RU 663

AK - OCSEAP

RE MOTE SENSING

Rec - 1/4/88

W - .

REMOTE SENSING DATA ACQUISITION ANALYSIS AND ARCHIVAL

SIXTH QUARTERLY REPORT

April 1, '19S7 - June. 30, 1987

OCSEAP Research Unit 663

by

William J. Stringer
Geophysical Institute
University of Alaska Fairbanks
Fairbanks, Alaska ,99775-0800

Submitted to

National Oceanic & Atmospheric Administration
Ocean Assessments Division
Alaska Office
PO Box 56
Anchorage, Alaska 99513

September 1987

REMOTE SENSING DATA ACQUISITION
ANALYSIS AND ARCHIVAL

SIXTH QUARTERLY REPORT

April 1, 1987 - June 30, 1987

OCSEAP Research Unit 663

by

William J. Stringer
Geophysical Institute
University of Alaska Fairbanks
Fairbanks, Alaska 99775-0800

Submitted to

National Oceanic & Atmospheric Administration
Ocean Assessments Division
Alaska Office
PO Box 56
Anchorage, Alaska 99513

September 1987

TABLE OF CONTENTS

Page

Activities This Quarter 1

Activit ies NextQuarter 3

Append ix I..... 5

Append ix..... 8

SIXTH QUARTERLY REPORT
April 1 - June 30, 1987
OCSEAP Research Unit 663
Contract #50ABNC 600041

ACTIVITIES THIS QUARTER

1. Assistance to MSS. Everett Tornfelt of the Anchorage MMS Office requested a data search and copies of appropriately selected imagery. This was accomplished (see our letter of transmittal and response from MMS attached as Appendix 1).

2. Polynya Analysis. Last quarter we supplied plots of polynya data for the Bering and Chukchi Sea polynyas we are analyzing. These plots gave the measured areas for the polynyas as a function of time. Since these plots show all the measured values for extent as measured from archived satellite data, they also serve as a record of available imagery of these polynyas including the existence of sets of time series data for later detailed analysis relating polynya behavior with meteorological and oceanic parameters.

This quarter we have condensed these data into a statistical summary (attached as Appendix 2) giving a wide range of statistical parameters for each polynya on a monthly basis.

3. Data Received and Archived. We have continued to obtain and archive daily NOAA AVHRR satellite imagery of the OCSEAP study areas around Alaska. Because of the three-to-four times daily coverage of Alaska by these satellites, we cannot possibly

afford to purchase a COPY of each at the $10.00 per COPY rate charged. Thus we select only the best images (approximately three per day and purchase them" in positive transparency format directly from the receiving station at Gilmore Creek). (Our experience has shown us that positive transparencies retain the highest information content for analysis and reproduction purposes of all data formats other than digital tapes.)

In addition to the positive transparency format data, we also receive hard COPY facsimile transmission positive prints that have been used by the weather service. There is a great quantity of these prints, as they represent at least one copy of each day's image and sometimes digital enlargements and enhancements of particular areas. These are sent to us by the weather service about a month after they are transmitted from Gilmore Creek. We archive these data (although the image quality is considerably diminished from that of the positive transparency) because some feature of interest to OCSEAP investigators may be found on one of these images which did not appear On an image judged to be one of the day's "best" images. Following these criteria, we archived approximately 517 positive transparencies and 3998 positive facsimile prints this quarter.

Our "Quick-Look" ground station received a total of 184 images from Landsats 4 and 5. These images are often digitally enhanced and enlarged with copies of these products archived as well as the standard 1:1M scale print. In some instances we have

obtained images at times when the sun was below the horizon - yet ice conditions are easily observed. This is an additional value of our ground station and image enhancement capability.

We also continue to receive and archive the NOAA/Navy ice charts published weekly and the drifting buoy data published monthly by the Polar Ocean Centsr in Seattle.

ACTIVITIES NEXT QUARTER

1. We are anticipating providing remotely sensed data to OCSEAP investigators performing field work aboard the NOAA Ship, Surveyor.

2. We will continue to collect remotely sensed AVHRR and Landsat data.

3. We will monitor the availability of the SSMI passive microwave data which should become available in September or October.

4. Continuing Polynya Analysis. Our earlier efforts to relate polynya size with local winds on a monthly basis did not yield many positive correlations. In order to test whether monthly sorting is too "coarse'" we will divide the data set into hi-monthly sets and perform the analysis on that basis.

On the other hand, we note Robert Pritchard's recent OCSEAP-sponsored research which reports poor correlation between ice motion and geostrophic winds. We want to investigate these results for their implications to polynya formation and size.

APPENDIX 1

February 18, 1987

Everett Tornfelt
Minerals Management Service
949 E. 36th Avenue
Room 110
Anchorage, Ak 99508-4302

Dear Mr. Tornfelt:

Enclosed with this letter are three enlargements of AVHRR images from September 15, 18 and 28, 19S3. We conducted a search of imagery available since 1973 and found that this set of images illustrates best the conditions encountered by the whaling fleet. However, the conditions shown here may be one "cape" northward of the location where the fleet was caught. (See dates on back of images.) The September 15/18 pair shows how fast the ice can move shoreward. The ice remained there and can be seen "freezing in" on the 28th. (Notice that Elson Lagoon North of Barrow has frozen over.)

Best regards,

Bill Stringer

Bill Stringer
Associate Professor of
Geophysics

BS:jd

encl.

cc: Jawed Hameedi,

Geophysical Institute, University of Alaska, C.T. Elvey Building,
Fairbanks, Alaska 99701
PHONE: 9074747282 TELEX: 35414 GEOPH INST FBK

Established by Act of Congress, dedicated to the maintenance of geophysical research concerning the Arctic region.

Hello Bill

27 Mar 87

Just wanted to drop a brief note thanking you for the photos.. just what we wanted.

again, thanks

Dale Kenney
MM 5

APPENDIX Z

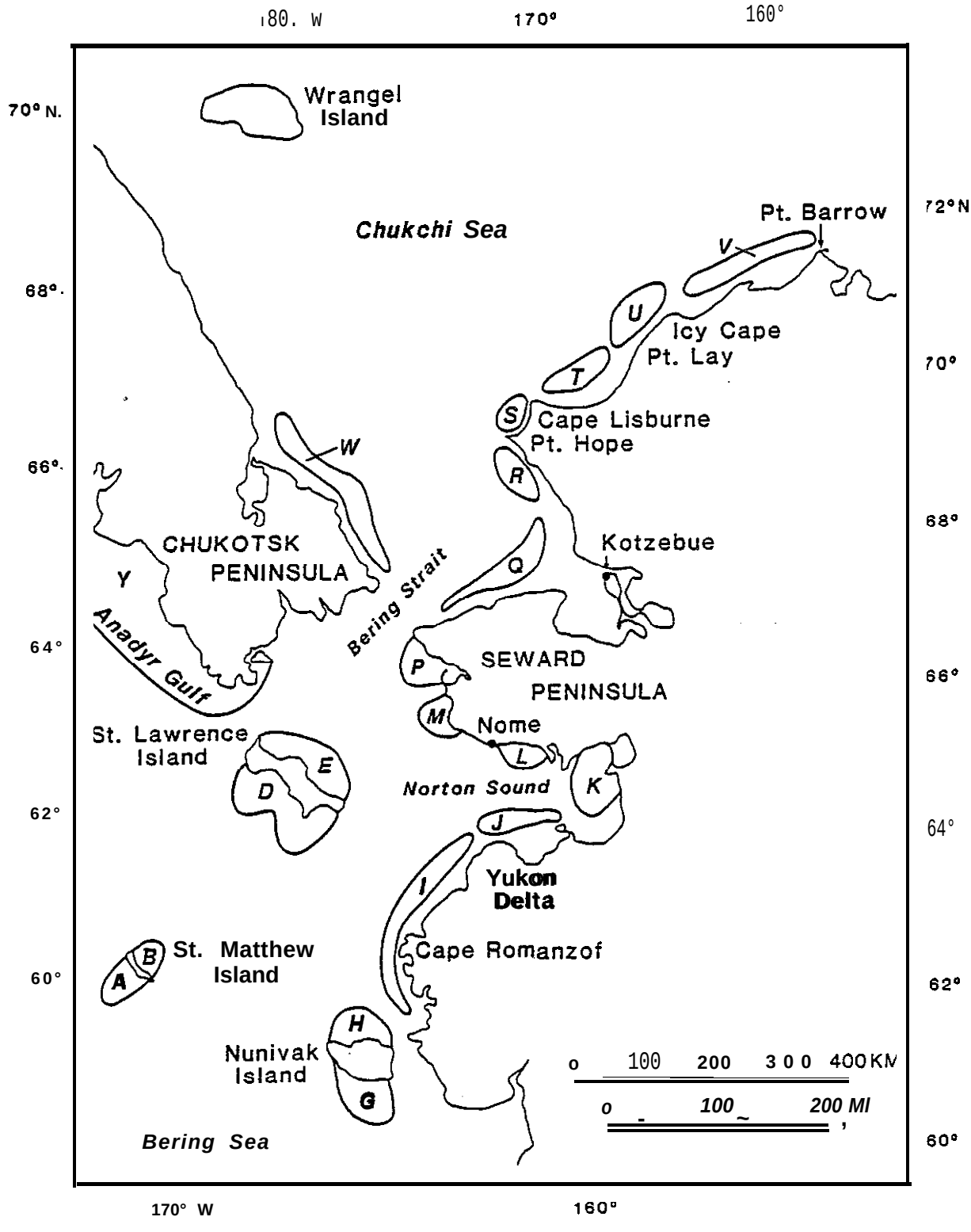

Figure 1. Map showing approximate location of persistent polynyas in the Bering Sea/ Chukchi Sea study area.

TABLE 1

IDENTIFICATION OF POLYNYI

LOCATION OF POLYNYI	CODED DESIGNATION ON ALASKA BASE MAP
St. Matthew Island Polynya, South	A
St. Matthew Island Polynya, North	B
St. Lawrence Island Polynya, South	D
St. Lawrence Island Polynya , North	E
Nunivak Island Polynya, South	G
Nunivak Island' Polynya, North	H
Cape Romanzof Polynya	I
Yukon Delta Polynya	J
Norton Sound Polynya	K
Nome Polynya	L
Seward Peninsula Polynya, South	M
Seward Peninsula Polynya, North	P
Kotzebue Sound Polynya	Q
Cape Thompson-Pt. Hope Polynya *	R
Pt. Hope-Cape Lisburne Polynya	s
Cape Lisburne to Pt. Lay Polynya **	T
Pt. Lay to Icy Cape Polynya *'	u
Icy Cape to Pt. Barrow Polynya **	V
Chukotsk Peninsula Polynya	W
Anadyr Gulf Polynya	Y

* Carlton, 1975
** Chukchi Polynya (Stringer, 1982)

Table 55: Monthly Summary Statistics of Polynya Areas* for St. Matthew Island Polynya, South (A) in 1974.

	FEBRUARY	MARCH	APRIL
Sample size	1	6	14
Average	0	5690	
Median**	0	7220	3040
Mode	0	1140	OPEN
Geometric mean		3660	
Standard deviation	0	3900	
Standard error	0	1590	
Minimum	0	497	436
Maximum	0	9110	OPEN
Range	0	8610	

	MAY	JUNE	JULY
Sample size	31	30	5
Average	OPEN	OPEN	OPEN
Median**	OPEN	OPEN	OPEN
Mode	OPEN	OPEN	OPEN
Geometric mean	OPEN	OPEN	OPEN
Standard deviation	0	0	0
Standard error	0	0	0
Minimum	OPEN	OPEN	OPEN
Maximum	OPEN	OPEN	OPEN
Range	0	0	0

Table 56: Monthly Summary Statistics of Polynya Areas* for St. Matthew Island Polynya, North (5) in 1974.

	FEBRUARY	MARCH	APRIL
Sample size	1	6	11
Average	0	0	
Median**	0	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	0	0	
Standard error	0	0	
Minimum	0	0	0
Maximum	0	0	OPEN
Range	0	0	

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 56: Monthly Summary Statistics of Polynya Areas* for St. Matthew Island Polynya, North (B) in 1974.

	MAY	JUNE	JULY
Sample size	31	30	5
Average	OPEN	OPEN	OPEN
Median**	OPEN	OPEN	OPEN
Mode	OPEN	OPEN	OPEN
Geometric mean	OPEN	OPEN	OPEN
Standard deviation	0	0	0
Standard error	0	0	0
Minimum	OPEN	OPEN	OPEN
Maximum	OPEN	OPEN	OPEN
Range	0	0	0

Table 57: Monthly Summary Statistics of Polynya Areas* for St. Lawrence Island Polynya, South (D) in 1974.

	FEBRUARY	MARCH	APRIL
Sample size	1	11	14
Average	0	2660	
Median**	0	2770	6200
Mode	0	0	
Geometric mean			
Standard deviation	0	2960	
Standard error	0	894	
Minimum	0	0	2680
Maximum	0	9620	OPEN
Range	0	9620	

	MAY	JUNE	JULY
Sample size	31	30	5
Average	OPEN	OPEN	OPEN
Median**	OFEN	OPEN	OPEN
Mode	OPEN	OPEN	OPEN
Geometric mean	OPEN	OPEN	OPEN
Standard deviation	0	0	0
Standard error	0	0	0
Minimum	OPEN	OPEN	OPEN
Maximum	OFEN	OPEN	OPEN
Range	0	0	0

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 58: Monthly Summary Statistics of Polynya Areas* for St. Lawrence Island Polynya, North (E) in 1974.

	FEBRUARY	MARCH	APRIL
Sample size	1	11	9
Average	0	0	
Median**	0	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	0	0	
Standard error	0	0	
Minimum	0	0	0
Maximum	0	0	OPEN
Range	0	0	

	MAY	JUNE	JULY
Sample size	1	30	5
Average	OPEN	OPEN	OPEN
Median**	OPEN	OPEN	OPEN
Mode	OPEN	OPEN	OPEN
Geometric mean	OPEN	OPEN	OPEN
Standard deviation	0	0	0
Standard error	0	0	0
Minimum	OPEN	OPEN	OPEN
Maximum	OPEN	OPEN	OPEN
Range	0	0	0

Table 59: Monthly Summary Statistics of Polynya Areas* for Nunivak Island Polynya, South (G) in 1974.

	FEBRUARY	MARCH	APRIL
Sample size	1	9	11
Average	0	3720	
Median**	0	4460	414 00
Mode	0	0	OPEN
Geometric mean			
Standard deviation	0	3810	
Standard error	0	1270	
Minimum	0	0	1030
Maximum	0	9200	OPEN
Range	0	9200	

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Tabl e59: Monthly Summary Statistics of Polynya Areas* for Nunivak Island Poly nya, South (G) in 1974.

	MAY	JUNE	JULY
Sample size	31	30	5
Average	OPEN	OPEN	OPEN
Median**	OPEN	OPEN	OPEN
Mode	OPEN	OPEN	OPEN
Geometric mean	OPEN	OPEN	OPEN
Standard deviation	0	0	0
Standard error	0	0	0
Minimum	OPEN	OPEN	OPEN
Maximum	OPEN	OPEN	OPEN
Range	0	0	0

Table 60: Monthly Summary Statistics of Polynya Areas* for Nunivak Island Polynya, North (H) in 1?74.

	FEBRUARY	MARCH	APRIL
Sample size	1	9	8
Average	0	4440	
Median**	0	0	77300
Mode	0	0	OPEN
Geometric mean			
Standard deviation	0	7620	
Standard error	0	2540	
Minimum	0	0	16600
Maximum	0	22100	OPEN
Range	0	22100	

	MAY	JUNE	JULY
Sample size	1	30	5
Average	OPEN	OPEN	OFEN
Median**	OPEN	OPEN	OPEN
Mode	OPEN	OPEN	OPEN
Geometric mean	OPEN	OPEN	OPEN
Standard deviation	0	0	0
Standard error	0	0	0
Minimum	OPEN	OPEN	OPEN
Maximum	OPEN	OPEN	OPEN
Range	0	0	0

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 61: Monthly Summary Statistics of Polynya Areas* for Cape Romanzof Polynya (I) in 1974.

	FEBRUARY	MARCH	APRIL
Sample size	1	15	9
Average**	0	9720	
Median	0	2000	54600
Mode	0	0	OPEN
Geometric mean			
Standard deviation	0	140 00	
Standard error	0	3620	
Minimum	0	0	529
Maximum	0	42200	OPEN
Range	0	42 200	

	MAY	JUNE	JULY
Sample size	11	30	5
Average**	OPEN	OPEN	OPEN
Median	OPEN	OPEN	OPEN
Mode	OPEN	OPEN	OFEN
Geometric mean	OPEN	OPEN	OPEN
Standard deviation	0	0	0
Standard error	0	0	0
Minimum	OPEN	OPEN	OPEN
Maximum	OPEN	OPEN	OPEN
Range	0	0	0

Table 62: Monthly Summary Statistics of Polynya Areas* for Yukon Delta Polynya (J) in 1974.

	FEBRUARY	MARCH	APRIL
Sample size	1	14	15
Average**	0	0	4800
Median	0	0	0
Made	0	0	0
Geometric mean			
Standard deviation	0	0	5430
Standard error	0	0	1400
Minimum	0	0	0
Maximum	0	0	12400
Range	0	0	12400

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 62: Monthly Summary Statistics of Polynya Areas* for Yukon Delta Polynya (J) in 1974.

	MAY	JUNE	JULY
Sample size	18	30	5
Average**		OPEN	OPEN
Median	0	OPEN	OPEN
Mode	0	OPEN	OPEN
Geometric mean		OPEN	OPEN
Standard deviation		0	0
Standard error		0	0
Minimum	0	OPEN	OPEN
Maximum	OPEN	OPEN	OPEN
Range		0	0

Table 63: Monthly Summary Statistics of Polynya Areas* for Norton Sound Polynya (K) in 1974.

	FEBRUARY	MARCH	APRIL
Sample size	1	14	25
Average**	0	3630	10100
Median	0	2500	9800
Mode	0	771	9740
Geometric mean			10000
Standard deviation	0	3510	1500
Standard error	0	937	300
Minimum	0	0	7920
Maximum	0	9220	13200
Range	0	9220	5280

	MAY	JUNE	JULY
Sample size	19	30	5
Average**		OPEN	OPEN
Median	17200	OPEN	OPEN
Mode	OPEN	OPEN	OPEN
Geometric mean		OPEN	OPEN
Standard deviation		0	0
Standard error		0	0
Minimum	10100	OPEN	OPEN
Maximum	OPEN	OPEN	OPEN
Range		0	0

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 64: Monthly Summary Statistics of Polynya Areas* for Nome Polynya (1-) in 1974.

	FEBRUARY	MARCH	APRIL
Sample size	1	14	25
Average**	0	3430	10100
Median**	0	2240	9800
Mode	0	0	9740
Geometric mean			10000
Standard deviation	0	3680	1500
Standard error	0	984	300
Minimum	0	0	7920
Maximum	0	9220	13200
Range	0	9220	5280

	MAY	JUNE	JULY
Sample size	19	30	5
Average**		OPEN	OPEN
Median**	172!:10	OPEN	OPEN
Mode	OPEN	OPEN	OPEN
Geometric mean		OPEN	OFEN
Standard deviation		0	0
Standard error		0	0
Minimum	10100	OPEN	OPEN
Maximum	OPEN	OFEN	OFEN
Range		0	0

Table 65: Monthly Summary Statistics of Polynya Areas* for Seward Peninsula Polynya, South (M) in 1974.

	FEBRUARY	MARCH	APRIL
Sample size	1	13	21
Average**	0	901	2120
Median**	0	623	2220
Mode	0	0	1720
Geometric mean			
Standard deviation	0	876	1390
Standard error	0	243	304
Minimum	0	0	0
Maximum	0	2430	5240
Range	0	2430	5240

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 65: Monthly Summary Statistics of Polynya Areas* for Seward Peninsula Polynya, South (M) in 1974.

	MAY	JUNE	JULY
Sample size	21	30	5
Average**		OPEN	OPEN
Median**	1650	OPEN	OPEN
Mode	OPEN	OPEN	OPEN
Geometric mean		OPEN	OPEN
Standard deviation		0	0
Standard error		0	0
Minimum	0	OPEN	OPEN
Maximum	OPEN	OPEN	OPEN
Range		0	0

Table 66: Monthly Summary Statistics of Polynya Areas* for Seward Peninsula Polynya, North (P) in 1974.

	FEBRUARY	MARCH	APRIL
Sample size	1	12	20
Average**	0	781	2100
Median**	0	0	2270
Mode	0	0	0
Geometric mean			
Standard deviation	0	985	1470
Standard error	0	284	330
Minimum	0	0	0
Maximum	0	2430	5240
Range	0	2430	5240

	MAY	JUNE	JULY
Sample size	17	3i!	5
Average**		OFEN	OFEN
Median**	1440	OPEN	OPEN
Mode	0	OPEN	OPEN
Geometric mean		OPEN	OPEN
Standard deviation		0	0
Standard error		0	0
Minimum	0	OPEN	OPEN
Maximum	OPEN	OPEN	OPEN
Range		0	0

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 67: Monthly Summary Statistics of Polynya Areas* for Kotzebue Sound Polynya (Q) in 1974.

	FEBRUARY	MARCH	APRIL
Sample size	1	12	18
Average**	0	38	0
Median**	0	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	0	132	0
Standard error	0	38	0
Minimum	0	0	0
Maximum	0	458	0
Range	0	458	0

	MAY	JUNE	JULY
Sample size	28	15	5
Average**	0		OPEN
Median**	0	0	OPEN
Mode	0	0	OPEN
Geometric mean			OPEN
Standard deviation	0		0
Standard error	0		0
Minimum	0	0	OPEN
Maximum	0	OPEN	OPEN
Range	0		0

Table 68: Monthly Summary Statistics of Polynya Areas* for Cape Thompson-Pt. Hope Polynya (R) in 1974.

	FEBRUARY	MARCH	APRIL
Sample size	1	17	22
Average**	0	1050	1690
Median**	0	954	2080
Mode	0	0	0
Geometric mean			
Standard deviation	0	933	1240
Standard error	0	226	265
Minimum	0	0	0
Maximum	0	2360	3740
Range	0	2360	3740

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 68: Monthly Summary Statistics of Polynya Areas* for Cape Thompson-Pt. Hope Polynya (R) in 1974.

	MAY	JUNE	JULY
Sample size	27	17	3
Average	149	1550	
Median**	121	155	17500
Mode	0	0	0
Geometric mean			
Standard deviation	151	4650	
Standard error	29	1130	
Minimum	0	0	0
Maximum	572	19400	OPEN
Range	572	19400	

Table 69: Monthly Summary Statistics of Polynya Areas* for Pt. Hope-Cape isburne Polynya (S) in 1974.

	FEBRU- Y	MARCH	APRIL
Sample size	1	15	21
Average	0	228	236
Median**	0	36	268
Mode	0	0	0
Geometric mean			
Standard deviation	0	375	135
Standard error	0	97	29
Minimum	0	0	0
Maximum	0	1270	442
Range	0	1270	442

	I"IfA\'	JUNE	JULY
Sample size	30	15	5
Average	4990	11400	
Median**	648	10900	19400
Mode	0	10700	
Geometric mean		6830	
Standard deviation	7760	77<) o	
Standard error	1420	1990	
Minimum	0	261	17501:1
Maximum	20300	25700	OPEN
Range	20300	25400	

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 70: Monthly Summary Statistics of Polynya Areas* for Cape Lisburne to Pt. Lay Polynya (T) in 1974.

	FEBRUARY	MARCH	APRIL
Sample size	1	17	19
Average	0	98	333
Median**	0	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	0	229	953
Standard error	0	55	220
Minimum	0	0	0
Maximum	0	831	4170
Range	0	831	4170

	MAY	JUNE	JULY
Sample size	27	18	.
Average	7600	11300	
Median**	5990	1!>.+<>:)	OPEN
Mode	0	9140	
Geometric mean		9400	
Standard deviation	7140	6430	
Standard error	1370	1520	
Minimum	0	1300	17500
Maximum	20300	25700	OPEN
Range	20300	24400	

Table 71: Monthly Summary Statistics of Polynya Areas* for Pt. Lay to Icy Cape Polynya (U) in 1974.

	FEBRUARY	MARCH	APRIL
Sample size	1	19	20
Average	0	125	586
Median**	0	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	0	236	1070
Standard error	0	54	239
Minimum	0	0	0
Maximum	0	658	4170
Range	0	658	4170

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 71: Monthly Summary Statistics of Polynya Areas* for Pt. Lay to Icy Cape Polynya (U) in 1974.

	MAY	JUNE	JULY
Sample size	27	17	2
Average	7960	11500	
Median**	5990	10700	58700
Mode	5920	10000	OPEN
Geometric mean		8570	41800
Standard deviation	6770	6620	
Standard error	1300	1610	
Minimum	0	186	17500
Maximum	20300	25700	OPEN
Range	20300	25500	

Table 72: Monthly Summary Statistics of Polynya Areas* for Icy Cape to Pt. Barrow Polynya (V) in 1974.

	FEBRUARY	MARCH	APRIL
Sample size	1	18	18
Average	0	0	309
Median**	0	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	0	0	1020
Standard error	0	0	240
Minimum	0	0	0
Maximum	0	0	4170
Range	0	0	4170

	MAY	JUNE	JULY
Sample size	24	14	2
Average	6920	3590	0
Median**	2320	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	7980	8600	0
Standard error	1630	2300	0
Minimum	0	0	0
Maximum	20300	25700	0
Range	20300	25700	0

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 73: Monthly Summary Statistics of Polynya Areas* for Chukotsk Peninsula Polynya (W) in 1974.

	MARCH	APRIL	MAY
Sample size	6	20	6
Average	468	0	0
Median**	0	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	1150	0	0
Standard error	468	0	0
Minimum	0	0	0
Maximum	2810	0	0
Range	2810	0	0

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 74: Monthly Summary Statistics of Polynya Areas* for St. Matthew Island Polynya, South (A) in 1975.

	JANUARY	FEBRUARY	MARCH
Sample size	1	5	4
Average**	0	684	230 c!
Median	o	549	2770
Mode	0	478	2770
Geometric mean		601	2930
Standard deviation	0	418	769
Standard error	0	1a?	384
Minimum	0	312	2340
Maximum	0	1.390	4110
Range	0	1080	1770

	APRIL	MAY	JUNE
Sample size	1	2	30
Average**	1060	OPEN	OPEN
Median	1060	OPEN	OPEN
Mode	1510	OPEN	OPEN
Geometric mean	952	OPEN	OPEN
Standard deviation	643	0	0
Standard error	455	0	0
Minimum	600	OPEN	OPEN
Maximum	1510	OPEN	OPEN
Range	910	0	o

Table 75: Monthly Summary Statistics of Polynya Areas* for St. Matthew Island Polynya, North (B) in 1975.

	JANUARY	FEBRUARY	MARCH
Sample size	1	4	4
Average**	0	0	0
Median	0	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	0	0	0
Standard error	0	0	0
Minimum	0	0	0
Maximum	0	0	0
Range	0	0	0

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 75: Monthly Summary Statistics of Polynya Areas* for St. Matthew Island Polynya, North (B) in 1975.

	APRIL	MAY	JUNE
Sample size	4	2	
Average**	238	OPEN	OPEN
Median**	0	OPEN	OPEN
Mode	0	OPEN	OPEN
Geometric mean		OPEN	OPEN
Standard deviation	47'5	0	0
Standard error	238	0	0
Minimum	0	OPEN	OPEN
Maximum	950	OPEN	OPEN
Range	950	0	0

Table 76: Monthly Summary Statistics of Polynya Areas* for St. Lawrence Island Polynya, South (D) in 1975.

	JANUARY	FEBRUARY	MARCH
Sample size	7	7	14
Average**	8760	3260	4380
Median**	4110	2570	4310
Mode	2120	0	0
Geometric mean	5340		
Standard deviation	9560	3400	3760
Standard error	3610	1280	1000
Minimum	2020	0	0
Maximum	27100	8550	122(:)[:)
Range	25100	8550	13220

	APRIL	MAY	JUNE
Sample size	18	8	30
Average**	3990		OPEN
Median**	2920	15900	OPEN
Mode	0		OPEN
Geometric mean			OPEN
Standard deviation	3560		0
Standard error	840		0
Minimum	0	8990	OPEN
Maximum	10900	OPEN	OPEN
Range	10900		0

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 77: Monthly Summary Statistics of Polynya Areas* for St. Lawrence Island Polynya, North (E) in 1975.

	JANUARY	FEBRUARY	MARCH
Sample size	3	6	14
Average	0	510	475
Median**	0	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	0	1250	1130
Standard error	0	510	302
Minimum	0	0	0
Maximum	0	3060	3610
Range	0	3060	3610

	APRIL	MAY	JUNE
Sample size	16	7	30
Average	456		OPEN
Median**	0	0	OPEN
Mode	0	0	OPEN
Geometric mean			OPEN
Standard deviation	821		0
Standard error	205		0
Minimum	0	0	OPEN
Maximum	2320	OPEN	OPEN
Range	2320		0

Table 78: Monthly Summary Statistics of Polynya Areas* for Nunivak Island Polynya, South (G) in 1975.

	JANUARY	FEBRUARY	MARCH
Sample size	5	6	8
Average	4830	1880	2470
Median**	3980	1210	1640
Mode	3110	0	0
Geometric mean			
Standard deviation	4350	2180	2760
Standard error	1950	890	976
Minimum	0	0	0
Maximum	11800	4440	5990
Range	11800	4440	5990

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 78: Monthly Summary Statistics of Polynya Areas* for Nunivak Island Polynya, South (G) in 1975.

	APRIL	MAY	JUNE
Sample size	11	5	30
Average	1940		OPEN
Median**	1510	OPEN	OPEN
Mode	0	OPEN	OPEN
Geometric mean			OPEN
Standard deviation	2110		0
Standard error	636		0
Minimum	0	3760	OPEN
Maximum	4860	OPEN	OPEN
Range	4860		0

Table 79: Monthly Summary Statistics of Polynya Areas* for Nunivak Island Polynya, North (H) in 1975.

	JANUARY	FEBRUARY	MARCH
Sample size	4	6	9
Average	114	2270	2310
Median**	0	2090	2130
Mode	0	0	0
Geometric mean			
Standard deviation	228	2500	2110
Standard error	114	1020	704
Minimum	0	0	0
Maximum	455	5020	5990
Range	455	5020	5990

	APRIL	MAY	JUNE
Sample size	12	5	30
Average	1610		OPEN
Median**	1110	OPEN	OPEN
Mode	0	OPEN	OPEN
Geometric mean			OPEN
Standard deviation	1710		0
Standard error	493		0
Minimum	0	0	OPEN
Maximum	4500	OPEN	OPEN
Range	4500		0

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 80: Monthly Summary Statistics of Polynya Areas* for Cape Romanzof Polynya (I) in 1975.

	JANUARY	FEBRUARY	MARCH
Sample size	7	11	16
Average**	286	9490	5330
Median	C)	1040	1770
Made	0	0	0
Geometr i c mean			
Standard devi ation	756	12[jOtj	7250
Standard error	286	3620	:1B10
Mi n imum	0	0	0
Max imum	7000	30400	25000
Range	7000	30400	25000

	APRIL	MAY	JUNE
Sample size	17	7	30
Average**	237	2930	OPEN
Median	0	1590	OPEN
Mode	0	0	OPEN
Geometric mean			OPEN
Standard deviation	466	3900	0
Standard error	113	1480	0
Minimum	0	0	OPEN
Maximum	1430	11300	OPEN
Range	1430	11300	0

Table 81: Monthly Summary Statistics of Polynya Areas* for Yukon Delta Polynya (J) in 1975.

	JANUARY	FEBRUARY	MARCH
Sample size	8	12	13
Average**	221	7630	45.2C)
Median	0	3020	976
Mode	0	0	0
Geometric mean			
Standard deviation	626	9680	7560
Standard error	22,	2790	2100
Mi nimum	0	0	0
Max i mum	1770	30400	25000
RaHge	1770	30400	25000

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 81: Monthly Summary Statistics of Polynya Areas* for Yukon Delta Polynya (J) in 1975.

	APRIL	MAY	JUNE
Sample size	21	8	30
Average	1650	0	
Median**	549	0	OPEN
Mode	0	0	OPEN
Geometric mean			
Standard deviation	1930	0	
Standard error	422	0	
Minimum	0	0	0
Maximum	5780	0	OPEN
Range	5780	0	

Table 82: Monthly Summary Statistics of Polynya Areas* for Norton Sound Polynya (K) in 1975.

	JANUARY	FEBRUARY	MARCH
Sample size	8	12	15
Average	1030	9780	4550
Median**	960	8960	1630
Mode	0	0	0
Geometric mean			
Standard deviation	1020	8670	6220
Standard error	359	2500	1610
Minimum	0	0	0
Maximum	2590	30400	25000
Range	2590	30400	25000

	APRIL	MAY	JUNE
Sample size	23	16	30
Average	1990	16800	
Median**	1180	13600	OPEN
Mode	0	13300	OPEN
Geometric mean		13400	
Standard deviation	2200	11000	
Standard error	458	2750	
Minimum	0	5010	30000
Maximum	6140	35500	OPEN
Range	6140	30500	

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 83: Monthly Summary Statistics of Polynya Areas* for Nome Polynya (L) in 1975.

	JANUARY	FEBRUARY	MARCH
Sample size	7	11	10
Average**	312	3940	1100
Median	117	0	570
Mode	0	0	0
Geometric mean			
Standard deviation	379	4570	1940
Standard error	143	1380	614
Minimum	0	0	0
Maximum	954	9870	5500
Range	954	9870	6500

	APRIL	MAY	JUNE
Sample size	16	16	30
Average**	1590	16400	
Median	342	13600	OPEN
Mode	0	13300	OPEN
Geometric mean		11800	
Standard deviation	2400	11400	
Standard error	600	2840	
Minimum	0	669	30000
Maximum	6140	35500	OPEN
Range	6140	34800	

Table 84: Monthly Summary Statistics of Polynya Areas* for Seward Peninsula Polynya, South (M) in 1975.

	JANUARY	FEBRUARY	MARCH
Sample size	5	9	10
Average**	7110	5060	4980
Median	6240	5370	5840
Mode	5550	0	5370
Geometric mean	6650		2820
Standard deviation	2862	4940	2990
Standard error	1280	1640	945
Minimum	3840	0	104
Maximum	11100	14900	7890
Range	7260	14900	7790

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 84: Monthly Summary Statistics of Polynya Areas* for Seward Peninsula Polynya, South (M) in 1975.

	APRIL	MAY	JUNE
Sample size	15	16	30
Average	2590	17900	
Median**	1460	13600	OPEN
Mode	0	13300	OPEN
Geometric mean		15600	
Standard deviation	2860	9920	
Standard error	738	2480	
Minimum	0	6830	30000
Maximum	8790	35500	OPEN
Range	8790	28700	

Table 85: Monthly Summary Statistics of Polynya Areas* for Seward Peninsula Polynya, North (P) in 1975.

	JANUARY	FEBRUARY	MARCH
Sample size	6	7	10
Average	6250	5430	4290
Median**	5900	5370	5380
Mode	3840	0	0
Geometric mean	5430		
Standard deviation	3310	5260	3210
Standard error	1352	1990	1020
Minimum	1960	0	0
Maximum	11100	14900	7890
Range	9140	14900	7890

	APRIL	MAY	JUNE
Sample size	15	16	30
Average	2510	17100	
Median**	1460	13350	OPEN
Mode	0	13000	OPEN
Geometric mean			
Standard deviation	2920	10900	
Standard error	753	2710	
Minimum	0	0	30000
Maximum	8790	35500	OPEN
Range	8790	35500	

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 86: Monthly Summary Statistics of Polynya Areas* for Kotzebue Sound Polynya (Q) in 1975.

	JANUARY	FEBRUARY	MARCH
Sample size	9	9	11
Average	1220	13700.	2880
Median**	0	10900	2950
Mode	0	10400	0
Geometric mean		123(M2	
Standard deviation	1770	8640	2500
Standard error	590	2880	755
Minimum	0	8010	0
Maximum	4720	36100	7300
Range	4720	28100	7300

	APRIL	MAY	JUNE
Sample size	15	8	28
Average	1720	0	
Median**	1760	0	OPEN
Mode	0	0	OPEN
Geometric mean			
Standard deviation	1660	0	
Standard error	430	0	
Minimum	0	0	0
Maximum	3910	0	OPEN
Range	3910	0	

Table 87: Monthly Summary Statistics of Polynya Areas* for Cape Thompson-Pt. Hope Polynya (R) in 1975.

	JANUARY	FEBRUARY	MARCH
Sample size	12	12	8
Average	1750	9570	1870
Median**	436	8900	1600
Mode	0	0	825
Geometric mean			
Standard deviation	2160	9730	1580
Standard error	623	2810	558
Minimum	0	0	0
Maximum	5070	36100	4710
Range	5070	36100	4710

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 37: Monthly Summary Statistics of Polynya Areas* for Cape Thompson-Pt. Hope Polynya (R) in 1975.

	APRIL	MAY	JUNE
Sample size	18	16	13
Average**	975	315	17400
Median	433	0	345
Mode	0	0	0
Geometric mean			
Standard deviation	1350	373	22800
Standard error	317	93	6330
Minimum	0	0	0
Maximum	3860	863	50500
Range	3860	863	50500

	JULY
Sample size	17
Average**	
Median	OPEN
Mode	OPEN
Geometric mean	
Standard deviation	
Standard error	
Minimum	0
Maximum	OPEN
Range	

Table 88: Monthly Summary Statistics of Polynya Areas* for Pt. Hope-Cape Lisburne Polynya (S) in 1975.

	JANUARY	FEBRUARY	MARCH
Sample size	12	12	5
Average**	95	8960	121
Median	0	5080	0
Mode	0	0	0
Geometric mean			
Standard deviation	168	11300	270
Standard error	48	3270	120
Minimum	0	0	0
Maximum	569	36100	604
Range	569	36100	604

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 88: Monthly Summary Statistics of Polynya Areas* for Pt. Hope-Cape Lisburne Polynya (S) in 1975.

	APRIL	MAY	JUNE
Sample size	17	15	11
Average	268	10200	39600
Median**	109	518	42000
Mode	0	0	39600
Geometric mean			39000
Standard deviation	357	14600	7310
Standard error	87	3780	2200
Minimum	0	0	27400
Maximum	1110	33300	50500
Range	1110	33300	23100

	JULY
Sample size	17
Average	
Median**	OPEN
Mode	OPEN
Geometric mean	
Standard deviation	
Standard error	
Minimum	0
Maximum	OPEN
Range	

Table 89: Monthly Summary Statistics of Polynya Areas* for Cape Lisburne to Pt. Lay Polynya (T) in 1975.

	JANUARY	FEBRUARY	MARCH
Sample size	12	12	7
Average	138	16500	3240
Median**	0	15600	1030
Mode	0	14900	1020
Geometric mean		14800	1950
Standard deviation	476	7920	3100
Standard error	138	2290	1170
Minimum	0	5430	557
Maximum	1650	36100	7440
Range	1650	30700	6880

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 89: Monthly Summary Statistics of Polynya Areas* for Cape Lisburne to Pt. Lay Polynya (T) in 1975.

	APRIL	MAY	JUNE
Sample size	21	16	13
Average	10200	21400	37500
Median**	1380	22600	39600
Mode	0	21100	38600
Geometric mean			35700
Standard deviation	12200	10100	10000
Standard error	2660	2520	2780
Minimum	0	0	12600
Maximum	28200	33300	50500
Range	28200	33300	37900

	JULY
Sample size	18
Average	
Median**	OPEN
Mode	OPEN
Geometric mean	
Standard deviation	
Standard error	
Minimum	1000
Maximum	OPEN
Range	

Table 90: Monthly Summary Statistics of Polynya Areas* for Pt. Lay to Icy Cape Polynya (U) in 1975.

	JANUARY	FEBRUARY	MARCH
Sample size	13	13	15
Average	594	13800	4340
Median**	0	15500	5040
Mode	0	0	0
Geometric mean			
Standard deviation	1040	10100	3150
Standard error	287	2800	813
Minimum	0	0	0
Maximum	2480	36100	8950
Range	2480	36100	8950

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 90: Monthly Summary Statistics of Polynya Areas* for Pt. Lay to Icy Cape Polynya (U) in 1975.

	APRIL		JUNE
Sample size	24	20	13
Average	8970	17200	37500
Median**	1280	20000	39600
Mode	0	0	38600
Geometric mean			35700
Standard deviation	11800	12300	10000
Standard error	2410	2750	2780
Minimum	0	0	12600
Maximum	28200	33300	50500
Range	28200	33300	37900

	JULY
Sample size	18
Average	
Median**	OPEN
Mode	OPEN
Geometric mean	
Standard deviation	
Standard error	
Minimum	1450
Maximum	OPEN
Range	

Table 91: Monthly Summary Statistics of Polynya Areas* for Icy Cape to Pt. Barrow Polynya (V) in 1975.

	JANUARY	FEBRUARY	MARCH
Sample size	15	17	17
Average	1210	10400	4640
Median**	834	9210	5040
Mode	0	0	0
Geometric mean			
Standard deviation	1700	10400	2740
Standard error	439	2530	664
Minimum	0	0	0
Maximum	6000	36100	8950
Range	6000	36100	8950

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 91: Monthly Summary Statistics of Polynya Areas* for Icy Cape to Pt. Barrow Polynya (V) in 1975.

	APRIL	MAY	JUNE
Sample size	23	21	13
Average	9350	16400	37500
Median**	1370	18800	39600
Mode	0	0	38600
Geometric mean			35700
Standard deviation	12000	12600	10000
Standard error	2500	2700	2780
Minimum	0	0	12600
Maximum	28200	33300	50500
Range	28200	33300	37900

	JULY
Sample size	16
Average	
Median**	OPEN
Mode	OPEN
Geometric mean	
Standard deviation	
Standard error	
Minimum	0
Maximum	OPEN
Range	

Table 92: Monthly Summary Statistics of Polynya Areas* for Chukotsk Peninsula Polynya (W) in 1975.

	JANUARY	FEBRUARY	MARCH
Sample size	8	9	3
Average	0	1400	1800
Median**	0	0	2110
Mode	0	0	0
Geometric mean			
Standard deviation	0	2740	1690
Standard error	0	913	975
Minimum	0	0	0
Maximum	0	6510	3340
Range	0	6510	3340

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 92: Monthly Summary Statistics of Polynya Areas* for Chukotsk Peninsula Polynya (W) in 1975.

	APRIL	MAY	JUNE
Sample size	3	4	0
Average	0	0	
Median**	0	0	
Mode	0	0	
Geometric mean			
Standard deviation	0	0	
Standard error	0	0	
Minimum	0	0	
Maximum	0	0	
Range	0	0	

Table 93: Monthly Summary Statistics of Polynya Areas* for Anadyr Gulf Polynya (Y) in 1975.

	JANUARY	FEBRUARY	MARCH
Sample size	6	9	16
Average	13200	3570	6420
Median**	11800	3140	4490
Mode	7830	2600	3670
Geometric mean	12200	2960	4600
Standard deviation	5720	2030	5050
Standard error	2340	677	1260
Minimum	7590	986	880
Maximum	21600	6590	17800
Range	14000	5600	16900

	APRIL
Sample size	20
Average	7330
Median**	5550
Mode	4060
Geometric mean	
Standard deviation	5670
Standard error	1270
Minimum	0
Maximum	19600
Range	19600

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 94: Monthly Summary Statistics of Polynya Areas* for St. Matthew Island Polynya, South (A) in 1976.

	FEBRUARY	MARCH	APRIL
Sample size	16	14	15
Average**	554	1770	1120
Median	402	1560	1060
Mode	648	850	752
Geometric mean		1180	
Standard deviation	573	1340	826
Standard error	143	358	213
Minimum	0	236	0
Maximum	2420	3620	2560
Range	2420	3380	2560

	MAY	JUNE	JULY
Sample size	4	22	31
Average**	120	OPEN	OPEN
Median	0	OPEN	OPEN
Mode	0	OPEN	OPEN
Geometric mean		OPEN	OPEN
Standard deviation	241	0	0
Standard error	120	0	0
Minimum	0	OPEN	OPEN
Maximum	482	OPEN	OPEN
Range	482	0	0

Table 95: Monthly Summary Statistics of Polynya Areas* for St. Matthew Island Polynya, North (B) in 1976.

	FEBRUARY	MARCH	APRIL
Sample size	17	16	10
Average**	0	402	0
Median	0	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	0	647	0
Standard error	0	162	0
Minimum	0	0	0
Maximum	0	1890	0
Range	0	1890	0

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 95: Monthly Summary Statistics of Polynya Areas* for St. Matthew Island Polynya, North (B) in 1976.

	MAY	JUNE	JULY
Sample size	3	22	31
Average**	1500	OPEN	OPEN
Median**	2100	OPEN	OPEN
Mode	180	OPEN	OPEN
Geometric mean	942	OPEN	OPEN
Standard deviation	1140	0	0
Standard error	659	0	0
Minimum	180	OPEN	OPEN
Maximum	2210	OPEN	OPEN
Range	2030	0	0

Table 96: Monthly Summary Statistics of Polynya Areas* for St. Lawrence Island Polynya, South (D) in 1976.

	FEBRUARY	MARCH	APRIL
Sample size	20	12	18
Average**	886	9940	4730
Median**	775	9500	5340
Mode	0	7720	0
Geometric mean			
Standard deviation	838	7230	3650
Standard error	187	2090	859
Minimum	0	0	0
Maximum	2570	20200	12000
Range	2570	20200	12000

	MAY	JUNE	JULY
Sample size	6	22	31
Average**	42400	OPEN	OPEN
Median**	40000	OPEN	OPEN
Mode	742	OPEN	OPEN
Geometric mean		OPEN	OPEN
Standard deviation	45100	0	0
Standard error	18400	0	0
Minimum	0	OPEN	OPEN
Maximum	91700	OPEN	OPEN
Range	91700	0	0

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 97: Monthly Summary Statistics of Polynya Areas* for St. Lawrence Island Polynya, North (E) in 1976.

	FEBRUARY	MARCH	APRIL
Sample size	18	13	11
Average	0	1040	222
Median**	0	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	0	1810	736
Standard error	0	503	222
Minimum	0	0	0
Maximum	0	4640	2440
Range	0	4640	2440

	MAY	JUNE	JULY
Sample size	4	22	31
Average	1500	OPEN	OPEN
Median**	0	OPEN	OPEN
Mode	0	OPEN	OPEN
Geometric mean		OPEN	OPEN
Standard deviation	3000	0	0
Standard error	1500	0	0
Minimum	0	OPEN	OPEN
Maximum	6000	OPEN	OPEN
Range	6000	0	0

Table 98: Monthly Summary Statistics of Polynya Areas* for Nunivak Island Polynya, South (G) in 1976.

	FEBRUARY	MARCH	APRIL
Sample size	12	14	16
Average	961	2700	3240
Median**	950	2360	1930
Mode	820	1780	1470
Geometric mean			2040
Standard deviation	675	2080	2850
Standard error	195	556	713
Minimum	0	0	271
Maximum	2670	6380	9190
Range	2670	6380	8920

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 98: Monthly Summary Statistics of Polynya Areas* for Nunivak Island Polynya, South (G) in 1976.

	MAY	JUNE	JULY
Sample size	13	[illegible]	31
Average		OPEN	OPEN
Median**	OPEN	OPEN	OPEN
Mode	OPEN	OPEN	OPEN
Geometric mean		OPEN	OPEN
Standard deviation		0	0
Standard error		0	0
Minimum	508	OPEN	OPEN
Maximum	OPEN	OPEN	OPEN
Range		0	0

Table 99: Monthly Summary Statistics of Polynya Areas* for Nunivak Island Polynya, North (H) in 1976.

	FEBRUARY	MARCH	APRIL
Sample size	9	18	13
Average	0	1820	142
Median**	0	258	0
Mode	0	0	0
Geometric mean			
Standard deviation	0	2290	351
Standard error	0	539	97
Minimum	0	0	0
Maximum	0	6150	1070
Range	0	6150	1070

	MAY	JUNE	JULY
Sample size	9	22	31
Average		OPEN	OPEN
Median**	18400	OPEN	OPEN
Mode	OPEN	OPEN	OPEN
Geometric mean		OPEN	OPEN
Standard deviation		0	0
Standard error		0	0
Minimum	0	OPEN	OPEN
Maximum	OPEN	OPEN	OPEN
Range		0	0

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 100: Monthly Summary Statistics of Polynya Areas* for Cape Romanzof Polynya (I) in 1976.

	FEBRUARY	MARCH	APRIL
Sample size	16	19	15
Average**	147	690	1270
Median**	0	0	902
Mode	0	0	0
Geometric mean			
Standard deviation	416	1580	1350
Standard error	104	362	350
Minimum	0	0	0
Maximum	1640	6940	3590
Range	1640	6940	3590

	MAY	JUNE	JULY
Sample size	9	21	31
Average**	7120	OPEN	OPEN
Median**	6970	OPEN	OPEN
Mode	0	OPEN	OPEN
Geometric mean		OPEN	OPEN
Standard deviation	6100	0	0
Standard error	2030	0	0
Minimum	0	OPEN	OPEN
Maximum	18400	OPEN	OPEN
Range	18400	0	0

Table 101: Monthly Summary Statistics of Polynya Areas* for Yukon Delta Polynya (J) in 1976.

	FEBRUARY	MARCH	APRIL
Sample size	23	22	17
Average**	0	1770	238
Median**	0	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	0	2570	844
Standard error	0	547	205
Minimum	0	0	0
Maximum	0	6940	3490
Range	0	6940	3490

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 101: Monthly Summary Statistics of Polynya Areas* for Yukon Delta Polynya (J) in 1976.

	MAY	JUNE	JULY
Sample size	12	9	31
Average	3500		OPEN
Median**	0	OPEN	OPEN
Mode	0	OPEN	OPEN
Geometric mean			OPEN
Standard deviation	6550		0
Standard error	1890		0
Minimum	0	0	OPEN
Maximum	18400	OPEN	OPEN
Range	18400		0

Table 102: Monthly Summary Statistics of Polynya Areas* for Norton Sound Polynya (K) in 1976.

	FEBRUARY	MARCH	APRIL
Sample size	23	14	24
Average	1790	2410	2440
Median**	675	1660	2490
Mode	654	1560	2300
Geometric mean			1950
Standard deviation	1960	2410	1230
Standard error	409	644	251
Minimum	0	0	148
Maximum	6060	7460	5590
Range	6060	7460	5440

	MAY	JUNE	JULY
Sample size	17	11	31
Average	8920		OPEN
Median**	5150	17500	OPEN
Mode	4860	OPEN	OPEN
Geometric mean	6660		OPEN
Standard deviation	7880		0
Standard error	1910		0
Minimum	2400	10800	OPEN
Maximum	27200	OPEN	OPEN
Range	24800		0

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 103: Monthly Summary Statistics of Polynya Areas* for Nome Polynya (L) in 1976.

	FEBRUARY	MARCH	APRIL
Sample size	21	11	19
Average	1260	2020	904
Median**	206	154	0
Mode	0	0	0
Geometric mean			
Standard deviation	1970	3030	1740
Standard error	431	913	399
Minimum	0	0	0
Maximum	6060	7460	5590
Range	6060	7460	5590

	MAY	JUNE	JULY
Sample size	15	11	31
Average	8130		OPEN
Median**	7380	500	OPEN
Mode	0	EN	OPEN
Geometric mean			OPEN
Standard deviation	9410		0
Standard error	2430		0
Minimum	0	10800	OPEN
Maximum	27200	OPEN	OPEN
Range	27200		0

Table 104: Monthly Summary Statistics of Polynya Areas* for Seward Peninsula Polynya, South (M) in 1976.

	FEBRUARY	MARCH	APRIL
Sample size	23	15	16
Average	1990	4020	822
Median**	455	3950	840
Mode	0	0	0
Geometric mean			
Standard deviation	3990	3900	654
Standard error	832	1010	164
Minimum	0	0	0
Maximum	13800	10800	2560
Range	13800	10800	2560

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 104: Monthly Summary Statistics of Polynya Areas* for Seward Peninsula Polynya, South (M) in 1976.

	MAY	JUNE	JULY
Sample size	18	11	31
Average	5690		OPEN
Median**	2160	17500	OPEN
Mode	0	OPEN	OPEN
Geometric mean			OPEN
Standard deviation	8960		0
Standard error	2110		0
Minimum	0	10800	OPEN
Maximum	27200	OPEN	OPEN
Range	27200		0

Table 105: Monthly Summary Statistics of Polynya Areas* for Seward Peninsula Polynya, North (P) in 1976.

	FEBRUARY	MARCH	APRIL
Sample size	20	14	15
Average	2330	3260	735
Median**	744	2480	688
Mode	0	0	0
Geometric mean			
Standard deviation	4180	3660	730
Standard error	936	979	188
Minimum	0	0	0
Maximum	13800	10700	2560
Range	13800	10700	2560

	MAY	JUNE	JULY
Sample size	19	11	31
Average	5410		OPEN
Median**	1790	17500	OPEN
Mode	0	OPEN	OPEN
Geometric mean			OPEN
Standard deviation	8790		0
Standard error	2020		0
Minimum	0	10800	OPEN
Maximum	27200	OPEN	OPEN
Range	27200		0

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 106: Monthly Summary Statistics of Polynya Areas* for Kotzebue Sound Polynya (Q) in 1976.

	FEBRUARY	MARCH	APRIL
Sample size	19	14	13
Average	159	674	25
Median**	0	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	320	1020	91
Standard error	73	272	25
Minimum	0	0	0
Maximum	927	3030	327
Range	927	3030	327

	MAY	JUNE	JULY
Sample size	9	9	31
Average	12	0	OPEN
Median**	0	0	OPEN
Mode	0	0	OPEN
Geometric mean			OPEN
Standard deviation	37	0	0
Standard error	12	0	0
Minimum	0	0	OPEN
Maximum	111	0	OPEN
Range	111	0	0

Table 107: Monthly Summary Statistics of Polynya Areas* for Cape Thompson-Pt. Hope Polynya (R) in 1976.

	FEBRUARY	MARCH	APRIL
Sample size	18	19	18
Average	2160	3000	400
Median**	1840	3200	0
Mode	0	0	0
Geometric mean			
Standard deviation	1680	2070	1180
Standard error	396	474	279
Minimum	0	0	0
Maximum	5960	5450	5100
Range	5960	5450	5100

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 107: Monthly Summary Statistics of Polynya Areas* for Cape Thompson-Pt. Hope Polynya (R) in 1976.

	MAY	JUNE	JULY
Sample size	17	14	24
Average	717	684	OPEN
Median**	405	130	OPEN
Mode	0	0	OPEN
Geometric mean			OPEN
Standard deviation	685	1290	0
Standard error	166	344	0
Minimum	0	0	OPEN
Maximum	2320	4850	OPEN
Range	2320	4850	0

Table 108: Monthly Summary Statistics of Polynya Areas* for Pt. Hope-Cape Lisburne Polynya (S) in 1976.

	FEBRUARY	MARCH	APRIL
Sample size	16	20	17
Average	136	267	91
Median**	0	141	0
Mode	0	0	0
Geometric mean			
Standard deviation	293	358	152
Standard error	73	80	37
Minimum	0	0	0
Maximum	785	1080	593
Range	785	1080	593

	MAY	JUNE	JULY
Sample size	15	15	24
Average	1560	5030	
Median**	346	364	OPEN
Mode	214	0	OPEN
Geometric mean			
Standard deviation	2920	5920	
Standard error	754	1530	
Minimum	0	0	590
Maximum	8860	14200	OPEN
Range	8860	14200	

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50

Table 109: Monthly Summary Statistics of Polynya Areas* for Cape Lisburne to Pt. Lay Polynya (T) in 1976.

	FEBRUARY	MARCH	APRIL
Sample size	13	21	15
Average	0	346	61
Median**	0	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	0	557	133
Standard error	0	122	34
Minimum	0	0	0
Maximum	0	1570	421
Range	0	1570	421

	MAY	JUNE	JULY
Sample size	25	18	17
Average	5650	7880	
Median**	4950	7250	OPEN
Mode	10800	6940	OPEN
Geometric mean		7230	
Standard deviation	3010	3380	
Standard error	601	796	
Minimum	0	3220	4490
Maximum	10800	14200	OPEN
Range	10800	11000	

Table 110: Monthly Summary Statistics of Polynya Areas* for Pt. Lay to Icy Cape Polynya (U) in 1976.

	FEBRUARY	MARCH	APRIL
Sample size	14	17	13
Average	383	441	100
Median**	0	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	638	688	162
Standard error	170	167	45
Minimum	0	0	0
Maximum	1530	1710	456
Range	1530	1710	456

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 110: Monthly Summary Statistics of Polynya Areas* for Pt. Lay to Icy Cape Polynya (U) in 1976.

	MAY	JUNE	JULY
Sample size	24	18	18
Average	5860	7490	
Median**	5150	7250	57300
Mode	10800	6940	OPEN
Geometric mean		5420	
Standard deviation	2870	4000	
Standard error	586	942	
Minimum	0	140	2560
Maximum	10800	14200	OPEN
Range	10800	14100	

Table 111: Monthly Summary Statistics of Polynya Areas* for Icy Cape to Pt. Barrow Polynya (V) in 1976.

	FEBRUARY	MARCH	APRIL
Sample size	13	19	13
Average	0	1050	106
Median**	0	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	0	2570	383
Standard error	0	589	106
Minimum	0	0	0
Maximum	0	11200	1380
Range	0	11200	1380

	MAY	JUNE	JULY
Sample size	19	19	15
Average	897	474	1060
Median**	193	105	488
Mode	0	0	0
Geometric mean			
Standard deviation	2440	948	1370
Standard error	560	217	353
Minimum	0	0	0
Maximum	10800	4100	4060
Range	10800	4100	4060

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 112: Monthly Summary Statistics of Polynya Areas* for Chukotsk Peninsula Polynya (W) in 1976.

	FEBRUARY	MARCH	APRIL
Sample size	19	11	11
Average	446	591	0
Median**	0	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	1260	1200	0
Standard error	288	362	0
Minimum	0	0	0
Maximum	5380	3740	0
Range	5380	3740	0

	MAY	JUNE	JULY
Sample size	7	22	0
Average	0		
Median**	0	OPEN	
Mode	0	OPEN	
Geometric mean			
Standard deviation	0		
Standard error	0		
Minimum	0	0	
Maximum	0	OPEN	
Range	0		

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median size recorded in Tables 44-50.

Table 113: Monthly Summary Statistics of Polynya Areas* for St. Matthew Island Polynya, South (A) in 1977.

	JANUARY	FEBRUARY	MARCH
Sample size	3	3	20
Average**	1950	403	490
Median**	1460	212	300
Mode	144	0	0
Geometric mean	962		
Standard deviation	2090	525	555
Standard error	1210	303	124
Minimum	144	0	0
Maximum	4240	996	2360
Range	4100	996	2360

	APRIL	MAY	JUNE
Sample size	17	17	30
Average**	676		OPEN
Median**	582	OPEN	OPEN
Mode	0	OPEN	OPEN
Geometric mean			OPEN
Standard deviation	748		0
Standard error	181		0
Minimum	0	355	OPEN
Maximum	2710	OPEN	OPEN
Range	2710		0

Table 114: Monthly Summary Statistics of Polynya Areas* for St. Matthew Island Polynya, North (B) in 1977.

	JANUARY	FEBRUARY	MARCH
Sample size	3	4	18
Average**	0	0	21
Median**	0	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	0	0	65
Standard error	0	0	15
Minimum	0	0	0
Maximum	0	0	251
Range	0	0	251

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median area in Tables 44-50.

Table 114: Monthly Summary Statistics of Polynya Areas* for St. Matthew Island Polynya, North (B) in 1977.

	APRIL	MAY	JUNE
Sample size	18	16	30
Average**	376		OPEN
Median**	0	OPEN	OPEN
Mode	0	OPEN	OPEN
Geometric mean			OPEN
Standard deviation	807	25000	0
Standard error	190	6250	0
Minimum	0	0	OPEN
Maximum	2340	OPEN	OPEN
Range	2340		0

Table 115: Monthly Summary Statistics of Polynya Areas* for St. Lawrence Island Polynya, South (D) in 1977.

	JANUARY	FEBRUARY	MARCH
Sample size	4	6	20
Average**	2000	1780	2270
Median**	2440	1760	1620
Mode	0	1160	1570
Geometric mean		1580	
Standard deviation	1380	848	1890
Standard error	692	346	422
Minimum	0	592	0
Maximum	3140	2780	6290
Range	3140	2190	6290

	APRIL	MAY	JUNE
Sample size	22	8	29
Average**	3590	12500	OPEN
Median**	2210	7280	OPEN
Mode	0	0	OPEN
Geometric mean			OPEN
Standard deviation	4050	13100	0
Standard error	864	4620	0
Minimum	0	0	OPEN
Maximum	14400	29100	OPEN
Range	14400	29100	0

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median area in Tables 44-50.

Table 116: Monthly Summary Statistics of Polynya Areas* for St. Lawrence Island Polynya, North (E) in 1977.

	JANUARY	FEBRUARY	MARCH
Sample size	5	6	19
Average	0	0	48
Median**	0	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	0	0	195
Standard error	0	0	45
Minimum	0	0	0
Maximum	0	0	852
Range	0	0	852

	APRIL	MAY	JUNE
Sample size	24	9	29
Average	886	891	OPEN
Median**	0	0	OPEN
Mode	0	0	OPEN
Geometric mean			OPEN
Standard deviation	1960	2020	0
Standard error	400	672	0
Minimum	0	0	OPEN
Maximum	7680	5950	OPEN
Range	7680	5950	0

Table 117: Monthly Summary Statistics of Polynya Areas* for Nunivak Island Polynya, South (G) in 1977.

	JANUARY	FEBRUARY	MARCH
Sample size	3	4	17
Average	2340		1630
Median**	1930	54700	1150
Mode	1610	OPEN	1300
Geometric mean	2210		
Standard deviation	1000		1870
Standard error	581		453
Minimum	1610	962	0
Maximum	3490	OPEN	7100
Range	1880		7100

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median area in Tables 44-50.

Table 117: Monthly Summary Statistics of Polynya Areas* for Nunivak Island Polynya, South (G) in 1977.

	APRIL	MAY	JUNE
Sample size	19	31	30
Average		OPEN	OPEN
Median**	5400	OPEN	OPEN
Mode	OPEN	OPEN	OPEN
Geometric mean		OPEN	OPEN
Standard deviation		0	0
Standard error		0	0
Minimum	0	OPEN	OPEN
Maximum	OPEN	OPEN	OPEN
Range		0	0

Table 118: Monthly Summary Statistics of Polynya Areas* for Nunivak Island Polynya, North (H) in 1977.

	JANUARY	FEBRUARY	MARCH
Sample size	4	4	16
Average	0	0	385
Median**	0	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	0	0	878
Standard error	0	0	219
Minimum	0	0	0
Maximum	0	0	2890
Range	0	0	2890

	APRIL	MAY	JUNE
Sample size	20	31	30
Average	5390	OPEN	OPEN
Median**	0	OPEN	OPEN
Mode	0	OPEN	OPEN
Geometric mean		OPEN	OPEN
Standard deviation	22300	0	0
Standard error	4980	0	0
Minimum	0	OPEN	OPEN
Maximum	OPEN	OPEN	OPEN
Range		0	0

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median area in Tables 44-50.

Table 119: Monthly Summary Statistics of Polynya Areas* for Cape Romanzof Polynya (I) in 1977.

	JANUARY	FEBRUARY	MARCH
Sample size	8	6	16
Average**	860	2430	279
Median**	371	1890	0
Mode	0	1080	0
Geometric mean			
Standard deviation	1050	2390	670
Standard error	370	974	167
Minimum	0	0	0
Maximum	2500	6870	2420
Range	2500	6870	2420

	APRIL	MAY	JUNE
Sample size	21	29	30
Average**	5340		OPEN
Median**	486	OPEN	OPEN
Mode	0	OPEN	OPEN
Geometric mean			OPEN
Standard deviation			0
Standard error			0
Minimum	0	5640	OPEN
Maximum	OPEN	OPEN	OPEN
Range			0

Table 120: Monthly Summary Statistics of Polynya Areas* for Yukon Delta Polynya (J) in 1977.

	JANUARY	FEBRUARY	MARCH
Sample size	8	4	19
Average**	349	120	639
Median**	0	124	0
Mode	0	0	0
Geometric mean			
Standard deviation	844	97	874
Standard error	298	48	200
Minimum	0	0	0
Maximum	2420	230	3200
Range	2420	230	3200

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median area in Tables 44-50.

Table 120: Monthly Summary Statistics of Polynya Areas* for Yukon Delta Pol/nya (J) in 1977.

	APRIL	MAY	JUNE
Sample size	23	29	30
Average	298		OPEN
Median**	0	OPEN	OPEN
Mode	0	OPEN	OPEN
Geometric mean			OPEN
Standard deviation	567		0
Standard error	118		0
Minimum	0	0	OPEN
Maximum	1720	OPEN	OPEN
Range	1720		0

Table 121: Monthly Summary Statistics of Polynya Areas* for Norton Sound Polynya (K) in 1977.

	JANUARY	FEBRUARY	MARCH
Sample size	8	10	20
Average	966	3040	1510
Median**	675	1880	145
Mode	0	875	0
Geometric mean		1630	
Standard deviation	1220	3110	2640
Standard error	432	984	591
Minimum	0	196	0
Maximum	3420	9120	11400
Range	3420	8920	11400

	APRIL	MAY	JUNE
Sample size	22	16	17
Average	1680		OPEN
Median**	1450	4840	OPEN
Mode	0	OPEN	OPEN
Geometric mean			OPEN
Standard deviation	1880		0
Standard error	400		0
Minimum	0	534	OPEN
Maximum	6560	OPEN	OPEN
Range	6560		0

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median area in Tables 44-50.

Table 122: Monthly Summary Statistics of Polynya Areas* for Nome Polynya (L) in 1977.

	JANUARY	FEBRUARY	MARCH
Sample size	10	9	21
Average	810	2900	1350
Median**	501	856	369
Mode	0	828	0
Geometric mean		1490	
Standard deviation	937	3340	2580
Standard error	296	1110	564
Minimum	0	360	0
Maximum	2480	9120	11400
Range	2480	8760	11400

	APRIL	MAY	JUNE
Sample size	21	13	18
Average	1220	421	
Median**	160	266	OPEN
Mode	0	0	OPEN
Geometric mean			
Standard deviation	2010	701	
Standard error	438	194	
Minimum	0	0	2710
Maximum	6560	2590	OPEN
Range	6560	2590	

Table 123: Monthly Summary Statistics of Polynya Areas* for Seward Peninsula Polyn ya, South (M) in 1977.

	JANUARY	FEBRUARY	MARCH
Sample size	6	10	21
Average	3170	1170	507
Median**	2480	906	0
Mode	1520	849	0
Geometric mean		1030	
Standard deviation	2690	602	911
Standard error	1100	190	199
Minimum	0	428	0
Maximum	7510	2280	3470
Range	7510	1850	3470

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median area in Tables 44-50.

Table 123: Monthly Summary Statistics of Polynya Areas* for Seward Peninsula Polynya, South (M) in 1977.

	APRIL	MAY	JUNE
Sample size	22	10	19
Average**	1450	433	
Median**	668	261	OPEN
Mode	0	0	OPEN
Geometric mean			
Standard deviation	1990	768	
Standard error	424	243	
Minimum	0	0	0
Maximum	6560	2590	OPEN
Range	6560	2590	

Table 124: Monthly Summary Statistics of Polynya Areas* for Seward Peninsula Polynya, North (P) in 1977.

	JANUARY	FEBRUARY	MARCH
Sample size	6	8	21
Average**	3170	1230	500
Median**	2480	1180	0
Mode	1520	849	0
Geometric mean		1020	
Standard deviation	2690	686	915
Standard error	1100	242	200
Minimum	0	266	0
Maximum	7510	2280	3470
Range	7510	2010	3470

	APRIL	MAY	JUNE
Sample size	23	9	19
Average**	1440	1160	
Median**	921	496	OPEN
Mode	0	0	OPEN
Geometric mean			
Standard deviation	1950	1470	
Standard error	406	490	
Minimum	0	0	0
Maximum	6560	4310	OPEN
Range	6560	4310	

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median area in Tables 44-50.

Table 125: Monthly Summary Statistics of Polynya Areas* for Kotzebue Sound Polynya (Q) in 1977.

	JANUARY	FEBRUARY	MARCH
Sample size	11	8	15
Average	3890	0	0
Median**	5440	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	3290	0	0
Standard error	992	0	0
Minimum	0	0	0
Maximum	7860	0	0
Range	7860	0	0

	APRIL	MAY	JUNE
Sample size	21	15	17
Average	63	48	
Median**	0	0	446
Mode	0	0	
Geometric mean			
Standard deviation	88	66	
Standard error	19	17	
Minimum	0	0	120
Maximum	237	236	OPEN
Range	237	236	

Table 126: Monthly Summary Statistics of Polynya Areas* for Cape Thompson-Pt. Hope Polynya (R) in 1977.

	JANUARY	FEBRUARY	MARCH
Sample size	15	15	17
Average	2800	435	47
Median**	1580	0	0
Mode	1500	0	0
Geometric mean			
Standard deviation	2780	687	139
Standard error	718	177	34
Minimum	0	0	0
Maximum	7860	2200	513
Range	7860	2200	513

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median area in Tables 44-50.

Table 126: Monthly Summary Statistics of Polynya Areas* for Cape Thompson-Pt. Hope Polynya (R) in 1977.

	APRIL	MAY	JUNE
Sample size	20	19	20
Average	5	781	3710
Median**	0	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	21	976	7830
Standard error	5	224	1750
Minimum	0	0	0
Maximum	96	2320	23000
Range	96	2320	23000

	JULY
Sample size	29
Average	
Median**	OPEN
Mode	OPEN
Geometric mean	
Standard deviation	
Standard error	
Minimum	1080
Maximum	OPEN
Range	

Table 127: Monthly Summary Statistics of Polynya Areas* for Pt. Hope-Cape Lisburne Polynya (S) in 1977.

	JANUARY	FEBRUARY	MARCH
Sample size	14	13	18
Average	293	105	0
Median**	161	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	344	163	0
Standard error	92	45	0
Minimum	0	0	0
Maximum	1110	476	0
Range	1110	476	0

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median area in Tables 44-50.

Table 127: Monthly Summary Statistics of Polynya Areas* for Pt. Hope-Cape Lisburne Polynya (S) in 1977.

	APRIL	MAY	JUNE
Sample size	24	21	22
Average**	82	1240	5970
Median	0	148	2200
Mode	0	0	1160
Geometric mean			2420
Standard deviation	163	3311	7820
Standard error	33	722	1670
Minimum	0	0	302
Maximum	504	12700	23000
Range	504	12700	22700

	JULY
Sample size	29
Average**	
Median	OPEN
Mode	OPEN
Geometric mean	
Standard deviation	
Standard error	
Minimum	21800
Maximum	OPEN
Range	

Table 128: Monthly Summary Statistics of Polynya Areas* for Cape Lisburne to Pt. Lay Polynya (T) in 1977.

	JANUARY	FEBRUARY	MARCH
Sample size	11	14	21
Average**	3210	634	187
Median	566	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	5550	1560	416
Standard error	1670	417	91
Minimum	0	0	0
Maximum	18200	5640	1440
Range	18200	5640	1440

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median area in Tables 44-50.

Table 128: Monthly Summary Statistics of Polynya Areas* for Cape Lisburne to Pt. Lay Polynya (T) in 1977.

	APRIL	MAY	JUNE
Sample size	22	28	23
Average	477	7720	7840
Median**	0	7920	4600
Mode	0	7780	4110
Geometric mean		6430	
Standard deviation	812	4030	7140
Standard error	173	761	1490
Minimum	0	1350	0
Maximum	2690	13800	23000
Range	2690	12400	23000

	JULY
Sample size	29
Average	
Median**	OPEN
Mode	OPEN
Geometric mean	
Standard deviation	
Standard error	
Minimum	21800
Maximum	OPEN
Range	

Table 129: Monthly Summary Statistics of Polynya Areas* for Pt. Lay to Icy Cape Polynya (U) in 1977.

	JANUARY	FEBRUARY	MARCH
Sample size	12	14	22
Average	4310	1570	135
Median**	1540	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	6140	2860	350
Standard error	1770	765	75
Minimum	0	0	0
Maximum	18200	9630	1440
Range	18200	9630	1440

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median area in Tables 44-50.

Table 129: Monthly Summary Statistics of Polynya Areas* for Pt. Lay to Icy Cape Polynya (U) in 1977.

	APRIL	MAY	JUNE
Sample size	22	26	21
Average	424	8100	6700
Median**	0	8100	4600
Mode	0	7900	0
Geometric mean		6780	
Standard deviation	877	3920	7930
Standard error	187	769	1730
Minimum	0	645	0
Maximum	2720	13800	23000
Range	2720	13200	23000

	JULY
Sample size	29
Average	
Median**	OPEN
Mode	OPEN
Geometric mean	
Standard deviation	
Standard error	
Minimum	21800
Maximum	OPEN
Range	

Table 130: Monthly Summary Statistics of Polynya Areas* for Icy Cape to Pt. Barrow Polynya (V) in 1977.

	JANUARY	FEBRUARY	MARCH
Sample size	12	14	20
Average	4310	1580	72
Median**	1630	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	6140	2860	322
Standard error	1770	764	72
Minimum	0	0	0
Maximum	18200	9630	1440
Range	18200	9630	1440

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median area in Tables 44-50.

Table 130: Monthly Summary Statistics of Polynya Areas* for Icy Cape to Pt. Barrow Polynya (V) in 1977.

	APRIL	MAY	JUNE
Sample size	22	25	23
Average	376	8080	1020
Median**	0	8260	0
Mode	0	7940	0
Geometric mean		6100	
Standard deviation	880	4180	1960
Standard error	188	836	408
Minimum	0	172	0
Maximum	2720	13800	6170
Range	2720	13600	6170

	JULY
Sample size	5
Average	
Median**	2010
Mode	
Geometric mean	
Standard deviation	
Standard error	
Minimum	0
Maximum	OPEN
Range	

Table 131: Monthly Summary Statistics of Polynya Areas* for Chukotsk Peninsula Polynya (W) in 1977.

	JANUARY	FEBRUARY	MARCH
Sample size	2	3	17
Average	0	0	0
Median**	0	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	0	0	0
Standard error	0	0	0
Minimum	0	0	0
Maximum	0	0	0
Range	0	0	0

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median area in Tables 44-50.

Table 131: Monthly Summary Statistics of Polynya Areas* for Chukotsk Peninsula Polynya (W) in 1977.

	APRIL	MAY	JUNE
Sample size	20	7	29
Average	0	737	
Median**	0	0	OPEN
Mode	0	0	OPEN
Geometric mean			
Standard deviation	0	1060	
Standard error	0	403	
Minimum	0	0	1780
Maximum	0	2690	OPEN
Range	0	2690	

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median area in Tables 44-50.

Table 132: Monthly Summary Statistics of Polynya Areas* for St. Matthew Island Polynya, South (A) in 1979.

	JANUARY	FEBRUARY	MARCH
Sample size	5	12	13
Average**	OPEN	OPEN	
Median	OPEN	OPEN	OPEN
Mode	OPEN	OPEN	OPEN
Geometric mean	OPEN	OPEN	
Standard deviation	0	0	
Standard error	0	0	
Minimum	OPEN	OPEN	305
Maximum	OPEN	OPEN	OPEN
Range	0	0	

	APRIL	MAY	JUNE
Sample size	30	31	30
Average**	OPEN	OPEN	OPEN
Median	OPEN	OPEN	OPEN
Mode	OPEN	OPEN	OPEN
Geometric mean	OPEN	OPEN	OPEN
Standard deviation	0	0	0
Standard error	0	0	0
Minimum	OPEN	OPEN	OPEN
Maximum	OPEN	OPEN	OPEN
Range	0	0	0

Table 133: Monthly Summary Statistics of Polynya Areas* for St. Matthew Island Polynya, North (B) in 1979.

	JANUARY	FEBRUARY	MARCH
Sample size	5	11	13
Average**	OPEN		
Median	OPEN	OPEN	OPEN
Mode	OPEN	OPEN	OPEN
Geometric mean	OPEN		
Standard deviation	0		
Standard error	0		
Minimum	OPEN	0	0
Maximum	OPEN	OPEN	OPEN
Range	0		

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median area in Tables 44-50

Table 133: Monthly Summary Statistics of Polynya Areas* for St. Matthew Island Polynya, North (B) in 1979.

	APRIL	MAY	JUNE
Sample size	30	31	30
Average**	OPEN	OPEN	OPEN
Median	OPEN	OPEN	OPEN
Mode	OPEN	OPEN	OPEN
Geometric mean	OPEN	OPEN	OPEN
Standard deviation	0	0	0
Standard error	0	0	0
Minimum	OPEN	OPEN	OPEN
Maximum	OPEN	OPEN	OPEN
Range	0	0	0

Table 134: Monthly Summary Statistics of Polynya Areas* for St. Lawrence Island Polynya, South (D) in 1979.

	JANUARY	FEBRUARY	MARCH
Sample size	3	17	17
Average**	OPEN	3270	2840
Median	OPEN	2640	2220
Mode	OPEN	0	2180
Geometric mean	OPEN		2420
Standard deviation	0	3140	2010
Standard error	0	761	487
Minimum	OPEN	0	1190
Maximum	OPEN	10200	8180
Range	0	10200	6990

	APRIL	MAY	JUNE
Sample size	14	31	30
Average**		OPEN	OPEN
Median	15900	OPEN	OPEN
Mode	OPEN	OPEN	OPEN
Geometric mean		OPEN	OPEN
Standard deviation		0	0
Standard error		0	0
Minimum	2420	OPEN	OPEN
Maximum	OPEN	OPEN	OPEN
Range		0	0

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median area in Tables 44-50.

Table 135: Monthly Summary Statistics of Polynya Areas* for St. Lawrence Island Polynya, North (E) in 1979.

	JANUARY	FEBRUARY	MARCH
Sample size	4	15	14
Average**		1270	901
Median**	50000	0	0
Mode	OPEN	0	0
Geometric mean			
Standard deviation		2210	2330
Standard error		570	623
Minimum	0	0	0
Maximum	OPEN	5520	7400
Range		5520	7400

	APRIL	MAY	JUNE
Sample size	14	31	30
Average**		OPEN	OPEN
Median**	0	OPEN	OPEN
Mode	0	OPEN	OPEN
Geometric mean		OPEN	OPEN
Standard deviation		0	0
Standard error		0	0
Minimum	0	OPEN	OPEN
Maximum	OPEN	OPEN	OPEN
Range		0	0

Table 136: Monthly Summary Statistics of Polynya Areas* for Nunivak Island Polynya, South (G) in 1979.

	JANUARY	FEBRUARY	MARCH
Sample size	5	15	16
Average**	OPEN	1780	
Median**	OPEN	1130	2520
Mode	OPEN	0	OPEN
Geometric mean	OPEN		
Standard deviation	0	1970	
Standard error	0	509	
Minimum	OPEN	0	574
Maximum	OPEN	6950	OPEN
Range	0	6950	

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median area in Tables 44-50.

Table 136: Monthly Summary Statistics of Polynya Areas* for Nunivak Island Polynya, South (G) in 1979.

	APRIL	MAY	JUNE
Sample size	30	31	30
Average	OPEN	OPEN	OPEN
Median**	OPEN	OPEN	OPEN
Mode	OPEN	OPEN	OPEN
Geometric mean	OPEN	OPEN	OPEN
Standard deviation	0	0	0
Standard error	0	0	0
Minimum	OPEN	OPEN	OPEN
Maximum	OPEN	OPEN	OPEN
Range	0	0	0

Table 137: Monthly Summary Statistics of Polynya Areas* for Nunivak Island Polynya, North (H) in 1979.

	JANUARY	FEBRUARY	MARCH
Sample size	5	15	14
Average	OPEN	851	
Median**	OPEN	0	0
Mode	OPEN	0	0
Geometric mean	OPEN		
Standard deviation	0	1660	
Standard error	0	428	
Minimum	OPEN	0	0
Maximum	OPEN	5150	OPEN
Range	0	5150	

	APRIL	MAY	JUNE
Sample size	30	31	30
Average	OPEN	OPEN	OPEN
Median**	OPEN	OPEN	OPEN
Mode	OPEN	OPEN	OPEN
Geometric mean	OPEN	OPEN	OPEN
Standard deviation	0	0	0
Standard error	0	0	0
Minimum	OPEN	OPEN	OPEN
Maximum	OPEN	OPEN	OPEN
Range	0	0	0

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median area in Tables 44-50.

Table 138: Monthly Summary Statistics of Polynya Areas* for Cape Romanzof Polynya (I) in 1979.

	JANUARY	FEBRUARY	MARCH
Sample size	4	21	18
Average**		3740	
Median	2490	3060	4550
Mode	1310	0	OPEN
Geometric mean			
Standard deviation		3570	
Standard error		780	
Minimum	1310	0	0
Maximum	OPEN	14200	OPEN
Range		14200	

	APRIL	MAY	JUNE
Sample size	30	31	30
Average**	OPEN	OPEN	OPEN
Median	OPEN	OPEN	OPEN
Mode	OPEN	OPEN	OPEN
Geometric mean	OPEN	OPEN	OPEN
Standard deviation	0	0	0
Standard error	0	0	0
Minimum	OPEN	OPEN	OPEN
Maximum	OPEN	OPEN	OPEN
Range	0	0	0

Table 139: Monthly Summary Statistics of Polynya Areas* for Yukon Delta Polynya (J) in 1979.

	JANUARY	FEBRUARY	MARCH
Sample size	4	19	16
Average**	0	825	812
Median	0	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	0	2230	1680
Standard error	0	512	420
Minimum	0	0	0
Maximum	0	9370	4700
Range	0	9370	4700

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median area in Tables 44-50.

Table 139: Monthly Summary Statistics of Polynya Areas* for Yukon Delta Polynya (J) in 1979.

	APRIL	MAY	JUNE
Sample size	25	31	30
Average		OPEN	OPEN
Median**	OPEN	OPEN	OPEN
Mode	OPEN	OPEN	OPEN
Geometric mean		OPEN	OPEN
Standard deviation		0	0
Standard error		0	0
Minimum	1180	OPEN	OPEN
Maximum	OPEN	OPEN	OPEN
Range		0	0

Table 140: Monthly Summary Statistics of Polynya Areas* for Norton Sound Polynya (K) in 1979.

	JANUARY	FEBRUARY	MARCH
Sample siz	9	24	17
Average	3100	2400	6590
Median**	170[illegible]	792	6970
Mode	163[illegible]	0	4700
Geometric [illegible]an			4510
Standard d[illegible]iation	3140	4750	4580
Standard error	1050	970	1110
Minimum	0	0	468
Maximum	7620	17600	15500
Range	7620	17600	15000

	APRIL	MAY	JUNE
Sample size	23	31	30
Average		OPEN	OPEN
Median**	16600	OPEN	OPEN
Mode	OPEN	OPEN	OPEN
Geometric mean		OPEN	OPEN
Standard deviation		0	0
Standard error		0	0
Minimum	5040	OPEN	OPEN
Maximum	OPEN	OPEN	OPEN
Range		0	0

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median area in Tables 44-50

Table 141: Monthly Summary Statistics of Polynya Areas* for Nome Polynya (L) in 1979.

	JANUARY	FEBRUARY	MARCH
Sample size	8	25	16
Average**	359	1760	6420
Median**	222	123	7040
Mode	0	0	4560
Geometric mean			3880
Standard deviation	600	4740	4940
Standard error	212	948	1240
Minimum	0	0	314
Maximum	1820	17600	15500
Range	1820	17600	15200

	APRIL	MAY	JUNE
Sample size	21	31	30
Average**		OPEN	OPEN
Median**	16600	OPEN	OPEN
Mode	OPEN	OPEN	OPEN
Geometric mean		OPEN	OPEN
Standard deviation		0	0
Standard error		0	0
Minimum	676	OPEN	OPEN
Maximum	OPEN	OPEN	OPEN
Range		0	0

Table 142: Monthly Summary Statistics of Polynya Areas* for Seward Peninsula Polynya, South (M) in 1979.

	JANUARY	FEBRUARY	MARCH
Sample size	5	24	22
Average**	1070	1500	2120
Median**	861	0	1730
Mode	649	0	1690
Geometric mean	904		
Standard deviation	650	2280	1620
Standard error	290	465	346
Minimum	360	0	0
Maximum	1920	6960	6040
Range	1560	6960	6040

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median area in Tables 44-50.

Table 142: Monthly Summary Statistics of Polynya Areas* for Seward Peninsula Polynya, South (M) in 1979.

	APRIL	MAY	JUNE
Sample size	22	31	30
Average**		OPEN	OPEN
Median**	10800	OPEN	OPEN
Mode	OPEN	OPEN	OPEN
Geometric mean		OPEN	OPEN
Standard deviation		0	0
Standard error		0	0
Minimum	0	OPEN	OPEN
Maximum	OPEN	OPEN	OPEN
Range		0	0

Table 143: Monthly Summary Statistics of Polynya Areas* for Seward Peninsula Polynya, North (P) in 1979.

	JANUARY	FEBRUARY	MARCH
Sample size	6	25	21
Average**	813	1470	2200
Median**	755	0	1770
Mode	412	0	1690
Geometric mean	628		
Standard deviation	608	2240	1620
Standard error	248	448	354
Minimum	158	0	0
Maximum	1920	6960	6040
Range	1760	6960	6040

	APRIL	MAY	JUNE
Sample size	22	31	30
Average**		OPEN	OPEN
Median**	10800	OPEN	OPEN
Mode	OPEN	OPEN	OPEN
Geometric mean		OPEN	OPEN
Standard deviation		0	0
Standard error		0	0
Minimum	0	OPEN	OPEN
Maximum	OPEN	OPEN	OPEN
Range		0	0

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median area in Tables 44-50.

Table 144: Monthly Summary Statistics of Polynya Areas* for Kotzebue Sound Polynya (Q) in 1979.

	JANUARY	FEBRUARY	MARCH
Sample size	4	25	23
Average	372	1870	1930
Median**	0	1070	628
Mode	0	0	0
Geometric mean			
Standard deviation	745	1960	2500
Standard error	372	392	520
Minimum	0	0	0
Maximum	1490	7040	9600
Range	1490	7040	9600

	APRIL	MAY	JUNE
Sample size	21	22	30
Average			OPEN
Median**	766	1170	OPEN
Mode	0	OPEN	OPEN
Geometric mean			OPEN
Standard deviation			0
Standard error			0
Minimum	0	835	OPEN
Maximum	OPEN	OPEN	OPEN
Range			0

Table 145: Monthly Summary Statistics of Polynya Areas* for Cape Thompson-Pt. Hope Polynya (R) in 1979.

	JANUARY	FEBRUARY	MARCH
Sample size	9	19	18
Average	1160	1330	2870
Median**	0	0	3000
Mode	0	0	2100
Geometric mean			1860
Standard deviation	1780	2740	2300
Standard error	594	629	542
Minimum	0	0	67
Maximum	4970	10100	9600
Range	4970	10100	9530

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median area in Tables 44-50

Table 145: Monthly Summary Statistics of Polynya Areas* for Cape Thompson-Pt. Hope Polynya (R) in 1979.

	APRIL	MAY	JUNE
Sample size	14	28	30
Average	2790		
Median**	3040	1120	OPEN
Mode	0	OPEN	OPEN
Geometric mean			
Standard deviation	2370		
Standard error	633		
Minimum	0	0	74
Maximum	6140	OPEN	OPEN
Range	6140		

Table 146: Monthly Summary Statistics of Polynya Areas* for Pt. Hope-Cape Lisburne Polynya (S) in 1979.

	JANUARY	FEBRUARY	MARCH
Sample size	11	19	20
Average	786	1720	350
Median**	0	1880	238
Mode	0	0	0
Geometric mean			
Standard deviation	1550	1160	530
Standard error	468	265	119
Minimum	0	0	0
Maximum	4010	3300	2340
Range	4010	3300	2340

	APRIL	MAY	JUNE
Sample size	19	24	30
Average	148	700	
Median**	126	398	OPEN
Mode	0	0	OPEN
Geometric mean			
Standard deviation	144	837	
Standard error	33	171	
Minimum	0	0	0
Maximum	512	3680	OPEN
Range	512	3680	

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median area in Tables 44-50.

Table 147: Monthly Summary Statistics of Polynya Areas* for Cape Lisburne to Pt. Lay Polynya (T) in 1979.

	JANUARY	FEBRUARY	MARCH
Sample size	10	20	23
Average	3120	1670	1560
Median**	1410	1860	1480
Mode	0	0	0
Geometric mean			
Standard deviation	4840	1160	1440
Standard error	1530	260	301
Minimum	0	0	0
Maximum	15800	3300	4410
Range	15800	3300	4410

	APRIL	MAY	JUNE
Sample size	21	25	25
Average	830	5690	
Median**	430	3240	OPEN
Mode	0	2590	OPEN
Geometric mean		3380	
Standard deviation	970	5760	
Standard error	430	1150	
Minimum	0	382	0
Maximum	7200	20700	OPEN
Range	7200	20300	

Table 148: Monthly Summary Statistics of Polynya Areas* for Pt. Lay to Icy Cape Polynya (U) in 1979.

	JANUARY	FEBRUARY	MARCH
Sample size	9	18	22
Average	2520	573	1670
Median**	0	0	1310
Mode	0	0	0
Geometric mean			
Standard deviation	5230	1460	1650
Standard error	1740	345	351
Minimum	0	0	0
Maximum	15800	4920	4830
Range	15800	4920	4830

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median area in Tables 44-50.

Table 148: Monthly Summary Statistics of Polynya Areas* for Pt. Lay to Icy Cape Polynya (U) in 1979.

	APRIL	MAY	JUNE
Sample size	19	26	21
Average**	1820	4330	
Median**	1430	672	15500
Mode	0	0	OPEN
Geometric mean			
Standard deviation	2040	6290	
Standard error	469	1230	
Minimum	0	0	0
Maximum	7200	20700	OPEN
Range	7200	20700	

Table 149: Monthly Summary Statistics of Polynya Areas* for Icy Cape to Pt. Barrow Polynya (V) in 1979.

	JANUARY	FEBRUARY	MARCH
Sample size	11	18	20
Average**	2550	588	1170
Median**	0	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	4830	1460	1680
Standard error	1460	345	377
Minimum	0	0	0
Maximum	15800	4920	4410
Range	15800	4920	4410

	APRIL	MAY	JUNE
Sample size	18	27	21
Average**	1660	3960	3930
Median**	536	679	479
Mode	0	0	0
Geometric mean			
Standard deviation	2160	6300	5450
Standard error	509	1210	1190
Minimum	0	0	0
Maximum	7200	20700	15900
Range	7200	20700	15900

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median area in Tables 44-50.

Table 150: Monthly Summary Statistics of Polynya Areas* for Chukotsk Peninisula Polynya (W) in 1979.

	JANUARY	FEBRUARY	MARCH
Sample size	4	15	19
Average**	3400	510	188
Median**	0	183	0
Mode	0	0	0
Geometric mean			
Standard deviation	6800	728	525
Standard error	3400	188	120
Minimum	0	0	0
Maximum	13600	2700	1710
Range	13600	2700	1710

	APRIL	MAY	JUNE
Sample size	9	16	30
Average**	0		
Median**	0	0	OPEN
Mode	0	0	OPEN
Geometric mean			
Standard deviation	0		
Standard error	0		
Minimum	0	0	5160
Maximum	0	OPEN	OPEN
Range	0		

Table 151: Monthly Summary Statistics of Polynya Areas* for Anadyr Gulf Polynya (Y) in 1979.

	JANUARY	FEBRUARY	MARCH
Sample size	7	13	23
Average**	3220	2570	3360
Median**	2640	2350	3180
Mode	2280	722	2070
Geometric mean	2780		2980
Standard deviation	2240	2050	1460
Standard error	847	569	305
Minimum	1650	0	464
Maximum	8120	5890	6320
Range	6470	5890	5860

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median area in Tables 44-50.

Table 151: Monthly Summary Statistics of Polynya Areas* for Anadyr Gulf Polynya (Y) in 1979.

	APRIL
Sample size	17
Average	19700
Median**	15600
Mode	14800
Geometric mean	14300
Standard deviation	19200
Standard error	4670
Minimum	2640
Maximum	86700
Range	84100

*Polynya areas are in square kilometers. All possible area determinations are used for the calculations.

**Median is equivalent to median area in Tables 44-50.

Table 152: Monthly Summary Statistics of Polynya Areas* for St. Matthew Island Polynya, South (A) in 1983.

	JANUARY	FEBRUARY	MARCH
Sample size	8	6	10
Average	OPEN	703	1300
Median	OPEN	662	455
Mode	OPEN	635	400
Geometric mean	OPEN		
Standard deviation	0	455	2290
Standard error	0	186	723
Minimum	OPEN	0	0
Maximum	OPEN	1420	7660
Range	0	1420	7660

	APRIL	MAY	JUNE
Sample size	6	31	30
Average		OPEN	OPEN
Median	5760	OPEN	OPEN
Mode	OPEN	OPEN	OPEN
Geometric mean		OPEN	OPEN
Standard deviation		0	0
Standard error		0	0
Minimum	136	OPEN	OPEN
Maximum	OPEN	OPEN	OPEN
Range		0	0

Table 153: Monthly Summary Statistics of Polynya Areas* for St. Matthew Island Polynya, North (B) in 1983.

	JANUARY	FEBRUARY	MARCH
Sample size	8	6	6
Average		0	46
Median	0	0	0
Mode	0	0	0
Geometric mean			
Standard deviation		0	113
Standard error		0	46
Minimum	0	0	0
Maximum	OPEN	0	276
Range		0	276

*Polynya areas in square kilometers. All possible area determinations are used for calculations.

**Median is equivalent to median area in Tables 44-50.

Table 153: Monthly Summary Statistics of Polynya Areas* for St. Matthew Island Polynya, North (B) in 1983.

	APRIL	MAY	JUNE
Sample size	7	31	30
Average	0	OPEN	OPEN
Median	0	OPEN	OPEN
Mode	0	OPEN	OPEN
Geometric mean		OPEN	OPEN
Standard deviation	0	0	0
Standard error	0	0	0
Minimum	0	OPEN	OPEN
Maximum	0	OPEN	OPEN
Range	0	0	0

Table 154: Monthly Summary Statistics of Polynya Areas* for St. Lawrence Island Polynya, South (D) in 1983.

	JANUARY	FEBRUARY	MARCH
Sample size	15	11	15
Average	2000	2290	4220
Median	1940	2120	2700
Mode	1820	1430	2500
Geometric mean		2200	3200
Standard deviation	842	683	3360
Standard error	217	206	869
Minimum	0	1430	893
Maximum	3440	3360	11800
Range	3440	1930	10900

	APRIL	MAY	JUNE
Sample size	16	28	30
Average			OPEN
Median	4760	OPEN	OPEN
Mode	OPEN	OPEN	OPEN
Geometric mean			OPEN
Standard deviation			0
Standard error			0
Minimum	686	0	OPEN
Maximum	OPEN	OPEN	OPEN
Range			0

*Polynya areas in square kilometers. All possible area determinations are used for calculations.

**Median is equivalent to median area in Tables 44-50.

Table 155: Monthly Summary Statistics of Polynya Areas* for St. Lawrence Island Polynya, North (E) in 1983.

	JANUARY	FEBRUARY	MARCH
Sample size	16	10	11
Average	0	0	328
Median	0	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	0	0	1090
Standard error	0	0	328
Minimum	0	0	0
Maximum	0	0	3610
Range	0	0	3610

	APRIL	MAY	JUNE
Sample size	15	27	30
Average		OPEN	OPEN
Median	487	OPEN	OPEN
Mode	OPEN	OPEN	OPEN
Geometric mean		OPEN	OPEN
Standard deviation		0	0
Standard error		0	0
Minimum	0	OPEN	OPEN
Maximum	OPEN	OPEN	OPEN
Range		0	0

Table 156: Monthly Summary Statistics of Polynya Areas* for Nunivak Island Polynya, South (G) in 1983.

	JANUARY	FEBRUARY	MARCH
Sample size	11	6	16
Average	1440	1180	
Median	1440	1190	7820
Mode	702	854	OPEN
Geometric mean	1280	1130	
Standard deviation	714	394	
Standard error	215.	161	
Minimum	506	665	0
Maximum	3040	1720	OPEN
Range	2530	1060	

*Polynya areas in square kilometers. All possible area determinations are used for calculations.

**Median is equivalent to median area in Tables 44-50

Table 156: Monthly Summary Statistics of Polynya Areas* for Nunivak Island Polynya, South (G) in 1983.

	APRIL	MAY	JUNE
Sample size	19	31	30
Average	OPEN	OPEN	OPEN
Median	OPEN	OPEN	OPEN
Mode	OPEN	OPEN	OPEN
Geometric mean	OPEN	OPEN	OPEN
Standard deviation	0	0	0
Standard error	0	0	0
Minimum	OPEN	OPEN	OPEN
Maximum	OPEN	OPEN	OPEN
Range	0	0	0

Table 157: Monthly Summary Statistics of Polynya Areas* for Nunivak Island Polynya, North (H) in 1983.

	JANUARY	FEBRUARY	MARCH
Sample si	12	7	17
Average	0	0	
Median	0	0	6840
Mode	0	0	OPEN
Geometric ean			
Standard eviation	0	0	
Standard error	0	0	
Minimum	0	0	0
Maximum	0	0	OPEN
Range	0	0	

	APRIL	MAY	JUNE
Sample size	19	31	30
Average		OPEN	OPEN
Median	OPEN	OPEN	OPEN
Mode	OPEN	OPEN	OPEN
Geometric mean		OPEN	OPEN
Standard deviation		0	0
Standard error		0	0
Minimum	0	OPEN	OPEN
Maximum	OPEN	OPEN	OPEN
Range		0	0

*Polynya areas in square kilometers. All possible area determinations are used for calculations.

**Median is equivalent to median area in Tables 44-50.

Table 158: Monthly Summary Statistics of Polynya Areas* for Cape Romanzof Polynya (I) in 1983.

	JANUARY	FEBRUARY	MARCH
Sample size	13	7	19
Average	1770	709	
Median	1220	726	13600
Mode	1150	610	OPEN
Geometric mean	1080	692	
Standard deviation	1760	164	
Standard error	489	62	
Minimum	122	508	739
Maximum	6730	962	OPEN
Range	6610	454	

	APRIL	MAY	JUNE
Sample size	19	31	30
Average		OPEN	OPEN
Median	OPEN	OPEN	OPEN
Mode	OPEN	OPEN	OPEN
Geometric mean		OPEN	OPEN
Standard deviation		0	0
Standard error		0	0
Minimum	475	OPEN	OPEN
Maximum	OPEN	OPEN	OPEN
Range		0	0

Table 159: Monthly Summary Statistics of Polynya Areas* for Yukon Delta Polynya (J) in 1983.

	JANUARY	FEBRUARY	MARCH
Sample size	20	10	20
Average	41	0	26
Median	0	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	157	0	79
Standard error	35	0	18
Minimum	0	0	0
Maximum	699	0	266
Range	699	0	266

*Polynya areas in square kilometers. All possible area determinations are used for calculations.

**Median is equivalent to median area in Tables 44-50.

Table 159: Monthly Summary Statistics of Polynya Areas* for Yukon Delta Polynya (J) in 1983.

	APRIL	MAY	JUNE
Sample size	19	31	30
Average		OPEN	OPEN
Median	9130	OPEN	OPEN
Mode	OPEN	OPEN	OPEN
Geometric mean		OPEN	OPEN
Standard deviation		0	0
Standard error		0	0
Minimum	0	OPEN	OPEN
Maximum	OPEN	OPEN	OPEN
Range		0	0

Table 160: Monthly Summary Statistics of Polynya Areas* for Norton Sound Polynya (K) in 1983.

	JANUARY	FEBRUARY	MARCH
mple size	21	10	23
erage	2190	1330	8300
dian	1620	1340	9020
de	0	1230	1730
ometric mean		1310	5940
tandard deviation	2630	239	5570
Standard error	574	75	1160
Minimum	0	1000	841
Maximum	8950	1720	16800
Range	8950	720	16000

	APRIL	MAY	JUNE
Sample size	19	31	30
Average		OPEN	OPEN
Median	16300	OPEN	OPEN
Mode	OPEN	OPEN	OPEN
Geometric mean		OPEN	OPEN
Standard deviation		0	0
Standard error		0	0
Minimum	2310	OPEN	OPEN
Maximum	OPEN	OPEN	OPEN
Range		0	0

*Polynya areas in square kilometers. All possible area determinations are used for calculations.

**Median is equivalent to median area in Tables 44-50.

Table 161: Monthly Summary Statistics of Polynya Areas* for Nome Polynya (L) in 1983.

	JANUARY	FEBRUARY	MARCH
Sample size	20	5	21
Average	1720	1030	9530
Median	422	582	9500
Mode	0	221	9020
Geometric mean		592	5330
Standard deviation	2860	1050	5820
Standard error	640	371	1270
Minimum	0	140	350
Maximum	8950	3050	16800
Range	8950	2910	16400

	APRIL	MAY	JUNE
Sample size	18	31	30
Average		OPEN	OPEN
Median	17000	OPEN	OPEN
Mode	OPEN	OPEN	OPEN
Geometric mean		OPEN	OPEN
Standard deviation		0	0
Standard error		0	0
Minimum	0	OPEN	OPEN
Maximum	OPEN	OPEN	OPEN
Range		0	0

Table 162: Monthly Summary Statistics of Polynya Areas* for Seward Peninsula Polynya, South (M) in 1983.

	JANUARY	FEBRUARY	MARCH
Sample size	19	12	22
Average	2680	2300	1720
Median	271	771	1710
Mode	0	0	1650
Geometric mean			1560
Standard deviation	4190	3340	680
Standard error	960	964	145
Minimum	0	0	410
Maximum	12600	10400	3130
Range	12600	10400	2720

*Polynya areas in square kilometers. All possible area determinations are used for calculations.

**Median is equivalent to median area in Tables 44-50.

Table 162: Monthly Summary Statistics of Polynya Areas* for Seward Peninsula Polynya, South (M) in 1983.

	APRIL	MAY	JUNE
Sample size	13	25	30
Average	4630		OPEN
Median	1050	OPEN	OPEN
Mode	914	OPEN	OPEN
Geometric mean			OPEN
Standard deviation	7490		0
Standard error	2080		0
Minimum	0	314	OPEN
Maximum	19100	OPEN	OPEN
Range	19100		0

Table 163: Monthly Summary Statistics of Polynya Areas* for Seward Peninsula Polynya, North (P) in 1983.

	JANUARY	FEBRUARY	MARCH
Sample size	17	12	22
Average	2550	2360	1720
Median	58	922	1710
Mode	0	0	1650
Geometric mean			1560
Standard deviation	4210	3300	680
Standard error	1020	952	145
Minimum	0	0	410
Maximum	12600	10400	3130
Range	12600	10400	2720

	APRIL	MAY	JUNE
Sample size	12	25	30
Average	5010		OPEN
Median	1080	OPEN	OPEN
Mode	914	OPEN	OPEN
Geometric mean			OPEN
Standard deviation	7690		0
Standard error	2220		0
Minimum	0	151	OPEN
Maximum	19100	OPEN	OPEN
Range	19100		0

*Polynya areas in square kilometers. All possible area determinations are used for calculations.

**Median is equivalent to median area in Tables 44-50.

Table 164: Monthly Summary Statistics of Polynya Areas* for Kotzebue Sound Polynya (Q) in 1983.

	JANUARY	FEBRUARY	MARCH
Sample size	21	11	17
Average	1050	409	73
Median	0	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	1700	1360	118
Standard error	371	409	29
Minimum	0	0	0
Maximum	4840	4500	308
Range	4840	4500	308

	APRIL	MAY	JUNE
Sample size	14	28	21
Average	585		
Median	388	886	OPEN
Mode	0	OPEN	OPEN
Geometric mean			
Standard deviation	620		
Standard error	166		
Minimum	0	0	0
Maximum	1490	OPEN	OPEN
Range	1490		

Table 165: Monthly Summary Statistics of Polynya Areas* for Cape Thompson-Pt. Hope Polynya (R) in 1983.

	JANUARY	FEBRUARY	MARCH
Sample size	23	16	22
Average	1090	435	521
Median	0	279	67
Mode	0	0	0
Geometric mean			
Standard deviation	1910	514	677
Standard error	398	128	144
Minimum	0	0	0
Maximum	8070	1660	1900
Range	8070	1660	1900

*Polynya areas in square kilometers. All possible area determinations are used for calculations.

**Median is equivalent to median area in Tables 44-50.

Table 165: Monthly Summary Statistics of Polynya Areas* for Cape Thompson-Pt. Hope Polynya (R) in 1983.

	APRIL	MAY	JUNE
Sample size	14	28	13
Average	340	364	2060
Median	0	0	1830
Mode	0	0	0
Geometric mean			
Standard deviation	570	532	1740
Standard error	152	100	482
Minimum	0	0	0
Maximum	1950	1580	5920
Range	1950	1580	5920

	JULY
Sample size	28
Average	OPEN
Median	OPEN
Mode	OPEN
Geometric mean	OPEN
Standard deviation	0
Standard error	0
Minimum	OPEN
Maximum	OPEN
Range	0

Table 166: Monthly Summary Statistics of Polynya Areas* for Pt. Hope-Cape Lisburne Polynya (S) in 1983.

	JANUARY	FEBRUARY	MARCH
Sample size	20	14	25
Average	266	334	125
Median	192	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	389	515	190
Standard error	87	138	38
Minimum	0	0	0
Maximum	1570	1660	652
Range	1570	1660	652

*Polynya areas in square kilometers. All possible area determinations are used for calculations.

**Median is equivalent to median area in Tables 44-50

Table 166: Monthly Summary Statistics of Polynya Areas* for Pt. Hope-Cape Lisburne Polynya (S) in 1983.

	983 APRIL	983 MAY	983 JUNE
Sample size	18	27	15
Average	128	8160	733
Median	124	516	428
Mode	0	0	0
Geometric mean			
Standard deviation	116	11400	1490
Standard error	27	2200	384
Minimum	0	0	0
Maximum	357	31400	5920
Range	357	31400	5920

	JULY
Sample size	28
Average	OPEN
Median	OPEN
Mode	OPEN
Geometric mean	OPEN
Standard deviation	0
Standard error	0
Minimum	OPEN
Maximum	OPEN
Range	0

Table 167: Monthly Summary Statistics of Polynya Areas* for Cape Lisburne to Pt. Lay Polynya (T) in 1983.

	JANUARY	FEBRUARY	MARCH
Sample size	20	14	28
Average	324	1140	1470
Median	0	0	1210
Mode	0	0	0
Geometric mean			
Standard deviation	552	1710	1640
Standard error	123	456	311
Minimum	0	0	0
Maximum	1920	4340	5900
Range	1920	4340	5900

*Polynya areas in square kilometers. All possible area determinations are used for calculations.

**Median is equivalent to median area in Tables 44-50

Table 167: Monthly Summary Statistics of Polynya Areas* for Cape Lisburne to Pt. Lay Polynya (T) in 1983.

	APRIL	MAY	JUNE
Sample size	21	39	14
Average	1630	21100	3360
Median	1180	21700	930
Mode	0	21700	775
Geometric mean		20200	1540
Standard deviation	2120	5920	4660
Standard error	463	1100	1250
Minimum	0	11100	149
Maximum	9570	31400	12000
Range	9570	20300	11800

	JULY
Sample size	30
Average	
Median	OPEN
Mode	OPEN
Geometric mean	
Standard deviation	
Standard error	
Minimum	4190
Maximum	OPEN
Range	

Table 168: Monthly Summary Statistics of Polynya Areas* for Pt. Lay to Icy Cape Polynya (U) in 1983.

	JANUARY	FEBRUARY	MARCH
Sample size	19	13	26
Average	454	1210	1280
Median	0	0	375
Mode	0	0	0
Geometric mean			
Standard deviation	815	1760	1690
Standard error	187	487	332
Minimum	0	0	0
Maximum	2720	4340	5900
Range	2720	4340	5900

*Polynya areas in square kilometers. All possible area determinations are used for calculations.

**Median is equivalent to median area in Tables 44-50.

Table 168: Monthly Summary Statistics of Polynya Areas* for Pt. Lay to Icy Cape Polynya (U) in 1983.

	APRIL	MAY	JUNE
Sample size	19	29	14
Average	1520	21100	
Median	1060	21700	207
Mode	0	21700	0
Geometric mean		20200	
Standard deviation	2260	5920	
Standard error	519	1100	
Minimum	0	11100	0
Maximum	9570	31400	OPEN
Range	9570	20300	

	JULY
Sample size	12
Average	
Median	6620
Mode	OPEN
Geometric mean	
Standard deviation	
Standard error	
Minimum	4190
Maximum	OPEN
Range	

Table 169: Monthly Summary Statistics of Polynya Areas* for Icy Cape to Pt. Barrow Polynya (V) in 1983.

	JANUARY	FEBRUARY	MARCH
Sample size	19	12	26
Average	578	1200	923
Median**	0	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	892	1830	1630
Standard error	205	529	320
Minimum	0	0	0
Maximum	2720	4340	5900
Range	2720	4340	5900

*Polynya areas in square kilometers. All possible area determinations are used for calculations.

**Median is equivalent to median area in Tables 44-50

Table 169: Monthly Summary Statistics of Polynya Areas* for Icy Cape to Pt. Barrow Polynya (V) in 1983.

	APRIL	MAY	JUNE
Sample size	19	28	15
Average	1100	20600	96
Median	306	21700	0
Mode	0	21700	0
Geometric mean			
Standard deviation	2280	7670	201
Standard error	522	1450	52
Minimum	0	0	0
Maximum	9570	31400	566
Range	9570	31400	566

	JULY
Sample size	14
Average	
Median	0
Mode	0
Geometric mean	
Standard deviation	
Standard error	
Minimum	0
Maximum	OPEN
Range	

Table 170: Monthly Summary Statistics of Polynya Areas* for Chukotsk Peninsula Polynya (W) in 1983.

	JANUARY	FEBRUARY	MARCH
Sample size	12	5	7
Average	454	0	0
Median	0	0	0
Mode	0	0	0
Geometric mean			
Standard deviation	992	0	0
Standard error	286	0	0
Minimum	0	0	0
Maximum	2590	0	0
Range	2590	0	0

*Polynya areas in square kilometers. All possible area determinations are used for calculations.

**Median is equivalent to median area in Tables 44-50.

Table 170: Monthly Summary Statistics of Polynya Areas* for Chukotsk Peninsula Polynya (W) in 1983.

	APRIL	MAY	JUNE
Sample size	6	15	23
Average	0	95	OPEN
Median	0	0	OPEN
Mode	0	0	OPEN
Geometric mean			OPEN
Standard deviation	0	367	0
Standard error	0	95	0
Minimum	0	0	OPEN
Maximum	0	1420	OPEN
Range	0	1420	0

Table 171: Monthly Summary Statistics of Polynya Areas* for Anadyr Gulf Polynya (Y) in 1983.

	JANUARY	FEBRUARY	MARCH
Sample size	11	10	16
Average	6200	3870	8080
Median	4950	3700	7060
Mode	0	3230	6510
Geometric mean			6980
Standard deviation	5570	2920	4430
Standard error	1680	923	1110
Minimum	0	0	2090
Maximum	16300	9650	18500
Range	16300	9650	16400

	APRIL
Sample size	11
Average	7660
Median	6180
Mode	6180
Geometric mean	6730
Standard deviation	3910
Standard error	1180
Minimum	2700
Maximum	14800
Range	12100

*Polynya areas in square kilometers. All possible area determinations are used for calculations.

**Median is equivalent to median area in Tables 44-50