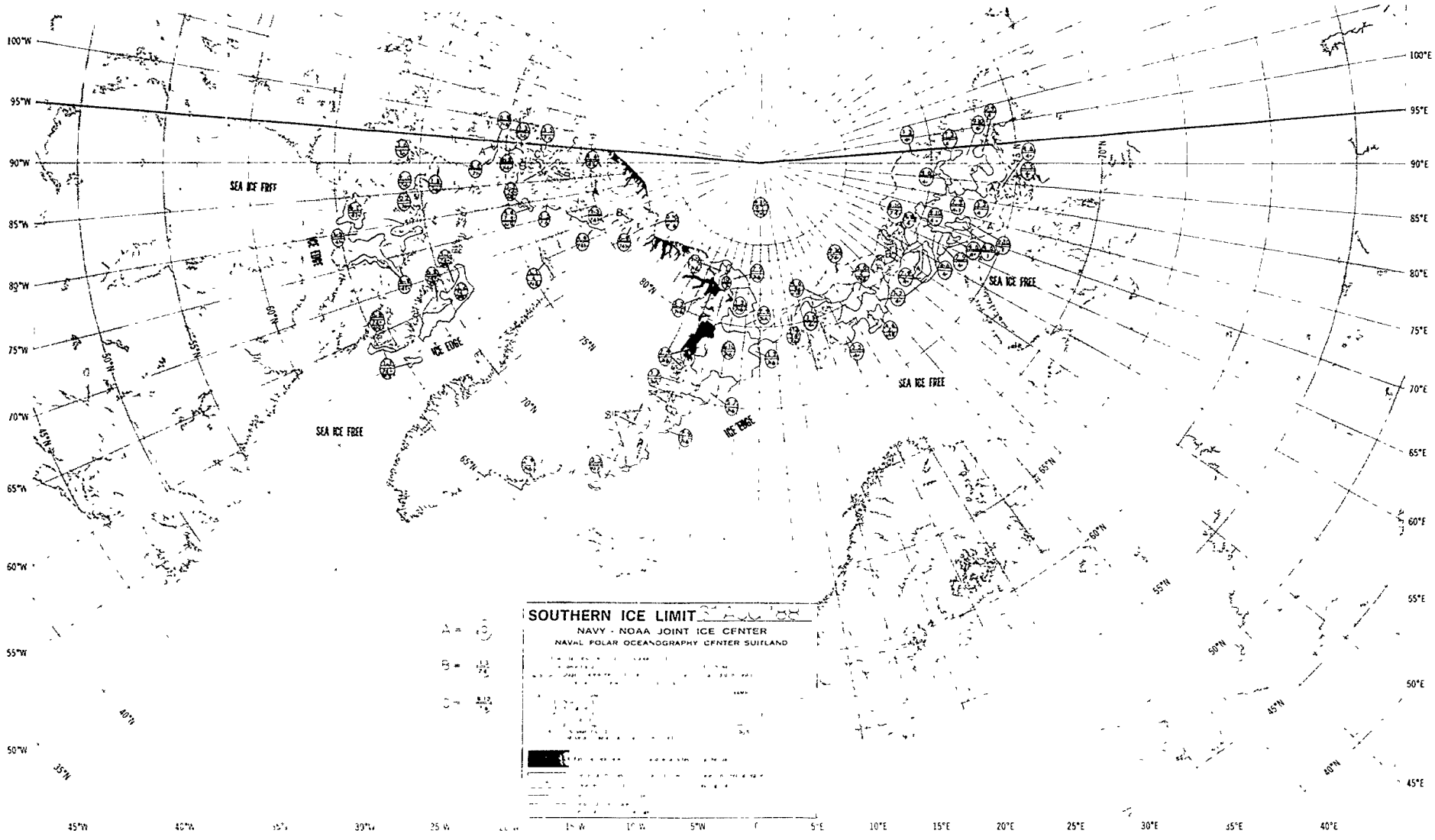
SEA ICE FREE
ICE EDGE
SEA ICE FREE
SEA ICE FREE
ICE EDGE
SOUTHERN ICE LIMIT
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
100°W
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85°W
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75°W
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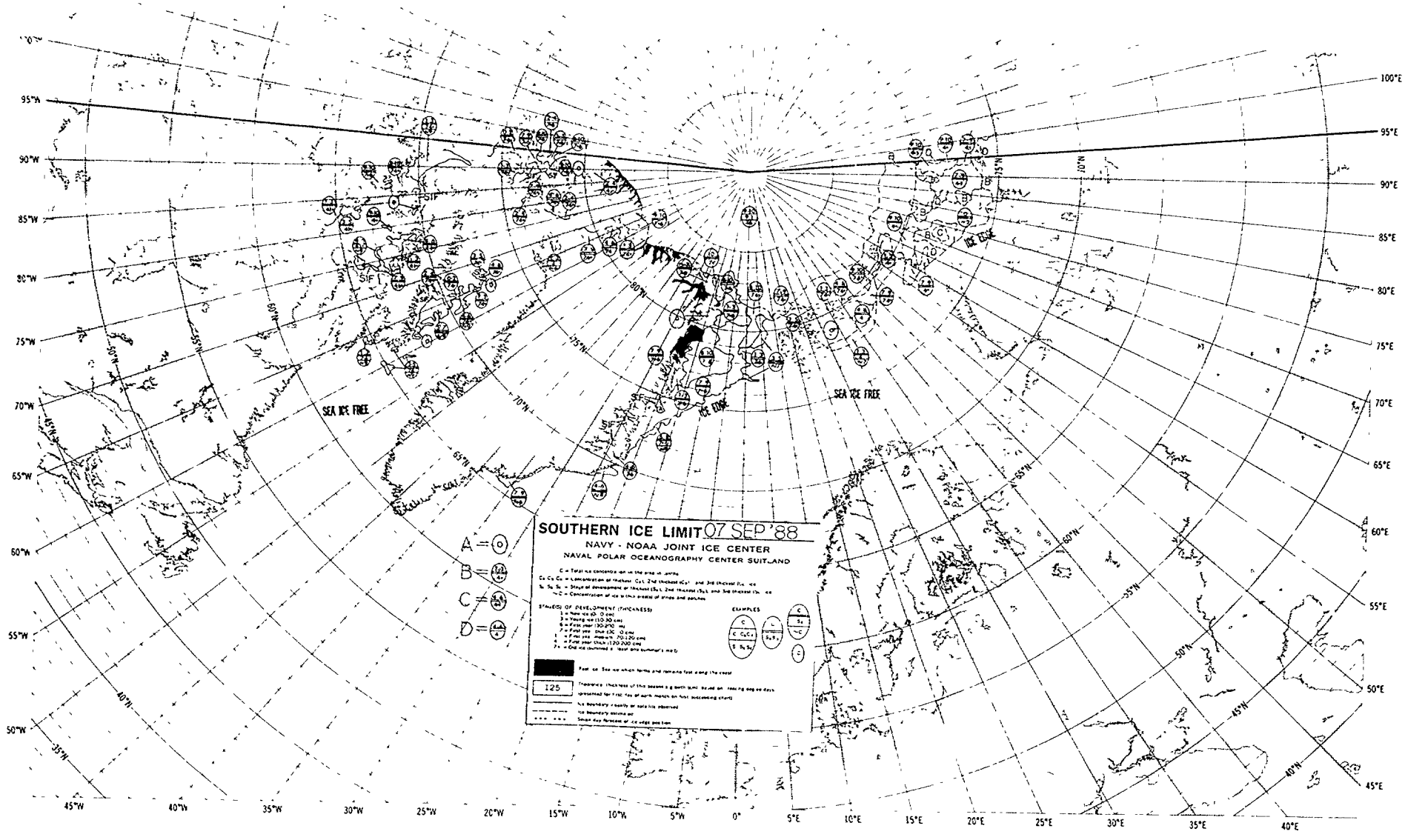
SOUTHERN ICE LIMIT 07 SEP '88
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NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
A =
B =
C =
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SEA ICE FREE
SEA ICE FREE
ICE EDGE
ICE EDGE
SIF
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SIF
EXAMPLES
STAGES OF DEVELOPMENT (THICKNESS)
125
90°W
95°W
100°W
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75°W
70°W
65°W
60°W
55°W
50°W
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40°W
35°W
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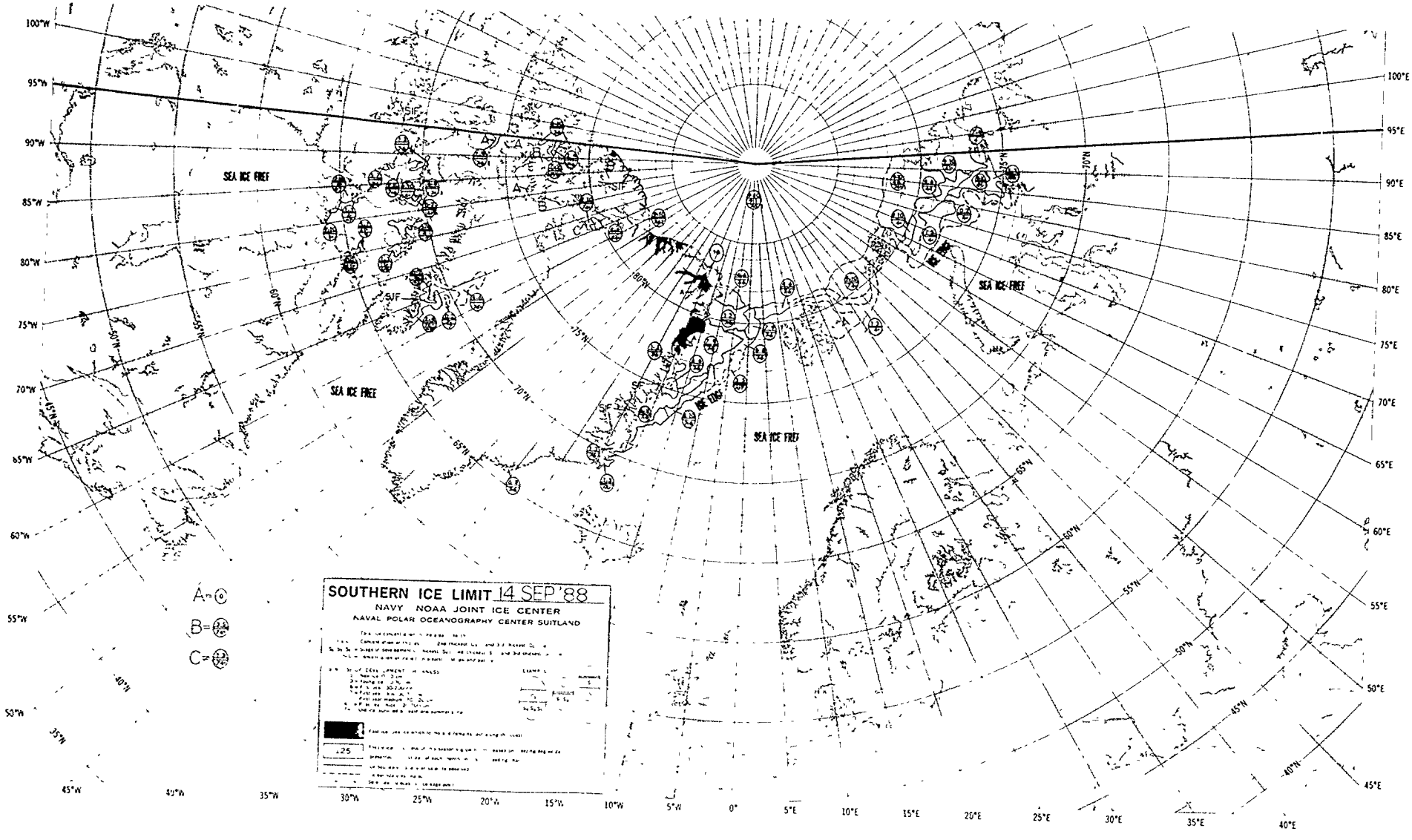
20°E
25°E
30°E
35°E
40°E
45°E
50°E
55°E
60°E
65°E
70°E
75°E
80°E
85°E
90°E
95°E
100°E
80°N
75°N
70°N
65°N
60°N
55°N
50°N
45°N
40°N
35°N


SEA ICE FREE
SEA ICE FREE
SEA ICE FREE
SEA ICE FREE
SIF
SIF
SIF
SIF
A=
B=
C=
SOUTHERN ICE LIMIT 14 SEP '88
NAVY NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
100°W
95°W
90°W
85°W
80°W
75°W
70°W
65°W
60°W
55°W
50°W
45°W
40°W
35°W
30°W
25°W
20°W
15°W
10°W
5°W
0°
5°E
10°E
15°E
20°E
25°E
30°E
35°E
40°E
45°E
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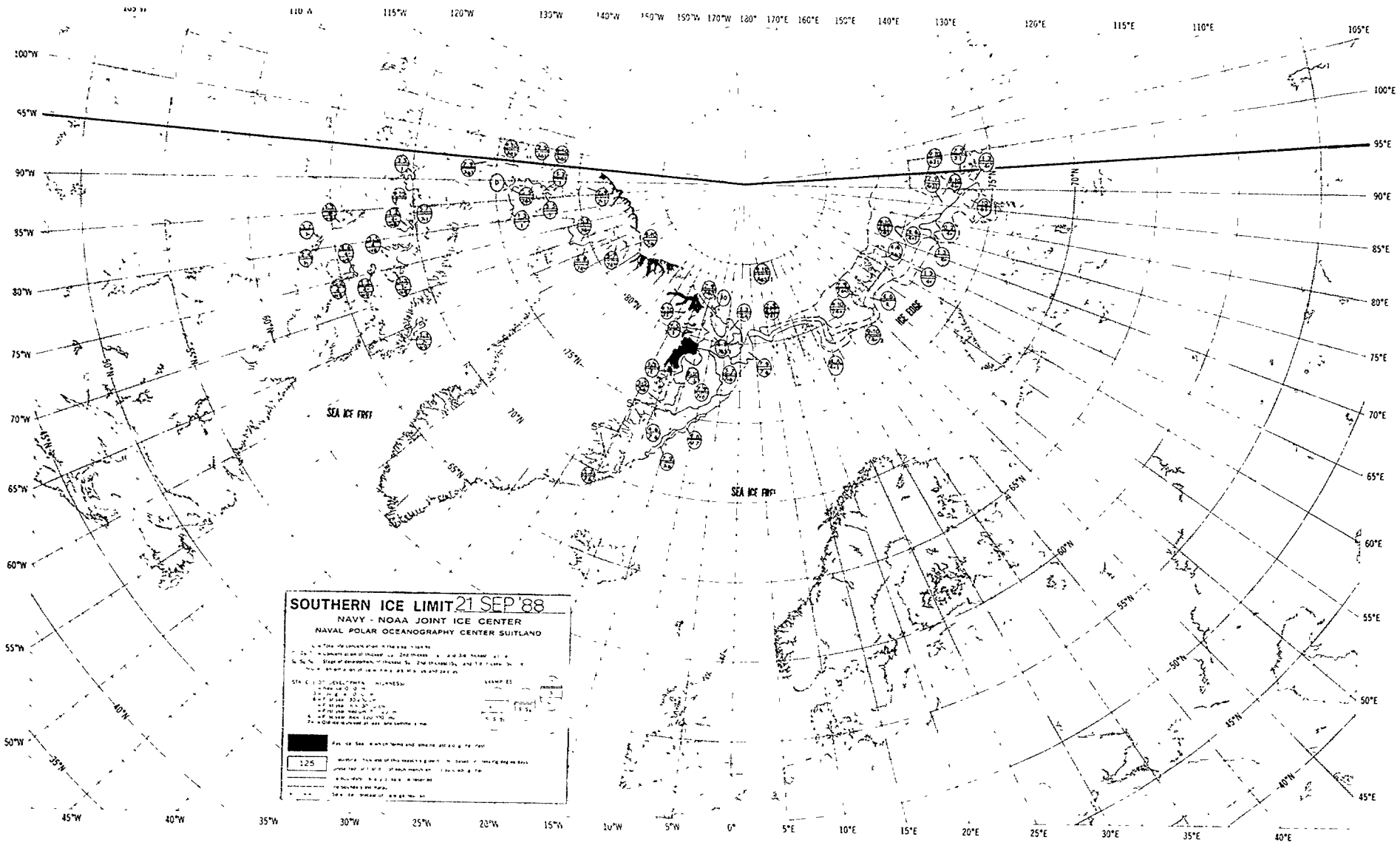
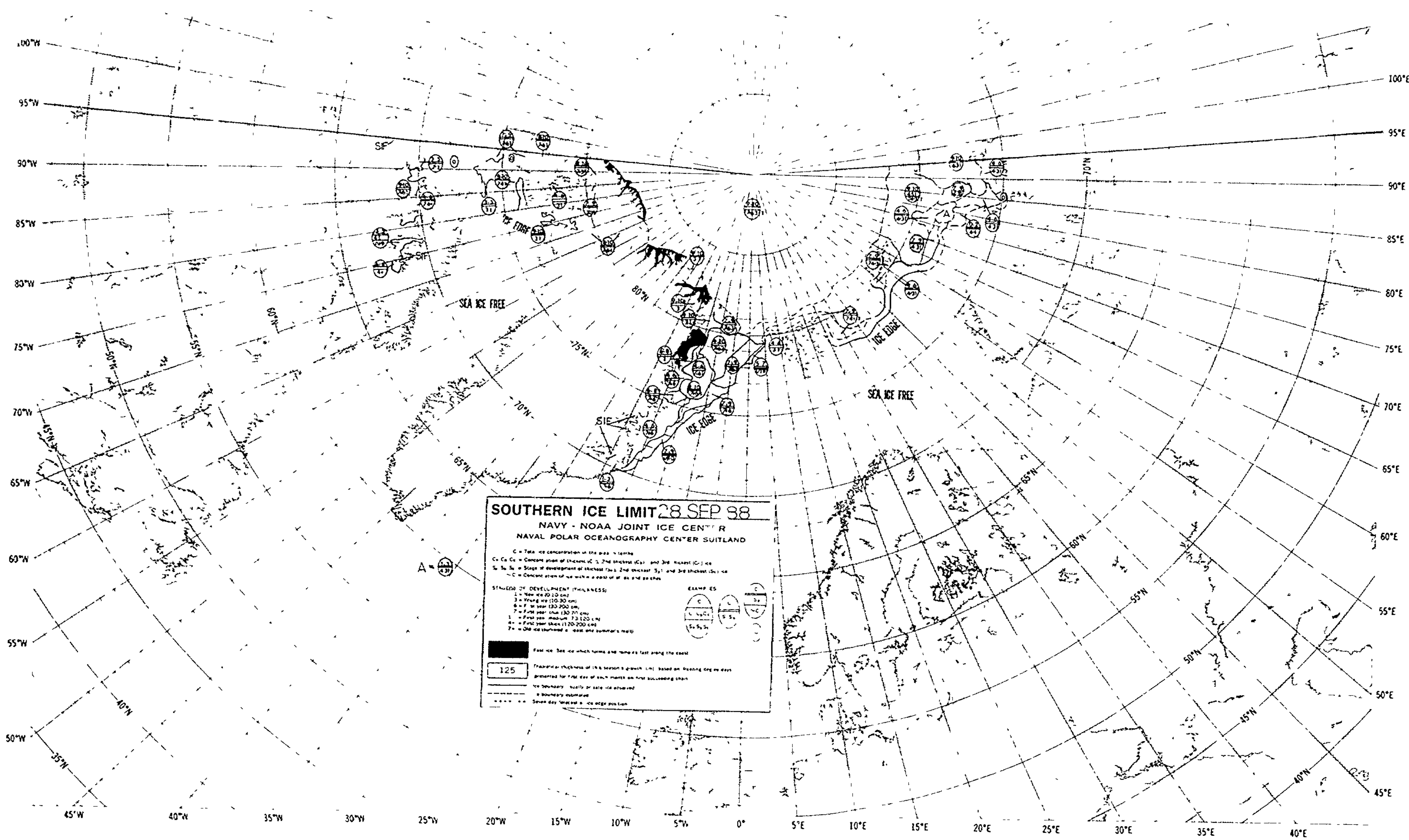
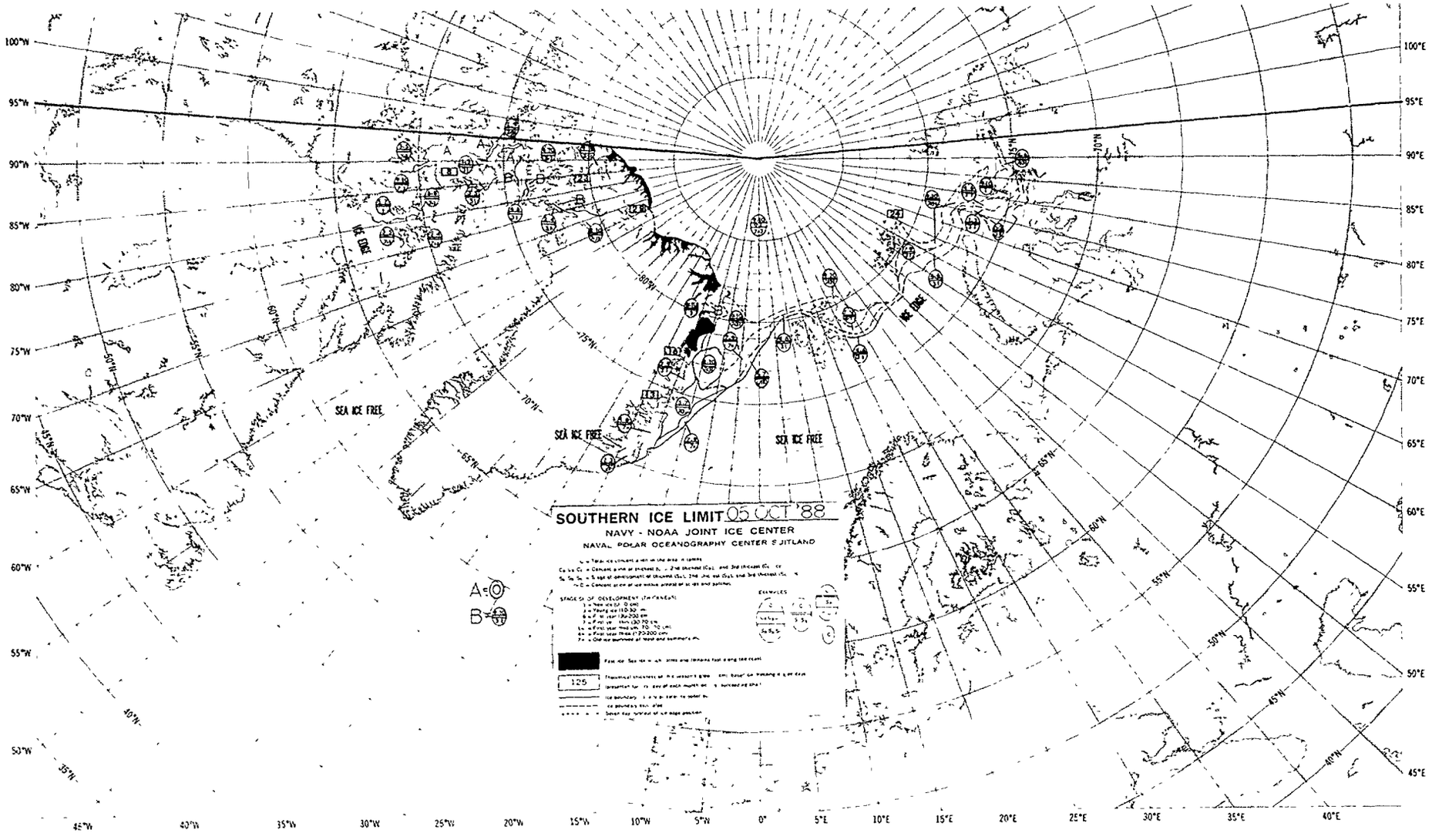
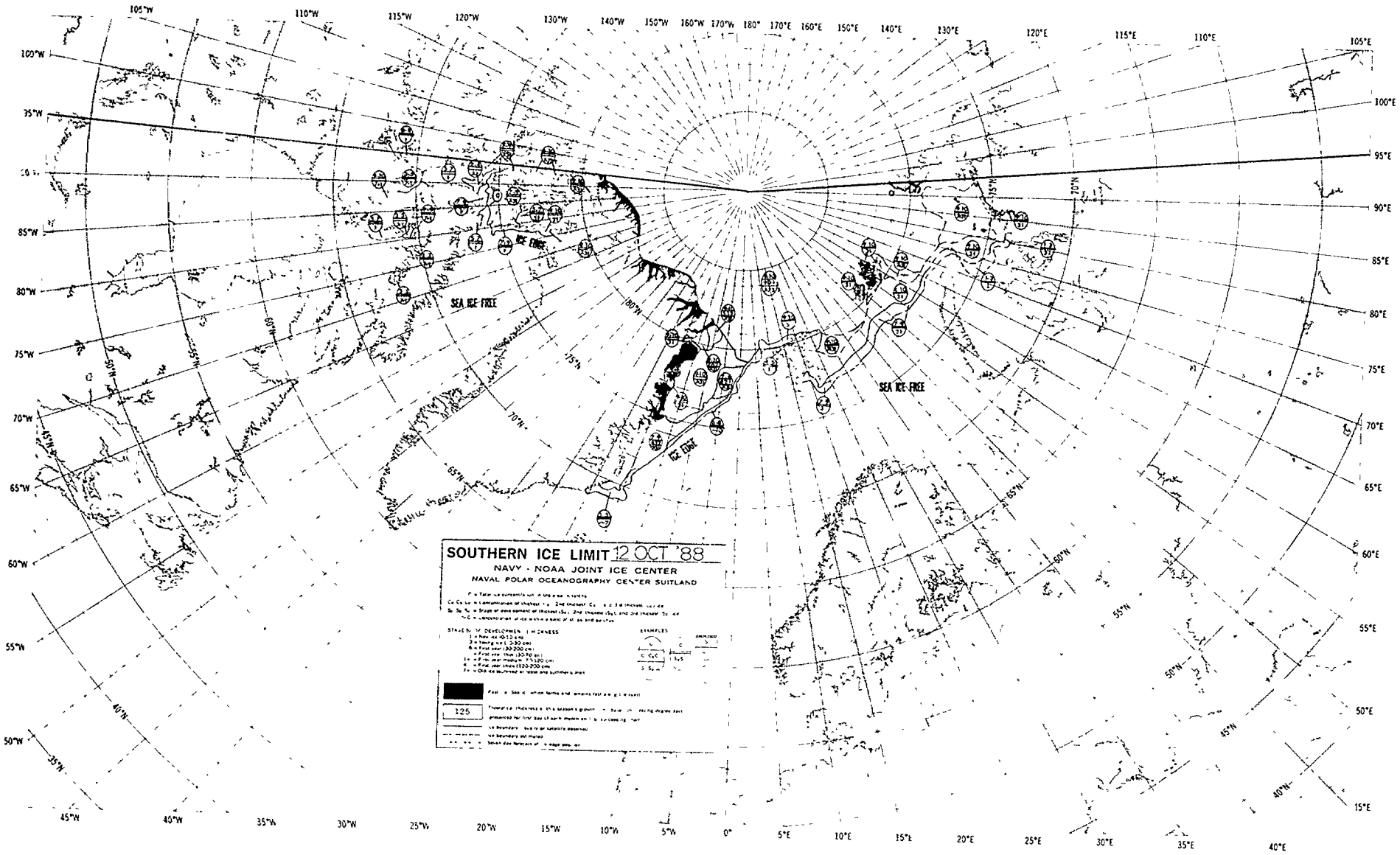
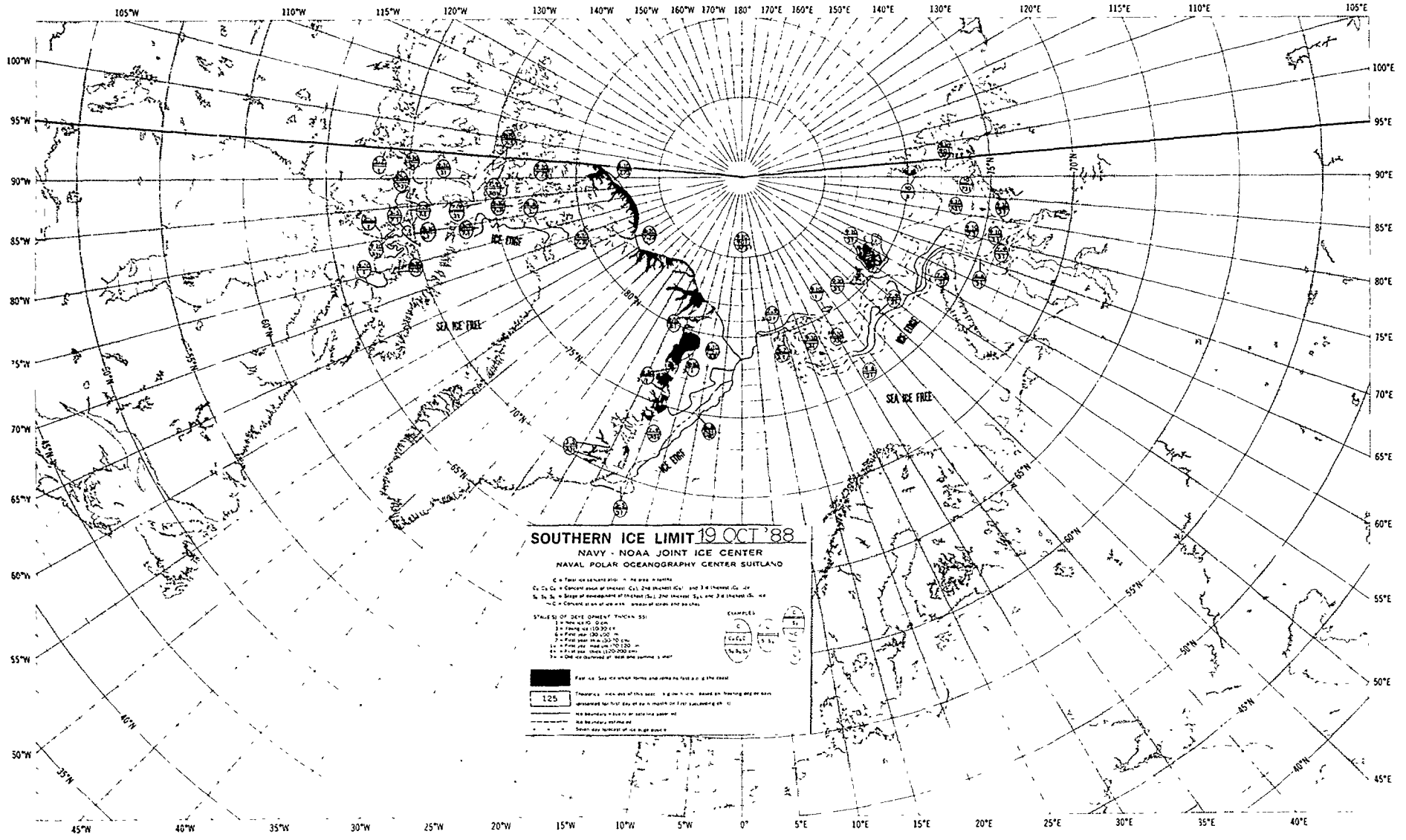
75°E
80°E
85°E
90°E
95°E
100°E

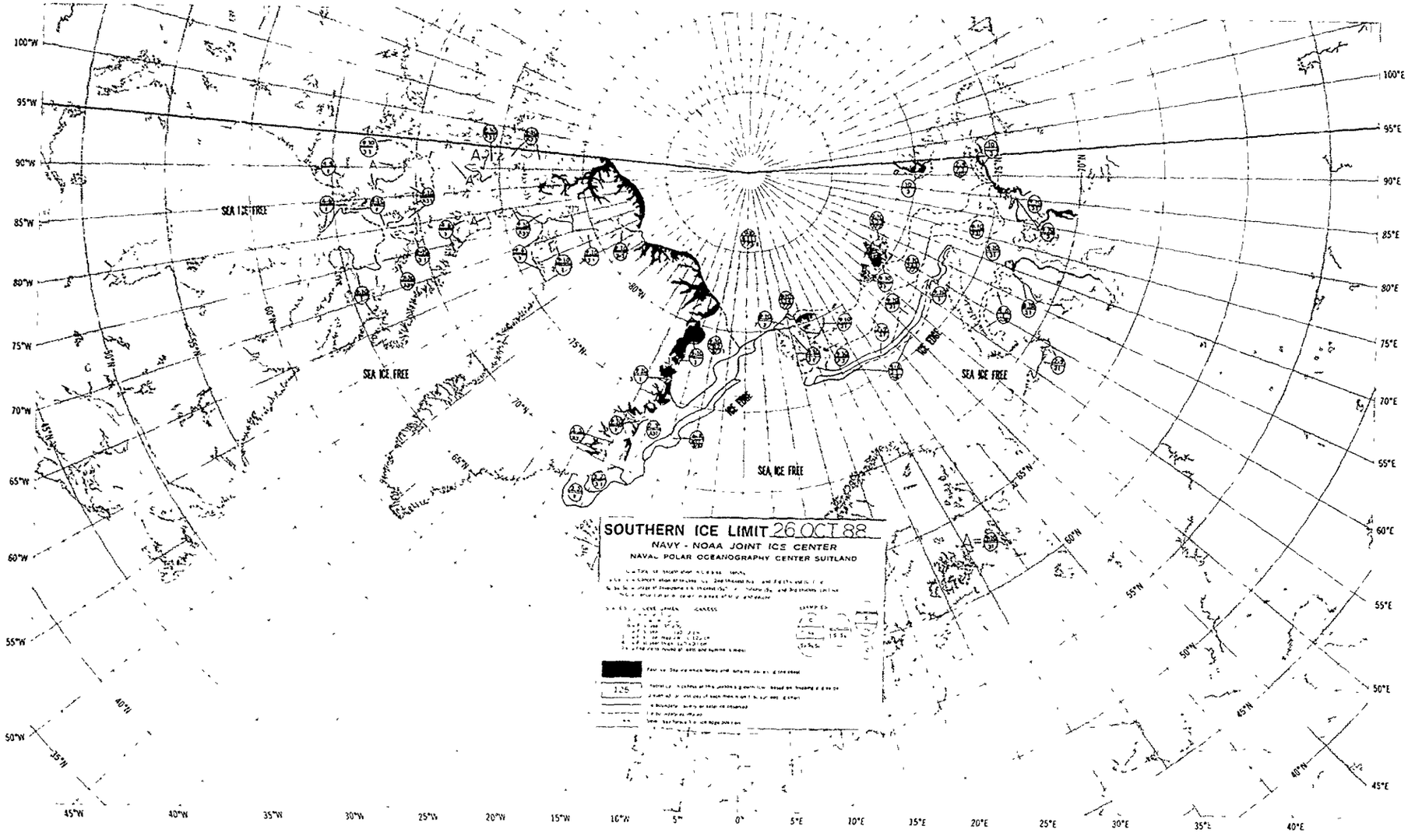

SOUTHERN ICE LIMIT 21 SEP '88
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SEA ICE FIRST
SEA ICE FIRST
ICE EDGE
125

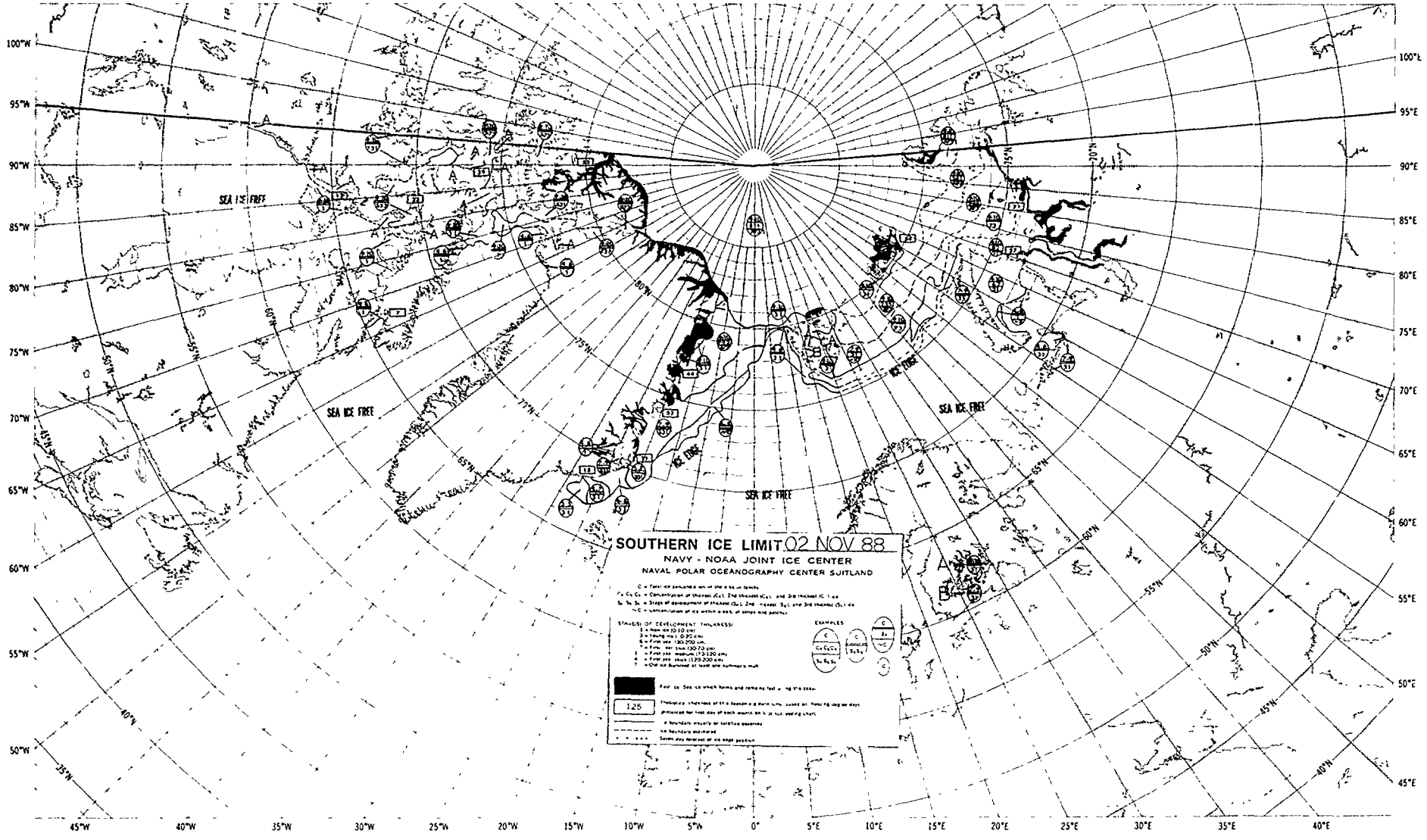

SOUTHERN ICE LIMIT 28 SEP 88
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SEA ICE FREE
ICE EDGE
SEA ICE FREE
ICE EDGE
ICE EDGE
125

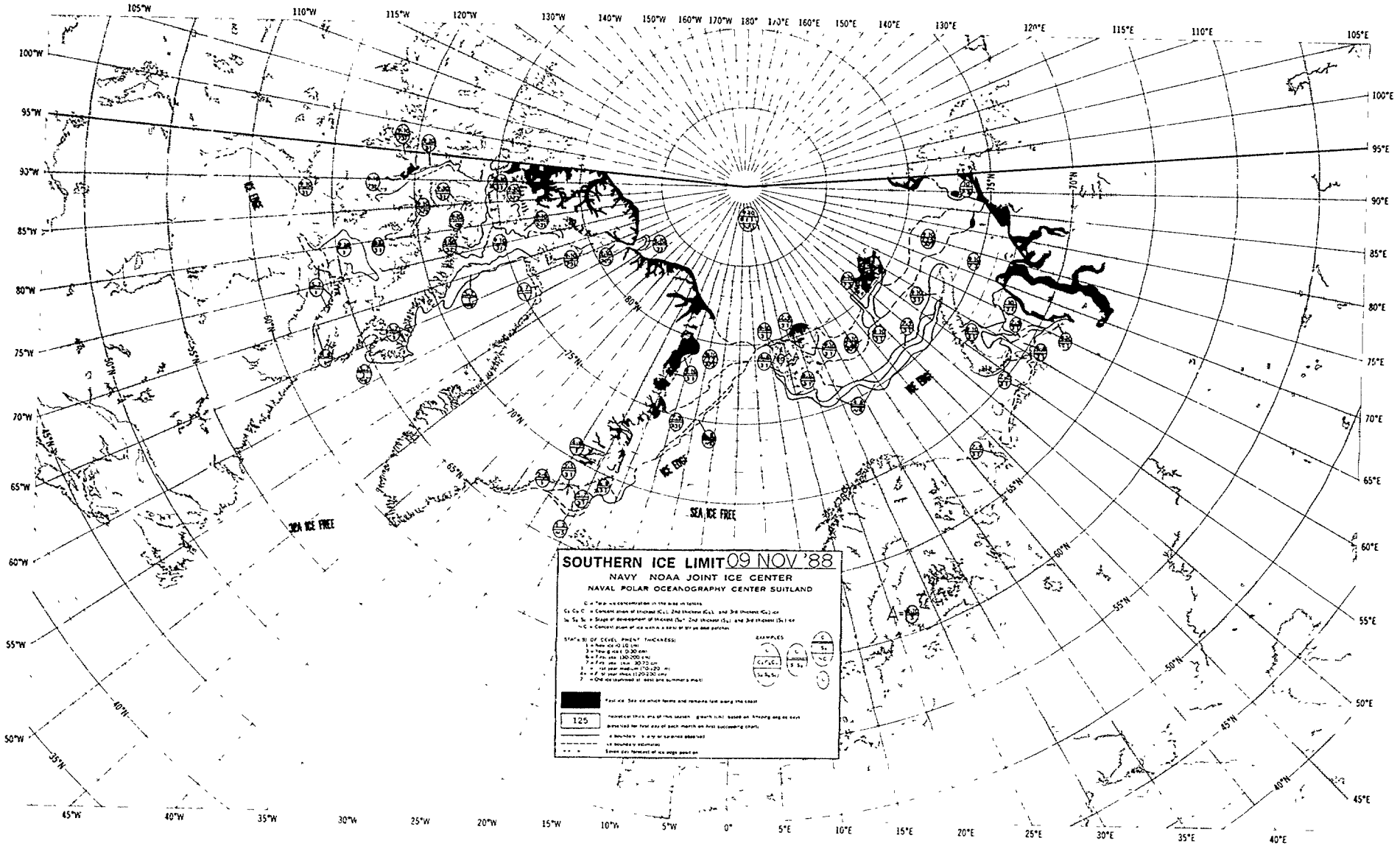

SOUTHERN ICE LIMIT 05 OCT '88
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SEA ICE FREE
SEA ICE FREE
SEA ICE FREE
ICE EDGE
ICE EDGE
A=
B=
100°W
95°W
90°W
85°W
80°W
75°W
70°W
65°W
60°W
55°W
50°W
45°W
40°W
35°W
30°W
25°W
20°W
15°W
10°W
5°W
0°
5°E
10°E
15°E
20°E
25°E
30°E
35°E
40°E
45°E
100°E
95°E
90°E
85°E
80°E
75°E
70°E
65°E
60°E
55°E
50°E
180°W
175°W
70°N
65°N
60°N
55°N
50°N
45°N
40°N
35°N

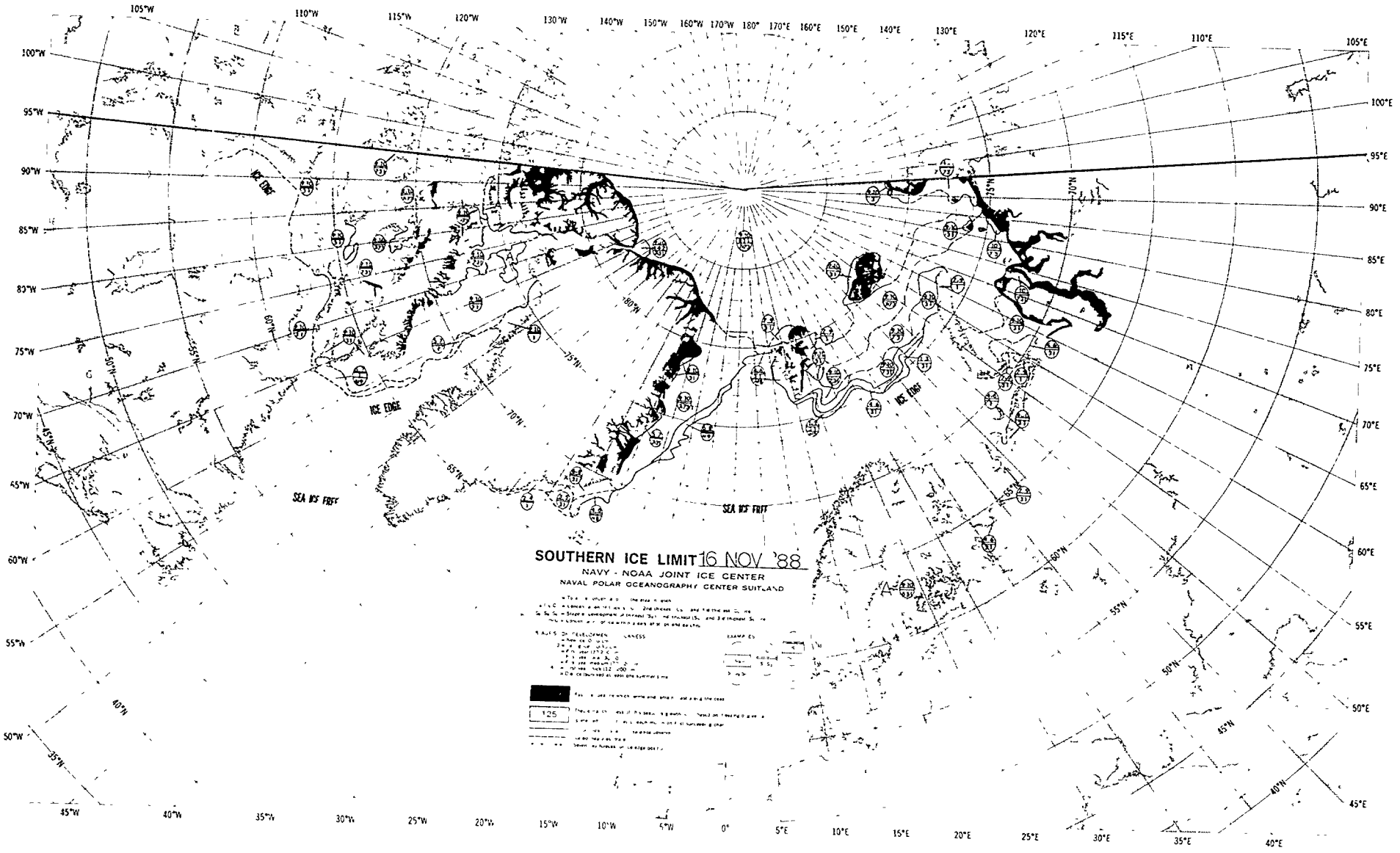

SEA ICE FREE
ICE EDGE
SEA ICE FREE
ICE EDGE
SOUTHERN ICE LIMIT 12 OCT '88
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
125

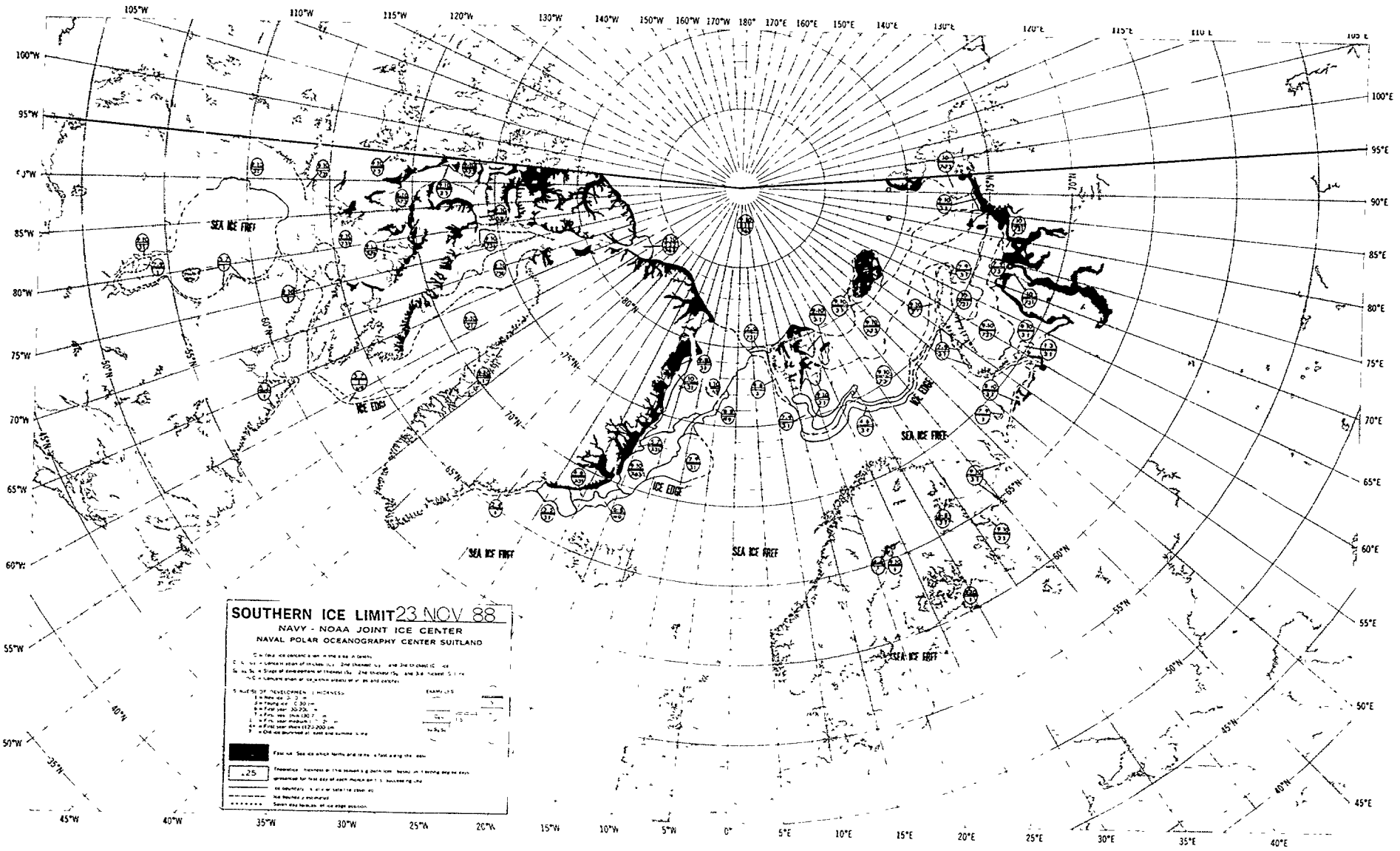

SOUTHERN ICE LIMIT 19 OCT '88
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
ICE EDGE
SEA ICE FREE
105°W
110°W
115°W
120°W
130°W
140°W
150°W
160°W
170°W
180°
170°E
160°E
150°E
140°E
130°E
120°E
115°E
110°E
105°E
100°W
95°W
90°W
85°W
80°W
75°W
70°W
65°W
60°W
55°W
50°W
45°W
40°W
35°W
30°W
25°W
20°W
15°W
10°W
5°W
0°
5°E
10°E
15°E
20°E
25°E
30°E
35°E
40°E
45°E
50°E
55°E
60°E
65°E
70°E
75°E
80°E
85°E
90°E
95°E
100°E

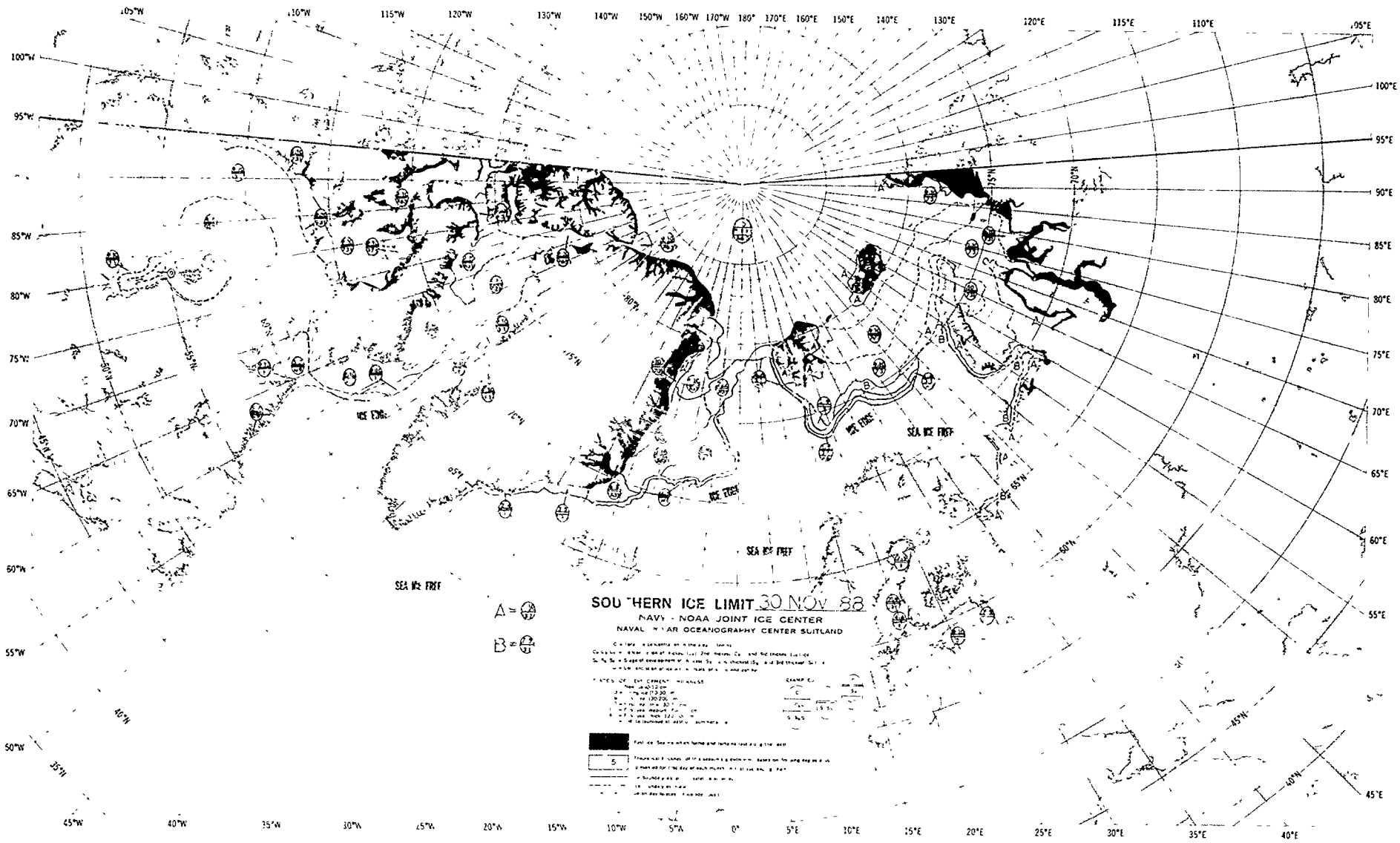

SEA ICE FREE
SEA ICE FREE
SEA ICE FREE
SEA ICE FREE
SOUTHERN ICE LIMIT 26 OCT 88
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
100°W
95°W
90°W
85°W
80°W
75°W
70°W
65°W
60°W
55°W
50°W
45°W
40°W
35°W
30°W
25°W
20°W
15°W
10°W
5°W
0°
5°E
10°E
15°E
20°E
25°E
30°E
35°E
40°E
45°E
50°E
55°E
60°E
65°E
70°E
75°E
80°E
85°E
90°E
95°E
100°E

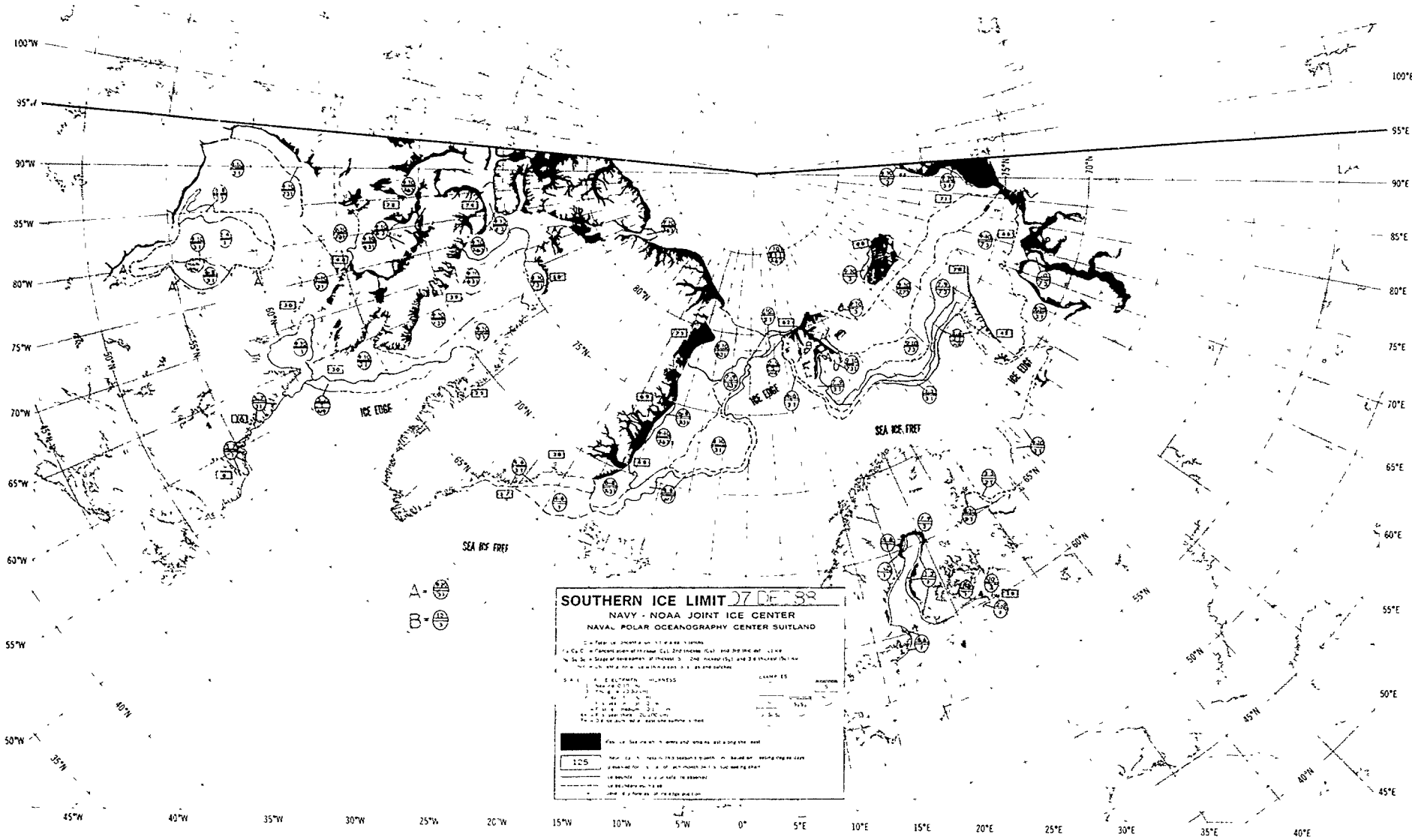

SEA ICE FREE
SEA ICE FREE
SEA ICE FREE
ICE FREE
ICE FREE
SOUTHERN ICE LIMIT 02 NOV 88
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
STAGES OF DEVELOPMENT THICKNESS
EXAMPLES
125
100°W
95°W
90°W
85°W
80°W
75°W
70°W
65°W
60°W
55°W
50°W
45°W
40°W
35°W
30°W
25°W
20°W
15°W
10°W
5°W
0°
5°E
10°E
15°E
20°E
25°E
30°E
35°E
40°E
45°E
50°E
55°E
60°E
65°E
70°E
75°E
80°E
85°E
90°E
95°E
100°E
80°N
75°N
70°N
65°N
60°N
55°N
50°N
45°N
40°N
35°N

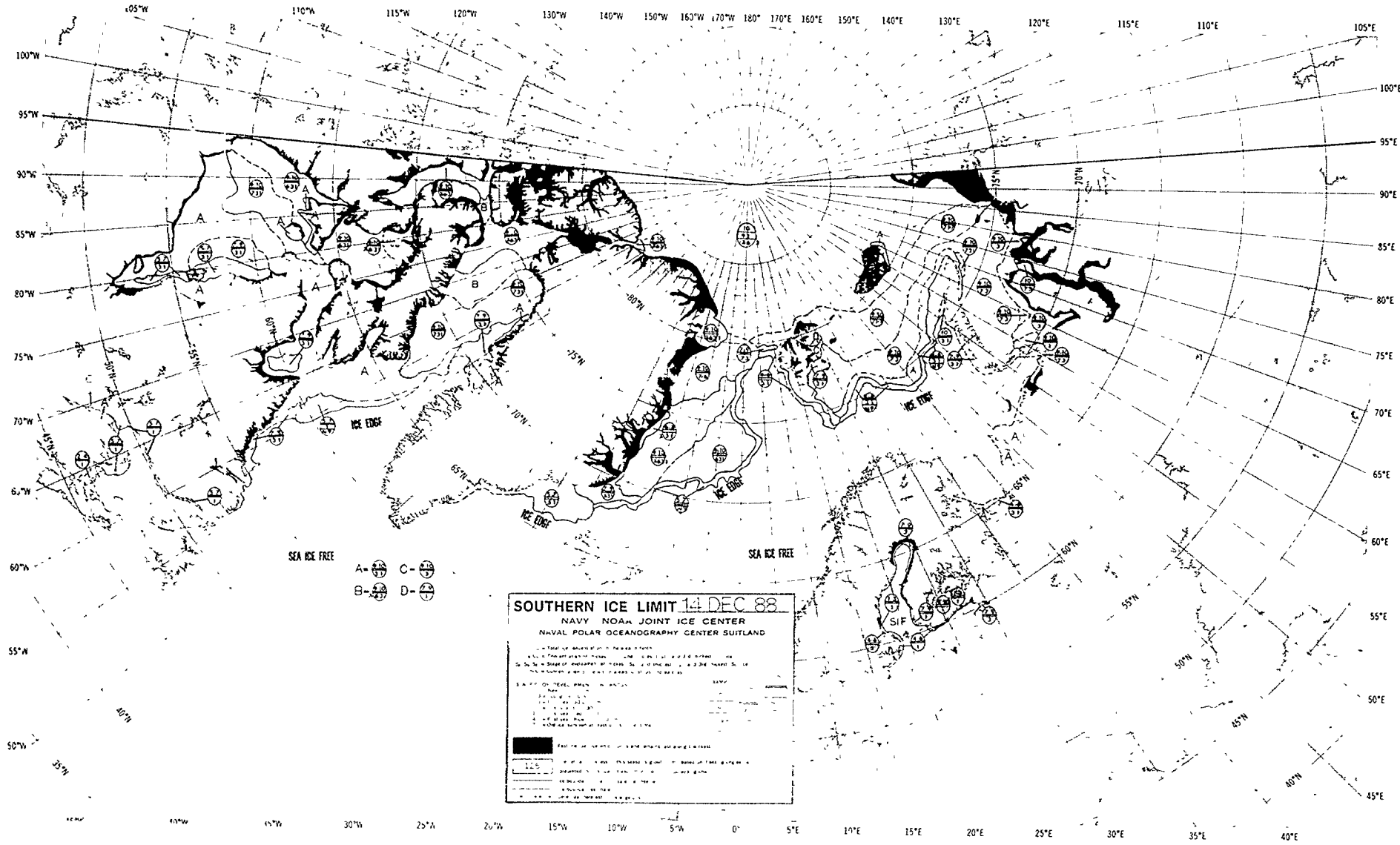

SEA ICE FREE
SEA ICE FREE
ICE EDGE
ICE EDGE
SOUTHERN ICE LIMIT 09 NOV '88
NAVY NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
EXAMPLES
125
105°W
100°W
95°W
90°W
85°W
80°W
75°W
70°W
65°W
60°W
55°W
50°W
45°W
40°W
35°W
30°W
25°W
20°W
15°W
10°W
5°W
0°
5°E
10°E
15°E
20°E
25°E
30°E
35°E
40°E
45°E
50°E
55°E
60°E
65°E
70°E
75°E
80°E
85°E
90°E
95°E
100°E
105°E
110°E
115°E
120°E
130°E
140°E
150°E
160°E
170°E
180°
170°W
160°W
150°W
140°W
130°W
120°W
115°W
110°W
105°W
100°W
95°W
90°W
85°W
80°W
75°W
70°W
65°W
60°W
55°W
50°W
45°W
40°W
35°W
30°W
25°W
20°W
15°W
10°W
5°W
0°
5°E
10°E
15°E
20°E
25°E
30°E
35°E
40°E
45°E
50°E
55°E
60°E
65°E
70°E
75°E
80°E
85°E
90°E
95°E
100°E
105°E
110°E
115°E
120°E
130°E
140°E
150°E
160°E
170°E
180°
170°W
160°W
150°W
140°W
130°W
120°W
115°W
110°W
105°W

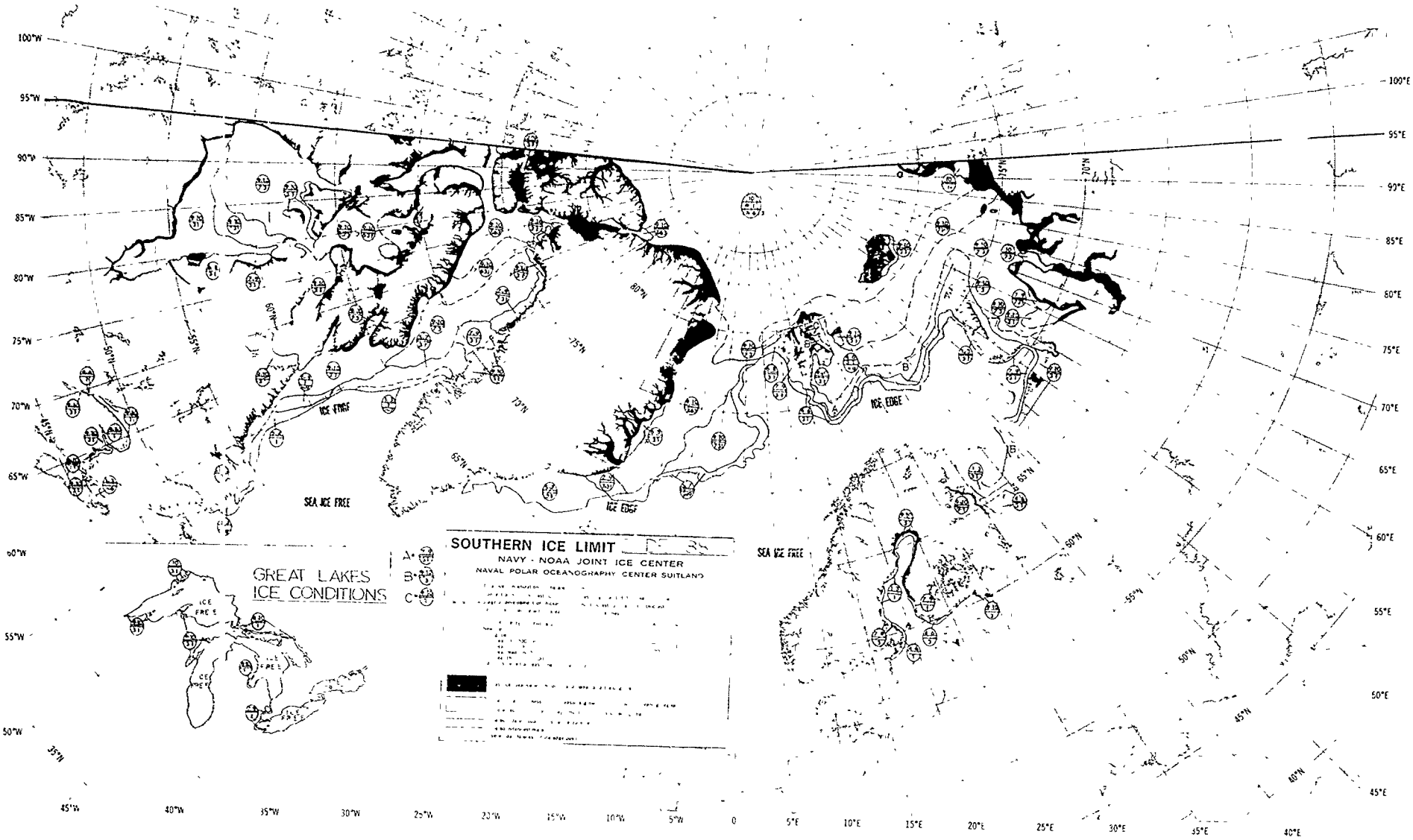

SOUTHERN ICE LIMIT 16 NOV '88
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
ICE EDGE
SEA ICE FREE
125

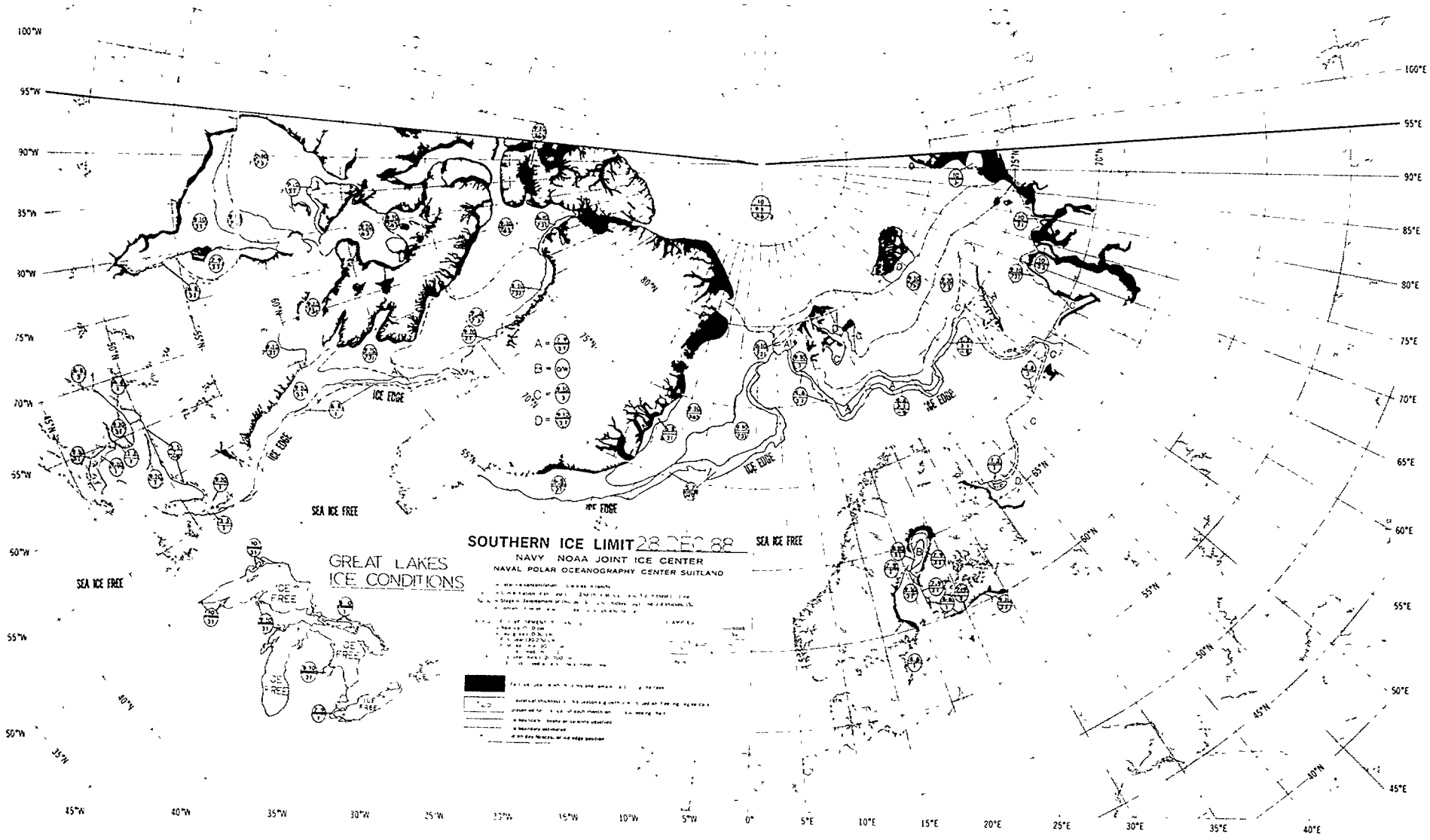

SEA ICE FREE
ICE EDGE
SEA ICE FREE
ICE EDGE
SEA ICE FREE
ICE EDGE
SEA ICE FREE
SEA ICE FREE
SOUTHERN ICE LIMIT 23 NOV 88
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND

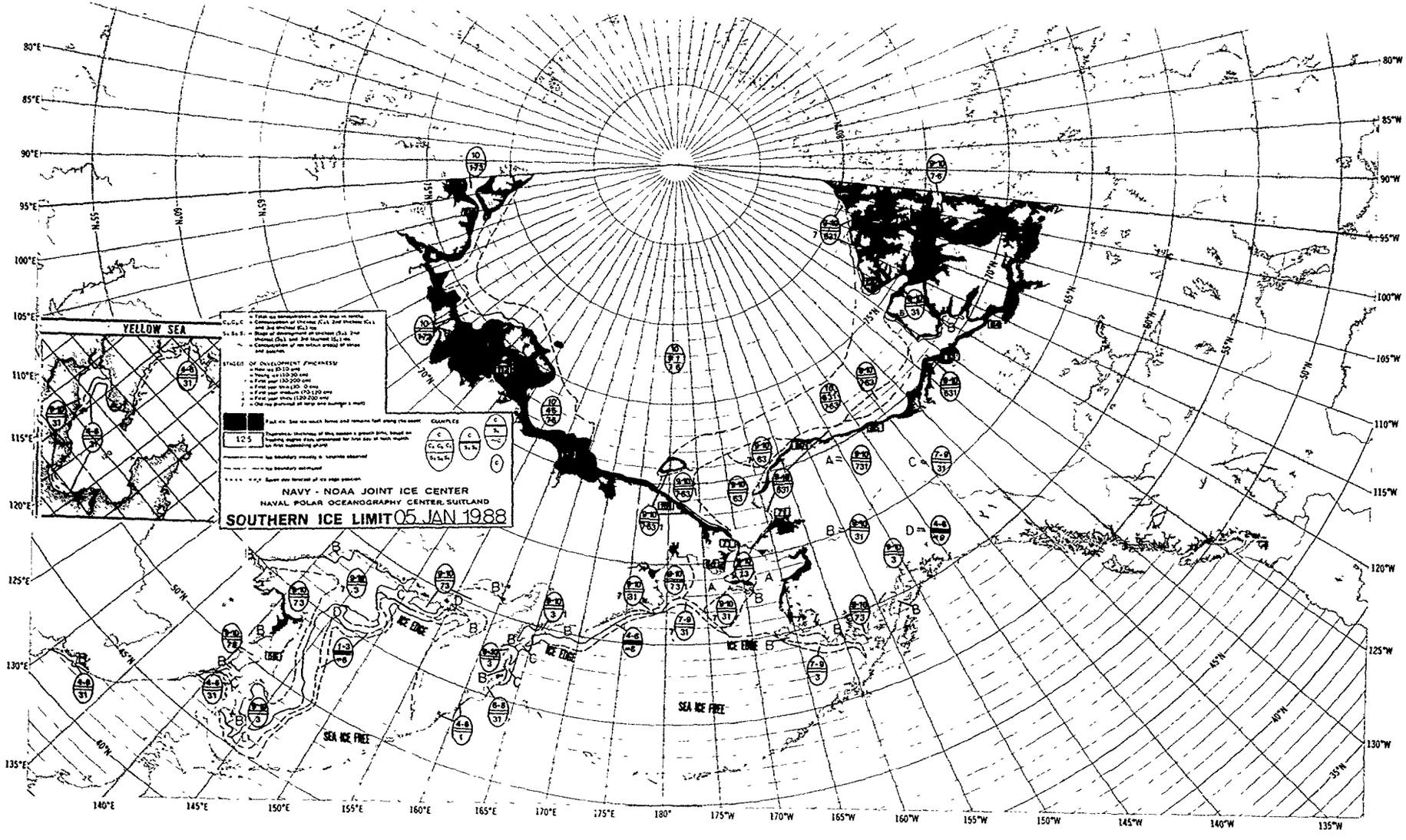

SOUTHERN ICE LIMIT 30 NOV 88
NAVY - NOAA JOINT ICE CENTER
NAVAL OCEANOGRAPHY CENTER SUITLAND
A = ⊕
B = ⊕
SEA ICE FREE
ICE EDGE

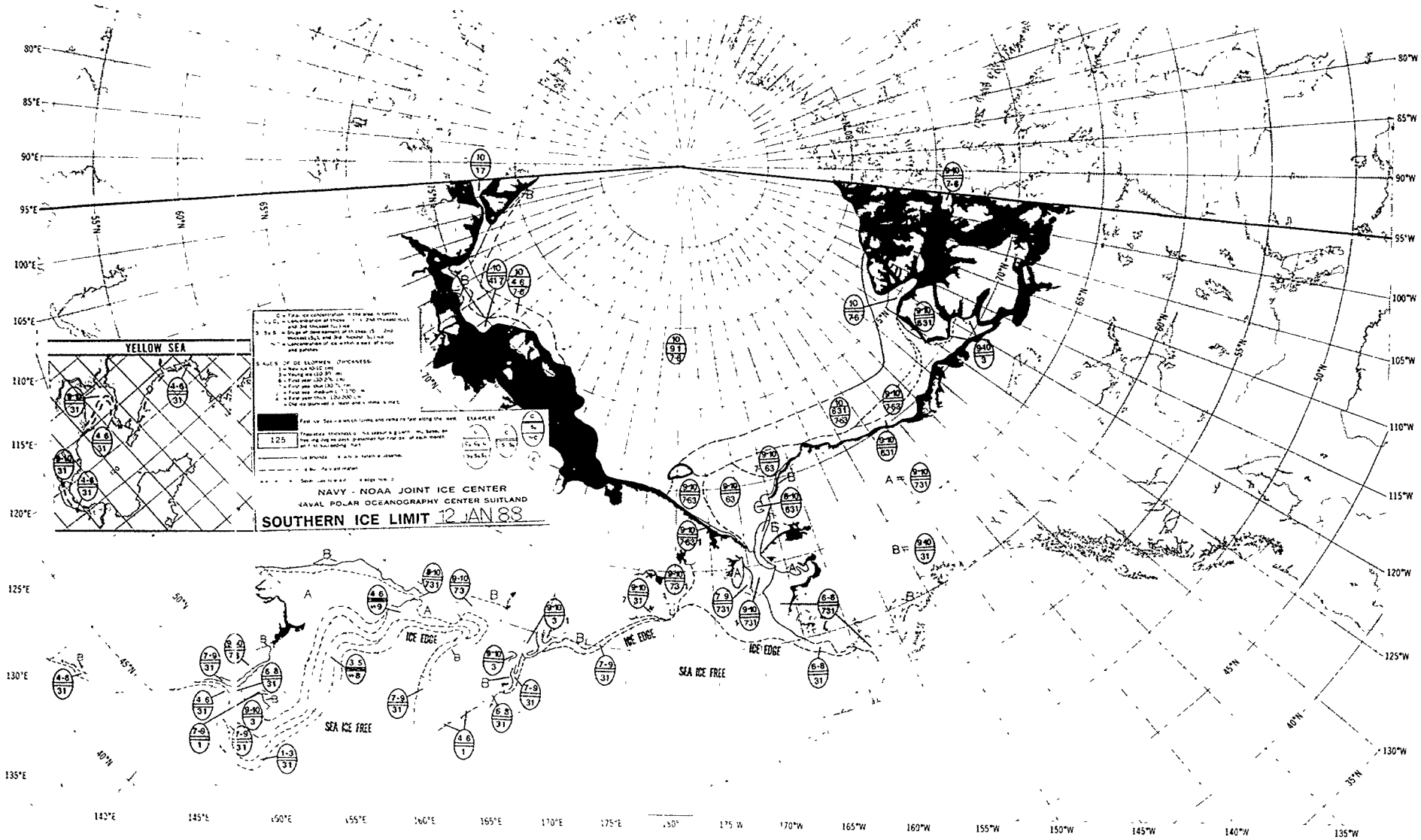

SOUTHERN ICE LIMIT 27 DEC 88
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
ICE EDGE
SEA ICE FREE
A-
B-
125

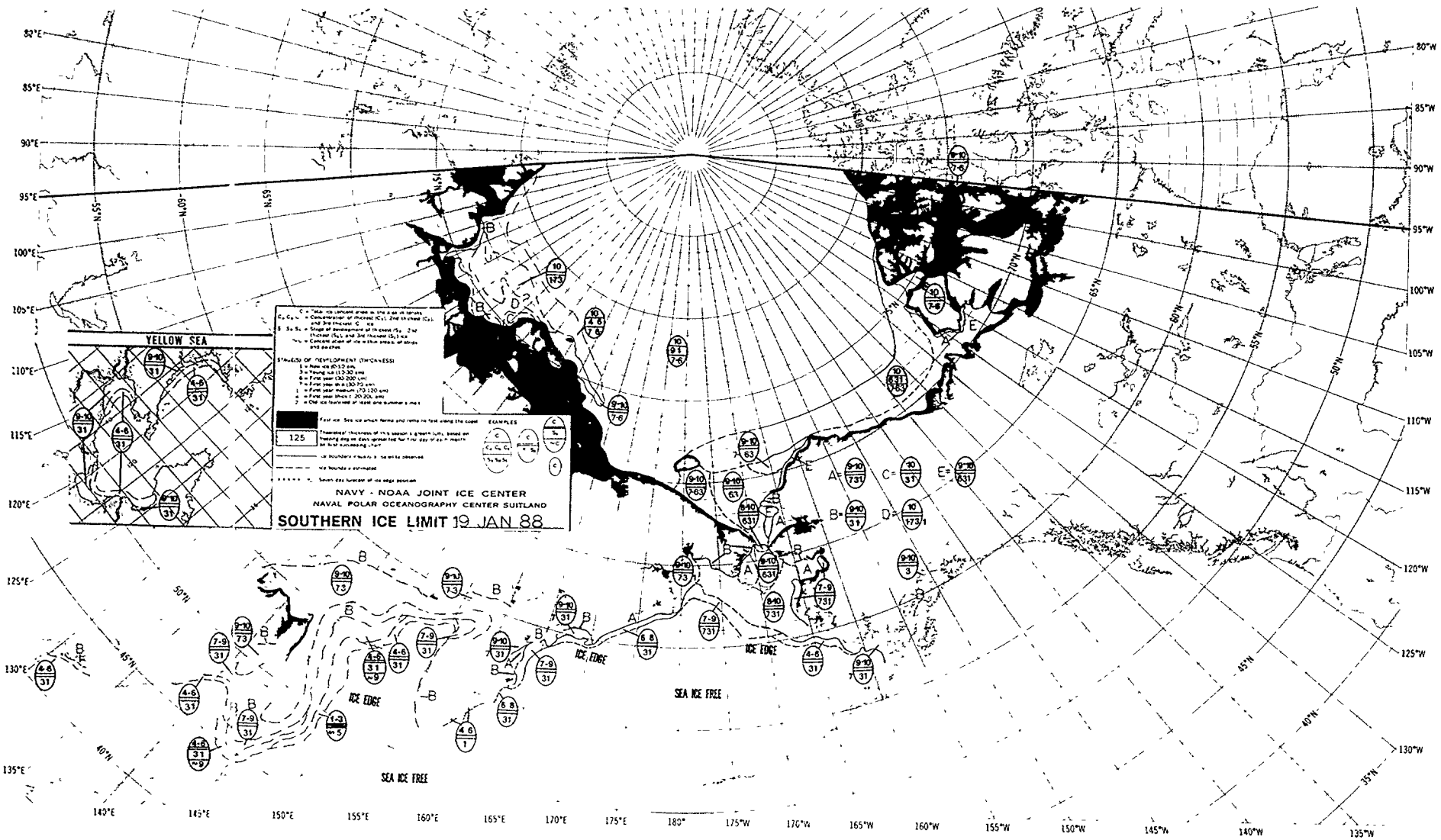

SOUTHERN ICE LIMIT 14 DEC 88
NAVY NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SEA ICE FREE
A- C-
B- D-
ICE EDGE
SIF

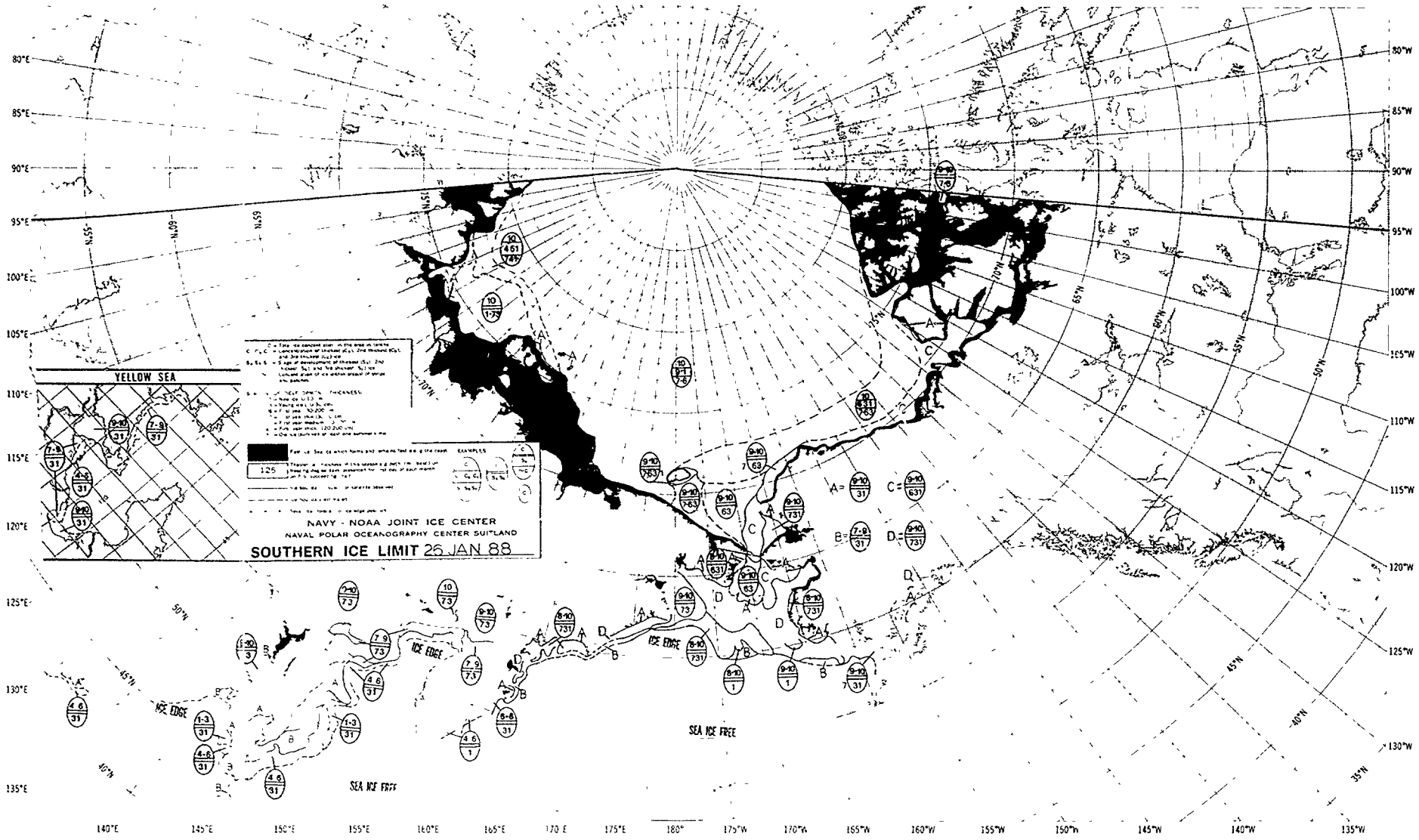

SOUTHERN ICE LIMIT
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
GREAT LAKES
ICE CONDITIONS
A
B
C
ICE FREE
SEA ICE FREE
ICE EDGE
ICE FREE
100°W
95°W
90°W
85°W
80°W
75°W
70°W
65°W
60°W
55°W
50°W
45°W
40°W
35°W
30°W
25°W
20°W
15°W
10°W
5°W
0
5°E
10°E
15°E
20°E
25°E
30°E
35°E
40°E
45°E
50°E
55°E
60°E
65°E
70°E
75°E
80°E
85°E
90°E
95°E
100°E


SOUTHERN ICE LIMIT 28 DEC 88
NAVY NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
GREAT LAKES
ICE CONDITIONS
ICE EDGE
SEA ICE FREE
ICE FREE
A =
B =
C =
D =


YELLOW SEA
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND
SOUTHERN ICE LIMIT 05 JAN 1988
ICE EDGE
SEA ICE FREE
80°E
85°E
90°E
95°E
100°E
105°E
110°E
115°E
120°E
125°E
130°E
135°E
140°E
145°E
150°E
155°E
160°E
165°E
170°E
175°E
180°
175°W
170°W
165°W
160°W
155°W
150°W
145°W
140°W
135°W
80°W
85°W
90°W
95°W
100°W
105°W
110°W
115°W
120°W
125°W
130°W
135°W
70°N
65°N
60°N
55°N
50°N
45°N
40°N
35°N


YELLOW SEA
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 12 JAN 88
ICE EDGE
SEA ICE FREE


YELLOW SEA
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 19 JAN 88
ICE EDGE
SEA ICE FREE
80°E
85°E
90°E
95°E
100°E
105°E
110°E
115°E
120°E
125°E
130°E
135°E
140°E
145°E
150°E
155°E
160°E
165°E
170°E
175°E
180°
175°W
170°W
165°W
160°W
155°W
150°W
145°W
140°W
135°W
80°W
85°W
90°W
95°W
100°W
105°W
110°W
115°W
120°W
125°W
130°W
35°N
40°N
45°N
50°N
55°N
60°N
65°N
70°N


YELLOW SEA
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 26 JAN 88
ICE EDGE
SEA ICE FREE
80°E
85°E
90°E
95°E
100°E
105°E
110°E
115°E
120°E
125°E
130°E
135°E
140°E
145°E
150°E
155°E
160°E
165°E
170 E
175°E
180°
175°W
170°W
165°W
160°W
155°W
150°W
145°W
140°W
135°W
80°W
85°W
90°W
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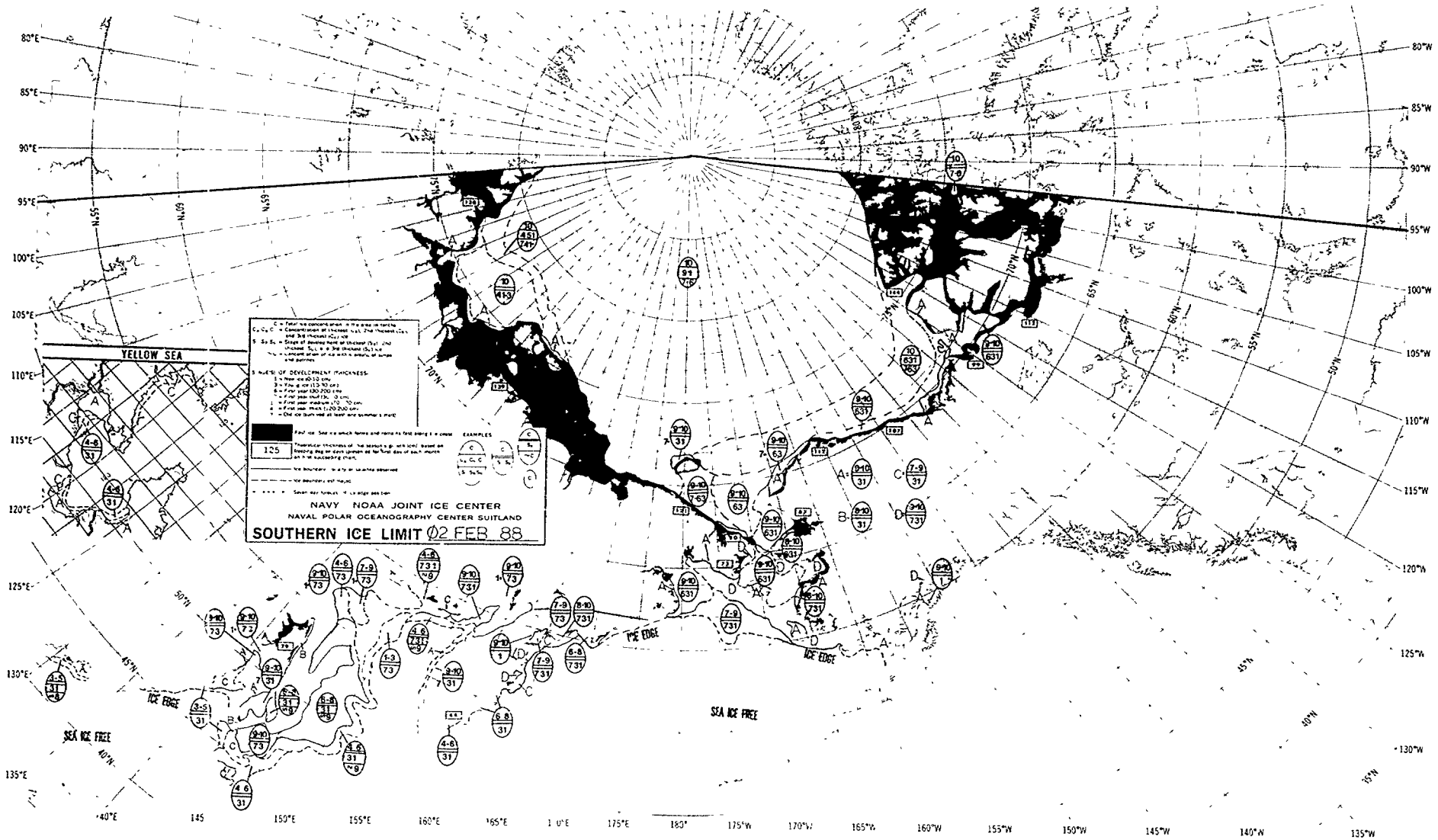
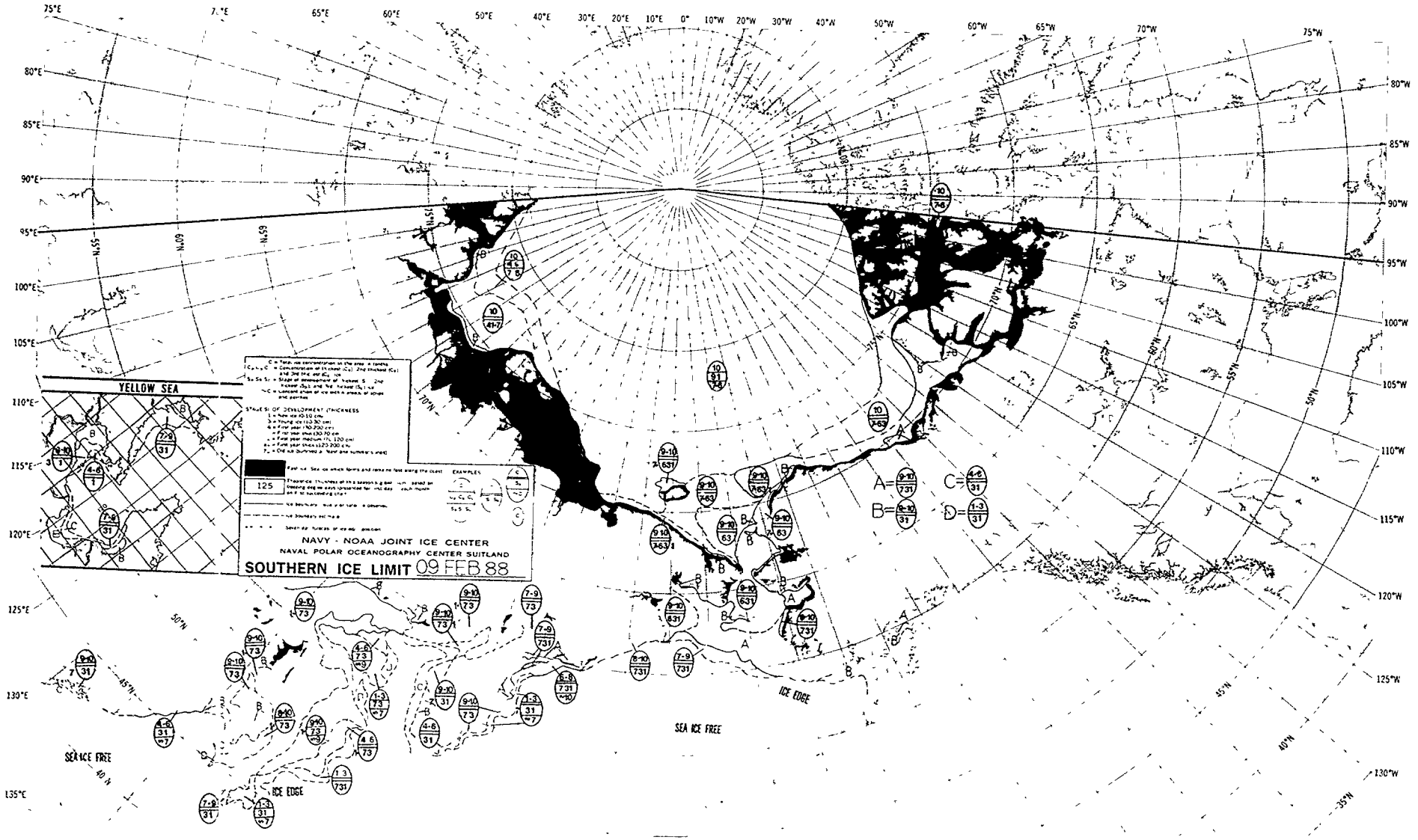
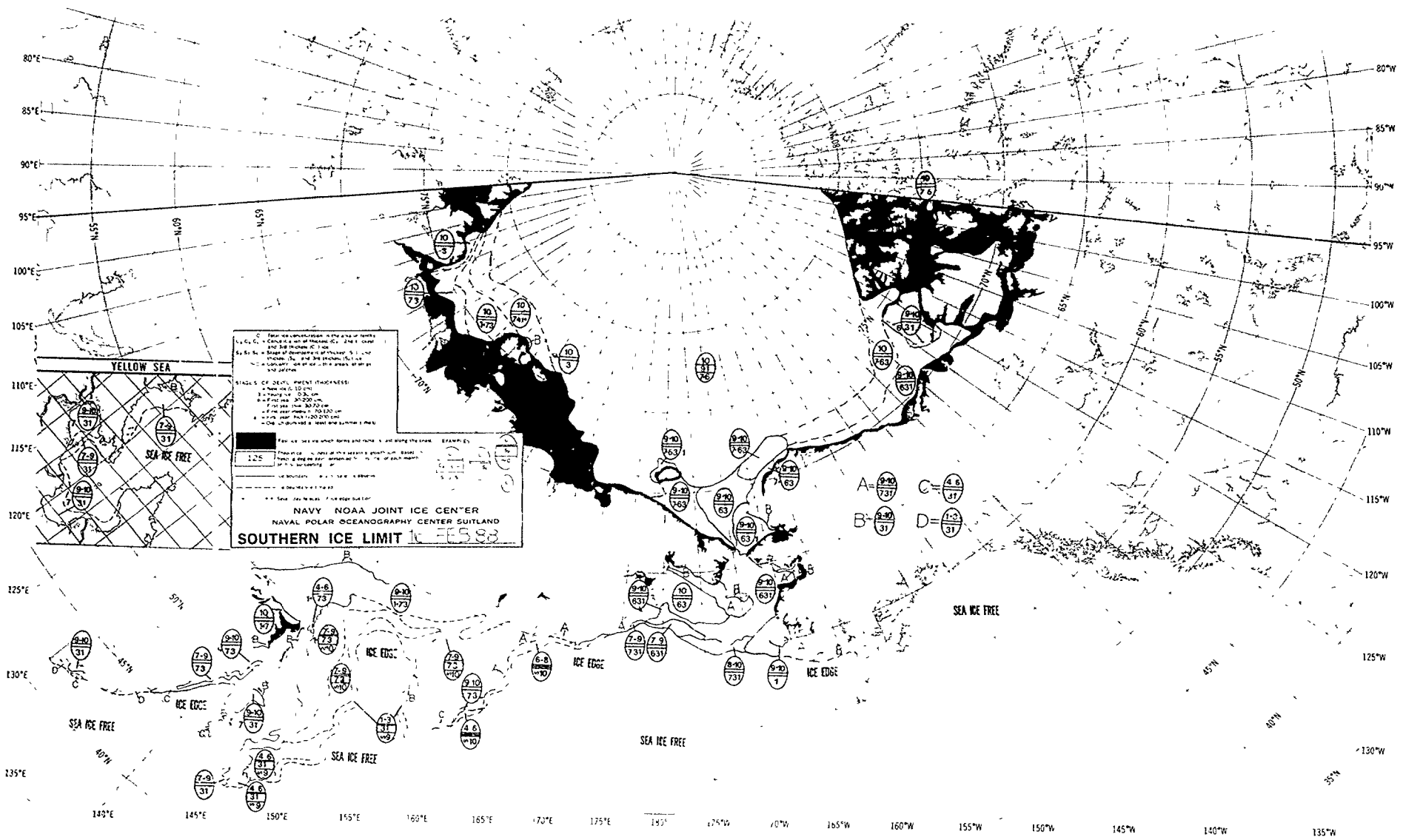
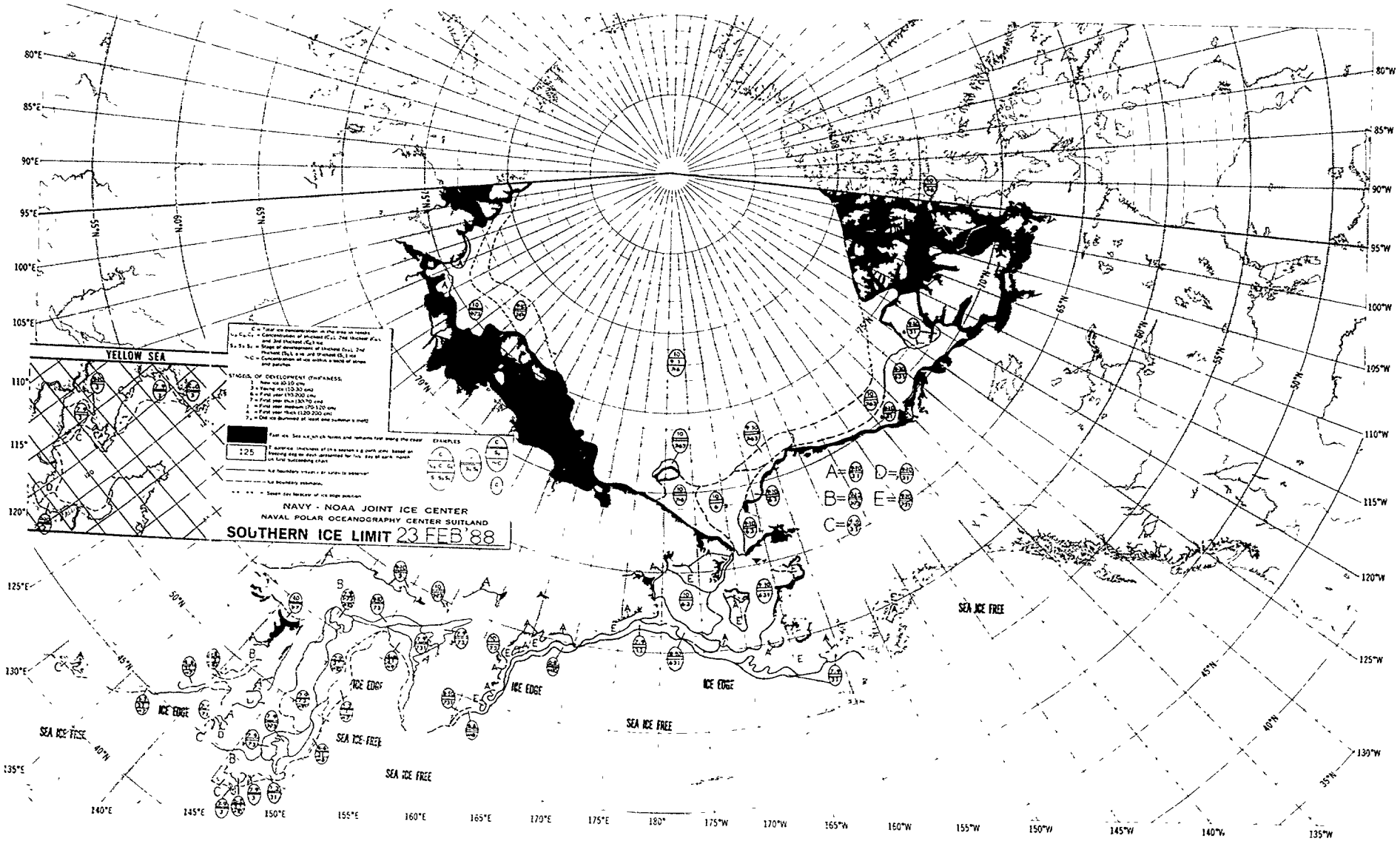
45°N
40°N
35°N


NAVY NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 02 FEB 88
YELLOW SEA
ICE EDGE
SEA ICE FREE


YELLOW SEA
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 09 FEB 88
A=(9-10/731)
B=(9-10/31)
C=(4-6/31)
D=(1-3/31)
ICE EDGE
SEA ICE FREE
ICE EDGE
SEA ICE FREE


NAVY NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 1 FEB 88
YELLOW SEA
SEA ICE FREE
ICE EDGE
A=9-10/731 C=4.6/31
B=9-10/31 D=1-3/31


YELLOW SEA
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 23 FEB '88
A= D=
B= E=
C=
ICE EDGE
SEA ICE FREE
80°E
85°E
90°E
95°E
100°E
105°E
110°E
115°E
120°E
125°E
130°E
135°E
140°E
145°E
150°E
155°E
160°E
165°E
170°E
175°E
180°
175°W
170°W
165°W
160°W
155°W
150°W
145°W
140°W
135°W
80°W
85°W
90°W
95°W
100°W
105°W
110°W
115°W
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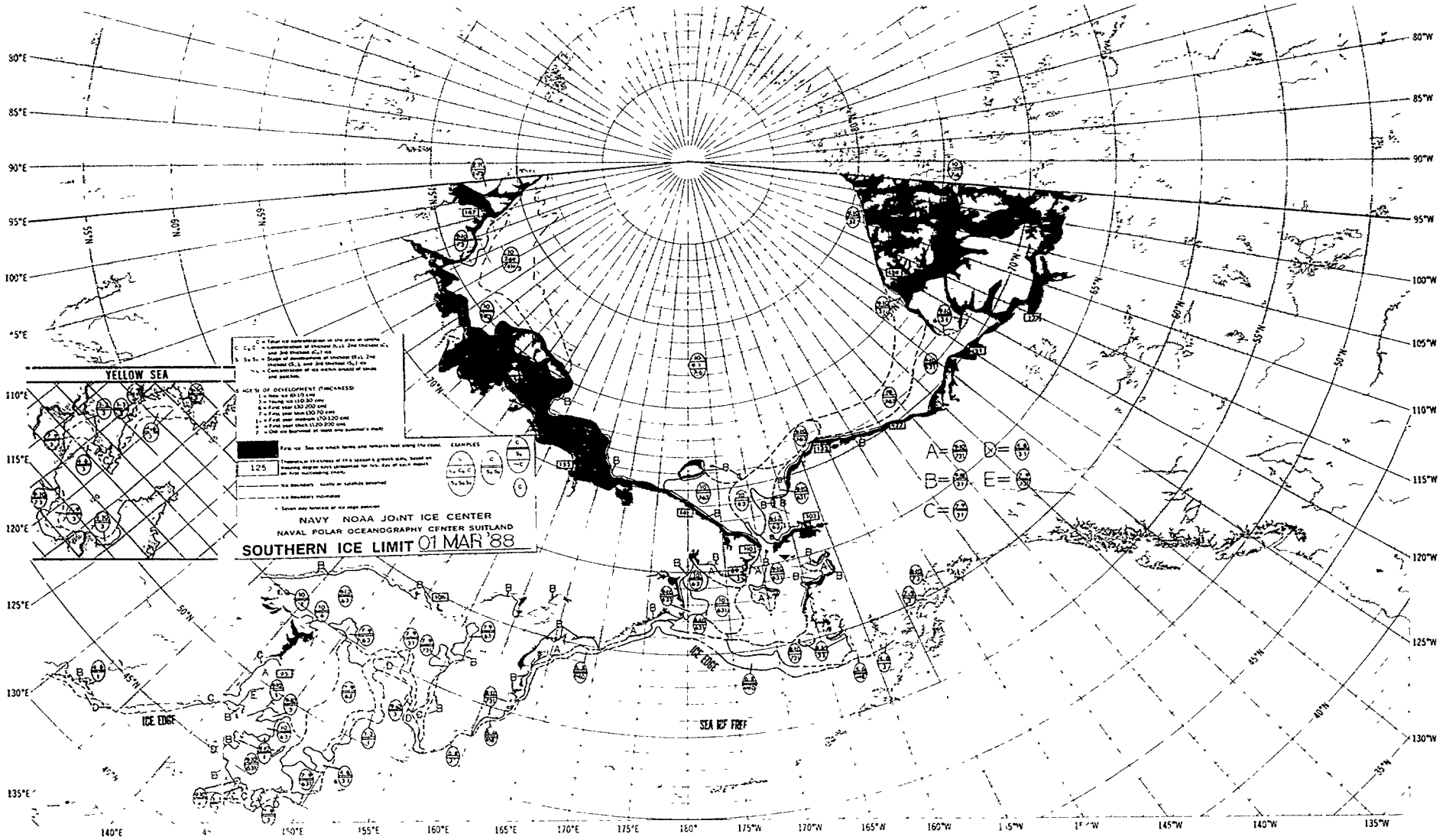
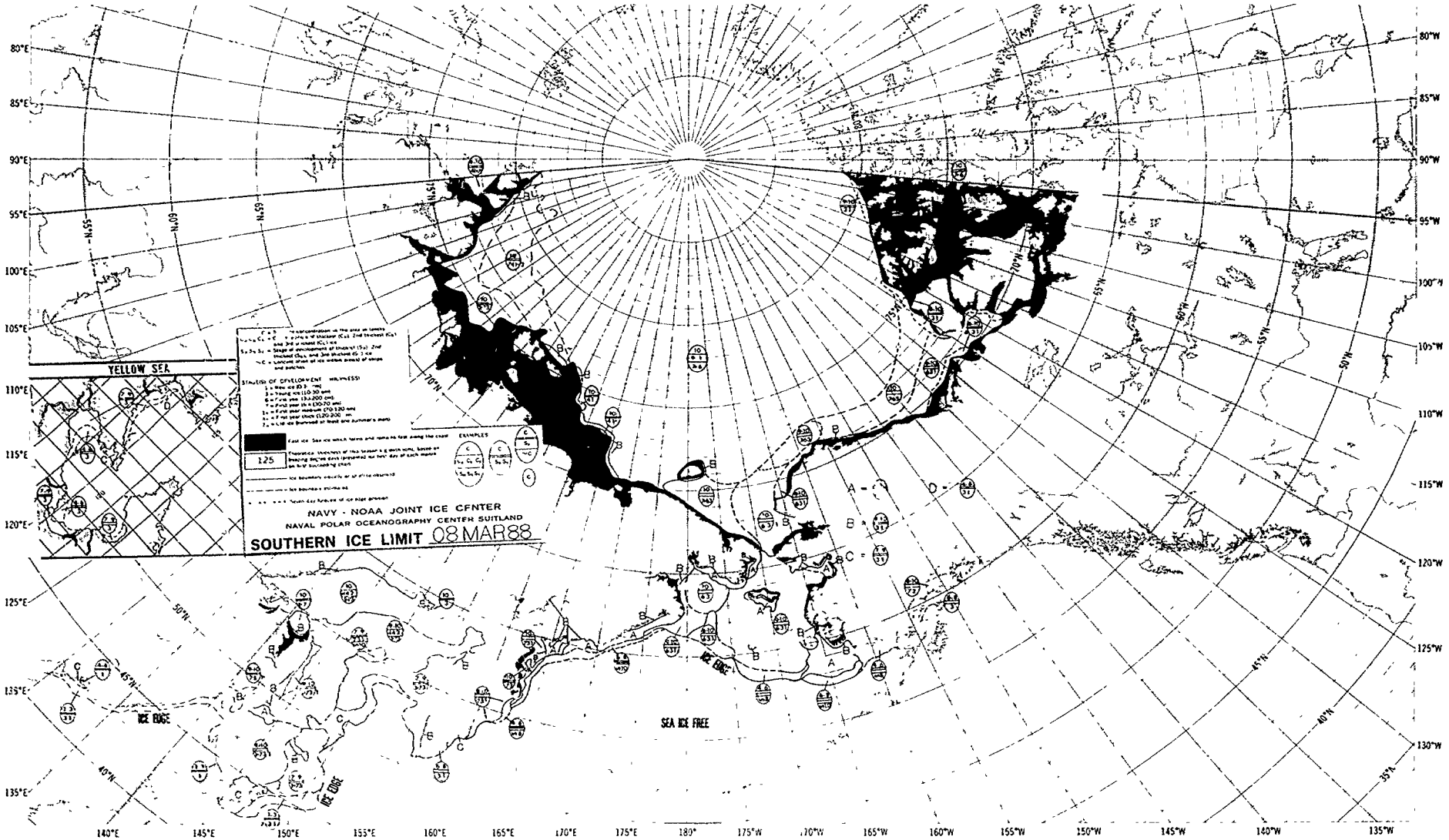
45°N
40°N
35°N


YELLOW SEA
NAVY NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 01 MAR '88
ICE EDGE
ICE EDGE
SEA ICE FREE
A= D=
B= E=
C=


YELLOW SEA
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 08 MAR 88
ICE EDGE
SEA ICE FREE
80°E
85°E
90°E
95°E
100°E
105°E
110°E
115°E
120°E
125°E
135°E
140°E
145°E
150°E
155°E
160°E
165°E
170°E
175°E
180°
175°W
170°W
165°W
160°W
155°W
150°W
145°W
140°W
135°W
80°W
85°W
90°W
95°W
100°W
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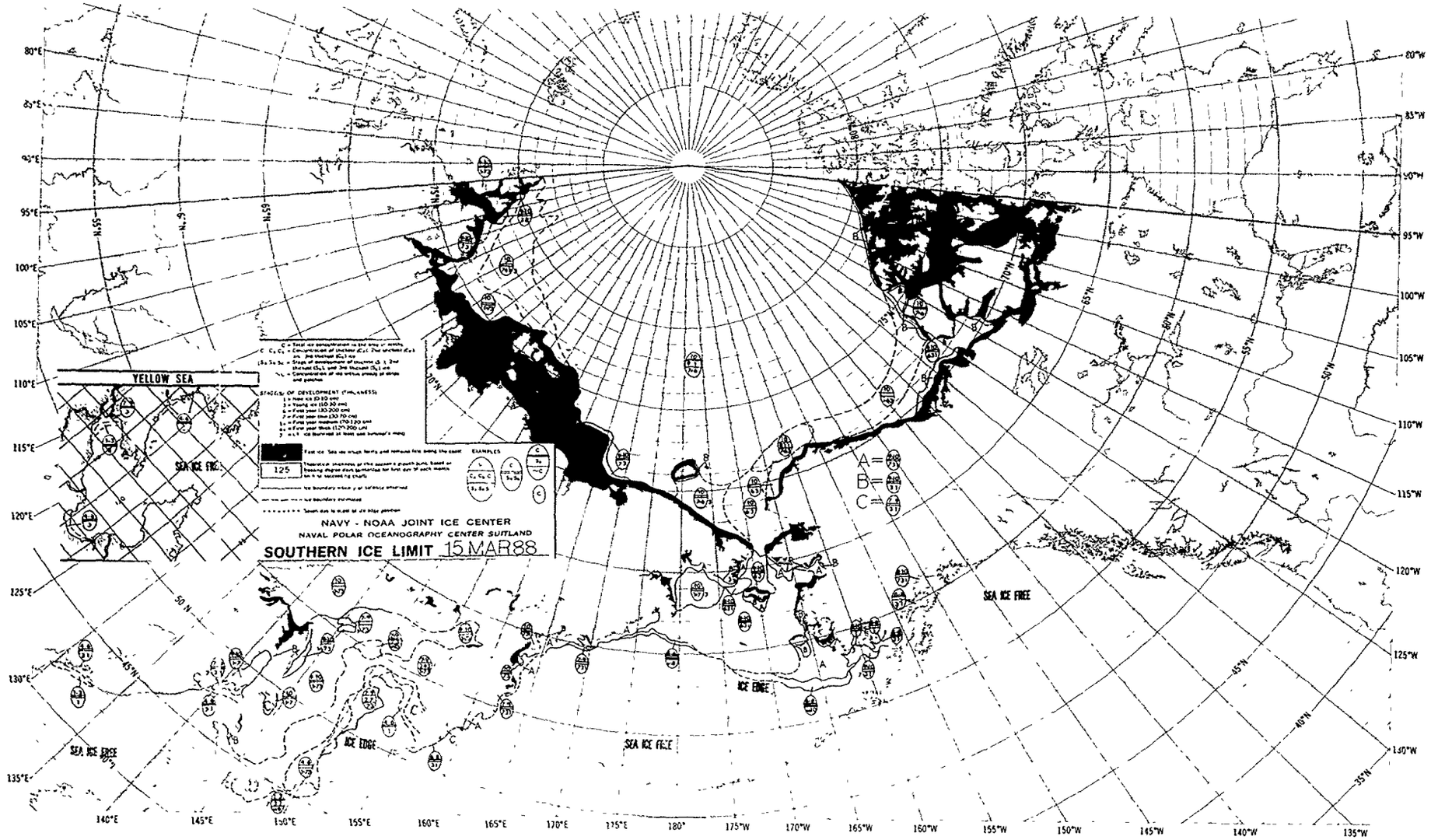
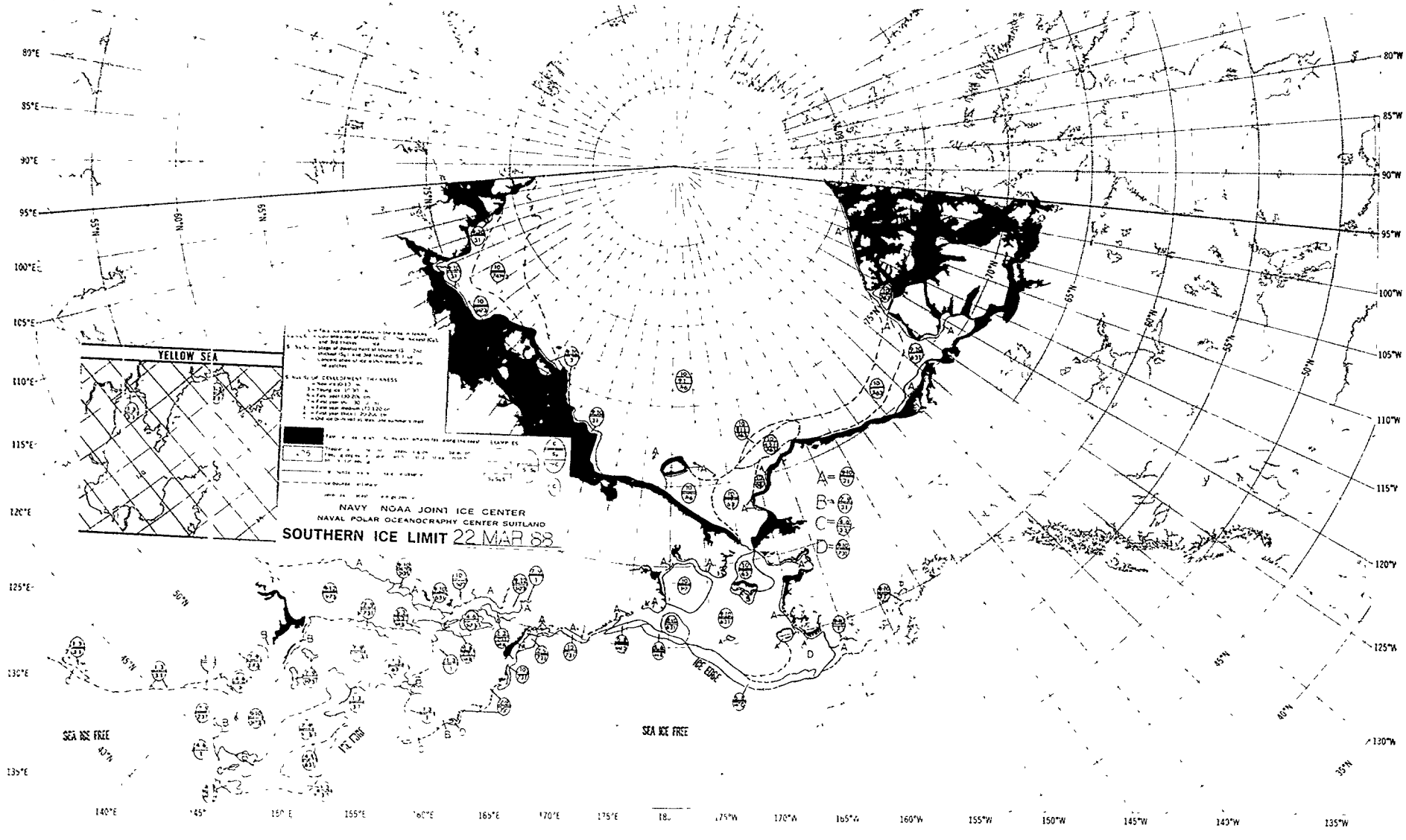
120°W
125°W
130°W
70°N
60°N
50°N
45°N
40°N
35°N


YELLOW SEA
SEA ICE FREE
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 15MAR88
A=
B=
C=
SEA ICE FREE
ICE EDGE
ICE EDGE
SEA ICE FREE
SEA ICE EDGE


YELLOW SEA
NAVY NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOCRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 22 MAR 88
A=
B=
C=
D=
ICE EDGE
SEA ICE FREE
SEA ICE FREE
FY COND
80°E
85°E
90°E
95°E
100°E
105°E
110°E
115°E
120°E
125°E
130°E
135°E
140°E
145°E
150°E
155°E
160°E
165°E
170°E
175°E
180
175°W
170°W
165°W
160°W
155°W
150°W
145°W
140°W
135°W
80°W
85°W
90°W
95°W
100°W
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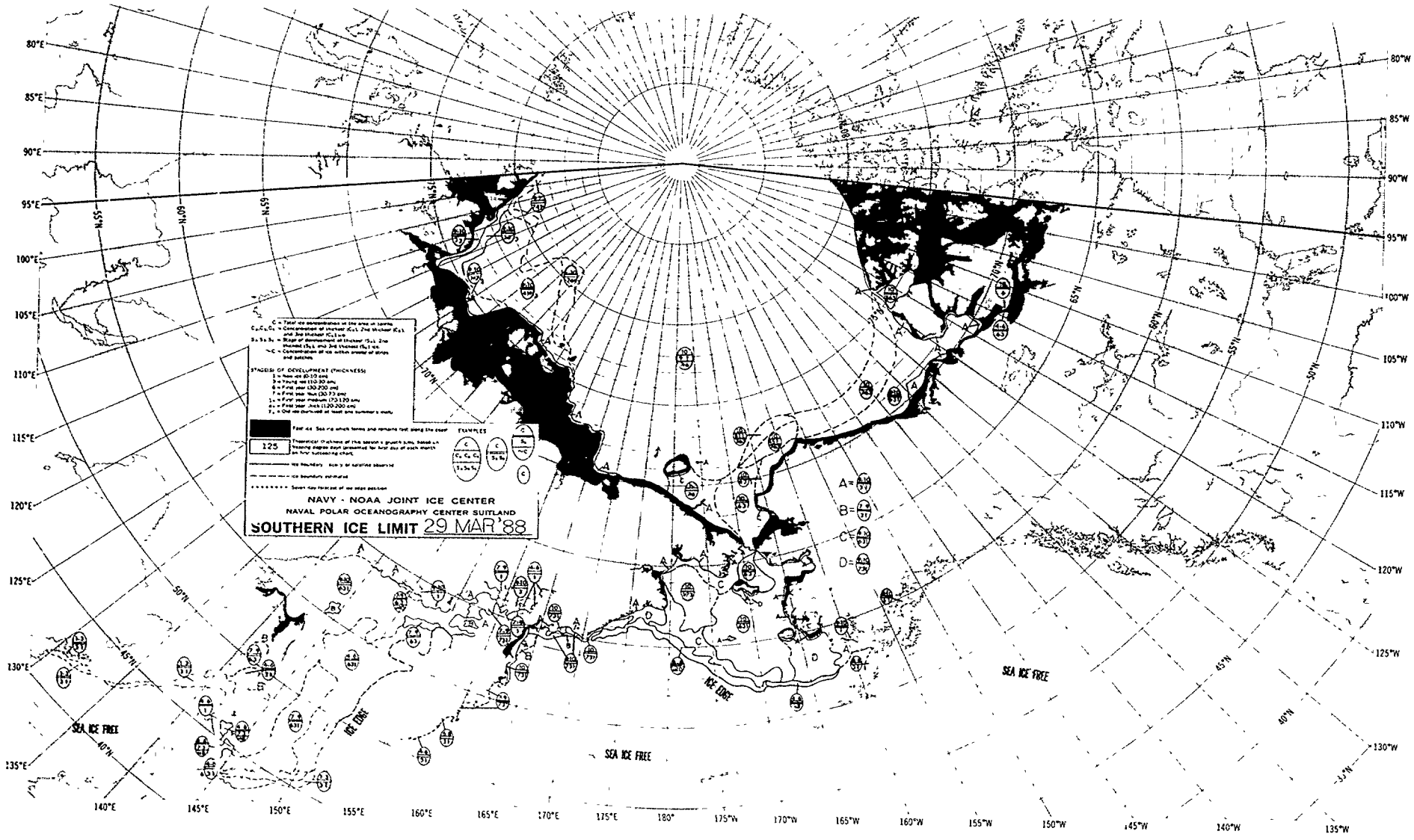
120°W
125°W
130°W
N.55
N.59
50°N
45°N
40°N
35°N


NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 29 MAR'88
STAGES OF DEVELOPMENT (THICKNESS)
EXAMPLES
A=
B=
C=
D=
SEA ICE FREE
ICE EDGE
80°E
85°E
90°E
95°E
100°E
105°E
110°E
115°E
120°E
125°E
130°E
135°E
140°E
145°E
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160°E
165°E
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95°W
100°W
105°W
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40°N
45°N
50°N
55°N
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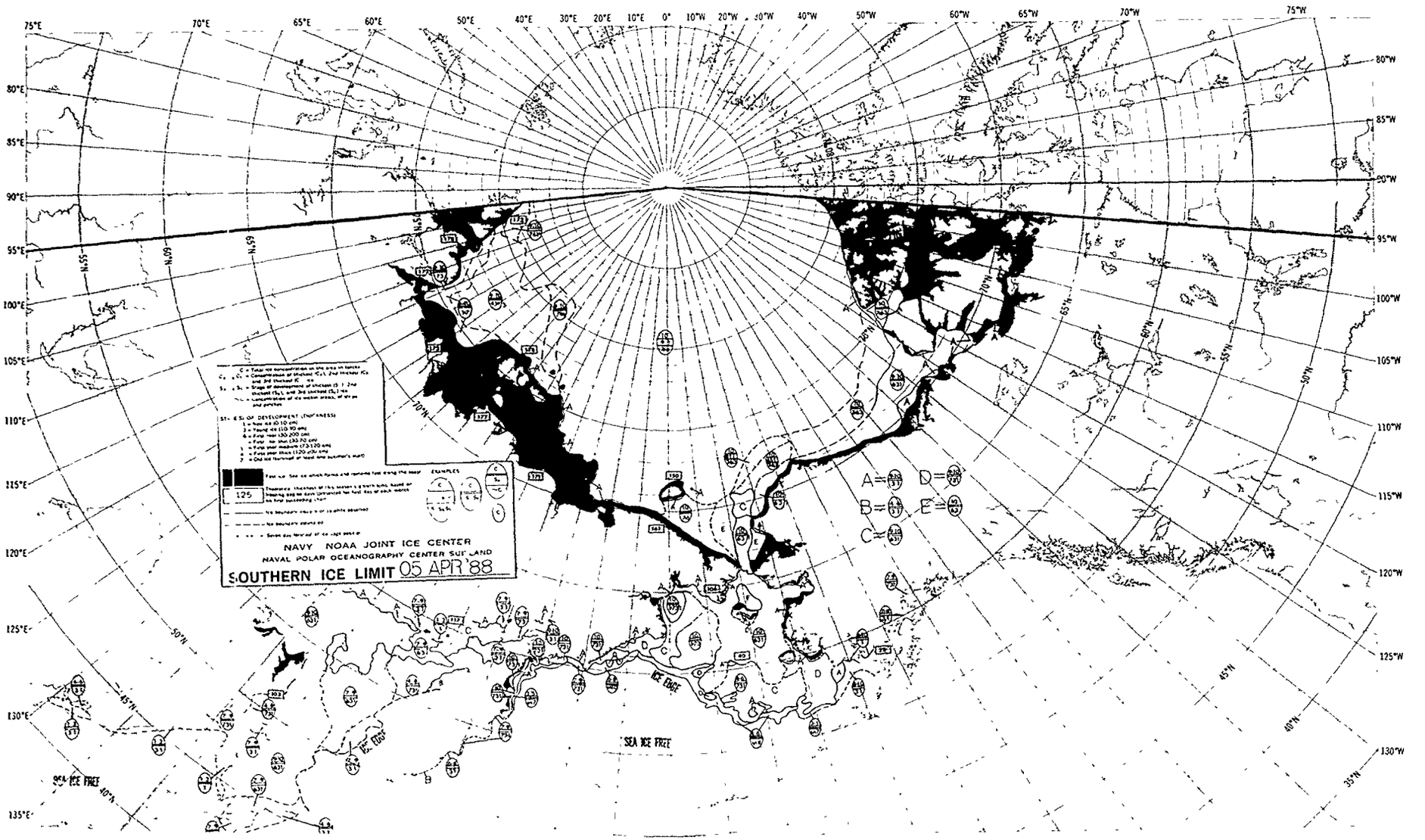
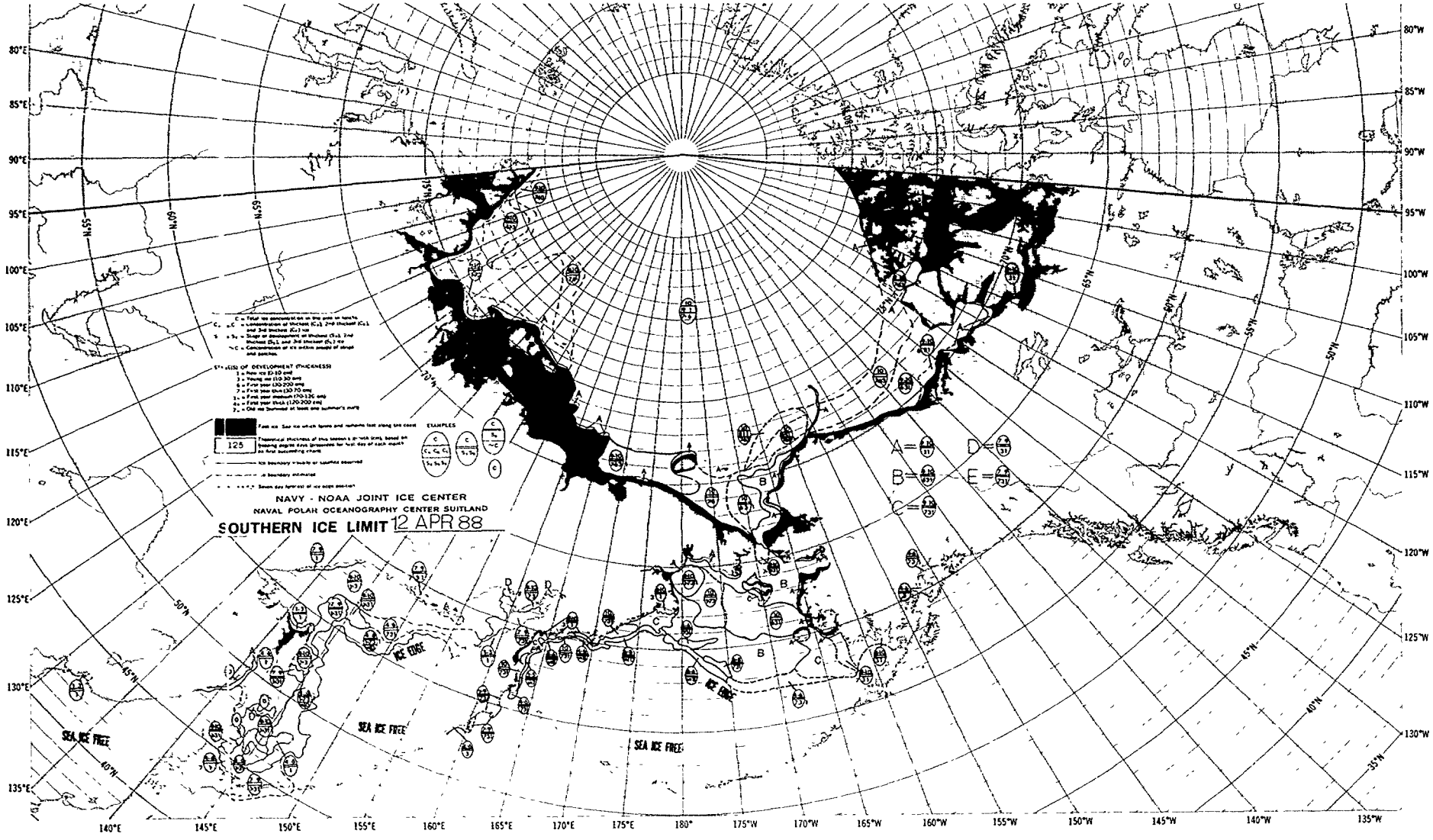
65°N


NAVY NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 05 APR '88
A=
B=
C=
D=
E=
ICE EDGE
SEA ICE FREE


NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 12 APR 88
ICE EDGE
SEA ICE FREE
A=
B=
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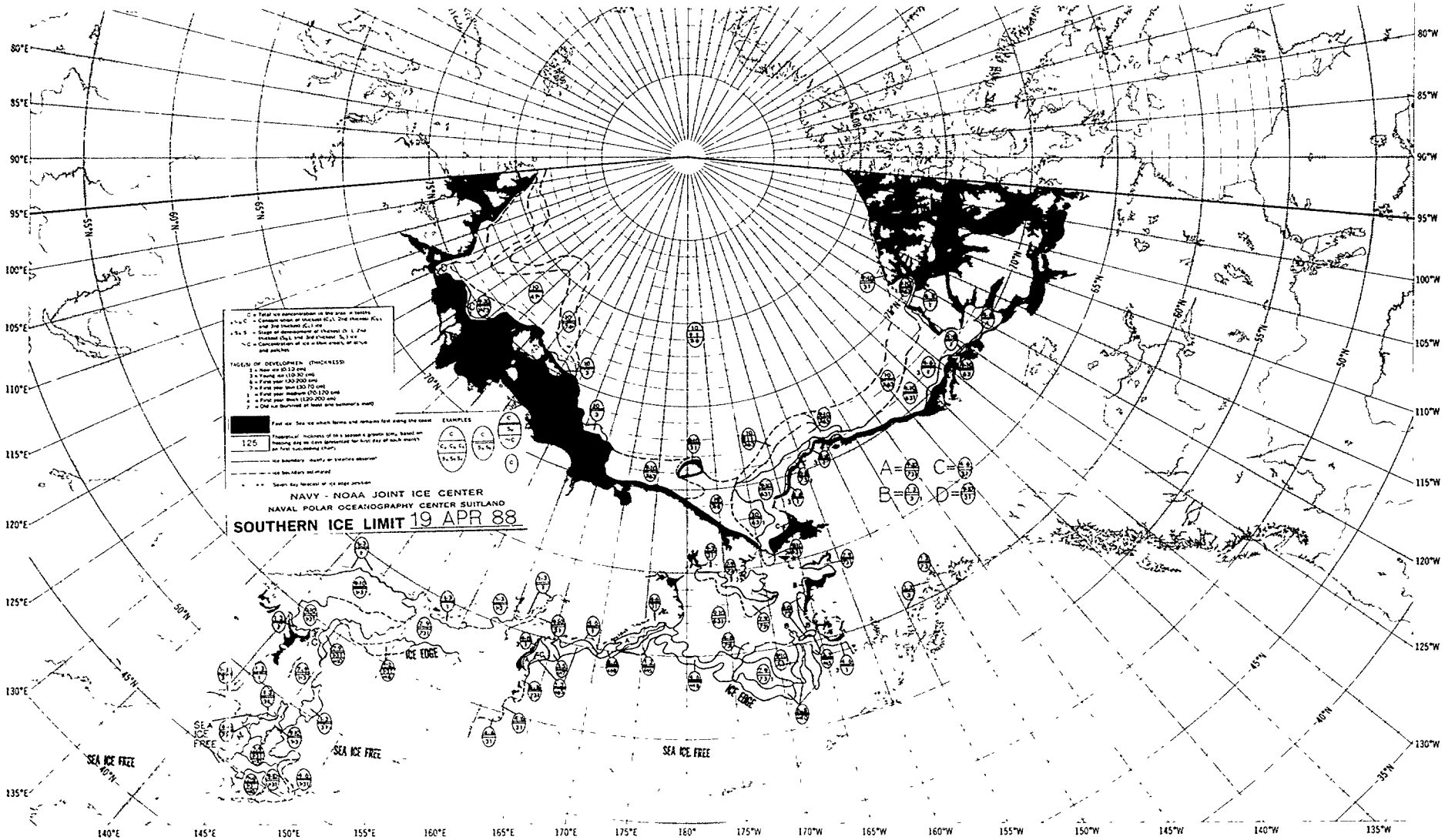
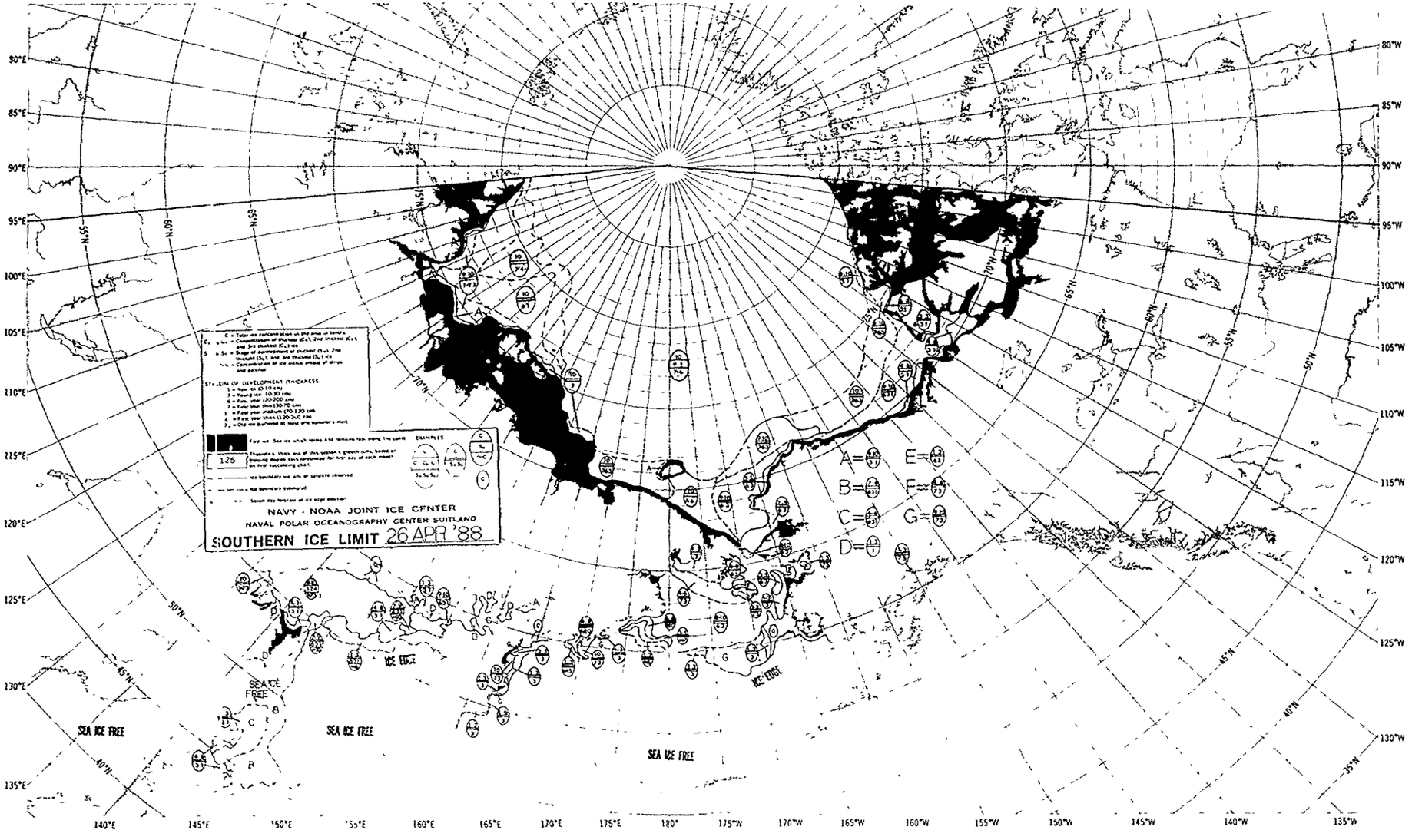
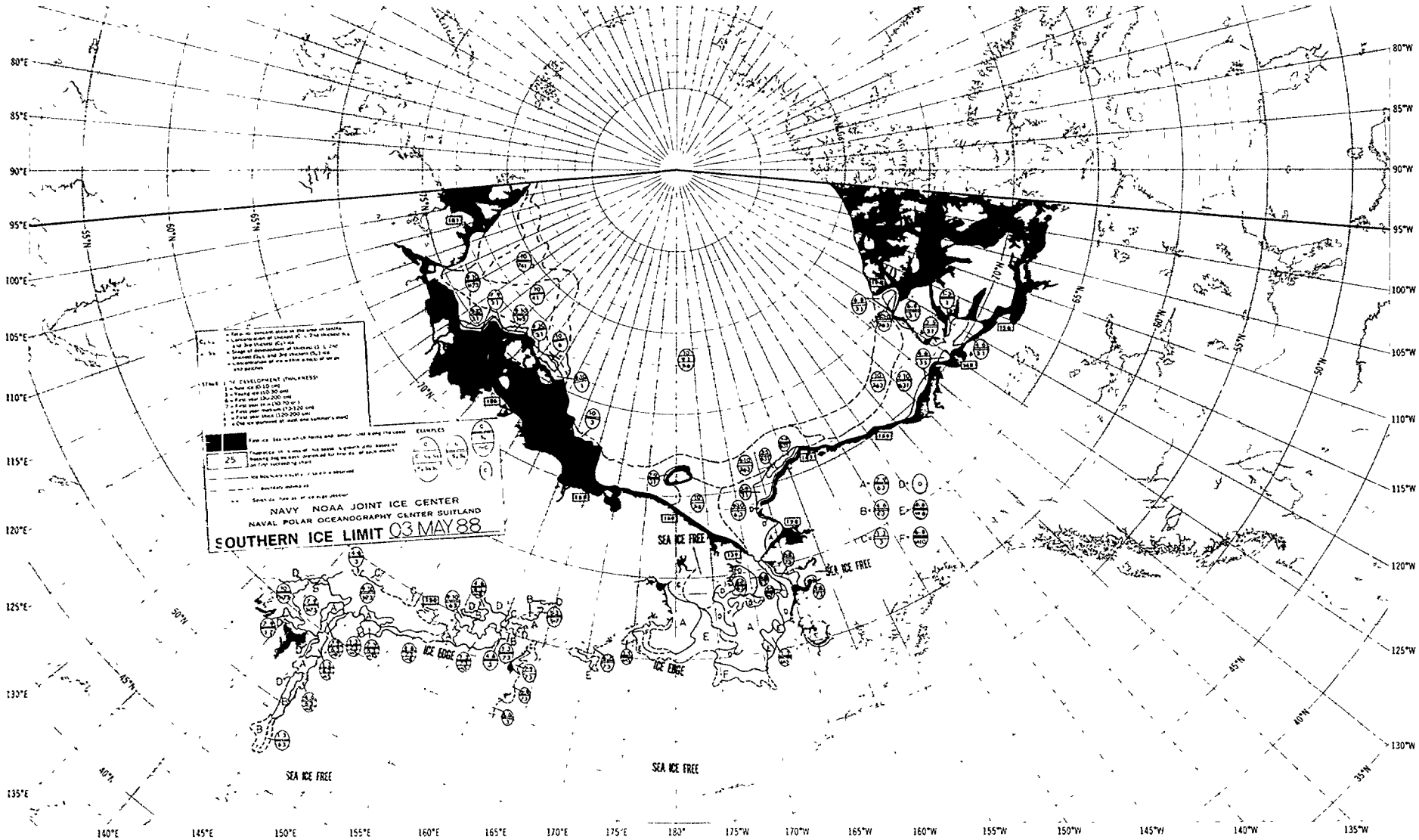

NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 19 APR 88
ICE EDGE
SEA ICE FREE
A= C=
B= D=


NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 26 APR '88
A=
B=
C=
D=
E=
F=
G=
SEA ICE FREE
SEA ICE FREE
SEA ICE FREE
SEA ICE FREE
ICE EDGE
ICE EDGE
ICE EDGE
90°E
85°E
90°E
95°E
100°E
105°E
110°E
115°E
120°E
125°E
130°E
135°E
80°W
85°W
90°W
95°W
100°W
105°W
110°W
115°W
120°W
125°W
130°W
135°W
55°N
60°N
65°N
70°N
50°N
45°N
40°N
35°N
140°E
145°E
150°E
155°E
160°E
165°E
170°E
175°E
180°
175°W
170°W
165°W
160°W
155°W
150°W
145°W
140°W
135°W


NAVY NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 03 MAY 88
SEA ICE FREE
SEA ICE FREE
SEA ICE FREE
ICE EDGE
ICE EDGE
80°E
85°E
90°E
95°E
100°E
105°E
110°E
115°E
120°E
125°E
130°E
135°E
140°E
145°E
150°E
155°E
160°E
165°E
170°E
175°E
180°
175°W
170°W
165°W
160°W
155°W
150°W
145°W
140°W
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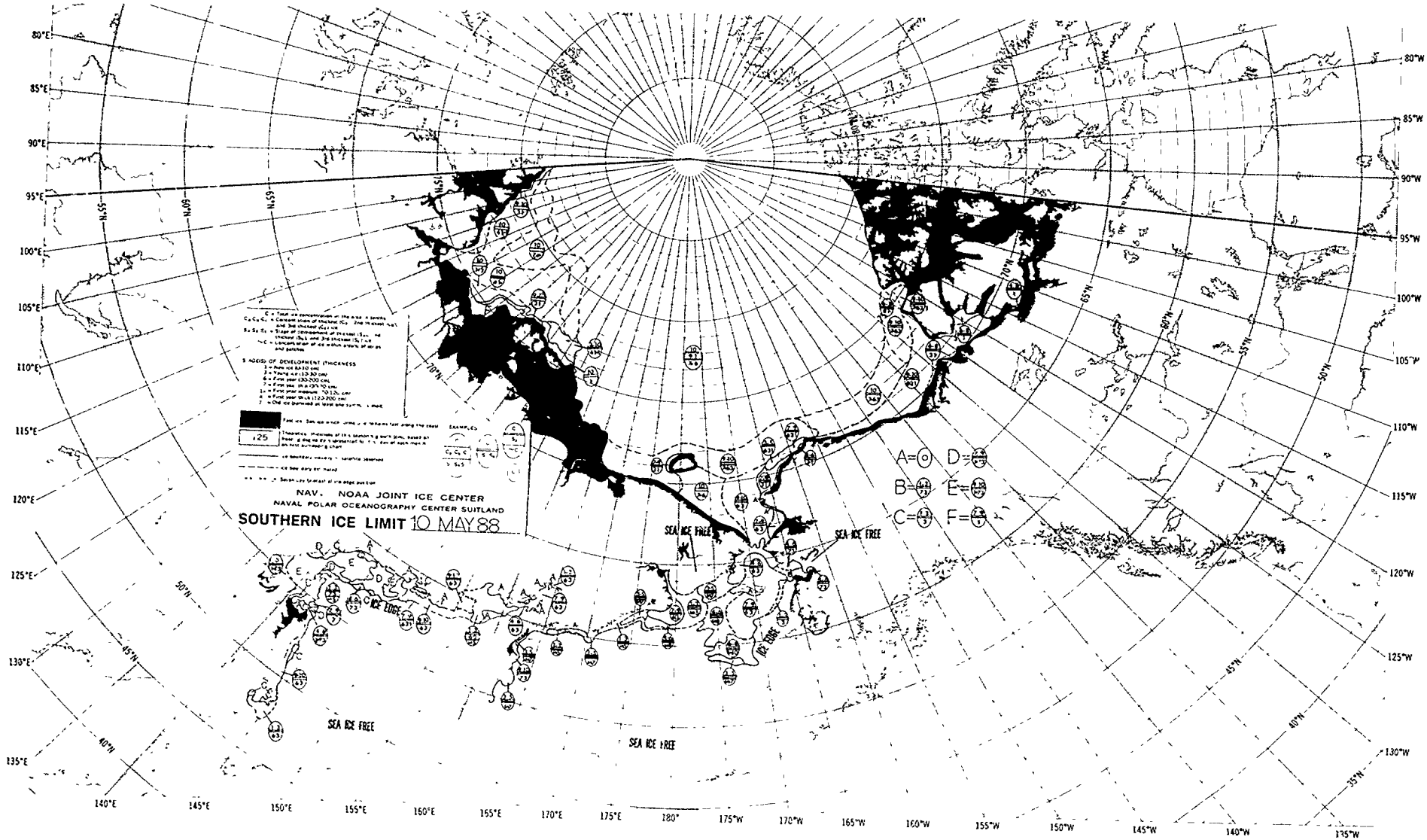
125°W
130°W


NAV. NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 10 MAY 88
A= D=
B= E=
C= F=
SEA ICE FREE
SEA ICE FREE
SEA ICE FREE
ICE EDGE
ICE EDGE
80°E
85°E
90°E
95°E
100°E
105°E
110°E
115°E
120°E
125°E
130°E
135°E
140°E
145°E
150°E
155°E
160°E
165°E
170°E
175°E
180°
175°W
170°W
165°W
160°W
155°W
150°W
145°W
140°W
135°W
80°W
85°W
90°W
95°W
100°W
105°W
110°W
115°W
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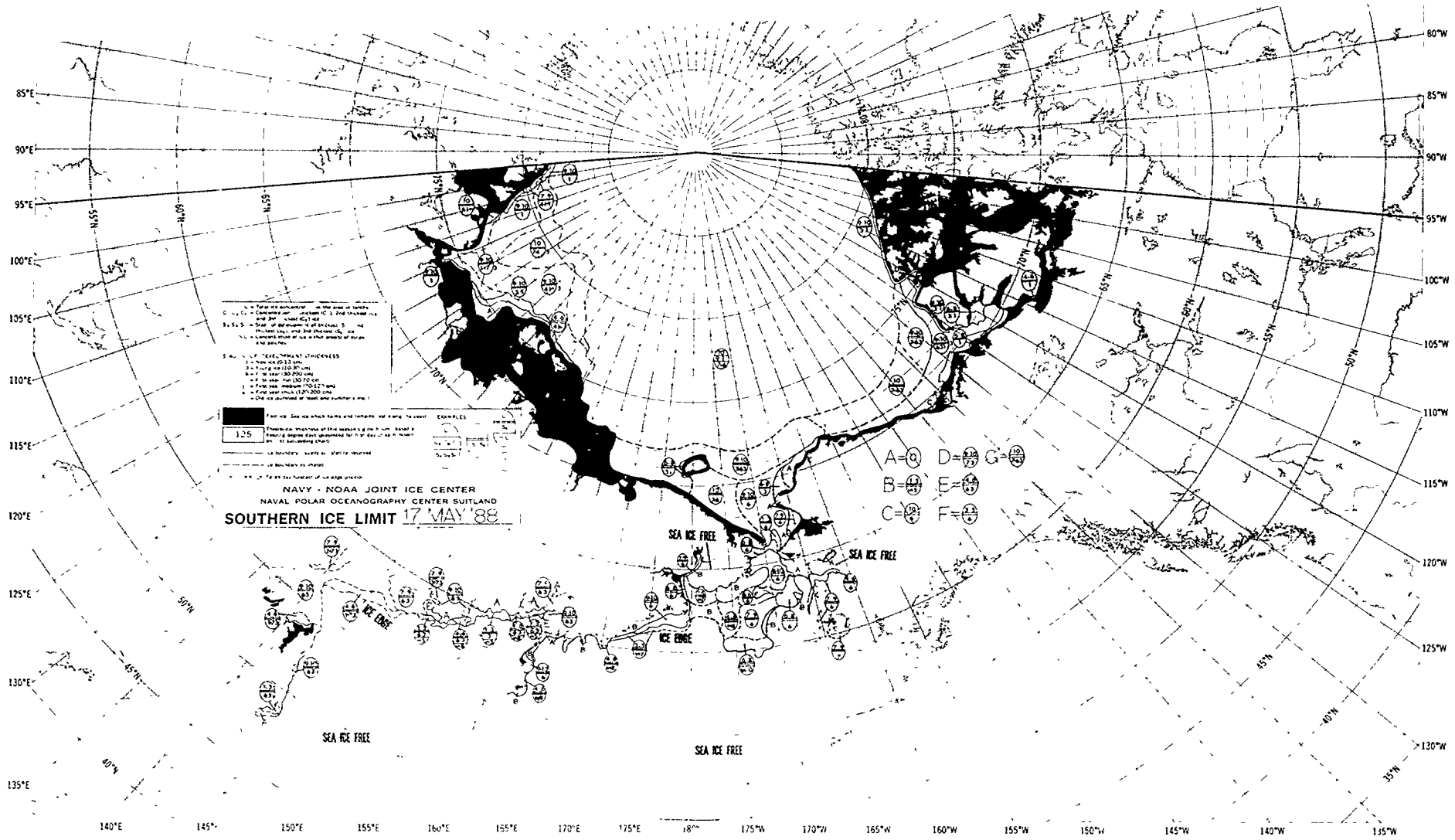
130°W
70°N
65°N
60°N
55°N
50°N
45°N
40°N
35°N


NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 17 MAY '88
A=
B=
C=
D=
E=
F=
G=
SEA ICE FREE
SEA ICE FREE
SEA ICE FREE
SEA ICE FREE
ICE EDGE
ICE EDGE
85°E
90°E
95°E
100°E
105°E
110°E
115°E
120°E
125°E
130°E
135°E
140°E
145°E
150°E
155°E
160°E
165°E
170°E
175°E
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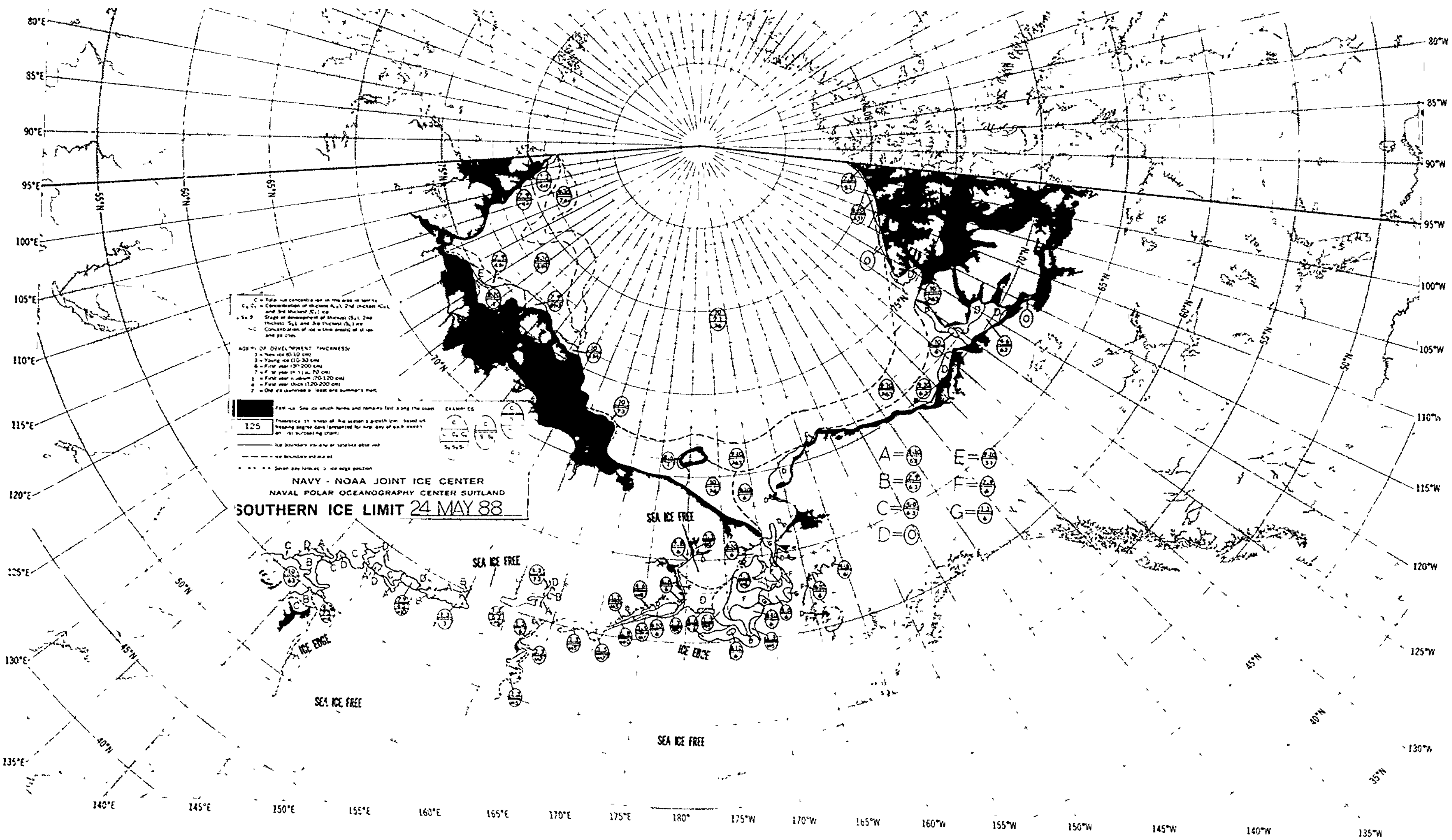
175°W
170°W
165°W
160°W
155°W
150°W
145°W
140°W
135°W
80°W
85°W
90°W
95°W
100°W
105°W
110°W
115°W
120°W
125°W
130°W
70°N
65°N
60°N
55°N
50°N
45°N
40°N
35°N


NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 24 MAY 88
SEA ICE FREE
SEA ICE FREE
SEA ICE FREE
SEA ICE FREE
ICE EDGE
ICE EDGE
80°E
85°E
90°E
95°E
100°E
105°E
110°E
115°E
120°E
125°E
130°E
135°E
140°E
145°E
150°E
155°E
160°E
165°E
170°E
175°E
180°
175°W
170°W
165°W
160°W
155°W
150°W
145°W
140°W
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130°W
125°W
120°W
115°W
110°W
105°W
100°W
95°W
90°W
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45°N
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35°N
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60°N
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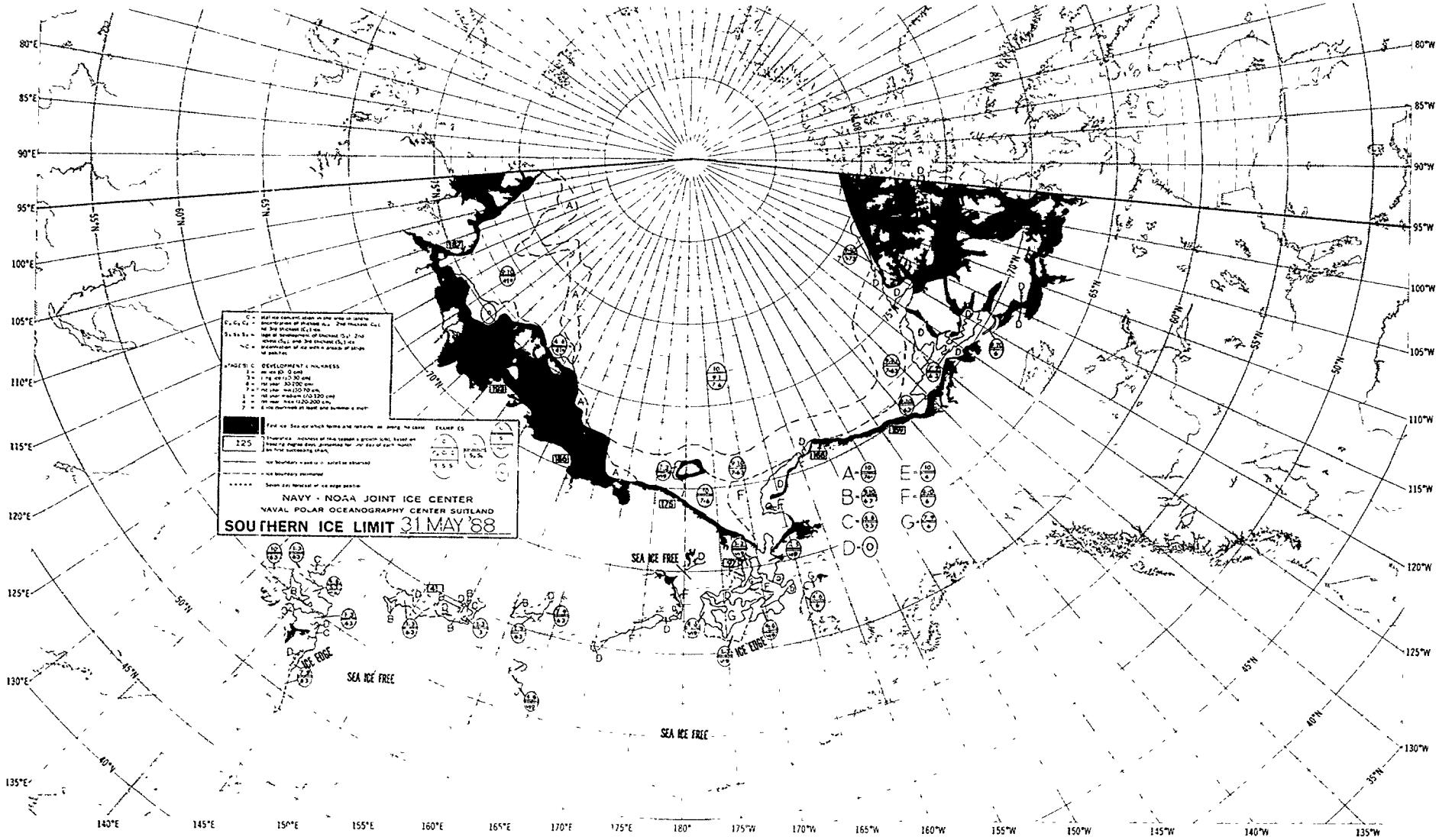
70°N
75°N
80°N


NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 31 MAY '88
A-
B-
C-
D-
E-
F-
G-
SEA ICE FREE
ICE EDGE
ICE RIDGE
80°E
85°E
90°E
95°E
100°E
105°E
110°E
115°E
120°E
125°E
130°E
135°E
140°E
145°E
150°E
155°E
160°E
165°E
170°E
175°E
180°
175°W
170°W
165°W
160°W
155°W
150°W
145°W
140°W
135°W
80°W
85°W
90°W
95°W
100°W
105°W
110°W
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120°W
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130°W
70°N
65°N
60°N
55°N
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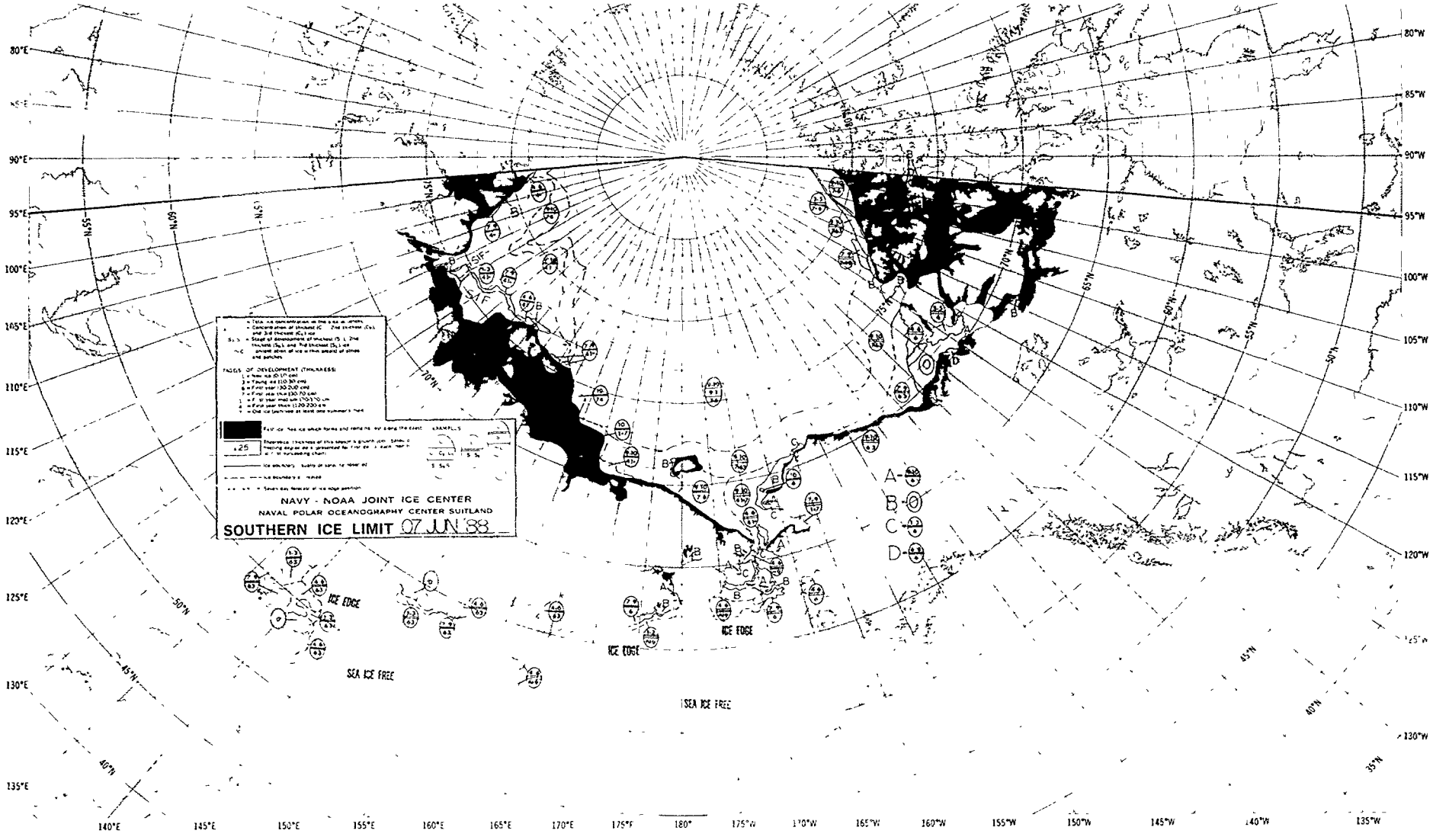
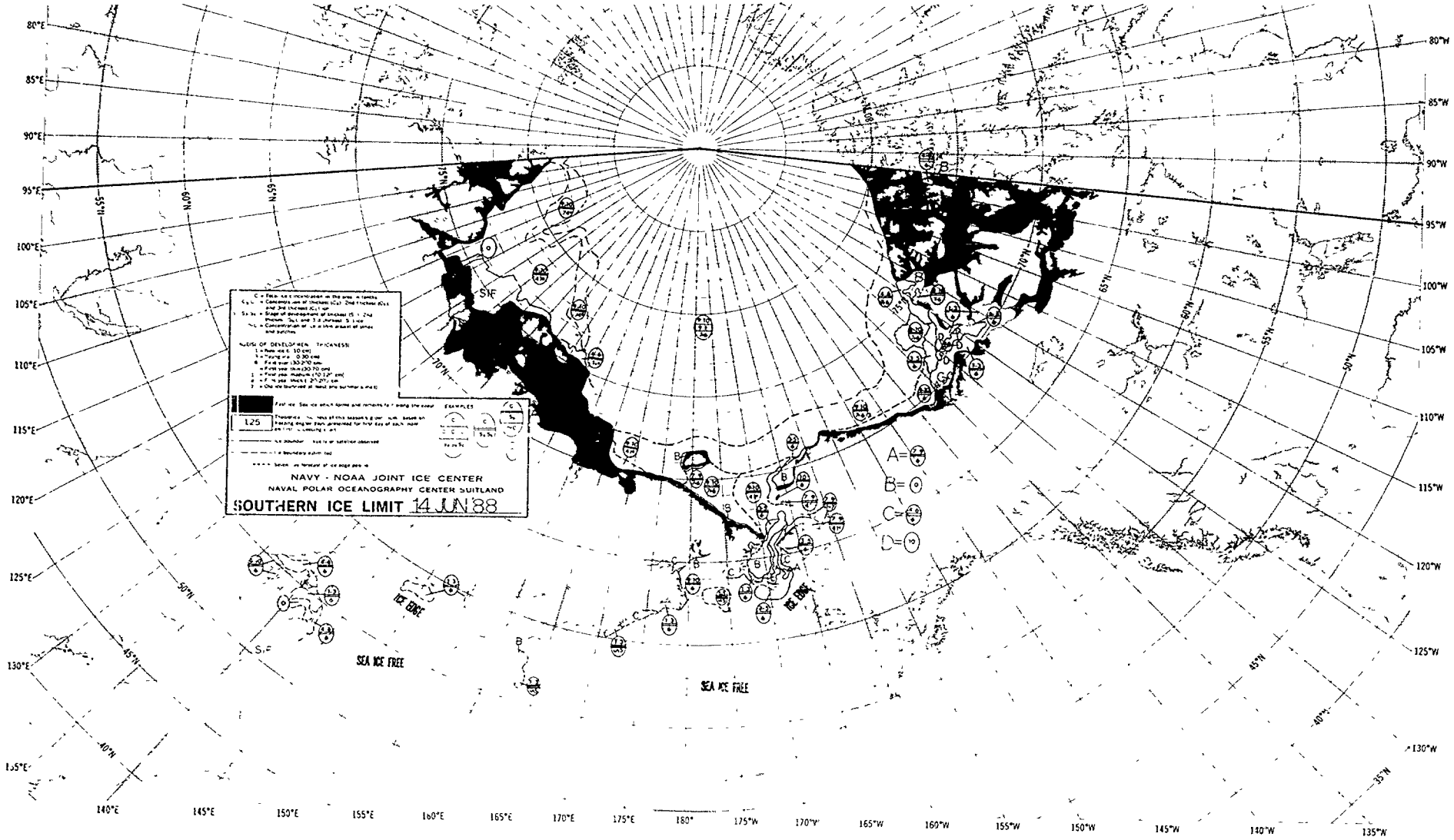
45°N
40°N
35°N


NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 07 JUN 88
ICE EDGE
SEA ICE FREE
A-
B-
C-
D-


NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 14 JUN 88
125
A=
B=
C=
D=
ICE EDGE
ICE EDGE
SEA ICE FREE
SEA ICE FREE
S.F
S.F
80°E
85°E
90°E
95°E
100°E
105°E
110°E
115°E
120°E
125°E
130°E
135°E
140°E
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145°W
140°W
135°W
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85°W
90°W
95°W
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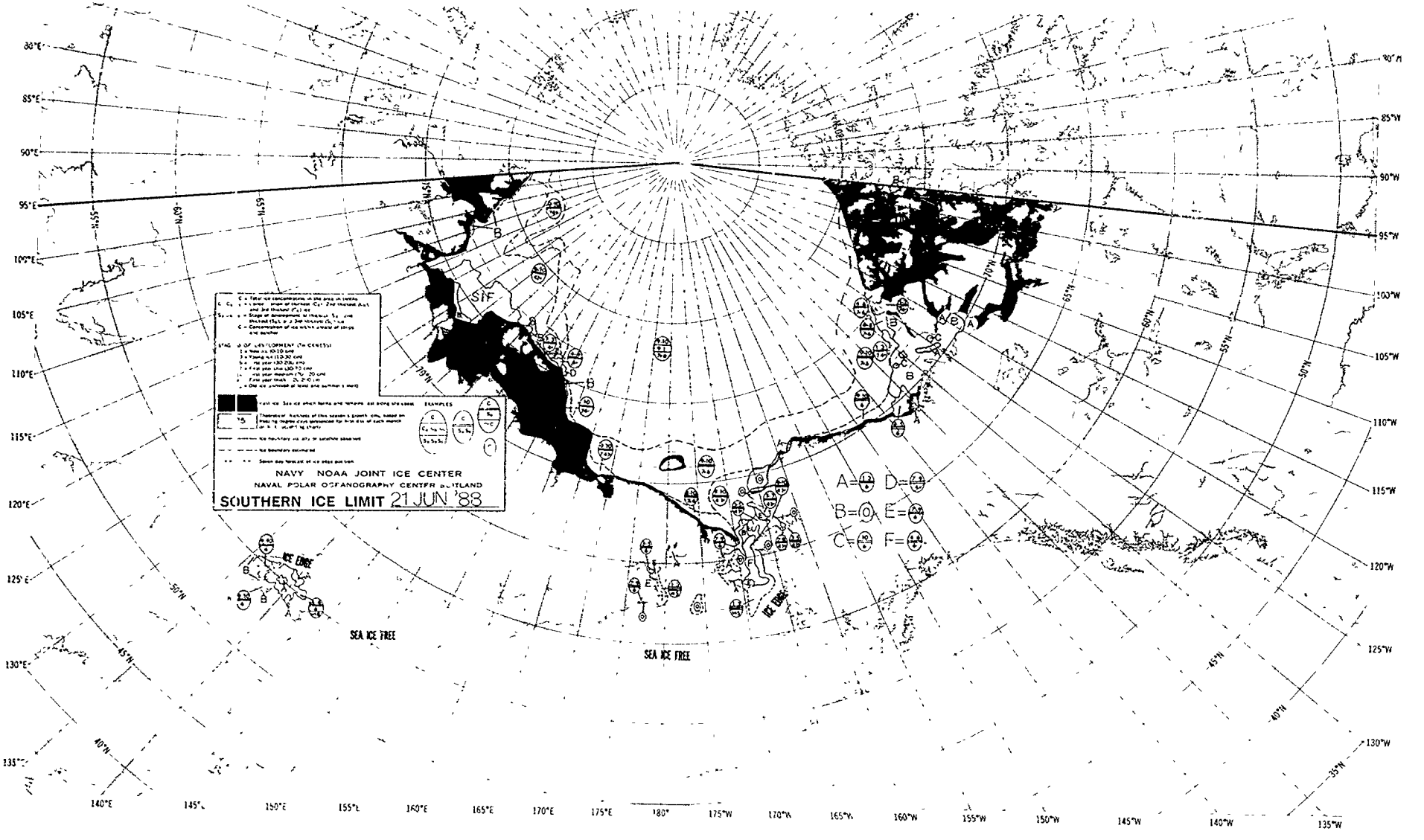
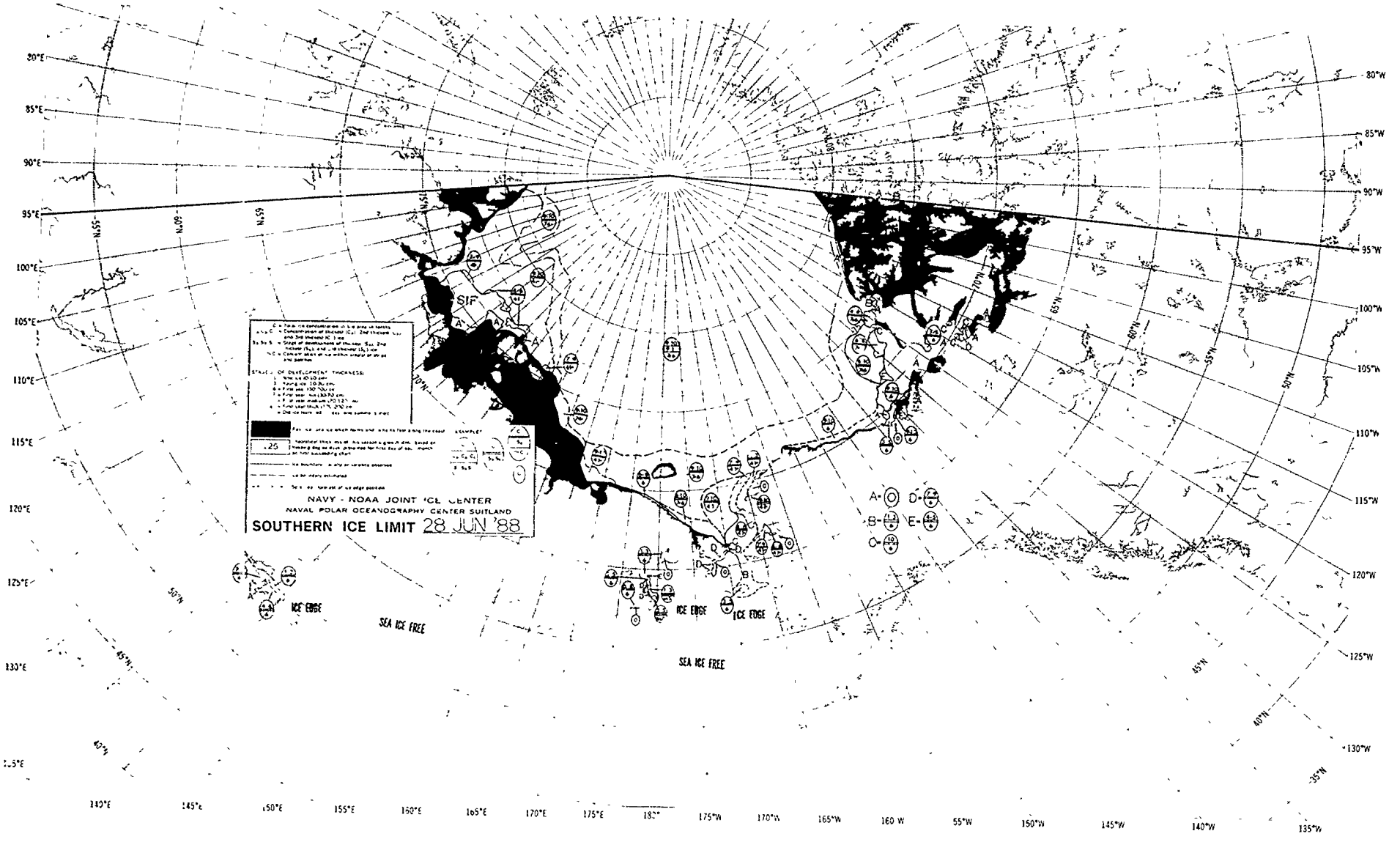
120°W
125°W
130°W
50°N
45°N
40°N
35°N


NAVY NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 21 JUN '88
A= D=
B= E=
C= F=
ICE EDGE
SEA ICE FREE
SEA ICE FREE
ICE EDGE


NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 28 JUN '88
SIF
ICE EDGE
SEA ICE FREE
ICE EDGE
ICE EDGE
SEA ICE FREE
A-
B-
C-
D-
E-
80°E
85°E
90°E
95°E
100°E
105°E
110°E
115°E
120°E
125°E
130°E
135°E
140°E
145°E
150°E
155°E
160°E
165°E
170°E
175°E
180°
175°W
170°W
165°W
160 W
55°W
150°W
145°W
140°W
135°W
80°W
85°W
90°W
95°W
100°W
105°W
110°W
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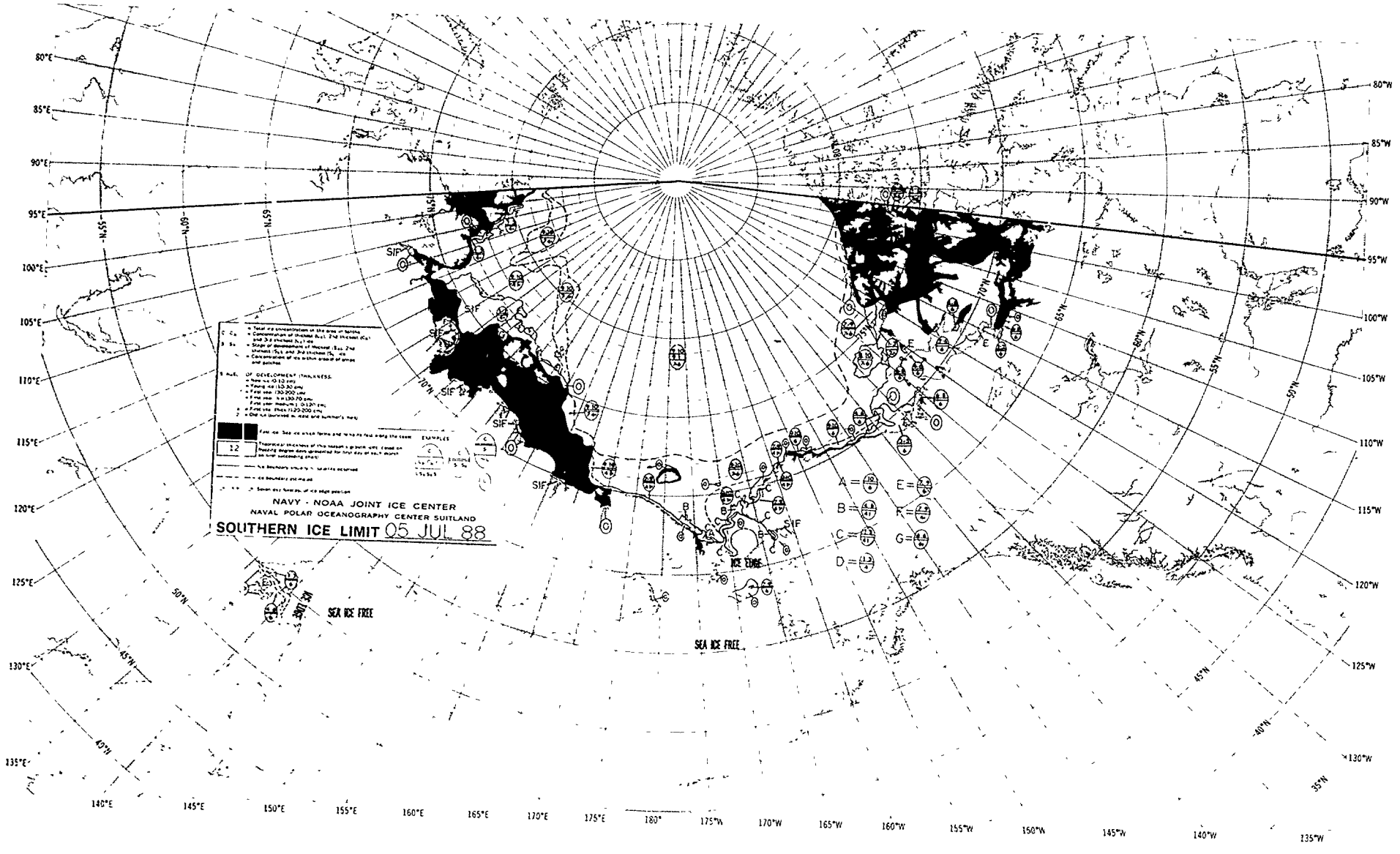
35°N


NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 05 JUL 88
SEA ICE FREE
SEA ICE FREE
ICE EDGE
SIF
A =
B =
C =
D =
E =
F =
G =
80°E
85°E
90°E
95°E
100°E
105°E
110°E
115°E
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125°E
130°E
135°E
140°E
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150°E
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135°W
80°W
85°W
90°W
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50°N
45°N
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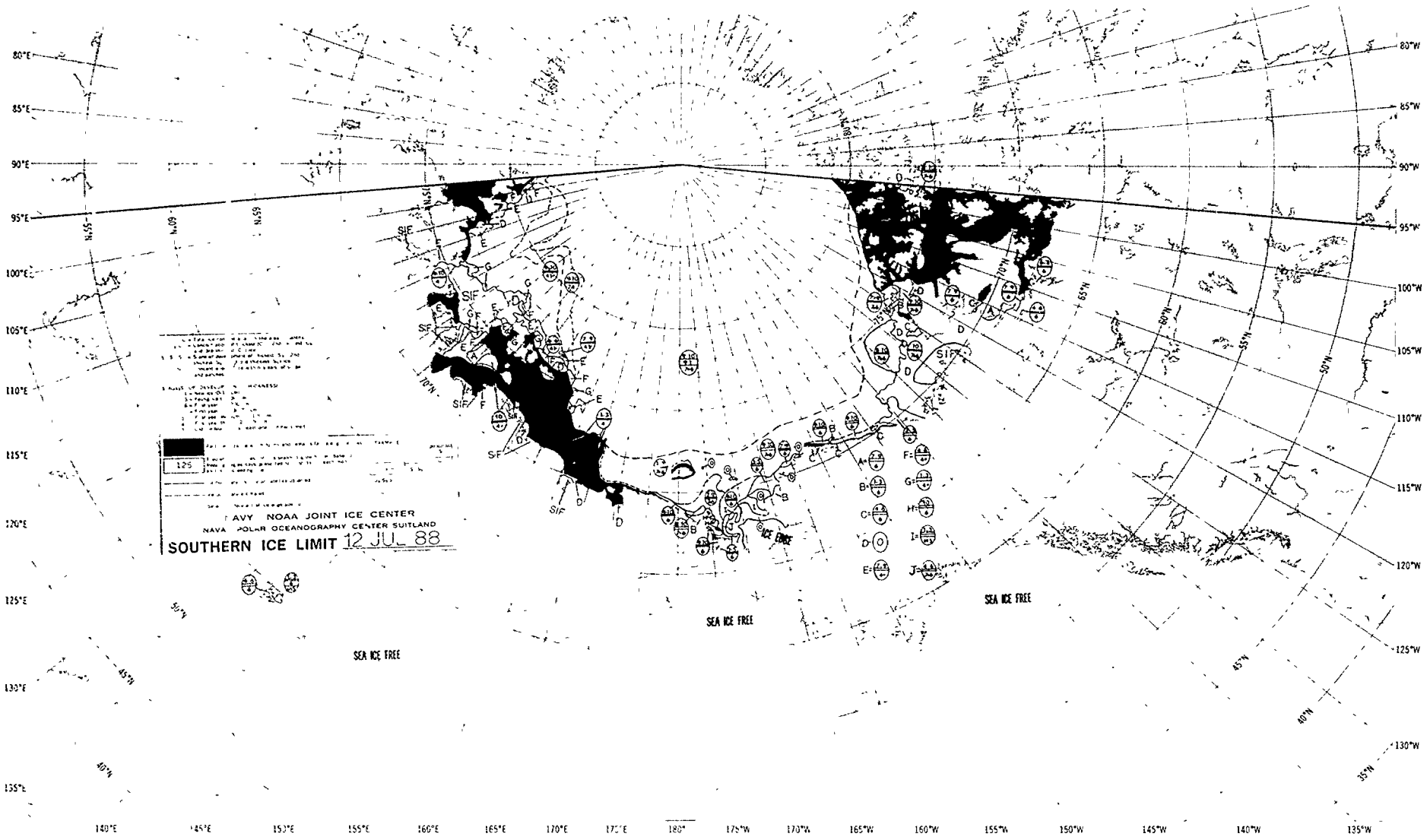
35°N


AVY NOAA JOINT ICE CENTER
NAVA POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 12 JUL 88
SEA ICE FREE
SEA ICE FREE
SEA ICE FREE
ICE FREE
SIF
80°E
85°E
90°E
95°E
100°E
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120°E
125°E
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80°W
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160°E
165°E
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175°W
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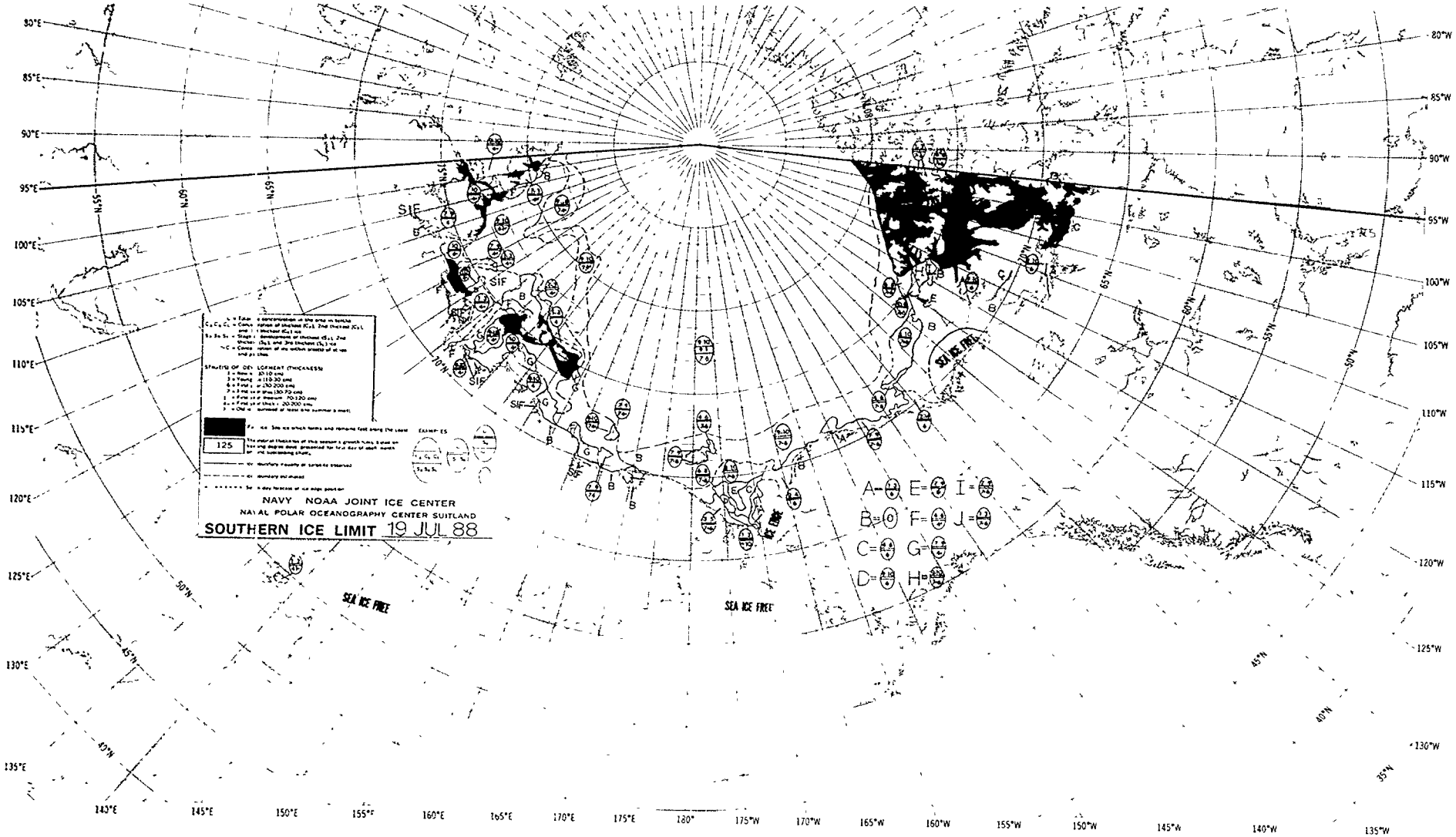
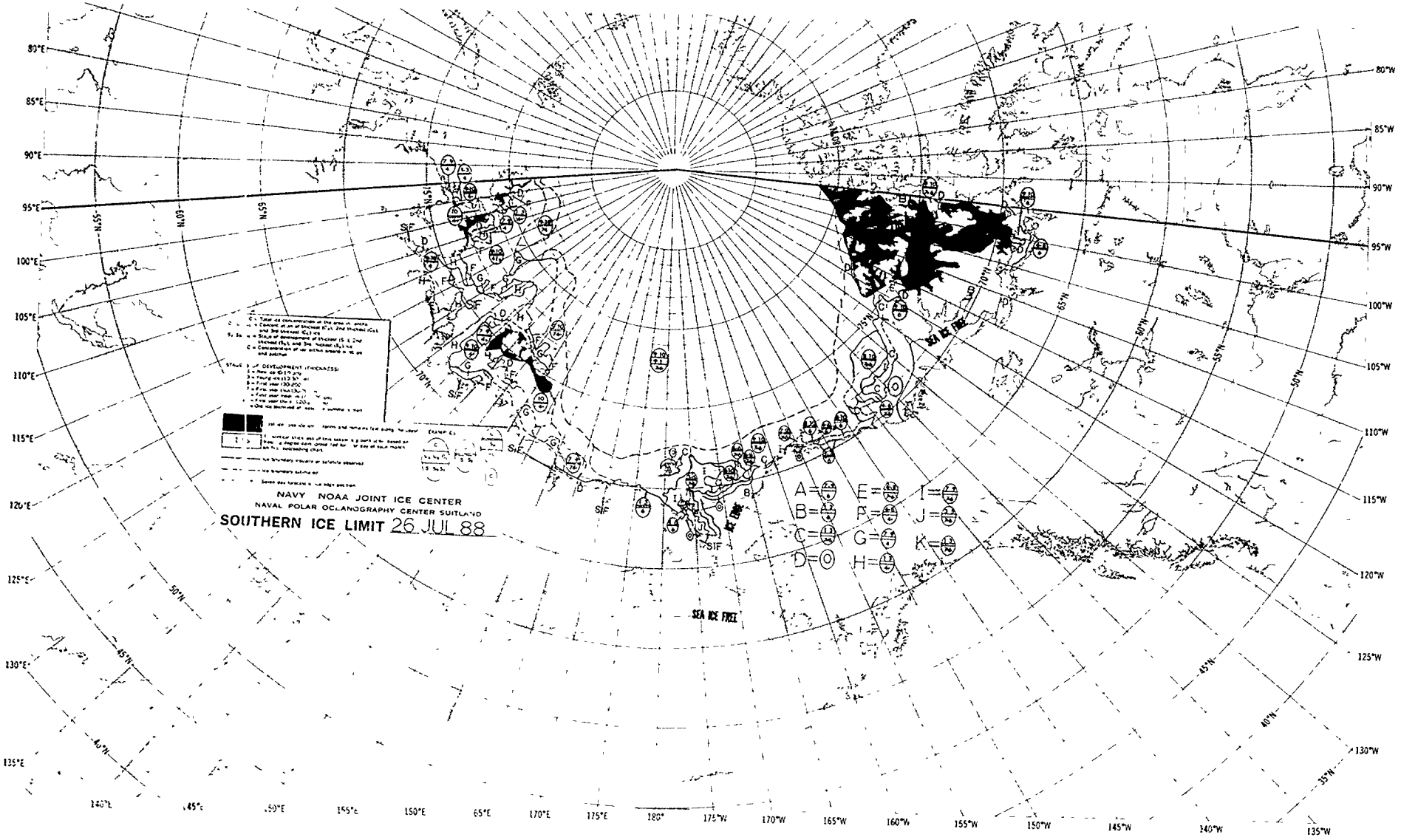
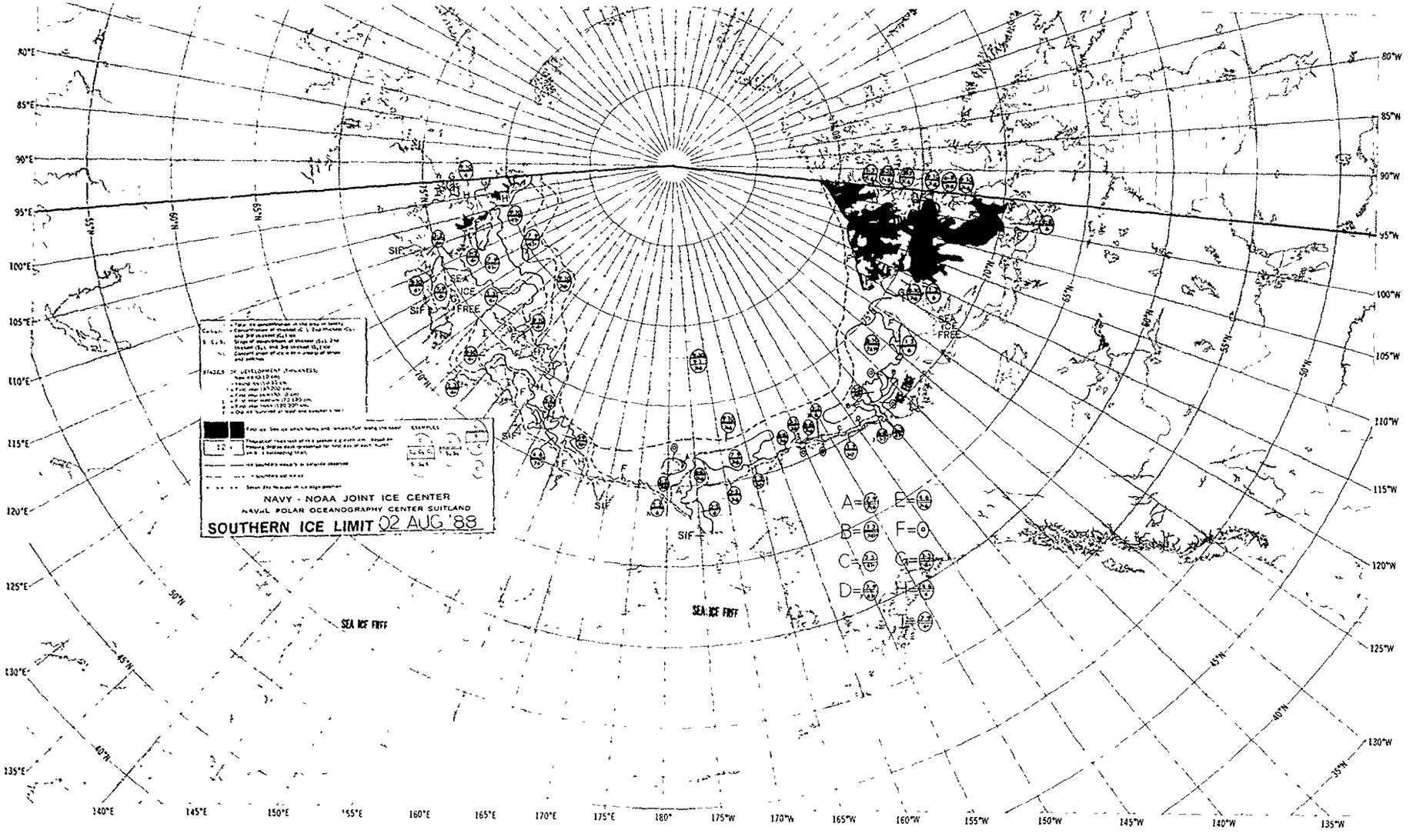
145°W
140°W
135°W


NAVY NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 19 JUL 88
SEA ICE FREE
SIF
A=
B=
C=
D=
E=
F=
G=
H=
I=
J=


NAVY NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 26 JUL 88
A= E= I=
B= F= J=
C= G= K=
D= H=
SEA ICE FREE
ICE EDGE
SIF


NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 02 AUG '88
SEA ICE FREE
SIF
A=
B=
C=
D=
E=
F=
G=
H=
I=
80°E
85°E
90°E
95°E
100°E
105°E
110°E
115°E
120°E
125°E
130°E
135°E
140°E
145°E
150°E
155°E
160°E
165°E
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175°E
180°
175°W
170°W
165°W
160°W
155°W
150°W
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140°W
135°W
80°W
85°W
90°W
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110°W
115°W
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135°W
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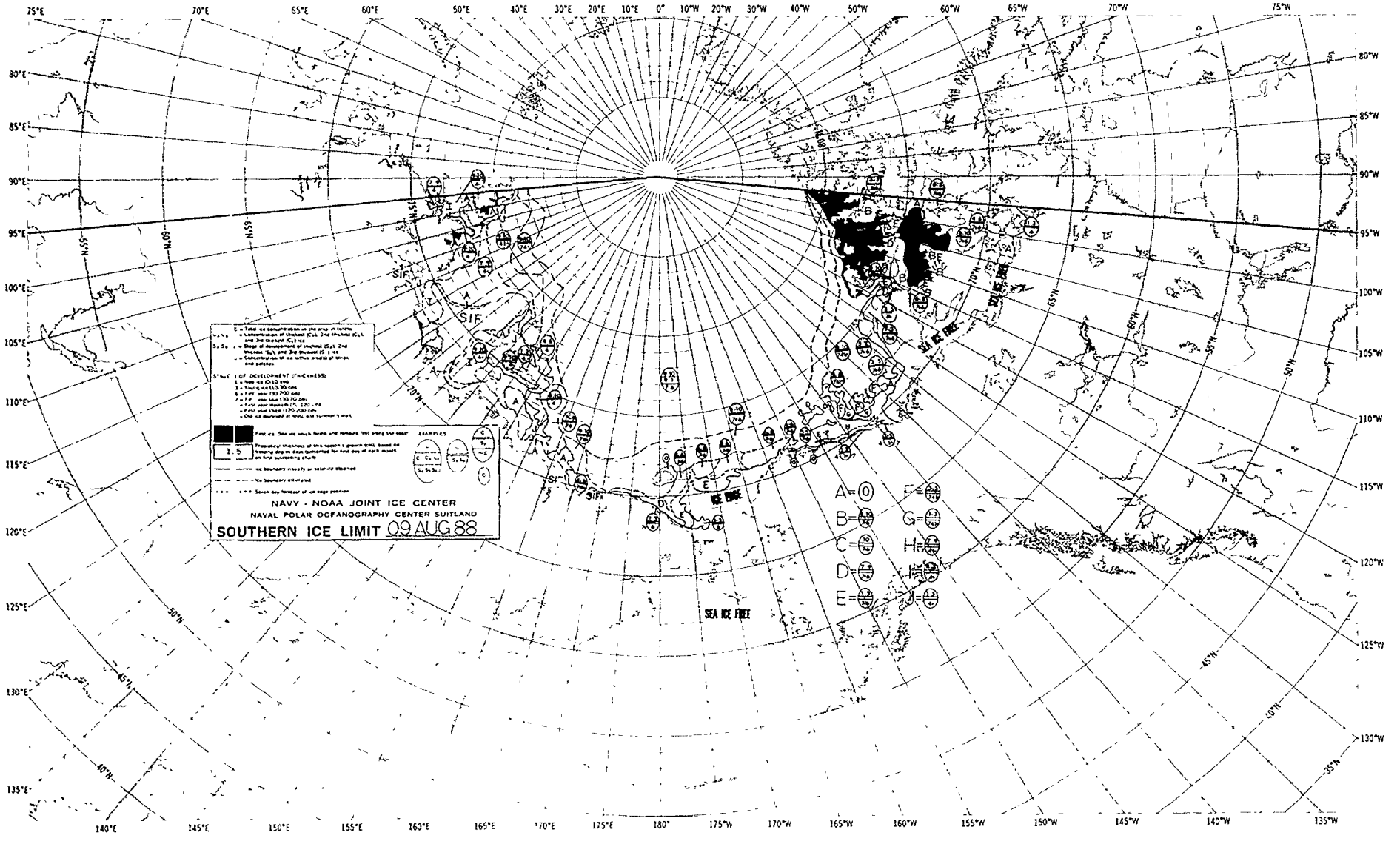
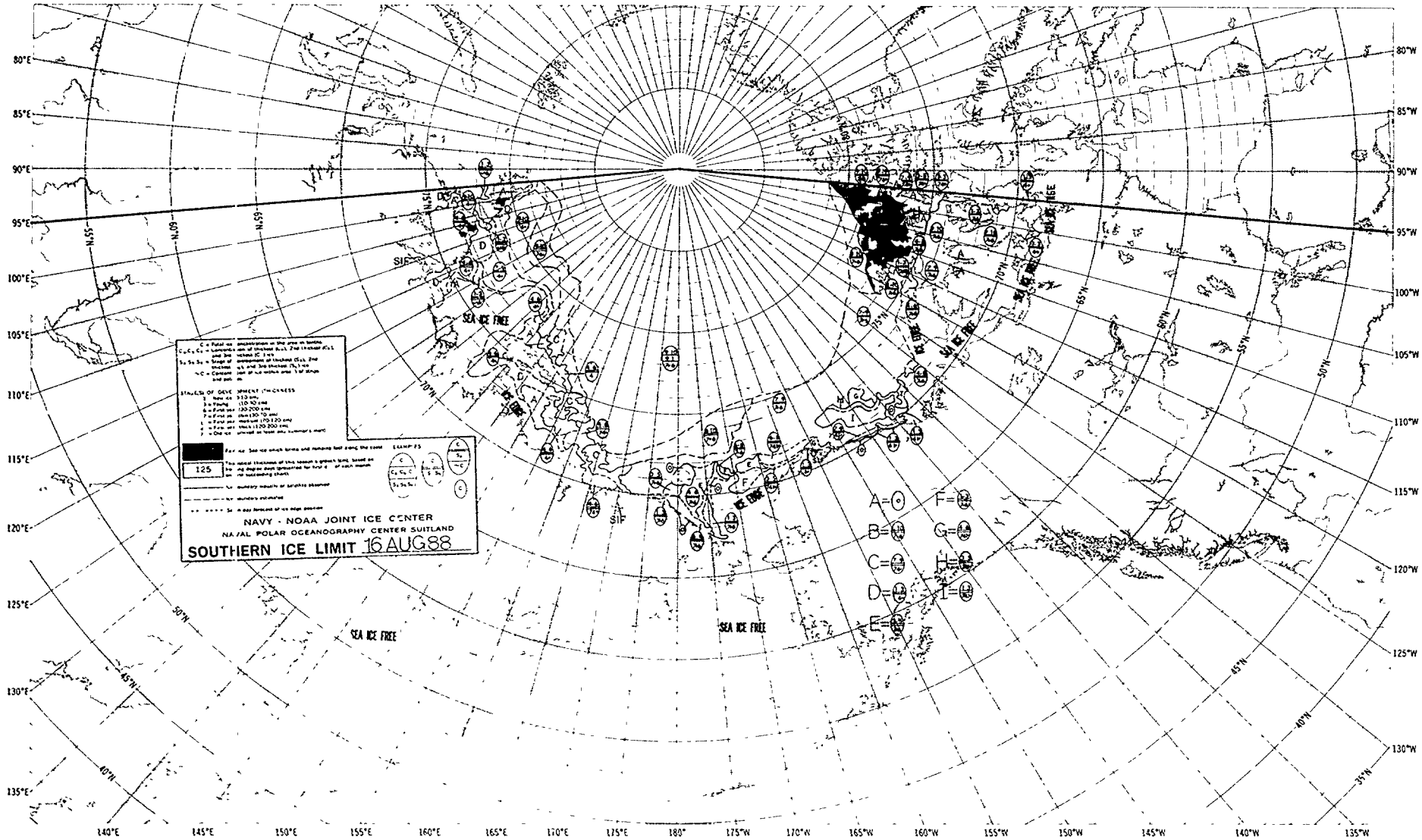

NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 09 AUG 88
SEA ICE FREE
A=0
B=
C=
D=
E=
F=
G=
H=
I=
J=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SOUTHERN ICE LIMIT 16AUG88
SEA ICE FREE
SEA ICE FREE
SEA ICE FREE
A=
B=
C=
D=
E=
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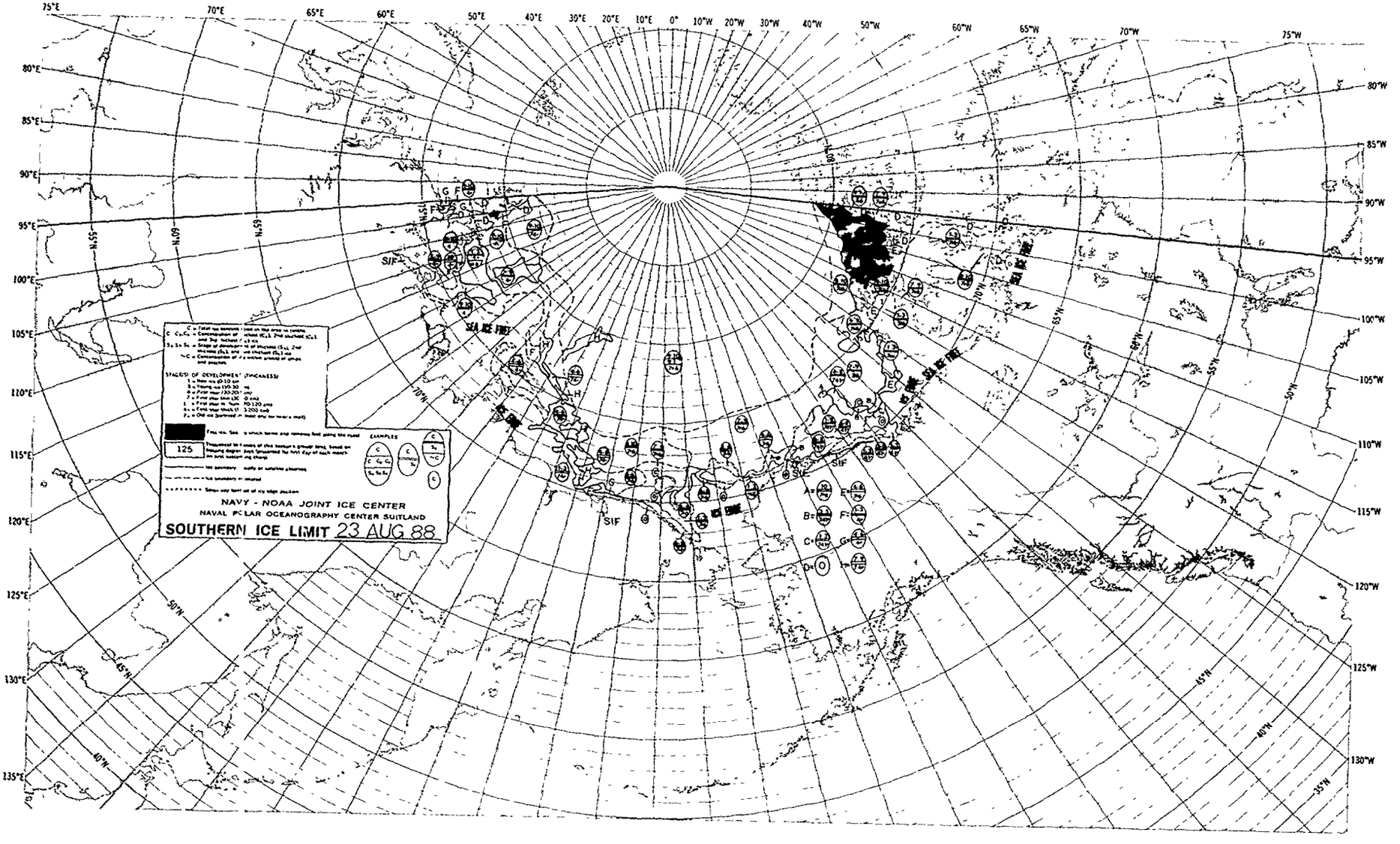
H=
I=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SOUTHERN ICE LIMIT 23 AUG 88
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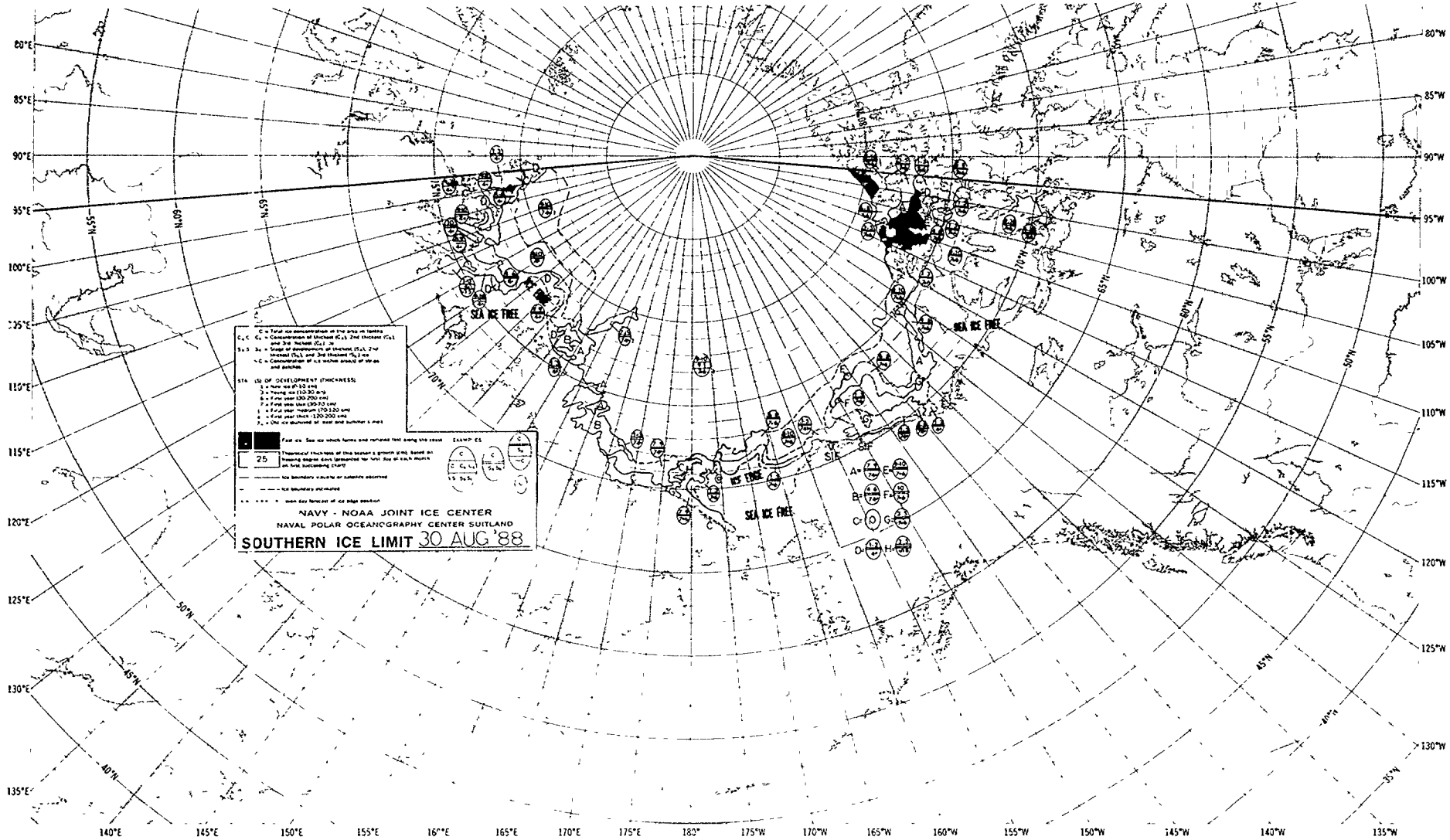
SIF


NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 30 AUG '88
SEA ICE FREE
SEA ICE FREE
ICE FREE
SEA ICE FREE
80°W
85°W
90°W
95°W
100°W
105°W
110°W
115°W
120°W
125°W
130°W
135°W
140°E
145°E
150°E
155°E
160°E
165°E
170°E
175°E
180°
175°W
170°W
165°W
160°W
155°W
150°W
145°W
140°W
135°W
80°N
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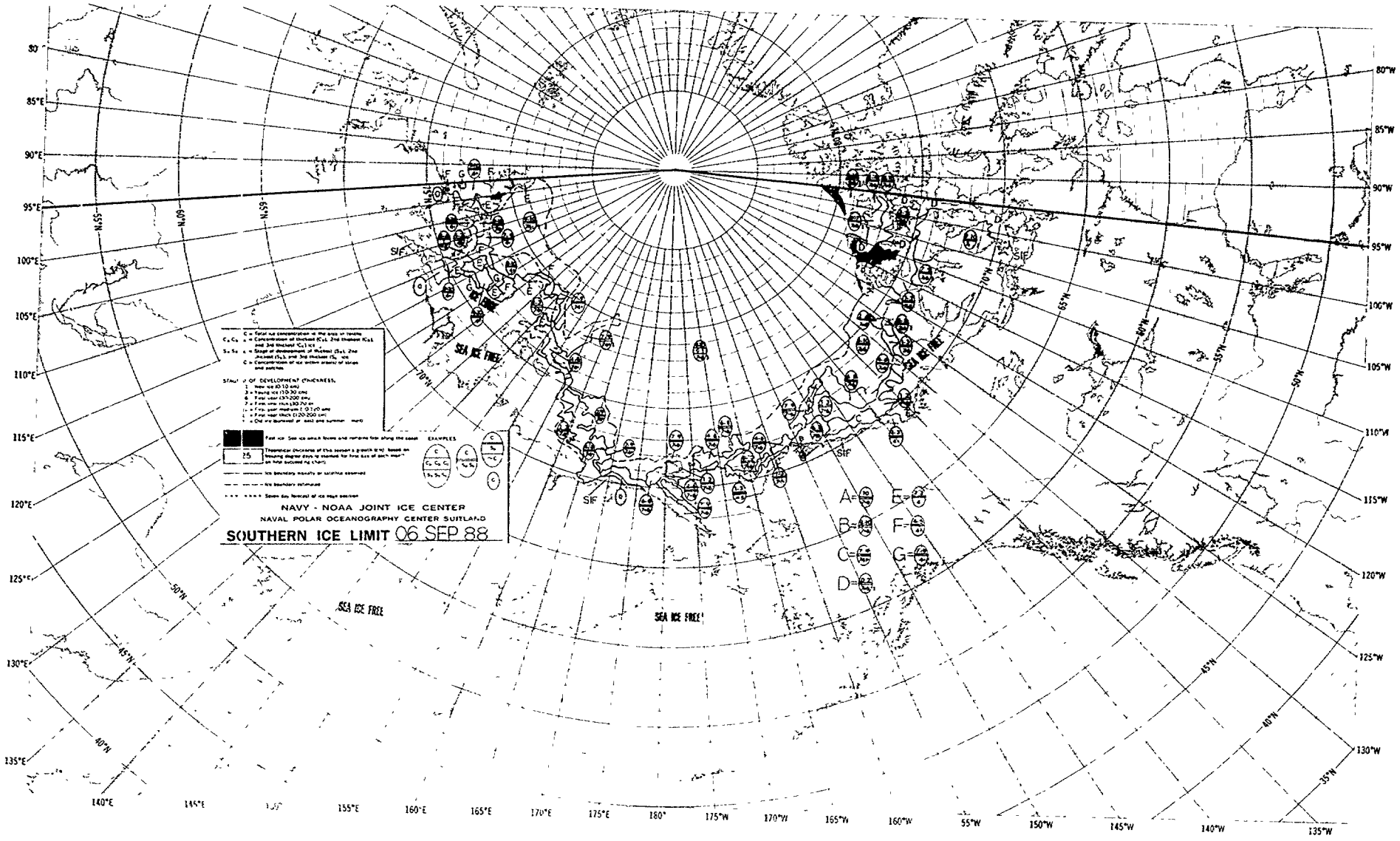
65°N
60°N
55°N
50°N
45°N
40°N
35°N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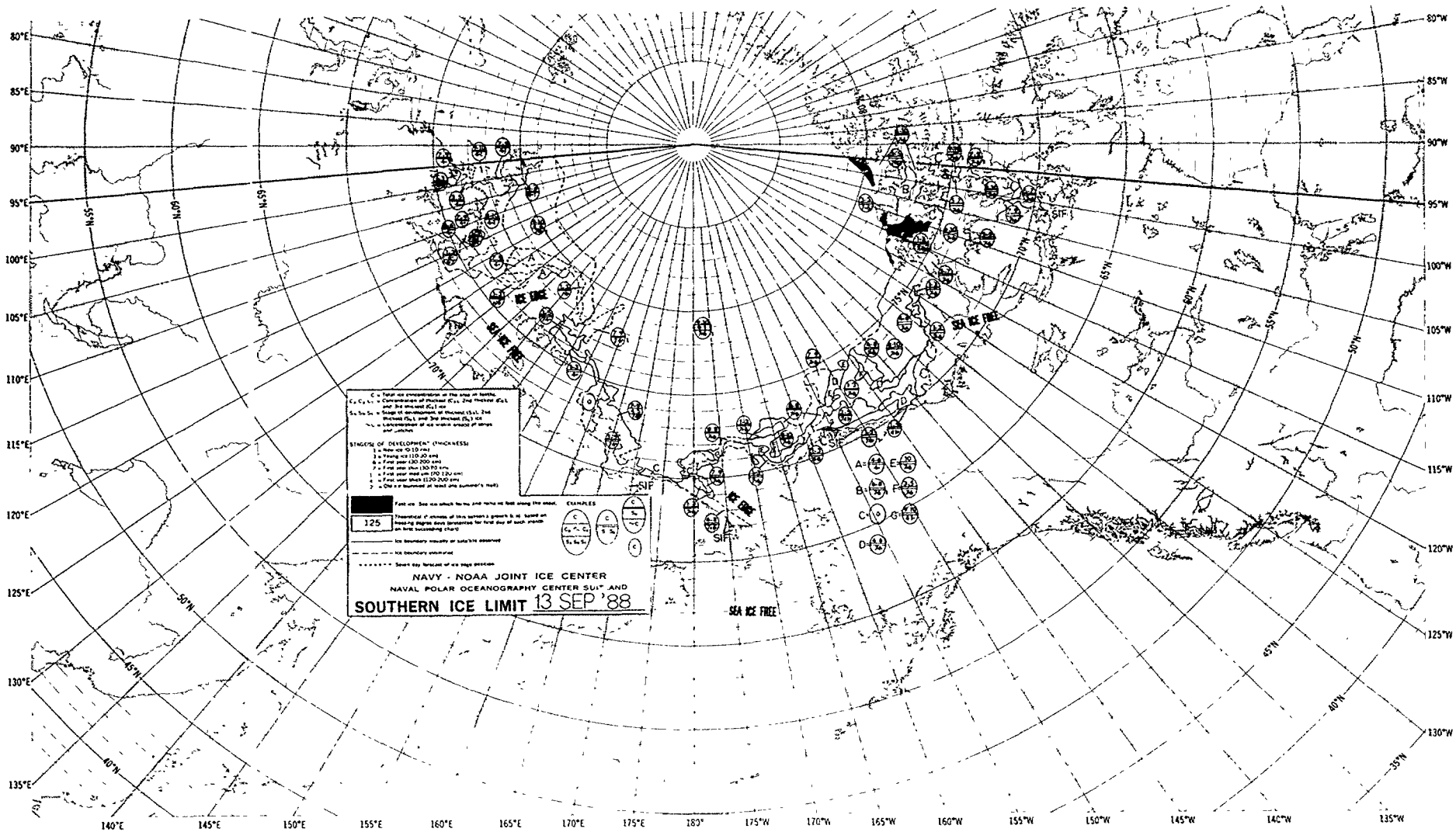
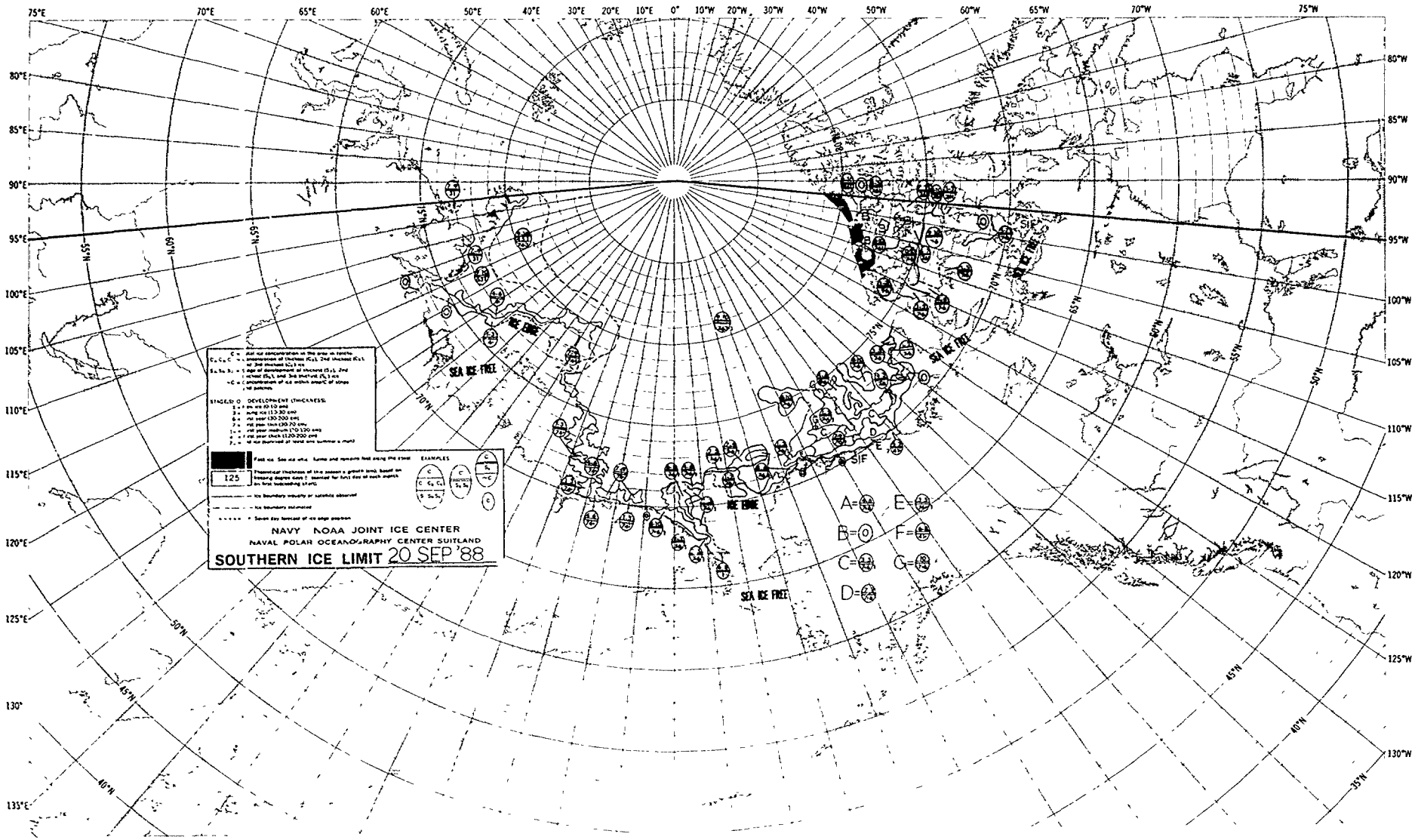
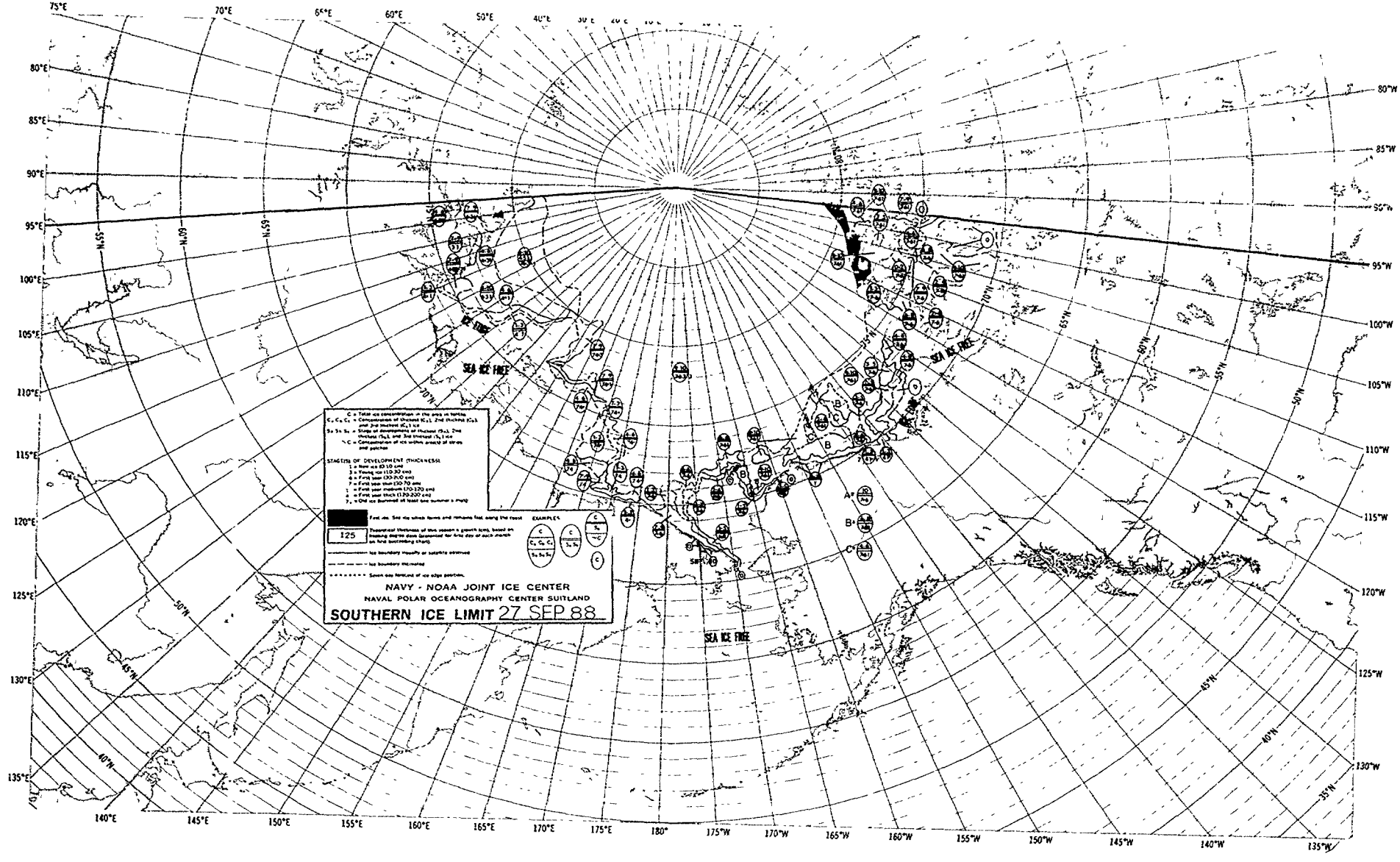
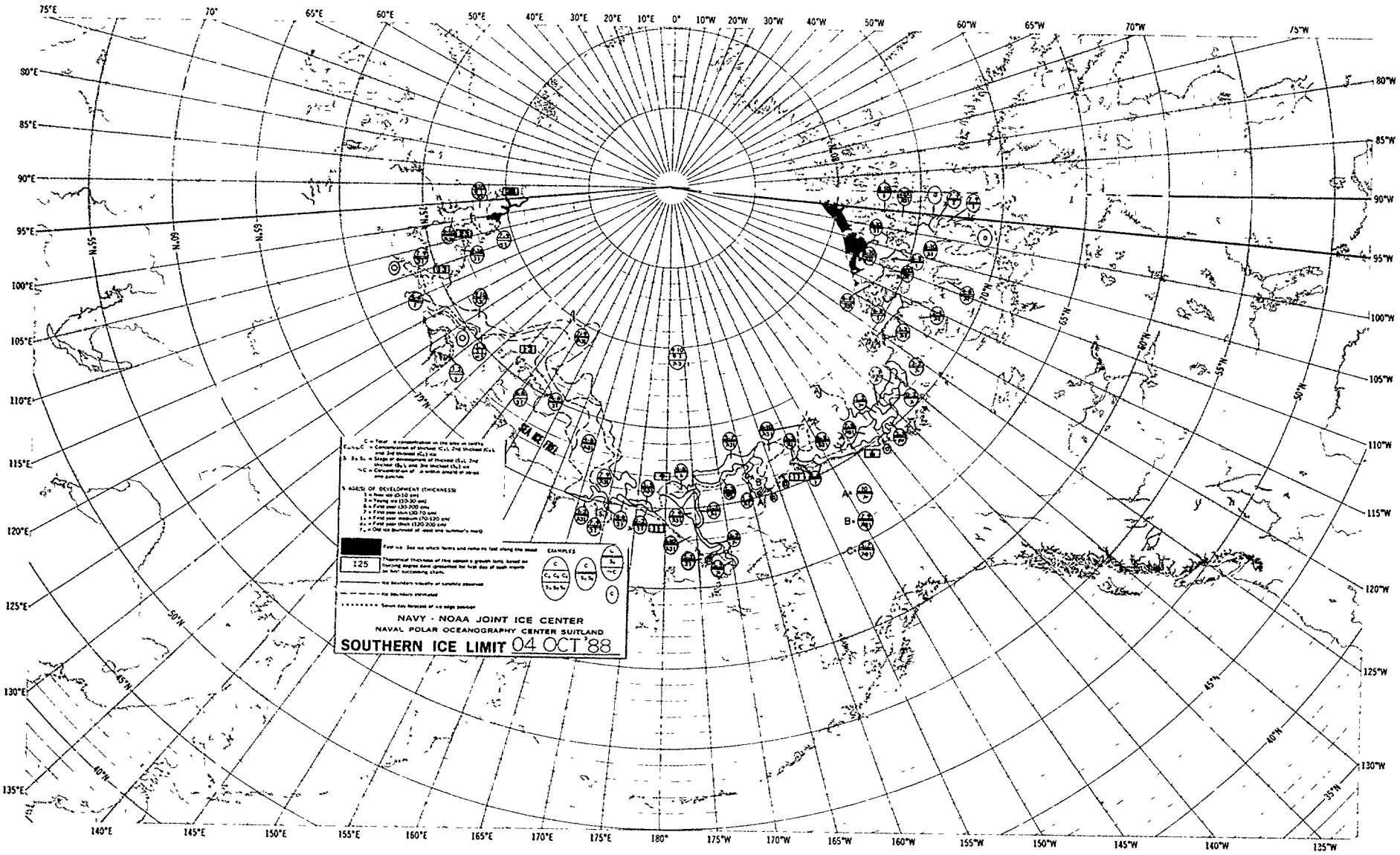
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 06 SEP 88
SEA ICE FREE
SIF
A=
B=
C=
D=
E=
F=
G=


NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 13 SEP '88
SEA ICE FREE
ICE EDGE
SIF
80°E
85°E
90°E
95°E
100°E
105°E
110°E
115°E
120°E
125°E
130°E
135°E
140°E
145°E
150°E
155°E
160°E
165°E
170°E
175°E
180°
175°W
170°W
165°W
160°W
155°W
150°W
145°W
140°W
135°W
80°W
85°W
90°W
95°W
100°W
105°W
110°W
115°W
120°W
125°W
130°W
135°W
70°N
65°N
60°N
55°N
50°N
45°N
40°N
35°N


NAVY NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 20 SEP '88
SEA ICE FREE
ICE EDGE
SIF
A=
B=
C=
D=
E=
F=
G=


NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 27 SEP 88
SEA ICE FREE
ICE FREE
EXAMPLES
125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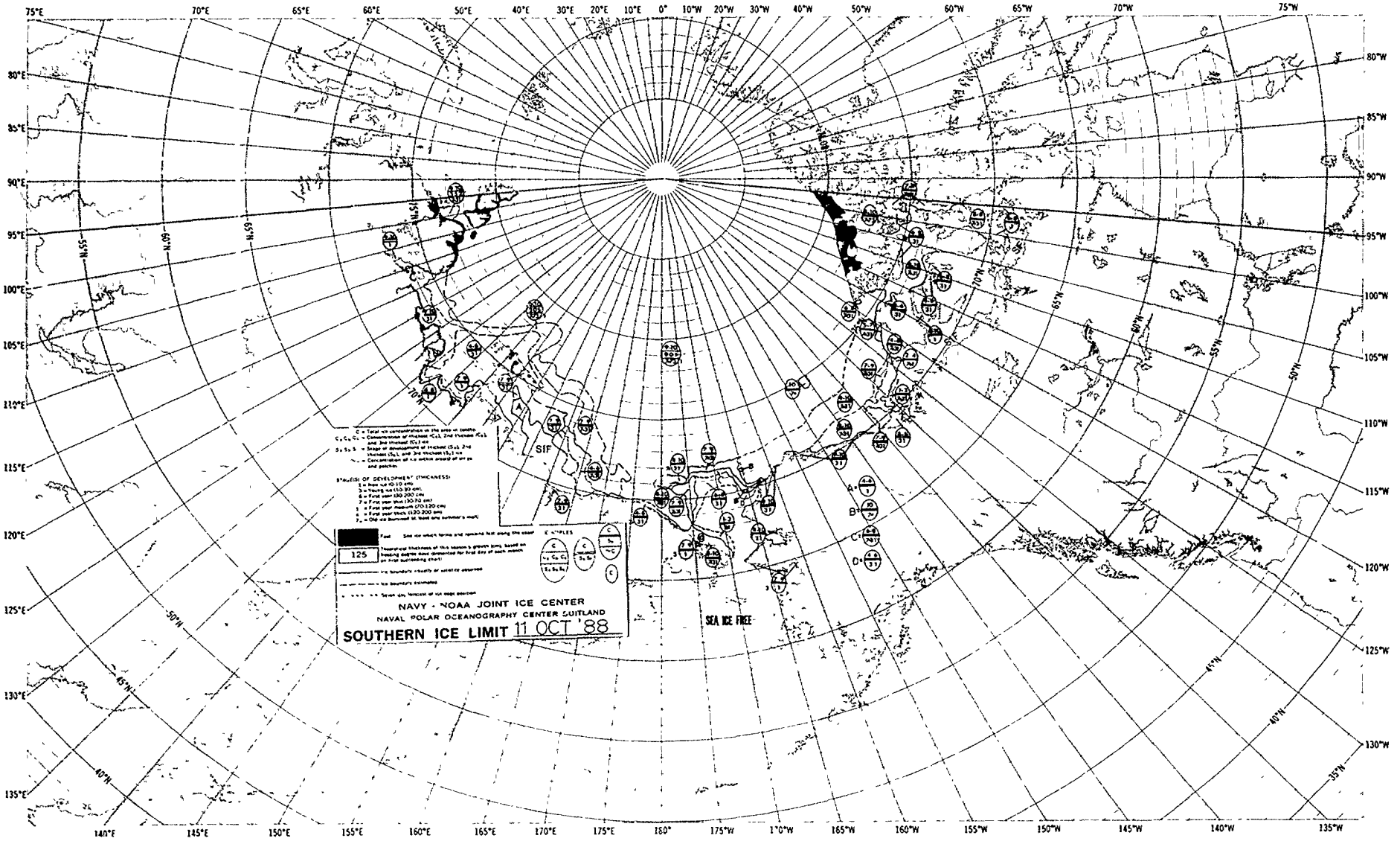
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 04 OCT '88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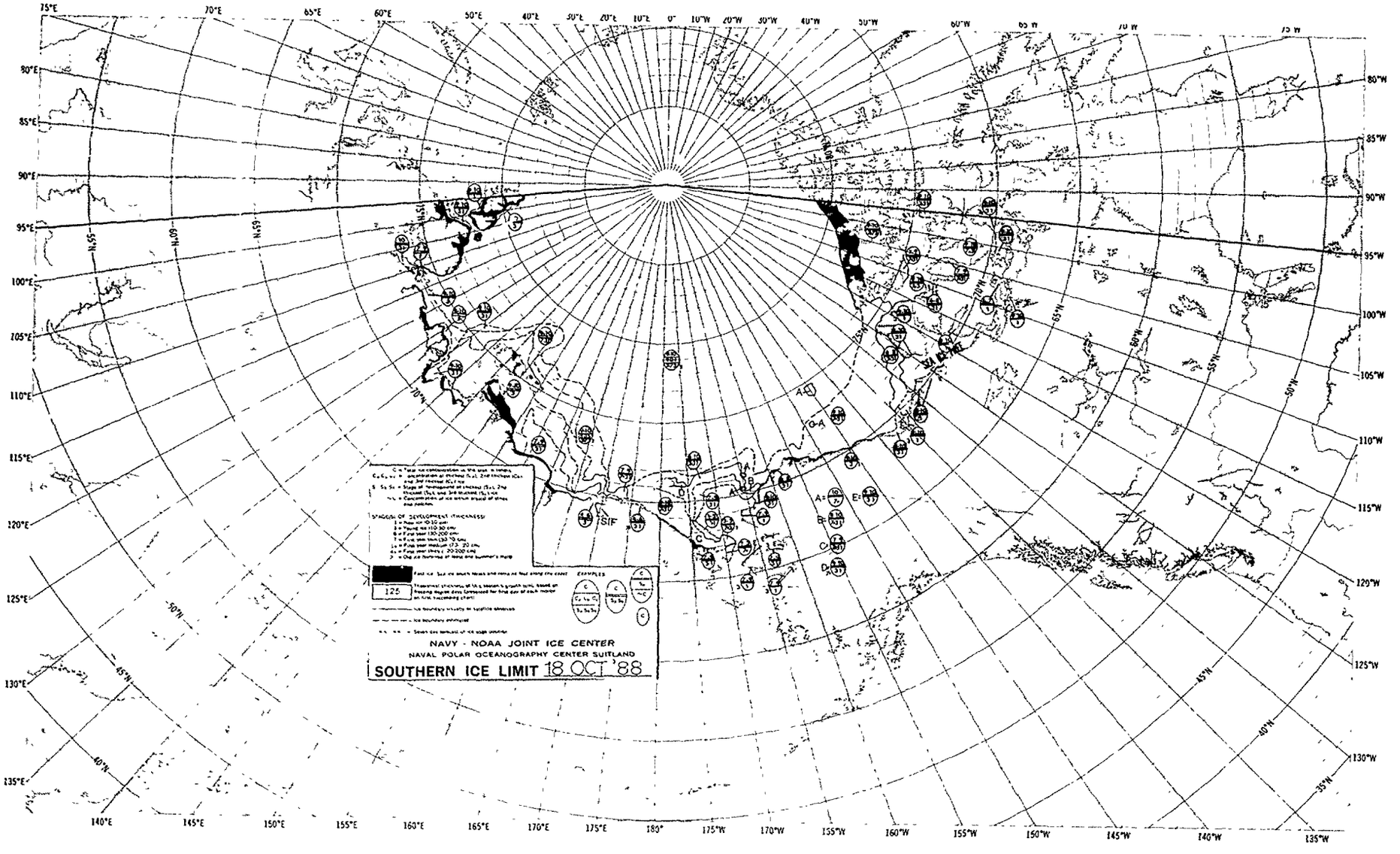
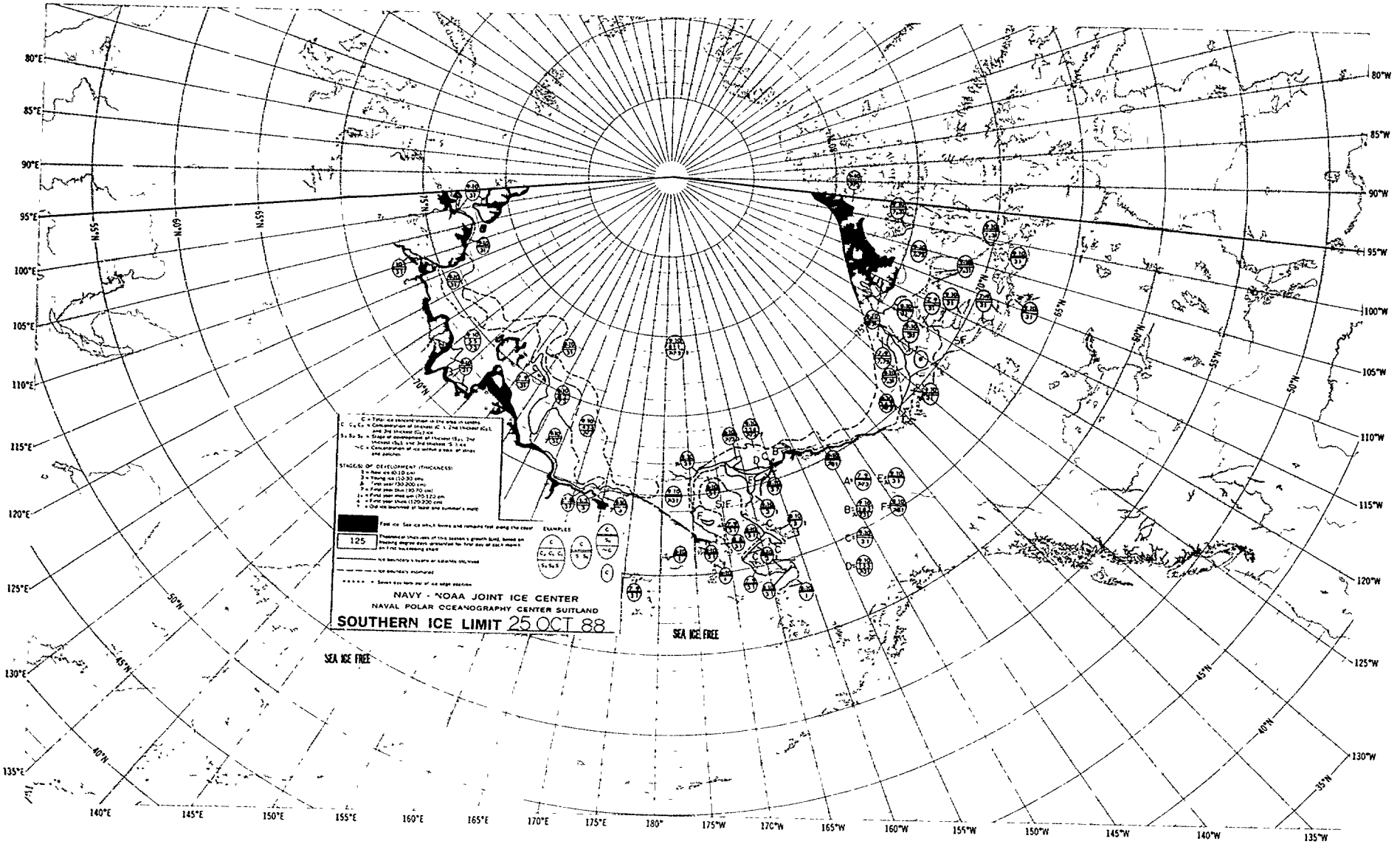
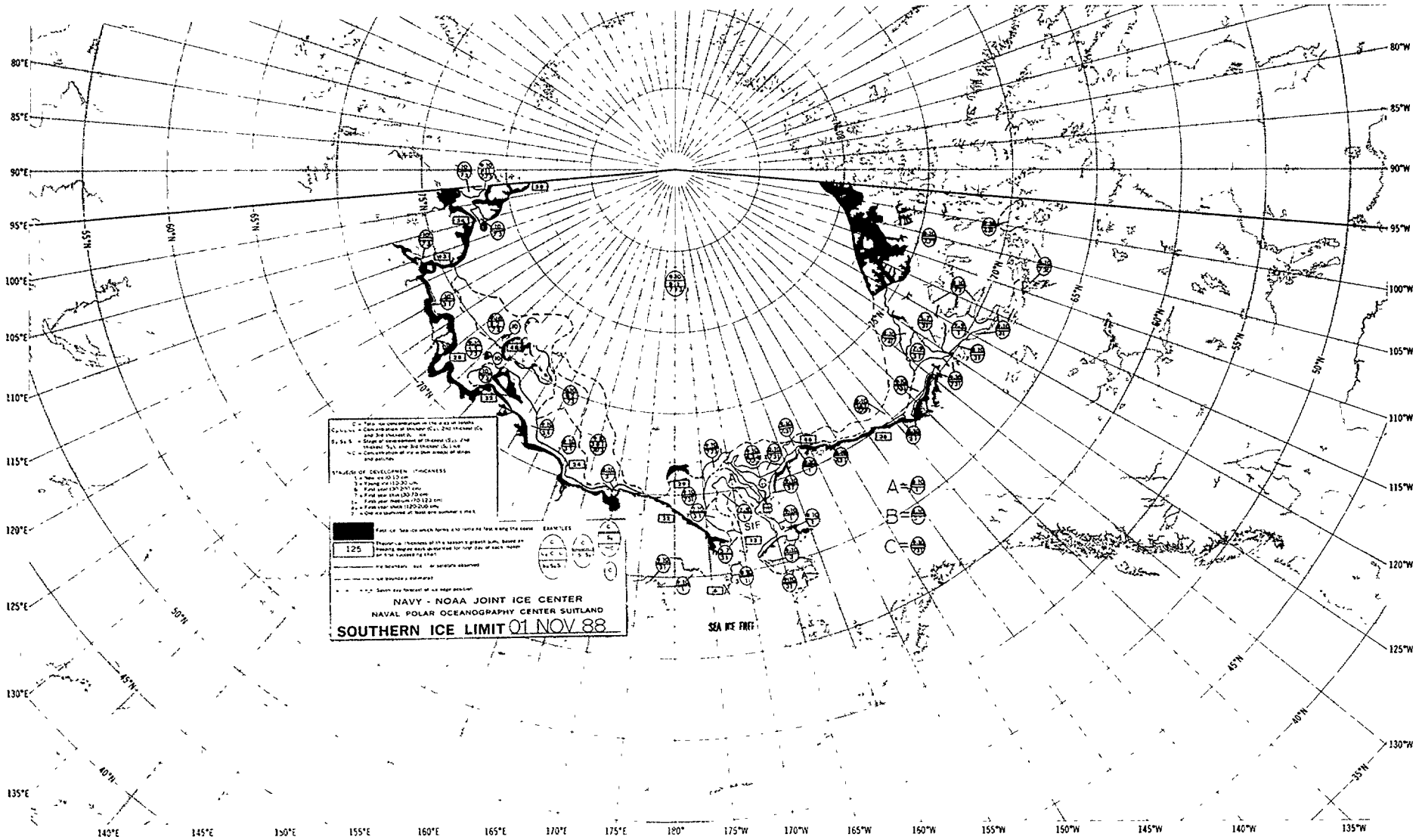
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 11 OCT '88
SEA ICE FREE
SIF
125


NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 18 OCT '88


NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 25 OCT 88
SEA ICE FREE
SEA ICE FREE
SIF
80°E
85°E
90°E
95°E
100°E
105°E
110°E
115°E
120°E
125°E
130°E
135°E
140°E
145°E
150°E
155°E
160°E
165°E
170°E
175°E
180°
175°W
170°W
165°W
160°W
155°W
150°W
145°W
140°W
135°W
80°W
85°W
90°W
95°W
100°W
105°W
110°W
115°W
120°W
125°W
130°W
70°N
65°N
60°N
55°N
50°N
45°N
40°N
35°N


NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 01 NOV 88
SEA ICE FREE
A=
B=
C=
SIF
80°E
85°E
90°E
95°E
100°E
105°E
110°E
115°E
120°E
125°E
130°E
135°E
80°W
85°W
90°W
95°W
100°W
105°W
110°W
115°W
120°W
125°W
130°W
135°W
140°E
145°E
150°E
155°E
160°E
165°E
170°E
175°E
180°
175°W
170°W
165°W
160°W
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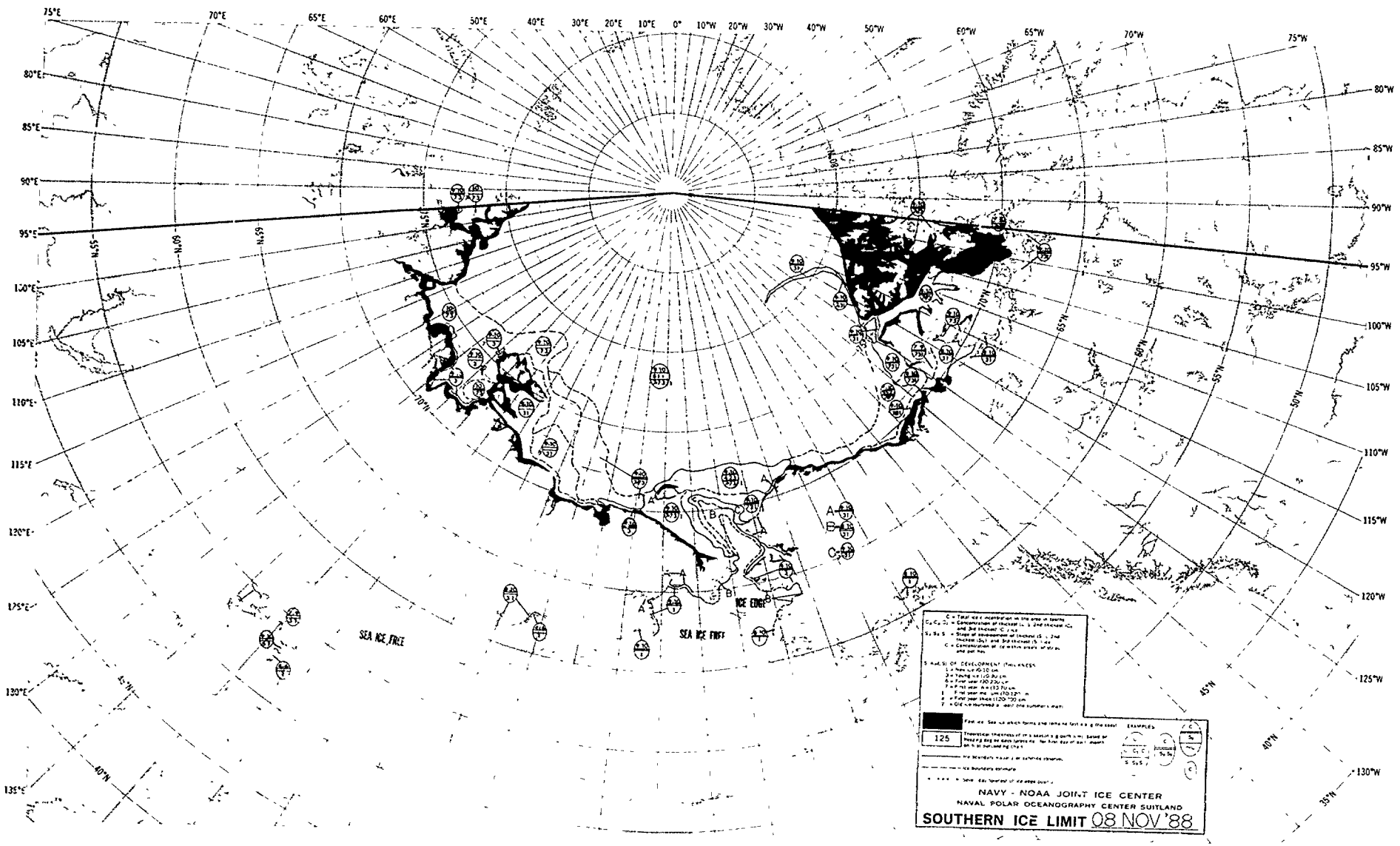
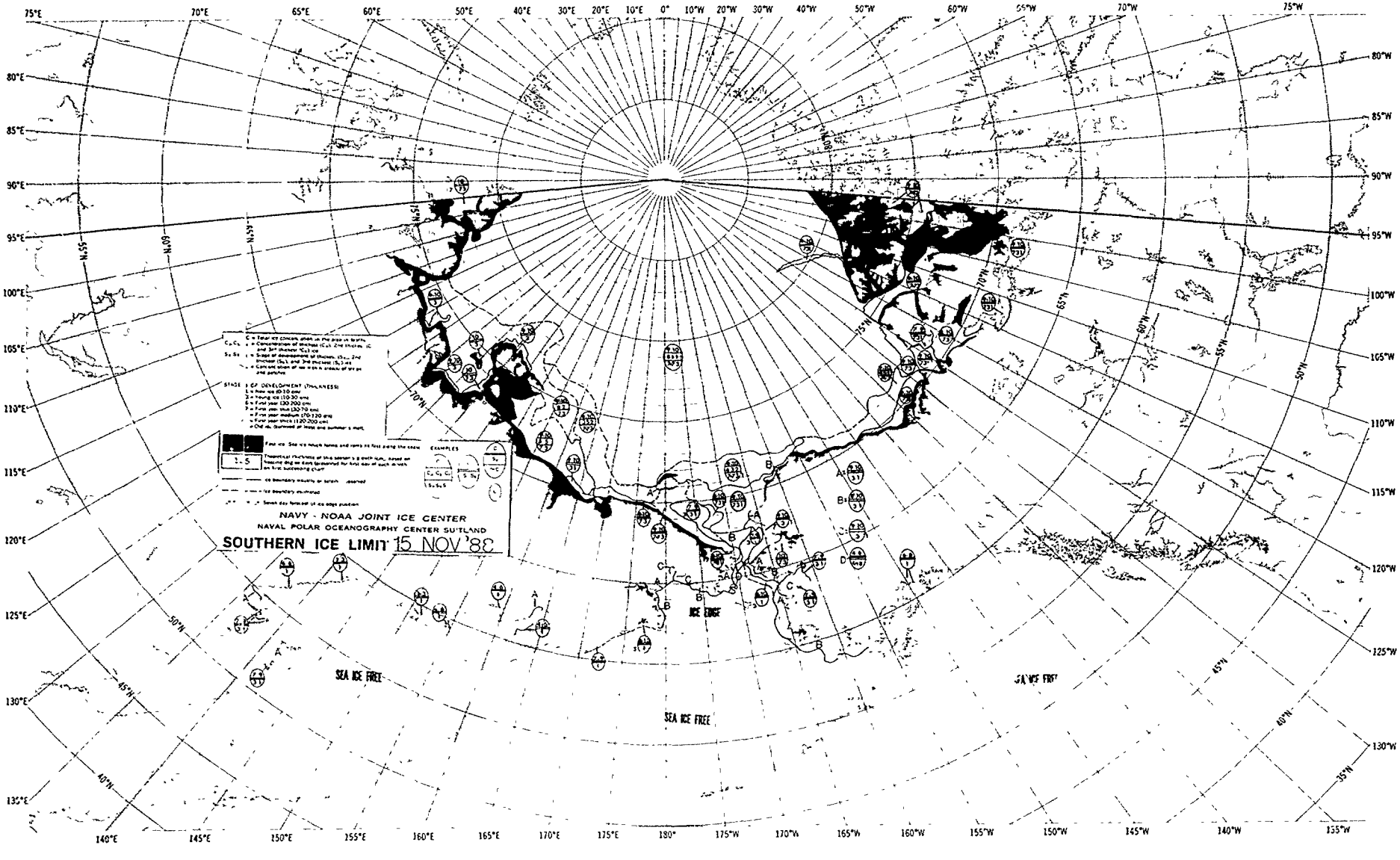
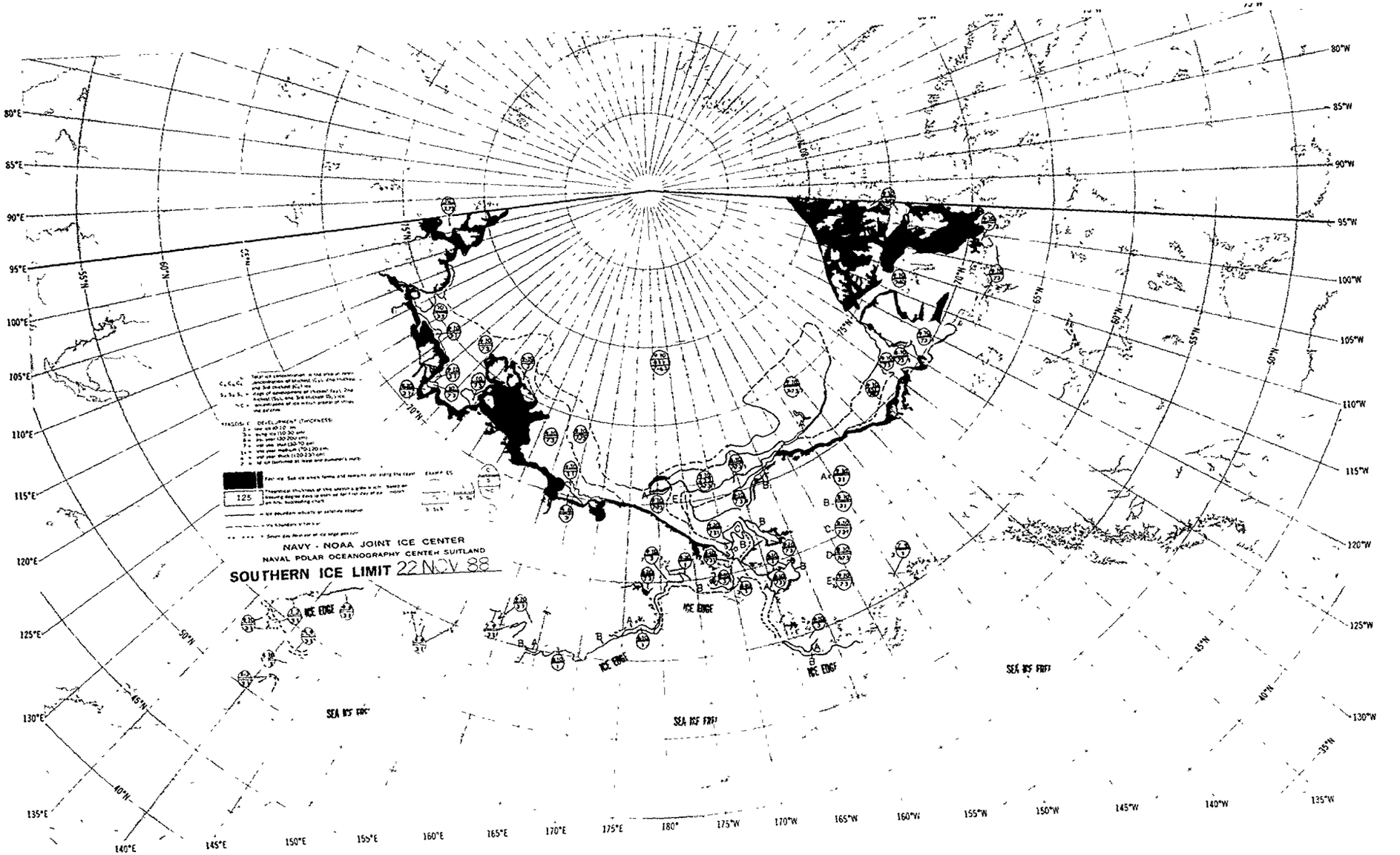
55°N
50°N
45°N
40°N
35°N


SEA ICE FREE
ICE EDGE
SEA ICE FREE
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 08 NOV '88


NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 15 NOV '88
SEA ICE FREE
SEA ICE FREE
SEA ICE FREE
ICE EDGE


NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 22 NOV 88
ICE EDGE
SEA ICE FREE
80°E
85°E
90°E
95°E
100°E
105°E
110°E
115°E
120°E
125°E
130°E
135°E
140°E
145°E
150°E
155°E
160°E
165°E
170°E
175°E
180°
175°W
170°W
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160°W
155°W
150°W
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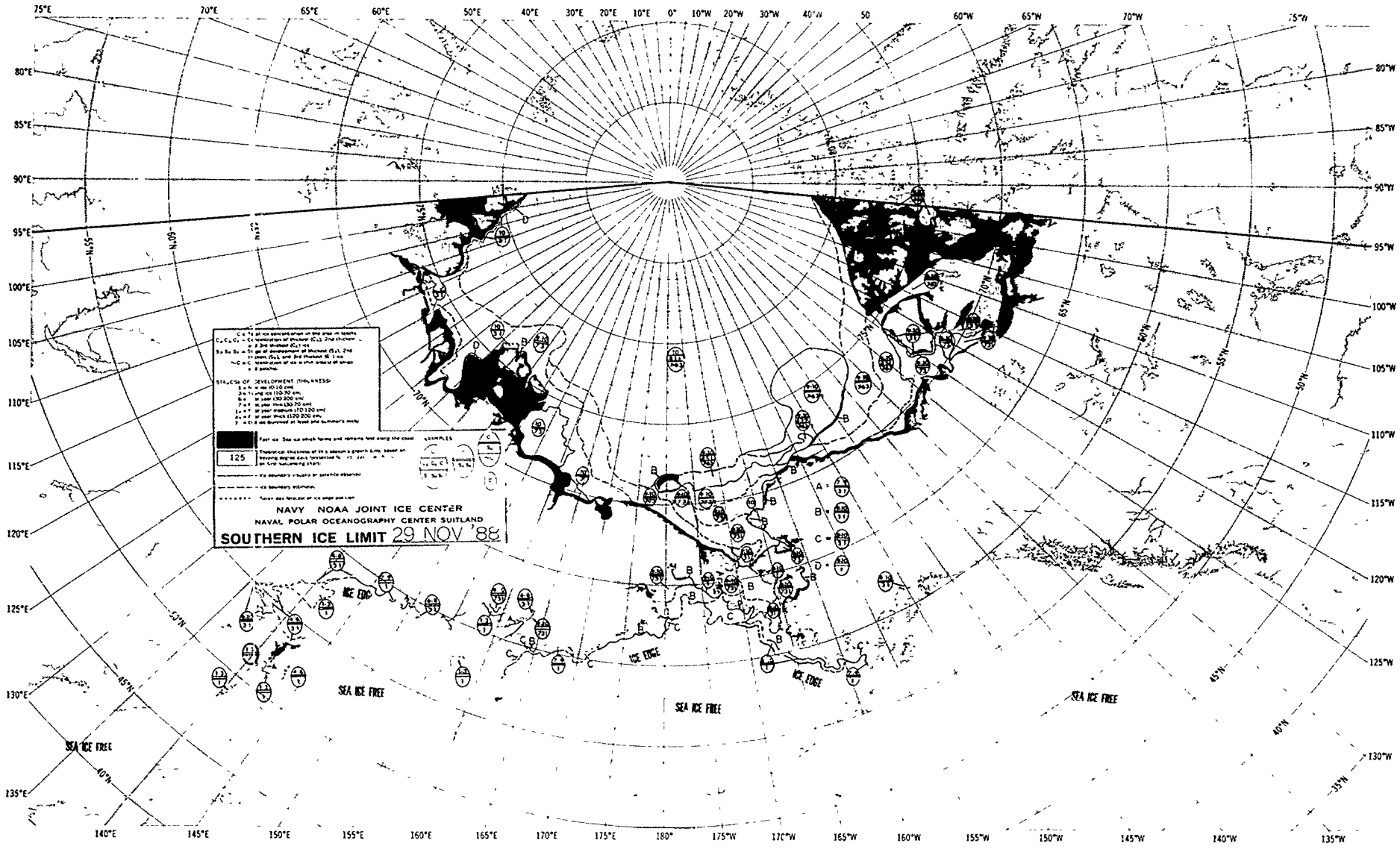
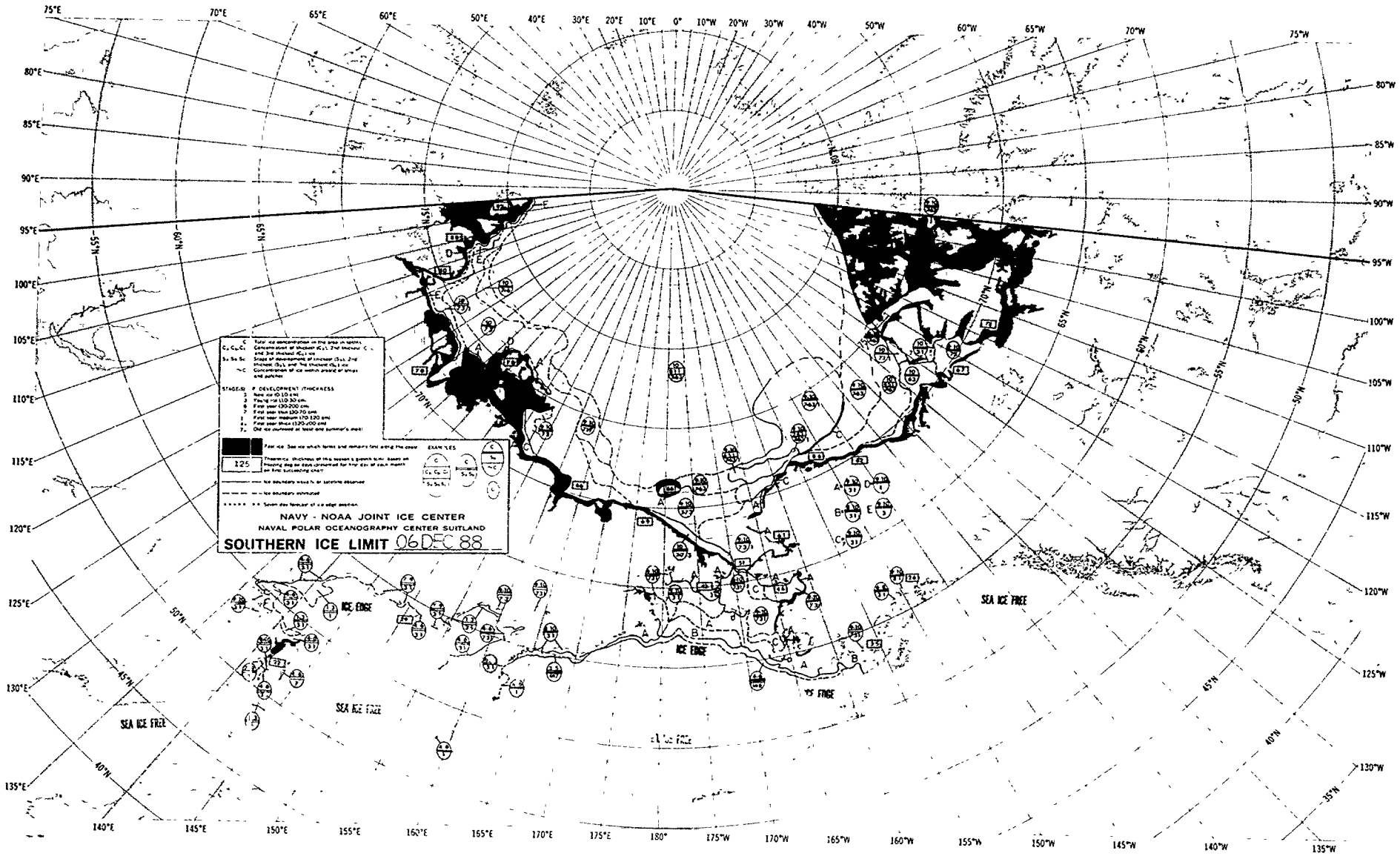
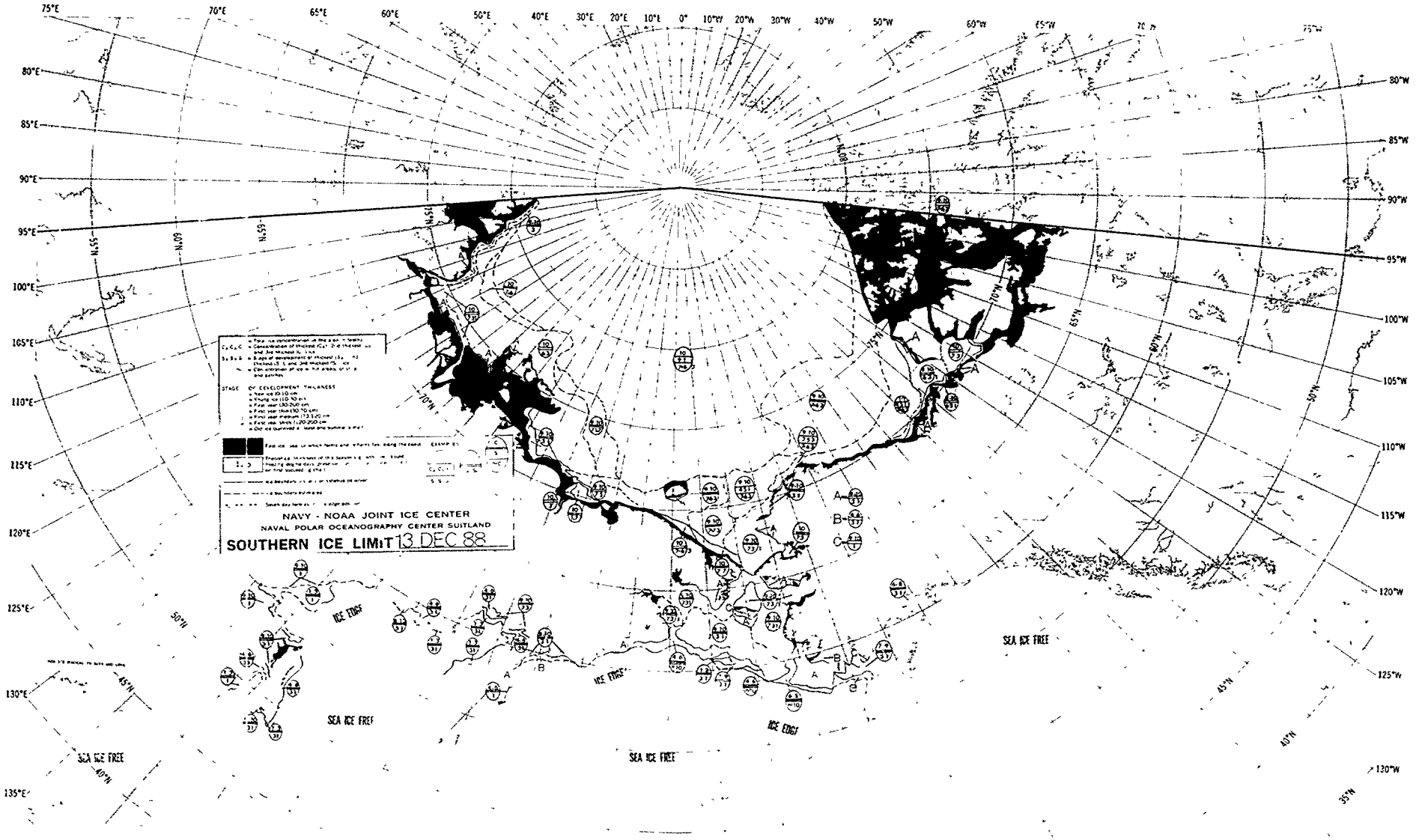
35°N


NAVY NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 29 NOV '88
ICE EDGE
SEA ICE FREE


NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 06 DEC 88
ICE EDGE
SEA ICE FREE


NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 13 DEC 88
ICE EDGE
SEA ICE FREE
75°E
70°E
65°E
60°E
50°E
40°E
30°E
20°E
10°E
0°
10°W
20°W
30°W
40°W
50°W
60°W
65°W
80°E
85°E
90°E
95°E
100°E
105°E
110°E
115°E
120°E
125°E
130°E
135°E
80°W
85°W
90°W
95°W
100°W
105°W
110°W
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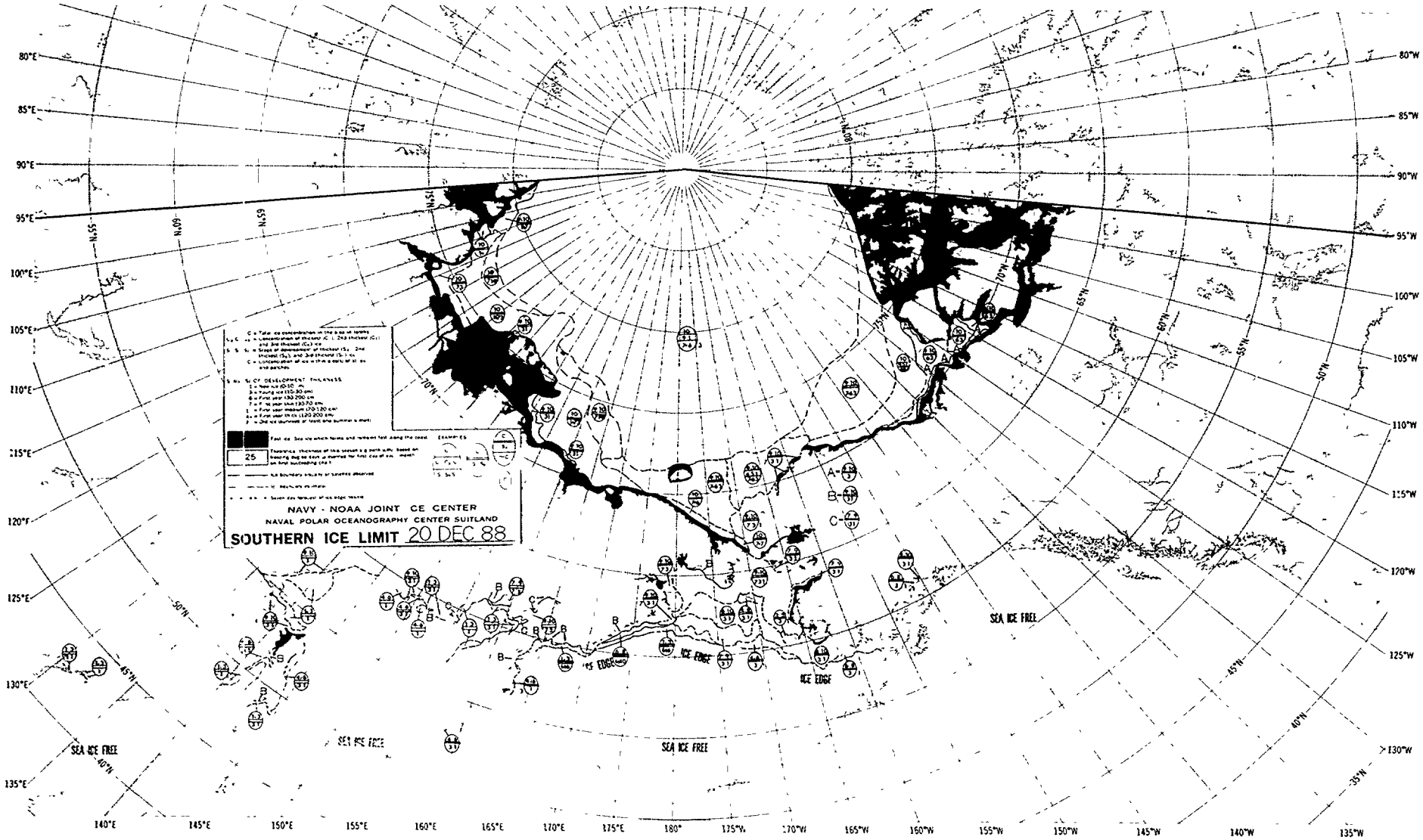
125°W
130°W
70°N
60°N
50°N
45°N
40°N
35°N


NAVY - NOAA JOINT CE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 20 DEC 88
SEA ICE FREE
ICE EDGE
80°E
85°E
90°E
95°E
100°E
105°E
110°E
115°E
120°E
125°E
130°E
135°E
140°E
145°E
150°E
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100°W
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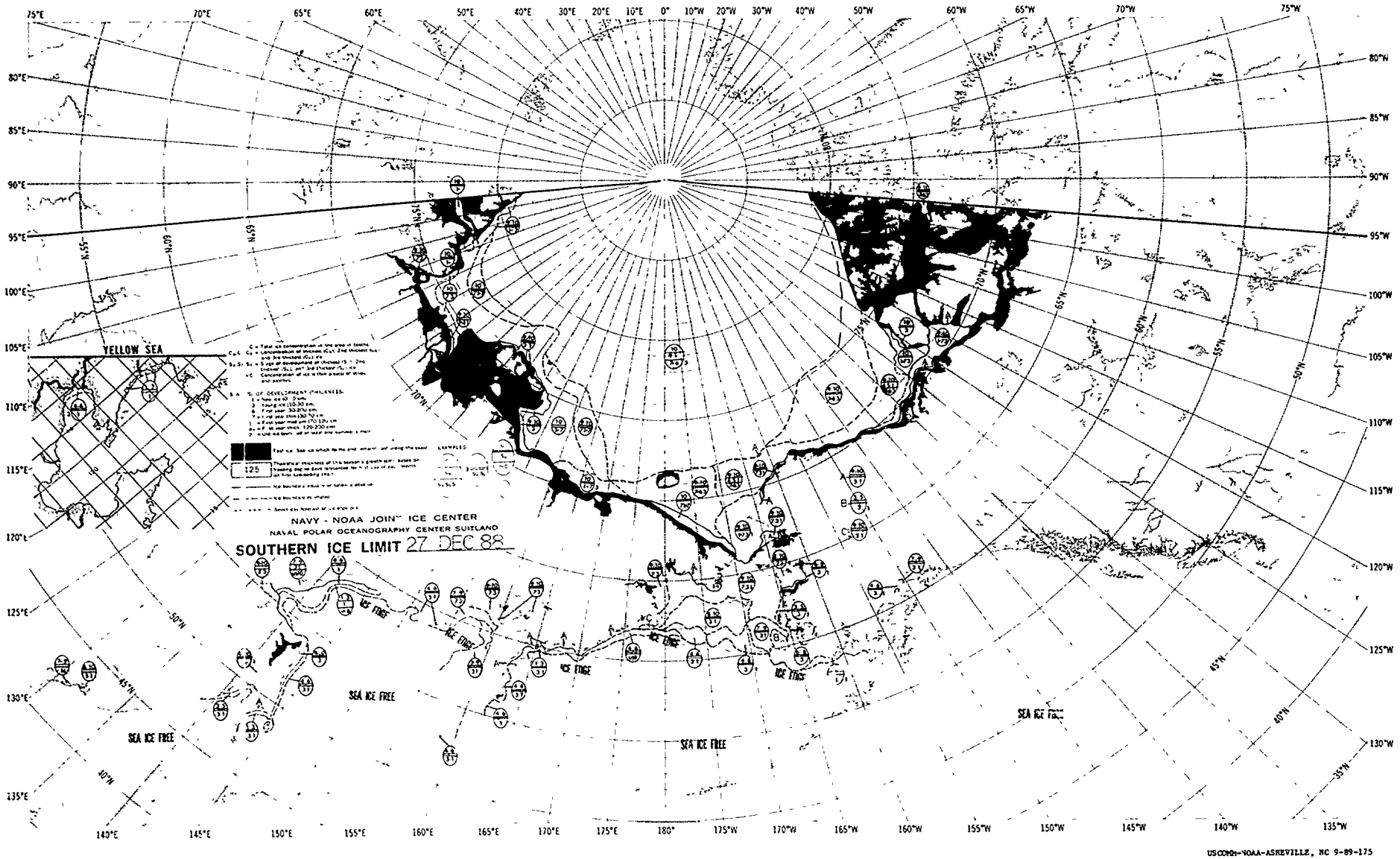
YELLOW SEA
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER SUITLAND
SOUTHERN ICE LIMIT 27 DEC 88
ICE EDGE
SEA ICE FREE
USCOMM-NOAA-ASHEVILLE, NC 9-89-175

TABLE 1. SATELLITE DATA UTILIZED DURING 1988 (ARCTIC)

Time period		Satellite Remote Sensing				
From	To	Sensor Platform	Sensor Type	Spectral Region	Resolution	Coverage
1-88	3-88	NOAA-9	AVHRR			
			HRPT/LAC			
			VIS	0.58-0.68 um	1 km	Regional
			NIR	0.73-1.10 um		
			IR	10.5-11.3 um		
			GAC			
			VIS	0.58-0.68 um	4 km	Global
			IR	10.3-11.3 um		
1-88	12-88	NOAA-10	AVHRR			
			HRPT/LAC			
			VIS	0.58-0.68 um	1 km	Regional
			NIR	0.725-1.10 um		
			IR	10.5-11.5 um		
			GAC			
			VIS	0.58-0.68 um	4 km	Global
			IR	10.5-11.5 um		
9-88	12-88	NOAA-11	AVHRR			
			HRPT/LAC			
			VIS	0.58-0.68 um	1 km	Regional
			NIR	0.725-1.10 um		
			IR	10.5-11.5 um		
			GAC			
			VIS	0.58-0.68 um	4 km	Regional
			IR	10.5-11.5 um		
11-87	12-88	DMSP-F(8)	VIS	0.4-1.1 um	3.7 km	Global
			IR	10.2-12.8 um	4.4 km	
5-88	12-88	DMSP-F(9)	VIS	0.4-1.1 um	3.7 km	Global
			IR	10.2-12.8 um	4.4 km	
1-87	12-88	GEOSAT	Radar Altimeter	N/A	7 km	Regional

Abbreviations and Acronyms

AVHRR - Advanced Very High Resolution Radiometer
cm - Centimeter
GAC - Global Area Coverage
HRPT - High Resolution Picture Transmission
IR - Infrared
km - Kilometer
LAC - Local Area Coverage
NIR - Near Infrared
SMMR - Scanning Multifrequency Microwave Radiometer
VIS - Visible
um - Micrometer