

ANTARCTIC SEA ICE ANALYSIS

1991-1992

ADA 286-729

PREPARED BY
NAVAL POLAR OCEANOGRAPHY CENTER
SUITLAND, MD



95-01063
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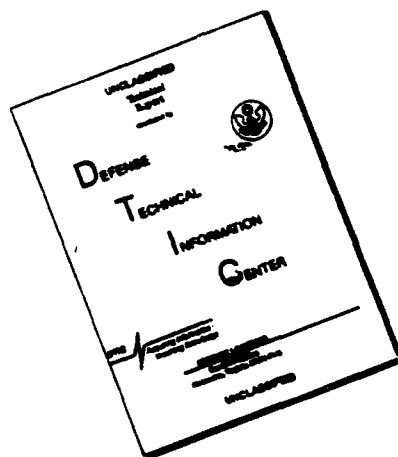
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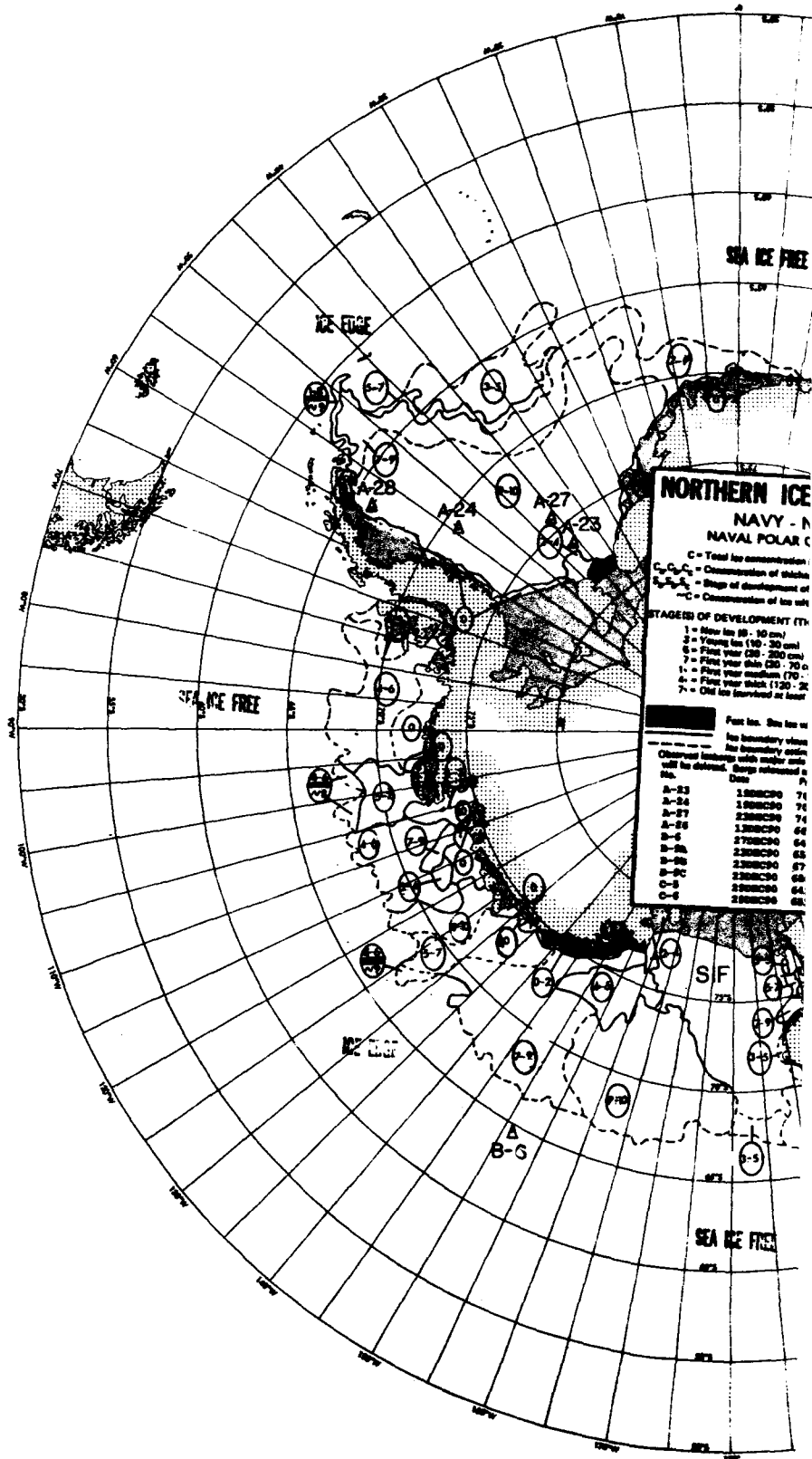
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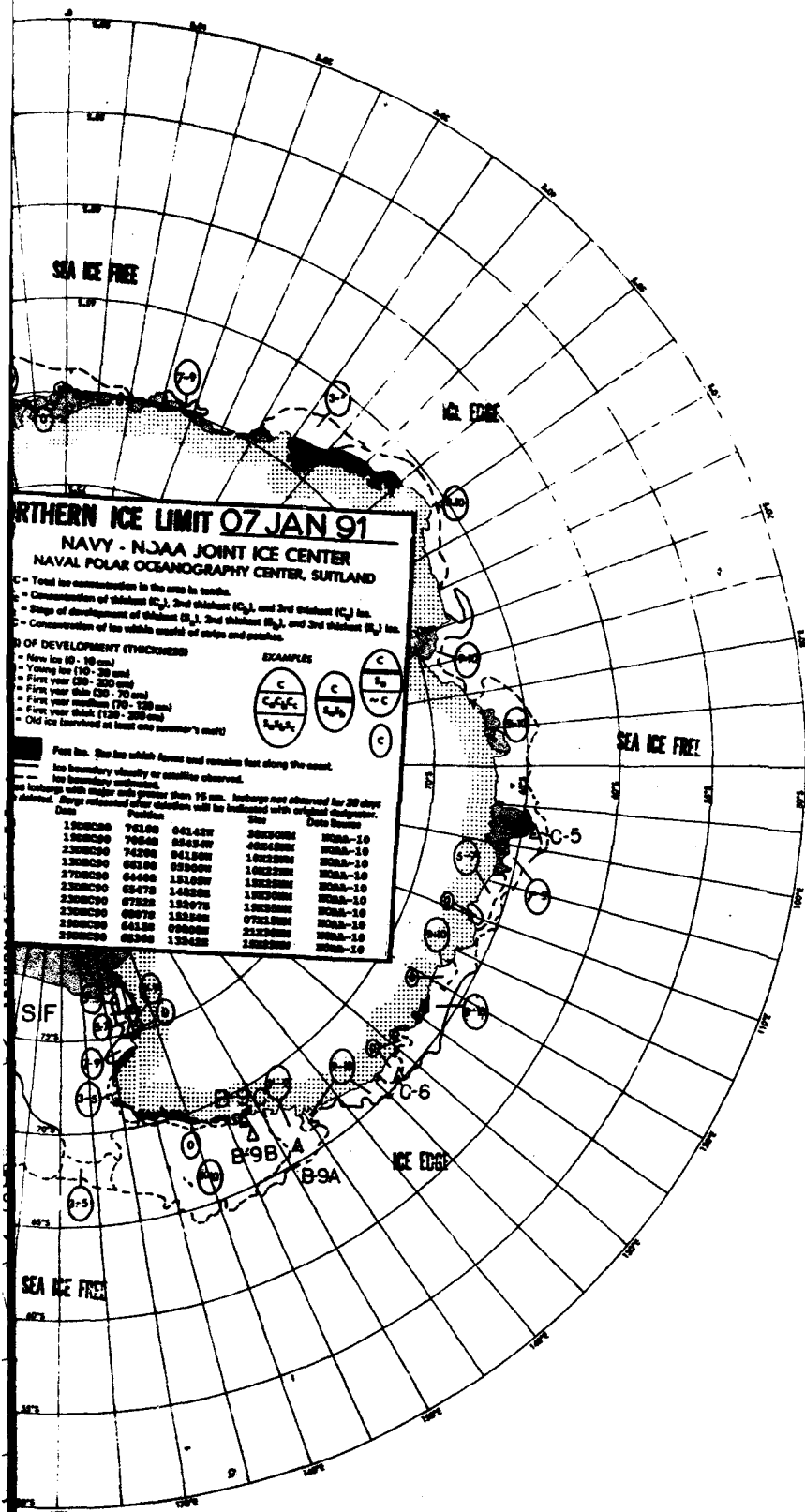
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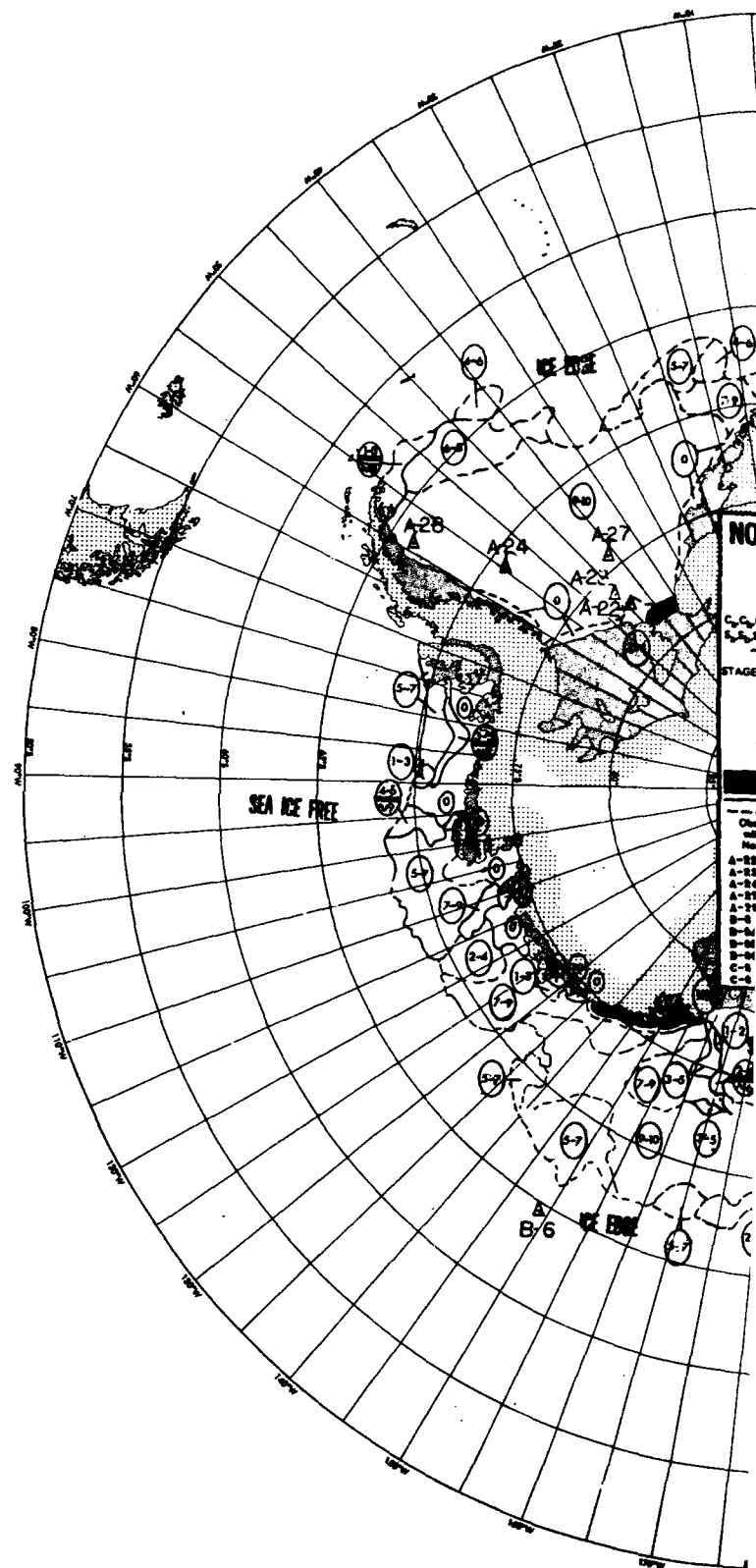
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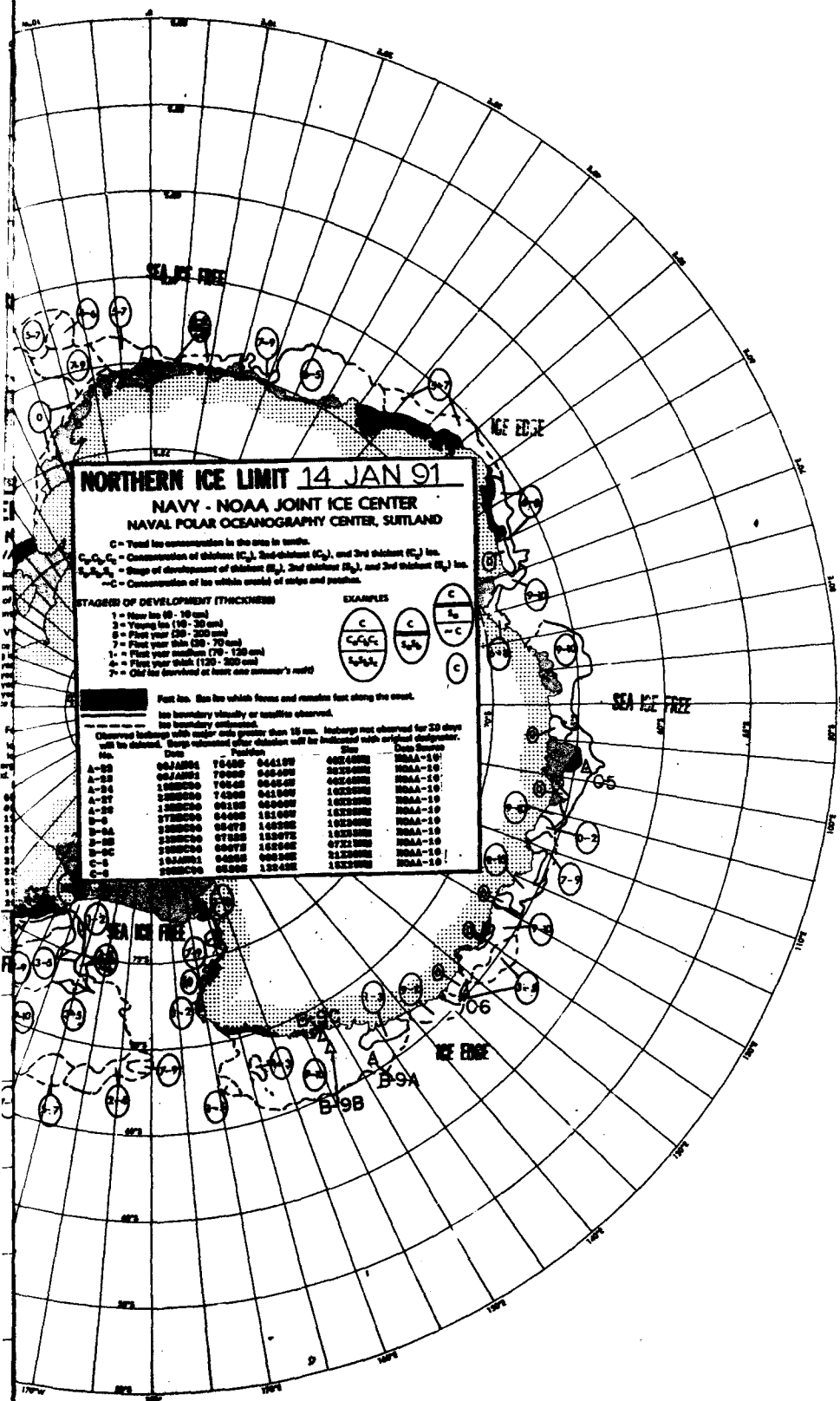


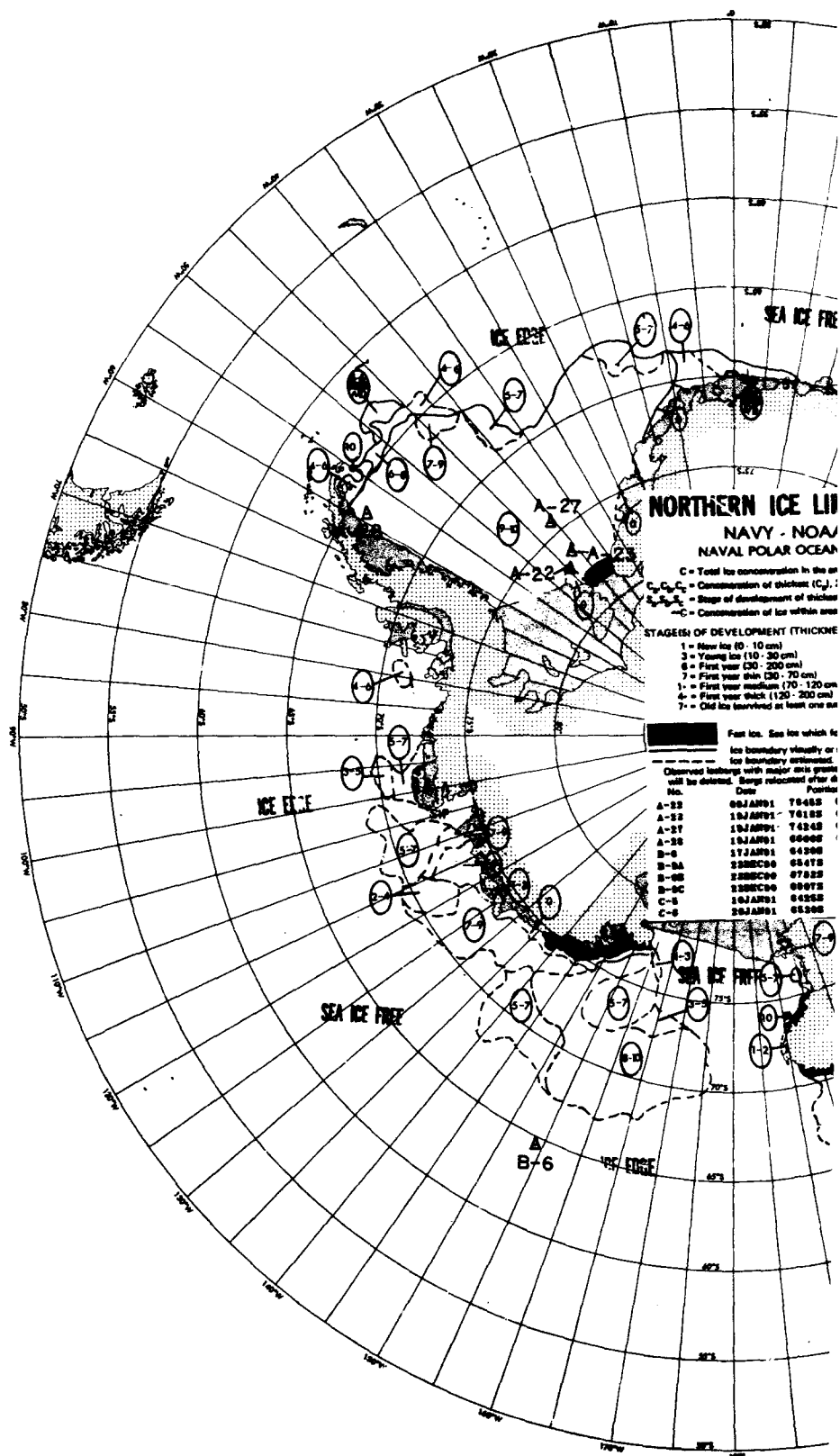
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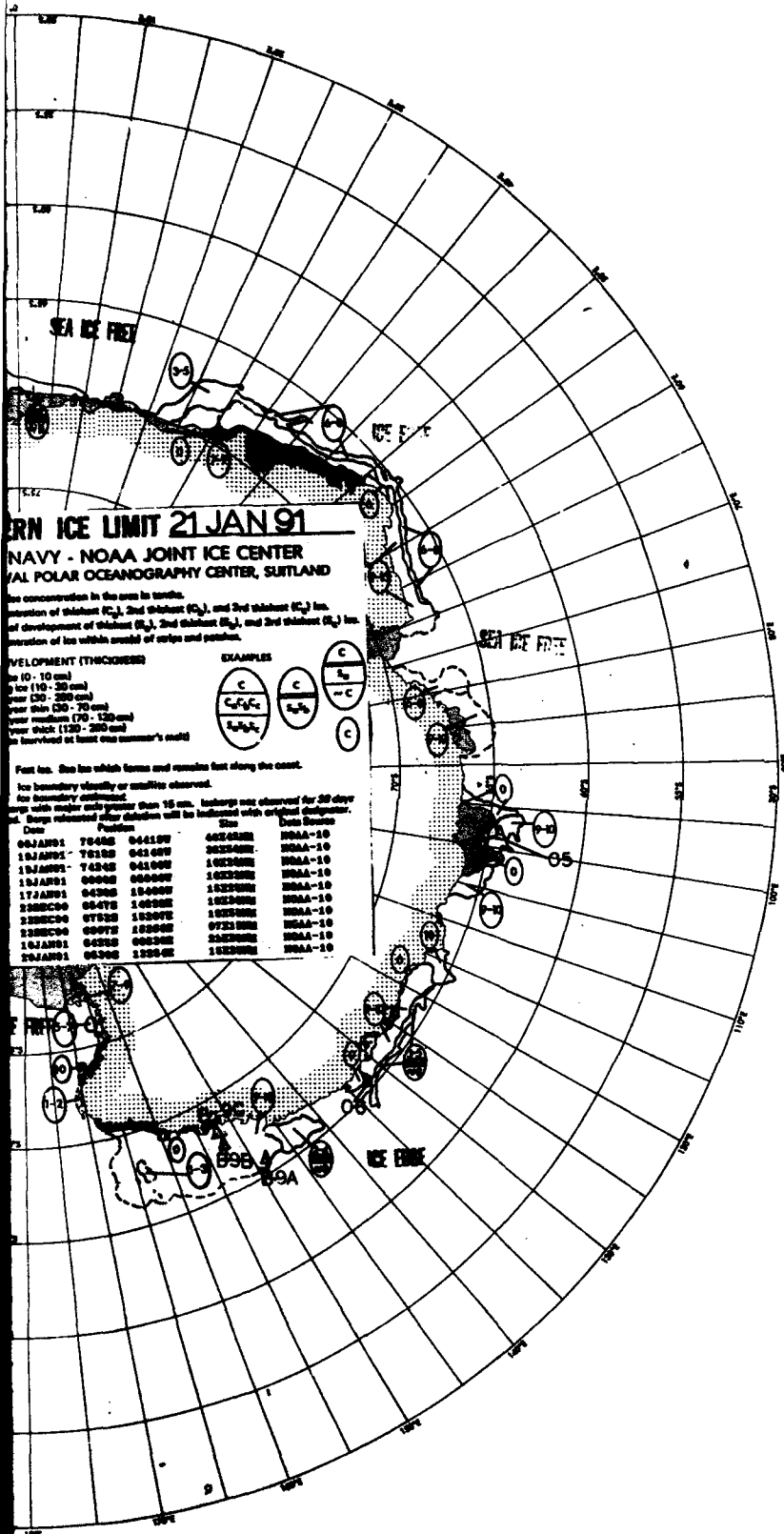


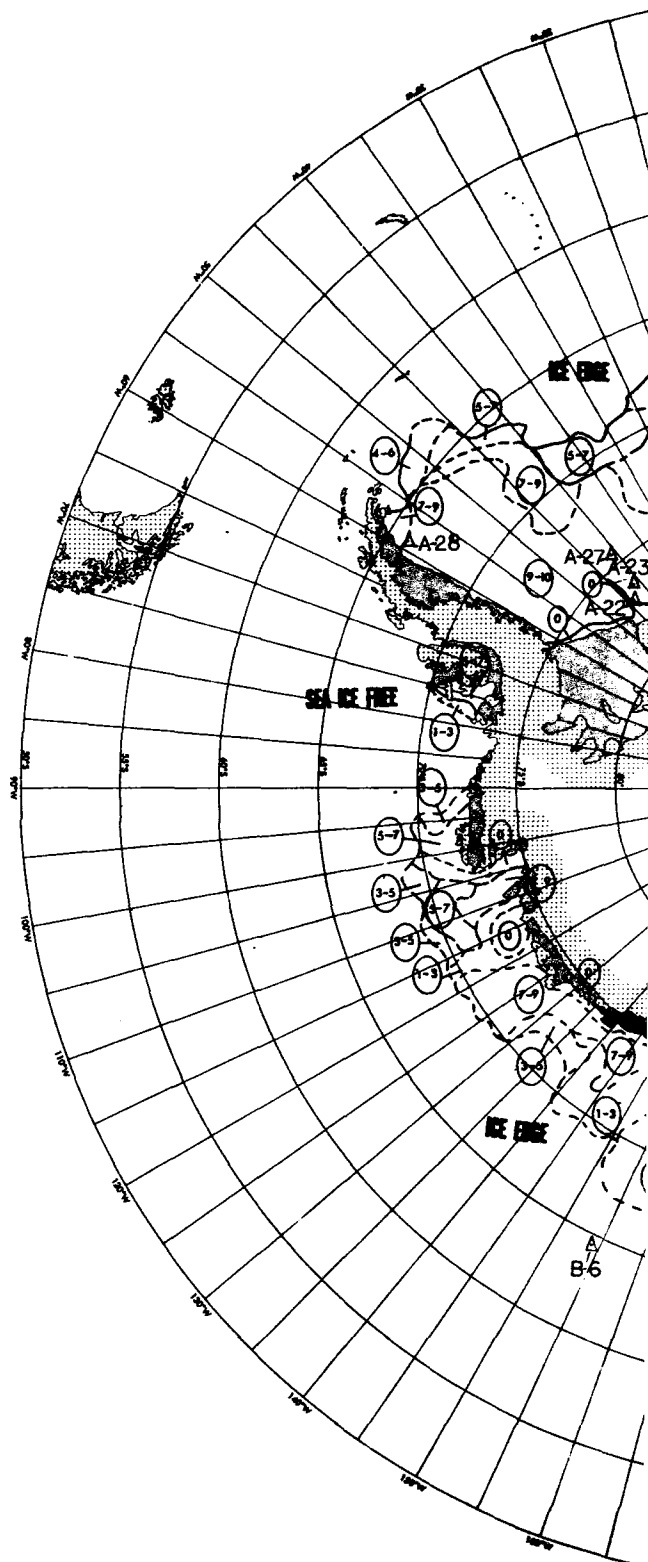


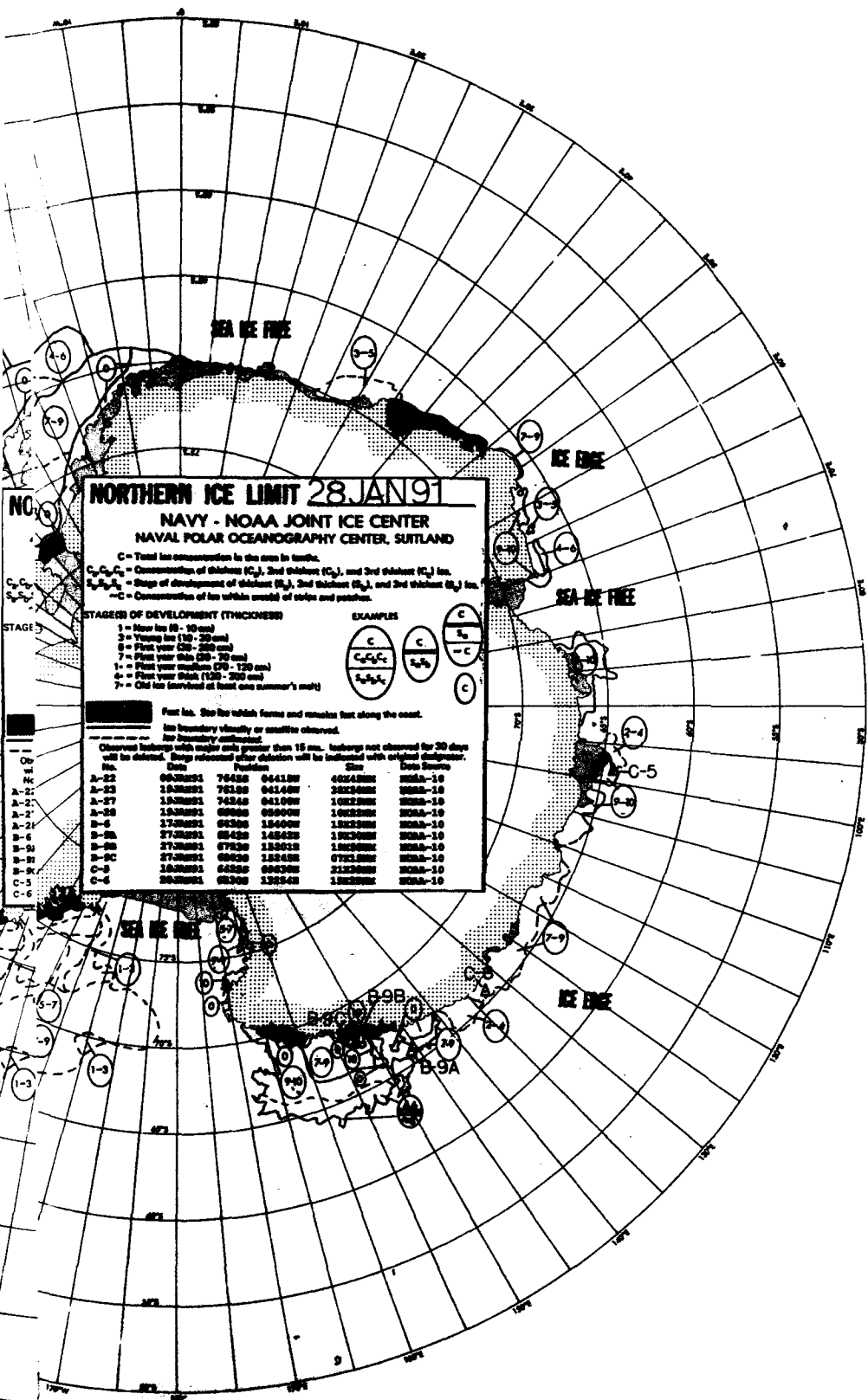


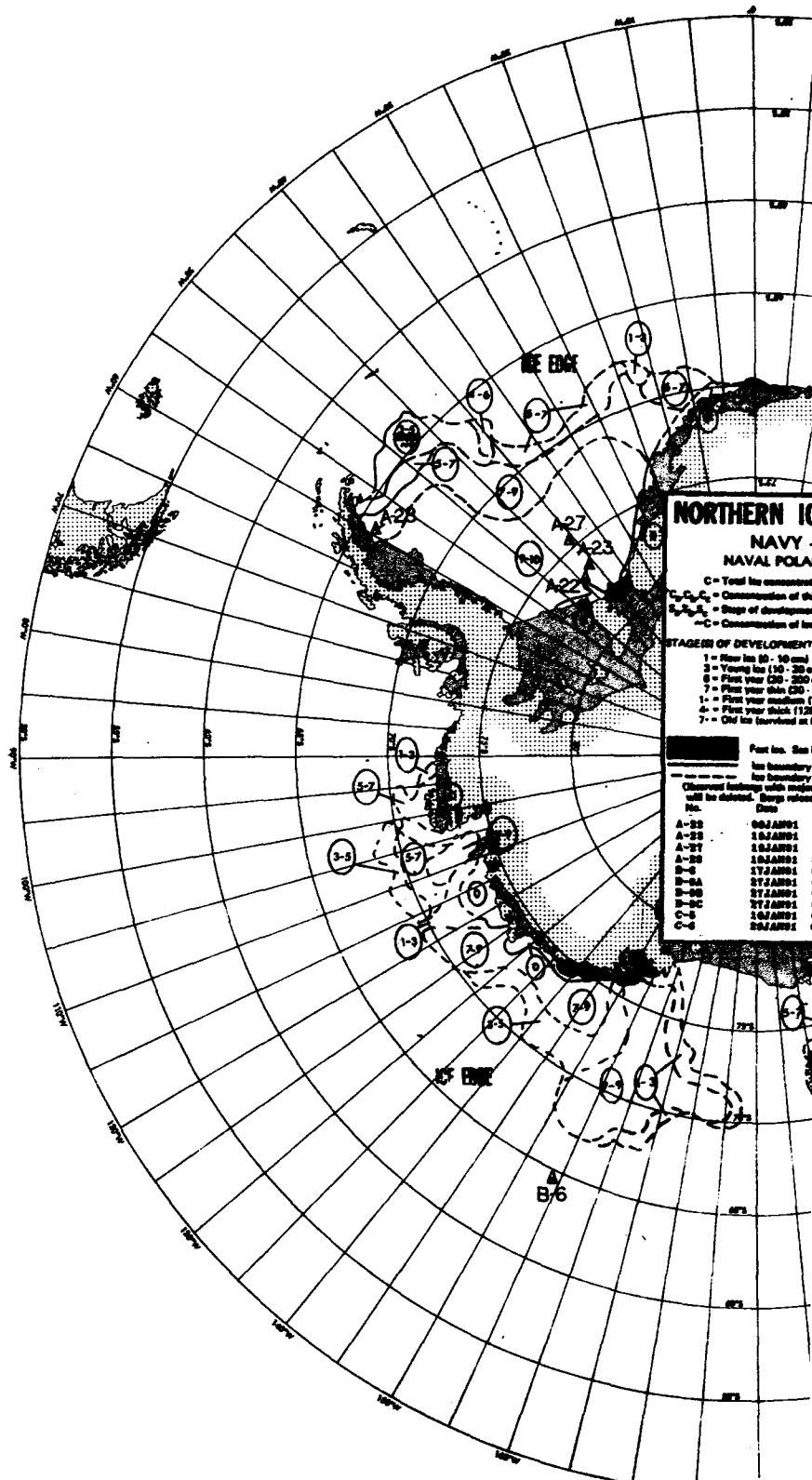


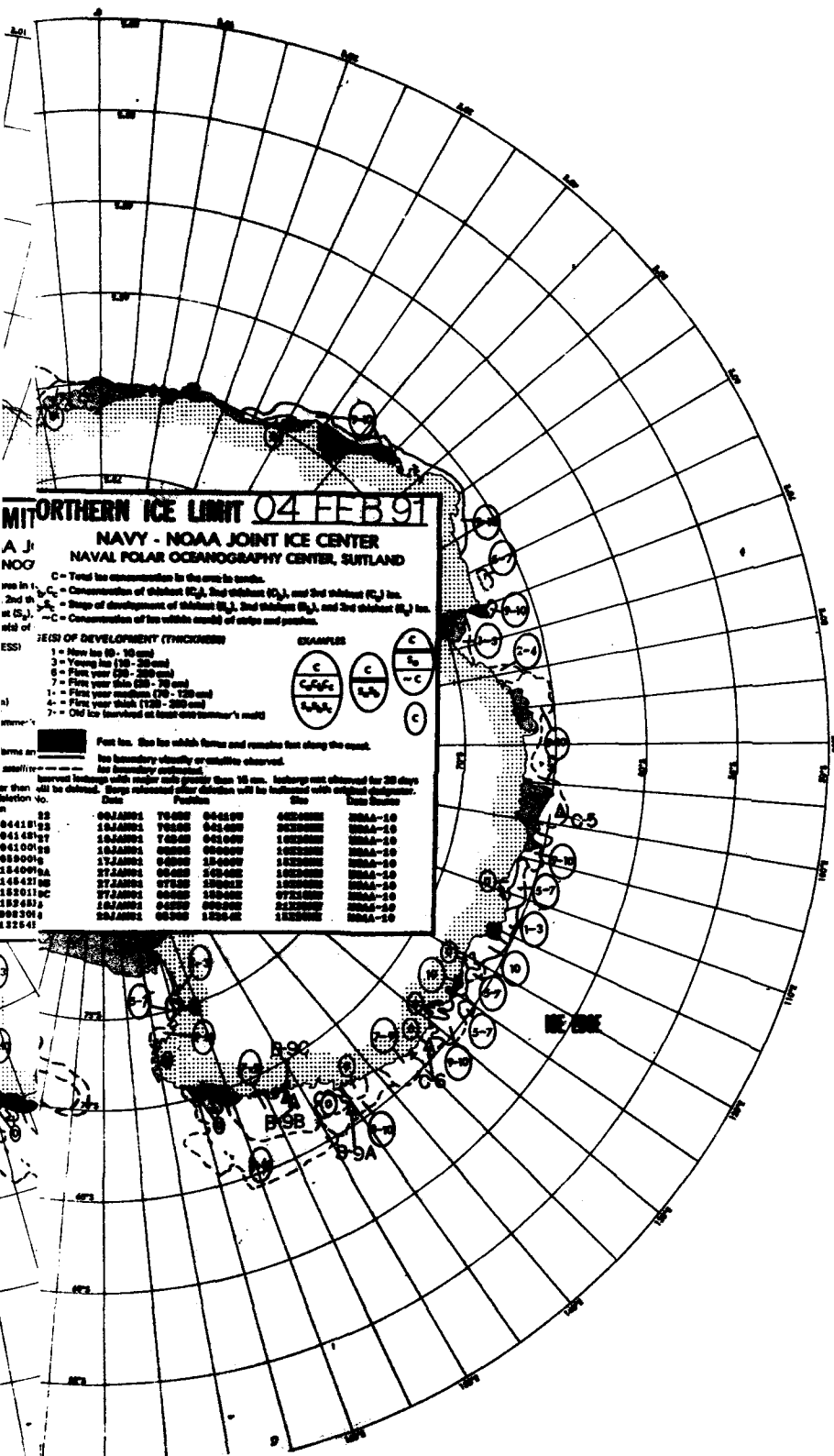


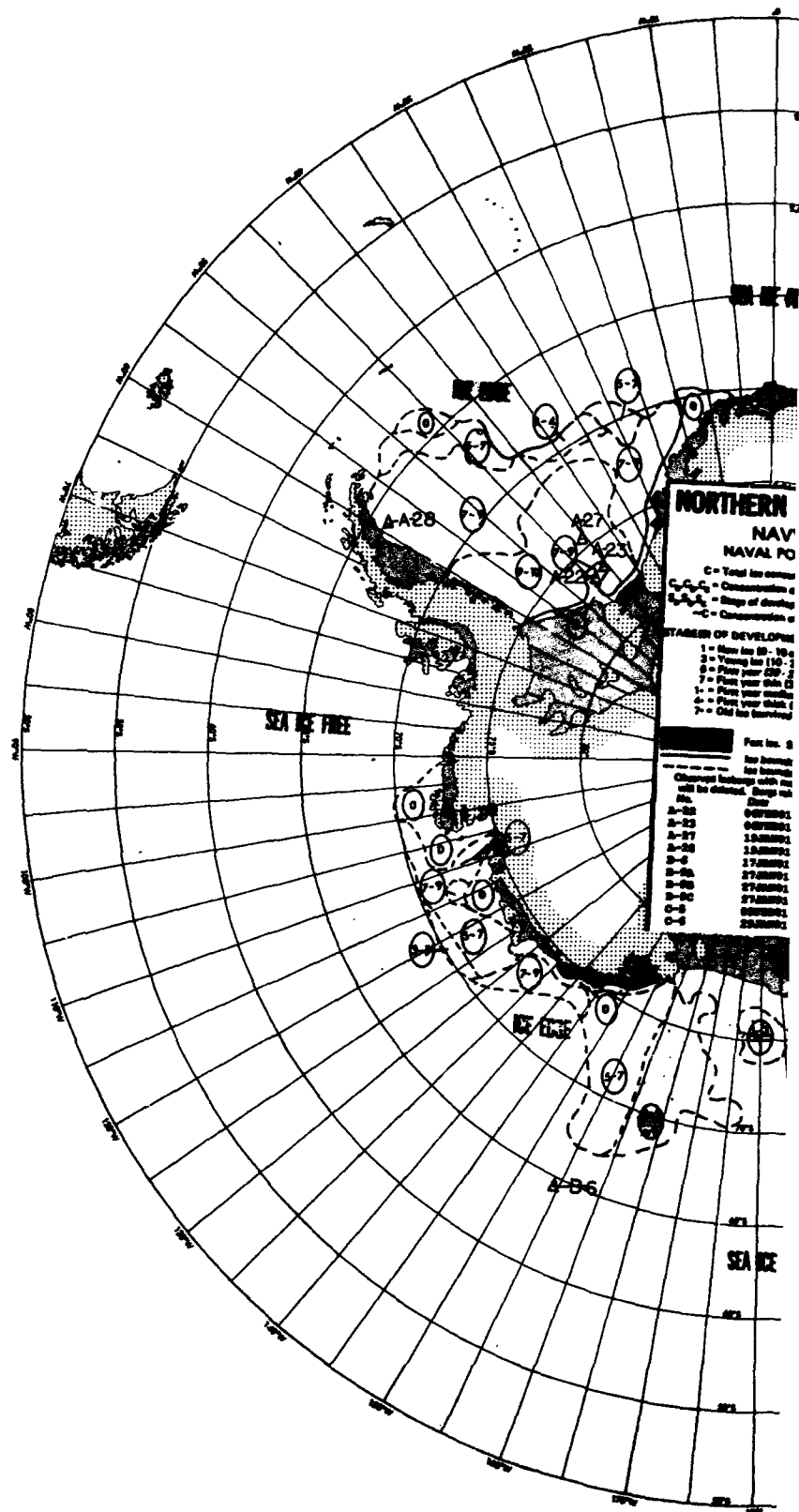


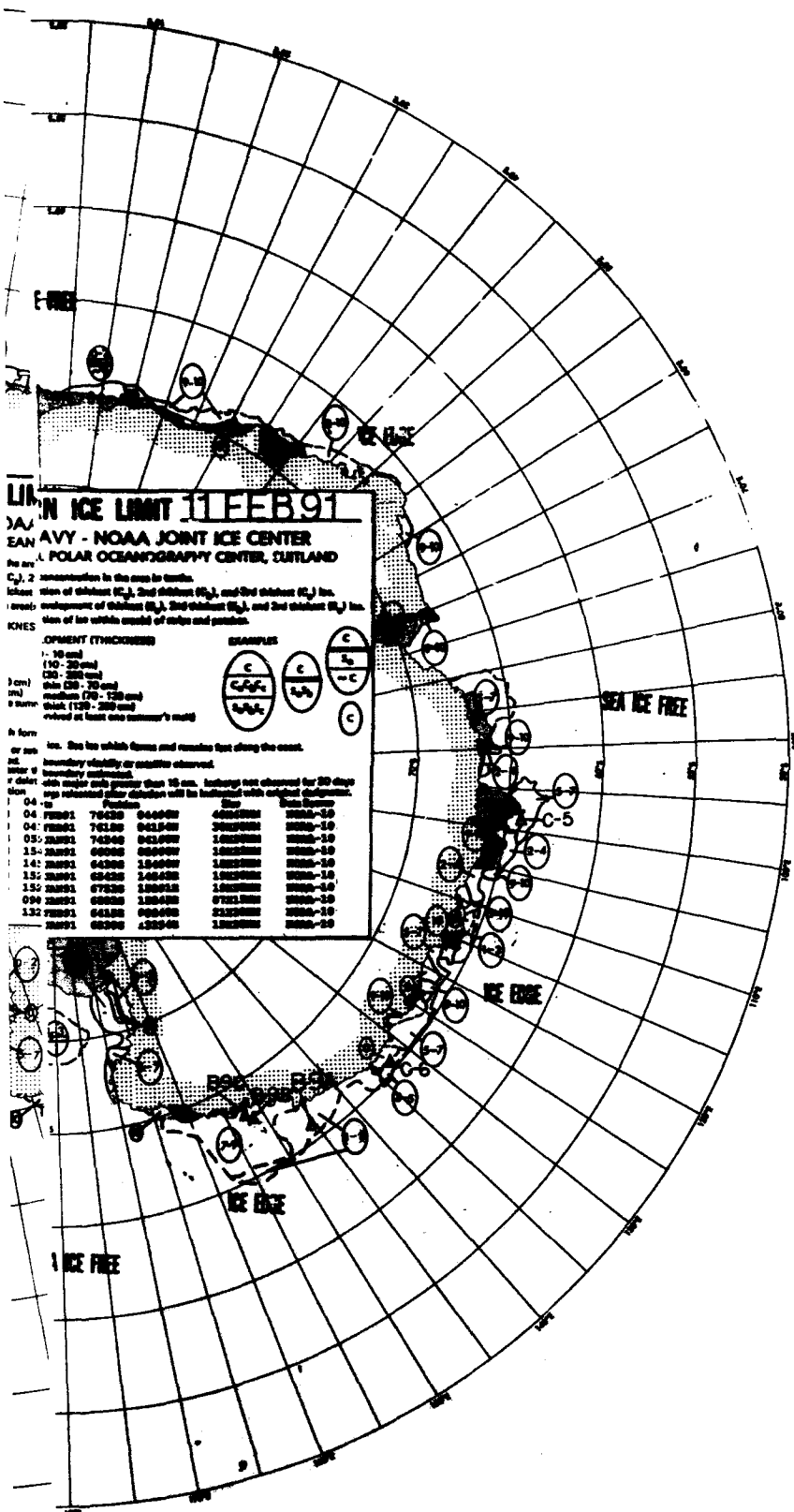


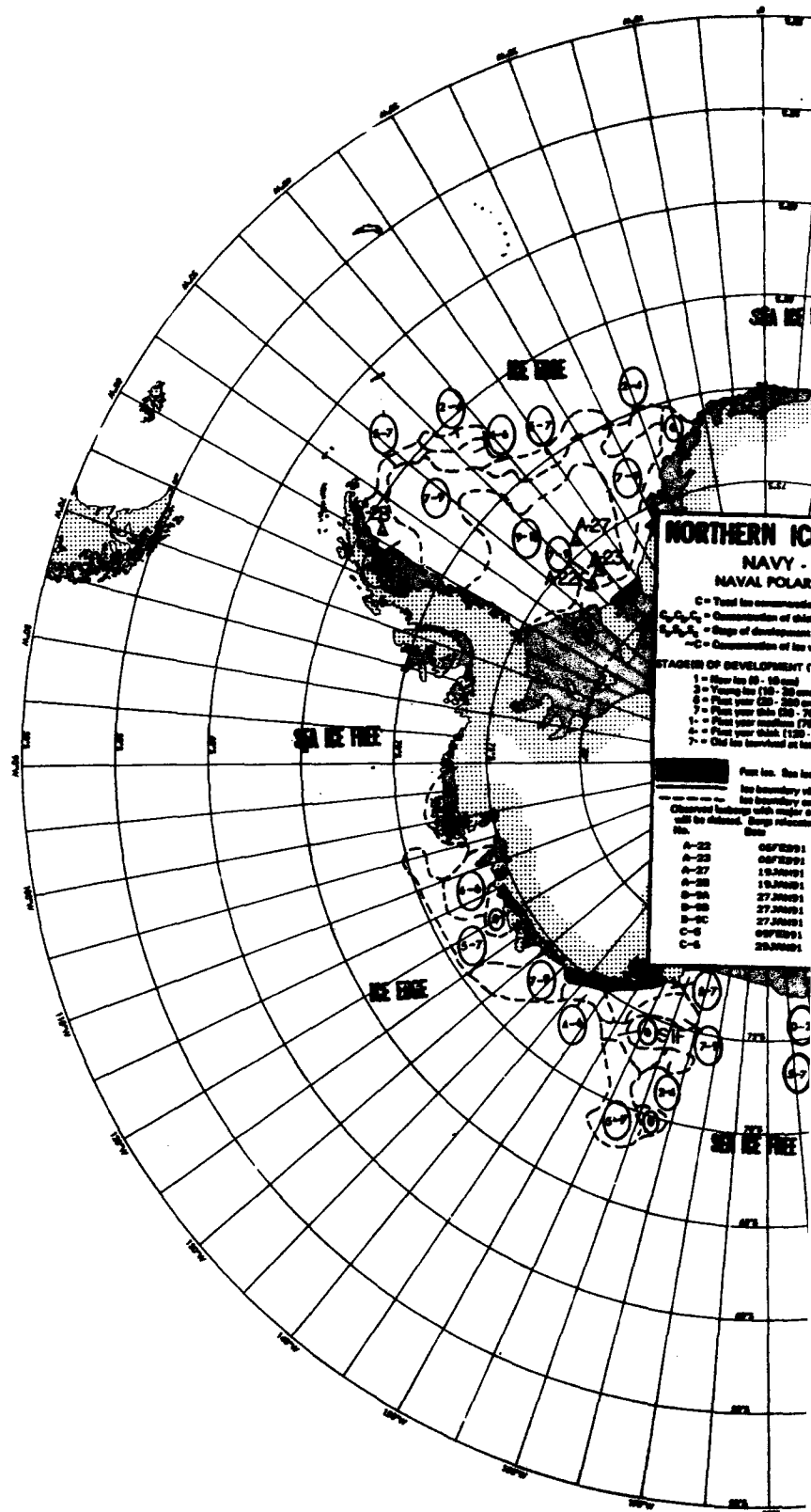


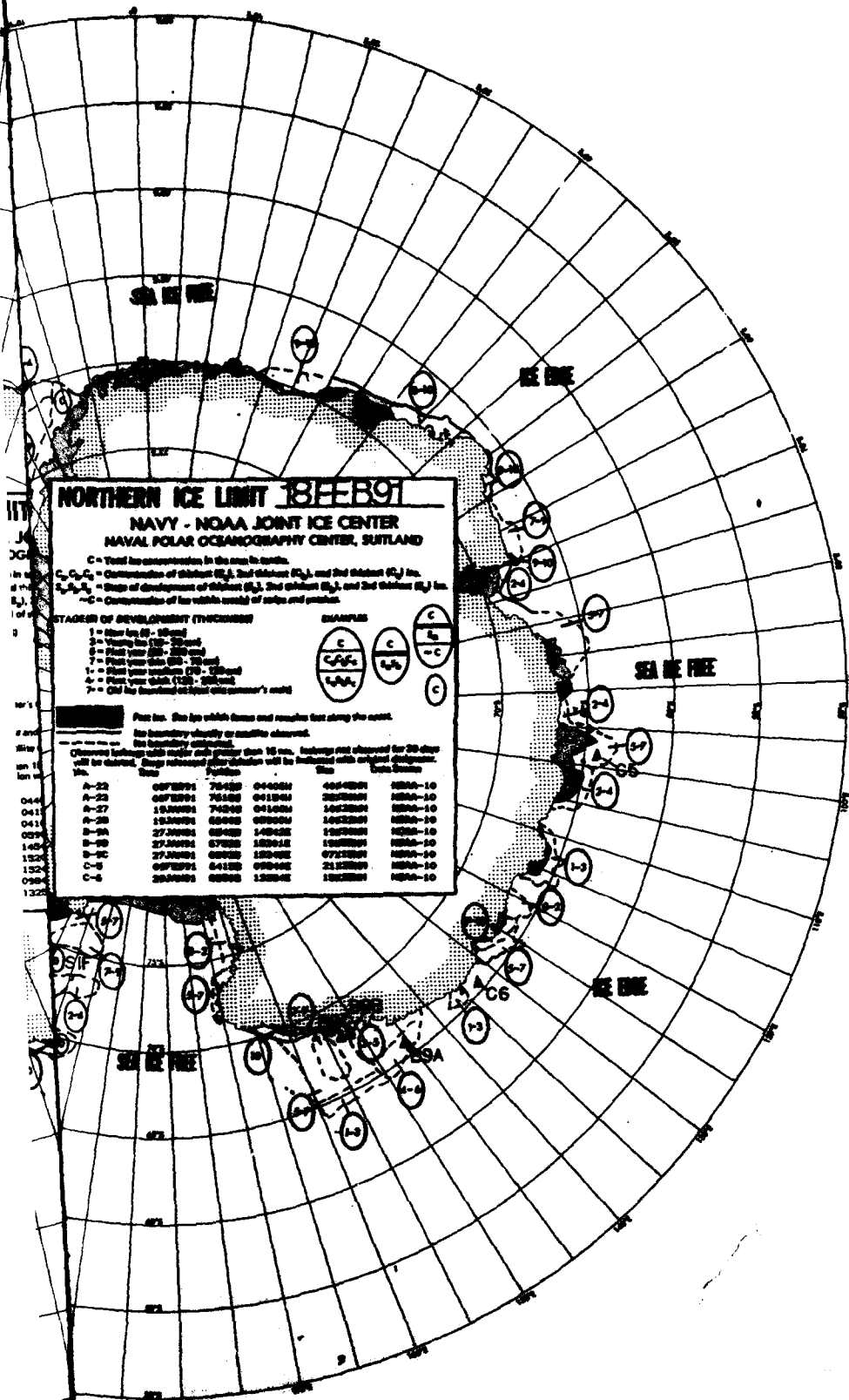












NORTHERN ICE LIMIT 18 FEB 71

NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUTLAND

C = Total ice concentration in the area in tenths.
 C₁, C₂, C₃ = Concentration of different ice types, and different ice types.
 S₁, S₂, S₃ = Stage of development of different ice types, and different ice types.
 S₁, S₂ = Concentration of ice within limits of area and position.

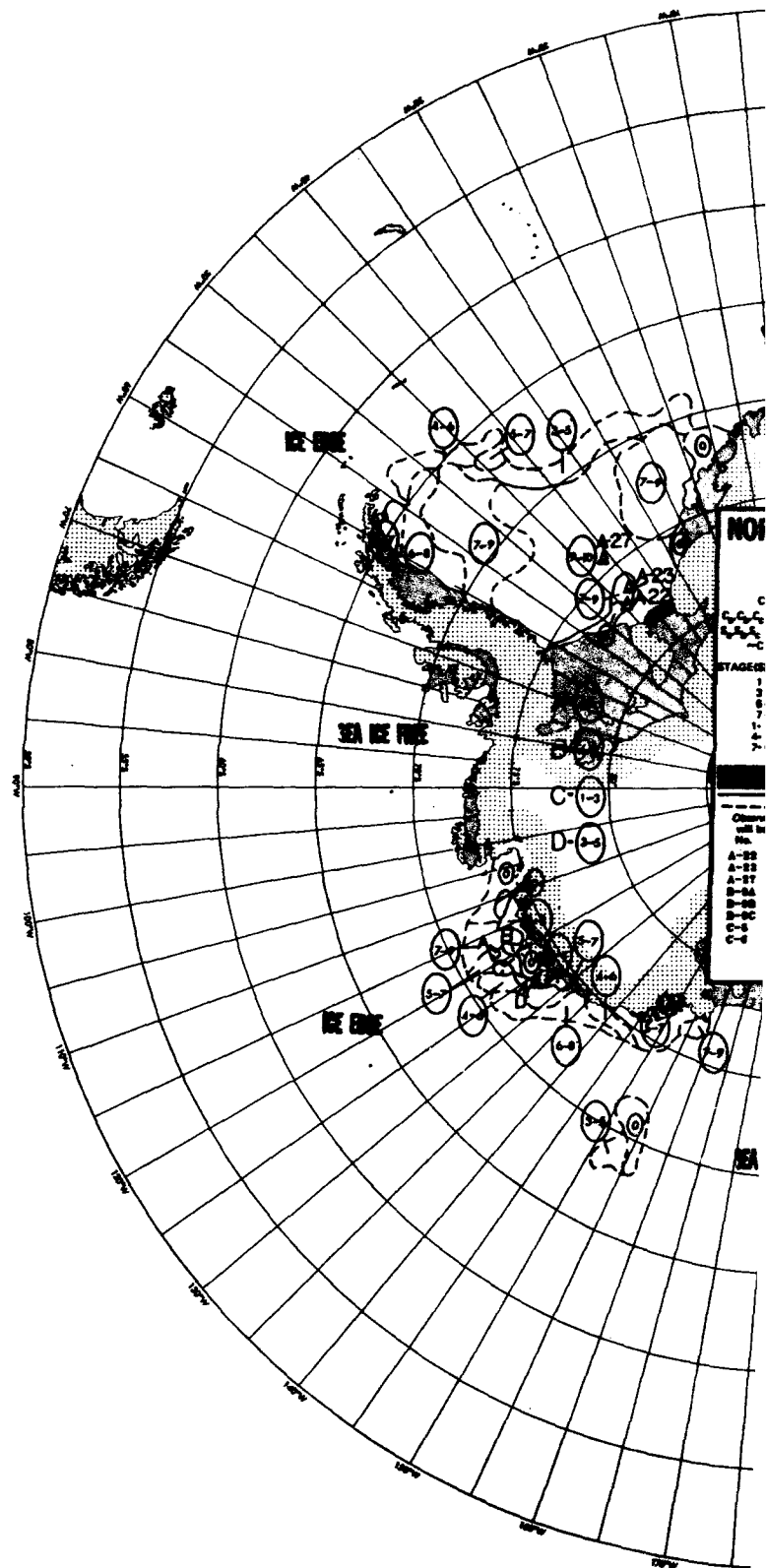
- STAGES OF DEVELOPMENT (THICKNESS)**
- 1 = New ice (0 - 10 cm)
 - 2 = Young ice (10 - 20 cm)
 - 3 = First year ice (20 - 30 cm)
 - 4 = First year ice (30 - 40 cm)
 - 5 = First year ice (40 - 50 cm)
 - 6 = First year ice (50 - 60 cm)
 - 7 = Old ice (60 cm or more)

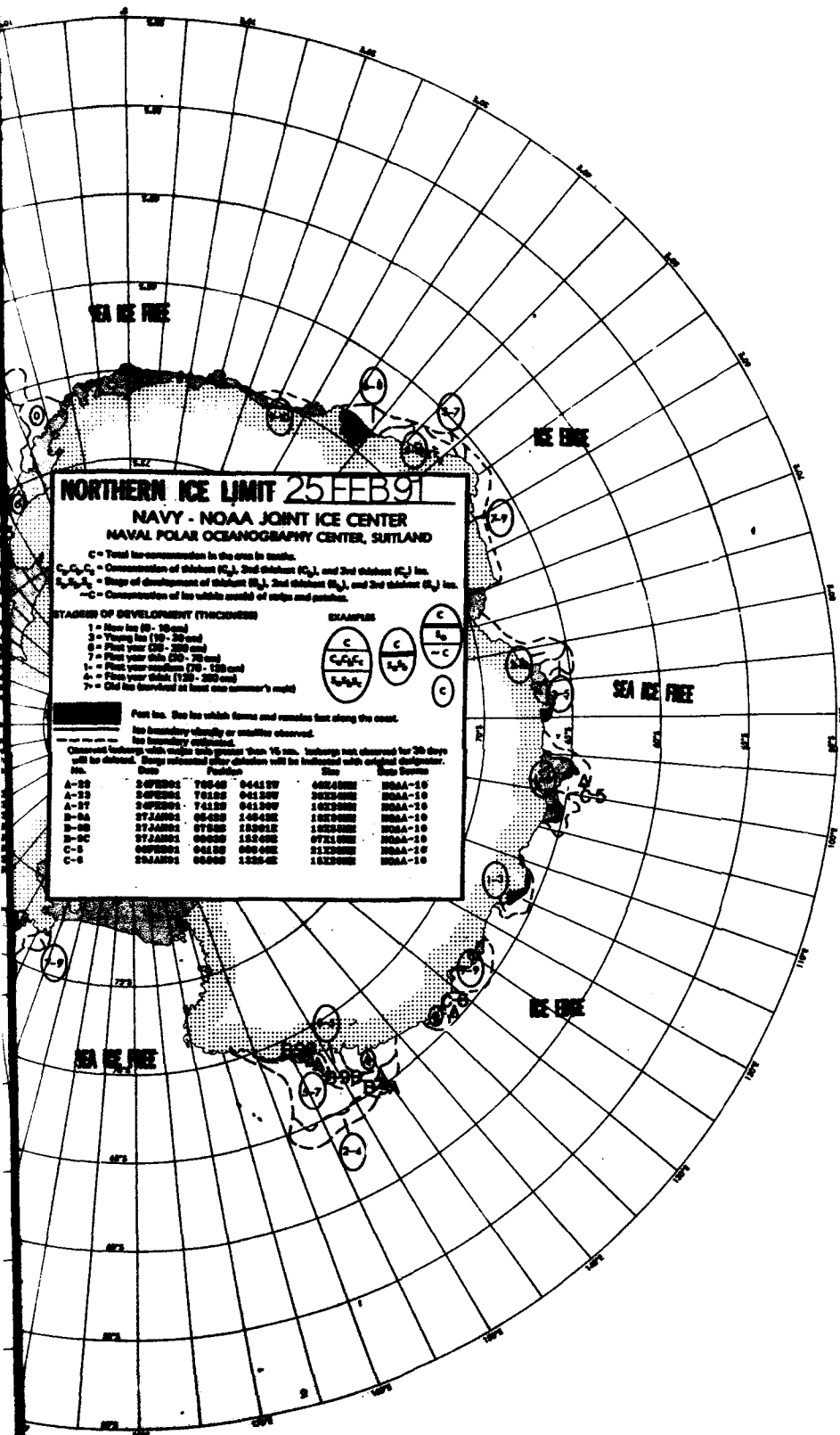


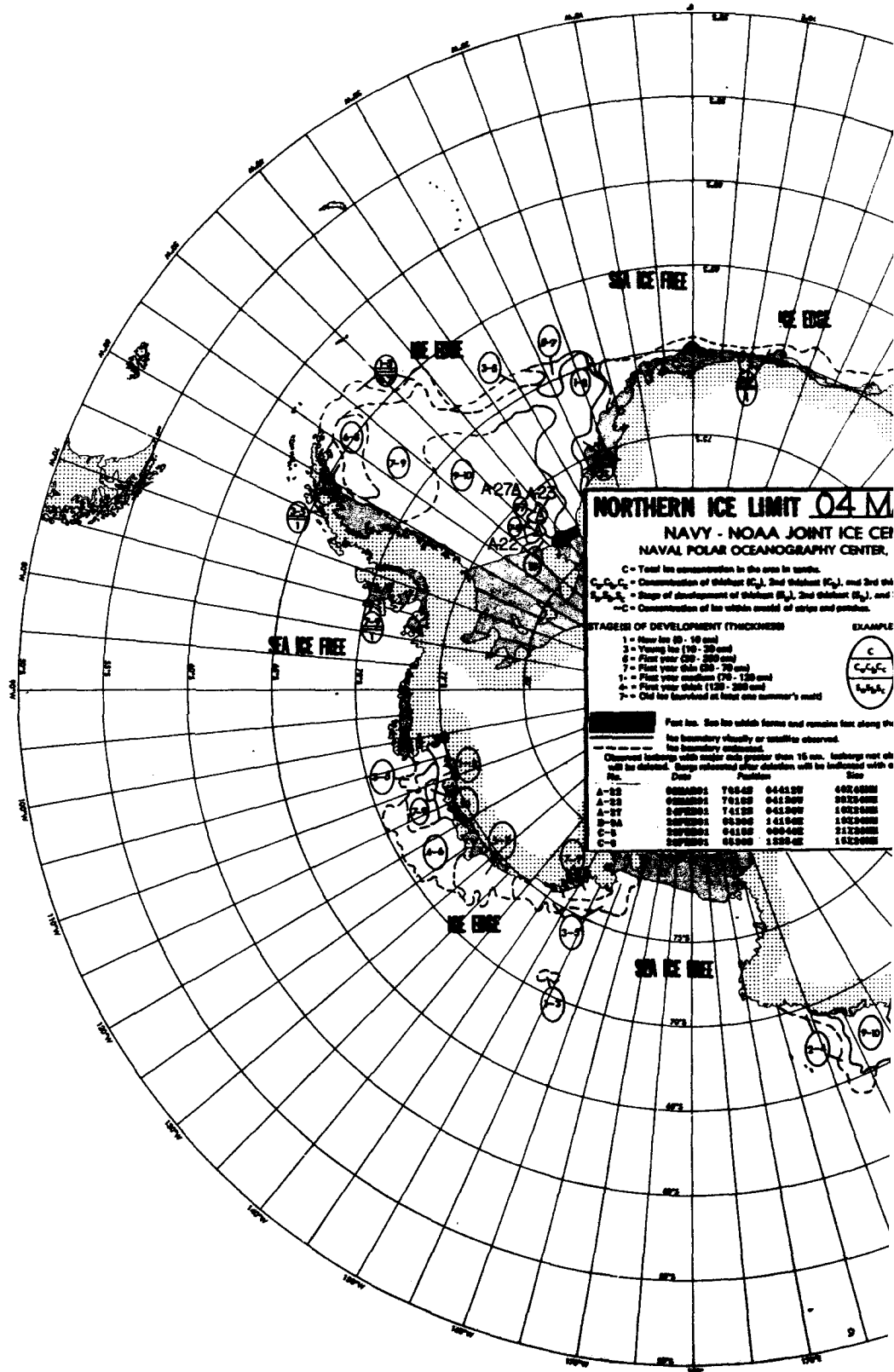
For ice: the age which forms and remains last along the coast.
 For boundary: the age which forms and remains last along the coast.

Observations taken with radar and other instruments. Iceberg not observed for 20 days.
 will be shown. Stage indicated after observation will be indicated with original diagram.

No.	Date	Latitude	Longitude	Ice Type	Ice Stage
A-22	08 FEB 71	76.40N	044.00W	100% ICE	SEA-10
A-23	08 FEB 71	76.10N	041.00W	100% ICE	SEA-10
A-27	10 FEB 71	74.00N	041.00W	100% ICE	SEA-10
A-28	10 FEB 71	68.00N	040.00W	100% ICE	SEA-10
B-24	27 FEB 71	68.00N	140.00E	100% ICE	SEA-10
B-25	27 FEB 71	67.00N	130.00E	100% ICE	SEA-10
B-26	27 FEB 71	66.00N	120.00E	100% ICE	SEA-10
C-6	08 FEB 71	64.10N	090.00E	100% ICE	SEA-10
C-6	20 FEB 71	68.00N	120.00E	100% ICE	SEA-10







9 IN ICE LIMIT 04 MAR 91

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Interpretation in the area is based on:
plan of thickness (C_1), 2nd thickness (C_2), and 3rd thickness (C_3) line.
development of thickness (C_1), 2nd thickness (C_2), and 3rd thickness (C_3) line.
plan of line within circle of circle and position.

CONCENTRATION (THICKNESS)

0 - 10 cm
(10 - 30 cm)
(30 - 50 cm)
thin (50 - 70 cm)
medium (70 - 100 cm)
thick (100 - 200 cm)
broken at least one summer's melt

EXAMPLES

$\frac{C}{C_1 C_2 C_3}$ $\frac{C}{C_1 C_2}$ $\frac{C}{C_1}$
 $\frac{C}{C_1 C_2}$ $\frac{C}{C_1}$ $\frac{C}{C_1}$

1 line. See line which forms and remains fast along the coast.
boundary visually or satellite observed.

30 days estimated.
with water and greater than 10 cm. Icebergs not observed for 30 days
large estimated after duration will be indicated with original diagram.

Source	Position	Size	Date
10	68001 78040 040100	0024000	1980-10
10	68001 78100 041000	0025000	1980-10
10	72001 74100 041000	1002000	1980-10
10	72001 74100 041000	1002000	1980-10
10	72001 68300 141000	1002000	1980-10
10	72001 64100 040400	0112000	1980-10
10	72001 68300 120000	1002000	1980-10

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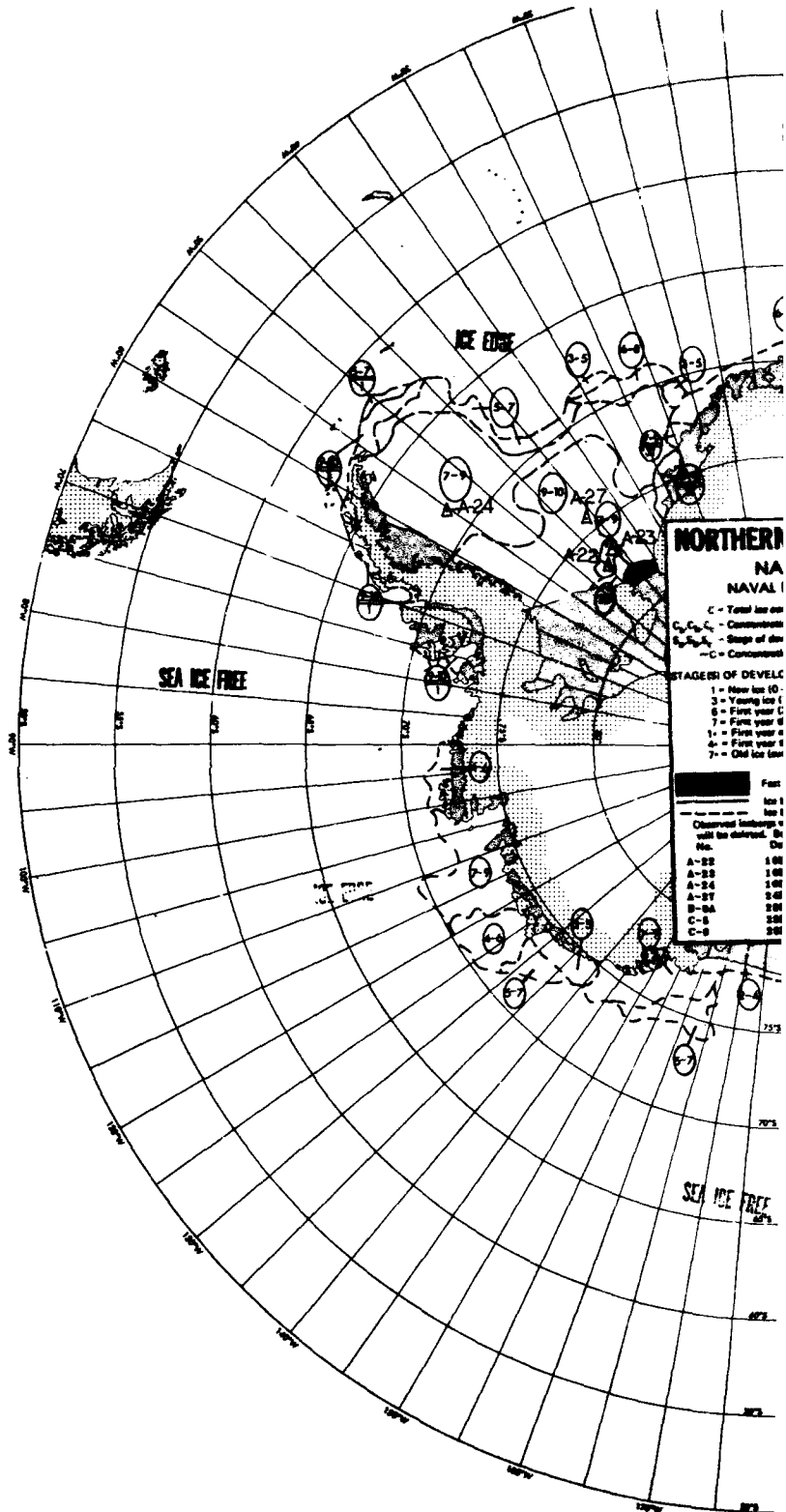
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SEA ICE FREE

NORTHERN ICE LIMIT 11 MAR 91

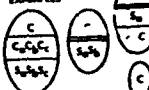
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C = Total ice concentration in the area in tenths.
C₁, C₂, C₃ = Comparison of thickest (C₁), 2nd thickest (C₂), and 3rd thickest (C₃) ice.
C₁, C₂, C₃ = Stage of development of thickest (C₁), 2nd thickest (C₂), and 3rd thickest (C₃).
C = Comparison of ice within circle of circle and patches.

STAGES OF DEVELOPMENT (THICKNESS)

- 1 = New ice (0 - 10 cm)
- 2 = Young ice (10 - 30 cm)
- 3 = First year (30 - 200 cm)
- 4 = First year (200 - 300 cm)
- 5 = First year (300 - 400 cm)
- 6 = First year (400 - 500 cm)
- 7 = Old ice (500 - 900 cm)
- 8 = Old ice (900 - 1200 cm)
- 9 = Old ice (1200 - 3000 cm)

EXAMPLES



For ice. See ice which reports and remains fast along the coast.

Ice boundary clearly or partially observed.

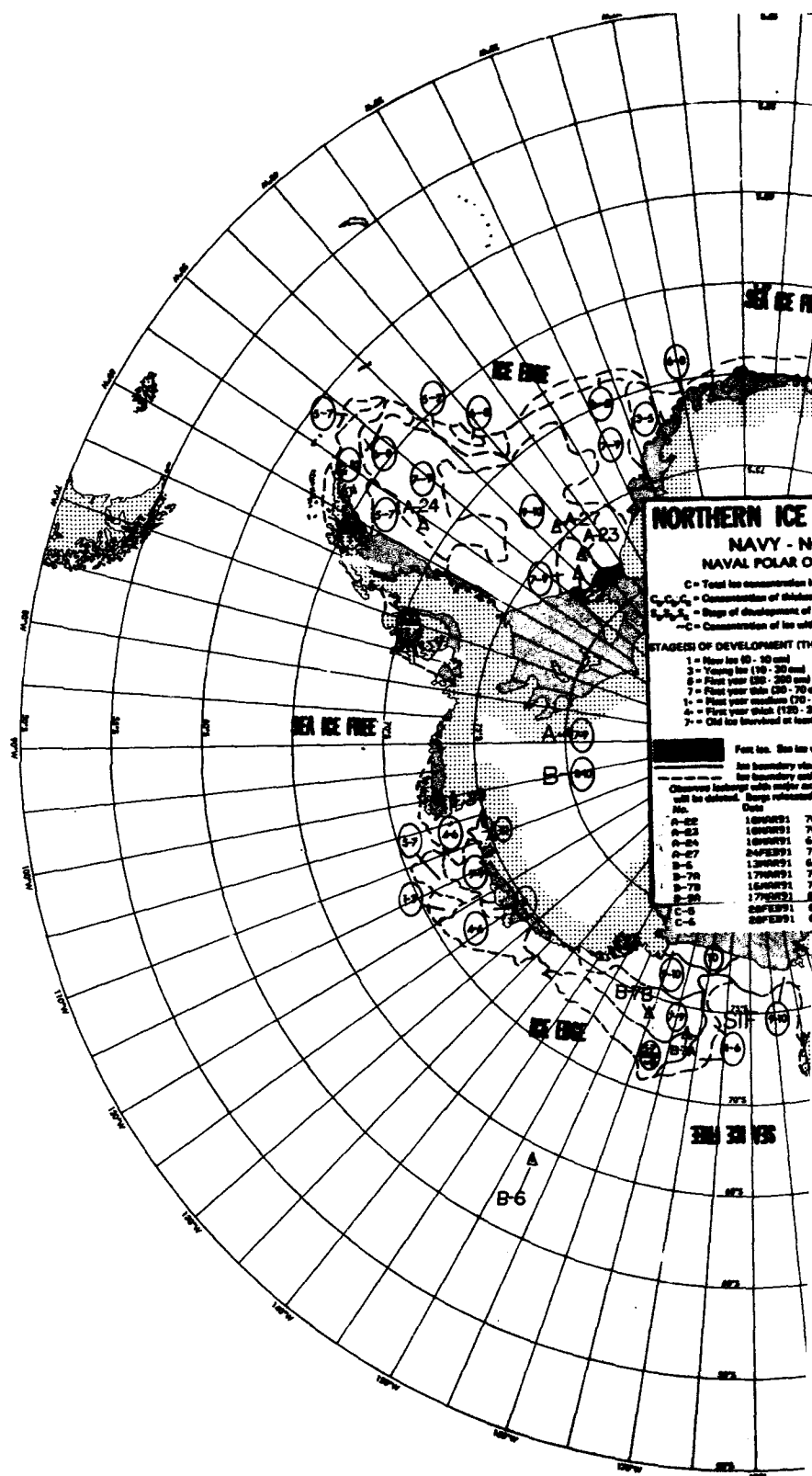
Chopped ice with angle less than 15 deg. Icebergs not observed for 30 days will be deleted. Surge released after deletion will be indicated with original designation.

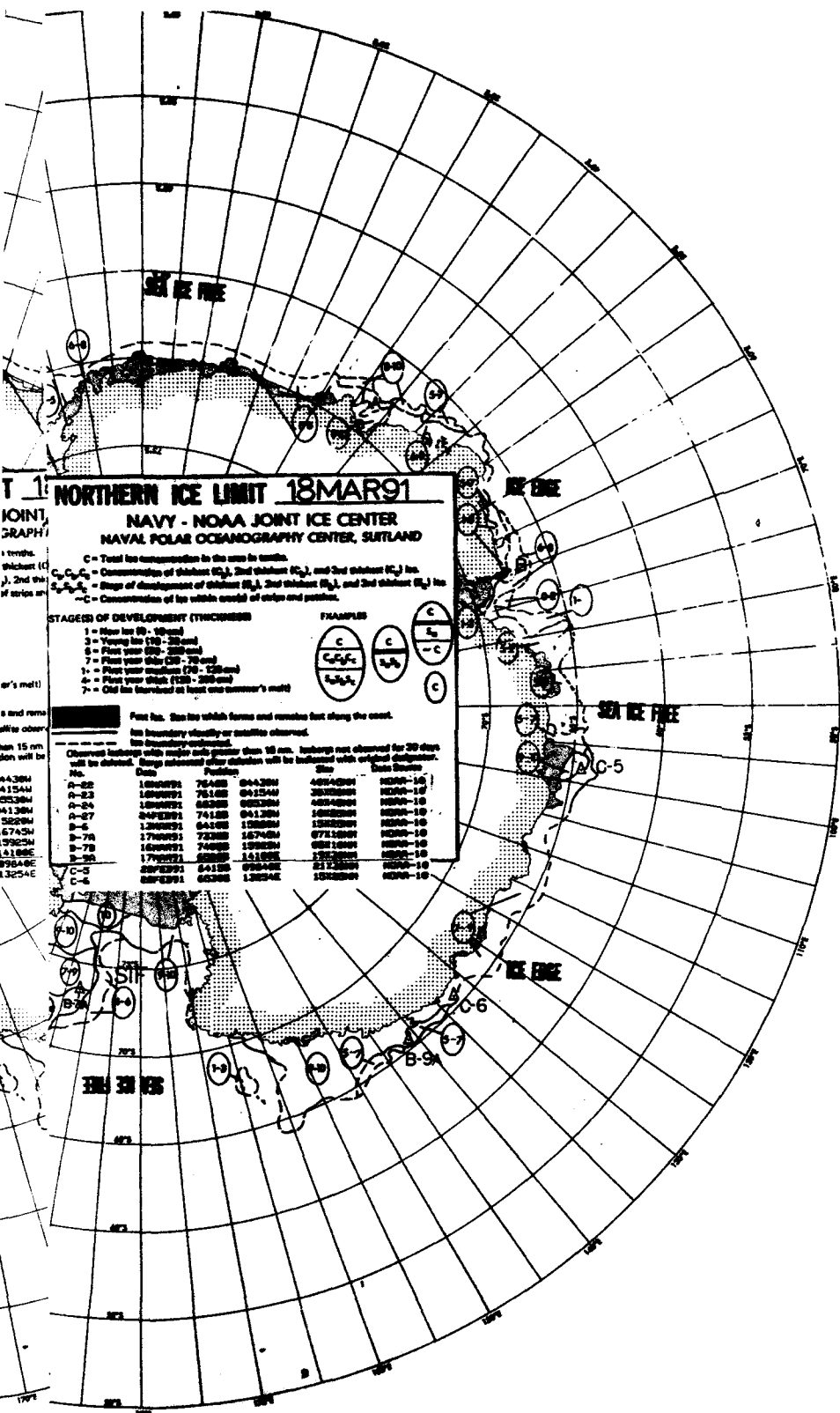
No.	Position	Size	Date	Source
A-22	100400N 76400W	402400N	NOAA-10	
A-22	100400N 76400W	402400N	NOAA-10	
A-24	100400N 76400W	402400N	NOAA-10	
A-27	100400N 76400W	402400N	NOAA-10	
B-24	100400N 76400W	402400N	NOAA-10	
C-2	100400N 76400W	402400N	NOAA-10	
C-2	100400N 76400W	402400N	NOAA-10	

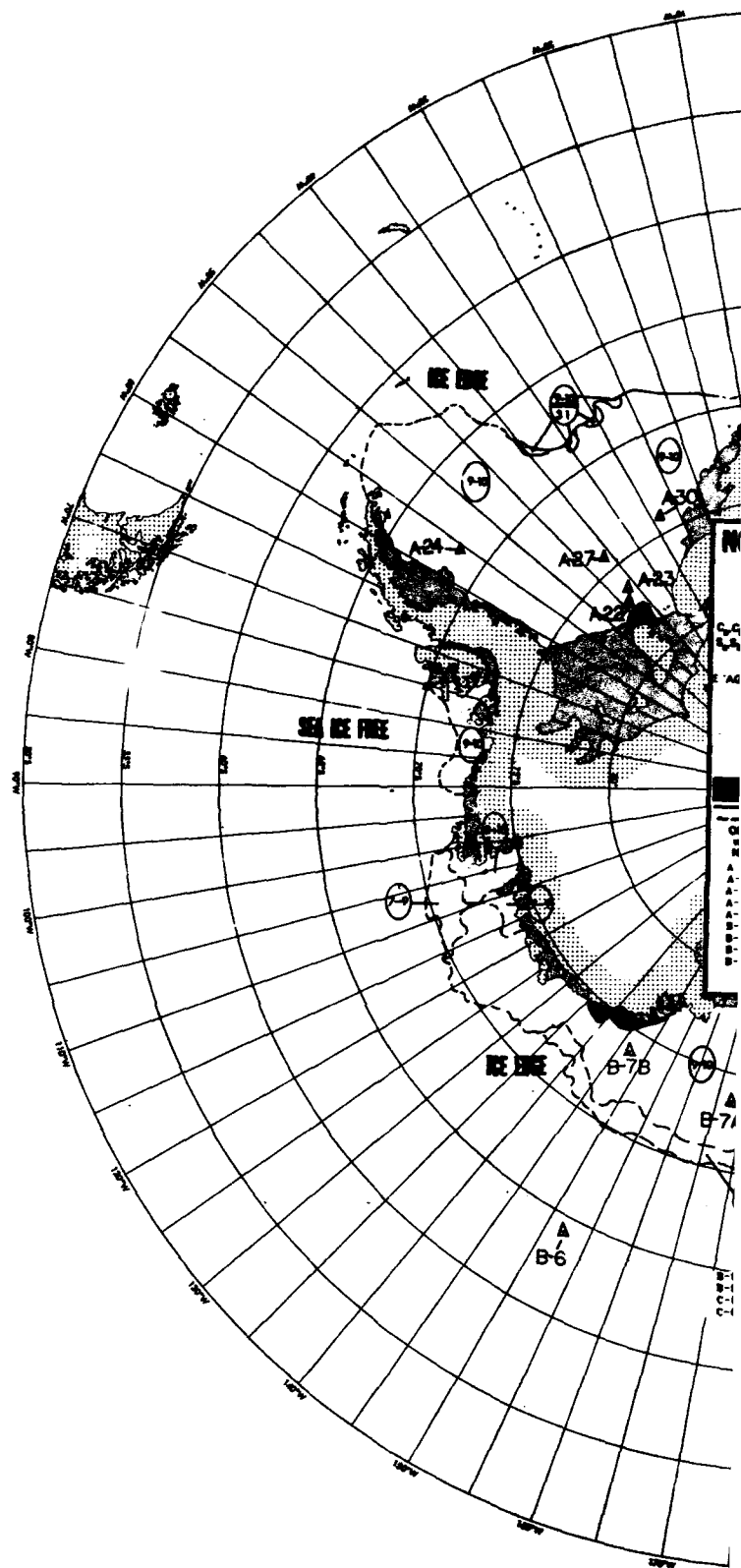
SEA ICE FREE

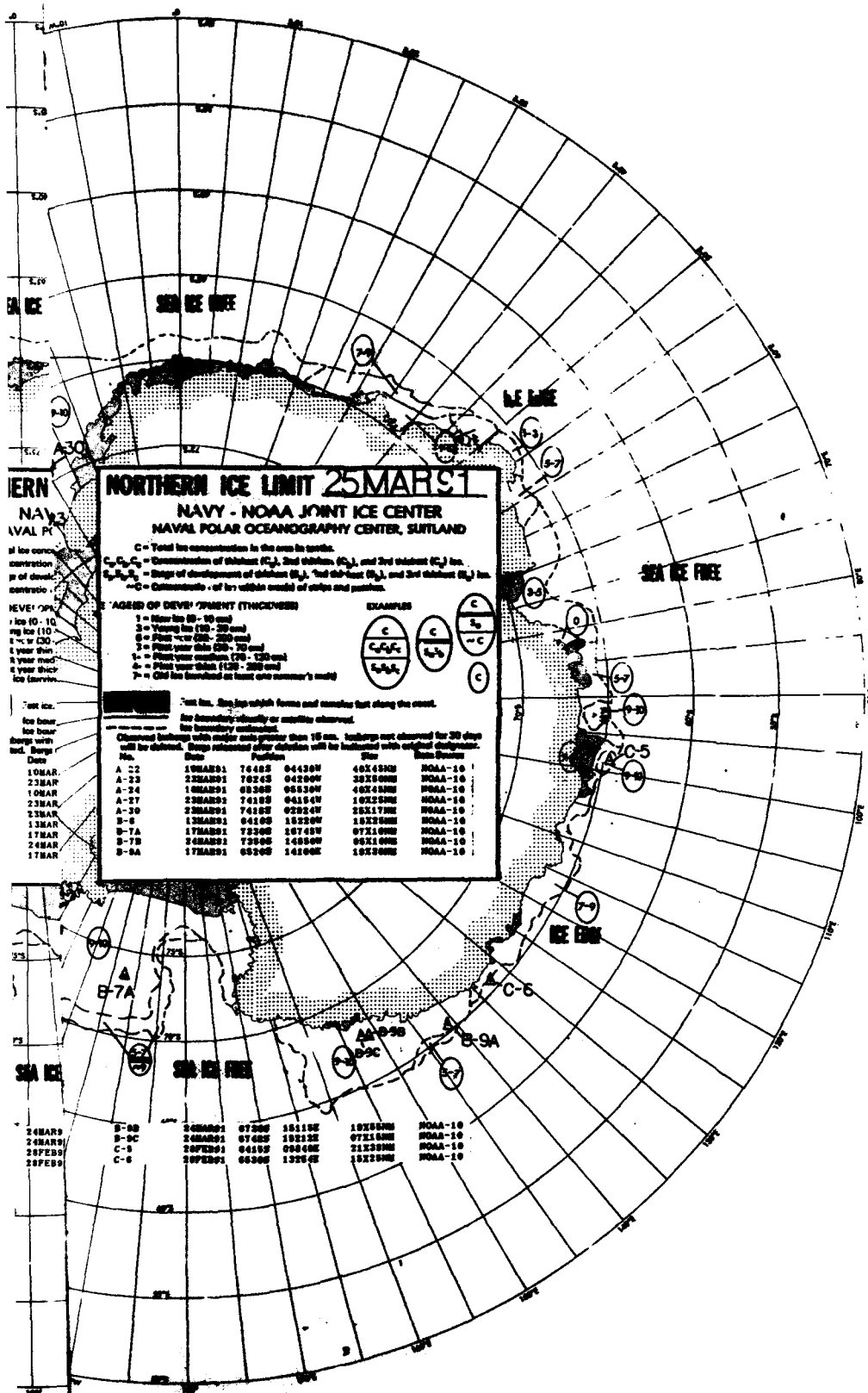
SEA ICE FREE

SEA ICE FREE









NORTHERN ICE LIMIT 25 MAR 51

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C = Total ice concentration in the area in percent.
C₁, C₂, C₃ = Concentration of thickest (C₁), 2nd thickest (C₂), and 3rd thickest (C₃) ice.
S₁, S₂, S₃ = Stages of development of thickest (S₁), 2nd thickest (S₂), and 3rd thickest (S₃) ice.
C₁ = Estimated - of ice within bounds of circles and points.

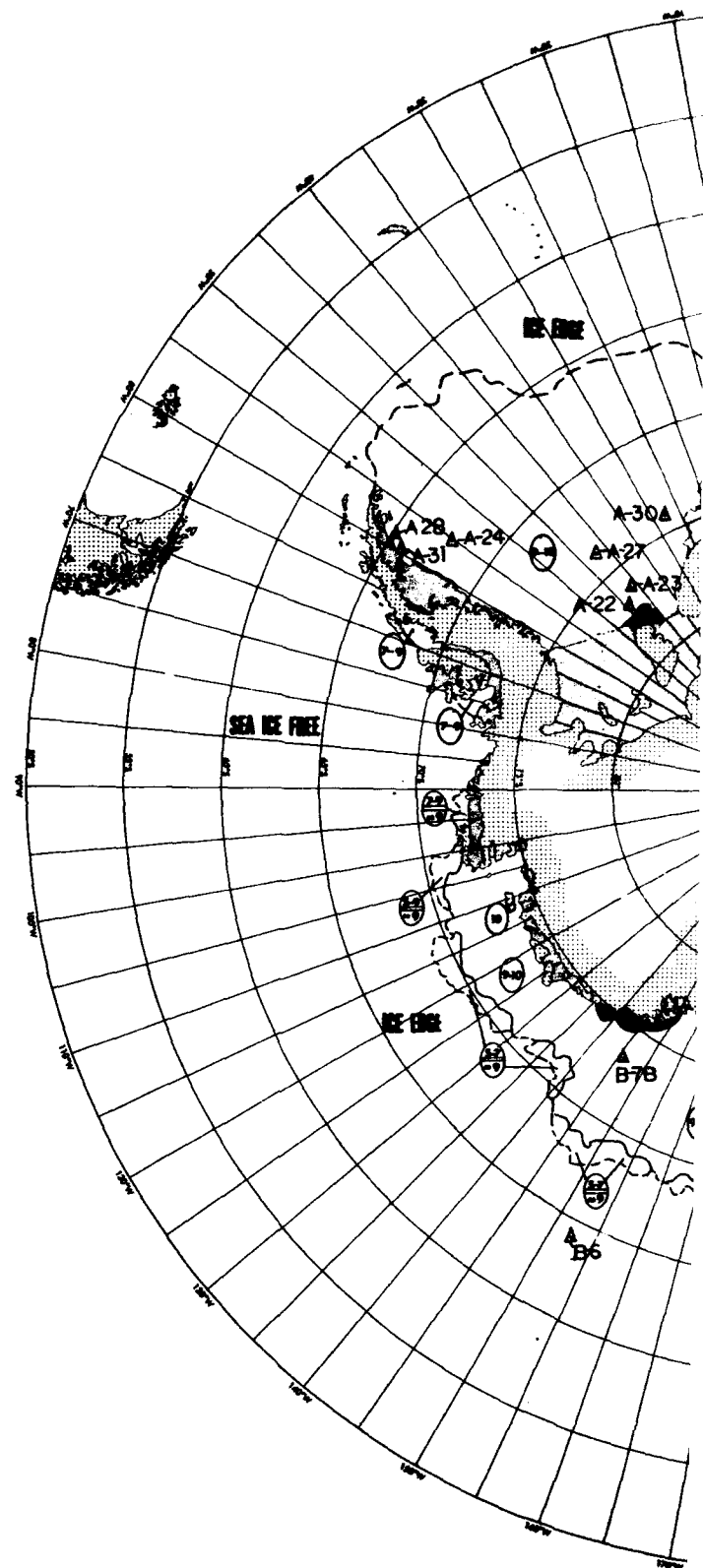
AGES OF DEVELOPMENT (THICKNESS)
1 = Young ice (10 - 20 cm)
2 = First year ice (20 - 30 cm)
3 = First year ice (30 - 40 cm)
4 = First year ice (40 - 50 cm)
5 = First year ice (50 - 60 cm)
6 = First year ice (60 - 70 cm)
7 = Old ice (over 70 cm thick)

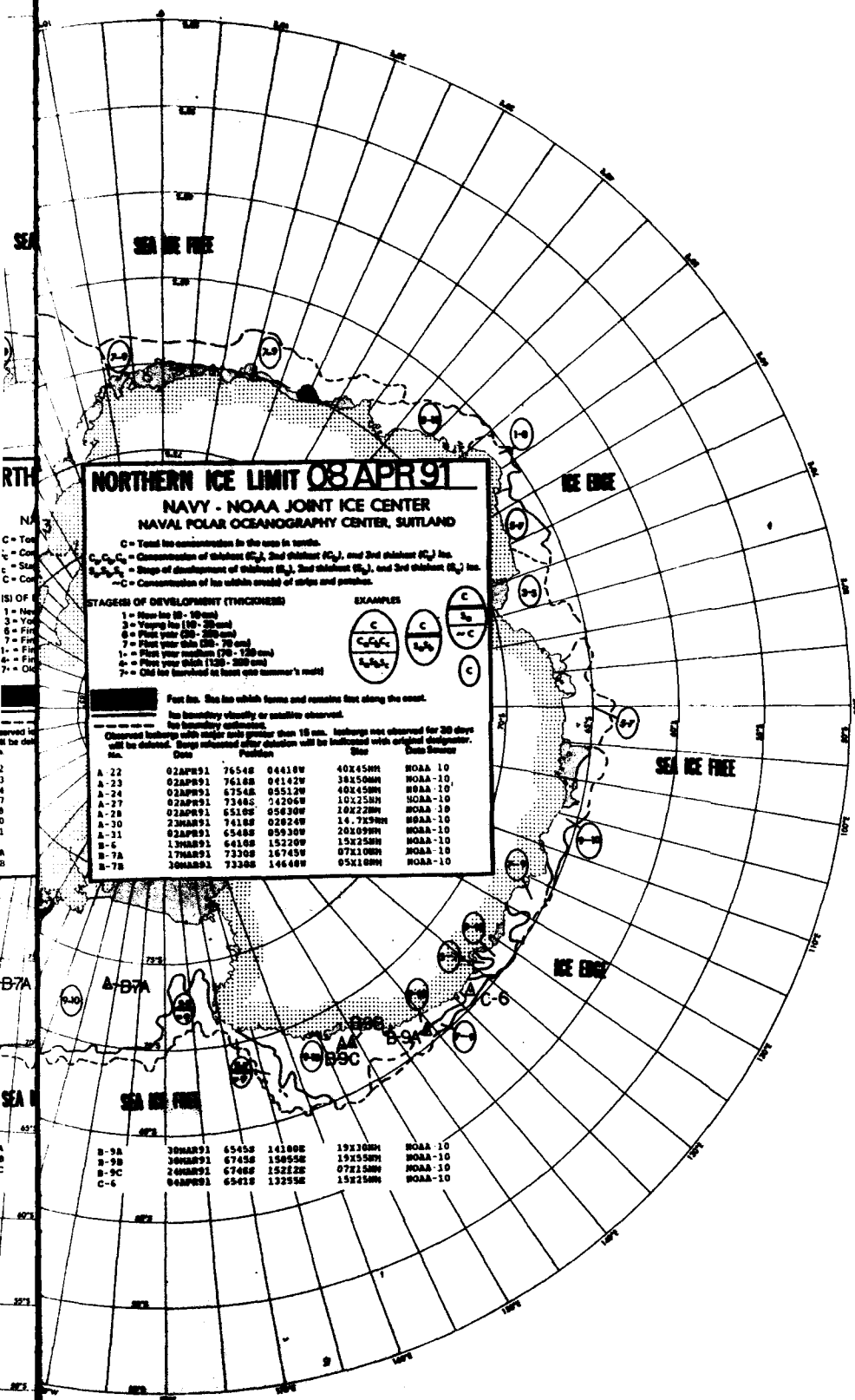


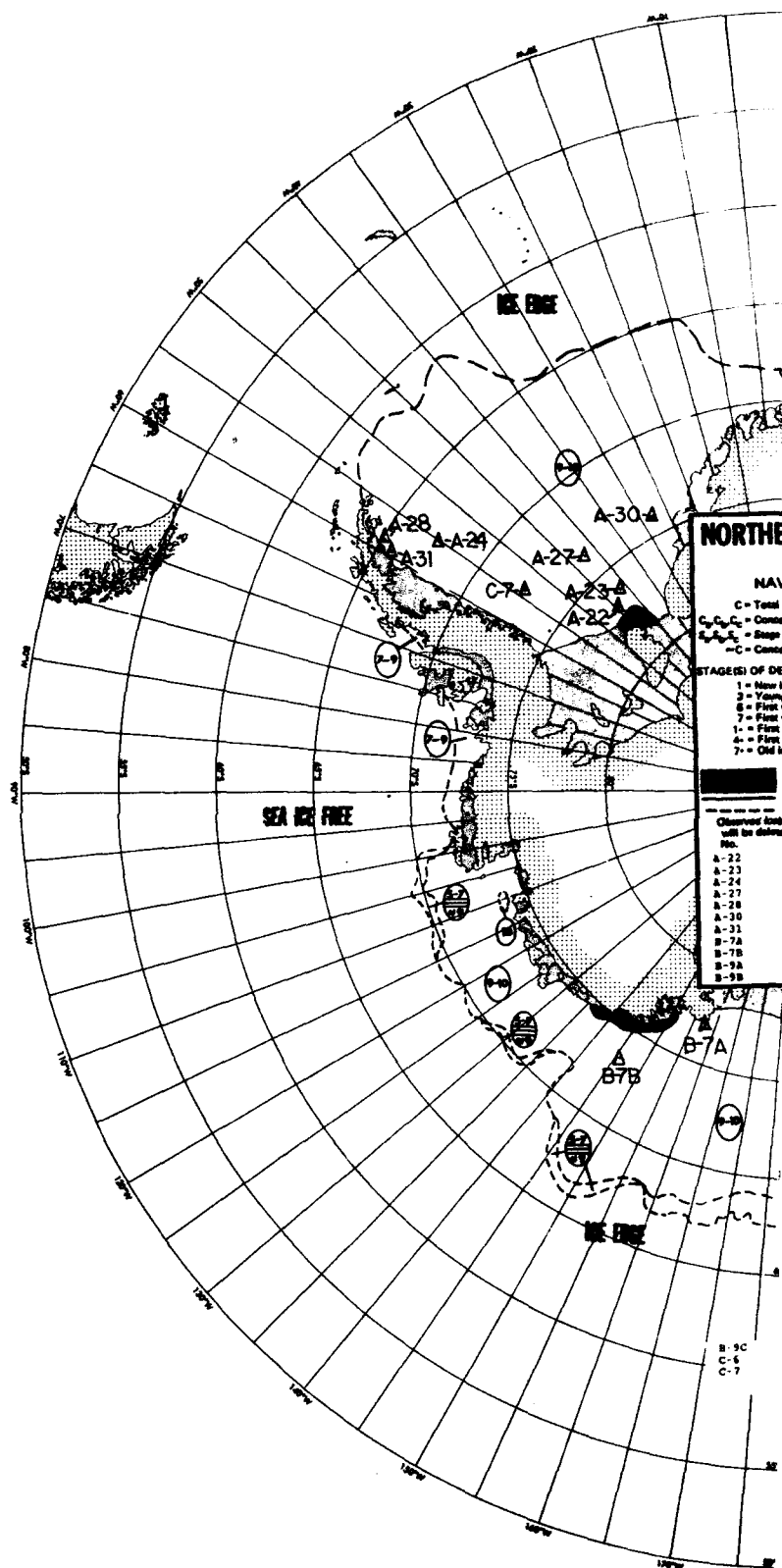
Notes: 1. Icebergs which form and remain fast along the coast.
2. Icebergs which are rapidly observed.
3. Icebergs which are not observed for 30 days will be deleted. Bergs observed after deletion will be indicated with original designation.

Date	No.	Lat	Long	Thick	Stages	Remarks
10 MAR	A-22	19 MAR 51	74 48 S	04430 W	40 X 4300	NOAA-10
22 MAR	A-23	23 MAR 51	70 24 S	04200 W	30 X 3000	NOAA-10
10 MAR	A-24	10 MAR 51	68 30 S	05530 W	40 X 4300	NOAA-10
23 MAR	A-27	23 MAR 51	70 10 S	04150 W	10 X 1000	NOAA-10
23 MAR	A-30	23 MAR 51	74 10 S	07000 W	30 X 1700	NOAA-10
13 MAR	B-6	13 MAR 51	64 10 S	15220 W	15 X 1500	NOAA-10
17 MAR	B-7A	17 MAR 51	72 30 S	10740 W	07 X 1000	NOAA-10
24 MAR	B-7B	24 MAR 51	73 00 S	14000 W	05 X 1000	NOAA-10
17 MAR	B-9A	17 MAR 51	60 00 S	14100 E	10 X 1000	NOAA-10

Date	No.	Lat	Long	Thick	Stages	Remarks
24 MAR 51	B-80	24 MAR 51	67 00 S	15110 E	10 X 1000	NOAA-10
24 MAR 51	B-9C	24 MAR 51	67 40 S	10210 E	07 X 1000	NOAA-10
20 FEB 51	C-5	20 FEB 51	64 10 S	09040 E	21 X 2000	NOAA-10
20 FEB 51	C-6	20 FEB 51	66 00 S	12000 E	10 X 1000	NOAA-10







SEA ICE FREE

ICE FREE

SEA ICE FREE

ICE FREE

SEA ICE FREE

NORTHERN ICE LIMIT 15 APR 91

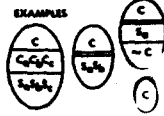
NAVY - NOAA JOINT ICE CENTER

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C = Total ice concentration in the area in tenths.
 C_1, C_2, C_3 = Concentration of thickens (C_1), 2nd thickest (C_2), and 3rd thickest (C_3) ice.
 C_1, C_2, C_3 = Range of development of thickens (C_1), 2nd thickest (C_2), and 3rd thickest (C_3) ice.
-C = Concentration of ice within circle of circle and points.

STAGES OF DEVELOPMENT (THICKNESS)

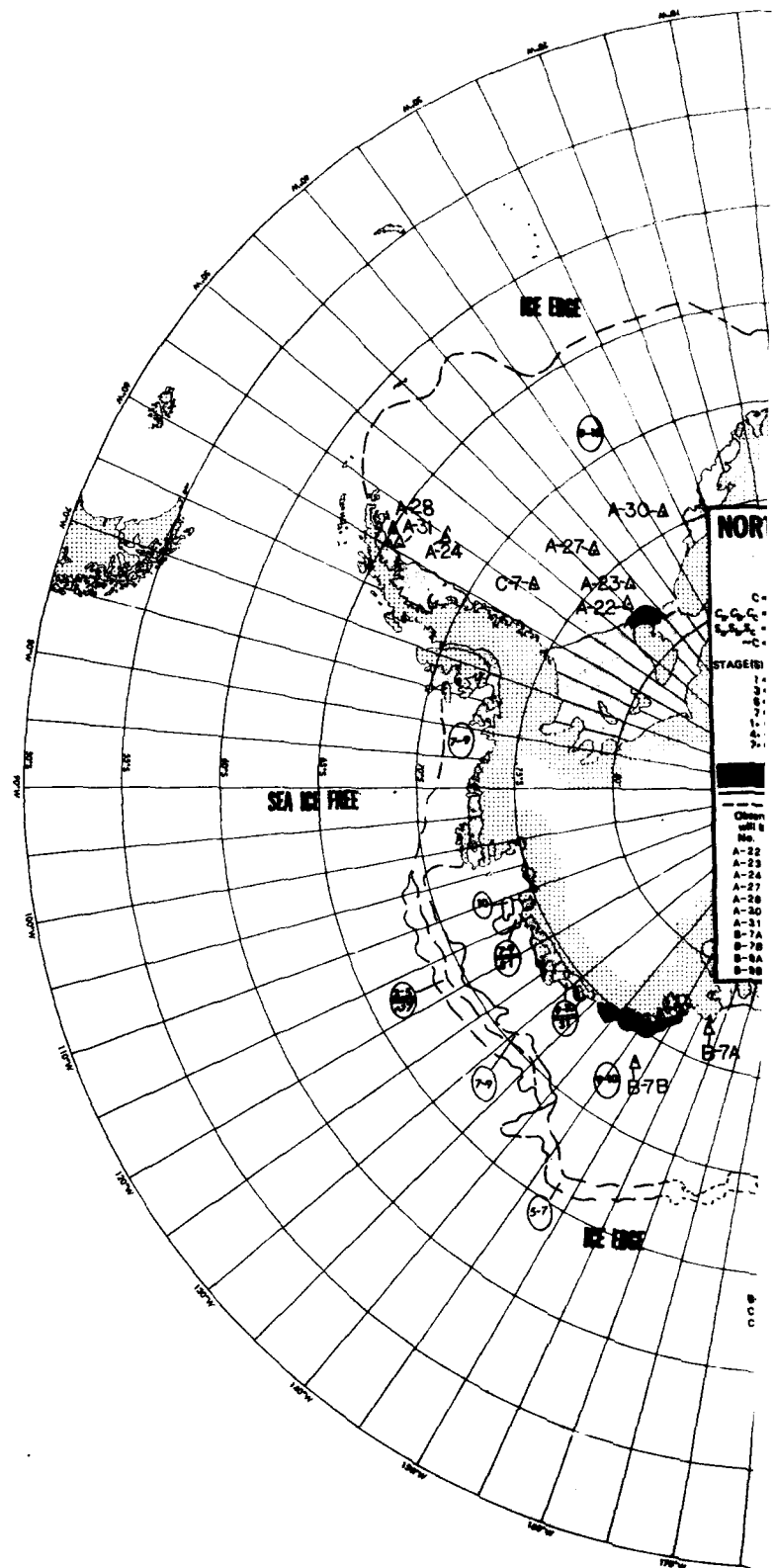
- 1 = New ice (0 - 10 cm)
- 2 = Young ice (10 - 30 cm)
- 3 = First year (30 - 50 cm)
- 4 = First year (50 - 70 cm)
- 5 = First year (70 - 100 cm)
- 6 = First year (100 - 150 cm)
- 7 = First year (150 - 200 cm)
- 8 = Old ice (200 - 300 cm)
- 9 = Old ice (300 - 400 cm)
- 10 = Old ice (400 - 500 cm)
- 11 = Old ice (500 - 600 cm)
- 12 = Old ice (600 - 700 cm)
- 13 = Old ice (700 - 800 cm)
- 14 = Old ice (800 - 900 cm)
- 15 = Old ice (900 - 1000 cm)
- 16 = Old ice (1000 - 1100 cm)
- 17 = Old ice (1100 - 1200 cm)
- 18 = Old ice (1200 - 1300 cm)
- 19 = Old ice (1300 - 1400 cm)
- 20 = Old ice (1400 - 1500 cm)
- 21 = Old ice (1500 - 1600 cm)
- 22 = Old ice (1600 - 1700 cm)
- 23 = Old ice (1700 - 1800 cm)
- 24 = Old ice (1800 - 1900 cm)
- 25 = Old ice (1900 - 2000 cm)
- 26 = Old ice (2000 - 2100 cm)
- 27 = Old ice (2100 - 2200 cm)
- 28 = Old ice (2200 - 2300 cm)
- 29 = Old ice (2300 - 2400 cm)
- 30 = Old ice (2400 - 2500 cm)
- 31 = Old ice (2500 - 2600 cm)
- 32 = Old ice (2600 - 2700 cm)
- 33 = Old ice (2700 - 2800 cm)
- 34 = Old ice (2800 - 2900 cm)
- 35 = Old ice (2900 - 3000 cm)
- 36 = Old ice (3000 - 3100 cm)
- 37 = Old ice (3100 - 3200 cm)
- 38 = Old ice (3200 - 3300 cm)
- 39 = Old ice (3300 - 3400 cm)
- 40 = Old ice (3400 - 3500 cm)
- 41 = Old ice (3500 - 3600 cm)
- 42 = Old ice (3600 - 3700 cm)
- 43 = Old ice (3700 - 3800 cm)
- 44 = Old ice (3800 - 3900 cm)
- 45 = Old ice (3900 - 4000 cm)
- 46 = Old ice (4000 - 4100 cm)
- 47 = Old ice (4100 - 4200 cm)
- 48 = Old ice (4200 - 4300 cm)
- 49 = Old ice (4300 - 4400 cm)
- 50 = Old ice (4400 - 4500 cm)
- 51 = Old ice (4500 - 4600 cm)
- 52 = Old ice (4600 - 4700 cm)
- 53 = Old ice (4700 - 4800 cm)
- 54 = Old ice (4800 - 4900 cm)
- 55 = Old ice (4900 - 5000 cm)
- 56 = Old ice (5000 - 5100 cm)
- 57 = Old ice (5100 - 5200 cm)
- 58 = Old ice (5200 - 5300 cm)
- 59 = Old ice (5300 - 5400 cm)
- 60 = Old ice (5400 - 5500 cm)
- 61 = Old ice (5500 - 5600 cm)
- 62 = Old ice (5600 - 5700 cm)
- 63 = Old ice (5700 - 5800 cm)
- 64 = Old ice (5800 - 5900 cm)
- 65 = Old ice (5900 - 6000 cm)
- 66 = Old ice (6000 - 6100 cm)
- 67 = Old ice (6100 - 6200 cm)
- 68 = Old ice (6200 - 6300 cm)
- 69 = Old ice (6300 - 6400 cm)
- 70 = Old ice (6400 - 6500 cm)
- 71 = Old ice (6500 - 6600 cm)
- 72 = Old ice (6600 - 6700 cm)
- 73 = Old ice (6700 - 6800 cm)
- 74 = Old ice (6800 - 6900 cm)
- 75 = Old ice (6900 - 7000 cm)
- 76 = Old ice (7000 - 7100 cm)
- 77 = Old ice (7100 - 7200 cm)
- 78 = Old ice (7200 - 7300 cm)
- 79 = Old ice (7300 - 7400 cm)
- 80 = Old ice (7400 - 7500 cm)
- 81 = Old ice (7500 - 7600 cm)
- 82 = Old ice (7600 - 7700 cm)
- 83 = Old ice (7700 - 7800 cm)
- 84 = Old ice (7800 - 7900 cm)
- 85 = Old ice (7900 - 8000 cm)
- 86 = Old ice (8000 - 8100 cm)
- 87 = Old ice (8100 - 8200 cm)
- 88 = Old ice (8200 - 8300 cm)
- 89 = Old ice (8300 - 8400 cm)
- 90 = Old ice (8400 - 8500 cm)
- 91 = Old ice (8500 - 8600 cm)
- 92 = Old ice (8600 - 8700 cm)
- 93 = Old ice (8700 - 8800 cm)
- 94 = Old ice (8800 - 8900 cm)
- 95 = Old ice (8900 - 9000 cm)
- 96 = Old ice (9000 - 9100 cm)
- 97 = Old ice (9100 - 9200 cm)
- 98 = Old ice (9200 - 9300 cm)
- 99 = Old ice (9300 - 9400 cm)
- 100 = Old ice (9400 - 9500 cm)
- 101 = Old ice (9500 - 9600 cm)
- 102 = Old ice (9600 - 9700 cm)
- 103 = Old ice (9700 - 9800 cm)
- 104 = Old ice (9800 - 9900 cm)
- 105 = Old ice (9900 - 10000 cm)

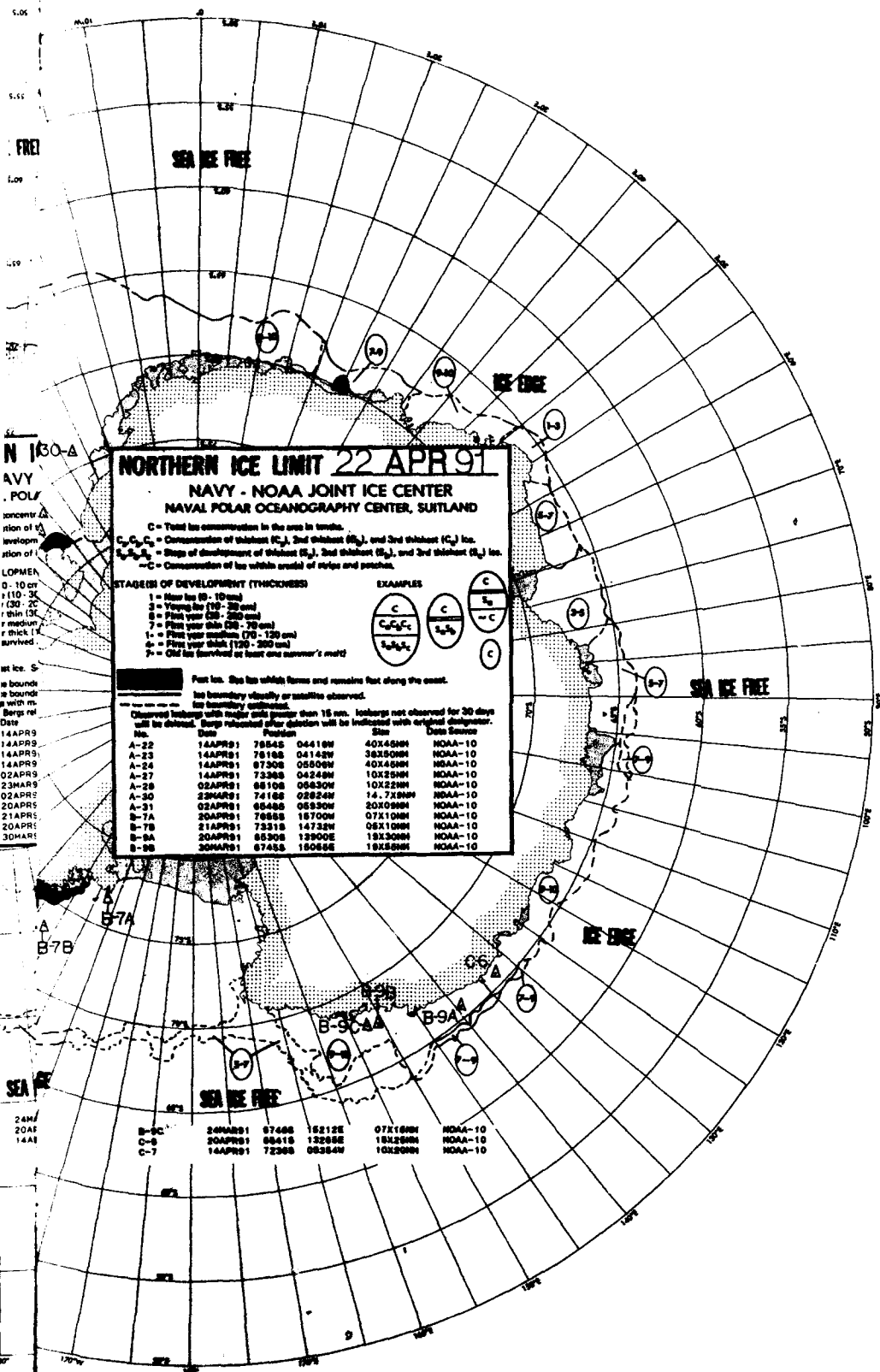


First ice. Sea ice which forms and remains fast along the coast.
Ice boundary visibility or satellite observed.
Channel boundary with width greater than 10 m. Iceberg not observed for 30 days
will be deleted. Deep channel after deletion will be indicated with original designation.

No.	Date	Position	Size	Days Since
A-22	14APR91	7654S 04410W	40x45NM	NOAA-10
A-23	14APR91	7618S 04142W	10x50NM	NOAA-10
A-24	14APR91	7308S 05506W	40x45NM	NOAA-10
A-27	14APR91	7336S 04248W	10x25NM	NOAA-10
A-28	02APR91	6510S 05820W	10x22NM	NOAA-10
A-30	23MAR91	7618S 02824W	14.75NM	NOAA-10
A-31	02APR91	6546S 05930W	20x09NM	NOAA-10
B-7A	09APR91	7780S 15745W	07x10NM	NOAA-10
B-7B	30MAR91	7330S 14640W	05x10NM	NOAA-10
B-7C	30MAR91	6545S 14100E	19x30NM	NOAA-10
B-7D	30MAR91	6745S 15055E	19x55NM	NOAA-10

B-9C	24MAR91	6740S 15212E	07x15NM	NOAA-10
C-6	04APR91	6548S 13254E	15x25NM	NOAA-10
C-7	14APR91	7236S 05354W	10x20NM	NOAA-10





NORTHERN ICE LIMIT 22 APR 91

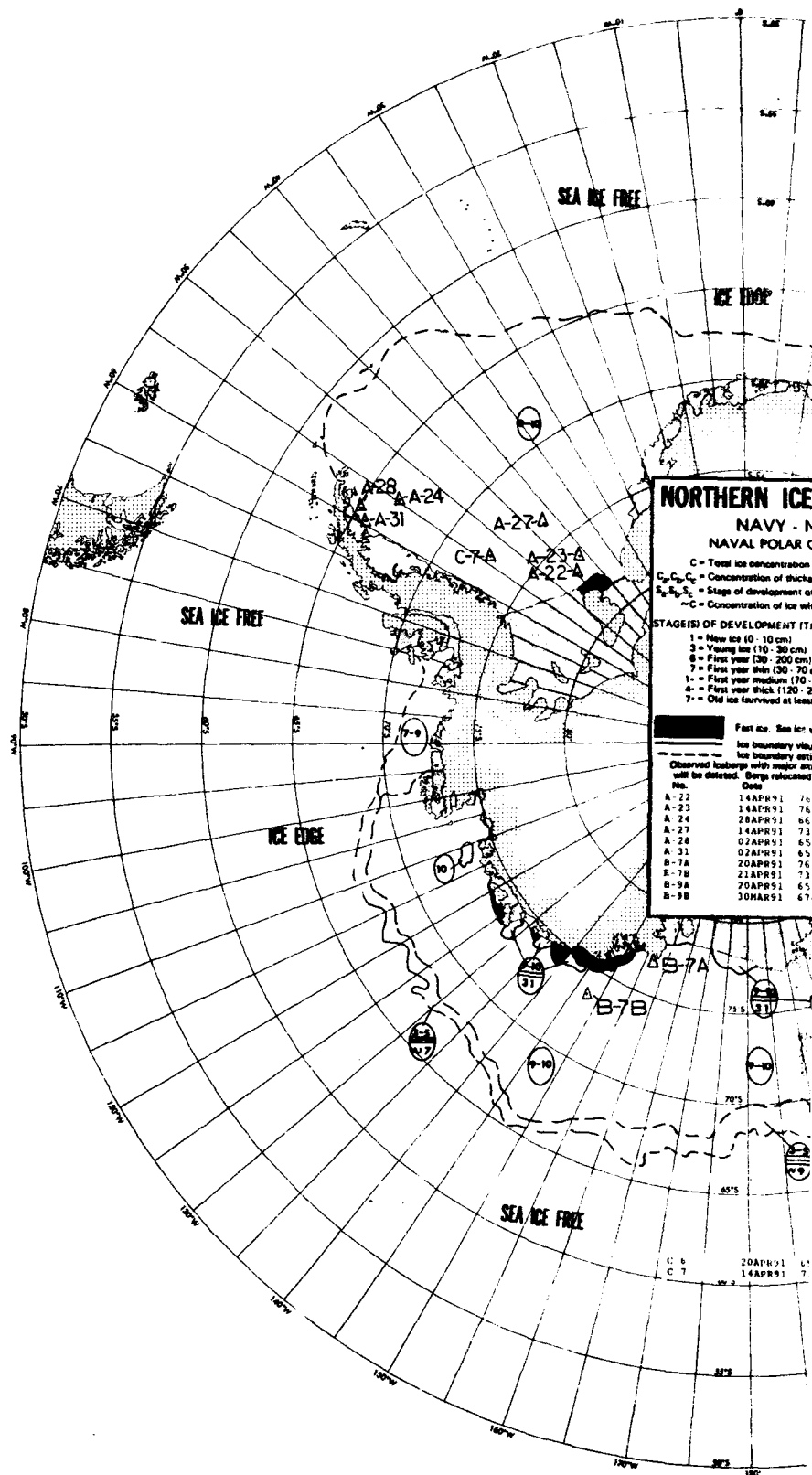
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUTLAND

C = Total ice concentration in the area in tenths.
 C₁C₂C₃ = Concentration of thickest (C₁), 2nd thickest (C₂), and 3rd thickest (C₃) ice.
 C₁C₂C₃ = Stage of development of thickest (C₁), 2nd thickest (C₂), and 3rd thickest (C₃) ice.
 C = Concentration of ice within areas of strips and patches.

STAGES OF DEVELOPMENT (THICKNESS)	EXAMPLES
1 = New ice (0 - 10 cm)	$\frac{C}{C_1C_2C_3}$
2 = Young ice (10 - 30 cm)	$\frac{C}{C_1C_2C_3}$
3 = First year (30 - 50 cm)	$\frac{C}{C_1C_2C_3}$
4 = First year (50 - 70 cm)	$\frac{C}{C_1C_2C_3}$
5 = First year (70 - 100 cm)	$\frac{C}{C_1C_2C_3}$
6 = First year (100 - 150 cm)	$\frac{C}{C_1C_2C_3}$
7 = Old ice (150 - 200 cm)	$\frac{C}{C_1C_2C_3}$
8 = Old ice (200 - 250 cm)	$\frac{C}{C_1C_2C_3}$
9 = Old ice (250 - 300 cm)	$\frac{C}{C_1C_2C_3}$
10 = Old ice (300 - 350 cm)	$\frac{C}{C_1C_2C_3}$
11 = Old ice (350 - 400 cm)	$\frac{C}{C_1C_2C_3}$
12 = Old ice (400 - 450 cm)	$\frac{C}{C_1C_2C_3}$
13 = Old ice (450 - 500 cm)	$\frac{C}{C_1C_2C_3}$
14 = Old ice (500 - 550 cm)	$\frac{C}{C_1C_2C_3}$
15 = Old ice (550 - 600 cm)	$\frac{C}{C_1C_2C_3}$
16 = Old ice (600 - 650 cm)	$\frac{C}{C_1C_2C_3}$
17 = Old ice (650 - 700 cm)	$\frac{C}{C_1C_2C_3}$
18 = Old ice (700 - 750 cm)	$\frac{C}{C_1C_2C_3}$
19 = Old ice (750 - 800 cm)	$\frac{C}{C_1C_2C_3}$
20 = Old ice (800 - 850 cm)	$\frac{C}{C_1C_2C_3}$
21 = Old ice (850 - 900 cm)	$\frac{C}{C_1C_2C_3}$
22 = Old ice (900 - 950 cm)	$\frac{C}{C_1C_2C_3}$
23 = Old ice (950 - 1000 cm)	$\frac{C}{C_1C_2C_3}$
24 = Old ice (1000 - 1050 cm)	$\frac{C}{C_1C_2C_3}$
25 = Old ice (1050 - 1100 cm)	$\frac{C}{C_1C_2C_3}$
26 = Old ice (1100 - 1150 cm)	$\frac{C}{C_1C_2C_3}$
27 = Old ice (1150 - 1200 cm)	$\frac{C}{C_1C_2C_3}$
28 = Old ice (1200 - 1250 cm)	$\frac{C}{C_1C_2C_3}$
29 = Old ice (1250 - 1300 cm)	$\frac{C}{C_1C_2C_3}$
30 = Old ice (1300 - 1350 cm)	$\frac{C}{C_1C_2C_3}$
31 = Old ice (1350 - 1400 cm)	$\frac{C}{C_1C_2C_3}$
32 = Old ice (1400 - 1450 cm)	$\frac{C}{C_1C_2C_3}$
33 = Old ice (1450 - 1500 cm)	$\frac{C}{C_1C_2C_3}$
34 = Old ice (1500 - 1550 cm)	$\frac{C}{C_1C_2C_3}$
35 = Old ice (1550 - 1600 cm)	$\frac{C}{C_1C_2C_3}$
36 = Old ice (1600 - 1650 cm)	$\frac{C}{C_1C_2C_3}$
37 = Old ice (1650 - 1700 cm)	$\frac{C}{C_1C_2C_3}$
38 = Old ice (1700 - 1750 cm)	$\frac{C}{C_1C_2C_3}$
39 = Old ice (1750 - 1800 cm)	$\frac{C}{C_1C_2C_3}$
40 = Old ice (1800 - 1850 cm)	$\frac{C}{C_1C_2C_3}$
41 = Old ice (1850 - 1900 cm)	$\frac{C}{C_1C_2C_3}$
42 = Old ice (1900 - 1950 cm)	$\frac{C}{C_1C_2C_3}$
43 = Old ice (1950 - 2000 cm)	$\frac{C}{C_1C_2C_3}$
44 = Old ice (2000 - 2050 cm)	$\frac{C}{C_1C_2C_3}$
45 = Old ice (2050 - 2100 cm)	$\frac{C}{C_1C_2C_3}$
46 = Old ice (2100 - 2150 cm)	$\frac{C}{C_1C_2C_3}$
47 = Old ice (2150 - 2200 cm)	$\frac{C}{C_1C_2C_3}$
48 = Old ice (2200 - 2250 cm)	$\frac{C}{C_1C_2C_3}$
49 = Old ice (2250 - 2300 cm)	$\frac{C}{C_1C_2C_3}$
50 = Old ice (2300 - 2350 cm)	$\frac{C}{C_1C_2C_3}$
51 = Old ice (2350 - 2400 cm)	$\frac{C}{C_1C_2C_3}$
52 = Old ice (2400 - 2450 cm)	$\frac{C}{C_1C_2C_3}$
53 = Old ice (2450 - 2500 cm)	$\frac{C}{C_1C_2C_3}$
54 = Old ice (2500 - 2550 cm)	$\frac{C}{C_1C_2C_3}$
55 = Old ice (2550 - 2600 cm)	$\frac{C}{C_1C_2C_3}$
56 = Old ice (2600 - 2650 cm)	$\frac{C}{C_1C_2C_3}$
57 = Old ice (2650 - 2700 cm)	$\frac{C}{C_1C_2C_3}$
58 = Old ice (2700 - 2750 cm)	$\frac{C}{C_1C_2C_3}$
59 = Old ice (2750 - 2800 cm)	$\frac{C}{C_1C_2C_3}$
60 = Old ice (2800 - 2850 cm)	$\frac{C}{C_1C_2C_3}$
61 = Old ice (2850 - 2900 cm)	$\frac{C}{C_1C_2C_3}$
62 = Old ice (2900 - 2950 cm)	$\frac{C}{C_1C_2C_3}$
63 = Old ice (2950 - 3000 cm)	$\frac{C}{C_1C_2C_3}$
64 = Old ice (3000 - 3050 cm)	$\frac{C}{C_1C_2C_3}$
65 = Old ice (3050 - 3100 cm)	$\frac{C}{C_1C_2C_3}$
66 = Old ice (3100 - 3150 cm)	$\frac{C}{C_1C_2C_3}$
67 = Old ice (3150 - 3200 cm)	$\frac{C}{C_1C_2C_3}$
68 = Old ice (3200 - 3250 cm)	$\frac{C}{C_1C_2C_3}$
69 = Old ice (3250 - 3300 cm)	$\frac{C}{C_1C_2C_3}$
70 = Old ice (3300 - 3350 cm)	$\frac{C}{C_1C_2C_3}$
71 = Old ice (3350 - 3400 cm)	$\frac{C}{C_1C_2C_3}$
72 = Old ice (3400 - 3450 cm)	$\frac{C}{C_1C_2C_3}$
73 = Old ice (3450 - 3500 cm)	$\frac{C}{C_1C_2C_3}$
74 = Old ice (3500 - 3550 cm)	$\frac{C}{C_1C_2C_3}$
75 = Old ice (3550 - 3600 cm)	$\frac{C}{C_1C_2C_3}$
76 = Old ice (3600 - 3650 cm)	$\frac{C}{C_1C_2C_3}$
77 = Old ice (3650 - 3700 cm)	$\frac{C}{C_1C_2C_3}$
78 = Old ice (3700 - 3750 cm)	$\frac{C}{C_1C_2C_3}$
79 = Old ice (3750 - 3800 cm)	$\frac{C}{C_1C_2C_3}$
80 = Old ice (3800 - 3850 cm)	$\frac{C}{C_1C_2C_3}$
81 = Old ice (3850 - 3900 cm)	$\frac{C}{C_1C_2C_3}$
82 = Old ice (3900 - 3950 cm)	$\frac{C}{C_1C_2C_3}$
83 = Old ice (3950 - 4000 cm)	$\frac{C}{C_1C_2C_3}$
84 = Old ice (4000 - 4050 cm)	$\frac{C}{C_1C_2C_3}$
85 = Old ice (4050 - 4100 cm)	$\frac{C}{C_1C_2C_3}$
86 = Old ice (4100 - 4150 cm)	$\frac{C}{C_1C_2C_3}$
87 = Old ice (4150 - 4200 cm)	$\frac{C}{C_1C_2C_3}$
88 = Old ice (4200 - 4250 cm)	$\frac{C}{C_1C_2C_3}$
89 = Old ice (4250 - 4300 cm)	$\frac{C}{C_1C_2C_3}$
90 = Old ice (4300 - 4350 cm)	$\frac{C}{C_1C_2C_3}$
91 = Old ice (4350 - 4400 cm)	$\frac{C}{C_1C_2C_3}$
92 = Old ice (4400 - 4450 cm)	$\frac{C}{C_1C_2C_3}$
93 = Old ice (4450 - 4500 cm)	$\frac{C}{C_1C_2C_3}$
94 = Old ice (4500 - 4550 cm)	$\frac{C}{C_1C_2C_3}$
95 = Old ice (4550 - 4600 cm)	$\frac{C}{C_1C_2C_3}$
96 = Old ice (4600 - 4650 cm)	$\frac{C}{C_1C_2C_3}$
97 = Old ice (4650 - 4700 cm)	$\frac{C}{C_1C_2C_3}$
98 = Old ice (4700 - 4750 cm)	$\frac{C}{C_1C_2C_3}$
99 = Old ice (4750 - 4800 cm)	$\frac{C}{C_1C_2C_3}$
100 = Old ice (4800 - 4850 cm)	$\frac{C}{C_1C_2C_3}$

Icebergs are identified by a number and a letter. The number indicates the year of discovery, and the letter indicates the sequence of discovery. Icebergs are listed in the following table:

No.	Date	Position	Size	Date Sighted
A-22	14APR91	7616S 04416W	40X45NM	NOAA-10
A-23	14APR91	7616S 04142W	38X50NM	NOAA-10
A-24	14APR91	8730S 05006W	40X45NM	NOAA-10
A-27	14APR91	7336S 04248W	10X25NM	NOAA-10
A-28	02APR91	6610S 06630W	10X22NM	NOAA-10
A-30	23MAR91	7416S 02624W	14.7X9NM	NOAA-10
A-31	02APR91	6648S 06630W	20X09NM	NOAA-10
B-7A	20APR91	7666S 18700W	07X10NM	NOAA-10
B-7B	21APR91	7331S 14732W	08X10NM	NOAA-10
B-8A	20APR91	6630S 13900E	18X30NM	NOAA-10
B-9B	30MAR91	6745S 15065E	18X25NM	NOAA-10
B-9C	20APR91	6746S 15212E	07X16NM	NOAA-10
C-6	20APR91	6641S 13256E	18X25NM	NOAA-10
C-7	14APR91	7236S 08364W	10X20NM	NOAA-10

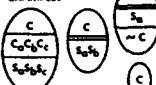


NORTHERN ICE LIMIT 29APR91

NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

- C = Total ice concentration in the area in tenths.
 C_1, C_2, C_3 = Concentration of thickest (C_1), 2nd thickest (C_2), and 3rd thickest (C_3) ice.
 S_1, S_2, S_3 = Stage of development of thickest (S_1), 2nd thickest (S_2), and 3rd thickest (S_3) ice.
 -C = Concentration of ice within areas of strips and patches.
- 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



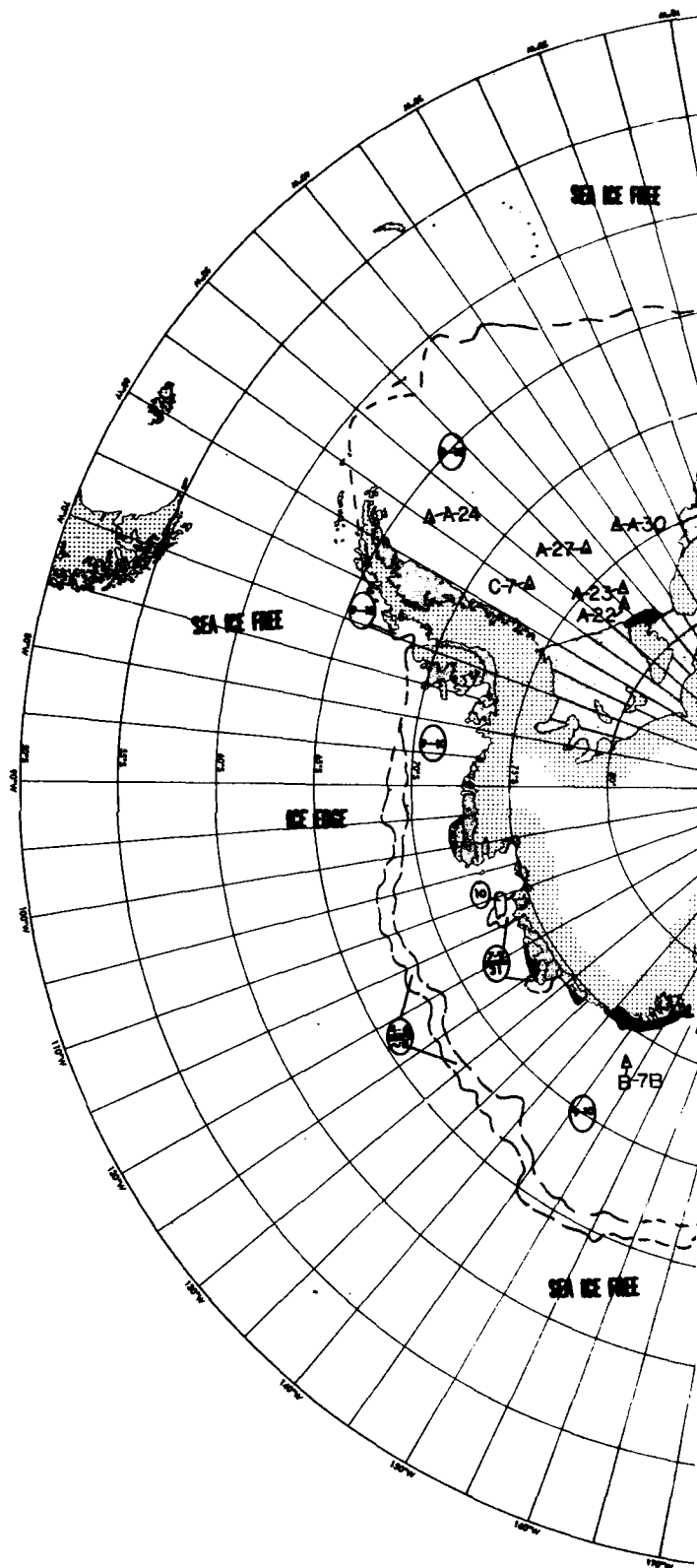
Fast ice. Sea ice which forms and remains fast along the coast.

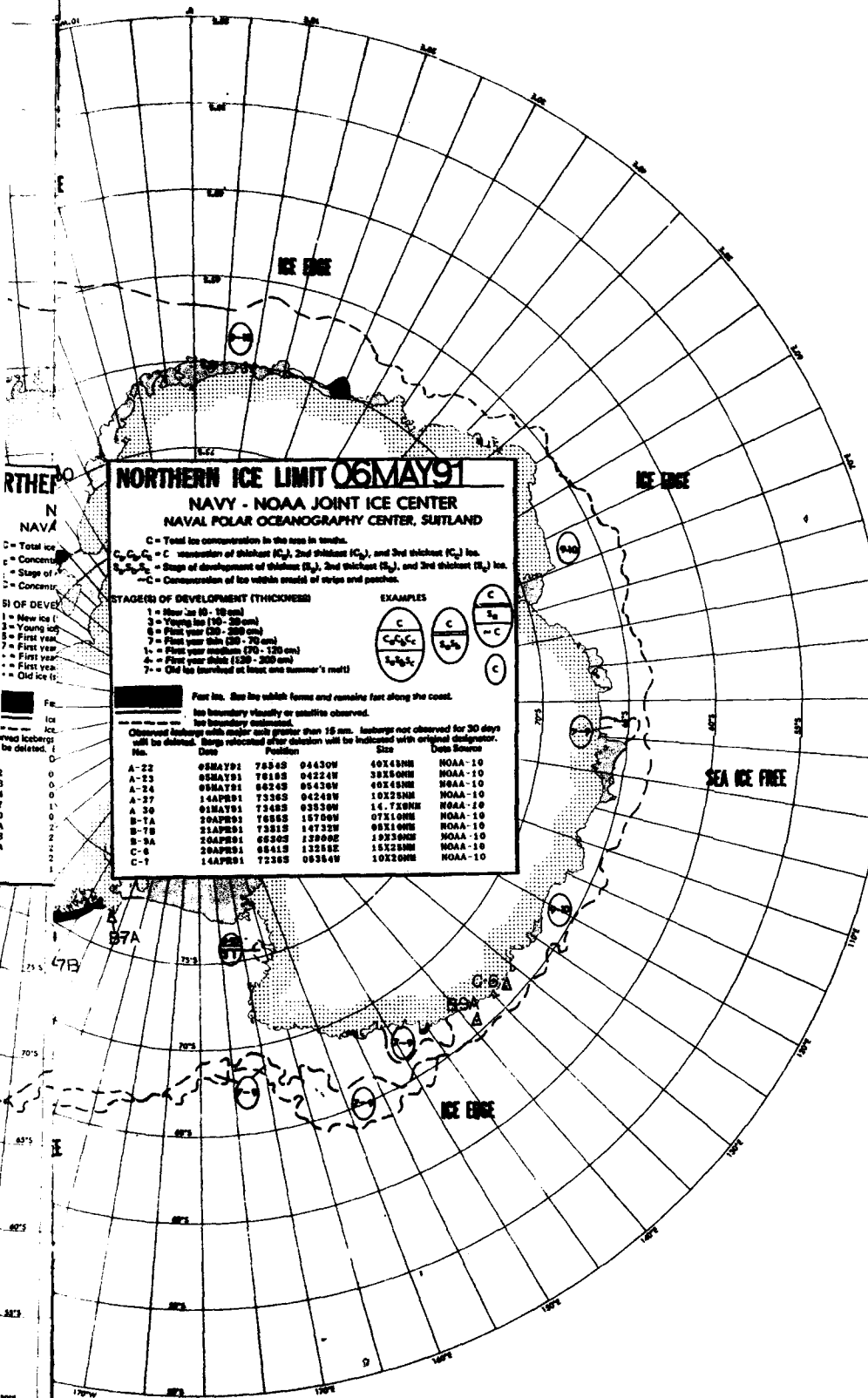
Ice boundary visually or satellite observed.

Observed icebergs with major axis greater than 15 nm. Icebergs not observed for 30 days will be deleted. Berge relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Data Source
A-22	14APR91	7654S 04418W	40X45NM	NOAA-10
A-23	14APR91	7618S 04142W	38X50NM	NOAA-10
A-24	29APR91	6648S 05454W	40X45NM	NOAA-10
A-27	14APR91	7336S 04248W	10X25NM	NOAA-10
A-28	02APR91	6510S 05830W	10X22NM	NOAA-10
A-31	02APR91	6548S 05930W	20X09NM	NOAA-10
B-7A	20APR91	7655S 15700W	07X10NM	NOAA-10
B-7B	21APR91	7311S 14732W	05X10NM	NOAA-10
B-9A	20APR91	6530S 13900E	19X30NM	NOAA-10
B-9B	30APR91	6745S 15055E	19X55NM	NOAA-10

BB-7A	20APR91	6541S	13255E	15X25NM	NOAA-10
7B	14APR91	7236S	05354W	10X20NM	NOAA-10

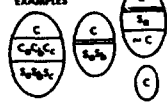




NORTHERN ICE LIMIT 06MAY91 **NAVY - NOAA JOINT ICE CENTER** **NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND**

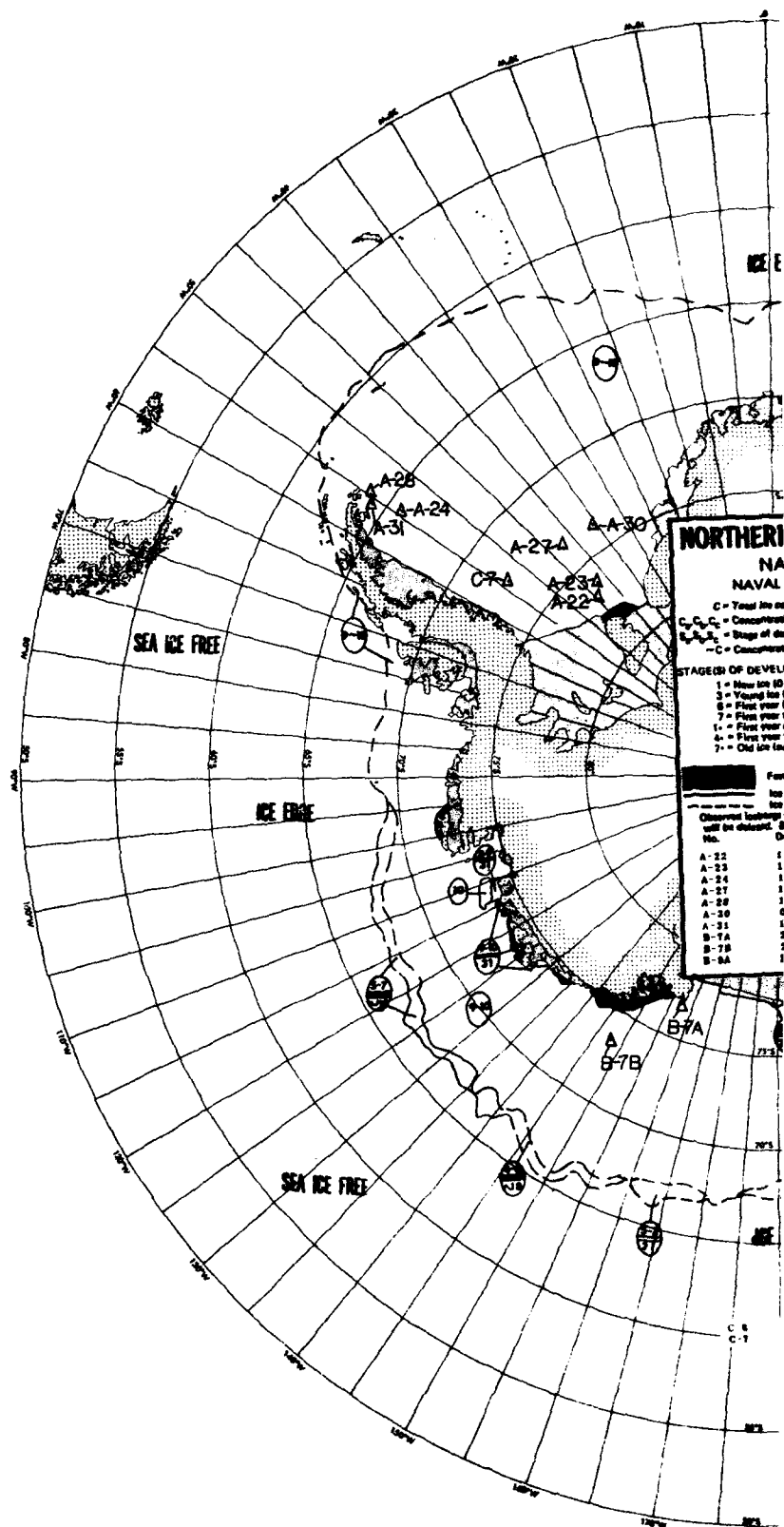
C = Total ice concentration in the sea in tenths.
 C_1, C_2, C_3 = C - concentration of thickest (C_1), 2nd thickest (C_2), and 3rd thickest (C_3) ice.
 S_1, S_2, S_3 = Stage of development of thickest (S_1), 2nd thickest (S_2), and 3rd thickest (S_3) ice.
 -C = Concentration of ice visible around or within patches.

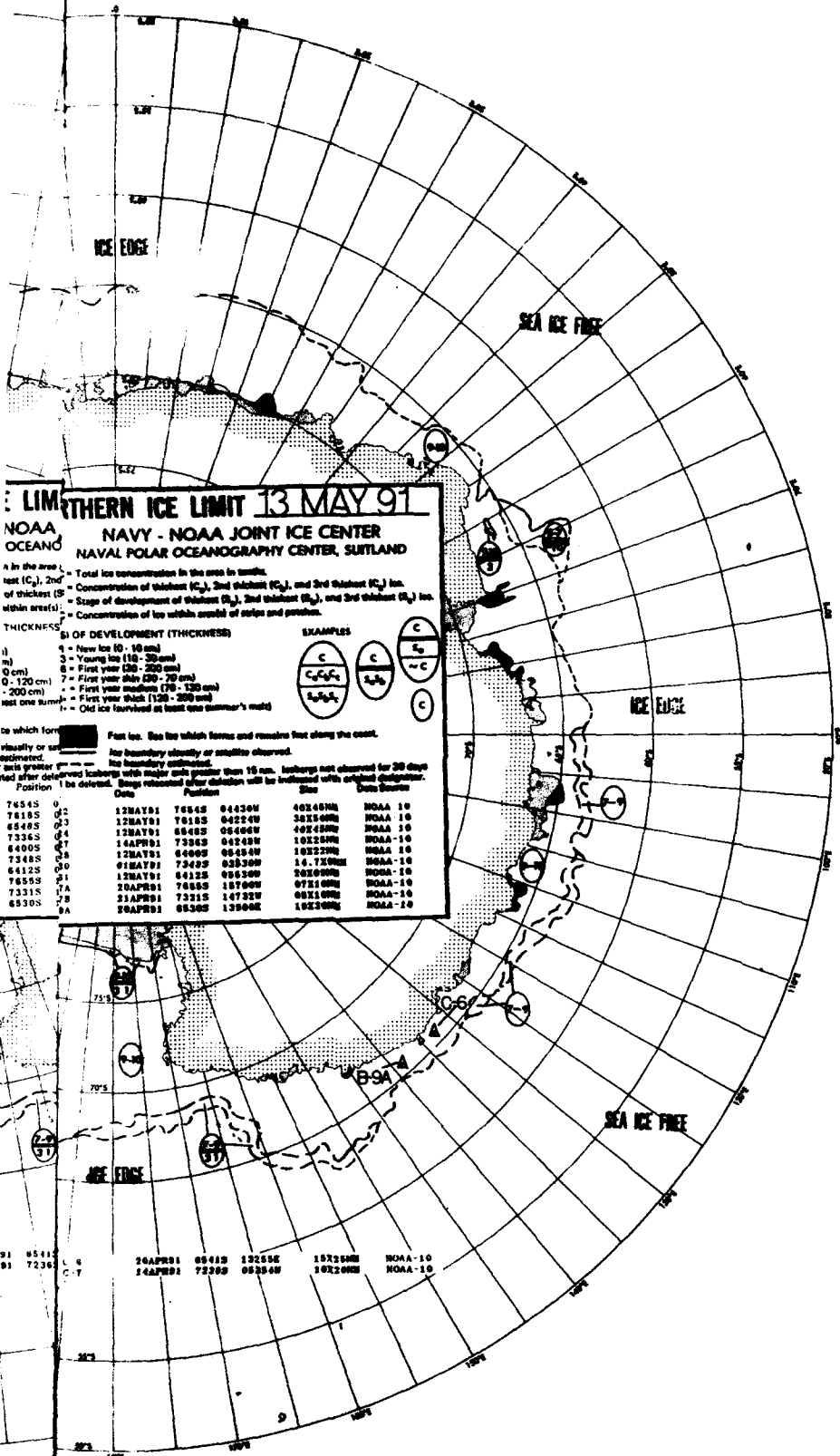
STAGES OF DEVELOPMENT (THICKNESS)
 1 = New ice (0 - 10 cm)
 2 = Young ice (10 - 20 cm)
 3 = First year (20 - 30 cm)
 4 = First year (30 - 50 cm)
 5 = First year (50 - 70 cm)
 6 = First year (70 - 100 cm)
 7 = First year (100 - 120 cm)
 8 = First year (120 - 200 cm)
 9 = Old ice (survived at least one summer's melt)

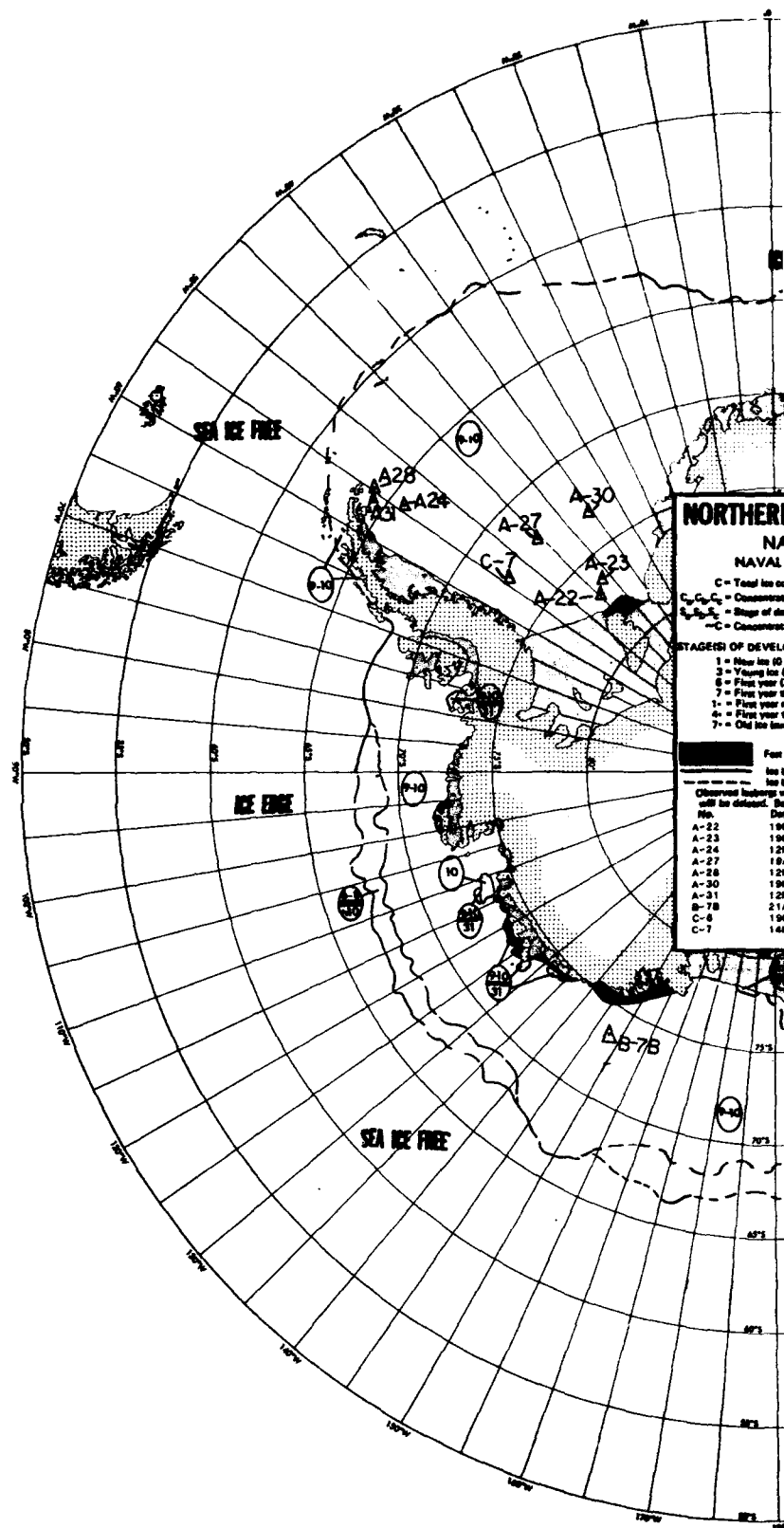


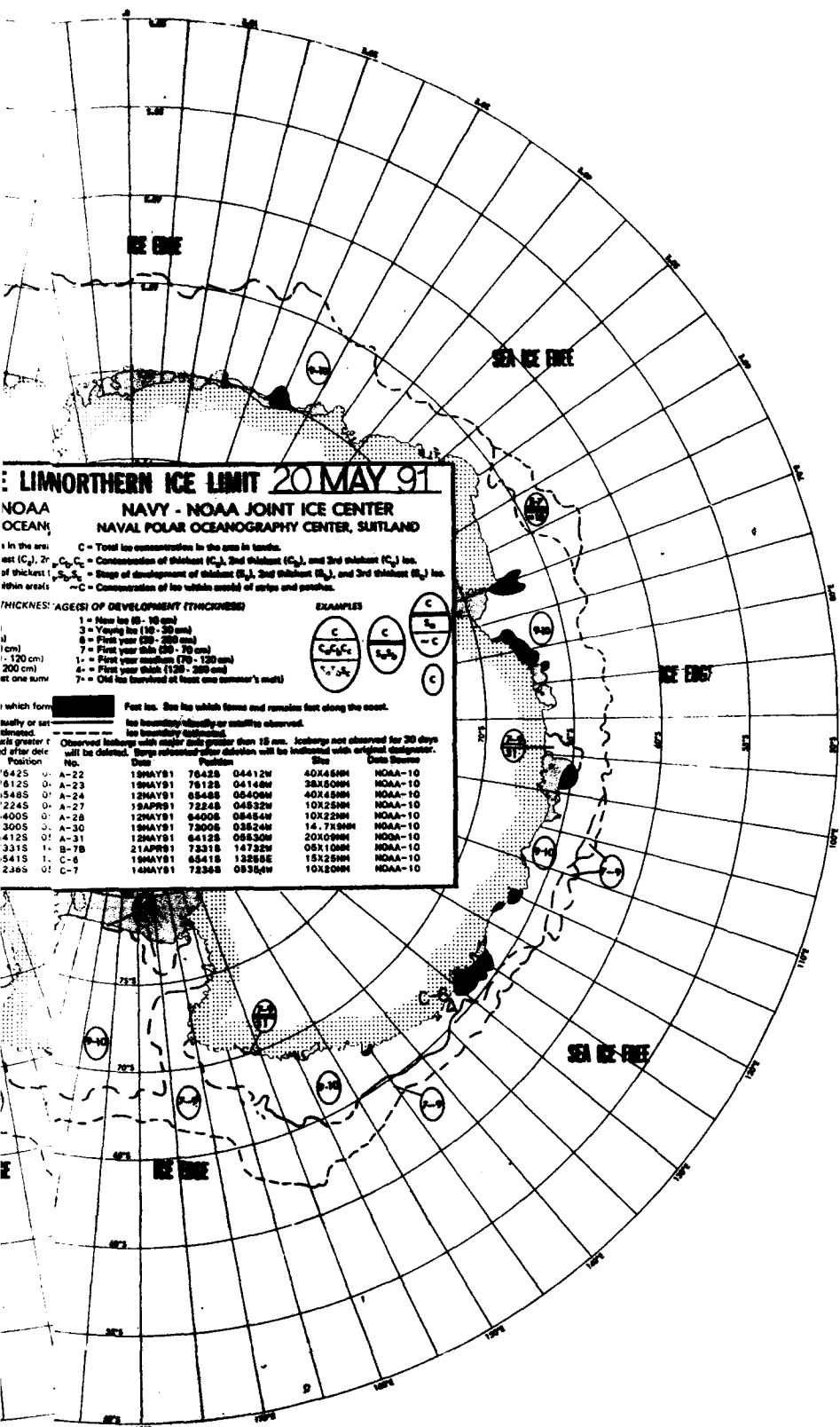
Part 1a. See the white forms and remaining part along the coast.
 Ice boundary visually or satellite observed.
 Ice boundary estimated.
 Observed icebergs with number and greater than 16 mm. Icebergs not observed for 30 days will be deleted. Bergs relocated after deletion will be indicated with original designator.

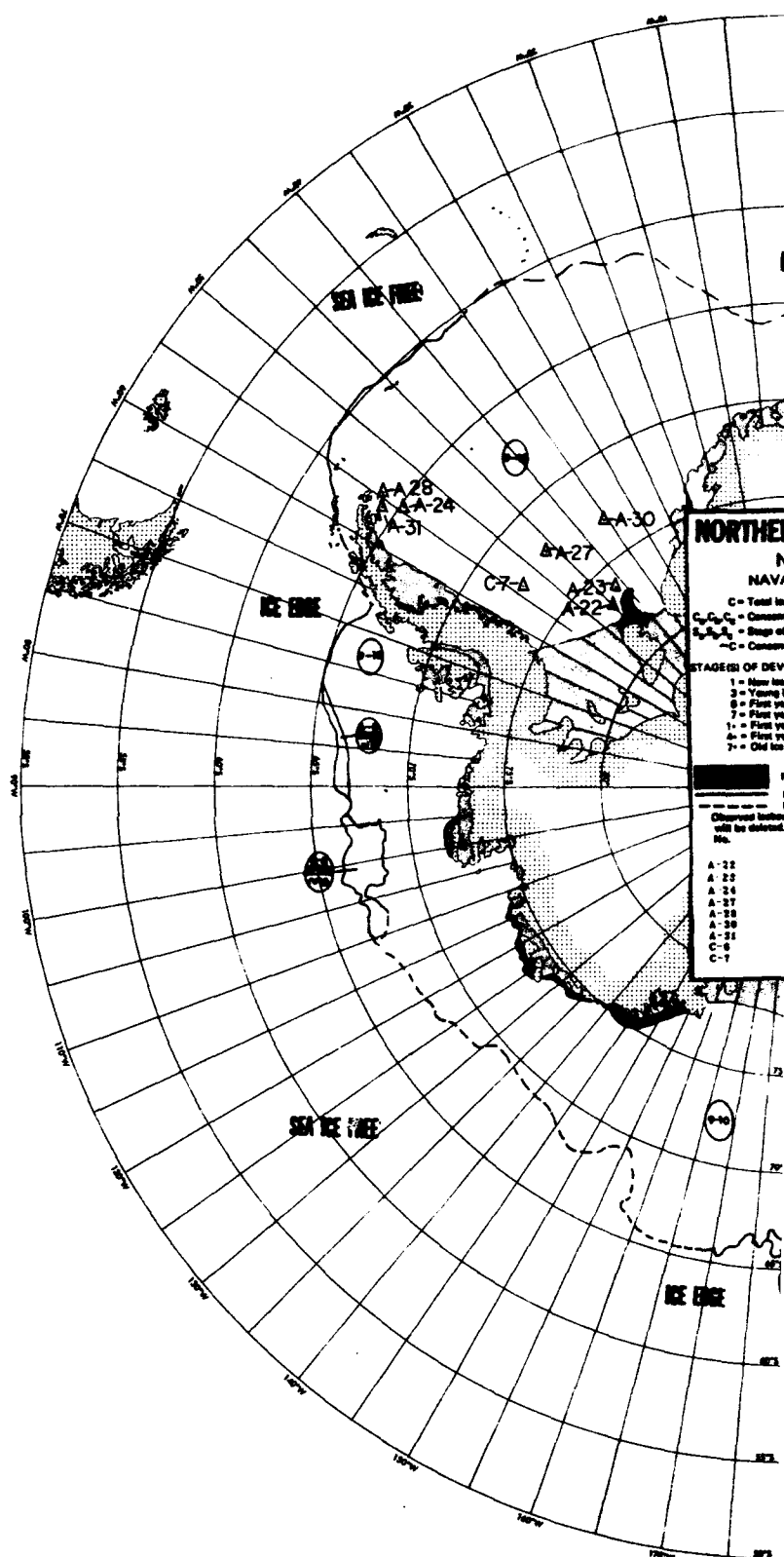
No.	Date	Position	Size	Date Source
A-22	05MAY91	7534S 04430W	46X43NM	NOAA-10
A-23	05MAY91	7518S 04224W	38X50NM	NOAA-10
A-24	05MAY91	0424S 04430W	40X45NM	NOAA-10
A-37	14APR91	7336S 04248W	10X25NM	NOAA-10
A-30	01MAY91	7348S 03330W	14.7X8NM	NOAA-10
B-7A	20APR91	7555S 15750W	07X10NM	NOAA-10
B-7B	21APR91	7331S 14733W	09X10NM	NOAA-10
B-9A	20APR91	6630S 13900E	10X30NM	NOAA-10
C-6	20APR91	6841S 13258E	15X23NM	NOAA-10
C-7	14APR91	7238S 09354W	10X20NM	NOAA-10

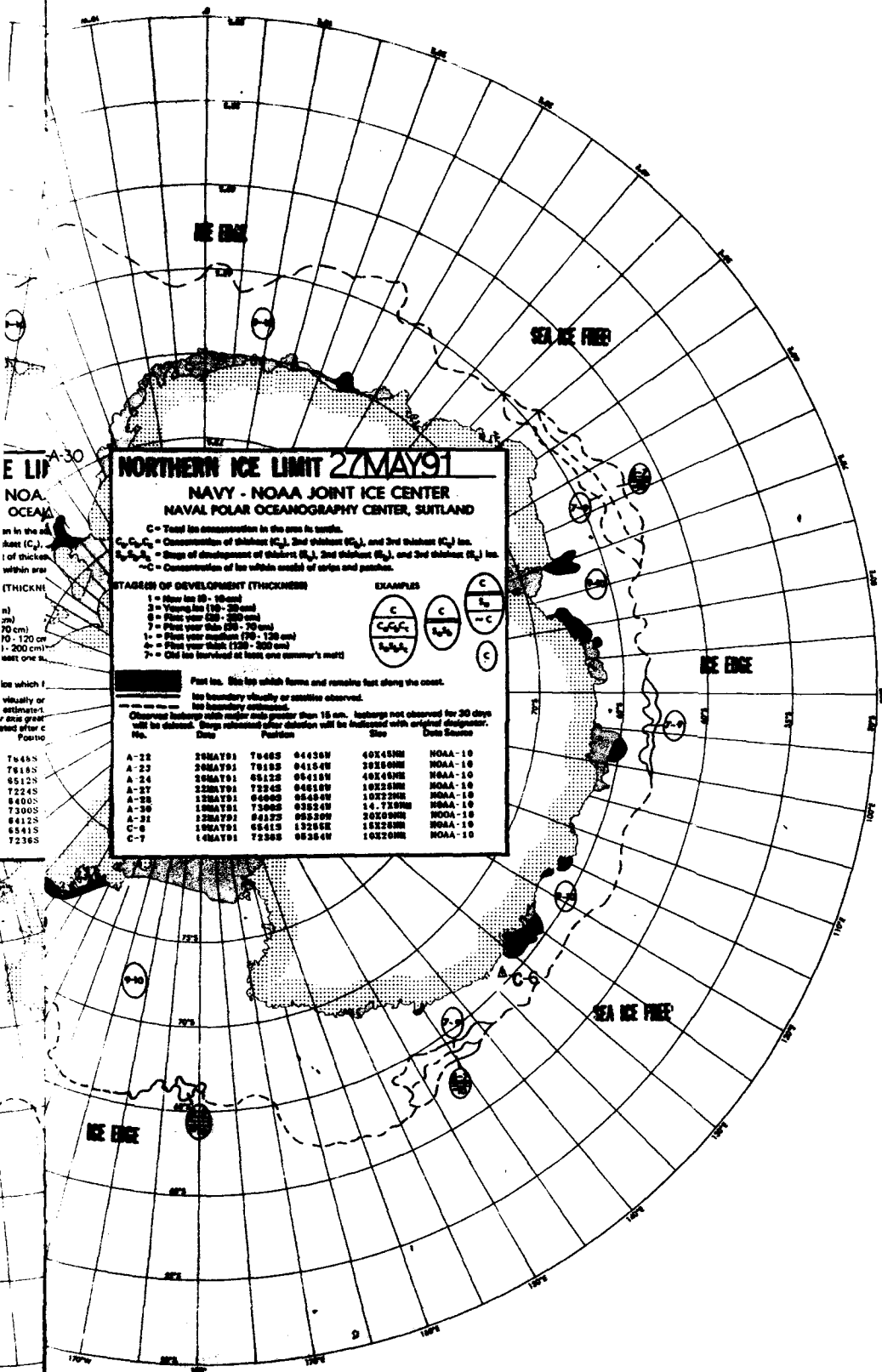


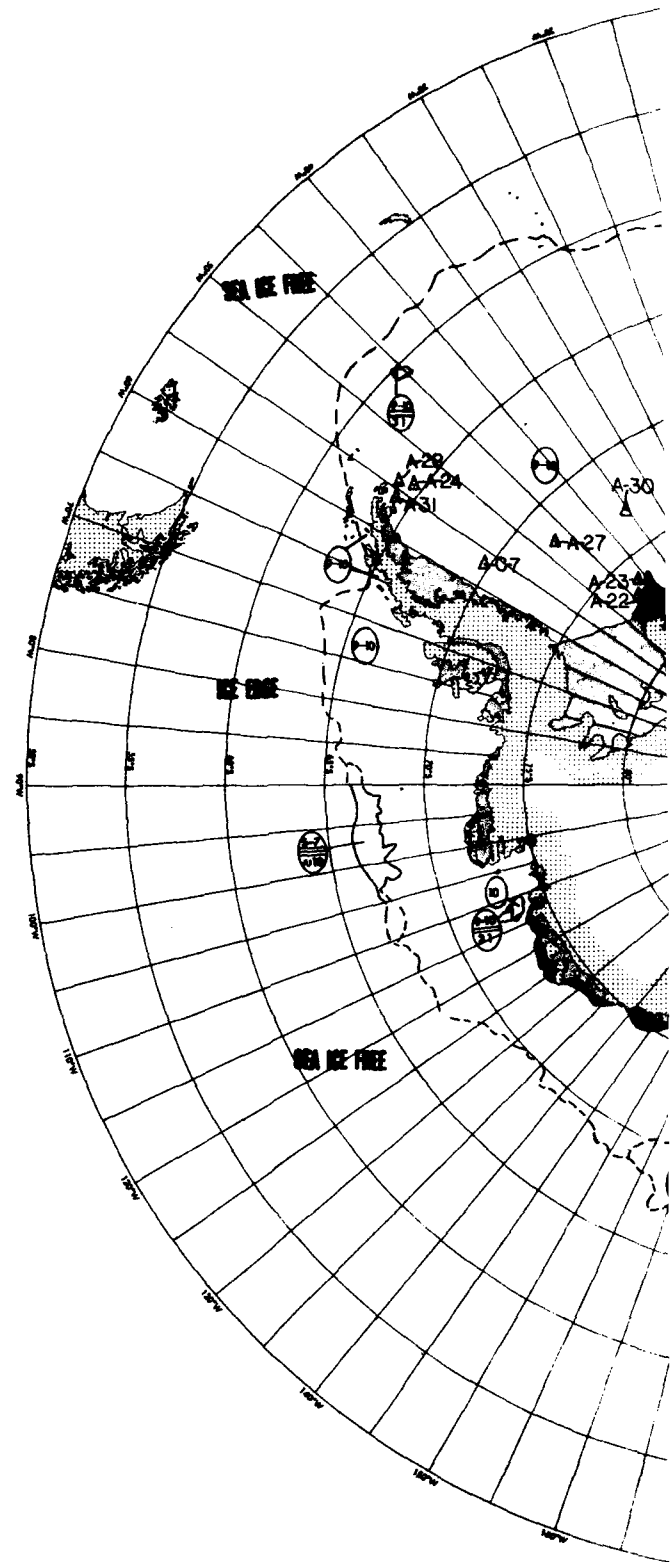


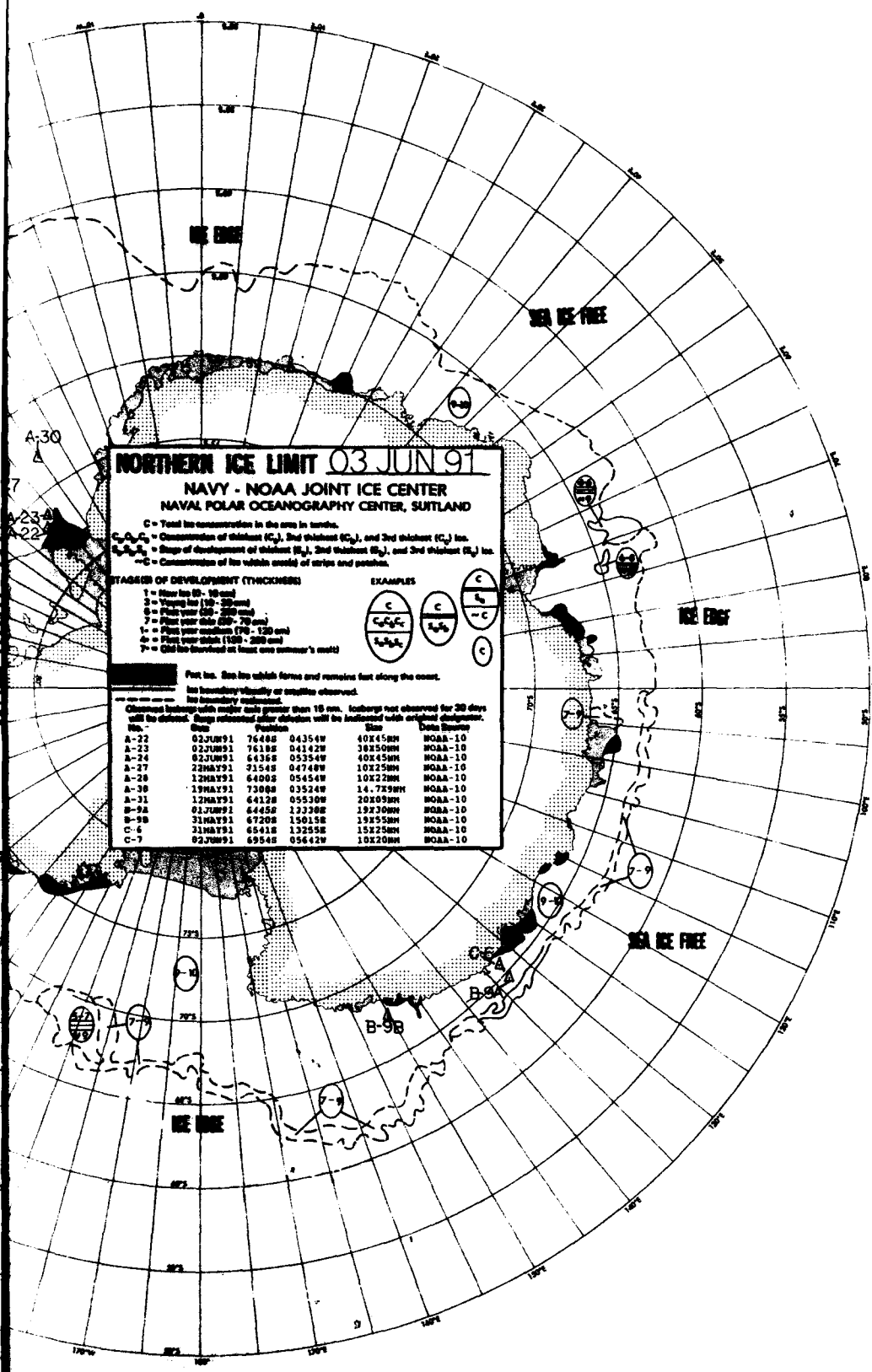












NORTHERN ICE LIMIT 03 JUN 91

NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

C = Total ice concentration in the area in tenths.
C₁, C₂, C₃ = Concentration of thickest (C₁), 2nd thickest (C₂), and 3rd thickest (C₃) ice.
S₁, S₂, S₃ = Stage of development of thickest (S₁), 2nd thickest (S₂), and 3rd thickest (S₃) ice.
-C = Concentration of ice within circle of stripe and position.

STAGES OF DEVELOPMENT (THICKNESS)

- 1 = New ice (0 - 10 cm)
- 2 = Young ice (10 - 25 cm)
- 3 = First year (25 - 50 cm)
- 4 = First year (50 - 75 cm)
- 5 = First year (75 - 120 cm)
- 6 = First year (120 - 200 cm)
- 7 = Old ice (200 cm or more)

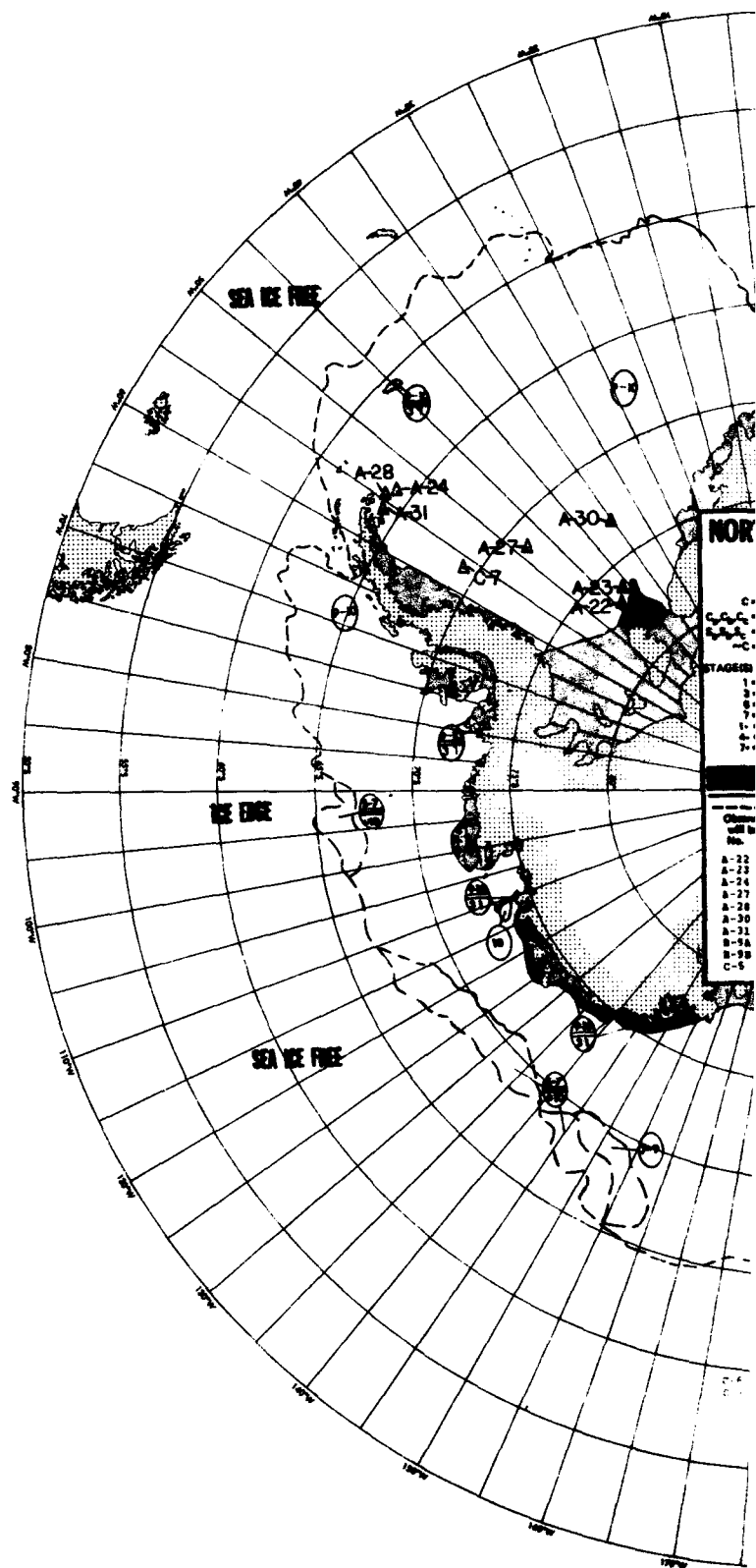
EXAMPLES

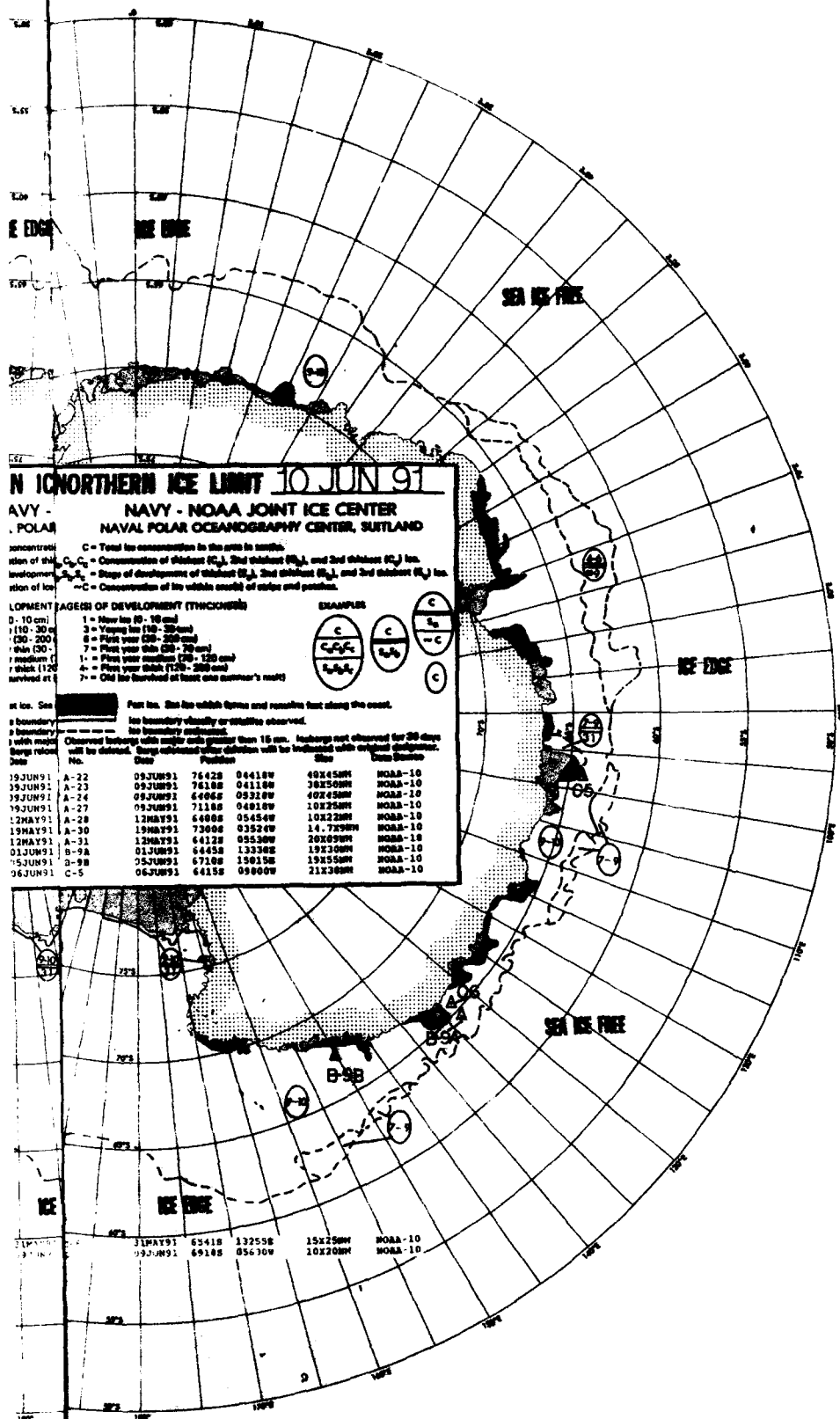


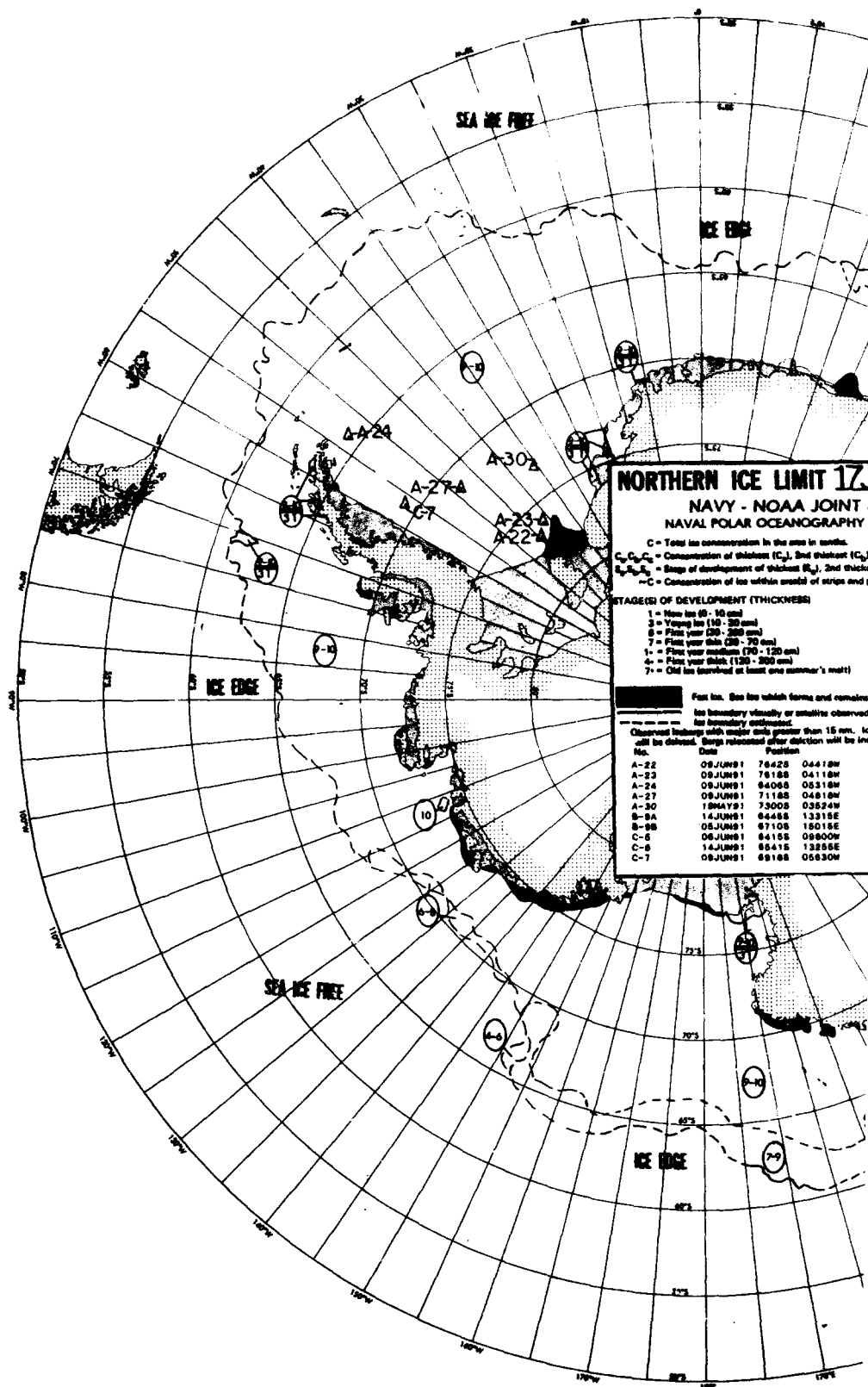
For ice. See ice within forms and remains fast along the coast.
No boundary visibility or multiple observed.

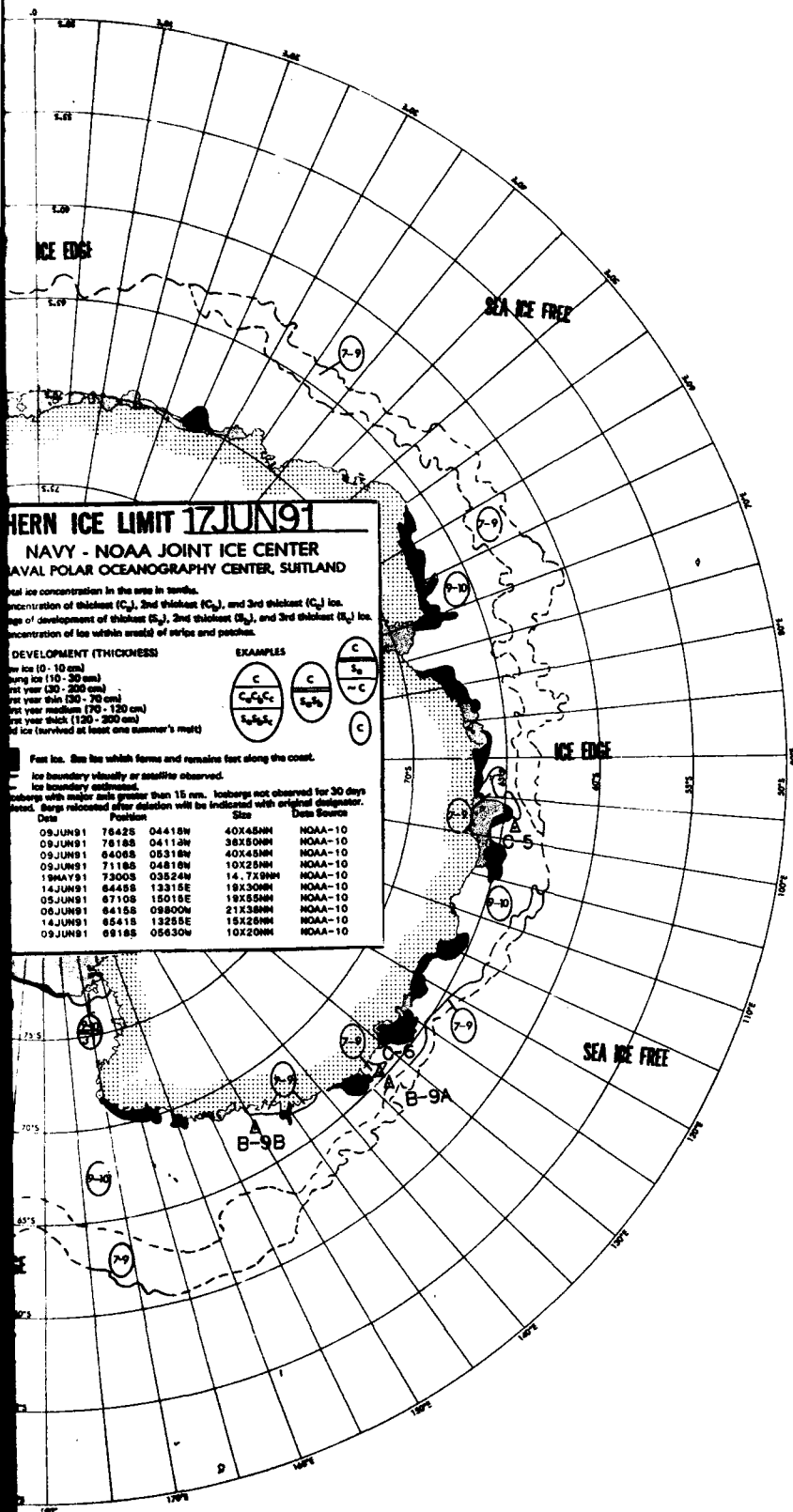
Observed ice with major axis greater than 15 cm. Iceberg not observed for 30 days will be deleted. Some observed data deletion will be indicated with original designation.

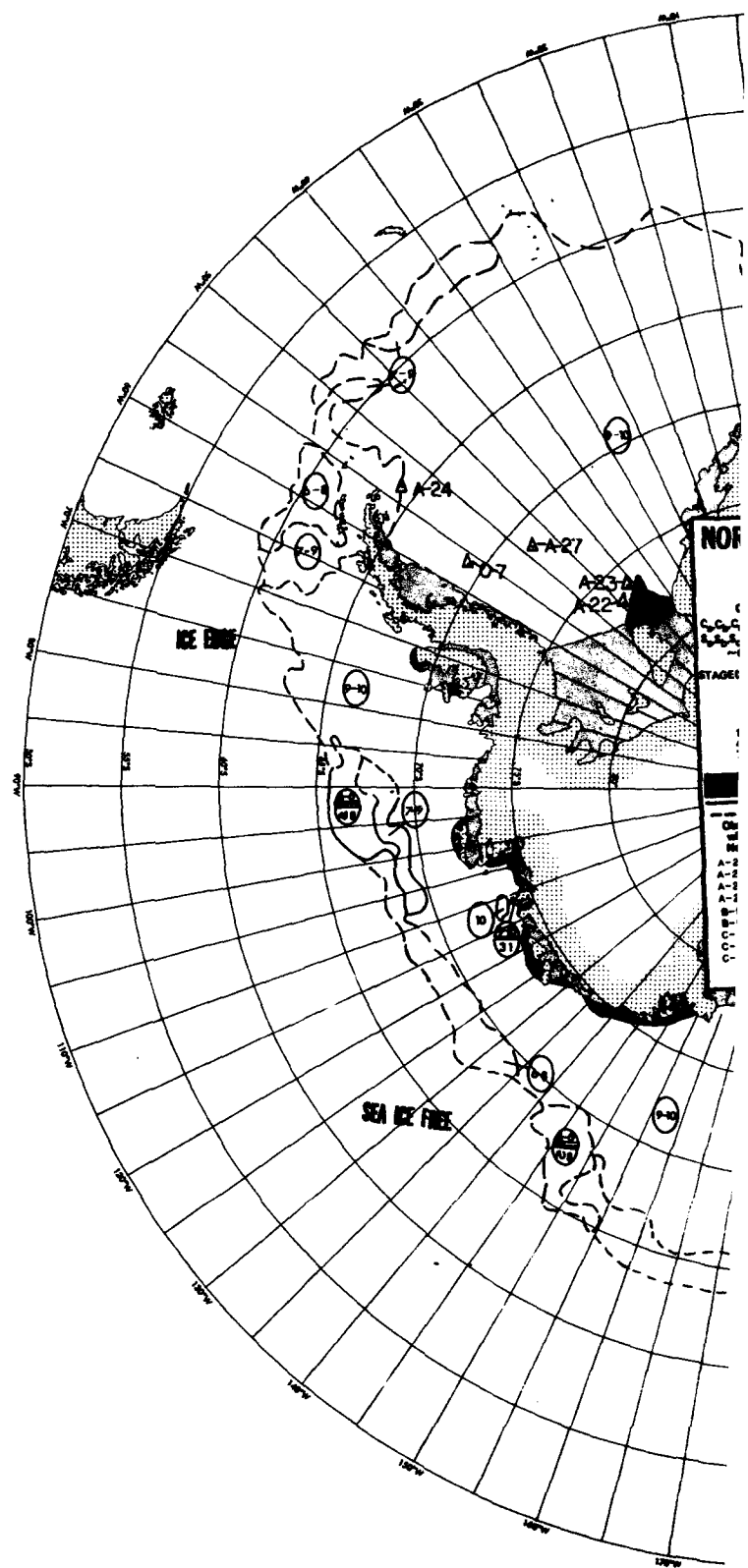
No.	Date	Position	Size	Notes
A-22	02JUN91	76488 04354W	40X45NM	NOAA-10
A-23	02JUN91	76188 04142W	30X50NM	NOAA-10
A-24	02JUN91	64368 05354W	40X45NM	NOAA-10
A-27	22MAY91	71548 04748W	10X25NM	NOAA-10
A-28	12MAY91	64008 05454W	10X22NM	NOAA-10
A-30	19MAY91	73008 03524W	14.7X9NM	NOAA-10
A-31	12MAY91	64128 05510W	20X30NM	NOAA-10
B-9A	02JUN91	64450 12330E	19X30NM	NOAA-10
B-9B	31MAY91	67208 15015E	19X55NM	NOAA-10
C-6	31MAY91	65418 13255E	15X25NM	NOAA-10
C-7	02JUN91	69548 05642W	10X20NM	NOAA-10

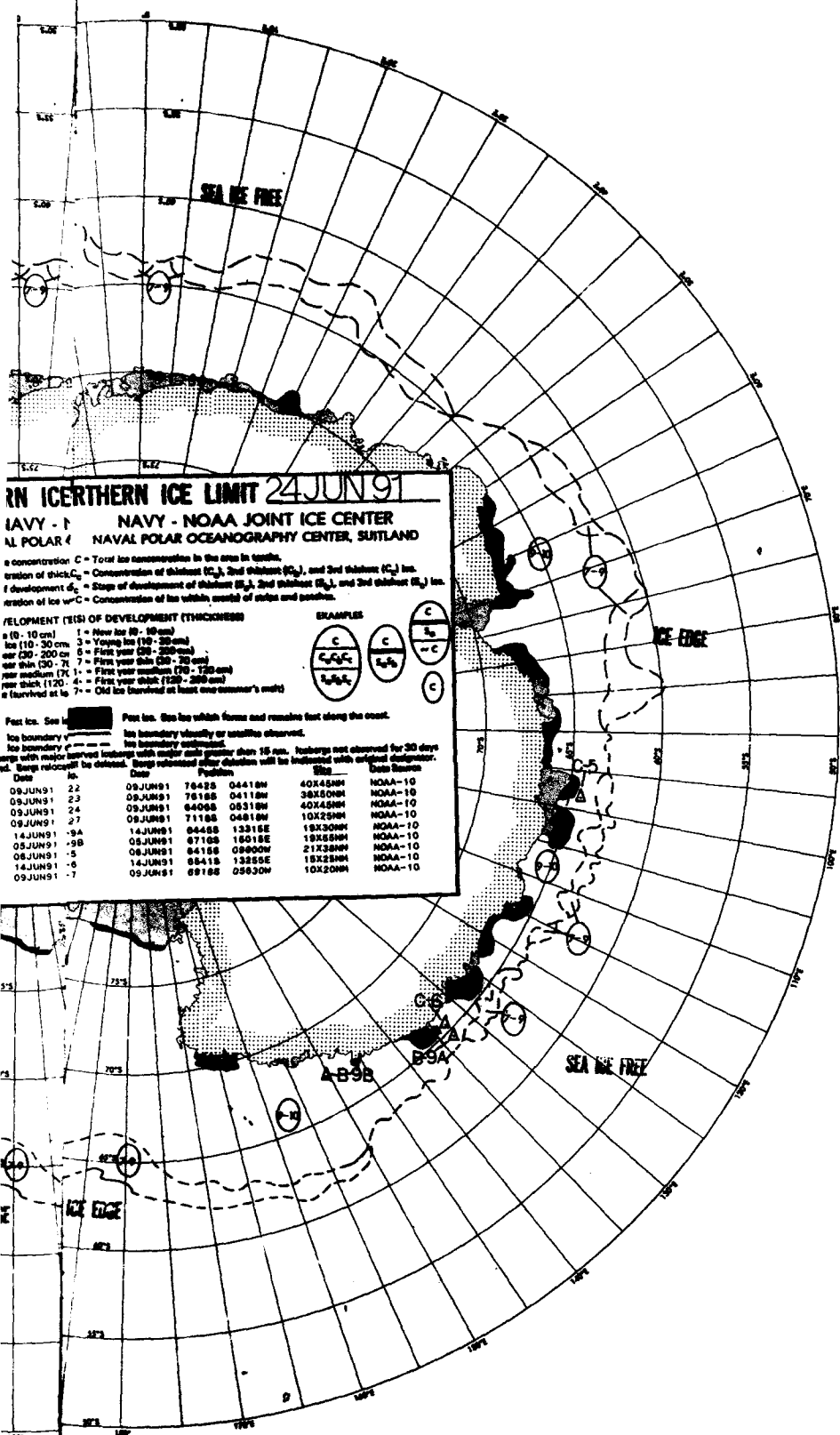


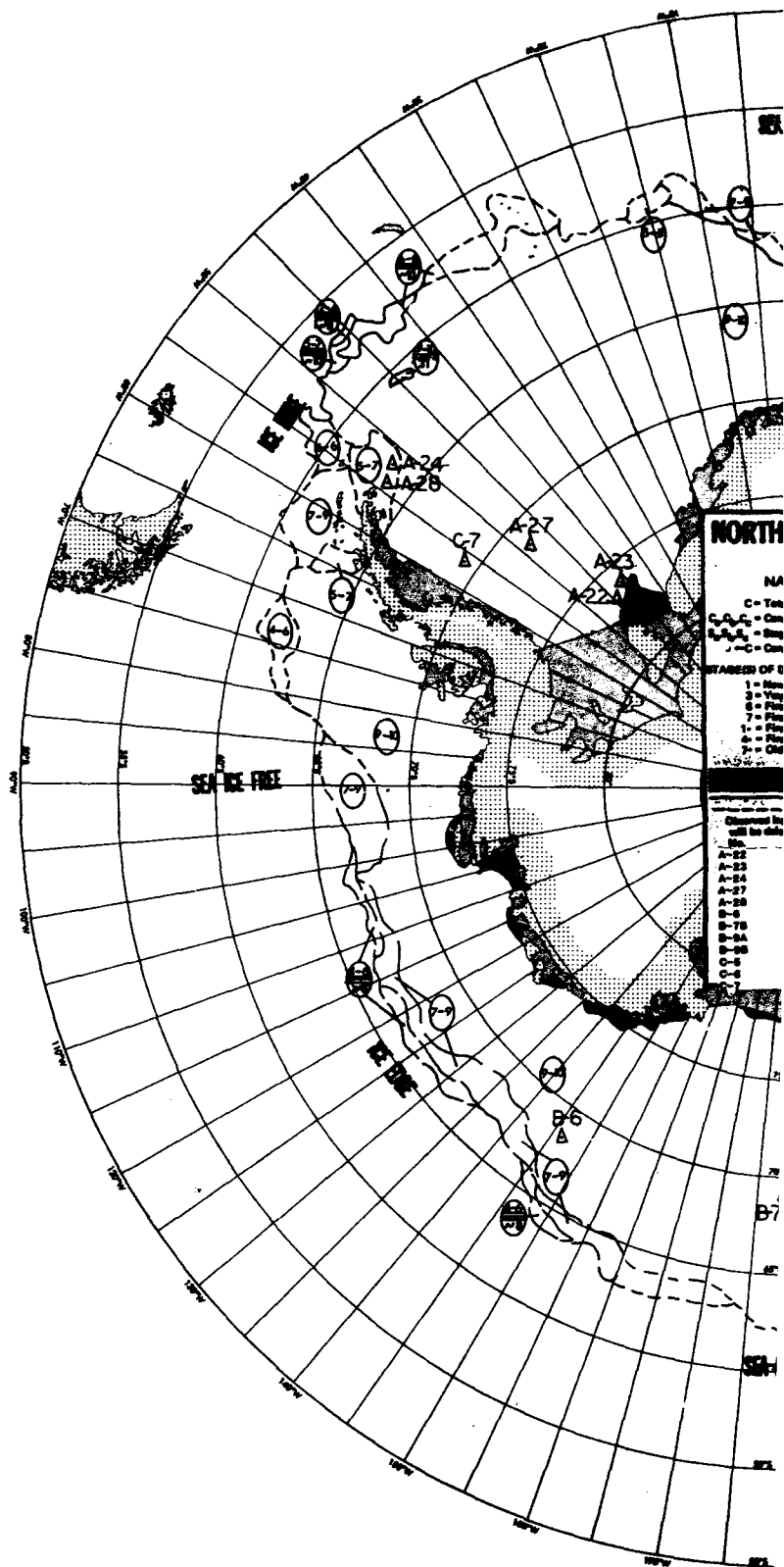


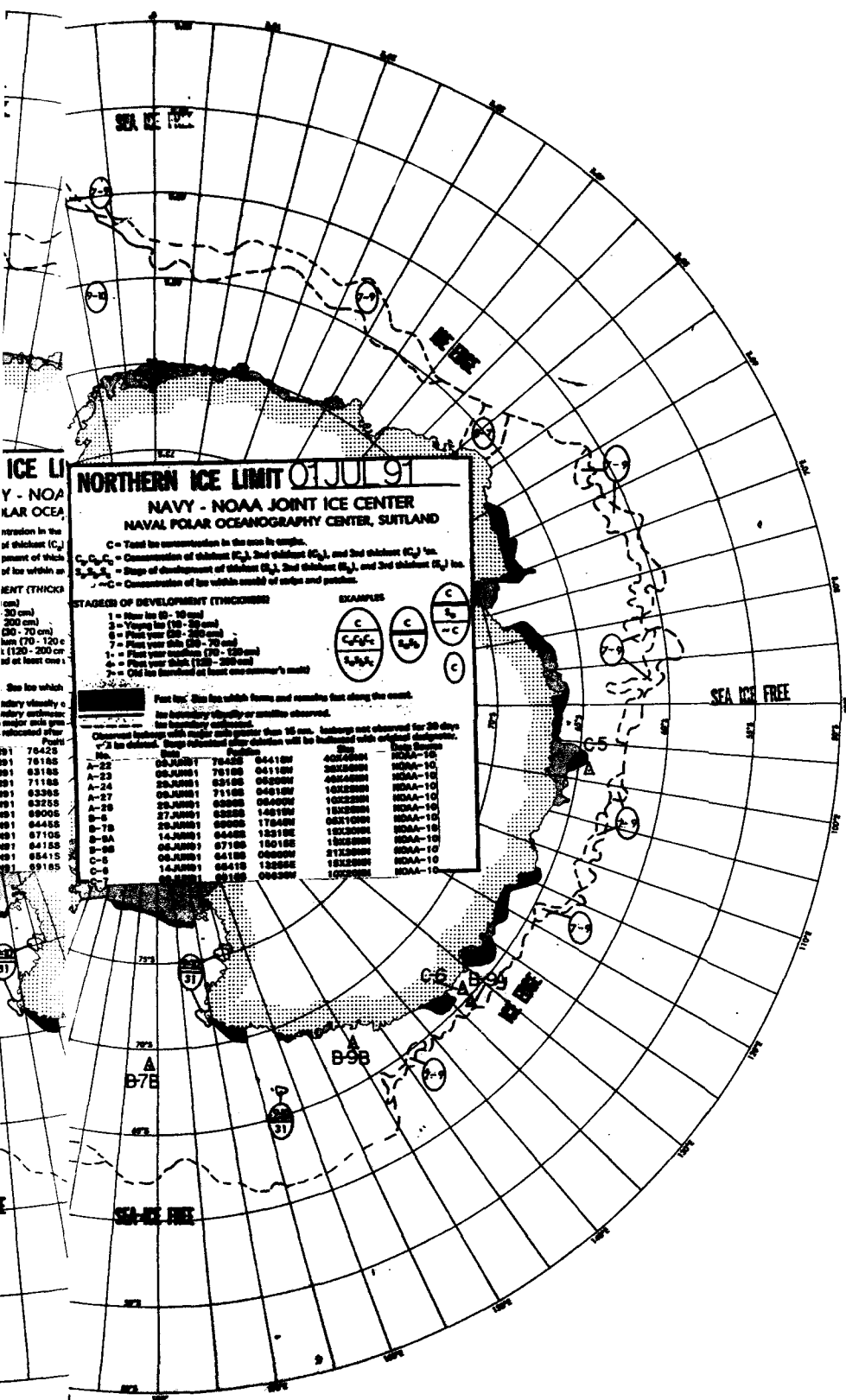


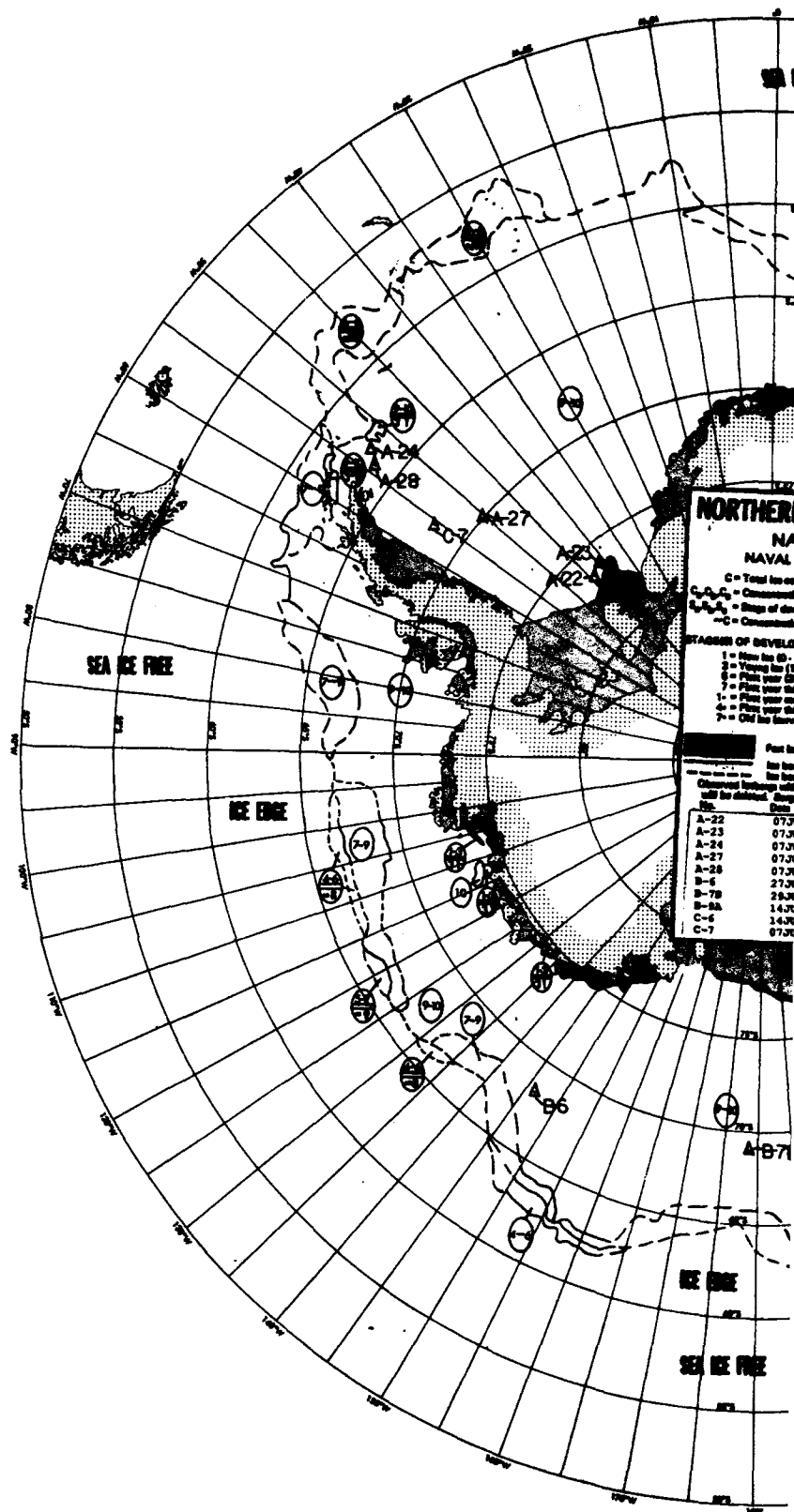


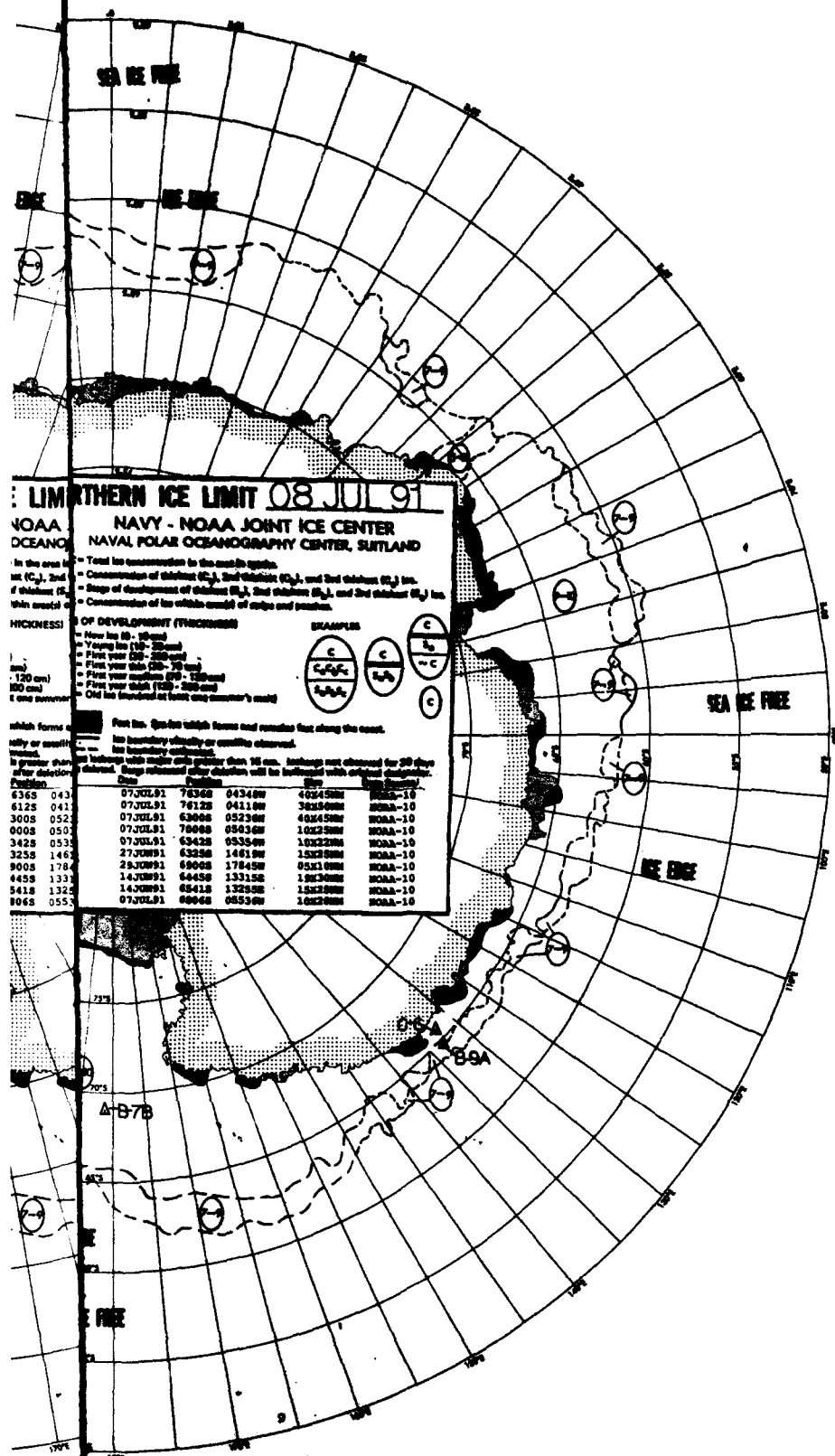


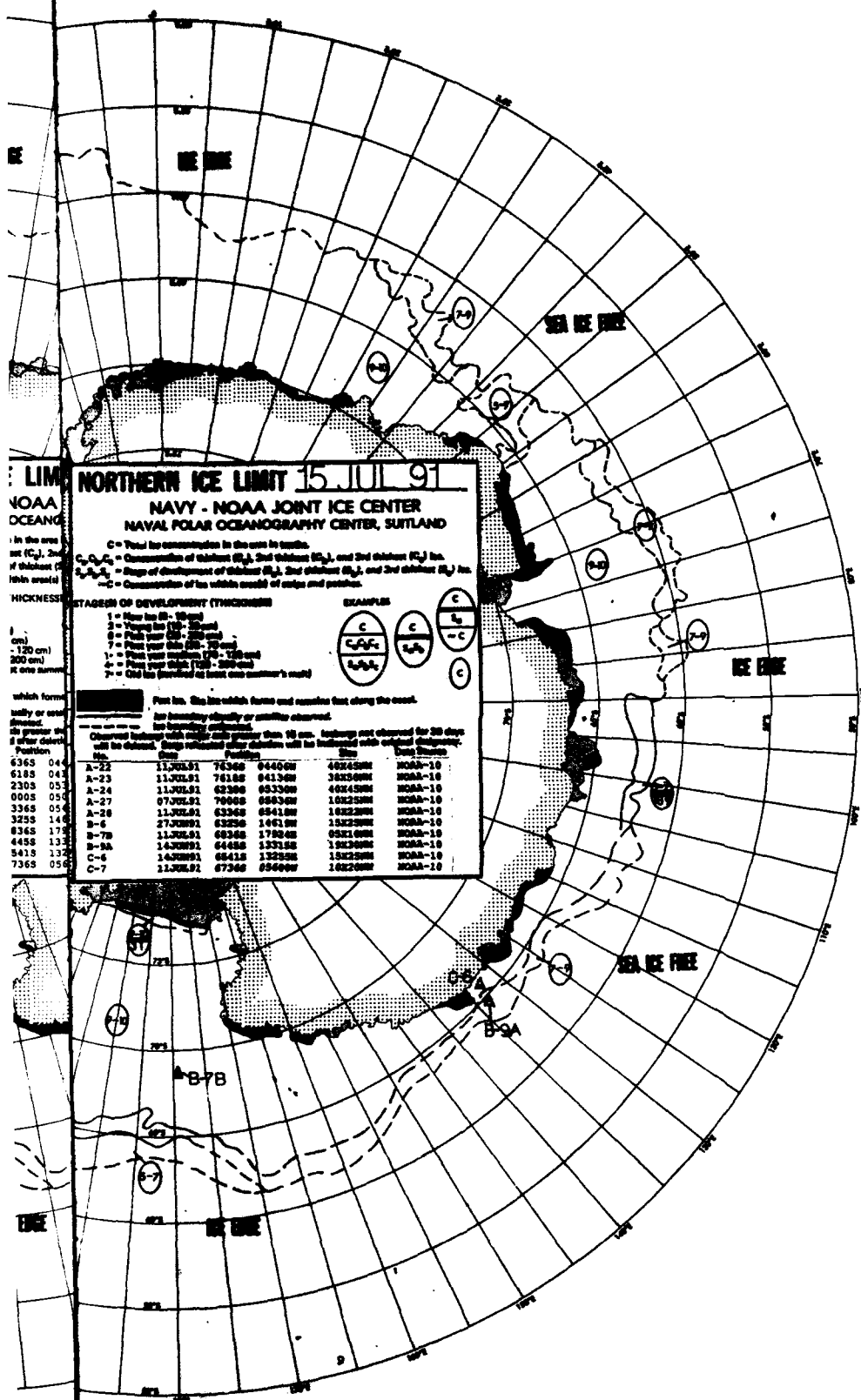


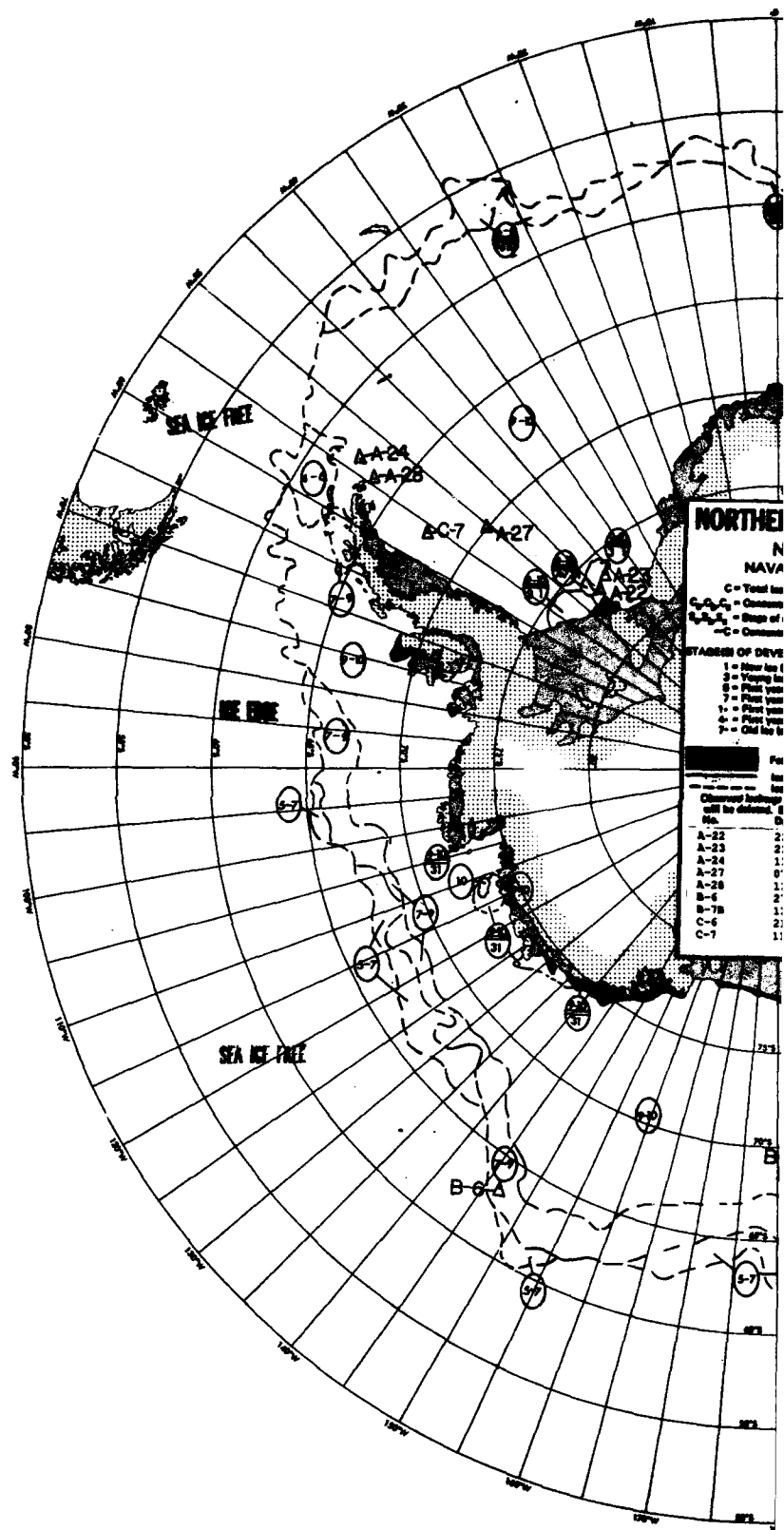


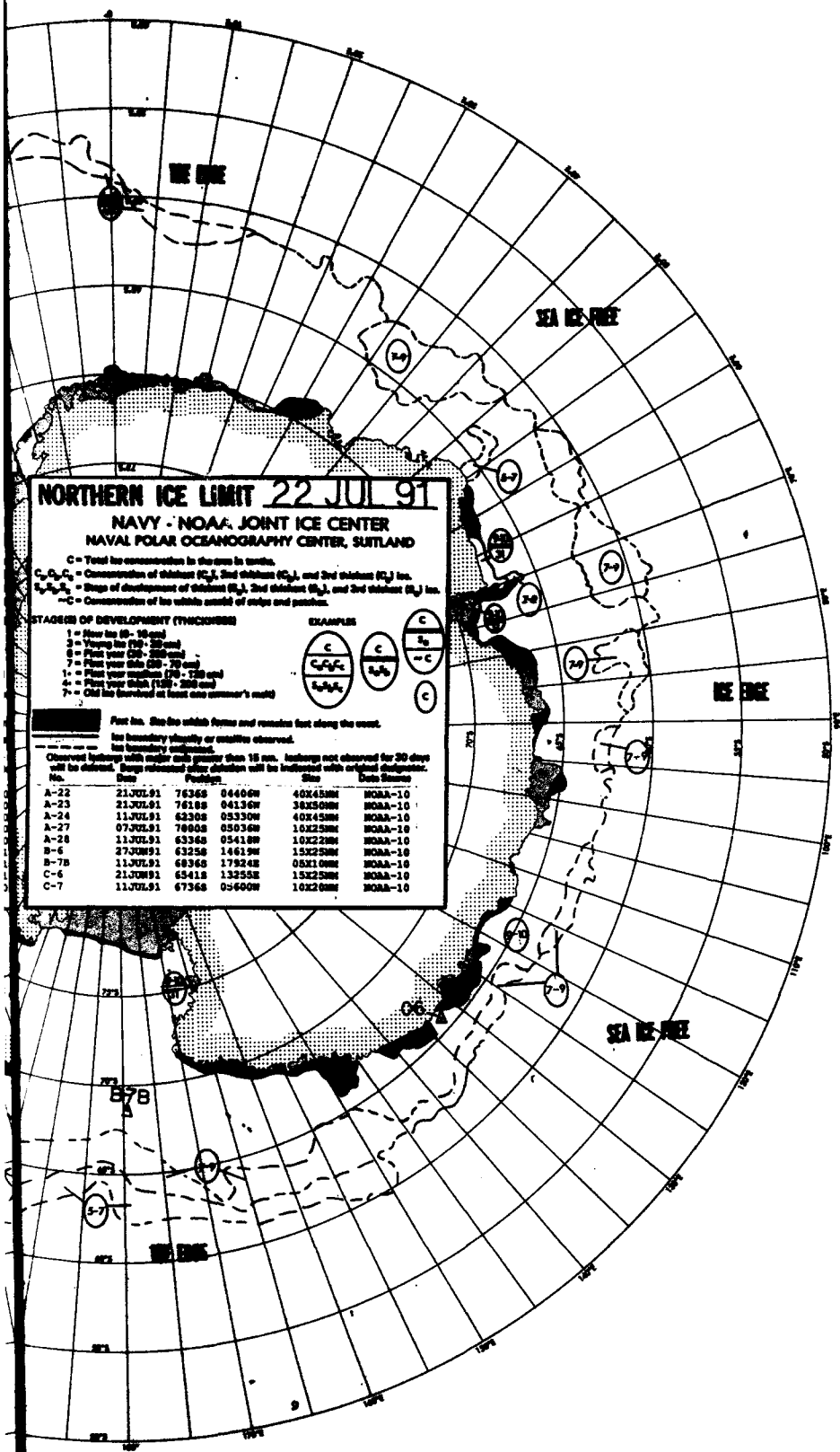












NORTHERN ICE LIMIT 22 JUL 91

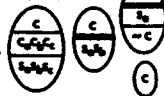
**NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUTLAND**

C = Total ice concentration in the area in tenths.
 C_1, C_2, C_3 = Concentration of thickest (C_1), 2nd thickest (C_2), and 3rd thickest (C_3) ice.
 S_1, S_2, S_3 = Stage of development of thickest (S_1), 2nd thickest (S_2), and 3rd thickest (S_3) ice.
 -C = Concentration of ice within circle of radius and position.

STAGES OF DEVELOPMENT (THICKNESS)

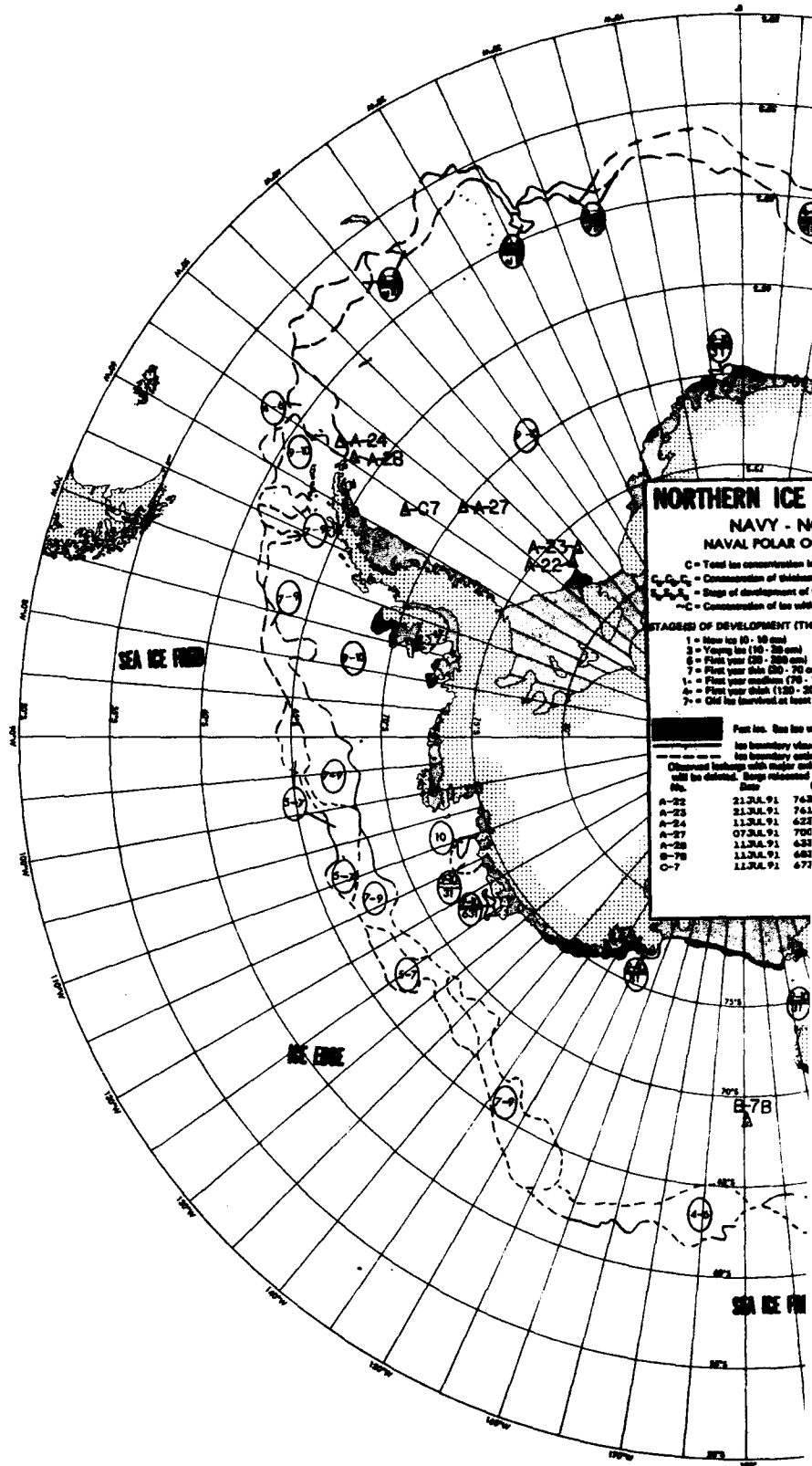
- 1 = New ice (0 - 10 cm)
- 2 = Young ice (10 - 20 cm)
- 3 = First year (20 - 250 cm)
- 4 = First year (250 - 270 cm)
- 5 = First year (270 - 290 cm)
- 6 = First year (290 - 300 cm)
- 7 = Old ice (300 cm and over)

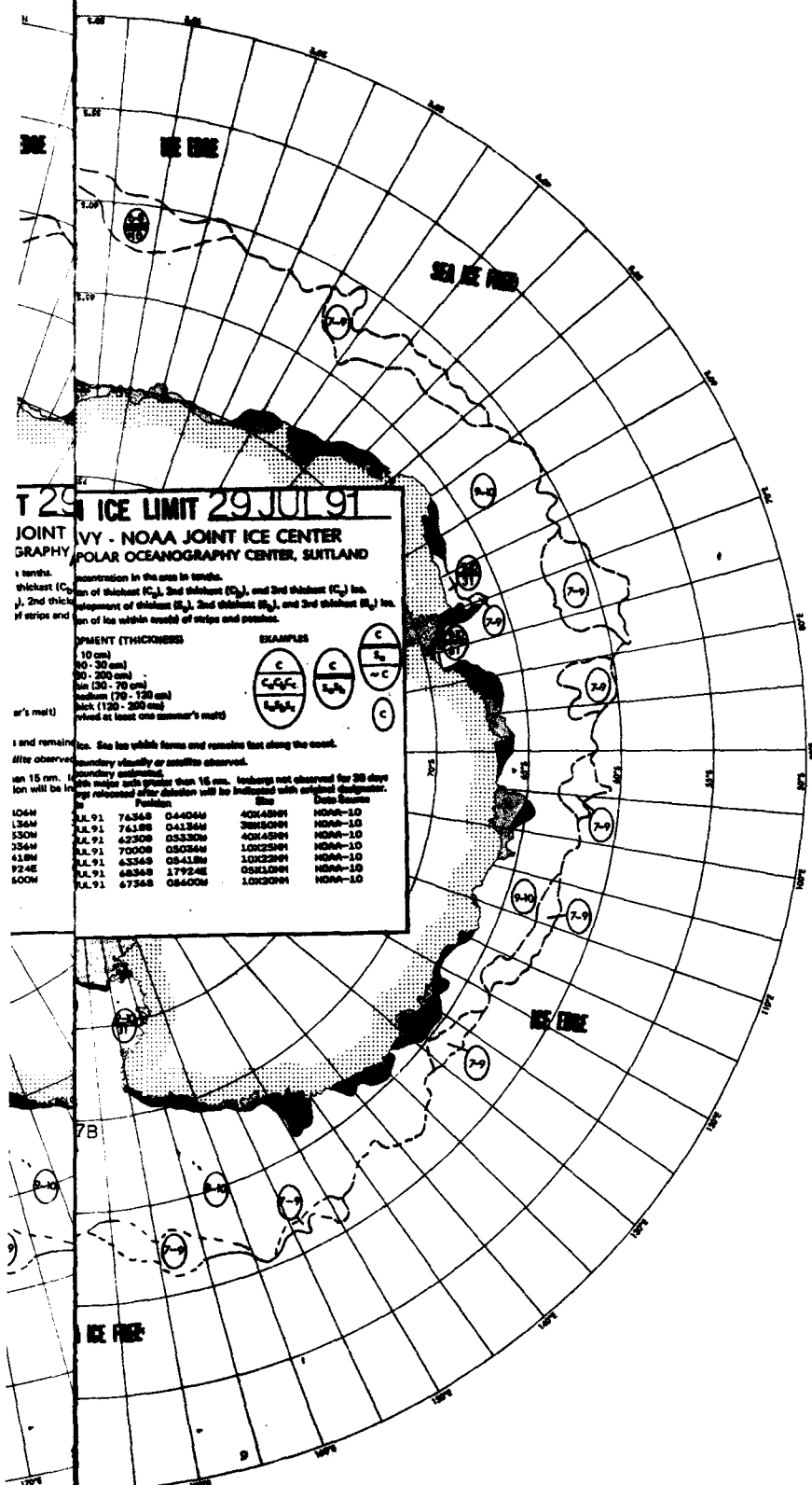
EXAMPLES



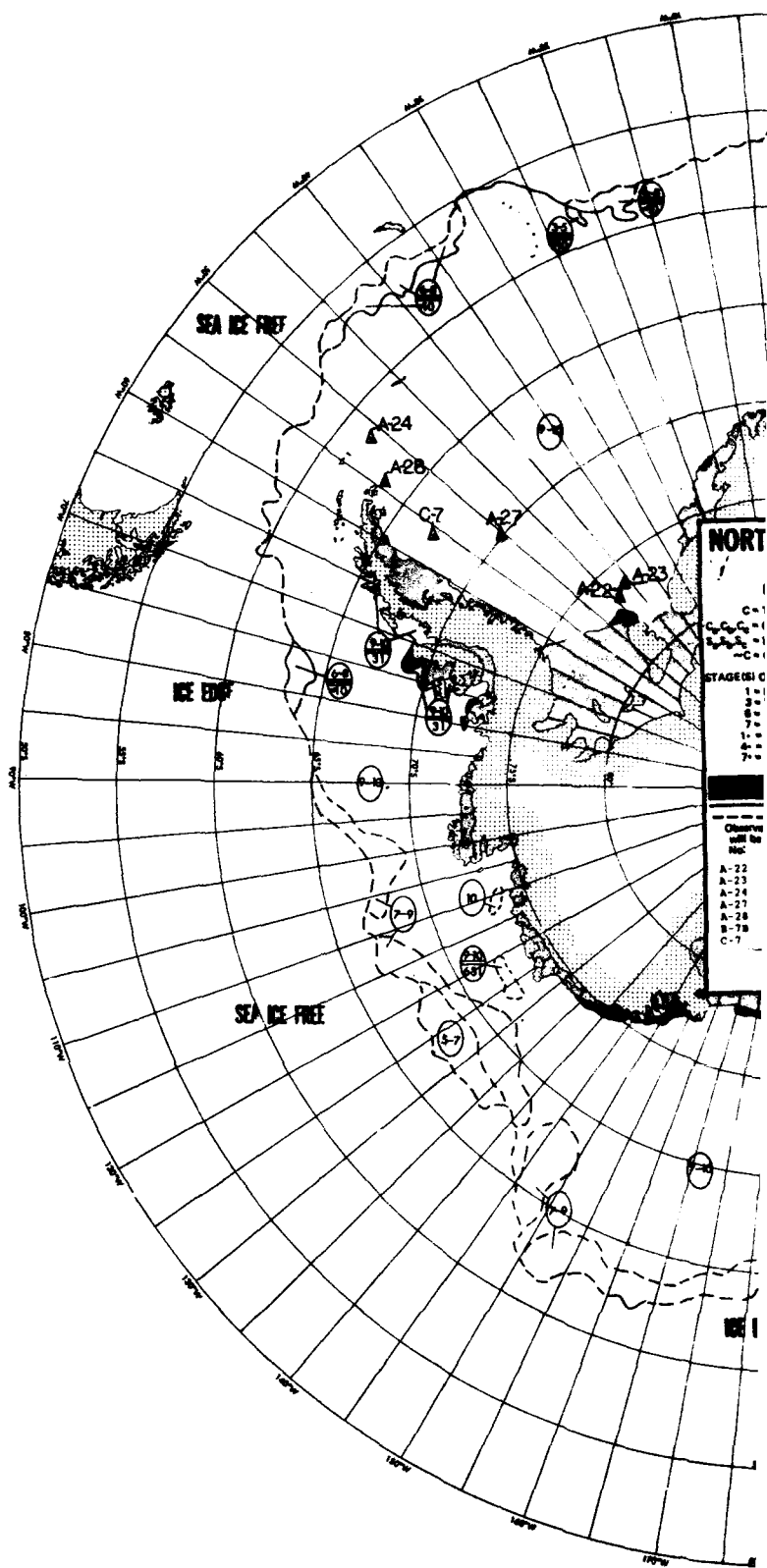
Fast ice. Sea ice which forms and remains fast along the coast.
 Ice boundary vicinity or outside observed.
 Observed icebergs with major axis greater than 15 m. Icebergs not observed for 30 days will be deleted. Range indicated after date will be indicated with original designation.

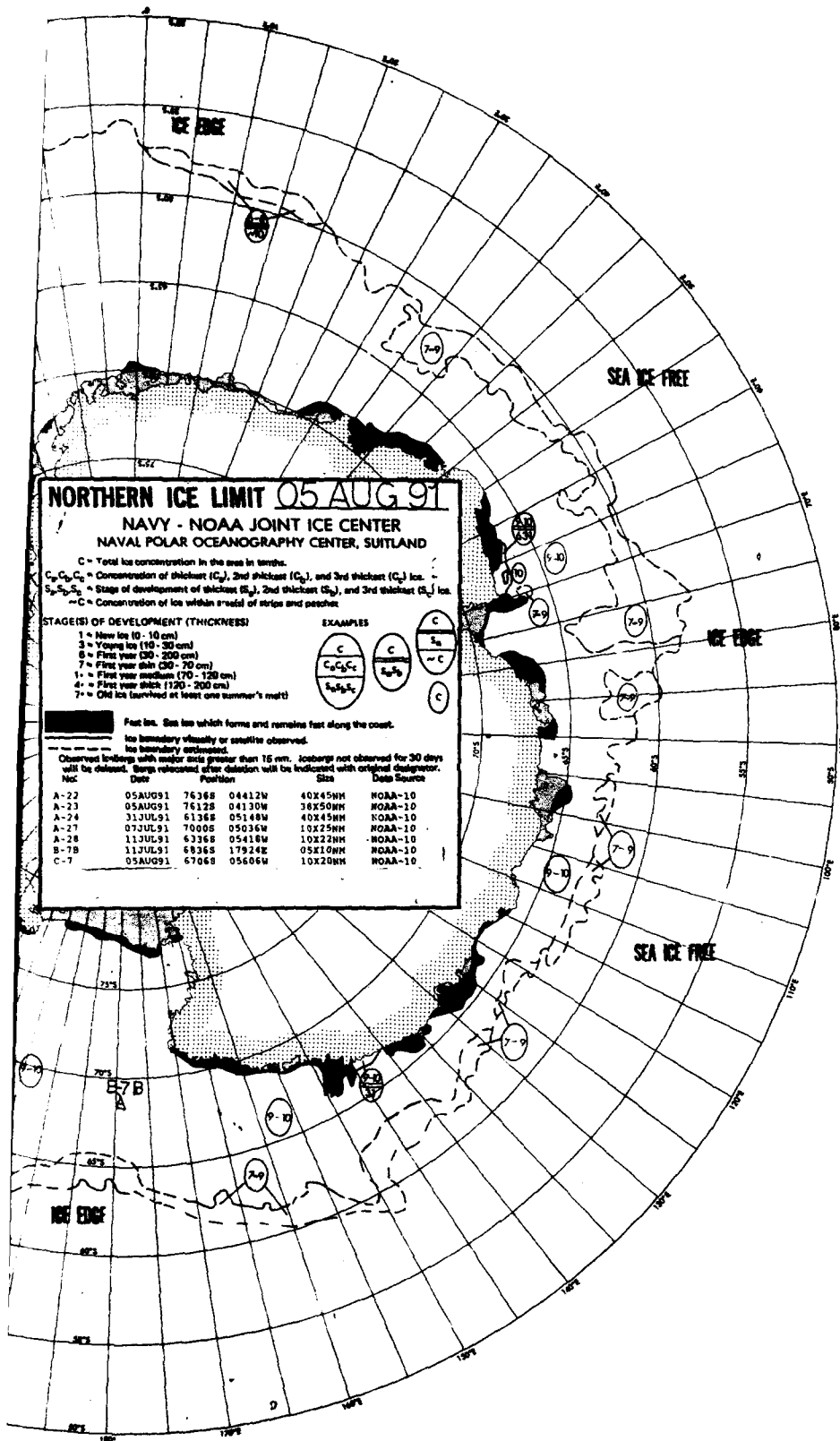
No.	Date	Position	Size	Notes
A-22	21 JUL 91	7636N 04400W	40X45NM	NOAA-10
A-23	21 JUL 91	7618N 04130W	38X50NM	NOAA-10
A-24	11 JUL 91	6330N 05330W	40X45NM	NOAA-10
A-27	07 JUL 91	7600N 05030W	10X25NM	NOAA-10
A-28	11 JUL 91	6336N 05410W	10X22NM	NOAA-10
B-6	27 JUN 91	6325N 14619W	15X25NM	NOAA-10
B-7B	11 JUL 91	6836N 1752E	08X10NM	NOAA-10
C-6	21 JUN 91	6541N 13255E	15X25NM	NOAA-10
C-7	11 JUL 91	6736N 05600W	10X20NM	NOAA-10

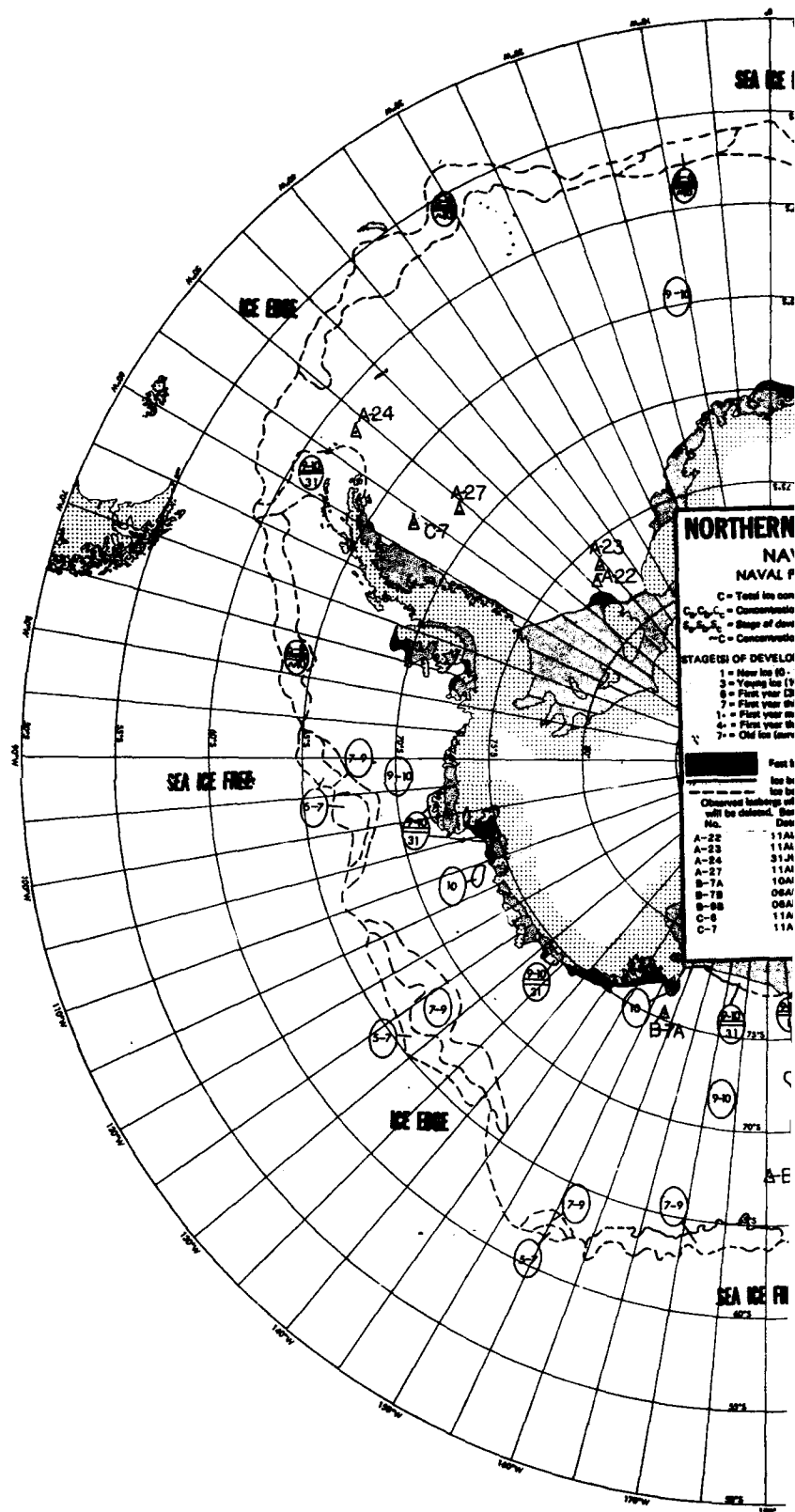


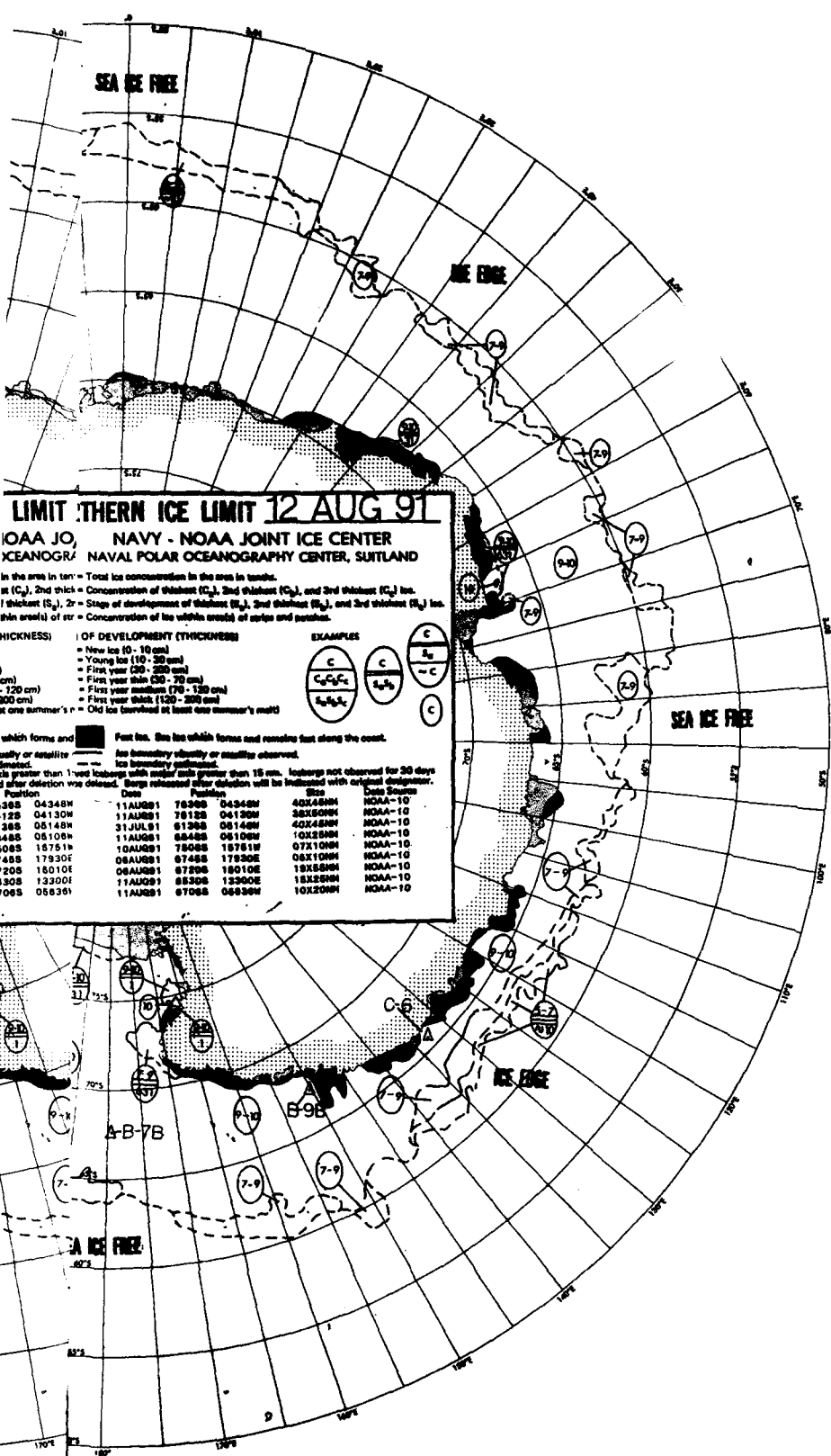


2









LIMIT THERN ICE LIMIT 12 AUG 91

IOAA JO, NAVY - NOAA JOINT ICE CENTER
 ICEANOG/ NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

In the area in tan: Total ice concentration in the area in tenths.
 as (C₁), 2nd thick = Concentration of thickest (C₂), 2nd thickest (C₃) ice.
 (thickest (S₁), 2nd = Stage of development of thickest (S₂), 2nd thickest (S₃) ice.
 thin areas (s) or = Concentration of ice within areas of strips and patches.

THICKNESS **OF DEVELOPMENT (THICKNESSES)**

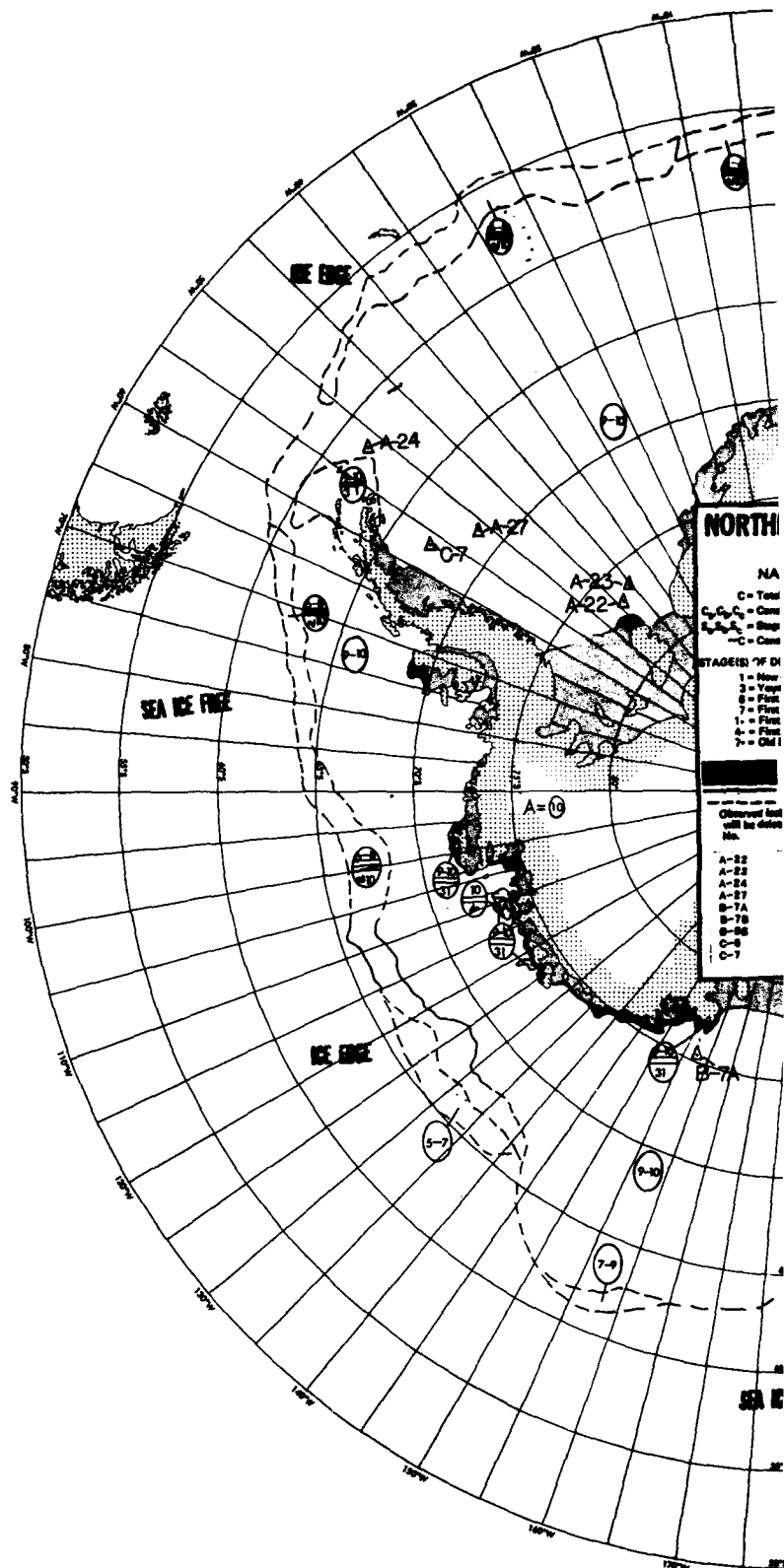
- New ice (0 - 10 cm)
- Young ice (10 - 30 cm)
- First year (30 - 200 cm)
- First year thin (20 - 70 cm)
- First year medium (70 - 120 cm)
- First year thick (120 - 200 cm)
- Old ice (survived at least one summer's melt)

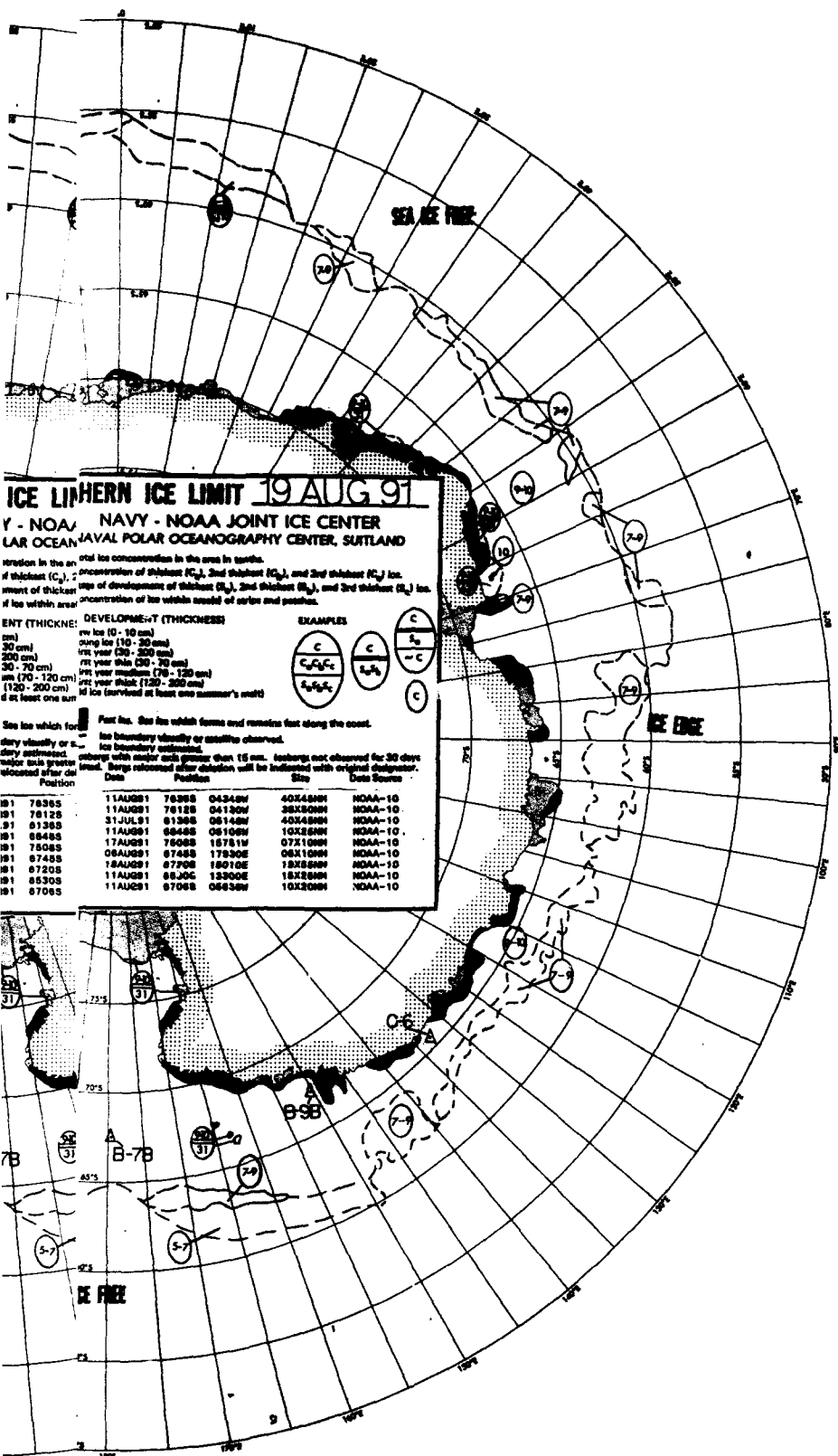
EXAMPLES

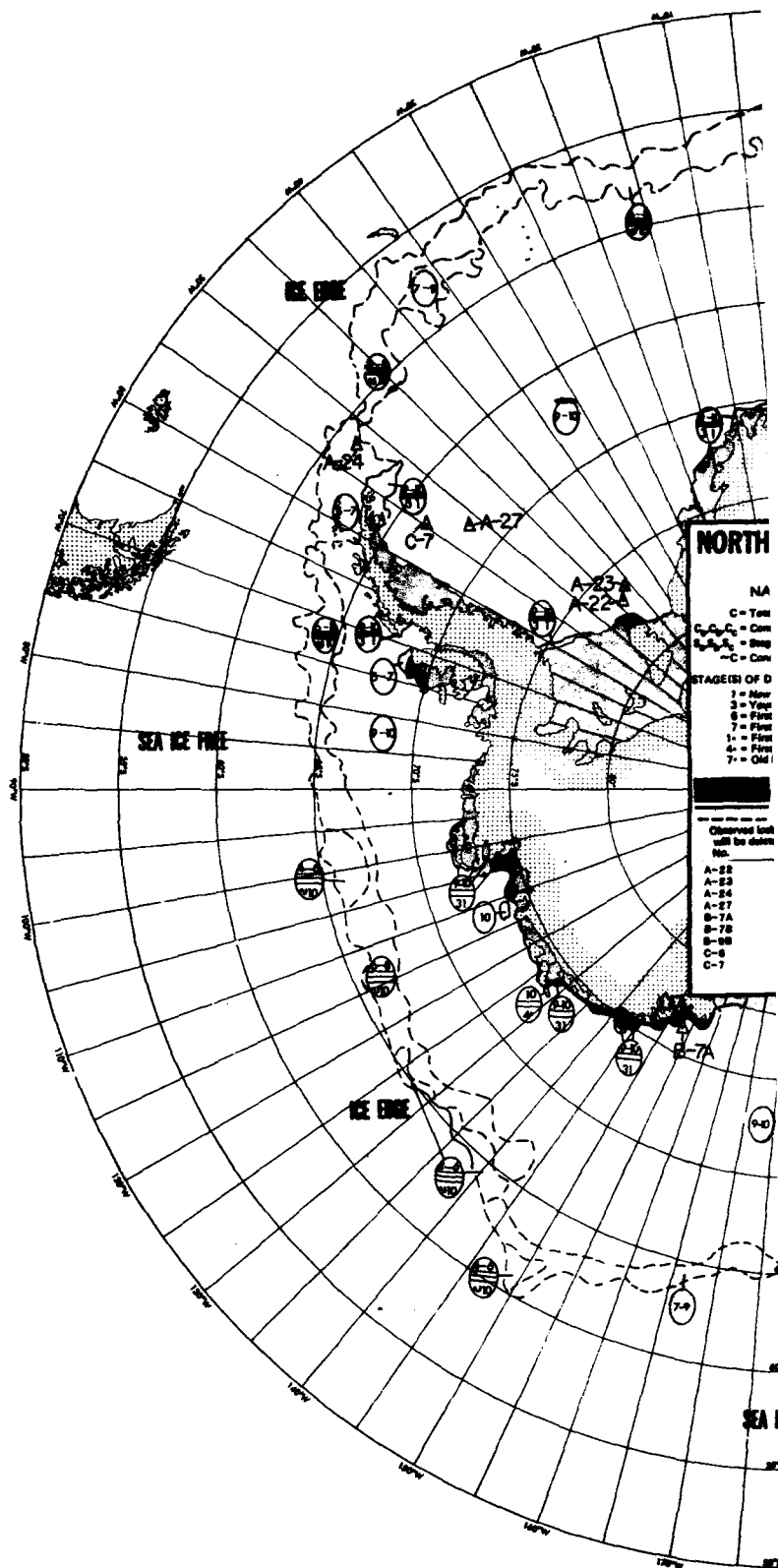
$\frac{C_1}{S_1}$	$\frac{C_2}{S_2}$	$\frac{C_3}{S_3}$
$\frac{C_1}{S_1}$	$\frac{C_2}{S_2}$	$\frac{C_3}{S_3}$

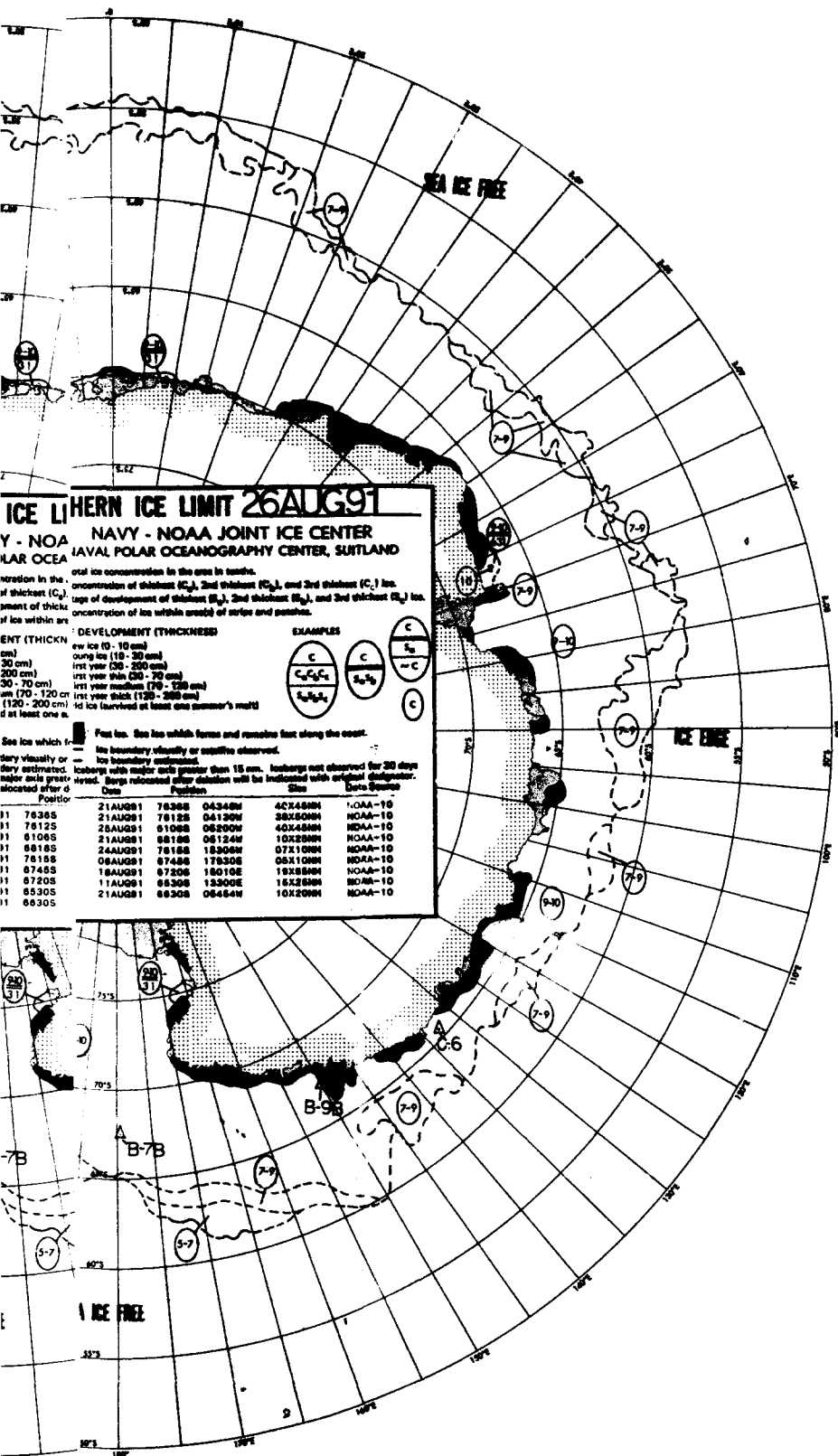
which forms and
 quality or satellite
 derived.
 ice greater than 1-vee icebergs with water side greater than 10 mm. Icebergs not observed for 30 days
 of after deletion was deleted. Berge released after deletion will be indicated with original designation.

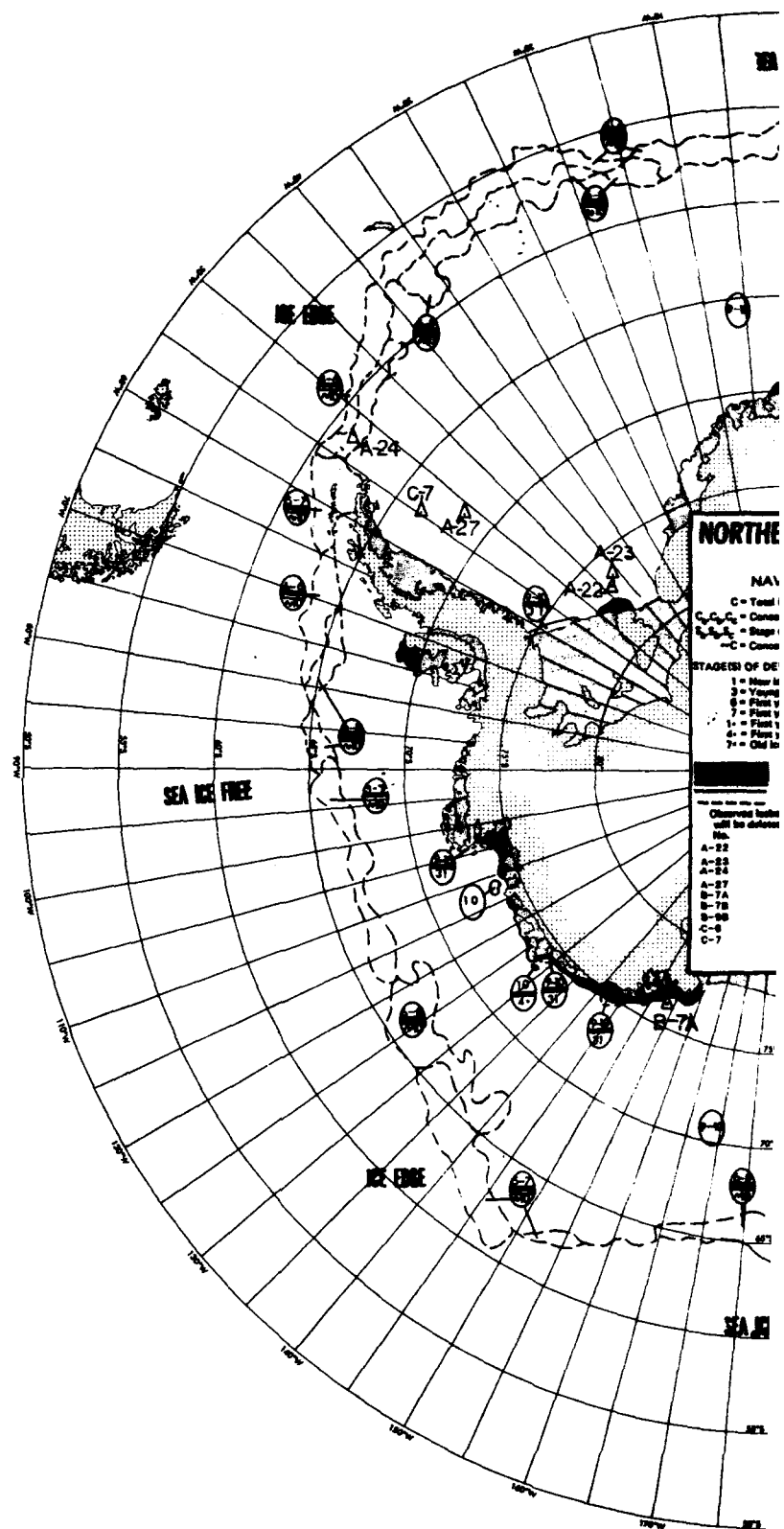
Position	Date	Position	Date	Position	Date	Source
8385 04348N	11AUG91	78385 04348N	40X48NH	NOAA-10		
8128 04130W	11AUG91	78128 04130W	38X50NH	NOAA-10		
1385 08148W	31JUL91	61385 08148W	42X48NH	NOAA-10		
8485 08109W	11AUG91	68485 08109W	10X10NH	NOAA-10		
6085 18751W	10AUG91	75085 18751W	07X10NH	NOAA-10		
7485 17930E	08AUG91	67485 17930E	08X10NH	NOAA-10		
7205 18010E	08AUG91	67205 18010E	18X5NH	NOAA-10		
6305 13202E	11AUG91	68305 13202E	18X5NH	NOAA-10		
7065 05836E	11AUG91	67065 05836E	10X20NH	NOAA-10		

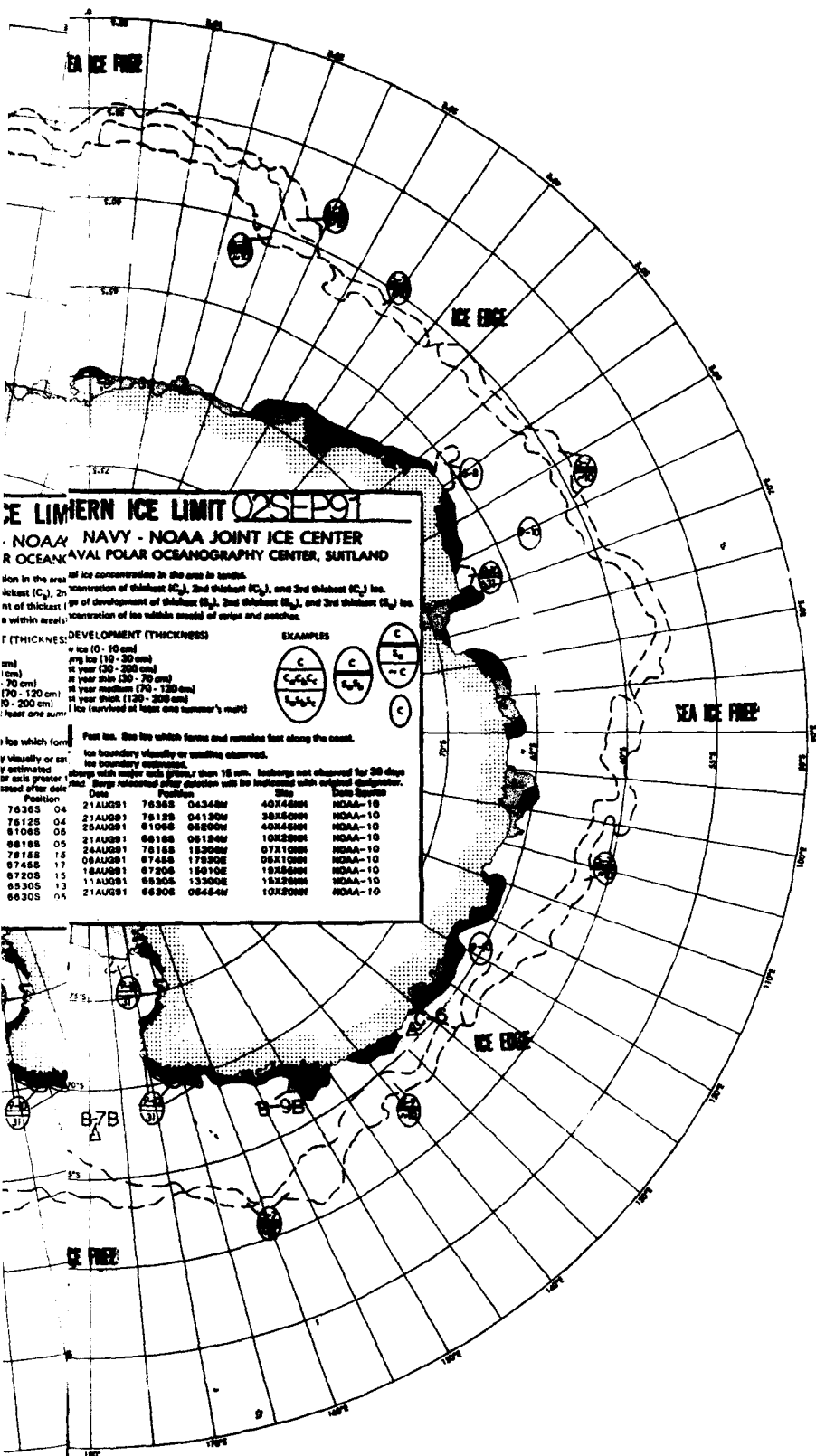


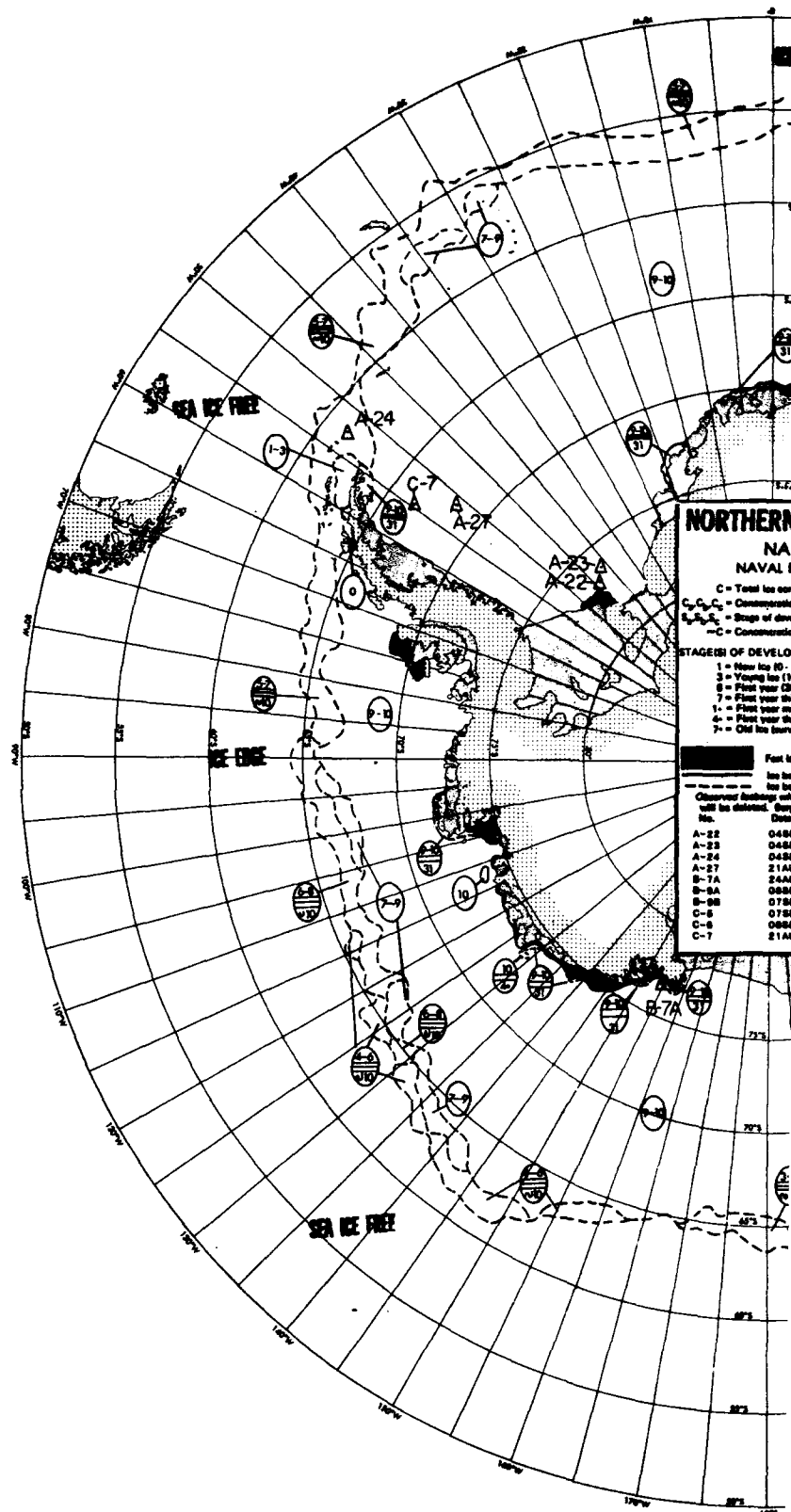


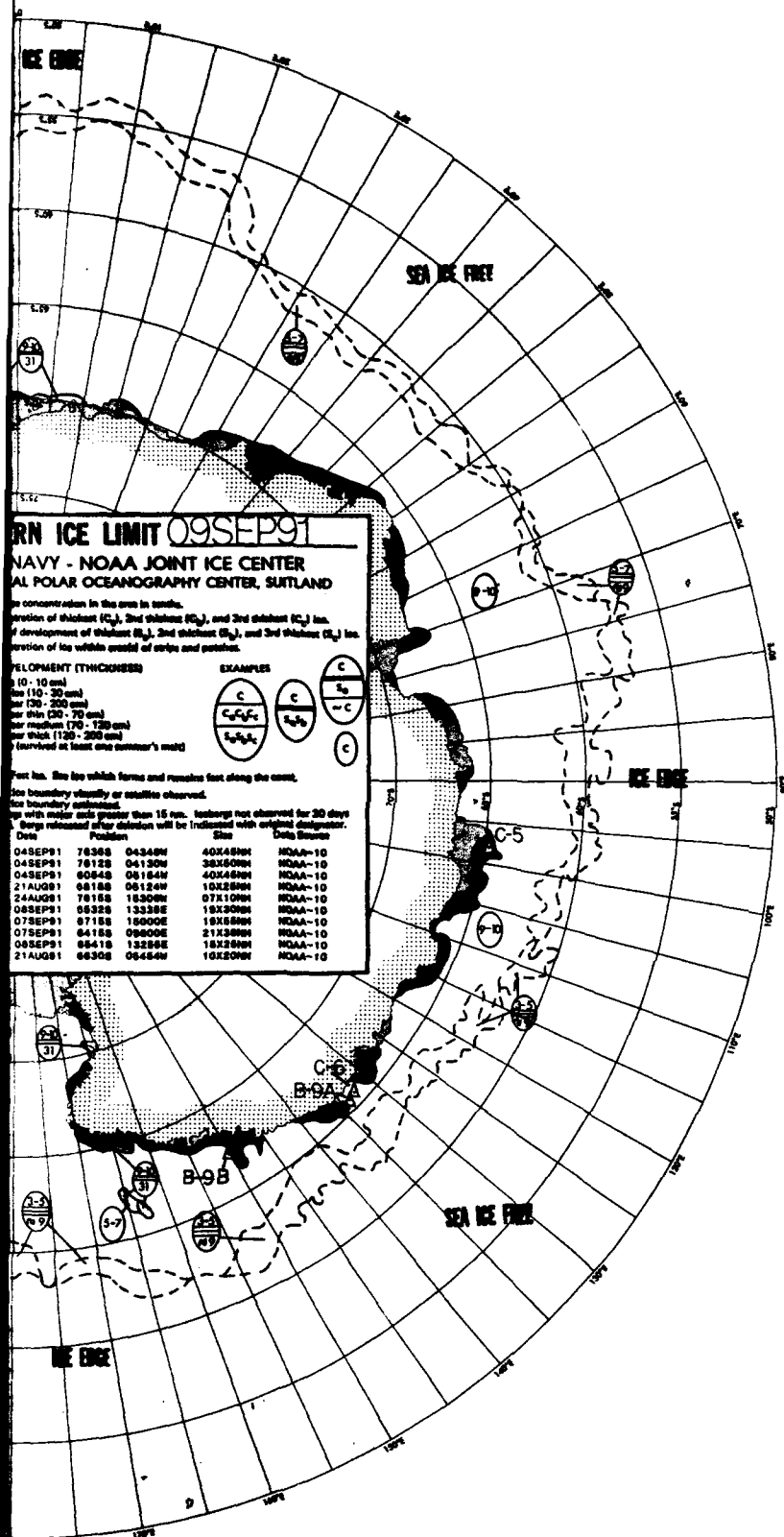


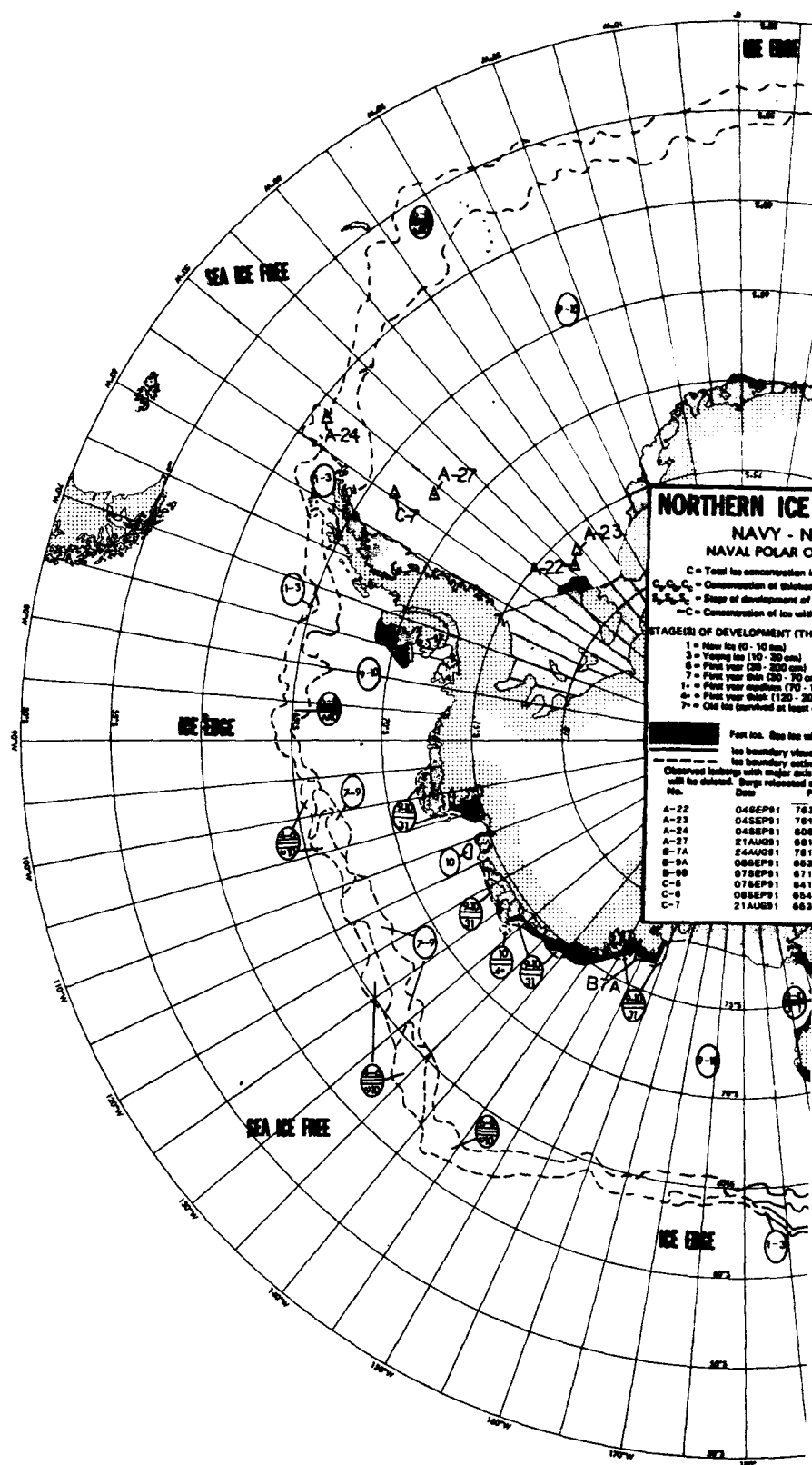


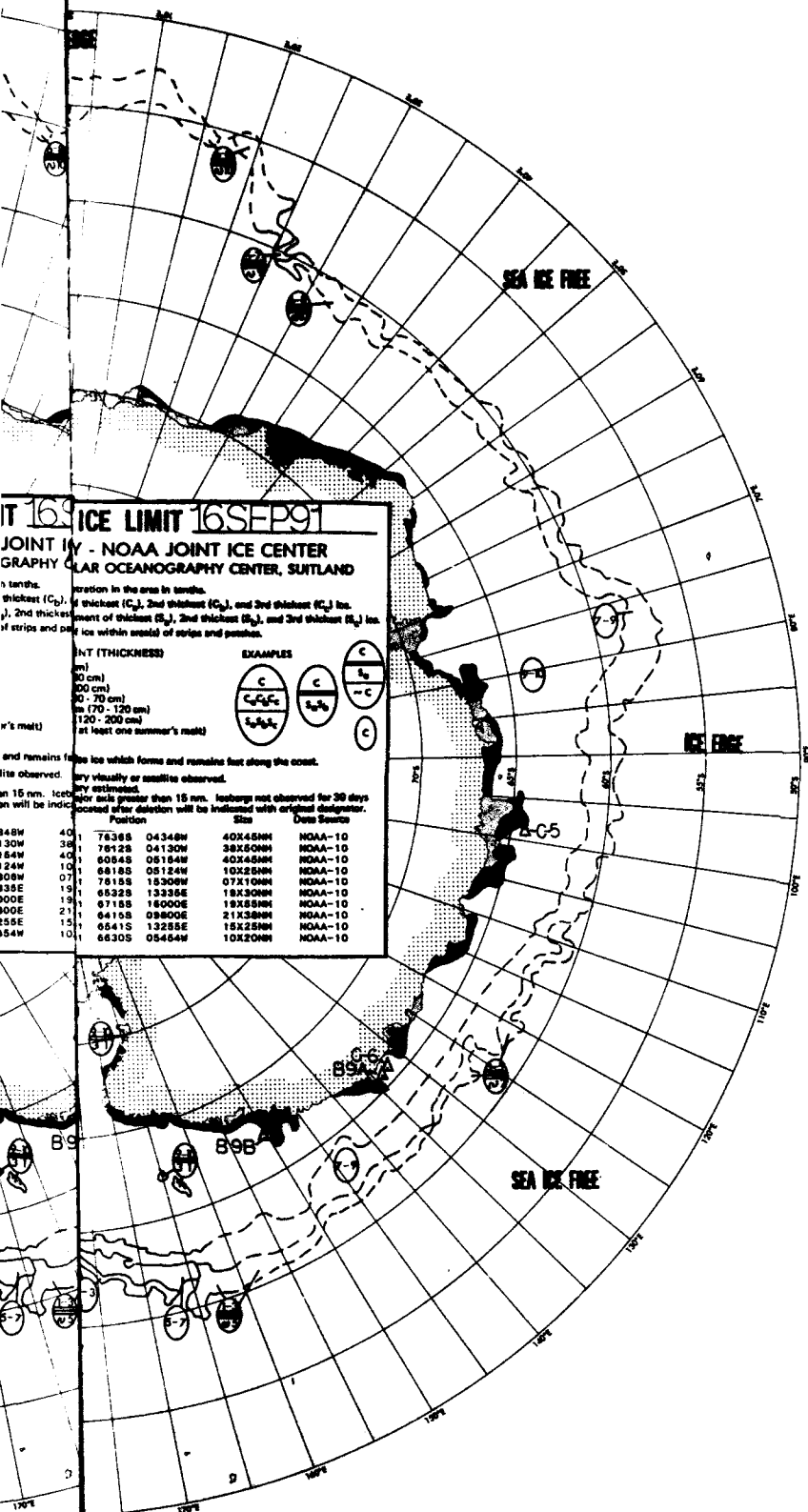


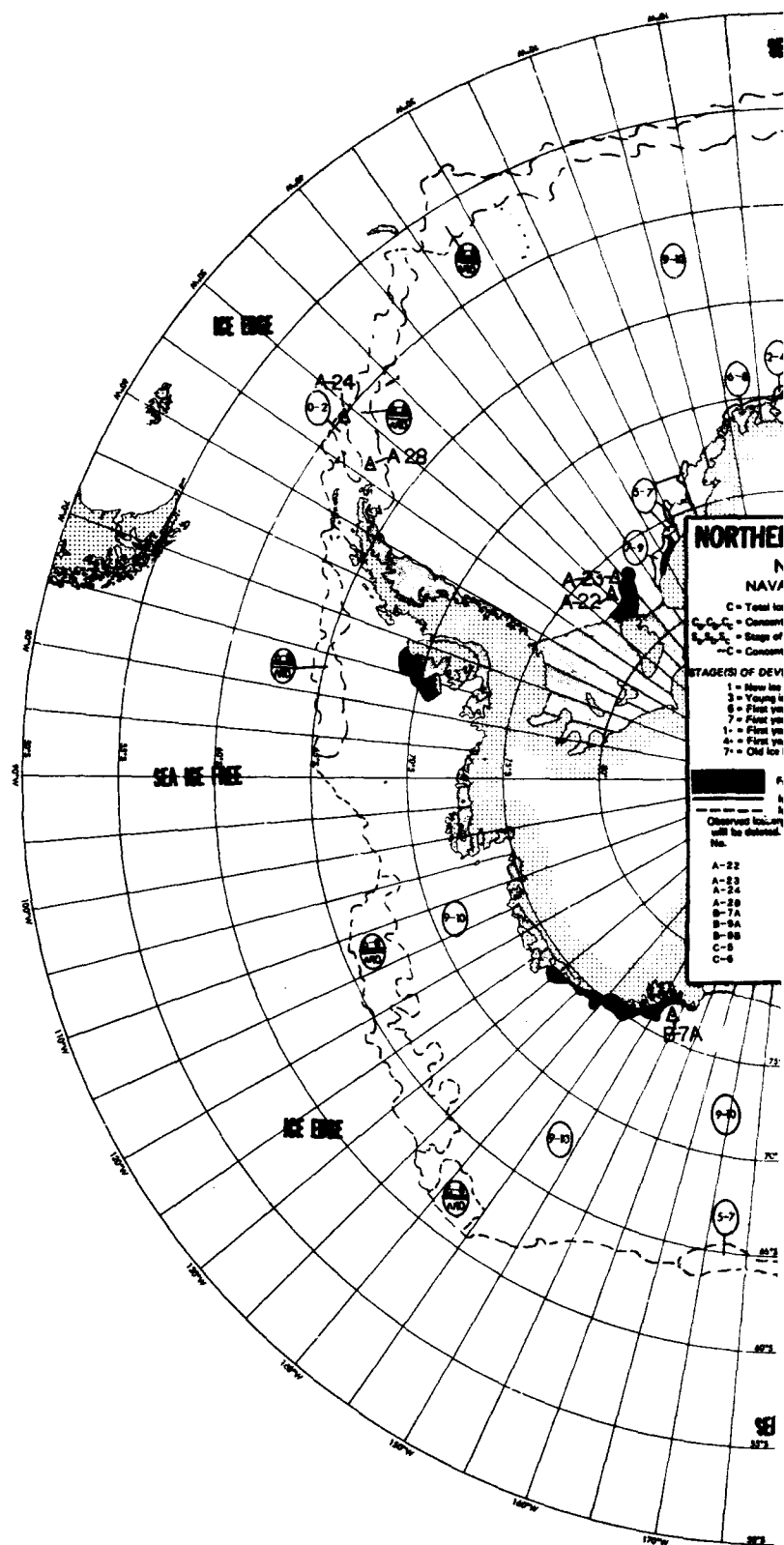


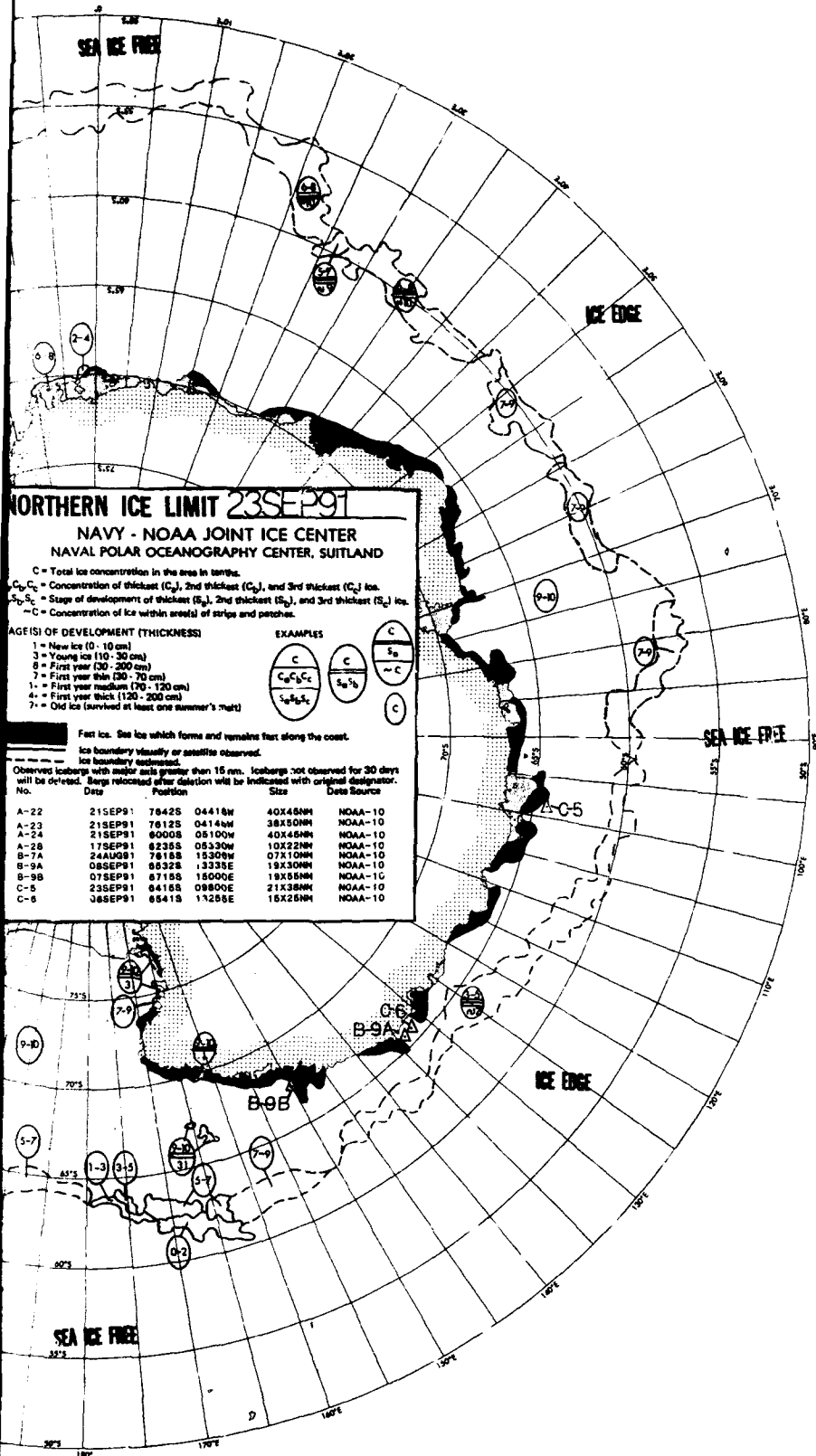


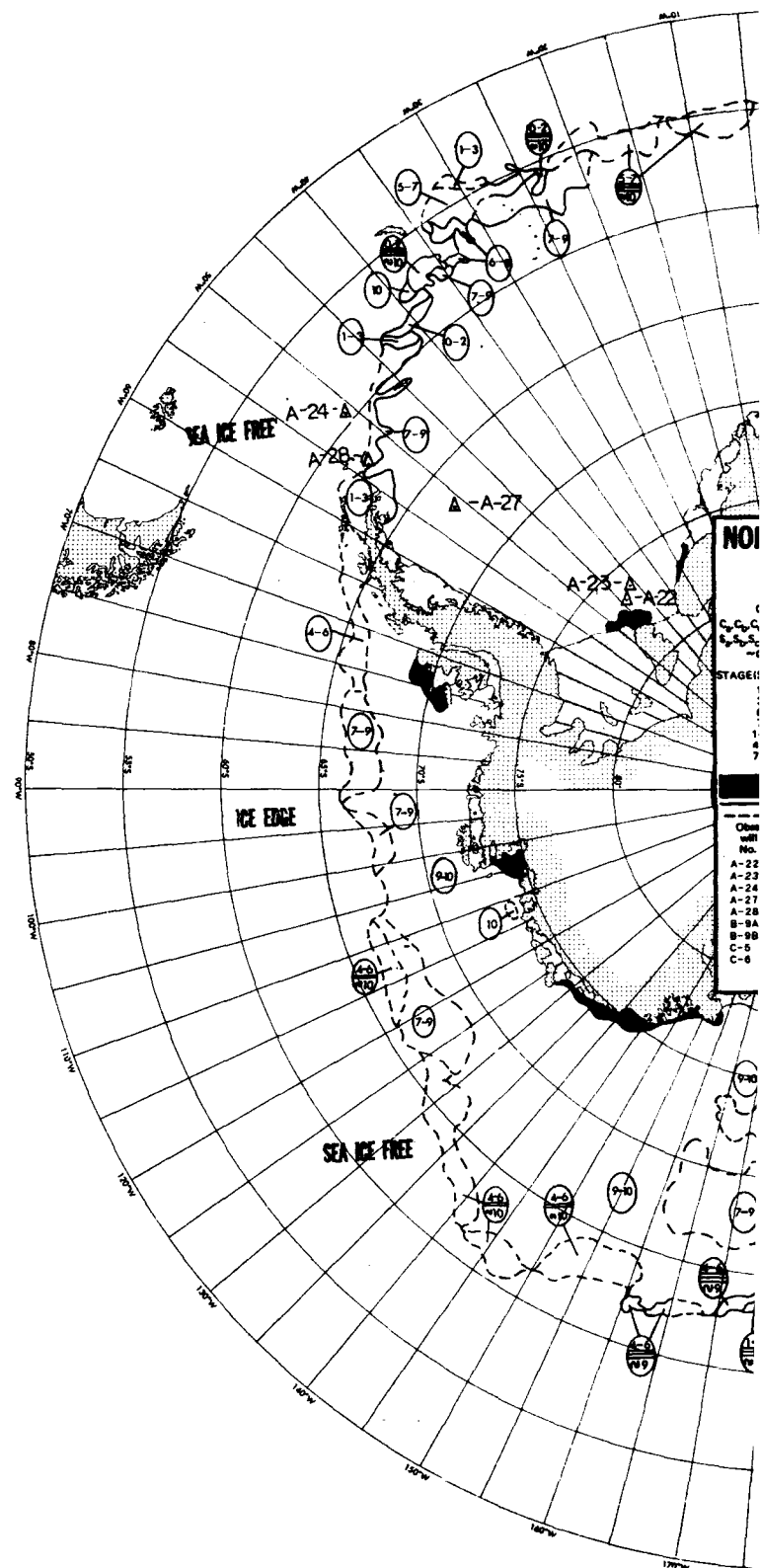


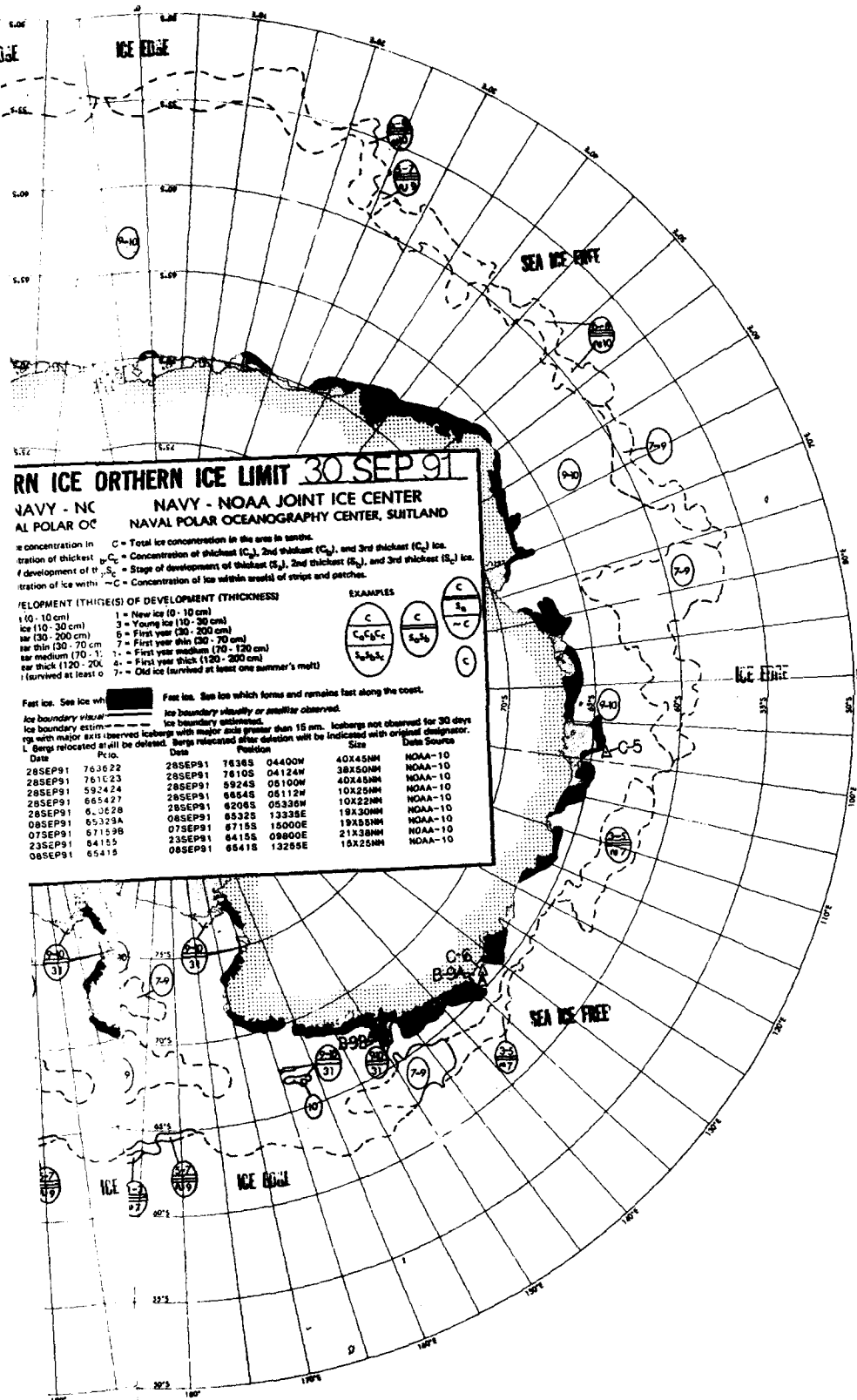


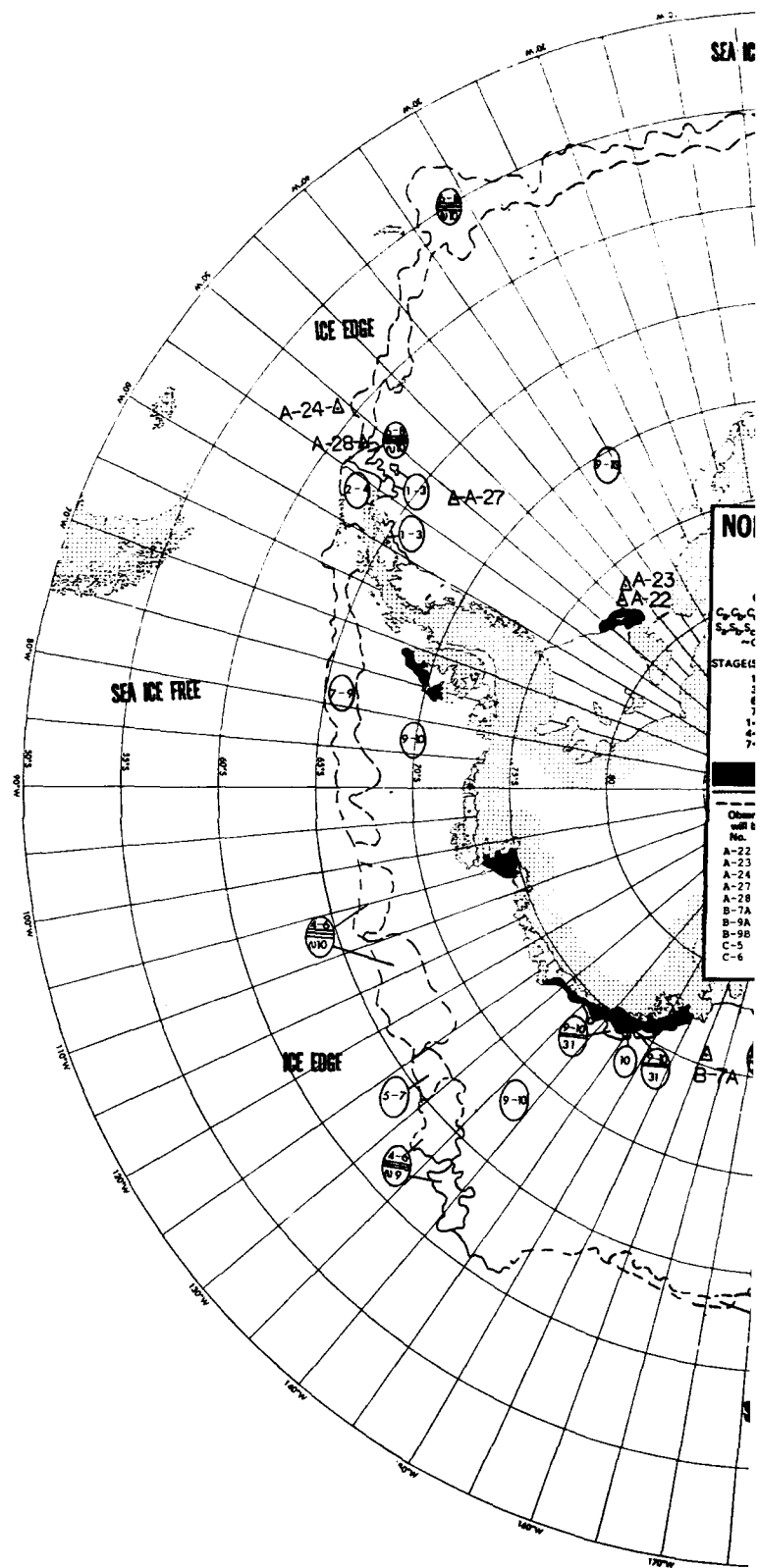


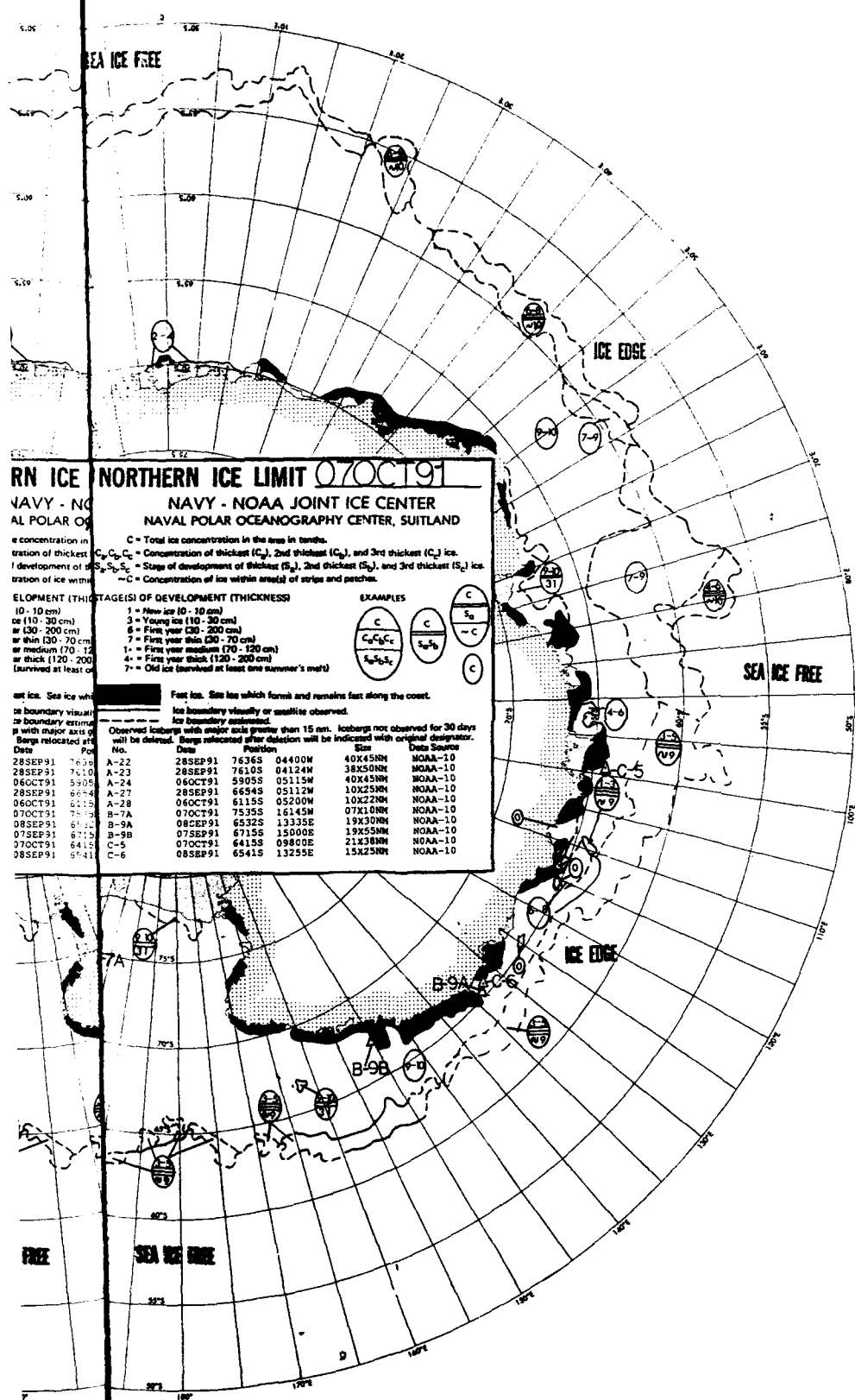












ARN ICE - NORTHERN ICE LIMIT 07OCT91

NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

C = Total ice concentration in the area in tenths.
C₁, C₂, C₃ = Concentration of thickest (C₁), 2nd thickest (C₂), and 3rd thickest (C₃) ice.
S₁, S₂, S₃ = Stage of development of thickest (S₁), 2nd thickest (S₂), and 3rd thickest (S₃) ice.
C = Concentration of ice within area(s) of strips and patches.

STAGE(S) OF DEVELOPMENT (THICKNESS)

1 = New ice (10 - 10 cm)
2 = Young ice (10 - 30 cm)
3 = First year (30 - 70 cm)
4 = First year (70 - 120 cm)
5 = First year (120 - 200 cm)
6 = First year (200 - 300 cm)
7 = First year (300 - 700 cm)
8 = First year (700 - 1200 cm)
9 = First year (1200 - 2000 cm)
10 = Old ice (survived at least one summer's melt)

EXAMPLES

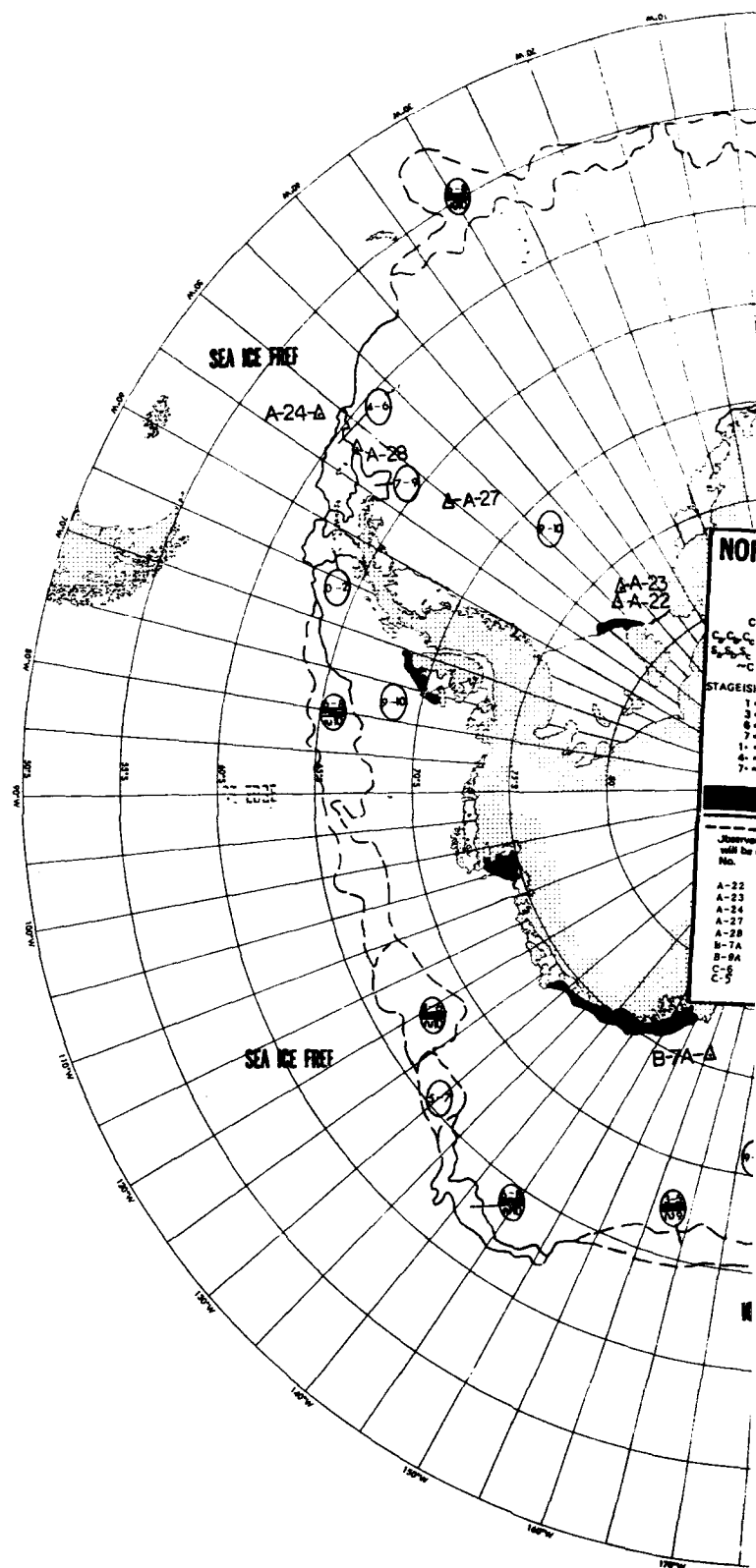
$\frac{C}{S_1}$ $\frac{C}{S_2}$ $\frac{C}{S_3}$ $\frac{C}{S_1 S_2}$ $\frac{C}{S_1 S_3}$ $\frac{C}{S_2 S_3}$ $\frac{C}{S_1 S_2 S_3}$

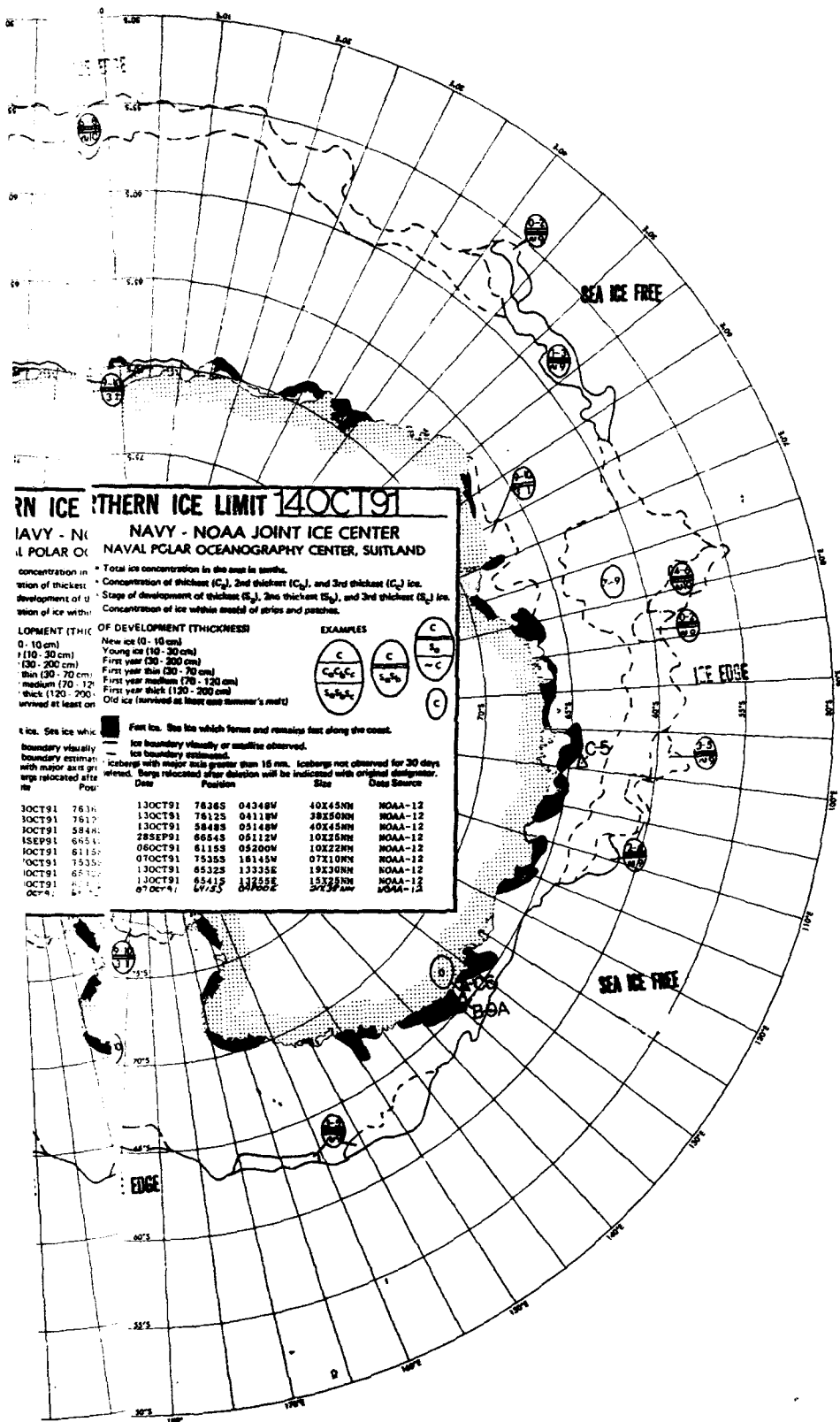
Legend:

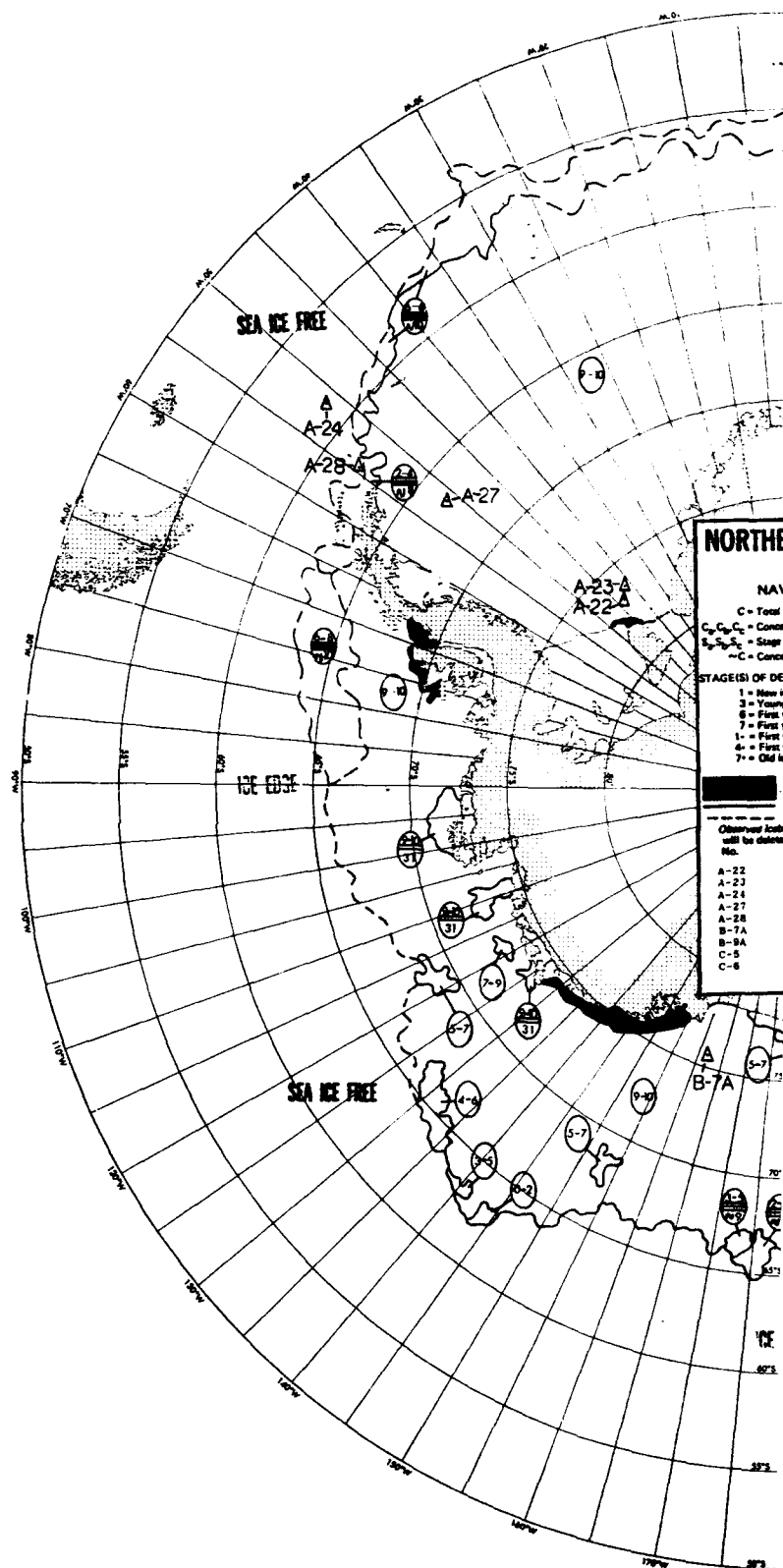
Sea ice which forms and remains fast along the coast.
Ice boundary visually or satellite observed.
Ice boundary estimated.
Observed icebergs with major axis greater than 15 m. Icebergs not observed for 30 days will be deleted. Berge relocated after deletion will be indicated with original designator.

Date	Port	No.	Position	Size	Data Source
28SEP91	A-22	28SEP91	7636S 04400W	40X45NM	NOAA-10
28SEP91	A-23	28SEP91	7610S 04124W	38X50NM	NOAA-10
06OCT91	A-24	06OCT91	5905S 05115W	40X45NM	NOAA-10
28SEP91	A-27	28SEP91	6654S 05112W	10X25NM	NOAA-10
06OCT91	A-28	06OCT91	6115S 05200W	10X22NM	NOAA-10
07OCT91	B-7A	07OCT91	7535S 16145W	07X10NM	NOAA-10
08SEP91	B-9A	08SEP91	6532S 13335E	19X30NM	NOAA-10
07SEP91	B-9B	07SEP91	6715S 15000E	19X55NM	NOAA-10
07OCT91	C-5	07OCT91	6418S 09800E	21X38NM	NOAA-10
08SEP91	C-6	08SEP91	6541S 13255E	15X25NM	NOAA-10

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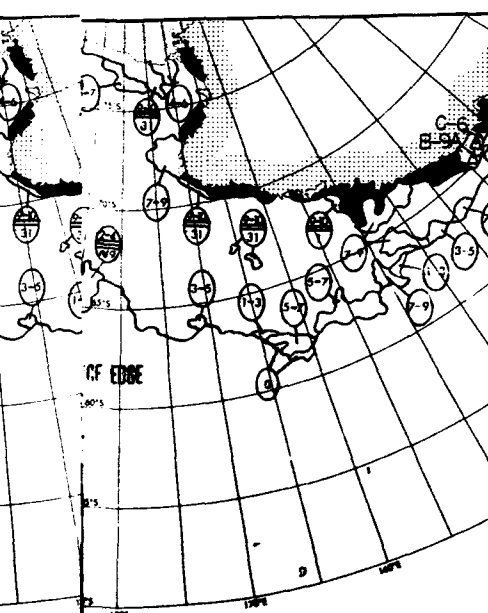
ICE LIMIT 21 OCT 91 NOAA NAVY - NOAA JOINT ICE CENTER R OCEANO NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

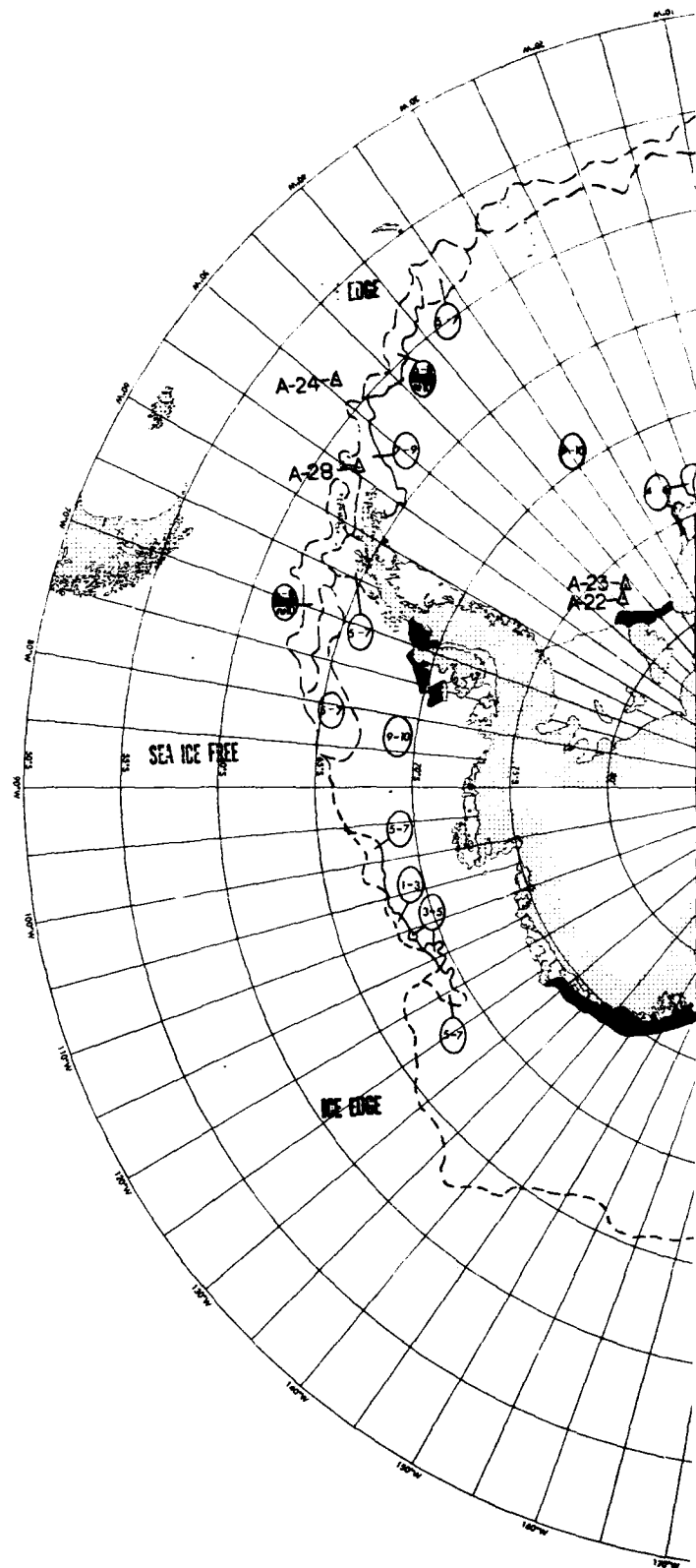
tion in the area -
Total ice concentration in the area in tenths.
Concentration of thickest (C₁), 2nd thickest (C₂), and 3rd thickest (C₃) ice.
Stage of development of thickest (S₁), 2nd thickest (S₂), and 3rd thickest (S₃) ice.
Concentration of ice within areal of strips and patches.
T (THICKNESS) OF DEVELOPMENT (THICKNESS)
New ice (10 - 10 cm)
Young ice (10 - 30 cm)
First year (30 - 200 cm)
First year thin (30 - 70 cm)
(70 - 120 cm)
First year medium (70 - 120 cm)
First year thick (120 - 200 cm)
Old ice (survived at least one summer's melt)

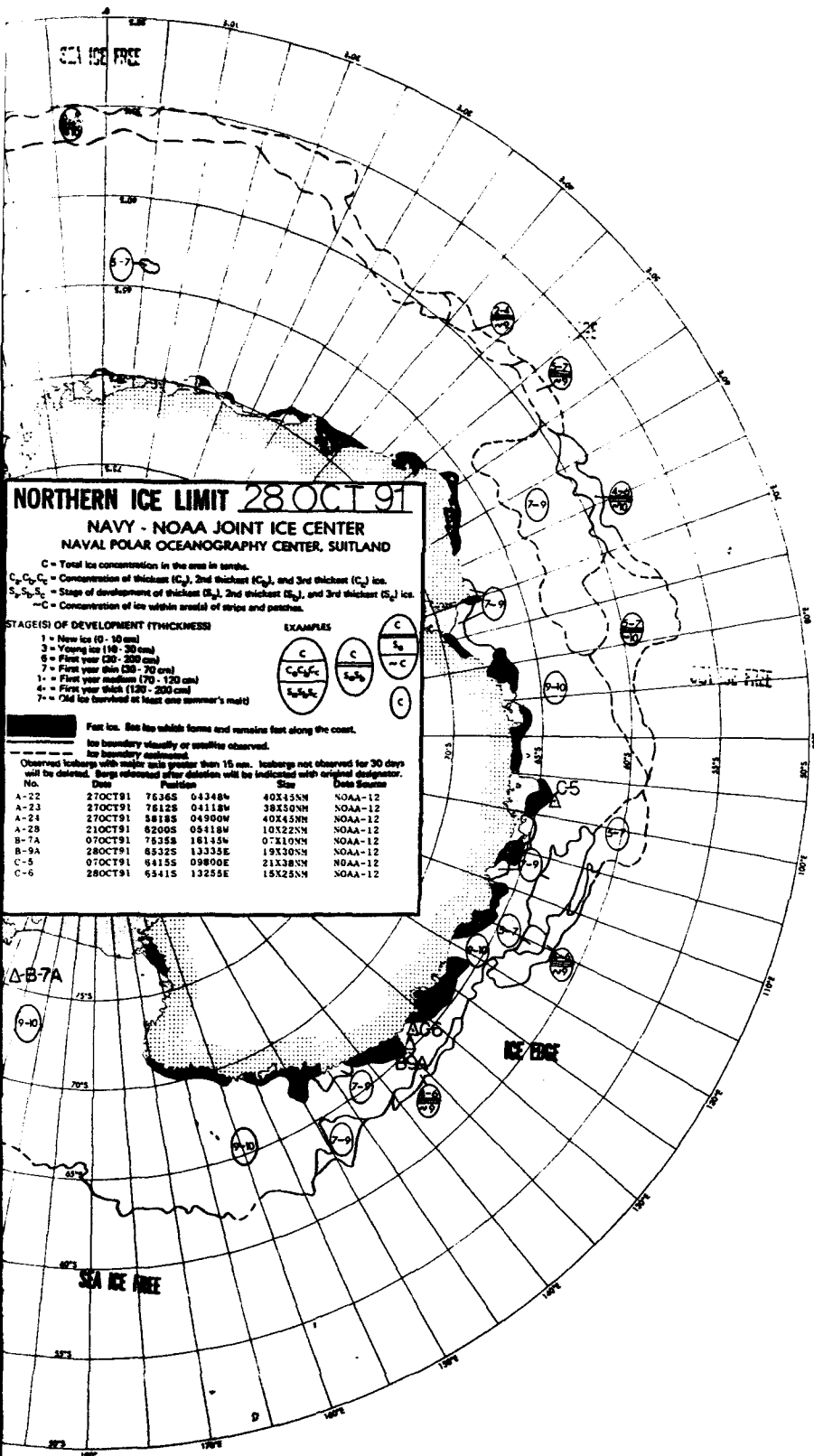
EXAMPLES

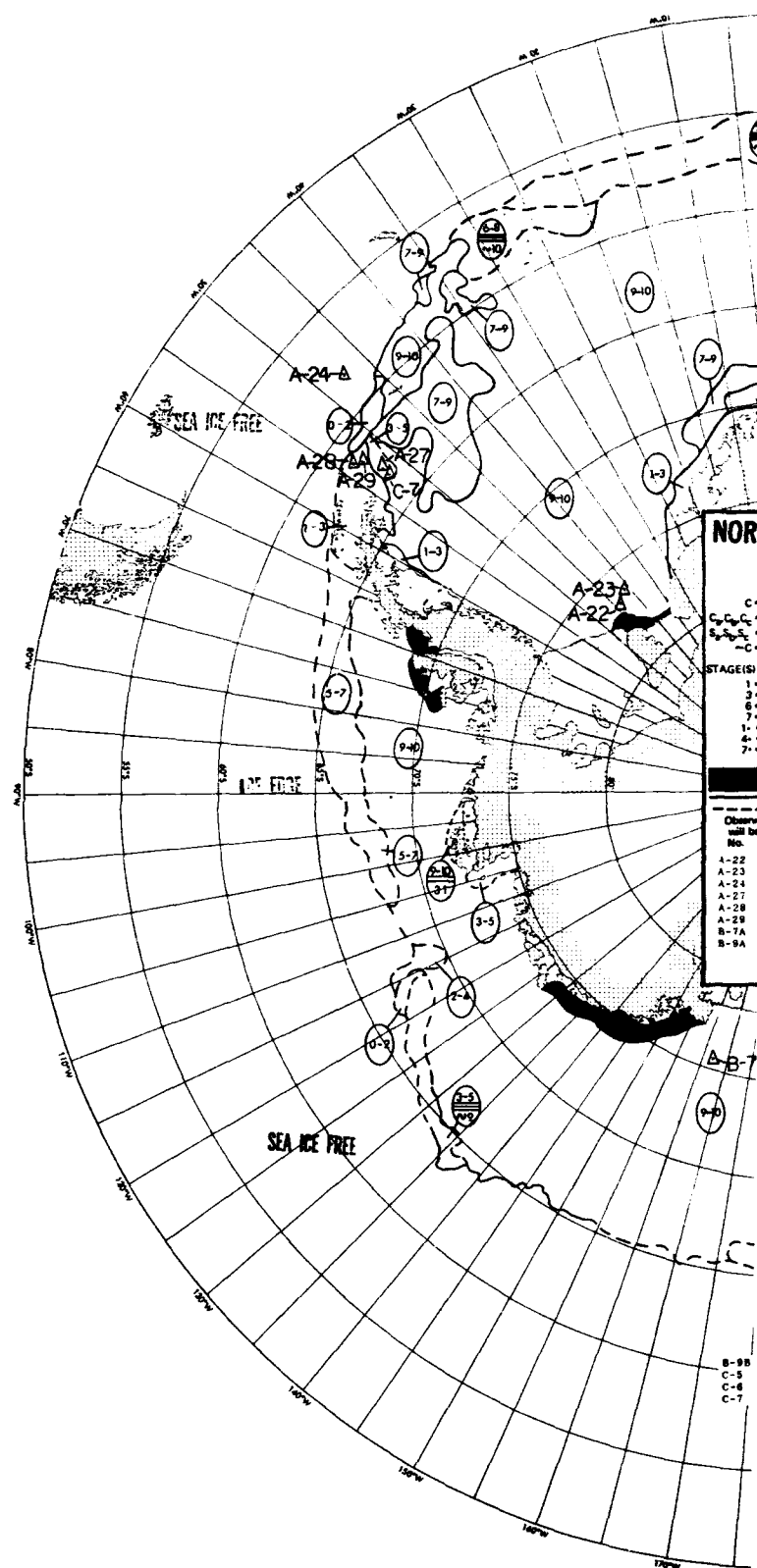
$\frac{C_1}{S_1} \frac{C_2}{S_2} \frac{C_3}{S_3}$
 $\frac{C_1}{S_1} \frac{C_2}{S_2} \frac{C_3}{S_3}$
 $\frac{C_1}{S_1} \frac{C_2}{S_2} \frac{C_3}{S_3}$

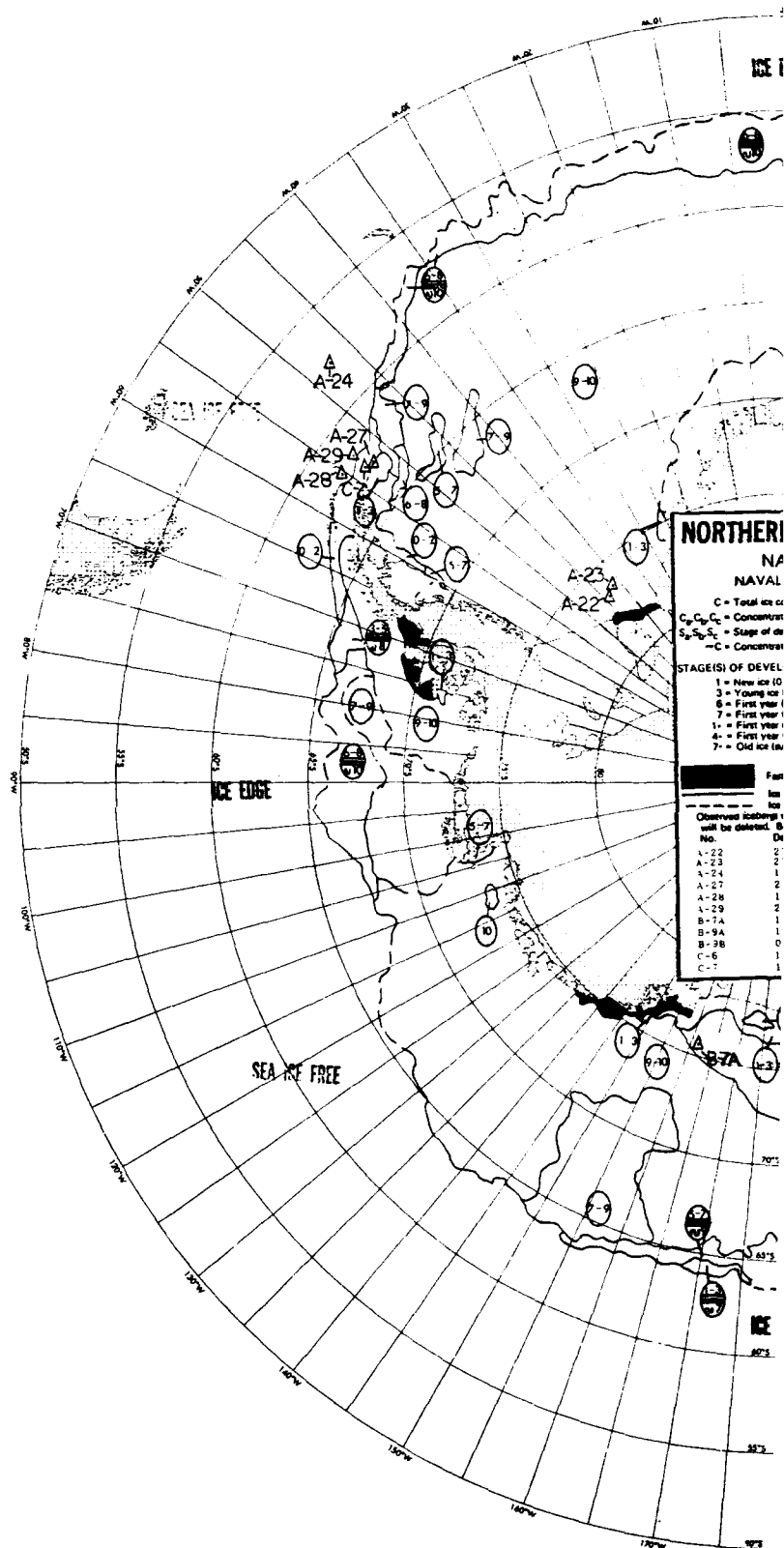
Position	Date	Size	Data Source
7636S 0	13OCT91	7636S 04348W	40X45NM NOAA-12
7612S 0	13OCT91	7612S 04118W	38X50NM NOAA-12
5836S 0	21OCT91	5836S 05106W	40X45NM NOAA-12
6654S 0	28SEP91	6654S 05112W	10X25NM NOAA-12
6200S 0	21OCT91	6200S 05418W	10X22NM NOAA-12
7535S 1	07OCT91	7535S 16145W	07X10NM NOAA-12
6532S 1	21OCT91	6532S 13335E	19X30NM NOAA-12
6415S 0	07OCT91	6415S 09800E	21X38NM NOAA-12
6541S 1	21OCT91	6541S 13255E	15X25NM NOAA-12

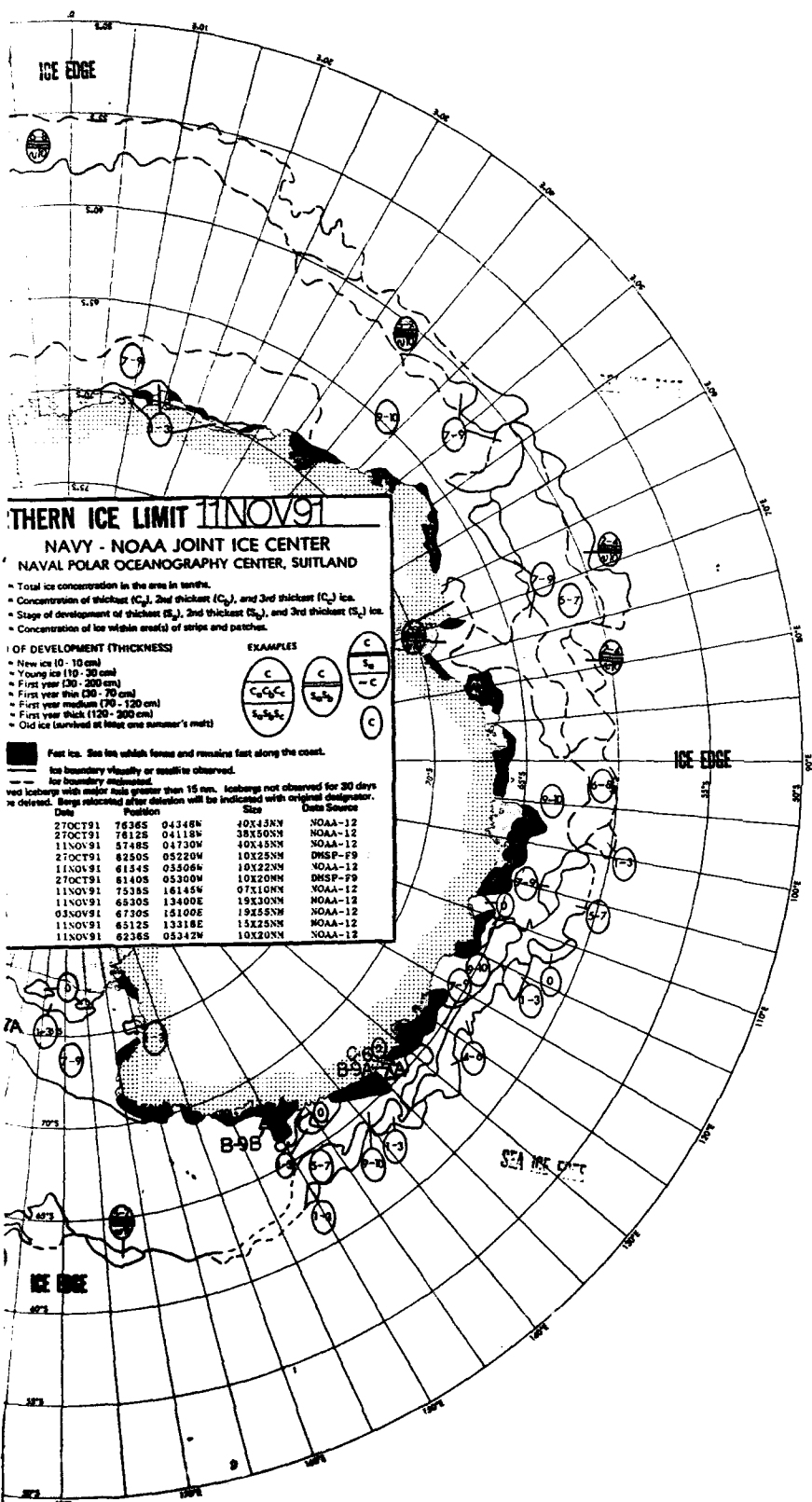


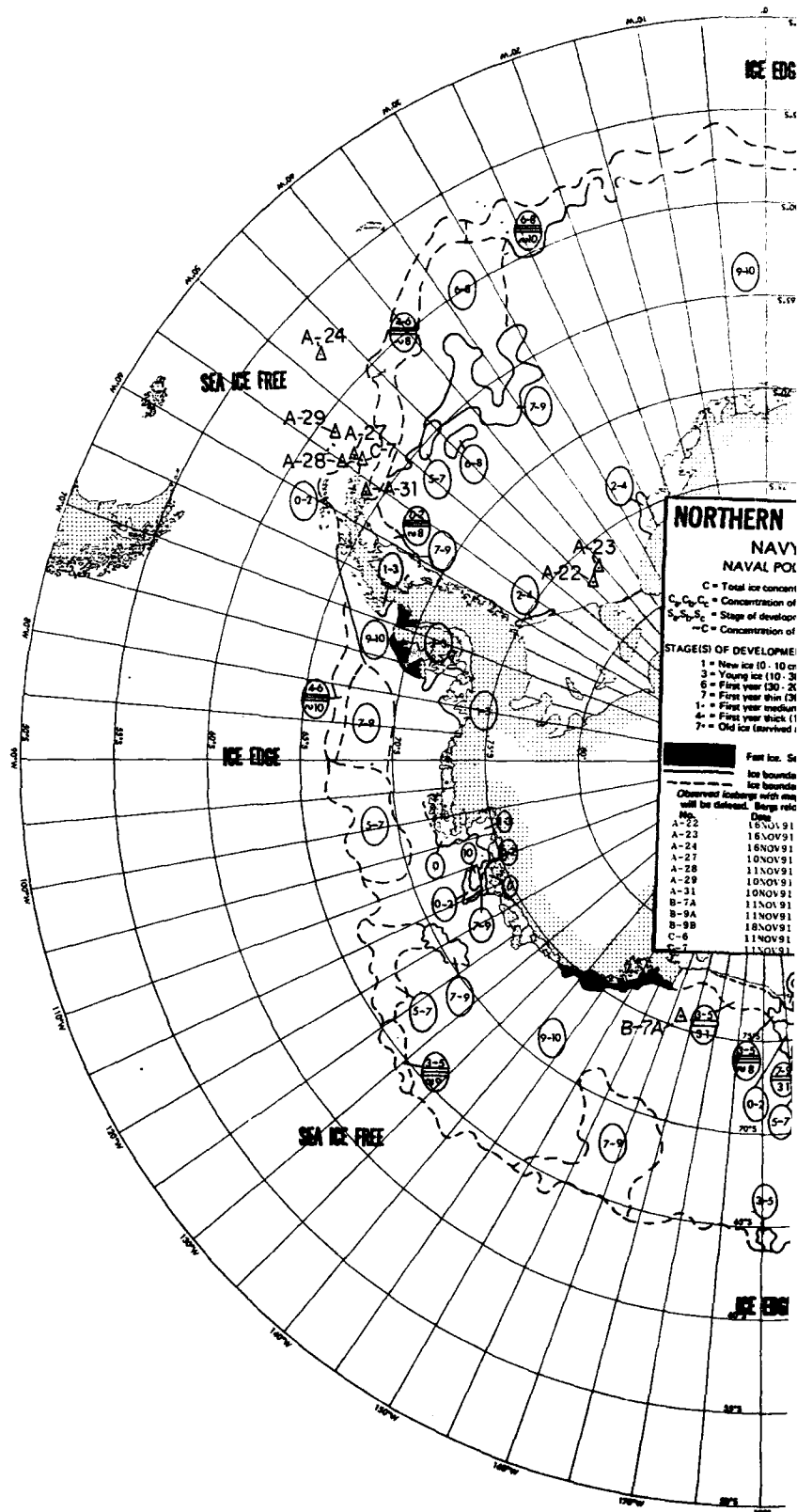


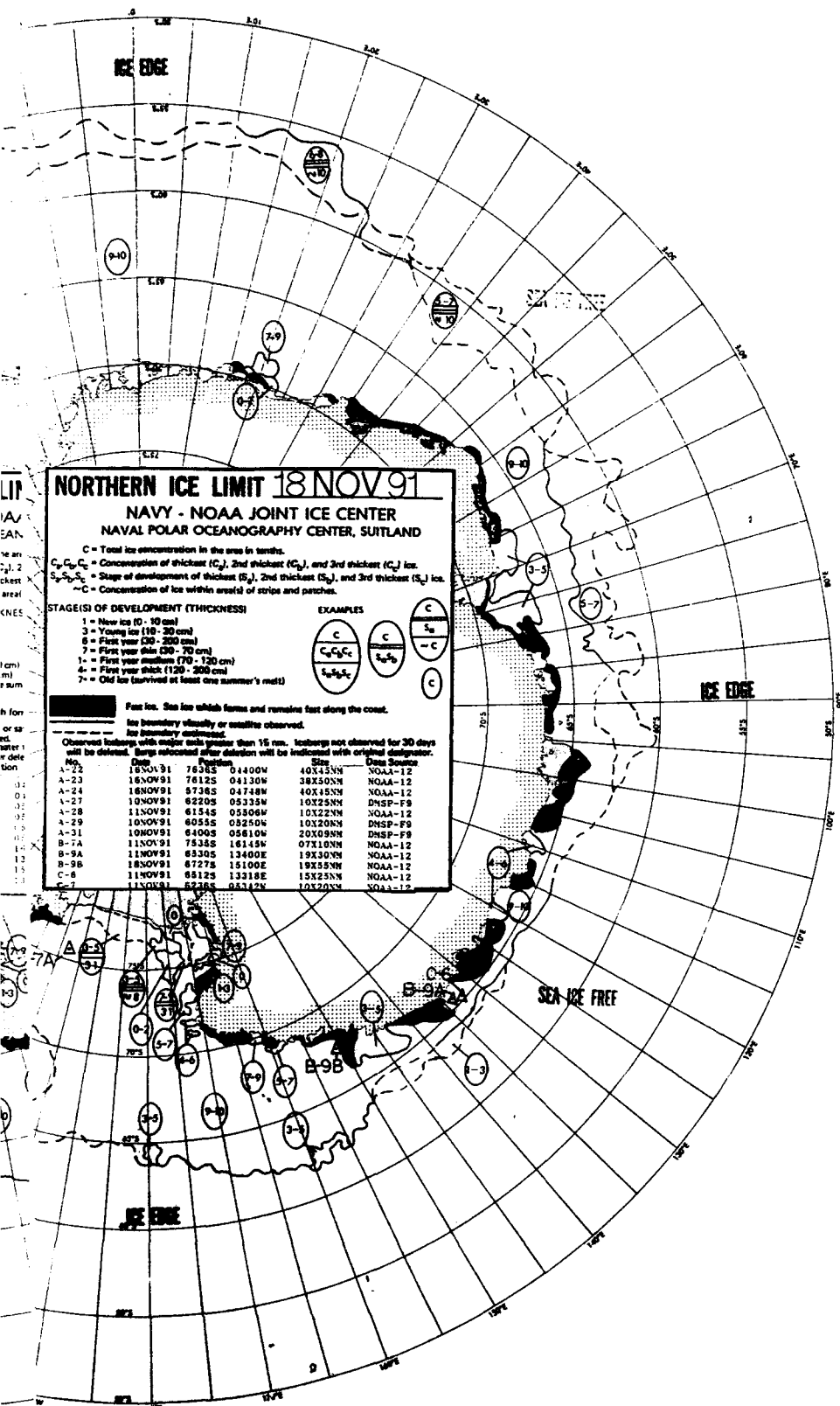




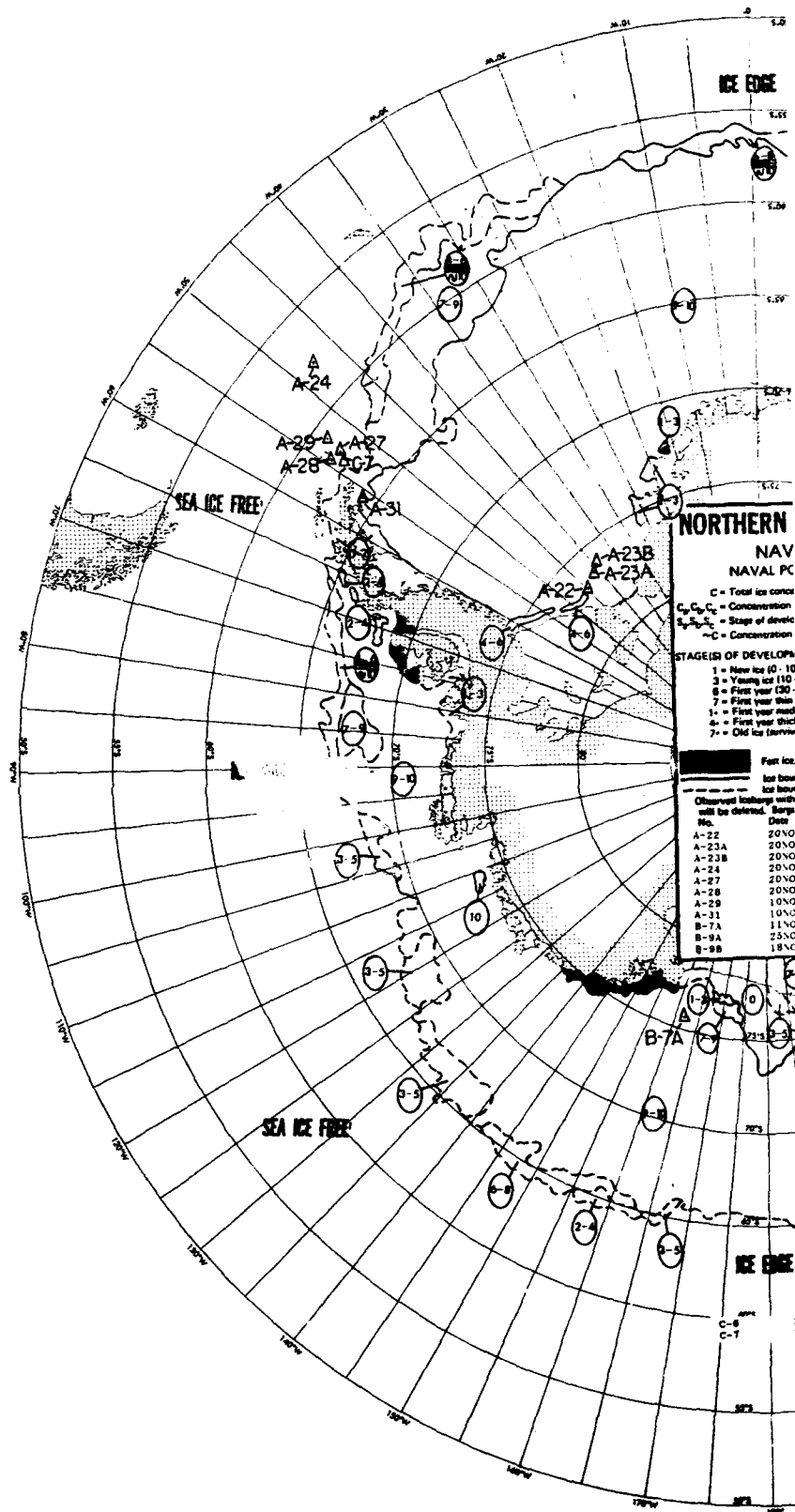


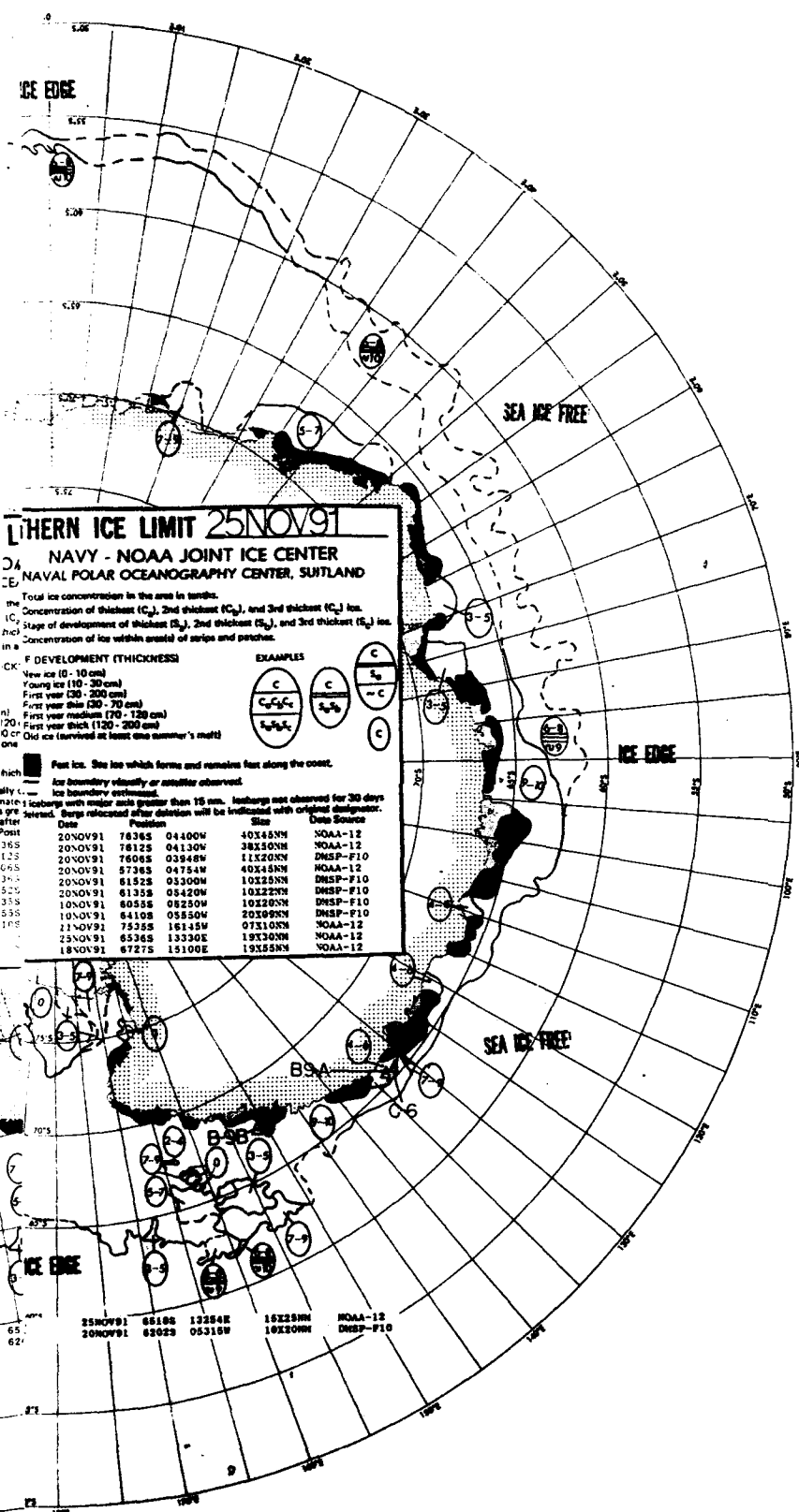


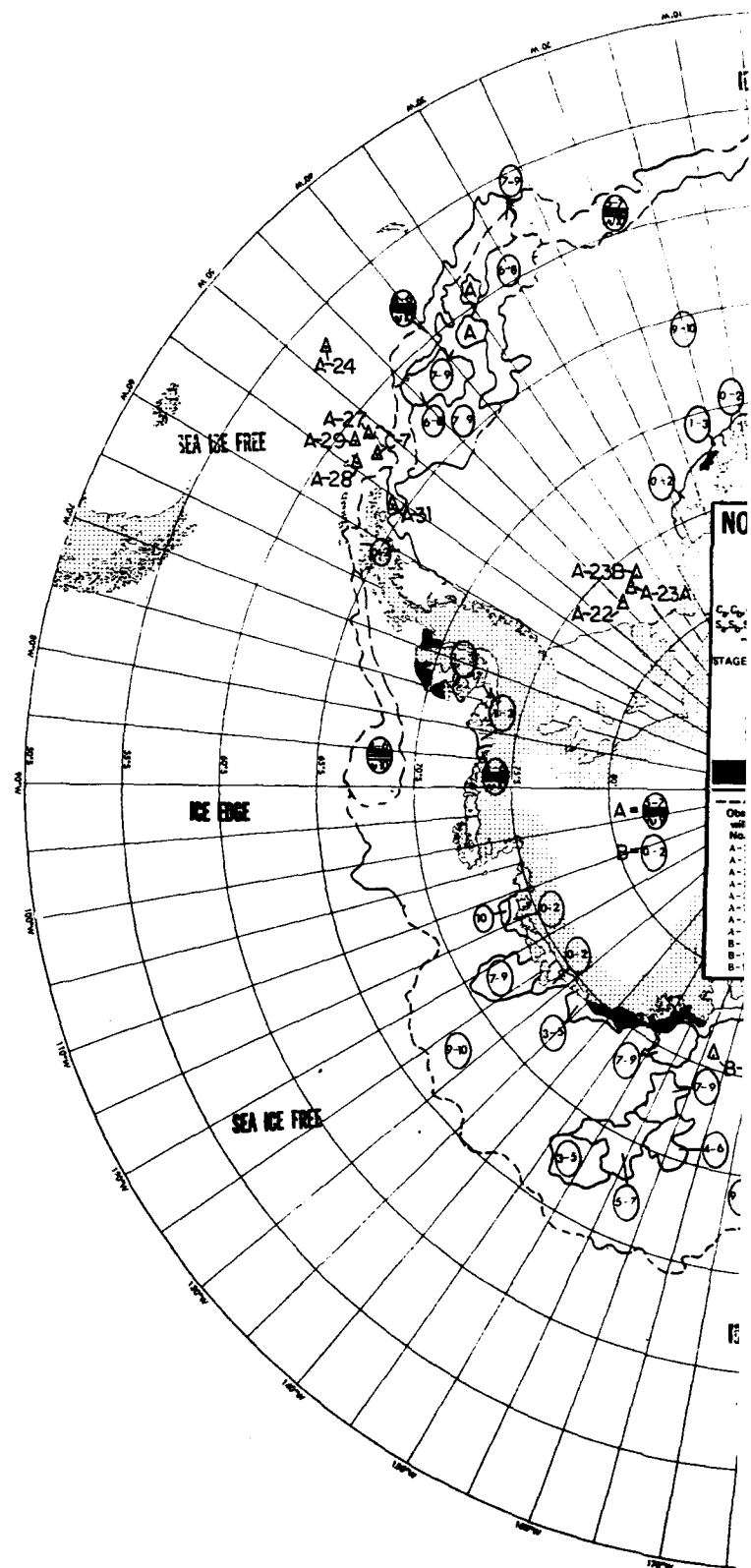


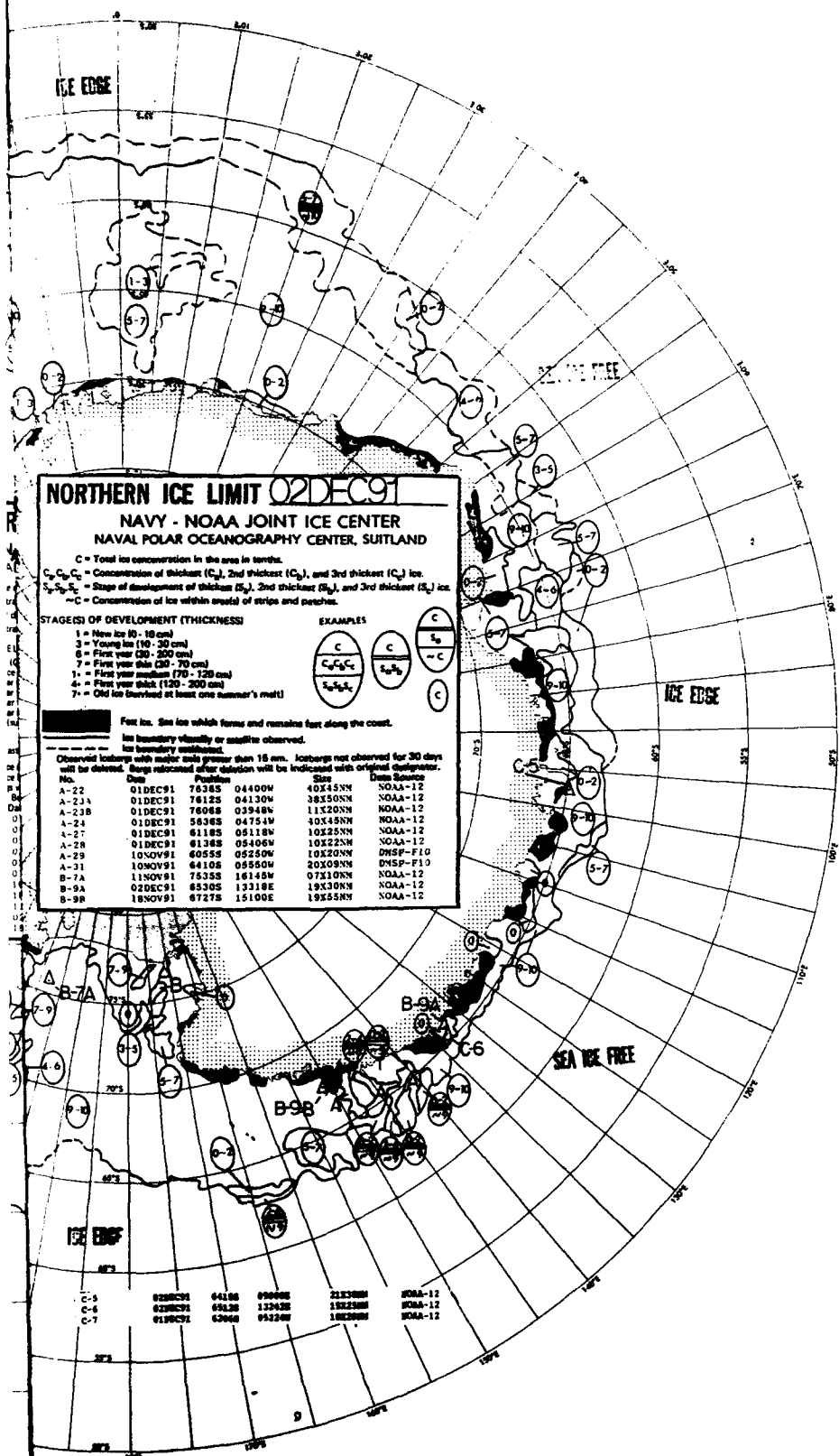


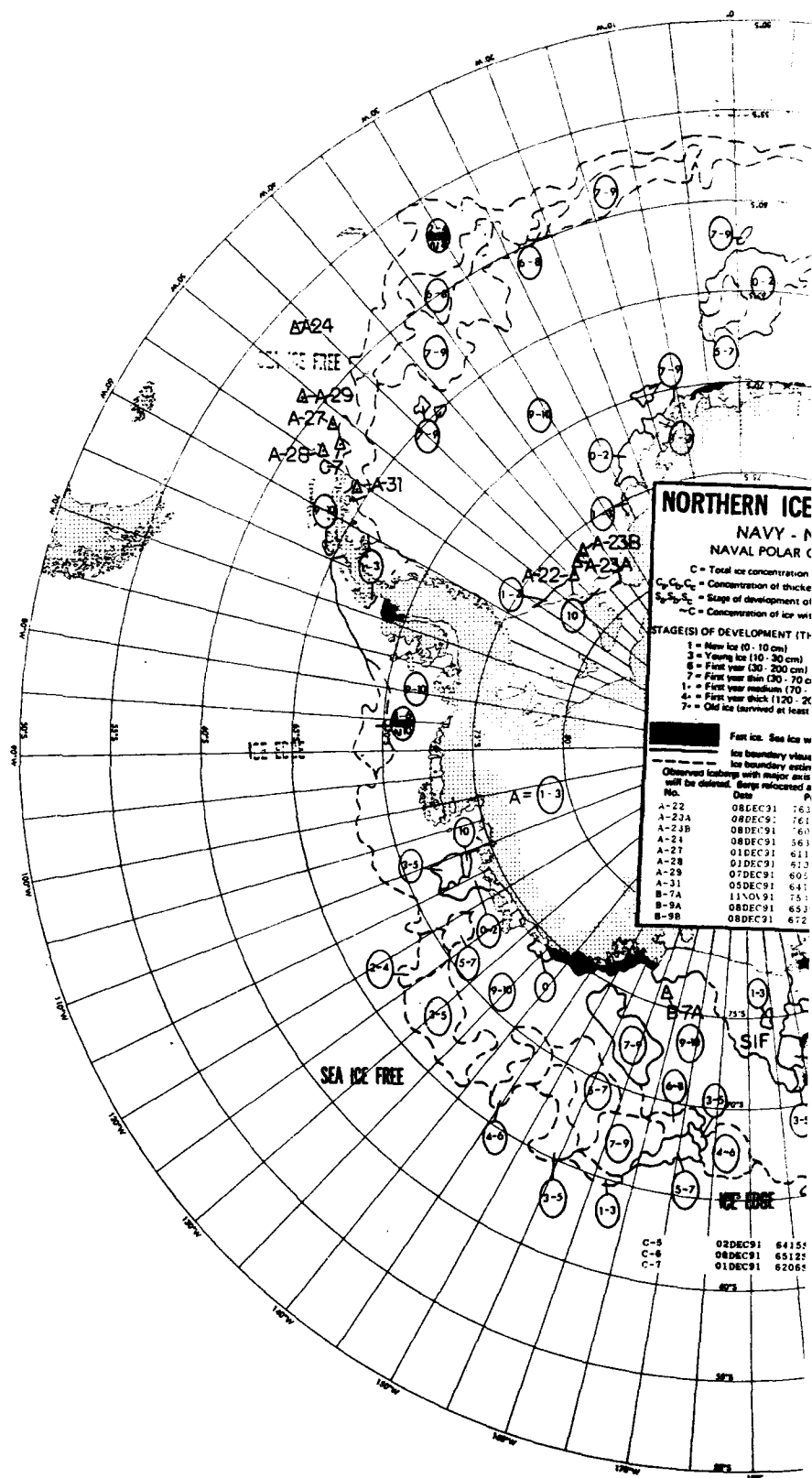
h/7

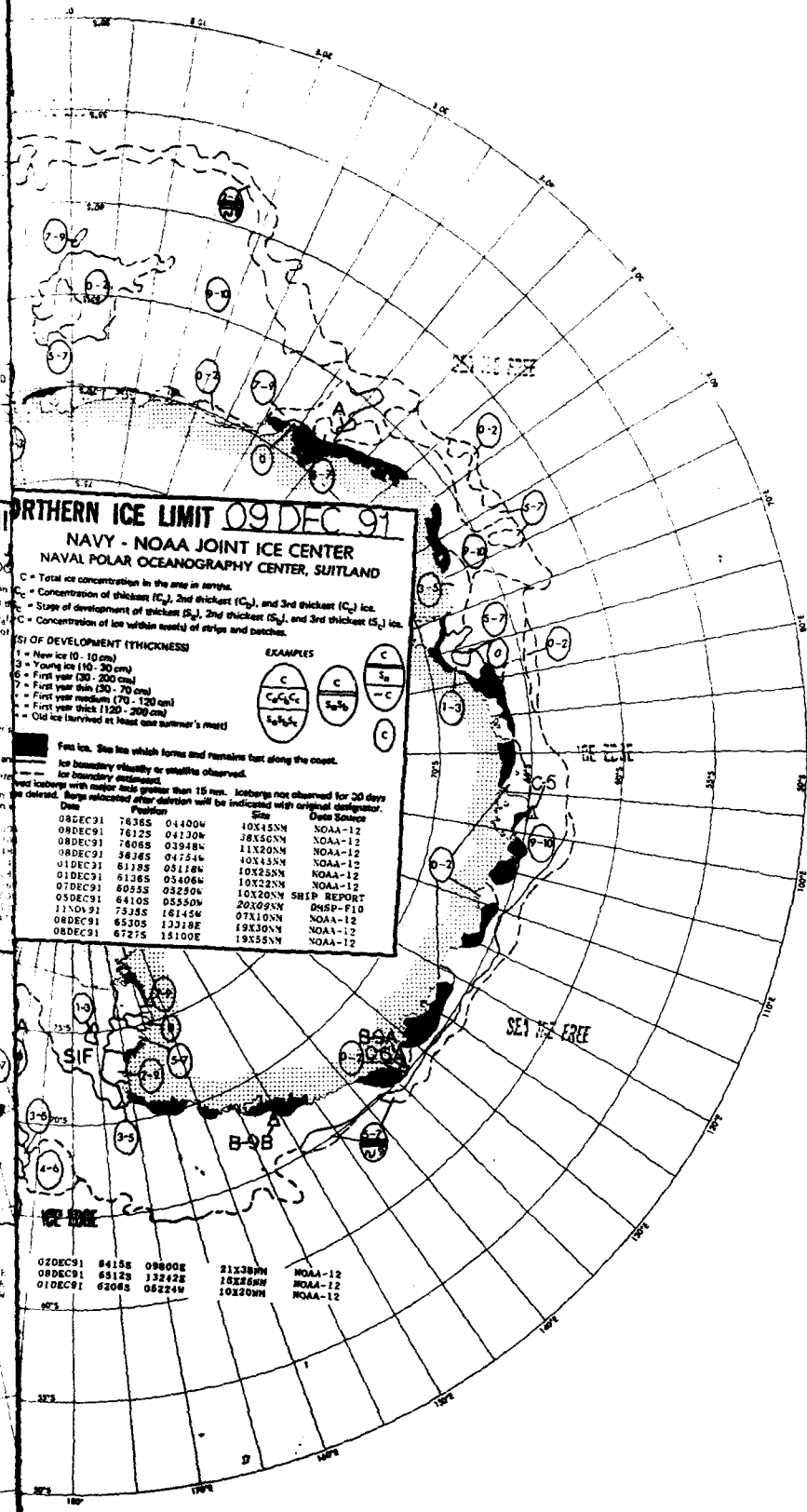


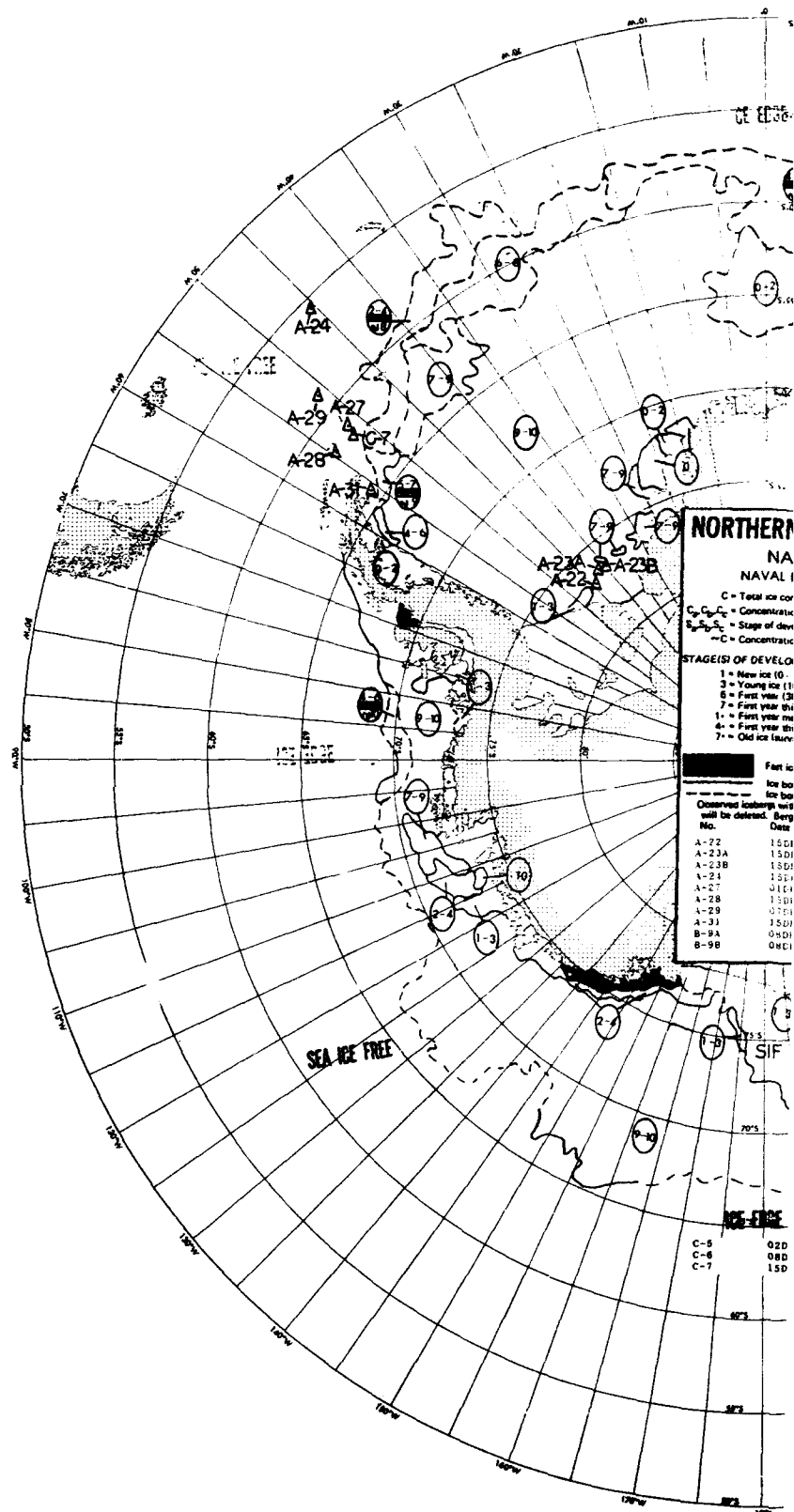


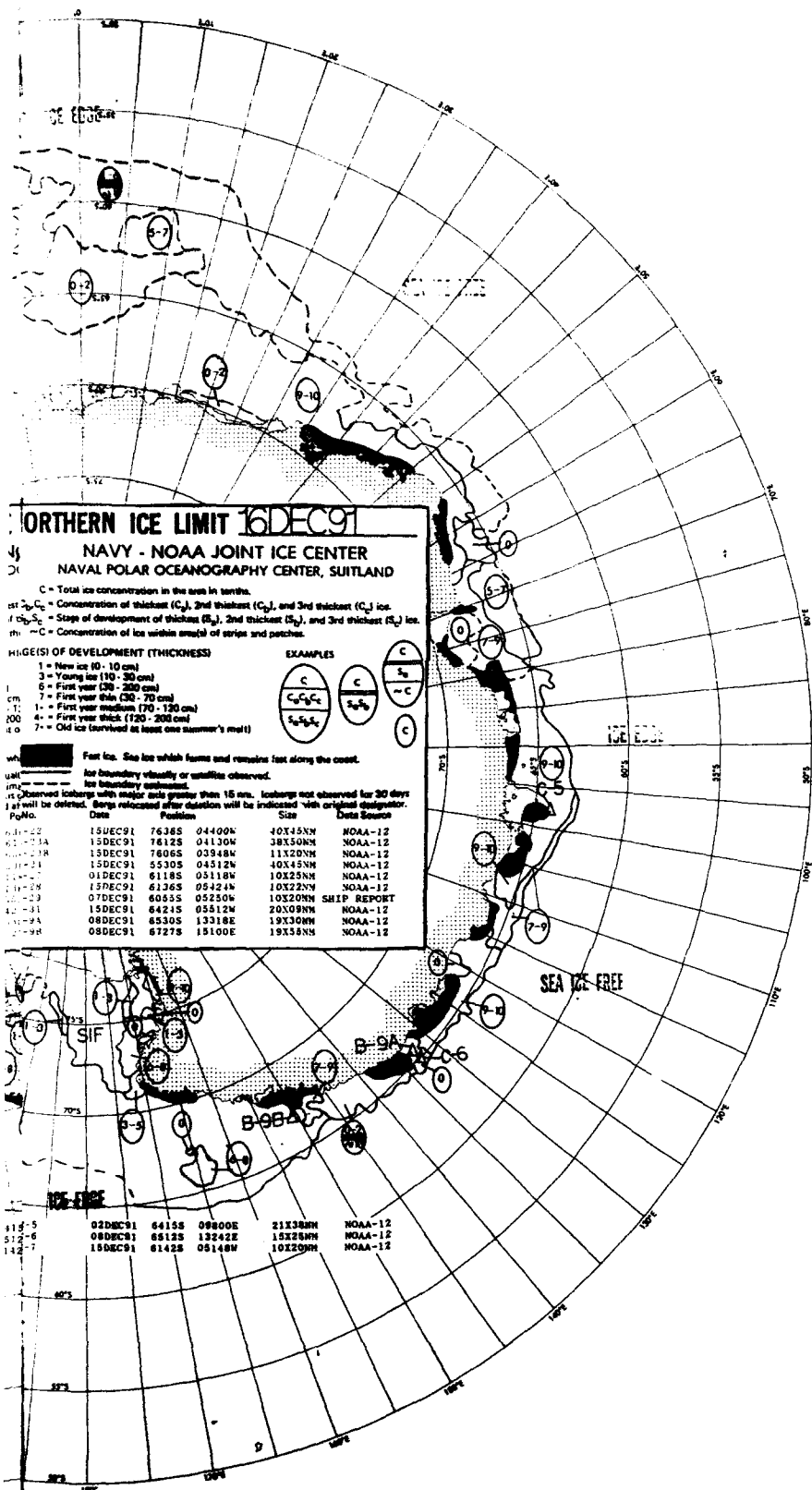


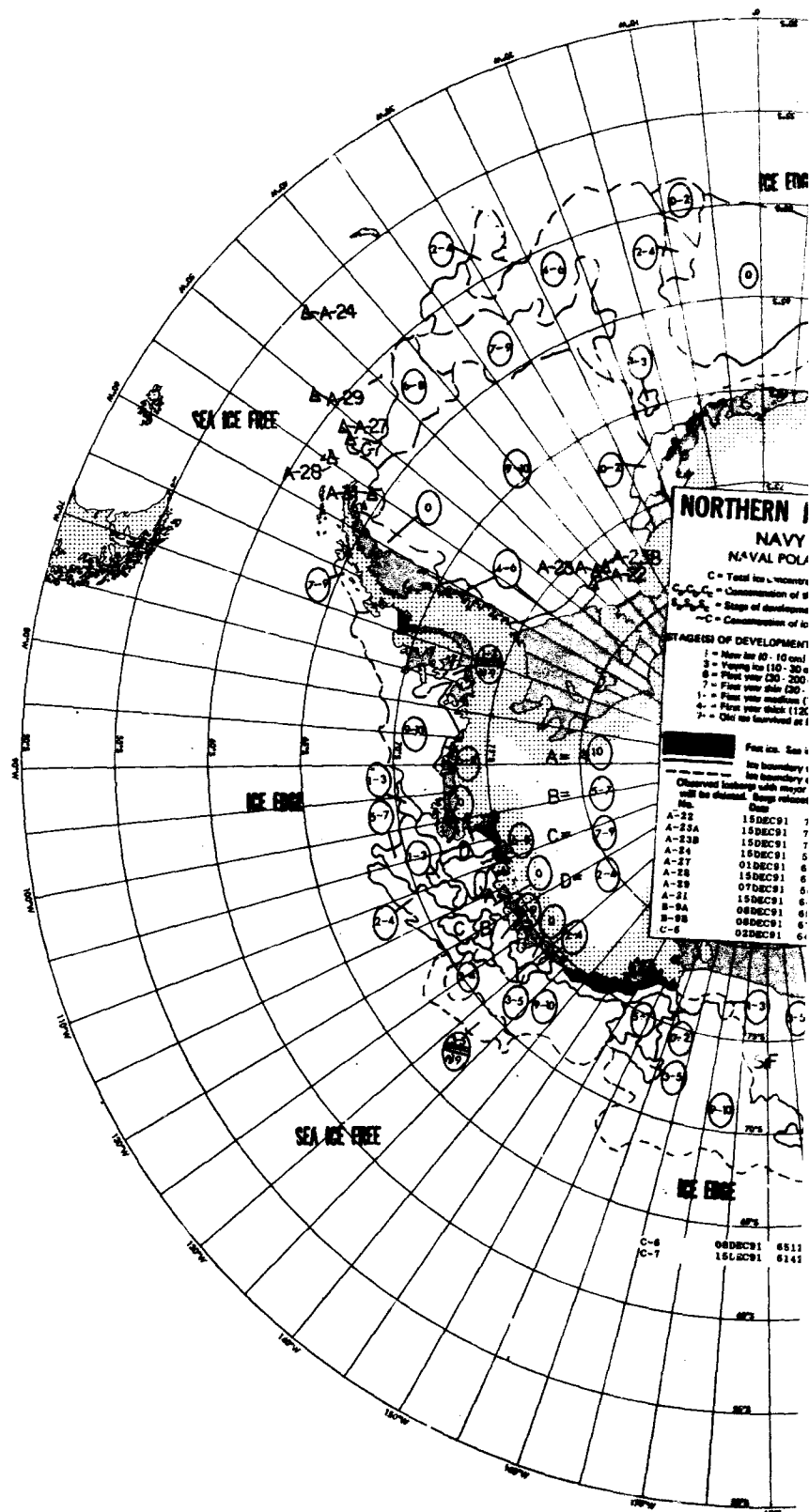












NORTHERN ICE LIMIT 23 DEC 91

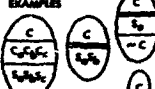
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUTLAND

C = Total ice concentration in the area in tenths.
 $C_{1/2}$ = Concentration of thickest ($C_{1/2}$), 2nd thickest ($C_{2/2}$), and 3rd thickest ($C_{3/2}$) ice.
 $C_{1/2}$ = Stage of development of thickest ($C_{1/2}$), 2nd thickest ($C_{2/2}$), and 3rd thickest ($C_{3/2}$) ice.
 $C_{1/2}$ = Concentration of ice within circle of radius and position.

STAGES OF DEVELOPMENT (THICKNESS)

- 1 = New ice (0 - 10 cm)
- 2 = Young ice (10 - 20 cm)
- 3 = First year ice (20 - 30 cm)
- 4 = First year ice (30 - 40 cm)
- 5 = First year ice (40 - 50 cm)
- 6 = First year ice (50 - 60 cm)
- 7 = First year ice (60 - 70 cm)
- 8 = First year ice (70 - 80 cm)
- 9 = First year ice (80 - 90 cm)
- 10 = First year ice (90 - 100 cm)
- 11 = First year ice (100 - 120 cm)
- 12 = Old ice (120 - 150 cm)
- 13 = Old ice (150 - 180 cm)
- 14 = Old ice (180 - 200 cm)
- 15 = Old ice (200 - 250 cm)
- 16 = Old ice (250 - 300 cm)
- 17 = Old ice (300 - 350 cm)
- 18 = Old ice (350 - 400 cm)
- 19 = Old ice (400 - 450 cm)
- 20 = Old ice (450 - 500 cm)
- 21 = Old ice (500 - 550 cm)
- 22 = Old ice (550 - 600 cm)
- 23 = Old ice (600 - 650 cm)
- 24 = Old ice (650 - 700 cm)
- 25 = Old ice (700 - 750 cm)
- 26 = Old ice (750 - 800 cm)
- 27 = Old ice (800 - 850 cm)
- 28 = Old ice (850 - 900 cm)
- 29 = Old ice (900 - 950 cm)
- 30 = Old ice (950 - 1000 cm)

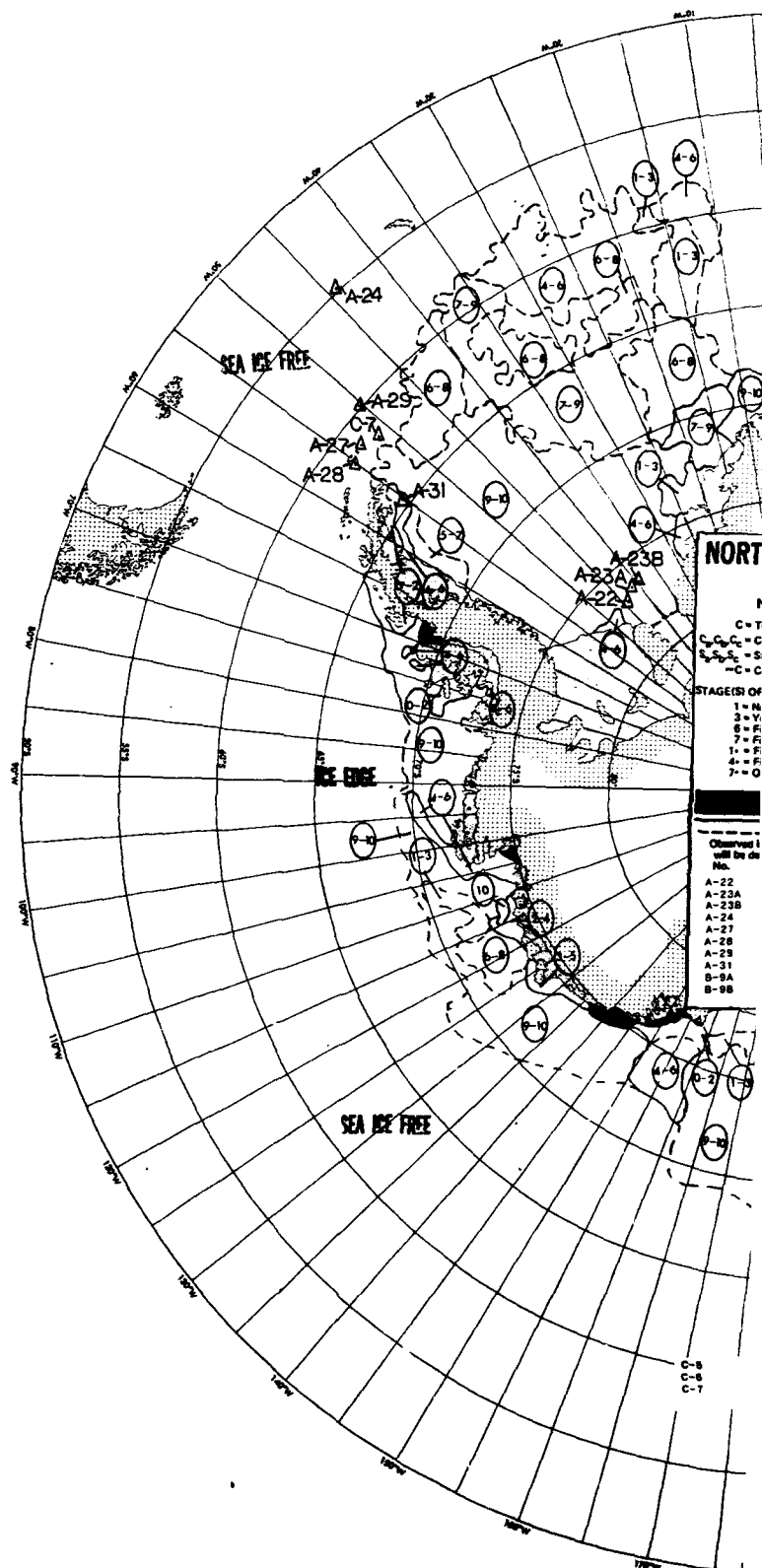
EXAMPLES

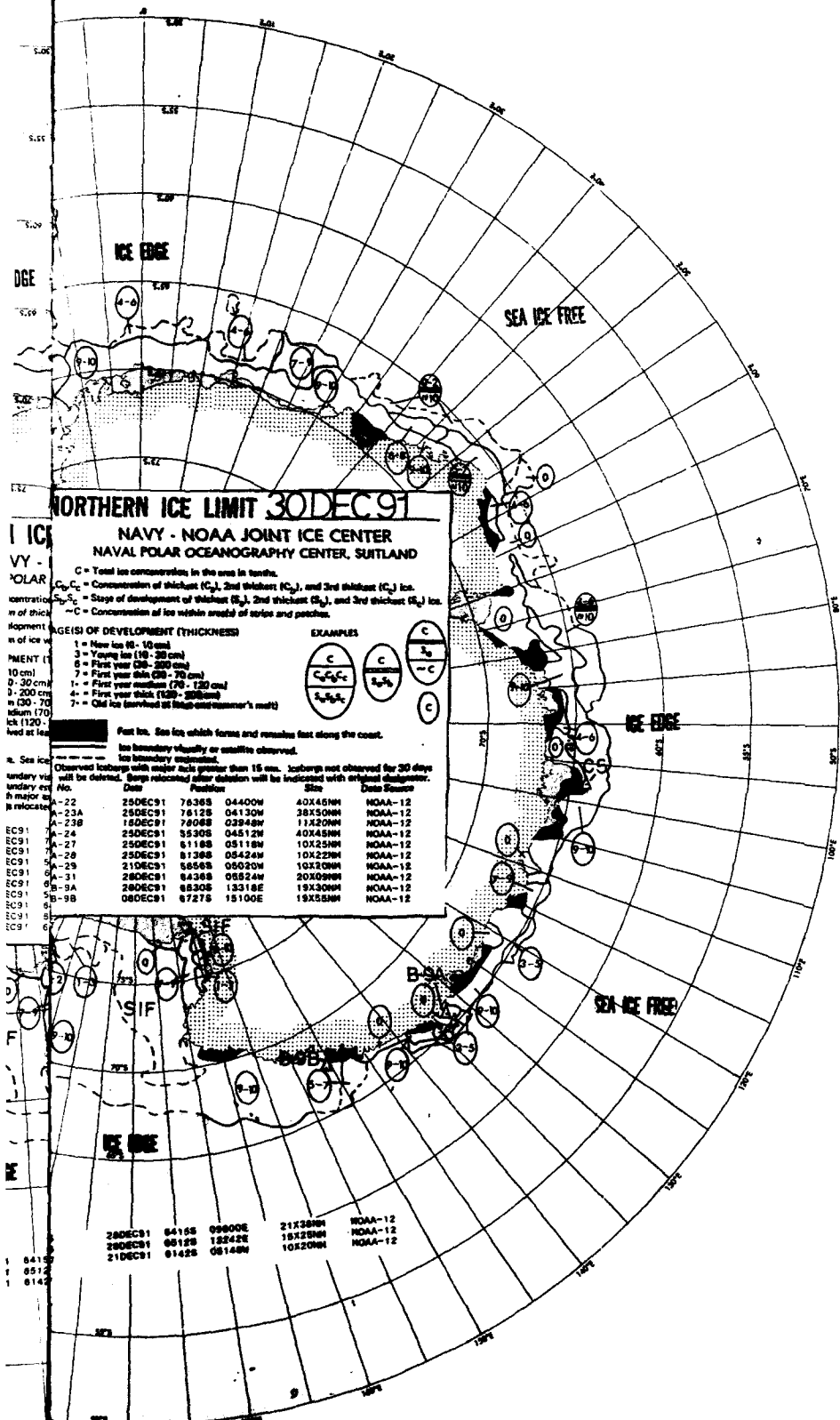


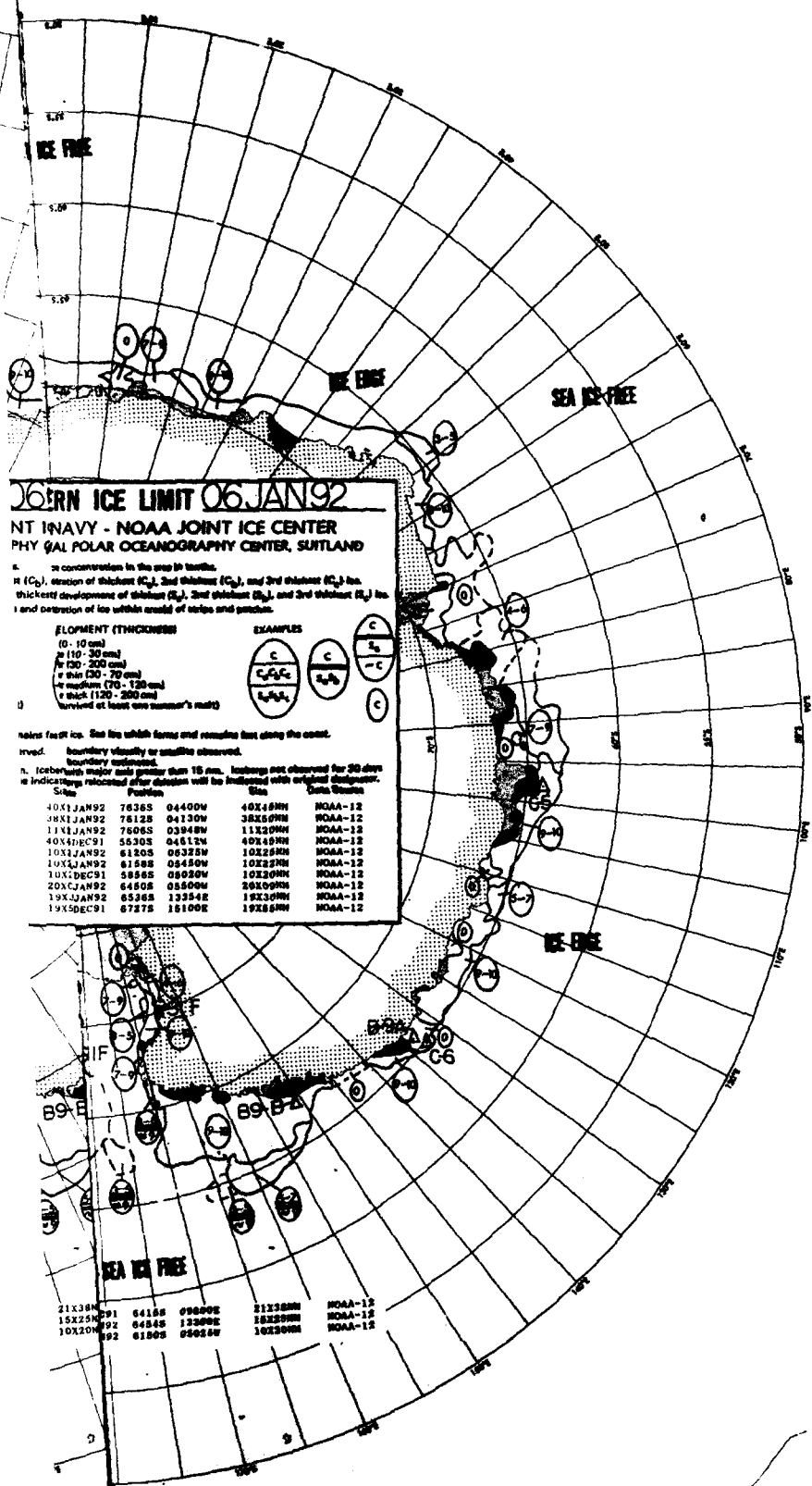
Part 10. Sea ice which forms and remains fast along the coast.
 Ice boundary slightly or totally changed.
 Ice boundary slightly or totally changed.
 Ice boundary slightly or totally changed.

Station	Position	Time	Station
15DEC91	78300 04400N	40X40M	NOAA-12
15DEC91	78120 04130W	30X30M	NOAA-12
15DEC91	78060 03940W	11X20M	NOAA-12
15DEC91	04510N	40X40M	NOAA-12
01DEC91	01100 05120N	10X20M	NOAA-12
15DEC91	01260 04420W	10X20M	NOAA-12
07DEC91	05500 06020W	10X20M	SHIP REPORT
15DEC91	04240 05012W	20X20M	NOAA-12
06DEC91	05200 13310E	10X20M	NOAA-12
06DEC91	07275 13100E	10X20M	NOAA-12
07DEC91	04150 09000E	21X20M	NOAA-12

05DEC91	00120	18040E	10X20M	NOAA-12
15DEC91	01400	06140W	10X20M	NOAA-12







06 JAN 92
NT INAVY - NOAA JOINT ICE CENTER
PHY CAL POLAR OCEANOGRAPHY CENTER, SUTLAND

a. concentration in the map in tenths.
 H (C₀) direction of thickest (C₁), 2nd thickest (C₂), and 3rd thickest (C₃) ice.
 thickest development of thickest (C₁), 2nd thickest (C₂), and 3rd thickest (C₃) ice.
 and direction of ice within circle of circle and patch.

FLOPMENT (THICKNESS)
 (0 - 10 cm)
 (10 - 30 cm)
 (30 - 50 cm)
 (50 - 70 cm)
 (70 - 120 cm)
 (120 - 200 cm)
 (200 - 300 cm)

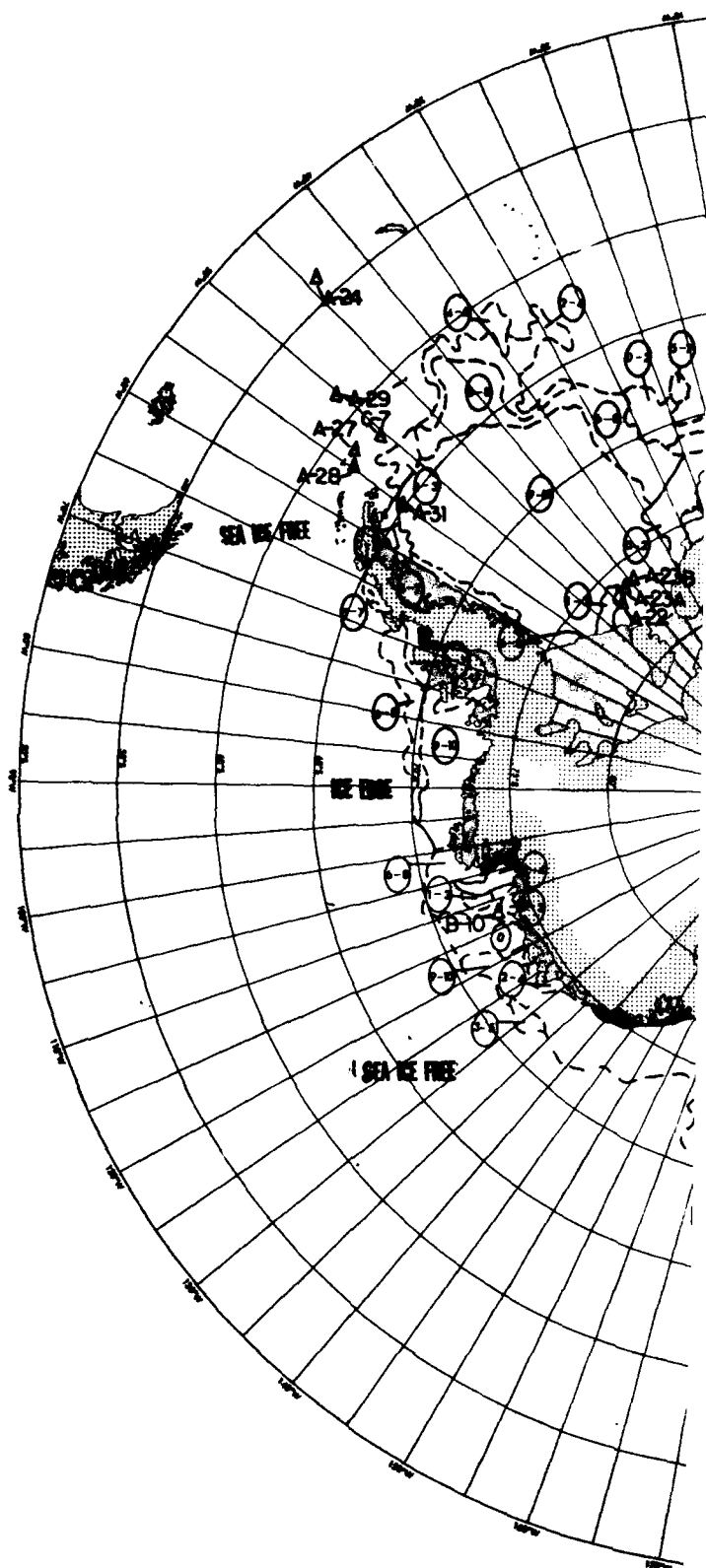
EXAMPLES

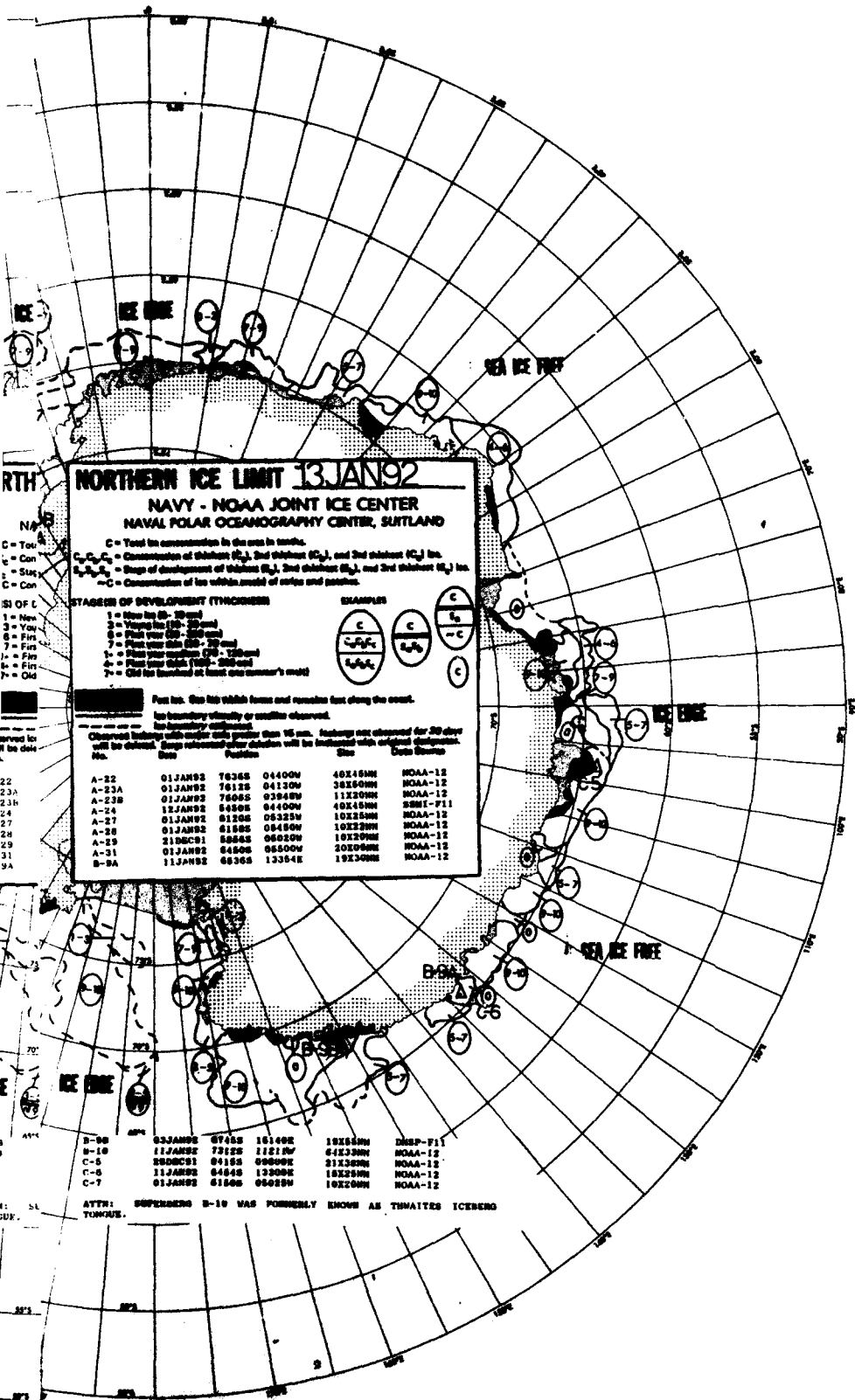
$\frac{C}{C_1 C_2 C_3}$ $\frac{C}{C_1 C_2}$ $\frac{C}{C_1}$ $\frac{C}{C_2}$ $\frac{C}{C_3}$ $\frac{C}{C_1 C_2 C_3}$ $\frac{C}{C_1 C_2}$ $\frac{C}{C_1}$ $\frac{C}{C_2}$ $\frac{C}{C_3}$

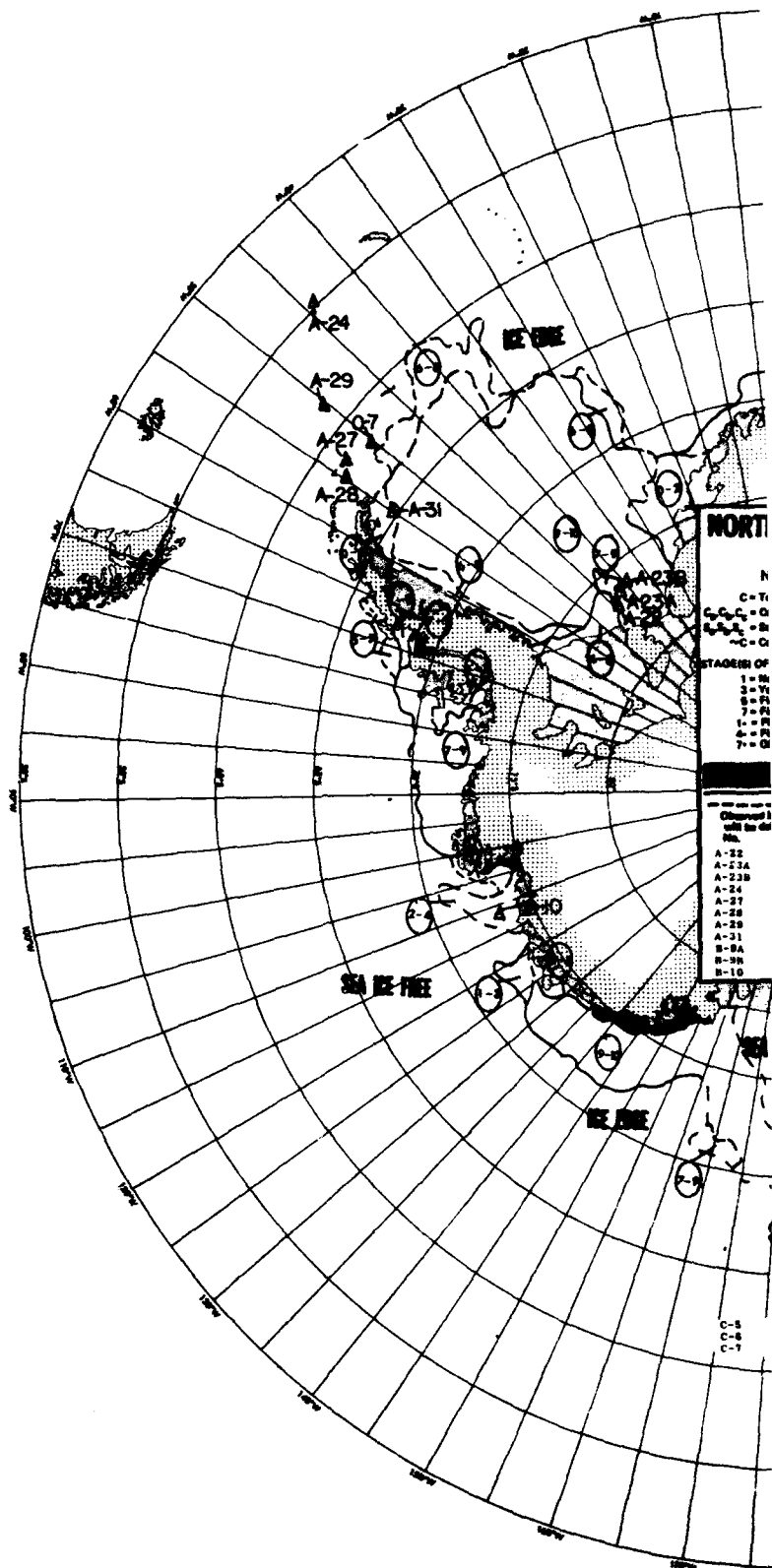
Notes: (a) Ice. See the white line and remains last along the coast.
 (b) Boundary usually to outside observed.
 (c) Boundary estimated.
 (d) Icebergs major scale greater than 10 m. Icebergs not observed for 20 days.
 (e) Indicators released after sunset will be indicated with original designation.

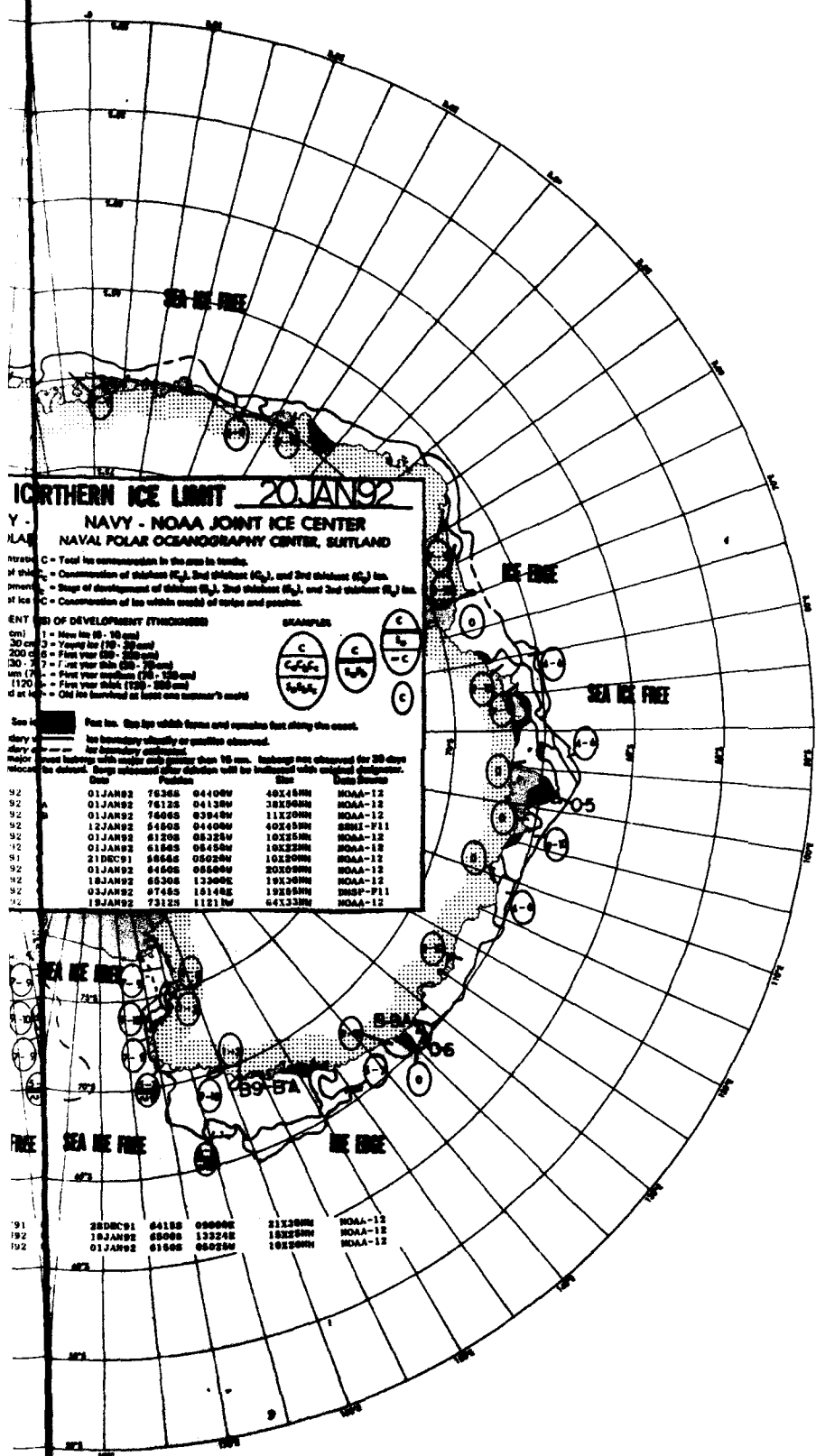
Date	Position	Size	Date	Position	Size
10X1JAN92	7836S 04400W	40X40M	NOAA-12		
10X1JAN92	7812S 04130W	38X50M	NOAA-12		
11X1JAN92	7808S 03940W	11X20M	NOAA-12		
40X1DEC91	5530S 04512W	40X60M	NOAA-12		
10X1JAN92	6120S 06325W	10X25M	NOAA-12		
10X1JAN92	6158S 05450W	10X25M	NOAA-12		
10X1DEC91	5858S 08080W	10X20M	NOAA-12		
20X1JAN92	6450S 08500W	58X00M	NOAA-12		
19X1JAN92	6536S 12354E	19X30M	NOAA-12		
19X5DEC91	6737S 18100E	19X86M	NOAA-12		

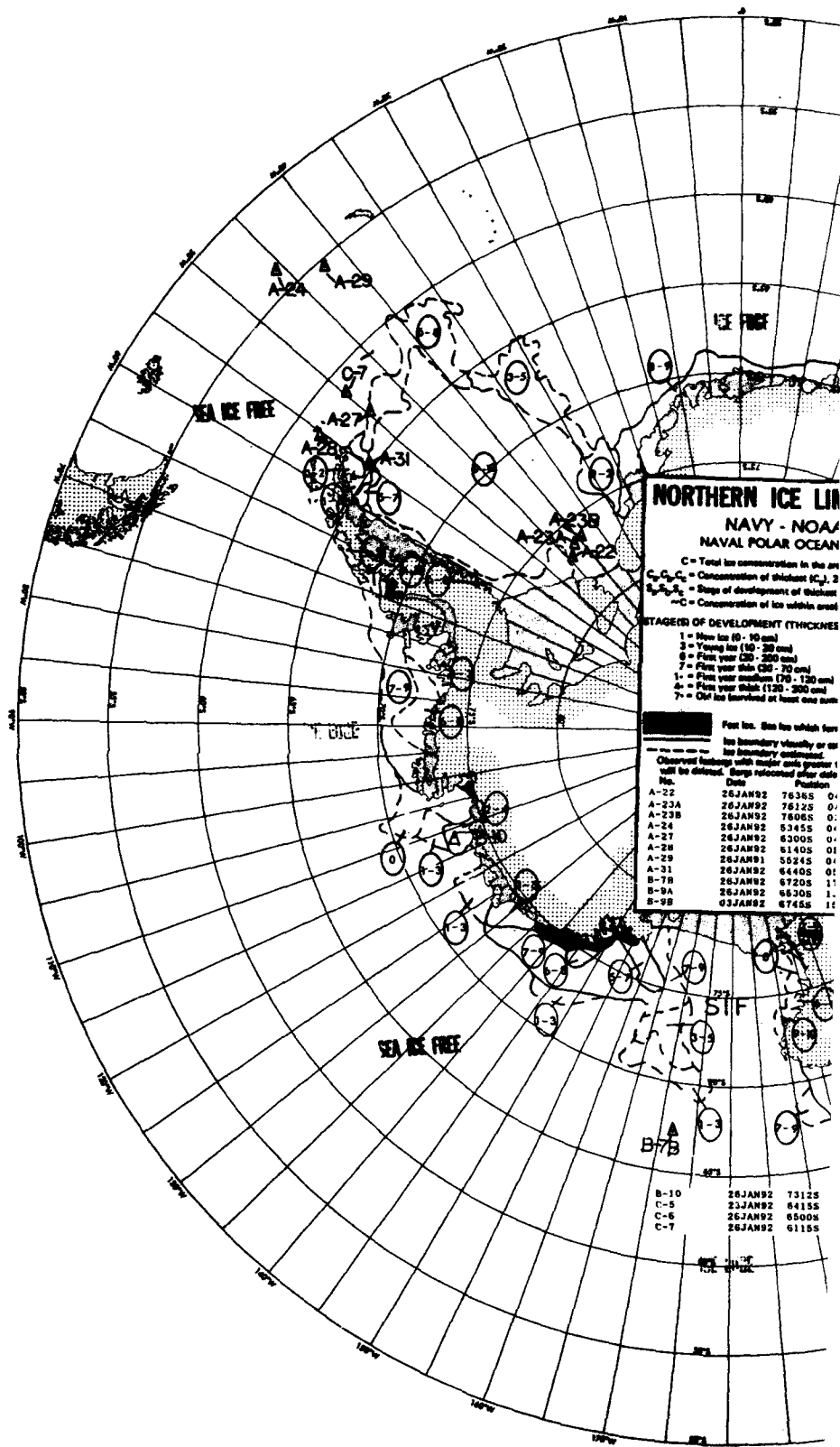
21X38M	6415S	09000E	21X38M	NOAA-12
15X25M	6454S	12300E	15X25M	NOAA-12
10X20M	6180S	06024W	10X20M	NOAA-12

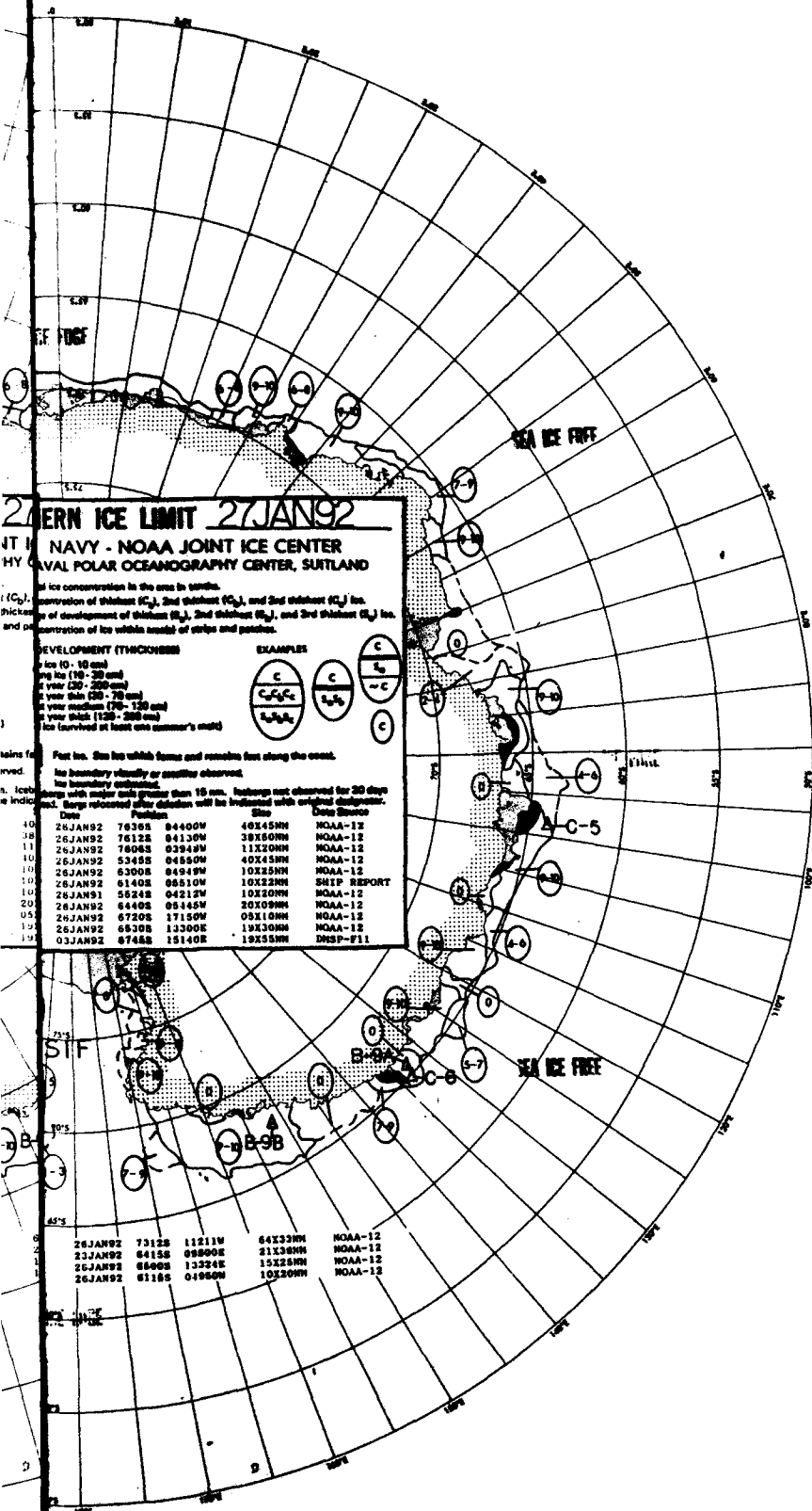


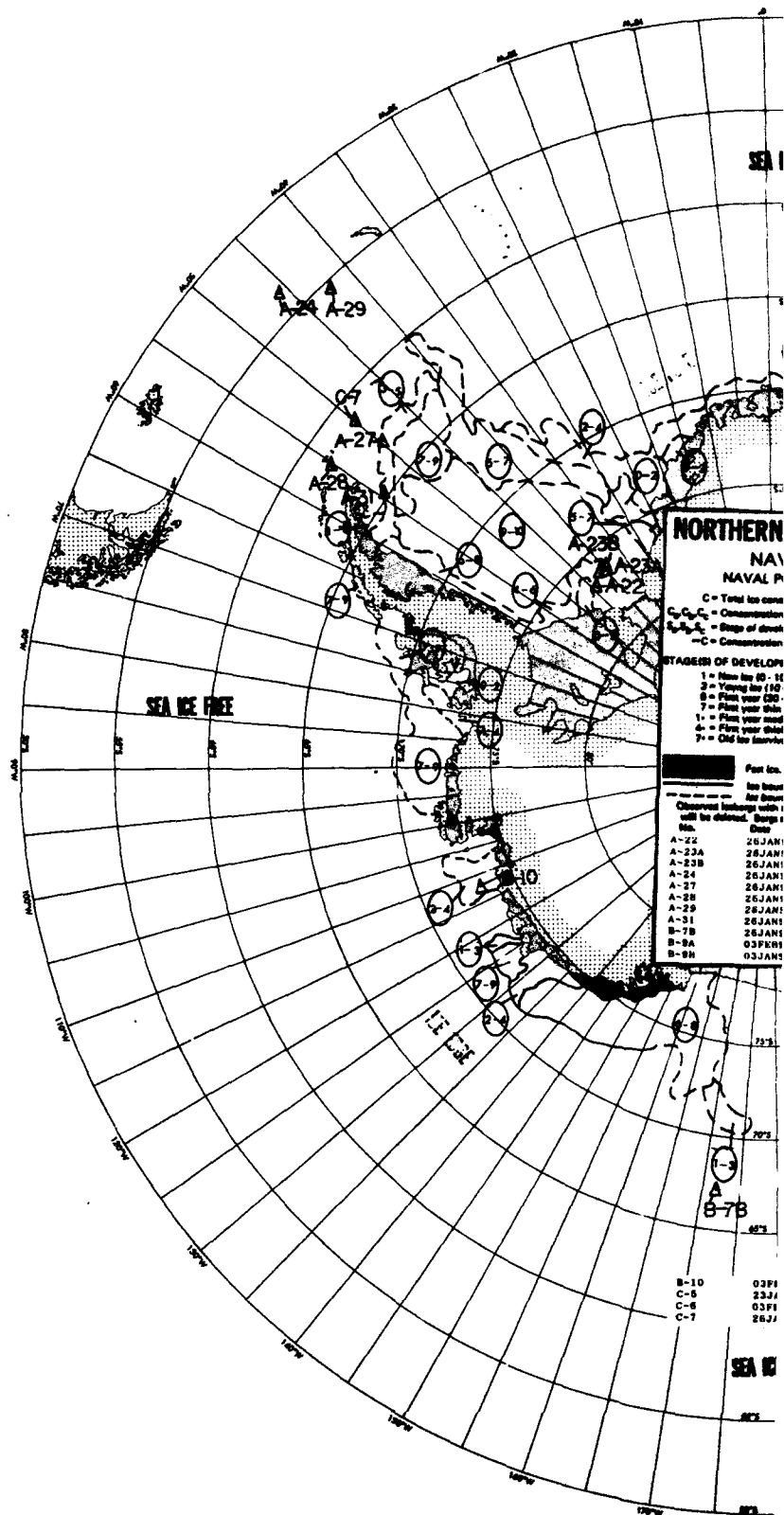












SEA ICE FREE

SEA ICE FREE

NORTHERN ICE LIMIT 03 FEB 92

NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUTLAND

C = Total ice concentration in the area to be used.
 C_1, C_2, C_3 = Concentration of thickest (C_1), 2nd thickest (C_2), and 3rd thickest (C_3) ice.
 C_1, C_2, C_3 = Stage of development of thickest (C_1), 2nd thickest (C_2), and 3rd thickest (C_3) ice.
 In area = Concentration of ice within circle of radius and position.

EXAMPLES OF DEVELOPMENT (THICKNESS)

- 1 = New ice (0 - 10 cm)
 2 = Young ice (10 - 30 cm)
 3 = First year (30 - 50 cm)
 4 = First year (50 - 70 cm)
 5 = First year (70 - 90 cm)
 6 = First year (90 - 120 cm)
 7 = First year (120 - 200 cm)
 8 = First year (200 - 300 cm)
 9 = Old ice (300 cm or more)

EXAMPLES



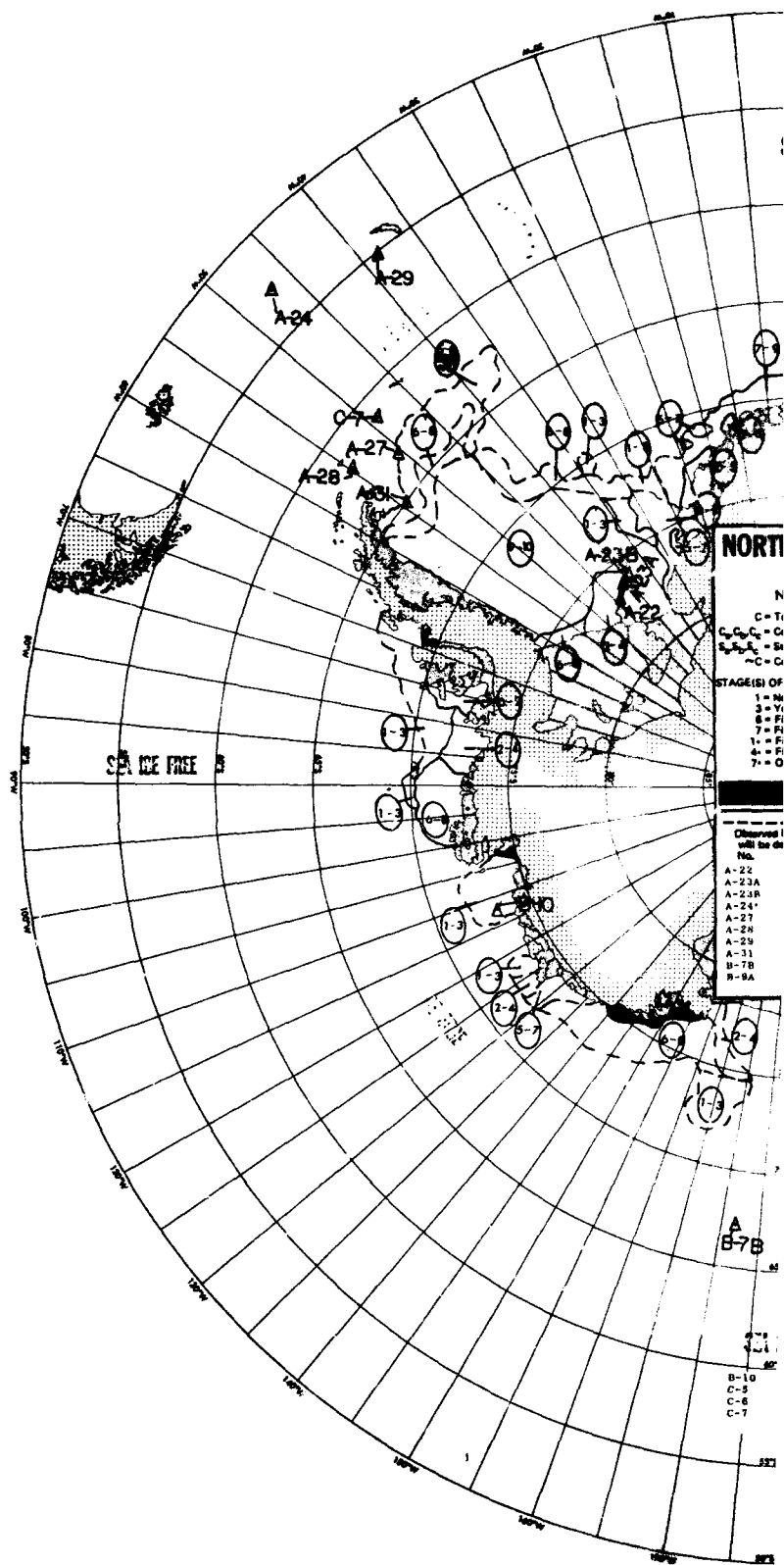
High for [] Feet ice. See ice which forms and remains fast along the coast.

Ice boundary vicinity of satellite observed.
 Ice boundary estimated.
 Greater observed ice than 15 cm. Iceberg not observed for 30 days.
 All be deleted. Barge released after duration will be indicated with original designation.

Date	Position	Size	Data Source
26 JAN 92	7536S 04400W	40X15NM	NOAA-12
26 JAN 92	7512S 04130W	38X20NM	NOAA-12
26 JAN 92	7508S 03948W	11X20NM	NOAA-12
26 JAN 92	5345S 04550W	40X15NM	NOAA-12
26 JAN 92	0300S 04949W	10X25NM	NOAA-12
26 JAN 92	6140S 05510W	10X22NM	SHIP REPORT
26 JAN 92	5524S 04212W	10X20NM	NOAA-12
26 JAN 92	6440S 05445W	20X20NM	NOAA-12
26 JAN 92	6720S 17150W	05X10NM	NOAA-12
03 FEB 92	0548S 13300E	18X20NM	NOAA-12
03 JAN 92	8745S 18140E	19X55NM	INSP-911

112S	10	03 FEB 92	7312S	11211W	04X33NM	NOAA-12
115S	5	23 JAN 92	6416S	09000E	21X35NM	NOAA-12
118S	6	03 FEB 92	6449S	13300E	15X25NM	NOAA-12
119S	7	26 JAN 92	6115S	04950E	10X20NM	NOAA-12

SEA ICE FREE



SEA ICE FREE

NORTHERN ICE LIMIT 10 FEB 92

NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

C = Total ice concentration in the area in tenths.
C₁, C₂, C₃ = Concentration of thickest (C₁), 2nd thickest (C₂), and 3rd thickest (C₃) ice.
S₁, S₂, S₃ = Stage of development of thickest (S₁), 2nd thickest (S₂), and 3rd thickest (S₃) ice.
~C = Concentration of ice within mental of strips and patches.

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



For ice: See ice which forms and remains fast along the coast.

Ice boundary visibility or satellite observed.

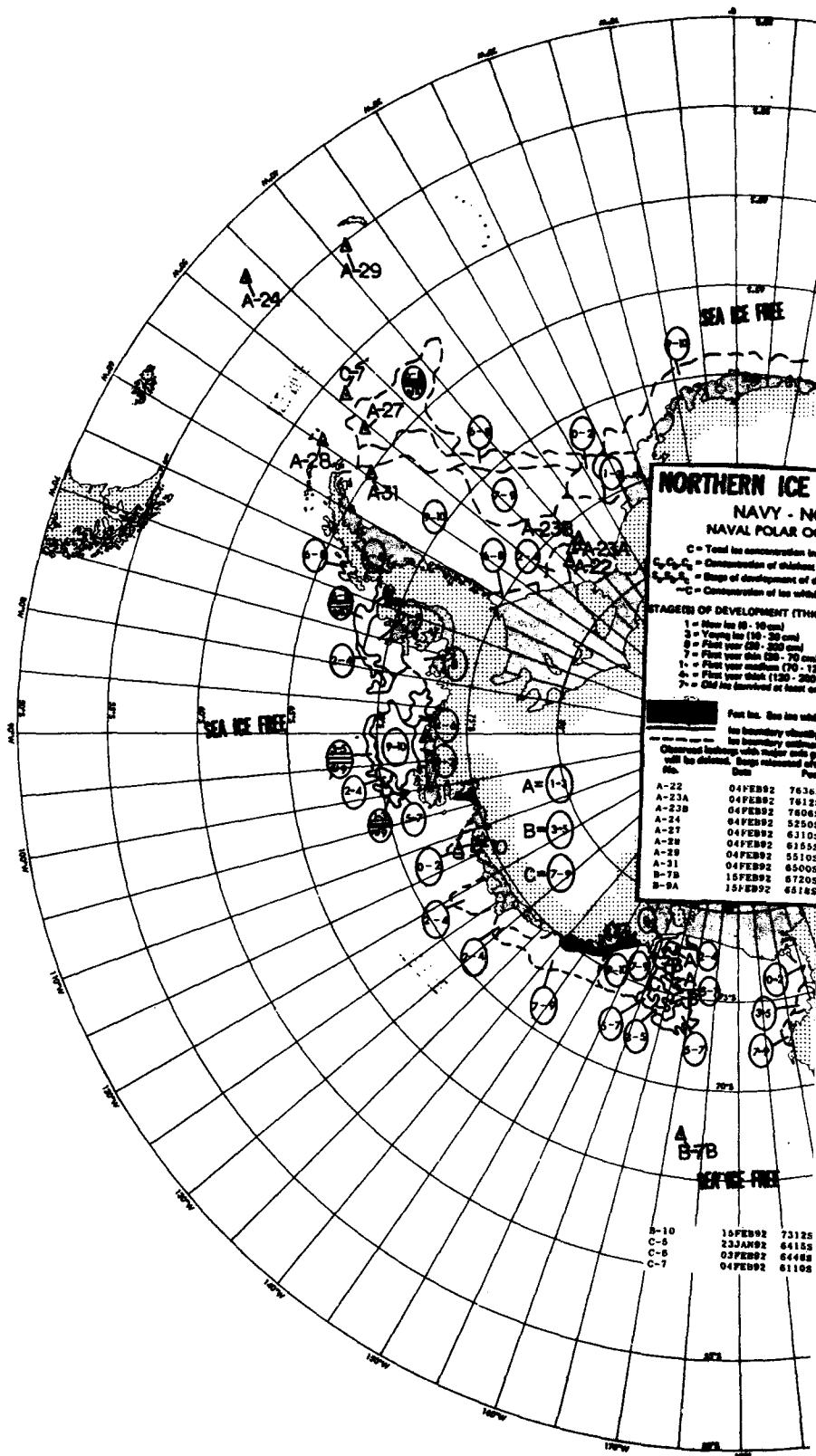
Ice boundary estimated.

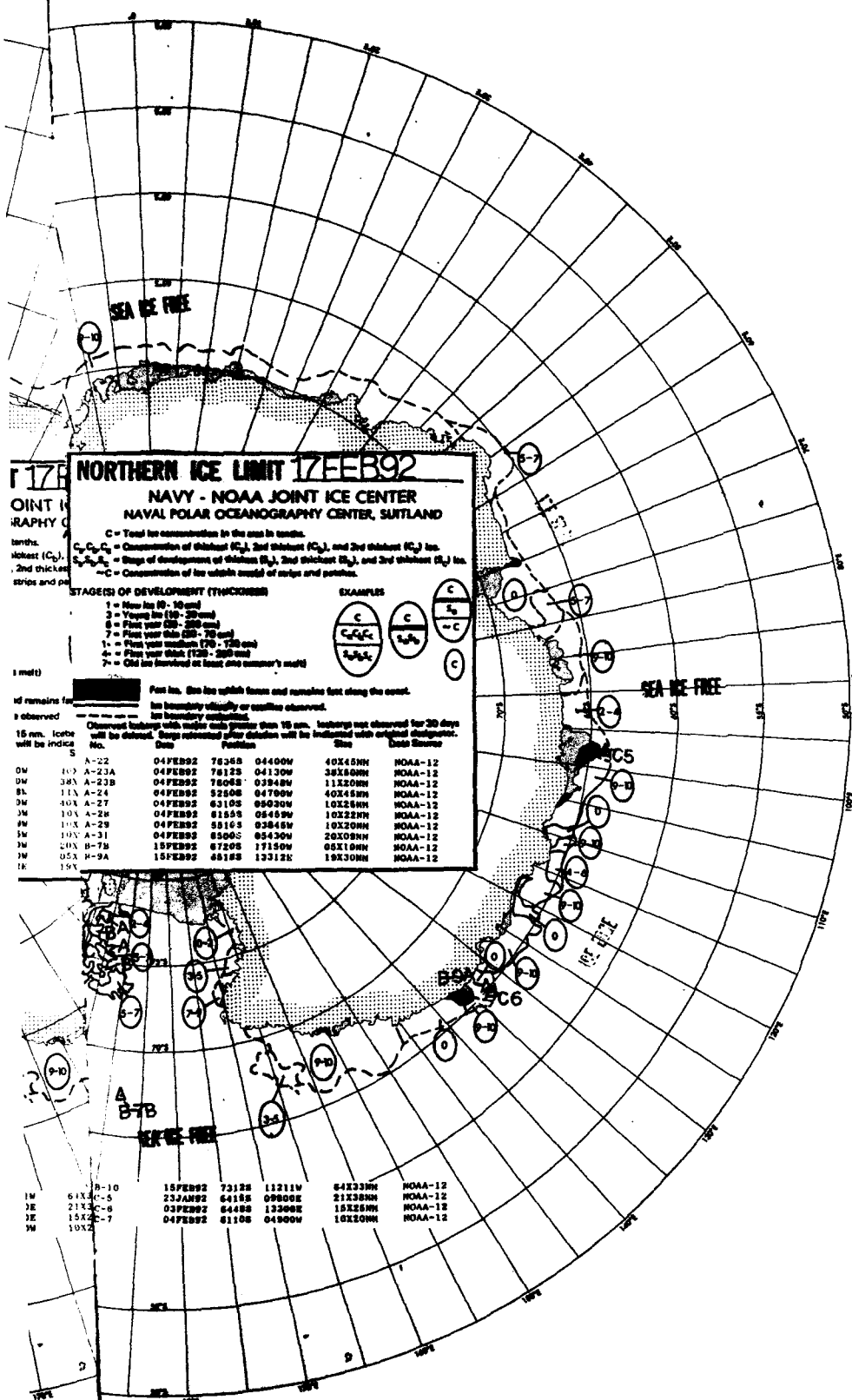
Observed icebergs with major axis greater than 15 km. Icebergs not observed for 30 days will be deleted. Berg released after deletion will be indicated with original designation.

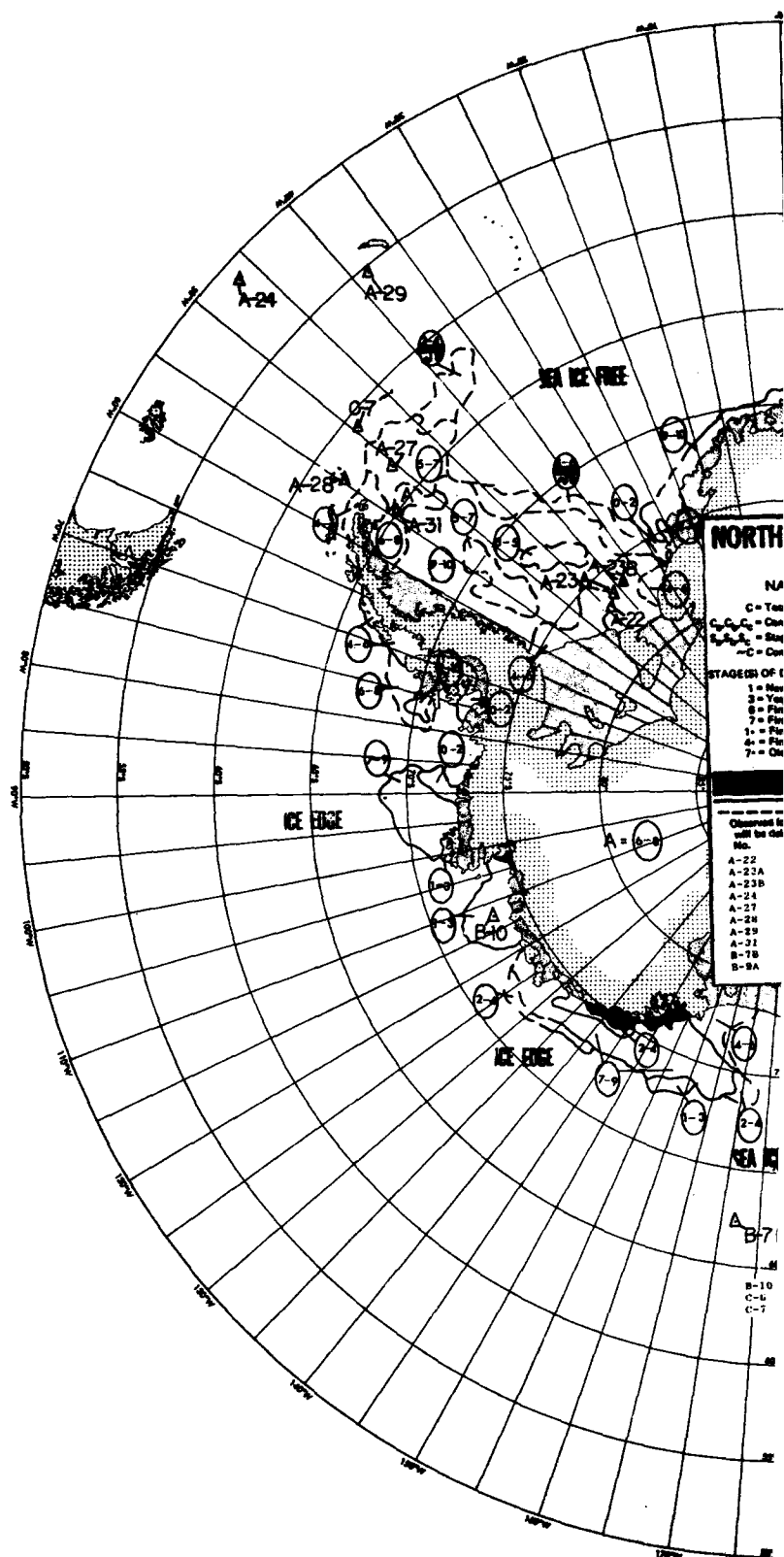
No.	Date	Position	Size	Data Source
A-22	01FEB92	763GS 04400W	40X45NM	NOAA-12
A-23A	04FEB92	7612S 04130W	38X50NM	NOAA-12
A-23B	04FEB92	7606S 03948W	11X20NM	NOAA-12
A-24	04FEB92	5250S 04700W	40X45NM	NOAA-12
A-27	04FEB92	6310S 05030W	10X25NM	NOAA-12
A-28	04FEB92	6155S 05459W	10X22NM	NOAA-12
A-29	04FEB92	5510S 03845W	10X20NM	NOAA-12
A-31	04FEB92	6500S 05430W	20X09NM	NOAA-12
B-7B	26JAN92	6720S 17150W	08X10NM	NOAA-12
B-9A	08FEB92	6518S 13312E	19X30NM	NOAA-12

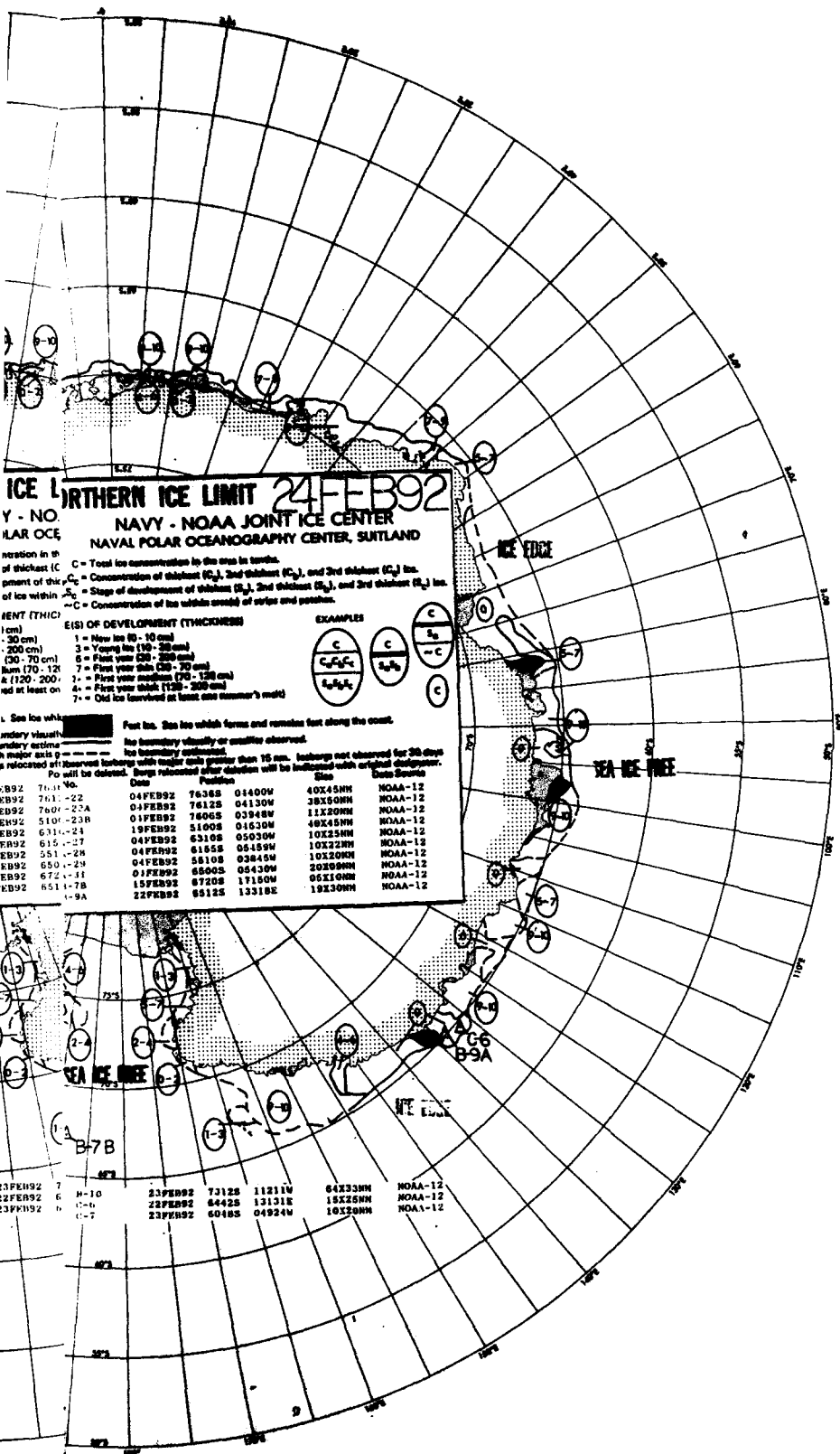
SEA ICE FREE

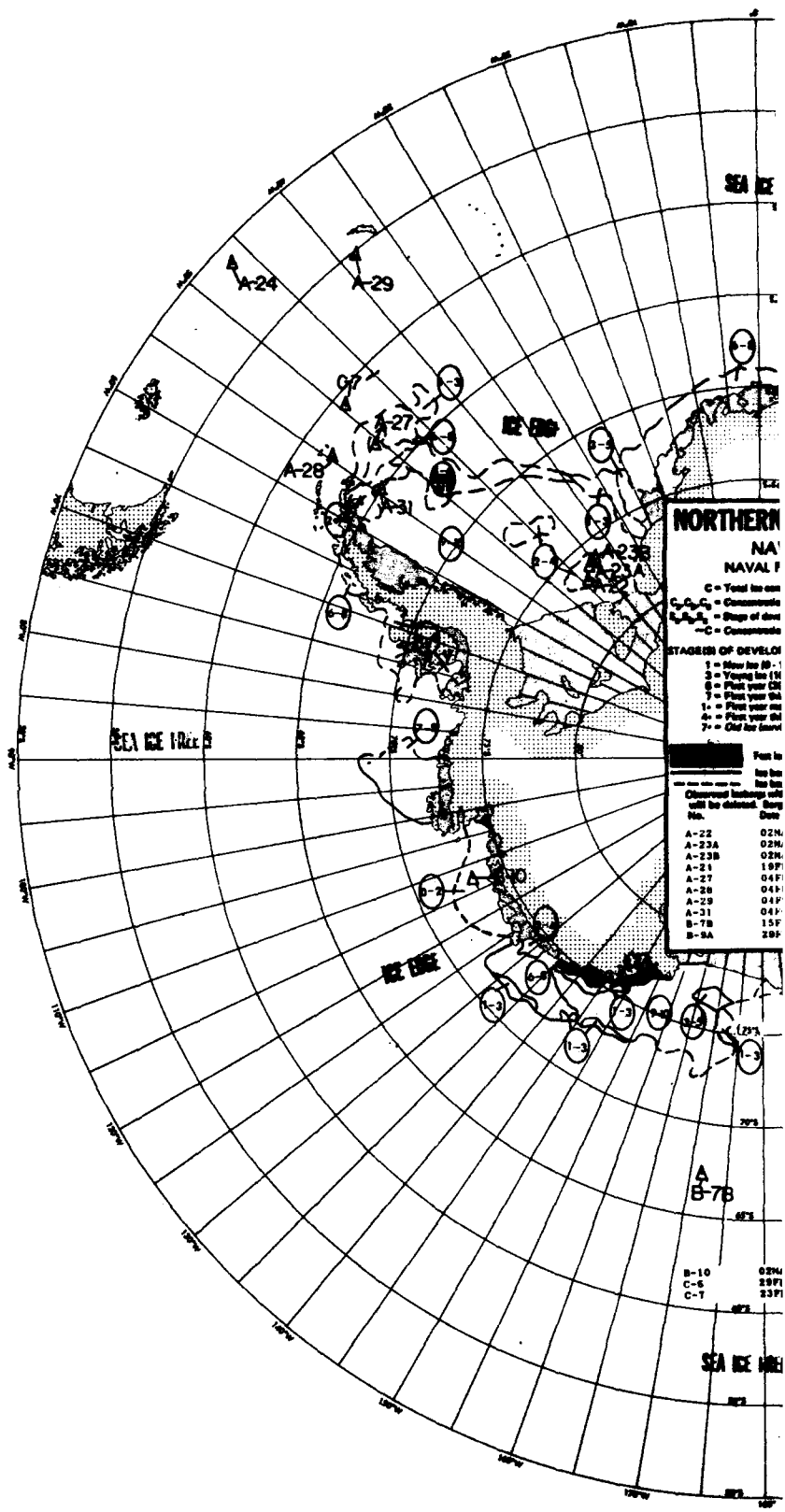
B-10	10FEB92	7312S	11211W	84X33NM	NOAA-12
C-5	23JAN92	6415S	09800E	21X28NM	NOAA-12
C-6	03FEB92	6448S	13300E	18X25NM	NOAA-12
C-7	04FEB92	6110S	04900W	10X20NM	NOAA-12

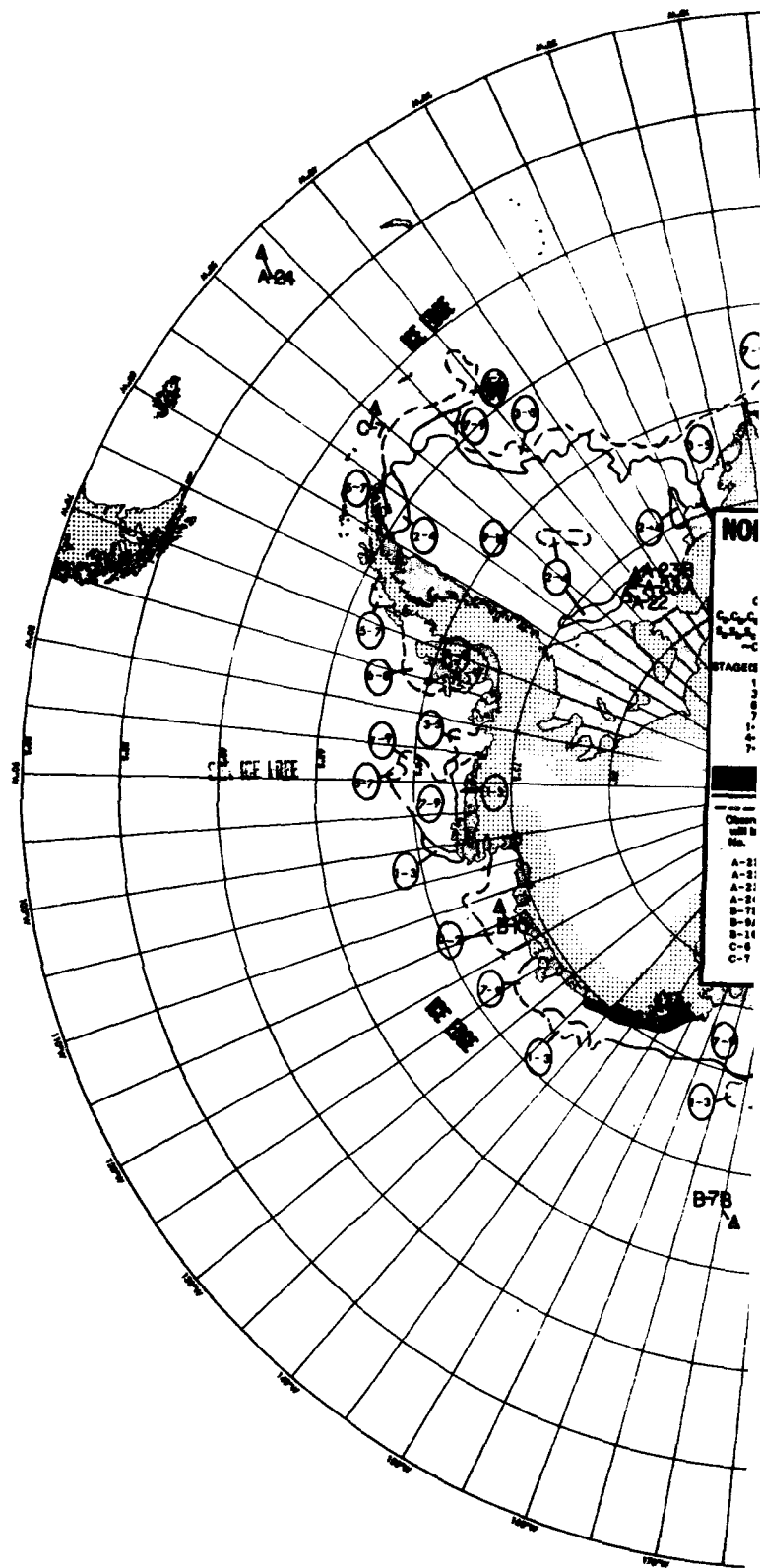


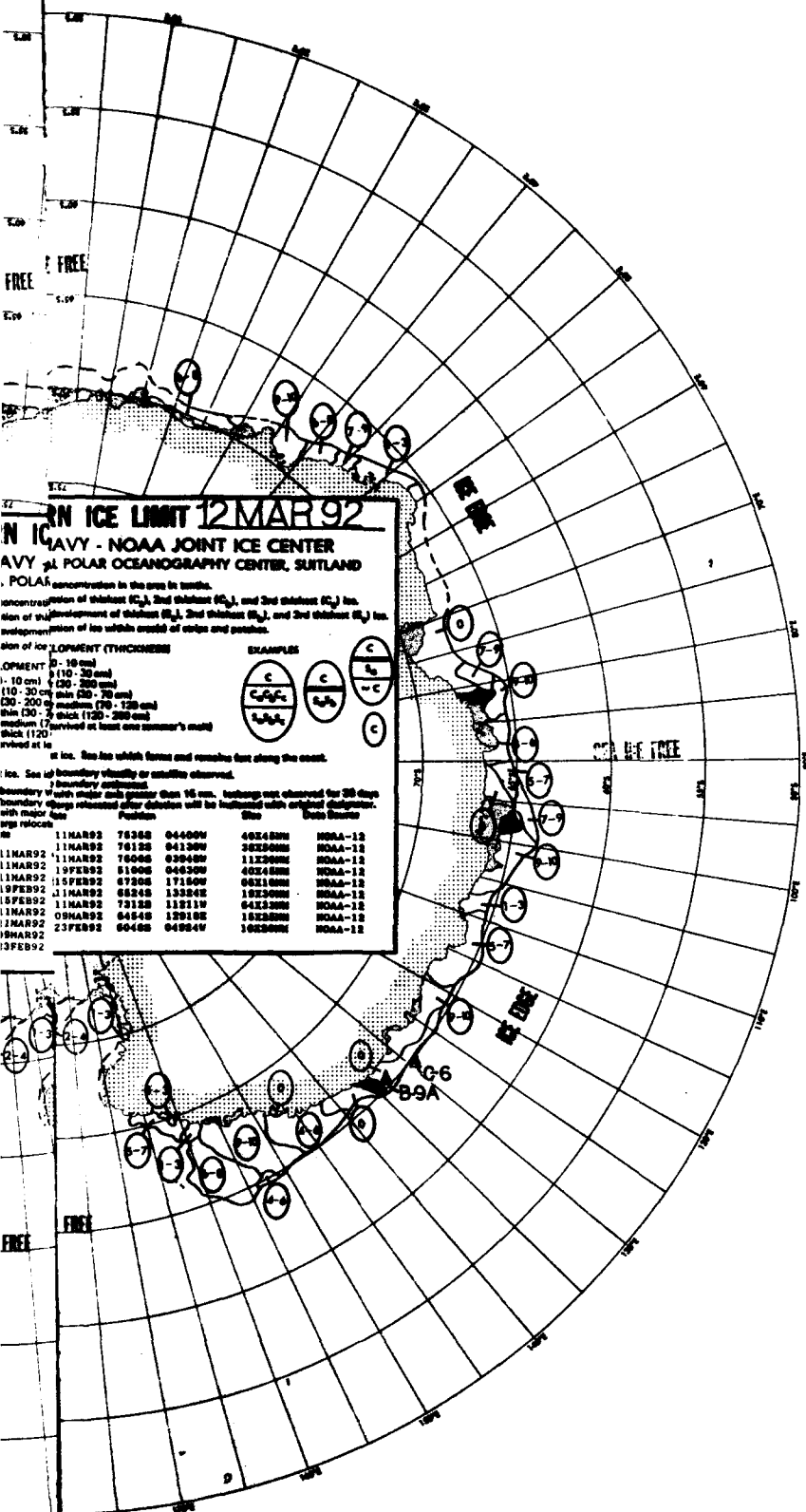


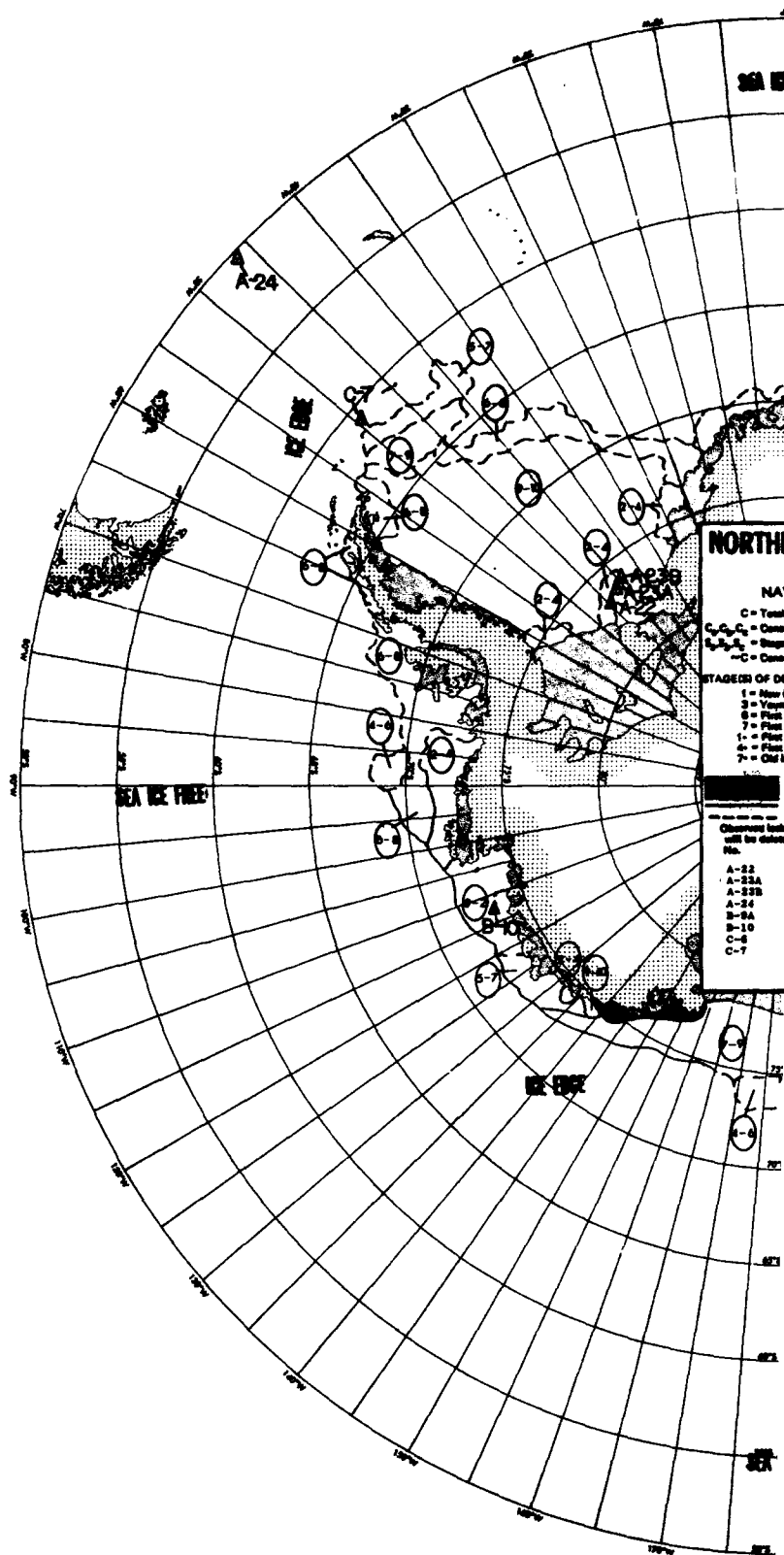


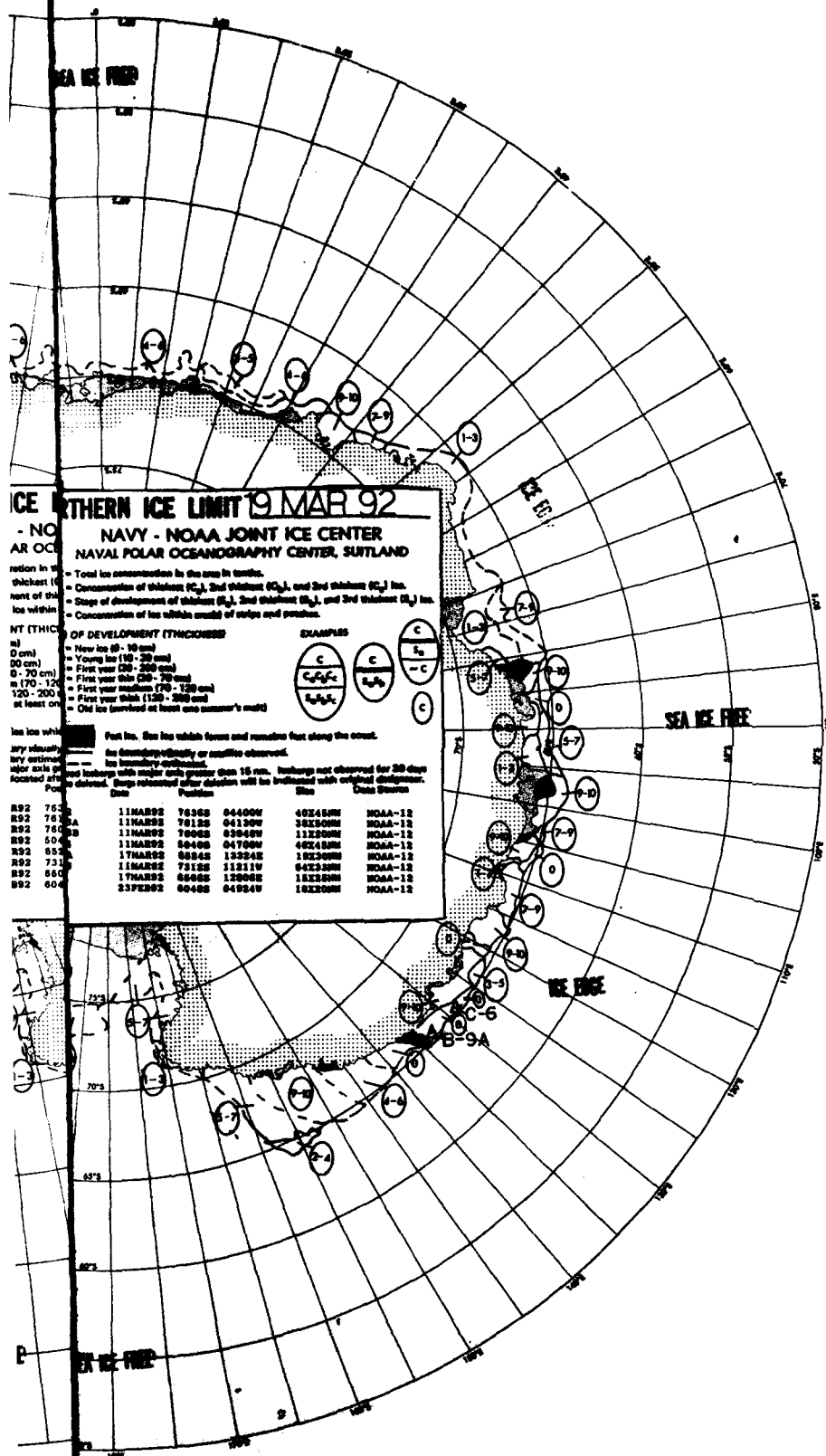


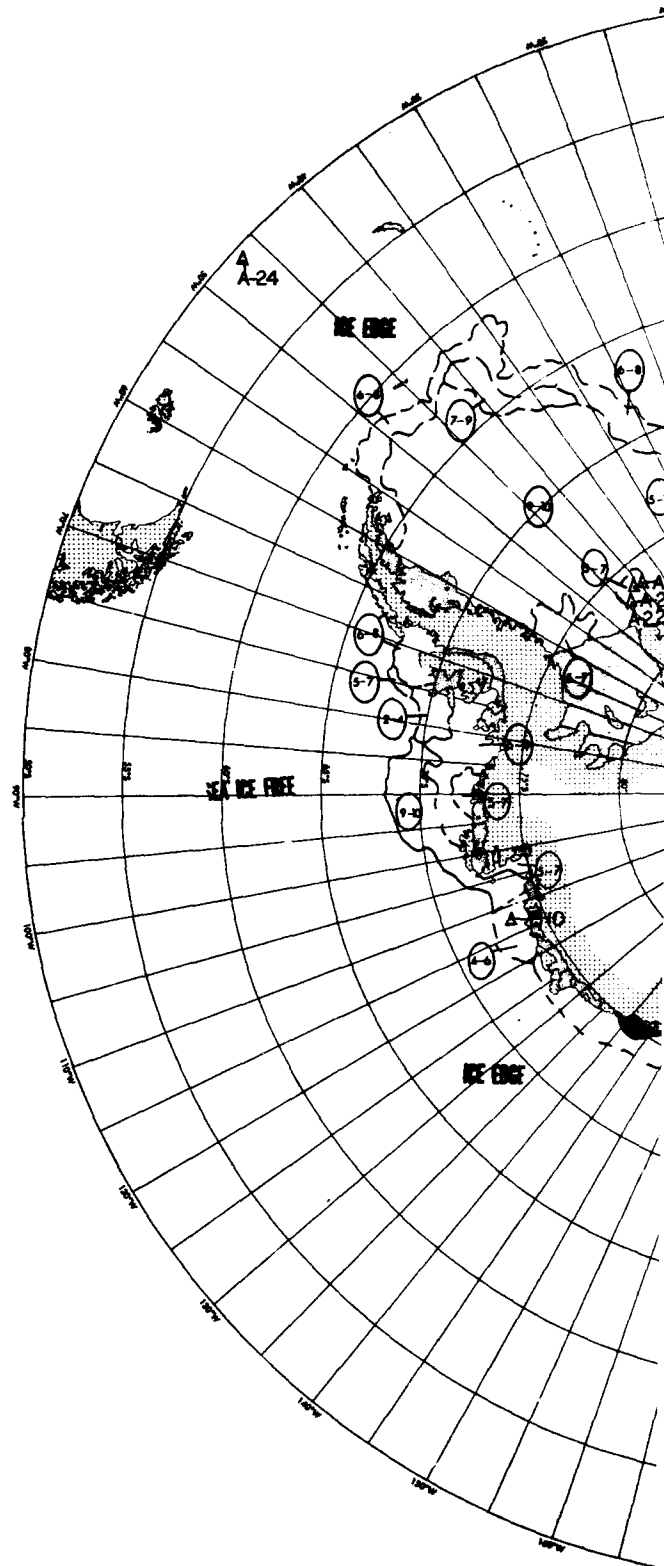


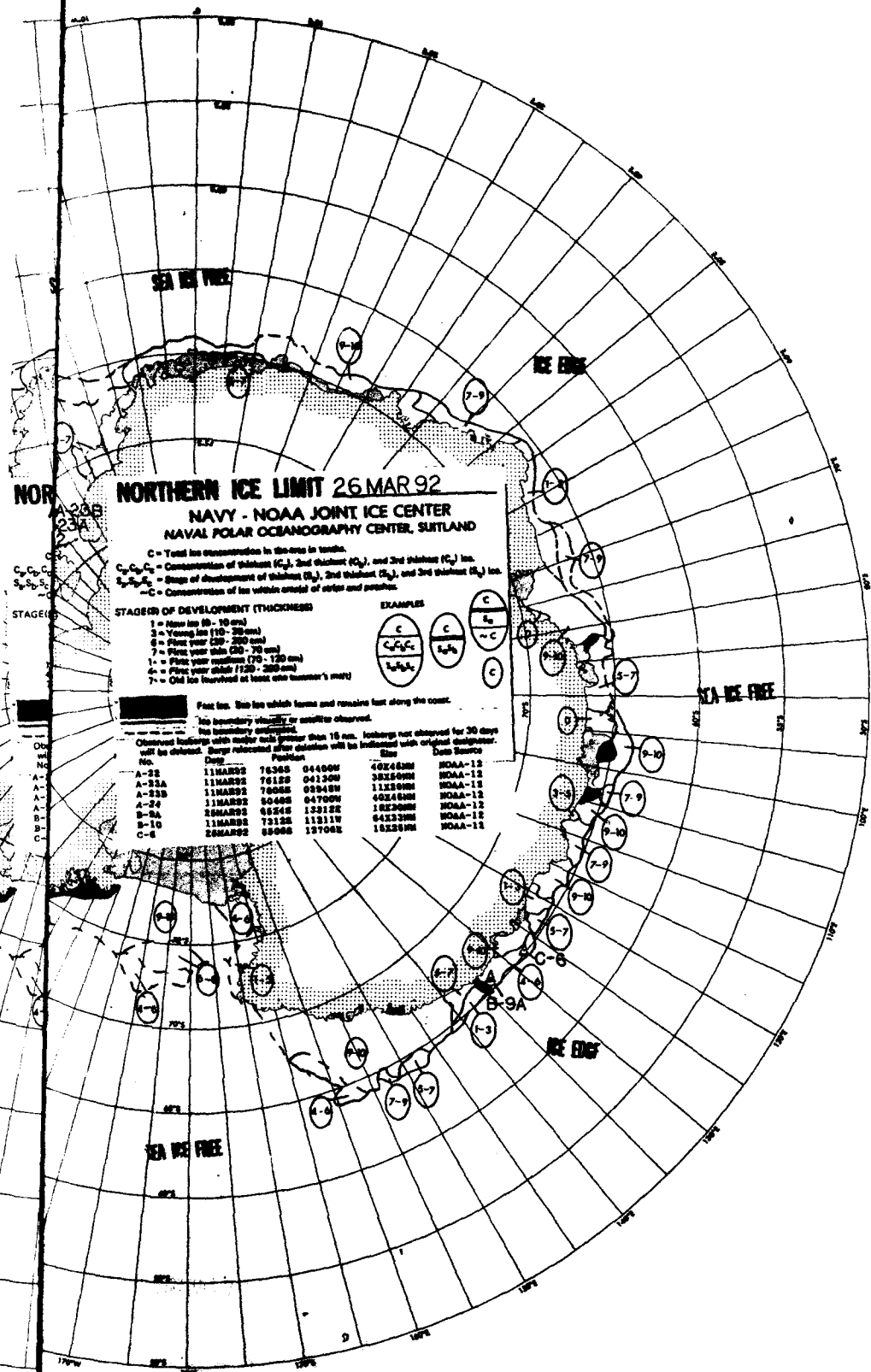


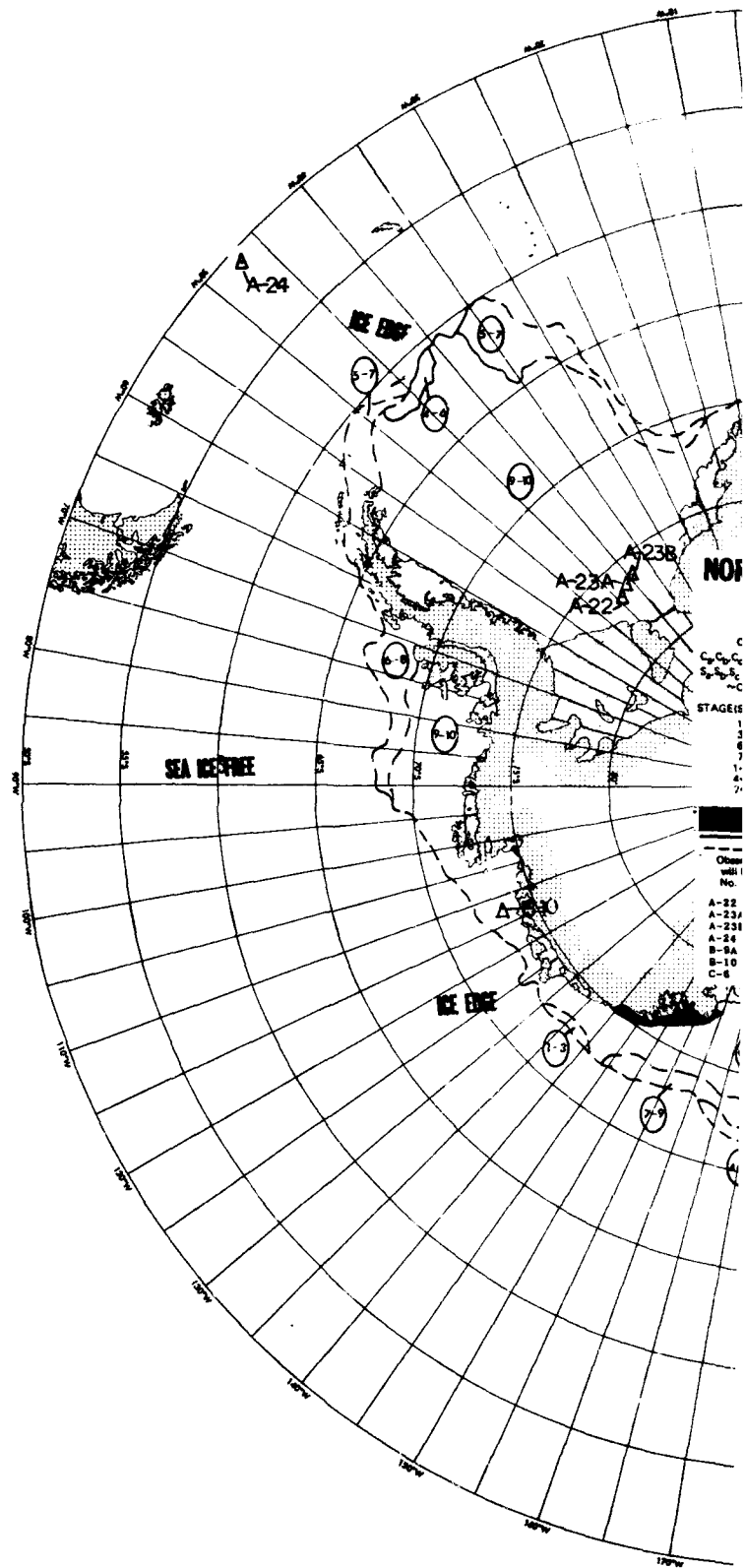


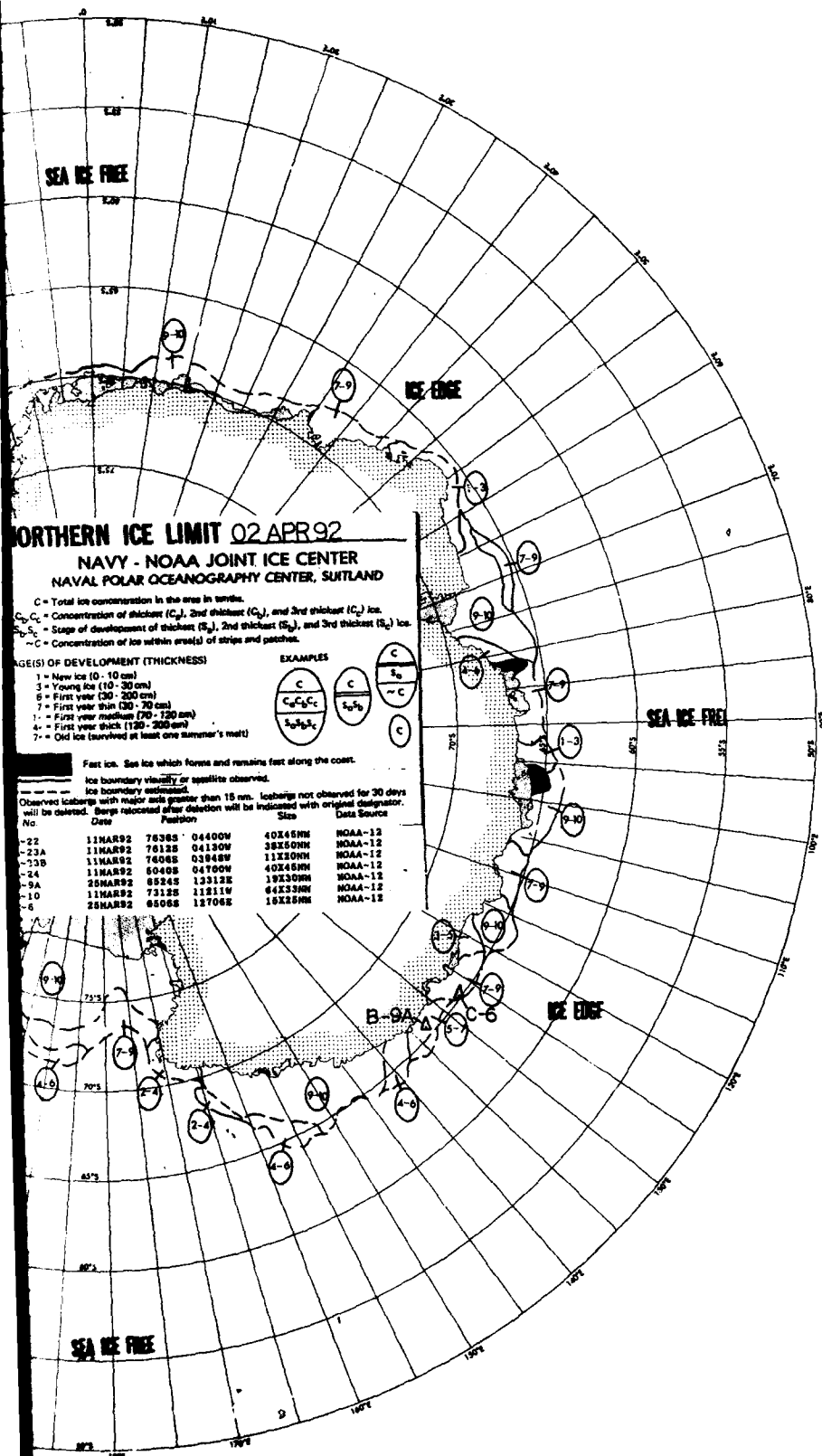


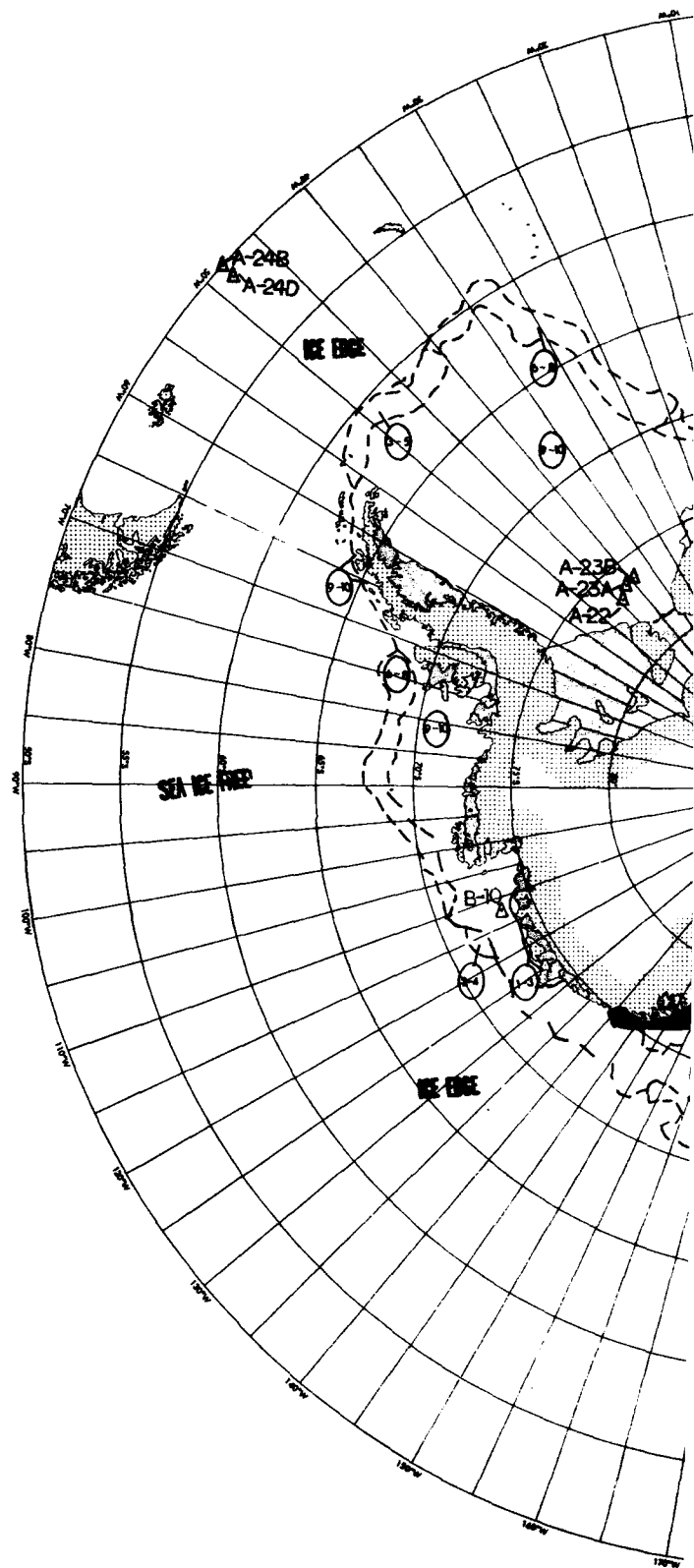


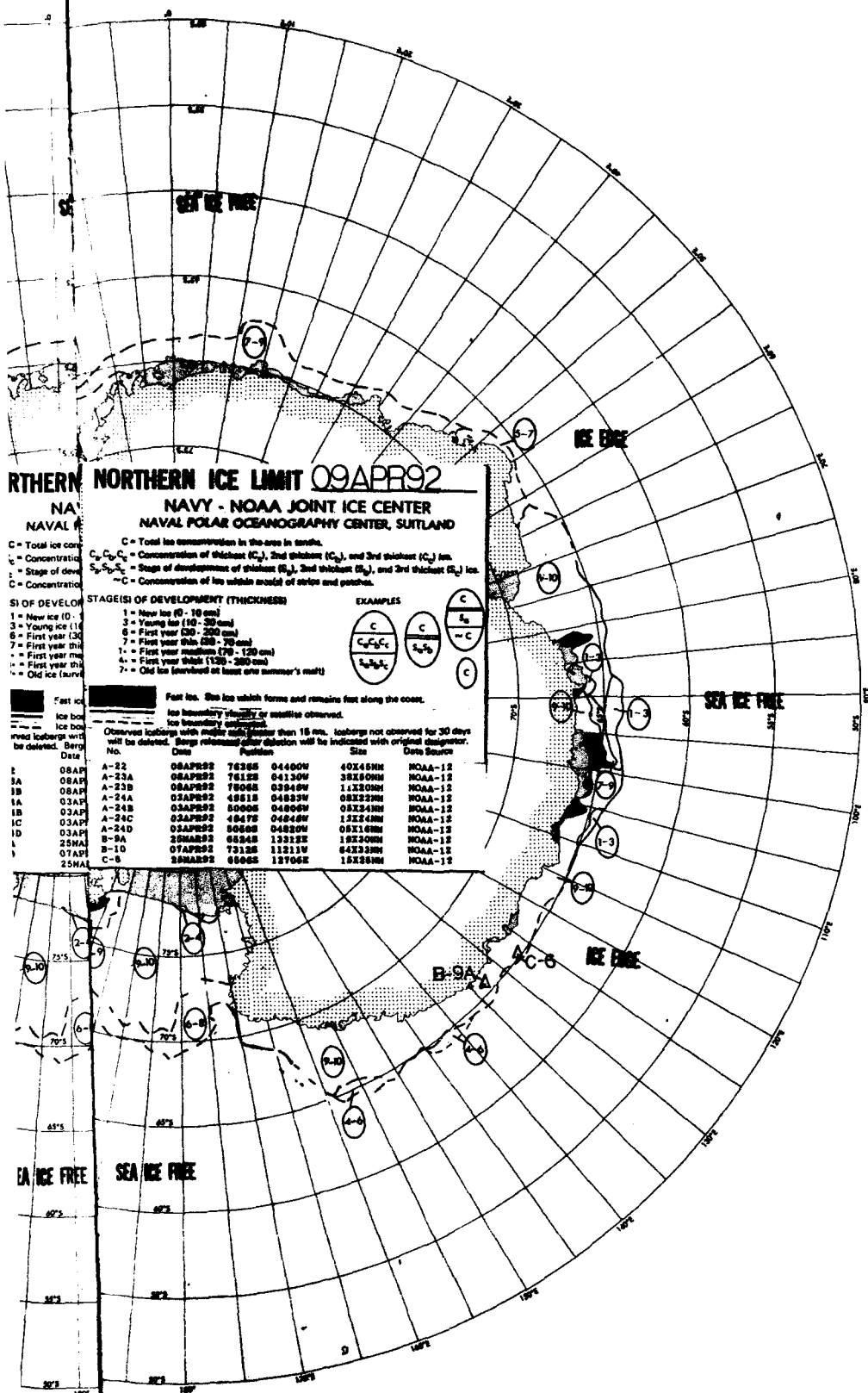


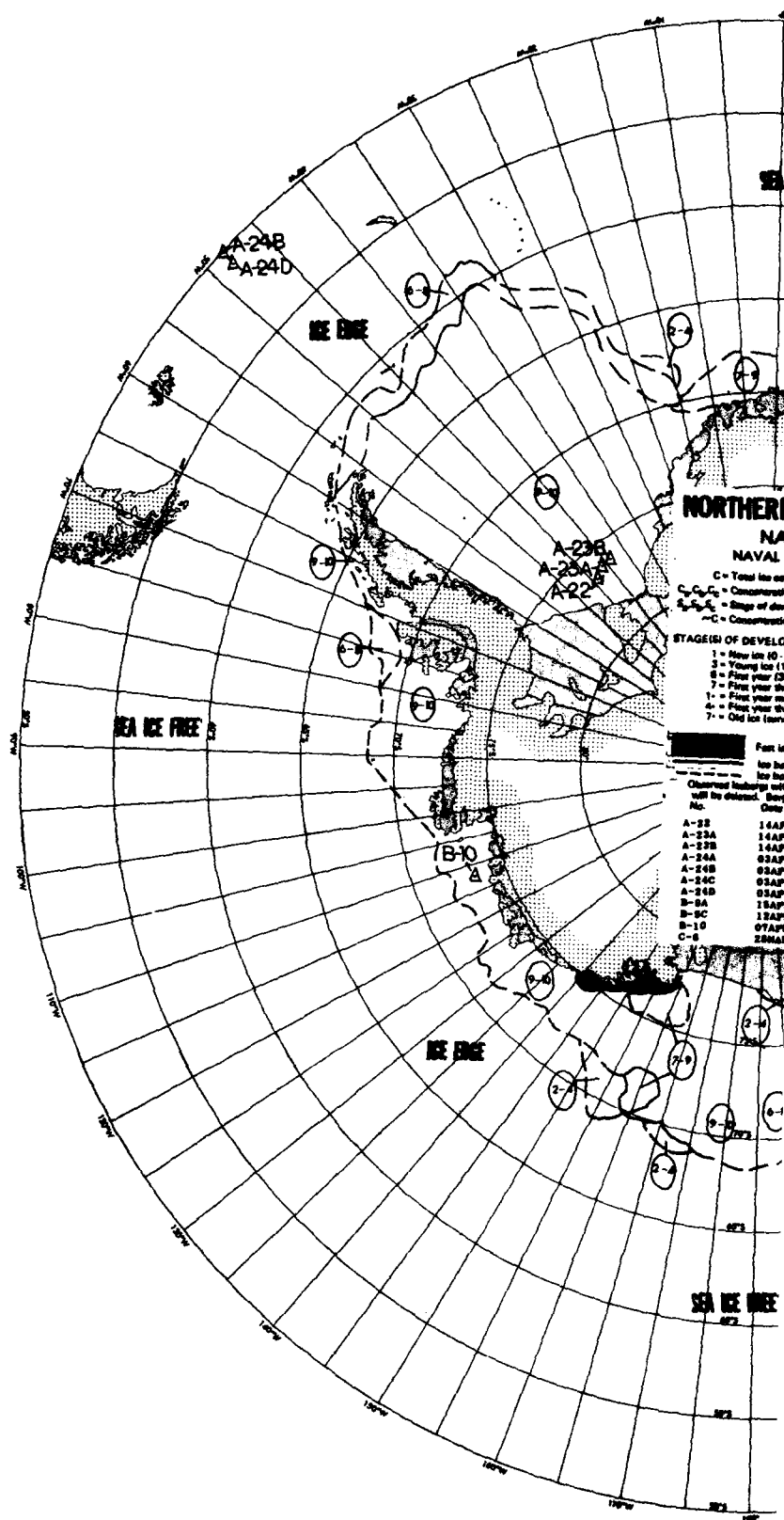


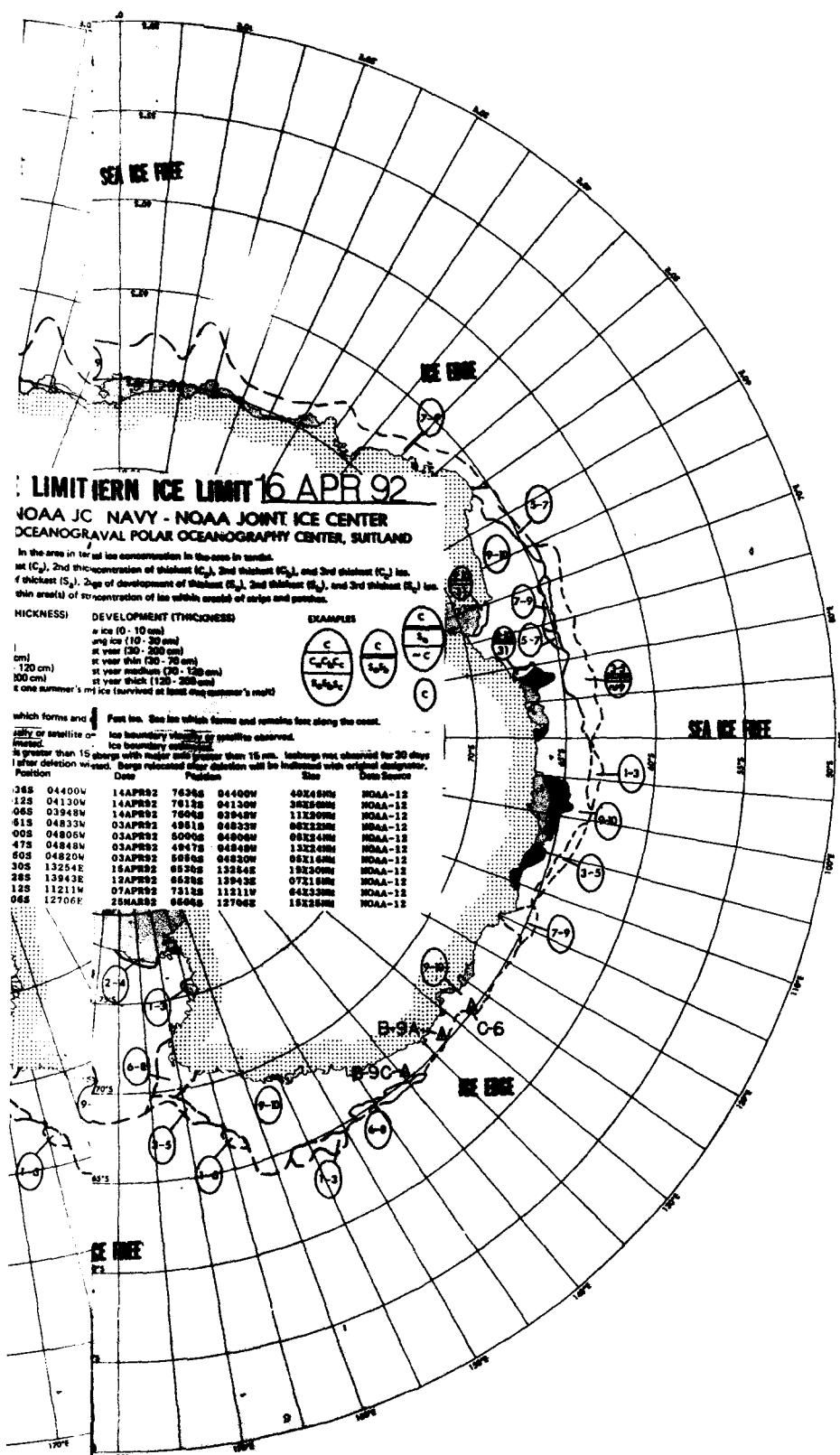


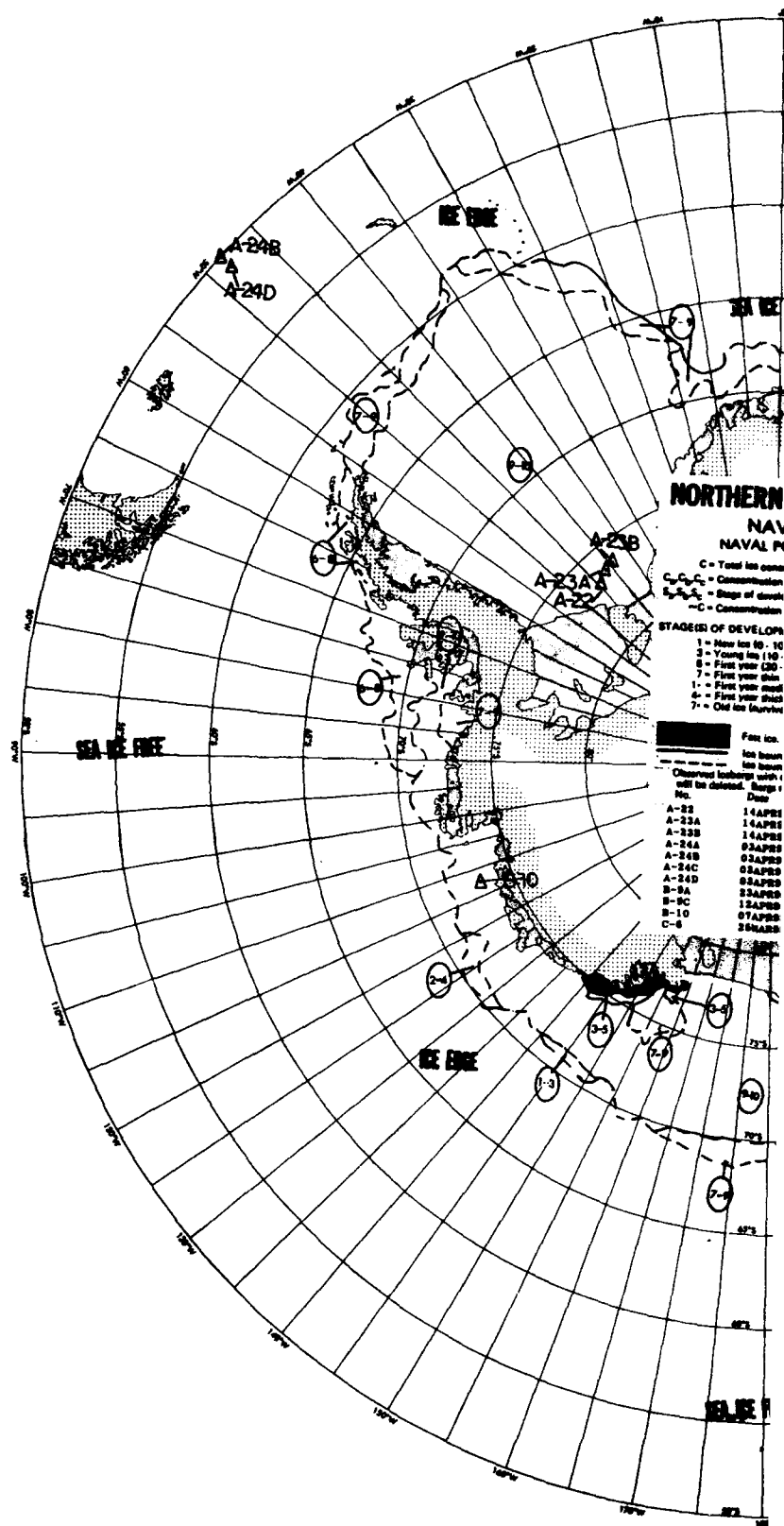


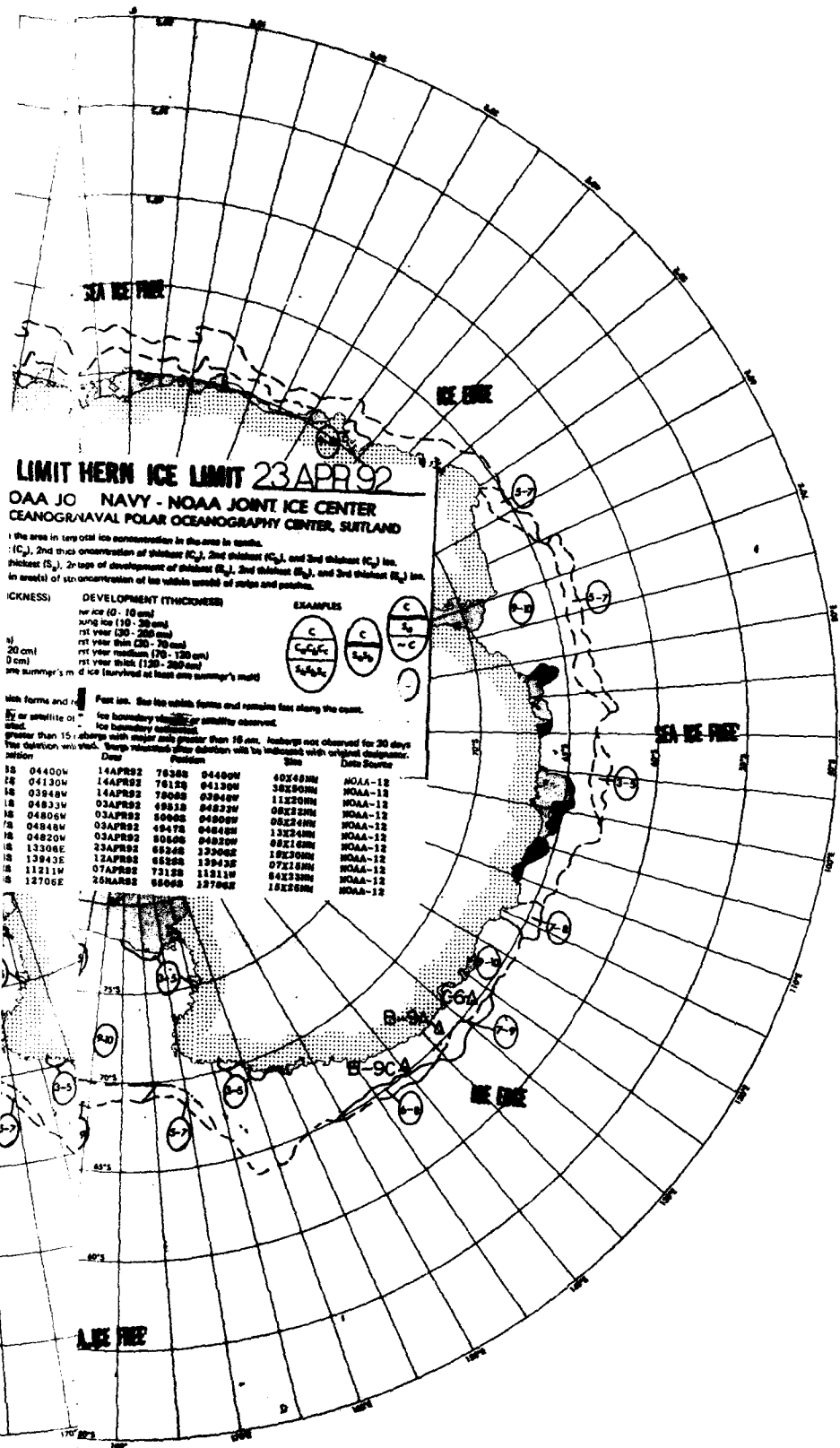


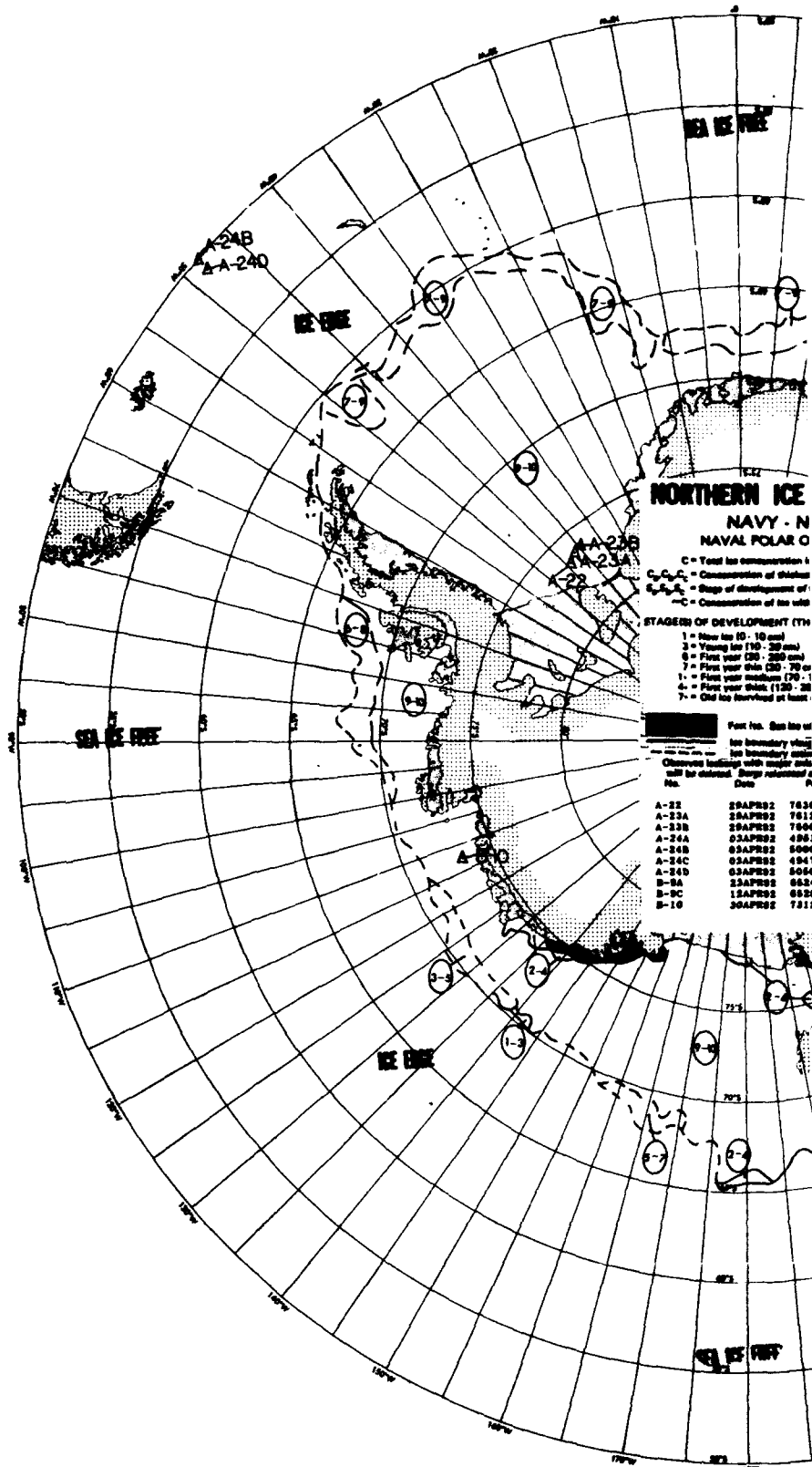


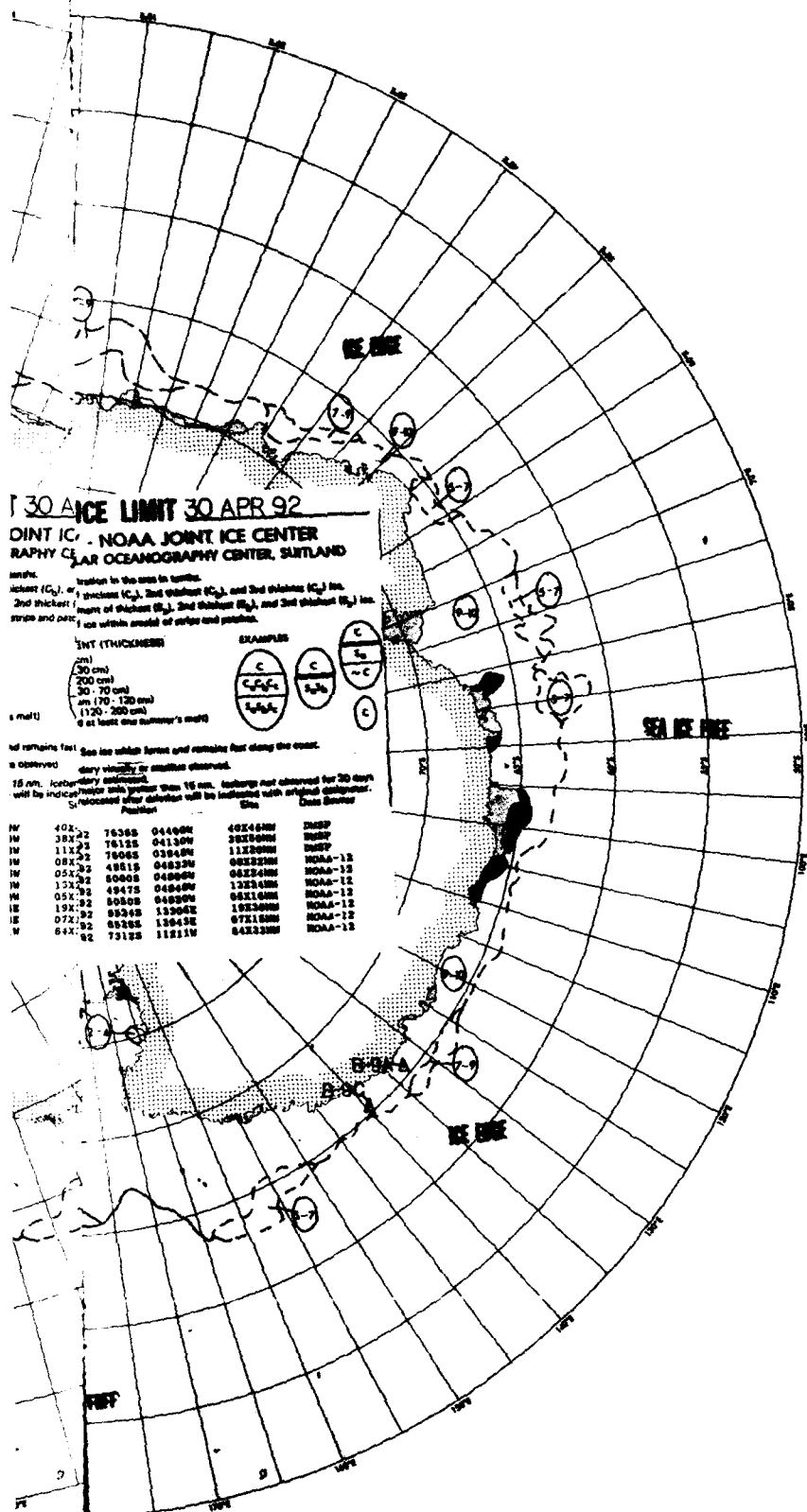


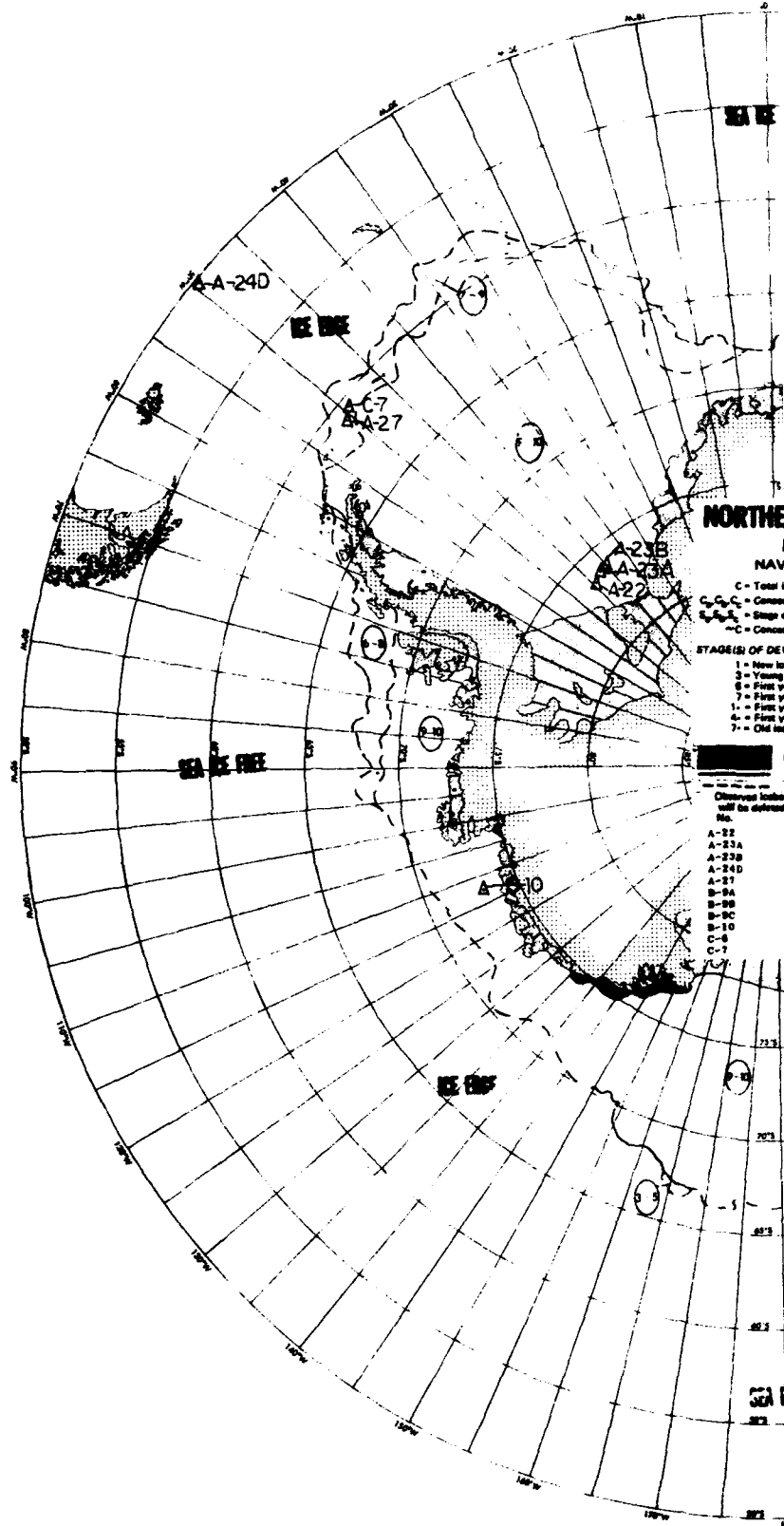


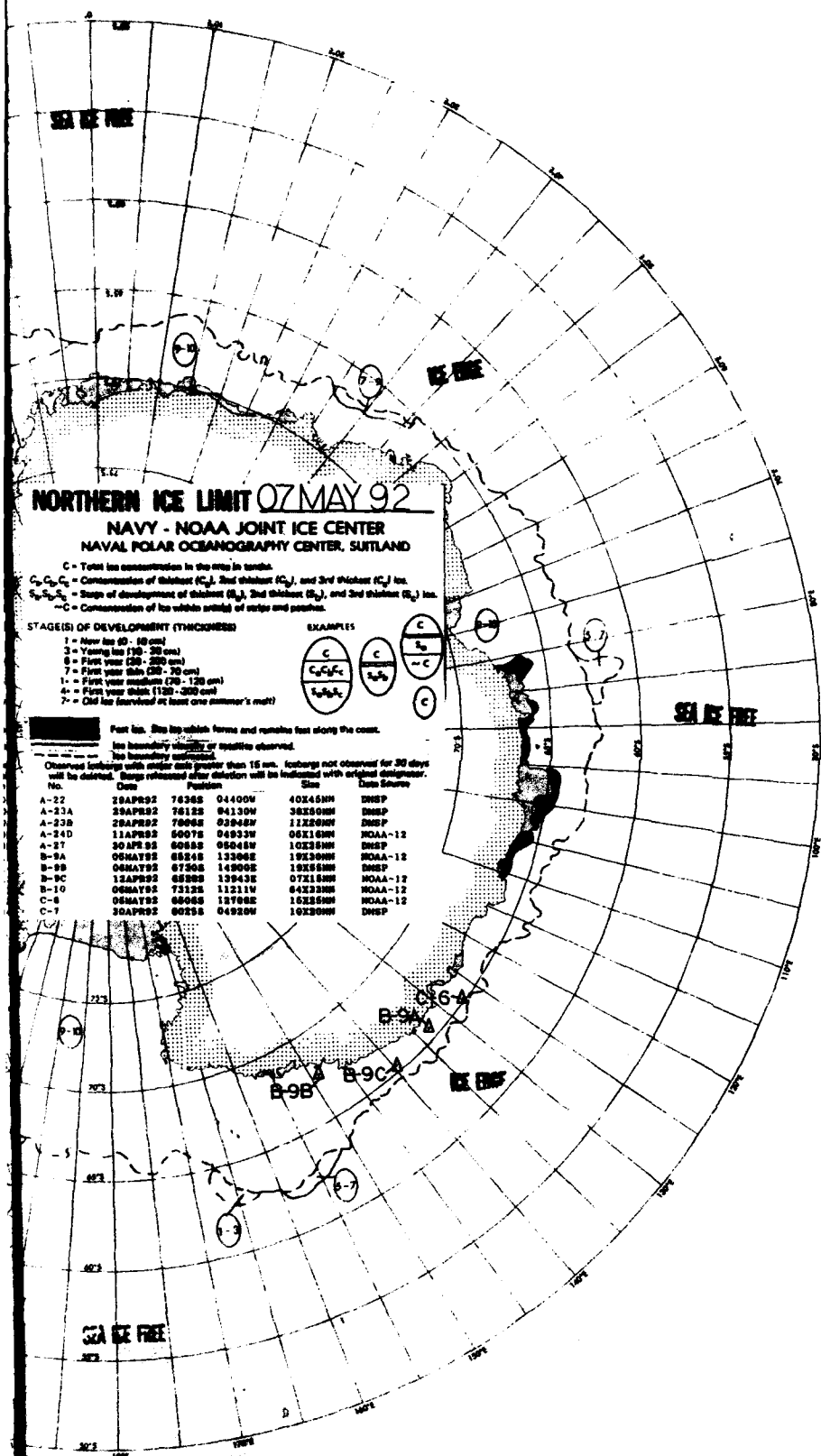


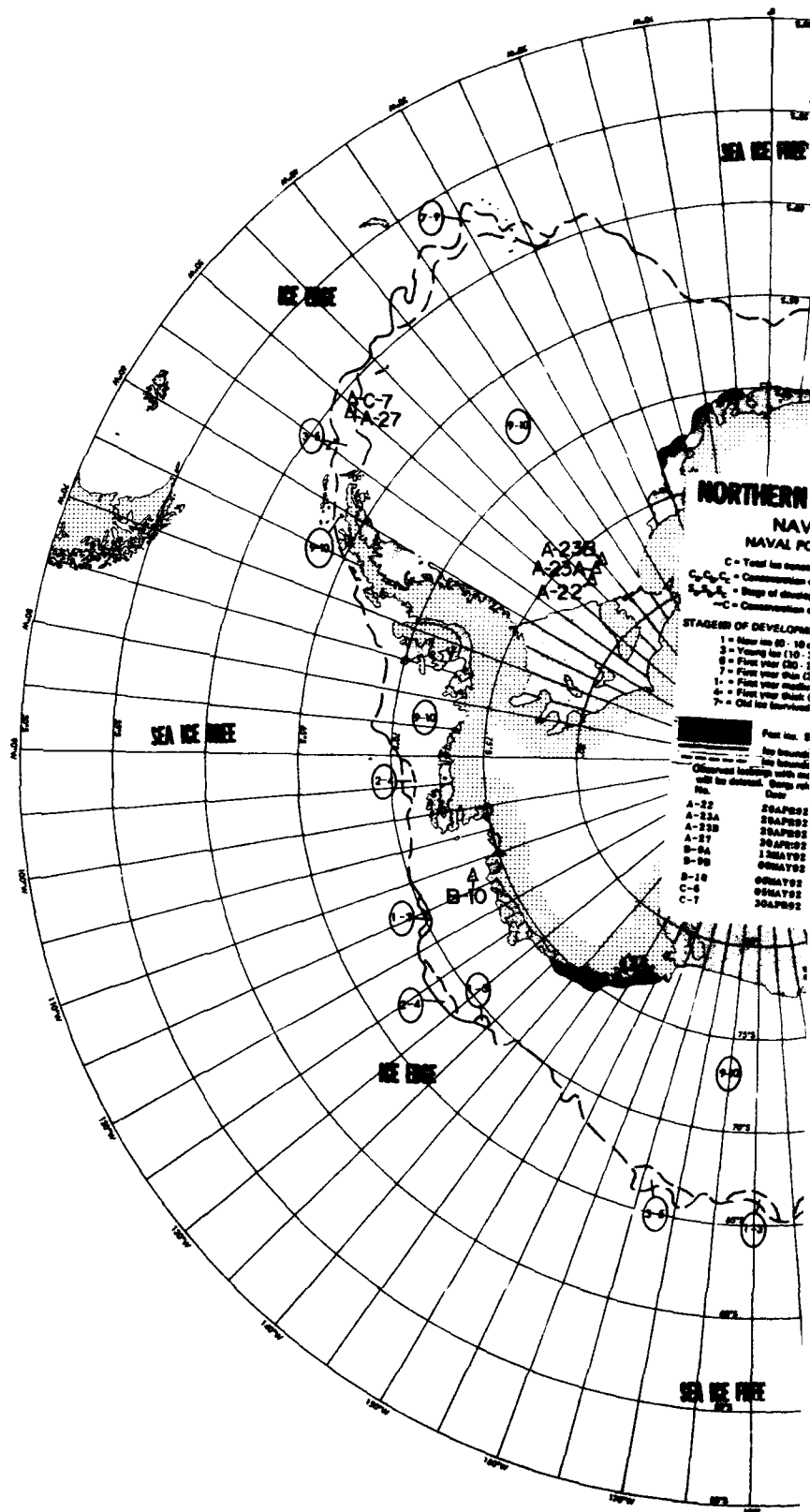


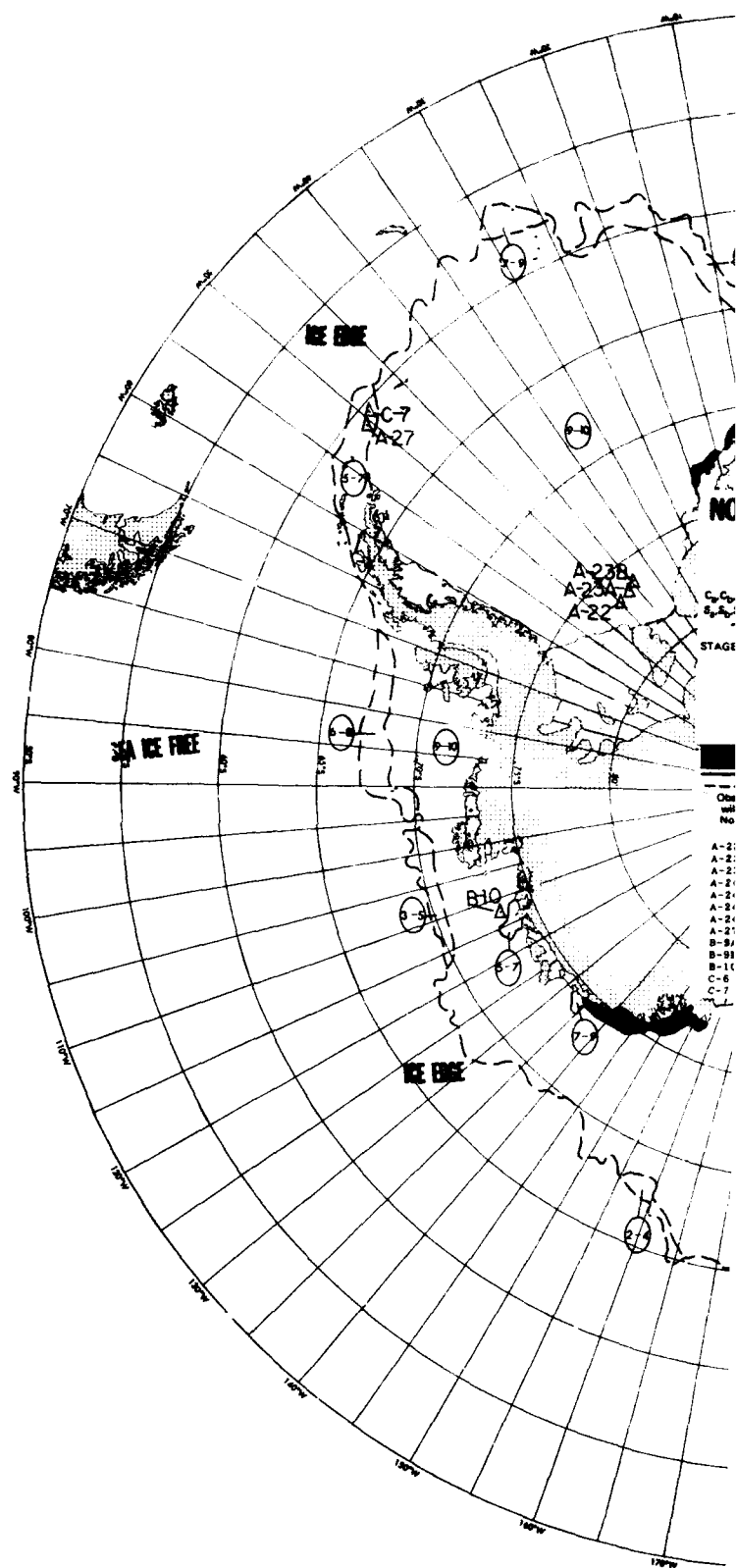


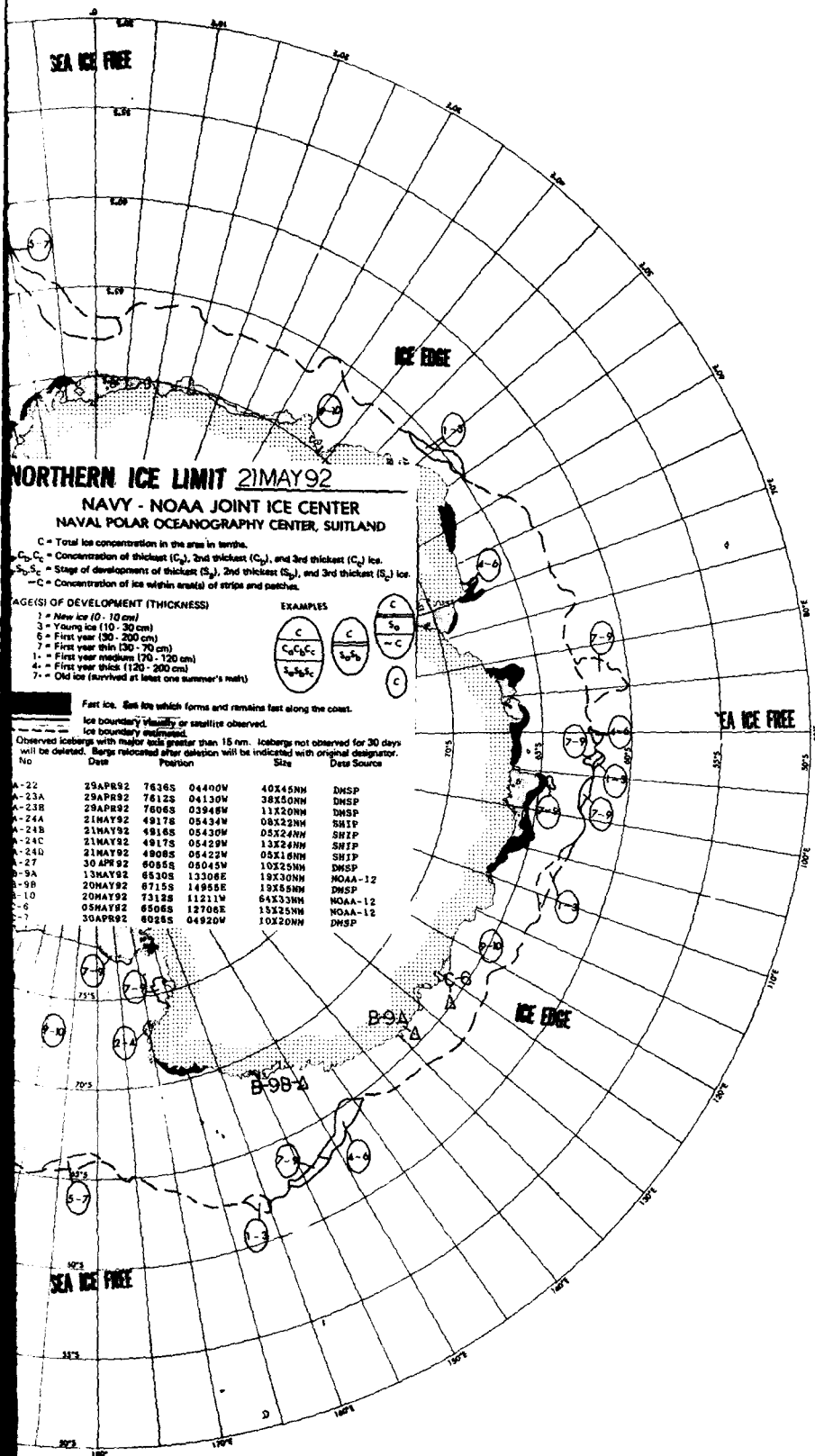


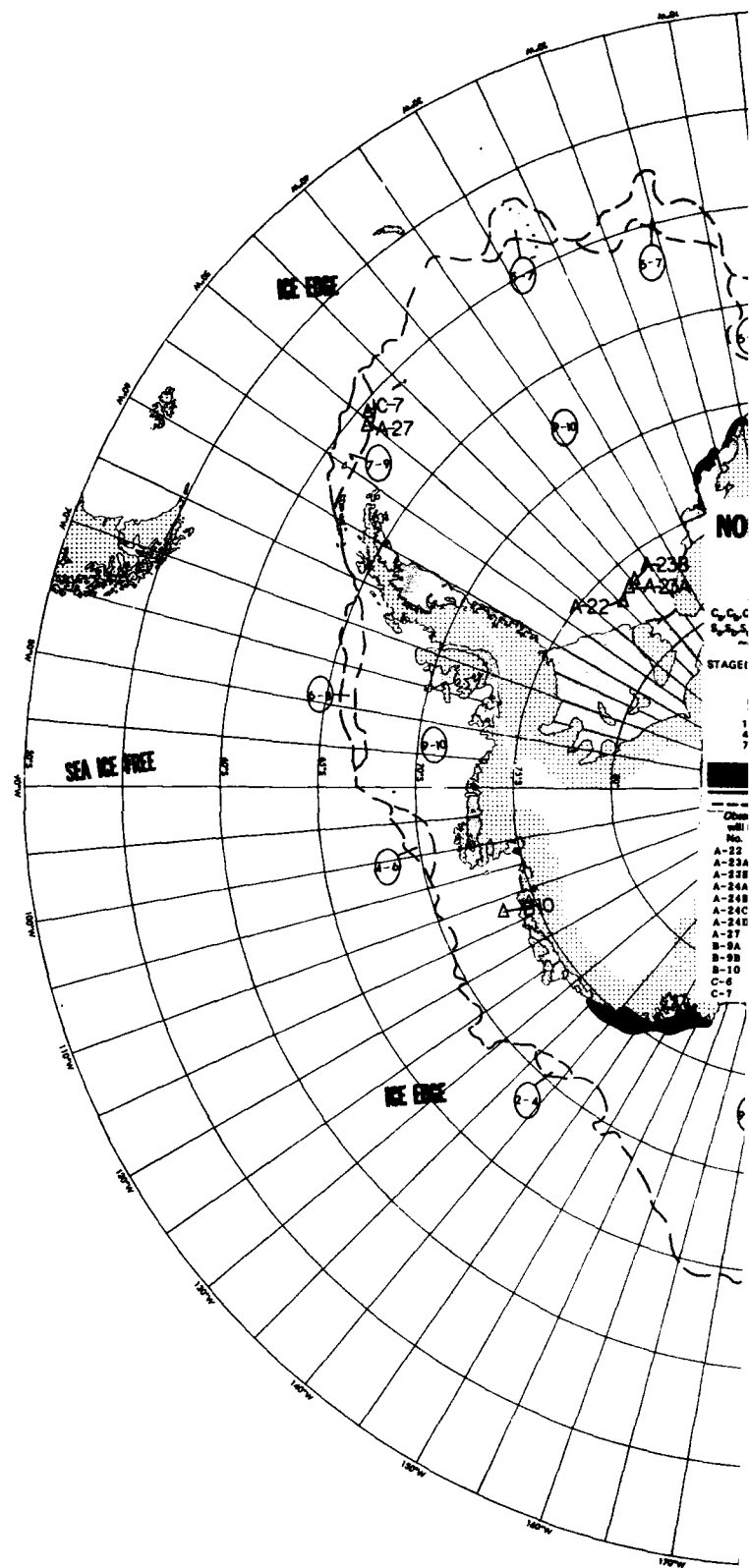


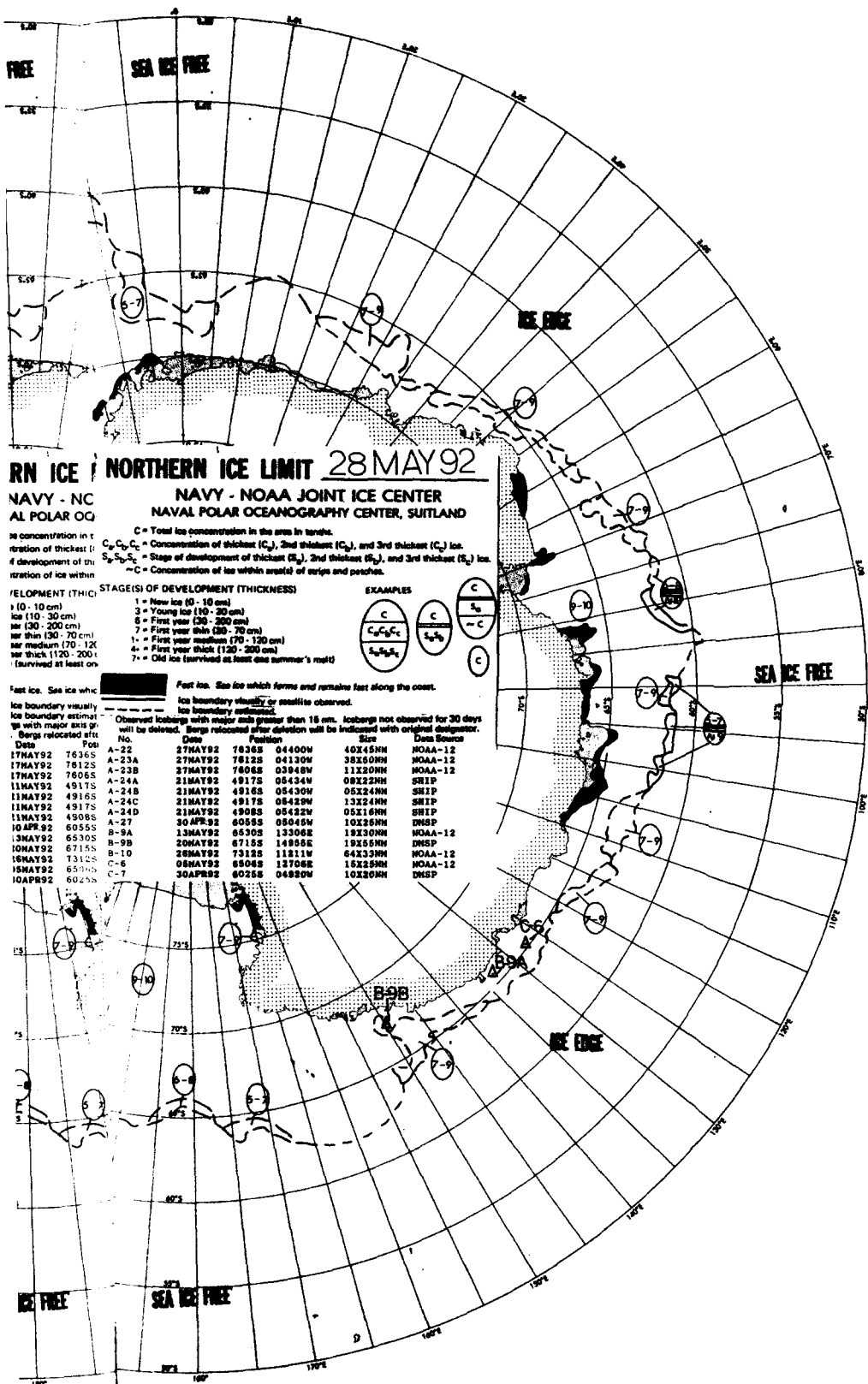


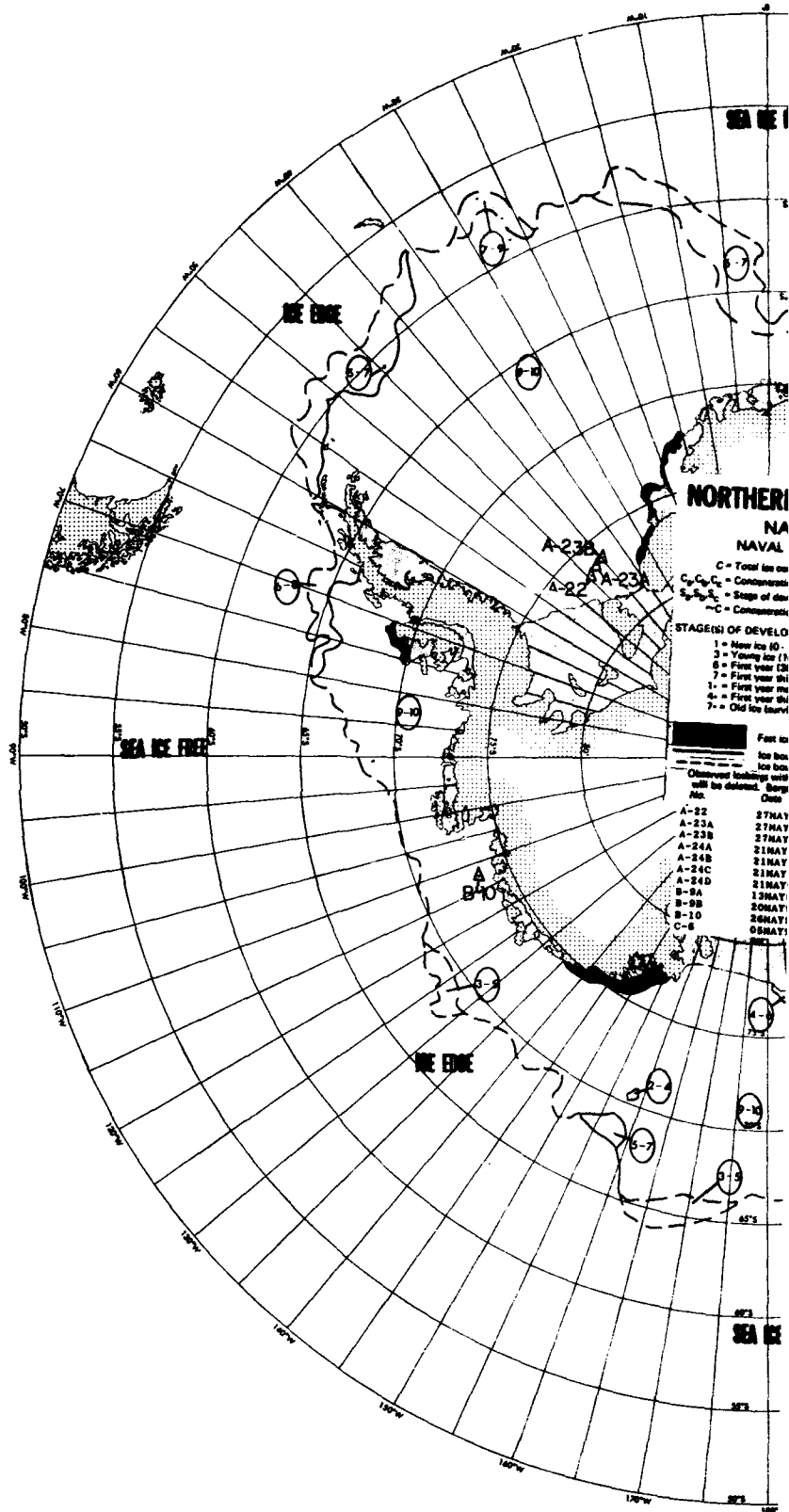


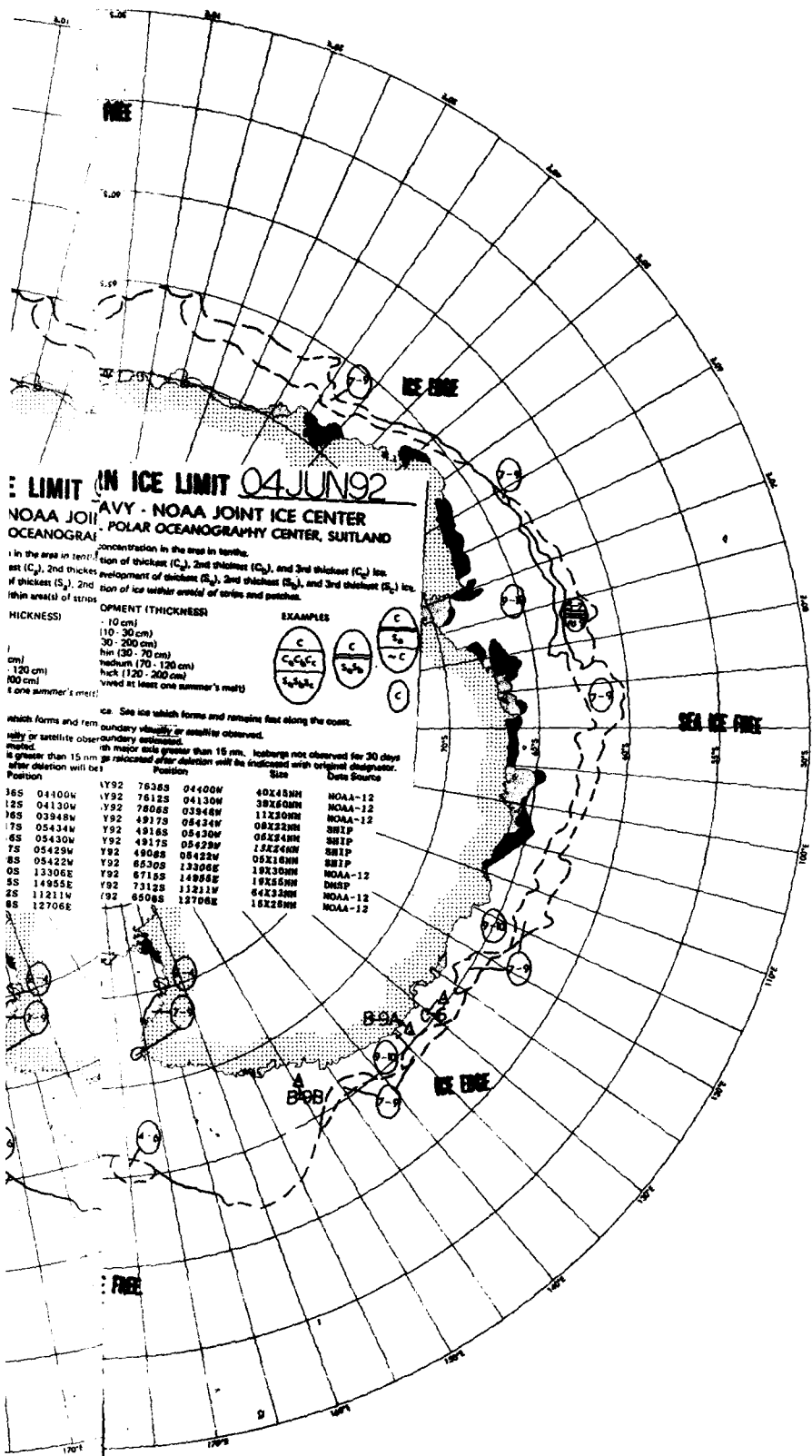






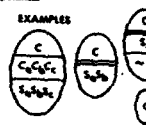






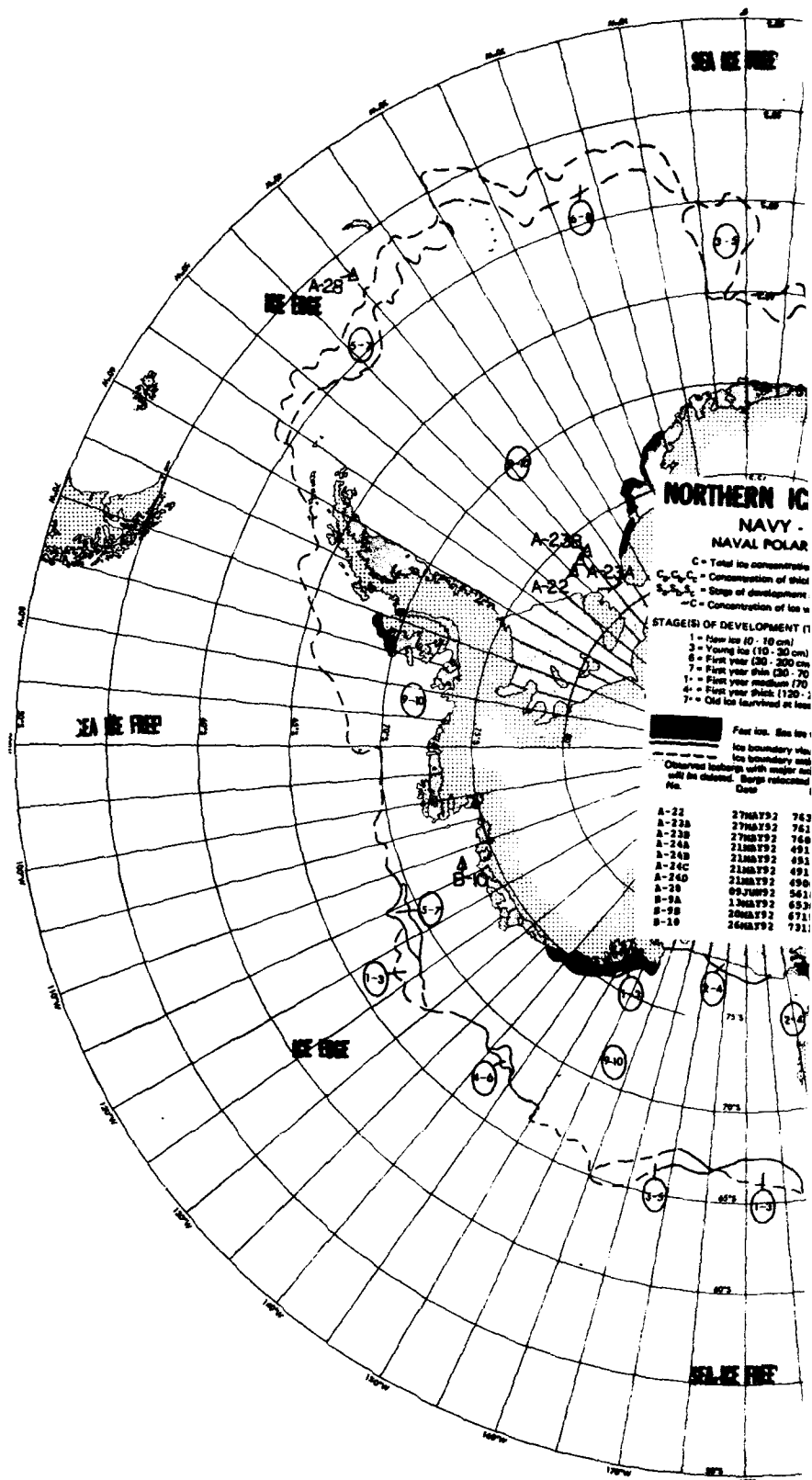
ICE LIMIT 04 JUN 92 **NOAA JOINT AVY - NOAA JOINT ICE CENTER** **OCEANOGRAPHIC POLAR OCEANOGRAPHY CENTER, SUTLAND**

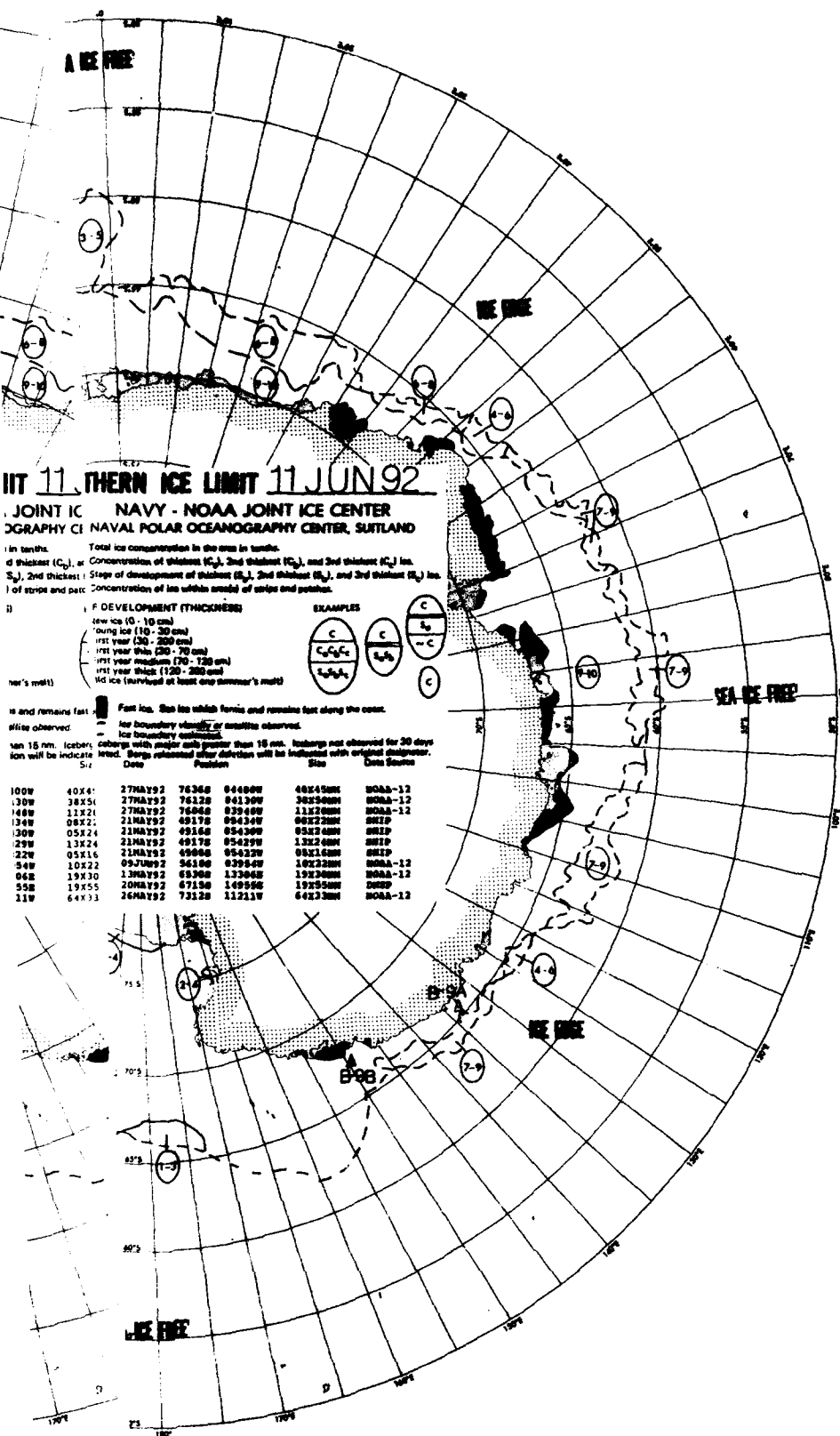
concentration in the area in tenths.
 1 in the area in tenths of thickness (C₁), 2nd thickest (C₂), and 3rd thickest (C₃) ice.
 at (C₁), 2nd thickest (C₂), and 3rd thickest (C₃) ice.
 If thickest (S₁), 2nd thickest (S₂), and 3rd thickest (S₃) ice.
 thin areas of strips.
 OPMENT (THICKNESS)
 10 cm
 10-30 cm
 30-200 cm
 thin (30-70 cm)
 medium (70-120 cm)
 thick (120-200 cm)
 survived at least one summer's melt)
 1 one summer's melt)



ice. See ice which forms and remains fast along the coast.
 which forms and remains fast along the coast.
 100% or satellite observation estimated.
 marked.
 is greater than 15 nm as indicated after deletion will be indicated with original designation.
 after deletion will be

Position	Size	Date Source
36S 04100N	40X48NM	NOAA-12
12S 04130W	38X60NM	NOAA-12
16S 03948W	11X30NM	NOAA-12
17S 05434W	08X22NM	SRIP
6S 05430W	05X24NM	SRIP
7S 05429W	12X24NM	SRIP
8S 05422W	05X16NM	SRIP
0S 13306E	10X30NM	NOAA-12
5S 14955E	10X30NM	DMSP
2S 11211W	6X23NM	NOAA-12
6S 12706E	18X29NM	NOAA-12





IT 11 THERN ICE LIMIT 11 JUN 92

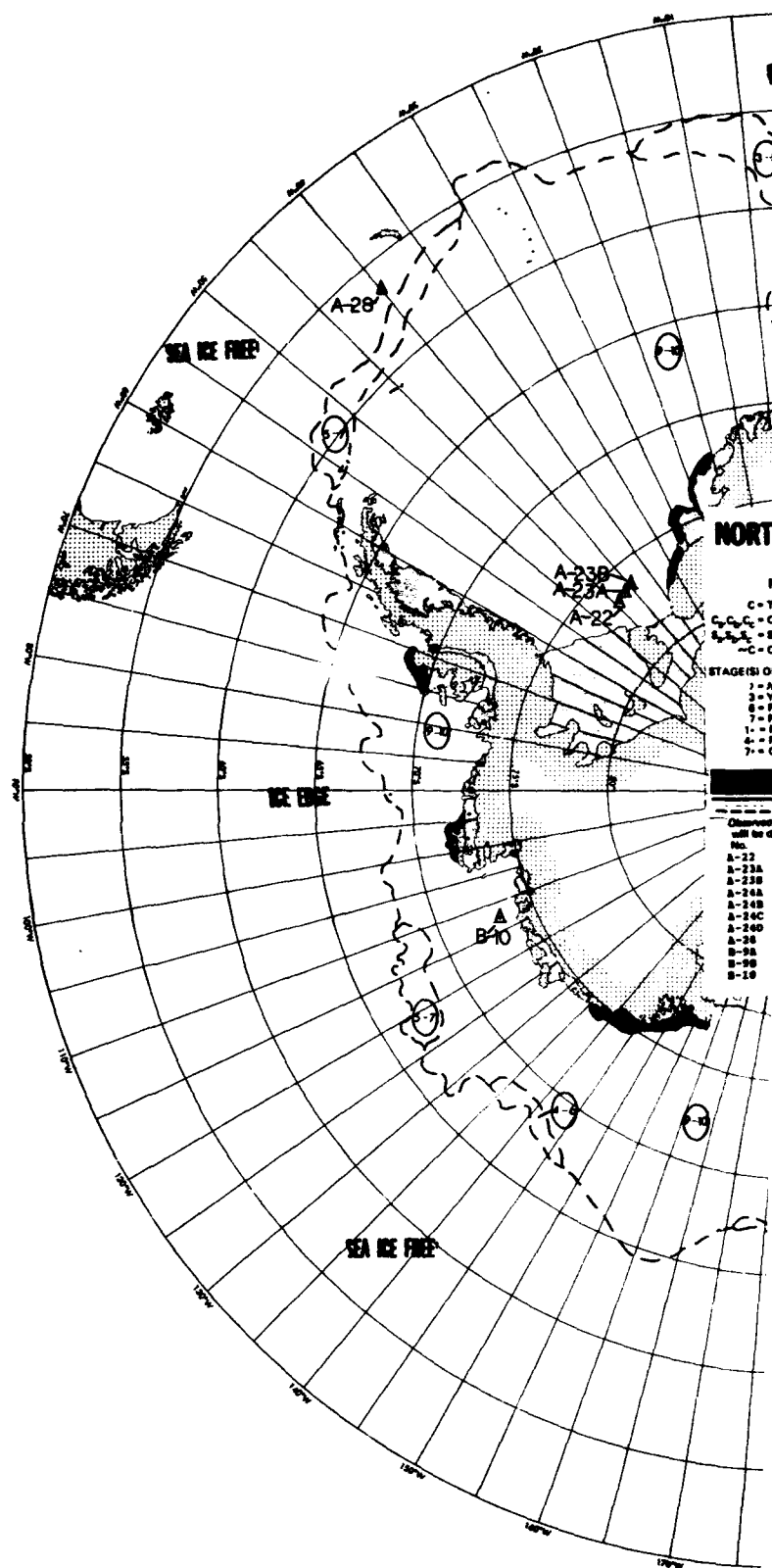
JOINT IC NAVY - NOAA JOINT ICE CENTER
OGRAPHY CI NAVAL POLAR OCEANOGRAPHY CENTER, SUTLAND

1 in tenths. Total ice concentration in the area in tenths.
d thickest (C₁), or Concentration of thickest (C₁), 2nd thickest (C₂), and 3rd thickest (C₃) in.
S₁), 2nd thickest (S₂), and 3rd thickest (S₃) in.
1 of stroke and part Concentration of ice within width of stroke and part.

1) F DEVELOPMENT (THICKNESS)
new ice (10 - 10 cm)
young ice (10 - 20 cm)
1st year thin (20 - 70 cm)
1st year medium (70 - 120 cm)
1st year thick (120 - 200 cm)
old ice (survived at least one summer's melt)

2) Fast ice. Sea ice which forms and remains fast along the coast.
ice boundary visually or satellite observed.
ice boundary estimated.
iceberg with major axis greater than 15 m. Icebergs not observed for 30 days
Icebergs not observed for 30 days will be indicated with original designation.
Icebergs not observed for 30 days will be indicated with original designation.

Date	Position	Size	Data Source
100W 40X4	27MAY92 76360 04400W	40X450M	NOAA-12
130W 38X5	27MAY92 76120 04130W	30X500M	NOAA-12
140W 11X21	27MAY92 76060 03940W	11X200M	NOAA-12
130W 08X22	21MAY92 09170 09430W	08X220M	SHIP
130W 05X24	21MAY92 09160 05430W	05X240M	SHIP
120W 13X24	21MAY92 09170 05420W	13X240M	SHIP
22W 05X16	21MAY92 09060 05420W	05X160M	SHIP
94W 10X22	09JUN92 06100 03960W	10X220M	NOAA-12
04W 19X30	13MAY92 01900 13300E	19X300M	NOAA-12
55E 19X55	20MAY92 07150 14950E	19X550M	SHIP
11W 64X33	26MAY92 73120 11211W	64X330M	NOAA-12



ICE LIN
Y - NOAA
OLAR OCEAN

NORTHERN ICE LIMIT 18 JUN 92

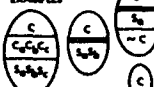
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUTLAND

C = Total ice concentration in the area in tenths.
C₁, C₂, C₃ = Concentration of thickest (C₁), 2nd thickest (C₂), and 3rd thickest (C₃) ice.
S₁, S₂, S₃ = Stages of development of thickest (S₁), 2nd thickest (S₂), and 3rd thickest (S₃) ice.
-C = Concentration of ice within areas of ridges and patches.

STAGES OF DEVELOPMENT (THICKNESS)

- 1 = New ice (0 - 10 cm)
- 2 = Young ice (10 - 30 cm)
- 3 = First year ice (30 - 70 cm)
- 4 = First year ice (70 - 120 cm)
- 5 = First year ice (120 - 200 cm)
- 6 = Old ice (over 200 cm)

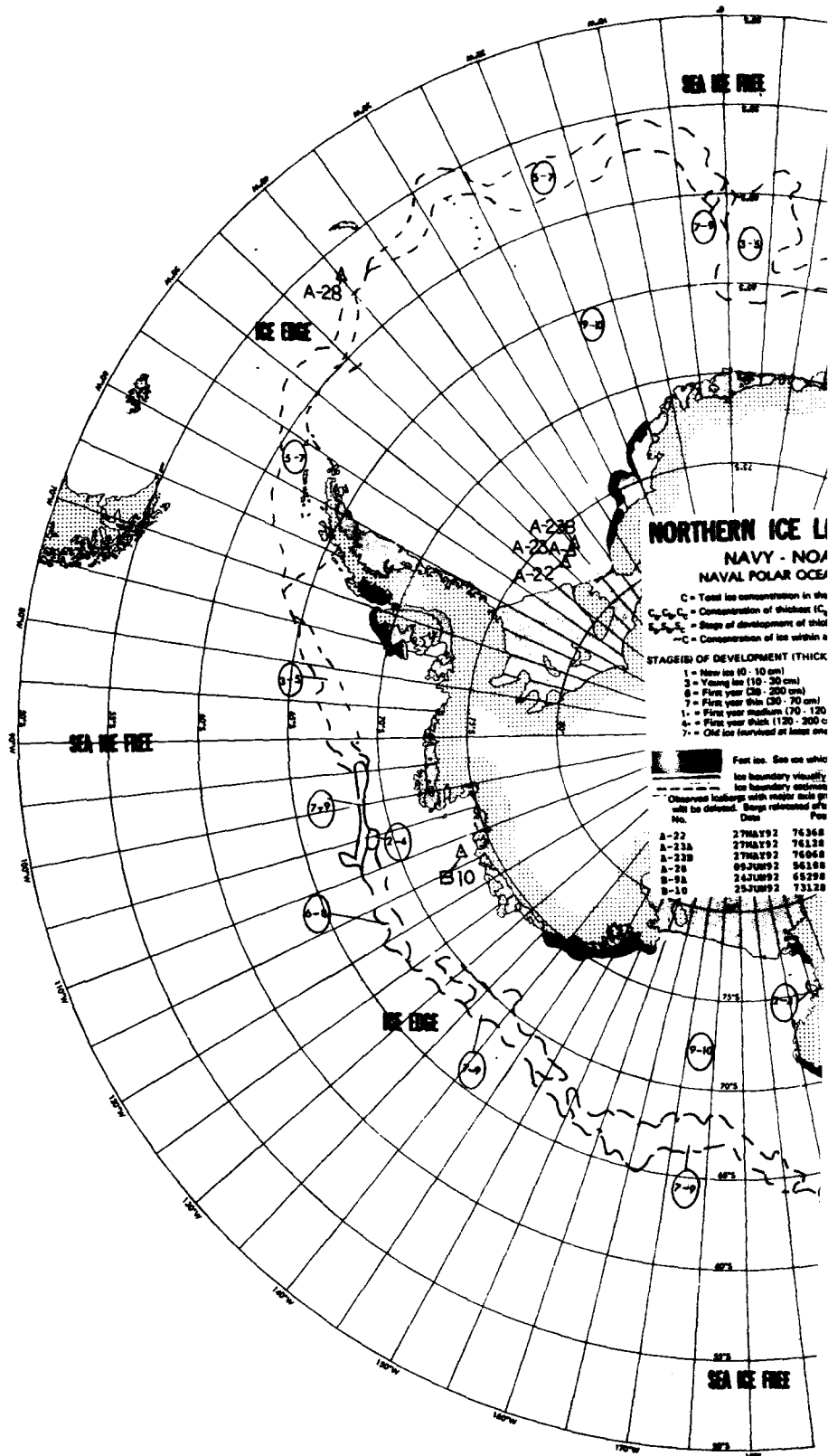
EXAMPLES

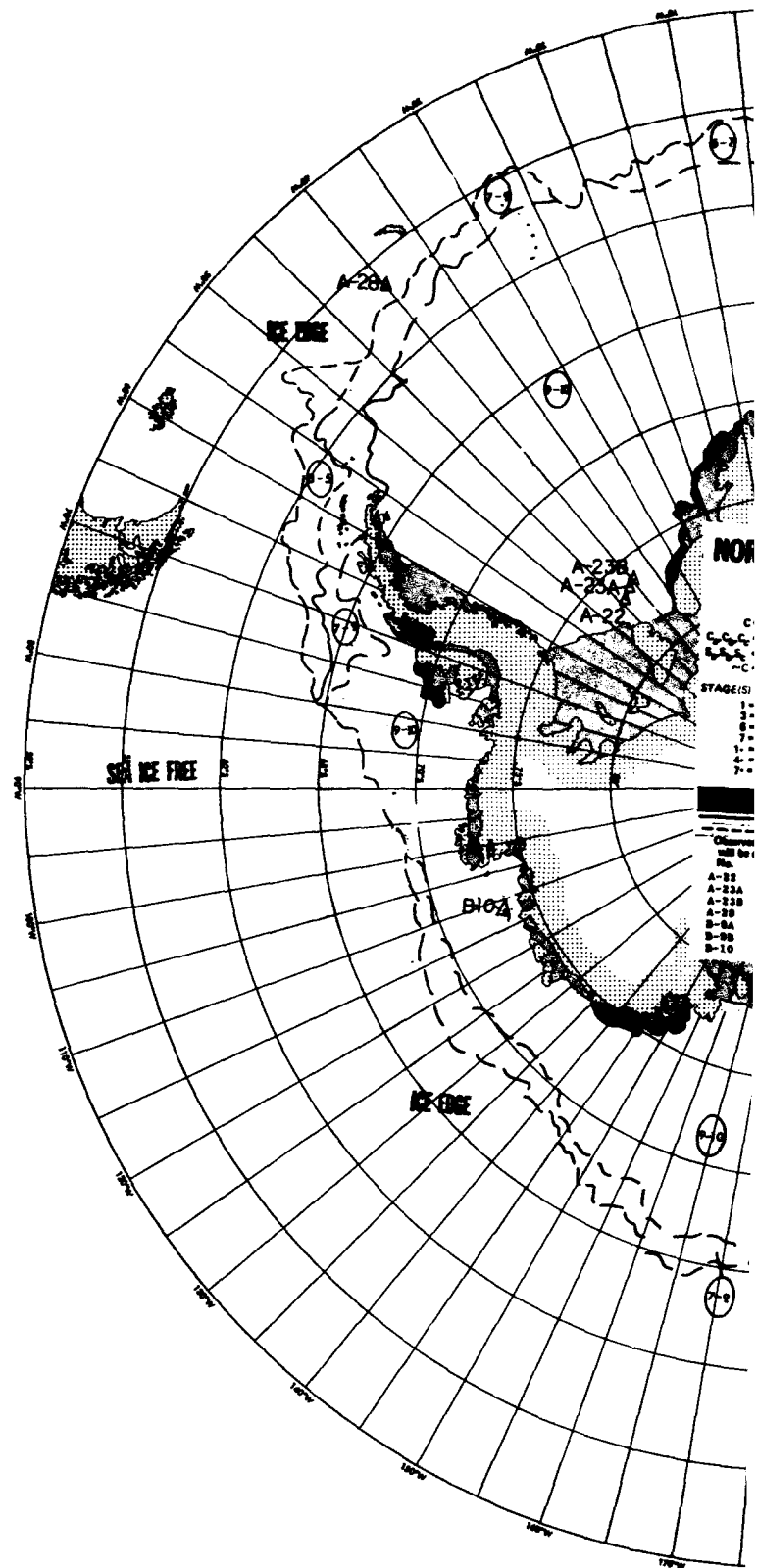


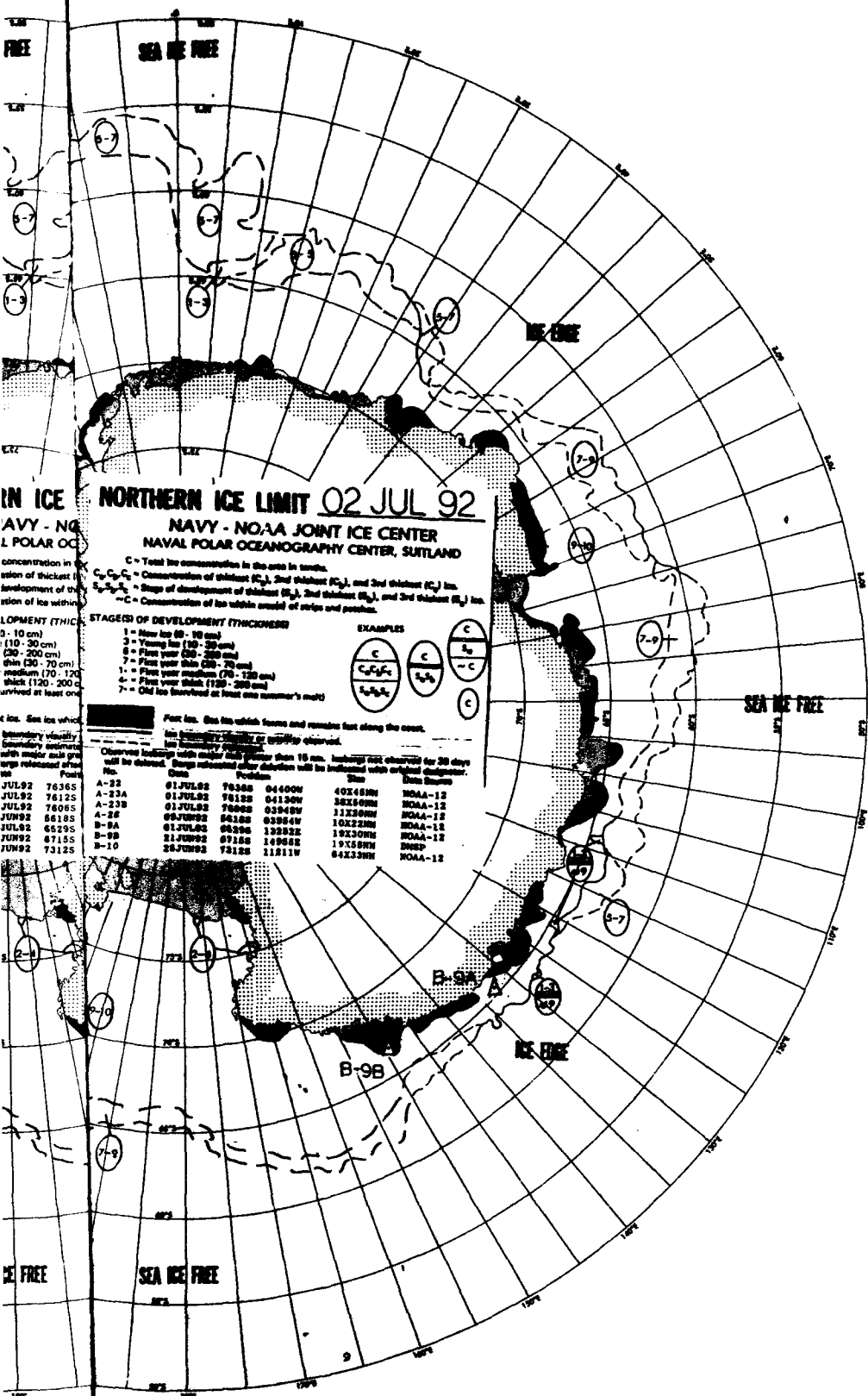
1. See ice which is
undary visually or
undary estimated
in major and greater
relocated after d
Postion

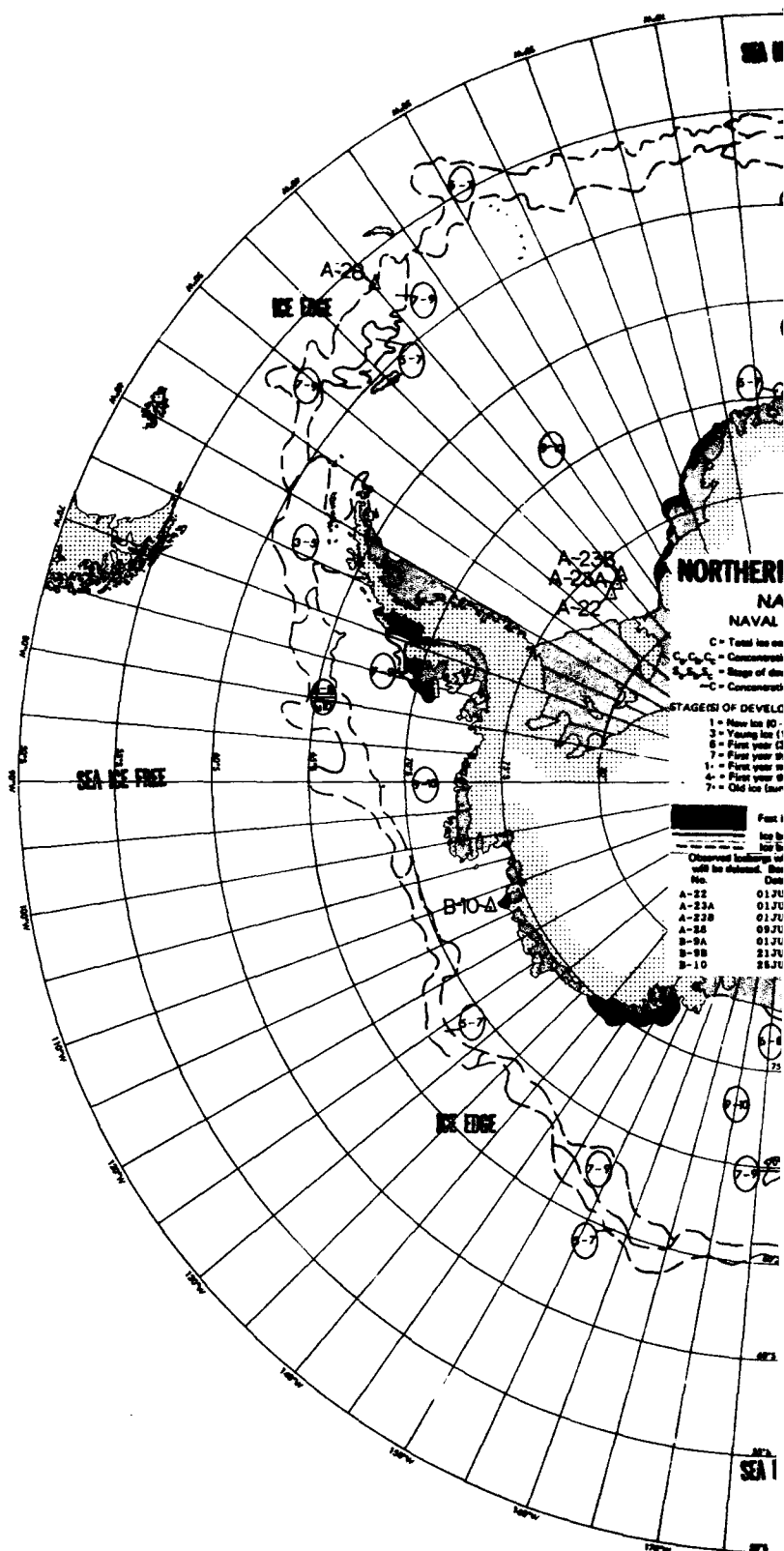
Observed icebergs with major axis greater than 15 m. Icebergs not observed for 30 days
will be deleted. Bergs released after deletion will be indicated with original designation.
Ice boundary within 10 miles of coastline.

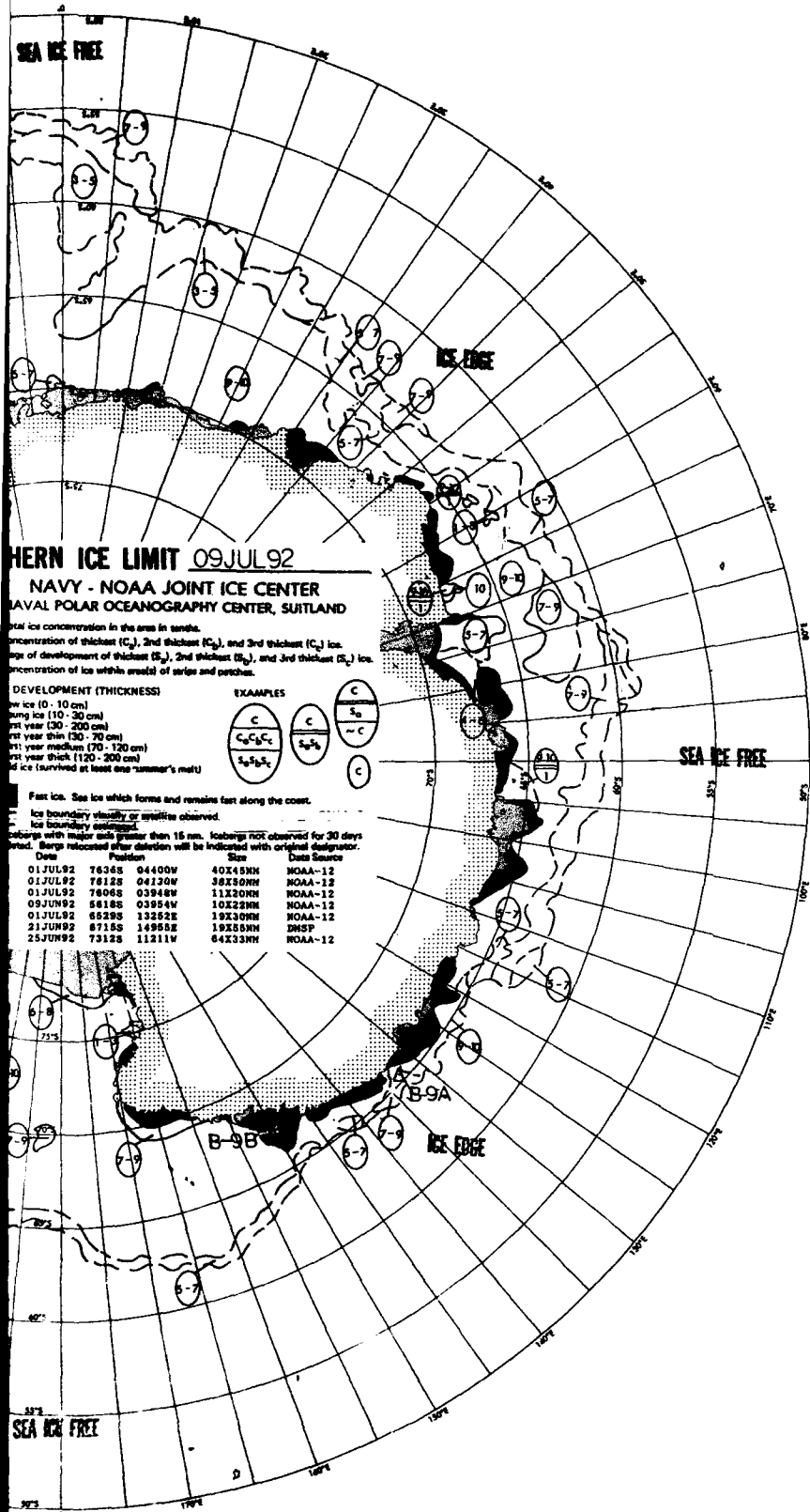
No.	Date	Position	Size	Data Source
A-22	27MAY92	7636S 04400W	40X45NM	NOAA-12
A-23A	27MAY92	7612S 04130W	38X50NM	NOAA-12
A-23B	27MAY92	7606S 03940W	11X20NM	NOAA-12
A-24A	21MAY92	0917S 05434W	08X22NM	SRIP
A-24B	21MAY92	0916S 05430W	05X24NM	SRIP
A-24C	21MAY92	0917S 05439W	13X24NM	SRIP
A-24D	21MAY92	0906S 05422W	05X24NM	SRIP
A-25	09JUN92	5618S 03954W	10X22NM	NOAA-12
B-2A	14JUN92	6500S 13325E	15X30NM	DMSP
B-2B	20MAY92	6715S 14953E	19X55NM	DMSP
B-10	26MAY92	7332S 11211W	64X37NM	NOAA-12

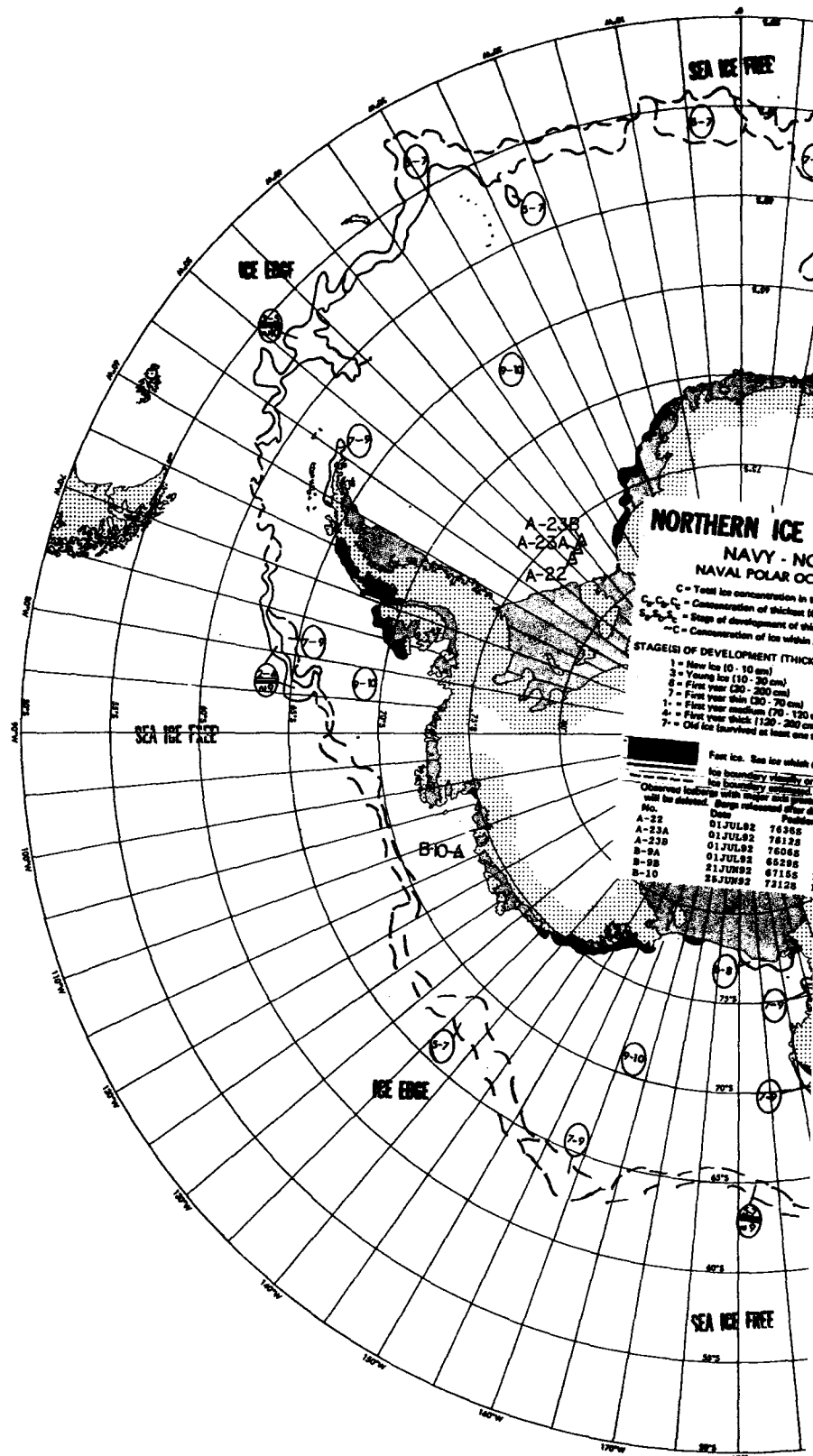


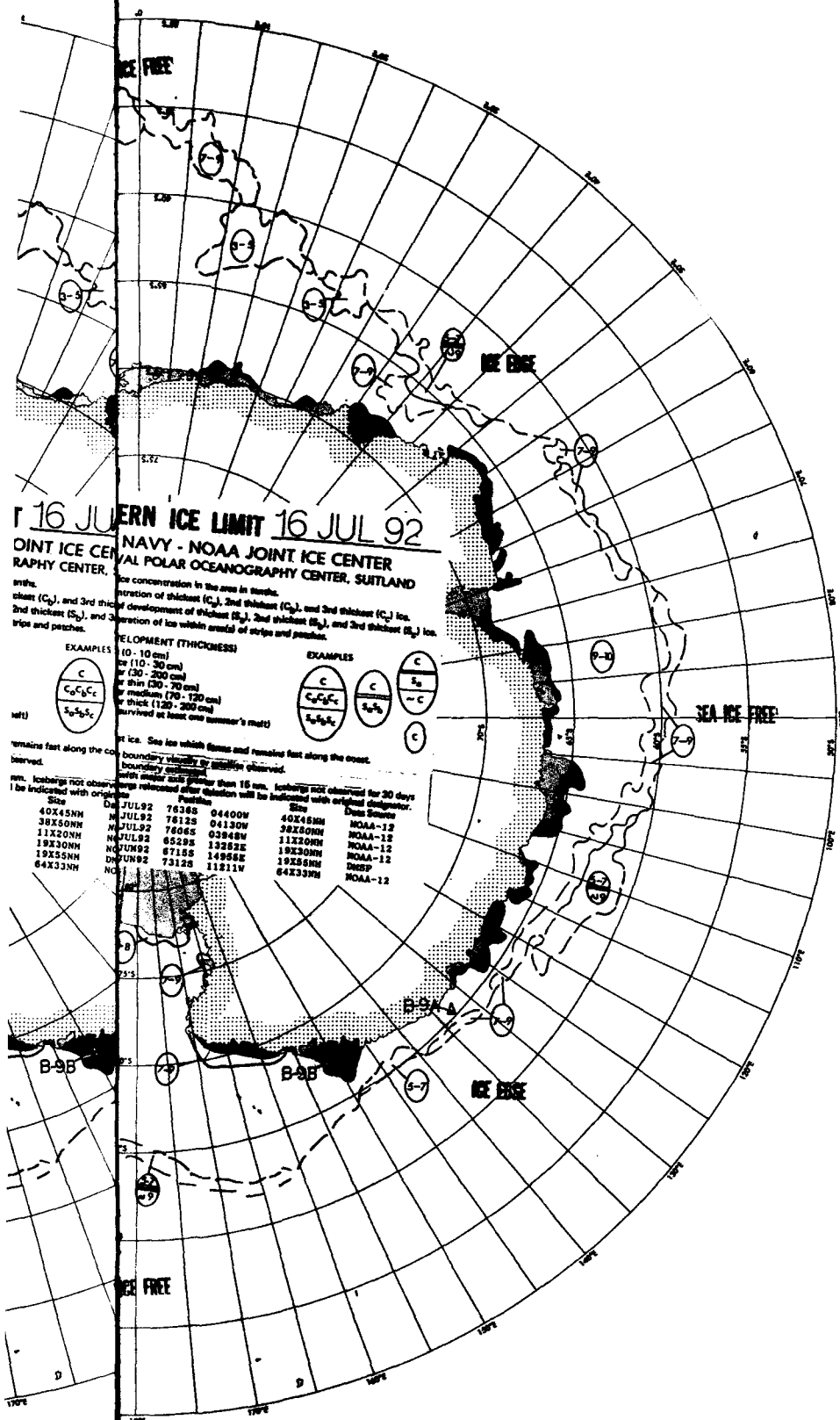


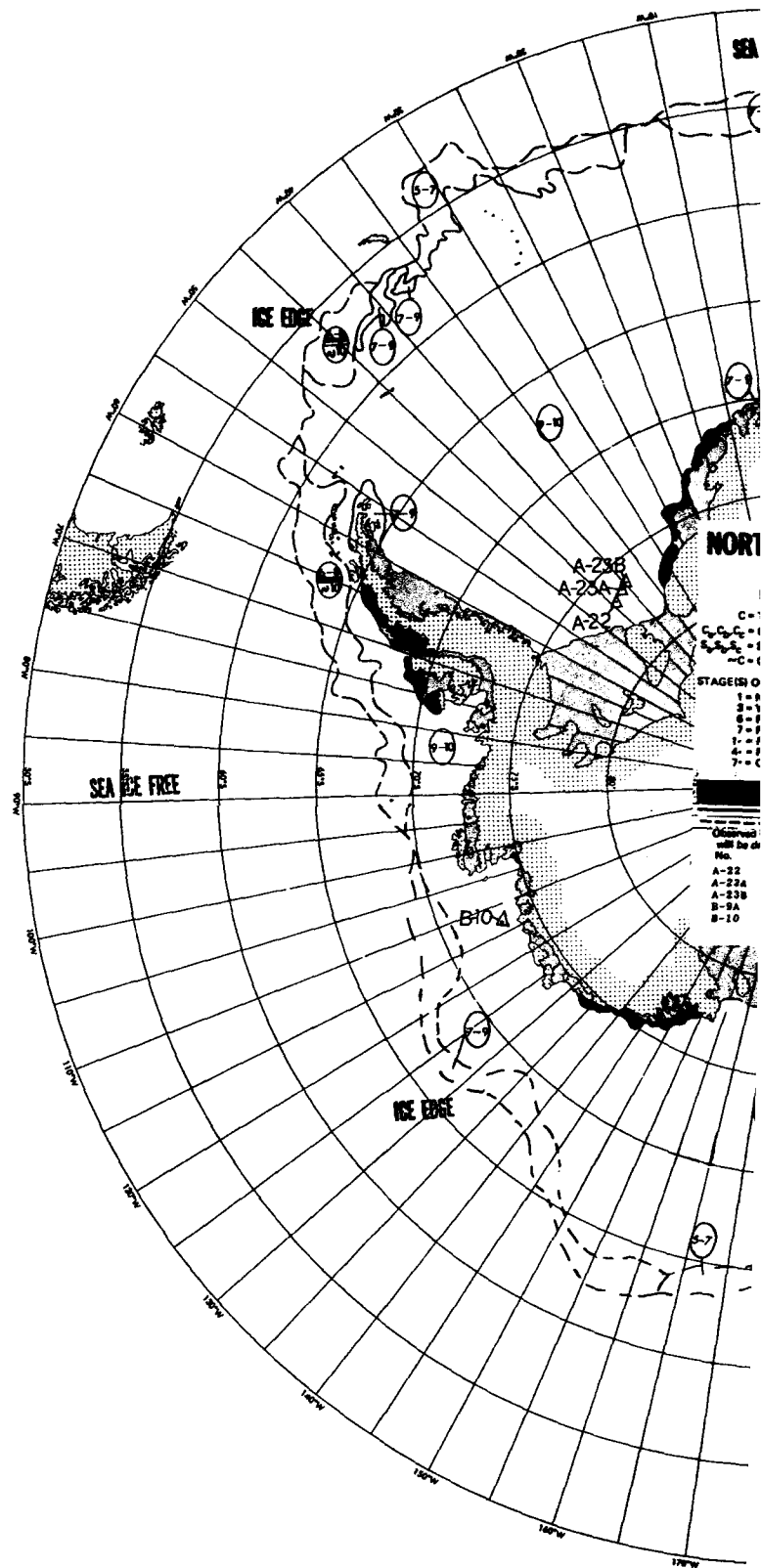


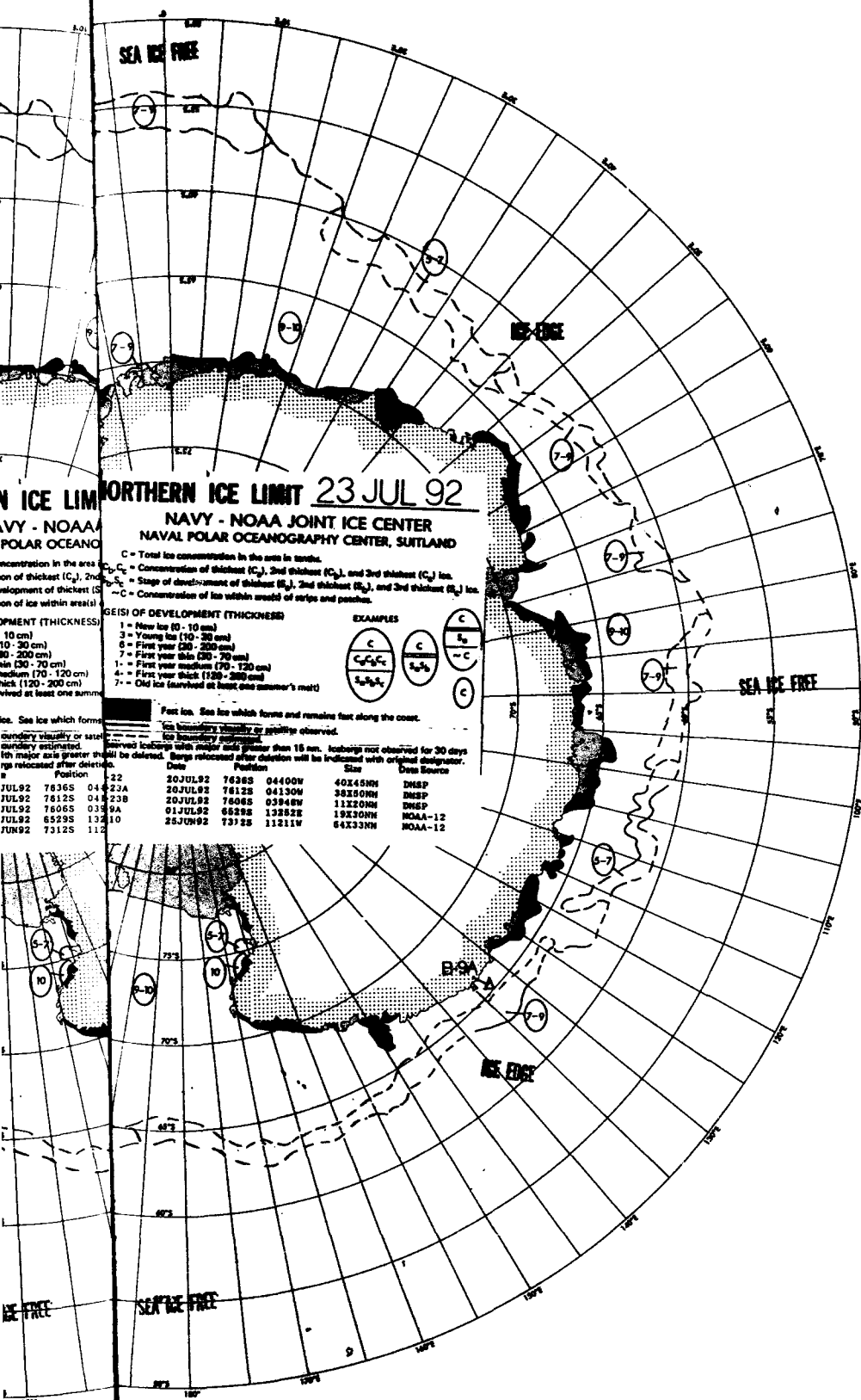


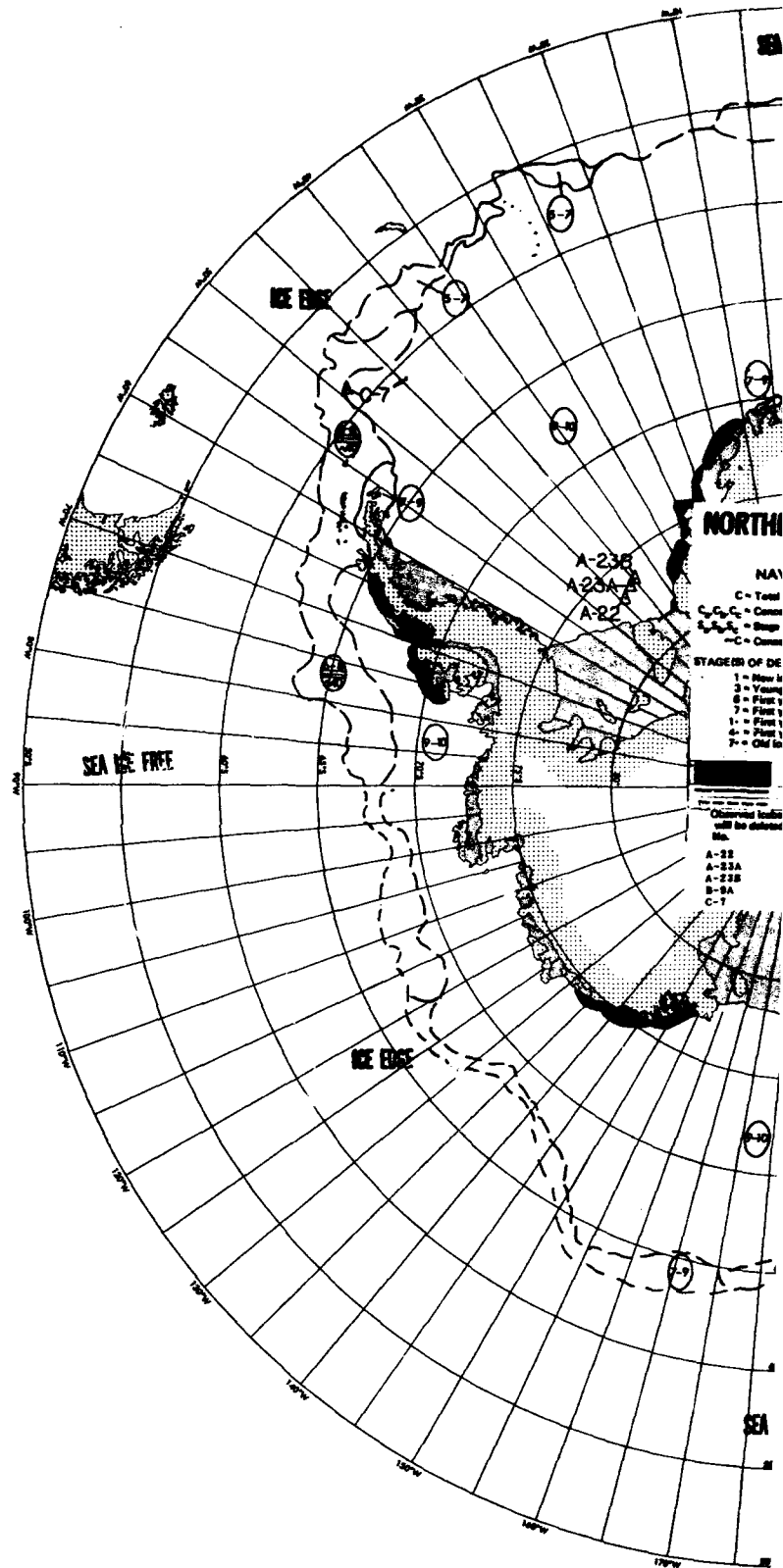


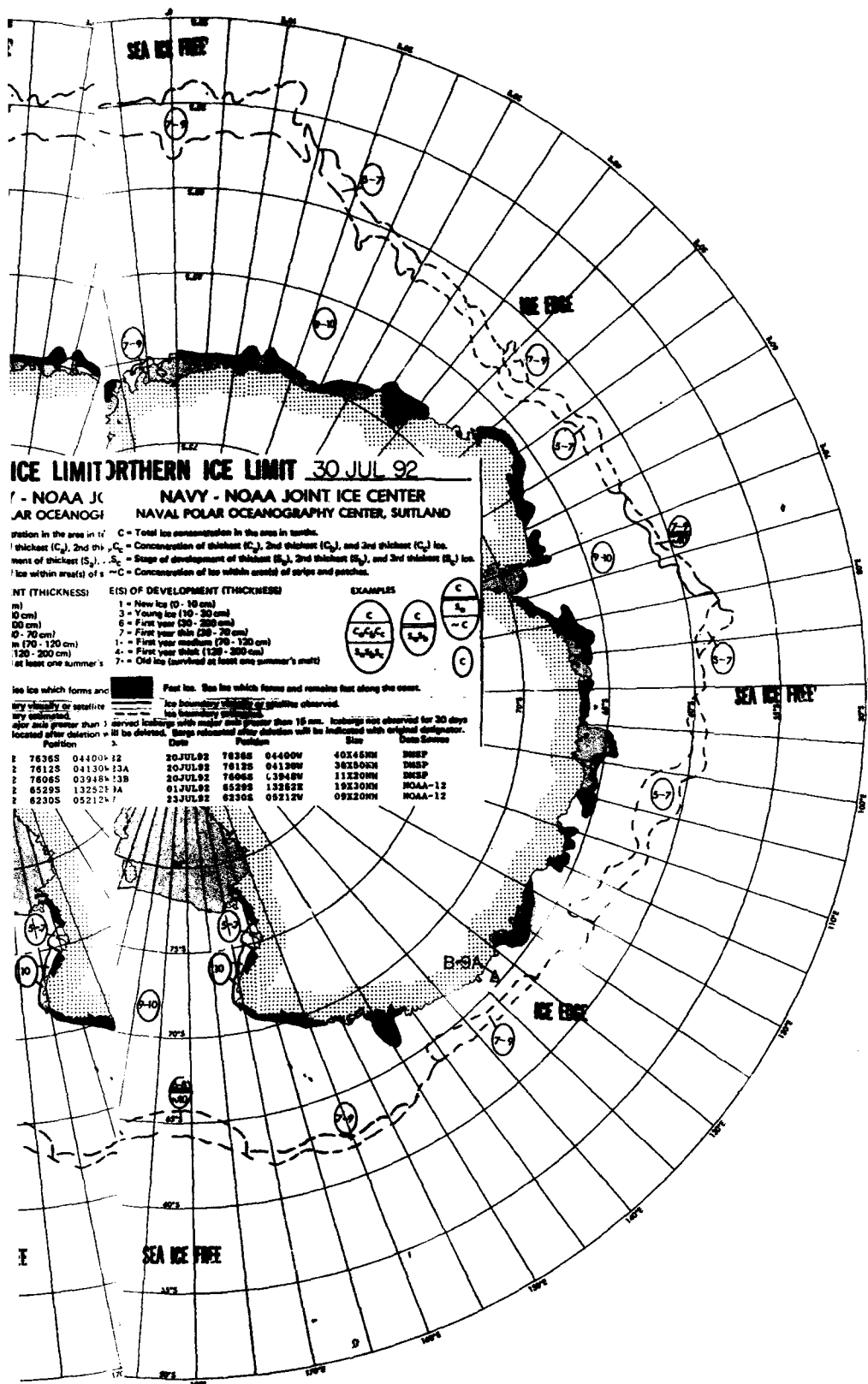


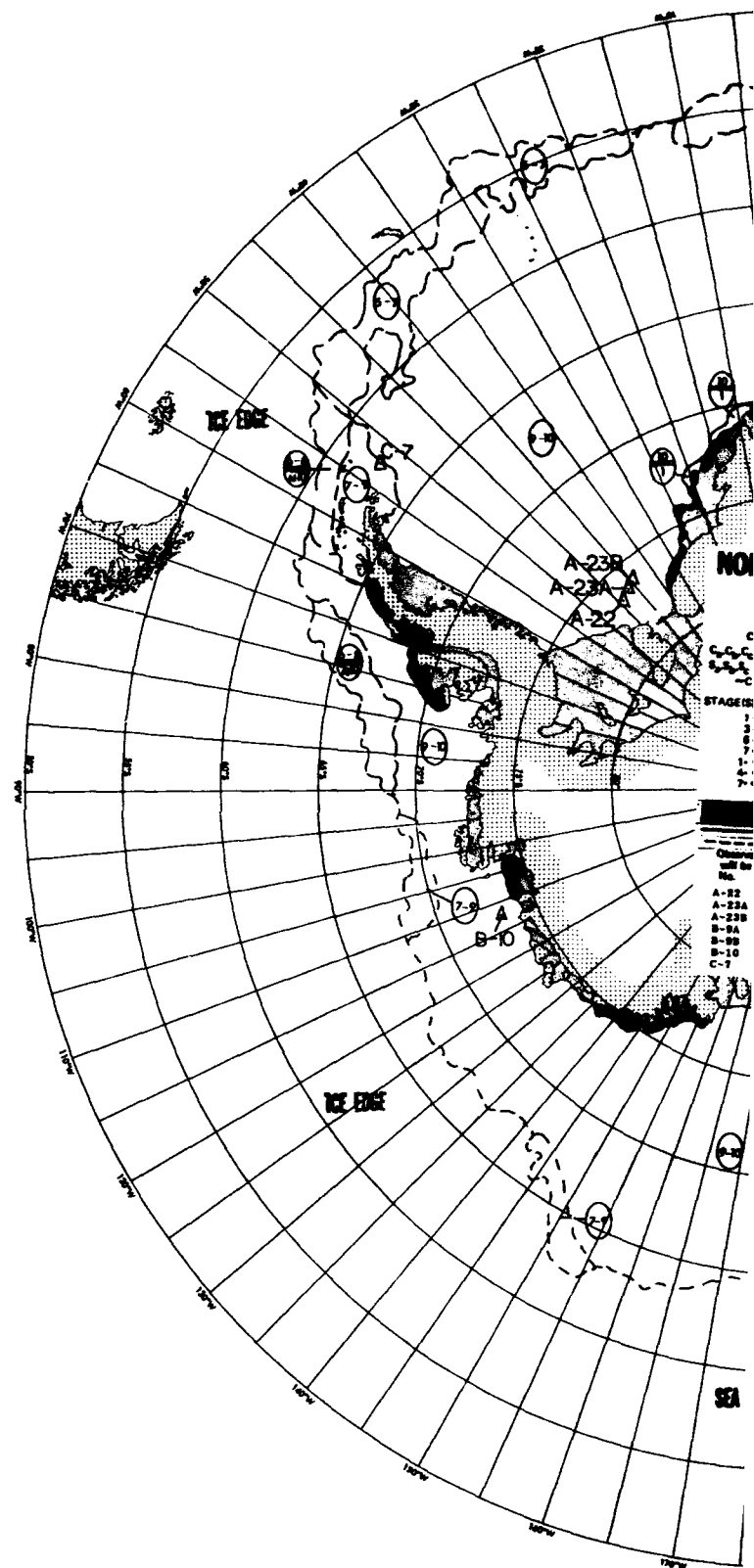


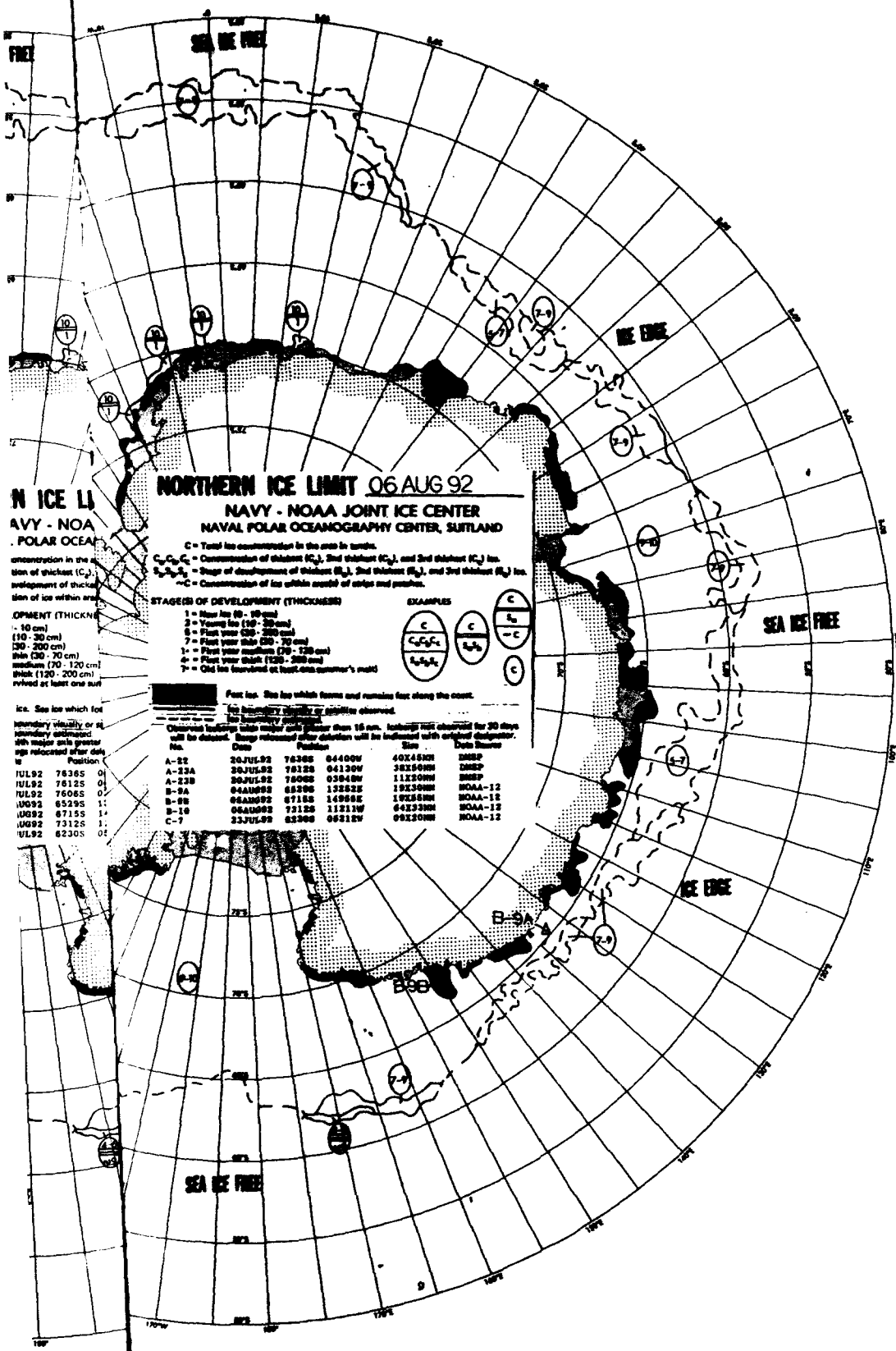












NORTHERN ICE LIMIT 06 AUG 92

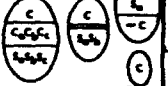
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUTLAND

C = Total ice concentration in the area in tenths.
C₁, C₂, C₃ = Concentration of thickest (C₁), 2nd thickest (C₂), and 3rd thickest (C₃) ice.
T₁, T₂, T₃ = Stage of development of thickest (T₁), 2nd thickest (T₂), and 3rd thickest (T₃) ice.
A = Concentration of ice within areola of strips and patches.

STAGES OF DEVELOPMENT (THICKNESS)

- 1 = New ice (0 - 10 cm)
- 2 = Young ice (10 - 30 cm)
- 3 = First year (30 - 50 cm)
- 4 = First year (50 - 70 cm)
- 5 = First year (70 - 100 cm)
- 6 = First year (100 - 150 cm)
- 7 = Old ice (150 - 200 cm)

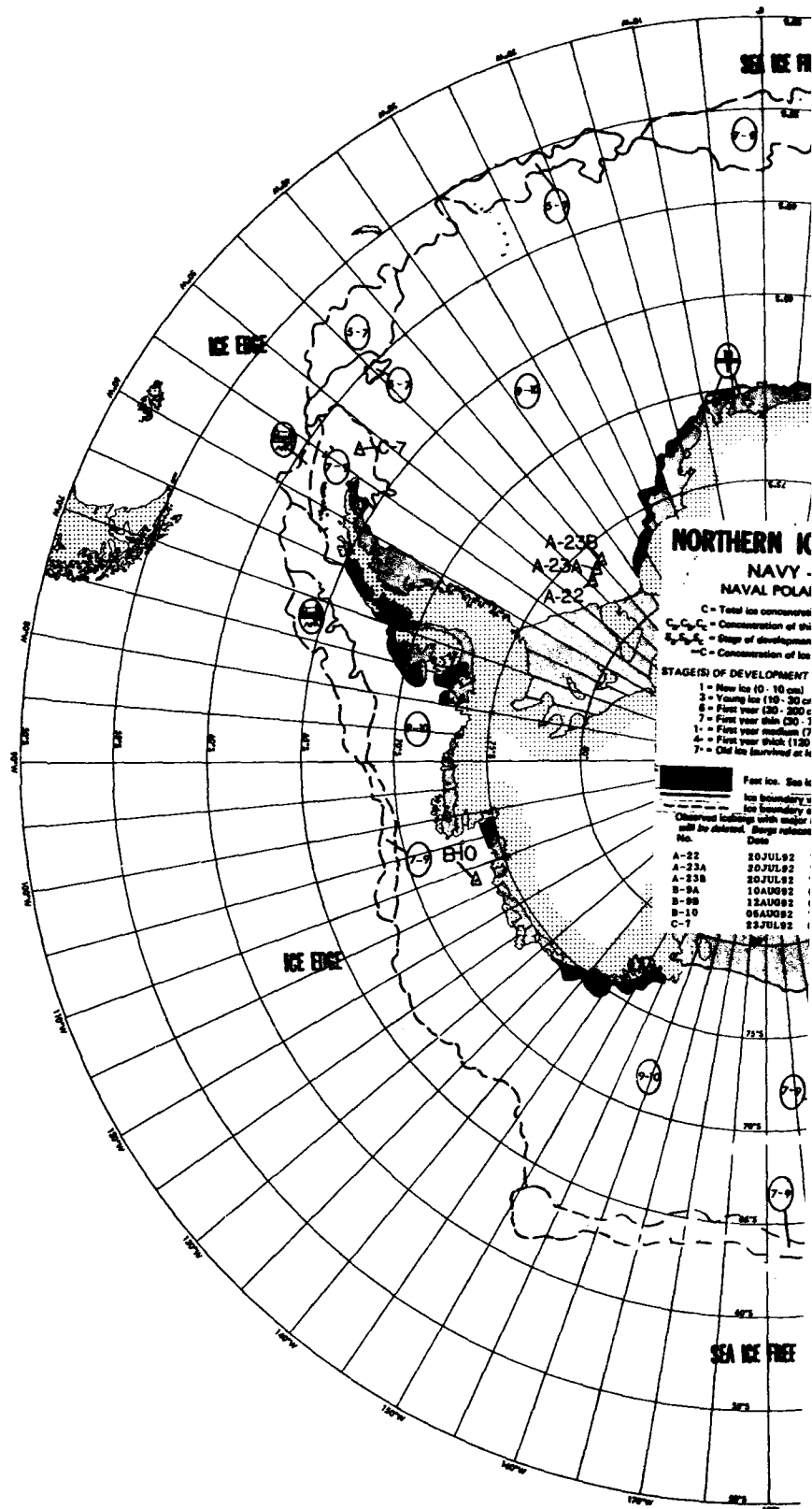
EXAMPLES

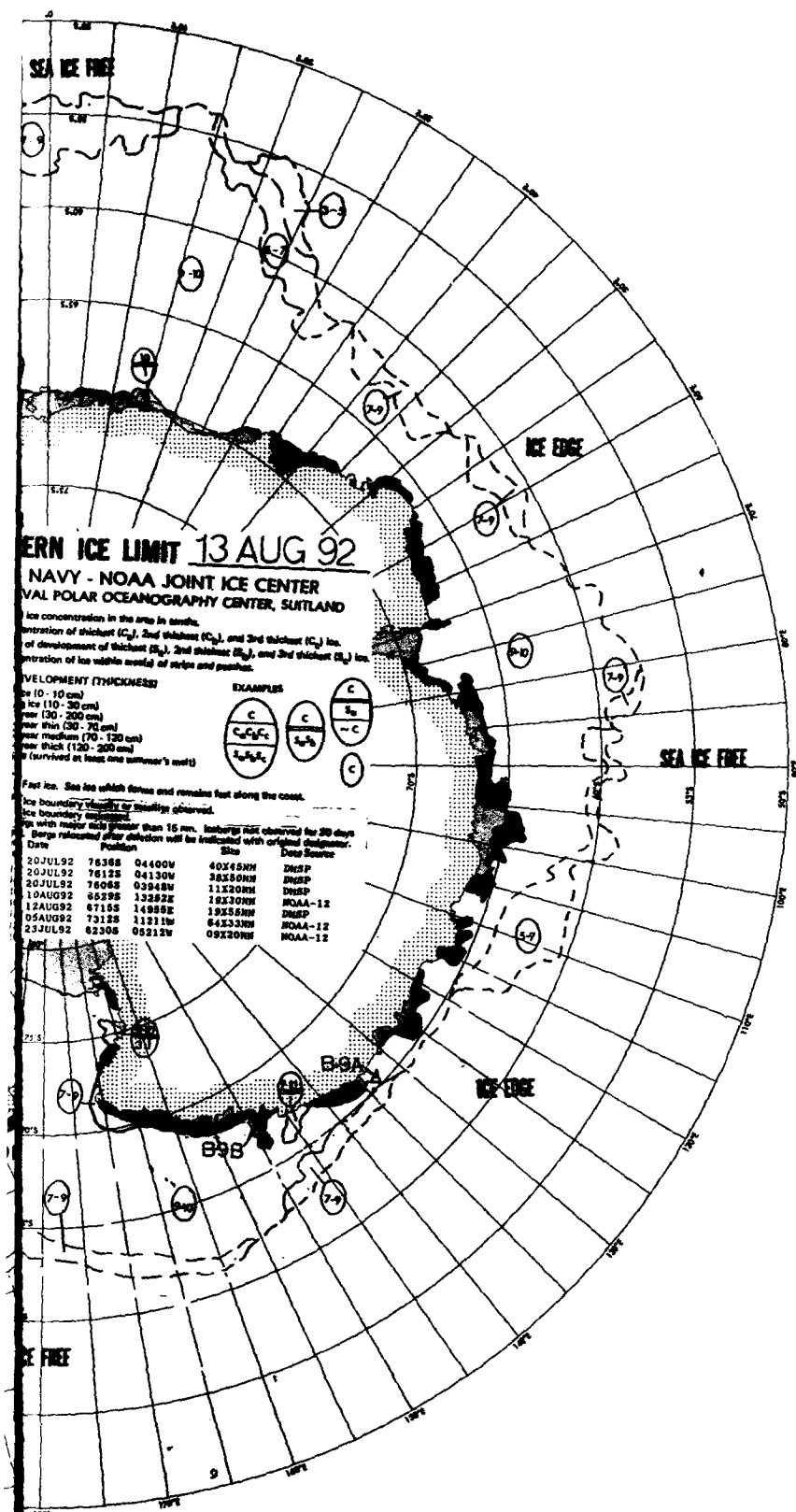


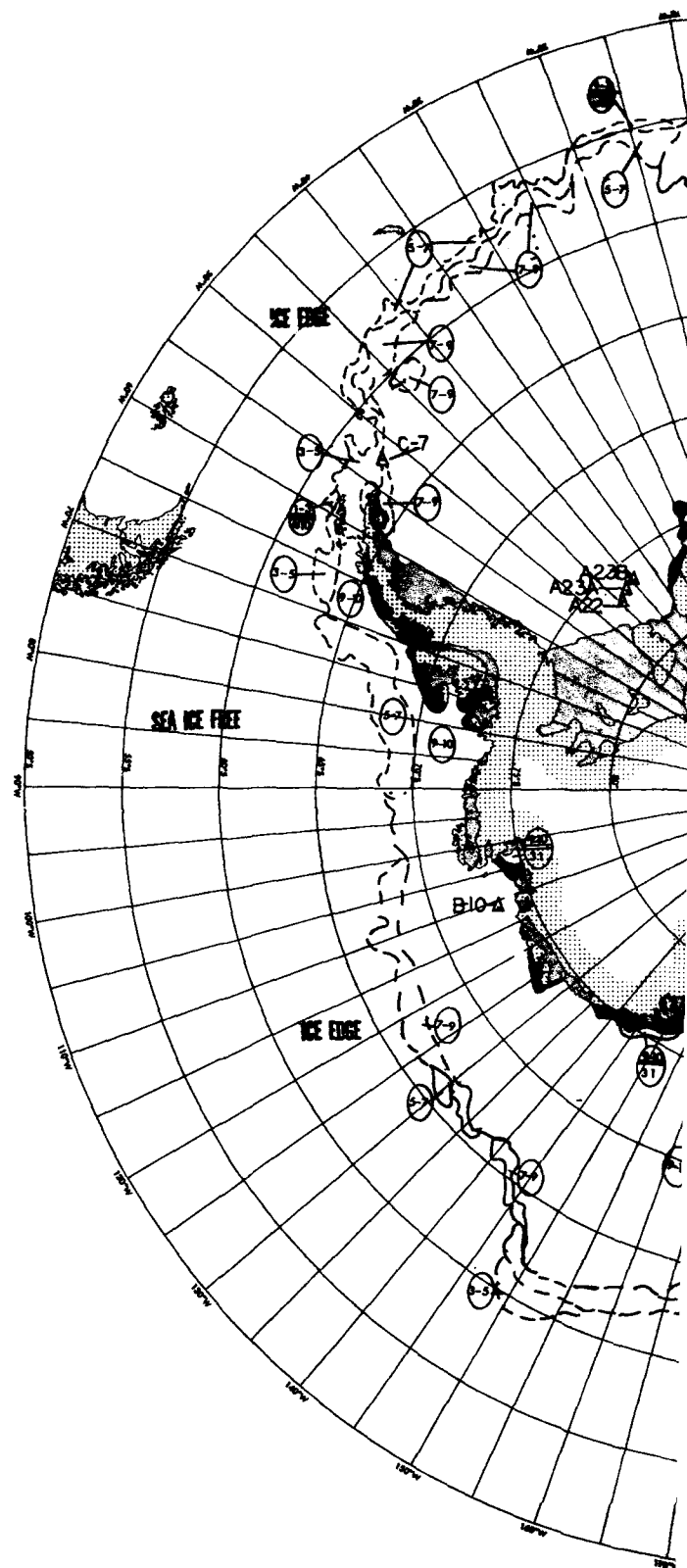
Ice Observations - See ice which forms and remains fast along the coast.
 Ice boundary - See ice which forms and remains fast along the coast.
 Ice thickness - See ice which forms and remains fast along the coast.
 Ice concentration - See ice which forms and remains fast along the coast.

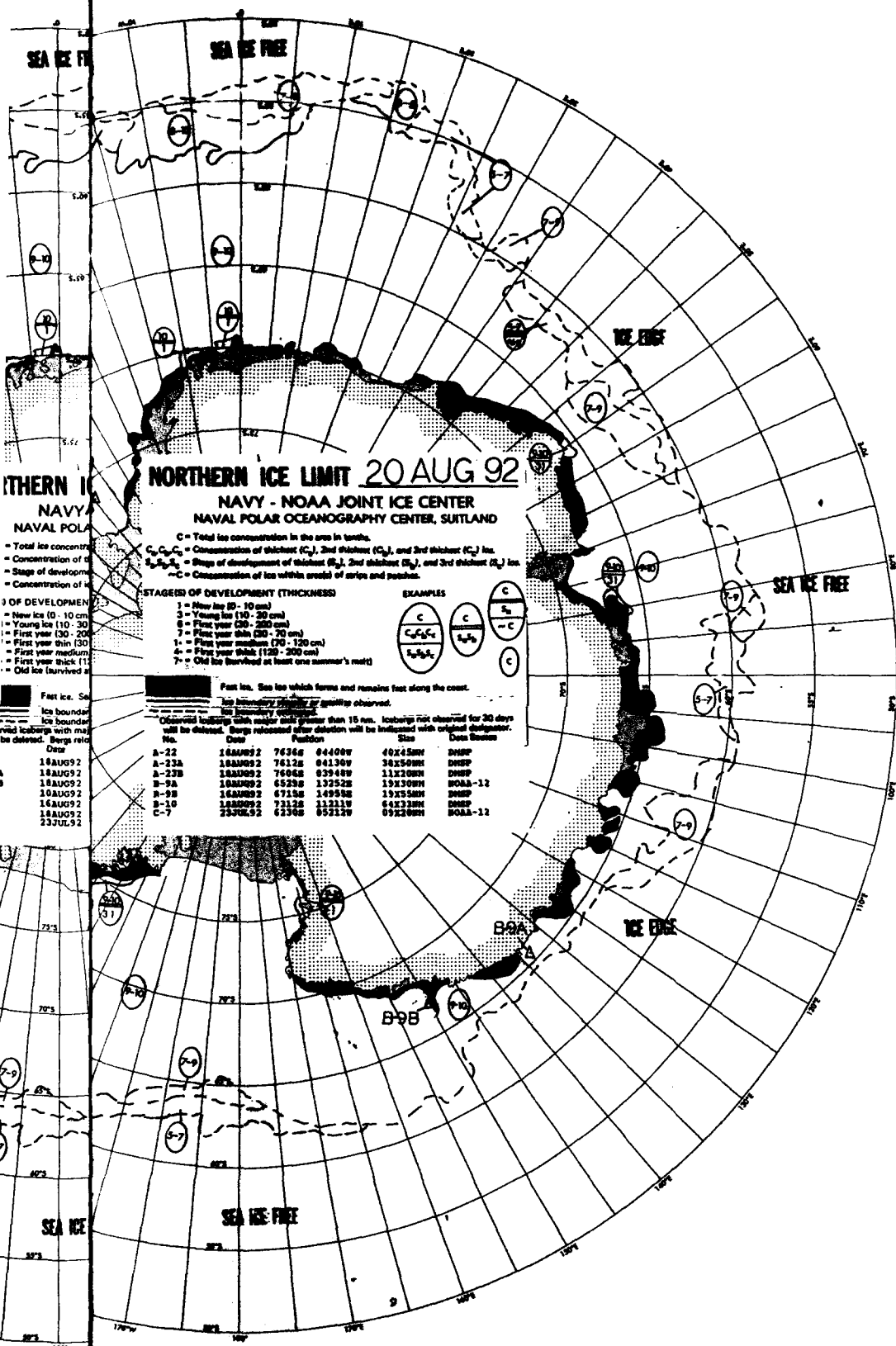
No.	Date	Position	Size	Data Source
A-22	20 JUL 92	7630S 04400W	40X40NM	DESP
A-23A	20 JUL 92	7630S 04130W	10X50NM	DESP
A-23B	20 JUL 92	7600S 03940W	11X50NM	DESP
B-9A	04 AUG 92	6830S 13252E	10X30NM	NOAA-12
B-9B	04 AUG 92	6715S 14958E	10X30NM	NOAA-12
B-10	04 AUG 92	7215S 11213W	44X30NM	NOAA-12
C-7	23 JUL 92	6830S 08212W	09X10NM	NOAA-12

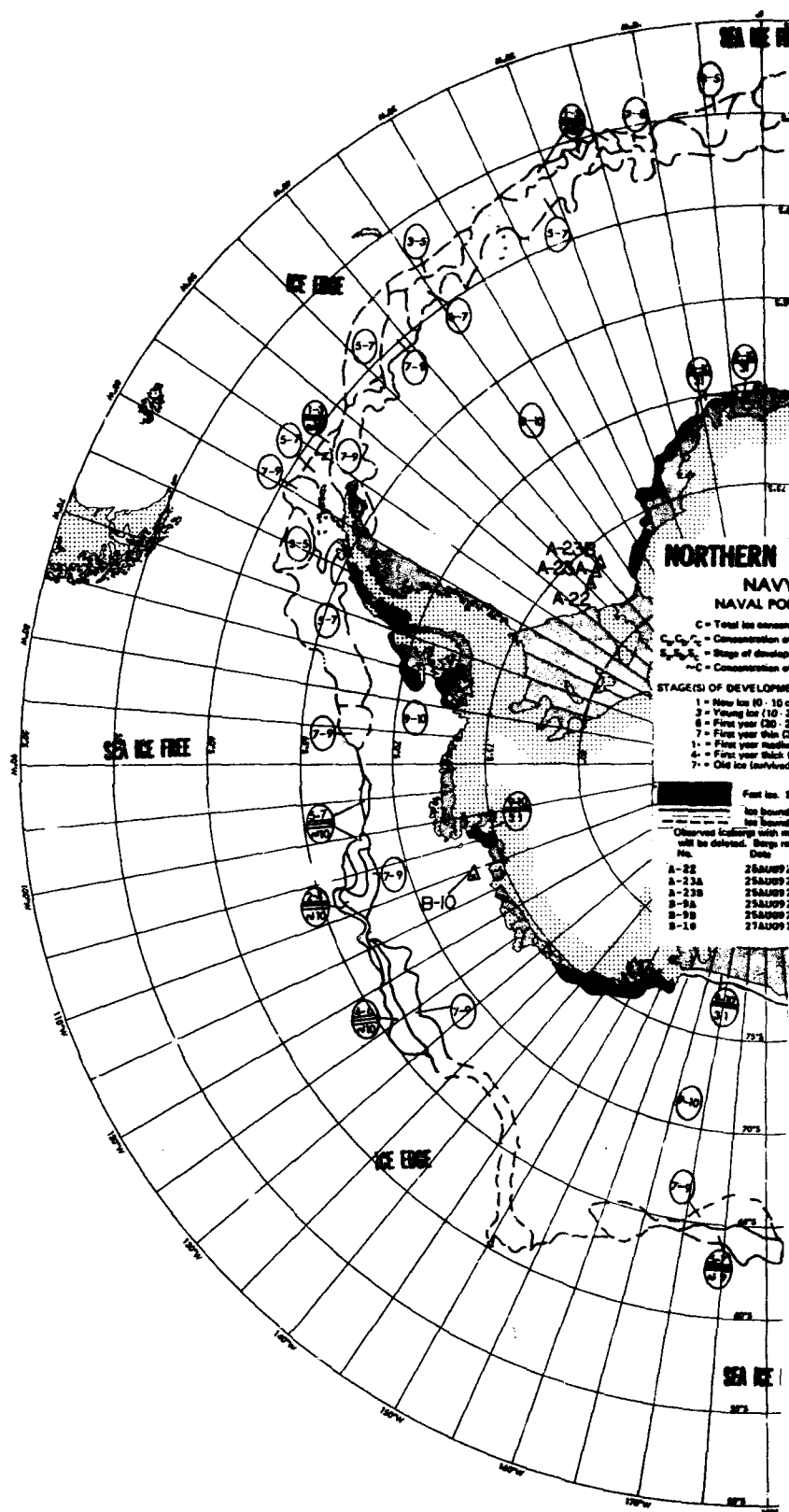
Ice Observations
 Date
 Position
 Data Source

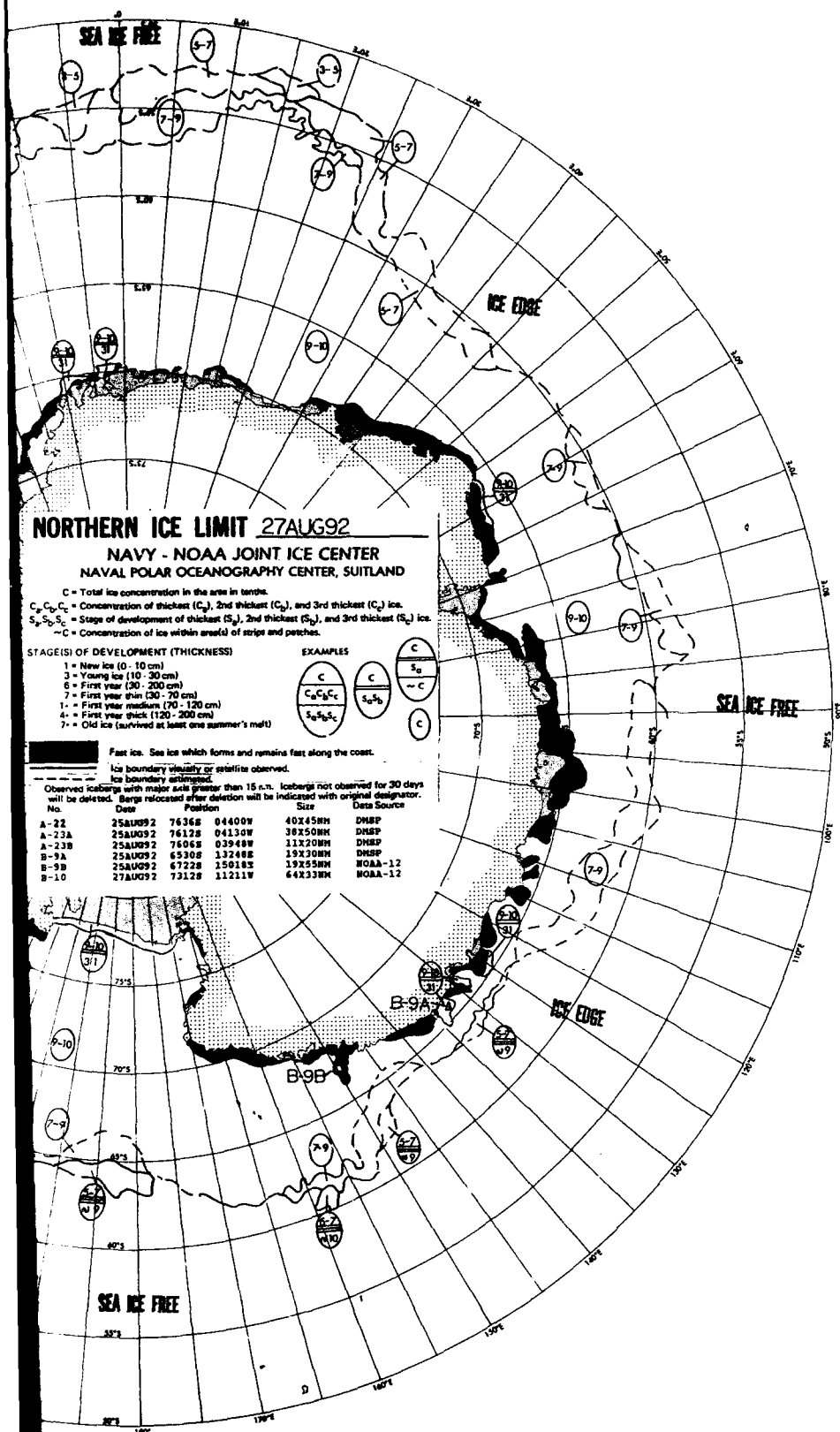


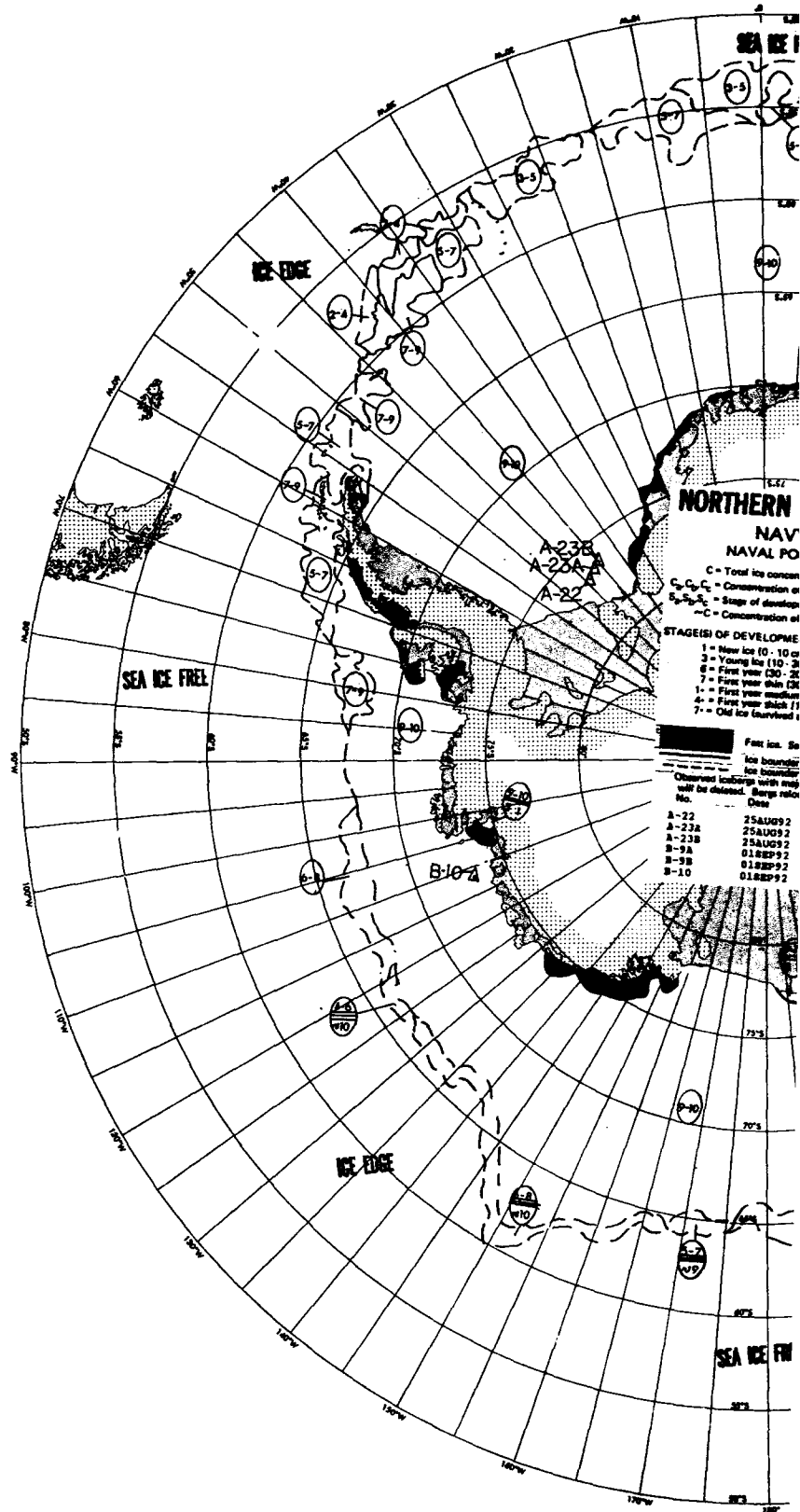


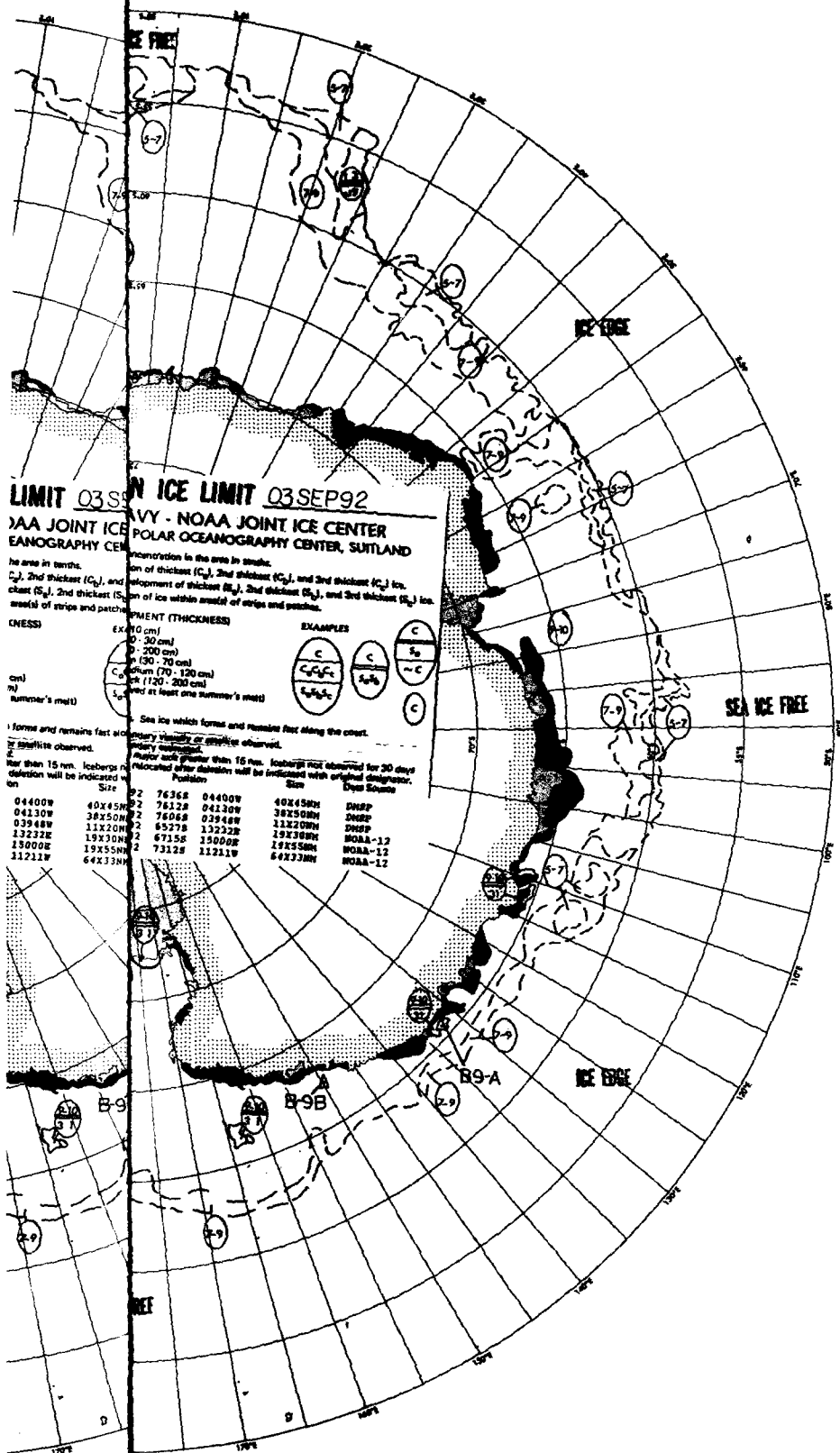


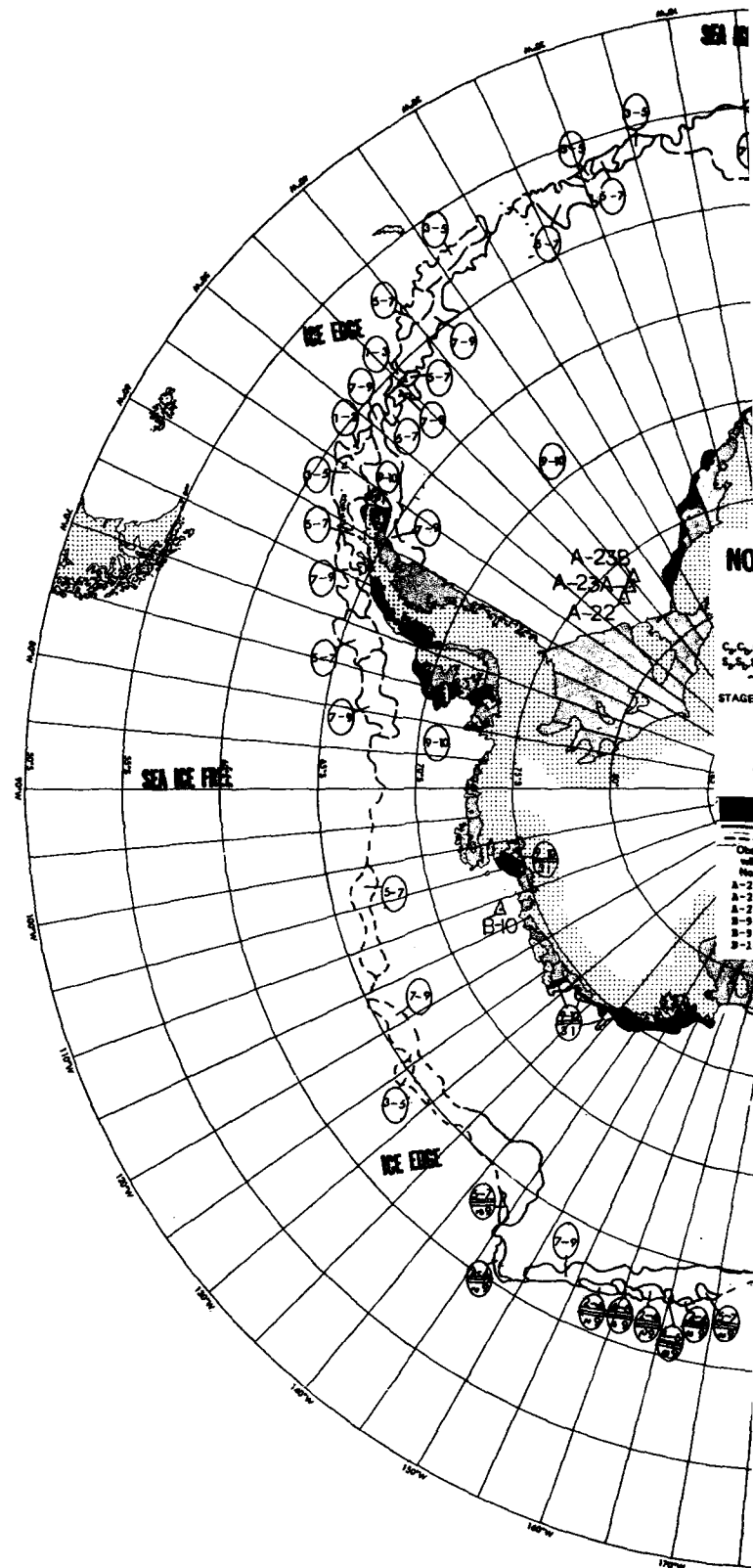


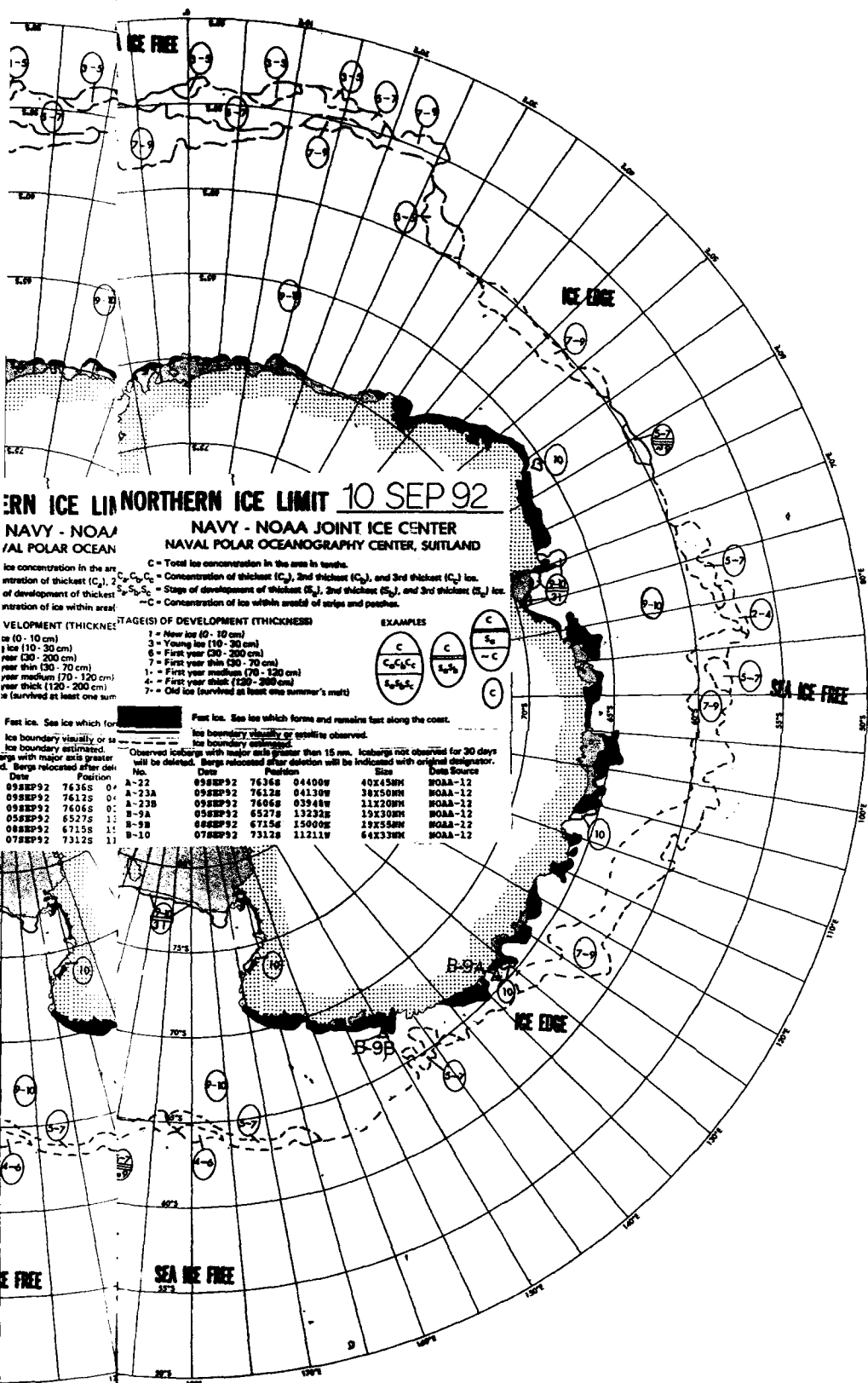


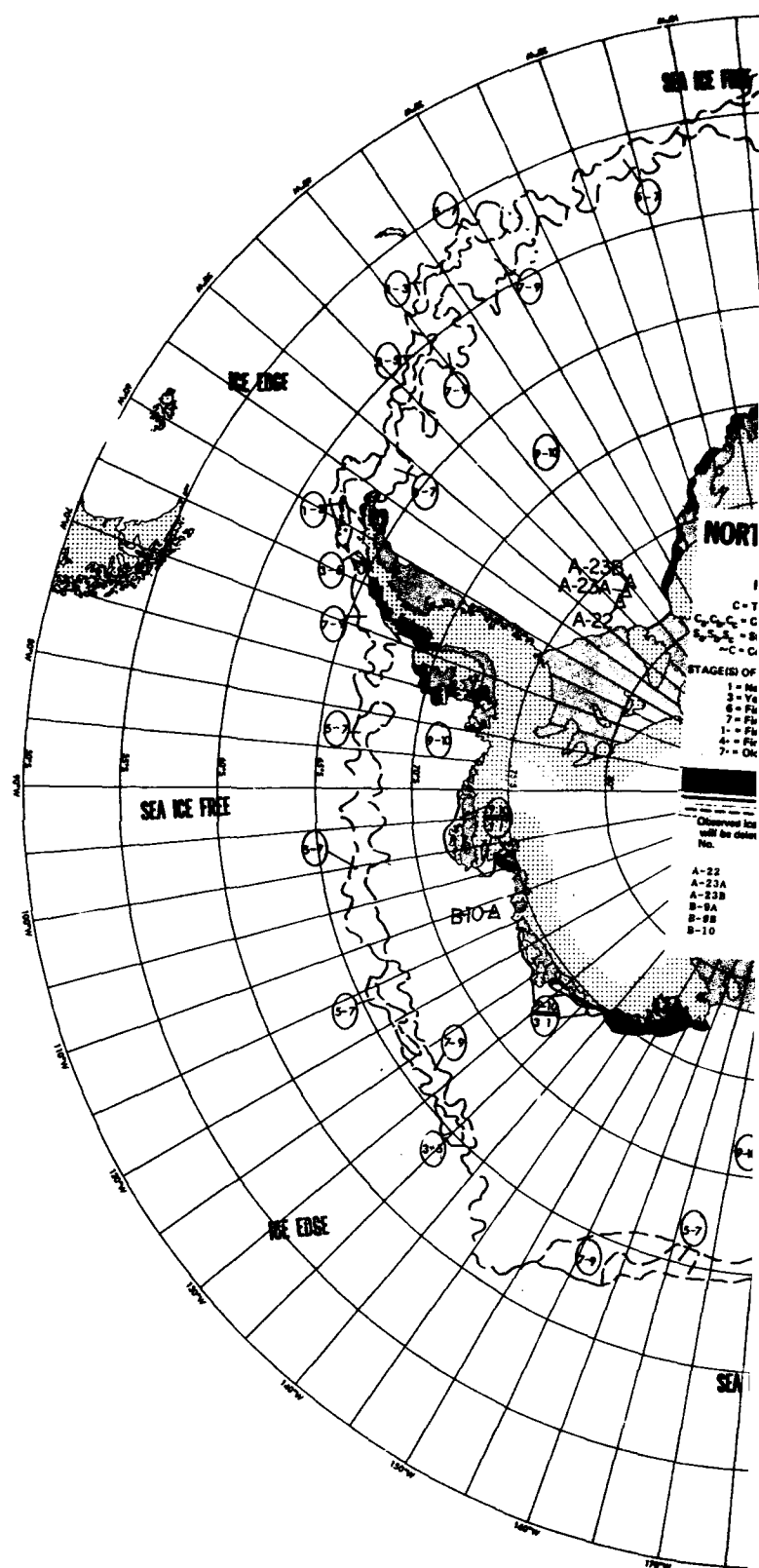


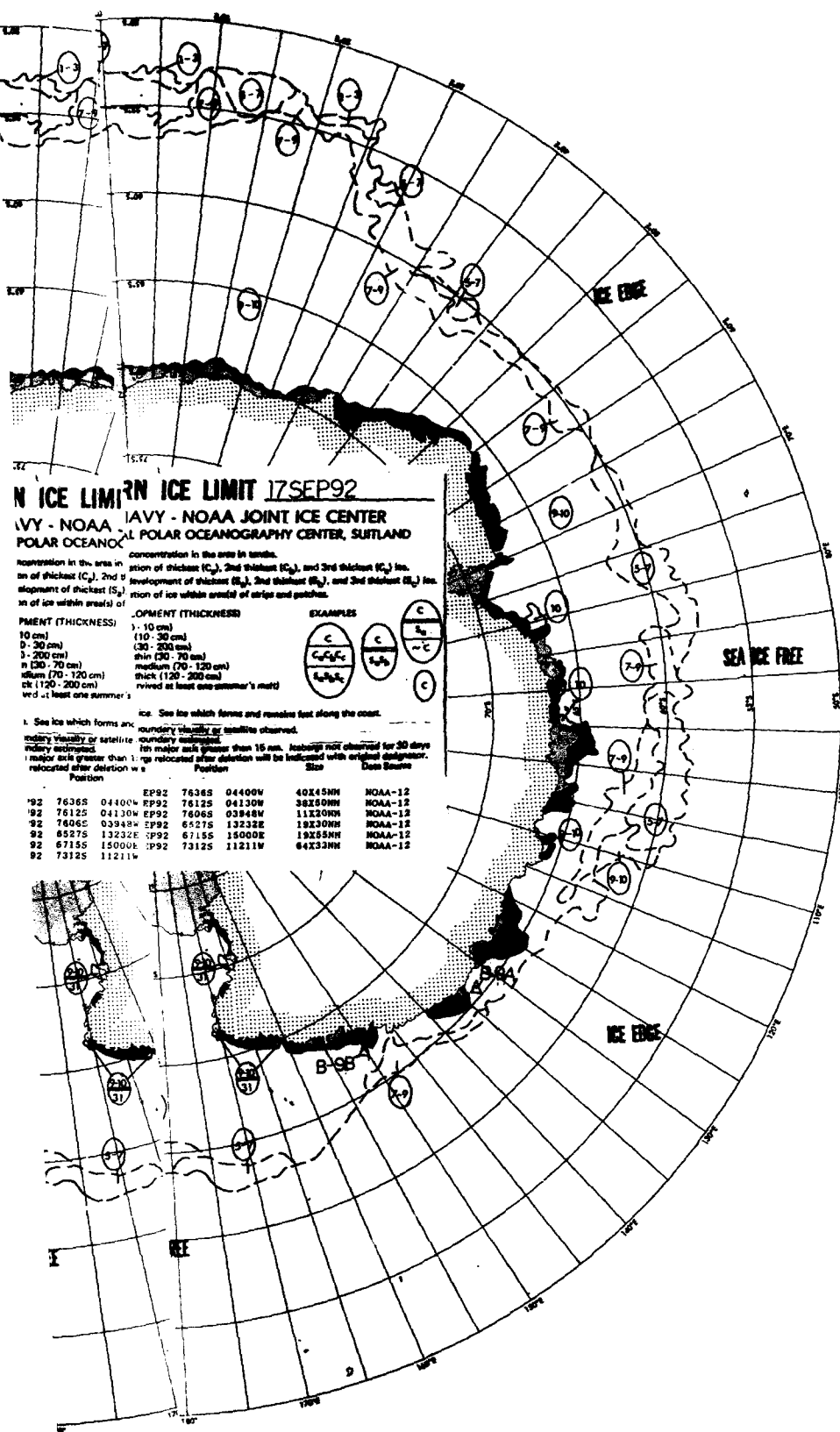








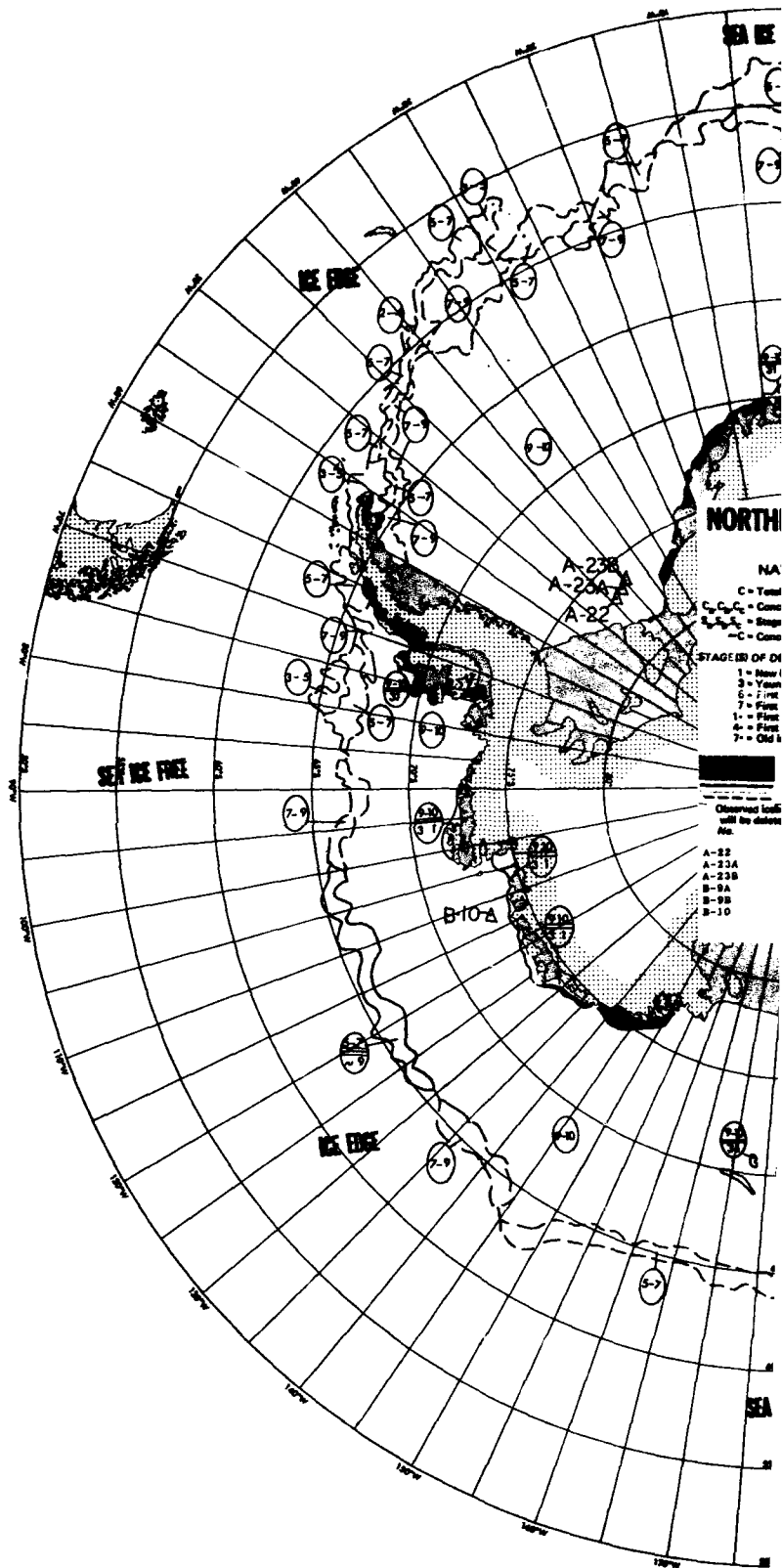


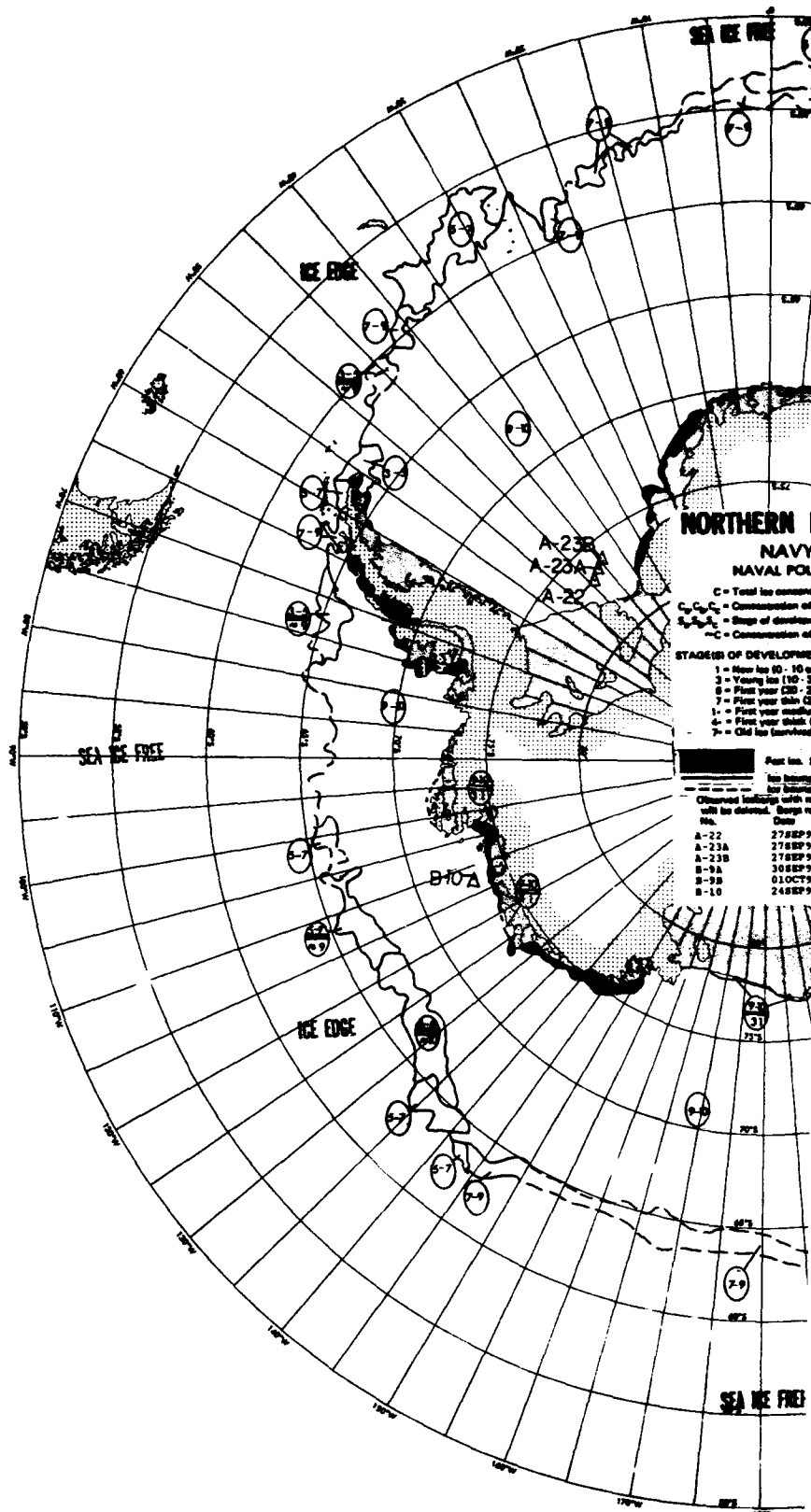


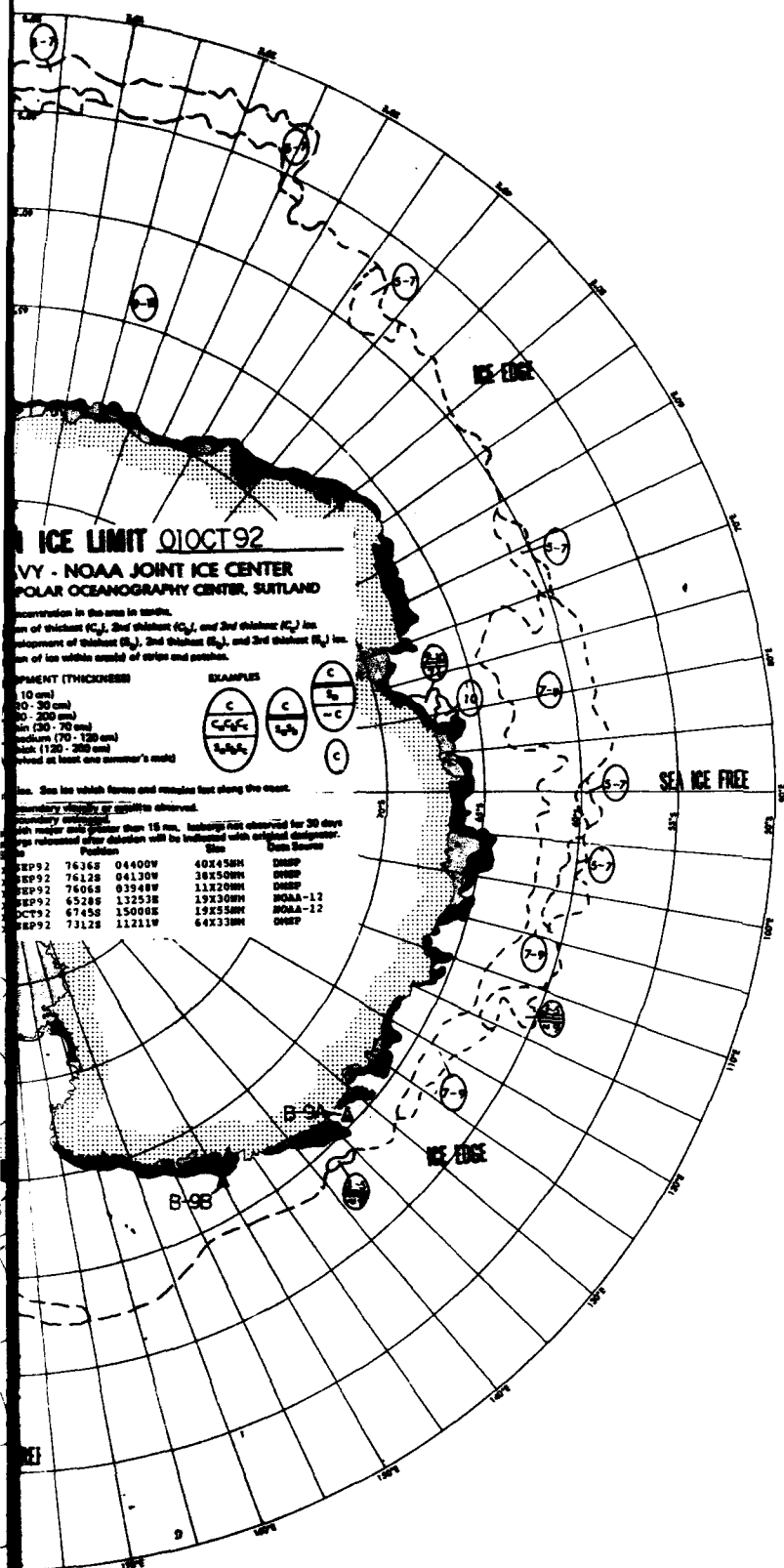
ICE LIMIT 17 SEP 92
NAVY - NOAA JOINT ICE CENTER
POLAR OCEANOGRAPHY CENTER, SUITLAND

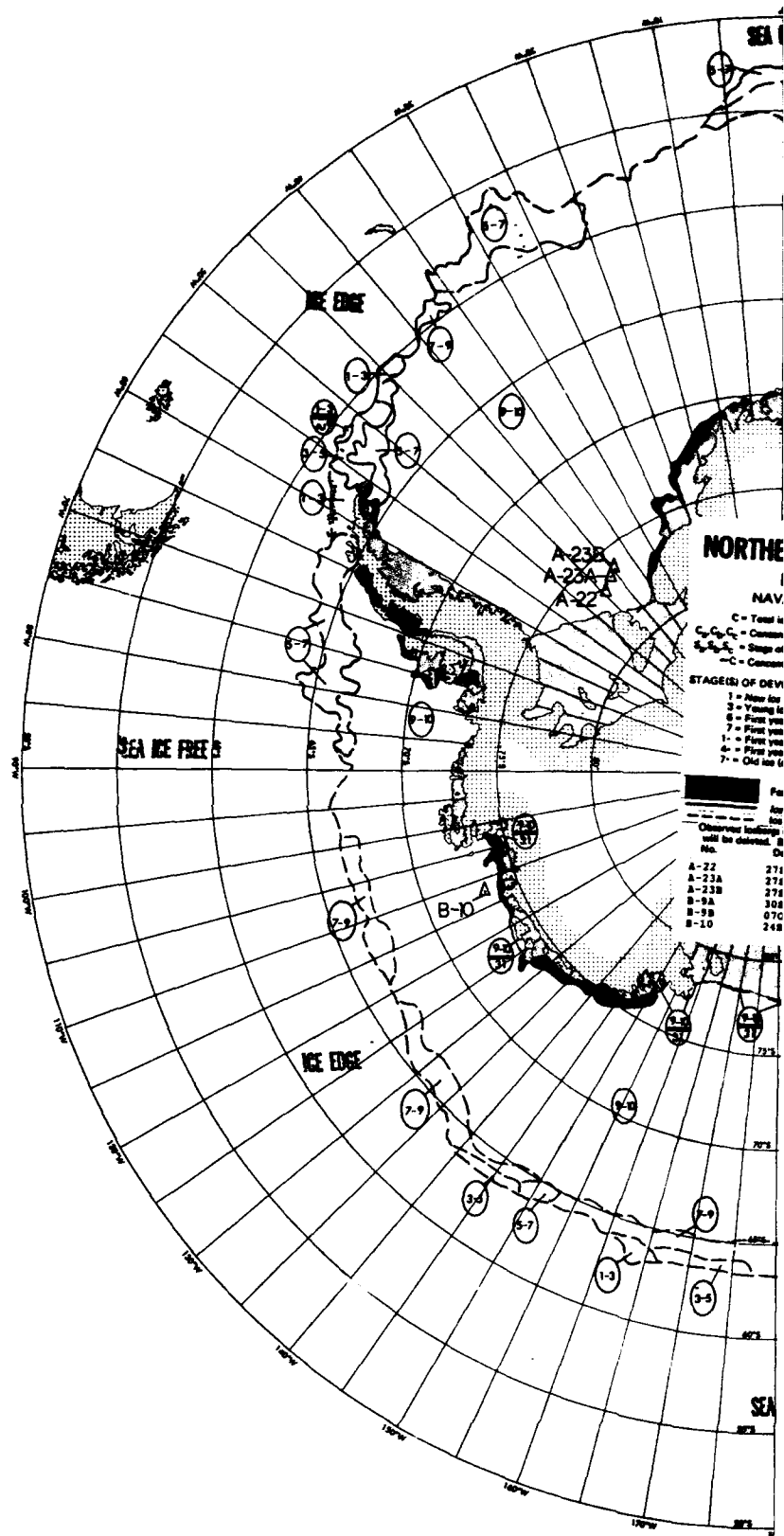
concentration in the area is limited.
 1. See ice which forms and remains fast along the coast.
 2. See ice which forms and remains fast along the coast.
 3. See ice which forms and remains fast along the coast.
 4. See ice which forms and remains fast along the coast.
 5. See ice which forms and remains fast along the coast.
 6. See ice which forms and remains fast along the coast.
 7. See ice which forms and remains fast along the coast.
 8. See ice which forms and remains fast along the coast.
 9. See ice which forms and remains fast along the coast.
 10. See ice which forms and remains fast along the coast.

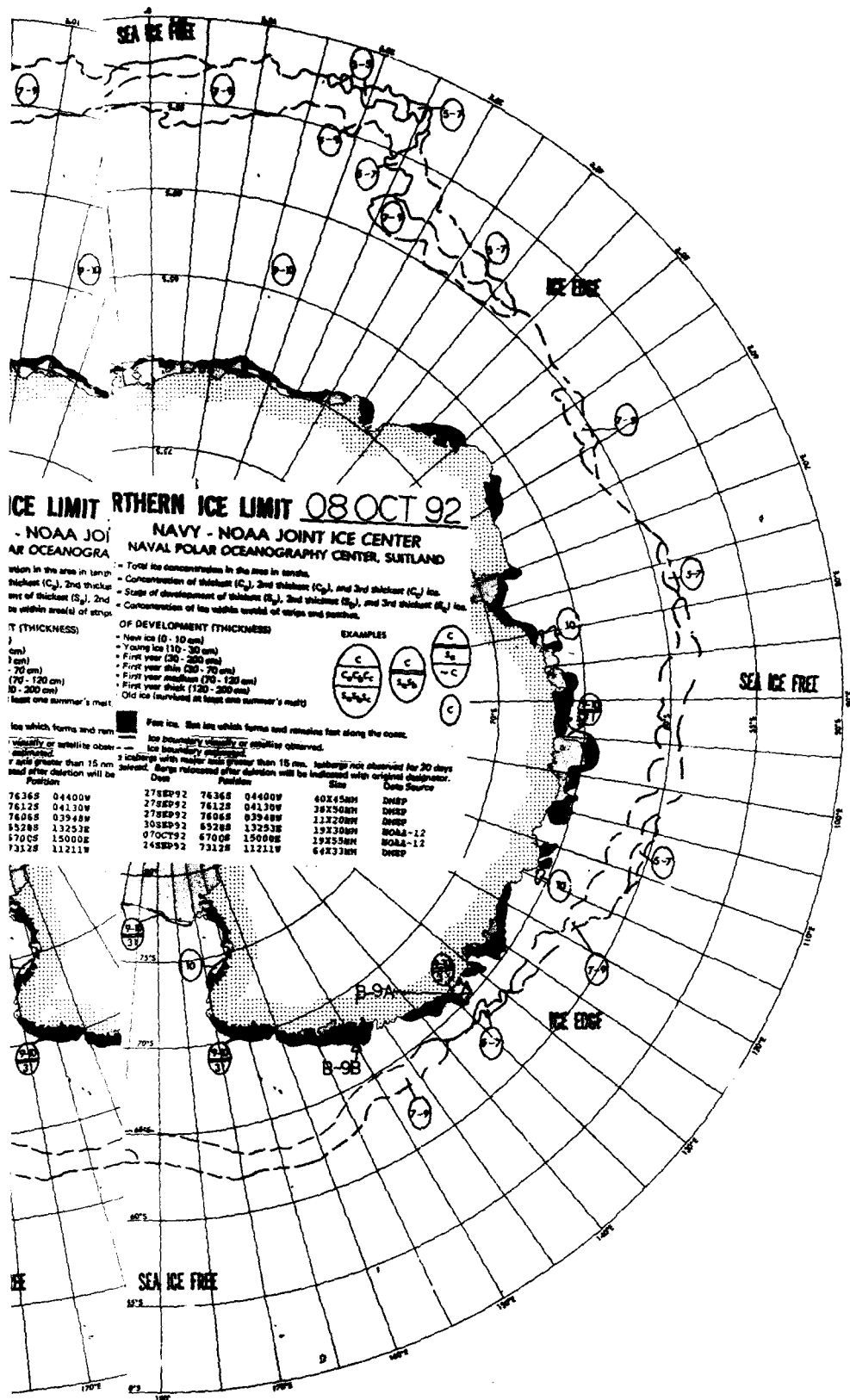
Position	Date	Source
7636S 04400W	EP92	NOAA-12
7612S 04130W	EP92	NOAA-12
7606S 03948W	EP92	NOAA-12
6527S 13232E	EP92	NOAA-12
6715S 15000E	EP92	NOAA-12
7312S 11211W	EP92	NOAA-12

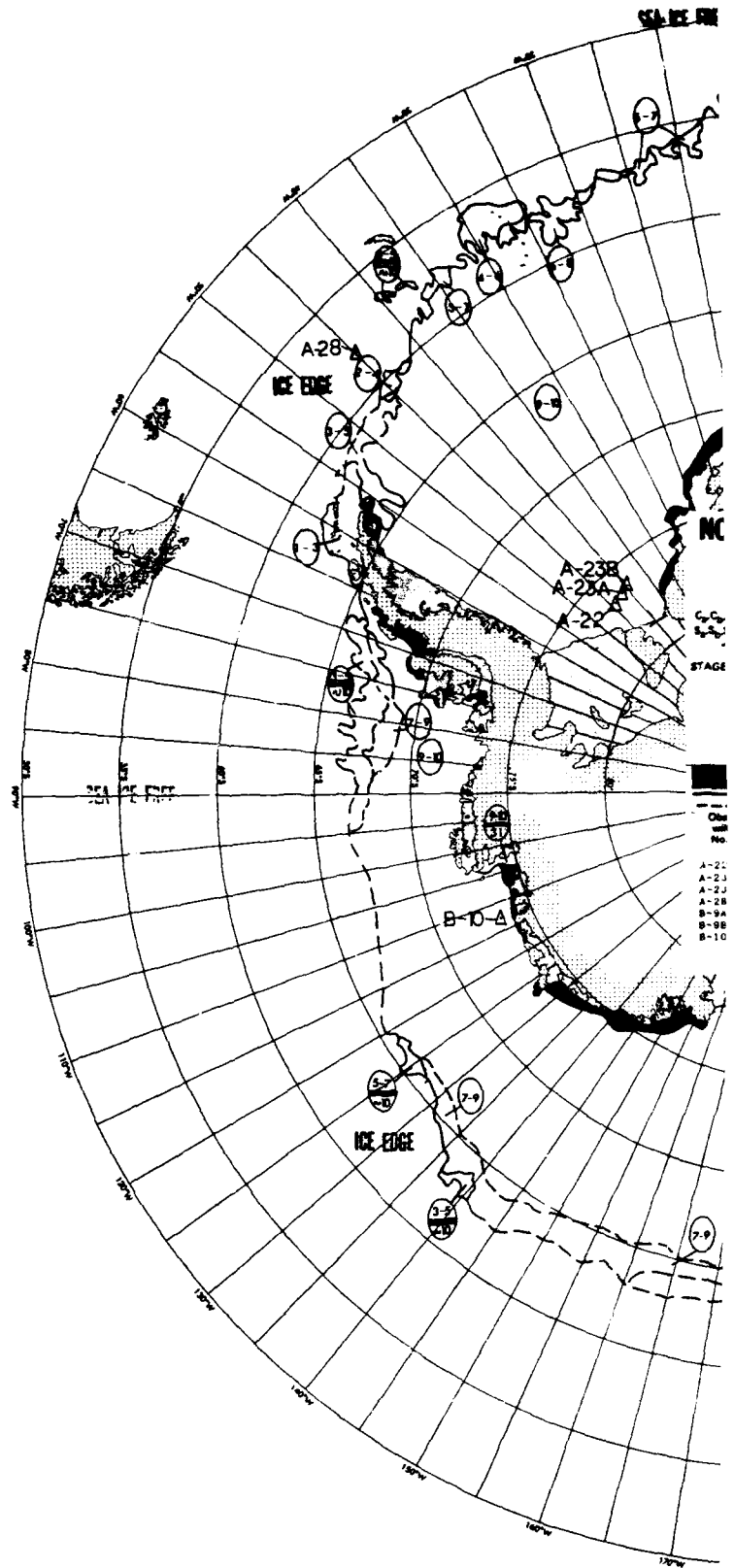


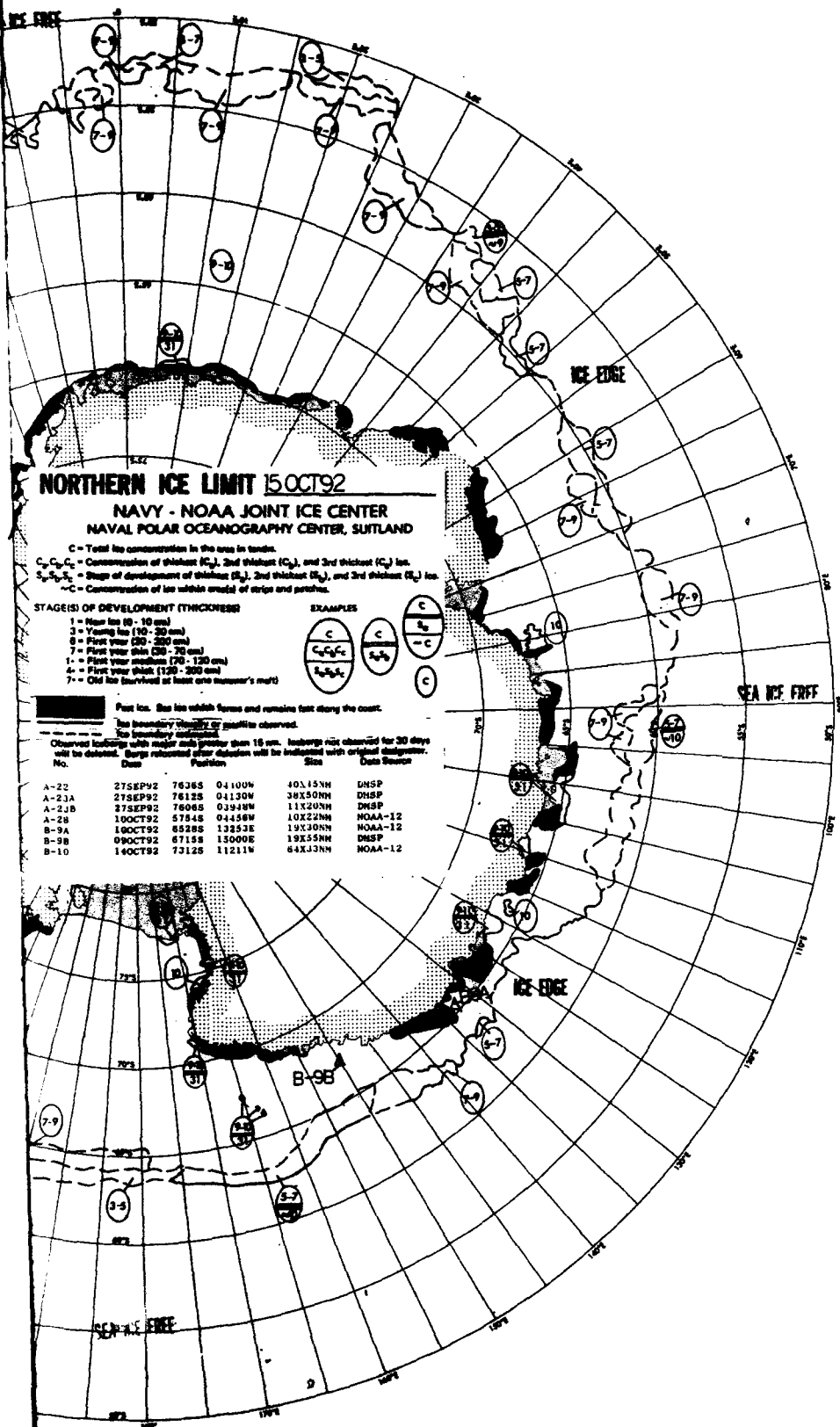


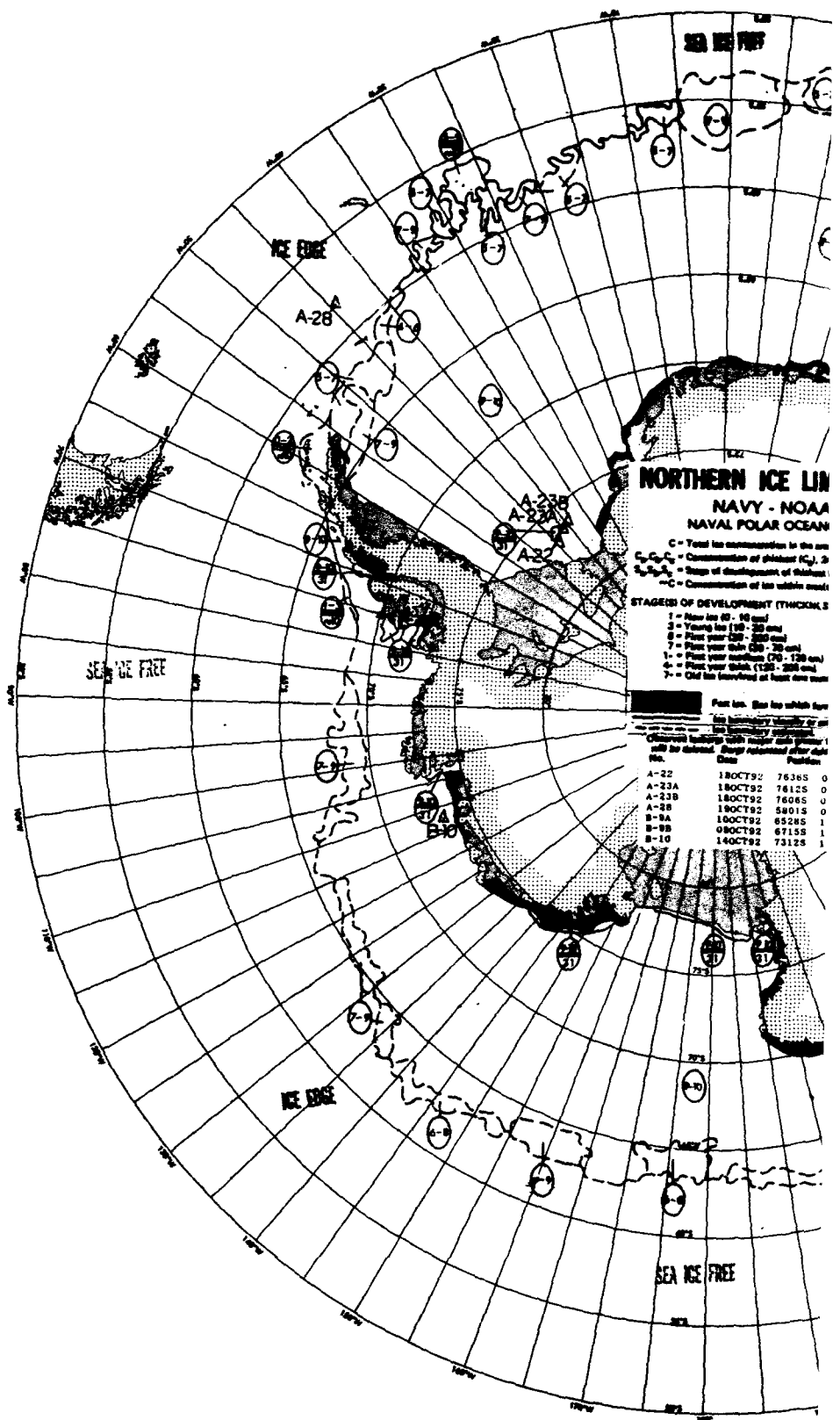


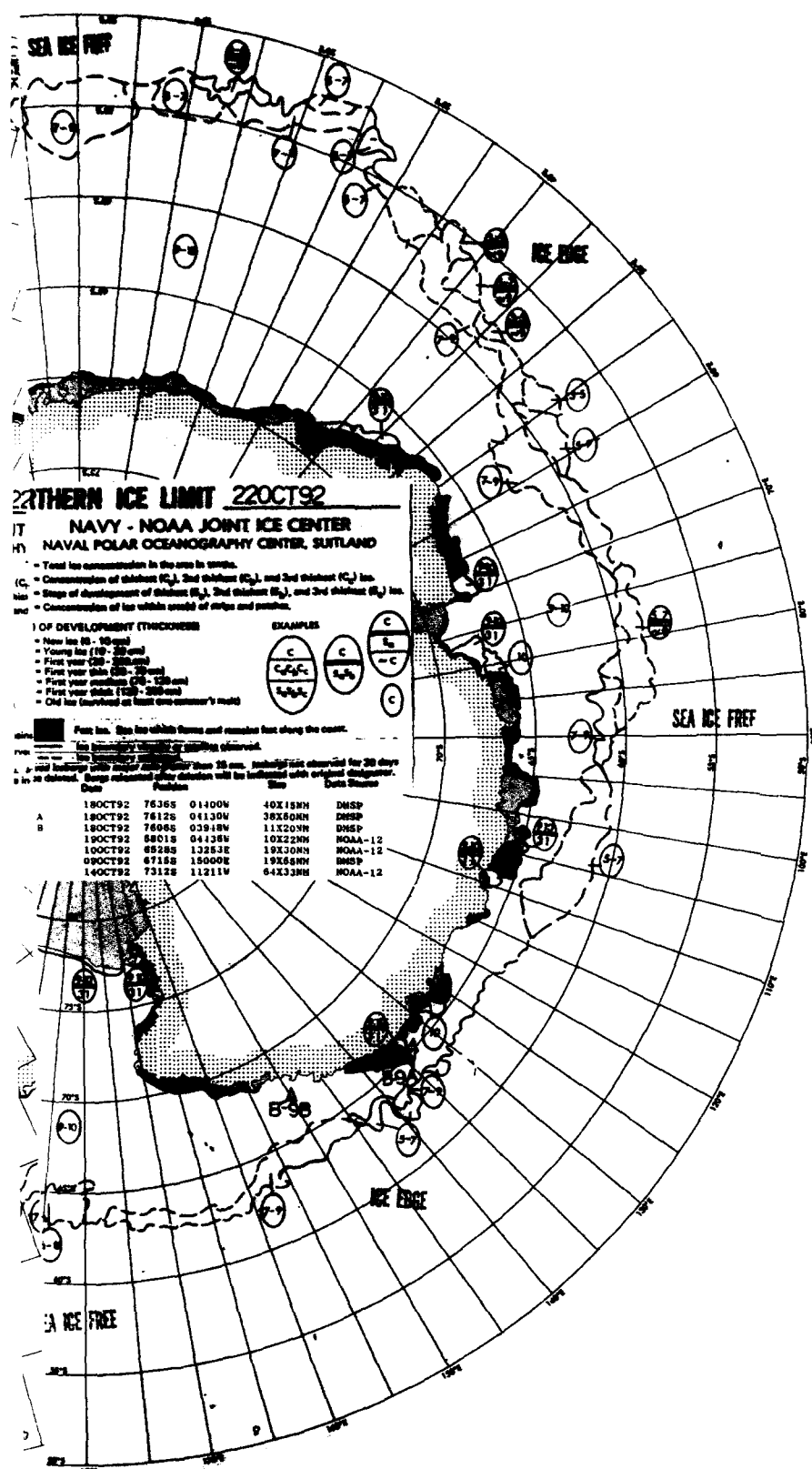


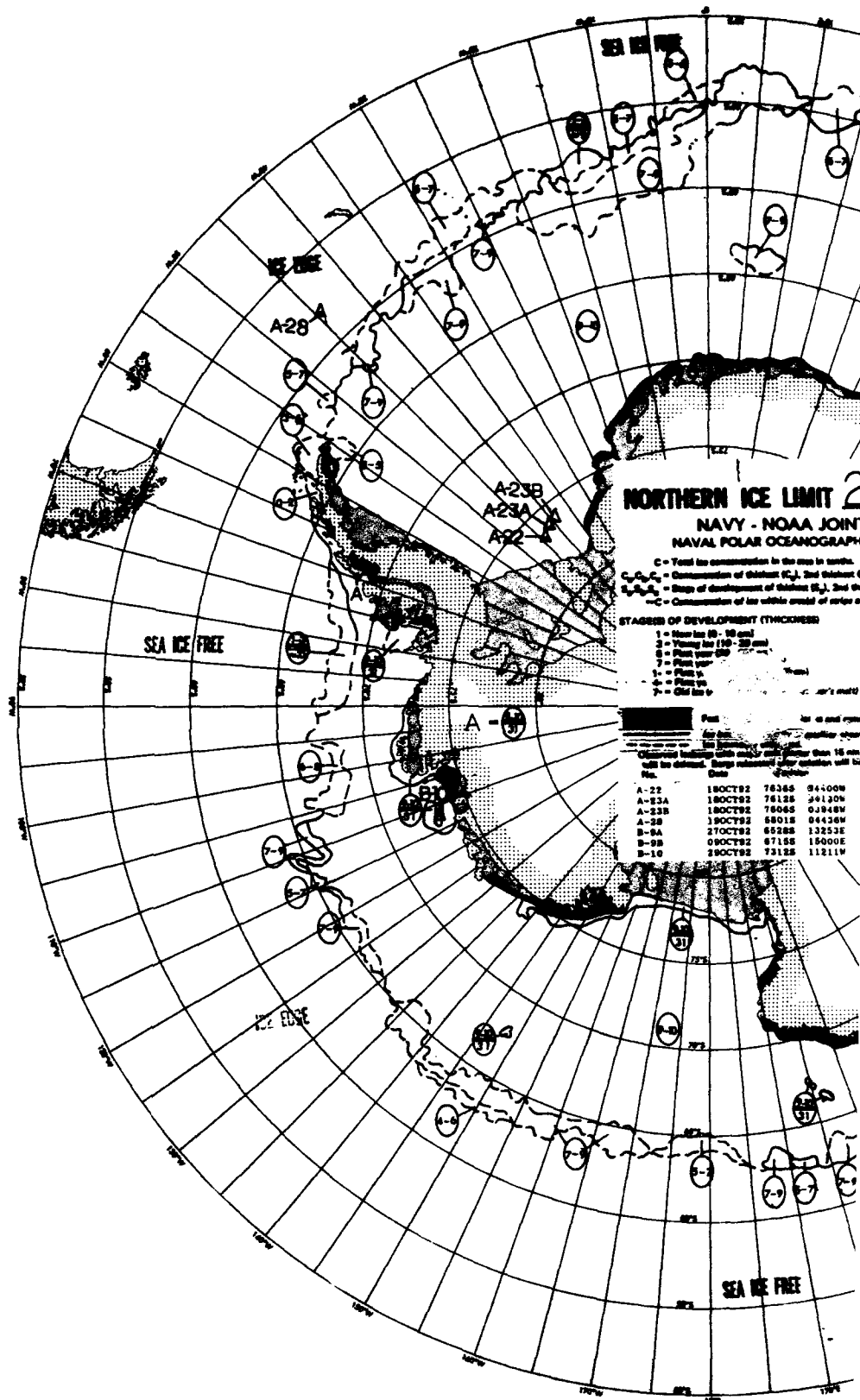


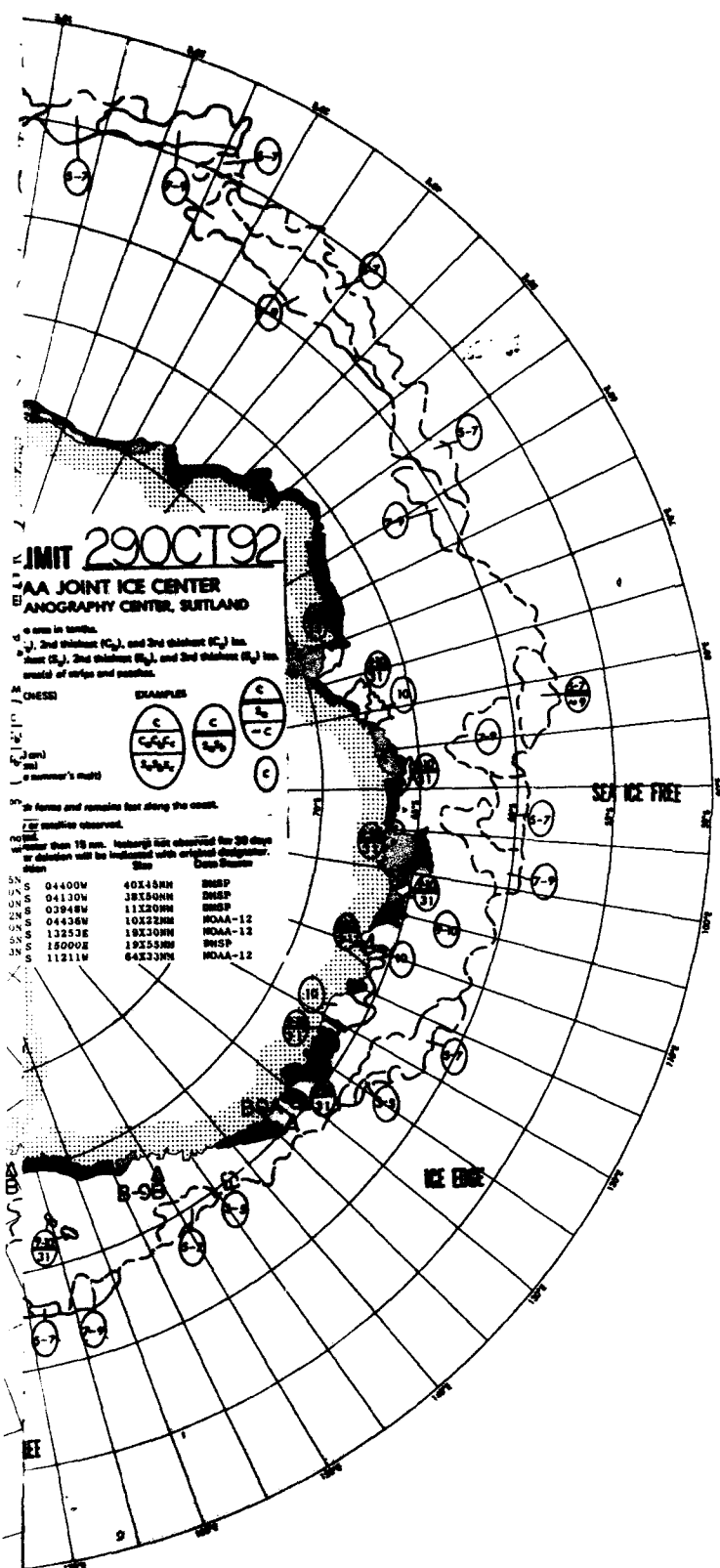


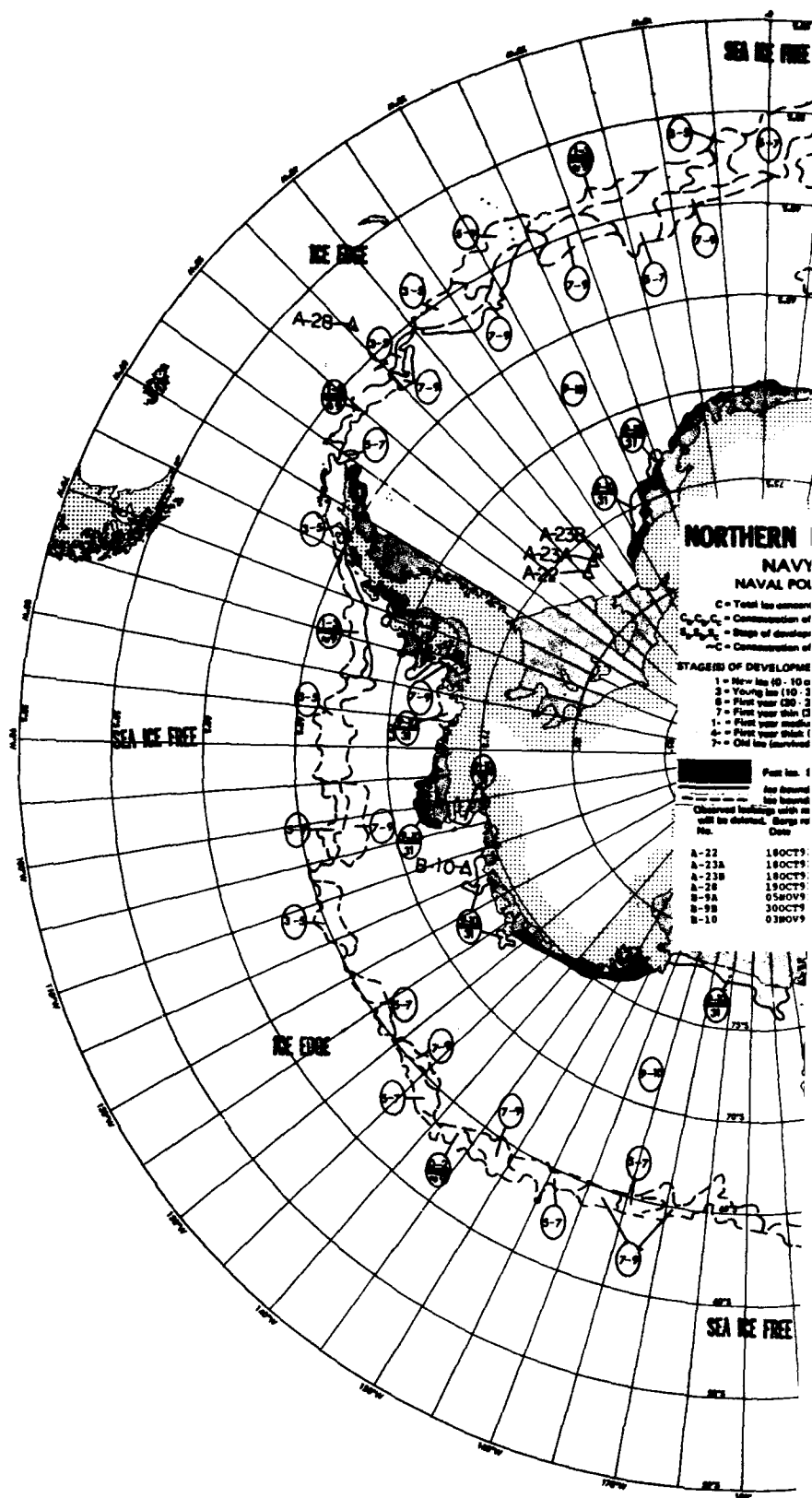


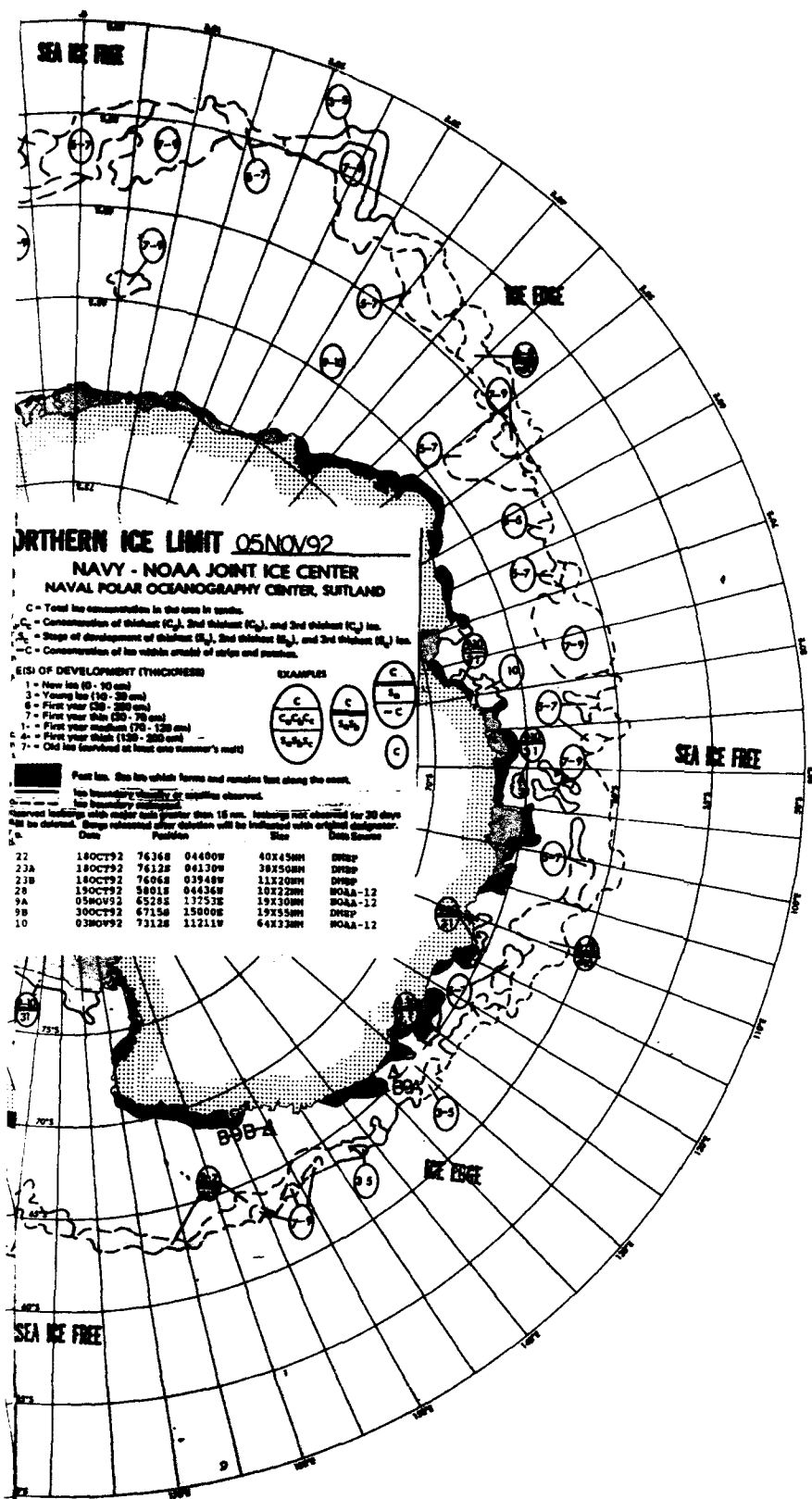


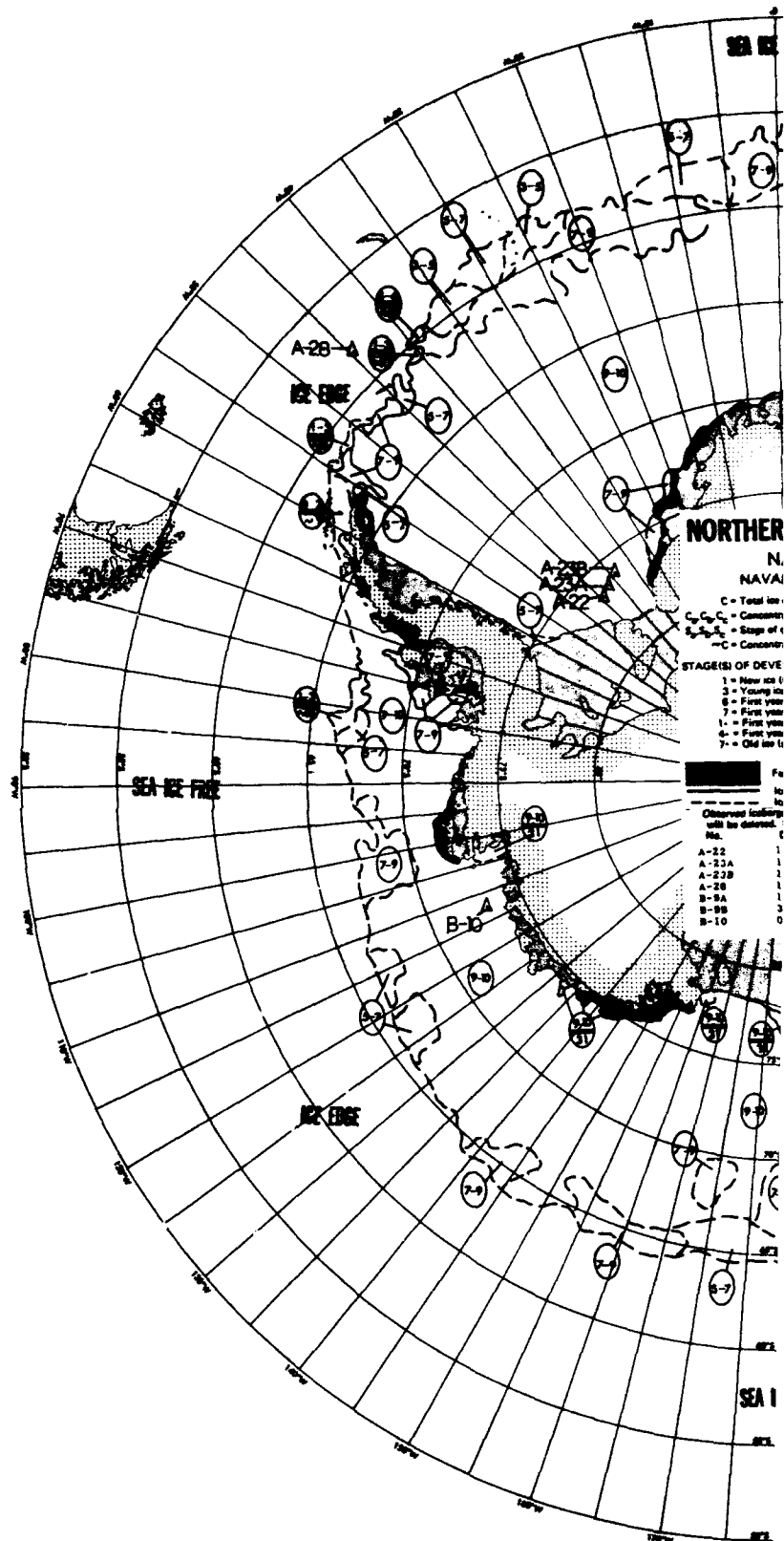


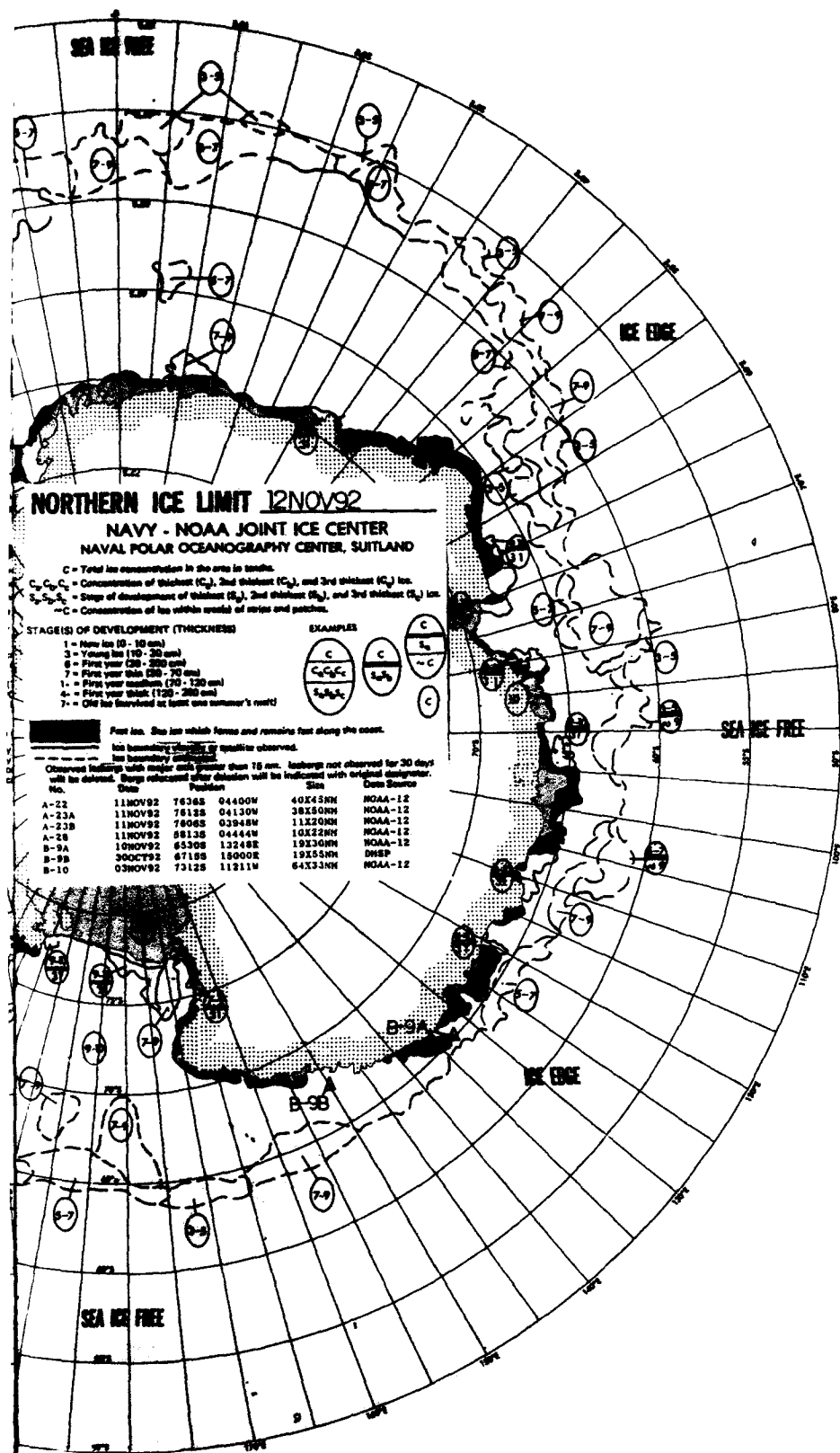


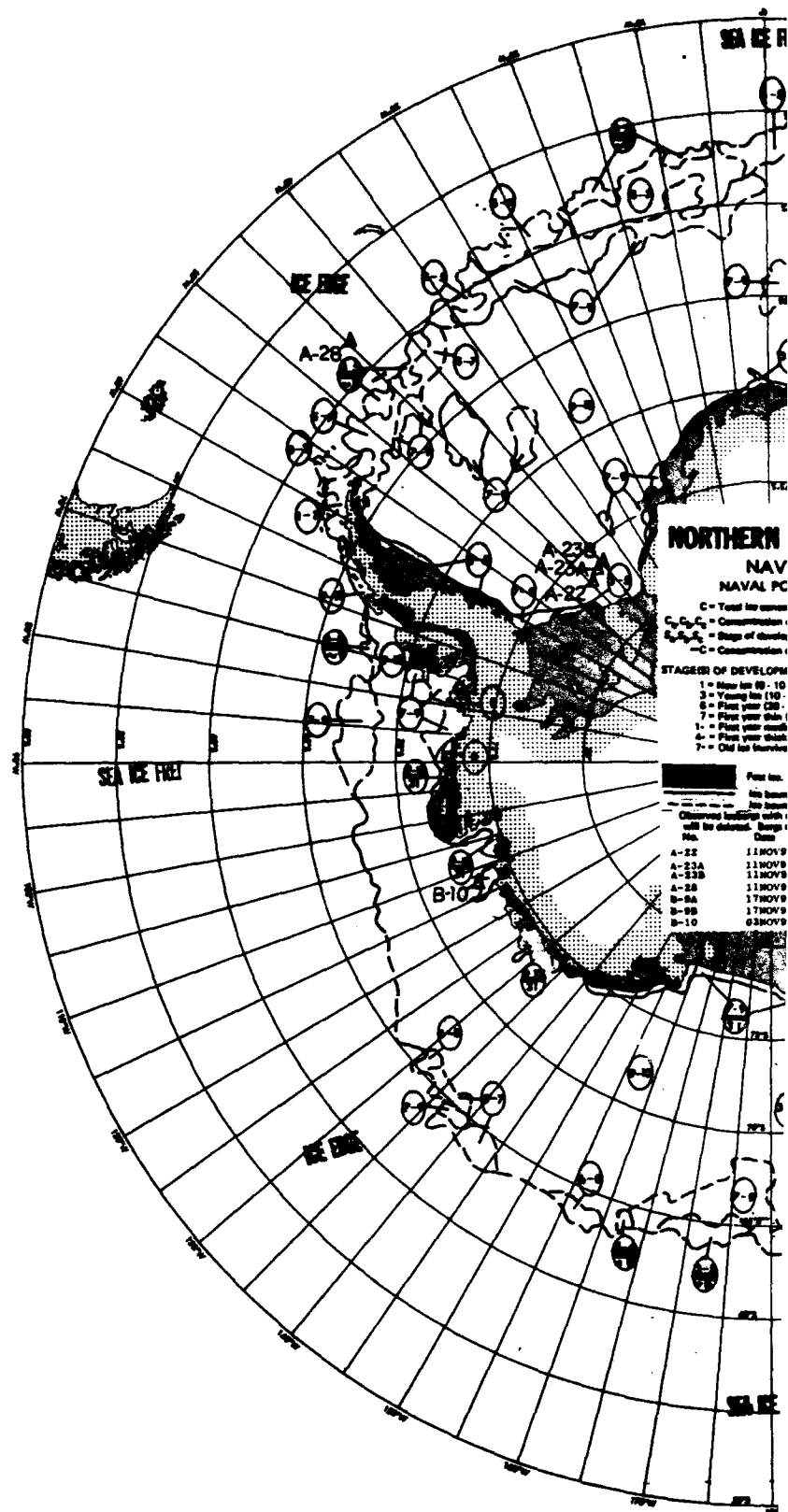


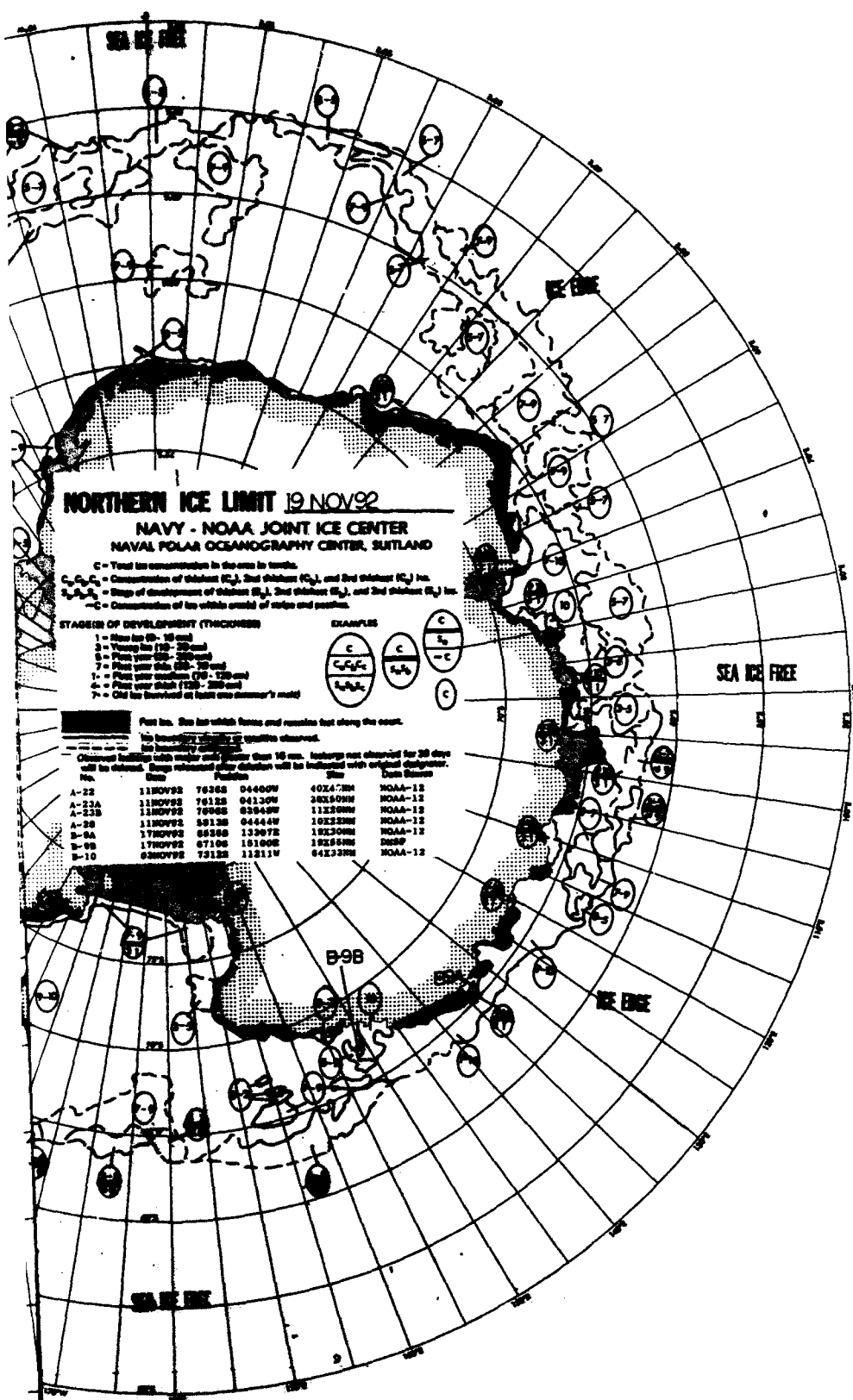


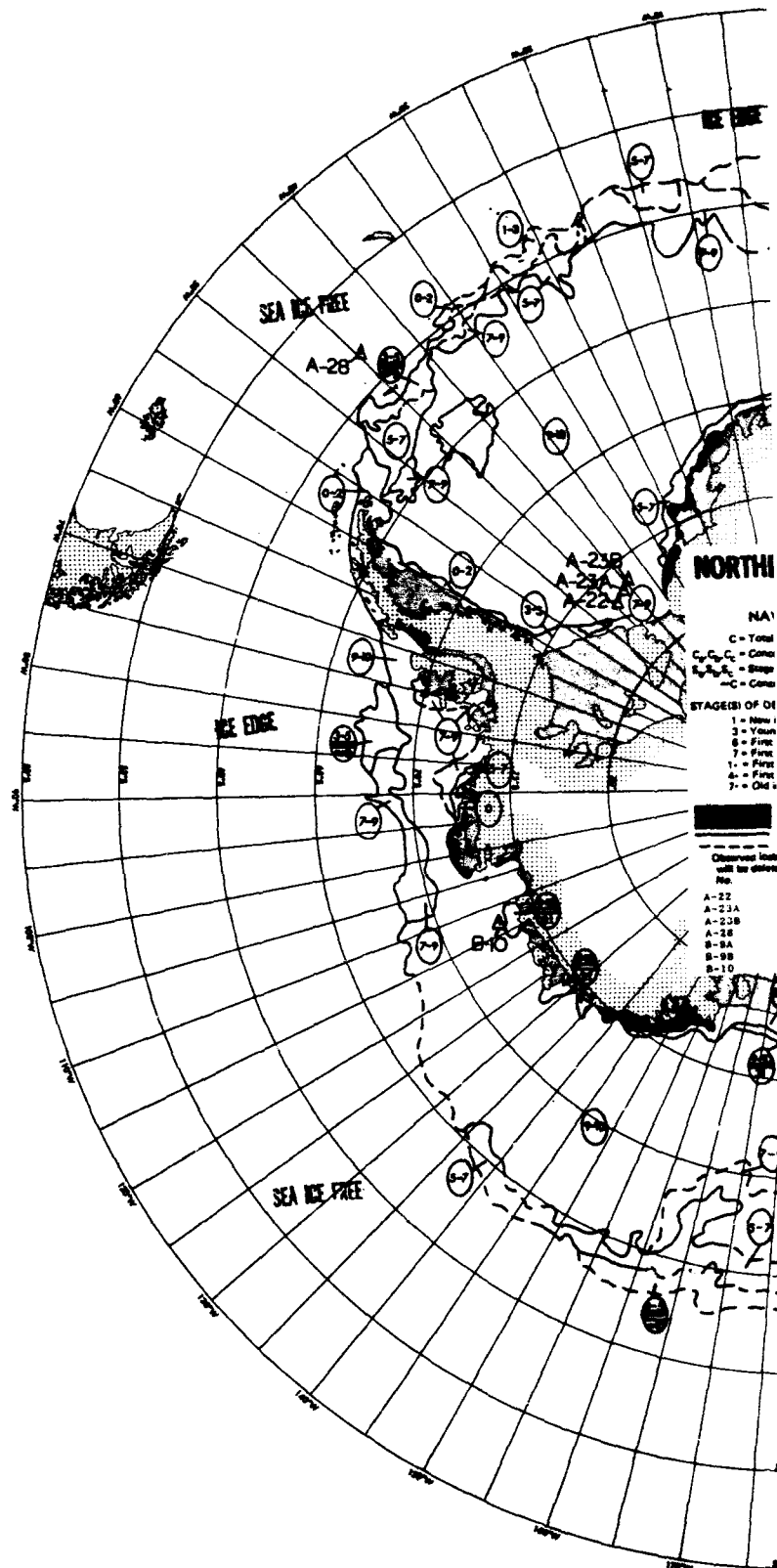


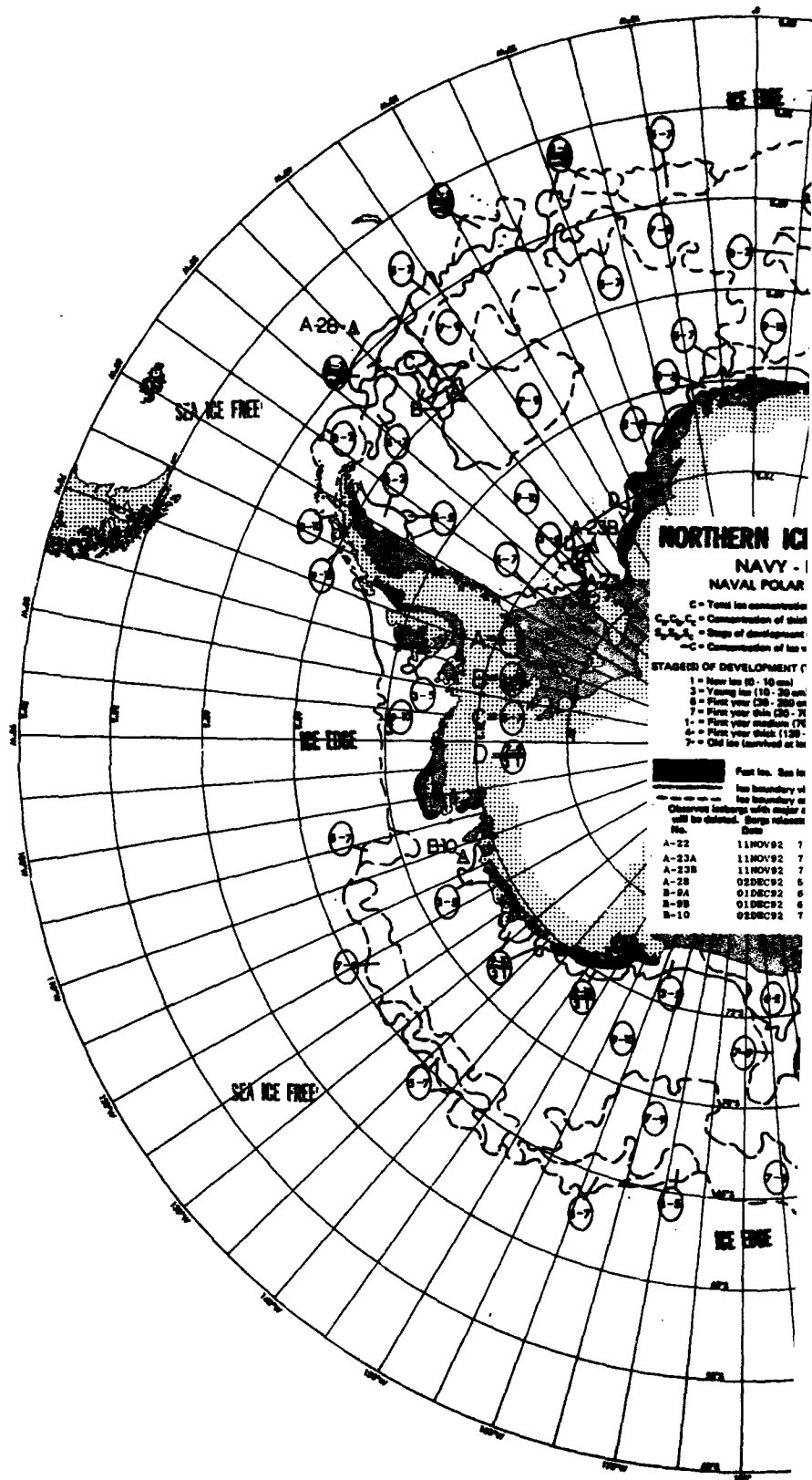


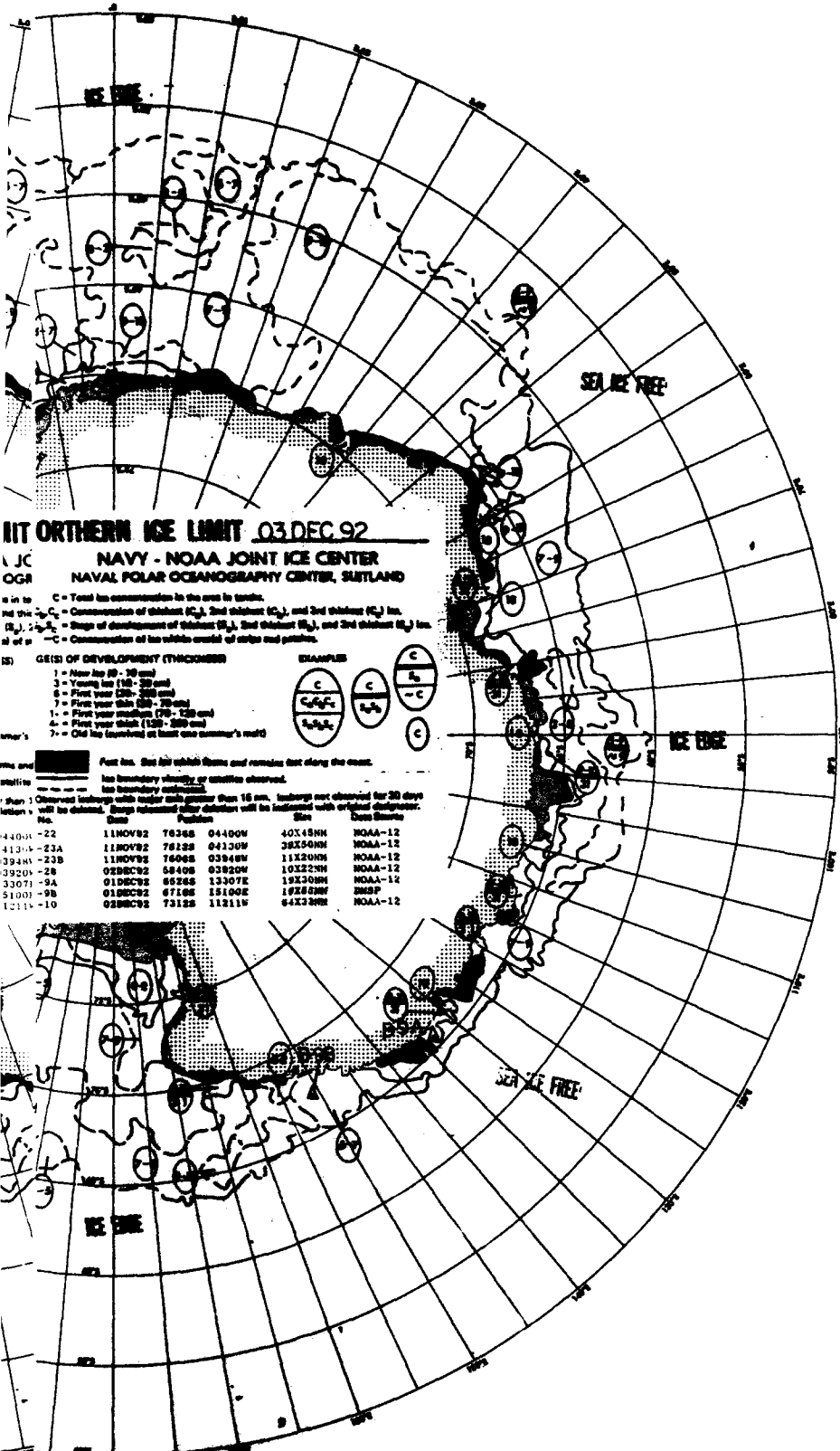












NIT ORTHERN ICE LIMIT 03 DEC 92 **NAVY - NOAA JOINT ICE CENTER** **NAVAL POLAR OCEANOGRAPHY CENTER, SUTLAND**

- C = Total ice concentration in the area to locate.
 - C₁ = Concentration of thickest (C₁), 2nd thickest (C₂), and 3rd thickest (C₃) ice.
 - C₂ = Stage of development of thickest (C₁), 2nd thickest (C₂), and 3rd thickest (C₃) ice.
 - C₃ = Concentration of ice within circle of stage and patches.
- ICE (S) OF DEVELOPMENT (THICKNESS)**
- 1 = New ice (0 - 10 cm)
 - 2 = Young ice (10 - 30 cm)
 - 3 = First year (30 - 100 cm)
 - 4 = First year (100 - 200 cm)
 - 5 = First year (200 - 300 cm)
 - 6 = First year (300 - 400 cm)
 - 7 = Old ice (400 cm or more)



For ice, the ice will float and remains flat along the coast.
 Ice boundary change or status observed.
 Observed ice type with order will greater than 10 cm. Ice type not observed for 30 days will be deleted.
 Large ice type will be deleted with original date.

No.	Date	Position	Size	Data Source
4100-22	11NOV92	7634S 04400W	40X45NM	NOAA-12
4120-23A	11NOV92	7612S 04130W	38X50NM	NOAA-12
3940-23B	11NOV92	7606S 03940W	11X20NM	NOAA-12
3920-28	02DEC92	6840S 03820W	10X22NM	NOAA-12
3307-9A	01DEC92	6526S 13307E	19X30NM	NOAA-12
5100-9B	01DEC92	6716S 15104E	19X28NM	JMSP
1211-10	02DEC92	7312S 11211W	64X23NM	NOAA-12

