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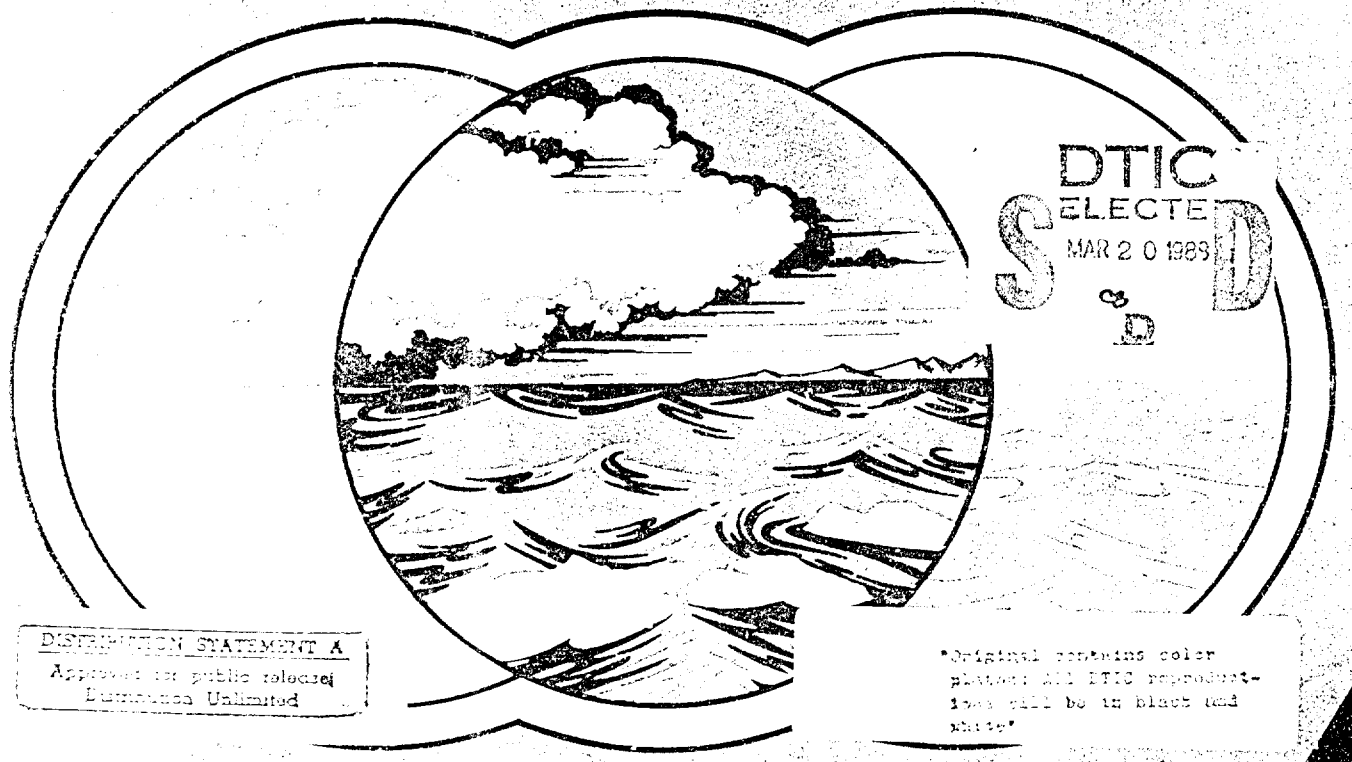
CLIMATIC ATLAS

OF THE OUTER CONTINENTAL SHELF WATERS AND COASTAL REGIONS OF ALASKA



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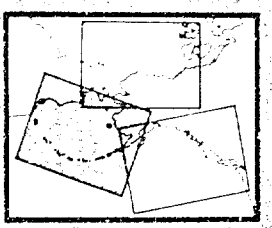

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

This climate study consists of monthly charts and tables of (1) clouds, (2) precipitation, (3) visibility-tables, (4) ceiling-visibility (mid-range/low range), (5) wind-visibility-cloudiness, (6) scalar mean wind speed, (7) wind speed less than 11 and greater or equal to 34 knots, (8) wind speed 11-21 and 22-33 knots, (9) surface wind roses, (10) air and sea temperature, (11) wave height-isopleths, (12) wave height-tables, (13) surface currents (seasonal).

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CLIMATIC ATLAS

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NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE
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1988

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The observations processed for most of the U.S. coastal stations were collected by the National Weather Service (NOAA), the Federal Aviation Administration, and the U.S. Navy, and routinely sent to NCDC for digitizing and archiving. The digital data for the U.S. Air Force (USAF) and Russian stations were provided by the USAF's Environmental Technical Applications Center in Asheville. The digital data for the Canadian coastal stations were purchased from the Canadian Climate Centre in Downsview, Ontario. Data summaries were made possible through programs designed at NCDC and funded primarily by the Commander, U.S. Naval Oceanography Command, in support of U.S. Navy's continuing marine climatology requirements, and by Department of Interior's Minerals Management Service in support of this atlas production.

The extremes data in the first section were updated through 1984 from a published *Alaska Climate Summaries* done by AEIDC in another project, published Canadian normals 1951-1980, and data supplied by Drs. Howard Critchfield and Kelly Redman, state climatologists for Washington and Oregon. Joseph C. LaBelle, glaciologist and geomorphologist at AEIDC assisted in the preparation of Cook Inlet ice and calving glacier ice in Volume I. Thanks also to Denise Cote for editing section I of all volumes and Laura J. Larson who was graphics project leader for the atlas and scheduled work on maps, charts, and text for all 3 volumes.

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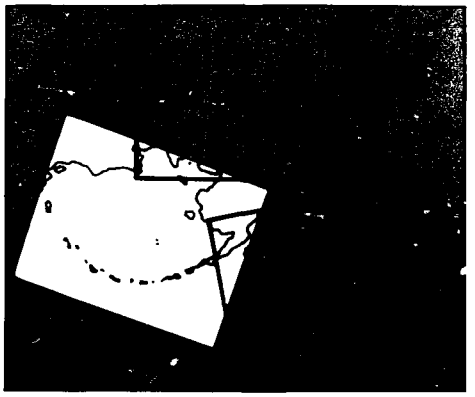
Abstract

This project updates the knowledge of climatological conditions presented in the 1977 publication of this three-volume atlas. Such environmental information for the three Alaskan marine and near-coastal areas is important for resource development of the outer continental shelf—The Gulf of Alaska (Volume I), the Bering Sea (Volume II), and The Chukchi and Beaufort Seas (Volume III) as shown on the map below.

The maps, graphs, and tables in the atlas present a detailed climatic profile of the marine and coastal regions of Alaska. Statistics give the means, extremes, and percent frequency of occurrence of threshold values for these elements: wind, visibility, present weather, sea level pressure, air and sea surface temperature, clouds, waves, and such supplemental information as storm surges, tides, sea ice, cyclone tracks, surface currents, bathymetry, detailed weather, and aviation weather. Data came from 4.5 million surface marine observations and 8.5 million observations for 66 coastal and island stations within the area 40°-84°N and 110°W-160°E, and provide the best possible climatological picture of the outer continental shelf waters and coastal regions of Alaska.



Introduction

The nature of man's offshore activities depends to a large extent on weather conditions. Knowledge of these conditions can help insure efficient and safe operations. Extreme weather conditions that may be encountered in a given location largely determine the design, construction, and operation of permanent platforms and structures in the ocean as well as onshore support activities. This atlas is useful to those engaged in shipping, national defense, fishing, and applied research where a knowledge of coastal and offshore climate is essential. Weather information also aids in assessing the onshore impact of offshore activities.

This atlas is the result of a joint effort by the Arctic Environmental Information and Data Center (AEIDC), University of Alaska and the National Climatic Data Center/National Oceanic Atmospheric Administration (NCDC/NOAA) to present descriptive climatology and data analyses of surface marine and atmospheric parameters for those waters and coastal regions of the Alaskan outer continental shelf important to resource development. It is designed to serve as a climatological reference in the assessment of potential impact by oil and gas exploration and development and of leasing and operating regulations and monitoring programs that will permit resource development and insure environmental protection.

The evaluation is in the form of a climatic atlas for each of three marine and coastal areas: The Gulf of Alaska (Volume I), The Bering Sea (Volume II), and The Chukchi and Beaufort Seas (Volume III).

The first section in each volume contains information on such hazards as storm surges, superstructure icing, hypothermia, and wind chill; extremes data on winds, temperature, and precipitation; and planning information on surface currents, bathymetry, sea ice, and tides. The second section presents a detailed climatic profile in the form of isopleth analyses, graphs, and tables.

Section I: Selected Topics in Marine and Coastal Climatology

by James L. Wise and Lynn D. Leslie

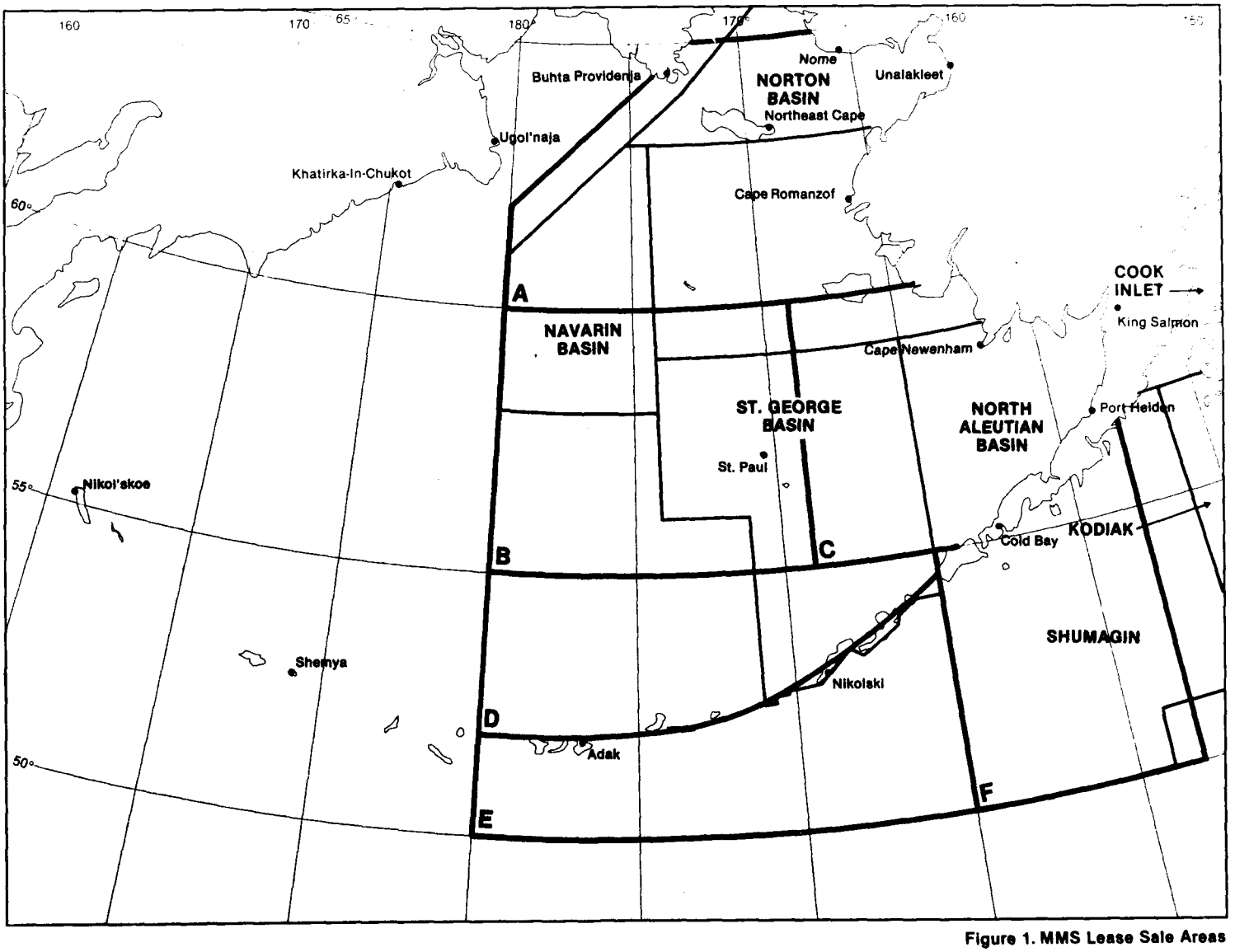


Figure 1. MMS Lease Sale Areas

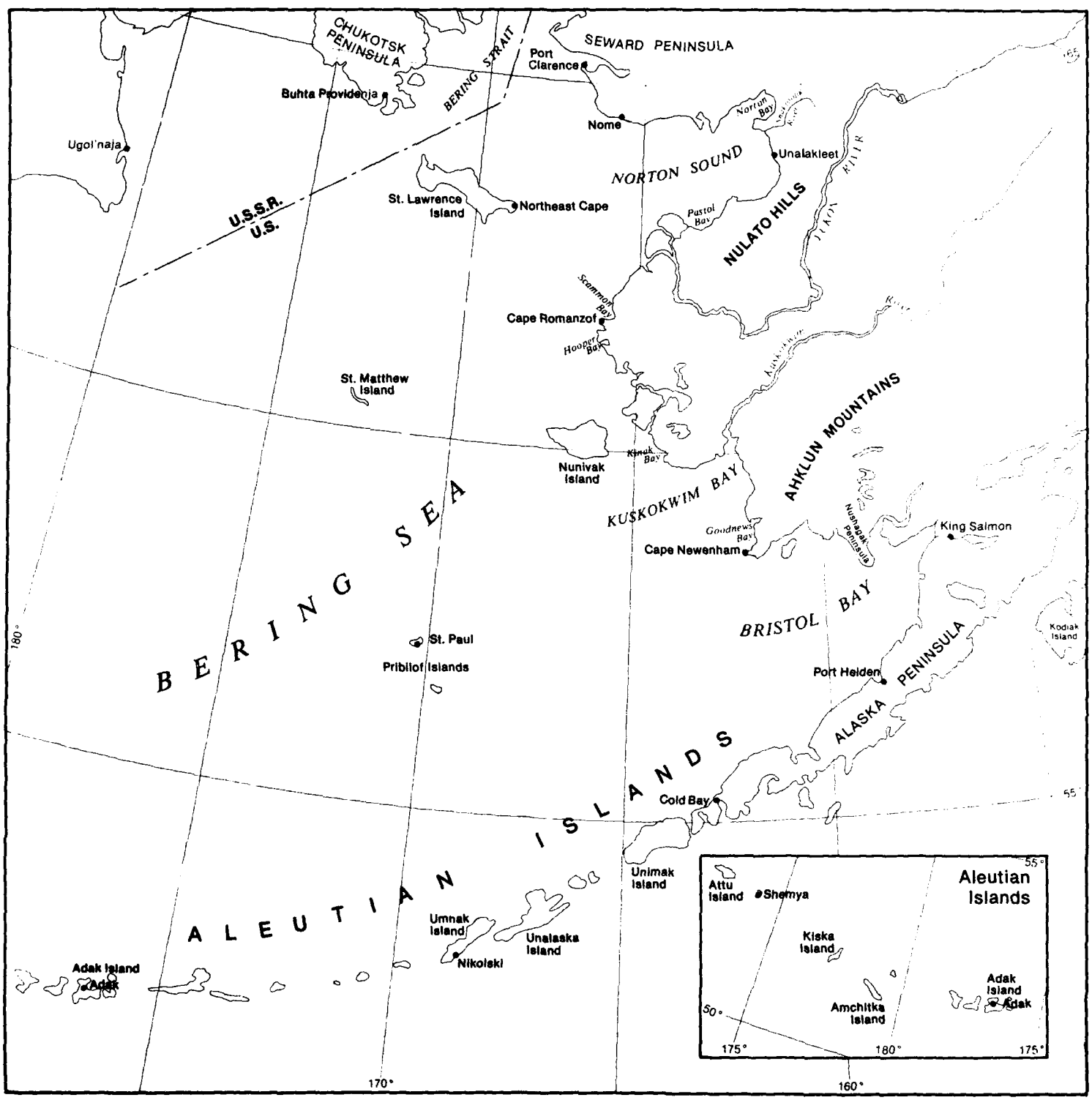


Figure 2. Place Names Map

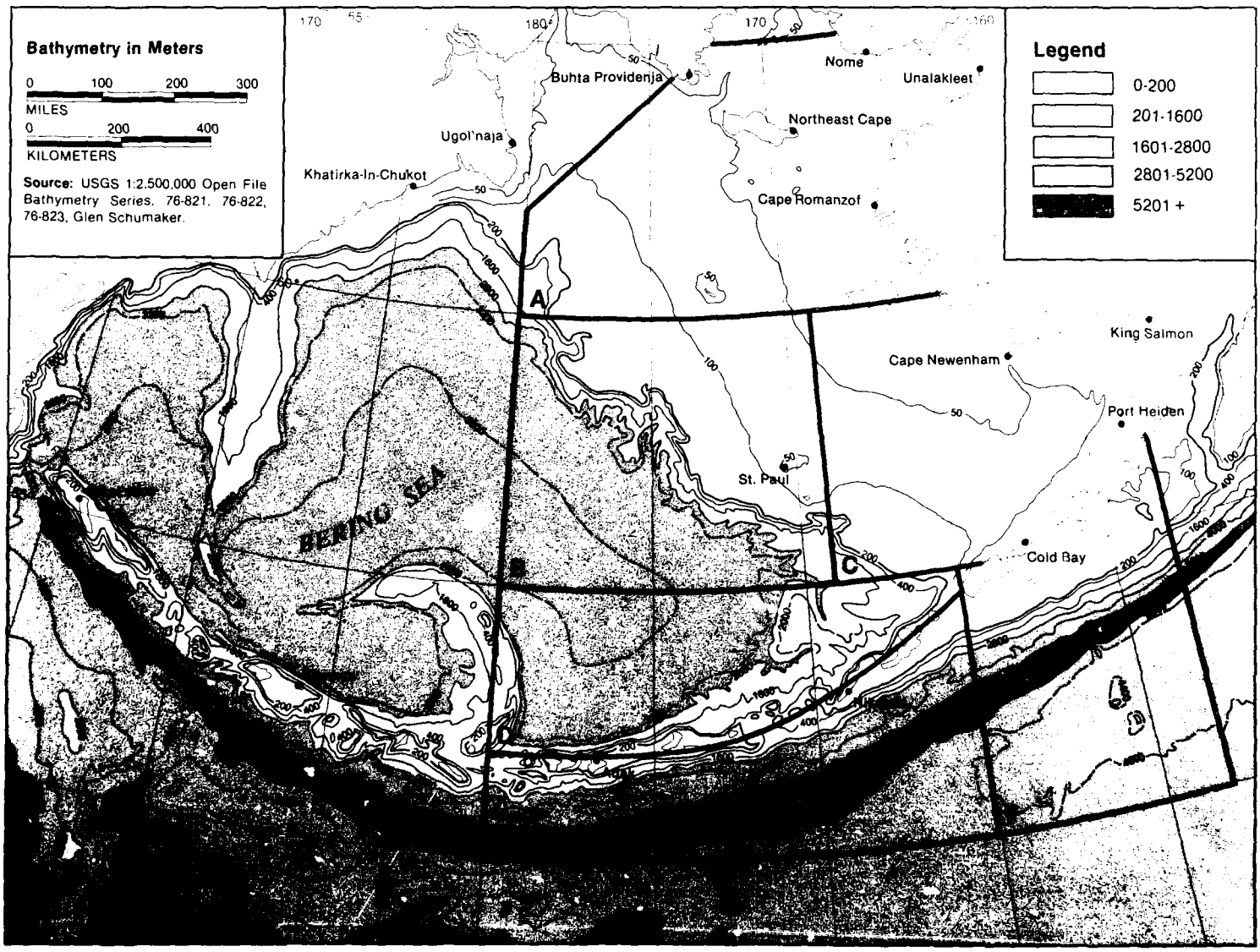


Figure 3. Bathymetry

Currents of the Bering Sea

North Aleutian Shelf

The primary flow of water into the Bering Sea originates at Unimak Pass. The source water of this flow is the Alaskan Coastal Current, from south of the Aleutians. Within the pass and north of Unimak Island, much of the coastal current is entrained into the wind-driven flow along the north Aleutian coast. Typically, this current flows to the northeast into Bristol Bay in the direction of the prevailing wind, following bathymetry contours along the coast. At times, the north Aleutian coastal current will undergo a reversal in direction due to changes in the large-scale and mesoscale wind direction. Because winds are highly variable, their contribution to net circulation is difficult to quantify, but the alongshore component of winds is highly correlated with both onshore and alongshore components of surface and subsurface currents.

Sea level changes on either side of Unimak Pass due to storm track and pressure cell movement are probably responsible for the fluctuation of magnitude and direction in the flow through the pass, which at times is southward. These reversals are more likely to occur when the flow from the seasonally variable Alaskan Coastal Current, from the Gulf of Alaska, is at its minimum. The shoaling bottom through Unimak Pass gives rise to vertical turbulence and mixes the water column.

On the north Aleutian shelf, the net northeasterly flow of approximately 1-5 cm/s is present within the coastal zone (Baker 1983; Cline et al. 1982; Thorsteinson 1984). This current is believed to be continuous with a weak current past Nunivak Island (Kinder and Schumacher 1981). Near Port Moller, currents have smaller magnitudes and do not intensify near the coast. Close inshore, within 50 km, currents ranges from 1 to 6 cm/s (Kinder and Schumacher 1982).

A weak mean flow shows a cyclonic tendency around the perimeter of Bristol Bay, with maximum speeds (roughly 3.5 cm/s) found near and inside the 50-m isobath and in the coastal domain. Mean speeds observed in the central shelf domain were less than 1.0 cm/s, with no sense of an organized circulation (Kinder and Schumacher 1981). There is apparently a net westward convection of water from the central basin of Bristol Bay into the Bering Sea. However, flow in this central region is highly variable, atmospherically forced, and difficult to quantify. Coastal waters along the northern boundary of Bristol Bay, also called the coastal current, continue to follow the bathymetry. The coastal current flows northwesterly into the Bering Sea and then northerly along the Yukon/Kuskokwim Delta. Thus, the fundamental circulation in outer Bristol Bay consists of a typically unclosed, counterclockwise gyre open to the Bering Sea and driven by a combination of wind, tide, estuarian, and thermohaline effects.

Ninety to ninety-five percent of the velocity variance within the bay is tidal, with tidal currents an order of magnitude larger than the mean flow. For example, on the north Aleutian shelf, where net currents are only 1-5 cm/s and the typical wind-driven currents are approximately 10 cm/s at 5 m, the tidal currents are 40-80 cm/s or more (Thorsteinson 1984). Turbulence resulting from tidal currents causes mixing of the water column from the bottom to about 50-m above the bottom. Tidal currents in Bristol Bay are nearly reversing along the Alaska Peninsula and become more cyclonic and rotary offshore. National Ocean Survey current tables show a change in maximum ebb currents from 20-25 cm/s up to 30-40 cm/s in June near Amak Island. Near Port Moller, the tidal current speeds are as high as 100 cm/s (U.S. Department of Commerce 1980). At a depth of 2m the calculated tidal residual current is approximately 3-4cm/s, spatially highly variable, and directed to the northwest (Leendertse and Liu 1981).

Kinder and Schumacher (1981) identified three separate hydrographic flow regimes in the southeastern Bering Sea. The *Coastal* regime is present inside the 50-m isobath in the vicinity of Nunivak Island. It is characterized by generally warm, low saline, vertically well-mixed water which has typical currents on the order of 2-5 cm/s toward the northwest. The *Middle* regime is present in the central Bristol Bay region, where water depths are on the order of 50 to 100 m. It is divided from the coastal regime by a front with an enhanced salinity gradient and is characterized by a strongly stratified, two-layered structure extending approximately to the 100-m isobath. Mean flow is general'y less than 1 cm/s, with no characteristic vector-mean direction. The *Outer* hydrographic region is divided from the middle region by a front along the 100-m isobath and is present out to the shelf break in the open waters beyond Bristol Bay. A fine vertical structure separates surface layers from the deeper, more well-mixed layers. The vector-mean current in this regime is directed to the northwest, with magnitudes on the order of 1-10 cm/s and a statistically significant cross-shelf component of about 1-5 cm/s.

Yukon Delta

The dominant current near the Yukon Delta is the northward flowing Alaskan Coastal Water. The current is thought to bifurcate at the northwest corner of the delta, with one fork flowing inland, toward Norton Sound, and the remaining flow continuing northward (U.S. Navy 1958). Local and seasonal effects can produce variability in the prevailing flow directions. In winter, when winds are from the north, flow offshore of the delta can actually reverse for days or weeks at a time (Aagaard and Coachman 1981). This situation accounted for the flow of the Alaskan Coastal Water about 30% of the time between September 1976 and March 1977 (Zimmerman 1982). The surface currents offshore of the delta tend to flow in the same general direction as the synoptic and mesoscale winds, from the north or northeast in winter and from the southwest during open water season. The typical summer wind frequently produces downwelling and shoreward transport of water, which results in a raised water level and increased wave energy near the coast.

Norton Sound

The currents in Norton Sound are dominated by regional wind and surface pressure patterns. The highest observed flow was measured at about 50 cm/s; flow decreased with increasing depth (Muench 1981). These atmosphere-driven flow events may differ from the mean flow and produce uncertain, intermittent variability in the circulation pattern. Oceanographic data from the mouth of Norton Sound indicate a net northward water transport, with strong seasonal differences in movement rates. Currents between the mouth of the sound and St. Lawrence Island to the west are characterized by somewhat pulsive north-south flow events having speeds of 50-100 cm/s (Muench, Pearson, and Tripp 1978). These speeds contrast with reported mean flow rates of 15 cm/s observed in relative synchrony with major meteorological events. The mean circulation pattern within the sound is cyclonic in character (Drake et al. 1980). A typical feature is westerly flow of water mass, varying in extent and intensity over time, along the northern coast (Cline, Muench, and Tripp 1981). The tidal component in the sound is on the

order of 50 cm/s and reverses either diurnally or semidiurnally. The reversals are roughly northeast/southwest within Norton Sound.

The upper- and lower-layer circulation is decoupled in the eastern sound, but less so in the western sound, where there is a monotonic decrease in speed along with a slight rotation of flow as depth increases. Northwesterly surface flow rotates to westerly near the bottom. In summer, easterly flow enters the sound along its southern shore, curves cyclonically to the north, and is then deflected to the west at the north coast, roughly following the bathymetry. This flow varies in intensity and extent from year to year. In the summer of 1979, a westerly mean flow paralleled the coastline and was superimposed upon a highly variable flow which included reversals (Muench 1981).

Bering Strait

The Bering Sea is characterized by an open shelf south of St. Lawrence Island. Mean currents are variable in direction and range from 1 to 4 cm/s, with the tidal current accounting for 55 (± 31)% of the fluctuation (Coachman, Salo, and Schumacher 1983). Near St. Lawrence Island, the Bering Sea narrows into two straits, the Shpanberg and Anadyr. North of the island the two straits merge to form the Bering Strait. Circulation here is dominated by a northward mean flow ranging from 4 to 15 cm/s, with very small tidal influences 24 (± 13)% variability (Coachman, Salo, Schumacher 1983). Flow in both the Anadyr and Shpanberg is to the north, approximately parallel to the local bathymetry. The flow appears to come from around both ends

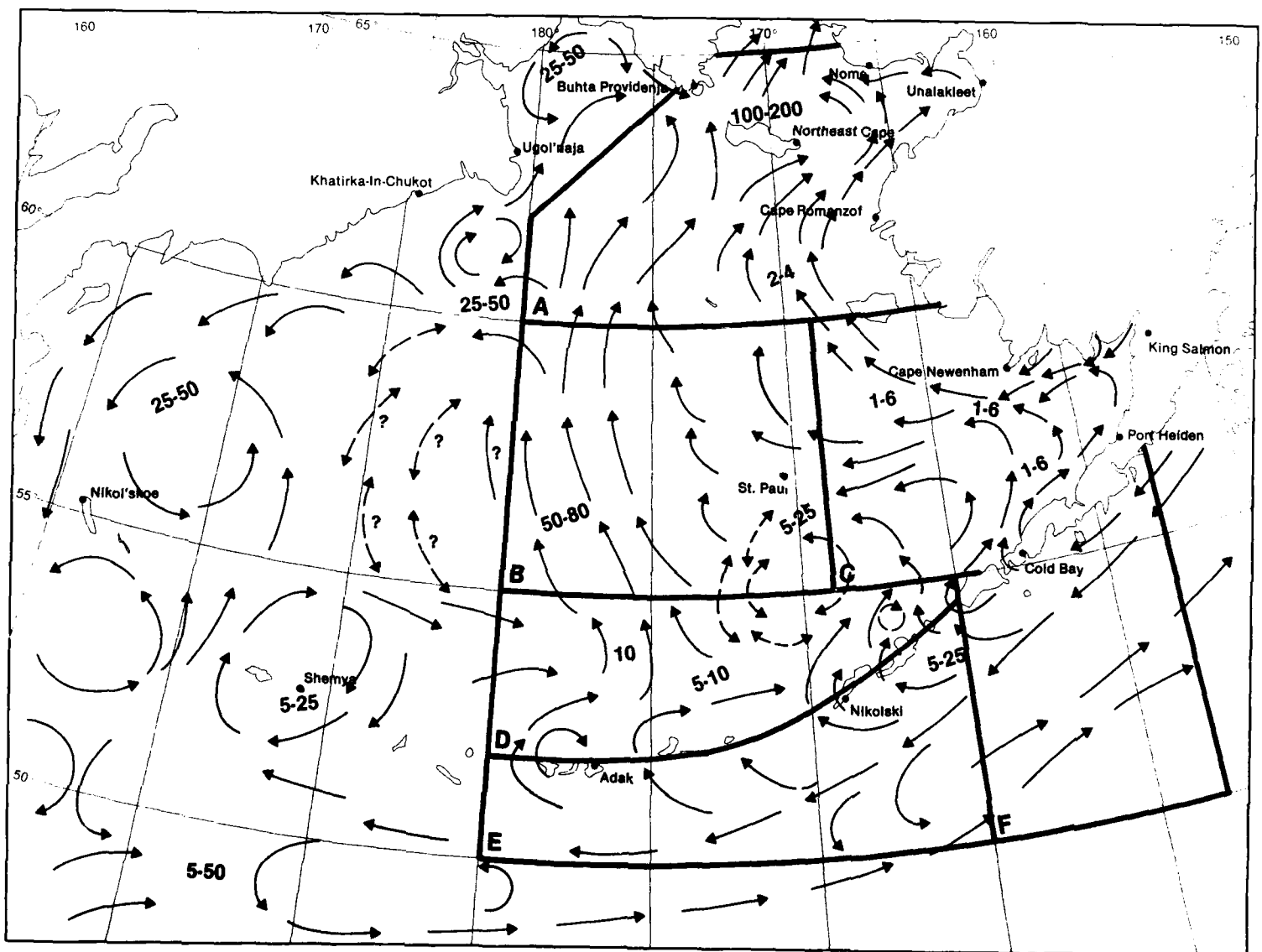


Figure 4. Bering Sea Currents—Summer

Legend

Bering Sea surface currents. Numbers indicate mean speed in cm/s. Arrows depict flow as follows:

Prevailing current direction

Variable current direction

Bering Sea surface currents synthesized from Arsen'er 1967; Goodman et al. 1942; Kinder and Schumacher 1981; LaBelle 1983; Marine Advisory Program, University of Alaska; Notorov 1963; Pelto 1981; Takenouti and Ohtani 1974; and U.S. Navy 1977

of St. Lawrence Island. Frequent reversals are coincidental with meteorological events. These reversals can affect the flow over vast regions covering thousands of square kilometers. The presence of ice appears to dampen the impact of wind stress forcing. The major driving force for the northward flow through Bering Strait is the sea surface sloping down to the north (Aagaard and Coachman 1966). A slope of 2×10^{-6} is associated with average summer northerly transport of approximately 1.6×10^{6} m^3/s. The normal condition is, thus, one in which sea level in the southern Chukchi Sea (in summer) is about 0.5 m lower than in the northern Bering Sea. A major cause of variations in the sea level difference must lie in fluctuations of the regional wind distribution. It is also possible that the atmospheric pressure field may itself directly modify the oceanic pressure field (Aagaard, Coachman, and Tripp 1975).

An examination of recent meteorologic data (Aagaard and Coachman 1981) showed the following results. In every case of southerly flow through the Bering Strait, the large-scale atmospheric pressure patterns were the same. One day

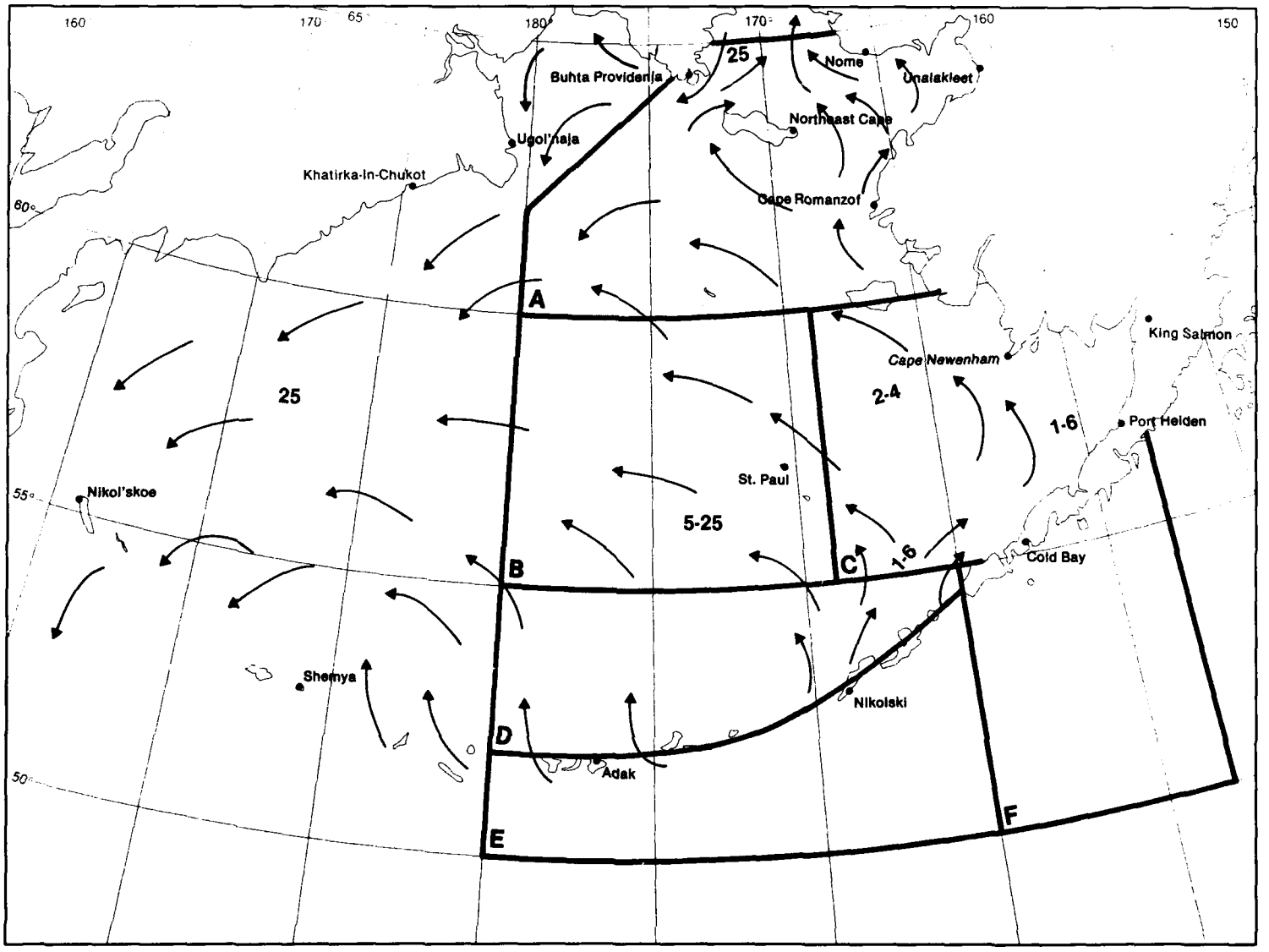


Figure 5. Bering Sea Currents—Winter

before a peak in southerly flow, a strong low-pressure system was centered some distance to the southeast of Bering Strait in the area of Bristol Bay, Kodiak, Anchorage, and the northern Gulf of Alaska. At the same time the Siberian high was centered some distance west or west-northwest of the strait. The isobars signifying the strongest pressure gradient between pressure centers were located precisely over the Bering Strait region. Most significantly, they had a nearly north-south orientation which extended from over the Chukchi Sea south into the central Bering Sea—completely across the northern Bering Sea shelf. If the north-south orientation of the isobars did not extend totally across the northern shelf or if the isobars were oriented northeast-southwest (the nearest typical configuration), strong southerly flow events did not occur.

The mechanism which drives major south flow events now seems clear. Strong north winds must develop over the entire northern Bering Sea, not just over the immediate region of Bering Strait. Large-scale, strong atmospheric pressure cells are required: a low far to the southeast and a high well to the west. The strong northerly winds generated thereby move water southward off the entire northern Bering Sea shelf. Removal of sufficient water off the northern shelf generates a sea-level slope down to the south—sea-level slope has been shown to be the major force driving transport through the strait (Coachman et al. 1975). This, together with the strong north winds caused by the east-west atmospheric pressure gradient, drives enhanced southerly transport. These conditions apparently require about one day to develop, so that maximum south transport occurs the following day. Because the system behaves to a marked degree as a coherent unit, water levels at both St. Lawrence Island and Cape Lisburne fall together and are nearly in phase with the transport.

Northward transport stands in contrast to the southerly transport events. Periods of northerly flow tend to be more persistent and not so great in magnitude, nor do they show the marked episodic character of the southerly flows. The greater persistence of northerly flow must reflect the basic driving force, a higher sea level in the Bering Sea than in the Arctic Ocean (Coachman et al. 1975), which still remains unexplained. There were, however, a number of relatively rapid northward accelerations of transport during the seven months of record which appear to have two basic causes:

(1) After strong south transport events, rapid accelerations commonly occur which can be thought of as compensatory. When atmospheric conditions causing the southerly transport event dissipate, water is not being removed from the northern Bering shelf, but there is still voluminous southerly transport in the system. Water "piles up" in the region around St. Lawrence Island and Norton Sound, a condition reflected by a strong, positive difference in water level. Following this by about one day, a strong northward acceleration occurs.

(2) Occasionally, major northward accelerations appear to be, at least in part, directly driven by atmospheric conditions. Specifically, these are a strong low pressure centered in the western Bering Sea southwest of Bering Strait, or a deep trough from the central Aleutians toward the northwest, so that the isobars in the strong pressure gradient are directed northward from the central Bering Sea along the axis of the system. This configuration creates strong, southerly winds which can move water from the central Bering Sea onto the northern Bering Sea shelf, raising the water level in the vicinity of St. Lawrence Island and enhancing the sea-level slope down to the north.

Central Bering

West and northwest of the North Aleutian Basin and Yukon Delta lies St. George Basin, the Central Bering Sea, and still further west, the Navarin Basin. Circulation in these regions is not as well understood as in the coastal basins. Fewer studies have been conducted in the offshore Bering. Data are site-specific and sporadic over decades. No consistent flow patterns have emerged as representative of the regional circulation. In fact, there is little consensus among investigators that the principal flow is north-south, east-west, or cyclonic or anticyclonic in nature (See Natarov 1963; Arsen'ev 1967; Tak enovti and Ohtani 1974; Goodman 1942; Ratmanov 1937). The northward flowing, eastern boundary current is roughly balanced by a southward flow along the Soviet coast. Within the central region, flow is probably dominated by the location and strength of large-scale atmospheric pressure cells. Response times, directions, and persistence are probably of a similar scale as those controlling flow through the Bering Strait (Aagaard and Coachman 1981). Thus, a dominant regional flow pattern is not readily observed nor easily quantified.

Sea Ice

Introduction

The annual cycle of formation and dissipation of sea ice in Alaska waters has widespread effects on a number of phenomena. When the ice forms, the coastal climate changes in character from maritime to continental with much colder temperatures and lower humidities than would be the case if open water were present. The ice also interferes and even stops water transportation with the possible exception of icebreakers and other specially designed ships. It makes the cleanup of oil spills difficult, if not impossible, by hampering the operation of cleanup equipment and by trapping oil under the ice. Sea ice also has important effects on the life cycles of living creatures in and near the sea.

In the Bering Sea, the sea ice generally begins as fast ice formation along the shores of the Seward and Chukotsk peninsulas in October. As the season progresses and waters in the more open portions of the Bering Sea cool off, the pack ice generally begins its seasonal southward formation in November. An estimated 97% of the ice in the Bering Sea is formed within the Bering Sea (Leanov 1960); very little is transported south through the Bering Strait. During periods of increasing ice and prevailing northerly winds, the ice apparently is generated along the south-facing coasts of the Bering Sea and moves southward with the wind at as much as 1 knot before melting at its southern limit (Pease 1971). During periods of southerly winds, ice coverage generally decreases in the Bering. Prevailing winds can persist in one direction for weeks at a time in winter in the Bering Sea, causing a wide variation in ice cover from month to month and from year to year (see Figure 6 and map set 17, Section II of this volume).

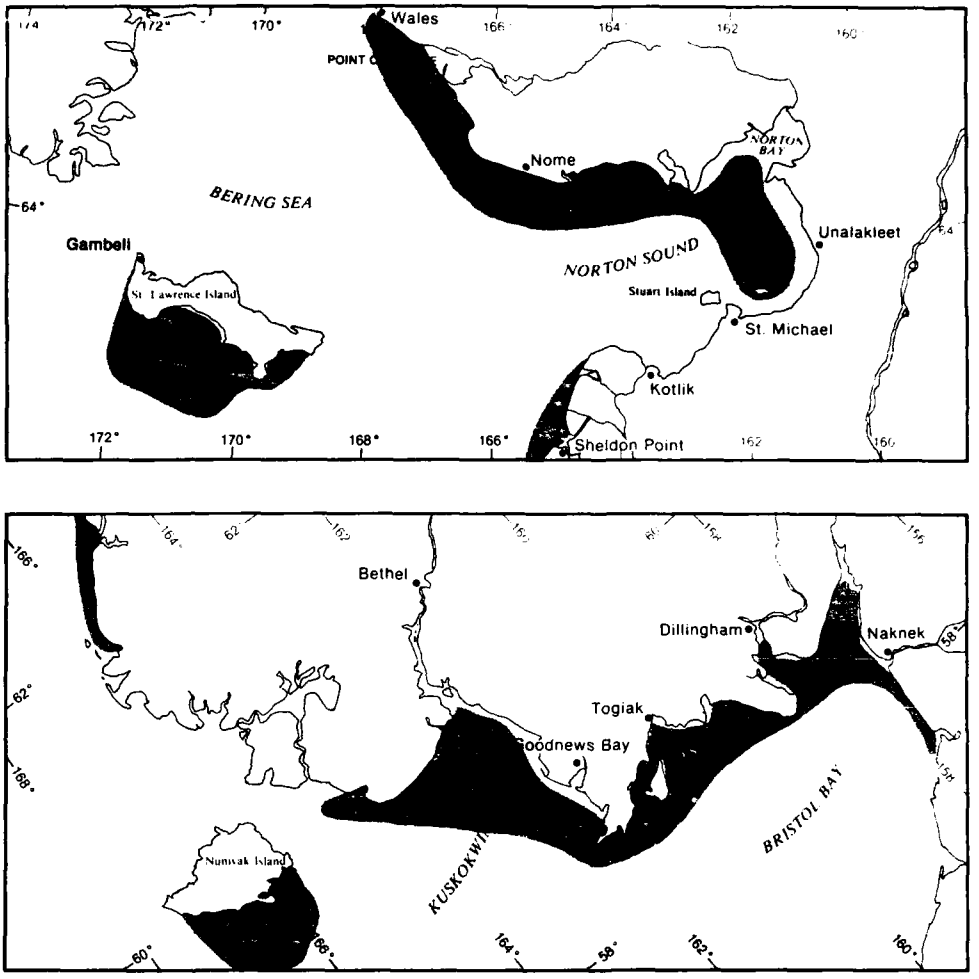


Figure 6. Recurring Polynyas

Synthesized from: McNutt 1981, Stringer, Barrett, and Schreurs 1980, Wohl 1982

Recurring Leads and Polynyas

Wind and current stresses on the ice can cause tension or divergence and open relatively narrow, long stretches of open water in an otherwise dense ice cover. In the absence of strong currents, the wind induces leads which run perpendicular to the wind direction. Flaw leads generally occur just seaward of the stable fast ice zone when strong offshore winds develop.

In the Bering Sea a wind-induced polynya (Figure 6) immediately south of St. Lawrence Island is a frequent but undependable feature (McNutt 1981; Wohl pers. comm.). Northerly winds cause the polynya to form in the lee of the island as sea ice is advected to the south. The polynya can extend more than 160 km and is frequently covered with thin ice. However, the feature is temporal, and a wind shift to southerly flow can close this area rapidly. At such times, a corresponding polynya to the north of St. Lawrence Island is sometimes observed, but it is generally much smaller and occurs less frequently.

A polynya can form on any side of Nunivak Island, depending upon the prevailing wind direction. Usually the feature is located to the north or south, under southerly or northerly winds, respectively. Like the polynya off St. Lawrence Island, the appearance of this polynya is variable, but it is usually observed at least once each year, often more. Its extent is variable, and thin ice commonly covers the polynya quickly during cold, northerly wind storms.

The polynyas shown for Norton Sound, Bristol Bay, and Kuskokwim Bay were taken from Stringer, Barrett, and Schreurs (1980). These features were mapped from LANDSAT scenes collected between 1973 and 1976. Generally, the major polynyas in these areas open in response to northerly winds, which cause all but landfast ice to move toward the south. As the polynyas are opened by the wind,

new ice forms and is, in turn, advected southward. This mechanism for new ice production can be very efficient under the proper circumstances (Pease 1980). None of the polynyas can be considered even semipermanent since a reversal in the wind direction can completely close them. Furthermore, many of the areas shown are partially covered with very thin ice when the northerly winds bring below-freezing temperatures.

Fast Ice and Shear Zones

According to World Meteorological Organization sea ice nomenclature, fast ice includes all ice that has become attached to the shore, even multiyear pack ice. A common feature at the seaward boundary of the fast ice is an area of shear ridges. Shear ridges in the Bering Sea tend to be more localized and of lesser extent and magnitude than farther north. Figure 7 shows the various kinds of ice near shore. Bering Sea ice does not have any multiyear ridges. The accompanying fast ice boundary maps, from the Alaska Marine Ice Atlas, were synthesized from Stringer, Barrett, and Schreurs (1980).

Any significance accorded to trends apparent on these maps must be tempered by consideration of the variability exhibited in the ice-edge data. At some locations, the edge of the fast ice varies considerably in position during each period. Although the average edges along the coast show a temporal trend, it has only minor significance. In other locations, the variability of the fast-ice edge of each period is small compared to the changes in the average position from period to period (Stringer 1981). The intraseason and interseason variability of the fast-ice edge are very dependent on the meteorology and associated wind patterns as well as the offshore bathymetry. Although the prevailing winds in winter are generally northeasterly, there are often periods of a week or more with southerly winds. During northeasterly winds, shore leads and polynyas open up, only to be closed again when winds shift to south or southwest. Also, the high tide ranges in Bristol Bay and along the coast south of Norton Sound tend to break up extensive areas of fast ice, except where it is grounded on mud flats or offshore shoals.

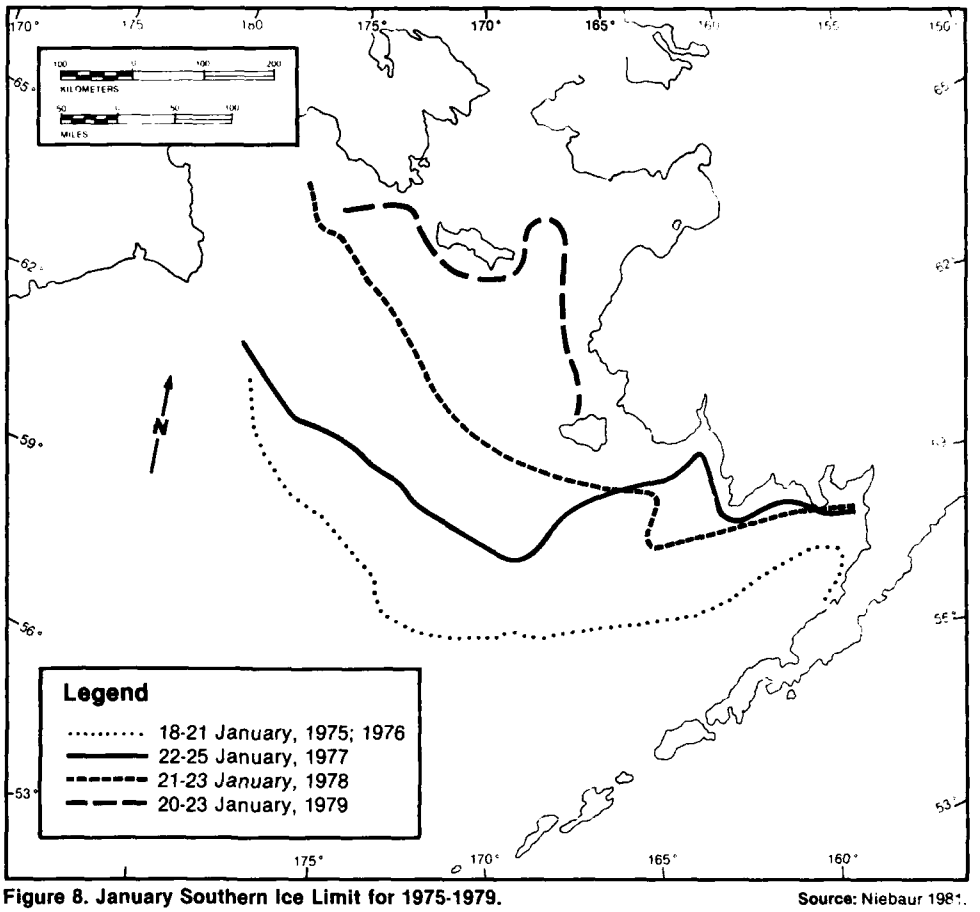


Figure 8. January Southern Ice Limit for 1975-1979. **Source:** Niebaur 1981.

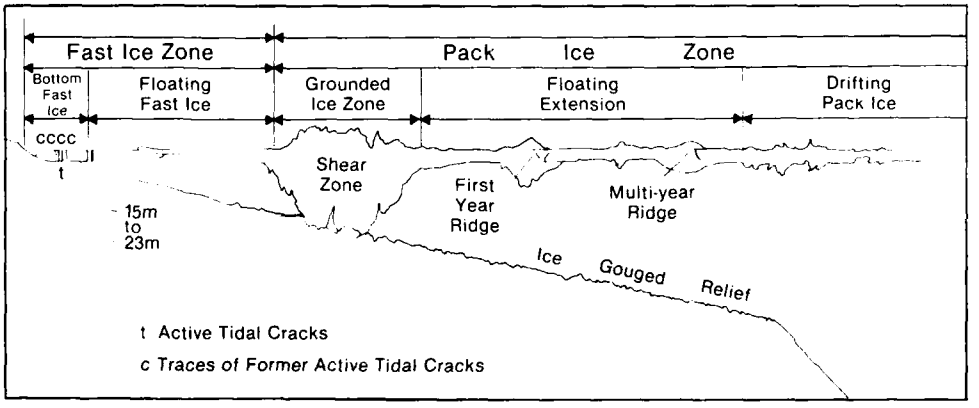


Figure 7. Sea Ice Zones and Types

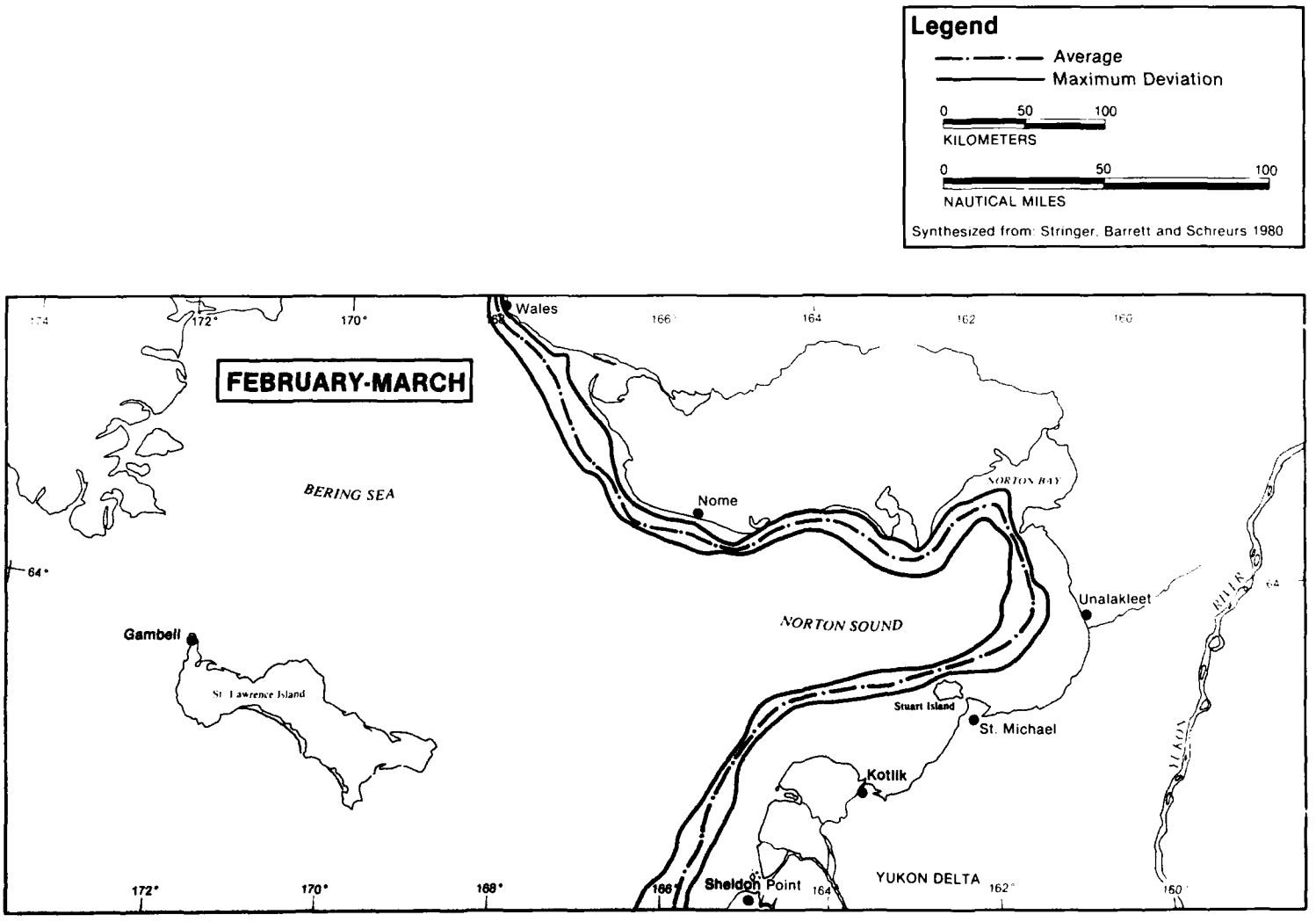


Figure 9. Seasonal Fast Ice Boundary—Norton Sound (February/March)

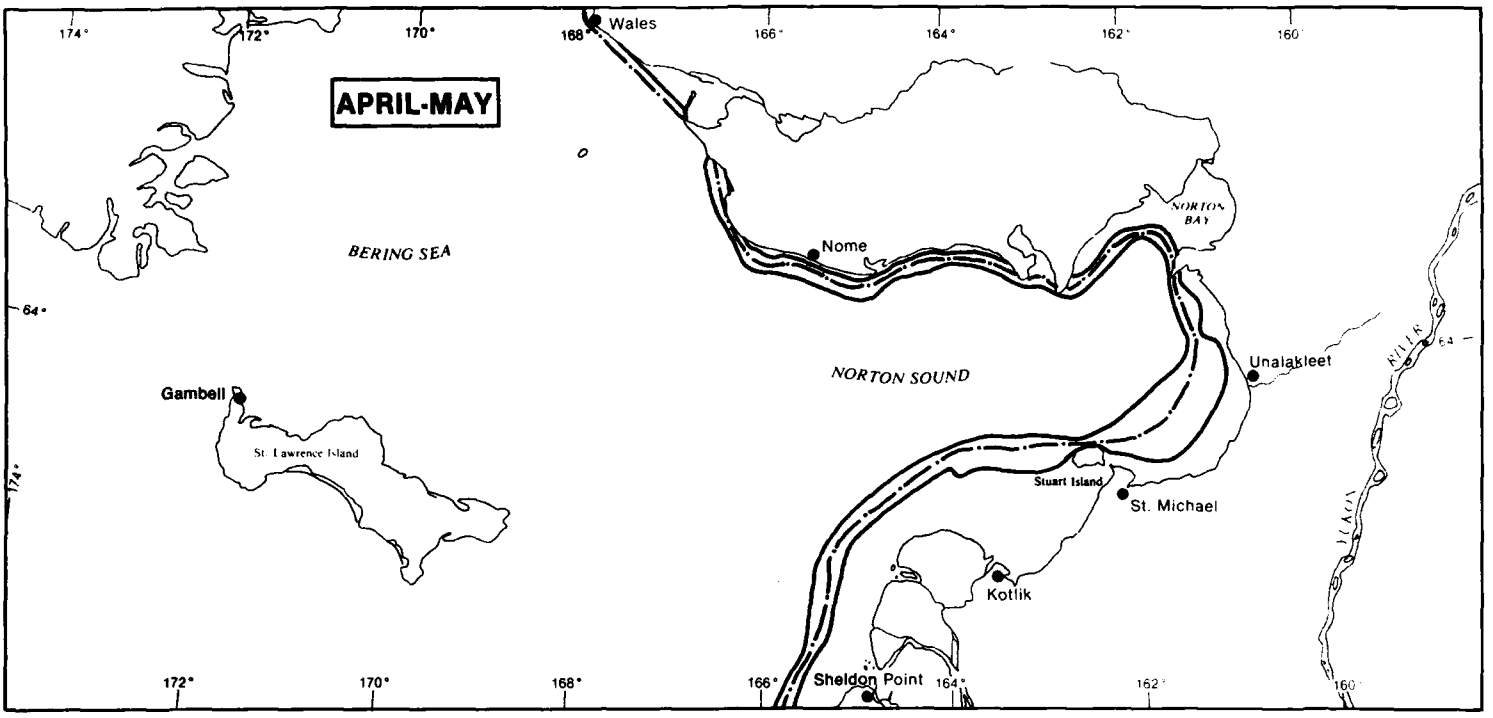


Figure 10. Seasonal Fast Ice Boundary—Norton Sound (April/May)

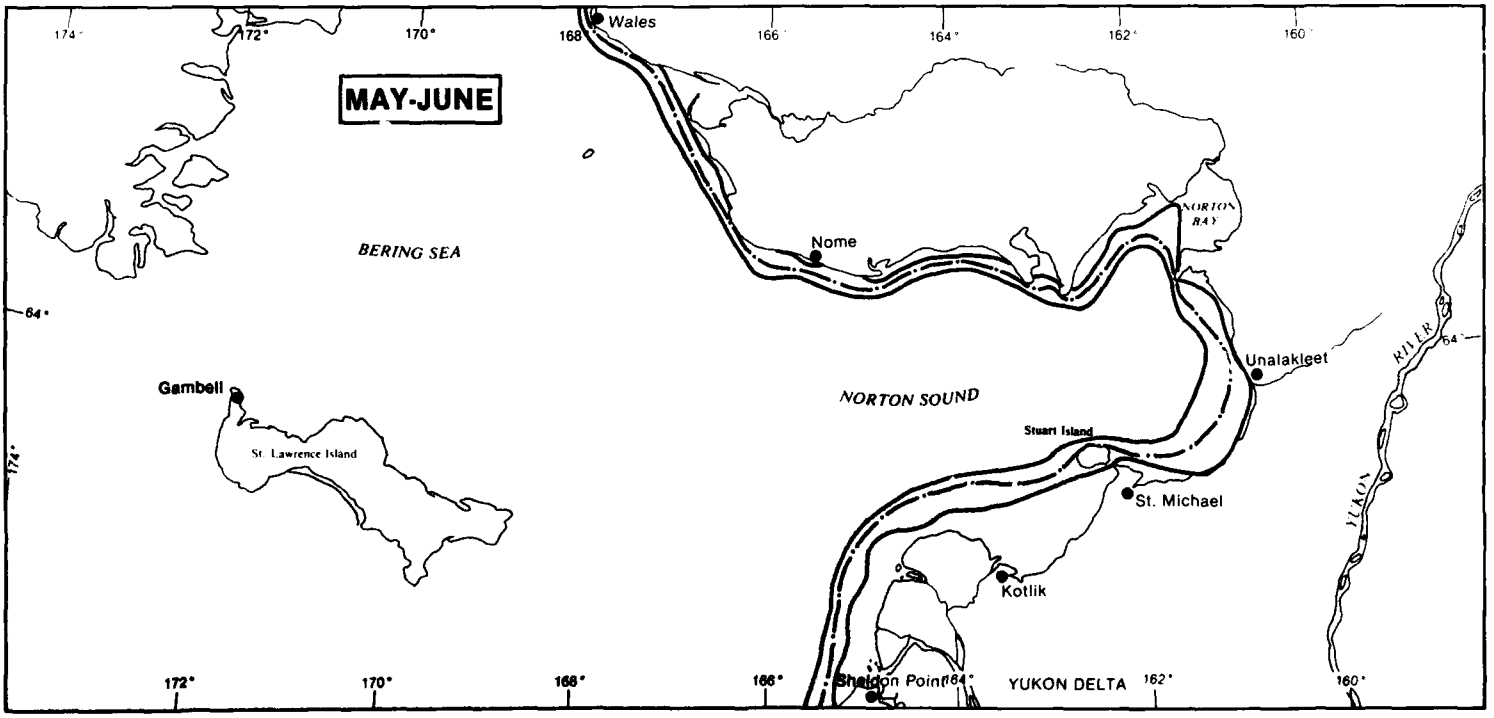


Figure 11. Seasonal Fast Ice Boundary—Norton Sound (May/June)

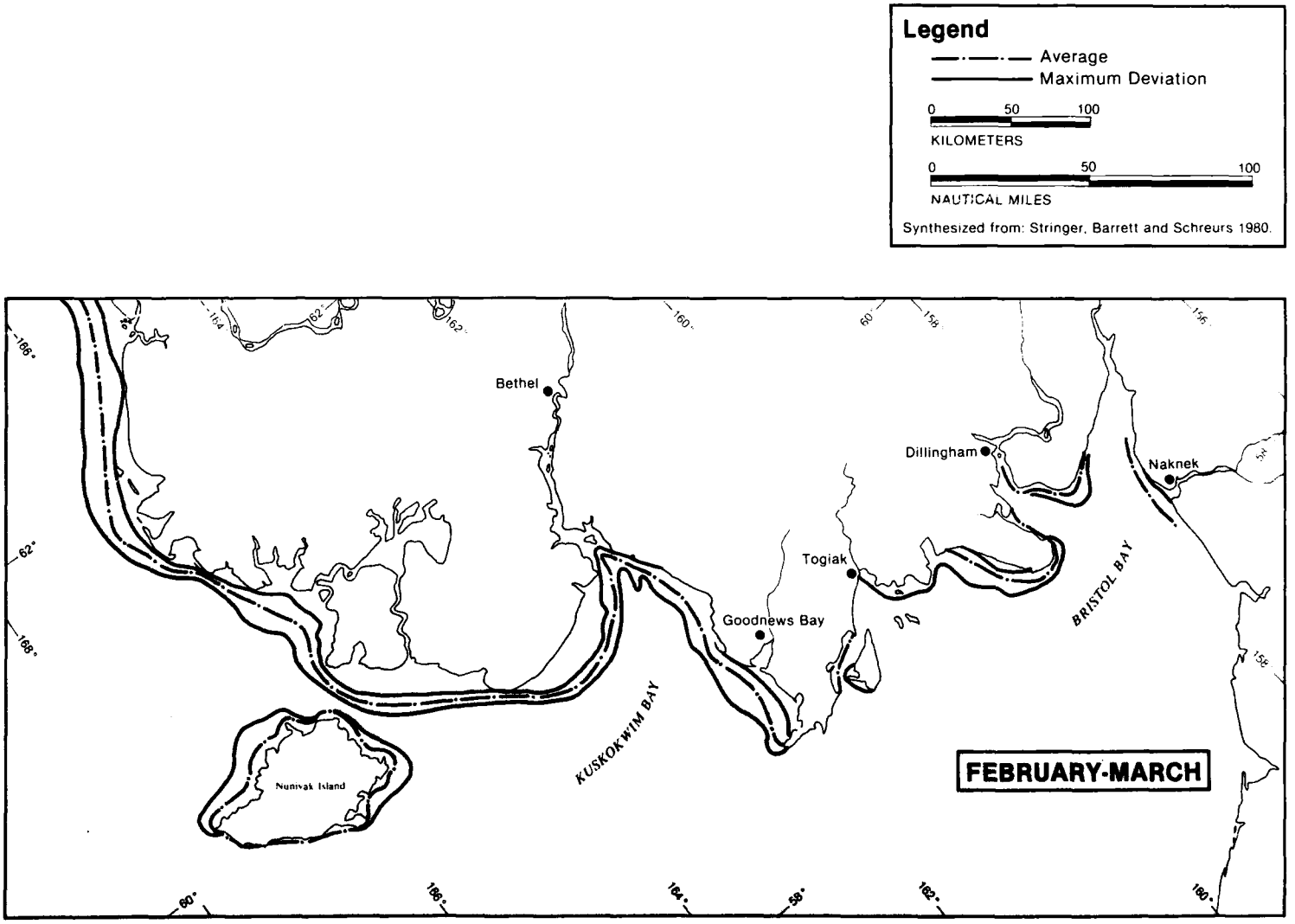


Figure 12. Seasonal Fast Ice Boundary—Southeast Bering (February/March)

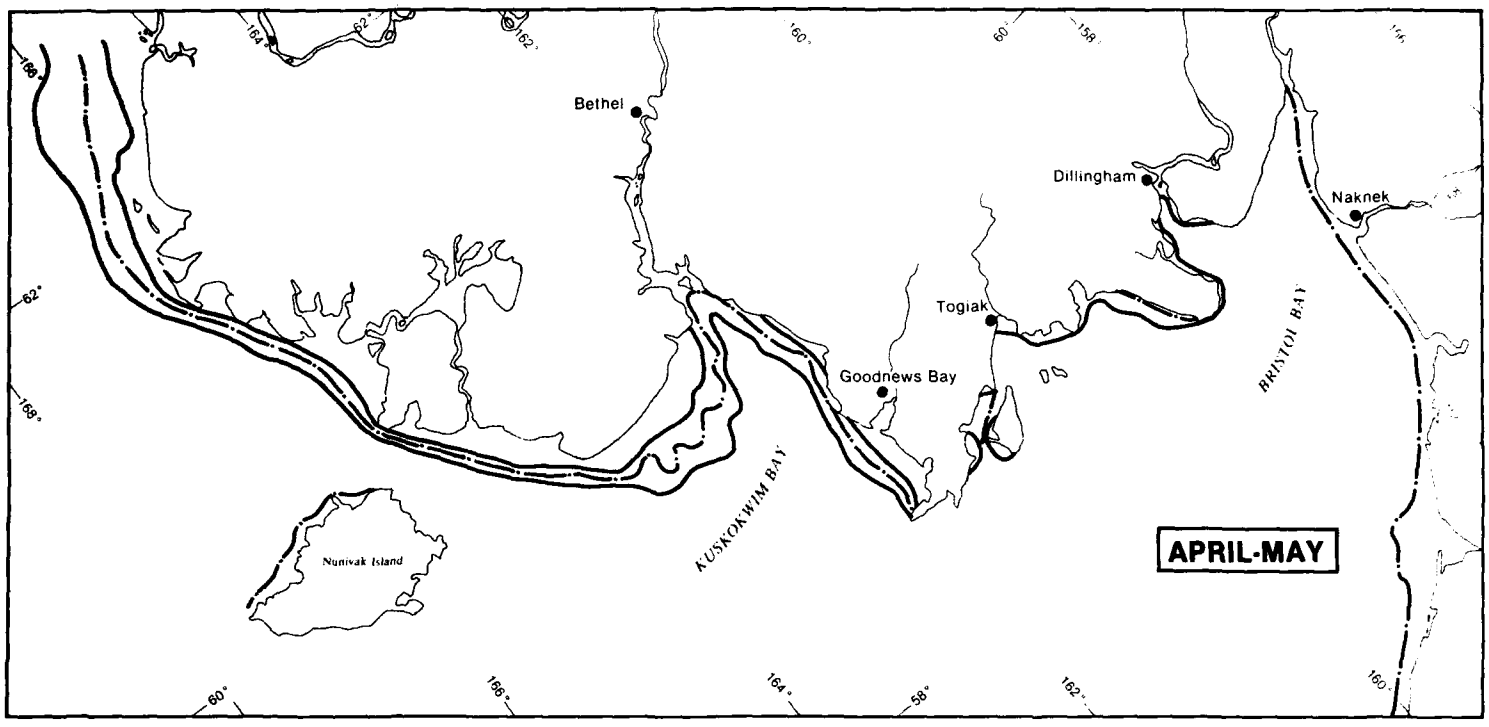


Figure 13. Seasonal Fast Ice Boundary—Southeast Bering (April/May)

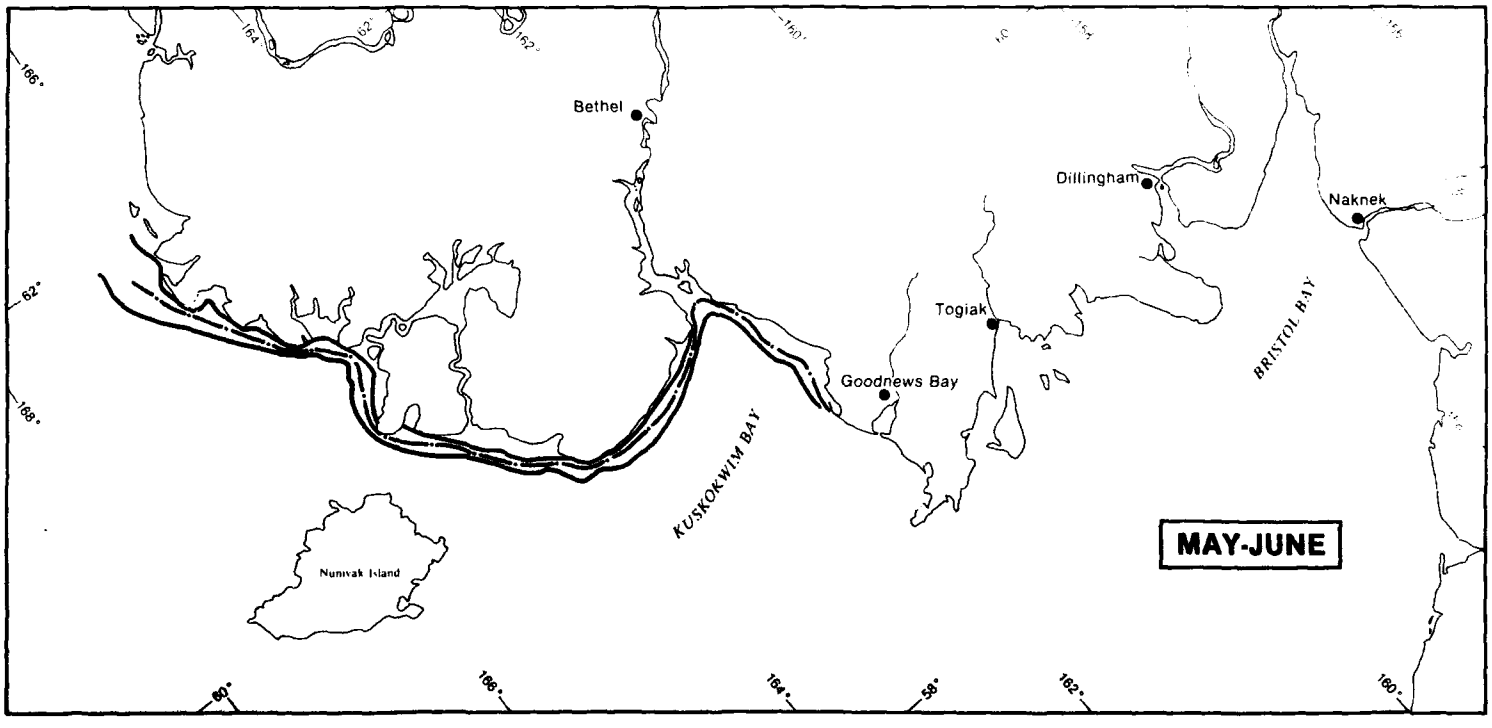


Figure 14. Seasonal Fast Ice Boundary—Southeast Bering (May/June)

Tides

The practical study of tides, aimed at predicting surface elevations and times, involves the empirical treatment of observations made at the desired location over an extended period of time. The motion of the heavenly bodies, particularly the sun and the moon, relative to the earth is known with great precision, so the tide generating potential at any place and time can be computed. Mathematically the potential can be resolved into a finite number of strictly periodic components which, upon addition, produce the total potential of hundreds of tide-generating components that are listed by various authors. Many of the components are of insignificant amplitude and can be excluded from consideration. In practice only seven components are widely used: four semidiurnal (M_2, S_2, N_2, K_2) and three diurnal components (K_1, O_1, P_1) (McLellan 1965). The names and relative weights of these components are shown in Figure 15.

Theoretical models of tides must be verified on the strength of observations at tidal stations where the tide wave has been distorted through passage over a continental shelf of complex topography. The nature of tides in a particular area is highly dependent on the bathymetry, shape, and direction of the coastline and latitude. In the Bering Sea in the last 10 years there have been a large number of presure gauge and current meter observations taken so that tides can be modeled with a high degree of acuracy. The following discussion paraphrases material contained in Pearson, Mofjeld and Tripp, 1981 in which theoretical tide model results are compared to observations. The tides most concerned with are the principal tidal constituents N_2 and M_2 in the semi-diurnal band and O and K in the diurnal band. Ordinarily the S_2 would be included in the discussion, however, S_2 is anonymously small throughout the Bering Sea, possibly because it has small amplitudes in the adjacent North Pacific Ocean. The complicated distributions of semi-diurnal and diurnal tides in the Bering Sea produce a rich variety of tidal types, ranging from fully semi-diurnal in some regions to fully diurnal in others.

The tide wave enters the Bering Sea as a progressive wave from the North Pacific Ocean, mainly through the central and western passages of the Aleutian-Komandorski Islands. The Arctic Ocean is a minor secondary source of tides which propagete southward into the north Bering Sea where they complicate the tidal distributions.

Tides in the Bering Sea are considered to be the result of cooscilation with large oceans. Once inside the Bering Sea, each tidal constituent propagates as a free wave subject to Coriolis effect and bottom friction.

SYMBOL	NAME OF PARTIAL TIDE	COEFFICIENT RATIO
M_2	Principal Lunar	100.0
S_2	Principal Solar	46.6
N_2	Larger Lunar Alliptic	19.2
K_2	Luni-Solar Semi-Diurnal	12.7
K_1	Luni-Solar Diurnal	58.4
O_1	Principal Lunar Diurnal	41.5
P_1	Principal Solar Diurnal	19.4

Contracted from table 15.1, Elements of Oceanography (McLellan 1965).

Figure 15. Major Tide Components

The tide wave propagates rapidly across the deep western basin. Part of it then propagates onto the southeast Bering shelf where large amplitudes are found along the Alaska Peninsula and in Kvichak and Kuskokwim Bays (Figure 17). Another part propagates northeastward past St. Lawrence Island and into Norton Sound. Over most of the Eastern Bering Shelf region the tide is mainly semi-diurnal, but in Norton Sound diurnal tides predominate. Over the remainder of the Bering tides tend to be mixed. In the Aleutians diurnal rather than semi-diurnal components are stronger.

Legend

Diurnal range is the average difference in height between mean higher high water and mean lower low water in feet on a single day.

Max diurnal and Min diurnal are the *maximum and minimum differences in feet respectively between the higher high water and lower low water that are predicted to occur during the year.*

Diurnal Range	
Max diurnal	Min diurnal
Max tide	Min tide

Max tide is the highest tide predicted to occur at the location in feet above the datum level generally taken to be the mean of the lower of the two low waters of each day.

Min tide is the lowest tide predicted to occur at the location in feet above the datum level generally taken to be the mean of the lower of the two waters each day. A negative number indicates a level below the datum level.

Prepared by AEIDC from *West Coast of North and South America Tide Tables, High and Low Water Predictions*, 1986, *West Coast of North and South America*, NOS/NOAA, 1985.

3.5 7.1 | 0.2 5.5 | -2.2 1 Ogliuea Island	3.1 6.3 | 0.2 4.9 | -2.0 2 Hot Springs Bay	3.7 7.5 | 0.2 5.8 | -2.3 3 Sweeper Cove	3.2 6.5 | 0.2 5.0 | -2.0 5 Martin Harbor	3.2 4.2 | 0.2 5.0 | -2.0 4 Shoal Point
3.7 6.4 | 0.3 4.9 | -2.0 6 Inanudak Bay	3.8 6.3 | 0.1 5.1 | -1.8 7 Chernofski Harbor	4.0 6.2 | 0.2 5.3 | -1.7 8 Kashega Bay	3.7 6.4 | 0.1 5.0 | -1.9 9 Dutch Harbor	5.0 7.4 | 1.1 6.3 | -1.6 10 Cape Sarichef
10.8 17.8 | 5.9 13.4 | -1.8 11 Port Moller	17.3 10.4 | 2.5 9.3 | -2.5 12 Sand Point	12.3 19.9 | 6.6 14.9 | -5.2 13 Port Heiden	18.2 26.1 | 11.0 22.1 | -4.6 14 Egegik R. Entrance	22.6 31.6 | 11.0 26.9 | -4.7 15 Naknek R. Entrance
3.2 3.4 | 2.0 3.1 | -0.4 16 Naknek Air Base	16.5 21.3 | 10.9 19.9 | -1.8 17 Kvichak	19.5 28.4 | 12.0 24.0 | -5.0 18 Nushagak Bay		
8.5 11.9 | 2.6 11.3 | -0.6 19 Goodnews Bay	12.2 17.3 | 4.4 16.8 | -0.5 20 Kuskowak Creek	4.0 1.2 | 0.3 1.0 | -0.0 21 Bethel		
3.2 5.5 | 0.0 4.3 | -1.6 22 Village Cove	2.1 3.7 | 0.1 2.9 | -1.1 23 St. Matthew Island			
1.7 6.6 | 0.1 2.9 | -4.0 24 Northeast Cape	1.7 2.8 | 0.6 2.1 | -0.6 25 Meghoweyik River			
6.8 11.2 | 2.3 8.6 | -2.3 26 Cape Romanzof	2.3 2.5 | 1.0 2.1 | -0.3 27 Kwikluak Pass			
4.0 6.8 | 0.9 5.8 | -1.0 28 Apoon Mouth	3.9 6.7 | 0.9 5.7 | -1.0 29 St. Michael			
1.8 3.1 | 0.4 2.6 | -0.5 30 Carolyn Island	1.6 1.6 | 0.4 2.1 | -0.6 31 Nome			

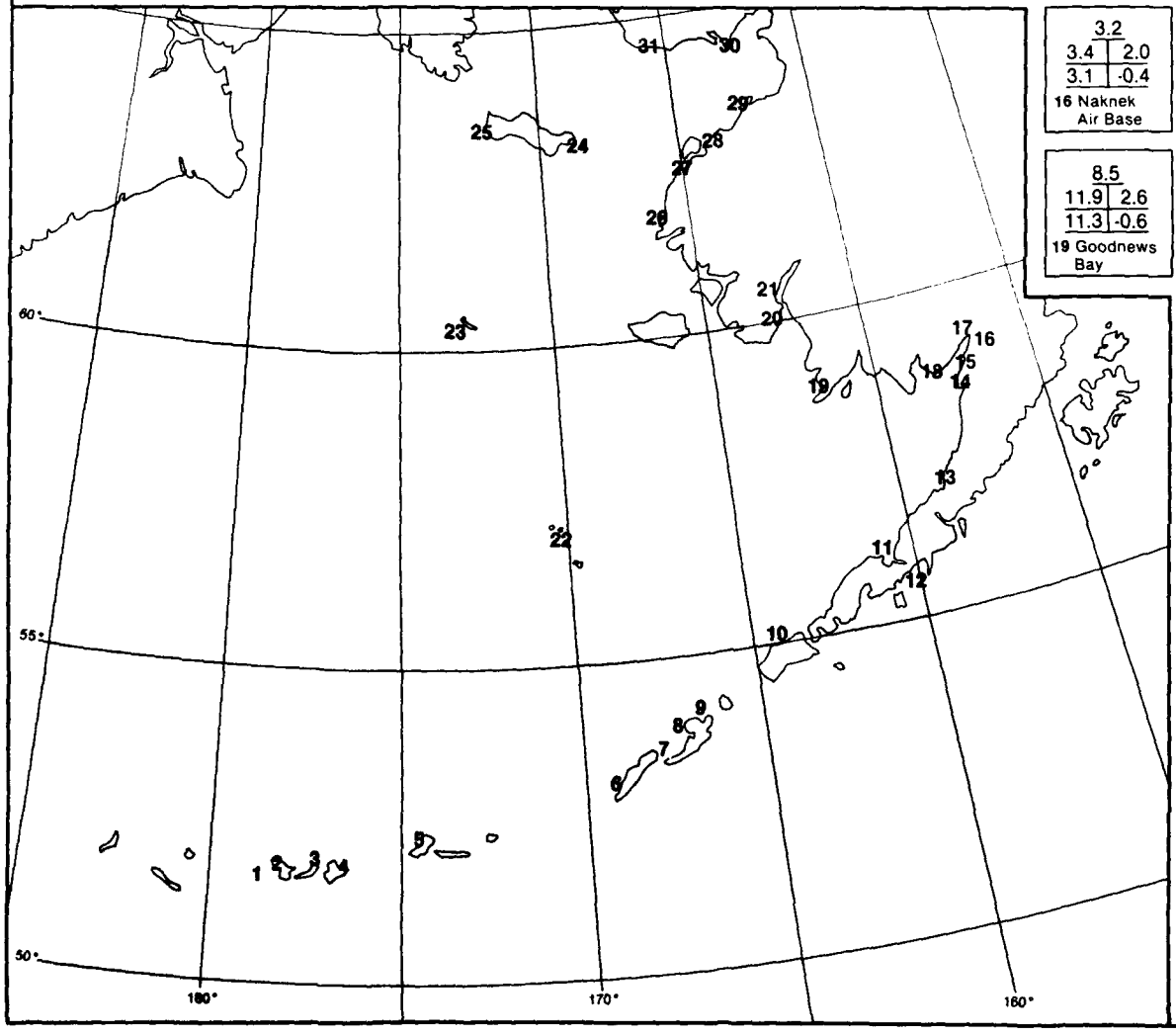


Figure 16. Tide Data

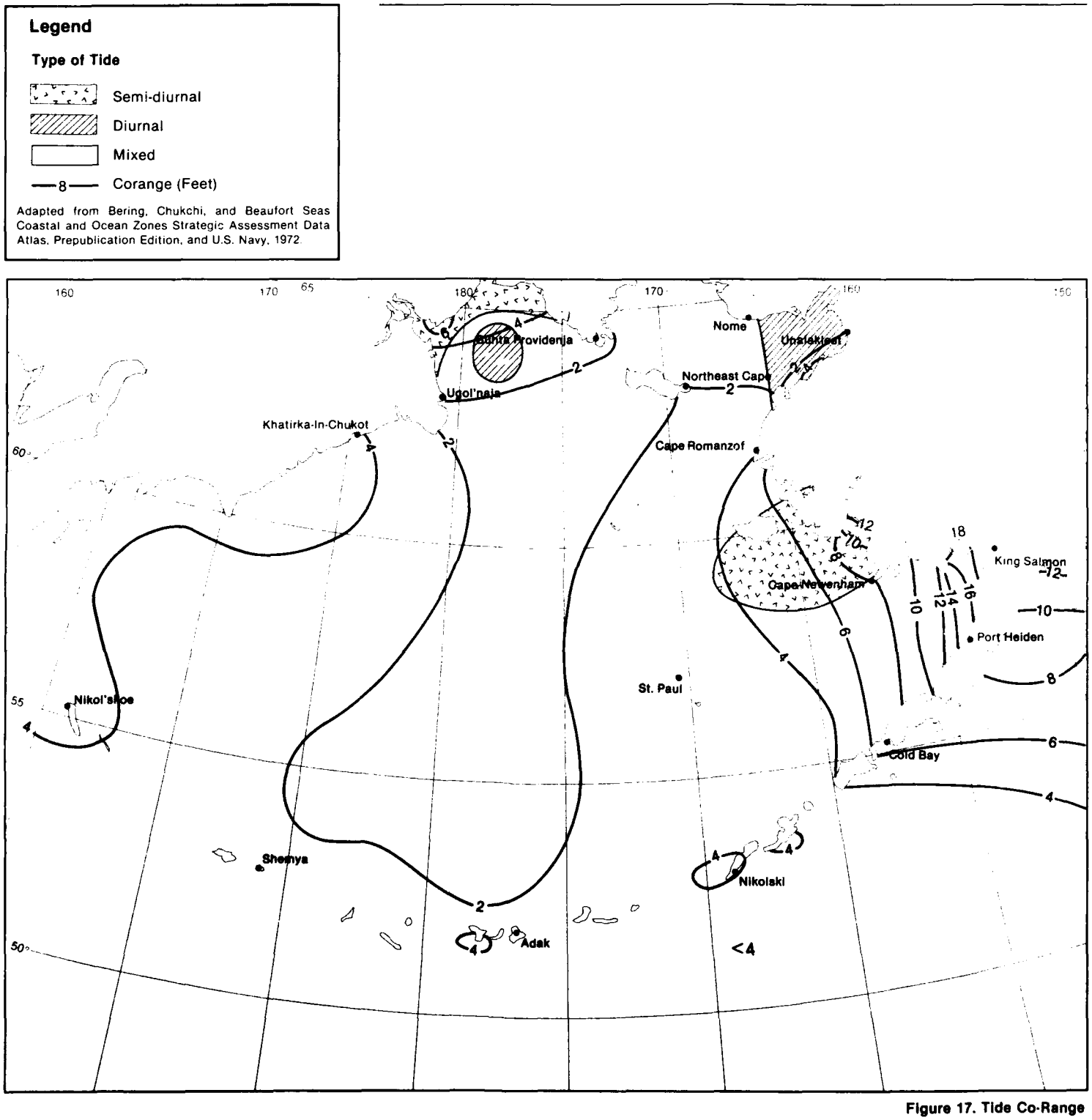


Figure 17. Tide Co-Range

Storm Surges

Storm surges are waves oscillating in the period range of a few minutes to a few days, in a coastal or inland water body, resulting from forcing from atmospheric weather systems (Murty 1984). By this definition, wind-generated waves (often referred to as wind waves) and swell, which have periods of several seconds, are excluded. The spectrum of storm surge waves is centered around 10^{-4} cycles per second (CPS), which gives a period of about three hours. However, depending mainly on the topography of the water body and secondarily on other parameters, such as the direction of movement of the storm, strength of the storm, stratification of the water body, presence or absence of ice cover, and nature of tidal motion in the water body, the periods of the water level oscillations may vary considerably. Even in the same water body, storm surge records at different locations can exhibit different periods.

Although storm surges belong to the class known as long waves, as do astronomical tides and tsunamis, there are at least two important differences. First, whereas tides and tsunamis occur on an oceanic scale, storm surges are simply a coastal phenomenon. Second, significant tides and tsunamis cannot occur in an enclosed, small, coastal or inland water body, but storm surges can occur even in lakes, or in canals and rivers. The range or height of a storm

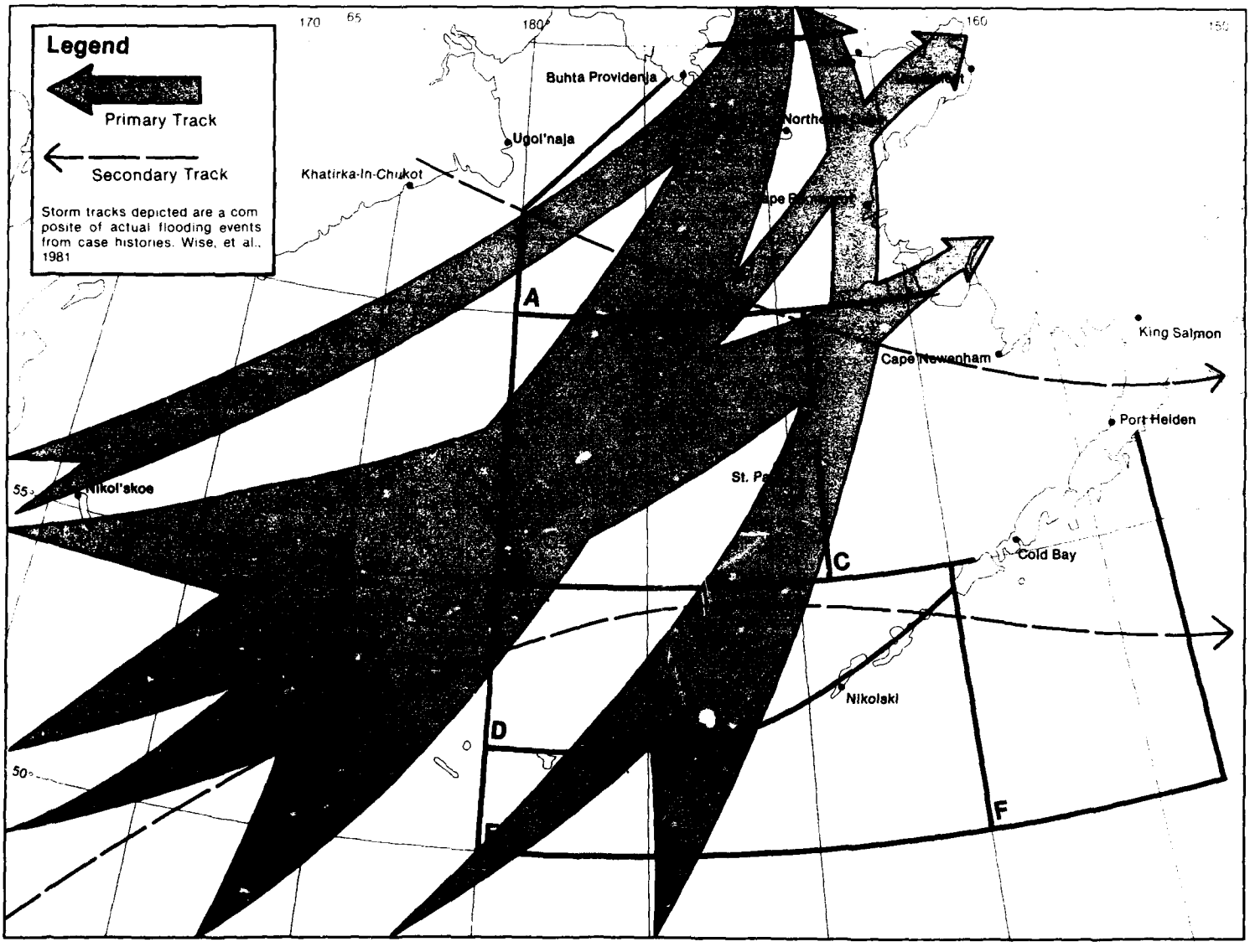


Figure 18. Storm Tracks with Storm Surge Floods

surge depends not only on characteristics of the storm but also on the topography onshore and bathymetry offshore. Shallow water bodies generally experience surges with greater ranges. Also, the height of a storm surge is less if the sea floor is steep than if there is a shallow slope to the sea floor (Murty 1984). Storm characteristics that effect the height of a surge include atmospheric pressure; wind speed, direction, and length of fetch; the latitude; and the direction and speed of storm movement. Air and water temperature differences also affect the height of surges.

Following is a discussion of the storm surge potentials from a study done in 1981 (Wise, Comiskey, and Becker), supplemented by storm statistics since then (NOAA Storm Data, 1981-1986) and a modeling study for surges in Norton Sound (Wise, Comiskey, and Becker 1981; Kowalik and Johnson 1985).

Along the southwest and south coasts of the Seward Peninsula the terrain is generally of moderate relief, with the exception of Port Clarence and the east end of Norton Sound. The waters offshore are shallow with a gently sloping sea floor. The open waters of the Bering Sea provide a long fetch for the development of storm waves. Sea ice restricts the development of storm waves from about the first of December to the first of June on the average; however, there can be a high degree of annual variability. Of 13 known flooding events in Nome, all except two occurred in the fall. One destructive storm for which little factual information is available occurred in April 1906, and another occurred in July 1969. Surges above 4 m (12 ft) have occurred along this section of coast. The most recent was in November 1974; a 3 m (10-ft) surge brought water into the town over the sea wall. This particular storm caused widespread flooding all along the Bering Sea coast.

With the exception of the Shaktoolik River mouth, which is of low relief and marshy, the coast at the east end of Norton Sound is generally rugged due to the proximity of the Nulato Hills. The south coast of Norton Sound is generally of low relief. The sound itself is shallow, with a gently sloping sea floor that is very favorable for the development of storm surges. The range of wind directions for the development of storm surges is limited to west-southwest to west. However, the east end of Norton Sound often experiences minor flooding, despite unfavorable winds, due to rising sea levels all over the sound.

A storm surge modeling study (Kowalik and Johnson 1985), determined that for the November 1974 storm the highest surge in Norton Sound was in Norton Bay, with a modeled surge of more than 3 m (10 ft). The same study also determined that negative surges of more than a meter can occur in the eastern end of Norton Sound in the presence of strong, persistent northeast winds in winter with an ice cover present. The winds tend to move the pack ice away from the shorefast ice and reduce ice cover from 0.7 or 0.9 coverage to less than 0.55 coverage over much of Norton Sound.

Eleven of the twelve storm surge cases at Unalakleet occurred in the fall; the other was in July. Sea ice and shorefast ice limit the fetch for the development of positive storm surges from about the first of December to the first of June.

The shores of Pastol Bay and the north coast of the Yukon River delta do not have long fetches favorable for the generation of waves and storm surges. However, this area experiences surges due to increases in the height of the water in Norton Sound. The remaining coast of the Yukon Delta is exposed to the open waters of the Bering Sea, where conditions are very favorable for the development of storm surges due to low relief onshore, shallow water offshore, and thousands of miles of open sea. Most surges causing property damage occur in the fall or in August. However, early summer surges can be very hard on nesting birds in the salt flats. In June 1963 80% to 90% of the black brandt production was lost due to flooding of the nesting area after eggs were laid.

The coastal area is generally of low relief from the Kuskokwim Delta to Goodnews Bay, with numerous lakes, sloughs, and marshes. From Goodnews Bay to the Nushagak Peninsula the coastline is more rugged due to the proximity of the Ahklun Mountains. The remainder of the coastline of Bristol Bay is similar to the stretch from the Kuskokwim River to Goodnews Bay. Offshore the shape of the sea floor is conducive to the formation and enhancement of storm surges. From Goodnews Bay northward an adequate fetch can be generated with storm winds from south through west to northwest. East of Goodnews Bay, westsouthwest to west are the only directions from which an adequate fetch can develop.

Autumn and late summer are the seasons for destructive storm surge flooding in this area. There are ten known cases of storm surge flooding of populated areas; seven were in autumn and three were in August. Two storms, in November 1979 and in August 1980, account for most of the factual reports of storm surge flooding. The November 1979 storm caused storm surge flooding from Cape Newenham to Scammon Bay. Surges were estimated at 2.5 m (8 ft) in exposed locations in the Kuskokwim Delta. The storm was on a track from west-southwest to eastnortheast, and a long fetch of more than 640 km (400 mi) developed with the storm. The August 1980 storm, one of the few summer flooding events, caused flooding on the shore of Bristol Bay. The storm was on a track from south-southwest toward north-northeast from near Atka Island, in the Aleutians, to Kuskokwim Bay. Exposed locations showed surge flooding up to 4 m (12 ft).

The coastal area from Hooper Bay to Kinak Bay is a favored nesting area of migratory birds in the spring and summer. Minor storm surges that cover nests in this area at the wrong time can be detrimental to the annual production of several species of birds. Five cases of minor summer flooding of the salt flats were documented in an annual report for the Clarence Rhode National Wildlife Refuge (USFWS 1964). One event (June 22, 1963) caused a loss of black brandt offspring estimated at 80% to 90% of the year's production.

Most of the north shore of the Alaska Peninsula east of Cold Bay is favorable for the occurrence of storm surge flooding, with low, marshy terrain onshore and a moderately sloping sea floor offshore. West of Cold Bay the Aleutian Islands and the south shore of the Alaska Peninsula conditions are not favorable due to rugged terrain onshore and steep ocean floor offshore. The only storm surges discovered in this area were at Meshik, or Port Heiden, and St. Paul. Damage to structures in this area is more likely to be from strong winds and beach erosion caused by wave action than from flooding.

Superstructure Icing

Structural icing on ships, offshore structures, and port facilities is a wintertime hazard in open waters and coastal sections of Alaska. The icing causes slippery decks, renders moving parts inoperable, and, in extreme cases, causes uneven loading and raises the center of gravity on small ships. Accumulation of ice on rigging and on deck equipment such as crab pots also increases wind effects because a larger surface area is presented to the wind. Ice forming on structural surfaces above or close to a body of water arises principally from sea spray (Nauman and Tyage 1985; Liljestrom 1985), with lesser amounts from atmospheric precipitation (freezing rain and wet snow) and fog (arctic sea smoke, white frost, black frost). Sea spray, the most dangerous source of icing, is produced by the breaking of waves against obstacles such as ships' hulls, other floating objects, shore structures, and, possibly, other sources (Minsk 1977).

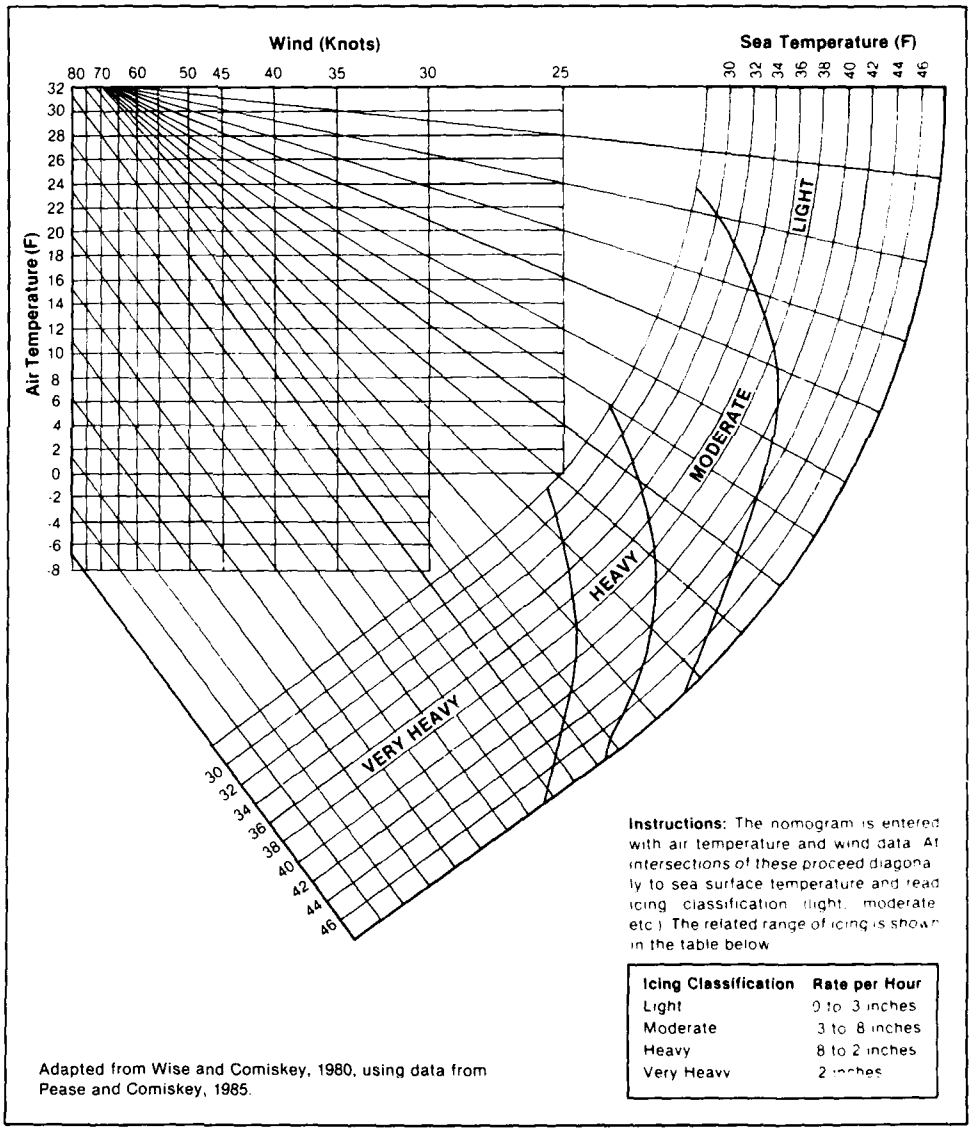
Statistical analysis (Borisenkov and Panov 1972) of more than 3,000 cases of ship icing indicates that in 86% of the cases icing was caused by ocean spray alone. Spray combined with fog, rain, or drizzle (liquid sources) accounted for only 6.4% of the cases, and spray combined with (solid source) snow only 1.1%. The cases of icing attributable only to fog, rain, or drizzle account for 2.7% (Minsk 1977). In the remainder of icing cases data were not sufficient to determine the cause.

Since the overwhelming majority of superstructure icing on ships and offshore structures is from sea spray, the remainder of this section will concentrate on this type of icing. Since a ship can present different aspects to the wind and spray, it is to be expected that the amount of spray reaching the ship will vary: Russian observations (Kultashev, et al. 1972) showed that the greatest frequency of spray and, therefore, icing occurs when a ship is heading into the wind at an angle between 15° and 45°. Asymmetrical icing occurs under this condition, with the greater accumulation on the windward side. Less icing occurs with the ship headed directly into the wind, and then accumulation tends to be uniform. With ships heading downwind, spray icing is generally much less than at other angles. In developing the nomogram for forecasting spray icing potential, downwind cases (those for which the ship's heading was 120° or greater off the wind) were not used.

Meteorological/oceanographic conditions necessary for significant spray icing are water temperatures less than 8°C, winds of 25 knots (13 meters per second) or more, and air temperatures less than −2°C (28°F, the freezing temperature of seawater of average salinity). Generally, the stronger the wind, and the colder the air and water, the higher the rate of icing on comparable vessels or structures. In some cases, however, where the wind fetch is not sufficient to fully develop waves, icing rates are lower.

The accompanying potential superstructure icing rate nomogram (Figure 19) is a modification of that shown in Wise and Comiskey (1980), using the open ocean cases appearing in Pease and Comiskey (1985), developed

Figure 19. Superstructure Icing Rate Nomogram



Instructions: The nomogram is entered with air temperature and wind data. At intersections of these proceed diagonally to sea surface temperature and read icing classification (light, moderate, etc.). The related range of icing is shown in the table below.

Icing Classification	Rate per Hour
Light	0 to 3 inches
Moderate	3 to 8 inches
Heavy	8 to 2 inches
Very Heavy	2 inches

Adapted from Wise and Comiskey, 1980, using data from Pease and Comiskey, 1985.

from icing case histories in the Gulf of Alaska and southern Bering Sea. Icing intensities in inches per hour are also from Pease and Comiskey (1985). If a vessel experiencing icing takes evasive action (i.e., changes heading, reduces speed, seeks shelter, etc.), icing rates experienced would probably be less.

Reported cases of ship icing (Figure 20) in the northern Gulf of Alaska and the Bering Sea are shown from two sources; Borisenkov and Panov (1972) and WBH29 (Dyson 1975-83). The lack of reported icing in the northern Bering may be a result of reduced ship traffic as well as conditions not favorable for icing. Kozo (1983) estimates a potential for superstructure icing for the northern Bering Sea in September, extending into Norton Sound in October, and even into the southern Bering during the most extreme conditions. Icing potential decreases in the north Bering as the sea ice cover advances; however, the potential for moderate or heavy icing downwind of the sea ice edge persists throughout the winter.

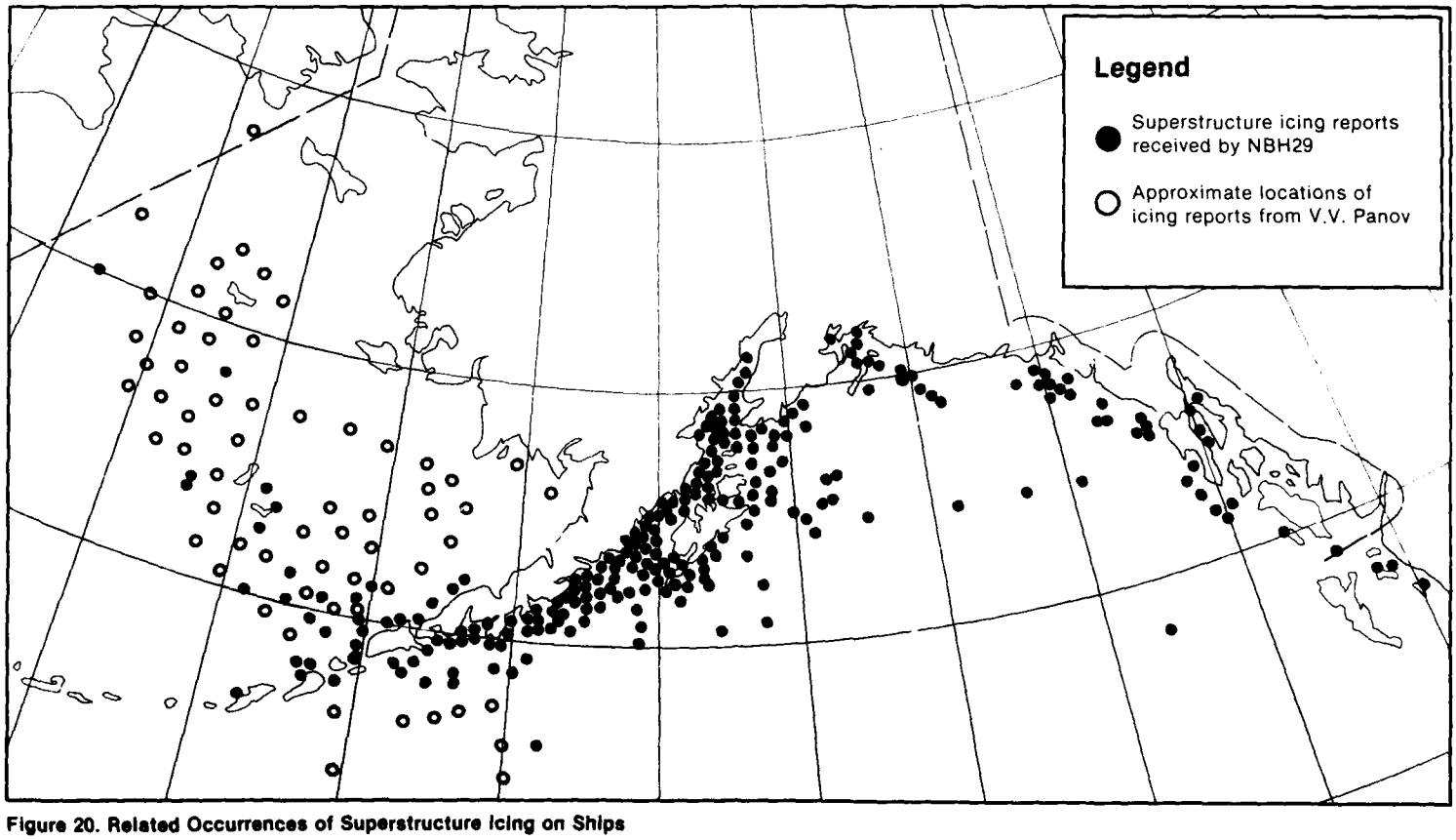


Figure 20. Related Occurrences of Superstructure Icing on Ships

Figure 21. Climatic Means and Extremes

-1.7 | -6.1 18.3 | -32.2 18.61 5.86 | 2.01 98.1 48.6 | 14.1 77 NNE / 15.9 NA / NA	-1.1 | -6.2 20.0 | -37.8 16.87 13.68 | 6.60 67.2 32.8 | 6.9 62 N / 11.2 SE / 94	0.3 | -7.5 30.0 | -43.3 14.77 7.82 | 2.99 55.8 25.9 | 9.0 74 N / 9.1 WSW / 48	-0.1 | -7.8 30.6 | -47.8 18.95 9.56 | 2.06 75.3 39.2 | 20.6 108 NNE / 10.8 SW / 50	0.7 | -7.0 30.6 | -45.6 14.16 8.07 | 1.53 39.9 37.3 | 14.0 42 E / 10.5 E / 60	2.3 | -5.8 26.7 | -45.6 19.75 5.65 | 2.00 63.7 27.5 | NA 63 E / 8.6 NA / NA	0.7 | -4.1 26.1 | -32.2 25.24 10.50 | 2.77 69.4 68.7 | 12.5 116 NE / 11.7 NE / 55	1.7 | -4.5 24.4 | 44.4 15.16 5.45 | 2.80 56.9 23.0 | NA 48 NW / 13.6 NA / NA
1 Gambell	2 Northeast Cape	3 Nome	4 Moses Point	5 Unalakleet	6 Emmonak	7 Cape Romanzof	8 Nunivak	
2.0 | -6.1 30.0 | -43.3 16.13 5.81 | 2.02 46.8 21.6 | 8.2 45 NNE / 11.0 SE / 60	2.8 | -1.6 23.9 | -33.3 36.42 11.42 | 3.13 76 28.7 | 13.1 51 N / 10.0 SE / 99	5.6 | -3.3 33.3 | -37.8 25.08 8.02 | 2.19 73.3 44.8 | NA 57 N / 9.6 NA / NA	4.8 | -3.9 31.1 | -43.3 19.33 7.30 | 2.00 43.7 20.0 | 11.0 19 N / 9.2 E / 58	3.6 | -1.0 17.8 | -32.2 22.71 9.32 | 2.00 56.4 55.8 | 13.8 32 N / 15.8 N / 65	5.4 | -1.1 30.6 | -32.2 15.68 5.55 | 3.00 49.4 37.7 | 18.0 24 ESE / 12.0 E / 65	5.5 | -2.9 23.3 | -22.8 43.51 NA | 5.00 92.1 NA | 10.4 36 S / 8.9 S / 44	7.8 | 1.8 20.6 | -13.9 51.57 13.39 | 3.90 40.5 23.3 | 9.0 11 NW / 12.0 NW / 74
9 Bethel	10 Cape Newenham	11 Dillingham	12 King Salmon	13 St. Paul Island	14 Port Heiden	15 Port Moller	16 Sand Point	
5.8 | 0.6 25.6 | -25.0 35.01 9.97 | 4.90 60.6 54.3 | 21.4 29 SSE / 14.7 SSE / 63	7.4 | 2.2 26.7 | -16.7 60.53 16.04 | 7.58 72.2 52.6 | NA 25 SE / 9.6 E / 92	6.3 | -0.7 24.4 | -16.1 20.55 7.63 | 3.08 70.2 40.1 | 30.0 25 NW / 8.3 WSW / 55	5.0 | 0.8 15.6 | 11.7 23.41 NA | 2.50 33.5 NA | 10.4 12 NW / 13.8 NNW / 60	6.9 | 2.3 23.9 | -16.1 61.19 17.34 | 5.49 99.2 54.8 | 17.0 34 WSW / 13.1 SW / 109	5.1 | 2.1 17.2 | -13.9 30.44 8.71 | 5.20 69.6 42.1 | NA 28 N / 13.9 SW / 108		
17 Cold Bay	18 Dutch Harbor	19 Driftwood Bay	20 Nikolski	21 Adak	22 Shemya			

Legend

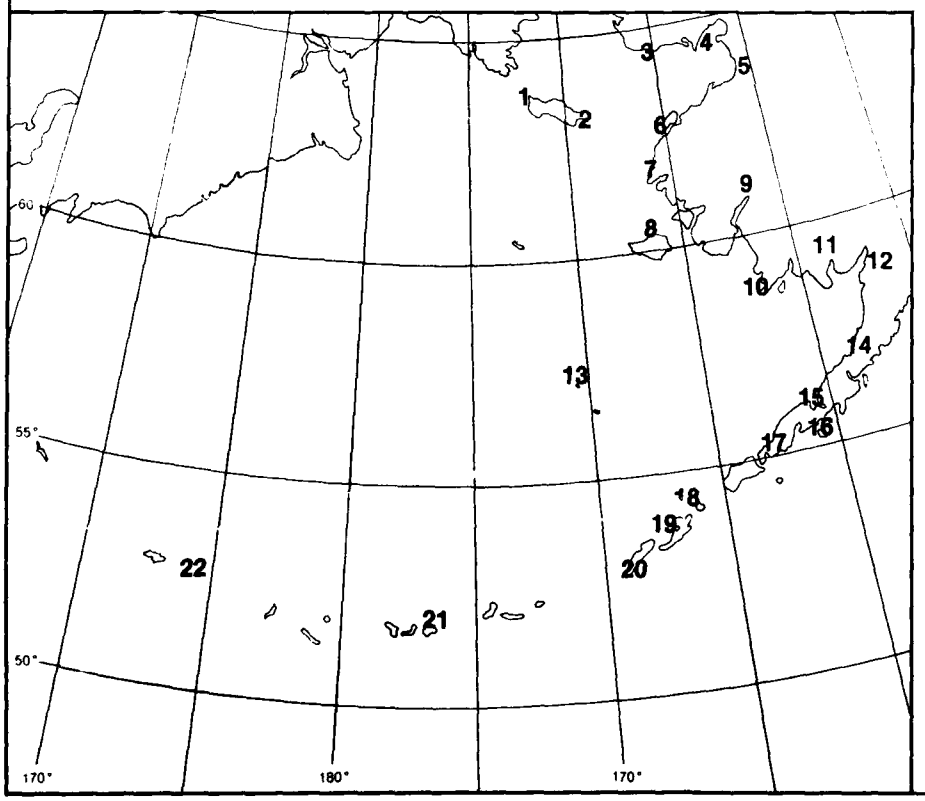
Temperature: 6.9 | 2.3 / 23.9 | -16.1

Total Precipitation: 61.19 / 17.34 | 5.49

Snowfall: 99.2 / 54.8 | 17.0

Snowdepth: 34

Surface Wind: WSW / 13.1 / SW / 109



	Temperature(°C)
17.6 | 3.6	Mean Annual Maximum | Mean Annual Minimum
22.2 | -14.4	Highest | Lowest
	Total Precipitation (inches) (Rain and Snow)
114.30	Average Annual
34.87 | 7.59	Greatest Month | Greatest Day
	Snowfall (inches)
58.5	Average Annual
46.9 | 14.2	Greatest Month | Greatest Day
	Snow depth (inches)
40	Annual Maximum on Ground
	Surface Wind (knots)
SSE / 9.3	Prevailing Direction / Average Annual Speed
SSE / 52	Fastest Direction / and Speed

Where the mean annual temperature (average of the mean annual maximum and minimum) is less than zero some type of permafrost will probably be present.

These data can be used for long-range planning and design criteria. More detailed information can be obtained from the National Climatic Data Center and the Arctic Environmental Information and Data Center in Anchorage.

NA = Information is not available

Prepared from NOAA/NESDIS and Canadian AES data.

Hypothermia

Hypothermia is the cooling of the body's core temperature to 95°F or below. It can cause shivering, numbness, and disorientation. In the extreme it can cause death. The body loses heat gradually in cold, dry conditions, but quickly becomes hypothermic in wet conditions. Rain, immersion in cold water, and perspiration can all cause rapid heat loss. However, the evaluation and treatment of hypothermia, whether wet or dry, on land or water, is essentially the same, namely to warm the victim by whatever appropriate means are available.

The following discussion was taken in part from Peters (1982).

The body loses heat in five ways:

- A large amount of heat is lost from the body in respiration. Exhaled warm air is replaced by cooler inhaled air, producing a net heat loss. The amount of the net heat loss can be reduced by covering the mouth/nose with wool or fur, thereby "prewarming" the inhaled air as it passes through the material which has been warmed by exhaled air and by heat radiating from the body.

- Evaporation of perspiration from the skin and moisture from the lungs contributes greatly to the amount of heat lost by the body. Although evaporation cannot be prevented, the amount of evaporation (and therefore cooling) can be controlled. Wearing clothing that can be opened or removed easily for ventilation will let water vapor escape and not condense to liquid water in the clothing. Keeping clothing dry preserves its insulating value and reduces heat loss.

- Sitting on snow, touching cold equipment, and being rained upon are all examples of how heat can be lost as a result of conduction. If an individual becomes wet a tremendous amount of body heat is lost rapidly. Deaths have occurred as a result of immersion in water below 40°F—body temperature could not be maintained. Although not as immediately serious, perspiration, rain, or wet snow should never be allowed to saturate articles of clothing, as this seriously reduces their insulating properties.

- Radiation causes the greatest amount of heat loss from the body from uncovered surfaces, particularly the head, neck, and hands. Coverage of these areas, therefore, is extremely important in keeping warm.

- The body continually warms (by conduction) a thin layer of air next to the skin. If the warm layer is removed by wind or air currents (advection), the body is cooled. The primary function of clothing is to retain this layer of warm air next to the skin by enclosing air in cell walls or between numerous fibers, while allowing water vapor to pass outward. Heat is lost rapidly with the lightest breeze unless the proper type of clothing is worn to prevent the warm air from being advected away.

Deaths have been attributed to a loss of body heat at temperatures of 40°F, with a 30 mph breeze. Under these conditions, the cooling effect on the skin is equal to that of much lower temperatures due to increased evaporation and convection. With lower temperatures and/or strong winds, cooling occurs even more rapidly. Wind protection and insulation (dead air space) can help ensure that body heat is retained at a safe level.

Treatment

Recognition and proper treatment of hypothermia must be prompt. Delays even after rescue can cost a person his life. Low body temperature is the best indication of hypothermia. Blood pressure and pulse are also good indicators. The pulse is generally slow and irregular, while blood pressure is low.

The hypothermia victim is pale in appearance, the pupils are constricted and react poorly to light, and respiration is slow and labored. He will usually be shivering violently, with frequent muscular rigidity. There may also be an appearance of intoxication.

Emergency treatment must begin as soon as possible to stop the drop in body temperature. Wet clothing should be removed. If the body temperature is 97°F or above, no treatment other than dry clothing and moving the victim to a warm area is generally necessary. If these are not available, the wet clothing should not be removed.

Combatting "afterdrop" in the core body temperature is extremely important. When heat is applied to the arms and legs, it causes those blood vessels to relax. This allows cold blood to flow back into the body core, further cooling the vital organs. Warming of the trunk of the body should be the prime concern.

During experiments in conjunction with the U.S. Coast Guard, researchers determined that the best warming technique was from the inside out, by having the victim breathe moist, warmed oxygen (Wilson 1976).

The next best treatment is a hot bath, with the water temperature between 90 and 100°F. If a tub is not available, an inflated life raft could be used. If possible, the limbs should remain out of the water. When no tub-type facility is available, a hot (115°F) shower while wrapped in towels or blankets is preferable.

When hot water for a tub or shower is unavailable, wrap the victim in blankets in a warm room with a heating pad or well-wrapped hot water bottle on the chest, or apply body warmth by direct contact with a rescuer.

Warm liquids may be given, but care must be taken to insure the victim is conscious and does not breathe the liquid into his lungs. Alcohol should never be given because it causes "afterdrop." Observe the victim's respiration closely and monitor for vomiting.

It has been learned in studies done in Alaska that victims of wet hypothermia can survive for a prolonged time in cases of deep cooling. Apparently, in the rapid cooling which occurs with wet hypothermia, physiological changes undergone by the body are more likely to be reversible than in the slower cooling of dry hypothermia. There have been victims of immersion hypothermia who were apparently dead but revived with proper treatment.

Wind Chill (Equivalent Temperatures)

The temperature of the air is not always a reliable indicator of how cold a person will feel outdoors. Other weather elements, such as wind speed, relative humidity, and sunshine (solar radiation), also exert an influence. In addition, the type of clothing worn, together with the state of health and the metabolism of an individual, influence how cold a person will feel. Cooling may be described as loss of heat from exposed flesh. Freezing occurs when there is such total heat loss that ice forms in the exposed tissues. The cooling power of the atmosphere (by wind) is primarily heat transfer by advection—in human cases, by exposure of uncovered flesh to the environment. Even small amounts of air movement have considerable chilling effect because this movement disrupts or removes the thin layer of warmed air that builds up near and about the body. This air movement leads to loss of total heat, since heat is transferred from the core of the body to rewarm the new colder air, replacing that blown away. Therefore, wind chill not only leads to frostbite locally, but may contribute to general hypothermia.

Equivalent Wind Chill Temperature

Wind Speed	Cooling Power Of Wind Expressed As "Equivalent Chill Temperature"																		
	Temperature (°C)																		
	12	8	4	0	-4	-8	-12	-16	-20	-24	-28	-32	-36	-40	-44	-48	-52	-56	-60
	Equivalent Chill Temperature																		
	12	8	4	0	-4	-8	-12	-16	-20	-24	-28	-32	-36	-40	-44	-48	-52	-56	-60
	9	5	0	-4	-8	-13	-17	-22	-26	-31	-35	-40	-44	-49	-53	-58			
	5	0	-5	-10	-15	-21	-26	-31	-36	-42	-47	-52	-57						
	3	-3	-8	-14	-20	-25	-31	-37	-43	-48	-54								
	1	-5	-11	-17	-23	-29	-35	-41	-47	-53	-59								
	0	-6	-12	-18	-25	-31	-37	-43	-49	-56									
	0	-7	-13	-19	-26	-32	-39	-45	-51	-58									
	1	-7	-14	-20	-27	-33	-40	-46	-52										
	1	-8	-14	-21	-27	-34	-40	-47	-53										
	1	-8	-14	-21	-27	-34	-40	-47	-53										
	1	-8	-14	-21	-27	-34	-40	-47	-53										
	Little Danger				Increasing Danger (Flesh May Freeze Within 1 Minute)														

Danger of Freezing Exposed Flesh For Properly Clothed Individuals

Figure 22. Equivalent Wind Chill Temperature

Adapted from NWS/NOAA Technical Procedures Bulletin No. 165. Effective Temperature (Wind Chill Index) 1976.

During the antarctic winter of 1941 Siple and Passel developed a formula to determine wind chill from experiments made at Little America (Siple and Passel 1945). The formula relates heat loss (H) from an object or person to wind speed and to the difference in temperature between the air and the object or person (DT). It is measured in heat units (calories) per unit area over time. The skin temperature of most people is approximately 33 °C (91.4 °F). Heat losses for the human body can then be computed for any combination of wind and temperature. Equivalent temperature is based on calm conditions and a person walking vigorously at 3 knots (4 mph). Each combination of wind and air temperature produces a heat loss H. The equivalent temperature is that temperature that would compute the same heat loss at a wind of 3 knots. The accompanying chart, figure 18, shows equivalent wind chill temperatures in °C for various combinations of winds in knots or km/hr and temperatures.

Concepts in the following discussion of wind chill are from an appendix to an article by William J. Mills, Jr., M.D., as published in Alaska Medicine (1973). Dr. Mills is still active in the treatment of cold injuries in Alaska.

Almost everyone knows that the increased speed of wind may cause increased danger of skin freezing. Many assume that the increase in wind speed causes the ambient air temperature to fall lower. This is not so. What does occur is air movement, so that warmed air is moved away from the individual exposed to the wind, causing first local, then general body cooling. Any resultant decrease of skin temperature is due to heat loss, insidious or sudden. Local vasoconstriction, vascular shunting, and cellular changes take place; eventually ice forms in the tissues, with true tissue freezing or frostbite.

This phenomenon can be readily proved. Place a laboratory recording thermometer with a thermistor attached (or any outdoor thermometer) out your car window on a calm day when the temperature is, say, – 20 °C (– 4 °F)—just a nice winter day in Anchorage, Alaska. Let it sit for a few minutes until the temperature reading has stabilized. This temperature, as read, will remain at the ambient air temperature level. Now slowly accelerate your vehicle to 80 km/hr (50 mph); the temperature remains unchanged at – 20 °C (– 4 °F). Now attach the thermistor to your bare hand. Place your ungloved hand out the same car window in the same ambient temperature of – 20 °C (– 4 °F). After a few minutes at 0 km/hr, the skin temperature may be read at approximately 93 °F (normal skin temperature in the nonsmoker). Your skin temperature will drop as heat is lost to the exterior, sometimes falling as low as 85 ° to 80 °F very rapidly. As the car is accelerated and the warmed air layer is moved away, the thermistor records skin heat loss. If you continue driving, your skin temperature may drop to a level near 23 °F (– 5 °C), the temperature at which freezing of skin may actually occur.

Wind chill may occur not only from natural wind, but also with air movement generated by automobile, snowmobile, aircraft, or helicopter rotoblade. These vehicles may predispose passengers to frostbite or general hypothermia.

Section II:
Marine and Coastal Climatic Atlas

by William A. Brower, Jr., Ronald G. Baldwin,
and Claude N. Williams, Jr.

Marine and Coastal Climatic Atlas — Section II

William A. Brower, Jr.
Ronald G. Baldwin
Claude N. Williams, Jr.

The marine observations used in computing the statistics for the maps, graphs, and tables in this section of the three-volume atlas were taken from the National Climatic Data Center's (NCDC) marine surface data files which include the Comprehensive Ocean Atmosphere Data Set (COADS). COADS is the result of a multiyear effort by NOAA and the National Center for Atmospheric Research (NCAR) to provide a quality-controlled marine data set which incorporates data from a variety of global sources for 1854-1979. Those files are: TD-1170 for COADS and TD-1129 for 1980-1985. Because relatively little data exist for near-coastal zones, observations from 66 U.S., Canadian, and Russian coastal stations were combined with the marine data in order to present the best possible climatological picture of the outer continental shelf waters and coastal regions of Alaska, and adjacent Canadian and Russian regions.

Data for the U.S. and Russian stations were taken from the edited digital files of NCDC and the U.S. Air Force's Environmental Technical Applications Center (ETAC) in Asheville, North Carolina. Digital data from the Canadian stations were purchased from the Canadian Climate Centre in Downsview, Ontario. All data were subjected to thorough computer and visual quality control in order to eliminate duplicate observations and exclude questionable elements detected during internal consistency and extreme value checks.

The percentages of the summarized 4.5 million marine and 8.5 million coastal station land observations that contain basic weather elements are:

	Marine	Coastal Stations
Wind	93.8	99.1
Visibility	79.5	97.5
Present weather	82.8	95.7
Total cloud amount	79.6	97.3
Low cloud amount	67.4	57.4
Sea level pressure	93.5	89.7
Air temperature	94.4	98.6
Wet bulb temperature	59.4	97.7
Sea surface temperature	85.6	—
Waves	65.4	—

The marine and coastal study area for which data were compiled and analyzed was expanded from 50°—80°N and 130°—180°W (in the 1977 atlas) to 40°—84°N and 110°W—160°E in order to afford greater coverage for each of the three atlas areas, with a minimum of overlap between areas. Element statistics (with observation counts) were generated for each of over 2,550 marine squares and 66 coastal stations within the study area, and then plotted by computer on monthly charts which have an albers equal-area conic projection. The marine plots were 1° latitude by 1° longitude squares for the latitude belt 40°—75°N and 1° by 2° areas for 75°—84°N. An analysis was performed on the entire marine and coastal study area in order to permit continuity between the three atlas areas. Meteorologists, aided by computer-drawn isopleth contours south of 65°N, drew isopleths (lines connecting points of equal magnitude) on 420 monthly element maps, and made subjective adjustments to the analyses when data biases or insufficient observations were evident. They also performed consistency checks in the sets of monthly patterns for each element and among elements, as well as comparative checks with other marine atlases and publications (see Reference).

Although more than a four-fold number of marine data above 65°N was available for this presentation than for the same area in the 1977 atlas, the amount remained inadequate to permit a detailed isopleth analysis by meteorologists or by computer-contouring routines. This was especially true for the cooler months when seasonal sea ice prevented ships of opportunity from frequenting the area. Isopleth analyses for the Chukchi-Beaufort Sea area, by necessity, were based principally on the plotted coastal stations' statistics, extrapolations of weather patterns identified in isopleth analyses for the warmer months, the period of greater data availability, and other marine and continental atlases and publications.

To supplement the isopleth analyses, nearly 16,750 monthly statistical graphs, tables, and roses were produced for 50 of the 66 land stations, 16 representative marine areas, and 43 5° by 5° marine areas. The graphics represent the objective compilation of all available data; they were not adjusted for suspected biases, and differences may be found when comparing the graphics data with the isopleth analyses.

For each topic set, all months are grouped in calendar order with one or two pages preceding each set containing the legend and narrative for that set. The legends contain detailed instructions on how to read the graphics and provide remarks which aid in interpreting the data. The following paragraphs contain additional remarks which are likely to be of interest to those called upon to interpret the data and provide answers to specific operational questions. The table on page II-4 describes the data and marine areas for this volume.

A word of caution. The intent of this atlas presentation was to gather and present existing data on climatological conditions within the marine and near coastal areas of Alaska and adjacent Canada and Russia. The data are presented without discussion and interpretations. Given the information presented in the introductory text, legend descriptions with related text, and number of observations (with measures of variability for some) displayed with the graphics presentations, the user should be able to assess the degree of statistical confidence in the presented climatology for a given month and location.

Standard Deviation

Some of the graphs display approximation of the empirical probability of occurrence of selected criteria. This is a major factor in assessing the risk involved in operational planning. For certain elements, unbiased estimates of population standard deviations are given on the graphs to provide a measure of variability. The standard deviation was computed using the expression:

$$s = \left[\frac{N\Sigma x_i^2 - [\Sigma x_i]2}{N(N-1)}\right]^{1/2}$$

where N is the number of observations in the sample and x_i is the ith realization of the random variable x.

Sea Ice

The ice isopleths presented in Sets 17-19 give the percent probability of finding ice of any kind, ice concentration of one-half coverage or more, and ice thickness of eight feet or more, within the Alaska study area. Actual concentration boundaries, under the influence of changing synoptic meteorological and oceanographic

situations, may vary widely from the averages. An isopleth label, therefore, does not explicitly define the conditions on either side of the line since presence of sea ice is discontinuous in nature and regions of 80% mean ice concentration may be bordering regions of 20% ice concentrations with no intermediate region of 50% ice concentration. However, the inherent continuity of persistence of sea ice features permit an isopleth presentation to provide meaningful information.

The sea ice data were derived from digitized weekly analyses of sea ice conditions based primarily on satellite imagery (90%) supplemented by ship and shore reports, and aerial reconnaissance. These weekly polar sea ice analyses have been operationally produced by the U.S. Navy/NOAA Joint Ice Center (JIC) since 1972. In 1981, JIC initiated a Sea Ice Digitization Program to digitize the weekly polar ice maps as they become available. NCDC was funded by the U.S. Navy to design software and digitize all weekly ice concentration charts available since 1972 and ice thickness charts available since 1980, and produce polar ice atlases based on data through 1982. The Antarctic Ice Atlas was published in 1985, and the Arctic West and the Arctic East Atlases in 1986 (U.S. Navy 1986). The U.S. Navy also funded NCDC to accelerate the digitization of the West Arctic weekly charts through 1985 and produce the ice statistics presented in this atlas.

Low Pressure Center Movement

The roses and tracks of the low pressure center movement maps presented in Set 22 are based on 20 years of Northern Hemisphere track charts (January 1966 - December 1985) prepared by the National Weather Service's National Meteorological Center. These charts show cyclone tracks based on 6-hourly positions of closed centers. The NCDC was funded by the U.S. Navy to develop the software and digitize some 240 monthly cyclone track charts to permit inclusion of the statistics in this atlas. Frequencies of cyclone centers passing through 5° squares were analyzed by meteorologists within the 35°—80°N, 115°W—160°E area of the North Pacific Ocean to obtain the mean tracks. Primary tracks were selected along axes of maximum cyclone center frequency and secondary tracks along axes of moderate frequency.

Persistence of Wind and Waves

Duration and interval tables are presented in Set 23 for wind speed and wave height. Seasonal and annual tables contain objective compilations for 23 grid points in the Gulf of Alaska and Bering Sea. The statistics are based on numerically-derived wind and wave data generated by NCDC using the Hindcast Spectral Ocean Wave Model (SOWM), developed by Dr. Willard J. Pierson and others, in producing U.S. Navy's SOWM Climatic Atlases for the North Pacific and North Atlantic Oceans (U.S. Navy 1985). No SOWM data were available to produce persistence statistics for grid points within the Beaufort Sea (Vol. III) area.

Episodes of durations (continuous hours or days) of events and episodes of intervals (continuous hours or days) between events were tallied for various thresholds. These tables give an indication of how long an episode is likely to last once it has begun. For convenience, the time an episode persisted above a given threshold is arbitrarily referred to as a "duration" of the event. The times between episodes have been termed "intervals." Data were summarized on a seasonal and annual basis because 12.5 years of hindcast data were considered too small a sample to provide representative durations and intervals for long episodes of wind and wave conditions on a monthly basis. The winter season is January-March; spring, April-June; summer, July-September; and autumn, October-December (World Meteorological Organization, 1981).

Return Periods for Maximum Winds and Waves

Tables of estimated maximum sustained wind speeds and wave heights for selected return periods are presented in Set 24 (Set 23 for Volume III).Estimates for winds are presented for 50 coastal stations within the 3-volume area and for 23 marine grid points within the Gulf of Alaska and Bering Sea areas (Vols. I and II). Hourly wind observations for the stations and numerically-derived wind and wave data generated by Pierson's Spectral Ocean Wave Model (SOWM) for the marine grid points were used in determining the wind and wave extreme estimates. No SOWM data were available for the Beaufort Sea (Vol. III) area. Following the method outlined by Lieblein (1954, 1974a, 1974b), these estimates were obtained by initially fitting an extreme value distribution to each station and marine grid point sample containing N maximum monthly or annual wind speed or wave height values, then inverting the distribution and computing extreme values for selected probabilities. Confidence bands were then computed following the techniques of Gumbel (1958), and Gumbel and Lieblein (1954).

The extreme value distribution has the form:

$$F(x) = F(x:\mu,\beta] = \exp\left[-\exp\left(-\frac{x-\mu}{\beta}\right)\right]$$

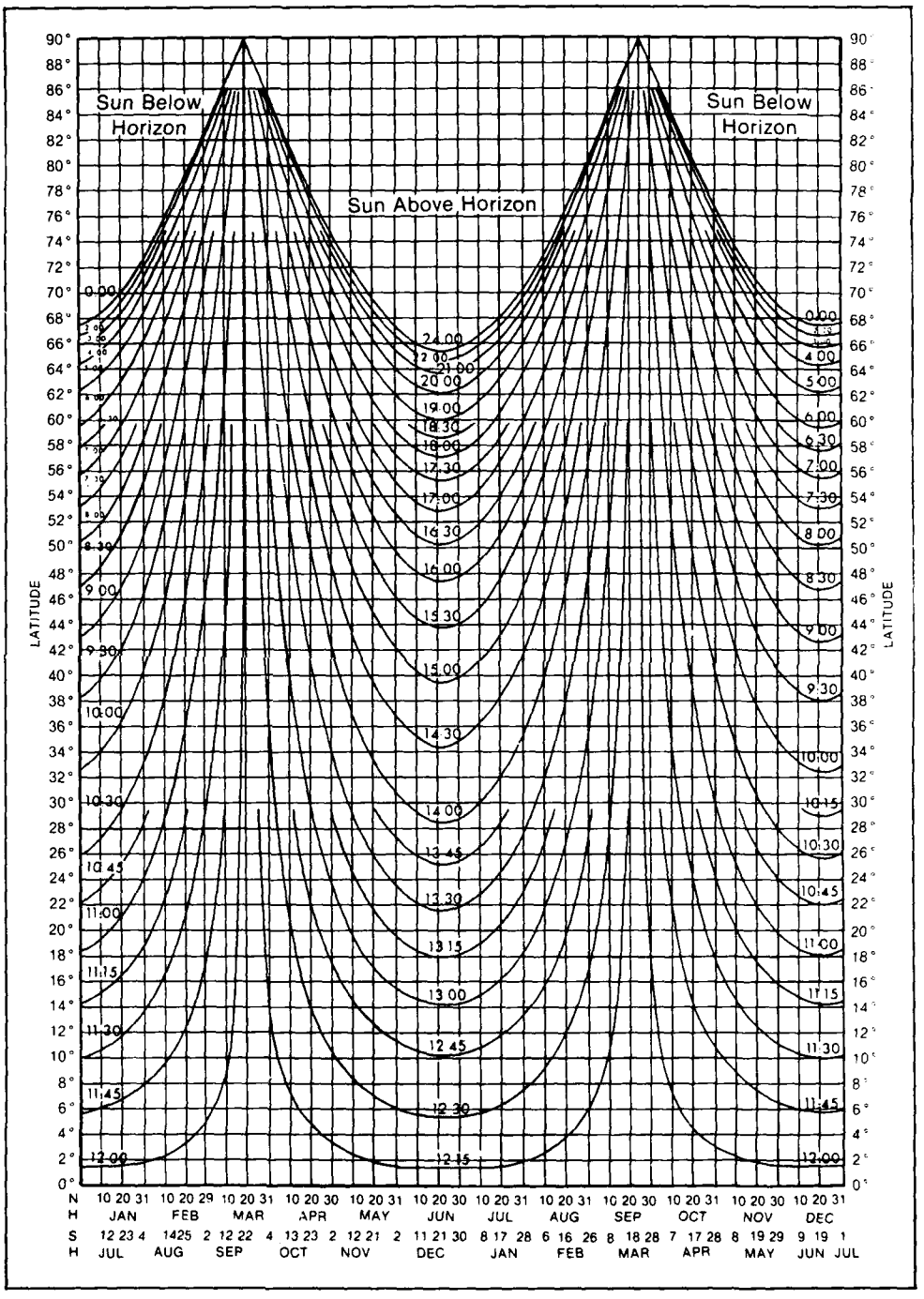
where F(x) is the probability that our observations are equal to or less than the specified value x, μ is the mode, and β is the scale parameter. Since the wind data were transformed logarithmically, μ and β refer to the transformed data, not to the wind maxima. The values given in the tables of Set 24 are the result of applying the natural logarithms of the N annual extreme wind to the extreme value model, determining the μ and β for each data set, and then exponentiating the logarithms of the estimates to give the probability estimates in knots. The wave data were not transformed logarithmically and, therefore, μ and β are in feet.

Graphic presentations similar to Figure 1 of Set 24 were drawn for each month and for the annual values, and are available on microfiche at the NCDC. The year/month extreme data for each station and marine grid point are also available on magnetic tape. These presentations provide a visual indication of the "goodness of fit" of the model to the data. The confidence limits shown by the envelope of lines about the line of "best fit" represent the level of uncertainty in the extreme value estimate corresponding to a given probability. For this study, 68% confidence limits were computed. This means that in 68% of repeated samples, the true extreme value will be contained within these limits.

Duration of Daylight

The duration-of-daylight chart for the Northern Hemisphere defines daylight as the period from sunrise to sunset. The upper scale at the bottom of the chart is for the Northern Hemisphere; the lower scale is for the Southern Hemisphere. For example, daylight on July 20 of any year at 48°N is about 15 hours and 30 minutes for any longitude. The data source was the U.S. Naval Observatory (1945) and is accurate for the entire twentieth century. Further details may be obtained from *The Daylighter* of the Navy Weather Research Facility (1960). Additional light (during twilight) may be usable for many purposes. Duration of daylight in high latitudes (poleward of about 60°) becomes increasingly dependent upon atmospheric conditions and refraction, and there may be some departure from the values depicted on the charts.

Figure 23. Duration of Daylight



Volume II

The following stations and representative marine areas have data plotted for analysis and graphics.

Land Stations	Lat.(°N)	Long.(°W)	Data Processed	No. of Obs.	No. of Obs./Day
Adak	51.9	176.7	Jan 1949-Apr 1985	264,528	8-24
Buhta Providenja	64.4	173.2	Jan 1959-Apr 1985 +	54,876	8
Cape Newenham	58.7	162.1	Jul 1953-Jan 1971; Jan 1973-Apr 1985	231,968	14-24
Cape Ozernoy*	57.7	163.3E	Jan 1959-Jul 1976 +	34,509	8
Cape Romanzof	61.8	166.0	Mar 1953-Dec 1968; Jan 1973-Apr 1985	226,254	17-24
Cape Shipunskiy*	53.1	160.0E	Jan 1959-Dec 1963; + Jan 1969-Jul 1976	25,082	8
Cold Bay	55.2	162.7	Jul 1955-Apr 1985	164,612	8-24
Khatirka-In-Chukot	62.1	175.3E	Jan 1959-Apr 1985 +	41,972	8
King Salmon	58.7	156.7	Jan 1949-Apr 1985	221,433	8-24
Nikolski	52.9	168.8	May 1959-Nov 1968	27,370	8
Nikol'skoe	55.2	166.0E	Jan 1959-Apr 1985	66,800	8
Nome	64.5	165.4	Jan 1945-Apr 1985	255,656	8-24
Northeast Cape	63.3	169.0	Jan 1953-Nov 1968	120,922	14-24
Port Heiden	57.0	158.6	May 1975-Apr 1985	73,676	14-24
St. Paul	57.2	170.2	Sep 1949-Apr 1985	135,031	4-24
Shemya	52.7	174.1E	Dec 1948-Apr 1985	227,236	4-24
Topata-Olyutorskaya*	60.6	171.1E	Jan 1969-Jul 1976 +	14,920	8
Ugol'naja	63.1	179.3E	Jan 1959-Apr 1985 +	60,852	8
Unalakleet	63.9	160.8	Jul 1948-Apr 1985	182,001	6-24

+ Period excludes Jul 1971-Dec 1972.
* Stations used for isopleth analyses only; no graphics produced.

Representative Marine Areas	Lat.(°N)	Long.(°W)	Data Processed	No. of Obs.
A	60-65	Coast-180	1879-1984	42,930
B	55-60	169-180	1905-1984	58,806
C	55-60	Coast-169	1908-1984	87,604
D	Aleutian-55	165-180	1888-1984	110,471
E	50-Aleutian	165-180	1881-1984	116,510
F	50-Coast	158-165	1872-1984	123,020

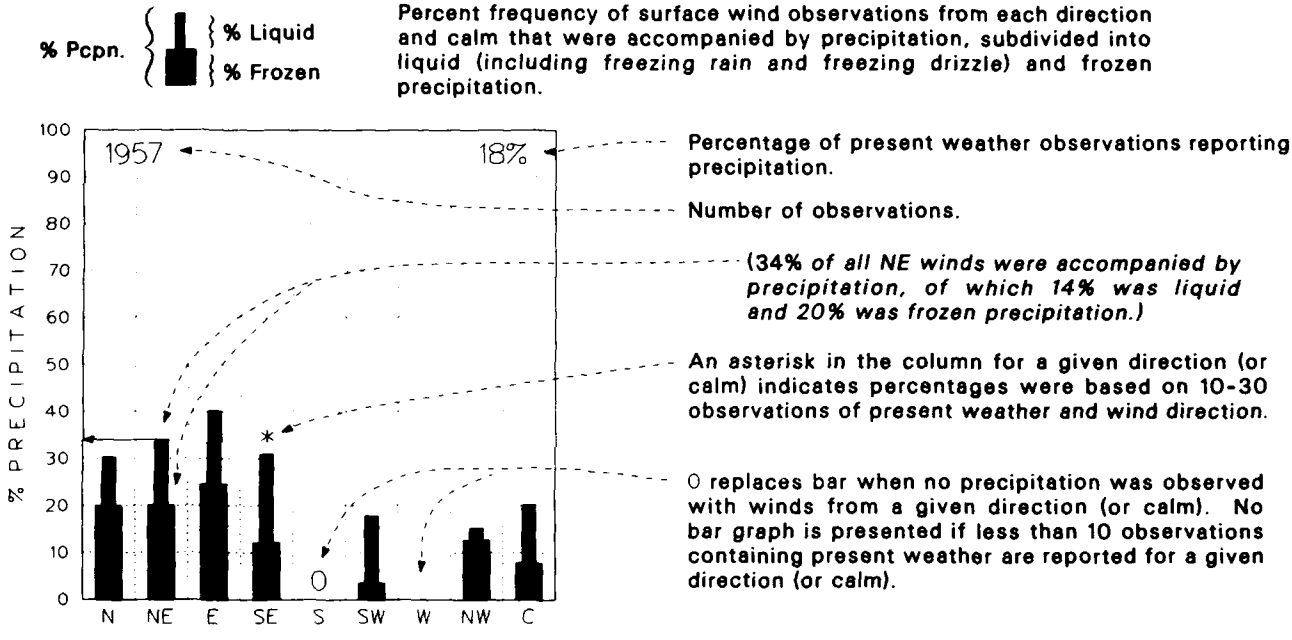
Map 1. Precipitation

BLACK LINE – Percent frequency of observations reporting precipitation.

BLUE LINE – Percent frequency of precipitation observations reporting frozen precipitation.

Albers Equal–Area Conic Projection

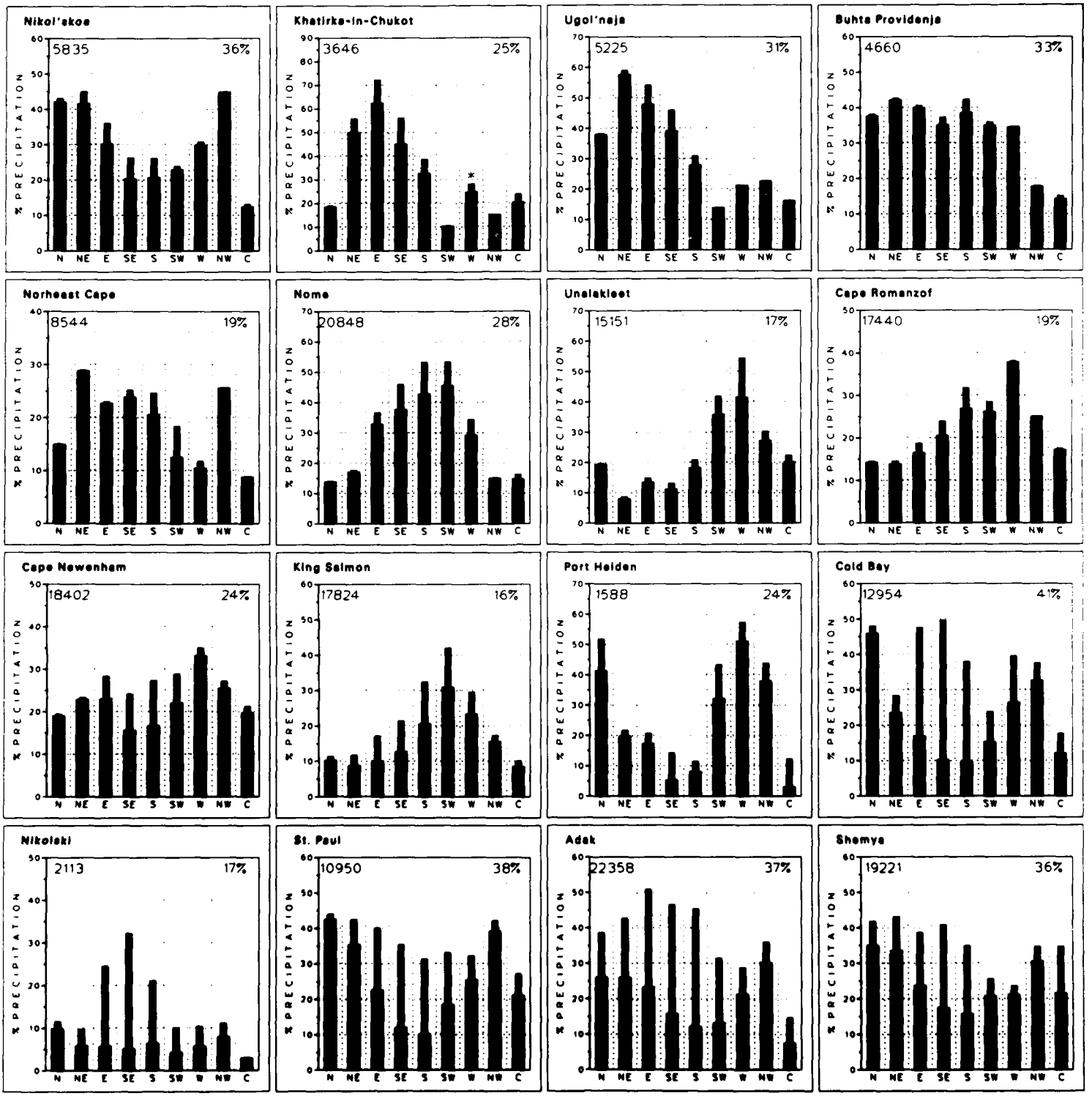
Graphs: Precipitation/wind direction



The percent frequency of observations reporting frozen precipitation for a given point on a monthly isopleth map can be determined by multiplying the percent frequency of observations reporting precipitation (BLACK LINE) with that of precipitation observations reporting frozen precipitation (BLUE LINE).

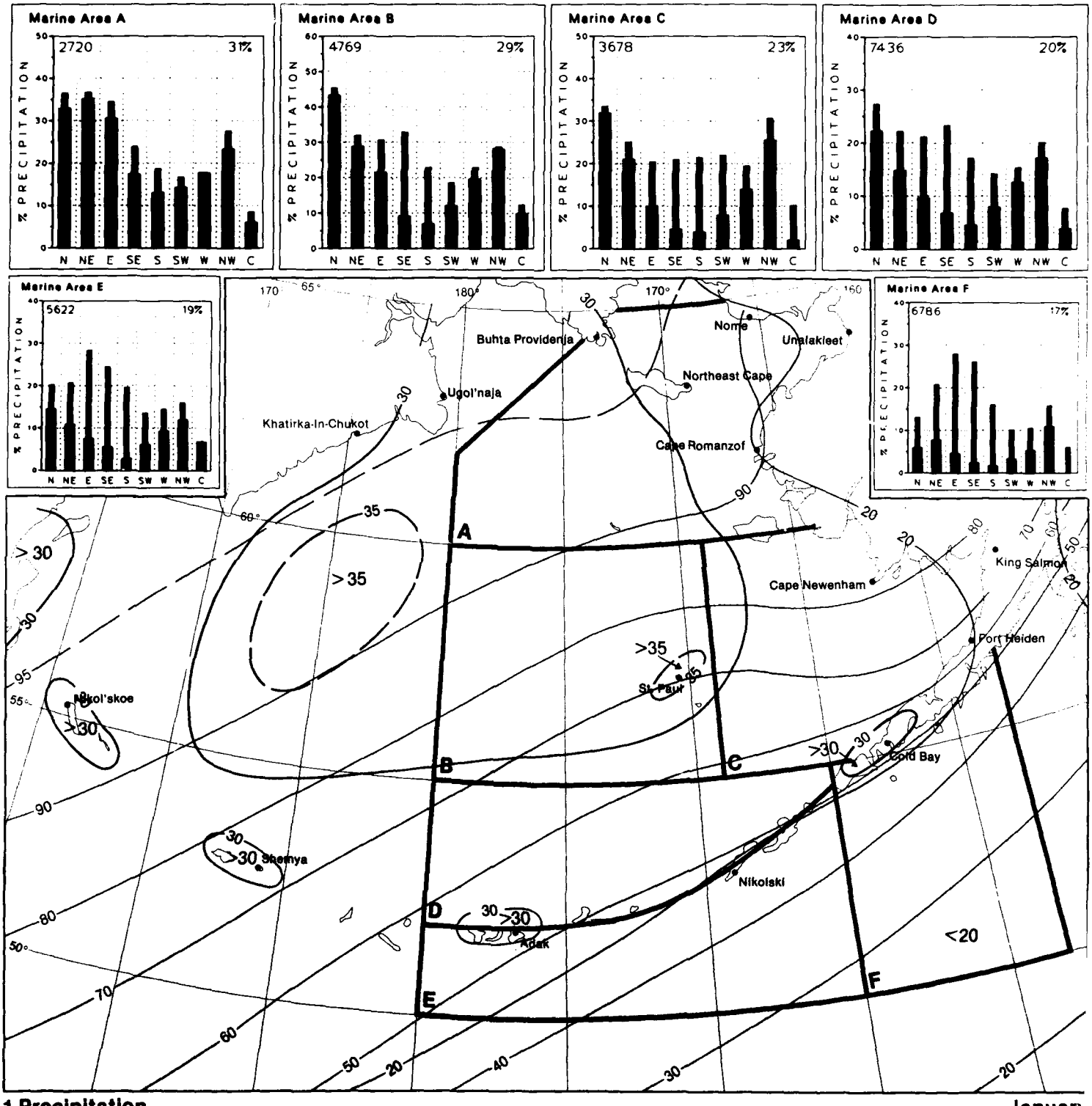
Of the elements recorded in the historical marine data base, precipitation is one that is most subject to error in both the way it is observed and the way it is interpreted. It is often implied in the literature that ships often try to avoid foul weather and thereby bias the oceanic climatology towards fair weather. A recent study by Elms (1986), in which he compared the Volunteer Observing Ship (VOS) data to Ocean Station Vessel (OSV) and buoy data, concluded there is little evidence that "fair weather bias" is a serious problem for most applications of marine climatic data.

Assessing oceanic rainfall data is a major problem because transit ships are unable to take quantitative precipitation measurements. A number of studies have been conducted in efforts to predict precipitation amounts, or rates of fall, based on estimates derived from the use of present weather observations from ships of opportunity (Goroch, et al., 1984) and readings from satellites (Rao, et al., 1976). Refer to the text and table in Set 2 for additional information about precipitation.



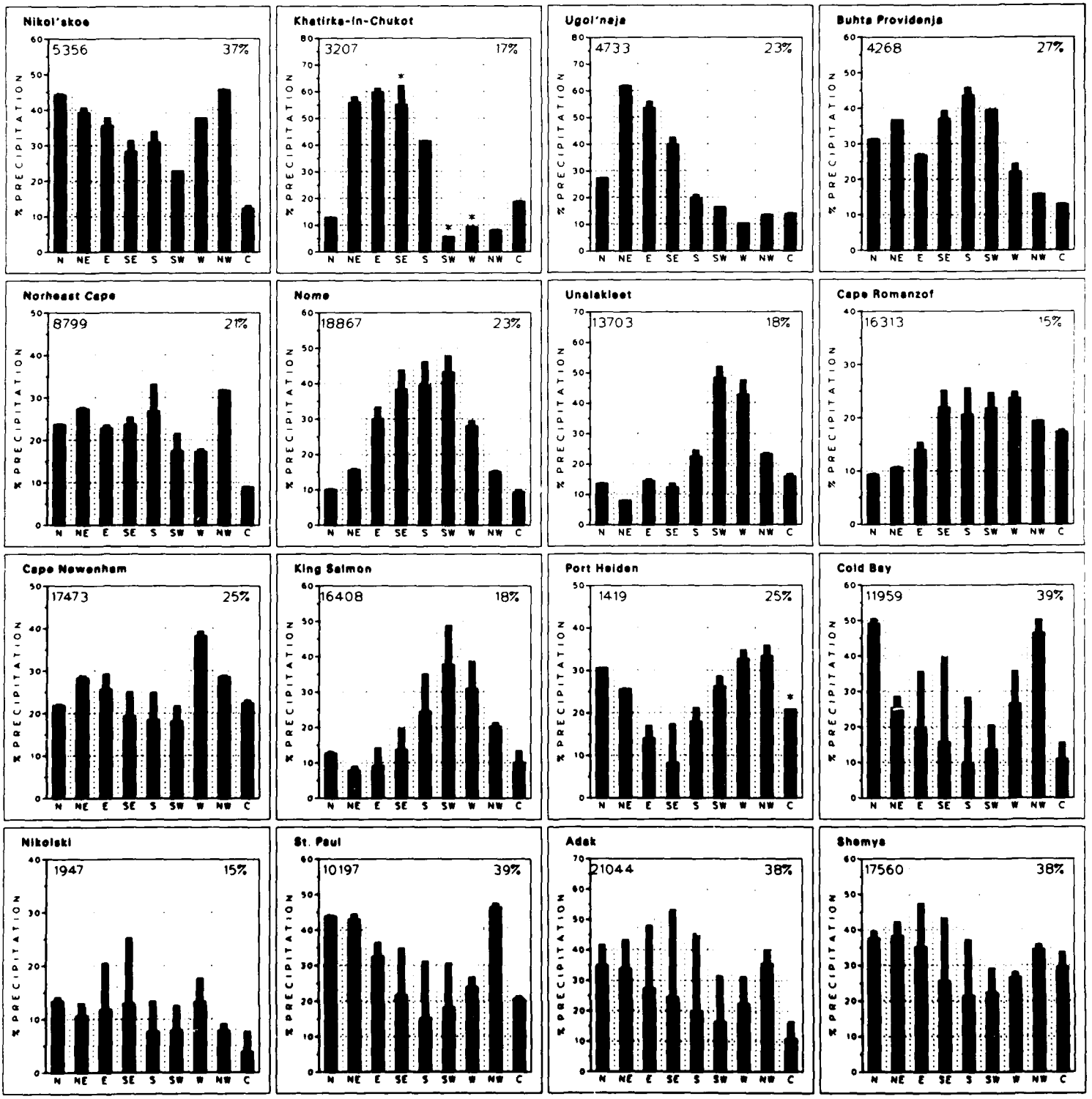
January

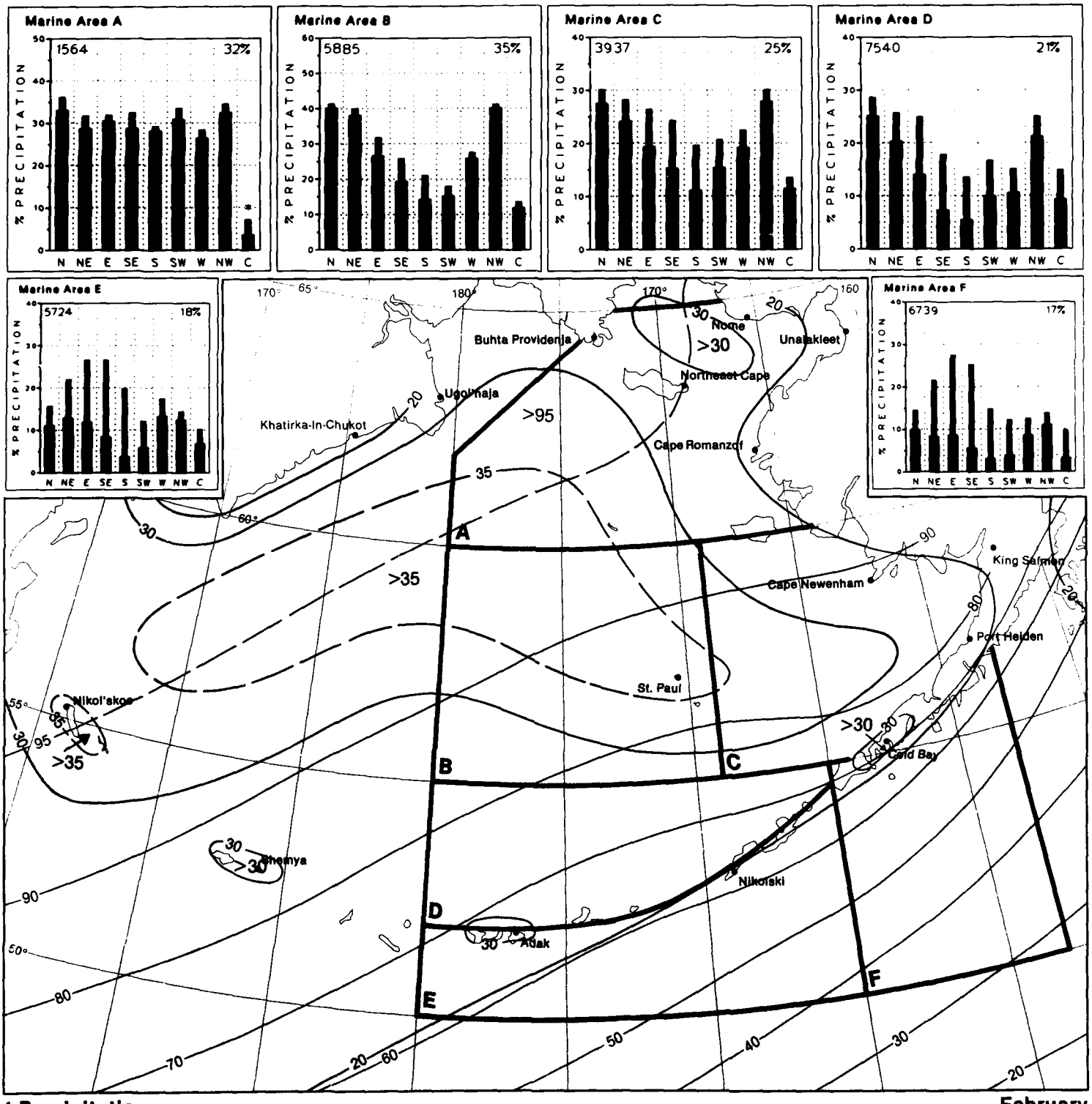
1 Precipitation and Wind Direction



1 Precipitation

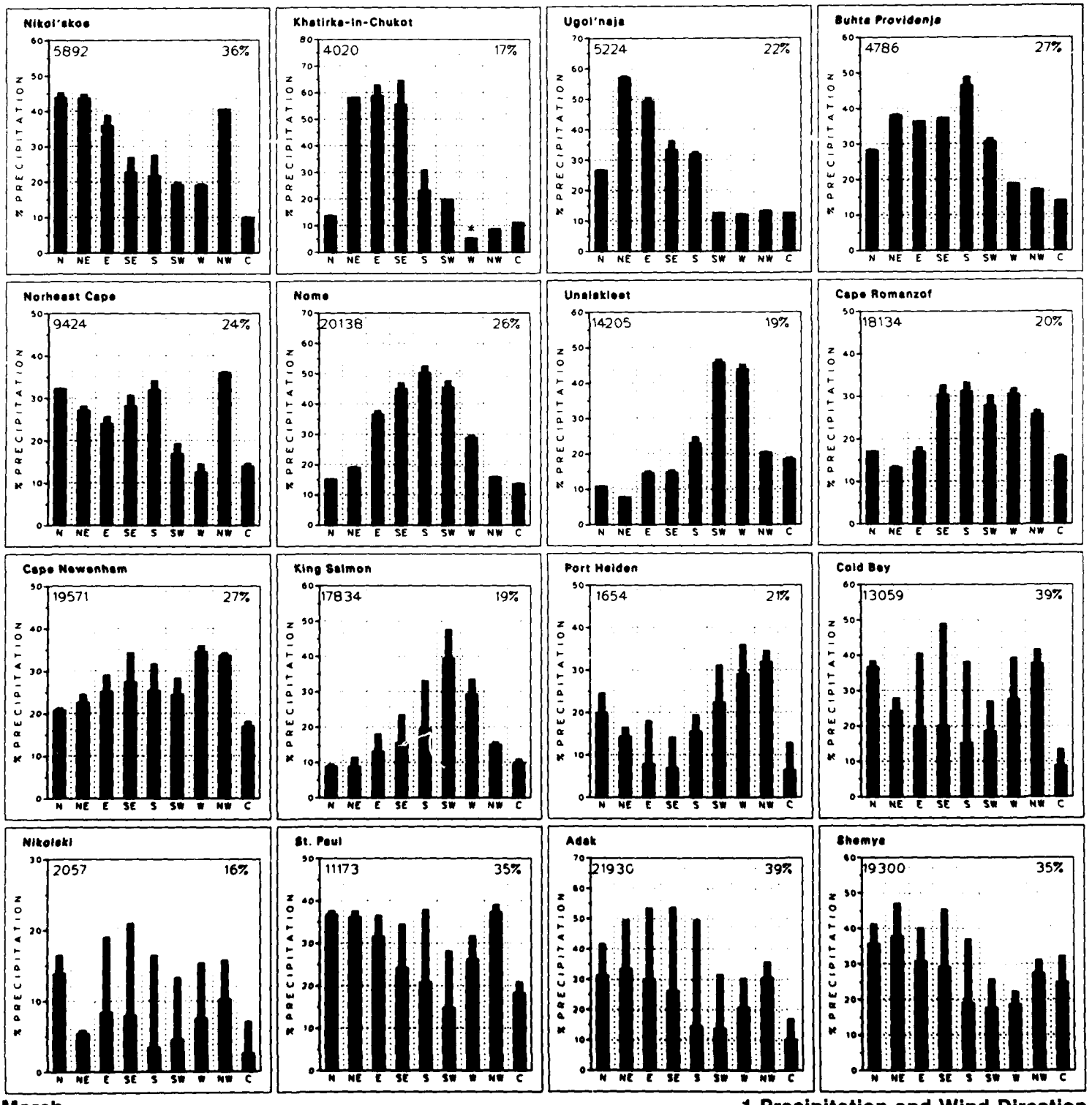
January


Nikol'skoe
5356
37%
Khatirka-In-Chukot
3207
17%
Ugol'naje
4733
23%
Buhta Providenja
4268
27%
Northeast Cape
8799
21%
Nome
18867
23%
Unalakleet
13703
18%
Cape Romanzof
16313
15%
Cape Newenham
17473
25%
King Salmon
16408
18%
Port Heiden
1419
25%
Cold Bay
11959
39%
Nikolski
1947
15%
St. Paul
10197
39%
Adak
21044
38%
Shemya
17560
38%
% PRECIPITATION
N NE E SE S SW W NW C



1 Precipitation

February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Khatirka-in-Chukot
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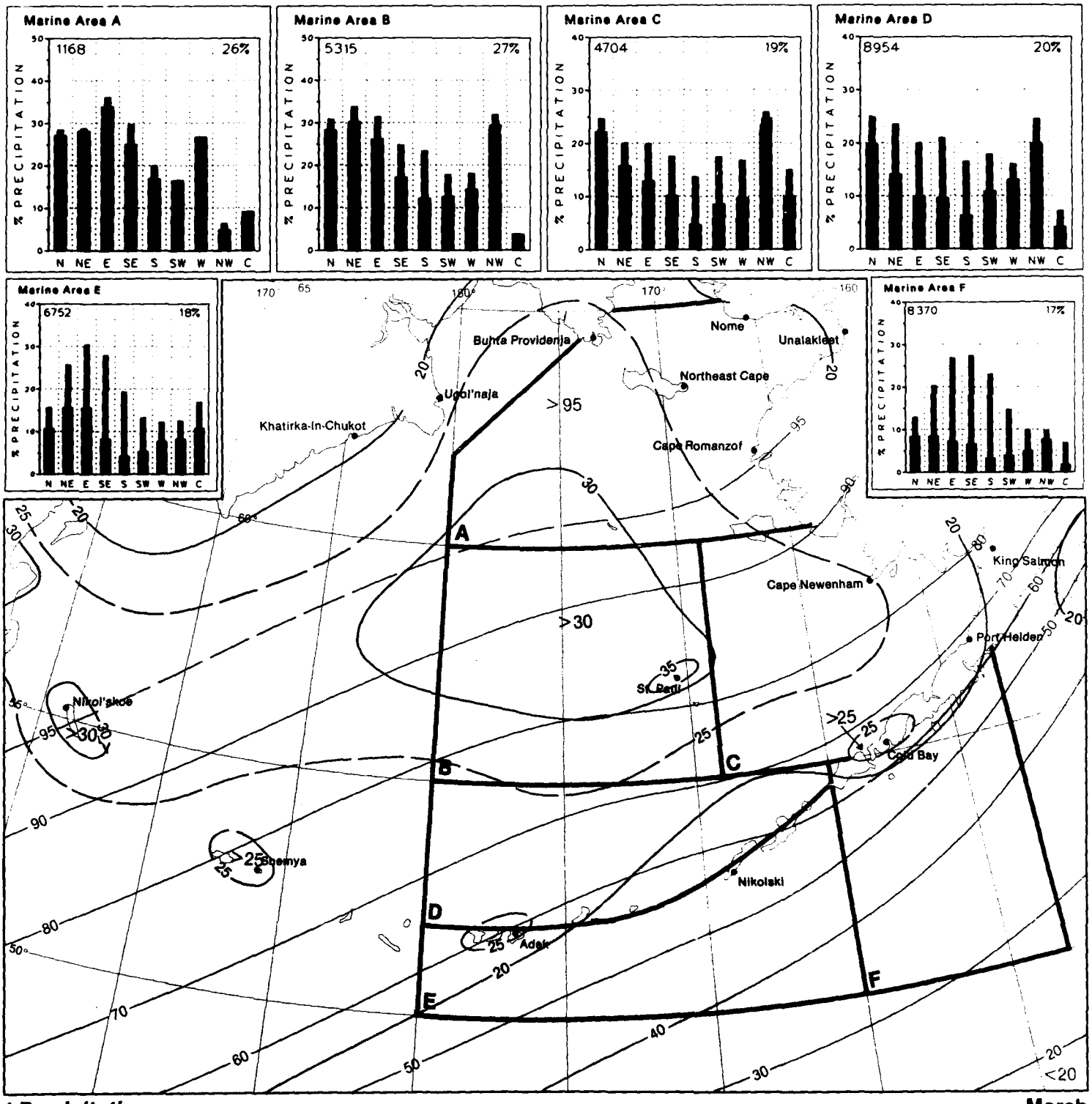
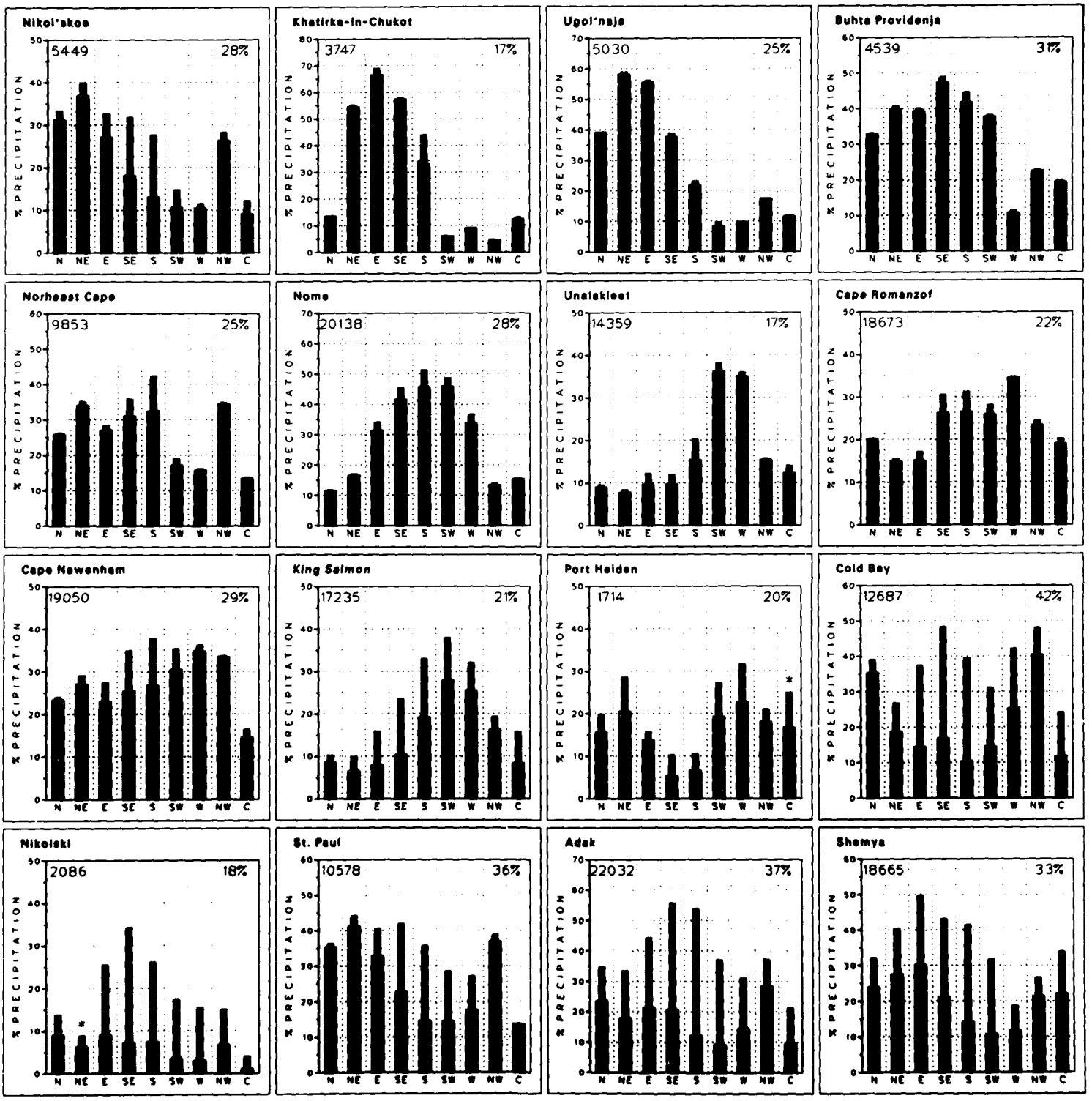
17%
Ugol'naja
5224
22%
Buhta Providenja
4786
27%
Norheast Cape
9424
24%
Nome
20138
26%
Unalakleet
14205
19%
Cape Romanzof
18134
20%
Cape Newenham
19571
27%
King Salmon
17834
19%
Port Heiden
1654
21%
Cold Bay
13059
39%
Nikolski
2057
16%
St. Paul
11173
35%
Adak
21930
39%
Shemya
19300
35%
% PRECIPITATION
N NE E SE S SW W NW C



1 Precipitation

March


Nikol'skoe
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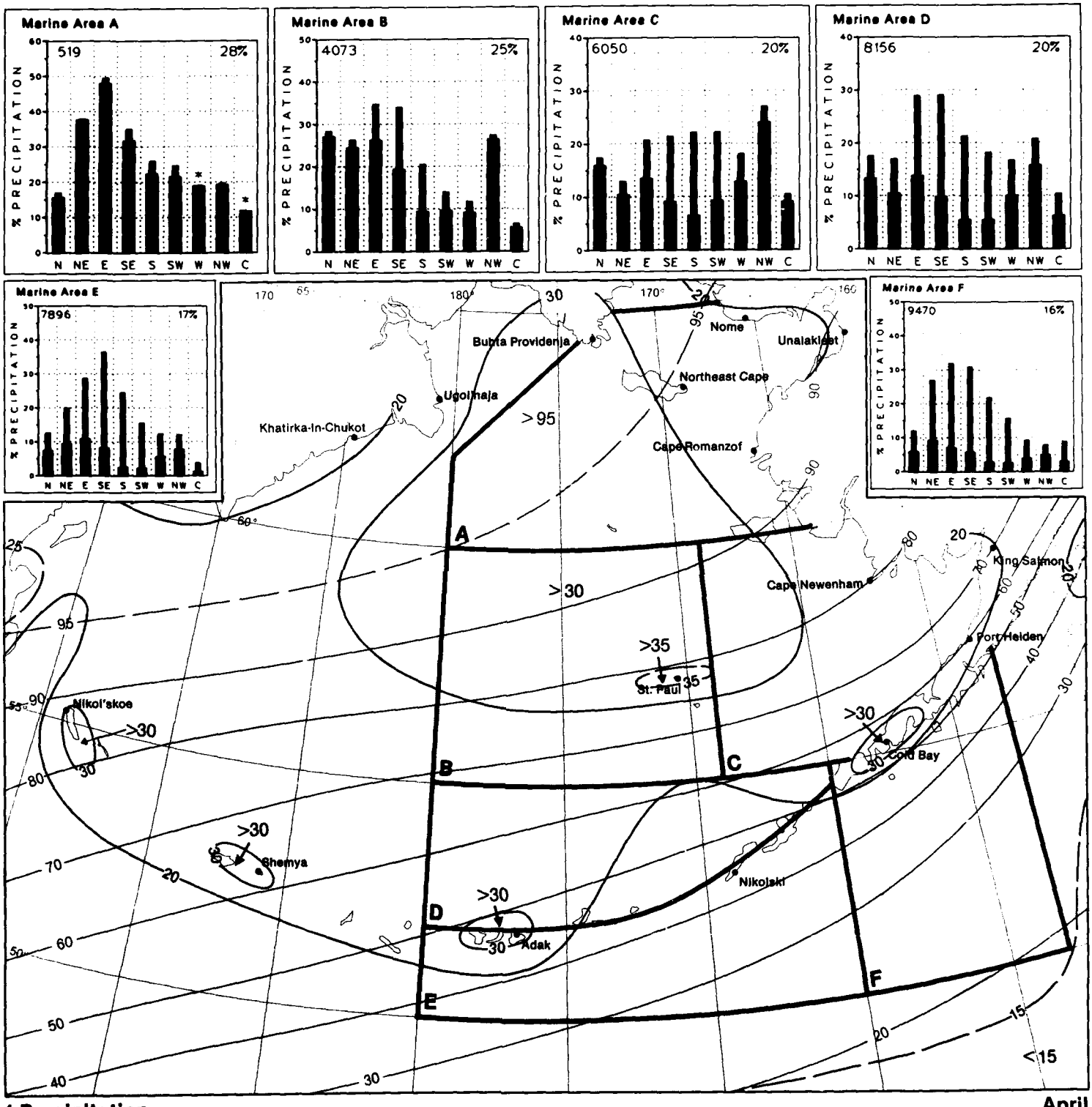
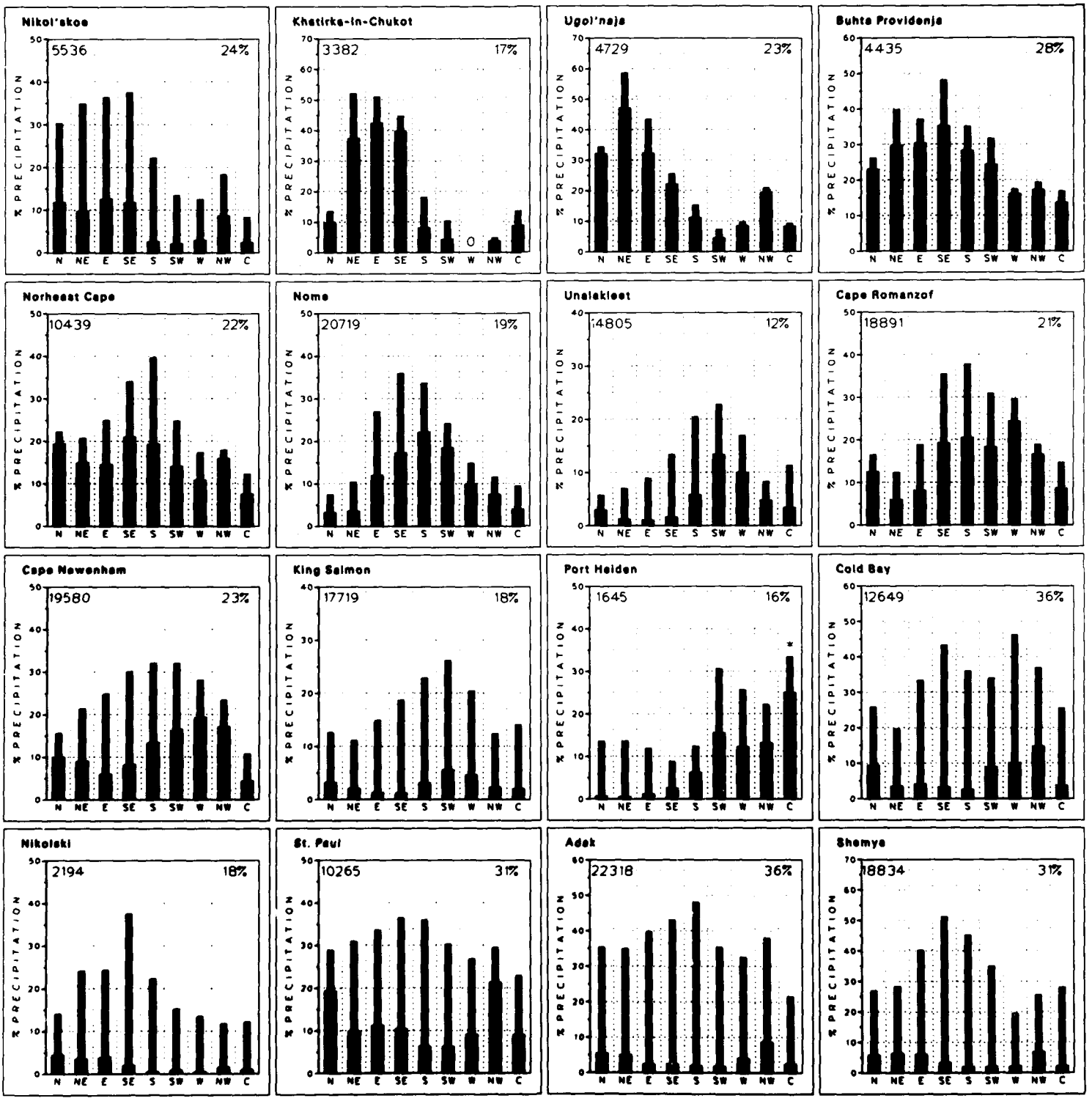
Khatirka-In-Chukot
3747
17%
Ugol'naja
5030
25%
Buhta Providenja
4539
31%
Northeast Cape
9853
25%
Nome
20138
28%
Unalakleet
14359
17%
Cape Romanzof
18673
22%
Cape Newenham
19050
29%
King Salmon
17235
21%
Port Heiden
1714
20%
Cold Bay
12687
42%
Nikolski
2086
18%
St. Paul
10578
36%
Adak
22032
37%
Shemya
18665
33%
% PRECIPITATION
N NE E SE S SW W NW C



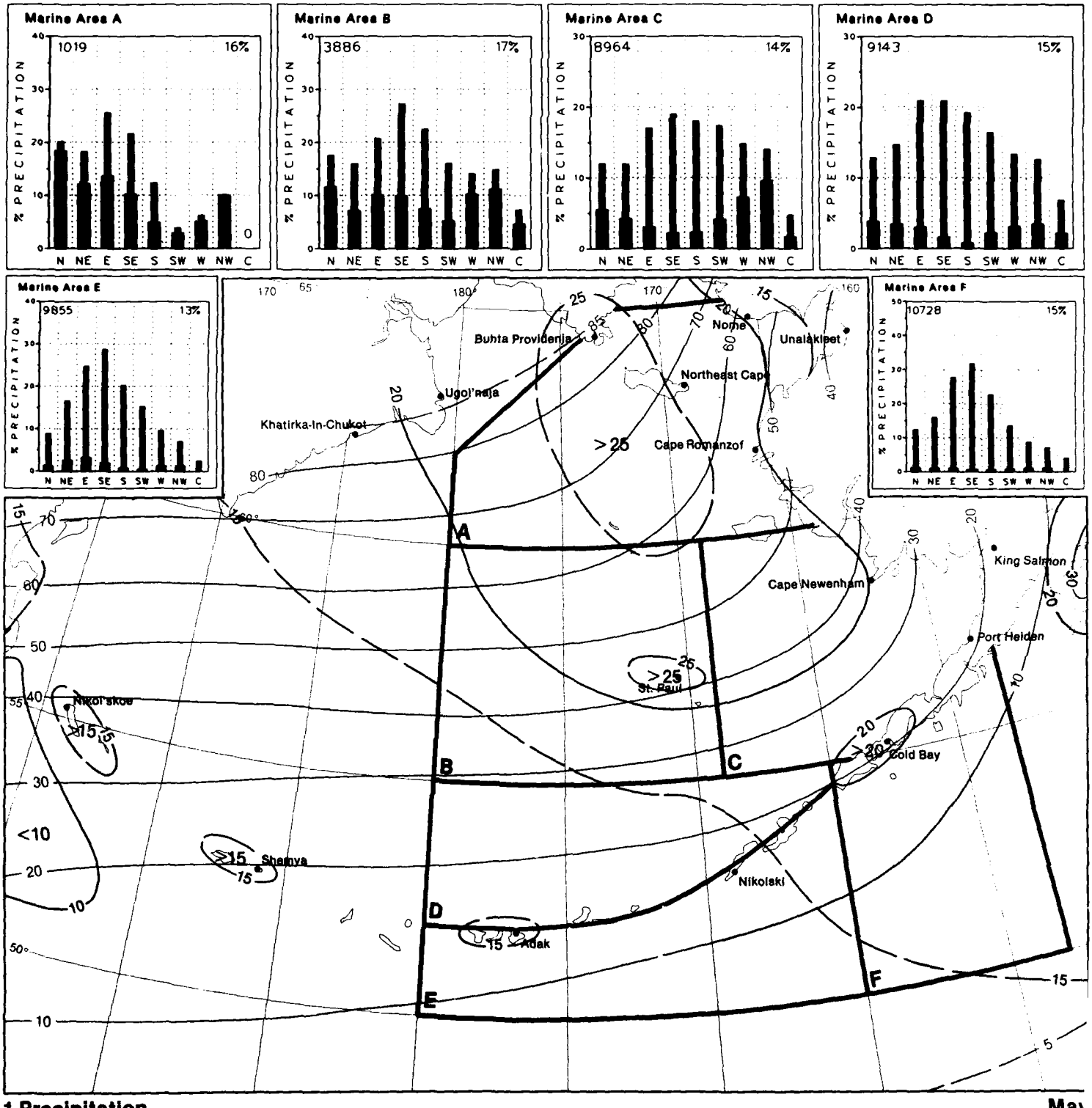
1 Precipitation

April



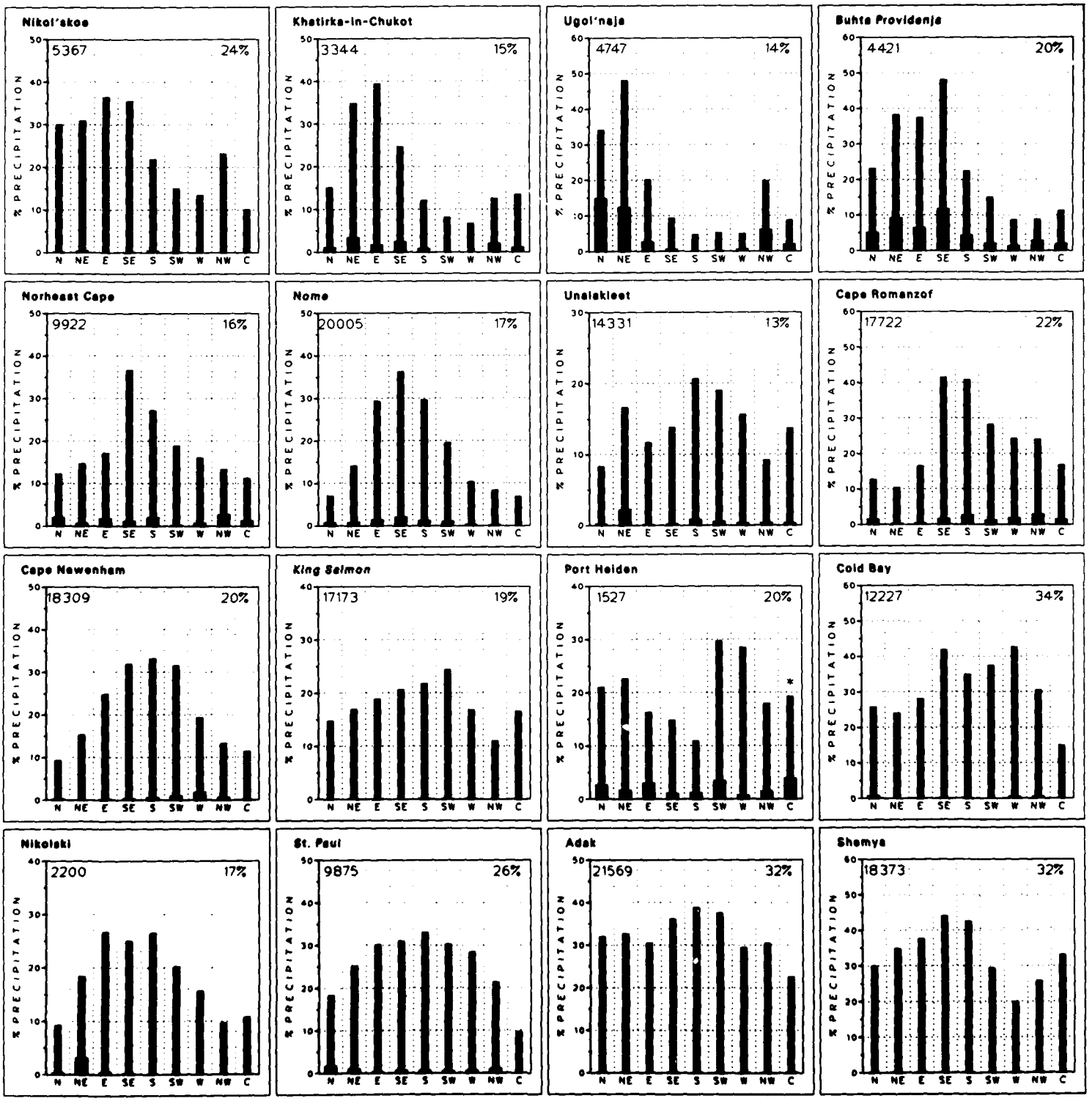
May

1 Precipitation and Wind Direction



1 Precipitation

May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Khatirka-in-Chukot
3344
15%
Ugol'naja
4747
14%
Buhta Providenja
4421
20%
Northeast Cape
9922
16%
Nome
20005
17%
Unalakleet
14331
13%
Cape Romanzof
17722
22%
Cape Newenham
18309
20%
King Salmon
17173
19%
Port Heiden
1527
20%
Cold Bay
12227
34%
Nikolski
2200
17%
St. Paul
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26%
Adak
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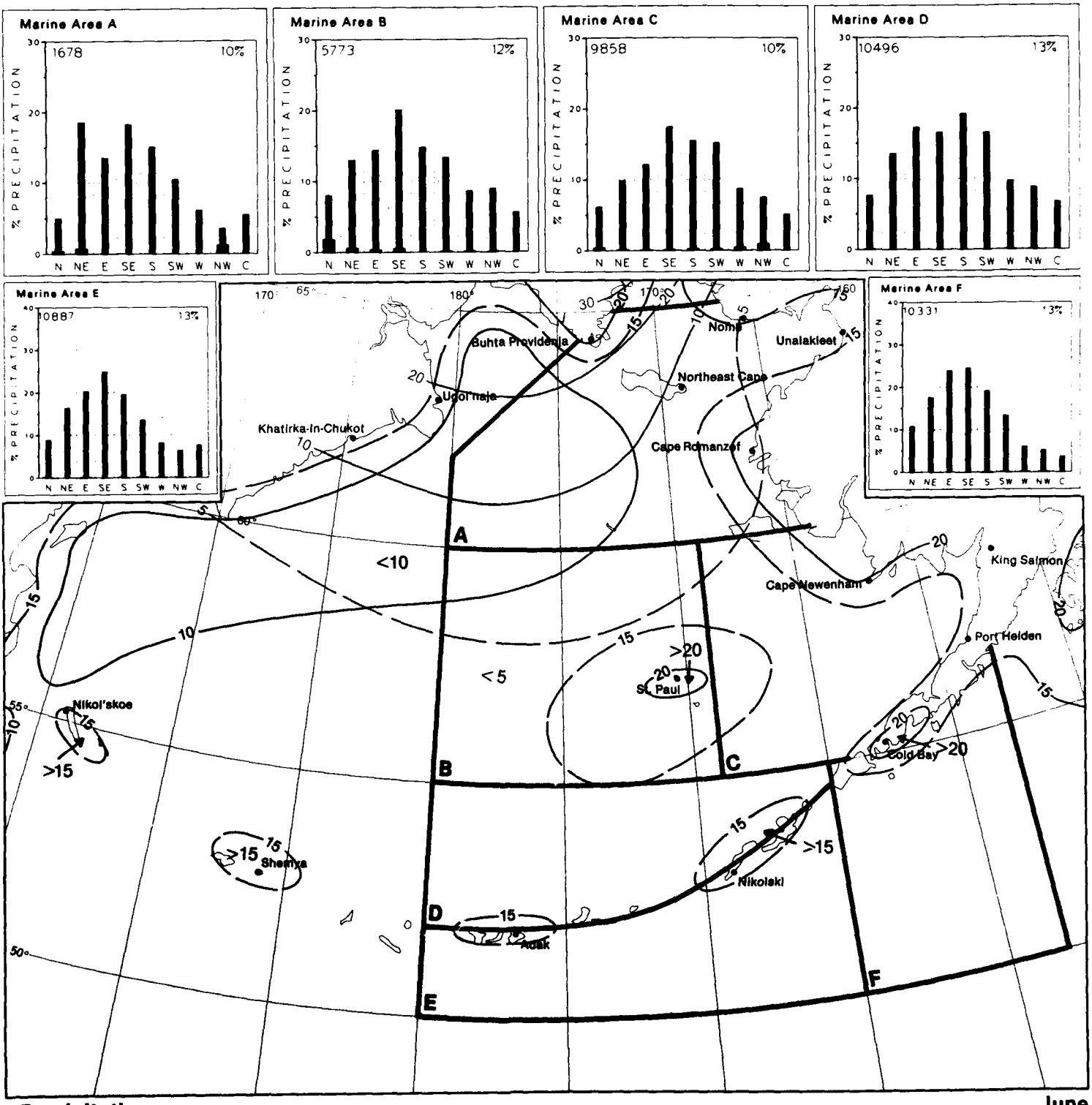
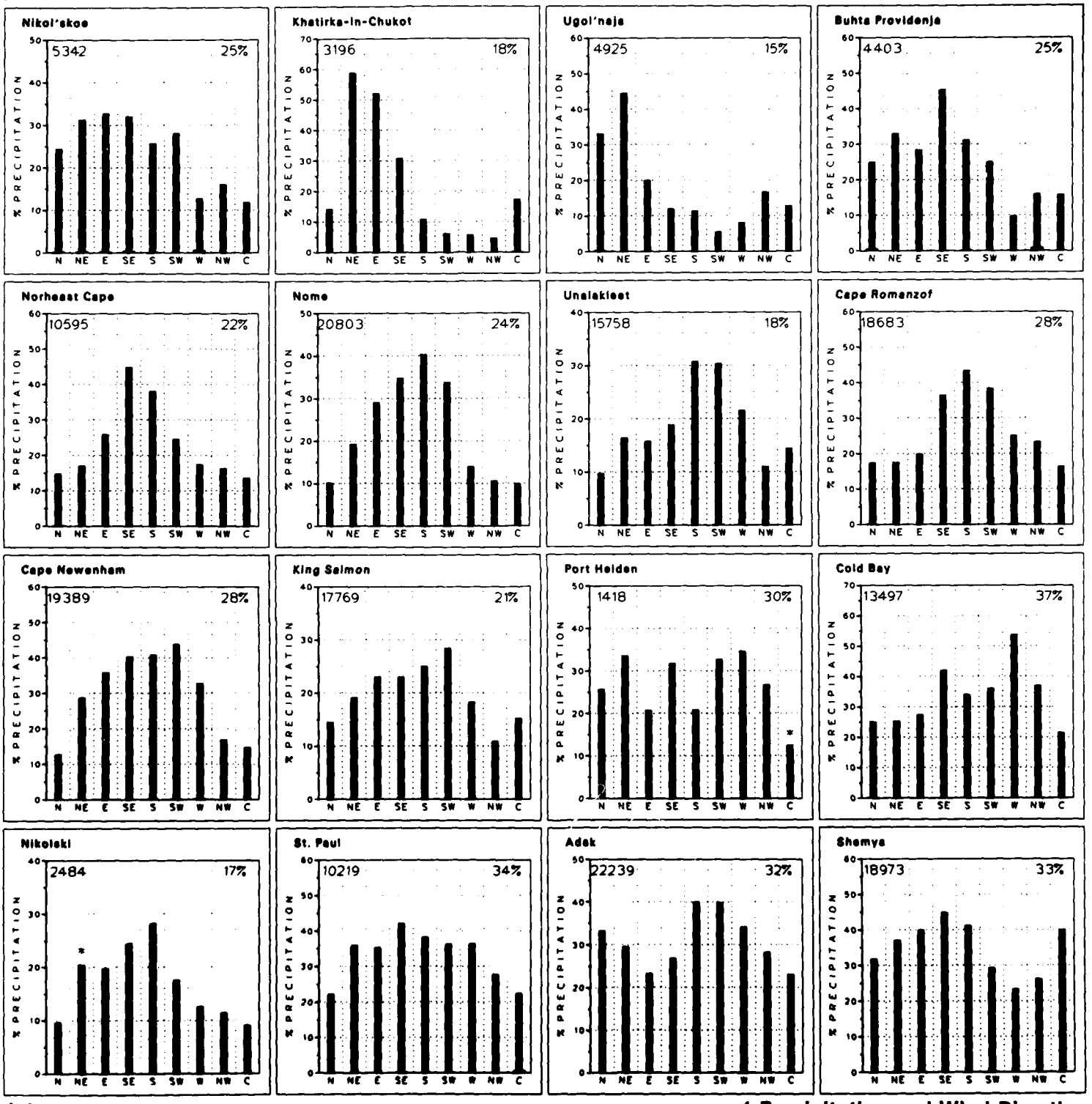
32%
Shemya
18373
32%
% PRECIPITATION
N NE E SE S SW W NW C



1 Precipitation

June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18%
Ugol'naja
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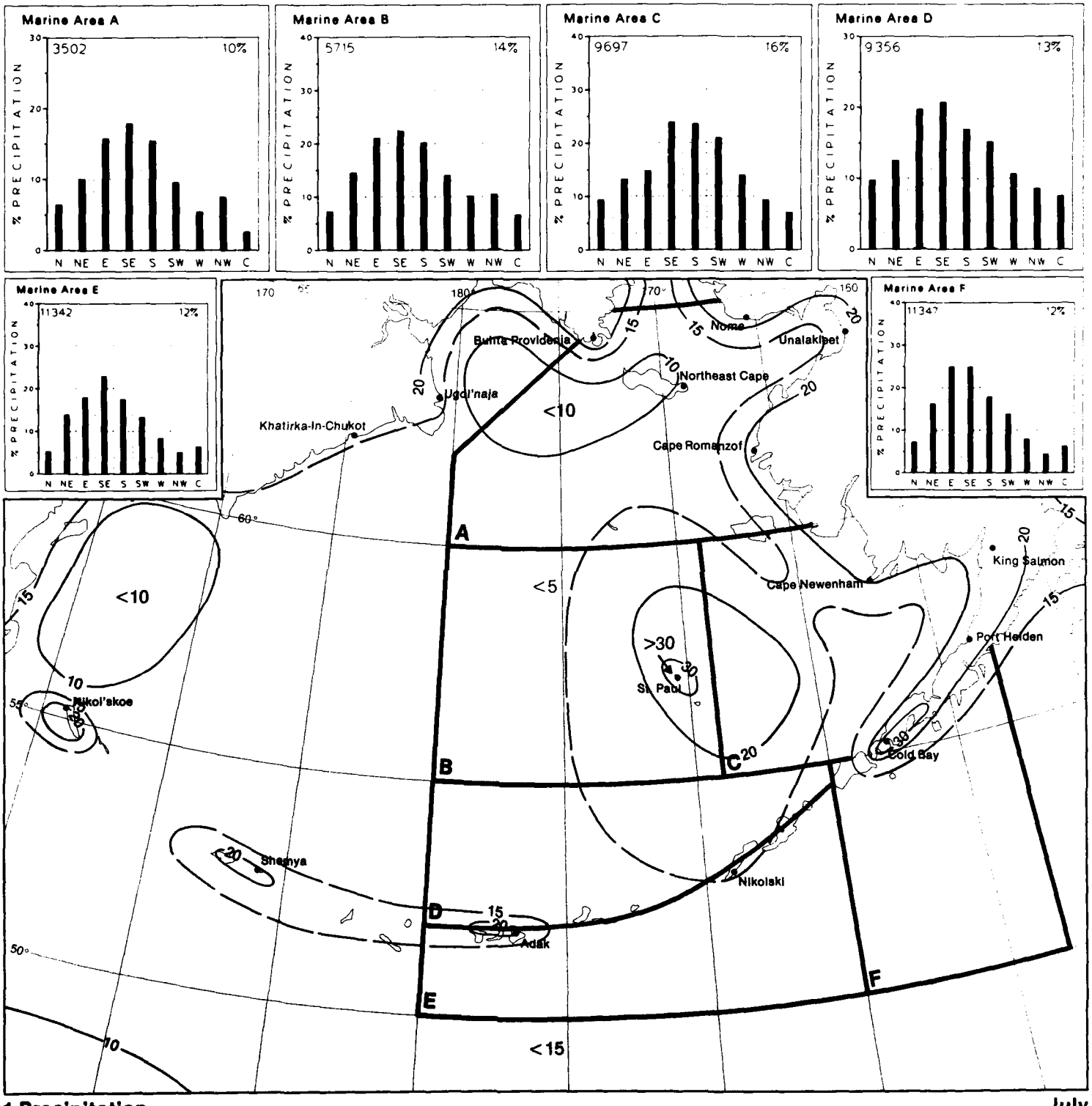
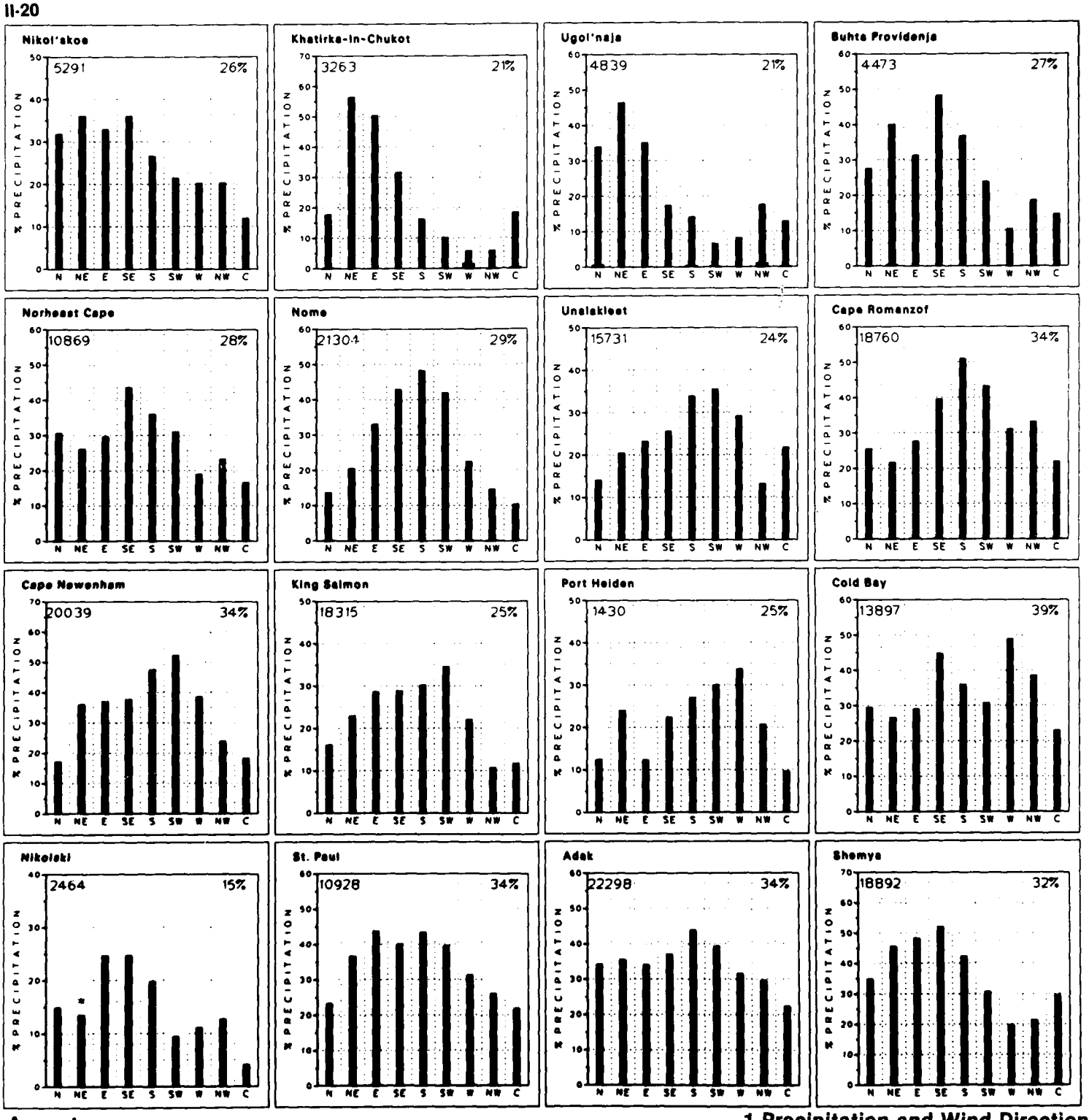
15%
Buhta Providenja
4403
25%
Northeast Cape
10595
22%
Nome
20803
24%
Unalakleet
15758
18%
Cape Romanzof
18683
28%
Cape Newenham
19389
28%
King Salmon
17769
21%
Port Heiden
1418
30%
Cold Bay
13497
37%
Nikoleki
2484
17%
St. Paul
10219
34%
Adak
22239
32%
Shemya
18973
33%
% PRECIPITATION
N NE E SE S SW W NW C



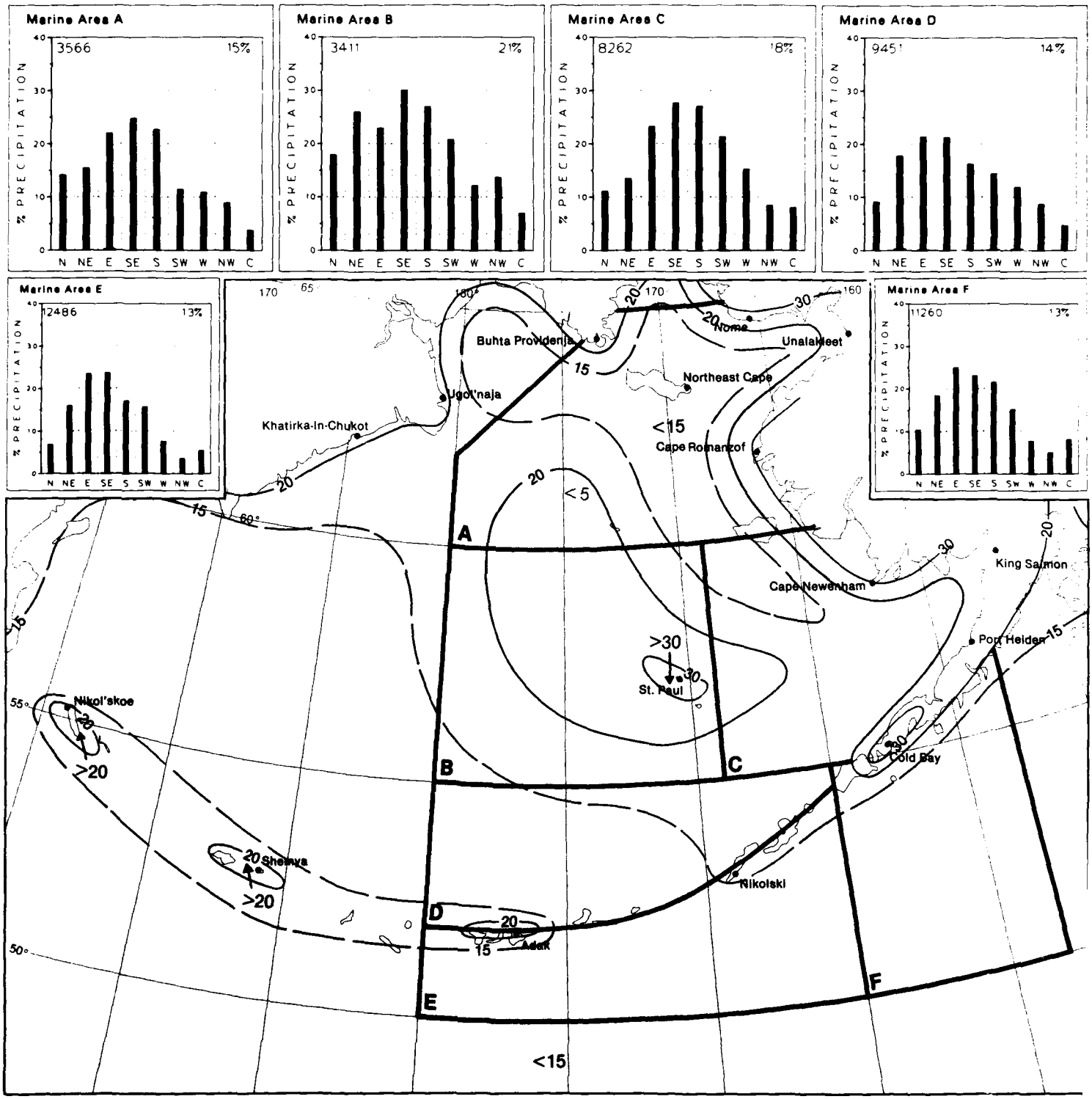
1 Precipitation

July



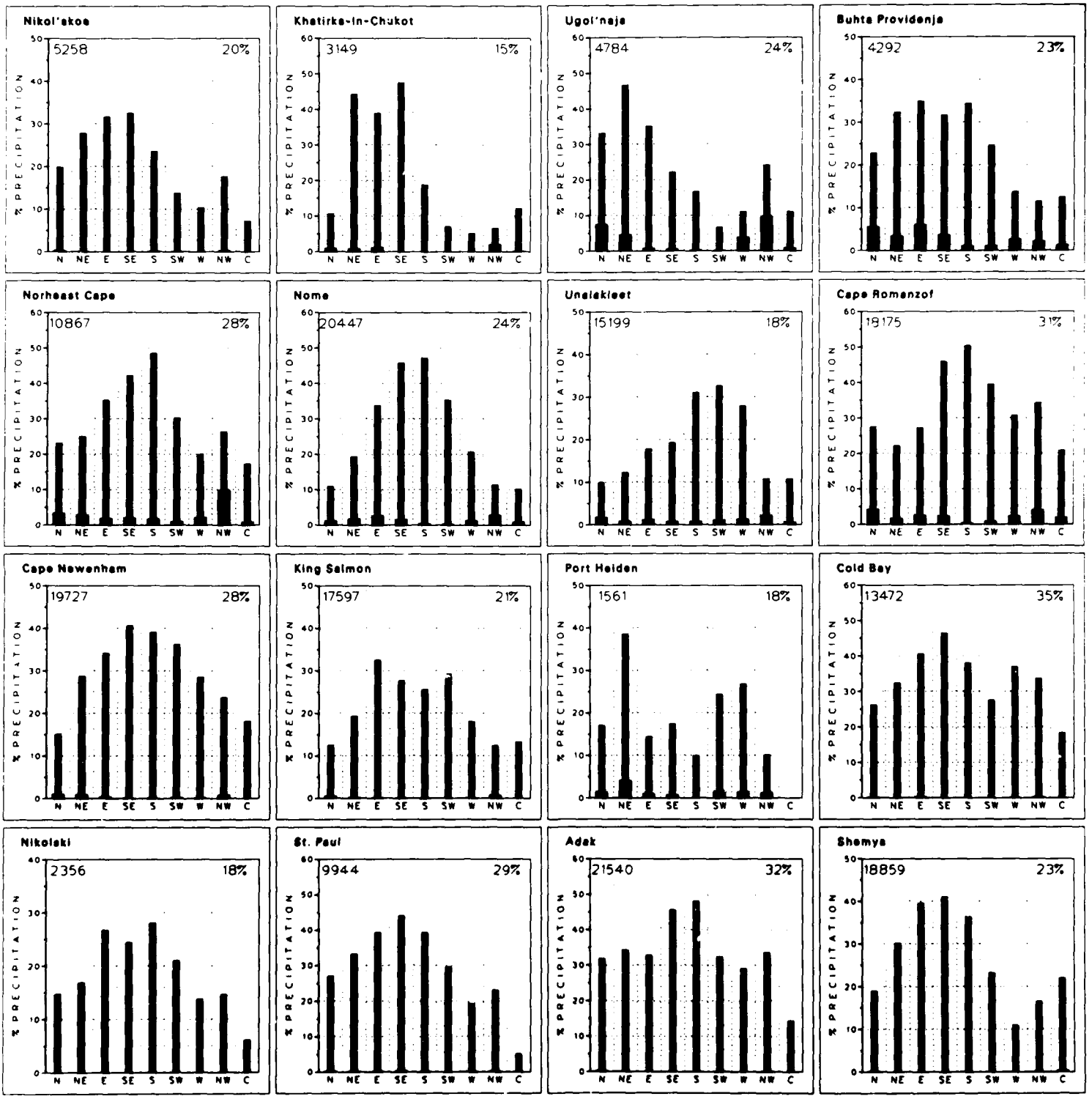
August

1 Precipitation and Wind Direction



1 Precipitation

Augus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Ugol'naja
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Buhta Providenja
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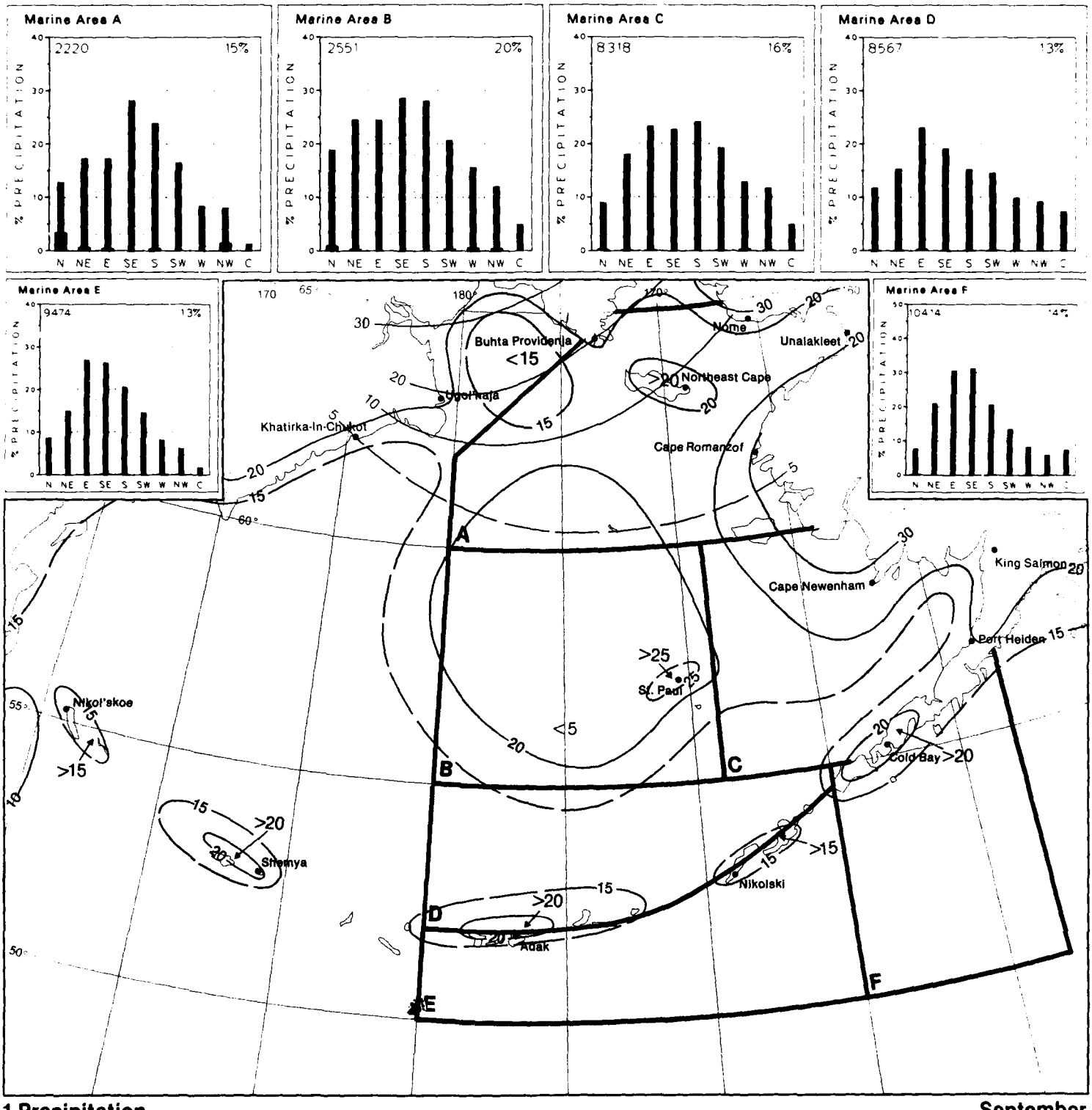
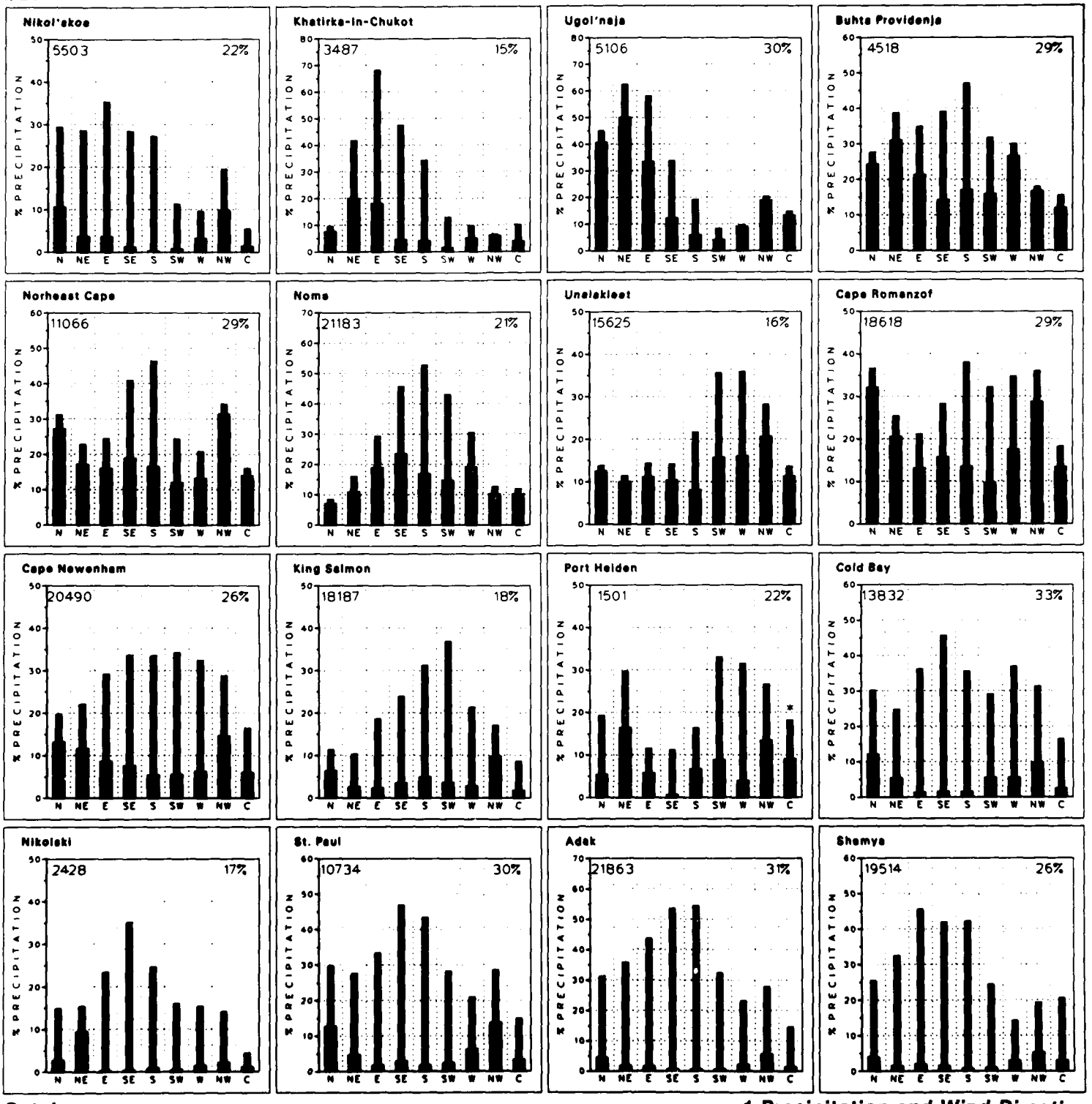
23%
Northeast Cape
10867
28%
Nome
20447
24%
Unalakleet
15199
18%
Cape Romanzof
19175
31%
Cape Newenham
19727
28%
King Salmon
17597
21%
Port Heiden
1561
18%
Cold Bay
13472
35%
Nikolski
2356
18%
St. Paul
9944
29%
Adak
21540
32%
Shemya
18859
23%
% PRECIPITATION
N NE E SE S SW W NW C



1 Precipitation

September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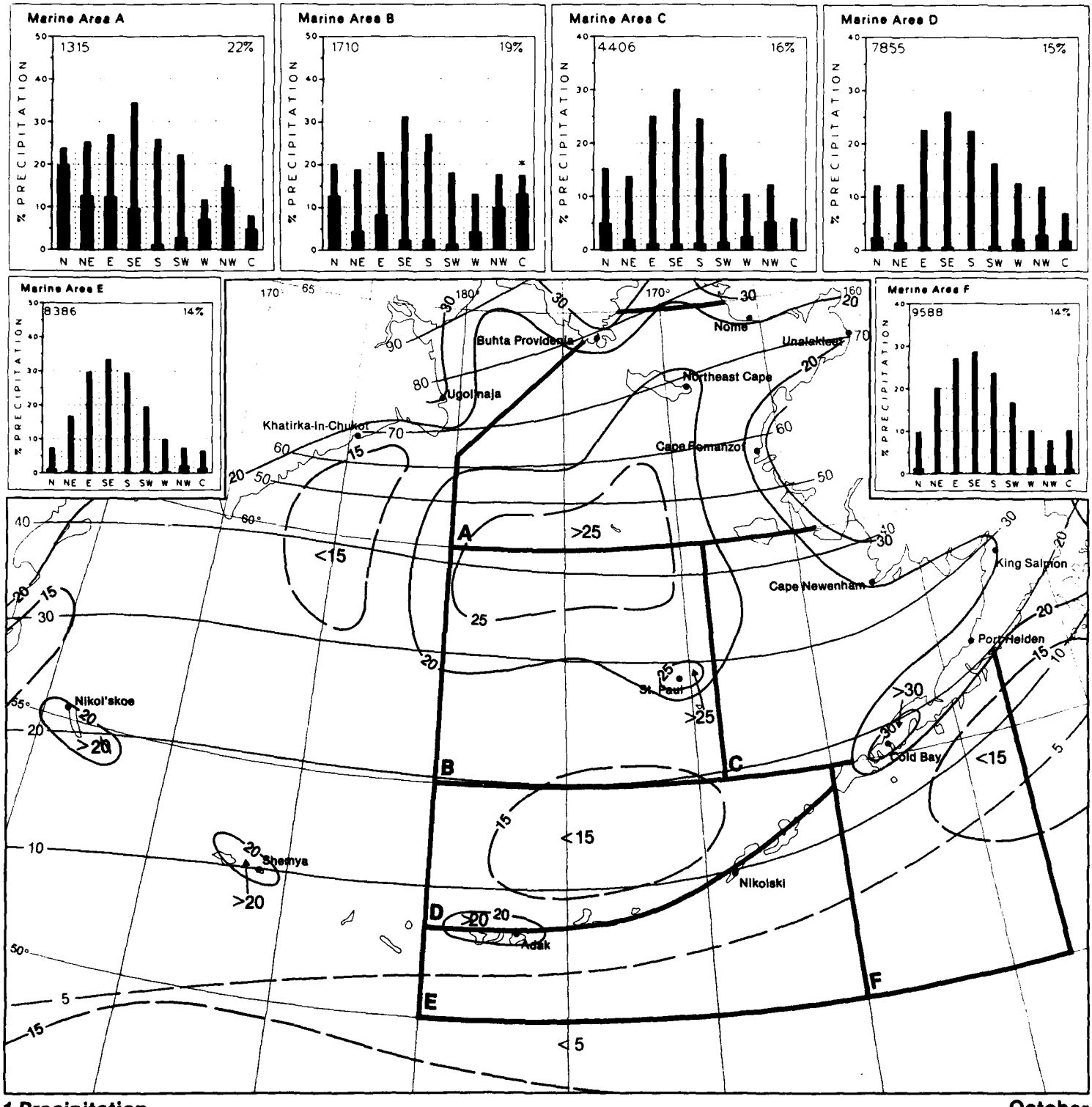
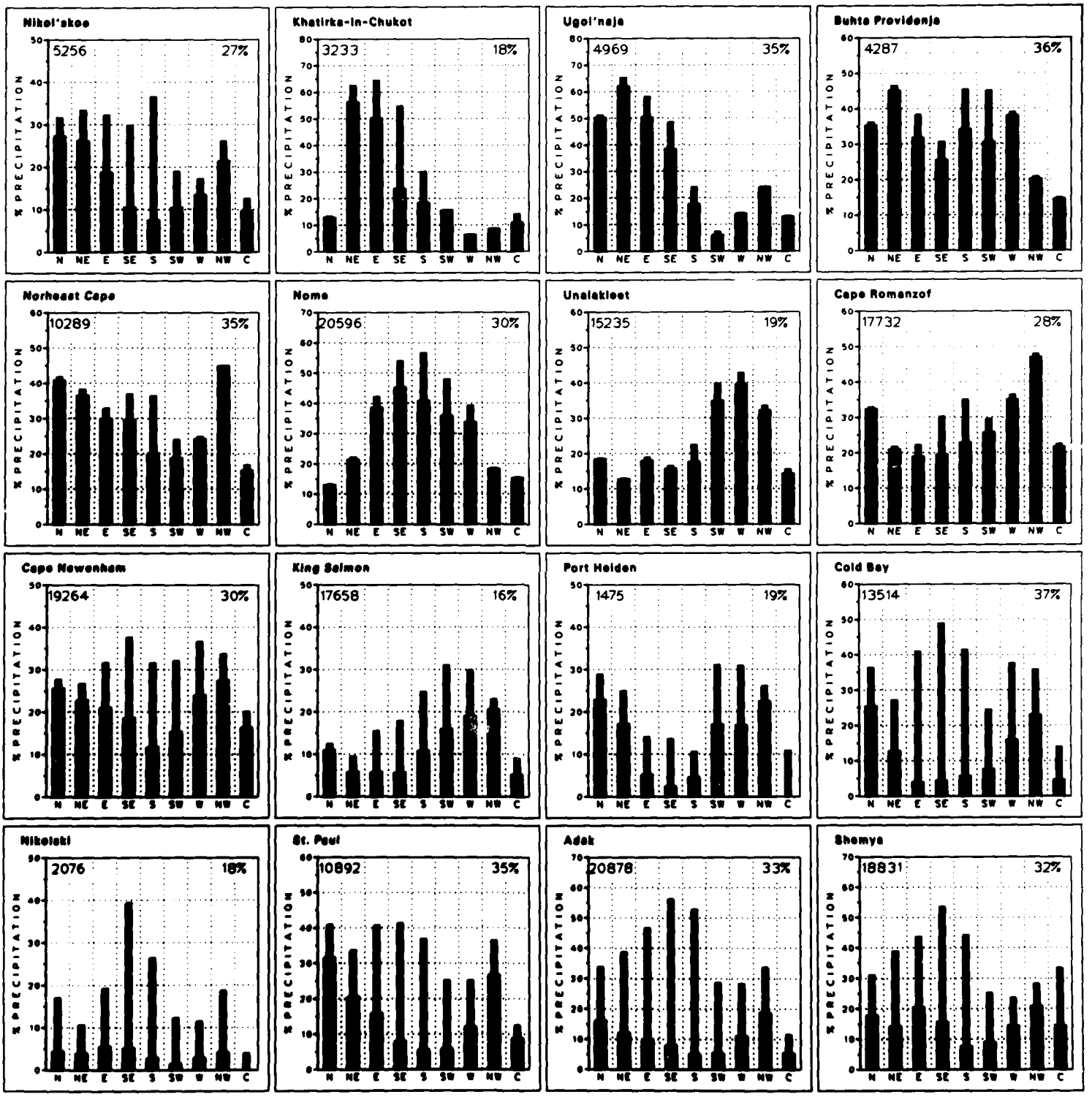
Khatirka-In-Chukot
3487
15%
Ugol'naja
5106
30%
Buhta Providenja
4518
29%
Northeast Cape
11066
29%
Nome
21183
21%
Unalakleet
15625
16%
Cape Romanzof
18618
29%
Cape Newenham
20490
26%
King Salmon
18187
18%
Port Heiden
1501
22%
Cold Bay
13832
33%
Nikolski
2428
17%
St. Paul
10734
30%
Adak
21863
31%
Shemya
19514
26%
% PRECIPITATION
N NE E SE S SW W NW C



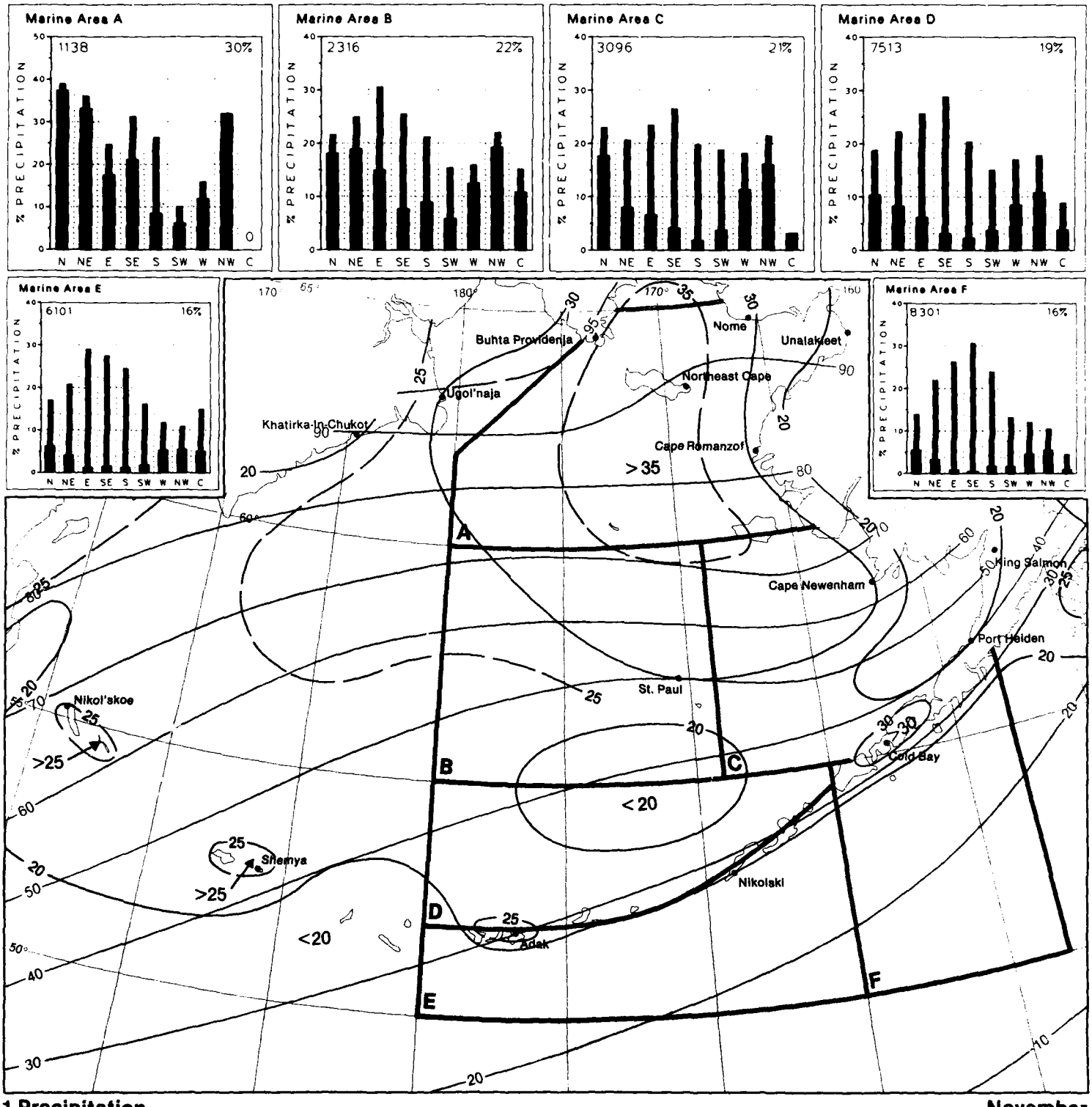
1 Precipitation

October



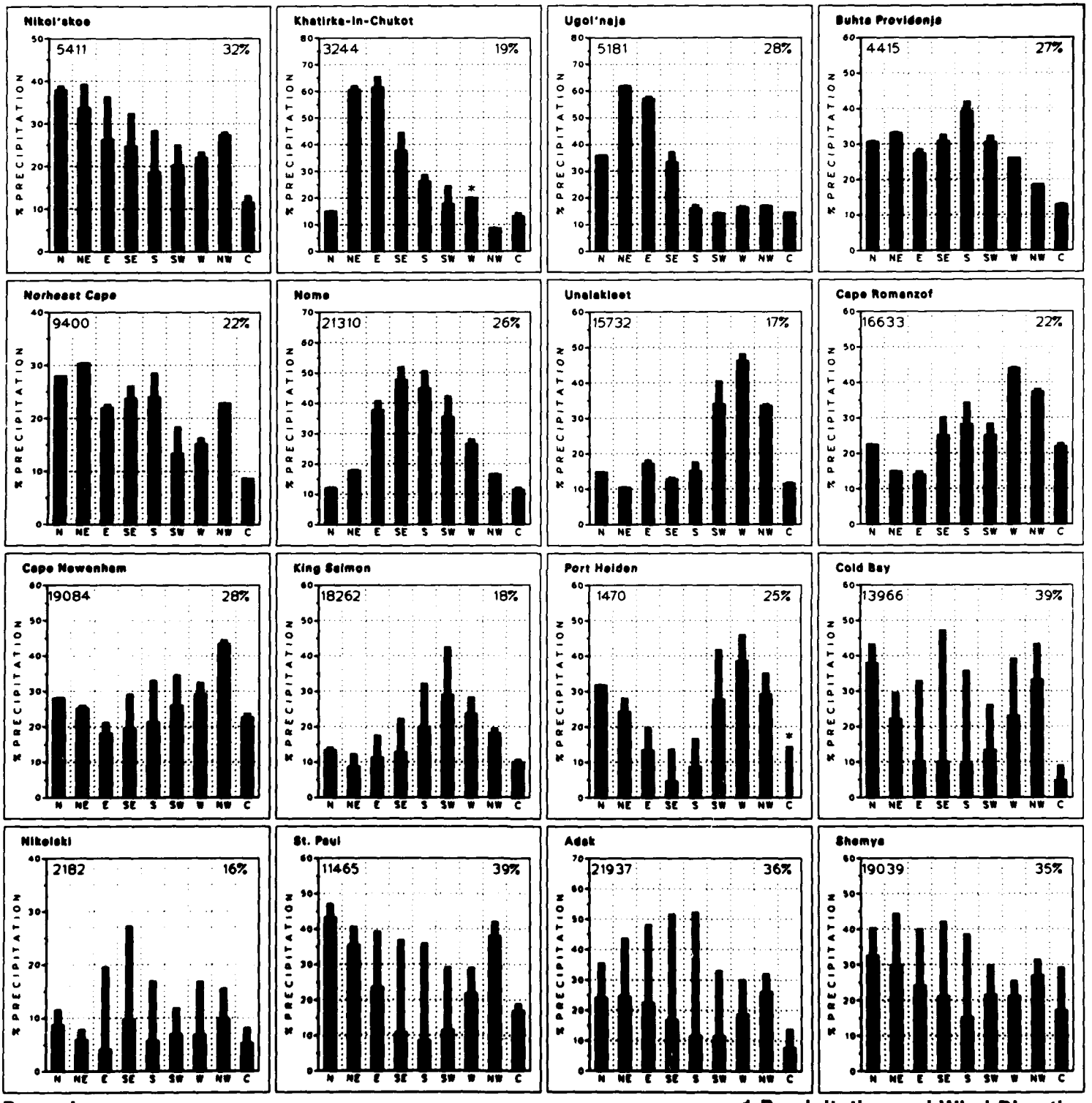
November

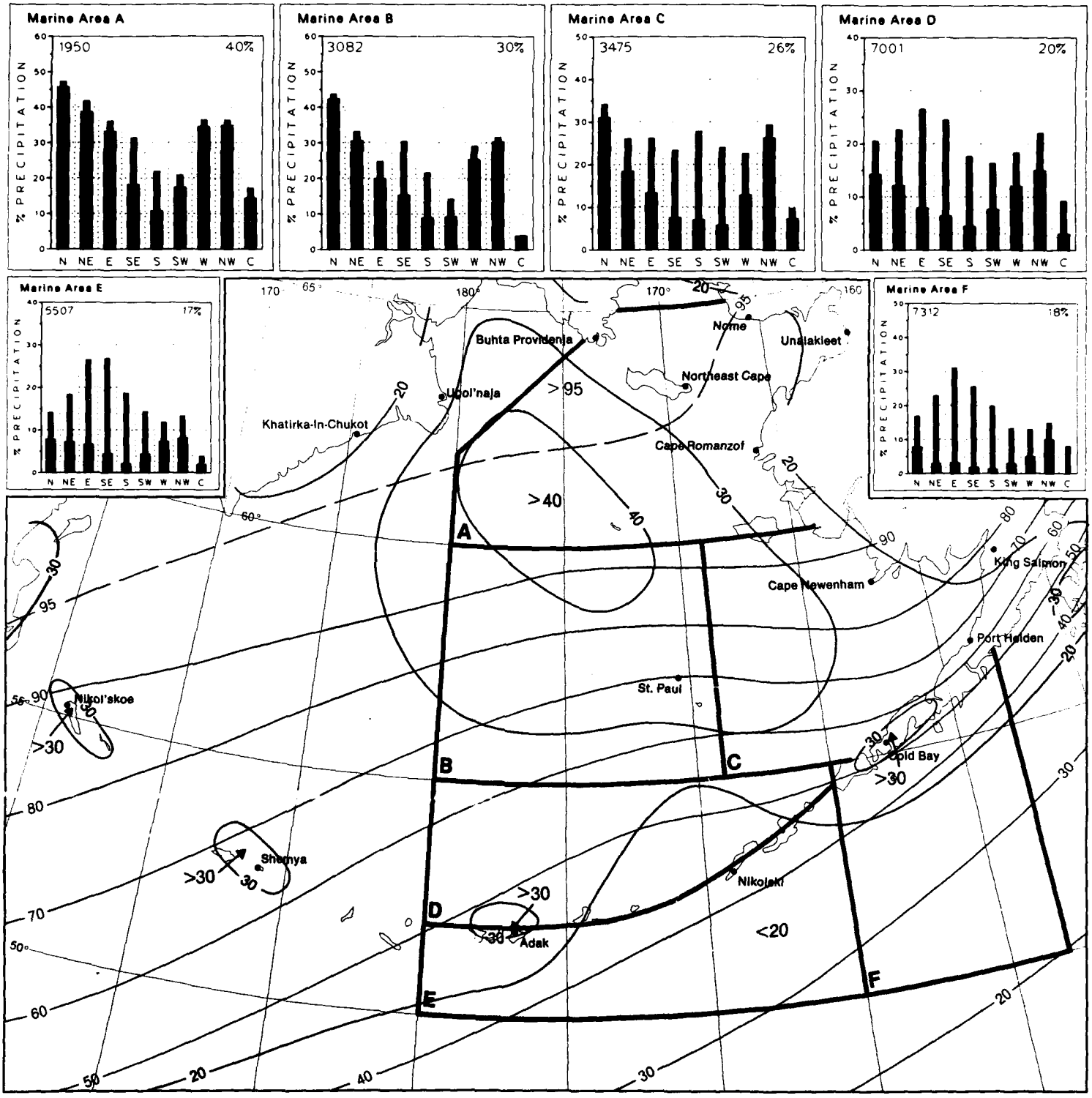
1 Precipitation and Wind Direction



1 Precipitation

November


Nikol'skoe
5411
32%
Khatirka-In-Chukot
3244
19%
Ugol'naja
5181
28%
Buhta Providenja
4415
27%
Northeast Cape
9400
22%
Nome
21310
26%
Unalakleet
15732
17%
Cape Romanzof
16633
22%
Cape Newenham
19084
28%
King Salmon
18262
18%
Port Heiden
1470
25%
Cold Bay
13966
39%
Nikolski
2182
16%
St. Paul
11465
39%
Adak
21937
36%
Shemya
19039
35%
% PRECIPITATION
N NE E SE S SW W NW C



1 Precipitation

December

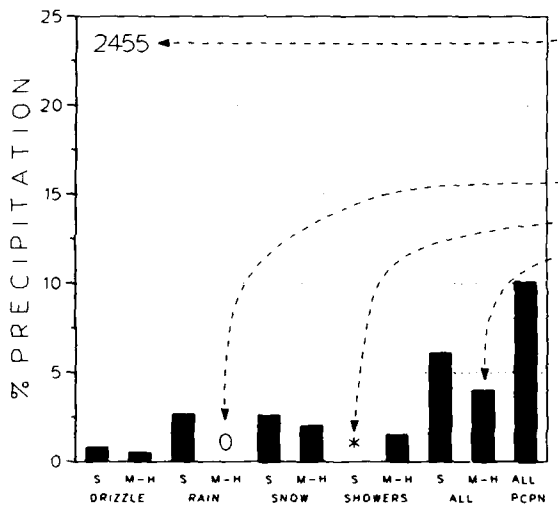
Map 2. Wind/visibility/cloudiness

BLACK LINE – Percent frequency of optimum conditions: Low cloud ceiling (LCC) ≥5000 feet, (or no LCC), visibility ≥5 nautical miles and wind 11–21 knots.

BLUE LINE – Percent frequency of poor conditions. Any one of the following constitutes poor conditions: LCC <**300 feet, visibility <1 nautical mile or wind <6 or ≥34 knots.**

Albers Equal–Area Conic Projection

Graphs: Precipitation types



Percent frequency of precipitation by type and intensity (S - slight, M - moderate and H- heavy).

Number of observations.

Bars show percent frequency of observations reporting Precipitation of various types and intensities.

0 indicates no observations in the category

*** indicates <.05% but >0.**

(4% of all observations recorded moderate to heavy precipitation.)

Present weather elements that can be reported in an observation are thunderstorms, lightning, waterspouts, squalls, fog, haze, smoke, dust, and all forms of precipitation. Most present weather codes (ww = 00-99, see table) apply to phenomena occurring at the time of observation, but a few refer to phenomena occurring in the past hour. The highest applicable numerical ww code figure is recorded (except that code 17 has preference over 20 to 49, inclusive). Precipitation includes all forms of water particles, whether liquid or solid, that fall to the earth's surface—rain, drizzle, snow, snow pellets, snow grains, ice crystals, ice pellets, and hail. Each form is classified by its character (continuous, intermittent, showery, or combination), intensity (slight, moderate, or heavy), and type (liquid, freezing, or frozen). In this study, frozen precipitation is defined as any precipitation that reaches the ground in frozen form; it does not include liquid that freezes upon impact with the ground or exposed objects. Refer to the text in Set 1 for additional information on precipitation.

PRESENT WEATHER (WMO Code, 1982)

The present weather (ww) code is arranged in priority order. Reading down the list, select the first applicable (most severe) weather condition that you observe and enter the code number for ww.

50-99 PRECIPITATION AT SHIP AT TIME OF OBSERVATION

95-99 THUNDERSTORM AT TIME OF OBSERVATION

99	Heavy thunderstorm with hail*
98	Thunderstorm with duststorm or sandstorm
97	Heavy thunderstorm with rain and/or snow, but no hail*
96	Slight or moderate thunderstorm with hail*
95	Slight or moderate thunderstorm with rain or snow but no hail*

*Includes hail, ice pellets, or snow pellets

91-94 THUNDERSTORM DURING THE PAST HOUR BUT NOT AT THE TIME OF OBSERVATION

Note: Use code 29 if there is no precipitation at time of observation.

94	Moderate or heavy snow, or rain and snow mixed, or hail*	Thunderstorm in past hour
93	Slight snow, or rain and snow mixed, or hail*	
92	Moderate or heavy rain	
91	Slight rain	

*Includes hail, ice pellets, or snow pellets

85-90 SOLID PRECIPITATION IN SHOWERS

Slight		Moderate or Heavy
89	Shower of hail*, no thunder	90
87	Shower of snow pellets or ice pellets†	88
85	Shower of snow	86

†With or without rain, or rain and snow mixed
*Include hail, ice pellets, or snow pellets

80-84 RAIN SHOWERS

84	Shower of rain and snow mixed, moderate or heavy
83	Shower of rain and snow mixed, slight
82	Violent rain shower
81	Moderate or heavy rain shower
80	Slight rain shower

70-79 SOLID PRECIPITATION NOT FALLING AS SHOWERS

79	Ice pellets
78	Isolated star-like snow crystals(with or without fog)
77	Snow grains (with or without fog)
76	Diamond dust (with or without fog)

Intermittent		Continuous
74	Heavy snow in flakes	75
72	Moderate snow in flakes	73
70	Slight snow in flakes	71

60-69 RAIN (NOT FALLING AS SHOWERS)

Slight		Moderate or Heavy
68	Rain or drizzle with snow	69
66	Freezing rain	67

Intermittent		Continuous
64	Heavy rain	65
62	Moderate rain	63
60	Slight rain	61

50-59 DRIZZLE

Slight		Moderate or heavy
58	Drizzle and rain mixed	59
56	Freezing drizzle	57

Intermittent		Continuous
54	Heavy drizzle	55
52	Moderate drizzle	53
50	Slight drizzle	51

00-49 NO PRECIPITATION AT SHIP AT TIME OF OBSERVATION

17	Thunder at time of observation, no precipitation at ship

40-49 FOG AT TIME OF OBSERVATION

(Visibility in fog is less than ½ nautical mile)

Sky visible		Sky invisible
48	Fog, depositing rime	49
46	Fog, has begun or thickened in past hour	47
44	Fog, no change in past hour	45
42	Fog, has become thinner in past hour	43
41	Fog in patches	
40	Fog at a distance but not at ship in past hour	

30-39 (Not likely to be used in ship reports)

Slight or moderate		Heavy
38	Blowing snow, high (above eye level)	39
36	Drifting snow, low (below eye level)	37

32	Duststorm or sandstorm, increasing	35
31	Duststorm or sandstorm, unchanging	34
30	Duststorm or sandstorm, decreasing	33

20-29 PHENOMENA IN PAST HOUR BUT NOT AT TIME OF OBSERVATION

29	Thunderstorm, with or without precipitation	
28	Fog (in past hour but not at time of obs.)	
27	Shower(s) of hail*, or of hail*, and rain mixed	
26	Shower(s) of snow, or of rain and snow mixed	
25	Shower(s) of rain	
24	Freezing drizzle or freezing rain	Not falling as showers
23	Rain and snow mixed, or ice pellets	
22	Snow	
21	Rain (not freezing)	
20	Drizzle (not freezing) or snow grains	

*Includes hail, ice pellets or snow pellets

18-19 SQUALLS, FUNNEL CLOUDS

19	Funnel cloud(s) seen in past hour or at time of obs
18	Squalls (no precip.) in past hour or at time of obs

13-16 PHENOMENA WITHIN SIGHT BUT NOT AT SHIP

16	Precip. within 3 naut. mi.—reaching surface
15	Precip. beyond 3 naut. mi.—reaching surface
14	Precipitation in sight, not reaching surface
13	Lightning visible, no thunder heard

10-12 MIST AND SHALLOW FOG

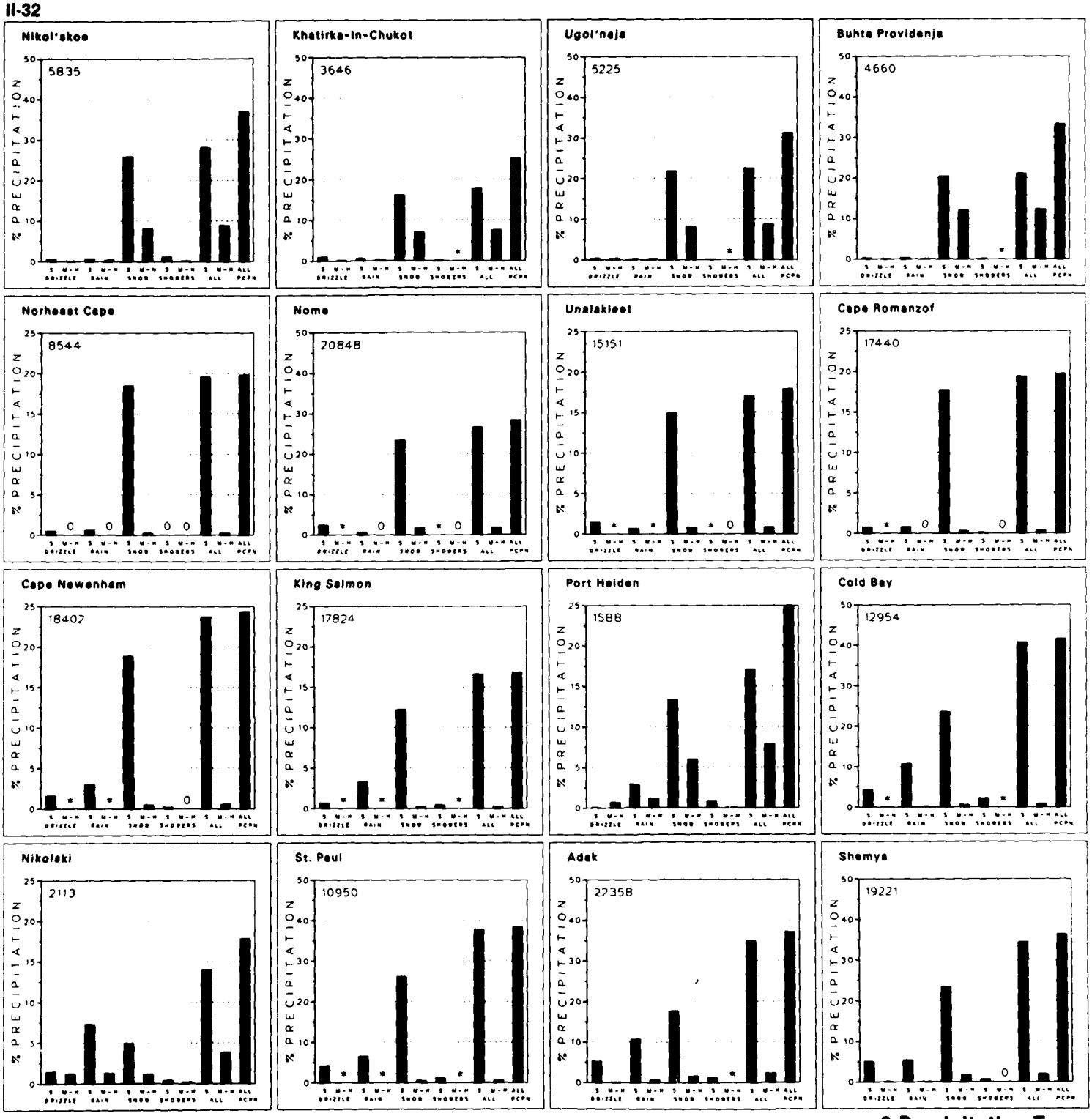
12	Shallow fog—more or less continuous	Fog not deeper than 10 m (33 feet)
11	Shallow fog in patches	
10	Mist (Visibility ½ nautical mile or more)	

04-09 HAZE, DUST, SAND, OR SMOKE

09	Duststorm or sandstorm within sight
08	Dust whirls in past hour (NOT FOR MARINE USE)
07	Blowing spray at ship
06	Widespread dust suspended in the air
05	Dry haze
04	Visibility reduced by smoke

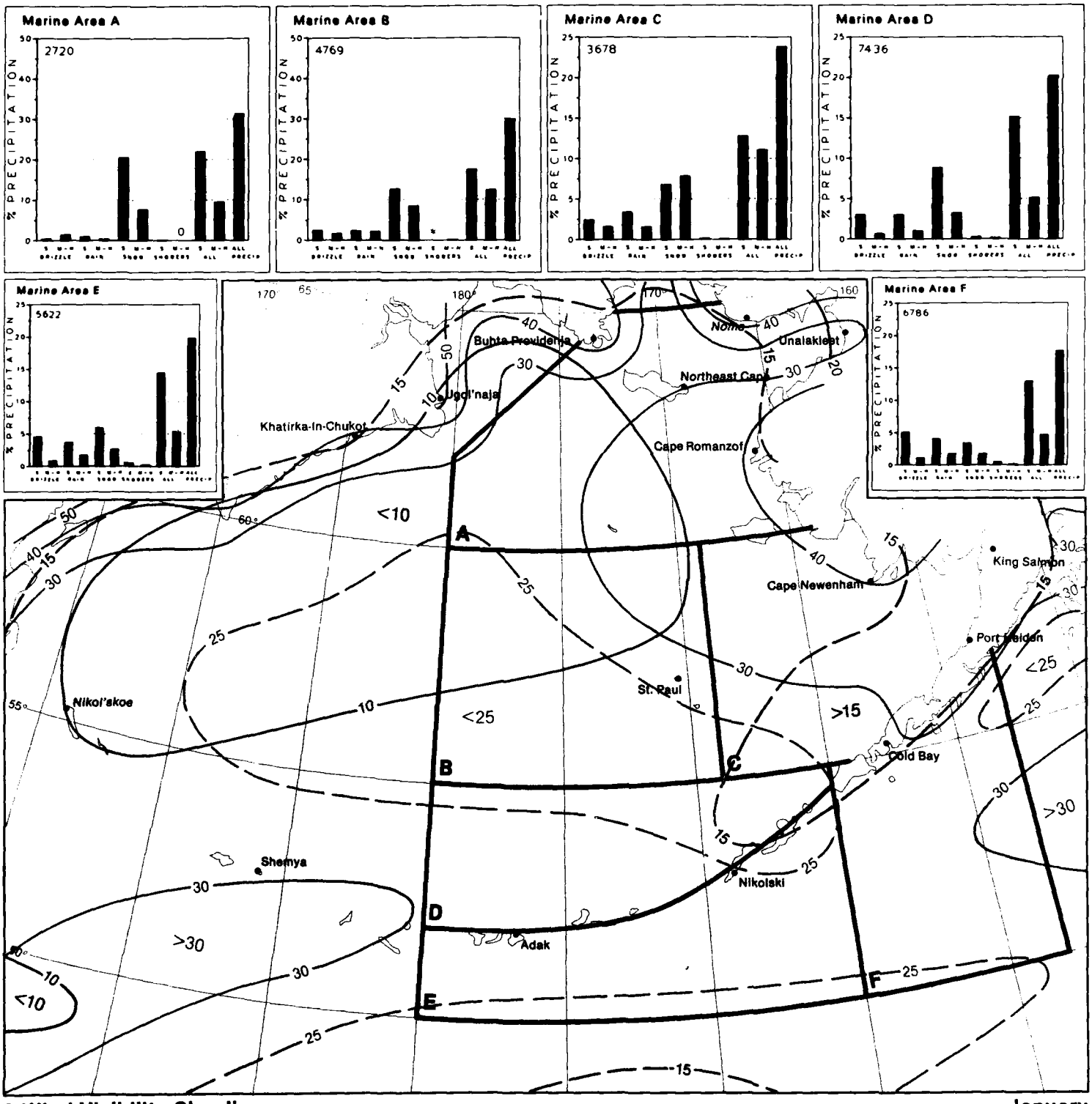
00-03 CHANGE OF SKY DURING PAST HOUR

Code figs.	
03	Clouds generally forming or developing
02	State of the sky on the whole unchanged
01	Clouds dissolving or becoming less developed
00	Cloud development not observable



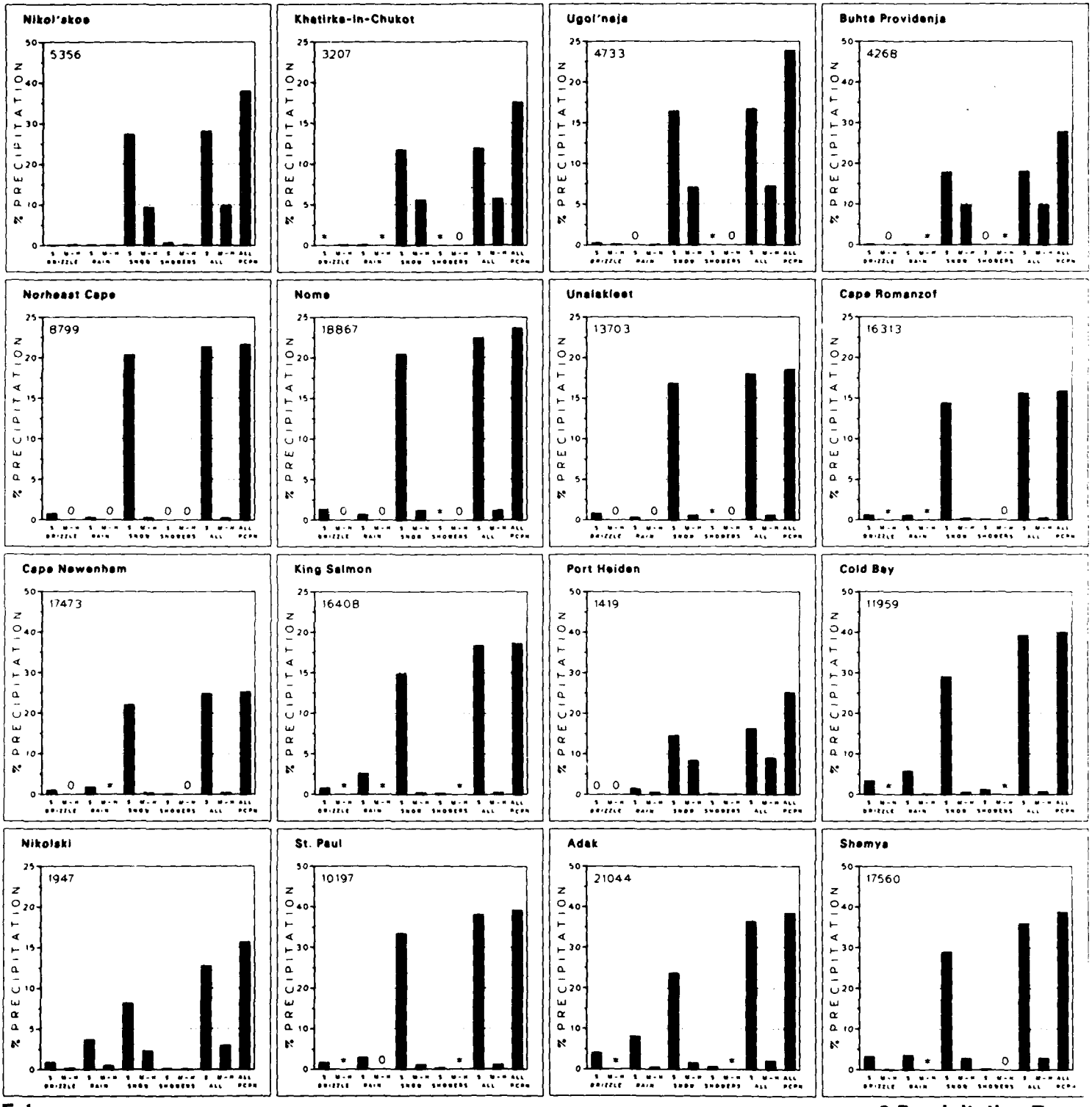
January

2 Precipitation Types



2 Wind-Visibility-Cloudiness

January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3207
Ugol'neje
4733
Buhta Providenja
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Northeast Cape
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Nome
18867
Unalakleet
13703
Cape Romanzof
16313
Cape Newenham
17473
King Salmon
16408
Port Heiden
1419
Cold Bay
11959
Nikolski
1947
St. Paul
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Adak
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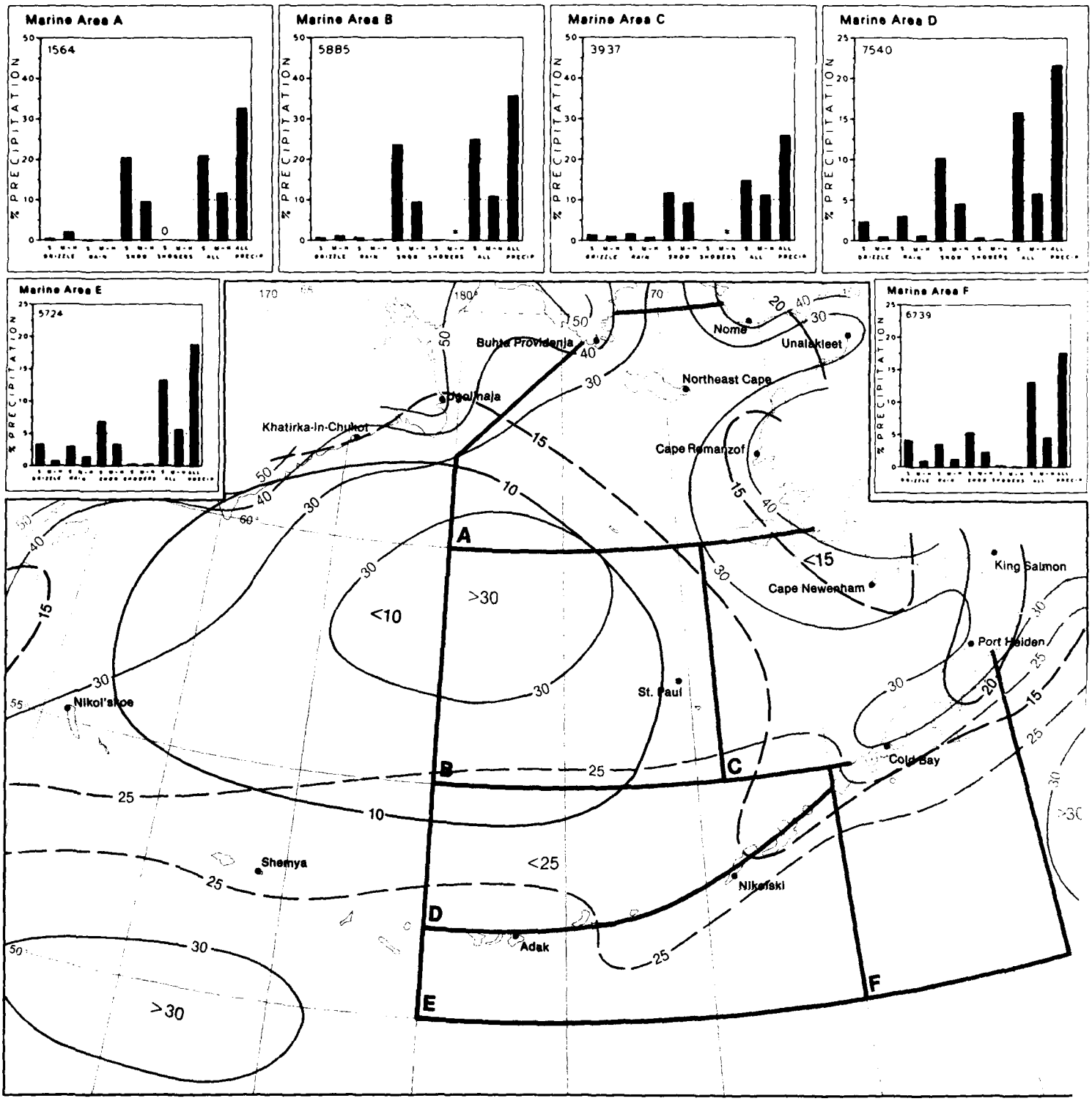
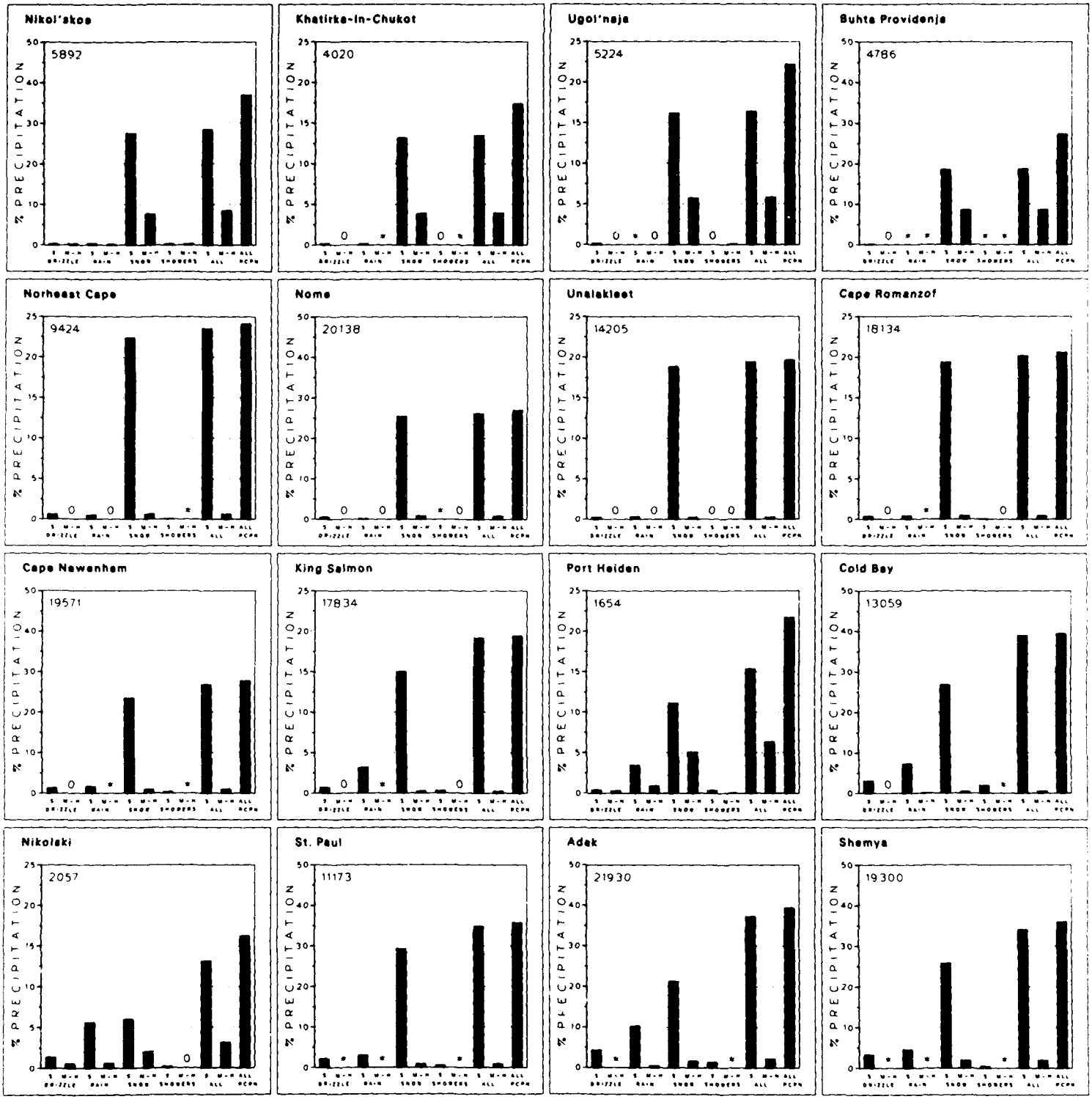
Shemya
17560
% PRECIPITATION
DRIZZLE
RAIN
SNOW
SHOWERS
ALL
PCPN



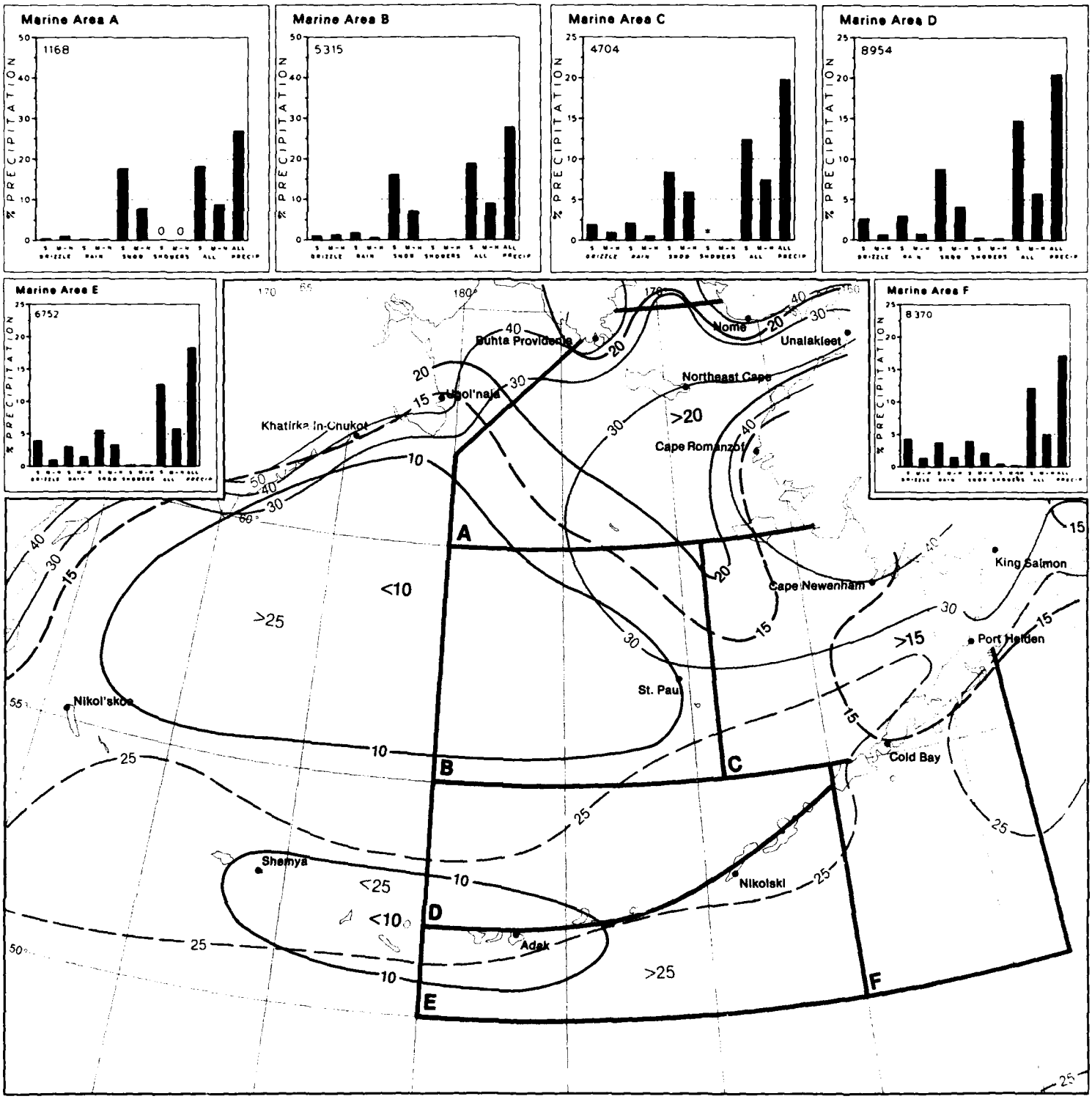
2 Wind-Visibility-Cloudiness

Februa



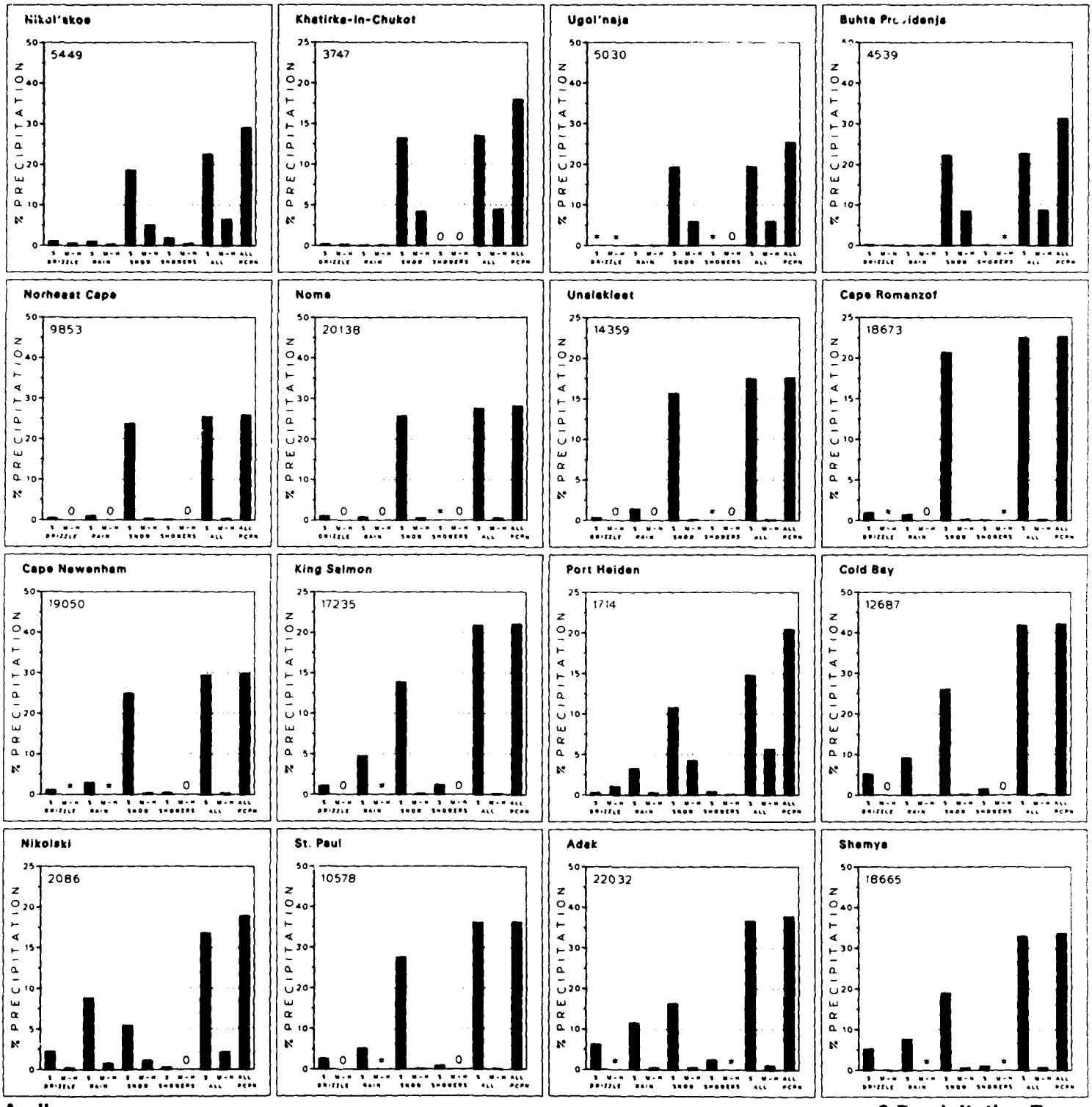
March

2 Precipitation Types



2 Wind-Visibility-Cloudiness

March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3747
Ugol'naja
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Unalakleet
14359
Cape Romanzof
18673
Cape Newenham
19050
King Salmon
17235
Port Heiden
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Cold Bay
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Nikolski
2086
St. Paul
10578
Adak
22032
Shemya
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% PRECIPITATION
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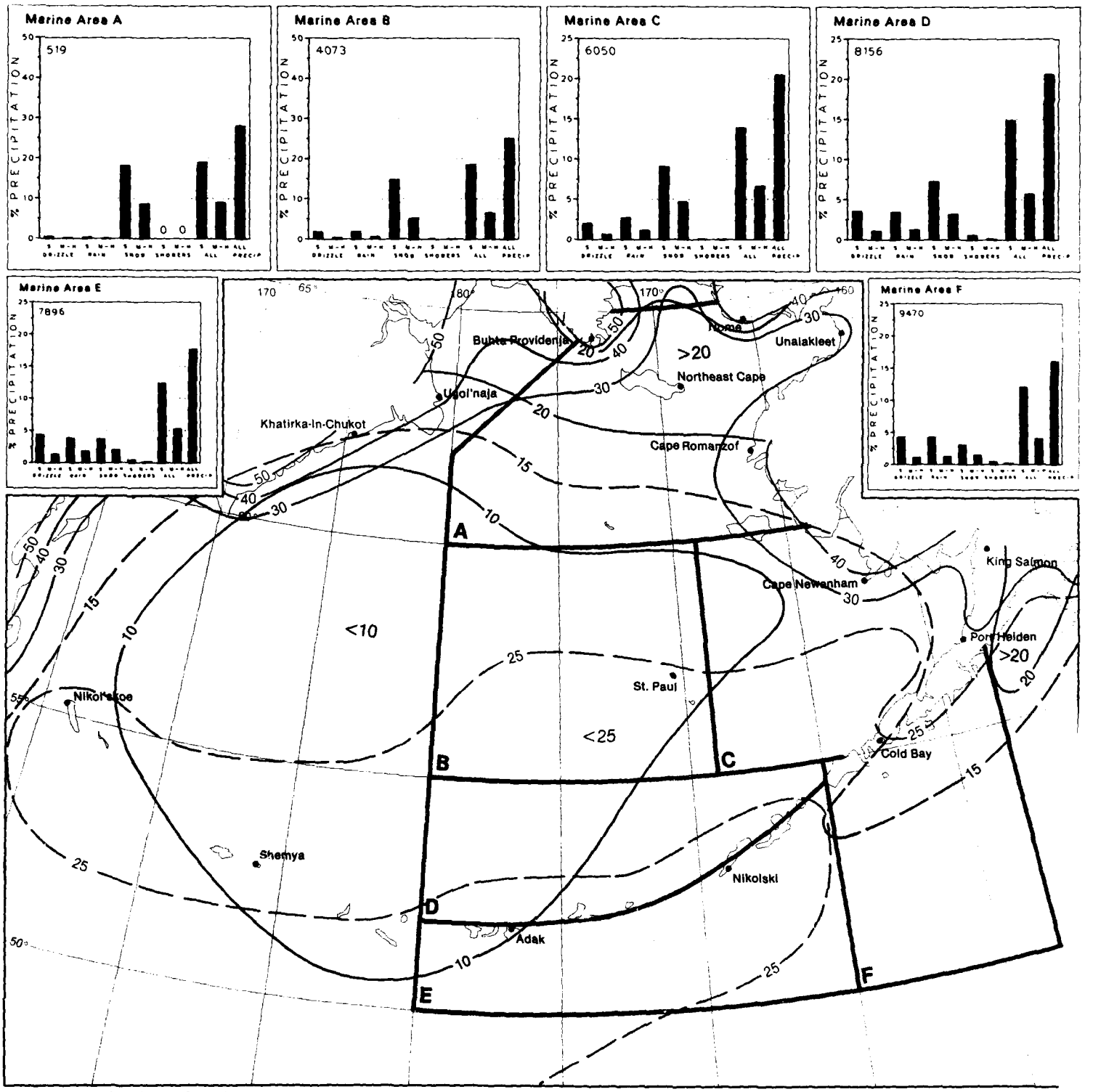
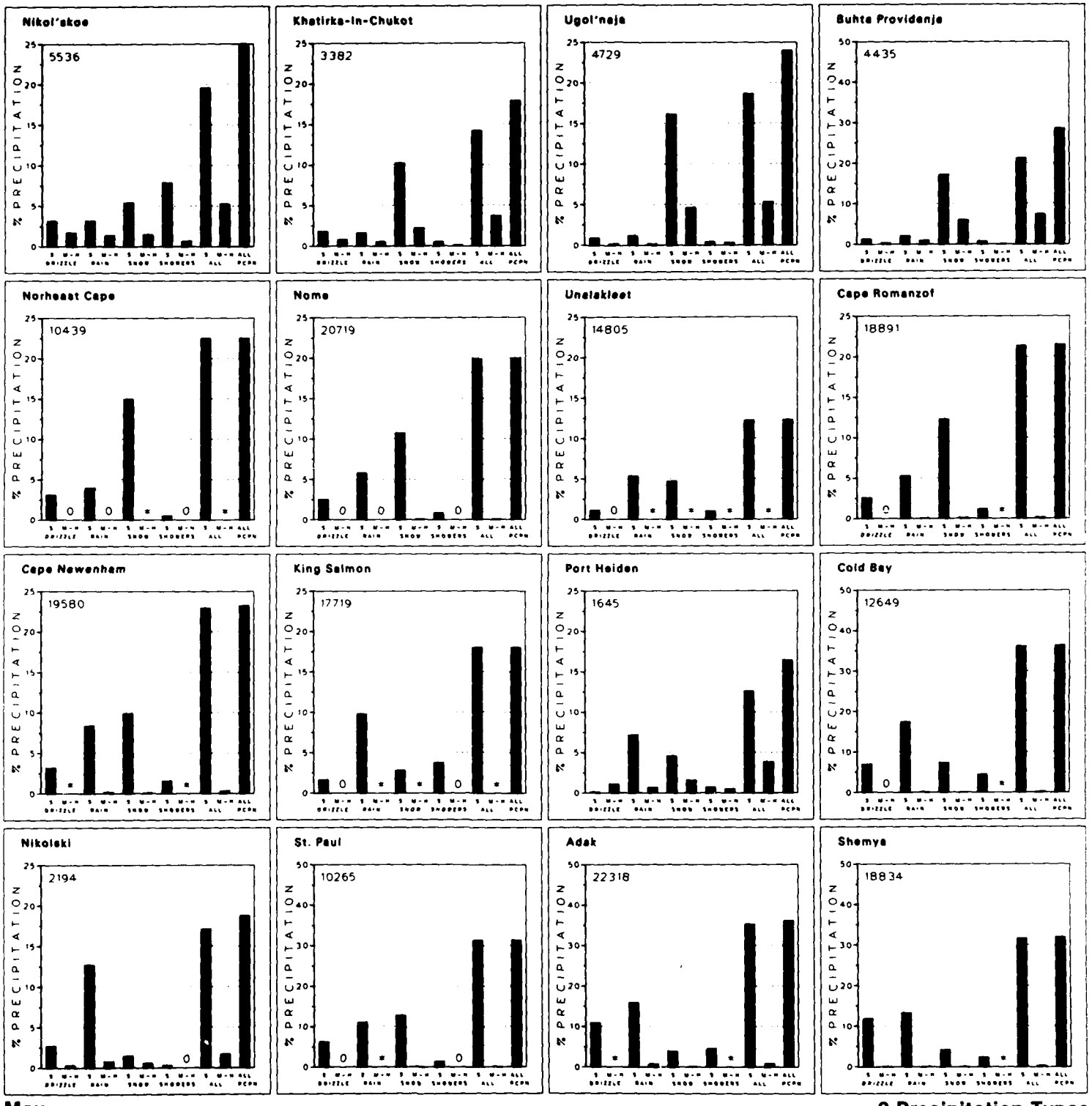


2 Wind-Visibility-Cloudiness

Ap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Nome
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Unalakleet
14805
Cape Romanzof
18891
Cape Newenham
19580
King Salmon
17719
Port Heiden
1645
Cold Bay
12649
Nikolski
2194
St. Paul
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Adak
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Shemya
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% PRECIPITATION
DRIZZLE
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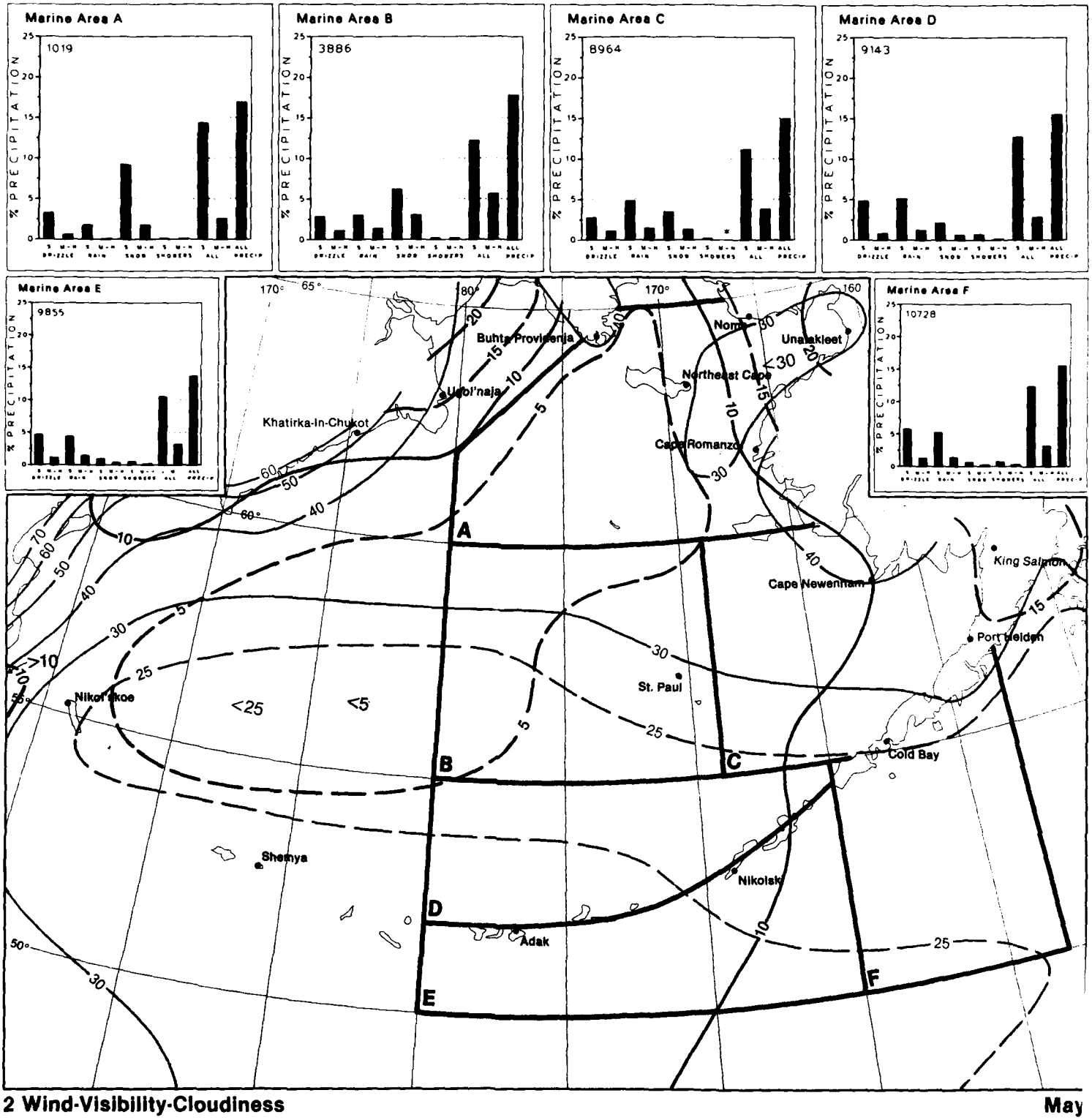
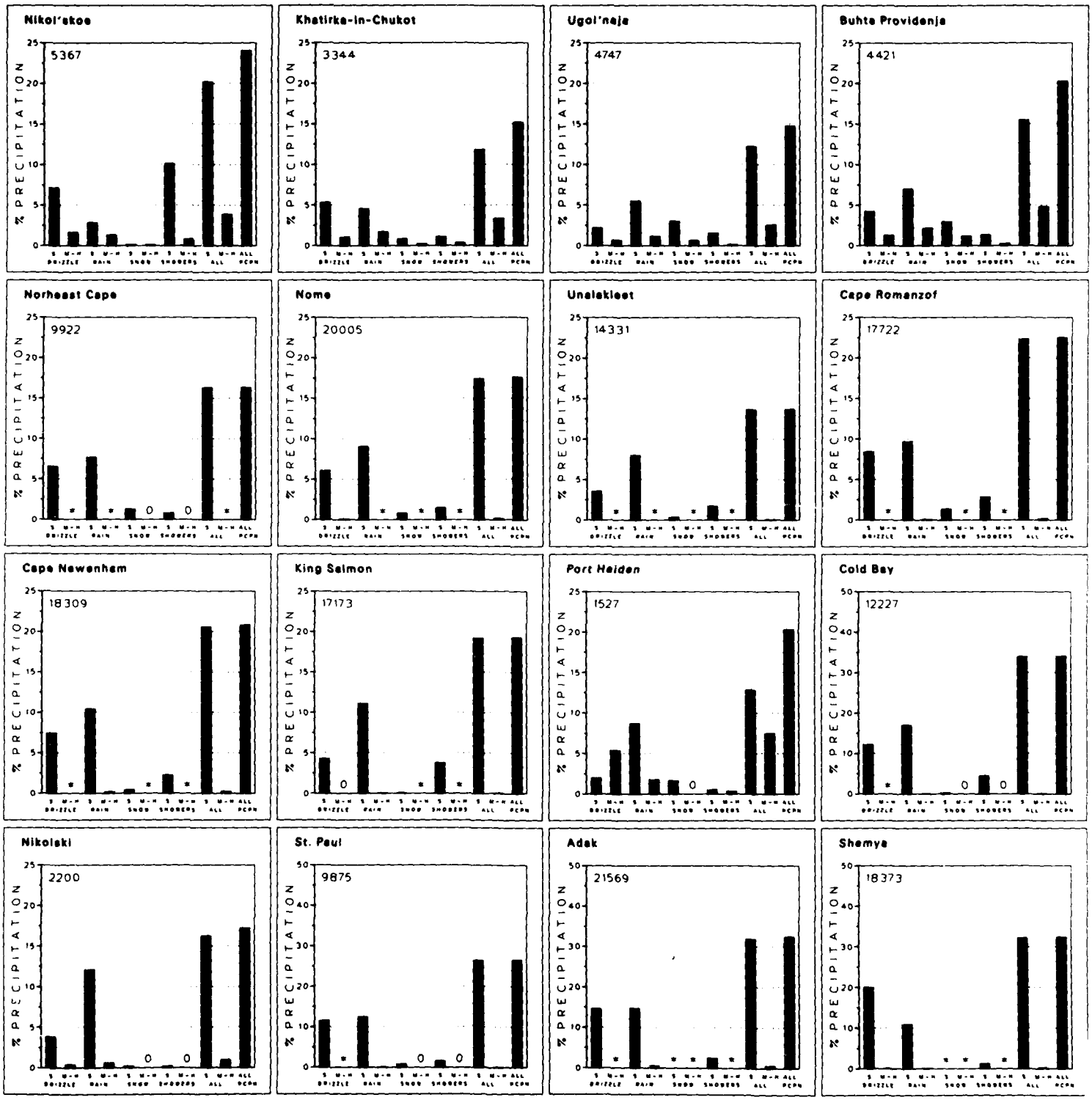
SNOW
SNOWERS
ALL
PCPN



2 Wind-Visibility-Cloudiness

May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Cape Romanzof
17722
Cape Newenham
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King Salmon
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Port Heiden
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Nikolski
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St. Paul
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Adak
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Shemya
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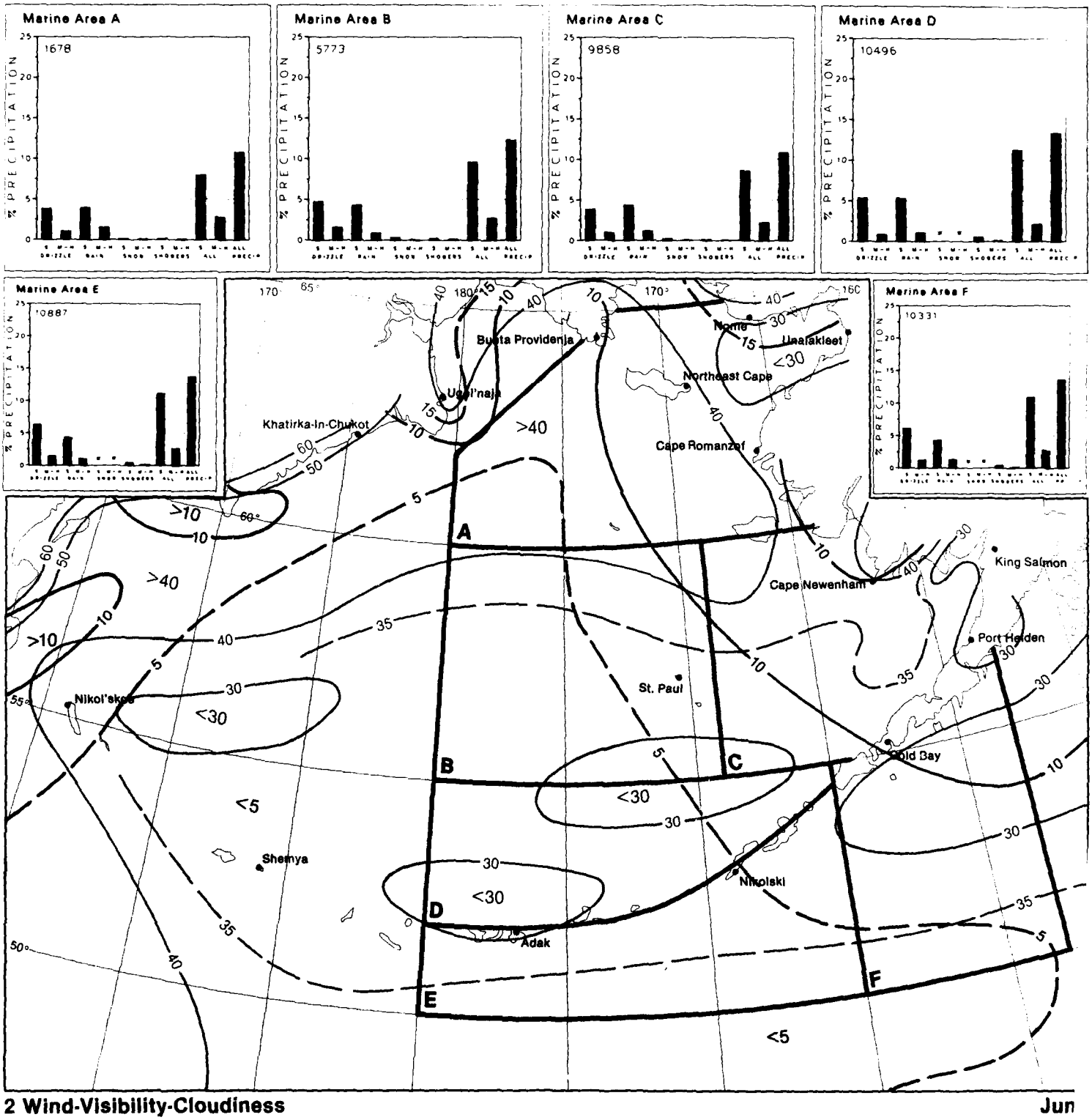
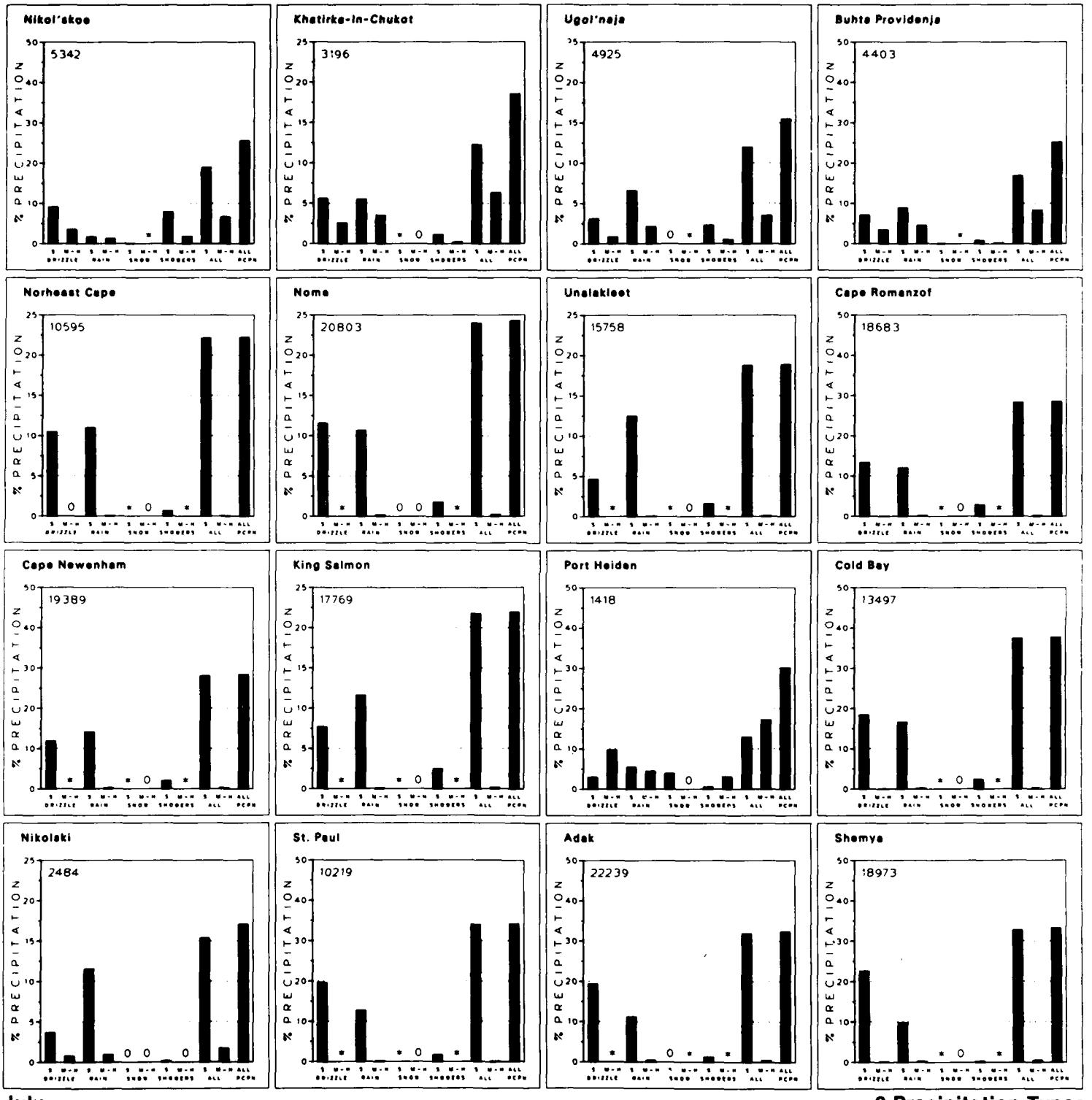
SNOW
SHOWERS
ALL
PCPN



2 Wind-Visibility-Cloudiness

Jun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Khatirka-In-Chukot
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Ugol'naja
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Buhta Providenja
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Northeast Cape
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Nome
20803
Unalakleet
15758
Cape Romanzof
18683
Cape Newenham
19389
King Salmon
17769
Port Heiden
1418
Cold Bay
13497
Nikolski
2484
St. Paul
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Adak
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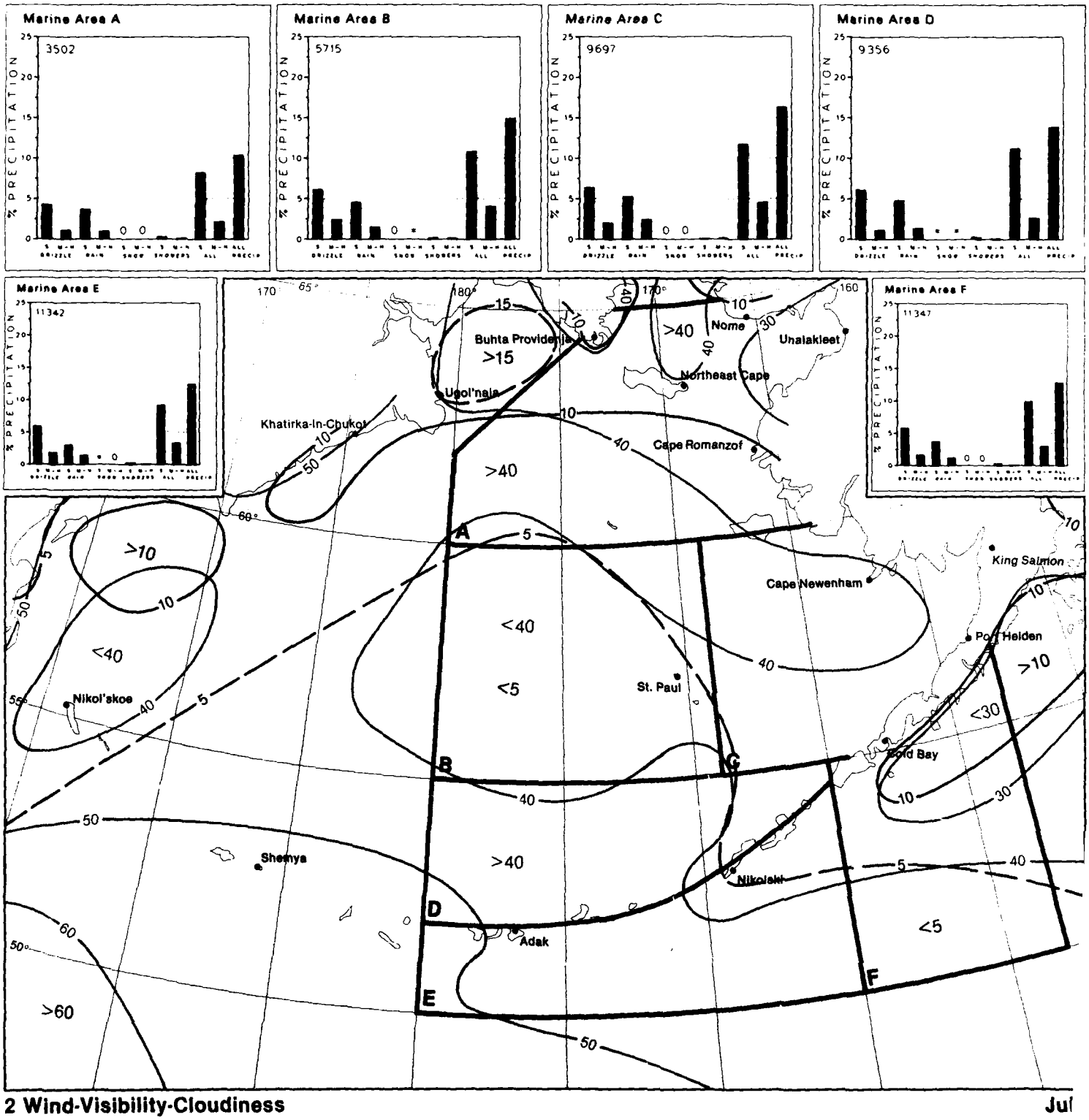
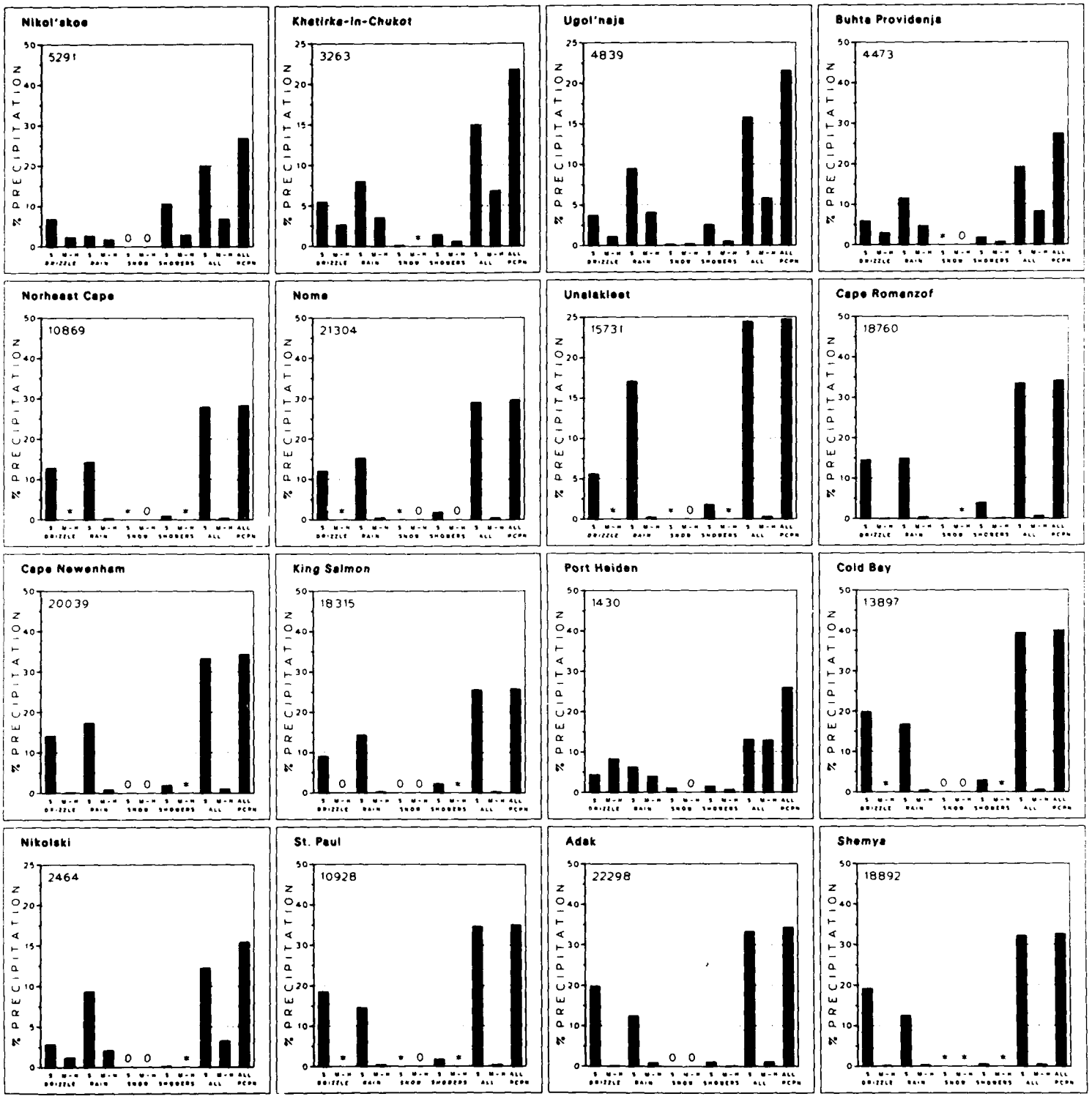
Shemya
18973
% PRECIPITATION
DRIZZLE
RAIN
SNOW
SHOWERS
ALL
PCPN



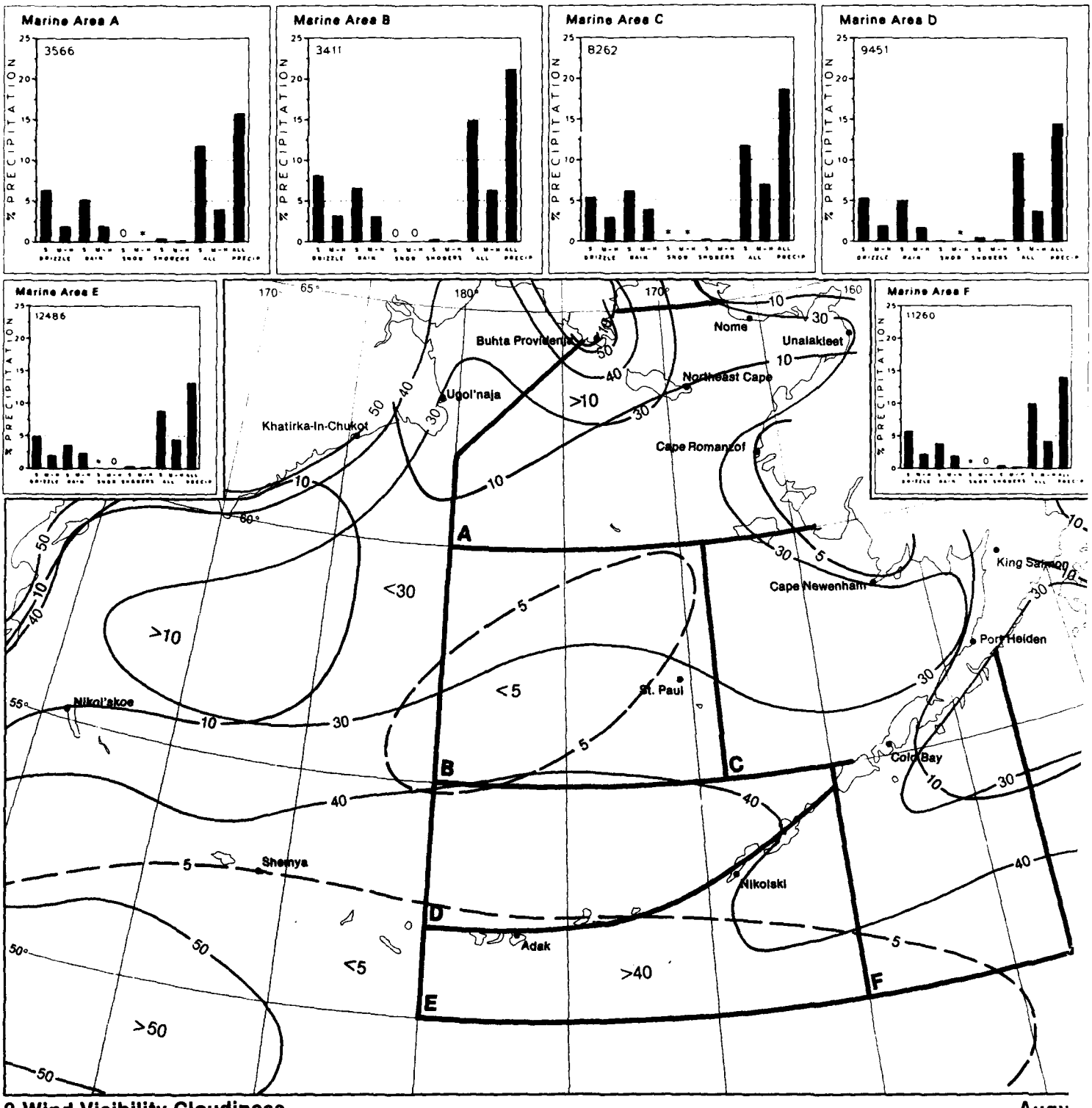
2 Wind-Visibility-Cloudiness

Jul



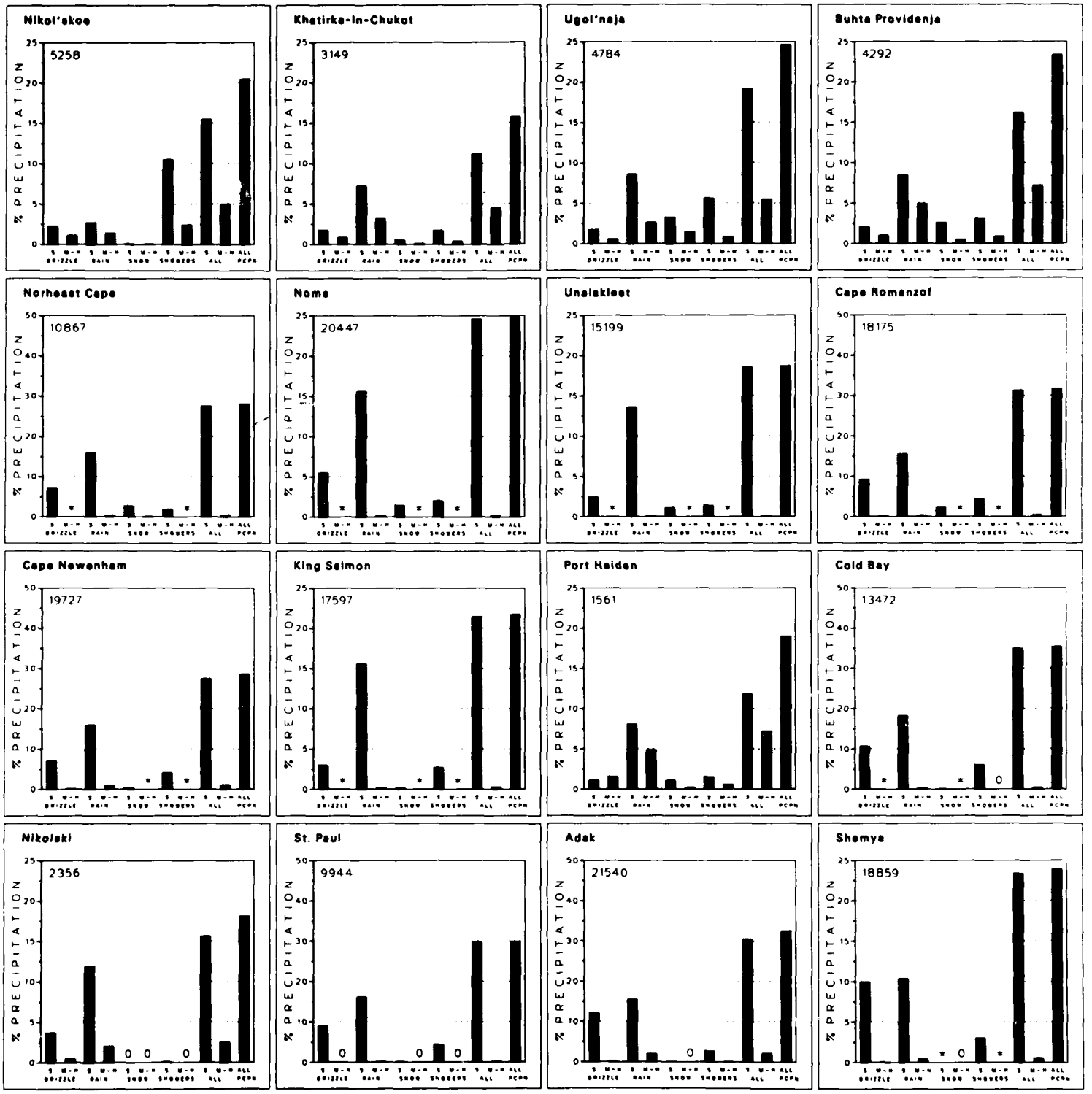
August

2 Precipitation Types



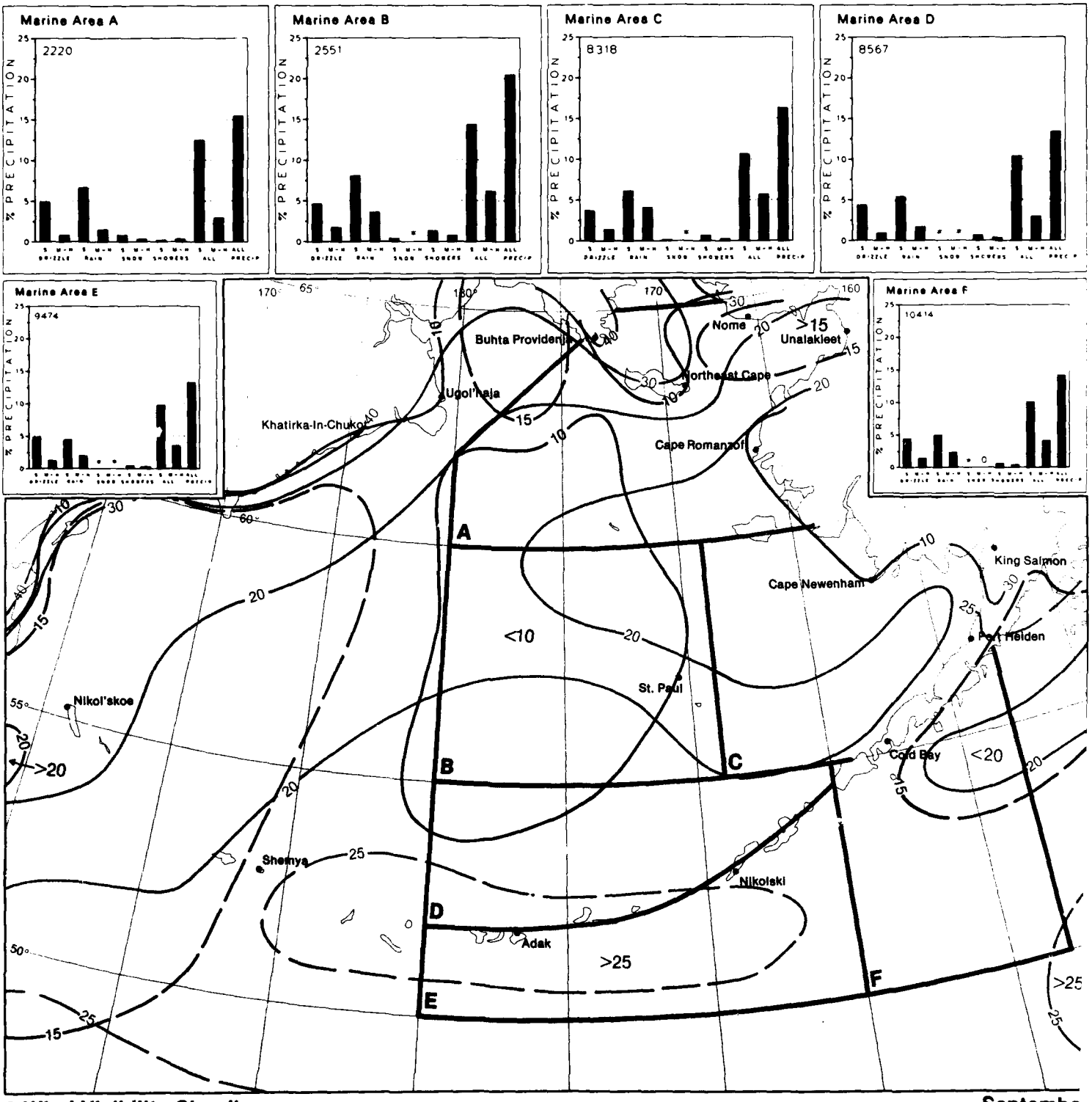
2 Wind-Visibility-Cloudiness

Augu



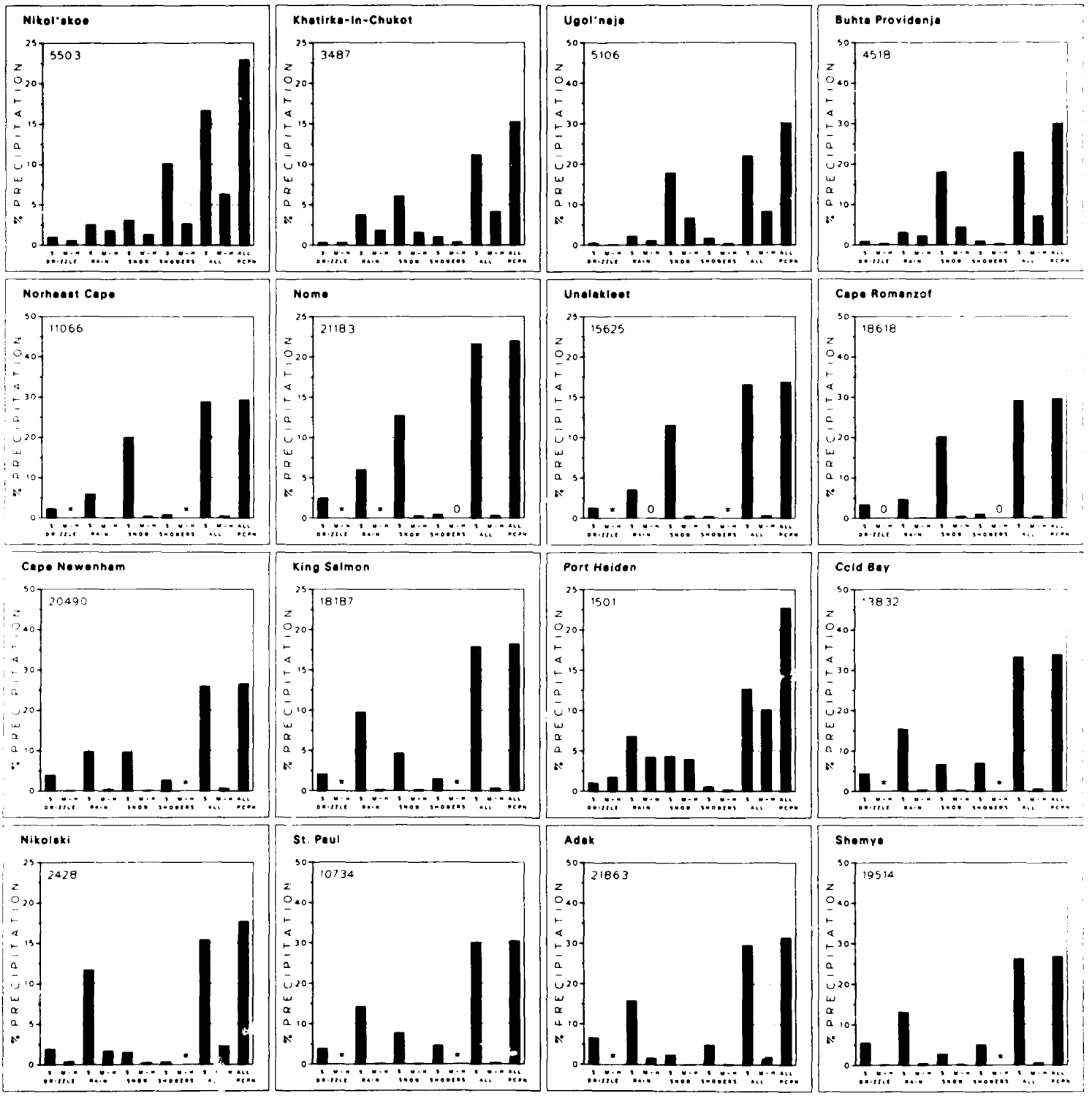
September

2 Precipitation Types



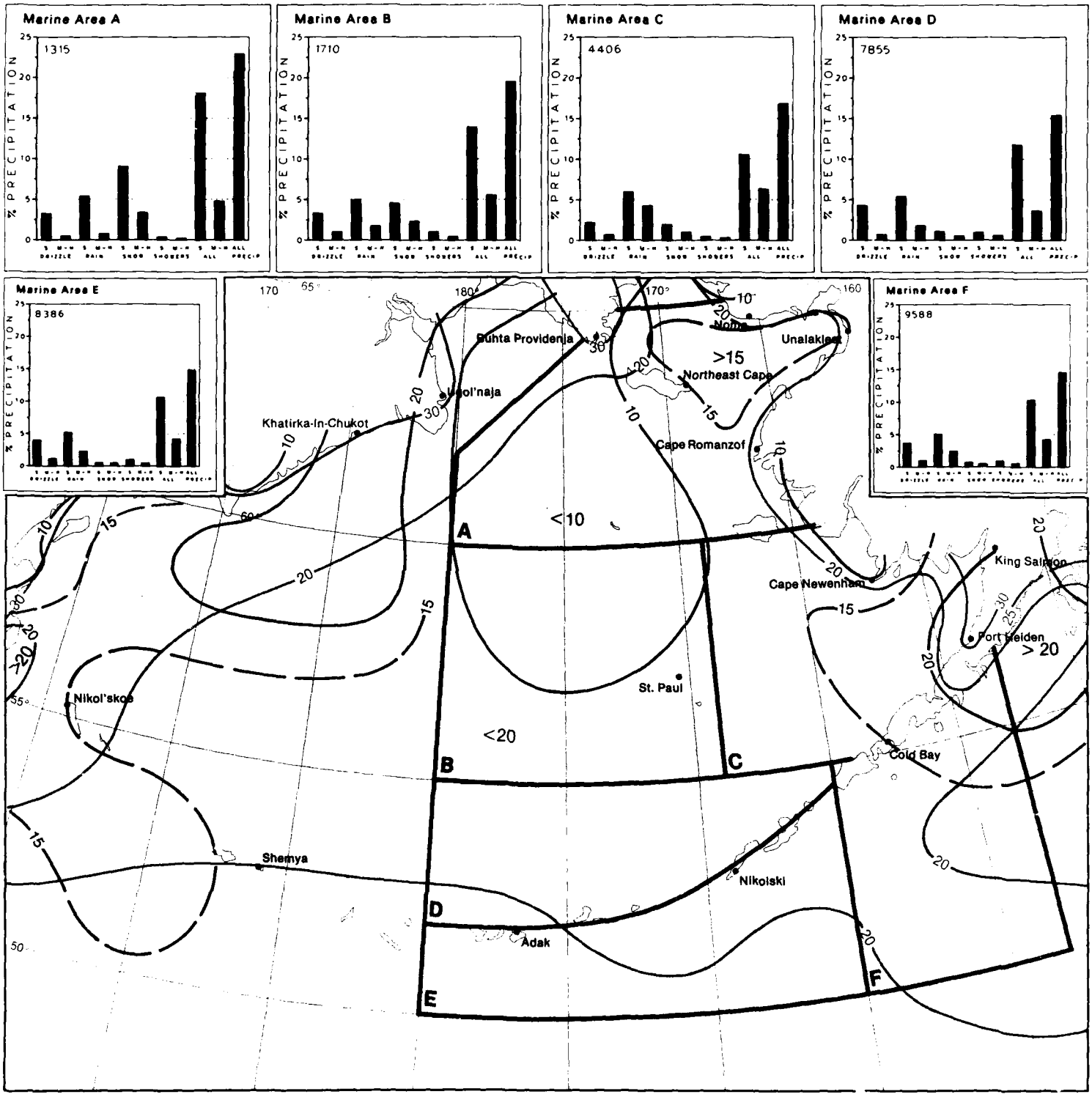
2 Wind-Visibility-Cloudiness

Septembe



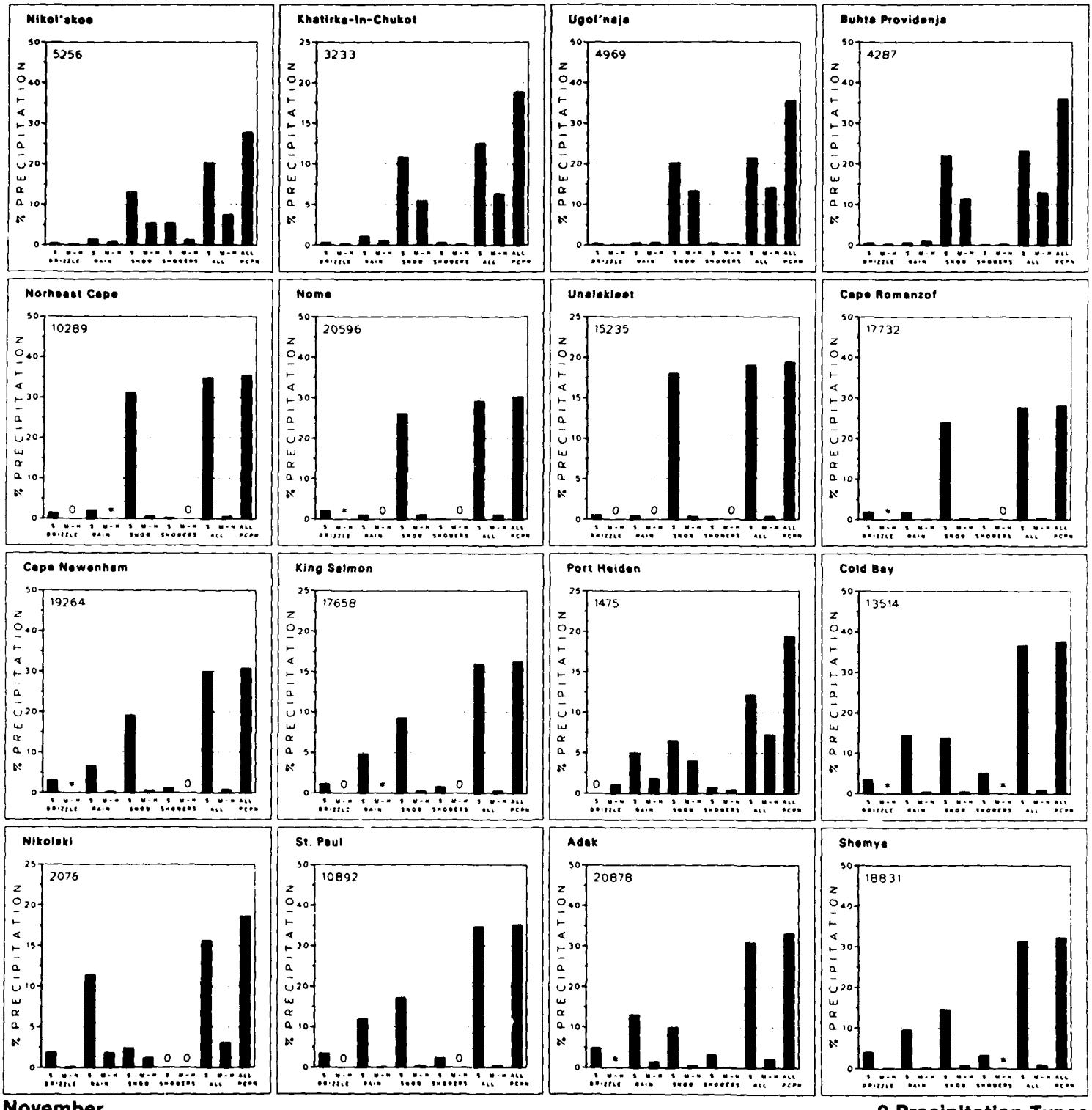
October

2 Precipitation Types



2 Wind-Visibility-Cloudiness

October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Khatirka-In-Chukot
3233
Ugol'naja
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Buhta Providenja
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Northeast Cape
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Nome
20596
Unalakleet
15235
Cape Romanzof
17732
Cape Newenham
19264
King Salmon
17658
Port Heiden
1475
Cold Bay
13514
Nikolski
2076
St. Paul
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% PRECIPITATION
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SNOW
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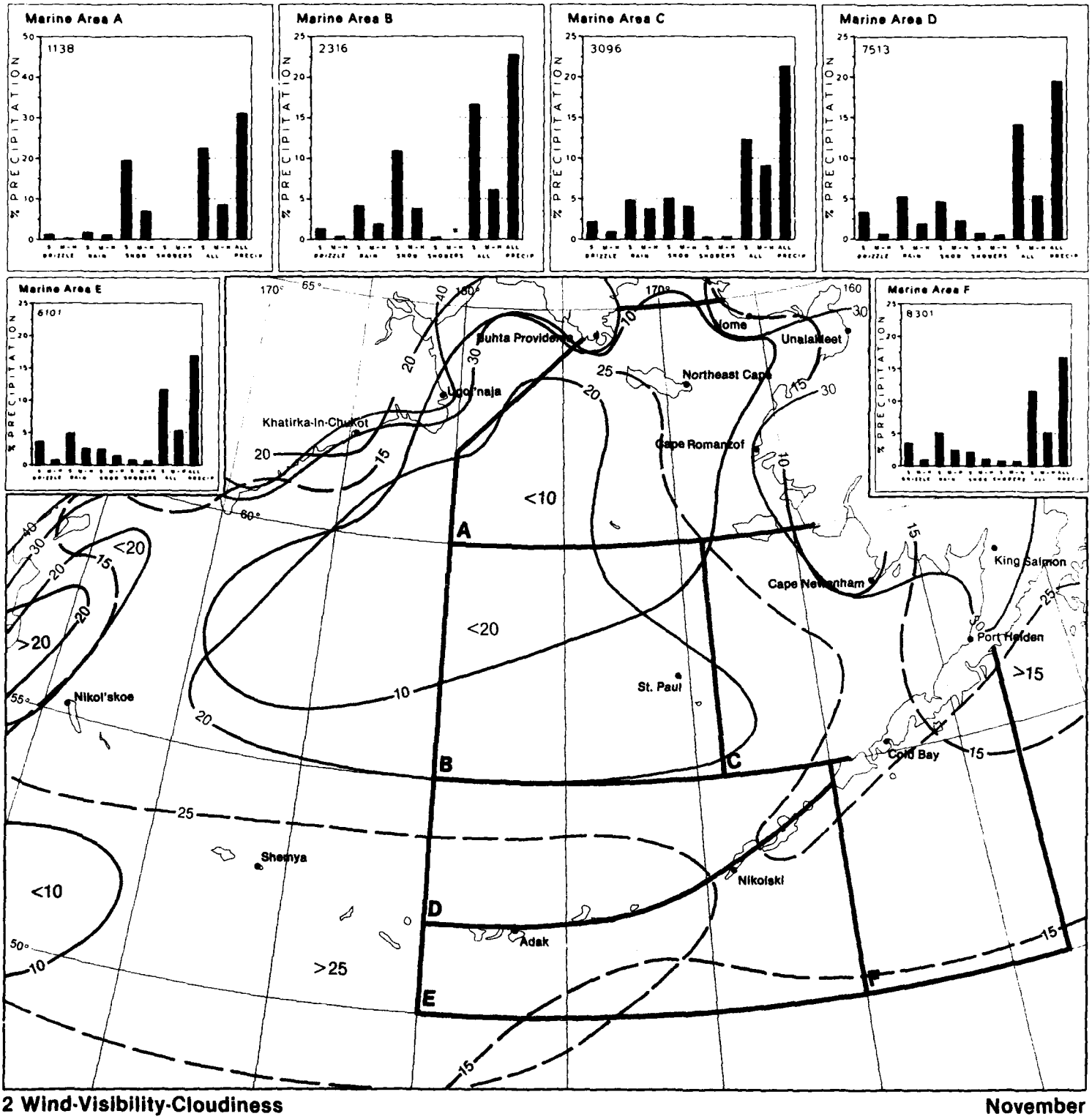
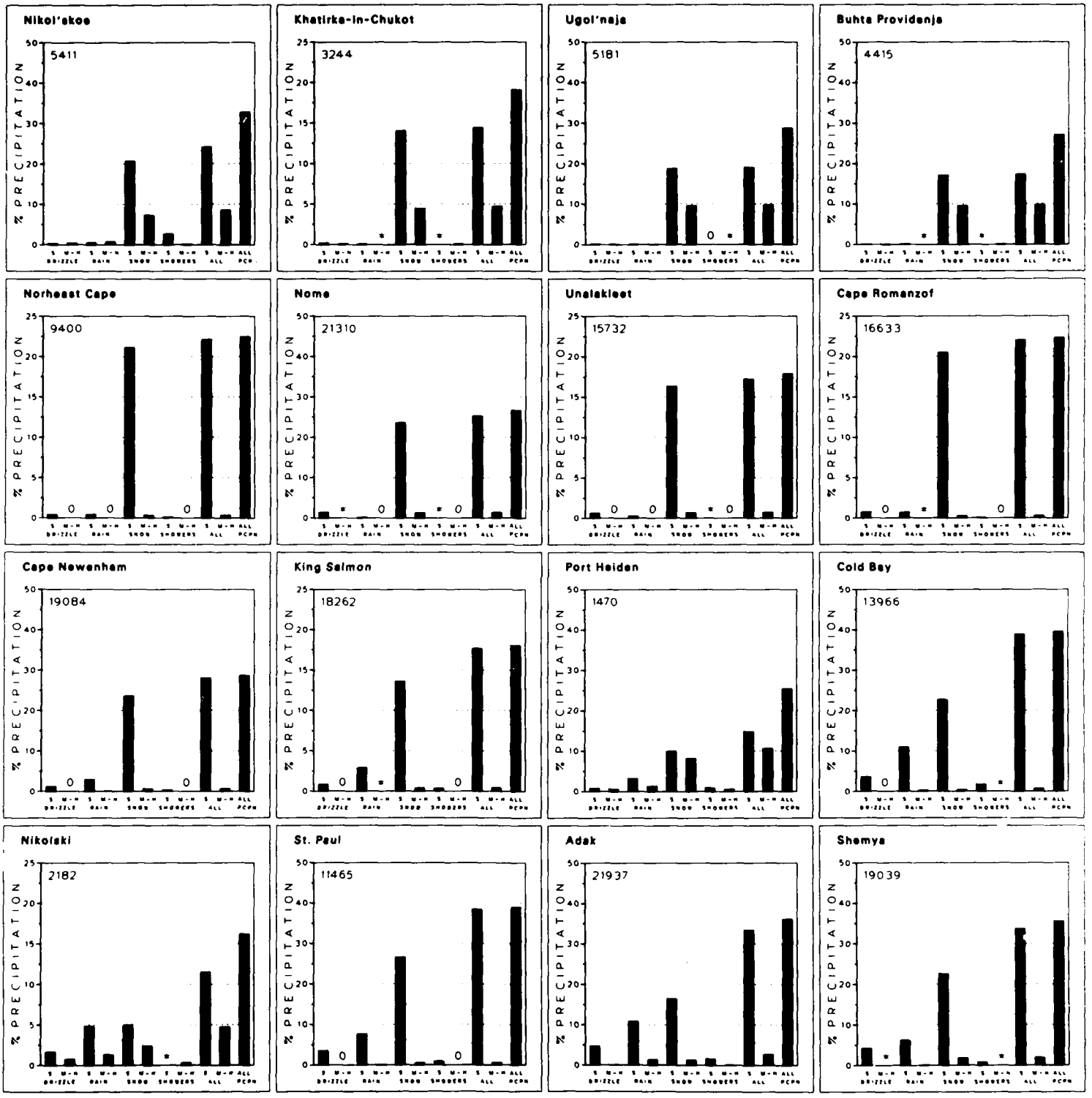
ALL
PCPN



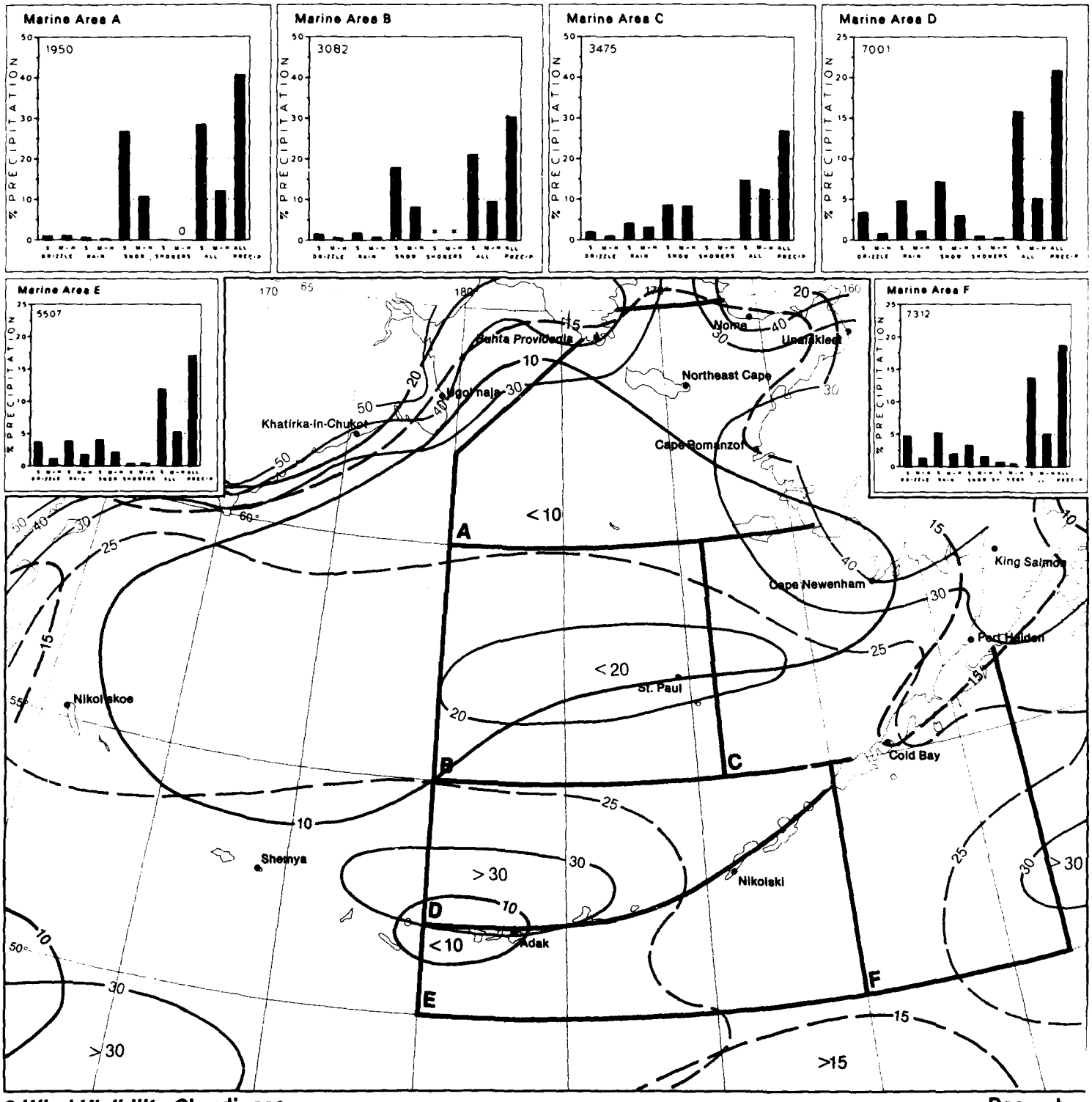
2 Wind-Visibility-Cloudiness

November



December

2 Precipitation Types



2 Wind-Visibility-Cloudiness

December

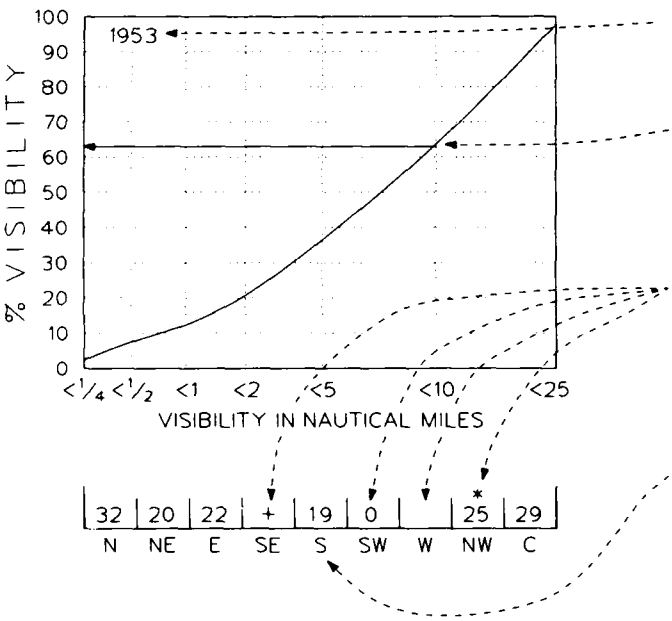
Map 3. Ceiling/visibility (low range)

BLACK LINE – Percent frequency of low cloud ceiling (LCC) <300 feet and/or visibility <1 nautical mile.

BLUE LINE – Percent frequency of LCC <600 feet and/or visibility <2 nautical miles.

Albers Equal–Area Conic Projection

Graphs: Visibility/wind direction



Number of observations.

Curve is the cumulative percent frequency of visibilities less than the visibility intersected by the curve.

(63% of all visibilities reported were <10 nautical miles.)

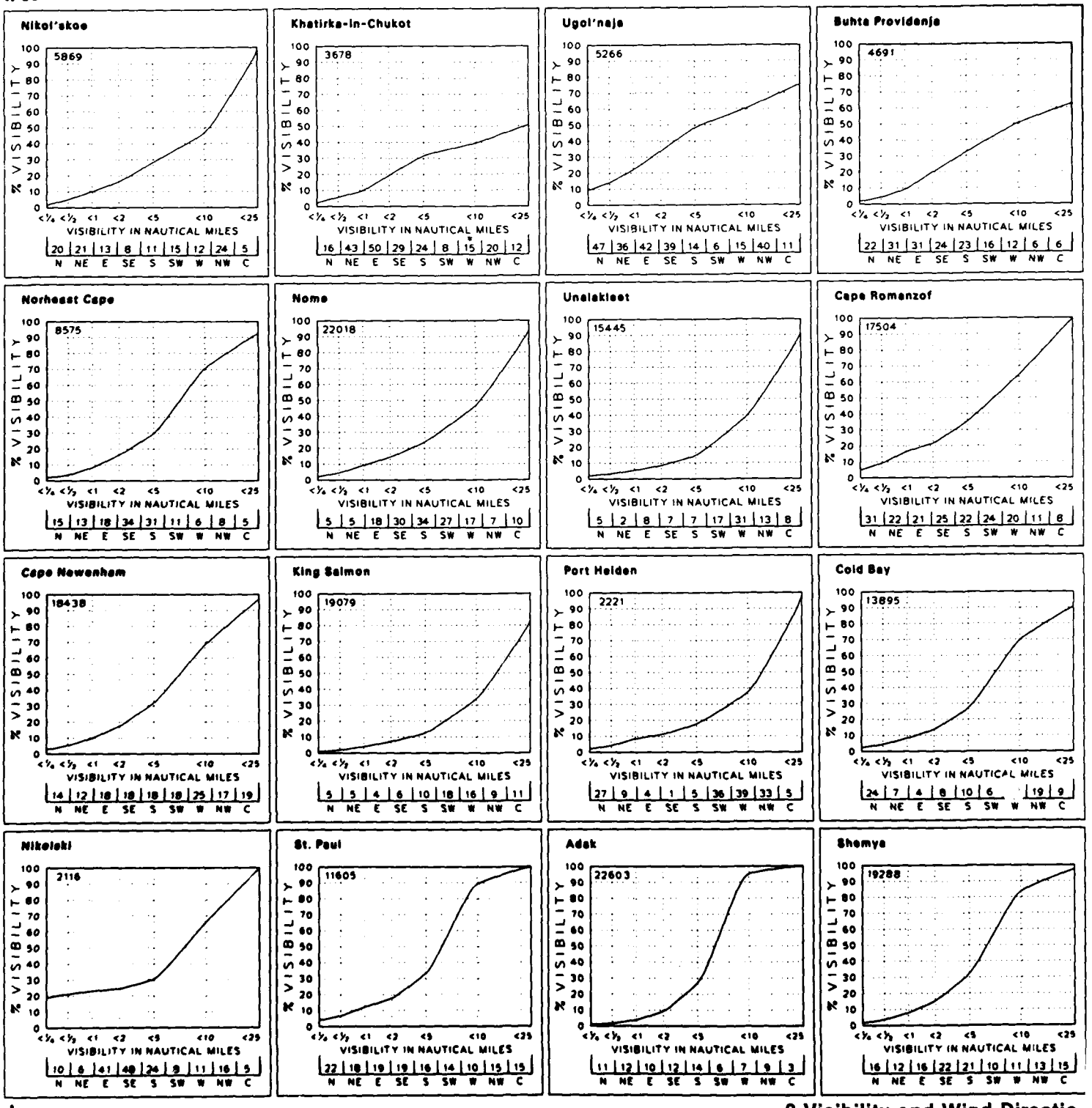
The table below the graph indicates percent frequency of occurrence of visibility <2 nautical miles versus wind direction.

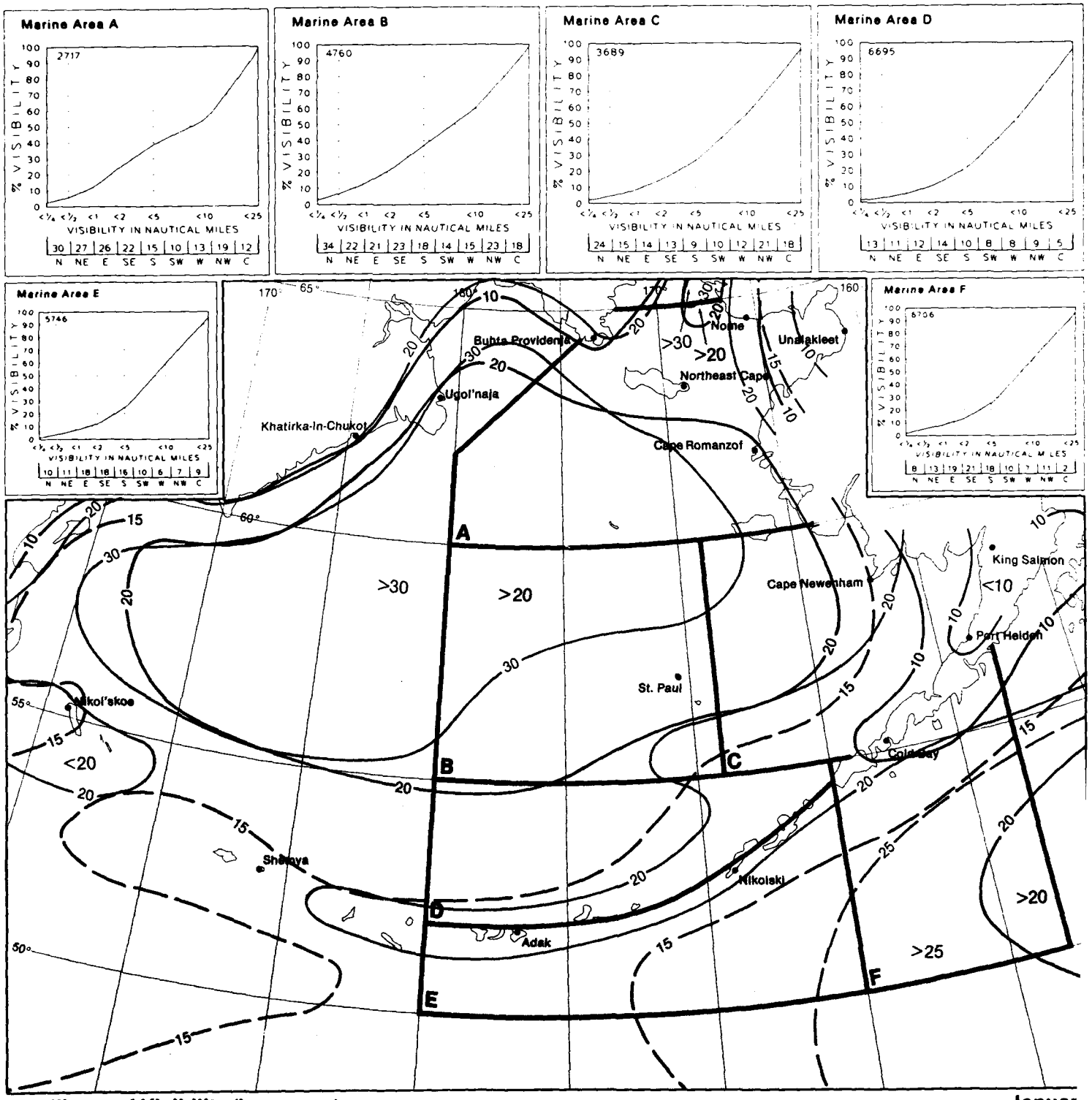
+ indicates <.5% but >0. 0 indicates that no visibilities <2 nautical miles were observed with winds from a direction or calm. No percentage is given if less than 10 observations were available for visibility and wind direction. An asterisk indicates that the percentage was based on 10-30 observations of visibility and wind direction.

(19% of all S winds were accompanied by visibilities <2 nautical miles.)

The percent frequency of visibilities equal to or greater than a given value can be obtained from the graph by subtracting the cumulative percent frequency of that value from 100%. Refer to the text in Set 5 for descriptive information on visibility.

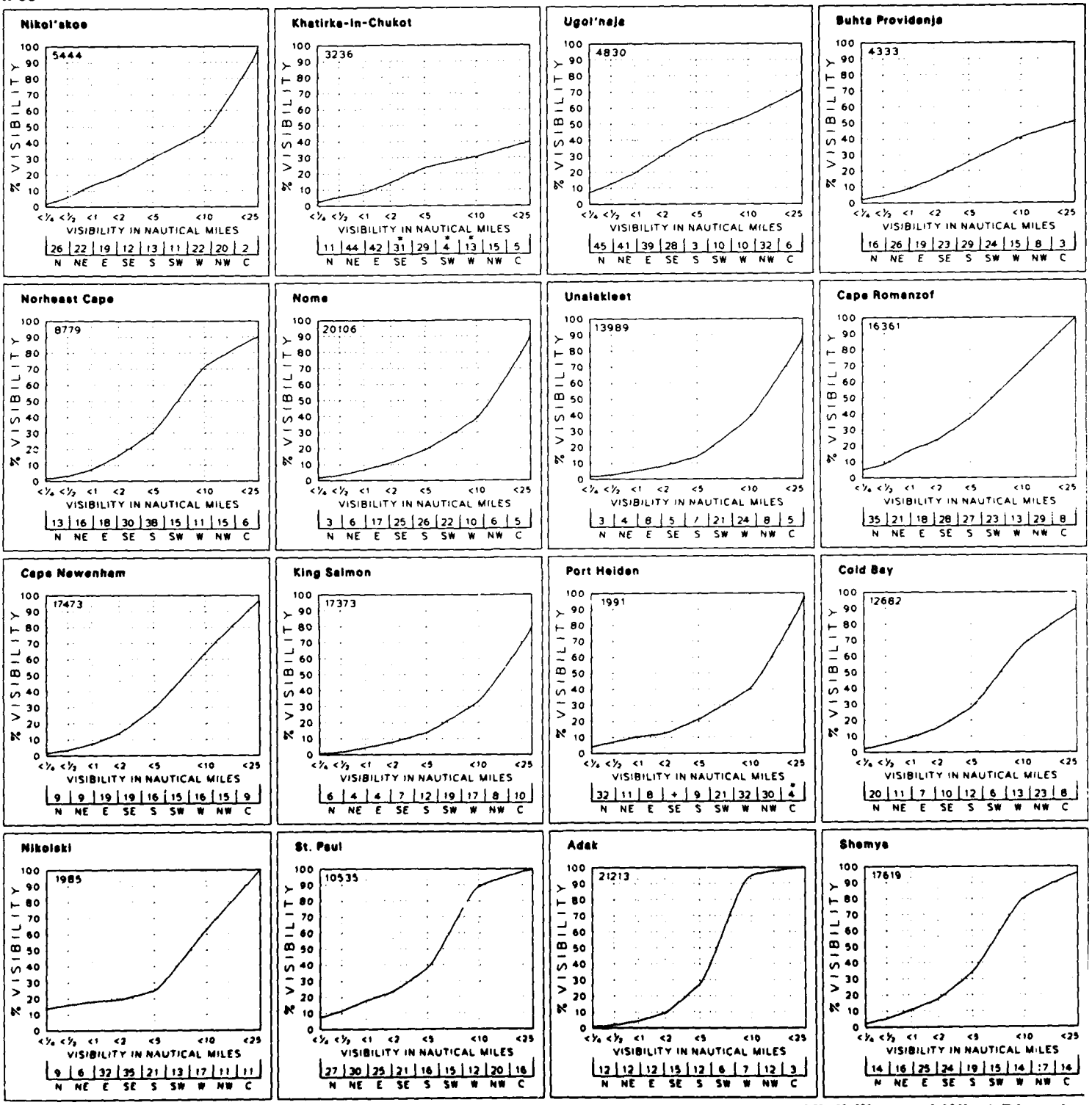
Aircraft-type ceilings are not available from marine observations. The ceilings are estimated from the height of the lowest cloud when low clouds (heights of less than 8,000 feet) cover more than half the sky. When the sky is totally obscured by snow, rain, fog, or other phenomena, the total obscuration is considered a ceiling with a height of zero. Refer to the texts in Sets 4 and 6 for additional information on clouds.

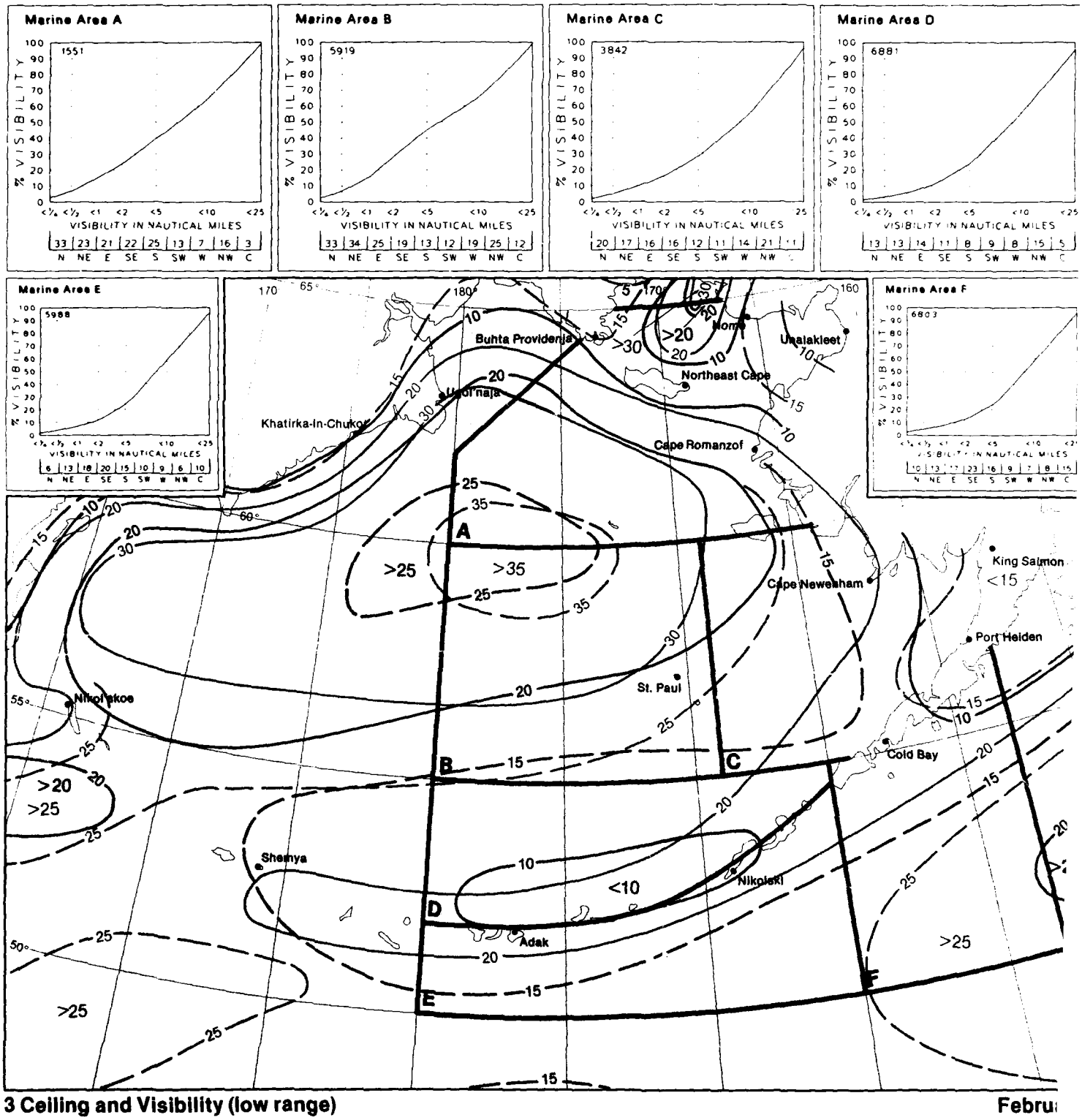

Nikol'skoe
5869
Khatirka-in-Chukot
3678
Ugol'naja
5266
Buhta Providenja
4691
Northeast Cape
8575
Nome
22018
Unalakleet
15445
Cape Romanzof
17504
Cape Newenham
18438
King Salmon
19079
Port Heiden
2221
Cold Bay
13895
Nikolski
2116
St. Paul
11605
Adak
22603
Shemya
19288
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
N NE E SE S SW W NW C



3 Ceiling and Visibility (low range)

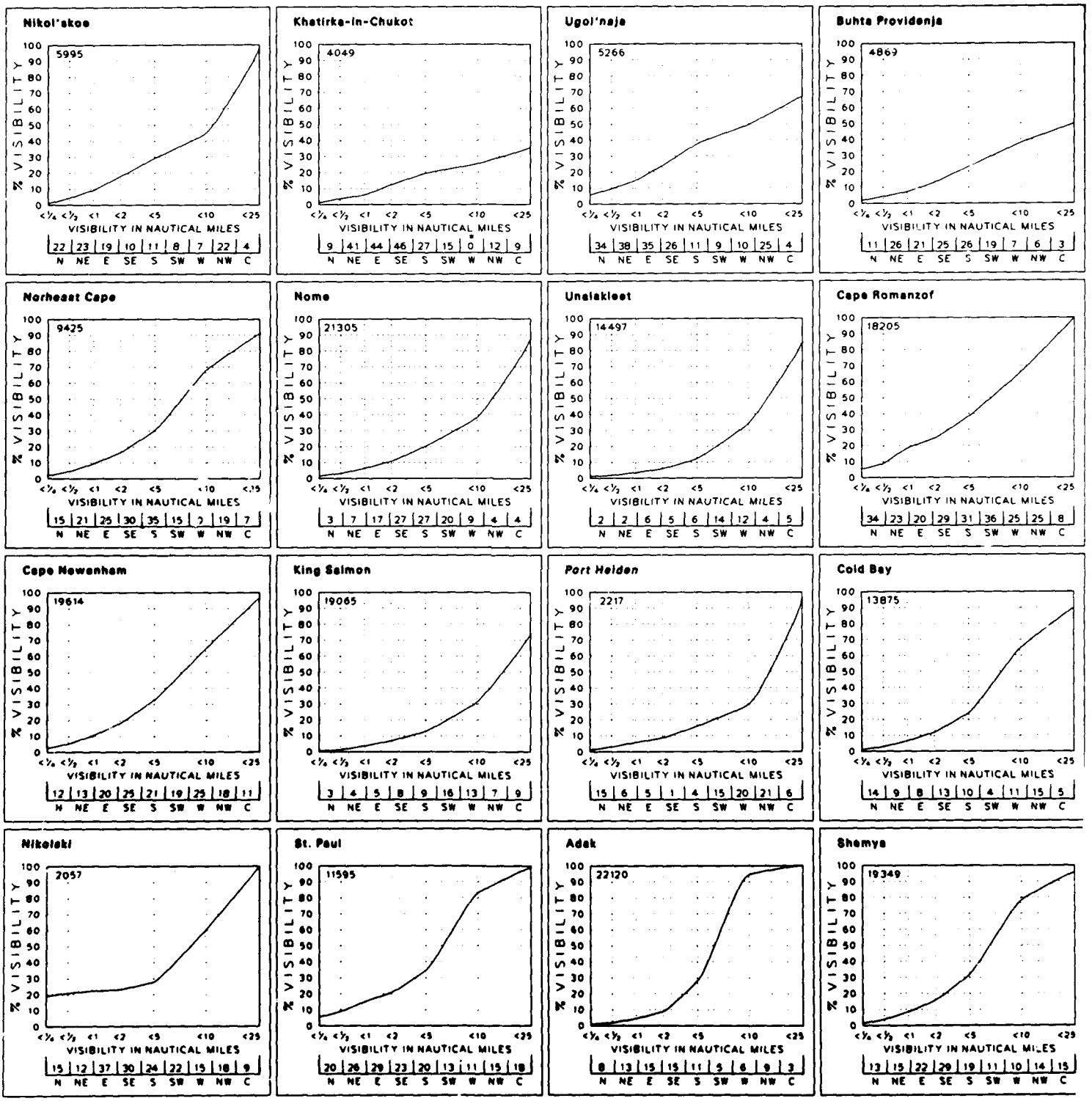
Januar

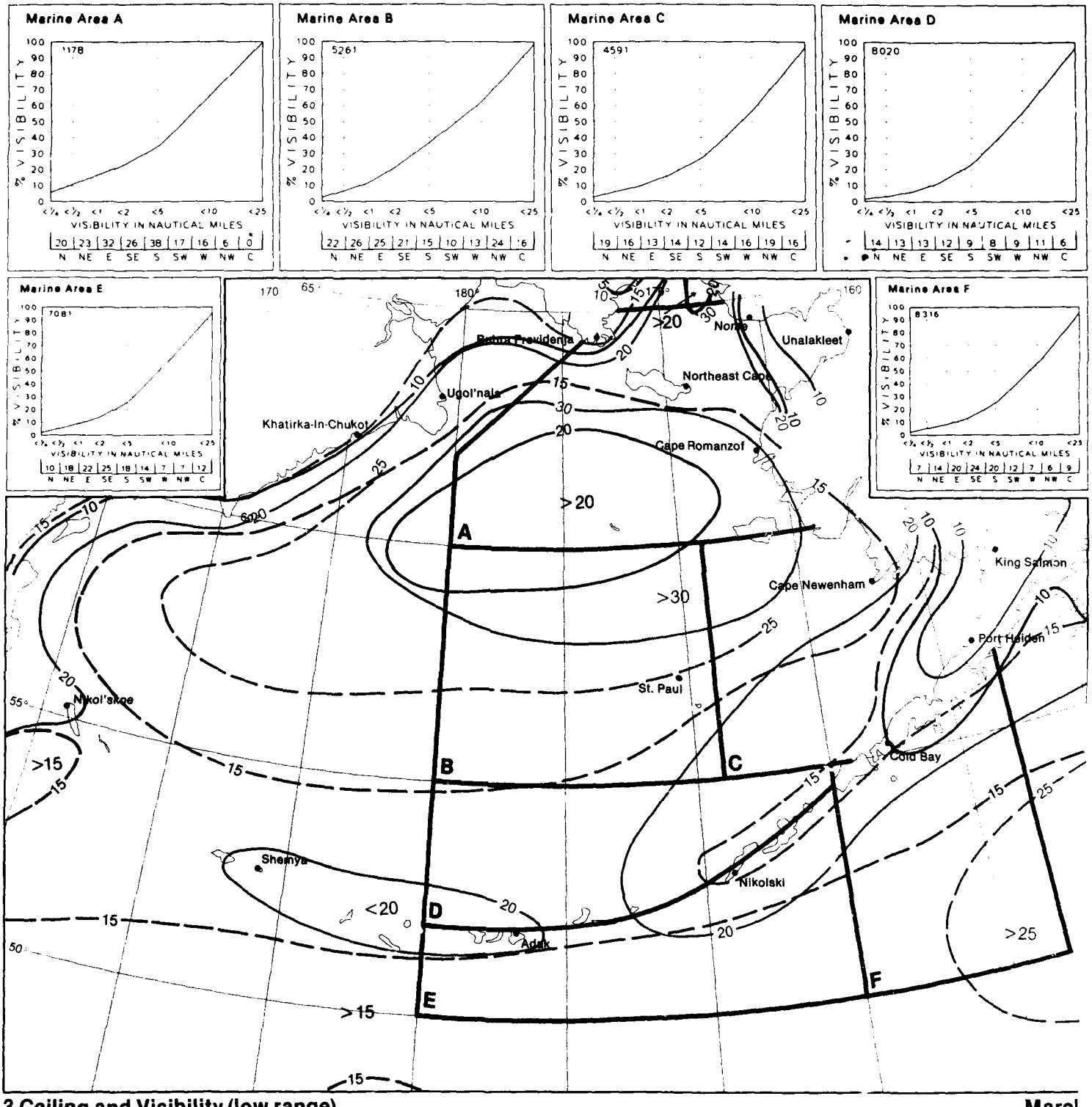

Nikol'skoe
5444
Khatirka-in-Chukot
3236
Ugol'naja
4830
Buhta Providenja
4333
Norheast Cape
8779
Nome
20106
Unalakleet
13989
Cape Romanzof
16361
Cape Newenham
17473
King Salmon
17373
Port Heiden
1991
Cold Bay
12682
Nikolski
1985
St. Paul
10535
Adak
21213
Shemya
17619
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
N NE E SE S SW W NW C



3 Ceiling and Visibility (low range)

Febru

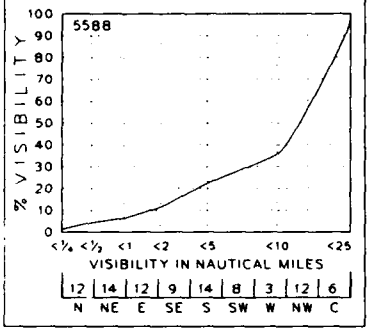

Nikol'skoe
5995
Khatirka-In-Chukot
4049
Ugol'naja
5266
Buhta Providenja
4869
Northeast Cape
9425
Nome
21305
Unalakleet
14497
Cape Romanzof
18205
Cape Newenham
19614
King Salmon
19065
Port Heiden
2217
Cold Bay
13875
Nikolski
2057
St. Paul
11595
Adak
22120
Shemya
19349
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
N NE E SE S SW W NW C



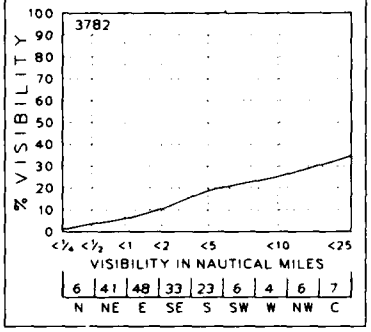
3 Ceiling and Visibility (low range)

Marcl

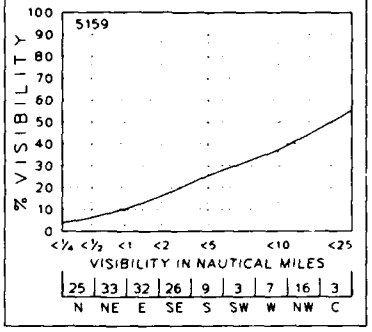
Nikol'skoe



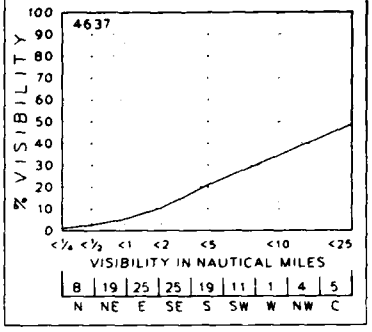
Khatirka-In-Chukot



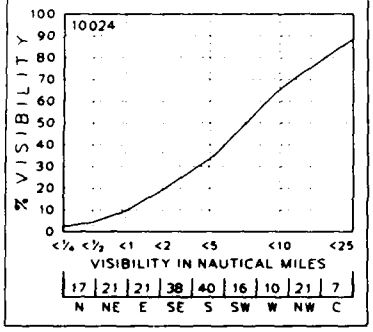
Ugol'naja



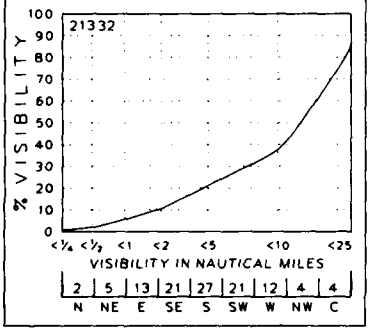
Buhta Providenja



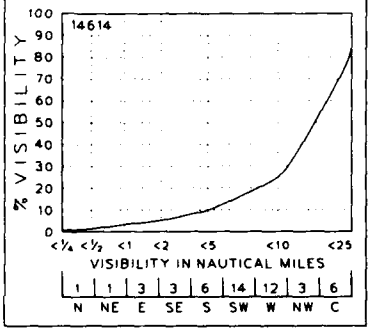
Norheast Cape



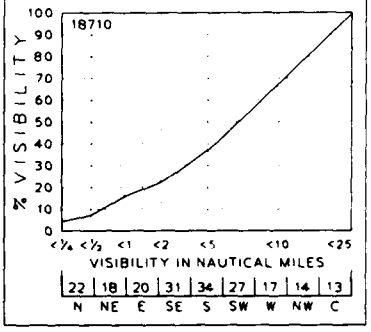
Nome



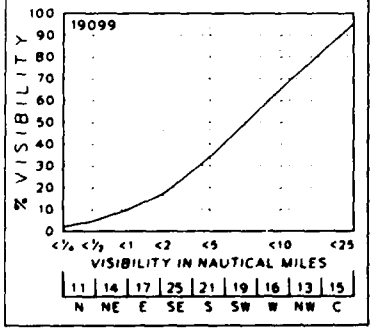
Unalakleet



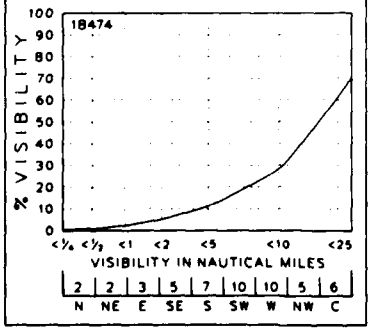
Cape Romanzof



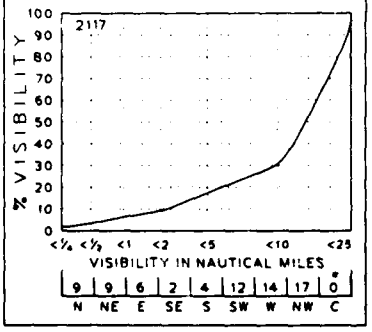
Cape Newenham



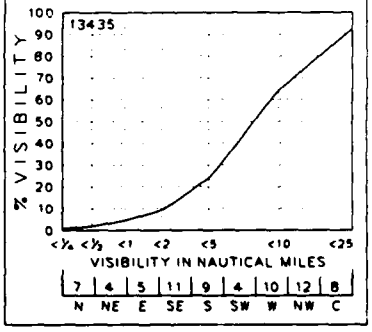
King Salmon



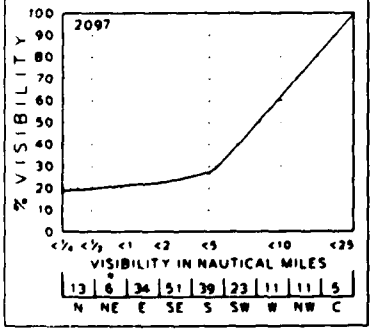
Port Heiden



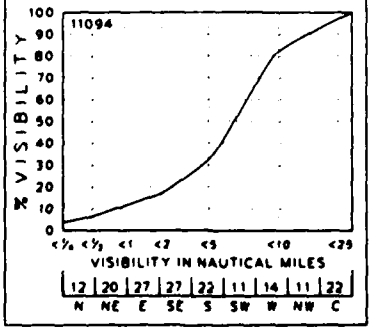
Cold Bay



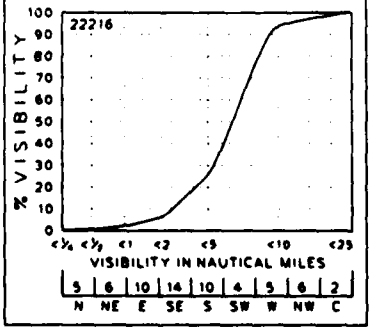
Nikolski



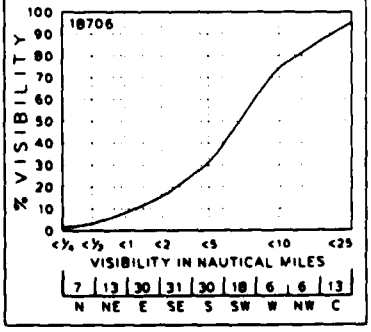
St. Paul

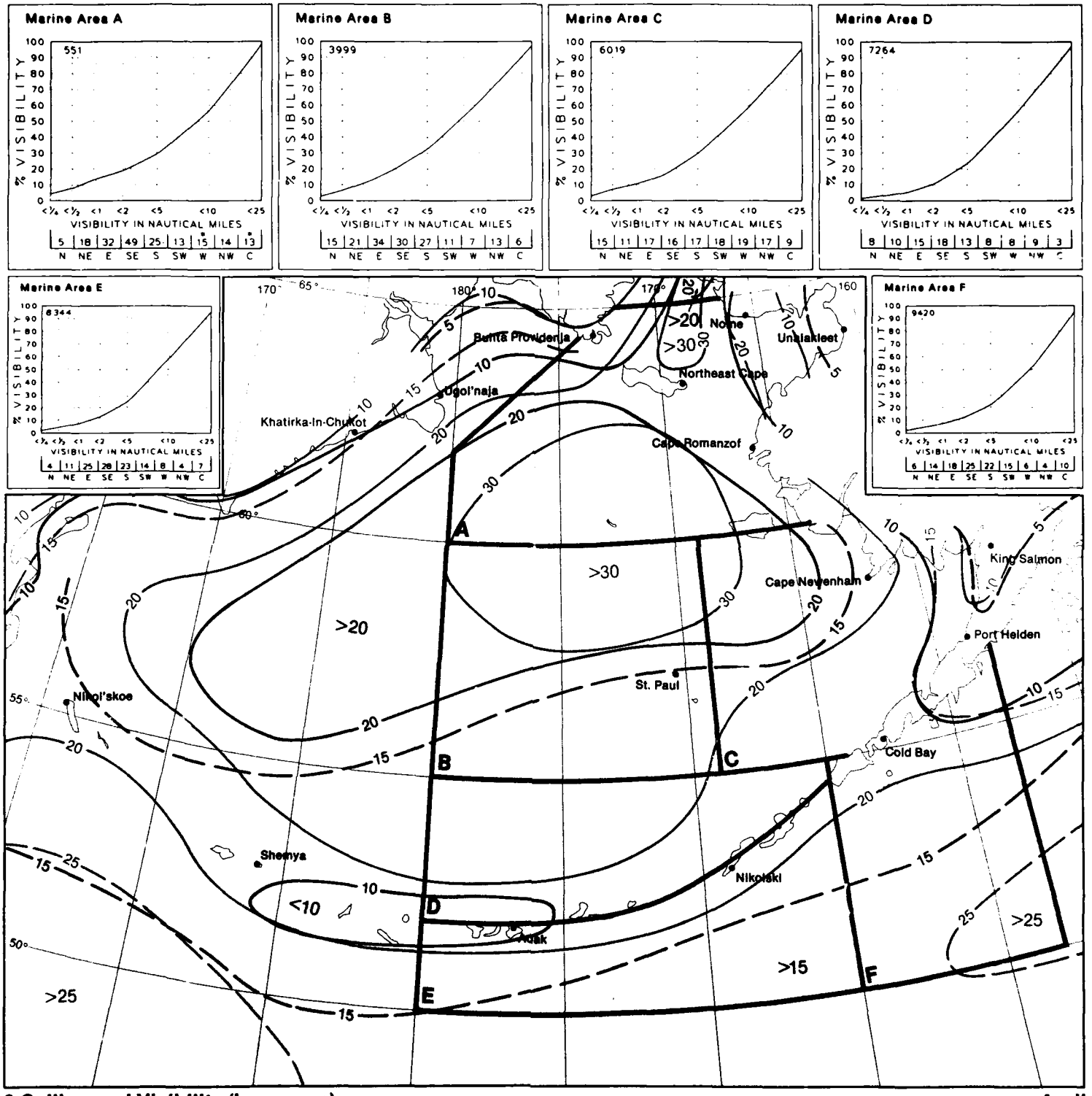


Adak

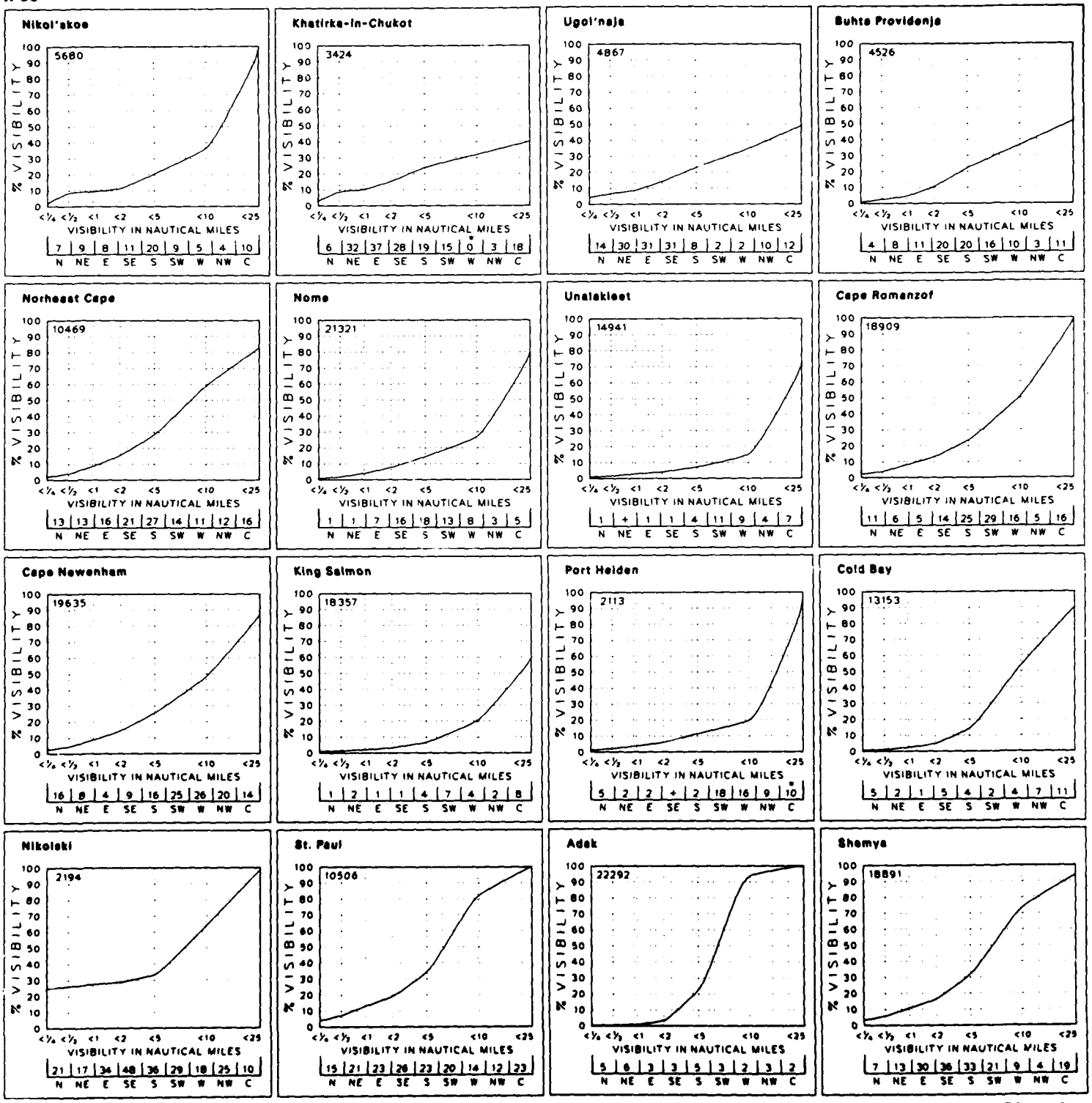


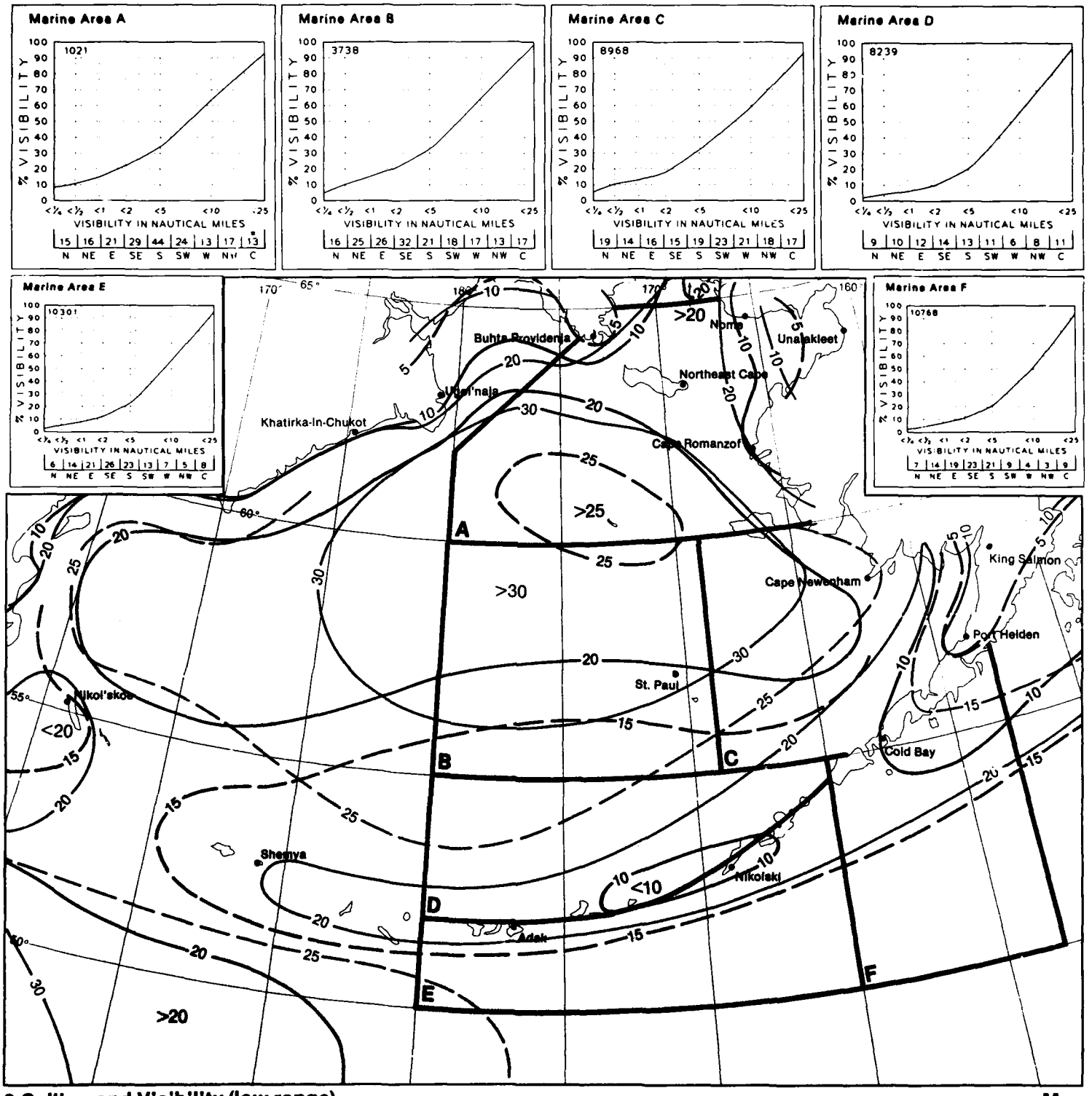
Shemya





3 Ceiling and Visibility (low range) **April**

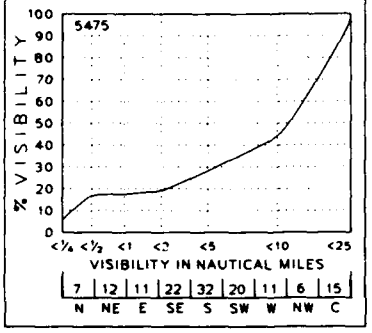

Nikol'skoe
5680
Khatirka-In-Chukot
3424
Ugol'naja
4867
Buhte Providenja
4526
Northeast Cape
10469
Nome
21321
Unalakleet
14941
Cape Romanzof
18909
Cape Newenham
19635
King Salmon
18357
Port Heiden
2113
Cold Bay
13153
Nikolski
2194
St. Paul
10506
Adak
22292
Shemya
18891
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
N NE E SE S SW W NW C



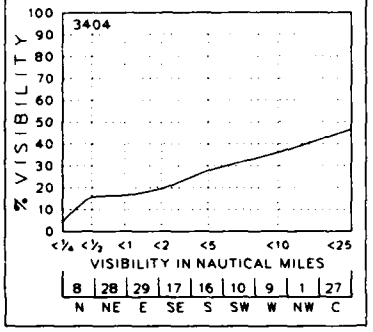
3 Ceiling and Visibility (low range)

May

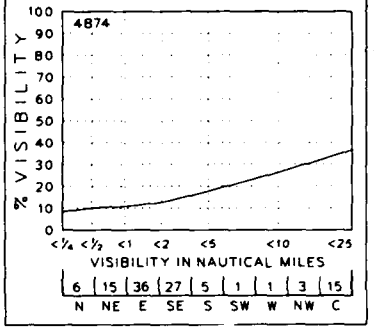
Nikol'skoe



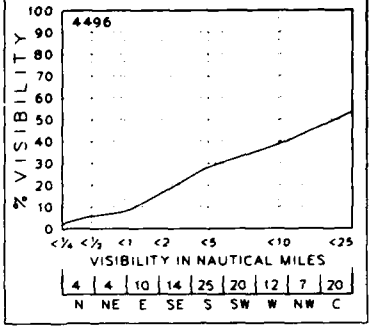
Khatirka-in-Chukot



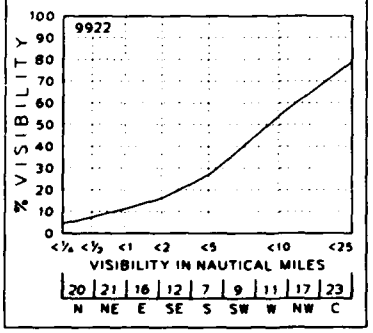
Ugol'naja



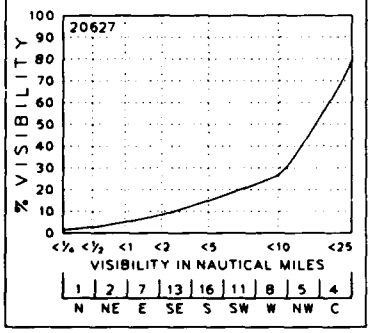
Buhta Providenja



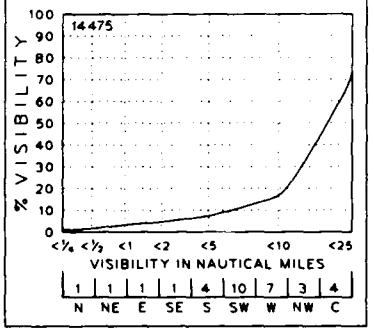
Norheast Cape



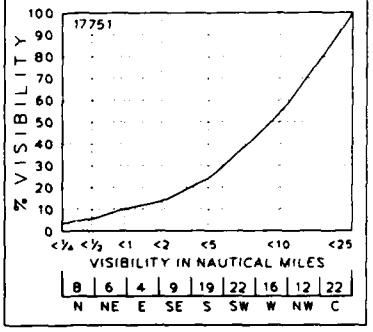
Nome



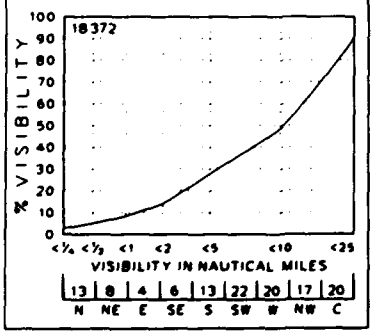
Unalakleet



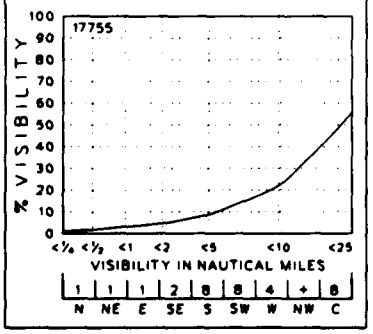
Cape Romanzof



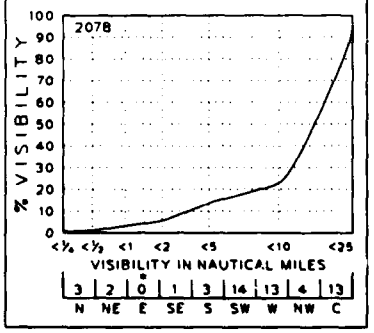
Cape Newenham



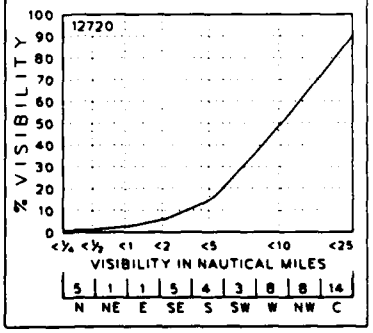
King Salmon



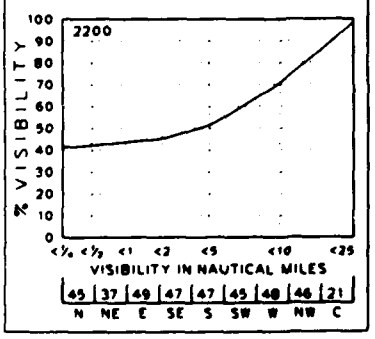
Port Heiden



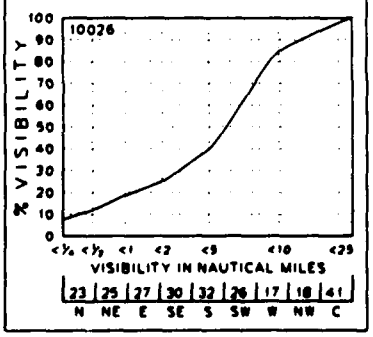
Cold Bay



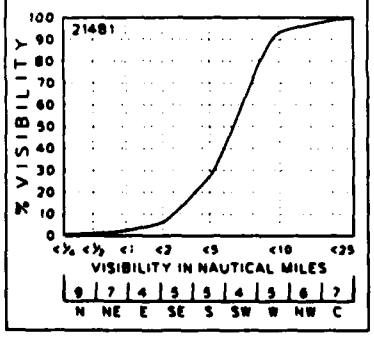
Nikolski



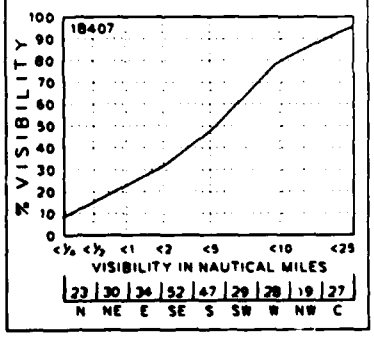
St. Paul

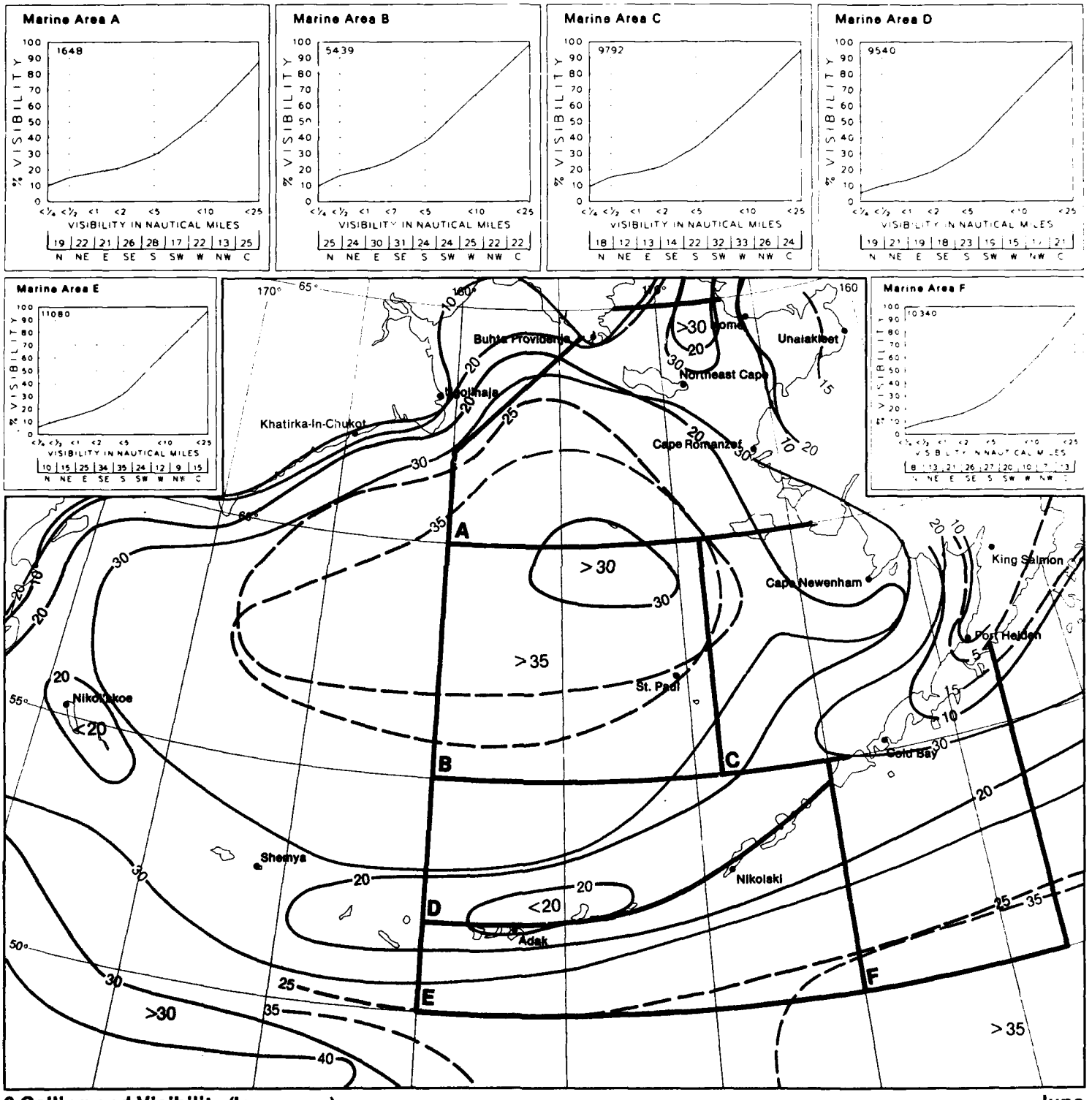


Adak



Shemya

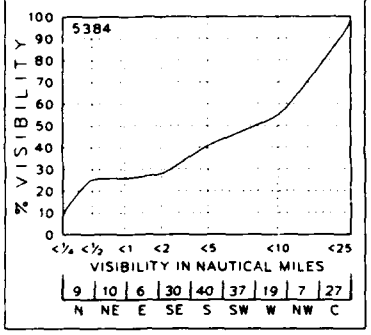




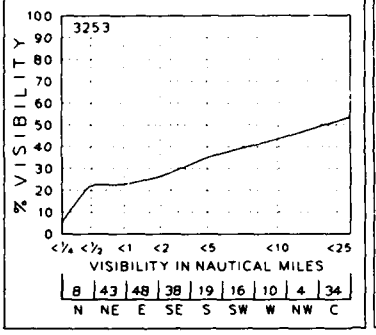
3 Ceiling and Visibility (low range)

June

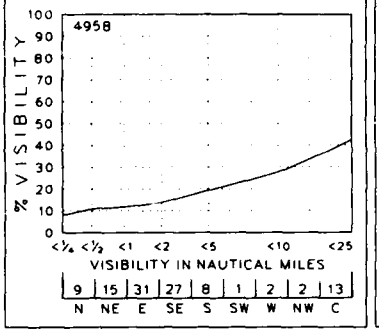
Nikol'skoe



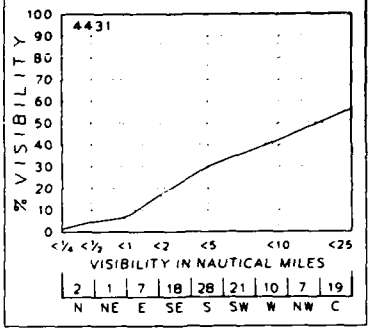
Khatirka-In-Chukot



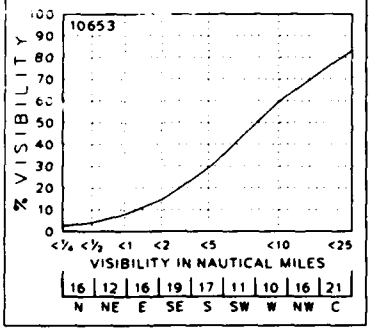
Ugol'naja



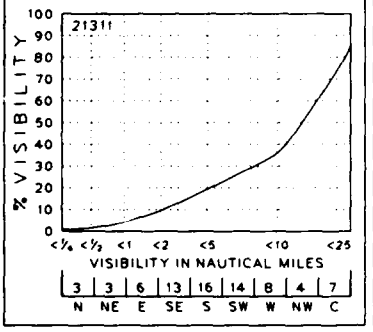
Buhta Providenja



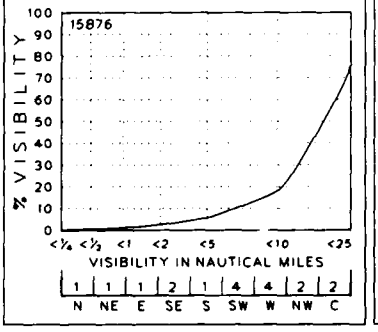
Norheast Cape



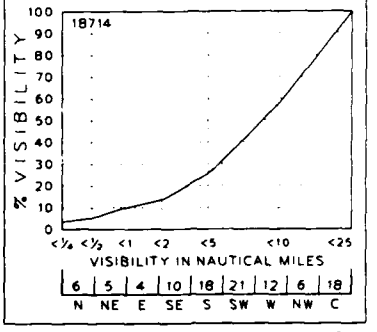
Nome



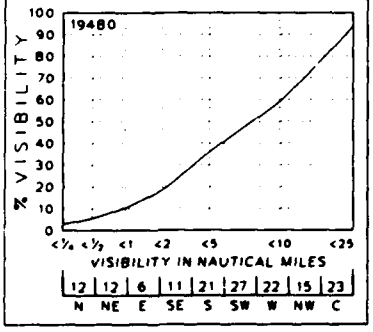
Unalakleet



Cape Romanzof



Cape Newenham



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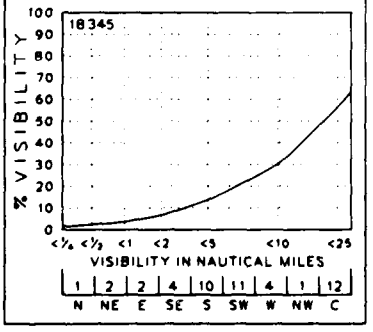
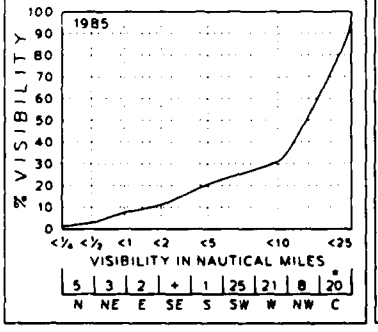
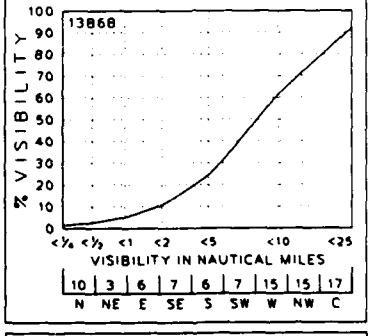


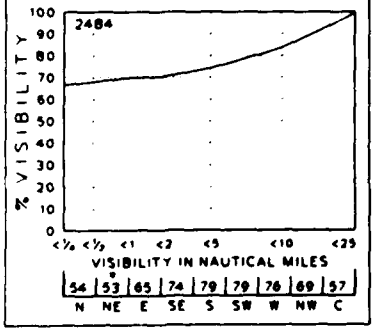
Port Heiden



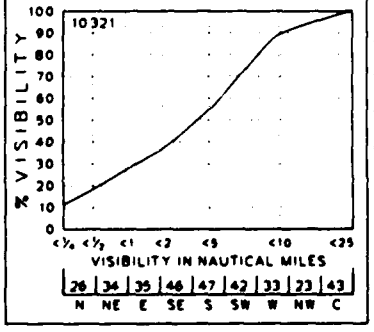
Cold Bay



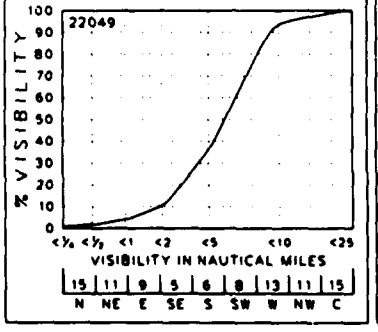
Nikolski



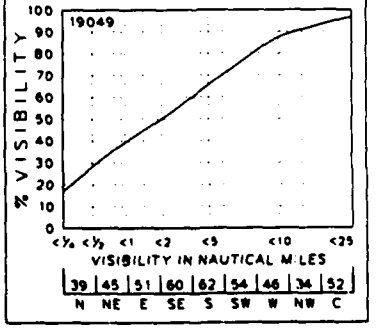
St. Paul

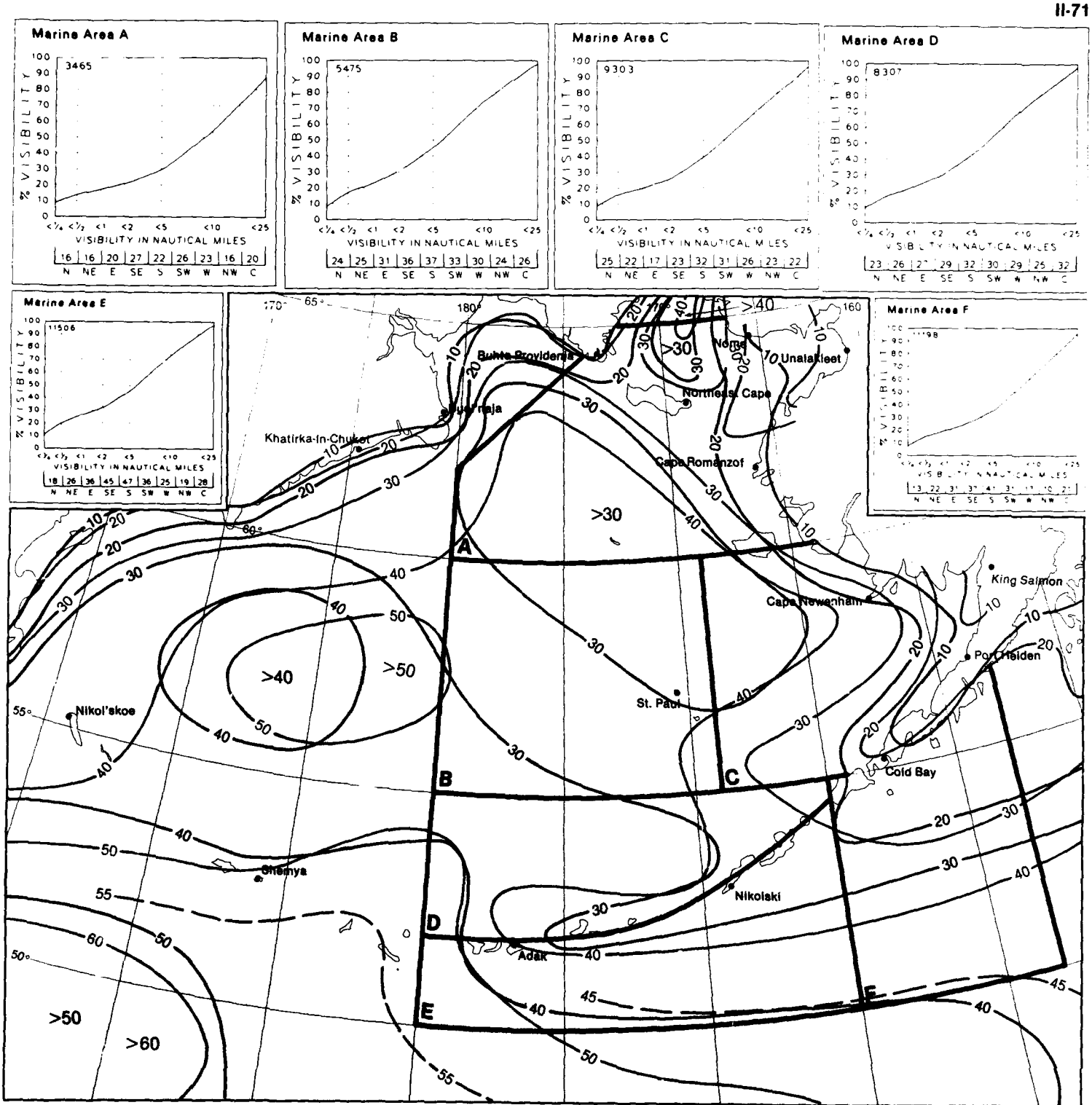


Adak



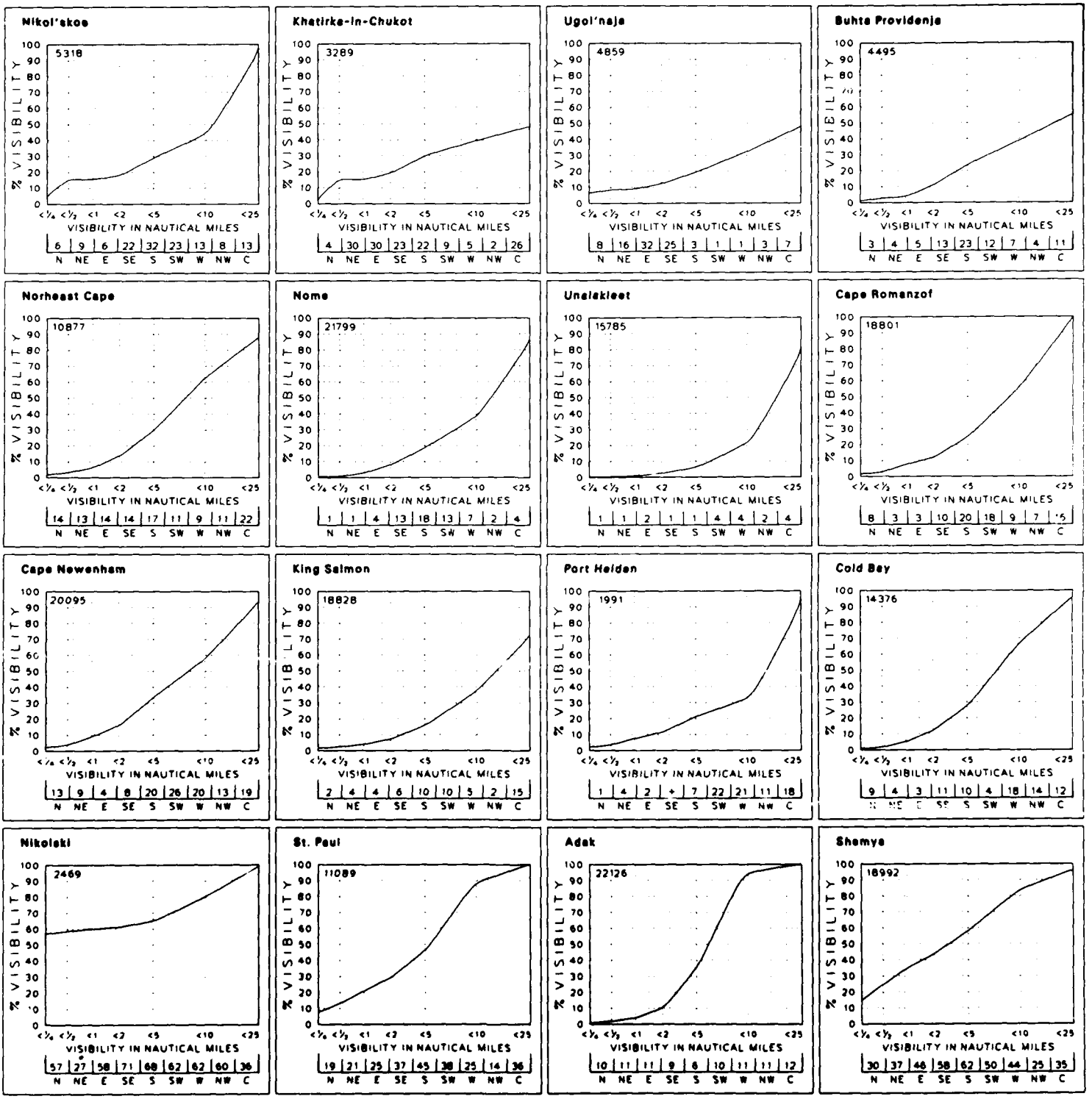
Shemya





3 Ceiling and Visibility (low range)

July


Nikol'skoe
5318
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Khatirka-In-Chukot
3289
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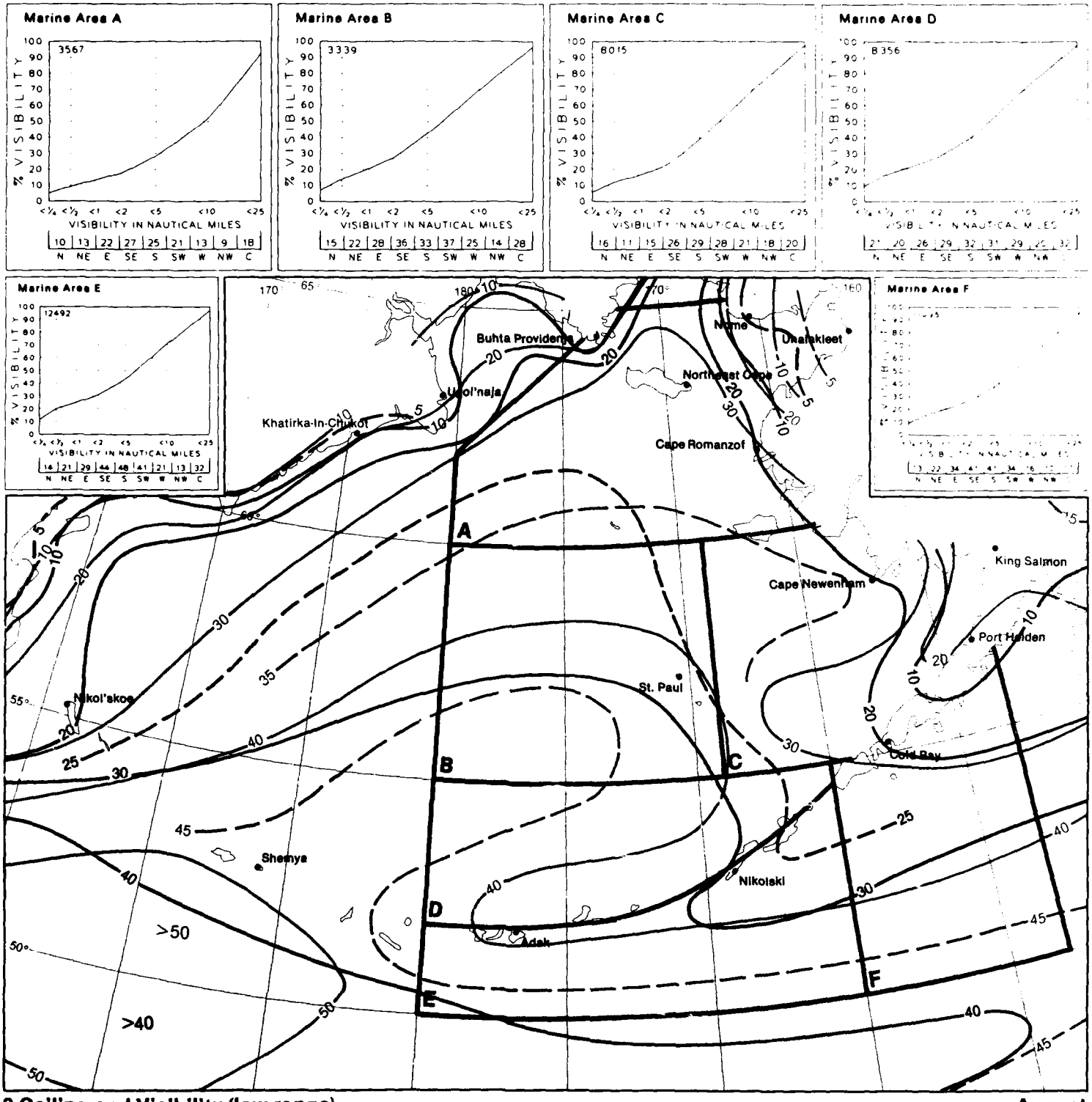
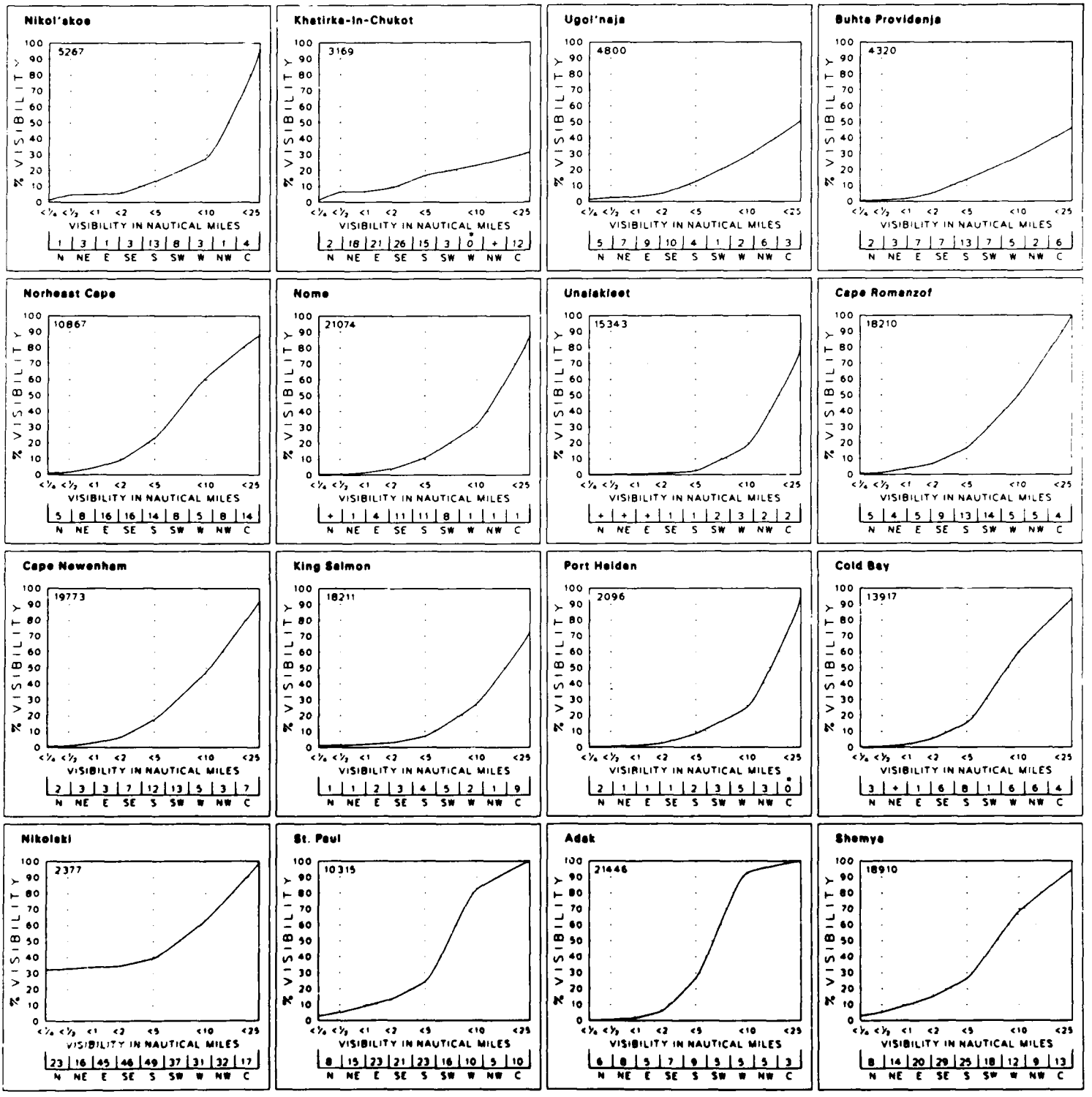
Ugol'naja
4859
8 16 32 25 3 1 1 3 7
Buhta Providenja
4495
3 4 5 13 23 12 7 4 11
Northeast Cape
10877
14 13 14 14 17 11 9 11 22
Nome
21799
1 1 4 13 18 13 7 2 4
Unalakleet
15785
1 1 2 1 1 4 4 2 4
Cape Romanzof
18801
8 3 3 10 20 18 9 7 5
Cape Newenham
20095
13 9 4 8 20 26 20 13 19
King Salmon
18828
2 4 4 6 10 10 5 2 15
Port Heiden
1991
1 4 2 + 7 22 21 11 18
Cold Bay
14376
9 4 3 11 10 4 18 14 12
Nikolski
2469
57 27 58 71 68 62 62 60 36
St. Paul
11089
19 21 25 37 45 38 25 14 36
Adak
22126
10 11 11 9 6 10 11 11 12
Shemya
18992
30 37 46 58 62 50 44 25 35
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
N NE E SE S SW W NW C



3 Ceiling and Visibility (low range)

August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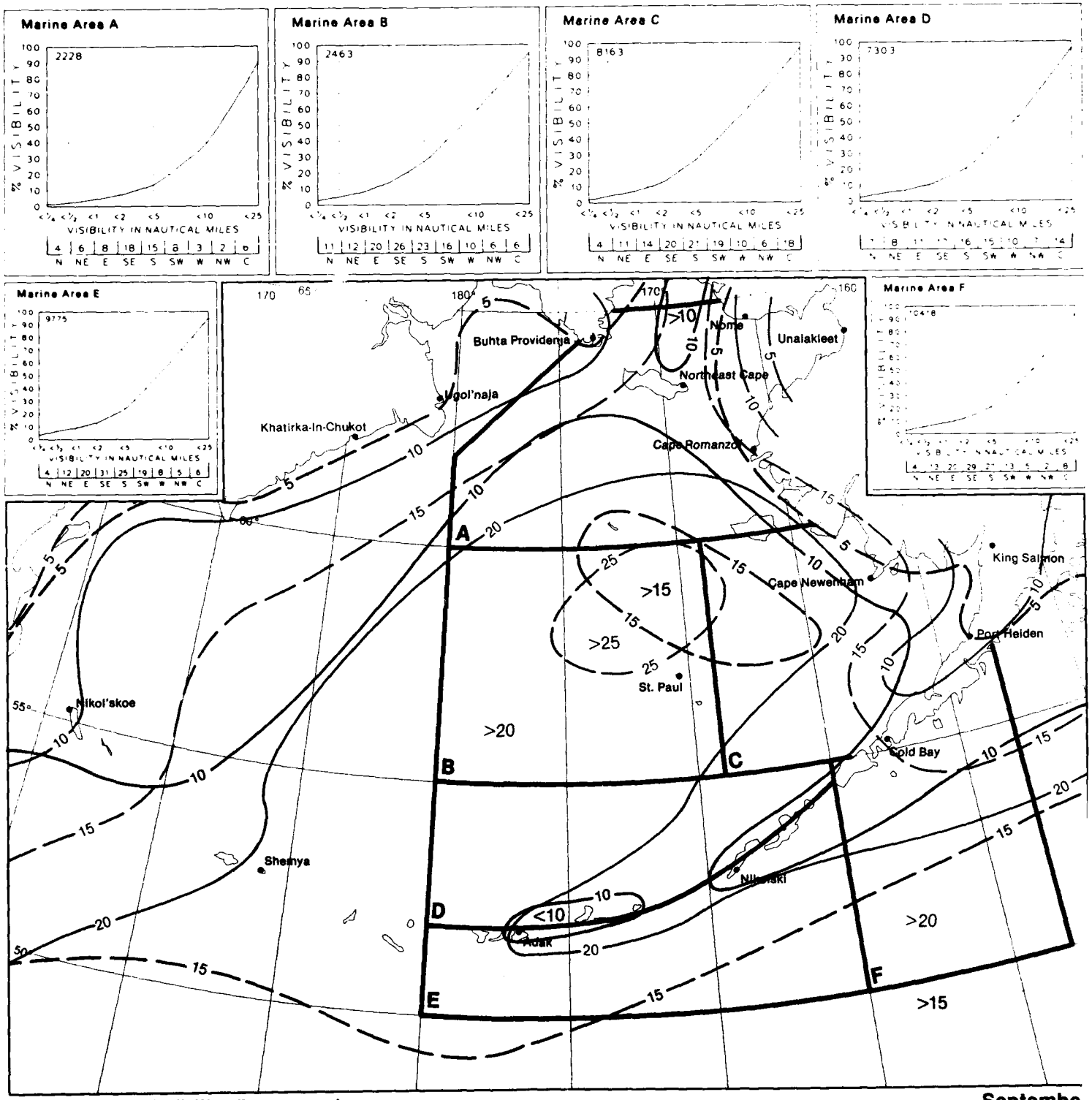
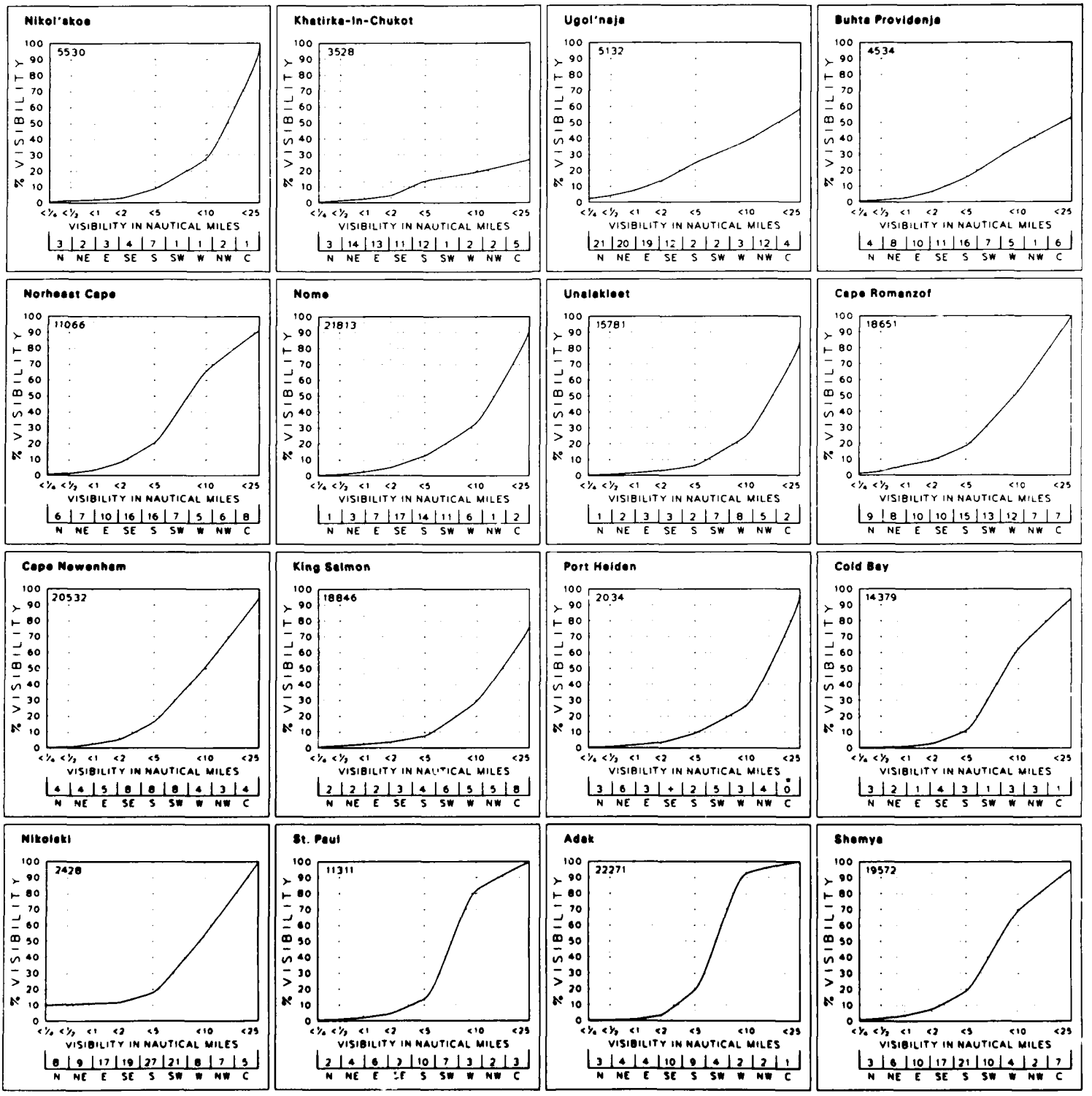
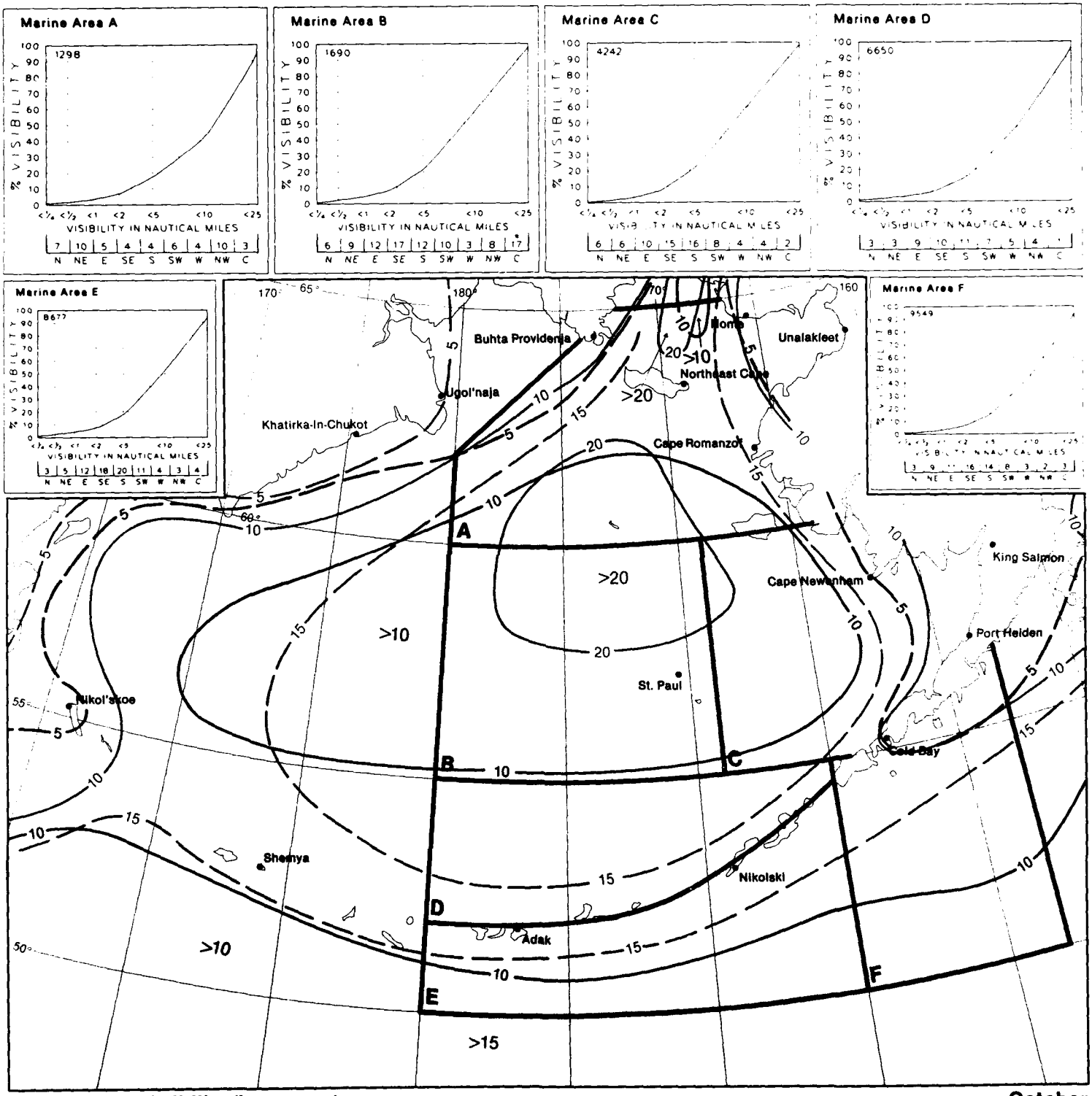
Khatirka-In-Chukot
3169
2 18 21 26 15 3 0 + 12
Ugol'naja
4800
5 7 9 10 4 1 2 6 3
Buhta Providenja
4320
2 3 7 7 13 7 5 2 6
Norheast Cape
10867
5 8 16 16 14 8 5 8 14
Nome
21074
+ 1 4 11 11 8 1 1 1
Unalakleet
15343
+ + + 1 1 2 3 2 2
Cape Romanzof
18210
5 4 5 9 13 14 5 5 4
Cape Newenham
19773
2 3 3 7 12 13 5 3 7
King Salmon
18211
1 1 2 3 4 5 2 1 9
Port Heiden
2096
2 1 1 1 2 3 5 3 0
Cold Bay
13917
3 + 1 6 8 1 6 6 4
Nikolski
2377
23 16 45 46 49 37 31 32 17
St. Paul
10315
8 15 23 21 23 16 10 5 10
Adak
21446
6 8 5 7 9 5 5 5 3
Shemya
18910
8 14 20 29 25 18 12 9 13
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
N NE E SE S SW W NW C



3 Ceiling and Visibility (low range)

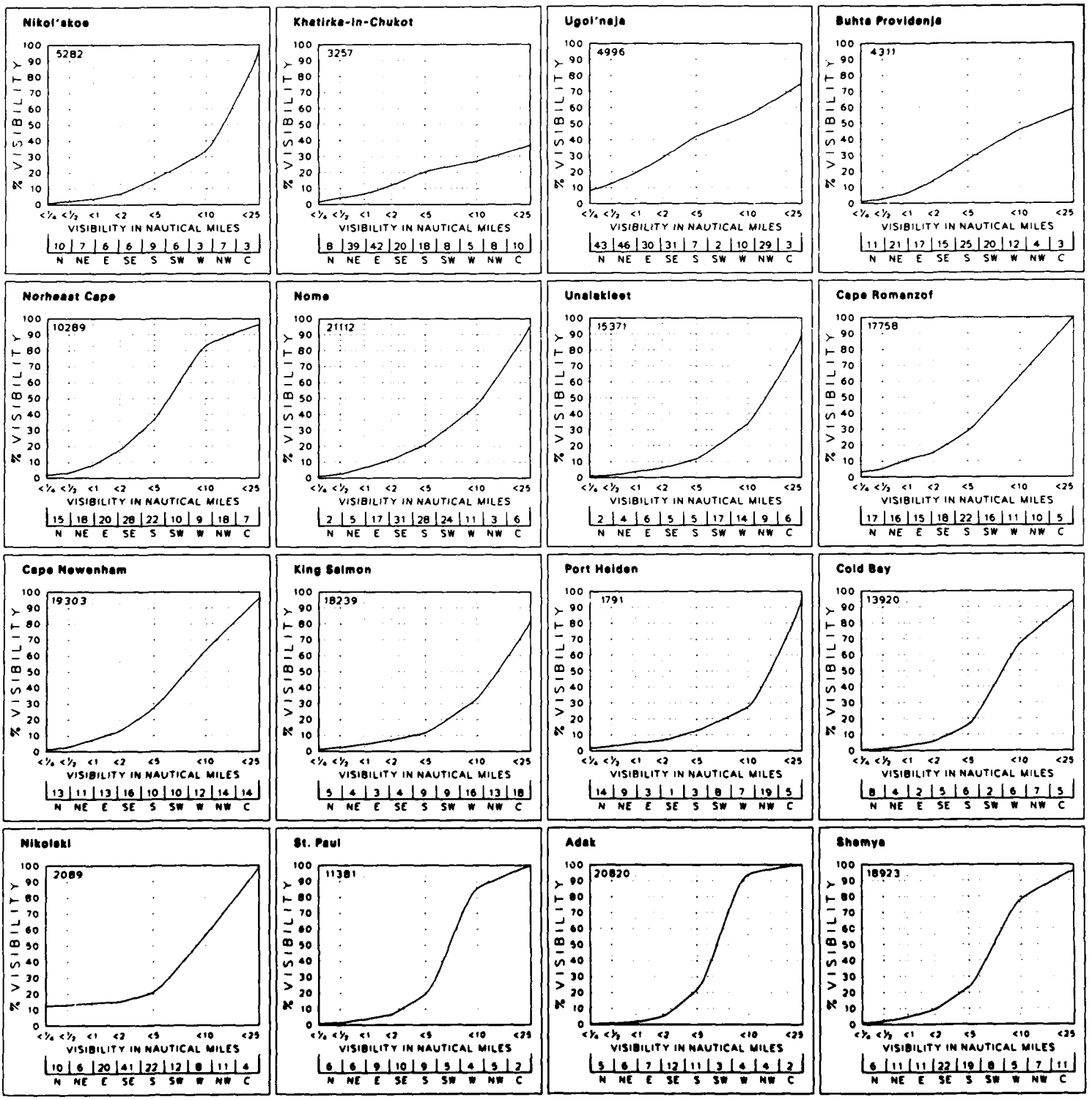
Septembe


Nikol'skoe
5530
Khatirka-In-Chukot
3528
Ugol'naja
5132
Buhta Providenja
4534
Northeast Cape
11066
Nome
21813
Unalakleet
15781
Cape Romanzof
18651
Cape Newenham
20532
King Salmon
18846
Port Heiden
2034
Cold Bay
14379
Nikolski
2428
St. Paul
11311
Adak
22271
Shemya
19572
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
N NE E SE S SW W NW C



3 Ceiling and Visibility (low range)

October


Nikol'skoe
5282
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
<¼ <½ <1 <2 <5 <10 <25
10 7 6 6 9 6 3 7 3
N NE E SE S SW W NW C
Khatirka-in-Chukot
3257
8 39 42 20 18 8 5 8 10
Ugol'naja
4996
43 46 30 31 7 2 10 29 3
Buhta Providenja
4311
11 21 17 15 25 20 12 4 3
Northeast Cape
10289
15 18 20 28 22 10 9 18 7
Nome
21112
2 5 17 31 28 24 11 3 6
Unalakleet
15371
2 4 6 5 5 17 14 9 6
Cape Romanzof
17758
17 16 15 18 22 16 11 10 5
Cape Newenham
19303
13 11 13 16 10 10 12 14 14
King Salmon
18239
5 4 3 4 9 9 16 13 18
Port Heiden
1791
14 9 3 1 3 8 7 19 5
Cold Bay
13920
8 4 2 5 6 2 6 7 5
Nikolski
2089
10 6 20 41 22 12 8 11 4
St. Paul
11381
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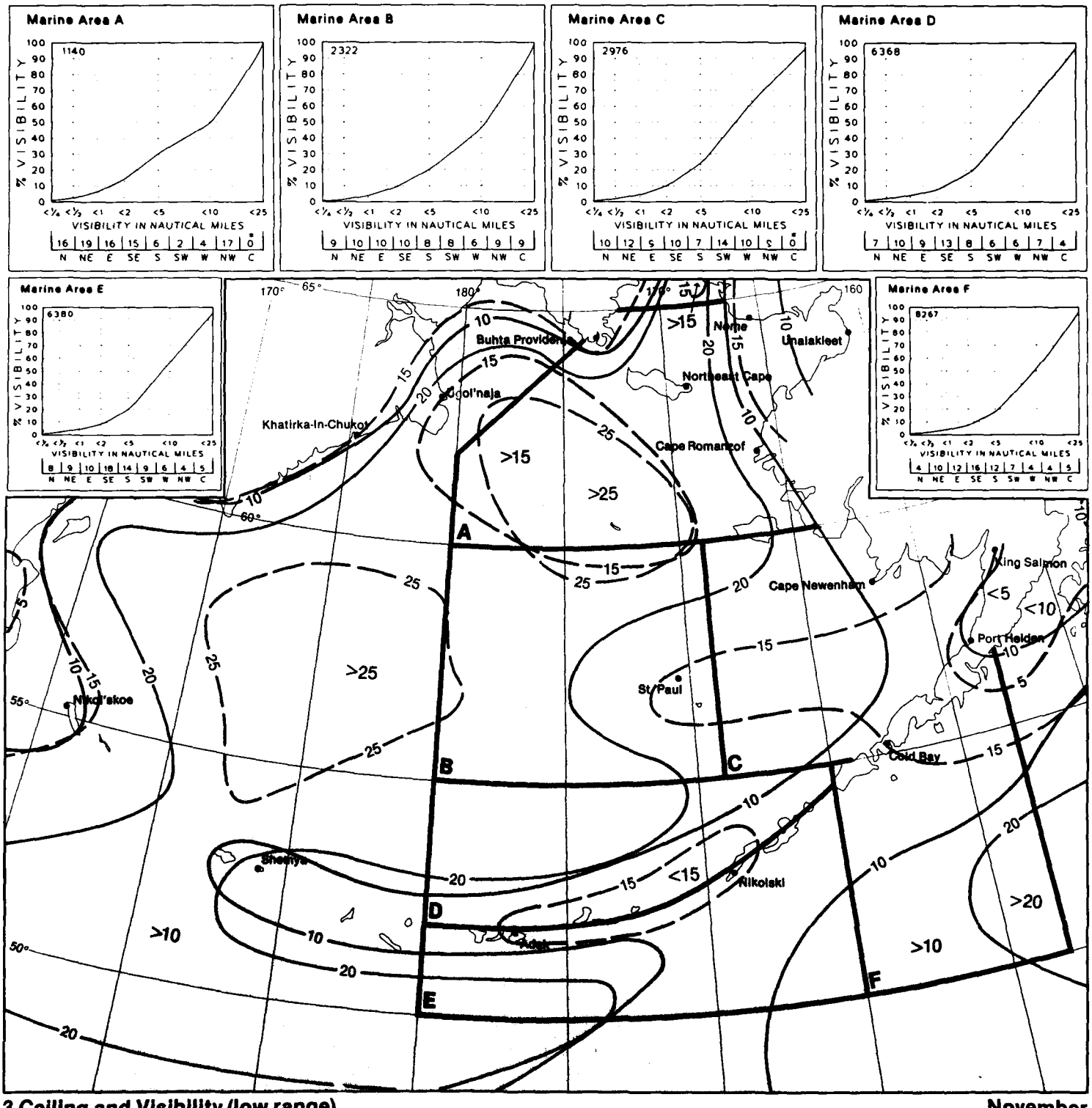
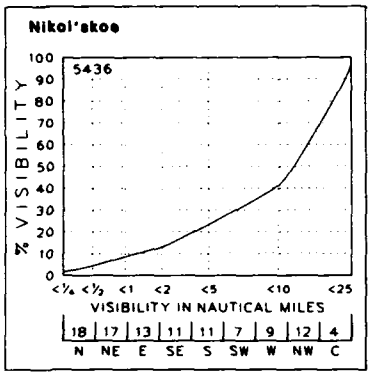
Adak
20820
5 6 7 12 11 3 4 4 2
Shemya
18923
6 11 11 22 19 8 5 7 11



3 Ceiling and Visibility (low range)

November


Nikol'skoe
5436
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VISIBILITY IN NAUTICAL MILES
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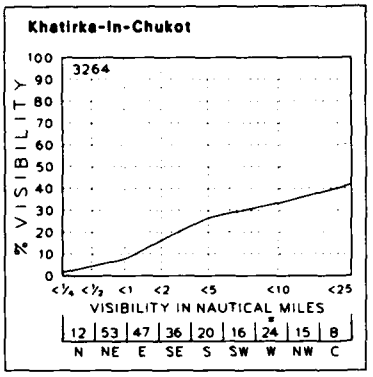
18 17 13 11 11 7 9 12 4
N NE E SE S SW W NW C


Khatirka-in-Chukot
3264
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
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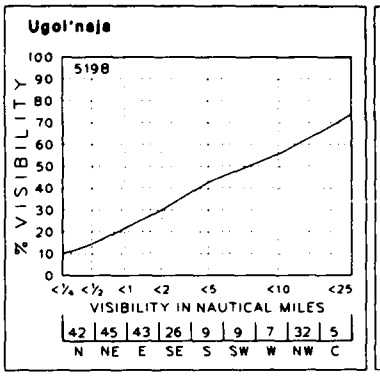
N NE E SE S SW W NW C


Ugol'naja
5198
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
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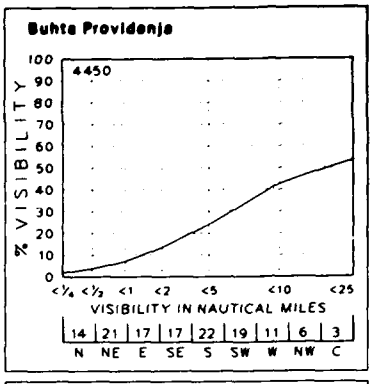
N NE E SE S SW W NW C


Buhta Providenja
4450
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
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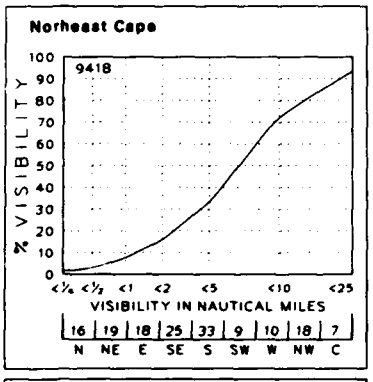
N NE E SE S SW W NW C


Northeast Cape
9418
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VISIBILITY IN NAUTICAL MILES
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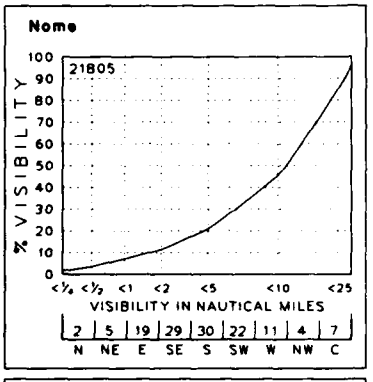
N NE E SE S SW W NW C


Nome
21805
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
<1/4 <1/2 <1 <2 <5 <10 <25
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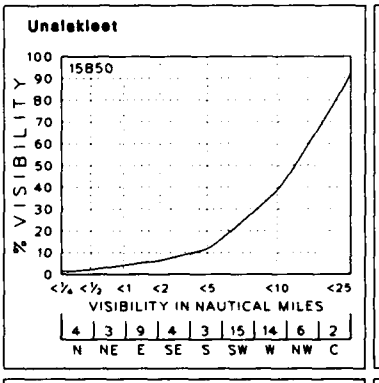
N NE E SE S SW W NW C


Unalakleet
15850
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
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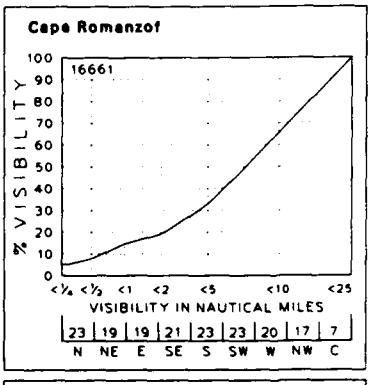
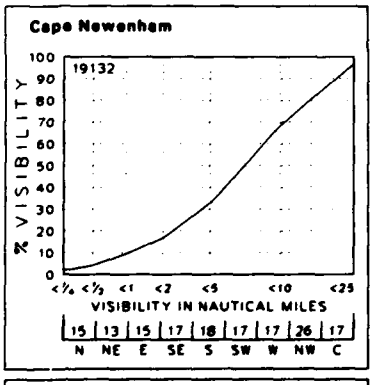
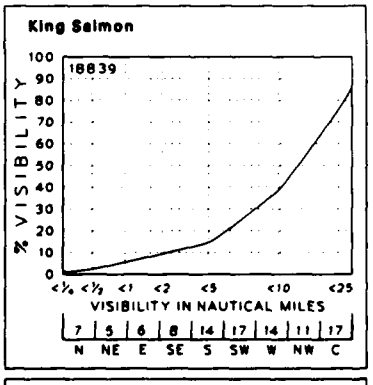
N NE E SE S SW W NW C


Cape Romanzof
16661
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
<1/4 <1/2 <1 <2 <5 <10 <25
23 19 19 21 23 23 20 17 7
N NE E SE S SW W NW C


Cape Newenham
19132
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
<1/4 <1/2 <1 <2 <5 <10 <25
15 13 15 17 18 17 17 26 17
N NE E SE S SW W NW C


King Salmon
18839
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
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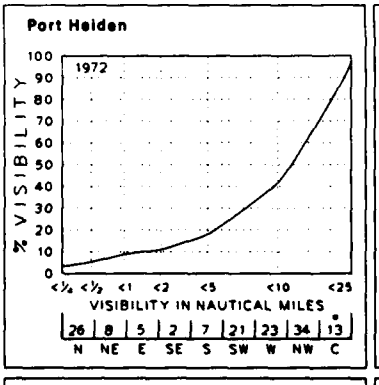
N NE E SE S SW W NW C


Port Heiden
1972
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
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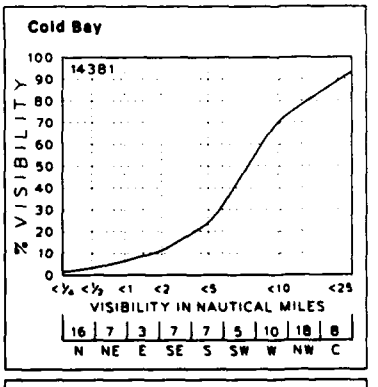
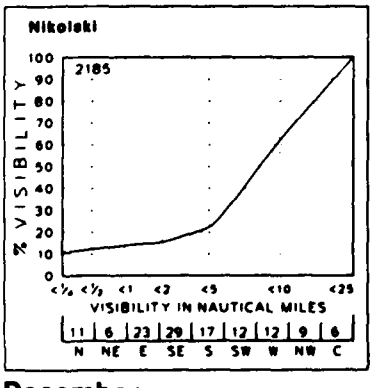
N NE E SE S SW W NW C


Cold Bay
14381
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
<1/4 <1/2 <1 <2 <5 <10 <25
16 7 3 7 7 5 10 18 8
N NE E SE S SW W NW C


Nikolski
2185
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
<1/4 <1/2 <1 <2 <5 <10 <25
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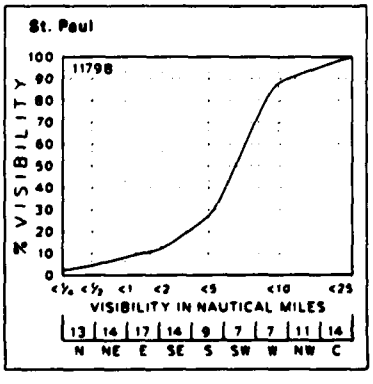
N NE E SE S SW W NW C


St. Paul
11798
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
<1/4 <1/2 <1 <2 <5 <10 <25
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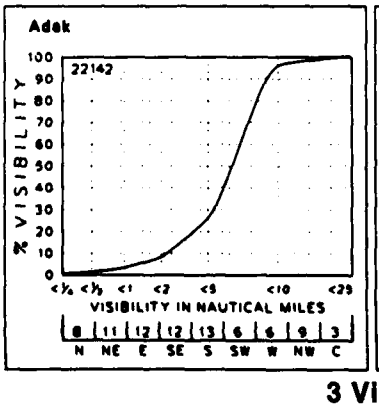
N NE E SE S SW W NW C


Adak
22142
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
<1/4 <1/2 <1 <2 <5 <10 <25
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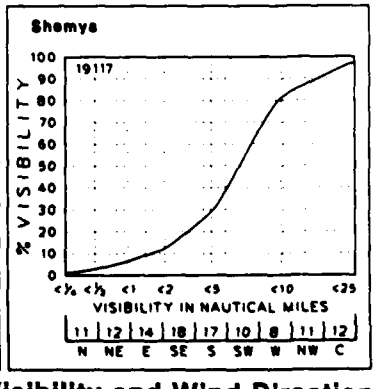
N NE E SE S SW W NW C


Shemya
19117
% VISIBILITY
VISIBILITY IN NAUTICAL MILES
<1/4 <1/2 <1 <2 <5 <10 <25
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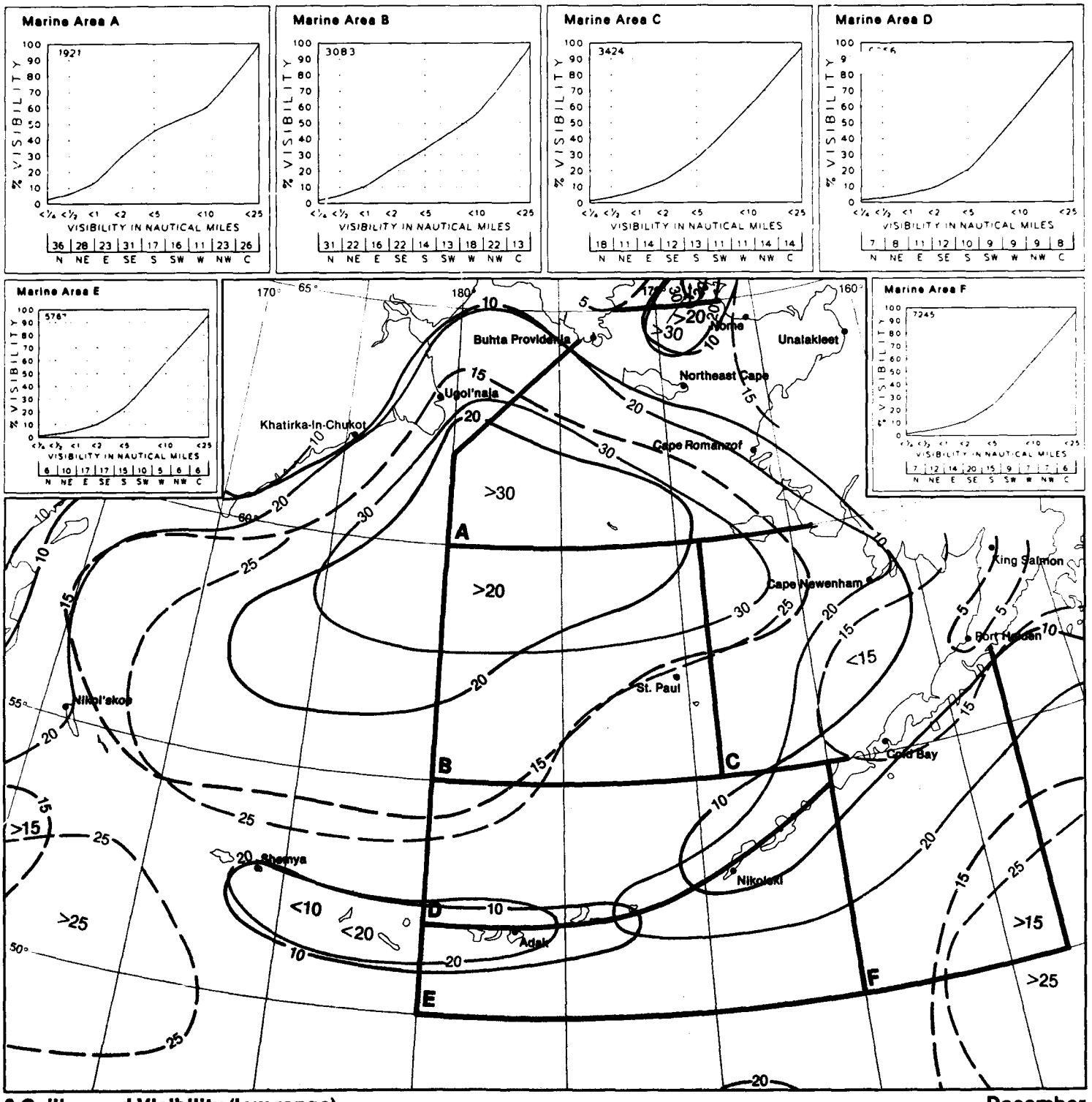
N NE E SE S SW W NW C



3 Ceiling and Visibility (low range)

December

Map 4. Ceiling/visibility (mid range)

BLACK LINE – Percent frequency of low cloud ceiling (LCC) <1000 feet and/or visibility <5 nautical miles.

BLUE LINE – Percent frequency of LCC <8000 feet and/or visibility <10 nautical miles.

Albers Equal–Area Conic Projection

Graphs: Low cloud ceiling/visibility

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) <½	½– <1	1– <2	2– <5	5– <10	≥10
NC	+	0	+	2	7	11
50<80	0	0	+	+	1	1
35<50	+	+	+	1	2	3
20<35	1	1	2	3	8	11
10<20	1	3	3	4	8	8
6<10	+	+	1	2	1	1
3<6	+	+	+	1	+	+
1.5<3	0	0	+	0	0	+
0<1.5	5	2	2	1	2	+

1659

Percent frequency of simultaneous occurrence of specified low cloud ceiling (hundreds of feet) and visibility (nautical miles).

Number of observations.

Low cloud ceiling heights are estimated from the height of low clouds (h) when low cloud amount (N_h) is ≥5/8.

Obscurations are included under ceiling "0<1.5".

"NC" (no ceiling) includes bases of clouds ≥8000 feet or N_h <5/8.

(8% of all observations reported ceiling ≥1000 feet but <2000 feet simultaneously with visibility ≥5 but <10 nautical miles).

+ indicates <.5% but >0.

Cloud classification is based upon the cloud appearance and, when possible, the formation process. In estimating the height of the lowest cloud base (h), the observer first determines the type of cloud; and, based on the normal height range for that cloud type, determines the height. Heights are generally higher in the tropics and lower at high latitudes. Similarly, clouds will generally be higher in summer and lower in winter. The appearance of the cloud, such as motion visible in the cloud base and the size of the cloud elements, gives some indication as to how much it is higher or lower than the average. After the observer estimates the height of the base of the lowest cloud in sight, he selects and records the appropriate code (see height table and LCC column in graph). Refer to the texts in Sets 3 and 6 for additional information on clouds.

HEIGHT (h) ABOVE THE SEA OF THE BASE OF THE LOWEST CLOUD SEEN (WMO Code, 1982)

If sky is clear or has only Cirrus-type clouds, code h as 9.

Code figs.	Height in meters	Height in feet
0	0 to 49	100 or less
1	50 to 99	200 or 300
2	100 to 199	400 to 600
3	200 to 299	700 to 900
4	300 to 599	1000 to 1900
5	600 to 999	2000 to 3200
6	1000 to 1499	3300 to 4900
7	1500 to 1999	5000 to 6500
8	2000 to 2499	6600 to 8200
9	2500 or more, or no clouds	8300 or more, or no clouds
/	Sky obscured by fog or snow	

Nikol'skoe

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 5827					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	+	+	+	1	4	22
50<80	0	0	0	+	+	+
35<50	+	+	+	+	+	1
20<35	1	+	1	3	4	10
10<20	3	4	5	7	9	20
6<10	+	+	+	1	+	+
3<6	+	+	+	+	+	+
1.5<3	0	0	0	+	+	+
0<1.5	1	+	0	+	+	0

Khatirka-Il.-Chukot

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 3669					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	1	1	2	3	4	50
50<80	0	0	+	+	+	+
35<50	+	+	+	+	+	3
20<35	1	1	3	4	2	5
10<20	2	1	3	3	2	2
6<10	1	+	1	1	+	+
3<6	+	+	+	+	+	+
1.5<3	0	0	+	+	0	+
0<1.5	1	0	0	0	0	0

Ugol'naja

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 5260					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	3	3	3	6	6	32
50<80	+	0	+	+	+	+
35<50	+	+	+	+	+	+
20<35	2	1	2	3	2	4
10<20	4	4	4	4	3	3
6<10	1	1	1	1	+	+
3<6	+	+	1	+	+	+
1.5<3	0	+	+	+	+	0
0<1.5	3	+	0	0	0	0

Buhta Providenja

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4670					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	+	1	2	5	11	41
50<80	0	0	+	+	+	+
35<50	+	+	+	+	+	1
20<35	1	1	2	3	3	5
10<20	2	3	5	4	3	2
6<10	+	+	+	+	+	+
3<6	0	+	+	+	+	+
1.5<3	0	+	+	0	+	+
0<1.5	1	0	+	0	0	+

Northeast Cape

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 3498					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	1	+	1	3	20	35
50<80	0	0	0	0	+	1
35<50	0	0	0	+	+	+
20<35	+	+	+	1	5	1
10<20	+	1	2	5	6	1
6<10	0	1	1	2	3	+
3<6	+	+	+	+	+	+
1.5<3	+	0	+	0	0	0
0<1.5	5	3	1	+	0	0

Nome

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 16011					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	1	+	+	1	10	45
50<80	+	+	+	+	1	2
35<50	+	+	+	+	2	1
20<35	+	+	1	2	4	2
10<20	+	1	1	3	4	2
6<10	+	1	1	1	2	+
3<6	+	+	1	1	1	+
1.5<3	+	+	+	+	+	+
0<1.5	3	3	1	+	+	0

Unalakleet

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 2659					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	+	+	+	1	23	32
50<80	+	+	+	+	3	3
35<50	0	0	0	+	4	3
20<35	+	+	+	1	6	6
10<20	0	+	+	2	5	3
6<10	+	+	+	1	1	+
3<6	+	+	+	+	+	+
1.5<3	0	0	0	0	0	0
0<1.5	2	1	1	1	0	0

Cape Romanzof

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4150					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	3	2	1	6	31	14
50<80	0	0	+	+	1	1
35<50	0	0	+	+	1	+
20<35	+	1	1	1	5	1
10<20	1	1	1	3	4	+
6<10	+	2	1	3	2	+
3<6	+	+	1	+	+	0
1.5<3	+	0	0	0	0	0
0<1.5	6	3	+	+	0	0

Cape Newenham

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 3956					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	1	1	1	1	18	24
50<80	+	0	+	+	1	1
35<50	0	+	0	+	1	+
20<35	+	+	+	1	3	1
10<20	+	1	1	4	8	3
6<10	1	1	2	4	7	2
3<6	+	+	1	1	2	+
1.5<3	0	0	+	0	0	0
0<1.5	5	2	1	1	+	0

King Salmon

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 16185					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	+	+	+	1	10	50
50<80	0	+	+	+	1	4
35<50	+	0	+	+	2	3
20<35	+	+	+	1	4	4
10<20	+	+	+	1	3	2
6<10	+	+	+	1	2	1
3<6	+	+	+	1	1	+
1.5<3	+	+	+	+	+	+
0<1.5	1	1	1	1	+	+

Port Heiden

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 123					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	0	0	1	0	9	35
50<80	0	0	0	0	0	6
35<50	0	0	0	0	0	3
20<35	0	0	0	1	0	10
10<20	0	1	0	1	10	10
6<10	0	0	0	1	6	0
3<6	0	0	1	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	5	2	0	1	0	0

Cold Bay

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 11814					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	+	+	+	1	11	20
50<80	+	+	+	+	+	1
35<50	+	+	+	+	2	1
20<35	1	1	1	2	10	5
10<20	1	1	1	4	11	4
6<10	+	1	1	4	5	1
3<6	+	+	1	2	2	+
1.5<3	+	+	+	+	+	0
0<1.5	3	2	1	+	+	0

Nikolski

No Data Available

St. Paul

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 9069					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	+	+	1	1	18	7
50<80	0	+	0	+	+	+
35<50	0	+	+	+	1	+
20<35	+	+	1	2	10	3
10<20	1	1	1	5	19	2
6<10	1	1	1	3	4	+
3<6	1	1	1	2	1	+
1.5<3	+	+	+	+	+	0
0<1.5	4	2	1	+	+	0

Adak

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 13760					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	+	+	+	+	16	3
50<80	+	0	0	+	1	+
35<50	0	0	+	+	6	1
20<35	+	+	+	3	25	1
10<20	+	+	1	8	17	+
6<10	+	+	1	4	2	+
3<6	+	+	1	1	1	0
1.5<3	+	+	+	+	+	0
0<1.5	2	2	2	1	+	0

Shemya

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 10000					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	+	+	+	+	13	10
50<80	0	0	0	+	+	+
35<50	0	+	+	+	3	1
20<35	+	+	+	2	16	6
10<20	+	1	2	5	12	2
6<10	+	1	2	4	4	+
3<6	+	1	2	2	1	+
1.5<3	+	+	+	+	0	0
0<1.5	3	2	1	+	+	0

Marine Area A

Low Cloud Ceiling (10^2 FT)	VISIBILITY (NM) 2351					
	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	+	1	1	3	14
50<80	+	0	+	+	1	1
35<50	+	+	+	+	1	1
20<35	1	1	2	4	3	28
10<20	1	3	7	6	4	3
6<10	+	+	1	1	1	+
3<6	+	+	+	+	+	+
1.5<3	+	+	+	+	0	0
0<1.5	4	2	2	2	1	+

Marine Area B

Low Cloud Ceiling (10^2 FT)	VISIBILITY (NM) 4304					
	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	+	+	1	4	13
50<80	+	0	+	+	1	1
35<50	+	+	+	+	1	2
20<35	1	1	2	4	7	20
10<20	1	2	3	4	5	4
6<10	+	+	1	2	2	1
3<6	+	+	+	+	1	+
1.5<3	+	+	+	+	+	+
0<1.5	4	2	2	2	1	+

Marine Area C

Low Cloud Ceiling (10^2 FT)	VISIBILITY (NM) 3073					
	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	+	+	1	6	21
50<80	0	0	+	+	1	2
35<50	+	+	+	1	2	3
20<35	+	+	1	2	5	11
10<20	1	1	2	4	9	7
6<10	+	+	1	2	4	1
3<6	+	+	+	1	+	+
1.5<3	+	+	0	+	0	+
0<1.5	3	2	3	3	1	+

Marine Area D

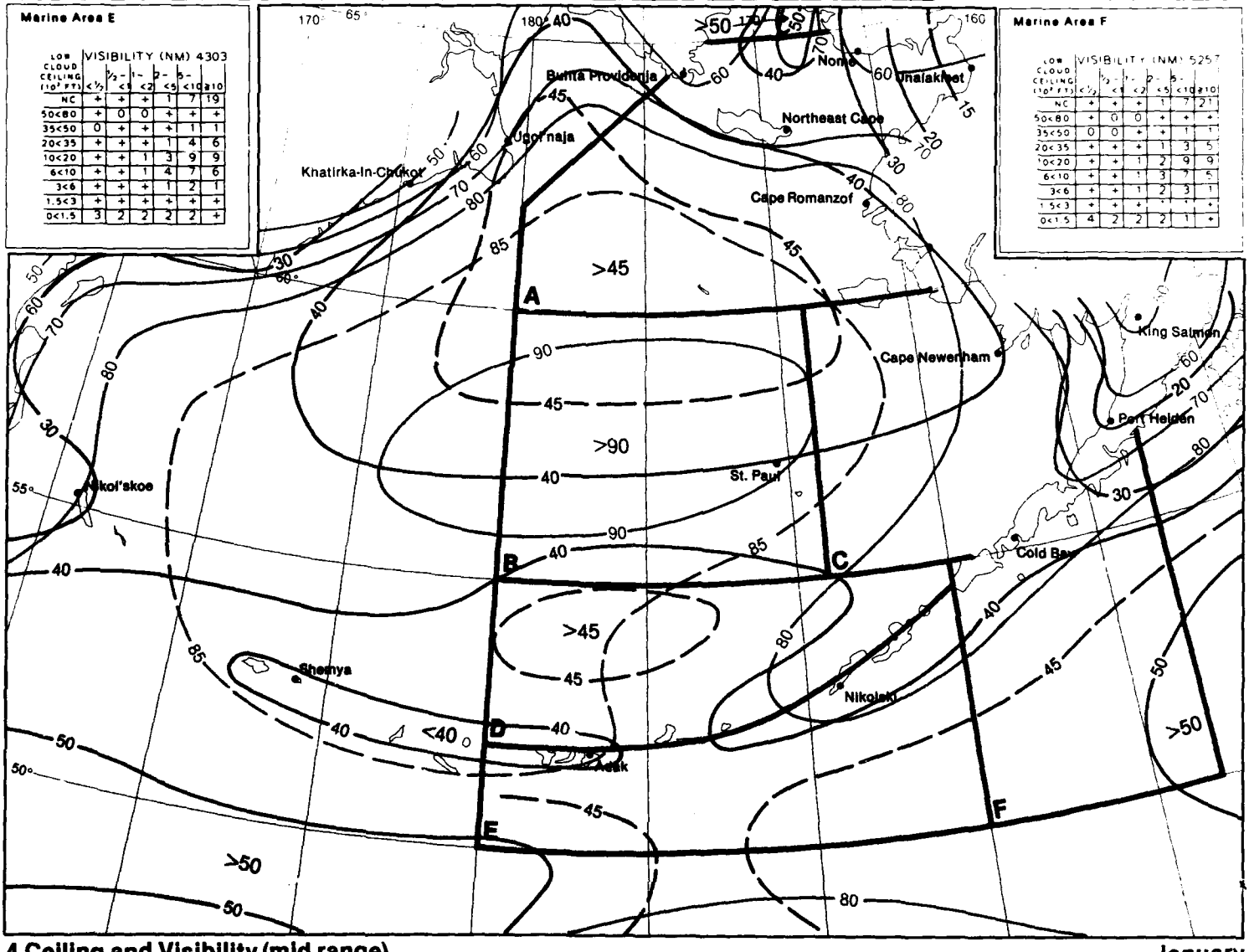
Low Cloud Ceiling (10^2 FT)	VISIBILITY (NM) 5470					
	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	+	+	1	6	19
50<80	+	+	0	+	1	+
35<50	+	0	+	+	1	1
20<35	+	+	+	1	4	7
10<20	+	+	1	2	7	10
6<10	+	1	1	3	7	7
3<6	+	+	1	1	2	2
1.5<3	+	+	+	+	1	+
0<1.5	2	1	2	2	2	+

Marine Area E

Low Cloud Ceiling (10^2 FT)	VISIBILITY (NM) 4303					
	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	+	+	1	7	19
50<80	+	0	0	+	+	+
35<50	0	+	+	+	1	1
20<35	+	+	+	1	4	6
10<20	+	+	1	3	9	9
6<10	+	+	1	4	7	6
3<6	+	+	+	1	2	1
1.5<3	+	+	+	+	+	+
0<1.5	3	2	2	2	2	+

Marine Area F

Low Cloud Ceiling (10^2 FT)	VISIBILITY (NM) 5257					
	<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	+	+	+	1	7	21
50<80	+	0	0	+	+	+
35<50	0	0	+	+	1	1
20<35	+	+	+	1	3	5
10<20	+	+	1	2	9	9
6<10	+	+	1	3	7	5
3<6	+	+	1	2	3	1
1.5<3	+	+	+	+	+	+
0<1.5	4	2	2	2	1	+



4 Ceiling and Visibility (mid range) **January**

Nikol'skoe

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 5419					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	1	4	25
50<80	+	+	0	+	+	+
35<50	0	0	+	+	+	1
20<35	1	1	1	3	5	11
10<20	4	5	4	7	7	16
6<10	+	+	+	+	+	+
3<6	+	+	+	+	+	+
1.5<3	0	+	+	+	0	+
0<1.5	1	+	+	+	0	+

Khatirka-In-Chukot

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 3233					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	2	1	2	3	4	63
50<80	0	0	0	0	+	+
35<50	0	0	+	+	+	3
20<35	1	+	2	3	1	3
10<20	1	1	2	2	1	1
6<10	1	+	+	1	+	+
3<6	+	+	+	+	0	0
1.5<3	0	0	0	0	0	0
0<1.5	1	0	0	0	0	0

Ugol'naja

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4802					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	5	3	5	7	8	41
50<80	+	0	+	0	+	+
35<50	+	+	+	+	+	+
20<35	1	1	1	1	1	2
10<20	3	2	3	3	2	1
6<10	1	+	1	1	+	+
3<6	+	+	+	+	+	+
1.5<3	+	+	+	+	+	+
0<1.5	2	+	0	+	+	0

Buhta Providenja

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4316					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	1	1	1	4	11	55
50<80	+	+	0	+	+	+
35<50	0	+	+	+	+	1
20<35	+	1	2	3	2	3
10<20	2	2	3	3	2	1
6<10	+	+	+	+	+	+
3<6	+	+	+	+	+	0
1.5<3	0	+	0	0	0	0
0<1.5	1	+	+	0	0	0

Norheast Cape

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 3698					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	1	2	18	38
50<80	0	0	+	+	+	1
35<50	0	0	+	+	1	+
20<35	+	+	+	1	3	1
10<20	+	1	2	5	7	2
6<10	+	1	1	2	2	+
3<6	0	+	+	+	+	0
1.5<3	0	0	0	0	+	0
0<1.5	4	2	1	+	0	0

Nome

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 14734					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	1	9	52
50<80	+	+	+	+	1	2
35<50	+	+	+	+	1	2
20<35	+	+	1	2	3	2
10<20	+	1	1	3	4	2
6<10	+	+	1	2	1	+
3<6	+	+	1	1	+	+
1.5<3	+	+	+	+	+	0
0<1.5	2	2	1	+	+	0

Unalakleet

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 2192					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	1	20	43
50<80	0	0	+	+	2	3
35<50	+	+	+	+	2	3
20<35	+	+	+	1	4	5
10<20	+	+	+	1	3	3
6<10	0	+	+	1	1	+
3<6	0	+	+	+	+	+
1.5<3	0	0	0	+	0	+
0<1.5	2	2	1	+	0	0

Cape Romanzof

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 3883					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	2	2	2	4	31	15
50<80	+	1	+	+	1	1
35<50	0	+	0	+	1	+
20<35	1	1	+	1	7	1
10<20	1	1	1	4	5	1
6<10	+	2	1	2	2	+
3<6	+	+	+	+	+	0
1.5<3	0	0	+	0	0	0
0<1.5	5	3	+	+	0	0

Cape Newenham

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 384*					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	1	1	16	24
50<80	0	0	+	+	+	1
35<50	0	0	0	+	1	1
20<35	+	+	+	1	4	2
10<20	+	1	1	3	7	5
6<10	+	1	3	6	6	3
3<6	1	1	1	2	1	+
1.5<3	0	+	+	+	0	0
0<1.5	3	2	1	1	+	+

King Salmon

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 14871					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	1	+	+	1	8	50
50<80	+	+	+	+	2	5
35<50	0	+	+	+	2	3
20<35	+	+	+	2	4	5
10<20	+	+	1	1	3	2
6<10	+	+	+	1	1	1
3<6	+	+	+	1	1	+
1.5<3	+	+	+	+	+	0
0<1.5	1	1	1	1	+	0

Port Heiden

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 109					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	1	1	0	1	11	38
50<80	0	0	0	0	0	2
35<50	0	0	0	0	0	3
20<35	0	0	0	2	3	14
10<20	0	1	0	2	6	6
6<10	0	0	1	2	2	0
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	5	1	1	1	0	0

Cold Bay

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 10760					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	1	9	20
50<80	+	0	+	+	+	1
35<50	0	+	+	+	1	1
20<35	+	1	1	3	8	5
10<20	1	1	1	4	11	5
6<10	+	+	1	2	5	1
3<6	+	+	1	2	2	+
1.5<3	+	+	+	+	+	+
0<1.5	3	2	1	+	+	0

Nikolski

No Data Available

St. Paul

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 8596					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	1	+	1	1	18	7
50<80	+	0	+	+	+	+
35<50	0	0	+	+	1	+
20<35	1	+	+	2	7	2
10<20	3	2	2	7	18	2
6<10	1	1	1	2	5	+
3<6	1	1	1	1	1	+
1.5<3	+	+	+	+	+	0
0<1.5	5	1	+	+	0	0

Adak

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 12622					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	+	16	3
50<80	0	0	0	+	1	+
35<50	0	+	+	+	5	1
20<35	+	+	+	3	27	2
10<20	+	+	1	9	16	+
6<10	+	+	1	3	2	+
3<6	+	+	+	+	+	0
1.5<3	0	+	+	+	0	0
0<1.5	2	2	2	1	+	+

Shemya

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 9339					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	+	10	11
50<80	0	+	0	+	+	+
35<50	+	0	+	+	2	2
20<35	+	+	1	3	18	8
10<20	1	2	2	6	12	2
6<10	+	1	2	3	2	+
3<6	+	1	1	1	+	+
1.5<3	+	+	+	0	0	0
0<1.5	4	2	1	+	+	+

Marine Area A

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 1473					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	1	+	+	1	9	19
50<80	0	+	0	+	1	+
35<50	0	+	+	+	+	1
20<35	+	1	1	3	6	12
10<20	1	3	4	5	6	3
6<10	+	+	1	2	1	+
3<6	+	1	+	1	+	+
1.5<3	0	+	+	+	0	0
0<1.5	4	3	1	3	+	+

Marine Area B

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 5725					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	4	9
50<80	0	+	+	+	+	1
35<50	+	+	+	+	1	1
20<35	1	2	4	6	5	18
10<20	1	3	6	6	5	4
6<10	+	1	1	1	2	1
3<6	+	+	+	+	+	+
1.5<3	0	+	+	+	+	0
0<1.5	3	2	2	2	1	+

Marine Area C

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 3153					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	5	20
50<80	0	+	0	+	+	1
35<50	+	+	+	+	1	2
20<35	+	+	1	1	4	13
10<20	1	2	3	4	9	9
6<10	+	1	1	2	3	1
3<6	+	+	+	+	+	+
1.5<3	+	0	+	+	+	+
0<1.5	2	2	3	2	1	+

Marine Area D

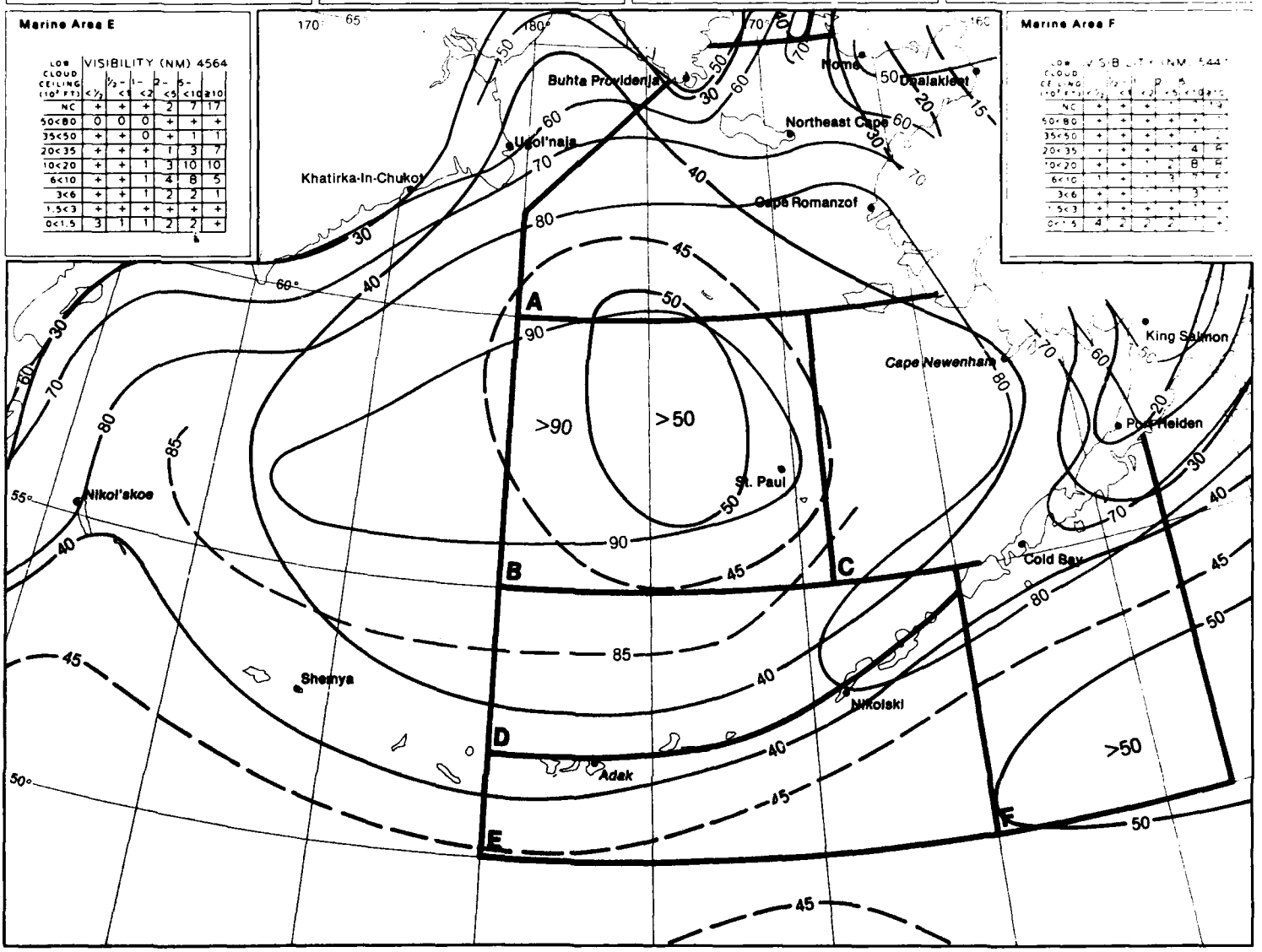
LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 5860					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	4	18
50<80	+	0	+	0	1	1
35<50	+	+	+	+	2	2
20<35	+	+	+	1	4	8
10<20	+	+	1	3	9	10
6<10	+	+	1	3	7	5
3<6	+	+	1	1	3	+
1.5<3	+	+	+	+	+	+
0<1.5	2	1	2	3	1	+

Marine Area E

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4564					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	2	7	17
50<80	0	0	0	+	+	+
35<50	+	+	0	+	1	1
20<35	+	+	+	1	3	7
10<20	+	+	1	3	10	10
6<10	+	+	1	4	8	5
3<6	+	+	1	2	2	1
1.5<3	+	+	+	+	+	+
0<1.5	3	1	1	2	2	+

Marine Area F

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 5441					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	+	+	+
50<80	+	+	+	+	+	+
35<50	+	+	+	+	+	+
20<35	+	+	+	+	4	4
10<20	+	+	+	2	8	4
6<10	+	+	+	3	6	2
3<6	+	+	+	+	3	+
1.5<3	+	+	+	+	+	+
0<1.5	4	2	2	2	+	+



4 Ceiling and Visibility (mid range) **February**

Nikol'skoe

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 5966					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	+	+	+	1	4	27
50<80	0	0	+	0	+	+
35<50	0	+	+	+	+	1
20<35	+	1	1	3	4	11
10<20	3	4	7	7	7	16
6<10	+	+	+	1	+	+
3<6	+	+	+	+	0	+
1.5<3	0	0	0	0	0	0
0<1.5	+	+	0	0	0	+

Khatirka-in-Chukot

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4054					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	1	1	2	3	3	68
50<80	0	0	0	0	+	+
35<50	0	0	+	+	+	1
20<35	1	1	1	2	1	3
10<20	1	1	1	1	1	2
6<10	+	+	1	+	+	+
3<6	+	+	+	+	+	+
1.5<3	+	0	+	+	0	+
0<1.5	+	0	0	+	0	0

Ugol'naja

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 5261					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	4	3	5	7	8	46
50<80	+	+	+	+	+	+
35<50	+	+	+	+	+	+
20<35	1	1	1	1	1	2
10<20	3	2	2	3	2	2
6<10	+	+	1	1	+	+
3<6	+	+	+	+	+	0
1.5<3	+	0	+	+	+	+
0<1.5	2	+	+	+	+	+

Buhta Providenja

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4868					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	1	+	2	4	9	57
50<80	+	0	+	+	+	+
35<50	+	0	+	+	+	1
20<35	+	1	1	2	2	3
10<20	3	2	3	3	2	1
6<10	+	+	+	+	+	+
3<6	0	+	+	+	0	0
1.5<3	0	0	+	+	0	0
0<1.5	+	0	0	+	0	0

Northeast Cape

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 3867					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	1	1	1	3	17	33
50<80	+	+	0	+	1	1
35<50	0	+	+	+	+	+
20<35	+	+	+	1	2	1
10<20	+	+	2	5	8	2
6<10	1	1	2	2	2	+
3<6	+	+	+	+	+	0
1.5<3	0	0	0	0	0	0
0<1.5	6	3	1	+	0	0

Nome

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 16143					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	+	+	+	1	7	53
50<80	+	+	+	1	1	2
35<50	+	+	+	+	1	2
20<35	+	+	+	2	3	2
10<20	+	1	1	3	4	1
6<10	+	+	1	2	1	+
3<6	+	+	1	1	1	+
1.5<3	+	+	+	+	+	0
0<1.5	2	1	1	+	+	0

Unalakleet

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 2353					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	+	+	+	1	18	45
50<80	0	+	+	+	1	3
35<50	0	0	0	+	1	3
20<35	+	+	+	1	3	6
10<20	+	+	+	2	3	3
6<10	0	+	+	1	2	1
3<6	+	+	+	+	+	+
1.5<3	0	0	0	+	+	+
0<1.5	1	1	1	+	+	0

Cape Romanzof

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4356					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	1	3	2	4	26	16
50<80	+	+	+	+	2	+
35<50	0	+	+	+	1	+
20<35	1	1	+	1	5	1
10<20	1	1	1	3	3	+
6<10	1	3	2	3	2	+
3<6	+	1	1	1	+	0
1.5<3	0	0	0	0	0	0
0<1.5	7	4	+	+	0	0

Cape Newenham

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4327					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	+	+	+	1	15	24
50<80	0	+	0	+	1	1
35<50	0	0	0	0	+	1
20<35	+	+	+	+	2	2
10<20	+	+	1	3	8	4
6<10	+	2	2	4	7	2
3<6	+	1	1	2	2	+
1.5<3	+	0	+	+	+	0
0<1.5	8	2	2	1	+	0

King Salmon

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 16774					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	+	+	+	+	6	52
50<80	0	+	+	+	1	4
35<50	+	0	+	+	2	3
20<35	+	+	+	1	4	5
10<20	+	+	1	2	4	3
6<10	+	+	1	1	2	1
3<6	+	+	+	1	1	+
1.5<3	+	+	+	+	+	+
0<1.5	1	1	1	+	+	+

Port Heiden

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 134					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	0	0	0	4	4	42
50<80	0	0	0	0	0	4
35<50	0	0	0	0	0	5
20<35	0	1	0	0	3	8
10<20	0	0	0	1	6	13
6<10	0	0	1	1	1	1
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	1	2	1	0	0	0

Cold Bay

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 1233					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	+	+	+	1	10	22
50<80	0	+	+	+	+	1
35<50	+	+	+	+	*	*
20<35	+	+	1	2	8	6
10<20	+	1	2	4	*	5
6<10	+	1	*	3	5	1
3<6	+	+	1	2	2	+
1.5<3	+	+	+	+	+	+
0<1.5	2	1	*	+	+	2

Nikolski

No Data Available

St. Paul

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 9589					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	+	+	+	1	18	11
50<80	+	0	0	+	+	+
35<50	+	+	0	+	1	1
20<35	+	+	+	1	6	3
10<20	2	2	2	5	15	3
6<10	1	2	1	3	5	+
3<6	1	1	1	2	2	+
1.5<3	+	+	+	+	+	0
0<1.5	5	1	+	+	0	0

Adak

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 14073					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	0	+	+	1	13	4
50<80	0	0	0	+	+	+
35<50	0	0	+	+	5	1
20<35	+	+	+	3	28	1
10<20	+	+	1	9	17	+
6<10	+	+	1	4	3	+
3<6	+	+	+	1	+	0
1.5<3	0	+	+	+	0	0
0<1.5	2	2	2	1	+	0

Shemya

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 10525					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	+	+	+	+	10	10
50<80	0	+	0	+	+	+
35<50	+	0	+	+	2	1
20<35	+	+	+	2	18	10
10<20	+	1	2	6	11	2
6<10	+	1	3	3	2	+
3<6	+	1	1	1	+	+
1.5<3	+	+	+	+	+	0
0<1.5	3	2	1	+	0	0

Marine Area A

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 1198					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	1	2	20	24
50<80	0	+	+	+	1	1
35<50	0	+	0	+	+	1
20<35	1	+	+	1	2	4
10<20	1	1	1	3	4	4
6<10	2	1	2	3	3	1
3<6	2	1	1	1	1	+
1.5<3	1	+	0	+	0	+
0<1.5	6	2	1	1	+	0

Marine Area B

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 5044					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	4	12
50<80	+	+	+	+	1	1
35<50	+	+	+	+	1	1
20<35	1	1	2	4	6	16
10<20	1	1	4	6	9	7
6<10	+	1	1	2	3	1
3<6	+	+	+	1	+	+
1.5<3	+	+	+	+	+	+
0<1.5	4	1	1	2	+	+

Marine Area C

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4230					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	+	3	2
50<80	0	0	0	+	+	+
35<50	+	+	+	+	+	2
20<35	+	+	+	+	4	12
10<20	+	1	2	4	10	9
6<10	+	1	2	2	5	2
3<6	+	+	+	+	+	+
1.5<3	0	0	+	+	+	0
0<1.5	5	1	1	2	+	+

Marine Area D

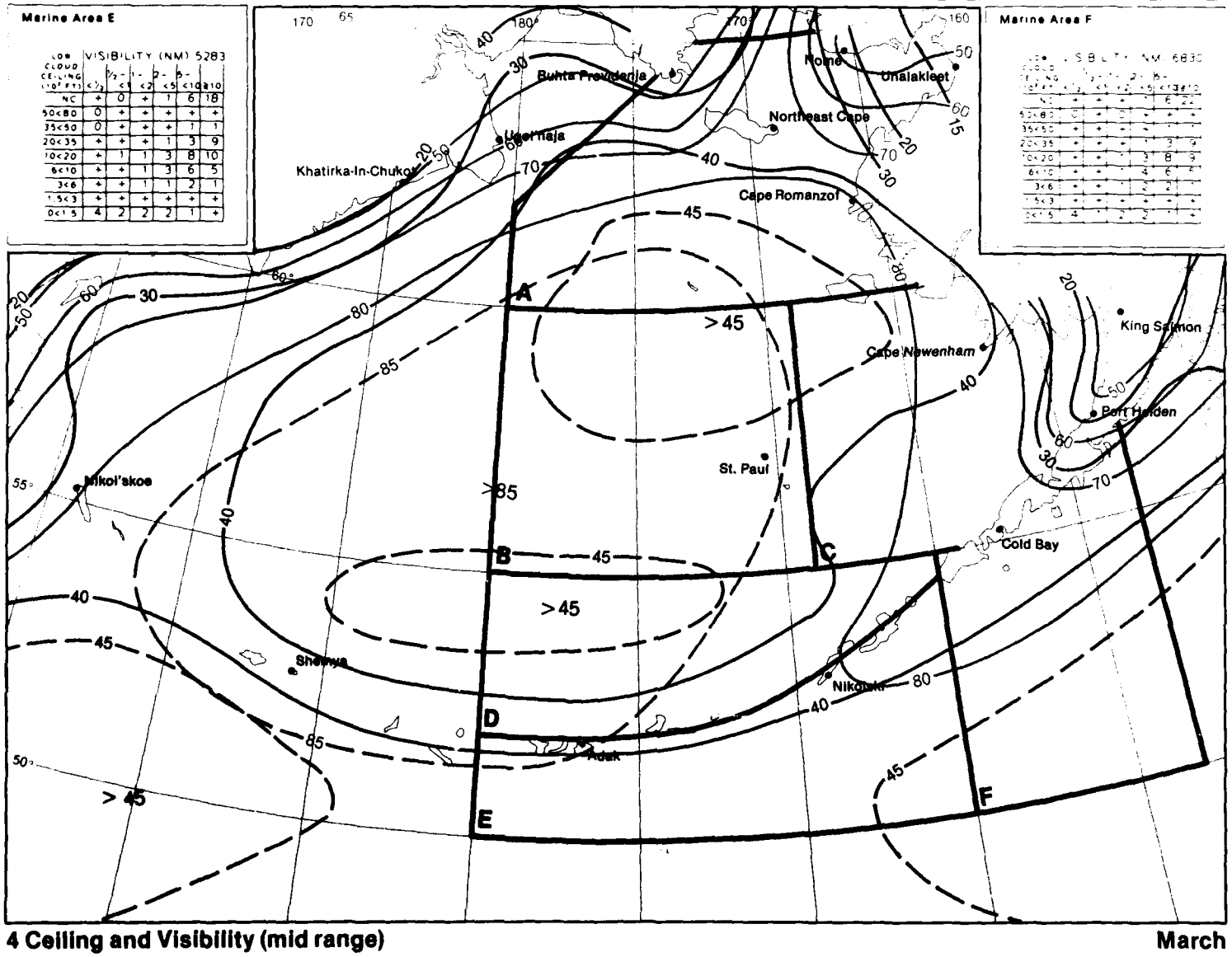
LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 7122					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	5	17
50<80	0	0	0	+	1	1
35<50	+	0	+	+	+	2
20<35	+	+	+	1	4	9
10<20	+	+	+	3	9	10
6<10	+	+	+	3	9	5
3<6	+	+	+	2	2	+
1.5<3	+	+	+	+	+	+
0<1.5	2	+	2	2	+	+

Marine Area E

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 5283					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	0	+	1	6	18
50<80	0	+	+	+	+	+
35<50	0	+	+	+	1	1
20<35	+	+	+	1	3	9
10<20	+	1	1	3	8	10
6<10	+	+	1	3	6	5
3<6	+	+	1	1	2	1
1.5<3	+	+	+	+	+	+
0<1.5	4	2	2	2	1	+

Marine Area F

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 6830					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	6	24
50<80	0	+	0	+	+	+
35<50	+	+	+	+	+	1
20<35	+	+	+	1	3	9
10<20	+	+	+	3	8	9
6<10	+	+	+	3	6	2
3<6	+	+	+	1	2	+
1.5<3	+	+	+	+	+	+
0<1.5	4	+	2	2	+	+



4 Ceiling and Visibility (mid range)

March

Nikol'skoe

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 5553					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	2	29
50<80	+	+	+	+	+	+
35<50	+	+	0	+	+	1
20<35	+	+	1	2	3	16
10<20	1	2	3	7	7	17
6<10	+	+	1	1	1	+
3<6	+	+	+	+	+	+
1.5<3	+	+	+	+	+	0
0<1.5	2	+	+	+	0	+

Khatirka-In-Chukot

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 3772					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	1	1	2	2	64
50<80	0	+	+	0	+	+
35<50	+	+	+	+	1	4
20<35	1	1	1	2	1	5
10<20	1	1	2	2	2	2
6<10	+	+	+	1	+	+
3<6	+	0	+	+	0	+
1.5<3	+	0	+	+	+	+
0<1.5	1	+	0	0	0	+

Ugol'naja

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 5158					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	2	1	2	4	6	54
50<80	+	+	+	+	+	+
35<50	0	+	0	+	+	1
20<35	1	1	1	1	1	4
10<20	2	2	3	3	3	3
6<10	+	+	1	1	1	1
3<6	+	+	+	+	+	+
1.5<3	0	0	+	+	+	+
0<1.5	1	+	+	0	0	+

Buhta Providenja

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 4649					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	1	2	7	55
50<80	0	0	+	+	+	+
35<50	0	+	+	+	+	1
20<35	+	+	1	2	3	6
10<20	1	2	3	4	3	3
6<10	+	+	+	+	+	+
3<6	+	+	+	+	0	+
1.5<3	0	+	+	+	0	0
0<1.5	+	0	0	+	0	+

Northeast Cape

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 4198					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	1	1	3	11	30
50<80	0	+	+	0	0	+
35<50	0	+	0	+	+	+
20<35	+	+	+	1	2	1
10<20	+	1	3	5	8	5
6<10	1	1	3	3	5	2
3<6	+	1	1	1	1	+
1.5<3	+	+	+	0	+	0
0<1.5	4	2	1	+	+	+

Nome

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 15680					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	5	53
50<80	+	+	+	+	+	2
35<50	+	+	+	+	1	2
20<35	+	+	+	1	3	3
10<20	+	+	1	3	4	2
6<10	+	1	1	3	2	+
3<6	+	1	1	2	1	+
1.5<3	+	+	+	+	+	+
0<1.5	1	2	1	+	+	+

Unalakleet

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 2428					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	7	49
50<80	0	0	0	+	+	4
35<50	0	0	+	+	1	4
20<35	+	+	+	1	2	8
10<20	+	+	+	2	3	6
6<10	0	+	+	1	1	2
3<6	+	0	+	+	+	+
1.5<3	0	0	0	0	+	0
0<1.5	1	2	1	1	0	0

Cape Romanzof

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 4886					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	1	2	1	4	23	17
50<80	+	+	+	+	1	1
35<50	+	+	0	+	1	+
20<35	+	+	+	2	5	2
10<20	+	1	1	4	6	1
6<10	+	1	2	3	5	1
3<6	+	1	1	1	1	0
1.5<3	+	0	+	0	+	0
0<1.5	6	2	1	+	0	0

Cape Newenham

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 4301					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	1	+	+	1	15	20
50<80	+	+	+	0	+	+
35<50	+	+	0	0	+	+
20<35	0	+	+	1	2	2
10<20	0	+	+	3	7	5
6<10	+	1	2	6	9	3
3<6	+	+	1	3	3	1
1.5<3	0	0	+	+	+	+
0<1.5	6	3	2	1	0	0

King Salmon

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 16296					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	+	4	49
50<80	+	0	0	+	1	4
35<50	+	+	+	+	1	4
20<35	+	+	+	1	4	9
10<20	+	+	1	2	5	5
6<10	+	+	1	1	2	1
3<6	+	+	+	1	1	+
1.5<3	+	+	+	+	+	+
0<1.5	1	1	1	+	+	+

Port Heiden

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 157					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	0	1	1	1	1	39
50<80	0	0	0	0	0	4
35<50	0	0	0	0	0	4
20<35	0	0	0	0	1	17
10<20	0	1	0	0	5	9
6<10	0	0	0	4	3	1
3<6	0	0	1	1	1	0
1.5<3	0	0	0	0	0	0
0<1.5	4	2	1	1	0	0

Cold Bay

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 11940					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	6	1
50<80	0	0	0	+	+	+
35<50	0	+	+	+	1	1
20<35	+	+	+	1	7	8
10<20	+	+	1	5	13	9
6<10	+	+	1	5	8	2
3<6	+	+	1	3	2	+
1.5<3	+	+	+	+	+	0
0<1.5	1	1	1	+	+	0

Nikolski

No Data Available

St. Paul

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 9455					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	14	9
50<80	0	0	+	+	+	+
35<50	0	0	+	+	1	1
20<35	+	+	+	1	7	4
10<20	1	1	2	5	18	5
6<10	1	1	1	3	5	1
3<6	+	1	2	3	3	+
1.5<3	+	+	+	+	+	+
0<1.5	4	1	+	+	+	+

Adak

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 13735					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	10	3
50<80	0	0	0	+	+	+
35<50	0	+	0	+	5	1
20<35	0	+	+	2	31	2
10<20	+	+	1	9	20	1
6<10	+	+	1	4	2	+
3<6	+	+	+	1	+	+
1.5<3	0	+	+	+	+	0
0<1.5	1	1	1	1	+	0

Shemya

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 10742					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	8	10
50<80	0	0	0	+	+	+
35<50	0	+	0	+	2	2
20<35	+	+	+	1	13	12
10<20	+	1	1	5	15	4
6<10	+	1	2	4	3	+
3<6	+	2	2	2	1	+
1.5<3	+	+	+	+	+	0
0<1.5	3	2	1	+	0	+

Marine Area A

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 558					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	1	1	0	2	13	32
50<80	0	0	0	0	1	0
35<50	0	+	0	+	+	1
20<35	0	+	+	0	2	5
10<20	1	1	1	2	5	3
6<10	1	1	1	3	2	2
3<6	1	1	1	2	2	0
1.5<3	1	+	+	+	0	+
0<1.5	4	2	3	1	+	0

Marine Area B

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 3743					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	5	13
50<80	0	+	+	+	1	1
35<50	0	+	+	+	1	1
20<35	+	+	1	2	5	12
10<20	+	1	3	5	10	9
6<10	+	1	2	2	4	2
3<6	1	1	1	1	1	1
1.5<3	1	+	+	+	+	+
0<1.5	3	2	2	1	1	+

Marine Area C

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 5375					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	6	16
50<80	0	+	+	+	1	1
35<50	0	+	+	+	1	2
20<35	+	+	+	1	4	9
10<20	+	+	1	4	12	11
6<10	+	1	2	3	5	3
3<6	+	+	1	1	1	1
1.5<3	+	+	+	+	+	+
0<1.5	4	2	1	2	1	+

Marine Area D

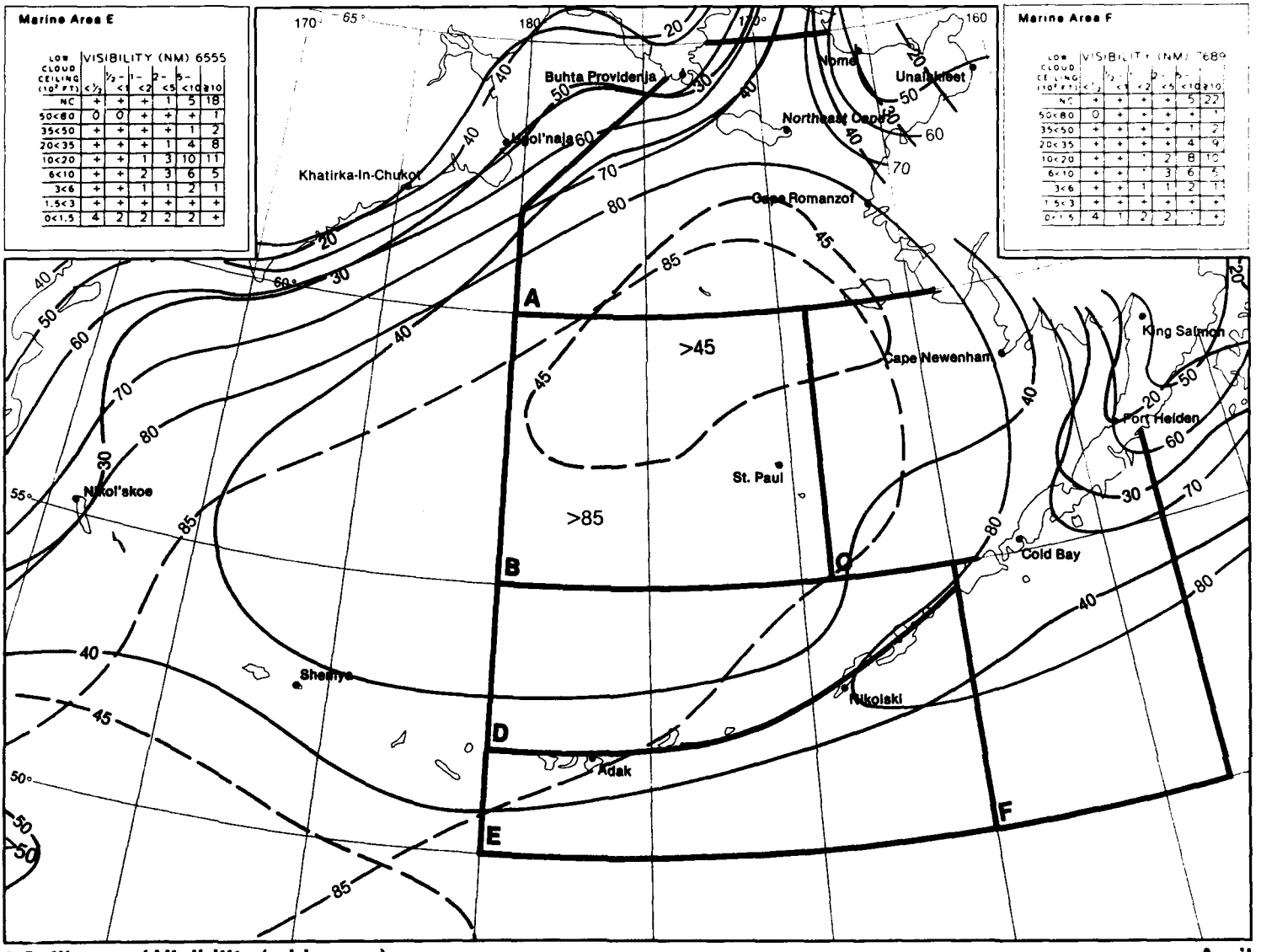
LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 6379					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	5	15
50<80	0	0	+	+	+	+
35<50	+	+	+	+	2	2
20<35	+	+	+	1	4	9
10<20	+	+	1	3	11	10
6<10	+	1	1	4	7	6
3<6	+	+	1	1	2	1
1.5<3	+	+	+	+	+	+
0<1.5	2	1	1	2	1	+

Marine Area E

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 6555					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	5	18
50<80	0	0	+	+	+	1
35<50	+	+	+	+	1	2
20<35	+	+	+	1	4	8
10<20	+	+	1	3	10	11
6<10	+	+	2	3	6	5
3<6	+	+	1	1	2	1
1.5<3	+	+	+	+	+	+
0<1.5	4	2	2	2	2	+

Marine Area F

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 7689					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	+	5	22
50<80	0	+	+	+	+	1
35<50	+	+	+	+	1	2
20<35	+	+	+	+	4	9
10<20	+	+	+	2	8	10
6<10	+	+	+	3	6	5
3<6	+	+	1	1	2	1
1.5<3	+	+	+	+	+	+
0<1.5	4	1	2	2	+	+



4 Ceiling and Visibility (mid range)

April

Nikol'skoe

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 5645					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	+	1	21
50<80	0	+	0	+	+	+
35<50	0	0	+	+	+	2
20<35	+	+	+	1	3	15
10<20	+	+	1	5	9	22
6<10	+	+	+	2	2	3
3<6	+	+	+	1	1	1
1.5<3	0	+	0	+	+	+
0<1.5	8	+	+	+	+	+

Khatirka-In-Chukot

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 3465					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	1	+	+	1	1	47
50<80	0	0	0	0	0	+
35<50	0	+	0	+	1	7
20<35	+	+	1	2	2	9
10<20	+	+	2	3	3	4
6<10	+	+	1	2	1	+
3<6	+	+	1	+	+	+
1.5<3	+	+	+	+	+	+
0<1.5	7	+	0	0	0	+

Ugol'naja

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 5031					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	1	+	1	1	2	43
50<80	0	0	0	+	+	+
35<50	+	0	0	+	+	2
20<35	+	+	+	1	2	9
10<20	1	1	3	4	4	9
6<10	+	+	1	2	2	2
3<6	0	+	+	1	1	1
1.5<3	0	+	+	+	+	+
0<1.5	4	+	+	+	+	+

Buhta Providenje

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4680					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	3	42
50<80	0	0	+	+	+	+
35<50	+	0	+	+	+	2
20<35	+	+	+	2	3	10
10<20	+	1	3	6	6	9
6<10	+	+	1	2	1	1
3<6	+	+	1	1	1	+
1.5<3	0	+	+	+	0	+
0<1.5	2	+	+	0	0	+

Northeast Cape

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4679					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	4	25
50<80	0	0	0	+	+	1
35<50	0	0	+	+	+	+
20<35	+	+	+	+	1	4
10<20	+	+	+	2	8	12
6<10	+	1	3	3	8	6
3<6	+	1	3	3	4	1
1.5<3	0	0	+	+	+	0
0<1.5	3	2	1	+	0	0

Nome

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 15788					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	+	1	53
50<80	+	+	0	+	+	5
35<50	0	+	0	+	+	4
20<35	+	+	+	+	2	6
10<20	+	+	+	1	4	4
6<10	+	+	1	2	3	2
3<6	+	1	1	2	2	1
1.5<3	+	+	+	+	+	+
0<1.5	1	1	1	+	+	0

Unalakleet

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 2700					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	+	1	52
50<80	0	0	0	+	+	4
35<50	0	0	0	0	1	8
20<35	0	0	+	+	1	11
10<20	0	0	+	1	1	6
6<10	0	0	+	1	1	3
3<6	+	+	+	1	2	2
1.5<3	0	+	+	+	+	+
0<1.5	1	1	+	+	+	+

Cape Romanzof

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 5104					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	18	20
50<80	0	+	+	+	2	1
35<50	0	0	0	+	1	1
20<35	+	+	+	1	8	5
10<20	+	+	1	3	8	3
6<10	+	+	2	3	4	1
3<6	+	1	2	2	2	+
1.5<3	+	+	+	+	+	+
0<1.5	3	2	+	+	0	0

Cape Newenham

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4495					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	13	19
50<80	+	+	+	+	1	1
35<50	0	0	0	0	+	1
20<35	+	0	0	+	2	4
10<20	0	+	1	2	6	7
6<10	+	1	2	4	7	5
3<6	0	+	2	3	3	1
1.5<3	+	+	+	+	+	+
0<1.5	5	3	2	1	+	0

King Salmon

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 16705					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	+	2	45
50<80	+	0	0	+	+	6
35<50	+	+	0	+	1	8
20<35	+	+	+	+	3	13
10<20	+	+	+	1	4	6
6<10	+	+	+	1	3	1
3<6	+	+	+	1	1	+
1.5<3	+	+	+	+	+	+
0<1.5	1	+	+	+	+	+

Port Heiden

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 128					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	0	0	3	2	4	63
50<80	0	0	0	0	0	2
35<50	0	0	0	0	0	4
20<35	0	0	0	0	0	7
10<20	0	0	0	0	1	5
6<10	0	1	0	1	3	1
3<6	0	0	0	1	0	0
1.5<3	0	0	0	0	0	0
0<1.5	2	1	0	0	0	1

Cold Bay

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 11627					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	+	4	17
50<80	0	0	0	0	+	+
35<50	0	+	+	+	1	2
20<35	+	+	+	+	5	10
10<20	+	+	+	2	13	12
6<10	+	+	1	4	11	4
3<6	+	+	1	4	4	1
1.5<3	+	+	+	+	+	+
0<1.5	1	+	+	+	+	0

Nikolski

No Data Available

St. Paul

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 9221					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	9	8
50<80	+	0	+	+	+	+
35<50	+	0	0	+	1	1
20<35	+	+	+	+	6	4
10<20	+	+	+	2	16	6
6<10	+	+	1	3	7	1
3<6	+	2	3	6	7	1
1.5<3	+	1	1	1	+	+
0<1.5	6	3	1	+	+	0

Adak

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 14156					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	0	+	+	7	3
50<80	0	0	0	0	+	+
35<50	0	0	0	+	3	1
20<35	0	+	+	1	21	2
10<20	+	+	1	10	32	1
6<10	0	+	1	6	6	+
3<6	0	+	1	2	1	+
1.5<3	+	+	+	+	+	0
0<1.5	+	+	1	1	+	0

Shemya

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 10380					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	+	5	6
50<80	+	0	0	+	+	+
35<50	0	0	0	+	1	1
20<35	+	+	+	+	6	9
10<20	+	+	+	4	17	10
6<10	+	+	2	5	9	1
3<6	+	2	3	4	2	+
1.5<3	+	1	+	+	+	0
0<1.5	6	3	1	+	+	0

Marine Area A

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 995					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	1	+	0	1	5	14
50<80	0	0	+	0	+	+
35<50	0	0	+	+	1	1
20<35	0	0	+	1	4	6
10<20	+	0	1	3	10	12
6<10	1	1	2	6	7	3
3<6	1	1	1	1	1	1
1.5<3	2	0	+	+	1	0
0<1.5	8	3	3	1	+	+

Marine Area B

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 3541					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	+	4	9
50<80	0	0	0	+	1	1
35<50	+	0	+	+	1	2
20<35	+	+	+	1	5	15
10<20	+	1	1	4	13	8
6<10	+	1	1	3	6	2
3<6	+	+	+	1	2	1
1.5<3	+	+	+	+	+	+
0<1.5	9	2	2	2	+	+

Marine Area C

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 7992					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	5	18
50<80	+	+	0	+	+	1
35<50	+	+	+	1	1	2
20<35	+	+	+	2	4	8
10<20	+	+	1	5	11	10
6<10	+	+	1	3	4	3
3<6	+	+	1	1	1	1
1.5<3	+	+	+	+	+	+
0<1.5	7	1	2	1	1	+

Marine Area D

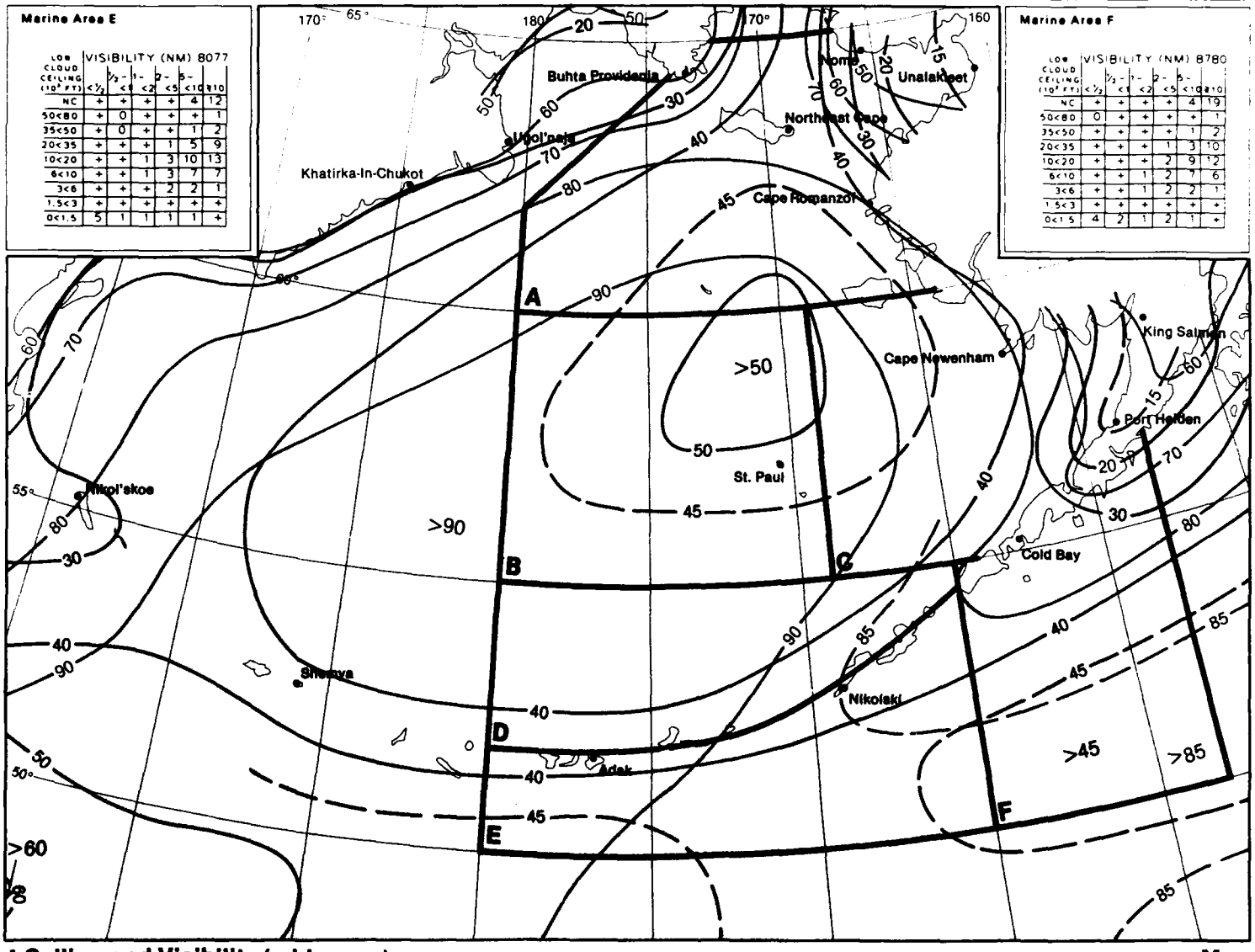
LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 7002					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	4	11
50<80	+	+	+	+	1	1
35<50	+	0	+	+	2	3
20<35	+	+	+	1	5	9
10<20	+	+	+	2	11	13
6<10	+	+	1	3	8	7
3<6	+	+	1	1	3	2
1.5<3	+	+	+	+	1	+
0<1.5	3	1	1	2	1	+

Marine Area E

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 8077					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	+	4	12
50<80	+	0	+	+	+	1
35<50	+	0	+	+	1	2
20<35	+	+	+	1	5	9
10<20	+	+	1	3	10	13
6<10	+	+	1	3	7	7
3<6	+	+	+	2	2	1
1.5<3	+	+	+	+	+	+
0<1.5	5	1	1	1	1	+

Marine Area F

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 8780					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	+	4	19
50<80	0	+	+	+	+	1
35<50	+	+	+	+	1	2
20<35	+	+	+	1	3	10
10<20	+	+	+	2	9	12
6<10	+	+	1	2	7	6
3<6	+	+	1	2	2	1
1.5<3	+	+	+	+	+	+
0<1.5	4	2	1	2	1	+



4 Ceiling and Visibility (mid range) **May**

Nikol'skoe

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 5425					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	1	+	0	+	1	18
50<80	0	0	0	+	+	+
35<50	0	0	+	+	+	1
20<35	+	0	+	+	1	12
10<20	+	+	+	2	8	19
6<10	+	+	+	3	4	4
3<6	+	+	+	2	2	2
1.5<3	0	0	+	+	+	+
0<1.5	16	+	+	+	+	+

Khatirka-in-Chukot

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 3392					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	1	+	+	+	1	37
50<80	0	0	0	+	0	+
35<50	+	0	0	+	+	10
20<35	+	0	+	+	1	10
10<20	0	+	1	3	3	5
6<10	+	+	1	3	2	2
3<6	+	+	1	1	1	1
1.5<3	+	+	+	+	+	+
0<1.5	15	+	0	0	0	+

Ugol'naja

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4873					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	1	+	+	1	2	52
50<80	+	0	0	0	+	+
35<50	+	0	0	+	+	3
20<35	+	+	+	+	+	8
10<20	+	+	+	1	2	7
6<10	+	+	+	1	2	3
3<6	+	+	+	1	2	1
1.5<3	0	+	+	+	+	+
0<1.5	9	+	+	+	0	+

Buhta Providenja

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4476					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	2	2	1	40
50<80	0	0	0	+	+	1
35<50	0	0	+	+	+	2
20<35	0	+	+	+	1	7
10<20	+	+	2	4	5	8
6<10	+	+	2	3	1	2
3<6	+	1	3	2	1	+
1.5<3	+	+	1	+	+	+
0<1.5	5	+	+	+	0	+

Norheast Cape

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4480					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	1	1	+	1	5	26
50<80	0	+	+	+	+	2
35<50	0	+	0	+	+	2
20<35	+	+	+	+	1	4
10<20	+	+	+	2	7	11
6<10	+	+	1	3	8	4
3<6	+	1	2	3	4	1
1.5<3	+	+	+	+	+	+
0<1.5	6	1	1	+	0	0

Nome

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 15898					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	+	1	53
50<80	+	+	0	+	+	4
35<50	+	0	+	+	+	3
20<35	+	+	+	+	1	5
10<20	+	+	+	1	3	5
6<10	+	+	1	2	4	2
3<6	+	1	2	3	3	1
1.5<3	+	+	+	+	+	+
0<1.5	2	1	+	+	+	+

Unalakleet

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 2573					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	+	+	41
50<80	0	0	0	0	+	5
35<50	0	+	0	0	+	8
20<35	+	0	0	0	1	13
10<20	0	+	+	+	1	11
6<10	0	+	+	+	2	5
3<6	+	+	+	1	2	2
1.5<3	0	+	+	+	+	+
0<1.5	2	1	+	1	+	+

Cape Romanzof

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4996					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	1	+	2	14	16
50<80	0	0	0	+	1	1
35<50	0	0	0	0	1	1
20<35	0	+	+	1	4	5
10<20	0	+	+	2	9	4
6<10	0	+	1	4	9	3
3<6	0	1	1	3	5	1
1.5<3	0	+	+	+	+	0
0<1.5	5	3	1	+	+	0

Cape Newenham

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4431					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	1	1	2	8	20
50<80	+	+	+	+	+	1
35<50	0	+	0	0	+	1
20<35	+	0	+	+	2	3
10<20	+	+	1	2	4	5
6<10	0	+	1	3	6	7
3<6	+	+	2	5	7	3
1.5<3	0	+	+	+	+	+
0<1.5	8	2	2	1	+	0

King Salmon

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 16181					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	+	2	40
50<80	+	+	+	+	+	5
35<50	+	0	+	+	1	8
20<35	+	+	0	+	2	13
10<20	+	+	+	+	3	8
6<10	+	+	+	1	3	3
3<6	+	+	+	2	2	1
1.5<3	+	+	+	+	+	+
0<1.5	1	1	+	+	+	0

Port Heiden

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 136					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	0	1	0	4	3	57
50<80	0	0	0	0	0	4
35<50	0	0	0	0	0	4
20<35	0	0	0	0	0	13
10<20	0	0	0	0	1	5
6<10	0	0	0	1	1	1
3<6	0	0	1	0	1	0
1.5<3	0	0	0	0	0	0
0<1.5	1	1	0	0	0	0

Cold Bay

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 11236					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	+	3	16
50<80	0	0	0	+	+	1
35<50	0	0	0	0	+	2
20<35	+	+	+	+	2	9
10<20	0	+	+	1	9	16
6<10	+	+	+	3	13	6
3<6	+	+	2	5	7	1
1.5<3	+	+	+	+	+	+
0<1.5	1	1	+	+	+	0

Nikolski

No Data Available

St. Paul

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 8841					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	1	+	+	1	8	7
50<80	0	+	0	0	1	+
35<50	+	0	0	+	1	+
20<35	+	+	0	+	3	3
10<20	+	+	+	1	14	4
6<10	+	+	1	3	8	1
3<6	1	2	3	8	9	1
1.5<3	+	1	1	1	1	+
0<1.5	10	4	1	+	+	0

Adak

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 14017					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	+	6	3
50<80	+	+	0	+	+	+
35<50	0	0	0	+	1	+
20<35	0	0	+	+	12	2
10<20	+	+	+	8	32	2
6<10	+	+	1	9	11	+
3<6	+	+	1	3	3	+
1.5<3	+	+	+	+	+	0
0<1.5	1	1	1	+	+	0

Shemya

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 9991					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	+	2	6
50<80	0	+	0	+	+	+
35<50	0	0	0	0	+	+
20<35	+	0	+	+	2	4
10<20	+	+	+	1	11	10
6<10	+	+	1	4	10	3
3<6	1	3	5	7	7	1
1.5<3	+	1	1	1	+	+
0<1.5	12	4	2	1	+	+

Marine Area A

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 1548					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	1	+	+	+	4	21
50<80	0	0	0	+	+	1
35<50	+	+	+	0	1	3
20<35	0	0	+	+	3	6
10<20	+	+	+	1	7	9
6<10	+	+	1	1	5	5
3<6	1	+	+	1	2	1
1.5<3	+	+	1	1	1	1
0<1.5	14	2	1	2	1	+

Marine Area B

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 5164					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	+	2	7
50<80	+	0	0	+	+	1
35<50	+	0	+	+	1	3
20<35	+	+	+	2	6	11
10<20	+	+	1	4	12	10
6<10	+	+	1	4	5	3
3<6	+	+	1	1	2	1
1.5<3	+	+	+	+	+	+
0<1.5	15	2	1	1	+	+

Marine Area C

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 8597					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	1	5	17
50<80	+	0	0	+	1	1
35<50	+	+	+	+	2	2
20<35	+	+	+	2	5	8
10<20	1	+	1	4	10	7
6<10	+	+	1	2	4	2
3<6	+	+	+	1	1	+
1.5<3	+	+	+	+	+	+
0<1.5	14	1	1	1	1	+

Marine Area D

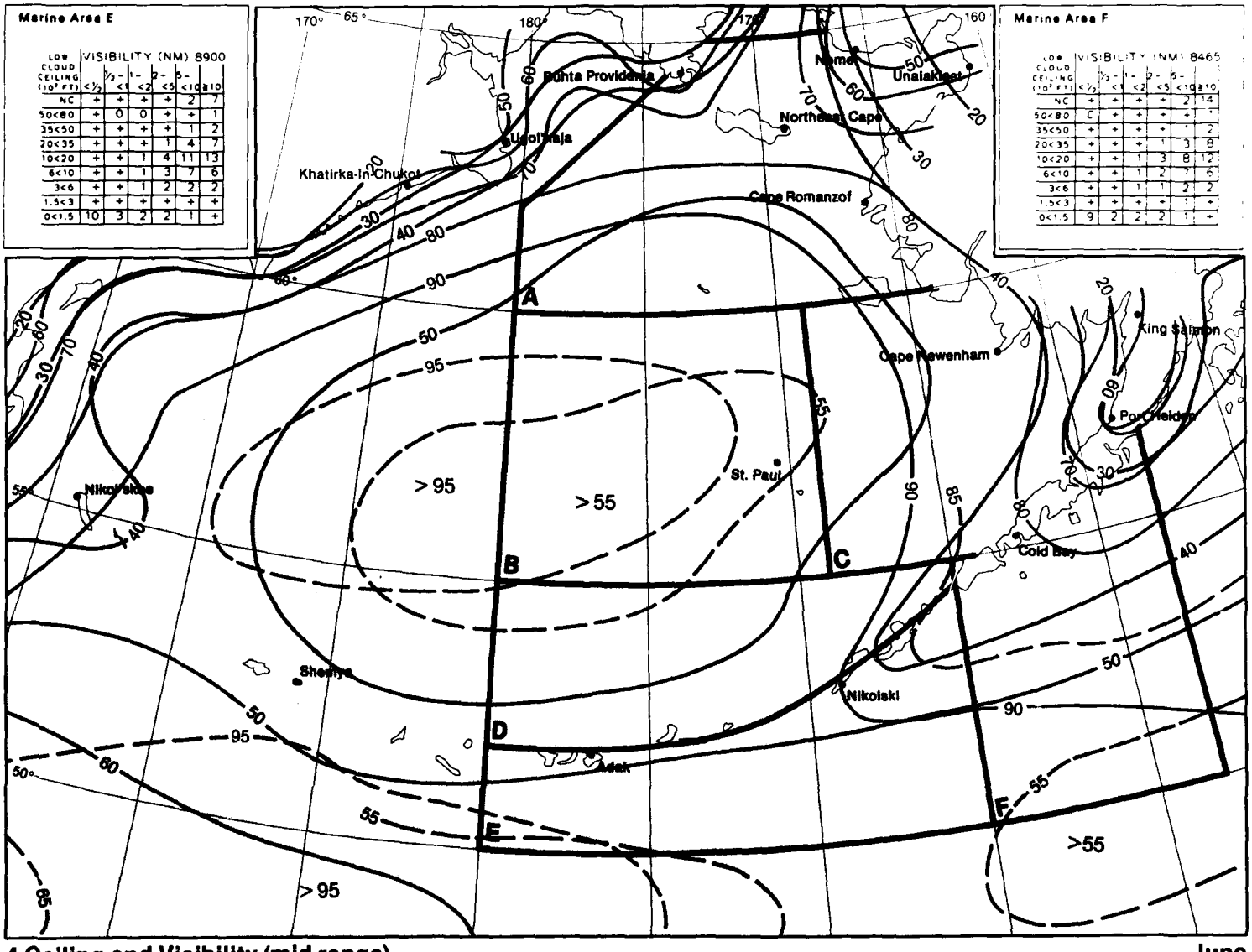
LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 8006					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	+	3	7
50<80	+	0	0	+	+	1
35<50	+	+	+	+	1	2
20<35	+	+	+	1	6	10
10<20	+	+	1	3	10	11
6<10	+	+	1	3	7	5
3<6	+	+	1	2	2	1
1.5<3	+	+	+	+	+	+
0<1.5	8	2	2	2	1	+

Marine Area E

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 8900					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	+	2	7
50<80	+	0	0	+	+	1
35<50	+	+	+	+	1	2
20<35	+	+	+	1	4	7
10<20	+	+	1	4	11	13
6<10	+	+	1	3	7	6
3<6	+	+	1	2	2	2
1.5<3	+	+	+	+	+	+
0<1.5	10	3	2	2	1	+

Marine Area F

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 8465					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	+	2	14
50<80	0	+	+	+	+	1
35<50	+	+	+	+	1	2
20<35	+	+	+	1	3	8
10<20	+	+	1	3	8	12
6<10	+	+	1	2	7	6
3<6	+	+	1	1	2	2
1.5<3	+	+	+	+	1	+
0<1.5	9	2	2	2	1	+



4 Ceiling and Visibility (mid range) **June**

Nikol'skoe

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 5348					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	1	16
50<80	+	0	0	0	+	+
35<50	0	0	0	+	+	1
20<35	+	0	+	+	1	7
10<20	+	+	+	3	5	15
6<10	+	+	1	5	4	5
3<6	+	+	1	3	2	2
1.5<3	+	+	+	+	+	+
0<1.5	25	+	+	+	+	+

Khatirka-In-Chukot

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 3251					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	1	0	+	+	1	33
50<80	0	0	0	+	0	+
35<50	0	0	0	+	+	8
20<35	+	0	+	1	1	8
10<20	+	+	1	3	2	5
6<10	+	+	1	3	2	2
3<6	+	+	1	1	1	+
1.5<3	+	+	+	+	1	+
0<1.5	21	+	+	0	+	+

Ugol'naja

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4940					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	1	+	+	1	2	47
50<80	0	0	0	0	+	+
35<50	0	0	0	+	+	4
20<35	+	+	+	+	1	10
10<20	+	+	+	1	2	8
6<10	+	+	1	2	2	2
3<6	0	+	+	1	2	1
1.5<3	+	+	+	+	+	+
0<1.5	10	1	+	+	+	+

Buhta Providenja

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4407					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	1	1	2	37
50<80	0	0	0	+	+	+
35<50	0	+	+	+	+	2
20<35	0	0	+	1	1	7
10<20	+	+	2	6	6	9
6<10	+	+	3	3	2	2
3<6	+	1	3	2	1	+
1.5<3	+	+	1	+	0	+
0<1.5	4	+	+	0	0	+

Northeast Cape

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4466					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	1	+	+	1	6	24
50<80	+	+	+	+	+	1
35<50	0	0	0	0	+	+
20<35	+	+	+	+	+	3
10<20	+	+	1	3	8	11
6<10	+	1	2	4	10	4
3<6	+	1	2	3	3	1
1.5<3	0	0	+	+	+	+
0<1.5	3	2	1	+	0	0

Nome

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 16600					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	+	2	42
50<80	+	+	0	+	+	3
35<50	0	0	0	0	+	3
20<35	0	+	+	+	1	5
10<20	0	+	+	1	4	8
6<10	+	+	1	4	7	3
3<6	+	1	3	4	3	1
1.5<3	+	+	+	+	+	+
0<1.5	1	+	+	+	+	0

Unalakleet

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 2898					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	+	1	35
50<80	0	0	0	0	0	3
35<50	+	0	0	+	+	7
20<35	0	0	0	+	1	16
10<20	0	+	+	1	3	17
6<10	0	+	+	1	3	6
3<6	0	+	+	1	1	1
1.5<3	0	0	+	0	0	+
0<1.5	+	+	+	+	+	+

Cape Romanzof

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4841					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	2	15	13
50<80	0	+	0	+	1	+
35<50	0	0	0	0	+	+
20<35	0	0	0	+	2	4
10<20	0	+	+	1	5	4
6<10	0	+	1	3	13	5
3<6	+	1	2	6	8	1
1.5<3	+	+	+	1	+	+
0<1.5	5	4	1	+	0	0

Cape Newenham

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4057					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	1	+	1	2	6	18
50<80	+	+	+	+	+	1
35<50	0	+	+	+	+	1
20<35	+	+	+	+	2	2
10<20	+	+	1	2	5	5
6<10	+	+	1	4	7	9
3<6	+	1	2	6	5	3
1.5<3	+	+	+	+	+	+
0<1.5	6	4	1	1	+	0

King Salmon

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 16739					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	1	+	+	1	2	35
50<80	+	+	+	+	+	4
35<50	+	+	0	+	1	6
20<35	+	0	+	+	2	12
10<20	+	+	+	1	5	8
6<10	+	+	1	2	4	2
3<6	+	+	1	3	2	1
1.5<3	+	+	+	+	+	+
0<1.5	2	1	1	+	+	+

Port Heiden

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 93					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	0	1	2	4	1	38
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	1
20<35	0	0	0	0	1	11
10<20	0	0	2	0	1	6
6<10	0	1	0	3	4	2
3<6	0	0	0	4	3	3
1.5<3	0	0	0	0	0	0
0<1.5	5	1	1	1	0	0

Cold Bay

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 12361					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	4	13
50<80	+	0	+	+	+	+
35<50	0	+	0	+	1	1
20<35	0	+	+	+	2	5
10<20	+	+	+	1	7	12
6<10	+	+	1	4	13	6
3<6	+	1	3	6	9	2
1.5<3	+	+	1	1	+	+
0<1.5	2	1	1	+	+	0

Nikolski

No Data Available

St. Paul

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 9078					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	1	+	+	+	5	4
50<80	+	+	0	0	+	+
35<50	+	+	+	+	+	+
20<35	+	+	+	+	2	1
10<20	+	+	+	1	9	4
6<10	+	+	1	2	9	1
3<6	1	3	5	10	9	1
1.5<3	1	1	2	1	1	+
0<1.5	16	4	2	+	+	+

Adak

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 14420					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	8	4
50<80	0	+	+	+	+	+
35<50	0	0	+	0	+	+
20<35	0	+	+	+	5	1
10<20	+	+	1	5	23	1
6<10	+	+	2	11	16	1
3<6	+	1	3	7	5	+
1.5<3	+	+	+	+	+	0
0<1.5	2	2	1	1	+	0

Shemya

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 10276					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	+	2	4
50<80	+	+	+	0	+	+
35<50	0	0	0	+	+	+
20<35	+	+	+	+	1	1
10<20	+	+	+	1	3	3
6<10	+	+	1	2	7	3
3<6	1	3	5	8	8	1
1.5<3	1	2	2	1	+	+
0<1.5	27	7	2	1	+	+

Marine Area A

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 3277					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	1	+	+	1	3	19
50<80	+	0	+	+	1	2
35<50	+	0	0	+	1	2
20<35	+	+	+	1	3	8
10<20	+	+	1	2	7	8
6<10	+	+	1	2	5	5
3<6	+	+	+	1	2	1
1.5<3	+	0	+	+	+	+
0<1.5	12	2	2	1	1	+

Marine Area B

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 5255					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	+	2	6
50<80	0	+	+	+	+	+
35<50	0	+	+	+	1	1
20<35	+	+	+	1	6	9
10<20	+	+	2	5	11	8
6<10	1	1	2	4	7	2
3<6	1	1	1	2	2	+
1.5<3	+	+	1	+	+	0
0<1.5	15	3	2	1	+	+

Marine Area C

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 8462					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	1	4	11
50<80	0	+	0	+	+	1
35<50	+	+	+	1	1	2
20<35	+	+	+	1	5	8
10<20	1	1	1	5	11	7
6<10	1	1	1	4	5	3
3<6	+	+	+	1	1	1
1.5<3	+	+	+	+	+	+
0<1.5	14	2	2	1	1	+

Marine Area D

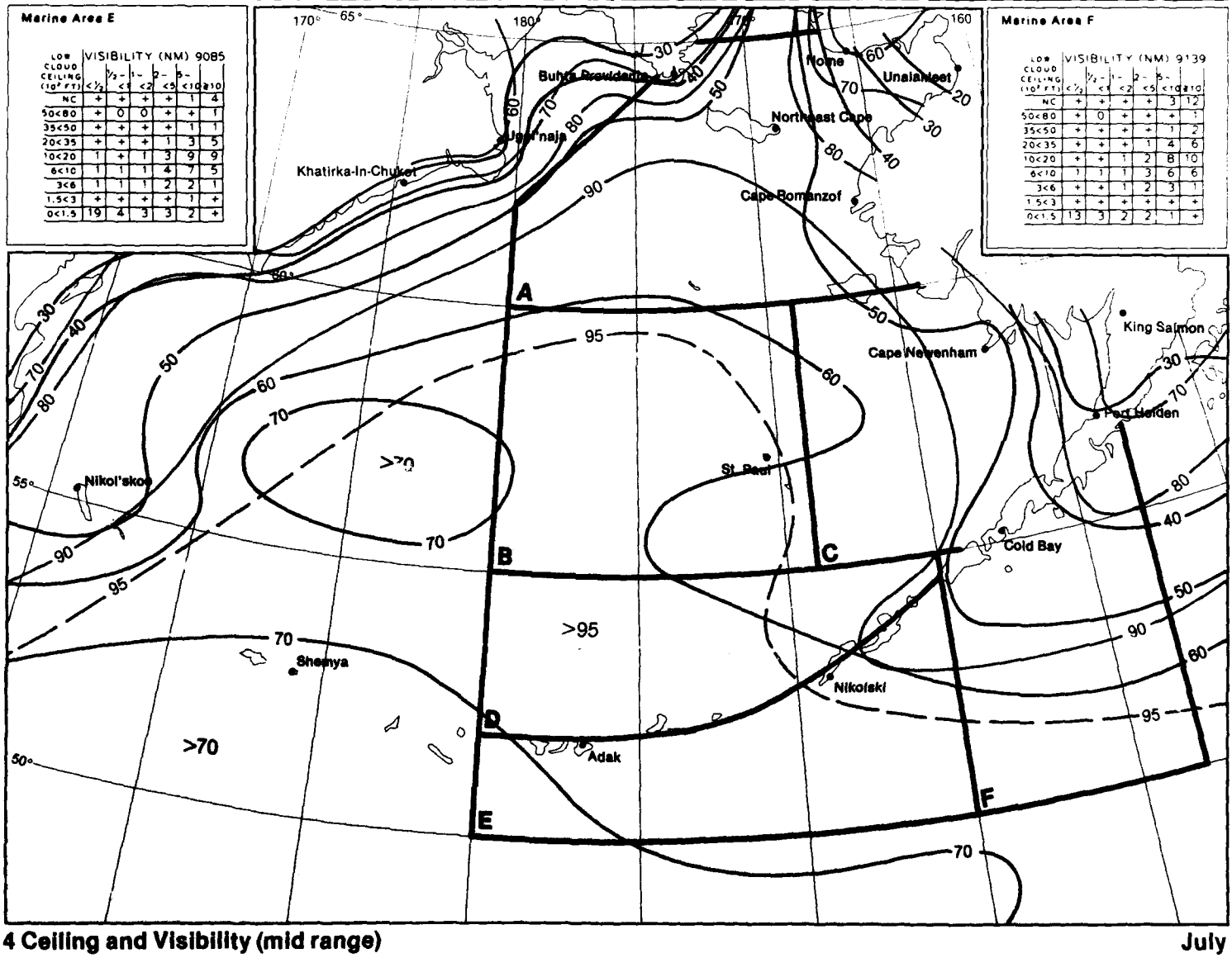
LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 6727					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	+	2	5
50<80	0	+	+	+	+	1
35<50	+	+	+	+	1	2
20<35	+	+	+	1	4	7
10<20	+	+	1	3	8	8
6<10	1	+	1	3	7	4
3<6	+	+	1	2	3	1
1.5<3	+	+	+	+	1	+
0<1.5	15	4	3	3	2	+

Marine Area E

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 9085					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	0	0	+	+	1
50<80	+	+	+	+	1	1
35<50	+	+	+	1	3	5
20<35	+	+	1	3	9	9
10<20	1	1	1	4	7	5
6<10	1	1	1	2	2	1
3<6	+	+	+	+	1	+
1.5<3	+	+	+	+	+	+
0<1.5	19	4	3	3	2	+

Marine Area F

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 9139					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	+	3	12
50<80	+	0	+	+	+	1
35<50	+	+	+	+	1	2
20<35	+	+	+	1	4	6
10<20	+	+	1	2	8	10
6<10	1	1	1	3	6	6
3<6	+	+	1	2	3	1
1.5<3	+	+	+	+	+	+
0<1.5	13	3	2	2	1	+



4 Ceiling and Visibility (mid range) **July**

Nikol'skoe

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 5277					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	1	+	+	+	1	22
50<80	0	0	0	0	+	+
35<50	0	0	0	+	+	1
20<35	+	0	+	+	1	9
10<20	+	+	1	3	7	18
6<10	+	+	1	4	4	4
3<6	+	+	1	2	1	1
1.5<3	+	+	+	+	+	+
0<1.5	14	+	+	+	+	+

Khatirka-in-Chukot

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 3266					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	1	0	+	+	1	33
50<80	0	0	0	0	0	+
35<50	+	0	0	+	+	10
20<35	0	0	+	1	2	13
10<20	+	+	1	4	4	5
6<10	+	+	1	5	1	1
3<6	+	+	1	1	+	+
1.5<3	+	+	1	+	+	+
0<1.5	14	+	+	0	0	+

Ugol'naja

LOW CLOUD CEILING (10^2 FT:	VISIBILITY (NM) 4841					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	1	2	38
50<80	0	0	+	+	+	+
35<50	0	0	0	+	+	3
20<35	0	0	+	+	2	13
10<20	+	+	1	2	4	9
6<10	+	0	1	2	3	3
3<6	+	+	1	2	2	1
1.5<3	0	+	+	+	+	+
0<1.5	8	+	+	+	+	+

Buhta Providenja

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4464					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	1	1	3	34
50<80	0	0	0	0	+	1
35<50	0	+	0	0	+	4
20<35	0	+	+	1	2	12
10<20	+	+	2	7	7	10
6<10	0	+	2	3	2	1
3<6	+	+	1	1	+	+
1.5<3	0	+	+	+	+	+
0<1.5	3	0	+	0	0	+

Norheast Cape

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4533					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	1	3	15
50<80	+	0	0	+	+	1
35<50	0	0	0	+	+	1
20<35	+	+	+	+	2	5
10<20	0	+	1	4	9	13
6<10	+	1	3	6	10	4
3<6	+	1	3	4	4	1
1.5<3	+	0	+	+	+	+
0<1.5	3	2	1	+	0	0

Nome

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 16615					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	+	2	35
50<80	+	+	+	+	+	3
35<50	+	0	+	+	+	3
20<35	0	+	+	+	2	7
10<20	+	+	+	1	7	9
6<10	+	+	1	4	7	3
3<6	+	1	3	4	2	1
1.5<3	+	+	+	+	+	+
0<1.5	1	+	+	+	+	+

Unalakleet

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 2789					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	0	+	+	2	36
50<80	0	0	0	0	+	4
35<50	0	0	0	+	1	5
20<35	+	0	0	+	3	17
10<20	0	0	+	+	4	15
6<10	+	+	+	1	2	4
3<6	0	+	+	1	1	1
1.5<3	+	0	0	0	0	+
0<1.5	+	+	+	+	+	0

Cape Romanzof

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4858					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	1	7	9
50<80	0	0	0	0	1	1
35<50	0	0	0	0	1	+
20<35	0	0	+	+	3	4
10<20	0	+	+	2	12	8
6<10	0	+	1	5	13	4
3<6	+	2	2	8	5	1
1.5<3	+	+	+	+	+	+
0<1.5	3	5	1	1	0	+

Cape Newenham

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4668					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	1	4	11
50<80	0	0	0	+	+	1
35<50	0	0	+	0	+	1
20<35	+	+	+	+	2	4
10<20	+	+	+	2	7	11
6<10	+	+	2	7	8	8
3<6	*	1	3	6	4	2
1.5<3	+	+	+	+	+	+
0<1.5	7	3	1	+	+	+

King Salmon

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 16720					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	1	+	+	1	4	31
50<80	+	+	+	+	1	4
35<50	+	+	+	+	1	6
20<35	+	+	+	+	3	11
10<20	+	0	+	1	5	8
6<10	+	+	1	3	4	2
3<6	+	+	1	3	3	1
1.5<3	+	+	+	+	+	+
0<1.5	1	1	1	+	+	+

Port Heiden

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 123					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	5	2	2	1	9	41
50<80	0	0	0	0	0	2
35<50	0	0	0	0	0	1
20<35	0	0	0	0	0	2
10<20	0	0	0	0	2	5
6<10	0	0	0	2	4	4
3<6	0	1	1	5	3	0
1.5<3	0	0	0	0	0	0
0<1.5	5	3	2	0	0	0

Cold Bay

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 12385					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	1	4	10
50<80	0	0	+	0	+	1
35<50	0	+	+	+	1	1
20<35	+	+	+	+	4	6
10<20	+	+	+	1	9	10
6<10	+	+	1	5	12	5
3<6	+	1	4	8	8	1
1.5<3	+	+	1	1	+	+
0<1.5	2	2	1	+	+	+

Nikolski

No Data Available

St. Paul

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 9425					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	+	6	4
50<80	+	0	0	+	+	+
35<50	0	+	0	+	1	+
20<35	+	+	0	+	3	3
10<20	+	+	+	1	11	5
6<10	+	+	1	3	11	1
3<6	1	3	5	10	8	1
1.5<3	+	2	1	1	+	+
0<1.5	11	3	1	+	+	+

Adak

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 14440					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	1	9	4
50<80	+	+	0	+	+	+
35<50	0	0	0	+	1	+
20<35	0	+	+	+	7	1
10<20	+	+	+	5	24	1
6<10	+	+	1	10	14	+
3<6	+	1	2	6	6	+
1.5<3	+	+	+	+	+	0
0<1.5	2	1	1	1	+	0

Shemya

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 10211					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	+	3	7
50<80	+	+	+	+	+	+
35<50	+	+	0	+	+	1
20<35	+	+	+	+	2	3
10<20	+	+	+	1	6	6
6<10	+	+	1	3	7	3
3<6	1	3	4	7	8	1
1.5<3	1	1	1	1	+	+
0<1.5	20	5	1	1	+	0

Marine Area A

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 3206					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	+	3	20
50<80	0	0	+	0	+	1
35<50	+	+	+	+	1	1
20<35	+	+	+	2	4	8
10<20	+	+	+	2	6	11
6<10	+	1	1	3	5	6
3<6	1	1	1	1	2	1
1.5<3	+	+	+	+	1	+
0<1.5	8	2	1	1	1	+

Marine Area B

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 3277					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	+	3	8
50<80	+	0	0	+	+	1
35<50	0	+	0	+	1	1
20<35	+	+	+	1	3	8
10<20	+	+	1	4	10	10
6<10	+	1	2	6	6	3
3<6	1	1	1	2	2	1
1.5<3	+	+	+	+	+	+
0<1.5	12	4	2	2	1	0

Marine Area C

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 7297					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	4	10
50<80	+	0	0	+	+	1
35<50	+	0	+	1	1	2
20<35	+	+	+	1	5	8
10<20	1	1	1	5	11	8
6<10	+	1	1	4	6	3
3<6	+	+	1	2	1	1
1.5<3	+	+	+	+	+	+
0<1.5	10	2	2	2	1	+

Marine Area D

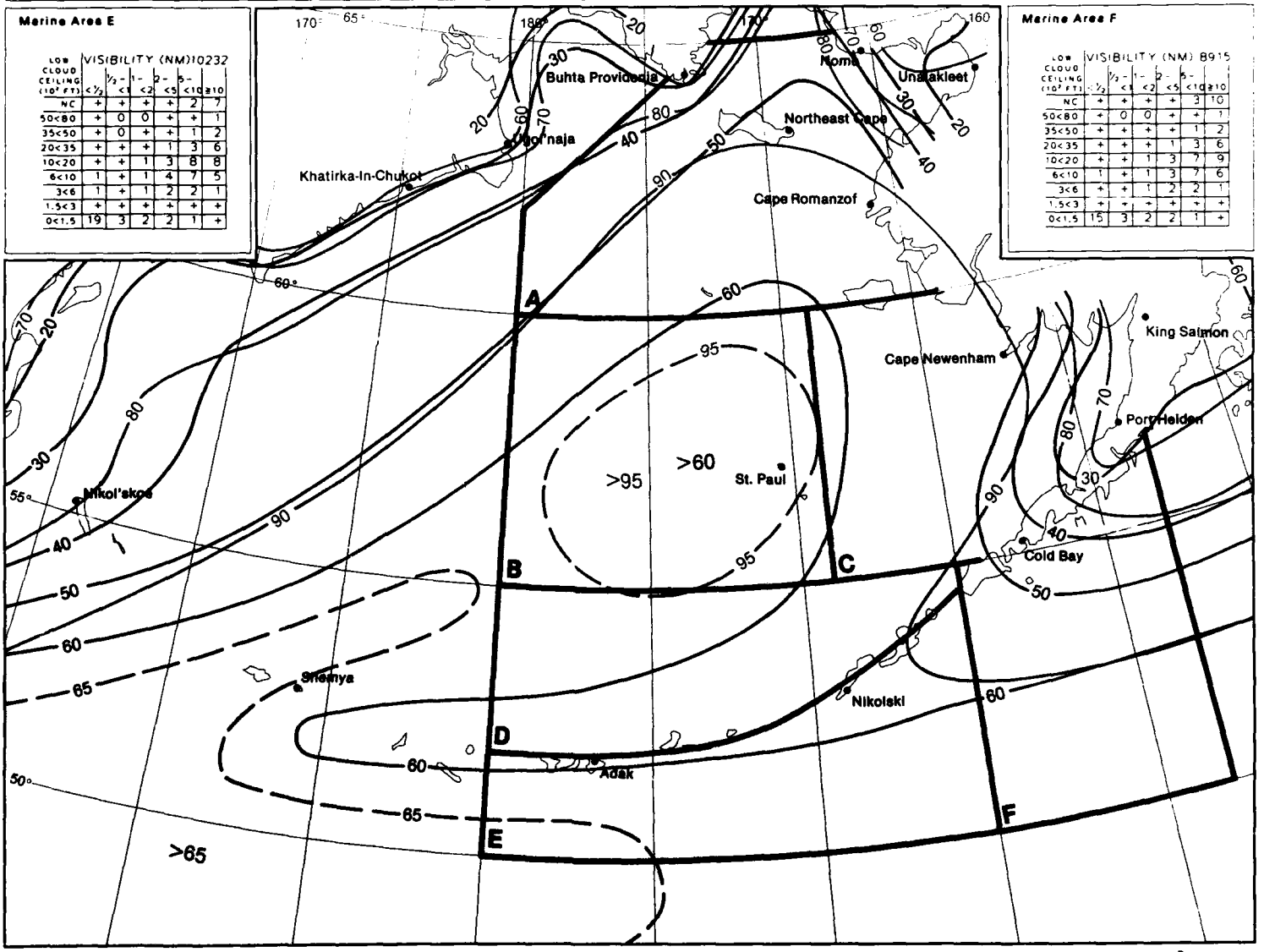
LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 6420					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	+	3	7
50<80	+	0	+	+	+	1
35<50	+	+	0	+	1	2
20<35	+	+	+	1	4	8
10<20	1	+	1	3	8	8
6<10	1	+	1	4	6	4
3<6	+	1	1	2	2	1
1.5<3	+	+	+	+	+	+
0<1.5	15	3	3	3	1	+

Marine Area E

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 10232					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	+	2	7
50<80	+	0	0	+	+	1
35<50	+	0	+	+	1	2
20<35	+	+	+	1	3	6
10<20	+	+	1	3	8	8
6<10	1	+	1	4	7	5
3<6	1	+	1	2	2	1
1.5<3	+	+	+	+	+	+
0<1.5	19	3	2	2	1	+

Marine Area F

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 8915					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	+	3	10
50<80	+	0	0	+	+	1
35<50	+	+	+	+	1	2
20<35	+	+	+	1	3	6
10<20	+	+	1	3	7	9
6<10	1	+	1	3	7	6
3<6	+	+	1	2	2	1
1.5<3	+	+	+	+	+	+
0<1.5	15	3	2	2	1	+



4 Ceiling and Visibility (mid range) **August**

Nikol'skoe

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 5248					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	2	37
50<80	0	0	0	0	0	+
35<50	0	0	0	+	+	2
20<35	+	0	+	+	2	12
10<20	+	+	+	4	8	20
6<10	+	+	+	2	2	2
3<6	+	+	+	1	+	1
1.5<3	+	0	0	0	0	0
0<1.5	4	+	+	+	+	+

Khatirka-in-Chukot

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 3162					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	0	0	+	+	43
50<80	0	0	0	+	0	+
35<50	0	0	0	0	+	13
20<35	0	0	+	1	2	17
10<20	0	+	1	3	3	4
6<10	+	+	1	3	1	1
3<6	0	+	+	1	+	+
1.5<3	+	+	+	+	0	+
0<1.5	6	+	0	0	+	+

Ugol'naja

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4795					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	+	2	32
50<80	0	0	0	+	+	+
35<50	0	0	0	+	+	2
20<35	0	+	+	1	2	21
10<20	+	+	1	3	7	14
6<10	+	+	+	2	3	2
3<6	+	+	+	1	1	1
1.5<3	0	0	+	+	+	+
0<1.5	1	+	+	+	0	+

Buhta Providenja

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4285					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	+	4	40
50<80	0	0	0	+	+	1
35<50	0	+	0	+	1	6
20<35	+	+	+	1	3	17
10<20	0	+	2	5	6	8
6<10	+	+	+	1	1	1
3<6	+	+	+	+	+	+
1.5<3	0	+	+	+	0	0
0<1.5	1	0	0	0	0	+

Northeast Cape

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4505					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	4	17
50<80	0	+	0	+	+	1
35<50	+	+	+	+	+	1
20<35	0	+	+	+	4	9
10<20	0	+	1	3	11	15
6<10	+	+	1	7	9	2
3<6	+	+	2	2	2	+
1.5<3	0	0	+	+	+	+
0<1.5	1	2	1	+	+	0

Nome

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 16008					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	+	3	43
50<80	0	0	0	-	1	4
35<50	0	0	0	+	1	4
20<35	0	+	+	+	3	9
10<20	+	+	+	2	8	8
6<10	+	+	1	3	4	1
3<6	+	+	1	2	1	+
1.5<3	+	+	+	+	+	0
0<1.5	+	+	+	+	+	0

Unalaklaet

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 2666					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	0	0	0	1	7	39
50<80	0	0	0	0	1	4
35<50	0	0	0	+	2	7
20<35	0	0	+	+	4	15
10<20	+	+	0	+	4	10
6<10	0	0	+	+	1	3
3<6	0	0	+	+	+	+
1.5<3	0	0	0	0	+	+
0<1.5	+	0	0	0	0	0

Cape Romanzof

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4566					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	10	12
50<80	0	+	0	0	1	1
35<50	0	+	0	0	1	+
20<35	0	+	+	1	9	6
10<20	0	+	+	3	17	8
6<10	+	1	2	5	10	2
3<6	+	1	2	3	2	+
1.5<3	0	+	0	+	0	0
0<1.5	1	1	+	+	0	0

Cape Newenham

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4577					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	+	9	16
50<80	0	0	0	0	+	1
35<50	0	0	0	+	1	2
20<35	0	+	+	+	5	7
10<20	+	+	+	2	9	11
6<10	+	+	2	4	8	7
3<6	+	+	1	3	3	1
1.5<3	0	+	+	+	+	+
0<1.5	2	2	1	+	0	0

King Salmon

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 16120					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	1	+	+	1	5	40
50<80	+	+	+	+	1	6
35<50	+	0	+	+	2	7
20<35	+	+	+	1	5	12
10<20	+	+	+	1	4	5
6<10	+	+	+	1	2	1
3<6	+	+	+	1	1	1
1.5<3	0	+	+	+	+	+
0<1.5	+	+	+	+	+	0

Port Heiden

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 136					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	0	0	1	3	4	58
50<80	0	0	0	0	0	3
35<50	0	0	0	0	0	5
20<35	0	0	0	0	0	10
10<20	0	0	0	0	2	7
6<10	0	1	0	0	3	1
3<6	0	0	0	1	0	0
1.5<3	0	0	0	0	0	0
0<1.5	1	0	0	0	0	0

Cold Bay

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 11965					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	+	7	15
50<80	+	+	+	0	+	1
35<50	0	0	0	+	2	3
20<35	0	+	+	+	8	11
10<20	0	0	+	1	11	8
6<10	0	+	1	4	10	3
3<6	+	1	2	4	4	1
1.5<3	+	+	+	+	+	+
0<1.5	+	+	1	+	+	+

Nikolski

No Data Available

St. Paul

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 8749					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	12	8
50<80	+	+	0	+	+	+
35<50	+	+	0	0	2	1
20<35	+	0	+	+	8	4
10<20	+	+	+	1	19	6
6<10	0	+	1	3	9	1
3<6	+	1	3	5	4	+
1.5<3	+	1	1	1	+	+
0<1.5	4	1	1	+	+	0

Adak

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 13573					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	12	4
50<80	0	0	0	+	+	+
35<50	0	0	0	+	2	+
20<35	0	0	+	1	17	2
10<20	0	+	1	7	22	1
6<10	+	+	1	7	8	+
3<6	+	1	1	5	3	+
1.5<3	+	+	+	+	+	0
0<1.5	+	+	1	+	+	0

Shemya

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 10395					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	+	10	18
50<80	0	+	0	+	+	1
35<50	0	0	0	+	2	1
20<35	0	+	+	+	7	7
10<20	+	+	+	2	11	7
6<10	+	+	1	3	6	1
3<6	+	2	3	4	3	+
1.5<3	+	+	1	+	+	0
0<1.5	5	2	1	+	+	0

Marine Area A

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 2063					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	+	4	23
50<80	+	0	+	+	+	2
35<50	+	0	+	+	1	3
20<35	+	+	+	1	3	12
10<20	+	+	+	1	8	15
6<10	+	+	1	1	5	5
3<6	+	+	+	1	2	1
1.5<3	0	+	+	1	+	+
0<1.5	2	1	1	1	1	+

Marine Area B

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 2393					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	1	5	16
50<80	0	0	+	0	+	+
35<50	0	+	0	+	1	1
20<35	+	+	+	1	3	7
10<20	+	+	1	3	13	14
6<10	+	1	3	5	6	2
3<6	1	1	1	1	2	+
1.5<3	1	+	+	+	+	+
0<1.5	3	1	1	1	1	+

Marine Area C

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 7675					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	*	7	18
50<80	0	0	+	+	+	1
35<50	+	0	+	+	*	1
20<35	+	+	+	1	5	9
10<20	+	+	1	5	12	9
6<10	+	+	1	3	4	3
3<6	+	+	1	2	1	1
1.5<3	+	+	+	+	+	+
0<1.5	4	2	2	2	1	+

Marine Area D

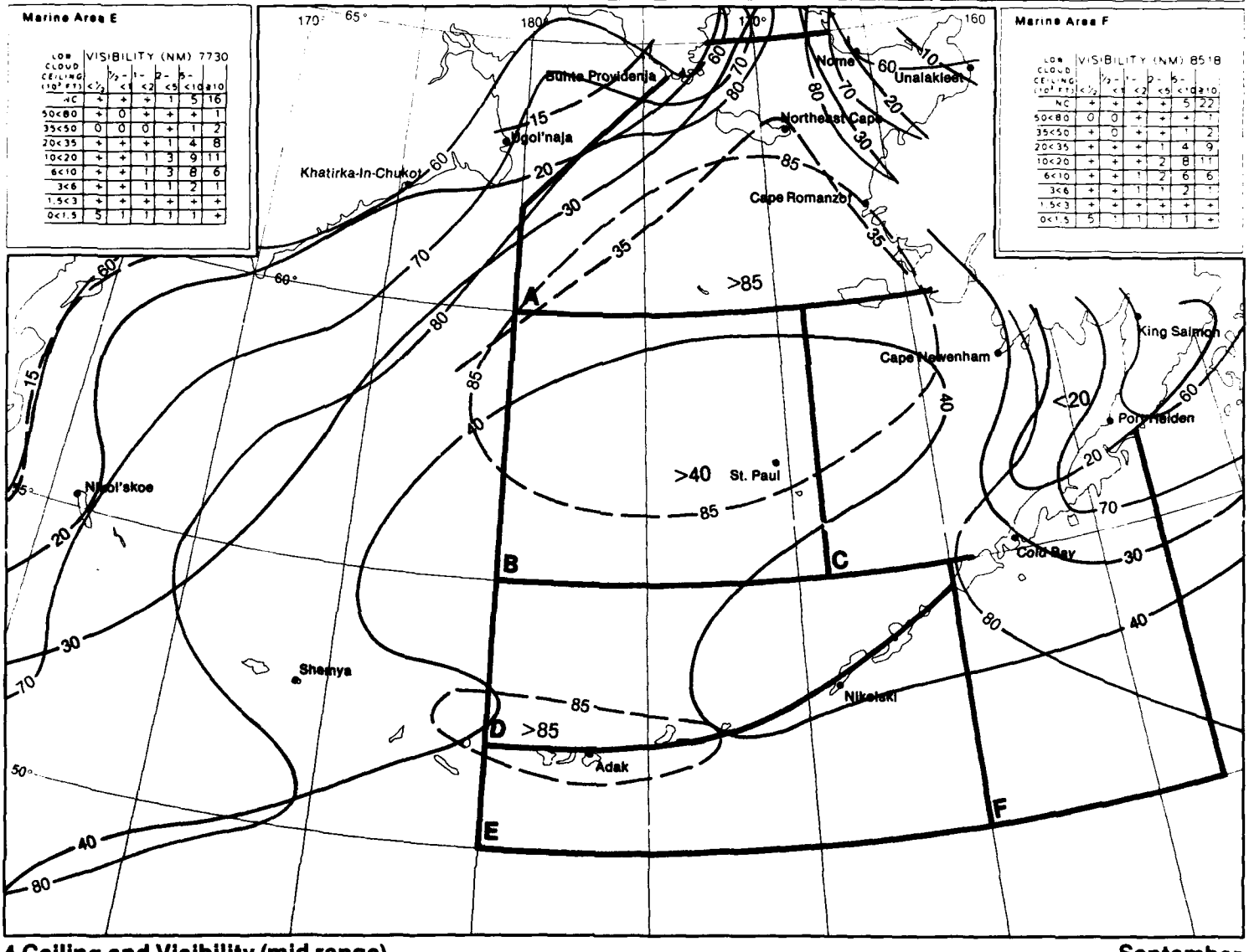
LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 6249					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	+	4	16
50<80	0	0	+	+	+	1
35<50	+	0	0	+	1	2
20<35	+	+	+	1	5	10
10<20	+	+	1	2	9	12
6<10	+	+	1	3	7	6
3<6	+	+	1	2	3	1
1.5<3	+	+	+	+	1	+
0<1.5	4	1	2	2	1	+

Marine Area E

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 7730					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	1	5	16
50<80	+	0	+	+	+	1
35<50	0	0	0	+	1	2
20<35	+	+	+	1	4	8
10<20	+	+	1	3	9	11
6<10	+	+	1	3	8	6
3<6	+	+	1	1	2	1
1.5<3	+	+	+	+	+	+
0<1.5	5	1	1	1	1	+

Marine Area F

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 8518					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	+	5	22
50<80	0	0	+	+	+	1
35<50	+	0	+	+	1	2
20<35	+	+	+	1	4	9
10<20	+	+	+	2	8	11
6<10	+	+	1	2	6	6
3<6	+	+	1	1	2	1
1.5<3	+	+	+	+	+	+
0<1.5	5	1	1	1	1	+



4 Ceiling and Visibility (mid range) **September**

Nikol'skoe

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 5510					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	+	4	36
50<80	0	0	0	+	+	+
35<50	0	0	0	+	+	2
20<35	+	+	+	1	4	14
10<20	+	+	1	3	9	19
6<10	0	+	+	1	1	1
3<6	0	+	+	+	+	+
1.5<3	0	+	0	+	0	0
0<1.5	1	+	+	0	+	+

Khatirka-In-Chukot

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 3525					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	0	+	1	1	61
50<80	+	0	0	+	+	+
35<50	0	0	0	+	+	7
20<35	+	+	1	2	1	9
10<20	+	1	1	4	3	3
6<10	+	+	+	1	1	+
3<6	0	+	+	+	+	+
1.5<3	0	0	+	+	+	0
0<1.5	1	0	0	0	0	0

Ugol'naja

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 5104					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	1	1	3	34
50<80	0	+	+	+	+	+
35<50	+	+	+	+	+	3
20<35	+	+	1	2	3	14
10<20	2	2	3	6	6	10
6<10	1	+	1	2	1	1
3<6	+	+	+	+	+	+
1.5<3	0	0	+	+	+	+
0<1.5	1	+	+	+	+	0

Buhta Providenja

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4518					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	1	7	37
50<80	0	0	0	+	+	+
35<50	+	+	+	+	1	6
20<35	+	+	1	2	6	17
10<20	+	1	2	5	5	4
6<10	+	+	+	+	+	+
3<6	+	+	+	+	+	0
1.5<3	+	+	+	0	+	0
0<1.5	1	0	+	0	+	0

Norheast Cape

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4524					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	+	5	12
50<80	+	0	0	0	+	+
35<50	0	0	0	0	1	2
20<35	0	+	+	1	14	17
10<20	+	+	1	5	13	9
6<10	+	+	2	4	3	1
3<6	+	+	+	1	+	+
1.5<3	+	+	0	0	+	0
0<1.5	1	1	1	1	0	0

Nome

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 16430					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	+	4	46
50<80	0	0	+	+	1	3
35<50	0	0	+	+	1	5
20<35	+	+	+	1	5	9
10<20	+	+	1	2	6	4
6<10	+	+	1	2	3	1
3<6	+	+	1	1	+	+
1.5<3	0	+	+	+	+	0
0<1.5	1	1	+	+	+	+

Unalakleet

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 2720					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	0	0	+	+	11	31
50<80	0	+	0	+	1	2
35<50	0	0	+	+	2	5
20<35	+	0	+	1	8	12
10<20	+	+	+	1	6	9
6<10	+	+	+	1	2	2
3<6	0	+	+	+	+	+
1.5<3	0	+	0	+	+	+
0<1.5	1	1	1	+	0	0

Cape Romanzof

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4423					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	0	+	+	1	16	14
50<80	0	+	+	+	1	+
35<50	0	+	0	+	2	1
20<35	+	+	+	1	16	6
10<20	+	1	1	3	15	4
6<10	+	1	1	2	4	1
3<6	+	+	+	1	1	+
1.5<3	0	0	0	+	0	0
0<1.5	1	2	+	+	0	0

Cape Newenham

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4523					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	0	+	0	+	10	15
50<80	0	0	0	0	+	1
35<50	0	0	0	+	2	1
20<35	0	0	0	+	8	10
10<20	+	+	+	3	12	12
6<10	+	+	1	5	7	3
3<6	0	+	1	2	2	+
1.5<3	0	+	0	+	0	0
0<1.5	1	2	1	+	0	0

King Salmon

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 16550					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	1	+	+	1	7	46
50<80	+	+	+	+	1	5
35<50	+	+	+	+	2	6
20<35	+	+	+	+	5	10
10<20	+	+	+	1	4	4
6<10	+	+	+	1	2	1
3<6	+	+	+	1	1	+
1.5<3	+	+	+	+	+	+
0<1.5	1	+	+	+	+	0

Port Heiden

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 92					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	0	1	0	0	3	47
50<80	0	0	0	0	0	5
35<50	0	0	0	0	1	7
20<35	0	0	0	0	1	15
10<20	0	0	0	0	4	7
6<10	0	0	0	1	4	1
3<6	0	0	0	1	1	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

Cold Bay

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 12355					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	+	10	1
50<80	0	0	0	+	1	+
35<50	0	0	+	+	3	3
20<35	+	+	+	1	14	10
10<20	+	+	+	3	15	6
6<10	0	+	+	2	6	1
3<6	+	+	1	2	2	+
1.5<3	+	+	+	+	+	0
0<1.5	+	+	+	+	+	0

Nikolski

No Data Available

St. Paul

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 9188					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	0	+	+	1	18	7
50<80	0	0	+	+	1	+
35<50	0	+	0	0	2	1
20<35	+	+	+	+	12	6
10<20	+	+	+	3	26	6
6<10	+	+	+	3	6	1
3<6	+	+	1	1	1	+
1.5<3	+	+	+	+	+	0
0<1.5	1	+	+	+	0	0

Adak

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 14044					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	0	+	+	1	16	4
50<80	0	+	0	+	1	+
35<50	0	0	0	+	5	1
20<35	+	+	+	2	26	3
10<20	+	+	1	8	20	1
6<10	0	+	1	3	3	+
3<6	+	+	1	1	1	+
1.5<3	0	0	+	+	+	0
0<1.5	+	+	+	+	+	0

Shemya

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 10745					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	0	+	+	13	15
50<80	0	0	+	+	+	+
35<50	0	0	+	+	2	2
20<35	+	+	+	1	13	12
10<20	0	+	1	3	14	5
6<10	+	+	1	3	4	+
3<6	+	1	2	2	1	+
1.5<3	+	+	+	+	+	0
0<1.5	1	1	+	+	+	0

Marine Area A

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 1179					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	0	0	+	+	2	15
50<80	0	0	0	0	+	2
35<50	0	0	+	+	1	2
20<35	1	+	1	1	6	23
10<20	+	+	1	3	9	10
6<10	+	+	1	2	2	4
3<6	+	+	+	1	1	1
1.5<3	0	0	0	+	+	+
0<1.5	1	1	1	2	1	1

Marine Area B

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 1644					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	2	6	12
50<80	0	0	0	0	+	+
35<50	0	0	0	+	1	+
20<35	0	+	0	+	5	14
10<20	+	+	2	5	14	11
6<10	+	1	1	4	6	3
3<6	+	+	+	1	2	1
1.5<3	+	+	+	+	+	+
0<1.5	1	+	1	1	1	+

Marine Area C

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 3768					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	0	+	1	10	16
50<80	0	0	0	+	+	1
35<50	0	0	0	+	2	2
20<35	+	0	+	2	5	11
10<20	+	+	1	4	13	9
6<10	+	+	1	3	4	3
3<6	+	+	+	1	2	1
1.5<3	+	+	+	+	+	+
0<1.5	1	1	2	2	1	+

Marine Area D

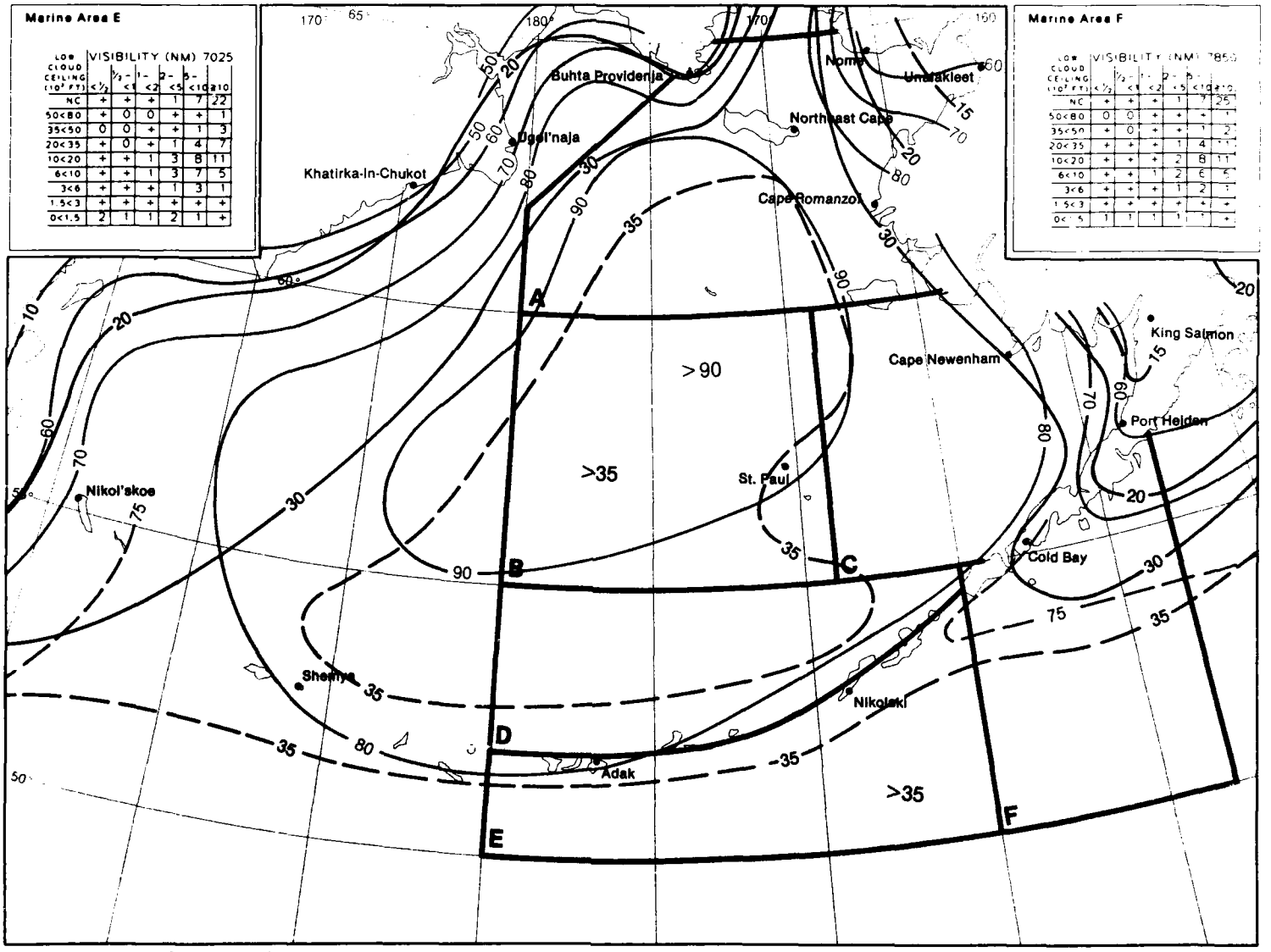
LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 5794					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	6	20
50<80	0	0	0	+	+	1
35<50	0	+	0	+	1	2
20<35	+	+	+	1	4	10
10<20	+	+	1	2	9	12
6<10	+	+	1	2	7	7
3<6	+	+	+	2	2	2
1.5<3	+	+	+	+	1	+
0<1.5	1	1	1	1	1	+

Marine Area E

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 7025					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	7	22
50<80	+	0	0	+	+	1
35<50	0	0	+	+	1	3
20<35	+	0	+	1	4	7
10<20	+	+	1	3	8	11
6<10	+	+	1	3	7	5
3<6	+	+	+	1	3	1
1.5<3	+	+	+	+	+	+
0<1.5	2	1	1	2	1	+

Marine Area F

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 7850					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	7	25
50<80	0	0	+	+	+	1
35<50	+	0	+	+	1	2
20<35	+	+	+	1	4	7
10<20	+	+	+	2	8	11
6<10	+	+	1	2	6	5
3<6	+	+	+	1	2	1
1.5<3	+	+	+	+	+	+
0<1.5	1	1	1	1	1	+



4 Ceiling and Visibility (mid range) **October**

Nikol'skoe

Low Cloud Ceiling (10^2 FT)	VISIBILITY (NM) 5266					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	1	4	30
50<80	0	+	+	0	+	+
35<50	0	+	+	+	+	1
20<35	+	+	1	1	4	12
10<20	1	1	2	6	9	23
6<10	+	+	+	1	1	1
3<6	+	+	+	+	+	+
1.5<3	0	+	0	+	0	0
0<1.5	1	0	+	+	+	+

Khatirka-In-Chukot

Low Cloud Ceiling (10^2 FT)	VISIBILITY (NM) 3249					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	1	2	2	60
50<80	+	0	+	0	0	+
35<50	+	+	+	+	+	4
20<35	2	1	2	3	1	6
10<20	1	+	2	3	2	2
6<10	+	+	1	1	+	+
3<6	+	+	+	+	+	+
1.5<3	0	+	+	+	+	0
0<1.5	1	0	0	0	0	0

Ugol'naja

Low Cloud Ceiling (10^2 FT)	VISIBILITY (NM) 4978					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	2	1	2	3	5	32
50<80	+	0	+	+	+	+
35<50	+	0	+	+	+	1
20<35	1	1	1	3	3	6
10<20	6	4	5	6	4	5
6<10	1	+	1	1	1	+
3<6	1	+	+	1	+	+
1.5<3	+	+	+	+	0	+
0<1.5	1	+	+	+	0	+

Buhta Providenja

Low Cloud Ceiling (10^2 FT)	VISIBILITY (NM) 4293					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	1	2	9	39
50<80	0	0	+	+	+	+
35<50	0	0	+	+	1	2
20<35	+	1	1	4	5	10
10<20	2	3	5	6	4	4
6<10	+	+	+	+	+	+
3<6	0	+	+	+	+	+
1.5<3	0	+	0	0	0	+
0<1.5	1	0	0	0	0	+

Norheast Cape

Low Cloud Ceiling (10^2 FT)	VISIBILITY (NM) 4141					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	1	+	1	7	10
50<80	0	+	0	+	+	+
35<50	0	+	0	+	+	+
20<35	+	+	1	2	12	7
10<20	+	1	3	10	16	4
6<10	+	+	2	3	4	1
3<6	+	+	1	1	1	+
1.5<3	0	0	0	0	+	0
0<1.5	5	3	3	+	+	0

Nome

Low Cloud Ceiling (10^2 FT)	VISIBILITY (NM) 16198					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	+	6	42
50<80	+	+	+	+	1	3
35<50	+	+	+	+	1	3
20<35	+	+	+	2	6	5
10<20	+	1	1	3	6	4
6<10	+	+	1	2	2	+
3<6	+	+	1	1	+	+
1.5<3	+	+	+	+	+	+
0<1.5	2	2	1	+	+	0

Unalakleet

Low Cloud Ceiling (10^2 FT)	VISIBILITY (NM) 2627					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	0	+	17	31
50<80	0	0	+	+	2	2
35<50	0	+	+	+	3	3
20<35	+	+	+	1	8	7
10<20	0	+	+	2	7	5
6<10	+	+	+	1	1	1
3<6	0	+	+	+	+	+
1.5<3	0	0	0	0	0	0
0<1.5	2	2	1	1	+	0

Cape Romanzof

Low Cloud Ceiling (10^2 FT)	VISIBILITY (NM) 4113					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	1	+	2	20	12
50<80	+	+	+	+	2	1
35<50	+	+	+	+	2	1
20<35	+	1	+	2	17	3
10<20	+	1	1	4	10	2
6<10	+	1	1	4	3	+
3<6	+	+	+	1	1	+
1.5<3	+	0	0	0	0	0
0<1.5	4	2	1	+	+	0

Cape Newenham

Low Cloud Ceiling (10^2 FT)	VISIBILITY (NM) 4214					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	1	9	18
50<80	0	0	0	+	+	1
35<50	0	0	0	+	1	1
20<35	+	+	+	1	6	4
10<20	+	+	1	4	15	6
6<10	+	1	2	4	7	3
3<6	+	1	1	3	2	1
1.5<3	0	+	+	+	0	0
0<1.5	3	2	1	+	0	0

King Salmon

Low Cloud Ceiling (10^2 FT)	VISIBILITY (NM) 15953					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	1	+	+	1	8	47
50<80	+	+	+	+	1	4
35<50	+	+	+	+	2	4
20<35	+	+	+	1	4	6
10<20	+	+	+	1	4	3
6<10	+	+	+	1	2	1
3<6	+	+	+	1	1	1
1.5<3	+	+	+	+	+	+
0<1.5	1	1	1	1	+	+

Port Heiden

Low Cloud Ceiling (10^2 FT)	VISIBILITY (NM) 148					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	0	0	1	1	1	34
50<80	0	0	0	0	0	3
35<50	0	0	0	0	0	3
20<35	0	0	0	0	1	14
10<20	0	0	1	3	9	14
6<10	0	0	1	2	8	0
3<6	0	0	0	0	1	0
1.5<3	0	0	0	0	0	0
0<1.5	1	1	0	0	0	0

Cold Bay

Low Cloud Ceiling (10^2 FT)	VISIBILITY (NM) 11938					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	1	12	18
50<80	0	+	0	0	+	1
35<50	+	+	+	+	3	2
20<35	+	+	+	2	14	8
10<20	+	+	1	4	13	4
6<10	+	+	1	2	5	1
3<6	+	+	1	2	2	+
1.5<3	0	+	+	+	+	0
0<1.5	1	1	1	+	+	0

Nikolski

No Data Available

St. Paul

Low Cloud Ceiling (10^2 FT)	VISIBILITY (NM) 8949					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	1	20	7
50<80	0	0	0	+	+	+
35<50	+	0	+	+	1	1
20<35	+	+	+	1	12	5
10<20	+	+	1	5	24	3
6<10	+	+	1	4	6	+
3<6	+	1	1	1	1	+
1.5<3	+	+	+	+	+	0
0<1.5	1	1	1	+	+	0

Adak

Low Cloud Ceiling (10^2 FT)	VISIBILITY (NM) 13576					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	0	+	+	1	19	4
50<80	0	0	0	0	1	+
35<50	0	+	+	+	5	1
20<35	+	+	+	3	29	2
10<20	+	+	1	8	16	+
6<10	+	+	1	3	2	+
3<6	+	+	+	1	+	0
1.5<3	0	0	+	+	+	0
0<1.5	1	1	1	+	+	0

Shemya

Low Cloud Ceiling (10^2 FT)	VISIBILITY (NM) 10385					
	<½	½- <1	1- <2	2- <5	5- <10	≥10
NC	+	+	+	+	14	11
50<80	0	+	0	+	+	+
35<50	0	+	0	+	2	2
20<35	+	+	+	1	17	10
10<20	+	+	1	4	16	3
6<10	+	+	1	3	4	+
3<6	+	1	1	1	1	+
1.5<3	+	+	+	+	+	0
0<1.5	2	1	1	+	+	0

Marine Area A

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 1060					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	0	0	+	+	2	12
50<80	0	0	+	+	1	+
35<50	0	0	+	0	+	1
20<35	0	+	+	2	4	26
10<20	1	1	4	8	7	8
6<10	+	1	2	2	3	3
3<6	+	+	+	1	1	+
1.5<3	0	0	0	+	+	0
0<1.5	1	2	2	2	1	+

Marine Area B

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 2259					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	1	1	4	14
50<80	0	0	0	+	+	1
35<50	0	+	0	+	1	2
20<35	+	+	+	2	4	28
10<20	+	1	2	4	8	7
6<10	+	1	1	2	4	1
3<6	+	+	+	1	2	+
1.5<3	+	+	+	+	+	+
0<1.5	+	1	1	2	1	+

Marine Area C

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 2559					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	10	15
50<80	0	+	+	+	+	+
35<50	0	+	+	1	1	1
20<35	0	+	+	1	5	12
10<20	+	1	1	5	15	7
6<10	+	+	1	2	4	2
3<6	+	+	+	1	1	1
1.5<3	+	+	+	+	+	0
0<1.5	1	1	2	2	1	+

Marine Area D

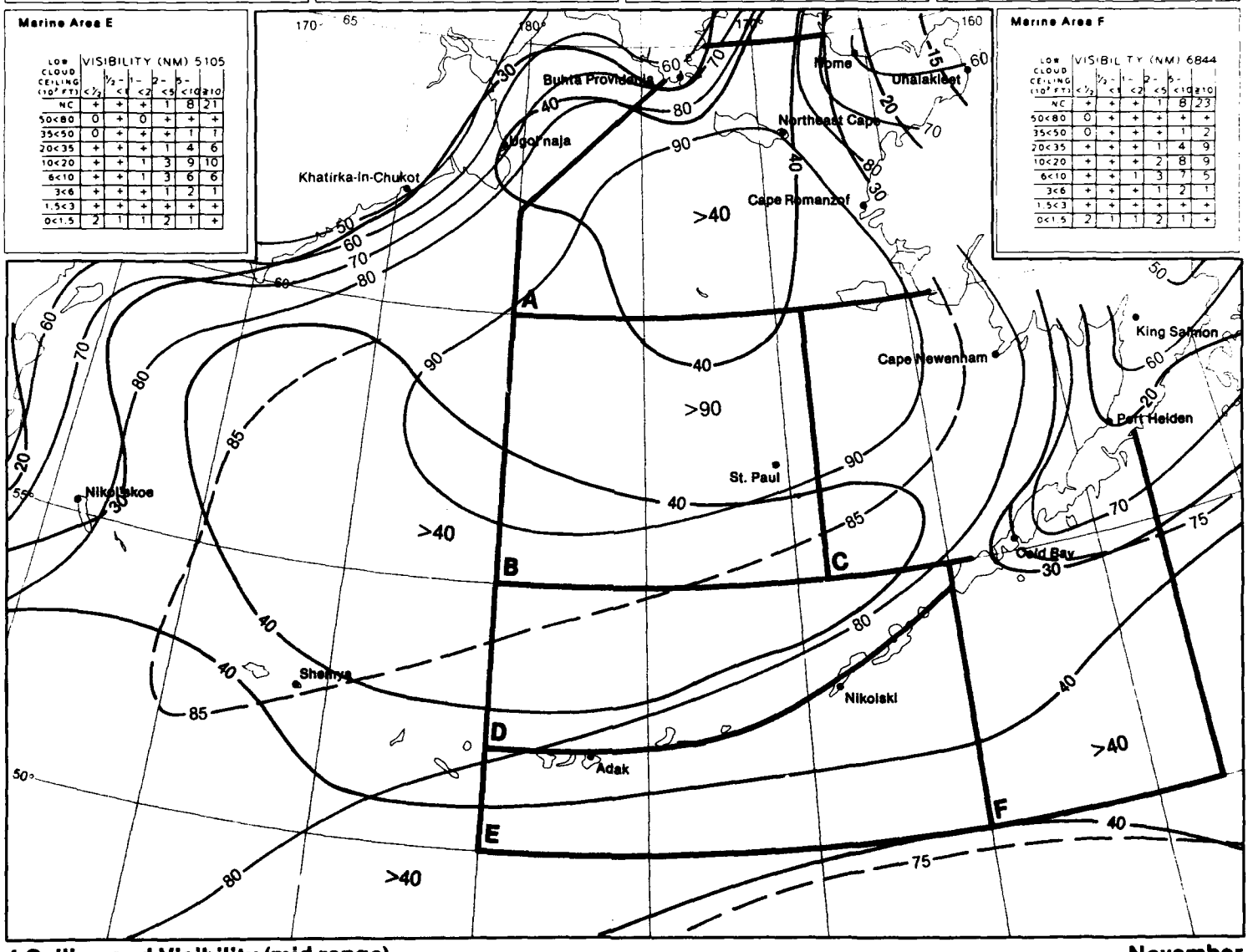
LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 5317					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	9	20
50<80	+	0	+	+	+	1
35<50	+	+	+	+	2	1
20<35	+	+	+	1	5	7
10<20	+	+	1	2	8	8
6<10	+	+	1	3	8	6
3<6	+	+	+	2	3	2
1.5<3	+	+	+	+	1	+
0<1.5	1	1	1	2	1	+

Marine Area E

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 5105					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	8	21
50<80	0	+	0	+	+	+
35<50	0	+	+	+	1	1
20<35	+	+	+	1	4	6
10<20	+	+	1	3	9	10
6<10	+	+	1	3	6	6
3<6	+	+	+	1	2	1
1.5<3	+	+	+	+	+	+
0<1.5	2	1	1	2	1	+

Marine Area F

LOW CLOUD CEILING (10^3 FT)	VISIBILITY (NM) 6844					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	8	23
50<80	0	+	+	+	+	+
35<50	0	+	+	+	1	2
20<35	+	+	+	1	4	9
10<20	+	+	+	2	8	9
6<10	+	+	1	3	7	5
3<6	+	+	+	1	2	1
1.5<3	+	+	+	+	+	+
0<1.5	2	1	1	2	1	+



4 Ceiling and Visibility (mid range) **November**

Nikol'skoe

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 5428					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	4	26
50<80	+	0	0	+	0	1
35<50	0	+	0	+	+	2
20<35	+	+	1	2	3	11
10<20	2	3	3	7	9	21
6<10	+	+	+	1	+	+
3<6	+	+	+	+	0	+
1.5<3	+	0	0	0	0	0
0<1.5	1	+	+	+	+	+

Khatirka-in-Chukot

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 3257					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	1	1	3	3	2	56
50<80	+	0	0	+	0	+
35<50	+	+	1	+	1	4
20<35	1	1	2	4	2	6
10<20	1	1	2	2	1	1
6<10	1	+	1	1	+	+
3<6	+	+	+	+	+	+
1.5<3	+	0	+	+	+	0
0<1.5	1	0	+	0	0	+

Ugol'naja

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 5190					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	3	2	3	5	7	35
50<80	+	0	+	+	+	+
35<50	+	+	0	+	+	1
20<35	2	1	1	2	3	6
10<20	5	3	3	4	3	3
6<10	1	1	1	1	1	+
3<6	+	+	+	+	+	+
1.5<3	0	0	+	+	0	0
0<1.5	3	+	+	0	0	+

Buhta Providenja

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4451					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	1	3	13	49
50<80	0	0	+	+	+	+
35<50	+	+	+	+	+	1
20<35	1	1	1	3	3	5
10<20	2	2	3	4	2	2
6<10	+	+	+	+	+	+
3<6	0	+	+	+	+	+
1.5<3	0	0	0	0	0	0
0<1.5	1	0	0	+	0	0

Northeast Cape

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 3916					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	4	15	31
50<80	+	0	0	0	+	+
35<50	0	+	+	0	+	+
20<35	+	+	1	2	5	1
10<20	+	1	3	7	11	3
6<10	+	+	1	3	3	+
3<6	+	+	+	+	+	+
1.5<3	0	0	0	+	+	0
0<1.5	3	2	1	+	0	0

Nome

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 16386					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	9	50
50<80	+	+	+	+	1	2
35<50	+	+	+	+	2	1
20<35	+	+	+	2	5	3
10<20	+	+	1	3	4	2
6<10	+	+	1	1	1	+
3<6	+	+	1	1	1	+
1.5<3	+	+	+	+	+	0
0<1.5	2	2	1	+	+	0

Unalakleet

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 2617					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	20	29
50<80	0	+	0	+	2	2
35<50	+	+	+	+	3	3
20<35	+	+	+	2	9	5
10<20	+	+	1	2	6	2
6<10	0	+	+	1	1	1
3<6	0	+	+	+	+	+
1.5<3	0	0	+	0	+	0
0<1.5	2	2	1	1	+	0

Cape Romanzof

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4024					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	1	2	2	5	30	11
50<80	+	+	+	+	2	1
35<50	+	+	+	+	1	1
20<35	+	1	+	2	8	1
10<20	1	1	1	4	11	+
6<10	+	1	1	2	2	+
3<6	+	+	1	1	1	0
1.5<3	0	+	0	0	+	0
0<1.5	3	2	1	+	0	0

Cape Newenham

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4202					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	1	1	12	20
50<80	+	0	0	+	+	1
35<50	0	0	+	+	1	1
20<35	+	+	+	1	5	3
10<20	+	1	1	5	11	4
6<10	1	1	2	5	6	2
3<6	+	+	1	1	1	+
1.5<3	0	0	+	+	+	0
0<1.5	4	3	1	+	0	0

King Salmon

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 16337					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	1	1	1	1	11	46
50<80	+	+	+	+	2	3
35<50	+	+	+	+	2	3
20<35	+	+	+	1	4	4
10<20	+	+	+	1	3	2
6<10	+	+	+	1	2	1
3<6	+	+	+	1	1	1
1.5<3	+	+	+	+	+	+
0<1.5	1	2	2	1	+	+

Port Heiden

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 109					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	1	0	0	0	1	38
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	2
20<35	0	0	0	0	4	9
10<20	0	0	0	0	11	12
6<10	0	0	1	2	9	0
3<6	0	0	0	3	1	0
1.5<3	0	0	0	0	0	0
0<1.5	2	3	0	2	0	0

Cold Bay

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 12315					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	11	18
50<80	0	+	+	+	1	1
35<50	+	+	+	+	3	2
20<35	1	1	1	3	12	6
10<20	+	+	1	4	12	4
6<10	+	+	1	3	4	1
3<6	+	1	1	2	2	+
1.5<3	0	+	+	+	+	+
0<1.5	2	2	1	+	+	+

Nikolski

No Data Available

St. Paul

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 9261					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	18	6
50<80	0	0	+	0	+	+
35<50	+	+	+	+	2	1
20<35	1	+	1	2	15	4
10<20	1	1	1	5	20	2
6<10	+	+	1	3	4	+
3<6	+	1	1	2	1	+
1.5<3	+	+	+	+	+	0
0<1.5	2	1	+	+	0	0

Adak

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 14074					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	1	17	2
50<80	0	0	0	+	1	+
35<50	0	0	+	+	6	1
20<35	0	+	+	3	28	1
10<20	+	+	2	8	16	+
6<10	+	+	1	4	2	0
3<6	+	+	+	1	+	0
1.5<3	+	0	+	+	+	0
0<1.5	1	1	1	1	+	0

Shemya

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 10268					
	<½	½ - <1	1 - <2	2 - <5	5 - <10	≥10
NC	+	+	+	+	15	11
50<80	0	0	0	0	+	+
35<50	+	0	+	+	2	1
20<35	+	+	+	2	18	9
10<20	+	1	1	4	13	2
6<10	+	1	1	3	3	+
3<6	+	1	2	2	1	+
1.5<3	+	+	+	+	+	0
0<1.5	2	2	1	+	+	0

Marine Area A

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 1817					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	+	+	1	1	2	6
50<80	0	+	+	+	+	+
35<50	0	0	+	+	+	1
20<35	1	+	1	3	3	28
10<20	1	2	9	8	5	6
6<10	+	1	1	1	1	2
3<6	+	+	+	+	+	1
1.5<3	+	0	+	+	+	+
0<1.5	4	3	4	3	1	+

Marine Area B

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 2862					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	+	+	1	1	4	11
50<80	0	0	+	+	1	1
35<50	+	0	+	+	1	3
20<35	+	+	2	3	5	26
10<20	1	2	4	4	7	7
6<10	+	1	1	2	2	3
3<6	+	+	+	1	+	2
1.5<3	0	0	+	+	0	+
0<1.5	3	2	3	3	1	+

Marine Area C

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 2890					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	+	+	+	1	6	13
50<80	0	0	+	+	1	1
35<50	+	+	+	+	2	4
20<35	1	1	+	2	5	15
10<20	+	1	2	4	11	9
6<10	+	+	1	2	3	2
3<6	+	+	+	1	+	1
1.5<3	0	+	+	0	+	+
0<1.5	2	2	3	3	2	+

Marine Area D

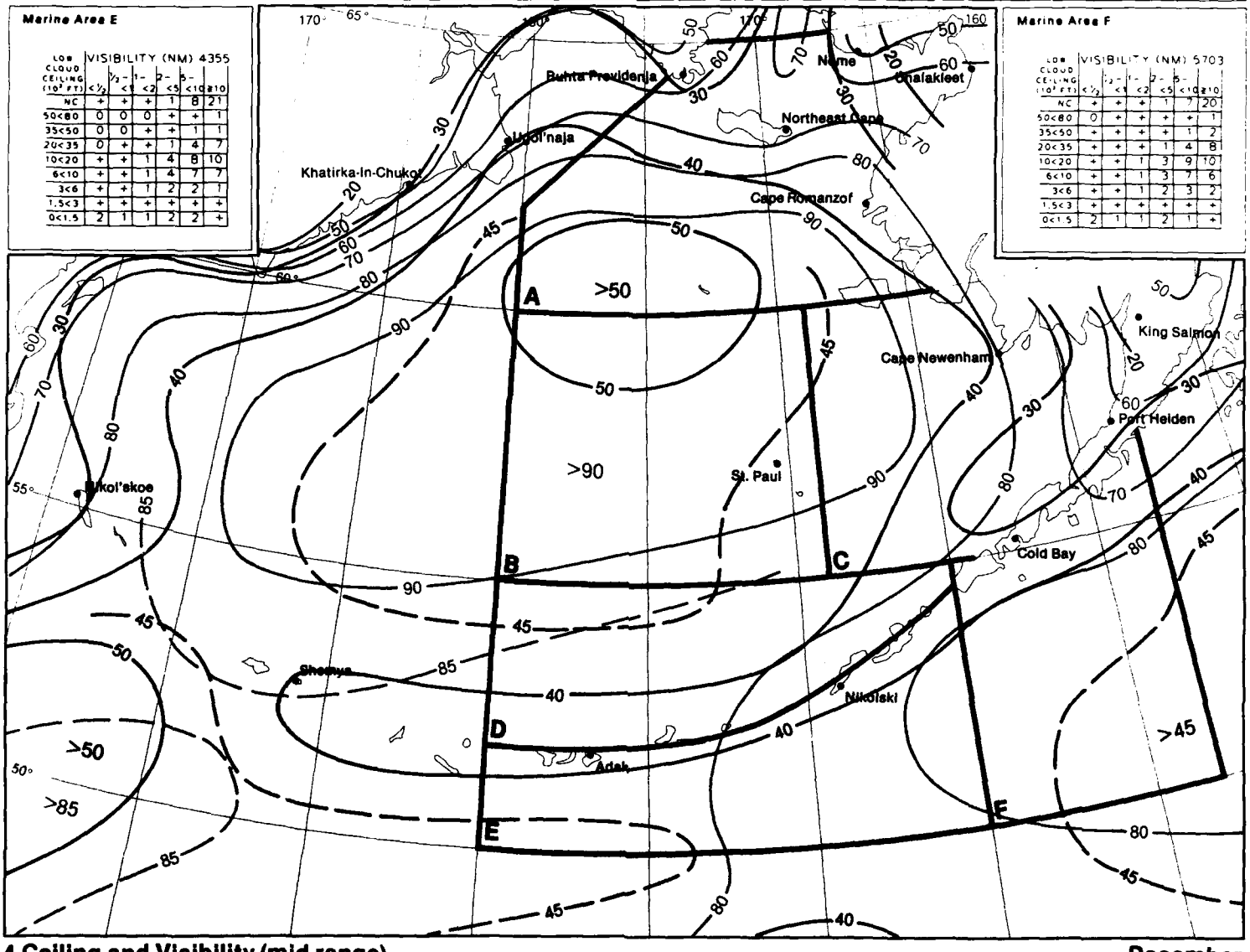
LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4984					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	+	+	+	1	7	20
50<80	0	0	+	+	1	1
35<50	+	+	+	+	2	2
20<35	+	+	+	1	3	7
10<20	+	+	1	2	9	11
6<10	+	+	1	3	8	7
3<6	+	+	1	2	3	2
1.5<3	+	+	+	+	1	+
0<1.5	2	1	1	2	1	+

Marine Area E

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 4355					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	+	+	+	1	8	21
50<80	0	0	0	+	+	1
35<50	0	0	+	+	1	1
20<35	0	+	+	1	4	7
10<20	+	+	1	4	8	10
6<10	+	+	1	4	7	7
3<6	+	+	1	2	2	1
1.5<3	+	+	+	+	+	+
0<1.5	2	1	1	2	2	+

Marine Area F

LOW CLOUD CEILING (10^2 FT)	VISIBILITY (NM) 5703					
	<½	½– <1	1– <2	2– <5	5– <10	≥10
NC	+	+	+	1	7	20
50<80	0	+	+	+	+	1
35<50	+	+	+	+	1	2
20<35	+	+	+	1	4	8
10<20	+	+	1	3	9	10
6<10	+	+	1	3	7	6
3<6	+	+	1	2	3	2
1.5<3	+	+	+	+	+	+
0<1.5	2	1	1	2	1	+



4 Ceiling and Visibility (mid range) **December**

Map 5. Visibility thresholds

TABLE – Percent frequency of visibility (nautical miles).

Albers Equal–Area Conic Projection

Graphs: Visibility thresholds

Percent frequency of visibility of various ranges for designated marine areas and coastal stations.

VISIBILITY (NM)	%
<.5	1.2
.5 <1	2.9
1 <2	1.2
2 <5	3.2
5 <10	30.7
≧10	60.8
N=	342

(2.9% of the observed visibilities were <1 but ≧1/2 nautical mile. Other percentages can be similarly interpreted.)

Nautical miles	.5	1	2	5	10
Kilometers	1	2	4	10	20

N = Observation count.

Visibility is a term that denotes the greatest distance from an observer that an object of known characteristics can be seen and identified with the unaided eye. When the visibility is not the same in all directions, the greatest distance common to one-half or more of the horizon circle is determined. Visibilities are difficult to measure at sea because of the lack of reference points. Climatically, many low visibility observations probably are missed because the observer is too busy with other duties (this is a form of fair weather bias). Also, some observers seem to report reduced visibilities at night because of darkness, though this tendency has abated in recent years. However, the coarseness of the visibility intervals (see code table) tends to minimize the problem, thereby permitting the summarized data to be relatively consistent. Visibilities greater than 25 nautical miles should be interpreted cautiously because the earth's curvature makes it impossible to see that distance horizontally from the bridge of most ships.

VISIBILITY (WMO Code, 1982)

Code figs.	Visibility (vv) in m/km	Visibility (vv) in yd./naut. mi.	Code figs.
90	less than 50 m	less than 55 yd.	90
91	50 but less than 200 m	55 but less than 220 yd.	91
92	200 but less than 500 m	220 but less than 550 yd.	92
93	500 but less than 1000 m	550 but less than ½ n. mi.	93
94	1 but less than 2 km	½ but less than 1 n. mi.	94
95	2 but less than 4 km	1 but less than 2 n. mi.	95
96	4 but less than 10 km	2 but less than 5 n. mi.	96
97	10 but less than 20 km	5 but less than 11 n. mi.	97
98	20 but less than 50 km	11 but less than 27 n. mi.	98
99	50 km or more	27 n. mi. or more	99

The visibility ranges corresponding to various weather types are as follows:

90, 91, 92	Heavy snow, heavy drizzle	Fog, thick haze	90, 91, 92
93	Moderate snow, moderate drizzle		93
94, 95, 96	Heavy rain, Moderate rain	Mist, haze	94, 95, 96
97	Light snow, light drizzle		97
98, 99	Light rain		98, 99

Nikol'skoe

VISIBILITY (NM)	%
<.5	5.1
.5 <1	5.1
1 <2	6.1
2 <5	12.1
5 <10	18.2
≥10	53.4
N=	5899

Khatirka-In-Chukot

VISIBILITY (NM)	%
<.5	5.9
.5 <1	3.9
1 <2	9.8
2 <5	12.0
5 <10	7.8
≥10	60.7
N=	3702

Ugol'naja

VISIBILITY (NM)	%
<.5	14.2
.5 <1	8.1
1 <2	11.5
2 <5	14.6
5 <10	11.9
≥10	39.6
N=	5289

Buhta Providenja

VISIBILITY (NM)	%
<.5	4.3
.5 <1	3.9
1 <2	10.5
2 <5	12.8
5 <10	17.7
≥10	49.6
N=	4710

Northeast Cape

VISIBILITY (NM)	%
<.5	4.0
.5 <1	4.8
1 <2	7.8
2 <5	13.6
5 <10	40.6
≥10	29.2
N=	8664

Nome

VISIBILITY (NM)	%
<.5	4.6
.5 <1	4.6
1 <2	5.2
2 <5	9.4
5 <10	22.9
≥10	53.3
N=	22020

Unalakleet

VISIBILITY (NM)	%
<.5	3.3
.5 <1	2.1
1 <2	3.0
2 <5	6.2
5 <10	24.8
≥10	60.5
N=	15445

Cape Romanzof

VISIBILITY (NM)	%
<.5	9.2
.5 <1	7.1
1 <2	5.3
2 <5	13.8
5 <10	28.8
≥10	35.8
N=	17545

Cape Newenham

VISIBILITY (NM)	%
<.5	5.1
.5 <1	4.6
1 <2	7.5
2 <5	14.9
5 <10	36.6
≥10	31.2
N=	19026

King Salmon

VISIBILITY (NM)	%
<.5	1.9
.5 <1	2.2
1 <2	3.1
2 <5	5.3
5 <10	21.4
≥10	66.1
N=	19082

Port Heiden

VISIBILITY (NM)	%
<.5	4.3
.5 <1	4.1
1 <2	2.8
2 <5	6.5
5 <10	19.9
≥10	62.4
N=	2250

Cold Bay

VISIBILITY (NM)	%
<.5	4.4
.5 <1	3.8
1 <2	5.5
2 <5	13.3
5 <10	42.5
≥10	30.5
N=	13895

Nikolski

VISIBILITY (NM)	%
<.5	20.3
.5 <1	1.8
1 <2	1.4
2 <5	5.9
5 <10	35.7
≥10	34.9
N=	2223

St. Paul

VISIBILITY (NM)	%
<.5	6.7
.5 <1	5.5
1 <2	5.5
2 <5	15.6
5 <10	56.0
≥10	10.8
N=	11605

Adak

VISIBILITY (NM)	%
<.5	1.8
.5 <1	2.1
1 <2	5.3
2 <5	18.0
5 <10	68.0
≥10	4.9
N=	22604

Shemya

VISIBILITY (NM)	%
<.5	3.6
.5 <1	4.3
1 <2	7.3
2 <5	17.0
5 <10	51.2
≥10	16.6
N=	19321

Marine Area A

VISIBILITY (NM)	%
<.5	5.8
.5 <1	6.2
1 <2	12.4
2 <5	14.2
5 <10	15.7
≥10	45.7
N=	2787

Marine Area B

VISIBILITY (NM)	%
<.5	6.9
.5 <1	5.9
1 <2	9.2
2 <5	15.3
5 <10	23.1
≥10	39.6
N=	5098

Marine Area C

VISIBILITY (NM)	%
<.5	4.5
.5 <1	3.8
1 <2	6.6
2 <5	12.1
5 <10	28.8
≥10	44.2
N=	3785

Marine Area D

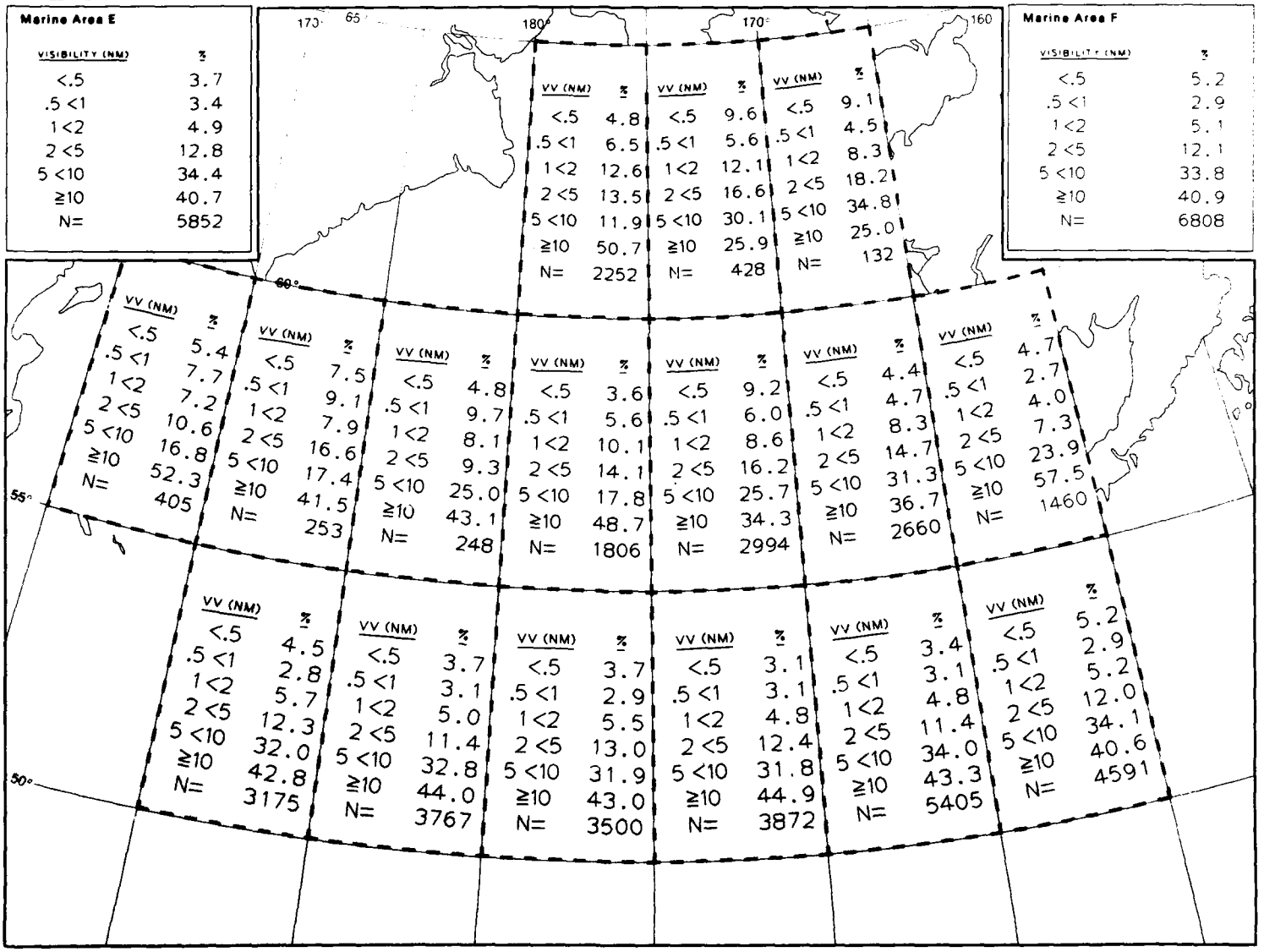
VISIBILITY (NM)	%
<.5	3.1
.5 <1	2.7
1 <2	5.1
2 <5	11.5
5 <10	31.3
≥10	46.2
N=	6925

Marine Area E

VISIBILITY (NM)	%
<.5	3.7
.5 <1	3.4
1 <2	4.9
2 <5	12.8
5 <10	34.4
≥10	40.7
N=	5852

Marine Area F

VISIBILITY (NM)	%
<.5	5.2
.5 <1	2.9
1 <2	5.1
2 <5	12.1
5 <10	33.8
≥10	40.9
N=	6808



5 Visibility Thresholds **January**

Nikol'skoe

VISIBILITY (NM)	%
<.5	5.9
.5 <1	7.3
1 <2	6.0
2 <5	11.4
5 <10	16.3
≥10	53.0
N=	5464

Khatirka-In-Chukot

VISIBILITY (NM)	%
<.5	5.5
.5 <1	2.7
1 <2	6.3
2 <5	9.0
5 <10	7.0
≥10	69.5
N=	3250

Ugol'naja

VISIBILITY (NM)	%
<.5	12.6
.5 <1	7.1
1 <2	10.6
2 <5	12.5
5 <10	12.0
≥10	45.3
N=	4843

Buhta Providenja

VISIBILITY (NM)	%
<.5	4.6
.5 <1	3.9
1 <2	6.7
2 <5	10.6
5 <10	15.0
≥10	59.2
N=	4361

Northeast Cape

VISIBILITY (NM)	%
<.5	3.7
.5 <1	4.1
1 <2	8.6
2 <5	14.8
5 <10	40.3
≥10	28.5
N=	8840

Nome

VISIBILITY (NM)	%
<.5	3.4
.5 <1	3.3
1 <2	4.4
2 <5	8.3
5 <10	19.3
≥10	61.4
N=	20107

Unalakleet

VISIBILITY (NM)	%
<.5	2.6
.5 <1	2.5
1 <2	3.0
2 <5	6.1
5 <10	23.6
≥10	62.2
N=	13990

Cape Romanzof

VISIBILITY (NM)	%
<.5	8.4
.5 <1	8.2
1 <2	6.5
2 <5	14.2
5 <10	29.9
≥10	32.7
N=	16381

Cape Newenham

VISIBILITY (NM)	%
<.5	3.4
.5 <1	3.9
1 <2	6.7
2 <5	15.7
5 <10	34.4
≥10	35.9
N=	17495

King Salmon

VISIBILITY (NM)	%
<.5	1.6
.5 <1	2.7
1 <2	3.5
2 <5	6.1
5 <10	19.0
≥10	67.1
N=	17374

Port Heiden

VISIBILITY (NM)	%
<.5	7.1
.5 <1	3.6
1 <2	2.3
2 <5	9.5
5 <10	19.0
≥10	58.6
N=	2024

Cold Bay

VISIBILITY (NM)	%
<.5	5.1
.5 <1	4.0
1 <2	5.9
2 <5	12.9
5 <10	38.7
≥10	33.4
N=	12682

Nikolski

VISIBILITY (NM)	%
<.5	15.9
.5 <1	2.0
1 <2	1.2
2 <5	5.8
5 <10	37.7
≥10	37.3
N=	2032

St. Paul

VISIBILITY (NM)	%
<.5	11.5
.5 <1	6.2
1 <2	5.8
2 <5	14.5
5 <10	50.9
≥10	11.1
N=	10535

Adak

VISIBILITY (NM)	%
<.5	1.9
.5 <1	2.5
1 <2	5.3
2 <5	18.0
5 <10	67.2
≥10	5.1
N=	21255

Shemya

VISIBILITY (NM)	%
<.5	5.3
.5 <1	5.4
1 <2	6.9
2 <5	16.6
5 <10	46.1
≥10	19.7
N=	17646

Marine Area A

VISIBILITY (NM)	%
<.5	7.1
.5 <1	7.9
1 <2	9.2
2 <5	16.0
5 <10	24.2
≥10	35.7
N=	1617

Marine Area B

VISIBILITY (NM)	%
<.5	7.0
.5 <1	7.5
1 <2	13.7
2 <5	17.3
5 <10	20.2
≥10	34.3
N=	6409

Marine Area C

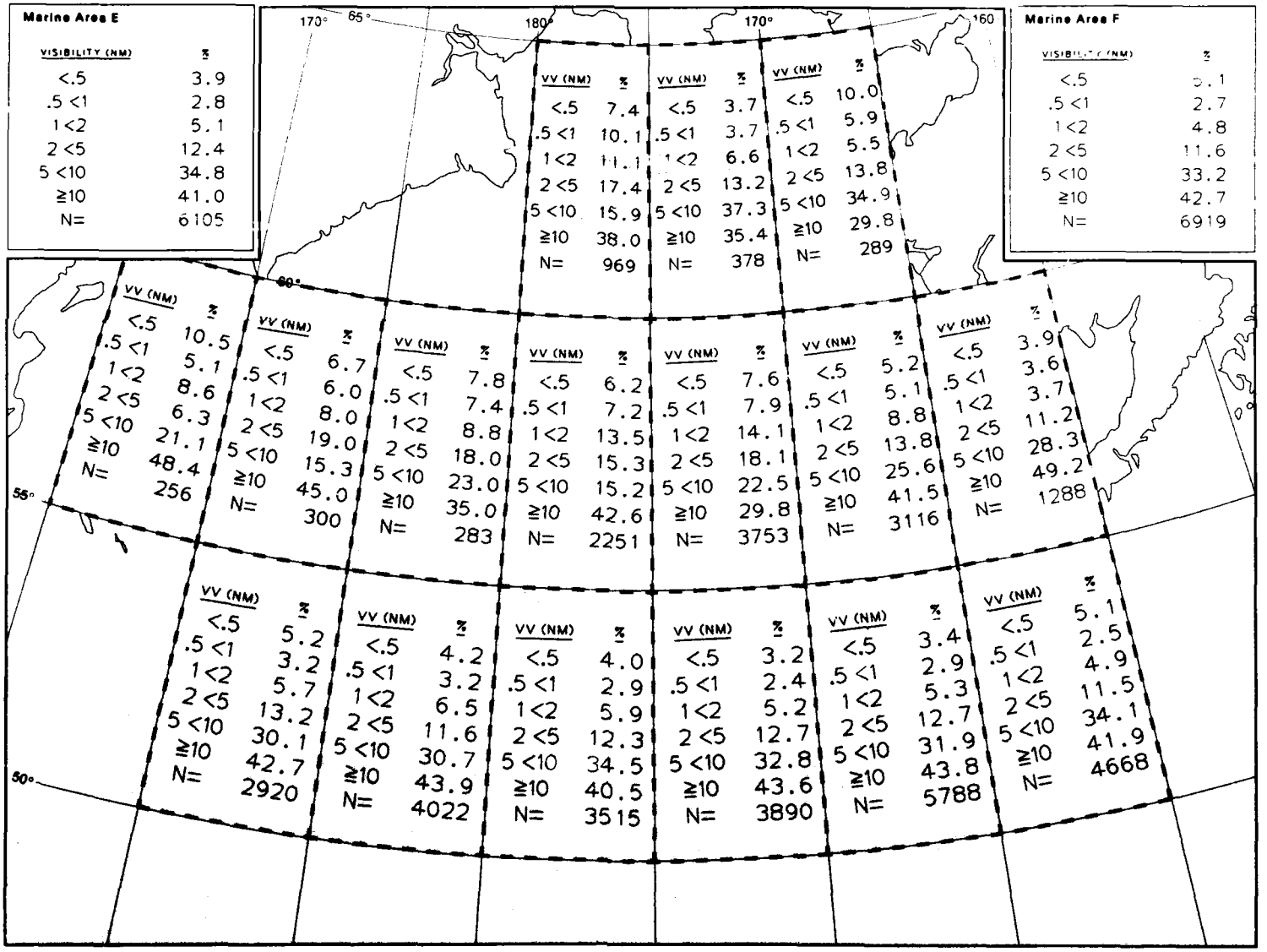
VISIBILITY (NM)	%
<.5	4.9
.5 <1	4.6
1 <2	6.8
2 <5	12.2
5 <10	26.6
≥10	44.8
N=	3929

Marine Area D

VISIBILITY (NM)	%
<.5	3.1
.5 <1	2.8
1 <2	5.7
2 <5	12.8
5 <10	31.2
≥10	44.4
N=	7088

Marine Area E

VISIBILITY (NM)	%
<.5	3.9
.5 <1	2.8
1 <2	5.1
2 <5	12.4
5 <10	34.8
≥10	41.0
N=	6105



VV (NM)	%
<.5	7.4
.5 <1	10.1
1 <2	11.1
2 <5	17.4
5 <10	15.9
≥10	38.0
N=	969

VV (NM)	%
<.5	3.7
.5 <1	3.7
1 <2	6.6
2 <5	13.2
5 <10	37.3
≥10	35.4
N=	378

VV (NM)	%
<.5	10.0
.5 <1	5.9
1 <2	5.5
2 <5	13.8
5 <10	34.9
≥10	29.8
N=	289

Marine Area F

VISIBILITY (NM)	%
<.5	3.1
.5 <1	2.7
1 <2	4.8
2 <5	11.6
5 <10	33.2
≥10	42.7
N=	6919

VV (NM)	%
<.5	10.5
.5 <1	5.1
1 <2	8.6
2 <5	6.3
5 <10	21.1
≥10	48.4
N=	256

VV (NM)	%
<.5	6.7
.5 <1	6.0
1 <2	8.0
2 <5	19.0
5 <10	15.3
≥10	45.0
N=	300

VV (NM)	%
<.5	7.8
.5 <1	7.4
1 <2	8.8
2 <5	18.0
5 <10	23.0
≥10	35.0
N=	283

VV (NM)	%
<.5	6.2
.5 <1	7.2
1 <2	13.5
2 <5	15.3
5 <10	15.2
≥10	42.6
N=	2251

VV (NM)	%
<.5	7.6
.5 <1	7.9
1 <2	14.1
2 <5	18.1
5 <10	22.5
≥10	29.8
N=	3753

VV (NM)	%
<.5	5.2
.5 <1	5.1
1 <2	8.8
2 <5	13.8
5 <10	25.6
≥10	41.5
N=	3116

VV (NM)	%
<.5	3.9
.5 <1	3.6
1 <2	3.7
2 <5	11.2
5 <10	28.3
≥10	49.2
N=	1288

VV (NM)	%
<.5	5.2
.5 <1	3.2
1 <2	5.7
2 <5	13.2
5 <10	30.1
≥10	42.7
N=	2920

VV (NM)	%
<.5	4.2
.5 <1	3.2
1 <2	6.5
2 <5	11.6
5 <10	30.7
≥10	43.9
N=	4022

VV (NM)	%
<.5	4.0
.5 <1	2.9
1 <2	5.9
2 <5	12.3
5 <10	34.5
≥10	40.5
N=	3515

VV (NM)	%
<.5	3.2
.5 <1	2.4
1 <2	5.2
2 <5	12.7
5 <10	32.8
≥10	43.6
N=	3890

VV (NM)	%
<.5	3.4
.5 <1	2.9
1 <2	5.3
2 <5	12.7
5 <10	31.9
≥10	43.8
N=	5788

VV (NM)	%
<.5	5.1
.5 <1	2.5
1 <2	4.9
2 <5	11.5
5 <10	34.1
≥10	41.9
N=	4668

5 Visibility Thresholds

February

Nikol'skoe

VISIBILITY (NM)	%
<.5	4.3
.5 <1	5.1
1 <2	8.4
2 <5	11.2
5 <10	15.5
≧10	55.4
N=	6021

Khatirka-In-Chukot

VISIBILITY (NM)	%
<.5	3.7
.5 <1	2.3
1 <2	6.4
2 <5	7.1
5 <10	5.8
≧10	74.7
N=	4081

Ugol'naja

VISIBILITY (NM)	%
<.5	9.6
.5 <1	5.2
1 <2	9.3
2 <5	13.4
5 <10	11.8
≧10	50.5
N=	5299

Buhta Providenja

VISIBILITY (NM)	%
<.5	4.3
.5 <1	3.0
1 <2	5.7
2 <5	9.9
5 <10	14.5
≧10	62.5
N=	4900

Northeast Cape

VISIBILITY (NM)	%
<.5	5.3
.5 <1	4.8
1 <2	7.1
2 <5	13.9
5 <10	37.2
≧10	31.8
N=	9517

Nome

VISIBILITY (NM)	%
<.5	3.2
.5 <1	3.1
1 <2	4.5
2 <5	9.3
5 <10	17.9
≧10	61.9
N=	21309

Unalakleet

VISIBILITY (NM)	%
<.5	1.8
.5 <1	1.7
1 <2	2.3
2 <5	6.3
5 <10	21.8
≧10	66.0
N=	14498

Cape Romanzof

VISIBILITY (NM)	%
<.5	8.8
.5 <1	9.7
1 <2	6.1
2 <5	13.9
5 <10	27.1
≧10	34.4
N=	18221

Cape Newenham

VISIBILITY (NM)	%
<.5	5.2
.5 <1	5.2
1 <2	7.5
2 <5	14.8
5 <10	32.0
≧10	35.4
N=	19632

King Salmon

VISIBILITY (NM)	%
<.5	1.3
.5 <1	2.4
1 <2	3.3
2 <5	5.9
5 <10	18.1
≧10	69.0
N=	19067

Port Heiden

VISIBILITY (NM)	%
<.5	3.1
.5 <1	2.7
1 <2	2.8
2 <5	7.3
5 <10	13.4
≧10	70.7
N=	2219

Cold Bay

VISIBILITY (NM)	%
<.5	2.9
.5 <1	3.6
1 <2	5.4
2 <5	12.2
5 <10	40.2
≧10	35.8
N=	13875

Nikolski

VISIBILITY (NM)	%
<.5	21.5
.5 <1	1.4
1 <2	0.9
2 <5	4.9
5 <10	32.5
≧10	38.8
N=	2228

St. Paul

VISIBILITY (NM)	%
<.5	8.9
.5 <1	6.2
1 <2	5.6
2 <5	13.9
5 <10	47.9
≧10	17.5
N=	11597

Adak

VISIBILITY (NM)	%
<.5	1.9
.5 <1	2.5
1 <2	4.5
2 <5	19.2
5 <10	66.0
≧10	5.8
N=	22123

Shemya

VISIBILITY (NM)	%
<.5	3.8
.5 <1	4.8
1 <2	7.2
2 <5	16.1
5 <10	45.9
≧10	22.1
N=	19367

Marine Area A

VISIBILITY (NM)	%
<.5	11.5
.5 <1	5.7
1 <2	6.4
2 <5	11.7
5 <10	29.9
≥10	34.8
N=	1257

Marine Area B

VISIBILITY (NM)	%
<.5	6.6
.5 <1	4.9
1 <2	9.3
2 <5	16.0
5 <10	25.0
≥10	38.1
N=	5541

Marine Area C

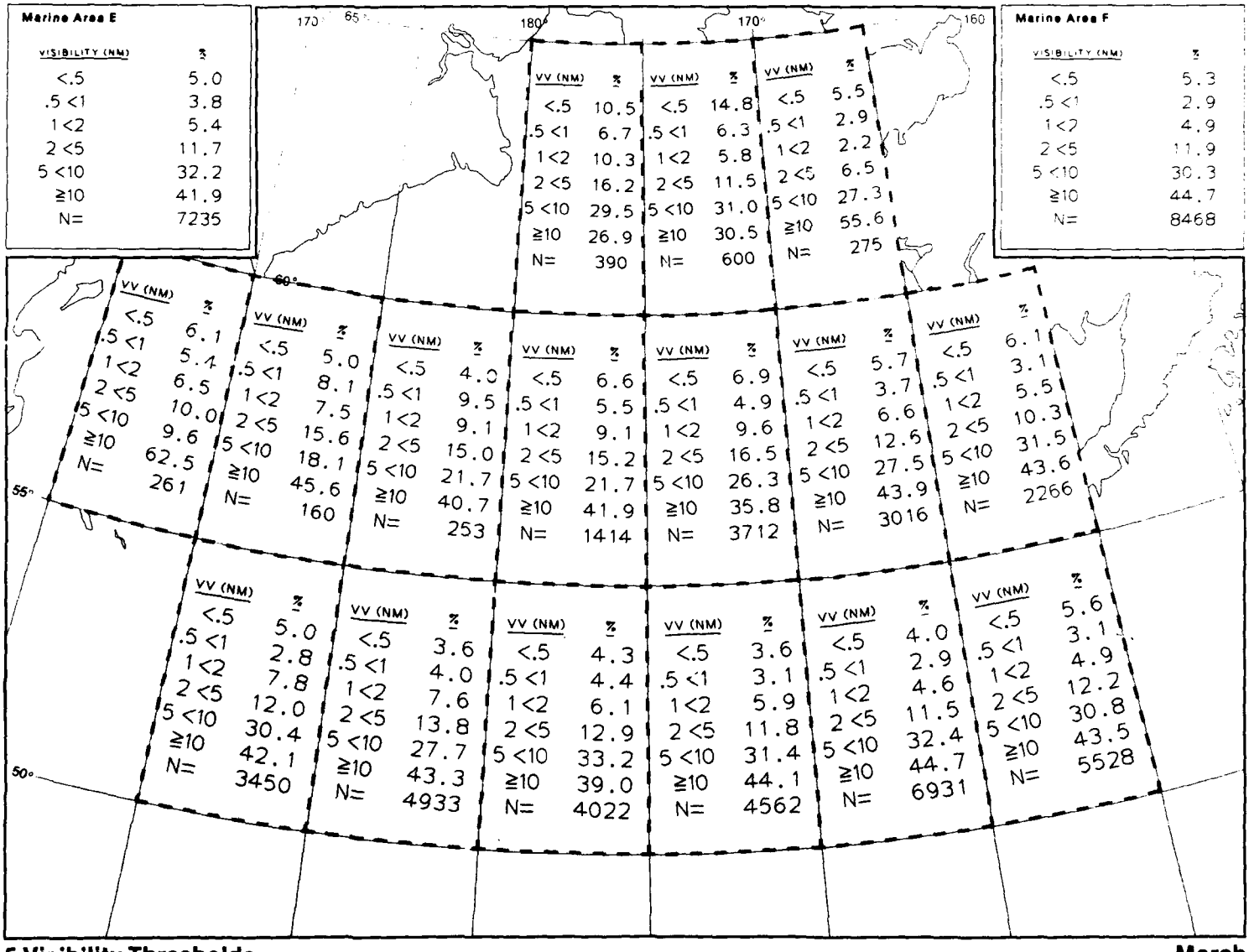
VISIBILITY (NM)	%
<.5	6.1
.5 <1	3.4
1 <2	6.1
2 <5	11.4
5 <10	29.5
≥10	43.5
N=	4763

Marine Area D

VISIBILITY (NM)	%
<.5	3.1
.5 <1	2.9
1 <2	5.3
2 <5	12.1
5 <10	32.4
≥10	44.1
N=	8280

Marine Area E

VISIBILITY (NM)	%
<.5	5.0
.5 <1	3.8
1 <2	5.4
2 <5	11.7
5 <10	32.2
≥10	41.9
N=	7235



VV (NM)	%
<.5	10.5
.5 <1	6.7
1 <2	10.3
2 <5	16.2
5 <10	29.5
≥10	26.9
N=	390

VV (NM)	%
<.5	14.8
.5 <1	6.3
1 <2	5.8
2 <5	11.5
5 <10	31.0
≥10	30.5
N=	600

VV (NM)	%
<.5	5.5
.5 <1	2.9
1 <2	2.2
2 <5	6.5
5 <10	27.3
≥10	55.6
N=	275

Marine Area F

VISIBILITY (NM)	%
<.5	5.3
.5 <1	2.9
1 <2	4.9
2 <5	11.9
5 <10	30.3
≥10	44.7
N=	8468

VV (NM)	%
<.5	6.1
.5 <1	5.4
1 <2	6.5
2 <5	10.0
5 <10	9.6
≥10	62.5
N=	261

VV (NM)	%
<.5	5.0
.5 <1	8.1
1 <2	7.5
2 <5	15.6
5 <10	18.1
≥10	45.6
N=	160

VV (NM)	%
<.5	4.0
.5 <1	9.5
1 <2	9.1
2 <5	15.0
5 <10	21.7
≥10	40.7
N=	253

VV (NM)	%
<.5	6.6
.5 <1	5.5
1 <2	9.1
2 <5	15.2
5 <10	21.7
≥10	41.9
N=	1414

VV (NM)	%
<.5	6.9
.5 <1	4.9
1 <2	9.6
2 <5	16.5
5 <10	26.3
≥10	35.8
N=	3712

VV (NM)	%
<.5	5.7
.5 <1	3.7
1 <2	6.6
2 <5	12.5
5 <10	27.5
≥10	43.9
N=	3016

VV (NM)	%
<.5	6.1
.5 <1	3.1
1 <2	5.5
2 <5	10.3
5 <10	31.5
≥10	43.6
N=	2266

VV (NM)	%
<.5	5.0
.5 <1	2.8
1 <2	7.8
2 <5	12.0
5 <10	30.4
≥10	42.1
N=	3450

VV (NM)	%
<.5	3.6
.5 <1	4.0
1 <2	7.6
2 <5	13.8
5 <10	27.7
≥10	43.3
N=	4933

VV (NM)	%
<.5	4.3
.5 <1	4.4
1 <2	6.1
2 <5	12.9
5 <10	33.2
≥10	39.0
N=	4022

VV (NM)	%
<.5	3.6
.5 <1	3.1
1 <2	5.9
2 <5	11.8
5 <10	31.4
≥10	44.1
N=	4562

VV (NM)	%
<.5	4.0
.5 <1	2.9
1 <2	4.6
2 <5	11.5
5 <10	32.4
≥10	44.7
N=	6931

VV (NM)	%
<.5	5.6
.5 <1	3.1
1 <2	4.9
2 <5	12.2
5 <10	30.8
≥10	43.5
N=	5528

5 Visibility Thresholds

March

Nikol'skoe

VISIBILITY (NM)	%
<.5	4.3
.5 <1	2.2
1 <2	5.0
2 <5	10.9
5 <10	13.2
≥10	64.4
N=	5629

Khatirka-In-Chukot

VISIBILITY (NM)	%
<.5	3.5
.5 <1	2.3
1 <2	4.6
2 <5	8.4
5 <10	6.4
≥10	74.7
N=	3804

Ugol'naja

VISIBILITY (NM)	%
<.5	6.2
.5 <1	4.0
1 <2	6.2
2 <5	9.2
5 <10	11.7
≥10	62.8
N=	5185

Buhta Providenja

VISIBILITY (NM)	%
<.5	2.6
.5 <1	2.7
1 <2	5.3
2 <5	10.4
5 <10	13.4
≥10	65.7
N=	4682

Northeast Cape

VISIBILITY (NM)	%
<.5	4.7
.5 <1	5.2
1 <2	9.8
2 <5	14.3
5 <10	31.6
≥10	34.4
N=	10105

Nome

VISIBILITY (NM)	%
<.5	2.0
.5 <1	3.7
1 <2	5.0
2 <5	10.5
5 <10	16.3
≥10	62.5
N=	21334

Unalakleet

VISIBILITY (NM)	%
<.5	1.4
.5 <1	1.9
1 <2	1.8
2 <5	4.7
5 <10	15.0
≥10	75.2
N=	14615

Cape Romanzof

VISIBILITY (NM)	%
<.5	7.3
.5 <1	8.3
1 <2	6.7
2 <5	14.7
5 <10	30.0
≥10	33.0
N=	18729

Cape Newenham

VISIBILITY (NM)	%
<.5	4.6
.5 <1	5.0
1 <2	7.5
2 <5	17.1
5 <10	30.8
≥10	35.0
N=	19132

King Salmon

VISIBILITY (NM)	%
<.5	0.8
.5 <1	1.5
1 <2	2.9
2 <5	6.0
5 <10	16.8
≥10	72.0
N=	18476

Port Heiden

VISIBILITY (NM)	%
<.5	3.4
.5 <1	3.0
1 <2	2.7
2 <5	8.4
5 <10	13.2
≥10	69.3
N=	2119

Cold Bay

VISIBILITY (NM)	%
<.5	1.9
.5 <1	2.6
1 <2	4.8
2 <5	14.8
5 <10	39.7
≥10	36.2
N=	13435

Nikolski

VISIBILITY (NM)	%
<.5	20.3
.5 <1	1.5
1 <2	1.2
2 <5	4.9
5 <10	33.5
≥10	38.6
N=	2148

St. Paul

VISIBILITY (NM)	%
<.5	6.4
.5 <1	5.0
1 <2	5.7
2 <5	15.1
5 <10	49.9
≥10	17.9
N=	11096

Adak

VISIBILITY (NM)	%
<.5	0.7
.5 <1	1.4
1 <2	4.0
2 <5	19.8
5 <10	67.8
≥10	6.2
N=	22216

Shemya

VISIBILITY (NM)	%
<.5	3.1
.5 <1	5.0
1 <2	7.4
2 <5	15.6
5 <10	42.6
≥10	26.4
N=	18724

Marine Area A

VISIBILITY (NM)	%
<.5	8.4
.5 <1	6.0
1 <2	5.7
2 <5	10.5
5 <10	25.5
≥10	43.9
N=	581

Marine Area B

VISIBILITY (NM)	%
<.5	6.4
.5 <1	5.3
1 <2	7.8
2 <5	13.2
5 <10	28.8
≥10	38.5
N=	4142

Marine Area C

VISIBILITY (NM)	%
<.5	7.0
.5 <1	3.4
1 <2	5.7
2 <5	13.4
5 <10	29.1
≥10	41.4
N=	6158

Marine Area D

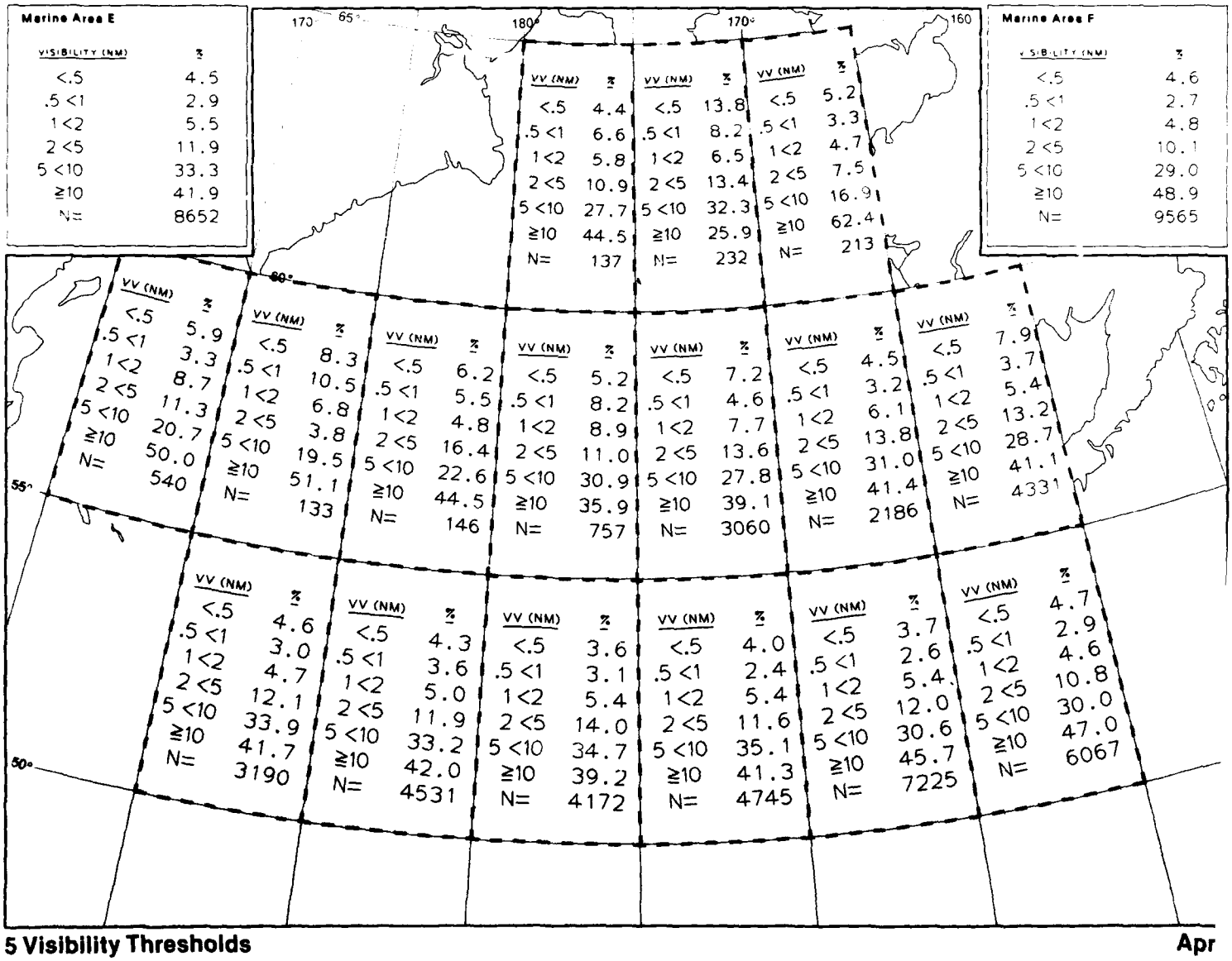
VISIBILITY (NM)	%
<.5	2.9
.5 <1	2.4
1 <2	5.3
2 <5	13.0
5 <10	32.6
≥10	43.7
N=	7490

Marine Area E

VISIBILITY (NM)	%
<.5	4.5
.5 <1	2.9
1 <2	5.5
2 <5	11.9
5 <10	33.3
≥10	41.9
N=	8652

Marine Area F

VISIBILITY (NM)	%
<.5	4.6
.5 <1	2.7
1 <2	4.8
2 <5	10.1
5 <10	29.0
≥10	48.9
N=	9565



VV (NM)	%
<.5	4.4
.5 <1	6.6
1 <2	5.8
2 <5	10.9
5 <10	27.7
≥10	44.5
N=	137

VV (NM)	%
<.5	13.8
.5 <1	8.2
1 <2	6.5
2 <5	13.4
5 <10	32.3
≥10	25.9
N=	232

VV (NM)	%
<.5	5.2
.5 <1	3.3
1 <2	4.7
2 <5	7.5
5 <10	16.9
≥10	62.4
N=	213

VV (NM)	%
<.5	5.9
.5 <1	3.3
1 <2	8.7
2 <5	11.3
5 <10	20.7
≥10	50.0
N=	540

VV (NM)	%
<.5	8.3
.5 <1	10.5
1 <2	6.8
2 <5	3.8
5 <10	19.5
≥10	51.1
N=	133

VV (NM)	%
<.5	6.2
.5 <1	5.5
1 <2	4.8
2 <5	16.4
5 <10	22.6
≥10	44.5
N=	146

VV (NM)	%
<.5	5.2
.5 <1	8.2
1 <2	8.9
2 <5	11.0
5 <10	30.9
≥10	35.9
N=	757

VV (NM)	%
<.5	7.2
.5 <1	4.6
1 <2	7.7
2 <5	13.6
5 <10	27.8
≥10	39.1
N=	3060

VV (NM)	%
<.5	4.5
.5 <1	3.2
1 <2	6.1
2 <5	13.8
5 <10	31.0
≥10	41.4
N=	2186

VV (NM)	%
<.5	7.9
.5 <1	3.7
1 <2	5.4
2 <5	13.2
5 <10	28.7
≥10	41.1
N=	4331

VV (NM)	%
<.5	4.6
.5 <1	3.0
1 <2	4.7
2 <5	12.1
5 <10	33.9
≥10	41.7
N=	3190

VV (NM)	%
<.5	4.3
.5 <1	3.6
1 <2	5.0
2 <5	11.9
5 <10	33.2
≥10	42.0
N=	4531

VV (NM)	%
<.5	3.6
.5 <1	3.1
1 <2	5.4
2 <5	14.0
5 <10	34.7
≥10	39.2
N=	4172

VV (NM)	%
<.5	4.0
.5 <1	2.4
1 <2	5.4
2 <5	11.6
5 <10	35.1
≥10	41.3
N=	4745

VV (NM)	%
<.5	3.7
.5 <1	2.6
1 <2	5.4
2 <5	12.0
5 <10	30.6
≥10	45.7
N=	7225

VV (NM)	%
<.5	4.7
.5 <1	2.9
1 <2	4.6
2 <5	10.8
5 <10	30.0
≥10	47.0
N=	6067

Nikol'skoe

VISIBILITY (NM)	%
<.5	8.4
.5 <1	0.9
1 <2	1.9
2 <5	9.1
5 <10	15.7
≥10	64.0
N=	5710

Khatirka-In-Chukot

VISIBILITY (NM)	%
<.5	8.8
.5 <1	1.4
1 <2	4.9
2 <5	8.8
5 <10	8.0
≥10	68.2
N=	3508

Ugol'naja

VISIBILITY (NM)	%
<.5	6.5
.5 <1	2.0
1 <2	5.3
2 <5	8.7
5 <10	11.6
≥10	65.8
N=	5057

Buhta Providenja

VISIBILITY (NM)	%
<.5	2.5
.5 <1	1.9
1 <2	5.8
2 <5	11.7
5 <10	13.7
≥10	64.3
N=	4716

Northeast Cape

VISIBILITY (NM)	%
<.5	4.0
.5 <1	4.5
1 <2	6.8
2 <5	13.1
5 <10	30.2
≥10	41.3
N=	10469

Nome

VISIBILITY (NM)	%
<.5	1.8
.5 <1	2.2
1 <2	3.7
2 <5	6.8
5 <10	12.2
≥10	73.3
N=	21321

Unalakleet

VISIBILITY (NM)	%
<.5	1.6
.5 <1	1.3
1 <2	1.2
2 <5	3.0
5 <10	7.7
≥10	85.2
N=	14942

Cape Romanzof

VISIBILITY (NM)	%
<.5	3.8
.5 <1	4.2
1 <2	4.8
2 <5	10.6
5 <10	27.0
≥10	49.6
N=	18927

Cape Newenham

VISIBILITY (NM)	%
<.5	4.5
.5 <1	4.1
1 <2	5.7
2 <5	11.1
5 <10	22.6
≥10	52.0
N=	19659

King Salmon

VISIBILITY (NM)	%
<.5	1.4
.5 <1	0.7
1 <2	1.2
2 <5	3.4
5 <10	13.6
≥10	79.7
N=	18359

Port Heiden

VISIBILITY (NM)	%
<.5	2.1
.5 <1	1.7
1 <2	2.1
2 <5	5.4
5 <10	8.3
≥10	80.3
N=	2120

Cold Bay

VISIBILITY (NM)	%
<.5	1.1
.5 <1	1.3
1 <2	2.4
2 <5	9.6
5 <10	39.2
≥10	46.4
N=	13153

Nikolski

VISIBILITY (NM)	%
<.5	26.0
.5 <1	1.4
1 <2	1.1
2 <5	4.6
5 <10	30.5
≥10	36.3
N=	2200

St. Paul

VISIBILITY (NM)	%
<.5	7.2
.5 <1	5.8
1 <2	6.0
2 <5	15.3
5 <10	47.4
≥10	18.3
N=	10506

Adak

VISIBILITY (NM)	%
<.5	0.2
.5 <1	0.6
1 <2	2.6
2 <5	19.2
5 <10	70.9
≥10	6.4
N=	22293

Shemya

VISIBILITY (NM)	%
<.5	5.8
.5 <1	4.9
1 <2	5.7
2 <5	15.5
5 <10	41.3
≥10	26.9
N=	18906

Marine Area A

VISIBILITY (NM)	%
<.5	10.7
.5 <1	4.1
1 <2	7.2
2 <5	11.9
5 <10	29.4
≥10	36.7
N=	1035

Marine Area B

VISIBILITY (NM)	%
<.5	10.2
.5 <1	4.7
1 <2	5.9
2 <5	12.0
5 <10	31.3
≥10	35.9
N=	3825

Marine Area C

VISIBILITY (NM)	%
<.5	10.4
.5 <1	2.6
1 <2	5.0
2 <5	14.1
5 <10	26.3
≥10	41.7
N=	9116

Marine Area D

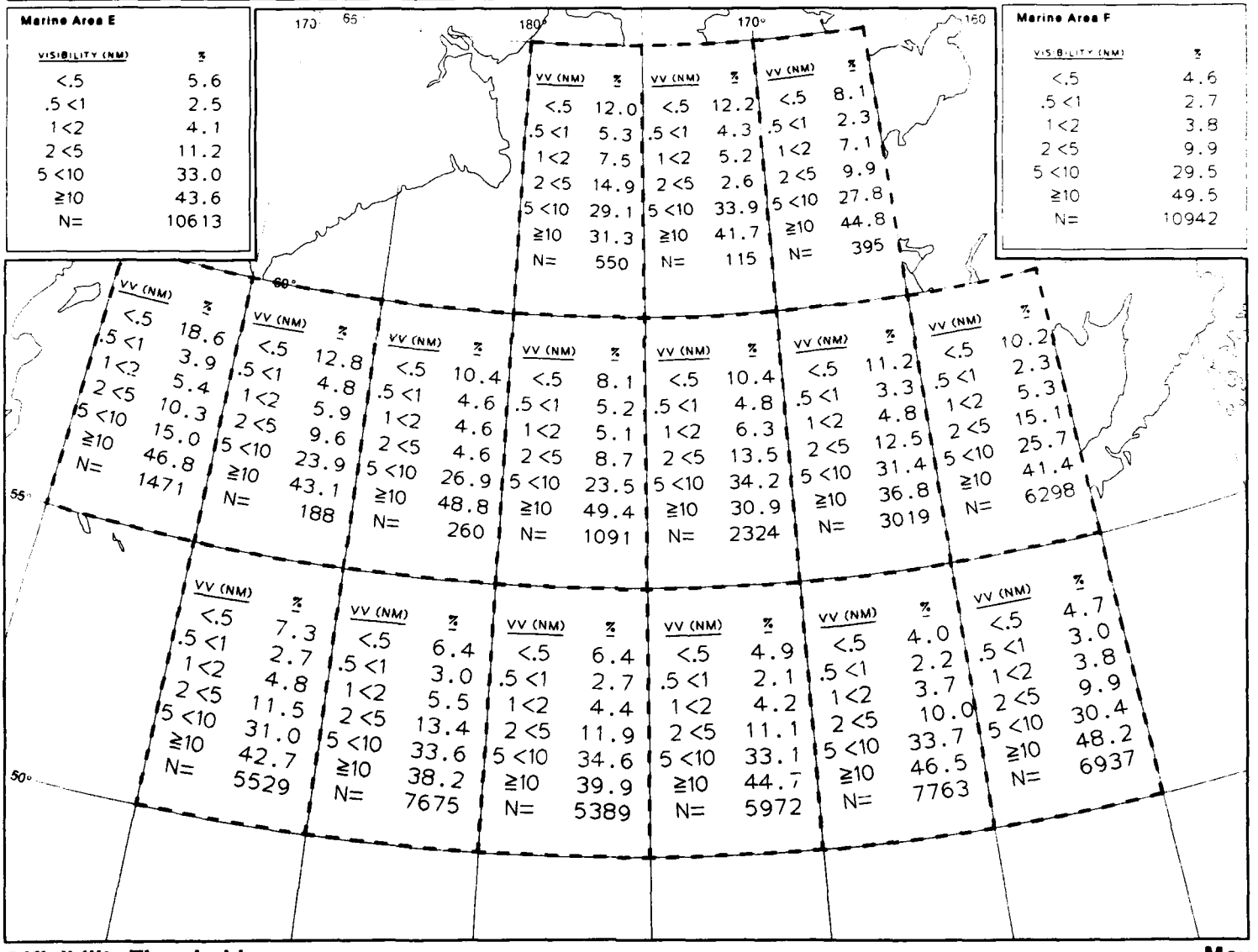
VISIBILITY (NM)	%
<.5	4.2
.5 <1	2.0
1 <2	3.9
2 <5	10.5
5 <10	34.8
≥10	44.6
N=	8511

Marine Area E

VISIBILITY (NM)	%
<.5	5.6
.5 <1	2.5
1 <2	4.1
2 <5	11.2
5 <10	33.0
≥10	43.6
N=	10613

Marine Area F

VISIBILITY (NM)	%
<.5	4.6
.5 <1	2.7
1 <2	3.8
2 <5	9.9
5 <10	29.5
≥10	49.5
N=	10942



5 Visibility Thresholds **May**

Nikol'skoe

VISIBILITY (NM)	%
<.5	16.9
.5 <1	0.6
1 <2	1.7
2 <5	9.1
5 <10	15.9
≧10	55.9
N=	5502

Khetirka-In-Chukot

VISIBILITY (NM)	%
<.5	15.9
.5 <1	0.7
1 <2	3.0
2 <5	8.3
5 <10	8.1
≧10	64.0
N=	3448

Ugol'naja

VISIBILITY (NM)	%
<.5	10.0
.5 <1	0.8
1 <2	1.8
2 <5	5.1
5 <10	8.6
≧10	73.7
N=	4902

Buhta Providenja

VISIBILITY (NM)	%
<.5	5.7
.5 <1	2.1
1 <2	8.6
2 <5	12.0
5 <10	10.4
≧10	61.3
N=	4534

Northeast Cape

VISIBILITY (NM)	%
<.5	7.4
.5 <1	3.9
1 <2	4.9
2 <5	11.0
5 <10	26.8
≧10	46.1
N=	9923

Nome

VISIBILITY (NM)	%
<.5	2.7
.5 <1	2.4
1 <2	3.4
2 <5	6.5
5 <10	11.9
≧10	73.2
N=	20628

Unalakleet

VISIBILITY (NM)	%
<.5	1.6
.5 <1	1.6
1 <2	1.4
2 <5	2.7
5 <10	9.3
≧10	83.3
N=	14476

Cape Romanzof

VISIBILITY (NM)	%
<.5	5.5
.5 <1	4.6
1 <2	3.5
2 <5	10.7
5 <10	29.0
≧10	46.7
N=	17765

Cape Newenham

VISIBILITY (NM)	%
<.5	5.1
.5 <1	3.4
1 <2	5.7
2 <5	13.7
5 <10	20.6
≧10	51.5
N=	18410

King Salmon

VISIBILITY (NM)	%
<.5	1.8
.5 <1	1.3
1 <2	1.5
2 <5	4.1
5 <10	13.2
≧10	78.1
N=	17756

Port Heiden

VISIBILITY (NM)	%
<.5	1.2
.5 <1	2.1
1 <2	2.4
2 <5	8.0
5 <10	9.2
≧10	77.2
N=	2081

Cold Bay

VISIBILITY (NM)	%
<.5	1.3
.5 <1	1.2
1 <2	3.1
2 <5	9.0
5 <10	33.9
≧10	51.5
N=	12720

Nikolski

VISIBILITY (NM)	%
<.5	42.0
.5 <1	1.5
1 <2	1.6
2 <5	6.3
5 <10	19.1
≧10	29.4
N=	2200

St. Paul

VISIBILITY (NM)	%
<.5	11.9
.5 <1	6.8
1 <2	6.3
2 <5	14.8
5 <10	44.8
≧10	15.4
N=	10026

Adak

VISIBILITY (NM)	%
<.5	0.9
.5 <1	1.4
1 <2	3.7
2 <5	21.2
5 <10	65.9
≧10	6.8
N=	21504

Shemya

VISIBILITY (NM)	%
<.5	15.1
.5 <1	7.6
1 <2	8.8
2 <5	16.0
5 <10	31.8
≧10	20.5
N=	18421

Marine Area A

VISIBILITY (NM)	%
<.5	15.2
.5 <1	2.8
1 <2	3.3
2 <5	7.6
5 <10	23.7
≥10	47.3
N=	1692

Marine Area B

VISIBILITY (NM)	%
<.5	16.2
.5 <1	3.6
1 <2	5.7
2 <5	12.2
5 <10	29.3
≥10	33.0
N=	5590

Marine Area C

VISIBILITY (NM)	%
<.5	15.2
.5 <1	2.6
1 <2	4.1
2 <5	12.2
5 <10	27.9
≥10	38.0
N=	9920

Marine Area D

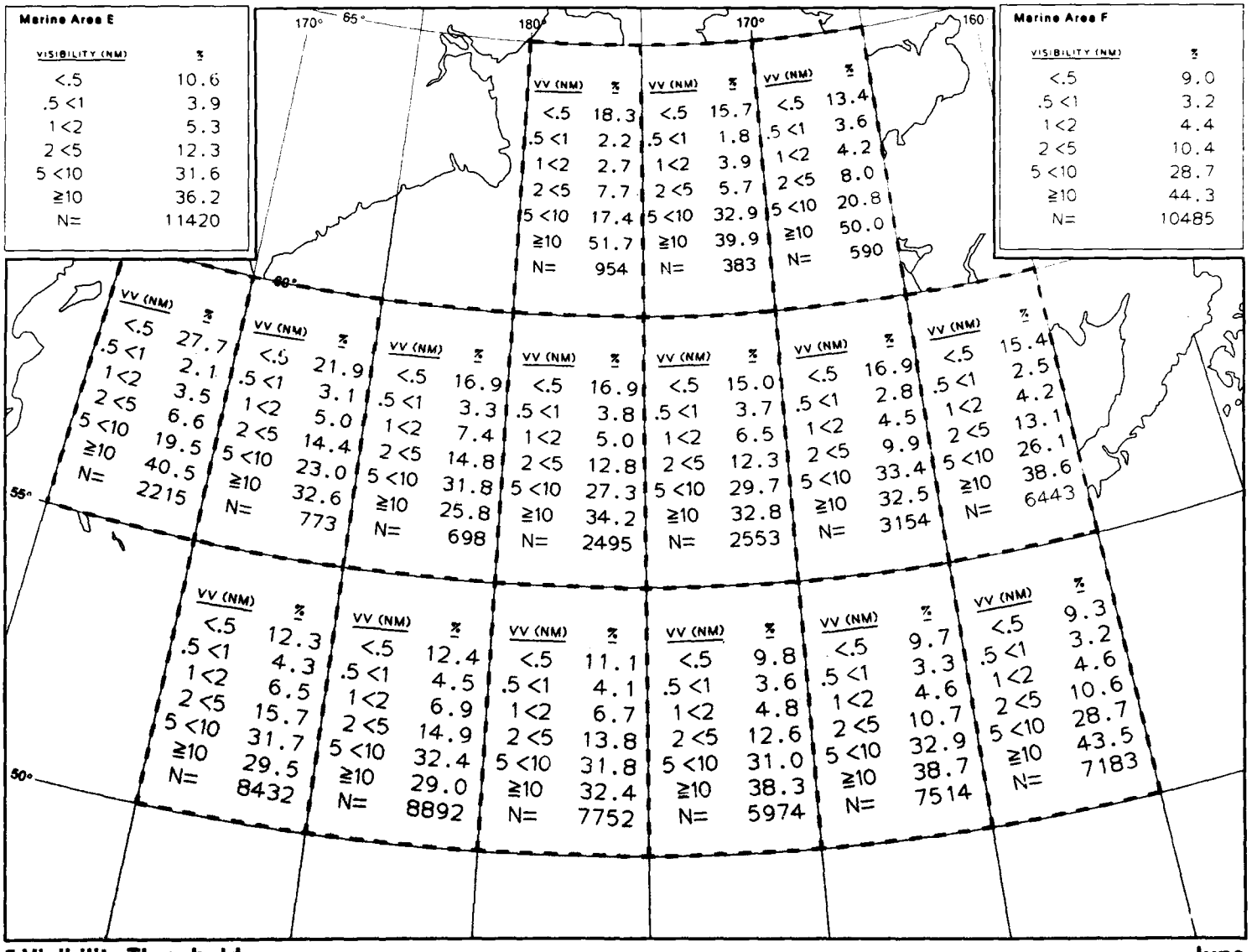
VISIBILITY (NM)	%
<.5	9.8
.5 <1	3.5
1 <2	5.6
2 <5	12.5
5 <10	32.4
≥10	36.3
N=	9820

Marine Area E

VISIBILITY (NM)	%
<.5	10.6
.5 <1	3.9
1 <2	5.3
2 <5	12.3
5 <10	31.6
≥10	36.2
N=	11420

Marine Area F

VISIBILITY (NM)	%
<.5	9.0
.5 <1	3.2
1 <2	4.4
2 <5	10.4
5 <10	28.7
≥10	44.3
N=	10485



5 Visibility Thresholds **June**

Nikol'skoe

VISIBILITY (NM)	%
<.5	25.3
.5 <1	0.6
1 <2	2.1
2 <5	12.8
5 <10	13.7
≥10	45.5
N=	5409

Khatirka-In-Chukot

VISIBILITY (NM)	%
<.5	22.4
.5 <1	0.5
1 <2	3.8
2 <5	8.5
5 <10	8.3
≥10	56.5
N=	3296

Ugol'naja

VISIBILITY (NM)	%
<.5	10.9
.5 <1	1.0
1 <2	2.0
2 <5	5.5
5 <10	8.4
≥10	72.3
N=	4981

Buhta Providenja

VISIBILITY (NM)	%
<.5	4.6
.5 <1	2.1
1 <2	10.6
2 <5	12.6
5 <10	12.0
≥10	58.1
N=	4458

Northeast Cape

VISIBILITY (NM)	%
<.5	4.1
.5 <1	3.8
1 <2	6.8
2 <5	14.6
5 <10	30.1
≥10	40.7
N=	10653

Nome

VISIBILITY (NM)	%
<.5	1.5
.5 <1	2.6
1 <2	5.4
2 <5	9.9
5 <10	16.5
≥10	64.1
N=	21311

Unalakleet

VISIBILITY (NM)	%
<.5	0.5
.5 <1	0.7
1 <2	1.4
2 <5	3.2
5 <10	12.1
≥10	82.2
N=	15878

Cape Romanzof

VISIBILITY (NM)	%
<.5	5.1
.5 <1	4.7
1 <2	3.8
2 <5	12.2
5 <10	31.7
≥10	42.6
N=	18733

Cape Newenham

VISIBILITY (NM)	%
<.5	5.4
.5 <1	4.9
1 <2	8.1
2 <5	17.6
5 <10	23.0
≥10	41.0
N=	19518

King Salmon

VISIBILITY (NM)	%
<.5	2.4
.5 <1	1.3
1 <2	3.0
2 <5	7.0
5 <10	16.4
≥10	69.9
N=	18345

Port Heiden

VISIBILITY (NM)	%
<.5	2.9
.5 <1	4.7
1 <2	3.5
2 <5	9.5
5 <10	10.5
≥10	68.9
N=	1990

Cold Bay

VISIBILITY (NM)	%
<.5	2.6
.5 <1	2.6
1 <2	5.6
2 <5	13.7
5 <10	37.0
≥10	38.7
N=	13868

Nikolski

VISIBILITY (NM)	%
<.5	67.9
.5 <1	1.8
1 <2	0.6
2 <5	3.9
5 <10	9.2
≥10	16.5
N=	2485

St. Paul

VISIBILITY (NM)	%
<.5	18.3
.5 <1	9.0
1 <2	9.4
2 <5	18.1
5 <10	34.7
≥10	10.6
N=	10322

Adak

VISIBILITY (NM)	%
<.5	1.8
.5 <1	2.4
1 <2	6.4
2 <5	25.7
5 <10	57.4
≥10	6.3
N=	22117

Shemya

VISIBILITY (NM)	%
<.5	28.2
.5 <1	11.1
1 <2	10.6
2 <5	15.6
5 <10	21.8
≥10	12.6
N=	19082

Marine Area A

VISIBILITY (NM)	%
<.5	13.7
.5 <1	3.2
1 <2	4.2
2 <5	8.7
5 <10	24.3
≥10	45.9
N=	3619

Marine Area B

VISIBILITY (NM)	%
<.5	16.8
.5 <1	5.4
1 <2	8.0
2 <5	14.9
5 <10	29.2
≥10	25.6
N=	5720

Marine Area C

VISIBILITY (NM)	%
<.5	15.5
.5 <1	4.2
1 <2	5.6
2 <5	13.7
5 <10	28.0
≥10	33.0
N=	9363

Marine Area D

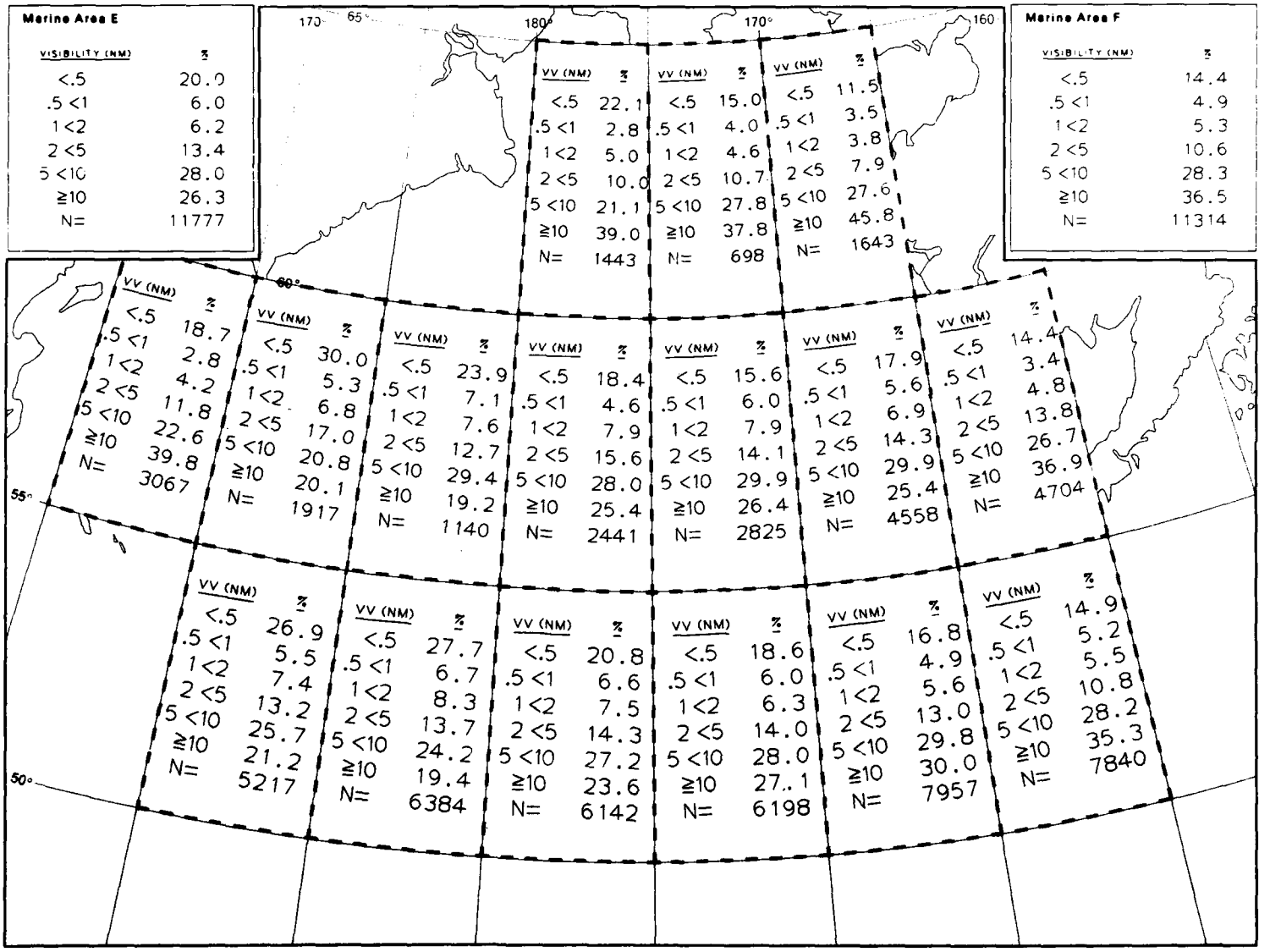
VISIBILITY (NM)	%
<.5	16.5
.5 <1	5.4
1 <2	6.6
2 <5	14.0
5 <10	29.1
≥10	28.4
N=	8520

Marine Area E

VISIBILITY (NM)	%
<.5	20.0
.5 <1	6.0
1 <2	6.2
2 <5	13.4
5 <10	28.0
≥10	26.3
N=	11777

Marine Area F

VISIBILITY (NM)	%
<.5	14.4
.5 <1	4.9
1 <2	5.3
2 <5	10.6
5 <10	28.3
≥10	36.5
N=	11314



5 Visibility Thresholds **July**

Nikol'skoe

VISIBILITY (NM)	%
<.5	15.2
.5 <1	0.4
1 <2	2.5
2 <5	10.9
5 <10	15.1
≥10	55.9
N=	5334

Khatirka-In-Chukot

VISIBILITY (NM)	%
<.5	15.0
.5 <1	0.3
1 <2	3.9
2 <5	10.6
5 <10	9.5
≥10	60.7
N=	3318

Ugol'naja

VISIBILITY (NM)	%
<.5	8.4
.5 <1	0.7
1 <2	3.2
2 <5	7.1
5 <10	12.8
≥10	67.8
N=	4877

Buhta Providenja

VISIBILITY (NM)	%
<.5	2.7
.5 <1	1.3
1 <2	7.0
2 <5	12.6
5 <10	15.0
≥10	61.5
N=	4520

Northeast Cape

VISIBILITY (NM)	%
<.5	3.3
.5 <1	3.0
1 <2	7.4
2 <5	16.2
5 <10	32.4
≥10	37.7
N=	10877

Nome

VISIBILITY (NM)	%
<.5	0.8
.5 <1	2.1
1 <2	5.1
2 <5	10.7
5 <10	19.7
≥10	61.5
N=	21799

Unalakleet

VISIBILITY (NM)	%
<.5	0.3
.5 <1	0.6
1 <2	1.6
2 <5	3.8
5 <10	15.5
≥10	78.3
N=	15788

Cape Romanzof

VISIBILITY (NM)	%
<.5	2.9
.5 <1	4.8
1 <2	4.3
2 <5	13.0
5 <10	30.7
≥10	44.3
N=	18816

Cape Newenham

VISIBILITY (NM)	%
<.5	4.0
.5 <1	5.0
1 <2	7.2
2 <5	17.4
5 <10	24.4
≥10	42.1
N=	20133

King Salmon

VISIBILITY (NM)	%
<.5	2.5
.5 <1	1.6
1 <2	3.3
2 <5	8.7
5 <10	21.2
≥10	62.8
N=	18828

Port Heiden

VISIBILITY (NM)	%
<.5	3.6
.5 <1	3.9
1 <2	4.0
2 <5	9.7
5 <10	11.8
≥10	67.0
N=	2005

Cold Bay

VISIBILITY (NM)	%
<.5	1.8
.5 <1	3.4
1 <2	7.0
2 <5	15.5
5 <10	38.2
≥10	34.0
N=	14376

Nikolski

VISIBILITY (NM)	%
<.5	58.5
.5 <1	1.5
1 <2	1.3
2 <5	3.8
5 <10	14.9
≥10	20.0
N=	2476

St. Paul

VISIBILITY (NM)	%
<.5	13.0
.5 <1	7.9
1 <2	8.5
2 <5	17.1
5 <10	41.3
≥10	12.1
N=	11089

Adak

VISIBILITY (NM)	%
<.5	1.9
.5 <1	2.2
1 <2	6.4
2 <5	25.4
5 <10	58.1
≥10	6.0
N=	22130

Shemya

VISIBILITY (NM)	%
<.5	24.6
.5 <1	10.0
1 <2	9.0
2 <5	14.5
5 <10	25.0
≥10	16.8
N=	19015

Marine Area A

VISIBILITY (NM)	%
<.5	9.2
.5 <1	4.0
1 <2	4.5
2 <5	10.7
5 <10	23.3
≥10	48.3
N=	3710

Marine Area B

VISIBILITY (NM)	%
<.5	13.9
.5 <1	6.0
1 <2	7.3
2 <5	15.3
5 <10	26.5
≥10	31.1
N=	3510

Marine Area C

VISIBILITY (NM)	%
<.5	11.9
.5 <1	4.0
1 <2	6.0
2 <5	16.8
5 <10	29.8
≥10	31.5
N=	8097

Marine Area D

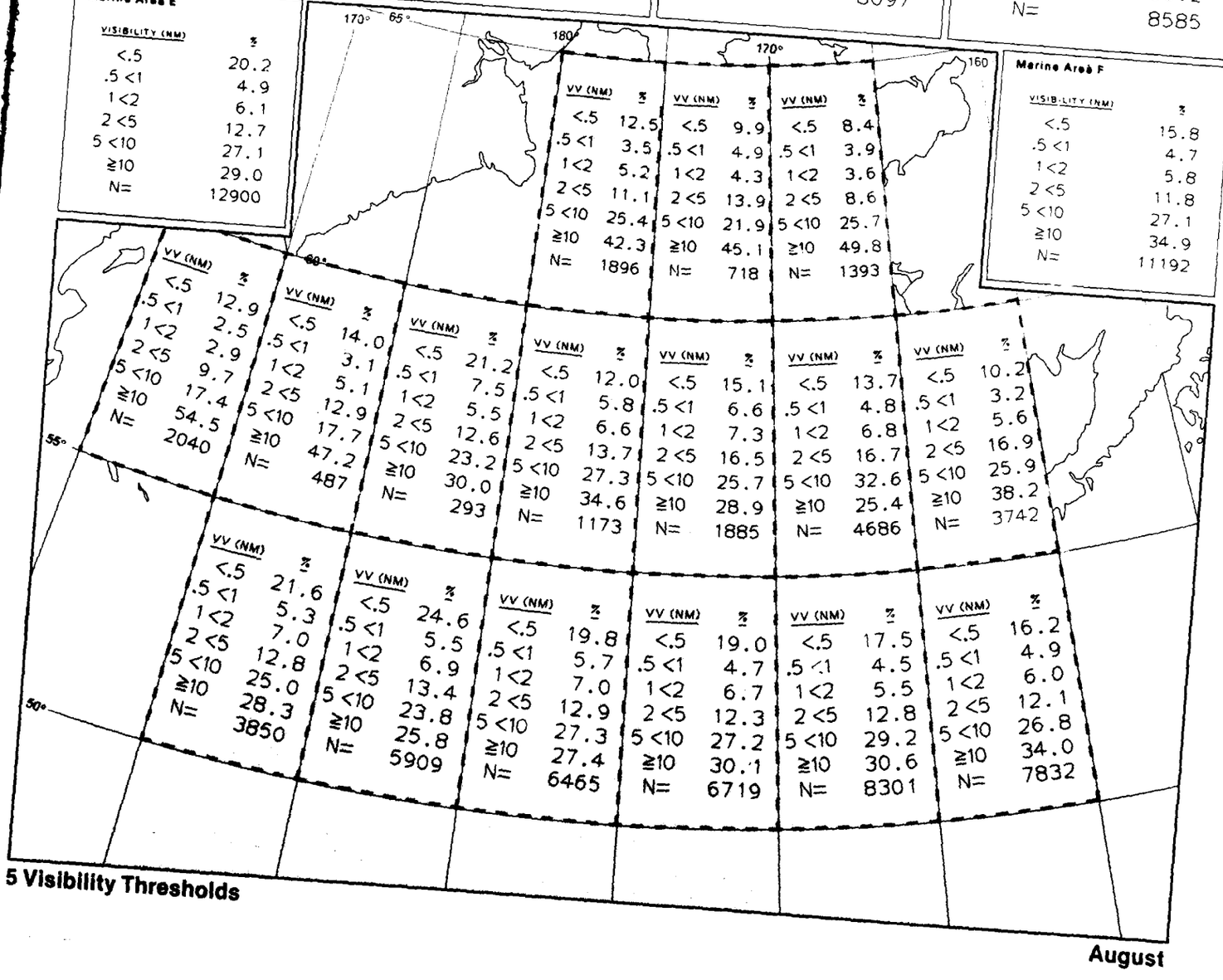
VISIBILITY (NM)	%
<.5	16.4
.5 <1	4.8
1 <2	6.7
2 <5	12.5
5 <10	29.4
≥10	30.2
N=	8585

Marine Area E

VISIBILITY (NM)	%
<.5	20.2
.5 <1	4.9
1 <2	6.1
2 <5	12.7
5 <10	27.1
≥10	29.0
N=	12900

Marine Area F

VISIBILITY (NM)	%
<.5	15.8
.5 <1	4.7
1 <2	5.8
2 <5	11.8
5 <10	27.1
≥10	34.9
N=	11192



5 Visibility Thresholds

August

Nikol'skoe

VISIBILITY (NM)	%
<.5	4.7
.5 <1	0.2
1 <2	0.9
2 <5	7.3
5 <10	14.3
≧10	72.5
N=	5294

Khatirka-In-Chukot

VISIBILITY (NM)	%
<.5	6.4
.5 <1	0.3
1 <2	2.4
2 <5	7.9
5 <10	6.3
≧10	76.8
N=	3190

Ugol'naja

VISIBILITY (NM)	%
<.5	2.5
.5 <1	0.5
1 <2	2.1
2 <5	7.5
5 <10	15.8
≧10	71.6
N=	4824

Buhte Providenja

VISIBILITY (NM)	%
<.5	0.9
.5 <1	0.7
1 <2	3.6
2 <5	8.7
5 <10	13.9
≧10	72.1
N=	4337

Northeast Cape

VISIBILITY (NM)	%
<.5	1.7
.5 <1	2.6
1 <2	4.9
2 <5	14.0
5 <10	37.9
≧10	39.0
N=	10867

Nome

VISIBILITY (NM)	%
<.5	0.3
.5 <1	1.0
1 <2	2.4
2 <5	7.1
5 <10	20.4
≧10	68.7
N=	21074

Unalakleet

VISIBILITY (NM)	%
<.5	0.2
.5 <1	0.2
1 <2	0.5
2 <5	1.5
5 <10	15.5
≧10	82.1
N=	15346

Cape Romanzof

VISIBILITY (NM)	%
<.5	1.2
.5 <1	2.5
1 <2	3.2
2 <5	10.0
5 <10	32.6
≧10	50.6
N=	18226

Cape Newenham

VISIBILITY (NM)	%
<.5	1.0
.5 <1	1.8
1 <2	3.5
2 <5	11.3
5 <10	29.5
≧10	53.0
N=	19786

King Salmon

VISIBILITY (NM)	%
<.5	1.4
.5 <1	0.5
1 <2	1.0
2 <5	4.2
5 <10	20.1
≧10	72.8
N=	18216

Port Heiden

VISIBILITY (NM)	%
<.5	0.4
.5 <1	0.6
1 <2	1.4
2 <5	6.1
5 <10	16.5
≧10	74.9
N=	2103

Cold Bay

VISIBILITY (NM)	%
<.5	0.4
.5 <1	1.2
1 <2	3.8
2 <5	10.0
5 <10	44.0
≧10	40.5
N=	13918

Nikolski

VISIBILITY (NM)	%
<.5	32.8
.5 <1	0.9
1 <2	0.7
2 <5	4.7
5 <10	23.3
≧10	37.5
N=	2382

St. Paul

VISIBILITY (NM)	%
<.5	5.1
.5 <1	3.5
1 <2	4.6
2 <5	11.1
5 <10	57.5
≧10	18.1
N=	10315

Adak

VISIBILITY (NM)	%
<.5	0.3
.5 <1	1.3
1 <2	4.1
2 <5	21.0
5 <10	65.8
≧10	7.5
N=	21505

Shemya

VISIBILITY (NM)	%
<.5	5.3
.5 <1	4.3
1 <2	5.5
2 <5	11.4
5 <10	41.2
≧10	32.3
N=	18936

Marine Area A

VISIBILITY (NM)	%
<.5	2.1
.5 <1	2.0
1 <2	3.0
2 <5	6.4
5 <10	24.2
≧10	62.3
N=	2305

Marine Area B

VISIBILITY (NM)	%
<.5	5.0
.5 <1	2.9
1 <2	6.1
2 <5	12.7
5 <10	31.4
≧10	42.0
N=	2574

Marine Area C

VISIBILITY (NM)	%
<.5	4.3
.5 <1	2.7
1 <2	5.2
2 <5	14.4
5 <10	31.7
≧10	41.7
N=	8283

Marine Area D

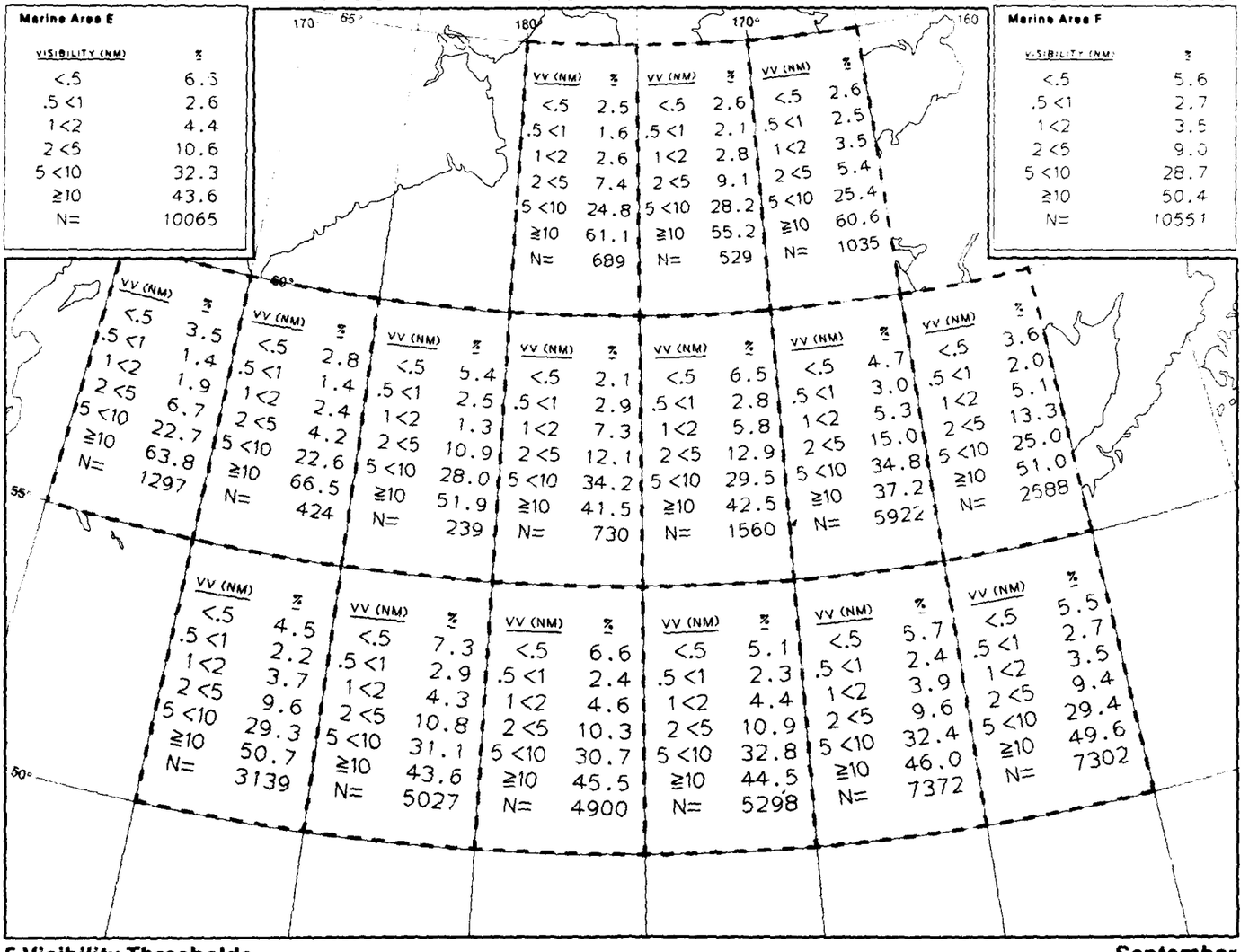
VISIBILITY (NM)	%
<.5	4.9
.5 <1	2.0
1 <2	4.0
2 <5	9.7
5 <10	31.6
≧10	47.8
N=	7505

Marine Area E

VISIBILITY (NM)	%
<.5	6.3
.5 <1	2.6
1 <2	4.4
2 <5	10.6
5 <10	32.3
≧10	43.6
N=	10065

Marine Area F

VISIBILITY (NM)	%
<.5	5.6
.5 <1	2.7
1 <2	3.5
2 <5	9.0
5 <10	28.7
≧10	50.4
N=	10551



VV (NM)	%
<.5	2.5
.5 <1	1.6
1 <2	2.6
2 <5	7.4
5 <10	24.8
≧10	61.1
N=	689

VV (NM)	%
<.5	2.6
.5 <1	2.1
1 <2	2.8
2 <5	9.1
5 <10	28.2
≧10	55.2
N=	529

VV (NM)	%
<.5	2.6
.5 <1	2.5
1 <2	3.5
2 <5	5.4
5 <10	25.4
≧10	60.6
N=	1035

VV (NM)	%
<.5	3.5
.5 <1	1.4
1 <2	1.9
2 <5	6.7
5 <10	22.7
≧10	63.8
N=	1297

VV (NM)	%
<.5	2.8
.5 <1	1.4
1 <2	2.4
2 <5	4.2
5 <10	22.6
≧10	66.5
N=	424

VV (NM)	%
<.5	5.4
.5 <1	2.5
1 <2	1.3
2 <5	10.9
5 <10	28.0
≧10	51.9
N=	239

VV (NM)	%
<.5	2.1
.5 <1	2.9
1 <2	7.3
2 <5	12.1
5 <10	34.2
≧10	41.5
N=	730

VV (NM)	%
<.5	6.5
.5 <1	2.8
1 <2	5.8
2 <5	12.9
5 <10	29.5
≧10	42.5
N=	1560

VV (NM)	%
<.5	4.7
.5 <1	3.0
1 <2	5.3
2 <5	15.0
5 <10	34.8
≧10	37.2
N=	5922

VV (NM)	%
<.5	3.6
.5 <1	2.0
1 <2	5.1
2 <5	13.3
5 <10	25.0
≧10	51.0
N=	2588

VV (NM)	%
<.5	4.5
.5 <1	2.2
1 <2	3.7
2 <5	9.6
5 <10	29.3
≧10	50.7
N=	3139

VV (NM)	%
<.5	7.3
.5 <1	2.9
1 <2	4.3
2 <5	10.8
5 <10	31.1
≧10	43.6
N=	5027

VV (NM)	%
<.5	6.6
.5 <1	2.4
1 <2	4.6
2 <5	10.3
5 <10	30.7
≧10	45.5
N=	4900

VV (NM)	%
<.5	5.1
.5 <1	2.3
1 <2	4.4
2 <5	10.9
5 <10	32.8
≧10	44.5
N=	5298

VV (NM)	%
<.5	5.7
.5 <1	2.4
1 <2	3.9
2 <5	9.6
5 <10	32.4
≧10	46.0
N=	7372

VV (NM)	%
<.5	5.5
.5 <1	2.7
1 <2	3.5
2 <5	9.4
5 <10	29.4
≧10	49.6
N=	7302

5 Visibility Thresholds **September**

Nikol'skoe

VISIBILITY (NM)	%
<.5	1.4
.5 <1	0.5
1 <2	1.1
2 <5	5.9
5 <10	18.6
≥10	72.5
N=	5552

Khatirka-In-Chukot

VISIBILITY (NM)	%
<.5	1.3
.5 <1	1.0
1 <2	2.2
2 <5	9.1
5 <10	5.5
≥10	80.9
N=	3551

Ugol'naja

VISIBILITY (NM)	%
<.5	4.1
.5 <1	3.2
1 <2	6.0
2 <5	11.3
5 <10	13.6
≥10	61.8
N=	5148

Buhta Providenja

VISIBILITY (NM)	%
<.5	1.2
.5 <1	1.4
1 <2	4.1
2 <5	8.8
5 <10	19.6
≥10	65.0
N=	4556

Northeast Cape

VISIBILITY (NM)	%
<.5	1.3
.5 <1	1.9
1 <2	5.0
2 <5	12.5
5 <10	44.7
≥10	34.6
N=	11097

Nome

VISIBILITY (NM)	%
<.5	0.7
.5 <1	1.5
1 <2	2.8
2 <5	7.4
5 <10	20.5
≥10	67.1
N=	21813

Unalakleet

VISIBILITY (NM)	%
<.5	0.6
.5 <1	1.0
1 <2	1.4
2 <5	3.2
5 <10	18.7
≥10	75.2
N=	15781

Cape Romanzof

VISIBILITY (NM)	%
<.5	2.3
.5 <1	3.8
1 <2	3.1
2 <5	9.2
5 <10	33.6
≥10	47.9
N=	18667

Cape Newenham

VISIBILITY (NM)	%
<.5	0.5
.5 <1	1.8
1 <2	2.9
2 <5	11.0
5 <10	34.7
≥10	49.0
N=	20546

King Salmon

VISIBILITY (NM)	%
<.5	1.3
.5 <1	1.0
1 <2	1.4
2 <5	3.9
5 <10	21.2
≥10	71.3
N=	18847

Port Heiden

VISIBILITY (NM)	%
<.5	0.6
.5 <1	1.2
1 <2	1.6
2 <5	5.9
5 <10	17.1
≥10	73.6
N=	2043

Cold Bay

VISIBILITY (NM)	%
<.5	0.3
.5 <1	0.7
1 <2	1.8
2 <5	8.2
5 <10	50.7
≥10	38.3
N=	14380

Nikolski

VISIBILITY (NM)	%
<.5	10.6
.5 <1	0.7
1 <2	0.4
2 <5	6.3
5 <10	35.9
≥10	46.1
N=	2462

St. Paul

VISIBILITY (NM)	%
<.5	0.8
.5 <1	1.2
1 <2	2.3
2 <5	9.4
5 <10	67.6
≥10	18.6
N=	11311

Adak

VISIBILITY (NM)	%
<.5	0.2
.5 <1	0.5
1 <2	2.8
2 <5	16.0
5 <10	72.9
≥10	7.6
N=	22271

Shemya

VISIBILITY (NM)	%
<.5	1.5
.5 <1	2.1
1 <2	3.8
2 <5	11.4
5 <10	49.6
≥10	31.5
N=	19588

Marine Area A

VISIBILITY (NM)	%
<.5	1.7
.5 <1	2.2
1 <2	3.9
2 <5	10.3
5 <10	25.1
≥10	56.8
N=	1374

Marine Area B

VISIBILITY (NM)	%
<.5	2.2
.5 <1	2.0
1 <2	4.0
2 <5	13.6
5 <10	36.3
≥10	41.8
N=	1795

Marine Area C

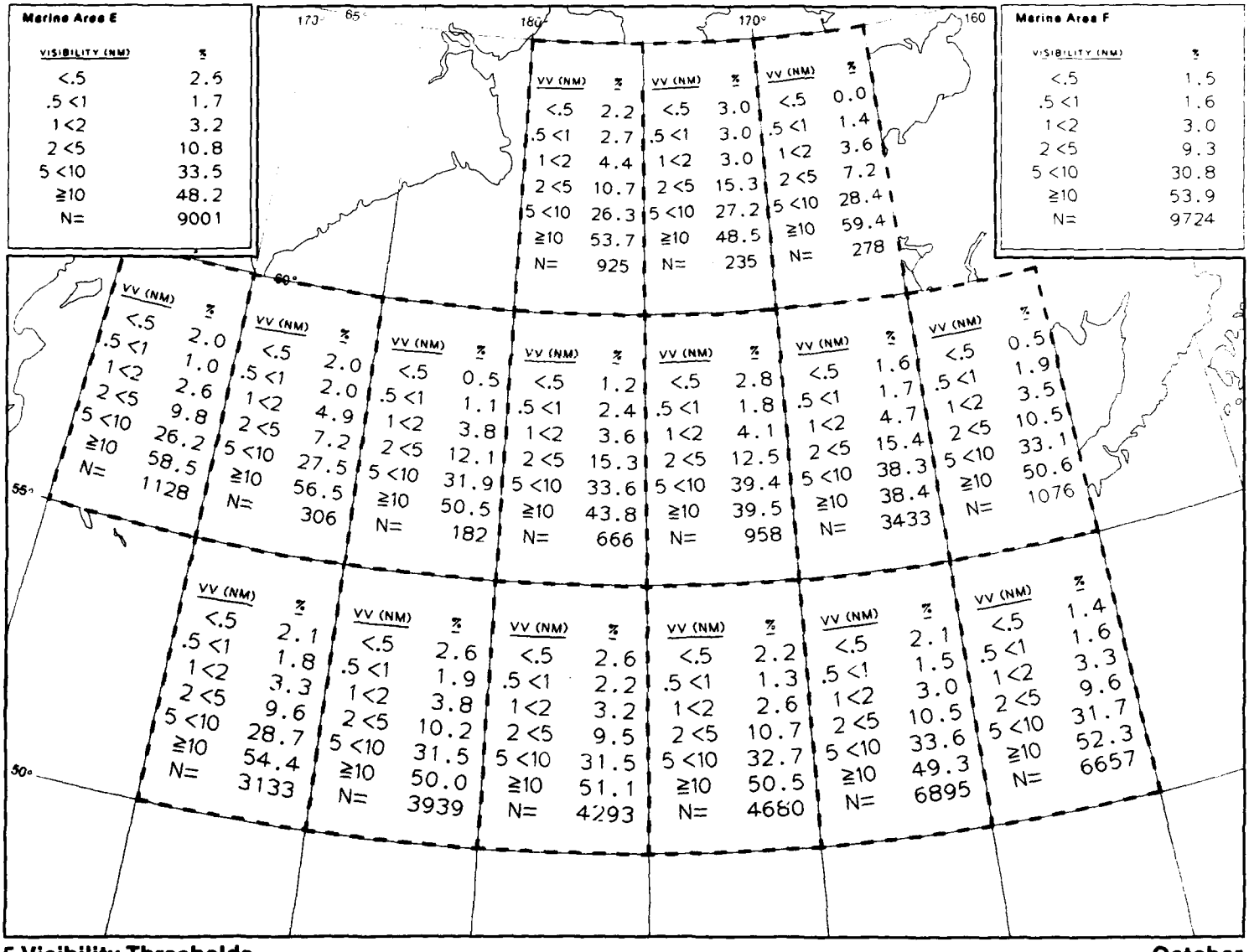
VISIBILITY (NM)	%
<.5	1.3
.5 <1	1.7
1 <2	4.4
2 <5	14.2
5 <10	37.2
≥10	41.1
N=	4302

Marine Area D

VISIBILITY (NM)	%
<.5	1.8
.5 <1	1.4
1 <2	2.6
2 <5	9.6
5 <10	31.8
≥10	52.6
N=	6867

Marine Area E

VISIBILITY (NM)	%
<.5	2.6
.5 <1	1.7
1 <2	3.2
2 <5	10.8
5 <10	33.5
≥10	48.2
N=	9001



VV (NM)	%
<.5	2.2
.5 <1	2.7
1 <2	4.4
2 <5	10.7
5 <10	26.3
≥10	53.7
N=	925

VV (NM)	%
<.5	3.0
.5 <1	3.0
1 <2	3.0
2 <5	15.3
5 <10	27.2
≥10	48.5
N=	235

VV (NM)	%
<.5	0.0
.5 <1	1.4
1 <2	3.6
2 <5	7.2
5 <10	28.4
≥10	59.4
N=	278

Marine Area F

VISIBILITY (NM)	%
<.5	1.5
.5 <1	1.6
1 <2	3.0
2 <5	9.3
5 <10	30.8
≥10	53.9
N=	9724

VV (NM)	%
<.5	2.0
.5 <1	1.0
1 <2	2.6
2 <5	9.8
5 <10	26.2
≥10	58.5
N=	1128

VV (NM)	%
<.5	2.0
.5 <1	2.0
1 <2	4.9
2 <5	7.2
5 <10	27.5
≥10	56.5
N=	306

VV (NM)	%
<.5	0.5
.5 <1	1.1
1 <2	3.8
2 <5	12.1
5 <10	31.9
≥10	50.5
N=	182

VV (NM)	%
<.5	1.2
.5 <1	2.4
1 <2	3.6
2 <5	15.3
5 <10	33.6
≥10	43.8
N=	666

VV (NM)	%
<.5	2.8
.5 <1	1.8
1 <2	4.1
2 <5	12.5
5 <10	39.4
≥10	39.5
N=	958

VV (NM)	%
<.5	1.6
.5 <1	1.7
1 <2	4.7
2 <5	15.4
5 <10	38.3
≥10	38.4
N=	3433

VV (NM)	%
<.5	0.5
.5 <1	1.9
1 <2	3.5
2 <5	10.5
5 <10	33.1
≥10	50.6
N=	1076

VV (NM)	%
<.5	2.1
.5 <1	1.8
1 <2	3.3
2 <5	9.6
5 <10	28.7
≥10	54.4
N=	3133

VV (NM)	%
<.5	2.6
.5 <1	1.9
1 <2	3.8
2 <5	10.2
5 <10	31.5
≥10	50.0
N=	3939

VV (NM)	%
<.5	2.6
.5 <1	2.2
1 <2	3.2
2 <5	9.5
5 <10	31.5
≥10	51.1
N=	4293

VV (NM)	%
<.5	2.2
.5 <1	1.3
1 <2	2.6
2 <5	10.7
5 <10	32.7
≥10	50.5
N=	4680

VV (NM)	%
<.5	2.1
.5 <1	1.5
1 <2	3.0
2 <5	10.5
5 <10	33.6
≥10	49.3
N=	6895

VV (NM)	%
<.5	1.4
.5 <1	1.6
1 <2	3.3
2 <5	9.6
5 <10	31.7
≥10	52.3
N=	6657

5 Visibility Thresholds **October**

Nikol'skoe

VISIBILITY (NM)	%
<.5	2.2
.5 <1	1.5
1 <2	3.3
2 <5	9.1
5 <10	17.4
≥10	66.5
N=	5297

Khatirka-In-Chukot

VISIBILITY (NM)	%
<.5	4.1
.5 <1	2.5
1 <2	5.4
2 <5	8.8
5 <10	6.5
≥10	72.8
N=	3278

Ugol'naja

VISIBILITY (NM)	%
<.5	12.4
.5 <1	6.7
1 <2	9.2
2 <5	13.5
5 <10	13.1
≥10	45.0
N=	5005

Buhta Providenja

VISIBILITY (NM)	%
<.5	2.7
.5 <1	3.6
1 <2	7.8
2 <5	13.2
5 <10	18.1
≥10	54.6
N=	4328

Northeast Cape

VISIBILITY (NM)	%
<.5	3.8
.5 <1	4.7
1 <2	9.6
2 <5	19.0
5 <10	45.7
≥10	17.1
N=	10394

Nome

VISIBILITY (NM)	%
<.5	2.4
.5 <1	4.0
1 <2	5.1
2 <5	9.7
5 <10	24.6
≥10	54.1
N=	21113

Unalakleet

VISIBILITY (NM)	%
<.5	1.4
.5 <1	2.2
1 <2	2.3
2 <5	5.6
5 <10	22.2
≥10	66.3
N=	15373

Cape Romanzof

VISIBILITY (NM)	%
<.5	5.2
.5 <1	5.5
1 <2	4.7
2 <5	13.4
5 <10	34.1
≥10	37.2
N=	17766

Cape Newenham

VISIBILITY (NM)	%
<.5	2.8
.5 <1	4.5
1 <2	5.6
2 <5	14.6
5 <10	35.9
≥10	36.7
N=	19319

King Salmon

VISIBILITY (NM)	%
<.5	2.5
.5 <1	1.9
1 <2	2.7
2 <5	4.7
5 <10	21.3
≥10	67.0
N=	18239

Port Heiden

VISIBILITY (NM)	%
<.5	2.9
.5 <1	1.9
1 <2	1.7
2 <5	6.2
5 <10	14.8
≥10	72.4
N=	1802

Cold Bay

VISIBILITY (NM)	%
<.5	1.1
.5 <1	1.8
1 <2	2.9
2 <5	10.1
5 <10	50.7
≥10	33.4
N=	13920

Nikolski

VISIBILITY (NM)	%
<.5	13.8
.5 <1	1.1
1 <2	0.8
2 <5	5.7
5 <10	35.9
≥10	42.7
N=	2398

St. Paul

VISIBILITY (NM)	%
<.5	1.4
.5 <1	2.1
1 <2	3.0
2 <5	13.1
5 <10	65.5
≥10	14.8
N=	11381

Adak

VISIBILITY (NM)	%
<.5	0.6
.5 <1	1.0
1 <2	3.5
2 <5	17.0
5 <10	71.8
≥10	6.0
N=	20827

Shemya

VISIBILITY (NM)	%
<.5	2.0
.5 <1	2.7
1 <2	4.8
2 <5	14.0
5 <10	54.0
≥10	22.5
N=	18944

Marine Area A

VISIBILITY (NM)	%
<.5	2.6
.5 <1	4.1
1 <2	8.8
2 <5	15.8
5 <10	19.0
≥10	49.8
N=	1200

Marine Area B

VISIBILITY (NM)	%
<.5	1.4
.5 <1	2.7
1 <2	5.2
2 <5	11.1
5 <10	26.3
≥10	53.4
N=	2489

Marine Area C

VISIBILITY (NM)	%
<.5	1.9
.5 <1	2.6
1 <2	5.4
2 <5	14.3
5 <10	37.5
≥10	38.3
N=	3046

Marine Area D

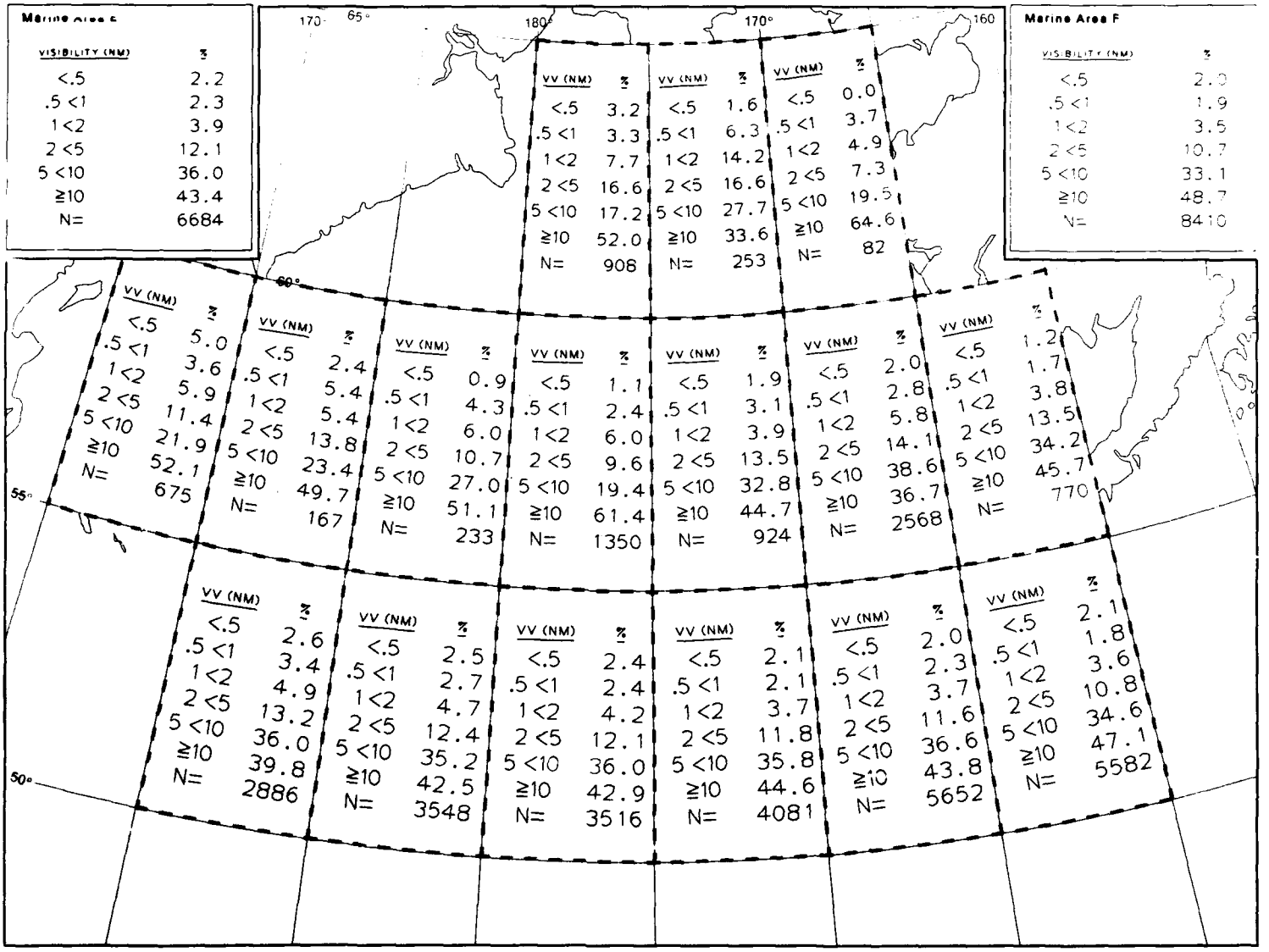
VISIBILITY (NM)	%
<.5	2.0
.5 <1	2.2
1 <2	3.7
2 <5	11.5
5 <10	36.4
≥10	44.2
N=	6565

Marine Area E

VISIBILITY (NM)	%
<.5	2.2
.5 <1	2.3
1 <2	3.9
2 <5	12.1
5 <10	36.0
≥10	43.4
N=	6684

Marine Area F

VISIBILITY (NM)	%
<.5	2.0
.5 <1	1.9
1 <2	3.5
2 <5	10.7
5 <10	33.1
≥10	48.7
N=	8410



5 Visibility Thresholds **November**

Nikol'skoe

VISIBILITY (NM)	%
<.5	4.5
.5 <1	4.2
1 <2	4.6
2 <5	10.2
5 <10	17.6
≥10	58.9
N=	5460

Khatirka-In-Chukot

VISIBILITY (NM)	%
<.5	4.4
.5 <1	3.3
1 <2	8.6
2 <5	10.0
5 <10	7.0
≥10	66.7
N=	3282

Ugol'naja

VISIBILITY (NM)	%
<.5	14.4
.5 <1	7.1
1 <2	8.6
2 <5	12.5
5 <10	13.0
≥10	44.4
N=	5218

Buhta Providenja

VISIBILITY (NM)	%
<.5	3.7
.5 <1	3.5
1 <2	6.3
2 <5	10.6
5 <10	18.2
≥10	57.7
N=	4476

Norheast Cape

VISIBILITY (NM)	%
<.5	3.3
.5 <1	4.6
1 <2	8.4
2 <5	17.4
5 <10	38.4
≥10	27.8
N=	9459

Nome

VISIBILITY (NM)	%
<.5	3.5
.5 <1	3.6
1 <2	4.4
2 <5	9.6
5 <10	24.5
≥10	54.5
N=	21808

Unalakleet

VISIBILITY (NM)	%
<.5	2.2
.5 <1	2.0
1 <2	2.2
2 <5	5.4
5 <10	26.7
≥10	61.5
N=	15851

Cape Romanzof

VISIBILITY (NM)	%
<.5	7.8
.5 <1	6.8
1 <2	4.6
2 <5	14.0
5 <10	32.2
≥10	34.7
N=	16673

Cape Newenham

VISIBILITY (NM)	%
<.5	4.2
.5 <1	5.2
1 <2	7.5
2 <5	16.0
5 <10	35.2
≥10	31.8
N=	19154

King Salmon

VISIBILITY (NM)	%
<.5	2.4
.5 <1	3.2
1 <2	3.8
2 <5	5.4
5 <10	24.0
≥10	61.3
N=	18839

Port Heiden

VISIBILITY (NM)	%
<.5	5.2
.5 <1	3.5
1 <2	2.2
2 <5	7.2
5 <10	23.6
≥10	58.3
N=	1986

Cold Bay

VISIBILITY (NM)	%
<.5	3.1
.5 <1	3.3
1 <2	4.8
2 <5	12.7
5 <10	46.2
≥10	29.8
N=	14382

Nikolski

VISIBILITY (NM)	%
<.5	12.4
.5 <1	1.7
1 <2	1.5
2 <5	7.0
5 <10	39.2
≥10	38.2
N=	2228

St. Paul

VISIBILITY (NM)	%
<.5	4.4
.5 <1	3.7
1 <2	4.1
2 <5	14.9
5 <10	60.8
≥10	12.1
N=	11800

Adak

VISIBILITY (NM)	%
<.5	1.4
.5 <1	2.0
1 <2	4.8
2 <5	17.9
5 <10	69.9
≥10	3.9
N=	22168

Shemya

VISIBILITY (NM)	%
<.5	2.8
.5 <1	3.6
1 <2	5.9
2 <5	16.7
5 <10	52.1
≥10	18.9
N=	19140

Marine Area A

VISIBILITY (NM)	%
<.5	6.2
.5 <1	6.2
1 <2	16.1
2 <5	16.7
5 <10	14.7
≥10	40.1
N=	2045

Marine Area B

VISIBILITY (NM)	%
<.5	4.8
.5 <1	5.2
1 <2	10.5
2 <5	13.1
5 <10	22.4
≥10	44.0
N=	3267

Marine Area C

VISIBILITY (NM)	%
<.5	3.4
.5 <1	3.9
1 <2	6.2
2 <5	14.2
5 <10	31.4
≥10	40.9
N=	346

Marine Area D

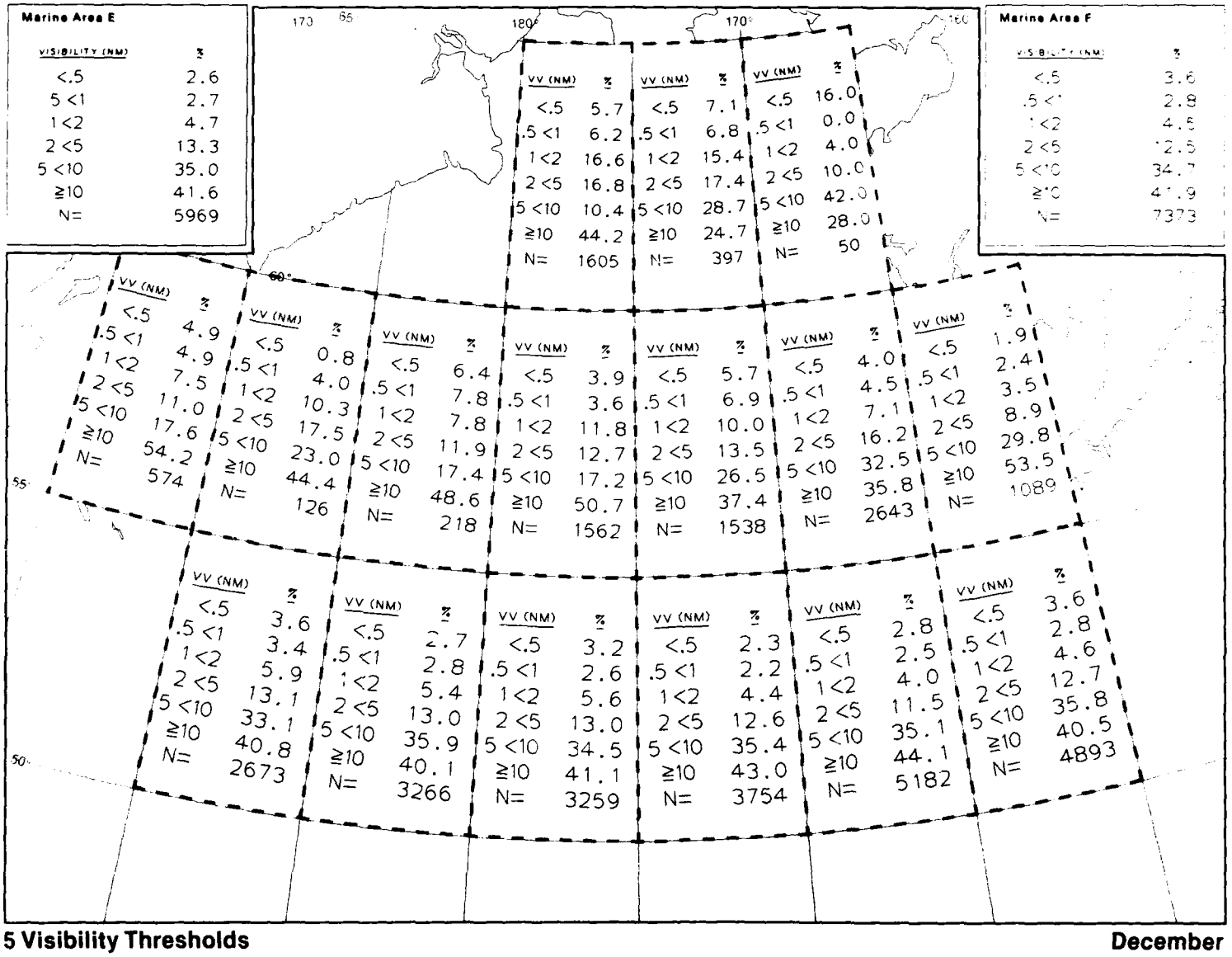
VISIBILITY (NM)	%
<.5	2.9
.5 <1	2.2
1 <2	4.4
2 <5	11.2
5 <10	35.0
≥10	44.3
N=	6226

Marine Area E

VISIBILITY (NM)	%
<.5	2.6
5 <1	2.7
1 <2	4.7
2 <5	13.3
5 <10	35.0
≥10	41.6
N=	5969

Marine Area F

VISIBILITY (NM)	%
<.5	3.6
.5 <1	2.8
1 <2	4.6
2 <5	12.5
5 <10	34.7
≥10	41.9
N=	7373



5 Visibility Thresholds **December**

Map 6. Cloud amount

BLACK LINE – Percent frequency of total cloud amount ≤2/8.

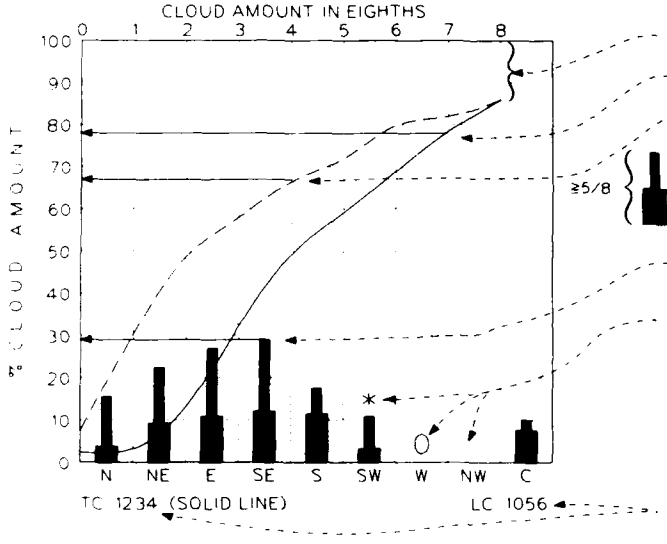
BLUE LINE – Percent frequency of low cloud amount ≥5/8.

Albers Equal–Area Conic Projection

Graphs: Cloud cover/wind direction

Total Cloud Amount
Low Cloud Amount

Cumulative percent frequency of indicated cloud amount equal to or less than the amount intersected by the curve.



Obscurations.

(78% of all total cloud amounts were ≤7/8.)

(67% of all low cloud amounts were ≤4/8.)

Low cloud amount: Percent frequency of observations from each direction and calm that were accompanied by low cloud amounts ≥5/8 and ≥7/8 (including obscurations). Low clouds are clouds with bases <8000 feet.

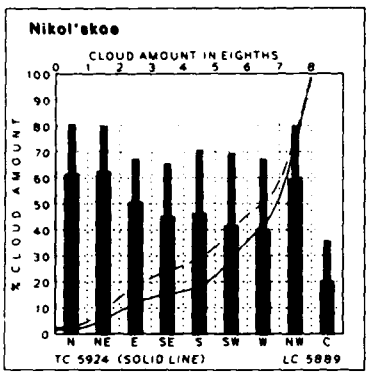
(29% of all SE winds were accompanied by low cloud amounts ≥5/8 and 12% by low cloud amounts ≥7/8)

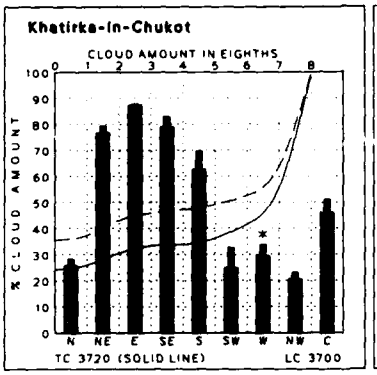
An asterisk indicates that the percentage is based on 10-30 observations of wind direction, total and low cloud amount. 0 replaces bar graph when no low cloud amounts ≥5/8 were observed with a wind direction or calm. 0 or bar is omitted when number of observations of total and low cloud amount from a wind direction or calm is less than 10.

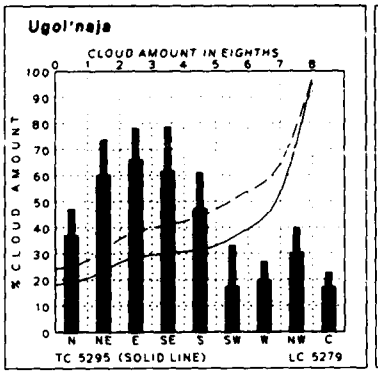
Number of total cloud (TC) and low cloud (LC) observations.

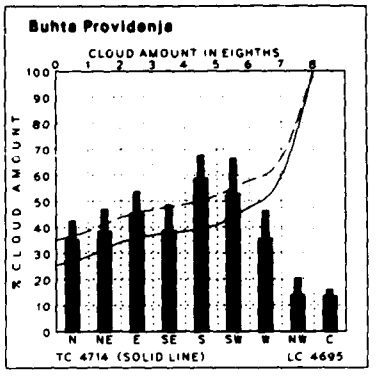
A survey of the cloud data (total and low cloud amounts) from the marine data base shows the number of total cloud reports significantly greater than that of low cloud amounts. This is because many of the early marine observations contain only total cloud amounts. Therefore, somewhat different samples may be used to compute the two curves on the graph. This may lead to inconsistencies where the low cloud amount appears higher than the total cloud amount. Where this occurred, the graph was adjusted in favor of the total cloud by making the curves coincide. The frequency of obscured conditions may be determined from the graph by subtracting the cumulative percent frequency on the curve corresponding to 8/8 coverage from 100%. In computing the bar graph, obscurations are considered as 8/8 coverage.

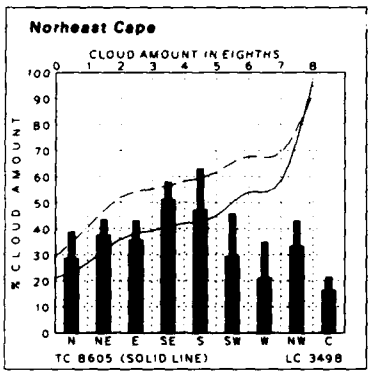
For the two isopleth presentations (total cloud amount ≤ 2/8 and low cloud amount ≥5/8), only those observations reporting both total and low cloud amounts were summarized. This helps eliminate problems introduced as a result of different size data sets. A comparison of total cloud analyses based on satellite data by the U.S. Department of Commerce and U.S. Air Force (1971) shows a fairly close agreement with, and bolsters the confidence in, the marine cloud statistics presented in this atlas. Refer to the texts in Sets 3 and 4 for additional information on clouds.

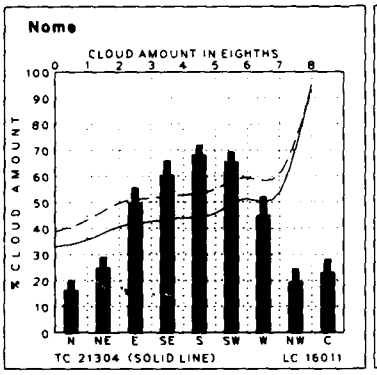

Nikol'skoe
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 5924 (SOLID LINE)
LC 5889

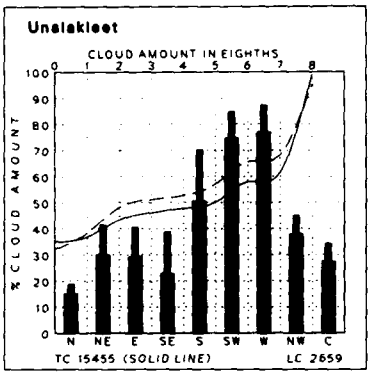

Khatirka-In-Chukot
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 3720 (SOLID LINE)
LC 3700

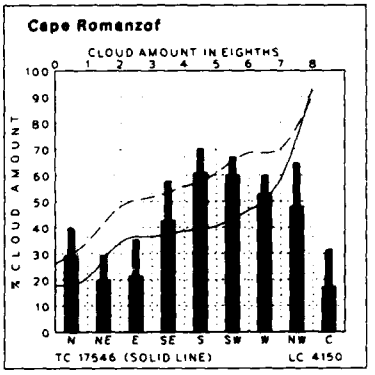

Ugol'naja
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 5295 (SOLID LINE)
LC 5279

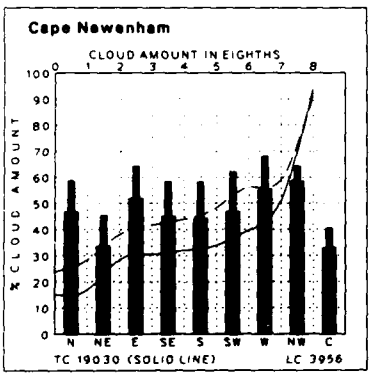

Buhta Providenja
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 4714 (SOLID LINE)
LC 4695

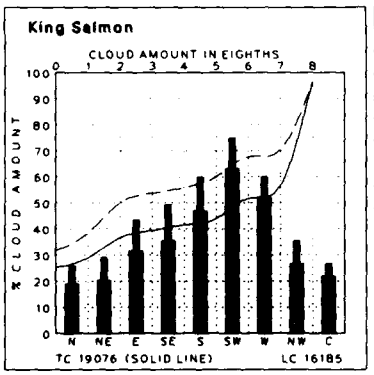

Northeast Cape
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 8605 (SOLID LINE)
LC 3498

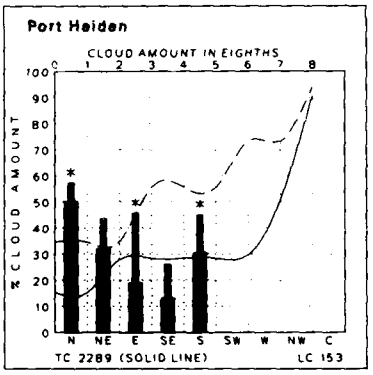

Nome
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 21304 (SOLID LINE)
LC 16011

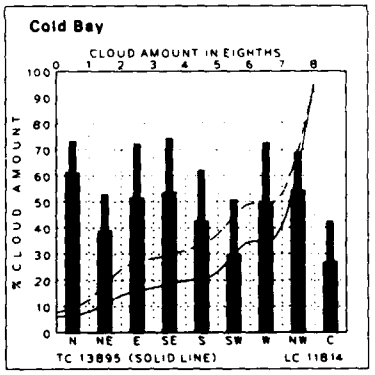

Unalakleet
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 15455 (SOLID LINE)
LC 2659

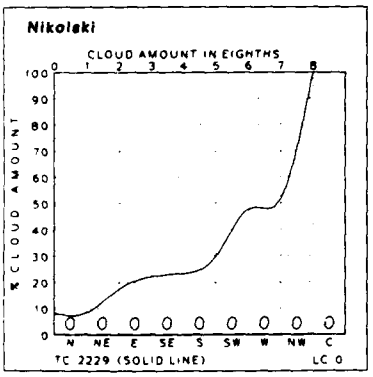

Cape Romanzof
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 17546 (SOLID LINE)
LC 4150

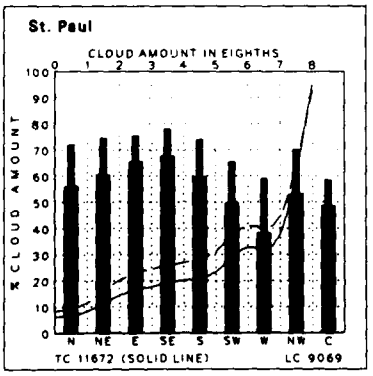

Cape Newenham
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 19030 (SOLID LINE)
LC 3956

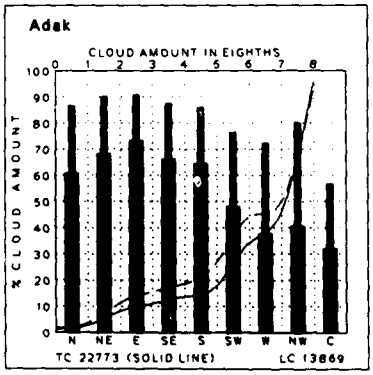

King Salmon
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 19076 (SOLID LINE)
LC 16185

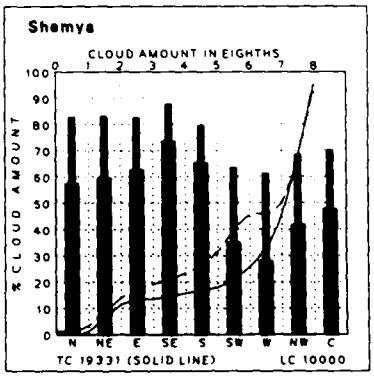

Port Heiden
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 2289 (SOLID LINE)
LC 153

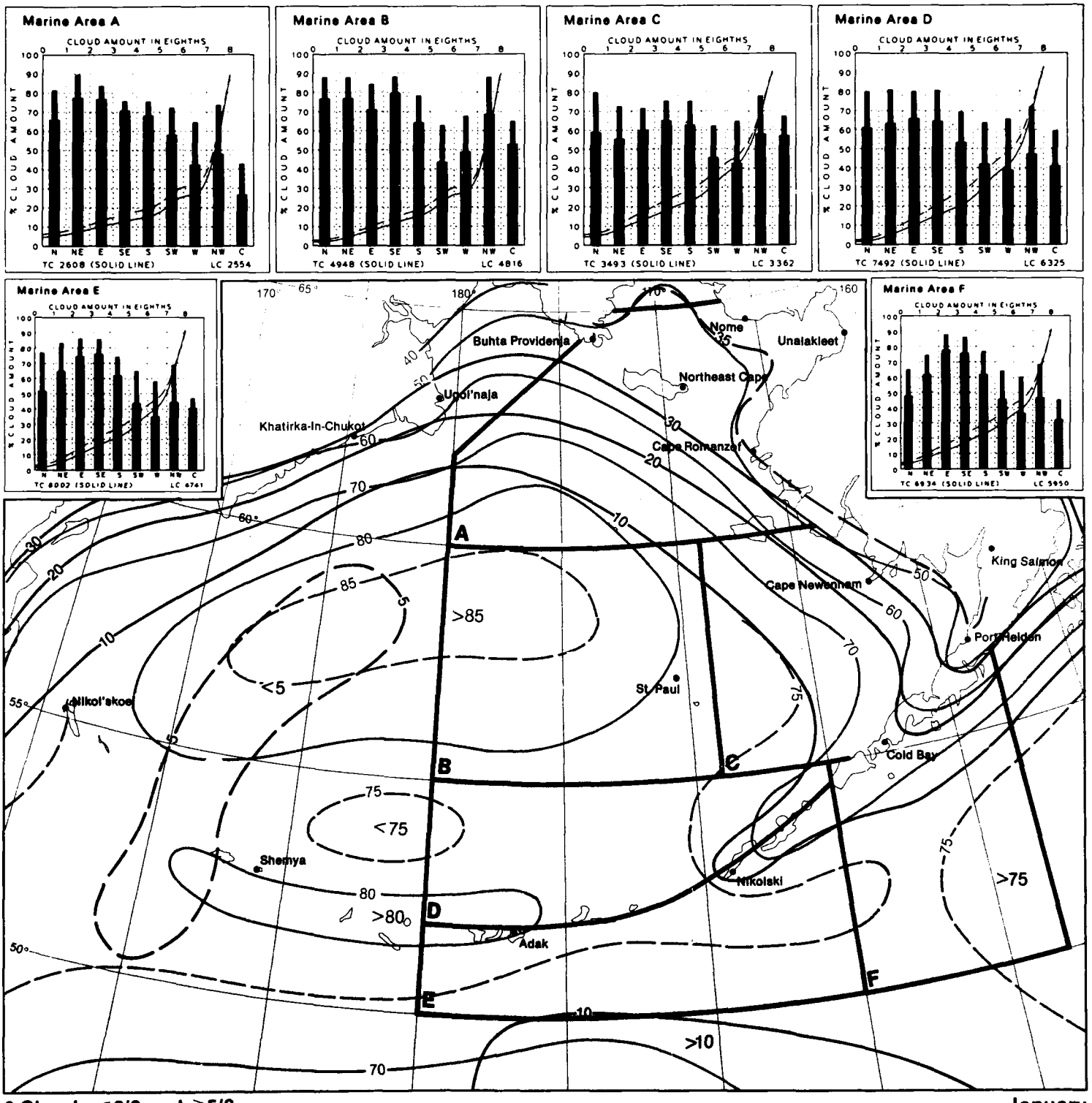

Cold Bay
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 13895 (SOLID LINE)
LC 11814


Nikolski
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 2229 (SOLID LINE)
LC 0


St. Paul
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 11672 (SOLID LINE)
LC 9069

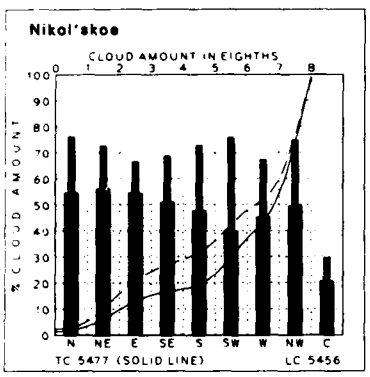

Adak
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 22773 (SOLID LINE)
LC 13869

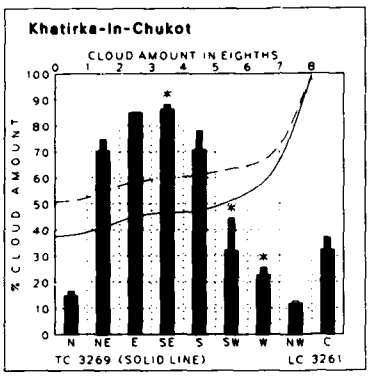

Shemya
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 19331 (SOLID LINE)
LC 10000

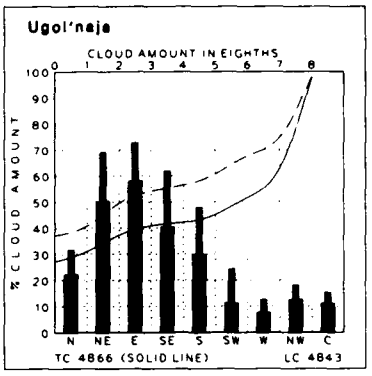


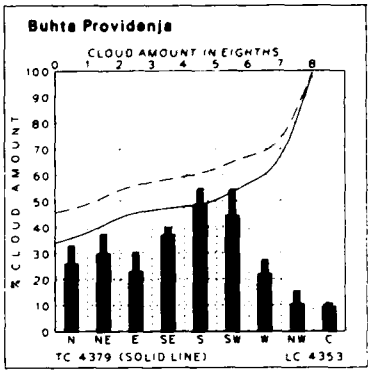
6 Clouds ≦2/8 and ≧5/8

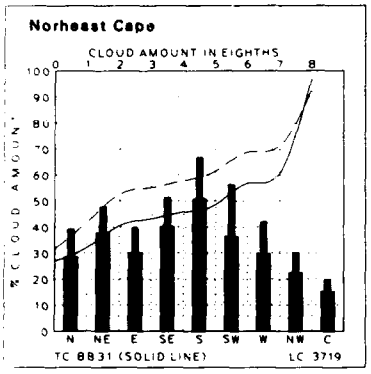
January

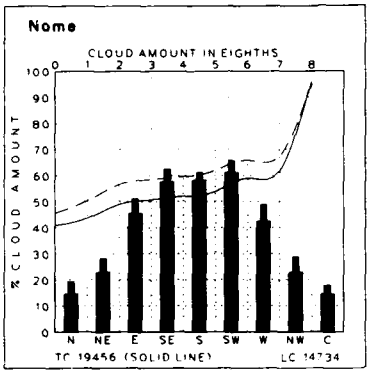

Nikol'skoe
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 5477 (SOLID LINE)
LC 5456

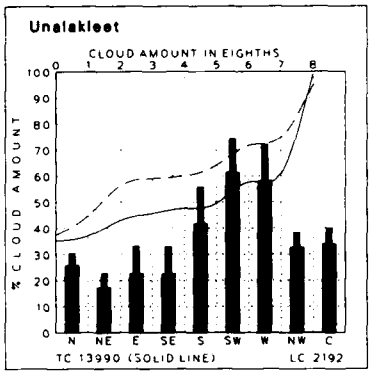

Khatirka-In-Chukot
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 3269 (SOLID LINE)
LC 3261

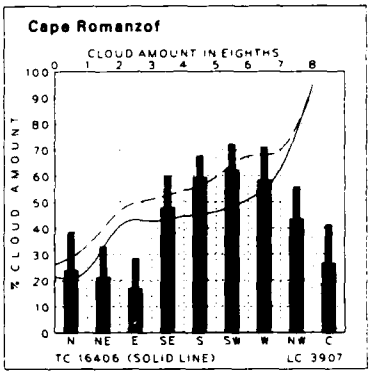

Ugol'naja
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 4866 (SOLID LINE)
LC 4843

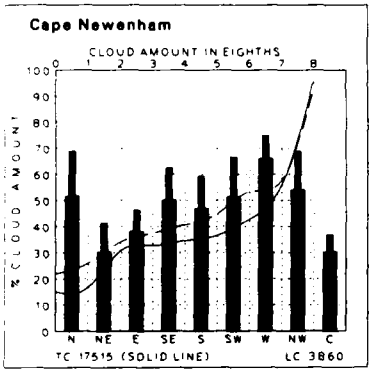

Buhta Providenja
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 4379 (SOLID LINE)
LC 4353

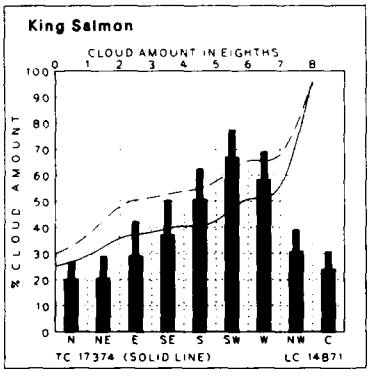

Norheast Cape
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 8831 (SOLID LINE)
LC 3719

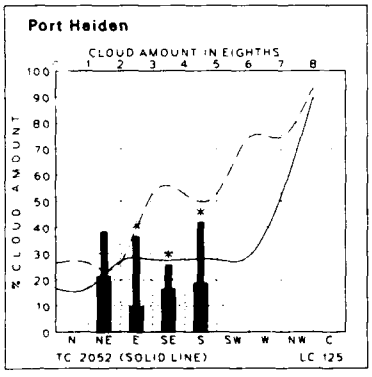

Nome
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 19456 (SOLID LINE)
LC 14734

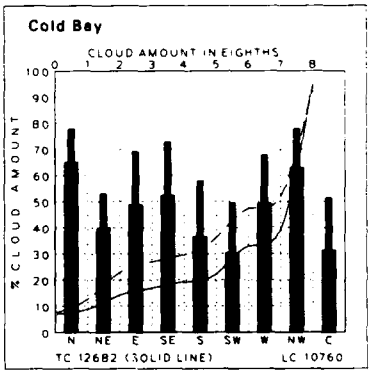

Unalakleet
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 13990 (SOLID LINE)
LC 2192

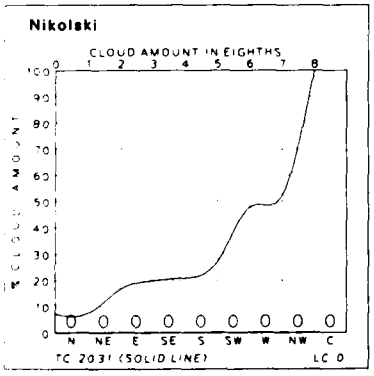

Cape Romanzof
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 16406 (SOLID LINE)
LC 3907

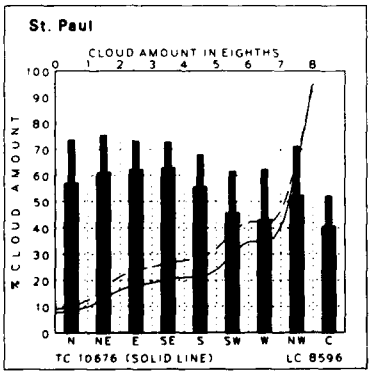

Cape Newenham
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 17515 (SOLID LINE)
LC 3860

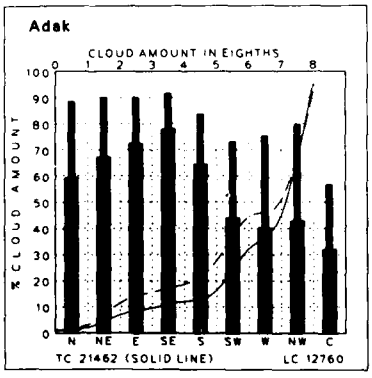

King Salmon
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 17374 (SOLID LINE)
LC 14871

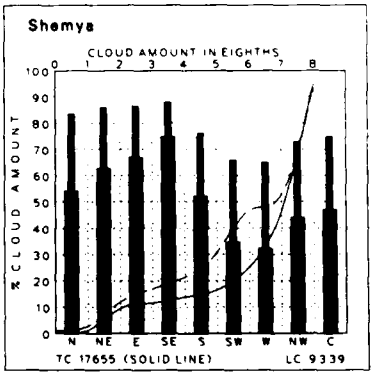

Port Heiden
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 2052 (SOLID LINE)
LC 125

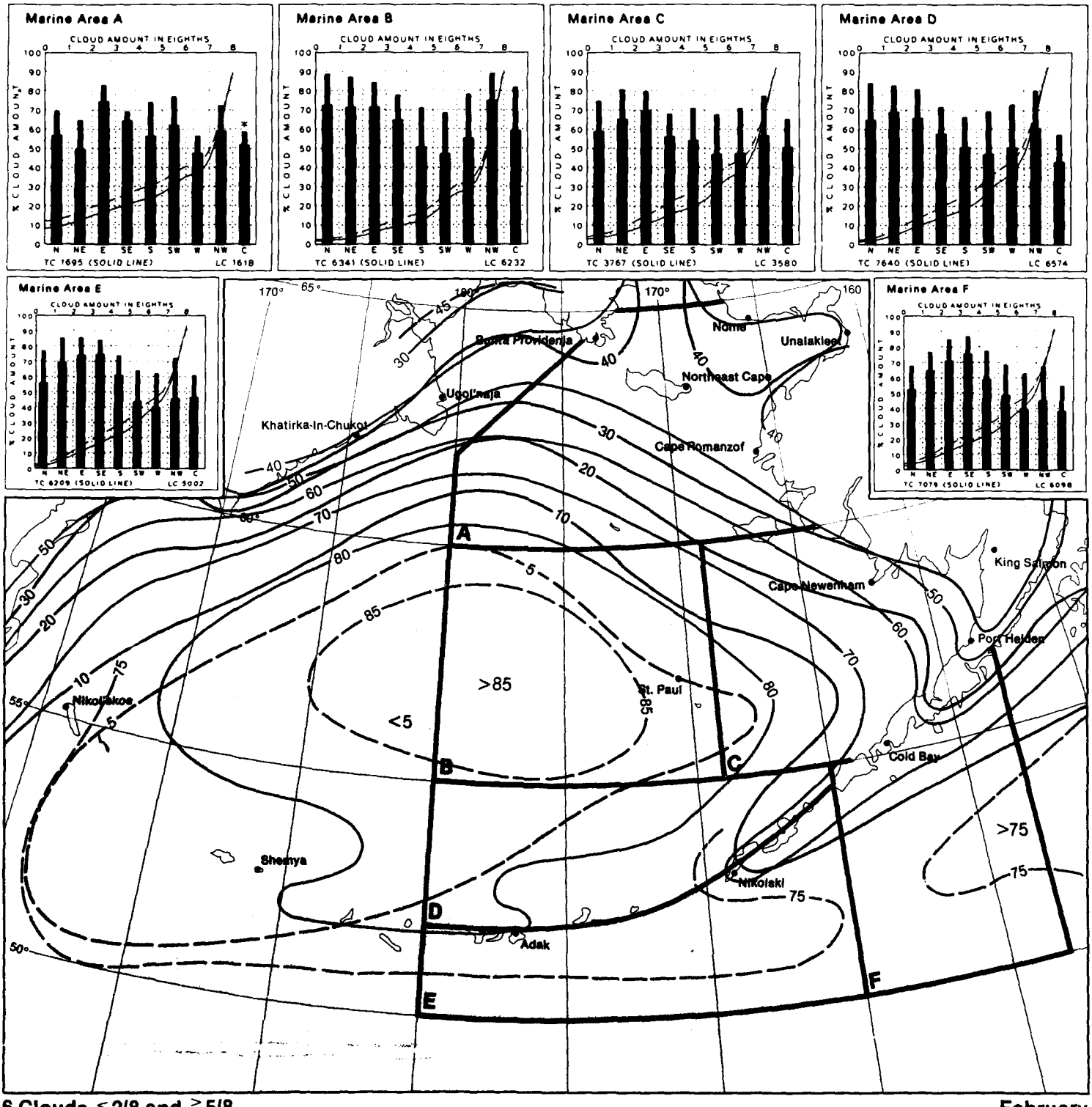

Cold Bay
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 12682 (SOLID LINE)
LC 10760


Nikolski
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 2031 (SOLID LINE)
LC 0


St. Paul
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 10676 (SOLID LINE)
LC 8596

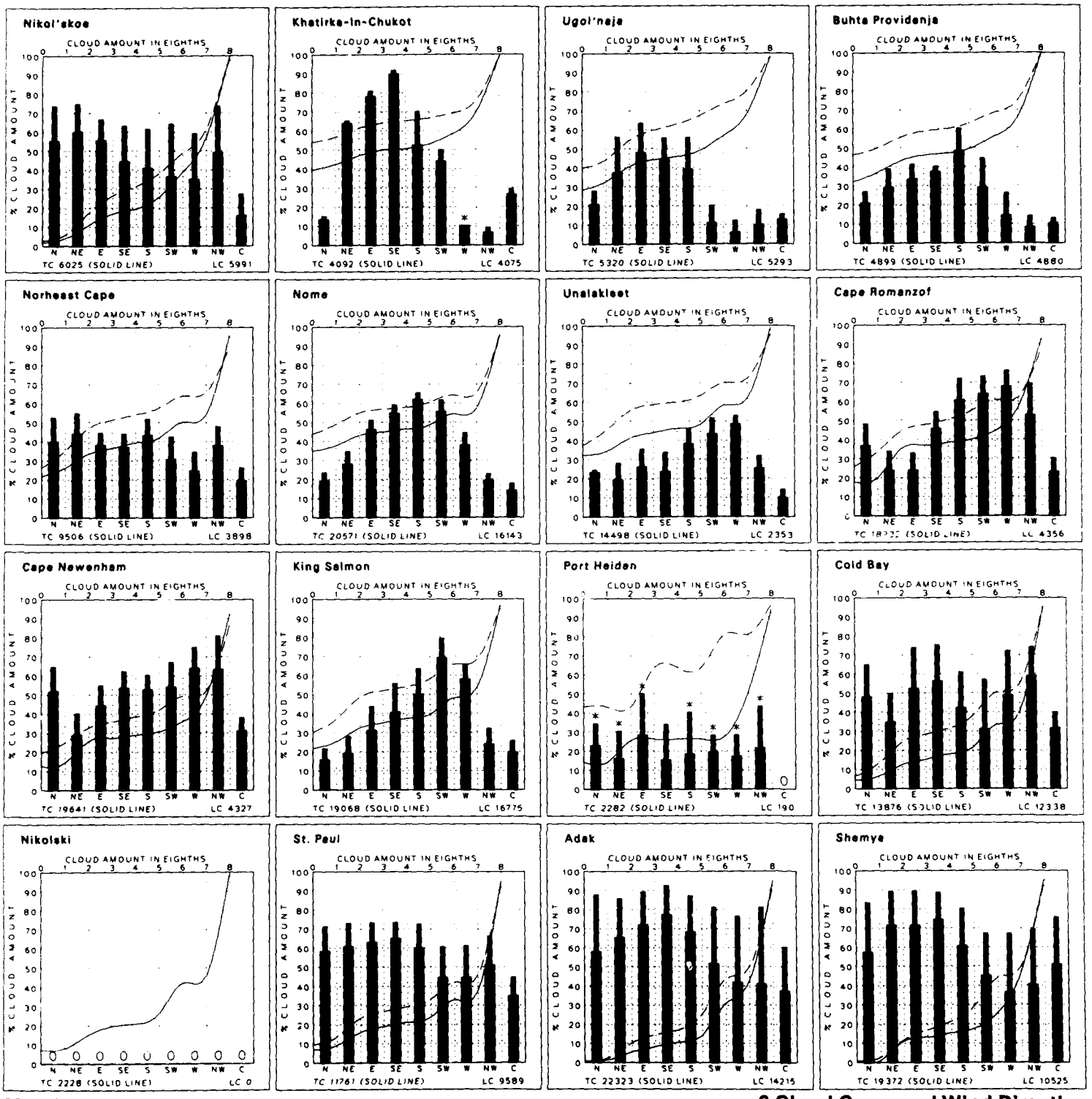

Adak
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 21462 (SOLID LINE)
LC 12760

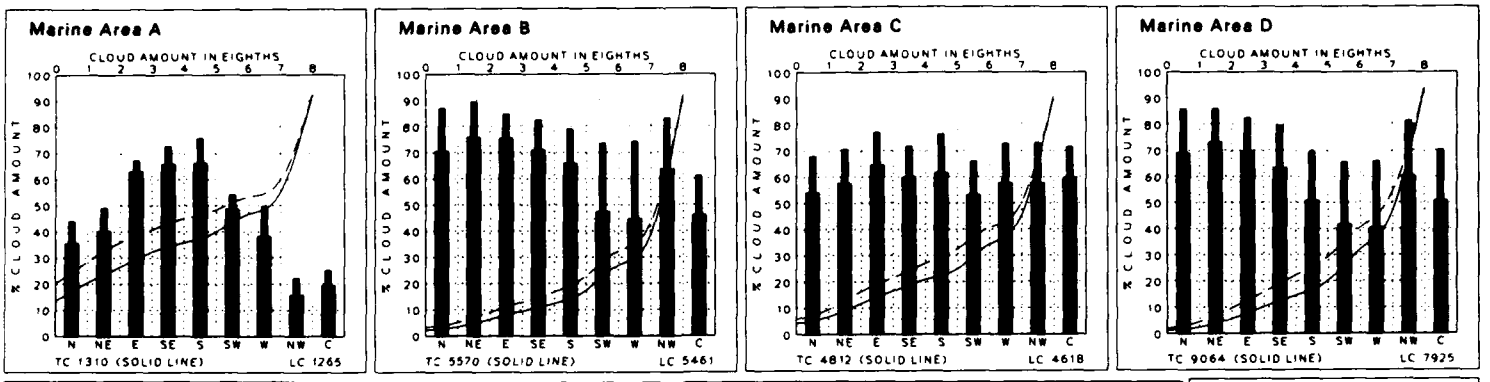

Shemya
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 17655 (SOLID LINE)
LC 9339

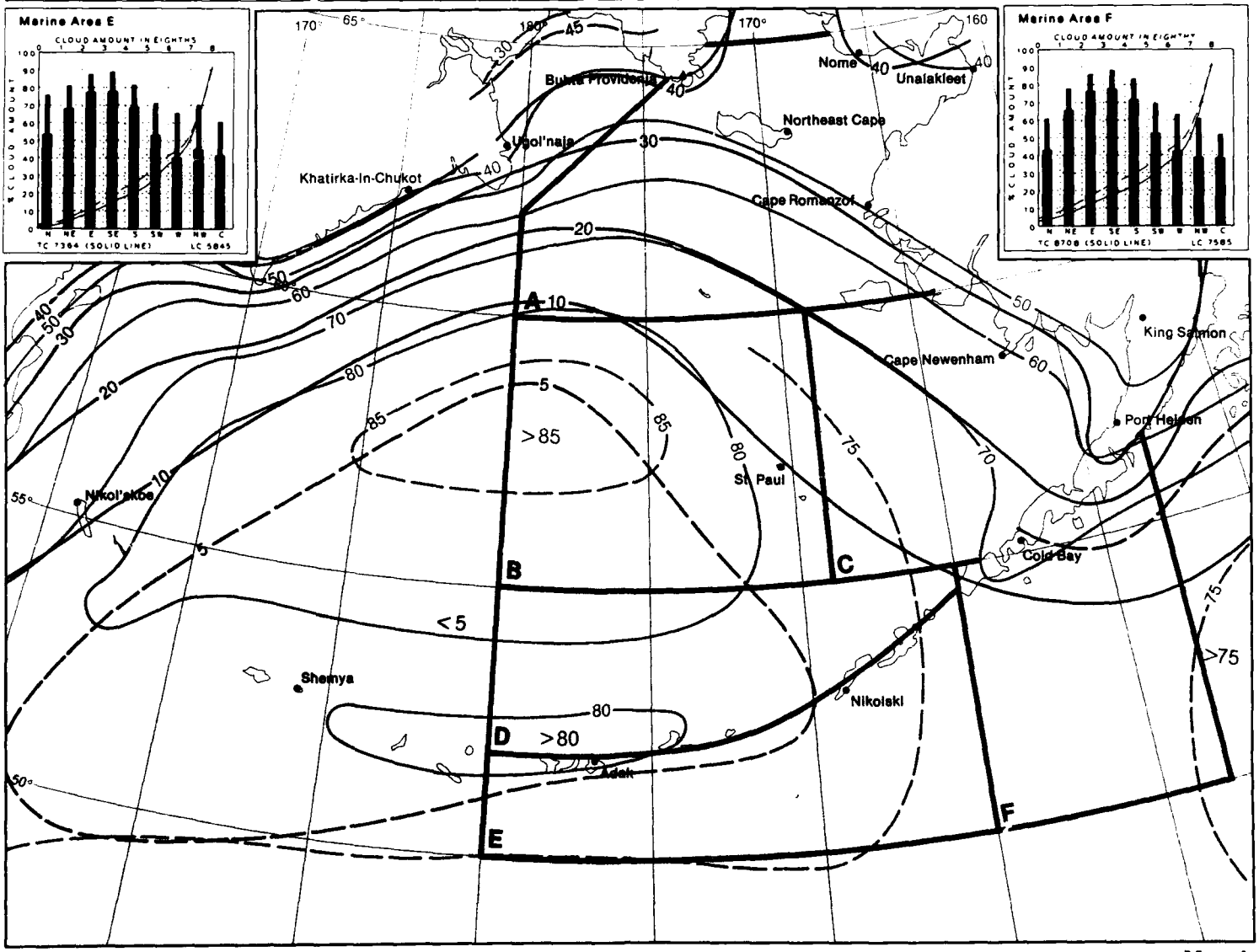


6 Clouds ≦2/8 and ≧5/8

February


Nikol'skoe
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 6025 (SOLID LINE)
LC 5991
Khatirka-In-Chukot
TC 4092 (SOLID LINE)
LC 4075
Ugol'neje
TC 5320 (SOLID LINE)
LC 5293
Buhta Providenja
TC 4899 (SOLID LINE)
LC 4880
Norheast Cape
TC 9506 (SOLID LINE)
LC 3898
Nome
TC 20571 (SOLID LINE)
LC 16143
Unalakleet
TC 14498 (SOLID LINE)
LC 2353
Cape Romanzof
LC 4356
Cape Newenham
TC 19641 (SOLID LINE)
LC 4327
King Salmon
TC 19068 (SOLID LINE)
LC 16775
Port Heiden
TC 2282 (SOLID LINE)
LC 190
Cold Bay
TC 13876 (SOLID LINE)
LC 12338
Nikolski
TC 2228 (SOLID LINE)
LC 0
St. Paul
TC 11761 (SOLID LINE)
LC 9589
Adak
TC 22323 (SOLID LINE)
LC 14215
Shemya
TC 19372 (SOLID LINE)
LC 10525

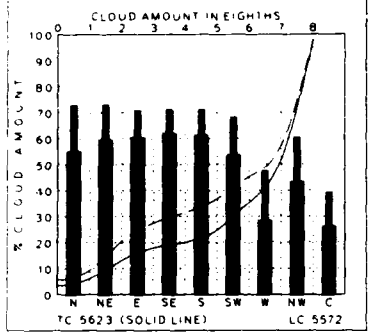




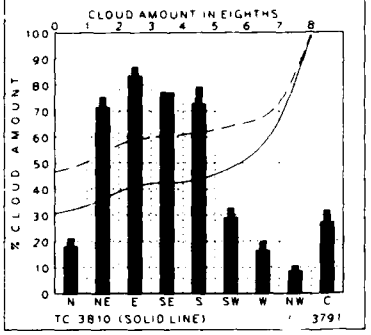
6 Clouds ≦2/8 and ≧5/8

March

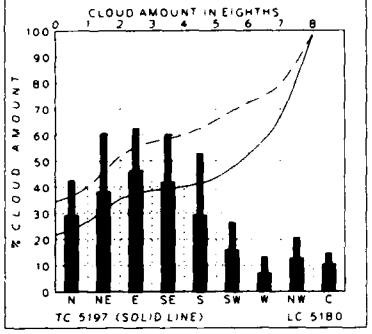
Nikol'skoe



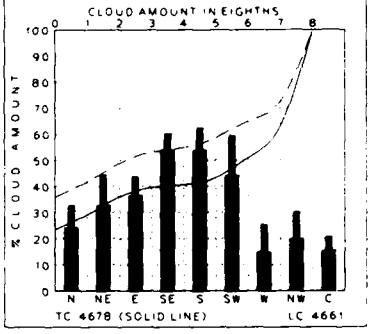
Khatirka-In-Chukot



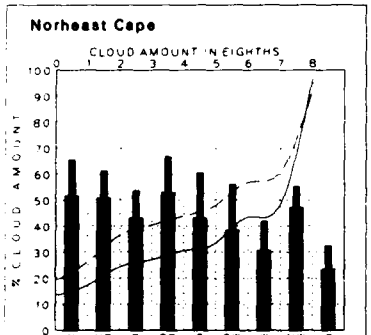
Ugol'naja



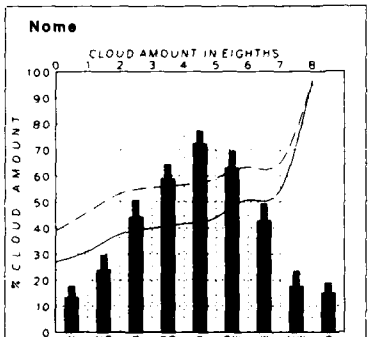
Buhta Providenje



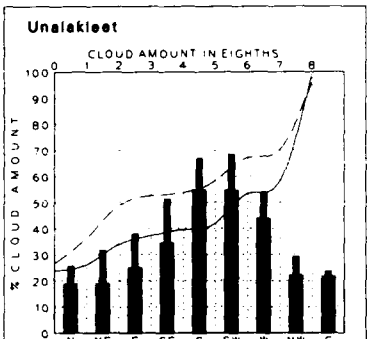
Norheast Cape



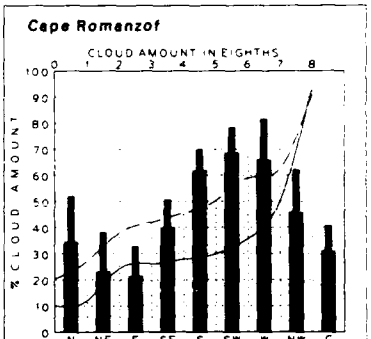
Nome



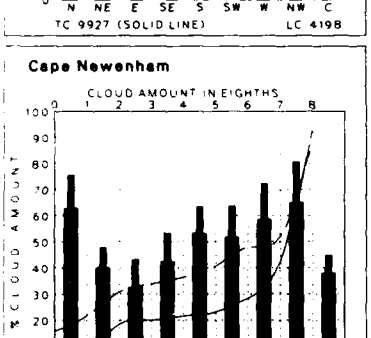
Unalakleet



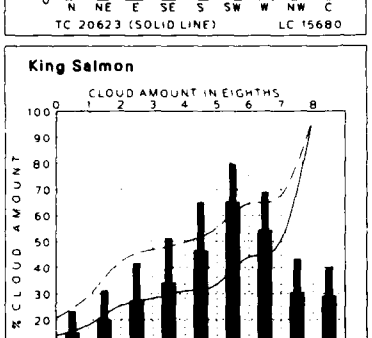
Cape Romanzof



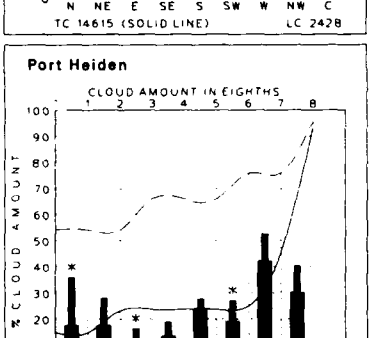
Cape Newenham



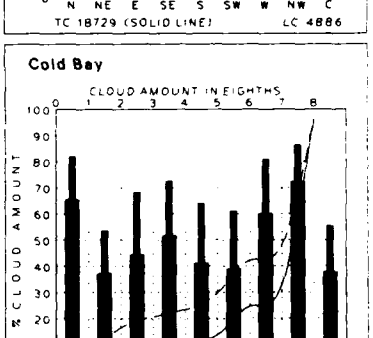
King Salmon



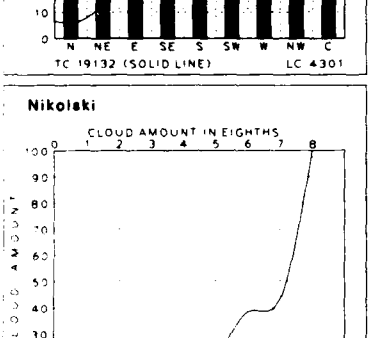
Port Heiden



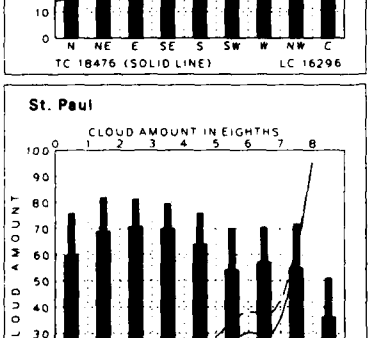
Cold Bay



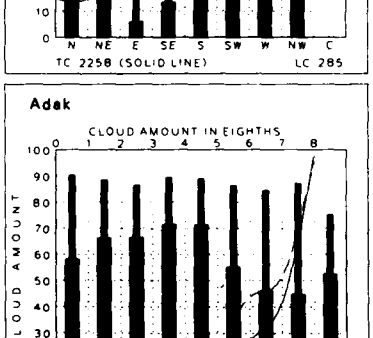
Nikolski



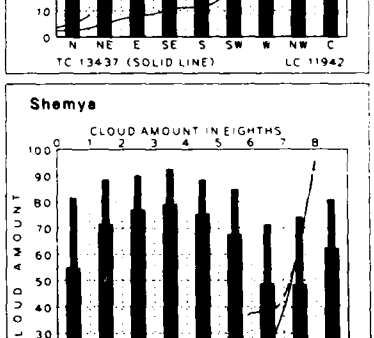
St. Paul

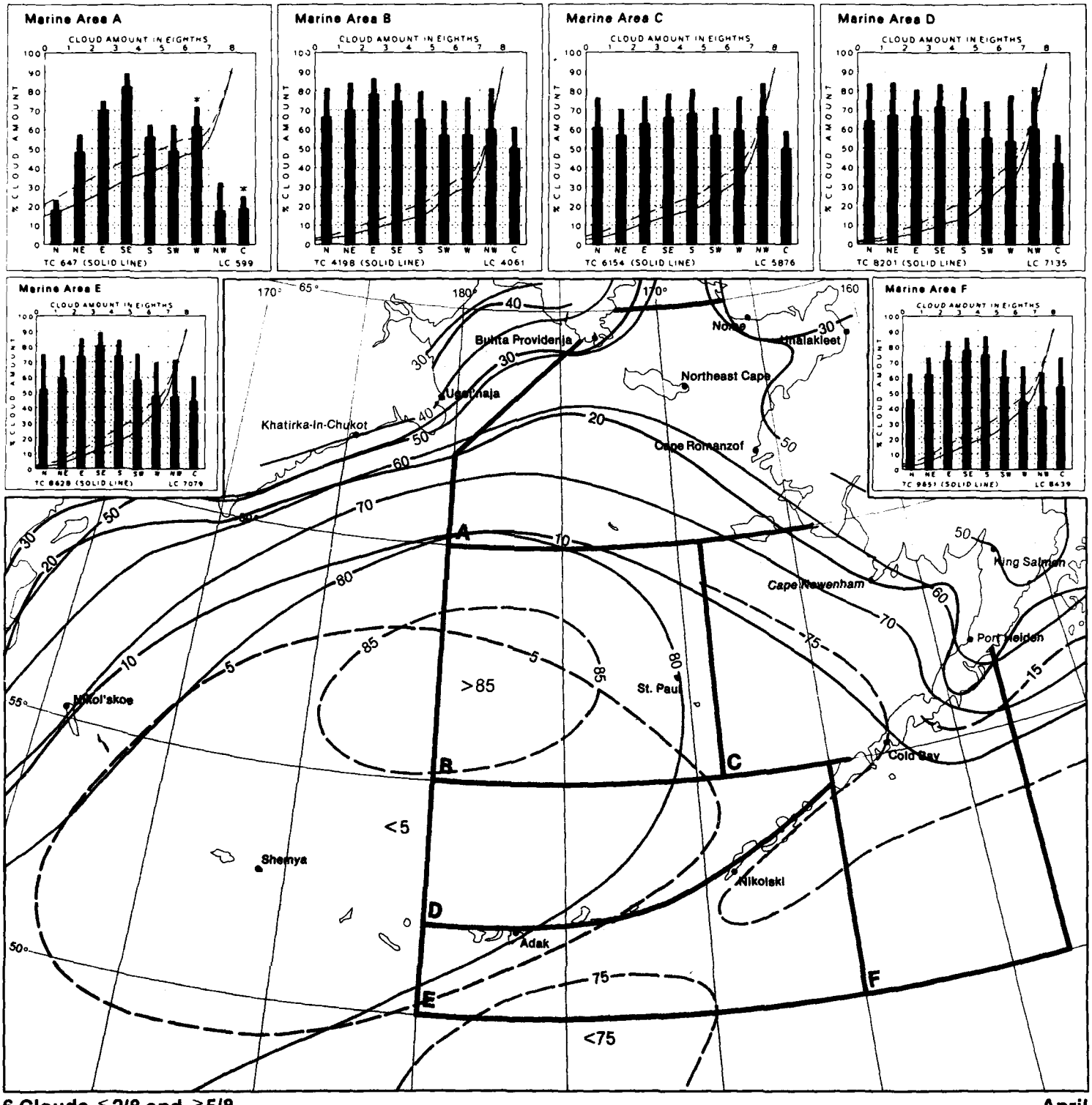


Adak



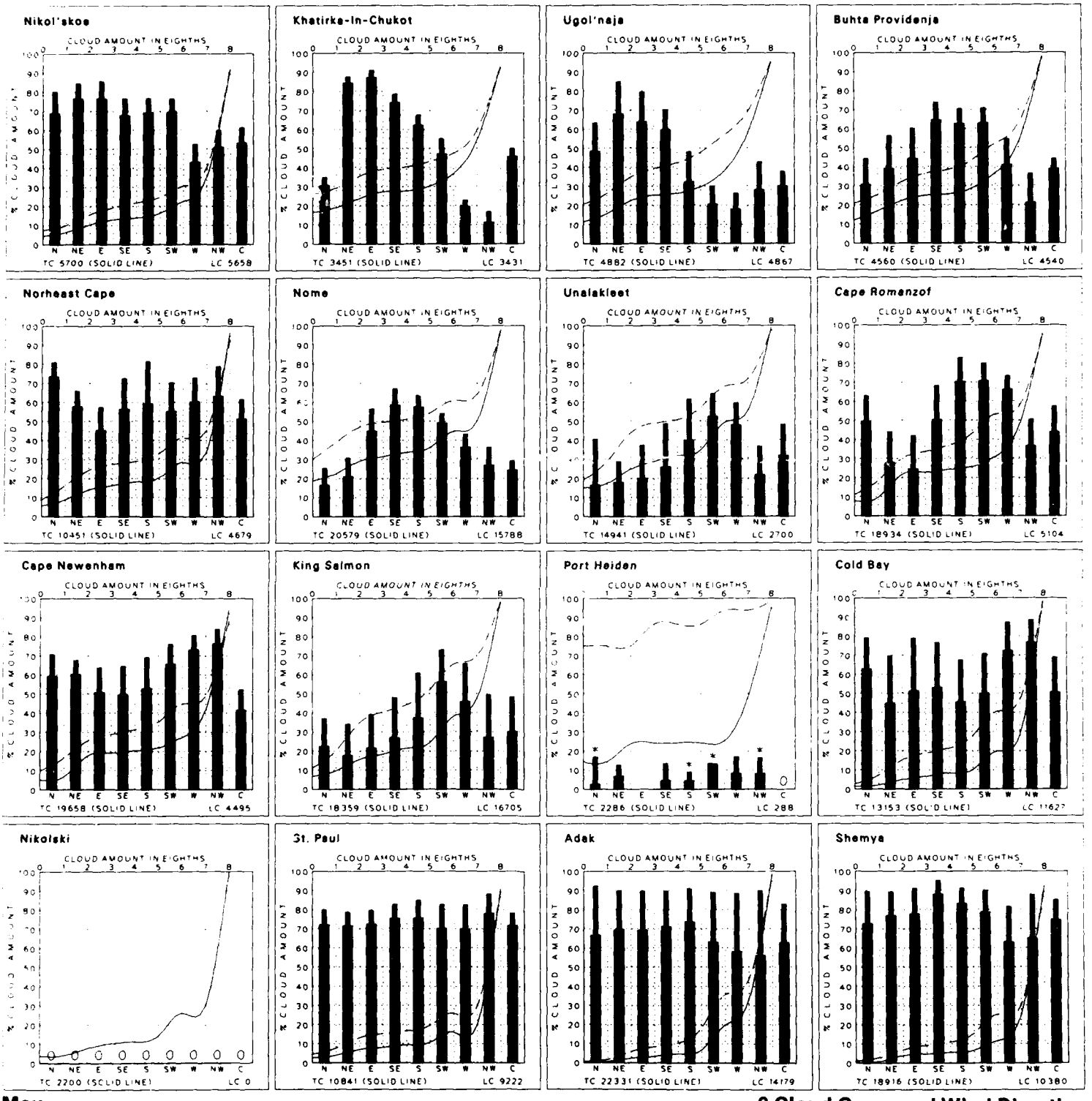
Shemya

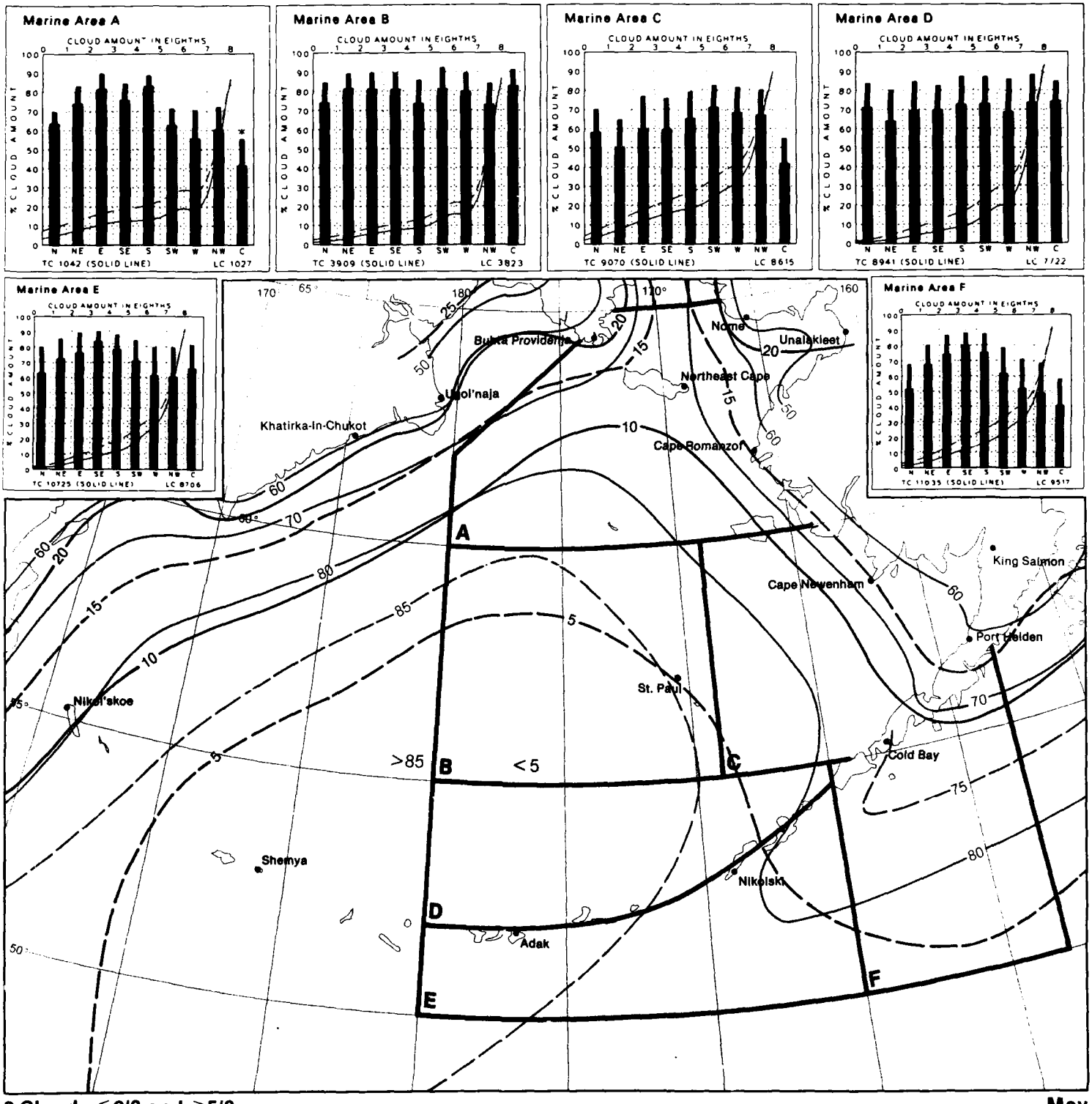




6 Clouds ≦2/8 and ≧5/8

April

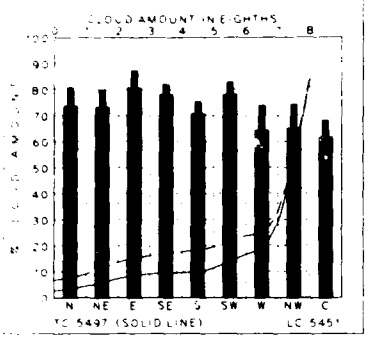

Nikol'skoe
TC 5700 (SOLID LINE) LC 5658
Khatirka-In-Chukot
TC 3451 (SOLID LINE) LC 3431
Ugol'naja
TC 4882 (SOLID LINE) LC 4867
Buhta Providenja
TC 4560 (SOLID LINE) LC 4540
Norheast Cape
TC 10451 (SOLID LINE) LC 4679
Nome
TC 20579 (SOLID LINE) LC 15788
Unalakleet
TC 14941 (SOLID LINE) LC 2700
Cape Romanzof
TC 18934 (SOLID LINE) LC 5104
Cape Newenham
TC 19658 (SOLID LINE) LC 4495
King Salmon
TC 18359 (SOLID LINE) LC 16705
Port Heiden
TC 2286 (SOLID LINE) LC 288
Cold Bay
TC 13153 (SOLID LINE) LC 11627
Nikolski
TC 2200 (SOLID LINE) LC 0
St. Paul
TC 10841 (SOLID LINE) LC 9222
Adak
TC 22331 (SOLID LINE) LC 14179
Shemya
TC 18916 (SOLID LINE) LC 10380
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C



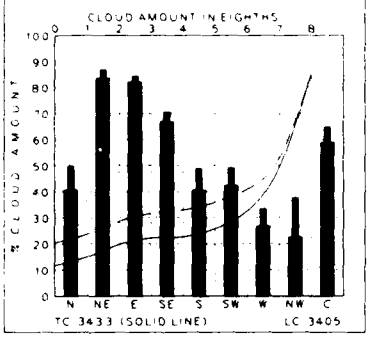
6 Clouds ≦2/8 and ≧5/8

May

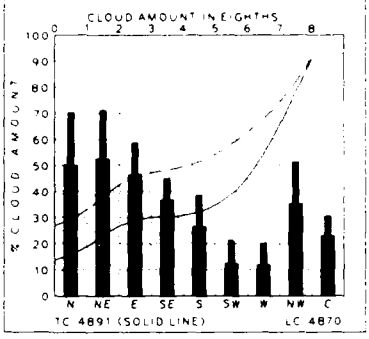
Nikol'skoe



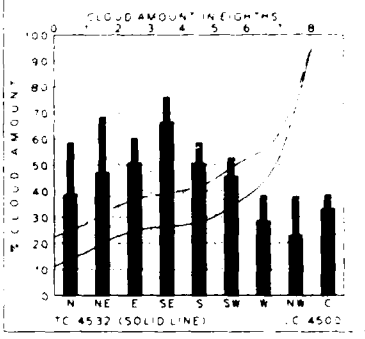
Khatirka-In-Chukot



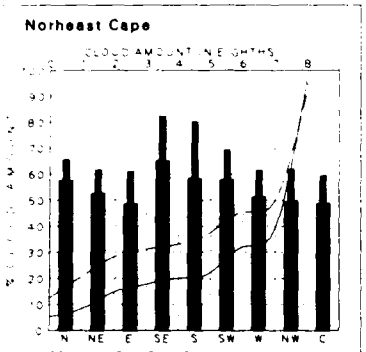
Ugol'naja



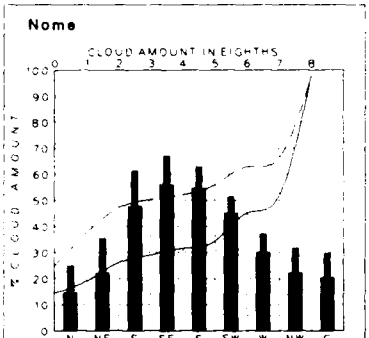
Buhta Providenja



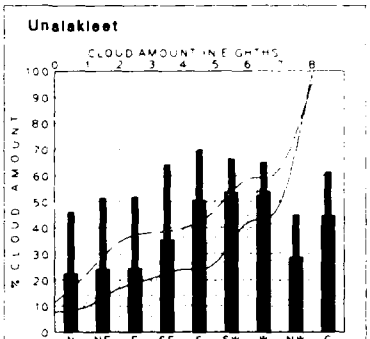
Norheast Cape



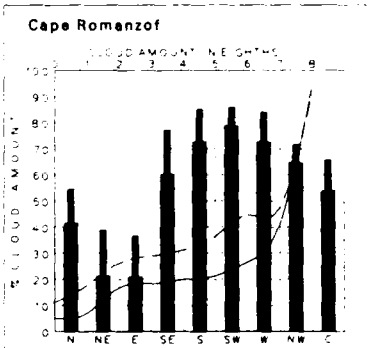
Nome



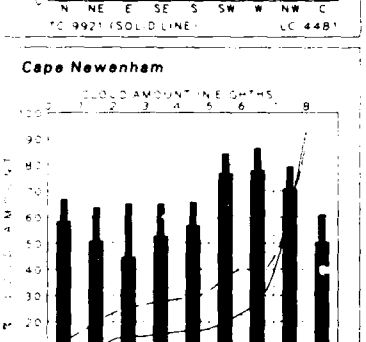
Unalakleet



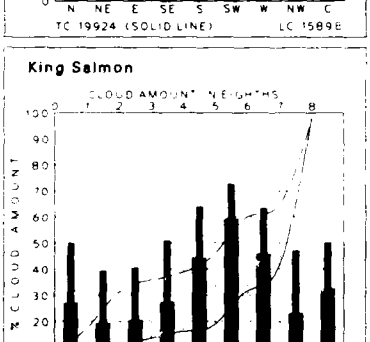
Cape Romanzof



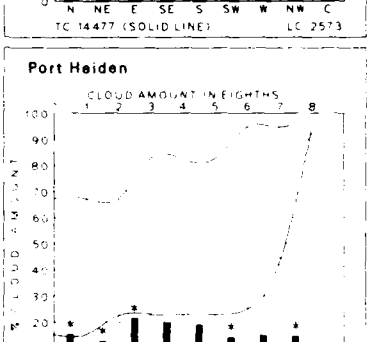
Cape Newenham



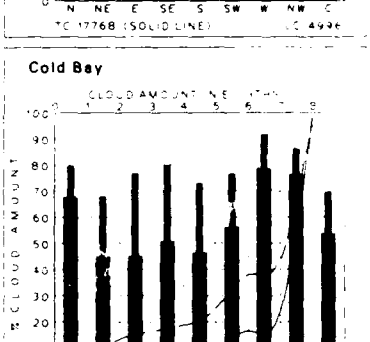
King Salmon



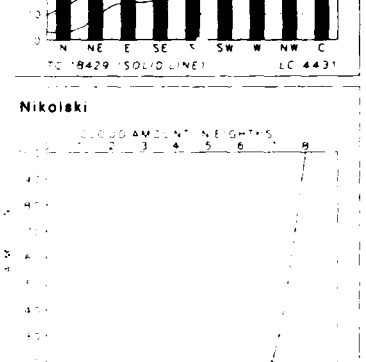
Port Heiden



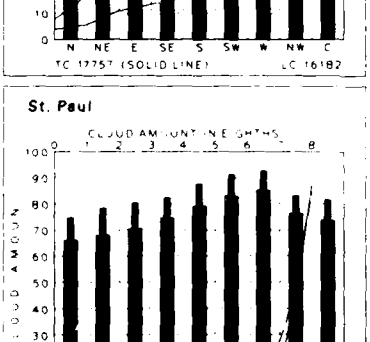
Cold Bay



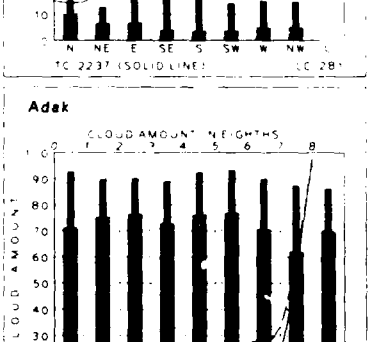
Nikolski



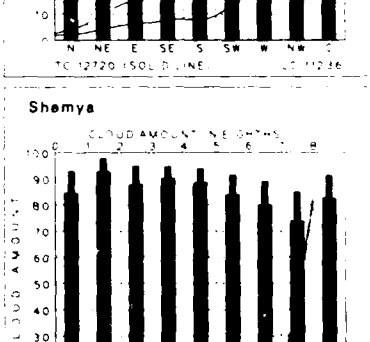
St. Paul

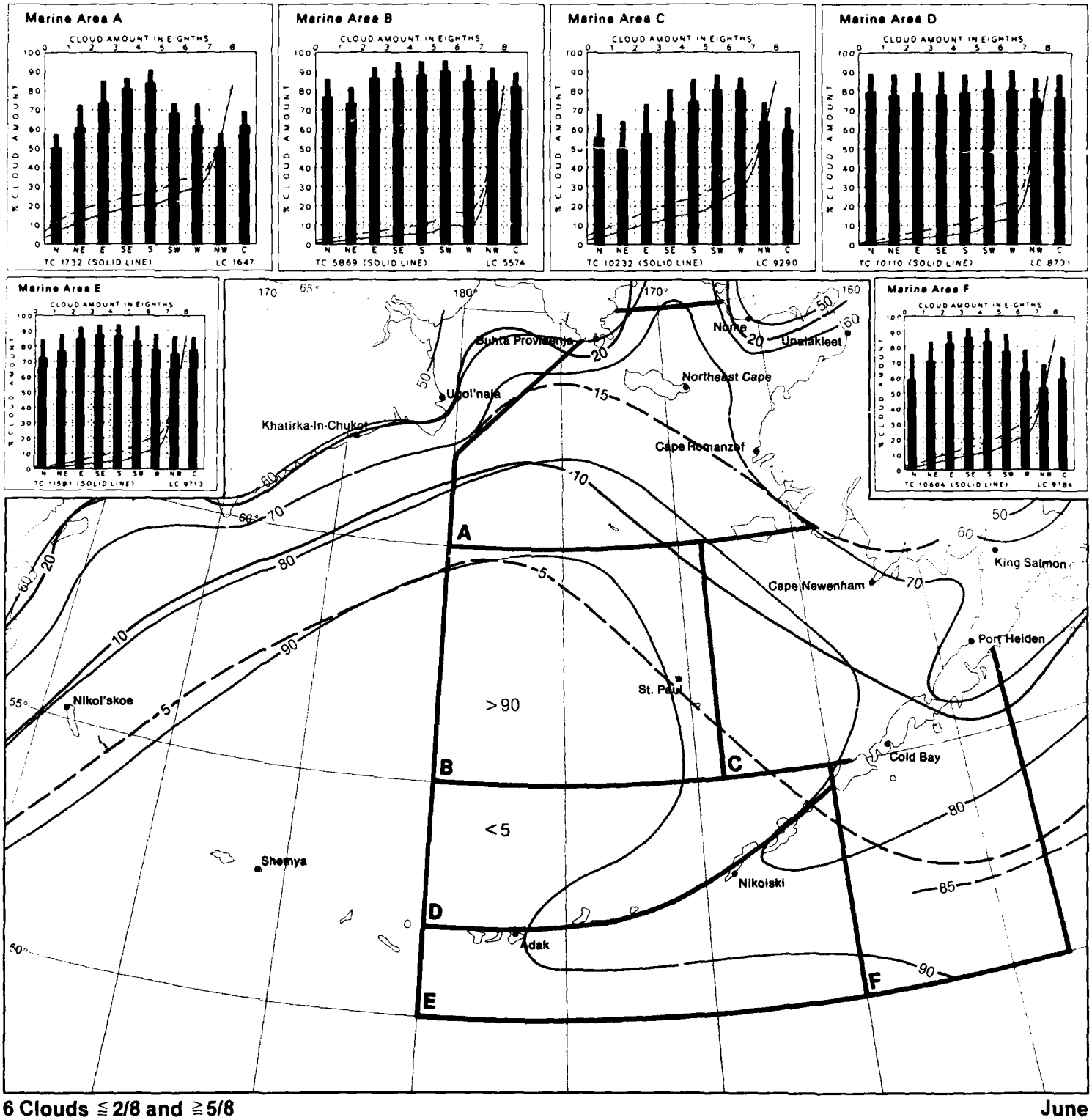


Adak

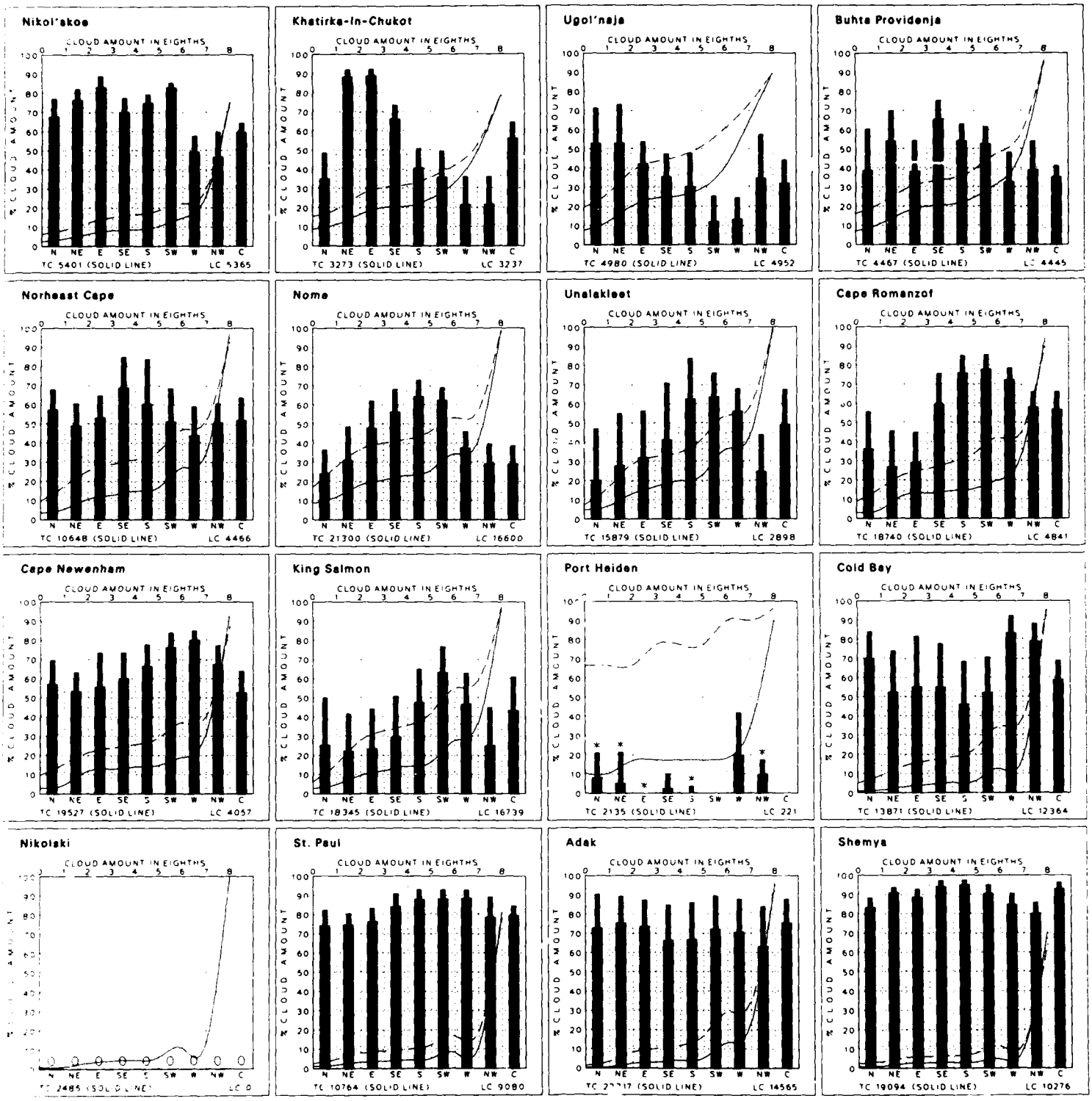


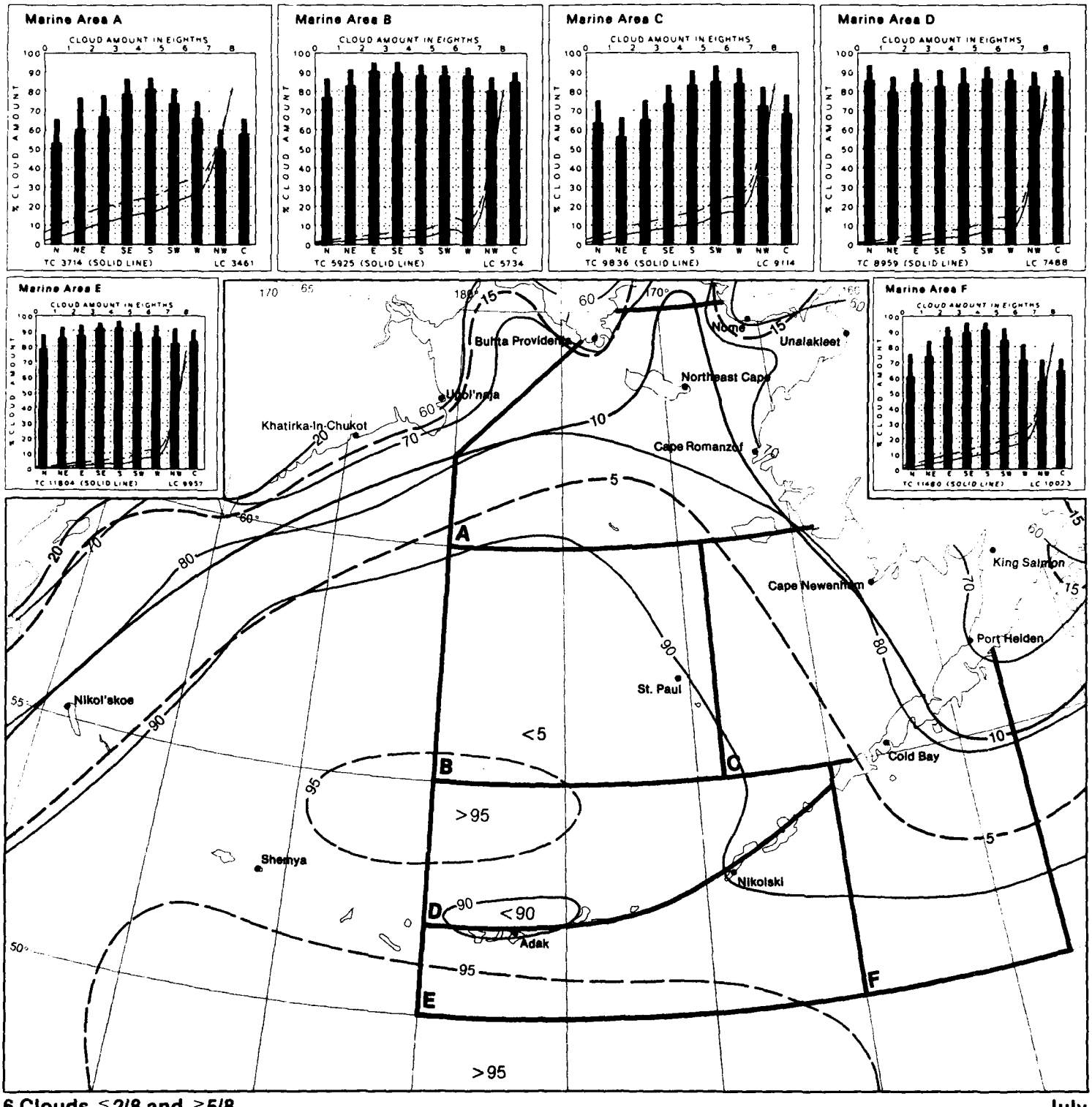
Shemya





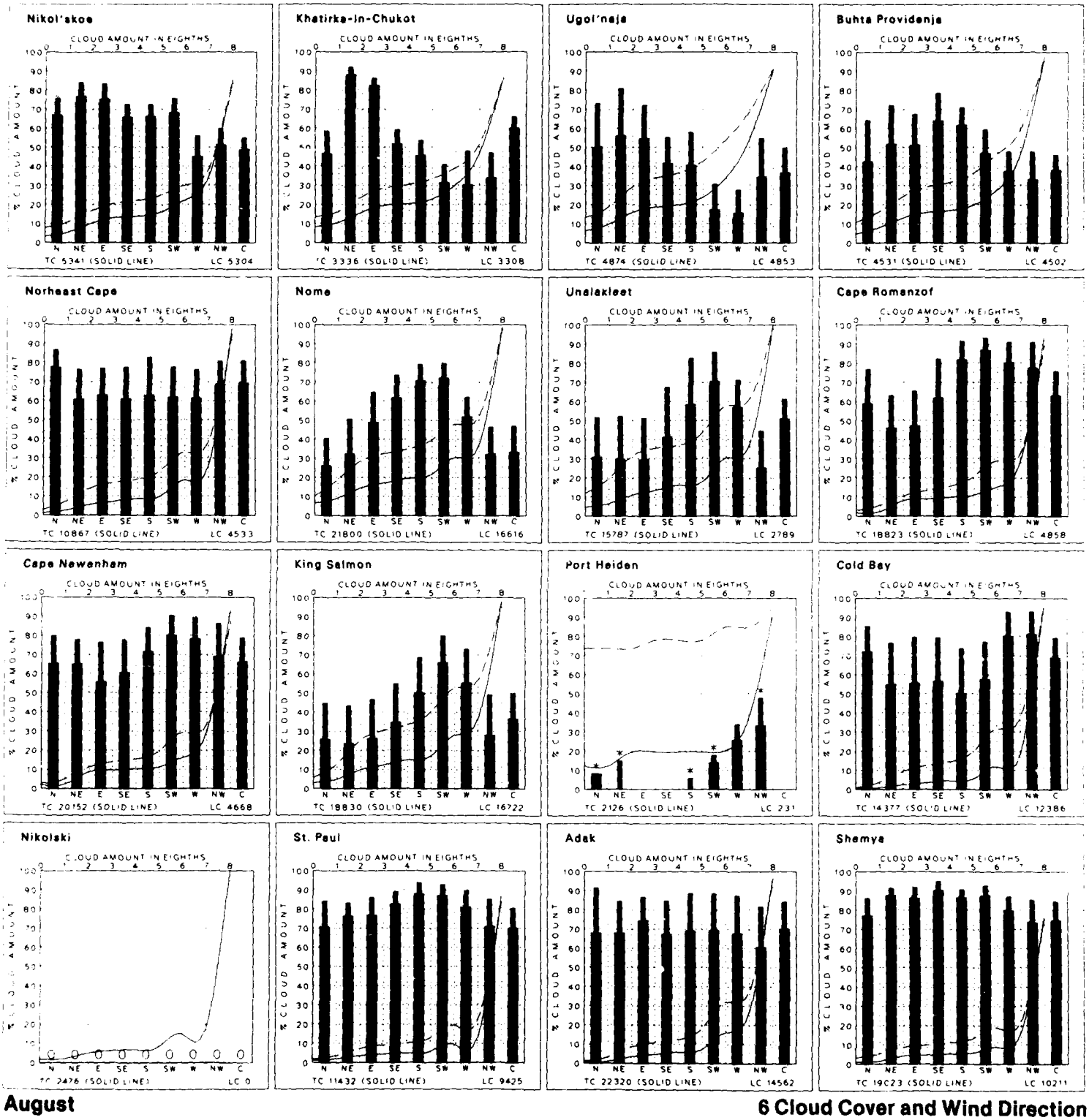
6 Clouds ≦ 2/8 and ≧ 5/8 **June**

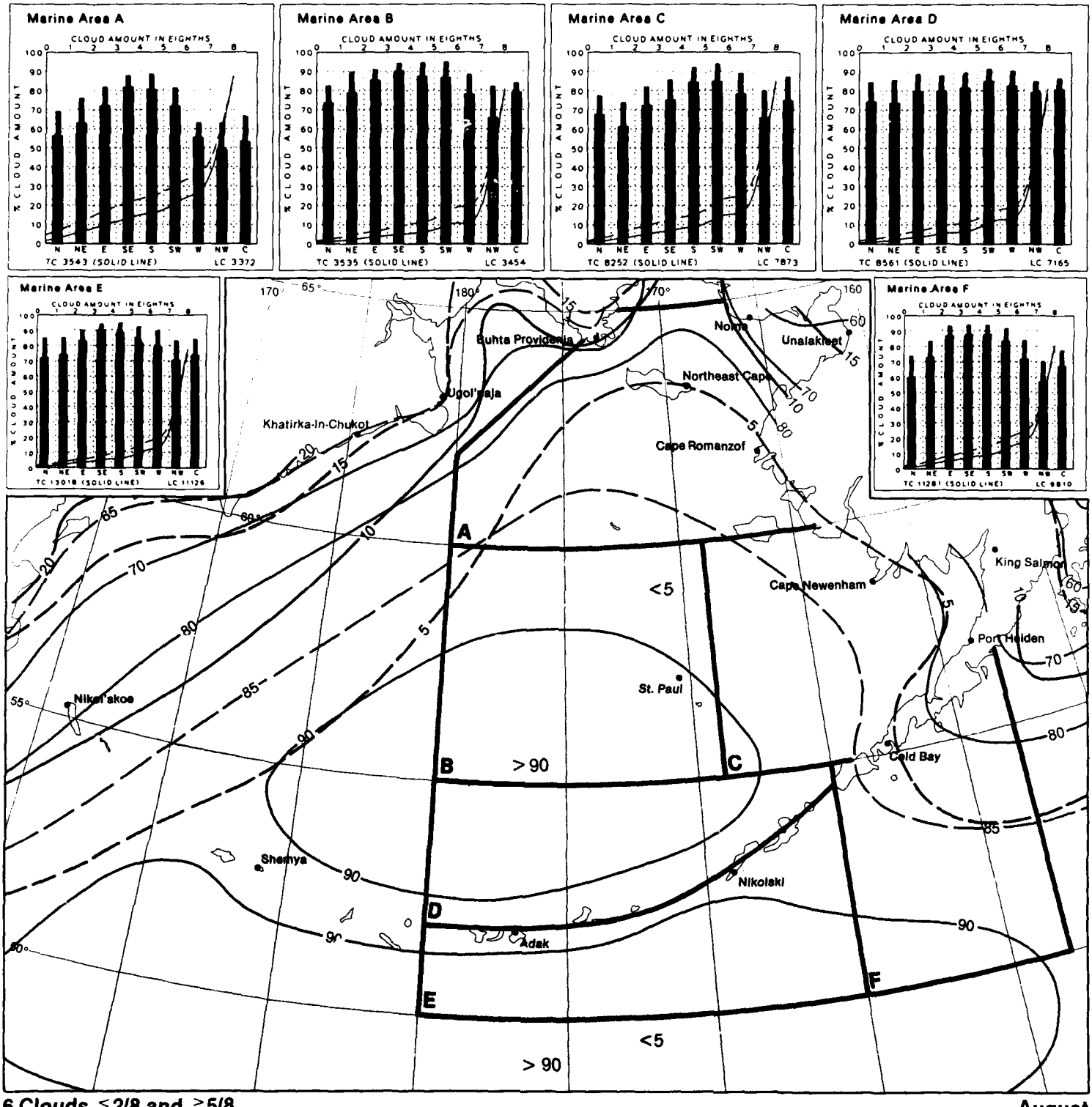

Nikol'skoe
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 5401 (SOLID LINE)
LC 5365
Khatirka-In-Chukot
TC 3273 (SOLID LINE)
LC 3237
Ugol'naja
TC 4980 (SOLID LINE)
LC 4952
Buhta Providenja
TC 4467 (SOLID LINE)
LC 4445
Norheast Cape
TC 10648 (SOLID LINE)
LC 4466
Nome
TC 21300 (SOLID LINE)
LC 16600
Unalakleet
TC 15879 (SOLID LINE)
LC 2898
Cape Romanzof
TC 18740 (SOLID LINE)
LC 4841
Cape Newenham
TC 19527 (SOLID LINE)
LC 4057
King Salmon
TC 18345 (SOLID LINE)
LC 16739
Port Heiden
TC 2135 (SOLID LINE)
LC 221
Cold Bay
TC 13871 (SOLID LINE)
LC 12364
Nikolski
TC 2485 (SOLID LINE)
LC 0
St. Paul
TC 10764 (SOLID LINE)
LC 9080
Adak
LC 14565
Shemya
TC 19094 (SOLID LINE)
LC 10276



6 Clouds ≦2/8 and ≧5/8

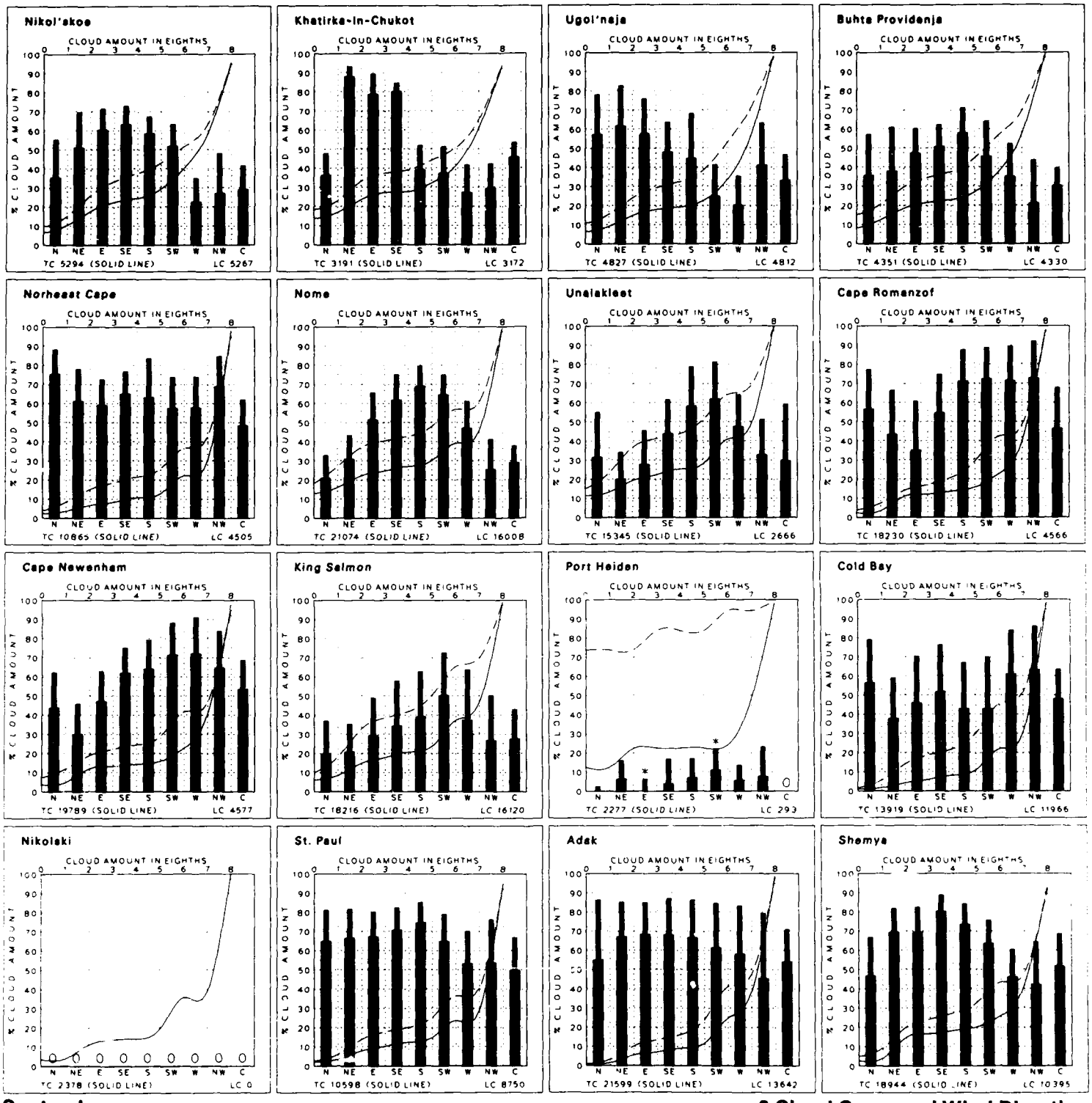
July

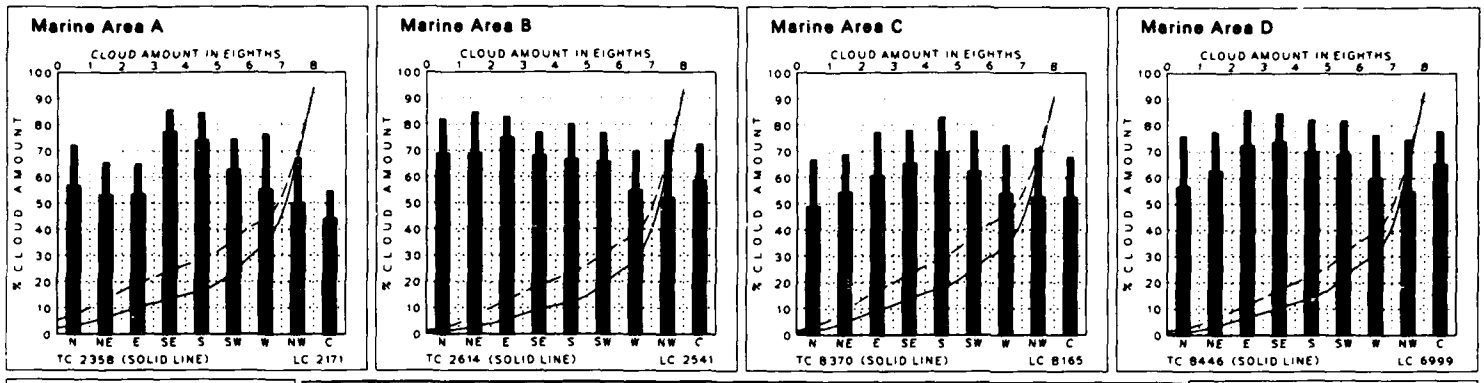

Nikol'skoe
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 5341 (SOLID LINE)
LC 5304
Khatirka-In-Chukot
TC 3336 (SOLID LINE)
LC 3308
Ugol'naja
TC 4874 (SOLID LINE)
LC 4853
Buhta Providenja
TC 4531 (SOLID LINE)
LC 4502
Northeast Cape
TC 10867 (SOLID LINE)
LC 4533
Nome
TC 21800 (SOLID LINE)
LC 16616
Unalakleet
TC 15787 (SOLID LINE)
LC 2789
Cape Romanzof
TC 18823 (SOLID LINE)
LC 4858
Cape Newenham
TC 20152 (SOLID LINE)
LC 4668
King Salmon
TC 18830 (SOLID LINE)
LC 16722
Port Heiden
TC 2126 (SOLID LINE)
LC 231
Cold Bay
TC 14377 (SOLID LINE)
LC 12386
Nikolski
TC 2476 (SOLID LINE)
LC 0
St. Paul
TC 11432 (SOLID LINE)
LC 9425
Adak
TC 22320 (SOLID LINE)
LC 14562
Shemya
TC 19023 (SOLID LINE)
LC 10211

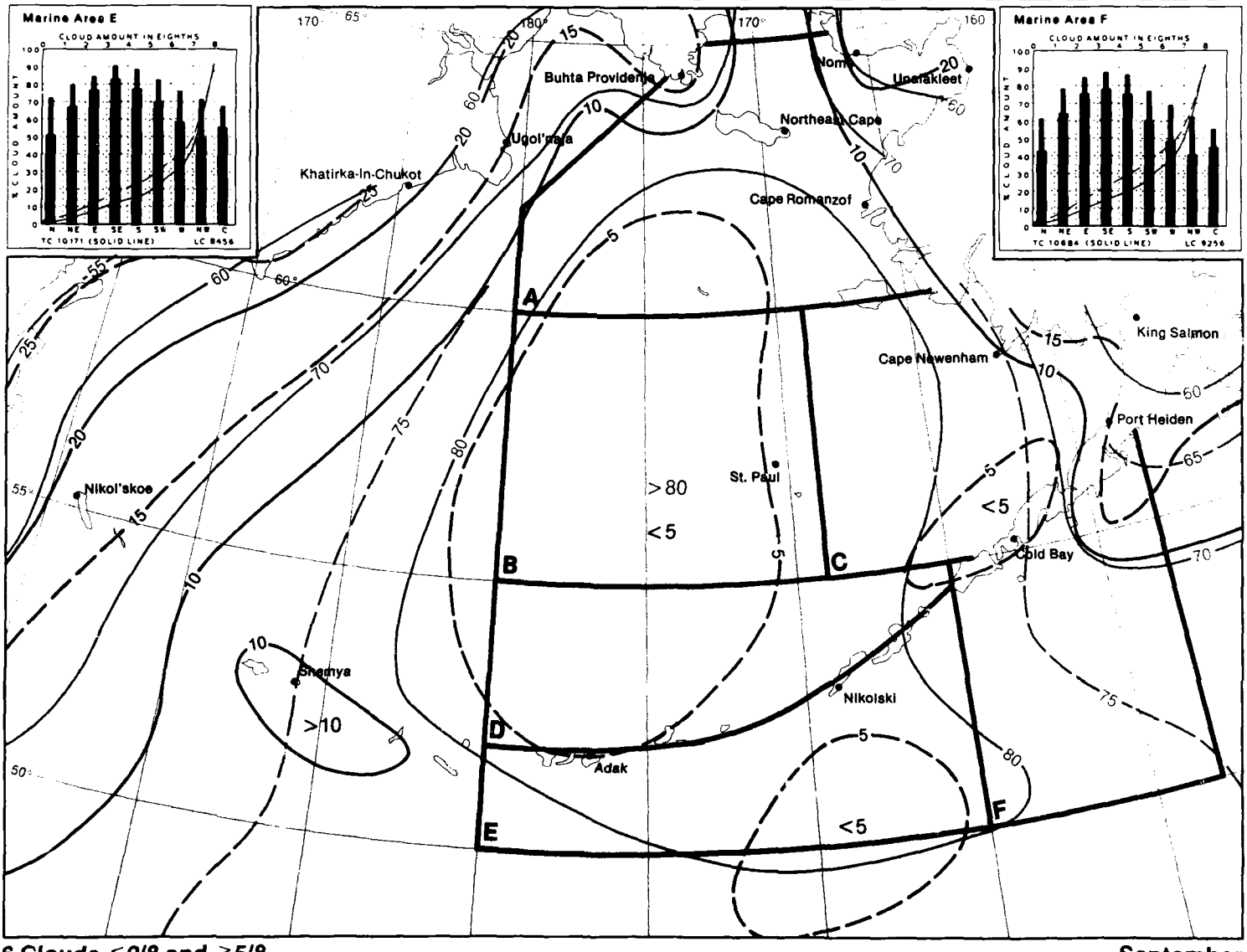


6 Clouds ≦2/8 and ≧5/8

August

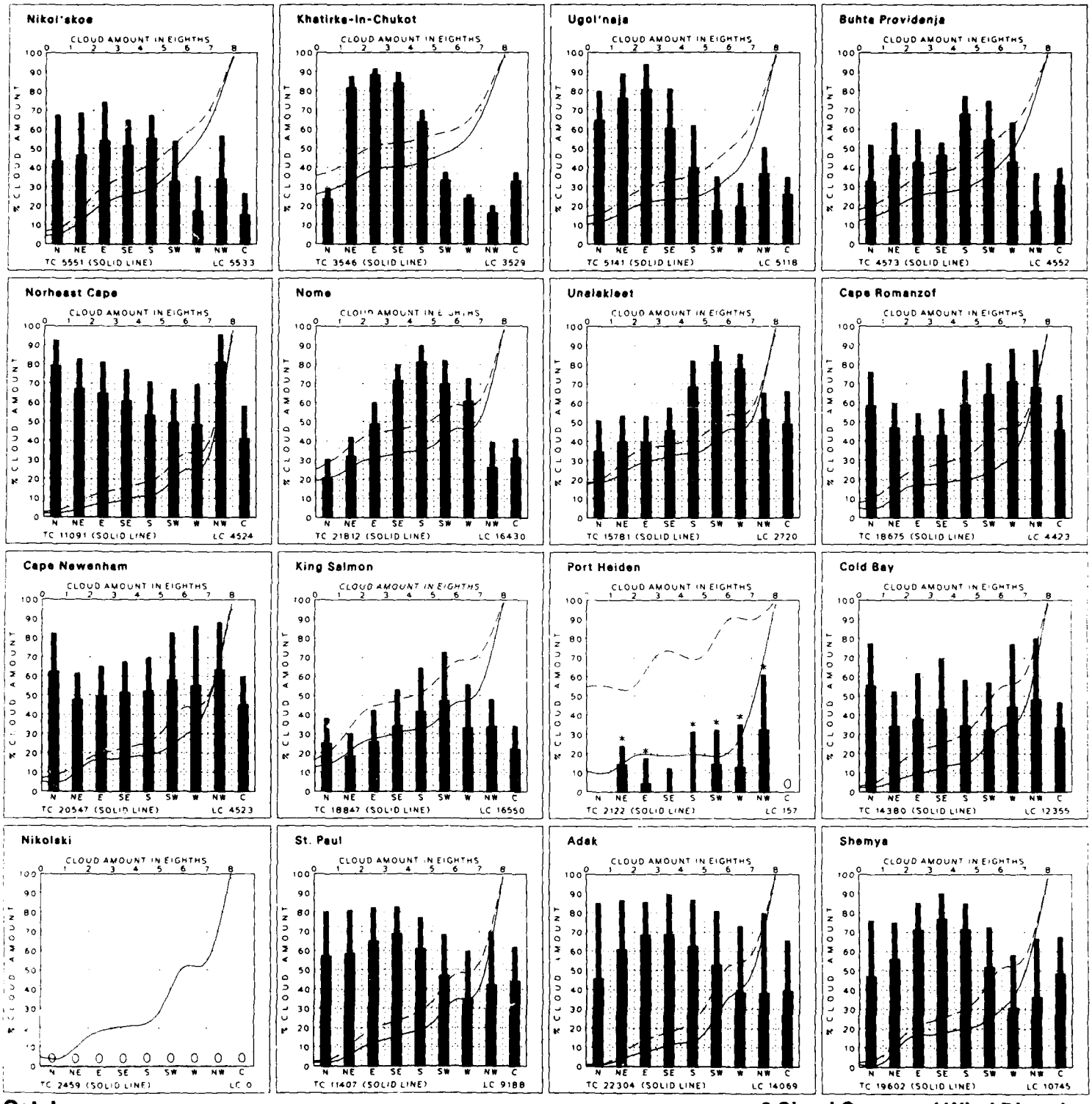

Nikol'skoe
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 5294 (SOLID LINE) LC 5267
Khatirka-In-Chukot
TC 3191 (SOLID LINE) LC 3172
Ugol'naja
TC 4827 (SOLID LINE) LC 4812
Buhta Providenja
TC 4351 (SOLID LINE) LC 4330
Norheast Cape
TC 10865 (SOLID LINE) LC 4505
Nome
TC 21074 (SOLID LINE) LC 16008
Unalakleet
TC 15345 (SOLID LINE) LC 2666
Cape Romanzof
TC 18230 (SOLID LINE) LC 4566
Cape Newenham
TC 19789 (SOLID LINE) LC 4577
King Salmon
TC 18216 (SOLID LINE) LC 16120
Port Heiden
TC 2277 (SOLID LINE) LC 293
Cold Bay
TC 13919 (SOLID LINE) LC 11966
Nikolski
TC 2378 (SOLID LINE) LC 0
St. Paul
TC 10598 (SOLID LINE) LC 8750
Adak
TC 21599 (SOLID LINE) LC 13642
Shemya
TC 18944 (SOLID LINE) LC 10395

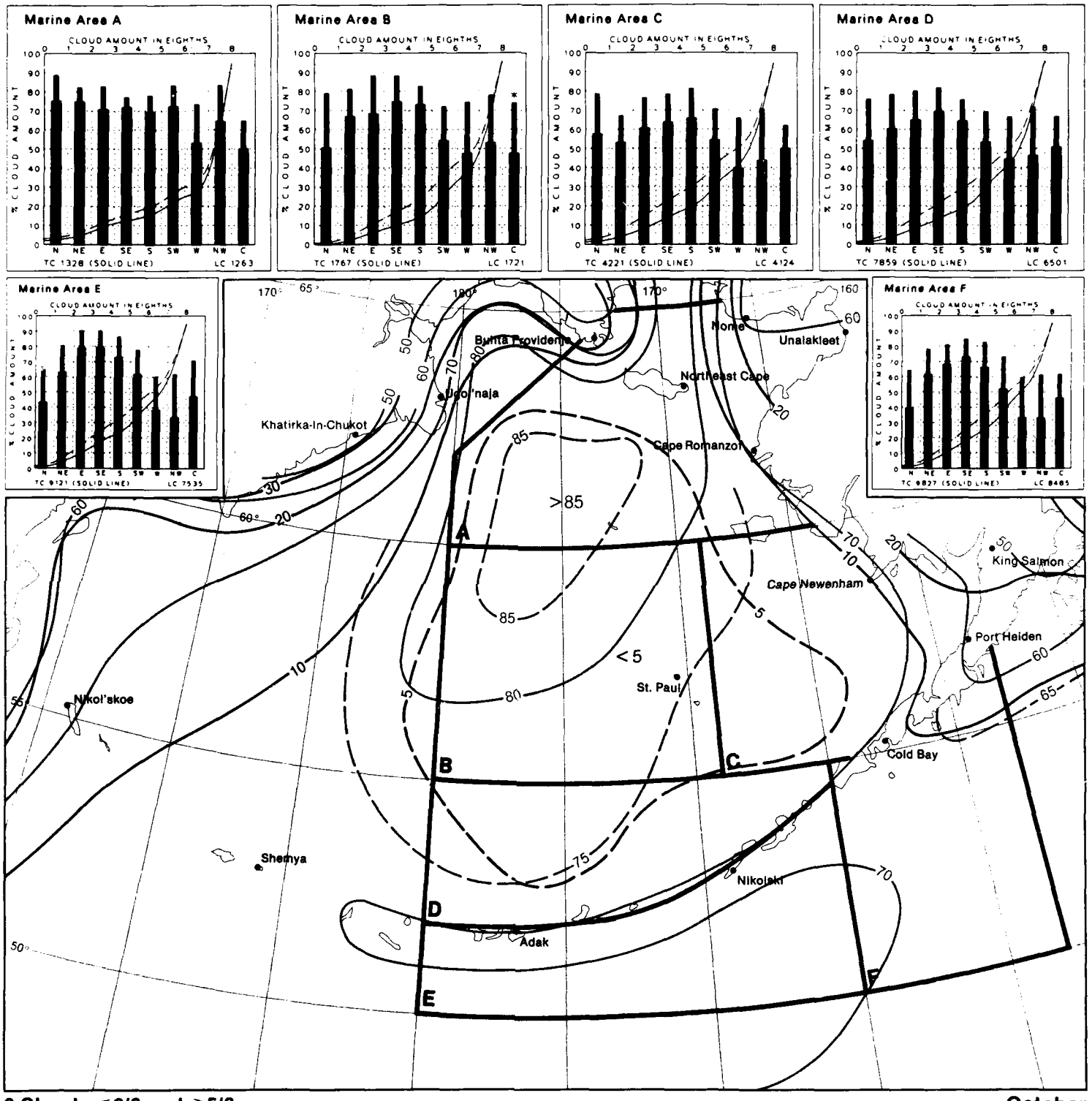




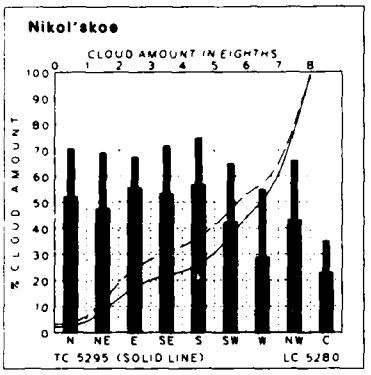
6 Clouds ≤2/8 and ≥5/8

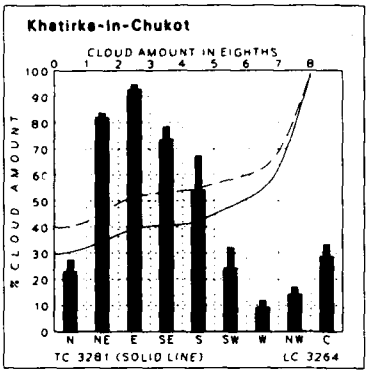
September

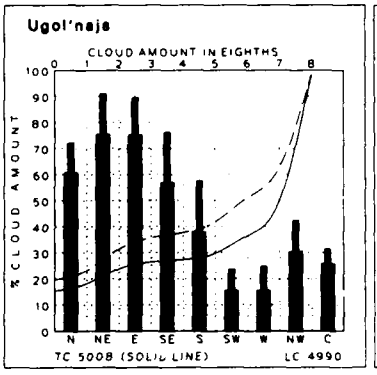

Nikol'skoe
TC 5551 (SOLID LINE)
LC 5533
Khatirka-In-Chukot
TC 3546 (SOLID LINE)
LC 3529
Ugol'naja
TC 5141 (SOLID LINE)
LC 5118
Buhta Providenja
TC 4573 (SOLID LINE)
LC 4552
Norheast Cape
TC 11091 (SOLID LINE)
LC 4524
Nome
TC 21812 (SOLID LINE)
LC 16430
Unalakleet
TC 15781 (SOLID LINE)
LC 2720
Cape Romanzof
TC 18675 (SOLID LINE)
LC 4423
Cape Newenham
TC 20547 (SOLID LINE)
LC 4523
King Salmon
TC 18847 (SOLID LINE)
LC 16550
Port Heiden
TC 2122 (SOLID LINE)
LC 157
Cold Bay
TC 14380 (SOLID LINE)
LC 12355
Nikolski
TC 2459 (SOLID LINE)
LC 0
St. Paul
TC 11407 (SOLID LINE)
LC 9188
Adak
TC 22304 (SOLID LINE)
LC 14069
Shemya
TC 19602 (SOLID LINE)
LC 10745
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C

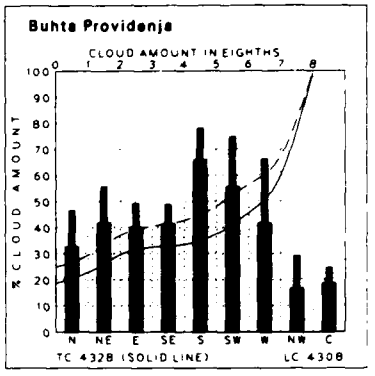


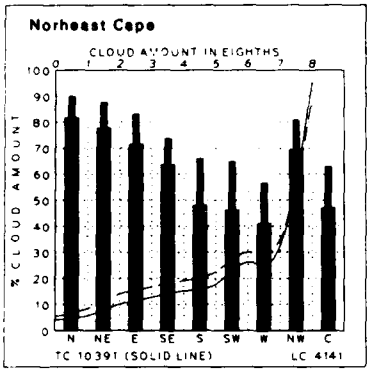
6 Clouds ≦2/8 and ≧5/8 **October**

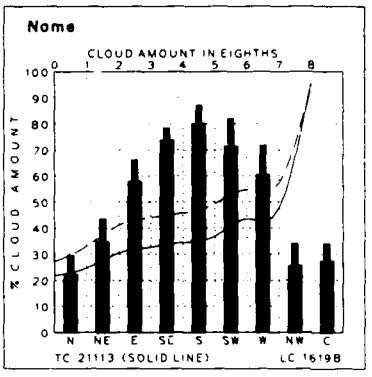

Nikol'skoe
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 5295 (SOLID LINE)
LC 5280

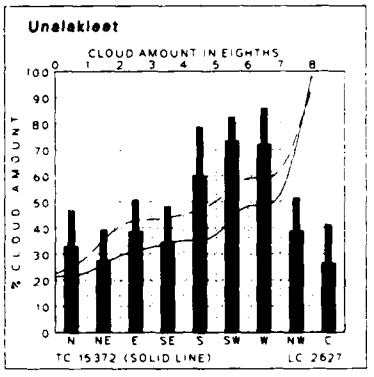

Khatirka-in-Chukot
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 3281 (SOLID LINE)
LC 3264

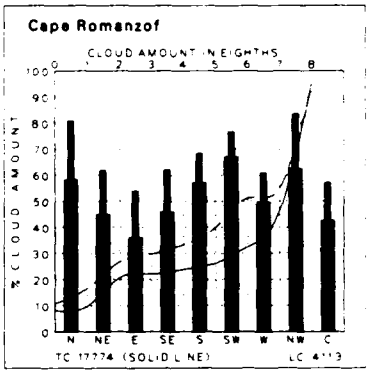

Ugol'naja
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 5008 (SOLID LINE)
LC 4990

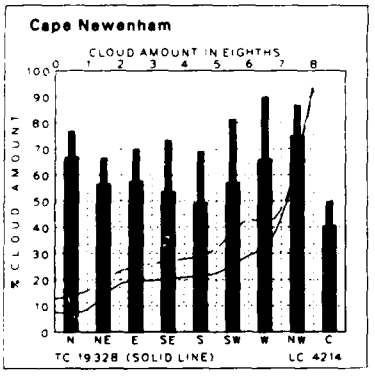

Buhta Providenja
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 4328 (SOLID LINE)
LC 4308

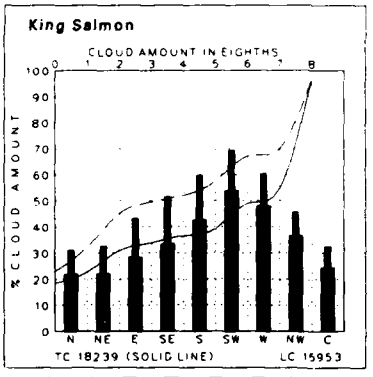

Norheast Cape
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 10391 (SOLID LINE)
LC 4141

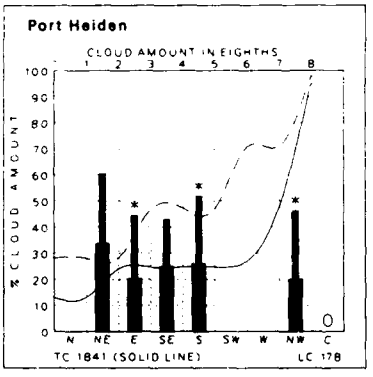

Nome
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 21113 (SOLID LINE)
LC 16198

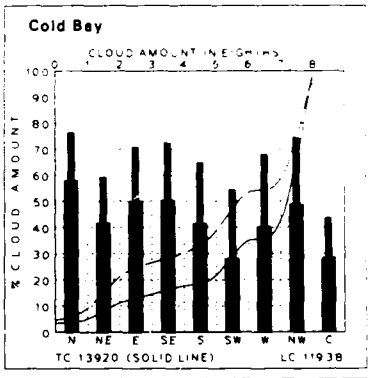

Unalakleet
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 15372 (SOLID LINE)
LC 2627

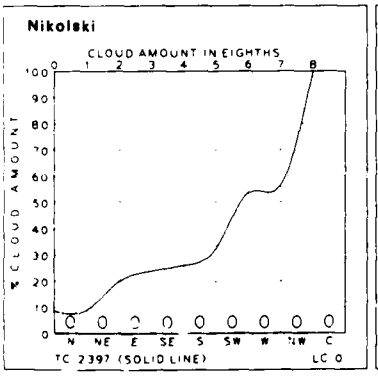

Cape Romanzof
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 17774 (SOLID LINE)

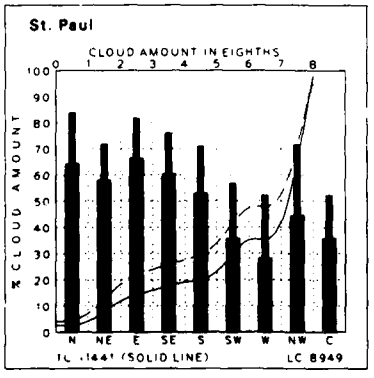

Cape Newenham
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 19328 (SOLID LINE)
LC 4214

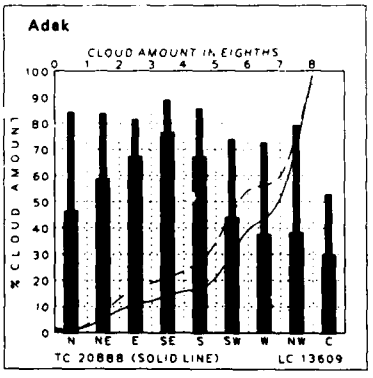

King Salmon
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 18239 (SOLID LINE)
LC 15953

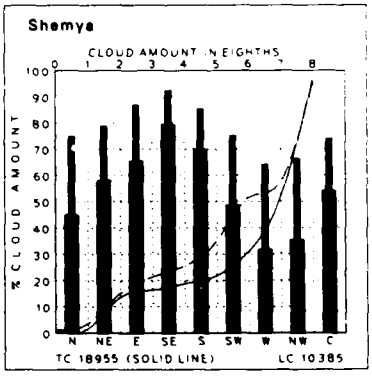

Port Heiden
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 1841 (SOLID LINE)
LC 178

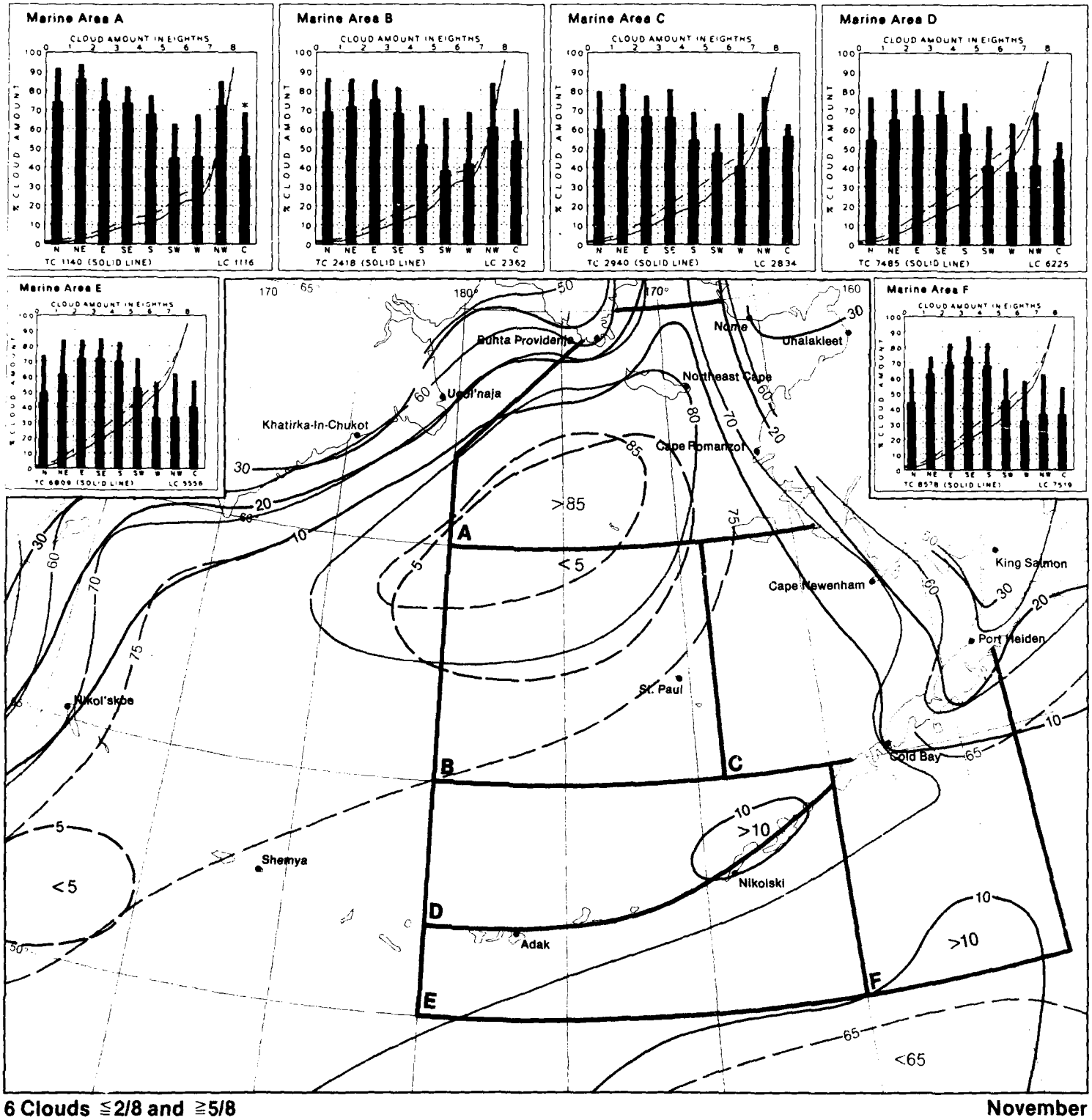

Cold Bay
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 13920 (SOLID LINE)
LC 11938


Nikolski
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 2397 (SOLID LINE)
LC 0

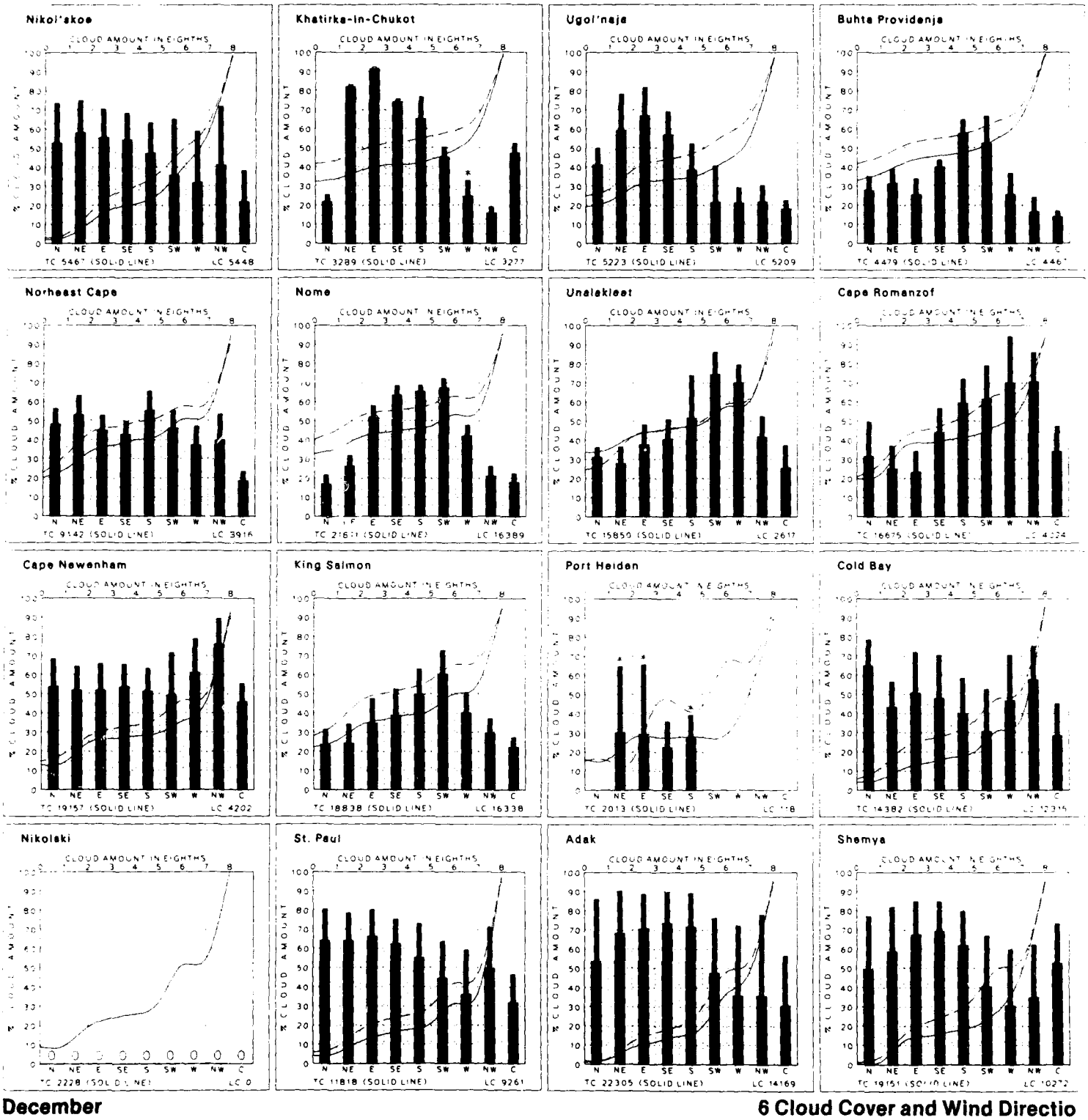

St. Paul
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
LC 8949

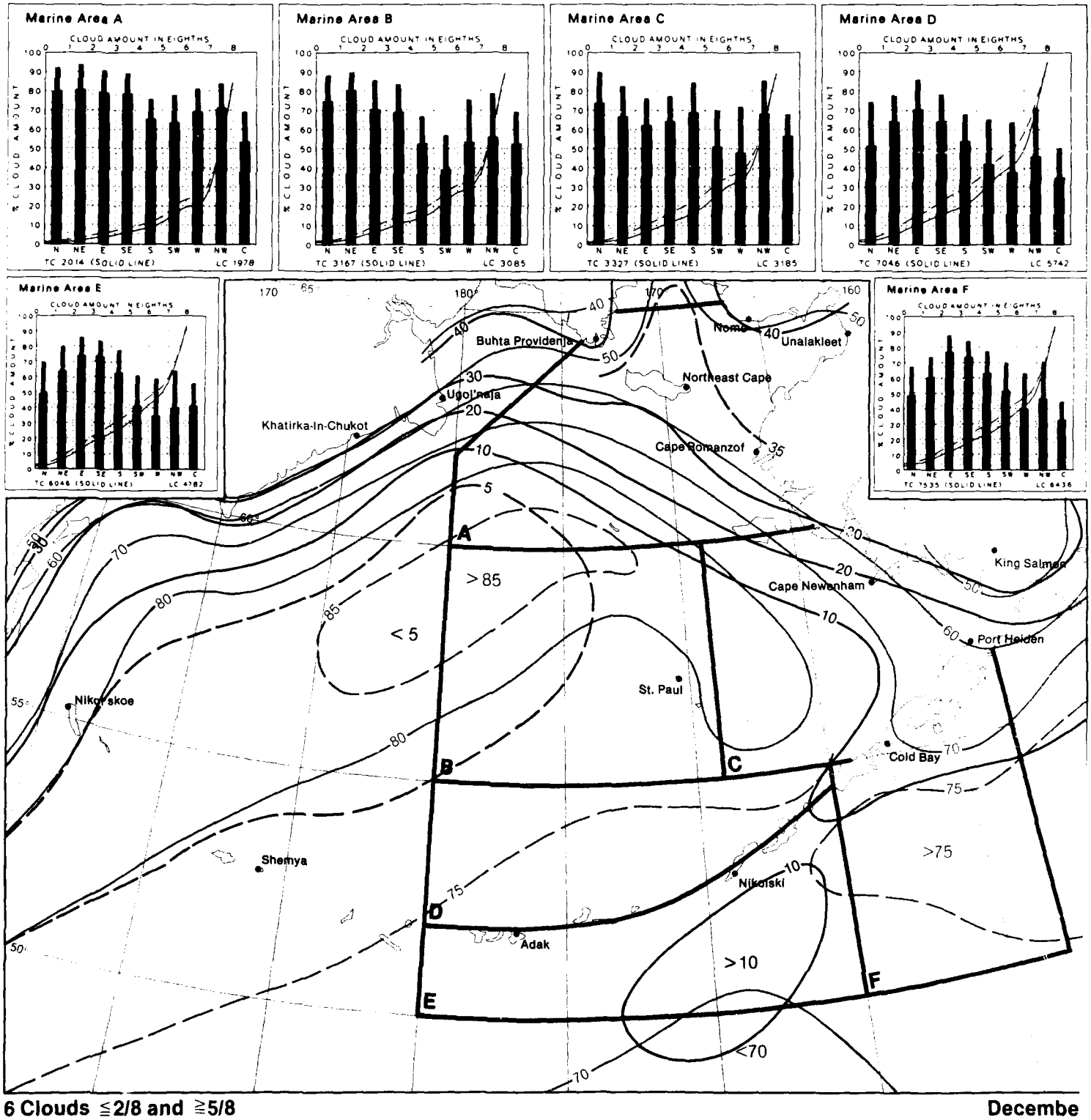

Adak
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 20888 (SOLID LINE)
LC 13609


Shemya
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 18955 (SOLID LINE)
LC 10385



6 Clouds ≦2/8 and ≧5/8 **November**


Nikol'skoe
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 5467 (SOLID LINE)
LC 5448
Khatirka-In-Chukot
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 3289 (SOLID LINE)
LC 3277
Ugol'naja
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 5223 (SOLID LINE)
LC 5209
Buhta Providenja
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 4479 (SOLID LINE)
Norheast Cape
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 9142 (SOLID LINE)
LC 3916
Nome
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 21631 (SOLID LINE)
LC 16389
Unalakleet
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 15850 (SOLID LINE)
LC 2617
Cape Romanzof
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 16675 (SOLID LINE)
Cape Newenham
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 19157 (SOLID LINE)
LC 4202
King Salmon
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 18838 (SOLID LINE)
LC 16338
Port Heiden
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 2013 (SOLID LINE)
Cold Bay
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 14382 (SOLID LINE)
Nikolski
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 2228 (SOLID LINE)
St. Paul
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 11818 (SOLID LINE)
LC 9261
Adak
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 22305 (SOLID LINE)
LC 14169
Shemya
CLOUD AMOUNT IN EIGHTHS
% CLOUD AMOUNT
N NE E SE S SW W NW C
TC 19151 (SOLID LINE)



6 Clouds ≦2/8 and ≧5/8

Decembe

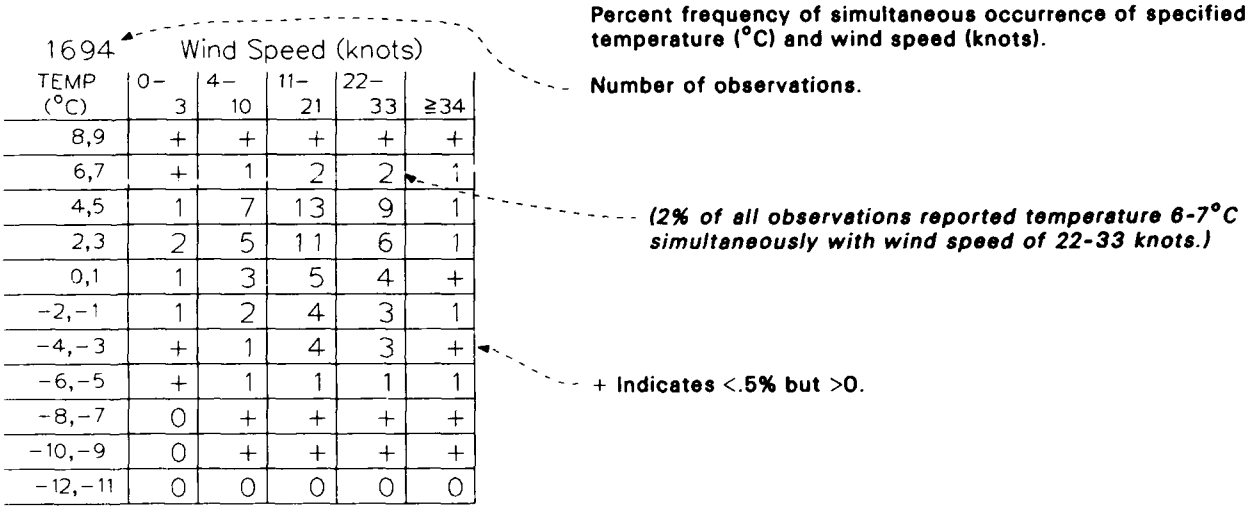
Map 7. Air temperature extremes (°C)

BLACK LINE – Maximum (99%) air temperature (1% of temperatures were greater than the given value).

BLUE LINE – Minimum (1%) air temperature (1% of temperatures were equal to or less than the given value).

Albers Equal–Area Conic Projection

Graphs: Air temperature/wind speed



1694 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
8,9	+	+	+	+	+
6,7	+	1	2	2	1
4,5	1	7	13	9	1
2,3	2	5	11	6	1
0,1	1	3	5	4	+
−2,−1	1	2	4	3	1
−4,−3	+	1	4	3	+
−6,−5	+	1	1	1	1
−8,−7	0	+	+	+	+
−10,−9	0	+	+	+	+
−12,−11	0	0	0	0	0

Air temperature is one of the elements most frequently observed by mariners. On many ships, the heating effect of the ship's structure has a tendency to produce higher than actual ambient air temperature readings because of instrument exposure. This is especially true under calm, sunny conditions. Despite the inaccuracies, the large-scale patterns and mean gradients of the isopleth analyses are relatively accurate.

The temperature scale of the graphs varies in both range and class interval. The graph can be used to determine the extent of human discomfort from the combined effects of extreme heat or cold and winds, or to estimate the likelihood of superstructure icing. Refer to Section I of this atlas for detailed information on superstructure icing and wind chill.

Nikol'skoe

5870 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥6	0	0	0	0	0
4,5	0	+	0	+	0
2,3	+	+	1	1	1
0,1	+	2	5	3	1
-2,-1	1	5	11	6	3
-4,-3	1	5	8	5	2
-6,-5	2	5	7	3	2
-8,-7	2	4	5	2	1
-10,-9	1	1	2	+	+
-12,-11	+	1	1	+	+
≤-13	+	+	+	+	+

Khatirka-in-Chukot

3669 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-4	5	5	7	3	+
-6,-5	2	2	2	1	+
-8,-7	1	1	3	1	1
-10,-9	1	1	2	1	+
-12,-11	1	1	1	2	1
-14,-13	1	1	2	2	1
-16,-15	1	1	2	2	1
-18,-17	1	1	3	3	1
-20,-19	1	+	2	2	+
-22,-21	1	1	3	1	1
≤-23	1	4	8	3	1

Ugol'naja

5256 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-6	3	4	7	7	3
-8,-7	2	2	1	1	+
-10,-9	1	+	1	1	+
-12,-11	1	1	1	1	2
-14,-13	1	1	1	2	2
-16,-15	1	1	1	2	2
-18,-17	1	1	1	2	3
-20,-19	1	+	1	2	2
-22,-21	1	1	+	2	2
-24,-23	1	1	1	2	2
≤-25	3	2	2	4	5

Buhta Providenje

4678 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-4	2	6	8	2	+
-6,-5	1	2	4	+	+
-8,-7	1	2	5	1	+
-10,-9	1	1	2	1	+
-12,-11	1	2	3	1	+
-14,-13	2	2	2	1	+
-16,-15	2	2	3	1	+
-18,-17	3	3	3	1	+
-20,-19	2	1	1	+	+
-22,-21	3	2	1	+	+
≤-23	12	3	1	+	+

Norheast Cape

8544 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-4	1	3	7	5	1
-6,-5	1	2	2	1	+
-8,-7	1	2	3	1	+
-10,-9	1	1	3	1	+
-12,-11	1	2	2	+	+
-14,-13	1	3	3	1	+
-16,-15	1	2	3	+	+
-18,-17	2	4	3	1	+
-20,-19	2	4	3	1	+
-22,-21	2	2	2	+	0
≤-23	8	6	4	+	0

Nome

22017 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-4	1	4	12	3	+
-6,-5	1	2	3	1	+
-8,-7	1	2	3	1	+
-10,-9	1	3	3	1	+
-12,-11	1	2	2	1	+
-14,-13	2	2	3	1	+
-16,-15	1	2	2	+	+
-18,-17	2	2	2	1	+
-20,-19	2	2	2	+	+
-22,-21	1	2	1	+	+
≤-23	12	9	2	+	+

Unalakleet

15434 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-6	1	4	10	4	+
-8,-7	+	1	3	2	+
-10,-9	+	2	3	2	+
-12,-11	+	1	2	2	+
-14,-13	1	2	3	2	+
-16,-15	1	2	2	2	+
-18,-17	1	2	3	2	+
-20,-19	1	2	2	1	+
-22,-21	1	2	1	1	+
-24,-23	1	2	2	1	+
≤-25	5	12	4	1	+

Cape Romanzof

17446 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥0	1	2	8	2	+
-2,-1	1	2	5	2	+
-4,-3	2	3	6	2	+
-6,-5	2	1	3	1	+
-8,-7	2	2	3	1	+
-10,-9	2	1	2	1	+
-12,-11	1	1	1	1	+
-14,-13	2	1	1	2	1
-16,-15	2	1	2	1	1
-18,-17	1	1	2	1	+
≤-19	3	3	6	6	3

Cape Newenham

18410 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥2	+	1	6	4	+
0,1	1	4	9	3	+
-2,-1	2	3	5	2	+
-4,-3	3	3	4	1	+
-6,-5	2	1	1	1	+
-8,-7	3	2	1	1	+
-10,-9	3	2	1	+	+
-12,-11	2	1	1	1	+
-14,-13	2	1	1	+	+
-16,-15	2	1	1	+	+
≤-17	6	5	6	1	0

King Salmon

19078 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥0	1	9	11	5	+
-2,-1	1	4	2	+	+
-4,-3	1	4	2	+	+
-6,-5	1	3	1	+	0
-8,-7	2	3	1	+	0
-10,-9	2	3	1	+	0
-12,-11	1	2	1	+	0
-14,-13	2	2	1	+	0
-16,-15	1	2	1	+	+
-18,-17	1	2	1	+	0
≤-19	6	11	7	1	+

Port Heiden

6361 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥6	+	+	1	+	+
4,5	+	1	2	1	+
2,3	1	4	9	4	1
0,1	2	8	9	2	+
-2,-1	2	8	3	+	0
-4,-3	2	5	2	+	0
-6,-5	1	3	2	+	+
-8,-7	1	2	1	+	0
-10,-9	1	2	1	+	0
-12,-11	+	2	1	0	0
≤-13	1	5	7	1	0

Cold Bay

13894 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥8	0	+	+	+	0
6,7	+	+	+	1	+
4,5	+	+	3	3	1
2,3	+	2	10	6	1
0,1	1	8	11	4	1
-2,-1	1	4	4	1	+
-4,-3	1	4	4	1	+
-6,-5	1	3	2	1	+
-8,-7	+	3	3	2	+
-10,-9	+	2	3	1	+
≤-11	+	2	3	1	+

Nikolski

2113 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	0	0	0	0	0
8,9	0	0	0	0	0
6,7	+	+	+	+	+
4,5	+	+	2	1	0
2,3	1	4	9	4	+
0,1	3	13	20	6	+
-2,-1	3	6	7	3	+
-4,-3	1	3	4	2	+
-6,-5	1	1	2	1	+
-8,-7	+	+	1	+	0
≤-9	0	0	1	+	0

St. Paul

11604 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥6	0	0	+	+	+
4,5	0	+	+	1	+
2,3	+	2	8	5	+
0,1	1	6	15	6	1
-2,-1	1	3	6	2	+
-4,-3	1	2	5	2	+
-6,-5	1	2	3	3	+
-8,-7	+	2	3	3	+
-10,-9	+	1	3	2	+
-12,-11	+	1	2	1	+
≤-13	+	1	2	2	+

Adak

22766 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	0	0	0	0	0
8,9	0	+	+	+	+
6,7	+	1	1	1	+
4,5	1	3	3	1	+
2,3	3	9	12	4	+
0,1	4	10	14	5	+
-2,-1	3	4	5	1	+
-4,-3	3	3	3	1	+
-6,-5	1	1	+	+	0
-8,-7	1	+	+	+	0
≤-9	1	+	0	0	0

Shemya

19232 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥8	0	0	0	+	0
6,7	0	+	0	0	+
4,5	+	+	+	1	+
2,3	1	2	7	6	1
0,1	3	7	16	9	2
-2,-1	2	5	10	5	1
-4,-3	2	4	7	3	+
-6,5	1	1	1	1	+
-8,-7	+	+	+	+	+
-10,-9	+	+	+	0	+
≤-11	+	+	0	+	0

Marine Area A

2807 Wind Speed (knots)

TEMP (°C)	0 - 3	4 - 10	11 - 21	22 - 33	≥34
≥4	+	+	1	+	+
2,3	+	1	3	1	+
0,1	+	3	8	5	1
-2,-1	1	3	7	4	1
-4,-3	1	2	5	4	1
-6,-5	+	1	3	3	1
-8,-7	+	1	3	3	1
-10,-9	+	1	2	3	1
-12,-11	+	1	2	3	1
-14,-13	+	1	2	1	1
≤-15	+	2	5	4	1

Marine Area B

4949 Wind Speed (knots)

TEMP (°C)	0 - 3	4 - 10	11 - 21	22 - 33	≥34
≥8	+	+	+	+	+
6,7	0	+	+	+	+
4,5	+	1	2	2	+
2,3	1	3	9	5	1
0,1	1	5	12	8	2
-2,-1	1	2	6	4	1
-4,-3	+	2	5	3	1
-6,-5	+	1	4	2	+
-8,-7	+	1	3	2	+
-10,-9	+	1	2	1	+
≤-11	+	1	2	2	1

Marine Area C

3884 Wind Speed (knots)

TEMP (°C)	0 - 3	4 - 10	11 - 21	22 - 33	≥34
≥10	0	+	0	0	0
8,9	0	+	+	+	0
6,7	+	+	+	+	+
4,5	+	2	6	3	1
2,3	1	5	14	7	2
0,1	1	5	10	5	1
-2,-1	1	2	4	2	+
-4,-3	1	1	2	2	+
-6,-5	+	1	2	2	+
-8,-7	+	1	2	2	1
≤-9	+	+	2	2	1

Marine Area D

7576 Wind Speed (knots)

TEMP (°C)	0 - 3	4 - 10	11 - 21	22 - 33	≥34
≥10	+	+	+	+	+
8,9	+	+	+	+	+
6,7	+	1	1	1	+
4,5	+	3	7	6	2
2,3	1	6	13	10	3
0,1	1	4	10	8	3
-2,-1	+	1	4	3	1
-4,-3	+	1	2	2	1
-6,-5	+	+	1	1	+
-8,-7	+	+	+	+	+
≤-9	0	+	+	+	+

Marine Area E

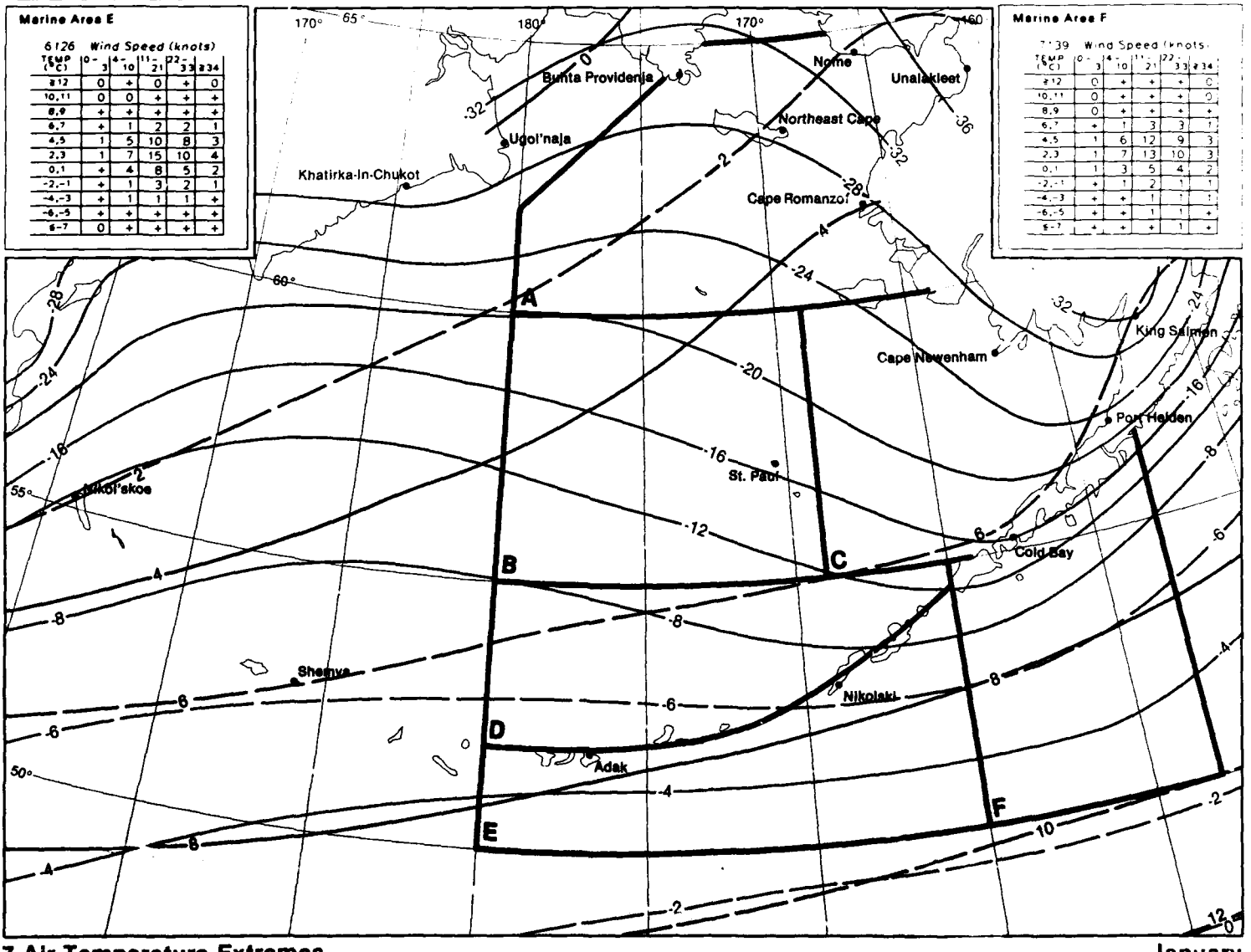
6126 Wind Speed (knots)

TEMP (°C)	0 - 3	4 - 10	11 - 21	22 - 33	≥34
≥12	0	+	0	+	0
10,11	0	0	+	+	+
8,9	+	+	+	+	+
6,7	+	1	2	2	1
4,5	1	5	10	8	3
2,3	1	7	15	10	4
0,1	+	4	8	5	2
-2,-1	+	1	3	2	1
-4,-3	+	1	1	1	+
-6,-5	+	+	+	+	+
≤-7	0	+	+	+	+

Marine Area F

7139 Wind Speed (knots)

TEMP (°C)	0 - 3	4 - 10	11 - 21	22 - 33	≥34
≥12	0	+	+	+	0
10,11	0	+	+	+	0
8,9	0	+	+	+	+
6,7	+	1	3	3	1
4,5	1	6	12	9	3
2,3	1	7	13	10	3
0,1	1	3	5	4	2
-2,-1	+	1	2	1	1
-4,-3	+	+	1	1	+
-6,-5	+	+	1	1	+
≤-7	+	+	+	1	+



7 Air Temperature Extremes **January**

Nikol'skoe

5438 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥6	0	0	0	0	0
4,5	0	0	+	0	0
2,3	+	+	1	+	+
0,1	+	2	4	2	1
-2,-1	1	4	9	7	3
-4,-3	1	5	9	5	3
-6,-5	2	5	8	4	1
-8,-7	2	4	6	3	1
-10,-9	1	1	2	1	+
-12,-11	+	1	1	+	+
≤-13	+	+	+	+	+

Khatirka-In-Chukot

3223 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-8	5	5	6	3	1
-10,-9	1	1	1	1	+
-12,-11	1	1	2	1	1
-14,-13	1	1	2	2	1
-16,-15	1	1	3	2	1
-18,-17	1	2	5	4	2
-20,-19	1	1	2	2	+
-22,-21	1	1	5	3	1
-24,-23	1	2	4	2	1
-26,-25	1	2	3	1	1
≤-27	1	4	4	1	1

Ugol'naja

4832 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-8	3	3	5	5	2
-10,-9	1	1	1	+	+
-12,-11	1	1	1	1	1
-14,-13	1	1	1	1	1
-16,-15	1	1	1	2	2
-18,-17	2	1	2	3	3
-20,-19	1	+	1	2	2
-22,-21	1	1	1	3	4
-24,-23	2	1	2	3	4
-26,-25	2	1	2	3	3
≤-27	3	2	3	3	5

Buhta Providenja

4327 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-8	2	5	9	2	+
-10,-9	1	1	2	+	+
-12,-11	1	2	3	1	+
-14,-13	1	2	4	1	+
-16,-15	2	3	4	1	+
-18,-17	3	3	4	1	+
-20,-19	2	2	1	+	0
-22,-21	4	3	2	+	+
-24,-23	5	2	1	+	0
-26,-25	4	2	1	+	0
≤-27	8	2	+	+	+

Norheast Cape

8799 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-8	2	5	10	6	1
-10,-9	1	2	2	1	+
-12,-11	1	2	2	+	0
-14,-13	1	2	2	1	+
-16,-15	2	2	2	+	0
-18,-17	2	3	3	+	+
-20,-19	2	4	2	+	+
-22,-21	2	3	2	+	0
-24,-23	4	4	2	+	+
-26,-25	3	3	2	+	+
≤-27	7	7	2	0	0

Nome

20105 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-6	1	5	11	3	+
-8,-7	1	2	3	1	+
-10,-9	1	2	3	1	+
-12,-11	1	2	2	+	+
-14,-13	2	2	3	1	+
-16,-15	1	2	1	1	+
-18,-17	2	3	2	+	+
-20,-19	2	3	2	+	+
-22,-21	2	2	1	+	+
-24,-23	3	3	1	+	+
≤-25	13	8	1	+	+

Unalakleet

13972 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-8	1	6	12	4	+
-10,-9	+	1	3	2	+
-12,-11	1	1	2	2	+
-14,-13	1	2	3	3	+
-16,-15	1	1	2	1	+
-18,-17	1	2	2	2	+
-20,-19	1	2	2	1	+
-22,-21	1	2	1	+	+
-24,-23	1	2	1	+	+
-26,-25	1	2	1	+	+
≤-27	6	12	2	+	0

Cape Romanzof

16317 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-4	3	5	12	3	+
-6,-5	2	1	2	1	+
-8,-7	2	1	2	1	+
-10,-9	2	1	2	2	+
-12,-11	1	1	1	1	+
-14,-13	2	1	2	2	1
-16,-15	1	1	2	2	1
-18,-17	1	1	2	2	1
-20,-19	1	1	2	2	1
-22,-21	1	1	2	2	1
≤-23	1	3	5	4	1

Cape Newenham

17474 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥2	+	1	4	2	+
0,1	1	3	9	2	+
-2,-1	2	3	5	1	+
-4,-3	2	3	3	1	+
-6,-5	1	2	2	1	+
-8,-7	2	1	1	+	+
-10,-9	2	2	1	+	+
-12,-11	2	2	1	+	+
-14,-13	2	2	2	+	+
-16,-15	1	2	1	+	0
≤-17	6	8	9	2	+

King Salmon

17369 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-2	2	11	13	3	+
-4,-3	1	4	2	+	0
-6,-5	1	2	1	+	0
-8,-7	1	3	2	+	0
-10,-9	1	3	1	+	0
-12,-11	1	2	1	+	0
-14,-13	1	3	2	+	0
-16,-15	1	2	1	+	0
-18,-17	1	2	2	+	0
-20,-19	1	3	2	+	0
≤-21	4	10	6	+	+

Port Heiden

5709 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥4	+	1	3	2	+
2,3	1	2	6	3	+
0,1	1	6	6	1	+
-2,-1	1	5	3	+	0
-4,-3	1	4	2	+	0
-6,-5	1	3	2	+	0
-8,-7	1	2	2	+	0
-10,-9	1	3	2	+	0
-12,-11	1	2	2	+	0
-14,-13	1	2	3	+	0
≤-15	1	9	10	2	0

Cold Bay

12682 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥6	+	+	+	+	+
4,5	+	+	1	1	+
2,3	+	3	8	5	1
0,1	1	7	11	4	1
-2,-1	1	4	5	1	+
-4,-3	1	5	5	1	+
-6,-5	+	2	4	1	+
-8,-7	1	2	5	2	+
-10,-9	+	2	3	2	+
-12,-11	+	1	1	1	+
≤-13	+	1	2	1	+

Nikolski

1947 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥8	0	0	0	0	0
6,7	0	0	0	0	+
4,5	+	+	1	1	0
2,3	1	3	5	2	+
0,1	5	12	14	6	+
-2,-1	3	7	9	3	+
-4,-3	1	6	7	4	+
-6,-5	+	1	3	1	+
-8,-7	0	1	1	1	0
-10,-9	0	+	+	+	0
≤-11	0	0	0	0	0

St. Paul

10600 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥4	0	+	+	+	+
2,3	+	1	3	2	+
0,1	+	4	14	4	1
-2,-1	+	3	6	3	+
-4,-3	1	2	5	2	+
-6,-5	+	1	3	3	+
-8,-7	+	2	3	3	1
-10,-9	+	1	4	3	1
-12,-11	+	1	2	2	+
-14,-13	+	1	2	2	+
≤-15	+	2	6	3	+

Adak

21407 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	0	0	0	0	0
8,9	+	+	+	+	0
6,7	+	+	1	+	+
4,5	+	2	2	1	+
2,3	2	8	10	4	1
0,1	5	11	13	5	1
-2,-1	2	5	7	2	+
-4,-3	2	3	4	1	+
-6,-5	1	1	1	+	+
-8,-7	1	+	+	+	0
≤-9	1	+	+	+	0

Shemya

17572 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥8	0	0	0	0	0
6,7	0	0	+	+	0
4,5	+	+	+	+	+
2,3	1	1	5	3	1
0,1	3	7	15	9	2
-2,-1	2	6	12	6	1
-4,-3	3	4	8	4	1
-6,-5	1	1	1	1	+
-8,-7	+	+	+	+	0
-10,-9	+	+	0	0	0
≤-11	+	+	0	0	0

Marine Area A

1630 Wind Speed (knots)

TEMP (°C)	0 - 3	4 - 10	11 - 21	22 - 33	≥34
≥0	1	2	5	3	1
-2,-1	+	3	7	3	1
-4,-3	+	2	4	2	+
-6,-5	+	2	3	2	+
-8,-7	+	1	3	3	+
-10,-9	+	1	2	2	+
-12,-11	+	1	4	4	1
-14,-13	+	1	5	4	1
-16,-15	+	1	5	4	1
-18,-17	+	1	3	2	1
≤-19	+	1	3	2	1

Marine Area B

6145 Wind Speed (knots)

TEMP (°C)	0 - 3	4 - 10	11 - 21	22 - 33	≥34
≥4	+	+	1	1	+
2,3	+	1	3	2	1
0,1	+	2	6	4	1
-2,-1	+	2	4	3	1
-4,-3	+	2	4	2	1
-6,-5	+	2	4	3	1
-8,-7	+	2	5	4	1
-10,-9	+	2	5	4	1
-12,-11	+	1	4	3	1
-14,-13	+	1	3	2	1
≤-15	+	1	3	2	1

Marine Area C

4298 Wind Speed (knots)

TEMP (°C)	0 - 3	4 - 10	11 - 21	22 - 33	≥34
≥8	0	+	+	+	+
6,7	+	+	+	+	+
4,5	+	1	2	1	+
2,3	+	4	11	6	1
0,1	1	5	12	6	1
-2,-1	+	2	5	3	1
-4,-3	+	1	3	2	1
-6,-5	+	2	3	3	1
-8,-7	+	1	3	2	1
-10,-9	+	1	1	1	1
≤-11	+	1	3	4	1

Marine Area D

7683 Wind Speed (knots)

TEMP (°C)	0 - 3	4 - 10	11 - 21	22 - 33	≥34
≥10	+	+	+	+	+
8,9	+	+	+	+	+
6,7	+	1	1	1	+
4,5	+	3	6	4	1
2,3	1	6	14	10	3
0,1	1	4	10	7	3
-2,-1	+	2	4	4	1
-4,-3	+	1	3	2	1
-6,-5	+	+	2	2	1
-8,-7	+	+	+	1	+
≤-9	+	+	+	+	+

Marine Area E

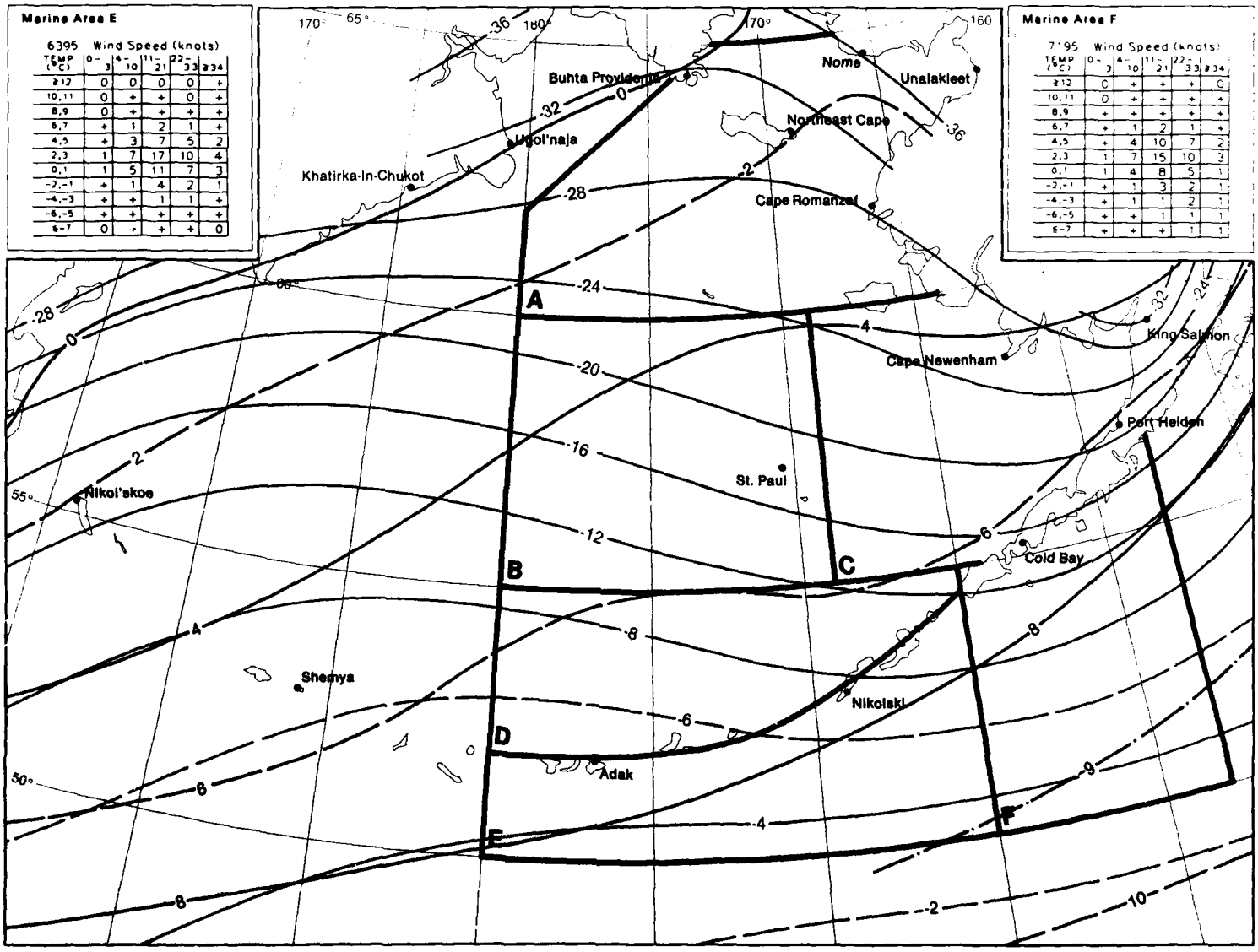
6395 Wind Speed (knots)

TEMP (°C)	0 - 3	4 - 10	11 - 21	22 - 33	≥34
≥12	0	0	0	0	+
10,11	0	+	+	0	+
8,9	0	+	+	+	+
6,7	+	1	2	1	+
4,5	+	3	7	5	2
2,3	1	7	17	10	4
0,1	1	5	11	7	3
-2,-1	+	1	4	2	1
-4,-3	+	+	1	1	+
-6,-5	+	+	+	+	+
≤-7	0	+	+	+	0

Marine Area F

7195 Wind Speed (knots)

TEMP (°C)	0 - 3	4 - 10	11 - 21	22 - 33	≥34
≥12	0	+	+	+	0
10,11	0	+	+	+	+
8,9	+	+	+	+	+
6,7	+	1	2	1	+
4,5	+	4	10	7	2
2,3	1	7	15	10	3
0,1	1	4	8	5	1
-2,-1	+	1	3	2	1
-4,-3	+	1	1	2	1
-6,-5	+	+	1	1	1
≤-7	+	+	+	1	1



7 Air Temperature Extremes **February**

N'kol'skoe

5985 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥6	0	0	0	+	0
4,5	0	0	+	0	0
2,3	+	+	1	1	+
0,1	+	2	5	2	1
-2,-1	1	5	12	7	3
-4,-3	2	6	10	4	3
-6,-5	2	5	7	3	1
-8,-7	2	3	4	2	1
-10,-9	1	1	1	+	+
-12,-11	+	1	1	+	+
≤-13	1	+	+	+	+

Khatirka-In-Chukot

4034 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-6	4	4	5	2	+
-8,-7	1	1	3	2	+
-10,-9	1	1	1	1	+
-12,-11	1	2	3	2	+
-14,-13	1	2	4	2	1
-16,-15	1	3	4	2	1
-18,-17	1	4	6	3	1
-20,-19	1	2	3	1	+
-22,-21	1	3	4	1	+
-24,-23	1	2	3	1	+
≤-25	1	3	3	1	0

Ugol'naja

5279 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-8	3	4	5	4	2
-10,-9	1	1	1	+	+
-12,-11	1	1	1	1	1
-14,-13	1	1	1	2	2
-16,-15	1	1	2	2	2
-18,-17	2	2	3	5	3
-20,-19	1	1	1	3	3
-22,-21	2	1	2	3	2
-24,-23	1	1	2	3	2
-26,-25	1	1	1	2	2
≤-27	1	1	1	1	2

Buhta Providenja

4858 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-6	3	5	6	1	+
-8,-7	2	2	3	1	+
-10,-9	1	2	4	+	+
-12,-11	2	3	4	1	+
-14,-13	3	3	3	1	+
-16,-15	3	4	3	1	+
-18,-17	4	4	3	+	+
-20,-19	3	2	2	+	+
-22,-21	4	2	1	+	0
-24,-23	4	2	1	+	0
≤-25	8	1	1	0	0

Norheast Cape

9426 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-4	2	4	7	3	1
-6,-5	1	1	1	1	+
-8,-7	1	2	2	1	+
-10,-9	1	2	2	1	+
-12,-11	2	2	2	+	+
-14,-13	3	4	3	1	+
-16,-15	3	3	2	+	0
-18,-17	3	4	3	+	0
-20,-19	3	4	2	+	0
-22,-21	2	2	1	+	0
≤-23	7	6	2	+	0

Nome

21305 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-4	1	5	9	2	+
-6,-5	1	2	2	1	+
-8,-7	1	3	3	1	+
-10,-9	2	3	3	1	+
-12,-11	1	3	2	+	+
-14,-13	2	4	3	1	+
-16,-15	2	3	2	+	+
-18,-17	2	3	2	+	0
-20,-19	3	3	1	+	0
-22,-21	2	2	1	+	0
≤-23	11	6	1	+	0

Unalakleet

14470 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-4	1	6	10	3	+
-6,-5	+	2	3	1	+
-8,-7	+	2	4	1	+
-10,-9	1	3	4	1	+
-12,-11	1	2	3	1	+
-14,-13	1	3	4	1	+
-16,-15	1	2	2	1	+
-18,-17	1	3	2	1	+
-20,-19	1	3	1	+	+
-22,-21	1	2	1	+	0
≤-23	5	8	3	+	+

Cape Romanzof

18136 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥0	1	3	5	1	+
-2,-1	1	2	6	2	+
-4,-3	2	3	5	2	+
-6,-5	1	1	2	1	+
-8,-7	2	2	3	1	+
-10,-9	2	2	3	2	+
-12,-11	2	1	2	2	+
-14,-13	2	2	3	3	1
-16,-15	2	1	2	1	+
-18,-17	2	1	2	1	+
≤-19	2	3	6	3	+

Cape Newenham

19576 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥4	+	+	+	+	+
2,3	1	1	3	1	+
0,1	3	6	10	2	+
-2,-1	3	5	6	2	+
-4,-3	3	4	4	1	+
-6,-5	2	2	2	1	+
-8,-7	2	3	2	+	+
-10,-9	2	3	2	+	+
-12,-11	1	2	1	+	+
-14,-13	2	2	2	+	+
≤-15	3	4	5	1	+

King Salmon

19064 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥4	+	2	3	1	+
2,3	1	4	5	2	+
0,1	1	7	6	1	+
-2,-1	1	5	3	+	+
-4,-3	2	5	3	+	+
-6,-5	1	3	1	+	0
-8,-7	1	4	2	+	0
-10,-9	1	3	2	+	+
-12,-11	1	2	1	+	+
-14,-13	1	3	2	+	0
≤-15	4	9	5	+	0

Port Heiden

6377 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥8	+	+	+	+	0
6,7	+	1	1	+	0
4,5	+	2	3	1	+
2,3	1	5	8	2	1
0,1	2	9	9	2	+
-2,-1	2	7	5	1	+
-4,-3	1	5	4	+	+
-6,-5	1	3	2	+	0
-8,-7	+	2	3	+	0
-10,-9	+	2	2	+	0
≤-11	1	5	4	1	0

Cold Bay

13876 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥8	0	+	+	+	+
6,7	+	+	+	+	+
4,5	+	1	2	2	+
2,3	+	4	9	5	1
0,1	1	8	12	6	1
-2,-1	1	4	5	2	+
-4,-3	1	4	5	2	+
-6,-5	+	2	4	1	+
-8,-7	+	2	3	1	+
-10,-9	+	1	2	1	+
≤-11	+	2	3	1	+

Nikolski

2057 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	0	0	+	0	0
8,9	+	0	0	0	0
6,7	+	+	0	+	0
4,5	+	1	2	+	0
2,3	2	6	8	3	+
0,1	4	12	19	7	+
-2,-1	2	4	8	3	+
-4,-3	1	3	5	3	+
-6,-5	+	1	2	1	+
-8,-7	+	1	1	1	0
≤-9	0	0	0	+	0

St. Paul

11595 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥4	0	+	+	+	0
2,3	+	1	2	1	+
0,1	+	5	14	6	+
-2,-1	+	4	7	3	+
-4,-3	1	3	6	3	+
-6,-5	+	2	4	2	+
-8,-7	+	2	5	2	+
-10,-9	+	1	3	2	+
-12,-11	+	1	2	1	+
-14,-13	+	1	2	2	+
≤-15	+	2	3	2	+

Adak

22293 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	0	+	0	0	0
8,9	0	+	+	+	+
6,7	+	1	1	+	+
4,5	1	3	4	2	+
2,3	3	10	14	4	1
0,1	4	11	15	6	1
-2,-1	2	4	4	1	+
-4,-3	2	2	2	1	+
-6,-5	1	+	+	+	+
-8,-7	+	+	+	0	0
≤-9	+	+	0	0	0

Shemya

19308 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	0	0	0	0	0
8,9	0	0	0	0	0
6,7	0	0	0	+	0
4,5	+	+	+	+	+
2,3	1	2	7	5	1
0,1	4	8	18	12	2
-2,-1	2	6	9	6	1
-4,-3	1	3	5	2	+
-6,-5	+	1	1	+	+
-8,-7	+	+	+	+	0
≤-9	+	+	+	0	0

Marine Area A

1218 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥0	+	1	4	2	1
-2,-1	+	4	8	4	1
-4,-3	+	2	4	2	1
-6,-5	+	1	2	3	1
-8,-7	+	2	3	2	1
-10,-9	+	2	2	3	+
-12,-11	1	3	4	3	2
-14,-13	1	2	2	2	1
-16,-15	+	2	4	2	+
-18,-17	1	2	3	1	+
≤-19	+	2	2	1	1

Marine Area B

5571 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥6	+	+	+	+	+
4,5	+	+	1	1	+
2,3	+	2	5	3	+
0,1	1	4	9	5	1
-2,-1	1	4	8	4	1
-4,-3	1	2	5	3	1
-6,-5	+	2	4	3	1
-8,-7	+	2	3	2	+
-10,-9	+	1	3	2	+
-12,-11	+	1	2	2	+
≤-13	+	1	3	2	+

Marine Area C

5089 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥8	+	+	+	0	+
6,7	+	+	+	+	0
4,5	+	1	2	1	+
2,3	1	6	12	6	1
0,1	1	6	12	5	1
-2,-1	1	5	5	3	1
-4,-3	1	3	4	2	+
-6,-5	+	1	3	2	+
-8,-7	+	1	2	1	+
-10,-9	+	1	2	1	+
≤-11	+	1	2	1	+

Marine Area D

906[illegible] Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥12	+	+	+	+	0
10,11	+	+	+	+	+
8,9	+	+	+	+	+
6,7	+	1	2	1	+
4,5	1	3	6	6	1
2,3	1	6	15	11	4
0,1	1	4	9	7	3
-2,-1	+	2	3	3	1
-4,-3	+	1	2	2	+
-6,-5	+	+	1	1	+
≤-7	+	+	1	1	+

Marine Area E

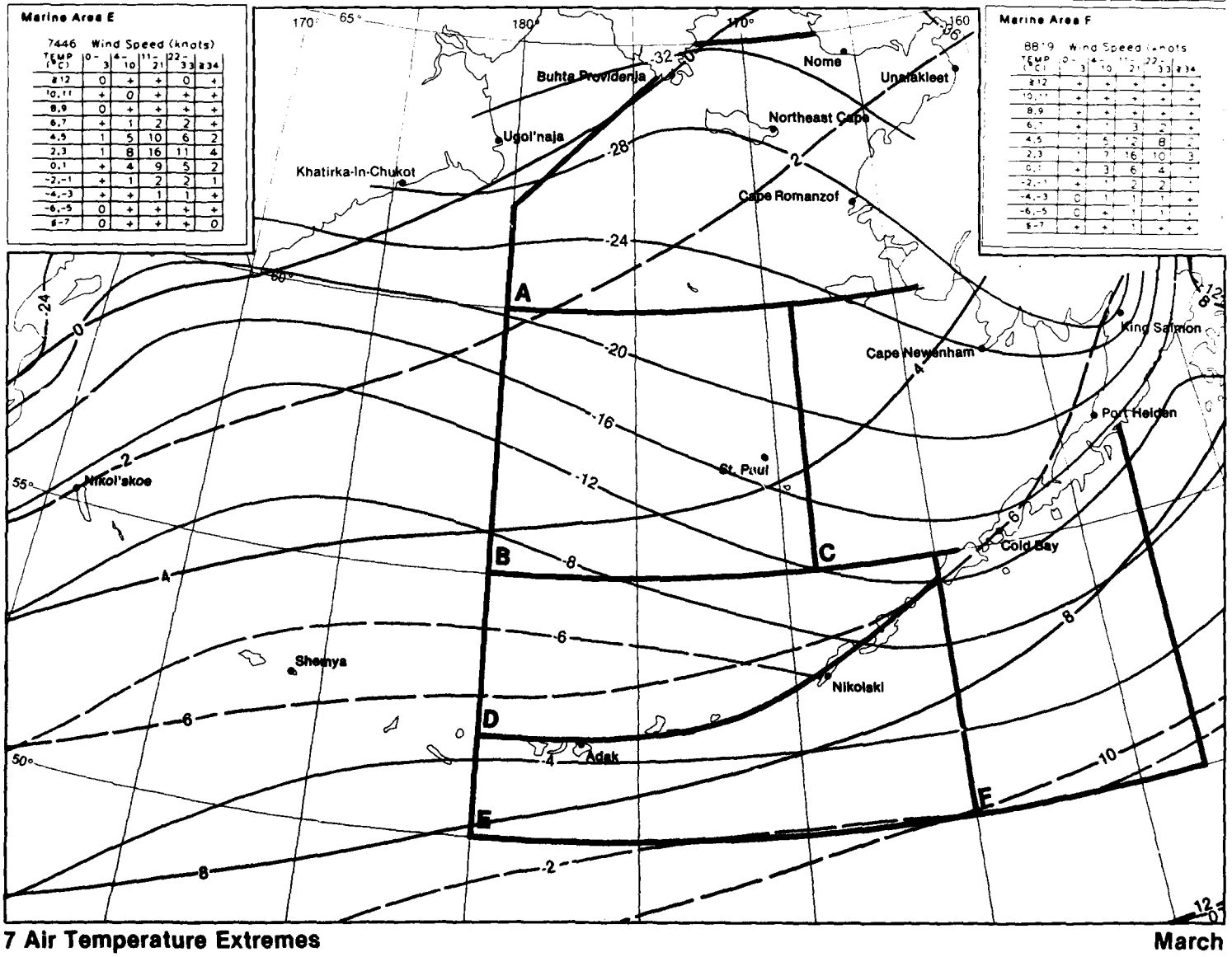
7446 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥12	0	+	+	0	+
10,11	+	0	+	+	+
8,9	0	+	+	+	+
6,7	+	1	2	2	+
4,5	1	5	10	6	2
2,3	1	8	16	11	4
0,1	+	4	9	5	2
-2,-1	+	1	2	2	1
-4,-3	+	+	1	1	+
-6,-5	0	+	+	+	+
≤-7	0	+	+	+	0

Marine Area F

8819 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥12	+	+	+	+	+
10,11	+	+	+	+	+
8,9	+	+	+	+	+
6,7	+	1	3	2	+
4,5	1	4	12	8	2
2,3	1	7	16	10	3
0,1	+	3	6	4	1
-2,-1	+	1	2	2	1
-4,-3	0	1	1	1	+
-6,-5	0	+	1	1	+
≤-7	+	+	1	+	+



7 Air Temperature Extremes **March**

Nikol'skoe

5567 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥8	0	0	+	0	0
6,7	+	+	0	0	0
4,5	+	+	+	+	0
2,3	1	3	4	2	+
0,1	2	7	12	4	1
-2,-1	3	11	15	6	2
-4,-3	2	6	6	3	1
-6,-5	1	2	2	1	+
-8,-7	1	1	1	+	+
-10,-9	+	+	+	+	+
≤-11	+	+	0	0	0

Khatirka-In-Chukot

3758 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥0	1	1	+	+	0
-2,-1	3	3	3	+	+
-4,-3	3	3	2	1	+
-6,-5	3	3	2	1	+
-8,-7	3	4	5	3	1
-10,-9	2	2	3	1	+
-12,-11	3	4	3	2	1
-14,-13	2	4	3	1	1
-16,-15	2	3	3	1	+
-18,-17	2	3	3	1	+
≤-19	2	2	1	+	+

Ugol'naja

5150 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-2	2	2	3	2	+
-4,-3	2	2	2	1	+
-6,-5	2	2	2	1	1
-8,-7	3	3	2	1	1
-10,-9	2	1	2	2	1
-12,-11	3	2	3	2	2
-14,-13	3	2	3	2	2
-16,-15	3	2	4	3	2
-18,-17	2	2	3	3	2
-20,-19	+	1	1	1	1
≤-21	1	1	1	1	1

Buhta Providenja

4616 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥0	1	2	2	+	+
-2,-1	1	4	2	+	+
-4,-3	2	5	2	+	0
-6,-5	2	4	3	+	0
-8,-7	4	5	3	1	+
-10,-9	2	3	2	+	+
-12,-11	4	4	3	+	+
-14,-13	4	4	2	+	+
-16,-15	5	4	2	+	0
-18,-17	5	3	1	+	0
≤-19	6	1	+	+	0

Norheast Cape

9853 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥0	1	3	6	3	1
-2,-1	1	3	4	1	+
-4,-3	1	3	5	1	+
-6,-5	1	2	2	1	+
-8,-7	2	3	3	+	+
-10,-9	2	3	3	1	+
-12,-11	1	3	2	+	0
-14,-13	3	4	4	+	0
-16,-15	2	3	2	+	0
-18,-17	3	3	2	+	+
≤-19	4	3	1	+	+

Nome

21332 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥2	+	1	2	+	0
0,1	1	4	6	1	+
-2,-1	1	4	5	1	+
-4,-3	2	5	5	1	+
-6,-5	2	3	3	1	+
-8,-7	2	4	3	1	+
-10,-9	2	4	3	+	+
-12,-11	2	3	1	+	+
-14,-13	2	4	2	+	+
-15,-15	2	2	1	+	0
≤-17	7	6	1	+	0

Unalakleet

14583 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥4	+	2	3	+	0
2,3	1	3	4	+	+
0,1	1	6	5	1	+
-2,-1	1	4	4	1	+
-4,-3	2	5	4	1	+
-6,-5	1	4	3	+	+
-8,-7	2	4	3	1	+
-10,-9	1	3	2	+	0
-12,-11	1	3	2	+	+
-14,-13	1	3	2	+	+
≤-15	4	9	2	+	+

Cape Romanzof

18673 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥4	+	1	1	+	0
2,3	1	2	2	+	0
0,1	1	4	7	2	+
-2,-1	2	4	3	2	+
-4,-3	2	4	6	2	+
-6,-5	1	2	4	1	+
-8,-7	1	2	3	1	+
-10,-9	2	2	3	1	+
-12,-11	1	2	2	1	+
-14,-13	2	2	3	2	+
≤-15	2	3	5	2	+

Cape Newenham

19052 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥6	+	+	+	+	0
4,5	1	1	1	+	+
2,3	2	3	5	2	+
0,1	5	9	9	2	+
-2,-1	4	6	5	1	+
-4,-3	3	5	4	1	+
-6,-5	1	3	3	+	+
-8,-7	1	3	3	+	+
-10,-9	1	2	3	+	0
-12,-11	1	1	2	+	0
≤-13	1	2	2	+	0

King Salmon

18473 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥8	+	2	2	+	+
6,7	+	3	3	1	+
4,5	1	4	3	1	+
2,3	1	7	6	1	+
0,1	3	11	6	+	0
-2,-1	2	7	3	+	0
-4,-3	2	6	3	+	0
-6,-5	1	3	2	+	0
-8,-7	1	4	2	+	0
-10,-9	1	2	1	+	0
≤-11	1	4	2	+	0

Port Heiden

6547 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥8	+	1	1	1	0
6,7	+	2	3	1	+
4,5	1	3	4	1	+
2,3	1	7	6	1	0
0,1	3	11	6	1	+
-2,-1	2	7	3	+	0
-4,-3	2	7	4	+	+
-6,-5	1	3	4	+	0
-8,-7	+	1	2	+	0
-10,-9	+	1	1	+	0
≤-11	+	2	2	+	0

Cold Bay

13437 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	+	+	+	+	0
8,9	0	+	+	+	0
6,7	+	1	1	1	+
4,5	+	2	4	3	+
2,3	+	5	11	6	1
0,1	1	7	13	4	+
-2,-1	+	4	6	2	+
-4,-3	+	3	8	2	+
-6,-5	+	2	3	1	+
-8,-7	+	1	2	1	+
≤-9	+	1	1	+	0

Nikolski

2086 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	+	+	0	0	0
8,9	+	+	+	0	0
6,7	+	+	+	+	0
4,5	+	1	3	1	0
2,3	1	7	14	4	1
0,1	3	10	21	9	+
-2,-1	1	3	5	4	+
-4,-3	+	1	4	3	+
-6,-5	0	+	1	+	0
-8,-7	0	0	+	+	0
≤-9	0	0	0	0	0

St. Paul

11095 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥8	0	0	0	0	0
6,7	0	+	+	+	0
4,5	+	+	1	+	+
2,3	+	2	6	2	+
0,1	1	7	19	5	+
-2,-1	1	5	8	3	+
-4,-3	+	3	6	3	+
-6,-5	+	2	3	2	+
-8,-7	+	2	4	2	+
-10,-9	+	1	3	1	+
≤-11	+	1	2	1	+

Adak

22294 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	0	0	0	+	0
10,11	0	+	+	+	0
8,9	+	+	+	+	+
6,7	+	2	3	1	+
4,5	1	6	9	3	+
2,3	3	13	18	5	1
0,1	3	9	11	3	1
-2,-1	1	2	2	1	+
-4,-3	+	+	+	+	+
-6,-5	+	+	0	0	0
≤-7	+	0	0	0	0

Shemya

18679 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	0	0	0	0	0
8,9	0	0	0	0	0
6,7	0	+	+	0	0
4,5	+	+	2	1	1
2,3	2	7	20	9	1
0,1	4	11	20	9	1
-2,-1	1	3	4	2	+
-4,-3	+	1	+	+	+
-6,-5	+	+	+	+	0
-8,-7	+	0	0	+	0
≤-9	0	0	0	0	0

Marine Area A

608 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥4	0	0	0	0	+
2,3	0	1	+	+	0
0,1	+	3	15	6	+
-2,-1	1	2	6	3	1
-4,-3	1	2	4	2	+
-6,-5	+	1	2	2	0
-8,-7	+	2	3	1	+
-10,-9	1	3	2	2	+
-12,-11	+	2	6	1	+
-14,-13	1	2	5	1	0
≤-15	1	4	5	2	+

Marine Area B

4380 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥8	+	+	+	0	0
6,7	0	+	+	+	0
4,5	+	1	2	1	+
2,3	+	4	11	4	1
0,1	1	6	12	5	1
-2,-1	1	4	9	5	1
-4,-3	1	3	5	3	+
-6,-5	1	2	4	2	+
-8,-7	+	1	2	1	+
-10,-9	+	1	2	1	+
≤-11	+	+	1	+	+

Marine Area C

6548 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥10	0	+	+	+	0
8,9	+	+	+	+	0
6,7	+	1	1	+	+
4,5	1	3	4	2	+
2,3	1	8	14	6	1
0,1	1	6	12	5	1
-2,-1	1	3	7	4	1
-4,-3	1	2	4	2	1
-6,-5	+	1	2	1	+
-8,-7	+	+	1	1	+
≤-9	+	+	+	+	+

Marine Area D

8247 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥12	+	+	+	+	0
10,11	+	+	+	+	0
8,9	+	+	1	+	+
6,7	+	2	2	1	+
4,5	1	4	9	7	2
2,3	2	6	16	10	3
0,1	1	4	9	5	2
-2,-1	+	+	3	2	+
-4,-3	+	1	1	1	+
-6,-5	+	+	+	+	+
≤-7	0	+	+	+	0

Marine Area E

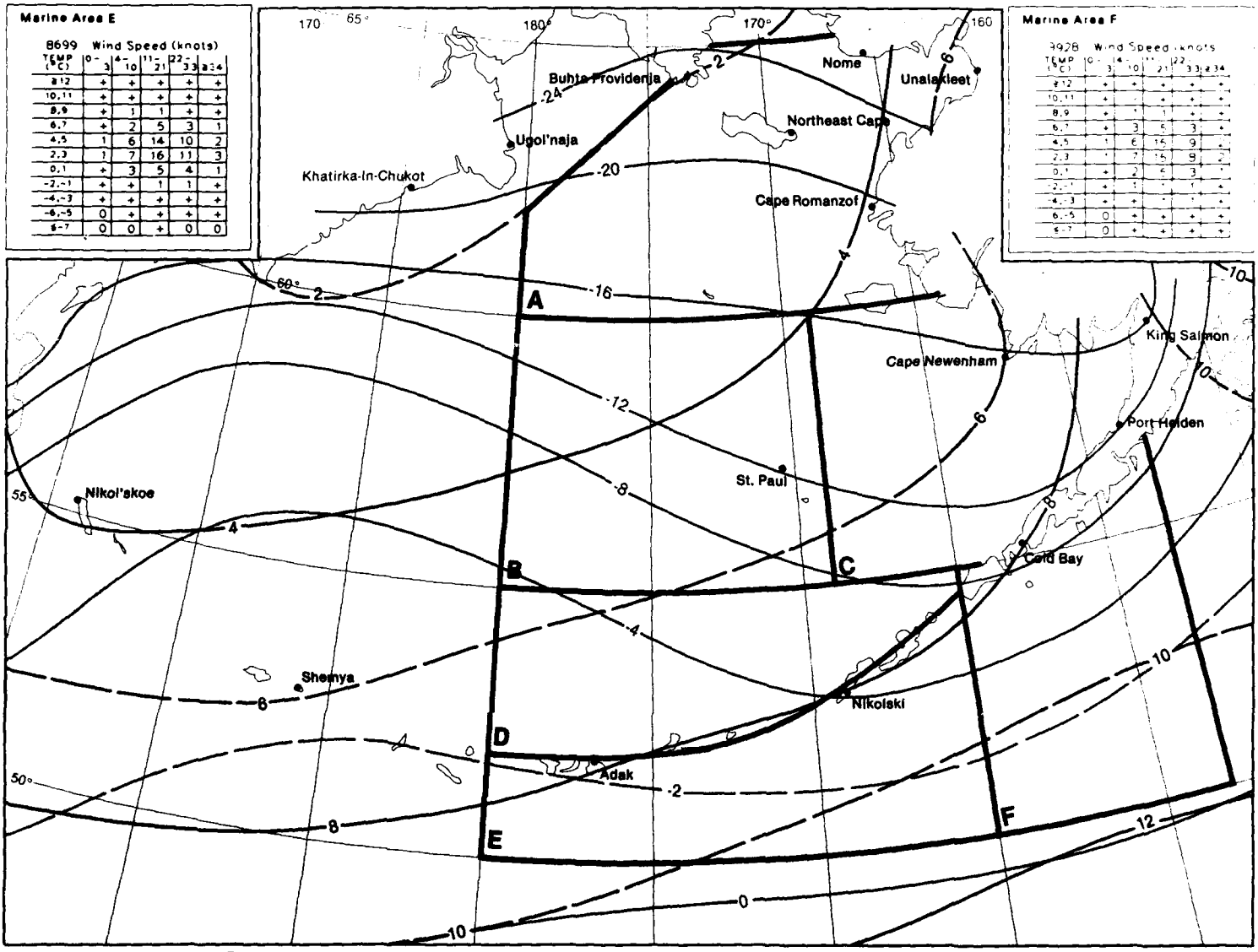
8699 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥12	+	+	+	+	+
10,11	+	+	+	+	+
8,9	+	1	1	+	+
6,7	+	2	5	3	1
4,5	1	6	14	10	2
2,3	1	7	16	11	3
0,1	+	3	5	4	1
-2,-1	+	+	1	1	+
-4,-3	+	+	+	+	+
-6,-5	0	+	+	+	+
≤-7	0	0	+	0	0

Marine Area F

9928 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥12	+	+	+	+	+
10,11	+	+	+	+	+
8,9	+	+	1	+	+
6,7	+	3	5	3	+
4,5	1	6	16	9	+
2,3	1	7	15	9	2
0,1	+	2	6	3	+
-2,-1	+	+	2	1	+
-4,-3	+	+	+	+	+
-6,-5	0	+	+	+	+
≤-7	0	+	+	+	+



7 Air Temperature Extremes

April

Nikol'skoe

5665 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	0	0	0	0	0
10,11	0	0	0	0	0
8,9	+	+	+	+	0
6,7	+	1	+	+	0
4,5	1	4	4	+	+
2,3	4	17	25	7	1
0,1	3	10	11	3	1
-2,-1	2	3	2	1	+
-4,-3	+	+	+	+	+
-6,-5	0	0	0	+	+
≤-7	0	0	0	0	0

Khatirka-In-Chukot

3396 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥8	+	+	+	0	0
6,7	+	+	+	+	0
4,5	:	1	1	+	0
2,3	7	5	4	1	0
0,1	10	7	3	+	+
-2,-1	15	10	5	2	+
-4,-3	5	4	2	1	+
-6,-5	2	1	1	+	+
-8,-7	1	1	1	+	+
-10,-9	1	1	+	+	+
≤-11	1	1	1	+	+

Ugol'naja

4857 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥8	+	+	+	0	0
6,7	+	1	+	+	0
4,5	1	1	1	+	0
2,3	3	5	4	1	+
0,1	3	5	6	2	+
-2,-1	5	8	10	4	1
-4,-3	3	5	6	3	1
-6,-5	2	2	2	1	1
-8,-7	1	1	2	2	1
-10,-9	+	+	1	1	1
≤-11	1	1	2	1	+

Buhta Providenja

4519 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥8	+	1	+	+	0
6,7	1	2	1	+	0
4,5	1	4	2	+	0
2,3	5	9	3	+	0
0,1	5	10	3	+	+
-2,-1	8	12	4	·	+
-4,-3	5	5	1	+	0
-6,-5	2	3	1	+	0
-8,-7	2	2	1	+	0
-10,-9	1	1	+	0	0
≤-11	1	1	+	+	0

Northeast Cape

10440 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥8	+	+	+	0	0
6,7	+	+	+	+	+
4,5	1	1	1	+	+
2,3	3	6	3	1	+
0,1	6	15	11	3	1
-2,-1	4	8	7	1	+
-4,-3	3	6	4	+	0
-6,-5	1	2	1	+	0
-8,-7	1	2	1	+	0
-10,-9	1	1	1	+	0
≤-11	1	1	1	+	0

Nome

21320 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	+	1	2	+	0
10,11	+	2	2	+	0
8,9	+	3	2	+	0
6,7	1	5	3	+	0
4,5	1	5	4	+	0
2,3	2	9	6	+	+
0,1	3	12	7	1	+
-2,-1	2	6	2	+	+
-4,-3	2	4	1	+	+
-6,-5	1	1	1	+	0
≤-7	2	3	1	+	0

Unalakleet

14933 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	+	2	3	+	0
10,11	+	3	2	+	0
8,9	1	4	3	+	0
6,7	2	8	4	+	0
4,5	2	7	4	+	0
2,3	3	11	5	+	0
0,1	3	11	3	+	0
-2,-1	1	4	1	+	0
-4,-3	1	3	1	+	0
-6,-5	+	1	1	0	0
≤-7	1	2	1	+	0

Cape Romanzof

18892 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	+	1	1	+	0
8,9	·	2	1	+	0
6,7	2	5	3	+	0
4,5	2	5	4	+	0
2,3	3	6	6	·	+
0,1	4	8	9	·	+
-2,-1	3	5	6	·	+
-4,-3	2	4	3	·	+
-6,-5	1	1	1	+	+
-8,-7	+	1	1	+	+
≤-9	+	·	1	+	+

Cape Newenham

19580 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	+	1	+	0	0
10,11	1	1	+	0	0
8,9	2	2	1	+	0
6,7	4	5	3	+	+
4,5	5	7	5	1	+
2,3	7	9	7	1	+
0,1	6	9	7	1	+
-2,-1	2	4	3	+	0
-4,-3	1	2	2	+	0
-6,-5	+	+	1	+	0
≤-7	+	+	1	+	0

King Salmon

18357 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	+	2	1	+	0
12,13	+	3	2	+	0
10,11	1	4	4	1	+
8,9	1	5	4	1	+
6,7	2	9	7	1	+
4,5	2	8	5	1	+
2,3	3	10	4	+	+
0,1	2	8	3	+	0
-2,-1	1	3	1	+	0
-4,-3	1	1	+	+	0
≤-5	+	1	+	0	0

Port Heiden

6326 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	+	+	+	+	0
12,13	+	1	1	+	0
10,11	+	2	3	1	0
8,9	+	3	4	1	+
6,7	1	7	8	2	+
4,5	2	8	7	1	0
2,3	3	11	6	1	0
0,1	3	9	4	+	+
-2,-1	1	3	3	+	0
-4,-3	1	1	1	0	0
≤-5	+	1	+	0	0

Cold Bay

13153 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	0	+	+	0	0
12,13	+	+	+	+	0
10,11	+	1	1	+	0
8,9	+	2	2	+	+
6,7	+	5	9	4	+
4,5	1	7	12	5	+
2,3	1	9	14	4	+
0,1	1	6	8	2	+
-2,-1	+	2	1	+	0
-4,-3	+	1	1	+	0
≤-5	+	+	+	0	0

Nikolski

2194 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	0	+	0	0	0
10,11	0	+	+	0	0
8,9	+	+	+	0	0
6,7	+	2	1	+	0
4,5	2	8	7	1	0
2,3	4	16	20	6	+
0,1	2	6	13	5	1
-2,-1	+	1	2	2	+
-4,-3	0	+	+	+	+
-6,-5	0	0	0	0	0
≤-7	0	0	0	0	0

St. Paul

10507 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	0	+	+	+	0
8,9	0	+	+	+	0
6,7	+	1	2	+	0
4,5	+	3	5	1	0
2,3	1	10	19	3	+
0,1	1	12	18	3	+
-2,-1	1	5	6	2	+
-4,-3	+	2	2	1	+
-6,-5	+	+	+	+	+
-8,-7	+	+	+	+	0
≤-9	+	+	+	+	0

Adak

22328 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	+	+	+	0	0
12,13	+	+	+	+	0
10,11	+	+	+	+	0
8,9	+	1	1	+	+
6,7	1	9	9	2	+
4,5	3	15	14	4	1
2,3	5	12	12	3	+
0,1	2	2	2	+	+
-2,-1	+	+	+	0	0
-4,-3	+	+	0	0	0
≤-5	+	0	0	0	0

Shemya

18837 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	0	0	0	0	0
10,11	0	+	0	0	0
8,9	+	+	+	0	0
6,7	+	1	2	+	+
4,5	2	7	15	4	+
2,3	5	15	29	8	+
0,1	1	3	4	2	+
-2,-1	+	+	+	+	+
-4,-3	+	0	+	0	0
-6,-5	0	0	0	0	0
≤-7	0	0	0	0	0

Marine Area A

1440 Wind Speed (knots)

TEMP (°C)	0 - 3	4 - 10	11 - 21	22 - 33	≥ 34
≥ 10	+	0	0	0	0
8,9	+	+	+	+	0
6,7	+	1	1	+	+
4,5	+	2	3	1	+
2,3	2	10	10	3	1
0,1	5	19	21	4	1
-2,-1	1	5	4	2	+
-4,-3	1	1	2	+	0
-6,-5	+	+	+	+	0
-8,-7	0	+	+	0	0
≤ -9	0	0	0	0	0

Marine Area B

4350 Wind Speed (knots)

TEMP (°C)	0 - 3	4 - 10	11 - 21	22 - 33	≥ 34
≥ 12	0	+	0	0	0
10,11	+	+	0	0	0
8,9	+	+	+	+	0
6,7	+	2	2	+	+
4,5	1	6	8	2	+
2,3	2	11	15	4	+
0,1	2	8	13	4	1
-2,-1	1	4	5	2	+
-4,-3	+	1	2	1	+
-6,-5	+	+	+	+	0
≤ -7	+	+	+	+	0

Marine Area C

9790 Wind Speed (knots)

TEMP (°C)	0 - 3	4 - 10	11 - 21	22 - 33	≥ 34
≥ 12	+	+	+	0	0
10,11	+	1	+	+	0
8,9	1	2	1	+	+
6,7	2	5	3	1	+
4,5	2	9	11	3	1
2,3	2	10	14	4	1
0,1	1	6	9	3	+
-2,-1	+	2	2	1	+
-4,-3	+	+	1	+	+
-6,-5	+	+	+	+	0
≤ -7	0	0	+	+	0

Marine Area D

9357 Wind Speed (knots)

TEMP (°C)	0 - 3	4 - 10	11 - 21	22 - 33	≥ 34
≥ 14	0	+	+	0	0
12,13	+	+	+	+	+
10,11	+	1	1	+	+
8,9	1	2	3	1	+
6,7	2	6	8	2	+
4,5	2	10	18	8	1
2,3	1	6	12	6	1
0,1	+	1	3	2	+
-2,-1	+	+	+	+	+
-4,-3	+	+	+	+	+
≤ -5	0	0	0	0	0

Marine Area E

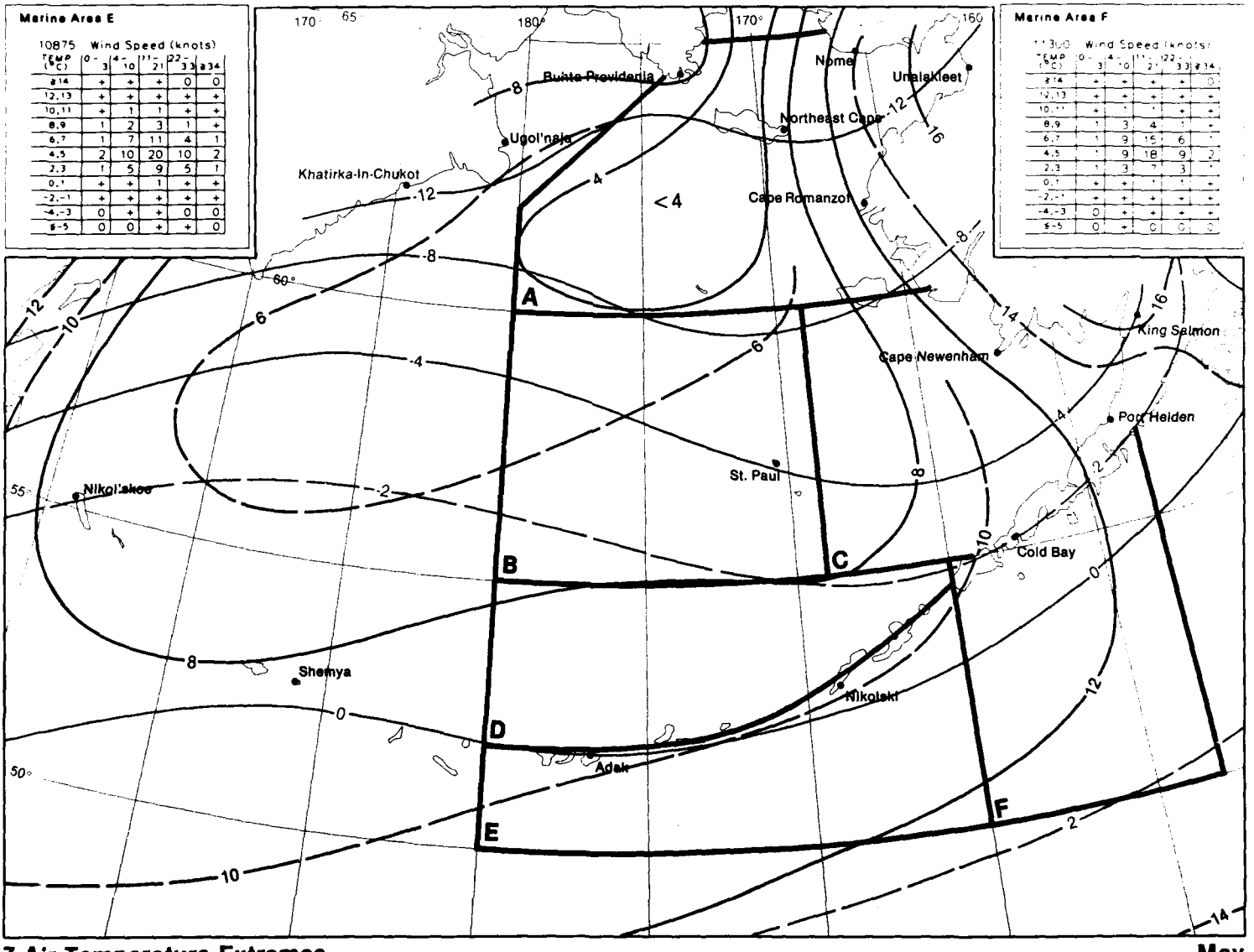
10875 Wind Speed (knots)

TEMP (°C)	0 - 3	4 - 10	11 - 21	22 - 33	≥ 34
≥ 14	+	+	+	0	0
12,13	+	+	+	+	+
10,11	+	1	1	+	+
8,9	1	2	3	1	+
6,7	1	7	11	4	1
4,5	2	10	20	10	2
2,3	1	5	9	5	1
0,1	+	+	1	+	+
-2,-1	+	+	+	+	+
-4,-3	0	+	+	0	0
≤ -5	0	0	+	+	0

Marine Area F

11300 Wind Speed (knots)

TEMP (°C)	0 - 3	4 - 10	11 - 21	22 - 33	≥ 34
≥ 14	+	+	+	+	0
12,13	+	+	+	+	+
10,11	+	+	1	+	+
8,9	1	3	4	1	+
6,7	1	9	15	6	1
4,5	1	9	18	9	2
2,3	1	3	7	3	1
0,1	+	+	1	+	+
-2,-1	+	+	+	+	+
-4,-3	0	+	+	+	+
≤ -5	0	+	0	0	0



7 Air Temperature Extremes **May**

Nikol'skoe

5456 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	+	+	+	0	0
12,13	+	+	+	+	0
10,11	+	1	+	+	0
8,9	1	2	2	+	0
6,7	2	10	10	2	+
4,5	4	16	19	3	+
2,3	4	10	10	2	+
0,1	+	1	1	+	+
-2,-1	+	0	+	0	0
-4,-3	0	0	0	0	0
≤-5	0	0	0	0	0

Khatirka-In-Chukot

3364 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	+	1	1	+	0
12,13	+	1	1	+	0
10,11	1	1	+	+	0
8,9	2	2	1	+	0
6,7	5	4	2	+	0
4,5	13	10	5	1	+
2,3	16	10	6	+	0
0,1	6	3	1	+	0
-2,-1	3	1	+	+	+
-4,-3	+	+	0	+	+
≤-5	0	0	0	0	0

Ugol'naja

4856 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	1	2	1	+	+
12,13	1	1	1	+	+
10,11	1	2	1	+	+
8,9	2	3	2	1	+
6,7	2	5	4	1	+
4,5	4	7	6	1	+
2,3	5	12	9	2	+
0,1	3	4	4	1	+
-2,-1	1	3	2	1	+
-4,-3	+	+	+	+	+
≤-5	+	+	+	0	+

Buhta Providenja

4473 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	+	1	+	0	0
12,13	1	2	+	0	0
10,11	1	2	+	0	0
8,9	3	4	1	0	0
6,7	5	8	2	0	0
4,5	9	13	3	+	0
2,3	11	15	4	+	+
0,1	5	5	1	0	0
-2,-1	3	2	+	0	0
-4,-3	1	+	+	0	0
≤-5	+	+	0	0	0

Norheast Cape

9923 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	+	+	+	+	0
12,13	+	1	1	+	0
10,11	1	2	1	+	0
8,9	1	3	2	+	0
6,7	4	8	5	1	+
4,5	4	9	5	1	+
2,3	7	13	6	1	+
0,1	6	11	3	+	0
-2,-1	2	2	1	0	0
-4,-3	+	+	+	0	0
≤-5	0	0	0	0	0

Nome

20628 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥16	+	3	2	+	0
14,15	+	2	1	+	0
12,13	1	5	2	+	0
10,11	1	8	3	+	0
8,9	1	7	4	+	0
6,7	3	11	5	+	0
4,5	2	9	5	+	0
2,3	2	8	4	+	0
0,1	1	4	2	+	0
-2,-1	+	1	+	0	0
≤-3	+	+	0	0	0

Unalakleet

14458 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥18	+	1	1	+	+
16,17	+	2	1	+	+
14,15	+	3	2	+	0
12,13	1	8	4	+	+
10,11	3	13	5	+	+
8,9	3	10	4	+	0
6,7	3	11	4	+	0
4,5	2	6	2	+	0
2,3	1	5	1	+	0
0,1	1	2	+	0	0
≤-1	+	+	+	0	0

Cape Romanzof

[illegible]25 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥16	+	1	1	+	0
14,15	+	1	1	+	0
12,13	1	3	2	+	0
10,11	2	5	3	+	0
8,9	2	5	4	+	0
6,7	4	9	6	1	0
4,5	3	9	6	+	0
2,3	3	9	5	+	0
0,1	2	3	3	+	0
-2,-1	+	1	1	+	0
≤-3	+	+	+	+	0

Cape Newenham

18313 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥16	+	+	+	0	0
14,15	+	1	+	+	0
12,13	2	2	1	+	0
10,11	4	6	2	+	0
8,9	5	8	4	+	0
6,7	9	14	7	1	+
4,5	6	8	5	+	+
2,3	3	5	3	+	+
0,1	1	1	1	+	+
-2,-1	+	+	+	0	0
≤-3	0	0	0	0	0

King Salmon

17756 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥20	+	2	1	+	0
18,19	+	1	1	+	0
16,17	+	3	2	+	0
14,15	+	4	3	+	+
12,13	1	7	4	1	+
10,11	2	10	6	1	+
8,9	2	10	4	+	+
6,7	3	12	5	+	+
4,5	1	6	2	+	+
2,3	1	3	1	+	0
≤1	+	1	+	0	0

Port Heiden

6135 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥18	+	+	+	0	0
16,17	0	+	1	+	0
14,15	+	1	1	+	+
12,13	+	3	4	1	0
10,11	1	8	7	1	+
8,9	2	9	6	1	+
6,7	5	14	8	1	+
4,5	3	7	3	+	0
2,3	2	5	2	+	0
0,1	1	1	1	0	0
≤-1	+	+	0	0	0

Cold Bay

12720 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥16	0	+	+	0	0
14,15	0	+	+	+	0
12,13	+	1	2	+	0
10,11	+	5	7	2	+
8,9	1	6	10	3	+
6,7	1	11	18	6	+
4,5	1	6	9	2	+
2,3	+	2	4	1	+
0,1	+	+	1	+	0
-2,-1	+	0	0	0	0
≤-3	0	0	0	0	0

Nikolski

2200 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	0	+	0	0	0
12,13	+	+	0	0	0
10,11	+	1	+	+	0
8,9	+	1	1	+	0
6,7	2	11	10	1	0
4,5	3	18	16	4	+
2,3	2	10	12	3	+
0,1	+	+	1	1	0
-2,-1	0	0	0	0	0
-4,-3	0	0	0	0	0
≤-5	0	0	0	0	0

St. Paul

10026 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	0	+	0	0	0
12,13	0	+	+	+	0
10,11	0	1	1	+	0
8,9	+	2	3	+	0
6,7	+	10	14	1	+
4,5	1	13	16	1	0
2,3	1	10	14	1	+
0,1	+	4	3	1	0
-2,-1	+	+	+	+	0
-4,-3	+	+	+	0	0
≤-5	0	+	0	0	0

Adak

21571 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥16	+	+	+	0	0
14,15	+	+	+	+	0
12,13	+	1	+	+	+
10,11	1	3	2	+	+
8,9	1	7	5	1	+
6,7	5	22	16	2	+
4,5	4	12	9	2	+
2,3	1	2	1	+	0
0,1	+	+	+	0	0
-2,-1	+	0	0	0	0
≤-3	0	0	0	0	0

Shemya

18373 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	0	0	0	0	0
12,13	+	+	+	0	0
10,11	+	+	+	+	0
8,9	+	1	1	+	0
6,7	3	11	15	2	+
4,5	5	18	24	3	+
2,3	2	6	6	+	+
0,1	+	+	+	0	0
-2,-1	+	0	0	0	0
-4,-3	0	0	0	0	0
≤-5	0	0	0	0	0

Marine Area A

2656 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	+	+	+	0	0
12,13	+	1	+	+	0
10,11	1	2	2	+	0
8,9	1	3	3	1	0
6,7	2	7	6	1	+
4,5	2	13	10	2	1
2,3	3	12	10	2	+
0,1	1	7	4	+	0
-2,-1	+	1	1	+	0
-4,-3	+	+	0	0	0
≤-5	0	0	0	0	0

Marine Area B

6364 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	0	0	0	0	0
12,13	+	+	+	0	+
10,11	+	1	+	+	+
8,9	1	4	2	+	+
6,7	3	13	14	3	+
4,5	3	14	17	3	+
2,3	2	6	7	1	+
0,1	1	2	2	+	+
-2,-1	+	+	+	+	0
-4,-3	0	0	+	0	0
≤-5	0	0	0	0	0

Marine Area C

10565 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥16	+	+	+	0	0
14,15	+	+	+	+	0
12,13	+	+	+	+	+
10,11	2	4	2	+	+
8,9	3	8	6	1	+
6,7	3	12	11	2	+
4,5	2	10	11	2	+
2,3	1	4	6	1	+
0,1	+	1	2	1	+
-2,-1	+	+	+	+	+
≤-3	0	0	0	+	+

Marine Area D

10871 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥16	+	+	0	0	0
14,15	+	+	+	+	0
12,13	+	1	1	+	0
10,11	1	3	3	+	+
8,9	2	7	8	2	+
6,7	3	15	19	5	+
4,5	2	8	11	3	+
2,3	+	1	1	1	+
0,1	0	+	+	+	+
-2,-1	+	+	+	+	0
≤-3	0	0	0	0	0

Marine Area E

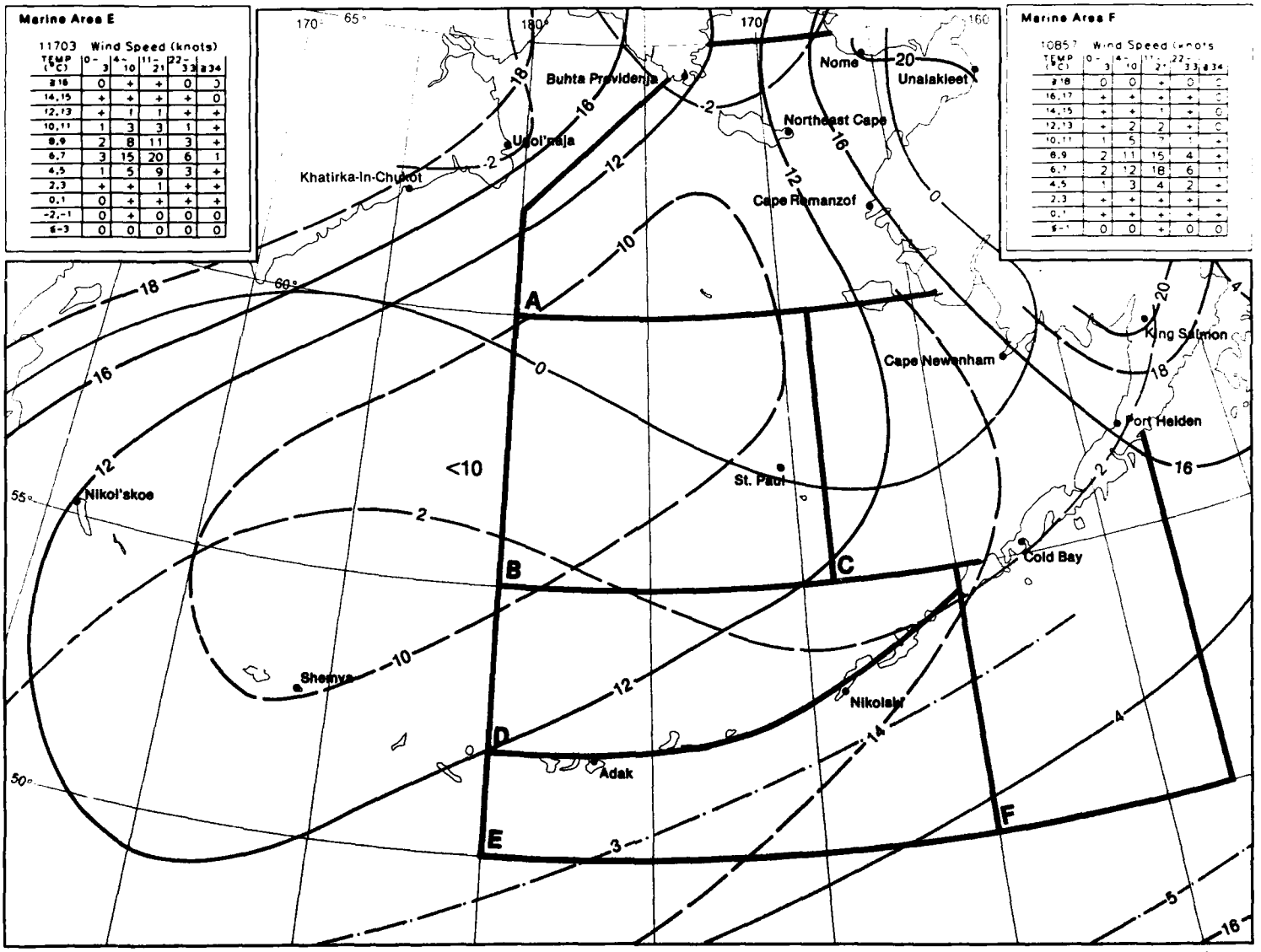
11703 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥18	0	+	+	0	0
14,15	+	+	+	+	0
12,13	+	1	1	+	+
10,11	1	3	3	1	+
8,9	2	8	11	3	+
6,7	3	15	20	6	1
4,5	1	5	9	3	+
2,3	+	+	1	+	+
0,1	0	+	+	+	+
-2,-1	0	+	0	0	0
≤-3	0	0	0	0	0

Marine Area F

10857 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥18	0	0	+	0	0
16,17	+	+	+	+	0
14,15	+	+	1	+	0
12,13	+	2	2	+	0
10,11	1	5	7	1	+
8,9	2	11	15	4	+
6,7	2	12	18	6	1
4,5	1	3	4	2	+
2,3	+	+	+	+	+
0,1	+	+	+	+	+
≤-1	0	0	+	0	0



7 Air Temperature Extremes **June**

Nikol'skoe

5353 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥18	0	+	0	0	0
16,17	+	+	0	0	0
14,15	+	+	+	0	0
12,13	1	3	1	+	0
10,11	2	6	5	1	0
8,9	5	14	17	3	+
6,7	4	12	14	4	+
4,5	1	2	3	1	0
2,3	+	+	0	0	0
0,1	+	0	0	0	0
≤-1	0	0	0	0	0

Khatirka-In-Chukot

3221 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥18	+	+	+	0	0
16,17	+	1	+	+	0
14,15	1	1	1	+	0
12,13	2	2	2	+	+
10,11	3	2	1	+	0
8,9	11	8	4	+	+
6,7	16	12	5	+	+
4,5	10	7	4	+	0
2,3	2	1	+	+	0
0,1	+	0	+	0	0
≤-1	0	+	0	0	0

Ugol'naja

4945 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥18	+	1	1	+	0
16,17	1	1	1	+	+
14,15	1	2	2	+	0
12,13	2	5	4	1	+
10,11	2	5	3	1	+
8,9	4	9	6	1	+
6,7	4	9	8	2	+
4,5	3	6	6	1	+
2,3	1	2	2	+	+
0,1	+	+	+	+	0
≤-1	0	+	0	0	+

Buhte Providenja

4421 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥18	+	+	+	0	0
16,17	+	+	+	0	0
14,15	1	2	1	0	0
12,13	2	5	1	+	+
10,11	3	6	1	0	0
8,9	8	14	3	0	0
6,7	10	16	3	0	0
4,5	6	9	2	+	0
2,3	2	2	1	0	0
0,1	+	0	+	0	0
≤-1	0	0	0	0	0

Norheast Cape

10595 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥18	+	+	+	+	0
16,17	+	+	1	+	0
14,15	+	1	1	+	0
12,13	1	3	3	+	0
10,11	3	8	6	1	+
8,9	4	9	7	1	+
6,7	5	13	11	1	+
4,5	2	6	4	1	+
2,3	1	2	2	+	0
0,1	+	+	+	0	0
≤-1	0	0	0	0	0

Nome

21311 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥20	+	1	1	+	0
18,19	+	1	1	+	0
16,17	+	3	2	+	0
14,15	1	4	2	+	0
12,13	2	10	4	+	0
10,11	3	14	6	+	+
8,9	2	11	6	+	0
6,7	2	10	6	+	0
4,5	1	3	1	+	0
2,3	+	1	+	+	0
≤1	+	+	+	+	0

Unalakleet

15859 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥22	+	+	+	0	0
20,21	+	1	1	+	0
18,19	+	2	1	+	0
16,17	1	6	2	+	0
14,15	2	9	3	+	0
12,13	4	15	7	+	+
10,11	3	14	8	1	0
8,9	1	5	3	+	0
6,7	1	3	2	+	0
4,5	+	1	+	+	0
≤3	+	+	+	0	0

Cape Romanzof

18686 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥18	+	1	+	0	0
16,17	1	1	1	+	0
14,15	1	2	1	+	0
12,13	2	5	3	+	0
10,11	4	10	6	+	0
8,9	5	11	7	+	0
6,7	5	13	7	+	0
4,5	2	4	3	+	0
2,3	+	1	1	+	0
0,1	+	+	+	0	0
≤-1	0	0	0	0	0

Cape Newenham

19391 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥18	+	+	+	+	0
16,17	1	1	+	+	0
14,15	2	2	1	+	0
12,13	4	5	3	+	0
10,11	7	12	6	+	0
8,9	7	13	8	+	+
6,7	6	10	7	+	0
4,5	1	2	1	+	0
2,3	+	+	+	0	0
0,1	0	0	+	0	0
≤-1	0	0	0	0	0

King Salmon

18345 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥22	+	2	1	+	0
20,21	+	2	1	+	0
18,19	+	3	1	+	0
16,17	1	5	3	+	0
14,15	1	6	3	+	0
12,13	2	11	5	+	0
10,11	4	16	6	+	+
8,9	3	10	3	+	+
6,7	2	5	2	+	0
4,5	+	1	+	0	0
≤3	+	+	+	0	0

Port Heiden

5917 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥20	+	+	1	+	0
18,19	+	1	1	+	+
16,17	+	2	2	+	+
14,15	+	3	2	1	+
12,13	2	7	5	1	+
10,11	3	14	7	1	+
8,9	3	11	8	1	+
6,7	3	9	6	+	0
4,5	2	2	+	0	0
2,3	+	+	+	0	0
≤1	+	+	0	0	0

Cold Bay

13871 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥18	0	+	+	+	0
16,17	+	+	1	+	0
14,15	+	1	1	+	0
12,13	+	3	6	1	+
10,11	1	10	16	5	+
8,9	1	9	15	4	+
6,7	1	7	11	2	+
4,5	+	1	1	+	0
2,3	+	+	+	0	0
0,1	0	+	0	0	0
≤-1	0	0	0	0	0

Nikolski

2484 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥16	0	0	0	0	0
14,15	+	+	+	0	0
12,13	+	1	1	0	0
10,11	1	4	4	+	0
8,9	1	9	6	1	0
6,7	2	23	19	2	+
4,5	1	8	10	2	0
2,3	+	1	1	+	0
0,1	0	+	+	0	0
-2,-1	0	0	0	0	0
≤-3	0	0	0	0	0

St. Paul

10306 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥16	+	+	+	0	0
14,15	0	+	+	0	0
12,13	+	1	+	+	0
10,11	+	3	4	+	0
8,9	1	10	13	1	0
6,7	2	24	24	1	0
4,5	1	7	5	+	0
2,3	+	2	1	+	0
0,1	+	+	+	0	0
-2,-1	+	+	0	0	0
≤-3	0	0	0	0	0

Adak

22239 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥18	+	+	+	+	0
16,17	+	+	+	+	+
14,15	+	1	1	+	+
12,13	1	4	4	1	+
10,11	3	11	9	1	+
8,9	4	14	10	1	+
6,7	6	14	9	1	+
4,5	1	2	1	+	0
2,3	+	+	+	+	0
0,1	+	0	0	0	0
≤-1	0	0	0	0	0

Shemya

18976 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥16	0	0	0	0	0
14,15	+	+	+	0	0
12,13	+	+	+	+	0
10,11	1	4	4	+	+
8,9	3	13	13	2	+
6,7	6	20	23	2	+
4,5	1	3	3	+	0
2,3	+	+	+	0	0
0,1	0	0	0	0	0
-2,-1	0	0	0	0	0
≤-3	0	0	0	0	0

Marine Area A

4770 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥18	+	+	+	+	0
16,17	+	1	1	0	0
14,15	+	1	1	+	+
12,13	1	2	2	+	+
10,11	2	5	6	1	+
8,9	2	10	11	2	+
6,7	3	12	16	2	+
4,5	1	5	6	1	+
2,3	+	1	1	+	+
0,1	+	+	+	+	0
≤–1	+	0	+	0	0

Marine Area B

6134 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥18	0	0	0	0	0
16,17	0	0	+	0	0
14,15	+	+	+	0	0
12,13	+	1	1	+	0
10,11	1	4	4	+	+
8,9	3	13	16	3	+
6,7	3	16	20	4	+
4,5	1	4	4	+	+
2,3	+	+	+	+	0
0,1	+	+	+	0	0
≤–1	0	0	0	0	0

Marine Area C

10077 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥18	+	+	+	0	0
16,17	+	+	+	+	0
14,15	1	1	+	+	0
12,13	2	3	1	+	0
10,11	3	9	8	1	+
8,9	3	13	14	3	+
6,7	2	11	12	2	1
4,5	1	2	3	1	+
2,3	+	+	+	0	0
0,1	+	+	+	0	0
≤–1	+	+	0	0	0

Marine Area D

9609 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥18	+	+	+	+	0
16,17	+	+	+	+	+
14,15	+	1	1	+	+
12,13	1	2	2	+	+
10,11	2	7	9	2	+
8,9	3	13	18	4	+
6,7	2	9	13	3	+
4,5	+	1	1	+	+
2,3	+	+	+	+	+
0,1	+	+	+	+	0
≤–1	0	+	0	0	0

Marine Area E

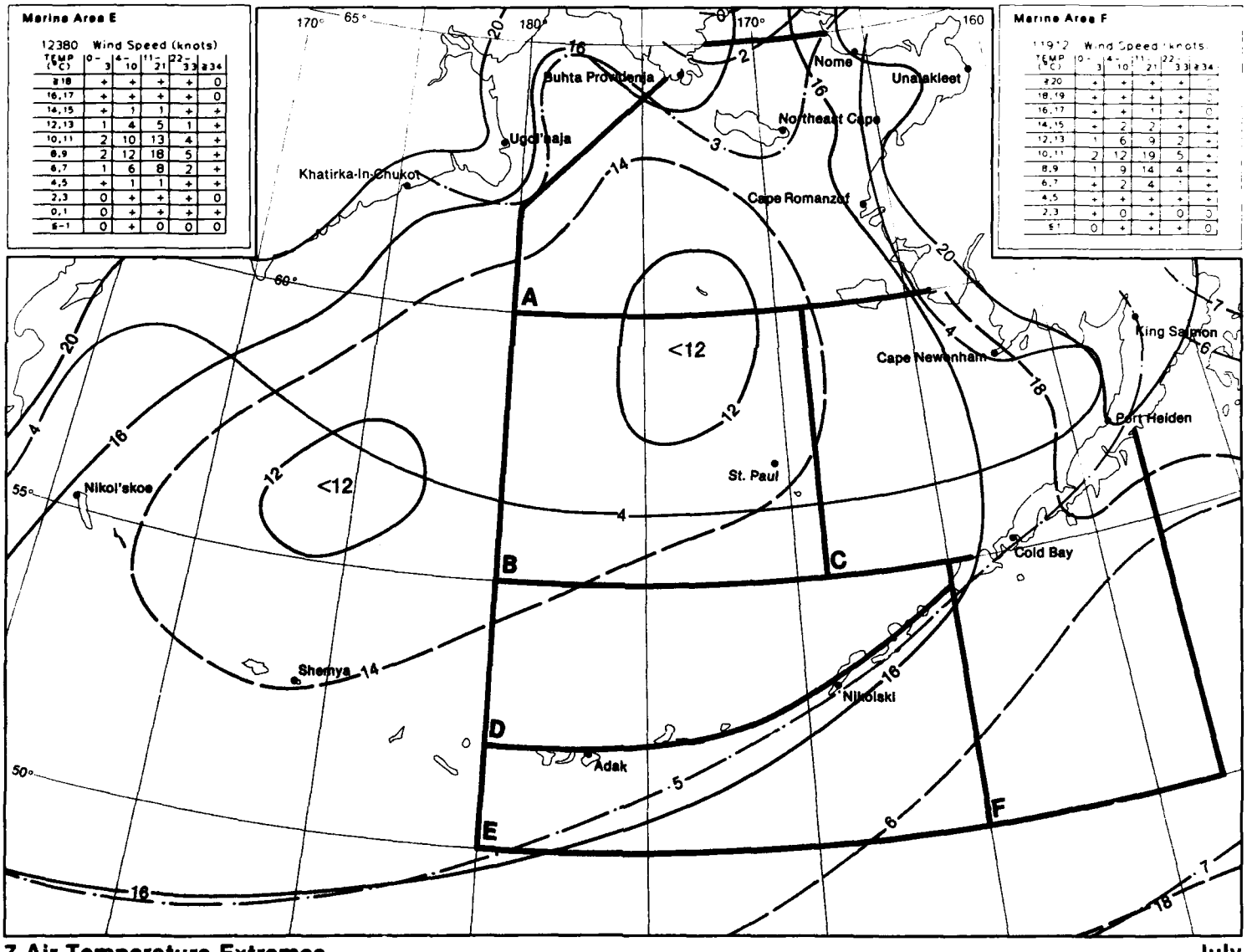
12380 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥18	+	+	+	+	0
16,17	+	+	+	+	0
14,15	+	1	1	+	+
12,13	1	4	5	1	+
10,11	2	10	13	4	+
8,9	2	12	18	5	+
6,7	1	6	8	2	+
4,5	+	1	1	+	+
2,3	0	+	+	+	0
0,1	0	+	+	+	+
≤–1	0	+	0	0	0

Marine Area F

11912 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥20	+	+	+	+	0
18,19	+	+	+	+	0
16,17	+	+	1	+	0
14,15	+	2	2	+	+
12,13	1	6	9	2	+
10,11	2	12	19	5	+
8,9	1	9	14	4	+
6,7	+	2	4	1	+
4,5	+	+	+	+	+
2,3	+	0	+	0	0
≤1	0	+	+	+	0



7 Air Temperature Extremes **July**

Nikol'skoe

5308 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥20	+	0	0	0	+
18,19	+	+	+	0	+
16,17	+	+	+	0	0
14,15	+	1	+	0	0
12,13	4	10	7	+	+
10,11	4	14	13	2	+
8,9	6	13	14	4	1
6,7	1	2	1	1	+
4,5	+	+	+	0	0
2,3	0	0	0	0	0
≤1	0	0	0	0	0

Khatirka-In-Chukot

3285 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥18	+	+	+	+	0
16,17	+	1	+	+	0
14,15	1	1	1	+	0
12,13	2	3	2	+	0
10,11	3	3	2	+	+
8,9	15	11	5	1	+
6,7	17	12	6	1	+
4,5	5	3	1	+	+
2,3	1	1	+	+	0
0,1	+	0	0	+	0
≤-1	0	0	0	0	0

Ugol'naja

4857 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥18	+	+	+	+	0
16,17	+	1	+	+	+
14,15	1	1	1	+	+
12,13	1	3	2	1	+
10,11	2	4	3	1	+
8,9	4	10	9	2	+
6,7	5	11	12	4	+
4,5	3	5	5	3	1
2,3	1	1	1	1	+
0,1	+	+	+	0	+
≤-1	0	+	+	+	0

Buhta Providenja

4490 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥18	+	+	+	0	0
16,17	+	+	+	+	0
14,15	+	1	+	0	0
12,13	2	4	1	0	0
10,11	3	7	2	+	0
8,9	8	15	4	+	0
6,7	11	15	4	+	+
4,5	7	7	2	+	+
2,3	3	2	+	+	0
0,1	+	+	0	0	0
≤-1	+	0	0	0	0

Norheast Cape

10869 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥18	0	+	+	0	0
16,17	+	+	+	+	+
14,15	+	+	+	+	0
12,13	+	2	2	+	+
10,11	2	8	7	1	+
8,9	4	13	11	1	+
6,7	4	14	11	2	+
4,5	2	4	5	1	0
2,3	1	1	1	+	+
0,1	+	+	+	0	0
≤-1	0	0	0	0	0

Nome

21802 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥20	+	+	+	0	0
18,19	+	+	+	0	0
16,17	+	1	1	+	0
14,15	+	3	2	+	0
12,13	1	8	5	+	0
10,11	2	15	10	1	+
8,9	2	12	8	1	+
6,7	2	8	5	1	+
4,5	1	2	1	+	0
2,3	1	2	+	+	0
≤1	+	1	+	0	0

Unalaklaat

15786 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥20	+	1	1	+	0
18,19	+	1	1	+	0
16,17	1	4	2	+	0
14,15	1	6	3	+	0
12,13	3	13	7	+	0
10,11	4	16	11	1	+
8,9	2	7	4	+	0
6,7	1	4	2	+	0
4,5	+	1	+	+	0
2,3	+	1	+	0	0
≤1	+	1	+	0	0

Cape Romanzof

18764 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥18	+	1	+	+	0
16,17	+	1	+	+	0
14,15	1	2	1	+	+
12,13	2	6	3	+	0
10,11	4	11	8	+	+
8,9	4	13	10	1	+
6,7	5	12	8	1	+
4,5	1	2	1	+	+
2,3	+	1	+	+	0
0,1	+	+	+	+	0
≤-1	0	0	0	0	0

Cape Newenham

20043 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥20	0	+	+	0	0
18,19	+	+	+	+	0
16,17	+	+	+	+	0
14,15	1	1	1	+	0
12,13	3	6	5	1	0
10,11	8	17	11	1	+
8,9	6	16	10	1	+
6,7	3	5	4	+	0
4,5	+	+	+	+	0
2,3	0	+	+	0	0
≤1	0	0	0	0	0

King Salmon

18824 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥22	+	1	+	+	0
20,21	+	1	1	+	0
18,19	+	2	1	+	0
16,17	+	4	3	+	+
14,15	1	6	4	1	+
12,13	2	13	7	1	+
10,11	4	16	7	+	+
8,9	2	8	3	+	0
6,7	2	4	1	+	0
4,5	1	1	+	0	+
≤3	1	1	+	0	0

Port Heiden

5631 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥20	+	+	+	+	0
18,19	+	1	1	+	0
16,17	+	2	2	1	0
14,15	1	3	3	1	0
12,13	2	9	8	1	+
10,11	4	16	12	1	+
8,9	4	10	8	1	+
6,7	2	3	1	+	0
4,5	1	1	+	0	0
2,3	+	+	0	0	0
≤1	+	+	0	0	0

Cold Bay

14377 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥20	0	+	+	+	0
18,19	+	+	+	+	0
16,17	+	+	1	+	0
14,15	+	1	2	1	+
12,13	+	4	8	4	+
10,11	1	12	22	7	+
8,9	1	8	14	2	+
6,7	1	4	4	+	0
4,5	+	+	+	0	0
2,3	+	+	0	0	0
≤1	0	0	0	0	0

Nikolski

2464 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥16	0	0	0	0	0
14,15	0	+	0	0	0
12,13	+	1	1	+	0
10,11	1	5	6	1	0
8,9	2	11	10	2	+
6,7	4	22	21	4	+
4,5	1	4	4	1	+
2,3	+	+	+	0	0
0,1	0	0	0	0	0
-2,-1	0	0	0	0	0
≤-3	0	0	0	0	0

St. Paul

11089 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥18	0	0	0	0	0
16,17	0	+	+	0	0
14,15	+	+	+	+	0
12,13	0	+	1	+	0
10,11	+	5	10	1	+
8,9	1	17	26	3	+
6,7	1	14	14	2	+
4,5	+	1	1	+	0
2,3	+	+	+	0	0
0,1	+	+	0	0	0
≤-1	+	+	0	0	0

Adak

22299 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥20	+	+	+	+	+
18,19	+	+	+	+	+
16,17	+	1	1	+	+
14,15	1	2	2	1	+
12,13	2	7	8	2	+
10,11	5	14	14	2	+
8,9	4	11	10	2	+
6,7	2	5	3	+	+
4,5	+	+	+	+	0
2,3	+	+	0	0	0
≤1	+	+	+	0	0

Shemya

18894 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥18	0	0	0	0	0
16,17	+	0	+	0	0
14,15	+	+	+	0	0
12,13	+	2	2	+	0
10,11	2	13	14	2	+
8,9	5	19	25	4	+
6,7	2	5	4	+	+
4,5	+	+	0	0	0
2,3	0	0	0	0	0
0,1	0	0	0	0	0
≤-1	0	0	0	0	0

Marine Area A

4677 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥18	+	+	+	0	0
16,17	+	1	+	0	0
14,15	+	1	+	+	0
12,13	1	3	2	+	+
10,11	1	6	8	1	+
8,9	2	12	17	4	+
6,7	3	13	13	3	+
4,5	+	2	2	1	+
2,3	+	+	+	+	0
0,1	+	+	+	0	0
≤–1	0	0	0	+	0

Marine Area B

3683 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥18	0	0	0	0	0
16,17	0	+	+	+	0
14,15	+	+	+	+	0
12,13	+	1	2	+	0
10,11	1	7	13	3	+
8,9	2	12	29	9	1
6,7	1	5	7	3	+
4,5	+	+	+	+	0
2,3	0	+	+	0	0
0,1	0	0	0	0	0
≤–1	0	0	0	0	0

Marine Area C

8537 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥20	+	+	+	0	+
18,19	+	+	+	0	0
16,17	+	+	+	+	0
14,15	+	1	1	+	+
12,13	1	4	3	1	+
10,11	2	12	17	5	+
8,9	2	14	22	6	+
6,7	+	2	4	1	+
4,5	+	+	+	+	0
2,3	0	+	+	0	0
≤1	0	0	0	0	0

Marine Area D

9657 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥20	+	+	0	+	0
18,19	+	+	+	0	0
16,17	+	+	+	+	0
14,15	+	1	1	+	+
12,13	1	4	5	1	+
10,11	3	11	15	5	+
8,9	3	12	19	6	+
6,7	1	3	4	1	+
4,5	+	+	+	+	+
2,3	+	+	+	+	0
≤1	+	+	+	0	0

Marine Area E

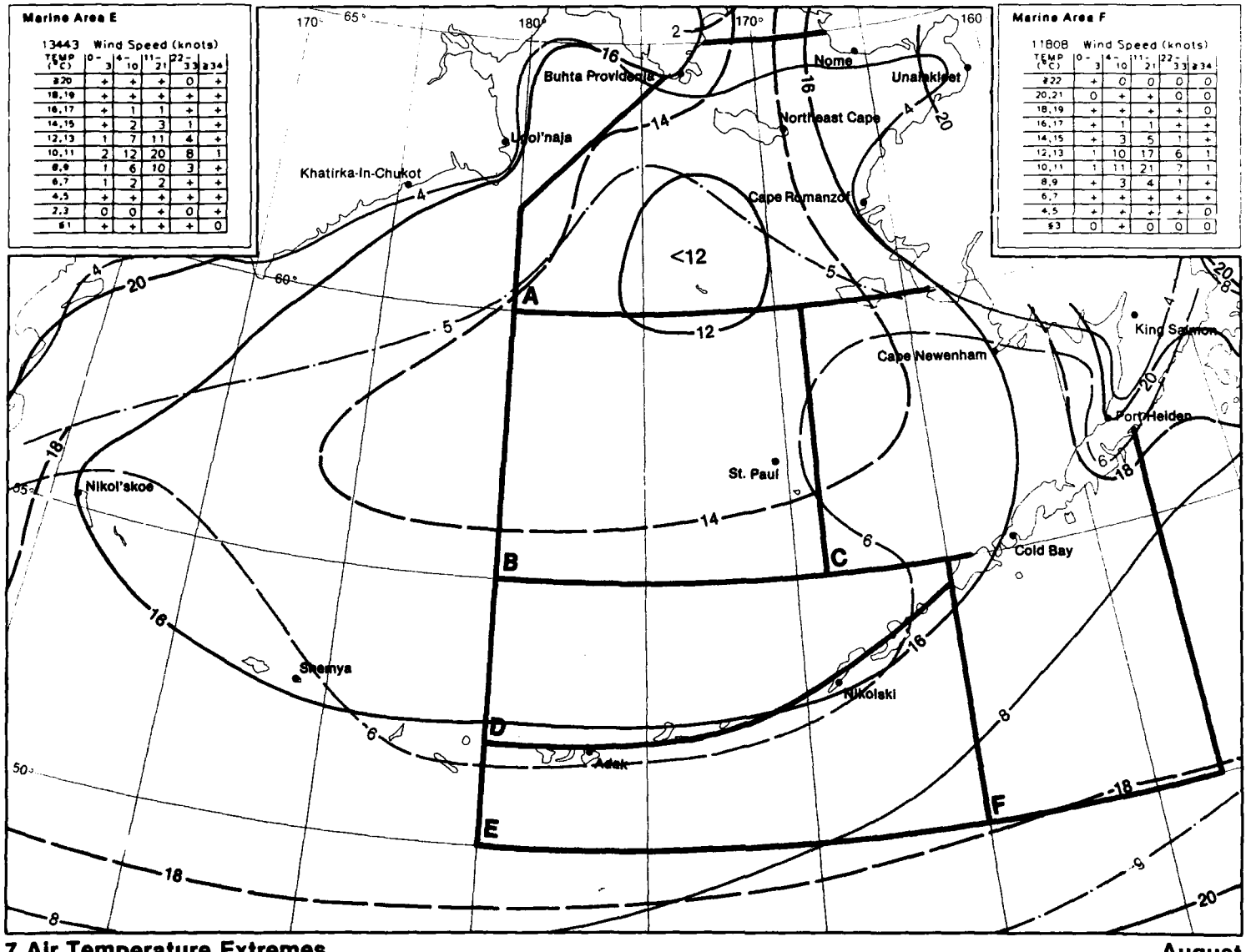
13443 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥20	+	+	+	0	+
18,19	+	+	+	+	+
16,17	+	1	1	+	+
14,15	+	2	3	1	+
12,13	1	7	11	4	+
10,11	2	12	20	8	1
8,9	1	6	10	3	+
6,7	1	2	2	+	+
4,5	+	+	+	+	+
2,3	0	0	+	0	+
≤1	+	+	+	+	0

Marine Area F

11808 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥22	+	0	0	0	0
20,21	0	+	+	0	0
18,19	+	+	+	+	0
16,17	+	1	1	+	+
14,15	+	3	5	1	+
12,13	1	10	17	6	1
10,11	1	11	21	7	1
8,9	+	3	4	1	+
6,7	+	+	+	+	+
4,5	+	+	+	+	0
≤3	0	+	0	0	0



7 Air Temperature Extremes **August**

Nikol'skoe

5265 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥18	0	0	0	0	0
16,17	0	+	+	0	0
14,15	0	+	0	0	0
12,13	+	3	2	1	+
10,11	2	8	11	3	+
8,9	5	15	17	4	1
6,7	4	7	6	3	+
4,5	2	2	2	1	+
2,3	+	+	+	+	0
0,1	+	+	+	0	0
≤-1	+	+	0	0	+

Khatirka-In-Chukot

3160 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	+	+	+	0	0
12,13	+	1	+	+	0
10,11	1	1	1	+	0
8,9	5	4	2	+	0
6,7	13	10	7	1	+
4,5	9	7	6	2	+
2,3	6	5	5	2	+
0,1	2	1	1	1	+
-2,-1	1	1	1	+	+
-4,-3	+	1	+	+	+
≤-5	+	+	+	+	0

Ugol'naje

4796 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	+	+	+	0	+
12,13	+	1	+	+	0
10,11	+	1	1	+	+
8,9	1	2	3	1	+
6,7	4	7	7	2	+
4,5	4	7	10	3	1
2,3	4	7	9	4	2
0,1	1	2	3	2	1
-2,-1	1	1	2	2	1
-4,-3	+	1	1	1	+
≤-5	+	+	1	+	+

Buhte Providenja

4314 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	0	0	0	0	0
12,13	+	+	+	0	0
10,11	+	2	+	+	0
8,9	2	4	2	+	0
6,7	5	11	4	+	0
4,5	9	13	5	+	0
2,3	9	11	5	+	0
0,1	4	3	2	+	0
-2,-1	3	2	1	+	0
-4,-3	1	1	+	+	0
≤-5	+	+	+	0	0

Norheast Cape

10867 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	0	0	0	0	0
12,13	+	+	+	+	0
10,11	+	1	1	+	+
8,9	1	4	4	1	+
6,7	4	11	15	2	+
4,5	3	8	11	1	+
2,3	3	7	11	2	+
0,1	1	3	4	1	+
-2,-1	+	+	1	+	0
-4,-3	+	+	+	+	0
≤-5	0	+	0	0	0

Nome

21073 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥16	0	+	+	+	0
14,15	+	+	+	+	0
12,13	+	2	2	+	0
10,11	1	6	4	+	0
8,9	1	8	7	1	+
6,7	2	12	11	1	+
4,5	1	7	4	+	+
2,3	2	6	4	+	+
0,1	2	5	3	+	+
-2,-1	1	2	1	+	0
≤-3	1	2	+	+	0

Unalakleet

15343 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥16	+	1	1	+	0
14,15	+	1	1	+	0
12,13	+	3	3	+	0
10,11	1	7	6	+	0
8,9	2	8	7	+	+
6,7	2	12	9	1	+
4,5	2	6	4	1	0
2,3	1	5	3	+	+
0,1	1	4	2	+	+
-2,-1	1	2	1	+	0
≤-3	1	2	+	+	0

Cape Romanzof

18176 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥16	+	+	+	0	0
14,15	+	+	+	0	0
12,13	+	1	1	+	0
10,11	2	5	3	+	+
8,9	2	7	7	1	+
6,7	3	13	13	2	+
4,5	2	8	7	1	+
2,3	2	5	5	1	+
0,1	1	2	2	1	+
-2,-1	+	+	1	+	+
≤-3	+	+	+	+	0

Cape Newenham

19728 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥18	0	0	+	0	0
16,17	+	+	+	0	0
14,15	+	+	+	0	0
12,13	1	1	1	+	0
10,11	4	9	6	1	+
8,9	5	15	10	1	+
6,7	4	13	11	1	+
4,5	1	4	3	+	0
2,3	1	2	2	+	0
0,1	+	1	+	+	0
≤-1	+	+	+	0	0

King Salmon

18211 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥18	+	+	+	+	0
16,17	+	1	1	+	0
14,15	+	2	2	+	+
12,13	1	6	5	1	+
10,11	2	11	8	1	+
8,9	2	10	5	+	+
6,7	3	12	4	+	+
4,5	2	5	1	+	0
2,3	1	4	1	+	0
0,1	1	3	1	+	0
≤-1	1	2	+	+	0

Port Heiden

6205 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥18	0	0	+	+	0
16,17	+	+	+	+	+
14,15	+	1	1	+	+
12,13	1	4	4	1	+
10,11	2	8	10	2	0
8,9	2	12	12	2	+
6,7	2	10	8	1	0
4,5	1	5	2	+	0
2,3	1	3	1	+	0
0,1	+	2	+	0	0
≤-1	+	+	+	0	0

Cold Bay

13918 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥18	0	+	+	+	0
16,17	0	0	+	+	0
14,15	+	+	+	+	0
12,13	+	2	3	1	+
10,11	1	7	14	4	+
8,9	1	8	15	4	+
6,7	1	9	14	3	+
4,5	1	3	3	+	+
2,3	+	2	1	+	0
0,1	+	+	+	0	0
≤-1	+	+	0	0	0

Nikolski

2356 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥16	0	0	0	0	0
14,15	0	0	0	0	0
12,13	+	+	+	0	0
10,11	+	2	2	+	0
8,9	1	8	8	1	0
6,7	4	21	22	3	+
4,5	1	7	10	4	+
2,3	+	1	2	1	+
0,1	0	0	+	0	0
-2,-1	0	0	0	0	0
≤-3	0	0	0	0	0

St. Paul

10316 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥16	0	0	0	0	0
14,15	0	+	+	0	0
12,13	0	+	+	+	0
10,11	+	1	3	1	0
8,9	+	8	18	3	+
6,7	1	14	22	5	+
4,5	1	5	5	2	+
2,3	+	3	2	1	+
0,1	+	2	+	+	0
-2,-1	+	+	+	0	0
≤-3	+	+	0	0	0

Adak

21540 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥18	0	+	+	+	0
16,17	+	+	+	+	+
14,15	+	+	+	+	+
12,13	+	2	3	1	+
10,11	2	11	11	2	+
8,9	3	14	14	3	+
6,7	5	11	9	2	+
4,5	1	1	1	+	+
2,3	1	+	+	+	0
0,1	+	+	0	0	0
≤-1	+	0	0	0	0

Shemya

18865 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥18	0	0	0	0	0
16,17	0	0	0	0	0
14,15	+	0	+	0	0
12,13	+	1	1	+	+
10,11	1	7	11	3	+
8,9	4	14	23	6	+
6,7	4	8	10	2	+
4,5	1	1	1	+	+
2,3	+	+	+	+	0
0,1	+	0	0	+	0
≤-1	0	0	0	0	0

Marine Area A

3705 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥16	+	+	0	0	0
14,15	+	+	+	+	0
12,13	+	1	1	+	0
10,11	1	3	3	1	+
8,9	1	5	10	3	+
6,7	2	10	16	4	1
4,5	2	7	10	4	+
2,3	1	3	5	2	+
0,1	+	1	1	1	+
-2,-1	0	+	+	+	+
≤-3	+	0	0	0	+

Marine Area B

2800 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥16	0	0	0	0	0
14,15	0	0	+	0	0
12,13	+	+	+	+	+
10,11	1	3	5	2	+
8,9	2	8	18	7	1
6,7	2	9	17	7	2
4,5	1	3	5	3	1
2,3	+	1	1	1	+
0,1	+	+	+	+	0
-2,-1	0	0	0	+	0
≤-3	0	0	0	0	0

Marine Area C

9055 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥18	0	+	+	0	0
16,17	+	+	+	0	0
14,15	+	+	+	+	+
12,13	+	1	1	+	+
10,11	1	6	8	3	+
8,9	1	11	23	10	1
6,7	1	6	13	6	1
4,5	+	+	2	1	+
2,3	+	+	+	+	+
0,1	0	+	+	+	0
≤-1	0	0	0	0	0

Marine Area D

8731 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥18	+	+	+	+	0
16,17	+	+	+	+	0
14,15	+	+	1	+	+
12,13	1	3	3	1	+
10,11	2	7	11	4	1
8,9	2	10	18	9	2
6,7	1	6	10	5	1
4,5	+	1	1	+	+
2,3	+	+	+	+	+
0,1	+	+	+	+	+
≤-1	0	0	0	0	0

Marine Area E

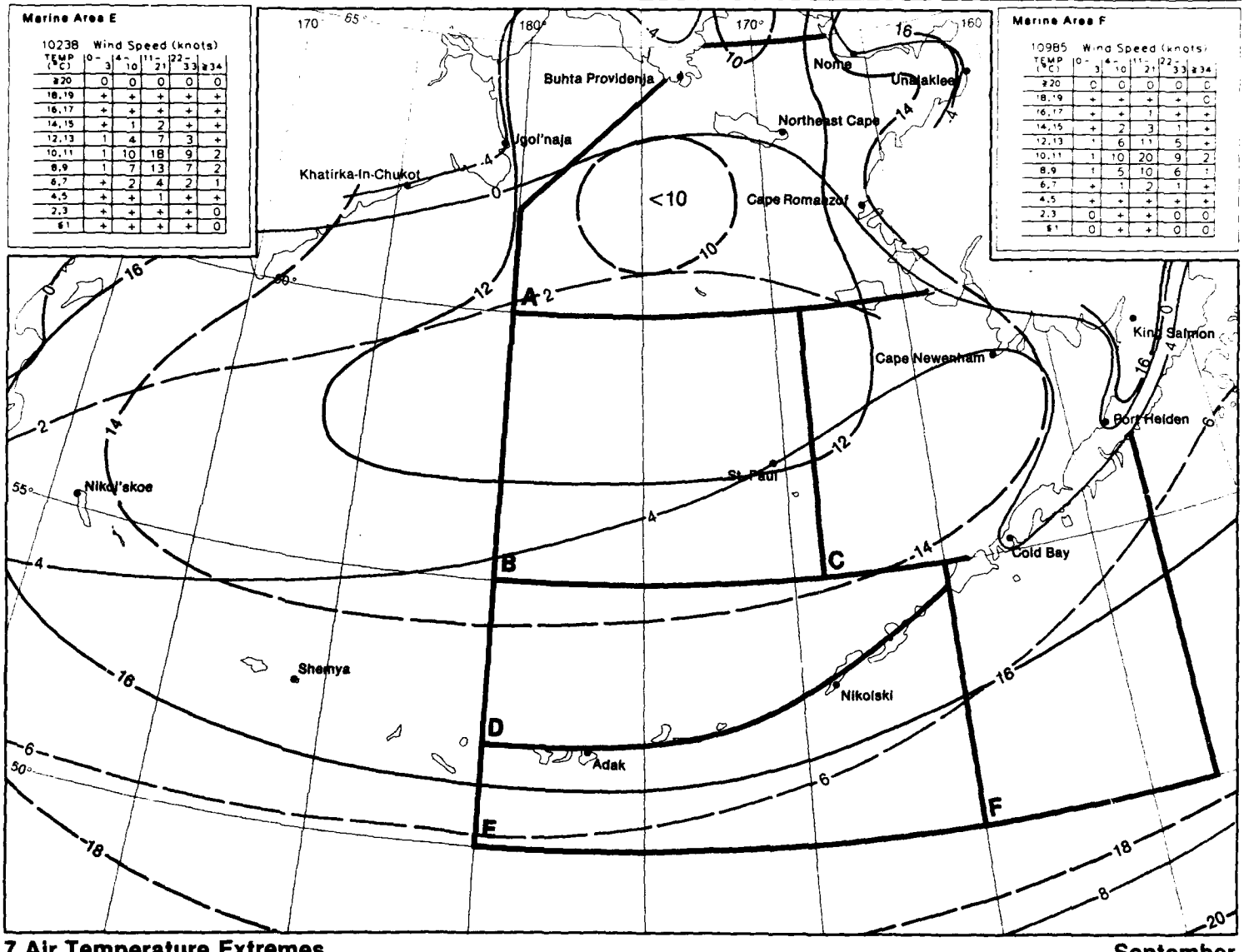
10238 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥20	0	0	0	0	0
18,19	+	+	+	+	+
16,17	+	+	+	+	+
14,15	+	1	2	+	+
12,13	1	4	7	3	+
10,11	1	10	18	9	2
8,9	1	7	13	7	2
6,7	+	2	4	2	1
4,5	+	+	1	+	+
2,3	+	+	+	+	0
≤1	+	+	+	+	0

Marine Area F

10985 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥20	0	0	0	0	0
18,19	+	+	+	+	0
16,17	+	+	1	+	+
14,15	+	2	3	1	+
12,13	1	6	11	5	+
10,11	1	10	20	9	2
8,9	1	5	10	6	1
6,7	+	1	2	1	+
4,5	+	+	+	+	+
2,3	0	+	+	0	0
≤1	0	+	+	0	0



7 Air Temperature Extremes **September**

Nikol'skoe

5517 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	0	0	0	0	0
12,13	0	0	0	+	0
10,11	+	+	1	+	0
8,9	+	2	3	1	+
6,7	2	6	10	5	1
4,5	3	9	10	4	1
2,3	5	9	9	4	1
0,1	1	2	3	1	+
-2,-1	1	1	1	+	+
-4,-3	+	+	+	+	+
≤-5	0	0	+	0	0

Khatirka-in-Chukot

3497 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥6	+	+	1	+	0
4,5	2	2	2	1	+
2,3	3	3	4	2	+
0,1	3	3	3	1	+
-2,-1	3	4	5	2	+
-4,-3	3	3	5	2	+
-6,-5	2	3	5	2	+
-8,-7	1	3	5	3	1
-10,-9	1	1	2	1	+
-12,-11	1	1	2	1	+
≤-13	1	1	2	1	+

Ugol'naja

5114 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥6	+	+	+	+	+
4,5	+	1	2	1	+
2,3	1	3	3	2	1
0,1	2	2	3	2	1
-2,-1	1	3	5	4	3
-4,-3	1	2	5	4	2
-6,-5	2	2	3	4	2
-8,-7	2	2	3	3	2
-10,-9	1	1	1	2	1
-12,-11	1	1	2	2	1
≤-13	1	2	2	2	2

Buhta Providenja

4540 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥6	0	+	+	+	0
4,5	+	2	1	0	0
2,3	2	6	4	1	0
0,1	3	7	3	1	+
-2,-1	5	8	6	1	+
-4,-3	5	8	5	1	+
-6,-5	4	6	4	1	+
-8,-7	4	3	1	+	0
-10,-9	1	1	+	+	0
-12,-11	2	1	1	+	0
≤-13	1	+	+	+	0

Norheast Cape

11066 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥8	0	+	+	+	0
6,7	+	1	2	+	+
4,5	+	2	4	1	+
2,3	1	3	8	2	+
0,1	1	6	16	5	+
-2,-1	2	6	11	3	+
-4,-3	1	5	9	2	+
-6,-5	1	2	3	+	+
-8,-7	+	1	2	+	+
-10,-9	+	+	+	+	0
≤-11	+	+	+	0	0

Nome

21813 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥8	+	+	+	+	0
6,7	+	1	1	+	+
4,5	+	3	3	1	+
2,3	1	5	6	1	+
0,1	2	9	8	1	+
-2,-1	2	7	4	1	+
-4,-3	2	8	5	1	+
-6,-5	1	5	2	+	+
-8,-7	2	5	2	+	+
-10,-9	1	3	1	+	0
≤-11	2	3	+	+	0

Unalaklaat

15772 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥6	+	2	3	+	0
4,5	+	2	2	+	+
2,3	1	4	5	1	+
0,1	2	7	7	1	+
-2,-1	2	6	4	1	0
-4,-3	2	6	5	1	+
-6,-5	1	4	3	1	+
-8,-7	2	4	4	1	+
-10,-9	1	3	2	+	+
-12,-11	+	2	1	+	+
≤-13	1	3	1	+	0

Cape Romanzof

18620 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥8	+	+	+	+	0
6,7	+	2	1	+	0
4,5	1	3	3	+	+
2,3	2	6	6	1	+
0,1	3	7	10	2	+
-2,-1	3	6	8	2	+
-4,-3	2	5	7	2	+
-6,-5	2	3	4	1	+
-8,-7	1	1	2	1	+
-10,-9	+	+	+	+	+
≤-11	+	+	+	+	+

Cape Newenham

20493 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	0	+	+	+	0
10,11	+	+	+	+	0
8,9	1	1	2	+	+
6,7	1	5	5	+	+
4,5	2	7	6	1	+
2,3	3	9	9	1	+
0,1	3	8	7	1	+
-2,-1	1	4	4	1	+
-4,-3	1	3	4	1	+
-6,-5	1	1	2	+	+
≤-7	+	1	1	+	+

King Salmon

18846 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	+	1	2	+	+
8,9	+	2	2	1	+
6,7	1	5	5	1	+
4,5	1	6	4	1	+
2,3	2	8	4	+	+
0,1	2	10	4	+	0
-2,-1	2	5	2	+	0
-4,-3	2	5	2	+	0
-6,-5	1	3	1	+	+
-8,-7	1	3	1	+	0
≤-9	2	4	1	+	0

Port Heiden

6048 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	+	+	+	+	0
10,11	+	1	2	+	0
8,9	+	2	4	1	+
6,7	1	6	8	2	+
4,5	1	7	9	1	+
2,3	1	7	8	1	0
0,1	1	8	6	+	+
-2,-1	1	5	2	+	0
-4,-3	1	3	2	+	0
-6,-5	+	2	1	+	0
≤-7	+	2	1	+	0

Cold Bay

14379 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	0	0	+	+	+
12,13	+	+	+	+	+
10,11	+	1	1	1	+
8,9	+	1	4	2	+
6,7	+	5	12	5	+
4,5	1	5	10	3	+
2,3	1	8	12	4	+
0,1	1	7	7	2	+
-2,-1	+	2	1	1	+
-4,-3	+	1	+	+	+
≤-5	+	+	+	+	0

Nikolski

2428 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	0	0	0	0	0
10,11	0	0	+	0	0
8,9	0	+	1	+	0
6,7	+	4	7	2	+
4,5	2	9	14	6	+
2,3	1	7	14	7	1
0,1	1	4	8	5	1
-2,-1	+	1	1	1	+
-4,-3	0	0	+	+	0
-6,-5	0	0	0	0	0
≤-7	0	0	0	0	0

St. Paul

11311 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	0	0	0	0	0
10,11	0	+	+	0	0
8,9	+	+	1	+	+
6,7	+	3	11	4	+
4,5	+	4	12	5	+
2,3	1	6	13	5	1
0,1	1	7	10	4	1
-2,-1	+	2	2	1	+
-4,-3	+	1	1	+	0
-6,-5	+	+	+	0	0
≤-7	+	+	0	0	0

Adak

22296 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥16	0	0	0	+	0
14,15	0	0	0	+	+
12,13	0	+	+	+	+
10,11	+	.	2	1	+
8,9	1	4	6	2	+
6,7	3	12	16	5	1
4,5	3	9	10	3	+
2,3	3	6	5	1	+
0,1	2	1	1	+	0
-2,-1	+	+	+	0	0
≤-3	+	0	0	0	0

Shemya

19529 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	0	0	0	0	0
12,13	0	0	+	0	0
10,11	+	+	+	+	+
8,9	+	2	5	2	1
6,7	2	8	18	8	2
4,5	3	7	13	6	1
2,3	2	5	7	3	1
0,1	1	1	1	+	+
-2,-1	+	+	+	+	+
-4,-3	+	+	+	+	0
≤-5	+	0	0	0	0

Marine Area A

2532 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	0	0	+	0	0
10,11	+	+	+	+	0
8,9	+	+	+	+	+
6,7	+	2	5	3	+
4,5	1	4	10	6	+
2,3	1	6	11	5	1
0,1	2	8	13	6	1
-2,-1	+	2	3	2	+
-4,-3	+	+	1	1	+
-6,-5	+	+	1	+	+
≤-7	0	+	+	+	+

Marine Area B

1939 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	0	0	0	+	0
12,13	0	0	+	0	0
10,11	0	+	1	+	+
8,9	+	1	2	1	+
6,7	+	3	9	6	1
4,5	1	4	13	10	2
2,3	1	6	10	8	2
0,1	1	3	6	4	1
-2,-1	0	+	1	1	+
-4,-3	0	+	+	+	0
≤-5	0	0	+	+	0

Marine Area C

5124 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥14	+	+	+	0	+
12,13	+	+	+	+	+
10,11	+	+	1	+	+
8,9	+	2	5	3	1
6,7	+	5	13	8	2
4,5	1	6	15	9	2
2,3	+	3	9	5	1
0,1	+	1	3	2	+
-2,-1	+	+	+	+	+
-4,-3	+	+	+	+	+
≤-5	0	0	0	0	0

Marine Area D

8215 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥16	0	+	+	+	+
14,15	+	+	+	+	+
12,13	+	+	+	+	+
10,11	1	2	2	1	+
8,9	1	5	8	5	1
6,7	1	8	18	10	3
4,5	1	5	11	6	2
2,3	+	1	3	2	1
0,1	+	+	+	+	+
-2,-1	0	+	+	+	+
≤-3	+	+	+	0	0

Marine Area E

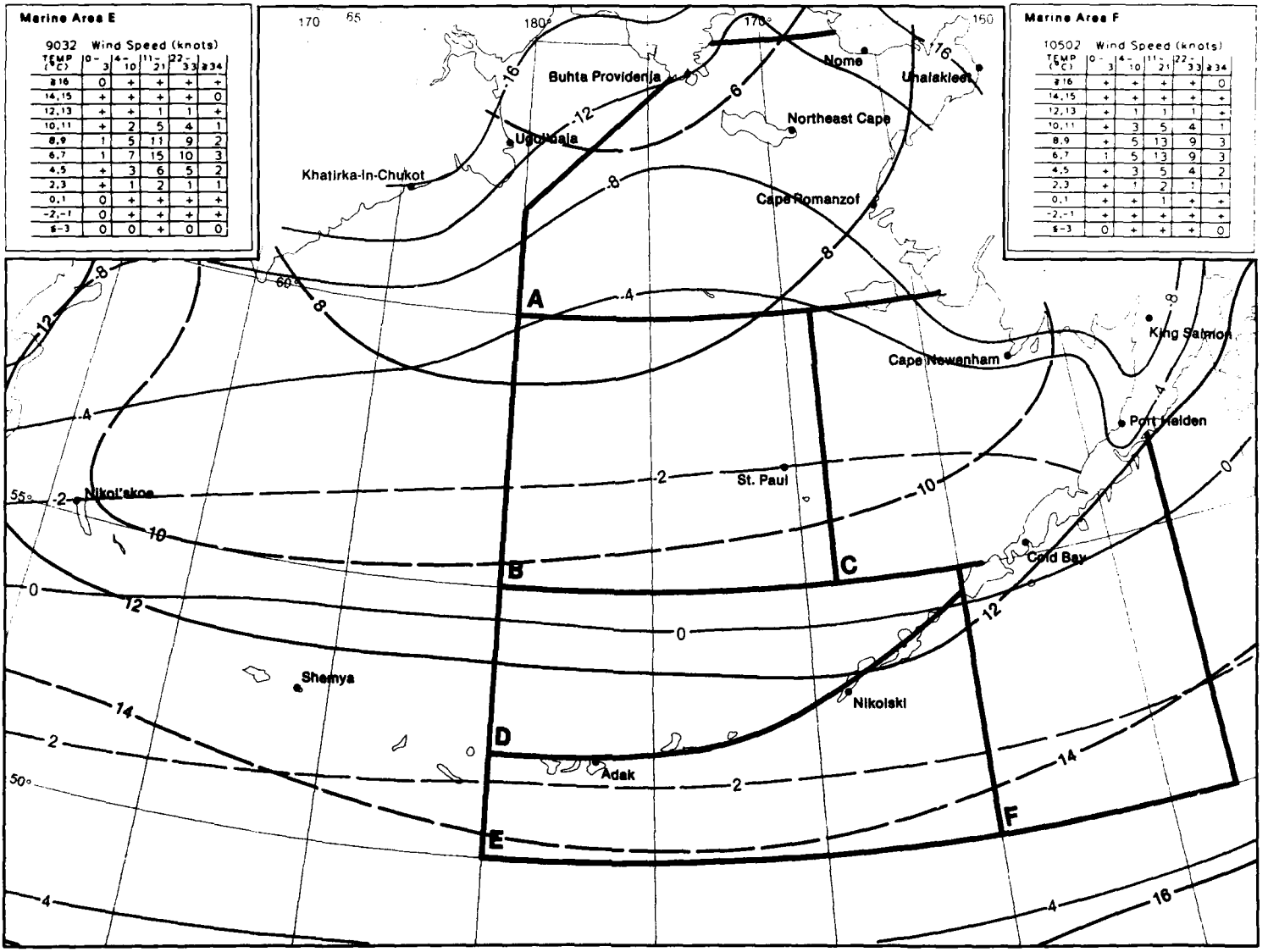
9032 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥16	0	+	+	+	+
14,15	+	+	+	+	0
12,13	+	+	1	1	+
10,11	+	2	5	4	1
8,9	1	5	11	9	2
6,7	1	7	15	10	3
4,5	+	3	6	5	2
2,3	+	1	2	1	1
0,1	0	+	+	+	+
-2,-1	0	+	+	+	+
≤-3	0	0	+	0	0

Marine Area F

10502 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥16	+	+	+	+	0
14,15	+	+	+	+	+
12,13	+	1	1	1	+
10,11	+	3	5	4	1
8,9	+	5	13	9	3
6,7	1	5	13	9	3
4,5	+	3	5	4	2
2,3	+	1	2	1	1
0,1	+	+	1	+	+
-2,-1	+	+	+	+	+
≤-3	0	+	+	+	0



7 Air Temperature Extremes

October

Nikol'skoe

5268 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	0	0	0	0	0
8,9	0	0	0	0	+
6,7	0	+	+	+	+
4,5	+	1	3	1	1
2,3	1	4	8	6	3
0,1	1	5	8	4	1
-2,-1	2	7	10	4	2
-4,-3	2	5	7	3	1
-6,-5	1	2	2	1	+
-8,-7	+	+	1	+	+
≤-9	0	0	0	0	0

Khatirka-In-Chukot

3240 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-2	2	5	6	4	1
-4,-3	1	1	2	2	+
-6,-5	1	1	2	3	+
-8,-7	1	2	4	3	1
-10,-9	1	2	2	1	+
-12,-11	1	2	3	2	1
-14,-13	1	2	3	2	1
-16,-15	1	2	3	2	1
-18,-17	1	2	4	3	1
-20,-19	+	1	1	1	+
≤-21	1	2	3	1	1

Ugol'naja

4983 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-2	1	1	5	6	4
-4,-3	1	1	2	2	2
-6,-5	1	2	2	2	2
-8,-7	1	2	2	3	2
-10,-9	1	1	1	1	1
-12,-11	1	1	1	2	3
-14,-13	1	1	2	2	2
-16,-15	1	1	1	2	2
-18,-17	1	2	1	2	4
-20,-19	1	1	1	1	2
≤-21	2	2	2	3	3

Buhta Providenja

4295 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥2	+	1	2	1	+
0,1	+	2	3	+	+
-2,-1	1	3	5	1	+
-4,-3	1	4	5	1	+
-6,-5	1	4	5	1	+
-8,-7	2	5	6	1	+
-10,-9	2	3	2	1	+
-12,-11	3	4	3	1	+
-14,-13	2	3	3	+	+
-16,-15	2	3	1	+	0
≤-17	5	4	1	0	0

Norheast Cape

10289 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥4	0	0	0	0	+
2,3	+	+	1	1	+
0,1	+	2	7	4	+
-2,-1	1	3	8	3	+
-4,-3	1	4	11	5	+
-6,-5	1	2	7	3	+
-8,-7	1	3	7	3	+
-10,-9	1	2	5	2	+
-12,-11	+	1	2	+	+
-14,-13	+	1	1	+	+
≤-15	+	1	2	+	+

Nome

21112 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥0	+	3	6	2	+
-2,-1	+	3	4	1	+
-4,-3	1	4	6	1	+
-6,-5	1	3	4	1	+
-8,-7	2	5	5	1	+
-10,-9	2	6	4	1	0
-12,-11	1	4	2	+	+
-14,-13	2	4	2	+	+
-16,-15	1	2	1	+	0
-13,-17	2	2	1	+	0
≤-19	4	5	1	+	0

Unalakleet

15355 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-2	1	4	8	2	+
-4,-3	+	2	5	2	+
-6,-5	1	2	4	1	+
-8,-7	1	4	5	2	+
-10,-9	1	4	5	2	+
-12,-11	1	3	3	1	+
-14,-13	1	3	4	1	+
-16,-15	1	2	2	1	+
-18,-17	1	2	1	1	+
-20,-19	1	2	1	+	+
≤-21	2	7	1	+	+

Cape Romanzof

17739 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥4	+	+	+	+	0
2,3	+	1	2	1	+
0,1	1	3	7	2	+
-2,-1	2	3	6	1	+
-4,-3	3	4	6	2	+
-6,-5	3	4	5	2	+
-8,-7	3	4	4	3	+
-10,-9	2	2	3	2	+
-12,-11	1	1	2	1	+
-14,-13	1	1	2	1	+
≤-15	1	1	2	1	1

Cape Newenham

19267 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥8	0	+	+	0	0
6,7	+	+	1	1	+
4,5	+	1	3	1	+
2,3	1	5	8	1	+
0,1	4	9	8	1	+
-2,-1	3	4	4	1	+
-4,-3	3	4	5	1	+
-6,-5	2	3	3	1	+
-8,-7	2	2	2	1	+
-10,-9	1	2	2	1	+
≤-11	2	3	3	1	+

King Salmon

18239 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥4	+	2	6	2	+
2,3	1	4	6	1	+
0,1	2	9	4	+	+
-2,-1	1	5	2	+	0
-4,-3	2	5	2	+	0
-6,-5	1	3	1	+	0
-8,-7	2	5	2	+	0
-10,-9	2	4	1	+	0
-12,-11	1	2	1	+	0
-14,-13	1	3	2	+	+
≤-15	3	7	3	+	0

Port Heiden

5524 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥8	+	+	+	1	+
6,7	+	+	1	1	+
4,5	+	1	3	1	+
2,3	1	6	8	3	1
0,1	2	9	6	1	+
-2,-1	2	9	5	1	+
-4,-3	2	6	4	+	0
-6,-5	1	5	2	+	0
-8,-7	+	3	2	+	0
-10,-9	+	2	1	+	0
≤-11	+	3	2	+	0

Cold Bay

13919 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	+	+	+	+	+
8,9	+	+	+	+	+
6,7	+	1	3	2	1
4,5	+	3	5	3	1
2,3	1	8	13	5	1
0,1	1	10	11	3	+
-2,-1	1	4	4	2	+
-4,-3	1	3	4	2	+
-6,-5	+	1	1	+	+
-8,-7	+	1	+	+	+
≤-9	+	+	+	+	0

Nikolski

2077 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	0	0	0	0	0
10,11	0	0	0	0	0
8,9	0	0	+	0	+
6,7	0	+	2	1	+
4,5	+	4	5	2	+
2,3	2	9	14	6	1
0,1	2	11	17	10	1
-2,-1	1	2	3	2	1
-4,-3	+	+	1	1	+
-6,-5	0	+	+	+	0
≤-7	0	0	0	0	0

St. Paul

11380 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	0	0	0	0	0
8,9	0	+	+	+	0
6,7	0	+	1	1	+
4,5	+	1	6	4	+
2,3	+	4	15	7	1
0,1	1	8	14	7	1
-2,-1	1	4	6	2	+
-4,-3	1	3	4	2	+
-6,-5	+	1	1	1	+
-8,-7	+	1	1	1	+
≤-9	+	+	+	+	0

Adak

20880 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	0	+	+	+	+
10,11	0	+	+	+	+
8,9	+	+	1	1	+
6,7	+	3	5	2	+
4,5	1	6	9	4	1
2,3	3	12	16	5	1
0,1	5	8	8	2	+
-2,-1	2	2	1	+	+
-4,-3	1	+	+	+	0
-6,-5	+	+	+	0	0
≤-7	+	+	0	0	0

Shemya

18861 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	0	0	0	0	0
10,11	0	0	0	0	0
8,9	0	0	0	+	+
6,7	+	+	1	2	1
4,5	1	2	7	5	1
2,3	2	6	16	11	3
0,1	2	6	14	7	1
-2,-1	1	2	4	2	+
-4,-3	1	1	1	+	+
-6,-5	+	+	+	+	+
≤-7	+	+	0	0	0

Marine Area A

1959 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥8	0	+	+	+	0
6,7	0	+	1	+	+
4,5	0	1	4	2	+
2,3	+	4	10	5	1
0,1	1	7	13	10	1
-2,-1	+	2	6	4	1
-4,-3	+	1	4	3	1
-6,-5	+	1	3	2	1
-8,-7	+	1	2	1	+
-10,-9	+	1	2	1	+
≤-11	0	+	+	+	+

Marine Area B

2701 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥10	0	+	+	+	0
8,9	0	+	+	+	+
6,7	+	+	1	1	+
4,5	+	3	6	3	1
2,3	1	5	12	8	2
0,1	1	5	12	7	2
-2,-1	+	2	6	4	1
-4,-3	+	1	4	2	1
-6,-5	+	1	3	1	0
-8,-7	+	+	1	+	+
≤-9	0	+	+	0	+

Marine Area C

4139 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥12	0	+	0	+	0
10,11	0	+	0	0	0
8,9	+	+	+	+	0
6,7	+	1	2	3	1
4,5	1	6	14	9	3
2,3	1	7	13	7	2
0,1	+	4	7	5	1
-2,-1	+	1	3	2	1
-4,-3	+	+	1	1	+
-6,-5	0	+	1	+	+
≤-7	0	+	+	+	+

Marine Area D

7858 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥14	+	+	+	0	0
12,13	+	+	+	+	+
10,11	+	+	+	+	+
8,9	+	1	1	1	+
6,7	1	3	6	5	2
4,5	1	7	15	11	4
2,3	1	5	10	8	3
0,1	+	2	4	4	1
-2,-1	+	+	1	1	+
-4,-3	+	+	+	+	+
≤-5	0	+	+	+	+

Marine Area E

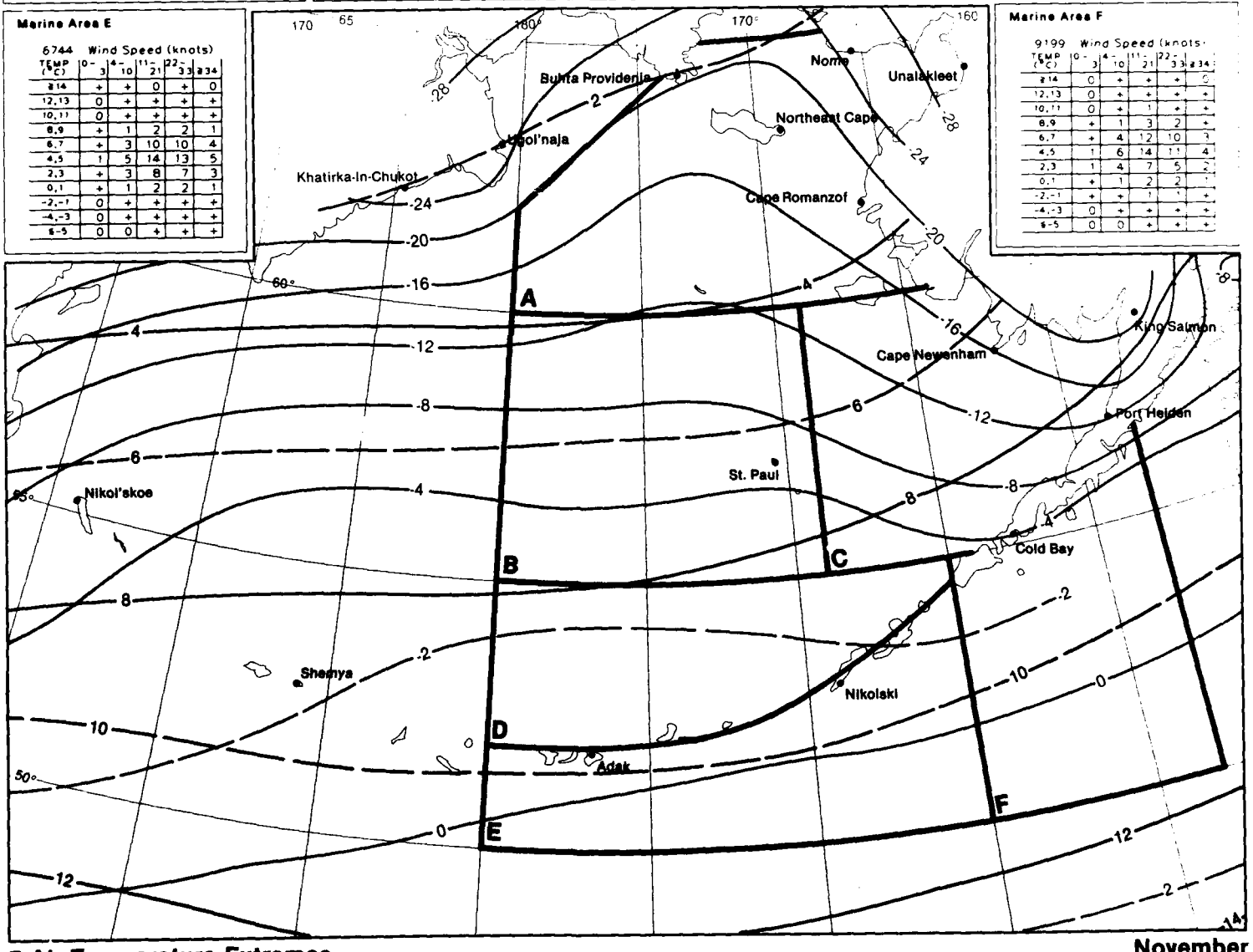
6744 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥14	+	+	0	+	0
12,13	0	+	+	+	+
10,11	0	+	+	+	+
8,9	+	1	2	2	1
6,7	+	3	10	10	4
4,5	1	5	14	13	5
2,3	+	3	8	7	3
0,1	+	1	2	2	1
-2,-1	0	+	+	+	+
-4,-3	0	+	+	+	+
≤-5	0	0	+	+	+

Marine Area F

9199 Wind Speed (knots)

TEMP (°C)	0–3	4–10	11–21	22–33	≥34
≥14	0	+	+	+	0
12,13	0	+	+	+	+
10,11	0	+	1	+	+
8,9	+	1	3	2	+
6,7	+	4	12	10	3
4,5	1	6	14	11	4
2,3	1	4	7	5	2
0,1	+	1	2	2	1
-2,-1	+	+	1	1	+
-4,-3	0	+	+	+	+
≤-5	0	0	+	+	+



Nikol'skoe

5423 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥6	0	0	0	0	0
4,5	0	+	+	+	+
2,3	+	1	3	2	1
0,1	1	4	6	3	1
-2,-1	2	6	10	5	3
-4,-3	2	6	9	4	2
-6,-5	2	5	7	3	1
-8,-7	2	3	4	1	+
-10,-9	+	1	+	+	+
-12,-11	+	+	+	+	0
≤-13	0	0	0	0	0

Khatirka-in-Chukot

3264 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-6	4	5	6	3	1
-8,-7	1	1	2	1	1
-10,-9	1	1	1	1	+
-12,-11	1	1	2	2	+
-14,-13	+	1	3	3	1
-16,-15	1	1	5	3	1
-18,-17	1	2	5	4	2
-20,-19	1	1	2	2	1
-22,-21	1	2	3	1	+
-24,-23	+	2	3	2	1
≤-25	1	3	5	2	1

Ugol'naja

5188 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-6	3	4	7	6	4
-8,-7	1	1	2	2	1
-10,-9	+	1	1	1	1
-12,-11	1	1	1	1	1
-14,-13	1	1	1	2	2
-16,-15	1	1	1	2	3
-18,-17	2	1	1	2	3
-20,-19	1	1	1	2	2
-22,-21	1	1	1	2	3
-24,-23	1	1	1	1	3
≤-25	2	2	3	4	4

Buhta Providenja

4438 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-4	1	4	5	1	+
-6,-5	1	2	2	+	+
-8,-7	2	2	3	1	+
-10,-9	1	2	2	+	+
-12,-11	2	3	3	1	+
-14,-13	2	3	4	1	+
-16,-15	2	3	3	1	+
-18,-17	4	4	4	1	+
-20,-19	3	2	1	+	+
-22,-21	4	3	1	+	+
≤-23	10	3	1	+	0

Norheast Cape

9400 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-4	1	3	10	4	1
-6,-5	+	1	3	1	+
-8,-7	1	2	4	1	+
-10,-9	1	3	4	2	+
-12,-11	1	2	3	1	0
-14,-13	1	2	4	+	+
-16,-15	1	2	2	+	+
-18,-17	2	3	4	+	0
-20,-19	3	3	4	+	+
-22,-21	1	2	1	+	0
≤-23	6	5	3	1	0

Nome

21808 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-6	1	6	11	3	+
-8,-7	1	3	4	1	+
-10,-9	1	3	2	1	+
-12,-11	1	2	2	+	+
-14,-13	2	4	3	+	+
-16,-15	1	3	2	1	+
-18,-17	2	4	2	+	+
-20,-19	2	3	2	+	+
-22,-21	2	2	1	+	0
-24,-23	2	2	+	+	+
≤-25	10	6	1	+	0

Unalaskleet

15833 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-8	1	5	12	5	+
-10,-9	1	2	4	2	+
-12,-11	+	2	3	1	+
-14,-13	1	3	3	2	+
-16,-15	1	2	2	1	+
-18,-17	1	2	2	1	+
-20,-19	1	3	2	1	+
-22,-21	1	2	2	1	+
-24,-23	1	3	2	1	+
-26,-25	1	2	1	+	+
≤-27	5	14	2	+	+

Cape Romanzof

16634 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-2	1	3	8	3	+
-4,-3	2	3	4	2	+
-6,-5	1	2	2	1	+
-8,-7	2	2	3	1	+
-10,-9	2	2	3	2	+
-12,-11	2	1	2	2	+
-14,-13	2	2	3	2	1
-16,-15	2	1	2	2	+
-18,-17	1	1	3	2	+
-20,-19	1	1	2	2	+
≤-21	1	2	4	3	+

Cape Newenham

19087 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥2	+	2	5	3	+
0,1	1	4	7	2	+
-2,-1	2	3	4	1	+
-4,-3	3	4	3	1	+
-6,-5	2	2	2	1	+
-8,-7	3	2	2	1	+
10,-9	3	2	2	1	+
-12,-11	2	1	1	+	+
-14,-13	2	2	2	+	+
-16,-15	2	2	1	+	+
≤-17	5	4	6	1	0

King Salmon

18840 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥-2	2	13	13	3	+
-4,-3	1	4	2	+	0
-6,-5	1	3	1	+	0
-8,-7	1	4	1	+	+
-10,-9	1	3	1	+	0
-12,-11	1	2	1	+	0
-14,-13	1	3	1	+	0
-16,-15	1	2	1	+	0
-18,-17	1	2	1	+	0
-20,-19	2	3	2	+	0
≤-21	7	9	5	+	+

Port Heiden

5839 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥4	+	1	3	2	+
2,3	+	3	8	3	+
0,1	1	7	8	2	+
-2,-1	1	6	5	1	+
-4,-3	1	5	4	1	+
-6,-5	1	3	2	+	+
-8,-7	+	2	1	+	0
-10,-9	1	2	1	+	0
-12,-11	+	2	2	+	0
-14,-13	+	3	3	+	0
≤-15	+	4	8	1	0

Cold Bay

14359 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥8	0	0	+	+	+
6,7	+	+	1	1	+
4,5	+	1	2	3	+
2,3	+	4	9	5	+
0,1	1	10	12	4	+
-2,-1	1	5	6	+	+
-4,-3	1	5	6	2	+
-6,-5	+	3	3	+	+
-8,-7	1	2	3	1	+
-10,-9	+	1	1	+	+
≤-11	+	1	+	1	+

Nikolski

2182 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	0	0	0	0	0
8,9	0	0	0	0	0
6,7	0	+	+	+	0
4,5	1	1	2	2	+
2,3	1	4	6	3	+
0,1	4	13	18	8	1
-2,-1	3	6	8	4	1
-4,-3	1	2	5	3	+
-6,-5	0	1	1	1	+
-8,-7	0	+	+	+	0
≤-9	0	0	0	0	0

St. Paul

11798 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥8	0	0	0	0	0
6,7	0	0	+	+	0
4,5	0	+	1	1	+
2,3	+	2	10	5	1
0,1	1	6	13	6	1
-2,-1	+	2	6	3	1
-4,-3	1	4	7	4	1
-6,-5	1	2	5	2	1
-8,-7	1	2	4	2	+
-10,-9	+	1	1	1	+
≤-11	+	+	1	2	+

Adak

22273 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	0	+	+	+	+
8,9	0	+	+	+	+
6,7	+	1	1	1	+
4,5	1	3	4	2	1
2,3	3	9	12	4	1
0,1	5	11	13	5	1
-2,-1	3	4	4	2	+
-4,-3	3	1	1	+	+
-6,-5	1	+	+	+	0
-8,-7	1	+	+	0	0
≤-9	+	+	0	0	0

Shemya

19053 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	0	0	0	0	0
8,9	0	0	0	0	0
6,7	+	+	+	+	+
4,5	+	+	1	1	1
2,3	2	2	10	7	2
0,1	3	7	17	11	3
-2,-1	2	6	9	4	1
-4,-3	1	3	4	2	+
-6,-5	+	1	1	+	+
-8,-7	+	+	+	+	0
≤-9	+	+	+	0	0

Marine Area A

2465 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥4	0	+	+	1	+
2,3	+	+	2	2	+
0,1	1	4	10	7	1
-2,-1	+	2	3	2	1
-4,-3	+	2	3	2	+
-6,-5	+	2	4	3	1
-8,-7	+	2	4	3	1
-10,-9	+	1	3	3	1
-12,-11	+	1	3	4	2
-14,-13	+	1	3	3	2
≤-15	+	1	3	3	2

Marine Area B

3321 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥8	0	+	+	+	+
6,7	0	+	+	+	+
4,5	+	1	1	1	+
2,3	1	4	9	3	1
0,1	1	5	11	4	1
-2,-1	+	2	6	4	1
-4,-3	+	3	6	4	1
-6,-5	+	2	5	4	·
-8,-7	+	1	3	2	1
-10,-9	+	1	1	1	1
≤-11	0	1	3	2	1

Marine Area C

4161 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥10	0	0	+	+	0
8,9	+	+	+	+	0
6,7	+	+	1	1	+
4,5	1	4	8	7	1
2,3	1	6	11	7	2
0,1	+	4	8	6	1
-2,-1	+	3	5	3	·
-4,-3	+	2	4	3	1
-6,-5	+	1	2	1	+
-8,-7	0	+	1	1	+
≤-9	+	+	+	1	+

Marine Area D

7381 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	+	+	+	+	0
10,11	+	+	+	+	+
8,9	+	+	+	+	+
6,7	+	1	2	2	1
4,5	1	4	10	9	4
2,3	1	6	13	10	4
0,1	1	4	7	6	2
-2,-1	+	1	3	2	1
-4,-3	+	+	1	1	+
-6,-5	0	+	+	+	+
≤-7	0	+	+	+	0

Marine Area E

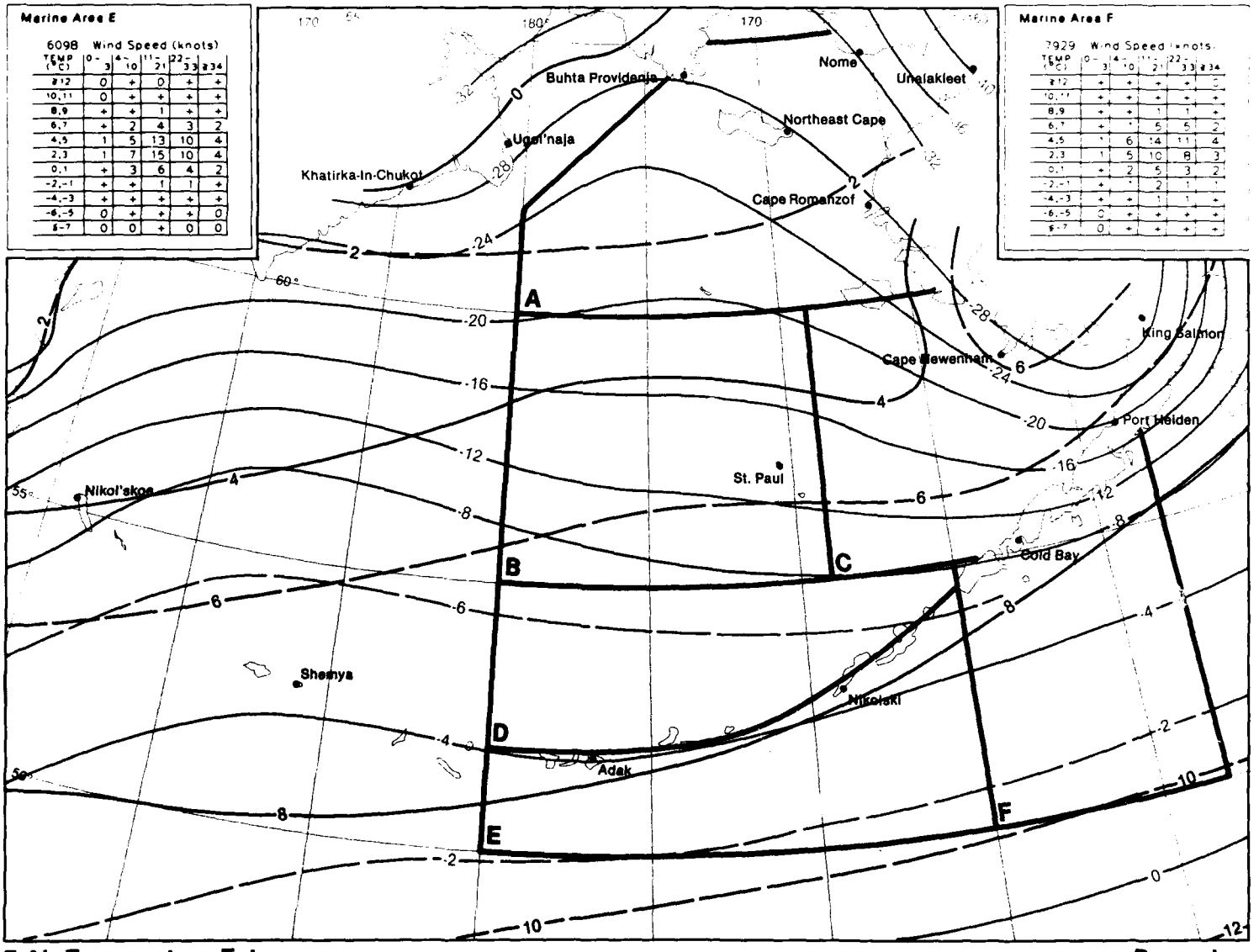
6098 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	0	+	0	+	+
10,11	0	+	+	+	+
8,9	+	+	1	+	+
6,7	+	2	4	3	2
4,5	1	5	13	10	4
2,3	1	7	15	10	4
0,1	+	3	6	4	2
-2,-1	+	+	1	1	+
-4,-3	+	+	+	+	+
-6,-5	0	+	+	+	0
≤-7	0	0	+	0	0

Marine Area F

7929 Wind Speed (knots)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
≥12	+	+	+	+	0
10,11	+	+	+	+	+
8,9	+	+	1	1	+
6,7	+	1	5	5	2
4,5	1	6	14	11	4
2,3	1	5	10	8	3
0,1	+	2	5	3	2
-2,-1	+	1	2	1	1
-4,-3	+	+	1	1	+
-6,-5	0	+	+	+	+
≤-7	0	+	+	+	+



7 Air Temperature Extremes **December**

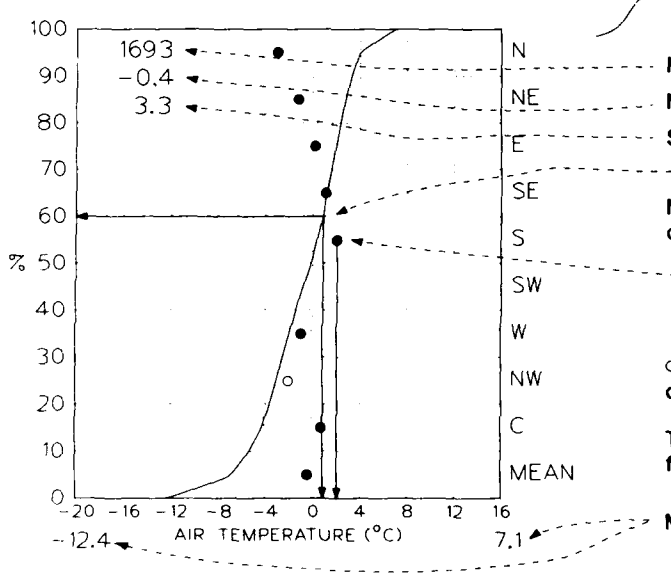
Map 8. Air temperature mean and frequency ≤0°C

BLACK LINE – Mean air temperature (°C).

BLUE LINE – Percent frequency of temperature ≤0°C (≤32°F).

Albers Equal–Area Conic Projection

Graphs: Air temperature/wind direction



Cumulative percent frequency of temperatures equal to or less than the temperature intersected by the curve.

Number of observations.

Mean temperature (°C).

Standard deviation of temperatures (°C).

(60% of all temperatures were ≤0.9 °C or ≤33.6 °F.)

Mean temperature for each wind direction, calm and for all data combined are represented by dots.

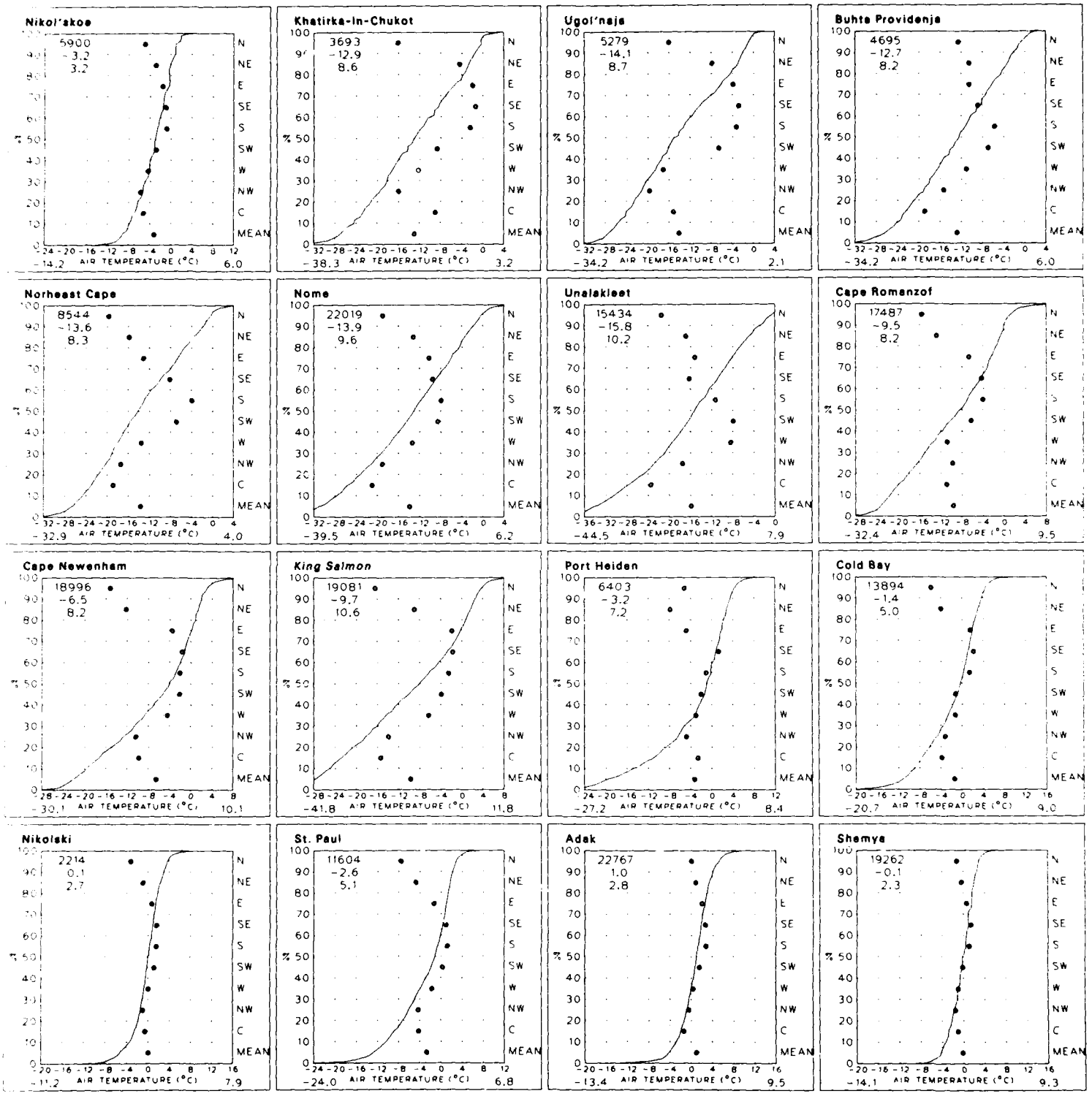
(With S winds, the mean temperature was 2.1 °C or 35.8 °F.)

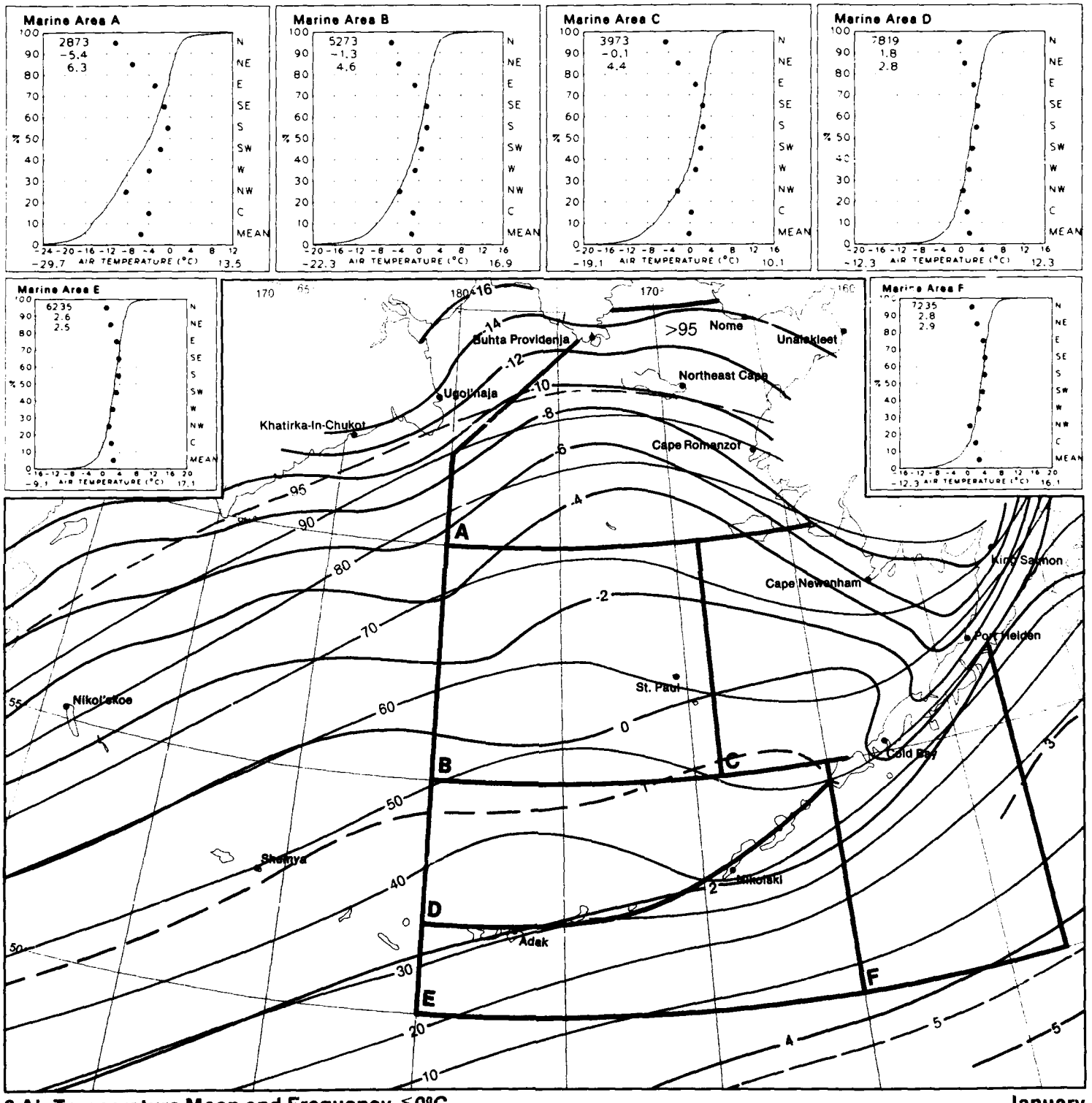
o Indicates that the mean temperature for a direction or calm was computed from 10-30 observations.

The mean temperature is omitted when less than 10 observations for a direction or calm were available.

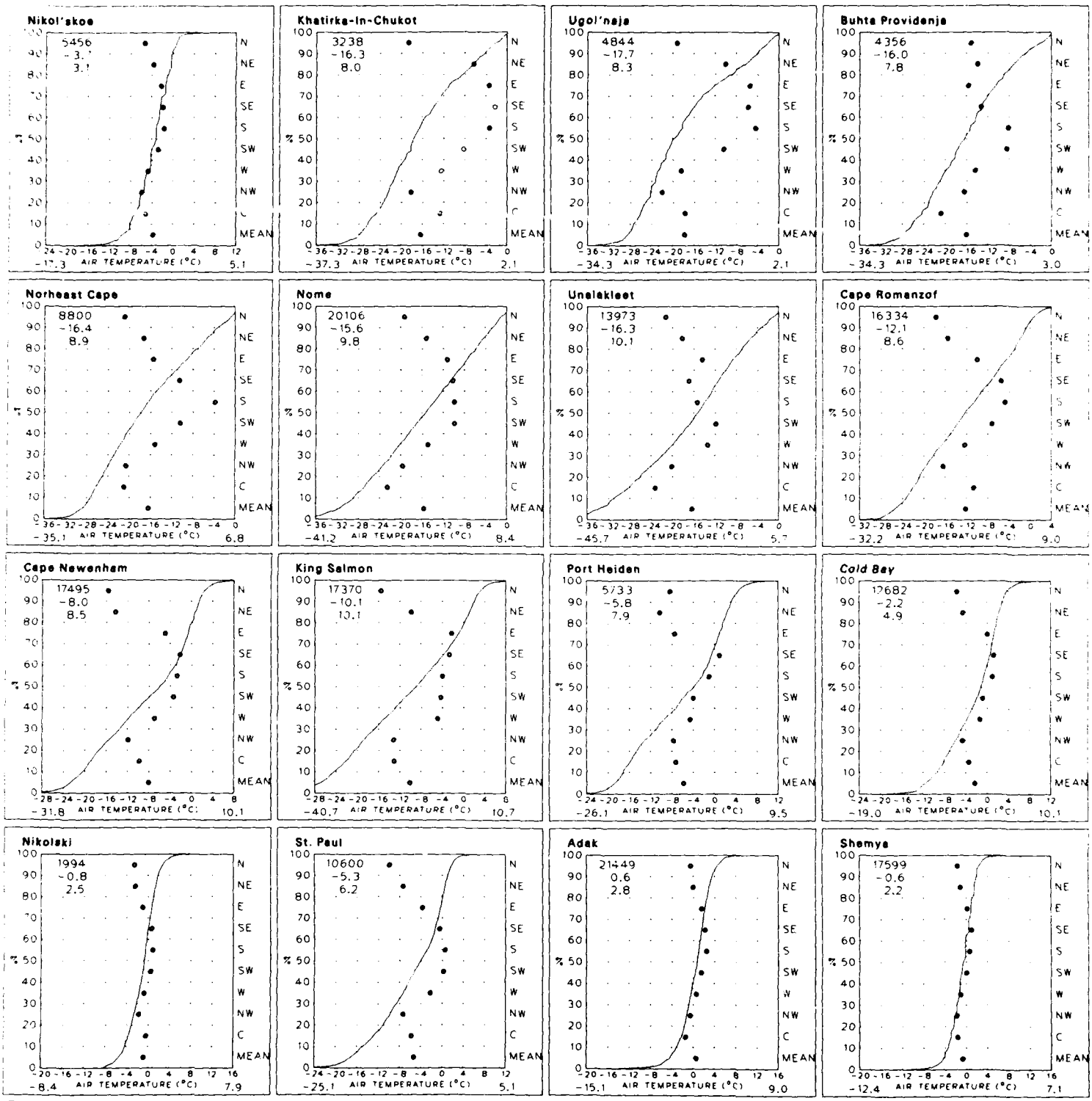
Maximum and minimum air temperature.

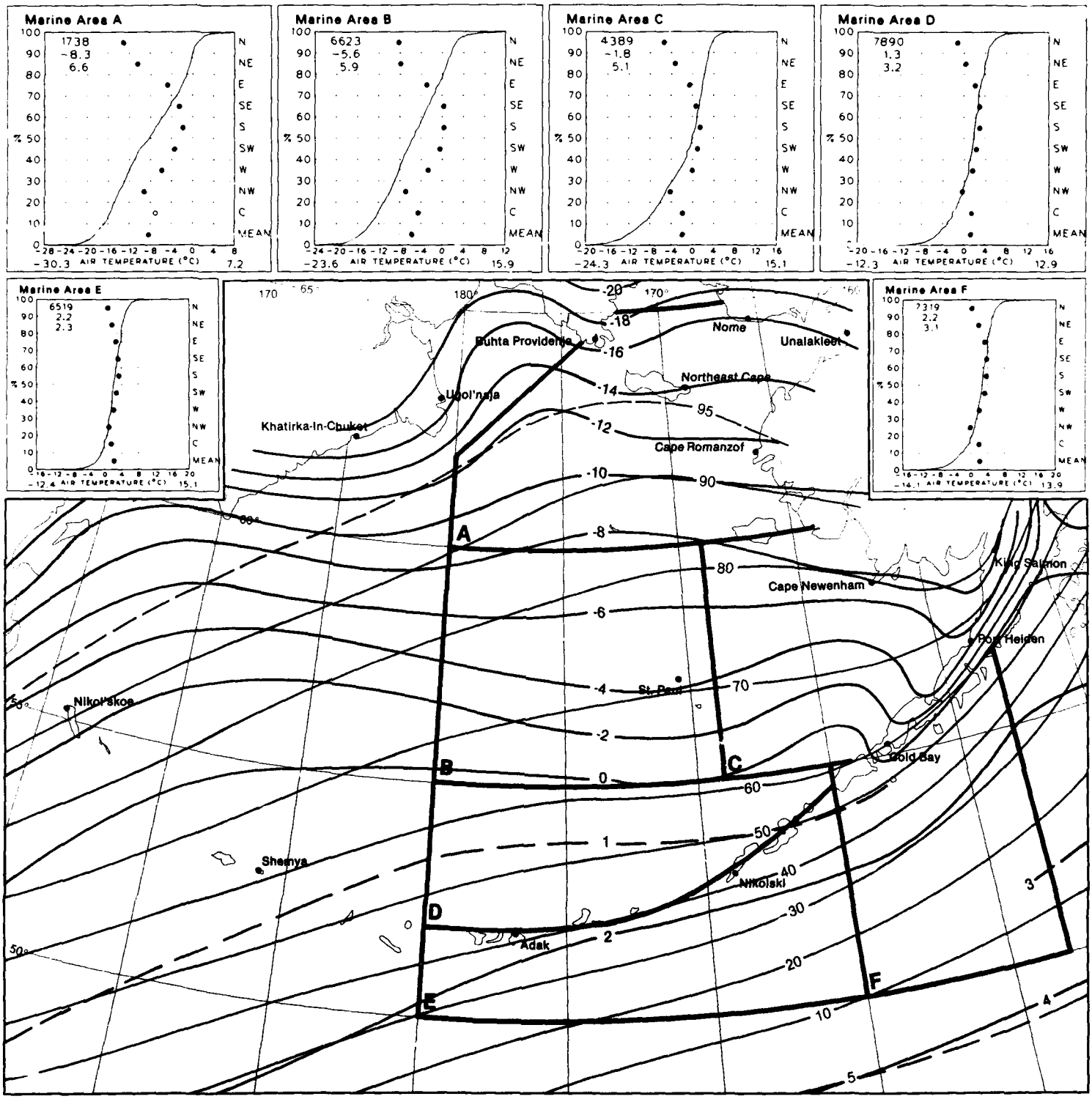
The temperature scale of the graphs varies in both range and class interval. The percent frequency of temperature observations greater than a given value can be obtained by subtracting the cumulative percent frequency of that value from 100%. The number of observations and the standard deviation, plus the plotted points on the graphs, are based on those observations reporting both temperature and wind direction. The cumulative curve is based on all observations reporting temperature with or without wind direction.


Nikol'skoe
5900
-3.2
3.2
-14.2 AIR TEMPERATURE (°C) 6.0
Khatirka-In-Chukot
3693
-12.9
8.6
-38.3 AIR TEMPERATURE (°C) 3.2
Ugol'naja
5279
-14.1
8.7
-34.2 AIR TEMPERATURE (°C) 2.1
Buhta Providenja
4695
-12.7
8.2
-34.2 AIR TEMPERATURE (°C) 6.0
Norheast Cape
8544
-13.6
8.3
-32.9 AIR TEMPERATURE (°C) 4.0
Nome
22019
-13.9
9.6
-39.5 AIR TEMPERATURE (°C) 6.2
Unalakleet
15434
-15.8
10.2
-44.5 AIR TEMPERATURE (°C) 7.9
Cape Romanzof
17487
-9.5
8.2
-32.4 AIR TEMPERATURE (°C) 9.5
Cape Newenham
18996
-6.5
8.2
-30.1 AIR TEMPERATURE (°C) 10.1
King Salmon
19081
-9.7
10.6
-41.8 AIR TEMPERATURE (°C) 11.8
Port Heiden
6403
-3.2
7.2
-27.2 AIR TEMPERATURE (°C) 8.4
Cold Bay
13894
-1.4
5.0
-20.7 AIR TEMPERATURE (°C) 9.0
Nikolski
2214
0.1
2.7
-11.2 AIR TEMPERATURE (°C) 7.9
St. Paul
11604
-2.6
5.1
-24.0 AIR TEMPERATURE (°C) 6.8
Adak
22767
1.0
2.8
-13.4 AIR TEMPERATURE (°C) 9.5
Shemya
19262
-0.1
2.3
-14.1 AIR TEMPERATURE (°C) 9.3
N
NE
E
SE
S
SW
W
NW
C
MEAN
%

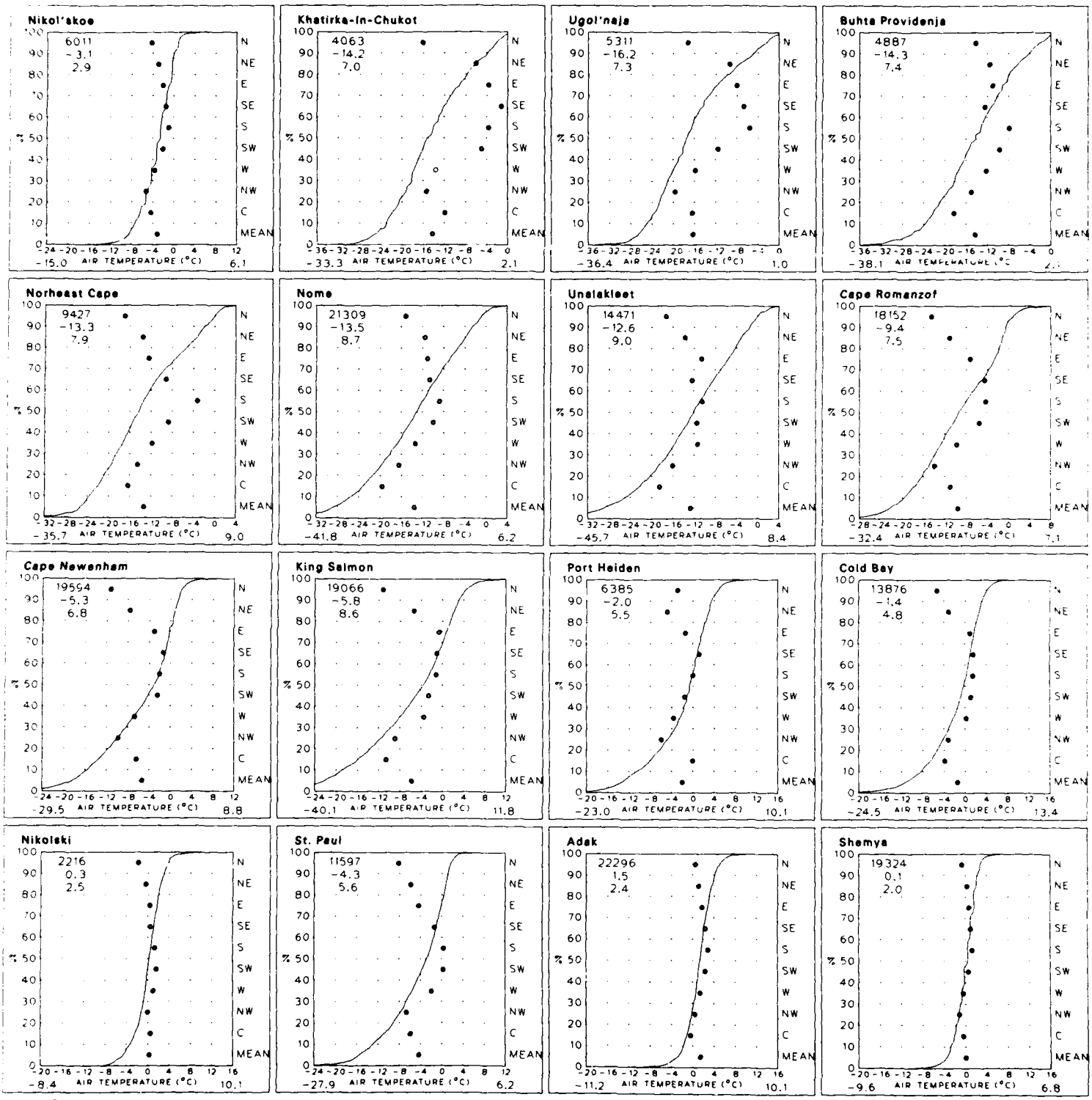


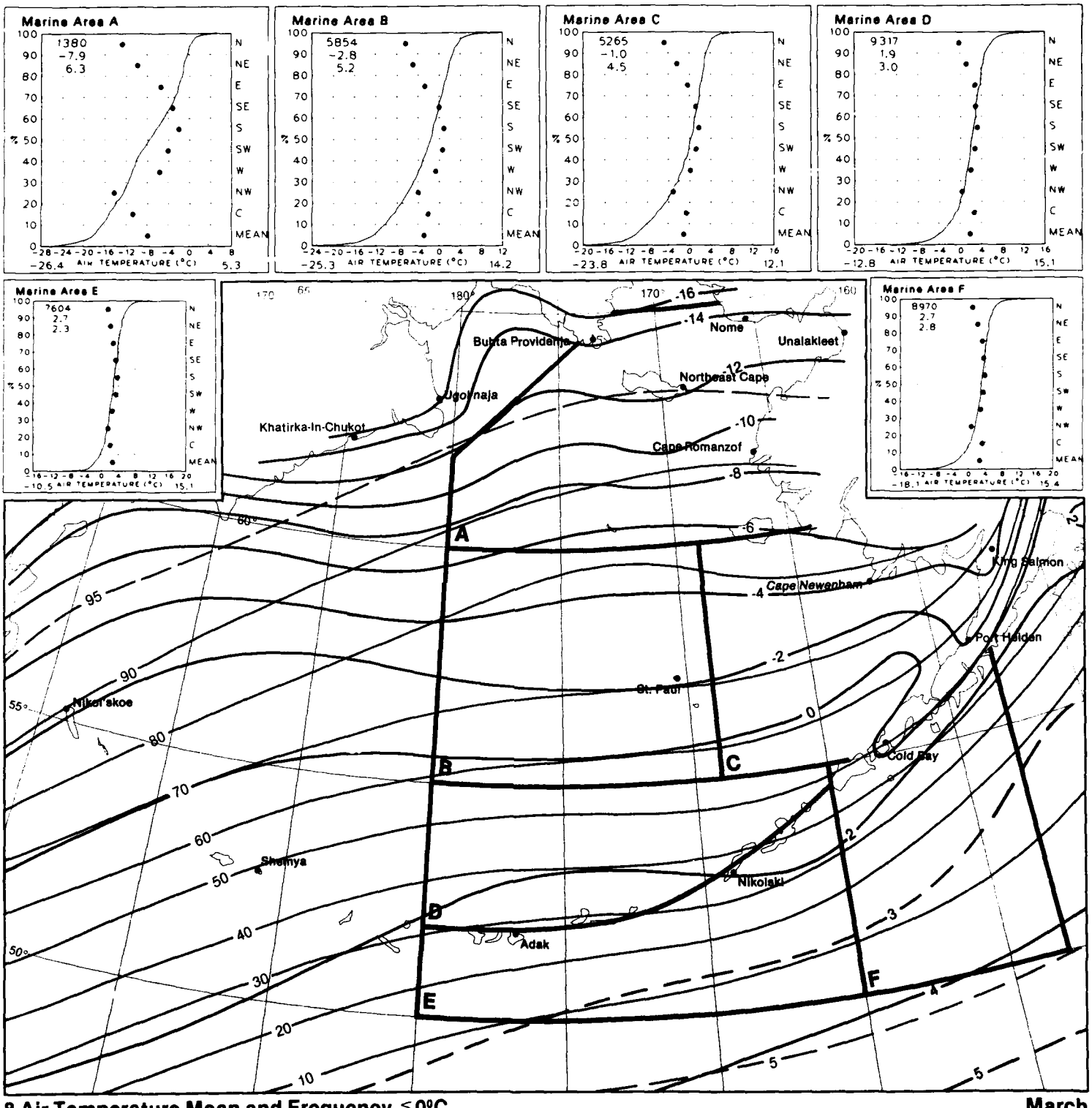
8 Air Temperature Mean and Frequency ≦0°C **January**


Nikol'skoe
5456
-3.7
3.1
-17.3 AIR TEMPERATURE (°C) 5.1
Khatirka-In-Chukot
3238
-16.3
8.0
-37.3 AIR TEMPERATURE (°C) 2.1
Ugol'naja
4844
-17.7
8.3
-34.3 AIR TEMPERATURE (°C) 2.1
Buhta Providenja
4356
-16.0
7.8
-34.3 AIR TEMPERATURE (°C) 3.0
Norheast Cape
8800
-16.4
8.9
-35.1 AIR TEMPERATURE (°C) 6.8
Nome
20106
-15.6
9.8
-41.2 AIR TEMPERATURE (°C) 8.4
Unalakleet
13973
-16.3
10.1
-45.7 AIR TEMPERATURE (°C) 5.7
Cape Romanzof
16334
-12.1
8.6
-32.2 AIR TEMPERATURE (°C) 9.0
Cape Newenham
17495
-8.0
8.5
-31.8 AIR TEMPERATURE (°C) 10.1
King Salmon
17370
-10.1
10.1
-40.7 AIR TEMPERATURE (°C) 10.7
Port Heiden
5733
-5.8
7.9
-26.1 AIR TEMPERATURE (°C) 9.5
Cold Bay
12682
-2.2
4.9
-19.0 AIR TEMPERATURE (°C) 10.1
Nikolski
1994
-0.8
2.5
-8.4 AIR TEMPERATURE (°C) 7.9
St. Paul
10600
-5.3
6.2
-25.1 AIR TEMPERATURE (°C) 5.1
Adak
21449
0.6
2.8
-15.1 AIR TEMPERATURE (°C) 9.0
Shemya
17599
-0.6
2.2
-12.4 AIR TEMPERATURE (°C) 7.1
%
N
NE
E
SE
S
SW
W
NW
C
MEAN

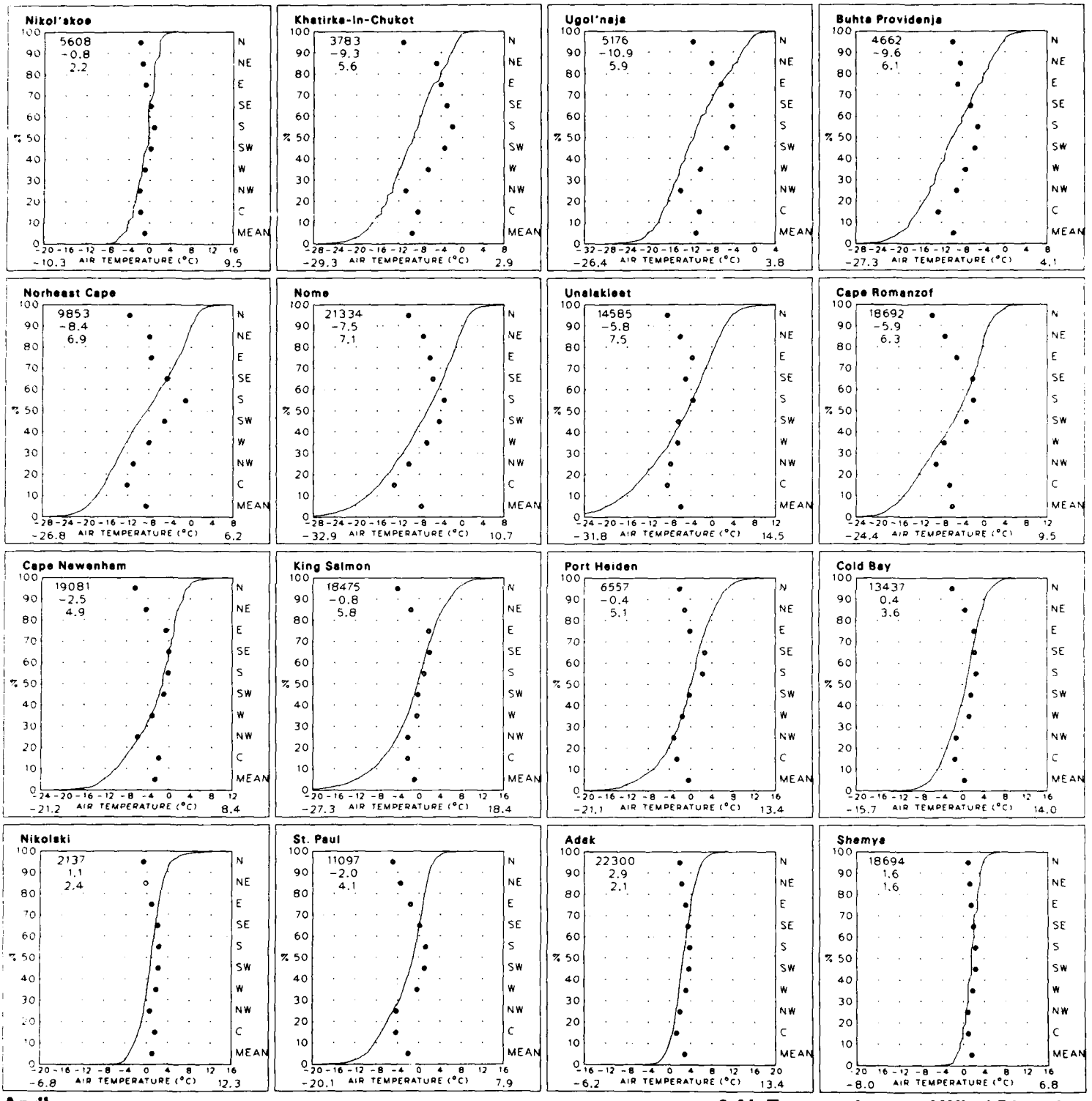


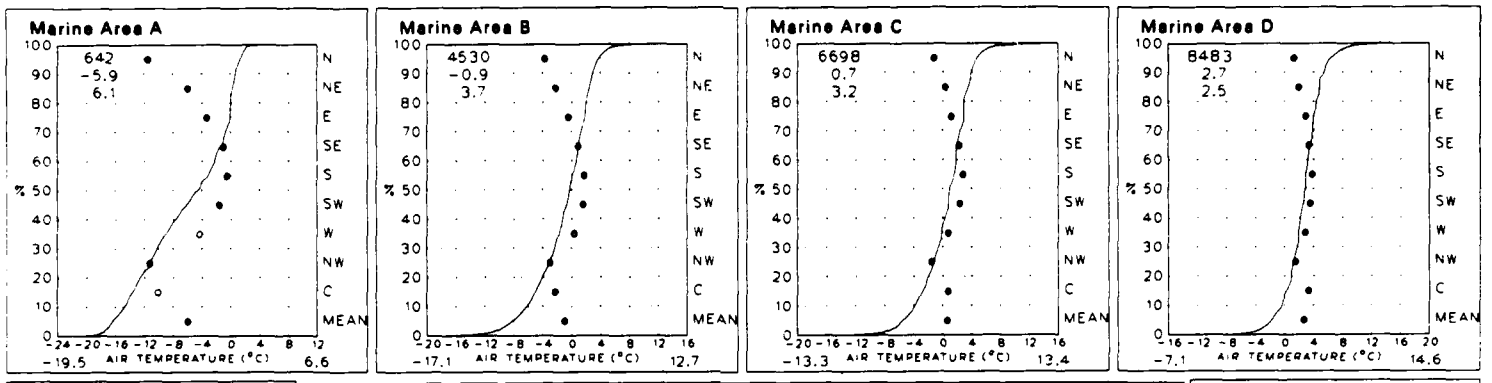
8 Air Temperature Mean and Frequency ≦0°C **February**

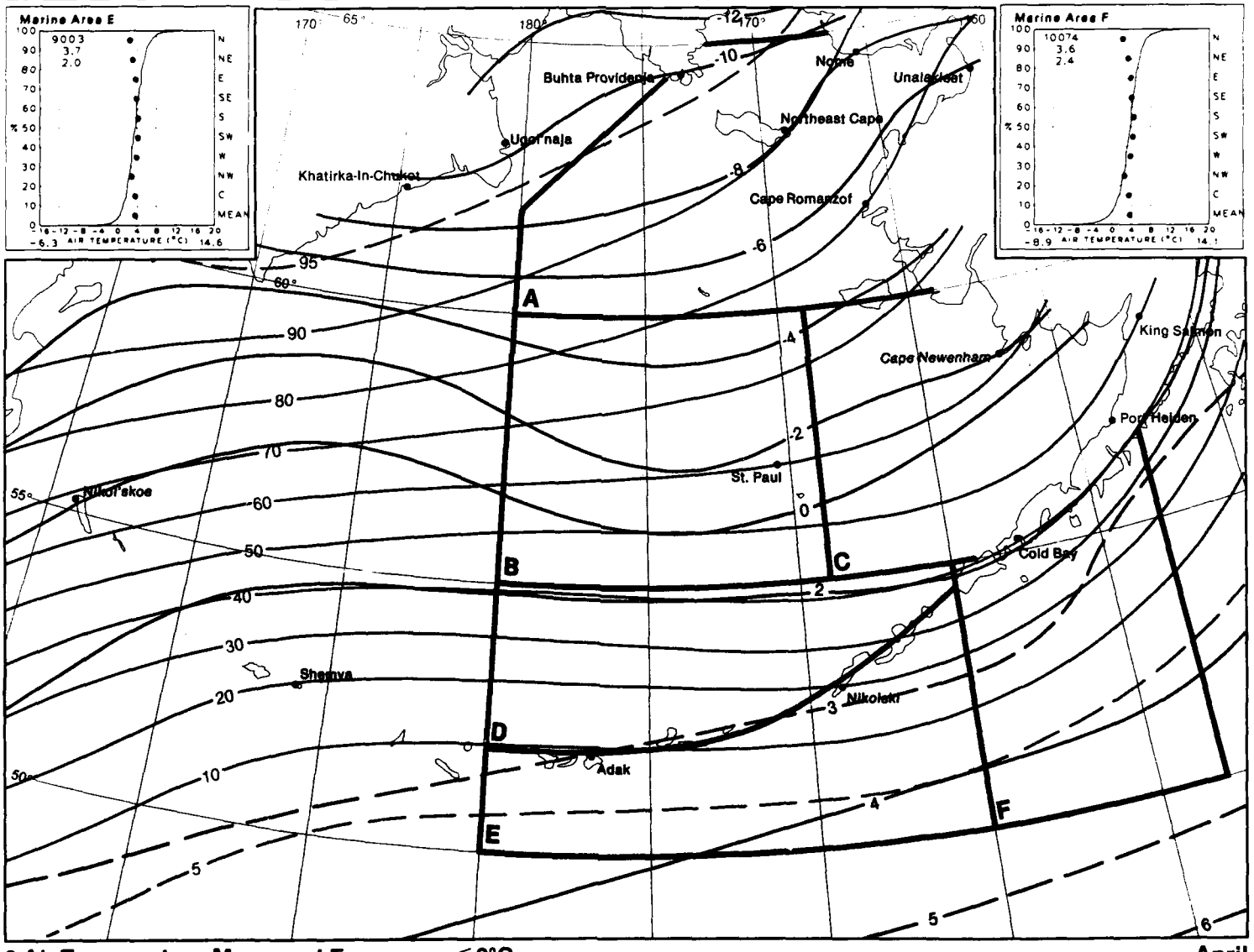

Nikol'skoe
6011
-3.1
2.9
-15.0 AIR TEMPERATURE (°C) 6.1
Khatirka-In-Chukot
4063
-14.2
7.0
-33.3 AIR TEMPERATURE (°C) 2.1
Ugol'naja
5311
-16.2
7.3
-36.4 AIR TEMPERATURE (°C) 1.0
Buhta Providenja
4887
-14.3
7.4
-38.1 AIR TEMPERATURE (°C)
Norheast Cape
9427
-13.3
7.9
-35.7 AIR TEMPERATURE (°C) 9.0
Nome
21309
-13.5
8.7
-41.8 AIR TEMPERATURE (°C) 6.2
Unalakleet
14471
-12.6
9.0
-45.7 AIR TEMPERATURE (°C) 8.4
Cape Romanzof
18152
-9.4
7.5
-32.4 AIR TEMPERATURE (°C) 7.1
Cape Newenham
19594
-5.3
6.8
-29.5 AIR TEMPERATURE (°C) 8.8
King Salmon
19066
-5.8
8.6
-40.1 AIR TEMPERATURE (°C) 11.8
Port Heiden
6385
-2.0
5.5
-23.0 AIR TEMPERATURE (°C) 10.1
Cold Bay
13876
-1.4
4.8
-24.5 AIR TEMPERATURE (°C) 13.4
Nikolski
2216
0.3
2.5
-8.4 AIR TEMPERATURE (°C) 10.1
St. Paul
11597
-4.3
5.6
-27.9 AIR TEMPERATURE (°C) 6.2
Adak
22296
1.5
2.4
-11.2 AIR TEMPERATURE (°C) 10.1
Shemya
19324
0.1
2.0
-9.6 AIR TEMPERATURE (°C) 6.8
% 0 10 20 30 40 50 60 70 80 90 100
N NE E SE S SW W NW C MEAN



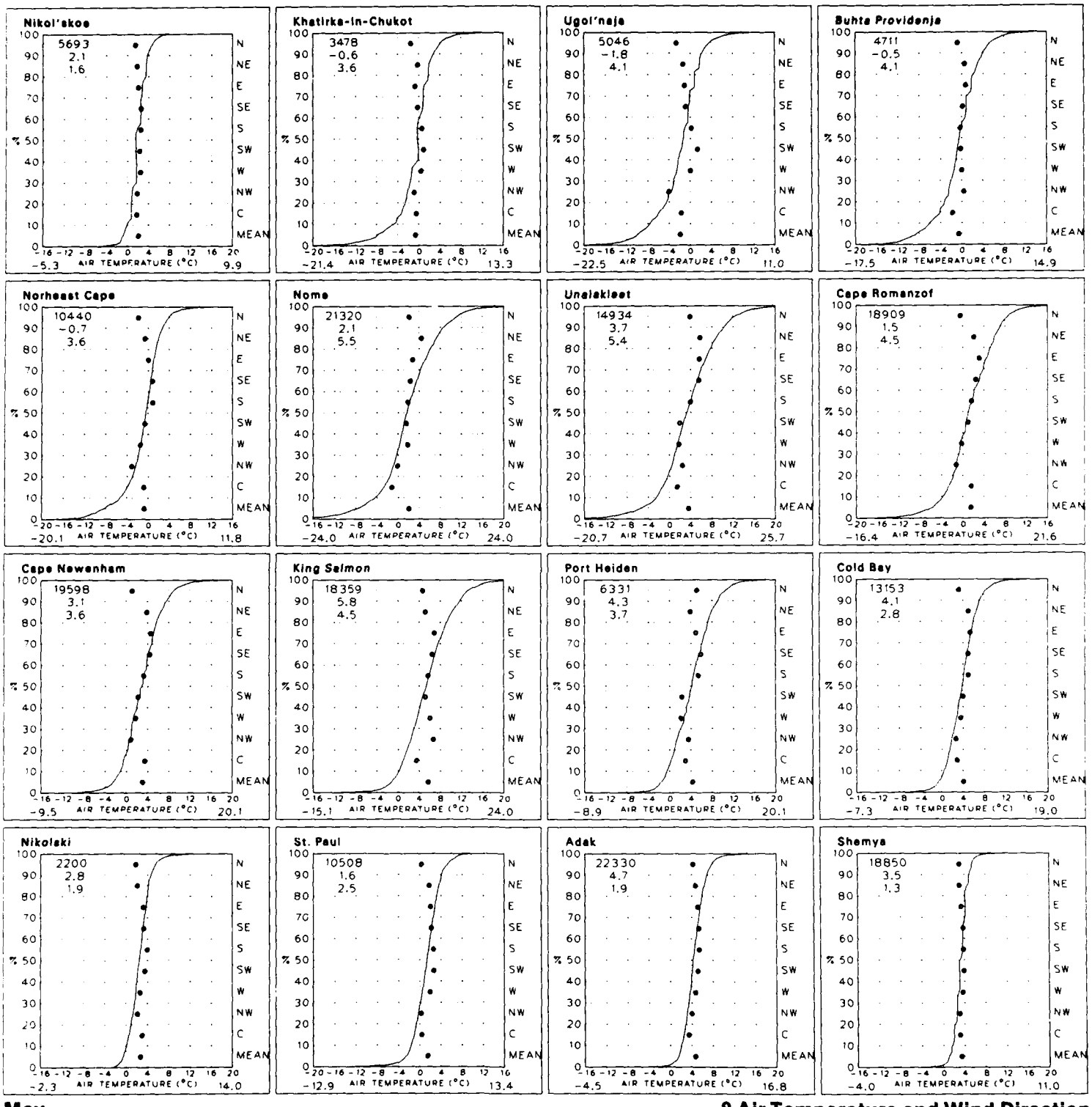
8 Air Temperature Mean and Frequency ≦0°C **March**

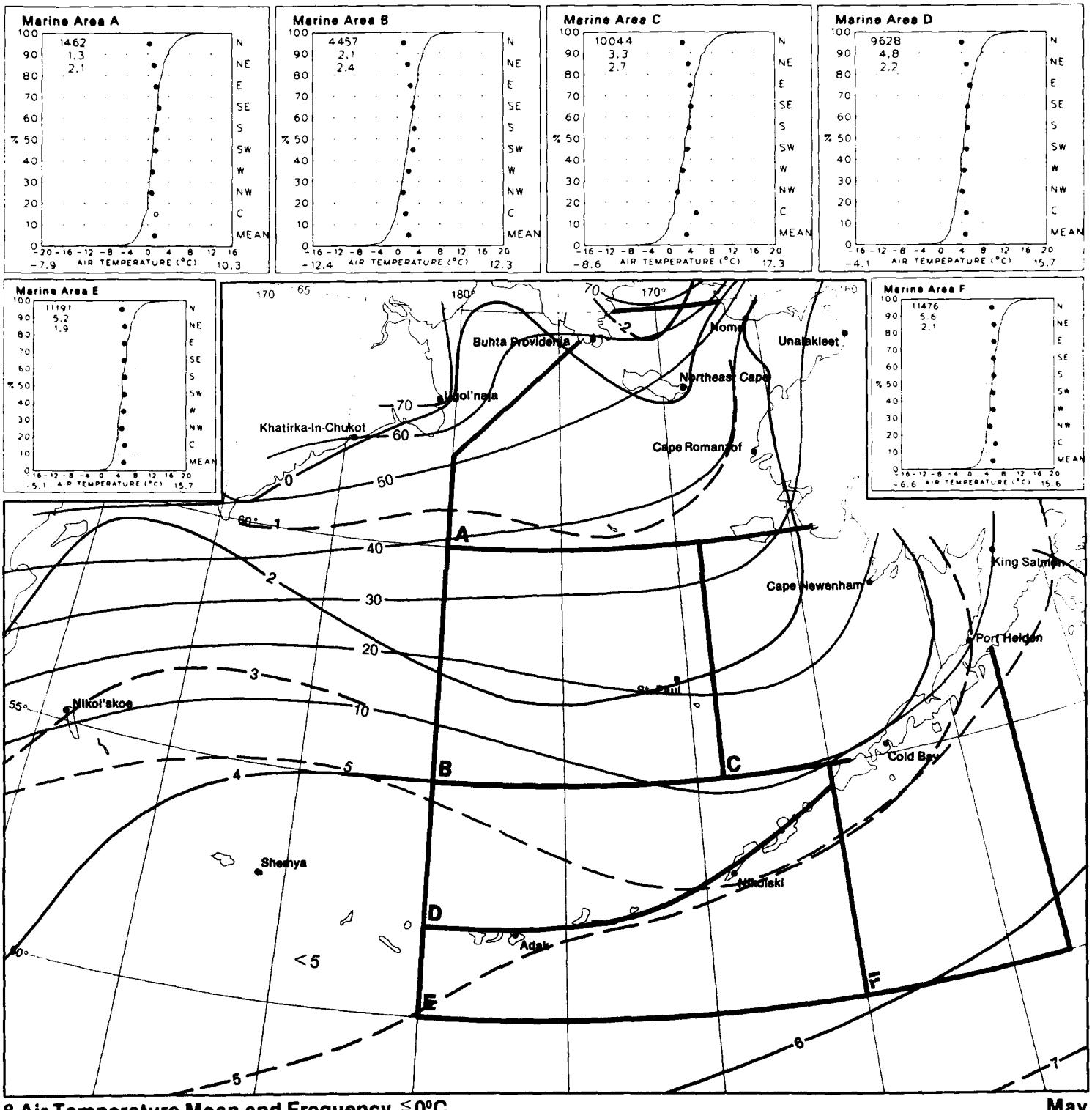

Nikol'skoe
5608
-0.8
2.2
-10.3
9.5
Khatirka-In-Chukot
3783
-9.3
5.6
-29.3
2.9
Ugol'naja
5176
-10.9
5.9
-26.4
3.8
Buhta Providenja
4662
-9.6
6.1
-27.3
4.1
Norheast Cape
9853
-8.4
6.9
-26.8
6.2
Nome
21334
-7.5
7.1
-32.9
10.7
Unalakleet
14585
-5.8
7.5
-31.8
14.5
Cape Romanzof
18692
-5.9
6.3
-24.4
9.5
Cape Newenham
19081
-2.5
4.9
-21.2
8.4
King Salmon
18475
-0.8
5.8
-27.3
18.4
Port Heiden
6557
-0.4
5.1
-21.1
13.4
Cold Bay
13437
0.4
3.6
-15.7
14.0
Nikolski
2137
1.1
2.4
-6.8
12.3
St. Paul
11097
-2.0
4.1
-20.1
7.9
Adak
22300
2.9
2.1
-6.2
13.4
Shemya
18694
1.6
1.6
-8.0
6.8
N
NE
E
SE
S
SW
W
NW
C
MEAN
%
AIR TEMPERATURE (°C)





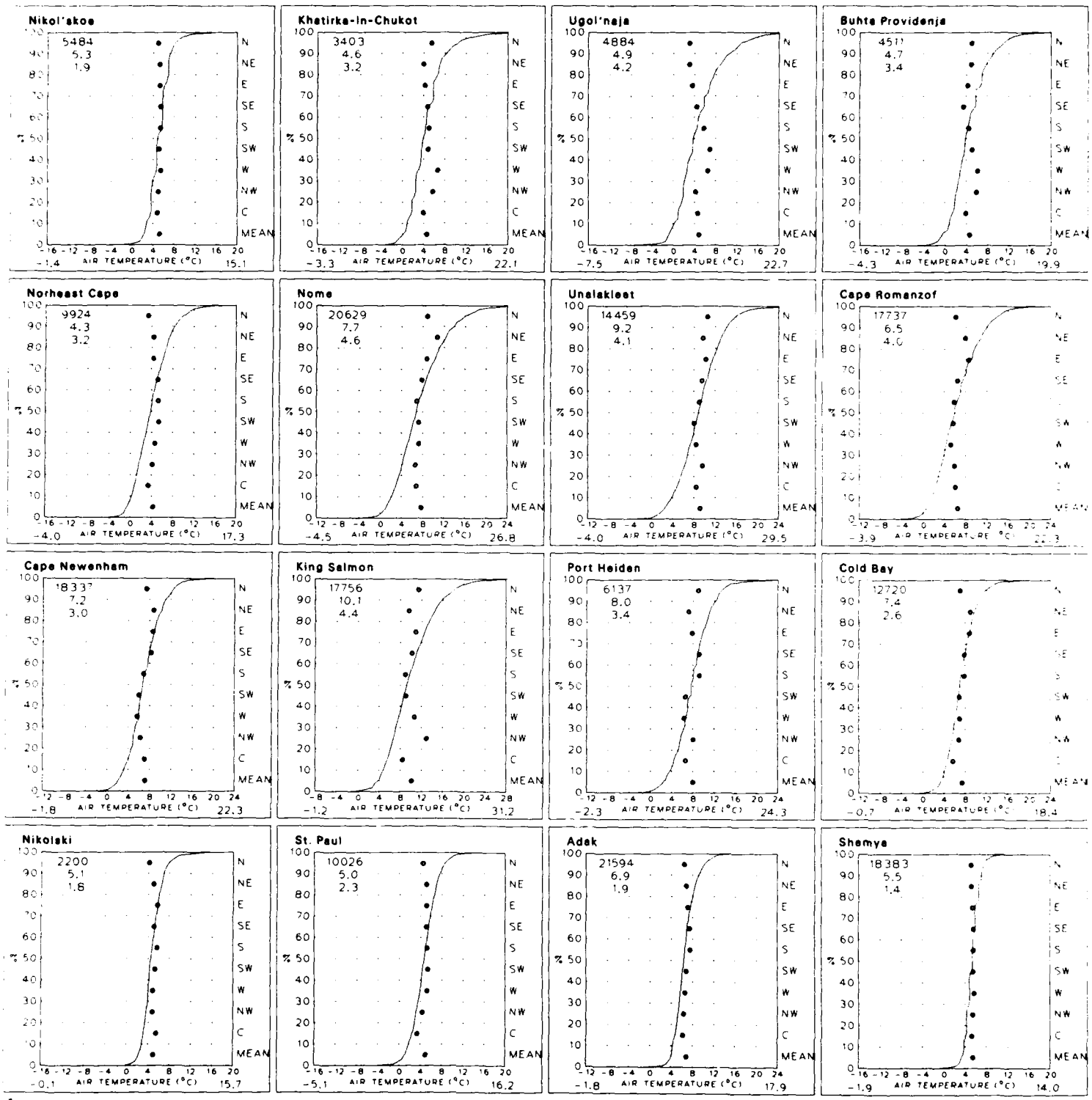
8 Air Temperature Mean and Frequency ≦0°C **April**

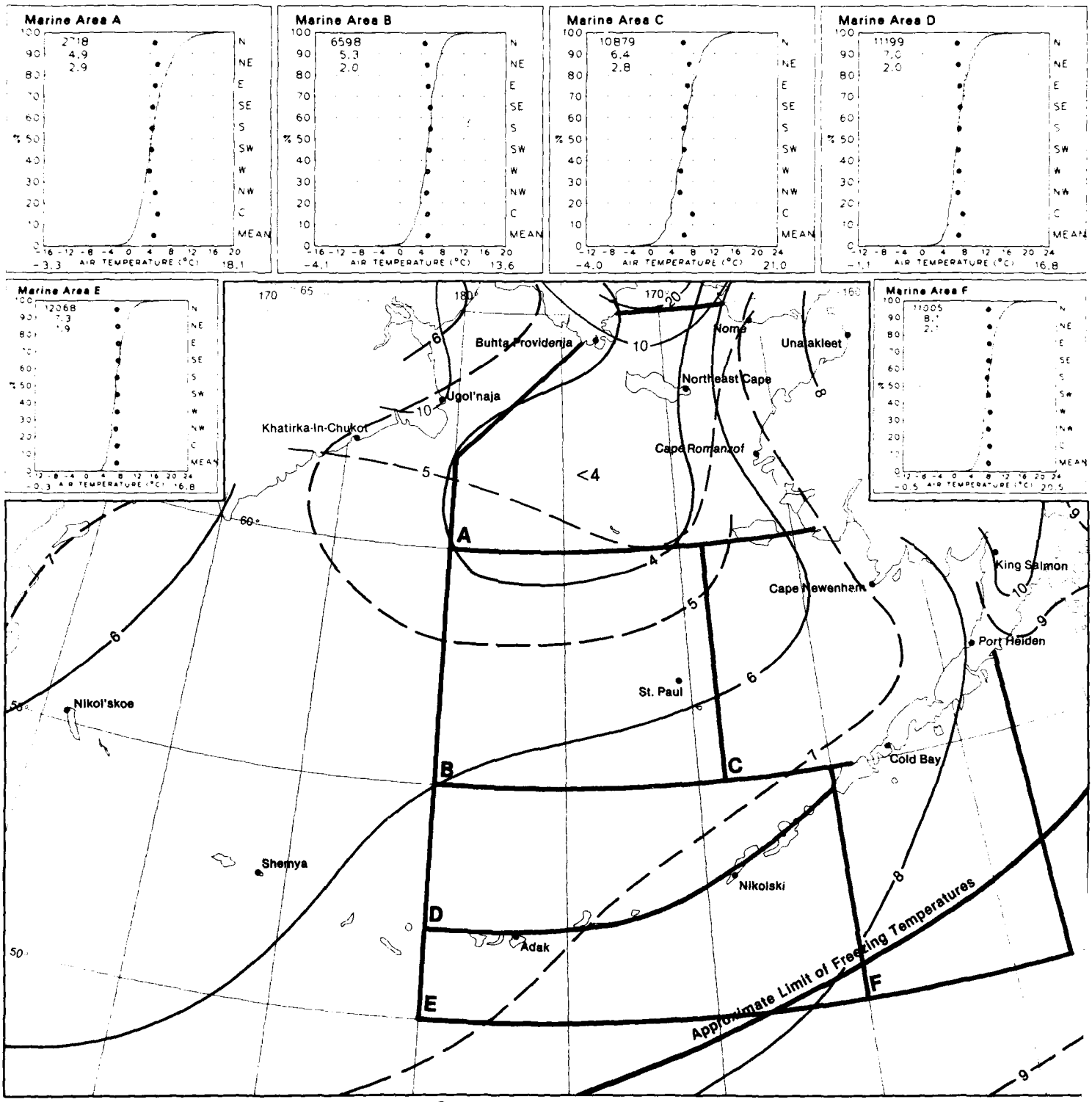

Nikol'skoe
5693
2.1
1.6
-5.3
9.9
Khatirka-In-Chukot
3478
-0.6
3.6
-21.4
13.3
Ugol'naja
5046
-1.8
4.1
-22.5
11.0
Buhta Providenja
4711
-0.5
4.1
-17.5
14.9
Norheast Cape
10440
-0.7
3.6
-20.1
11.8
Nome
21320
2.1
5.5
-24.0
24.0
Unalakleet
14934
3.7
5.4
-20.7
25.7
Cape Romanzof
18909
1.5
4.5
-16.4
21.6
Cape Newenham
19598
3.1
3.6
-9.5
20.1
King Salmon
18359
5.8
4.5
-15.1
24.0
Port Heiden
6331
4.3
3.7
-8.9
20.1
Cold Bay
13153
4.1
2.8
-7.3
19.0
Nikolski
2200
2.8
1.9
-2.3
14.0
St. Paul
10508
1.6
2.5
-12.9
13.4
Adak
22330
4.7
1.9
-4.5
16.8
Shemya
18850
3.5
1.3
-4.0
11.0
%
AIR TEMPERATURE (°C)
N
NE
E
SE
S
SW
W
NW
C
MEAN



8 Air Temperature Mean and Frequency ≦0°C

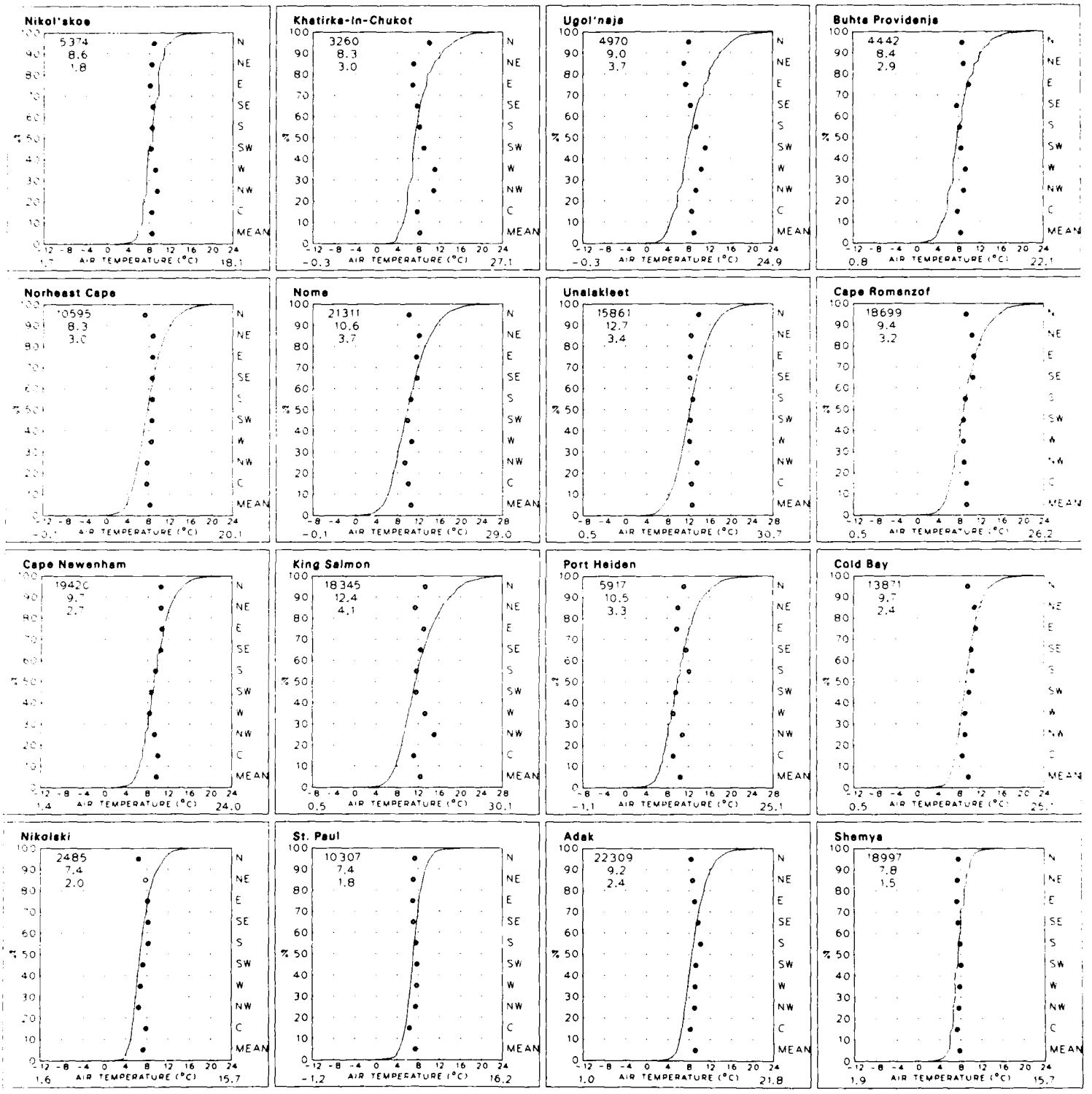
May

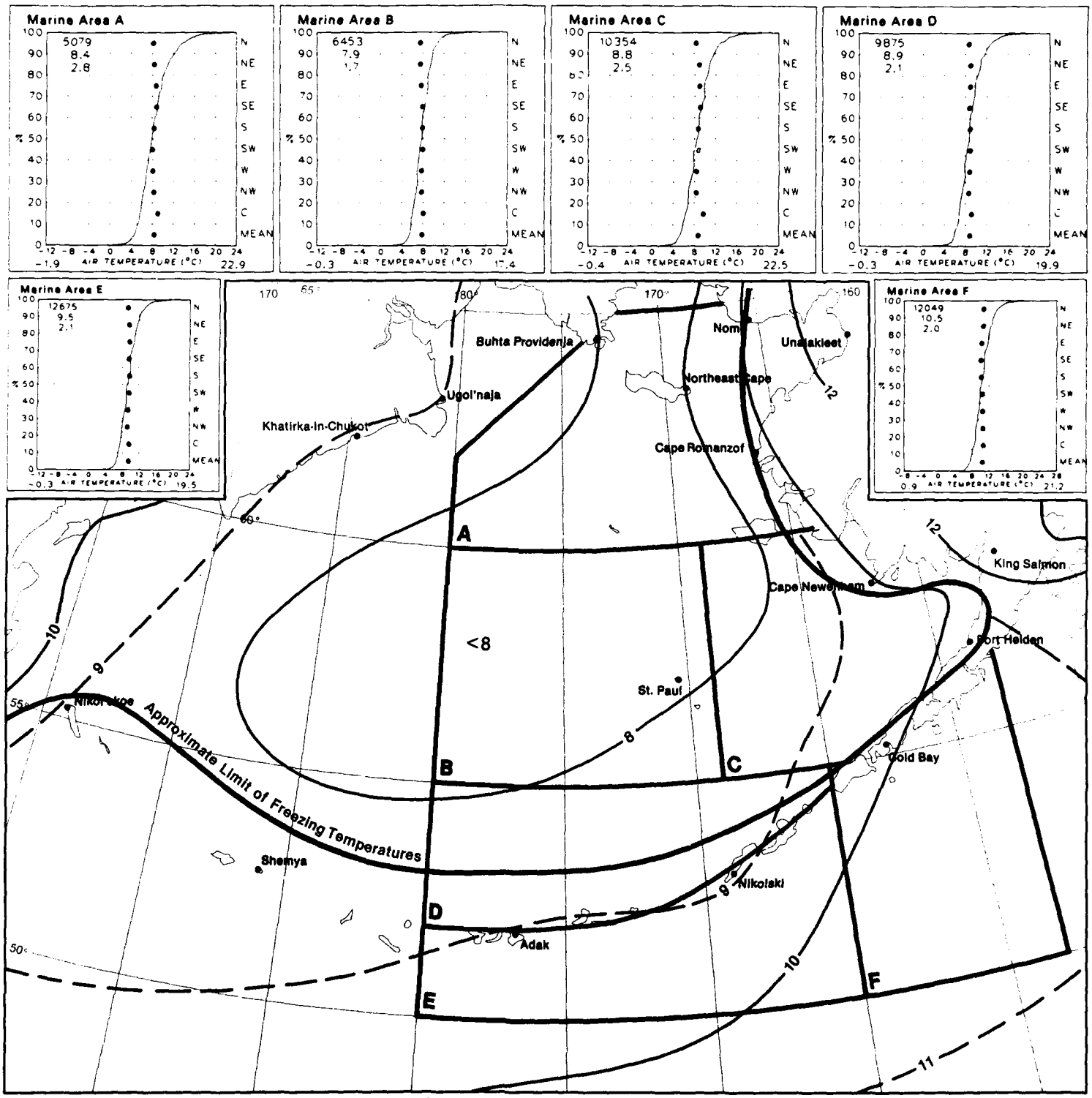

Nikol'skoe
5484
5.3
1.9
-1.4
15.1
Khatirka-In-Chukot
3403
4.6
3.2
-3.3
22.1
Ugol'naja
4884
4.9
4.2
-7.5
22.7
Buhta Providenja
4511
4.7
3.4
-4.3
19.9
Northeast Cape
9924
4.3
3.2
-4.0
17.3
Nome
20629
7.7
4.6
-4.5
26.8
Unalakleet
14459
9.2
4.1
-4.0
29.5
Cape Romanzof
17737
6.5
4.0
-3.9
Cape Newenham
18337
7.2
3.0
-1.8
22.3
King Salmon
17756
10.1
4.4
-1.2
31.2
Port Heiden
6137
8.0
3.4
-2.3
24.3
Cold Bay
12720
7.4
2.6
-0.7
18.4
Nikolski
2200
5.1
1.8
-0.1
15.7
St. Paul
10026
5.0
2.3
-5.1
16.2
Adak
21594
6.9
1.9
-1.8
17.9
Shemya
18383
5.5
1.4
-1.9
14.0
N
NE
E
SE
S
SW
W
NW
C
MEAN
%
AIR TEMPERATURE (°C)



8 Air Temperature Mean and Frequency ≦0°C

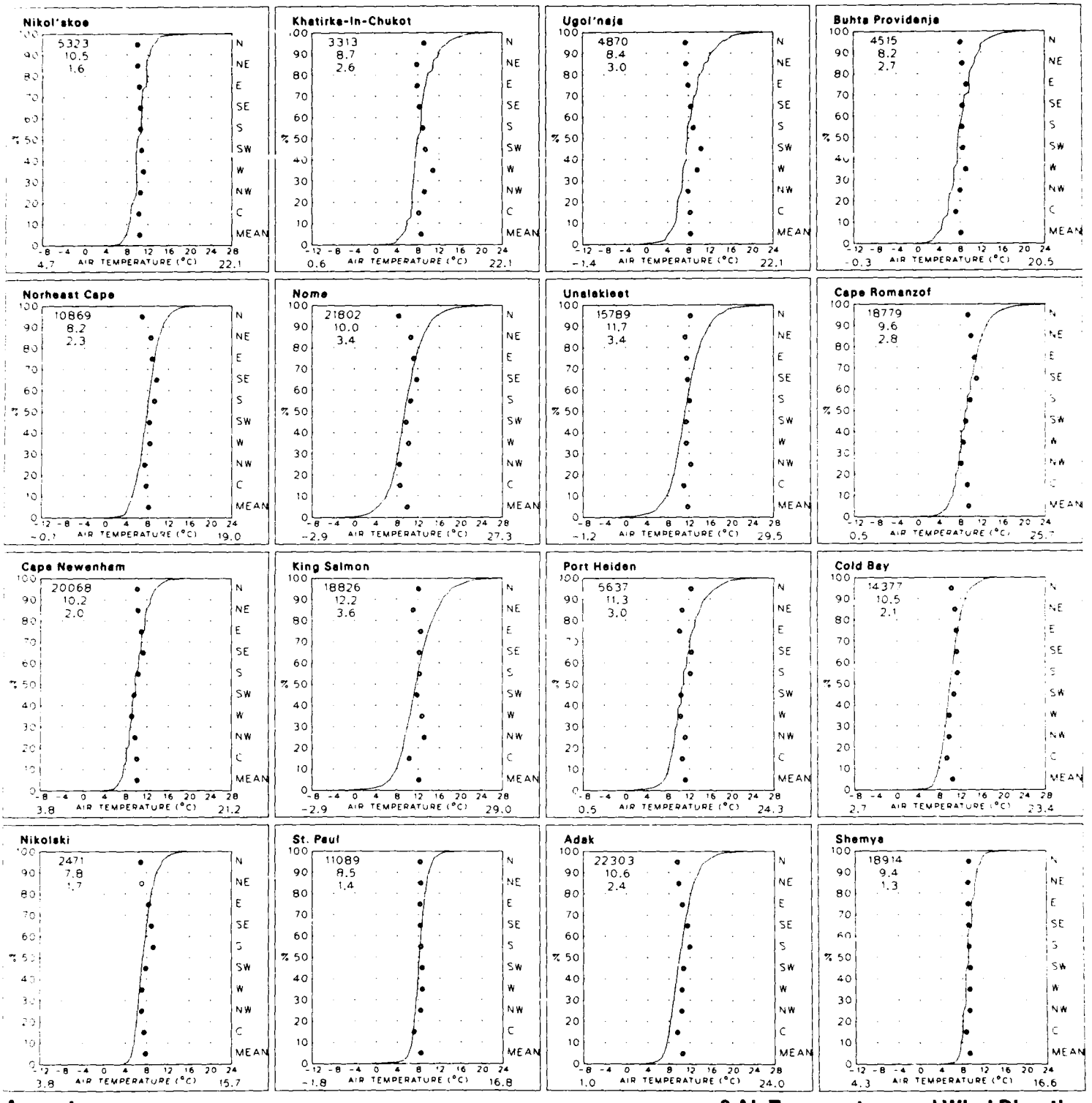
Jun

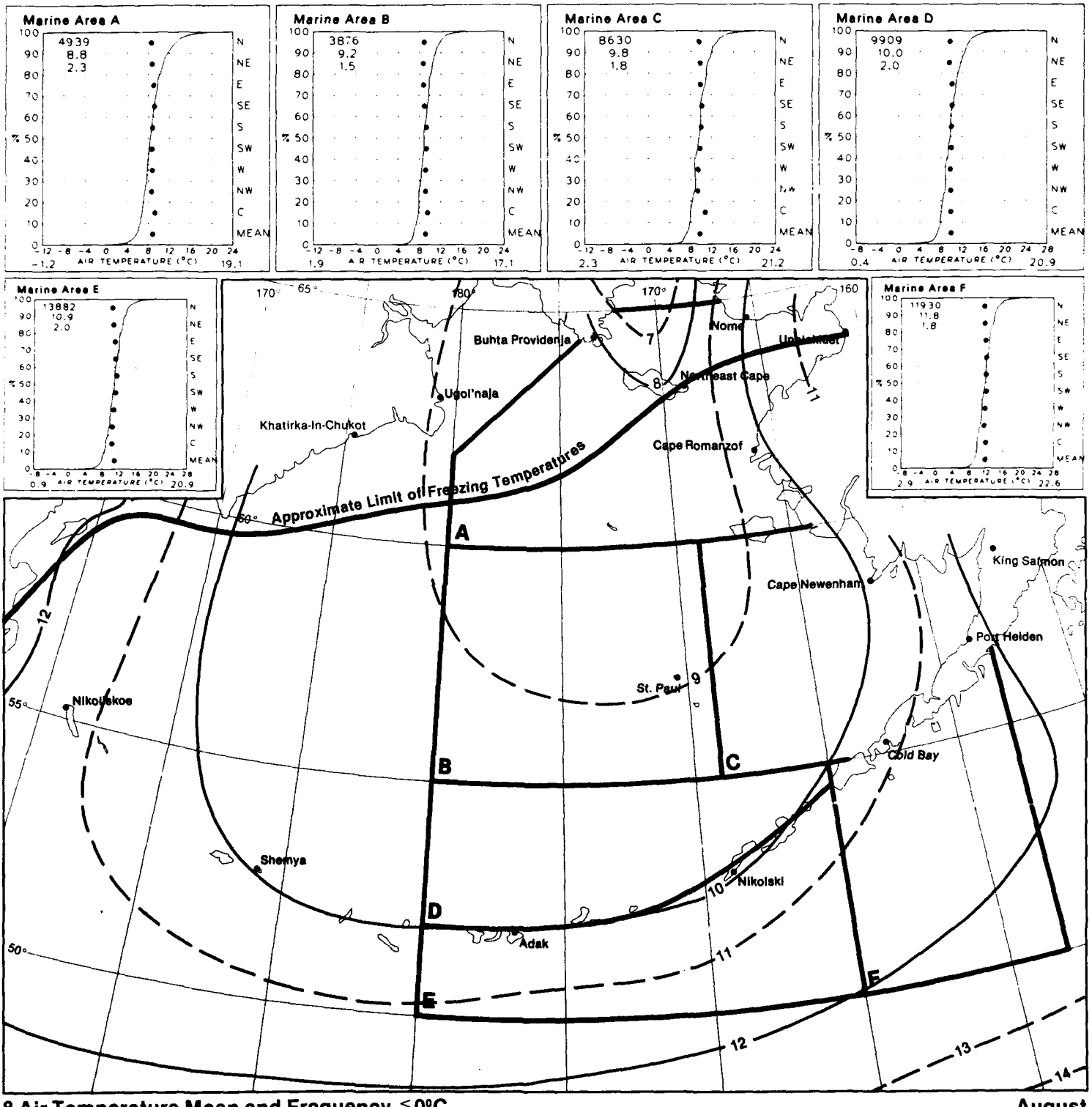

Nikol'skoe
5374
8.6
1.8
18.1
Khatirka-In-Chukot
3260
8.3
3.0
-0.3
27.1
Ugol'naja
4970
9.0
3.7
-0.3
24.9
Buhta Providenja
4442
8.4
2.9
0.8
22.1
Norheast Cape
10595
8.3
3.0
20.1
Nome
21311
10.6
3.7
-0.1
29.0
Unalakleet
15861
12.7
3.4
0.5
30.7
Cape Romanzof
18699
9.4
3.2
0.5
26.2
Cape Newenham
19420
9.7
2.7
1.4
24.0
King Salmon
18345
12.4
4.1
0.5
30.1
Port Heiden
5917
10.5
3.3
-1.1
25.1
Cold Bay
13871
9.7
2.4
0.5
Nikolski
2485
7.4
2.0
1.6
15.7
St. Paul
10307
7.4
1.8
-1.2
16.2
Adak
22309
9.2
2.4
1.0
21.8
Shemya
18997
7.8
1.5
1.9
15.7
N
NE
E
SE
S
SW
W
NW
C
MEAN
%
AIR TEMPERATURE (°C)



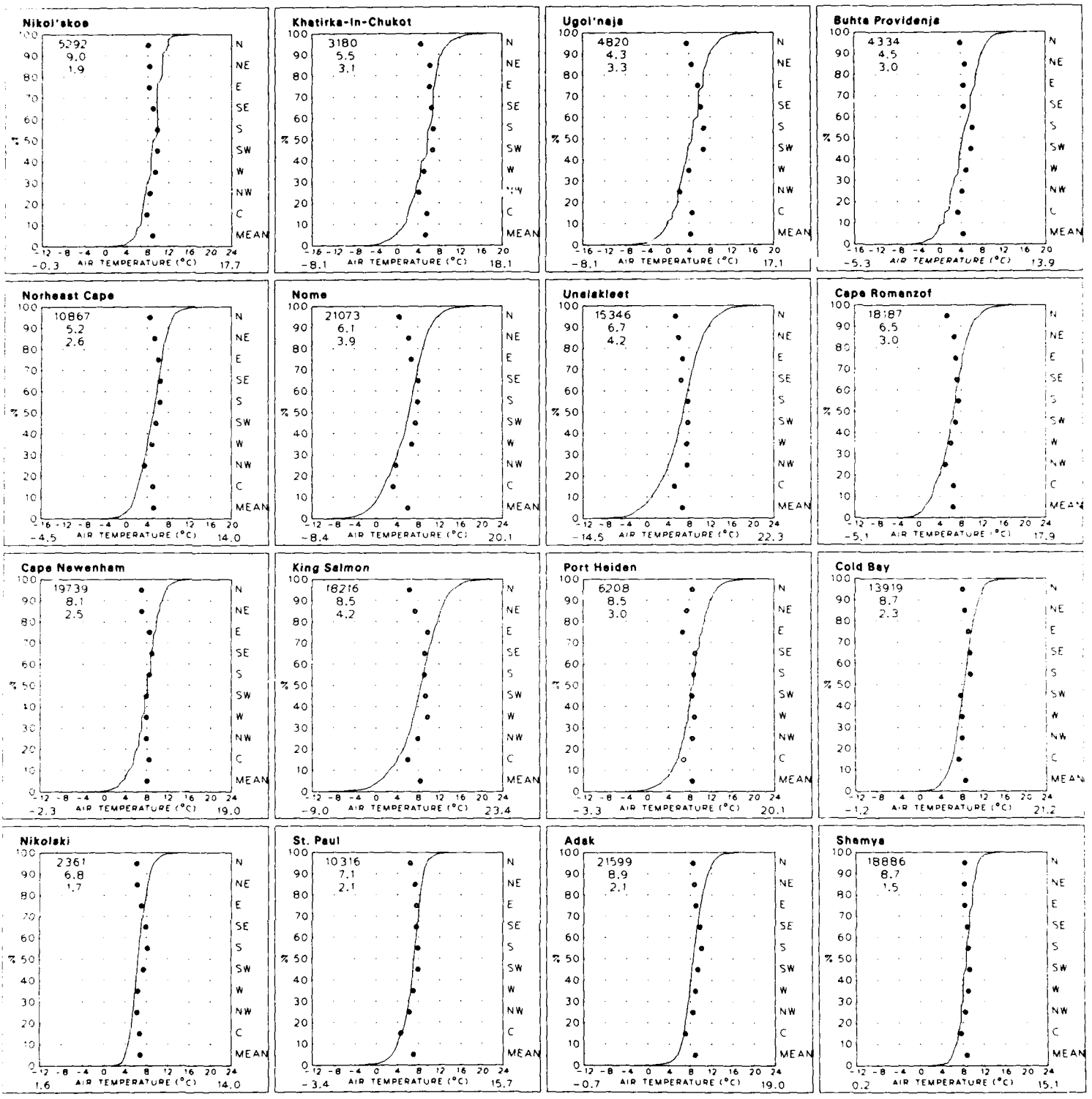
8 Air Temperature Mean and Frequency ≦0°C

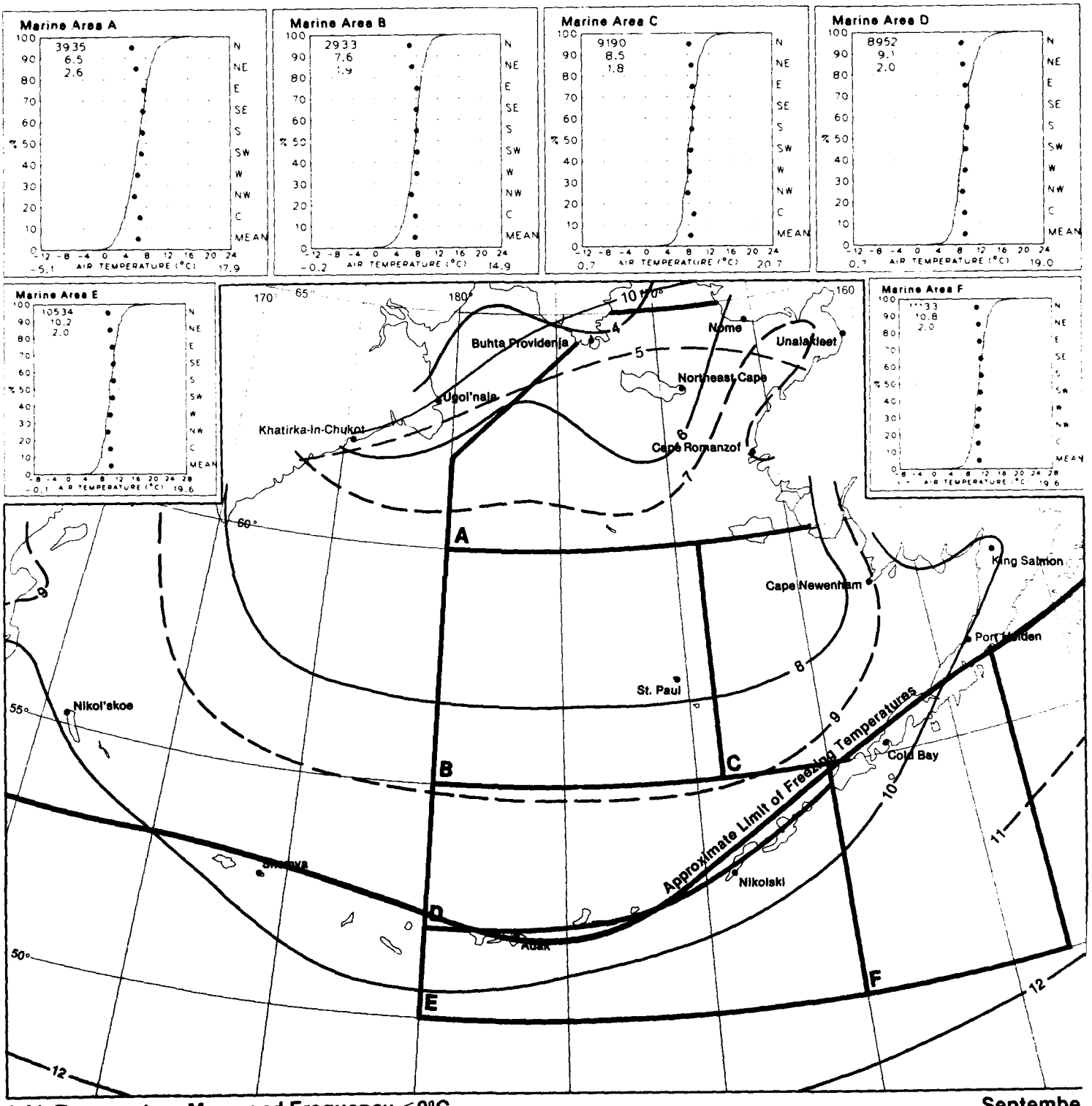
July


Nikol'skoe
5323
10.5
1.6
4.7
AIR TEMPERATURE (°C)
22.1
Khatirka-In-Chukot
3313
8.7
2.6
0.6
AIR TEMPERATURE (°C)
22.1
Ugol'naja
4870
8.4
3.0
-1.4
AIR TEMPERATURE (°C)
22.1
Buhta Providenja
4515
8.2
2.7
-0.3
AIR TEMPERATURE (°C)
20.5
Norheast Cape
10869
8.2
2.3
-0.1
AIR TEMPERATURE (°C)
19.0
Nome
21802
10.0
3.4
-2.9
AIR TEMPERATURE (°C)
27.3
Unalakleet
15789
11.7
3.4
-1.2
AIR TEMPERATURE (°C)
29.5
Cape Romanzof
18779
9.6
2.8
0.5
AIR TEMPERATURE (°C)
25.7
Cape Newenham
20068
10.2
2.0
3.8
AIR TEMPERATURE (°C)
21.2
King Salmon
18826
12.2
3.6
-2.9
AIR TEMPERATURE (°C)
29.0
Port Heiden
5637
11.3
3.0
0.5
AIR TEMPERATURE (°C)
24.3
Cold Bay
14377
10.5
2.1
2.7
AIR TEMPERATURE (°C)
23.4
Nikolski
2471
7.8
1.7
3.8
AIR TEMPERATURE (°C)
15.7
St. Paul
11089
8.5
1.4
-1.8
AIR TEMPERATURE (°C)
16.8
Adak
22303
10.6
2.4
1.0
AIR TEMPERATURE (°C)
24.0
Shemya
18914
9.4
1.3
4.3
AIR TEMPERATURE (°C)
16.6
%
N
NE
E
SE
S
SW
W
NW
C
MEAN



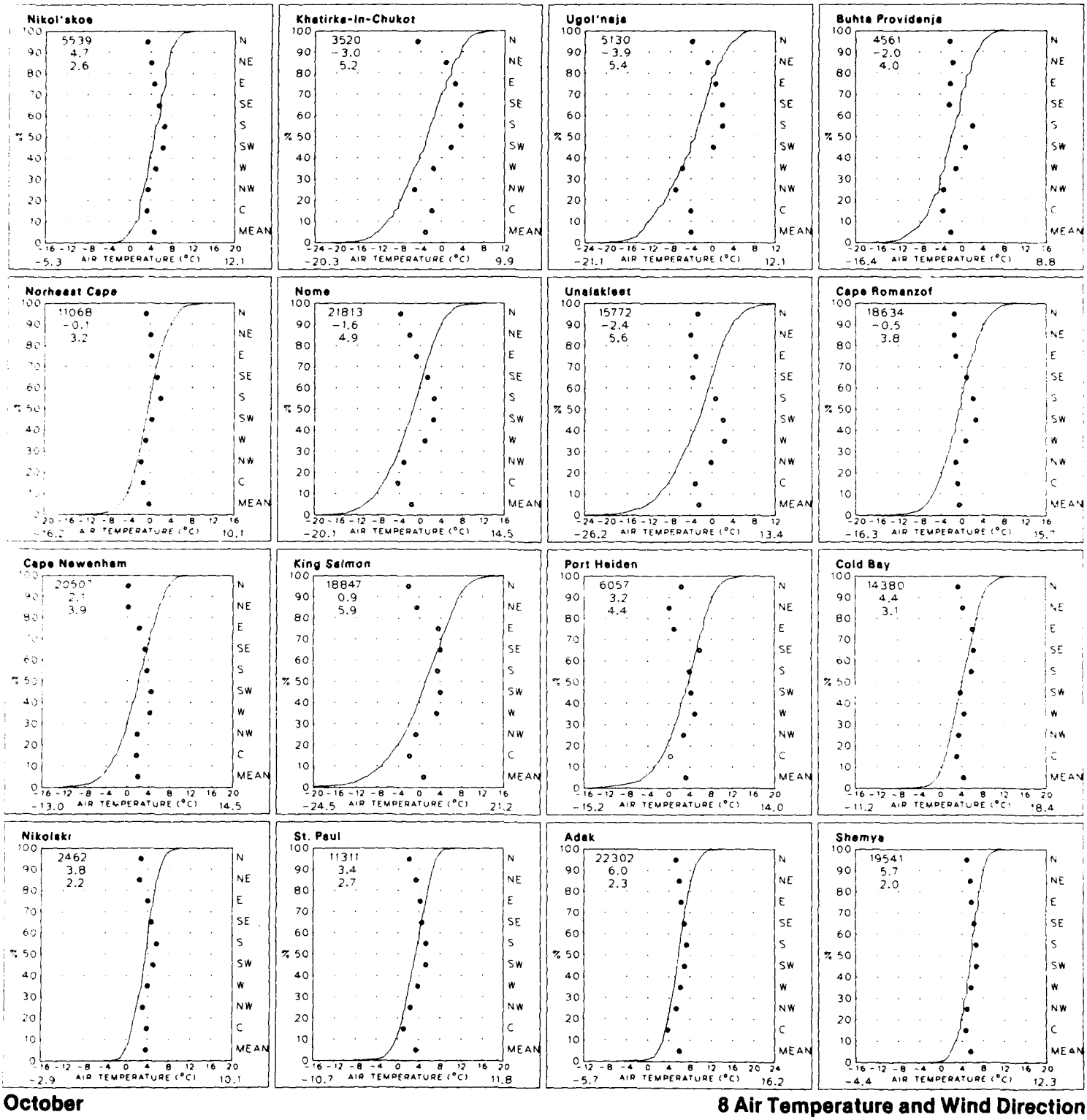
8 Air Temperature Mean and Frequency ≦0°C **August**

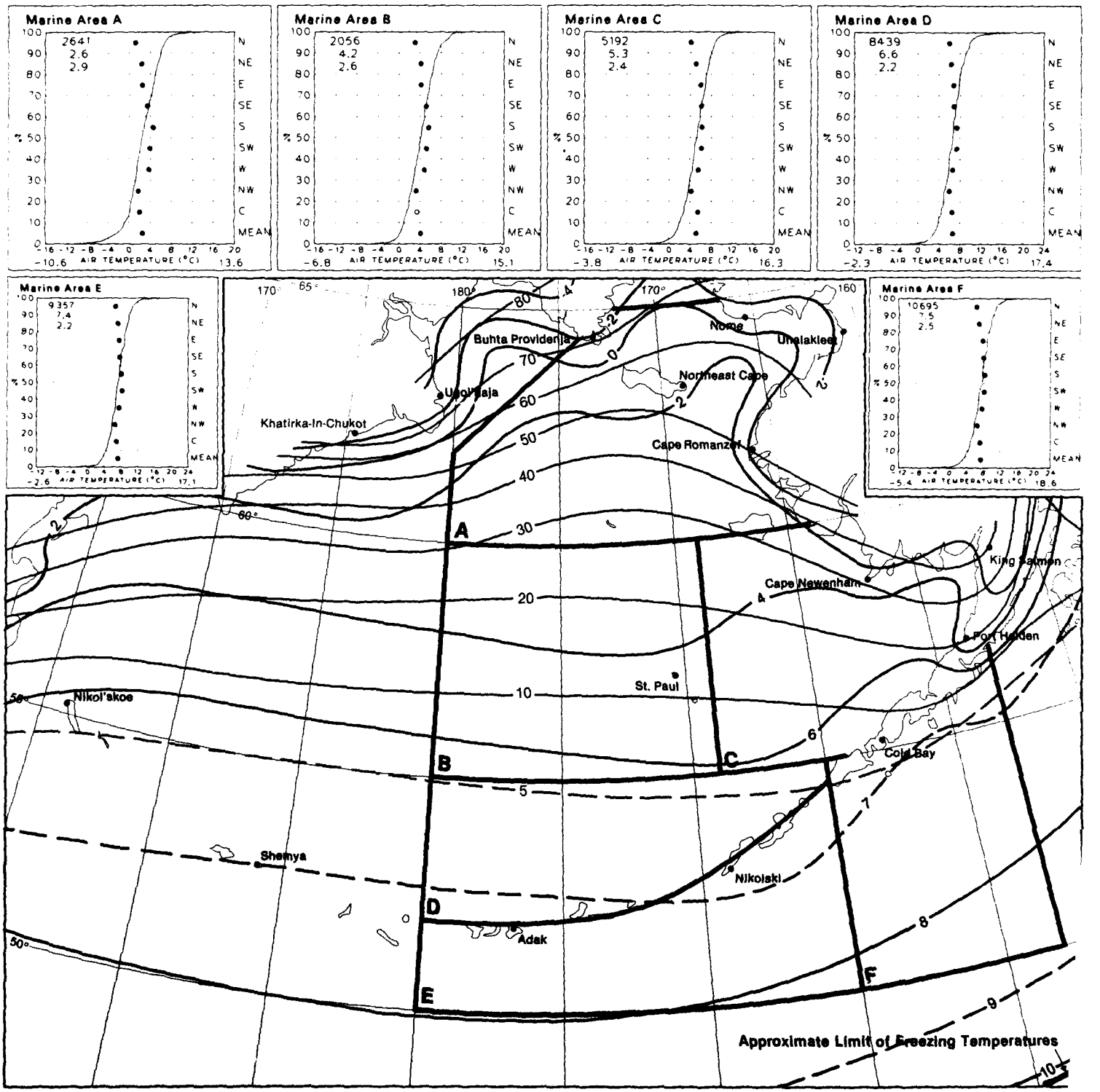

Nikol'skoe
5292
9.0
1.9
-0.3
17.7
Khatirka-In-Chukot
3180
5.5
3.1
-8.1
18.1
Ugol'naja
4820
4.3
3.3
-8.1
17.1
Buhta Providenja
4334
4.5
3.0
-5.3
13.9
Norheast Cape
10867
5.2
2.6
-4.5
14.0
Nome
21073
6.1
3.9
-8.4
20.1
Unalakleet
15346
6.7
4.2
-14.5
22.3
Cape Romanzof
18187
6.5
3.0
-5.1
17.9
Cape Newenham
19739
8.1
2.5
-2.3
19.0
King Salmon
18216
8.5
4.2
-9.0
23.4
Port Heiden
6208
8.5
3.0
-3.3
20.1
Cold Bay
13919
8.7
2.3
-1.2
21.2
Nikolski
2361
6.8
1.7
1.6
14.0
St. Paul
10316
7.1
2.1
-3.4
15.7
Adak
21599
8.9
2.1
-0.7
19.0
Shemya
18886
8.7
1.5
0.2
15.1
N
NE
E
SE
S
SW
W
NW
C
MEAN
%
AIR TEMPERATURE (°C)



8 Air Temperature Mean and Frequency ≦0°C

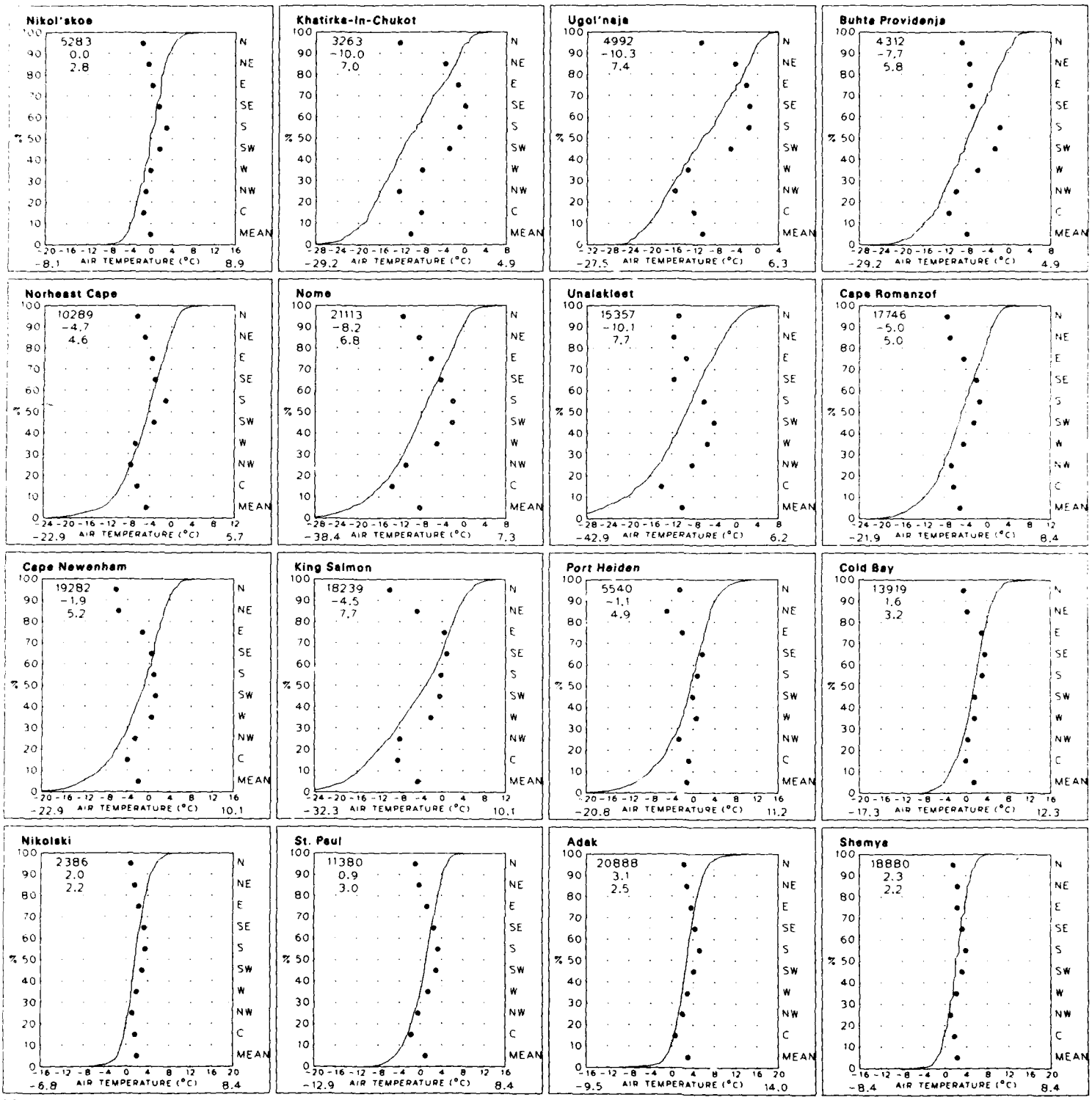
Septembe

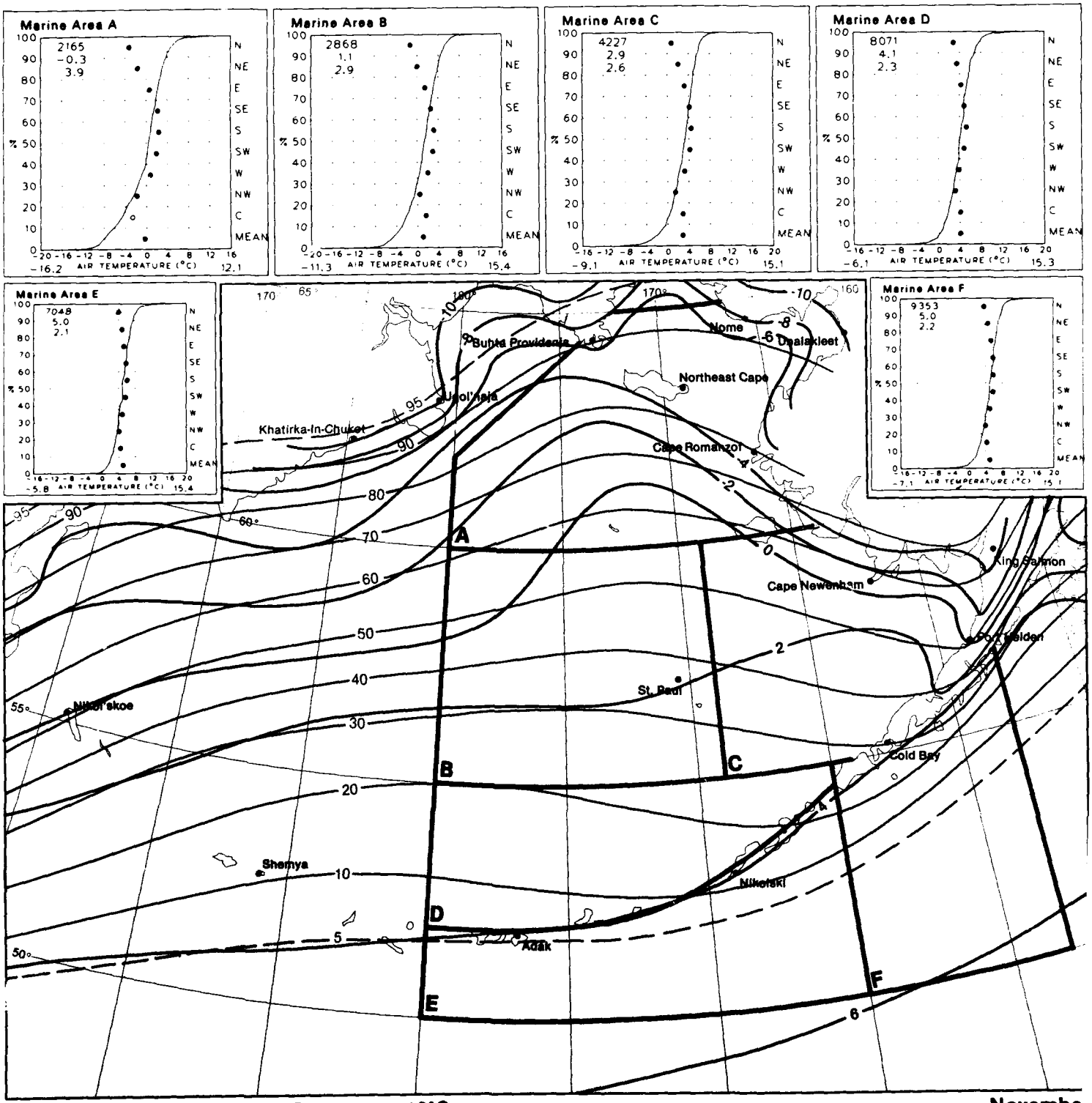

Nikol'skoe
5539
4.7
2.6
-5.3
12.1
Khatirka-In-Chukot
3520
-3.0
5.2
-20.3
9.9
Ugol'naja
5130
-3.9
5.4
-21.1
12.1
Buhta Providenja
4561
-2.0
4.0
-16.4
8.8
Northeast Cape
11068
-0.1
3.2
-16.2
10.1
Nome
21813
-1.6
4.9
-20.1
14.5
Unalakleet
15772
-2.4
5.6
-26.2
13.4
Cape Romanzof
18634
-0.5
3.8
-16.3
Cape Newenham
2050
2.1
3.9
-13.0
14.5
King Salmon
18847
0.9
5.9
-24.5
21.2
Port Heiden
6057
3.2
4.4
-15.2
14.0
Cold Bay
14380
4.4
3.1
-11.2
8.4
Nikolski
2462
3.8
2.2
-2.9
10.1
St. Paul
11311
3.4
2.7
-10.7
11.8
Adak
22302
6.0
2.3
-5.7
16.2
Shemya
19541
5.7
2.0
-4.4
12.3
N
NE
E
SE
S
SW
W
NW
C
MEAN
%
AIR TEMPERATURE (°C)



8 Air Temperature Mean and Frequency ≦0°C

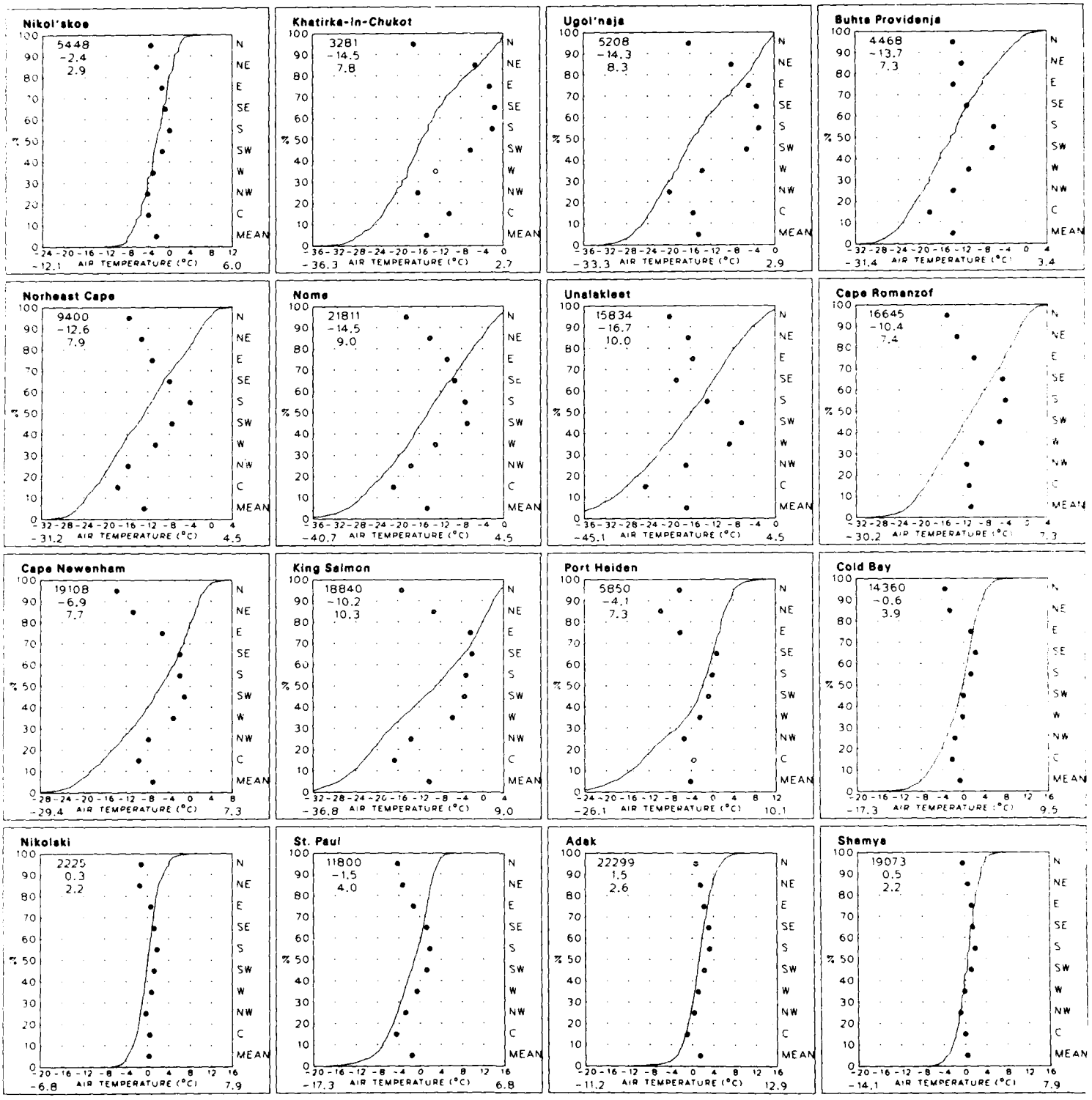
Octob

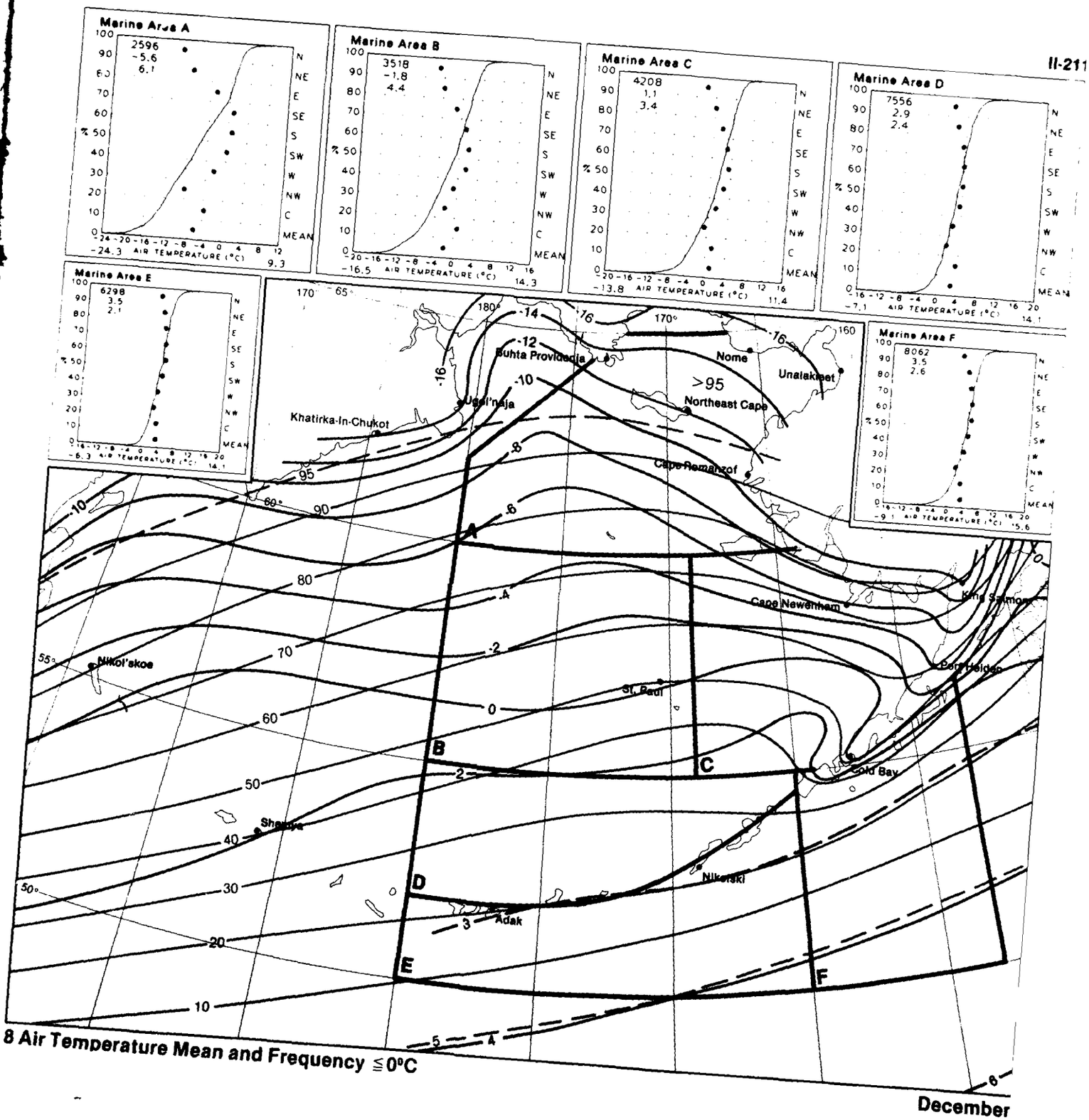

Nikol'skoe
5283
0.0
2.8
-8.1
8.9
Khatirka-In-Chukot
3263
-10.0
7.0
-29.2
4.9
Ugol'naja
4992
-10.3
7.4
-27.5
6.3
Buhta Providenja
4312
-7.7
5.8
-29.2
4.9
Norheast Cape
10289
-4.7
4.6
-22.9
5.7
Nome
21113
-8.2
6.8
-38.4
7.3
Unalakleet
15357
-10.1
7.7
-42.9
6.2
Cape Romanzof
17746
-5.0
5.0
-21.9
8.4
Cape Newenham
19282
-1.9
5.2
-22.9
10.1
King Salmon
18239
-4.5
7.7
-32.3
10.1
Port Heiden
5540
-1.1
4.9
-20.8
11.2
Cold Bay
13919
1.6
3.2
-17.3
12.3
Nikolski
2386
2.0
2.2
-6.8
8.4
St. Paul
11380
0.9
3.0
-12.9
8.4
Adak
20888
3.1
2.5
-9.5
14.0
Shemya
18880
2.3
2.2
-8.4
8.4
N
NE
E
SE
S
SW
W
NW
C
MEAN
%
AIR TEMPERATURE (°C)



8 Air Temperature Mean and Frequency ≦0°C

Novembe


Nikol'skoe
5448
-2.4
2.9
-12.1
6.0
Khatirka-In-Chukot
3281
-14.5
7.8
-36.3
2.7
Ugol'naja
5208
-14.3
8.3
-33.3
2.9
Buhta Providenja
4468
-13.7
7.3
-31.4
3.4
Norheast Cape
9400
-12.6
7.9
-31.2
4.5
Nome
21811
-14.5
9.0
-40.7
4.5
Unalakleet
15834
-16.7
10.0
-45.1
4.5
Cape Romanzof
16645
-10.4
7.4
-30.2
Cape Newenham
19108
-6.9
7.7
-29.4
7.3
King Salmon
18840
-10.2
10.3
-36.8
9.0
Port Heiden
5850
-4.1
7.3
-26.1
10.1
Cold Bay
14360
-0.6
3.9
-17.3
9.5
Nikolski
2225
0.3
2.2
-6.8
7.9
St. Paul
11800
-1.5
4.0
-17.3
6.8
Adak
22299
1.5
2.6
-11.2
12.9
Shemya
19073
0.5
2.2
-14.1
7.9
N
NE
E
SE
S
SW
W
NW
C
MEAN
%
AIR TEMPERATURE (°C)



8 Air Temperature Mean and Frequency ≤0°C

December

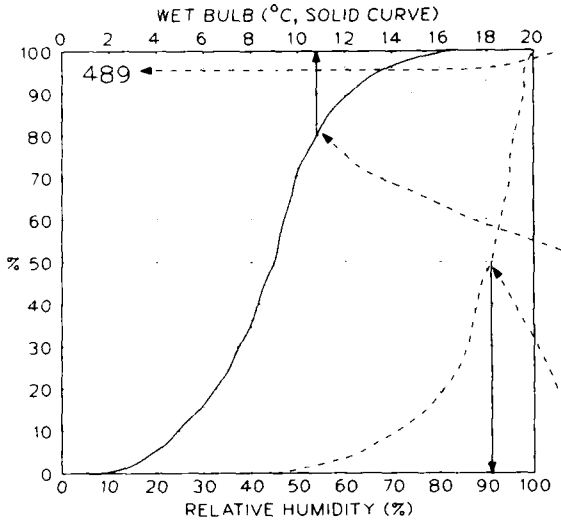
Map 9. Dew point temperature extremes (°C)

BLACK LINE – Maximum (99%) dew point temperature (1% of temperatures were greater than the given value).

BLUE LINE – Minimum (1%) dew point temperature (1% of temperatures were equal to or less than the given value).

Albers Equal–Area Conic Projection

Graphs: Wet bulb/relative humidity



Number of observations.

Cumulative percent frequency of wet-bulb temperatures equal to or less than the temperature intersected by the curve (top scale).

Wet bulb (°C).

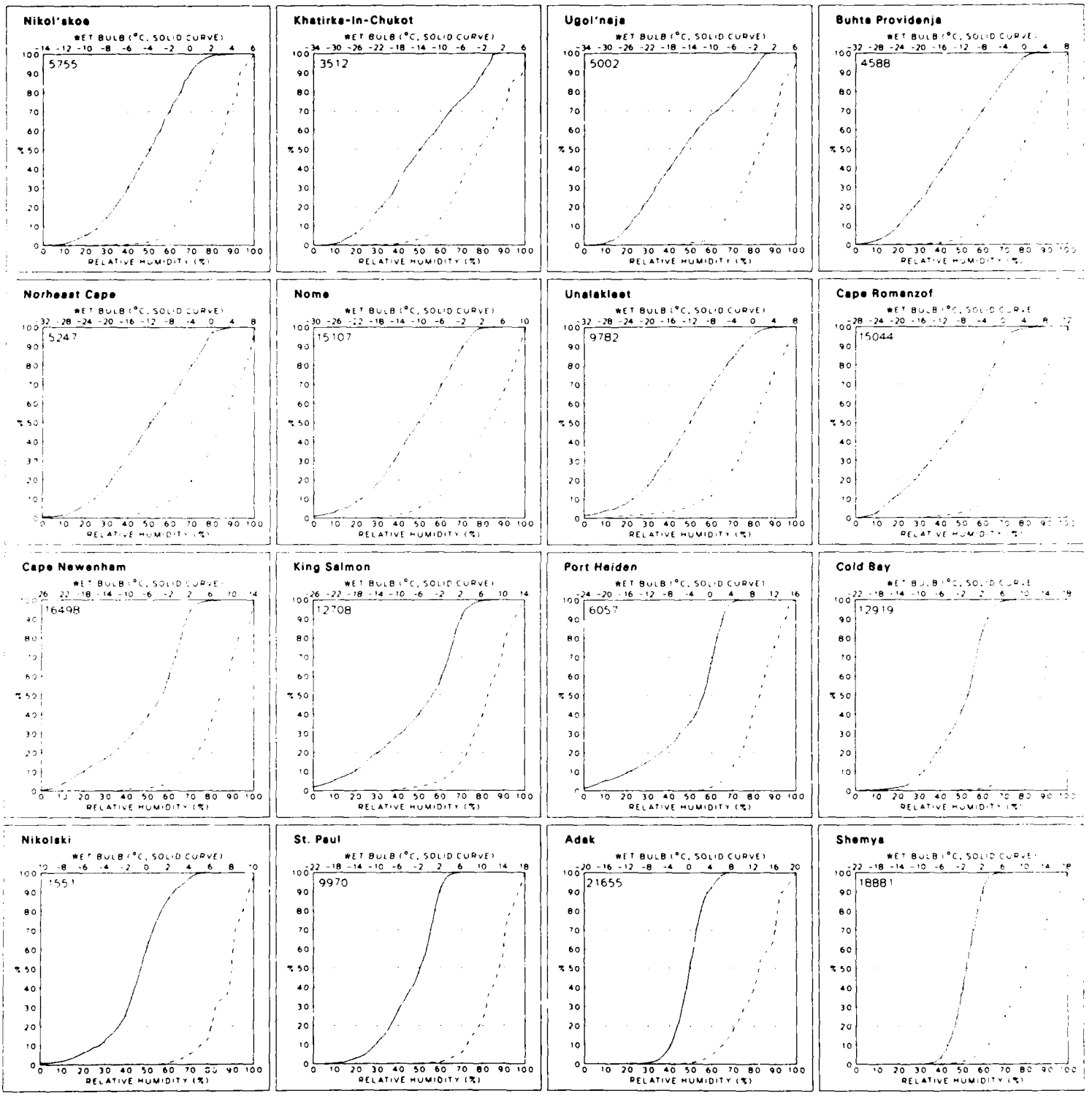
(80% of all observed wet-bulb temperatures were ≤10.8°C or 51.4°F.)

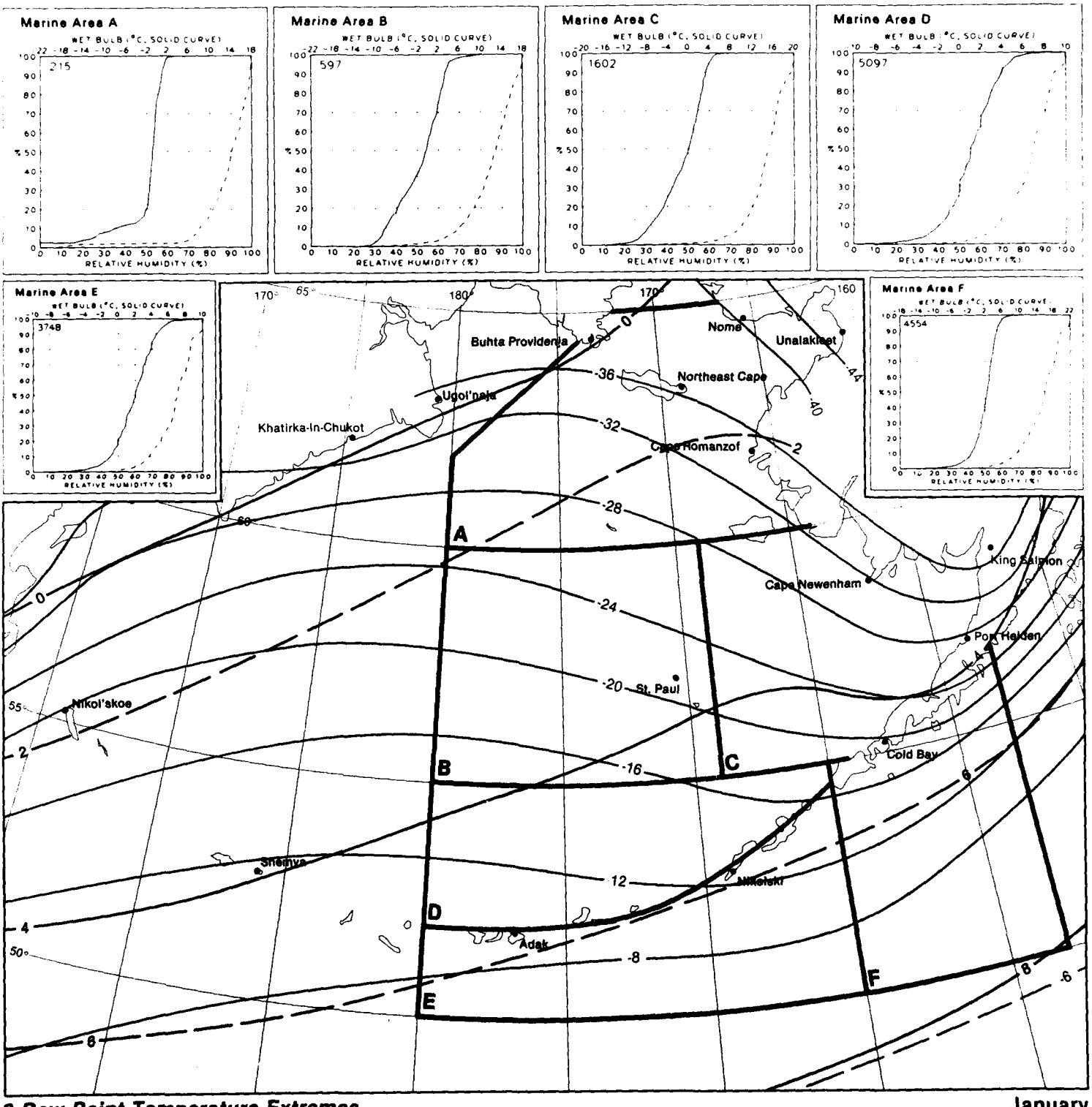
Cumulative percent frequency of relative humidities equal to or less than the humidity intersected by the curve (bottom scale).

Relative humidity(%).

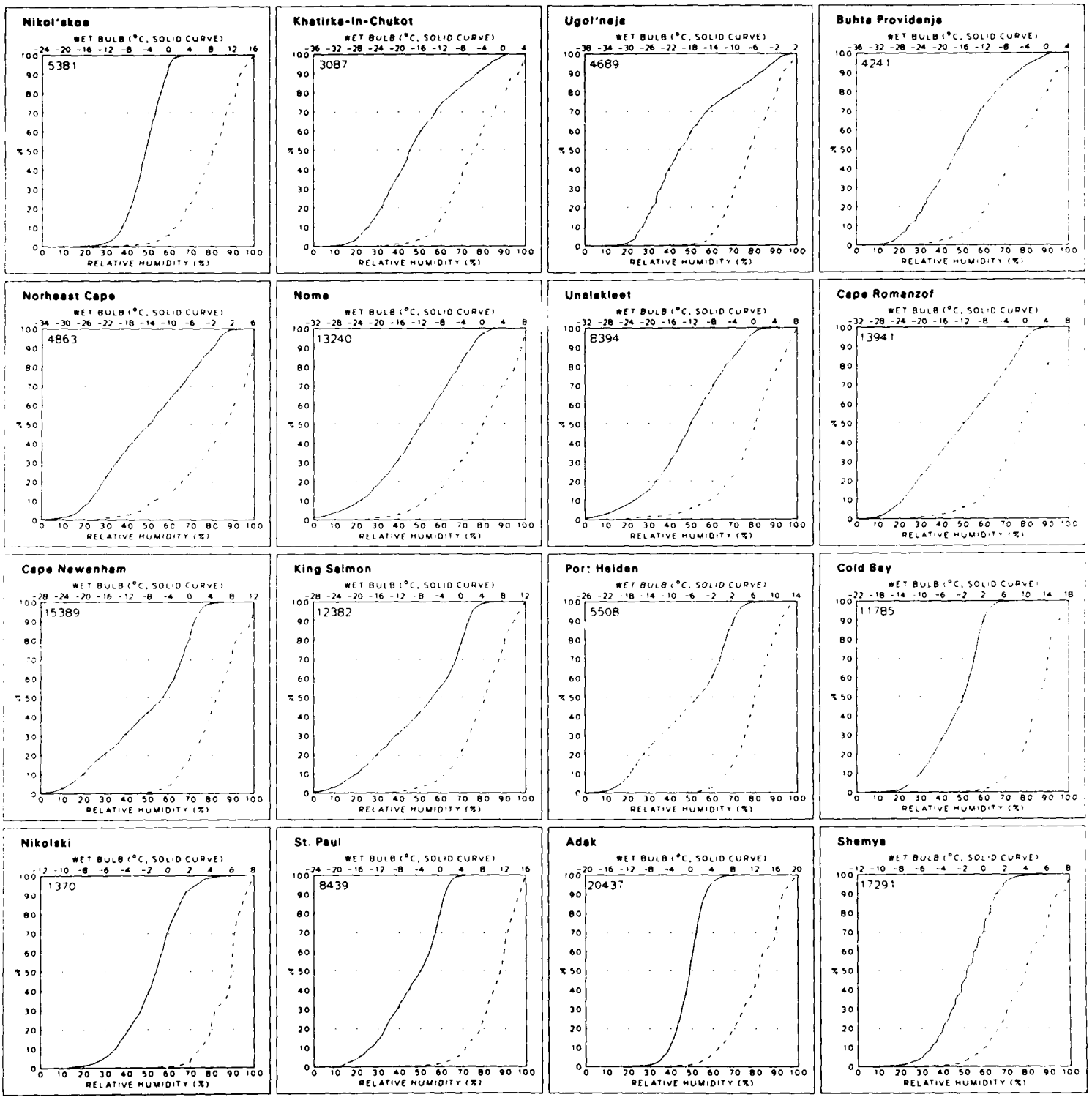
(50% of all observed relative humidities were ≤91%.)

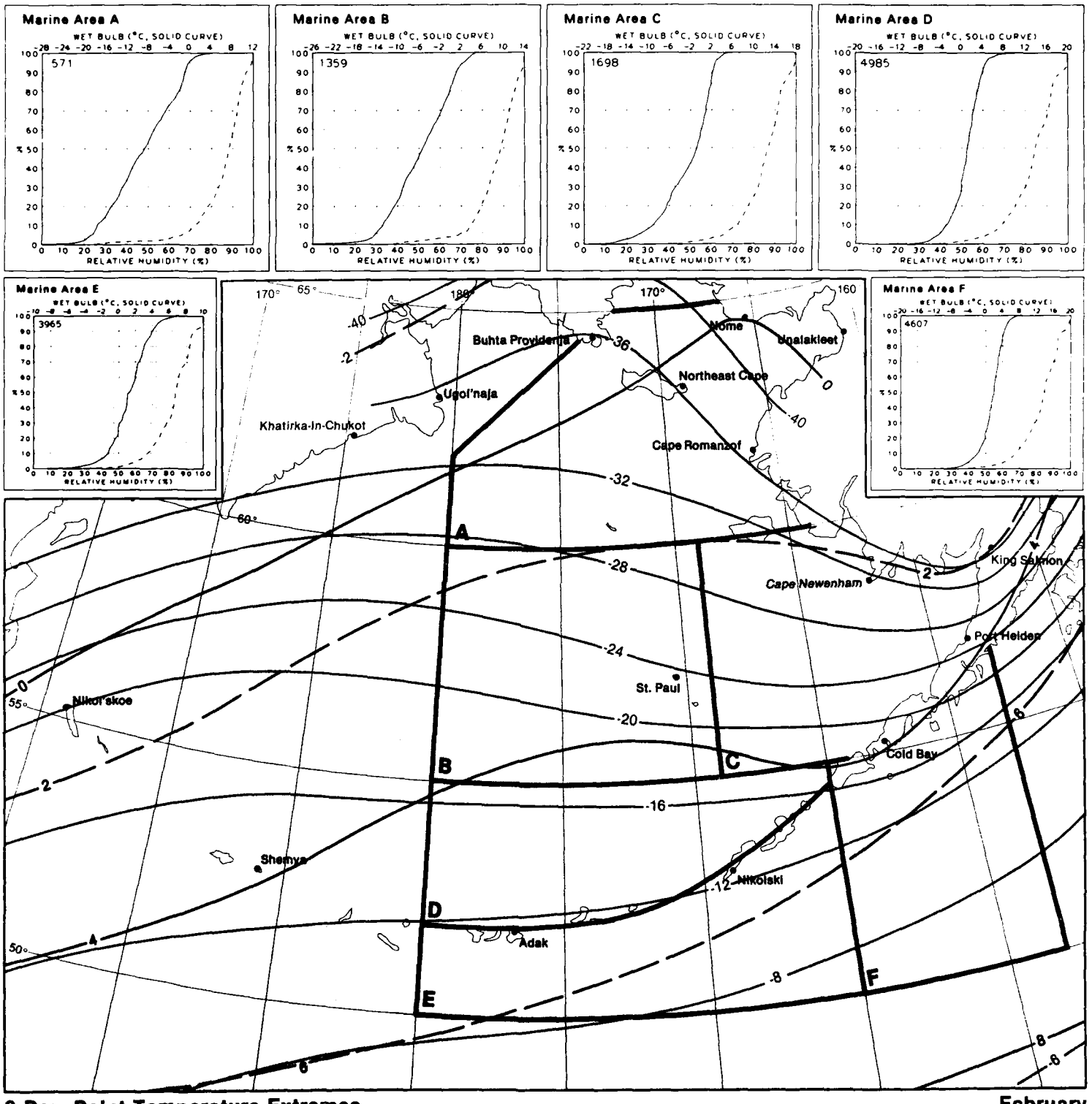
The observation count for the graph reflects those observations containing both dry and wet bulb temperatures; both are r quired in computing the relative humidity. The percentage of observations of either element greater than a given value can b obtained from the graph by subtracting the cumulative percent frequency of that value from 100%.


Nikol'skoe
5755
Khatirka-In-Chukot
3512
Ugol'naja
5002
Buhte Providenja
4588
Norheast Cape
5247
Nome
15107
Unalakleet
9782
Cape Romanzof
15044
Cape Newenham
16498
King Salmon
12708
Port Heiden
6057
Cold Bay
12919
Nikolski
St. Paul
9970
Adak
21655
Shemya
18881
WET BULB (°C, SOLID CURVE)
RELATIVE HUMIDITY (%)

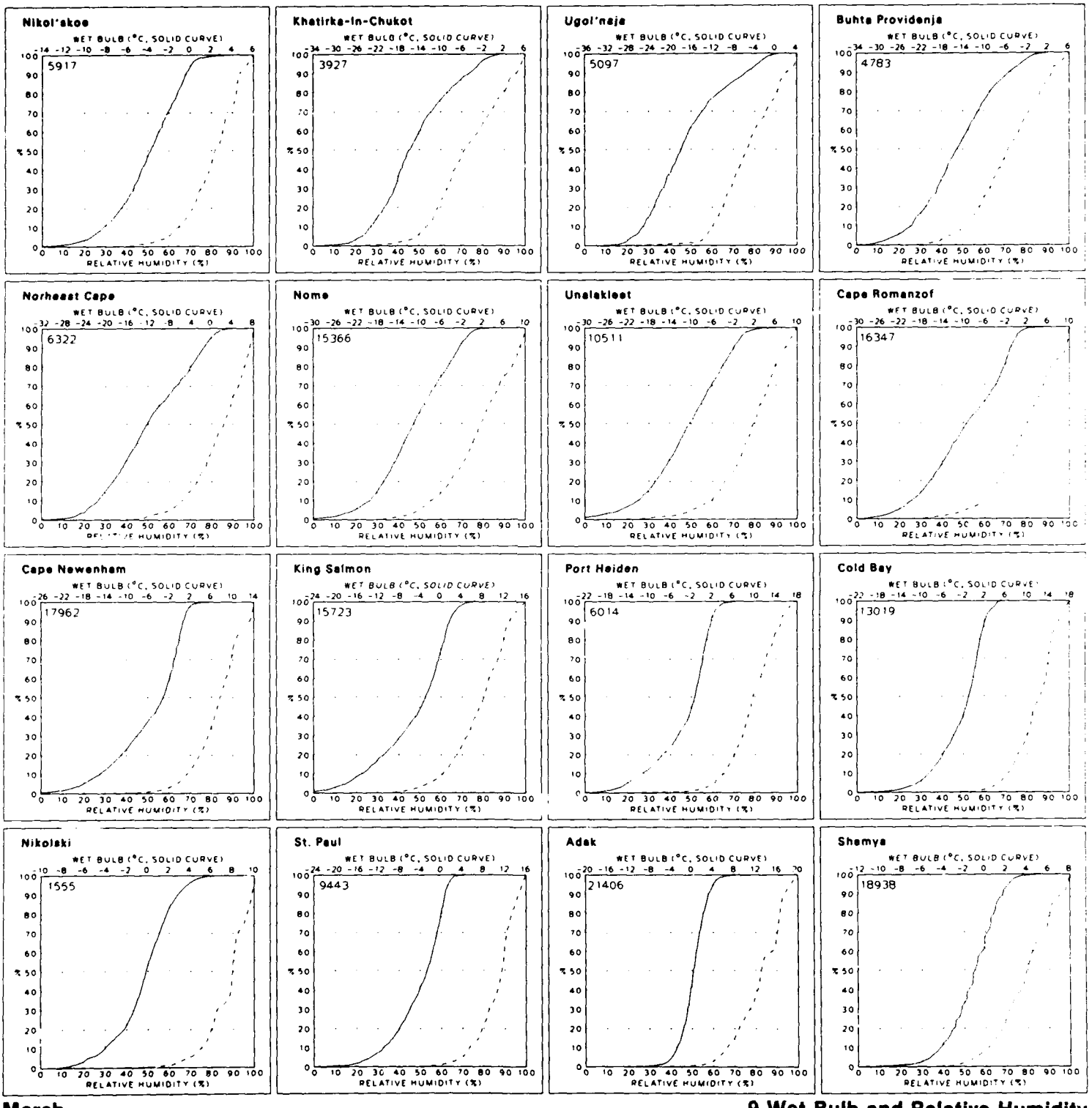


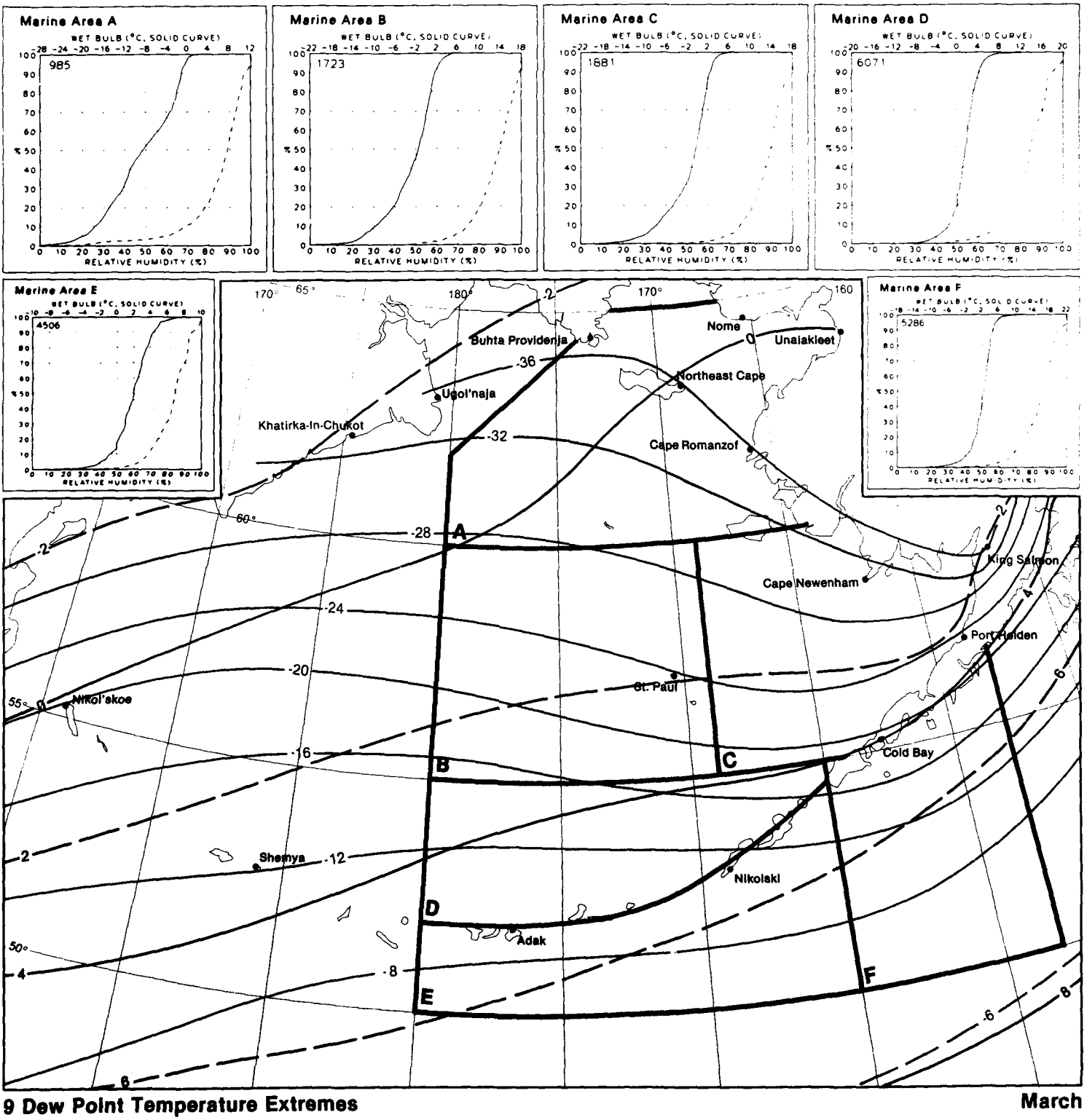
9 Dew Point Temperature Extremes **January**


Nikol'skoe
5381
Khatirka-In-Chukot
3087
Ugol'neje
4689
Buhta Providenja
4241
Norheast Cape
4863
Nome
13240
Unalakleet
8394
Cape Romanzof
13941
Cape Newenham
15389
King Salmon
12382
Port Heiden
5508
Cold Bay
11785
Nikolski
1370
St. Paul
8439
Adak
20437
Shemya
17291
WET BULB (°C, SOLID CURVE)
RELATIVE HUMIDITY (%)

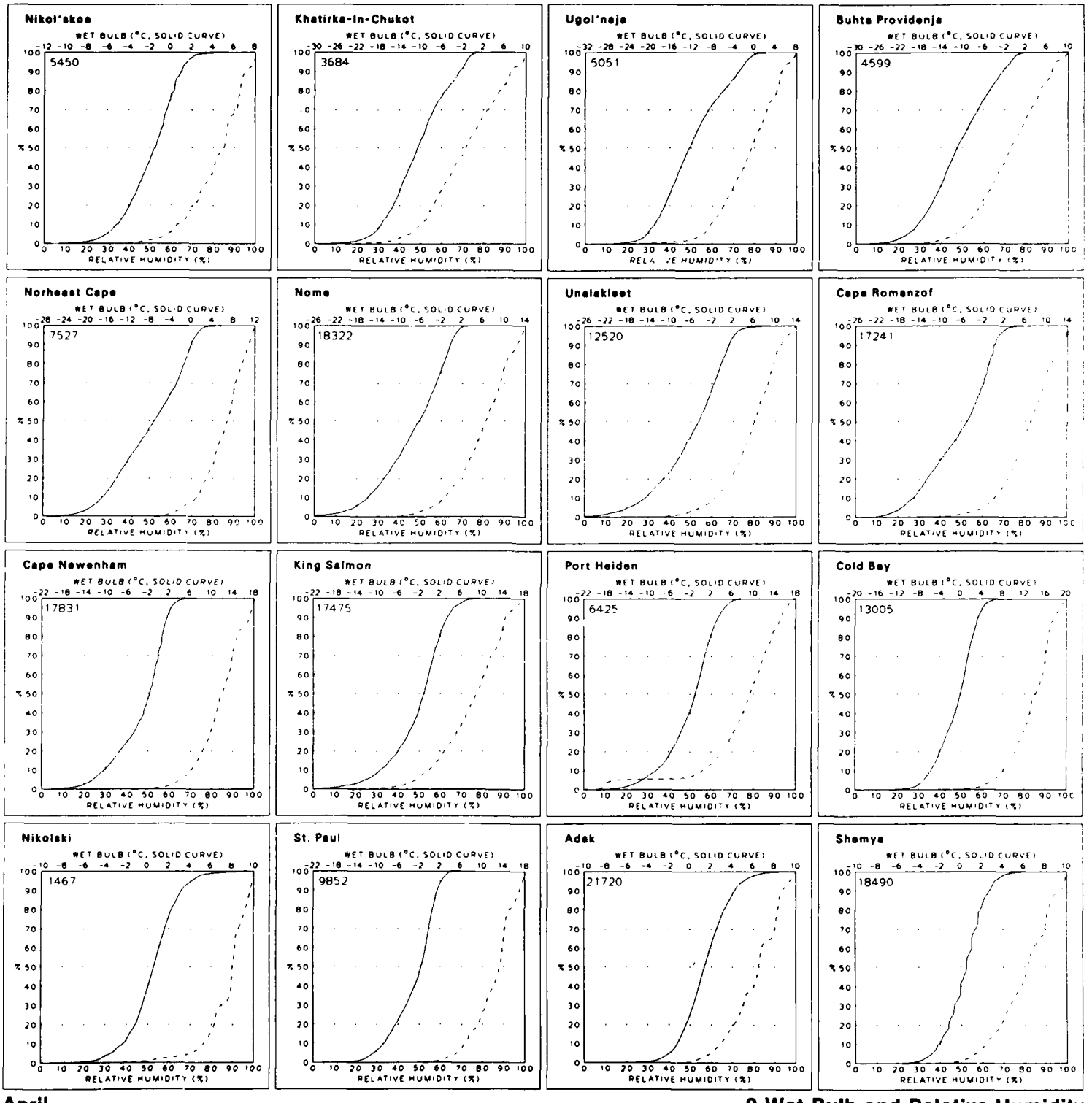


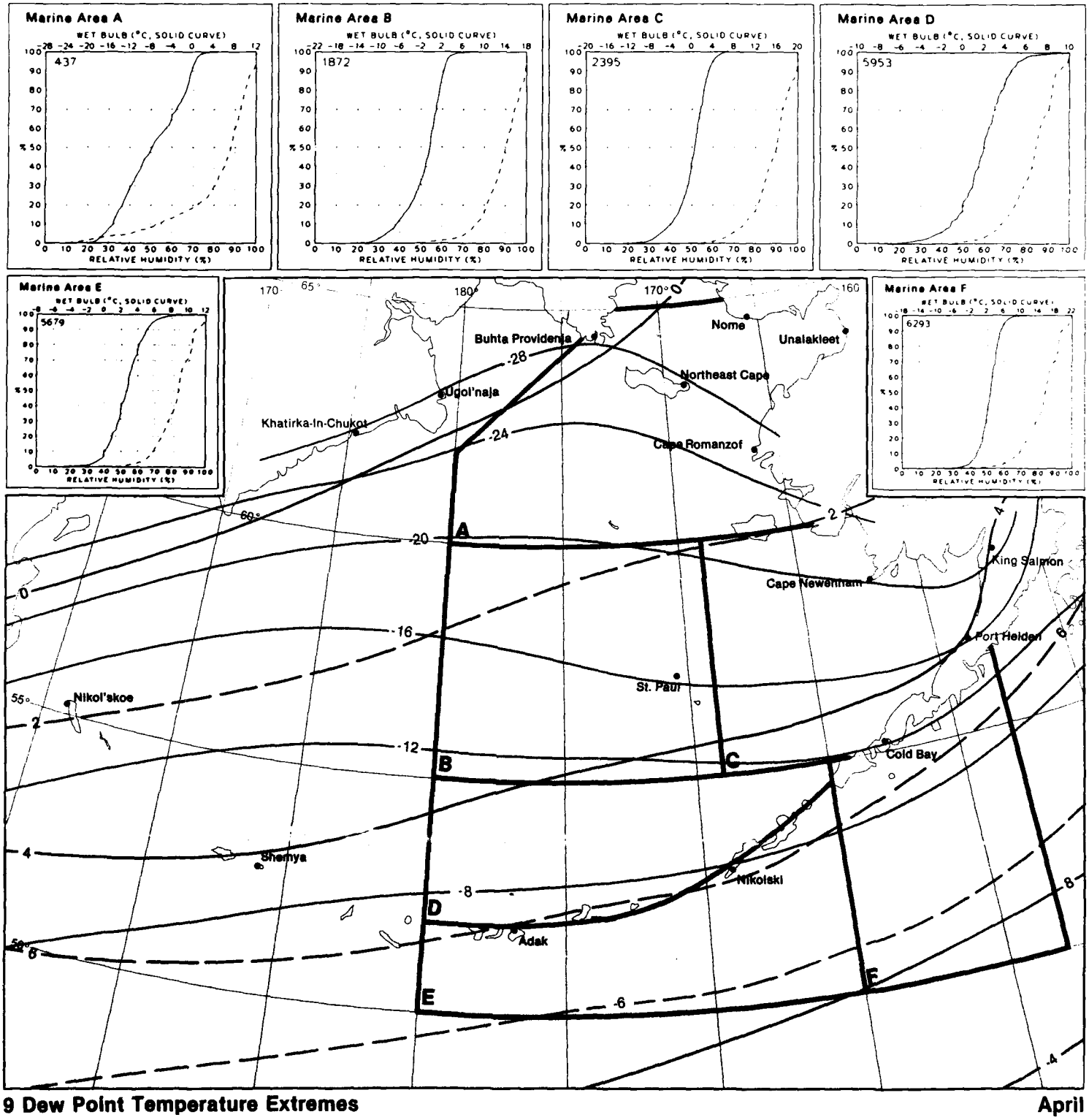
9 Dew Point Temperature Extremes **February**


Nikol'skoe
5917
Khatirka-In-Chukot
3927
Ugol'naja
5097
Buhta Providenja
4783
Northeast Cape
6322
Nome
15366
Unalakleet
10511
Cape Romanzof
16347
Cape Newenham
17962
King Salmon
15723
Port Heiden
6014
Cold Bay
13019
Nikolski
1555
St. Paul
9443
Adak
21406
Shemya
18938
WET BULB (°C, SOLID CURVE)
RELATIVE HUMIDITY (%)
%

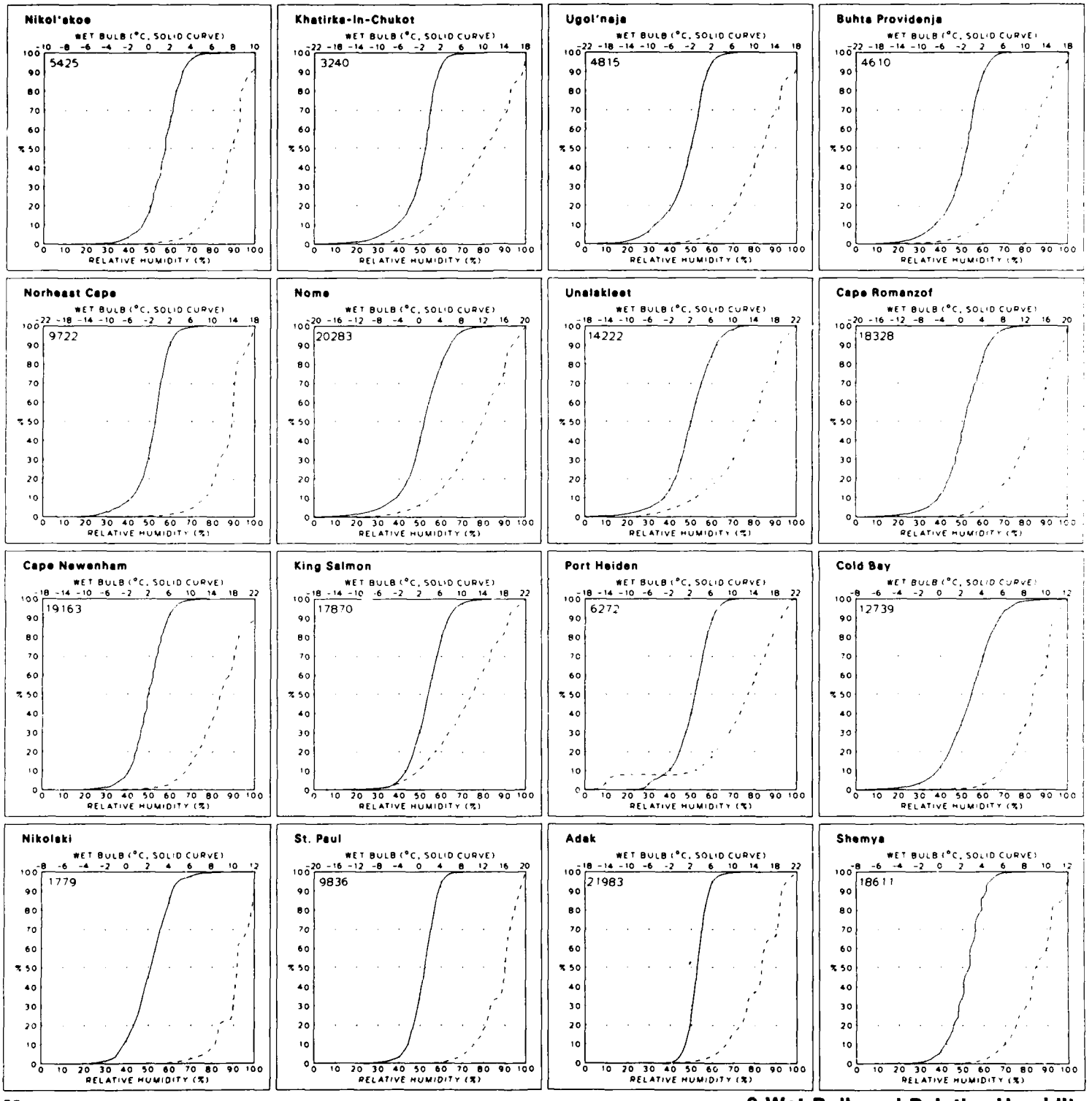


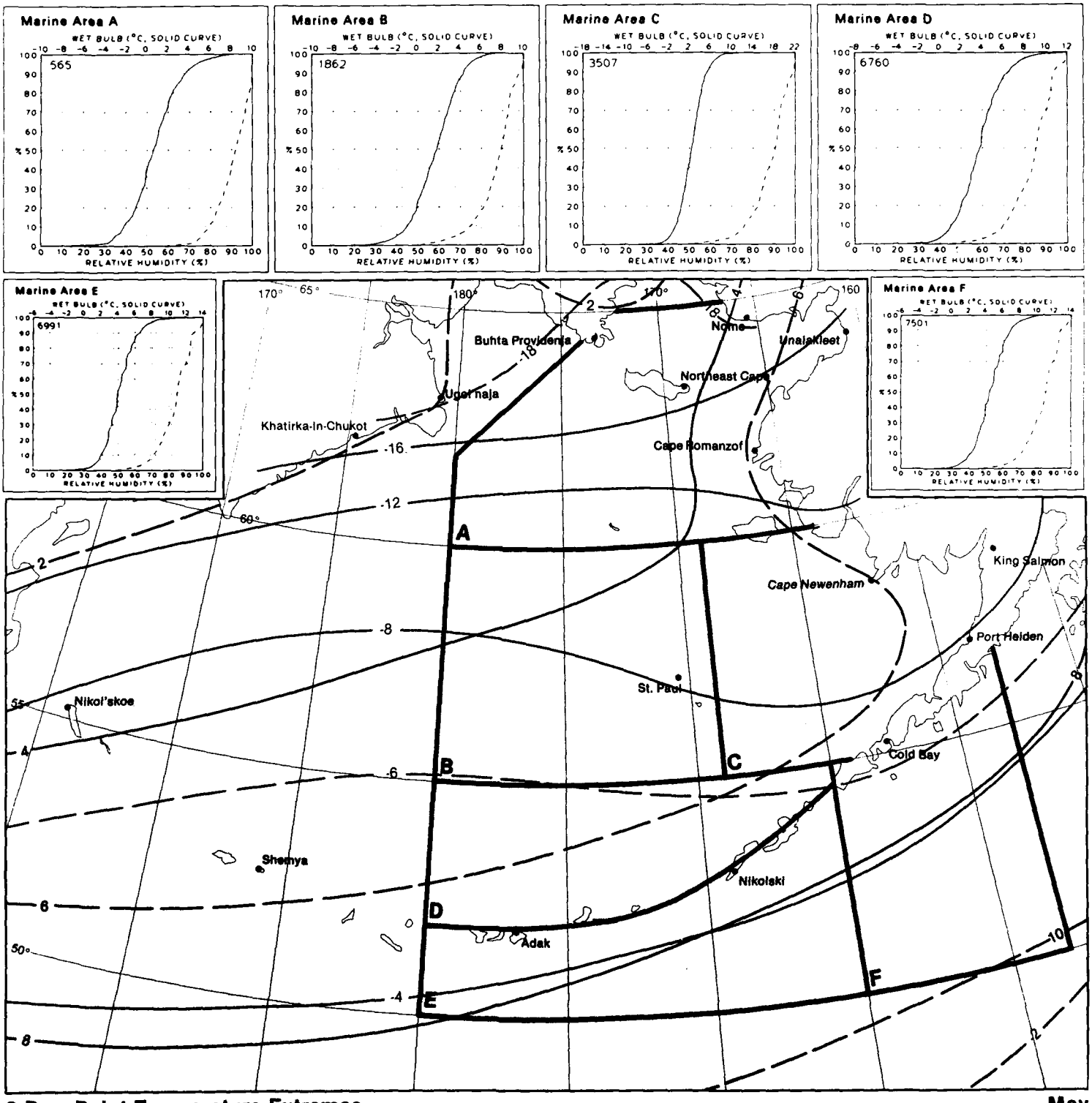
9 Dew Point Temperature Extremes **March**


Nikol'skoe
5450
Khatirka-In-Chukot
3684
Ugol'naja
5051
Buhta Providenja
4599
Norheast Cape
7527
Nome
18322
Unalakleet
12520
Cape Romanzof
17241
Cape Newenham
17831
King Salmon
17475
Port Heiden
6425
Cold Bay
13005
Nikolski
1467
St. Paul
9852
Adak
21720
Shemya
18490
WET BULB (°C, SOLID CURVE)
RELATIVE HUMIDITY (%)
%

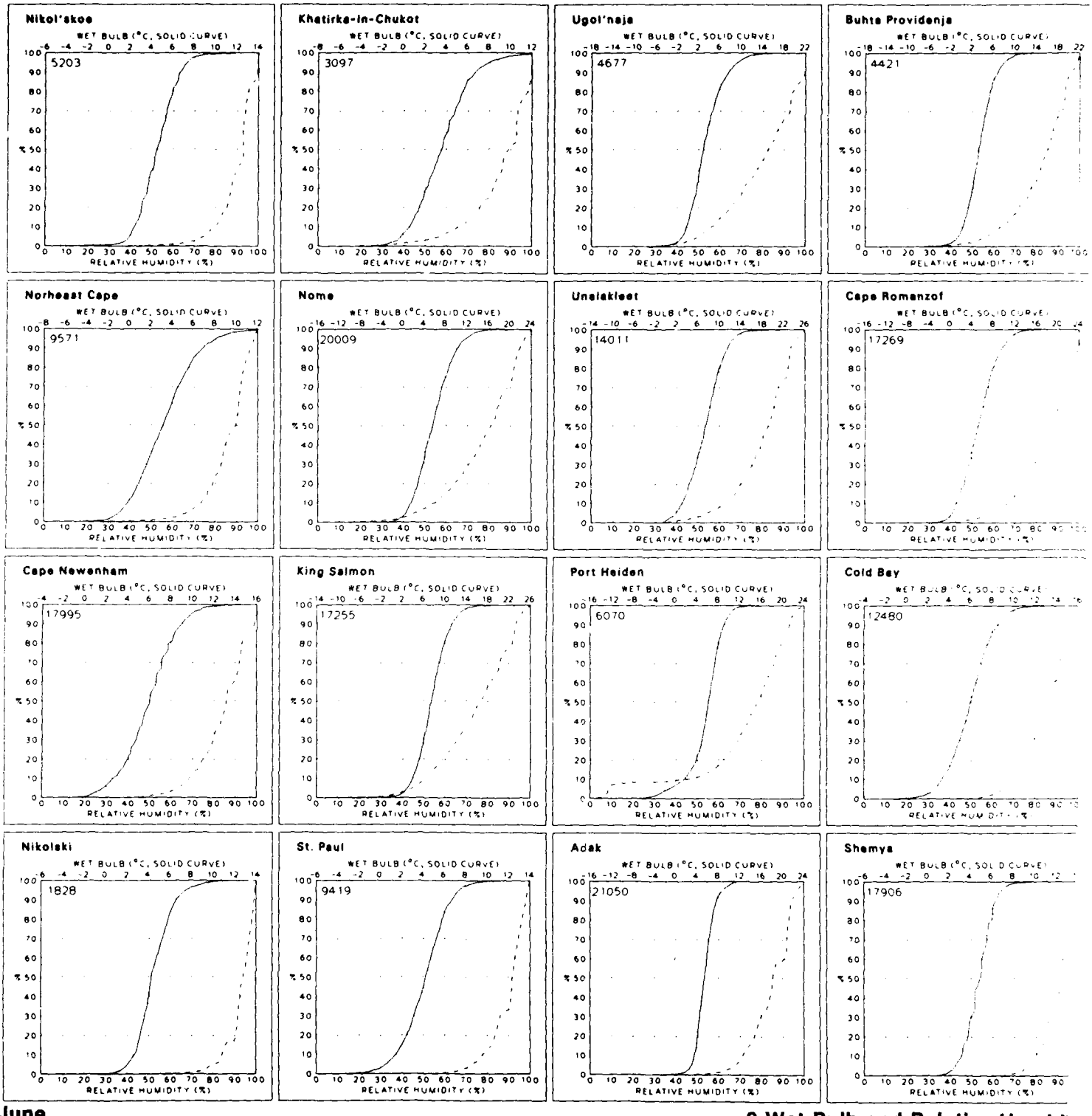


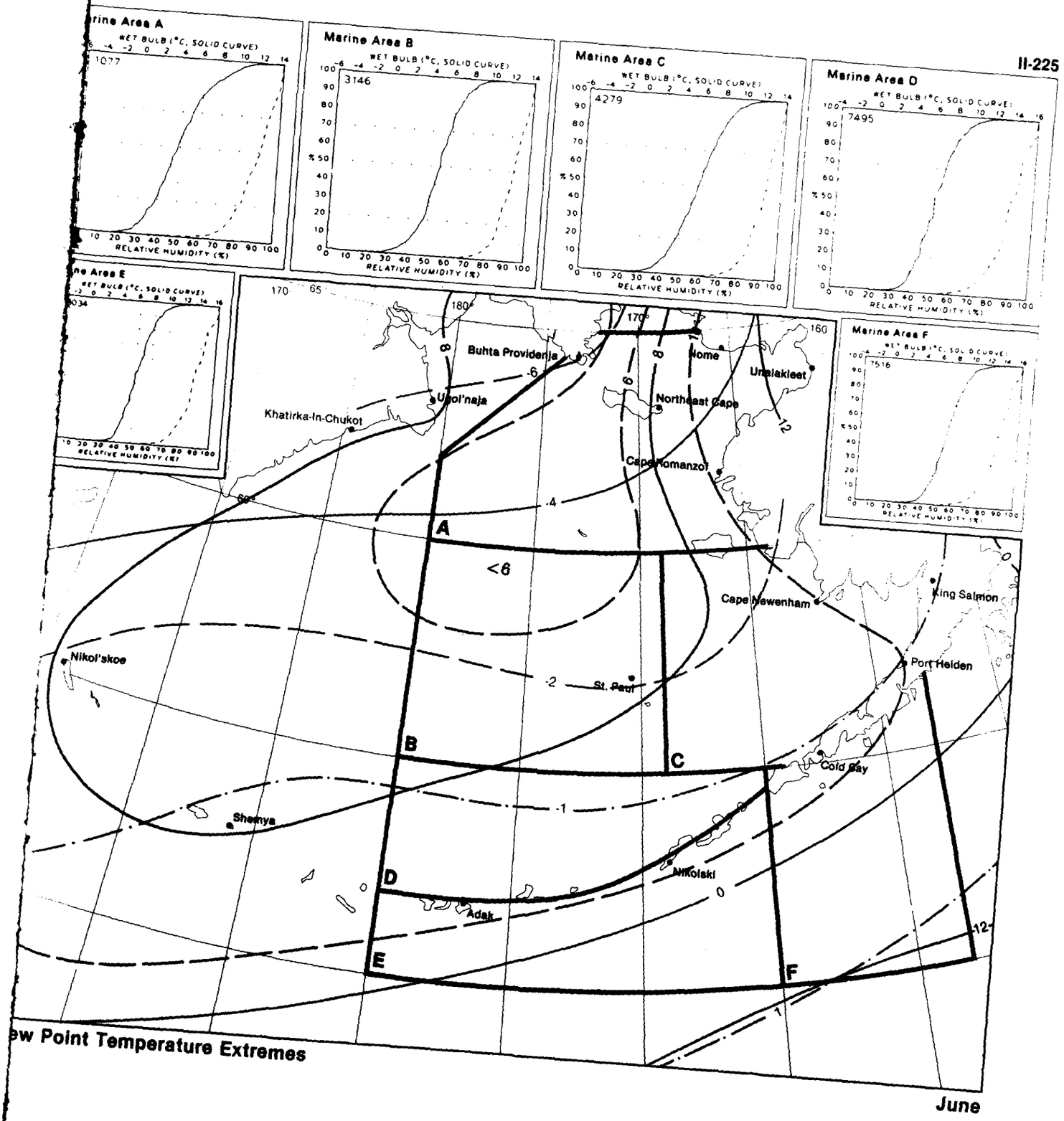
9 Dew Point Temperature Extremes **April**


Nikol'skoe
5425
Khatirka-In-Chukot
3240
Ugol'naja
4815
Buhta Providenja
4610
Northeast Cape
9722
Nome
20283
Unalakleet
14222
Cape Romanzof
18328
Cape Newenham
19163
King Salmon
17870
Port Heiden
6272
Cold Bay
12739
Nikolski
1779
St. Paul
9836
Adak
21983
Shemya
18611
WET BULB (°C, SOLID CURVE)
% RELATIVE HUMIDITY (%)



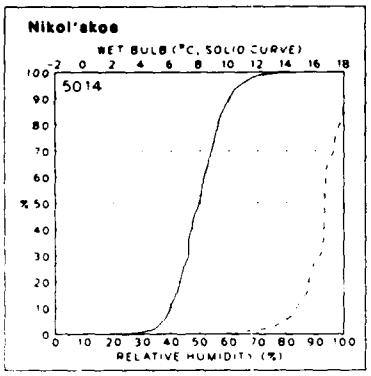
9 Dew Point Temperature Extremes **May**

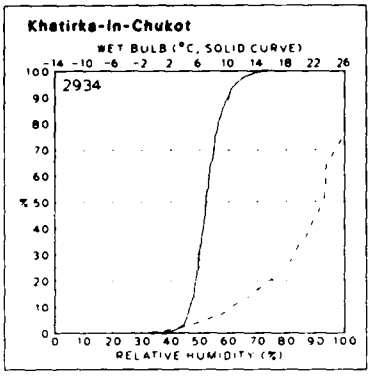

Nikol'skoe
5203
Khatirka-In-Chukot
3097
Ugol'naja
4677
Buhta Providenja
4421
Norheast Cape
9571
Nome
20009
Unalakleet
14011
Cape Romanzof
17269
Cape Newenham
17995
King Salmon
17255
Port Heiden
6070
Cold Bay
12480
Nikolski
1828
St. Paul
9419
Adak
21050
Shemya
17906
WET BULB (°C, SOLID CURVE)
RELATIVE HUMIDITY (%)

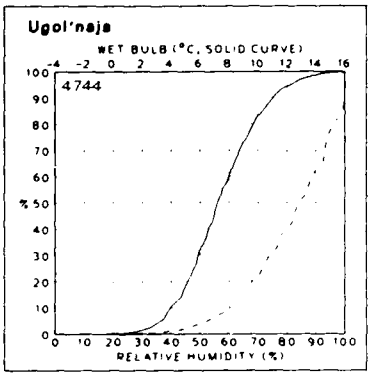


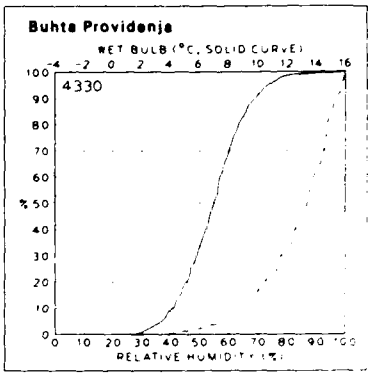
ew Point Temperature Extremes

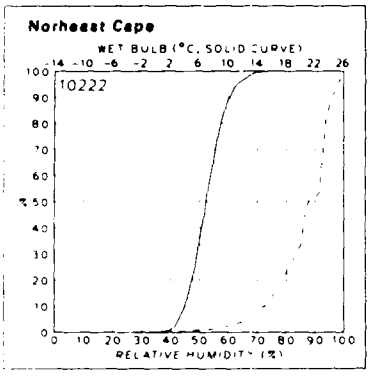
June

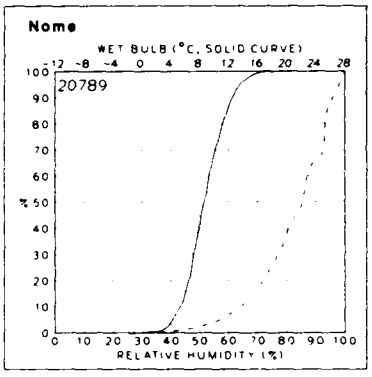

Nikol'skoe
WET BULB (°C, SOLID CURVE)
5014
% RELATIVE HUMIDITY (%)

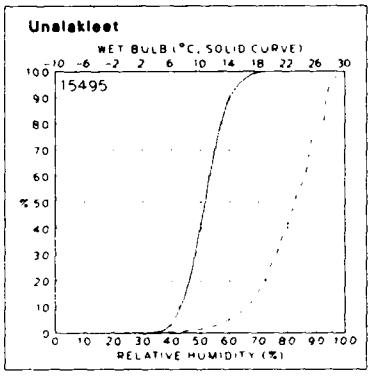

Khatirka-In-Chukot
WET BULB (°C, SOLID CURVE)
2934
% RELATIVE HUMIDITY (%)

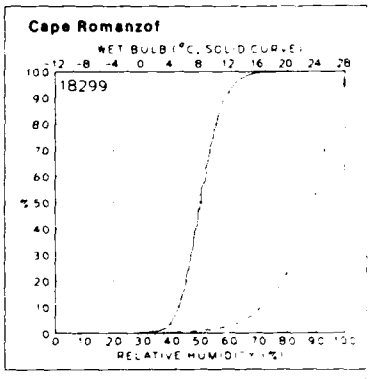

Ugol'naja
WET BULB (°C, SOLID CURVE)
4744
% RELATIVE HUMIDITY (%)

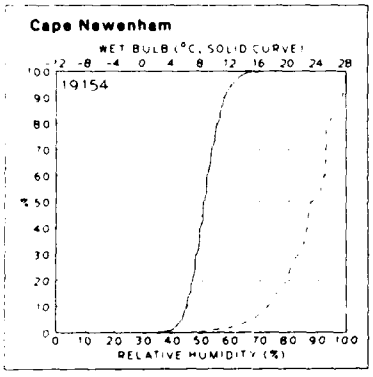

Buhta Providenja
WET BULB (°C, SOLID CURVE)
4330
% RELATIVE HUMIDITY (%)

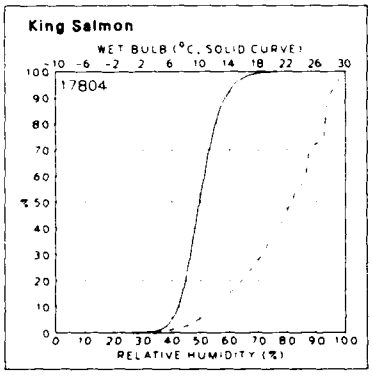

Norheast Cape
WET BULB (°C, SOLID CURVE)
10222
% RELATIVE HUMIDITY (%)

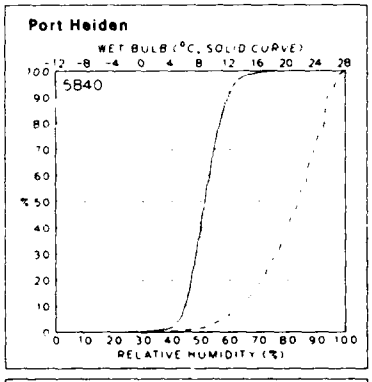

Nome
WET BULB (°C, SOLID CURVE)
20789
% RELATIVE HUMIDITY (%)

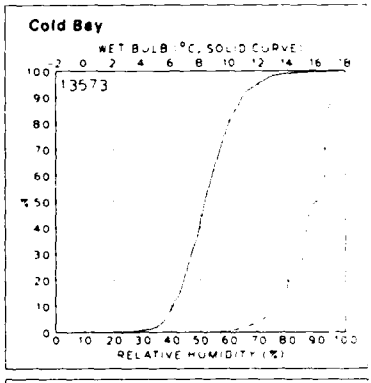

Unalakleet
WET BULB (°C, SOLID CURVE)
15495
% RELATIVE HUMIDITY (%)

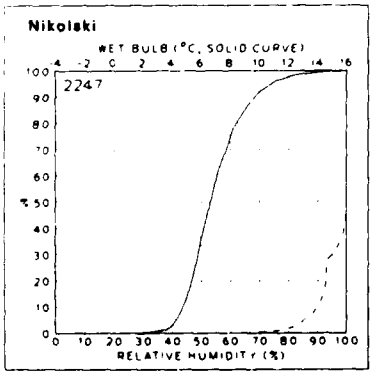

Cape Romanzof
WET BULB (°C, SOLID CURVE)
18299
% RELATIVE HUMIDITY (%)

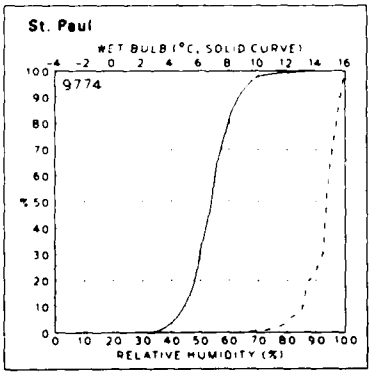

Cape Newenham
WET BULB (°C, SOLID CURVE)
19154
% RELATIVE HUMIDITY (%)

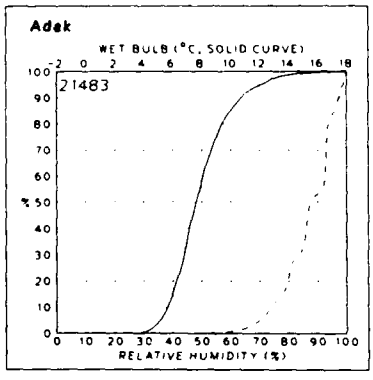

King Salmon
WET BULB (°C, SOLID CURVE)
17804
% RELATIVE HUMIDITY (%)

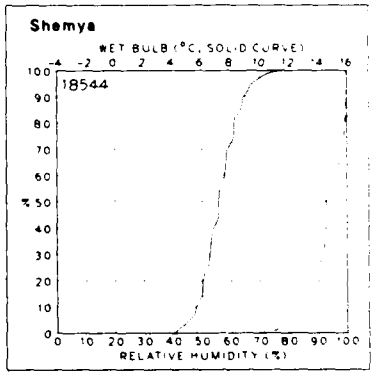

Port Heiden
WET BULB (°C, SOLID CURVE)
5840
% RELATIVE HUMIDITY (%)

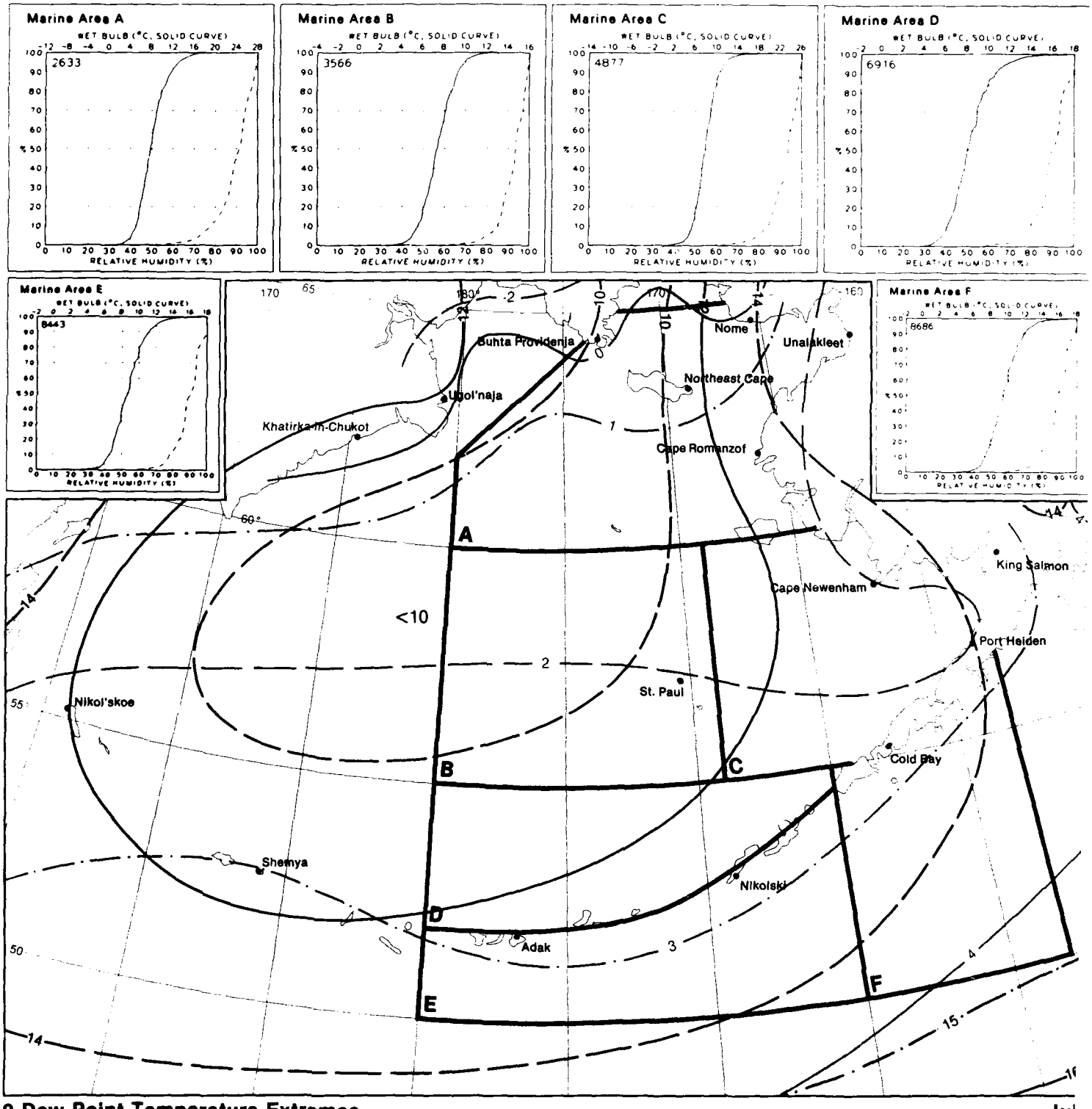

Cold Bay
WET BULB (°C, SOLID CURVE)
13573
% RELATIVE HUMIDITY (%)


Nikolski
WET BULB (°C, SOLID CURVE)
2247
% RELATIVE HUMIDITY (%)


St. Paul
WET BULB (°C, SOLID CURVE)
9774
% RELATIVE HUMIDITY (%)

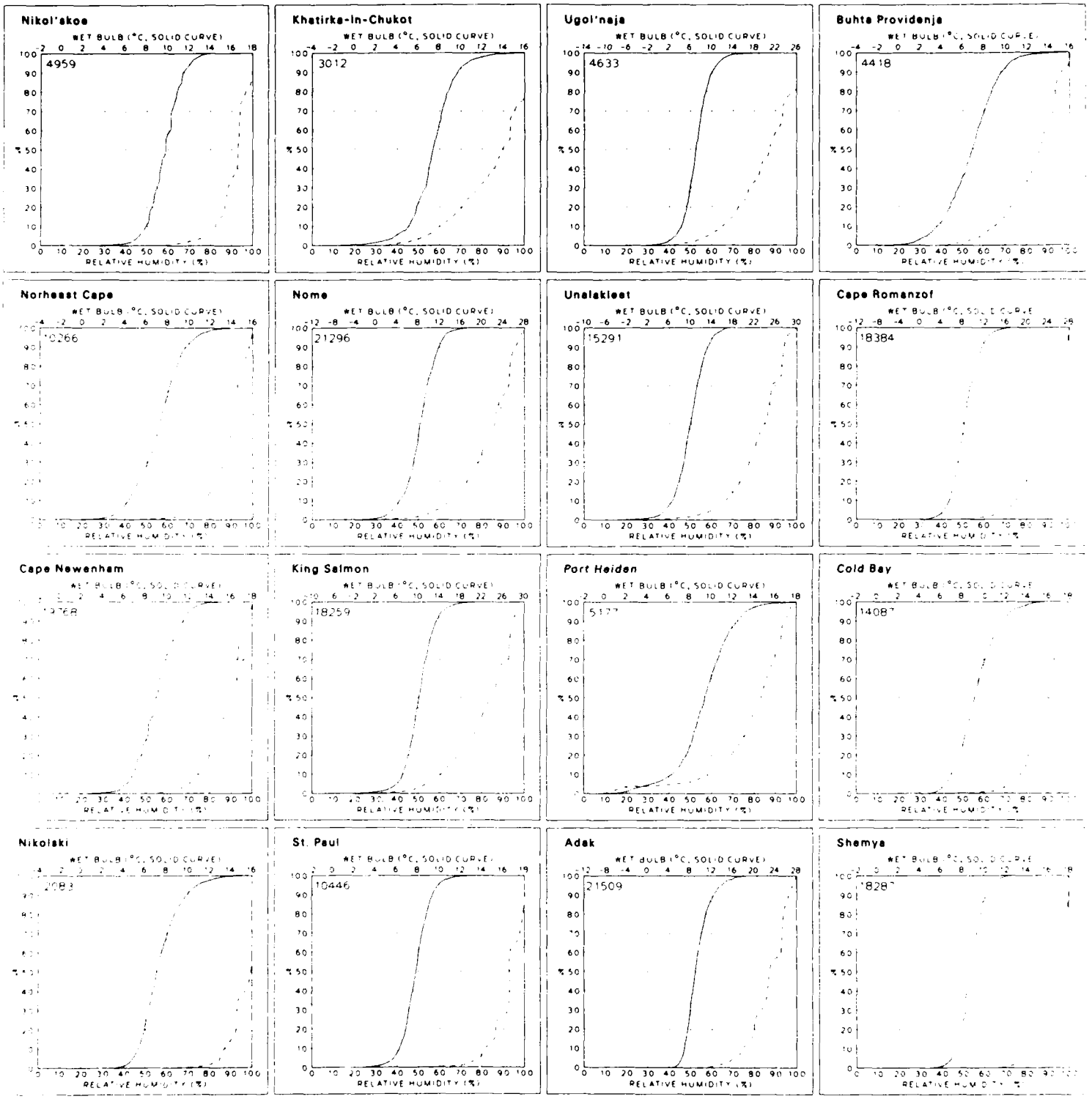

Adak
WET BULB (°C, SOLID CURVE)
21483
% RELATIVE HUMIDITY (%)

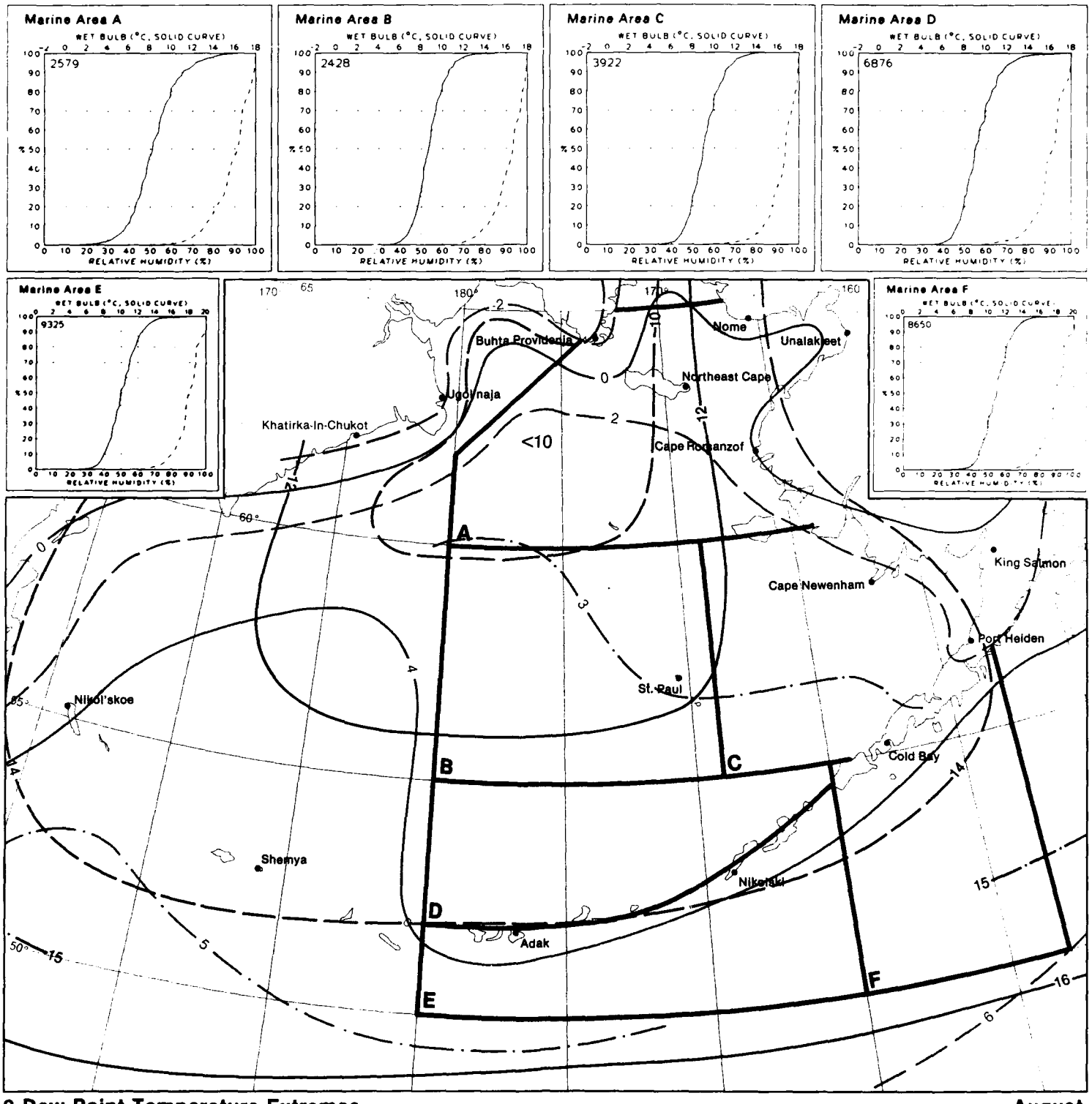

Shemya
WET BULB (°C, SOLID CURVE)
18544
% RELATIVE HUMIDITY (%)



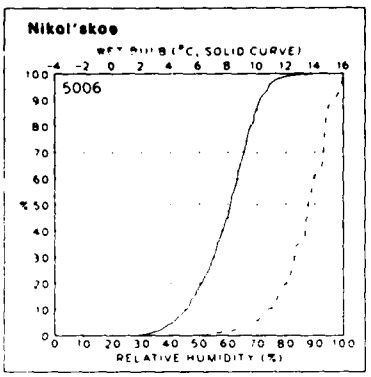
9 Dew Point Temperature Extremes

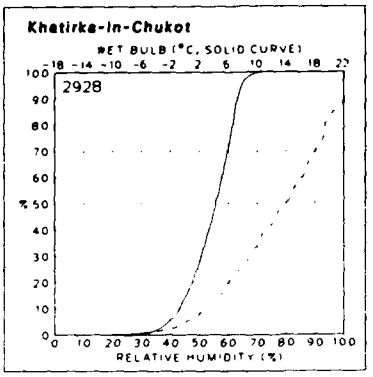
Jul

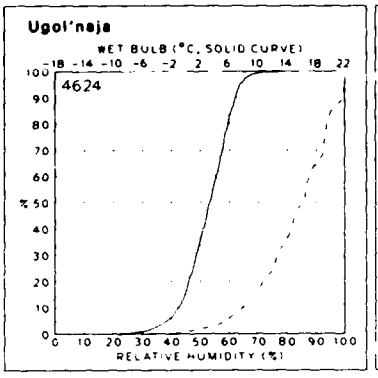

Nikol'skoe
4959
Khatirka-In-Chukot
3012
Ugol'naja
4633
Buhta Providenja
4418
Norheast Cape
10266
Nome
21296
Unalakleet
15291
Cape Romanzof
18384
Cape Newenham
13768
King Salmon
18259
Port Heiden
5177
Cold Bay
14087
Nikolski
20883
St. Paul
10446
Adak
21509
Shemya
18287
WET BULB (°C, SOLID CURVE)
RELATIVE HUMIDITY (%)
%

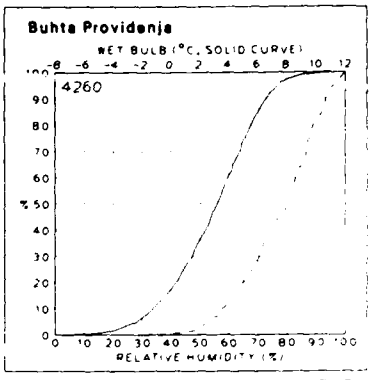


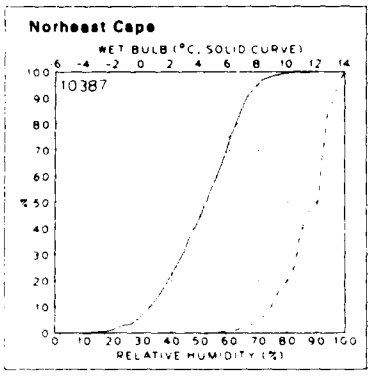
9 Dew Point Temperature Extremes **August**

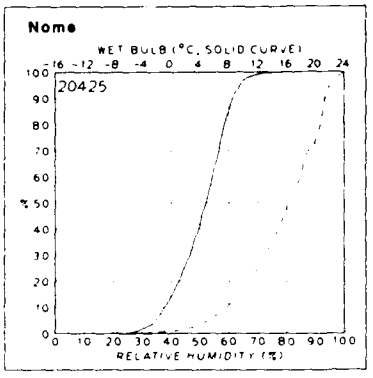

Nikol'skoe
WET BULB (°C, SOLID CURVE)
5006
RELATIVE HUMIDITY (%)

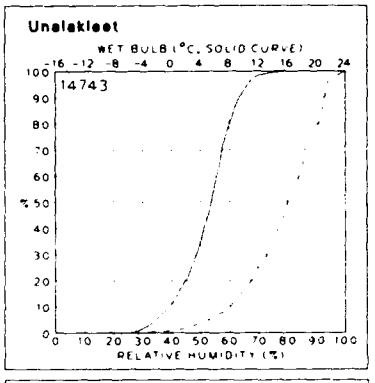

Khatirka-In-Chukot
WET BULB (°C, SOLID CURVE)
2928
RELATIVE HUMIDITY (%)

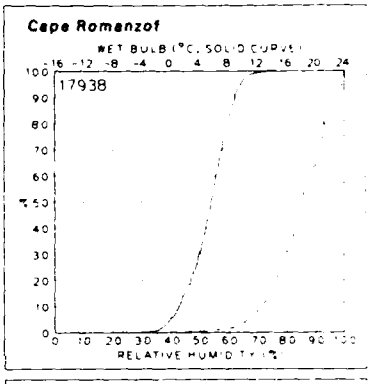

Ugol'naja
WET BULB (°C, SOLID CURVE)
4624
RELATIVE HUMIDITY (%)

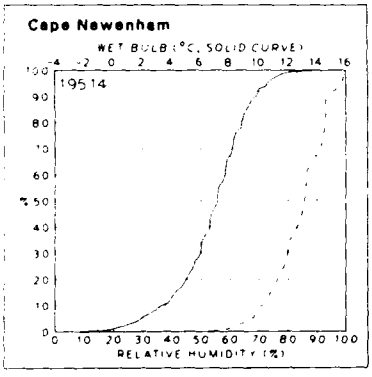

Buhta Providenja
WET BULB (°C, SOLID CURVE)
4260
RELATIVE HUMIDITY (%)

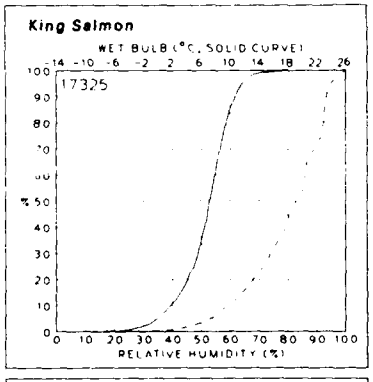

Norheast Cape
WET BULB (°C, SOLID CURVE)
10387
RELATIVE HUMIDITY (%)

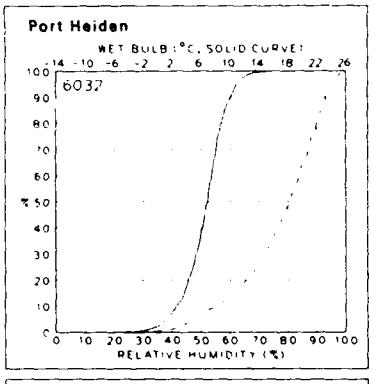

Nome
WET BULB (°C, SOLID CURVE)
20425
RELATIVE HUMIDITY (%)

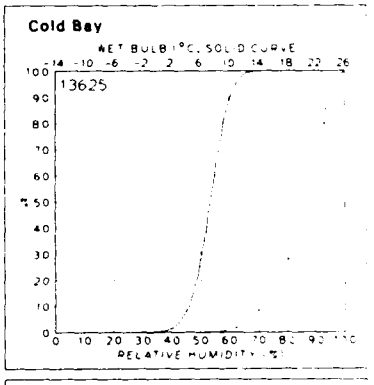

Unalakleet
WET BULB (°C, SOLID CURVE)
14743
RELATIVE HUMIDITY (%)

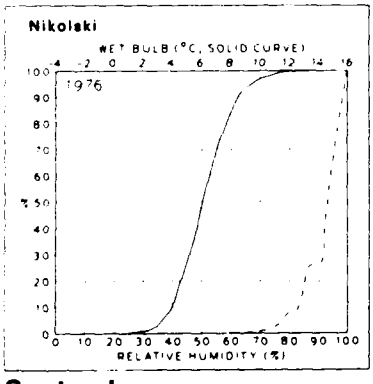

Cape Romanzof
WET BULB (°C, SOLID CURVE)
17938
RELATIVE HUMIDITY (%)

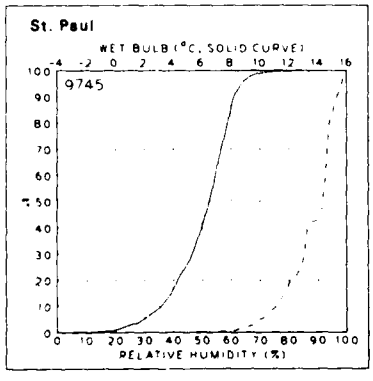

Cape Newenham
WET BULB (°C, SOLID CURVE)
19514
RELATIVE HUMIDITY (%)

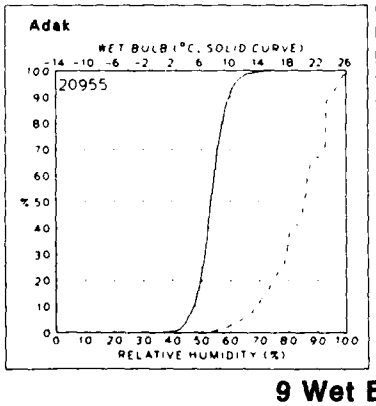

King Salmon
WET BULB (°C, SOLID CURVE)
17325
RELATIVE HUMIDITY (%)

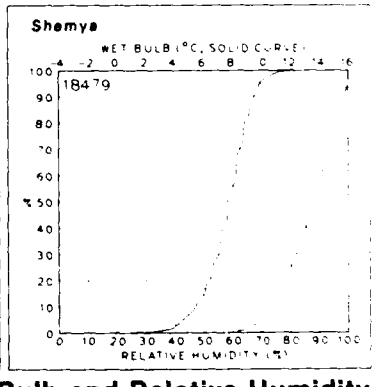

Port Heiden
WET BULB (°C, SOLID CURVE)
6037
RELATIVE HUMIDITY (%)

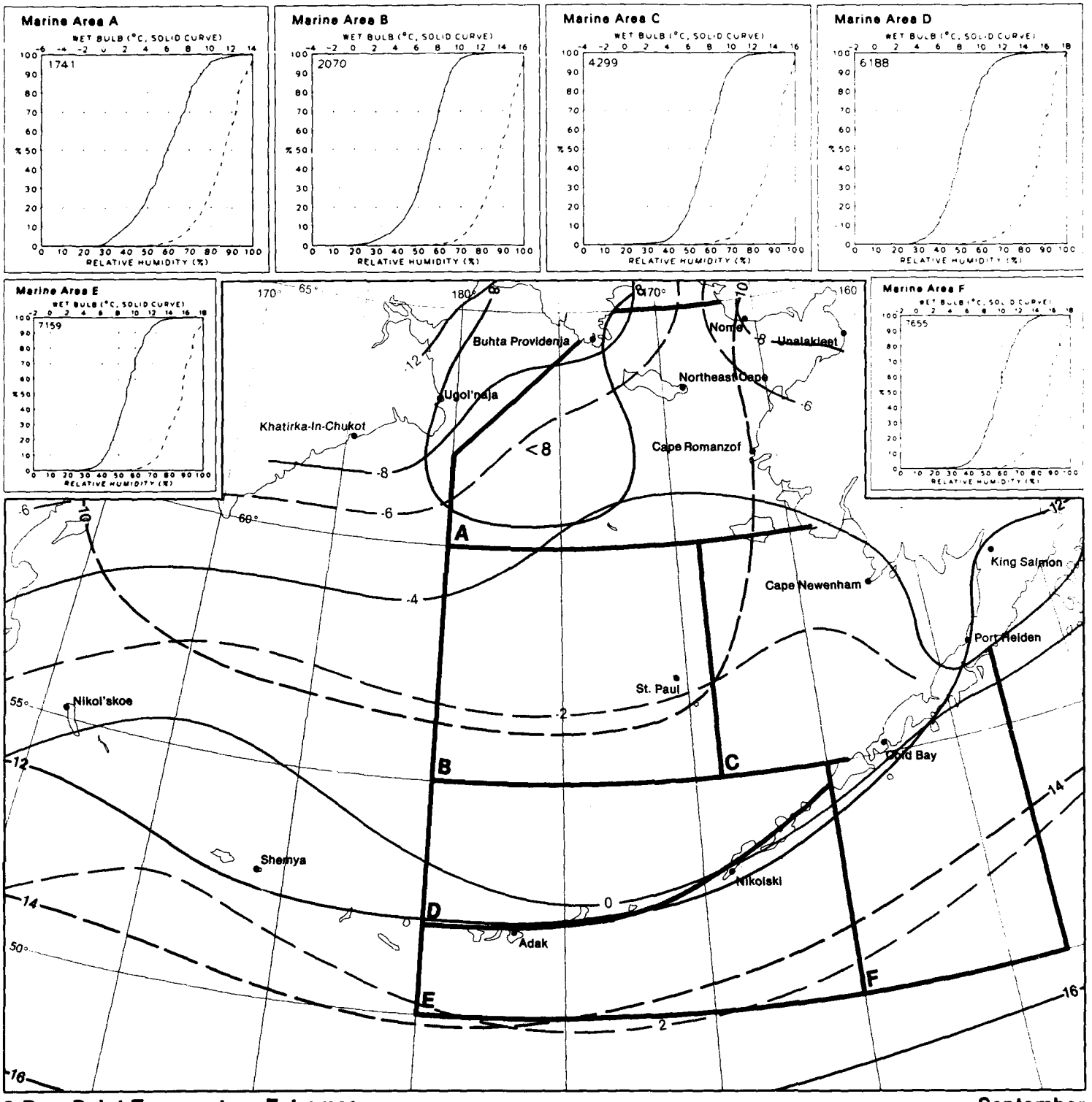

Cold Bay
WET BULB (°C, SOLID CURVE)
13625
RELATIVE HUMIDITY (%)


Nikolski
WET BULB (°C, SOLID CURVE)
1976
RELATIVE HUMIDITY (%)

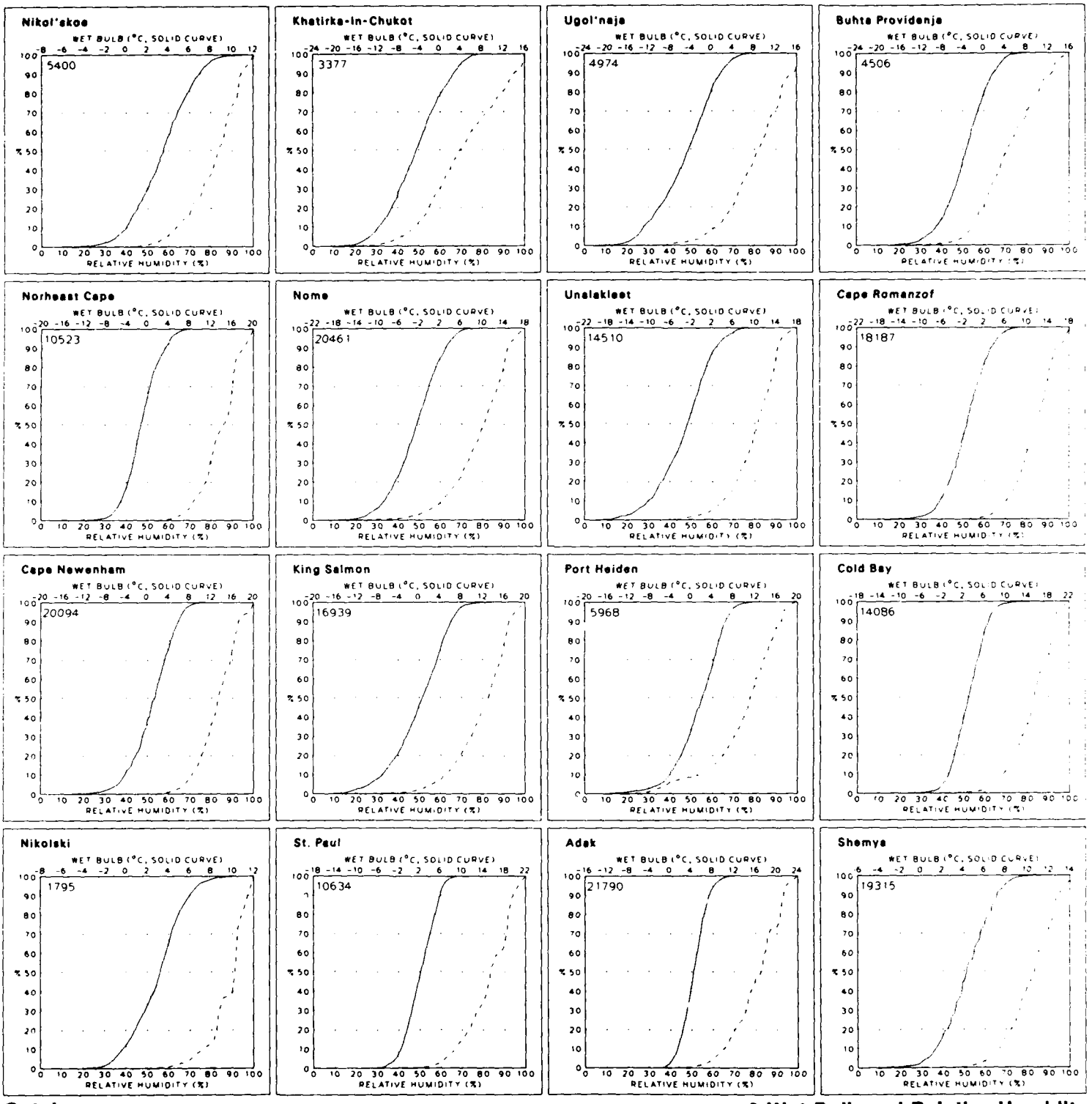

St. Paul
WET BULB (°C, SOLID CURVE)
9745
RELATIVE HUMIDITY (%)

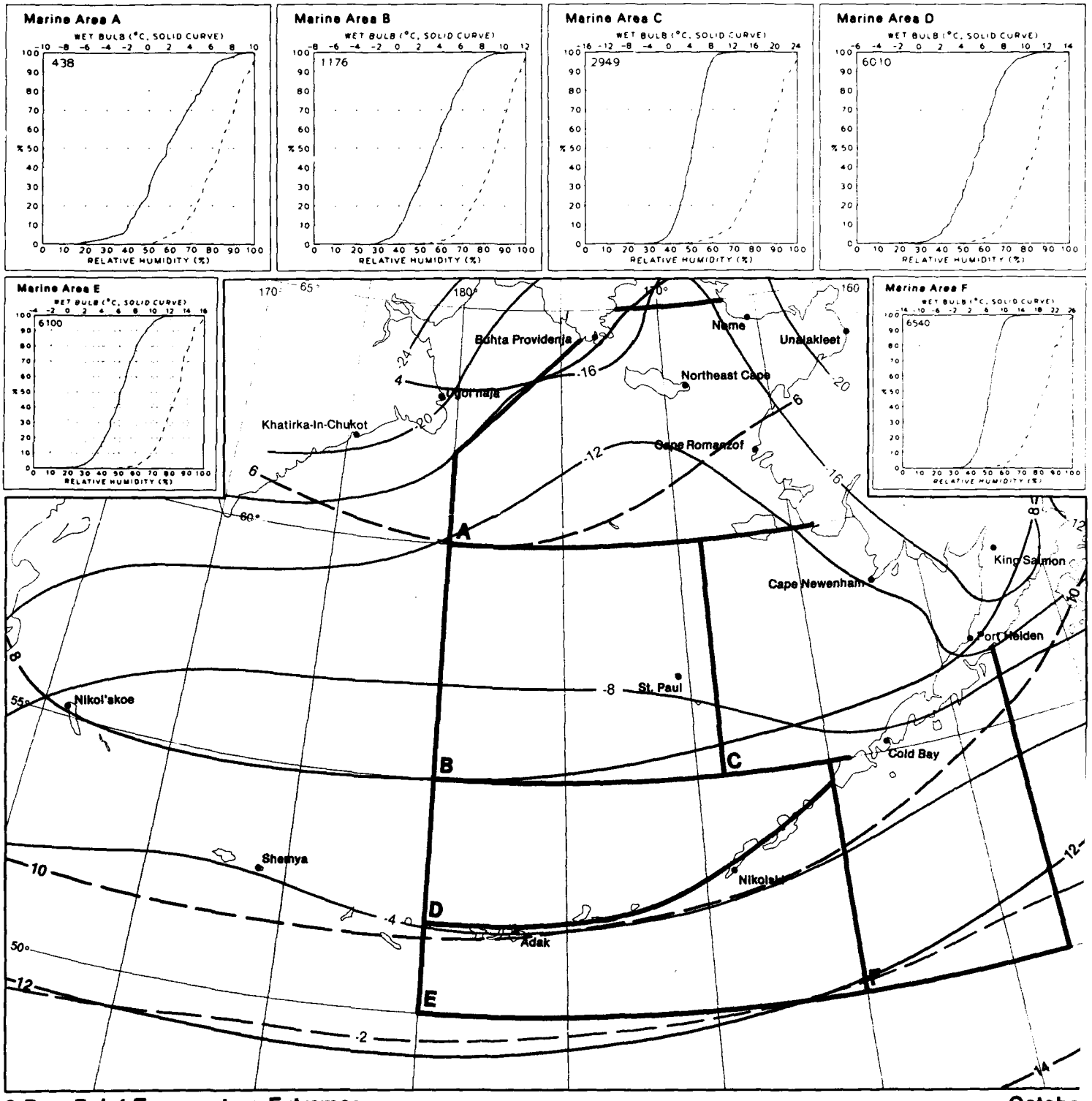

Adak
WET BULB (°C, SOLID CURVE)
20955
RELATIVE HUMIDITY (%)


Shemya
WET BULB (°C, SOLID CURVE)
18479
RELATIVE HUMIDITY (%)



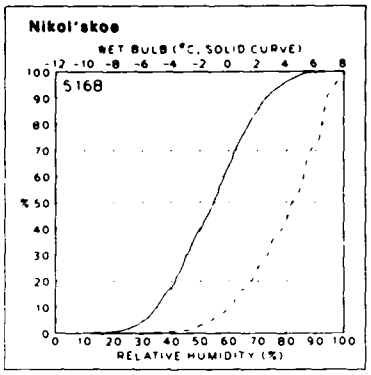
9 Dew Point Temperature Extremes **September**

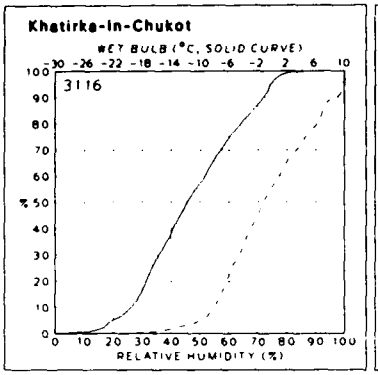

Nikol'skoe
5400
Khatirka-In-Chukot
3377
Ugol'naja
4974
Buhta Providenja
4506
Norheast Cape
10523
Nome
20461
Unalakleet
14510
Cape Romanzof
18187
Cape Newenham
20094
King Salmon
16939
Port Heiden
5968
Cold Bay
14086
Nikolski
1795
St. Paul
10634
Adak
21790
Shemya
19315
WET BULB (°C, SOLID CURVE)
RELATIVE HUMIDITY (%)

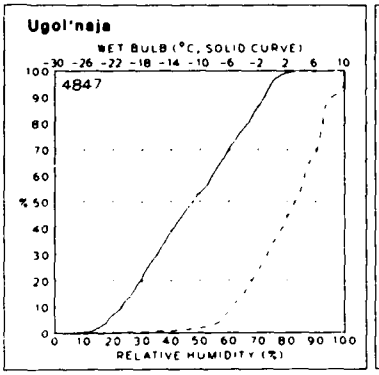


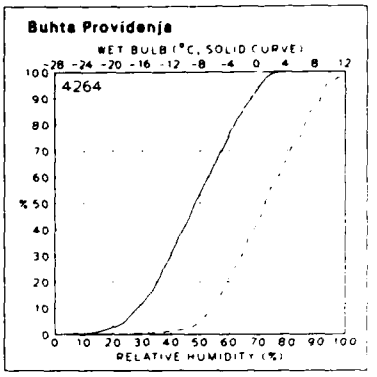
9 Dew Point Temperature Extremes

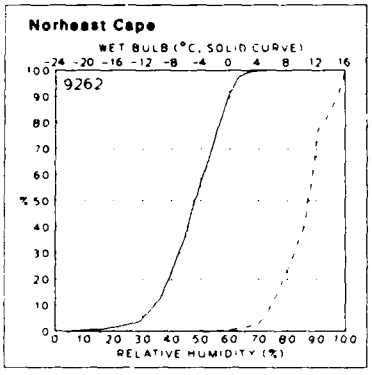
Octobe

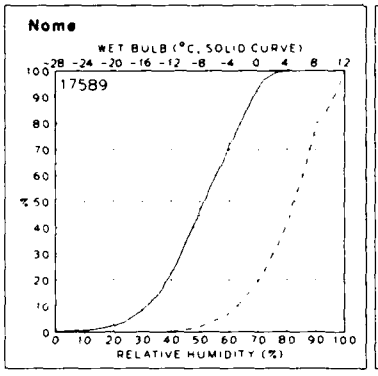

Nikol'skoe
WET BULB (°C, SOLID CURVE)
5168
% RELATIVE HUMIDITY (%)

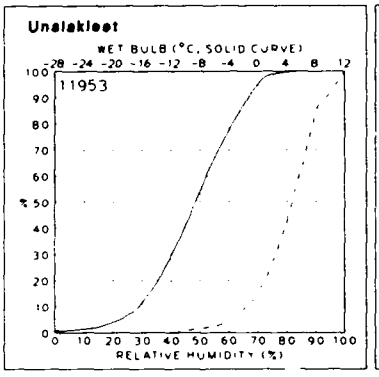

Khatirka-In-Chukot
WET BULB (°C, SOLID CURVE)
3116
% RELATIVE HUMIDITY (%)

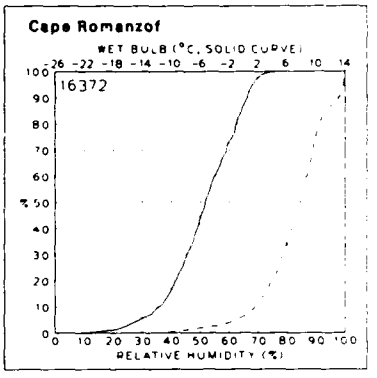

Ugol'naja
WET BULB (°C, SOLID CURVE)
4847
% RELATIVE HUMIDITY (%)

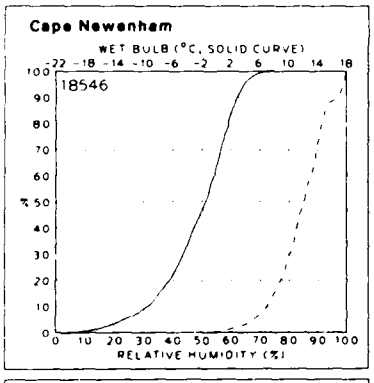

Buhta Providenja
WET BULB (°C, SOLID CURVE)
4264
% RELATIVE HUMIDITY (%)

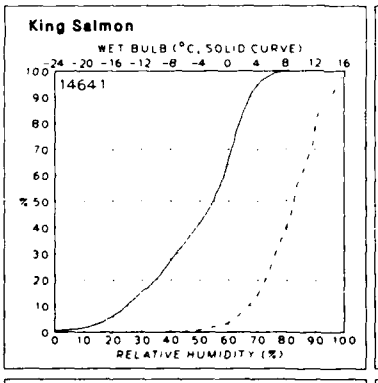

Norheast Cape
WET BULB (°C, SOLID CURVE)
9262
% RELATIVE HUMIDITY (%)

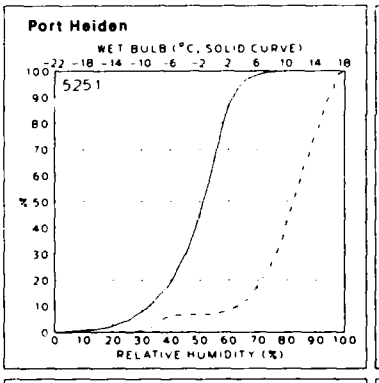

Nome
WET BULB (°C, SOLID CURVE)
17589
% RELATIVE HUMIDITY (%)

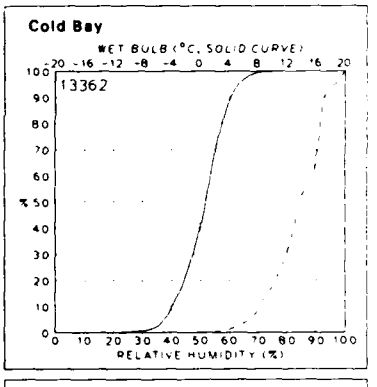

Unalakleet
WET BULB (°C, SOLID CURVE)
11953
% RELATIVE HUMIDITY (%)

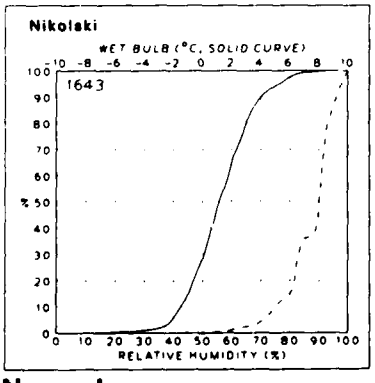

Cape Romanzof
WET BULB (°C, SOLID CURVE)
16372
% RELATIVE HUMIDITY (%)

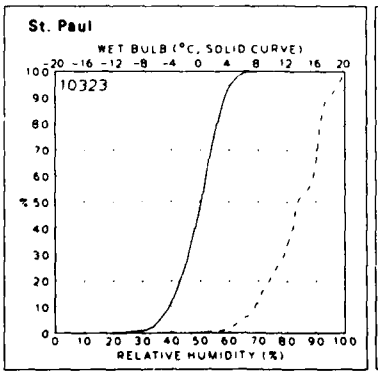

Cape Newenham
WET BULB (°C, SOLID CURVE)
18546
% RELATIVE HUMIDITY (%)

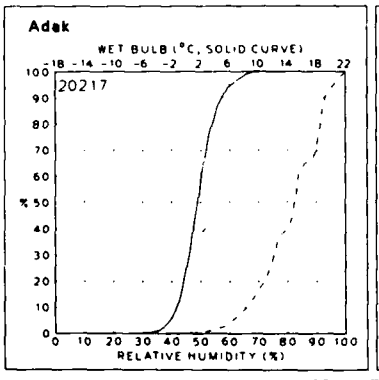

King Salmon
WET BULB (°C, SOLID CURVE)
14641
% RELATIVE HUMIDITY (%)

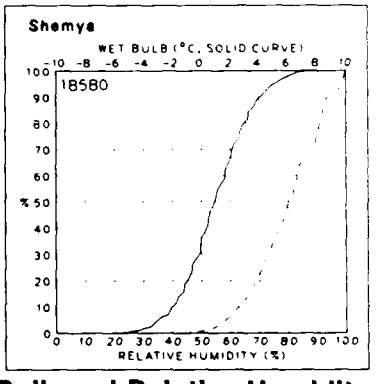

Port Heiden
WET BULB (°C, SOLID CURVE)
5251
% RELATIVE HUMIDITY (%)

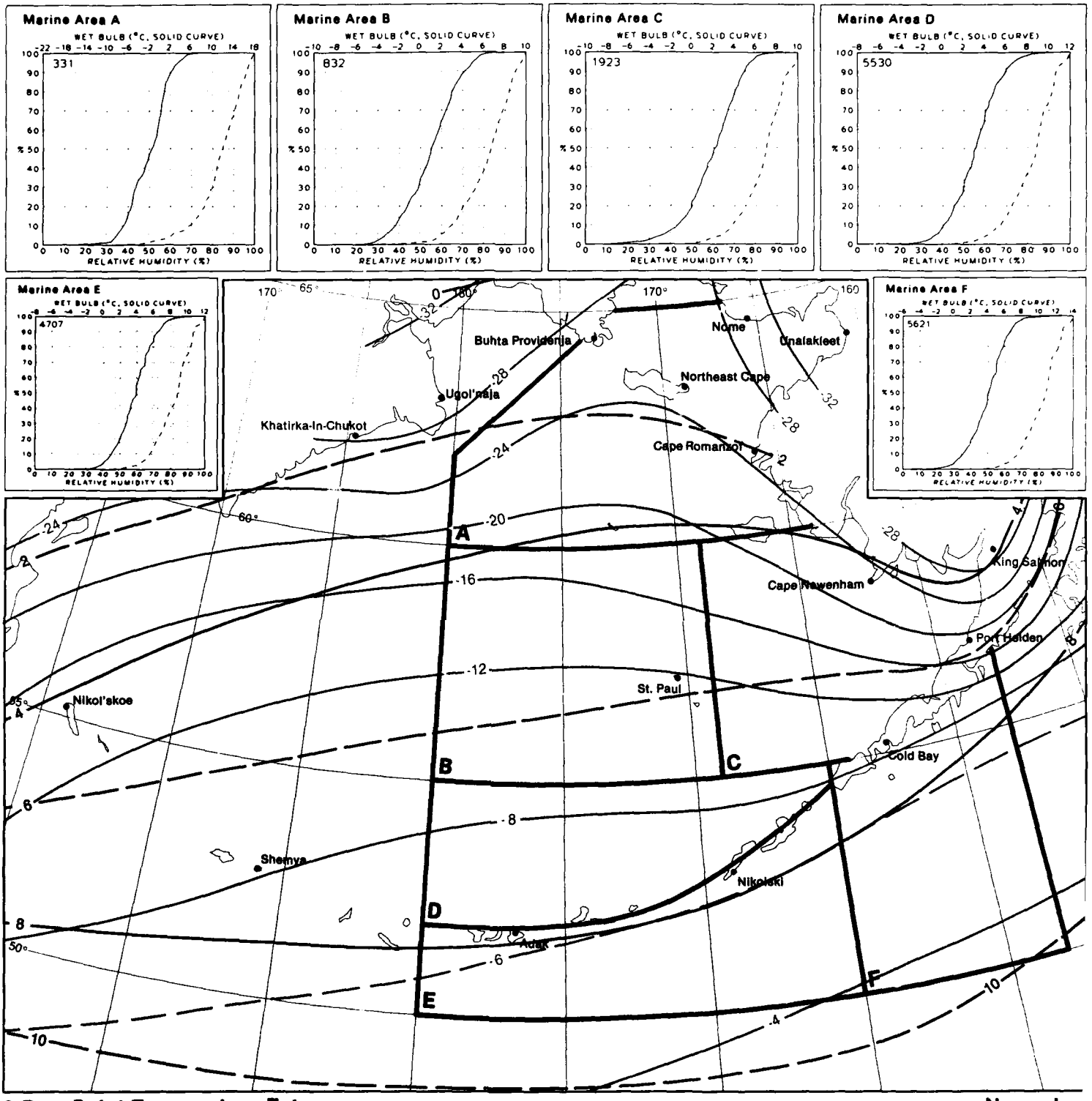

Cold Bay
WET BULB (°C, SOLID CURVE)
13362
% RELATIVE HUMIDITY (%)


Nikolski
WET BULB (°C, SOLID CURVE)
1643
% RELATIVE HUMIDITY (%)


St. Paul
WET BULB (°C, SOLID CURVE)
10323
% RELATIVE HUMIDITY (%)

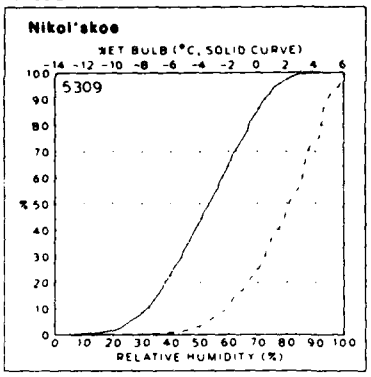

Adak
WET BULB (°C, SOLID CURVE)
20217
% RELATIVE HUMIDITY (%)

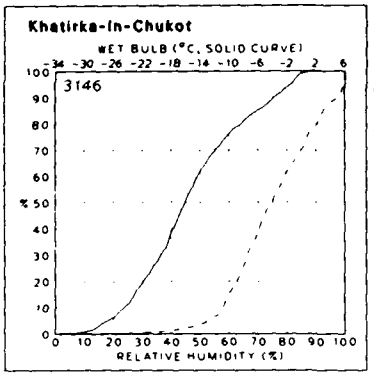

Shemya
WET BULB (°C, SOLID CURVE)
18580
% RELATIVE HUMIDITY (%)

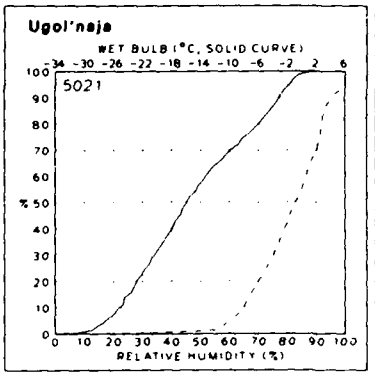


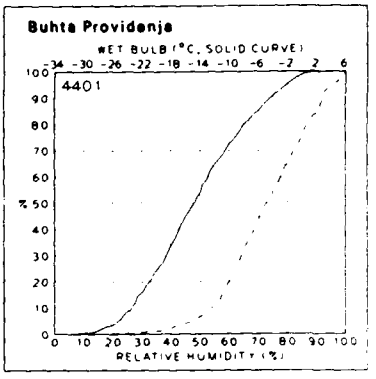
9 Dew Point Temperature Extremes

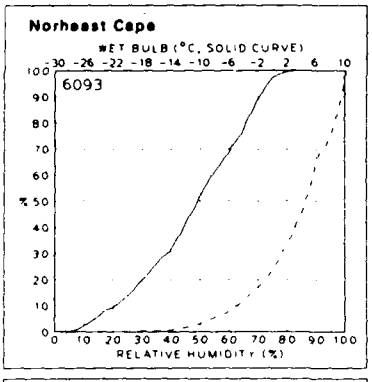
November

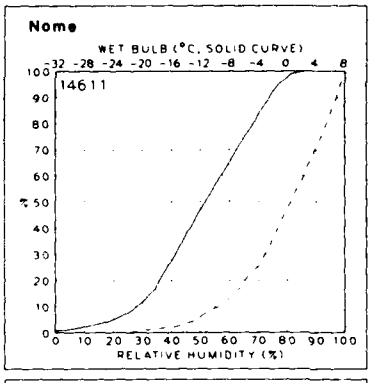

Nikol'skoe
WET BULB (°C, SOLID CURVE)
5309
RELATIVE HUMIDITY (%)

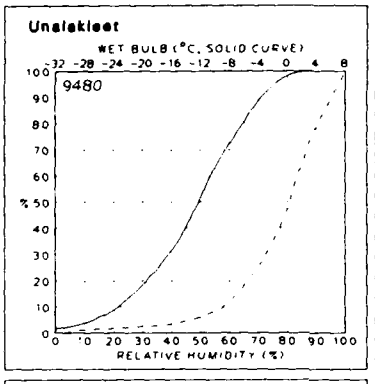

Khatirka-In-Chukot
WET BULB (°C, SOLID CURVE)
3146
RELATIVE HUMIDITY (%)

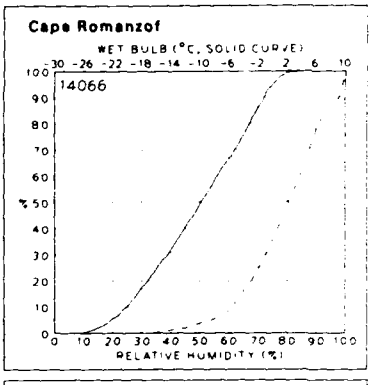

Ugol'naja
WET BULB (°C, SOLID CURVE)
5021
RELATIVE HUMIDITY (%)

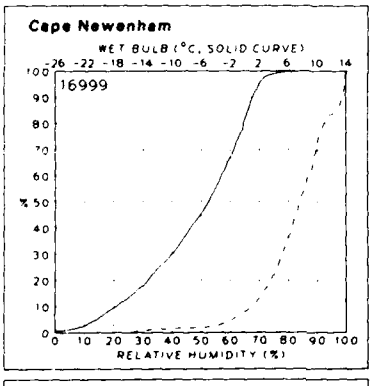

Buhta Providenja
WET BULB (°C, SOLID CURVE)
4401
RELATIVE HUMIDITY (%)

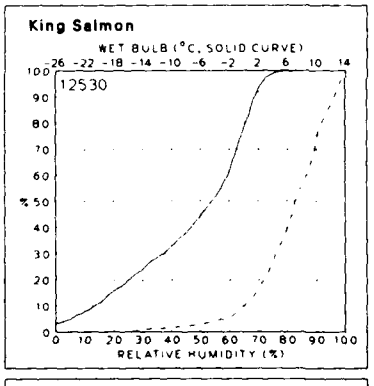

Norheast Cape
WET BULB (°C, SOLID CURVE)
6093
RELATIVE HUMIDITY (%)

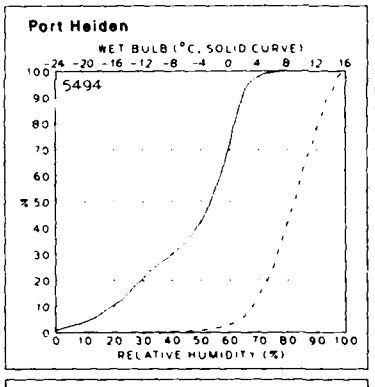

Nome
WET BULB (°C, SOLID CURVE)
14611
RELATIVE HUMIDITY (%)

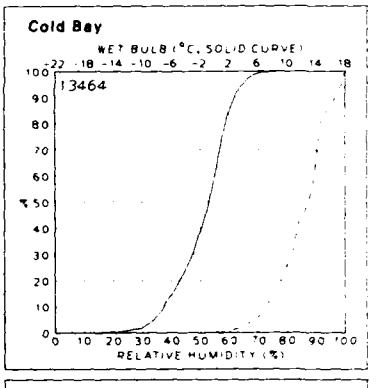

Unalakleet
WET BULB (°C, SOLID CURVE)
9480
RELATIVE HUMIDITY (%)

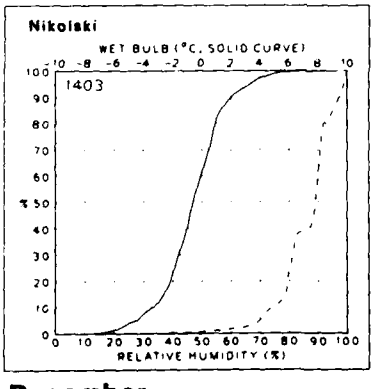

Cape Romanzof
WET BULB (°C, SOLID CURVE)
14066
RELATIVE HUMIDITY (%)

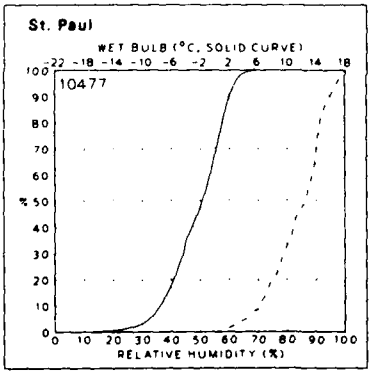

Cape Newenham
WET BULB (°C, SOLID CURVE)
16999
RELATIVE HUMIDITY (%)

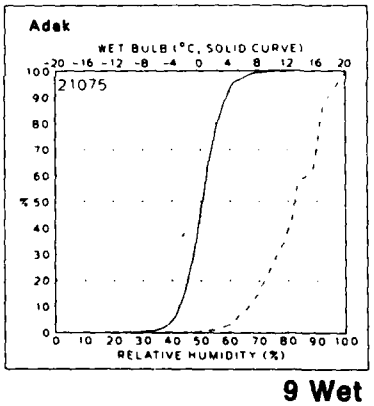

King Salmon
WET BULB (°C, SOLID CURVE)
12530
RELATIVE HUMIDITY (%)

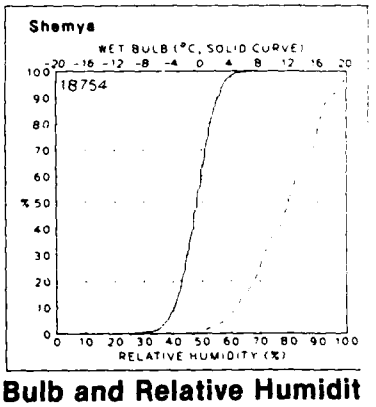

Port Heiden
WET BULB (°C, SOLID CURVE)
5494
RELATIVE HUMIDITY (%)

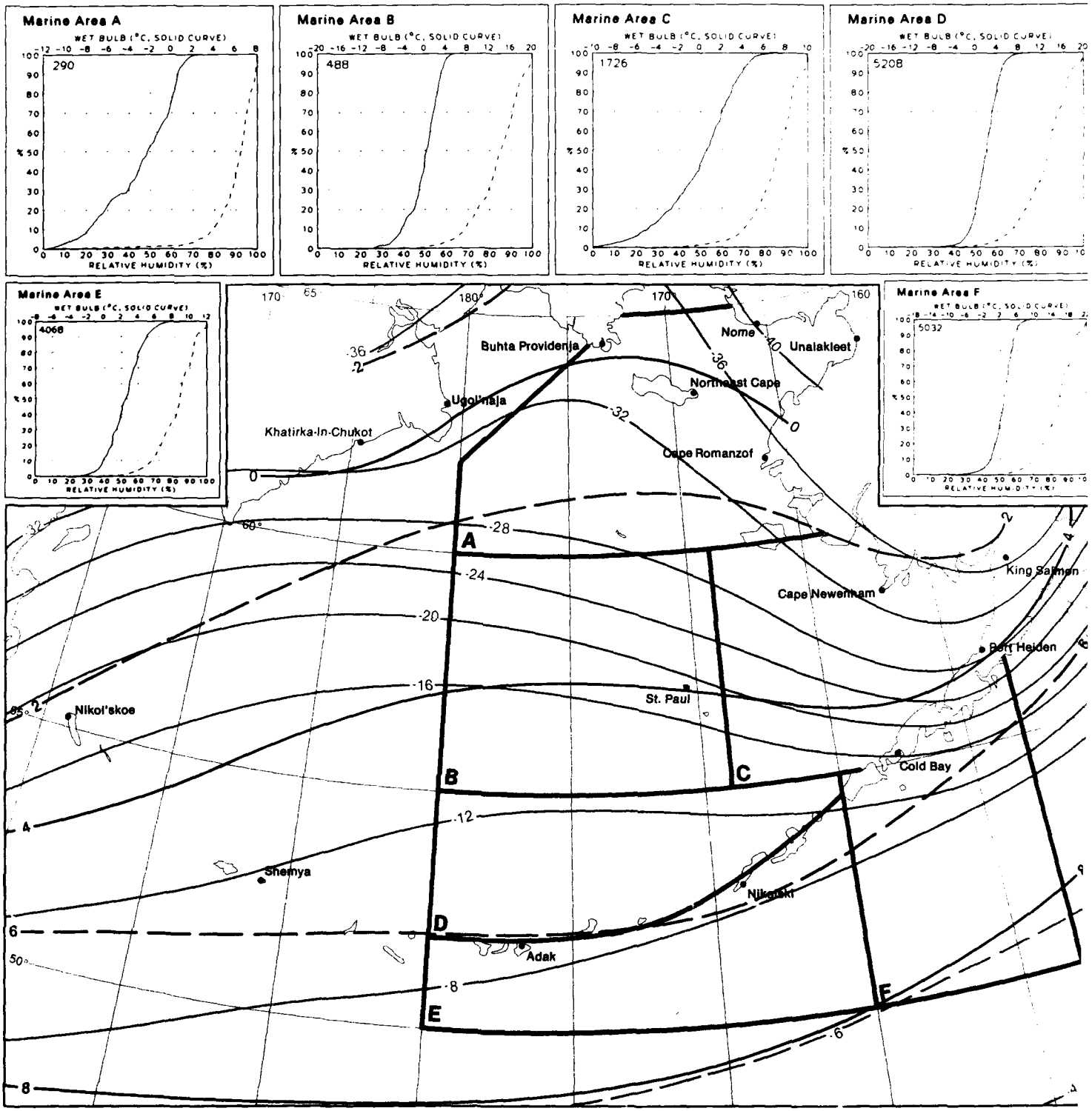

Cold Bay
WET BULB (°C, SOLID CURVE)
13464
RELATIVE HUMIDITY (%)


Nikolski
WET BULB (°C, SOLID CURVE)
1403
RELATIVE HUMIDITY (%)


St. Paul
WET BULB (°C, SOLID CURVE)
10477
RELATIVE HUMIDITY (%)


Adak
WET BULB (°C, SOLID CURVE)
21075
RELATIVE HUMIDITY (%)


Shemya
WET BULB (°C, SOLID CURVE)
18754
RELATIVE HUMIDITY (%)



9 Dew Point Temperature Extremes Decemb

Map 10. Mean sea level pressure and vector mean wind

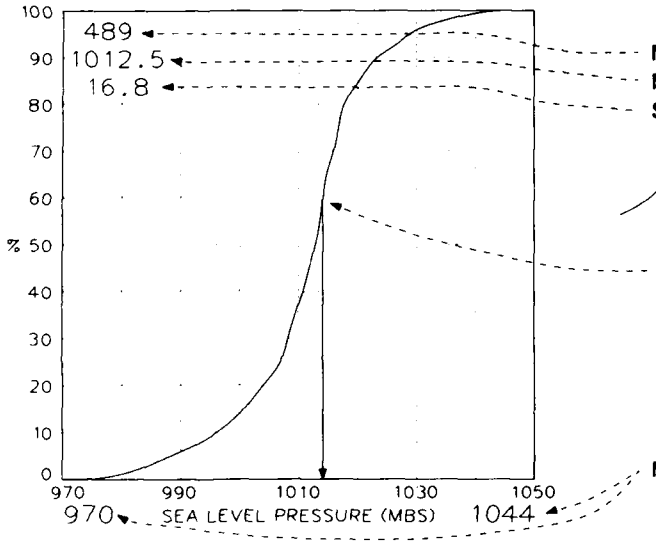
BLACK LINE – Mean sea level pressure (millibars).

10.2 ●

Direction of flow toward station dot; vector magnitude in knots (example: vector mean wind is from northeast at 10.2 knots or 11.7 mph).

Albers Equal–Area Conic Projection

Graphs: Sea level pressure



Number of observations.
Mean sea level pressure (mbs).
Standard deviation of pressure (mbs).

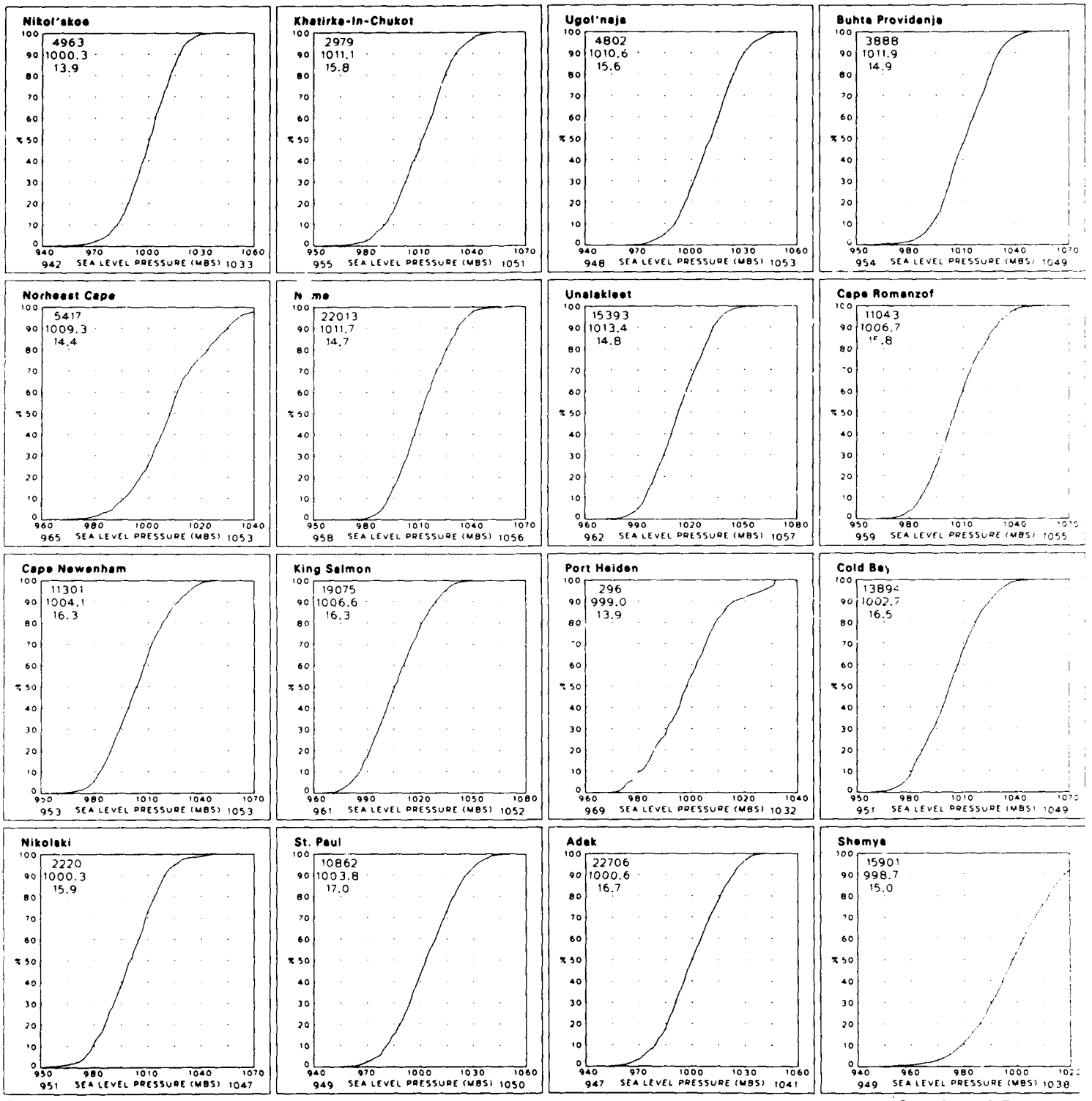
Cumulative percent frequency of sea level pressures equal to or less than the pressure intersected by the curve.

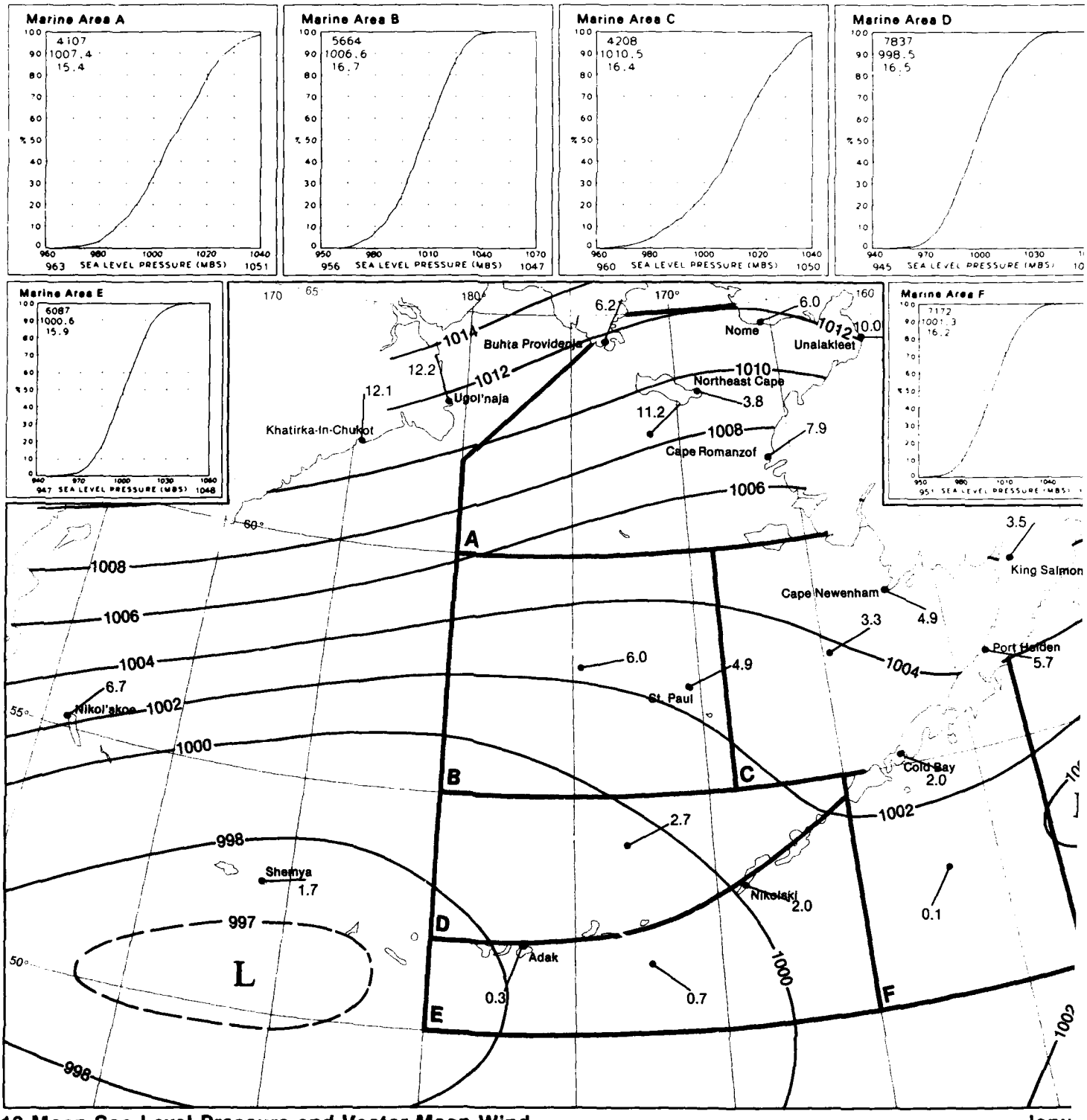
(60% of all observed sea level pressures were ≦1014.1 millibars.)

Minimum and maximum sea level pressures.

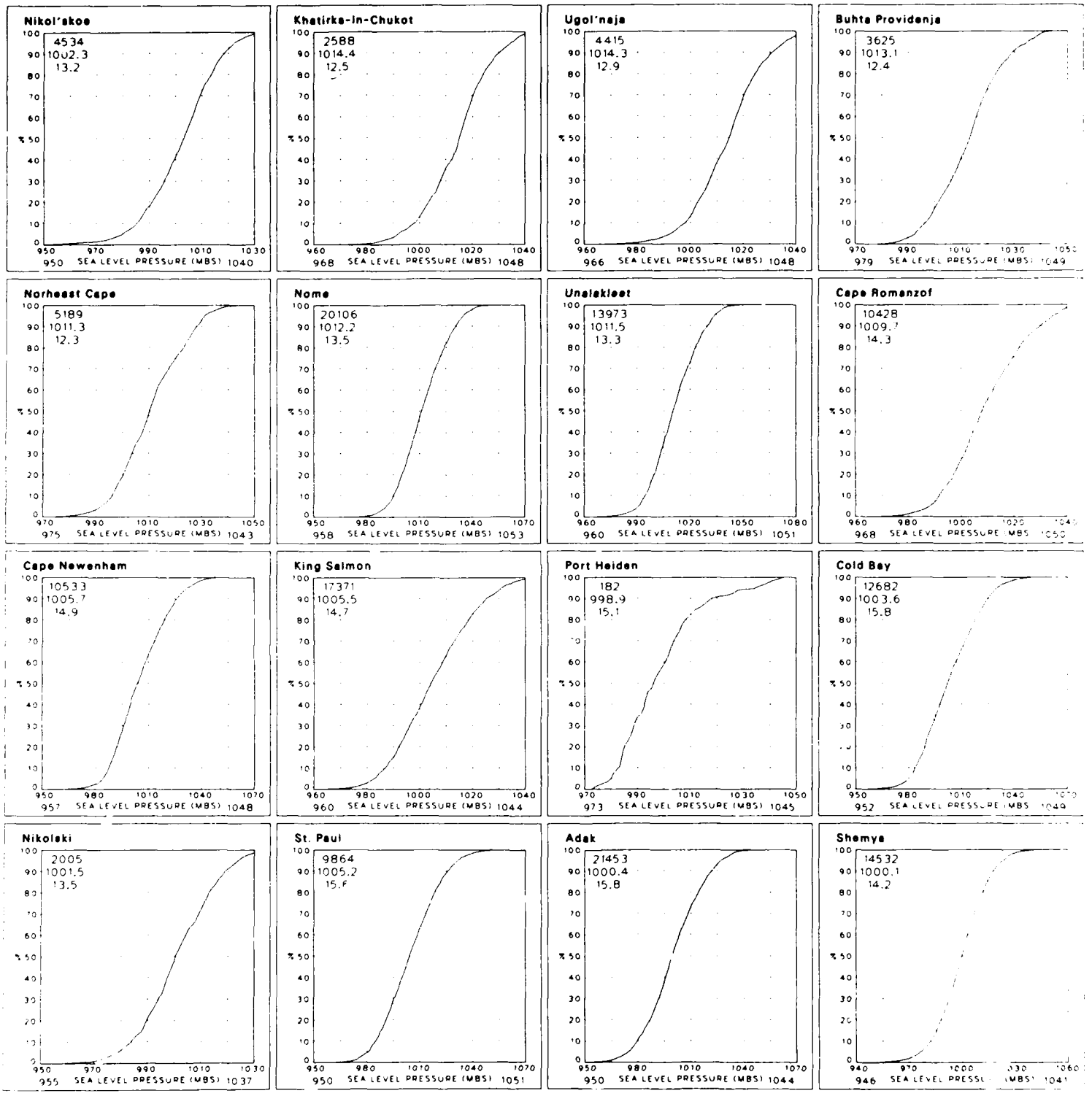
Sea level pressure is one of the most frequently recorded elements, but one of the least accurate because of instrume calibration and coding errors. Despite the inaccuracies of the individual readings, the large-scale patterns and mean gradien of the isopleth analyses are relatively accurate. The percentage of sea level pressure observations greater than a given value ca be obtained from the graph by subtracting the cumulative percent frequency of that value from 100%.

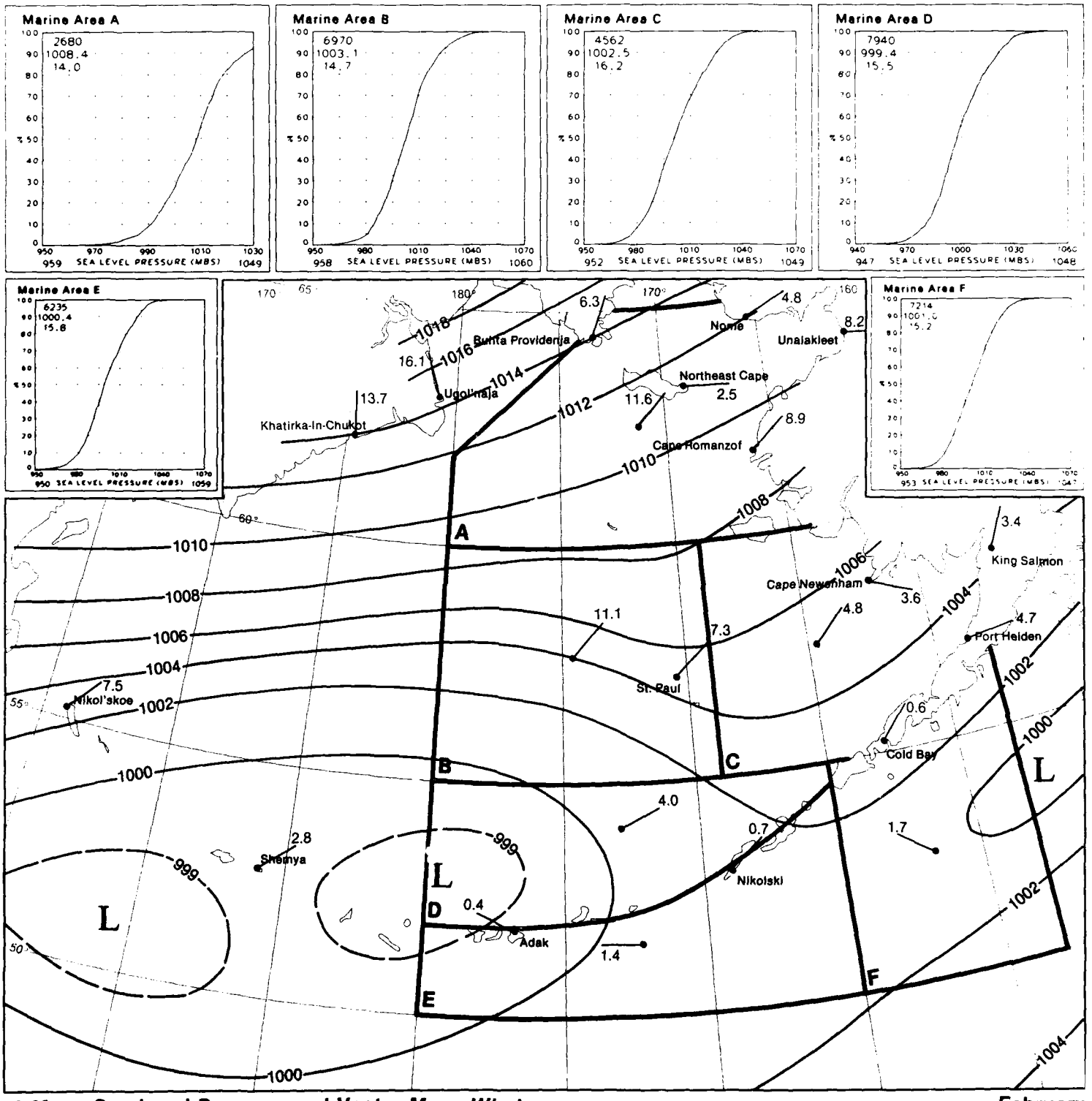
In areas of high persistence (also called constancy, steadiness) of direction, the magnitude of the vector mean wind (Set 1 should closely approach that of the scalar mean wind (Set 13).


Nikol'skoe
4963
1000.3
13.9
942 SEA LEVEL PRESSURE (MBS) 1033
Khatirka-In-Chukot
2979
1011.1
15.8
955 SEA LEVEL PRESSURE (MBS) 1051
Ugol'naja
4802
1010.6
15.6
948 SEA LEVEL PRESSURE (MBS) 1053
Buhta Providenja
3888
1011.9
14.9
954 SEA LEVEL PRESSURE (MBS) 1049
Northeast Cape
5417
1009.3
14.4
965 SEA LEVEL PRESSURE (MBS) 1053
N me
22013
1011.7
14.7
958 SEA LEVEL PRESSURE (MBS) 1056
Unalakleet
15393
1013.4
14.8
962 SEA LEVEL PRESSURE (MBS) 1057
Cape Romanzof
11043
1006.7
959 SEA LEVEL PRESSURE (MBS) 1055
Cape Newenham
11301
1004.1
16.3
953 SEA LEVEL PRESSURE (MBS) 1053
King Salmon
19075
1006.6
16.3
961 SEA LEVEL PRESSURE (MBS) 1052
Port Heiden
296
999.0
13.9
969 SEA LEVEL PRESSURE (MBS) 1032
Cold Bay
13894
1002.7
16.5
951 SEA LEVEL PRESSURE (MBS) 1049
Nikolski
2220
1000.3
15.9
951 SEA LEVEL PRESSURE (MBS) 1047
St. Paul
10862
1003.8
17.0
949 SEA LEVEL PRESSURE (MBS) 1050
Adak
22706
1000.6
16.7
947 SEA LEVEL PRESSURE (MBS) 1041
Shemya
15901
998.7
15.0
949 SEA LEVEL PRESSURE (MBS) 1038
% 50



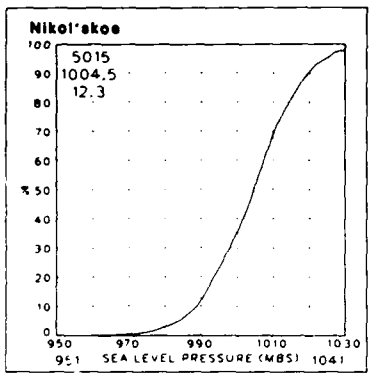
10 Mean Sea Level Pressure and Vector Mean Wind Janu

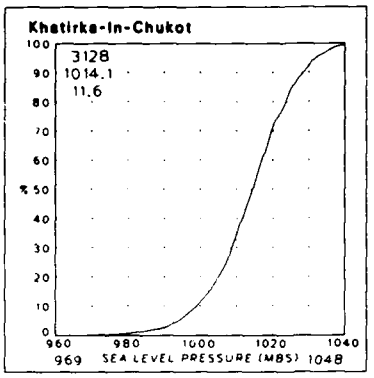

Nikol'skoe
4534
1002.3
13.2
950 SEA LEVEL PRESSURE (MBS) 1040
Khatirka-In-Chukot
2588
1014.4
12.5
968 SEA LEVEL PRESSURE (MBS) 1048
Ugol'naja
4415
1014.3
12.9
966 SEA LEVEL PRESSURE (MBS) 1048
Buhta Providenja
3625
1013.1
12.4
979 SEA LEVEL PRESSURE (MBS) 1049
Norheast Cape
5189
1011.3
12.3
975 SEA LEVEL PRESSURE (MBS) 1043
Nome
20106
1012.2
13.5
958 SEA LEVEL PRESSURE (MBS) 1053
Unalakleet
13973
1011.5
13.3
960 SEA LEVEL PRESSURE (MBS) 1051
Cape Romanzof
10428
1009.7
14.3
968 SEA LEVEL PRESSURE (MBS)
Cape Newenham
10533
1005.7
14.9
957 SEA LEVEL PRESSURE (MBS) 1048
King Salmon
17371
1005.5
14.7
960 SEA LEVEL PRESSURE (MBS) 1044
Port Heiden
182
998.9
15.1
973 SEA LEVEL PRESSURE (MBS) 1045
Cold Bay
12682
1003.6
15.8
952 SEA LEVEL PRESSURE (MBS)
Nikolski
2005
1001.5
13.5
955 SEA LEVEL PRESSURE (MBS) 1037
St. Paul
9864
1005.2
15.F
950 SEA LEVEL PRESSURE (MBS) 1051
Adak
21453
1000.4
15.8
950 SEA LEVEL PRESSURE (MBS) 1044
Shemya
14532
1000.1
14.2
946 SEA LEVEL PRESSURE (MBS) 1041
% 50

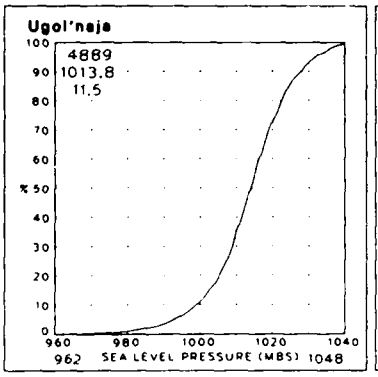


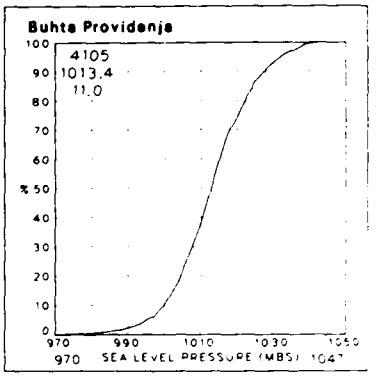
10 Mean Sea Level Pressure and Vector Mean Wind

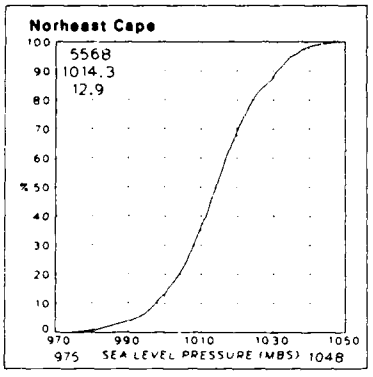
February

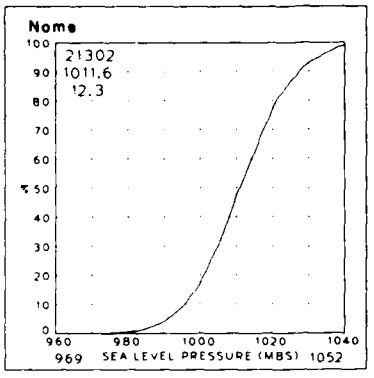

Nikol'skoe
5015
1004.5
12.3
950 970 990 1010 1030
951 SEA LEVEL PRESSURE (MBS) 1041

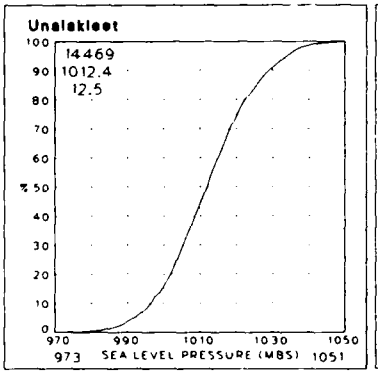

Khatirka-In-Chukot
3128
1014.1
11.6
960 980 1000 1020 1040
969 SEA LEVEL PRESSURE (MBS) 1048

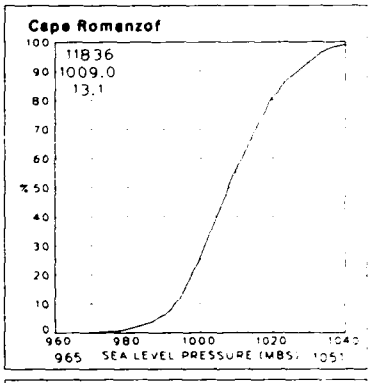

Ugol'naja
4889
1013.8
11.5
960 980 1000 1020 1040
962 SEA LEVEL PRESSURE (MBS) 1048

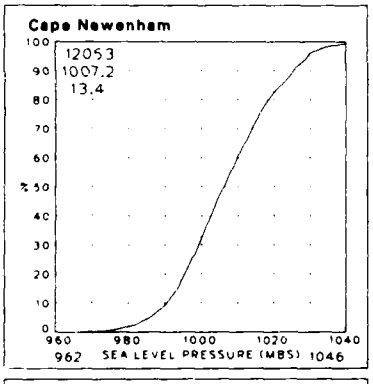

Buhta Providenja
4105
1013.4
11.0
970 990 1010 1030 1050
970 SEA LEVEL PRESSURE (MBS) 1047

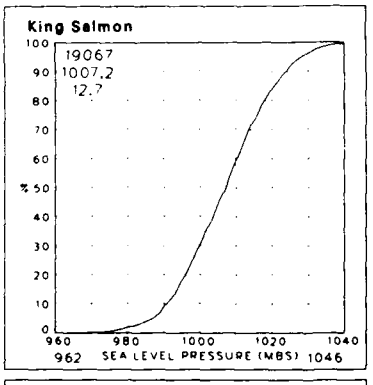

Norheast Cape
5568
1014.3
12.9
970 990 1010 1030 1050
975 SEA LEVEL PRESSURE (MBS) 1048

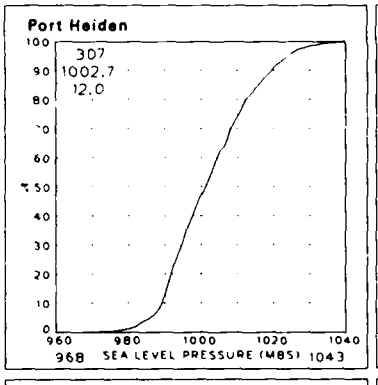

Nome
21302
1011.6
12.3
960 980 1000 1020 1040
969 SEA LEVEL PRESSURE (MBS) 1052

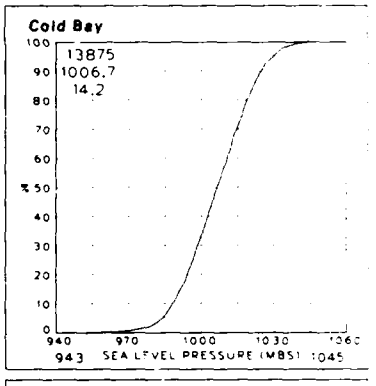

Unalakleet
14469
1012.4
12.5
970 990 1010 1030 1050
973 SEA LEVEL PRESSURE (MBS) 1051

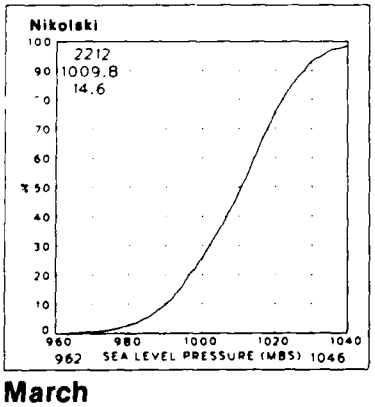

Cape Romanzof
11836
1009.0
13.1
960 980 1000 1020 1040
965 SEA LEVEL PRESSURE (MBS) 1051

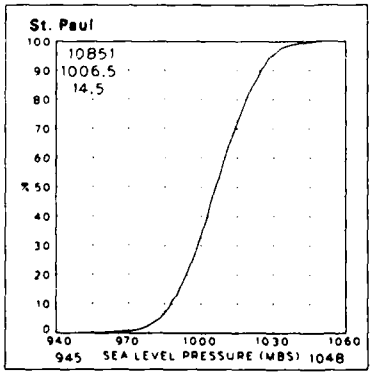

Cape Newenham
12053
1007.2
13.4
960 980 1000 1020 1040
962 SEA LEVEL PRESSURE (MBS) 1046


King Salmon
19067
1007.2
12.7
960 980 1000 1020 1040
962 SEA LEVEL PRESSURE (MBS) 1046


Port Heiden
307
1002.7
12.0
960 980 1000 1020 1040
968 SEA LEVEL PRESSURE (MBS) 1043


Cold Bay
13875
1006.7
14.2
940 970 1000 1030 1060
943 SEA LEVEL PRESSURE (MBS) 1045


Nikolski
2212
1009.8
14.6
960 980 1000 1020 1040
962 SEA LEVEL PRESSURE (MBS) 1046


St. Paul
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1006.5
14.5
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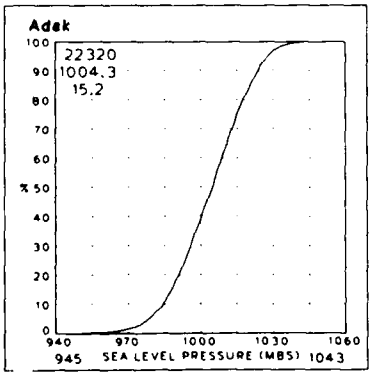
Adak
22320
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15.2
940 970 1000 1030 1060
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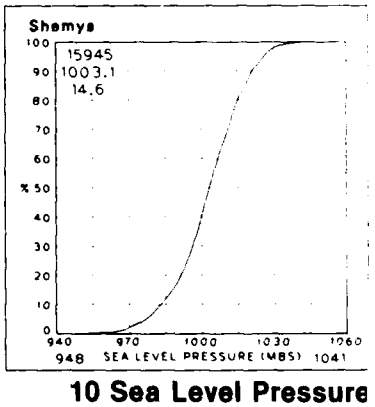
Shemya
15945
1003.1
14.6
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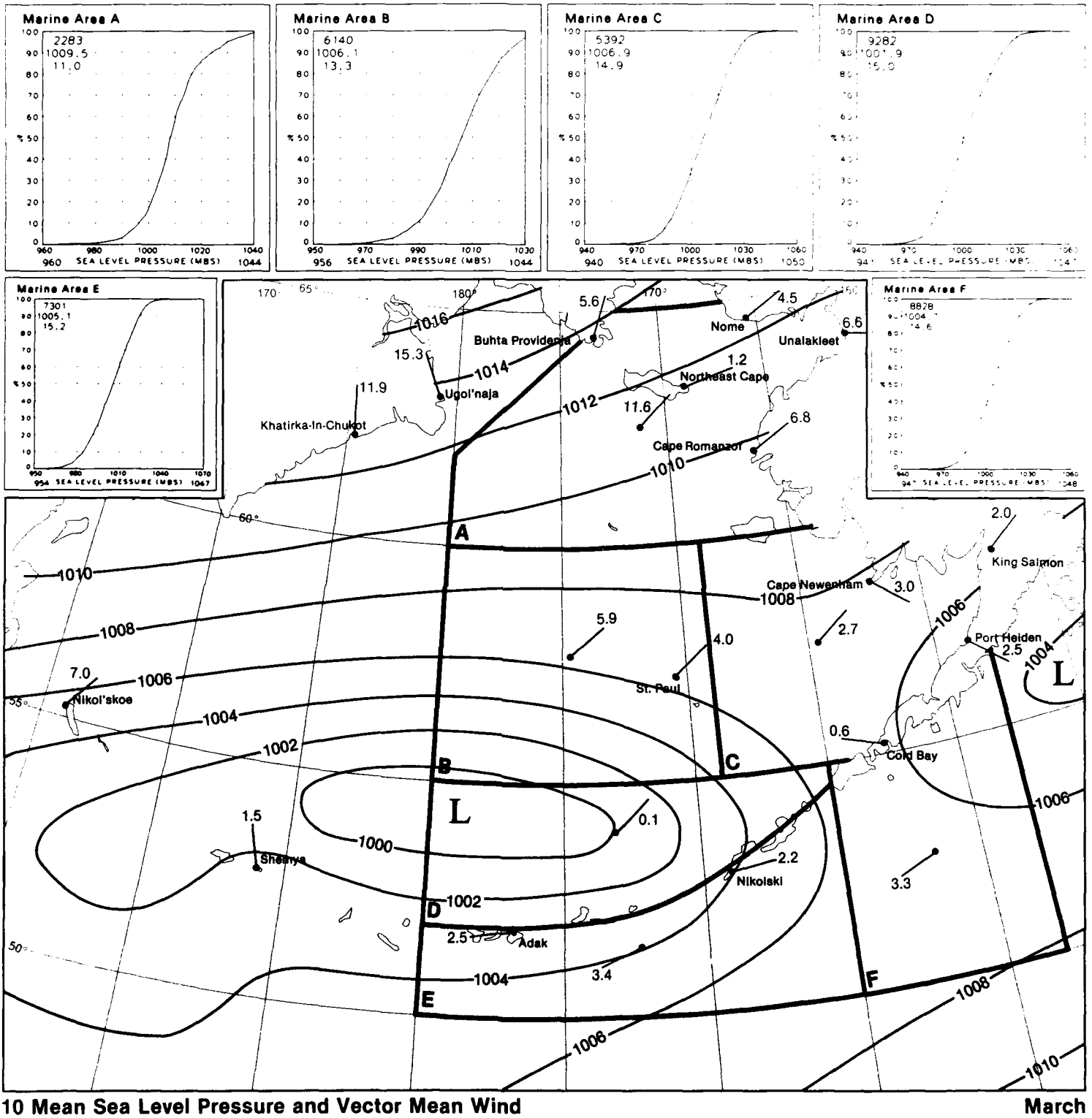
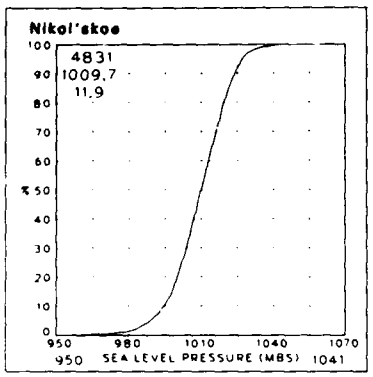


10 Mean Sea Level Pressure and Vector Mean Wind

March


Nikol'skoe
4831
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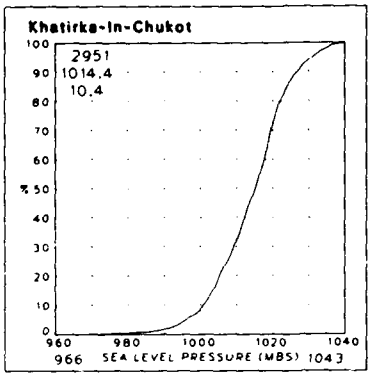
11.9
950 SEA LEVEL PRESSURE (MBS) 1041


Khatirka-In-Chukot
2951
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10.4
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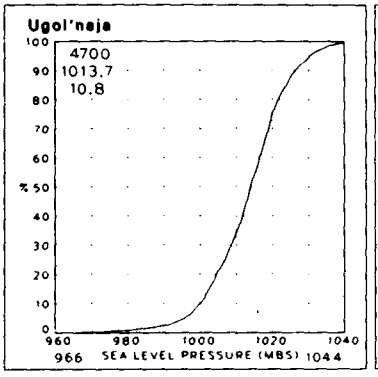
Ugol'naja
4700
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10.8
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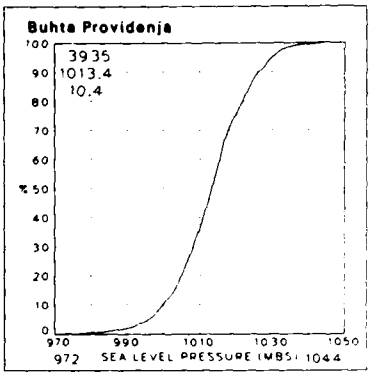
Buhta Providenja
3935
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10.4
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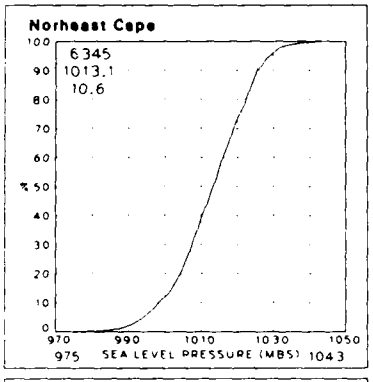
Norheast Cape
6345
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10.6
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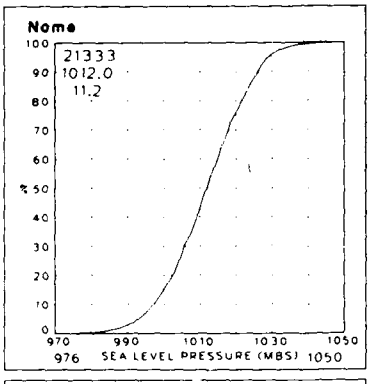
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21333
1012.0
11.2
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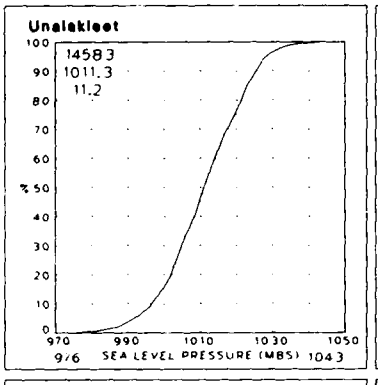
Unalakleet
14583
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11.2
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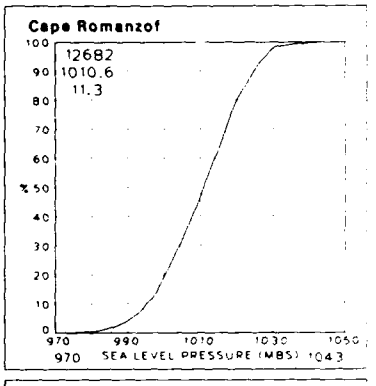
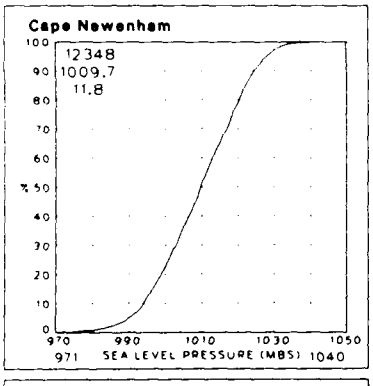

Cape Romanzof
12682
1010.6
11.3
970 SEA LEVEL PRESSURE (MBS) 1043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12348
1009.7
11.8
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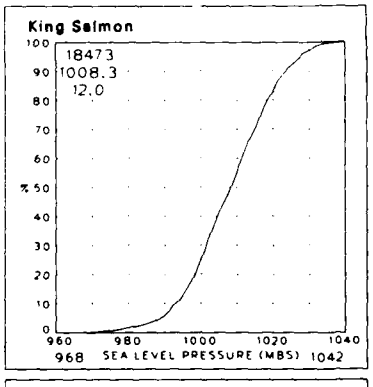
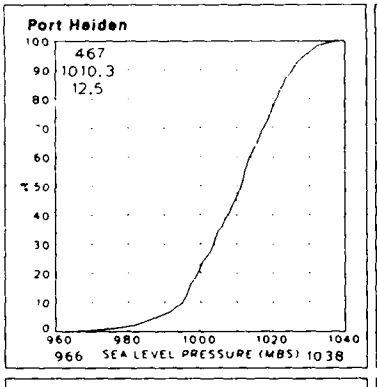

King Salmon
18473
1008.3
12.0
968 SEA LEVEL PRESSURE (MBS) 1042


Port Heiden
467
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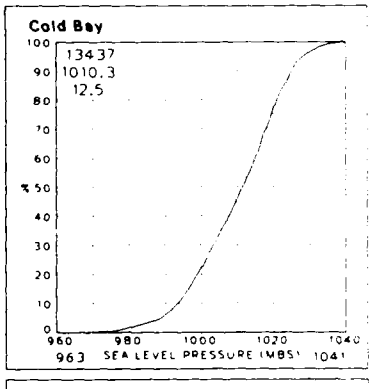
12.5
966 SEA LEVEL PRESSURE (MBS) 1038


Cold Bay
13437
1010.3
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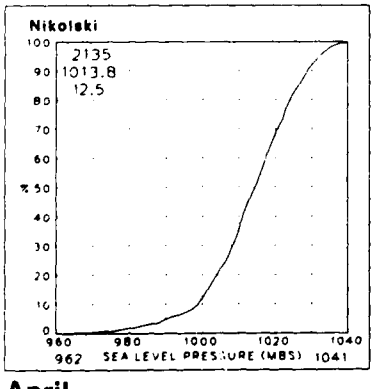
Nikolski
2135
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12.5
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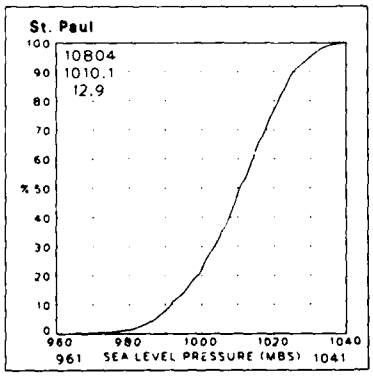
St. Paul
10804
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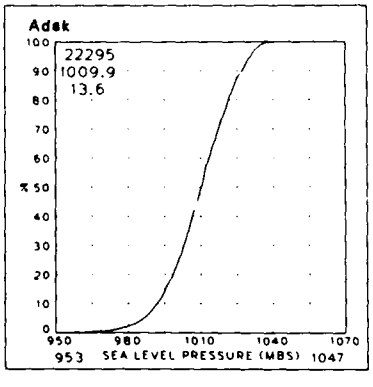
Adak
22295
1009.9
13.6
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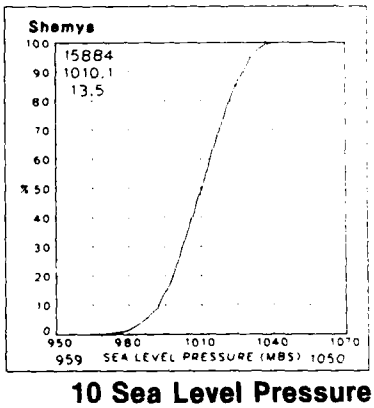
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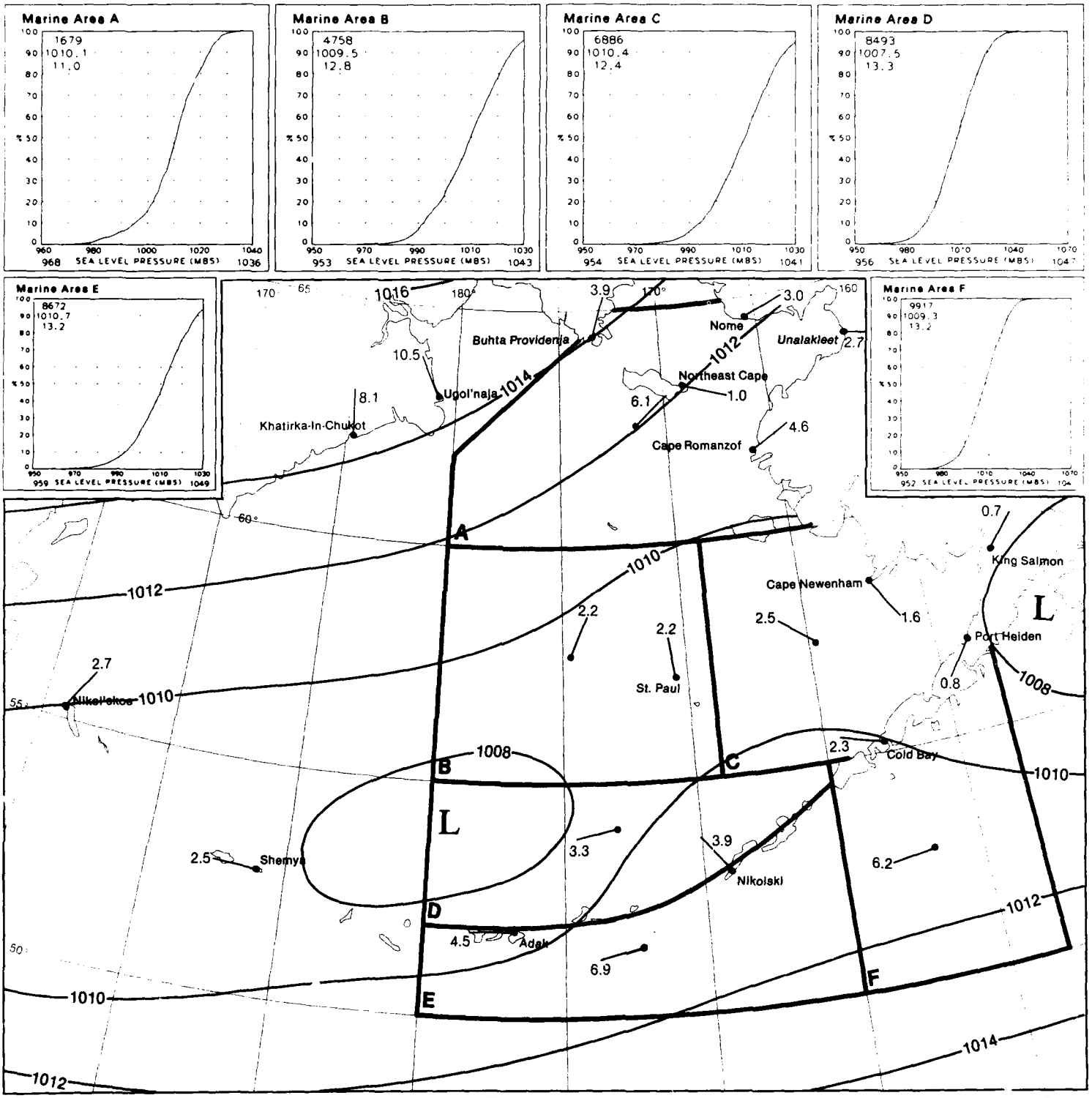
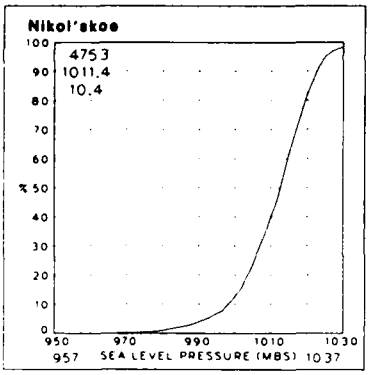
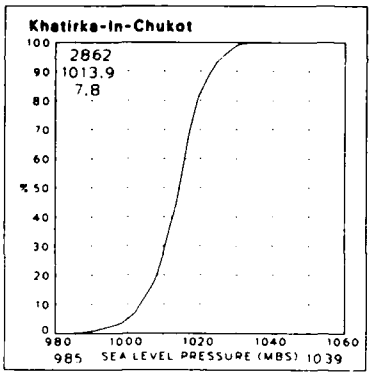
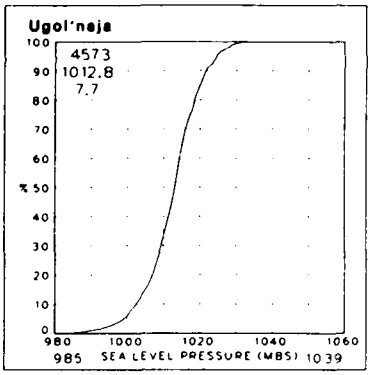


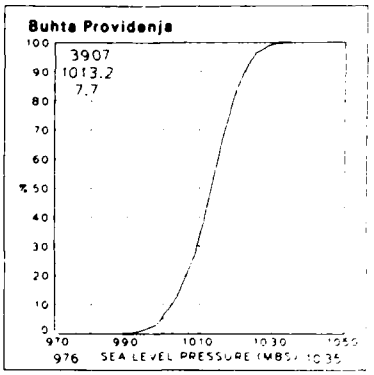
10 Mean Sea Level Pressure and Vector Mean Wind

April


Nikol'skoe
4753
1011.4
10.4
957 SEA LEVEL PRESSURE (MBS) 1037


Khatirka-In-Chukot
2862
1013.9
7.8
985 SEA LEVEL PRESSURE (MBS) 1039


Ugol'naja
4573
1012.8
7.7
985 SEA LEVEL PRESSURE (MBS) 1039


Buhta Providenja
3907
1013.2
7.7
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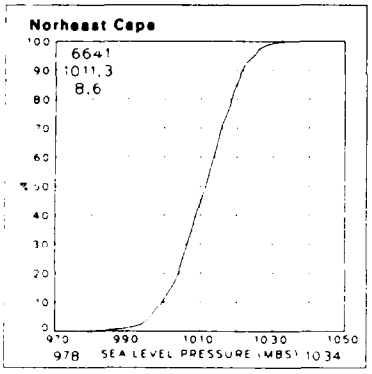
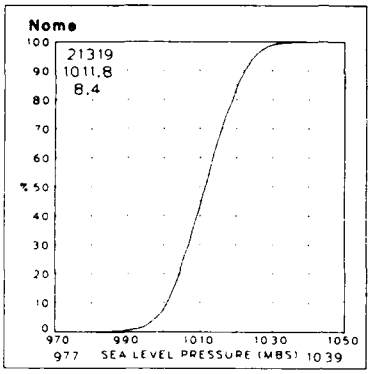

Norheast Cape
6641
1011.3
8.6
978 SEA LEVEL PRESSURE (MBS) 1034


Nome
21319
1011.8
8.4
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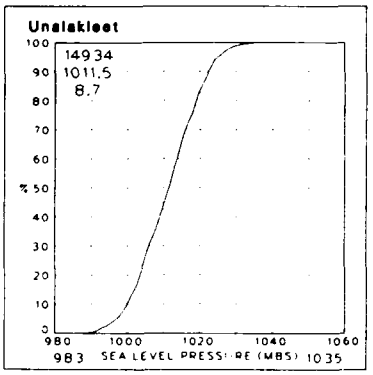
Unalakleet
14934
1011.5
8.7
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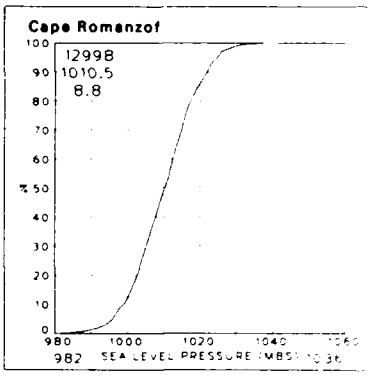
Cape Romanzof
12998
1010.5
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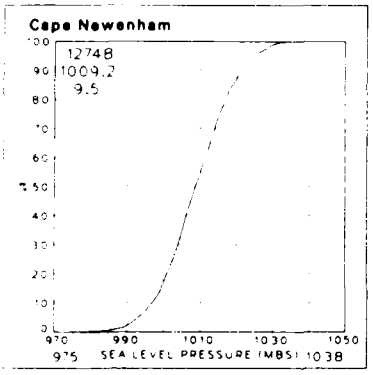
Cape Newenham
12748
1009.2
9.5
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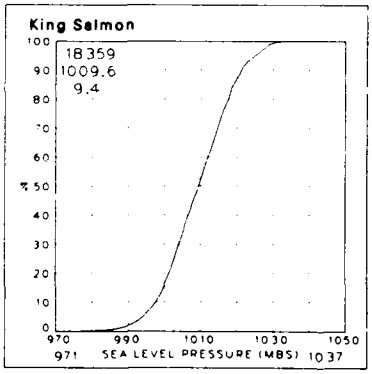
King Salmon
18359
1009.6
9.4
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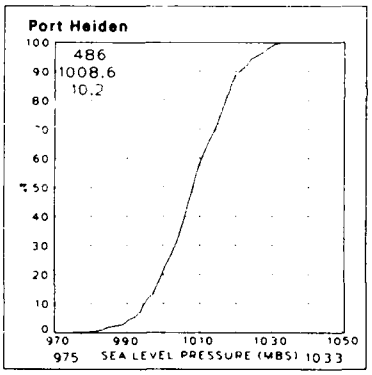
Port Heiden
486
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10.2
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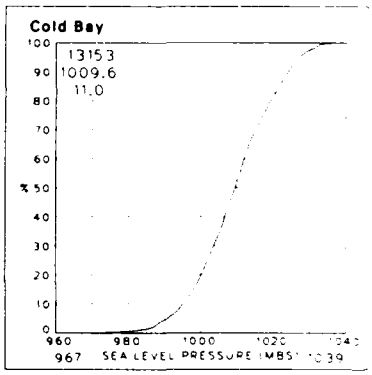
Cold Bay
13153
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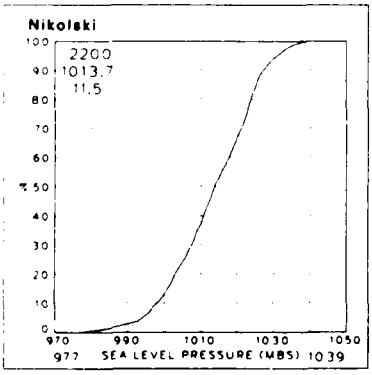
11.0
967 SEA LEVEL PRESSURE (MBS) 1039


Nikolski
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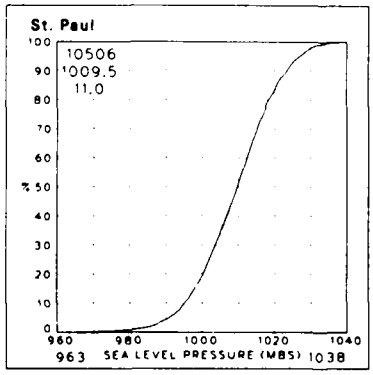
St. Paul
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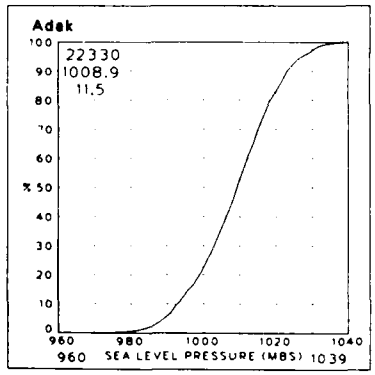
Adak
22330
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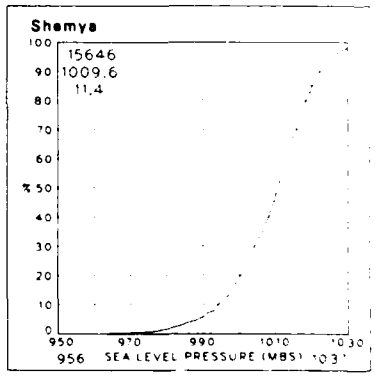
960 SEA LEVEL PRESSURE (MBS) 1039


Shemya
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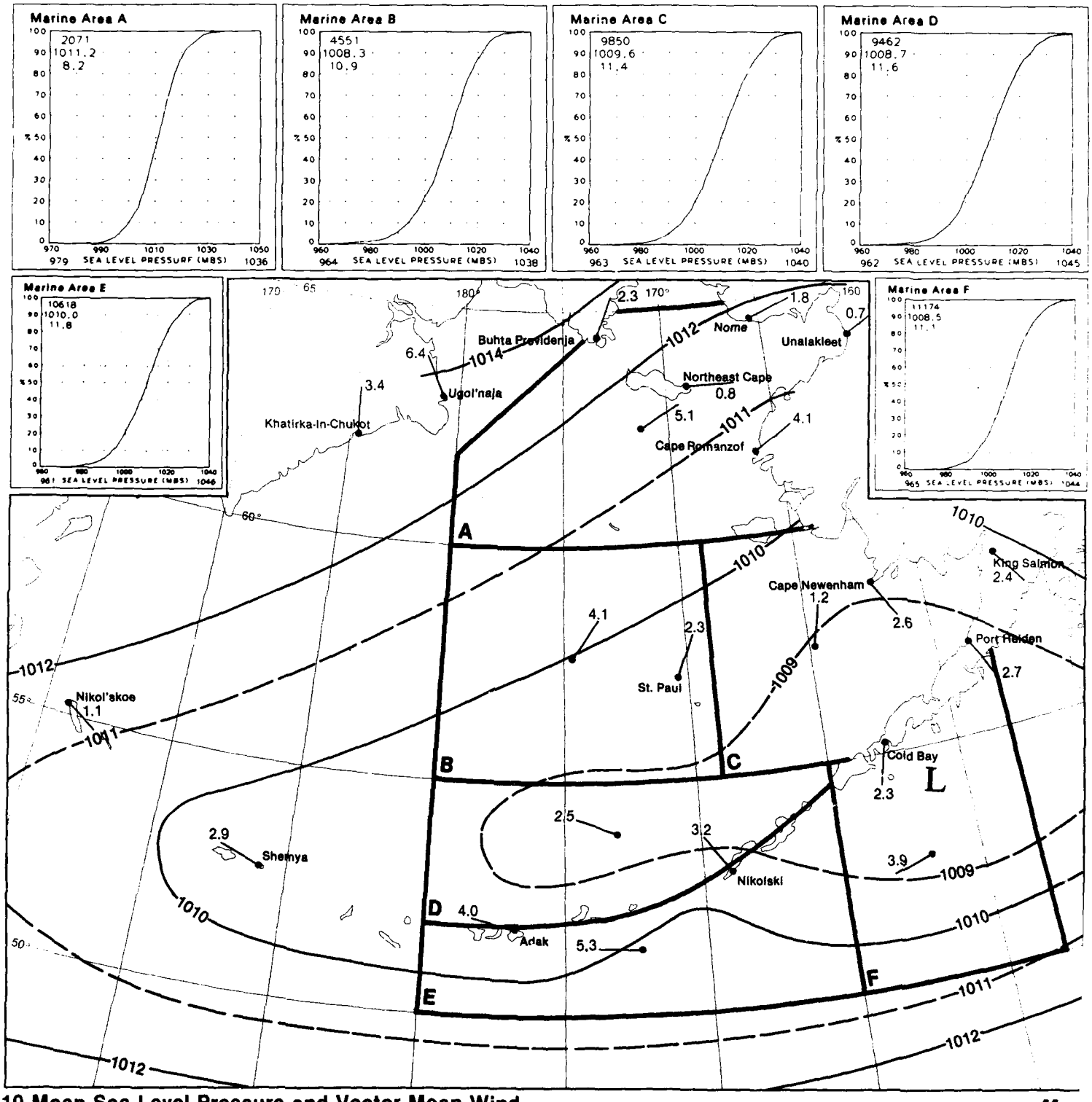
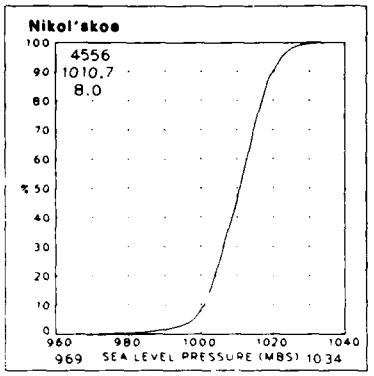
956 SEA LEVEL PRESSURE (MBS) 1037



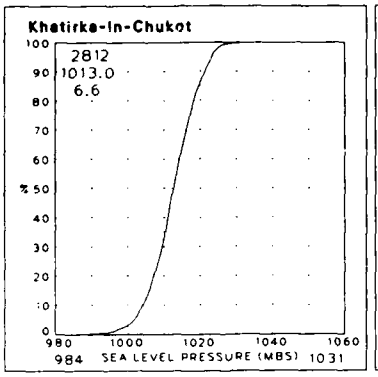
10 Mean Sea Level Pressure and Vector Mean Wind

May

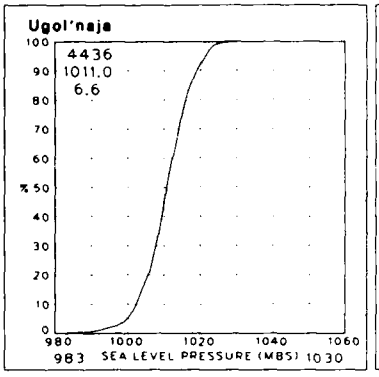
Nikol'skoe



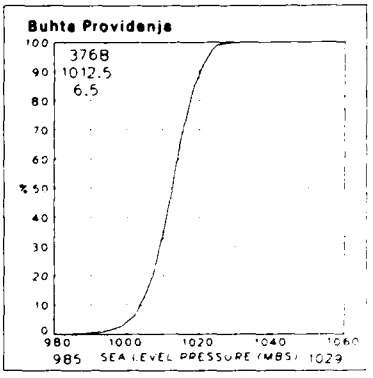
Khatirka-In-Chukot



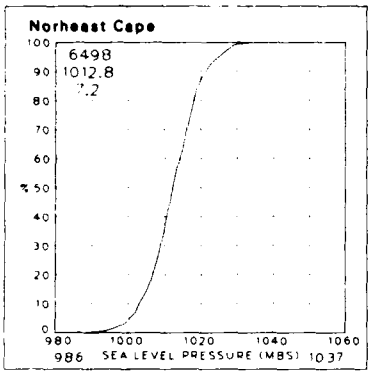
Ugol'naja



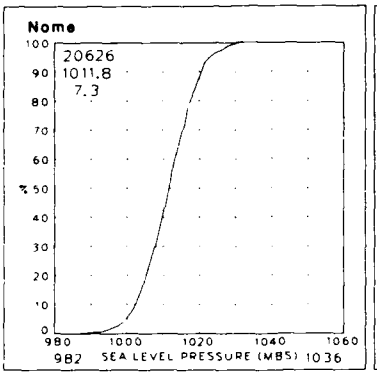
Buhta Providenja



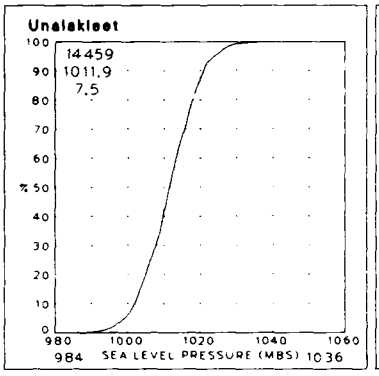
Norheast Cape



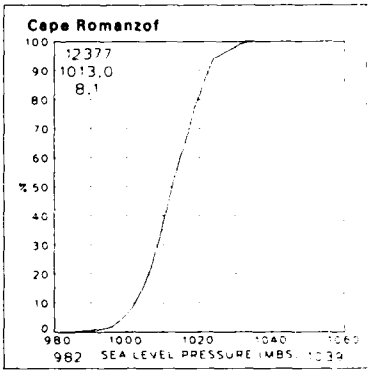
Nome



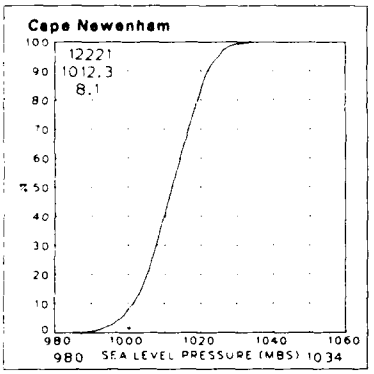
Unalakleet



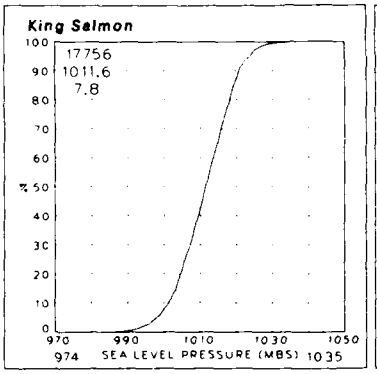
Cape Romanzof



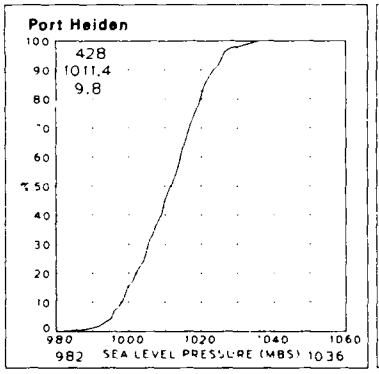
Cape Newenham



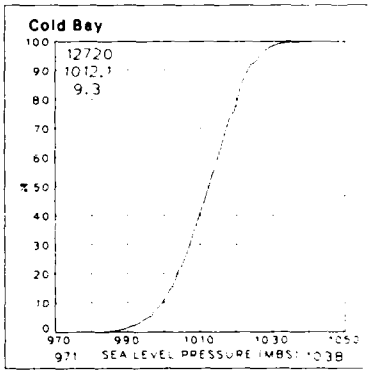
King Salmon



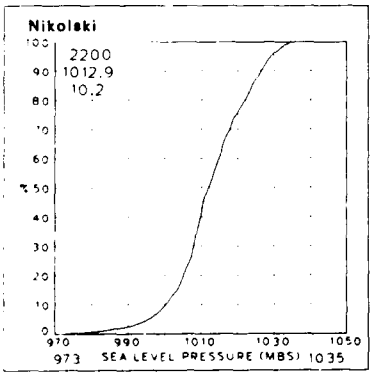
Port Heiden



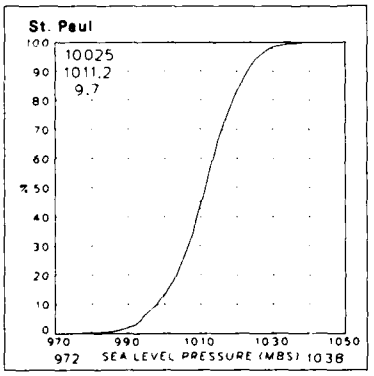
Cold Bay



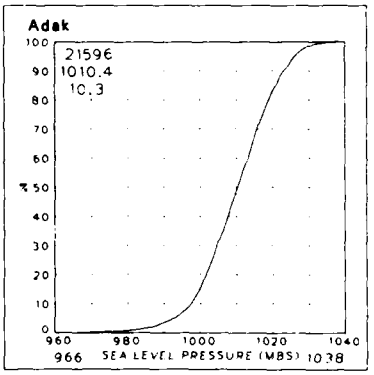
Nikolski



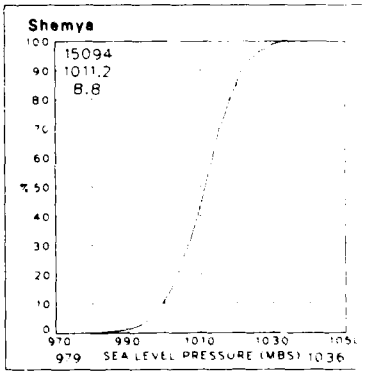
St. Paul

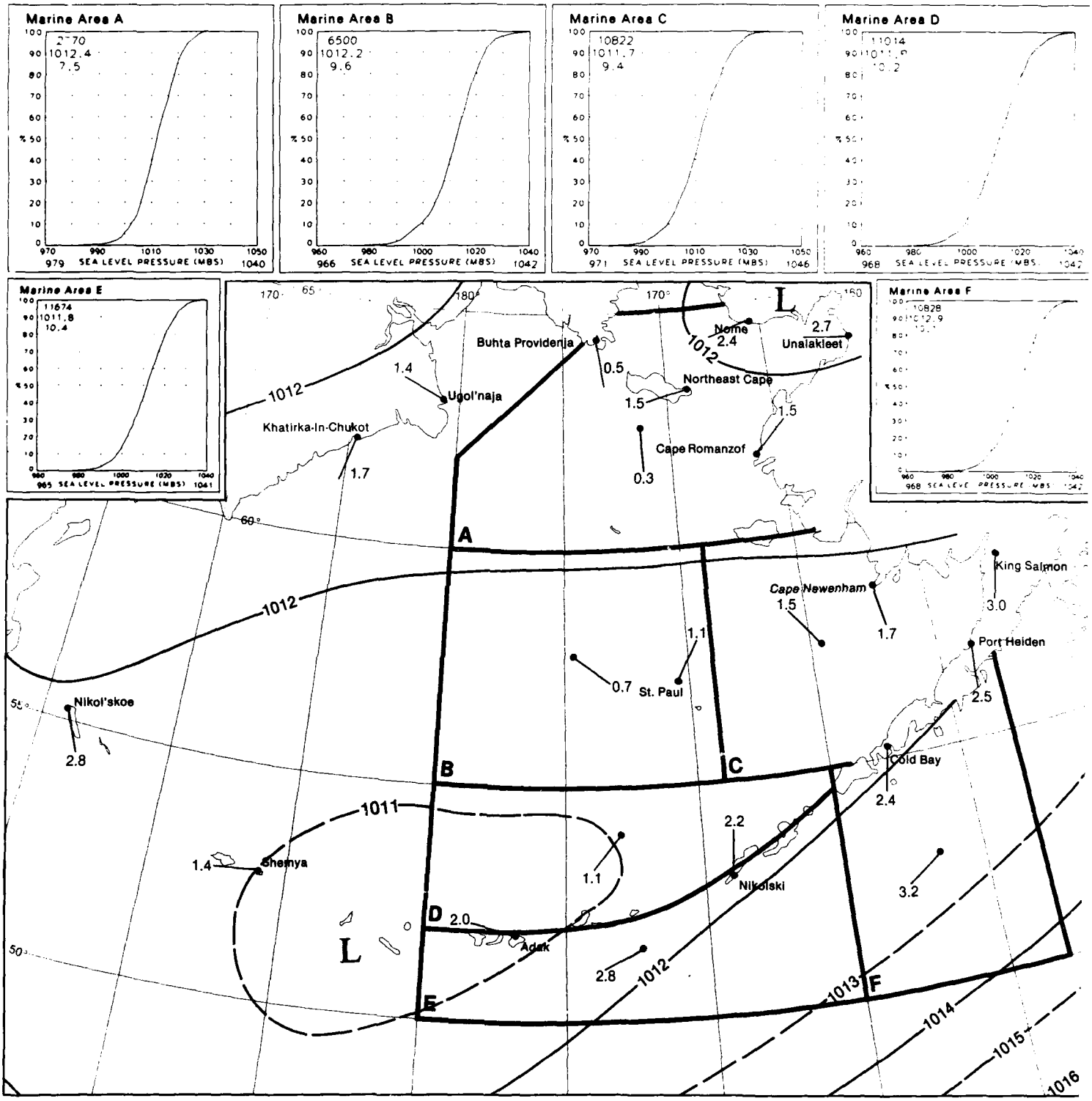


Adak



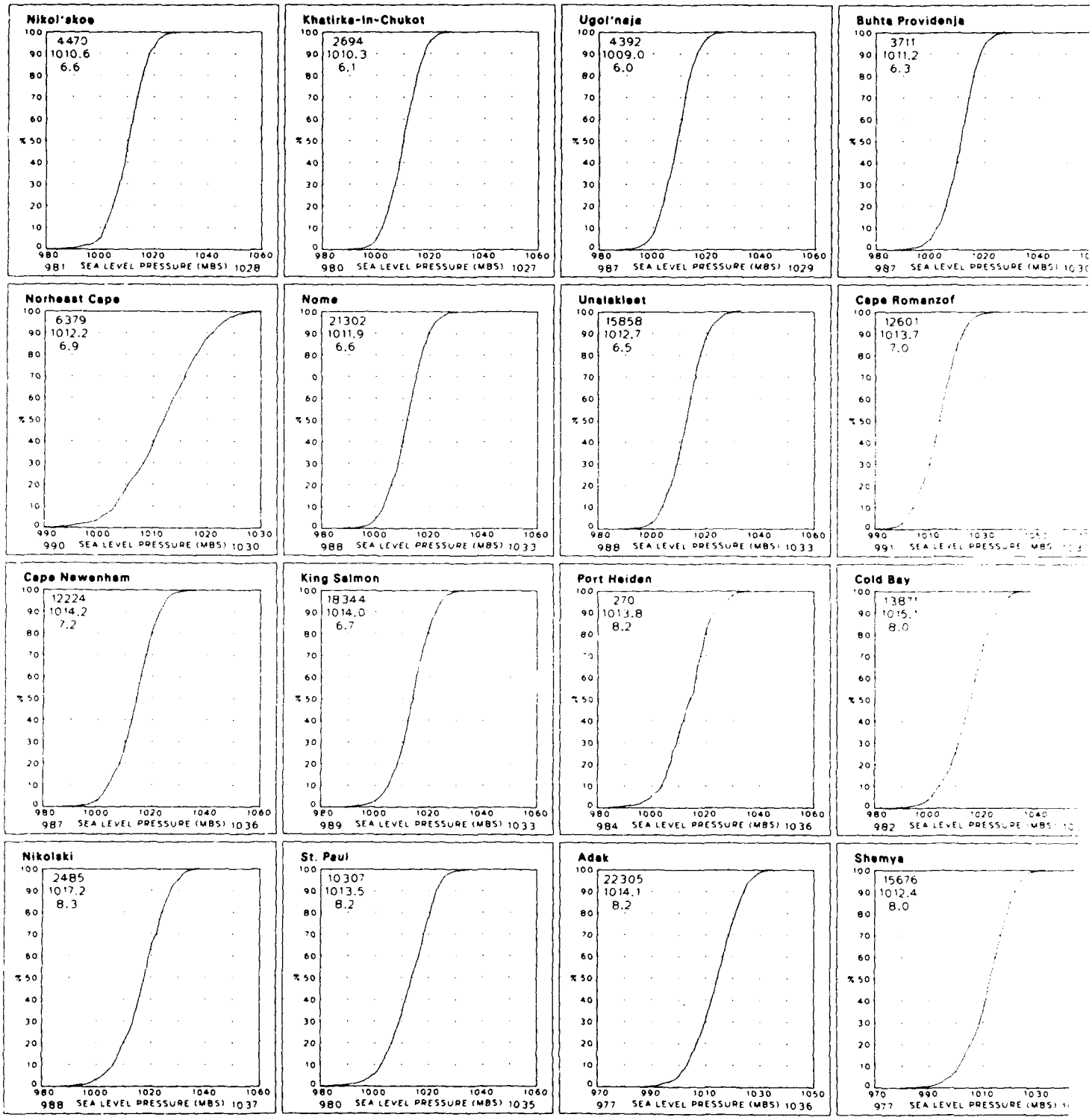
Shemya





10 Mean Sea Level Pressure and Vector Mean Wind

Jun


Nikol'skoe
4470
1010.6
6.6
981 SEA LEVEL PRESSURE (MBS) 1028
Khatirka-in-Chukot
2694
1010.3
6.1
980 SEA LEVEL PRESSURE (MBS) 1027
Ugol'naja
4392
1009.0
6.0
987 SEA LEVEL PRESSURE (MBS) 1029
Buhta Providenja
3711
1011.2
6.3
987 SEA LEVEL PRESSURE (MBS)
Northeast Cape
6379
1012.2
6.9
990 SEA LEVEL PRESSURE (MBS) 1030
Nome
21302
1011.9
6.6
988 SEA LEVEL PRESSURE (MBS) 1033
Unalakleet
15858
1012.7
6.5
988 SEA LEVEL PRESSURE (MBS) 1033
Cape Romanzof
12601
1013.7
7.0
Cape Newenham
12224
1014.2
7.2
987 SEA LEVEL PRESSURE (MBS) 1036
King Salmon
18344
1014.0
6.7
989 SEA LEVEL PRESSURE (MBS) 1033
Port Heiden
270
1013.8
8.2
984 SEA LEVEL PRESSURE (MBS) 1036
Cold Bay
1387
1015.
8.0
982 SEA LEVEL PRESSURE
Nikolski
2485
1017.2
8.3
988 SEA LEVEL PRESSURE (MBS) 1037
St. Paul
10307
1013.5
8.2
980 SEA LEVEL PRESSURE (MBS) 1035
Adak
22305
1014.1
8.2
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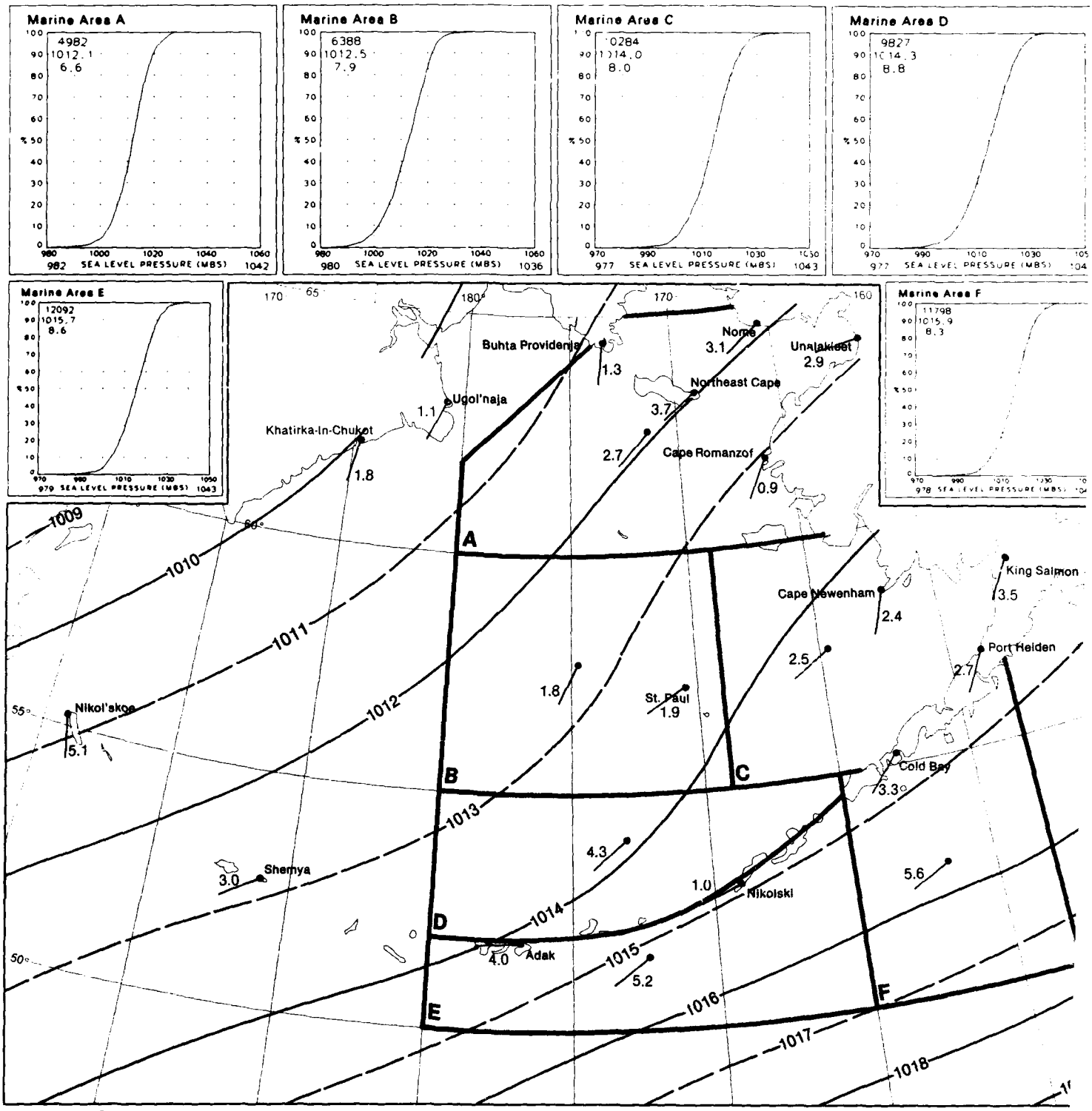
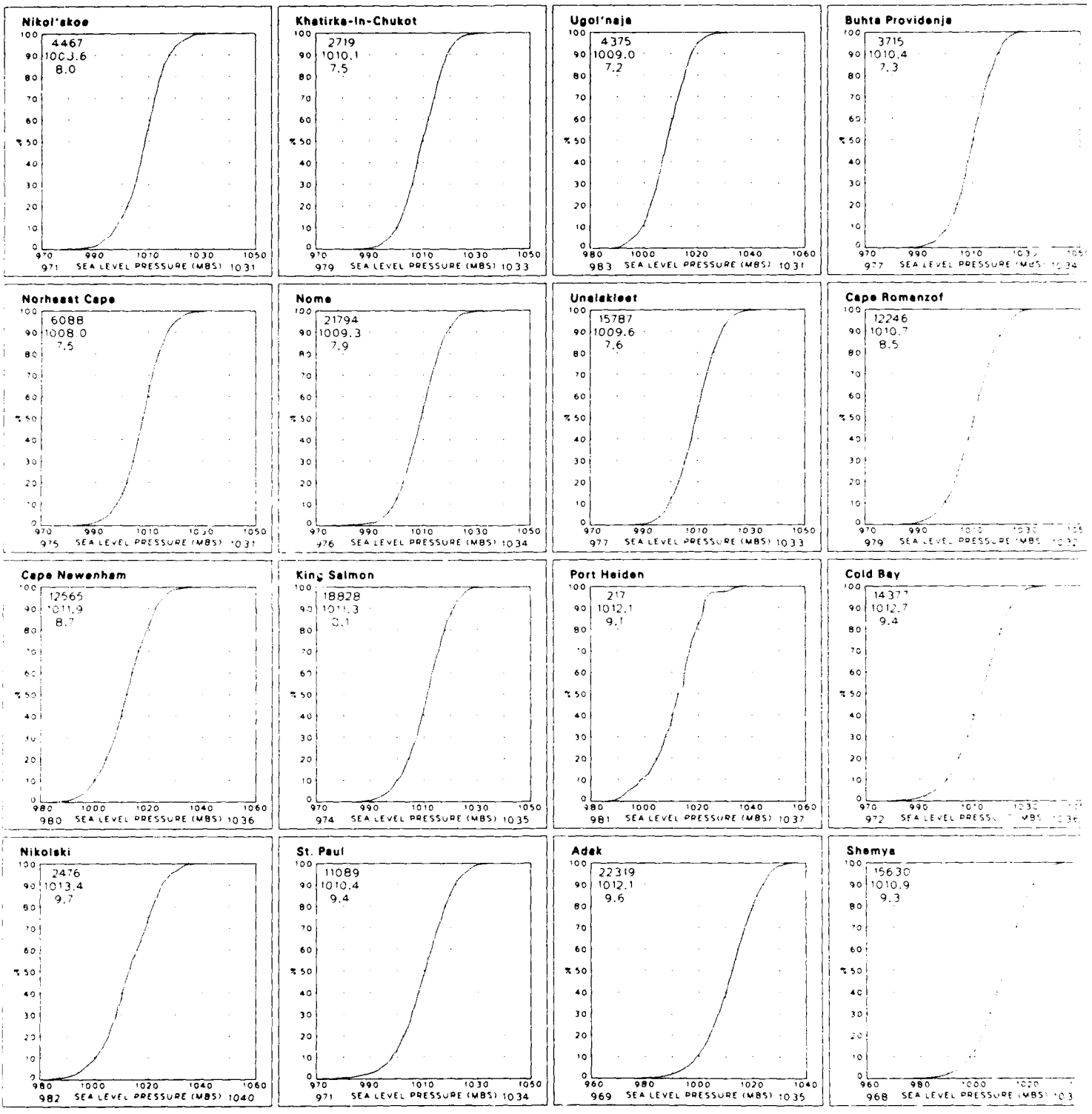
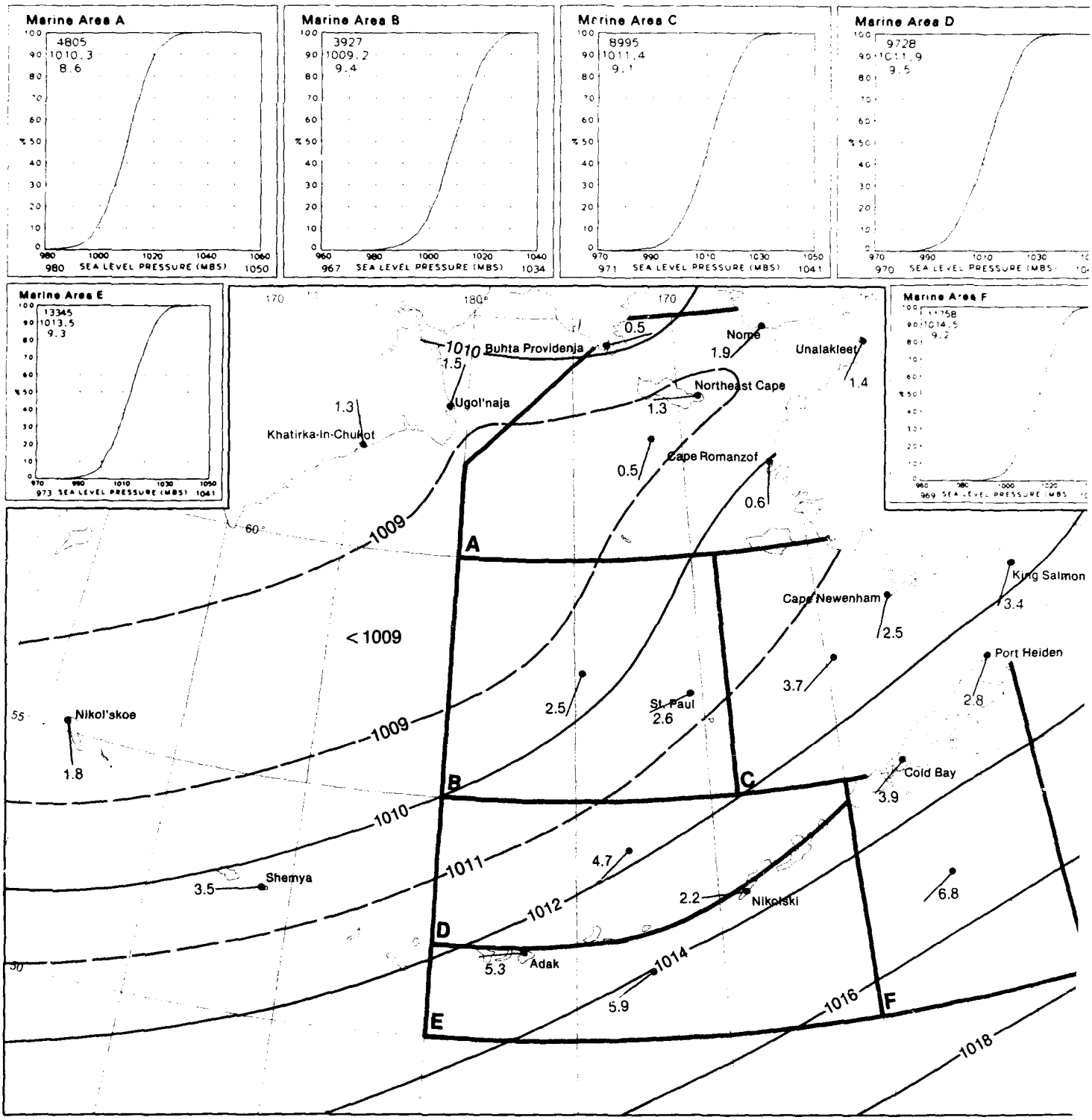
Shemya
15676
1012.4
8.0
977 SEA LEVEL PRESSURE (MBS)
% 50



10 Mean Sea Level Pressure and Vector Mean Wind

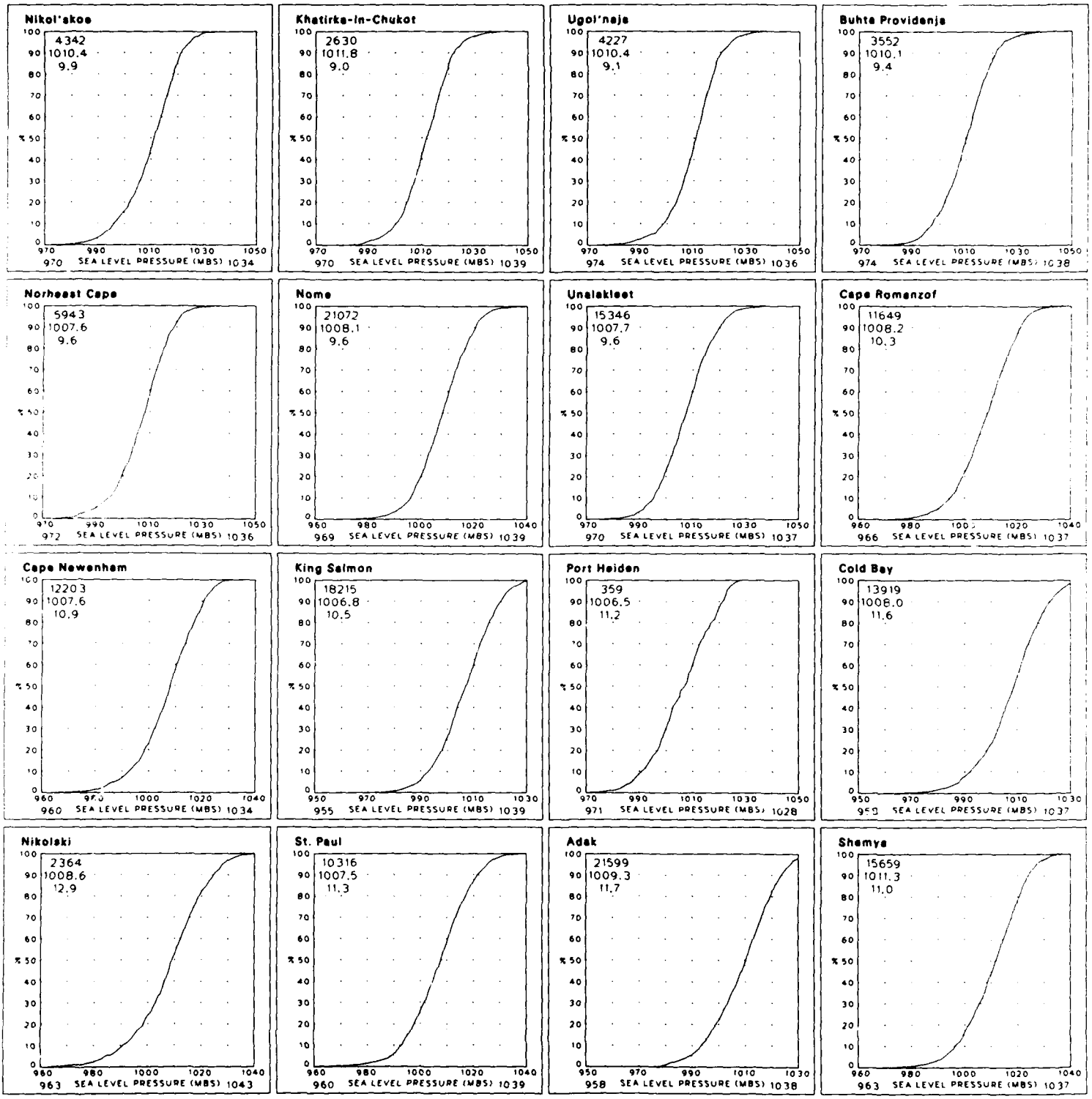
J

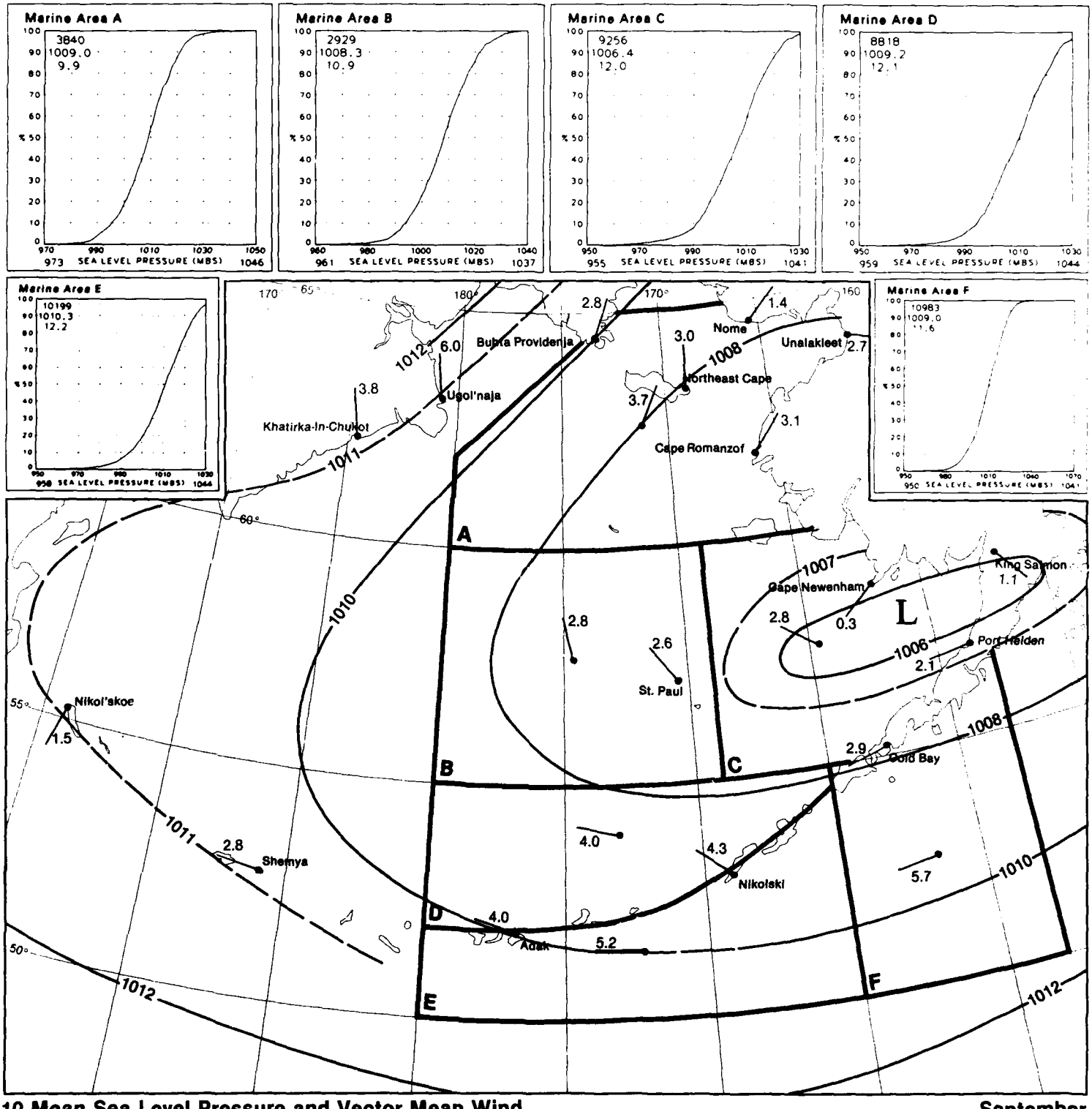

Nikol'skoe
4467
1003.6
8.0
971
Khatirka-In-Chukot
2719
1010.1
7.5
979
Ugol'naja
4375
1009.0
7.2
983
Buhta Providenja
3715
1010.4
7.3
977
Norheast Cape
6088
1008.0
7.5
975
Nome
21794
1009.3
7.9
976
Unalakleet
15787
1009.6
7.6
977
Cape Romanzof
12246
1010.7
8.5
979
Cape Newenham
12565
1011.9
8.7
980
King Salmon
18828
1011.3
8.1
974
Port Heiden
217
1012.1
9.1
981
Cold Bay
14377
1012.7
9.4
972
Nikolski
2476
1013.4
9.7
982
St. Paul
11089
1010.4
9.4
971
Adak
22319
1012.1
9.6
969
Shemya
15630
1010.9
9.3
968
% 50
SEA LEVEL PRESSURE (MBS)



10 Mean Sea Level Pressure and Vector Mean Wind

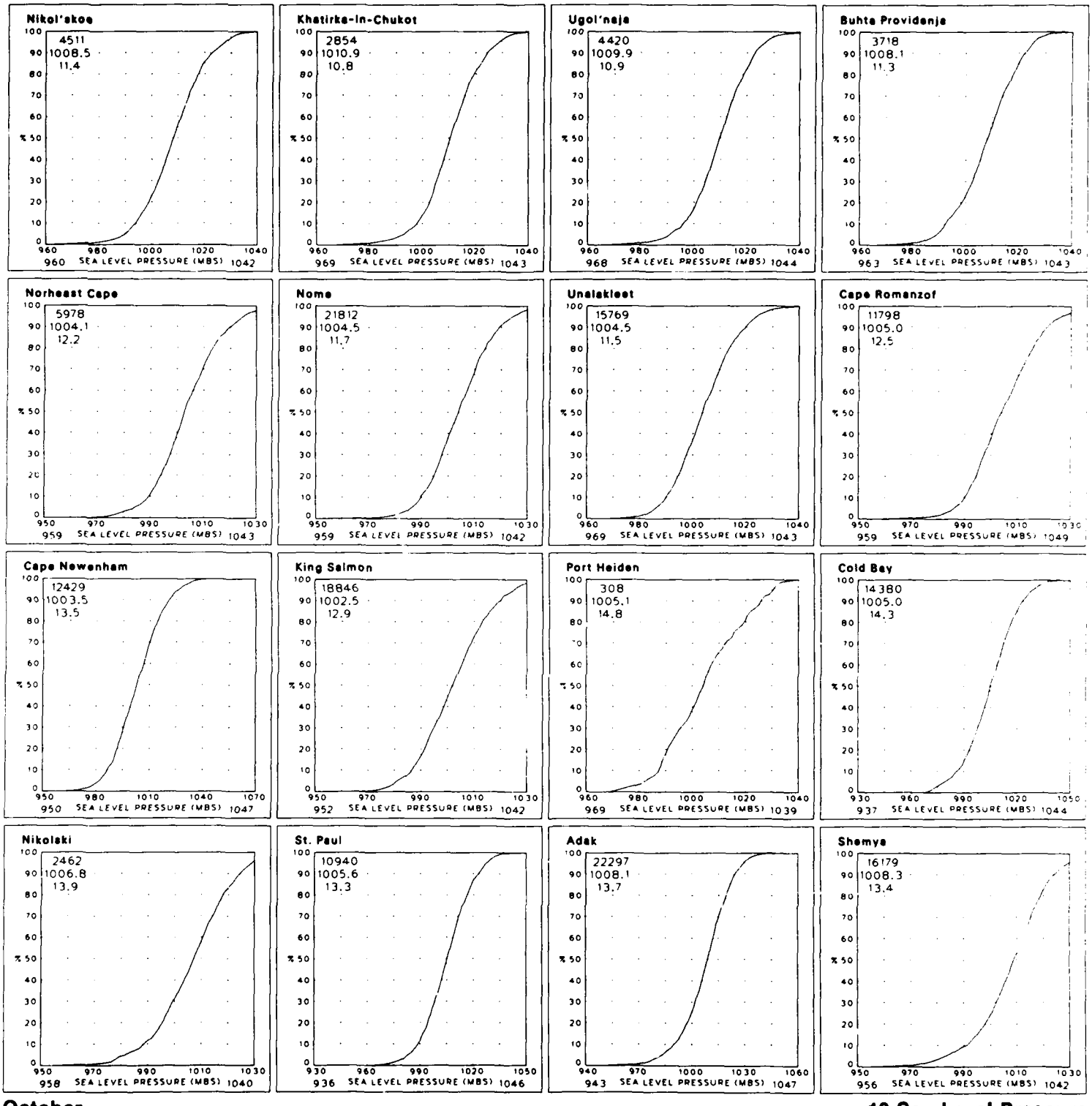
Aug

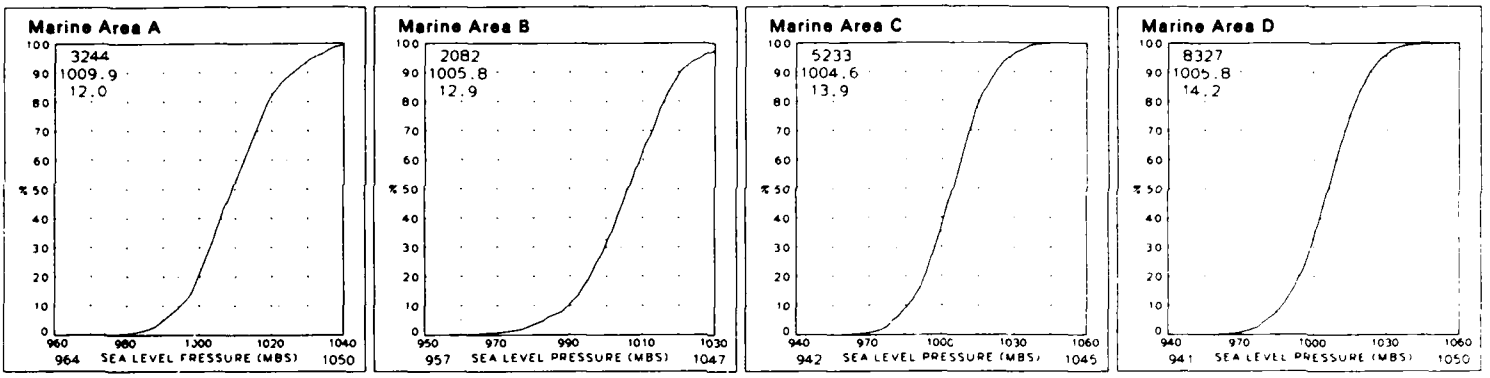

Nikol'skoe
4342
1010.4
9.9
970 SEA LEVEL PRESSURE (MBS) 1034
Khatirka-In-Chukot
2630
1011.8
9.0
970 SEA LEVEL PRESSURE (MBS) 1039
Ugol'naja
4227
1010.4
9.1
974 SEA LEVEL PRESSURE (MBS) 1036
Buhta Providenja
3552
1010.1
9.4
974 SEA LEVEL PRESSURE (MBS) 1038
Norheast Cape
5943
1007.6
9.6
972 SEA LEVEL PRESSURE (MBS) 1036
Nome
21072
1008.1
9.6
969 SEA LEVEL PRESSURE (MBS) 1039
Unalakleet
15346
1007.7
9.6
970 SEA LEVEL PRESSURE (MBS) 1037
Cape Romanzof
11649
1008.2
10.3
966 SEA LEVEL PRESSURE (MBS) 1037
Cape Newenham
12203
1007.6
10.9
960 SEA LEVEL PRESSURE (MBS) 1034
King Salmon
18215
1006.8
10.5
955 SEA LEVEL PRESSURE (MBS) 1039
Port Heiden
359
1006.5
11.2
971 SEA LEVEL PRESSURE (MBS) 1028
Cold Bay
13919
1008.0
11.6
SEA LEVEL PRESSURE (MBS) 1037
Nikolski
2364
1008.6
12.9
963 SEA LEVEL PRESSURE (MBS) 1043
St. Paul
10316
1007.5
11.3
960 SEA LEVEL PRESSURE (MBS) 1039
Adak
21599
1009.3
11.7
958 SEA LEVEL PRESSURE (MBS) 1038
Shemya
15659
1011.3
11.0
963 SEA LEVEL PRESSURE (MBS) 1037
% 50

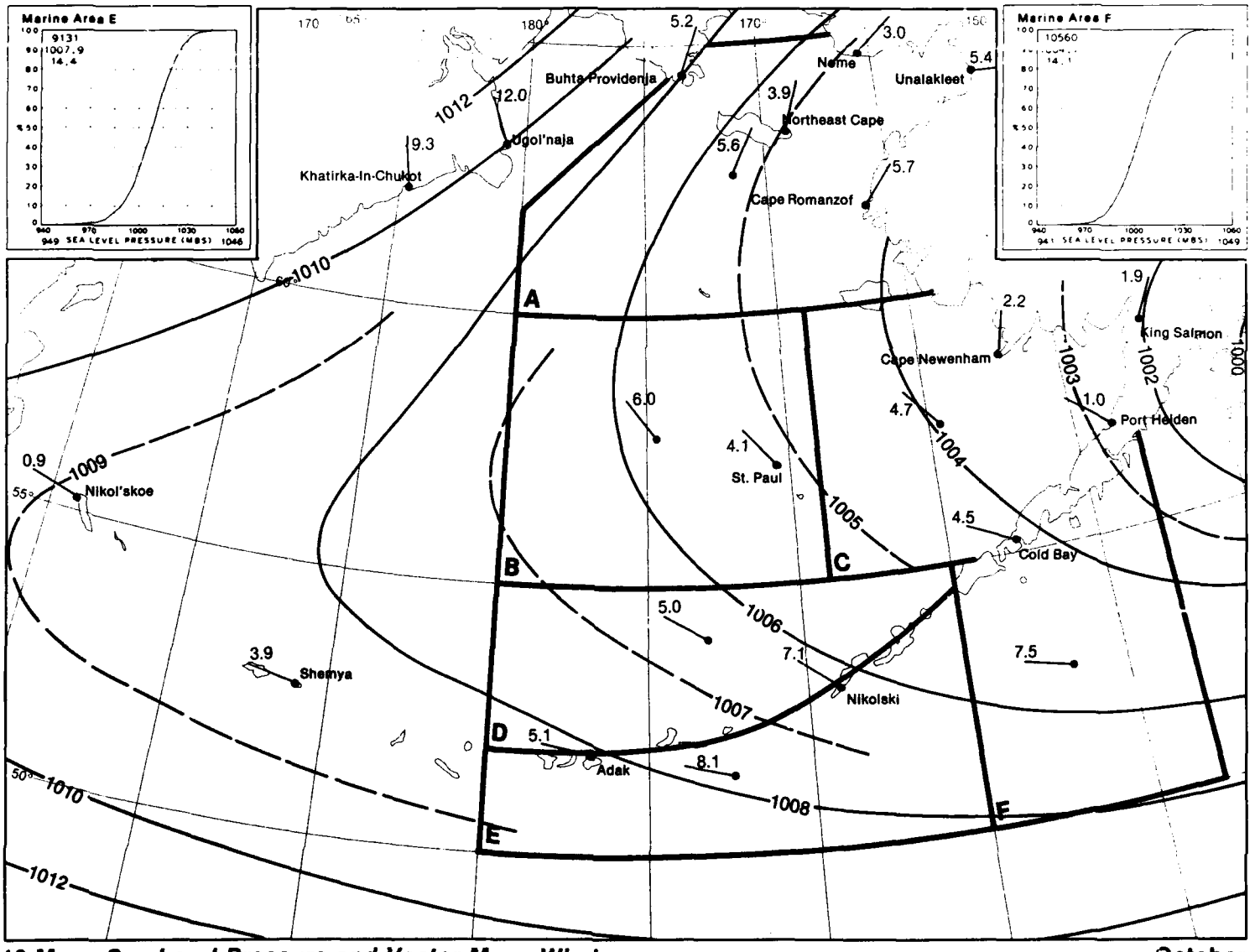


10 Mean Sea Level Pressure and Vector Mean Wind

September

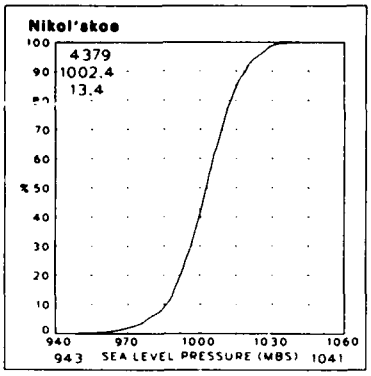

Nikol'skoe
4511
1008.5
11.4
960 SEA LEVEL PRESSURE (MBS) 1042
Khatirka-In-Chukot
2854
1010.9
10.8
969 SEA LEVEL PRESSURE (MBS) 1043
Ugol'naja
4420
1009.9
10.9
968 SEA LEVEL PRESSURE (MBS) 1044
Buhta Providenje
3718
1008.1
11.3
963 SEA LEVEL PRESSURE (MBS) 1043
Norheast Cape
5978
1004.1
12.2
959 SEA LEVEL PRESSURE (MBS) 1043
Nome
21812
1004.5
11.7
959 SEA LEVEL PRESSURE (MBS) 1042
Unalakleet
15769
1004.5
11.5
969 SEA LEVEL PRESSURE (MBS) 1043
Cape Romanzof
11798
1005.0
12.5
959 SEA LEVEL PRESSURE (MBS) 1049
Cape Newenham
12429
1003.5
13.5
950 SEA LEVEL PRESSURE (MBS) 1047
King Salmon
18846
1002.5
12.9
952 SEA LEVEL PRESSURE (MBS) 1042
Port Heiden
308
1005.1
14.8
969 SEA LEVEL PRESSURE (MBS) 1039
Cold Bay
14380
1005.0
14.3
937 SEA LEVEL PRESSURE (MBS) 1044
Nikolski
2462
1006.8
13.9
958 SEA LEVEL PRESSURE (MBS) 1040
St. Paul
10940
1005.6
13.3
936 SEA LEVEL PRESSURE (MBS) 1046
Adak
22297
1008.1
13.7
943 SEA LEVEL PRESSURE (MBS) 1047
Shemya
16179
1008.3
13.4
956 SEA LEVEL PRESSURE (MBS) 1042
% 50

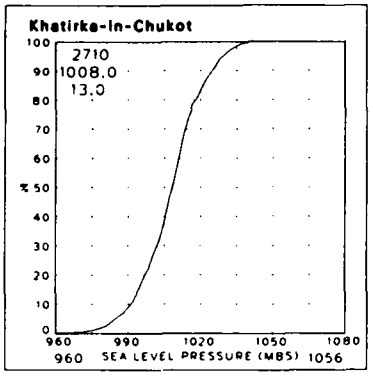


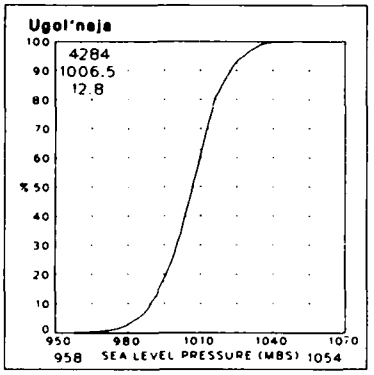


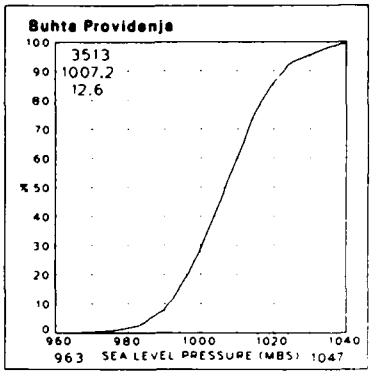
10 Mean Sea Level Pressure and Vector Mean Wind

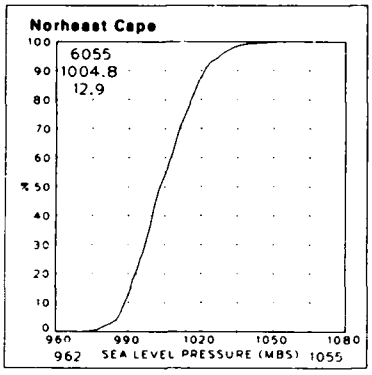
October

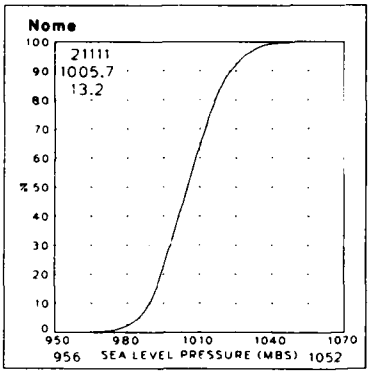

Nikol'skoe
4379
1002.4
13.4
943
SEA LEVEL PRESSURE (MBS)
1041

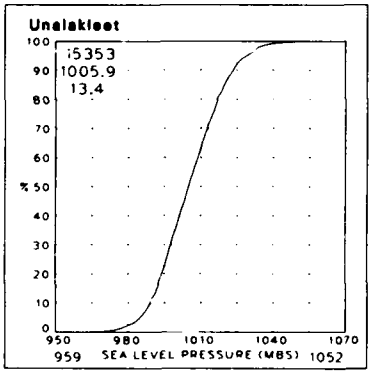

Khatirka-In-Chukot
2710
1008.0
13.0
960
SEA LEVEL PRESSURE (MBS)
1056

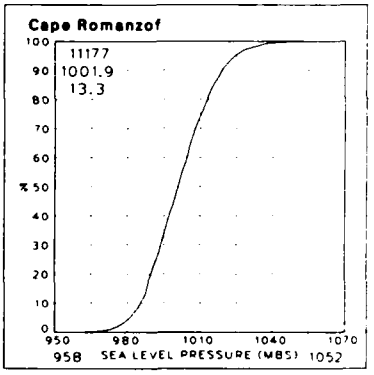

Ugol'naja
4284
1006.5
12.8
958
SEA LEVEL PRESSURE (MBS)
1054

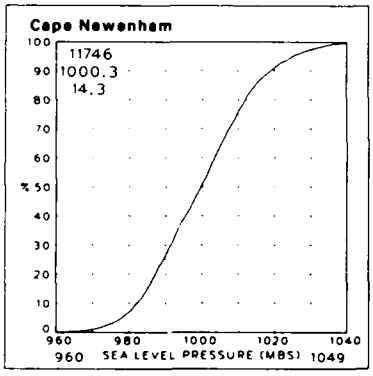

Buhta Providenja
3513
1007.2
12.6
963
SEA LEVEL PRESSURE (MBS)
1047

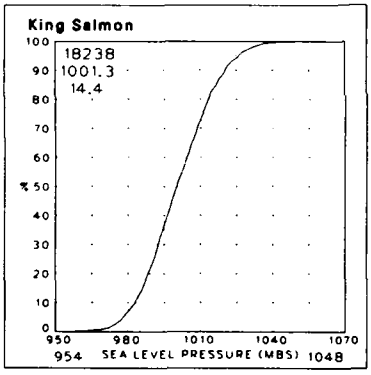

Norheast Cape
6055
1004.8
12.9
962
SEA LEVEL PRESSURE (MBS)
1055

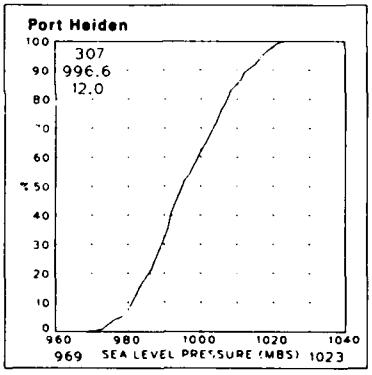

Nome
21111
1005.7
13.2
956
SEA LEVEL PRESSURE (MBS)
1052

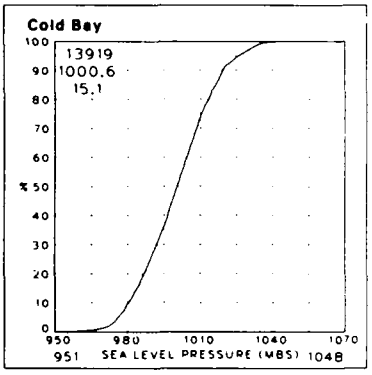

Unalakleet
15353
1005.9
13.4
959
SEA LEVEL PRESSURE (MBS)
1052

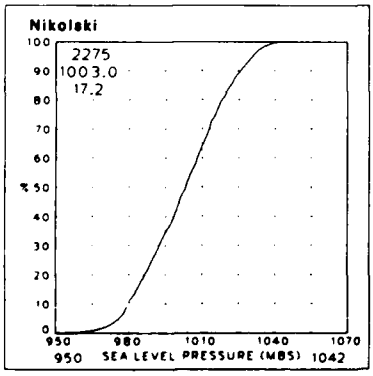

Cape Romanzof
11177
1001.9
13.3
958
SEA LEVEL PRESSURE (MBS)
1052

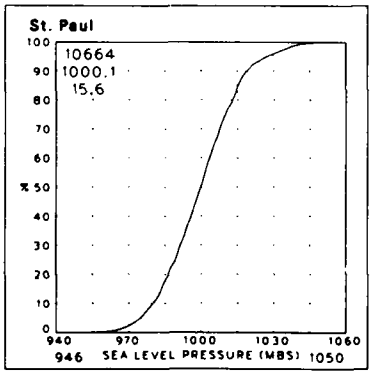

Cape Newenham
11746
1000.3
14.3
960
SEA LEVEL PRESSURE (MBS)
1049

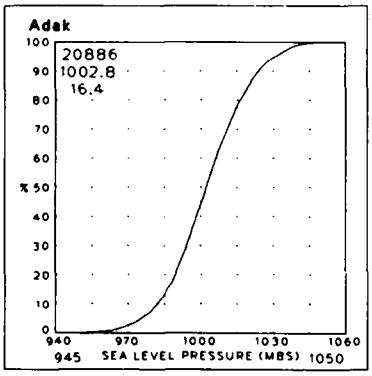

King Salmon
18238
1001.3
14.4
954
SEA LEVEL PRESSURE (MBS)
1048

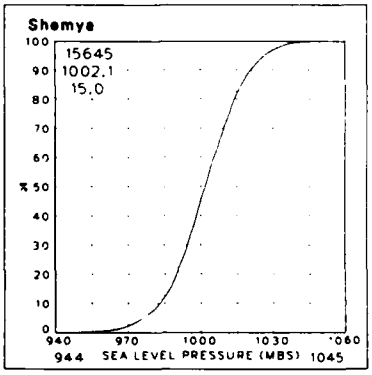

Port Heiden
307
996.6
12.0
969
SEA LEVEL PRESSURE (MBS)
1023

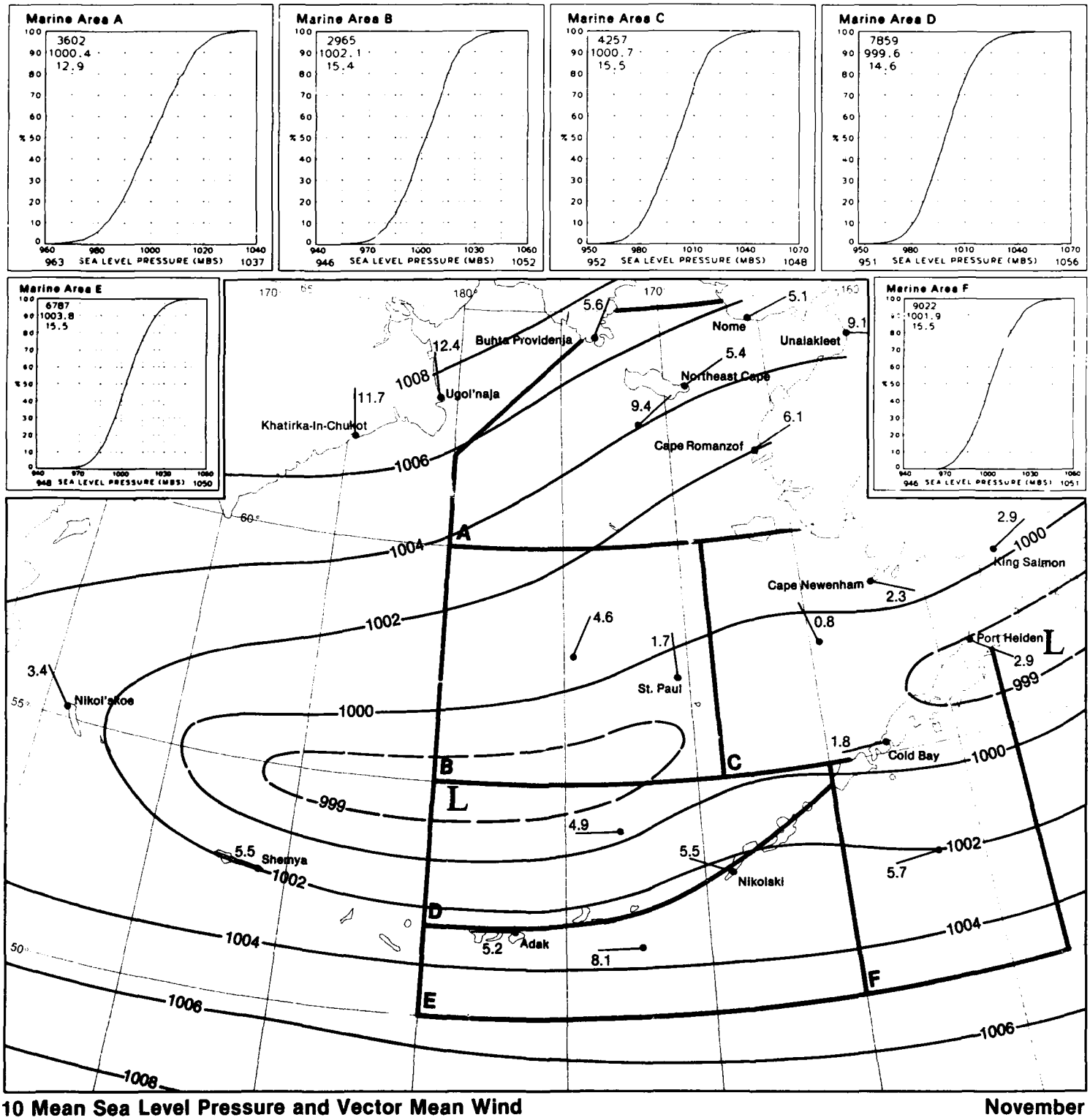

Cold Bay
13919
1000.6
15.1
951
SEA LEVEL PRESSURE (MBS)
1048


Nikolski
2275
1003.0
17.2
950
SEA LEVEL PRESSURE (MBS)
1042


St. Paul
10664
1000.1
15.6
946
SEA LEVEL PRESSURE (MBS)
1050

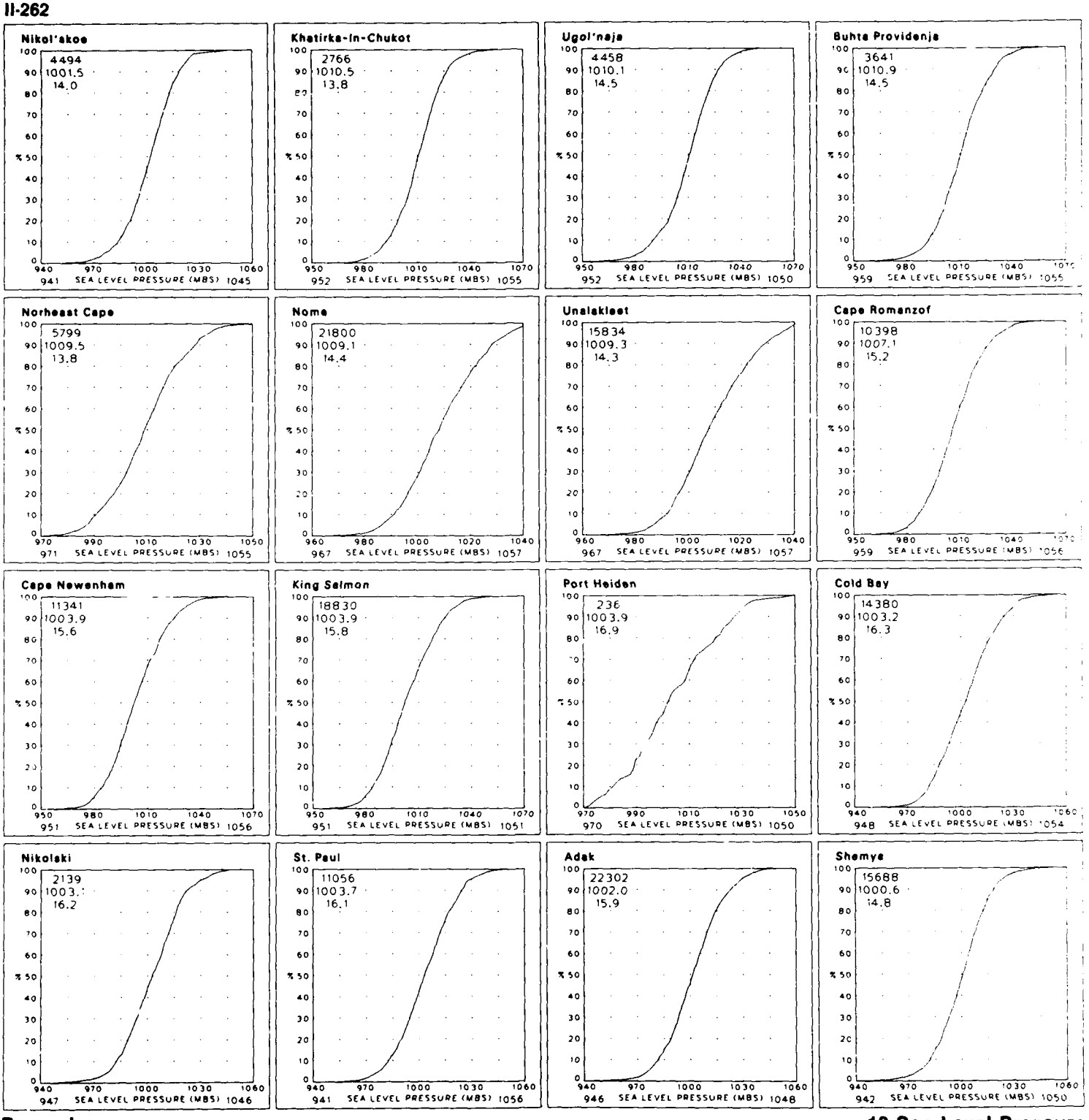

Adak
20886
1002.8
16.4
945
SEA LEVEL PRESSURE (MBS)
1050

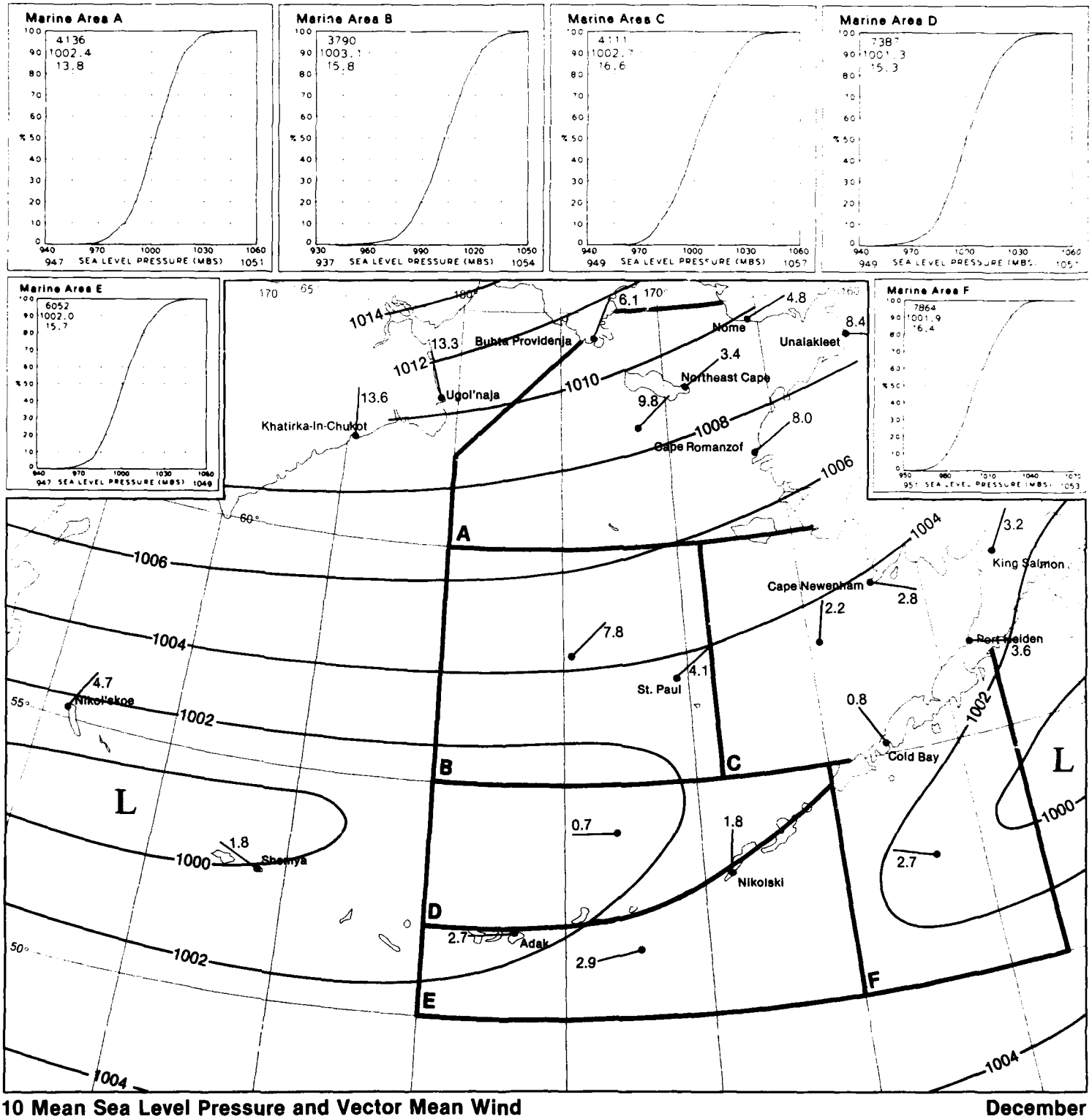

Shemya
15645
1002.1
15.0
944
SEA LEVEL PRESSURE (MBS)
1045



10 Mean Sea Level Pressure and Vector Mean Wind

November


Nikol'skoe
4494
1001.5
14.0
941 SEA LEVEL PRESSURE (MBS) 1045
Khatirka-In-Chukot
2766
1010.5
13.8
952 SEA LEVEL PRESSURE (MBS) 1055
Ugol'naja
4458
1010.1
14.5
952 SEA LEVEL PRESSURE (MBS) 1050
Buhta Providenja
3641
1010.9
14.5
959 SEA LEVEL PRESSURE (MBS) 1055
Northeast Cape
5799
1009.5
13.8
971 SEA LEVEL PRESSURE (MBS) 1055
Nome
21800
1009.1
14.4
967 SEA LEVEL PRESSURE (MBS) 1057
Unalakleet
15834
1009.3
14.3
967 SEA LEVEL PRESSURE (MBS) 1057
Cape Romanzof
10398
1007.1
15.2
959 SEA LEVEL PRESSURE (MBS) 1056
Cape Newenham
11341
1003.9
15.6
951 SEA LEVEL PRESSURE (MBS) 1056
King Salmon
18830
1003.9
15.8
951 SEA LEVEL PRESSURE (MBS) 1051
Port Heiden
236
1003.9
16.9
970 SEA LEVEL PRESSURE (MBS) 1050
Cold Bay
14380
1003.2
16.3
948 SEA LEVEL PRESSURE (MBS) 1054
Nikolski
2139
1003.1
16.2
947 SEA LEVEL PRESSURE (MBS) 1046
St. Paul
11056
1003.7
16.1
941 SEA LEVEL PRESSURE (MBS) 1056
Adak
22302
1002.0
15.9
946 SEA LEVEL PRESSURE (MBS) 1048
Shemya
15688
1000.6
14.8
942 SEA LEVEL PRESSURE (MBS) 1050



10 Mean Sea Level Pressure and Vector Mean Wind

December

Map 11. Wind speed ≤10 and ≥34 knots

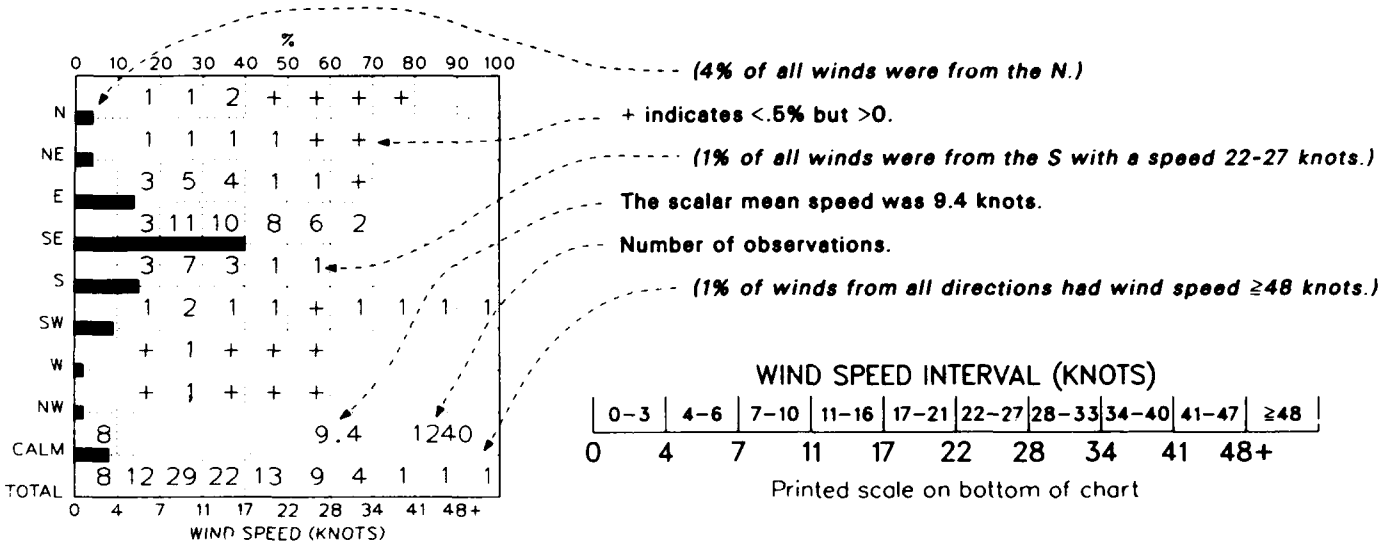
BLACK LINE – Percent frequency of wind speed ≤10 knots (≤12 mph).

BLUE LINE – Percent frequency of wind speed ≥34 knots (≥39 mph).

Albers Equal–Area Conic Projection

Graphs: Wind speed/direction

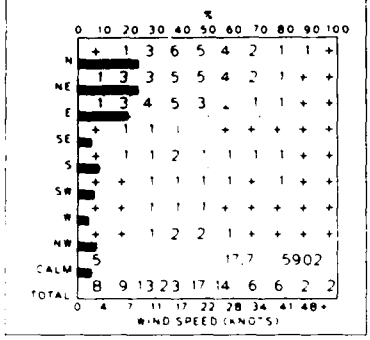
Direction frequency (top scale): Bars represent percent frequency of winds observed from each direction. Speed frequency (bottom scale): Printed figures represent percent frequency of wind speeds observed from each direction.



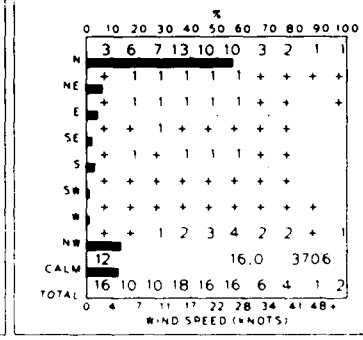
The scalar mean wind speed on the graph is based on the number of observations reporting a wind speed with direction. The sum of the TOTAL line provides the cumulative percent frequency of wind speed below a selected threshold value. In the legend graph, 71% of all winds were less than 17 knots (20 mph). The sum of the percent frequencies of the four wind speed isopleths for a given month and location on Map Sets 11 and 12 should equal 100%.

Surface wind is one of the most commonly observed elements. Many of the observations from the NCDC data base are visual observations based on the roughness of the sea (see table in text of Set 14). In recent years, more ships acquired anemometers and reported measured winds. Prior to 1963, many of the winds were recorded in the Beaufort scale; such estimates have proven to be quite reliable and can be used with a high degree of confidence.

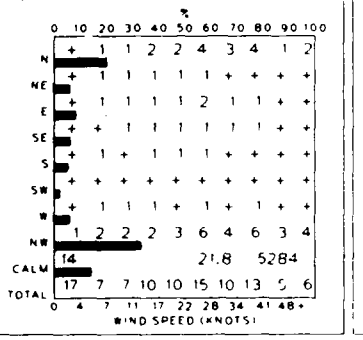
Nikol'skoe



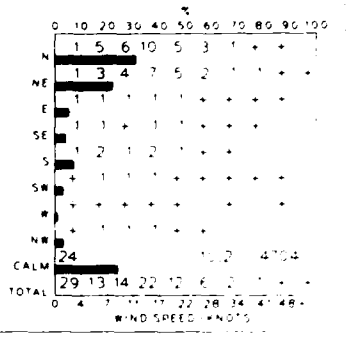
...etirka-In-Chukot



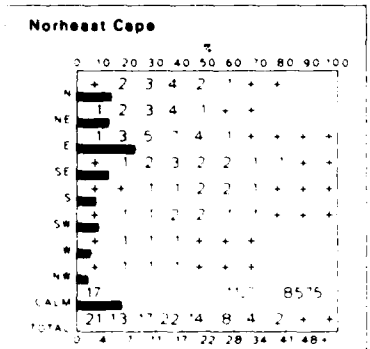
Ugol'naja



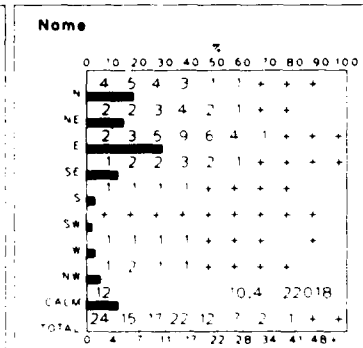
Buhta Providenja



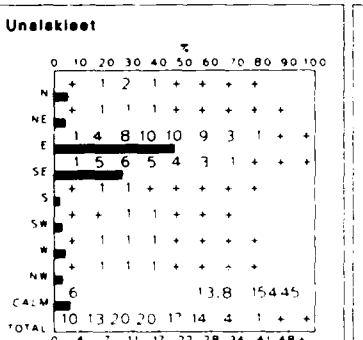
Northeast Cape



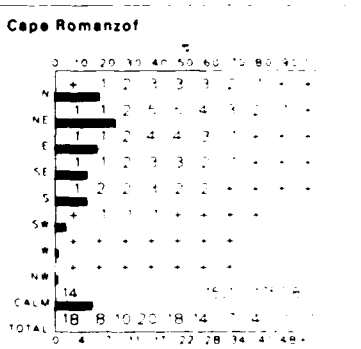
Nome



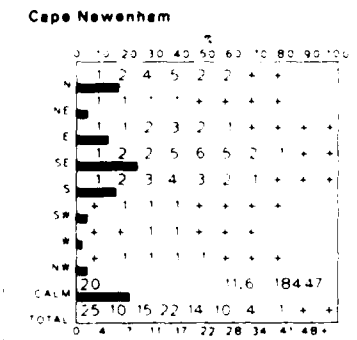
Unalakleet



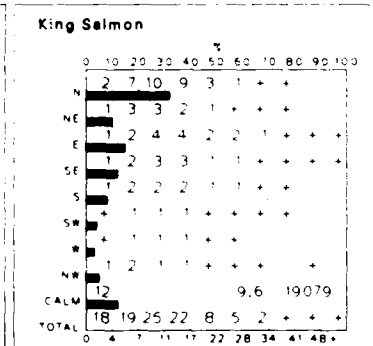
Cape Romanzof



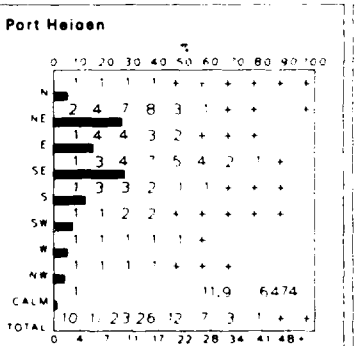
Cape Newenham



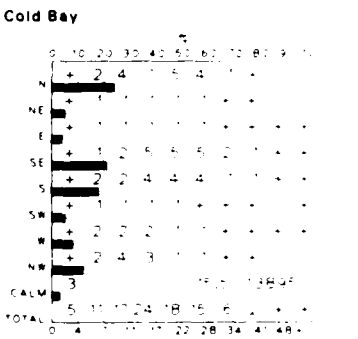
King Salmon



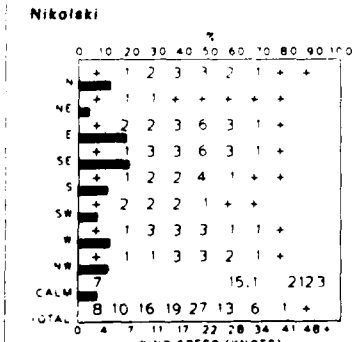
Port Heiden



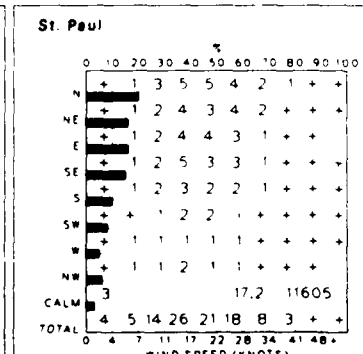
Cold Bay



Nikolski



St. Paul



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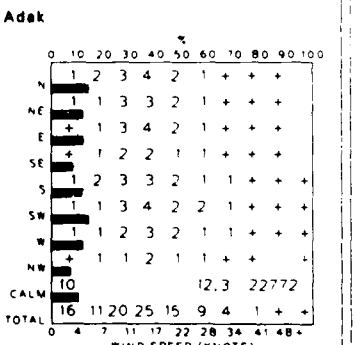
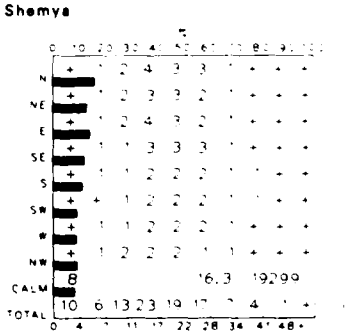
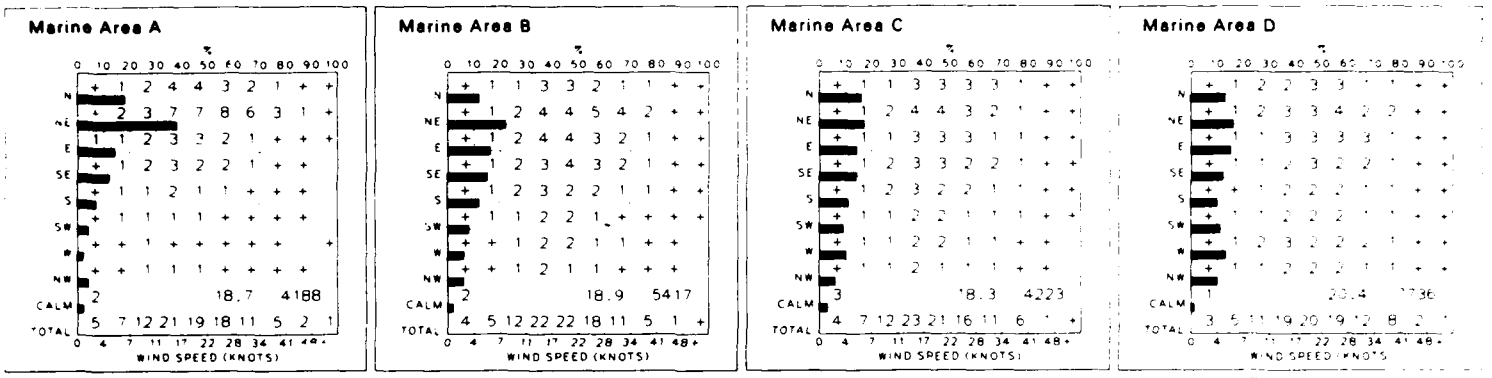
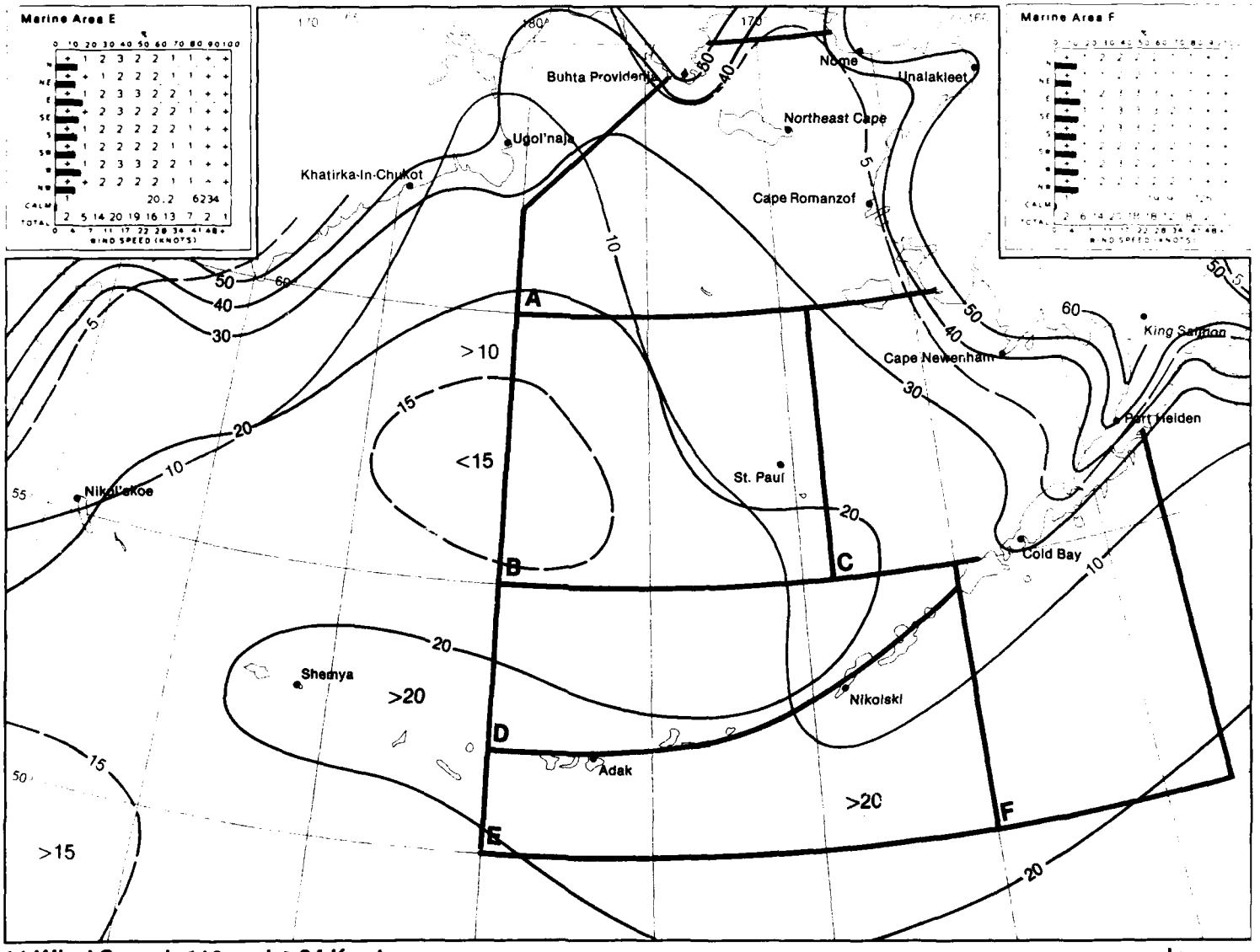


Shemya

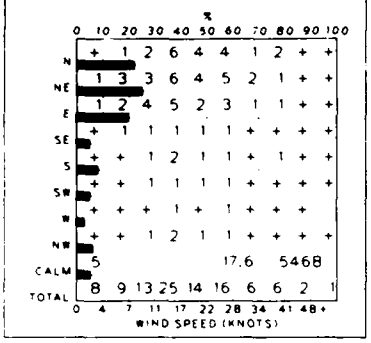




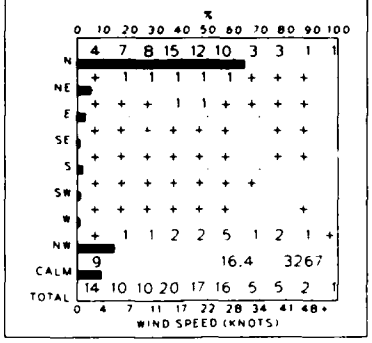


11 Wind Speed ≦10 and ≧34 Knots **January**

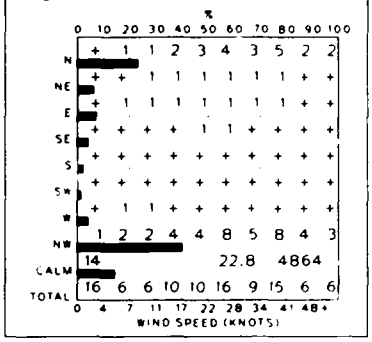
Nikol'skoe



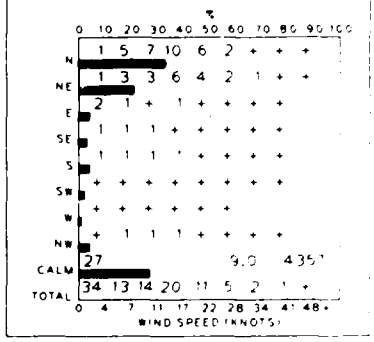
Khatirka-In-Chukot



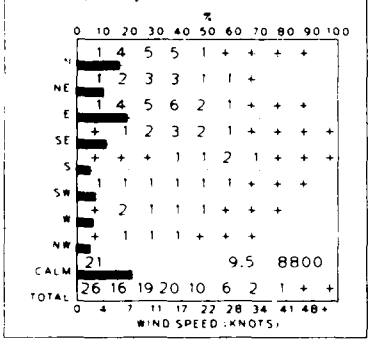
Ugol'naja



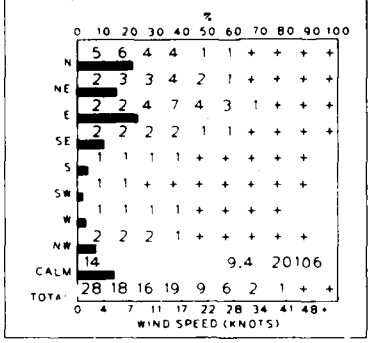
Buhta Providenja



Norheast Cape



Nome



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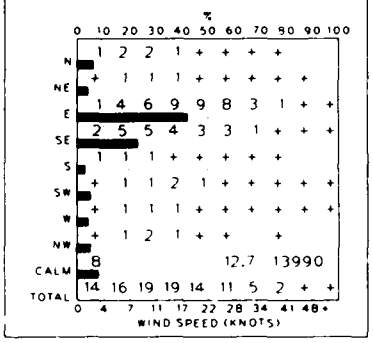
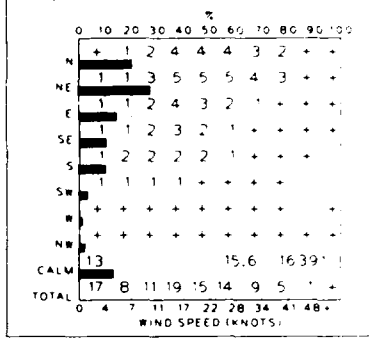
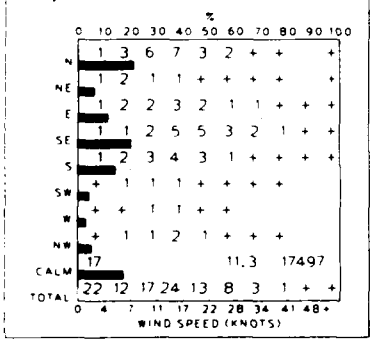


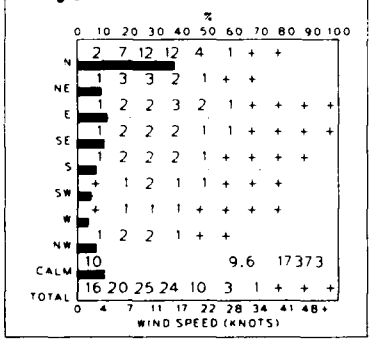
Cape Romanzof



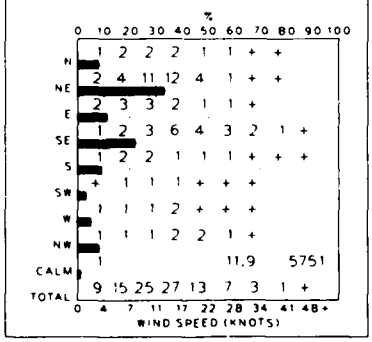
Cape Newenham



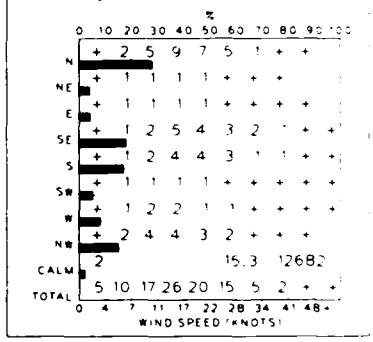
King Salmon



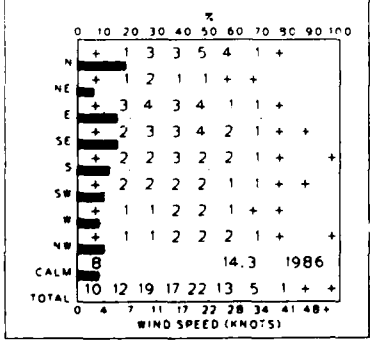
Port Heiden



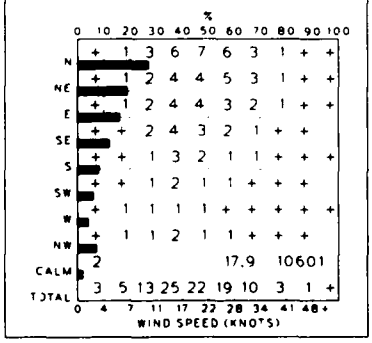
Cold Bay



Nikolski



St. Paul



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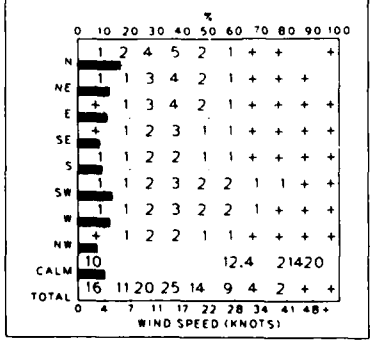
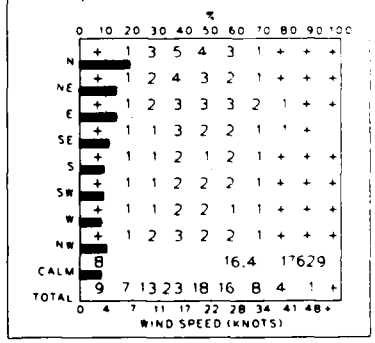
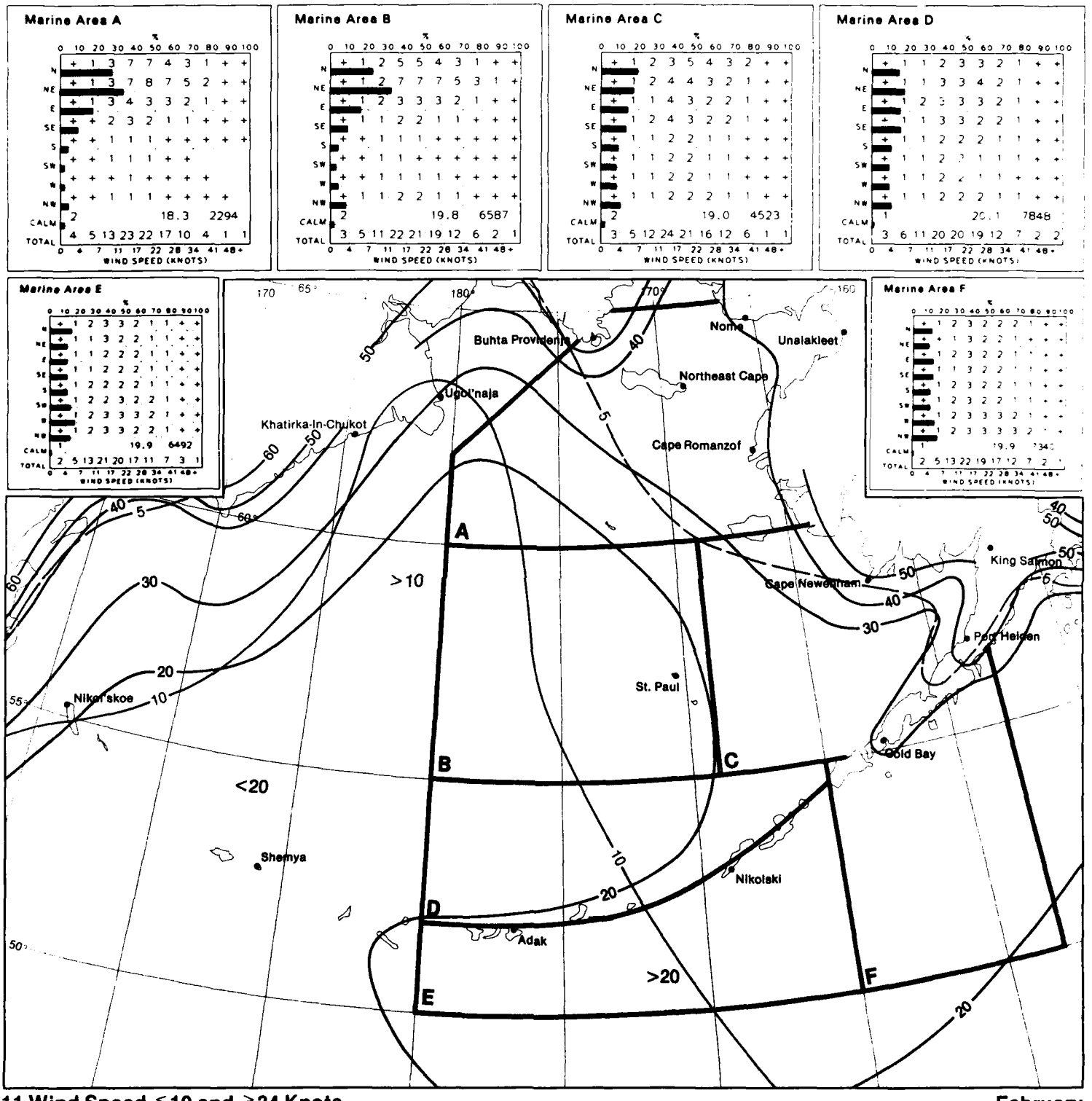


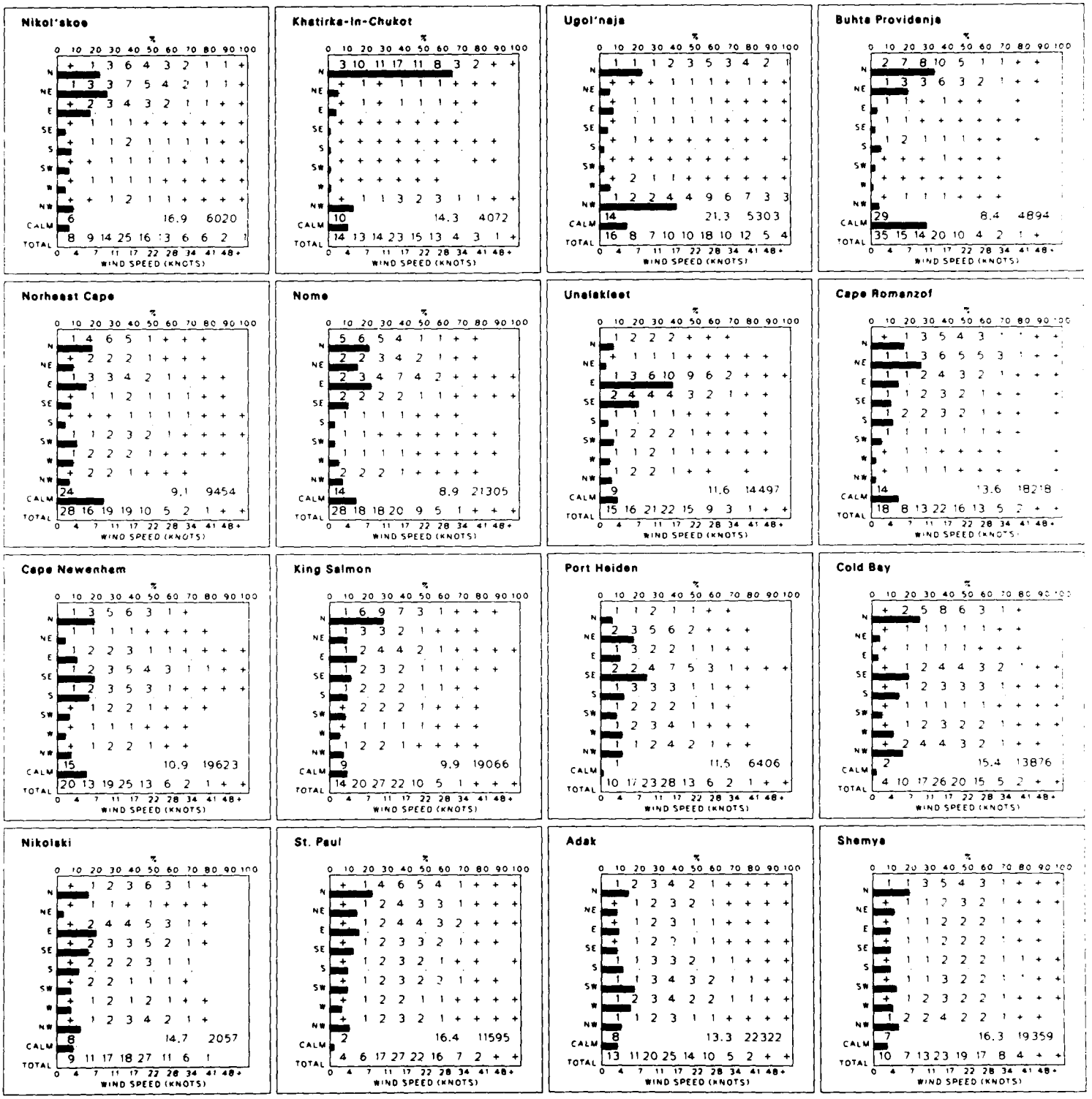
Shemya

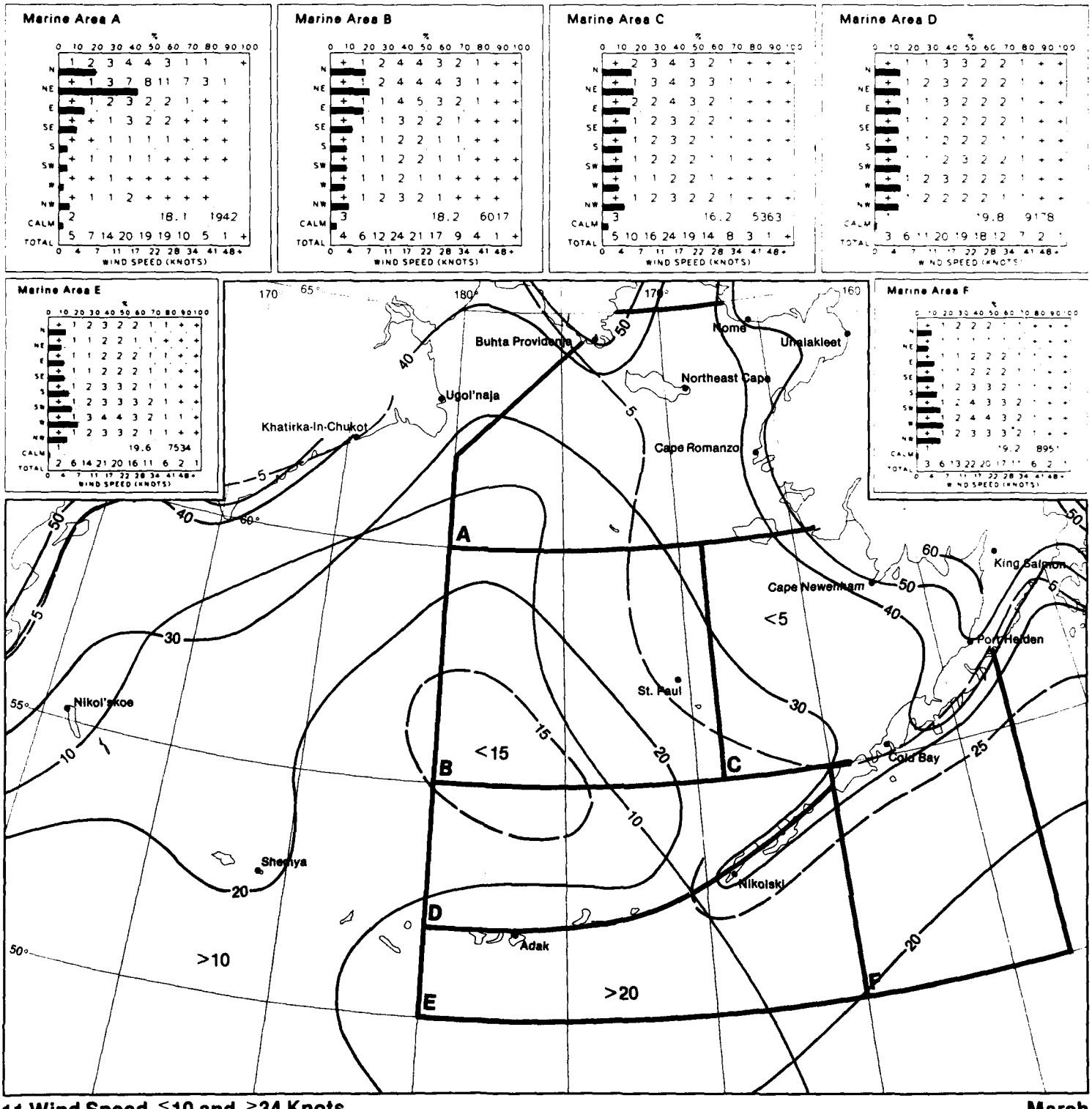




11 Wind Speed ≦10 and ≧34 Knots

February

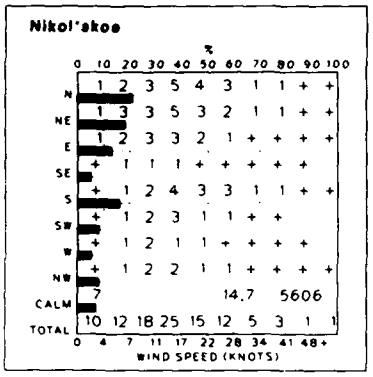

Nikol'skoe
16.9 6020
Khatirka-In-Chukot
14.3 4072
Ugol'naja
21.3 5303
Buhte Providenja
8.4 4894
Norheast Cape
9.1 9454
Nome
8.9 21305
Unalakleet
11.6 14497
Cape Romanzof
13.6 18218
Cape Newenham
10.9 19623
King Salmon
9.9 19066
Port Heiden
11.5 6406
Cold Bay
15.4 13876
Nikolski
14.7 2057
St. Paul
16.4 11595
Adak
13.3 22322
Shemya
16.3 19359
N NE E SE S SW W NW CALM TOTAL
WIND SPEED (KNOTS)



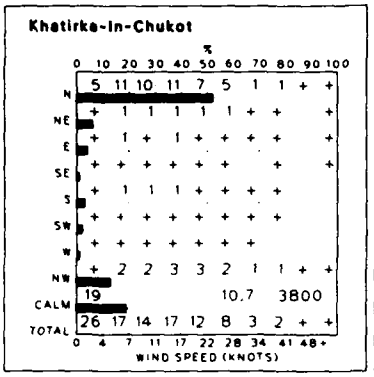
11 Wind Speed ≦10 and ≧34 Knots

March

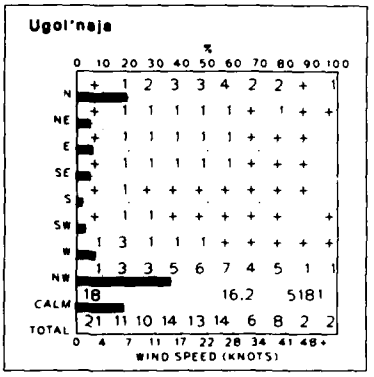
Nikol'skoe



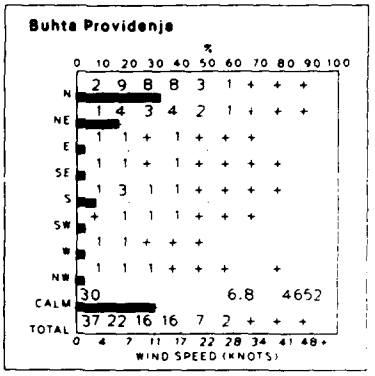
Khatirka-In-Chukot



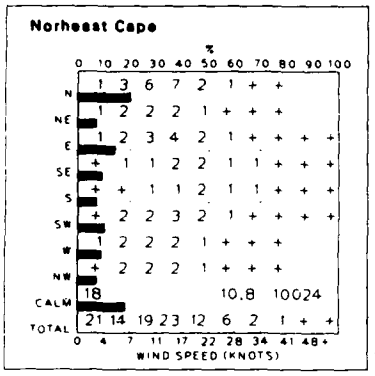
Ugol'naja



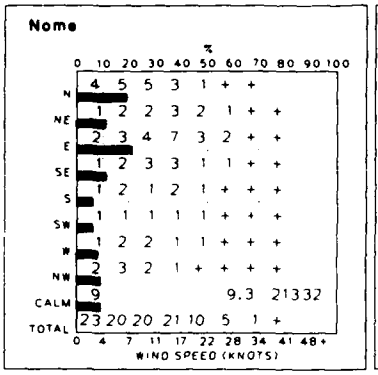
Buhta Providenje



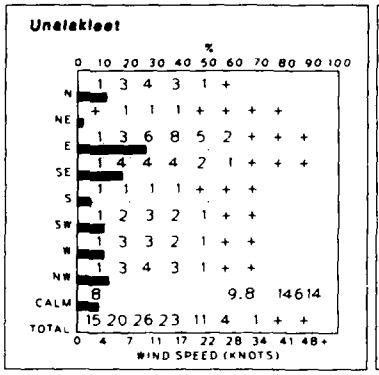
Norheast Cape



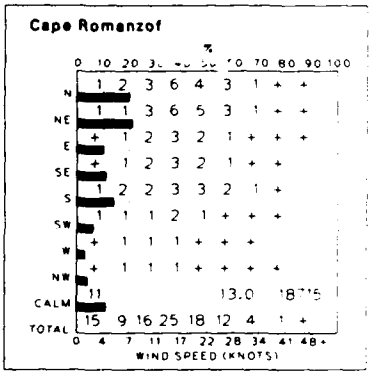
Nome



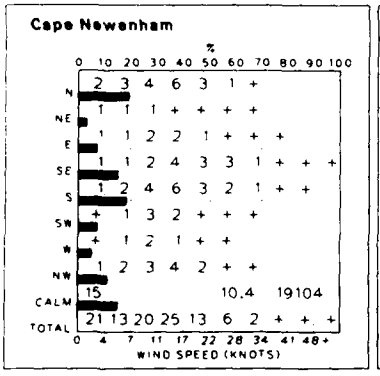
Unalakleet



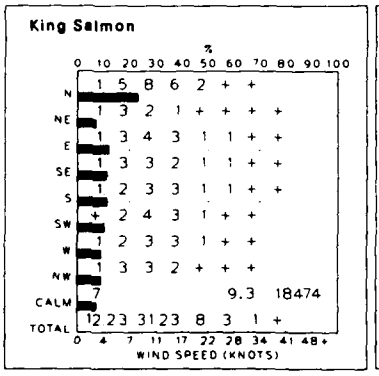
Cape Romanzof



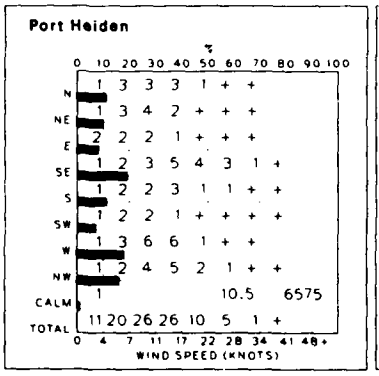
Cape Newenham



King Salmon



Port Heiden



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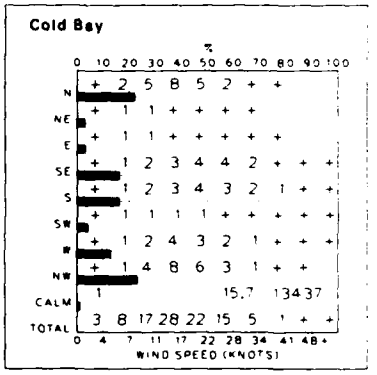
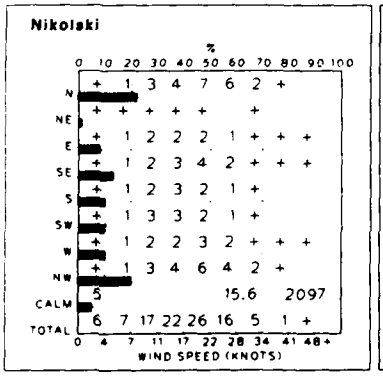
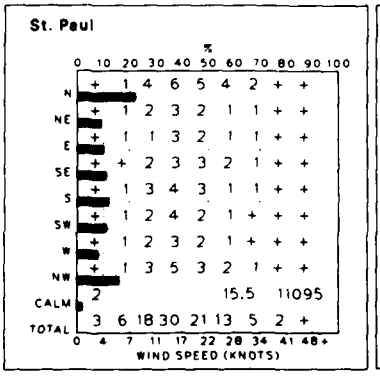


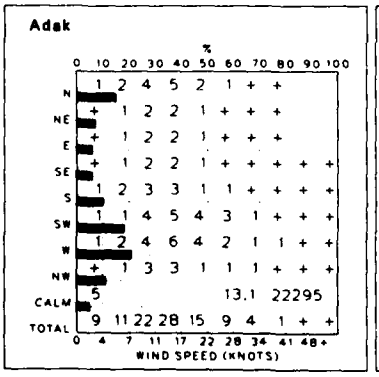
Nikolski



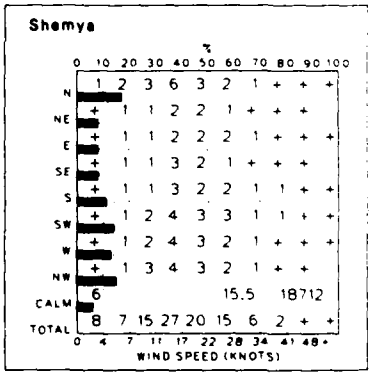
St. Paul

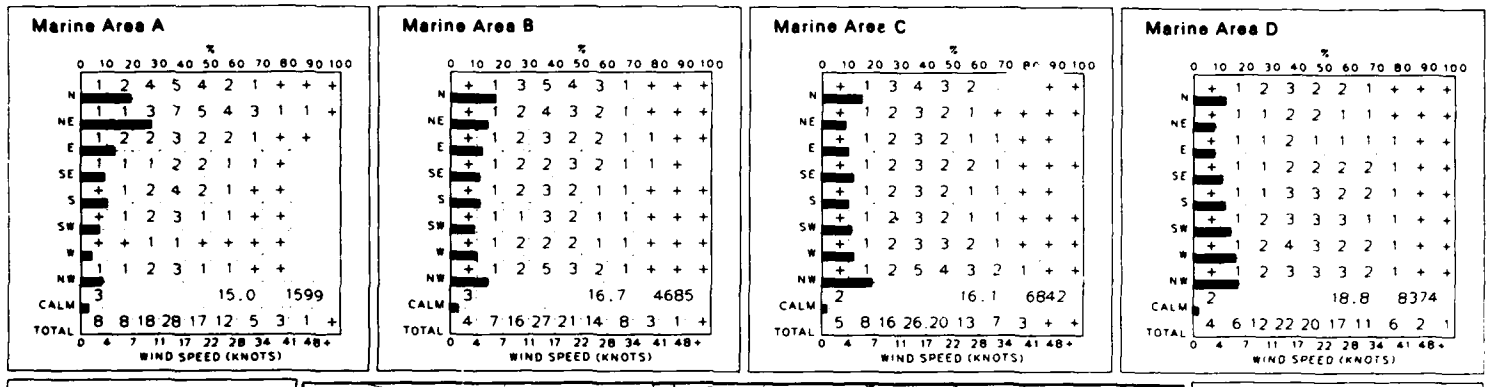


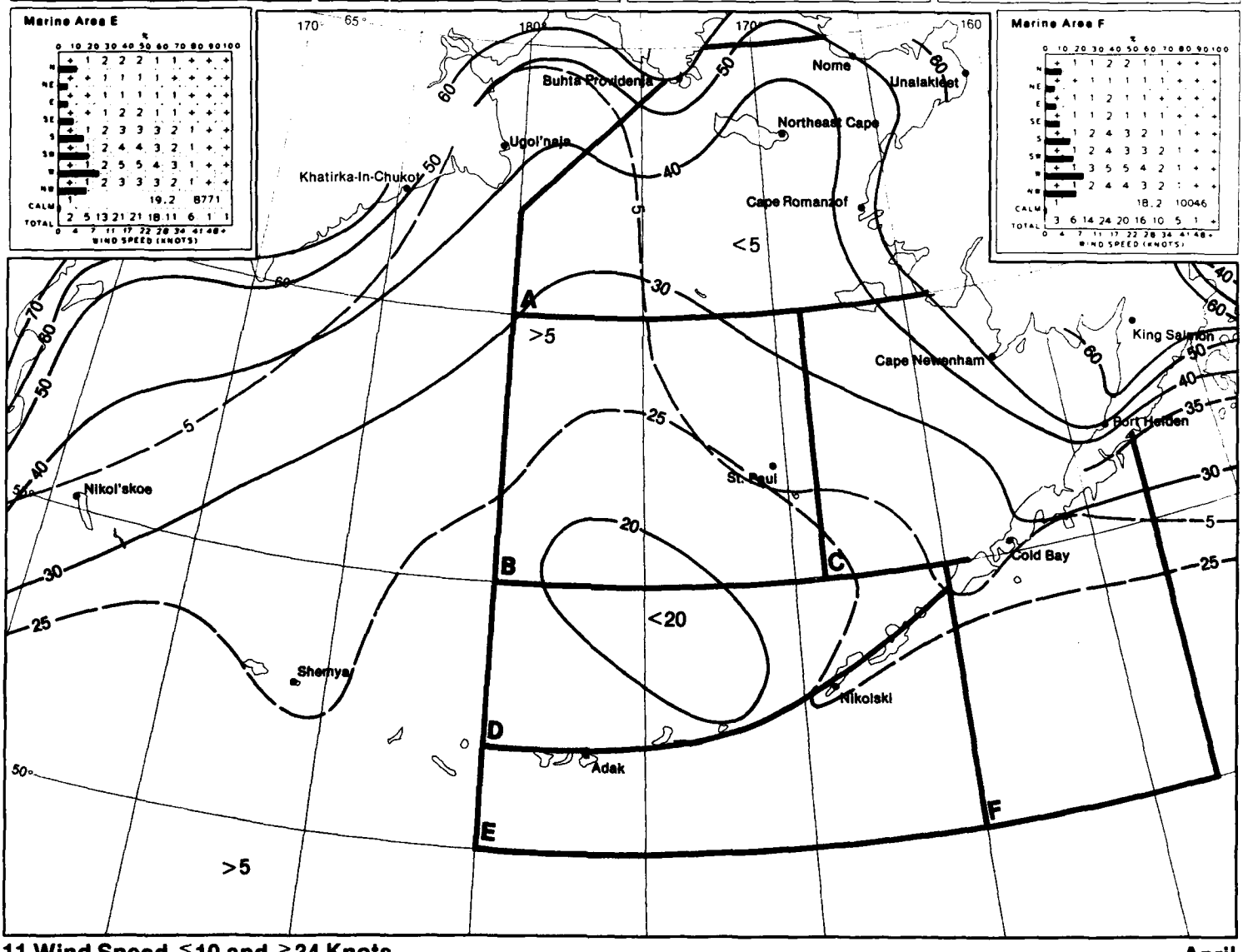
Adak



Shemya

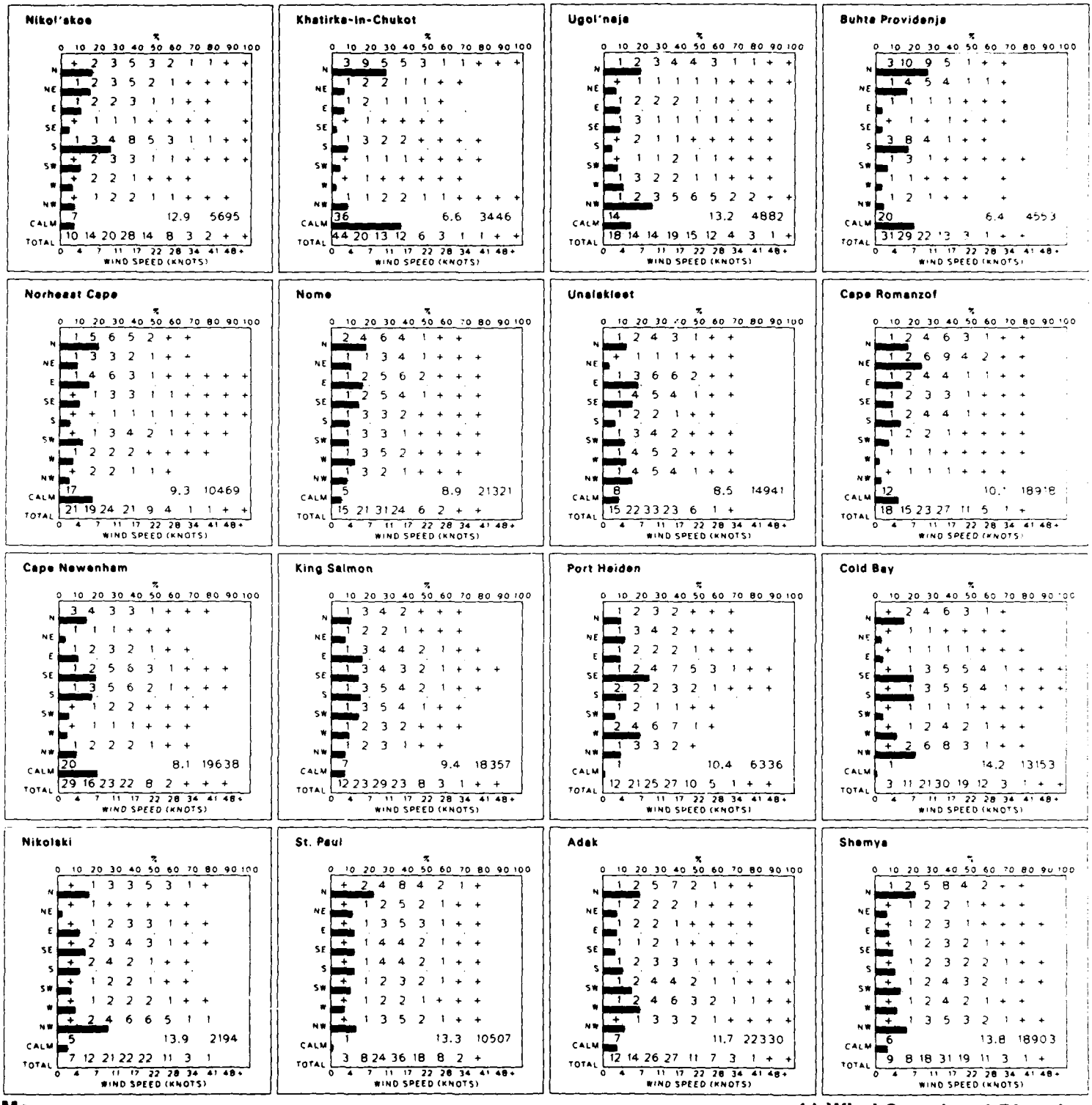


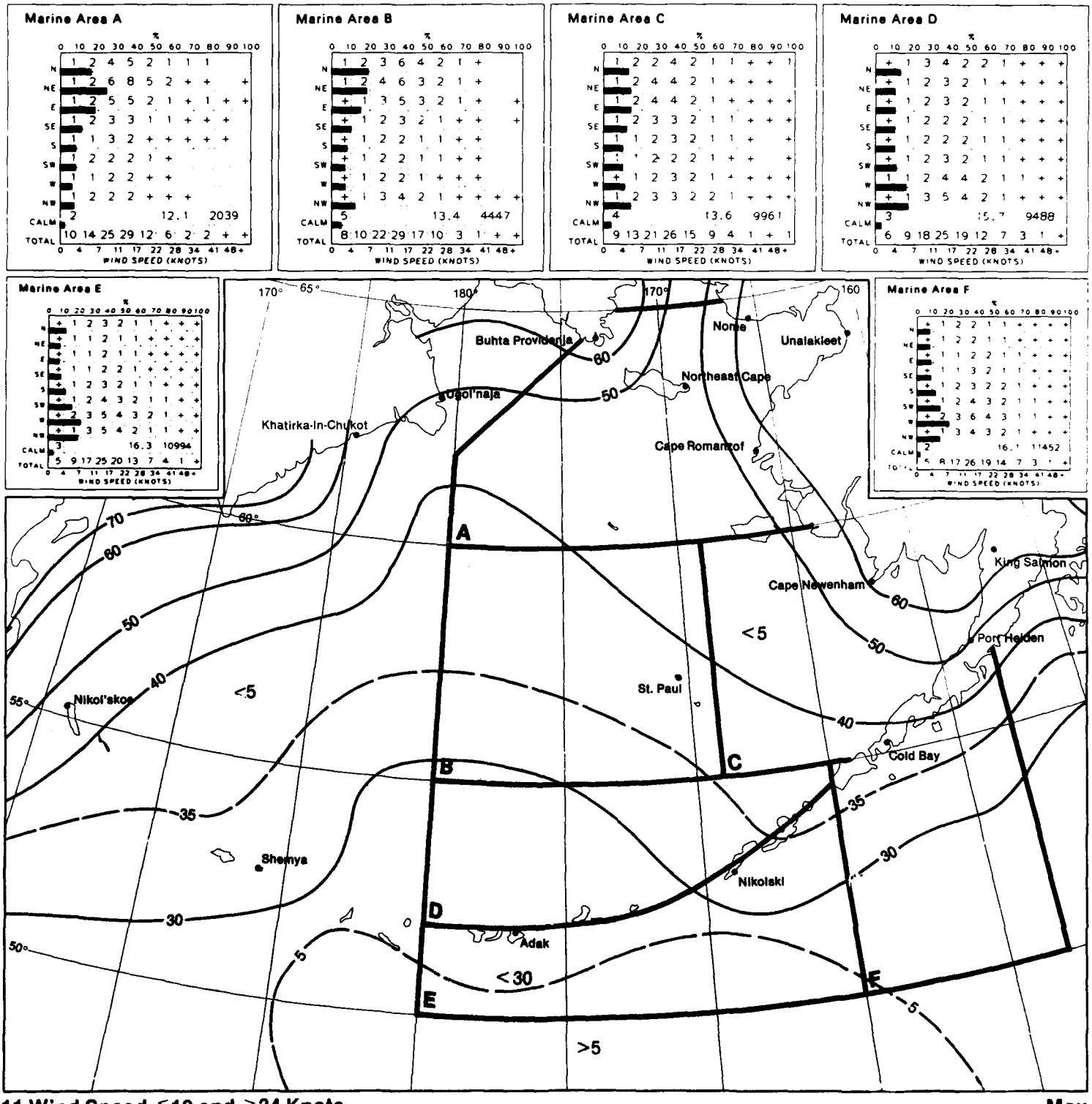




11 Wind Speed ≦10 and ≧34 Knots

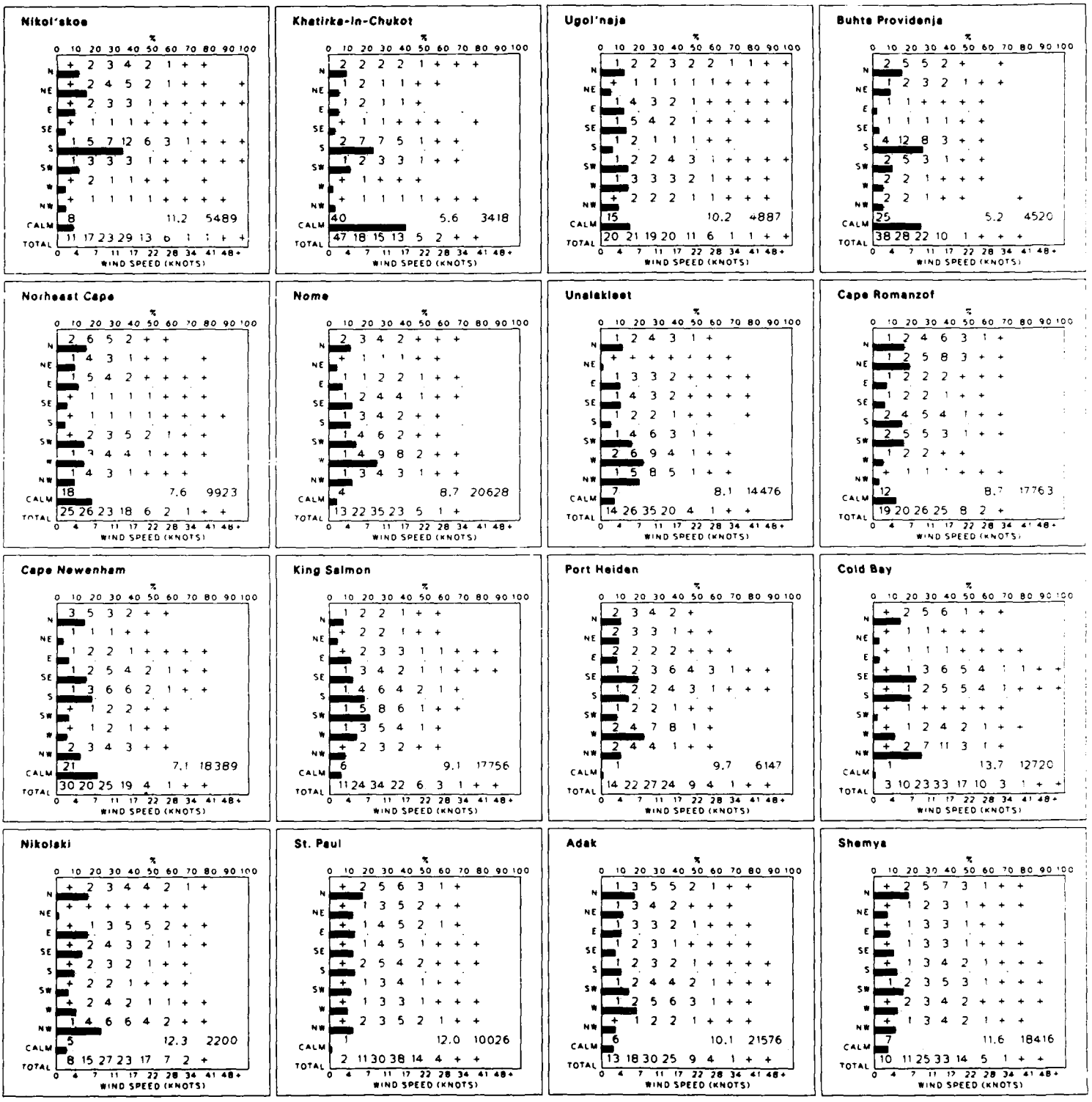
April

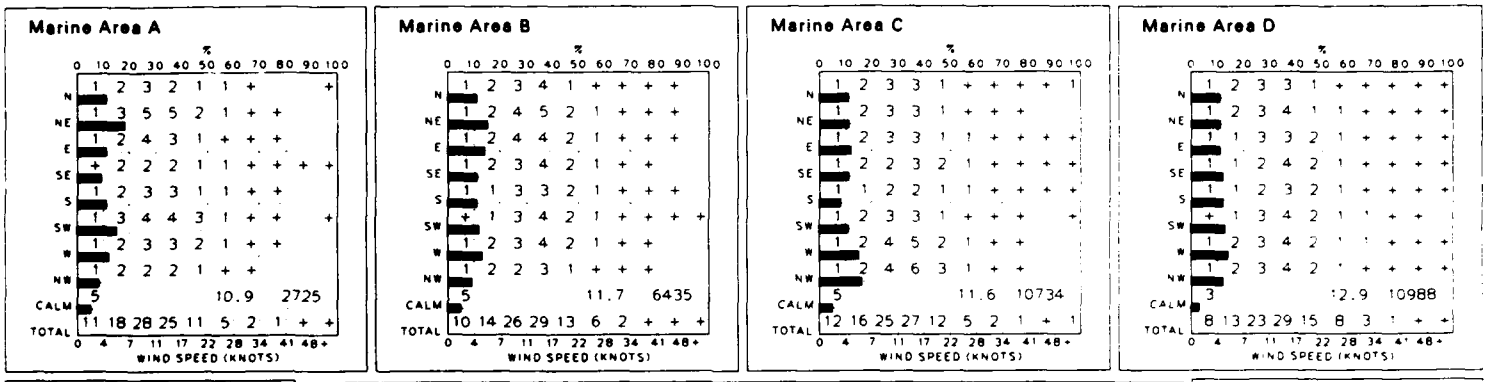

Nikol'skoe
Khatirka-In-Chukot
Ugol'neje
Buhte Providenje
Northeast Cape
Nome
Unalaklaet
Cape Romanzof
Cape Newenham
King Salmon
Port Heiden
Cold Bay
Nikolski
St. Paul
Adak
Shemya
%
WIND SPEED (KNOTS)
CALM
TOTAL

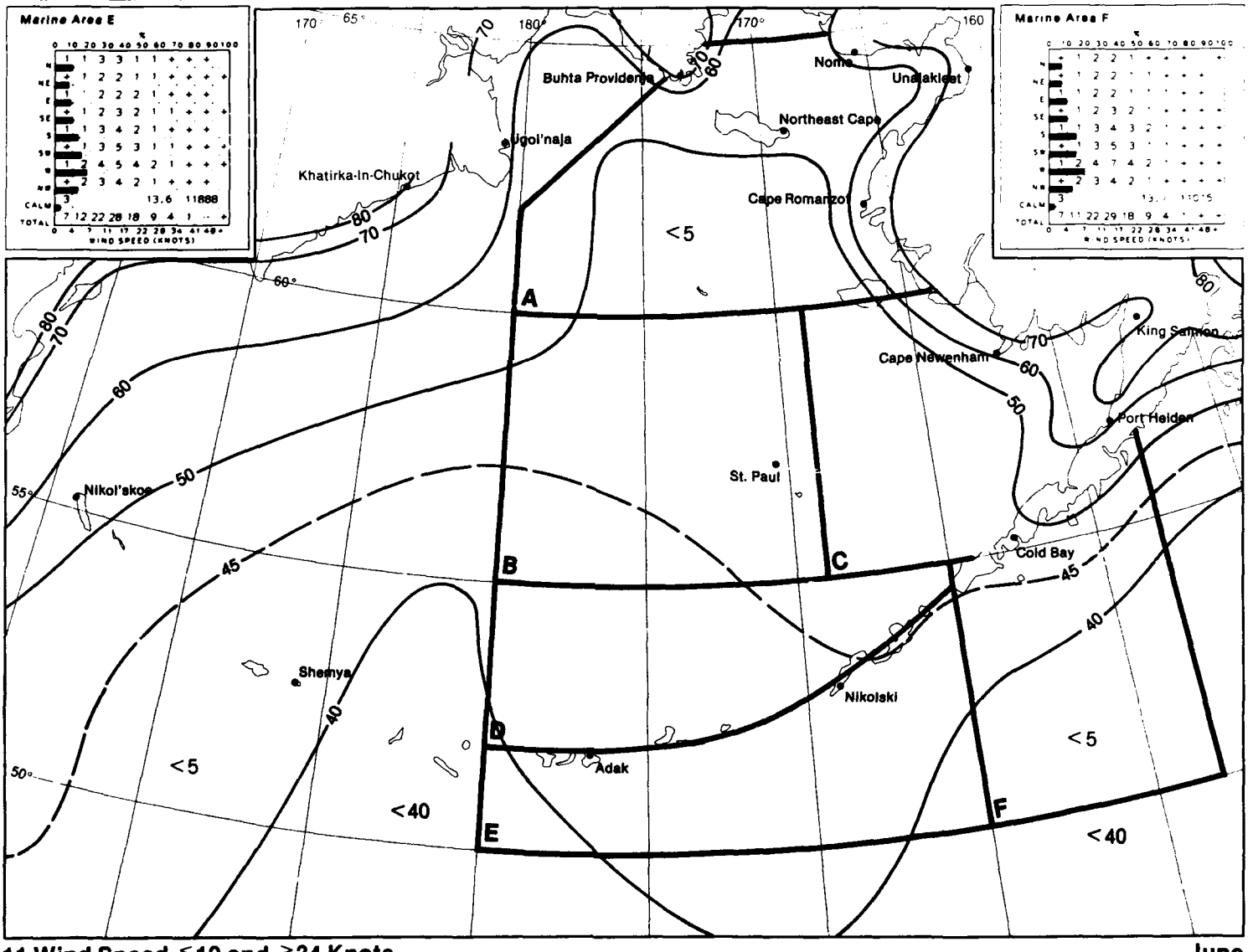


11 Wind Speed ≦10 and ≧34 Knots

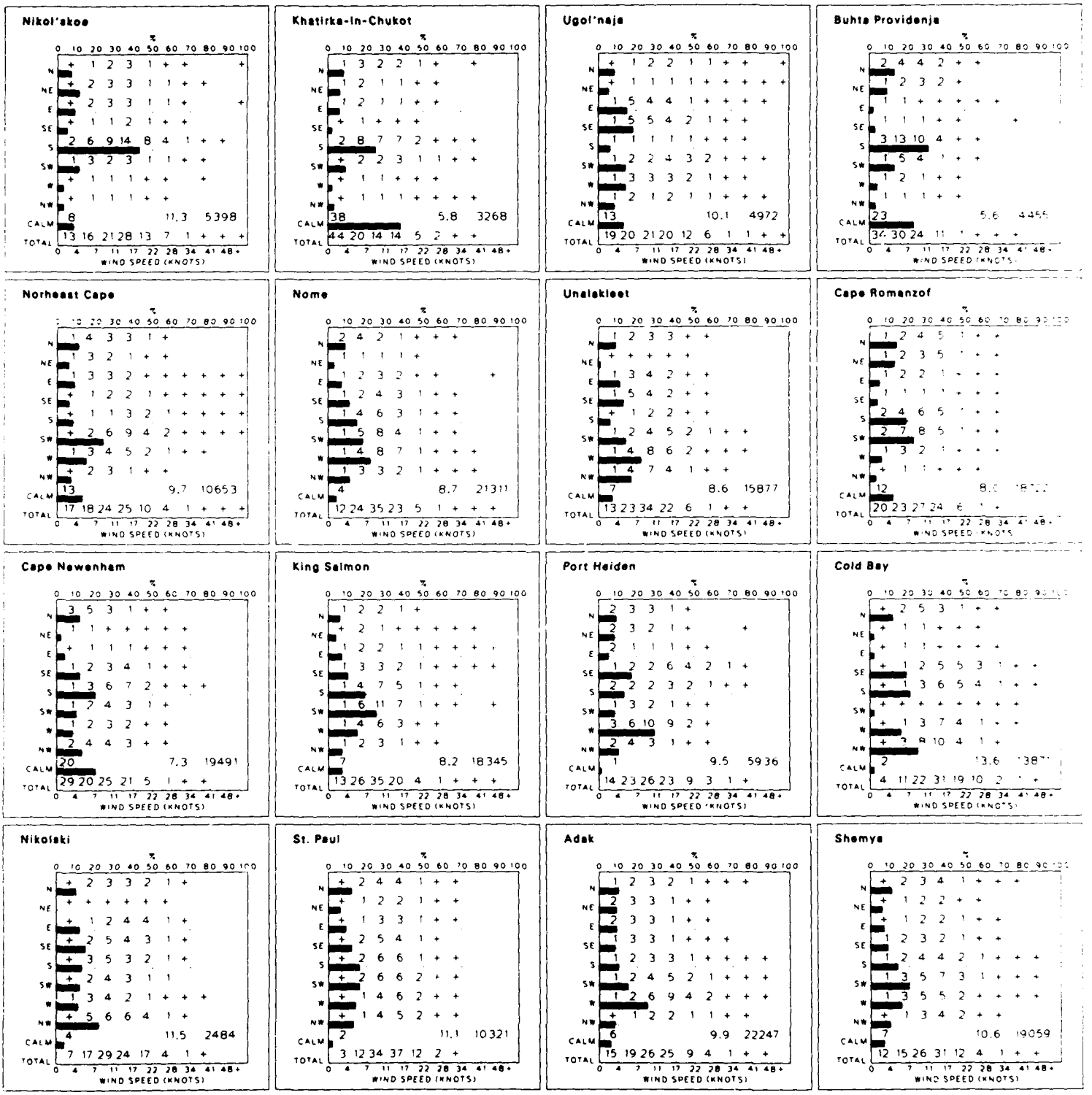
May

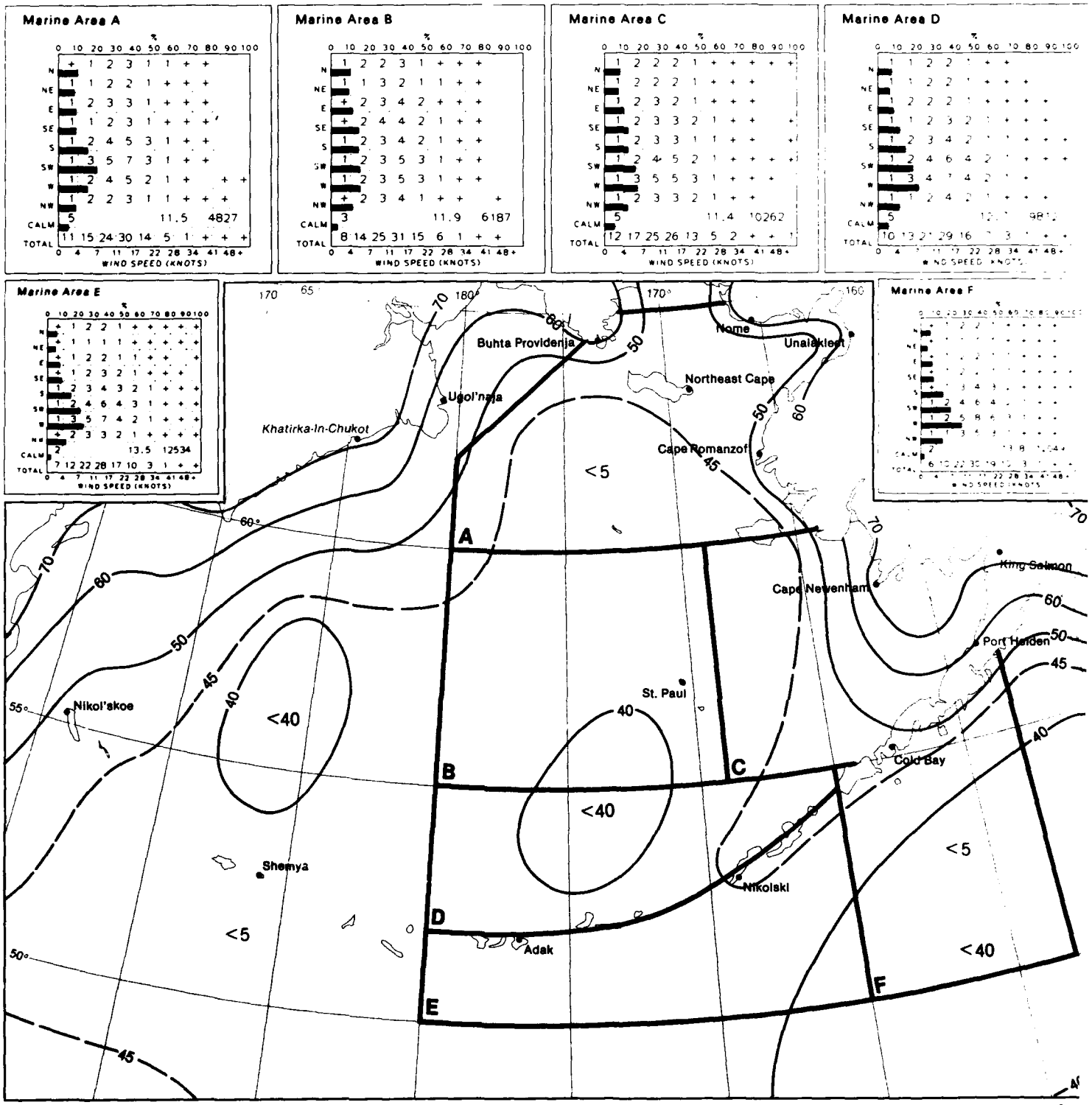

Nikol'skoe
Khatirka-In-Chukot
Ugol'naja
Buhta Providenja
Northeast Cape
Nome
Unalakleet
Cape Romanzof
Cape Newenham
King Salmon
Port Heiden
Cold Bay
Nikolski
St. Paul
Adak
Shemya
WIND SPEED (KNOTS)





11 Wind Speed ≦10 and ≧34 Knots **June**

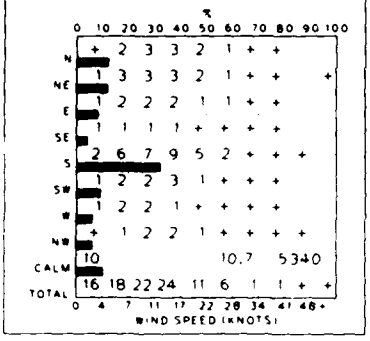

Nikol'skoe
Khatirka-In-Chukot
Ugol'naja
Buhta Providenja
Norheast Cape
Nome
Unalakleet
Cape Romanzof
Cape Newenham
King Salmon
Port Heiden
Cold Bay
Nikolski
St. Paul
Adak
Shemya
WIND SPEED (KNOTS)



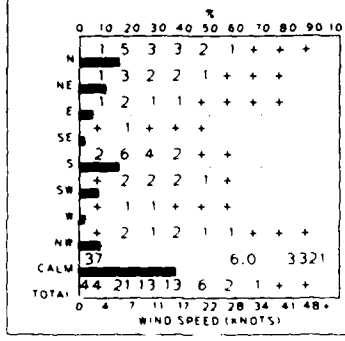
11 Wind Speed ≦10 and ≧34 Knots

Ju

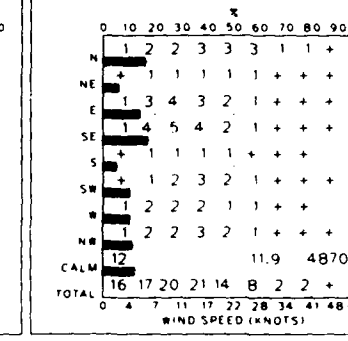
Nikol'skoe



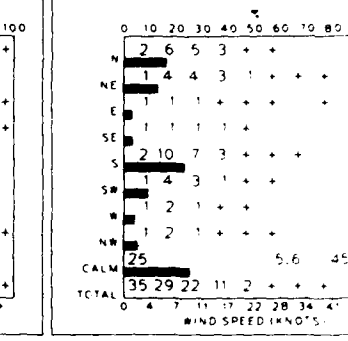
Khatirka-In-Chukot



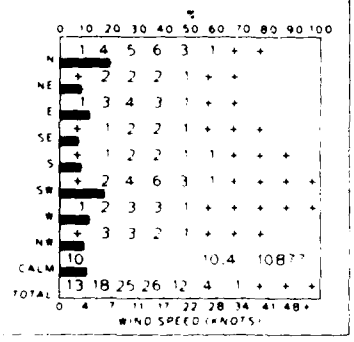
Ugol'naja



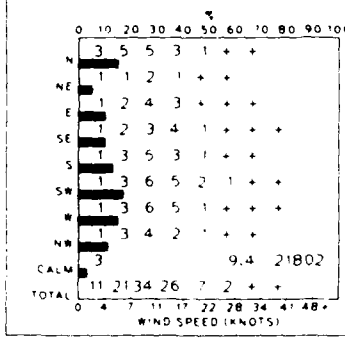
Buhta Providenja



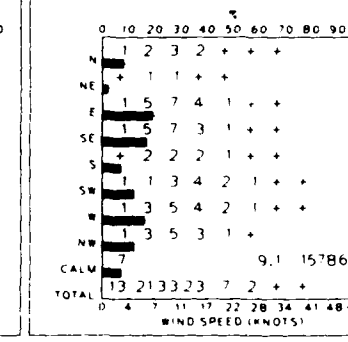
Norheast Cape



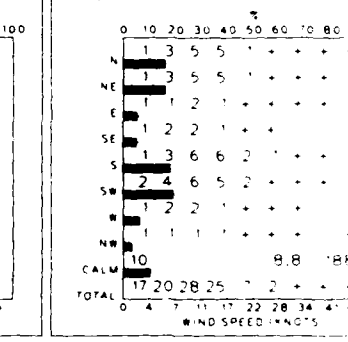
Nome



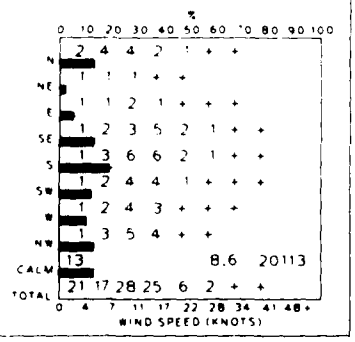
Unalakleet



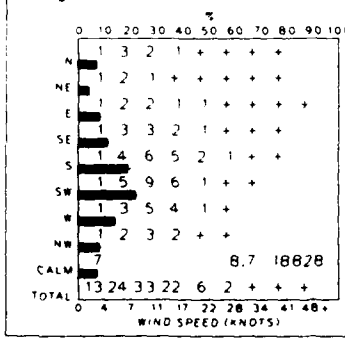
Cape Romanzof



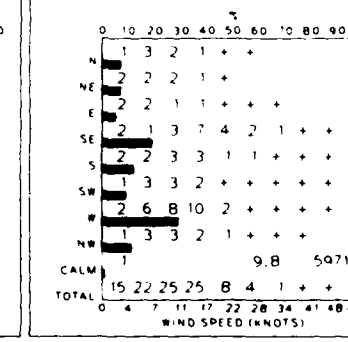
Cape Newenham



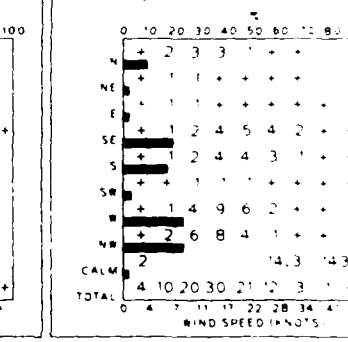
King Salmon



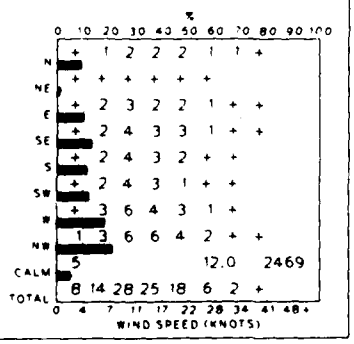
Port Heiden



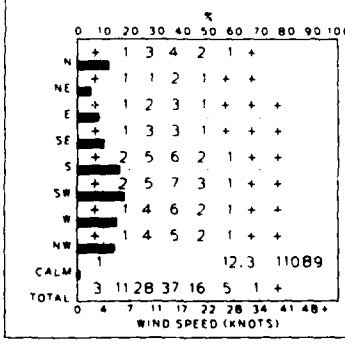
Cold Bay



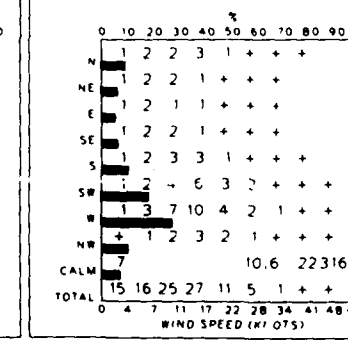
Nikolski



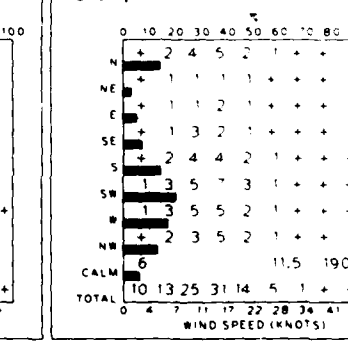
St. Paul

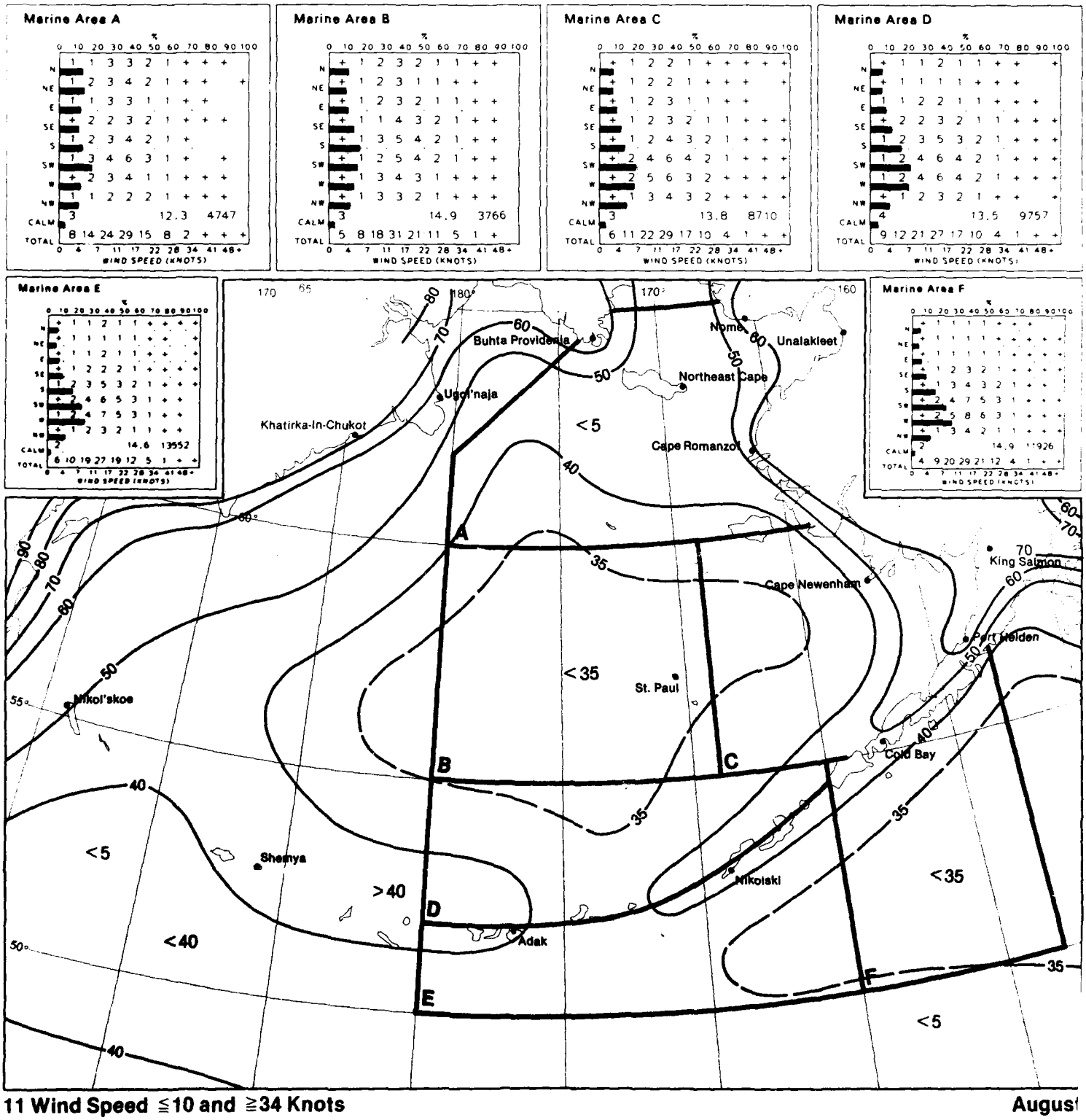


Adak



Shemya

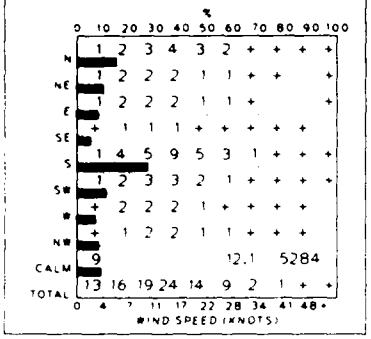




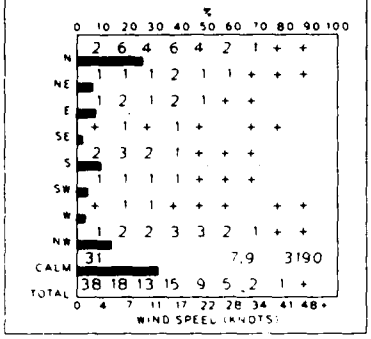
11 Wind Speed ≦10 and ≧34 Knots

August

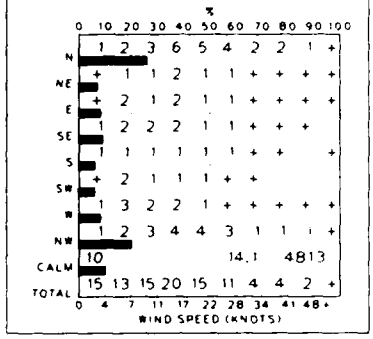
Nikol'skoe



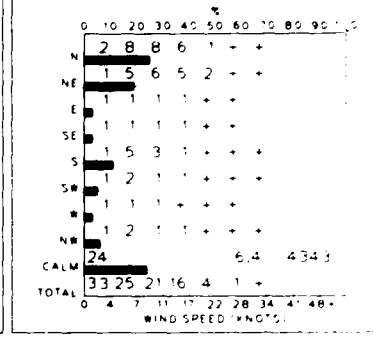
Khatirka-In-Chukot



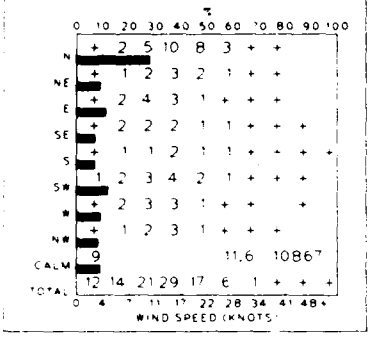
Ugol'naje



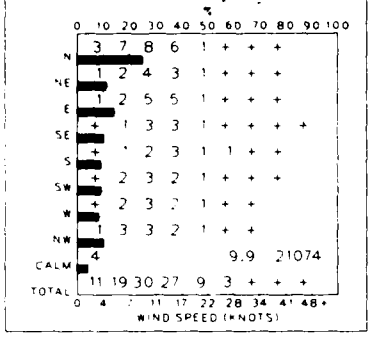
Buhta Providenja



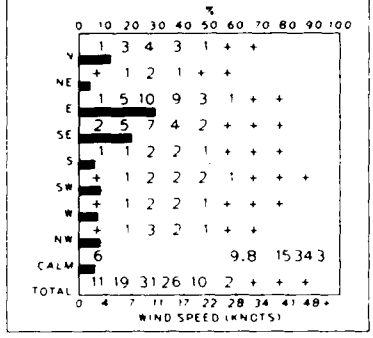
Norheast Cape



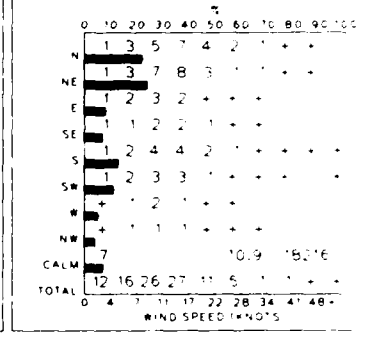
Nome



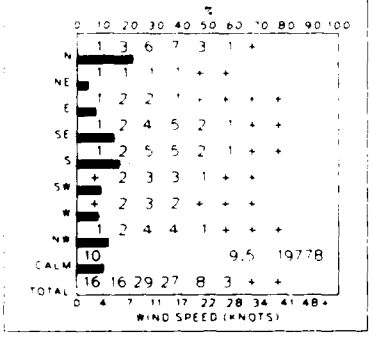
Unalakleet



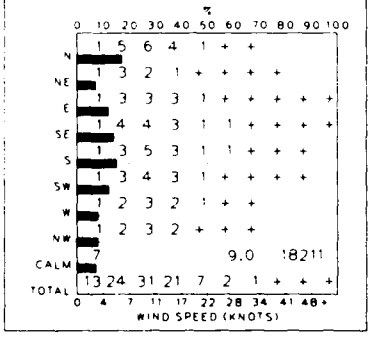
Cape Romanzof



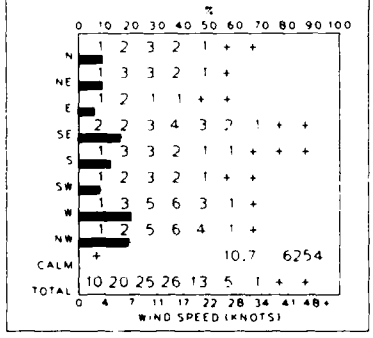
Cape Newenham



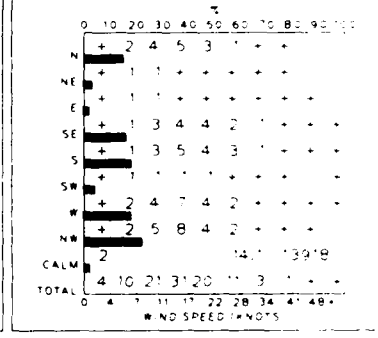
King Salmon



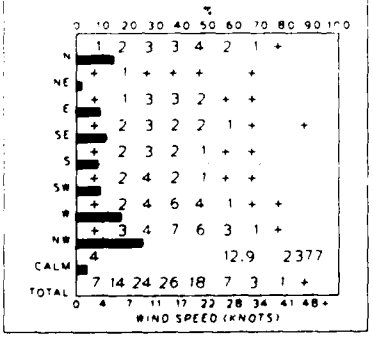
Port Heiden



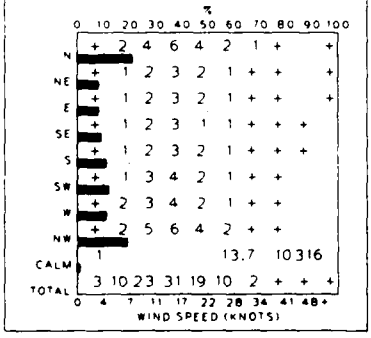
Cold Bay



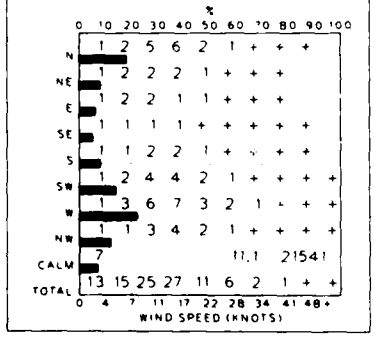
Nikolski



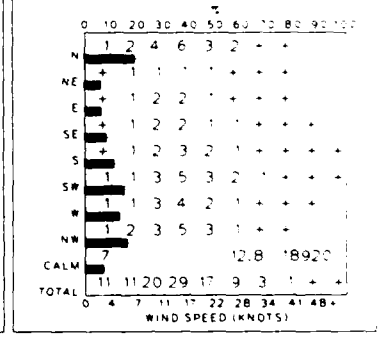
St. Paul

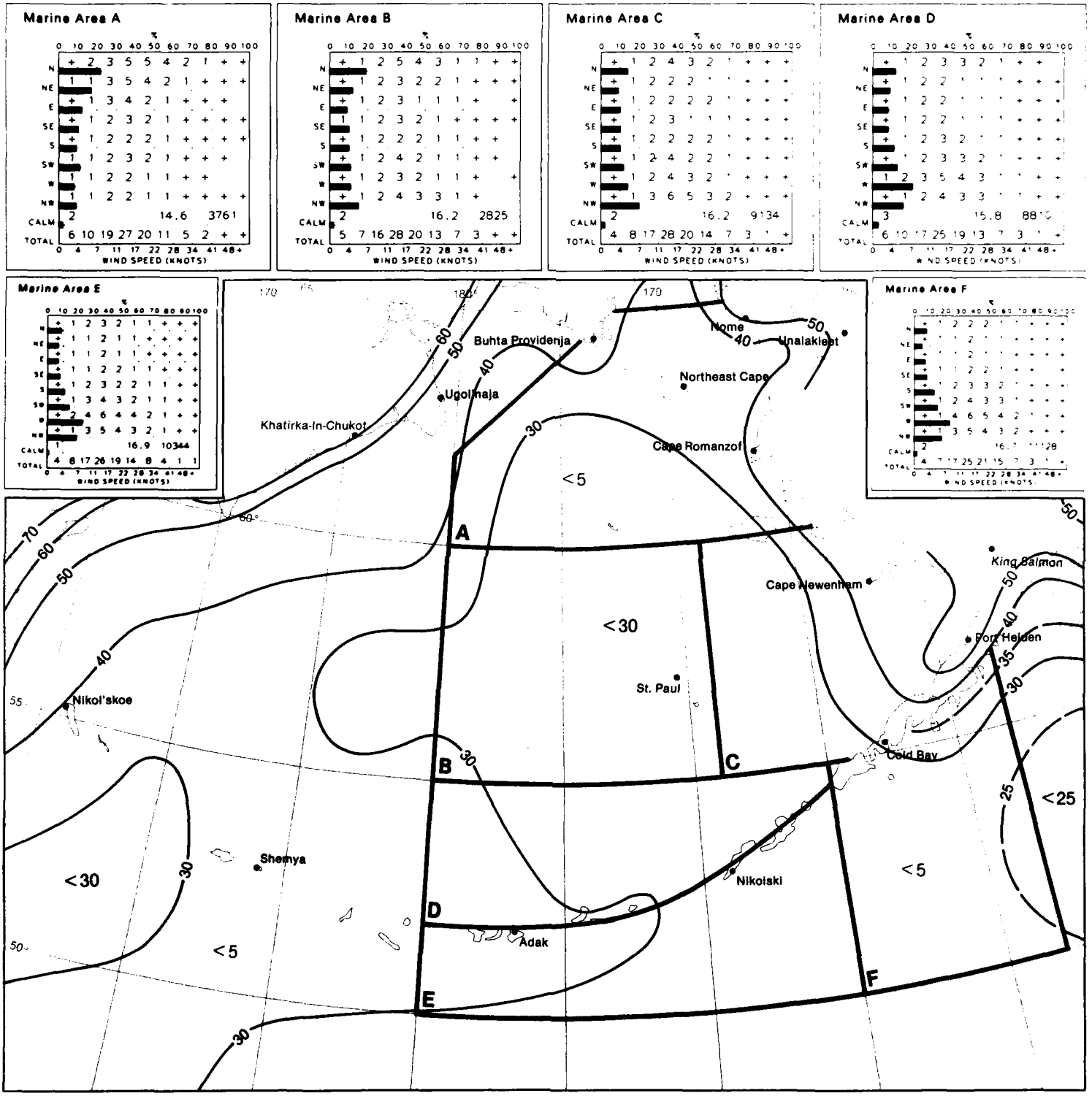


Adak



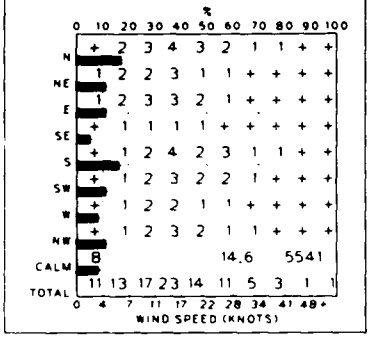
Shemya



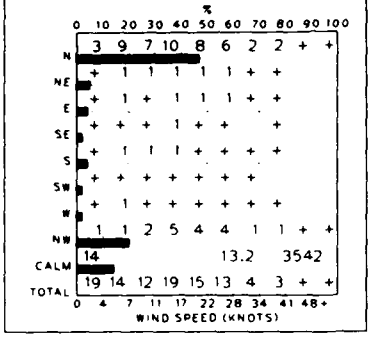


11 Wind Speed ≦10 and ≧34 Knots **September**

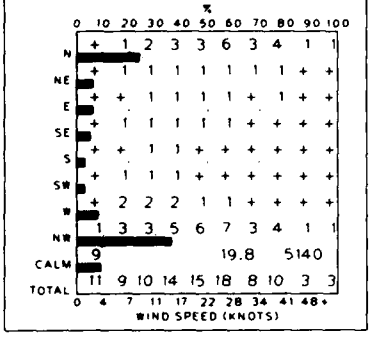
Nikol'skoe



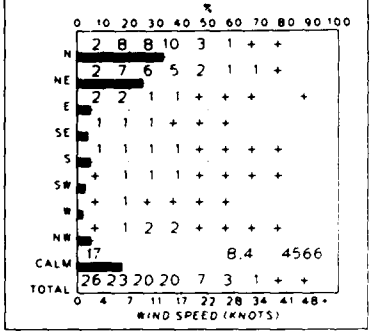
Khatirka-In-Chukot



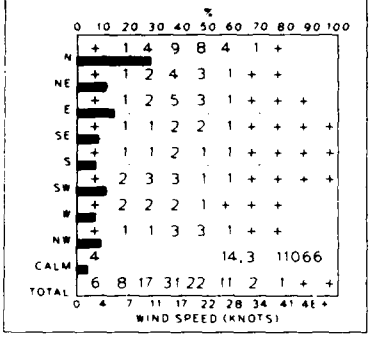
Ugol'naja



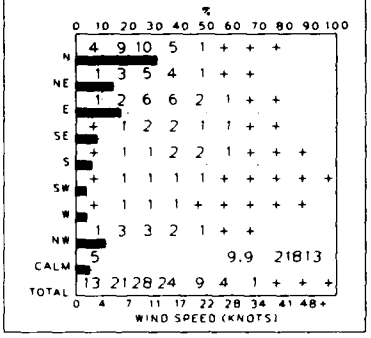
Buhta Providenja



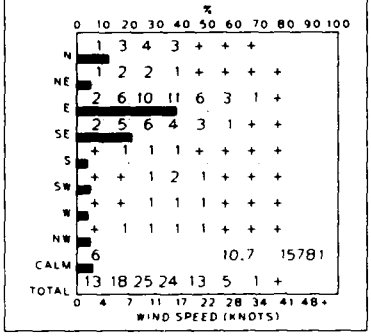
Norheast Cape



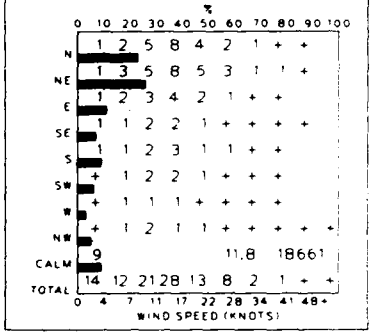
Nome



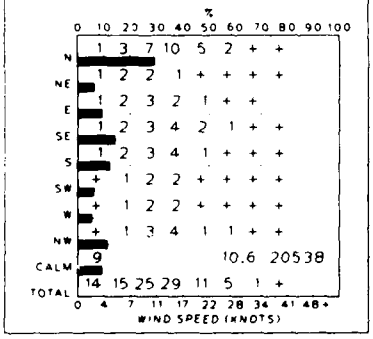
Unalakleet



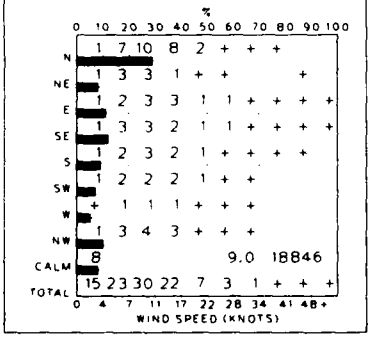
Cape Romanzof



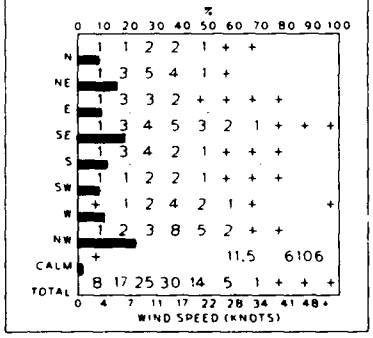
Cape Newenham



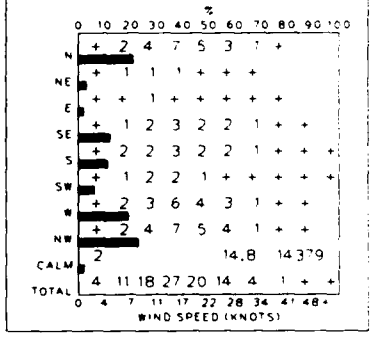
King Salmon



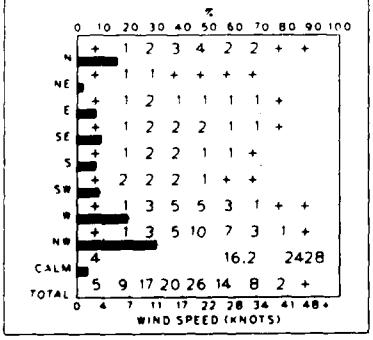
Port Heiden



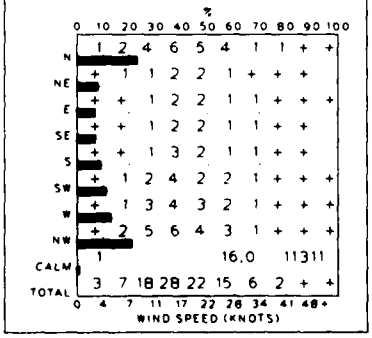
Cold Bay



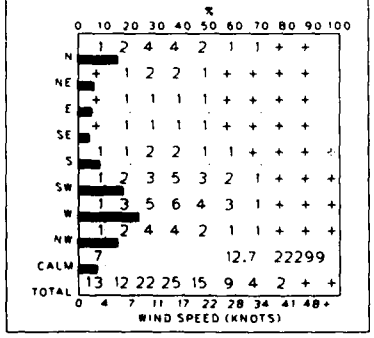
Nikolski



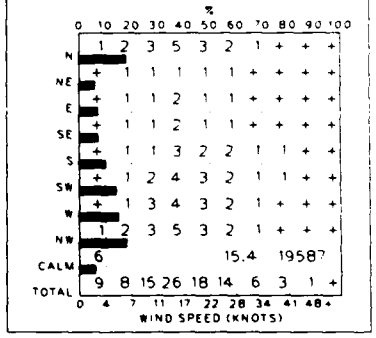
St. Paul

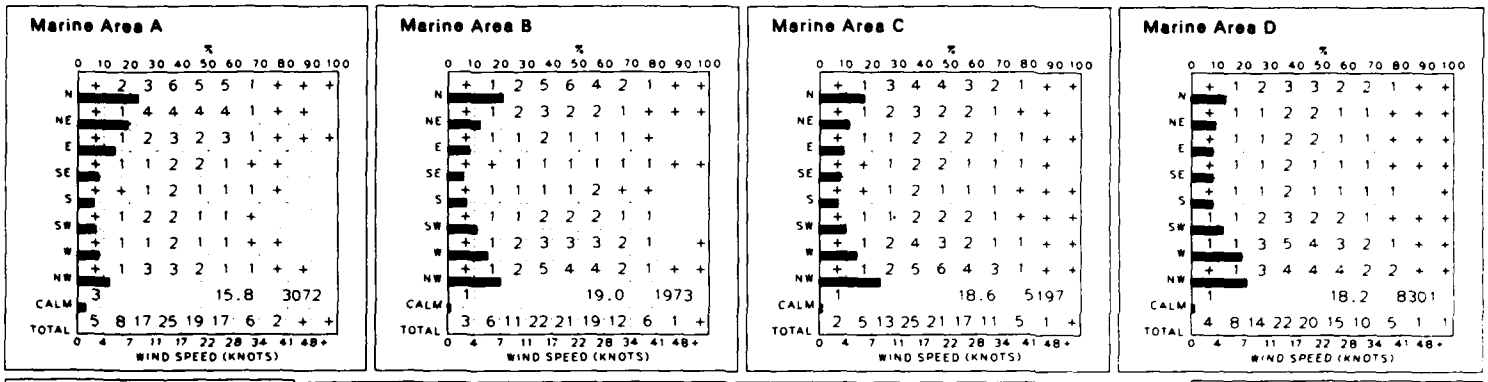


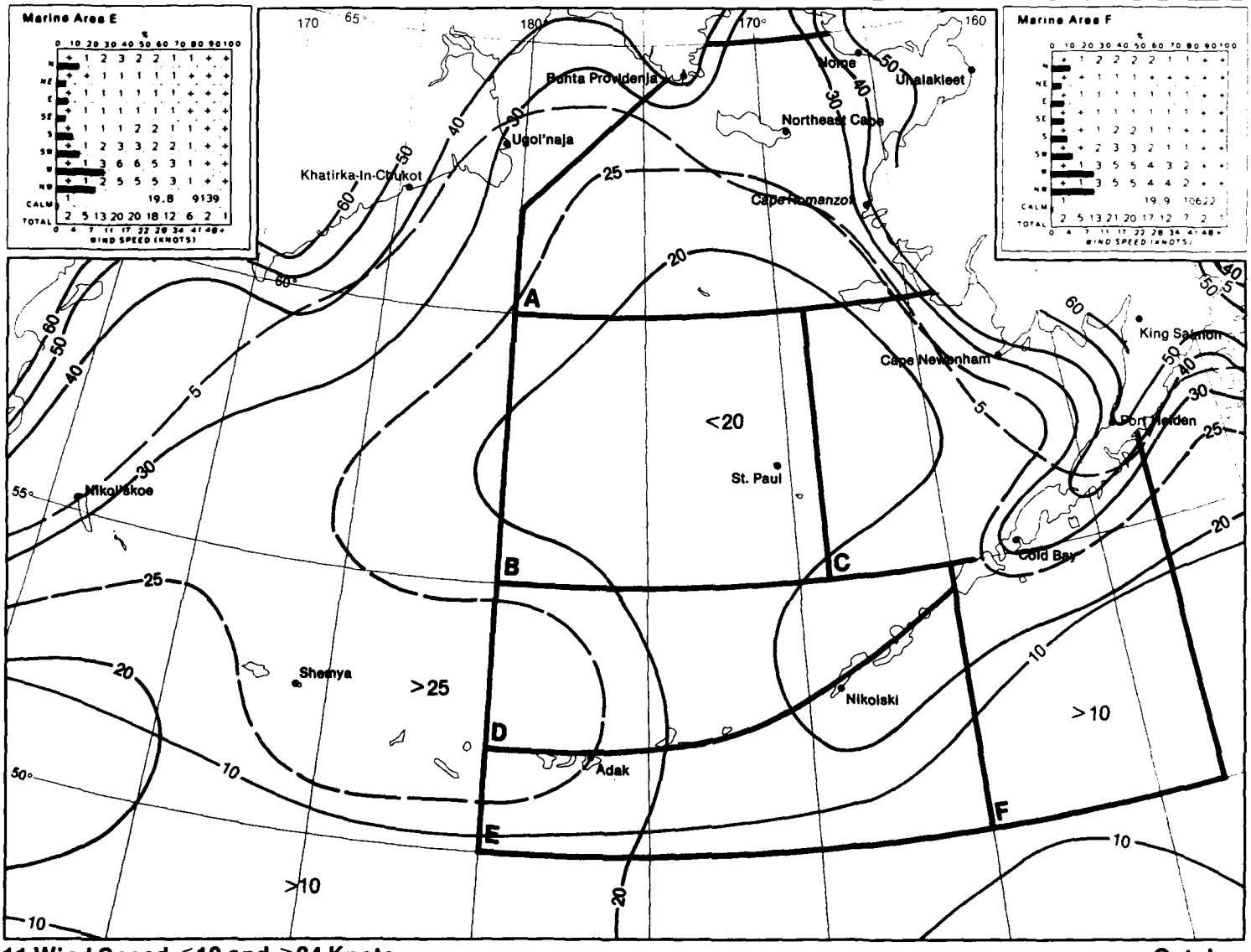
Adak



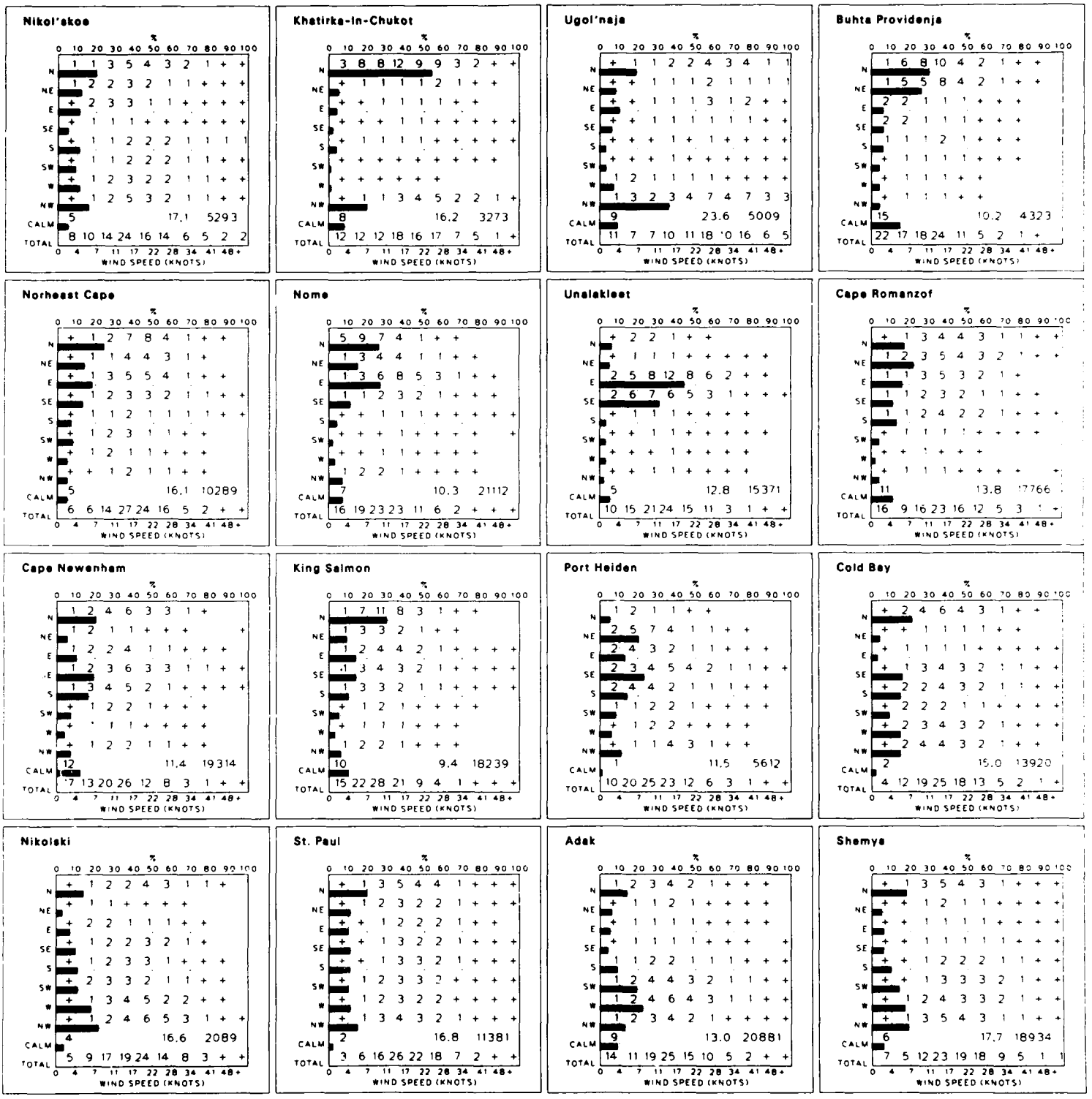
Shemya

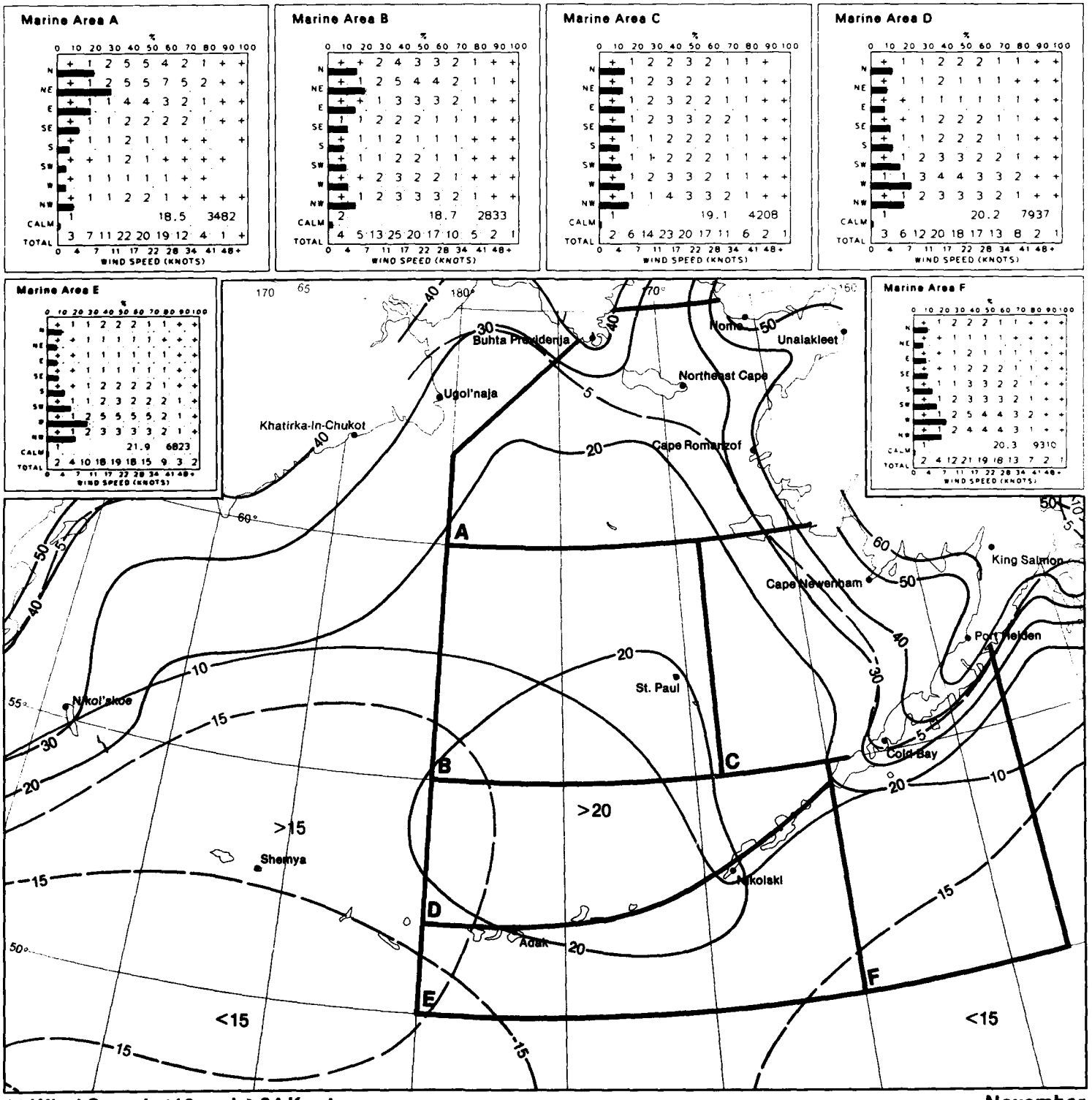




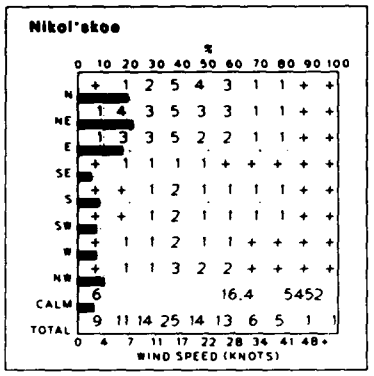


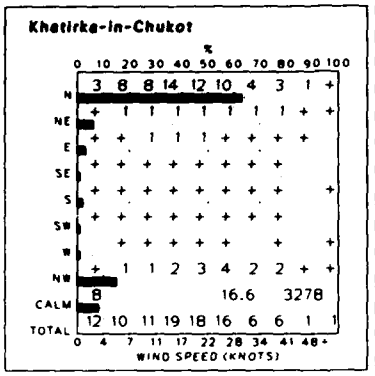
11 Wind Speed ≦10 and ≧34 Knots **October**

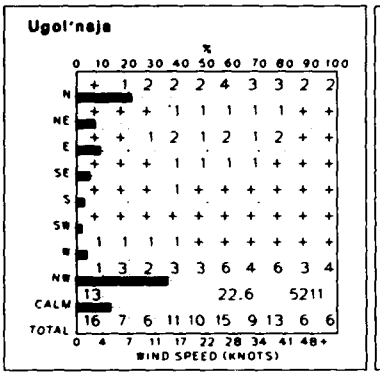

Nikol'skoe
17.1 5293
Khatirka-In-Chukot
16.2 3273
Ugol'naja
23.6 5009
Buhta Providenja
10.2 4323
Northeast Cape
16.1 10289
Nome
10.3 21112
Unalakleet
12.8 15371
Cape Romanzof
13.8 17766
Cape Newenham
11.4 19314
King Salmon
9.4 18239
Port Heiden
11.5 5612
Cold Bay
15.0 13920
Nikolski
16.6 2089
St. Paul
16.8 11381
Adak
13.0 20881
Shemya
17.7 18934
WIND SPEED (KNOTS)

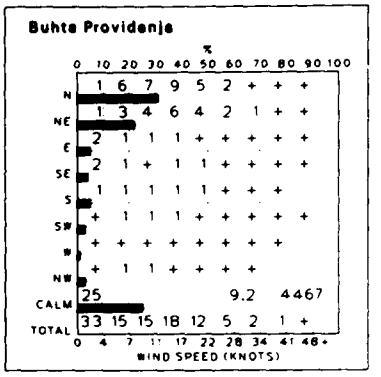


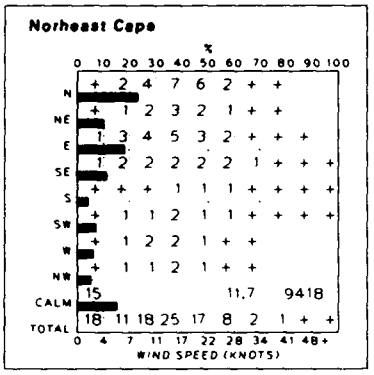
11 Wind Speed ≦10 and ≧34 Knots **November**

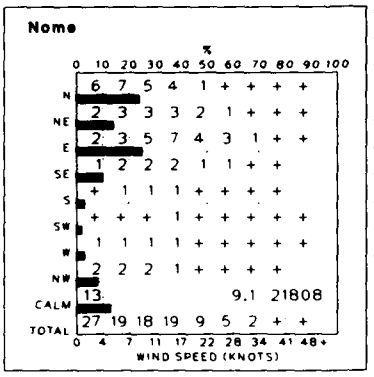

Nikol'skoe
CALM 6 16.4 5452
TOTAL 9 11 14 25 14 13 6 5 1 1
WIND SPEED (KNOTS)

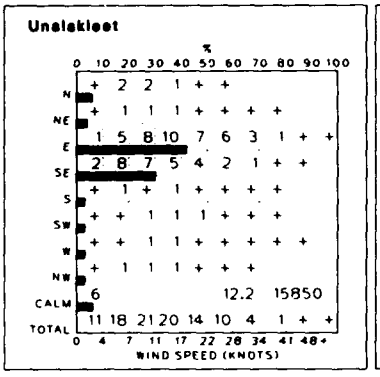

Khatirka-in-Chukot
CALM 8 16.6 3278
TOTAL 12 10 11 19 18 16 6 6 1 1
WIND SPEED (KNOTS)

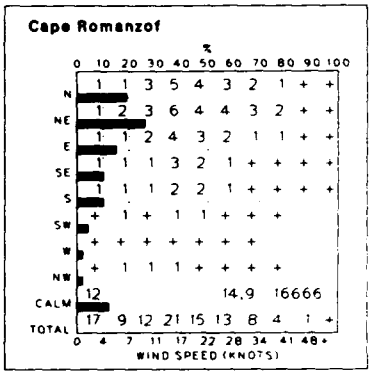

Ugol'naja
CALM 13 22.6 5211
TOTAL 16 7 6 11 10 15 9 13 6 6
WIND SPEED (KNOTS)

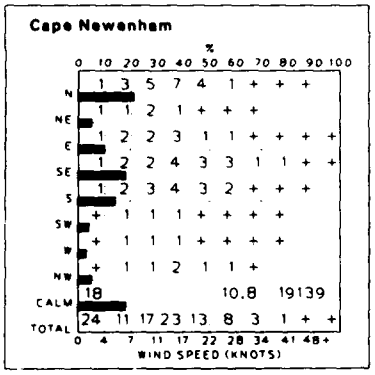

Buhta Providenja
CALM 25 9.2 4467
TOTAL 33 15 15 18 12 5 2 1 +
WIND SPEED (KNOTS)

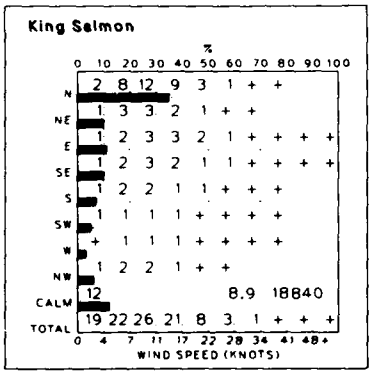

Norheast Cape
CALM 15 11.7 9418
TOTAL 18 11 18 25 17 8 2 1 + +
WIND SPEED (KNOTS)

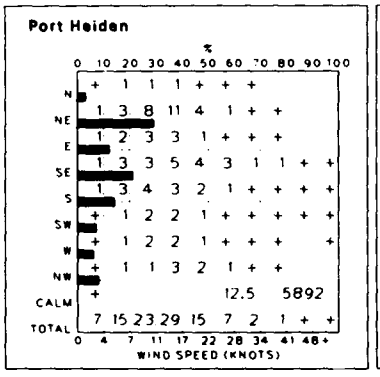

Nome
CALM 13 9.1 21808
TOTAL 27 19 18 19 9 5 2 + +
WIND SPEED (KNOTS)

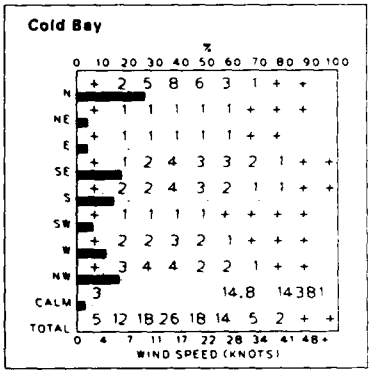

Unalakleet
CALM 6 12.2 15850
TOTAL 11 18 21 20 14 10 4 1 + +
WIND SPEED (KNOTS)

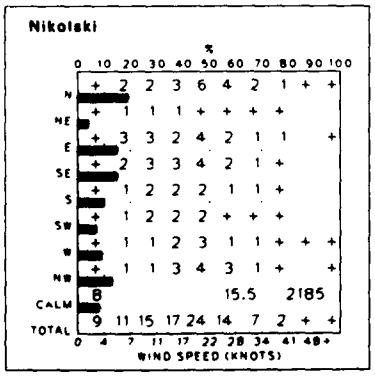

Cape Romanzof
CALM 12 14.9 16666
TOTAL 17 9 12 21 15 13 8 4 1 +
WIND SPEED (KNOTS)

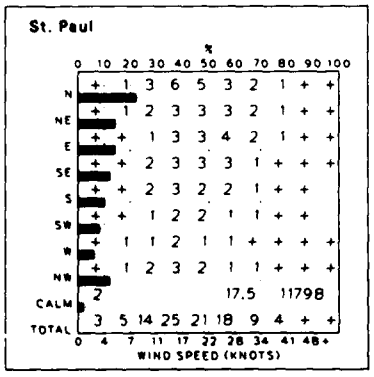

Cape Newenham
CALM 18 10.8 19139
TOTAL 24 11 17 23 13 8 3 1 + +
WIND SPEED (KNOTS)

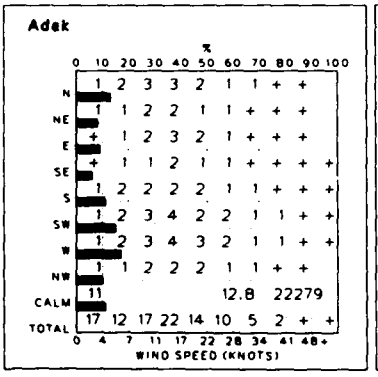

King Salmon
CALM 12 8.9 18840
TOTAL 19 22 26 21 8 3 1 + + +
WIND SPEED (KNOTS)

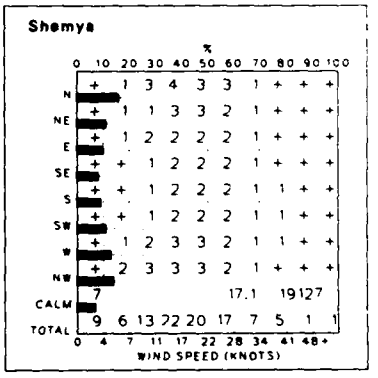

Port Heiden
CALM + 12.5 5892
TOTAL 7 15 23 29 15 7 2 1 + +
WIND SPEED (KNOTS)

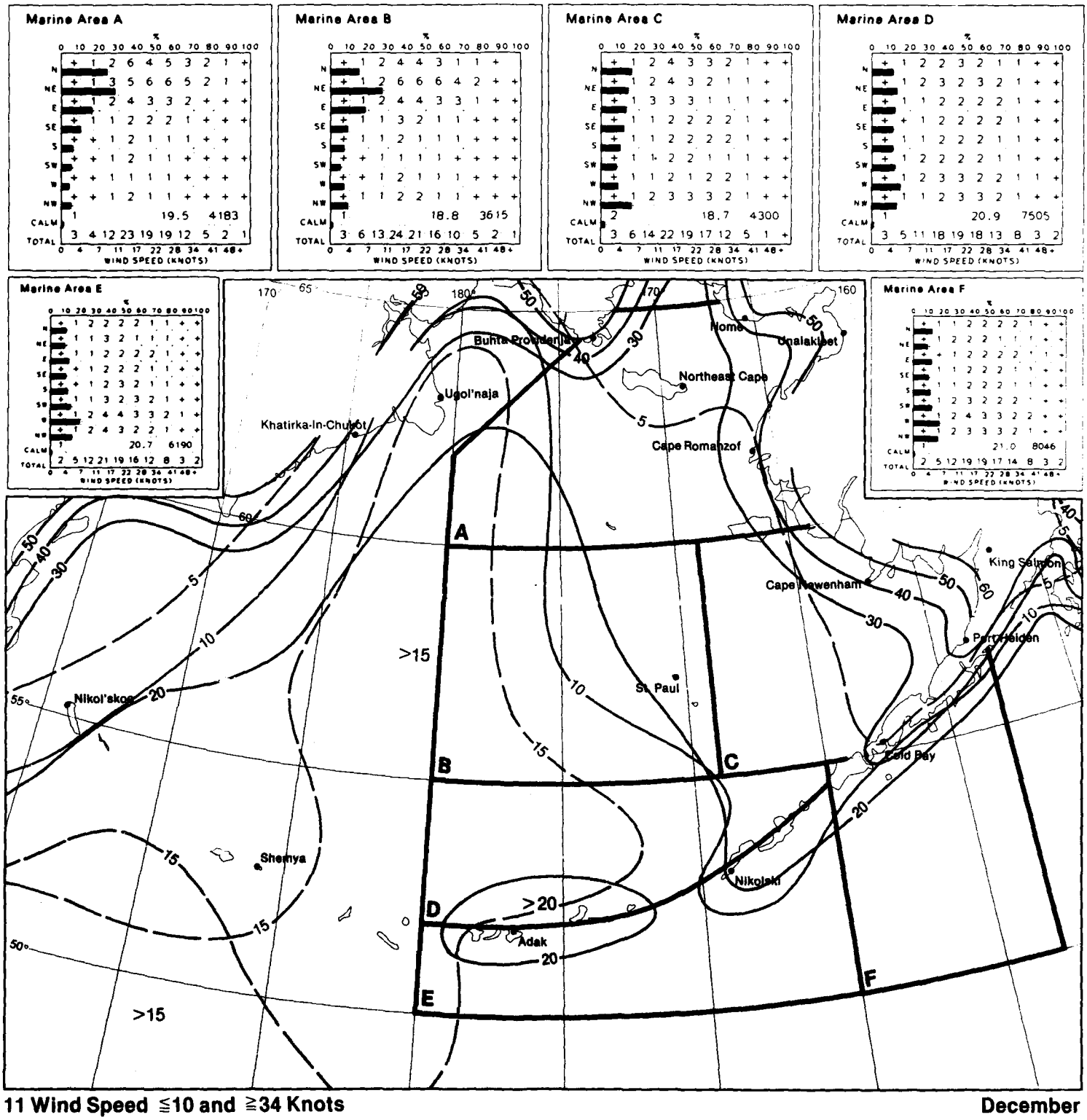

Cold Bay
CALM 3 14.8 14381
TOTAL 5 12 18 26 18 14 5 2 + +
WIND SPEED (KNOTS)


Nikolski
CALM 8 15.5 2185
TOTAL 9 11 15 17 24 14 7 2 + +
WIND SPEED (KNOTS)


St. Paul
CALM 2 17.5 11798
TOTAL 3 5 14 25 21 18 9 4 + +
WIND SPEED (KNOTS)


Adak
CALM 11 12.8 22279
TOTAL 17 12 17 22 14 10 5 2 + +
WIND SPEED (KNOTS)


Shemya
CALM 7 17.1 19127
TOTAL 9 6 13 22 20 17 7 5 1 1
WIND SPEED (KNOTS)



11 Wind Speed ≦10 and ≧34 Knots **December**

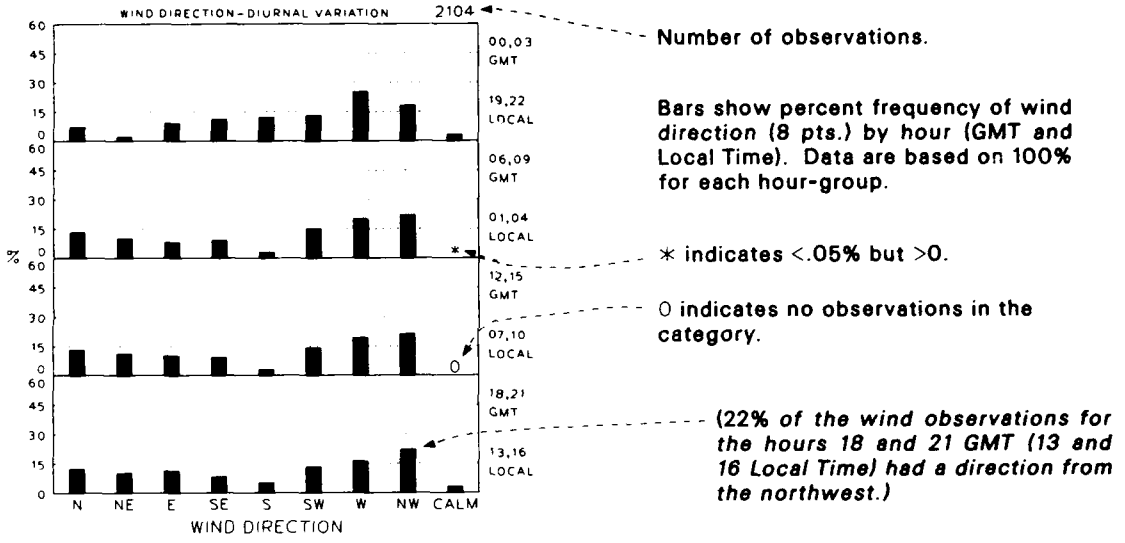
Map 12. Wind speed 11-21 and 22-33 knots

BLACK LINE – Percent frequency of wind speed 11–21 knots.

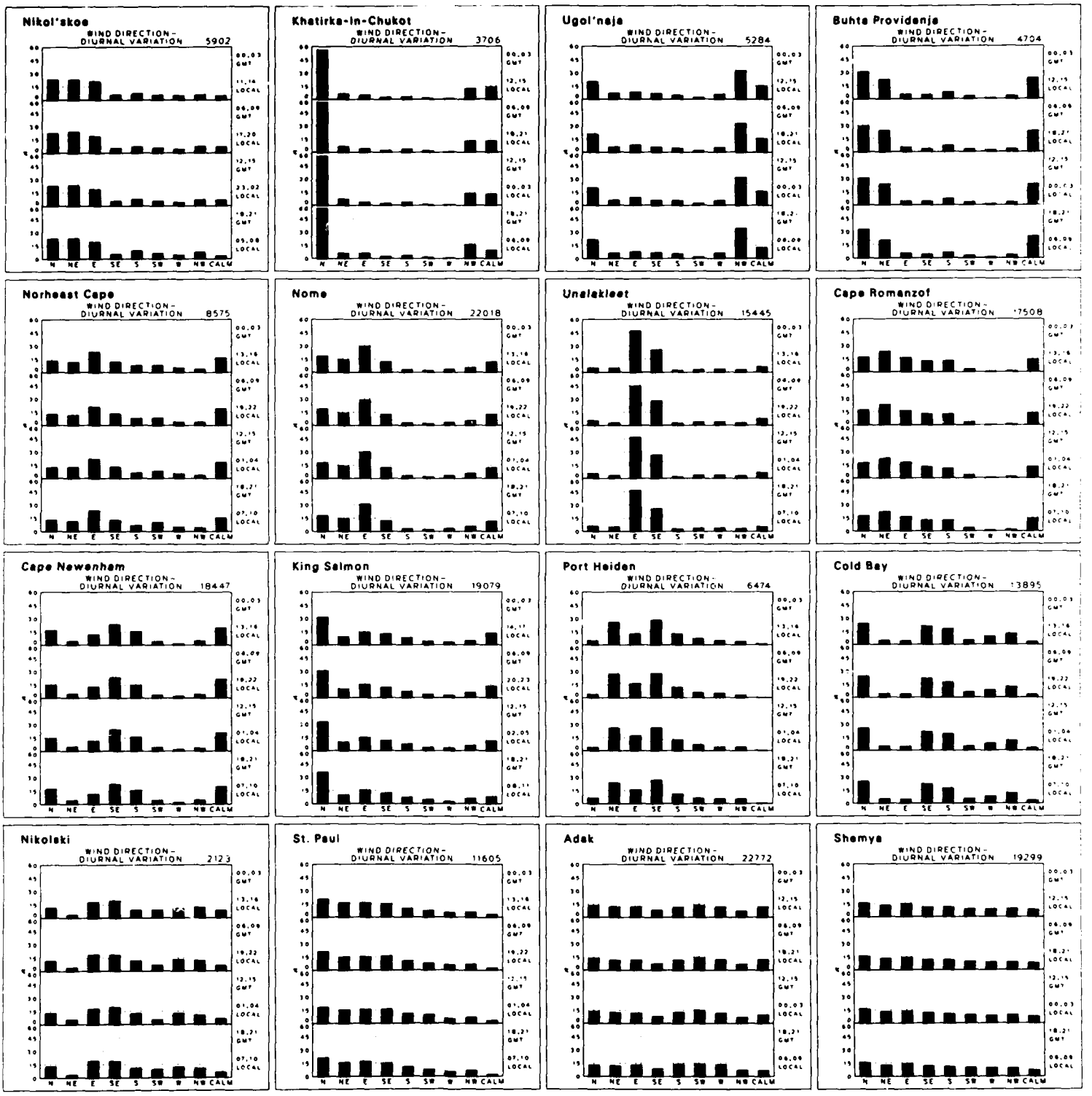
BLUE LINE – Percent frequency of wind speed 22–33 knots.

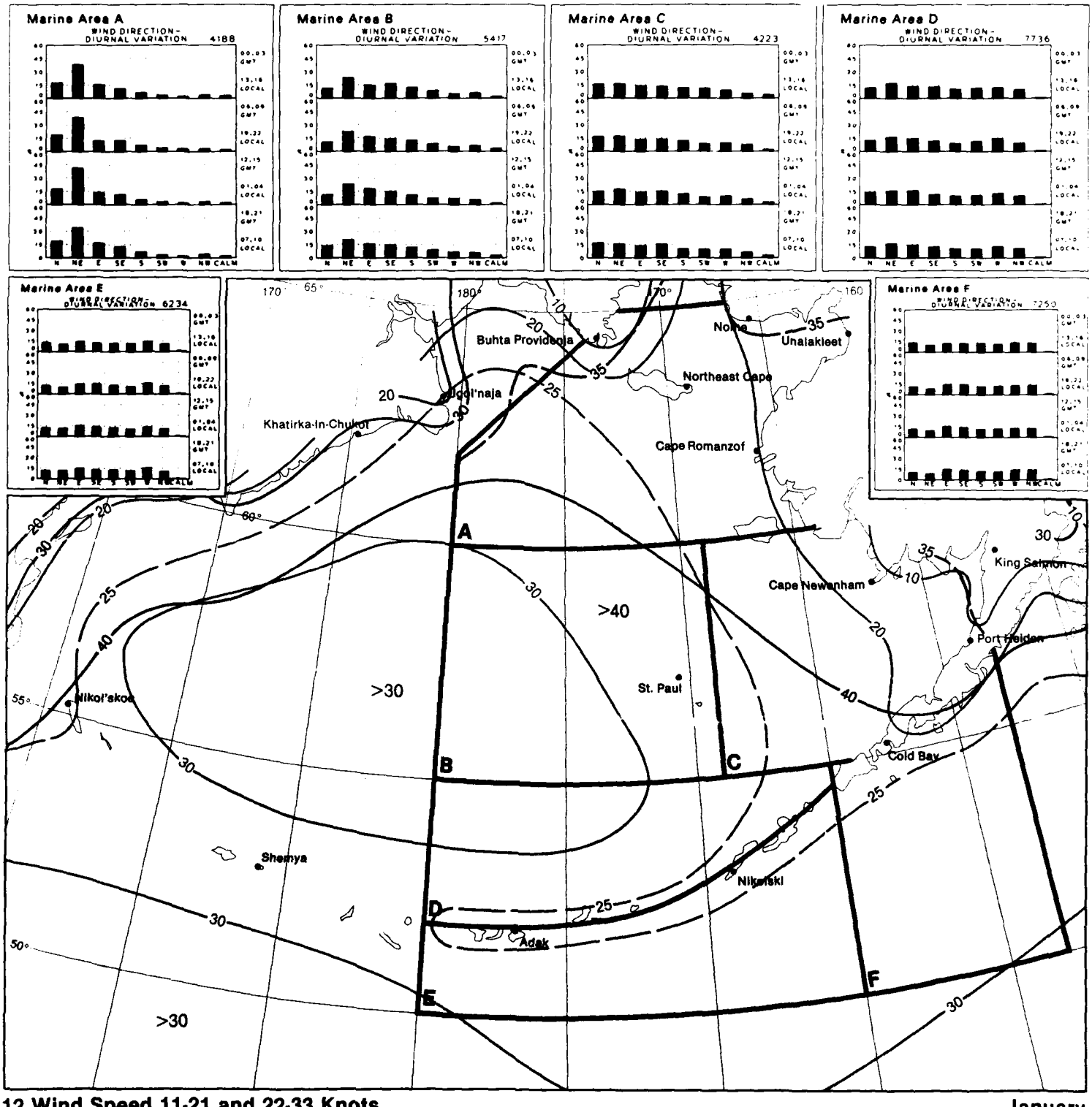
Albers Equal–Area Conic Projection

Graphs: Wind direction/diurnal variation



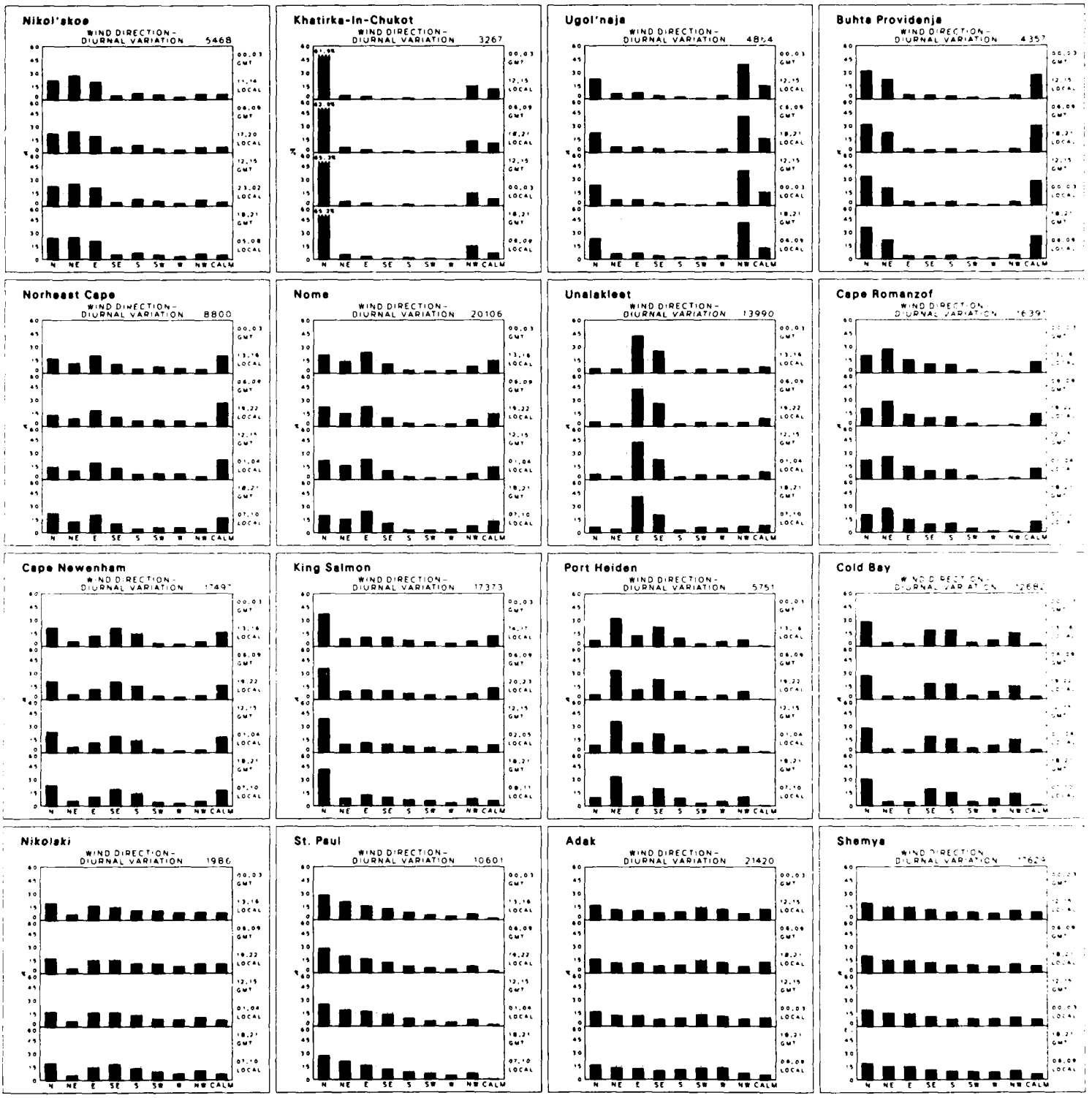
The historical marine data file at the NCDC is made up of data collected and recorded since 1854 in several different units of measurement. Wind direction has been recorded over the years in the 16-, 32-, and 36-point scale. A reduced biasing system was employed in converting wind direction to the 8-point scale used in this atlas. This method attached weighting values to observations which overlap two different 8-point sectors and treats them as "fractional observation counts."

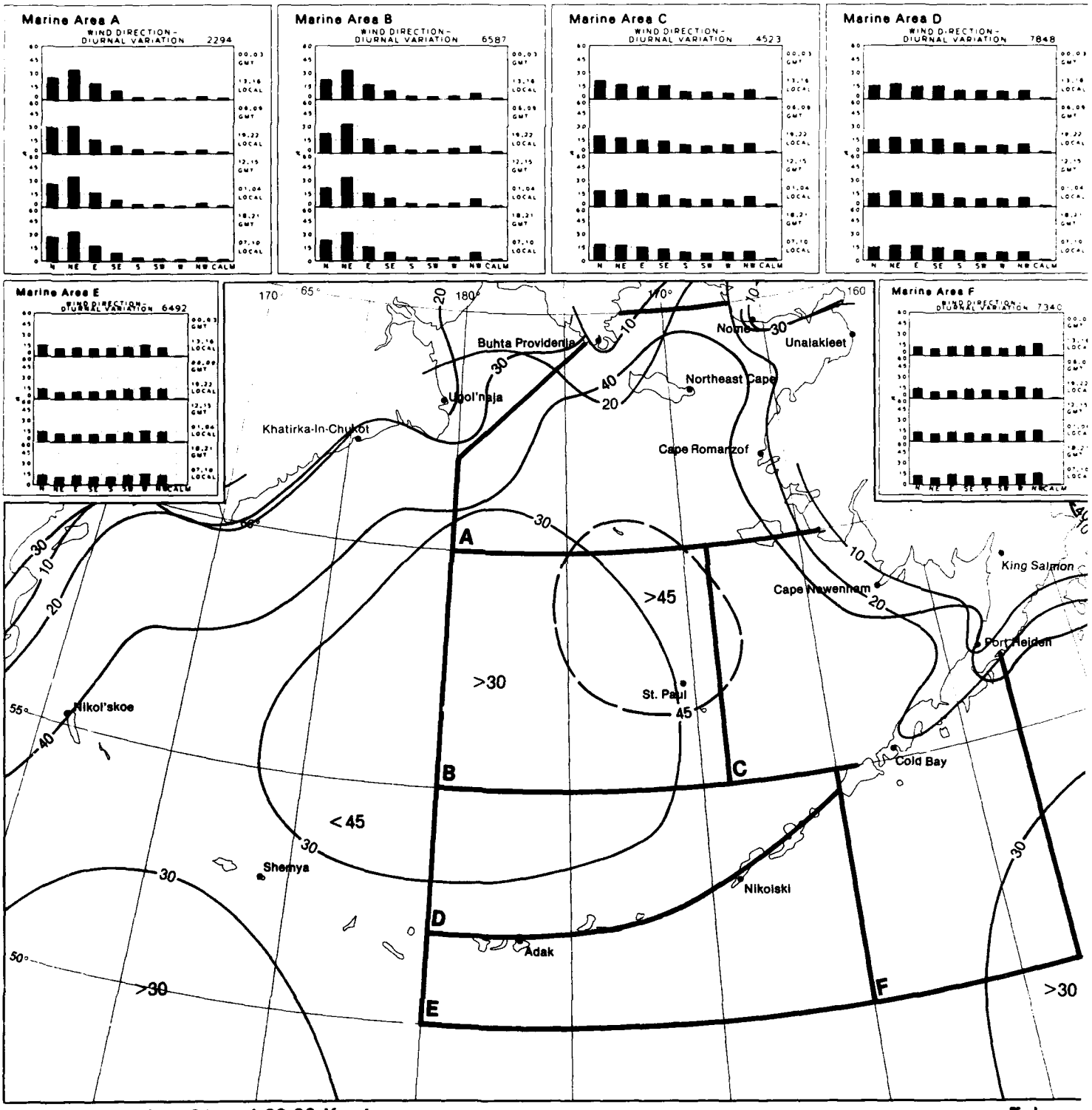

Nikol'skoe
WIND DIRECTION-DIURNAL VARIATION 5902
Khatirka-In-Chukot
WIND DIRECTION-DIURNAL VARIATION 3706
Ugol'naja
WIND DIRECTION-DIURNAL VARIATION 5284
Buhta Providenja
WIND DIRECTION-DIURNAL VARIATION 4704
Norheast Cape
WIND DIRECTION-DIURNAL VARIATION 8575
Nome
WIND DIRECTION-DIURNAL VARIATION 22018
Unalakleet
WIND DIRECTION-DIURNAL VARIATION 15445
Cape Romanzof
WIND DIRECTION-DIURNAL VARIATION 7508
Cape Newenham
WIND DIRECTION-DIURNAL VARIATION 18447
King Salmon
WIND DIRECTION-DIURNAL VARIATION 19079
Port Heiden
WIND DIRECTION-DIURNAL VARIATION 6474
Cold Bay
WIND DIRECTION-DIURNAL VARIATION 13895
Nikolski
WIND DIRECTION-DIURNAL VARIATION 2123
St. Paul
WIND DIRECTION-DIURNAL VARIATION 11605
Adak
WIND DIRECTION-DIURNAL VARIATION 22772
Shemya
WIND DIRECTION-DIURNAL VARIATION 19299
N NE E SE S SW W NW CALM



12 Wind Speed 11-21 and 22-33 Knots

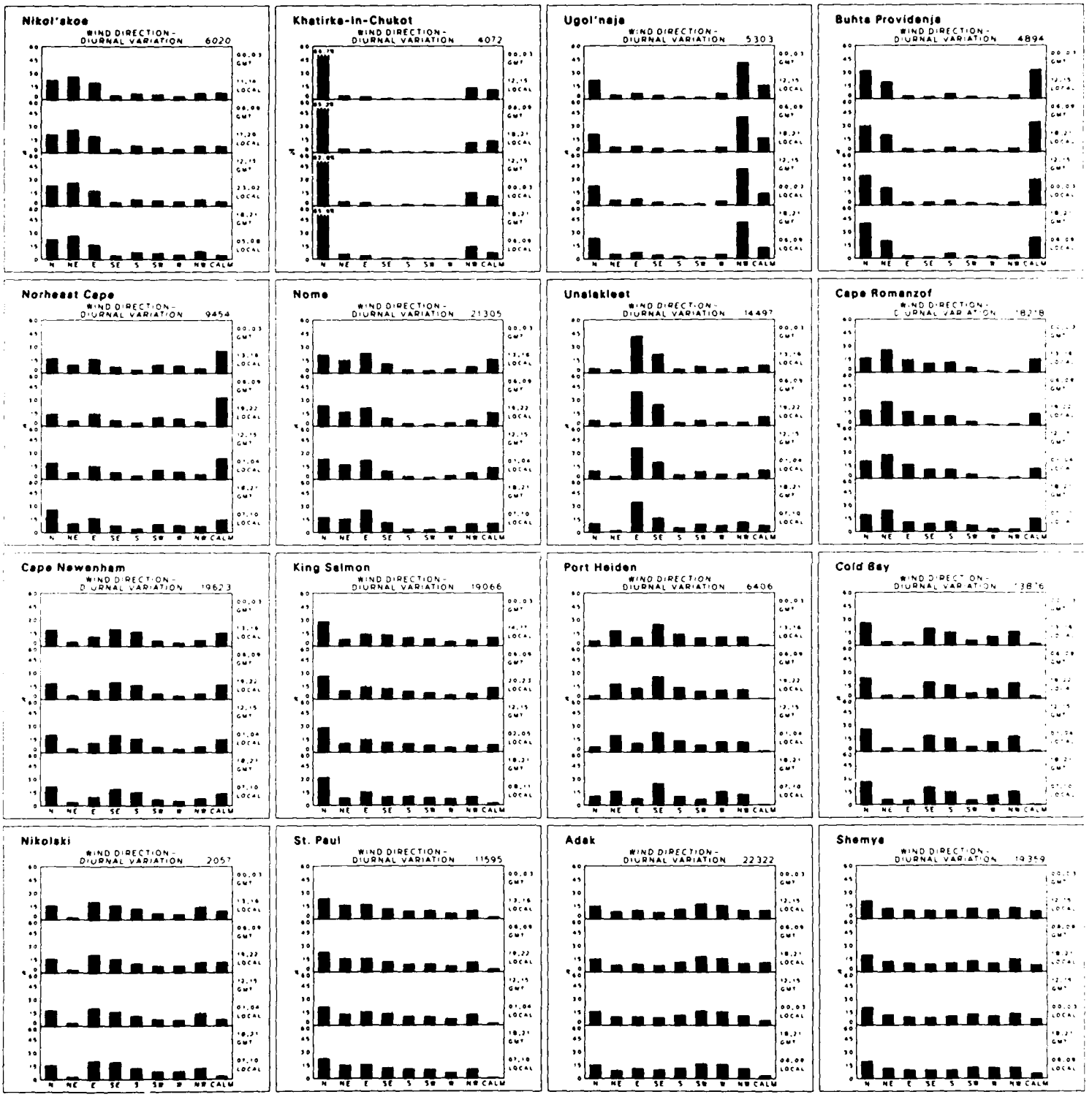
January

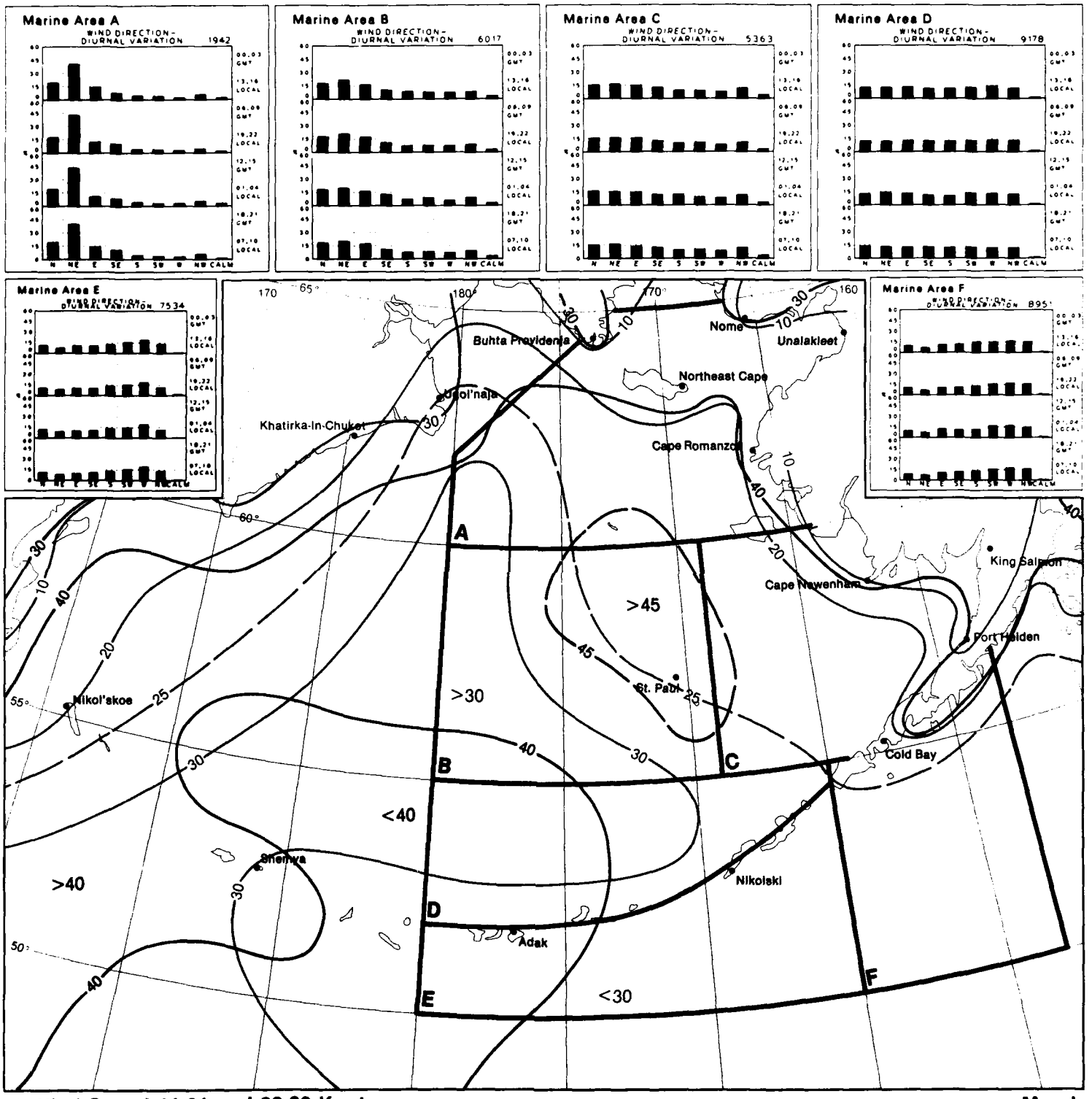

Nikol'skoe
WIND DIRECTION - DIURNAL VARIATION 5468
Khatirka-In-Chukot
WIND DIRECTION - DIURNAL VARIATION 3267
Ugol'naja
WIND DIRECTION - DIURNAL VARIATION 4814
Buhta Providenja
WIND DIRECTION - DIURNAL VARIATION 4357
Northeast Cape
WIND DIRECTION - DIURNAL VARIATION 8800
Nome
WIND DIRECTION - DIURNAL VARIATION 20106
Unalakleet
WIND DIRECTION - DIURNAL VARIATION 13990
Cape Romanzof
WIND DIRECTION - DIURNAL VARIATION 16391
Cape Newenham
WIND DIRECTION - DIURNAL VARIATION 17497
King Salmon
WIND DIRECTION - DIURNAL VARIATION 17373
Port Heiden
WIND DIRECTION - DIURNAL VARIATION 5751
Cold Bay
WIND DIRECTION - DIURNAL VARIATION 12684
Nikolski
WIND DIRECTION - DIURNAL VARIATION 1986
St. Paul
WIND DIRECTION - DIURNAL VARIATION 10601
Adak
WIND DIRECTION - DIURNAL VARIATION 21420
Shemya
WIND DIRECTION - DIURNAL VARIATION 17629
N NE E SE S SW W NW CALM



12 Wind Speed 11-21 and 22-33 Knots

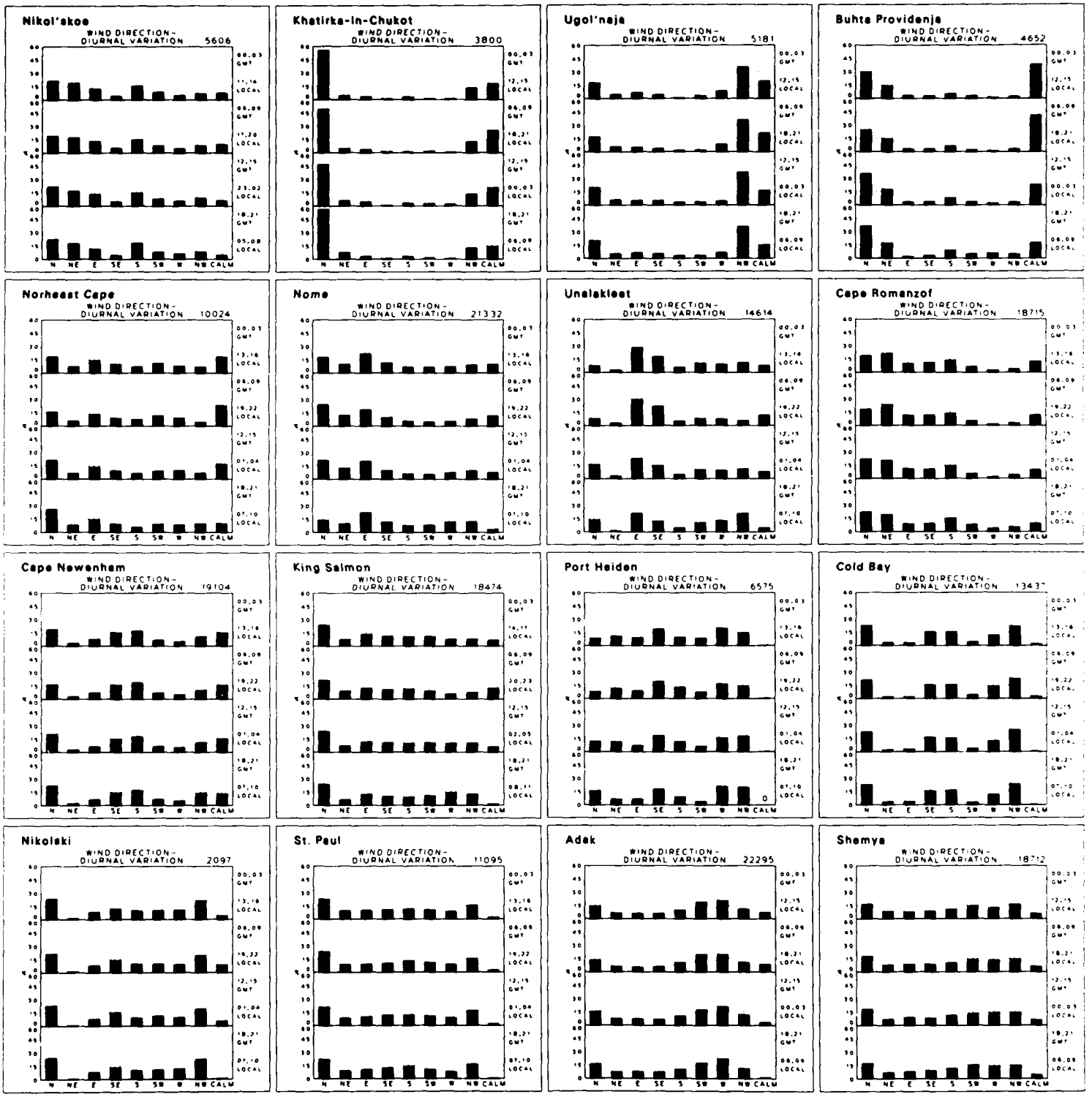
Februa

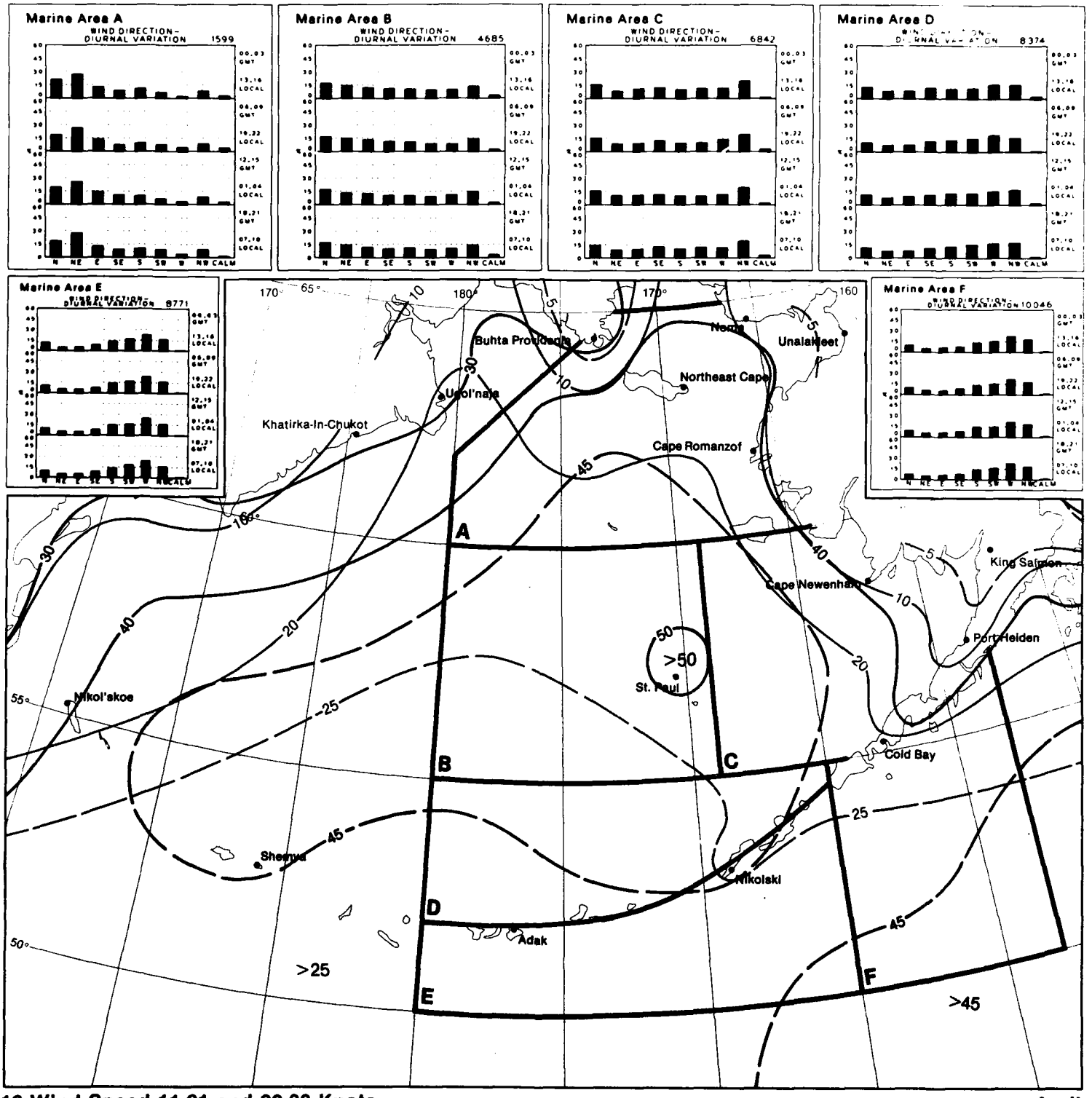

Nikol'skoe
WIND DIRECTION - DIURNAL VARIATION 6020
Khatirka-In-Chukot
WIND DIRECTION - DIURNAL VARIATION 4072
Ugol'naja
WIND DIRECTION - DIURNAL VARIATION 5303
Buhta Providenja
WIND DIRECTION - DIURNAL VARIATION 4894
Northeast Cape
WIND DIRECTION - DIURNAL VARIATION 9454
Nome
WIND DIRECTION - DIURNAL VARIATION 21305
Unalakleet
WIND DIRECTION - DIURNAL VARIATION 14497
Cape Romanzof
WIND DIRECTION - DIURNAL VARIATION 18218
Cape Newenham
WIND DIRECTION - DIURNAL VARIATION 19623
King Salmon
WIND DIRECTION - DIURNAL VARIATION 19066
Port Heiden
WIND DIRECTION - DIURNAL VARIATION 6406
Cold Bay
WIND DIRECTION - DIURNAL VARIATION 13876
Nikolski
WIND DIRECTION - DIURNAL VARIATION 2057
St. Paul
WIND DIRECTION - DIURNAL VARIATION 11595
Adak
WIND DIRECTION - DIURNAL VARIATION 22322
Shemya
WIND DIRECTION - DIURNAL VARIATION 19359
N NE E SE S SW W NW CALM



12 Wind Speed 11-21 and 22-33 Knots

March

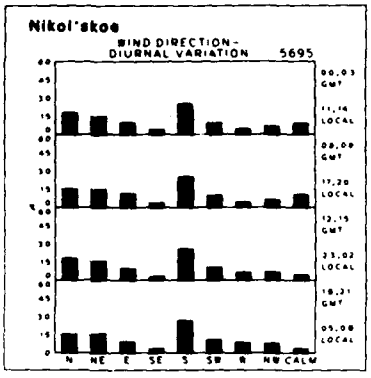

Nikol'skoe
WIND DIRECTION-
DIURNAL VARIATION 5606
Khatirka-In-Chukot
WIND DIRECTION-
DIURNAL VARIATION 3800
Ugol'naja
WIND DIRECTION-
DIURNAL VARIATION 5181
Buhta Providenja
WIND DIRECTION-
DIURNAL VARIATION 4652
Norheast Cape
WIND DIRECTION-
DIURNAL VARIATION 10024
Nome
WIND DIRECTION-
DIURNAL VARIATION 21332
Unalakleet
WIND DIRECTION-
DIURNAL VARIATION 14614
Cape Romanzof
WIND DIRECTION-
DIURNAL VARIATION 18715
Cape Newenham
WIND DIRECTION-
DIURNAL VARIATION 19104
King Salmon
WIND DIRECTION-
DIURNAL VARIATION 18474
Port Heiden
WIND DIRECTION-
DIURNAL VARIATION 6575
Cold Bay
WIND DIRECTION-
DIURNAL VARIATION 13437
Nikolski
WIND DIRECTION-
DIURNAL VARIATION 2097
St. Paul
WIND DIRECTION-
DIURNAL VARIATION 11095
Adak
WIND DIRECTION-
DIURNAL VARIATION 22295
Shemya
WIND DIRECTION-
DIURNAL VARIATION 18712
N NE E SE S SW W NW CALM



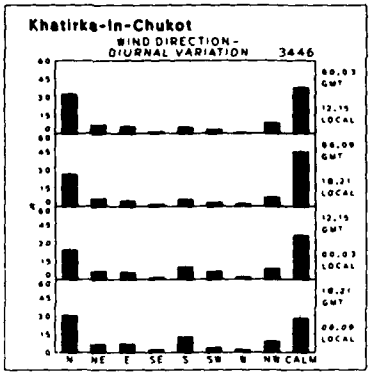
12 Wind Speed 11-21 and 22-33 Knots

April

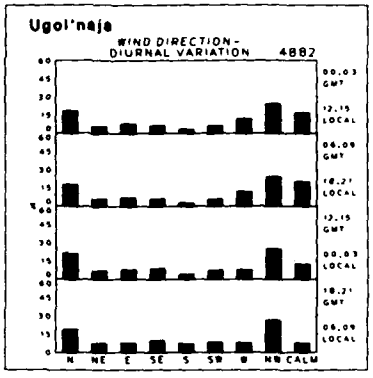
Nikol'skoe



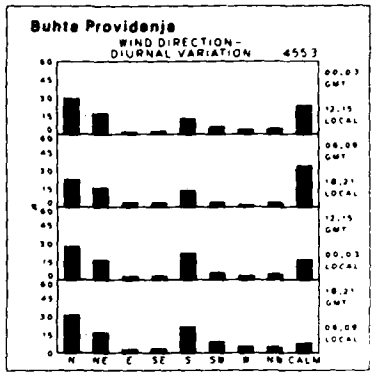
Khatirka-In-Chukot



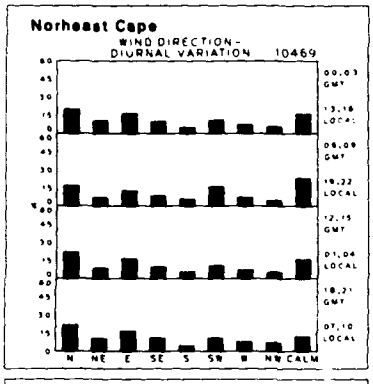
Ugol'naja



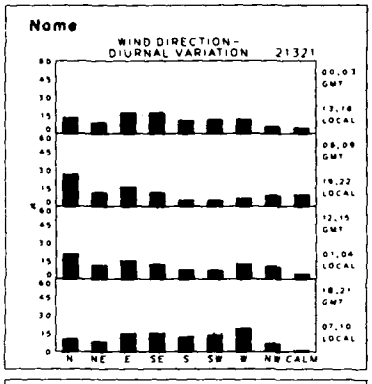
Buhta Providenja



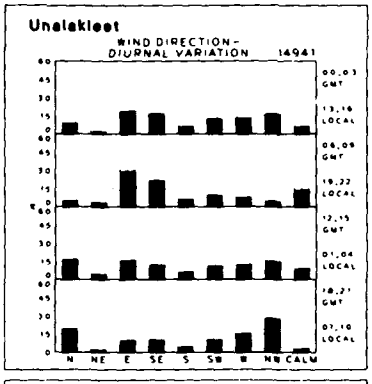
Norheast Cape



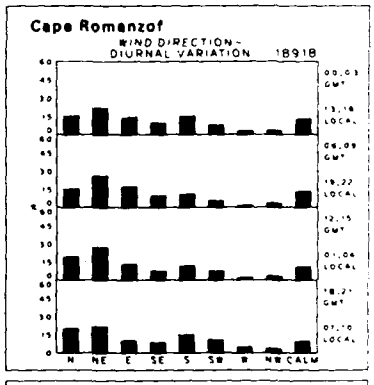
Nome



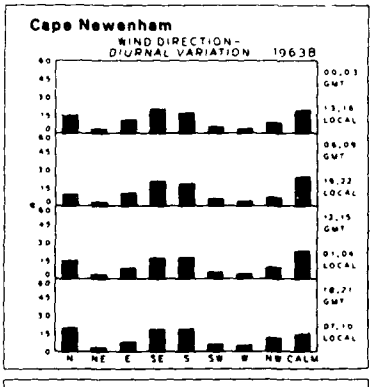
Unalakleet



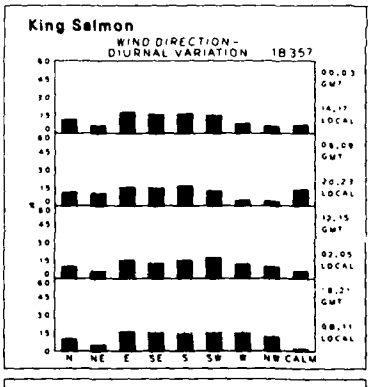
Cape Romanzof



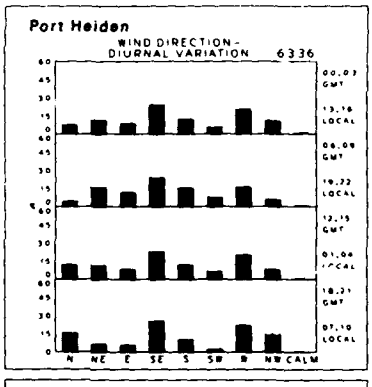
Cape Newenham



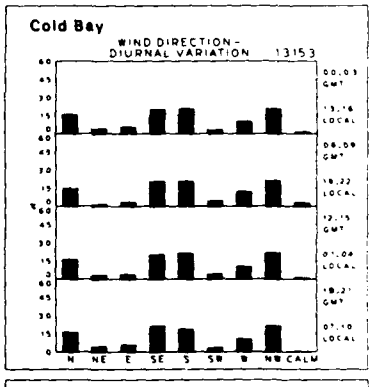
King Salmon



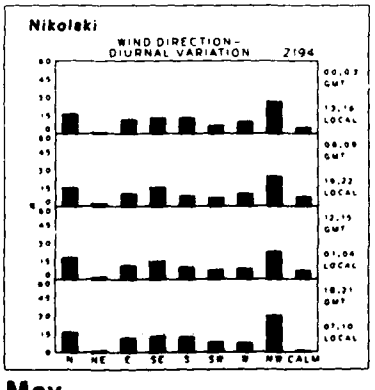
Port Heiden



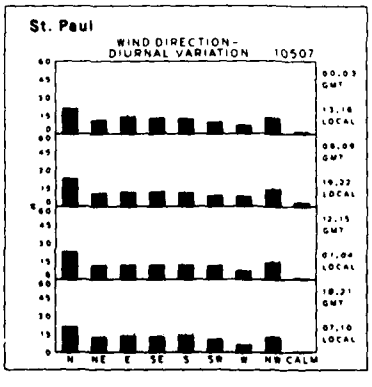
Cold Bay



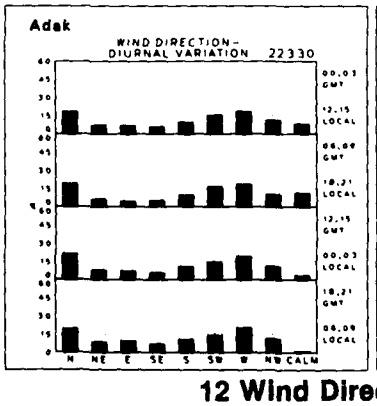
Nikolski



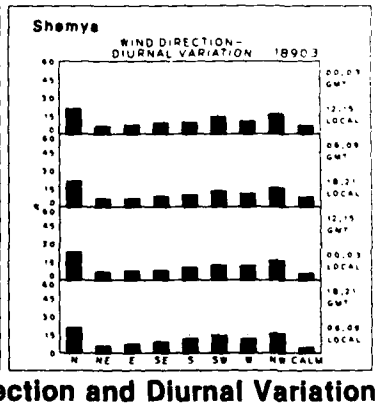
St. Paul

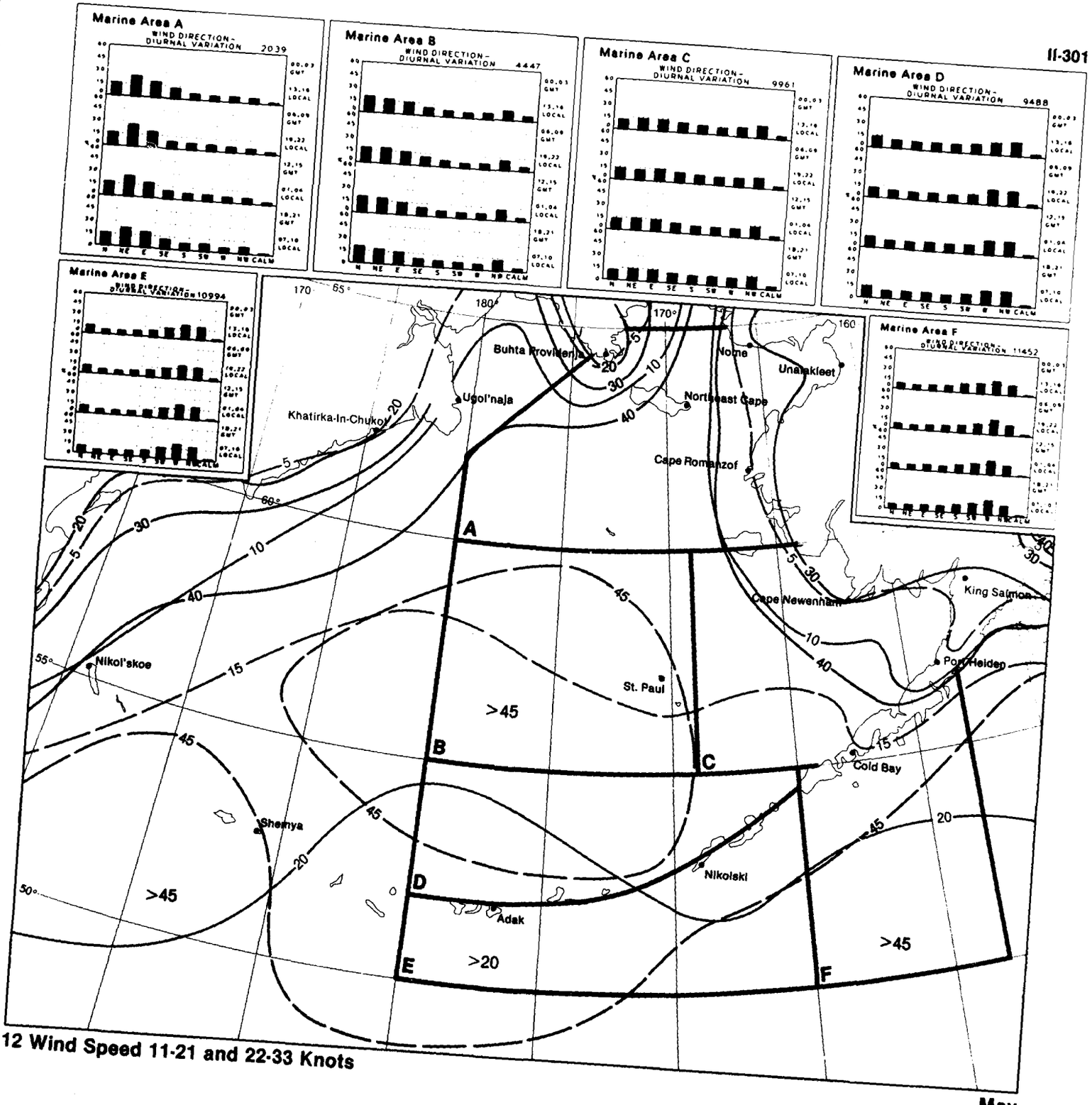


Adak



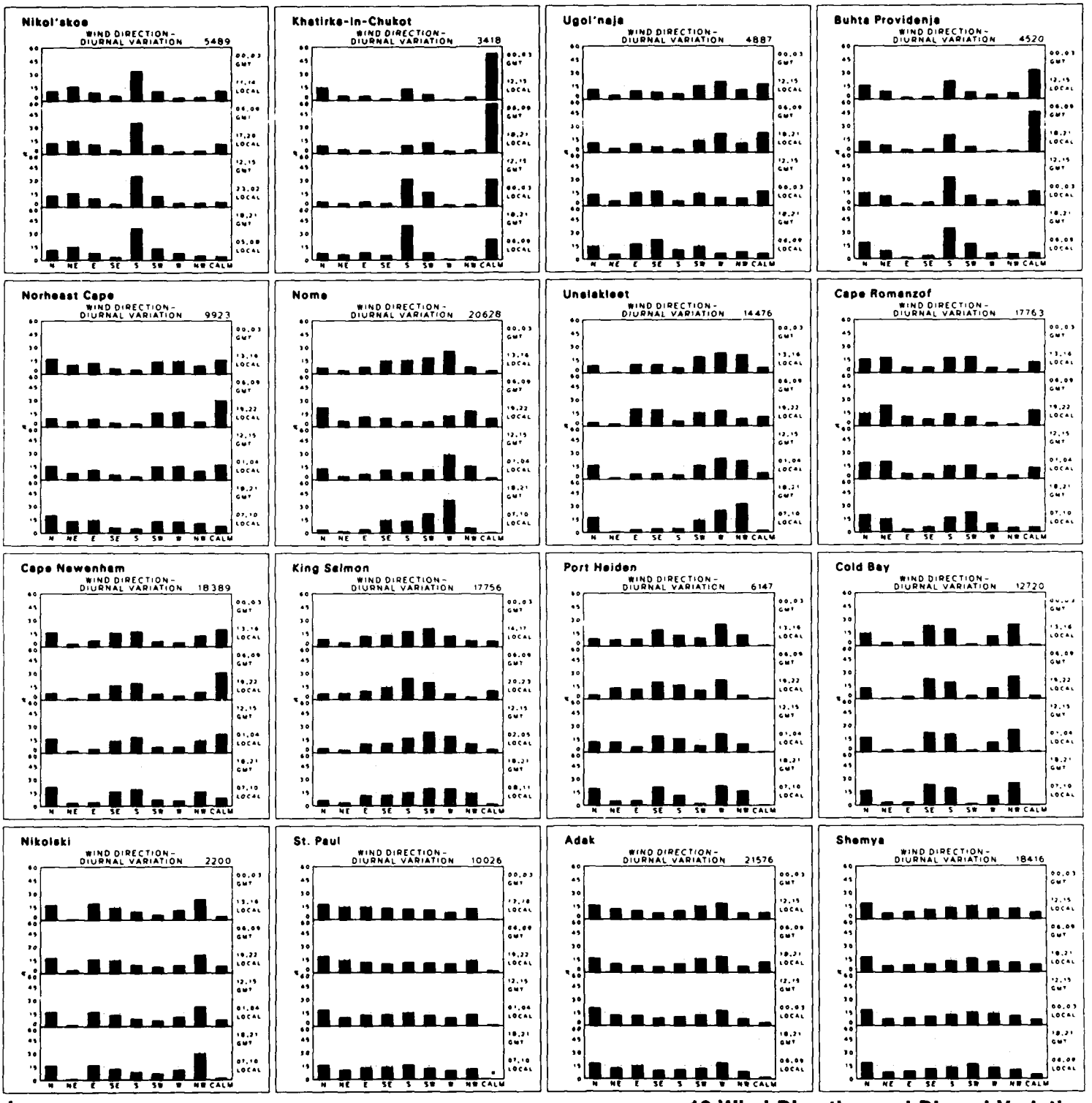
Shemya

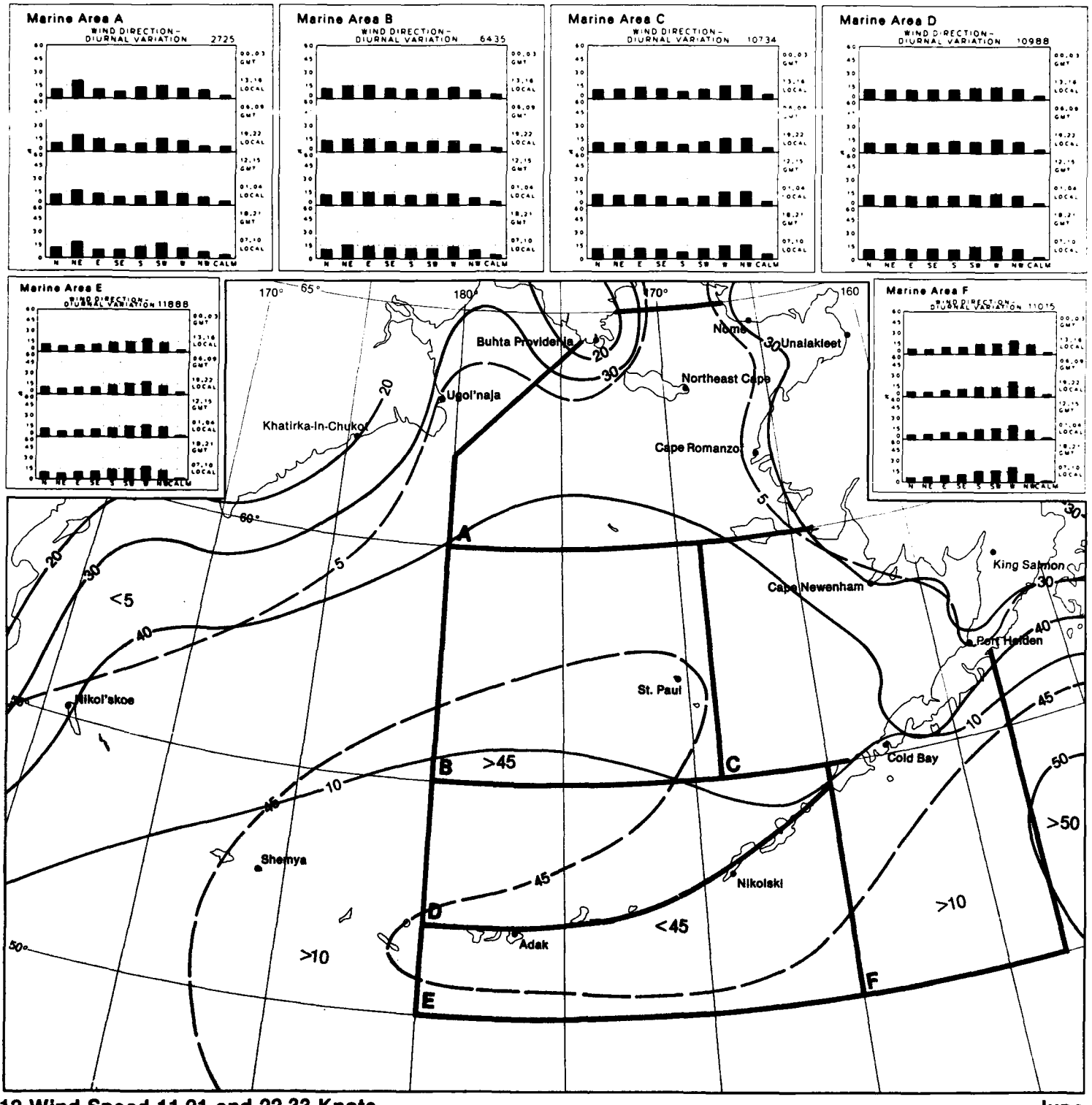




12 Wind Speed 11-21 and 22-33 Knots

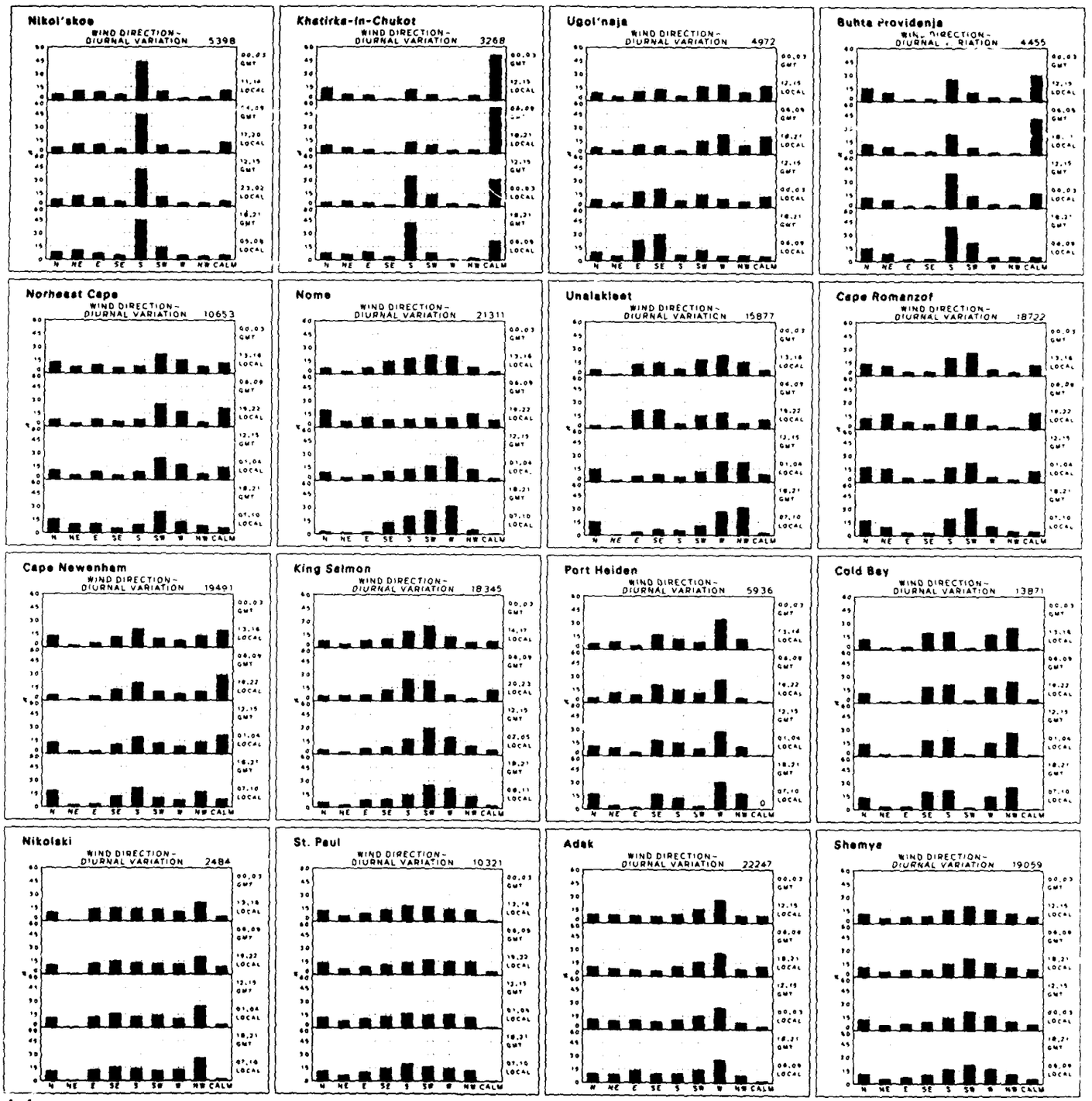
May

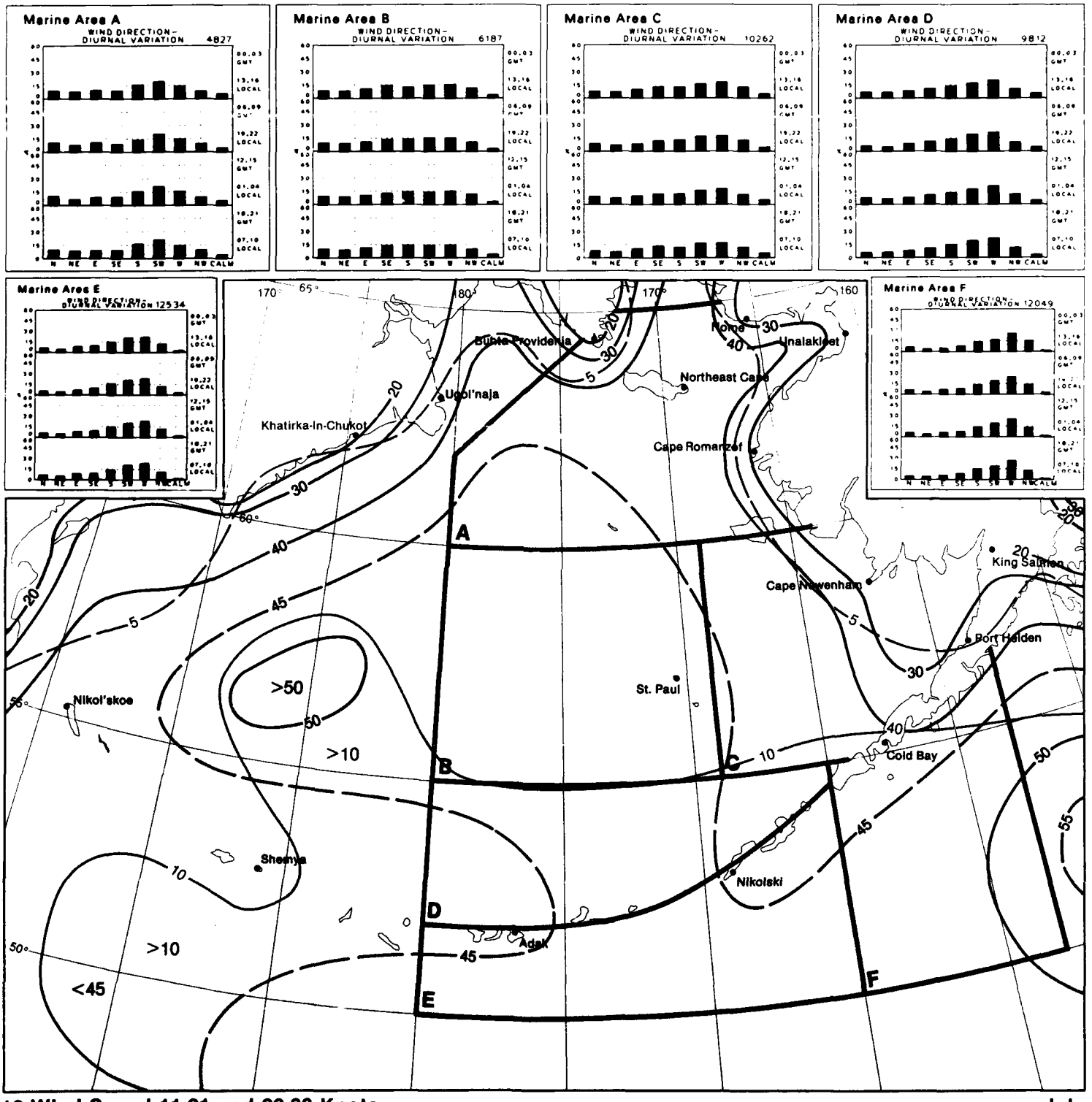

Nikol'skoe
WIND DIRECTION-
DIURNAL VARIATION
5489
Khatirka-In-Chukot
3418
Ugol'naja
4887
Buhta Providenje
4520
Norheast Cape
9923
Nome
20628
Unalakleet
14476
Cape Romanzof
17763
Cape Newenham
18389
King Salmon
17756
Port Heiden
6147
Cold Bay
12720
Nikolski
2200
St. Paul
10026
Adak
21576
Shemya
18416
N NE E SE S SW W NW CALM
00,03 GMT
13,16 LOCAL
06,09 GMT
19,22 LOCAL
12,15 GMT
01,04 LOCAL
18,21 GMT
07,10 LOCAL



12 Wind Speed 11-21 and 22-33 Knots

June

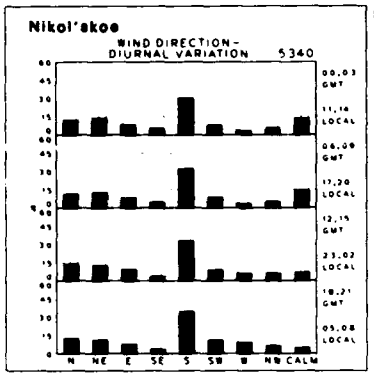

Nikol'skoe
WIND DIRECTION-
DIURNAL VARIATION 5398
Khatirka-in-Chukot
WIND DIRECTION-
DIURNAL VARIATION 3268
Ugol'naja
WIND DIRECTION-
DIURNAL VARIATION 4972
Buhta Providenja
WIND DIRECTION-
DIURNAL VARIATION 4455
Northeast Cape
WIND DIRECTION-
DIURNAL VARIATION 10653
Nome
WIND DIRECTION-
DIURNAL VARIATION 21311
Unalakleet
WIND DIRECTION-
DIURNAL VARIATION 15877
Cape Romanzof
WIND DIRECTION-
DIURNAL VARIATION 18722
Cape Newenham
WIND DIRECTION-
DIURNAL VARIATION 19491
King Salmon
WIND DIRECTION-
DIURNAL VARIATION 18345
Port Heiden
WIND DIRECTION-
DIURNAL VARIATION 5936
Cold Bay
WIND DIRECTION-
DIURNAL VARIATION 13871
Nikolski
WIND DIRECTION-
DIURNAL VARIATION 2484
St. Paul
WIND DIRECTION-
DIURNAL VARIATION 10321
Adak
WIND DIRECTION-
DIURNAL VARIATION 22247
Shemya
WIND DIRECTION-
DIURNAL VARIATION 19059
N NE E SE S SW W NW CALM



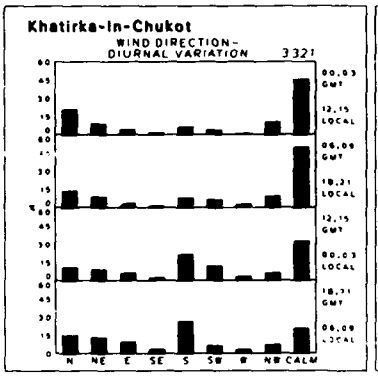
12 Wind Speed 11-21 and 22-33 Knots

July

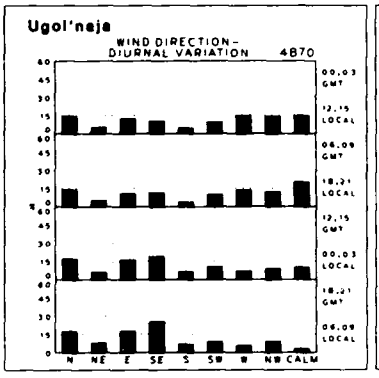
Nikol'skoe



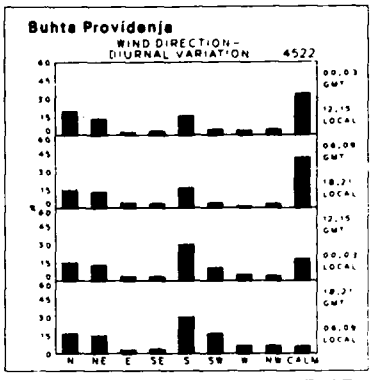
Khatirka-In-Chukot



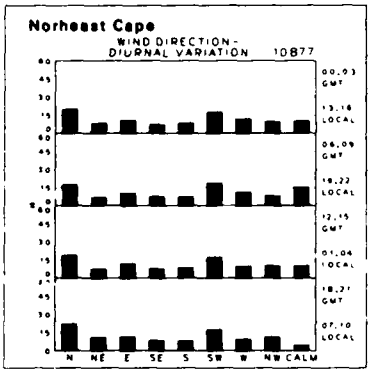
Ugol'naja



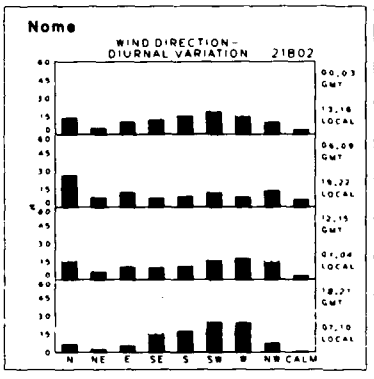
Buhta Providenja



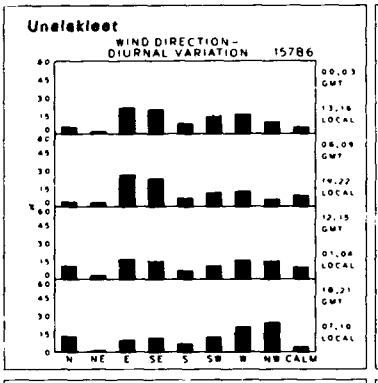
Norheast Cape



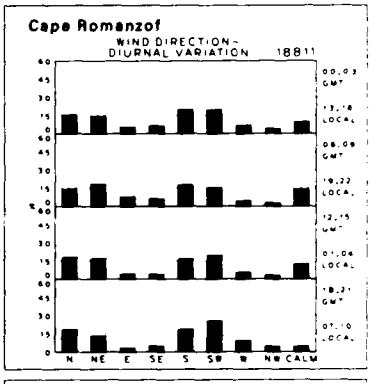
Nome



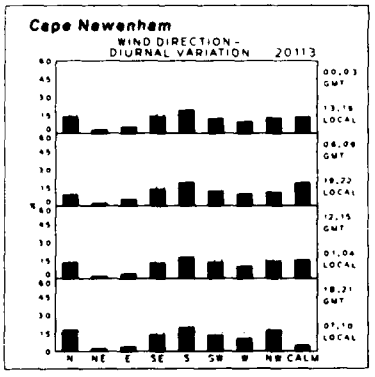
Unalakleet



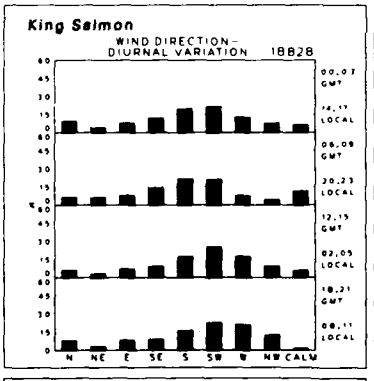
Cape Romanzof



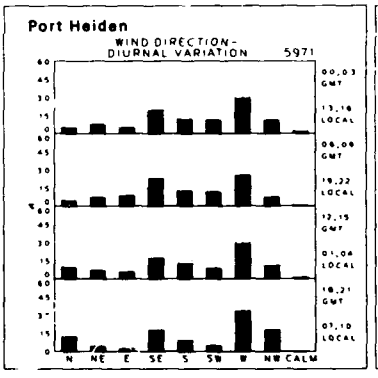
Cape Newenham



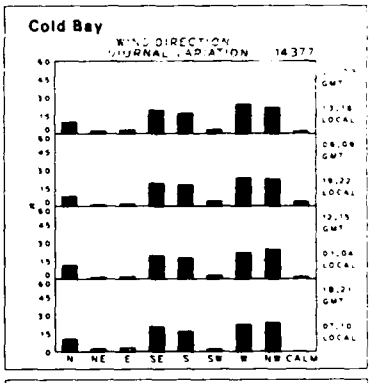
King Salmon



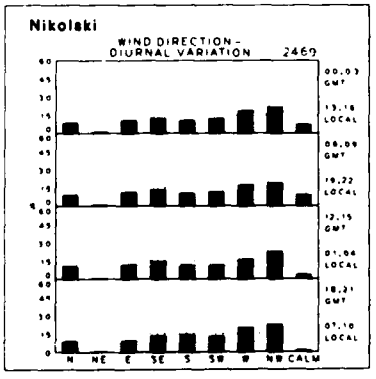
Port Heiden



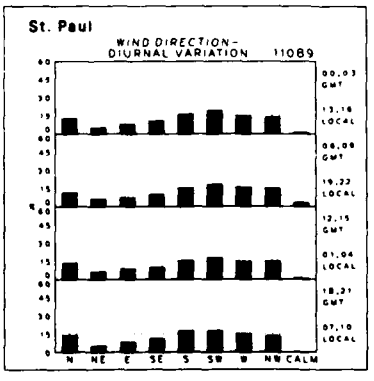
Cold Bay



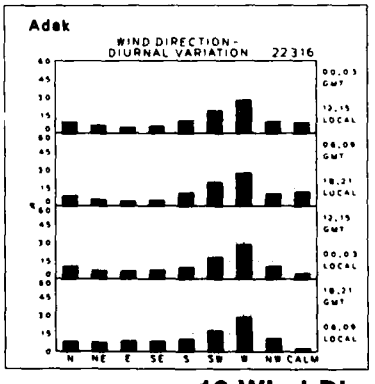
Nikolski



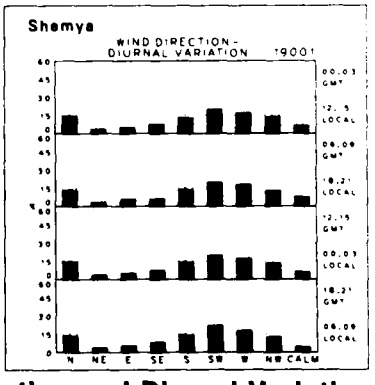
St. Paul

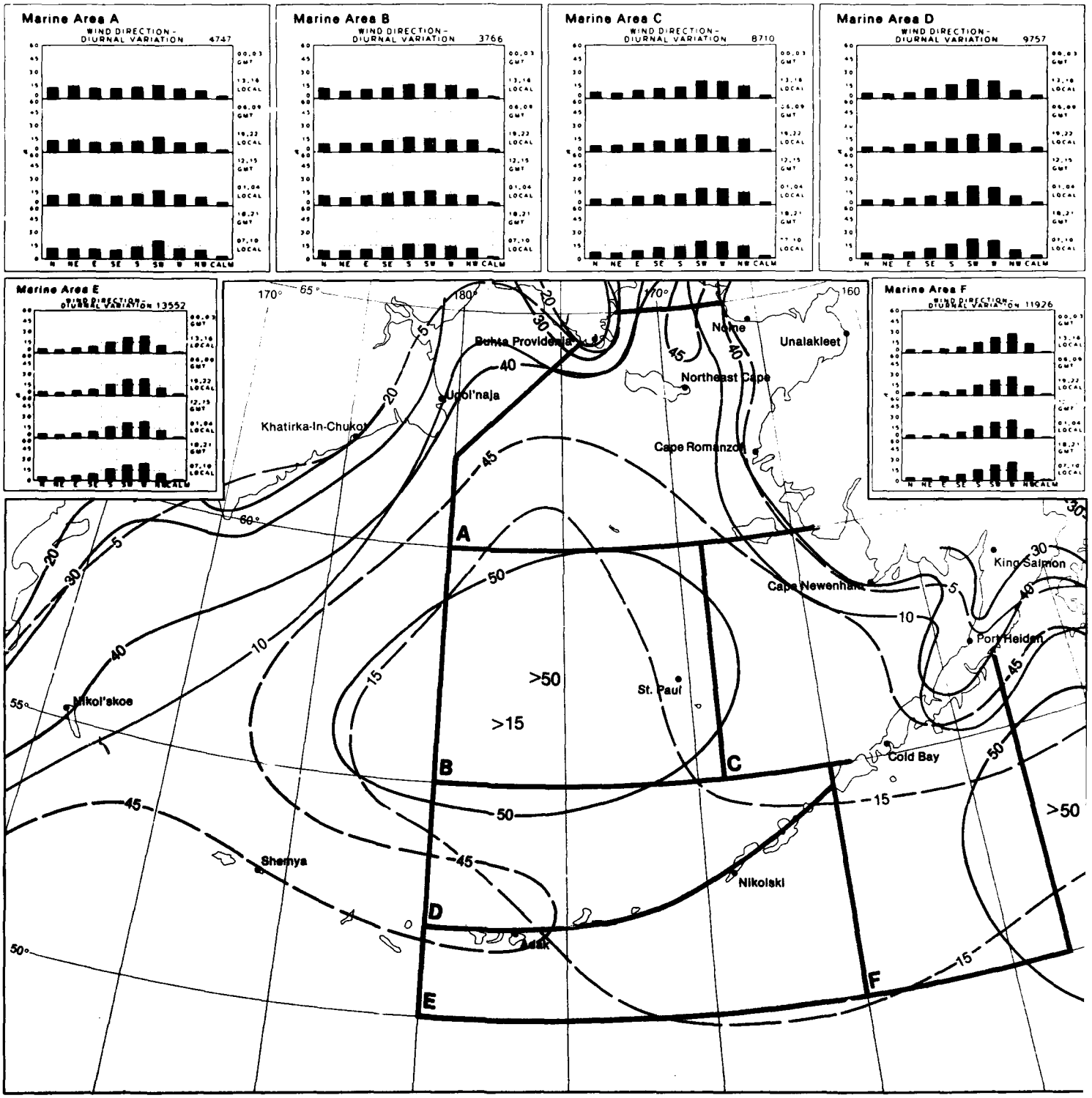


Adak



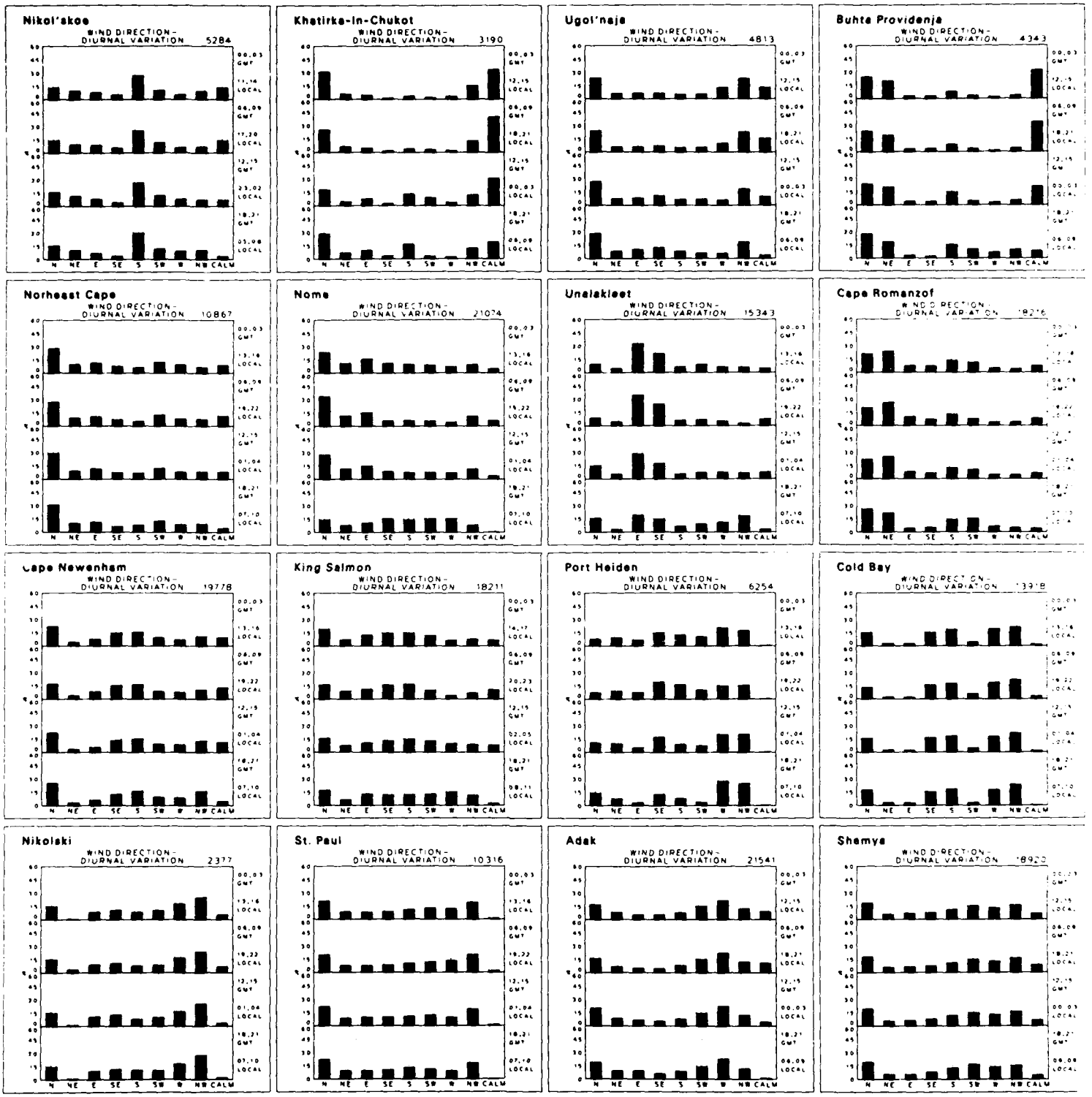
Shemya

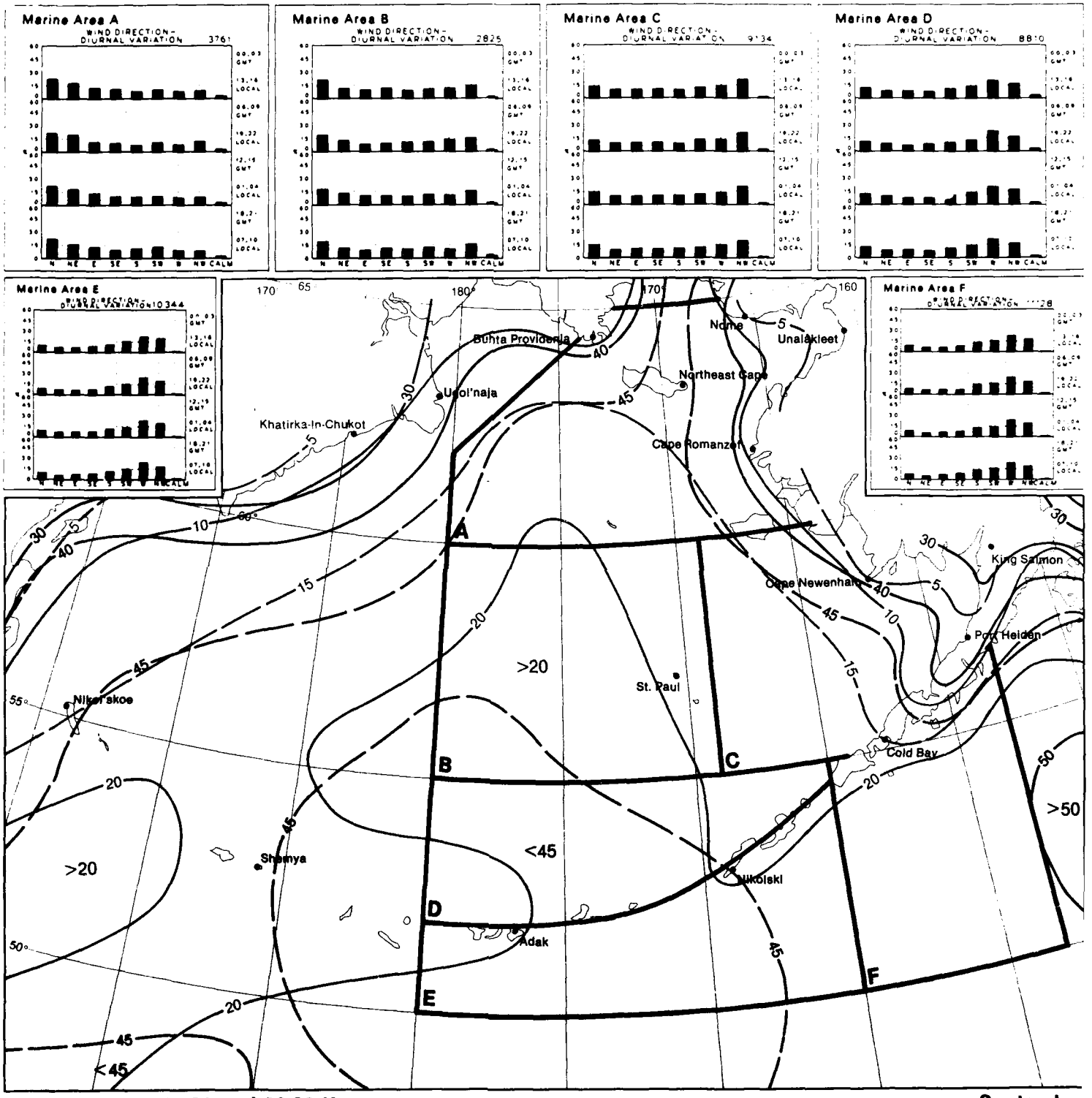




12 Wind Speed 11-21 and 22-33 Knots

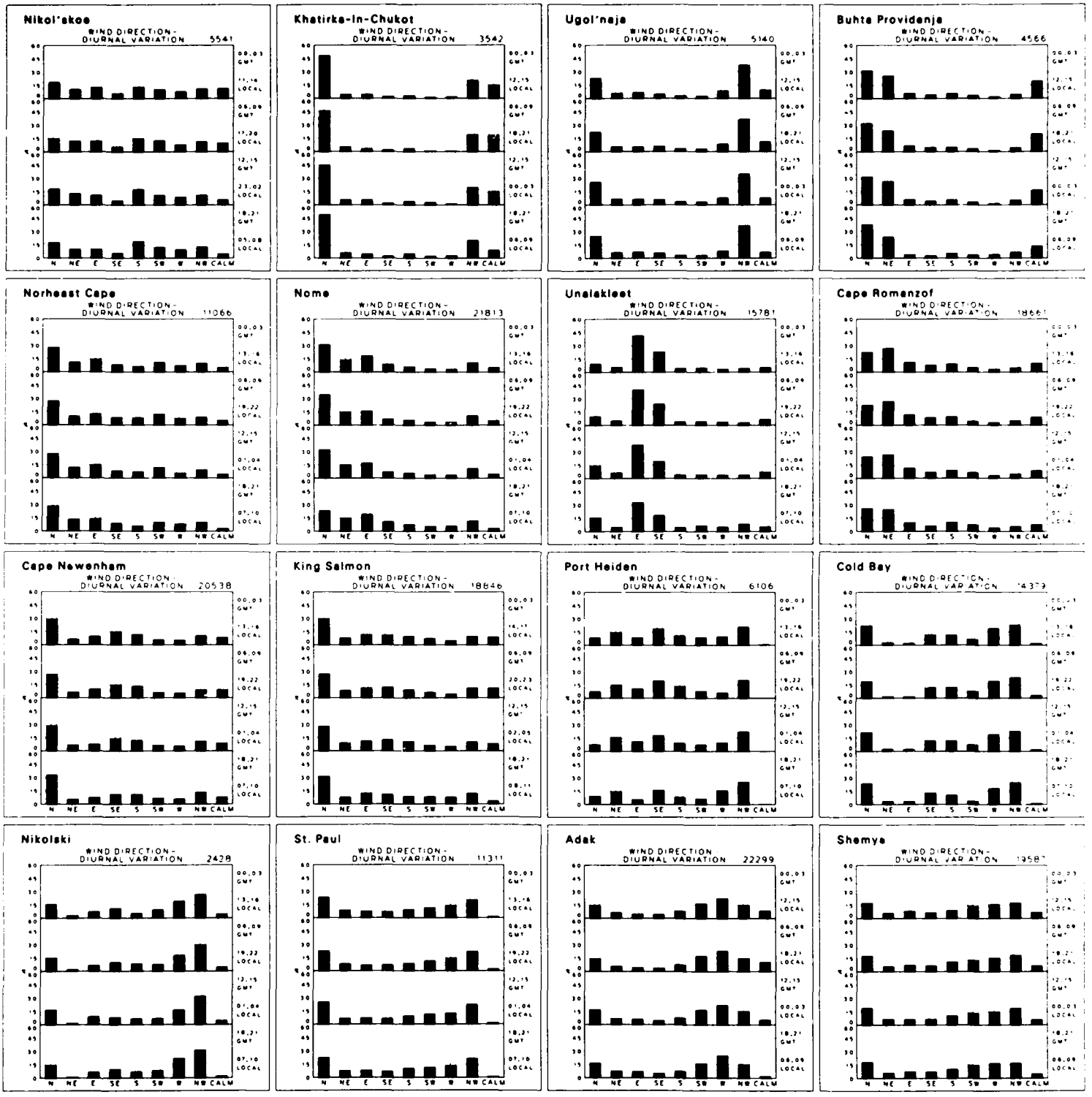
August

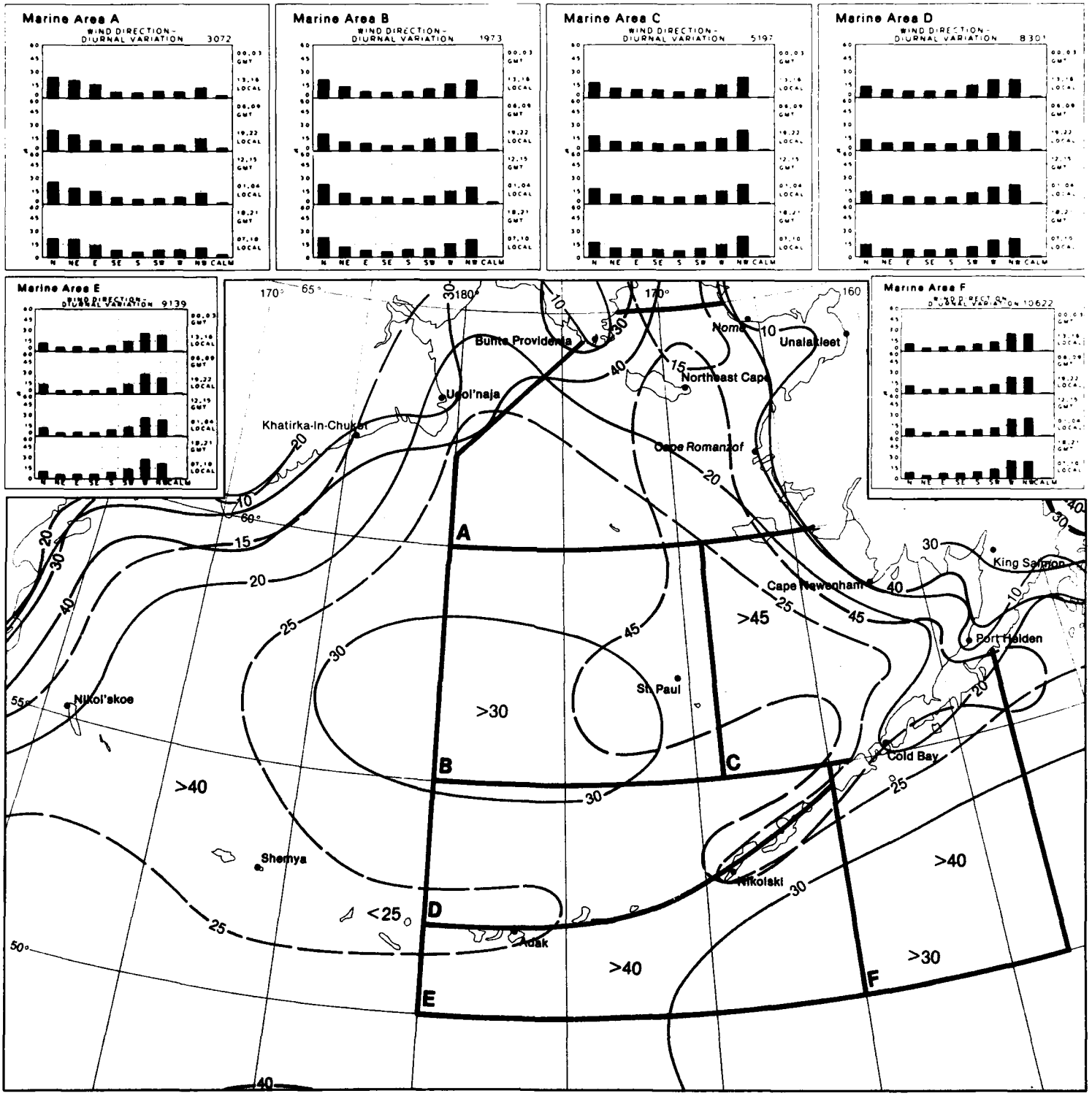

Nikol'skoe
WIND DIRECTION - DIURNAL VARIATION 5284
Khatirka-In-Chukot
WIND DIRECTION - DIURNAL VARIATION 3190
Ugol'naje
WIND DIRECTION - DIURNAL VARIATION 4813
Buhta Providenje
WIND DIRECTION - DIURNAL VARIATION 4343
Northeast Cape
WIND DIRECTION - DIURNAL VARIATION 10867
Nome
WIND DIRECTION - DIURNAL VARIATION 21074
Unalakleet
WIND DIRECTION - DIURNAL VARIATION 15343
Cape Romanzof
Cape Newenham
WIND DIRECTION - DIURNAL VARIATION 19778
King Salmon
WIND DIRECTION - DIURNAL VARIATION 18211
Port Heiden
WIND DIRECTION - DIURNAL VARIATION 6254
Cold Bay
Nikolski
WIND DIRECTION - DIURNAL VARIATION 2377
St. Paul
WIND DIRECTION - DIURNAL VARIATION 10316
Adak
WIND DIRECTION - DIURNAL VARIATION 21541
Shemya
N NE E SE S SW W NW CALM



12 Wind Speed 11-21 and 22-33 Knots

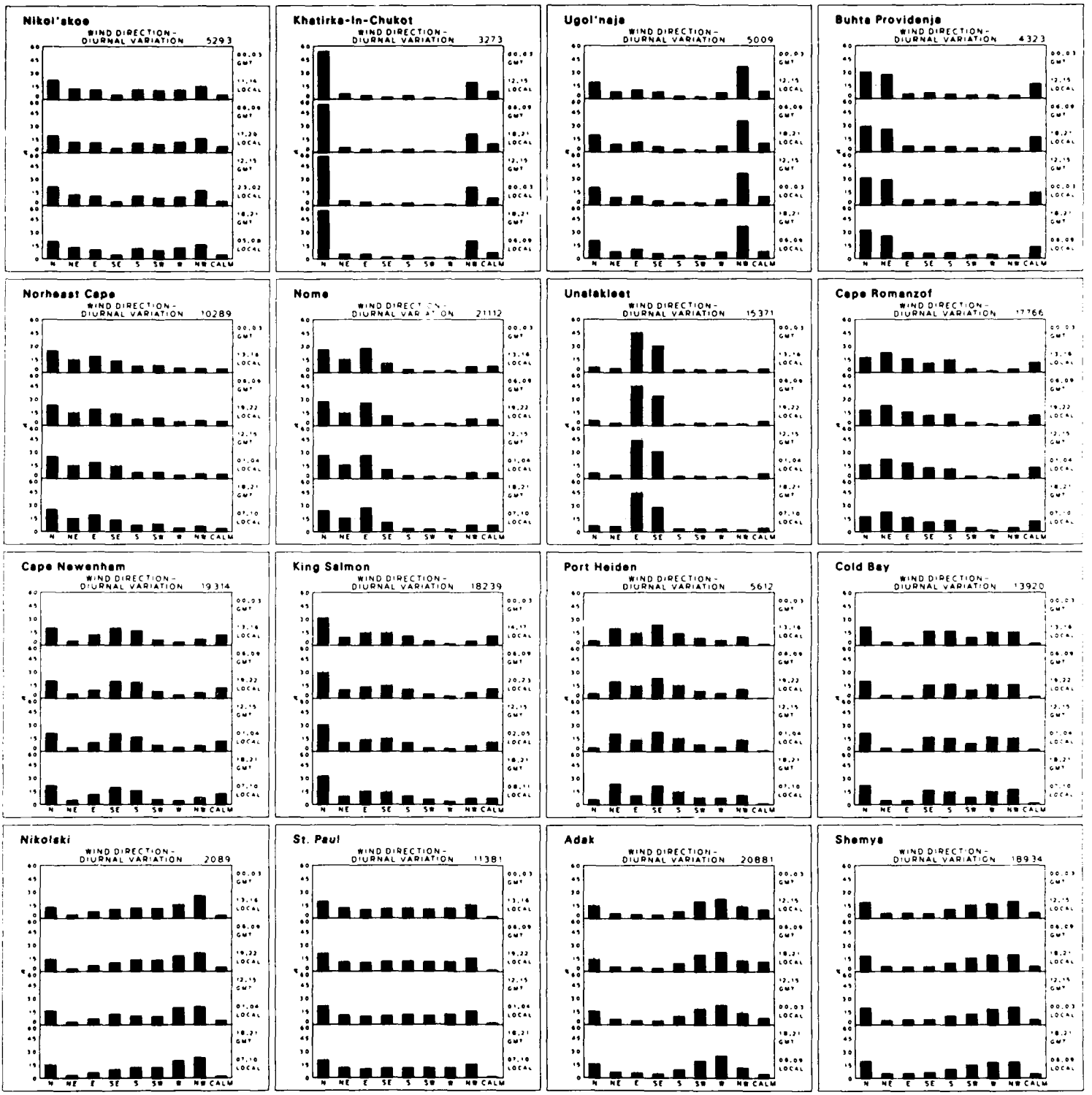
September

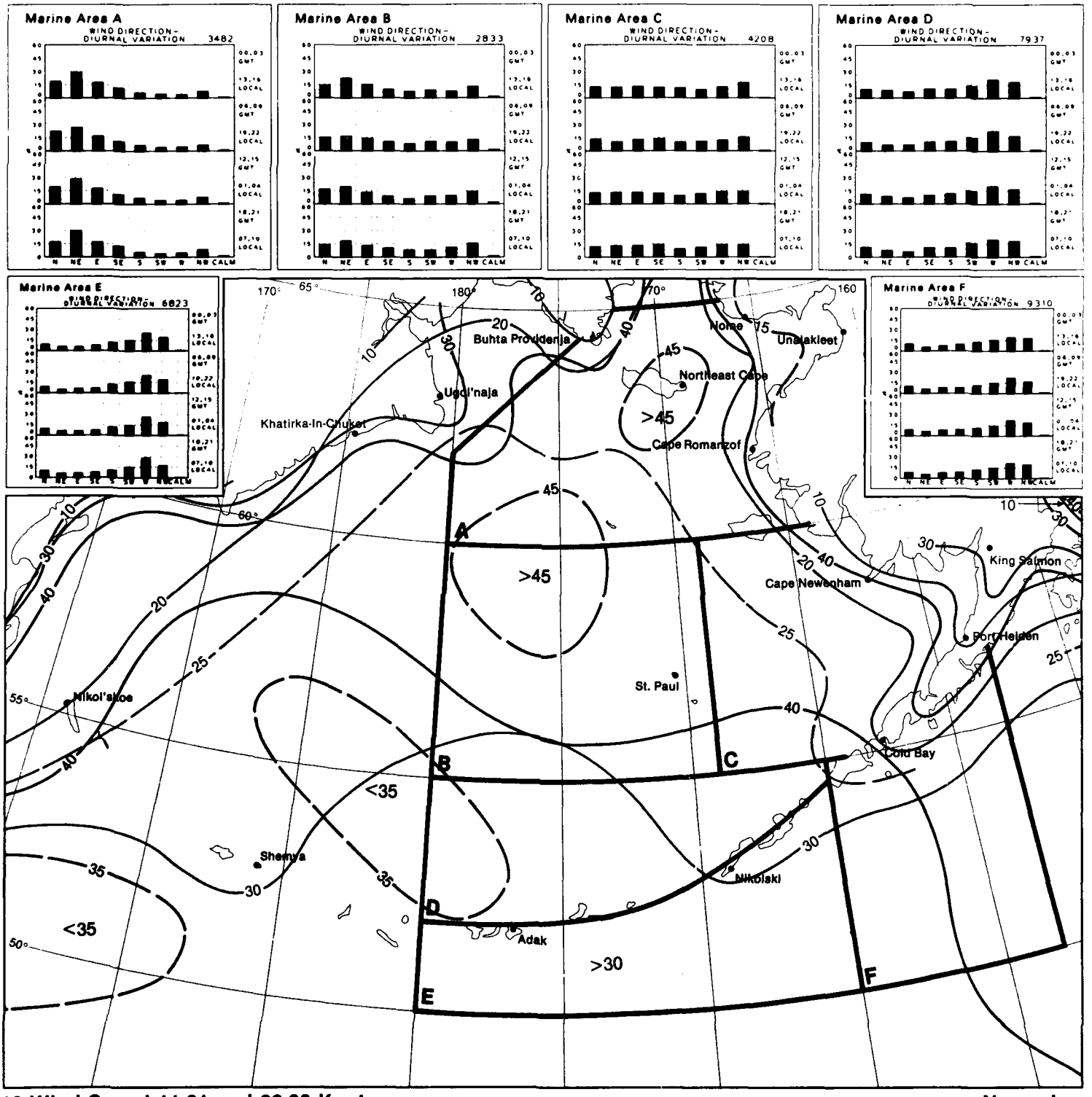

Nikol'skoe
WIND DIRECTION - DIURNAL VARIATION 5541
Khatirka-In-Chukot
WIND DIRECTION - DIURNAL VARIATION 3542
Ugol'naja
WIND DIRECTION - DIURNAL VARIATION 5140
Buhta Providenja
WIND DIRECTION - DIURNAL VARIATION 4566
Norheast Cape
WIND DIRECTION - DIURNAL VARIATION 11066
Nome
WIND DIRECTION - DIURNAL VARIATION 21813
Unalakleet
WIND DIRECTION - DIURNAL VARIATION 15781
Cape Romanzof
WIND DIRECTION - DIURNAL VARIATION 1866
Cape Newenham
WIND DIRECTION - DIURNAL VARIATION 20538
King Salmon
WIND DIRECTION - DIURNAL VARIATION 18846
Port Heiden
WIND DIRECTION - DIURNAL VARIATION 6106
Cold Bay
WIND DIRECTION - DIURNAL VARIATION 14379
Nikolski
WIND DIRECTION - DIURNAL VARIATION 2428
St. Paul
WIND DIRECTION - DIURNAL VARIATION 11311
Adak
WIND DIRECTION DIURNAL VARIATION 22299
Shemya
WIND DIRECTION - DIURNAL VARIATION 1958
N NE E SE S SW W NW CALM



12 Wind Speed 11-21 and 22-33 Knots

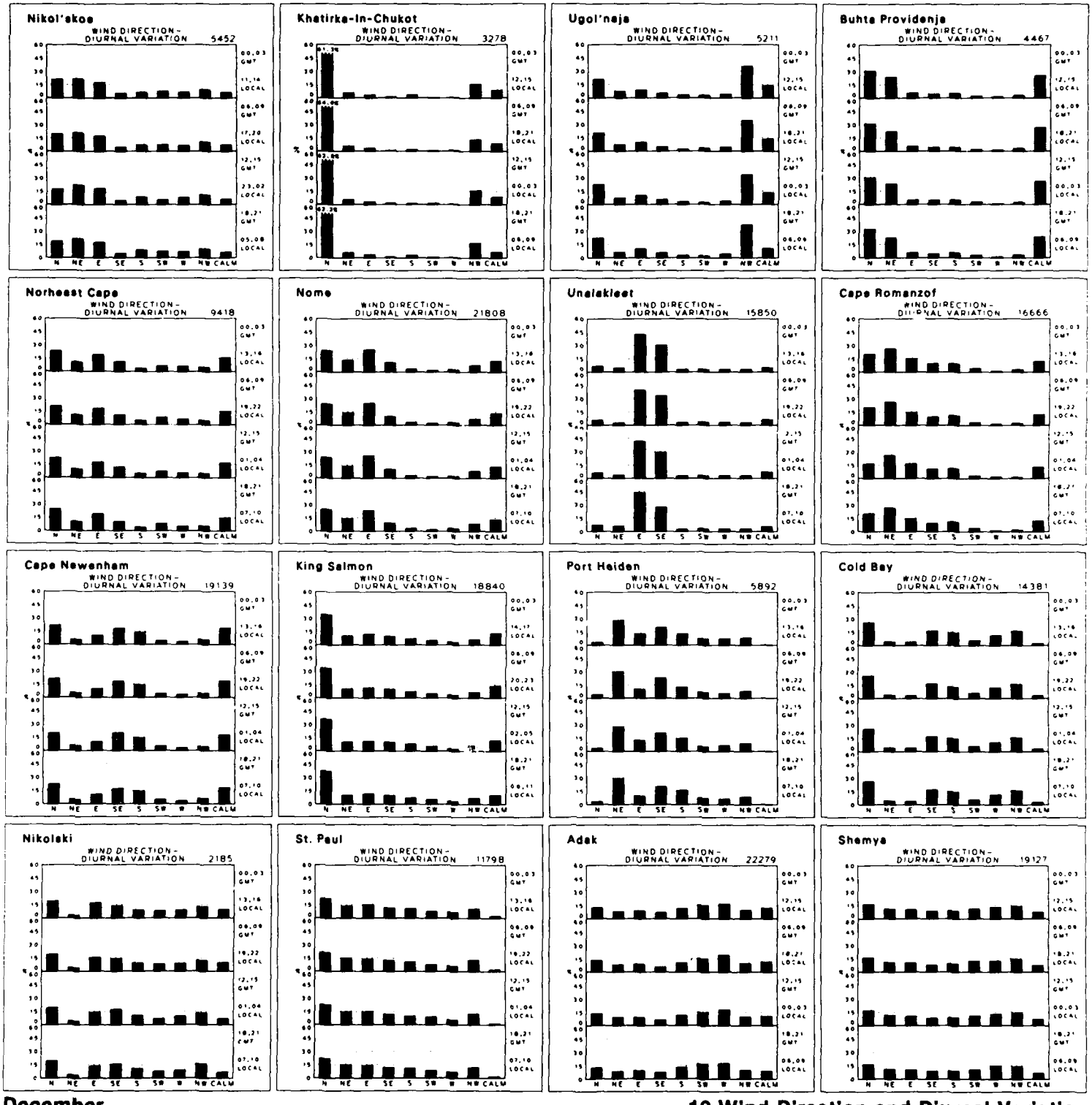
October


Nikol'skoe
WIND DIRECTION-DIURNAL VARIATION 5293
Khatirka-In-Chukot
WIND DIRECTION-DIURNAL VARIATION 3273
Ugol'naje
WIND DIRECTION-DIURNAL VARIATION 5009
Buhta Providenje
WIND DIRECTION-DIURNAL VARIATION 4323
Norheast Cape
WIND DIRECTION-DIURNAL VARIATION 10289
Nome
WIND DIRECTION-DIURNAL VARIATION 21112
Unalakleet
WIND DIRECTION-DIURNAL VARIATION 15371
Cape Romanzof
WIND DIRECTION-DIURNAL VARIATION 17766
Cape Newenham
WIND DIRECTION-DIURNAL VARIATION 19314
King Salmon
WIND DIRECTION-DIURNAL VARIATION 18239
Port Heiden
WIND DIRECTION-DIURNAL VARIATION 5612
Cold Bay
WIND DIRECTION-DIURNAL VARIATION 13920
Nikolski
WIND DIRECTION-DIURNAL VARIATION 2089
St. Paul
WIND DIRECTION-DIURNAL VARIATION 11381
Adak
WIND DIRECTION-DIURNAL VARIATION 20881
Shemya
WIND DIRECTION-DIURNAL VARIATION 18934
N NE E SE S SW W NW CALM



12 Wind Speed 11-21 and 22-33 Knots

November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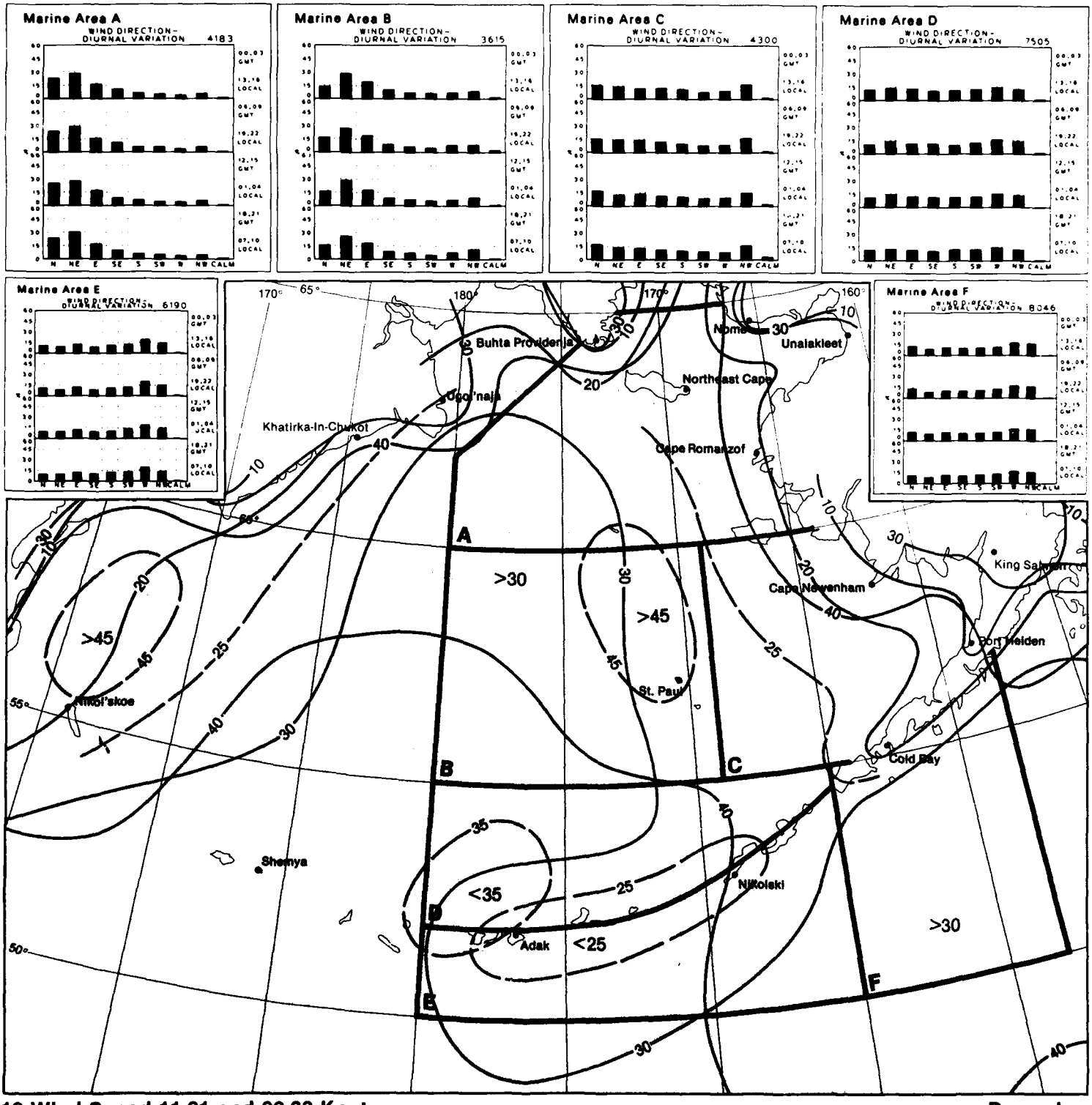
Khatirka-In-Chukot
WIND DIRECTION-DIURNAL VARIATION 3278
Ugol'naja
WIND DIRECTION-DIURNAL VARIATION 5211
Buhta Providenja
WIND DIRECTION-DIURNAL VARIATION 4467
Norheast Cape
WIND DIRECTION-DIURNAL VARIATION 9418
Nome
WIND DIRECTION-DIURNAL VARIATION 21808
Unalakleet
WIND DIRECTION-DIURNAL VARIATION 15850
Cape Romanzof
WIND DIRECTION-DIURNAL VARIATION 16666
Cape Newenham
WIND DIRECTION-DIURNAL VARIATION 19139
King Salmon
WIND DIRECTION-DIURNAL VARIATION 18840
Port Heiden
WIND DIRECTION-DIURNAL VARIATION 5892
Cold Bay
WIND DIRECTION-DIURNAL VARIATION 14381
Nikolski
WIND DIRECTION-DIURNAL VARIATION 2185
St. Paul
WIND DIRECTION-DIURNAL VARIATION 11798
Adak
WIND DIRECTION-DIURNAL VARIATION 22279
Shemya
WIND DIRECTION-DIURNAL VARIATION 19127
N NE E SE S SW W NW CALM



12 Wind Speed 11-21 and 22-33 Knots

December

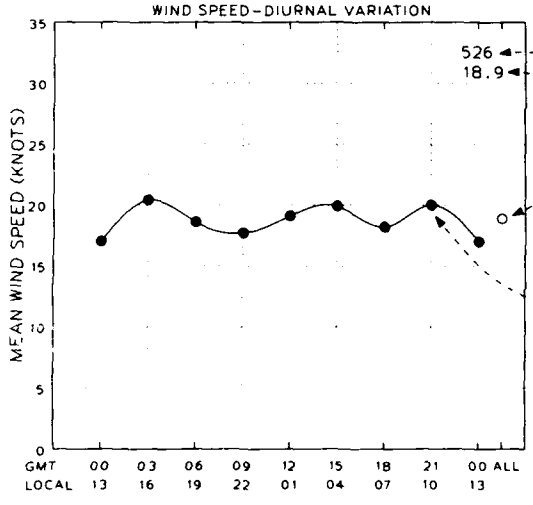
Map 13. Scalar mean wind speed and wind chill temperature ≤-30°C

BLACK LINE – Mean scalar wind speed (knots).

BLUE LINE – Percent frequency of wind chill temperature ≤–30°C (≤–22°F).

Albers Equal–Area Conic Projection

Graphs: Wind speed/diurnal variation



Number of observations.

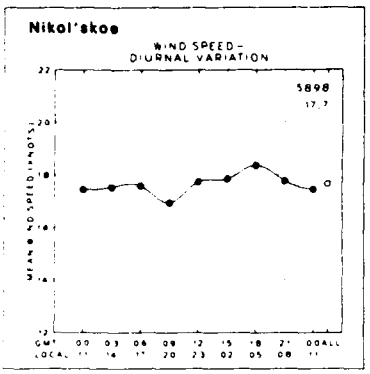
Mean scalar wind speed (knots) for all 3-hourly observations.

Mean wind speed (knots) by hour (GMT and Local Time).

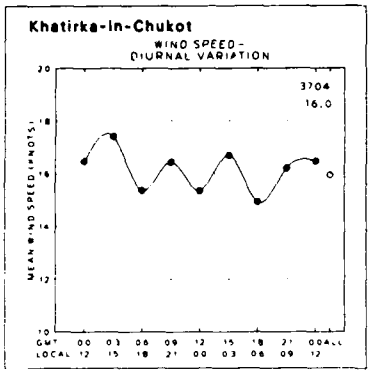
(The mean wind speed for the hour 21 GMT (10 Local) was 20 knots.)

In areas of high persistence (also called constancy, steadiness) of direction, the magnitude of the vector mean wind (Set 10) should closely approach that of the scalar mean wind (set 13). As most of the marine observations are recorded at six-hour intervals (00, 06, 12, 18 GMT), intermediate hours (03, 09, 15, 21 GMT) were not plotted on the graphs for the marine areas. Intermediate hours were plotted for the stations, but users should use caution in interpreting plots for those few stations that reported less than eight observations per day—see the data inventory in the introductory text for Section II.

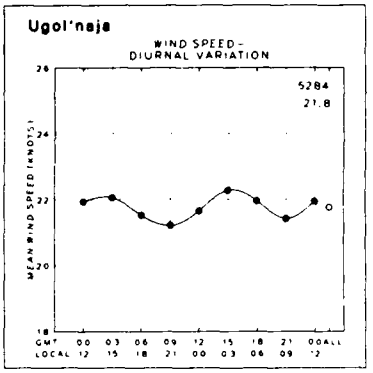
Nikol'skoe



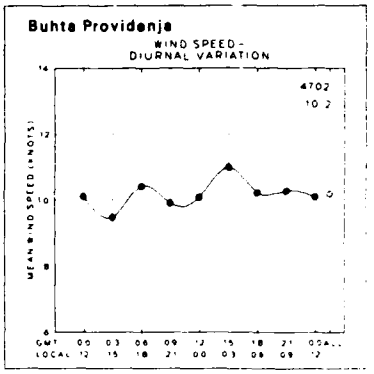
Khatirka-In-Chukot



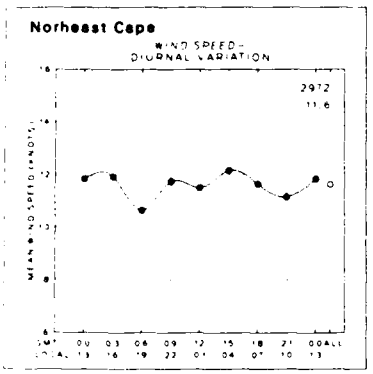
Ugol'naja



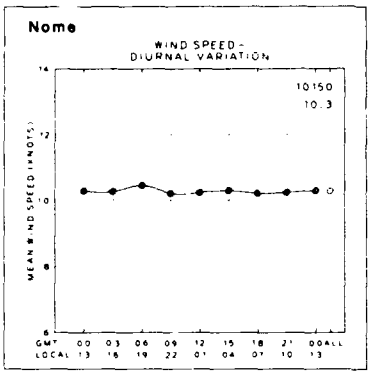
Buhta Providenja



Norheast Cape



Nome



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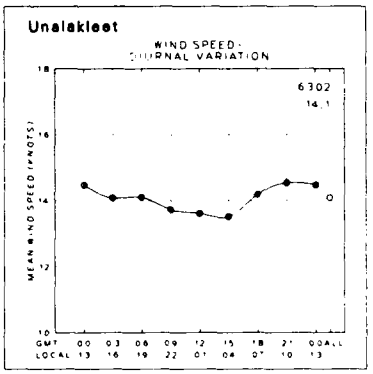
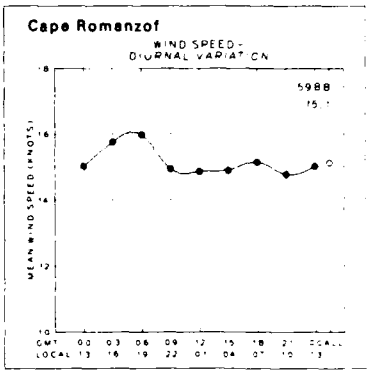
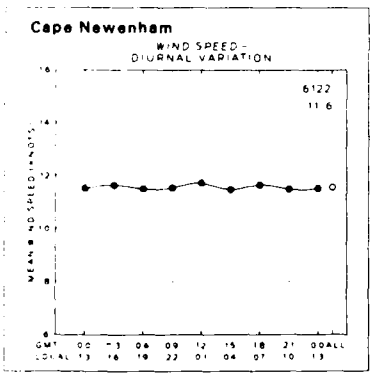


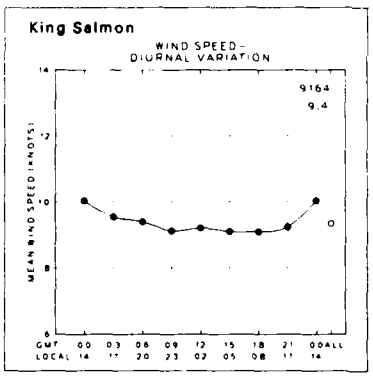
Cape Romanzof



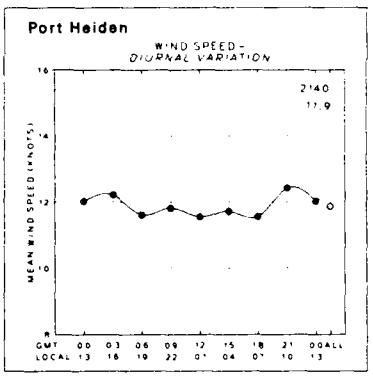
Cape Newenham



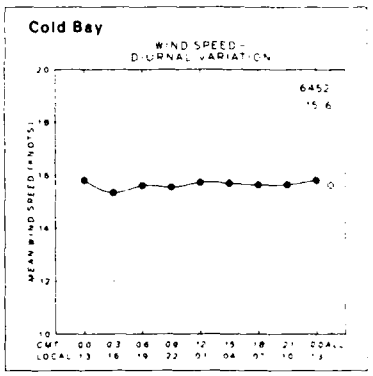
King Salmon



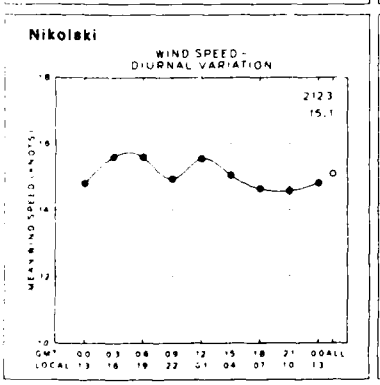
Port Heiden



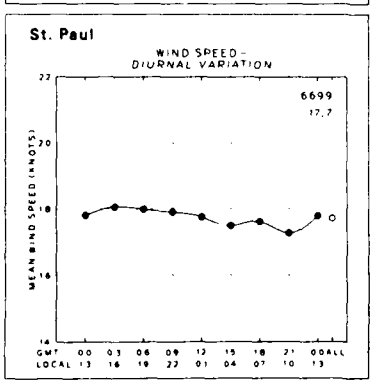
Cold Bay



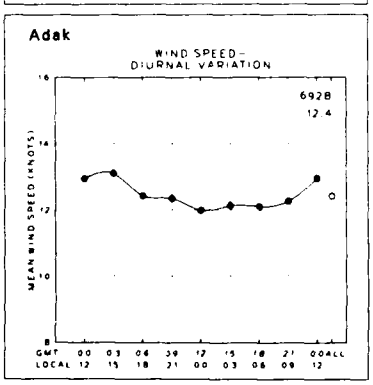
Nikolski



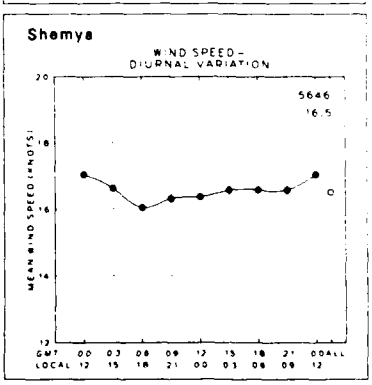
St. Paul

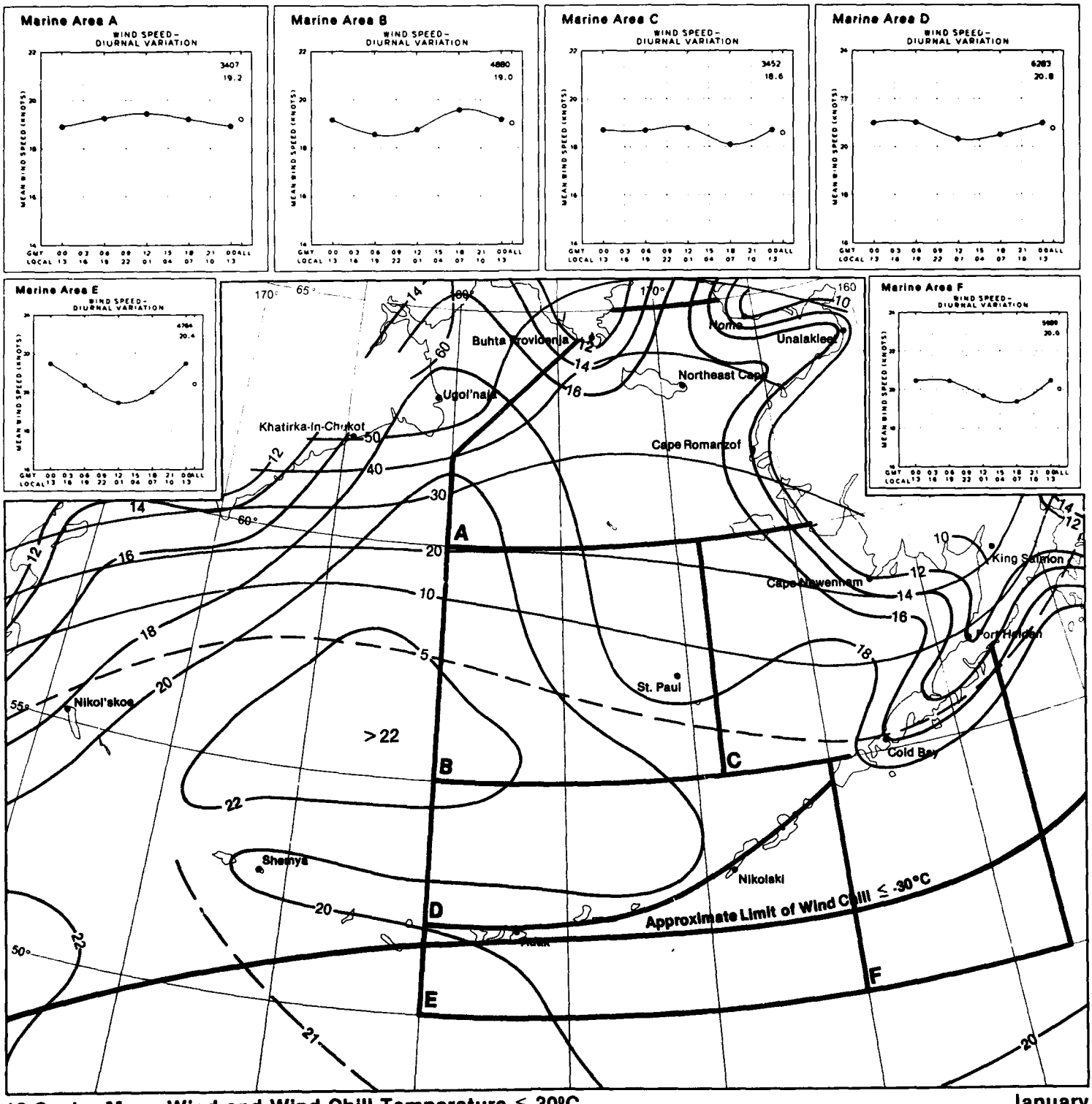


Adak



Shemya

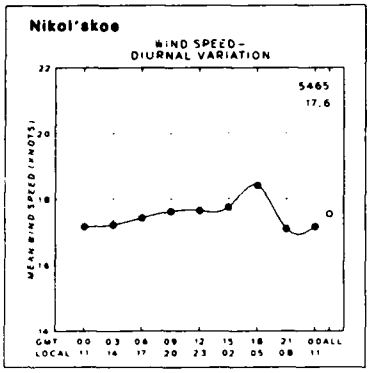




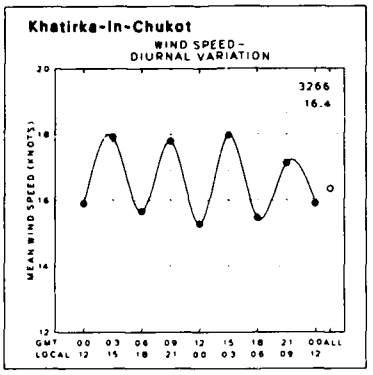
13 Scalar Mean Wind and Wind Chill Temperature ≦-30°C

January

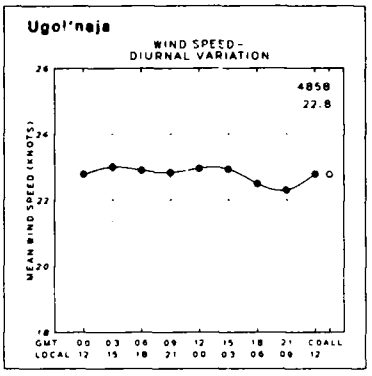
Nikol'skoe



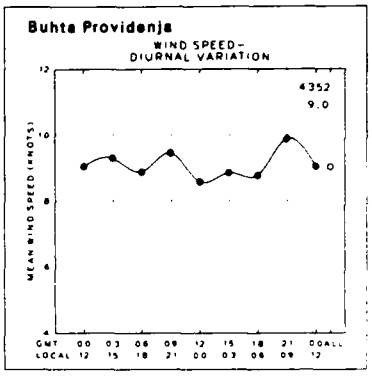
Khatirka-In-Chukot



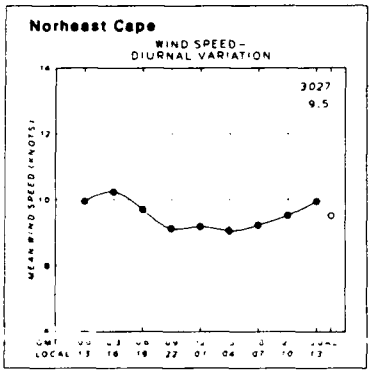
Ugol'naja



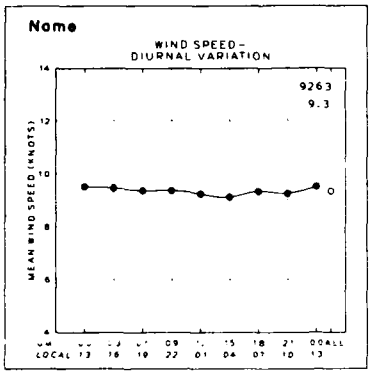
Buhta Providenja



Norheast Cape



Nome



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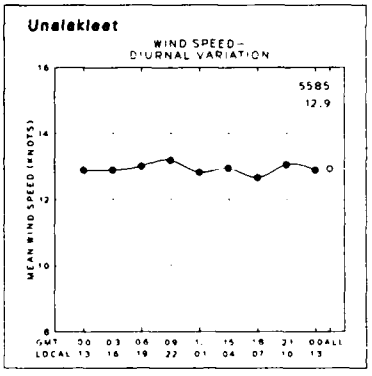
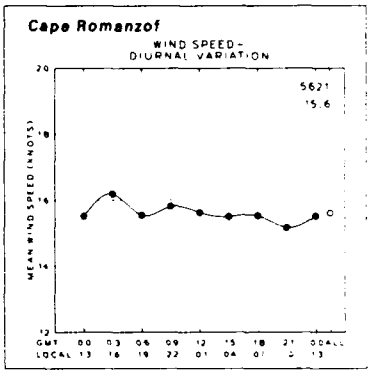
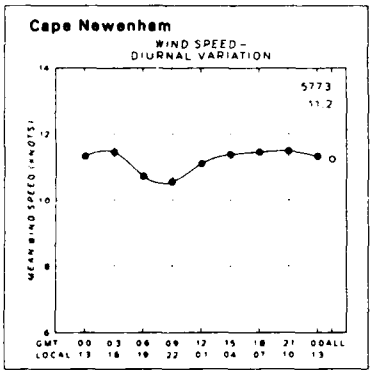


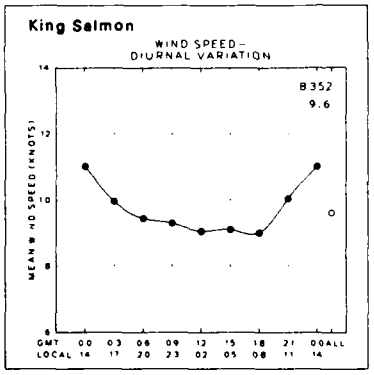
Cape Romanzof



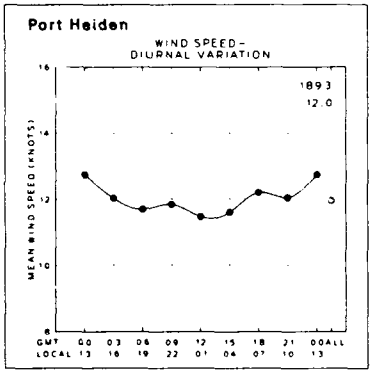
Cape Newenham



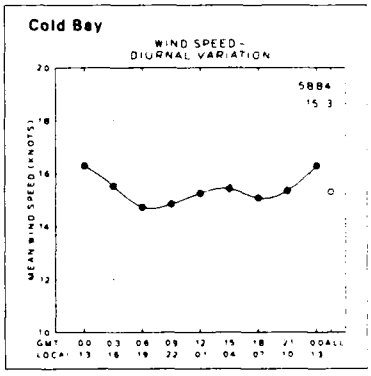
King Salmon



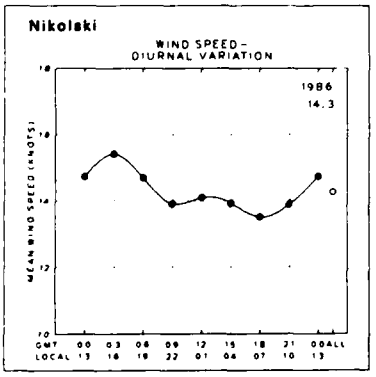
Port Heiden



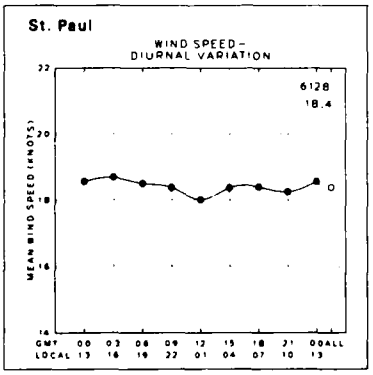
Cold Bay



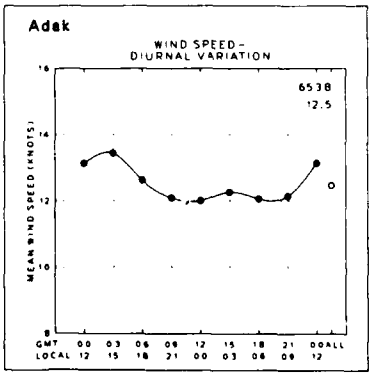
Nikolski



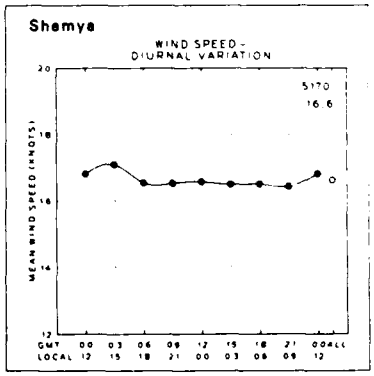
St. Paul

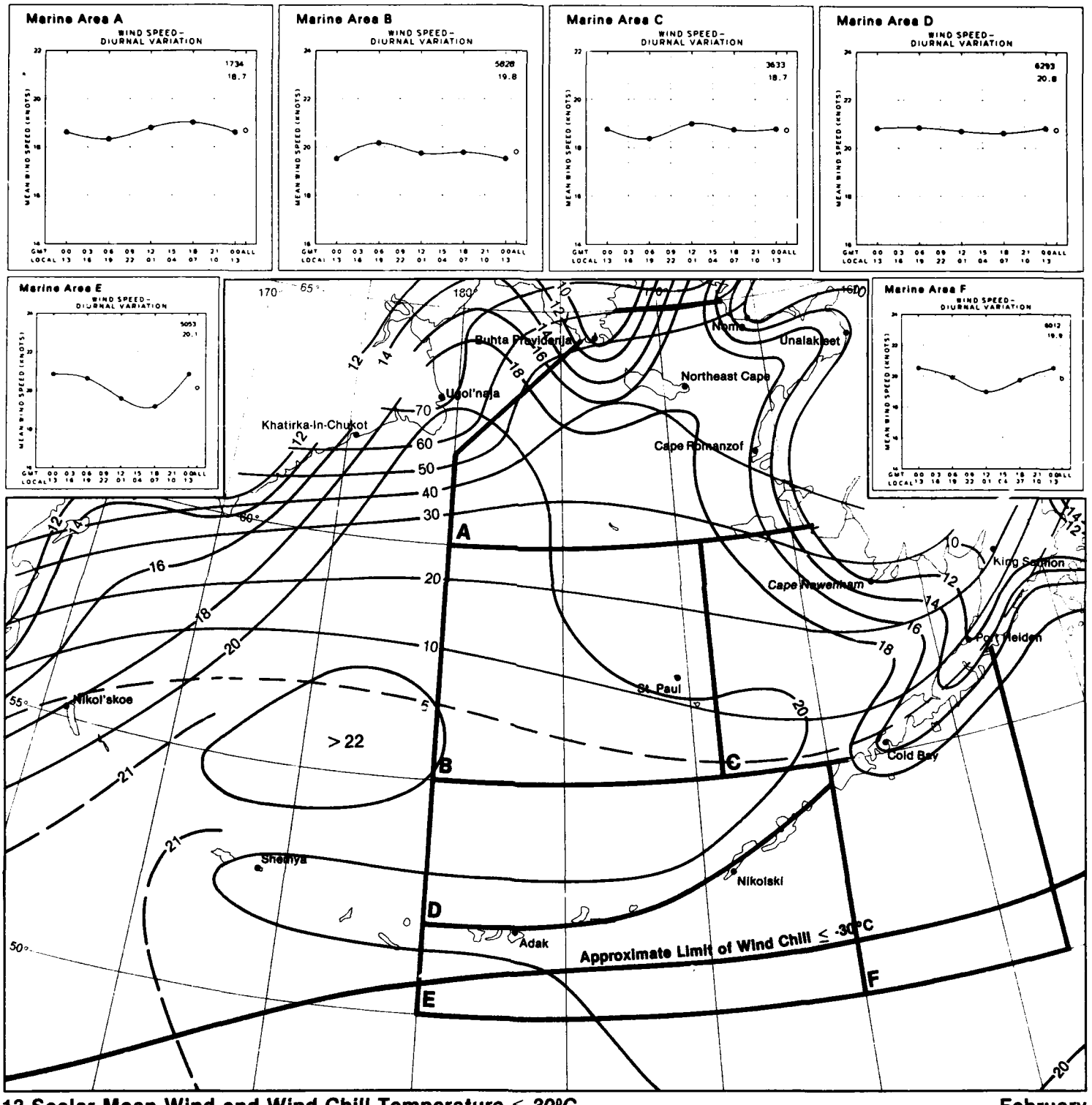


Adak



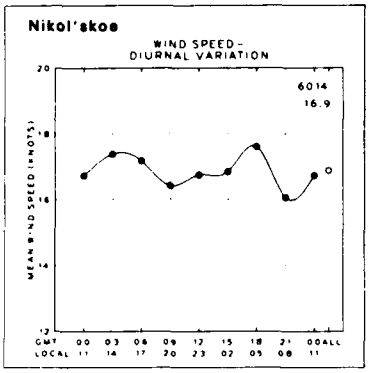
Shemya



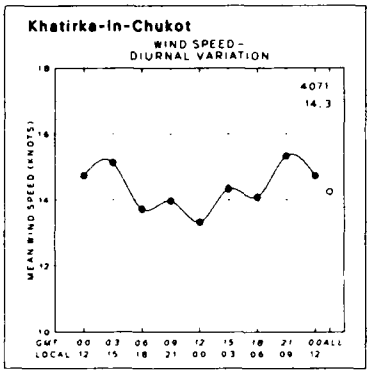


13 Scalar Mean Wind and Wind Chill Temperature ≦-30°C February

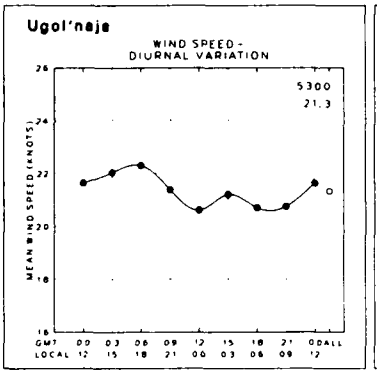
Nikol'skoe



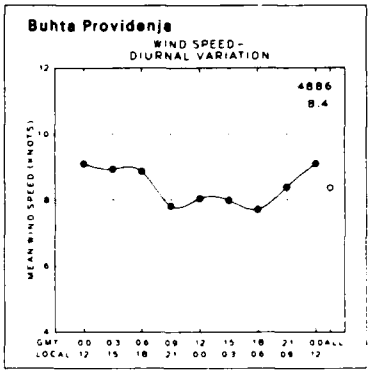
Khatirka-In-Chukot



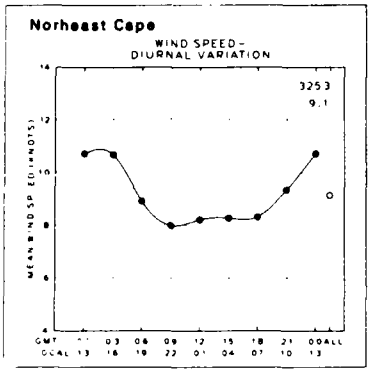
Ugol'naje



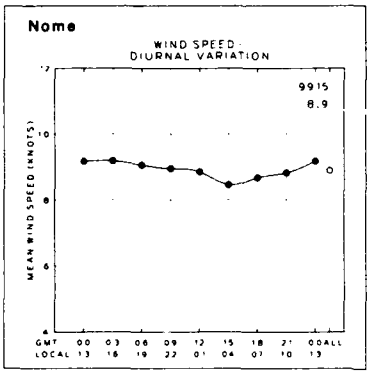
Buhta Providenja



Norheast Cape



Nome



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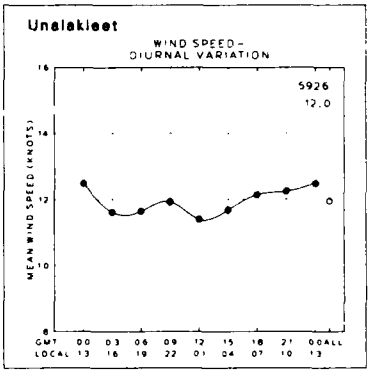
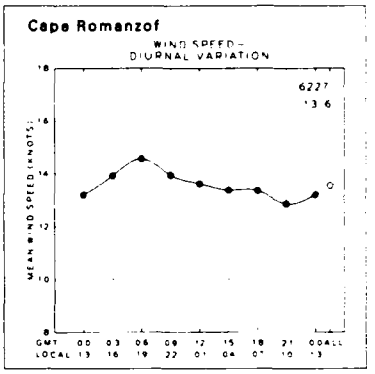
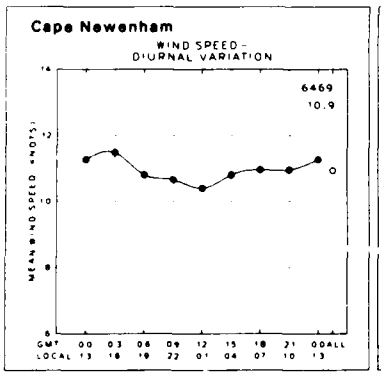


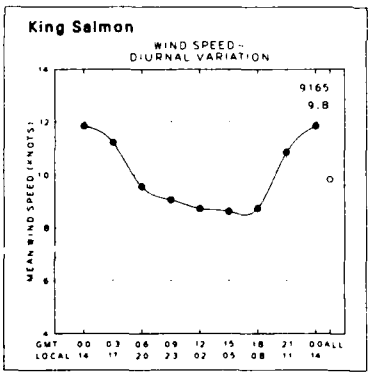
Cape Romanzof



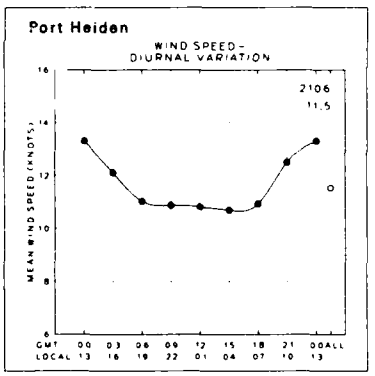
Cape Newenham



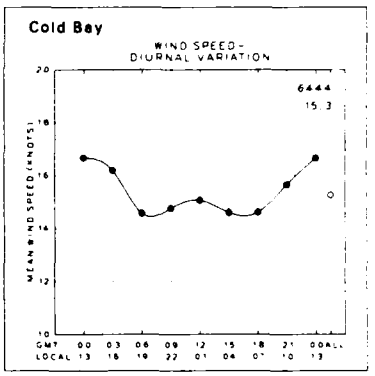
King Salmon



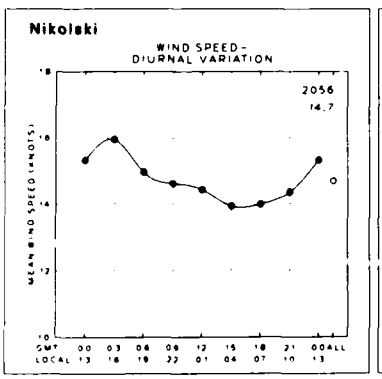
Port Heiden



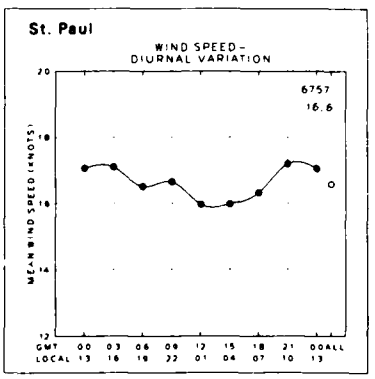
Cold Bay



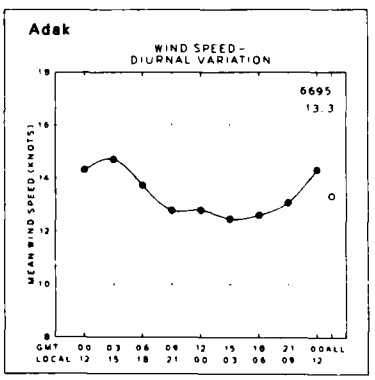
Nikolski



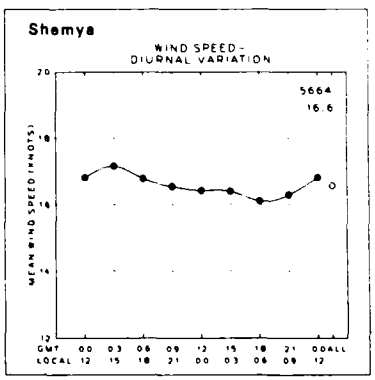
St. Paul

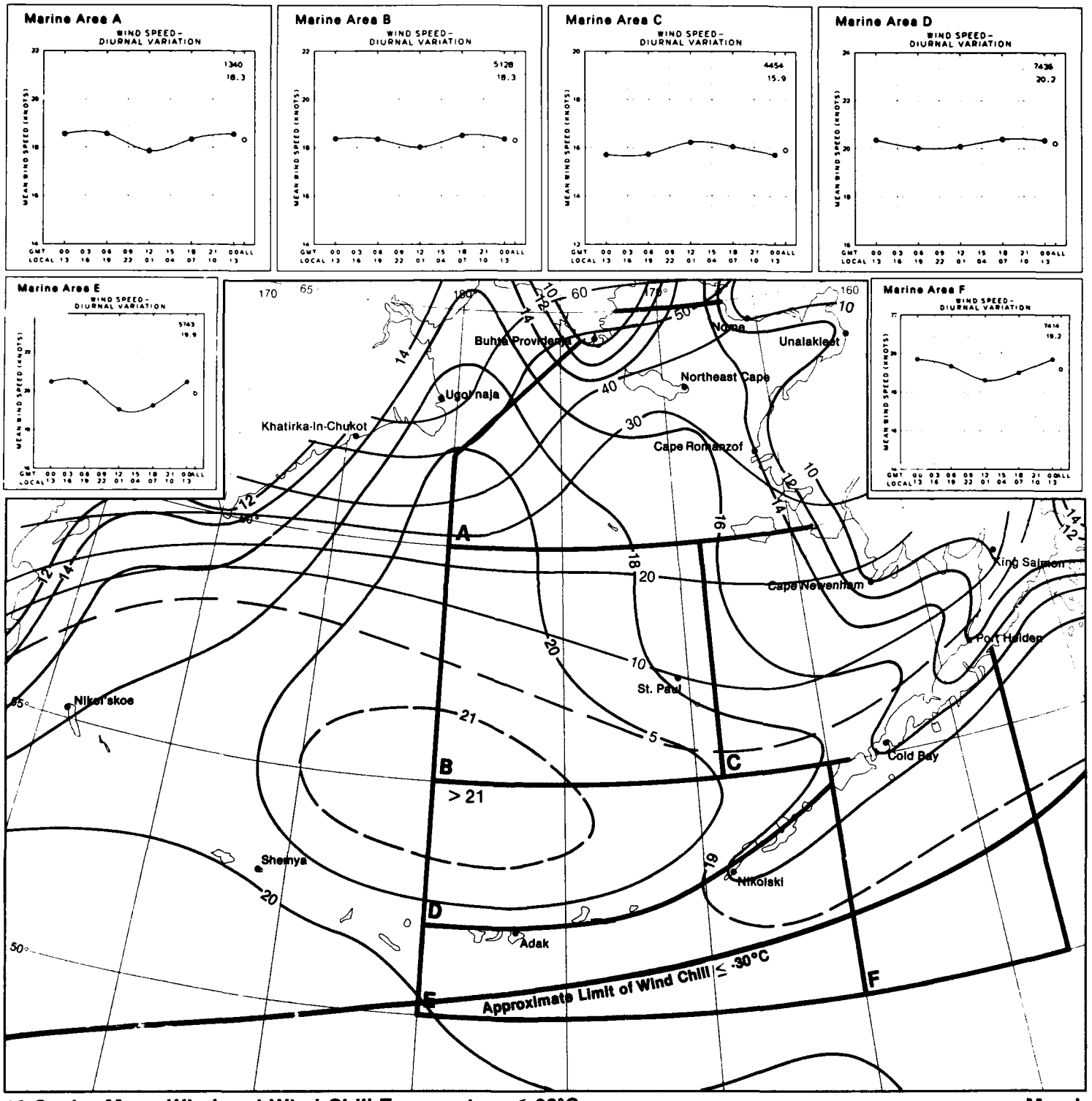


Adak



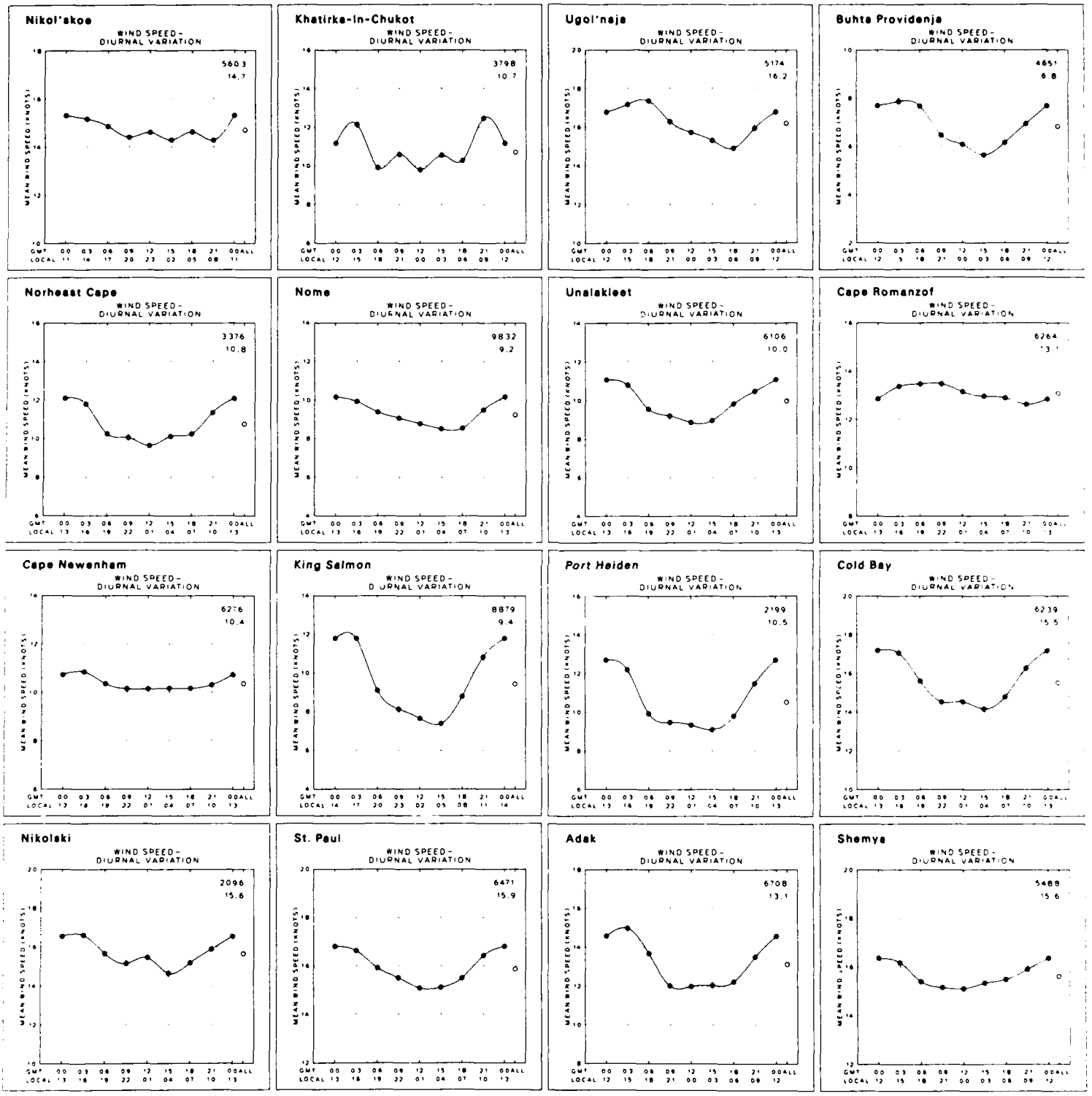
Shemya

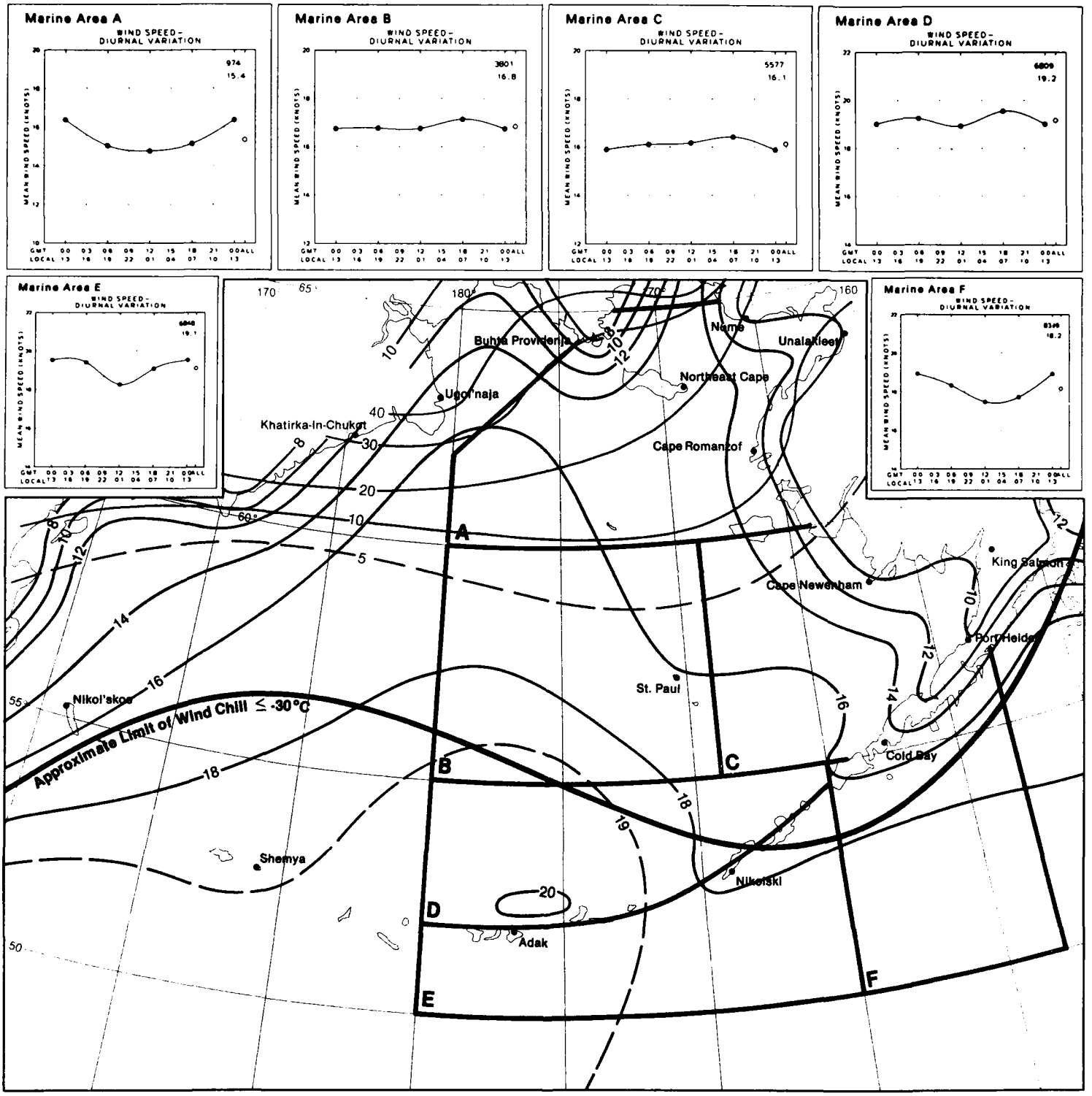




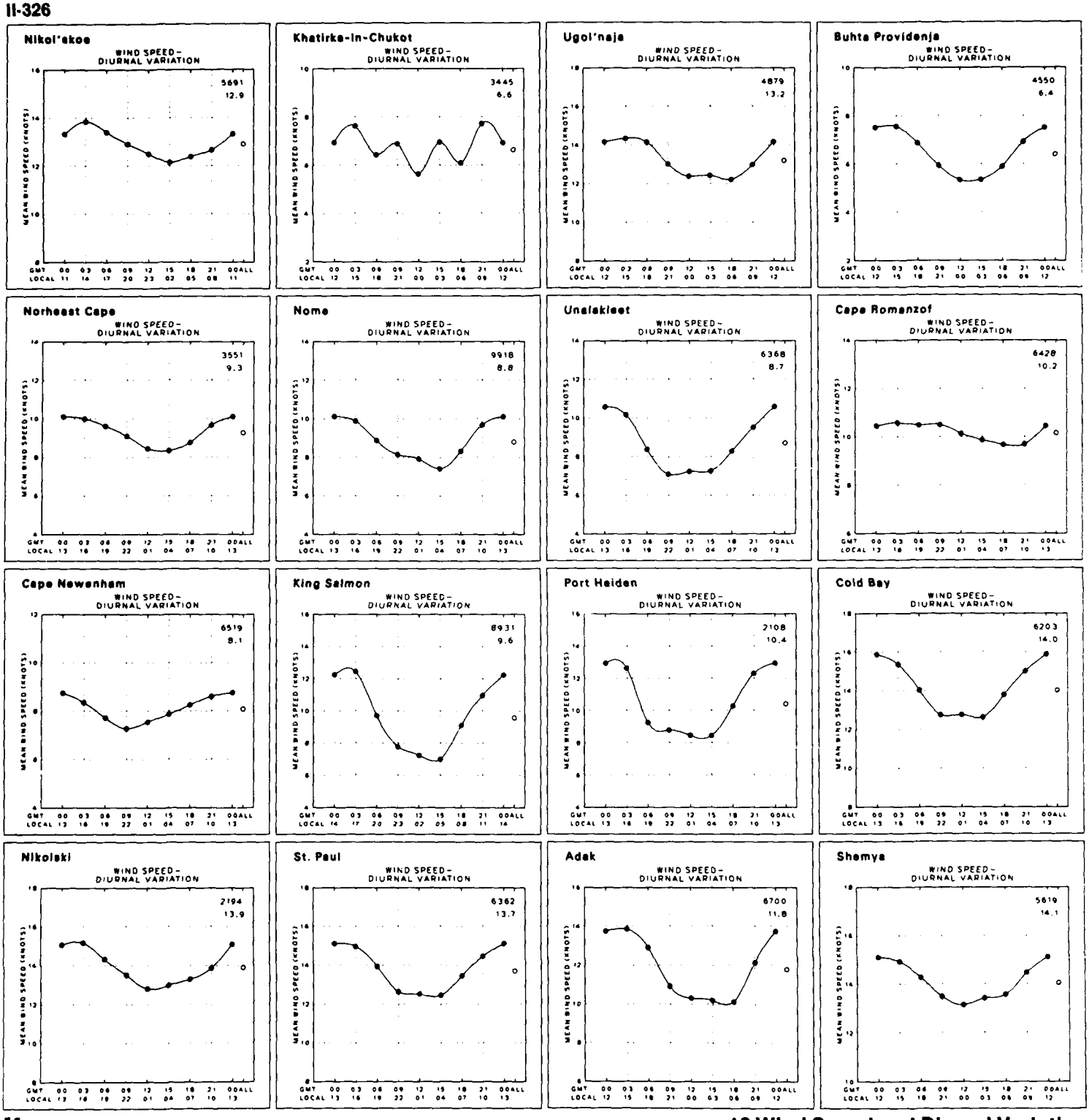
13 Scalar Mean Wind and Wind Chill Temperature ≦-30°C

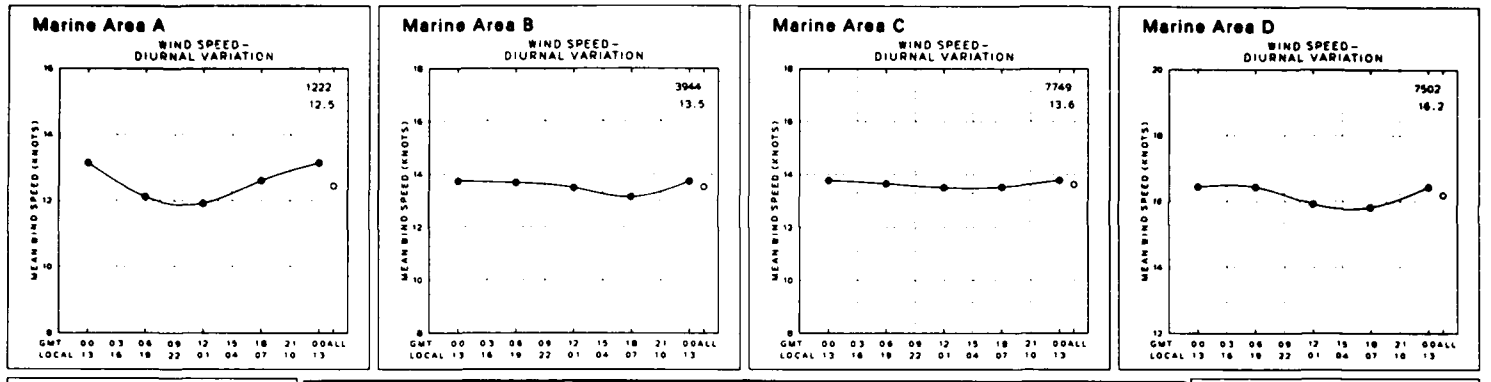
March

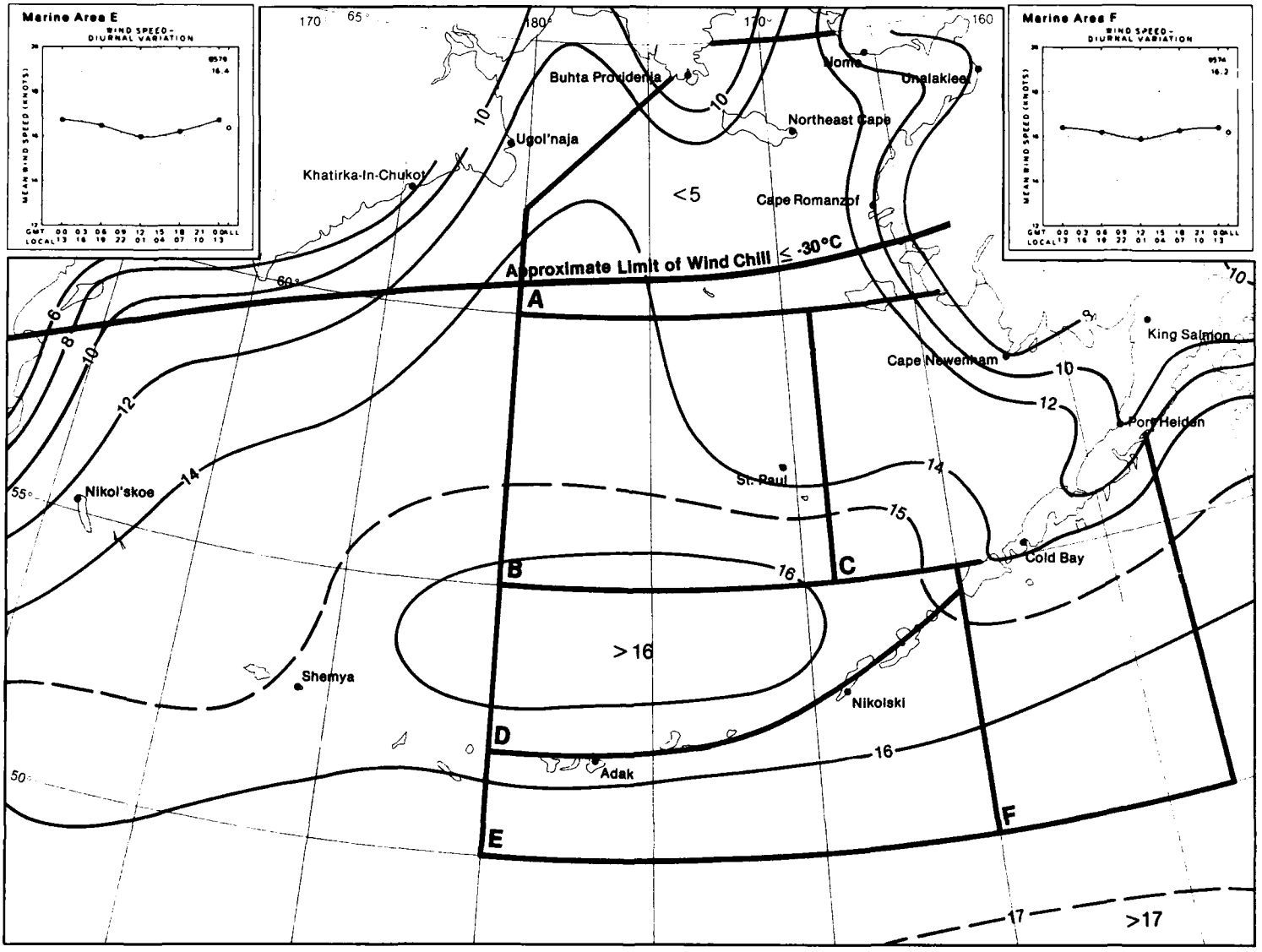

Nikol'skoe
WIND SPEED - DIURNAL VARIATION
5603
14.7
Khatirka-In-Chukot
WIND SPEED - DIURNAL VARIATION
3798
10.7
Ugol'naja
WIND SPEED - DIURNAL VARIATION
5174
16.2
Buhta Providenja
WIND SPEED - DIURNAL VARIATION
4651
6.8
Northeast Cape
WIND SPEED - DIURNAL VARIATION
3376
10.8
Nome
WIND SPEED - DIURNAL VARIATION
9832
9.2
Unalakleet
WIND SPEED - DIURNAL VARIATION
6106
10.0
Cape Romanzof
WIND SPEED - DIURNAL VARIATION
6264
13.1
Cape Newenham
WIND SPEED - DIURNAL VARIATION
6276
10.4
King Salmon
WIND SPEED - DIURNAL VARIATION
8879
9.4
Port Heiden
WIND SPEED - DIURNAL VARIATION
2199
10.5
Cold Bay
WIND SPEED - DIURNAL VARIATION
6239
15.5
Nikolski
WIND SPEED - DIURNAL VARIATION
2096
15.6
St. Paul
WIND SPEED - DIURNAL VARIATION
6471
15.9
Adak
WIND SPEED - DIURNAL VARIATION
6708
13.1
Shemya
WIND SPEED - DIURNAL VARIATION
5488
15.6



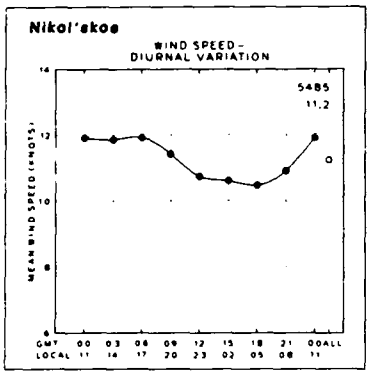
13 Scalar Mean Wind and Wind Chill Temperature ≦-30°C April

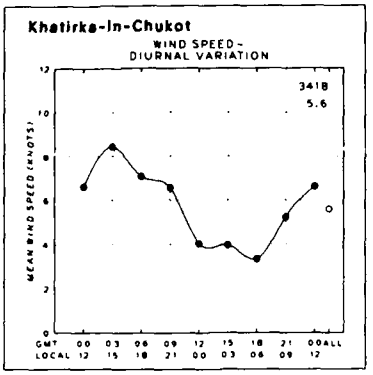

Nikol'skoe
WIND SPEED-
DIURNAL VARIATION
5691
12.9
Khatirka-In-Chukot
WIND SPEED-
DIURNAL VARIATION
3445
6.6
Ugol'naja
WIND SPEED-
DIURNAL VARIATION
4879
13.2
Buhta Providenja
WIND SPEED-
DIURNAL VARIATION
4550
6.4
Northeast Cape
WIND SPEED-
DIURNAL VARIATION
3551
9.3
Nome
WIND SPEED-
DIURNAL VARIATION
9918
8.8
Unalakleet
WIND SPEED-
DIURNAL VARIATION
6368
8.7
Cape Romanzof
WIND SPEED-
DIURNAL VARIATION
6428
10.2
Cape Newenham
WIND SPEED-
DIURNAL VARIATION
6519
8.1
King Salmon
WIND SPEED-
DIURNAL VARIATION
8931
9.6
Port Heiden
WIND SPEED-
DIURNAL VARIATION
2108
10.4
Cold Bay
WIND SPEED-
DIURNAL VARIATION
6203
14.0
Nikolski
WIND SPEED-
DIURNAL VARIATION
2194
13.9
St. Paul
WIND SPEED-
DIURNAL VARIATION
6362
13.7
Adak
WIND SPEED-
DIURNAL VARIATION
6700
11.8
Shemya
WIND SPEED-
DIURNAL VARIATION
5619
14.1
MEAN WIND SPEED (KNOTS)
GMT
LOCAL
ALL

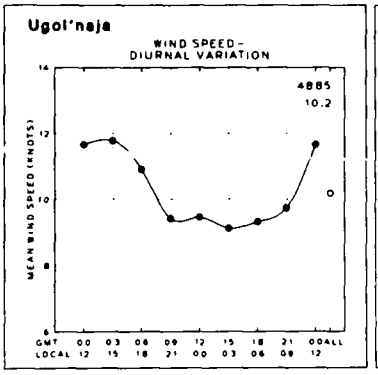


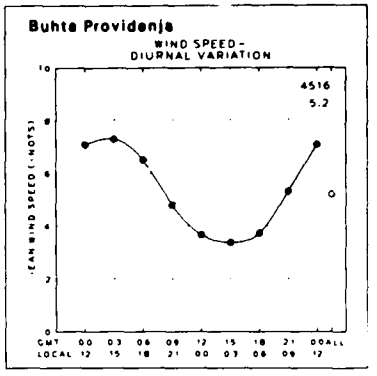


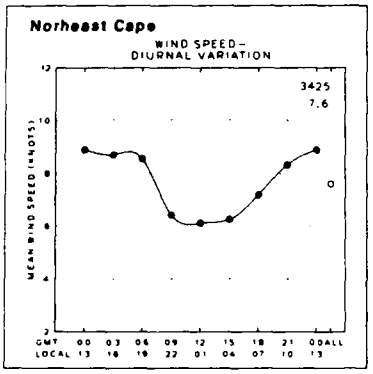
13 Scalar Mean Wind and Wind Chill Temperature ≦-30°C **May**

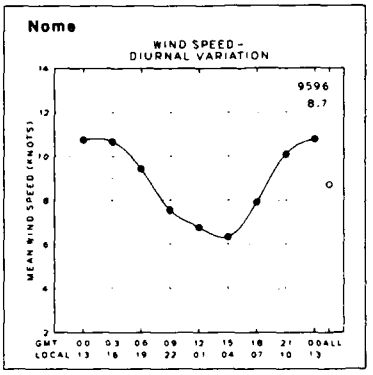

Nikol'skoe
WIND SPEED-
DIURNAL VARIATION
5485
11.2
MEAN WIND SPEED (KNOTS)
GMT 00 03 06 09 12 15 18 21 00ALL
LOCAL 11 14 17 20 23 02 05 08 11

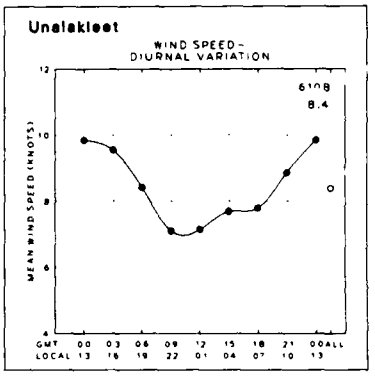

Khatirka-In-Chukot
WIND SPEED-
DIURNAL VARIATION
3418
5.6
MEAN WIND SPEED (KNOTS)
GMT 00 03 06 09 12 15 18 21 00ALL
LOCAL 12 15 18 21 00 03 06 09 12

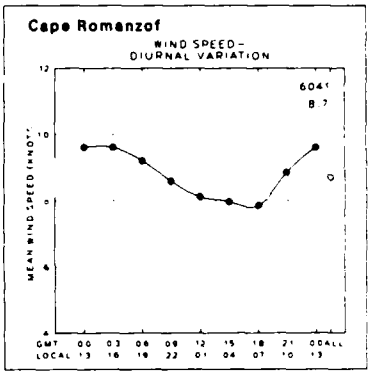

Ugol'naja
WIND SPEED-
DIURNAL VARIATION
4885
10.2
MEAN WIND SPEED (KNOTS)
GMT 00 03 06 09 12 15 18 21 00ALL
LOCAL 12 15 18 21 00 03 06 09 12

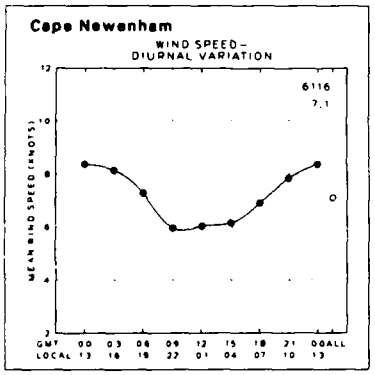

Buhta Providenja
WIND SPEED-
DIURNAL VARIATION
4516
5.2
MEAN WIND SPEED (KNOTS)
GMT 00 03 06 09 12 15 18 21 00ALL
LOCAL 12 15 18 21 00 03 06 09 12

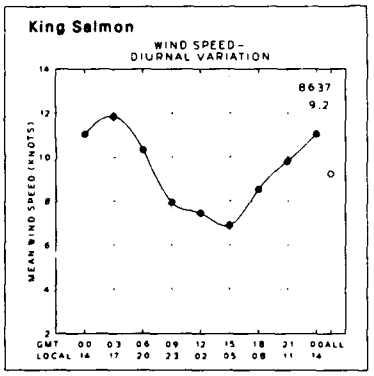

Norheast Cape
WIND SPEED-
DIURNAL VARIATION
3425
7.6
MEAN WIND SPEED (KNOTS)
GMT 00 03 06 09 12 15 18 21 00ALL
LOCAL 13 16 19 22 01 04 07 10 13

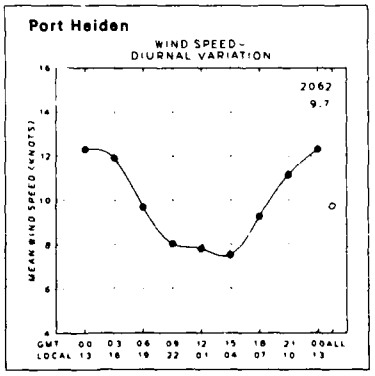

Nome
WIND SPEED-
DIURNAL VARIATION
9596
8.7
MEAN WIND SPEED (KNOTS)
GMT 00 03 06 09 12 15 18 21 00ALL
LOCAL 13 16 19 22 01 04 07 10 13

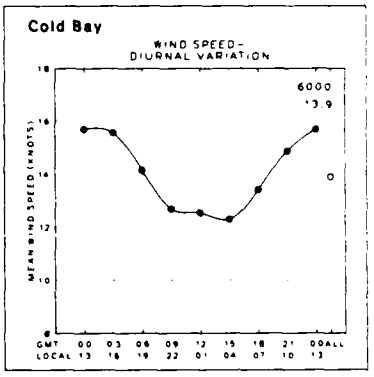

Unalakleet
WIND SPEED-
DIURNAL VARIATION
6108
8.4
MEAN WIND SPEED (KNOTS)
GMT 00 03 06 09 12 15 18 21 00ALL
LOCAL 13 16 19 22 01 04 07 10 13

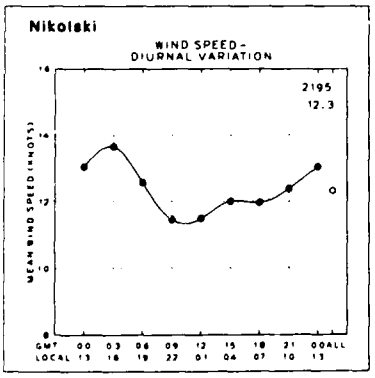

Cape Romanzof
WIND SPEED-
DIURNAL VARIATION
6041
8.7
MEAN WIND SPEED (KNOTS)
GMT 00 03 06 09 12 15 18 21 00ALL
LOCAL 13 16 19 22 01 04 07 10 13

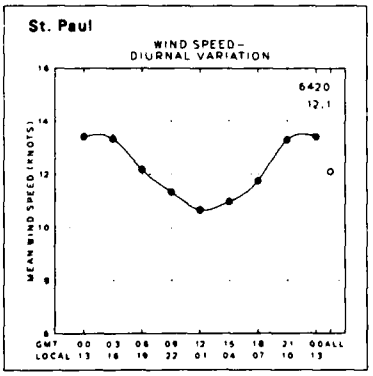

Cape Newenham
WIND SPEED-
DIURNAL VARIATION
6116
7.1
MEAN WIND SPEED (KNOTS)
GMT 00 03 06 09 12 15 18 21 00ALL
LOCAL 13 16 19 22 01 04 07 10 13

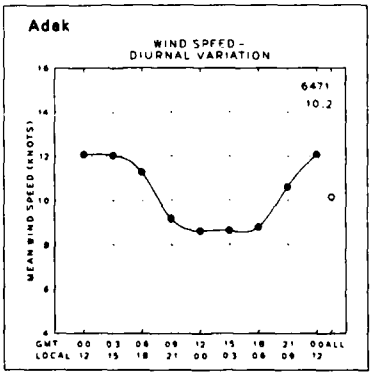

King Salmon
WIND SPEED-
DIURNAL VARIATION
8637
9.2
MEAN WIND SPEED (KNOTS)
GMT 00 03 06 09 12 15 18 21 00ALL
LOCAL 14 17 20 23 02 05 08 11 14

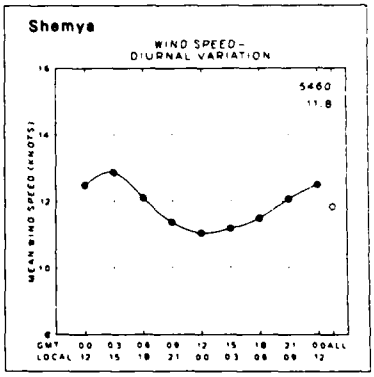

Port Heiden
WIND SPEED-
DIURNAL VARIATION
2062
9.7
MEAN WIND SPEED (KNOTS)
GMT 00 03 06 09 12 15 18 21 00ALL
LOCAL 13 16 19 22 01 04 07 10 13

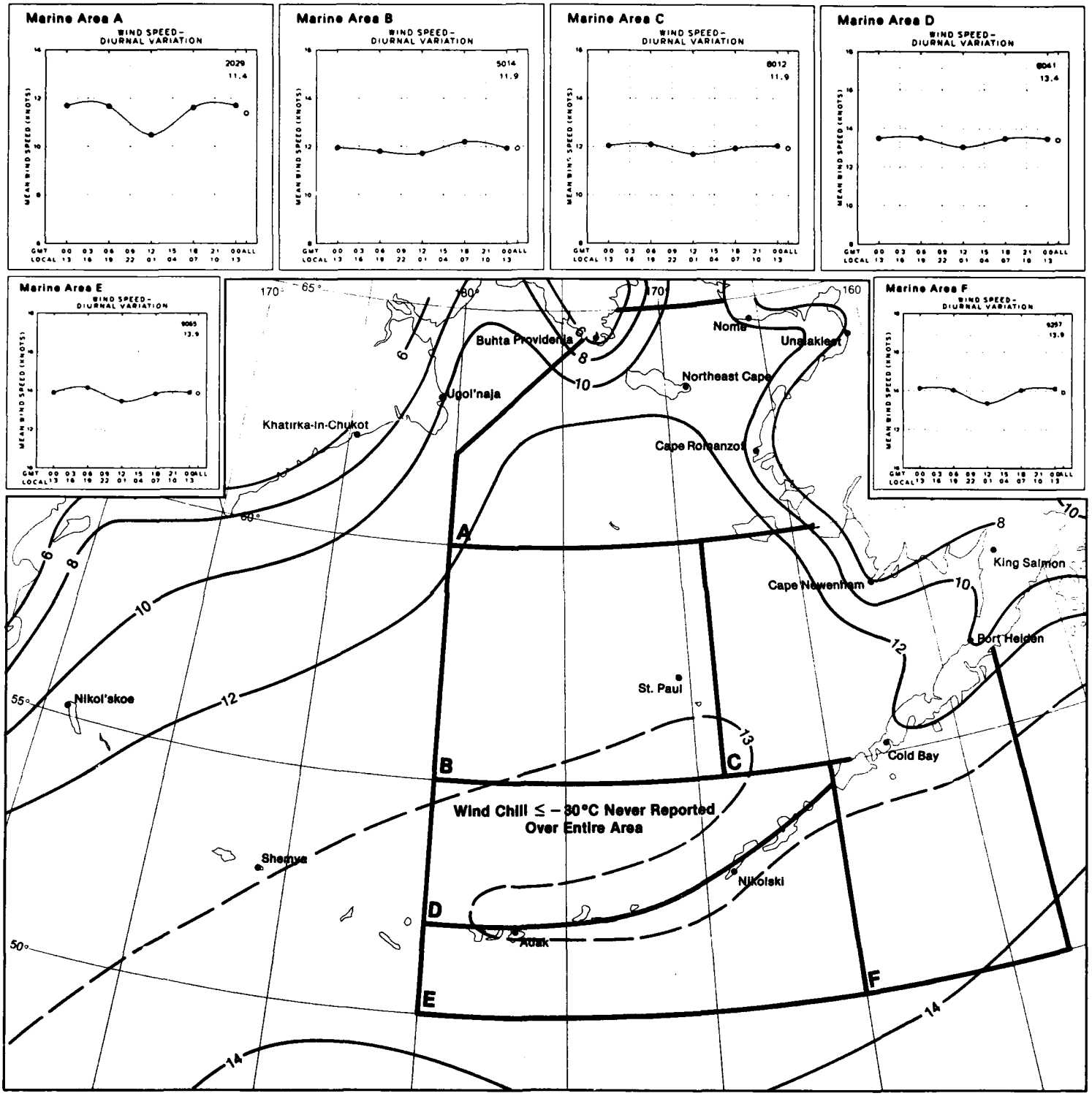

Cold Bay
WIND SPEED-
DIURNAL VARIATION
6000
13.9
MEAN WIND SPEED (KNOTS)
GMT 00 03 06 09 12 15 18 21 00ALL
LOCAL 13 16 19 22 01 04 07 10 13


Nikolski
WIND SPEED-
DIURNAL VARIATION
2195
12.3
MEAN WIND SPEED (KNOTS)
GMT 00 03 06 09 12 15 18 21 00ALL
LOCAL 13 16 19 22 01 04 07 10 13


St. Paul
WIND SPEED-
DIURNAL VARIATION
6420
12.1
MEAN WIND SPEED (KNOTS)
GMT 00 03 06 09 12 15 18 21 00ALL
LOCAL 13 16 19 22 01 04 07 10 13

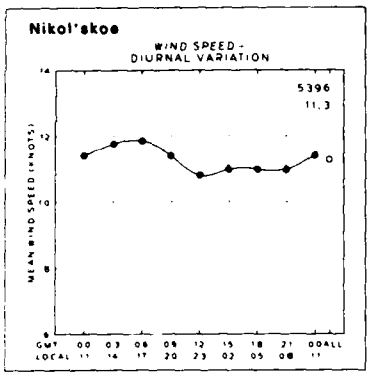

Adak
WIND SPEED-
DIURNAL VARIATION
6471
10.2
MEAN WIND SPEED (KNOTS)
GMT 00 03 06 09 12 15 18 21 00ALL
LOCAL 12 15 18 21 00 03 06 09 12

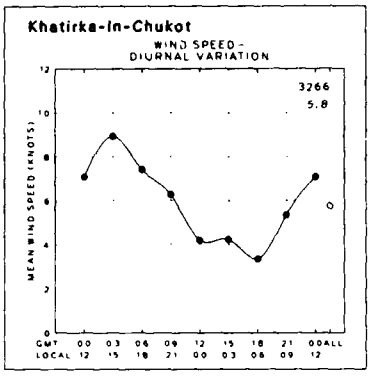

Shemya
WIND SPEED-
DIURNAL VARIATION
5460
11.8
MEAN WIND SPEED (KNOTS)
GMT 00 03 06 09 12 15 18 21 00ALL
LOCAL 12 15 18 21 00 03 06 09 12

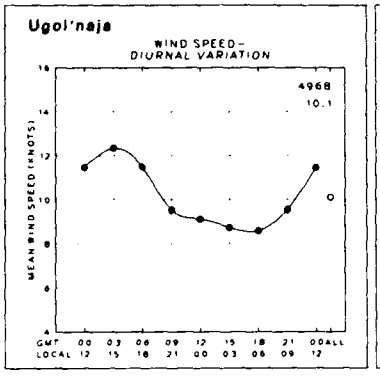


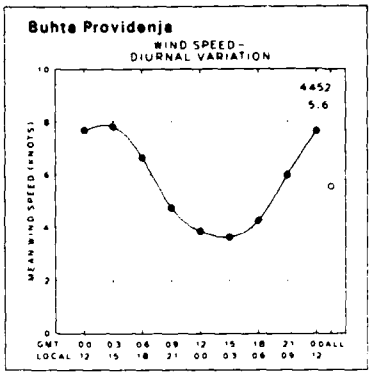
13 Scalar Mean Wind and Wind Chill Temperature ≦-30°C

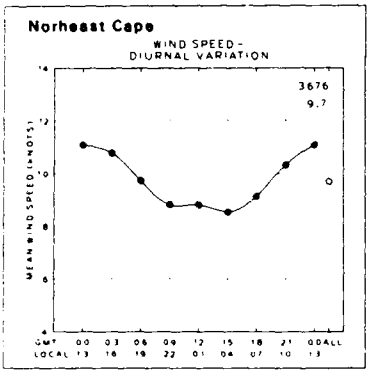
June

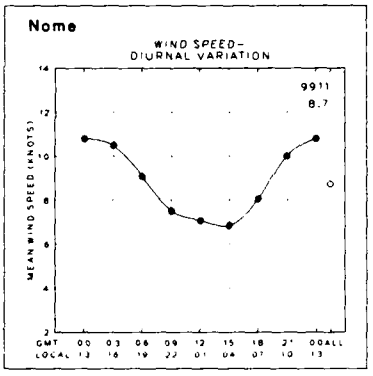

Nikol'skoe
WIND SPEED -
DIURNAL VARIATION
5396
11.3
MEAN WIND SPEED (KNOTS)
GMT 00 03 06 09 12 15 18 21 00ALL
LOCAL 11 14 17 20 23 02 05 08 11

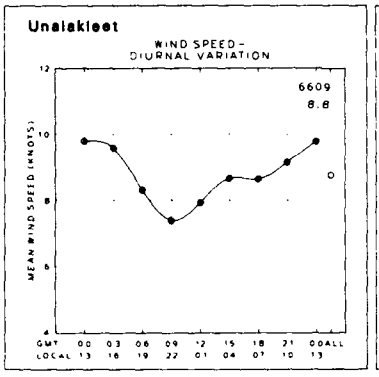

Khatirka-In-Chukot
WIND SPEED -
DIURNAL VARIATION
3266
5.8
MEAN WIND SPEED (KNOTS)
GMT 00 03 06 09 12 15 18 21 00ALL
LOCAL 12 15 18 21 00 03 06 09 12

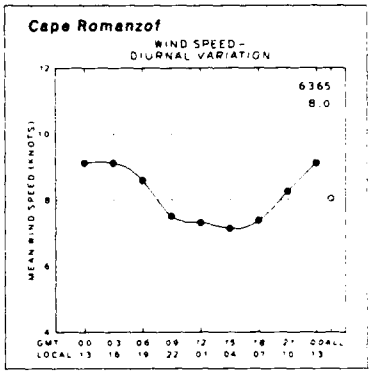

Ugol'naja
WIND SPEED -
DIURNAL VARIATION
4968
10.1
MEAN WIND SPEED (KNOTS)
GMT 00 03 06 09 12 15 18 21 00ALL
LOCAL 12 15 18 21 00 03 06 09 12

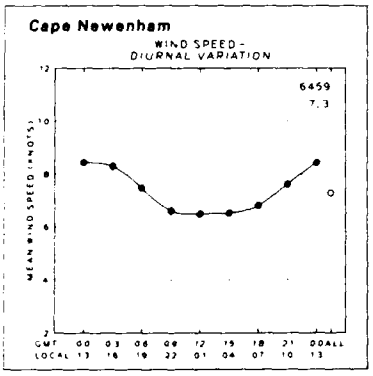

Buhta Providenja
WIND SPEED -
DIURNAL VARIATION
4452
5.6
MEAN WIND SPEED (KNOTS)
GMT 00 03 06 09 12 15 18 21 00ALL
LOCAL 12 15 18 21 00 03 06 09 12

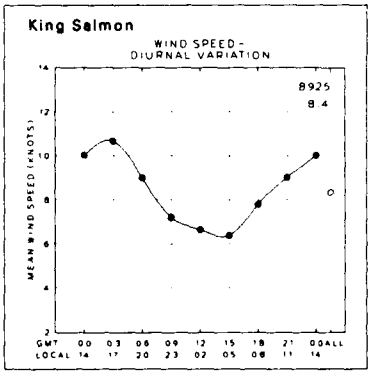

Norheast Cape
WIND SPEED -
DIURNAL VARIATION
3676
9.7
MEAN WIND SPEED (KNOTS)
GMT 00 03 06 09 12 15 18 21 00ALL
LOCAL 13 16 19 22 01 04 07 10 13

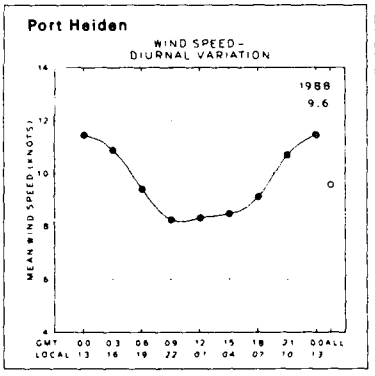

Nome
WIND SPEED -
DIURNAL VARIATION
9911
8.7
MEAN WIND SPEED (KNOTS)
GMT 00 03 06 09 12 15 18 21 00ALL
LOCAL 13 16 19 22 01 04 07 10 13

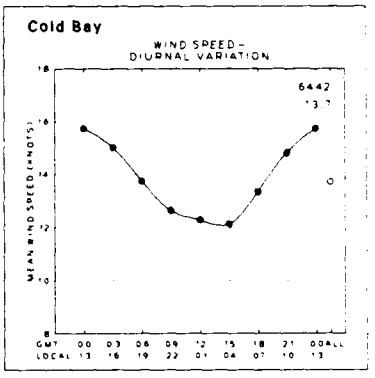

Unalakleet
WIND SPEED -
DIURNAL VARIATION
6609
8.8
MEAN WIND SPEED (KNOTS)
GMT 00 03 06 09 12 15 18 21 00ALL
LOCAL 13 16 19 22 01 04 07 10 13

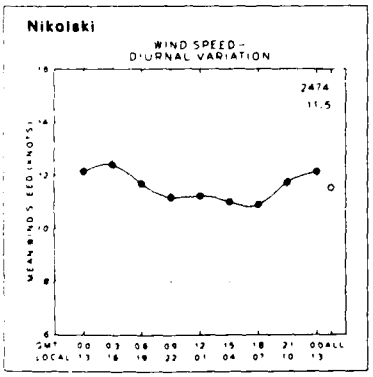

Cape Romanzof
WIND SPEED -
DIURNAL VARIATION
6365
8.0
MEAN WIND SPEED (KNOTS)
GMT 00 03 06 09 12 15 18 21 00ALL
LOCAL 13 16 19 22 01 04 07 10 13

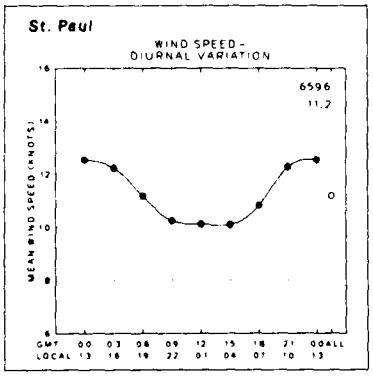

Cape Newenham
WIND SPEED -
DIURNAL VARIATION
6459
7.3
MEAN WIND SPEED (KNOTS)
GMT 00 03 06 09 12 15 18 21 00ALL
LOCAL 13 16 19 22 01 04 07 10 13

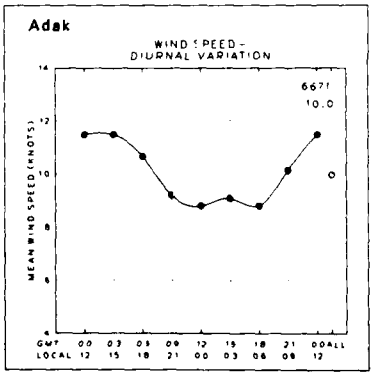

King Salmon
WIND SPEED -
DIURNAL VARIATION
8925
8.4
MEAN WIND SPEED (KNOTS)
GMT 00 03 06 09 12 15 18 21 00ALL
LOCAL 14 17 20 23 02 05 08 11 14

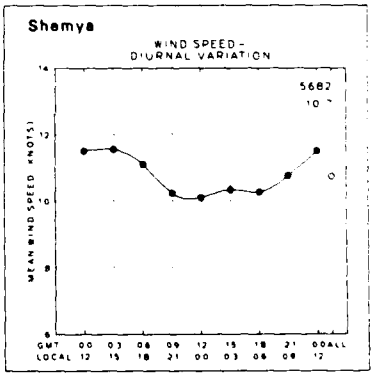

Port Heiden
WIND SPEED -
DIURNAL VARIATION
1988
9.6
MEAN WIND SPEED (KNOTS)
GMT 00 03 06 09 12 15 18 21 00ALL
LOCAL 13 16 19 22 01 04 07 10 13

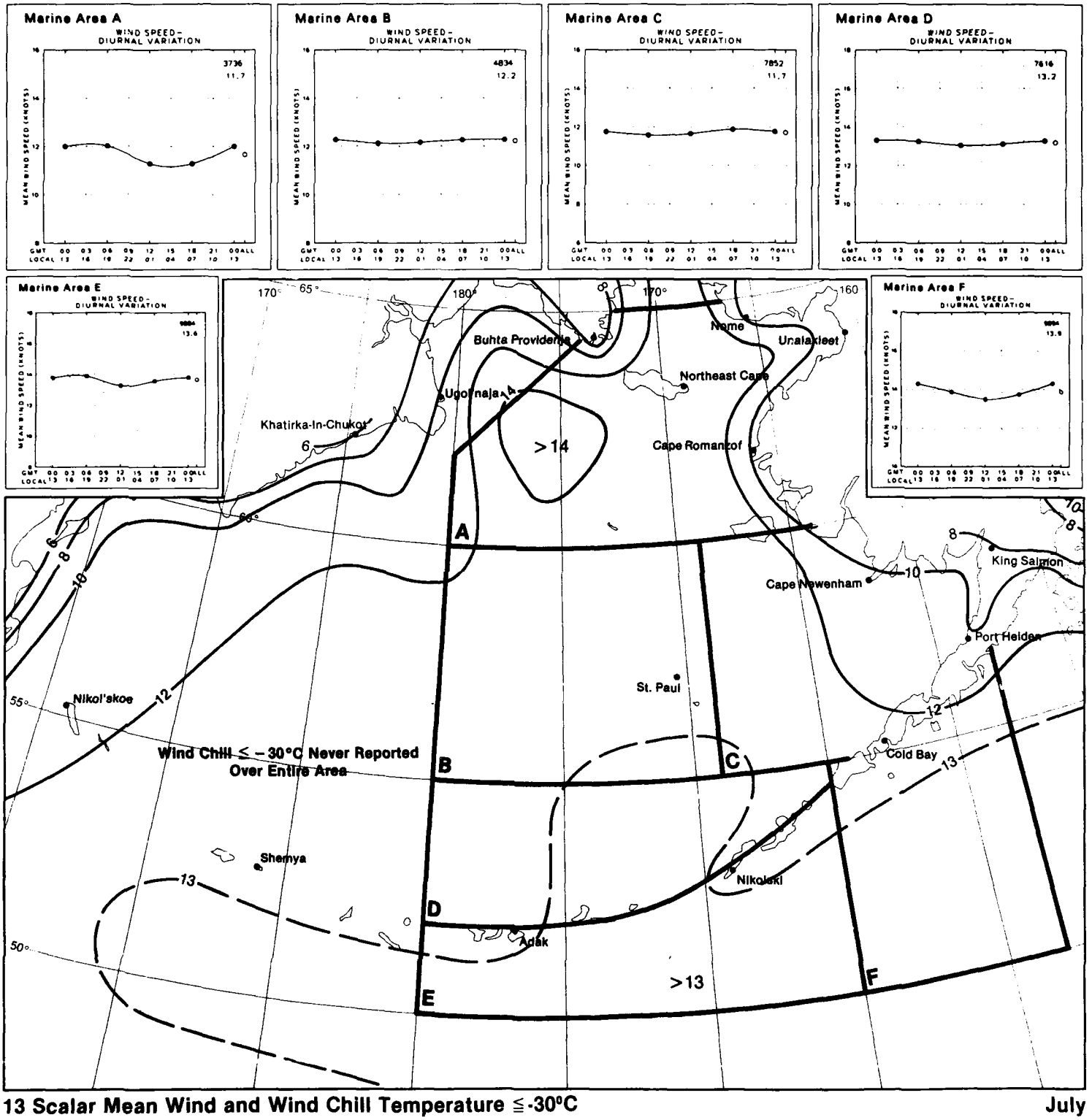

Cold Bay
WIND SPEED -
DIURNAL VARIATION
6442
13.7
MEAN WIND SPEED (KNOTS)
GMT 00 03 06 09 12 15 18 21 00ALL
LOCAL 13 16 19 22 01 04 07 10 13


Nikolski
WIND SPEED -
DIURNAL VARIATION
2474
11.5
MEAN WIND SPEED (KNOTS)
GMT 00 03 06 09 12 15 18 21 00ALL
LOCAL 13 16 19 22 01 04 07 10 13


St. Paul
WIND SPEED -
DIURNAL VARIATION
6596
11.2
MEAN WIND SPEED (KNOTS)
GMT 00 03 06 09 12 15 18 21 00ALL
LOCAL 13 16 19 22 01 04 07 10 13

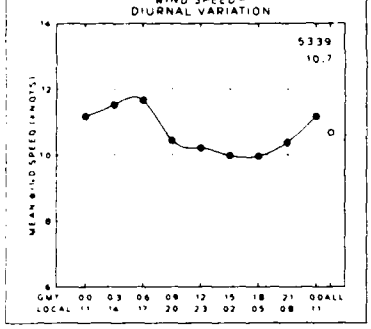

Adak
WIND SPEED -
DIURNAL VARIATION
6671
10.0
MEAN WIND SPEED (KNOTS)
GMT 00 03 06 09 12 15 18 21 00ALL
LOCAL 12 15 18 21 00 03 06 09 12


Shemya
WIND SPEED -
DIURNAL VARIATION
5682
MEAN WIND SPEED (KNOTS)
GMT 00 03 06 09 12 15 18 21 00ALL
LOCAL 12 15 18 21 00 03 06 09 12

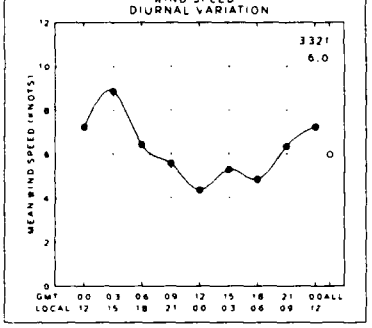


13 Scalar Mean Wind and Wind Chill Temperature ≦-30°C July

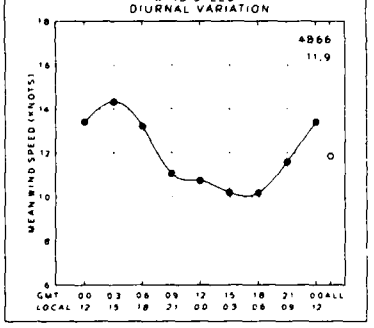
Nikol'skoe



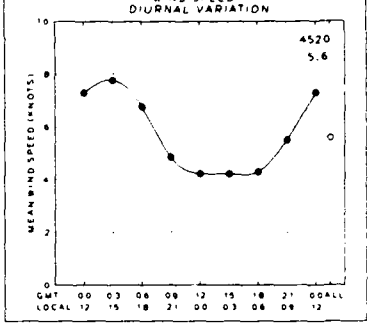
Khatirka-In-Chukot



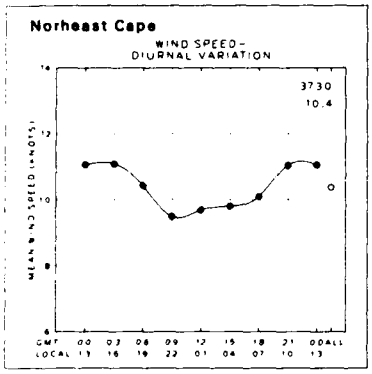
Ugol'naja



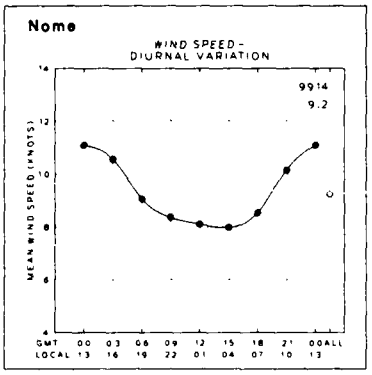
Buhta Providenja



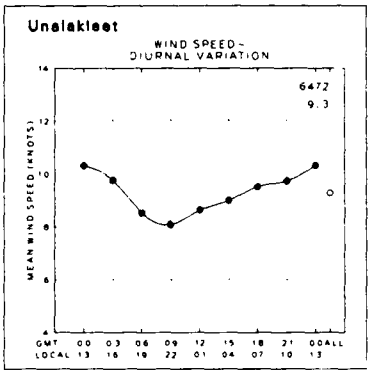
Northeast Cape



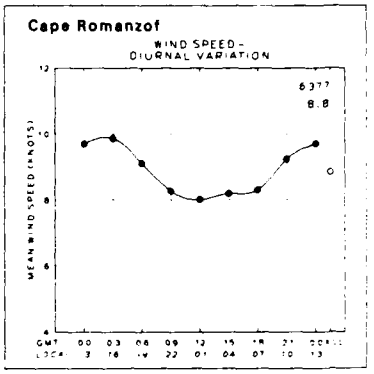
Nome



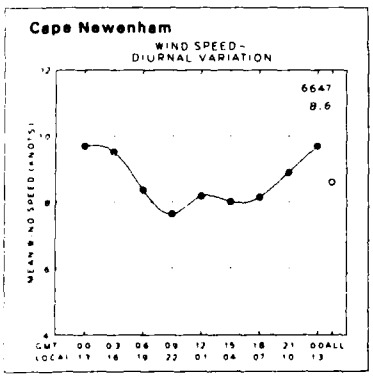
Unalakleet



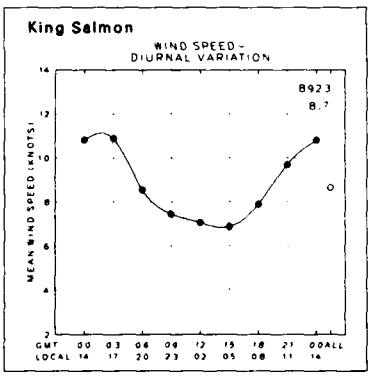
Cape Romanzof



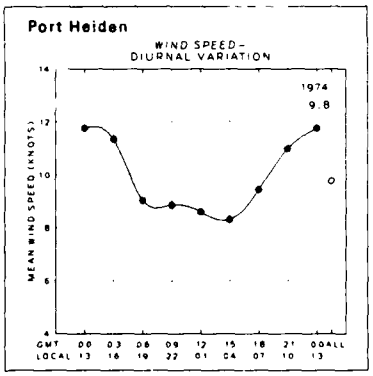
Cape Newenham



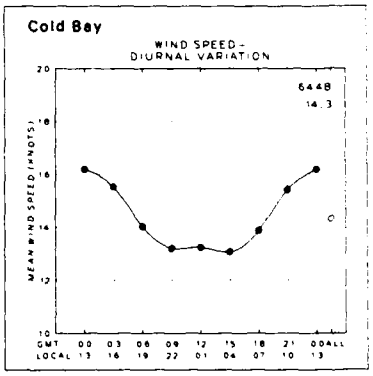
King Salmon



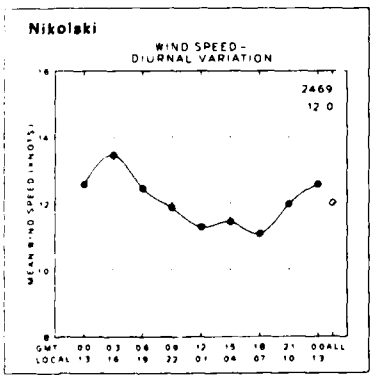
Port Heiden



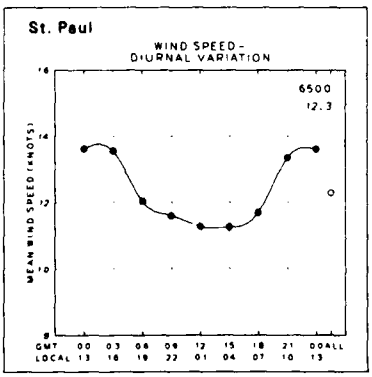
Cold Bay



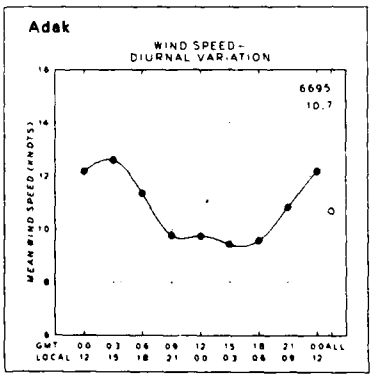
Nikolski



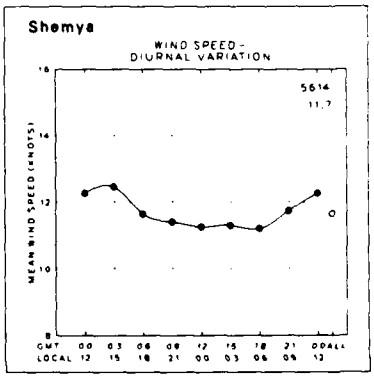
St. Paul

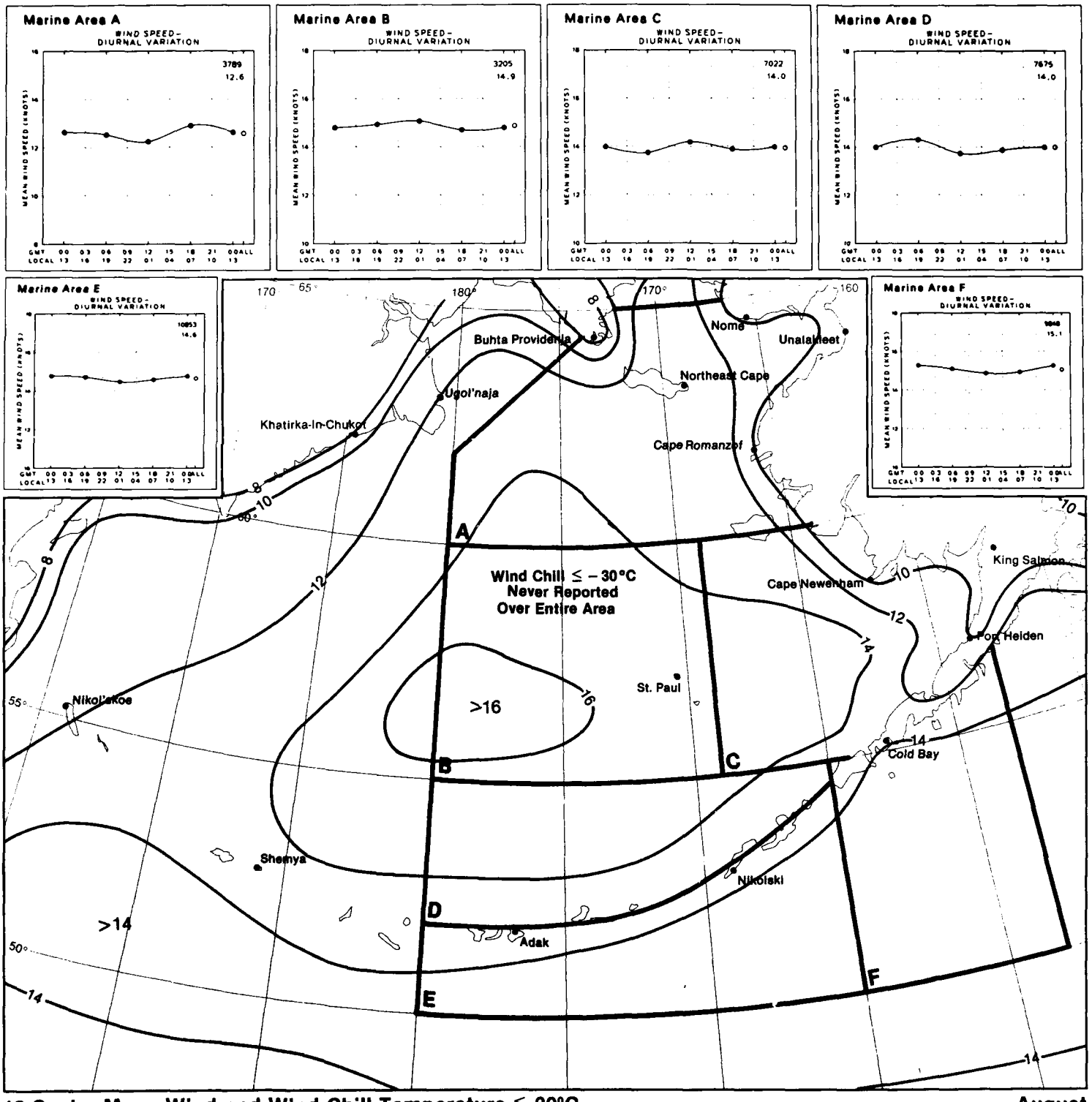


Adak



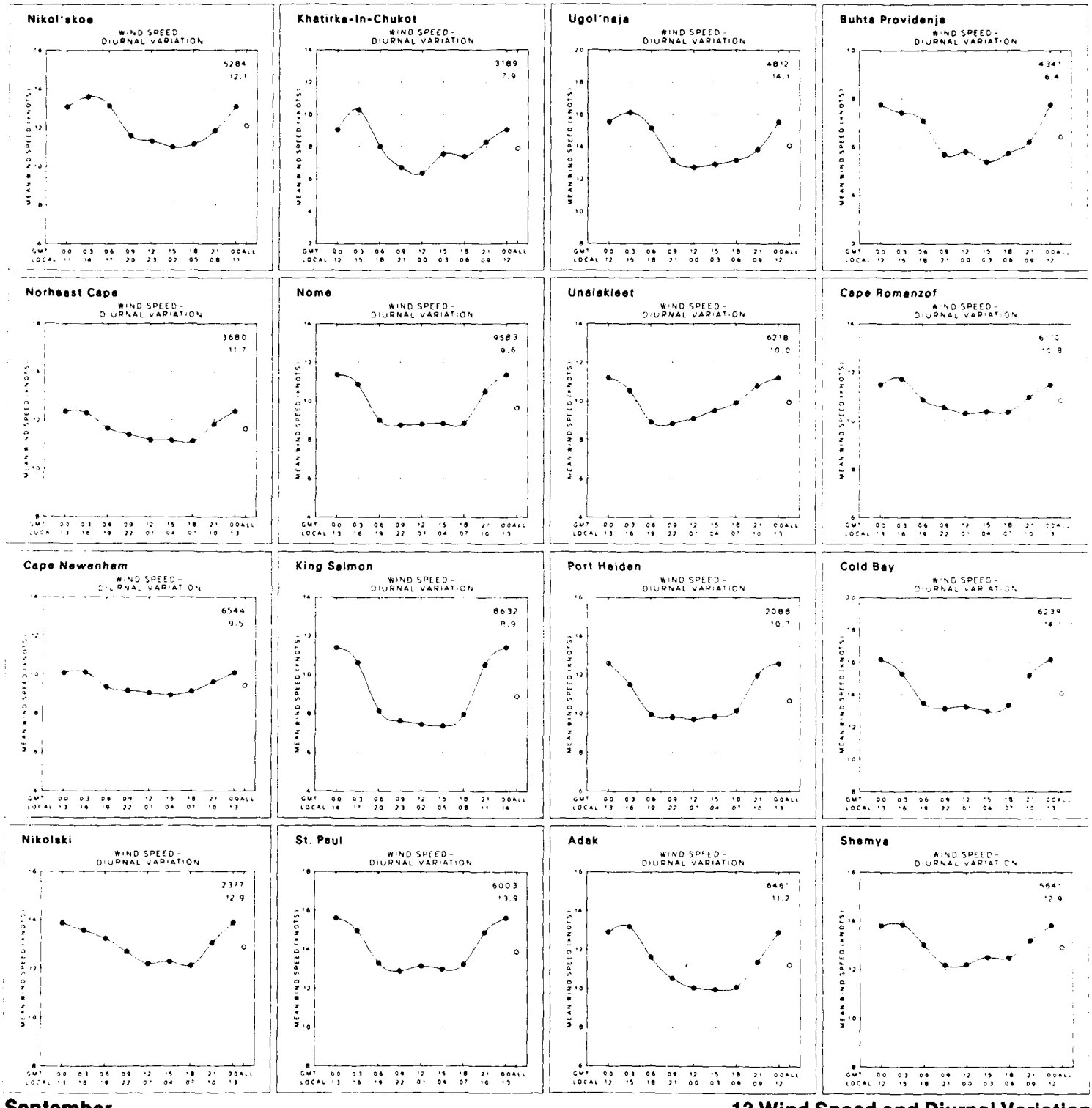
Shemya

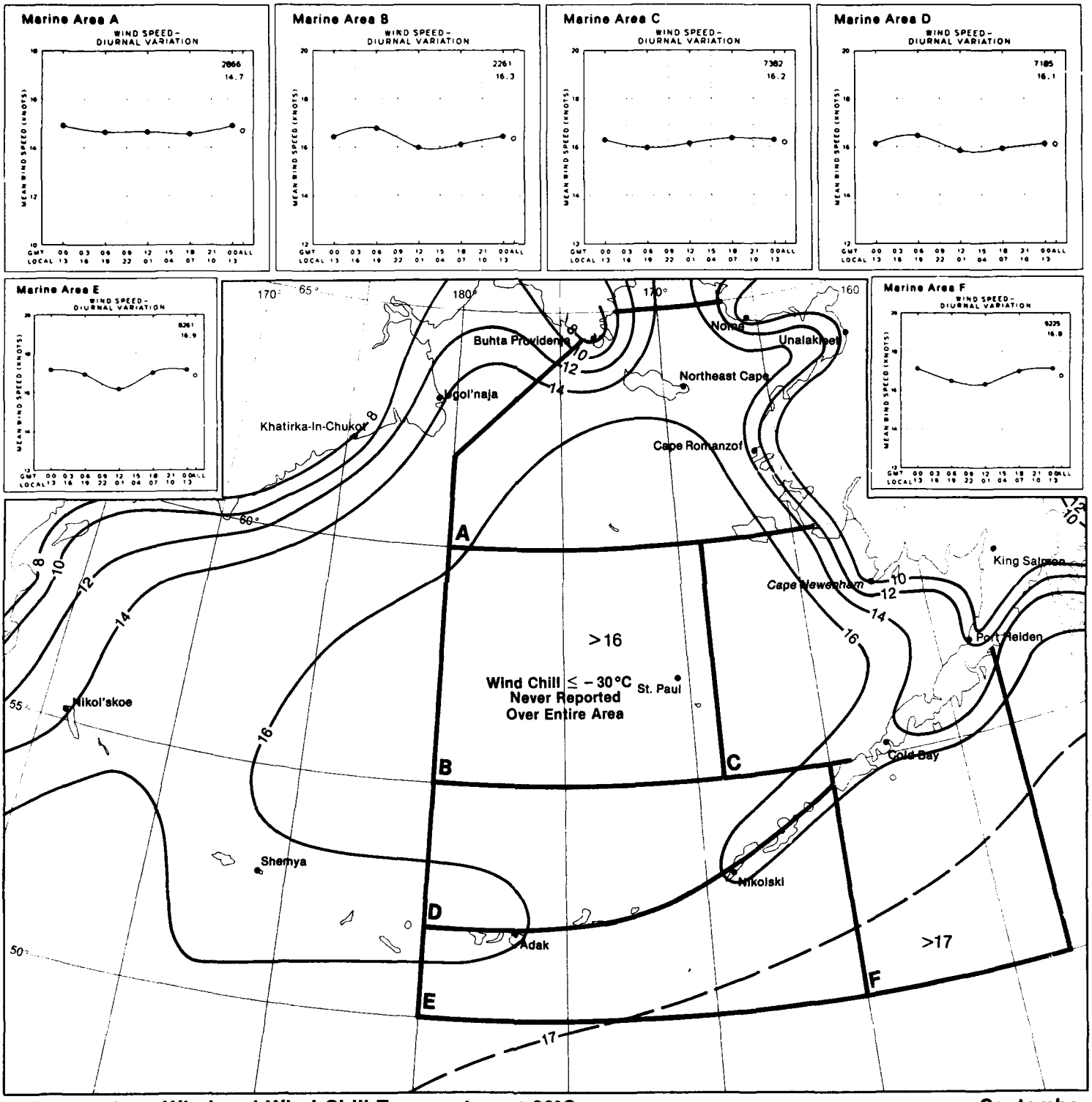




13 Scalar Mean Wind and Wind Chill Temperature ≦-30°C

August

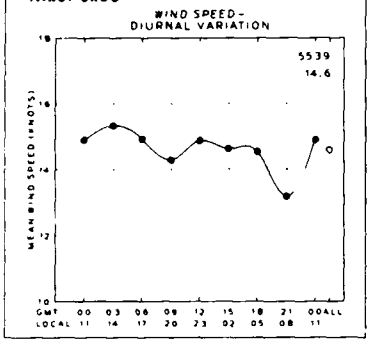

Nikol'skoe
WIND SPEED - DIURNAL VARIATION
5284
12.1
Khatirka-In-Chukot
WIND SPEED - DIURNAL VARIATION
3189
7.9
Ugol'naja
WIND SPEED - DIURNAL VARIATION
4812
14.1
Buhta Providenja
WIND SPEED - DIURNAL VARIATION
4347
6.4
Northeast Cape
WIND SPEED - DIURNAL VARIATION
3680
11.7
Nome
WIND SPEED - DIURNAL VARIATION
9583
9.6
Unalakleet
WIND SPEED - DIURNAL VARIATION
6218
10.0
Cape Romanzof
WIND SPEED - DIURNAL VARIATION
Cape Newenham
WIND SPEED - DIURNAL VARIATION
6544
9.5
King Salmon
WIND SPEED - DIURNAL VARIATION
8632
8.9
Port Heiden
WIND SPEED - DIURNAL VARIATION
2088
10.7
Cold Bay
WIND SPEED - DIURNAL VARIATION
6239
Nikolski
WIND SPEED - DIURNAL VARIATION
2377
12.9
St. Paul
WIND SPEED - DIURNAL VARIATION
6003
13.9
Adak
WIND SPEED - DIURNAL VARIATION
646
11.2
Shemya
WIND SPEED - DIURNAL VARIATION
564
12.9



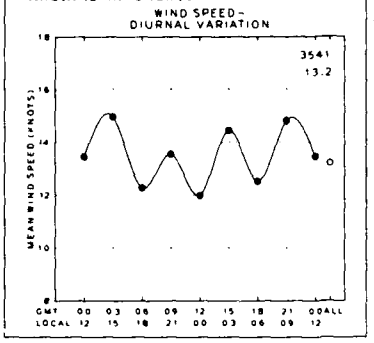
13 Scalar Mean Wind and Wind Chill Temperature ≦-30°C

September

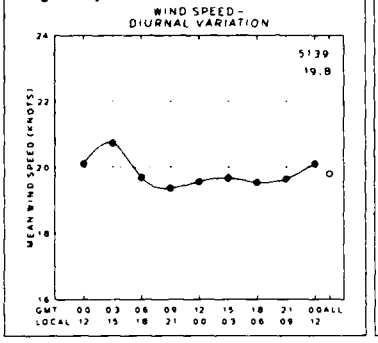
Nikol'skoe



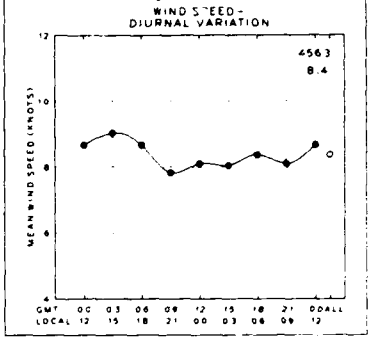
Khatirka-In-Chukot



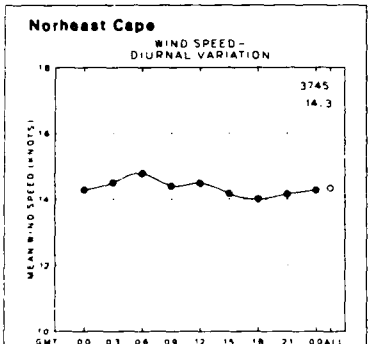
Ugol'naja



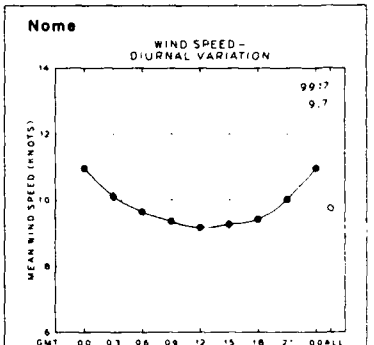
Buhta Providenja



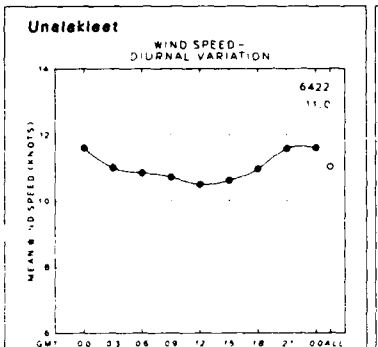
Norheast Cape



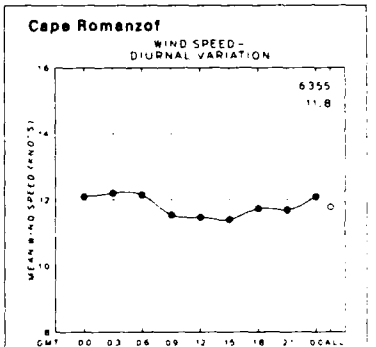
Nome



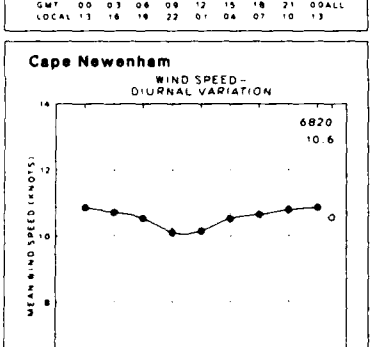
Unalaklieet



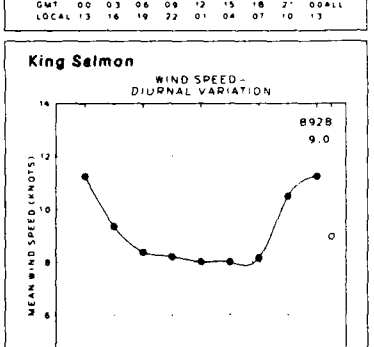
Cape Romanzof



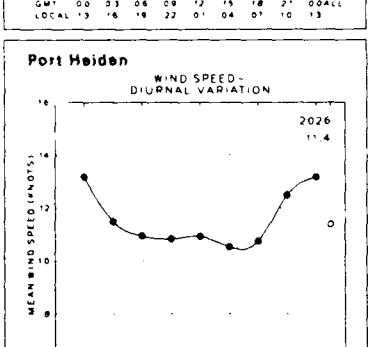
Cape Newenham



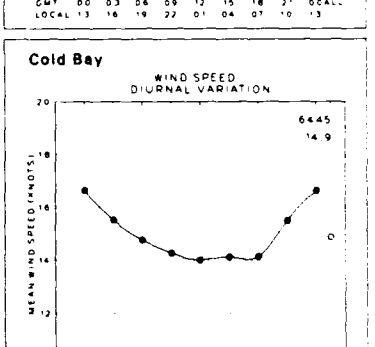
King Salmon



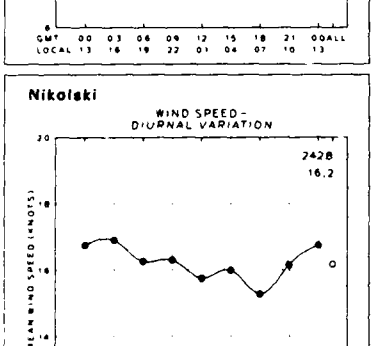
Port Heiden



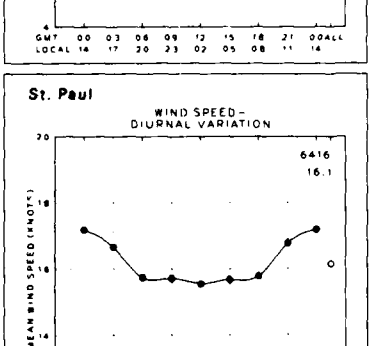
Cold Bay



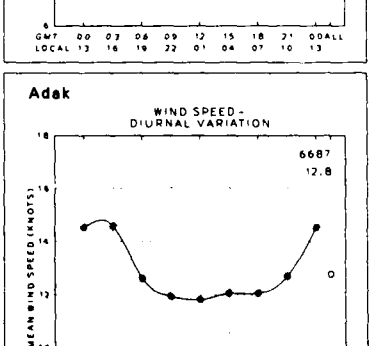
Nikolski



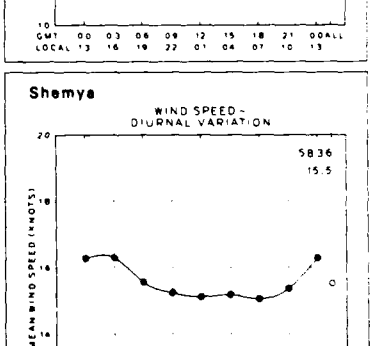
St. Paul

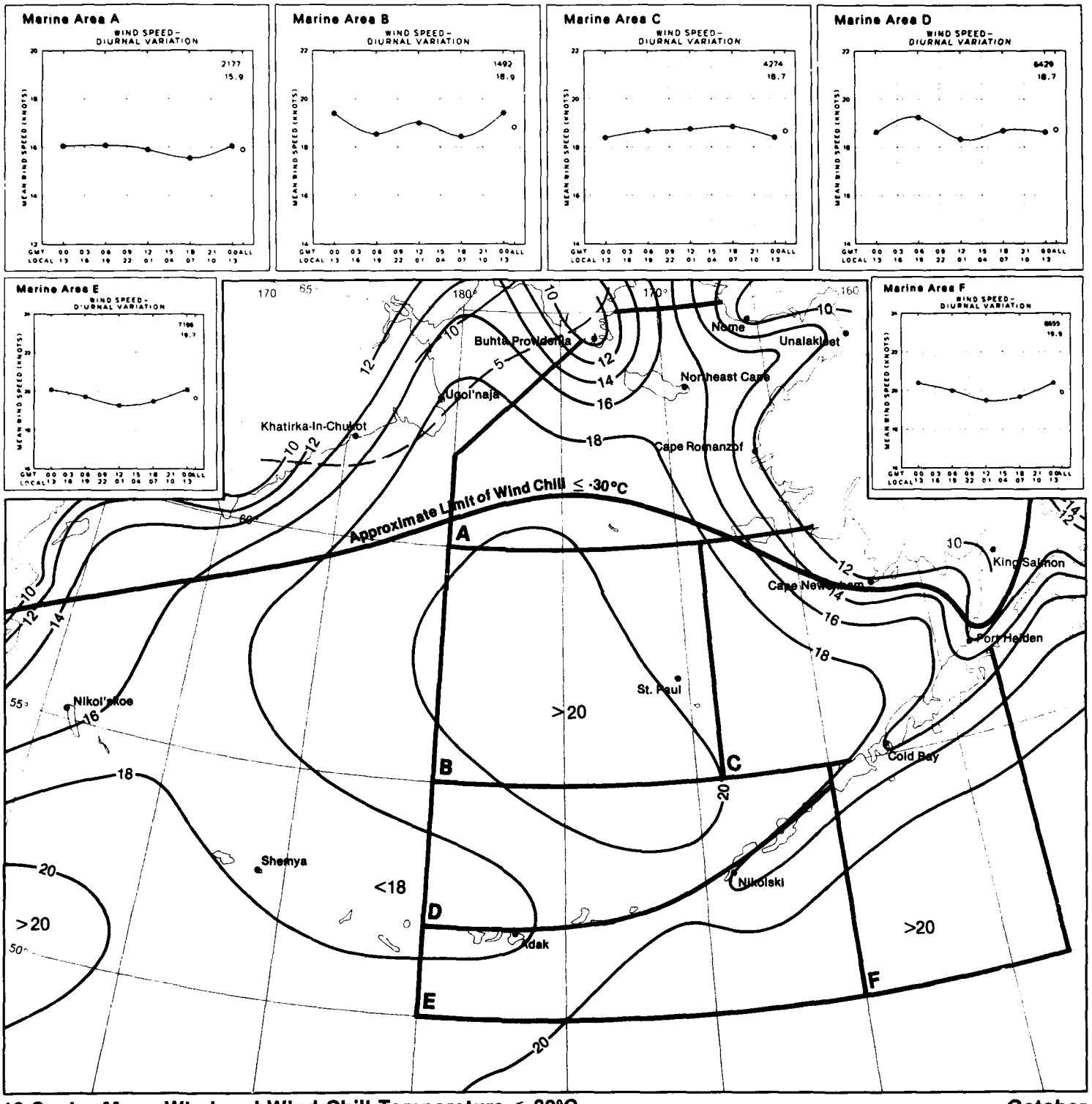


Adak



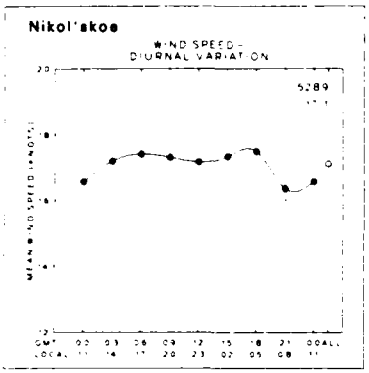
Shemya



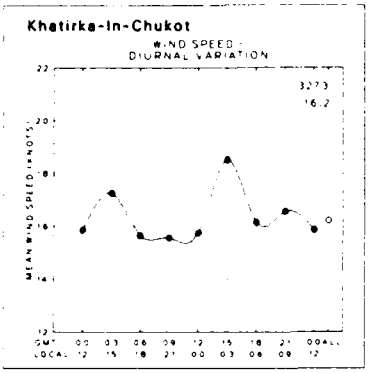


13 Scalar Mean Wind and Wind Chill Temperature ≦ -30°C **October**

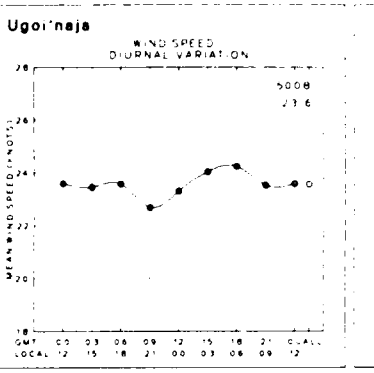
Nikol'skoe



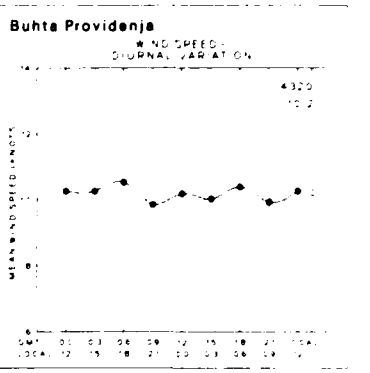
Khatirka-In-Chukot



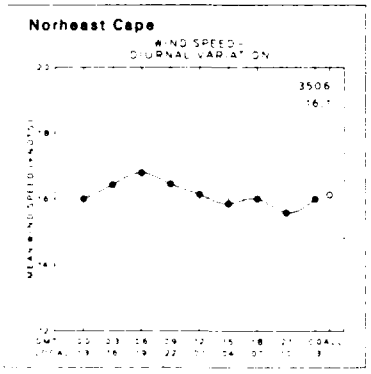
Ugol'naja



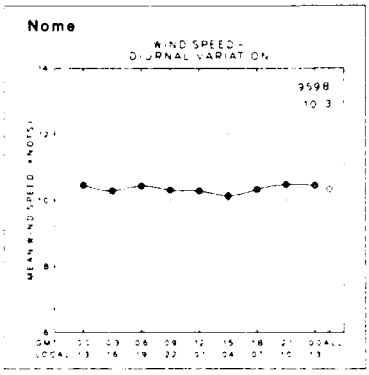
Buhta Providenja



Norheast Cape



Nome



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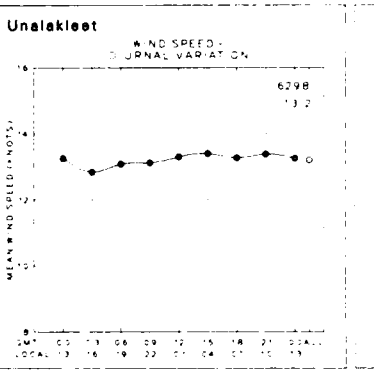

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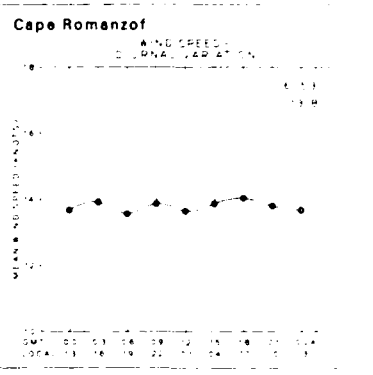

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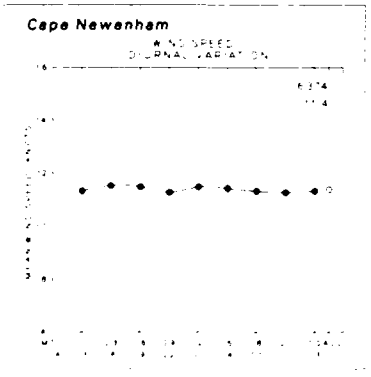

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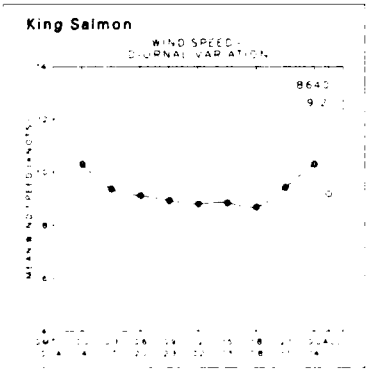

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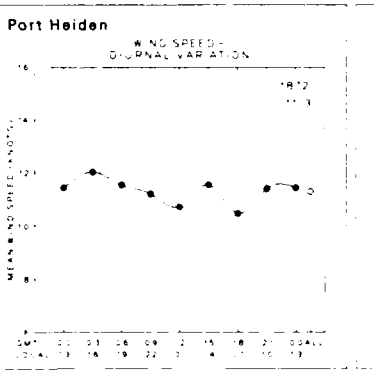

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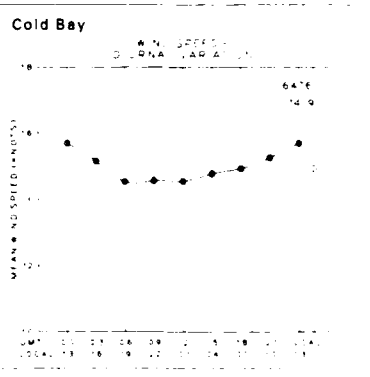

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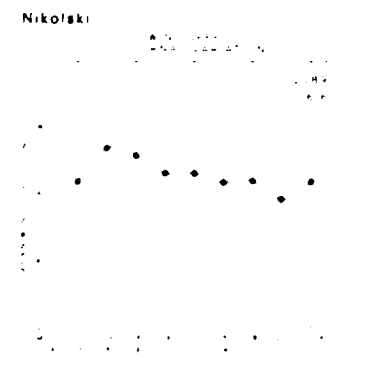

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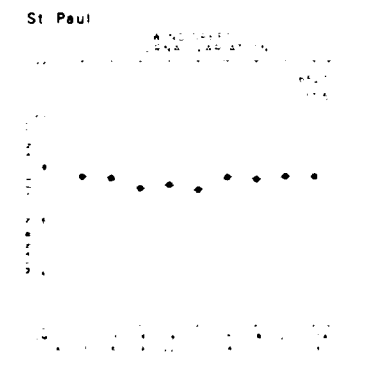

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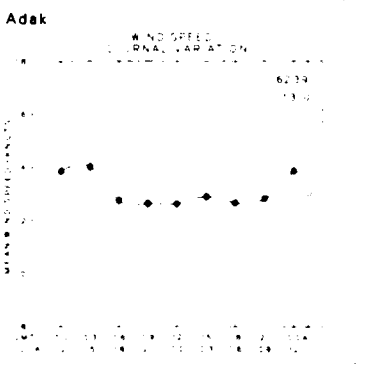

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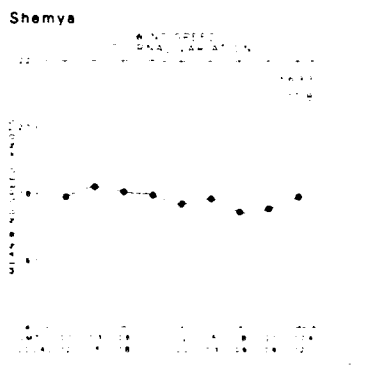

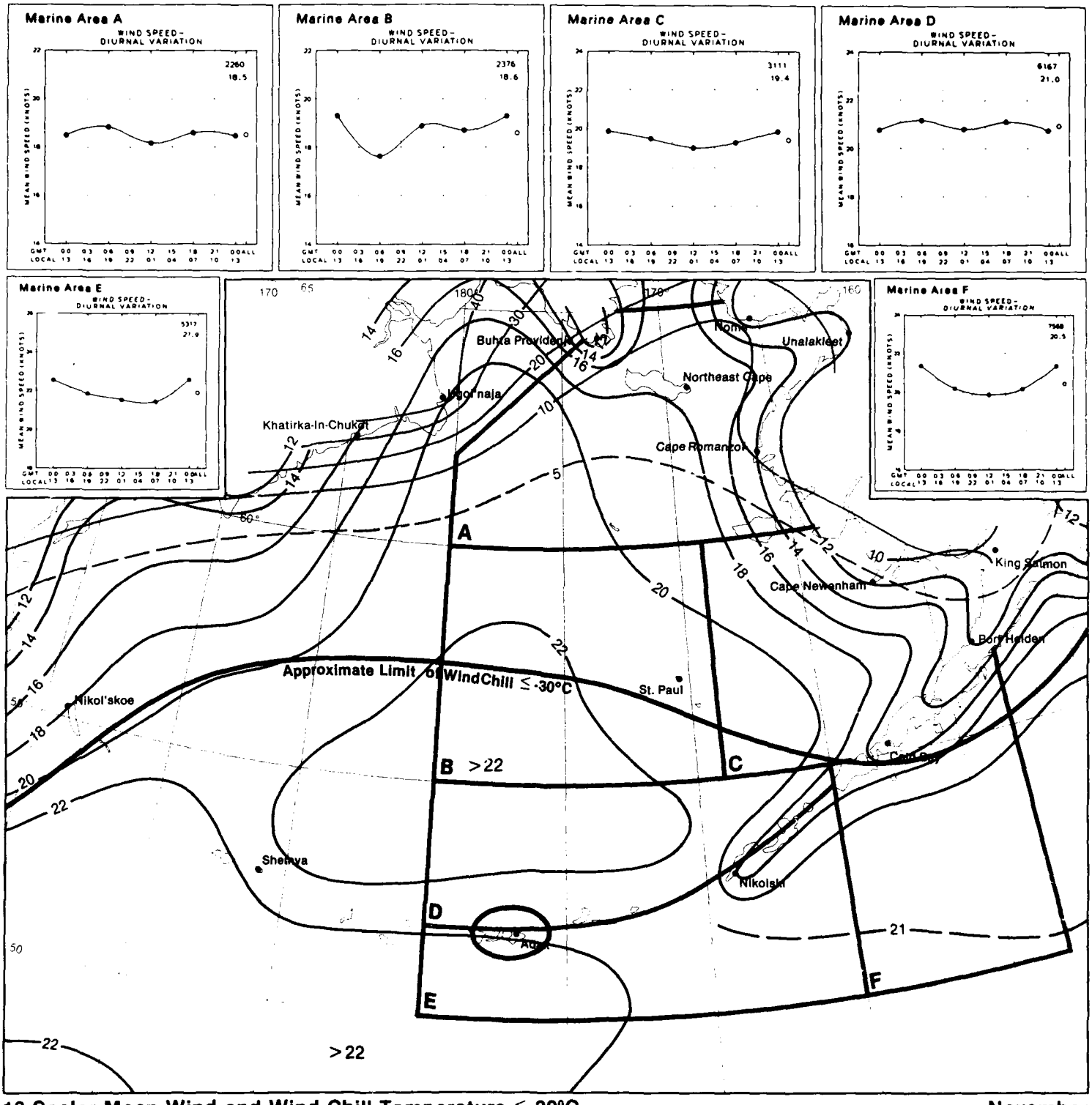

13 Scalar Mean Wind and Wind Chill Temperature ≦-30°C

November

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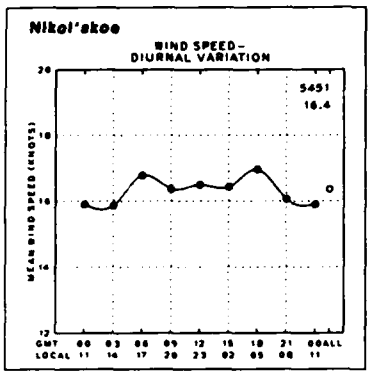

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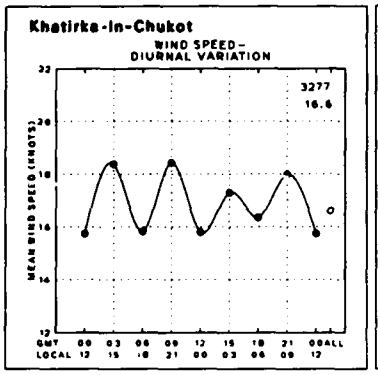

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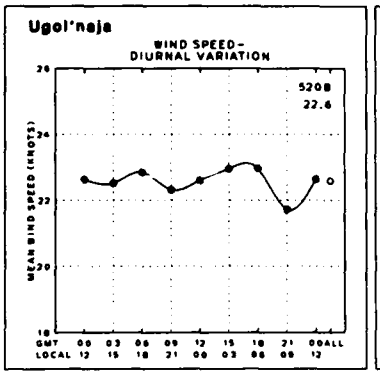

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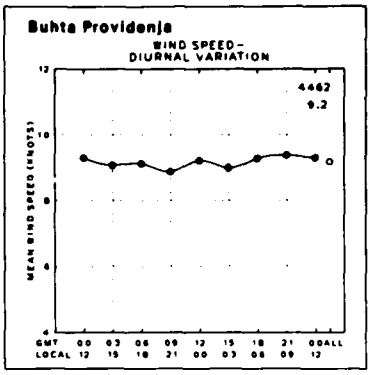

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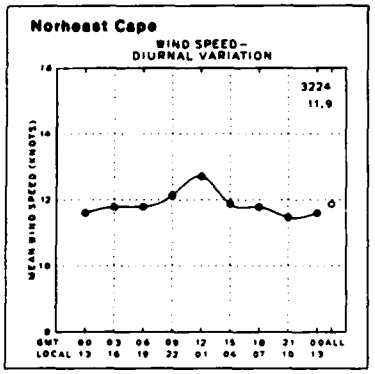

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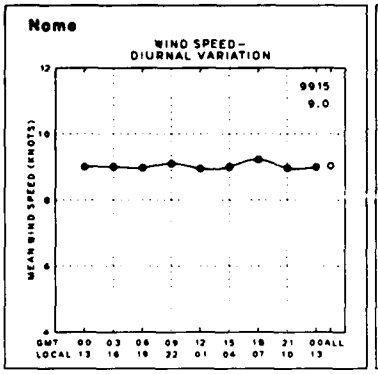

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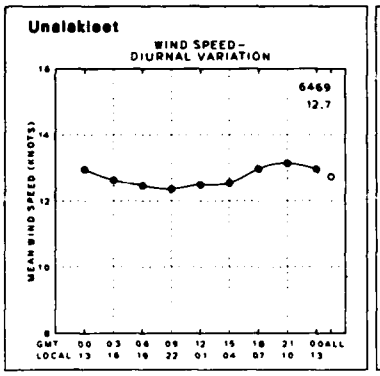

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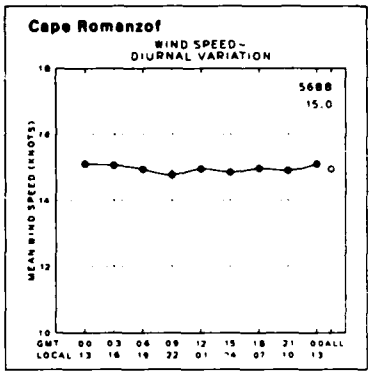

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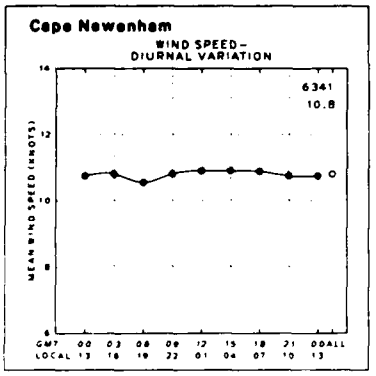

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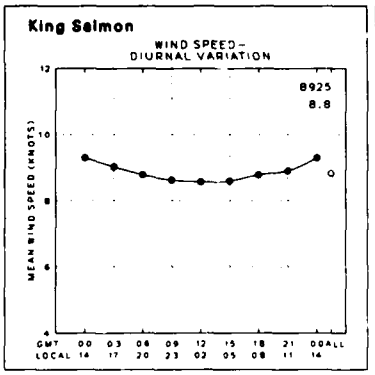

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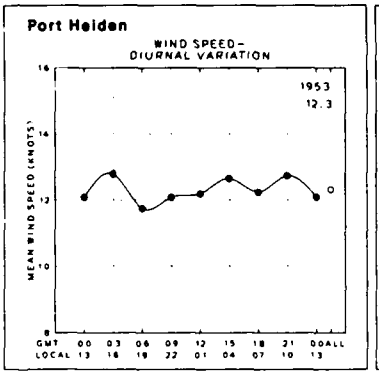

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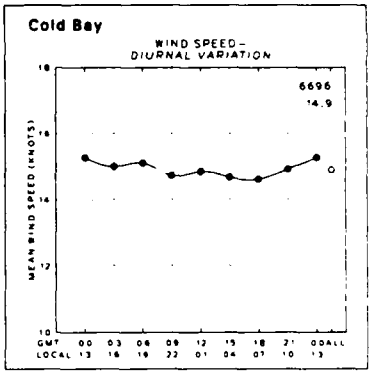

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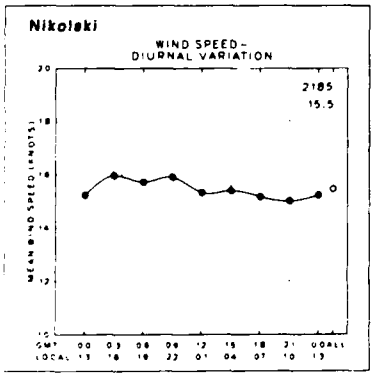

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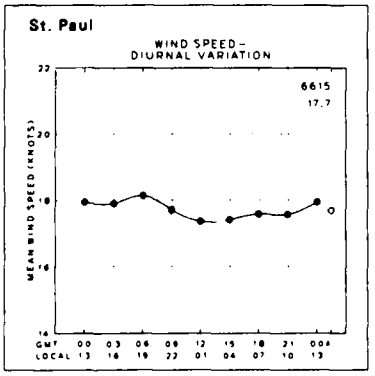

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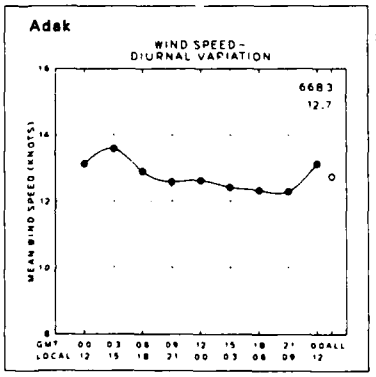

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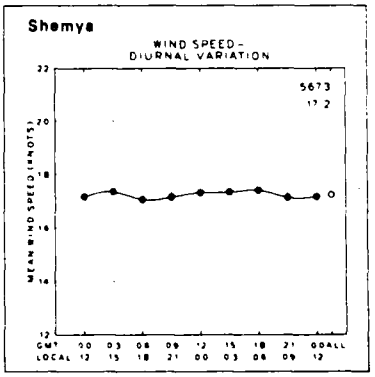
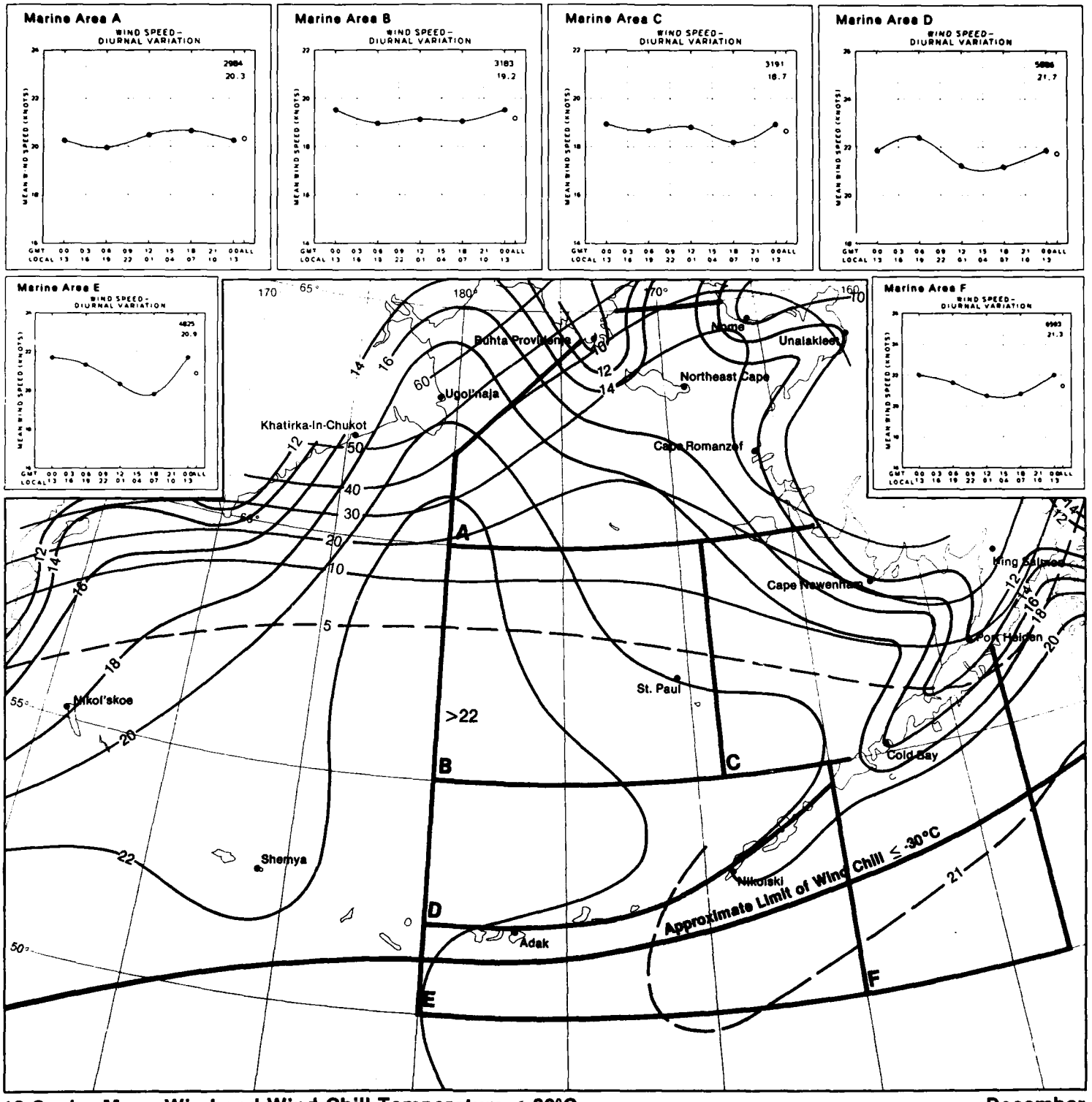




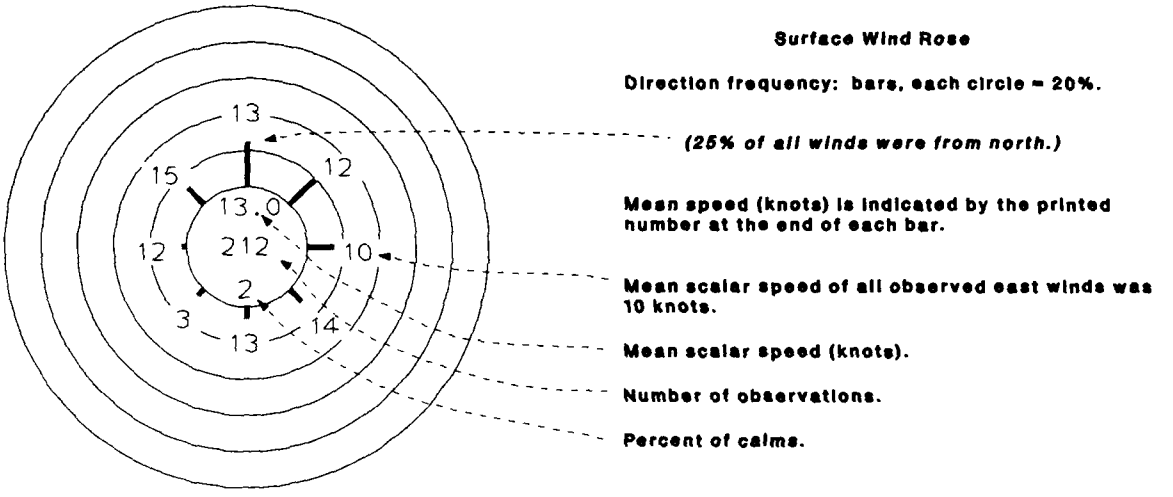
13 Scalar Mean Wind and Wind Chill Temperature ≦-30°C

December

Map 14. Wind speed and direction

ROSE – Percent frequency of wind observations by direction (8–points).

Albers Equal–Area Conic Projection



Wind is measured in terms of velocity, a vector that gives both wind speed and direction. ***True wind*** is the wind that is experienced by an observer standing still. When the ship is moving, an observer experiences what is termed an ***apparent wind***. The speed and course of the ship must be eliminated from the apparent wind to obtain the true wind, which is needed for meteorological purposes. Wind estimated from the appearance of the sea surface is a true wind, while wind determined by the appearance of the ship's rigging or by a shipboard anemometer is an apparent wind. True wind direction may be estimated by observing the direction from which ripples, small waves, and sea spray are coming, since they run with the wind. The direction from which the waves are coming is most easily found by sighting along the wave crests and then turning 90° to face the advancing waves. The observer is then facing the direction from which the waves are coming. The direction is determined to the nearest 10° with respect to true north. The true wind speed is the average speed of the wind blowing near the sea surface. Information in the following table is used to estimate the true wind speed based upon the condition of the sea surface. Refer to the text in Set 11 for additional descriptive information on winds.

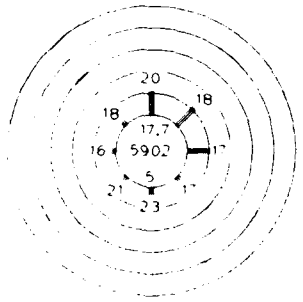
WIND SPEED IN KNOTS (WMO Code, 1982)

This table is based on sea conditions ov' deep water with a fully developed sea. There will be frequent cases where the sea will not be fully developed bacause the wind has not blown long enough over a sufficient distance (fetch). Other factors such as currents and water depth will also affect the look of the sea.

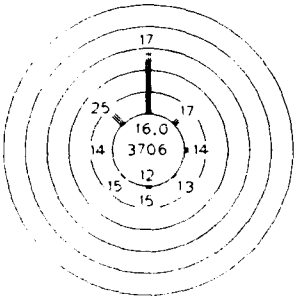
Code figs. (Knots)	Beaufort	Description	Sea criterion when sea fully developed	Probable ht. of waves in m (ft) Average		Maximum	
00	0	Calm	Sea like a mirror	–			–
01-03	1	Light air	Ripples with the appearance of scales are formed, but *without foam crests*	0.1	(¼)	0.1	(¼)
04-06	2	Light breeze	Small wavelets, still short but more pronounced, crests have a glassy appearance and do not break	0.2	(½)	0.3	(1)
07-10	3	Gentle breeze	Large wavelets; crests begin to break; foam of glassy appearance; perhaps scattered white horses	0.6	(2)	1	(3)
11-16	4	Moderate breeze	Small waves, becoming longer; fairly frequent white horses	1	(3½)	1.5	(5)
17-21	5	Fresh breeze	Moderate waves, taking a more pronounced long form; many white horses are formed (chance of some spray)	2	(6)	2.5	(8½)
22-27	6	Strong breeze	Large waves begin to form; white foam crests are more extensive everywhere (probably some spray)	3	(9½)	4	(13)
28-33	7	Near gale	Sea heaps up and white foam from breaking waves begins to be blown in streaks along the direction of the wind	4	(13½)	5.5	(19)
34-40	8	Gale	Moderately high waves of greater length; edges of crests begin to break into the spindrift; the foam is blown in well-marked streaks along the direction of the wind	5.5	(18)	7.5	(25)
41-47	9	Strong gale	High waves; dense streaks of foam along the direction of the wind; crests of waves begin to topple, tumble and roll over; spray may affect visibility	7	(23)	10	(32)
48-55	10	Storm	Very high waves with long overhanging crests; the resulting foam, in great patches, is blown in dense white streaks along the direction of the wind; on the whole, the surface of the sea takes on a white appearance; tumbling of the sea becomes heavy and shock-like; visibility affected	9	(29)	12.5	(41)
58-63	11	Violent Storm	Exceptionally high waves (small and medium-sized ships might be for a time lost to view behind the waves); the sea is completely covered with long white patches of foam lying along the direction of the wind; everywhere the edges of the wave crests are blown into froth; visibility affected	11.5	(37)	16	(52)
64 and over	12	Hurricane	The air is filled with foam and spray; sea completely white with driving spray; visibility very seriously affected	14	(45)	–	XX

Note: For winds over 99 knots, add 50 to dd (direction) and enter the tens and units digits of the wind speed for ff; e.g. for a wind from 100° true at 125 knc.s, dd = 60, and ff = 25.

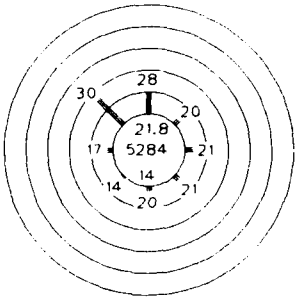
Nikol'skoe



Khatirka-In-Chukot



Ugol'naja



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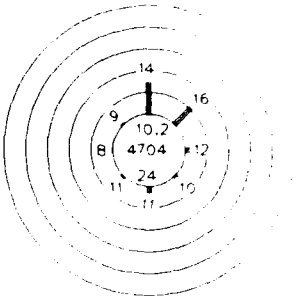
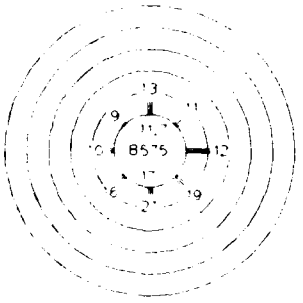


Norheast Cape



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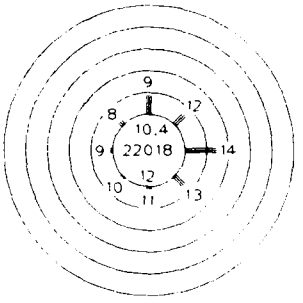

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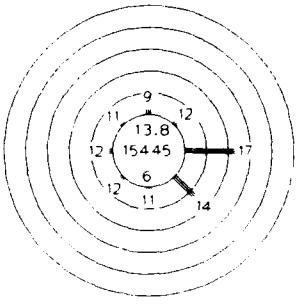
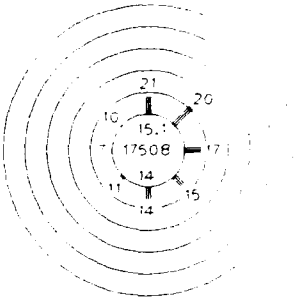


Cape Romanzof



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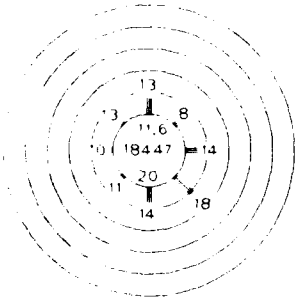

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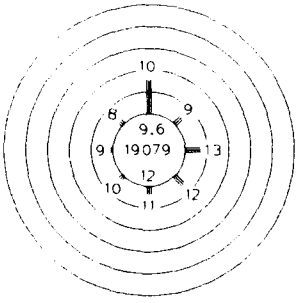

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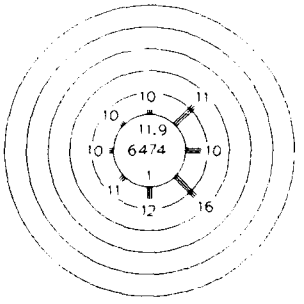

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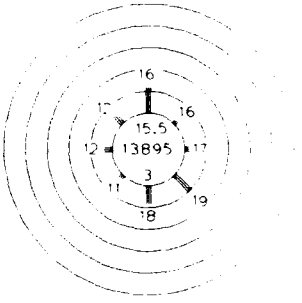

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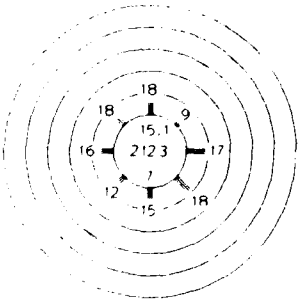

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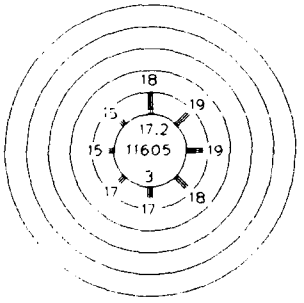

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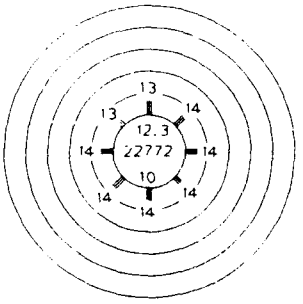

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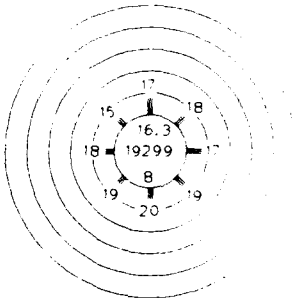
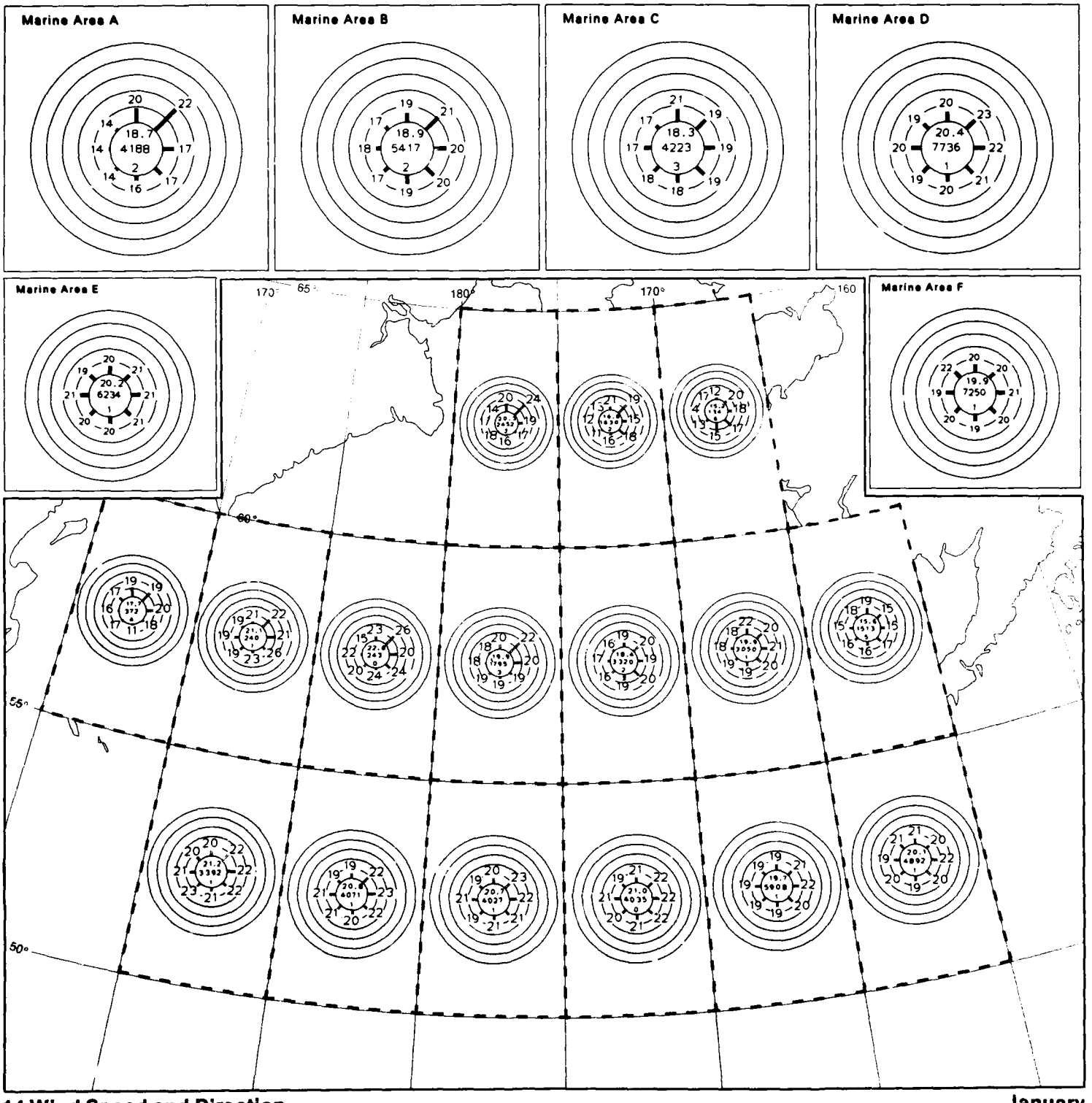
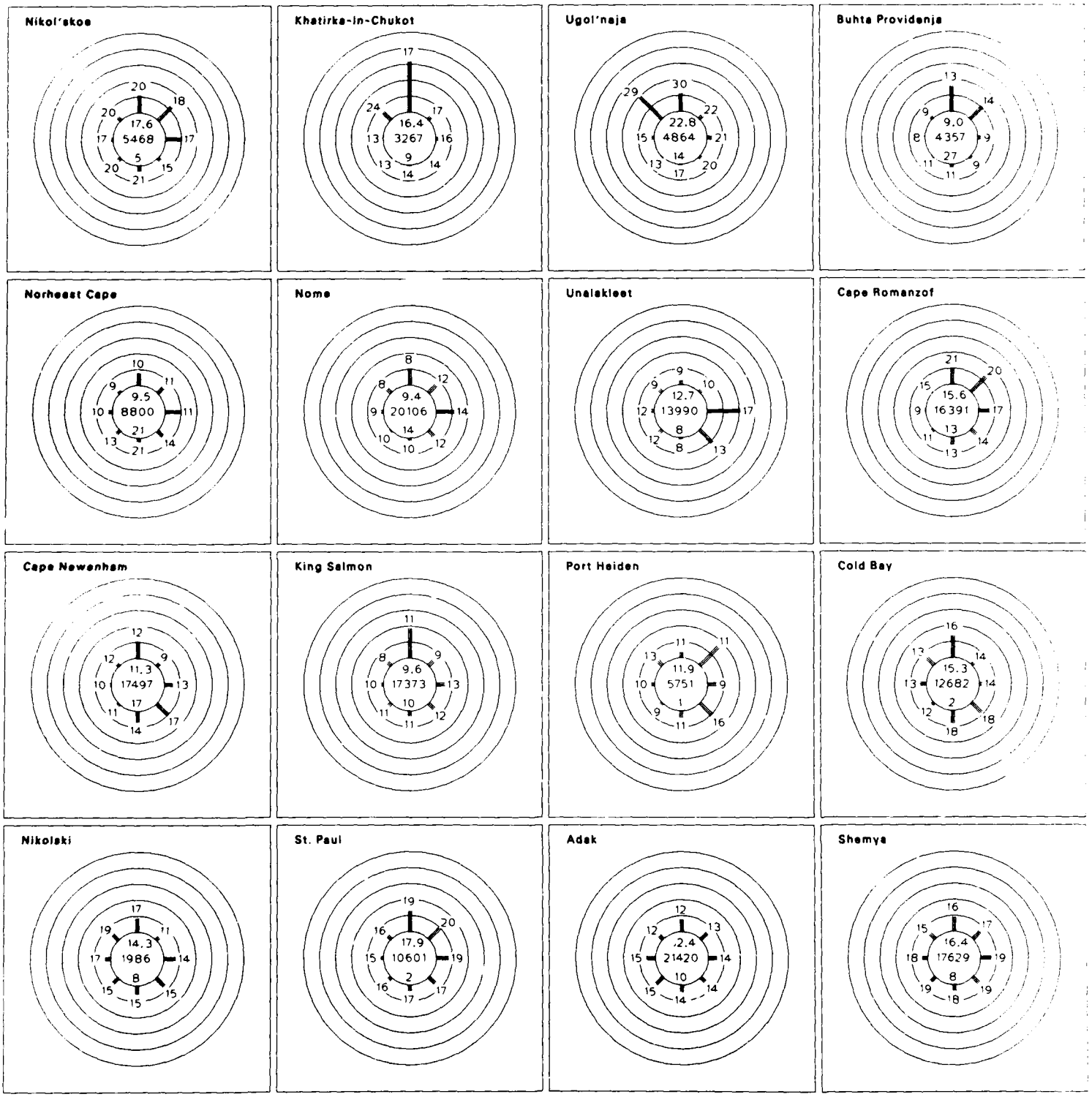




14 Wind Speed and Direction **January**


Nikol'skoe
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Khatirka-in-Chukot
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16.4
3267
Ugol'naja
30 22 21 20 17 14 13 15 29
22.8
4864
Buhta Providenja
13 14 9 9 27 11 11 8
9.0
4357
Norheast Cape
10 11 11 21 21 13 10 9
9.5
8800
Nome
8 12 14 14 10 10 9 8
9.4
20106
Unalakleet
9 10 17 8 13 12 12 9
12.7
13990
Cape Romanzof
21 20 17 13 14 13 11 9 15
15.6
16391
Cape Newenham
12 9 13 17 14 17 11 10 12
11.3
17497
King Salmon
11 9 13 11 12 11 10 8
9.6
17373
Port Heiden
11 11 9 1 16 9 13 10
11.9
5751
Cold Bay
16 14 14 2 18 18 13 13 12
15.3
12682
Nikolski
17 11 14 15 8 15 15 19 17
14.3
1986
St. Paul
19 20 19 2 17 17 16 15 16
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Shemya
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16.4
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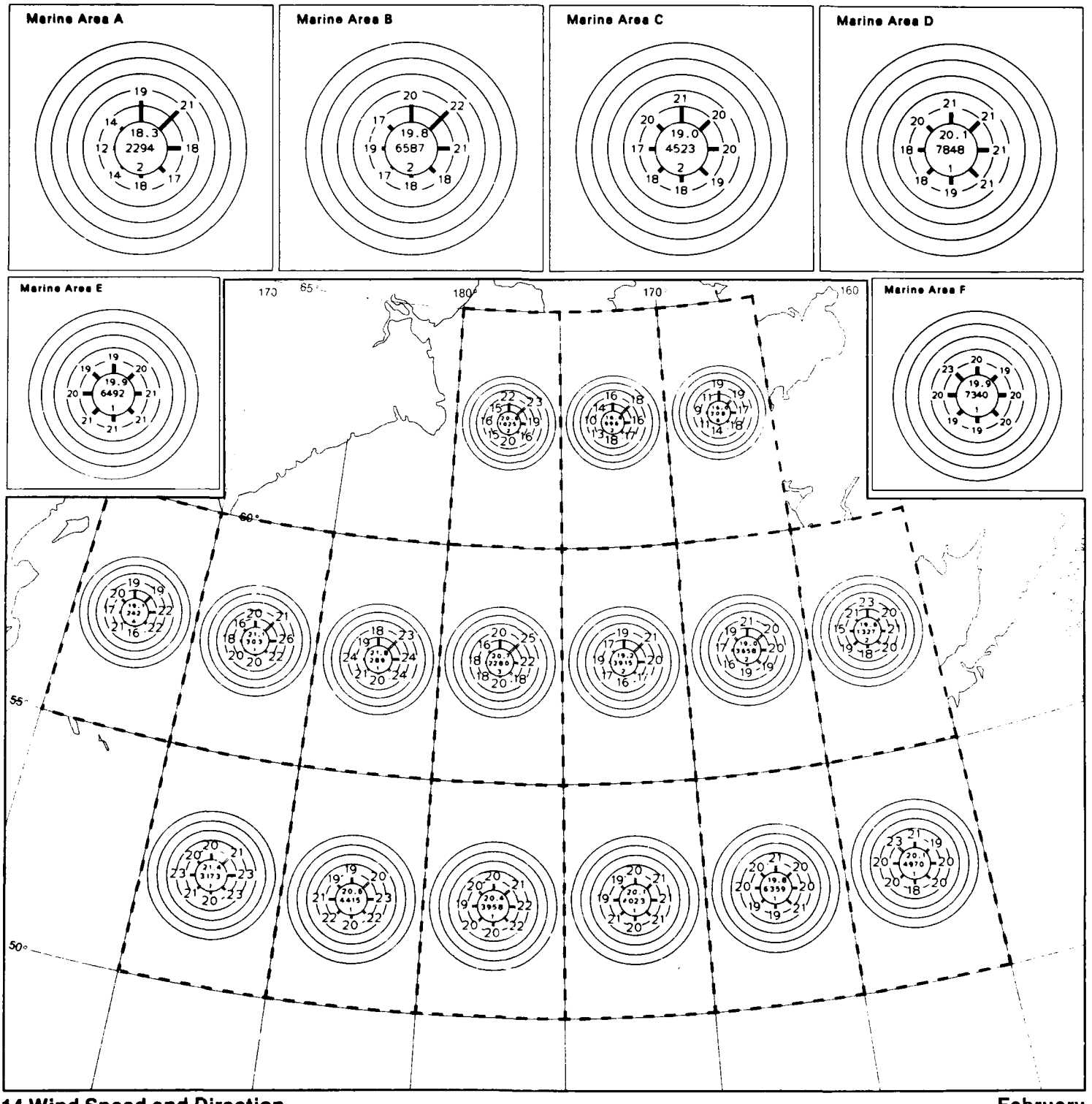
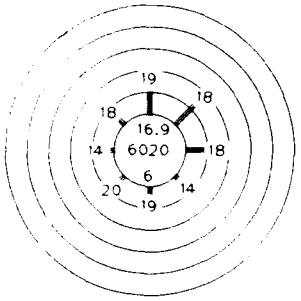
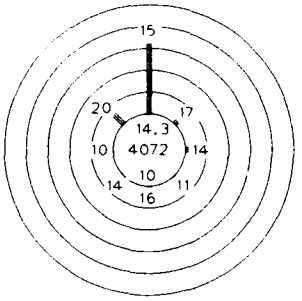


14 Wind Speed and Direction **February**

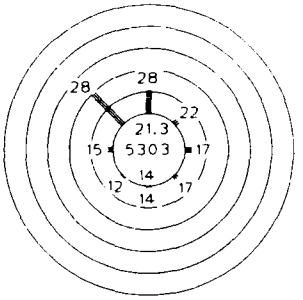
Nikol'skoe



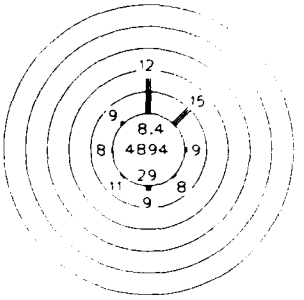
Khatirka-In-Chukot



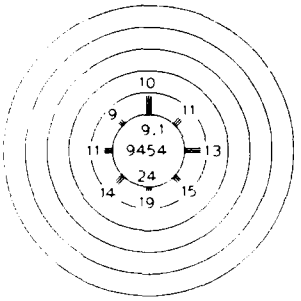
Ugol'naja



Buhta Providenja



Norheast Cape



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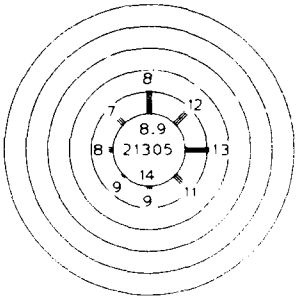
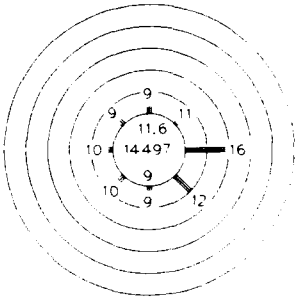
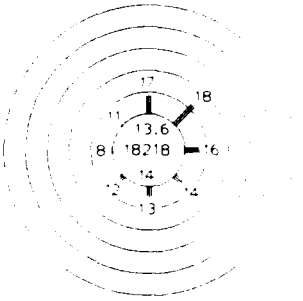


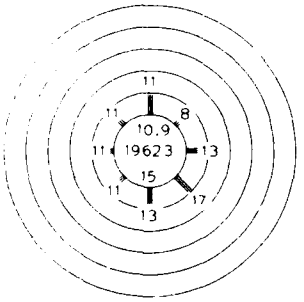
Unalakleet



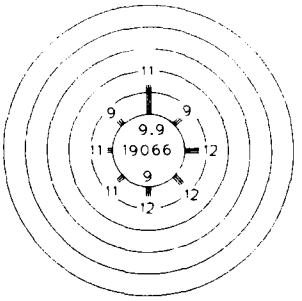
Cape Romanzof



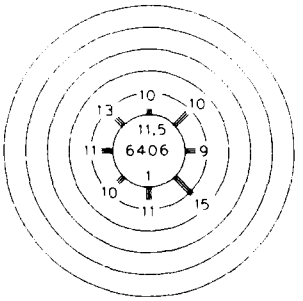
Cape Newenham



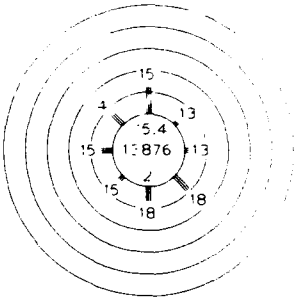
King Salmon



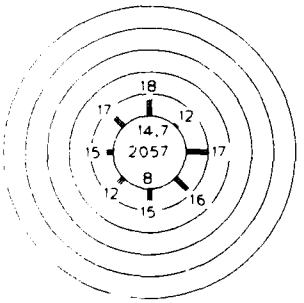
Port Heiden



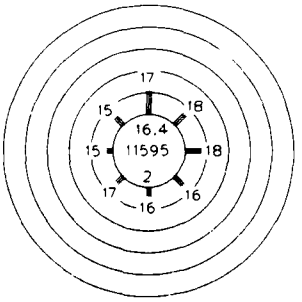
Cold Bay



Nikolski



St. Paul



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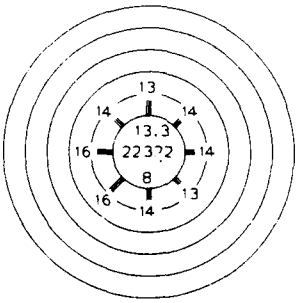
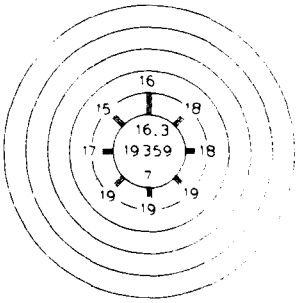
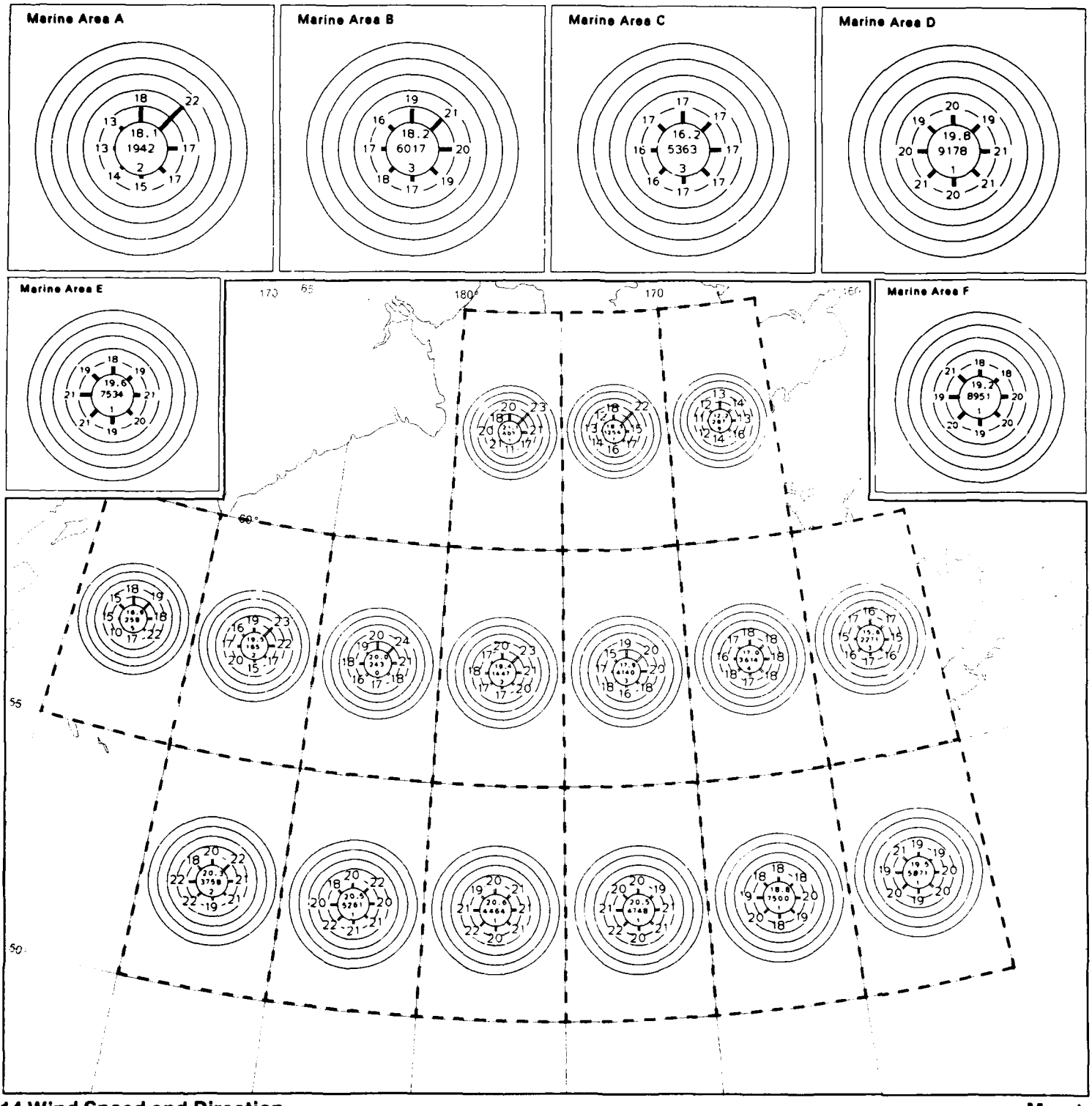


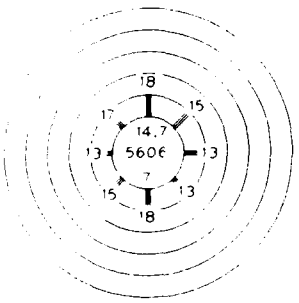
Shemya



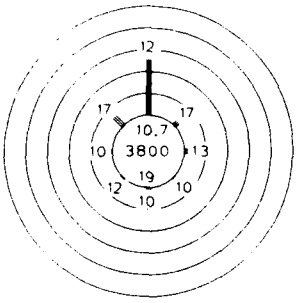


14 Wind Speed and Direction **March**

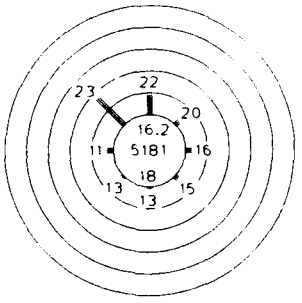
Nikol'skoe



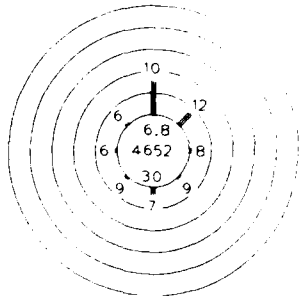
Khatirka-In-Chukot



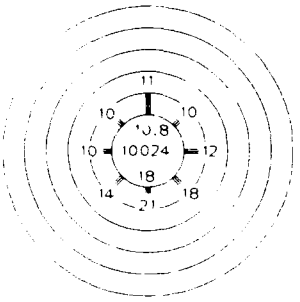
Ugol'naja



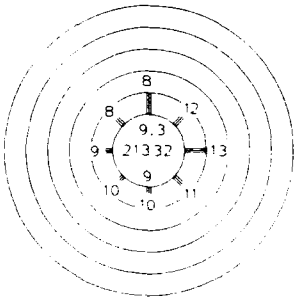
Buhta Providenja



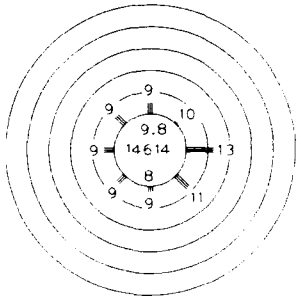
Norheast Cape



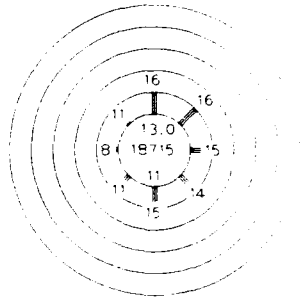
Nome



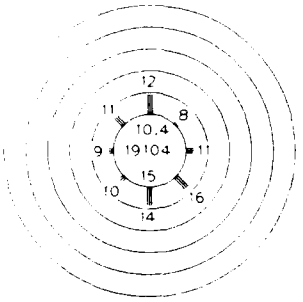
Unalakleet



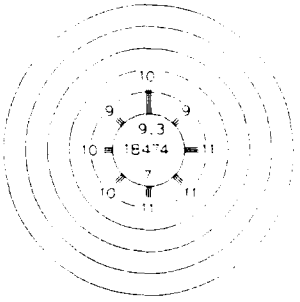
Cape Romanzof



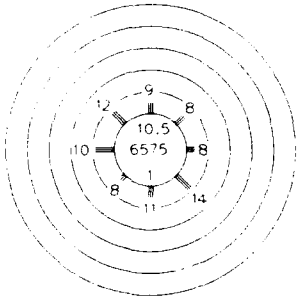
Cape Newenham



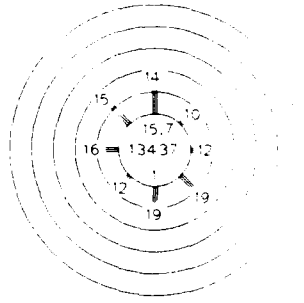
King Salmon



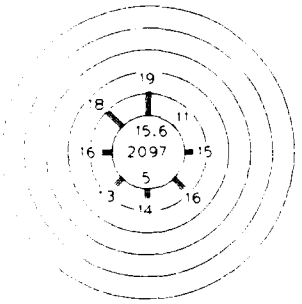
Port Heiden



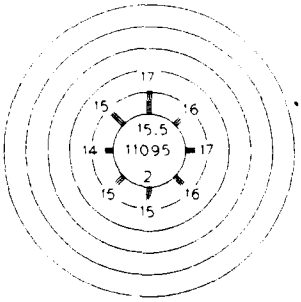
Cold Bay



Nikolski



St. Paul



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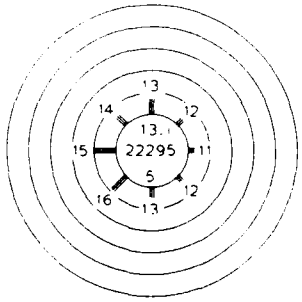
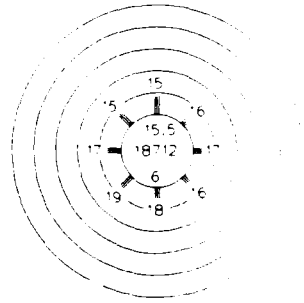
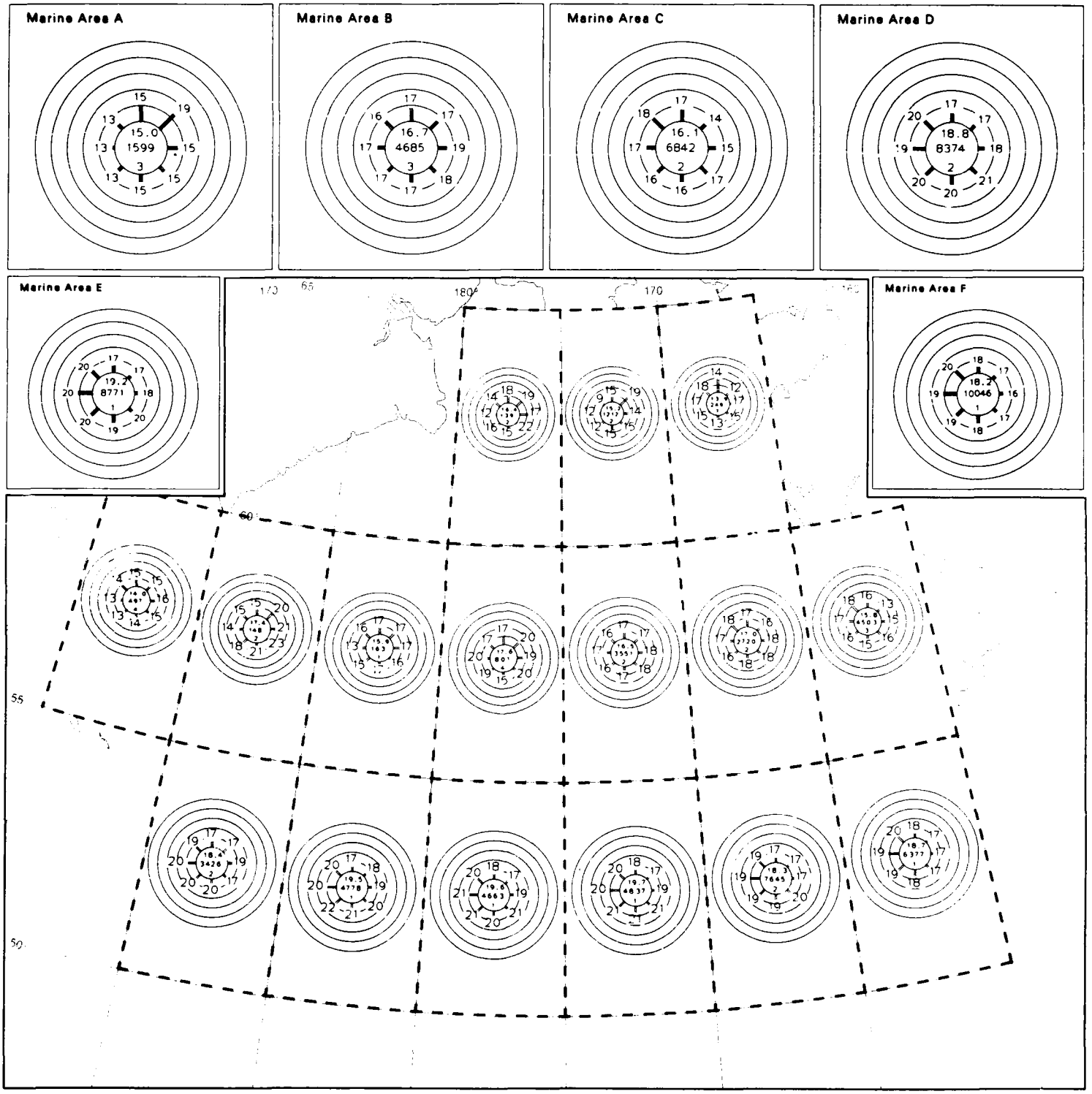


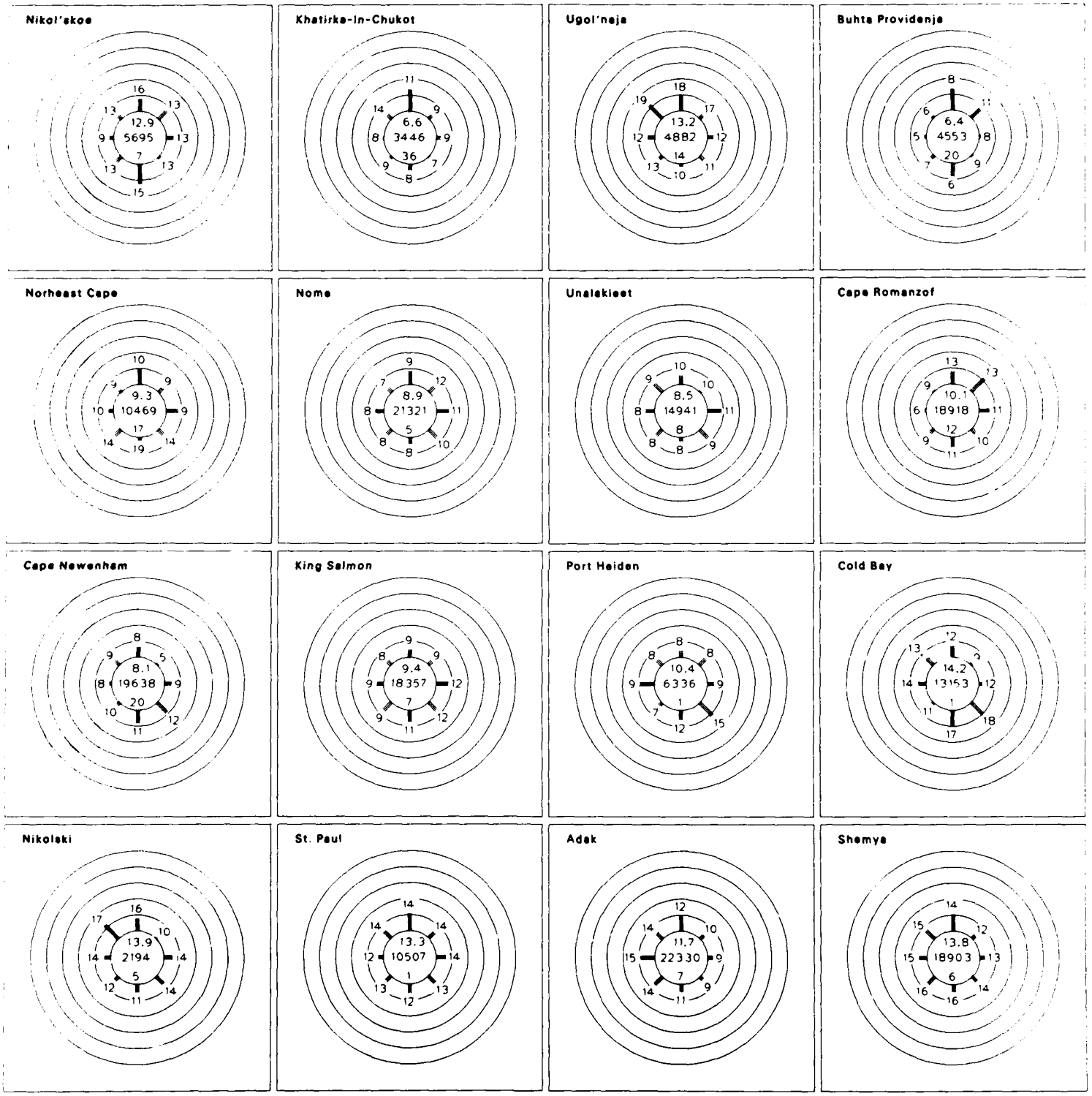
Shemya





14 Wind Speed and Direction

April


Nikol'skoe
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Ugol'naja
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Buhta Providenja
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Northeast Cape
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Cape Newenham
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King Salmon
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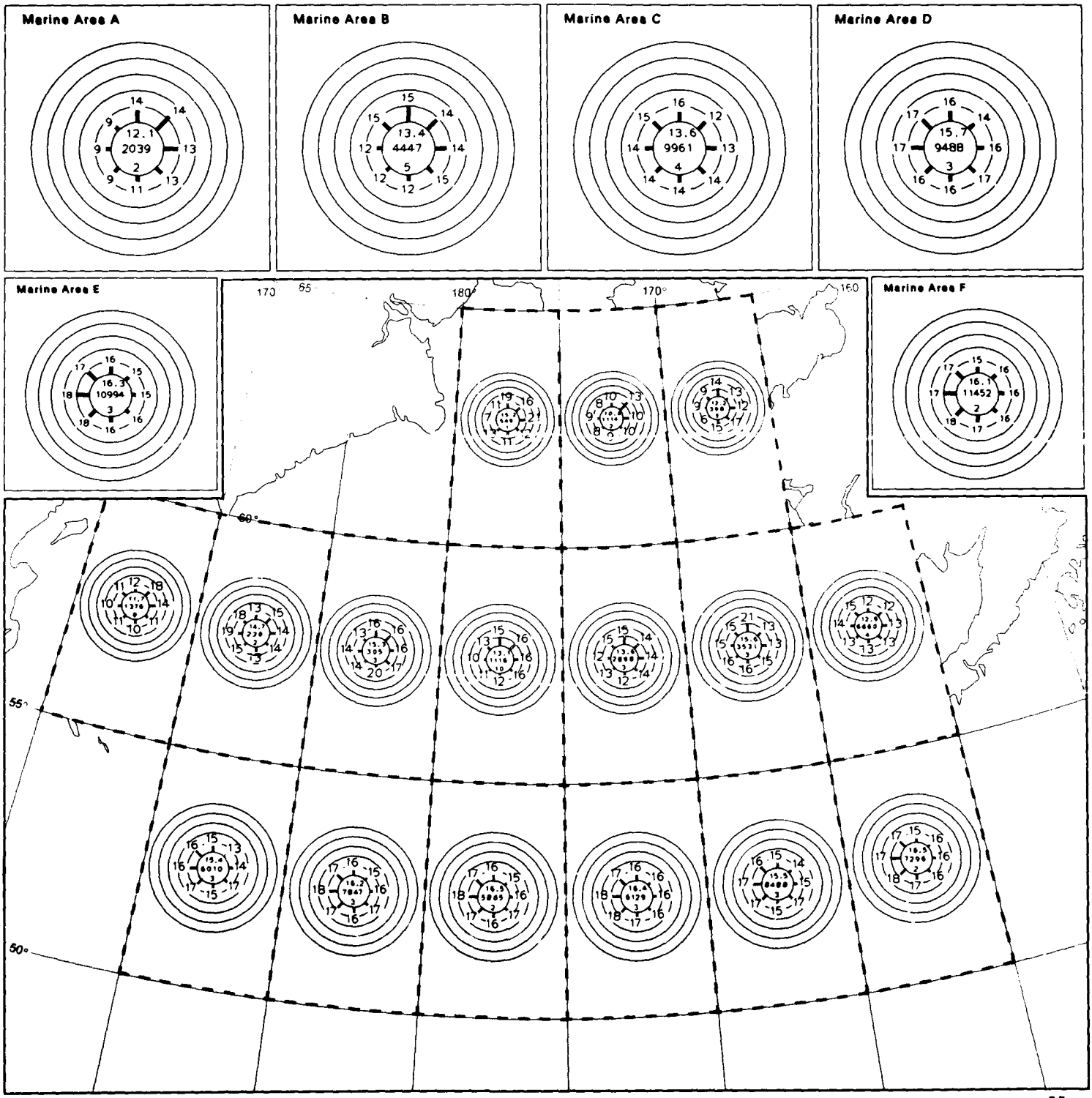
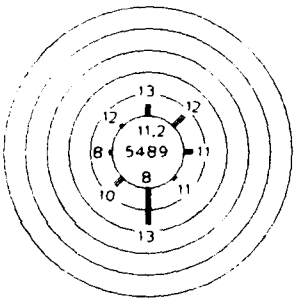


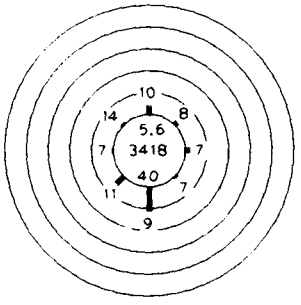
14 Wind Speed and Direction

May

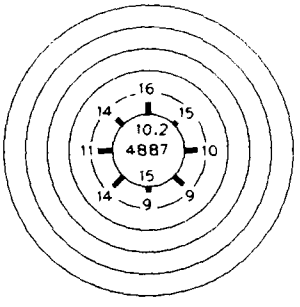
Nikol'skoe



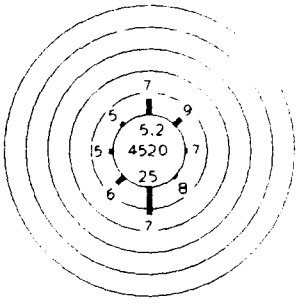
Khatirka-In-Chukot



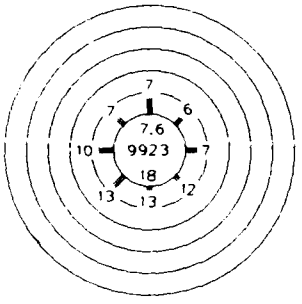
Ugol'naja



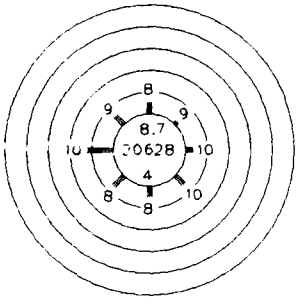
Buhta Providenja



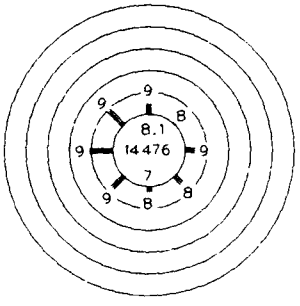
Norheast Cape



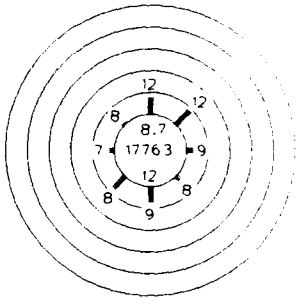
Nome



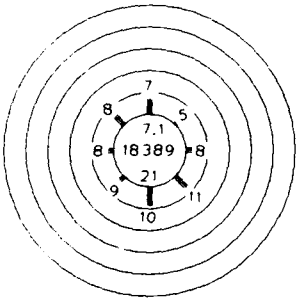
Unalakleet



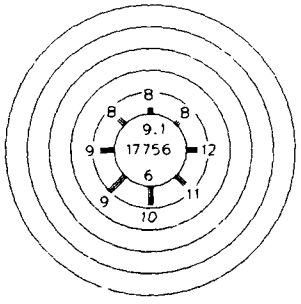
Cape Romanzof



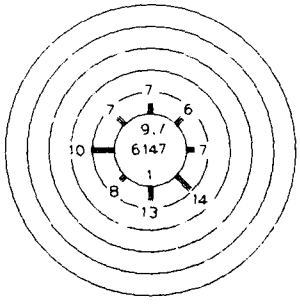
Cape Newenham



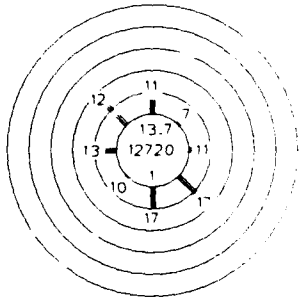
King Salmon



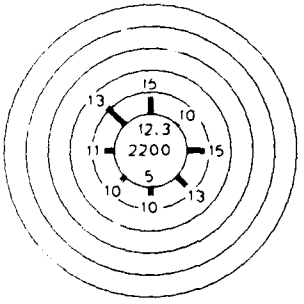
Port Heiden



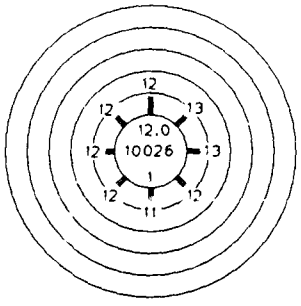
Cold Bay



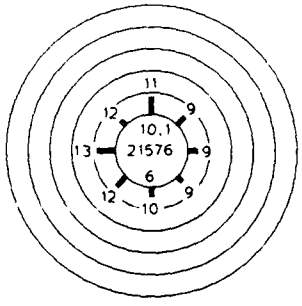
Nikolski



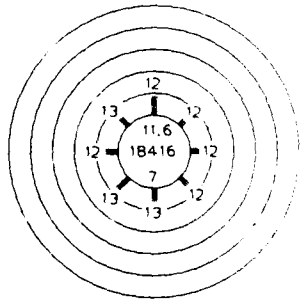
St. Paul

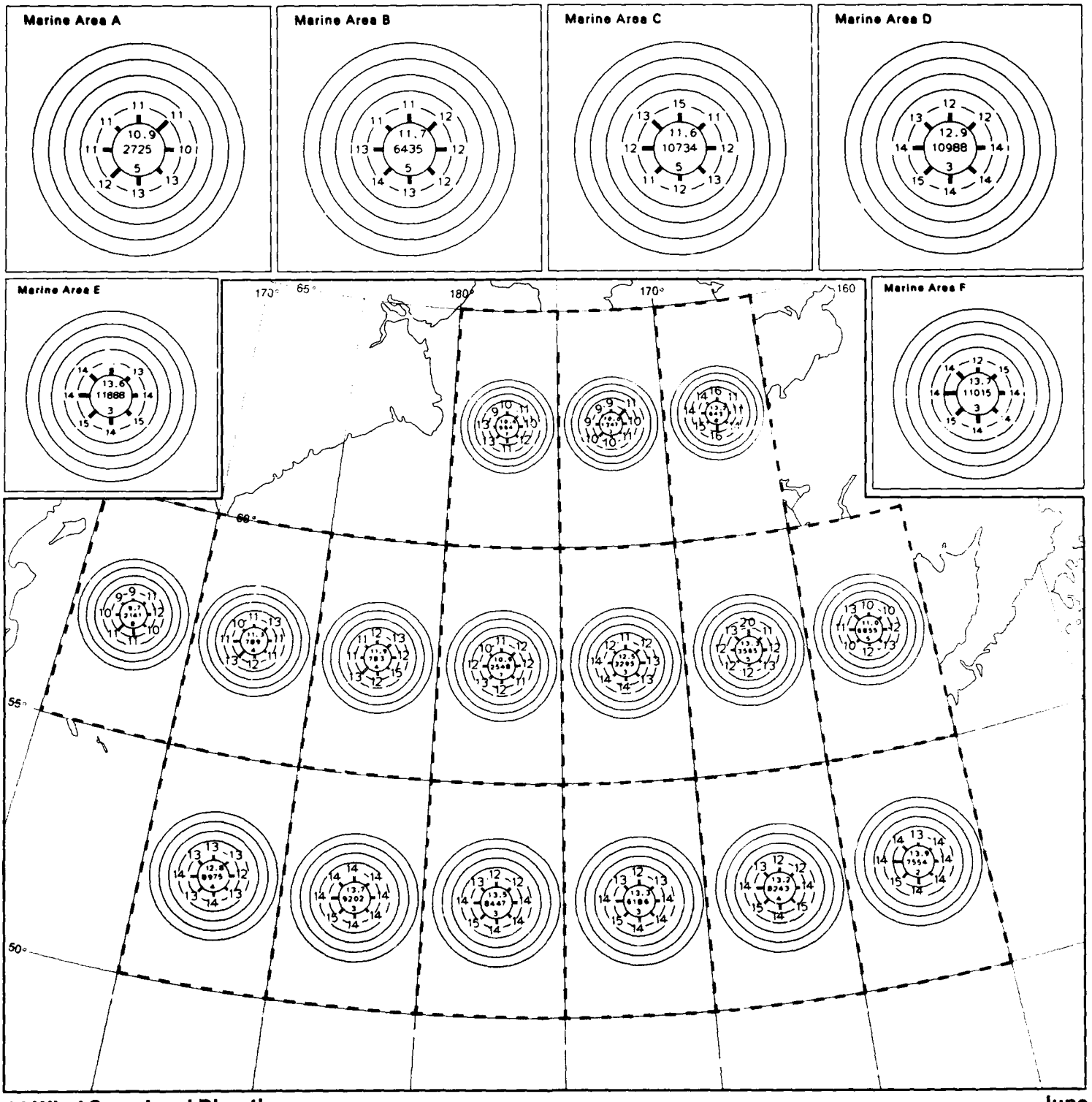


Adak

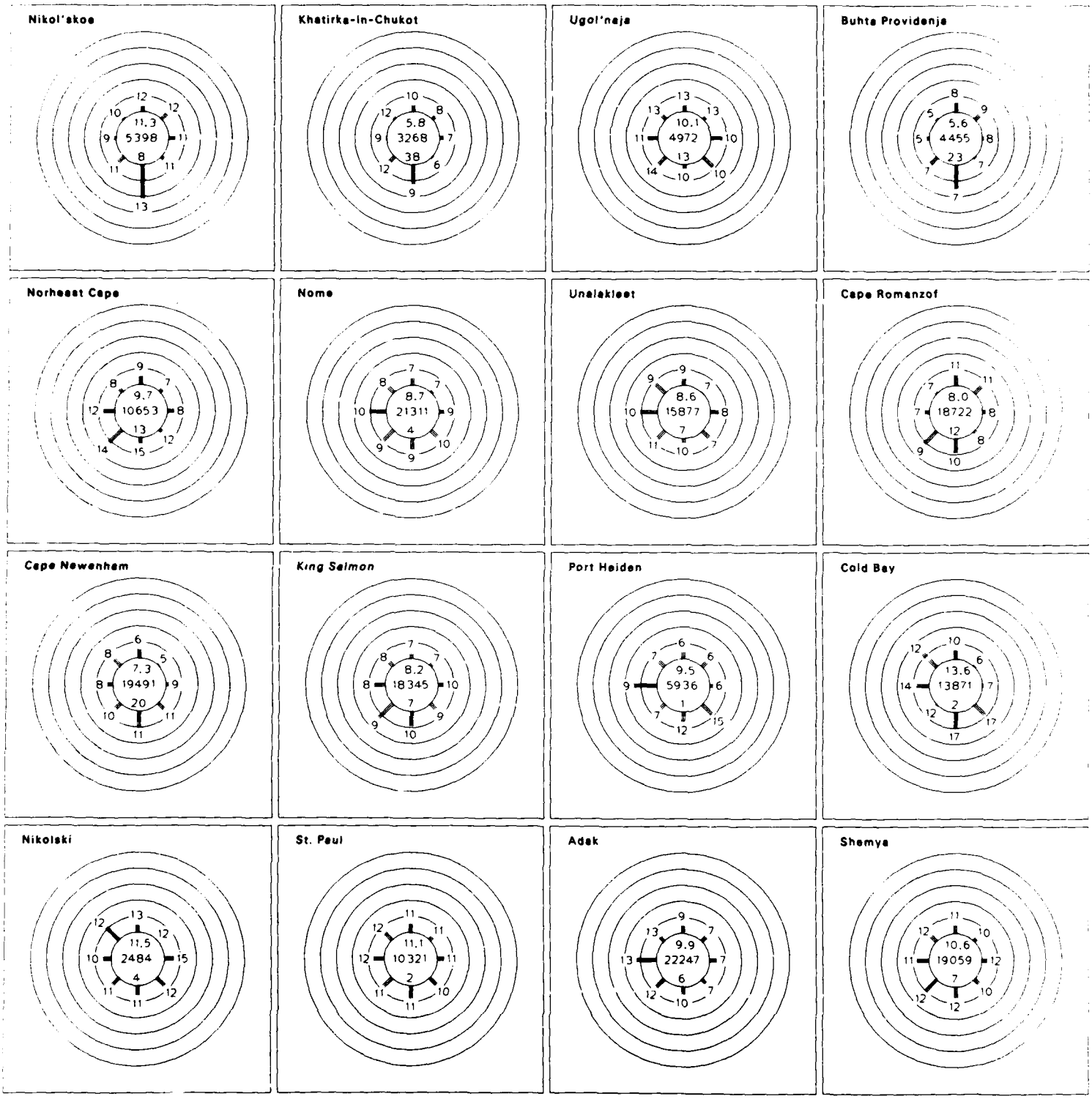


Shemya





14 Wind Speed and Direction **June**


Nikol'skoe
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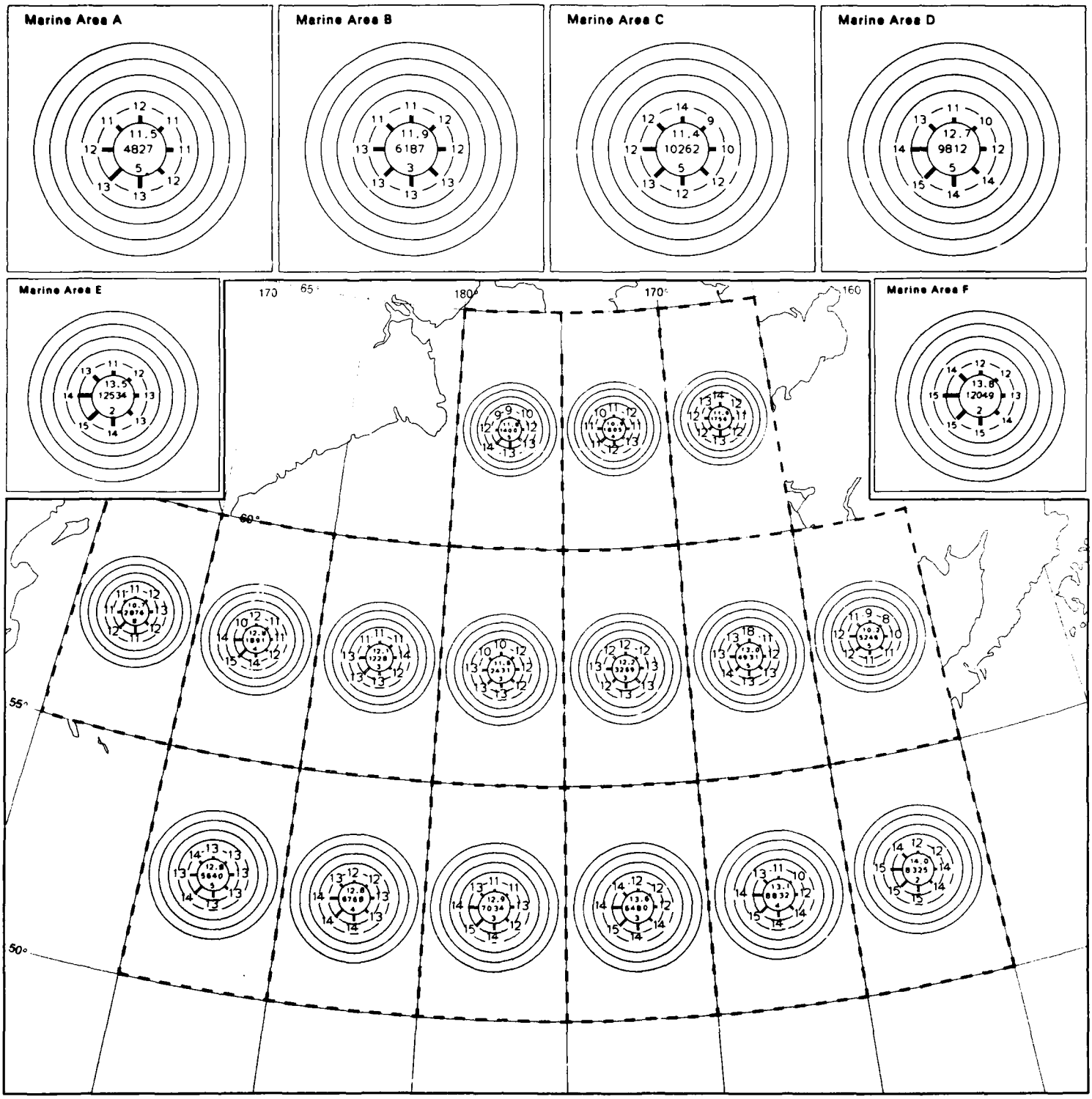
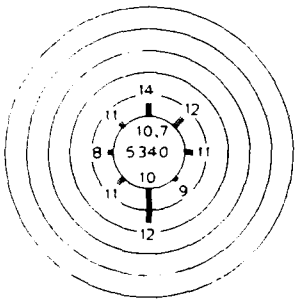
5398
Khatirka-In-Chukot
5.8
3268
38
Ugol'naja
10.1
4972
Buhta Providenja
5.6
4455
23
Northeast Cape
9.7
10653
Nome
8.7
21311
Unalakleet
8.6
15877
Cape Romanzof
8.0
18722
Cape Newenham
7.3
19491
20
King Salmon
8.2
18345
Port Heiden
9.5
5936
Cold Bay
13.6
13871
Nikolski
11.5
2484
St. Paul
11.1
10321
Adak
9.9
22247
Shemya
10.6
19059

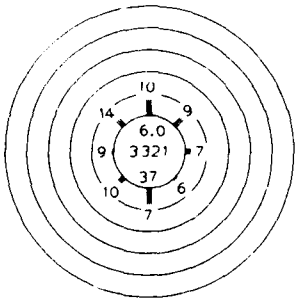


14 Wind Speed and Direction **July**

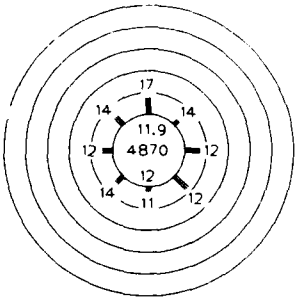
Nikol'skoe



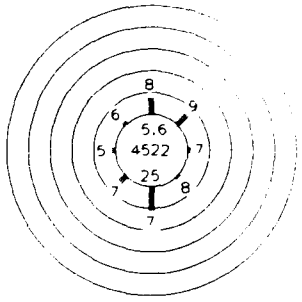
Khatirka-In-Chukot



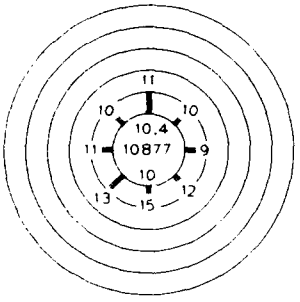
Ugol'naja



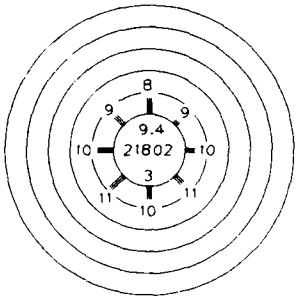
Buhta Providenja



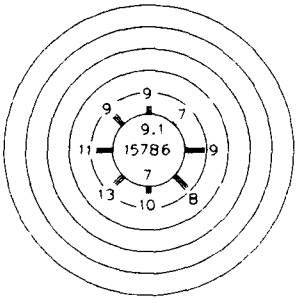
Norheast Cape



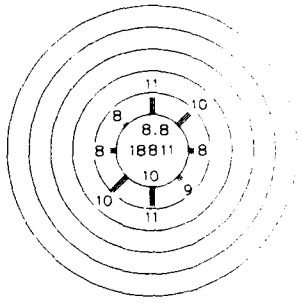
Nome



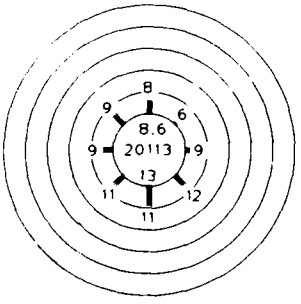
Unalakleet



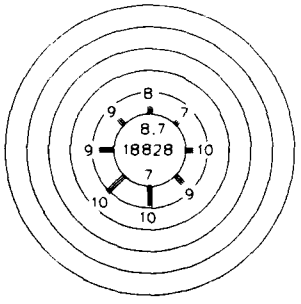
Cape Romanzof



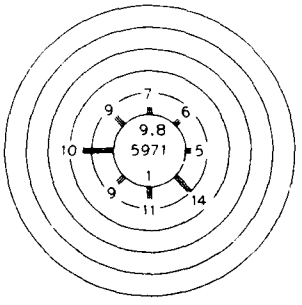
Cape Newenham



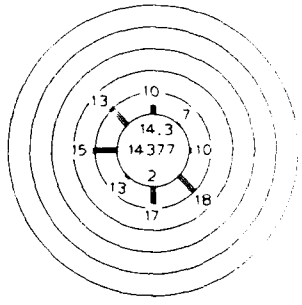
King Salmon



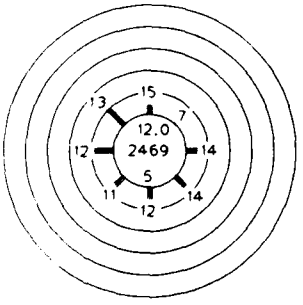
Port Heiden



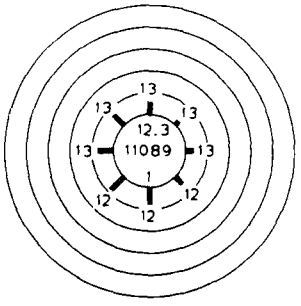
Cold Bay



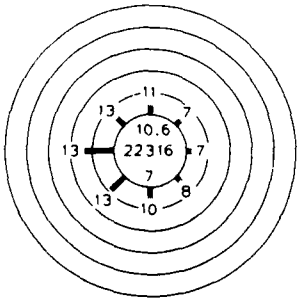
Nikolski



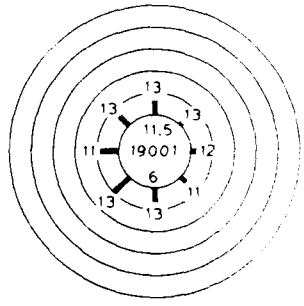
St. Paul

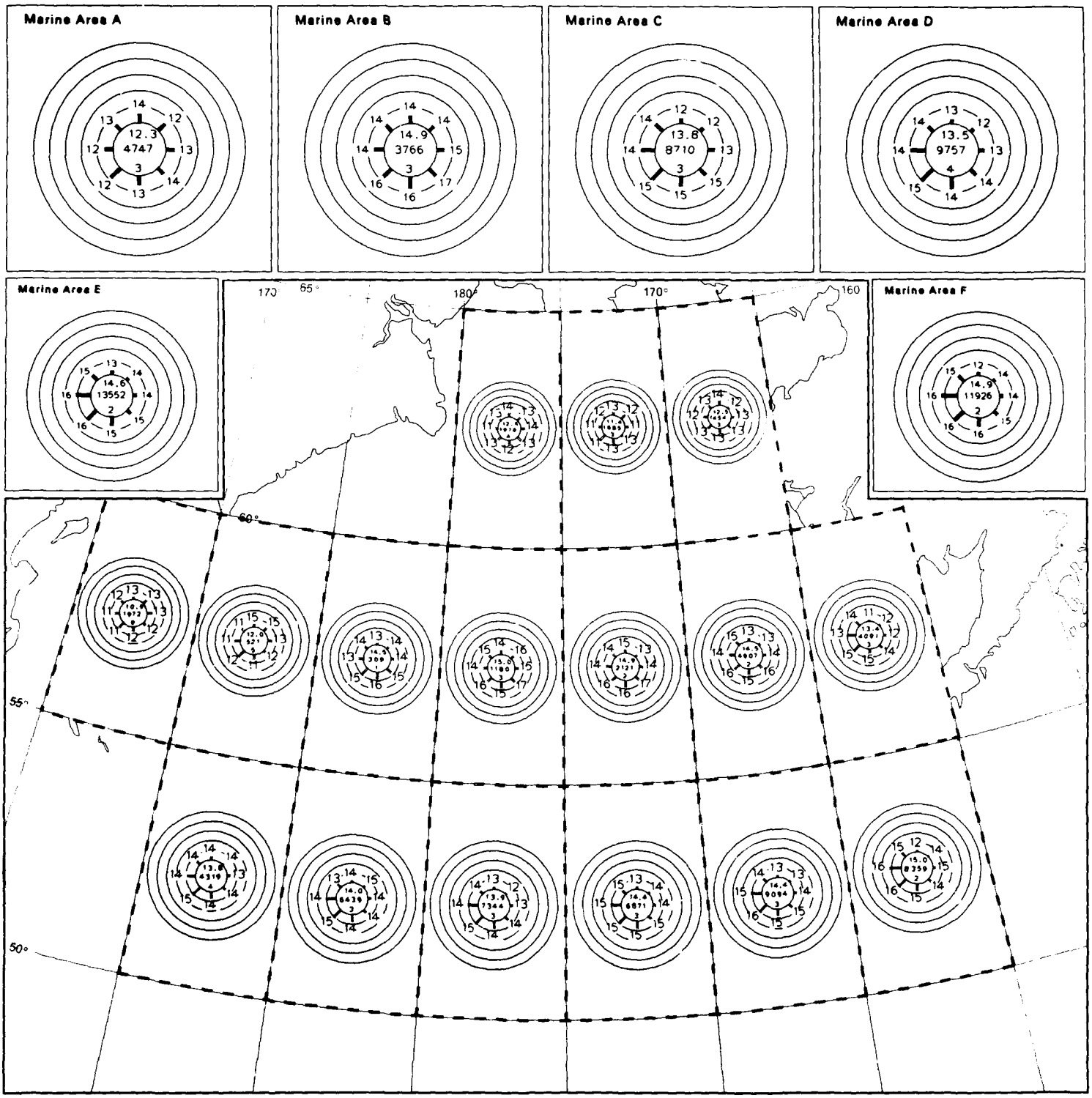


Adak



Shemya

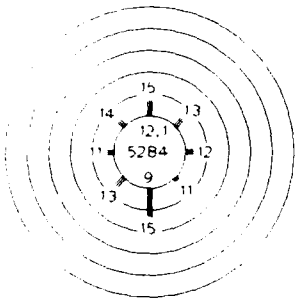




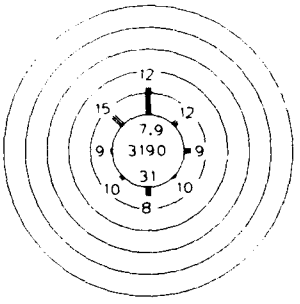
14 Wind Speed and Direction

August

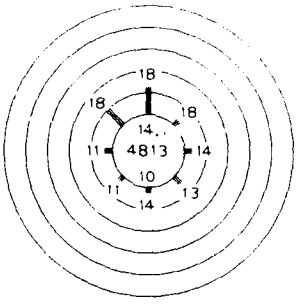
Nikol'skoe



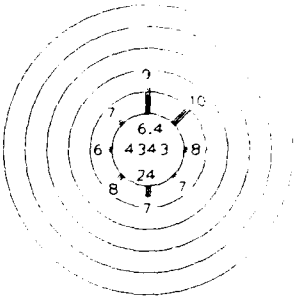
Khatirka-In-Chukot



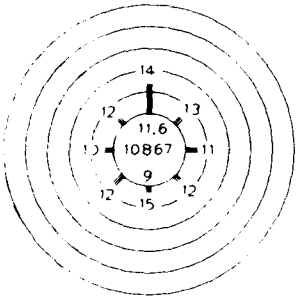
Ugol'naja



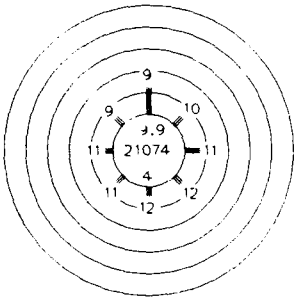
Buhta Providenja



Norheast Cape



Nome



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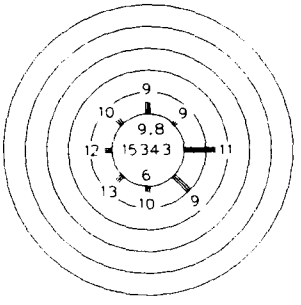
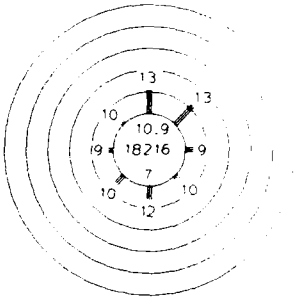
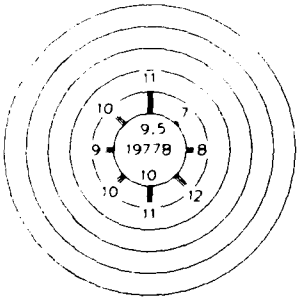


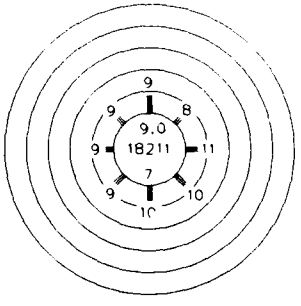
Cape Romanzof



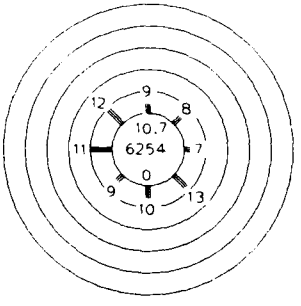
Cape Newenham



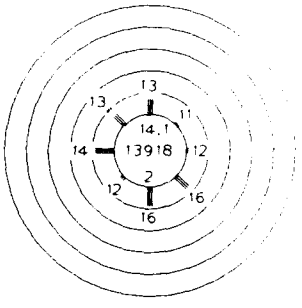
King Salmon



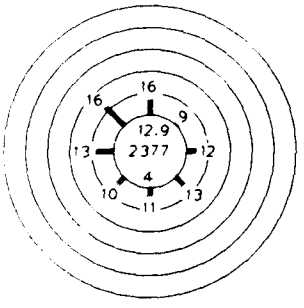
Port Heiden



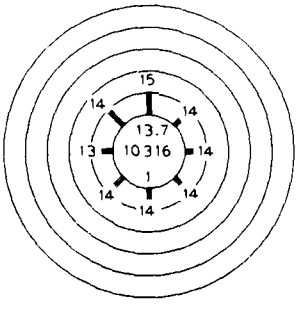
Cold Bay



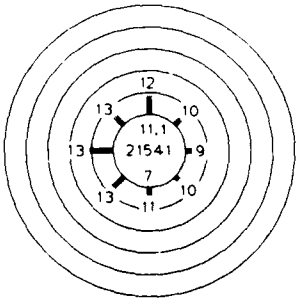
Nikolski



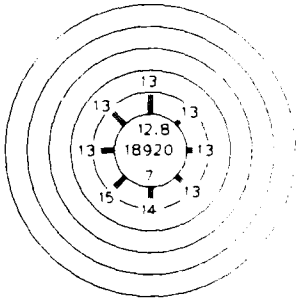
St. Paul

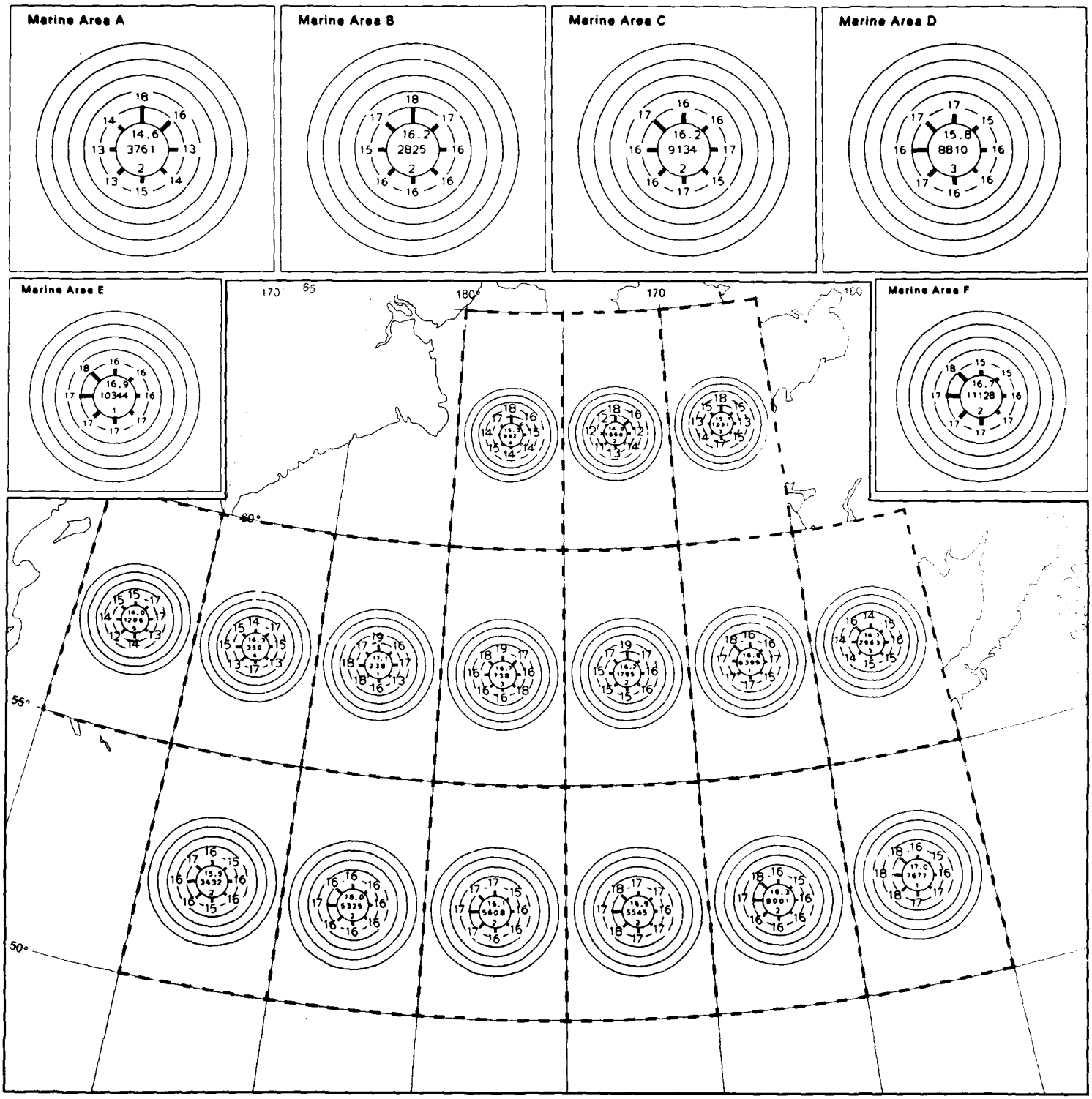


Adak



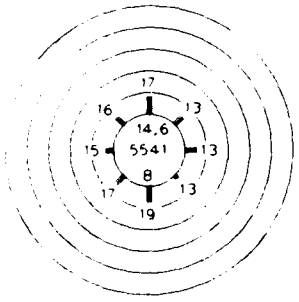
Shemya



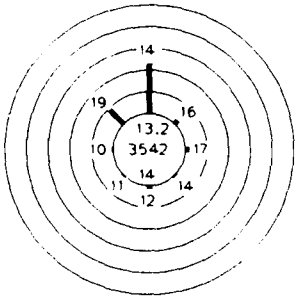


14 Wind Speed and Direction **September**

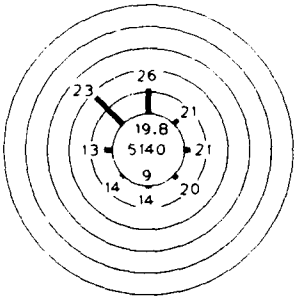
Nikol'skoe



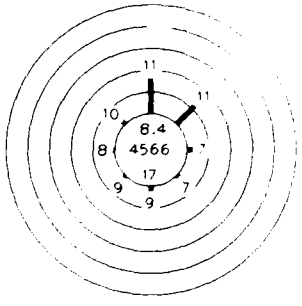
Khatirka-In-Chukot



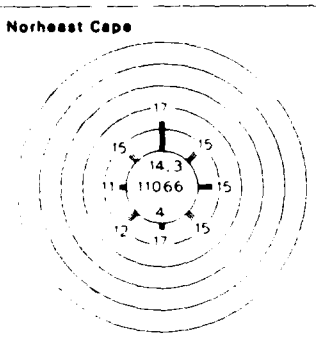
Ugol'naja



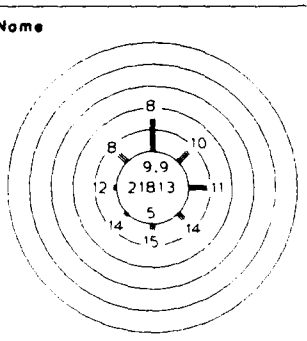
Buhte Providenja



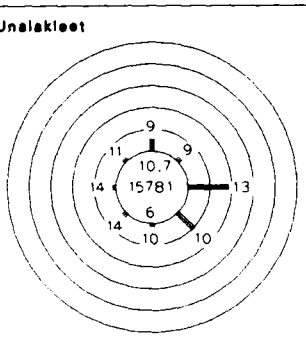
Northeast Cape



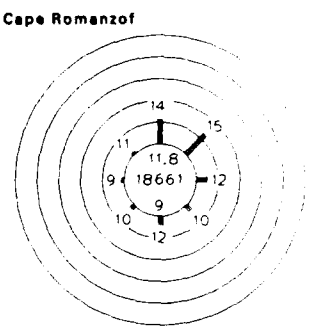
Nome



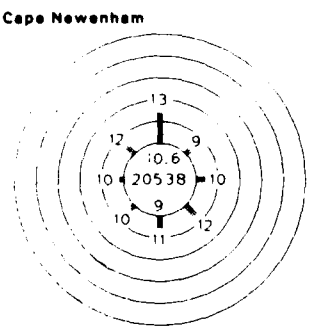
Unalakleet



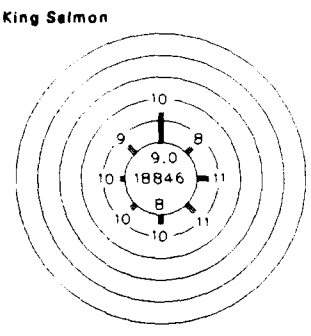
Cape Romanzof



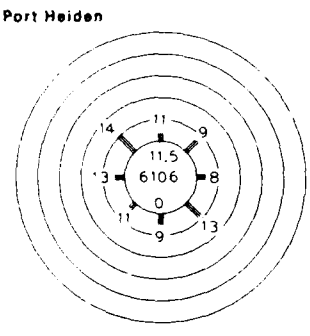
Cape Newenham



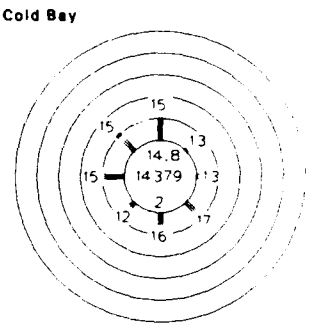
King Salmon



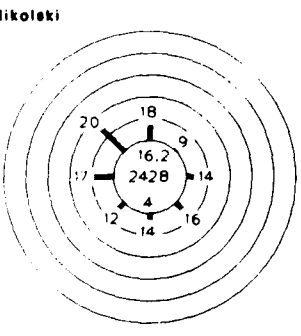
Port Heiden



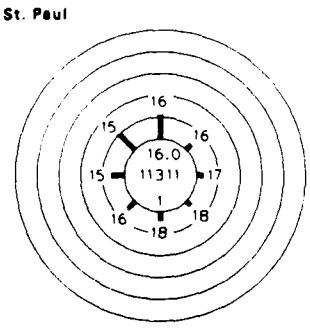
Cold Bay



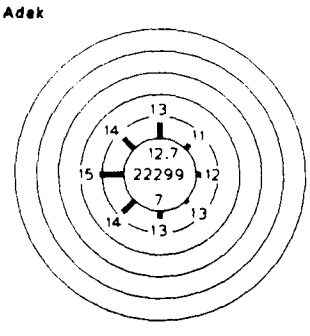
Nikolski



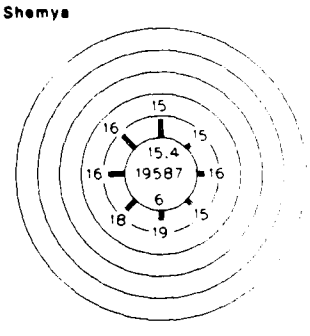
St. Paul

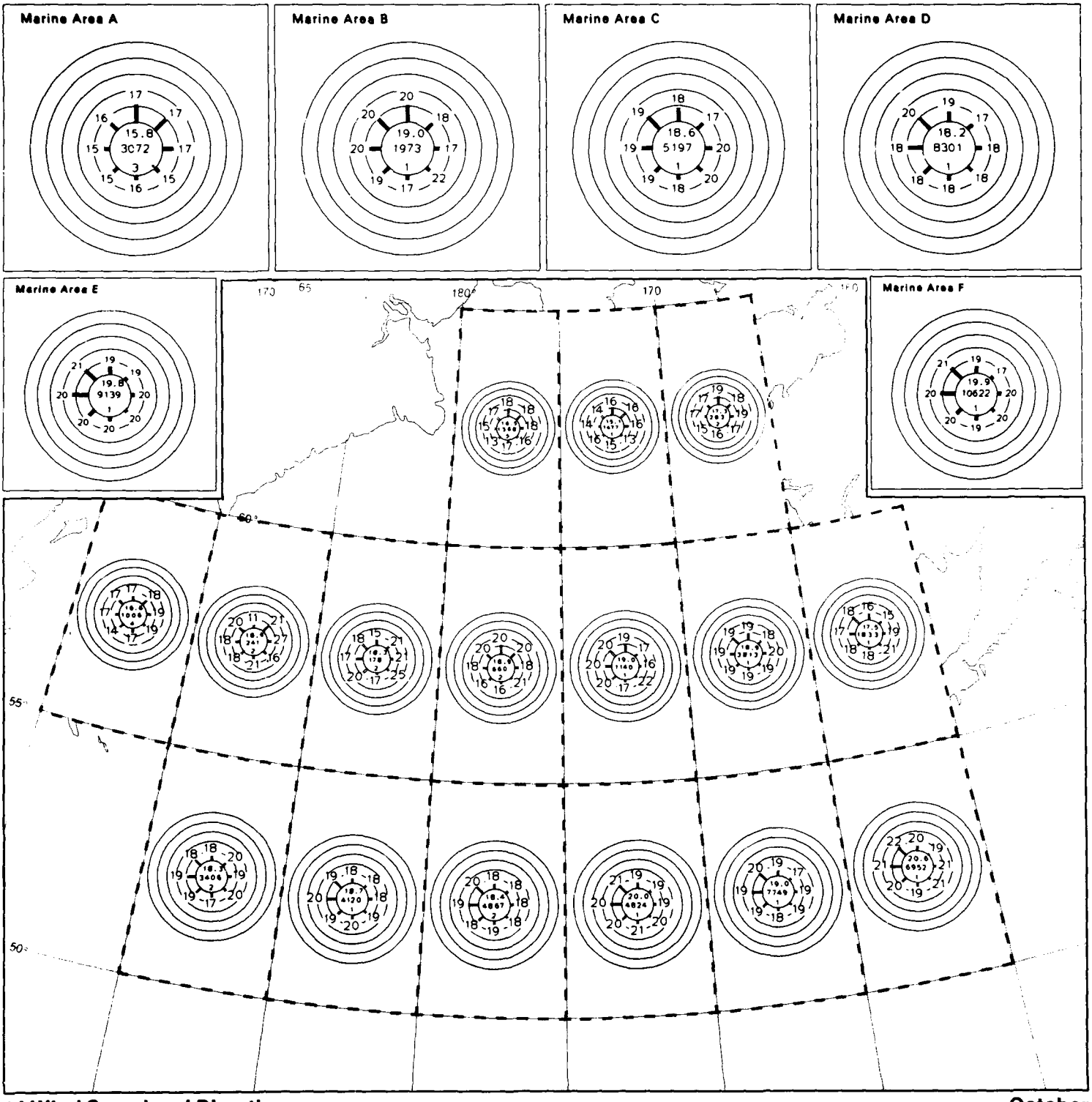


Adak

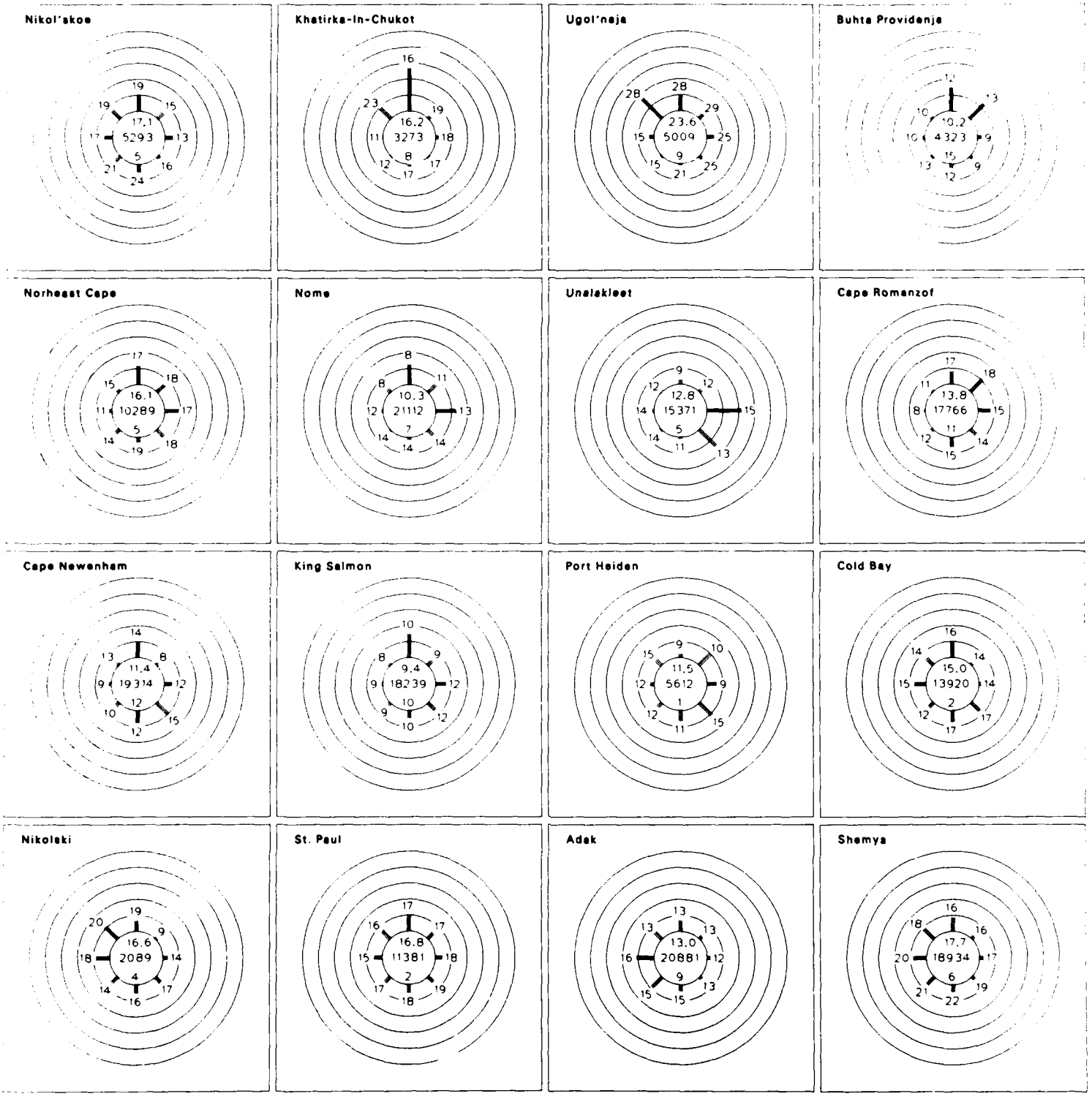


Shemya





14 Wind Speed and Direction **October**


Nikol'skoe
19
19
15
17.1
17
5293
13
5
21
16
24
Khatirka-In-Chukot
16
23
19
16.2
11
3273
18
8
12
17
17
Ugol'naja
28
28
29
23.6
15
5009
25
9
15
25
21
Buhta Providenja
12
13
10
10.2
10
4323
9
15
13
9
12
Norheast Cape
17
18
15
16.1
11
10289
17
5
14
18
19
Nome
8
8
11
10.3
12
21112
13
7
14
14
14
Unalakleet
9
12
12
12.8
14
15371
15
5
14
11
13
Cape Romanzof
17
18
11
13.8
8
17766
15
11
12
14
15
Cape Newenham
14
13
8
11.4
9
19314
12
12
10
15
12
King Salmon
10
8
9
9.4
9
18239
12
10
9
12
10
Port Heiden
9
10
15
11.5
12
5612
9
1
12
15
11
Cold Bay
16
14
14
15.0
15
13920
14
2
12
17
17
Nikolski
19
20
9
16.6
18
2089
14
4
14
17
16
St. Paul
17
16
17
16.8
15
11381
18
2
17
19
18
Adak
13
13
13
13.0
16
20881
12
9
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13
15
Shemya
16
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16
17.7
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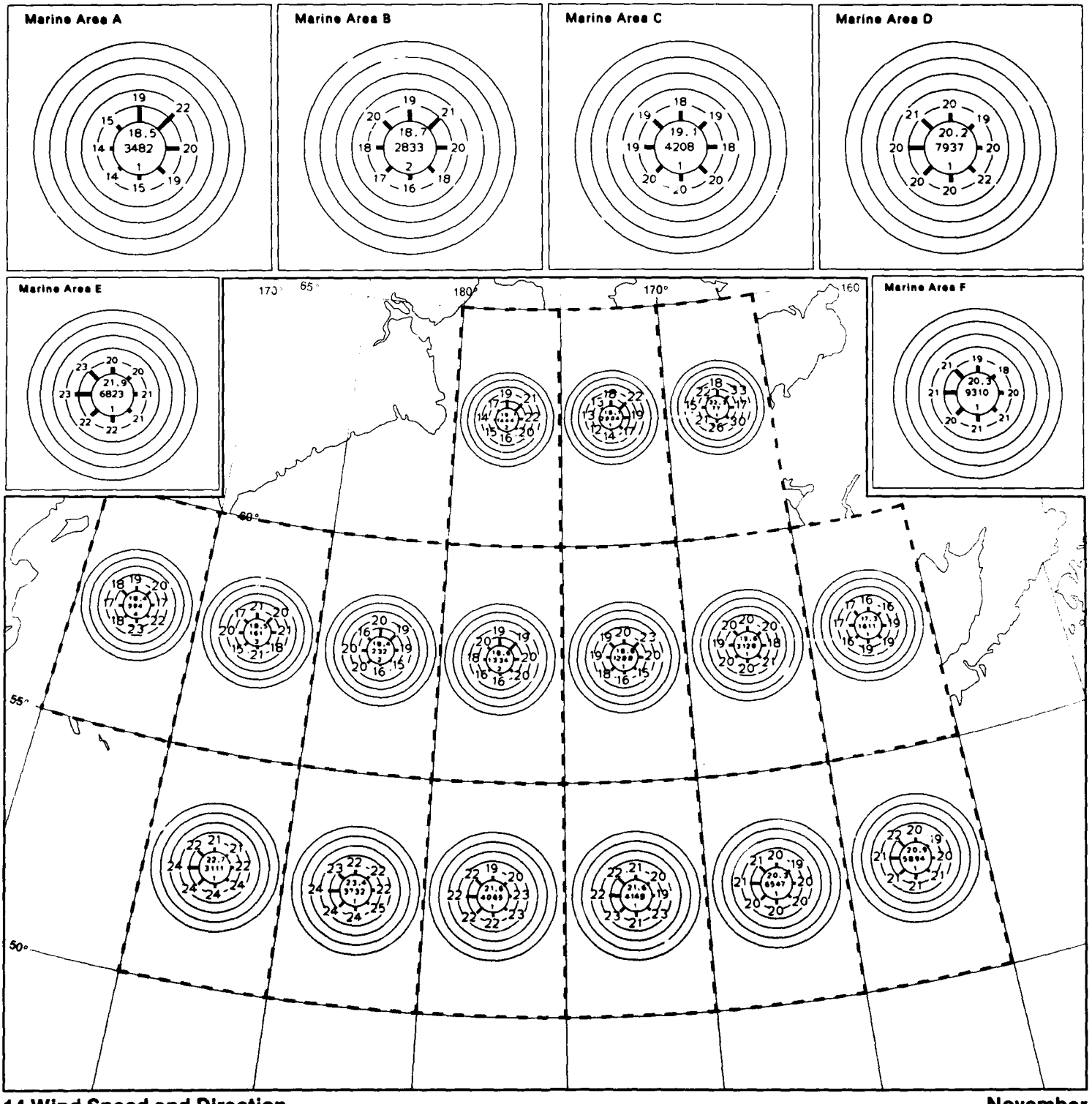
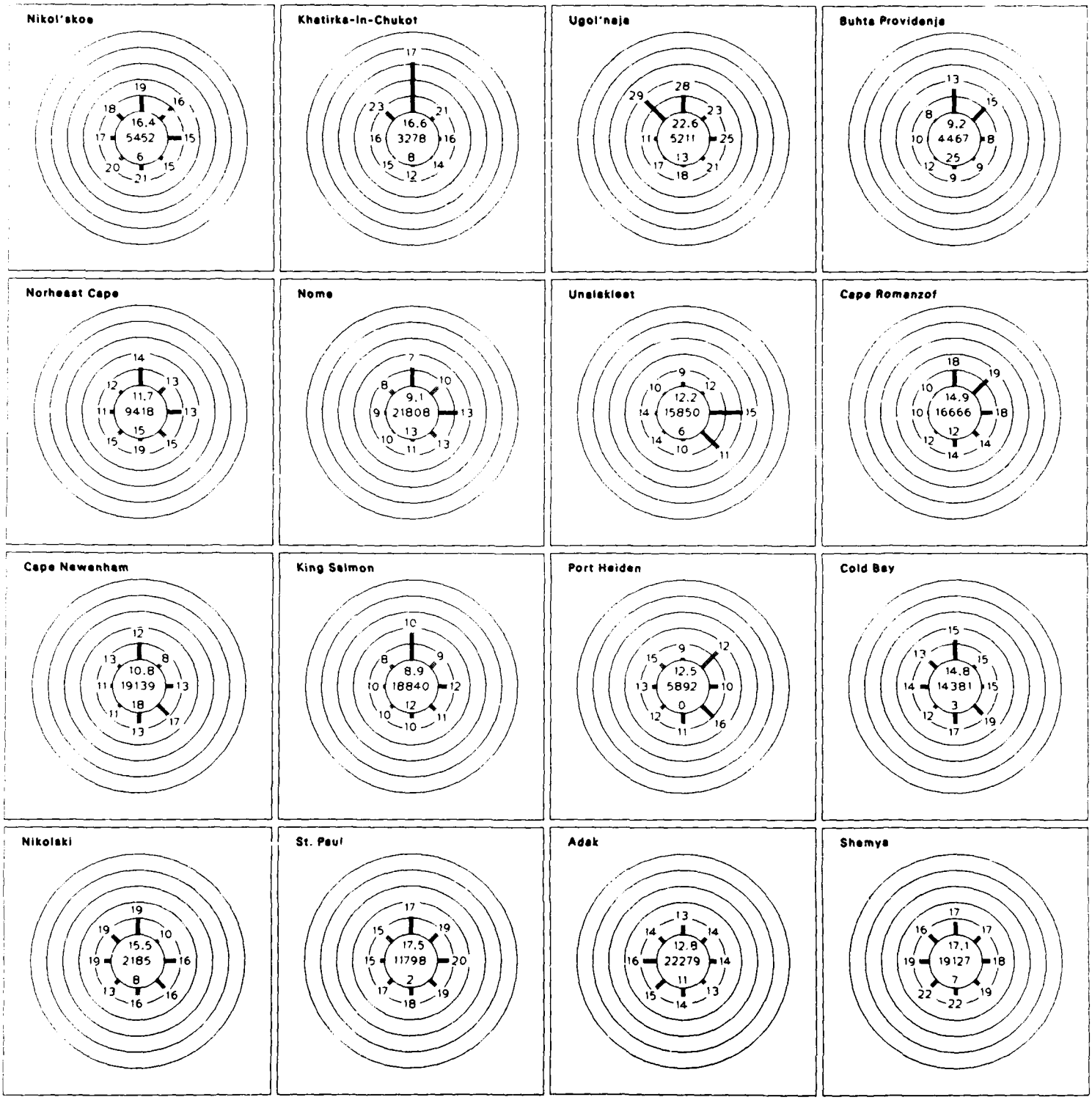
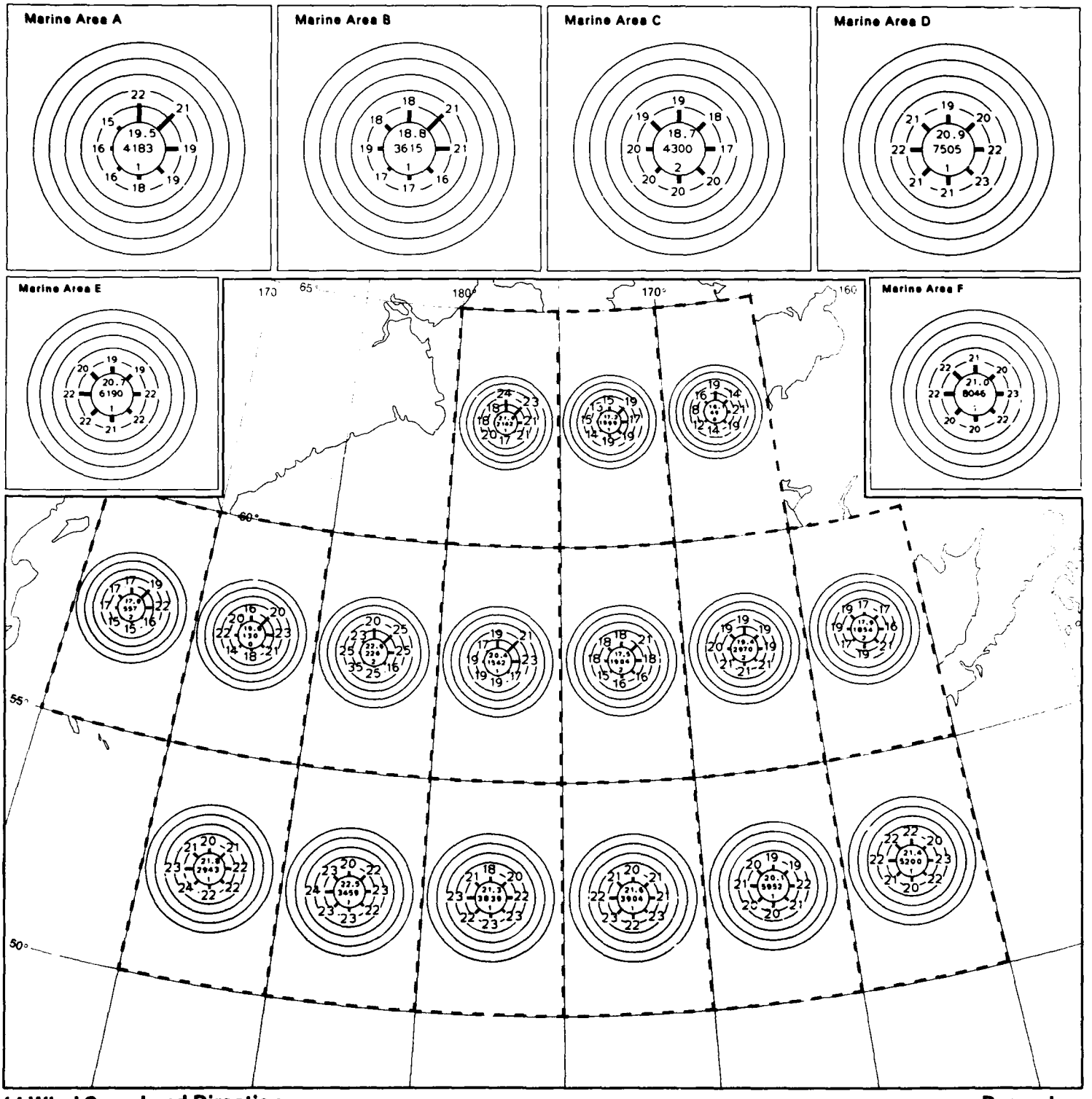
18934
17
6
21
19
22



14 Wind Speed and Direction **November**



December **14 Wind Speed and Direction**



14 Wind Speed and Direction **December**

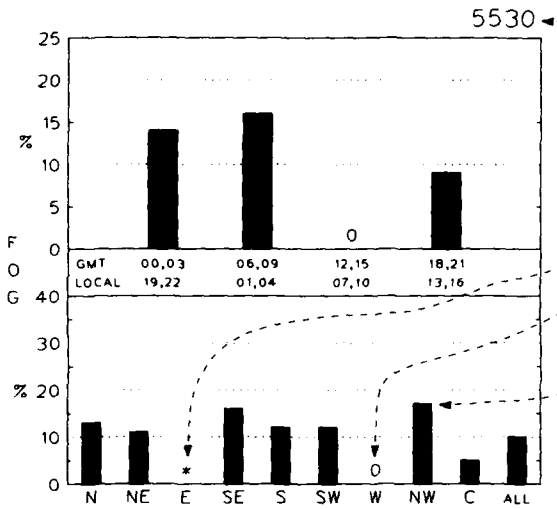
Map 15. Fog and poor visibility

BLACK LINE – Percent frequency of visibility <1/2 nautical mile.

BLUE LINE – Percent frequency of fog occurring without precipitation.

Albers Equal–Area Conic Projection

Graphs: Fog/time and fog/wind direction



Number of observations.

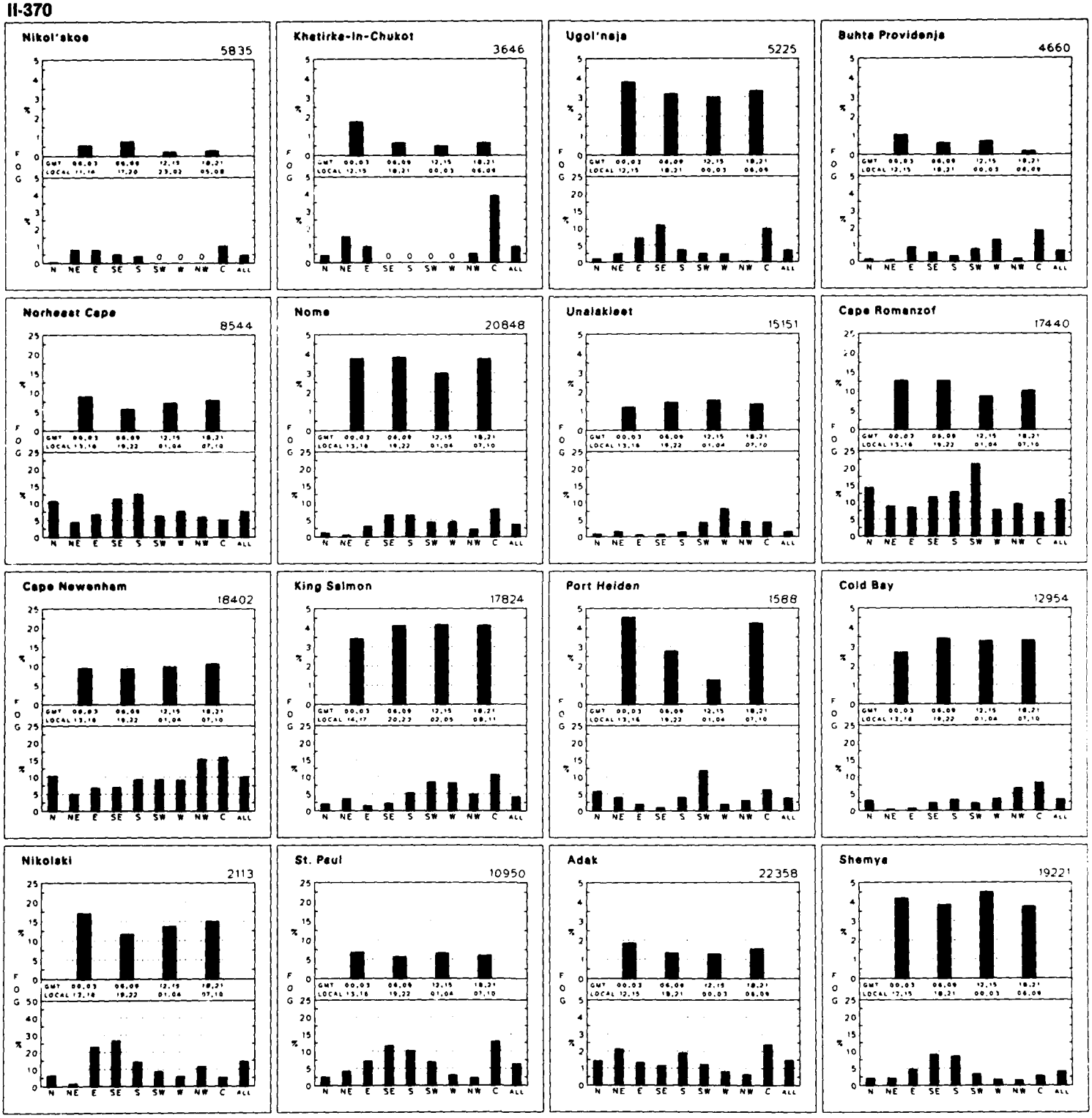
Bar graphs represent percent frequency of fog (without precipitation) for various hour groupings and wind directions. Data are based on 100% for each hour-group and direction category.

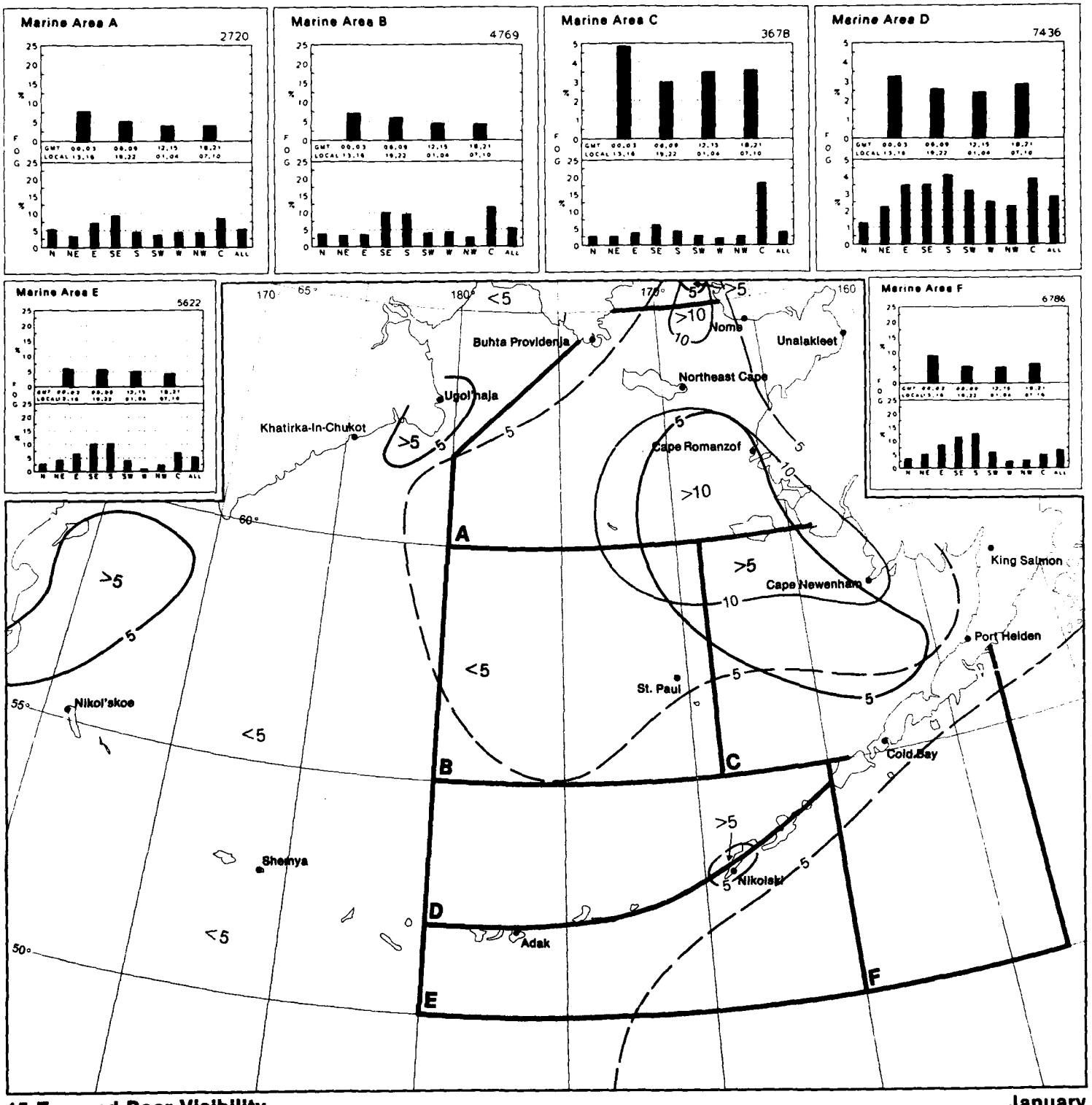
* indicates <.05% but >0.

0 indicates no fog occurred with the wind direction.

(Data show that 17% of all NW winds were accompanied by Fog (without precipitation).)

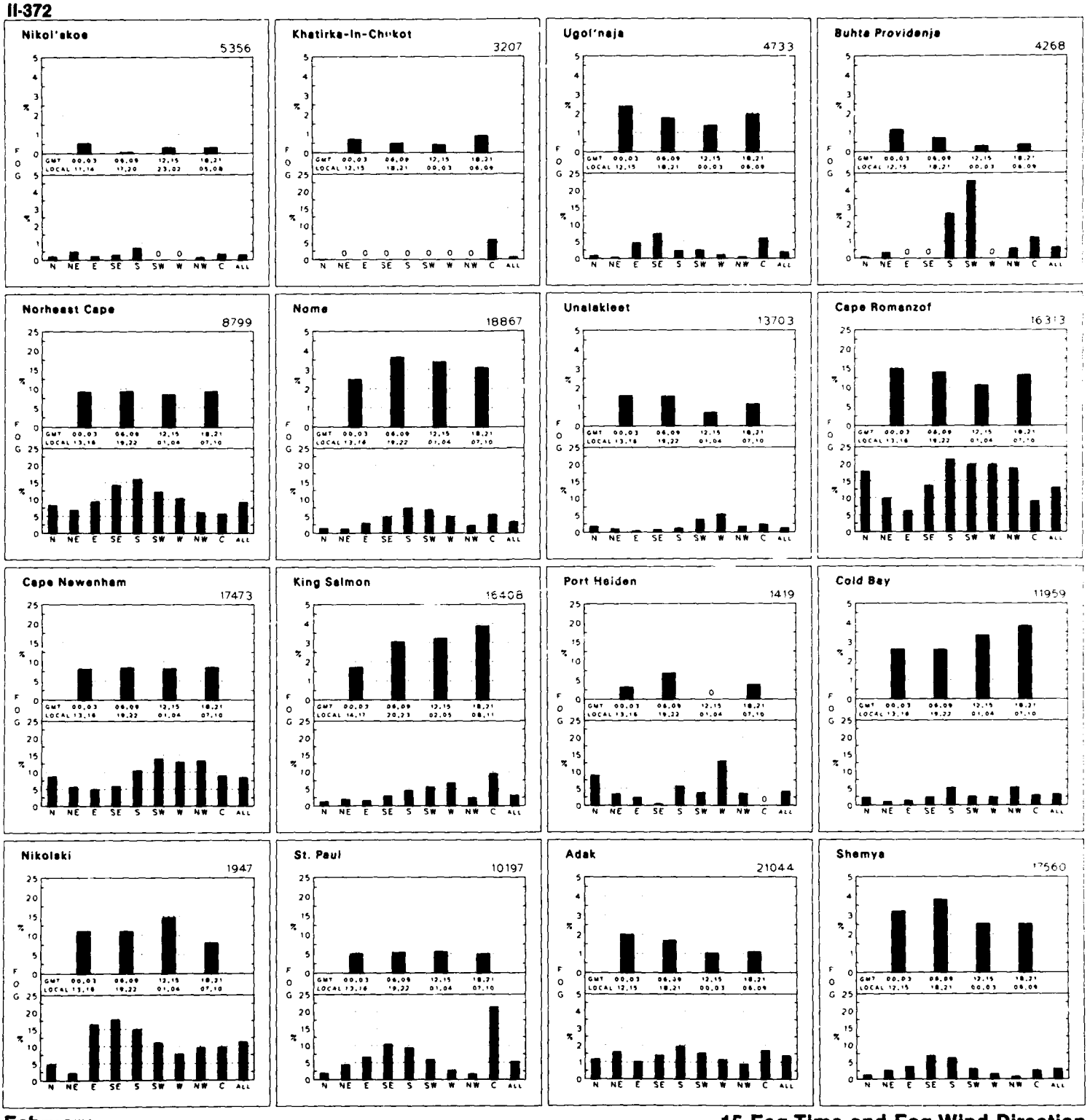
Fog is composed of minute droplets suspended in the atmosphere near the earth's surface which have no visible downward motion (fog is a stratus cloud on the surface). Fog is distinguished from haze (suspended dust or salt particles, yellowish or blue in color) by its dampness and grey color; also its restriction of visibility (less than one-half nautical mile) if deeper than 33 feet, a height considered average for the observer above the sea surface while standing on the bridge of a ship (WMO code). Fog rarely exists when the difference between the air and dew point temperatures is more than 2.5 °C. Present weather coding of fog in the marine observation is restricted to reporting of fog only when no precipitation is occurring at the time of observation (see present weather code table in the text of Set 2). Therefore, determination of occurrences of either fog with precipitation or all fog is not possible. The isopleth presentation (BLACK LINE) of visibility less than one-half nautical mile, includes restrictions to visibility due to any weather phenomena; i.e., fog, precipitation, dust, smoke, etc.

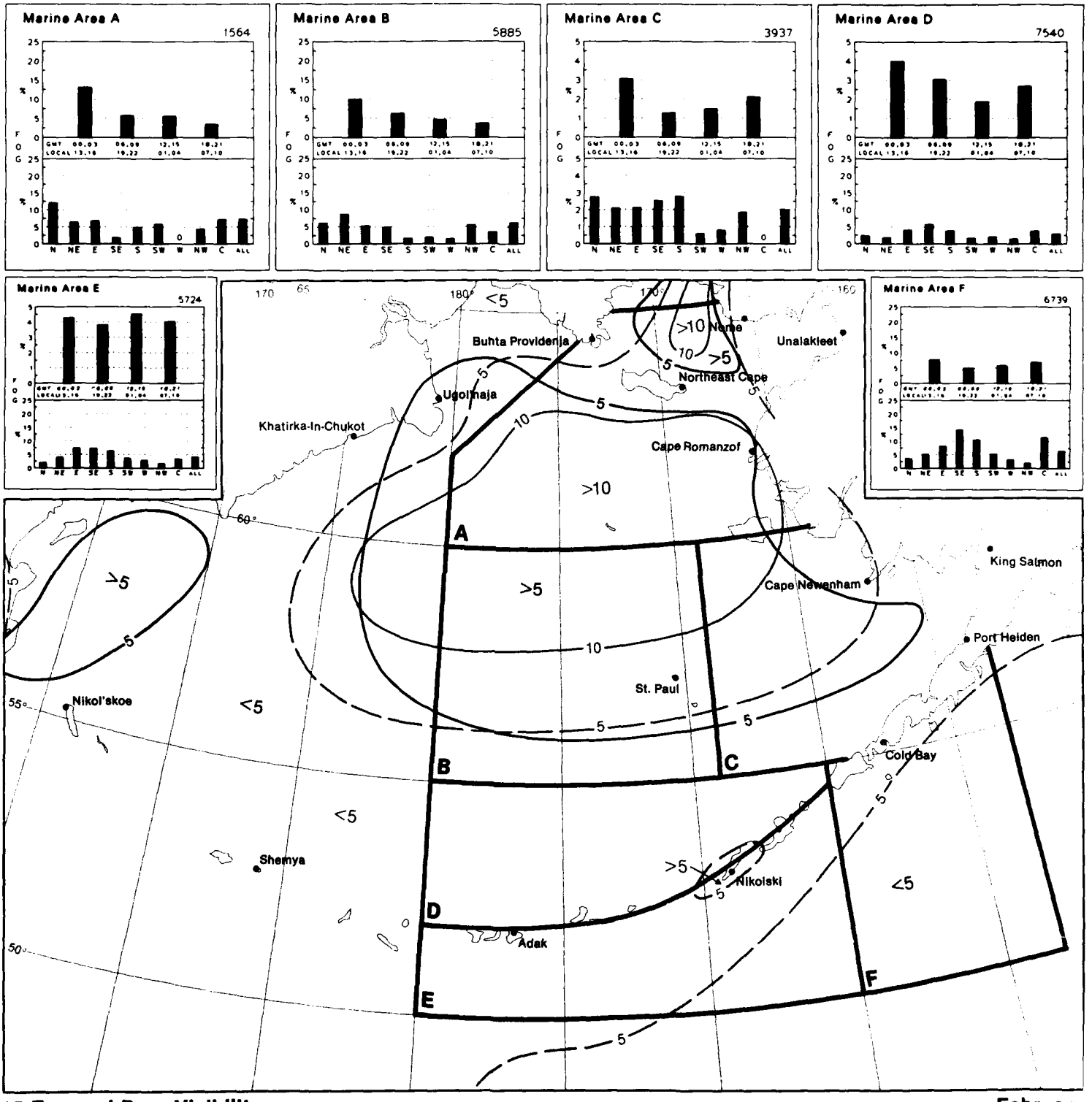

Nikol'skoe
5835
Khetirka-In-Chukot
3646
Ugol'naja
5225
Buhta Providenja
4660
Northeast Cape
8544
Nome
20848
Unalakleet
15151
Cape Romanzof
17440
Cape Newenham
18402
King Salmon
17824
Port Heiden
1588
Cold Bay
12954
Nikolski
2113
St. Paul
10950
Adak
22358
Shemya
19221
FOG
%
N NE E SE S SW W NW C ALL



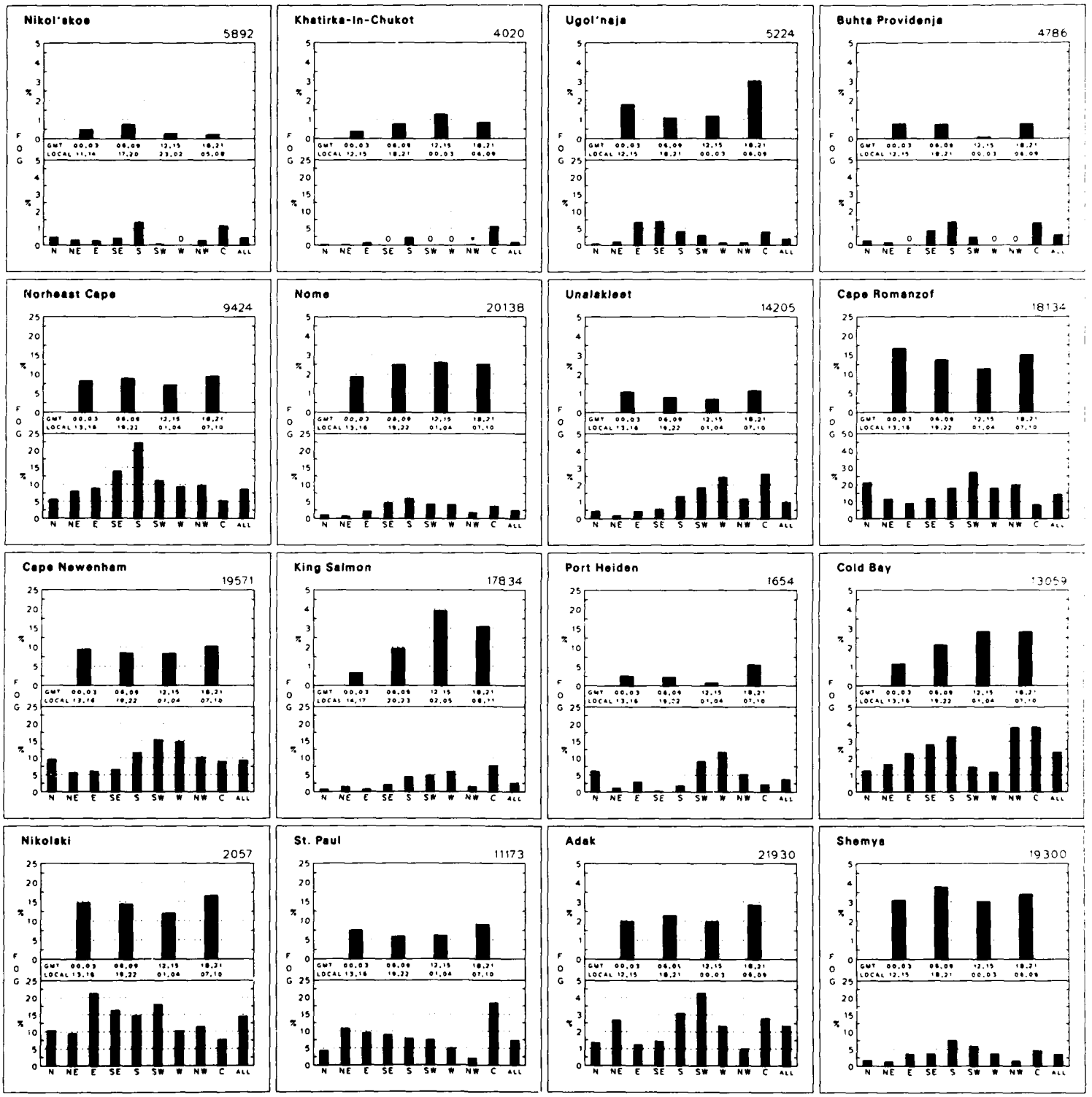
15 Fog and Poor Visibility

January


Nikol'skoe
5356
Khatirka-In-Chukot
3207
Ugol'naja
4733
Buhta Providenja
4268
Norheast Cape
8799
Nome
18867
Unalakleet
13703
Cape Romanzof
16313
Cape Newenham
17473
King Salmon
16408
Port Heiden
1419
Cold Bay
11959
Nikolski
1947
St. Paul
10197
Adak
21044
Shemya
17560
FOG
%
N NE E SE S SW W NW C ALL
GMT 00,03 06,09 12,15 18,21
LOCAL 17,20 23,02 05,08

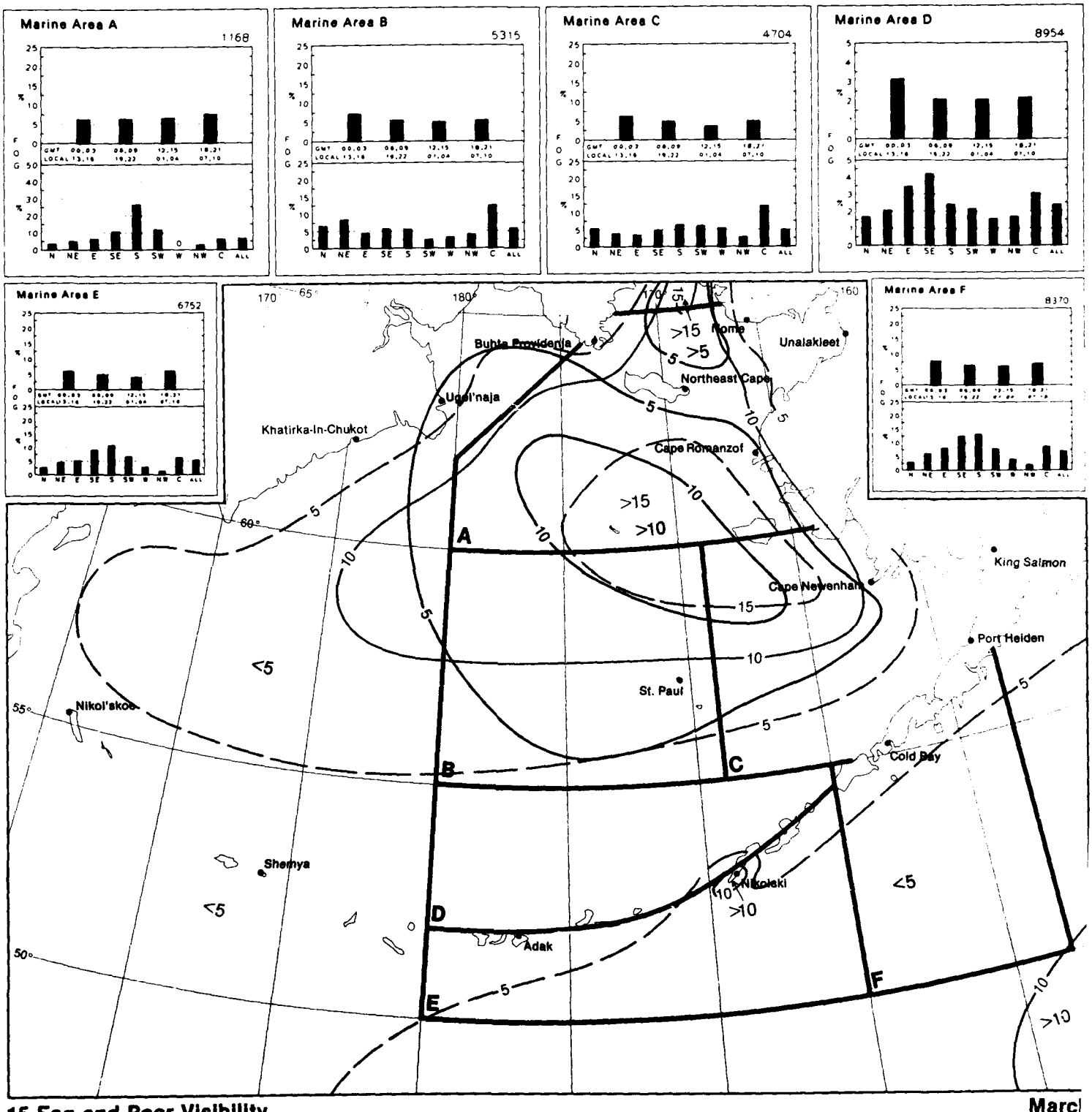


15 Fog and Poor Visibility **February**

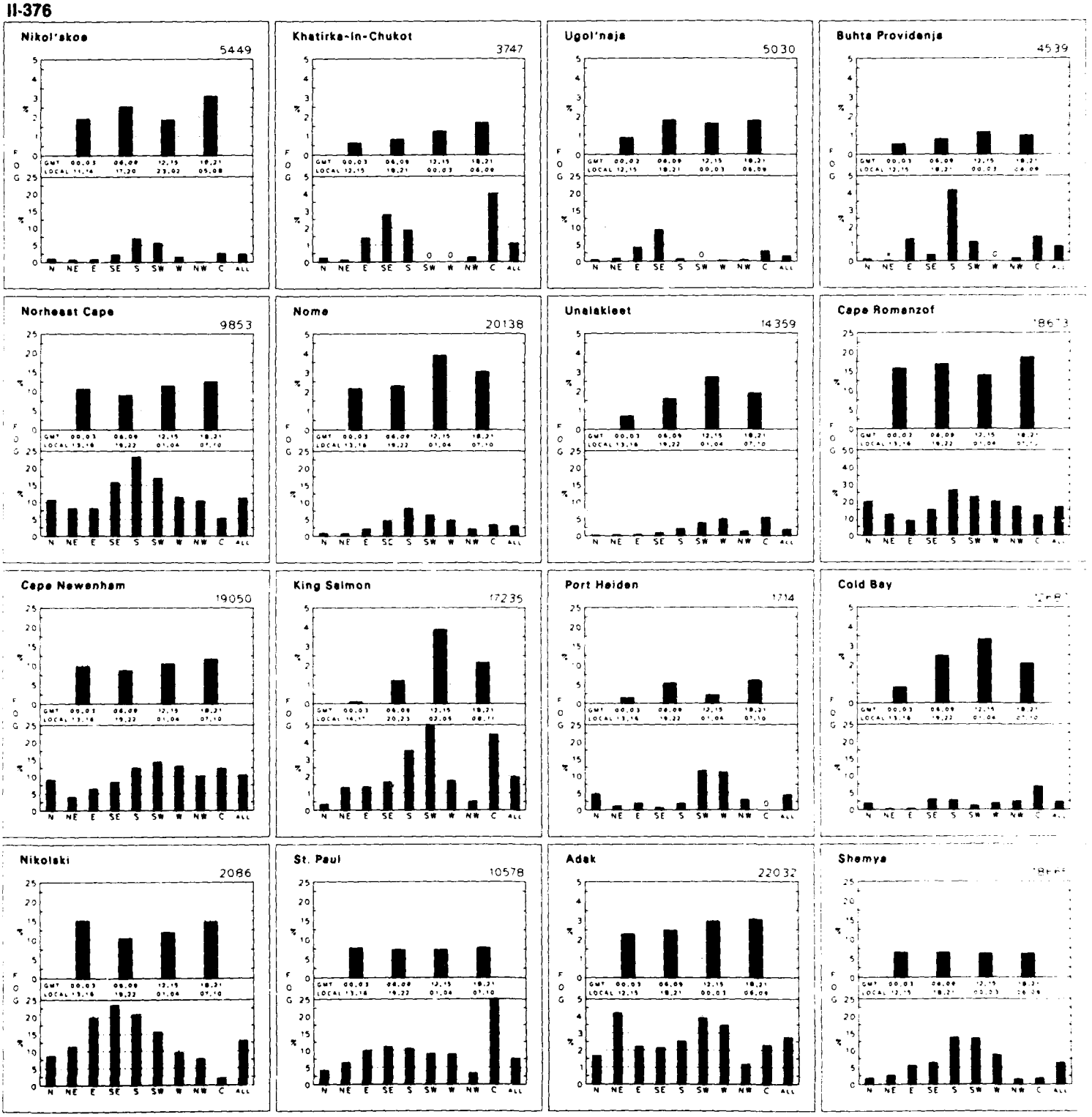


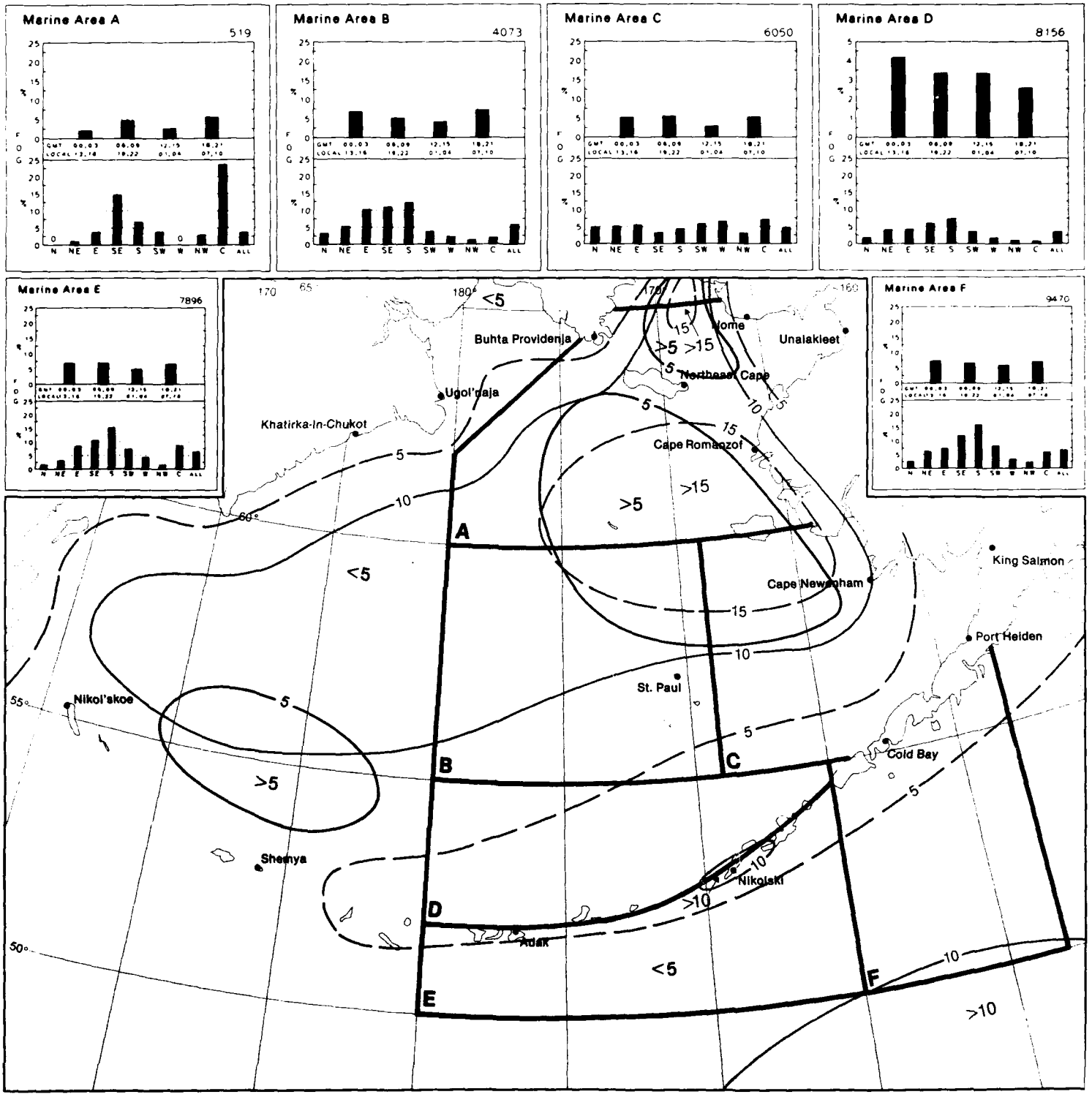
March

15 Fog-Time and Fog-Wind Direction

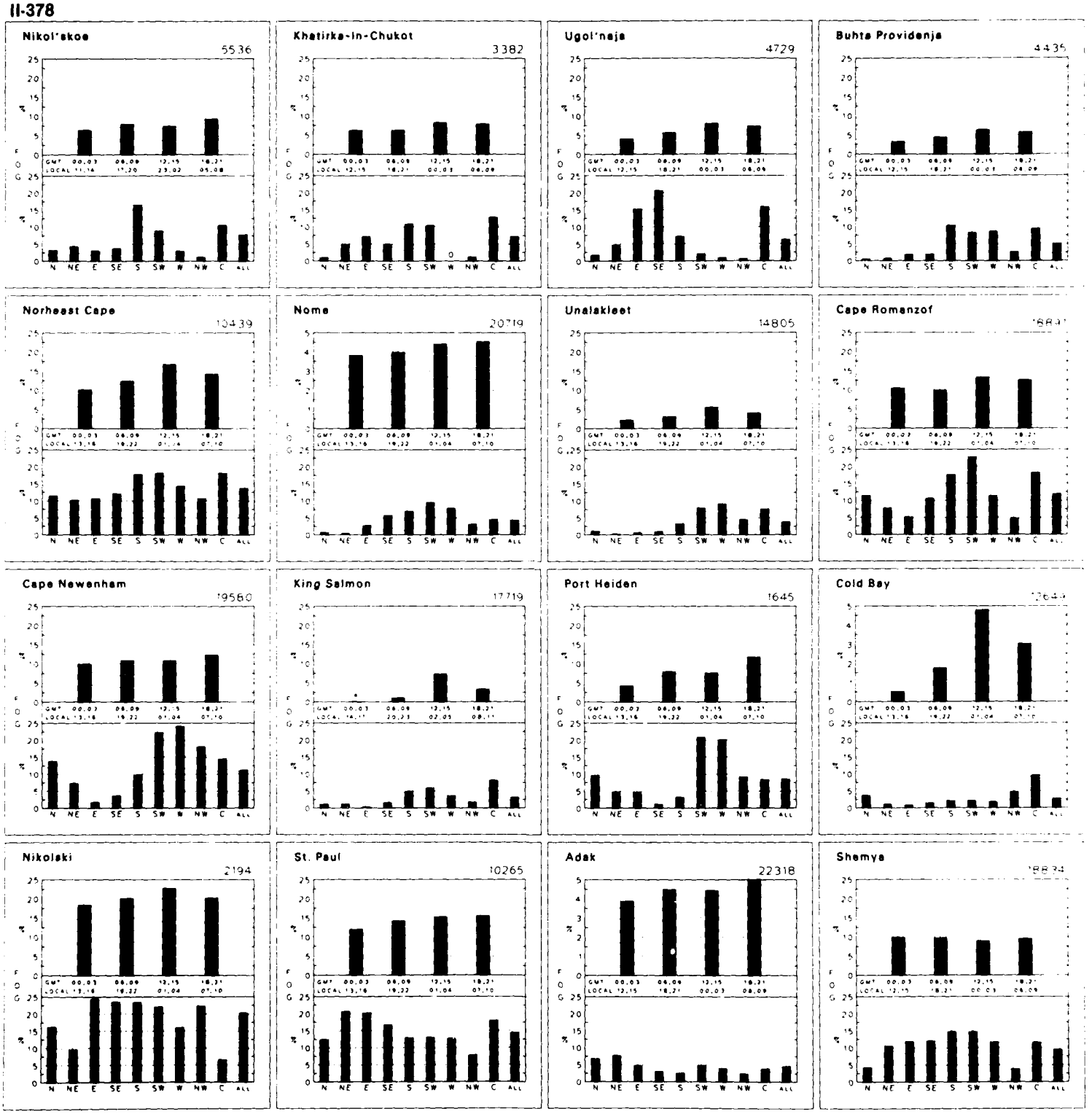


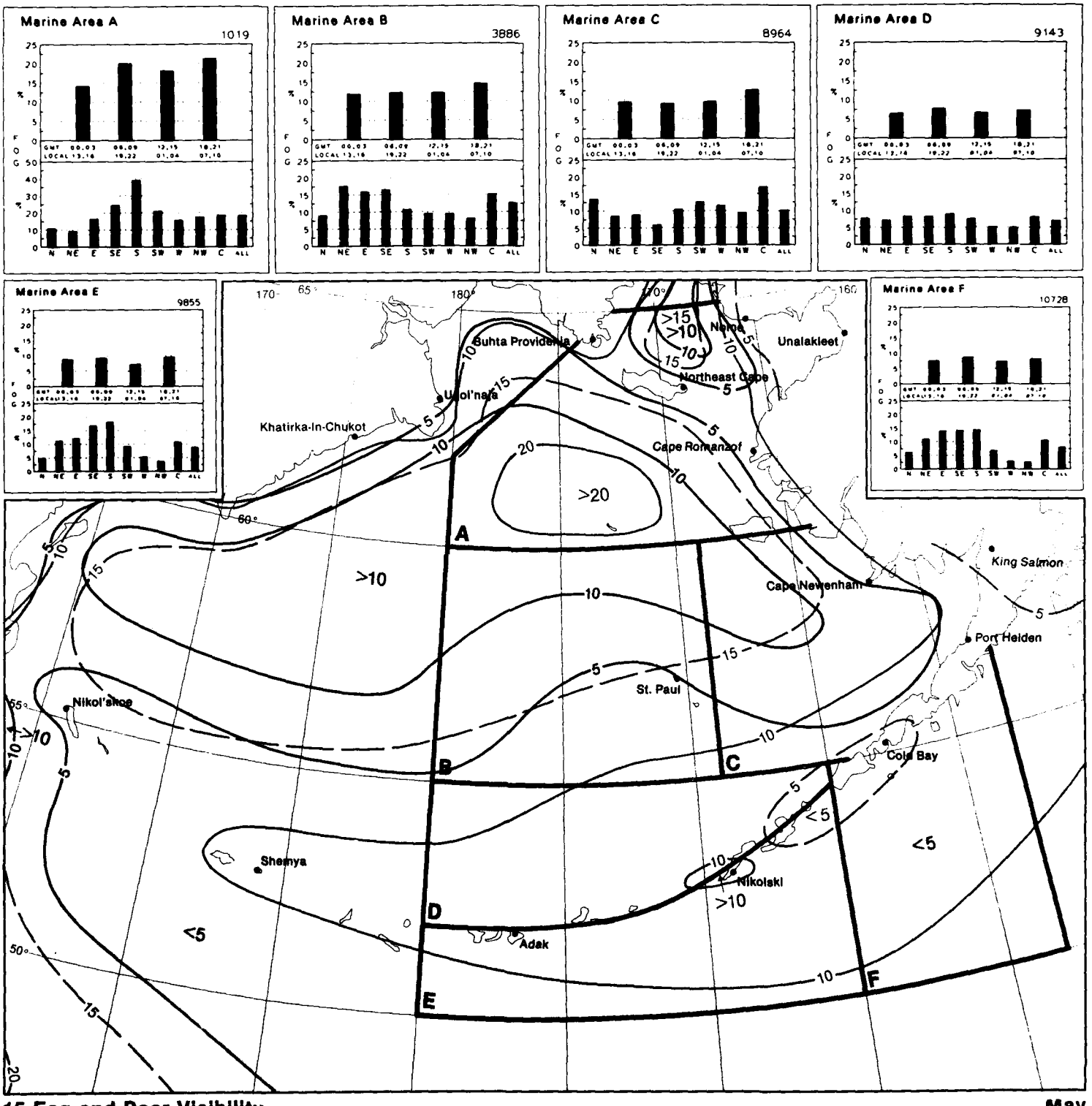
15 Fog and Poor Visibility


Nikol'skoe
5449
Khatirka-In-Chukot
3747
Ugol'naja
5030
Buhta Providenja
4539
Norheast Cape
9853
Nome
20138
Unalakleet
14359
Cape Romanzof
Cape Newenham
19050
King Salmon
17235
Port Heiden
1714
Cold Bay
Nikolski
2086
St. Paul
10578
Adak
22032
Shemya
N NE E SE S SW W NW C ALL
FOG %



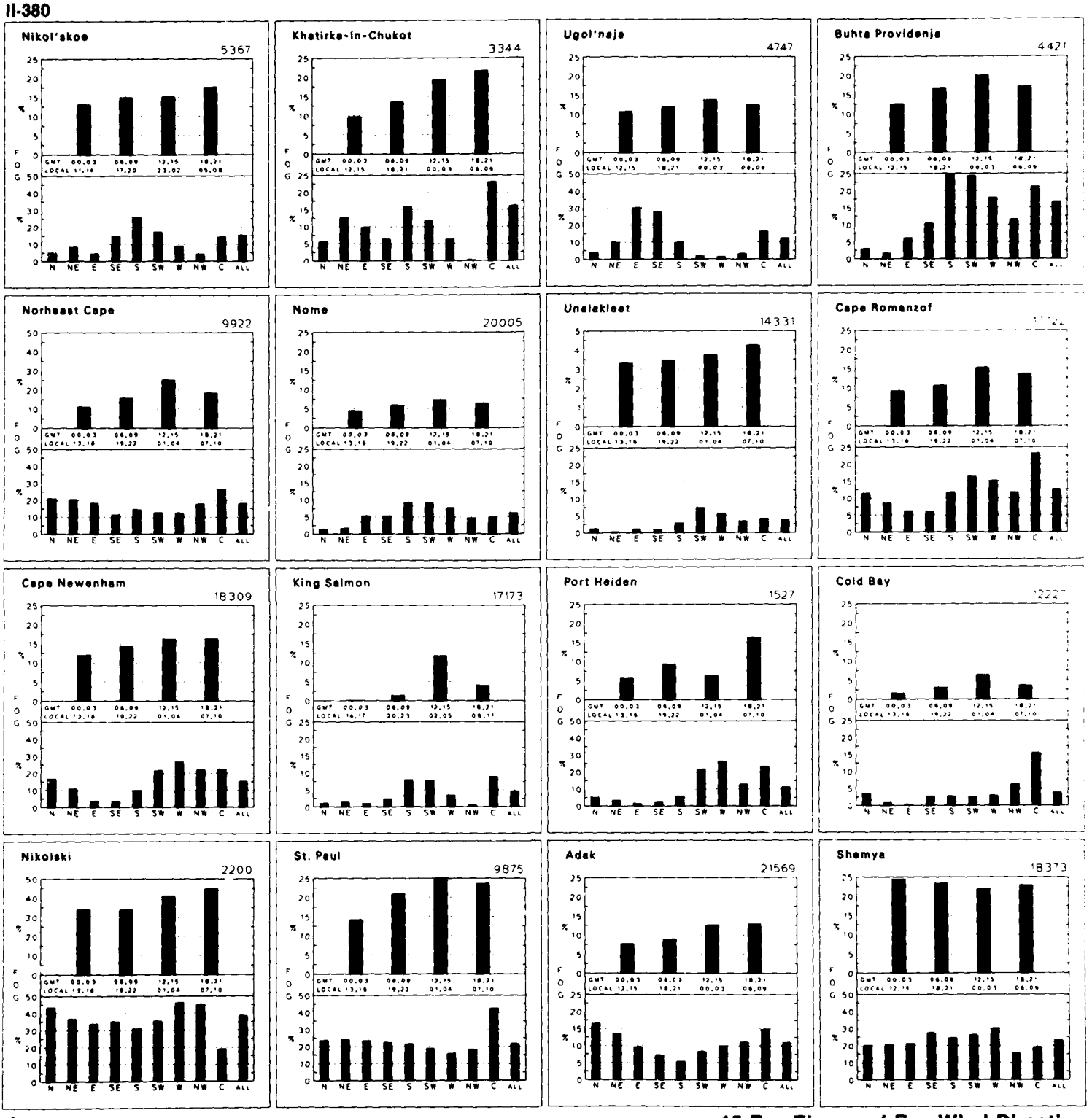
15 Fog and Poor Visibility **April**


Nikol'skoe
5536
Khatirka-In-Chukot
3382
Ugol'naja
4729
Buhta Providenja
4435
Northeast Cape
10439
Nome
20719
Unalakleet
14805
Cape Romanzof
Cape Newenham
19560
King Salmon
17719
Port Heiden
1645
Cold Bay
Nikolski
2194
St. Paul
10265
Adak
22318
Shemya
N NE E SE S SW W NW C ALL



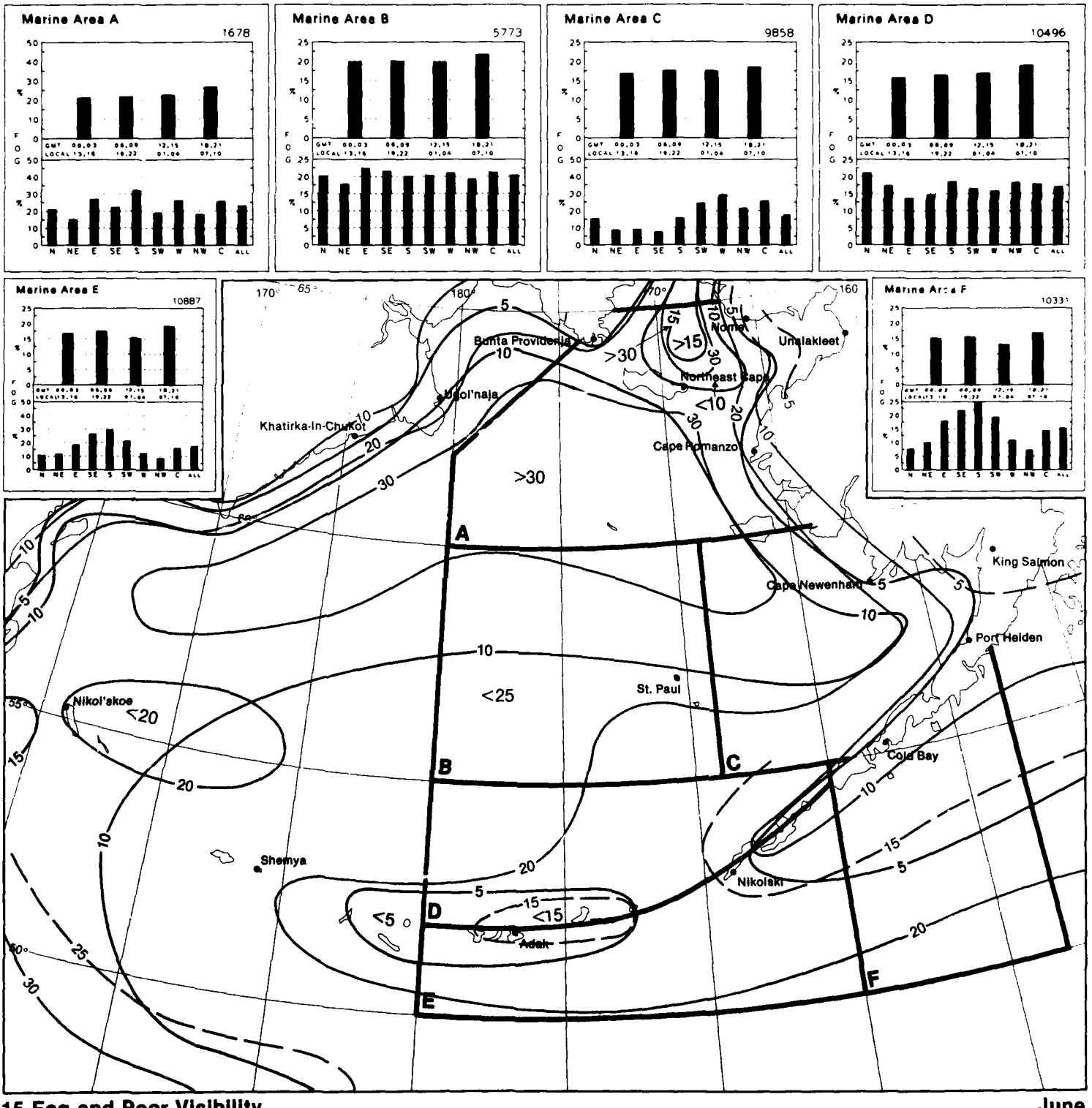
15 Fog and Poor Visibility

May

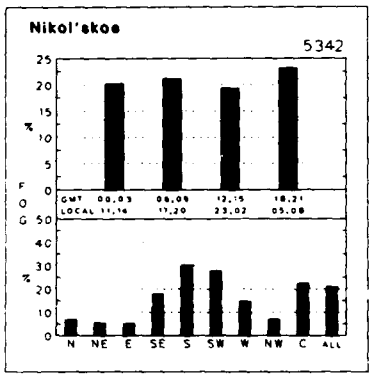


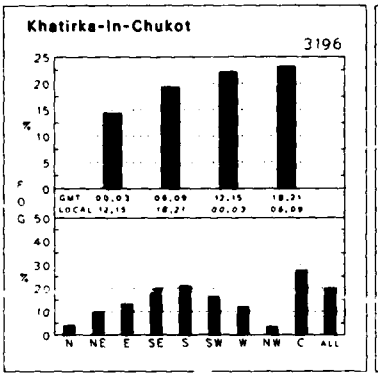
June

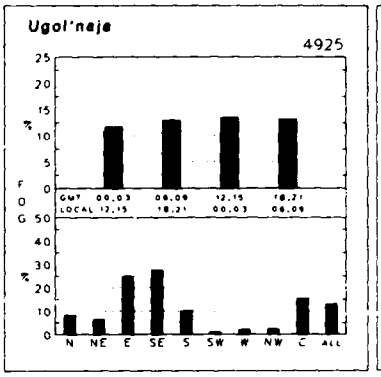
15 Fog-Time and Fog-Wind Direction

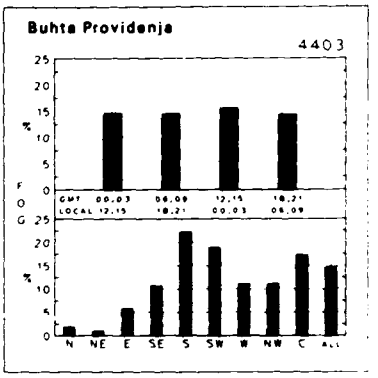


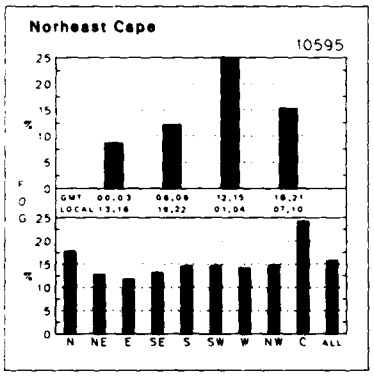
15 Fog and Poor Visibility **June**

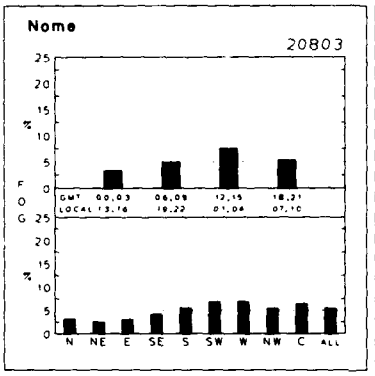

Nikol'skoe
5342
FOG %
GMT 00,03 06,09 12,15 18,21
LOCAL 11,16 17,20 23,02 05,08
%
N NE E SE S SW W NW C ALL

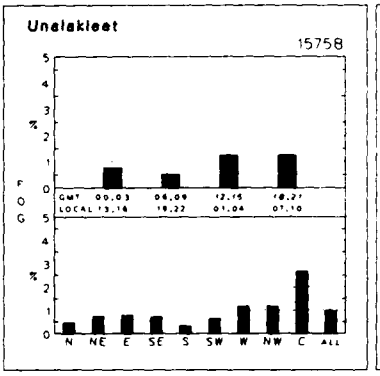

Khatirka-In-Chukot
3196
FOG %
GMT 00,03 06,09 12,15 18,21
LOCAL 12,15 18,21 00,03 06,09
%
N NE E SE S SW W NW C ALL

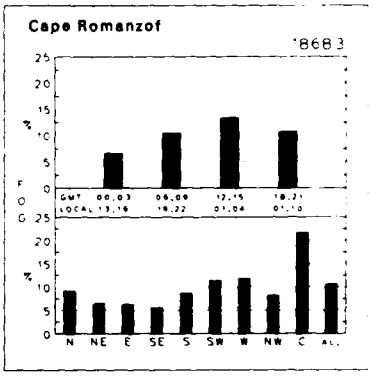

Ugol'naja
4925
FOG %
GMT 00,03 06,09 12,15 18,21
LOCAL 12,15 18,21 00,03 06,09
%
N NE E SE S SW W NW C ALL

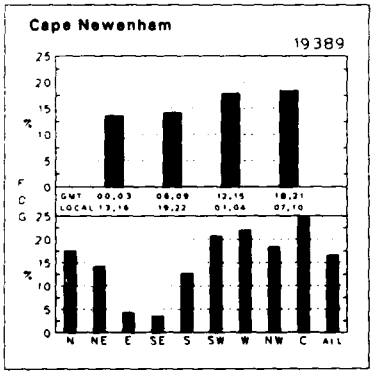

Buhta Providenja
4403
FOG %
GMT 00,03 06,09 12,15 18,21
LOCAL 12,15 18,21 00,03 06,09
%
N NE E SE S SW W NW C ALL

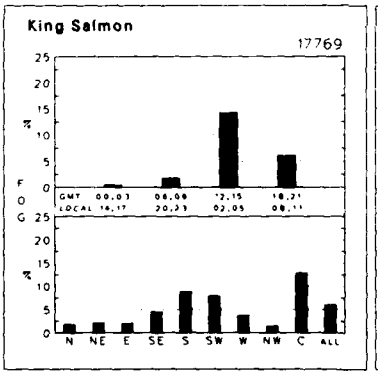

Norheast Cape
10595
FOG %
GMT 00,03 06,09 12,15 18,21
LOCAL 13,16 19,22 01,04 07,10
%
N NE E SE S SW W NW C ALL

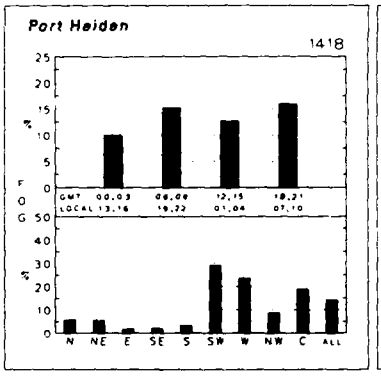

Nome
20803
FOG %
GMT 00,03 06,09 12,15 18,21
LOCAL 13,16 19,22 01,04 07,10
%
N NE E SE S SW W NW C ALL

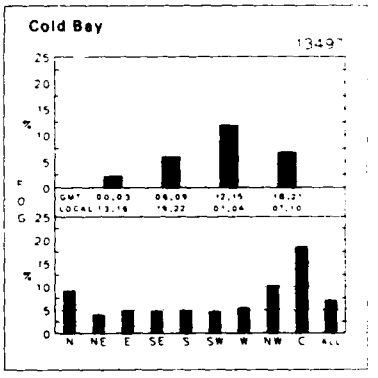

Unalakleet
15758
FOG %
GMT 00,03 06,09 12,15 18,21
LOCAL 13,16 19,22 01,04 07,10
%
N NE E SE S SW W NW C ALL

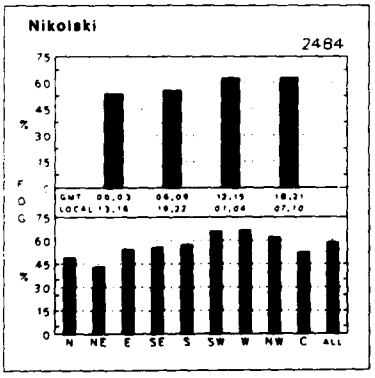

Cape Romanzof
18683
FOG %
GMT 00,03 06,09 12,15 18,21
LOCAL 13,16 19,22 01,04 07,10
%
N NE E SE S SW W NW C ALL

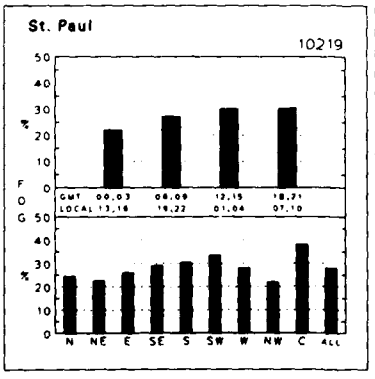

Cape Newenham
19389
FOG %
GMT 00,03 06,09 12,15 18,21
LOCAL 13,16 19,22 01,04 07,10
%
N NE E SE S SW W NW C ALL

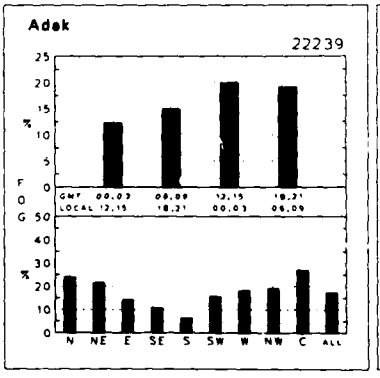

King Salmon
17769
FOG %
GMT 00,03 06,09 12,15 18,21
LOCAL 14,17 20,23 02,05 08,11
%
N NE E SE S SW W NW C ALL

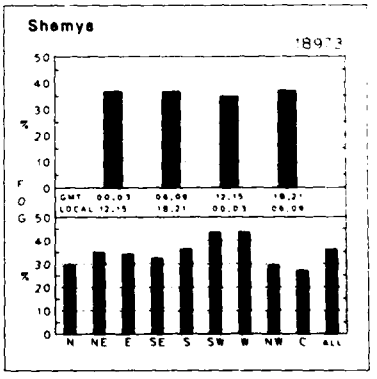

Port Heiden
1418
FOG %
GMT 00,03 06,09 12,15 18,21
LOCAL 13,16 19,22 01,04 07,10
%
N NE E SE S SW W NW C ALL

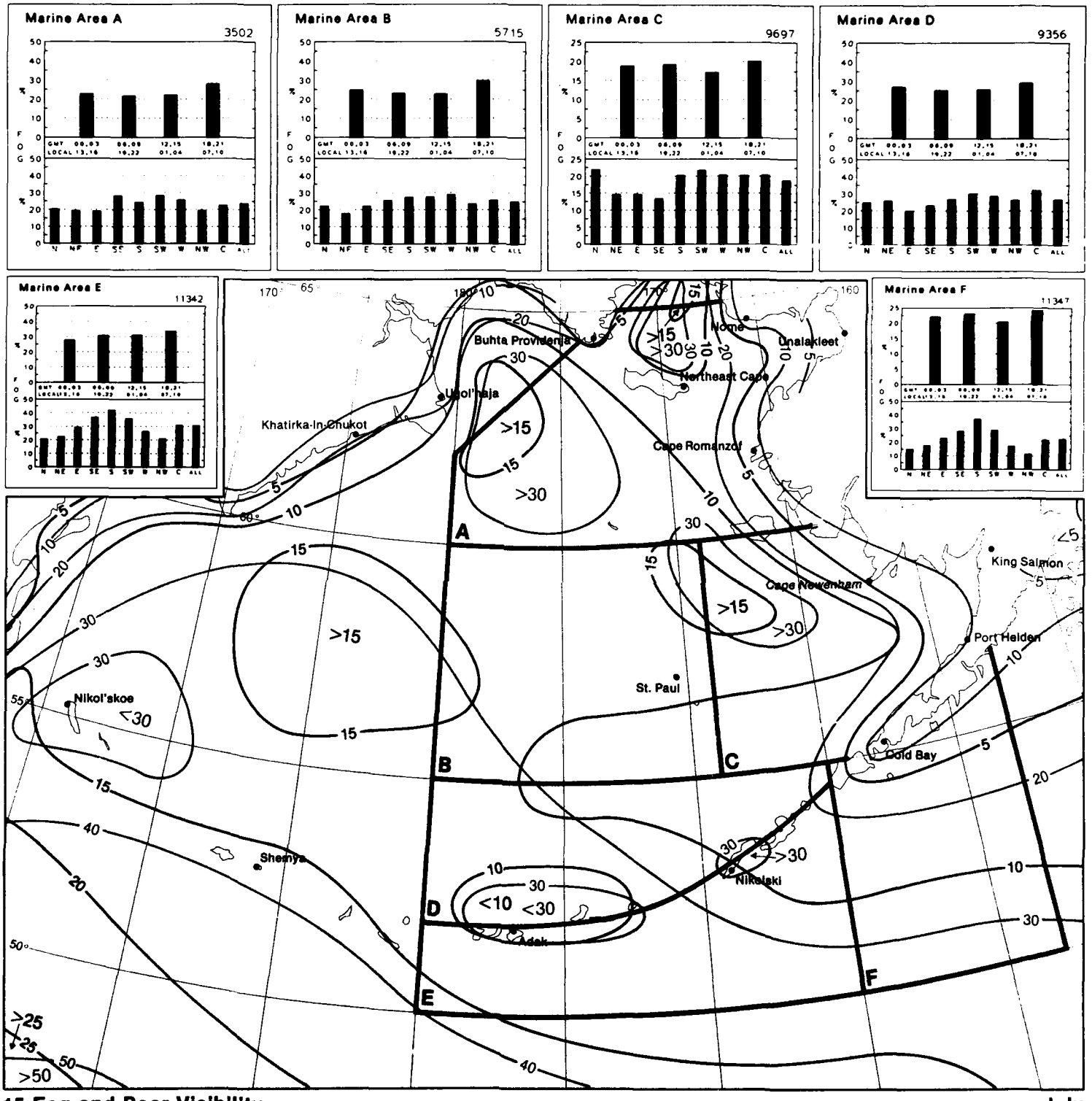

Cold Bay
13497
FOG %
GMT 00,03 06,09 12,15 18,21
LOCAL 13,16 19,22 01,04 07,10
%
N NE E SE S SW W NW C ALL


Nikolski
2484
FOG %
GMT 00,03 06,09 12,15 18,21
LOCAL 13,16 19,22 01,04 07,10
%
N NE E SE S SW W NW C ALL

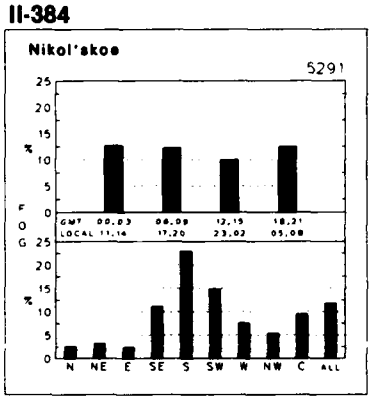

St. Paul
10219
FOG %
GMT 00,03 06,09 12,15 18,21
LOCAL 13,16 19,22 01,04 07,10
%
N NE E SE S SW W NW C ALL

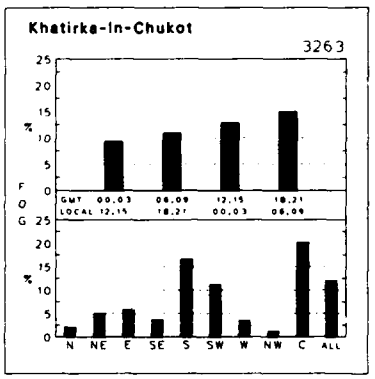

Adak
22239
FOG %
GMT 00,03 06,09 12,15 18,21
LOCAL 12,15 18,21 00,03 06,09
%
N NE E SE S SW W NW C ALL

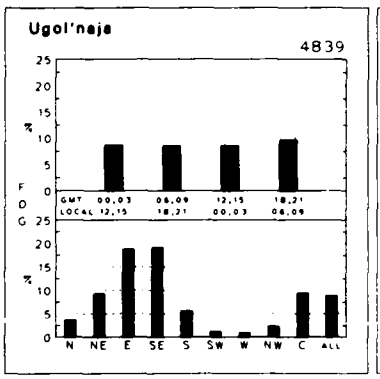

Shemya
18973
FOG %
GMT 00,03 06,09 12,15 18,21
LOCAL 12,15 18,21 00,03 06,09
%
N NE E SE S SW W NW C ALL

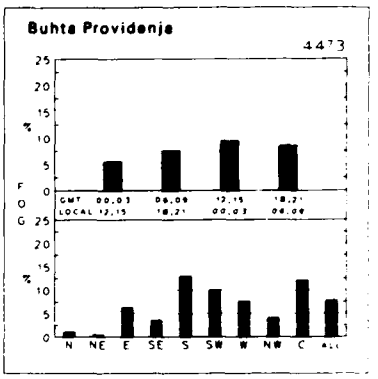


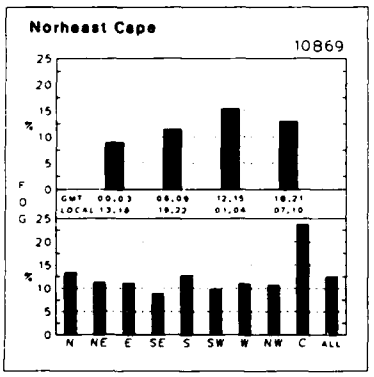
15 Fog and Poor Visibility **July**

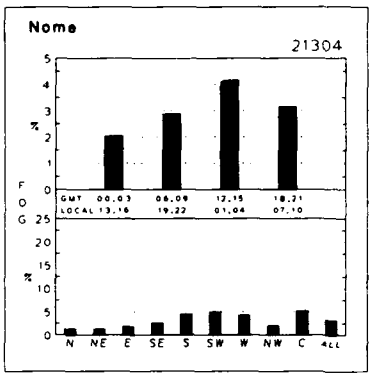

Nikol'skoe
5291
FOG %
GMT 00,03 06,09 12,15 18,21
LOCAL 11,16 17,20 23,02 05,08
N NE E SE S SW W NW C ALL

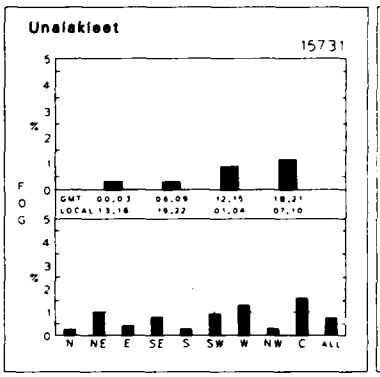

Khatirka-In-Chukot
3263
FOG %
GMT 00,03 06,09 12,15 18,21
LOCAL 12,15 18,21 00,03 06,09
N NE E SE S SW W NW C ALL

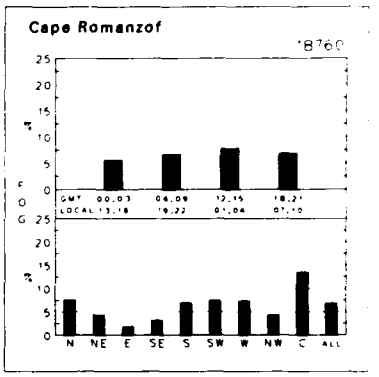

Ugol'naja
4839
FOG %
GMT 00,03 06,09 12,15 18,21
LOCAL 12,15 18,21 00,03 06,09
N NE E SE S SW W NW C ALL

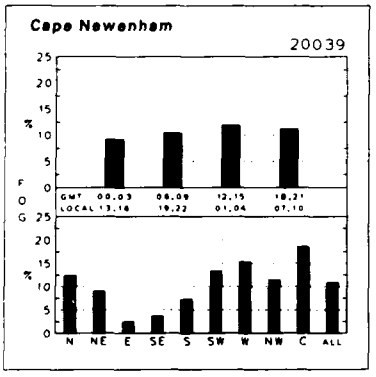

Buhta Providenja
4473
FOG %
GMT 00,03 06,09 12,15 18,21
LOCAL 12,15 18,21 00,03 06,09
N NE E SE S SW W NW C ALL

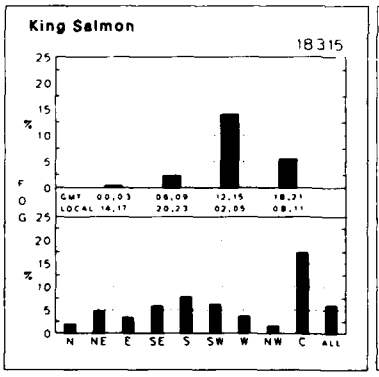

Norheast Cape
10869
FOG %
GMT 00,03 06,09 12,15 18,21
LOCAL 13,18 19,22 01,04 07,10
N NE E SE S SW W NW C ALL

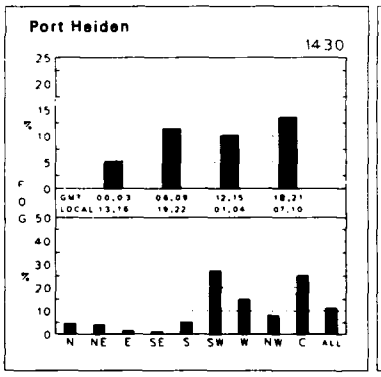

Nome
21304
FOG %
GMT 00,03 06,09 12,15 18,21
LOCAL 13,18 19,22 01,04 07,10
N NE E SE S SW W NW C ALL

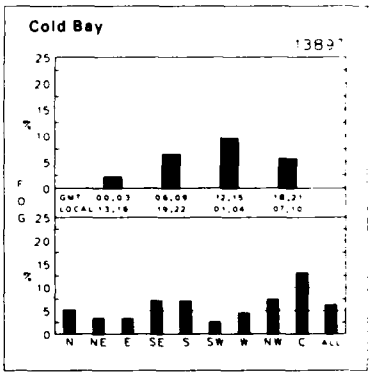

Unalakleet
15731
FOG %
GMT 00,03 06,09 12,15 18,21
LOCAL 13,18 19,22 01,04 07,10
N NE E SE S SW W NW C ALL

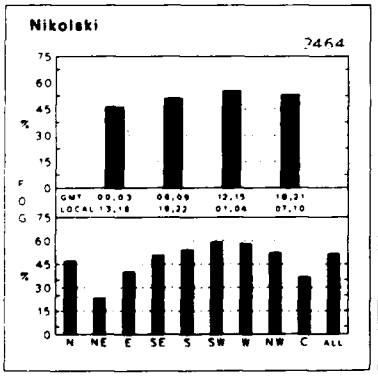

Cape Romanzof
18760
FOG %
GMT 00,03 06,09 12,15 18,21
LOCAL 13,18 19,22 01,04 07,10
N NE E SE S SW W NW C ALL

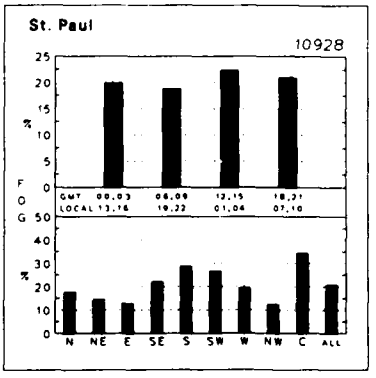

Cape Newenham
20039
FOG %
GMT 00,03 06,09 12,15 18,21
LOCAL 13,18 19,22 01,04 07,10
N NE E SE S SW W NW C ALL

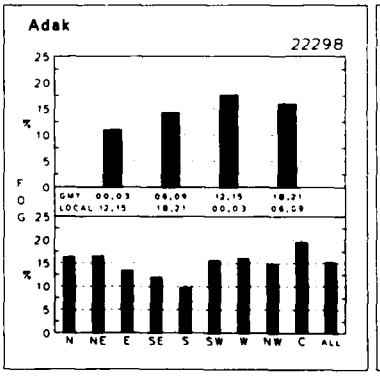

King Salmon
18315
FOG %
GMT 00,03 06,09 12,15 18,21
LOCAL 14,17 20,23 02,05 08,11
N NE E SE S SW W NW C ALL

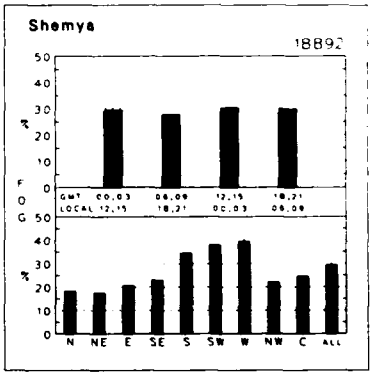

Port Heiden
1430
FOG %
GMT 00,03 06,09 12,15 18,21
LOCAL 13,18 19,22 01,04 07,10
N NE E SE S SW W NW C ALL

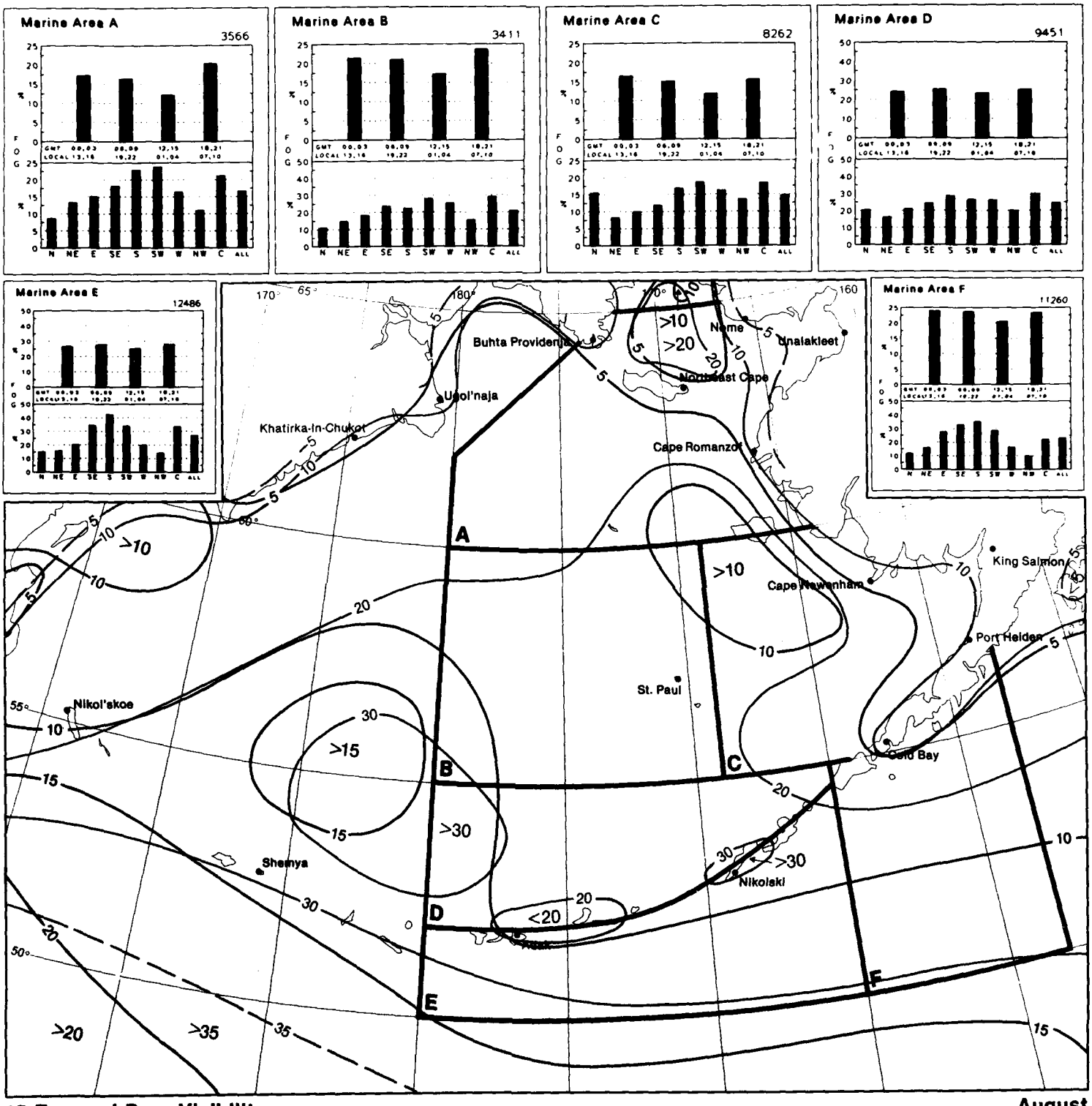

Cold Bay
1389
FOG %
GMT 00,03 06,09 12,15 18,21
LOCAL 13,18 19,22 01,04 07,10
N NE E SE S SW W NW C ALL


Nikolski
2464
FOG %
GMT 00,03 06,09 12,15 18,21
LOCAL 13,18 19,22 01,04 07,10
N NE E SE S SW W NW C ALL


St. Paul
10928
FOG %
GMT 00,03 06,09 12,15 18,21
LOCAL 13,18 19,22 01,04 07,10
N NE E SE S SW W NW C ALL

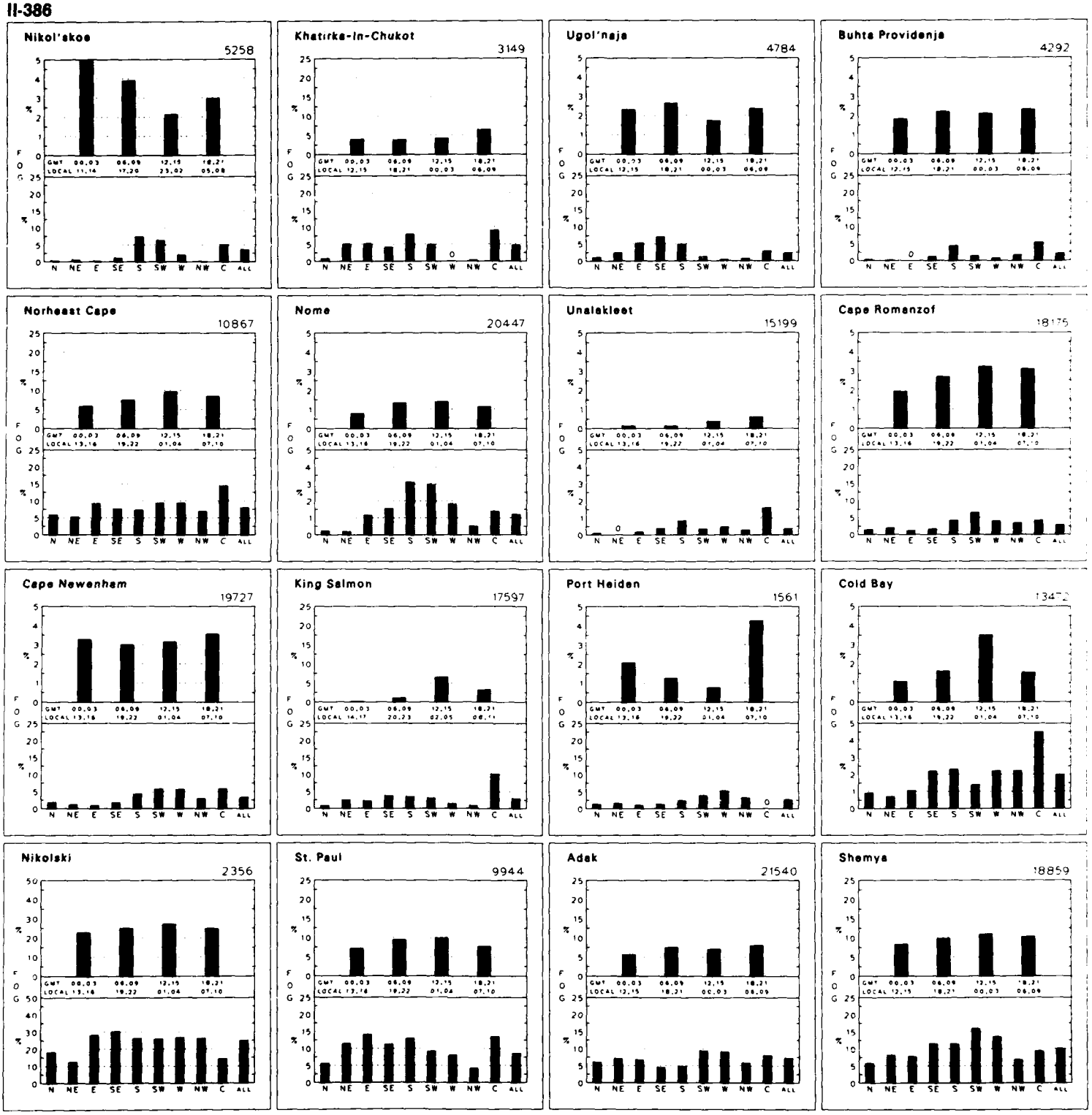

Adak
22298
FOG %
GMT 00,03 06,09 12,15 18,21
LOCAL 12,15 18,21 00,03 06,09
N NE E SE S SW W NW C ALL

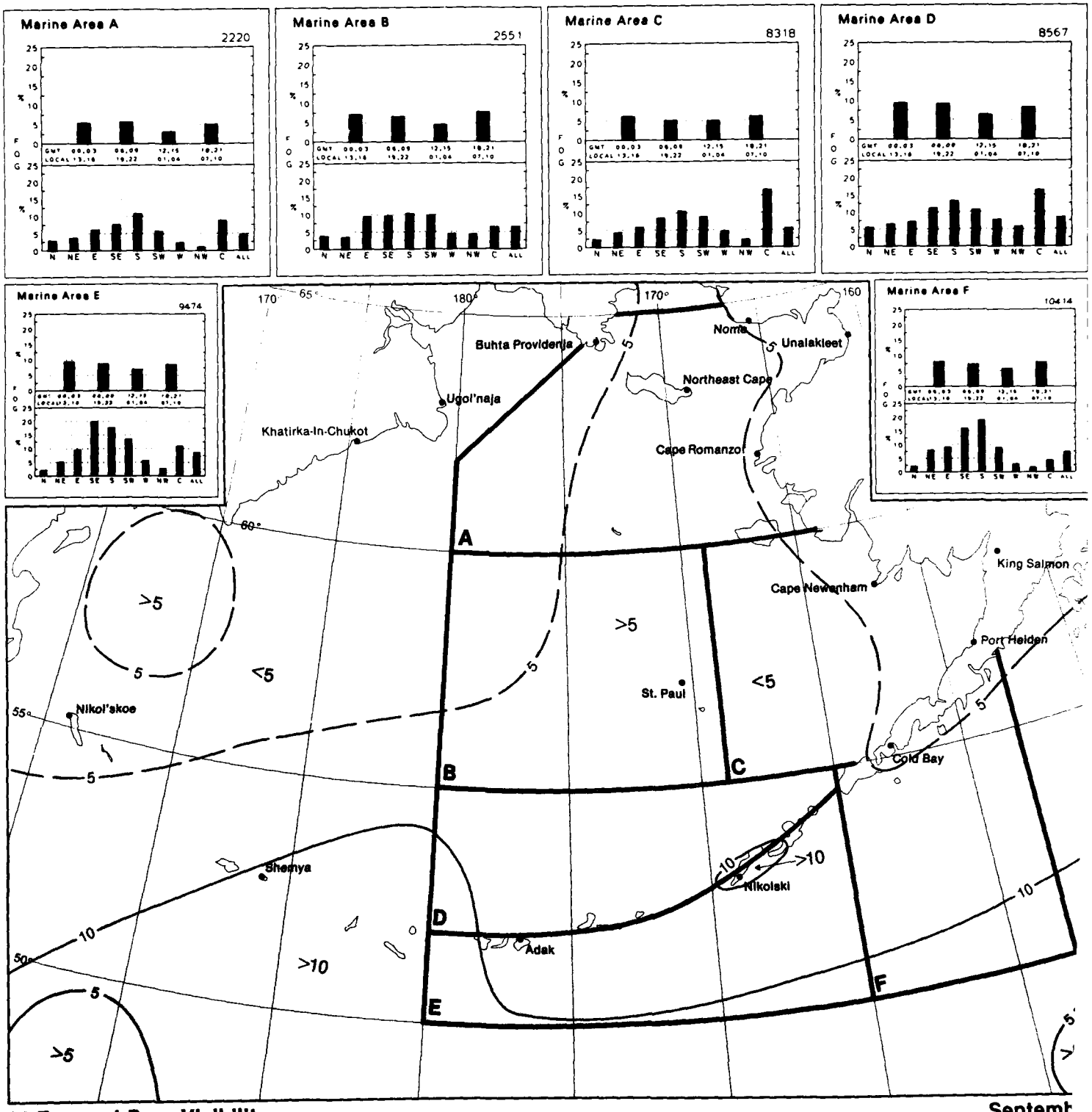

Shemya
18892
FOG %
GMT 00,03 06,09 12,15 18,21
LOCAL 12,15 18,21 00,03 06,09
N NE E SE S SW W NW C ALL



15 Fog and Poor Visibility

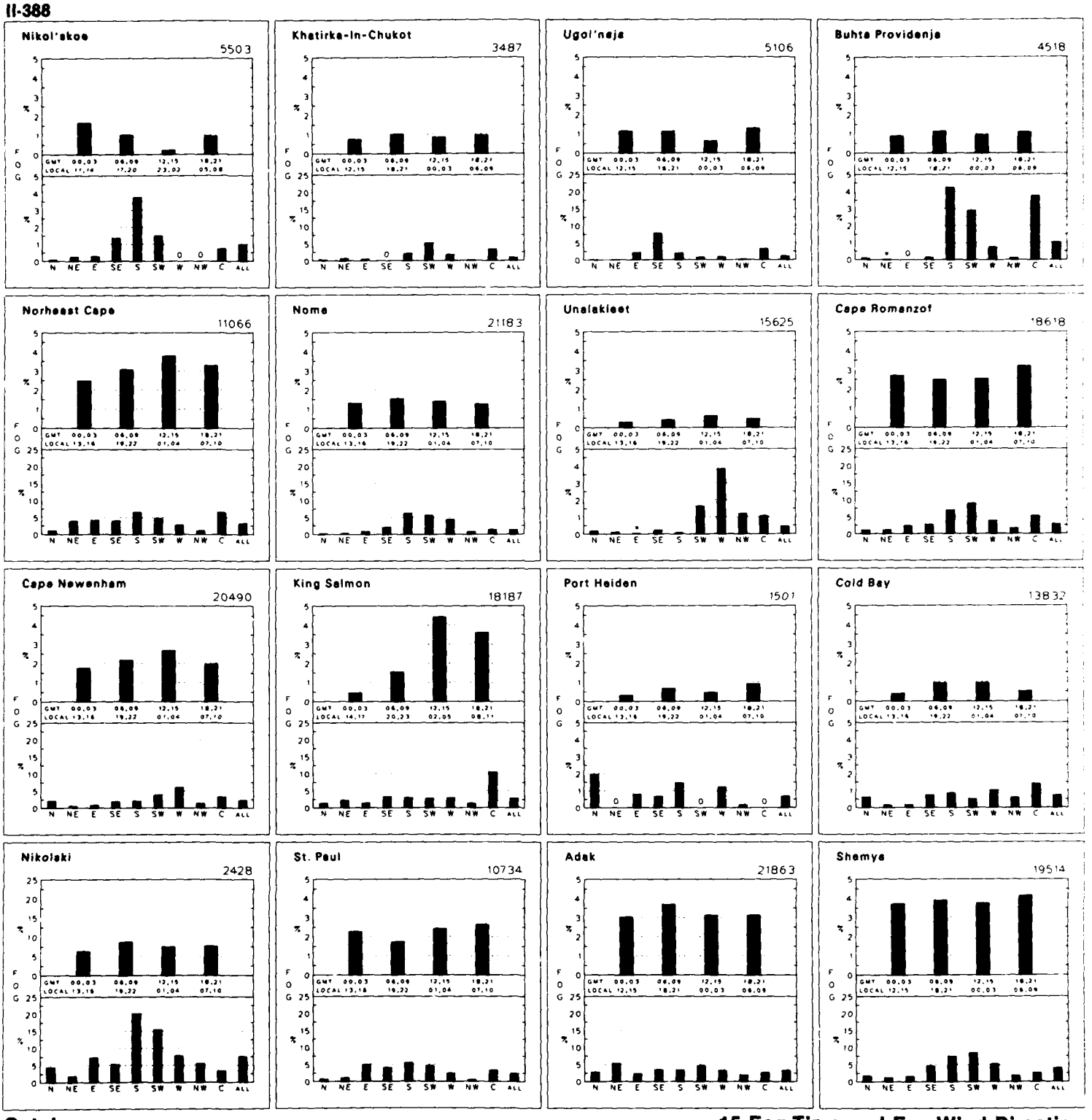
August

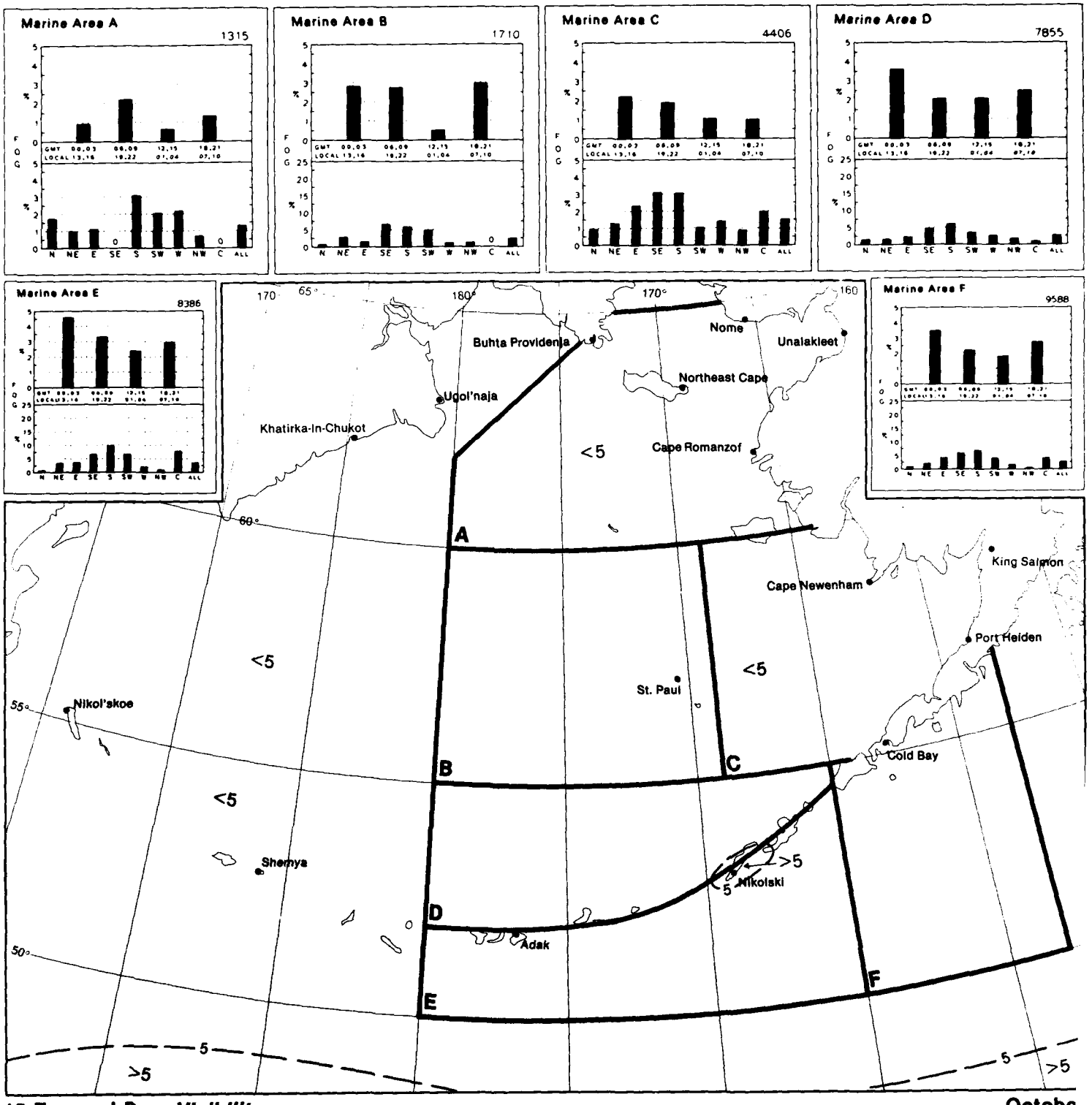

Nikol'skoe
5258
Khatirka-In-Chukot
3149
Ugol'naja
4784
Buhta Providenja
4292
Norheast Cape
10867
Nome
20447
Unalakleet
15199
Cape Romanzof
18175
Cape Newenham
19727
King Salmon
17597
Port Heiden
1561
Cold Bay
Nikolski
2356
St. Paul
9944
Adak
21540
Shemya
18859
FOG
%
N NE E SE S SW W NW C ALL



15 Fog and Poor Visibility

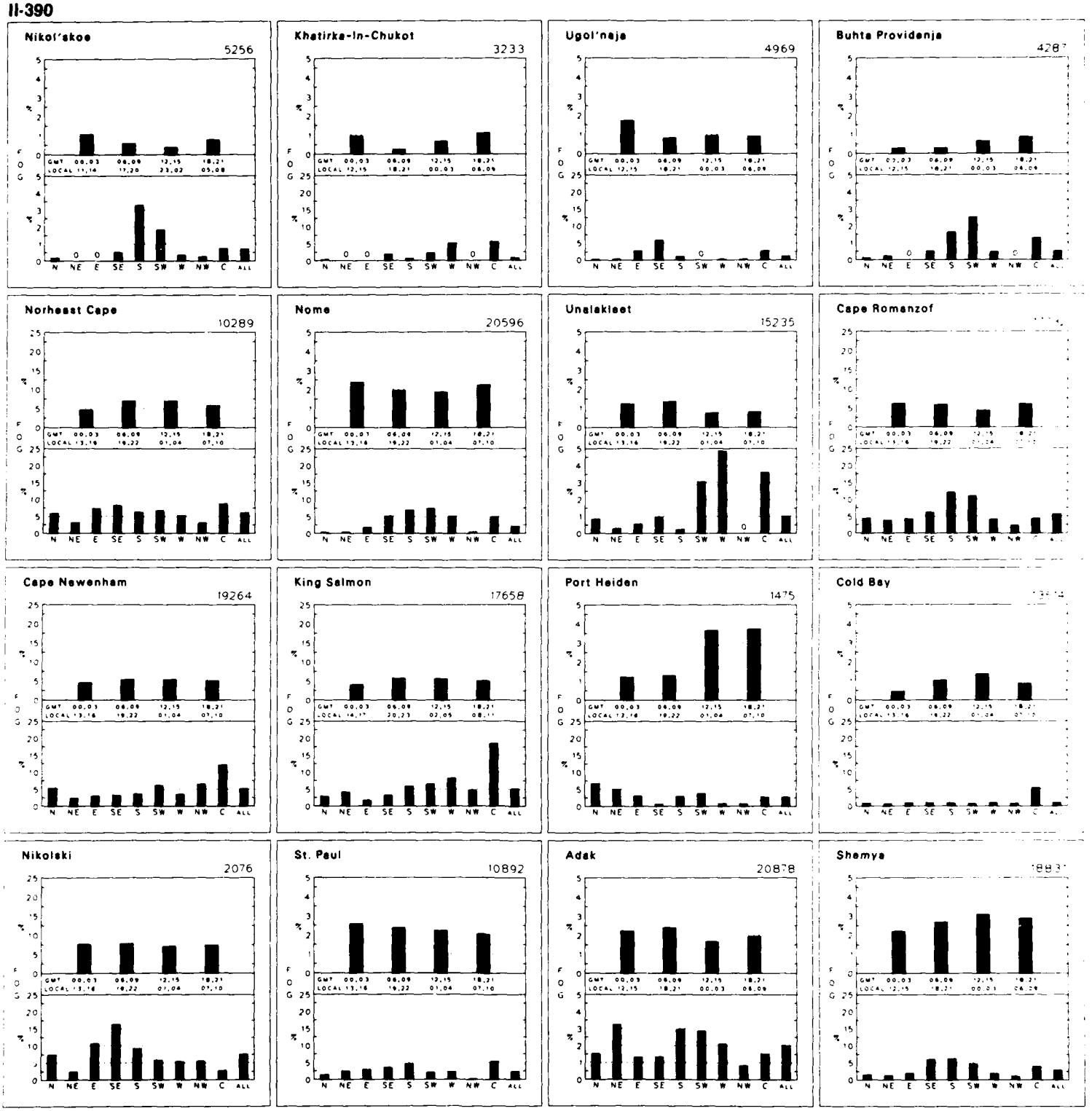
Septemb

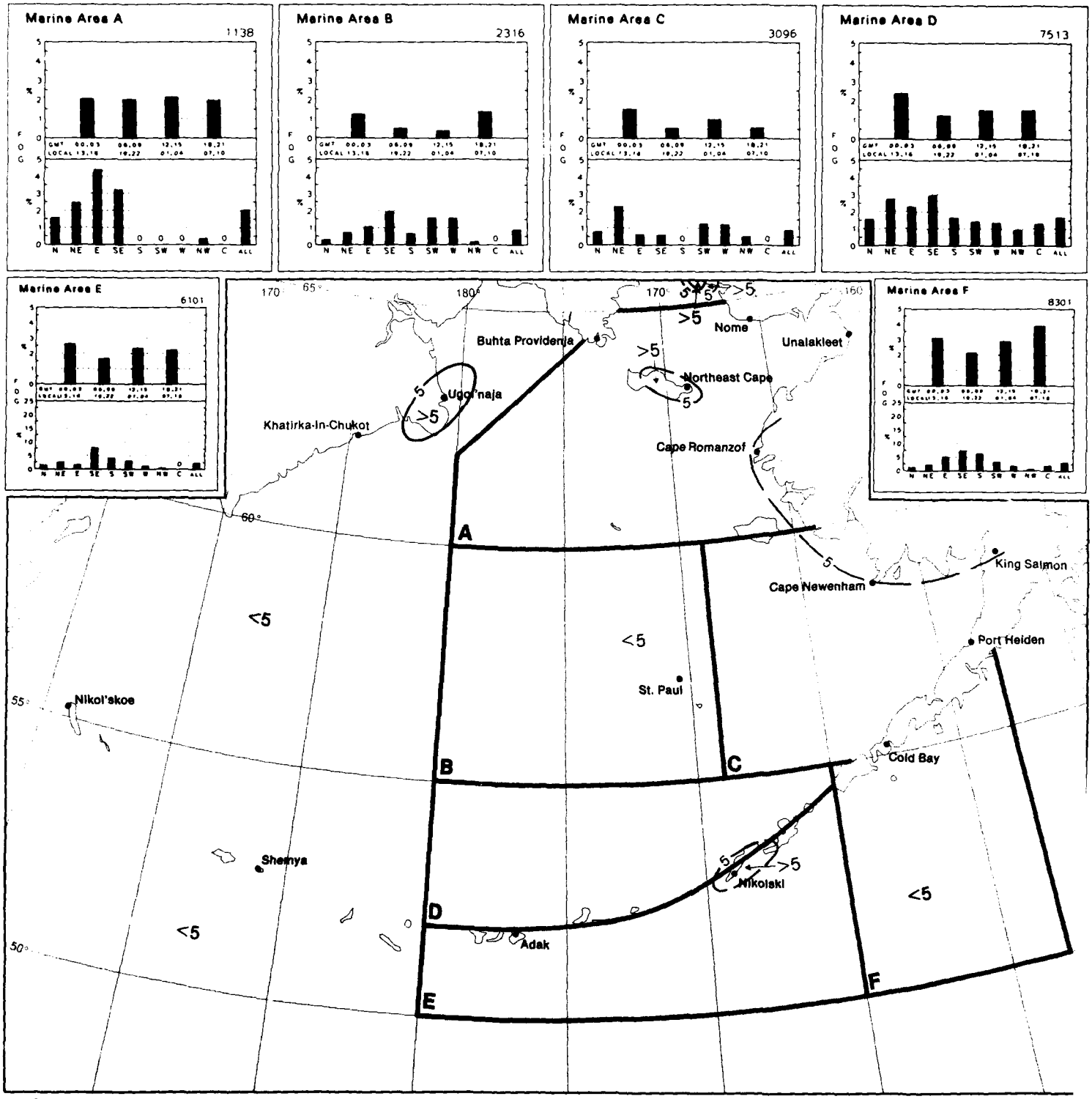

Nikol'skoe
5503
Khatirka-In-Chukot
3487
Ugol'naja
5106
Buhta Providenja
4518
Norheast Cape
11066
Nome
21183
Unalakleet
15625
Cape Romanzof
18618
Cape Newenham
20490
King Salmon
18187
Port Heiden
1501
Cold Bay
13832
Nikolski
2428
St. Paul
10734
Adak
21863
Shemya
19514
FOG
%
N NE E SE S SW W NW C ALL



15 Fog and Poor Visibility

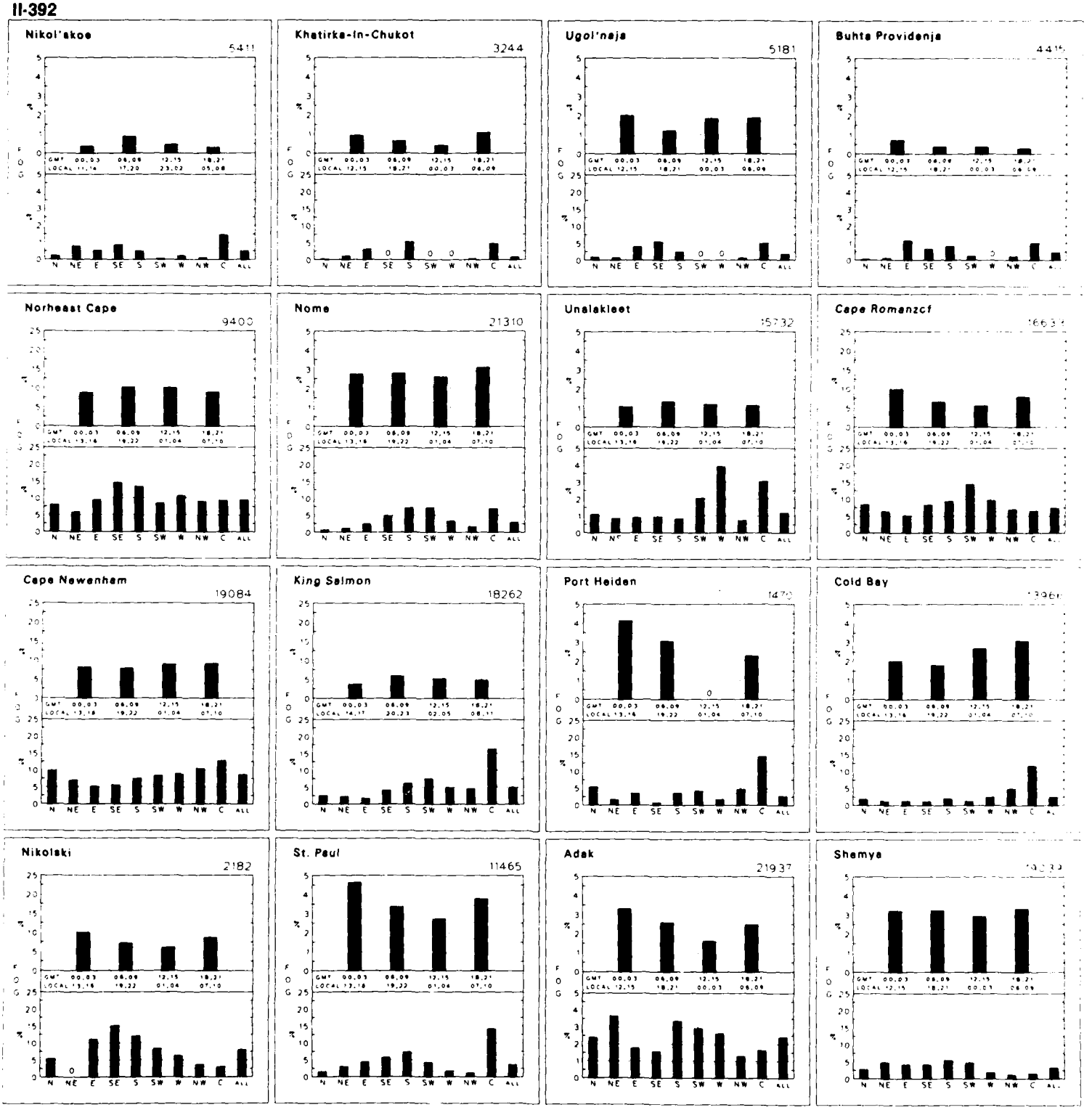
Octobe

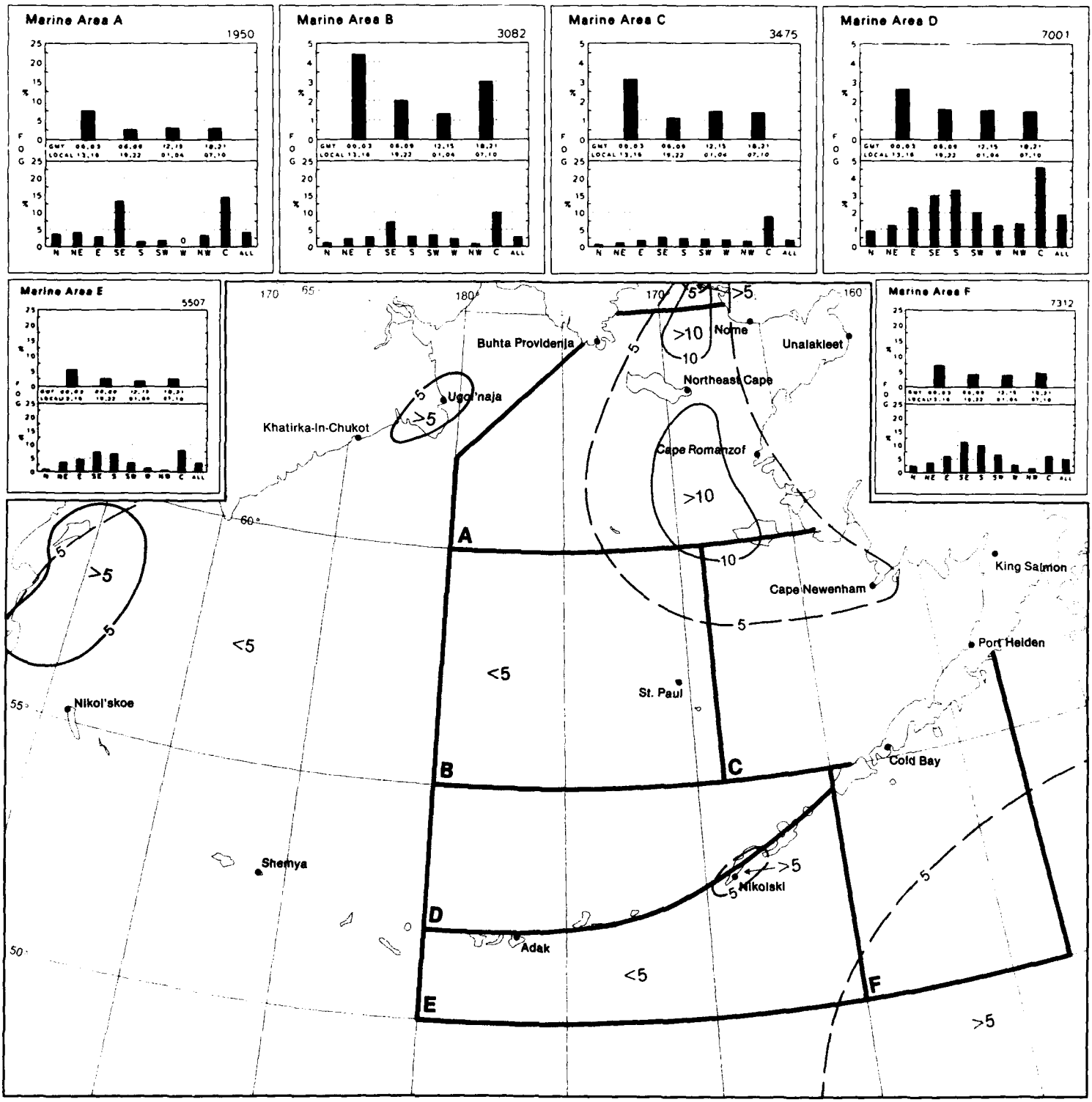

Nikol'skoe
5256
Khatirka-In-Chukot
3233
Ugol'naja
4969
Buhta Providenja
Norheast Cape
10289
Nome
20596
Unalakleet
15235
Cape Romanzof
Cape Newenham
19264
King Salmon
17658
Port Heiden
1475
Cold Bay
Nikolski
2076
St. Paul
10892
Adak
20878
Shemya
N NE E SE S SW W NW C ALL



15 Fog and Poor Visibility

Novembe


Nikol'skoe
5411
Khatirka-In-Chukot
3244
Ugol'naja
5181
Buhta Providenja
Norheast Cape
9400
Nome
21310
Unalakleet
Cape Romanzef
Cape Newenham
19084
King Salmon
18262
Port Heiden
Cold Bay
Nikolski
2182
St. Paul
11465
Adak
21937
Shemya
FOG
N NE E SE S SW W NW C ALL



15 Fog and Poor Visibility **December**

Map 16. Sea surface temperature extremes (°C)

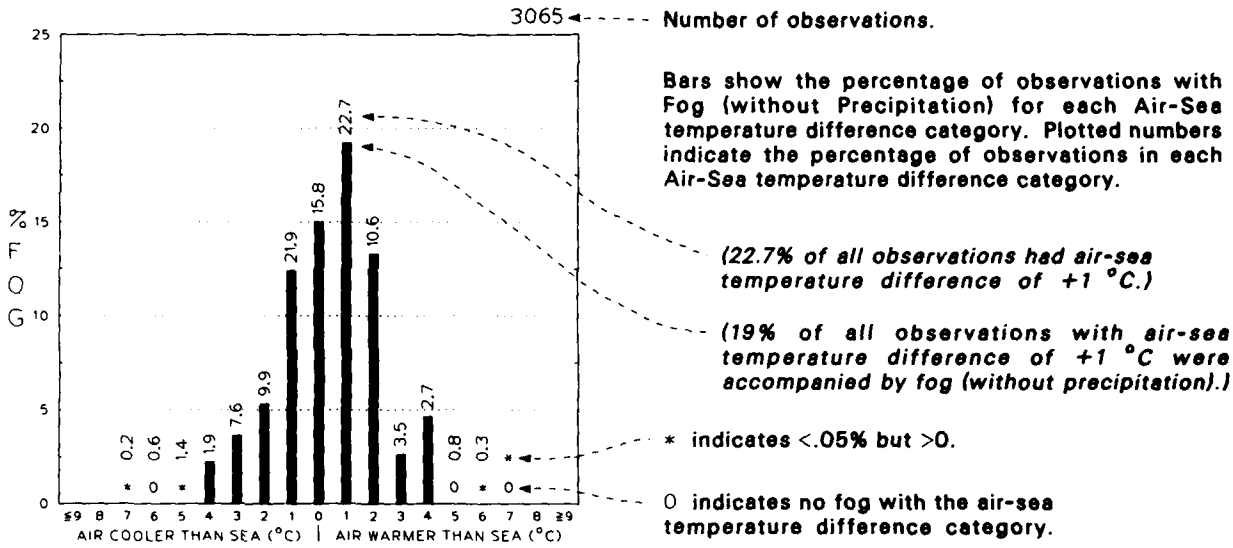
BLACK LINE – Maximum (99%) sea surface temperature (1% of the temperatures were greater than the given value).

BLUE LINE – Minimum (1%) sea surface temperature (1% of the temperatures were equal to or less than the given value).

Albers Equal–Area Conic Projection

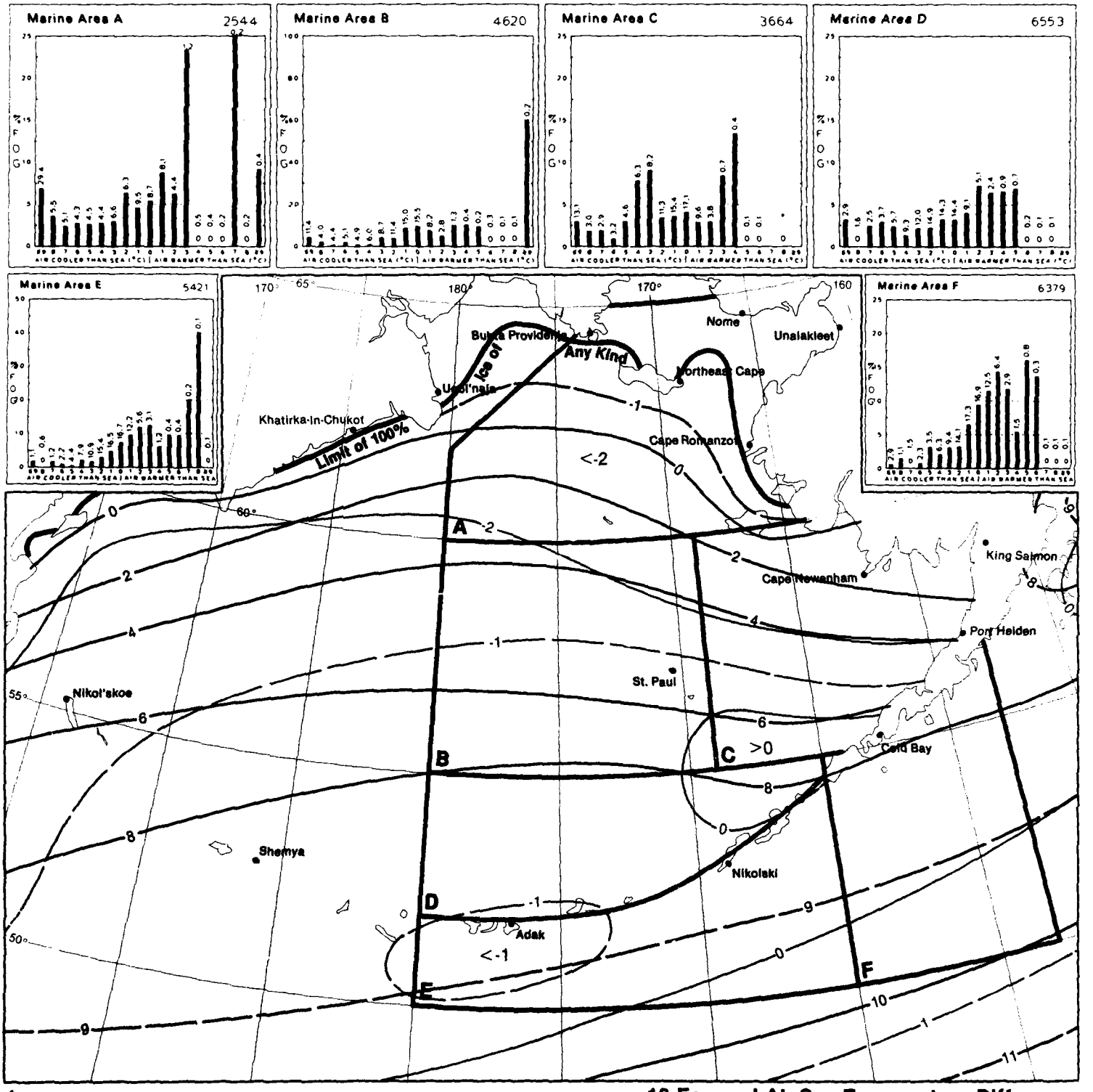
Graphs: Fog/air-sea temperature difference

PERCENT FREQUENCY OF THE OCCURRENCE OF FOG (Without Precipitation) VERSUS AIR-SEA TEMPERATURE DIFFERENCE (°C)



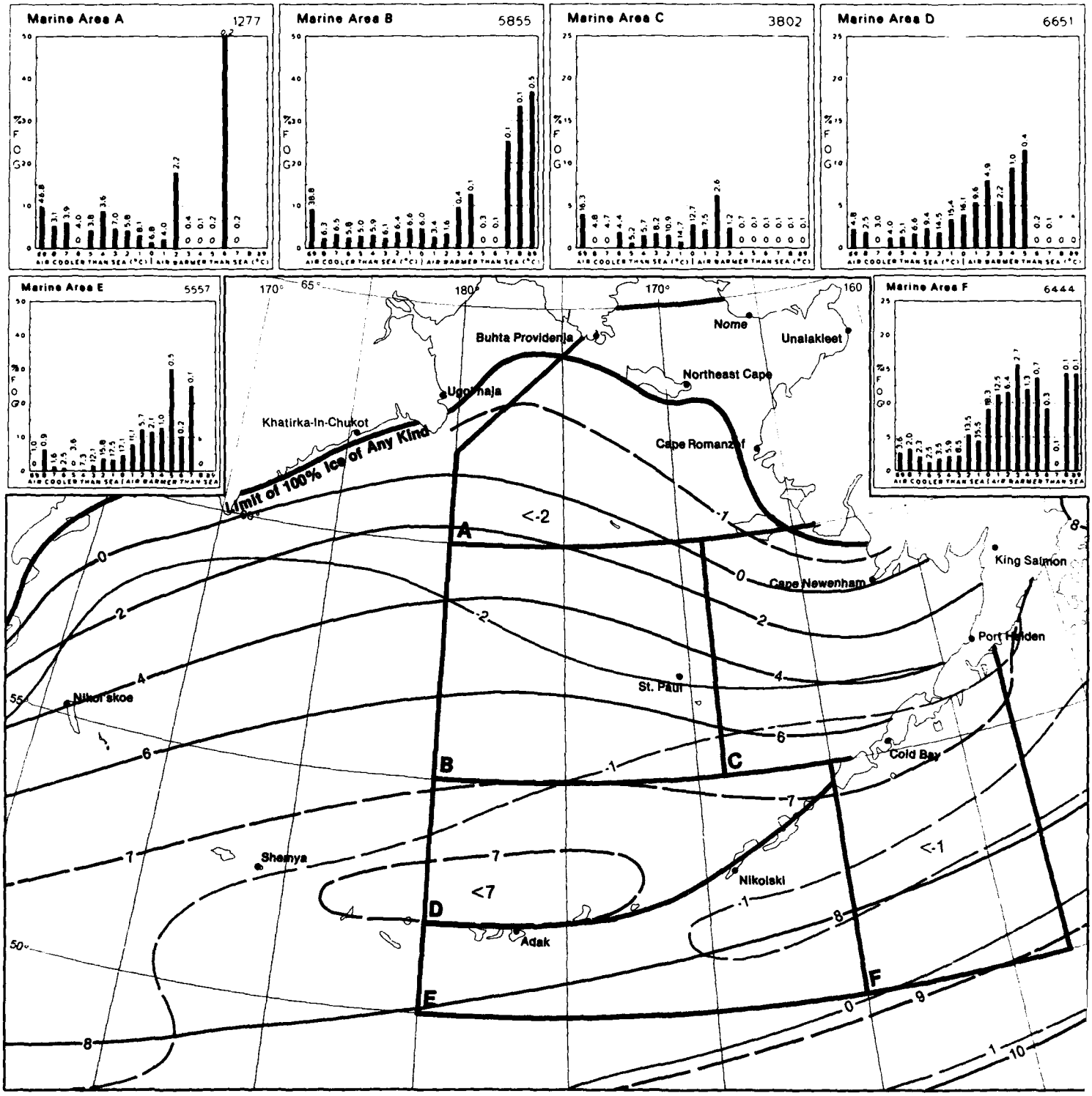
Sea surface temperatures are recorded with a fairly high frequency in marine observations. The principal methods for observing the temperature of the water surface on merchant ships are by either a fluid thermometer located in the condenser intake of the ship or a thermometer immersed in a freshly-drawn bucket of surface water. While the intake method is commonly used on most merchant ships today, the bucket method was the most common a half century ago. Injection temperatures are not considered as representative of the surface temperature as bucket readings because the injectors are commonly located well below the water surface at depths of 5 to 20 meters depending on the size of the ship. Injection temperatures are also subject to varying errors due to heating caused by the ship. Bucket temperatures can also be biased by the air temperature or the bucket itself.

Even though the two methods produce slightly different results, the data can be used with considerable confidence. The isopleths representing extreme conditions show the maximum (99%) and the minimum (1%) levels of sea surface temperature. Gradients and relative values of the isopleths are considered reliable.



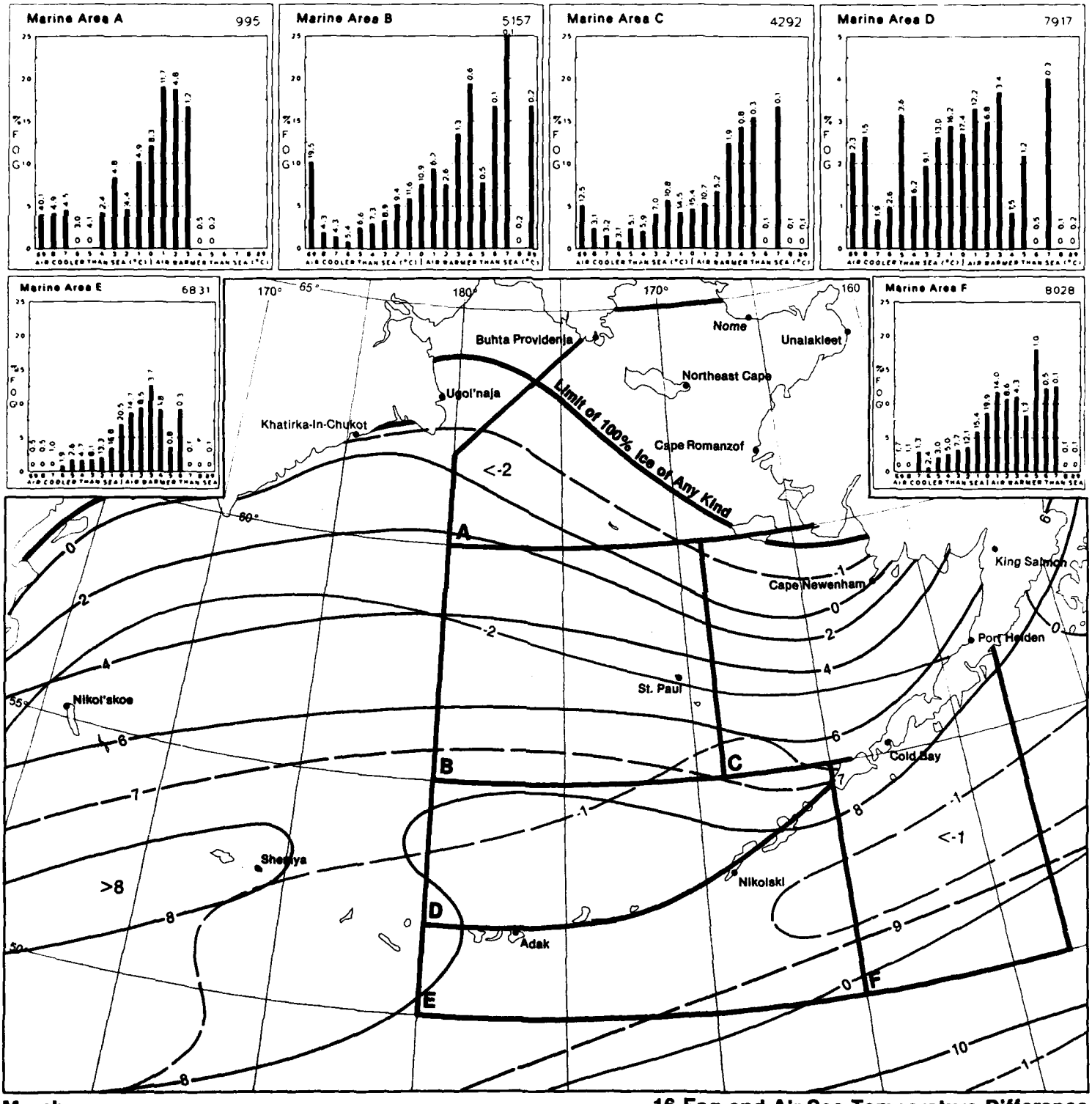
January

16 Fog and Air-Sea Temperature Difference
Sea Surface Temperature Extremes



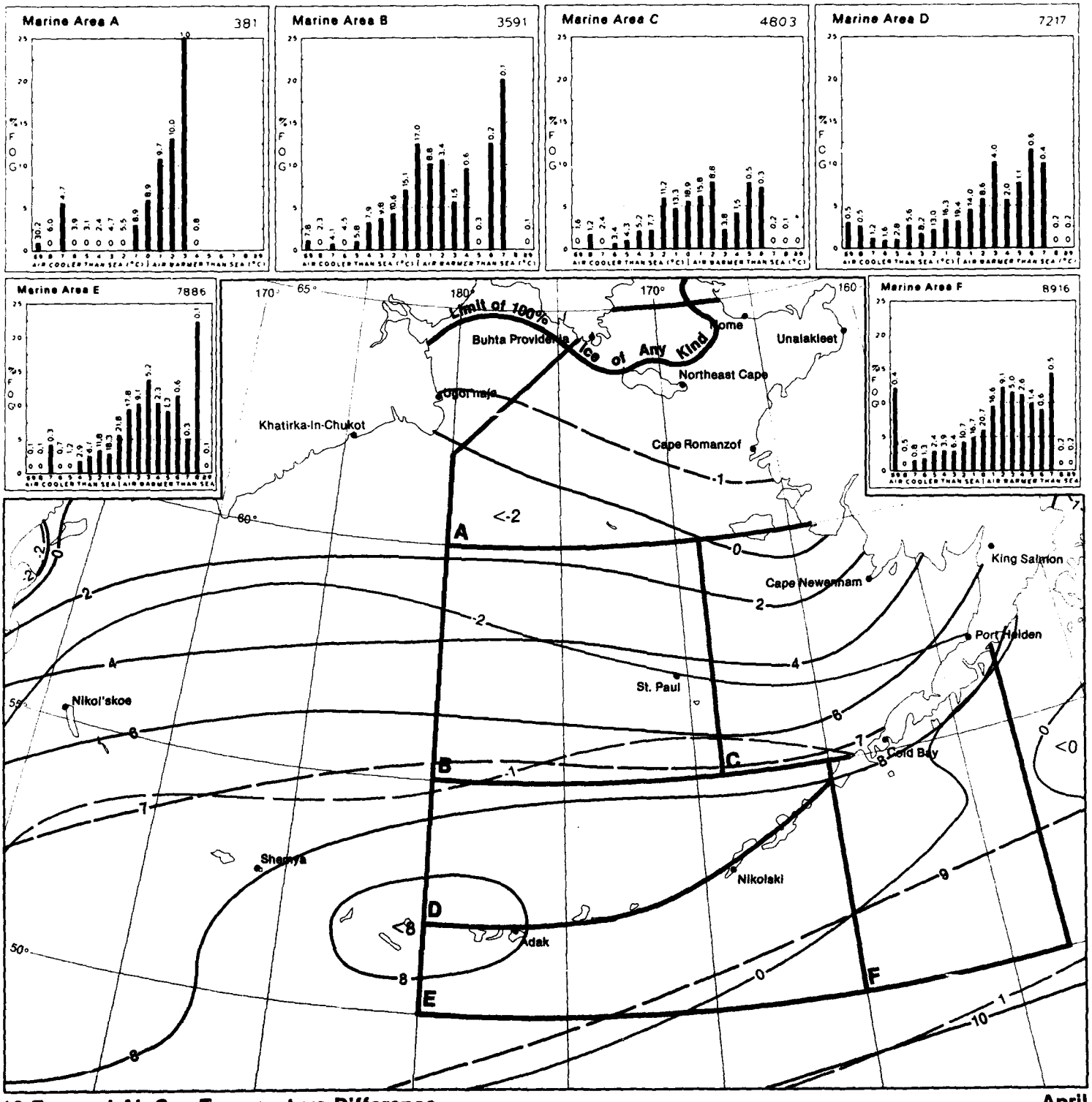
16 Fog and Air-Sea Temperature Difference
Sea Surface Temperature Extremes

February



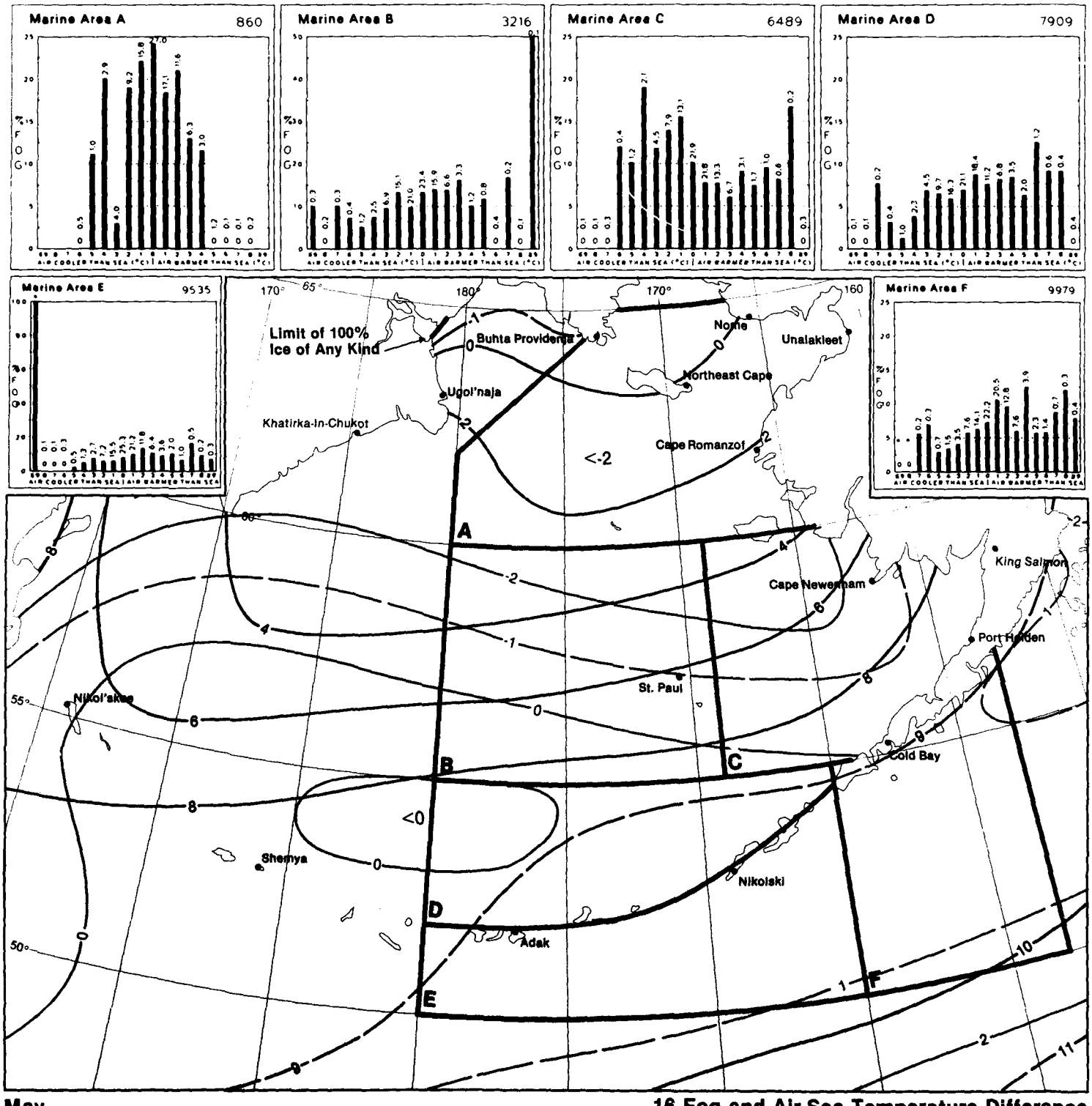
March

16 Fog and Air-Sea Temperature Difference
Sea Surface Temperature Extremes



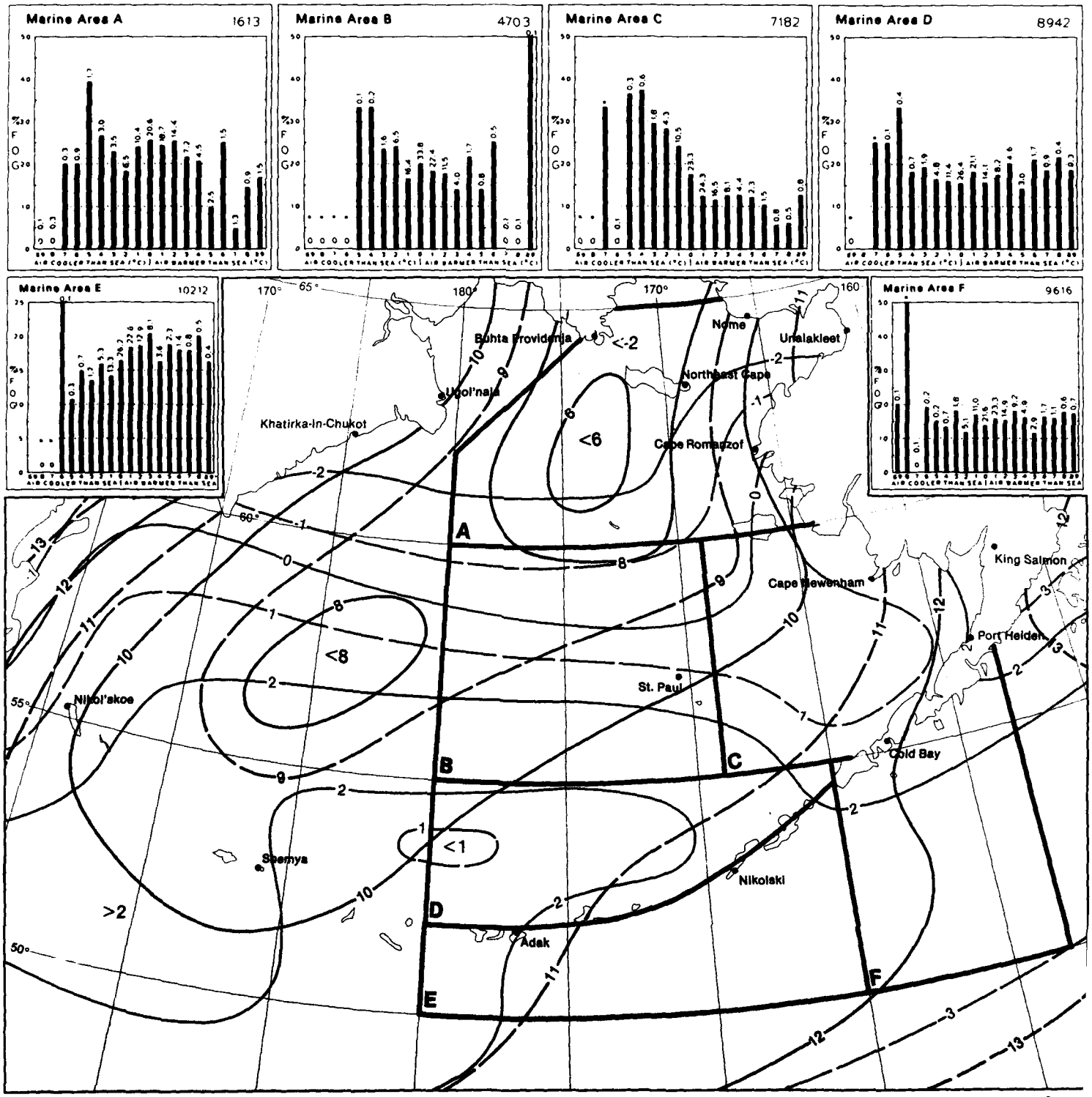
16 Fog and Air-Sea Temperature Difference
Sea Surface Temperature Extremes

April



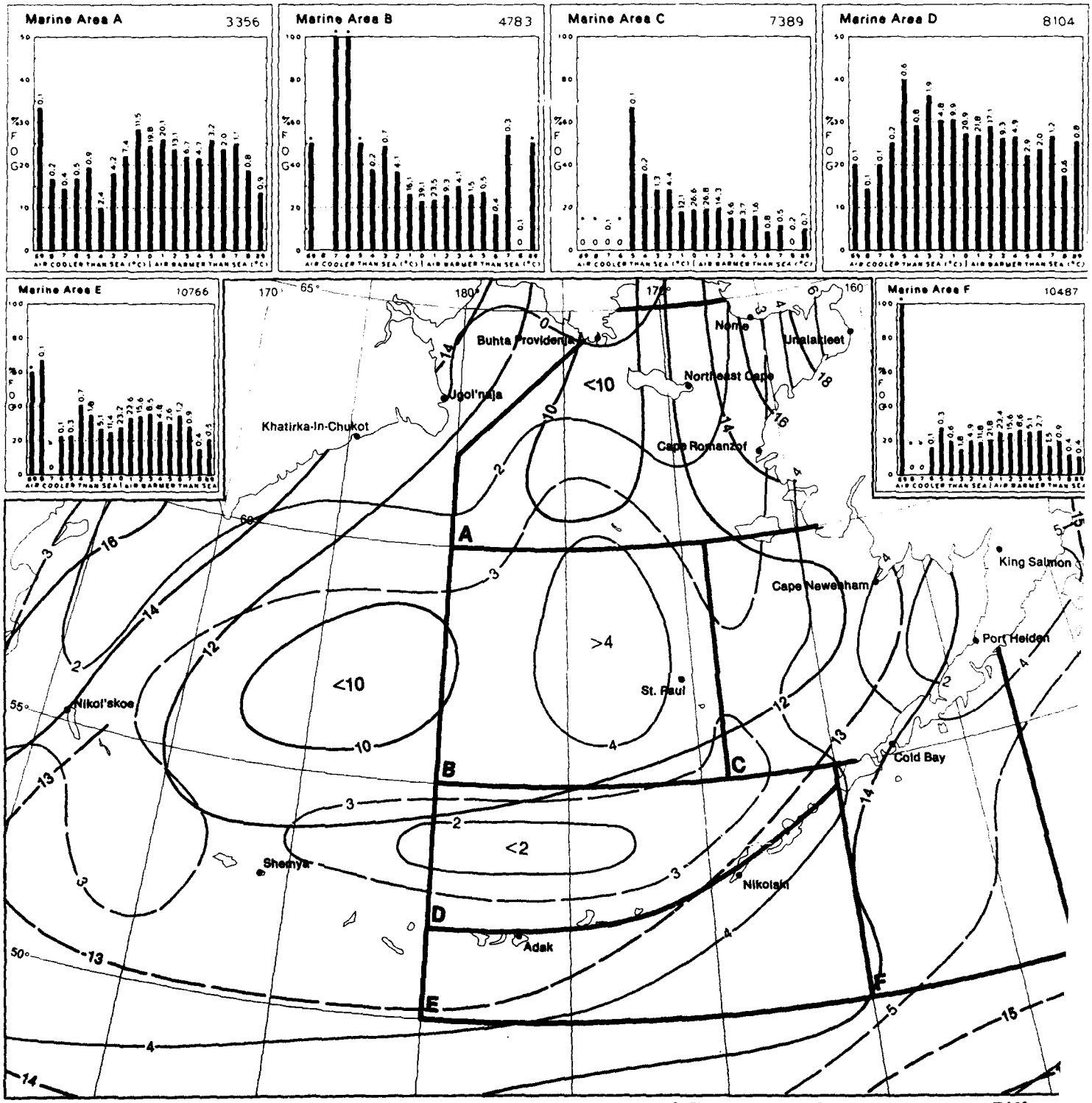
May

16 Fog and Air-Sea Temperature Difference
Sea Surface Temperature Extremes



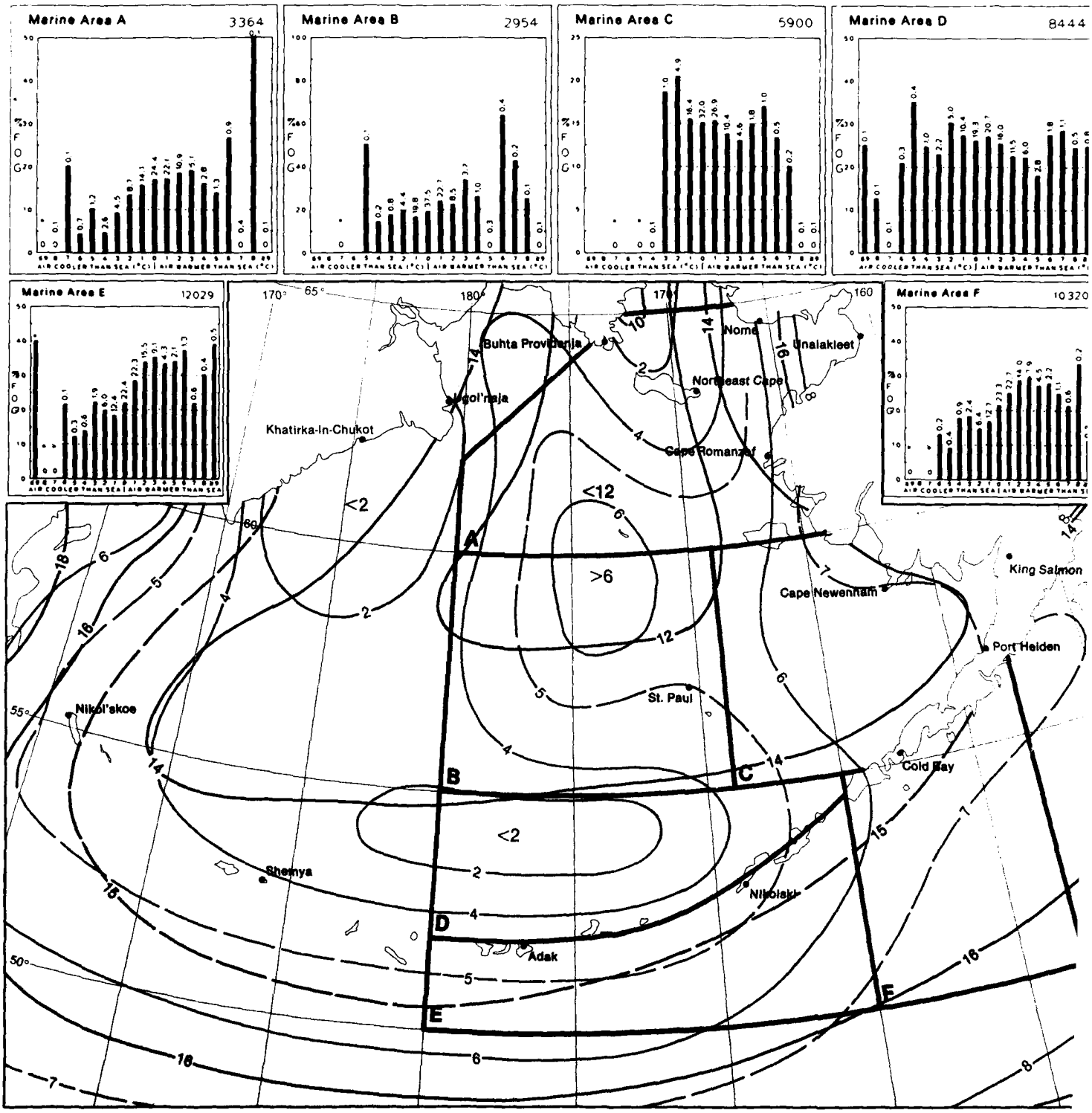
16 Fog and Air-Sea Temperature Difference
Sea Surface Temperature Extremes

June



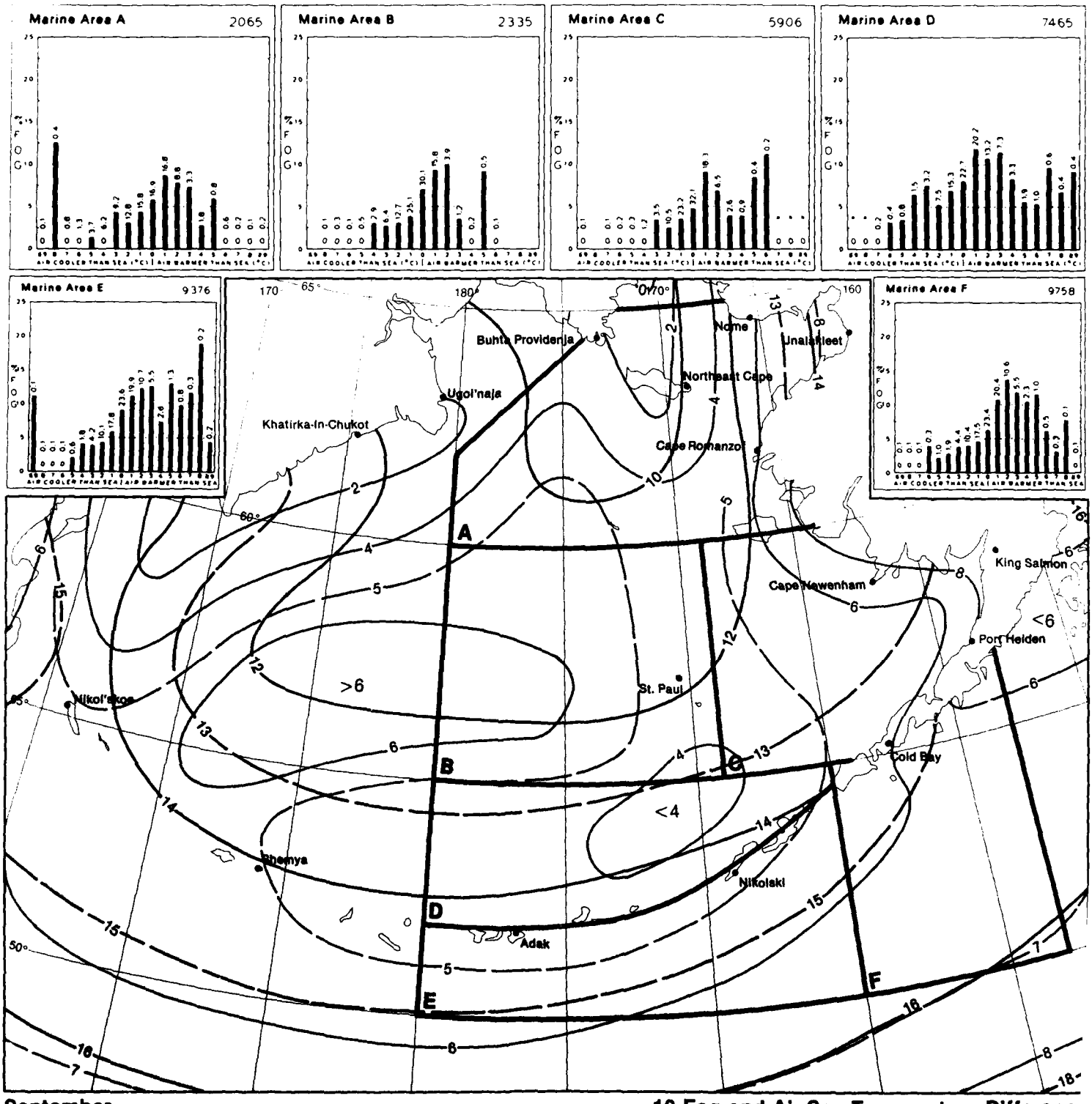
July

16 Fog and Air-Sea Temperature Differe
Sea Surface Temperature Extremes



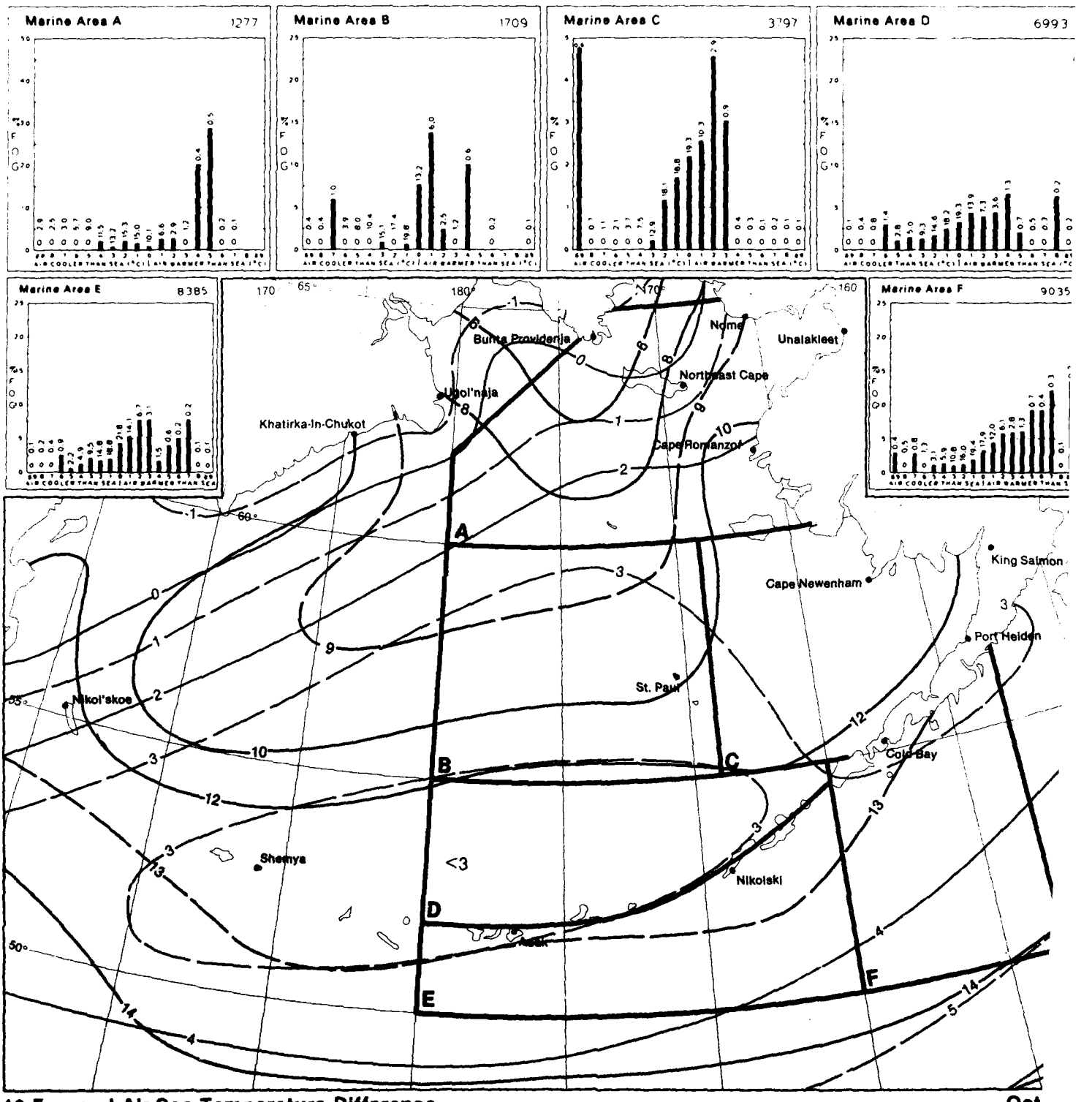
16 Fog and Air-Sea Temperature Difference
Sea Surface Temperature Extremes

Aug



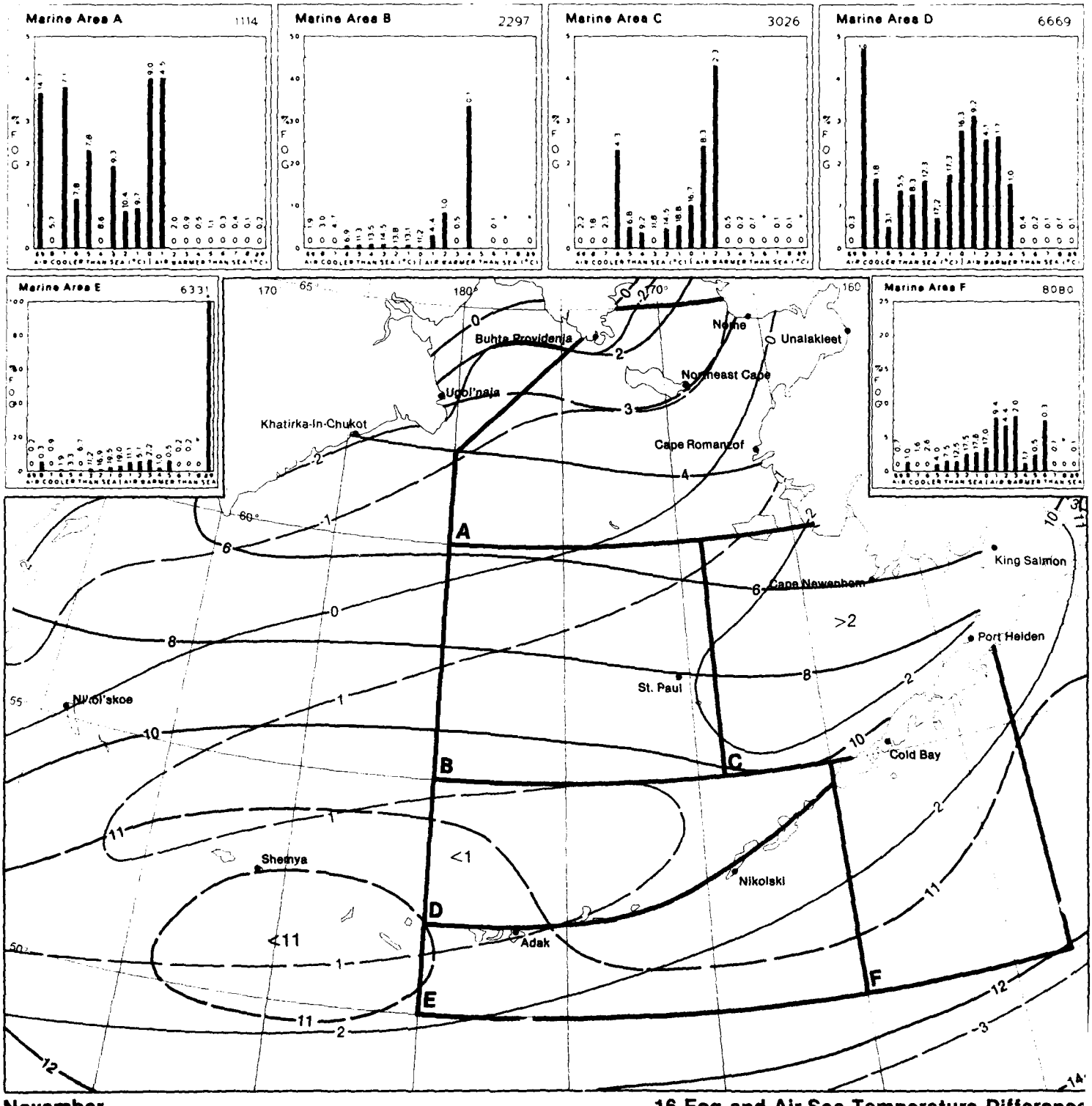
September

16 Fog and Air-Sea Temperature Difference
Sea Surface Temperature Extremes



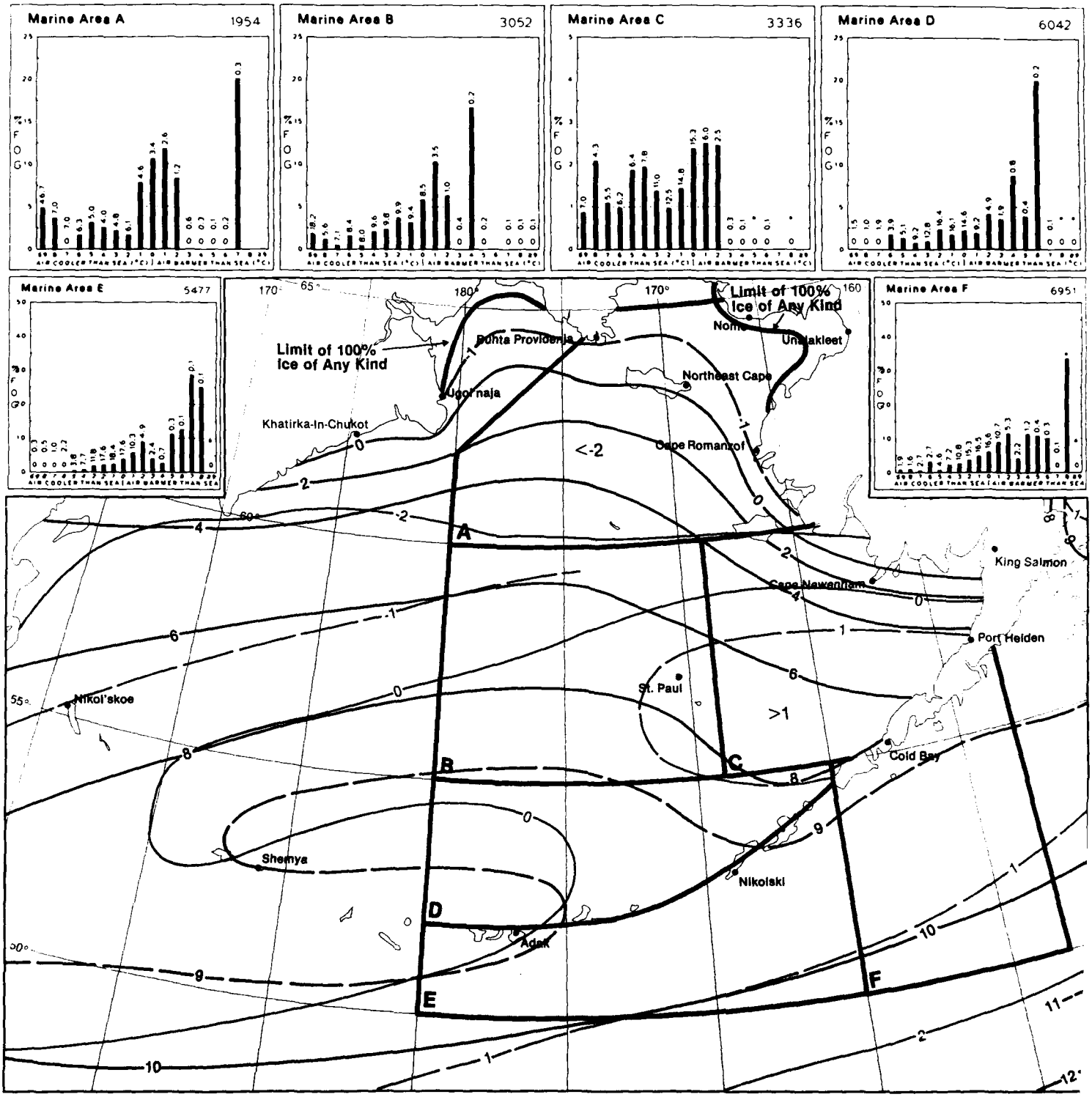
16 Fog and Air-Sea Temperature Difference
Sea Surface Temperature Extremes

Oct



November

16 Fog and Air-Sea Temperature Difference
Sea Surface Temperature Extremes



16 Fog and Air-Sea Temperature Difference Sea Surface Temperature Extremes

Decembe

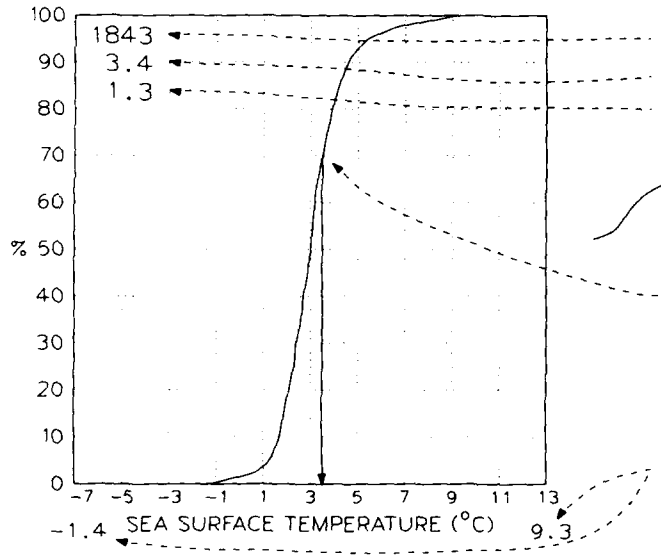
Map 17. Mean sea surface temperature and ice concentration of any kind.

BLACK LINE – Mean sea surface temperature (°C).

BLUE LINE – Percent frequency of occurrence of ice of any kind.

Albers Equal–Area Conic Projection

Graphs: Sea surface temperature



Number of observations.

Mean sea surface temperature (°C).

Standard deviation of sea surface temperatures (°C).

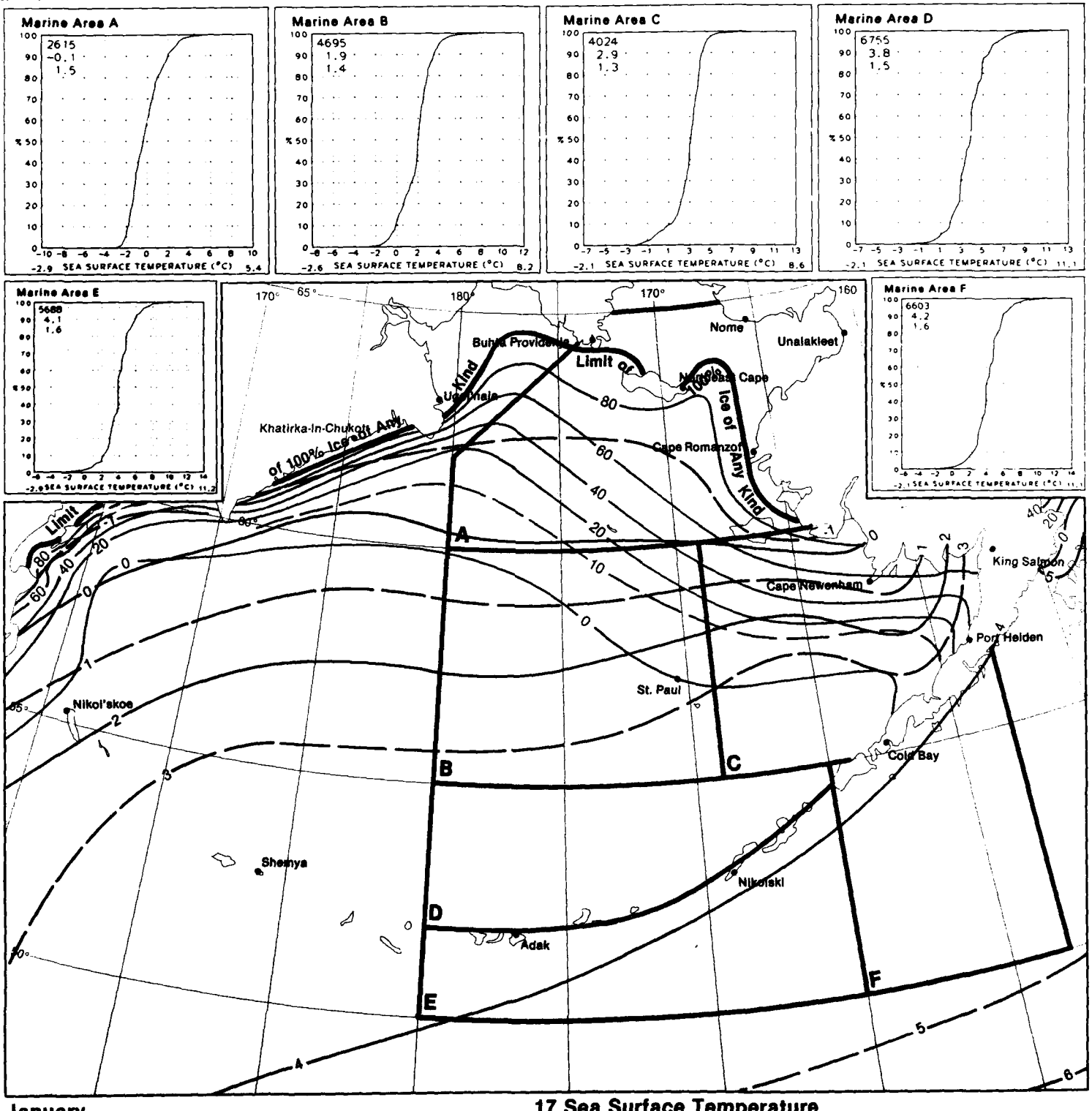
Cumulative percent frequency of sea surface temperatures equal to or less than the temperature intersected by the curve.

(70% of all observed sea surface temperatures were ≤3.5 °C or ≤38.3 °F.)

Maximum and minimum sea surface temperature.

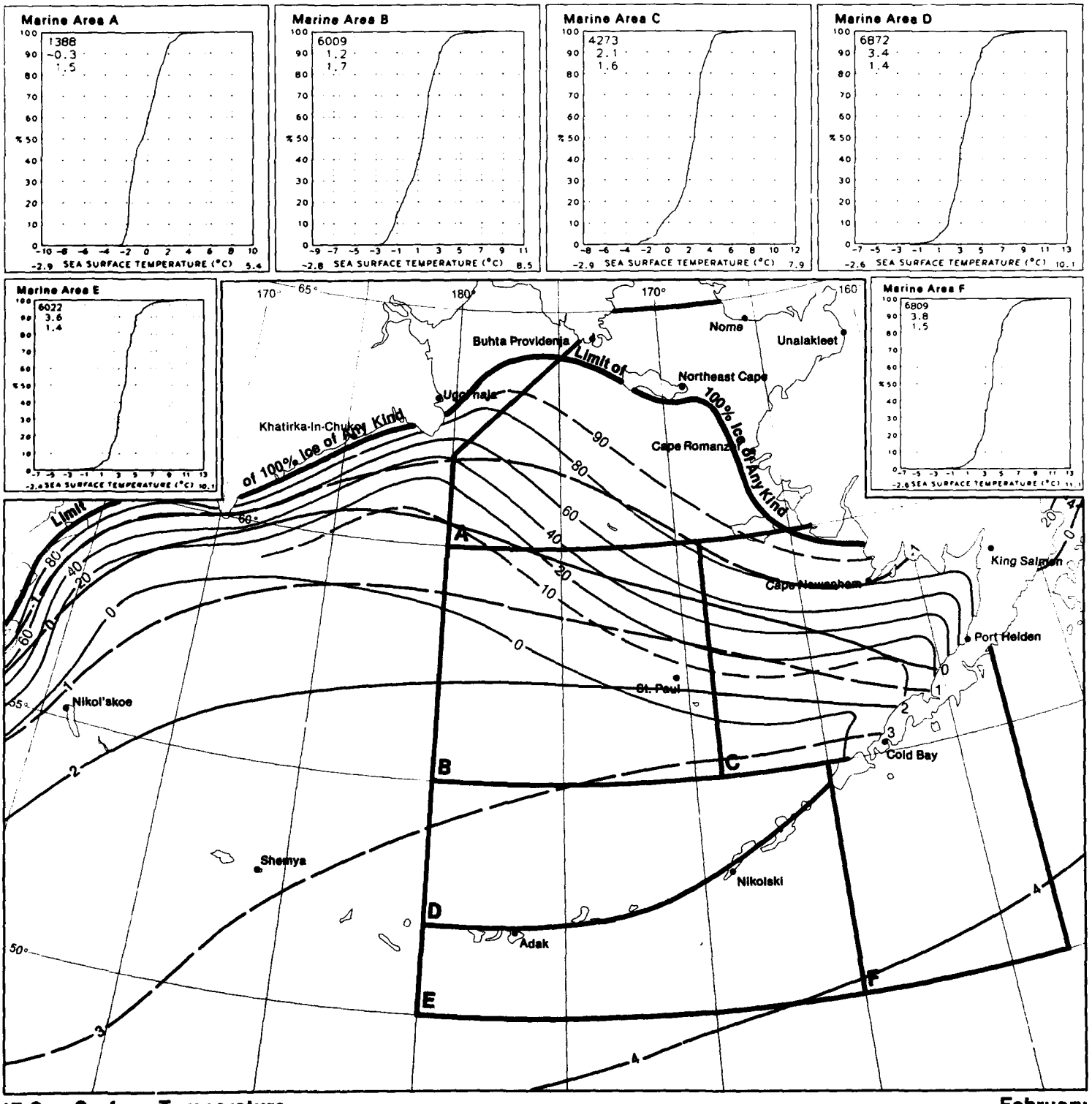
The percentage of temperatures greater than a given value can be obtained from the graph by subtracting the cumulative frequency of that value from 100%. Sea surface temperatures may be used to estimate the length of time a person in ordinary clothes and life preserver may be expected to survive if washed overboard. The approximate survival time as a function of water temperature is shown in the following table (refer to the text in Section I of the atlas for information on immersion hypothermia, and to the introductory text in Section II for sea ice information).

Water Temperature	Exhaustion or Unconsciousness	Expected time of Survival
0 °C	15 min	15—45 min
0 °—5 °C	15—30 min	30—90 min
5 °—10 °C	30—60 min	1—3 hours
10 °—15 °C	1—2 hours	1—6 hours
15 °—20 °C	2—7 hours	2—40 hours
20 °—25 °C	3—12 hours	3—indefinite hrs
25 °C	Indefinite	Indefinite



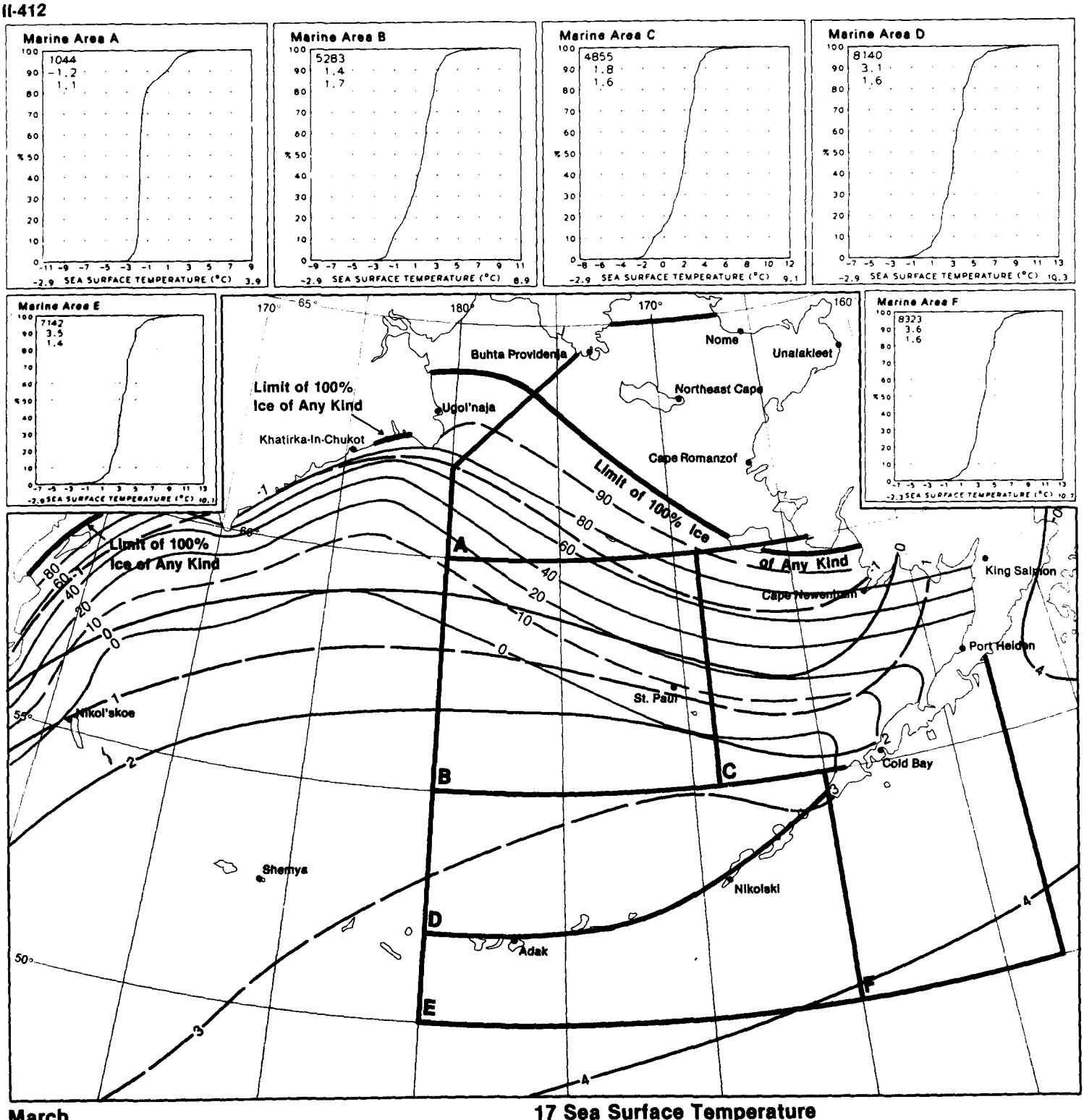
January

17 Sea Surface Temperature
Mean Sea Surface Temperature and Ice of Any Kind



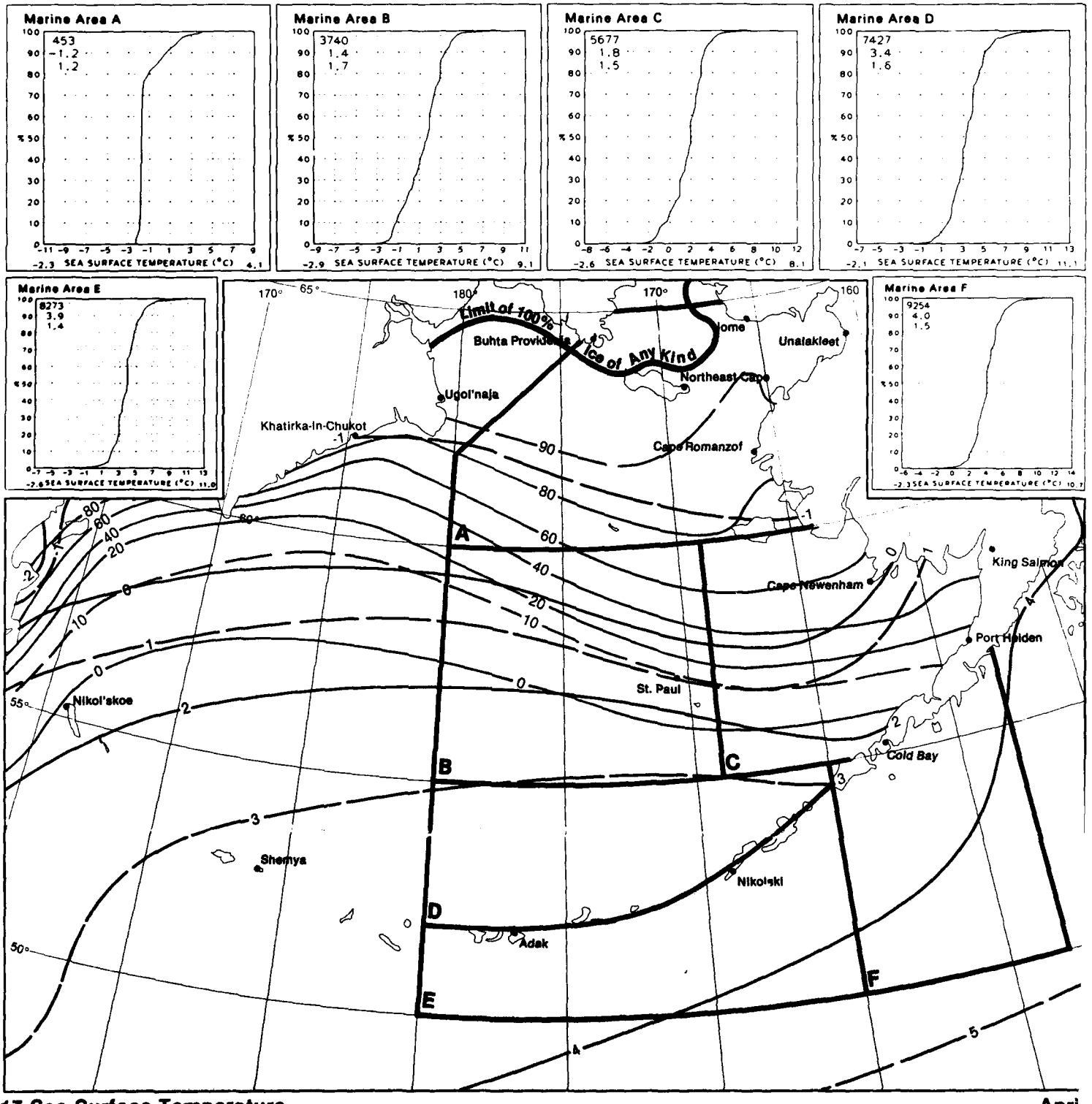
17 Sea Surface Temperature **February**

Mean Sea Surface Temperature and Ice of Any Kind



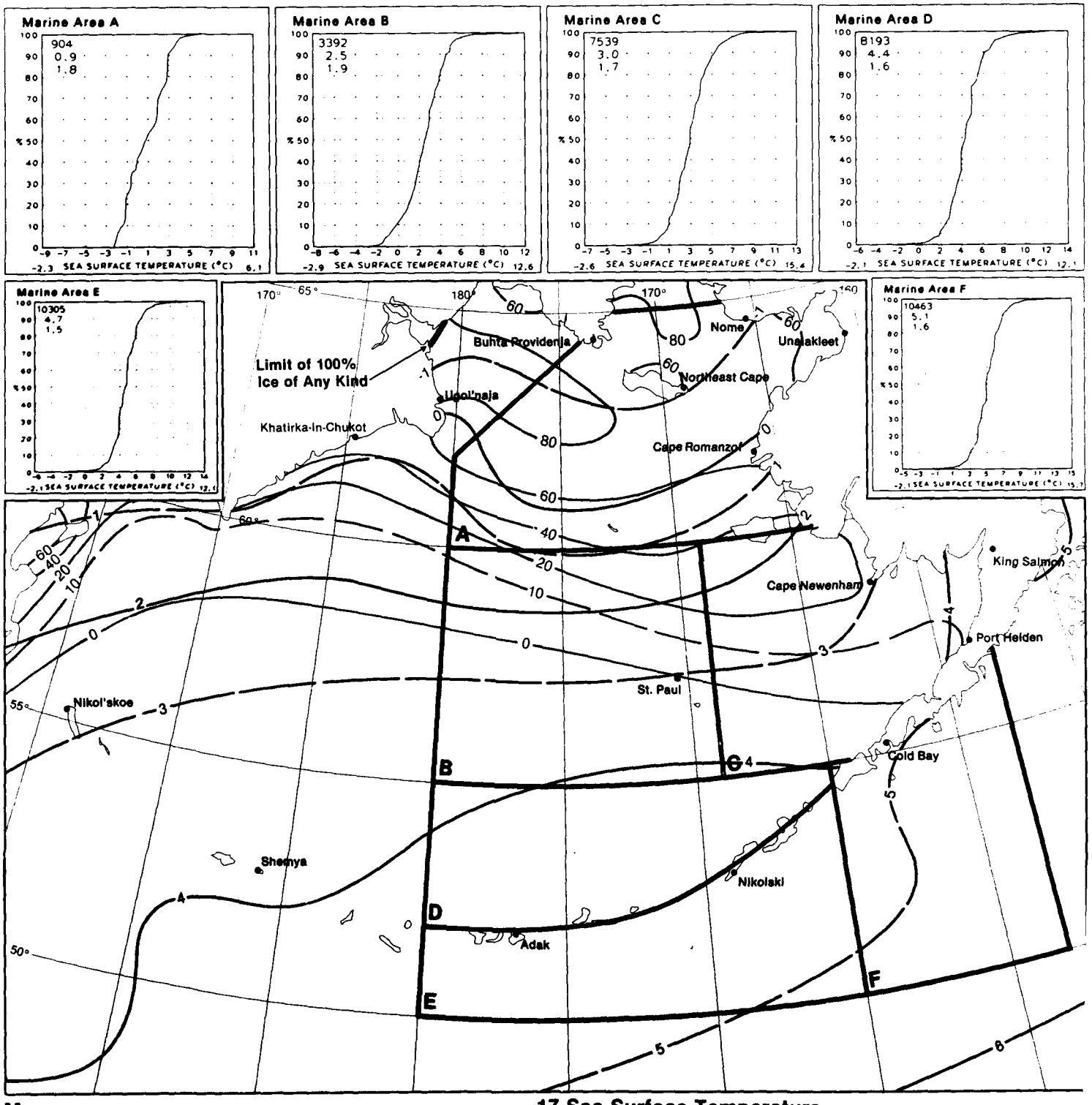
March

17 Sea Surface Temperature
Mean Sea Surface Temperature and Ice of Any Kind



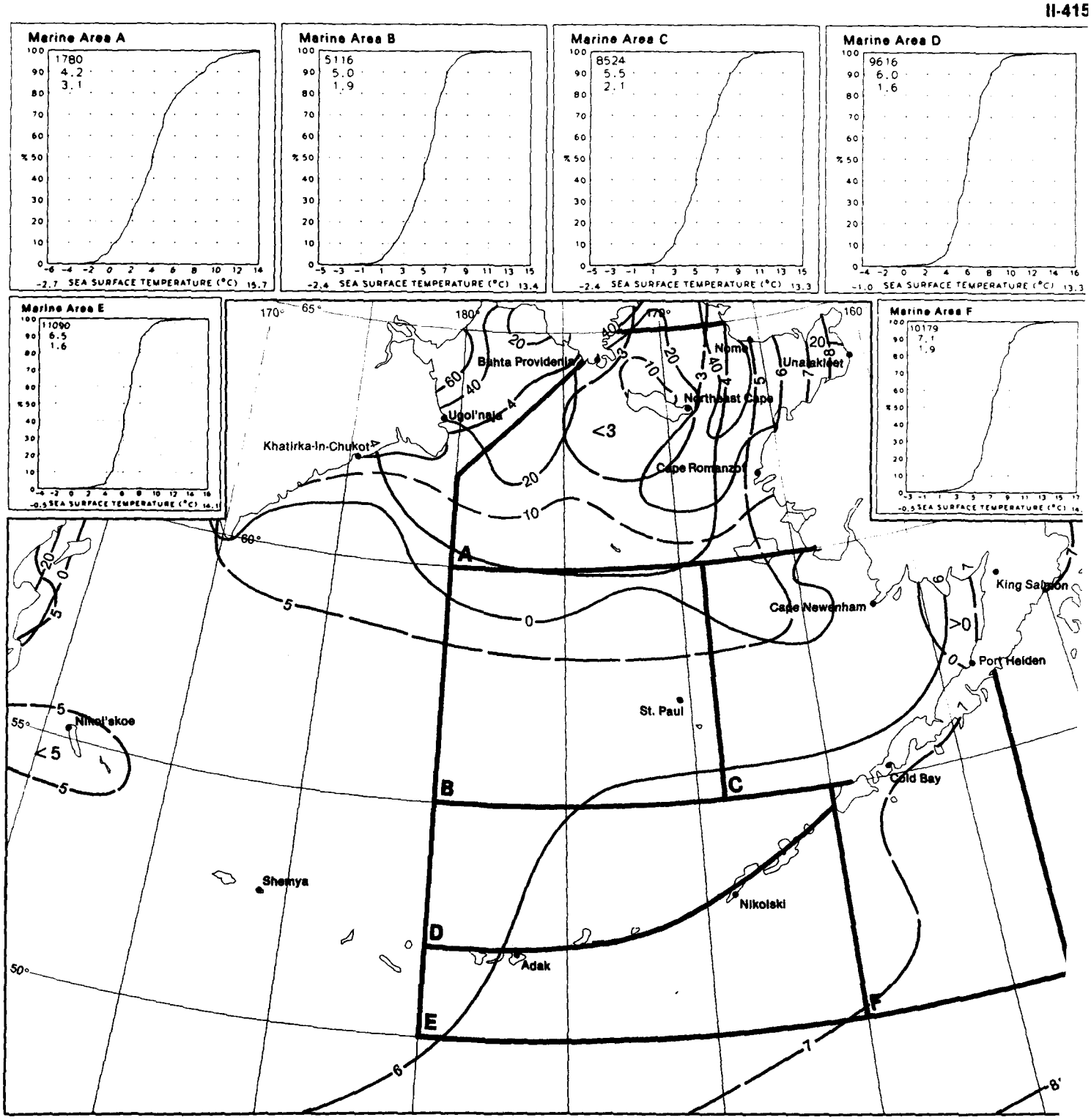
17 Sea Surface Temperature Apri

Mean Sea Surface Temperature and Ice of Any Kind

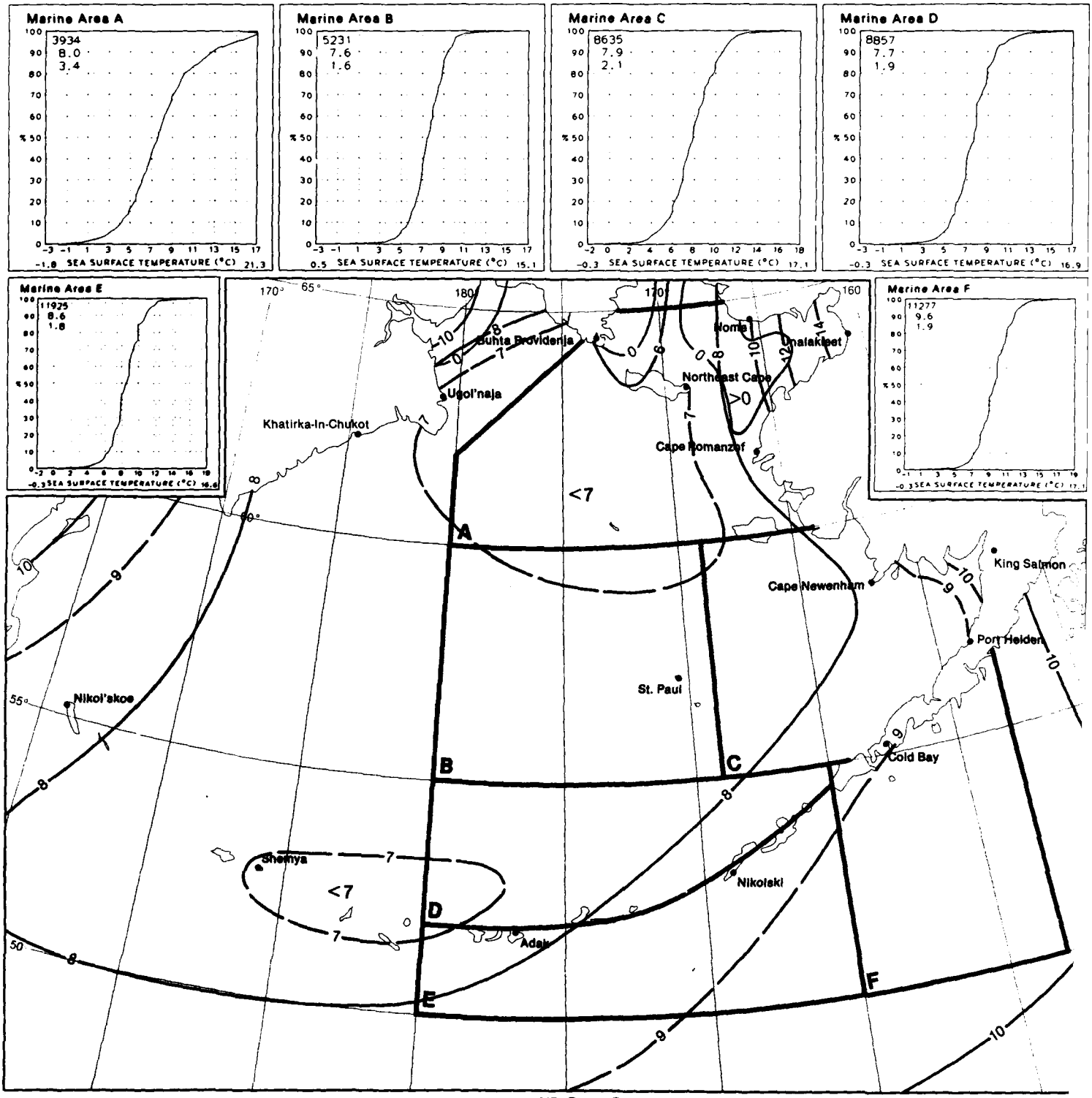


May

17 Sea Surface Temperature
Mean Sea Surface Temperature and Ice of Any Kin

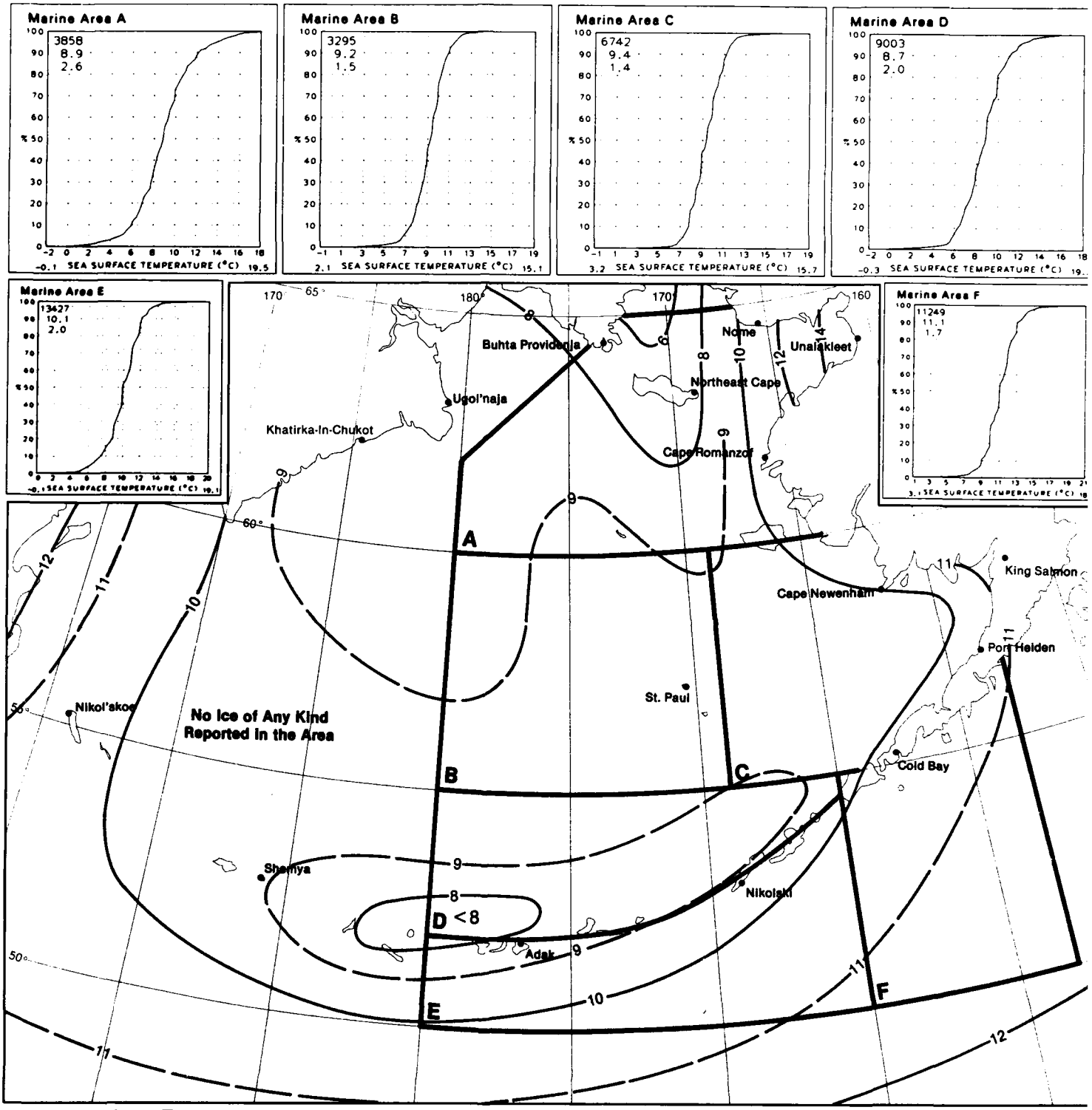


17 Sea Surface Temperature
Mean Sea Surface Temperature and Ice of Any Kind

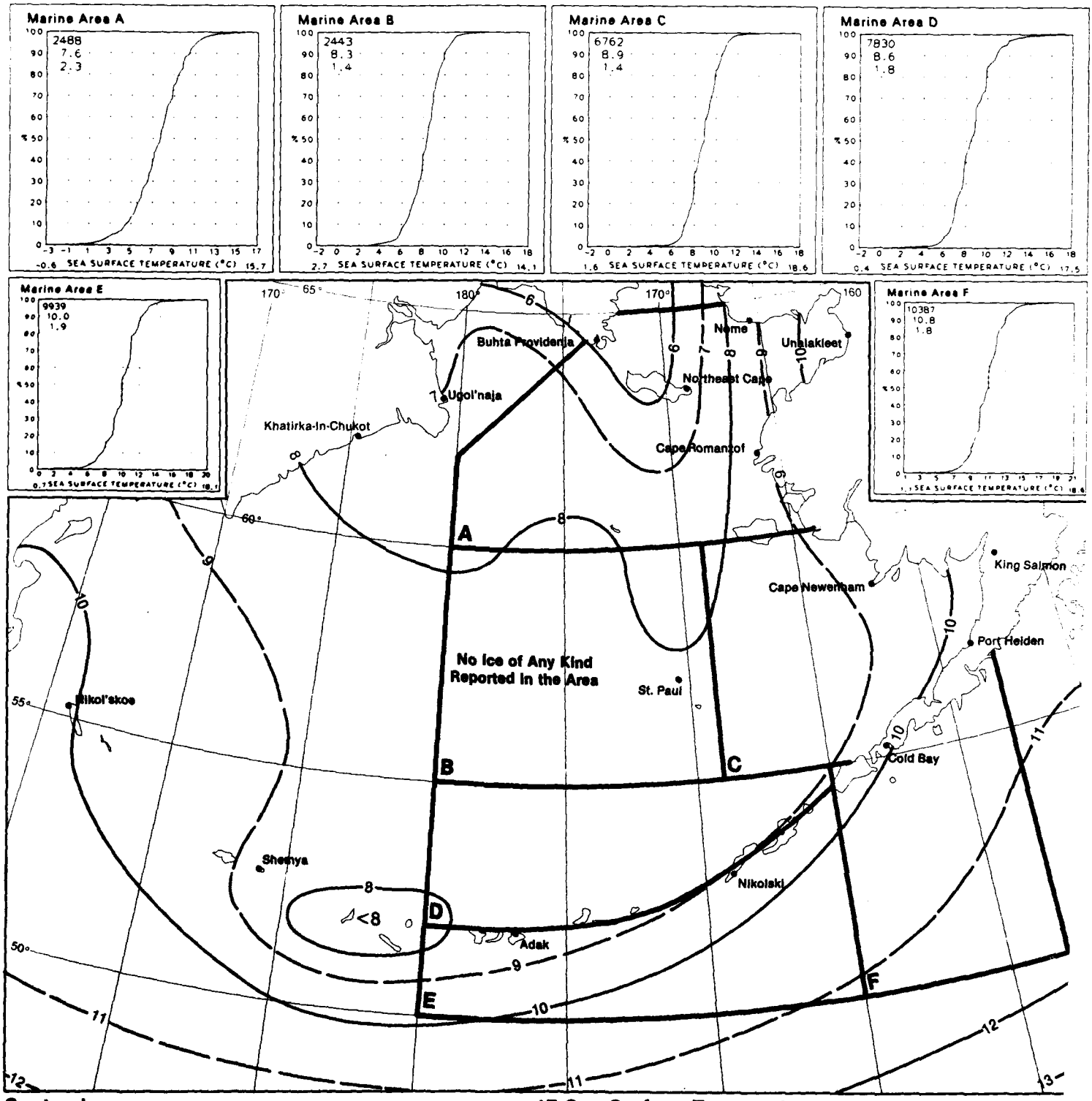


July

17 Sea Surface Temperature
Mean Sea Surface Temperature and Ice of Any Kir

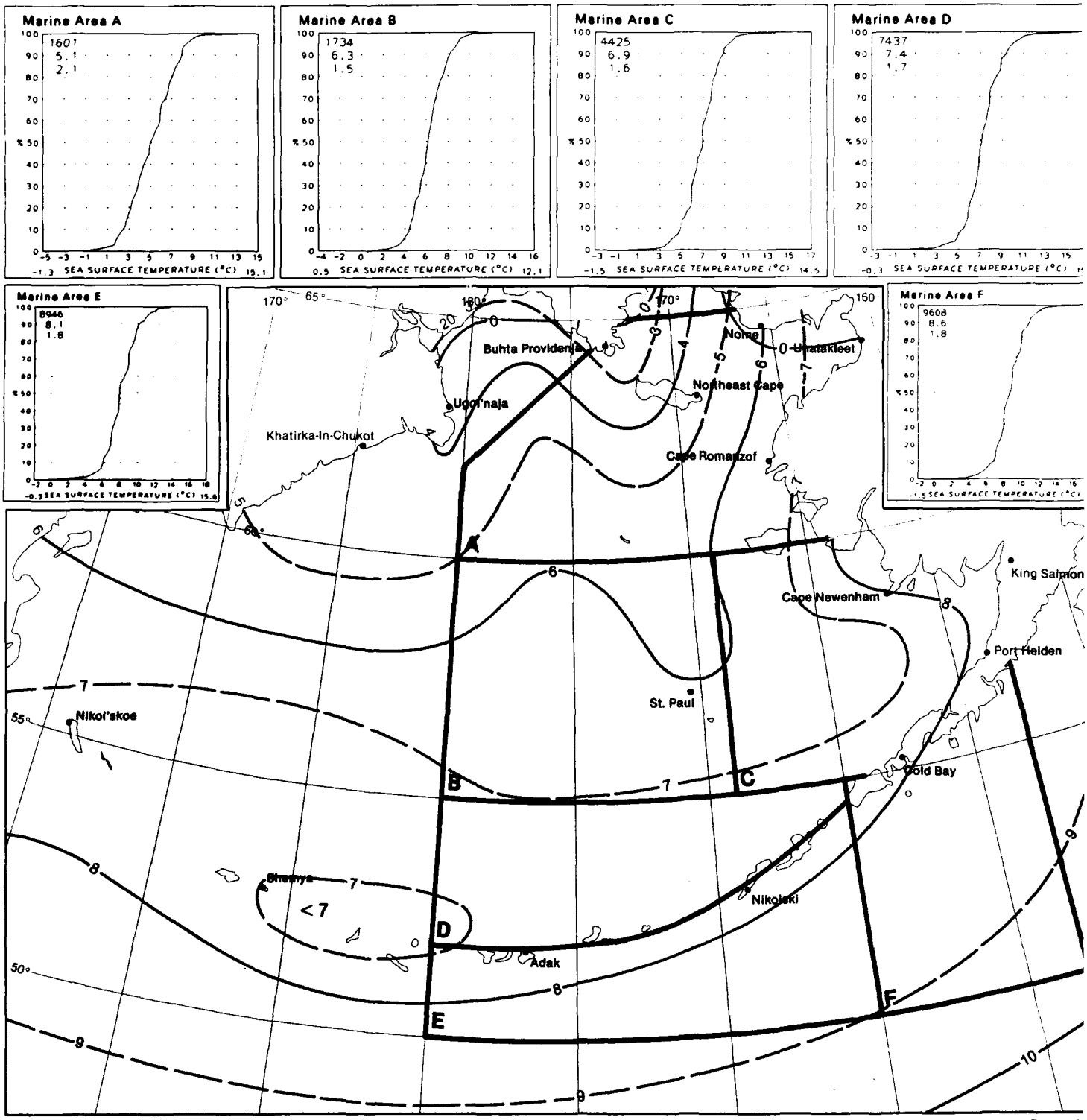


17 Sea Surface Temperature
Mean Sea Surface Temperature and Ice of Any Kind



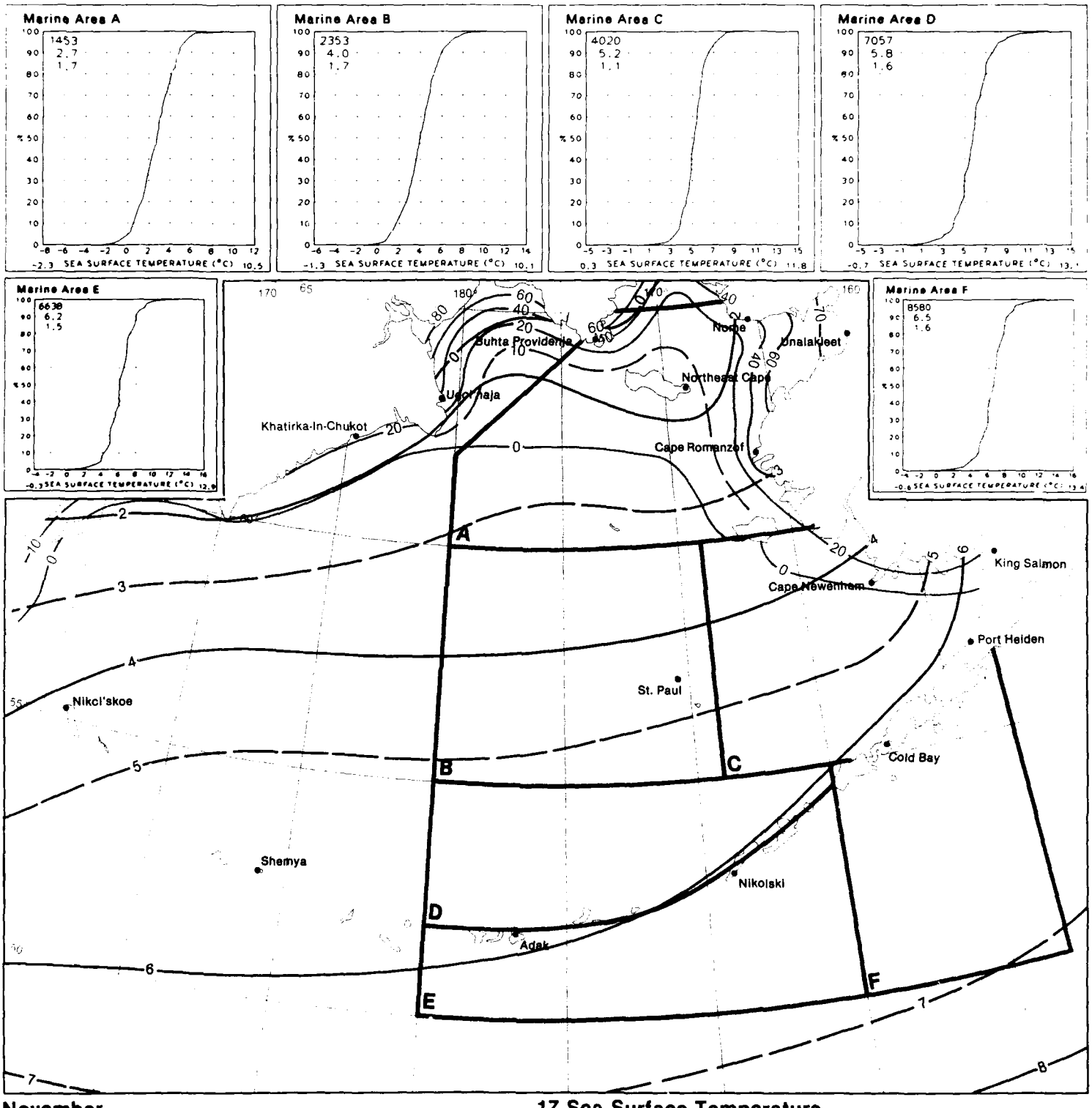
September

17 Sea Surface Temperature
Mean Sea Surface Temperature and Ice of Any Ki



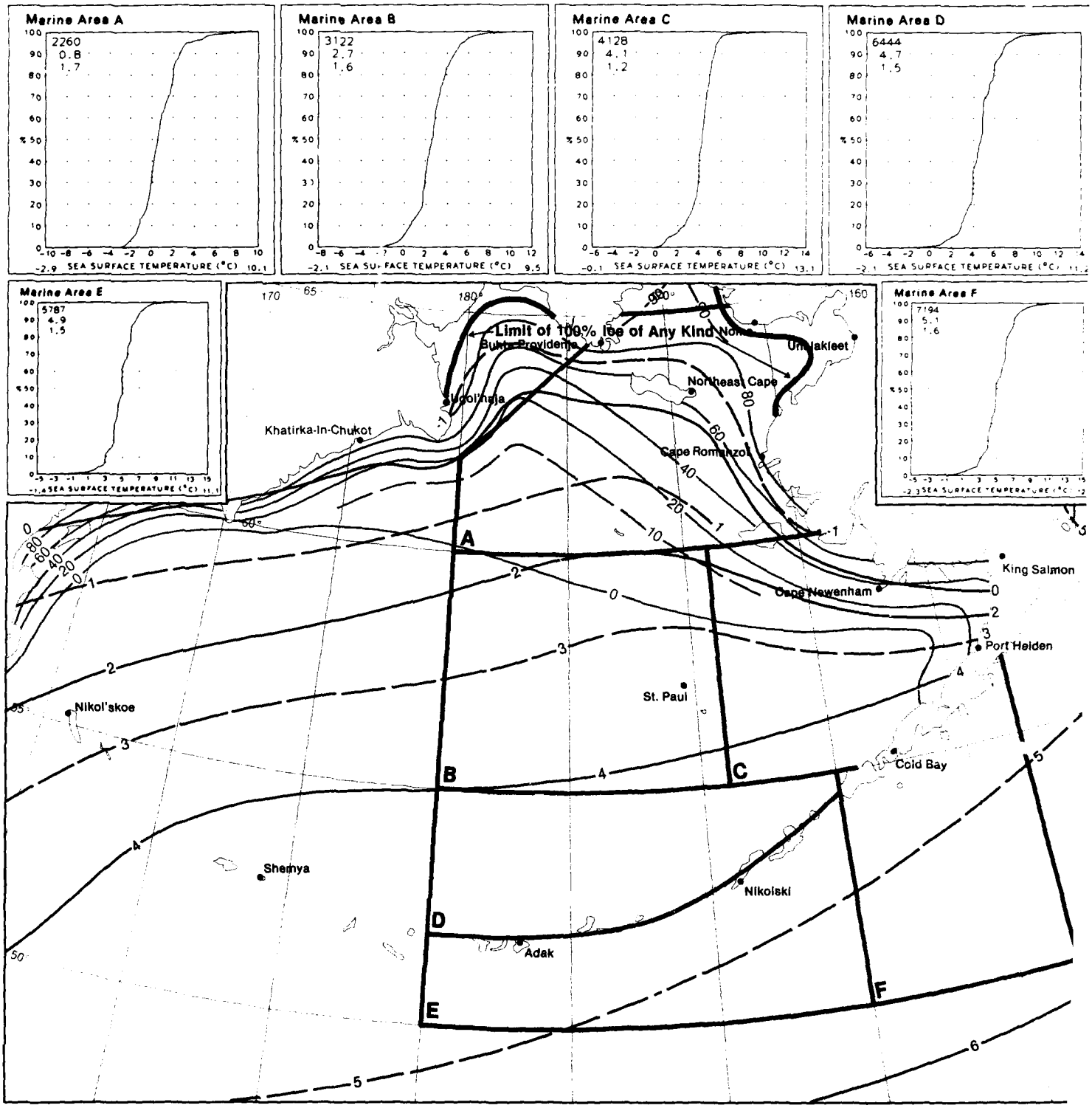
17 Sea Surface Temperature

Mean Sea Surface Temperature and Ice of Any Kind



November

17 Sea Surface Temperature
Mean Sea Surface Temperature and Ice of Any Kind



17 Sea Surface Temperature **Decemi**

Mean Sea Surface Temperature and Ice of Any Kind

Map 18. Wave height ≤3 feet and ice concentration ≥5/10ths

BLACK LINE – Percent frequency of wave height ≤3 feet (1 meter).

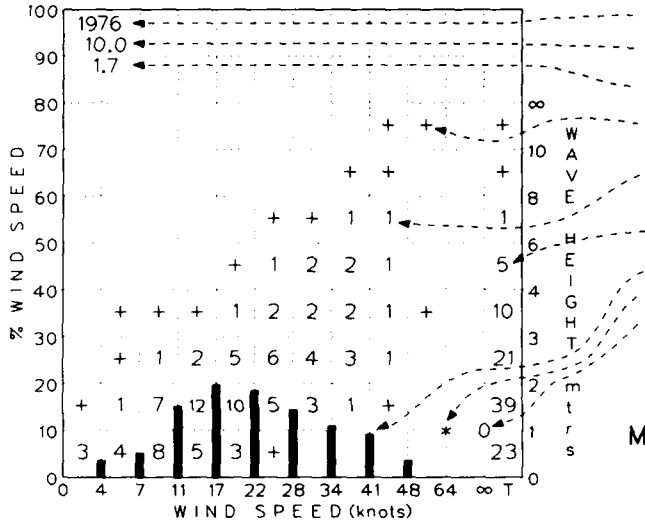
BLUE LINE – Percent frequency of ice concentration ≥5/10ths.

Albers Equal–Area Conic Projection

Graphs: Wave height/wind speed

Wind speed frequency: Bars are percentages for each wind speed category.

Wave height frequency: Numbers are percentages of wave height for various wind speeds.



Number of observations.

Scalar mean wind speed (knots).

Mean wave height (meters).

+ indicates <.5% but >0.

(1% of the winds were ≥41 but <48 knots with wave heights ≥6 but <8 meters.)

(5% of the wave heights were ≥4 but <6 meters.)

(9% of the wind speeds were ≥34 but <41 knots.)

*** replaces bar when percent is <.5% but >0.**

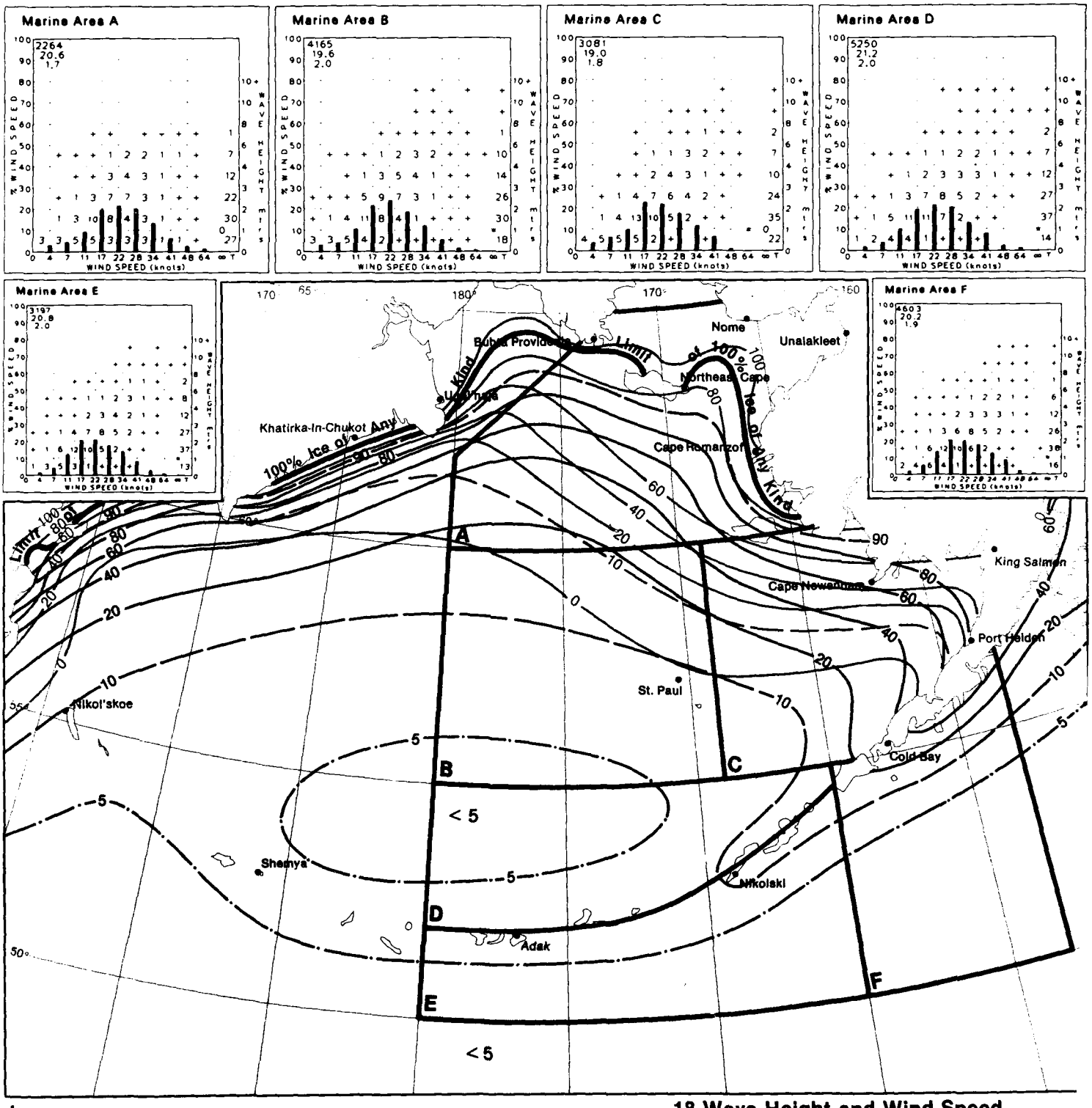
0 replaces bar when no wind speeds in the category were observed.

T=wave height category totals. ∞=≥64 knots or ≥10 meters.

Meters	1	2	3	4	6	8	10
Feet	3.2	6.6	9.8	13.1	19.7	26.2	32.8

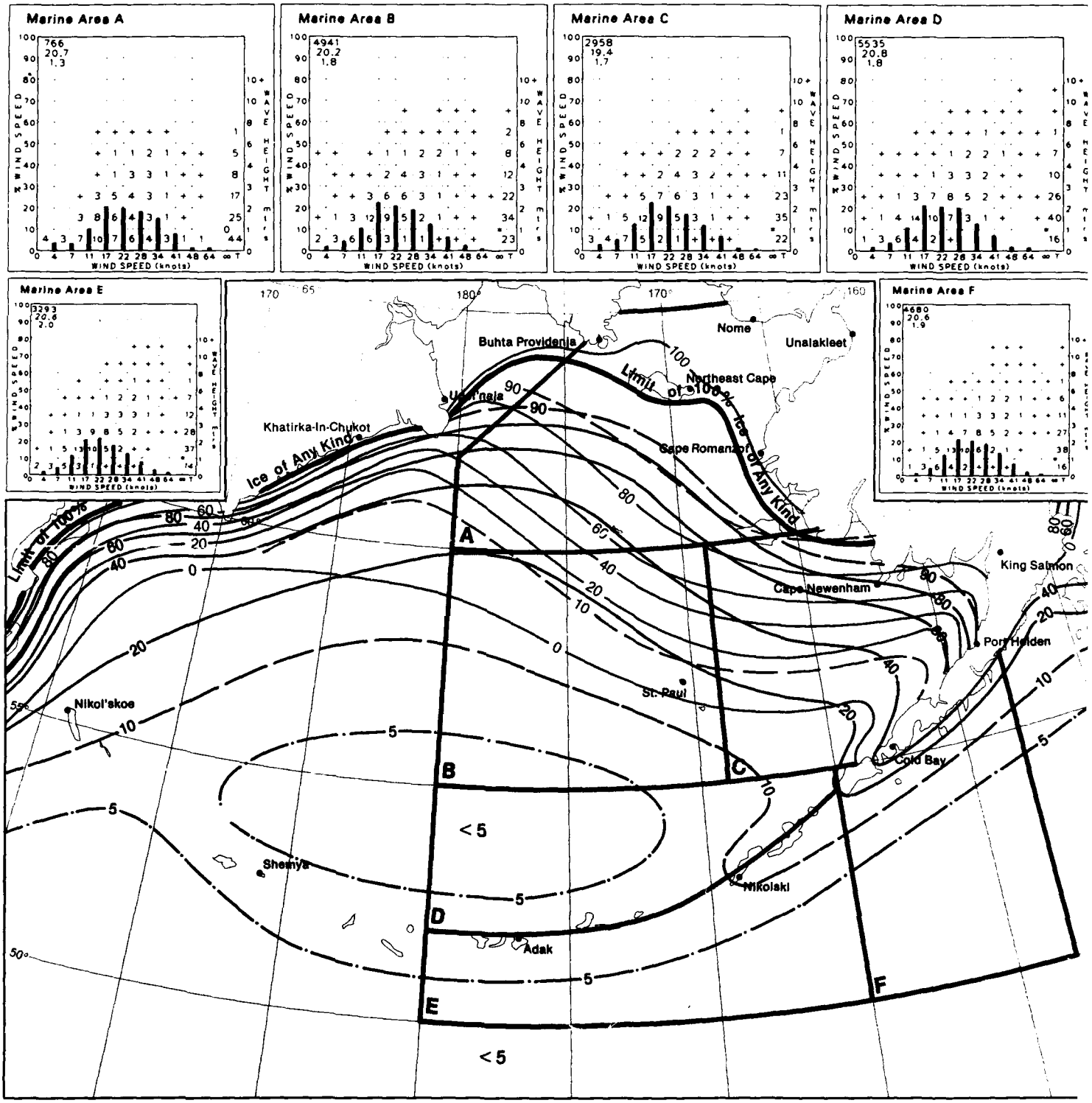
Wave heights have been recorded in a consistent quantitative code only since the late 1940's. The reluctance of many observers to take wave observations in the earlier years and the difficulty in estimating waves, especially in confused seas, make wave observations one of the least commonly observed elements. The observations are also subject to biases in wave characteristics. A correction factor of approximately 10% was suggested by Hogben and Lumb (1967) and has been verified by preliminary work at NCDC where Quayle (1980) found that generally the heights are too low, the periods too short, and sea-swell discrimination poor. The data in this study have not been adjusted for the suspected biases. The marine observations were processed through quality control procedure where an internal check was made between wind speed and sea height. The sea and swell data were then arrayed and suspicious outliers deleted. The higher of the sea wave or swell was selected for summarization. If the heights were equal, the wave with the longer period was selected.

Wave height isopleth presentations in Sets 18 and 19 are for a generally nonhazardous sea condition; i.e., wave heights less than 3 feet and 8 feet, respectively. Isopleth presentations in Set 20 define much more hazardous sea conditions; i.e., wave heights equal to or greater than 12 and 20 feet. Refer to the texts of Sets 14 and 18-21 for complete information on waves, and to the introductory text of Section II for sea ice information.



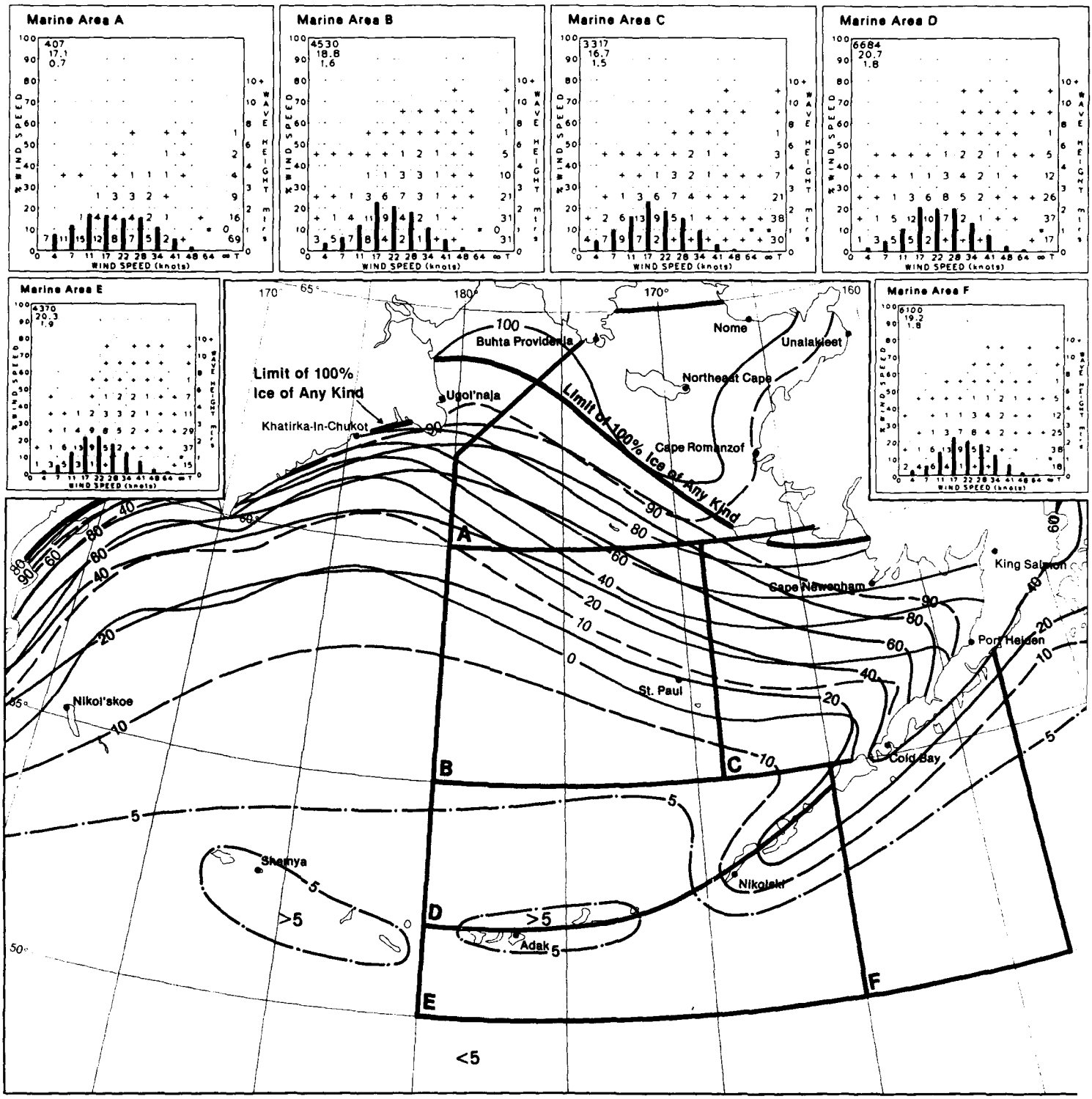
January

18 Wave Height and Wind Speed
Wave Height ≦3 Feet and Ice ≧5/10th



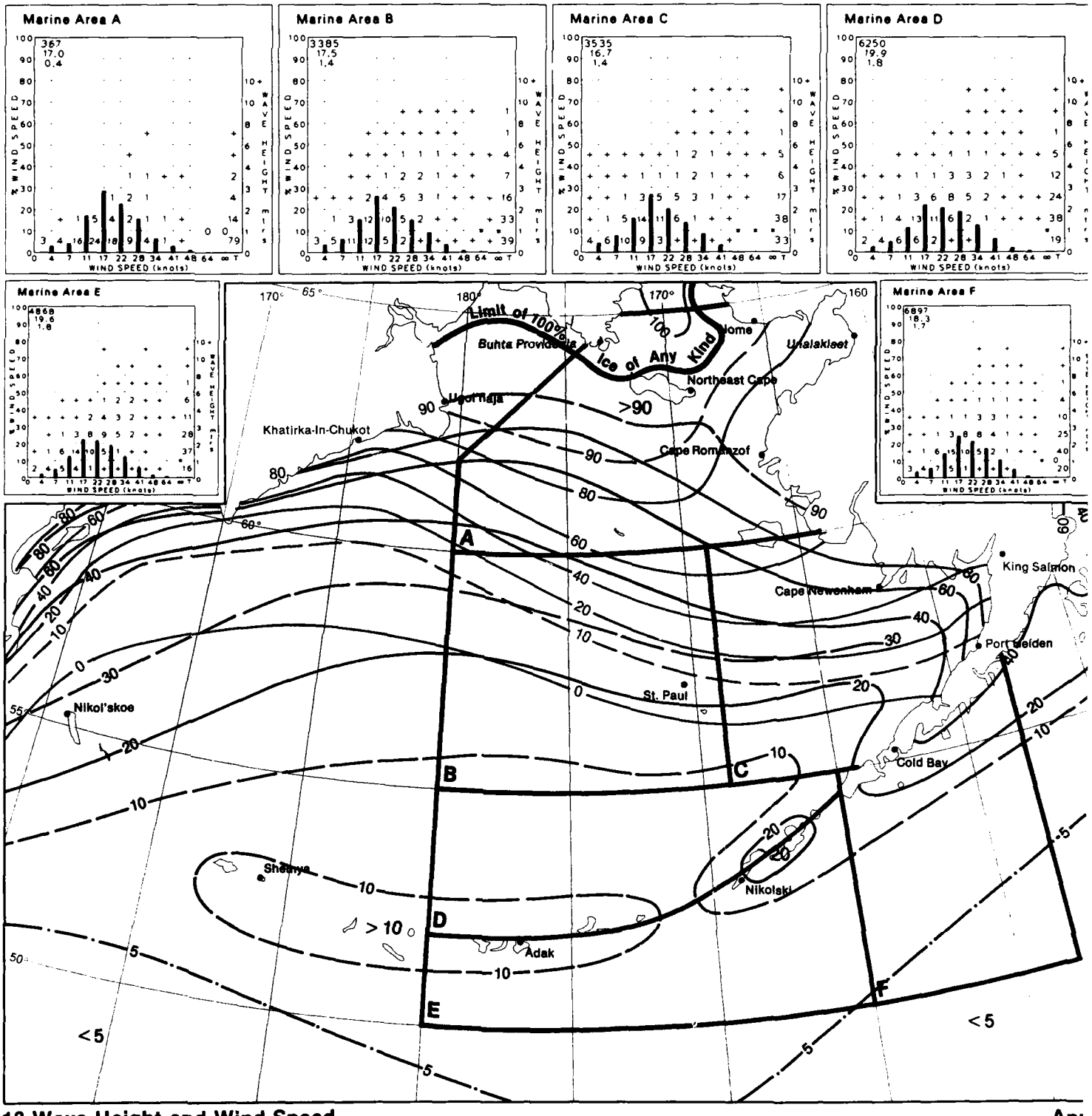
18 Wave Height and Wind Speed
Wave Height ≦3 Feet and Ice ≧5/10ths

Februa



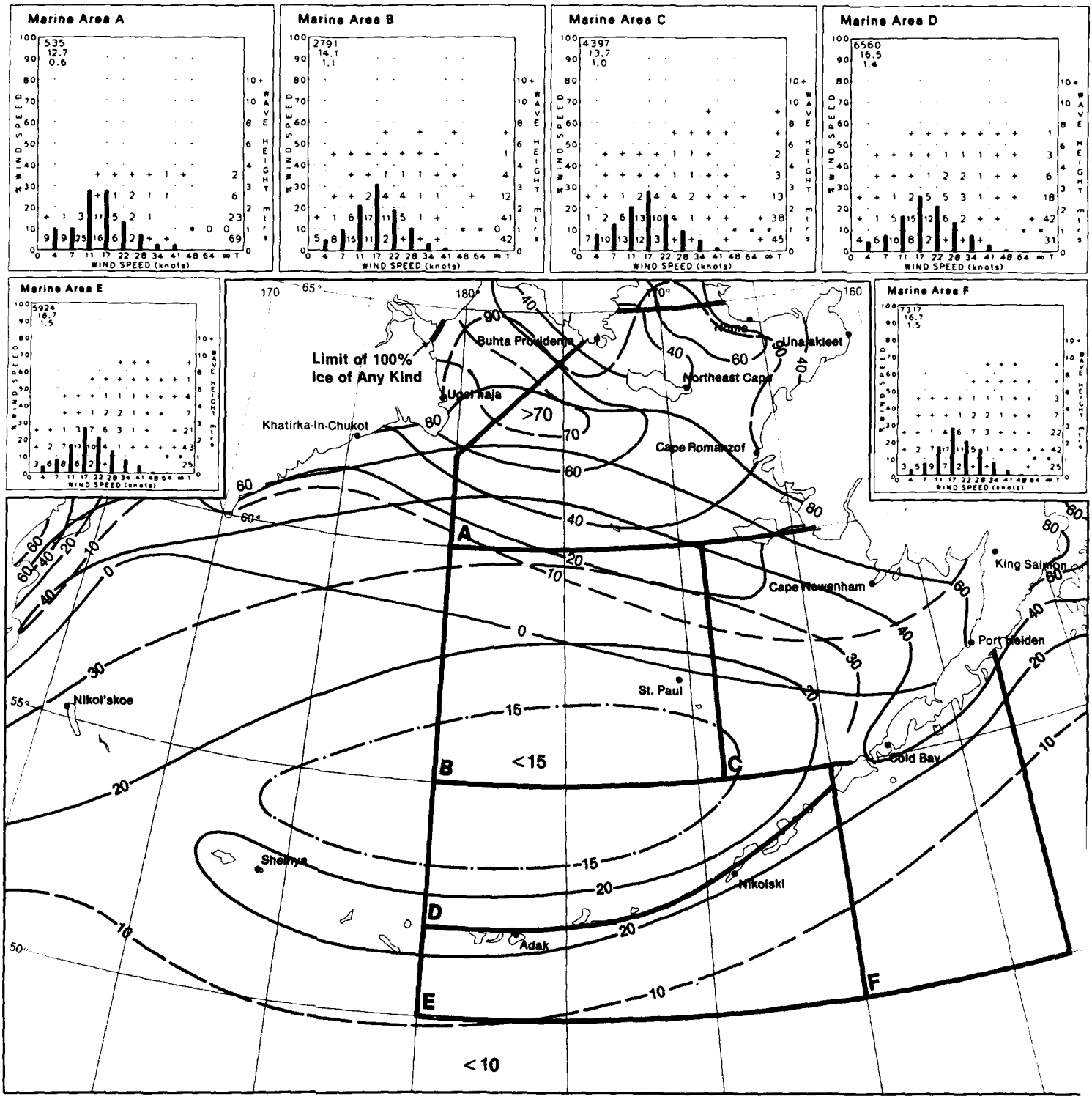
March

18 Wave Height and Wind Speed
Wave Height ≦3 Feet and Ice ≧5/10th



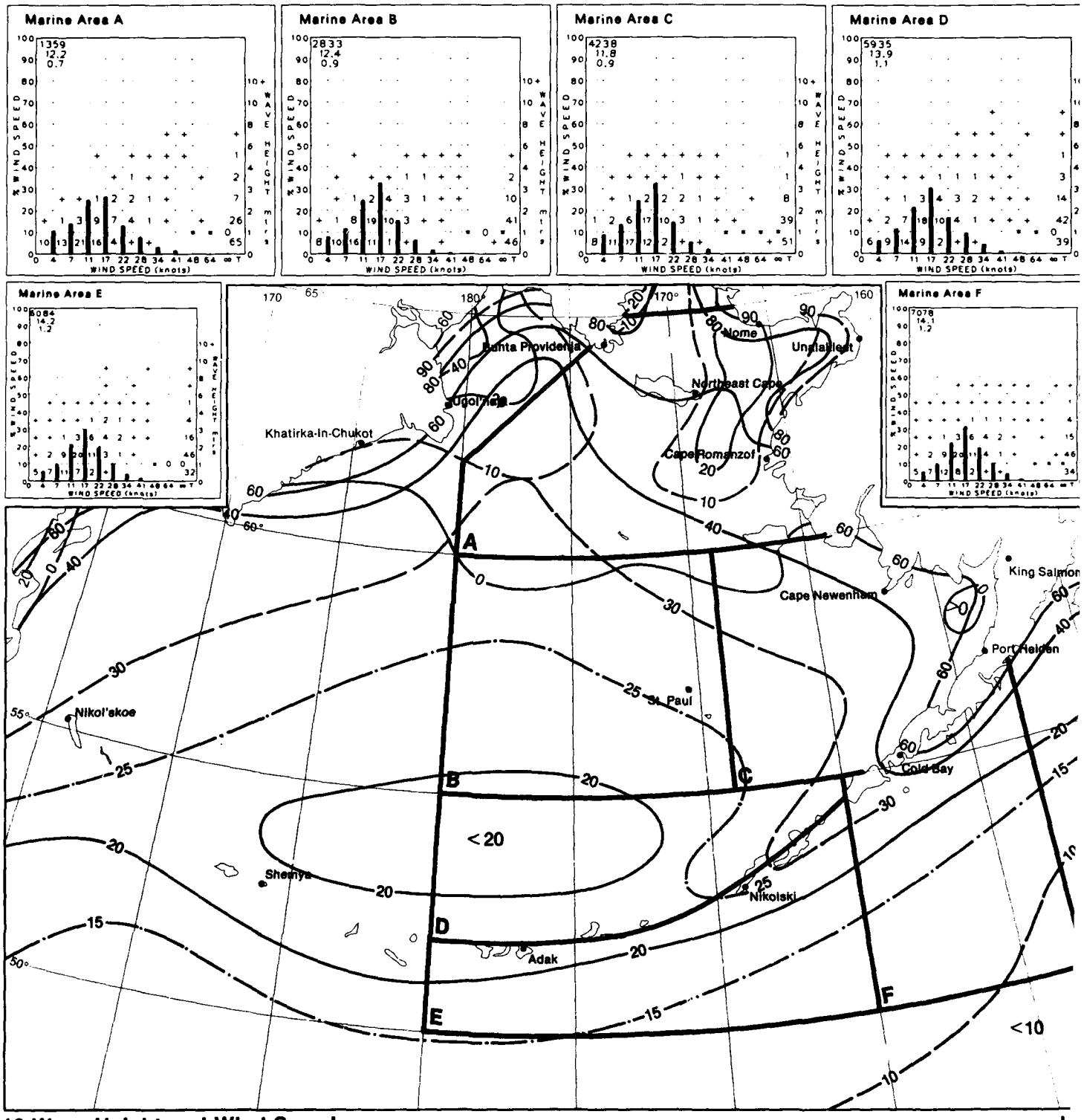
18 Wave Height and Wind Speed
Wave Height ≦3 Feet and Ice ≧5/10ths

Apr

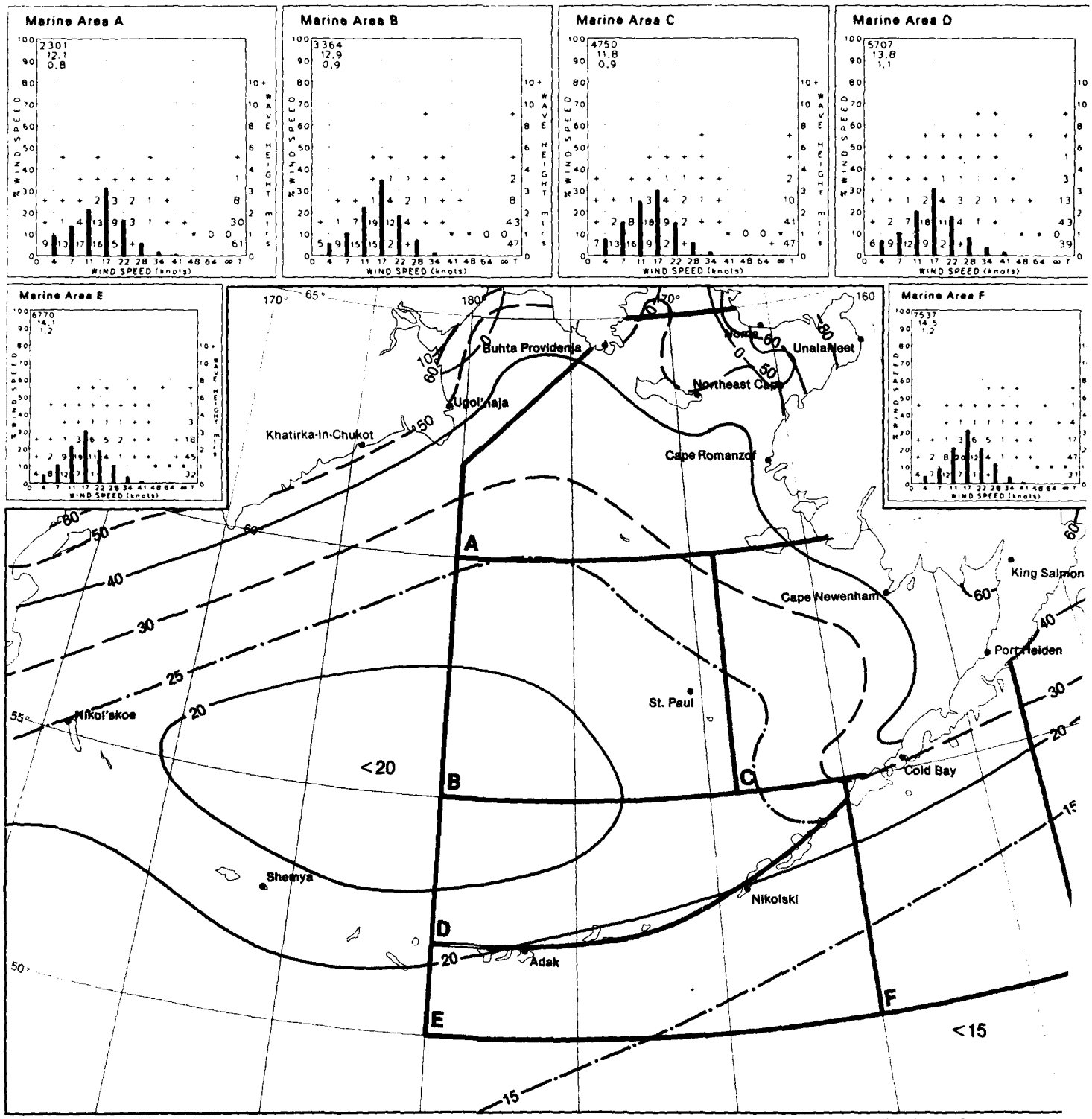


May

18 Wave Height and Wind Speed
Wave Height ≦3 Feet and Ice ≧5/10th

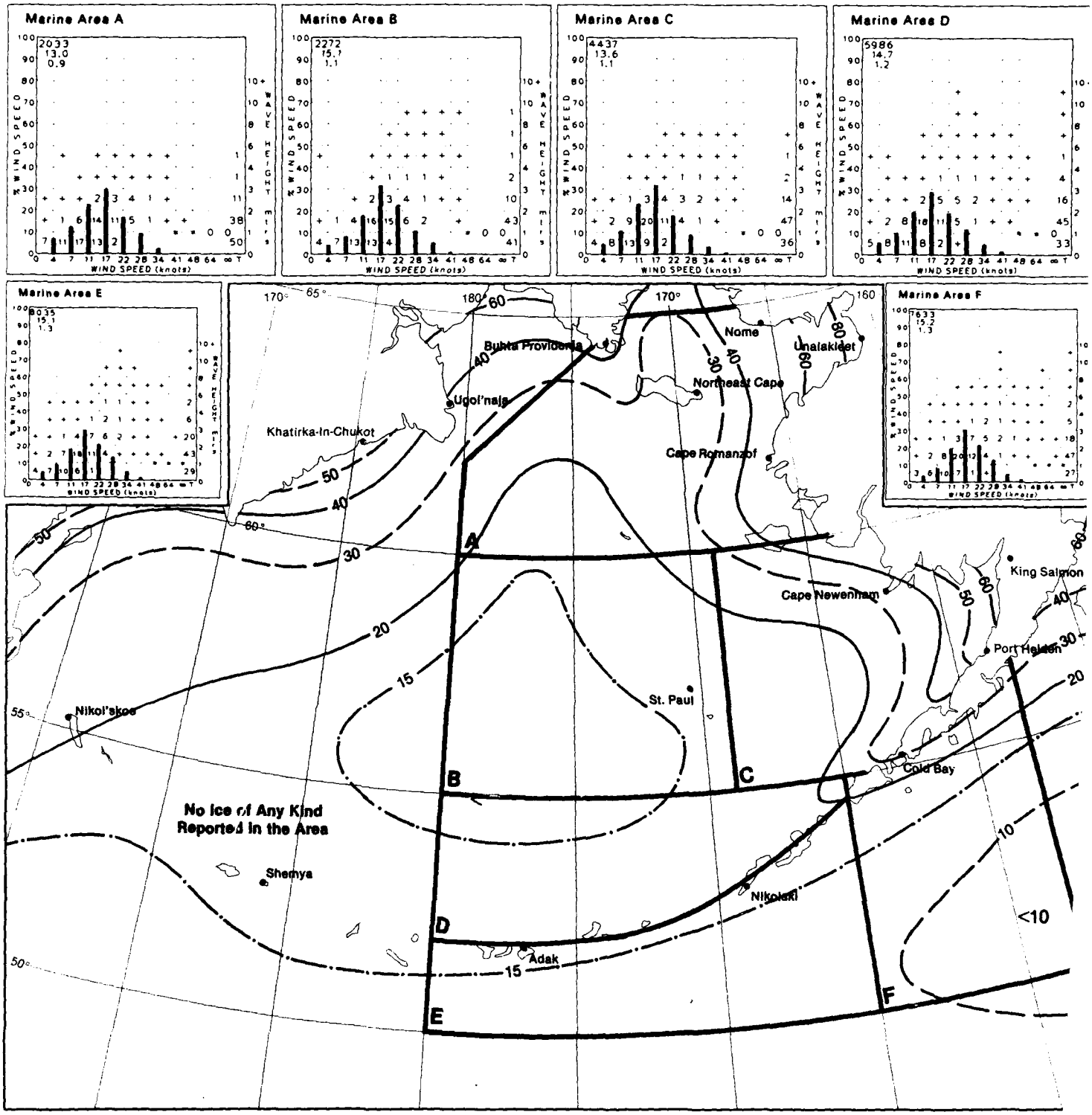


18 Wave Height and Wind Speed
Wave Height ≦3 Feet and Ice ≧5/10ths



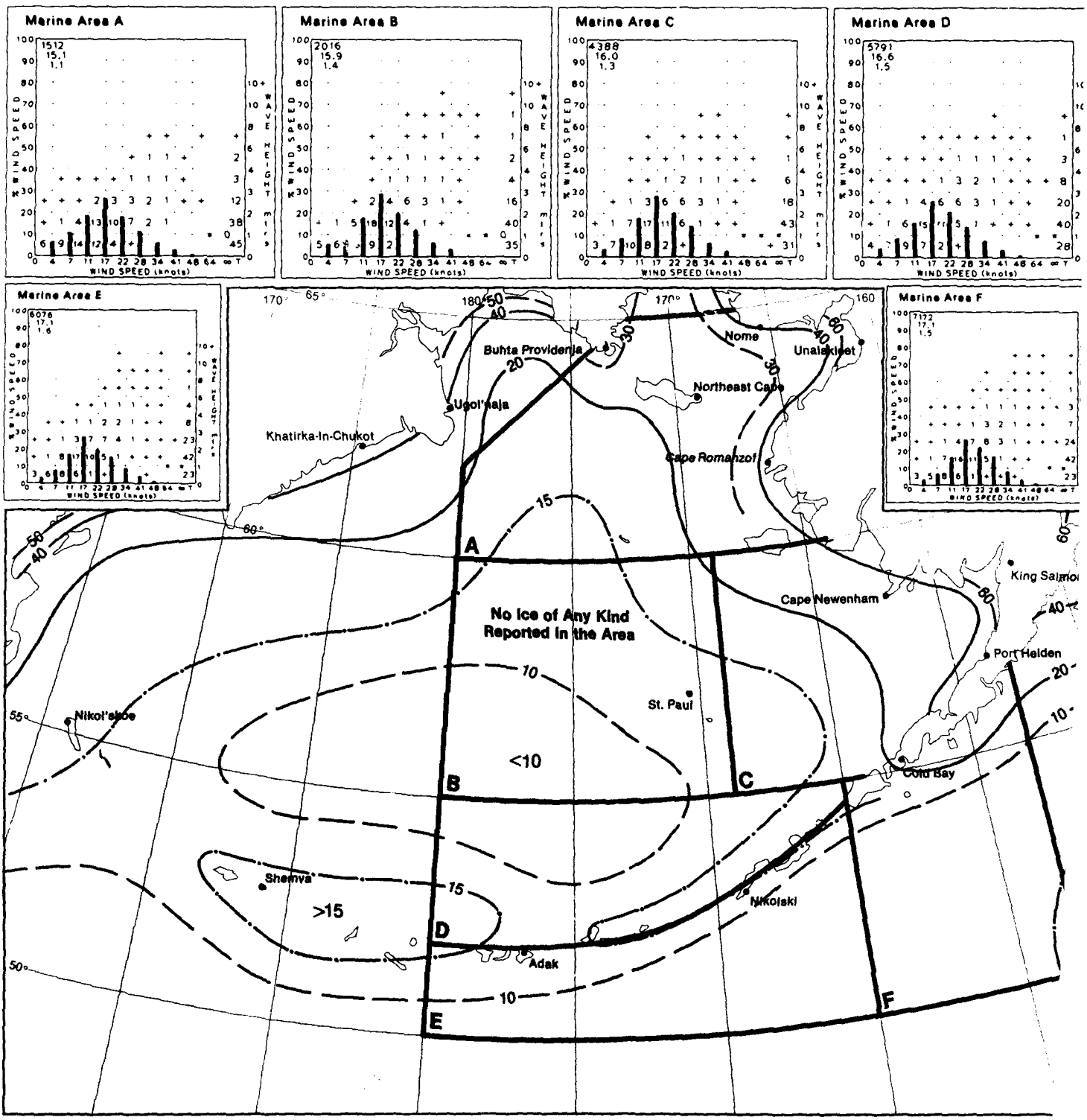
July

18 Wave Height and Wind Speed
Wave Height ≤3 Feet and Ice ≥5/



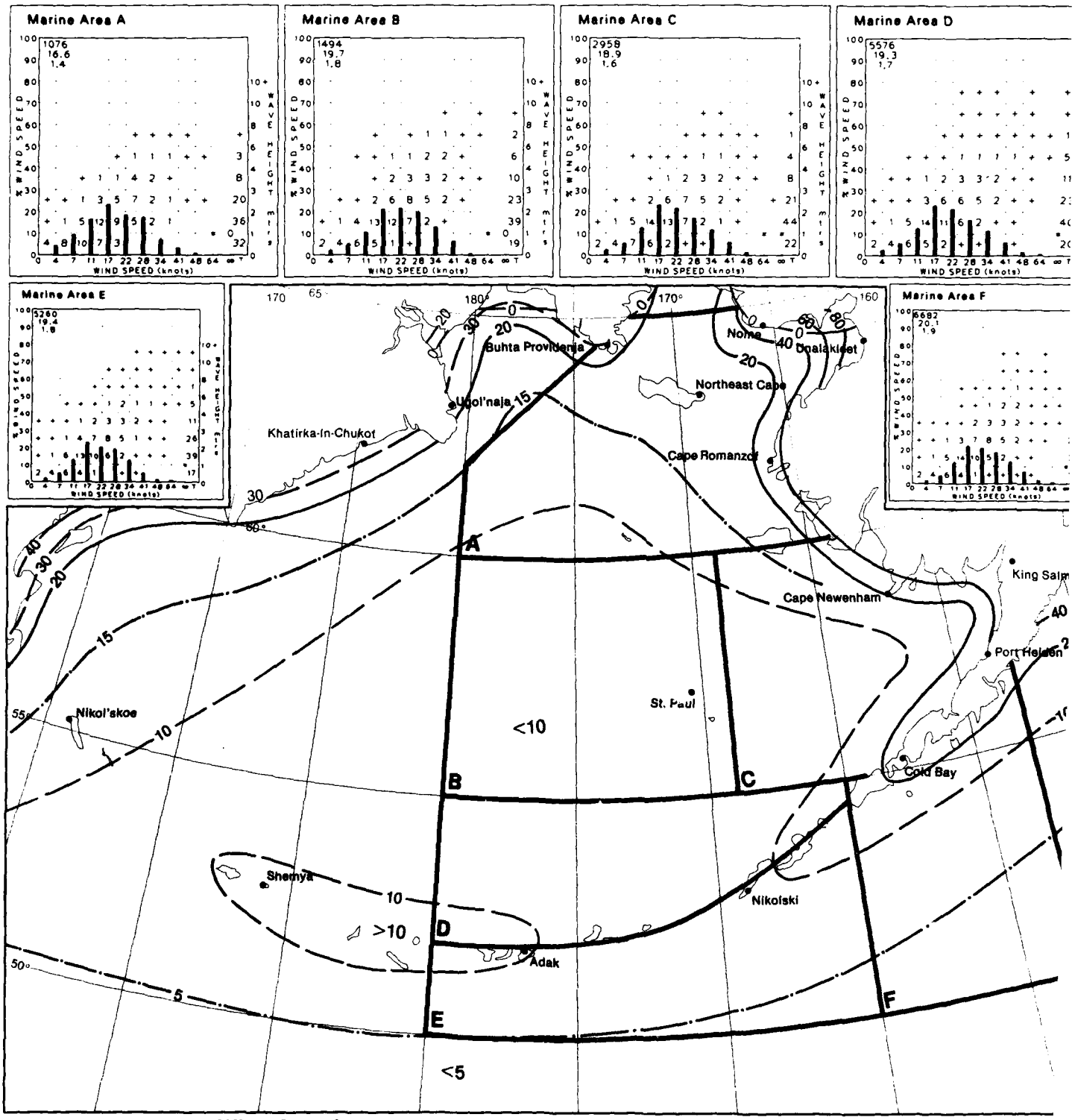
18 Wave Height and Wind Speed
Wave Height ≦3 Feet and Ice ≧5/10ths

Au



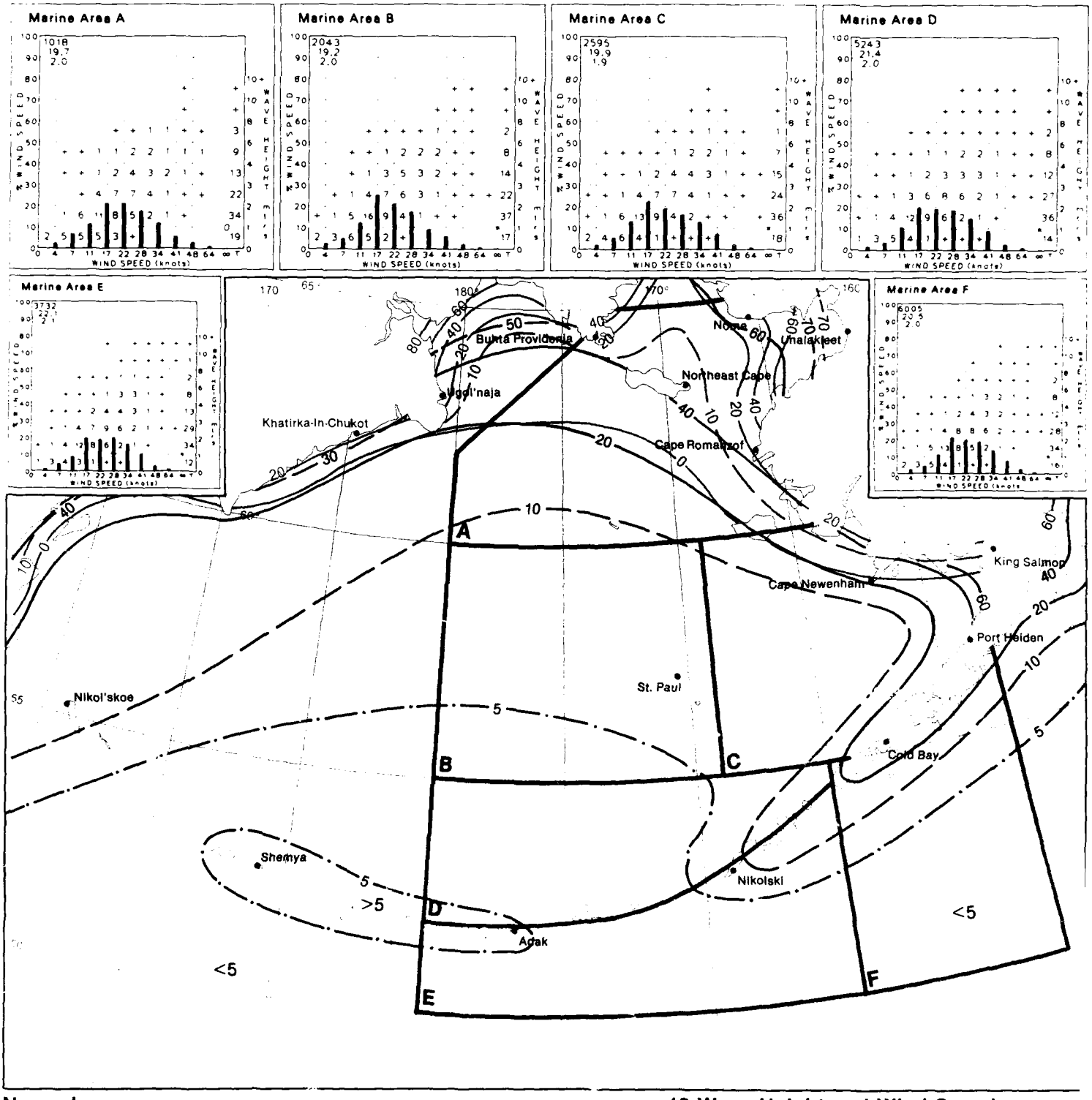
September

18 Wave Height and Wind Speed
Wave Height ≦3 Feet and Ice ≧5/



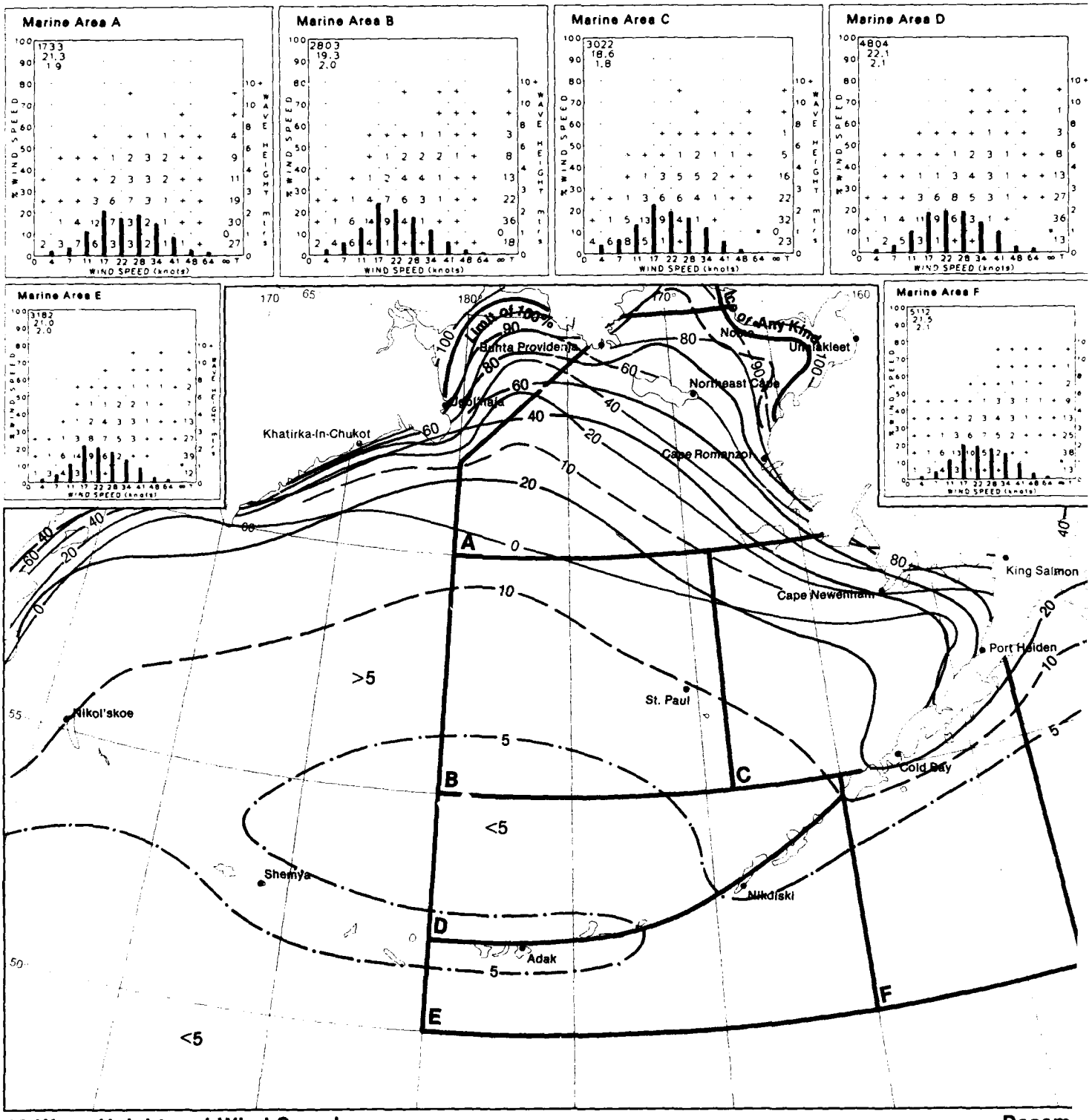
18 Wave Height and Wind Speed
Wave Height ≦3 Feet and Ice ≧5/10ths

Oc



November

18 Wave Height and Wind Speed
Wave Height ≦3 Feet and Ice ≧5/10ths



18 Wave Height and Wind Speed **Decem**
Wave Height ≦3 Feet and Ice ≧5/10ths

Map 19. Wave height <8 feet and ice thickness ≧8 feet

BLACK LINE – Percent frequency of wave height <8 feet (2.5 meters).

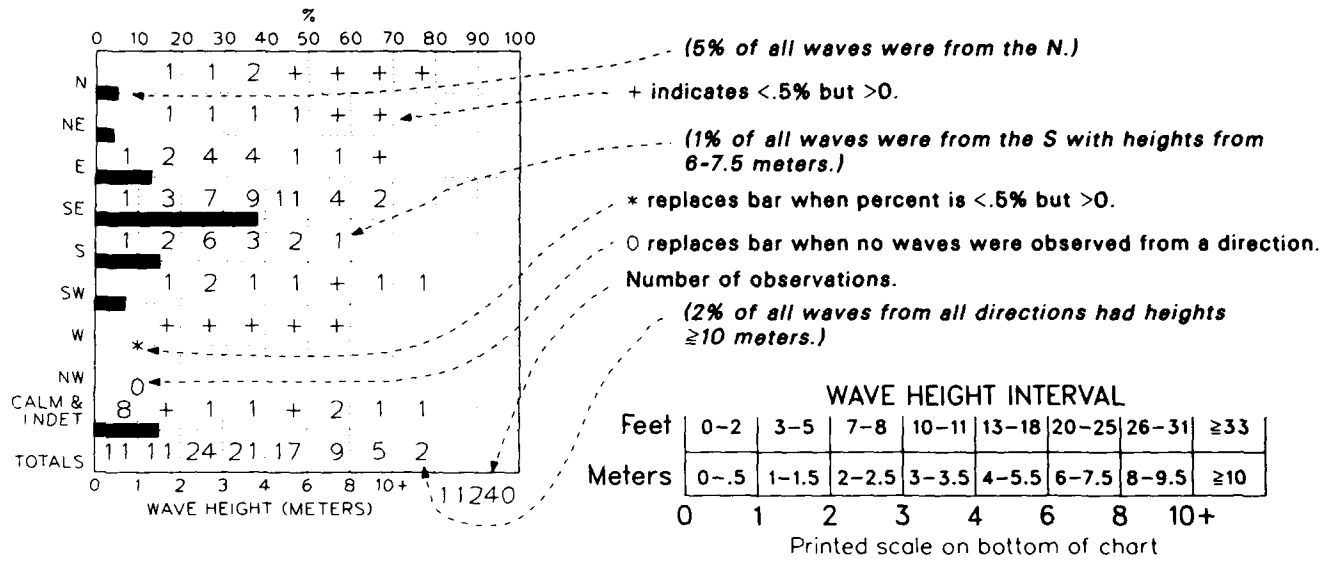
BLUE LINE – Percent frequency of ice thickness ≧8 feet (multi-year ice).

Albers Equal-Area Conic Projection

Graphs: Wave height/direction

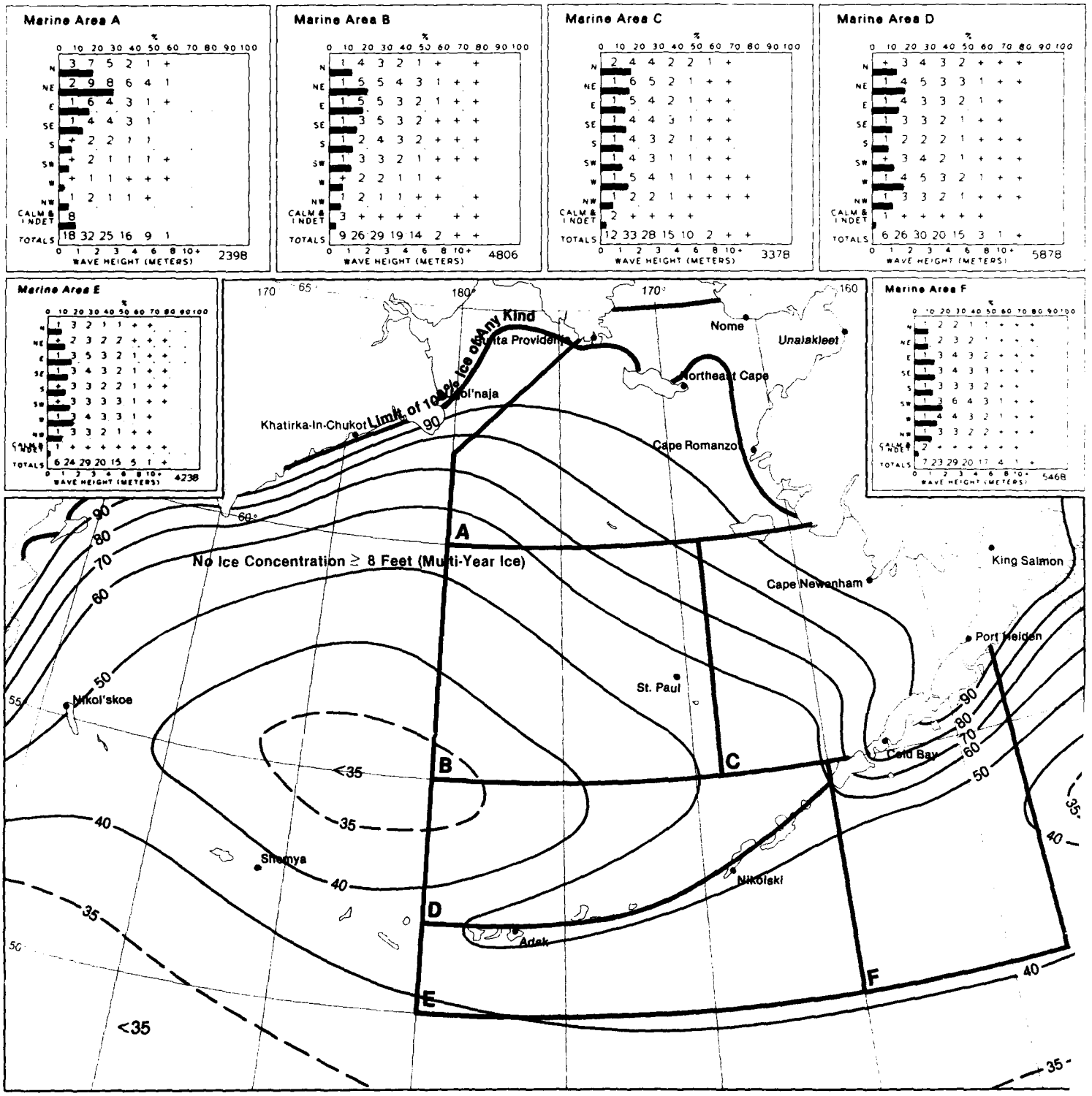
Direction frequency (top scale): Bars represent percent frequency of waves from each direction.

Height frequency (bottom scale): Printed figures represent percent frequency of wave heights observed from each direction.



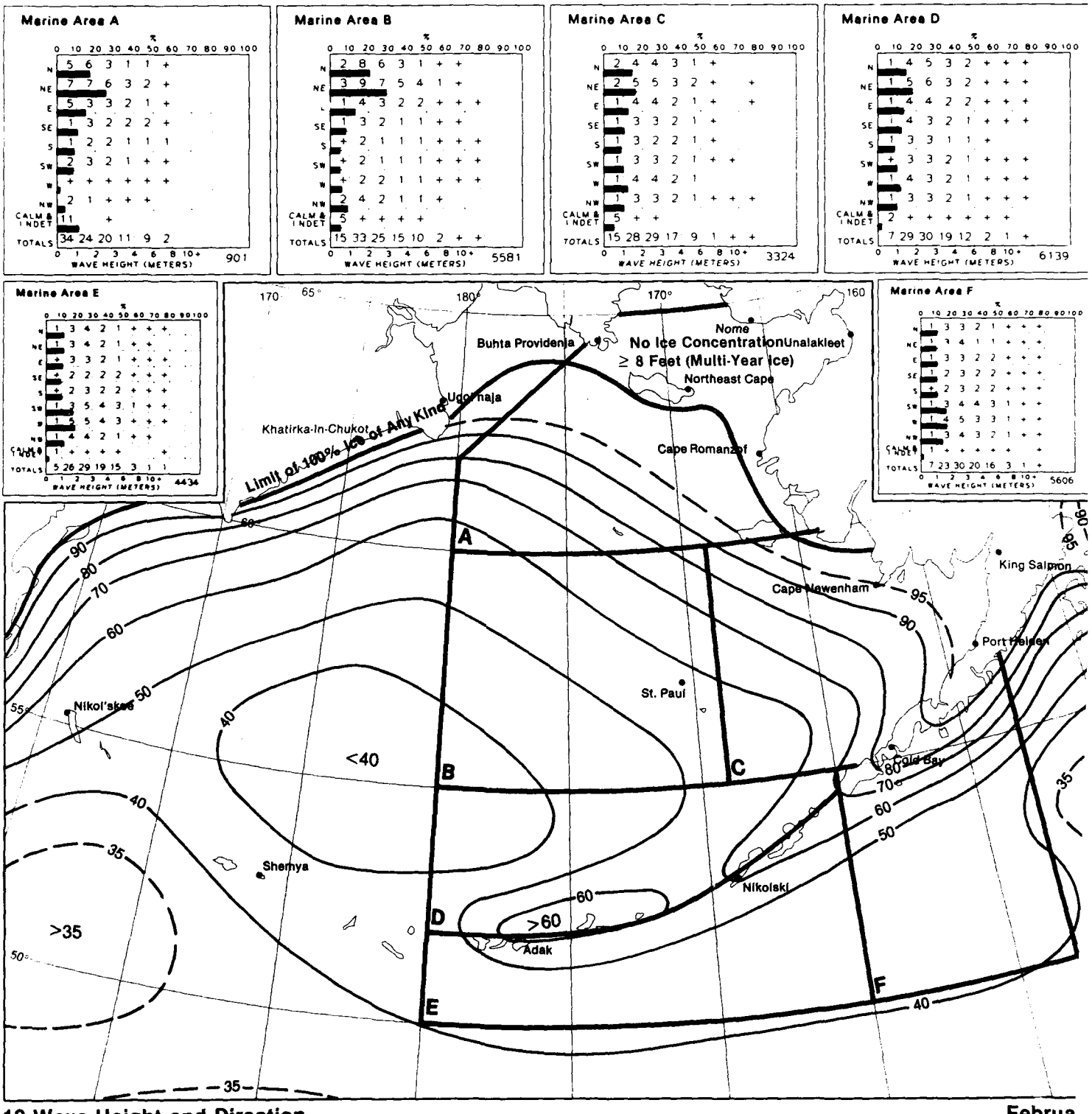
The observer aboard ship determines and records the period and height of wind waves (sea); and the direction, period, anc height of swell waves. Sea waves are waves raised by the local wind and are assumed to have the same direction as the wind Swell waves are waves not raised by the local wind, but rather by distant wind systems or by winds that have sinced ceased tc blow. Swell waves characteristically exhibit more regular and longer periods, and have flatter crests than wind waves withir their generating area (fetch). Sea and swell waves occur singly or in manifold combination from which they can sometimes be separated only with difficulty.

Indeterminate directions are combined with calms in the direction scale of the graph (they can be distinguished by con sulting the sea height scale). The number of observations noted on the graphs is from the higher of sea or swell when both ar reported; if the heights were equal, then the one with the longer period was selected. If only one wave was reported (sea or swell then that value was used. Refer to the texts of Sets 14 and 18-21 for complete information on waves, and to the introductory tex section of Section II for sea ice information.



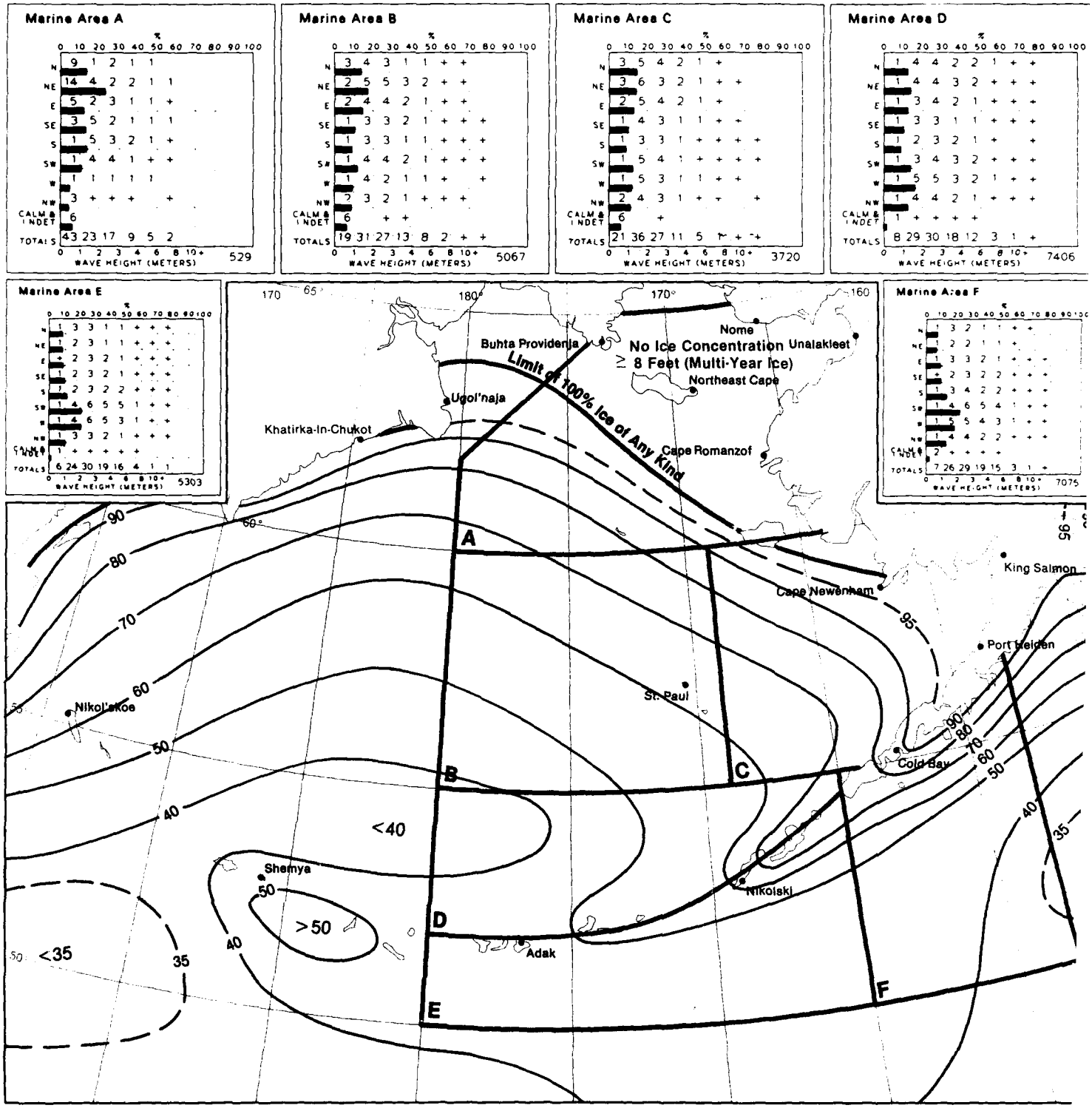
January

19 Wave Height and Direction
Wave Height <8 Feet and Ice Thickness ≧8 Fe



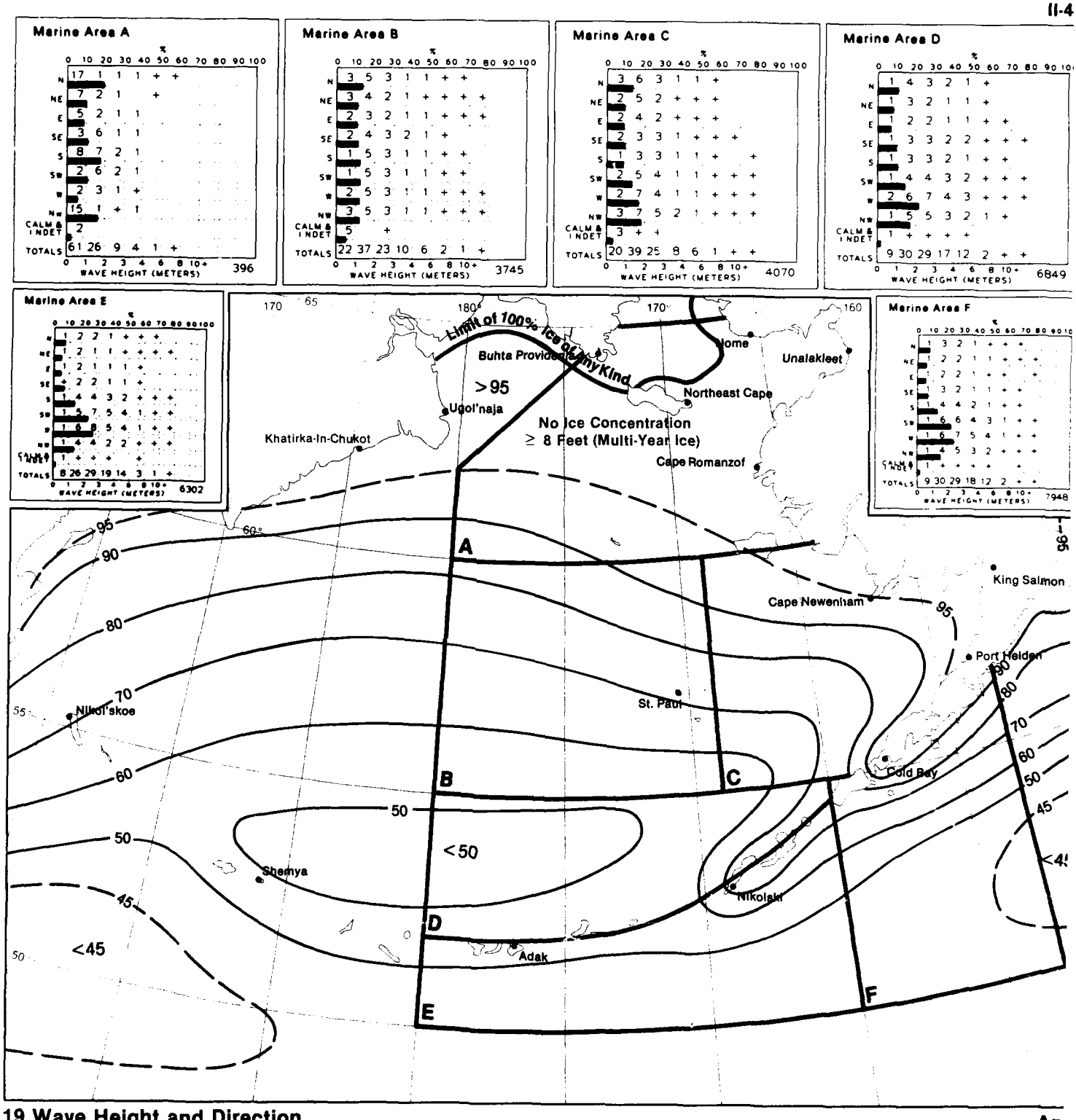
19 Wave Height and Direction
Wave Height < 8 Feet and Ice Thickness ≧ 8 Feet

Februa



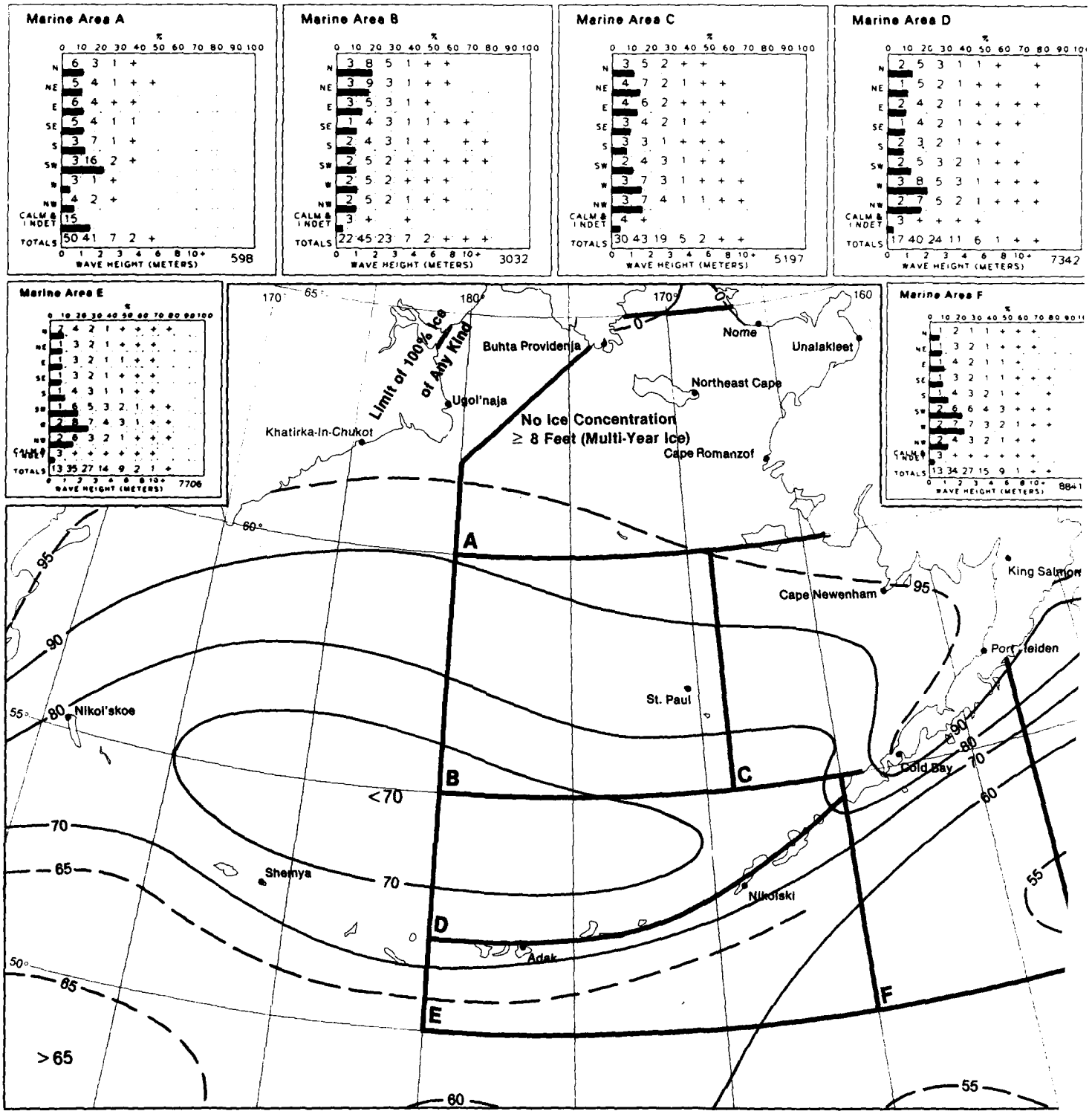
March

19 Wave Height and Direction
Wave Height <8 Feet and Ice Thickness ≧8 F



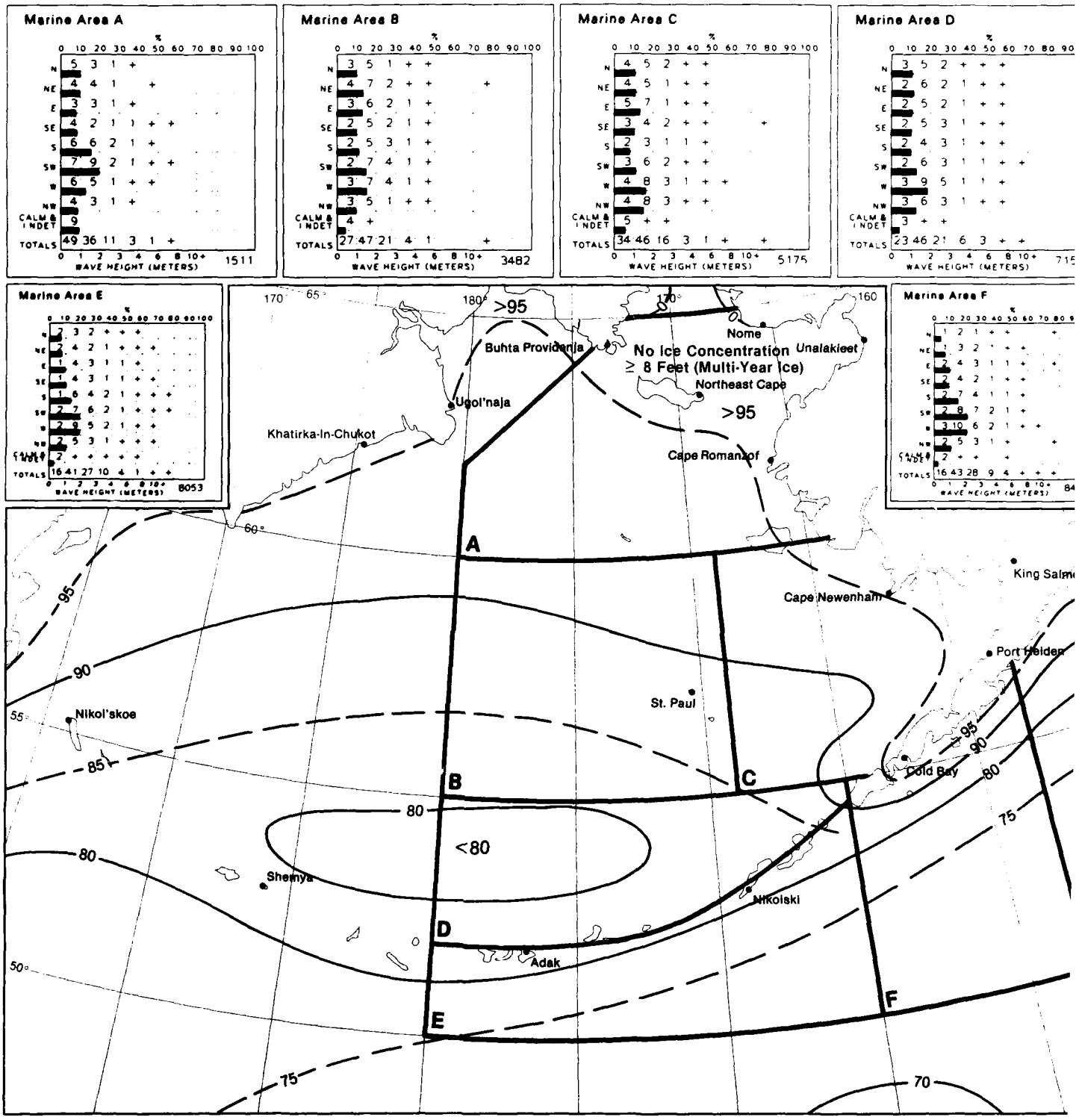
19 Wave Height and Direction
Wave Height < 8 Feet and Ice Thickness ≧ 8 Feet

Ap

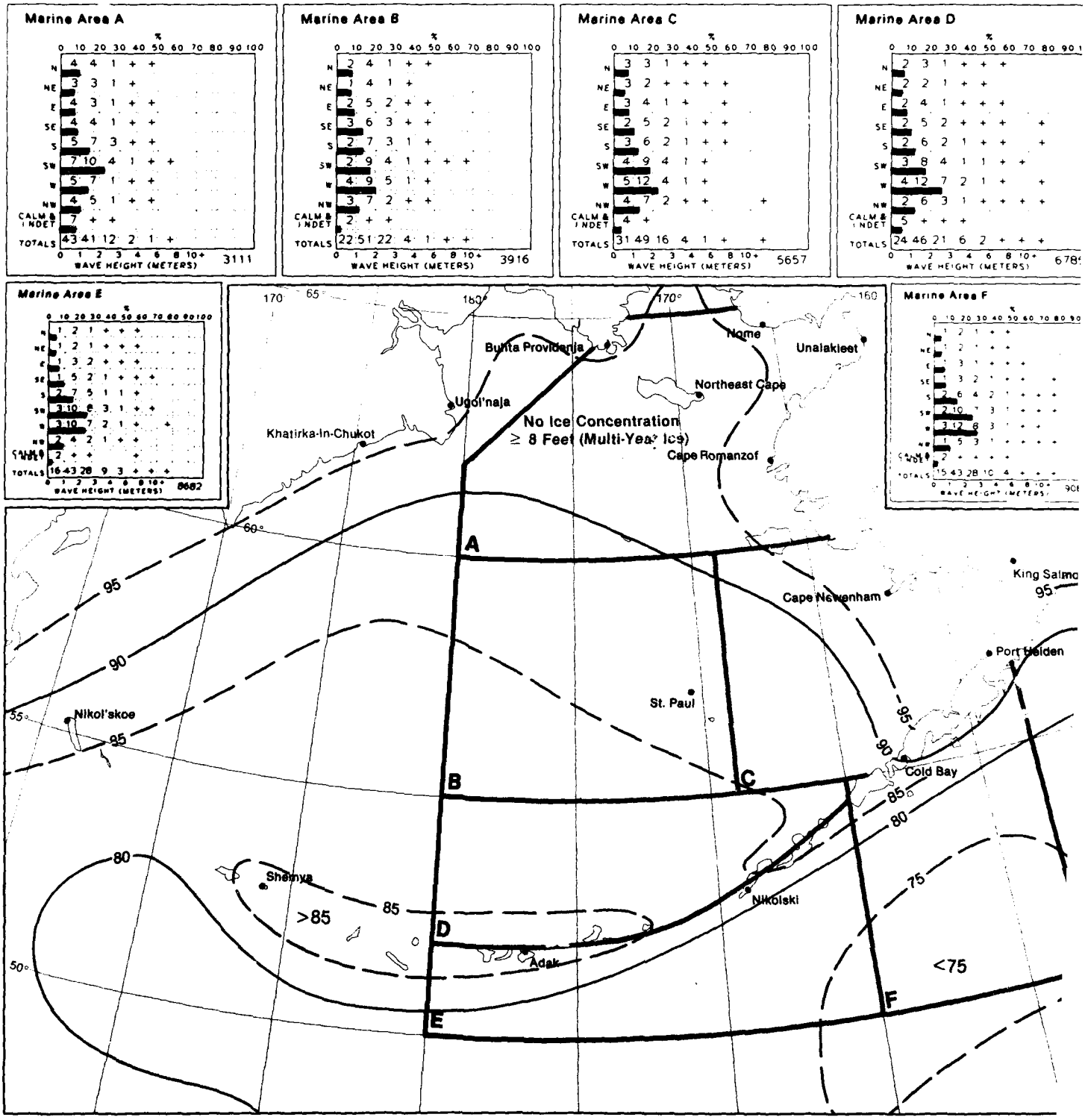


May

19 Wave Height and Direction
Wave Height < 8 Feet and Ice Thickness ≧ 8

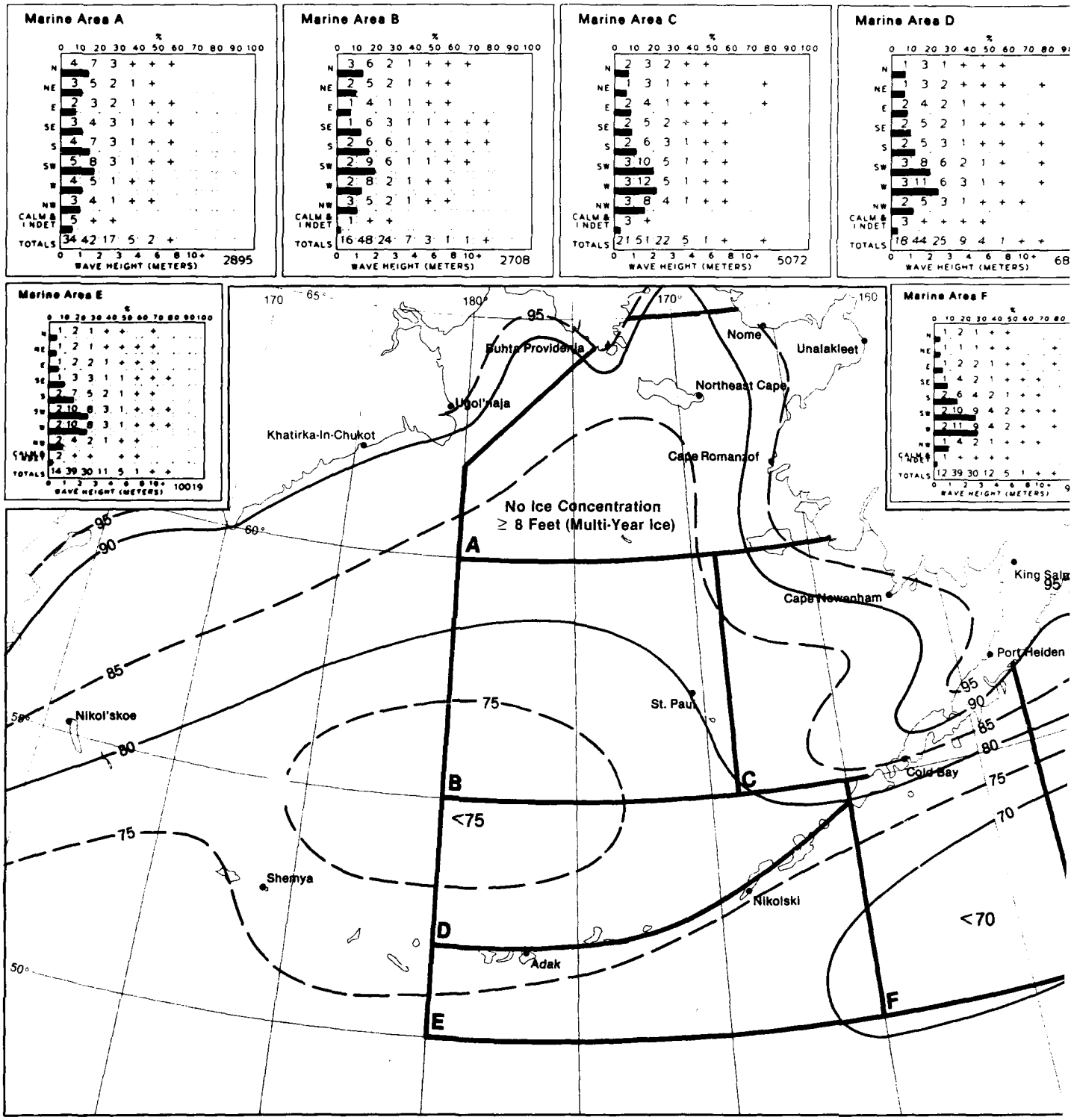


19 Wave Height and Direction
Wave Height <8 Feet and Ice Thickness ≧8 Feet



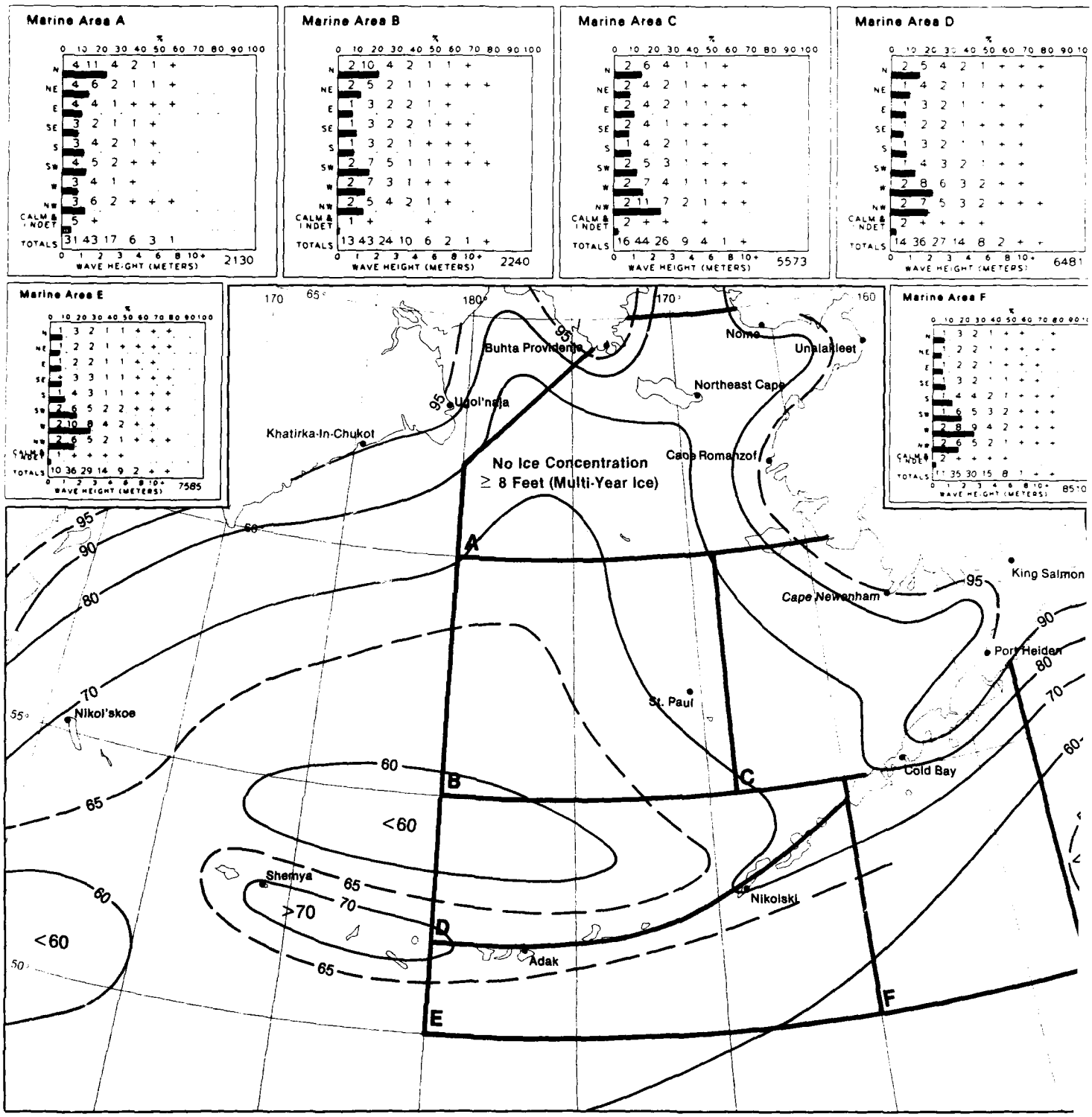
July

19 Wave Height and Direction
Wave Height <8 Feet and Ice Thickness ≧8



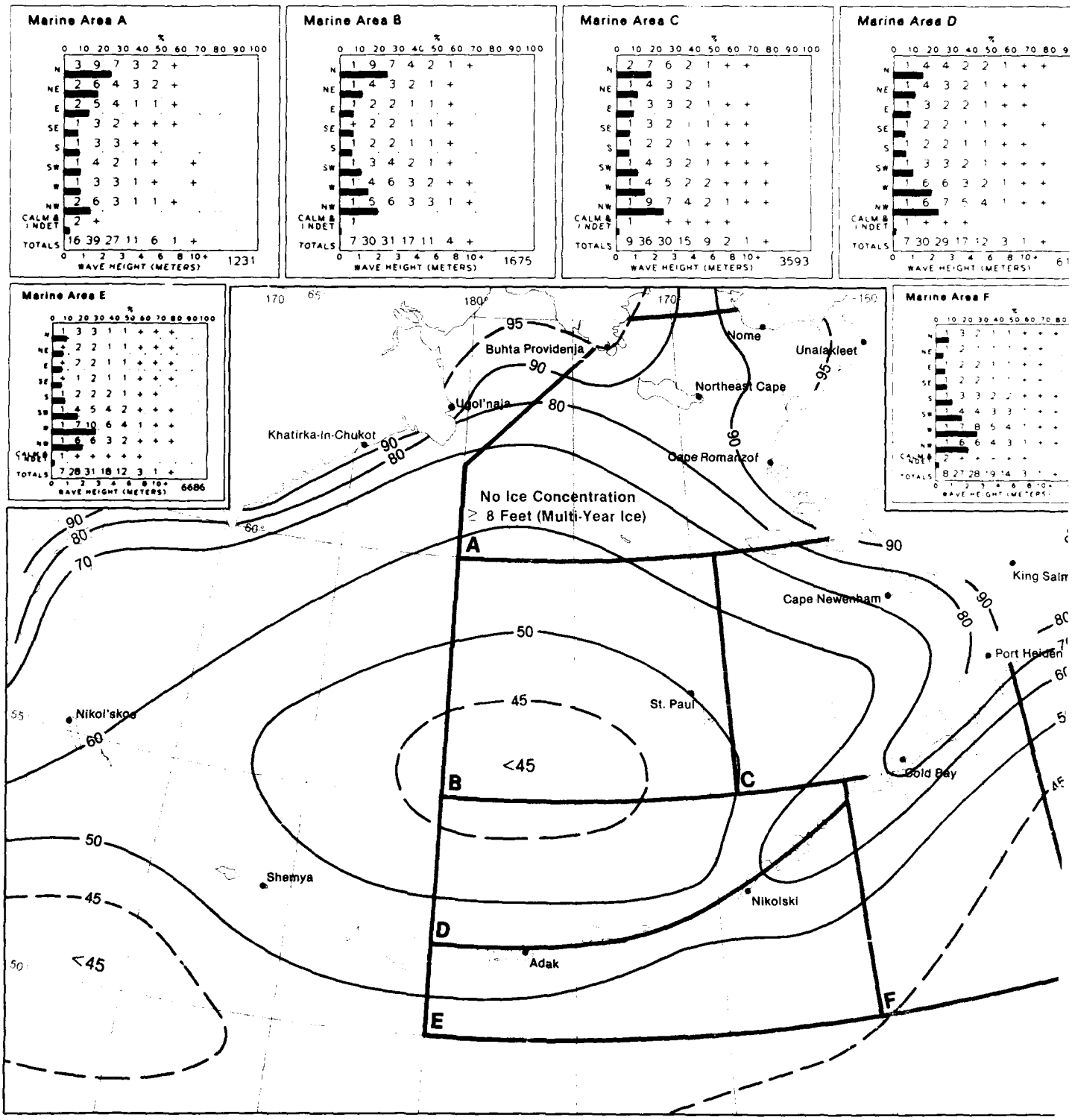
19 Wave Height and Direction
Wave Height <8 Feet and Ice Thickness ≧8 Feet

Au



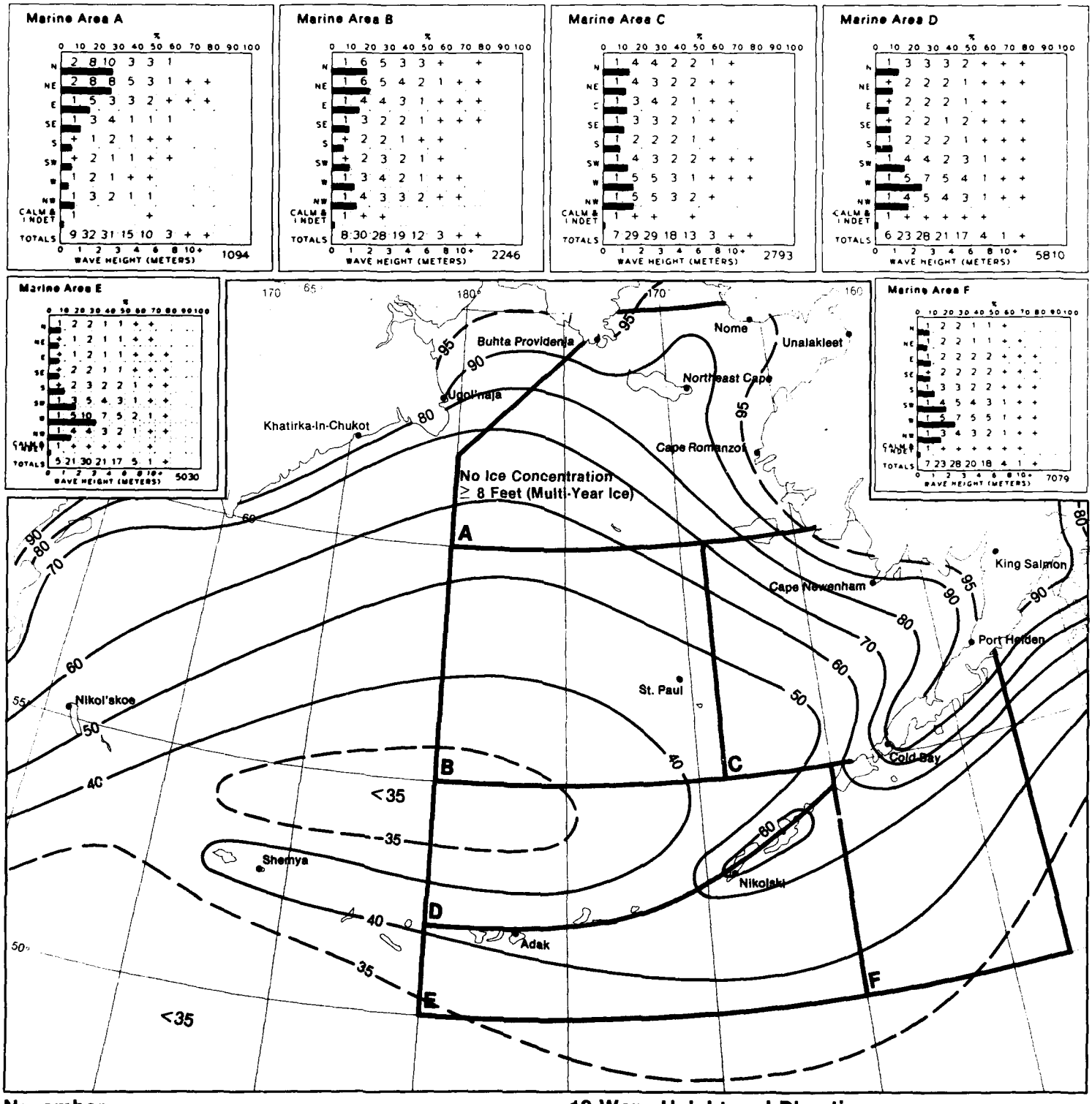
September

19 Wave Height and Direction
Wave Height < 8 Feet and Ice Thickness ≧ 8 F



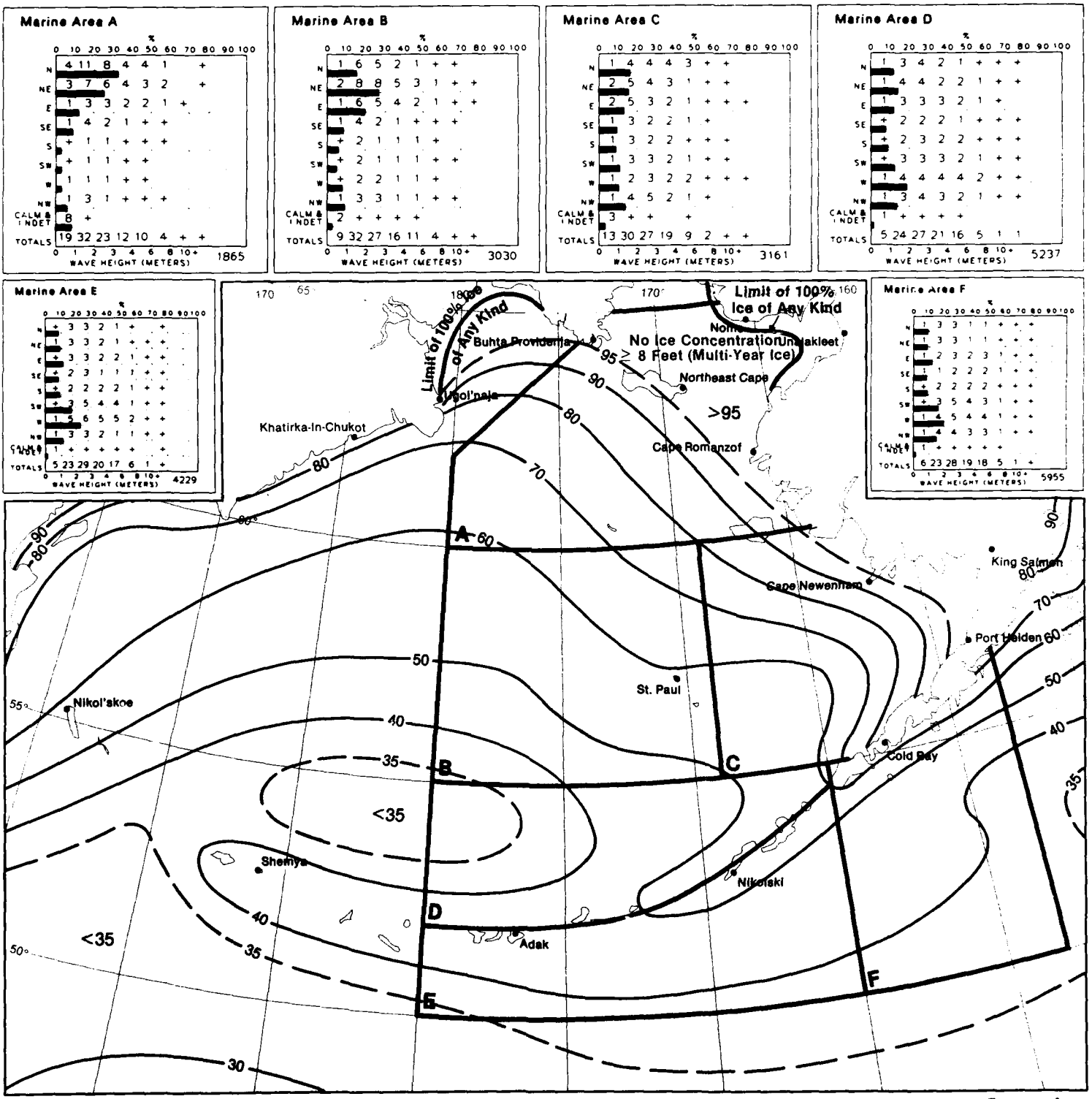
19 Wave Height and Direction
Wave Height <8 Feet and Ice Thickness ≧8 Feet

Oc



November

19 Wave Height and Direction
Wave Height <8 Feet and Ice Thickness ≧8 Feet



19 Wave Height and Direction
Wave Height <8 Feet and Ice Thickness ≧8 Feet

December

Map 20. Wave height ≧12 and ≧20 feet

BLACK LINE – Percent frequency of wave height ≧12 feet (≧3.5 meters).

BLUE LINE – Percent frequency of wave height ≧20 feet (≧6 meters).

Albers Equal–Area Conic Projection

Graphs: Wave height/period

Percent frequency of occurrence of wave period and height.

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6–7	8–9	10–11	12–13	>13	IND
0–.5	21	3	1	+	+	+	6
1–1.5	22	16	6	2	1	+	+
2–2.5	3	6	4	3	1	+	+
3–3.5	+	1	1	1	1	+	+
4–5.5	+	+	+	+	+	+	0
6–7.5	0	+	+	0	0	+	0
8–9.5	0	0	0	+	0	0	0
≥10	0	0	0	0	0	+	0

4010

+ indicates <.5% but >0.

(2% of observed waves had a height of 1-1.5 meters and a period of 10-11 seconds.)

Number of observations.

Waves are selected on the basis of the higher of sea and swell when both are reported. If both heights are equal, the wave with the longer period is selected.

Wave period is the interval in seconds between the passage of two successive crests or troughs of well-formed waves past a fixed point. Waves in the same system usually occur in a sequence of a few large, well-formed waves followed by an interval in which only small and poorly-formed waves occur, and another series of well-formed waves, etc. Observers aboard ship determine the values of wave height, period, and direction generally using only the well-formed waves and ignoring poorly-formed waves. To describe a similar sea state from a measured wave record, a statistical approach is used to describe the significant wave height ($\overline{H}$ 1/3) which is the average of the highest one-third of the measured waves. This roughly approximates the characteristic height observed visually from aboard ship. To determine the period of wind waves or swell, the observer needs only to select a distinctive patch of foam or a small floating object at some distance from the ship. As the object falls astern, a new one is selected. The elapsed time is determined to the nearest second between the instant when the object is on the crest of the first and of the last well-formed wave in the group. Noting the number of crests that pass under the object during the interval permits computation of the average period. An experienced observer needs only to observe a few representative wave "sets" to derive the average period.

The number of observations noted on the graphs is that of those observations reporting both wave height and period. The wave height isopleth presentations are for a generally hazardous sea condition (wave heights equal to or greater than 12 feet). Refer to the texts of Sets 14 and 18-21 for complete information on waves.

Marine Area A

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	NO
0-.5	5	1	+	+			11
1-1.5	20	7	2	+	+	+	1
2-2.5	9	11	2	1	+	1	1
3-3.5	3	6	5	1	+	+	+
4-5.5	+	3	3	1	+	+	1
6-7.5	+	+	+	+		+	
8-9.5							
≥10							

2398

Marine Area B

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	NO
0-.5	4	1	+	+			4
1-1.5	14	5	2	1	+	+	3
2-2.5	9	12	3	2	1	+	3
3-3.5	2	8	6	1	+	+	2
4-5.5	1	3	5	2	+	+	2
6-7.5	+	+	1	1	+	+	+
8-9.5		+	+	+	+	+	+
≥10							

4806

Marine Area C

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	NO
0-.5	7	1	+	+			3
1-1.5	19	8	2	1	1	+	2
2-2.5	11	11	3	1	+	+	2
3-3.5	2	9	3	+	+	+	1
4-5.5	+	4	3	1	+	+	1
6-7.5		+	1	1	+	+	+
8-9.5		+	+	+	+		
≥10							

3378

Marine Area D

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	NO
0-.5	3	+	+	+			2
1-1.5	14	7	1	1	1	+	2
2-2.5	10	11	4	2	1	+	2
3-3.5	3	8	5	2	+	+	1
4-5.5	1	4	4	3	1	+	1
6-7.5	+	1	1	1	+	+	+
8-9.5		+	+	+	+	+	+
≥10							

5878

Marine Area E

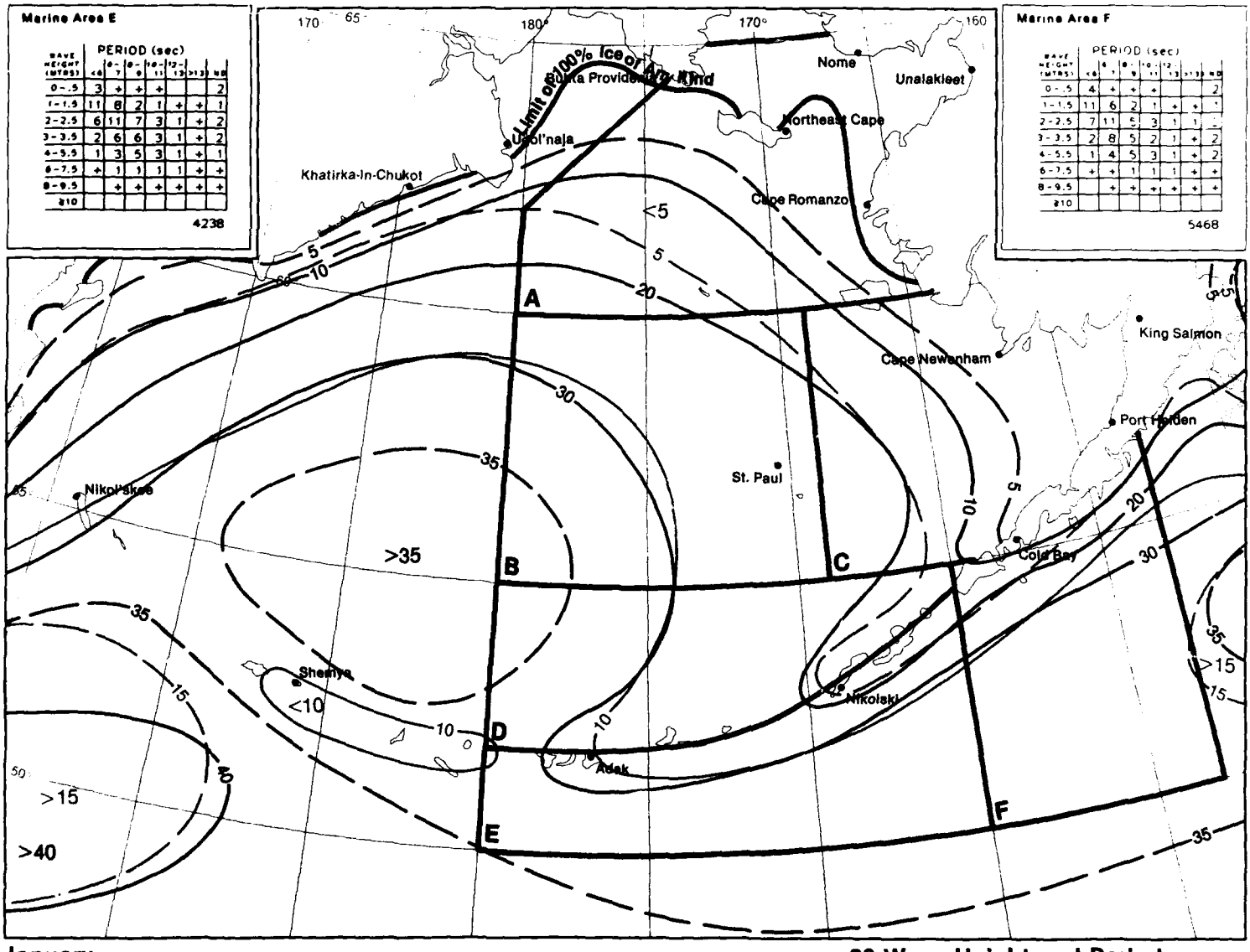
WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	NO
0-.5	3	+	+	+			2
1-1.5	11	8	2	1	+	+	1
2-2.5	6	11	7	3	1	+	2
3-3.5	2	6	6	3	1	+	2
4-5.5	1	3	5	3	1	+	1
6-7.5	+	1	1	1	1	+	+
8-9.5		+	+	+	+	+	+
≥10							

4238

Marine Area F

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	NO
0-.5	4	+	+	+			2
1-1.5	11	6	2	1	+	+	1
2-2.5	7	11	6	3	1	1	-
3-3.5	2	8	5	2	1	+	2
4-5.5	1	4	5	3	1	+	2
6-7.5	+	+	1	1	1	+	+
8-9.5		+	+	+	+	+	+
≥10							

5468



January

20 Wave Height and Period
Wave Height ≧12 and ≧20 Feet

Marine Area A

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	NO
0-.5	9	1	1	1			22
1-1.5	16	4	2	1	1	+	1
2-2.5	6	8	3	1	+	+	1
3-3.5	1	4	4	1	+	+	1
4-5.5	1	1	3	3	1	+	1
6-7.5		+	+	1	+		
8-9.5							
≥10							

901

Marine Area B

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	NO
0-.5	7	1	+	+	+		7
1-1.5	19	6	2	1	1	+	3
2-2.5	8	10	3	1	+	+	2
3-3.5	2	7	4	1	+	+	1
4-5.5	1	3	4	1	1	+	1
6-7.5	+	+	1	+	+	+	+
8-9.5		+	+	+	+	+	+
≥10							

5581

Marine Area C

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	NO
0-.5	7	1	+	+			7
1-1.5	17	6	2	1	+	+	2
2-2.5	11	11	4	1	+	+	1
3-3.5	2	9	4	1	+		1
4-5.5	1	3	4	1	+	+	+
6-7.5		+	+	+	+	+	+
8-9.5		+					
≥10							

3324

Marine Area D

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	NO
0-.5	4	1	+	+			2
1-1.5	16	7	3	1	+	+	1
2-2.5	9	11	5	2	+	+	2
3-3.5	3	7	5	2	1	+	1
4-5.5	1	4	3	2	1	+	2
6-7.5	+	1	+	+	+	+	1
8-9.5		+	+	+	+	+	+
≥10							

6139

Marine Area E

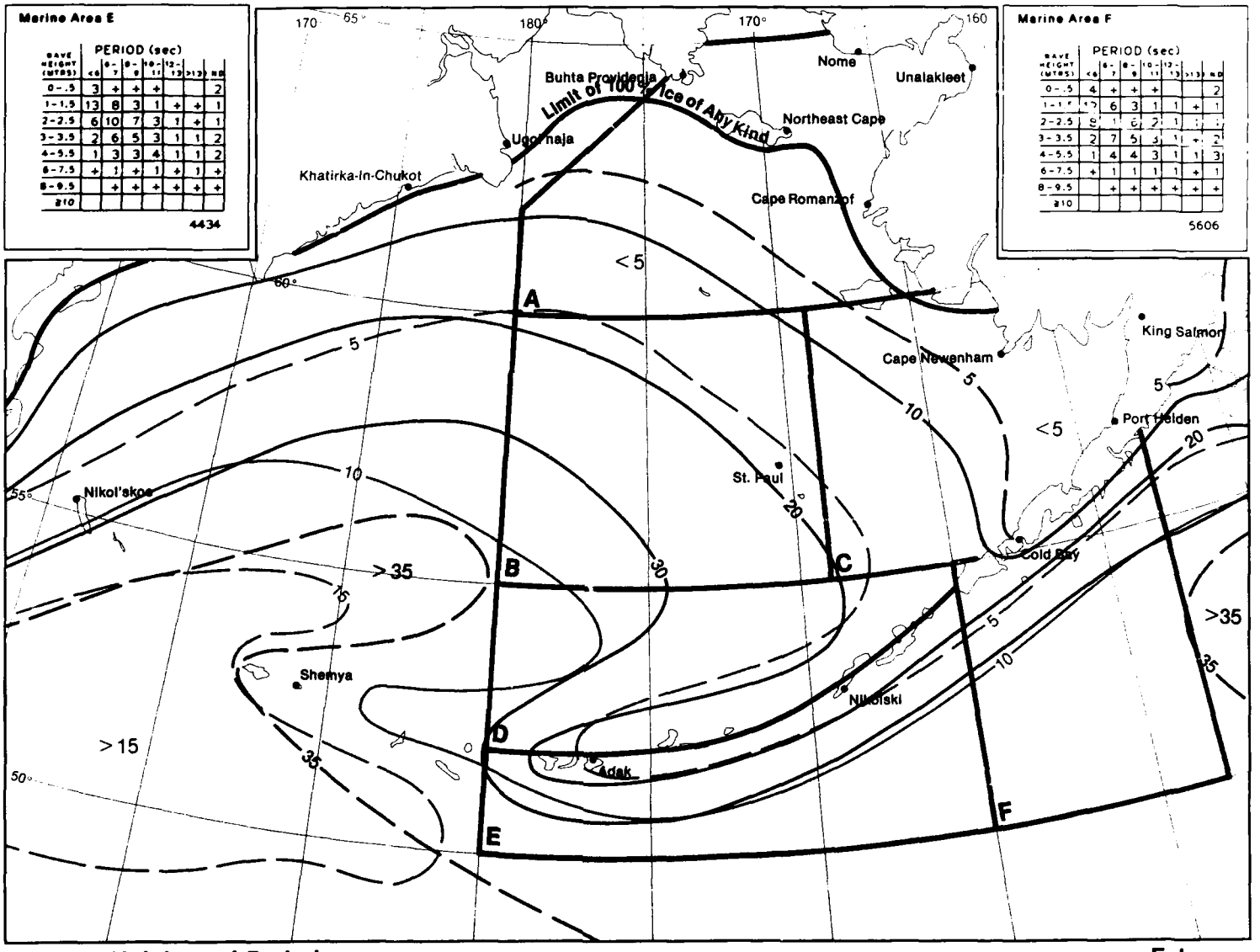
WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	NO
0-.5	3	+	+	+			2
1-1.5	13	8	3	1	+	+	1
2-2.5	6	10	7	3	1	+	1
3-3.5	2	6	5	3	1	1	2
4-5.5	1	3	3	4	1	1	2
6-7.5	+	1	+	1	+	1	+
8-9.5		+	+	+	+	+	+
≥10							

4434

Marine Area F

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	NO
0-.5	4	+	+	+			2
1-1.5	17	6	3	1	1	+	1
2-2.5	9	11	6	2	1	+	2
3-3.5	2	7	5	3	1	+	2
4-5.5	1	4	4	3	1	1	3
6-7.5	+	1	1	1	1	+	1
8-9.5		+	+	+	+	+	+
≥10							

5606



20 Wave Height and Period
Wave Height ≥12 and ≥20 Feet

February

Marine Area A

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	+	+				38
1-1.5	8	6	6	2	1	+	+
2-2.5	3	5	5	2	1	1	+
3-3.5		2	5	2	+		
4-5.5		1	3	1	+		
6-7.5			1	1	+		
8-9.5							
≥10							

529

Marine Area B

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	9	1	+	+			8
1-1.5	16	6	3	2	1	+	2
2-2.5	7	11	4	2	1	+	1
3-3.5	2	6	3	1	+	+	1
4-5.5	1	2	3	1	+	+	1
6-7.5	+	+	+	+	+	+	+
8-9.5		+	+	+	+	+	+
≥10							

5067

Marine Area C

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	11	1	+	+			9
1-1.5	21	8	3	1	+	+	2
2-2.5	7	12	5	1	+	+	1
3-3.5	1	4	3	1	+	+	+
4-5.5	1	1	2	1	+	+	1
6-7.5		+	+	+	+	+	+
8-9.5		+	+	+		+	
≥10							

3720

Marine Area D

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	1	+	+			2
1-1.5	15	8	3	1	+	+	1
2-2.5	9	13	4	1	+	+	1
3-3.5	2	8	4	1	1	+	1
4-5.5	1	4	3	2	1	+	1
6-7.5	+	1	+	1	+	+	+
8-9.5		+	+	+	+	+	+
≥10							

7406

Marine Area E

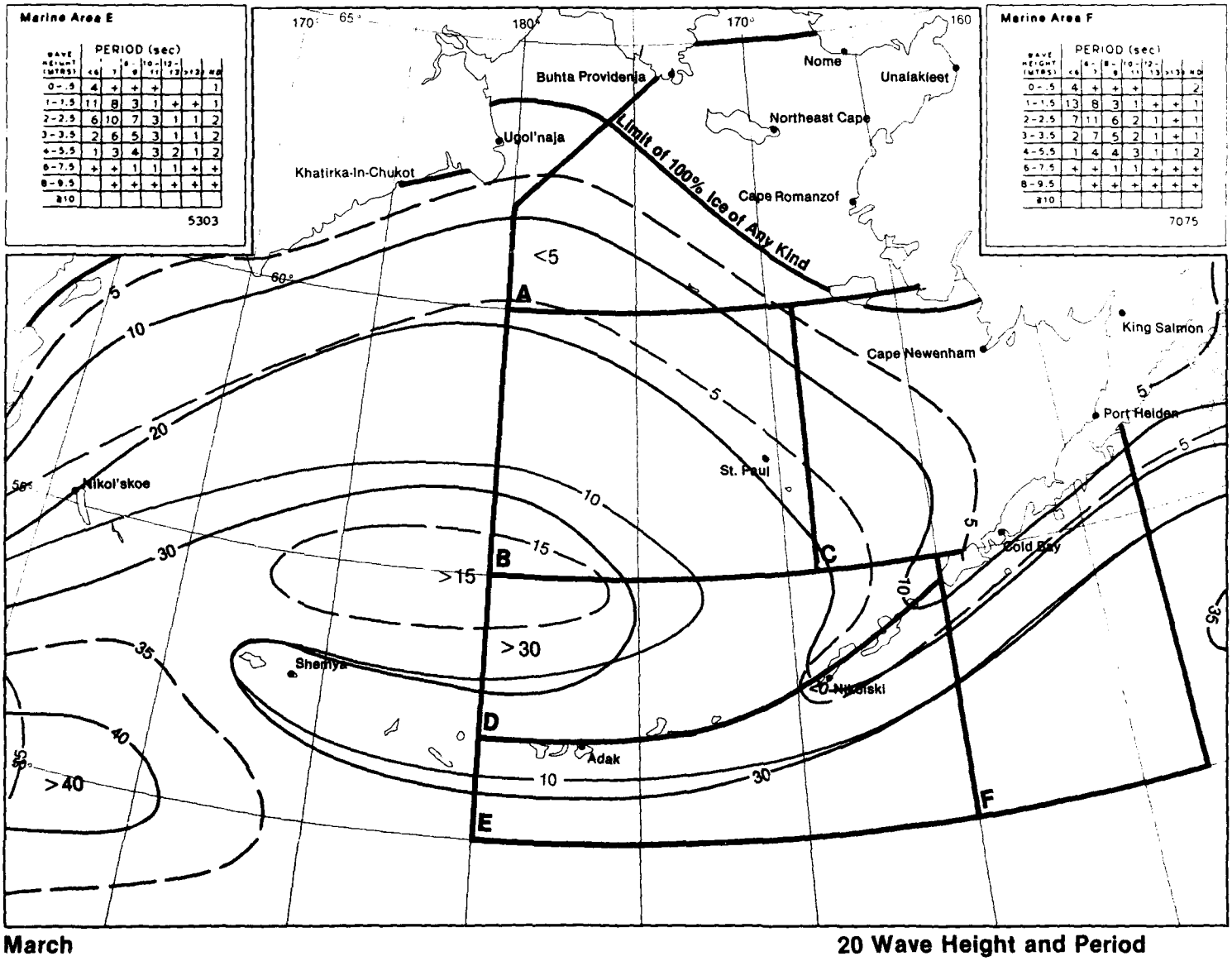
WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	+	+	+			1
1-1.5	11	8	3	1	+	+	1
2-2.5	6	10	7	3	1	1	2
3-3.5	2	6	5	3	1	1	2
4-5.5	1	3	4	3	2	1	2
6-7.5	+	+	1	1	1	+	+
8-9.5		+	+	+	+	+	+
≥10							

5303

Marine Area F

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	+	+	+			2
1-1.5	13	8	3	1	+	+	1
2-2.5	7	11	6	2	1	+	1
3-3.5	2	7	5	2	1	+	1
4-5.5	1	4	4	3	1	1	2
6-7.5	+	+	1	1	+	+	+
8-9.5		+	+	+	+	+	+
≥10							

7075



March

20 Wave Height and Period
Wave Height ≧12 and ≧20 Feet

Marine Area A

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	ND
0-.5	5	1	1				54
1-1.5	10	8	3	3	1		2
2-2.5	2	4	1	1		1	1
3-3.5		2	1	+	1		+
4-5.5			+				+
6-7.5				+			
8-9.5							
≥10							

396

Marine Area B

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	ND
0-.5	12	1	1	+			8
1-1.5	17	9	4	2	2	+	2
2-2.5	6	10	3	1	1	+	1
3-3.5	1	4	2	1	1	+	1
4-5.5	+	3	2	1	+	+	+
6-7.5		1	+	+	+		+
8-9.5		+	+			+	
≥10							

3745

Marine Area C

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	ND
0-.5	12	2	1	+			5
1-1.5	20	13	4	1	1	+	1
2-2.5	5	11	6	1	+	+	1
3-3.5	1	3	3	1	+	+	+
4-5.5	+	1	1	2	+	+	+
6-7.5	+	+	+	+	+	+	+
8-9.5			+	+		+	
≥10							

4070

Marine Area D

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	ND
0-.5	6	1	+	+			2
1-1.5	17	8	2	1	+	+	2
2-2.5	9	13	4	1	+	+	1
3-3.5	2	8	4	1	+	+	1
4-5.5	1	3	3	2	1	+	1
6-7.5	+	+	+	+	+	+	+
8-9.5		+	+	+	+	+	+
≥10							

6849

Marine Area E

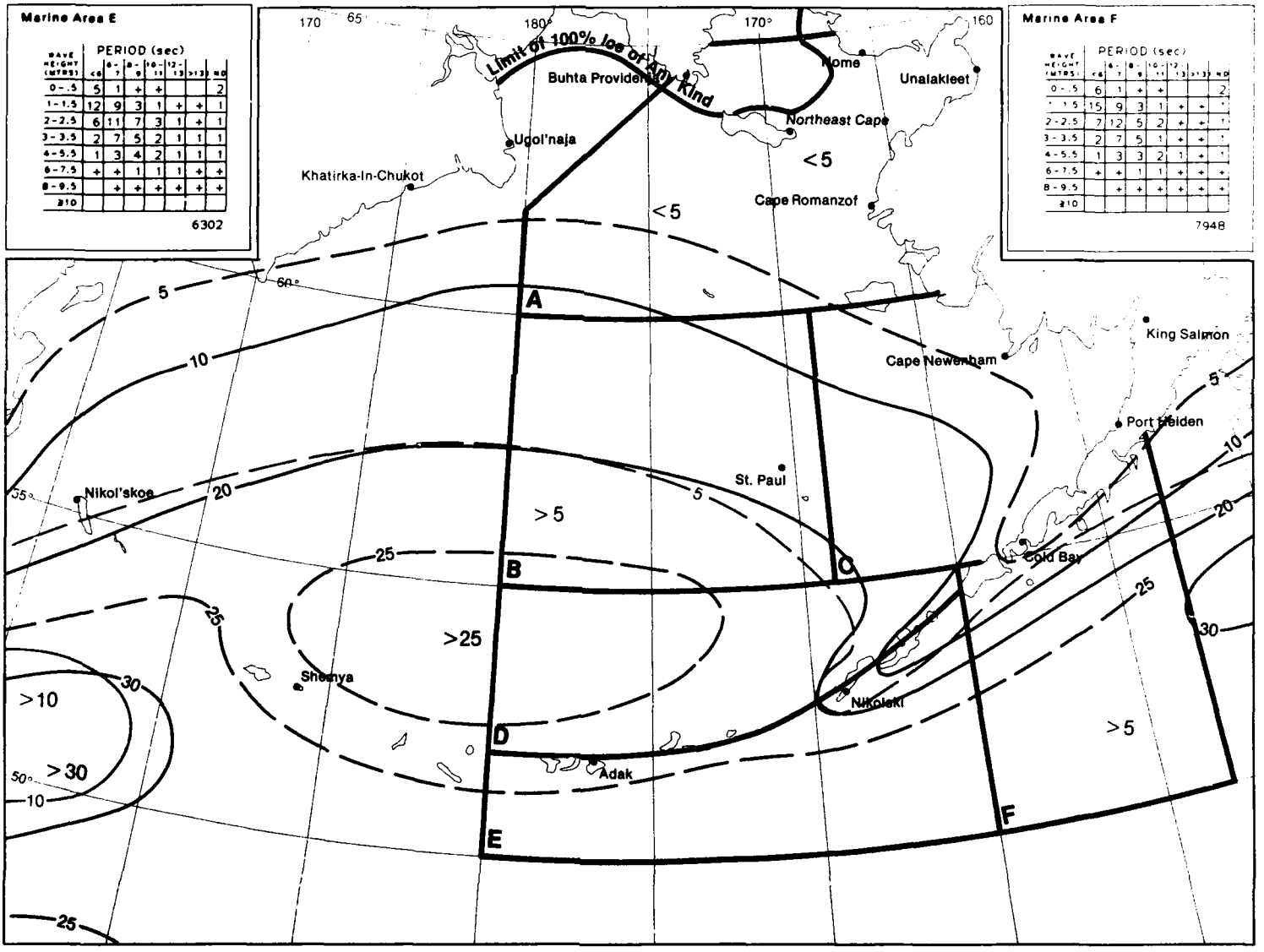
WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	ND
0-.5	5	1	+	+			2
1-1.5	12	9	3	1	+	+	1
2-2.5	6	11	7	3	1	+	1
3-3.5	2	7	5	2	1	1	1
4-5.5	1	3	4	2	1	1	1
6-7.5	+	+	1	1	1	+	+
8-9.5		+	+	+	+	+	+
≥10							

6302

Marine Area F

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	ND
0-.5	6	1	+	+			2
1-1.5	15	9	3	1	+	+	1
2-2.5	7	12	5	2	+	+	1
3-3.5	2	7	5	1	+	+	1
4-5.5	1	3	3	2	1	+	1
6-7.5	+	+	1	1	+	+	+
8-9.5		+	+	+	+	+	+
≥10							

7948



20 Wave Height and Period
Wave Height ≧ 12 and ≧ 20 Feet

April

Marine Area A

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	ND
0-.5	17	2	1	2			29
1-1.5	13	4	1	9	11		5
2-2.5	3	2	+	+	1		2
3-3.5	1	1					+
4-5.5	+						
6-7.5							
8-9.5							
≥10							

598

Marine Area B

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	ND
0-.5	13	2	1	1			5
1-1.5	23	15	2	2	1	+	2
2-2.5	4	13	3	1	+	+	2
3-3.5	1	4	2	+	+		+
4-5.5	+	1	+	+	+	+	+
6-7.5		+	+	+		+	+
8-9.5			+				
≥10							

3032

Marine Area C

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	ND
0-.5	20	2	1	+		+	7
1-1.5	25	13	3	1	+	+	1
2-2.5	4	9	5	1	+	+	+
3-3.5	1	2	1	1	+	+	+
4-5.5	+	1	1	+	+	+	+
6-7.5		+	+	+		+	+
8-9.5		+		+	+		
≥10							

5197

Marine Area D

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	ND
0-.5	10	2	1	+			4
1-1.5	24	10	3	1	1	+	2
2-2.5	8	10	3	1	+	1	1
3-3.5	2	4	2	1	+	+	+
4-5.5	1	1	1	1	+	+	+
6-7.5	+	+	+	+	+	+	+
8-9.5		+	+	+	+		
≥10							

7342

Marine Area E

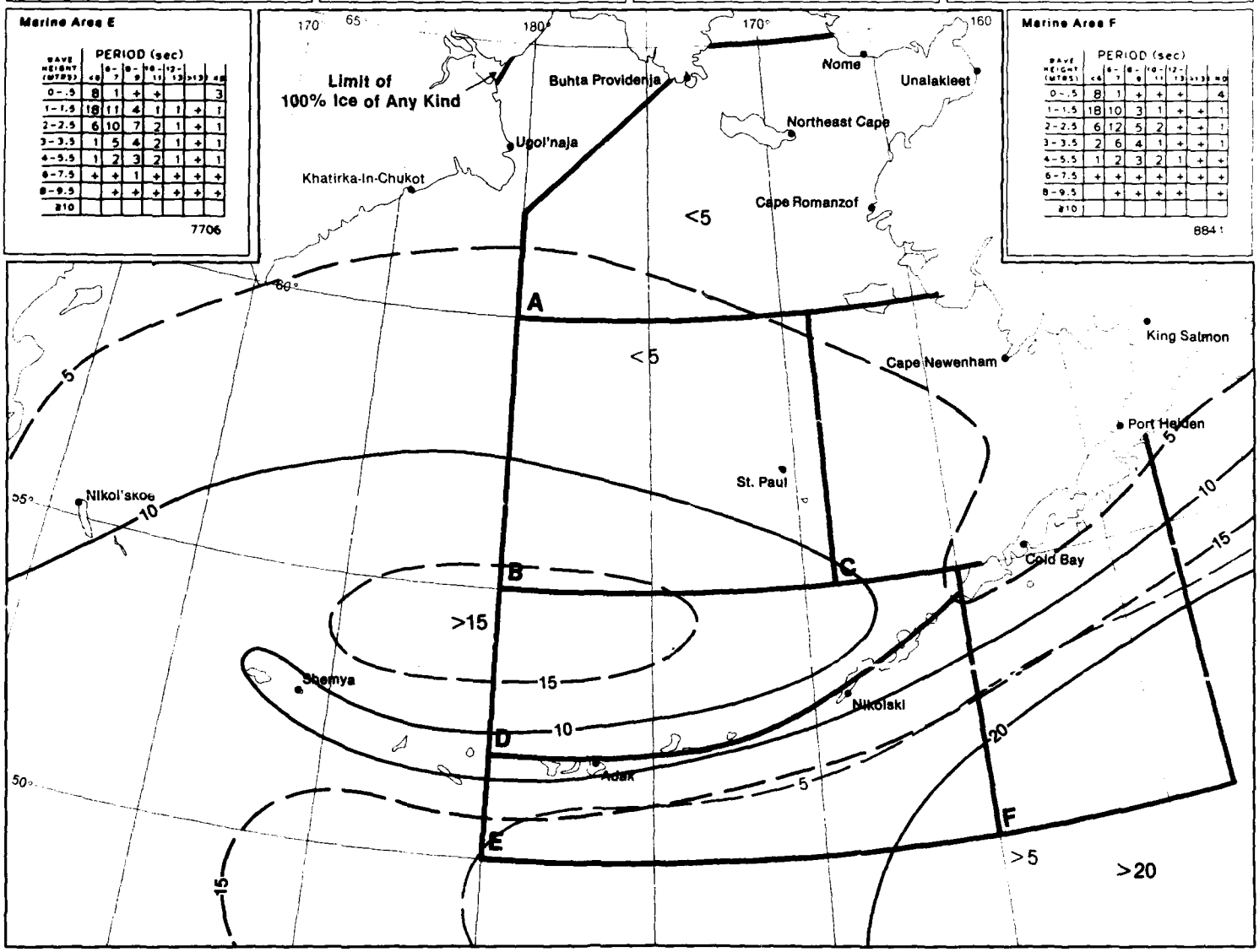
WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	ND
0-.5	8	1	+	+			3
1-1.5	18	11	4	1	1	+	1
2-2.5	6	10	7	2	1	+	1
3-3.5	1	5	4	2	1	+	1
4-5.5	1	2	3	2	1	+	1
6-7.5	+	+	1	+	+	+	+
8-9.5		+	+	+	+	+	+
≥10							

7706

Marine Area F

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	ND
0-.5	8	1	+	+	+		4
1-1.5	18	10	3	1	+	+	1
2-2.5	6	12	5	2	+	+	1
3-3.5	2	6	4	1	+	+	1
4-5.5	1	2	3	2	1	+	+
6-7.5	+	+	+	+	+	+	+
8-9.5		+	+	+	+		+
≥10							

8841



May

20 Wave Height and Period
Wave Height ≧12 and ≧20 Feet

Marine Area A

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	NO
0-.5	27	2	+	1			19
1-1.5	20	7	2	4	2	+	2
2-2.5	7	2	+	1	+		1
3-3.5	1	1	+	+			+
4-5.5	+	+	+	+		+	+
6-7.5		+	+				+
8-9.5							
≥10							

1511

Marine Area B

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	NO
0-.5	15	4	2	+			6
1-1.5	22	19	5	1	+	+	1
2-2.5	4	11	4	1	+	+	1
3-3.5	+	2	1	+	+		+
4-5.5	+	+	+	+	+	+	+
6-7.5							
8-9.5							
≥10							

3482

Marine Area C

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	NO
0-.5	21	3	1	+			9
1-1.5	27	14	4	1	+	+	1
2-2.5	5	7	3	1	+	+	+
3-3.5	+	1	1	+	+	+	+
4-5.5	+	+	+	+	+	+	+
6-7.5			+				
8-9.5							
≥10							

5175

Marine Area D

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	NO
0-.5	15	2	1	+			5
1-1.5	27	13	3	1	1	1	2
2-2.5	8	9	3	1	+	+	1
3-3.5	1	3	1	1	+	+	+
4-5.5	+	1	1	+	+	+	+
6-7.5	+	+	+	+	+	+	
8-9.5		+					
≥10							

7150

Marine Area E

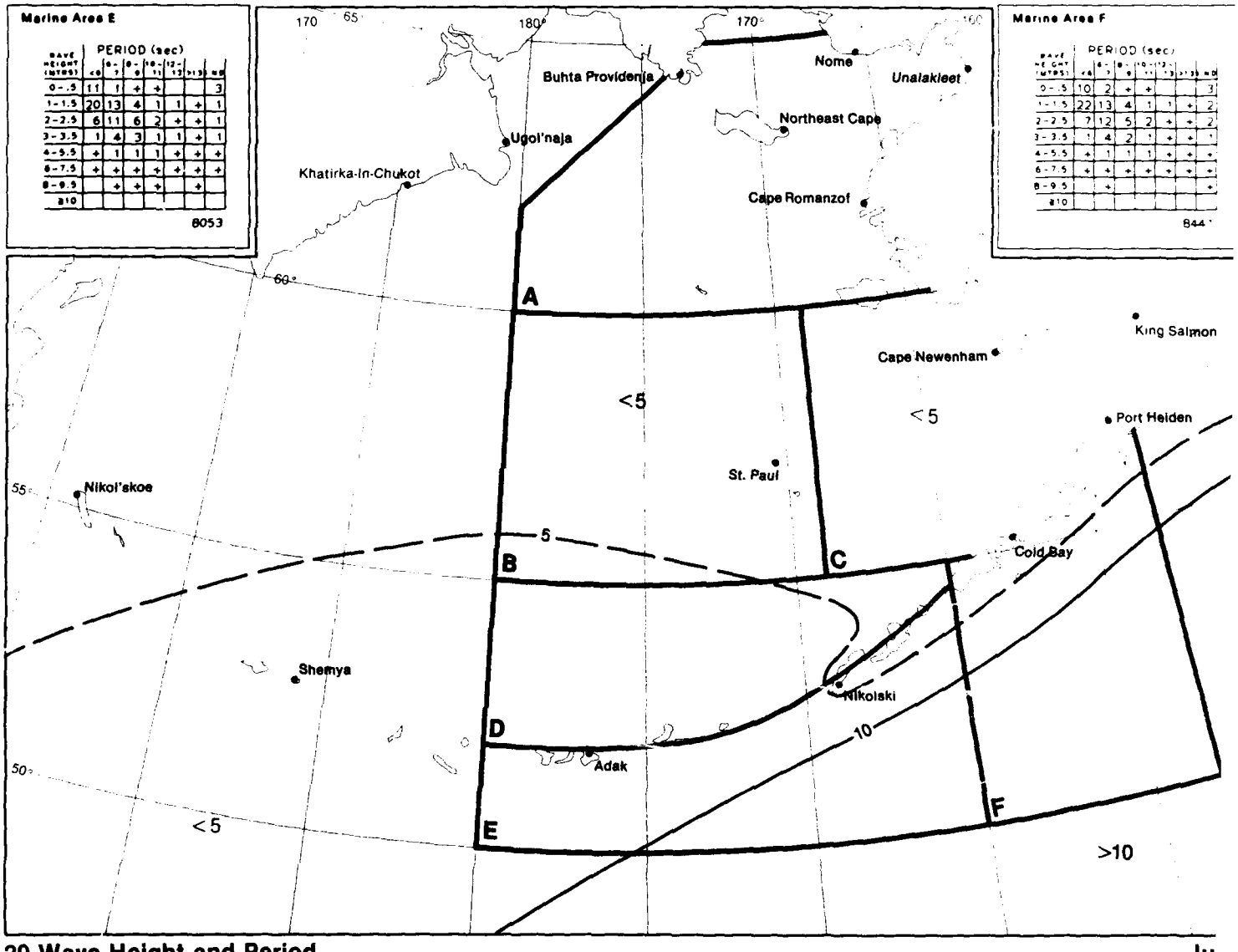
WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	NO
0-.5	11	1	+	+			3
1-1.5	20	13	4	1	1	+	1
2-2.5	6	11	6	2	+	+	1
3-3.5	1	4	3	1	1	+	1
4-5.5	+	1	1	1	+	+	+
6-7.5	+	+	+	+	+	+	+
8-9.5		+	+	+		+	
≥10							

8053

Marine Area F

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	NO
0-.5	10	2	+	+			3
1-1.5	22	13	4	1	1	+	2
2-2.5	7	12	5	2	+	+	2
3-3.5	1	4	2	+	+	+	1
4-5.5	+	1	1	1	+	+	+
6-7.5	+	+	+	+	+	+	+
8-9.5		+					+
≥10							

844



20 Wave Height and Period
Wave Height ≧12 and ≧20 Feet

Ju

Marine Area A

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	ND
0-.5	26	4	1	1			12
1-1.5	24	6	3	+	1	+	3
2-2.5	5	5	1	+	+	+	1
3-3.5	+	1	1	+	+	+	+
4-5.5	+	+			+	+	+
6-7.5	+	+					
8-9.5							
≥10							

3111

Marine Area B

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	ND
0-.5	14	3	+	+			4
1-1.5	23	22	4	+	+	+	1
2-2.5	4	12	4	1	+	+	+
3-3.5	1	2	1	+	+	+	+
4-5.5	+	+	+	+	+	+	+
6-7.5						+	+
8-9.5			+				+
≥10							

3916

Marine Area C

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	ND
0-.5	19	2	1	+			8
1-1.5	29	15	3	1	+	+	1
2-2.5	4	8	3	1	+	+	1
3-3.5	+	2	1	+	+	+	+
4-5.5	+	+	+	+	+	+	+
6-7.5				+	+		
8-9.5							
≥10							

5657

Marine Area D

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	ND
0-.5	14	2	1	+			7
1-1.5	27	12	4	1	1	+	2
2-2.5	7	8	3	1	+	+	1
3-3.5	1	3	1	+	+	+	+
4-5.5	+	1	+	+	+	+	+
6-7.5	+	+	+	+	+		+
8-9.5		+				+	+
≥10							

6785

Marine Area E

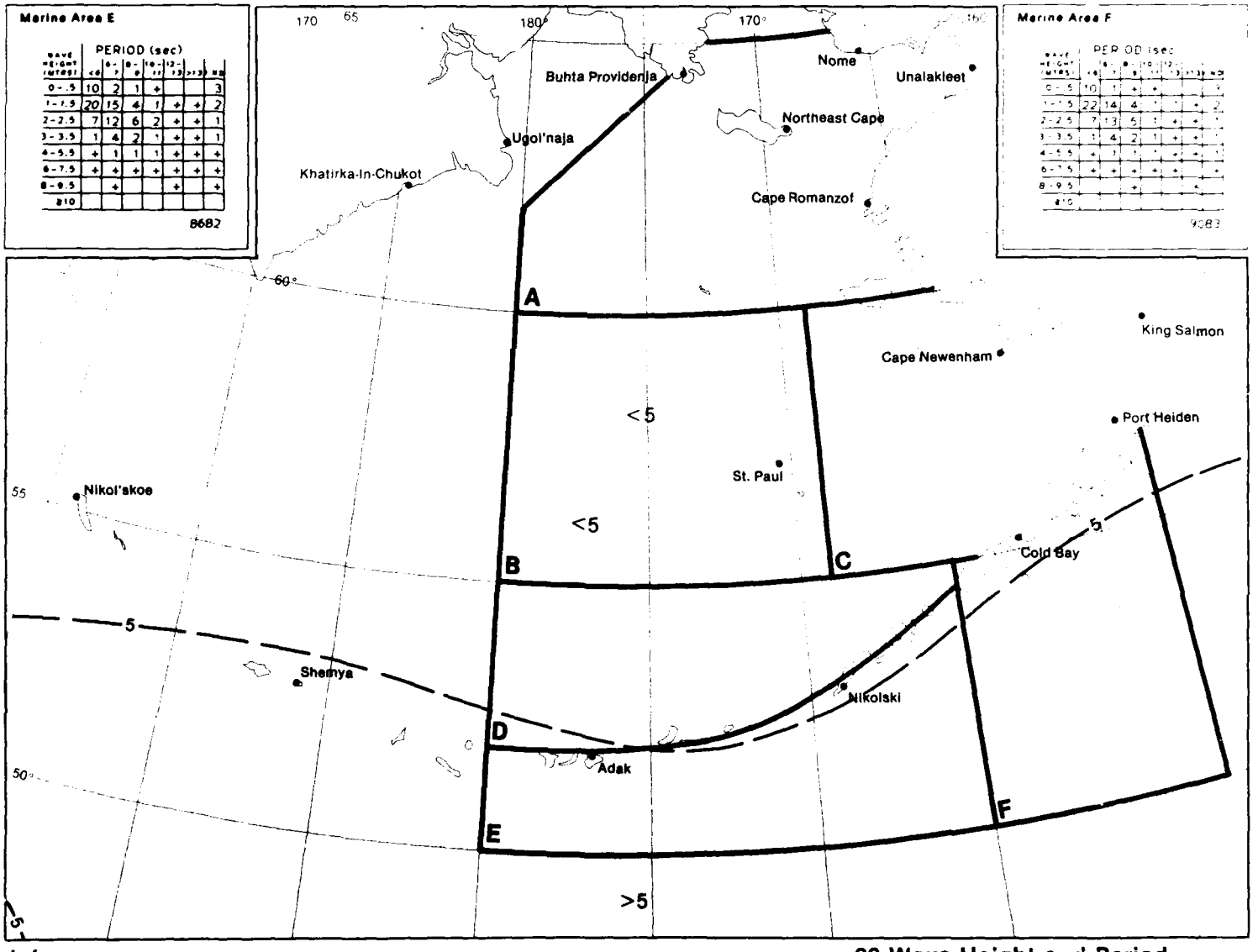
WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	ND
0-.5	10	2	1	+			3
1-1.5	20	15	4	1	+	+	2
2-2.5	7	12	6	2	+	+	1
3-3.5	1	4	2	1	+	+	1
4-5.5	+	1	1	1	+	+	+
6-7.5	+	+	+	+	+	+	+
8-9.5		+			+		+
≥10							

8682

Marine Area F

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	ND
0-.5	10	1	+	+			+
1-1.5	22	14	4	1	+	+	2
2-2.5	7	13	5	1	+	+	1
3-3.5	1	4	2	1	+	+	+
4-5.5	+	1	1	+	+	+	+
6-7.5	+	+	+	+	+	+	+
8-9.5			+			+	+
≥10							

9083



July

20 Wave Height and Period
Wave Height ≧12 and ≧20 Feet

Marine Area A

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	ND
0-.5	23	3	+	+			8
1-1.5	25	12	2	+	+	+	3
2-2.5	4	8	3	1	+	+	1
3-3.5	1	2	1	+	+	+	+
4-5.5	+	+	+	+	+	+	+
6-7.5				+	+		+
8-9.5							
≥10							

2895

Marine Area B

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	ND
0-.5	9	3	1	+			3
1-1.5	21	18	6	1	+	+	2
2-2.5	3	13	6	1	+	+	1
3-3.5	1	2	2	2	+	+	1
4-5.5	+	1	1	+	+	+	1
6-7.5	+	1	+	+		+	+
8-9.5		+	+			+	
≥10							

2708

Marine Area C

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	ND
0-.5	13	2	1	+			5
1-1.5	32	14	3	1	+	+	1
2-2.5	6	10	5	1	+	+	+
3-3.5	+	2	1	+	+	+	+
4-5.5	+	+	1	+	+	+	1
6-7.5		+	+	+			+
8-9.5							
≥10							

5072

Marine Area D

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	ND
0-.5	11	2	+	+			4
1-1.5	25	12	3	1	1	+	1
2-2.5	9	11	3	1	+	+	1
3-3.5	2	4	2	1	+	+	1
4-5.5	1	1	1		+	+	1
6-7.5		+	+	+	+	+	+
8-9.5			+			+	+
≥10							

6807

Marine Area E

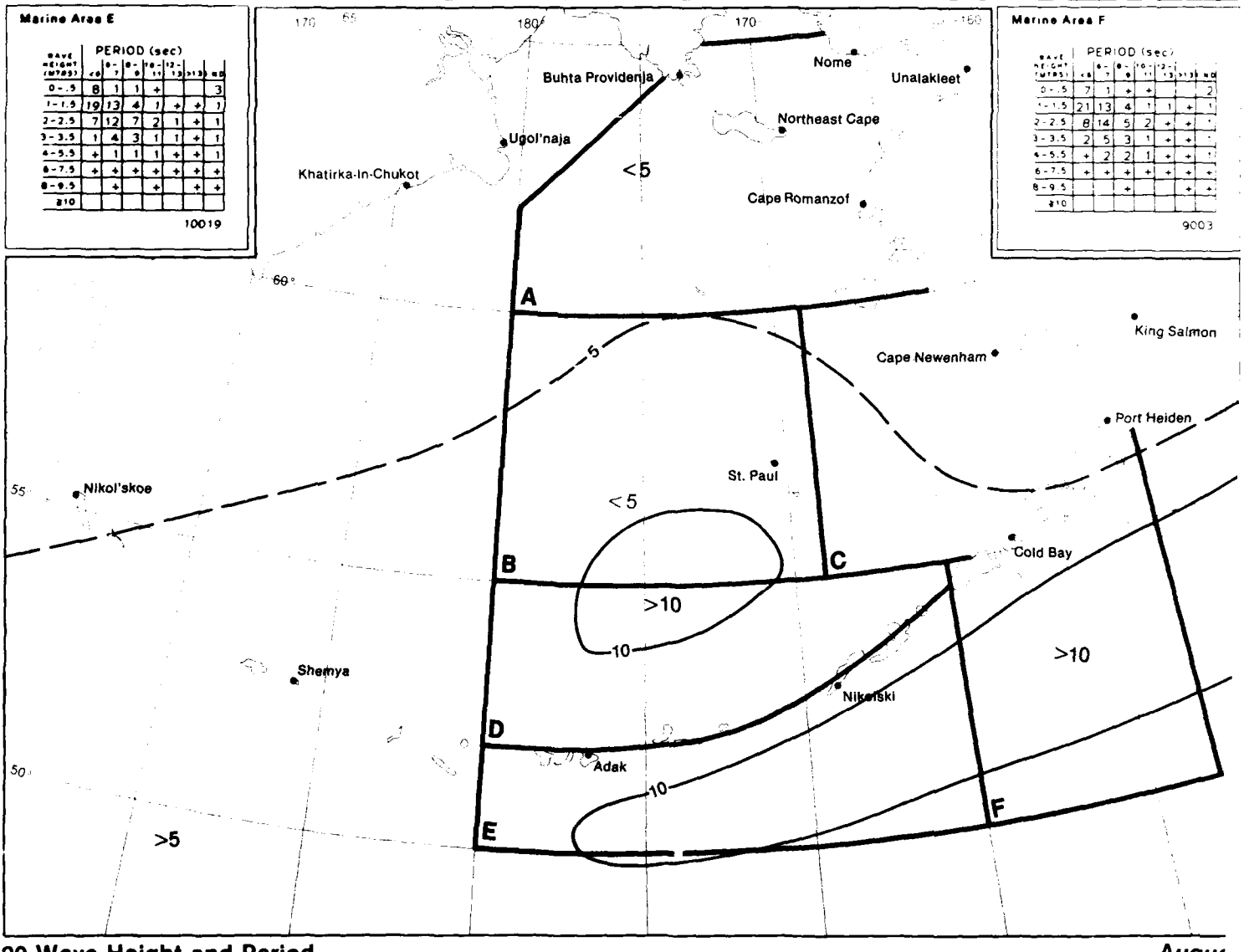
WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	ND
0-.5	8	1	1	+			3
1-1.5	19	13	4	1	+	+	1
2-2.5	7	12	7	2	1	+	1
3-3.5	1	4	3	1	1	+	1
4-5.5	+	1	1	1	+	+	1
6-7.5	+	+	+	+	+	+	+
8-9.5		+		+		+	+
≥10							

10019

Marine Area F

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	ND
0-.5	7	1	+	+			2
1-1.5	21	13	4	1	1	+	1
2-2.5	8	14	5	2	+	+	+
3-3.5	2	5	3	1	+	+	+
4-5.5	+	2	2	1	+	+	1
6-7.5	+	+	+	+	+	+	+
8-9.5			+			+	+
≥10							

9003



20 Wave Height and Period
Wave Height ≧12 and ≧20 Feet

Augus

Marine Area A

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	ND
0-.5	21	2	+	+			7
1-1.5	26	11	1	1	+	+	2
2-2.5	6	7	1	1	+	+	1
3-3.5	1	2	1	+	+	+	1
4-5.5	+	1	1	+	+	+	+
6-7.5		+		+	+		+
8-9.5							
≥10							

2130

Marine Area B

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	ND
0-.5	10	1	+	+			2
1-1.5	17	17	4	4	1	+	+
2-2.5	5	11	4	2	+	+	1
3-3.5	1	5	2	1	+		1
4-5.5	1	2	2	1	+	+	1
6-7.5		1	1	+	+	+	+
8-9.5		+	+			+	+
≥10							

2240

Marine Area C

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	ND
0-.5	11	2	+	+			3
1-1.5	24	15	3	1	+	+	+
2-2.5	7	13	4	1	+	+	+
3-3.5	1	4	2	1	+	+	1
4-5.5	1	1	1	1	+	+	1
6-7.5	+	+	+	+	+		+
8-9.5		+	+	+			+
≥10							

5573

Marine Area D

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	ND
0-.5	9	1	+	+			4
1-1.5	21	9	2	1	+	+	1
2-2.5	8	12	4	1	+	+	1
3-3.5	2	6	3	1	+	+	1
4-5.5	1	3	2	1	+	+	1
6-7.5	+	+	+	+	+	+	+
8-9.5		+	+			+	+
≥10							

6481

Marine Area E

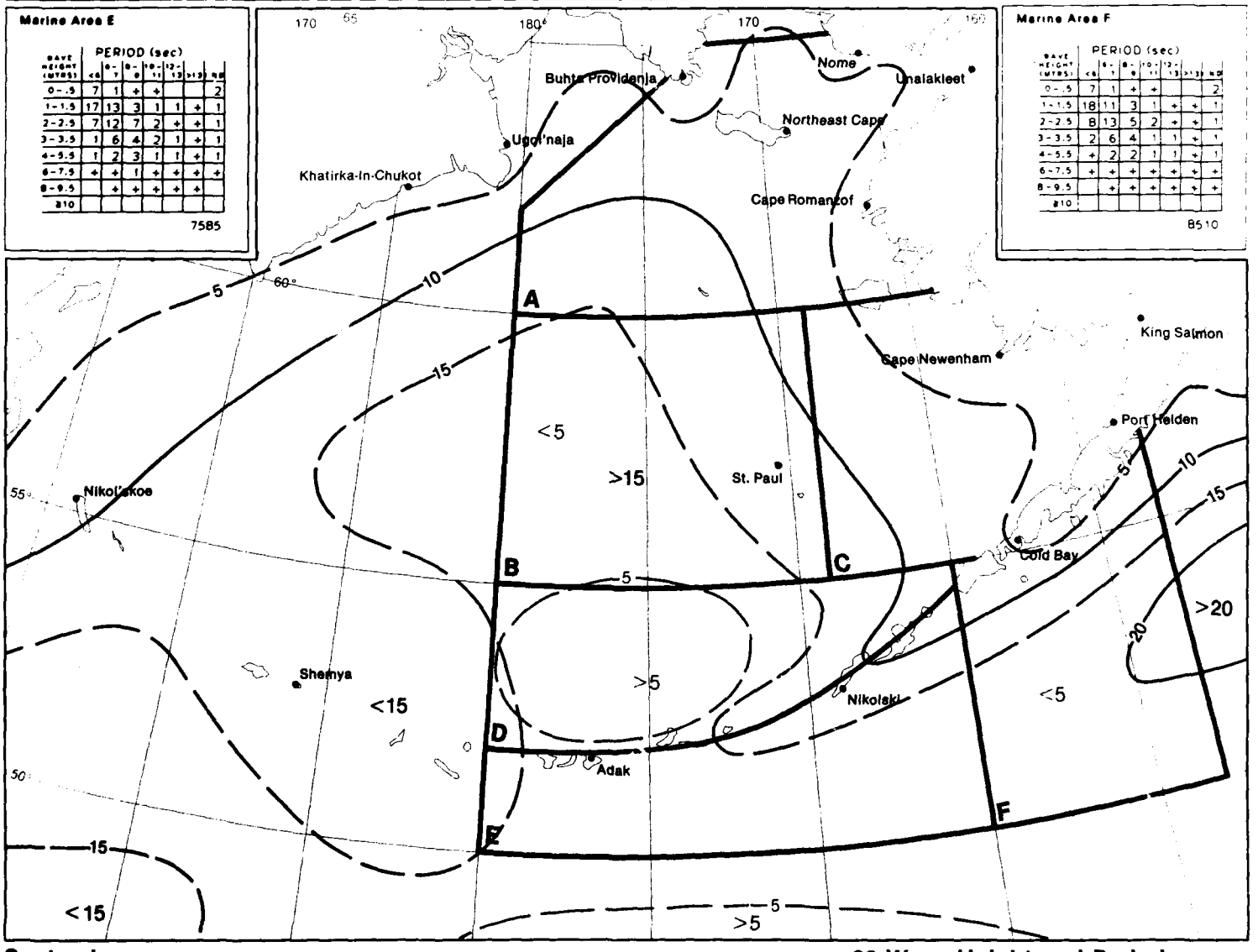
WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	ND
0-.5	7	1	+	+			2
1-1.5	17	13	3	1	1	+	1
2-2.5	7	12	7	2	+	+	1
3-3.5	1	6	4	2	1	+	1
4-5.5	1	2	3	1	1	+	1
6-7.5	+	+	1	+	+	+	+
8-9.5		+	+	+	+	+	
≥10							

7585

Marine Area F

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	ND
0-.5	7	1	+	+			2
1-1.5	18	11	3	1	+	+	1
2-2.5	8	13	5	2	+	+	1
3-3.5	2	6	4	1	1	+	1
4-5.5	+	2	2	1	1	+	1
6-7.5	+	+	+	+	+	+	+
8-9.5		+	+	+	+	+	+
≥10							

8510



September

20 Wave Height and Period
Wave Height ≧12 and ≧20 Feet

Marine Area A

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	NO
0-.5	11	1		+			4
1-1.5	24	8	2	1	1	+	4
2-2.5	8	12	2	+	+	1	4
3-3.5	1	4	3	1	+	+	1
4-5.5	+	1	1	2	1	+	1
6-7.5		+	+	+			+
8-9.5				+			
≥10							

1231

Marine Area B

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	NO
0-.5	5	1	+	+			1
1-1.5	16	9	3	1	+	+	2
2-2.5	11	11	5	2	+	+	3
3-3.5	2	7	4	2	+	+	3
4-5.5	1	4	3	1	+	+	2
6-7.5	+	1	+	1	+	+	+
8-9.5		+		+	+	+	
≥10							

1675

Marine Area C

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	NO
0-.5	6	1	+	+			2
1-1.5	18	13	2	1	+	+	1
2-2.5	8	17	3	1	+	+	1
3-3.5	2	7	4	1	+	+	1
4-5.5	1	2	3	1	+	+	2
6-7.5	+	+	1	+	+	+	+
8-9.5		+	+	+	+	+	
≥10							

3593

Marine Area D

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	NO
0-.5	4	1	+	+			2
1-1.5	17	9	2	1	+	+	1
2-2.5	9	13	4	1	+	+	2
3-3.5	3	7	5	1	+	+	2
4-5.5	1	3	4	2	+	+	2
6-7.5	+	1	1	+	+	+	+
8-9.5		-	+	+	+	+	+
≥10							

6111

Marine Area E

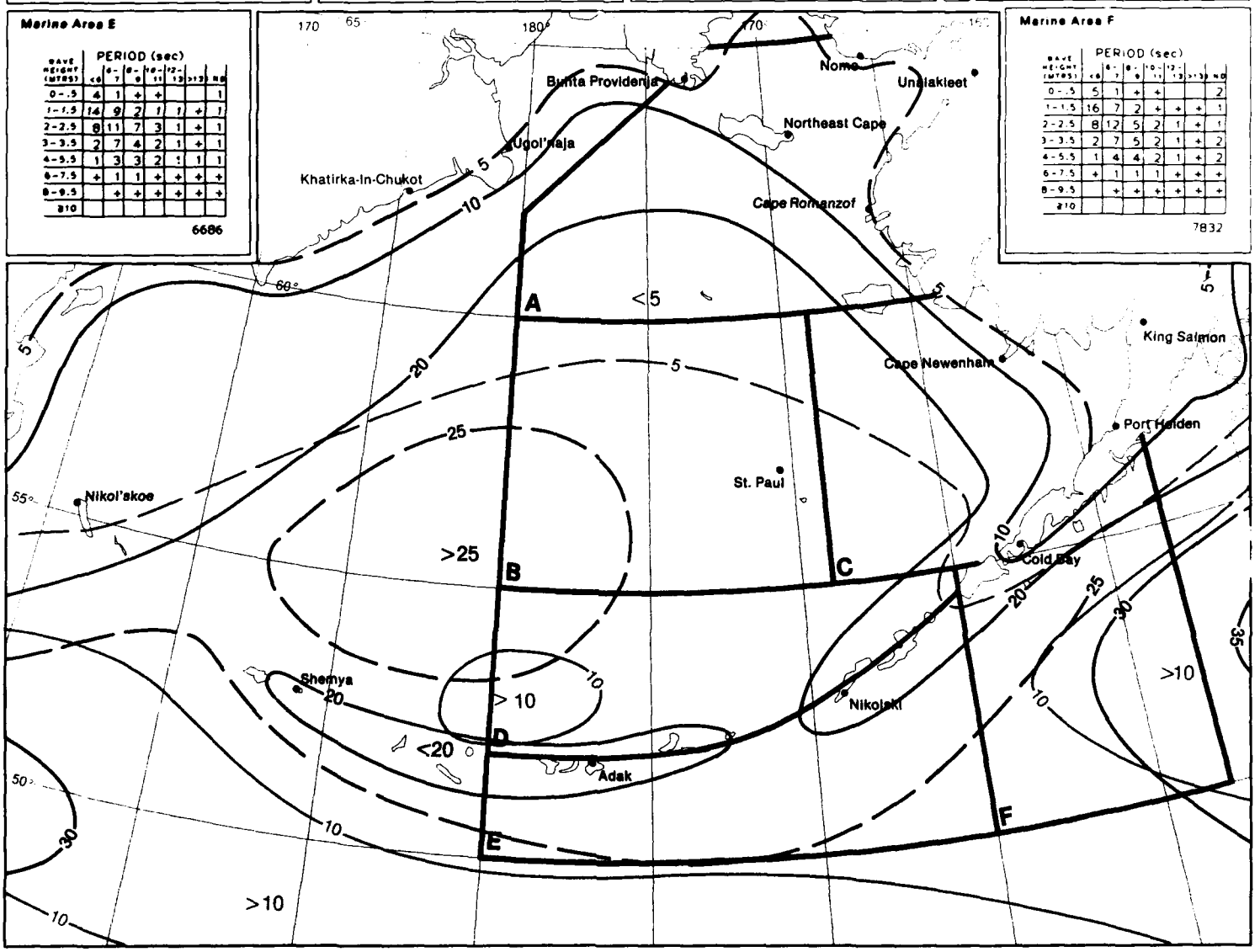
WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	NO
0-.5	4	1	+	+			1
1-1.5	14	9	2	1	1	+	1
2-2.5	8	11	7	3	1	+	1
3-3.5	2	7	4	2	1	+	1
4-5.5	1	3	3	2	1	1	1
6-7.5	+	1	1	+	+	+	+
8-9.5		+	+	+	+	+	+
≥10							

6686

Marine Area F

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	NO
0-.5	5	1	+	+			2
1-1.5	16	7	2	+	+	+	1
2-2.5	8	12	5	2	1	+	1
3-3.5	2	7	5	2	1	+	2
4-5.5	1	4	4	2	1	+	2
6-7.5	+	1	1	1	+	+	+
8-9.5		+	+	+	+	+	+
≥10							

7832



20 Wave Height and Period
Wave Height ≧12 and ≧20 Feet

October

Marine Area A

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	6	+	+				3
1-1.5	20	5	3	+		+	2
2-2.5	12	12	3	+	+	+	2
3-3.5	2	6	4	+	+	+	1
4-5.5	1	2	3	1	1	+	1
6-7.5	+	1	1	1	+	1	1
8-9.5		+				+	
≥10							

1094

Marine Area B

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	+	+	+			2
1-1.5	20	5	2	1	+	+	2
2-2.5	9	12	3	1	+	+	2
3-3.5	2	7	6	1	1	+	2
4-5.5	2	3	3	2	+	+	2
6-7.5		1	1	1	+	1	+
8-9.5		+	+	+	+	+	+
≥10							

2246

Marine Area C

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	1	+				2
1-1.5	15	9	3	1	+	+	2
2-2.5	9	14	4	1	+	+	1
3-3.5	2	10	3	1	+	+	1
4-5.5	1	3	4	2	+	+	1
6-7.5	+	1	1	1	+	+	+
8-9.5		+	+	+	+	+	+
≥10							

2793

Marine Area D

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	1	+	+			2
1-1.5	12	6	1	1	+	+	1
2-2.5	9	11	4	2	+	+	2
3-3.5	3	8	5	2	+	+	1
4-5.5	1	5	5	2	1	+	2
6-7.5	+	1	1	1	1	+	1
8-9.5		+	+	+	+	+	+
≥10							

5810

Marine Area E

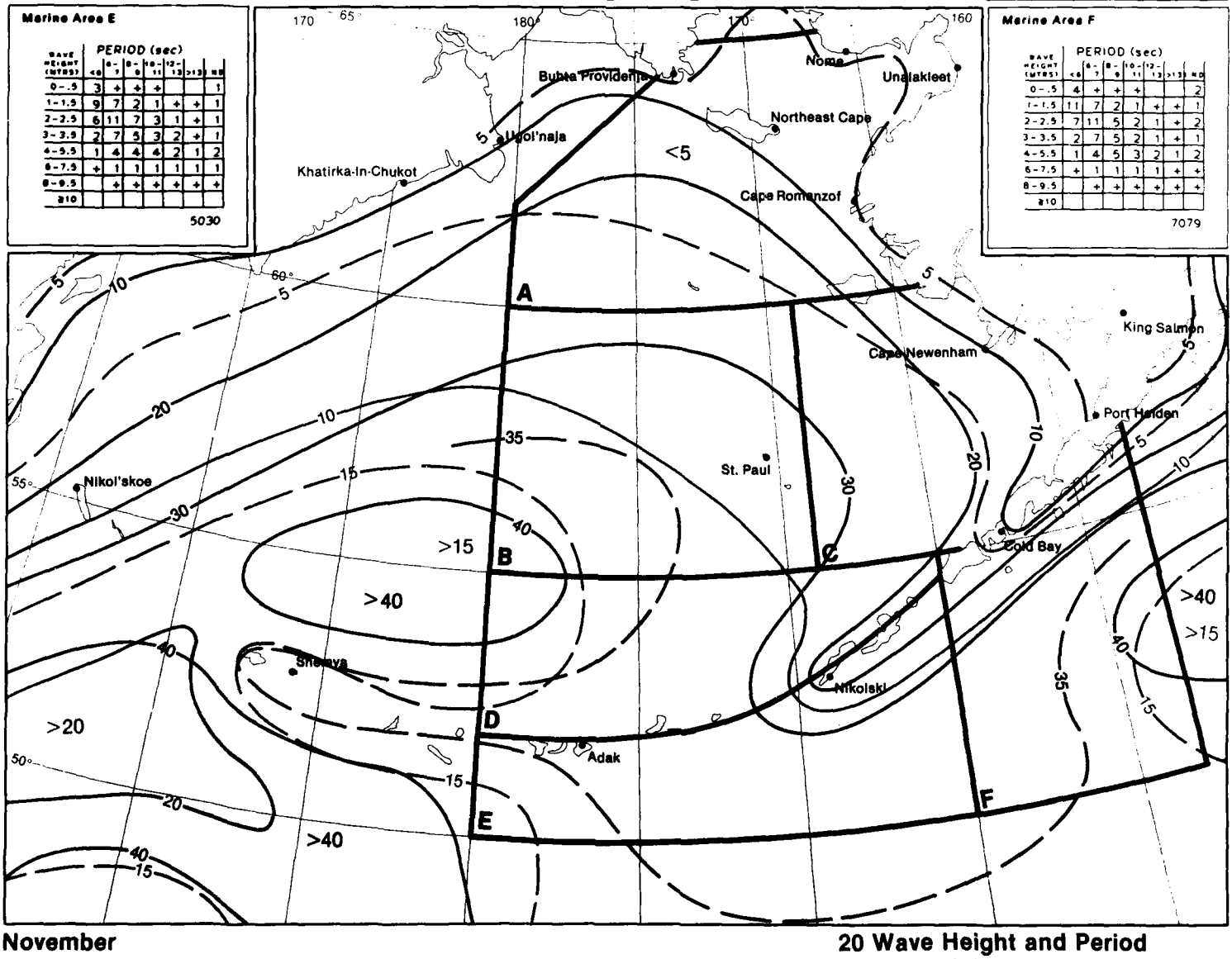
WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	+	+	+			1
1-1.5	9	7	2	1	+	+	1
2-2.5	6	11	7	3	1	+	1
3-3.5	2	7	5	3	2	+	1
4-5.5	1	4	4	4	2	1	2
6-7.5	+	1	1	1	1	1	1
8-9.5		+	+	+	+	+	+
≥10							

5030

Marine Area F

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	+	+	+			2
1-1.5	11	7	2	1	+	+	1
2-2.5	7	11	5	2	1	+	2
3-3.5	2	7	5	2	1	+	1
4-5.5	1	4	5	3	2	1	2
6-7.5	+	1	1	1	1	+	+
8-9.5		+	+	+	+	+	+
≥10							

7079



November

20 Wave Height and Period
Wave Height ≧12 and ≧20 Feet

Marine Area A

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	1	1	+			10
1-1.5	20	6	4	+	+	+	1
2-2.5	8	10	2	1	+	+	+
3-3.5	2	5	4	+	+	+	+
4-5.5	+	2	3	3	1	+	+
6-7.5		1	1	2	+	+	
8-9.5				+			
≥10							

1865

Marine Area B

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	+	+	+			3
1-1.5	22	5	1	1	+	+	2
2-2.5	9	12	2	1	1	+	1
3-3.5	2	7	5	+	+	+	1
4-5.5	1	2	4	2	+	+	1
6-7.5	+	+	1	1	+	+	
8-9.5		+	+	+		+	
≥10							

3030

Marine Area C

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	2	+	+			3
1-1.5	18	8	1	1	+	+	1
2-2.5	9	13	3	1	+	+	1
3-3.5	1	10	3	1	+		1
4-5.5	+	2	3	2	+		+
6-7.5	+	+	+	1	+	+	+
8-9.5		+	+	+	+		
≥10							

3161

Marine Area D

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	+	+	+			1
1-1.5	13	6	2	1	+	+	1
2-2.5	8	10	5	2	+	+	1
3-3.5	3	9	5	2	1	+	1
4-5.5	1	4	5	2	1	+	+
6-7.5	+	1	1	1	1	+	+
8-9.5		+	+	+	+	+	+
≥10							

5237

Marine Area E

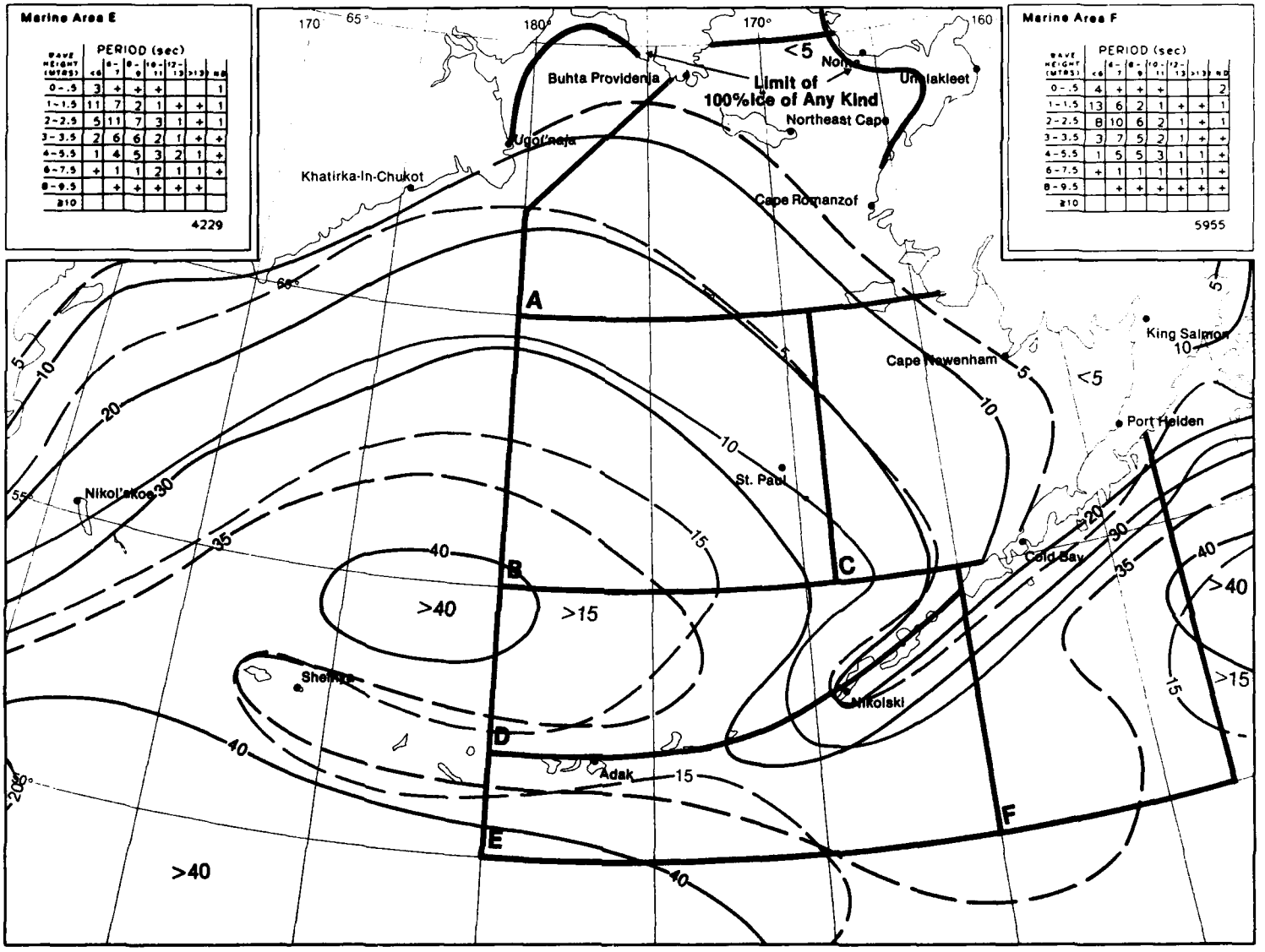
WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	+	+	+			1
1-1.5	11	7	2	1	+	+	1
2-2.5	5	11	7	3	1	+	1
3-3.5	2	6	6	2	1	+	+
4-5.5	1	4	5	3	2	1	+
6-7.5	+	1	1	2	1	1	+
8-9.5		+	+	+	+	+	
≥10							

4229

Marine Area F

WAVE HEIGHT (MTRS)	PERIOD (sec) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	+	+	+			2
1-1.5	13	6	2	1	+	+	1
2-2.5	8	10	6	2	1	+	1
3-3.5	3	7	5	2	1	+	+
4-5.5	1	5	5	3	1	1	+
6-7.5	+	1	1	1	1	1	+
8-9.5		+	+	+	+	+	+
≥10							

5955



20 Wave Height and Period **December**
Wave Height ≧12 and ≧20 Feet

Map 21. Wave height thresholds

TABLE – Wave height frequencies.

Albers Equal–Area Conic Projection

Graphs: Wave height thresholds

Wave height frequencies.

WAVE HEIGHT (M)	%
0–0.5	10.0
1–1.5	20.0
2–2.5	30.0
3–3.5	20.0
4–5.5	10.0
≥6.0	10.0
N=	1363

Percent frequency of various ranges within the *area*.

(30.0% of all observed wave heights were in the range 2 to 2.5 meters.)

N = Observation count.

Wave data for these tables were selected from the higher of sea or swell when both were reported.

The wave height should be estimated from the best available point on the ship that permits the height of the waves to l compared to the height of the ship. The point of observation should be chosen amidships where the pitching of the vessel is a minimum, and the wave height should be estimated when the ship is on an even keel. In general, it has been found by compari instrument measurements to "eyeball" estimates that small wave heights are underestimated while large wave heights a overestimated. Theoretically, the wave height cannot exceed 1/13 of the wave length, measured from trough to trough. Wh both sea and swell, or two systems of swell, are present at the same time, the observer first estimates the higher system waves and then repeats the process for the lower system.

Swell direction may be determined by "eyeball" or by sighting from a compass along wave crests and adding or subtracti 90°. Ship's true heading can also be used to determine the direction from which swells are approaching. The higher the obser tion point, the easier it is to determine swell direction. The average of several observations, rounded to the nearest 10°, shoi be used as the observed swell direction. Refer to the texts for Sets 14 and 18-21 for complete information on waves.

Marine Area A

WAVE HEIGHT (M)	%
0–0.5	17.5
1–1.5	32.1
2–2.5	25.1
3–3.5	15.6
4–5.5	8.8
≥6.0	0.9
N=	2398

Marine Area B

WAVE HEIGHT (M)	%
0–0.5	9.0
1–1.5	26.2
2–2.5	29.4
3–3.5	19.0
4–5.5	13.6
≥6.0	2.9
N=	4806

Marine Area C

WAVE HEIGHT (M)	%
0–0.5	11.8
1–1.5	33.1
2–2.5	28.2
3–3.5	14.9
4–5.5	9.6
≥6.0	2.4
N=	3378

Marine Area D

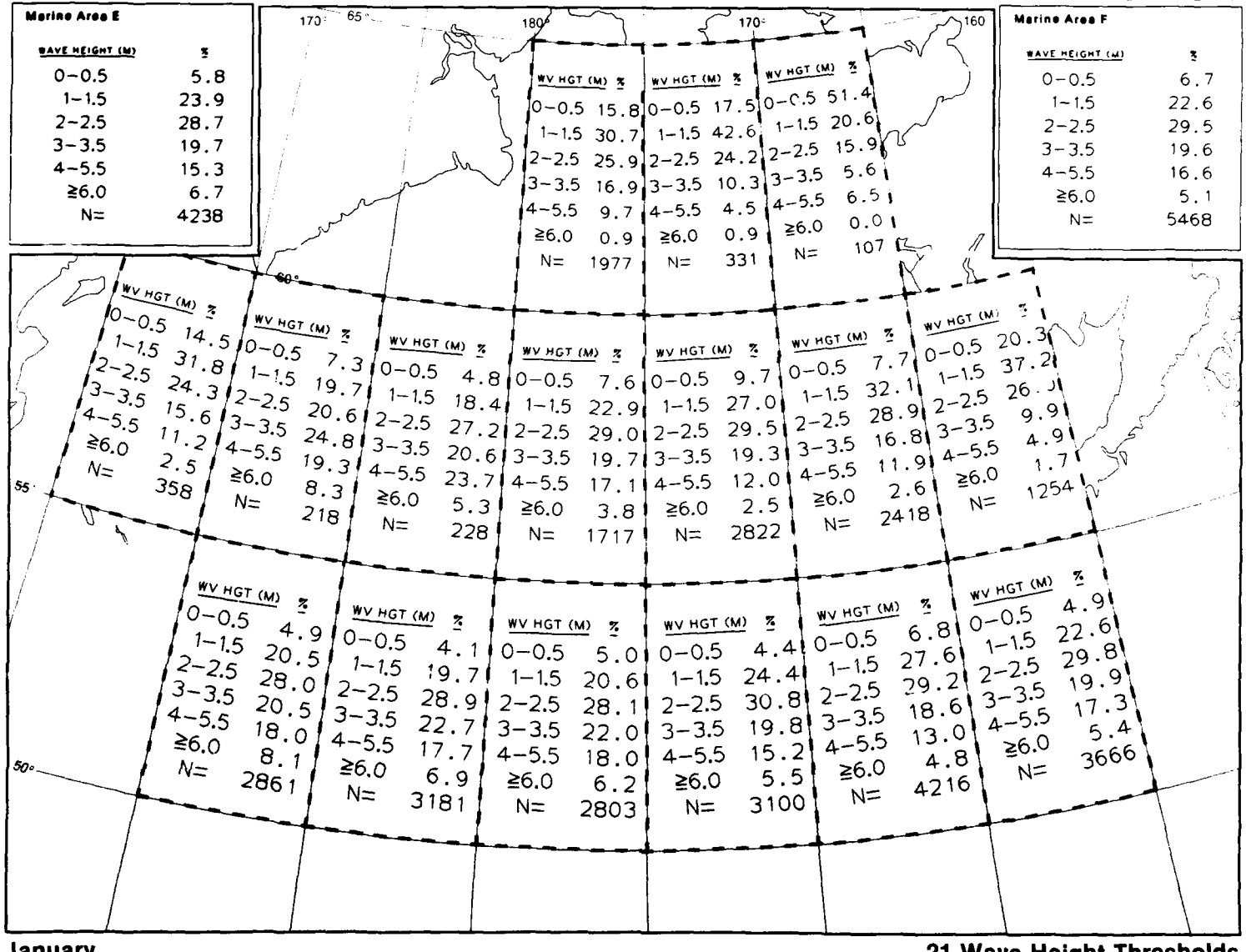
WAVE HEIGHT (M)	%
0–0.5	5.8
1–1.5	25.6
2–2.5	29.6
3–3.5	20.0
4–5.5	14.7
≥6.0	4.4
N=	5878

Marine Area E

WAVE HEIGHT (M)	%
0–0.5	5.8
1–1.5	23.9
2–2.5	28.7
3–3.5	19.7
4–5.5	15.3
≥6.0	6.7
N=	4238

Marine Area F

WAVE HEIGHT (M)	%
0–0.5	6.7
1–1.5	22.6
2–2.5	29.5
3–3.5	19.6
4–5.5	16.6
≥6.0	5.1
N=	5468



Marine Area A

WAVE HEIGHT (M)	%
0–0.5	34.0
1–1.5	24.4
2–2.5	20.2
3–3.5	10.9
4–5.5	8.8
≧6.0	1.8
N=	901

Marine Area B

WAVE HEIGHT (M)	%
0–0.5	14.7
1–1.5	32.8
2–2.5	24.7
3–3.5	15.1
4–5.5	10.1
≧6.0	2.6
N=	5581

Marine Area C

WAVE HEIGHT (M)	%
0–0.5	14.9
1–1.5	28.4
2–2.5	28.9
3–3.5	17.2
4–5.5	9.3
≧6.0	1.3
N=	3324

Marine Area D

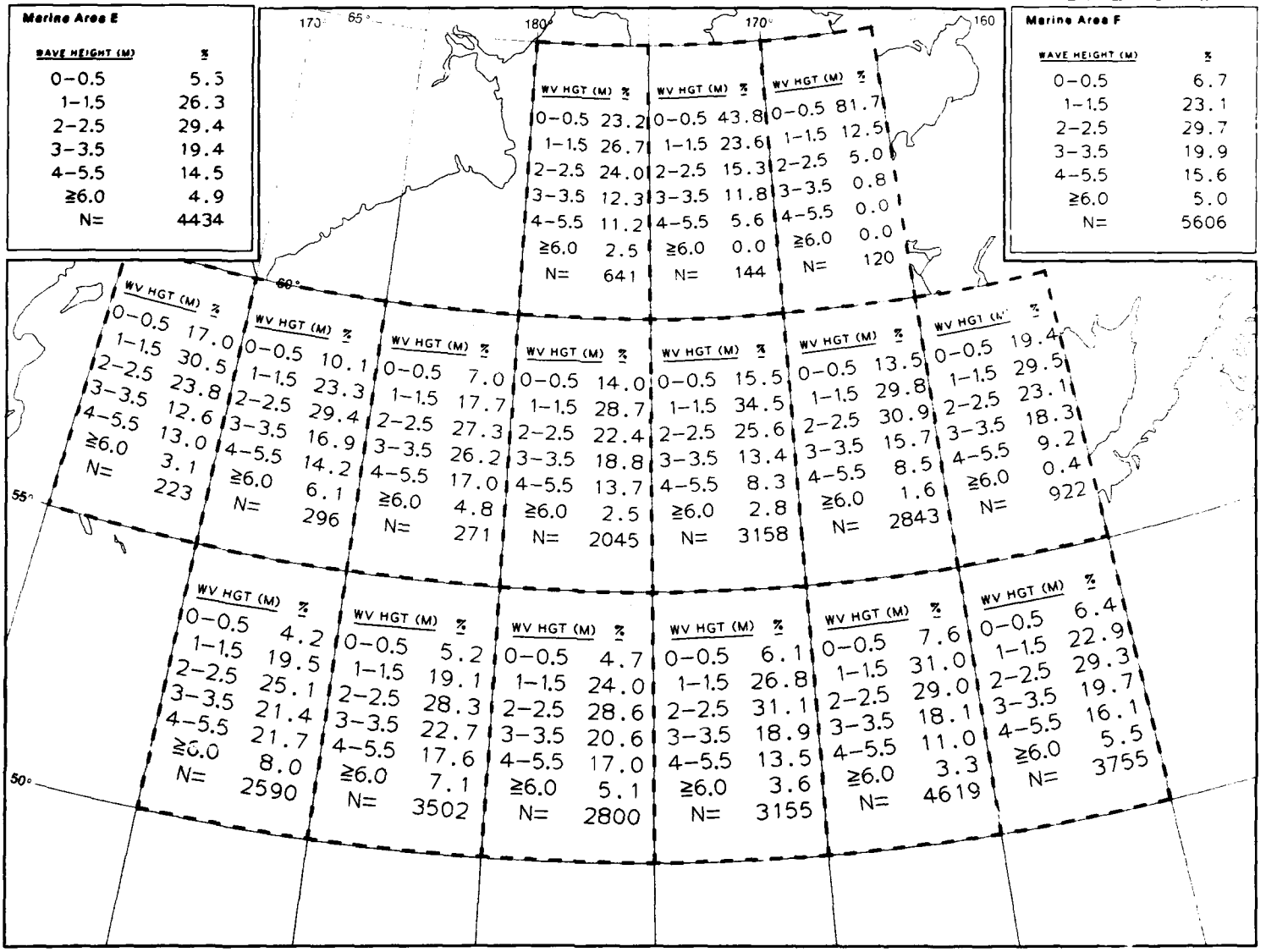
WAVE HEIGHT (M)	%
0–0.5	7.2
1–1.5	29.3
2–2.5	29.6
3–3.5	18.5
4–5.5	12.3
≧6.0	3.1
N=	6139

Marine Area E

WAVE HEIGHT (M)	%
0–0.5	5.3
1–1.5	26.3
2–2.5	29.4
3–3.5	19.4
4–5.5	14.5
≧6.0	4.9
N=	4434

Marine Area F

WAVE HEIGHT (M)	%
0–0.5	6.7
1–1.5	23.1
2–2.5	29.7
3–3.5	19.9
4–5.5	15.6
≧6.0	5.0
N=	5606



21 Wave Height Thresholds **February**

Marine Area A

WAVE HEIGHT (M)	%
0–0.5	42.9
1–1.5	22.9
2–2.5	17.4
3–3.5	9.5
4–5.5	5.5
≥6.0	1.9
N=	529

Marine Area B

WAVE HEIGHT (M)	%
0–0.5	18.8
1–1.5	31.1
2–2.5	26.6
3–3.5	13.4
4–5.5	7.9
≥6.0	2.2
N=	5067

Marine Area C

WAVE HEIGHT (M)	%
0–0.5	20.7
1–1.5	35.9
2–2.5	26.7
3–3.5	10.7
4–5.5	4.7
≥6.0	1.3
N=	3720

Marine Area D

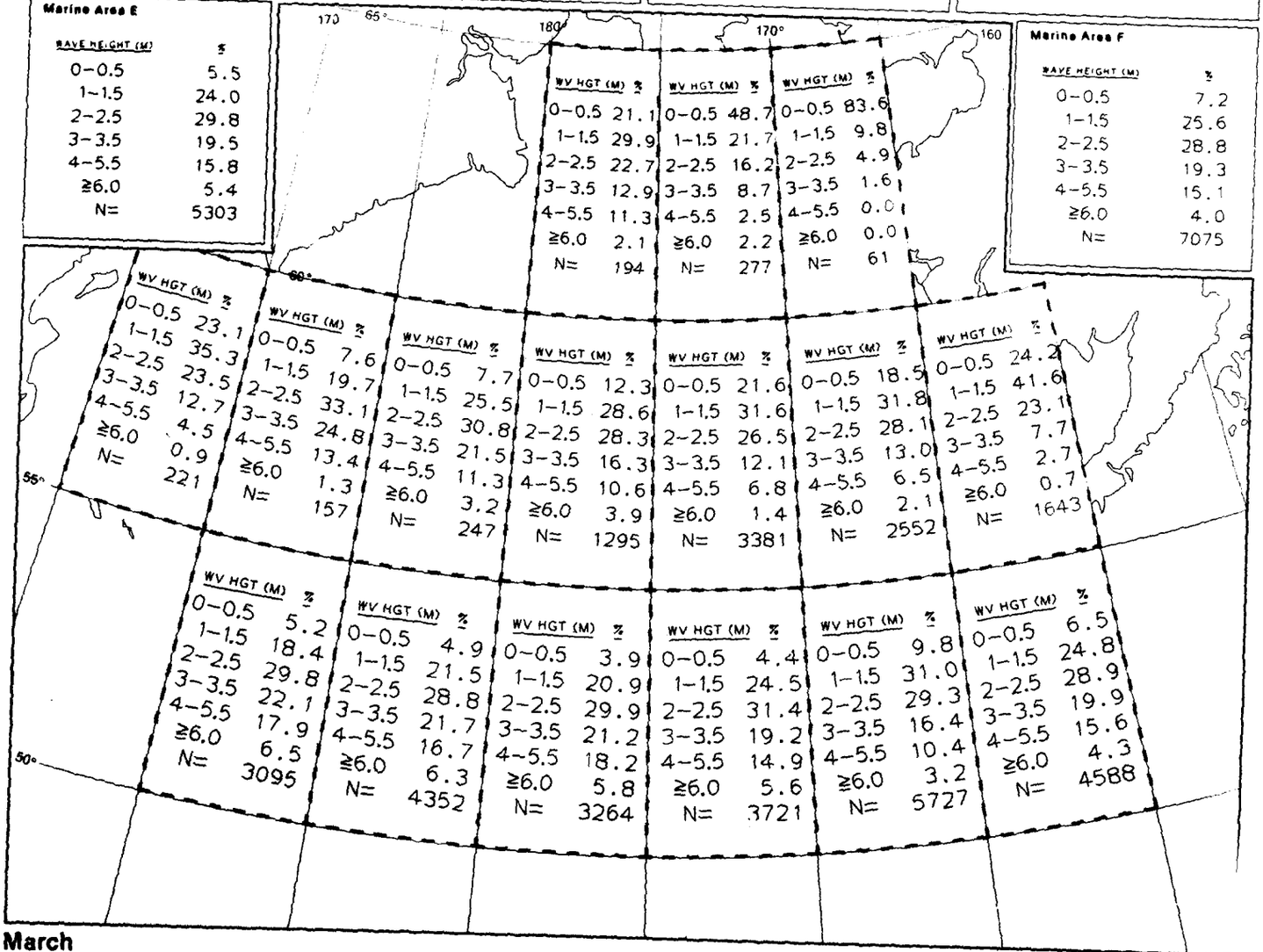
WAVE HEIGHT (M)	%
0–0.5	7.7
1–1.5	28.7
2–2.5	30.0
3–3.5	17.5
4–5.5	12.2
≥6.0	3.8
N=	7406

Marine Area E

WAVE HEIGHT (M)	%
0–0.5	5.5
1–1.5	24.0
2–2.5	29.8
3–3.5	19.5
4–5.5	15.8
≥6.0	5.4
N=	5303

Marine Area F

WAVE HEIGHT (M)	%
0–0.5	7.2
1–1.5	25.6
2–2.5	28.8
3–3.5	19.3
4–5.5	15.1
≥6.0	4.0
N=	7075



WV HGT (M)	%
0–0.5	21.1
1–1.5	29.9
2–2.5	22.7
3–3.5	12.9
4–5.5	11.3
≥6.0	2.1
N=	194

WV HGT (M)	%
0–0.5	48.7
1–1.5	21.7
2–2.5	16.2
3–3.5	8.7
4–5.5	2.5
≥6.0	2.2
N=	277

WV HGT (M)	%
0–0.5	83.6
1–1.5	9.8
2–2.5	4.9
3–3.5	1.6
4–5.5	0.0
≥6.0	0.0
N=	61

WV HGT (M)	%
0–0.5	23.1
1–1.5	35.3
2–2.5	23.5
3–3.5	12.7
4–5.5	4.5
≥6.0	0.9
N=	221

WV HGT (M)	%
0–0.5	7.6
1–1.5	19.7
2–2.5	33.1
3–3.5	24.8
4–5.5	13.4
≥6.0	1.3
N=	157

WV HGT (M)	%
0–0.5	7.7
1–1.5	25.5
2–2.5	30.8
3–3.5	21.5
4–5.5	11.3
≥6.0	3.2
N=	247

WV HGT (M)	%
0–0.5	12.3
1–1.5	28.6
2–2.5	28.3
3–3.5	16.3
4–5.5	10.6
≥6.0	3.9
N=	1295

WV HGT (M)	%
0–0.5	21.6
1–1.5	31.6
2–2.5	26.5
3–3.5	12.1
4–5.5	6.8
≥6.0	1.4
N=	3381

WV HGT (M)	%
0–0.5	18.5
1–1.5	31.8
2–2.5	28.1
3–3.5	13.0
4–5.5	6.5
≥6.0	2.1
N=	2552

WV HGT (M)	%
0–0.5	24.2
1–1.5	41.6
2–2.5	23.1
3–3.5	7.7
4–5.5	2.7
≥6.0	0.7
N=	1643

WV HGT (M)	%
0–0.5	5.2
1–1.5	18.4
2–2.5	29.8
3–3.5	22.1
4–5.5	17.9
≥6.0	6.5
N=	3095

WV HGT (M)	%
0–0.5	4.9
1–1.5	21.5
2–2.5	28.8
3–3.5	21.7
4–5.5	16.7
≥6.0	6.3
N=	4352

WV HGT (M)	%
0–0.5	3.9
1–1.5	20.9
2–2.5	29.9
3–3.5	21.2
4–5.5	18.2
≥6.0	5.8
N=	3264

WV HGT (M)	%
0–0.5	4.4
1–1.5	24.5
2–2.5	31.4
3–3.5	19.2
4–5.5	14.9
≥6.0	5.6
N=	3721

WV HGT (M)	%
0–0.5	9.8
1–1.5	31.0
2–2.5	29.3
3–3.5	16.4
4–5.5	10.4
≥6.0	3.2
N=	5727

WV HGT (M)	%
0–0.5	6.5
1–1.5	24.8
2–2.5	28.9
3–3.5	19.9
4–5.5	15.6
≥6.0	4.3
N=	4588

March

21 Wave Height Thresholds

Marine Area A

WAVE HEIGHT (M)	%
0–0.5	60.6
1–1.5	26.0
2–2.5	8.6
3–3.5	4.0
4–5.5	0.5
≧6.0	0.3
N=	396

Marine Area B

WAVE HEIGHT (M)	%
0–0.5	22.0
1–1.5	36.6
2–2.5	23.0
3–3.5	9.7
4–5.5	6.3
≧6.0	2.3
N=	3745

Marine Area C

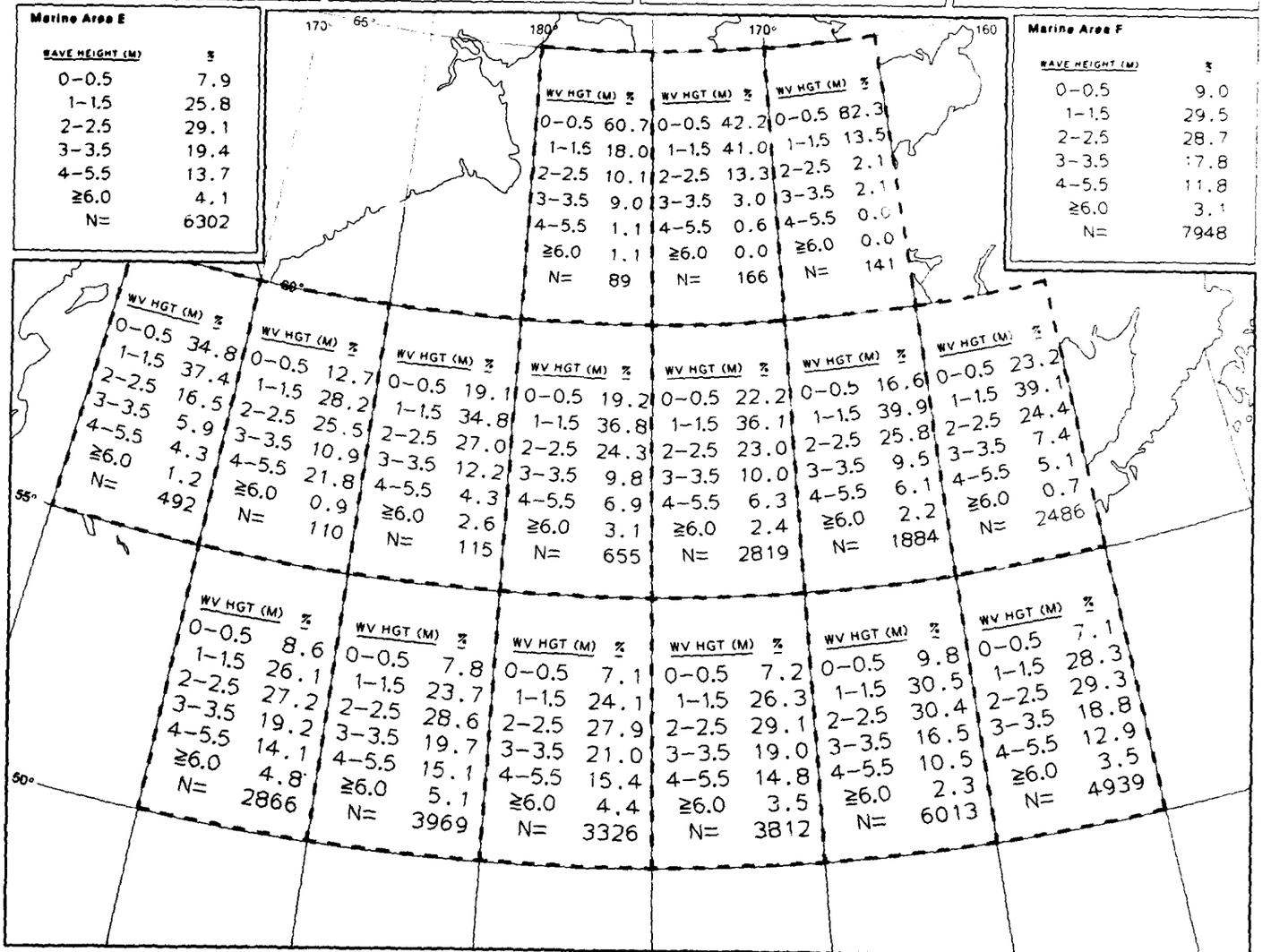
WAVE HEIGHT (M)	%
0–0.5	19.8
1–1.5	39.2
2–2.5	25.5
3–3.5	8.5
4–5.5	5.6
≧6.0	1.4
N=	4070

Marine Area D

WAVE HEIGHT (M)	%
0–0.5	9.1
1–1.5	29.6
2–2.5	29.5
3–3.5	17.3
4–5.5	12.2
≧6.0	2.4
N=	6849

Marine Area E

WAVE HEIGHT (M)	%
0–0.5	7.9
1–1.5	25.8
2–2.5	29.1
3–3.5	19.4
4–5.5	13.7
≧6.0	4.1
N=	6302



Marine Area F

WAVE HEIGHT (M)	%
0–0.5	9.0
1–1.5	29.5
2–2.5	28.7
3–3.5	17.8
4–5.5	11.8
≧6.0	3.1
N=	7948

21 Wave Height Thresholds

April

Marine Area A

WAVE HEIGHT (M)	%
0–0.5	49.7
1–1.5	41.0
2–2.5	7.2
3–3.5	2.0
4–5.5	0.2
≥6.0	0.0
N=	598

Marine Area B

WAVE HEIGHT (M)	%
0–0.5	22.0
1–1.5	45.3
2–2.5	22.9
3–3.5	7.3
4–5.5	2.1
≥6.0	0.4
N=	3032

Marine Area C

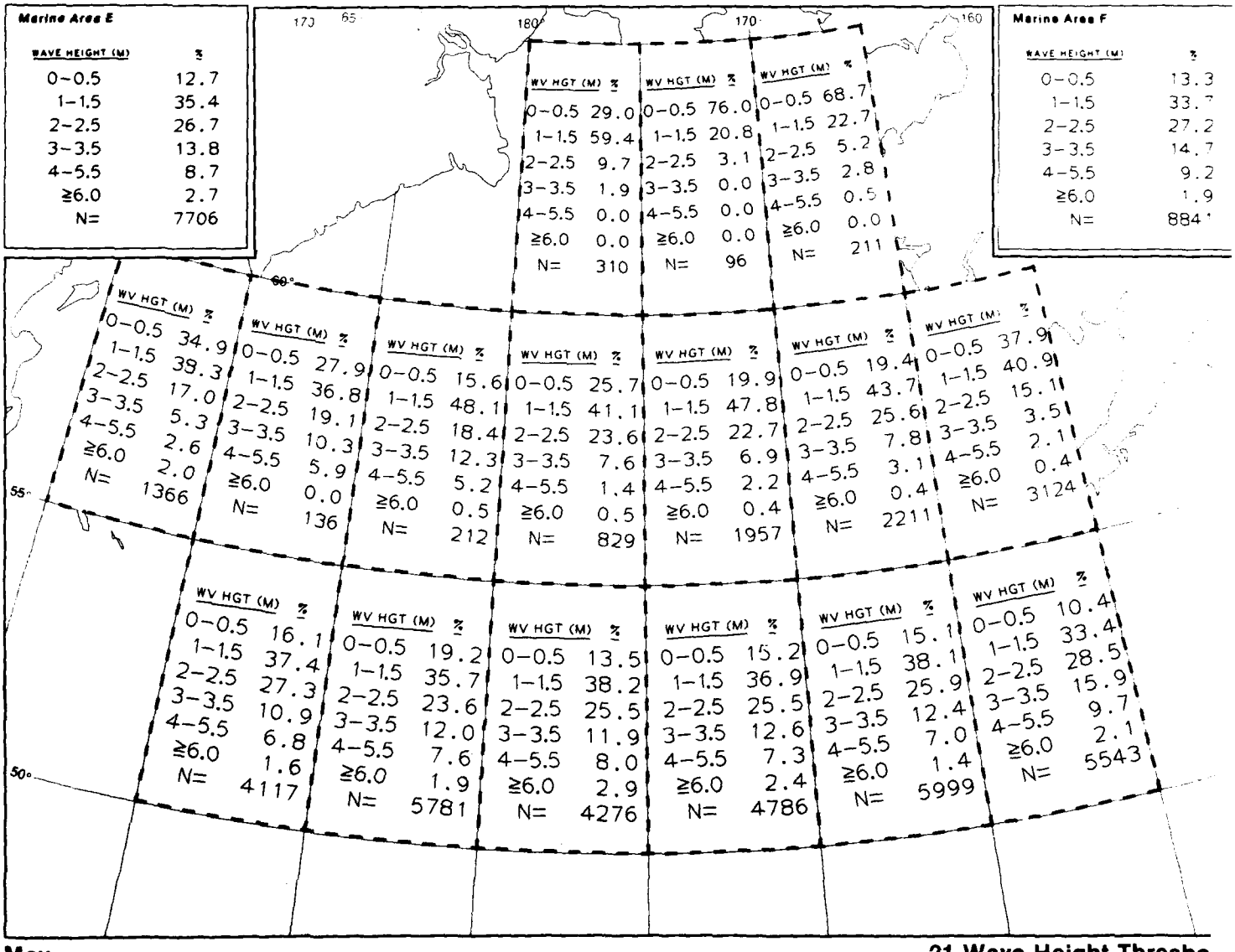
WAVE HEIGHT (M)	%
0–0.5	30.1
1–1.5	42.7
2–2.5	19.3
3–3.5	5.1
4–5.5	2.4
≥6.0	0.4
N=	5197

Marine Area D

WAVE HEIGHT (M)	%
0–0.5	17.2
1–1.5	40.5
2–2.5	24.3
3–3.5	10.7
4–5.5	5.8
≥6.0	1.5
N=	7342

Marine Area E

WAVE HEIGHT (M)	%
0–0.5	12.7
1–1.5	35.4
2–2.5	26.7
3–3.5	13.8
4–5.5	8.7
≥6.0	2.7
N=	7706



Marine Area F

WAVE HEIGHT (M)	%
0–0.5	13.3
1–1.5	33.7
2–2.5	27.2
3–3.5	14.7
4–5.5	9.2
≥6.0	1.9
N=	884

Marine Area A

WAVE HEIGHT (M)	%
0–0.5	48.8
1–1.5	36.2
2–2.5	11.1
3–3.5	2.8
4–5.5	0.8
≥6.0	0.2
N=	1511

Marine Area B

WAVE HEIGHT (M)	%
0–0.5	26.9
1–1.5	47.1
2–2.5	20.5
3–3.5	4.1
4–5.5	1.3
≥6.0	0.0
N=	3482

Marine Area C

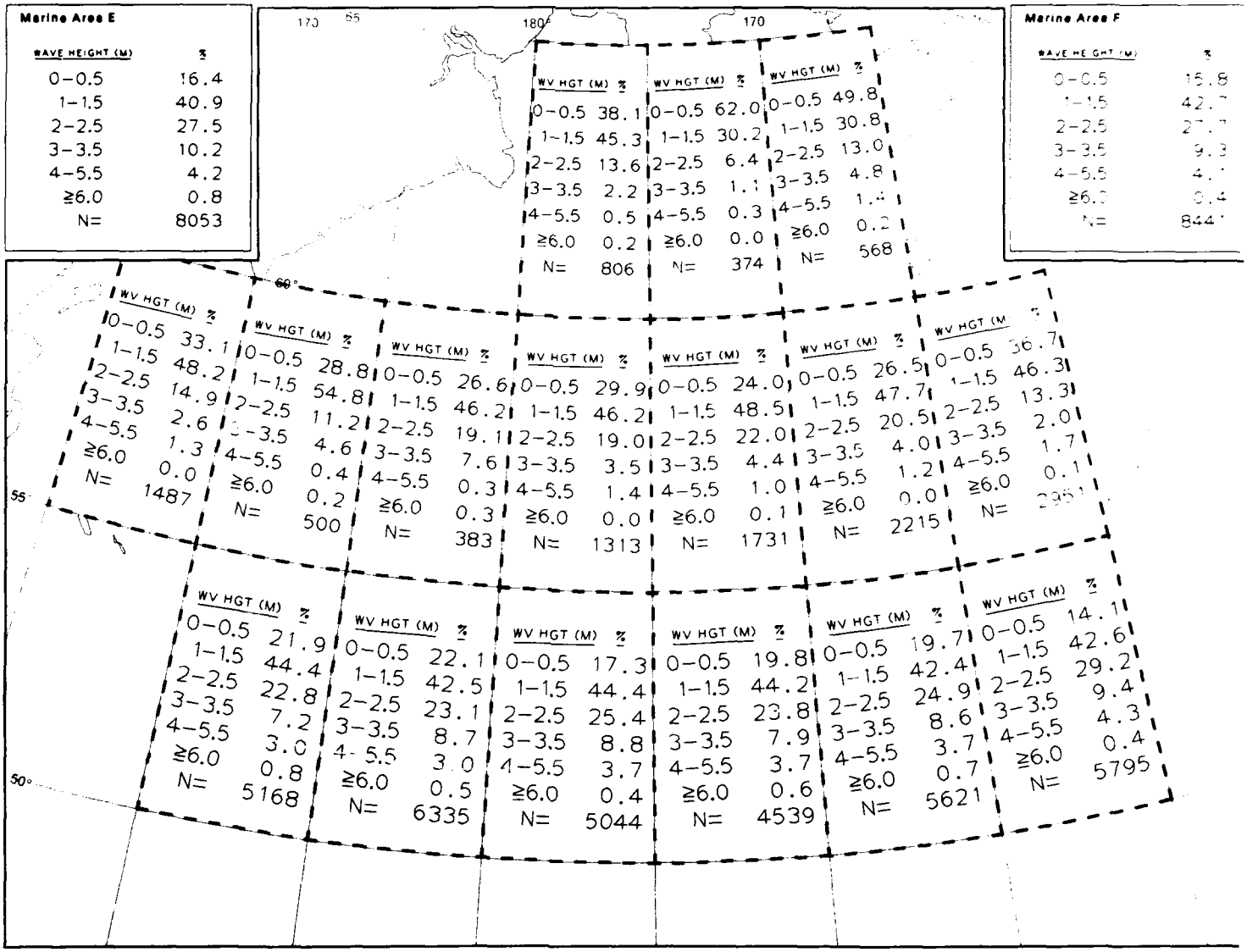
WAVE HEIGHT (M)	%
0–0.5	33.8
1–1.5	46.3
2–2.5	15.9
3–3.5	2.6
4–5.5	1.3
≥6.0	0.0
N=	5175

Marine Area D

WAVE HEIGHT (M)	%
0–0.5	22.6
1–1.5	46.5
2–2.5	21.2
3–3.5	6.4
4–5.5	3.0
≥6.0	0.3
N=	7150

Marine Area E

WAVE HEIGHT (M)	%
0–0.5	16.4
1–1.5	40.9
2–2.5	27.5
3–3.5	10.2
4–5.5	4.2
≥6.0	0.8
N=	8053



Marine Area F

WAVE HEIGHT (M)	%
0–0.5	15.8
1–1.5	42.7
2–2.5	27.7
3–3.5	9.3
4–5.5	4.7
≥6.0	0.4
N=	8441

21 Wave Height Thresholds

Marine Area A

WAVE HEIGHT (M)	%
0–0.5	43.3
1–1.5	41.2
2–2.5	12.4
3–3.5	2.3
4–5.5	0.6
≥6.0	0.1
N=	3111

Marine Area B

WAVE HEIGHT (M)	%
0–0.5	22.0
1–1.5	51.4
2–2.5	21.9
3–3.5	4.0
4–5.5	0.7
≥6.0	0.1
N=	3916

Marine Area C

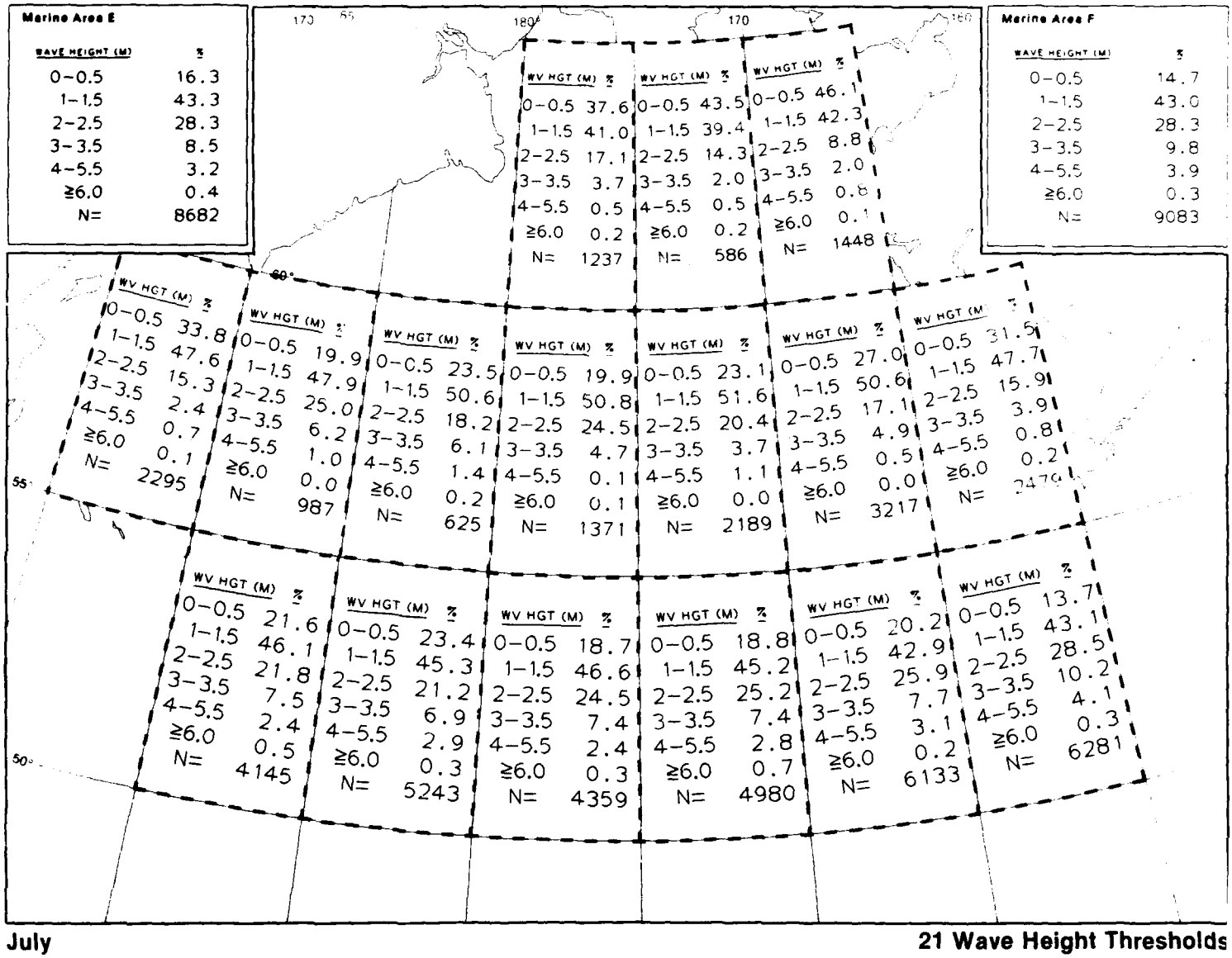
WAVE HEIGHT (M)	%
0–0.5	30.6
1–1.5	48.6
2–2.5	15.7
3–3.5	4.3
4–5.5	0.7
≥6.0	0.1
N=	5657

Marine Area D

WAVE HEIGHT (M)	%
0–0.5	24.1
1–1.5	46.1
2–2.5	21.1
3–3.5	6.1
4–5.5	2.2
≥6.0	0.4
N=	6785

Marine Area E

WAVE HEIGHT (M)	%
0–0.5	16.3
1–1.5	43.3
2–2.5	28.3
3–3.5	8.5
4–5.5	3.2
≥6.0	0.4
N=	8682



Marine Area F

WAVE HEIGHT (M)	%
0–0.5	14.7
1–1.5	43.0
2–2.5	28.3
3–3.5	9.8
4–5.5	3.9
≥6.0	0.3
N=	9083

Marine Area A

WAVE HEIGHT (M)	%
0–0.5	33.9
1–1.5	42.4
2–2.5	17.4
3–3.5	4.7
4–5.5	1.5
≥6.0	0.1
N=	2895

Marine Area B

WAVE HEIGHT (M)	%
0–0.5	16.4
1–1.5	48.3
2–2.5	23.8
3–3.5	7.0
4–5.5	2.9
≥6.0	1.6
N=	2708

Marine Area C

WAVE HEIGHT (M)	%
0–0.5	20.5
1–1.5	50.9
2–2.5	21.9
3–3.5	4.9
4–5.5	1.4
≥6.0	0.3
N=	5072

Marine Area D

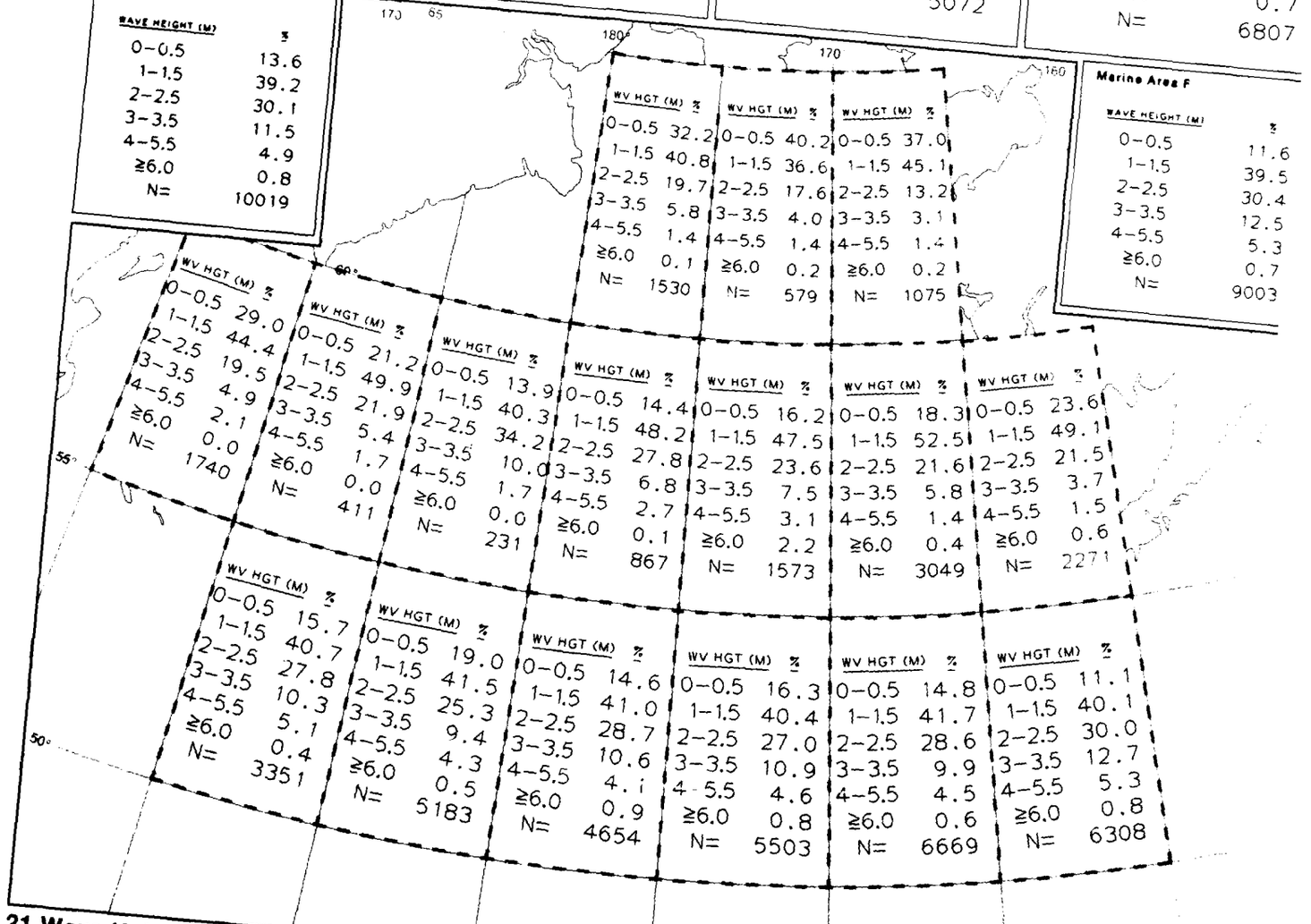
WAVE HEIGHT (M)	%
0–0.5	18.2
1–1.5	43.7
2–2.5	24.8
3–3.5	8.8
4–5.5	3.8
≥6.0	0.7
N=	6807

Marine Area E

WAVE HEIGHT (M)	%
0–0.5	13.6
1–1.5	39.2
2–2.5	30.1
3–3.5	11.5
4–5.5	4.9
≥6.0	0.8
N=	10019

Marine Area F

WAVE HEIGHT (M)	%
0–0.5	11.6
1–1.5	39.5
2–2.5	30.4
3–3.5	12.5
4–5.5	5.3
≥6.0	0.7
N=	9003



WV HGT (M)	%
0–0.5	32.2
1–1.5	40.8
2–2.5	19.7
3–3.5	5.8
4–5.5	1.4
≥6.0	0.1
N=	1530

WV HGT (M)	%
0–0.5	40.2
1–1.5	36.6
2–2.5	17.6
3–3.5	4.0
4–5.5	1.4
≥6.0	0.2
N=	579

WV HGT (M)	%
0–0.5	37.0
1–1.5	45.1
2–2.5	13.2
3–3.5	3.1
4–5.5	1.4
≥6.0	0.2
N=	1075

WV HGT (M)	%
0–0.5	29.0
1–1.5	44.4
2–2.5	19.5
3–3.5	4.9
4–5.5	2.1
≥6.0	0.0
N=	1740

WV HGT (M)	%
0–0.5	21.2
1–1.5	49.9
2–2.5	21.9
3–3.5	5.4
4–5.5	1.7
≥6.0	0.0
N=	411

WV HGT (M)	%
0–0.5	13.9
1–1.5	40.3
2–2.5	34.2
3–3.5	10.0
4–5.5	1.7
≥6.0	0.0
N=	231

WV HGT (M)	%
0–0.5	14.4
1–1.5	48.2
2–2.5	27.8
3–3.5	6.8
4–5.5	2.7
≥6.0	0.1
N=	867

WV HGT (M)	%
0–0.5	16.2
1–1.5	47.5
2–2.5	23.6
3–3.5	7.5
4–5.5	3.1
≥6.0	2.2
N=	1573

WV HGT (M)	%
0–0.5	18.3
1–1.5	52.5
2–2.5	21.6
3–3.5	5.8
4–5.5	1.4
≥6.0	0.4
N=	3049

WV HGT (M)	%
0–0.5	23.6
1–1.5	49.1
2–2.5	21.5
3–3.5	3.7
4–5.5	1.5
≥6.0	0.6
N=	2271

WV HGT (M)	%
0–0.5	15.7
1–1.5	40.7
2–2.5	27.8
3–3.5	10.3
4–5.5	5.1
≥6.0	0.4
N=	3351

WV HGT (M)	%
0–0.5	19.0
1–1.5	41.5
2–2.5	25.3
3–3.5	9.4
4–5.5	4.3
≥6.0	0.5
N=	5183

WV HGT (M)	%
0–0.5	14.6
1–1.5	41.0
2–2.5	28.7
3–3.5	10.6
4–5.5	4.1
≥6.0	0.9
N=	4654

WV HGT (M)	%
0–0.5	16.3
1–1.5	40.4
2–2.5	27.0
3–3.5	10.9
4–5.5	4.6
≥6.0	0.8
N=	5503

WV HGT (M)	%
0–0.5	14.8
1–1.5	41.7
2–2.5	28.6
3–3.5	9.9
4–5.5	4.5
≥6.0	0.6
N=	6669

WV HGT (M)	%
0–0.5	11.1
1–1.5	40.1
2–2.5	30.0
3–3.5	12.7
4–5.5	5.3
≥6.0	0.8
N=	6308

21 Wave Height Thresholds

Marine Area A

WAVE HEIGHT (M)	%
0–0.5	30.7
1–1.5	42.6
2–2.5	17.4
3–3.5	5.8
4–5.5	2.9
≥6.0	0.6
N=	2130

Marine Area B

WAVE HEIGHT (M)	%
0–0.5	13.4
1–1.5	43.3
2–2.5	24.1
3–3.5	10.3
4–5.5	6.1
≥6.0	2.8
N=	2240

Marine Area C

WAVE HEIGHT (M)	%
0–0.5	16.4
1–1.5	43.5
2–2.5	26.3
3–3.5	8.7
4–5.5	4.2
≥6.0	0.9
N=	5573

Marine Area D

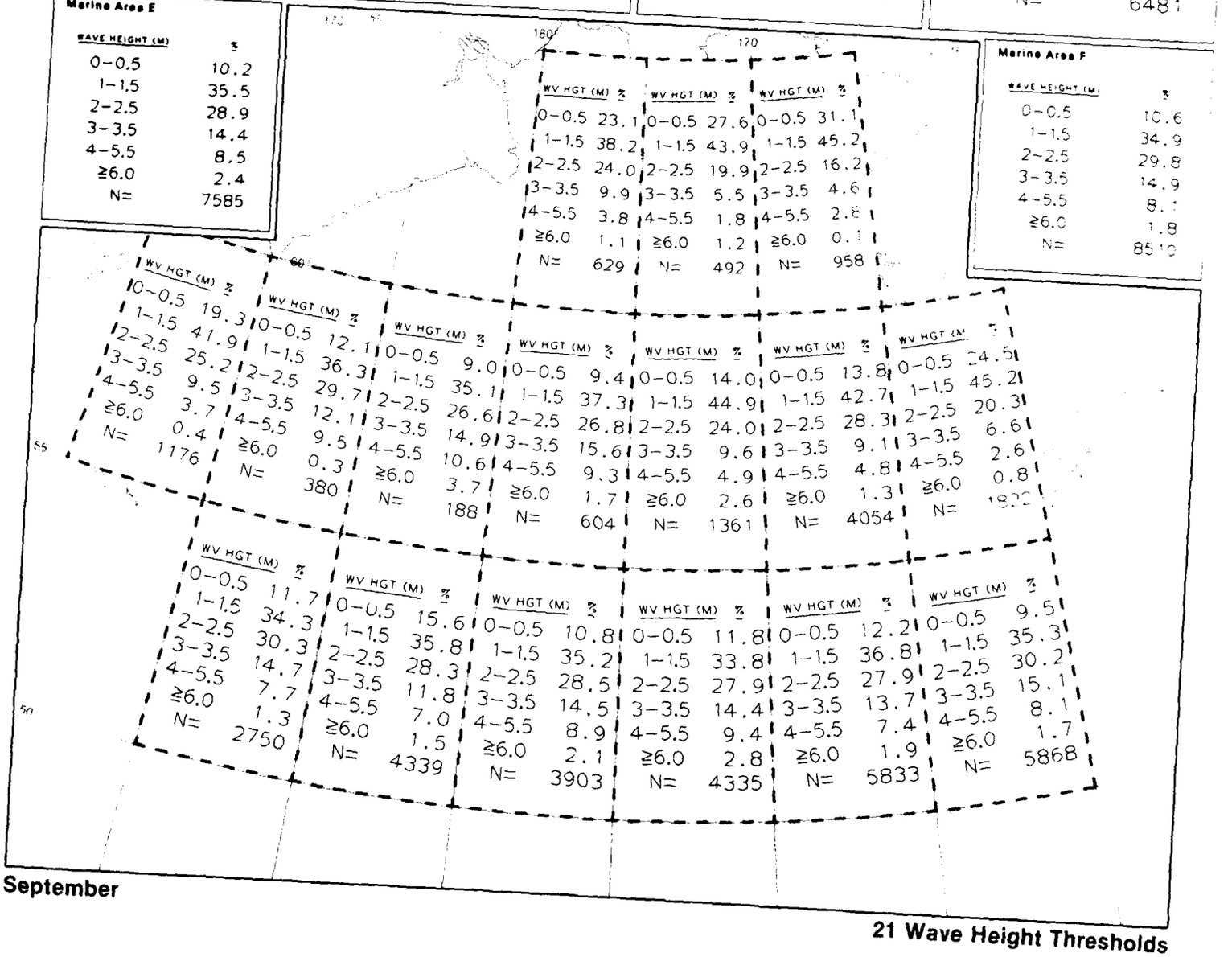
WAVE HEIGHT (M)	%
0–0.5	13.7
1–1.5	35.6
2–2.5	26.7
3–3.5	13.6
4–5.5	8.2
≥6.0	2.1
N=	6481

Marine Area E

WAVE HEIGHT (M)	%
0–0.5	10.2
1–1.5	35.5
2–2.5	28.9
3–3.5	14.4
4–5.5	8.5
≥6.0	2.4
N=	7585

Marine Area F

WAVE HEIGHT (M)	%
0–0.5	10.6
1–1.5	34.9
2–2.5	29.8
3–3.5	14.9
4–5.5	8.1
≥6.0	1.8
N=	8519



Marine Area A

WAVE HEIGHT (M)	%
0–0.5	15.8
1–1.5	39.5
2–2.5	26.8
3–3.5	10.8
4–5.5	6.1
≥6.0	1.1
N=	1231

Marine Area B

WAVE HEIGHT (M)	%
0–0.5	6.9
1–1.5	30.4
2–2.5	31.2
3–3.5	16.9
4–5.5	10.6
≥6.0	3.9
N=	1675

Marine Area C

WAVE HEIGHT (M)	%
0–0.5	8.8
1–1.5	35.8
2–2.5	29.9
3–3.5	14.8
4–5.5	8.6
≥6.0	2.2
N=	3593

Marine Area D

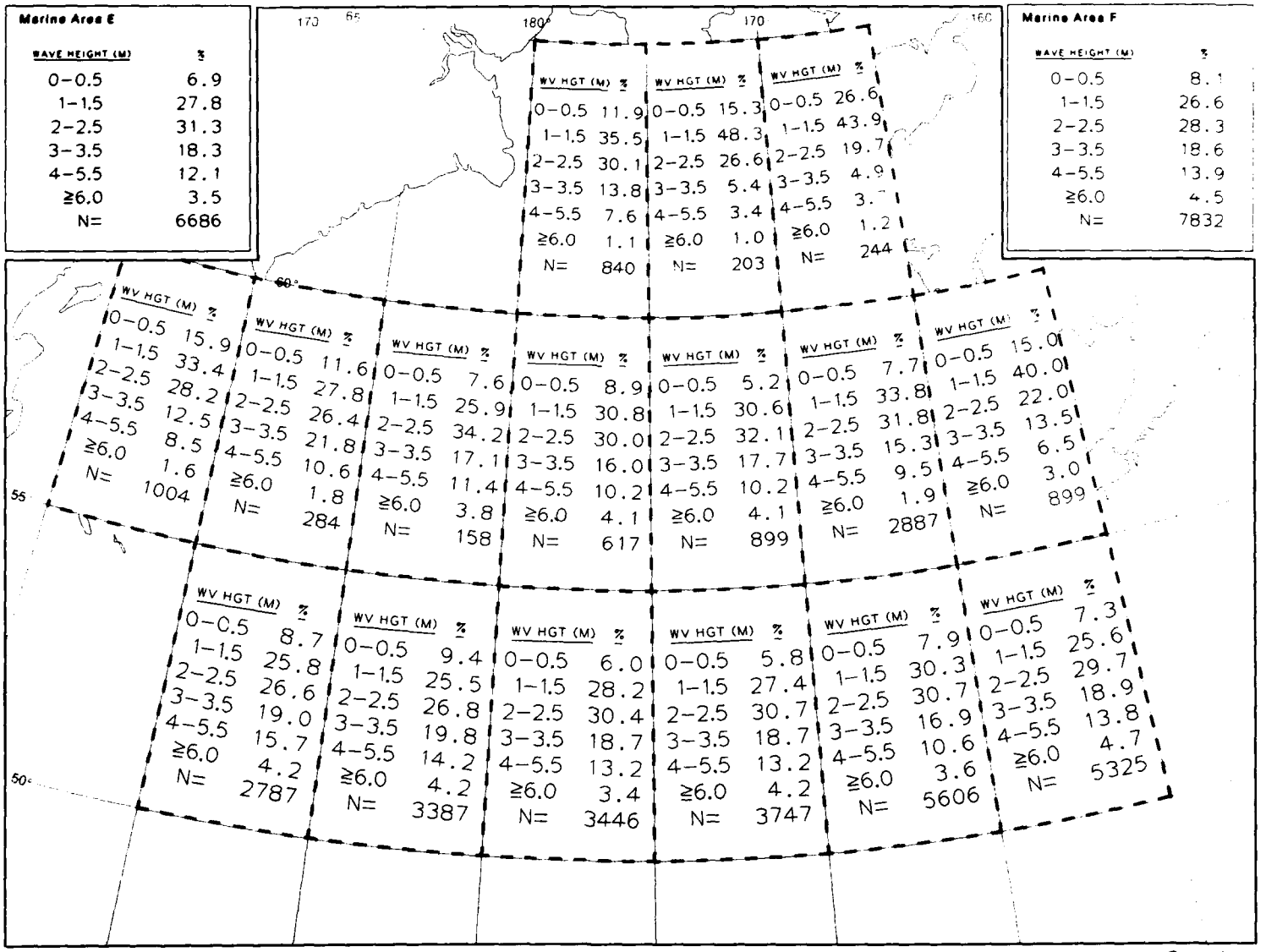
WAVE HEIGHT (M)	%
0–0.5	7.2
1–1.5	30.2
2–2.5	29.5
3–3.5	17.4
4–5.5	11.9
≥6.0	3.8
N=	6111

Marine Area E

WAVE HEIGHT (M)	%
0–0.5	6.9
1–1.5	27.8
2–2.5	31.3
3–3.5	18.3
4–5.5	12.1
≥6.0	3.5
N=	6686

Marine Area F

WAVE HEIGHT (M)	%
0–0.5	8.1
1–1.5	26.6
2–2.5	28.3
3–3.5	18.6
4–5.5	13.9
≥6.0	4.5
N=	7832



21 Wave Height Thresholds **October**

Marine Area A

WAVE HEIGHT (M)	%
0–0.5	8.9
1–1.5	31.7
2–2.5	30.5
3–3.5	15.3
4–5.5	10.1
≧6.0	3.6
N=	1094

Marine Area B

WAVE HEIGHT (M)	%
0–0.5	7.6
1–1.5	30.4
2–2.5	27.9
3–3.5	18.8
4–5.5	11.8
≧6.0	3.6
N=	2246

Marine Area C

WAVE HEIGHT (M)	%
0–0.5	7.3
1–1.5	29.3
2–2.5	29.3
3–3.5	17.9
4–5.5	12.7
≧6.0	3.5
N=	2793

Marine Area D

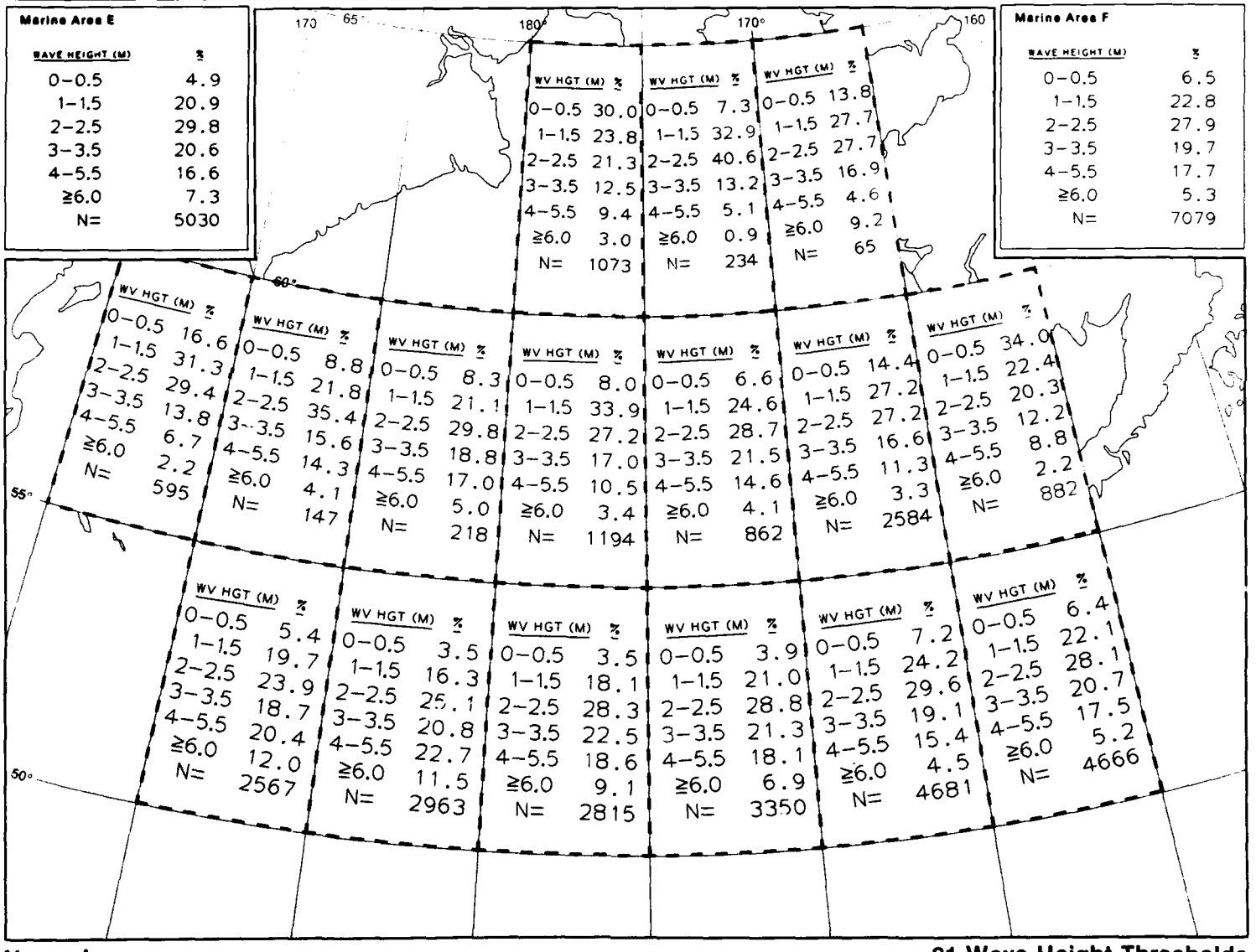
WAVE HEIGHT (M)	%
0–0.5	5.9
1–1.5	22.6
2–2.5	28.1
3–3.5	20.6
4–5.5	17.4
≧6.0	5.5
N=	5810

Marine Area E

WAVE HEIGHT (M)	%
0–0.5	4.9
1–1.5	20.9
2–2.5	29.8
3–3.5	20.6
4–5.5	16.6
≧6.0	7.3
N=	5030

Marine Area F

WAVE HEIGHT (M)	%
0–0.5	6.5
1–1.5	22.8
2–2.5	27.9
3–3.5	19.7
4–5.5	17.7
≧6.0	5.3
N=	7079



November

21 Wave Height Thresholds

Marine Area A

WAVE HEIGHT (M)	%
0–0.5	19.2
1–1.5	32.3
2–2.5	22.6
3–3.5	11.8
4–5.5	9.8
≧6.0	4.3
N=	1865

Marine Area B

WAVE HEIGHT (M)	%
0–0.5	8.8
1–1.5	32.3
2–2.5	27.3
3–3.5	16.1
4–5.5	11.4
≧6.0	4.1
N=	3030

Marine Area C

WAVE HEIGHT (M)	%
0–0.5	13.2
1–1.5	29.9
2–2.5	26.8
3–3.5	18.7
4–5.5	9.4
≧6.0	2.1
N=	3161

Marine Area D

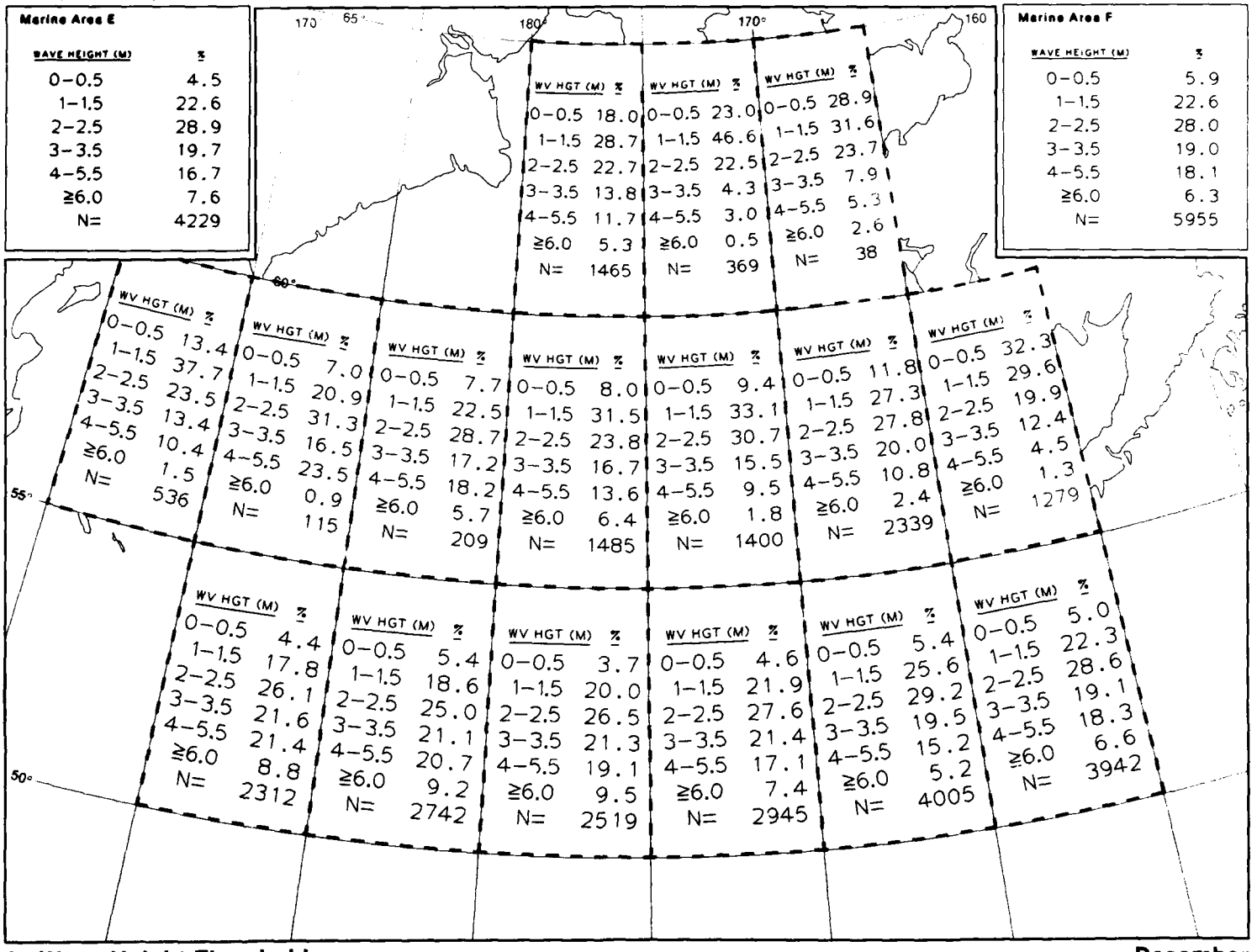
WAVE HEIGHT (M)	%
0–0.5	5.2
1–1.5	23.8
2–2.5	27.1
3–3.5	21.1
4–5.5	16.3
≧6.0	6.5
N=	5237

Marine Area E

WAVE HEIGHT (M)	%
0–0.5	4.5
1–1.5	22.6
2–2.5	28.9
3–3.5	19.7
4–5.5	16.7
≧6.0	7.6
N=	4229

Marine Area F

WAVE HEIGHT (M)	%
0–0.5	5.9
1–1.5	22.6
2–2.5	28.0
3–3.5	19.0
4–5.5	18.1
≧6.0	6.3
N=	5955



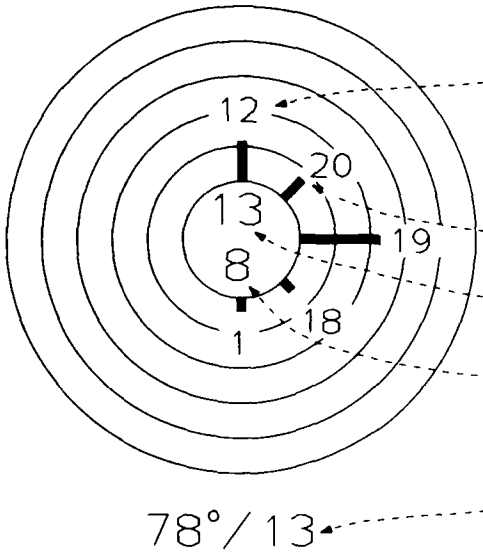
21 Wave Height Thresholds **December**

Map 22. Low pressure center movement

ROSE – Percent frequency of low pressure center movement.

BLACK ARROWS – Preferred storm tracks (solid for primary tracks, dashed for secondary tracks).

Exact Cylindrical Equidistant Projection



Six hour movements of low pressure centers considering only closed circulations.

Mean speed: Printed figures at the end of each bar represent the mean speed of movement (in knots) toward the indicated direction.

(Low pressure centers moving toward the N had a mean speed of 12 knots.)

Direction frequency: Bars represent percent frequency of six hour movements toward each direction. Each circle represents 20%.

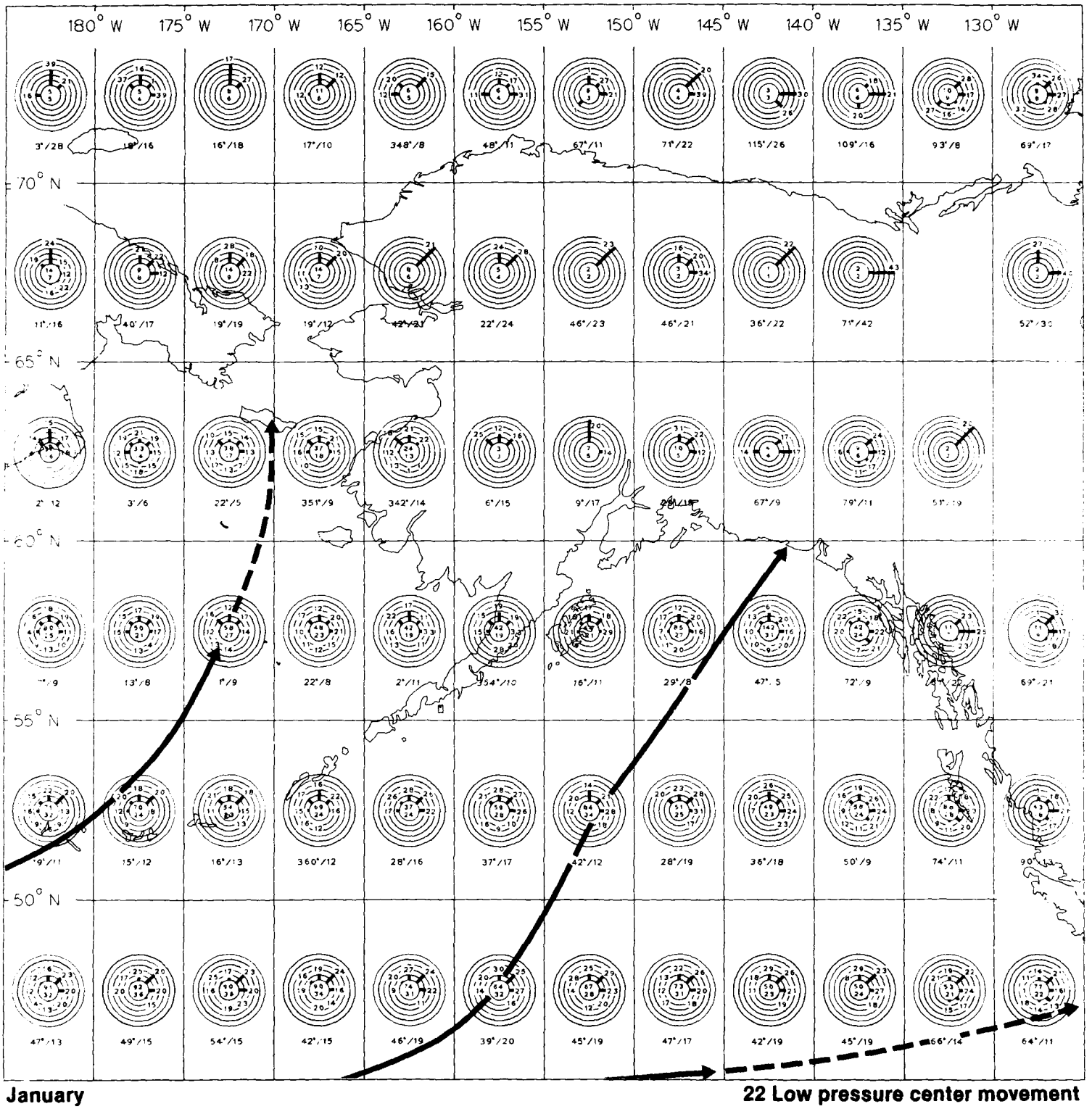
(18% of all six hour movements were toward the NE.)

(Statistics for this rose are based on 13 six hour movements.)

(8 low pressure centers were observed in the 5° X 5° area during the 20 year period of record 1/66-12/85.)

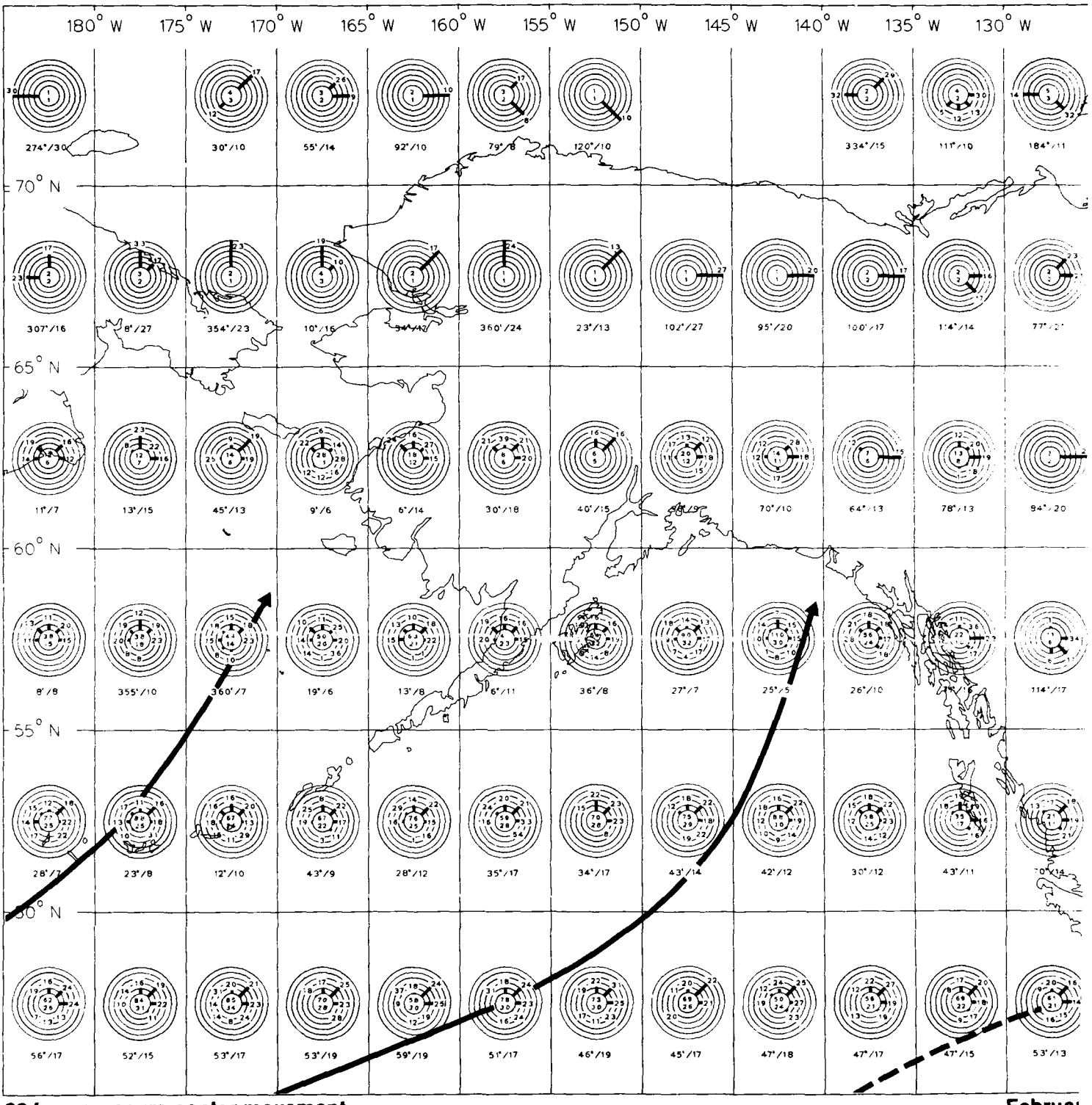
(Mean vector movement of all centers was toward 78° (ENE) at 13 knots.)

Refer to the introductory text for Section II for more information on low pressure center movement and preferred storm tracks.

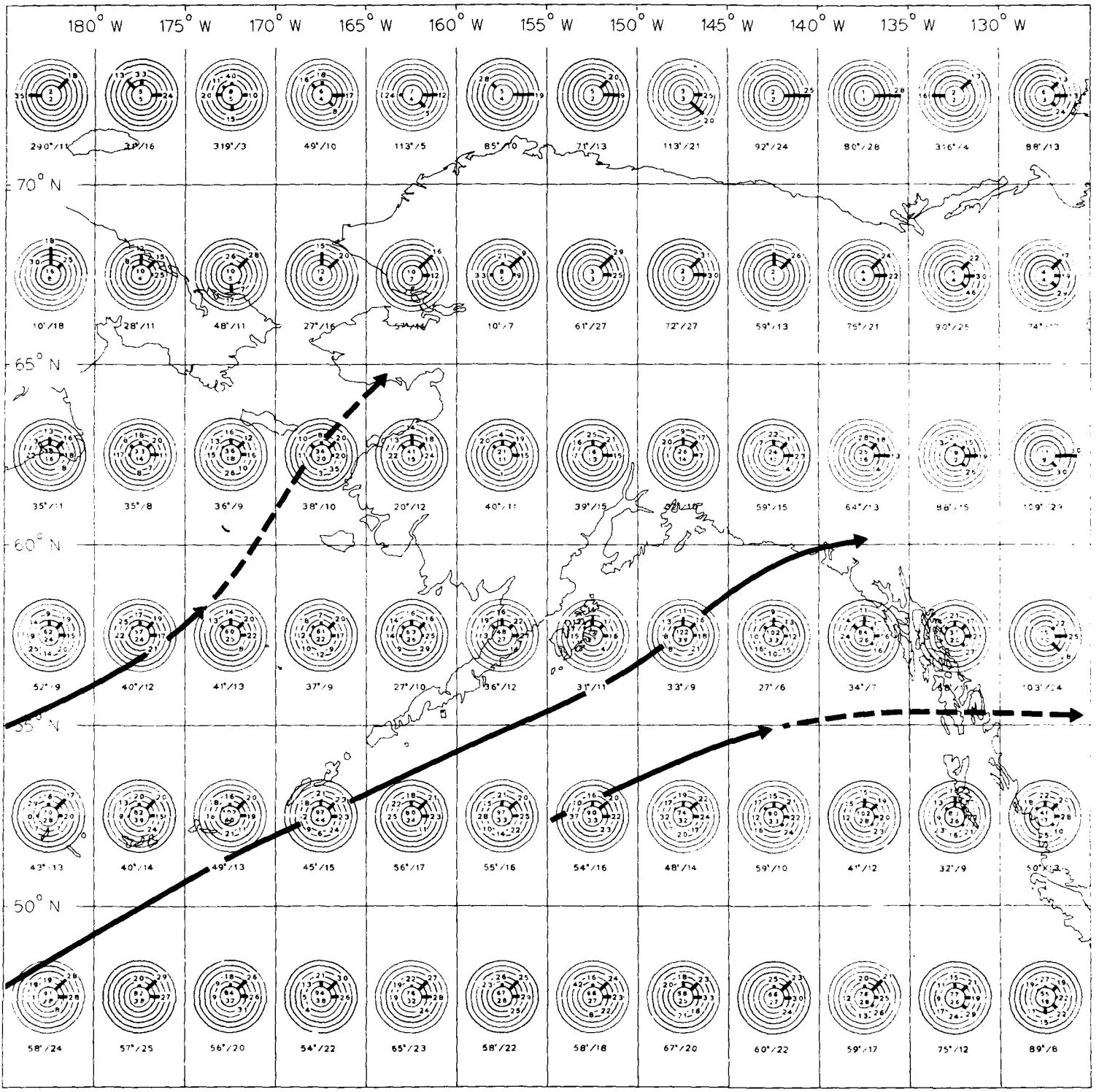


January

22 Low pressure center movement

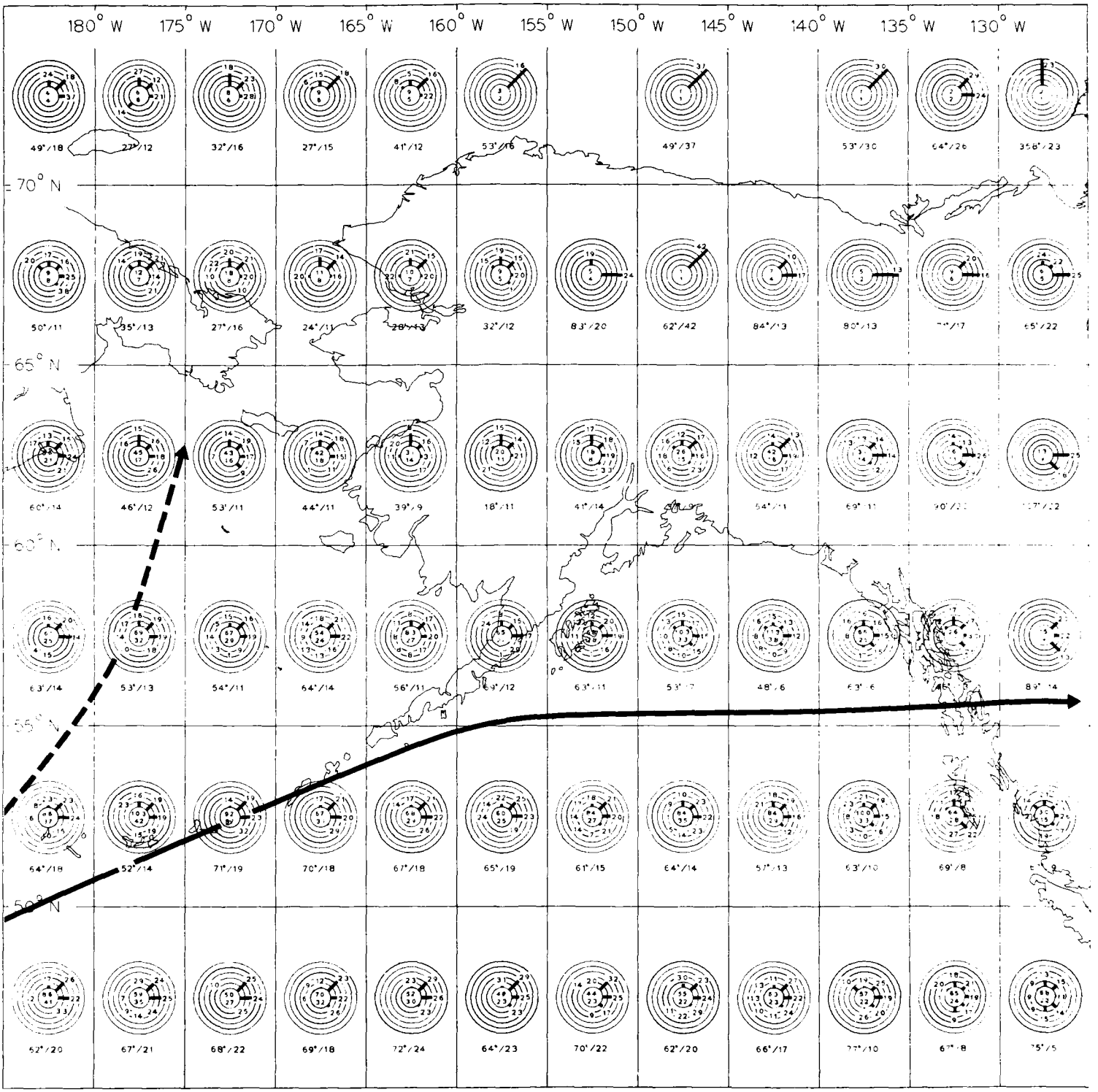


22 Low pressure center movement

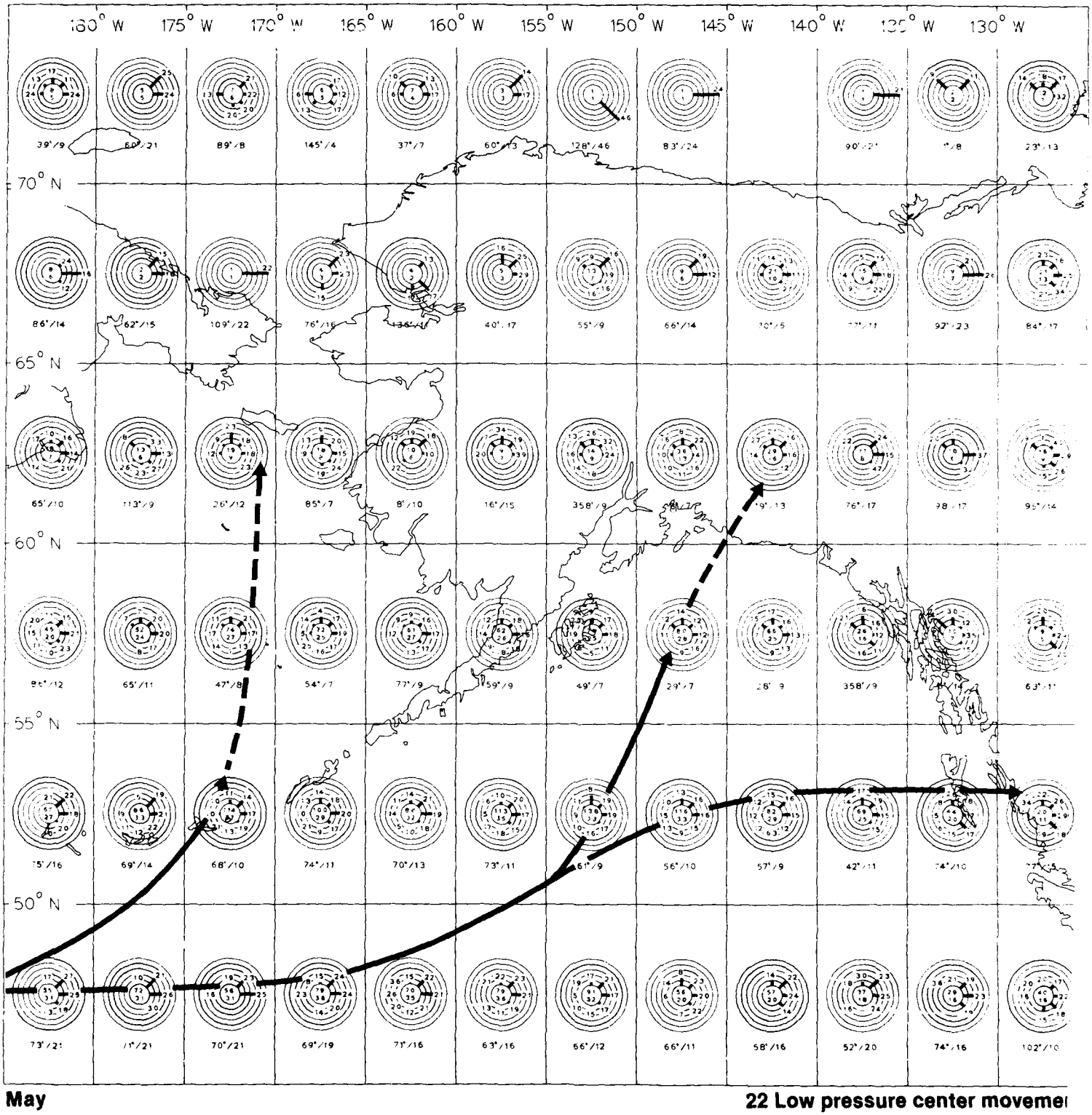


March

22 Low pressure center movement

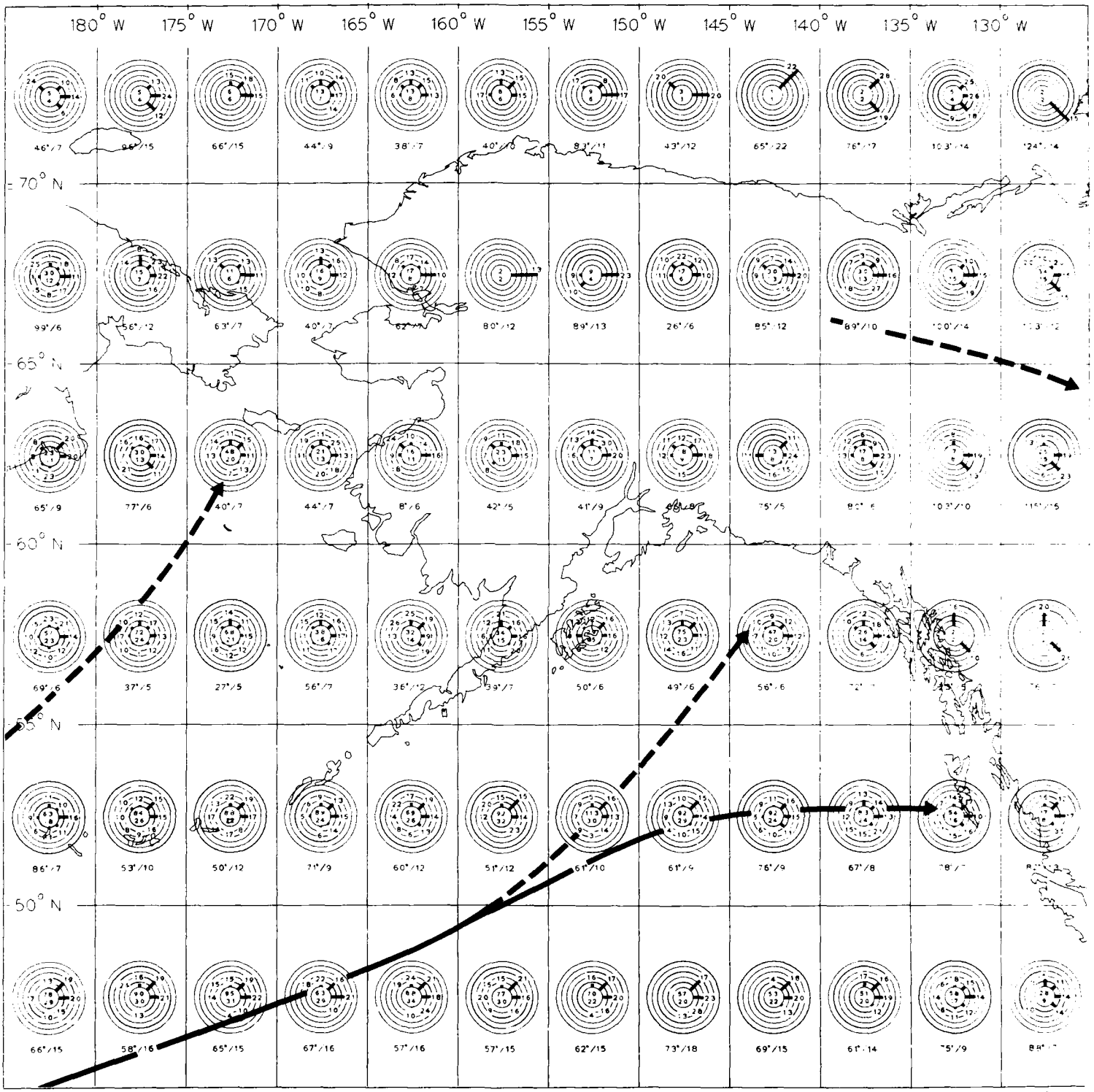


22 Low pressure center movement

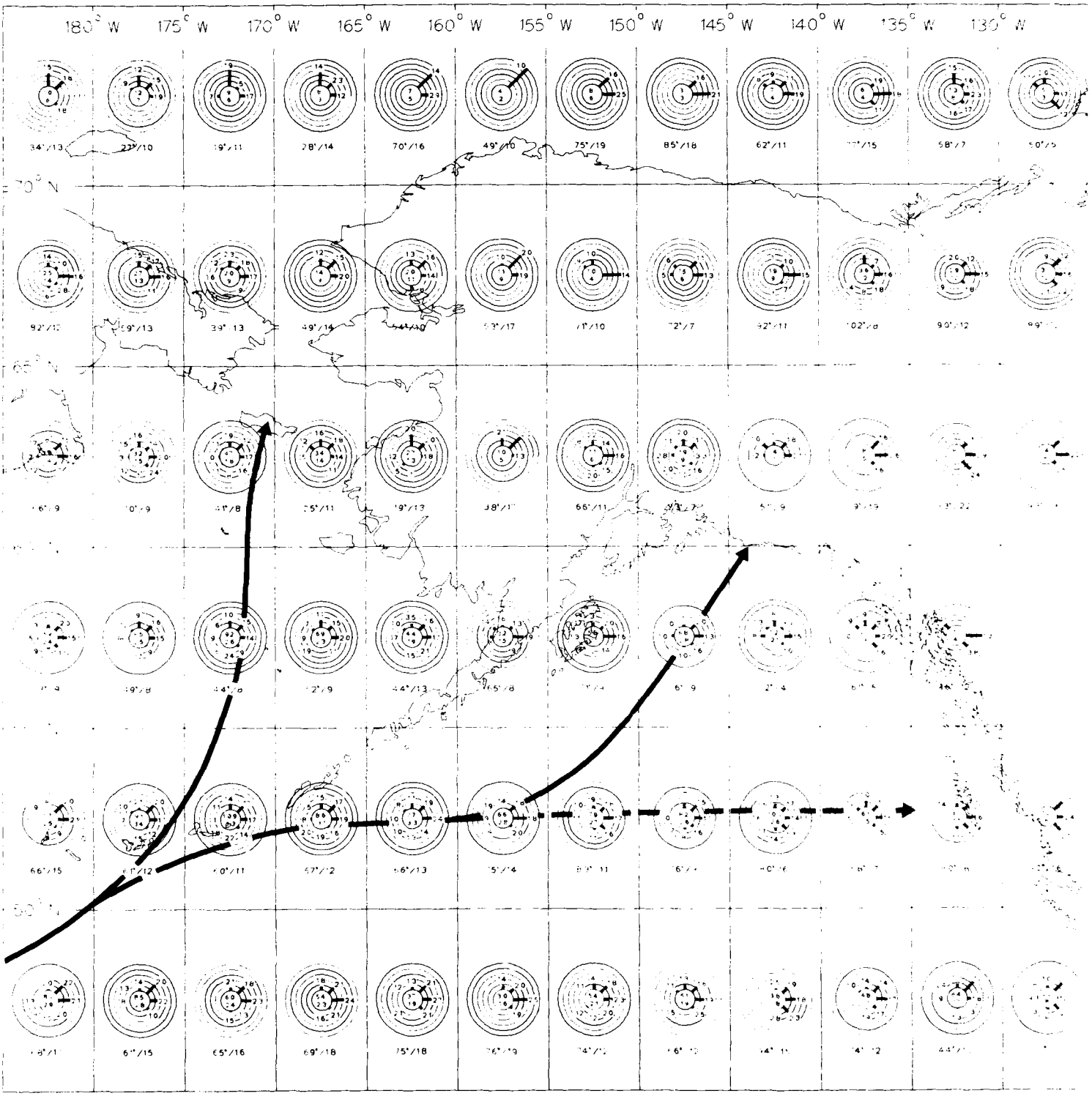


May

22 Low pressure center movemer

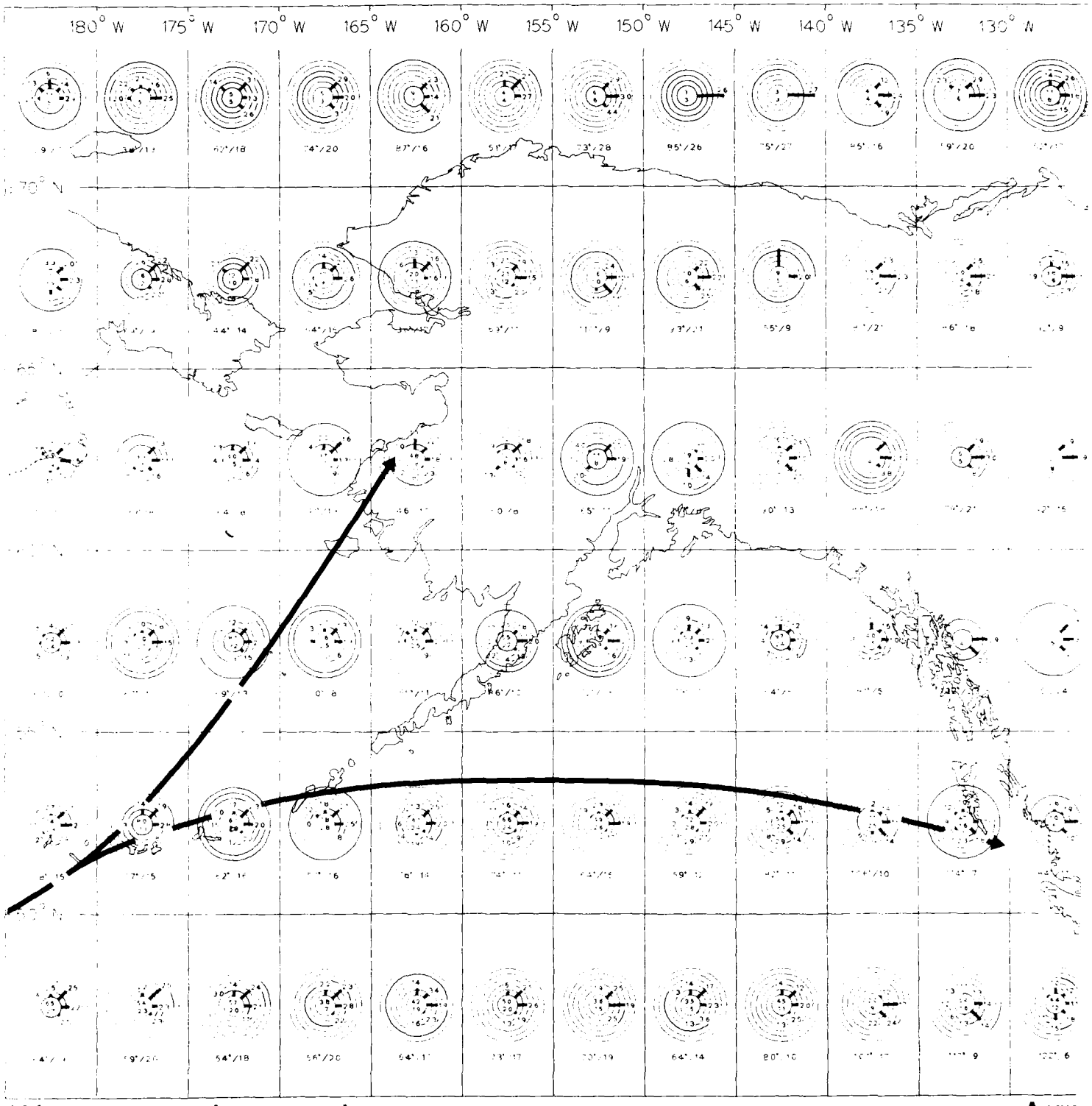


22 Low pressure center movement

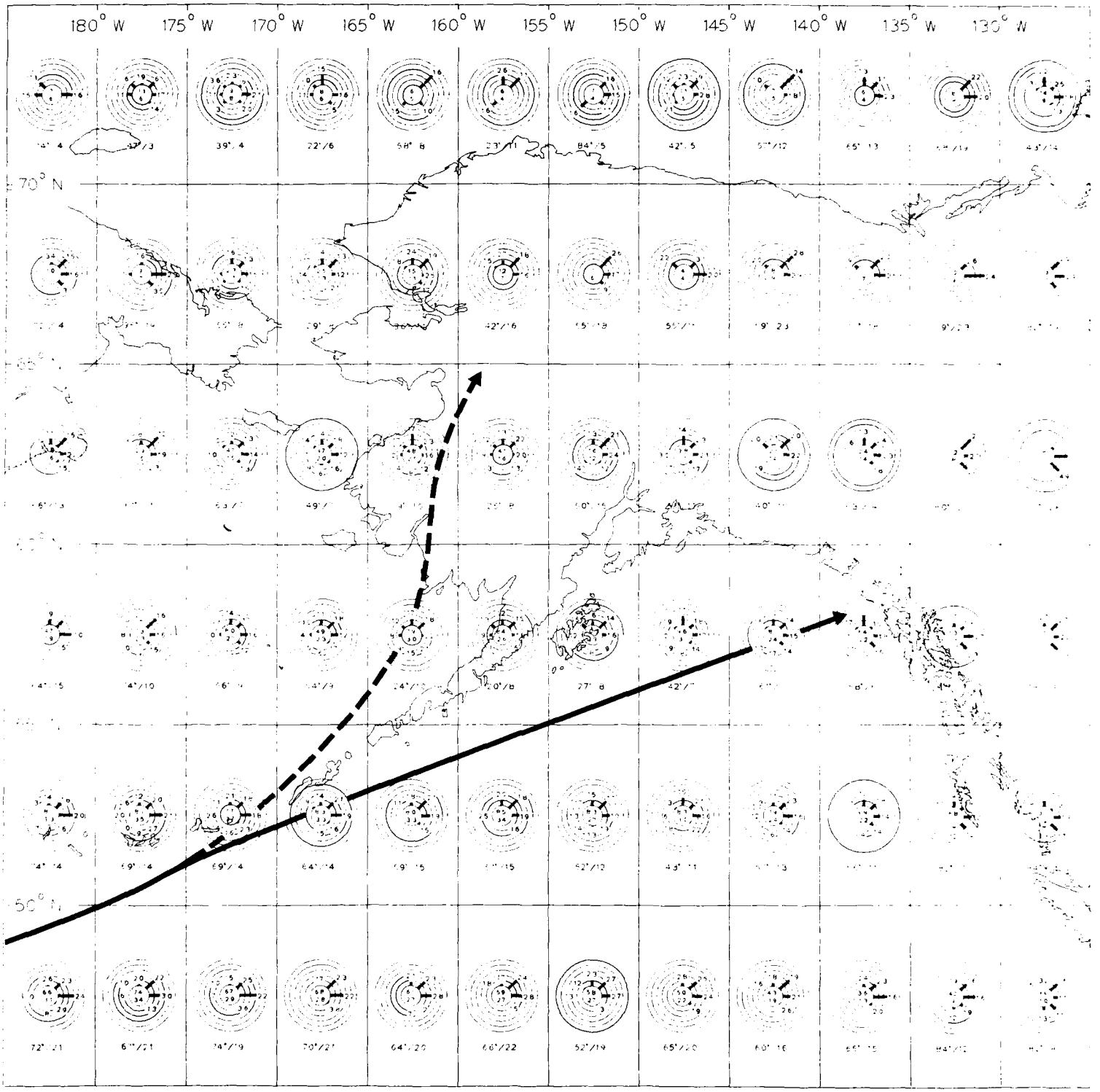


July

22 Low pressure center movemer

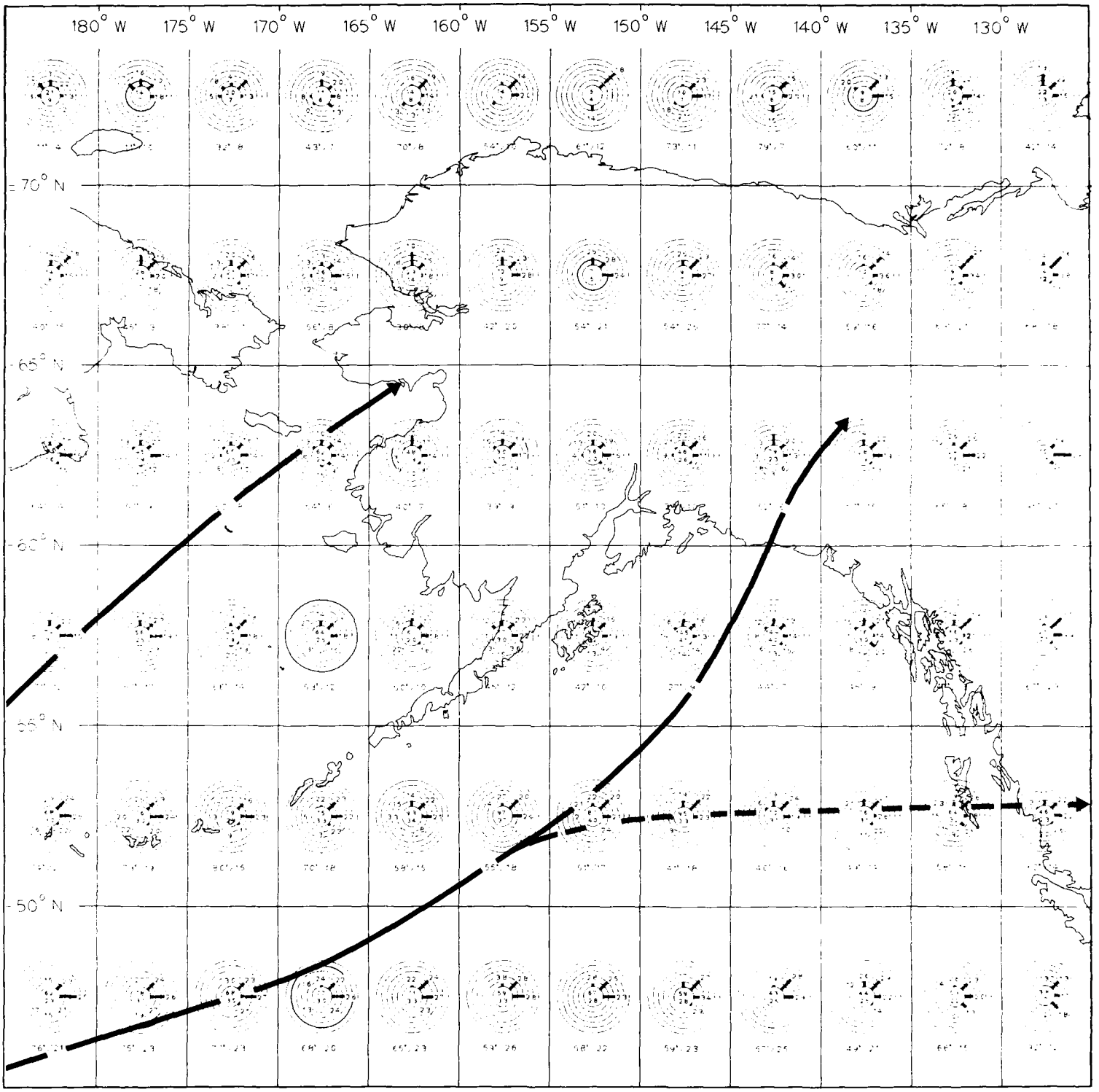


22 Low pressure center movement

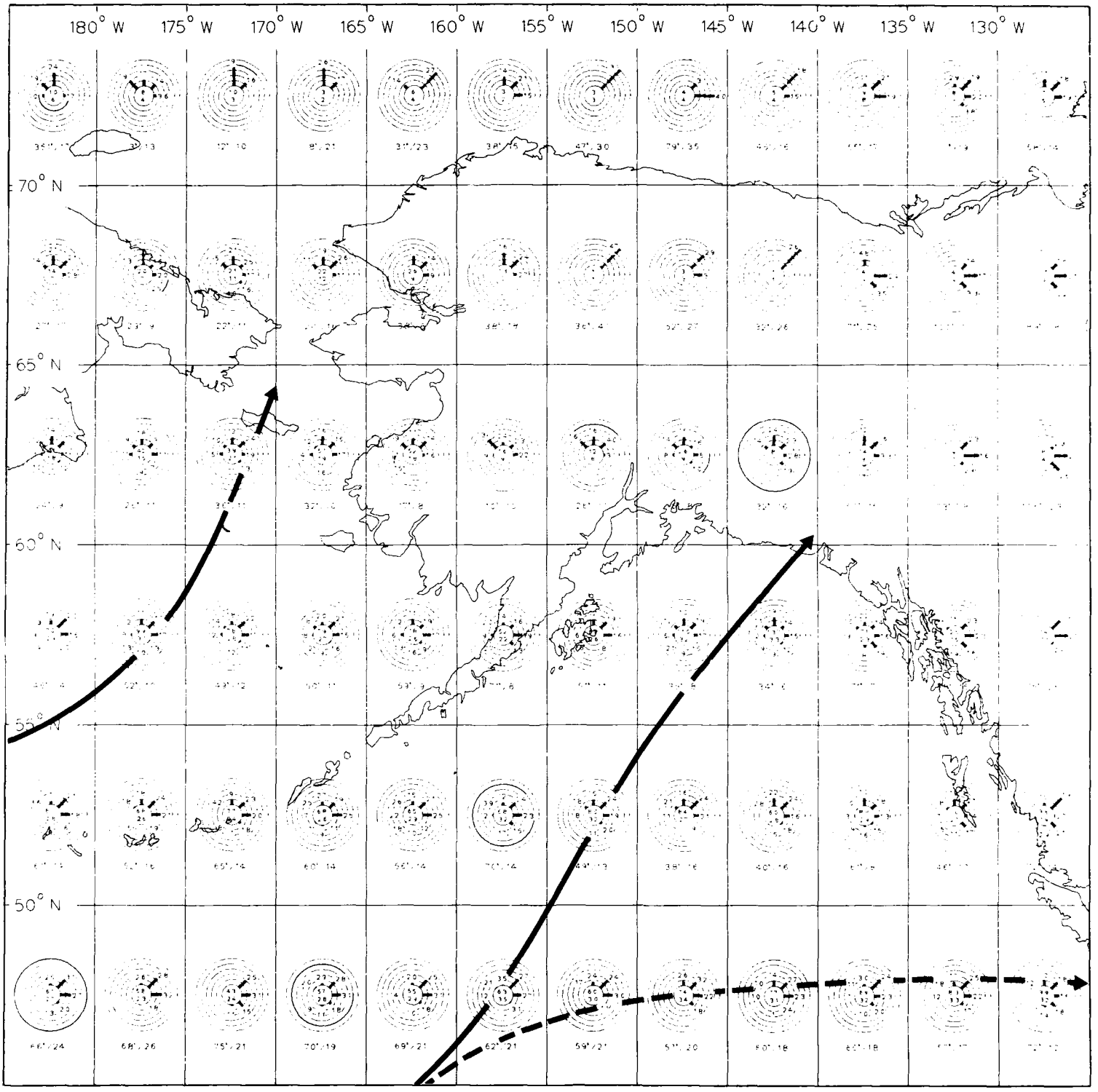


September

22 Low pressure center movement

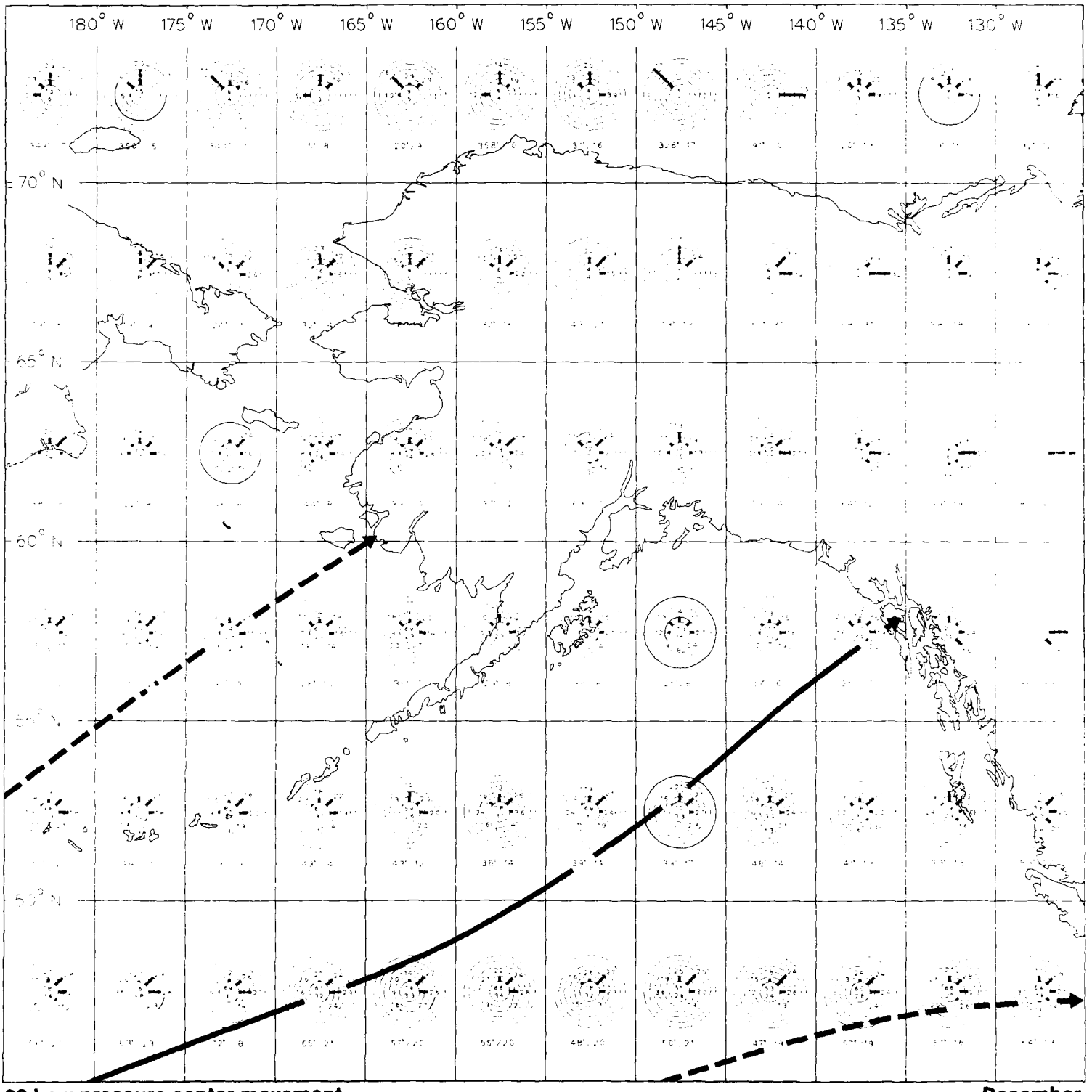


22 Low pressure center movement **October**



November

22 Low pressure center movement

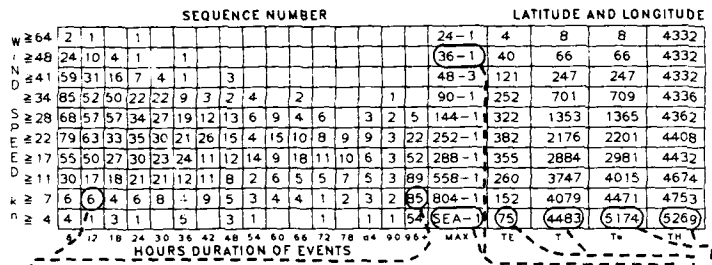


22 Low pressure center movement

December

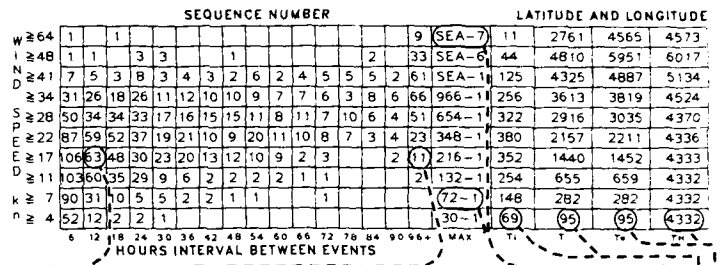
Set 23. Persistence of wind speed and wave height, seasonal

WIND SPEED DURATIONS - SEASONAL



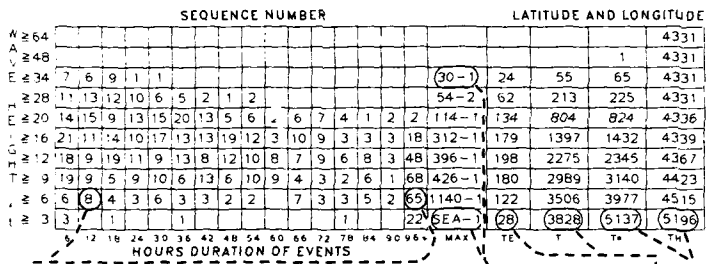
-6 Events with wind speeds ≧7 kn. persisted 12 hours; 85 events persisted ≧96 hours.
The longest event with wind speeds ≧4 kn. persisted for 3 months or more and it occurred 1 time.
The longest event with wind speeds ≧48 kn. persisted 36 hours and it occurred 1 time.
75 Events had wind speeds ≧4 kn. which comprised a total of 4,483 hindcasts.
5,269 Hindcasts were examined, and 5,174 had wind speeds ≧4 kn.

WIND SPEED INTERVALS - SEASONAL



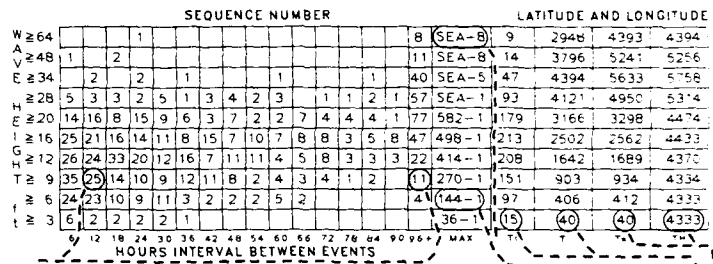
-There were 63 12-hour intervals between events of wind speeds ≧17 kn.; 11 intervals persisted 96 hours or more.
The longest interval between events of wind speeds ≧7 kn. was 72 hours and it occurred 1 time.
The longest interval between events of wind speeds ≧64 kn. was 3 months or more and it occurred 7 times.
There were 69 intervals between events of wind speeds ≧4 kn. which comprised a total of 95 hindcasts.
4,332 Hindcasts were examined, and 95 had wind speeds < 4 kn.

WAVE HEIGHT DURATIONS - SEASONAL



-8 Events with wave heights ≧6 ft. (1.8m) persisted 12 hours; 65 events persisted ≧96 hours.
The longest event with wave heights ≧3 ft. (0.9m) persisted 3 months or more and it occurred 1 time.
The longest event with wave heights ≧34 ft. (10.4m) persisted for 30 hours and it occurred 1 time.
28 Events had wave heights ≧3 ft. (0.9m) which comprised a total of 3,828 hindcasts.
5,196 Hindcasts were examined, and 5,137 had wave heights ≧3 ft. (0.9m).

WAVE HEIGHT INTERVALS - SEASONAL



-There were 25 12-hour intervals between events of wave heights ≧9 ft. (2.7m).; 11 intervals persisted 96 hours or more.
The longest interval between events of wave heights ≧6 ft. (1.8m) was 144 hours and it occurred 1 time.
The longest interval between events of wave heights ≧64 ft. (19.5m) was 3 months or more and it occurred 8 times.
There were 15 intervals between events of wave heights ≧3 ft. (0.9m) which comprised a total of 40 hindcasts.
4,333 Hindcasts were examined, and 40 had wave heights <3 ft. (0.9m).

Durations for a particular season extend from the time the event begins (or the first day of the season if already in progress), and terminate when the event ends. Events become undefined if missing data is encountered. Durations lasting a season or more are categorized together. Durations may persist into the next season.

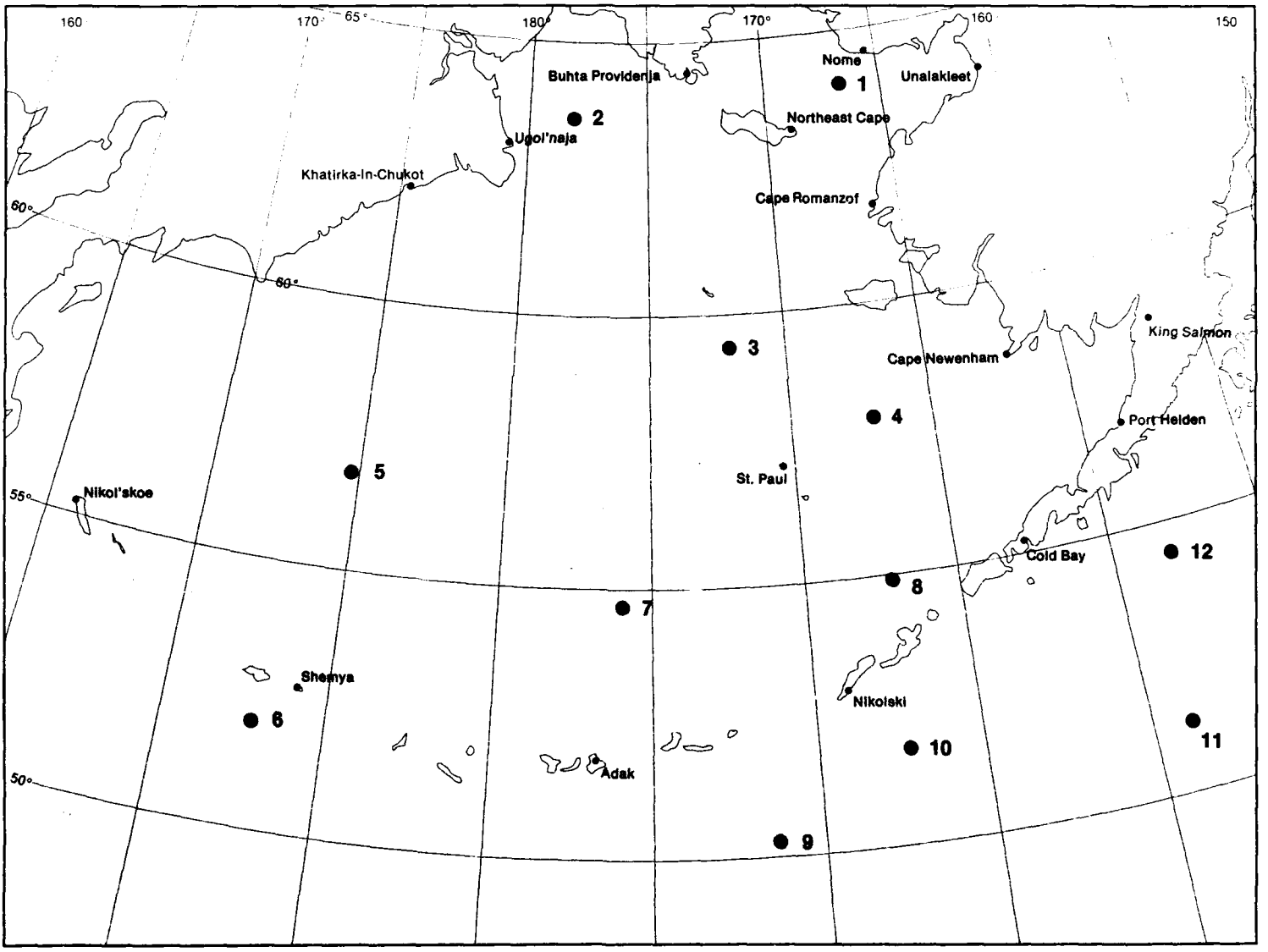
ABBREVIATIONS

MAX: Maximum duration or interval, followed by the number of occurrences.
TE or TI: Total number of events or intervals
T: Total number of hindcasts included in TE or TI.
T≈: Total number of hindcasts that met the stated criteria.
TH: Total number of hindcasts examined.

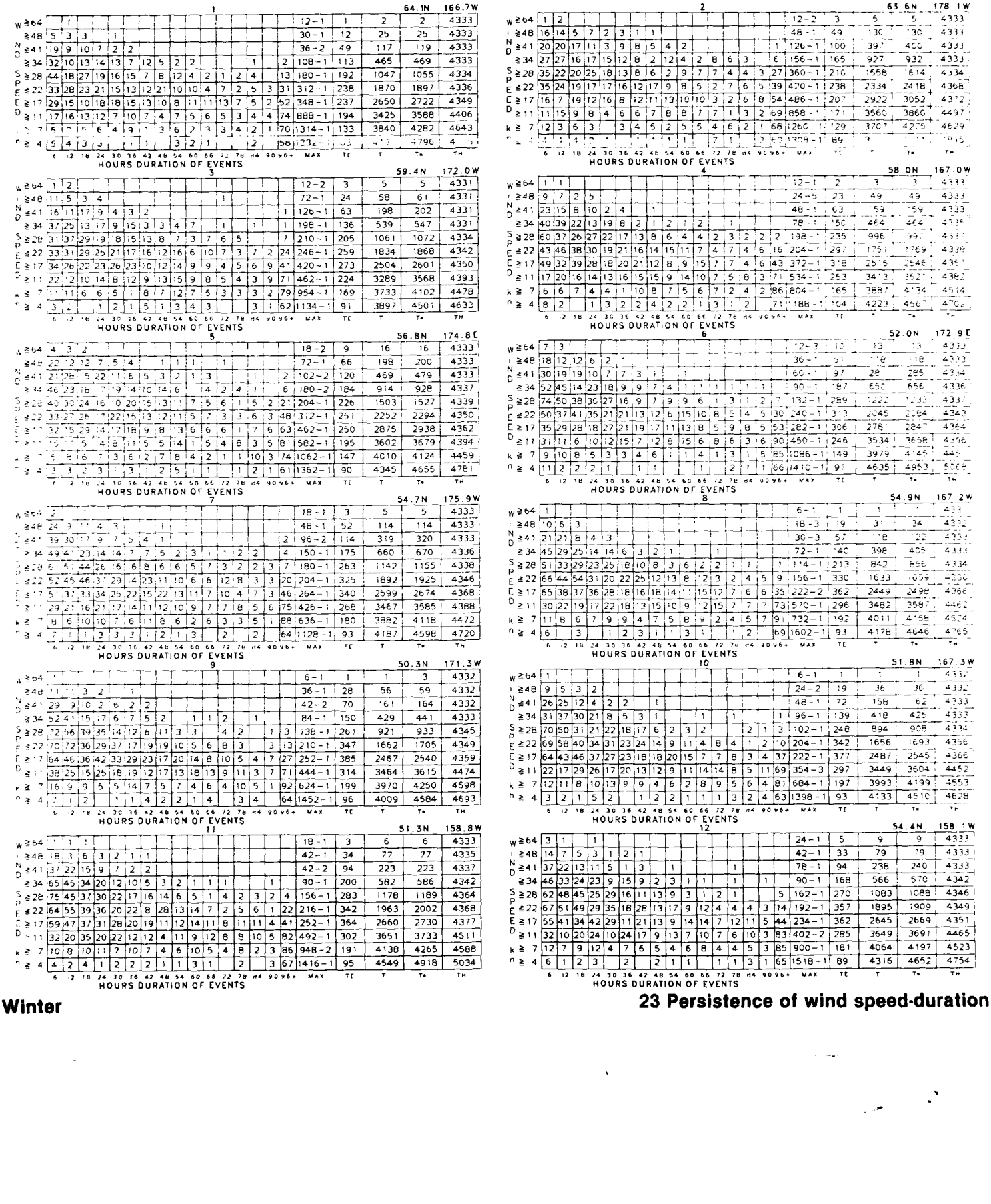
Intervals for a particular season extend from the time the event ends (or the first day of the season if the event is not in progress), and terminate when the event begins. Intervals become undefined if missing data is encountered. Intervals lasting a season or more are categorized together. Intervals may persist into the next season.

feet	0	3	6	9	12	16	20	28	34	48	64
meters	0.0	0.9	1.8	2.7	3.7	4.6	6.1	8.5	10.4	14.6	19.5

The SEA code in the MAX column of the tables refers to season, i.e., the longest event or interval persisted for three months or more. Since the extreme wave statistics are based on the assumption of winds blowing over open water without fetch restrictions, the wave height extremes are likely to be unrealistically high during the winter season for those few grid points located within an area having a probability of ice restricting the development of waves. Refer to the ice statistics in sets 17-19. Refer to the introductory text in Section II for additional information on persistence of wind and waves.



23 Legend **Legend 23**


1 64.1N 166.7W
2 63.6N 178.1W
3 59.4N 172.0W
4 58.0N 167.0W
5 56.8N 174.8E
6 52.0N 172.9E
7 54.7N 175.9W
8 54.9N 167.2W
9 50.3N 171.3W
10 51.8N 167.3W
11 51.3N 158.8W
12 54.4N 158.1W
HOURS DURATION OF EVENTS
MAX TE T To TH

1 — 64.1N 166.7W

WIND SPEED	6	12	18	24	30	36	42	48	54	60	66	72	78	>84	>90	>96+	MAX	TI	T	Te	Th
≥64																9	SEA-8	9	3080	4525	4527
≥48					1	1							1	1			15	SEA-7	19	3504	5057	5082
≥41	2	1	1	2	1	2	1	3	2		1	2	2	1			33	SEA-6	54	4793	6757	6286
≥34	8	6	7	2	3	5	4	4	2	1	3	4	1	2			64	SEA-4	116	4934	5433	5902
≥28	25	6	10	7	5	7	9	11	12	12	5	9	3	5	6	6	66	780-1	198	3492	3608	4662
≥22	23	18	22	20	15	15	21	13	7	8	8	7	7	5	7	4	43	420-1	239	2428	2497	4391
≥17	37	27	30	26	20	15	8	7	11	10	7	5	5	4			25	240-1	237	1633	1661	4367
≥11	36	36	39	15	13	15	8	5	2	4	3	2	2	2	2	5		114-1	189	819	830	4345
≥ 7	47	28	20	10	9	4	3	4	1		1		1					78-1	128	358	361	4333
≥ 4	43	16	7	15	1	1	2	1										48-1	76	149	152	4333

HOURS INTERVAL BETWEEN EVENTS

2 — 63.6N 178.1W

WIND SPEED	6	12	18	24	30	36	42	48	54	60	66	72	78	>84	>90	>96+	MAX	TI	T	Te	Th
≥64																11	SEA-8	11	3388	4833	4838
≥48	5	3	3	2			1	1	1	1	4						33	SEA-8	54	5334	6263	6393
≥41	16	2	1	2	3	3	4	5	3	3	1	3	1	1			56	SEA-1	104	4226	4644	5044
≥34	14	6	17	5	4	8	7	7	9	4	6	4	5	3	4	65	984-1		168	3515	3753	4685
≥28	32	13	15	10	10	17	7	8	4	7	12	6	6	4	4	61	708-1		216	2819	2866	4479
≥22	35	22	19	18	16	25	17	11	5	6	6	6	10	2	6	34	408-1		238	2006	2045	4428
≥17	37	23	24	24	21	10	9	8	6	6	3	4	3	1	3	21	222-1		203	1308	1344	4357
≥11	40	37	29	7	8	13	10	6	7		1	1			1	3	210-1		163	639	646	4342
≥ 7	53	25	12	9	9	4	4	1					3			1	204-1		121	353	354	4333
≥ 4	48	11	8	6	3	1			2	2							54-2		81	173	174	4333

HOURS INTERVAL BETWEEN EVENTS

3 — 59.4N 172.0W

WIND SPEED	6	12	18	24	30	36	42	48	54	60	66	72	78	>84	>90	>96+	MAX	TI	T	Te	Th
≥64																10	SEA-7	10	3134	4672	4677
≥48	2			1			1	2	1		1	2					20	SEA-6	30	3891	5666	5727
≥41	3	3	1	2	1		5	1	1	2	3				1		48	SEA-5	71	5282	5864	6066
≥34	9	3	5	4	2	7	8	3	4	5	9	3	6	3	4		68	SEA-2	143	4419	4716	5263
≥28	16	13	9	11	14	12	14	17	4	10	9	6	3	3	6		62	816-1	209	3268	3422	4491
≥22	29	22	26	16	31	20	10	15	12	11	6	4	2	5	5		46	450-1	260	2453	2513	4370
≥17	44	34	34	34	23	21	15	6	14	5	3	7	2	6	4		22	420-1	274	1746	1772	4354
≥11	55	45	29	25	21	12	13		5	4	3	2	2	1			2	126-1	219	821	831	4337
≥ 7	68	44	20	10	9	7	2	1		1								60-1	162	375	378	4333
≥ 4	61	15	4	4	1		1											42-1	86	131	132	4331

HOURS INTERVAL BETWEEN EVENTS

4 — 58.0N 167.0W

WIND SPEED	6	12	18	24	30	36	42	48	54	60	66	72	78	>84	>90	>96+	MAX	TI	T	Te	Th
≥64																10	SEA-8	10	3375	4870	4823
≥48					1	1		2			1	1		2			21	SEA-7	29	4134	5986	5634
≥41	2	1	2	3	1	5	2		1	1		4	1	1			46	SEA-4	70	4801	5526	5685
≥34	13	7	6	8	3	8	6	5	3	4	2	6	5	1	2		76	SEA-1	155	4114	4366	4827
≥28	34	12	9	12	14	15	13	10	9	9	8	11	9	5	2		68	534-1	240	3254	3462	4495
≥22	45	17	31	32	26	16	20	11	15	15	9	8	7	6	1		41	336-1	300	2485	2615	4379
≥17	54	45	42	36	24	33	9	12	9	10	8	8	4	3	4		18	312-1	319	1802	1831	4364
≥11	69	58	44	22	13	11	5	11	5	4	2	1			1		3	126-1	249	851	862	4334
≥ 7	64	47	19	9	5	6	4	1										96-1	157	376	380	4333
≥ 4	65	25	2	3														24-3	95	133	135	4333

HOURS INTERVAL BETWEEN EVENTS

5 — 56.8N 174.8E

WIND SPEED	6	12	18	24	30	36	42	48	54	60	66	72	78	>84	>90	>96+	MAX	TI	T	Te	Th
≥64								1								15	SEA-8	17	3570	4978	4994
≥48	4		1	2		3	3	2	1		1	5	1	1			46	SEA-4	72	4676	5100	5300
≥41	15	7		6	3	3	3	4	4	1	5	3	5	4	2		61	SEA-2	126	4207	4463	4942
≥34	16	12	9	13	9	6	7	5	6	7	8	5	6	4	4		70	648-1	187	3465	3616	4540
≥28	27	17	17	18	15	10	8	11	7	7	6	8	10	2	4		60	528-1	227	2764	2894	4415
≥22	32	29	31	17	22	13	17	14	6	8	6	7	3	5	3		38	300-2	251	2007	2102	4379
≥17	43	33	40	23	22	12	15	11	8	6	5	7	3	2	5		15	228-1	250	1414	1438	4347
≥11	50	46	29	24	8	9	6	4	5		5	1	1	1	1		3	132-1	193	704	724	4342
≥ 7	69	26	20	11	6	4	1		1	1	1						1	102-1	141	333	335	4333
≥ 4	60	16	5	2	1	1												36-1	85	126	126	4333

HOURS INTERVAL BETWEEN EVENTS

6 — 52.0N 172.9E

WIND SPEED	6	12	18	24	30	36	42	48	54	60	66	72	78	>84	>90	>96+	MAX	TI	T	Te	Th
≥64									2							14	SEA-7	16	3611	5131	5344
≥48		1	1	1	1	2		1	1			1		1		44	SEA-2	51	3945	4996	5174
≥41	5	5	1	4	2	3	4	4	2	2		4	1	5	3	58	SEA-1	103	4224	4530	4844
≥34	17	20	13	12	6	7	10	6	8	6	7	6	5	3	4	62	1044-1		192	3662	3820	4471
≥28	58	29	25	20	13	12	18	15	9	11	5	5	6	3	5	62	364-1		296	3041	3159	4388
≥22	54	44	31	30	23	16	16	8	14	7	12	7	7	7	4	35	246-1		315	2168	2273	4347
≥17	64	55	41	31	20	18	7	6	8	3	3	2	2	1	4		138-1		303	1277	1326	4342
≥11	85	53	43	21	10	7	8	3	4	1	4	3	3				78-3		245	747	762	4341
≥ 7	76	33	13	12	4	4	2	1			1						66-1		146	306	306	4333
≥ 4	64	13	3	4													24-4		64	115	116	4333

HOURS INTERVAL BETWEEN EVENTS

7 — 54.7N 175.9W

WIND SPEED	6	12	18	24	30	36	42	48	54	60	66	72	78	>84	>90	>96+	MAX	TI	T	Te	Th
≥64																10	SEA-7	11	3046	4491	4496
≥48	8		2		2				1	1	1	1	2	3			37	SEA-5	58	4890	5454	5568
≥41	17	10	6	2	3	3	3	2	5	2	3	3	2	2	2	2	62	SEA-1	120	4388	4633	4953
≥34	16	12	10	11		6	7	9	4	3	12	5	4	4	3		70	864-1	181	3637	3814	4481
≥28	34	17	22	16	14	17	11	9	7	15	6	6	6	6	6	60	636-1		264	3140	3229	4379
≥22	58	36	38	29	25	21	19	13	12	13	10	3	5	5	3	37	390-1		327	2411	2445	4357
≥17	63	64	54	38	19	16	9	10	11	5	6	2	5	9	3	14	246-1		338	1682	1709	4348
≥11	89	89	43	23	15	7	3	2	4	2	4	2					72-2		265	788	806	4336
≥ 7	85	44	23	12	2	4	2	1	1								54-1		174	355	355	4334
≥ 4	63	7	5	1		1											36-1		87	122	122	4333

HOURS INTERVAL BETWEEN EVENTS

8 — 54.9N 167.2W

WIND SPEED	6	12	18	24	30	36	42	48	54	60	66	72	78	>84	>90	>96+	MAX	TI	T	Te	Th
≥64																8	SEA-7	8	2711	4514	4516
≥48	1			1			2									21	SEA-7	25	4288	5914	5747
≥41		2	1	2		3	4			2	1	1	1	1	1	44	SEA-2	63	4251	5337	5491
≥34	17	8	7	4	5	5	4	5	2	4	3	2	1	1	2	76	780-1		146	3944	4214	4660
≥28	26	14	13	10	13	8	15	7	9	4	3	10	3		8	77	552-1		221	3361	3593	4448
≥22	54	33	28	39	27	26	19	16	7	10	6	6	11	2	7	41	318-1		332	2618	2758	4366
≥17	68	63	52	37	25	25	16	12	11	9	7	9	2	1	2	20	240-1		359	841	1815	4338
≥11	98	77	41	22	19	15	5	5	2	3	2	2				2	126-1		293	854	885	4336
≥ 7	101	39	25	11	3	4		1			1	1					66-1		185	356	367	4342
≥ 4	76	6	1	3			1		1								42-1		87	110	120	4332

HOURS INTERVAL BETWEEN EVENTS

9 — 50.3N 171.3W

WIND SPEED	6	12	18	24	30	36	42	48	54	60	66	72	78	>84	>90	>96+	MAX	TI	T	Te	Th
≥64																9	SEA-7	9	3007	4676	4679
≥48	2	3			2	1					1						26	SEA-5	36	4329	5351	5410
≥41	5	3		1	3	2		3	1	2			2		1		52	SEA-1	76	4561	4958	5122
≥34	15	7	8	7	7	4	5	6	5	1	4	5	2	3			76	858-1	156	3869	4056	4496
≥28	40	21	15	18	16	11	10	13	7	8	10	4	7	2	7		78	546-1	267	3425	3567	4487
≥22	59	41	47	20	23	20	13	11	20	15	10	12	13	13	8	3	354-1		350	2674	2714	4402
≥17	89	63	47	37	28	23	23	17	13	9	12	8	2	1	2	1	198-1		385	1806	1837	4350
≥11	107	78	38	38	18	8	5	4	3	4	2					1	120-1		309	849	859	4332
≥ 7	104	56	20	4	3	4		1	1								54-1		193	348	348	4332
≥ 4	78	16	5	1													24-1		90	109	109	4332

HOURS INTERVAL BETWEEN EVENTS

10 — 51.8N 167.3W

WIND SPEED	6	12	18	24	30	36	42	48	54	60	66	72	78	>84	>90	>96+	MAX	TI	T	Te	Th
≥64																8	SEA-7	8	2711	4515	4516
≥48	1					2		1						1		20	SEA-7	25	4069	5679	5716
≥41	5	2	2	3	2	2	1	2	2				2	1	2	53	SEA-2	79	4628	5266	5447
≥34	17	8	5	7	7	2	5			4	3	3		6	3	75	936-1		145	3995	4249	4678
≥28	36	22	13	10	20	13	5	10	8	5	8	8	7	5	1	81	480-1		252	3377	3513	4476
≥22	60	44	35	23	22	22	14	15	11	11	13	7	7	7	5	46	312-1		342	2628	2691	4366
≥17	78	64	46	48	37	19	18	13	10	9	7	8	2	2		14	240-1		375	1782	1840	4356
≥11	104	79	37	22	22	7	6	6	2	1	1	2	1	2	1	2	96-2		295	854	859	4342
≥ 7	114	42	18	10	4	1	2	2	1								54-1		194	357	357	4336
≥ 4	66	15	5	2													24-2		88	119	119	4333

HOURS INTERVAL BETWEEN EVENTS

11 — 51.3N 158.8W

WIND SPEED	6	12	18	24	30	36	42	48	54	60	66	72	78	>84	>90	>96+	MAX	TI	T	Te	Th
≥64		1														10	SEA-8	11	3411	4856	4862
≥48	2	1		1				1		1		1					30	SEA-4	37	4069	5411	5486
≥41	7	4	5	2	2	2		3	4	4	1	1	3		1		60	1350-1	99	4152	4561	4780
≥34	28	13	10	10	13	7	6	5	2	3	8	1	2	1	1		83	690-1	205	3719	3987	4564
≥28	40	29	22	20	21	9	13	9	15	9	6	12	2	7	4		67	438-1	285	3127	3260	4418
≥22	59	35	46	39	26	14	11	21	14	12	9	6	7	6	8		30	306-1	343	2366	2441	4408
≥17	90	70	53	28	30	17	20	6	6	5	7	7	5		1		16	198-2	361	1618	1662	4348
≥11	116	79	37	23	12	5	5	6	1	3	3	1		2				84-2	293	762	782	4337
≥ 7	113	37	16	7	3	5			1									54-1	182	317	323	4333
≥ 4	69	17	3	1														24-1	90	116	116	4333

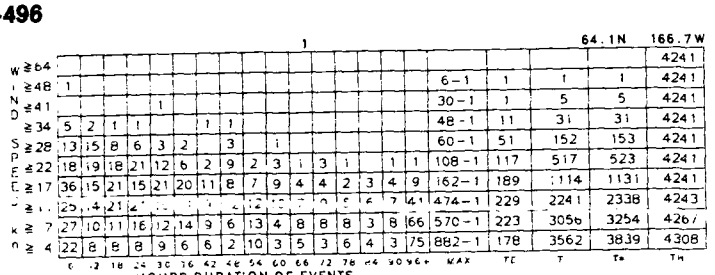
HOURS INTERVAL BETWEEN EVENTS

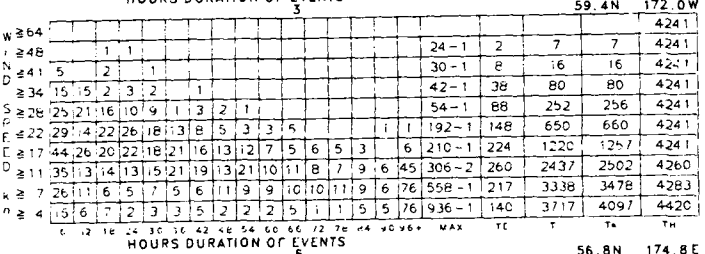
12 — 54.4N 158.1W

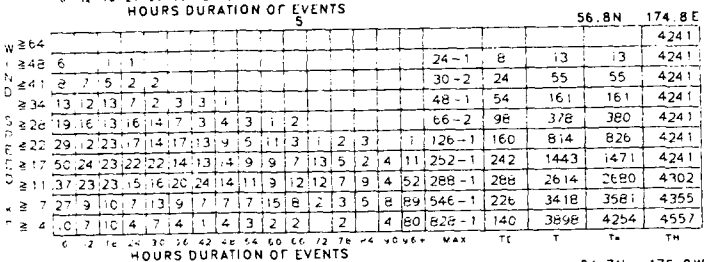
WIND SPEED	6	12	18	24	30	36	42	48	54	60	66	72	78	>84	>90	>96+	MAX	TI	T	Te	Th
≥64																12	SEA-7	12	3623	5185	5134
≥48	3	1	1		1		1									32	SEA-2	39	4336	5525	5604
≥41	7	3	1		1	2	5	1	4	2	2	2	1			71	1170-1	102	4083	4488	4728
≥34	13	6	9	10	18	10	6	3	4	4	3	2	2	2	6	77	762-1		175	3763	3955	4516
≥28	27	25	26	23	23	12	12	5	11	11	7	7	3	4	5	74	444-1		275	3234	3380	4455
≥22	69	50	47	32	23	20	19	16	12	4	5	8	5	7	6	35	378		358	2415	2463	4356
≥17	71	71	58	39	22	25	17	12	6	4	4	7	4	4	3	13	186-1		360	1657	1694	4345
≥11	105	72	34	22	11	13	4	3	5	3	2	1	1		1		90-1		277	761	777	4336
≥ 7	97	38	21	7	5	3	1			1							66-1		173	325	326	4333
≥ 4	65	12	4														18-4		81	101	102	4333

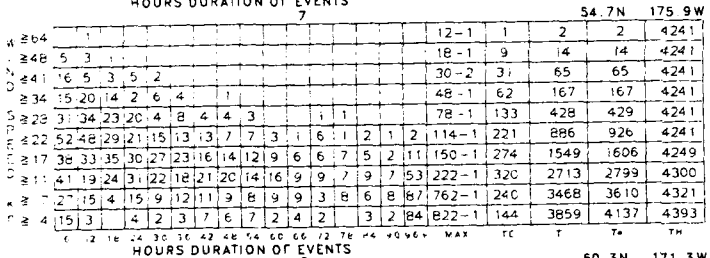
HOURS INTERVAL BETWEEN EVENTS

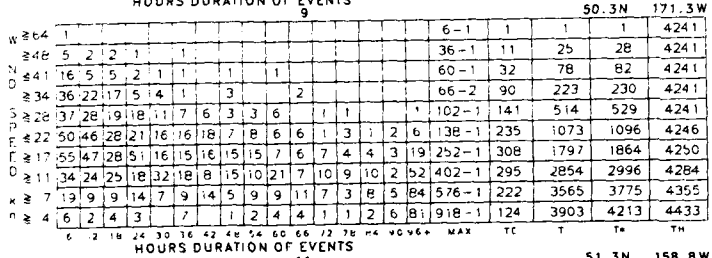
23 Persistence of wind speed-interval

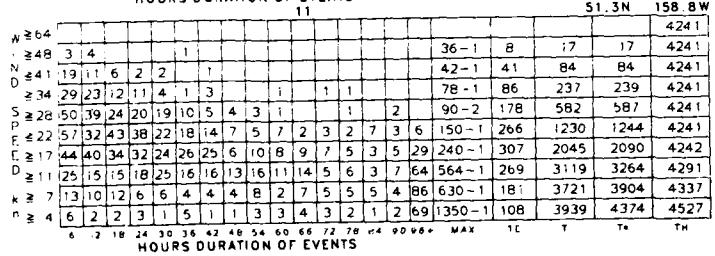

1
64.1N 166.7W
HOURS DURATION OF EVENTS

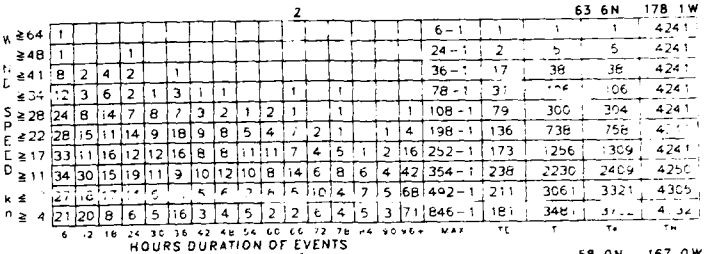

3
59.4N 172.0W
HOURS DURATION OF EVENTS

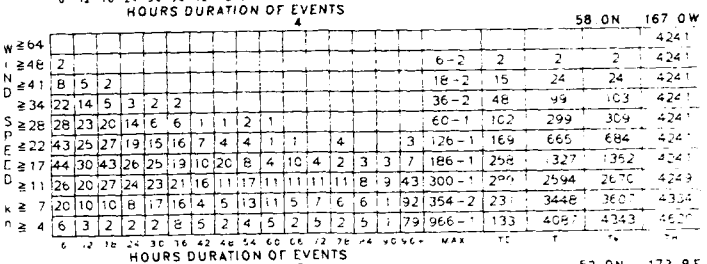

5
56.8N 174.8E
HOURS DURATION OF EVENTS

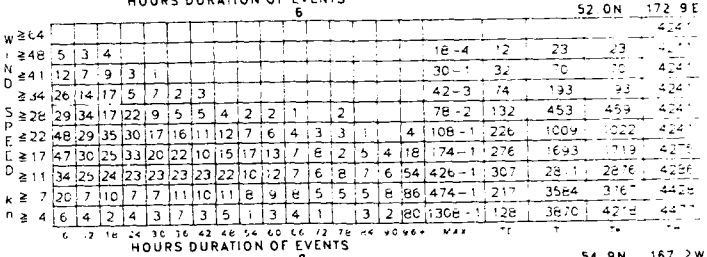

7
54.7N 175.9W
HOURS DURATION OF EVENTS

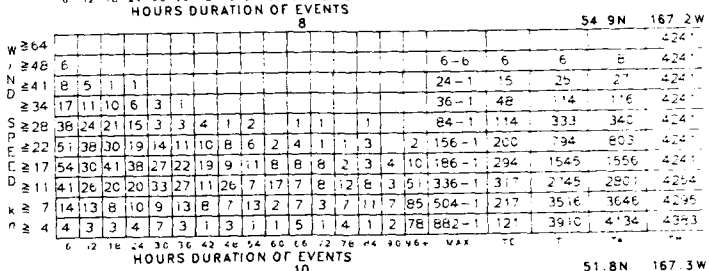

9
50.3N 171.3W
HOURS DURATION OF EVENTS

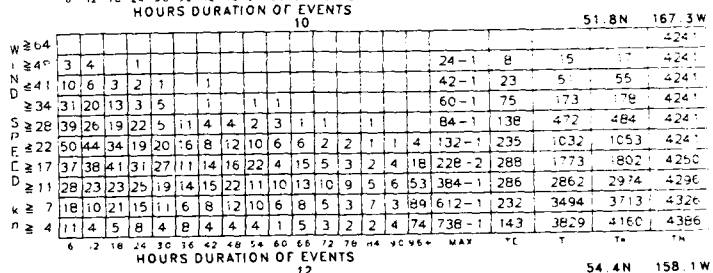

11
51.3N 158.8W
HOURS DURATION OF EVENTS

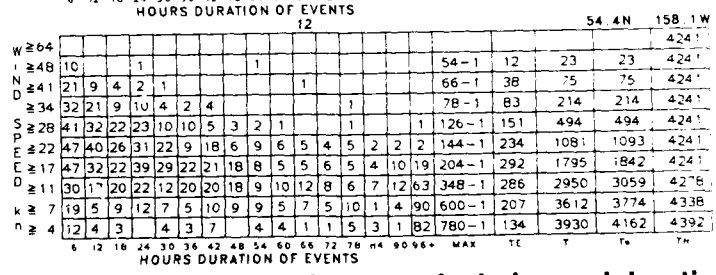

2
63.6N 178.1W
HOURS DURATION OF EVENTS

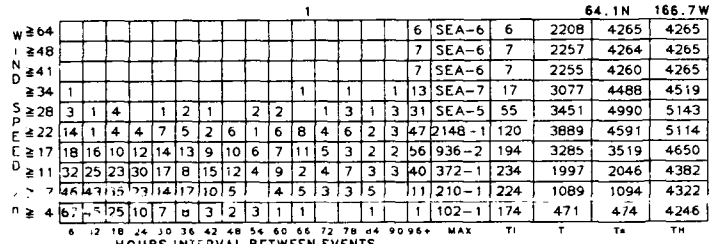

4
58.0N 167.0W
HOURS DURATION OF EVENTS


6
52.0N 172.9E
HOURS DURATION OF EVENTS


8
54.9N 167.2W
HOURS DURATION OF EVENTS


10
51.8N 167.3W
HOURS DURATION OF EVENTS


12
54.4N 158.1W
HOURS DURATION OF EVENTS



1 — 64.1N 166.7W

WIND SPEED	6	12	18	24	30	36	42	48	54	60	66	72	78	≥4	90	96+	MAX	TI	T	Te	TH
≥64																6	SEA-6	6	2208	4265	4265
≥48																7	SEA-6	7	2257	4264	4265
≥41																7	SEA-6	7	2255	4260	4265
≥34	1								1		1			1		13	SEA-7	17	3077	4488	4519
≥28	3	1	4		1	2	1		2	2		1	3	1	3	31	SEA-5	55	3451	4990	5143
≥22	14	1	4	4	7	5	2	6	1	6	8	4	6	2	3	47	2148-1	120	3889	4591	5114
≥17	18	16	10	12	14	13	9	10	6	7	11	5	3	2	2	56	936-2	194	3285	3519	4650
≥11	32	25	23	30	17	8	15	12	4	9	2	4	7	3	3	40	372-1	234	1997	2046	4382
≥ 7	46	43	15	23	14	17	10	5		4	5	3	3	5		11	210-1	224	1089	1094	4322
≥ 4	67	5	25	10	7	8	3	2	3	1	1				1	1	102-1	174	471	474	4246

HOURS INTERVAL BETWEEN EVENTS

2 — 63.6N 178.1W

WIND SPEED	6	12	18	24	30	36	42	48	54	60	66	72	78	≥4	90	96+	MAX	TI	T	Te	TH
≥64												1				6	SEA-6	7	2220	4264	4265
≥48											2					6	SEA-6	8	2230	4260	4265
≥41	2	2					1		1	1		1				15	SEA-8	23	3521	4690	4728
≥34	2	1	1	2					2	2	1		1			24	SEA-8	36	4013	4931	5037
≥28	14	1	2	2		2	1		3	2	1	2	1	3	3	43	SEA-2	80	3657	5003	5307
≥22	14	3	11	8	6	11	4	7	5	1	6		7	1	4	51	SEA-1	139	3904	4337	5095
≥17	21	13	13	12	14	7	5	9	8	1	3	6	2	6	6	51	1572-1	177	3119	3345	4654
≥11	47	22	30	20	15	20	7	10	9	5	2	2	5	6	4	32	348-1	236	1830	1887	4287
≥ 7	43	40	24	20	21	11	14	7	4	4	2	5	4	1	1	6	258-1	207	988	996	4253
≥ 4	61	42	20	15	12	10	3	3	3	1			1			3	126-1	174	537	540	4241

HOURS INTERVAL BETWEEN EVENTS

3 — 59.4N 172.0W

WIND SPEED	6	12	18	24	30	36	42	48	54	60	66	72	78	≥4	90	96+	MAX	TI	T	Te	TH
≥64																6	SEA-6	6	2208	4265	4265
≥48									1							7	SEA-6	8	2265	4258	4265
≥41						1			1							10	SEA-6	12	2524	4250	4266
≥34	4	1		1		2		2		1			1	3	1	23	SEA-5	39	3208	4920	5000
≥28	4	2	2	2	7	3	5		3	3	3	5	1	4	2	44	SEA-1	90	3739	5213	5469
≥22	12	9	6	9	9	5	6	7	6	3	8	3	3	3	4	58	2058-1	151	3829	4410	5070
≥17	25	20	16	19	13	14	11	9	11	8	7	9	2	2	2	60	852-1	228	3150	3281	4538
≥11	55	35	30	27	19	12	7	12	8	2	5	8	1	3	1	34	372-1	259	1829	1880	4363
≥ 7	65	47	25	22	8	12	5	4	5	5	3	6	1	2	1	3	108-1	214	808	824	4260
≥ 4	69	28	13	9	3	3	3	5	2			1					72-1	136	324	325	4243

HOURS INTERVAL BETWEEN EVENTS

4 — 58.0N 167.0W

WIND SPEED	6	12	18	24	30	36	42	48	54	60	66	72	78	≥4	90	96+	MAX	TI	T	Te	TH
≥64																6	SEA-6	6	2208	4265	4265
≥48																6	SEA-6	6	2208	4264	4266
≥41									1			1	1		1	14	SEA-7	18	2976	4470	4494
≥34	2	1			1	4			1	1	2	2	2	2	3	28	SEA-2	49	3450	5349	5452
≥28	6	8	5	2	3	5	4	2	4	3	7	3	3	4	2	48	2184-1	109	4538	4962	5271
≥22	11	11	13	13	4	10	11	10	4	8	3	5	8	4	3	57	1956-1	175	3853	4146	4830
≥17	40	30	22	22	16	16	10	4	7	4	11	6	7	3	1	61	954-1	260	3159	3329	4681
≥11	58	60	29	23	19	19	10	5	5	10	3	3	4	3	2	22	312-1	289	1647	1680	4342
≥ 7	75	56	19	25	20	9	7	7	2	1	2	1	2	1		1	126-1	228	726	742	4256
≥ 4	65	33	12	6	4	3		1		1	2						66-2	127	269	277	4241

HOURS INTERVAL BETWEEN EVENTS

5 — 56.8N 174.8E

WIND SPEED	6	12	18	24	30	36	42	48	54	60	66	72	78	≥4	90	96+	MAX	TI	T	Te	TH
≥64								1		1						6	SEA-6	6	2208	4265	4265
≥48		1							1							11	SEA-6	14	2802	4711	4724
≥41	1	1				1	1	1		1	1					21	SEA-7	28	3636	5071	5126
≥34	3	1	1	1	1	1	3	1	2		1	1		1	1	37	SEA-1	55	4033	5529	5690
≥28	6	3	3	5	4	4	5	1	5		2	1	3	2		56	1728-1	101	3861	4673	5053
≥22	14	8	12	8	9	8	10	2	5	2	6	9	3		6	62	1020-1	164	3409	3814	4640
≥17	38	20	16	25	11	14	13	8	6	3	12	9	4	7	8	52	600-1	246	2703	2834	4305
≥11	64	46	33	30	19	16	16	10	7	6	7	4	4	4	2	18	216-1	286	1567	1639	4258
≥ 7	87	61	33	12	14	9	1	7	4	2	1	3			1	5	162-1	220	744	783	4250
≥ 4	71	27	18	4	2	4	1	1	1	1	2				1		90-1	133	300	303	4241

HOURS INTERVAL BETWEEN EVENTS

6 — 52.0N 172.9E

WIND SPEED	6	12	18	24	30	36	42	48	54	60	66	72	78	≥4	90	96+	MAX	TI	T	Te	TH
≥64							1		1							6	SEA-6	6	2208	4265	4265
≥48	2					1		1								13	SEA-6	17	2986	4897	4920
≥41	1	1	2	1		2		1	1							25	SEA-5	34	3854	5155	5275
≥34	6	4	1	3	4	4		3			1	1	1	3	3	42	SEA-4	76	4270	5047	5240
≥28	11	9	7	11	7	3	2	6	3	2	2	2	2	4	5	59	SEA-1	135	3984	4375	4834
≥22	32	25	21	16	12	13	9	11	5	5	4	5	6	4	1	60	1032-1	229	3339	3533	4555
≥17	34	38	32	26	12	16	12	8	9	7	6	7	5	2	7	55	426-1	276	2588	2633	4318
≥11	91	49	40	22	17	12	13	8	6	7	2	8	5	3	2	13	300-1	304	1410	1422	4253
≥ 7	83	35	38	17	11	7	8		1	1	3	1		1	1	4	150-1	211	656	666	4246
≥ 4	62	23	24	4	3		2	1	1				1				84-1	121	257	259	4241

HOURS INTERVAL BETWEEN EVENTS

7 — 54.7N 175.9W

WIND SPEED	6	12	18	24	30	36	42	48	54	60	66	72	78	≥4	90	96+	MAX	TI	T	Te	TH
≥64								1		1						6	SEA-6	7	2218	4263	4265
≥48							1		1							12	SEA-7	14	3078	4715	4729
≥41	1		2	1	1		1		1							26	SEA-6	33	3562	5240	5305
≥34	3	4	2	2	2	1	1	2	1	1	2		2		1	39	SEA-2	63	3875	4927	5094
≥28	9	4	8	7	9	7	8	3	6	2	1	4	4	2	2	58	2016-1	134	3865	4579	5008
≥22	23	23	26	19	14	13	10	6	9	7	4	3	2	7	2	63	1590-1	231	3354	3509	4435
≥17	41	34	39	21	16	11	13	13	7	9	4	8	3	8	4	50	540-1	281	2596	2714	4312
≥11	87	60	36	28	24	25	9	7	11	3	3	5	3	2	3	17	168-2	323	1513	1550	4290
≥ 7	100	45	30	18	15	4	4	7	4	4	3			2	2	1	102-1	239	719	720	4250
≥ 4	74	42	11	6	3		1		2								54-2	139	255	256	4241

HOURS INTERVAL BETWEEN EVENTS

8 — 54.9N 167.2W

WIND SPEED	6	12	18	24	30	36	42	48	54	60	66	72	78	≥4	90	96+	MAX	TI	T	Te	TH
≥64																6	SEA-6	6	2208	4265	4265
≥48																9	SEA-4	9	2284	4617	4625
≥41							1					1			1	15	SEA-4	18	2515	4695	4722
≥34		3	1		1	1		1	1	1	2	1	1	1	2	34	SEA-2	50	3618	5223	5339
≥28	9	5	9	8	4	4	2	6	1	5	4	6	3	2	3	49	SEA-1	120	4655	5073	5413
≥22	18	16	18	17	12	11	10	5	6	3	7	5	5	5	3	62	1728-1	203	3849	4123	4926
≥17	51	25	36	29	19	10	11	7	11	6	8	6	4	2	6	60	804-1	291	2810	2961	4517
≥11	83	63	40	23	17	19	11	11	15	5	5	3	3	1	2	17	198-1	318	1509	1522	4310
≥ 7	83	48	28	13	15	10	3	3	2	3	2	1	2	3		2	132-1	218	685	689	4281
≥ 4	64	28	11	4	2	2	5	2		1							60-1	119	252	253	4245

HOURS INTERVAL BETWEEN EVENTS

9 — 50.3N 171.3W

WIND SPEED	6	12	18	24	30	36	42	48	54	60	66	72	78	≥4	90	96+	MAX	TI	T	Te	TH
≥64							1									6	SEA-6	7	2215	4264	4265
≥48					1						1	1	1	1	1	11	SEA-5	17	2571	4554	4582
≥41	2	1			1	3				1	2		1			24	SEA-4	35	3430	5120	5202
≥34	7	2	5	4	7	3	4		1	4	1	4		1	3	47	SEA-1	93	4481	5504	5734
≥28	16	5	13	11	7	6	4	1	2	7	7	2		3	1	64	SEA-1	149	4313	4510	5039
≥22	37	30	19	16	10	8	8	10	6	9	4	4	1	7	2	70	690-1	241	3153	3310	4401
≥17	58	48	50	21	16	19	8	5	10	8	3	4	7	9	5	43	510-1	314	2444	2468	4323
≥11	80	58	38	25	19	15	9	4	7	10	6	2	5	4	2	10	192-1	294	1305	1314	4267
≥ 7	96	44	29	15	8	7	8	3	3	1	2		1	1	1		90-1	219	594	600	4261
≥ 4	67	31	11	4	2	1	1				1	1					72-1	119	224	226	4247

HOURS INTERVAL BETWEEN EVENTS

10 — 51.8N 167.3W

WIND SPEED	6	12	18	24	30	36	42	48	54	60	66	72	78	≥4	90	96+	MAX	TI	T	Te	TH
≥64																6	SEA-6	6	2208	4265	4265
≥48							1									11	SEA-4	12	2304	4606	4623
≥41		1	1				1					1	2		1	1	18	SEA-5	26	3155	4968	5023
≥34	10	5		3		4	1	3		3	3	2			3	40	SEA-1	77	3794	5074	5252
≥28	15	7	7	9	7	5	8	5	5	3	5	3	1	2	2	60	2112-1	144	4459	4803	5287
≥22	34	29	25	13	10	12	7	6	6	8	3		6	9	4	66	816-1	238	3296	3537	4590
≥17	49	39	35	27	19	15	8	8	7	9	6	6	5	3	1	54	582-1	291	2476	2563	4356
≥11	74	42	42	26	21	17	10	12	11	5	4	6	1	3	2	13	162-1	289	1386	1388	4307
≥ 7	86	57	37	16	10	11	5		2	4	1	2	1				78-1	232	632	633	4261
≥ 4	91	32	10	4	1	1	1	1	1								54-1	142	236	237	4252

HOURS INTERVAL BETWEEN EVENTS

11 — 51.3N 158.8W

WIND SPEED	6	12	18	24	30	36	42	48	54	60	66	72	78	≥4	90	96+	MAX	TI	T	Te	TH
≥64																6	SEA-6	6	2208	4265	4265
≥48																13	SEA-8	13	3399	4631	4648
≥41	4					1	2	1		3				1		30	SEA-7	42	4084	5217	5301
≥34	4	3	7	1	2	3	5	2	2	4		1		4	5	45	SEA-5	88	4794	5543	5782
≥28	17	16	11	14	9	6	6	4	7	6	4	2	5	4	3	65	1806-1	179	4510	4757	5344
≥22	44	32	26	11	12	15	11	9	5	15	8	5	6	6	6	56	1722-1	267	3434	3576	4820
≥17	50	50	30	28	22	22	14	16	15	11	3	1	6	7	2	34	570-1	311	2394	2440	4529
≥11	72	56	44	18	24	9	15	2	7	6	1	4		2	2	6	138-1	268	1044	1047	4261
≥ 7	81	34	27	20	5	3		4	2	1		1			1		90-1	179	440	441	4249
≥ 4	70	25	3	2	3												30-3	103	152	153	4241

HOURS INTERVAL BETWEEN EVENTS

12 — 54.4N 158.1W

WIND SPEED	6	12	18	24	30	36	42	48	54	60	66	72	78	≥4	90	96+	MAX	TI	T	Te	TH
≥64																6	SEA-6	6	2208	4265	4265
≥48	1															15	SEA-7	16	3453	4794	4817
≥41	3		2		1			1	2		1	1				29	SEA-5	40	3902	5065	5140
≥34	6	2	3	1	2	1	2	3	2	1	2	1	2	2	2	52	SEA-3	84	4673	5526	5740
≥28	10	12	9	4	9	3	3	4	3		6	5	4	6	6	68	1800-1	152	4430	4715	5209
≥22	21	22	24	15	19	12	6	9	9	11	10	9	3	5	3	59	864-2	237	3533	3663	4756
≥17	46	47	33	26	19	12	13	10	14	10	6	5	4	8	5	39	744-1	297	2702	2741	4583
≥11	77	48	40	28	24	11	14	5	6	6	2	5	3	4	1	9	318-1	283	1235	1262	4284
≥ 7	81	38	37	14	12	2	4	3	1	1	2	1	1	1	2		90-2	200	558	564	4241
≥ 4	78	28	11	3	4	1			2								60-2	127	225	230	4241

HOURS INTERVAL BETWEEN EVENTS

23 Persistence of wind speed-interval

1 — 64.1N 166.7W

WIND	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TC	T	Te	TH
W ≥64																					4100
I ≥48																					4100
N ≥41		1															12-1	1	2	2	4100
D ≥34			1	2	1												30-1	4	16	16	4100
S ≥28	6	4	2		1	1	1	3									48-3	18	62	62	4101
P ≥22	15	15	7	5	2	1	4	3	1	1	2	1	1				78-1	58	220	220	4104
E ≥17	34	13	18	14	13	9	6	4	4	4	2	3	2	1	1	9	180-1	137	744	748	4151
C ≥11	47	27	17	17	16	16	15	11	15	6	1	4	10	2	4	29	234-1	240	1826	1893	4181
K ≥ 7	29	14	16	12	14	19	5	14	13	10	9	7	11	8	5	7	420-1	2	68	3010	4223
N ≥ 4	14	5	2	16	8	7	7	5	4	5	4	9	3	7	8	76	558-1	210	3286	3685	4308

HOURS DURATION OF EVENTS

2 — 63.6N 178.1W

WIND	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TC	T	Te	TH
W ≥64																					4100
I ≥48																					4100
N ≥41	3	1			1												30-1	5	10	10	4100
D ≥34	2	5	1		1						1						72-1	10	32	32	4100
S ≥28	12	5	7	5	3	1	1			1						1	96-1	36	118	23	4100
P ≥22	17	11	8	6	9	3	6	5	4	1	2				1	4	108-2	77	383	392	4123
E ≥17	21	33	16	12	12	8	4	7	3	2	9	1	4	5	4	8	138-2	149	874	894	4151
C ≥11	43	33	17	17	17	20	17	4	9	8	11	7	5	3	4	37	324-2	252	2024	2109	4192
K ≥ 7	4	17	24	19	14	11	9	8	7	12	3	8	9	4	7	67	522-1	260	2970	3165	4294
N ≥ 4	29	15	11	13	9	6	10	5	4	6	5	7	2	2	5	79	918-1	208	3550	3836	4396

HOURS DURATION OF EVENTS

3 — 59.4N 172.0W

WIND	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TC	T	Te	TH
W ≥64																					4100
I ≥48		2															12-2	2	4	4	4100
N ≥41	1	2				1											36-1	4	11	11	4100
D ≥34	2	2	3	3			1	1									42-1	11	34	34	4101
S ≥28	9	8	6	4	5	2	2	2	2								54-2	40	144	144	4102
P ≥22	24	16	10	9	12	6	9	6	1	2	2		2	1	1		90-1	101	435	438	4106
E ≥17	33	20	18	13	14	14	9	13	12	4	3	3	3	3	5	5	138-1	172	970	986	4136
C ≥11	31	30	24	15	22	19	17	8	16	4	13	9	8	4	7	38	270-1	265	2212	2249	4181
K ≥ 7	24	9	12	10	15	13	12	12	8	6	8	9	9	8	3	69	360-1	227	3054	3317	4262
N ≥ 4	14	4	10	4	3	1	2	4	4	4	2	3	1	9	2	73	792-1	140	3608	4249	4624

HOURS DURATION OF EVENTS

4 — 58.0N 167.0W

WIND	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TC	T	Te	TH
W ≥64																					4100
I ≥48	2	1															12-1	3	4	4	4100
N ≥41	1	1				1											36-1	3	9	9	4100
D ≥34	5	9	1		1	3	1										42-1	20	56	56	4101
S ≥28	19	11	19	9	3		2	1	1	1							60-1	66	190	190	4102
P ≥22	24	16	14	16	13	16	5	3	3	3	1	1	1			1	102-1	117	492	493	4107
E ≥17	32	26	19	25	17	14	18	12	10	5	4	4	3	1		8	156-1	198	1072	1079	4119
C ≥11	39	26	19	23	22	19	17	22	17	6	10	9	10	6	1	41	264-1	287	2321	2372	4151
K ≥ 7	20	8	9	12	8	9	11	10	11	9	7	8	3	11	5	72	954-1	213	3295	3477	4327
N ≥ 4	20	9	8	5	4	5	4	2	4	4	3	2	5	3	2	65	1626-1	145	3838	4256	4585

HOURS DURATION OF EVENTS

5 — 56.8N 174.8E

WIND	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TC	T	Te	TH
W ≥64																					4100
I ≥48																					4100
N ≥41	5																6-5	5	5	5	4100
D ≥34	7	3	2	2	3				1								54-1	18	51	51	4108
S ≥28	17	11	8	7	4	5	2	2					2				78-2	58	197	197	4118
P ≥22	28	8	12	12	14	11	7	6	5	1	4					4	114-2	112	534	538	4130
E ≥17	46	27	23	14	20	22	14	11	11	5	4	6	5		1	11	132-1	220	1191	1214	4138
C ≥11	39	27	22	9	17	23	17	6	14	7	6	10	7	7	5	55	378-1	274	2543	2598	4224
K ≥ 7	21	16	7	13	7	4	11	6	12	11	8	4	6	1	4	85	492-1	218	3143	3557	4315
N ≥ 4	11	15	5	4	3	1	2	6	4	1	2	2	1	3	4	74	1000	130	3377	4066	4345

HOURS DURATION OF EVENTS

6 — 52.0N 172.9E

WIND	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TC	T	Te	TH
W ≥64																					4100
I ≥48	1																6-1	1	1	1	4100
N ≥41	4	4		1													24-1	9	16	16	4100
D ≥34	10	4	8	3	2		1										48-1	28	72	72	4102
S ≥28	26	19	12	6	6	4	1	1	2					1			84-1	78	225	225	4106
P ≥22	41	20	24	18	13	9	8	5	5	2	3	1	1		1	1	126-1	152	599	607	4114
E ≥17	48	46	34	21	21	20	18	7	14	6	2	4	3	3	3	6	144-1	256	1434	1454	4136
C ≥11	58	36	26	22	13	13	17	16	13	10	8	16	8	4	5	50	222-1	315	2481	2581	4164
K ≥ 7	23	5	16	11	10	13	14	11	12	9	8	7	7	8	5	72	582-1	231	3300	3605	4281
N ≥ 4	12	5		3	4	3	3	6	6	4	4	2	1	1		76	996-1	131	3490	4225	4477

HOURS DURATION OF EVENTS

7 — 54.7N 175.9W

WIND	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TC	T	Te	TH
W ≥64																					4100
I ≥48	4																6-4	4	4	4	4100
N ≥41	7	4	2														18-2	13	21	21	4100
D ≥34	28	9	8	4	4	1		1									48-1	55	120	121	4105
S ≥28	23	21	16	8	5	5	5	1	2	1	2			1			84-1	90	307	313	4111
P ≥22	39	38	23	24	17	10	6	3	6	4	3	3	2	2	1	3	120-1	184	779	787	4141
E ≥17	53	39	23	24	21	10	19	13	10	3	7	5	6	6	3	12	216-1	254	1423	1440	4152
C ≥11	35	23	25	28	19	26	22	6	18	10	10	12	12	5	8	44	486-1	303	2754	2830	4250
K ≥ 7	17	13	9	7	7	8	10	10	12	6	7	7	4	3	5	84	618-1	209	3357	3664	4291
N ≥ 4	11	8	1	2	4	3	2	2	3	3	2	3	3	3	2	69	1920-1	121	3590	4172	4405

HOURS DURATION OF EVENTS

8 — 54.9N 167.2W

WIND	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TC	T	Te	TH
W ≥64																					4100
I ≥48	2	1	1														12-1	3	4	4	4100
N ≥41	3	2	2														18-2	7	13	13	4100
D ≥34	13	6	6	1		3											30-2	23	66	66	4101
S ≥28	25	14	13	4	4	4	1	2		1							60-1	68	189	189	4103
P ≥22	41	22	25	15	22	9	9	5	2	4	1	1		2	1		9	160	628	633	4124
E ≥17	49	30	26	30	24	21	12	13	5	13	7	4	3		3	10	210	25	1368	1377	4146
C ≥11	29	16	17	15	23	21	16	18	8	12	8	13	11	13	5	43	414-1	268	2631	2716	4221
K ≥ 7	18	12	9	6	8	14	8	2	9	10	7	9	5	4	14	74	636-1	209	3305	3611	4347
N ≥ 4	10	3	6	3		7	3		1	1	1	3	2	2		77	1746-1	119	3808	4377	4636

HOURS DURATION OF EVENTS

9 — 50.3N 171.3W

WIND	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TC	T	Te	TH
W ≥64																					4100
I ≥48	3		1														18-1	4	6	6	4100
N ≥41	6	4		1													24-1	11	18	19	4100
D ≥34	17	8	8	2	2	2											36-2	39	87	91	4101
S ≥28	29	21	14	12	7	5	4	2	1	1		1					72-1	97	301	309	4111
P ≥22	29	34	26	18	16	7	11	10	3	5	5	3	2		2	3	96-3	174	798	817	4126
E ≥17	49	32	30	28	27	22	13	9	9	12	10	9	3	1	5	15	162-1	274	1582	1606	4164
C ≥11	39	18	16	18	19	18	11	12	17	16	11	2	13	4	7	54	438-1	275	2768	2854	4190
K ≥ 7	18	3	9	6	13	8	6	6	5	8	3	5	5	7	7	79	840-1	198	3432	3638	4252
N ≥ 4	5	4	2	4	7	1	4	3	5	1	2	2	1	3	2	69	1680-1	115	3769	4551	4796

HOURS DURATION OF EVENTS

10 — 51.8N 167.3W

WIND	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TC	T	Te	TH
W ≥64																					4100
I ≥48	4																6-4	4	4	4	4100
N ≥41	1	2	1	1													24-1	5	12	13	4100
D ≥34	13	8	6		2												36-2	29	59	62	4101
S ≥28	31	12	18	9	8	3	3	1		1							66-1	86	243	249	4114
P ≥22	59	27	20	19	13	14	8	7	8	4	1	1	2		1	2	156-1	186	730	749	4140
E ≥17	43	39	28	27	29	18	9	13	6	12	14	5	7	2	1	15	162-1	268	1533	1556	4142
C ≥11	35	14	23	5	14	13	14	11	17	13	4	12	12	9	8	56	366-1	270	2775	2855	4214
K ≥ 7	26	11	9	6	8	9	5	7	6	3	6	2	4	4	8	87	690-1	201	3459	3728	4334
N ≥ 4	9	6	5		3	4	5	2	3	4	2	3	2	3	4	68	1152-1	123	3536	4300	4548

HOURS DURATION OF EVENTS

11 — 51.3N 158.8W

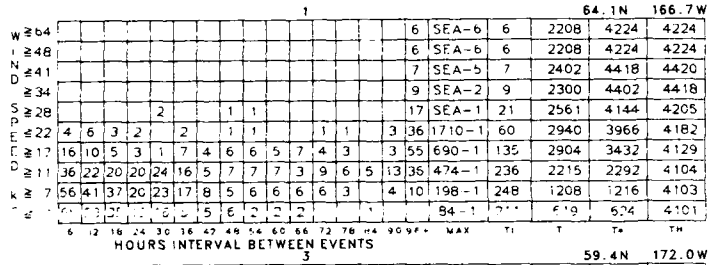
WIND	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TC	T	Te	TH
W ≥64																					4100
I ≥48	2																6-2	2	2	2	4100
N ≥41	6	3		2													24-2	11	20	21	4101
D ≥34	18	8	2	5	3	2											36-2	38	87	90	4102
S ≥28	35	25	17	7	2	6	4	3	2								54-2	101	280	295	4105
P ≥22	49	24	28	13	20	8	8	18	2	6	3	2	1			3	102-2	185	779	821	4111
E ≥17	41	39	32	29	19	23	13	6	10	12	7	4	6	3	1	19	204-1	264	1571	1641	4138
C ≥11	34	20	19	21	13	10	14	11	6	5	9	12	6	4	2	66	624-1	252	2920	3051	4296
K ≥ 7	15	13	8	8	9	13	4	7	5	6	8	4	7	4	10	71	768-1	192	3431	3855	4407
N ≥ 4	8	2	2	4	3	2	1	1	1	3	2	1	3	3	1	53	1032-1	90	3579	4353	4526

HOURS DURATION OF EVENTS

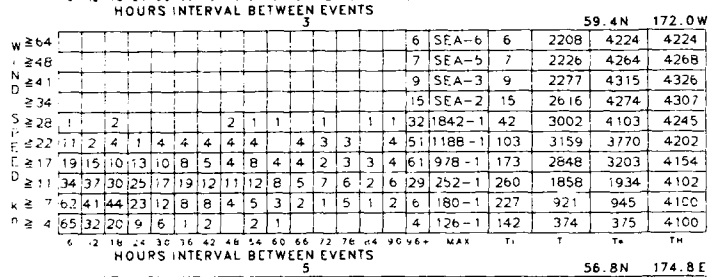
12 — 54.4N 158.1W

WIND	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TC	T	Te	TH
W ≥64																					4100
I ≥48	2		1														18-1	3	5	5	4102
N ≥41	7	3	3	1	1												30-1	15	31	31	4102
D ≥34	10	5	7	5	2	1	1	1									48-1	32	92	92	4104
S ≥28	29	12	12	6	3	9	1	2		1							60-1	75	215	226	4107
P ≥22	35	37	29	15	13	9	5	6	6	4	1		1	1	1	1	102-1	164	622	646	4115
E ≥17	56	46	35	28	17	14	14	15	11	7	4	5	3	2	4	9	162-1	270	1331	1386	4125
C ≥11	35	20	25	17	18	16	11	15	11	10	9	7	9	6	7	59	648-1	275	2730	2862	4227
K ≥ 7	24	10	11	13	10	13	8	4	6	9	4	3	2	5	7	78	798-1	207	3518	3836	4424
N ≥ 4	12		2	5	3	2	5	1	6	5	3	3	1	1		65	1152-1	114	3613	4193	4424

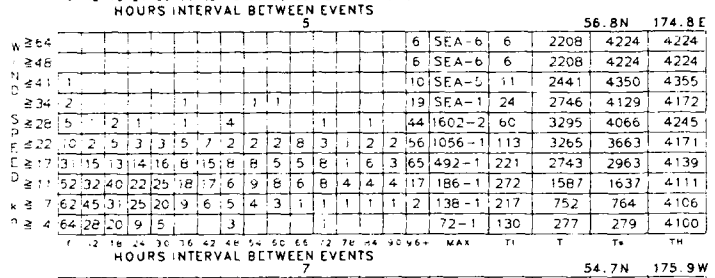
HOURS DURATION OF EVENTS



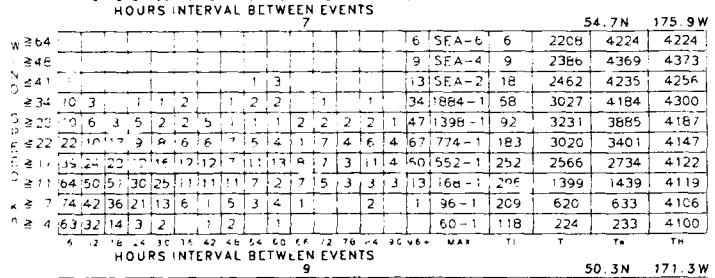
WIND	DURATION	SEA-6	6	2208	4224	4224
≥64	≥48	SEA-6	6	2208	4224	4224
≥48	≥41	SEA-5	7	2402	4418	4420
≥41	≥34	SEA-2	9	2300	4402	4418
≥34	≥28	SEA-1	21	2561	4144	4205
≥28	≥22	1710-1	60	2940	3966	4182
≥22	≥17	690-1	135	2904	3432	4129
≥17	≥11	474-1	236	2215	2292	4104
≥11	≥7	198-1	248	1208	1216	4103
≥7	≥4	84-1	[illegible]	[illegible]	624	4101



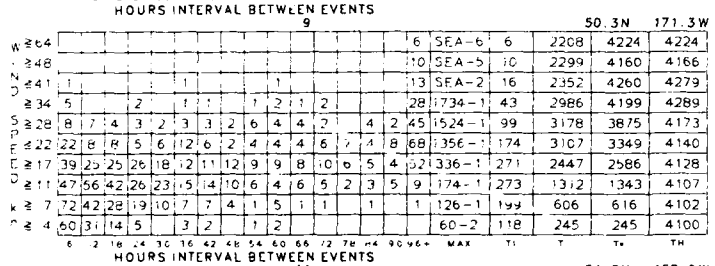
WIND	DURATION	SEA-6	6	2208	4224	4224
≥64	≥48	SEA-5	7	2226	4264	4268
≥48	≥41	SEA-3	9	2277	4315	4326
≥41	≥34	SEA-2	15	2616	4274	4307
≥34	≥28	1842-1	42	3002	4103	4245
≥28	≥22	1188-1	103	3159	3770	4202
≥22	≥17	978-1	173	2848	3203	4154
≥17	≥11	252-1	260	1858	1934	4102
≥11	≥7	180-1	227	921	945	4100
≥7	≥4	126-1	142	374	375	4100



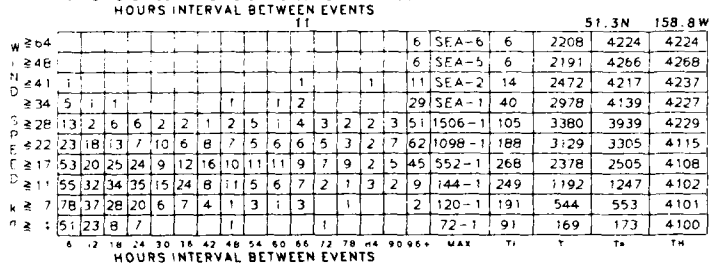
WIND	DURATION	SEA-6	6	2208	4224	4224
≥64	≥48	SEA-6	6	2208	4224	4224
≥48	≥41	SEA-5	11	2441	4350	4355
≥41	≥34	SEA-1	24	2746	4129	4172
≥34	≥28	1602-2	60	3295	4066	4245
≥28	≥22	1056-1	113	3265	3663	4171
≥22	≥17	492-1	221	2743	2963	4139
≥17	≥11	186-1	272	1587	1637	4111
≥11	≥7	138-1	217	752	764	4106
≥7	≥4	72-1	130	277	279	4100



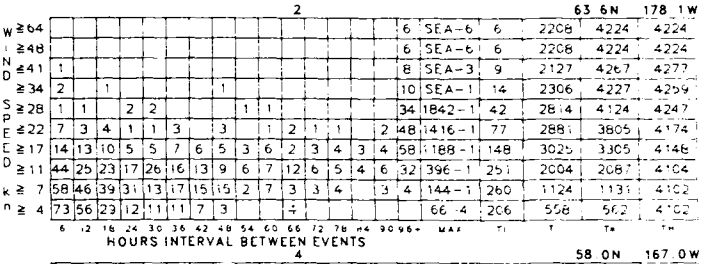
WIND	DURATION	SEA-6	6	2208	4224	4224
≥64	≥48	SEA-4	9	2386	4369	4373
≥48	≥41	SEA-2	18	2462	4235	4256
≥41	≥34	1884-1	58	3027	4184	4300
≥34	≥28	1398-1	92	3231	3885	4187
≥28	≥22	774-1	183	3020	3401	4147
≥22	≥17	552-1	252	2566	2734	4122
≥17	≥11	168-1	296	1399	1439	4119
≥11	≥7	96-1	209	620	633	4106
≥7	≥4	60-1	118	224	233	4100



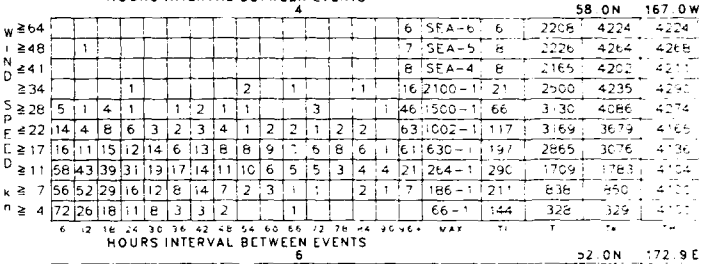
WIND	DURATION	SEA-6	6	2208	4224	4224
≥64	≥48	SEA-5	10	2299	4160	4166
≥48	≥41	SEA-2	16	2352	4260	4279
≥41	≥34	1734-1	43	2986	4199	4289
≥34	≥28	1524-1	99	3178	3875	4173
≥28	≥22	1356-1	174	3107	3349	4140
≥22	≥17	1336-1	271	2447	2586	4128
≥17	≥11	774-1	273	1312	1343	4107
≥11	≥7	126-1	199	606	616	4102
≥7	≥4	60-2	118	245	245	4100



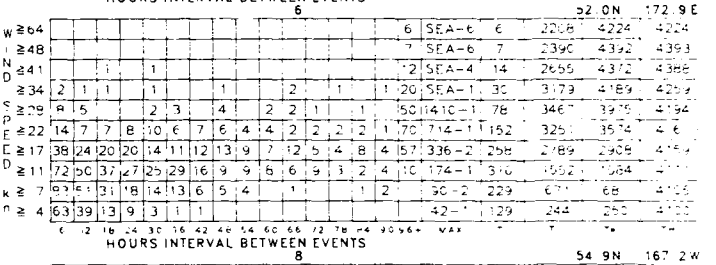
WIND	DURATION	SEA-6	6	2208	4224	4224
≥64	≥48	SEA-5	6	2191	4266	4268
≥48	≥41	SEA-2	14	2472	4217	4237
≥41	≥34	SEA-1	40	2978	4139	4227
≥34	≥28	1506-1	105	3380	3939	4229
≥28	≥22	1098-1	188	3129	3305	4115
≥22	≥17	552-1	268	2378	2505	4108
≥17	≥11	144-1	249	1192	1247	4102
≥11	≥7	120-1	191	544	553	4101
≥7	≥4	72-1	91	169	173	4100



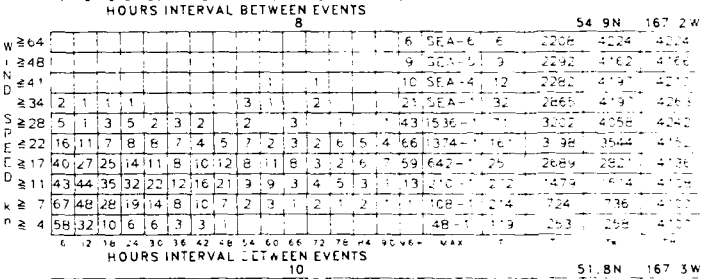
WIND	DURATION	SEA-6	6	2208	4224	4224
≥64	≥48	SEA-6	6	2208	4224	4224
≥48	≥41	SEA-3	9	2127	4267	4277
≥41	≥34	SEA-1	14	2306	4227	4259
≥34	≥28	1842-1	42	2814	4124	4247
≥28	≥22	1416-1	77	2883	3805	4174
≥22	≥17	1188-1	148	3025	3305	4148
≥17	≥11	396-1	251	2004	2087	4104
≥11	≥7	144-1	260	1124	1131	4102
≥7	≥4	66-4	206	558	562	4102



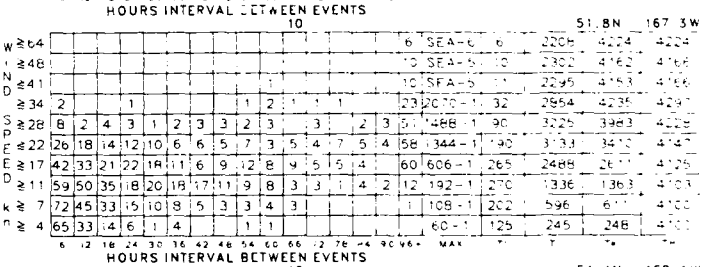
WIND	DURATION	SEA-6	6	2208	4224	4224
≥64	≥48	SEA-5	8	2226	4264	4268
≥48	≥41	SEA-4	8	2165	4202	4211
≥41	≥34	2100-1	21	2500	4235	4282
≥34	≥28	1500-1	66	3130	4086	4274
≥28	≥22	1002-1	117	3169	3679	4165
≥22	≥17	630-1	197	2865	3076	4136
≥17	≥11	264-1	290	1709	1783	4104
≥11	≥7	186-1	211	836	850	4101
≥7	≥4	66-1	144	328	329	4100



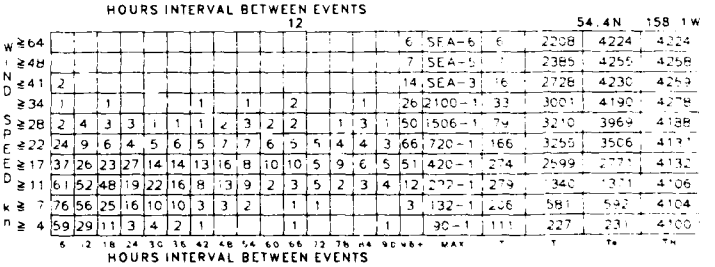
WIND	DURATION	SEA-6	6	2208	4224	4224
≥64	≥48	SEA-6	7	2390	4392	4393
≥48	≥41	SEA-4	14	2655	4372	4388
≥41	≥34	SEA-1	30	3179	4189	4259
≥34	≥28	1410-1	78	3467	3975	4194
≥28	≥22	714-1	152	3251	3574	4166
≥22	≥17	336-2	258	2789	2908	4154
≥17	≥11	174-1	316	1652	1684	4104
≥11	≥7	90-2	229	671	68	4105
≥7	≥4	42-1	129	244	253	4100



WIND	DURATION	SEA-6	6	2208	4224	4224
≥64	≥48	SEA-5	9	2292	4162	4166
≥48	≥41	SEA-4	10	2282	4191	4211
≥41	≥34	SEA-1	32	2865	4191	4264
≥34	≥28	1536-1	71	3202	4058	4240
≥28	≥22	1374-1	161	3198	3644	4152
≥22	≥17	642-1	251	2689	2821	4136
≥17	≥11	270-1	212	1479	1514	4104
≥11	≥7	108-1	274	724	736	4100
≥7	≥4	48-1	119	253	258	4100



WIND	DURATION	SEA-6	6	2208	4224	4224
≥64	≥48	SEA-5	10	2302	4162	4166
≥48	≥41	SEA-5	11	2295	4153	4166
≥41	≥34	2070-1	32	2954	4235	4297
≥34	≥28	1488-1	90	3225	3883	4228
≥28	≥22	1344-1	190	3133	3410	4147
≥22	≥17	606-1	265	2488	2611	4126
≥17	≥11	192-1	270	1336	1363	4103
≥11	≥7	108-1	202	596	611	4100
≥7	≥4	60-1	125	245	248	4100



WIND	DURATION	SEA-6	6	2208	4224	4224
≥64	≥48	SEA-5	7	2385	4255	4258
≥48	≥41	SEA-3	16	2728	4230	4259
≥41	≥34	2100-1	33	3001	4190	4278
≥34	≥28	1506-1	79	3210	3969	4188
≥28	≥22	1020-1	166	3255	3506	4131
≥22	≥17	420-1	274	2599	2771	4132
≥17	≥11	222-1	279	840	871	4106
≥11	≥7	132-1	268	581	592	4104
≥7	≥4	90-1	111	227	231	4100

23 Persistence of wind speed-interval

Summe

1 — 64.1N 166.7W

WIND DIRECTION	≥64	≥48	≥41	≥34	≥28	≥22	≥17	≥11	≥7	≥4	MAX	TE	T	Te	TH
	1										12-1	1	2	2	4545
	4	2	1								18-1	7	11	11	4545
	19	13	11	3	1	3					36-3	50	113	113	4545
	33	21	20	14	7	7	3	3	1	2	1	1	1	114-1	114	388	401	4563
	42	31	22	26	10	16	13	5	7	5	2	2	2	2	8	162-1	193	921	955	4564
	42	33	30	32	[illegible]	[illegible]	3	14	7	4	7	7	1	3	21	222-1	264	1673	1819	4590
	29	28	19	24	24	18	11	11	18	8	11	8	7	12	2	39	384-1	269	2420	2652	4606
	18	14	14	14	13	16	10	11	11	11	10	6	8	8	13	68	906-1	245	3484	3853	4823
	21	3	5	7	13	6	10	8	2	3	10	6	1	4	3	78	1848-1	180	3683	4458	4908
	11	3	1	4	4	4	6	2	4	2	2	4	2	3	1	58	SEA-1	111	3252	4755	4933

6 12 18 24 30 36 42 48 54 60 66 72 78 84 90 96+ HOURS DURATION OF EVENTS

2 — 63.6N 178.1W

WIND DIRECTION	≥64	≥48	≥41	≥34	≥28	≥22	≥17	≥11	≥7	≥4	MAX	TE	T	Te	TH
	3	1									12-1	4	5	5	4545
	24	7	6	10	1	3		1		1	1			72-1	54	149	155	4545
	30	14	16	11	6	9	8	1		1		2		4	132-1	102	402	432	4546
	39	22	31	16	8	9	7	3	7	4	5	1	4	2	2	4	162-1	164	765	879	4552
	35	31	17	23	22	10	12	7	12	7	6		3	4	5	17	210-3	211	1352	1500	4580
	32	15	34	25	19	15	9	13	10	12	6	9	4	5	4	34	366-1	246	2043	2314	4573
	36	20	21	20	19	12	9	14	4	8	12	9	4	7	5	52	654-1	252	2648	3025	4604
	19	11	9	13	8	11	18	11	7	6	10	4	7	6	3	70	990-1	213	3405	4030	4774
	10	4	5	4	5	4	5	4	2	7	6	2	4	2	4	73	1026-1	141	3484	4463	4782
	8	3	1	2	3	3	1	3		3	3	2	2		1	54	1734-1	89	3351	4664	4828

6 12 18 24 30 36 42 48 54 60 66 72 78 84 90 96+ HOURS DURATION OF EVENTS

3 — 59.4N 172.0W

WIND DIRECTION	≥64	≥48	≥41	≥34	≥28	≥22	≥17	≥11	≥7	≥4	MAX	TE	T	Te	TH
		1									12-1	1	2	2	4545
	7	5	7								18-7	19	38	39	4545
	17	21	10	8	5	2					36-2	63	158	160	4545
	49	33	26	10	14	9	3	3	3		1			72-1	151	441	444	4546
	53	31	37	25	25	26	8	5	2	6	3	2	2	1	5	132-1	231	980	996	4547
	48	31	31	30	23	21	26	14	14	13	7	5	4	3	4	19	246-1	293	1815	1842	4582
	53	25	30	29	28	13	19	22	16	14	9	10	6	6	4	44	282-1	328	2594	2739	4609
	13	14	18	21	11	15	14	8	16	13	13	6	6	5	10	73	540-1	256	3477	3873	4719
	12	6	7	6	9	2	8	4	5	5	5	6	2	5	7	83	1014-1	172	3858	4439	4780
	8	2	1	2	2	1	1	2	4	1			1			55	1584-1	80	3742	4908	5015

6 12 18 24 30 36 42 48 54 60 66 72 78 84 90 96+ HOURS DURATION OF EVENTS

4 — 58.0N 167.0W

WIND DIRECTION	≥64	≥48	≥41	≥34	≥28	≥22	≥17	≥11	≥7	≥4	MAX	TE	T	Te	TH
		1									12-1	1	2	2	4545
	8	5	2	1							24-1	16	28	29	4545
	28	18	6	6	2		1				48-1	61	124	126	4545
	41	34	28	19	11	4	4	2	1	1			66-1	145	412	415	4545
	53	60	37	22	28	15	8	3	5	3	1		2	1	3	120-1	241	861	872	4545
	59	47	55	37	35	26	20	11	13	10	4	7	4	2	3	8	156-1	341	1651	1703	4574
	53	33	44	42	23	33	19	23	18	13	15	11	8	5	6	31	204-1	377	2531	2618	4583
	29	21	23	12	18	22	13	9	16	9	10	5	7	9	9	83	492-1	295	3659	3822	4709
	20	11	3	11	6	4	4	9	5	5	9	3	8	5	7	81	876-1	191	4148	4425	4792
	7	1	3	2		1	3	3	1	1	3	2	1		2	58	1788-1	88	4088	4964	5085

6 12 18 24 30 36 42 48 54 60 66 72 78 84 90 96+ HOURS DURATION OF EVENTS

5 — 56.8N 174.8E

WIND DIRECTION	≥64	≥48	≥41	≥34	≥28	≥22	≥17	≥11	≥7	≥4	MAX	TE	T	Te	TH
	2	1									12-1	3	4	4	4545
	18	14	7	3	1						48-1	44	92	95	4545
	34	19	17	8	8	2	1	2		1	1			72-1	93	253	256	4549
	46	33	30	22	16	10	5	4	1	2		3	1	1	1	96-1	175	605	621	4555
	59	37	37	35	35	19	12	12	3	5	2	4	1	2	1	6	156-1	270	1176	1210	4567
	45	30	38	32	36	27	24	18	16	14	9	2	3	3	1	24	198-2	322	2021	2096	4580
	30	29	26	25	29	25	24	22	15	19	8	11	8	7	3	47	474-1	328	2875	2985	4667
	29	16	18	6	16	12	17	16	11	8	11	10	5	6	4	84	486-2	269	3660	3973	4741
	14	6	4	5	6	7	3	5	9	8	2	7	4	2	3	80	654-1	165	3741	4487	4800
	[illegible]		3		2	2	3	2	2	2		3	1	4	1	53	2022-1	82	3997	5034	5143

6 12 18 24 30 36 42 48 54 60 66 72 78 84 90 96+ HOURS DURATION OF EVENTS

6 — 52.0N 172.9E

WIND DIRECTION	≥64	≥48	≥41	≥34	≥28	≥22	≥17	≥11	≥7	≥4	MAX	TE	T	Te	TH
	6	1	1		1						30-1	9	16	6	4545
	19	9	9	2	1		2	1			48-2	42	94	94	4545
	50	35	12	7	4	1	3		1	1	66-1	114	251	256	4545
	54	58	48	25	11	4	3	8	4		1	1	78-1	216	627	639	4547
	62	57	54	44	33	15	8	11	5	7	2		1	1	4	120-1	304	1151	1173	4549
	67	47	50	40	43	39	20	16	11	8	12	7	3	3	2	14	174-2	382	1975	2051	4564
	45	36	45	32	33	28	32	19	15	13	11	10	8	11	6	36	210-1	380	2723	2836	4607
	32	17	24	20	24	20	17	22	15	4	5	8	12	5	7	79	372-1	311	3559	3866	4642
	12	6	8	7	9	12	5	12	7	5	7	5	3	7	4	87	666-1	196	3824	4408	4781
	5	2	1	4	3	4	3	1	1	3	1		3	1	2	54	1578-1	88	3966	5069	5196

6 12 18 24 30 36 42 48 54 60 66 72 78 84 90 96+ HOURS DURATION OF EVENTS

7 — 54.7N 175.9W

WIND DIRECTION	≥64	≥48	≥41	≥34	≥28	≥22	≥17	≥11	≥7	≥4	MAX	TE	T	Te	TH
	3	2									12-2	5	7	7	4545
	27	19	6	4							24-4	56	99	99	4545
	42	22	22	9	6	2	1		1		54-1	105	246	248	4545
	67	54	31	26	12	10	3	5	4	1	1	96-1	214	615	622	4550
	63	51	51	38	28	20	11	10	9	5	3	1	1	4	150-1	301	1172	1204	4558
	73	51	47	30	32	20	28	17	17	11	8	8	7	3	1	14	192-1	367	1953	2006	4567
	64	43	48	38	35	26	19	19	20	19	15	4	10	12	5	31	294-1	408	2744	2869	4606
	21	19	17	15	27	17	17	12	9	14	14	18	14	6	5	70	366-1	295	3601	3911	4726
	13	7	15	3	5	9	9	8	5	8	3	3	7	6	2	82	924-1	185	4049	4527	4884
	5	2	6	2	2	3		1	2	3	1	1	2	2	2	61	1362-1	95	3911	5081	5212

6 12 18 24 30 36 42 48 54 60 66 72 78 84 90 96+ HOURS DURATION OF EVENTS

8 — 54.9N 167.2W

WIND DIRECTION	≥64	≥48	≥41	≥34	≥28	≥22	≥17	≥11	≥7	≥4	MAX	TE	T	Te	TH
	1										6-1	1	1	1	4545
	8	9	2	2							24-2	21	40	41	4545
	21	16	10	3	2	1	1	1			48-1	55	126	126	4545
	47	28	23	12	6	3	3	3	1	1		2	120-1	129	368	371	4547
	69	39	50	29	18	10	6	7	4	3	4	1		3	132-2	243	844	869	4561
	84	47	54	33	32	25	17	12	11	12	7	5	7	6	1	6	198-1	359	1677	1735	4566
	63	29	40	32	29	33	28	19	17	14	7	10	10	12	11	24	264-1	378	2588	2709	4585
	29	15	22	22	24	13	17	12	14	21	11	7	10	9	8	75	378-2	309	3509	3719	4643
	16	7	7	8	5	14	6	6	5	15	2	6	4	5	6	83	744-1	195	3895	4315	4697
	3	2	3	4		2	1	2	5	1	3					64	1452-1	90	4174	4939	5061

6 12 18 24 30 36 42 48 54 60 66 72 78 84 90 96+ HOURS DURATION OF EVENTS

9 — 50.3N 171.3W

WIND DIRECTION	≥64	≥48	≥41	≥34	≥28	≥22	≥17	≥11	≥7	≥4	MAX	TE	T	Te	TH
	2										6-2	2	2	2	4545
	19	7	5	2	1						30-1	34	61	61	4545
	46	26	9	16	1	3	2	4	1		48-4	97	218	220	4545
	73	44	34	17	11	12	2	2	1	3	1		120-1	201	558	563	4549
	73	69	40	35	24	21	18	6	8	4	4	3	1	2	3	132-1	311	1180	1189	4549
	57	59	60	33	31	29	17	22	16	9	14	5	7	4	1	16	288-1	380	2075	2104	4568
	52	39	46	33	26	27	25	16	21	13	14	10	8	4	4	42	366-1	380	2847	2959	4594
	30	15	17	24	16	8	13	8	20	7	9	8	5	9	3	85	498-1	277	3715	3944	4666
	6	5	8	12	4	5	8	6	7	4	5	3	4	3	2	90	798-1	172	3952	4358	4669
	8	2	2		2	3	1	1	2	1	1		2			62	1536-1	87	3554	4769	4881

6 12 18 24 30 36 42 48 54 60 66 72 78 84 90 96+ HOURS DURATION OF EVENTS

10 — 51.8N 167.3W

WIND DIRECTION	≥64	≥48	≥41	≥34	≥28	≥22	≥17	≥11	≥7	≥4	MAX	TE	T	Te	TH
															4545
	12	7	5	2							24-2	26	49	49	4545
	25	17	4	5	3	2	2		1		54-1	59	141	143	4545
	54	50	19	13	5	8	4	2	2	4			60-4	161	438	447	4545
	80	55	37	34	26	17	9	8	2	4	4	3		2	126-1	281	974	999	4550
	72	66	49	41	27	23	30	18	11	9	9	3	3	5	3	13	288-1	382	1914	1972	4561
	48	48	41	39	27	28	20	23	12	16	13	10	13	7	6	34	324-1	385	2734	2848	4584
	23	20	20	18	19	14	10	13	12	11	6	6	9	4	5	89	396-1	279	3696	3903	4662
	10	10	6	8	9	6	8	6	8	6		5	2	5	2	87	864-1	178	4018	4392	4734
	2	3		2	4	3	3	3		1		3		2	57	1458-1	83	3655	4979	5290

6 12 18 24 30 36 42 48 54 60 66 72 78 84 90 96+ HOURS DURATION OF EVENTS

11 — 51.3N 158.8W

WIND DIRECTION	≥64	≥48	≥41	≥34	≥28	≥22	≥17	≥11	≥7	≥4	MAX	TE	T	Te	TH
	3	1									12-1	4	5	5	4545
	12	6	3		3						30-3	24	48	48	4545
	38	16	10	7	3		1	1	1		54-1	77	167	168	4545
	65	48	19	16	13	7	4	1	2	1		1	96-1	177	469	476	4545
	96	62	47	34	18	24	14	12	6	2	1	1	1	2	2	108-2	322	1102	1116	4545
	67	57	54	50	35	32	23	21	18	14	6	7	7	3	4	11	210-1	409	2102	2156	4603
	39	57	30	37	29	24	18	23	17	17	10	9	9	7	8	47	282-1	381	2951	3060	4630
	27	23	16	15	18	7	14	6	15	5	12	6	4	6	6	86	564-1	266	3757	4002	4680
	13	5	10	6	7	8	4	4	2	2	4	5	5		8	85	828-1	168	3874	4434	4738
	4	1	2	3	6	3	2			2	1	2	2	2	1	51	1218-1	82	3348	4674	4774

6 12 18 24 30 36 42 48 54 60 66 72 78 84 90 96+ HOURS DURATION OF EVENTS

12 — 54.4N 158.1

WIND DIRECTION	≥64	≥48	≥41	≥34	≥28	≥22	≥17	≥11	≥7	≥4	MAX	TE	T	Te	TH
	1	1									12-1	2	3	3	4545
	13	5	3	2	3						30-3	26	55	55	4545
	38	25	5	6	3	2	2				42-2	81	168	168	4545
	55	35	34	20	10	6	3	1	3	2			60-2	169	463	477	4545
	75	51	55	28	25	19	8	10	3	7	3	1		2	96-2	287	1004	1028	4545
	81	60	52	37	37	32	20	12	15	11	8	2	8	2	14	162-1	391	1890	1937	4561
	57	48	46	35	28	25	36	18	21	10	5	14	12	4	5	37	240-1	401	2757	2840	4591
	29	18	25	26	23	16	16	18	7	7	9	9	13	4	4	81	528-1	305	3756	3943	4711
	13	9	11	9	6	6	6	10	5	6	4	7	5	10	1	84	942-1	192	3959	4461	4811
	4	3	4	2	4	3	3	1		2		2	4	1	1	66	1008-1	97	3677	4812	4931

6 12 18 24 30 36 42 48 54 60 66 72 78 84 90 96+ HOURS DURATION OF EVENTS

1 — 64.1N 166.7W

WIND SPEED (kn)	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	T*	TH
≥64																6	SEA-5	6	2202	4928	4930
≥48																10	SEA-4	11	2464	5189	5200
≥41	4		4		1				1							40	1578-1	50	3363	4994	5107
≥34	11	4	3	1	4	3	4	2	1	5			2	2	2	73	1440-1	117	3593	4356	4739
≥28	28	13	8	6	4	8	5	9	3	11	3	5	5	7	7	76	588-1	198	3330	3702	4638
≥22	33	16	15	14	14	31	15	9	12	12	14	6	5	11	6	51	360-1	264	2630	2843	4617
≥17	31	29	32	27	29	23	13	14	12	7	7	11	4	4	4	24	306-1	271	1946	2001	4592
≥11	65	51	37	25	20	18	4	3	5	3	1	2	3	2		7	162-1	246	951	973	4548
≥7	78	45	22	19	6	2	2	2	2						1	1	126-1	180	436	451	4546
≥4	77	21	7	6	1	1											36-1	113	175	179	4546

HOURS INTERVAL BETWEEN EVENTS

2 — 63.6N 178.1

WIND SPEED (kn)	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	T*	TH
≥64																8	SEA-5	6	2471	5306	531[illegible]
≥48	3	1	4	1		2		1	1		1			1	1	39	2112-1	55	3169	4951	5106
≥41	8	5	8	2	2		2	2			4	2	2	2	4	62	840-1	105	3423	4295	4726
≥34	19	9	5	4	7	5	6	4	3	7	8	4	10		1	78	780-1	170	3272	3811	4683
≥28	22	13	10	12	11	12	8	12	5	7	11	10	5	4	6	70	708-1	218	2979	3160	4625
≥22	32	17	24	19	23	15	14	15	14	9	3	8	7	8	4	38	312-1	250	2206	2312	4598
≥17	45	35	27	30	18	18	10	13	9	8	7	4	10	1	1	21	246-1	257	1587	1621	458[illegible]
≥11	60	47	32	21	15	14	8	7	3	1	3	1	2			2	228-1	216	770	779	4580
≥7	62	41	16	11	8	1	1	2		1							60-1	143	315	319	4545
≥4	51	23	5	6	3				1								54-1	89	160	164	4545

HOURS INTERVAL BETWEEN EVENTS

3 — 59.4N 172.0W

WIND SPEED (kn)	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	T*	TH
≥64																6	SEA-5	6	2201	4927	4929
≥48	1												1			21	SEA-1	23	2836	5053	5092
≥41	1	1	1		1	1		1		3	3		1	2		48	1224-1	63	3392	4529	4689
≥34	6	6	8	10	2	5	3	5	5	4	5		3	5	5	71	1158-1	149	3293	4224	4667
≥28	24	17	6	12	14	20	19	5	8	4	9	8	4	6	3	75	750-1	234	3172	3723	4717
≥22	42	32	20	30	26	19	6	18	15	9	3	5	6	5	10	48	318-1	294	2512	2812	4617
≥17	51	38	57	41	33	23	17	19	7	6	6	5	5	5	1	19	252-1	333	1841	1916	4591
≥11	64	81	38	22	13	12	4	4	4	5	2		3			3	126-1	255	827	846	4545
≥7	95	41	15	10	3		3	2	1			1					72-1	171	335	341	4545
≥4	57	17	5														18-5	79	106	107	4545

HOURS INTERVAL BETWEEN EVENTS

4 — 58.0N 167.0

WIND SPEED (kn)	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	T*	TH
≥64																6	SEA-5	6	2201	4927	4929
≥48											2					16	SEA-1	18	2813	4934	4963
≥41		1		2		1		2	5	1		2		2	2	43	1098-	61	2984	4571	4697
≥34	12	5	3	8	9	4	4	6	3	3	5	4	4	2		72	966-1	144	3345	4255	4670
≥28	24	11	12	15	15	15	8	12	6	8	12	8	11	3	5	74	444-1	239	3191	3768	4640
≥22	50	37	39	32	28	10	19	16	13	12	11	5	6	7	8	49	336-1	342	2661	2924	4598
≥17	85	57	59	40	19	16	18	15	12	8	4	9	10	5	3	16	204-1	376	1888	1985	4565
≥11	96	75	52	15	17	13	7	5	3	4			3	1	1	1	114-1	293	868	894	455[illegible]
≥7	100	48	18	8	6		3	1		1							60-1	185	351	367	4545
≥4	66	14	2		2	1											36-1	85	116	121	4545

HOURS INTERVAL BETWEEN EVENTS

5 — 56.8N 174.8E

WIND SPEED (kn)	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	T*	TH
≥64												1				7	SE[illegible]	[illegible]	2052	4774	4778
≥48	3	3				1		1		2						35	SEA-1	45	3167	4918	5013
≥41	8	3	2	1	2	1	1	1	2	2	1	2	2		2	59	SEA-1	89	3248	4450	4702
≥34	15	8	6	4	6	6	9	5	6	5	6	9	7	3	3	74	894-1	172	3508	4004	4615
≥28	28	16	17	19	16	12	14	15	9	15	10	12	7	4	8	67	438-1	269	3117	3414	4602
≥22	41	33	39	26	39	13	19	12	9	16	20	4	9	2	4	38	282-1	324	2366	2514	4575
≥17	58	58	46	34	27	28	9	12	15	11	5	7	3	3	7	9	144-1	332	1661	1709	4572
≥11	85	70	44	24	20	12	6	3	3		1	1	1				78-1	270	754	769	4546
≥7	87	46	20	10	4	1		1									48-1	169	313	313	4545
≥4	66	11	4	1	1												30-1	83	109	109	4545

HOURS INTERVAL BETWEEN EVENTS

6 — 52.0N 172.9

WIND SPEED (kn)	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	T*	TH
≥64	1											1				10	SEA-5	12	2563	5276	5292
≥48	1		1	1					2	1	1		1		1	35	SEA-1	44	3368	4722	48[illegible]
≥41	8	6	3	2	3	1	3	4	2	1	4	2	3	2	1	72	SEA-1	117	3675	4571	48[illegible]
≥34	19	19	11	13	8	9	5	10	5	11	2	9	3	6	5	81	618-1	216	3625	4055	4692
≥28	35	21	38	26	19	16	11	16	11	9	5	7	4	7	7	70	396-1	302	3136	3473	4642
≥22	63	52	51	36	23	25	17	19	12	16	11	6	9	8	3	34	372-1	385	2448	26[illegible]	46[illegible]
≥17	76	77	59	34	25	24	12	18	14	9	9	8	3	5	1	10	132-1	384	1761	1789	4569
≥11	128	73	37	34	20	6	7	2	4	3		1				2	102-1	317	833	845	4554
≥7	107	45	25	12	5	2							1				78-1	197	370	373	4546
≥4	65	16	7	2													24-2	90	126	127	4545

HOURS INTERVAL BETWEEN EVENTS

7 — 54.7N 175.9W

WIND SPEED (kn)	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	T*	TH
≥64																10	SEA-4	10	2437	4909	4916
≥48	3	2	1			1			3		1		2	2	1	39	1434-1	55	3138	4731	4830
≥41	5	4	5	1	4	2	3	2	3	4		2	2	3	2	62	1134-1	104	3458	4530	4778
≥34	9	17	8	12	7	9	8	6	9	6	9	3	9	7	4	81	894-1	214	3474	4086	4703
≥28	42	34	22	14	21	20	14	10	8	10	10	11	8	3	6	67	702-1	300	3089	3458	4649
≥22	52	47	49	37	31	20	17	14	22	10	9	6	4	6	6	36	402-1	366	2496	2609	4593
≥17	99	68	64	49	32	22	14	13	10	5	6	3	5	3	3	11	168-1	407	1729	1761	4569
≥11	107	84	43	22	12	7	4	2	5	3	3	2			1	1	114-1	296	804	817	4547
≥7	106	46	15	8	3	2	3		2	1							60-1	186	351	357	4545
≥4	71	14	7		2												30-2	94	130	131	4545

HOURS INTERVAL BETWEEN EVENTS

8 — 54.9N 167.2

WIND SPEED (kn)	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	T*	TH
≥64																5	SEA-4	5	1833	4570	45[illegible]
≥48								1	1	1						21	SEA-2	24	3376	5468	550[illegible]
≥41		3	1		1		2		1				1			48	1464-1	57	3382	4809	493[illegible]
≥34	11	6	8	7	2	2	5	3	2	5	3	3	2		2	69	1242-1	130	3550	4317	466[illegible]
≥28	25	23	14	17	6	15	11	6	13	11	11	10	3	6	5	67	438-2	243	3226	3779	4632
≥22	67	35	33	30	31	20	20	10	18	12	5	10	7	9	6	43	282-1	356	2641	2981	4595
≥17	71	82	58	41	22	19	16	10	6	16	7	7	5	2	2	14	276-1	378	1815	1901	456[illegible]
≥11	114	77	40	31	14	9	8	5	5	2		3				1	108-1	310	866	909	4550
≥7	106	48	22	5	4	4		1	1	1							60-1	192	359	378	4545
≥4	66	17	2	1	1	2											36-2	89	127	128	454[illegible]

HOURS INTERVAL BETWEEN EVENTS

9 — 50.3N 171.3W

WIND SPEED (kn)	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	T*	TH
≥64																6	SEA-5	6	2201	4926	4928
≥48	4						1									27	SEA-1	33	2982	5260	5321
≥41	9	6		4	1	2		2	4	4	3	2	1	1		60	1194-1	99	3670	4726	4946
≥34	21	9	13	10	7	5	8	7	7	8	7	4	7	4	1	81	978-1	199	3537	4328	4887
≥28	48	29	14	22	17	22	20	16	23	9	10	6	5	6	4	57	396-1	308	2942	3447	4632
≥22	50	55	52	33	32	27	18	24	10	12	8	4	12	5	5	27	366-1	374	2314	2484	4565
≥17	84	65	62	46	32	26	14	12	5	5	8	5	3	4	2	6	120-2	379	1573	1652	4562
≥11	108	79	33	22	17	4	5	3	5	1	1			1			84-1	279	701	725	4548
≥7	105	35	20	6	3	2	2	1									48-1	174	308	311	4545
≥4	70	11	3	1		1											36-1	86	111	112	4545

HOURS INTERVAL BETWEEN EVENTS

10 — 51.8N 167.3

WIND SPEED (kn)	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	T*	TH
≥64																5	SEA-5	5	1840	4566	4566
≥48	3	1					1		1							20	SEA-2	26	2989	5176	5225
≥41	5	1	2			2	2	2	1	1			1		1	43	SEA-1	61	3437	4894	503[illegible]
≥34	14	9	12	6	4	5	9	6	9	3	2		5	2	4	73	702-1	163	3417	4260	470[illegible]
≥28	32	26	20	15	21	19	15	7	11	15	6	6	5	4	4	74	468-1	280	3202	3622	4616
≥22	62	45	49	42	36	22	22	8	12	12	11	14	3	8	4	30	384-1	380	2451	2626	4576
≥17	86	72	53	43	34	23	15	16	7	6	5	6	5	1	2	9	270-1	383	1649	1752	4556
≥11	124	62	36	28	9	4	7	1	2	3	1	1			1	1	114-1	281	713	751	4547
≥7	97	51	17	6	3	1		2	1								54-1	178	320	342	4545
≥4	69	9	2	2	2												30-2	84	111	111	4545

HOURS INTERVAL BETWEEN EVENTS

11 — 51.3N 158.8W

WIND SPEED (kn)	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	T*	TH
≥64																8	SEA-5	8	2380	4920	4925
≥48					1			1				1		1		24	SEA-1	28	2407	4777	4825
≥41	4	6	2	4	1	1	4					1	2	2	1	49	SEA-1	77	3359	4716	4884
≥34	16	5	7	8	16	10	3	5	6	5	6	2	4	5		81	840-1	179	3631	4334	4810
≥28	35	31	38	30	26	21	19	17	11	9	5	5	7	4	2	63	426-1	323	3204	3561	4677
≥22	78	61	52	54	42	19	13	17	9	12	7	4	5	3	4	32	312-1	412	2376	2498	4596
≥17	98	87	55	32	29	21	14	11	8	7	2	5	2		1	10	210-1	382	1527	1587	4562
≥11	120	55	36	17	16	9	7	1		1	1		2			1	138-1	266	667	683	4550
≥7	104	36	14	8	4	2	2	1									48-1	171	304	304	4545
≥4	65	13	3														18-3	81	100	100	4545

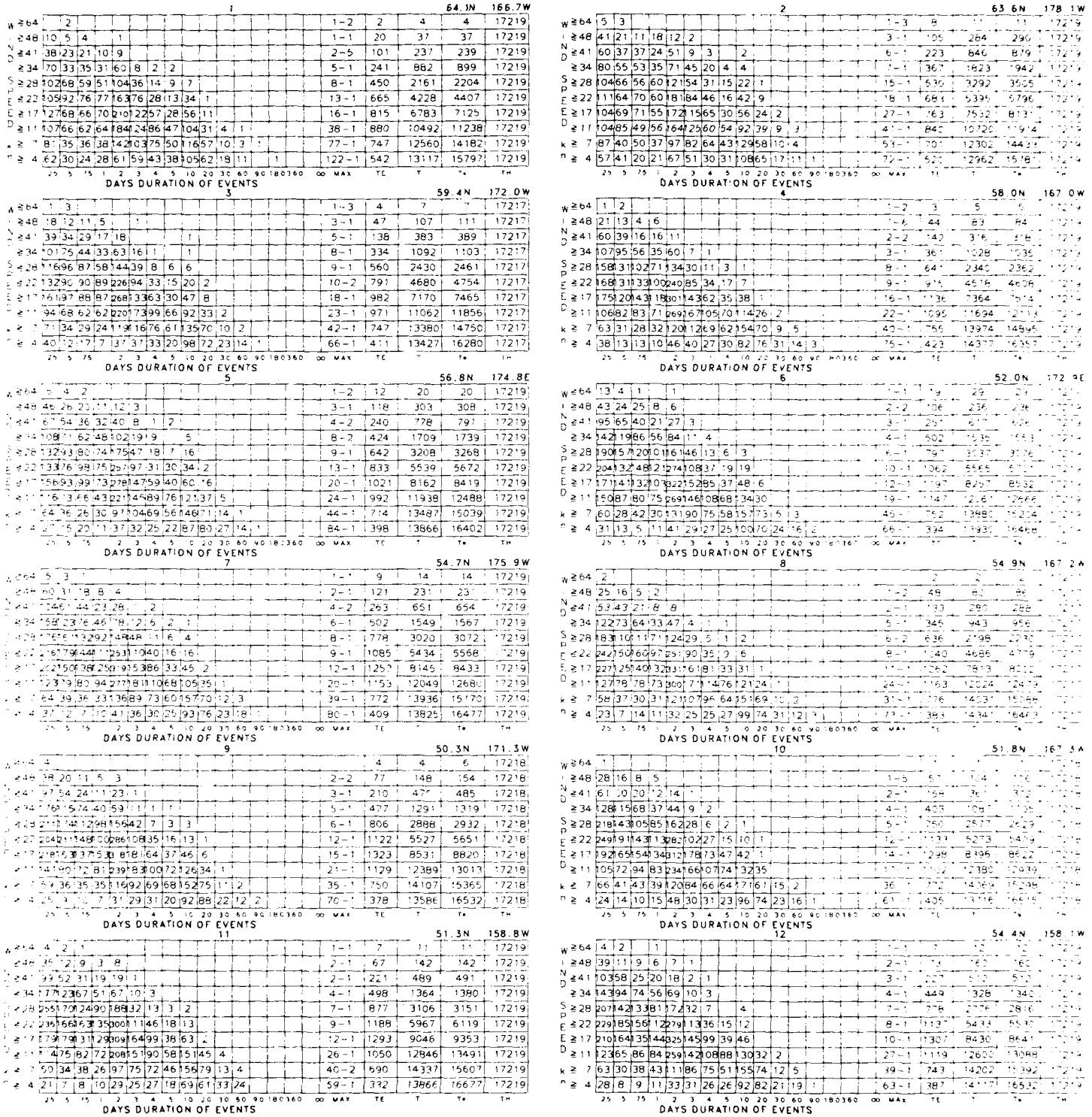
HOURS INTERVAL BETWEEN EVENTS

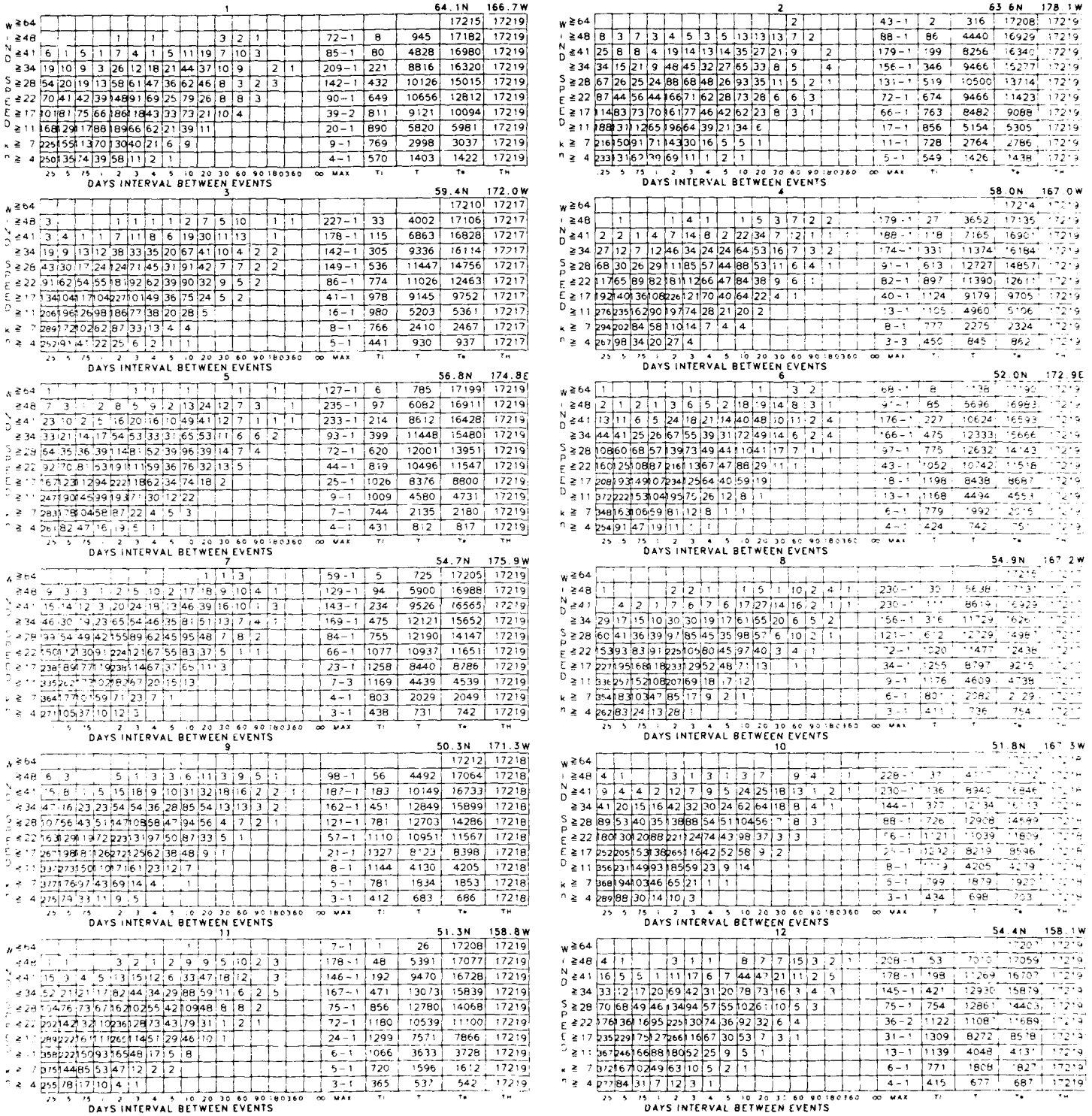
12 — 54.4N 158.1

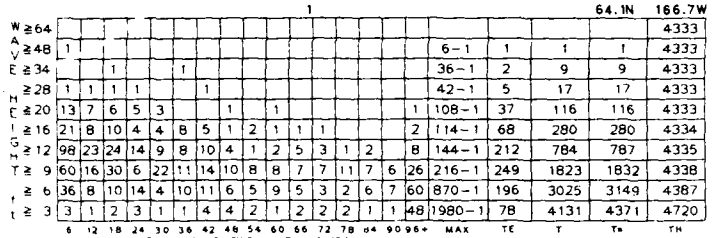
WIND SPEED (kn)	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	T*	TH
≥64																7	SEA-5	7	2546	5272	5275
≥48							1				1		1			23	SEA-1	26	2980	5121	5176
≥41	5	3	2	1	3	1	1		2	1		3	1		1	57	1452-1	81	3617	4714	4882
≥34	13	6	5	12	10	8	3	9	10	2	5	3	5	5	7	68	564-1	171	3619	4257	4734
≥28	34	27	16	22	24	17	16	6	15	7	6	11	5	2	4	77	480-1	289	3332	3676	4704
≥22	69	57	46	46	29	24	19	11	12	14	7	7	3	9	6	36	240-1	395	2505	2654	4567
≥17	84	86	66	36	29	27	16	12	12	5	4	7	3	2	3	11	156-1	403	1727	1768	4555
≥11	129	74	45	20	14	9	9	5	1	2						1	102-1	309	765	773	4545
≥7	119	35	20	12	5	2								1			84-1	194	348	349	4545
≥4	75	15	5	1													24-1	96	124	124	4545

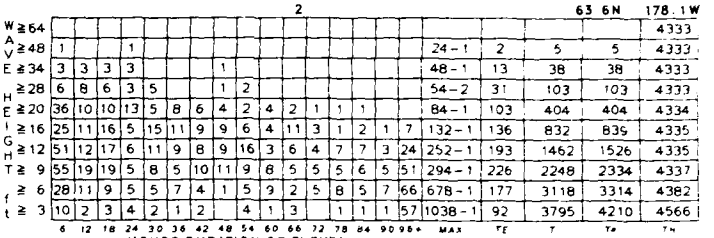
HOURS INTERVAL BETWEEN EVENTS

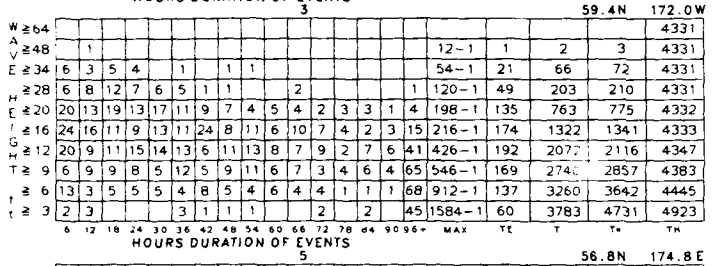
23 Persistence of wind speed-interval ... **Fa**

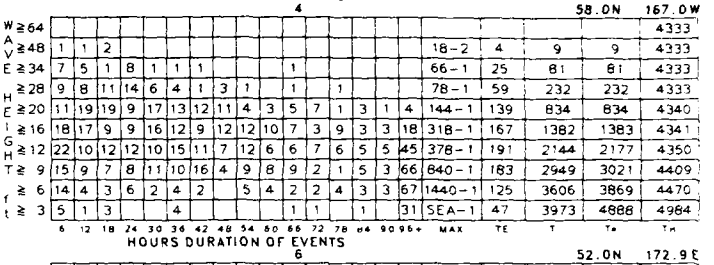

1
64.3N 166.7W
2
63.6N 178.1W
3
59.4N 172.0W
4
58.0N 167.0W
5
56.8N 174.8E
6
52.0N 172.9E
7
54.7N 175.9W
8
54.9N 167.2W
9
50.3N 171.3W
10
51.8N 167.3W
11
51.3N 158.8W
12
54.4N 158.1W
DAYS DURATION OF EVENTS

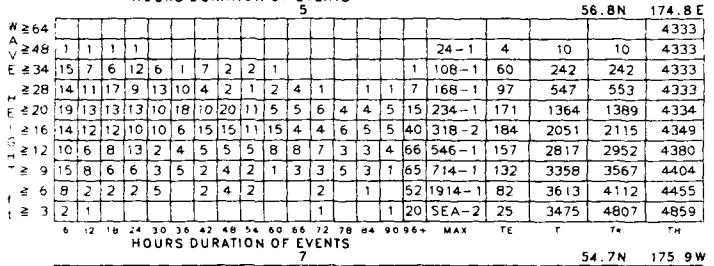

1 64.1N 166.7W
2 63.6N 178.1W
3 59.4N 172.0W
4 58.0N 167.0W
5 56.8N 174.8E
6 52.0N 172.9E
7 54.7N 175.9W
8 54.9N 167.2W
9 50.3N 171.3W
10 51.8N 167.3W
11 51.3N 158.8W
12 54.4N 158.1W
WIND SPEED
DAYS INTERVAL BETWEEN EVENTS

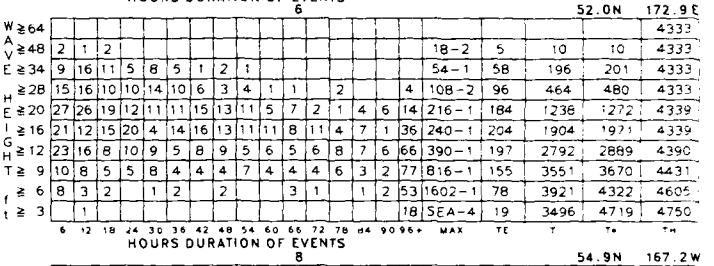

1
64.1N 166.7W
HOURS DURATION OF EVENTS

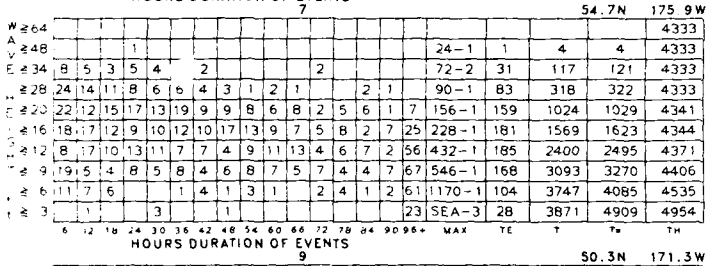

2
63 6N 178.1W
HOURS DURATION OF EVENTS


3
59.4N 172.0W
HOURS DURATION OF EVENTS


4
58.0N 167.0W
HOURS DURATION OF EVENTS


5
56.8N 174.8E
HOURS DURATION OF EVENTS


6
52.0N 172.9E
HOURS DURATION OF EVENTS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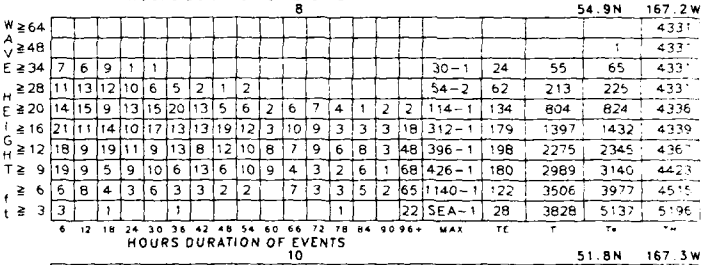
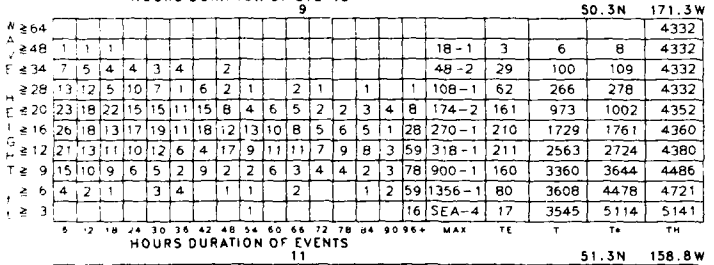
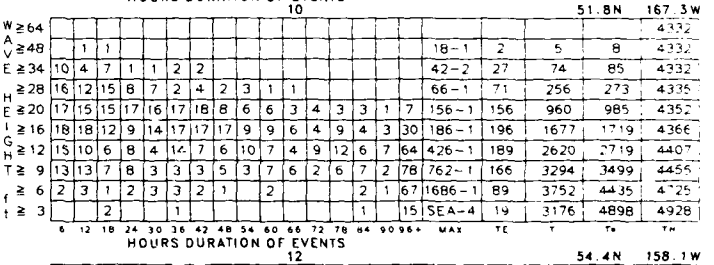
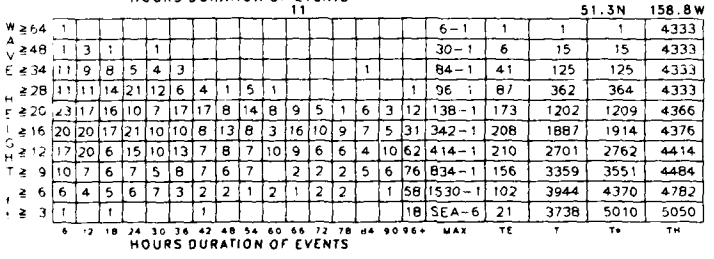
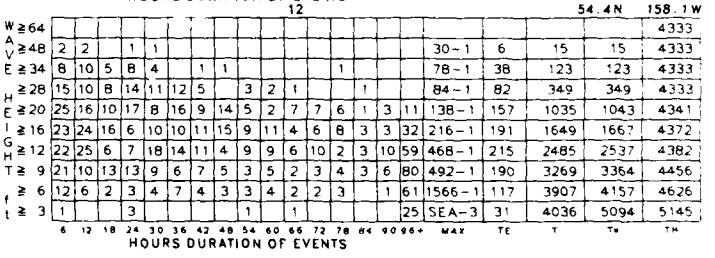
54.7N 175.9W
HOURS DURATION OF EVENTS


8
54.9N 167.2W
HOURS DURATION OF EVENTS


9
50.3N 171.3W
HOURS DURATION OF EVENTS


10
51.8N 167.3W
HOURS DURATION OF EVENTS


11
51.3N 158.8W
HOURS DURATION OF EVENTS


12
54.4N 158.1W
HOURS DURATION OF EVENTS

1 — 64.1N 166.7W

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥ 64																8	SEA-8	8	2944	4389	4389
≥ 48																9	SEA-8	9	3081	4526	4527
≥ 34												1				9	SEA-8	10	3076	4521	4530
≥ 28										1				2		9	SEA-8	12	3086	4531	4548
≥ 20	4		1	3	1	2				2	2		1	1		22	SEA-2	39	3684	5027	5143
≥ 16	5	5	1	4	1	1	3	1	3	2	1	1	1			40	SEA-1	69	4073	4867	5146
≥ 12	37	20	20	7	4	6	9	6	3	10	8	2	1	1	8	73	1314-1	215	3658	3911	4696
≥ 9	65	13	17	11	8	16	13	11	6	8	12	8	5	4	4	49	378-1	250	2497	2596	4423
≥ 6	41	23	19	11	14	8	10	11	14	6	4	4	6	3	4	15	252-1	193	1246	1270	4365
≥ 3	15	10	15	5	6	2	6	1	3	4	1	1		1	1	1	234-1	72	350	360	4344

HOURS INTERVAL BETWEEN EVENTS

2 — 63.6N 178.1W

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥ 64																8	SEA-8	8	2944	4389	4389
≥ 48													1			9	SEA-8	10	3078	4523	4528
≥ 34		2		1						1		1			1	13	SEA-8	19	3650	4888	4926
≥ 28	1	1		1		1		2	1	1	1	1		2	1	24	SEA-7	37	4923	5925	6028
≥ 20	10	6	4	4	6	3	2	1	2	3	3	4		1	1	53	SEA-1	103	4053	4621	5024
≥ 16	13	4	10	4	4	5	2	7	2	2	3		4	3	3	71	1032-1	137	3652	3916	4753
≥ 12	29	7	21	6	10	7	10	8	8	8	5	3	8	3	6	59	618-1	198	2984	3060	4584
≥ 9	55	19	14	14	10	12	12	8	8	12	8	5	4	3	4	40	498-1	228	2080	2117	4447
≥ 6	44	22	19	10	13	9	12	7	6	4	2	3	4	1	2	16	324-1	174	1084	1108	4373
≥ 3	25	12	11	8	5	7	1	5	4	2	1				1	2	138-1	84	352	362	4339

HOURS INTERVAL BETWEEN EVENTS

3 — 59.4N 172.0W

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥ 64																7	SEA-7	7	2576	4379	4379
≥ 48																9	SEA-7	9	3008	4675	4678
≥ 34			1	1			1	2	1			1	1			20	SEA-7	28	4078	5417	5489
≥ 28	2		1	2	2	2	2	2	1	1		1			1	38	SEA-5	55	4838	5776	5986
≥ 20	6	9	7	4	6	8	12	2	5	4	2	3	7	1	1	62	SEA-1	139	3943	4233	5007
≥ 16	18	10	7	10	9	8	15	6	5	8	6	7	2	4	2	60	618-1	177	3026	3250	4589
≥ 12	23	16	19	13	14	19	7	6	5	3	4	8	5	3	2	47	510-1	194	2275	2333	4433
≥ 9	21	21	18	11	12	11	11	7	8	7	4	3	5	5	2	25	486-1	171	1535	1558	4363
≥ 6	25	21	18	10	15	6	5	5	4	4	4	4	1	4	2	7	330-1	135	803	817	4345
≥ 3	17	10	6	6	2	3	2	1	3	2						1	102-1	53	193	194	4333

HOURS INTERVAL BETWEEN EVENTS

4 — 58.0N 167.0W

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥ 64																8	SEA-8	8	2944	4389	4389
≥ 48						1										11	SEA-8	12	3528	4973	4982
≥ 34				1	2	1	1							2		24	SEA-7	31	4643	5928	6009
≥ 28	2	3	2	4		1	3	1	2		1		1		2	42	SEA-4	64	4303	5625	5857
≥ 20	13	6	5	5	5	10	5	3	6	4	2	4				72	798-1	140	3520	3827	4654
≥ 16	13	9	7	8	12	14	8	4	4	4	6	4	2	4	6	65	564-1	170	2913	3082	4457
≥ 12	21	16	15	13	16	12	12	7	8	9	9	2	5	1	5	42	438-1	193	2139	2244	4404
≥ 9	25	16	24	15	15	17	7	8	7	9	10	4	2	2	3	18	366-1	182	1379	1417	4362
≥ 6	27	20	13	18	12	5	9	5	3	1	1			1		5	318-1	120	602	611	4343
≥ 3	20	7	5	1	4		1	2									48-2	40	96	97	4334

HOURS INTERVAL BETWEEN EVENTS

5 — 56.8N 174.8E

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥ 64																8	SEA-8	8	2944	4389	4389
≥ 48										1						11	SEA-8	12	3502	4947	4957
≥ 34	3	1		2	1	1	2	1	1	2					3	46	SEA-5	63	4971	6078	6320
≥ 28	4	4	3	2	1	4	9	1	3		3	6	2	2	3	54	SEA-3	101	4439	4834	5387
≥ 20	14	12	13	6	13	10	6	5	6	10	3	2	5	2	4	63	780-1	174	3016	3154	4542
≥ 16	21	17	13	10	14	11	10	9	3	2	11	6	4	3	3	50	444-1	187	2226	2315	4414
≥ 12	15	20	17	10	12	7	7	10	7	7	7	4	6	3	1	23	354-1	156	1398	1475	4380
≥ 9	23	17	9	16	10	8	9	7	4	3	3	4		2		14	222-1	129	849	879	4375
≥ 6	22	8	9	9	6	2	5	4	4	4	2	1	1			1	108-1	78	351	351	4341
≥ 3	7	4	3		1	2		2									48-2	19	57	57	4338

HOURS INTERVAL BETWEEN EVENTS

6 — 52.0N 172.9E

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥ 64																8	SEA-8	8	2944	4389	4389
≥ 48									1	1						10	SEA-7	12	3232	4940	4950
≥ 34	1	3	2	2	3	1	1		4		1	2	1	2	2	42	SEA-2	67	4563	5047	5248
≥ 28	6	4	4	4	1	5	4	4	2	4	3		7	3	1	53	SEA-1	105	4068	4378	4858
≥ 20	18	12	8	9	8	11	10	16	6	2	5	6	3	3	6	66	504-1	189	3036	3183	4449
≥ 16	25	24	13	15	12	9	10	9	10	5	8	5	3	8	2	51	462-1	209	2366	2455	4420
≥ 12	26	25	23	17	9	12	9	16	5	8	3	3	8	2	4	27	228-1	197	1505	1554	4386
≥ 9	38	22	14	13	10	7	10	8	5	5	2	5	2	2	2	5	126-2	150	755	772	4344
≥ 6	16	19	6	5	8	6	2	3	3	1	1	3					72-3	73	290	291	4341
≥ 3	4	2	4	1				1									48-1	12	32	32	4334

HOURS INTERVAL BETWEEN EVENTS

7 — 54.7N 175.9W

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥ 64																8	SEA-8	8	2944	4389	4389
≥ 48																9	SEA-8	9	3077	4522	4526
≥ 34	2	1	2	1		1	1		2			1		1		28	SEA-8	40	4812	5516	5639
≥ 28	6	5	2	2	2	2	1	2	3		2	1	4	2	3	52	SEA-5	89	5101	5380	5702
≥ 20	12	9	11	6	11	9	4	5	8	5	6	3	3	3	2	64	846-1	161	3288	3464	4485
≥ 16	18	11	11	10	15	8	11	13	5	12	3	4	2	2	3	58	822-1	186	2719	2796	4408
≥ 12	23	20	9	21	17	17	5	8	4	6	9	5	3	3	3	34	594-1	187	1876	1905	4362
≥ 9	33	18	25	15	5	9	15	4	7	4	3	4	2	4	5	15	378-1	168	1151	1151	4348
≥ 6	24	15	12	8	12	7	1	4	6	2	2	2		1		3	132-1	99	454	454	4337
≥ 3	11	4	4	1							1						66-1	21	46	46	4334

HOURS INTERVAL BETWEEN EVENTS

8 — 54.9N 167.2W

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥ 64																7	SEA-7	7	2576	4379	4379
≥ 48																8	SEA-8	8	2944	4394	4395
≥ 34	1	1		1		1	1				1					26	SEA-7	32	4894	6056	6121
≥ 28	1	1	3	2	2	3	1	5		1			2	1		45	SEA-3	67	4412	5772	5997
≥ 20	4	13	5	3	5	7	6	3	5	3	6	3	3		3	69	762-1	138	3527	3766	4585
≥ 16	23	7	8	15	12	2	8	9	5	8	2	6	4	5	4	65	504-1	183	2813	3031	4455
≥ 12	22	19	21	14	18	6	8	12	10	9	7	7	6	5	3	32	456-1	199	1984	2084	4393
≥ 9	29	25	19	23	10	10	11	7	8	7	7	1	3	2	1	17	324-1	180	1250	1290	4338
≥ 6	24	25	18	14	11	5	7	3	1	2	2	1	1	1		4	216-1	119	520	541	4334
≥ 3	11	6		1		1		2									48-2	21	49	59	4331

HOURS INTERVAL BETWEEN EVENTS

9 — 50.3N 171.3W

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥ 64																7	SEA-7	7	2576	4380	4380
≥ 48						1										11	SEA-8	12	3521	4966	4974
≥ 34		1		1	2	2	1	1						2		26	SEA-6	36	4573	5743	5852
≥ 28	3	1	3	3	3	1	2	1	1	1	1	1	1	2		45	SEA-1	69	4104	4662	4940
≥ 20	10	12	7	5	6	9	4	4	8		7	5	6	5	5	72	828-1	165	3373	3538	4520
≥ 16	30	17	17	12	13	8	9	7	9	12	8	6	8	2		55	504-1	213	2628	2711	4444
≥ 12	34	27	20	18	14	9	17	4	6	6	12	5	2	1	7	30	252-1	212	1645	1686	4362
≥ 9	36	21	12	19	12	12	8	7	8	5	3	3		3	2	6	204-1	157	841	843	4333
≥ 6	25	14	9	9	7	2	3	3	1	1						1	96-1	75	243	243	4332
≥ 3	5	2	1	1							1						66-1	10	27	27	4332

HOURS INTERVAL BETWEEN EVENTS

10 — 51.8N 167.3W

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥ 64																7	SEA-7	7	2576	4380	4380
≥ 48				1												10	SEA-8	11	3222	4667	4675
≥ 34	2		1		1	1	1	2		1			1			24	SEA-6	34	4578	5971	6056
≥ 28	4	1	4	5	1	2	1	3		1		1	2	2		50	SEA-2	77	4554	5284	5554
≥ 20	15	7	10	6	5	5	6	4	3	6	6	4	6	4	2	71	702-1	160	3351	3574	4539
≥ 16	24	7	11	14	11	10	9	9	9	6	12	5	6	6	5	54	492-1	198	2599	2754	4439
≥ 12	19	23	20	11	11	19	12	7	13	10	8	3	1	3	4	26	420-1	190	1706	1729	4373
≥ 9	35	17	17	17	16	17	8	6	7	1	2	5	3	1	1	11	240-1	164	946	958	4334
≥ 6	28	13	14	9	3	3	4	1	2		1	1		1	1	1	108-1	82	289	290	4332
≥ 3	7	1	1	2						1							60-1	12	30	30	4332

HOURS INTERVAL BETWEEN EVENTS

11 — 51.3N 158.8W

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥ 64				1												8	SEA-8	9	2948	4393	4394
≥ 48	1		2													11	SEA-8	14	3796	5241	5256
≥ 34		2		2		1				1				1		40	SEA-5	47	4394	5633	5758
≥ 28	5	3	3	2	5	1	3	4	2	3		1	1	2	1	57	SEA-1	93	4121	4950	5314
≥ 20	14	16	8	15	9	6	3	7	2	2	7	4	4	4	1	77	582-1	179	3166	3298	4474
≥ 16	25	21	16	14	11	8	15	7	10	7	8	8	3	5	8	47	498-1	213	2502	2562	4433
≥ 12	26	24	33	20	12	16	7	11	11	4	5	8	3	3	3	22	414-1	208	1642	1689	4370
≤ 9	35	25	14	10	9	12	11	8	2	4	3	4	1	2		11	270-1	151	903	934	4334
≥ 6	24	23	10	9	11	3	2	2	2	5	2					4	144-1	97	406	412	4333
≥ 3	6	2	2	2	2	1											36-1	15	40	40	4333

HOURS INTERVAL BETWEEN EVENTS

12 — 54.4N 158.1W

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥ 64																8	SEA-8	8	2944	4389	4389
≥ 48				1												12	SEA-7	13	3610	5171	5186
≥ 34		1	2		1		1	1		1		1				36	SEA-4	44	4893	5904	6027
≥ 28	3	2	5	4	1	1	3	1	1	1	2	4	1	2	2	55	1512-1	88	4066	4725	5074
≥ 20	12	14	7	7	8	8	4	7	7	3	1	3	3	3	3	71	738-1	161	3322	3475	4510
≥ 16	25	16	11	8	12	10	8	6	7	6	9	5	4	4	4	60	450-1	195	2742	2801	4429
≥ 12	29	22	31	16	15	9	11	9	10	10	5	4	6	1	4	30	396-1	212	1828	1865	4353
≥ 9	38	30	25	15	12	13	14	4	4	6	3	1	4	2	1	12	276-1	184	1068	1093	4334
≥ 6	23	24	15	13	8	7	5	3	3		2		2	3		1	180-1	109	456	470	4334
≥ 3	11	7	2		1		2										42-2	23	50	51	4333

HOURS INTERVAL BETWEEN EVENTS

1 — 64.1N 166.7W

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TE	T	T*	TH
≥ 64																					4241
≥ 48																					4241
≥ 34			1														18-1	1	3	3	4241
≥ 28				1													24-1	1	4	4	4241
≥ 20	2	2	2						1								54-1	7	21	21	4241
≥ 16	7	3	3	3	1	1	1				1						66-1	20	63	63	4241
≥ 12	16	6	5		7	6	2	2	1	1	1	1	3				78-3	51	225	225	4241
≥ 9	36	14	11	12	7	8	7	5	6	3	2	2	3	1		4	168-1	121	578	579	4241
≥ 6	49	16	8	13	11	10	10	6	14	8	3	5	9	2	6	21	216-1	191	1385	1397	4247
≥ 3	34	17	6	13	9	3	10	6	10	6	3	5	5	4	3	57	1062-1	191	2580	2732	4261

HOURS DURATION OF EVENTS

2 — 63.6N 178.1W

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TE	T	T*	TH
≥ 64																					4241
≥ 48																					4241
≥ 34				1	1												30-1	2	9	9	4241
≥ 28	1	1	1			1	1										42-1	5	19	19	4241
≥ 20	7	2	4	3	1	1			1			1					72-1	20	67	67	4241
≥ 16	8	4	1	7	2	4	1	3		1	1			1			84-1	33	147	147	4241
≥ 12	19	6	3	9	5	5	4	4	2	2	2	1	4			2	138-1	68	355	359	4241
≥ 9	22	8	11	7	7	7	8	7	3	6	2	4		3	3	8	186-1	106	708	728	4241
≥ 6	31	9	12	9	7	8	7	1	8	10	7	4	10	5	1	24	306-1	153	1370	1431	4244
≥ 3	20	16	7	8	5	8	13	9	4	5	7	4	9	7	5	56	672-1	183	2515	2735	4265

HOURS DURATION OF EVENTS

3 — 59.4N 172.0W

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TE	T	T*	TH
≥ 64																					4241
≥ 48																					4241
≥ 34		2	1														18-1	3	7	7	4241
≥ 28	2	2	1		2												30-2	7	19	19	4241
≥ 20	8	1	6	5	3	3	3	1	2								54-2	32	128	130	4241
≥ 16	3	9	10	10	5	4	7	3	5	3	1	1					72-1	61	311	316	4241
≥ 12	16	7	8	7	12	9	4	10	9	5	2	8	3			3	174-1	103	659	670	4241
≥ 9	16	8	8	12	16	6	8	8	9	8	11	3	3	4	4	13	336-1	137	1150	1187	4241
≥ 6	20	9	7	9	6	8	5	11	6	8	9	5	8	7	7	43	360-1	168	1925	1998	4241
≥ 3	12	6	3	4	7	3	4	5	2	4	3	2	5	5	9	63	1056-1	137	3091	3338	4334

HOURS DURATION OF EVENTS

4 — 58.0N 167.0W

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TE	T	T*	TH
≥ 64																					4241
≥ 48																					4241
≥ 34	1	1															12-1	2	3	3	4241
≥ 28	4	2	3	2		1											36-1	12	31	31	4241
≥ 20	11	6	6	4	5	4	5	2	2	1	1						66-1	47	196	201	4241
≥ 16	10	13	10	8	7	6	13	4	4	1		2	1			2	96-2	81	407	417	4241
≥ 12	7	7	11	10	8	10	14	12	7	11	7	2	1	5		5	126-1	117	837	863	4241
≥ 9	16	11	9	12	5	11	10	8	6	10	10	10	6	8	3	18	312-1	153	1389	1450	4241
≥ 6	19	9	10	8	9	8	7	7	10	6	10	5	6	6	4	55	348-1	179	2235	2334	4250
≥ 3	17	9	3	3	5	4	1	2	8	4	5	2	2	8	2	59	1200-1	134	3374	3641	4335

HOURS DURATION OF EVENTS

5 — 56.8N 174.8E

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TE	T	T*	TH
≥ 64																					4241
≥ 48																					4241
≥ 34		2		1													24-1	3	8	8	4241
≥ 28	4	3	1	2	2												30-2	12	31	31	4241
≥ 20	5	2	9	9	6	5	5	2	4	1							60-1	48	229	229	4241
≥ 16	11	8	8	2	10	14	7	2	3	4	5	1		1			84-1	76	406	407	4241
≥ 12	11	9	12	11	6	10	7	12	10	7	6	3	3	5		5	162-1	117	815	824	4241
≥ 9	18	7	9	6	9	12	6	7	10	4	8	5	10	7	2	24	318-1	144	1370	1405	4241
≥ 6	11	16	9	7	10	6	9	7	6	4	7	4	4	5	1	54	624-1	160	2132	2293	4256
≥ 3	19	7	7	3	2	3	7	3	1	3	5	1	5	3	1	54	1584-1	124	3055	3569	4361

HOURS DURATION OF EVENTS

6 — 52.0N 172.9E

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TE	T	T*	TH
≥ 64																					4241
≥ 48																					4241
≥ 34	4	4	1	1													24-1	10	19	19	4241
≥ 28	10	3	4	5		2	1										42-1	25	67	67	4241
≥ 20	7	14	10	8	5	6	7	3	4	2	1						66-1	67	298	298	4241
≥ 16	14	11	10	15	14	11	4	7	3	6	4	2	1	2	1		90-1	105	557	559	4241
≥ 12	[illegible]	12	16	7	15	7	12	11	9	4	11	4	7	5	4	7	162-1	144	1049	1062	4241
≥ 9	19	13	8	9	9	13	15	5	9	7	4	8	6	4	7	33	240-1	169	1049	[illegible]	4241
≥ 6	22	12	14	9	3	8	9	6	5	3	8	3	4	4	6	59	672-1	175	2500	2609	4309
≥ 3	13	4	3	3	4	3	4	2	5	2	3	2	8	1	1	58	1218-1	116	3436	3917	4494

HOURS DURATION OF EVENTS

7 — 54.7N 175.9W

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TE	T	T*	TH
≥ 64																					4241
≥ 48																					4241
≥ 34	1	1	3														18-3	5	12	12	4241
≥ 28	3	4	2		3	1			1								54-1	14	47	47	4241
≥ 20	8	11	8	11	7	3	3	4	2	1							60-1	58	232	232	4241
≥ 16	15	12	9	11	7	7	9	6	3	4	6	1				1	102-1	91	460	462	4241
≥ 12	18	10	18	19	8	7	6	6	13	7	2	9	6	1	2	6	180-1	138	900	933	4241
≥ 9	27	14	7	7	14	19	9	6	7	4	7	9	3	9	3	25	282-1	170	1495	1566	4247
≥ 6	33	6	13	6	11	9	9	6	8	5	4	8	4	7	2	55	444-1	186	2311	2490	4288
≥ 3	10	4	4	1	3	1	5	3	2	4	3	6	1	1	4	59	1614-1	111	3147	3627	4342

HOURS DURATION OF EVENTS

8 — 54.9N 167.2W

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TE	T	T*	TH
≥ 64																					4241
≥ 48																					4241
≥ 34	2	1															12-1	3	4	4	4241
≥ 28	2	3	5	2			1										42-1	13	38	39	4241
≥ 20	6	9	11	5	6	6	2	3	1		2						66-2	51	212	217	4241
≥ 16	18	11	18	9	7	10	11	3	3	3	4					1	114-1	98	446	459	4241
≥ 12	18	10	11	12	14	7	12	9	13	11	6	4	1	5	2	7	132-1	142	968	992	4241
≥ 9	21	13	7	8	18	10	7	12	11	8	11	8	8	4	7	25	252-1	178	1585	1620	4242
≥ 6	16	4	12	7	15	11	5	5	7	4	8	3	10	3	1	68	474-1	179	2530	2626	426[illegible]
≥ 3	13	10	3	5	5	1	1	1	2	6	1	1	4	2	2	62	1194-1	119	3347	3765	433[illegible]

HOURS DURATION OF EVENTS

9 — 50.3N 171.3W

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TE	T	T*	TH
≥ 64																					4241
≥ 48	1																6-1	1	1	1	4241
≥ 34	2	1		1			2										42-2	6	22	23	4241
≥ 28	9	8	2	1	4			1		1							60-1	26	73	75	4241
≥ 20	11	8	12	9	14	6	4	3	3	3	1	1	1				78-1	76	350	36	4241
≥ 16	13	20	8	6	7	11	9	14	5	3	3	3	3	1	1	4	174-1	111	673	695	4241
≥ 12	14	17	12	9	7	13	8	4	11	9	4	10	3	2	2	23	246-2	148	1281	1315	424[illegible]
≥ 9	23	15	14	7	16	5	12	7	11	2	9	9	6	7	4	33	396-1	180	1882	2025	4252
≥ 6	8	8	4	5	8	9	4	6	4	5	4	5	6	4	6	63	990-1	149	2691	2954	4262
≥ 3	6	5	1	2	4		4	1	2		2	3	1	2	2	48	1476-1	83	3065	3915	4356

HOURS DURATION OF EVENTS

10 — 51.8N 167.3W

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TE	T	T*	TH
≥ 64																					4241
≥ 48																					4241
≥ 34	2			1			1										42-1	4	13	14	4241
≥ 28	6	6	4	2	2		1			1							60-1	22	65	6[illegible]	4241
≥ 20	11	12	7	8	9	4	6	3	3	1				1			84-1	65	274	28[illegible]	4241
≥ 16	18	15	6	20	8	7	11	10	9	5	4	1	1		1	1	120-1	117	620	638	4241
≥ 12	14	11	14	6	6	12	10	3	8	11	9	11	4	4	6	15	246-1	144	1233	1268	4241
≥ 9	21	9	10	11	14	8	8	8	13	10	10	9	8	1	3	37	324-1	180	1854	1954	[illegible]
≥ 6	14	10	7	5	7	5	5	6	3	7	4	8	4	7	10	58	528-1	160	2756	29[illegible]	[illegible]
≥ 3	7	1	4	4	5	2	2			1	2	1		2		52	1476-1	83	3349	3969	[illegible]

HOURS DURATION OF EVENTS

11 — 51.3N 158.8W

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TE	T	T*	TH
≥ 64																					4241
≥ 48																					4241
≥ 34	1	2	2	1	1	1											36-1	8	26	26	4241
≥ 28	3	3	6	2	5			2	1								54-1	22	85	85	4241
≥ 20	17	11	20	8	8	7	6	8	4	1				2		1	96-1	93	409	414	4241
≥ 16	14	15	17	12	17	5	17	4	11	6	7	1	1		2	5	126-1	134	792	806	4241
≥ 12	16	4	21	14	9	14	10	8	13	8	10	5	6	2	1	21	330-1	162	1456	1498	4241
≥ 9	15	12	13	9	13	8	7	11	7	7	7	8	8	5	5	43	432-1	178	2116	2211	4243
≥ 6	10	5	6	4	5	9	8	9	9	6	6	7	3	5	4	60	714-1	156	2906	3180	4282
≥ 3	1	1	2	2	2			2	1	2	1	1		1	3	43	1524-1	62	3377	4150	4429

HOURS DURATION OF EVENTS

12 — 54.4N 158.1W

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TE	T	T*	TH
≥ 64																					4241
≥ 48																					4241
≥ 34	1	2	1	3													24-3	7	20	2[illegible]	4241
≥ 28	2	4	6	4	1	1	3	1									48-1	22	84	84	4241
≥ 20	10	12	7	9	8	8	4	4	7	3	2	1					72-1	75	366	3[illegible]3	4241
≥ 16	22	10	15	11	11	10	9	8	6	5	7	4	2		1	3	126-1	124	697	7[illegible]5	4241
≥ 12	16	9	15	11	12	16	7	9	8	10	8	5	2	1	2	26	192-2	157	1339	136[illegible]	4241
≥ 9	17	15	12	5	4	8	10	8	8	8	5	6	11	6	5	39	348-1	167	1901	2001	4244
≥ 6	21	12	11	9	4	8	15	6	6	5	2	5	4	5	6	62	576-1	181	2726	2894	4250
≥ 3	7	2		3	4	1	3	1	2	2	1	1	4	1	2	50	1314-1	84	3233	3959	4342

HOURS DURATION OF EVENTS

1 — 64.1N 166.7W

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥64																6	SEA-6	6	2208	4265	4265
≥48																6	SEA-6	6	2208	4265	4265
≥34																7	SEA-6	7	2256	4262	4265
≥28																7	SEA-6	7	2256	4261	4265
≥20	1											1				12	SEA-5	13	2716	4464	4485
≥16							1				2					20	SEA-5	24	3252	4975	5038
≥12	8		2		1	2	3	1		3	1	1				31	SEA-3	53	3796	4871	5096
≥ 9	15	3	7	4	3	3	1	7	2	5	2	6	2	1	6	55	SEA-1	122	4248	4616	5195
≥ 6	42	9	11	12	10	8	8	9	7	6	6	4	3	3	4	48	972-1	190	3026	3232	4623
≥ 3	37	27	20	5	12	14	9	10	7	7	6	5	2	2		30	372-1	193	1600	1637	4349

HOURS INTERVAL BETWEEN EVENTS

2 — 63.6N 178.1W

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥64																6	SEA-6	6	2208	4265	4265
≥48																6	SEA-6	6	2208	4265	4265
≥34												1				7	SEA-6	8	2266	4256	4265
≥28												2				9	SEA-7	11	2878	4365	4384
≥20	1						1		2				1		1	17	SEA-7	23	3555	4870	4937
≥16	3				1	1	1		3				3			25	SEA-5	37	3931	4732	4879
≥12	4	1	4	3	3	1	1	1	4	1	1	1	2		1	43	SEA-3	71	4119	4736	5095
≥ 9	13	2	6	7	2	2	7	3	6	1	4	2	3		4	47	SEA-1	109	3589	4020	4748
≥ 6	16	12	12	5	5	11	5	8	3	1	3	7	8	3	1	55	906-1	155	2832	2980	4408
≥ 3	31	22	16	15	14	16	7	7	8	4	2	5	2	5	1	29	288-1	184	1544	1580	4291

HOURS INTERVAL BETWEEN EVENTS

3 — 59.4N 172.0W

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥64																6	SEA-6	6	2208	4265	4265
≥48																6	SEA-6	6	2208	4265	4265
≥34											1					8	SEA-6	9	2431	4423	4430
≥28						1				1				1		9	SEA-6	12	2452	4412	4431
≥20	1				1		2			3	1		2		1	22	SEA-4	33	2860	4813	4943
≥16	1	1	2	4	2	1		2	2	4	2		2	2	1	37	SEA-3	63	3912	5214	5530
≥12	5	5	6	4	7	5	1	5	1	4	2	5	3	3	1	50	2130-1	108	4045	4389	5059
≥ 9	6	13	7	4	12	5	5	7	7	3	2	4	5	1		58	1362-1	139	3295	3544	4731
≥ 6	18	15	17	10	12	8	6	5	6	5	4	3	6	4	2	47	558-1	168	2251	2379	4377
≥ 3	18	16	16	18	9	9	7	2	6	4	2	4	2	1	2	19	258-1	135	1017	1044	4289

HOURS INTERVAL BETWEEN EVENTS

4 — 58.0N 167.0W

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥64																6	SEA-6	6	2208	4265	4265
≥48																6	SEA-6	6	2208	4265	4265
≥34																8	SEA-6	8	2582	4427	4430
≥28	1											1			1	13	SEA-5	16	2788	4514	4545
≥20	1		3		3	1			2	1	3	2		1	3	30	SEA-3	50	3774	5045	5246
≥16	4	5	2	1	2	5	3	1	2	1	3	3	1	8	1	43	SEA-3	85	4492	5065	5482
≥12	7	6	9	9	4	4	4	7	2	3	5	4	1	1	2	54	1950-1	122	3860	4118	498
≥ 9	12	8	14	16	6	4	8	10	5	4	6	2	3	2	1	54	1716-1	155	3136	3363	48 3
≥ 6	30	20	20	15	7	10	6	4	10	4	4	2	3		2	42	810-1	179	2026	2155	4480
≥ 3	40	17	12	13	10	6	4	4	4	6	1	2		1	2	11	204-1	133	728	745	4292

HOURS INTERVAL BETWEEN EVENTS

5 — 56.8N 174.8E

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥64																6	SEA-6	6	2208	4265	4265
≥48																6	SEA-6	6	2208	4265	4265
≥34		1														8	SEA-6	9	2373	4376	4384
≥28		1				1		1			1				1	13	SEA-7	18	3139	4925	4956
≥20	3			1	3	2	2			1	2	3				32	SEA-4	49	3646	5251	5480
≥16	4	2	4	4	3	4		1	3	2	2			2	3	43	SEA-3	78	3970	5267	5674
≥12	7	6	7	5	5	3	2	5	3	6	3	2	4	4	6	51	1740-1	119	3580	4232	5056
≥ 9	17	9	7	10	12	6	9	4	2	8	4	6	5	4	1	43	942-1	147	2846	3134	4539
≥ 6	23	14	19	11	10	10	6	3	4	4		3	5	5	2	43	546-1	162	1893	1991	4269
≥ 3	24	15	14	7	9	6	11	6	4	5	4		1	4	2	9	222-2	121	772	804	4253

HOURS INTERVAL BETWEEN EVENTS

6 — 52.0N 172.9E

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥64																6	SEA-6	6	2208	4265	4265
≥48																6	SEA-6	6	2208	4265	4265
≥34				2				1								13	SEA-5	16	2539	4412	4431
≥28	1	1	1			1		1	1	1					1	20	SEA-6	28	3313	5018	5085
≥20	5	2		3	1	4		1		3	1	1			2	47	SEA-4	70	4264	4956	5294
≥16	9	2	7	10	4	3	1	4	2	5		2	2	3	2	50	SEA-3	106	4141	4601	5160
≥12	16	13	13	4	4	2	12	2	5	5	4	3	7	4	2	50	1398-1	146	3283	3558	4620
≥ 9	20	20	14	13	11	10	4	4	5	3	3	3	2	3	5	51	744-1	171	2719	2805	4516
≥ 6	25	25	11	13	9	10	5	5	7	3	2	6	4	2	3	42	306-1	172	1678	1714	4255
≥ 3	31	16	14	11	7	4	3	6	4	3	3	2	2	1	2	4	282-1	113	573	584	4248

HOURS INTERVAL BETWEEN EVENTS

7 — 54.7N 175.9W

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥64																6	SEA-6	6	2208	4265	4265
≥48																6	SEA-6	6	2208	4265	4265
≥34							1		1							9	SEA-6	11	2431	4416	4428
≥28		1		1					1					1		14	SEA-6	18	2625	4603	4650
≥20	5	3	2	1		3	1	1	3	1	1			4	2	30	SEA-2	57	3529	5379	5611
≥16	5	6	10	3	4	3	4	2	3	2	2	4	3	1	1	38	SEA-1	91	3546	4746	5208
≥12	13	15	7	8	10	6	4	6	4	5	2	4	2	3		54	1998-1	143	3505	3830	4763
≥ 9	24	21	11	15	10	5	11	4	6	4	6	5	2	6	2	42	978-1	175	2628	2811	4371
≥ 6	31	22	19	16	12	7	9	11	7	4	4	3	3	3	2	34	354-1	187	1765	1838	4281
≥ 3	24	11	10	12	9	3	7	4	7	5	1		1	3	3	11	150-2	111	722	742	4268

HOURS INTERVAL BETWEEN EVENTS

8 — 54.9N 167.2W

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥64																6	SEA-6	6	2208	4265	4265
≥48																6	SEA-6	6	2208	4265	4265
≥34	1															8	SEA-6	9	2371	4428	4432
≥28				1						1			1			13	SEA-4	16	2483	4588	4627
≥20	3	2	1		1		2	1	1	2	3			1	1	35	SEA-2	54	3488	5064	5291
≥16	9	4	3	1	2	7	4	4	3	3	5	4	4	1	1	46	SEA-1	101	4232	4948	5437
≥12	15	10	10	5	8	8	5	8	3	1	2	4	1	4	2	59	1686-1	145	3848	4129	5121
≥ 9	22	17	15	13	9	4	5	5	8	5	6	4	4	4	4	54	680-1	177	3002	3205	4824
≥ 6	26	23	15	14	15	11	7	8	6	3	4	4	4	1	2	34	450-1	177	1613	1740	4347
≥ 3	24	24	13	9	12	8	3	4	1	4	4	2	2	1		7	162-1	118	606	615	4282

HOURS INTERVAL BETWEEN EVENTS

9 — 50.3N 171.3W

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥64																6	SEA-6	6	2208	4265	4265
≥48							1									6	SEA-6	7	2215	4264	4265
≥34		1									1					11	SEA-6	13	2470	4467	4490
≥28	1	1								3	1	1	1	1		21	SEA-5	31	3292	4877	4952
≥20	6	2	3	1	5	3	4		2	4		2	3	1	1	42	SEA-2	79	4347	5201	5561
≥16	12	6	6	8	6	6	2	4	2	5	5	3	1		2	48	SEA-2	118	4384	4626	5321
≥12	16	20	9	4	8	4	4	7	3	5	4	2	3	3	3	57	1818-1	152	3216	3399	4709
≥ 9	28	19	11	6	14	11	7	7	6	7	4	5	4	1	3	47	642-1	180	2285	2361	4375
≥ 6	27	21	12	12	9	5	4	8	4	5	2	1	2	4		33	330-1	149	1359	1395	4328
≥ 3	1	11	13	8	12	6	5	1	1	2	4	1	1	1		6	144-2	83	472	472	4272

HOURS INTERVAL BETWEEN EVENTS

10 — 51.8N 167.3W

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥64																6	SEA-6	6	2208	4265	4265
≥48																6	SEA-6	6	2208	4265	4265
≥34				1											1	9	SEA-6	11	2421	4417	4431
≥28	1		1						2	1	1			1		18	SEA-5	25	3174	4995	5062
≥20	3	1	1	1	2	3	2	1	2	3		2	1	4	1	39	SEA-2	66	3951	5182	5403
≥16	7	6	5	10	6	6	9	1	4	2	2	4	4	2	3	50	SEA-1	121	4283	4918	5556
≥12	15	16	10	7	6	5	6	2	6	3	3	2	1	3		59	1686-1	145	3489	3739	5007
≥ 9	22	18	17	11	6	6	13	2	3	5	4	7	4	2	6	51	810-1	177	2405	2609	4554
≥ 6	32	20	13	17	8	7	5	7	4	3	4	3	4	2	4	27	468-1	160	1403	1436	4326
≥ 3	14	15	7	12	6	7	4	2	1	2	2	3		4	2	4	144-1	85	479	479	4287

HOURS INTERVAL BETWEEN EVENTS

11 — 51.3N 158.8W

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥64																6	SEA-6	6	2208	4265	4265
≥48																6	SEA-6	6	2208	4265	4265
≥34						1									1	12	SEA-7	14	3038	4558	4584
≥28	1		1				1	1				1	1	1	1	19	SEA-8	26	3799	4906	4991
≥20	4	7	4	2	8	3	2	2	3	5	3		2	2	3	43	SEA-5	93	4681	5655	6069
≥16	9	5	11	12	6	4	9	6	4		2	4	4	4	3	54	SEA-1	137	4357	4674	5480
≥12	12	18	8	13	6	8	10	4	4	3	5	3	2	6	5	56	1722-1	163	3453	3620	5118
≥ 9	23	17	13	12	14	11	3	9	9	5	3	6	7		3	42	1218-1	177	2561	2629	4838
≥ 6	25	23	19	10	13	10	9	7	2	2	7	3	1	1	2	22	402-1	156	1301	1320	4459
≥ 3	16	6	13	6	3	4	2	1	1	1	3	2			3		228-1	61	304	304	4266

HOURS INTERVAL BETWEEN EVENTS

12 — 54.4N 158.1W

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥64																6	SEA-6	6	2208	4265	4265
≥48																6	SEA-6	6	2208	4265	4265
≥34						1										12	SEA-7	13	3076	4595	4615
≥28	2			1	1				1		1		1	1		18	SEA-7	26	3649	4863	4947
≥20	5	3		5	4		2	2	1	3	1	1	1	2	2	46	SEA-3	77	4606	5435	5808
≥16	5	7	5	11	5	4	5	2	2	3	5	3		5	2	63	SEA-1	127	4425	4706	5421
≥12	14	17	8	8	7	6	7	5	6	6	3	2	3	3	5	59	1722-1	159	3465	3651	5012
≥ 9	13	12	13	12	17	11	2	11	11	6	2	6	1	1	4	44	864-1	166	2585	2734	4732
≥ 6	37	28	18	12	7	14	7	7	6	4	5	5	2	2	5	23	684-1	182	1630	1656	4541
≥ 3	19	14	14	10	5	4	4	1	2	3					5		258-1	81	377	394	4252

HOURS INTERVAL BETWEEN EVENTS

1 — 64.1N 166.7W

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	d4	90	96+	MAX	TE	T	Te	TH
≥64																					4100
≥48																					4100
≥34																					4100
≥28	1																6-1	1	1	1	4100
≥20	1	2		1													24-1	4	9	9	4100
≥16	1	2	1			1		1		1							60-1	7	32	32	4103
≥12	8	3	3	2	2	1	2	1	1			1				1	114-1	25	109	109	4104
≥ 9	24	4	4	7	4	3	1	1	1	2	1	2	2	1		4	150-1	61	307	307	4109
≥ 6	42	8	15	8	10	4	6	3	3	4	1	2	3	2	2	16	222-1	129	824	851	4125
≥ 3	35	17	20	9	11	12	14	4	9	2	11	7	4	3	5	39	372-1	202	2115	2312	4226

HOURS DURATION OF EVENTS

2 — 63.6N 178.1W

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	d4	90	96+	MAX	TE	T	Te	TH
≥64																					4100
≥48																					4100
≥34																					4100
≥28																					4100
≥20	4			2		1											36-1	7	18	18	4100
≥16	2	1	3			2	3										42-3	11	46	46	4100
≥12	10	4		1	6	3	2	2		2	3			1			84-1	34	167	167	4101
≥ 9	22	8	11	7	4	5	3	4	4	1	3	1	2	3	2	2	126-1	82	432	445	4106
≥ 6	27	11	17	6	5	7	5	4	3	3	5	4	7	4		24	228-1	132	1087	1124	4133
≥ 3	28	18	16	8	5	9	9	10	2	3	7	7	5	5	2	57	324-1	191	2290	2442	4167

HOURS DURATION OF EVENTS

3 — 59.4N 172.0W

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	d4	90	96+	MAX	TE	T	Te	TH
≥64																					4100
≥48																					4100
≥34																					4100
≥28																					4100
≥20		3	4	2		1	2										42-2	12	46	46	4100
≥16	6	4	5	2	3	1	3	1	2		1					1	90-1	29	131	131	4106
≥12	11	5	8	7	10	9	8	4	2	2	1				1	2	108-2	70	365	365	4114
≥ 9	11	4	10	6	3	5	10	8	8	4	5	4	4	3	2	9	132-2	96	758	760	4128
≥ 6	22	13	13	5	14	12	9	8	11	6	6	6	3	2	6	30	348-1	166	1578	1639	4209
≥ 3	21	16	9	13	10	6	7	1	2	3	4	4	2	7	4	58	888-1	167	2815	3271	4434

HOURS DURATION OF EVENTS

4 — 58.0N 167.0W

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	d4	90	96+	MAX	TE	T	Te	TH
≥64																					4100
≥48																					4100
≥34																					4100
≥28		3	1	1													24-1	5	13	13	4100
≥20	4	5	5	1	3	1	2	2									48-2	23	84	84	4103
≥16	4	7	4	7	4	4	3	2	5	1							60-1	41	194	194	4107
≥12	7	9	10	8	7	8	4	8	4	1	5	4		1	2	2	132-1	80	494	507	4118
≥ 9	9	6	12	9	6	13	7	9	8	4	5	5	2	2	3	13	246-1	113	916	946	4139
≥ 6	21	6	9	10	8	9	8	7	11	7	5	8	6	9	3	37	402-1	164	1799	1878	4232
≥ 3	17	14	8	6	5	8	9	1	5	1	4	4	4	3	3	66	2094-1	158	3267	3693	4715

HOURS DURATION OF EVENTS

5 — 56.8N 174.8E

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	d4	90	96+	MAX	TE	T	Te	TH
≥64																					4100
≥48																					4100
≥34																					4100
≥28	1																6-1	1	1	1	4100
≥20	6	1	2	1		1	1			1							60-1	13	41	41	4102
≥16	9	8	3	4	4	2	2	1	2					2			84-2	37	150	150	4120
≥12	12	7	8	5	8	6	5	7	3	5	4	1	1			4	126-1	76	457	458	4136
≥ 9	18	8	11	6	11	5	9	9	4	2	4	5	5	2	1	14	240-1	114	872	877	4163
≥ 6	22	17	7	10	11	10	10	9	4	1	8	3	12	4	5	40	378-1	173	1788	1878	4239
≥ 3	19	8	8	6	13	2	2	5	4	6	5	2	8	3	2	64	750-1	157	3005	3434	4433

HOURS DURATION OF EVENTS

6 — 52.0N 172.9E

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	d4	90	96+	MAX	TE	T	Te	TH
≥64																					4100
≥48																					4100
≥34	1																6-1	1	1	1	4100
≥28		1	2														18-2	3	8	8	4100
≥20	8	1	5	2	1	1				1			1				78-1	20	67	67	4110
≥16	8	9	6	5	7	2	2	2	3	1				1		1	96-1	47	208	208	4117
≥12	16	12	9	11	11	5	9	3	4	6	2	1	3	1		4	156-1	97	545	551	4130
≥ 9	17	17	7	11	11	13	7	17	4	7	6	5	2	4	5	9	186-1	142	1012	1041	4147
≥ 6	20	7	9	9	13	14	3	14	3	5	12	8	7	4	1	47	300-1	176	1950	2030	4209
≥ 3	22	11	4	4	3	7	5	5	6	6	4	4	2	6	2	69	SEA-1	160	3372	3681	4575

HOURS DURATION OF EVENTS

7 — 54.7N 175.9W

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	d4	90	96+	MAX	TE	T	Te	TH
≥64																					4100
≥48																					4100
≥34																					4100
≥28	2	1															12-1	3	4	4	4100
≥20	12	5	5	8	1	1	2		1								54-1	35	103	103	4101
≥16	9	7	7	5	6	7	3	3	1	3	1	2		2			84-2	56	283	287	4114
≥12	19	8	8	6	8	5	3	5	7	5	4	3	3	1	3	6	162-1	94	621	628	4136
≥ 9	18	11	17	14	8	13	9	7	5	4	10	5	7	6	4	15	234-1	153	1235	1246	4180
≥ 6	21	14	11	14	9	13	7	4	2	8	7	7	8	6	6	50	396-1	187	2129	2215	4282
≥ 3	12	6	4	5	7	5	6	3	3	5	1	3	5	4	1	65	SEA-2	135	3702	4315	5012

HOURS DURATION OF EVENTS

8 — 54.9N 167.2W

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	d4	90	96+	MAX	TE	T	Te	TH
≥64																					4100
≥48																					4100
≥34																					4100
≥28		2	1														18-1	3	7	7	4100
≥20	5	6	3	5		2	2										42-2	23	72	73	4100
≥16	12	6	9	4	7	5	1	1	4	2							60-2	51	203	206	4111
≥12	17	4	9	10	12	10	5	6	6	2	2	3	2	1		5	114-1	94	552	568	4120
≥ 9	16	5	18	7	8	10	10	7	10	7	7	8	5	3	2	14	258-1	137	1124	1167	4160
≥ 6	17	11	13	11	8	12	5	5	7	7	5	5	10	11	9	42	414-1	178	2094	2186	4260
≥ 3	13	13	3	5	5	3	7	2	2		4	2	1	3	2	66	SEA-1	131	3761	4230	5004

HOURS DURATION OF EVENTS

9 — 50.3N 171.3W

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	d4	90	96+	MAX	TE	T	Te	TH
≥64																					4100
≥48																					4100
≥34																					4100
≥28	3	2															12-2	5	7	7	4100
≥20	12	8	5	5	1	1	1	2									48-2	35	97	102	4100
≥16	10	10	4	8	7	7	2	2	1	4	2		1		1	1	102-1	60	297	312	4109
≥12	14	8	15	7	7	8	6	4	9	5	2	2	5		1	11	156-1	104	726	748	4140
≥ 9	22	14	11	13	11	7	4	10	12	4	7	6	7	6	6	21	240-1	161	1402	1455	4210
≥ 6	13	10	8	7	9	8	9	13	6	7	4	6	9	6	4	55	498-1	174	2545	2697	4347
≥ 3	5	4	4	1	3	5			2	2		2	2	1	1	69	SEA-3	101	4299	4902	5406

HOURS DURATION OF EVENTS

10 — 51.8N 167.3W

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	d4	90	96+	MAX	TE	T	Te	TH
≥64																					4100
≥48																					4100
≥34																					4100
≥28	1	1															12-1	2	3	3	4100
≥20	7	4	3	5	3	3											36-3	25	77	81	4100
≥16	11	6	6	6	7	2	6	4	2							2	102-2	52	238	251	4101
≥12	22	10	11	9	13	5	8	5	4	5	4	1	7	2	1	4	222-1	111	667	691	4116
≥ 9	24	9	6	12	5	12	5	11	4	8	7	5	7	6	6	20	282-1	147	1282	1336	4144
≥ 6	14	11	11	11	12	13	6	6	5	3	8	6	3	8	2	62	636-1	181	2530	2618	4363
≥ 3	8	1	4	2	4	3	2	2	4	4	1	2	3	2	3	59	SEA-1	104	3832	4525	5026

HOURS DURATION OF EVENTS

11 — 51.3N 158.8W

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	d4	90	96+	MAX	TE	T	Te	TH
≥64																					4100
≥48																					4100
≥34																					4100
≥28	2	2			1	1											36-1	6	17	19	4100
≥20	4	4	5	4	1	1	3		2								54-2	24	93	106	4103
≥16	12	10	7	4	7	6	4	4	4	1		1		1			84-1	61	272	291	4106
≥12	14	13	15	13	11	9	6	9	4	4	5	5	1	2	2	8	126-2	121	772	811	4126
≥ 9	16	14	4	6	9	9	12	7	5	7	8	9	5	6	6	26	240-1	149	1449	1525	4181
≥ 6	12	8	13	8	9	14	6	4	10	7	5	8	5	5	7	56	882-1	177	2678	2821	4448
≥ 3	9	3	4	2			2	2	1	2			1	1	2	61	SEA-2	90	3830	4649	5169

HOURS DURATION OF EVENTS

12 — 54.4N 158.1W

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	d4	90	96+	MAX	TE	T	Te	TH
≥64																					4100
≥48																					4100
≥34			1														18-1	1	3	3	4100
≥28	2	2	1		1												30-1	6	14	14	4100
≥20	5	6	3	4	2	4	3			1							60-1	28	107	112	4107
≥16	12	7	6	5	3	5	6	3	3	4		2					72-2	56	266	276	4111
≥12	10	5	9	13	7	6	5	6	3	3	9	2	3	1	1	8	132-2	91	647	670	4125
≥ 9	22	16	10	14	11	7	10	8	5	2	5	6	6	4	4	23	330-1	153	1289	1353	4216
≥ 6	23	14	9	3	7	10	10	8	5	6	4	3	3	6	4	59	642-1	174	2304	2636	4469
≥ 3	15	8	2	3	2	3	3	3	4	3	2	1	1	1	1	60	SEA-1	112	3490	4273	4832

HOURS DURATION OF EVENTS

1 — 64.1N 166.7W

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	T*	TH
≥ 64																6	SEA-6	6	2208	4224	4224
≥ 48																6	SEA-6	6	2208	4224	4224
≥ 34																6	SEA-6	6	2208	4224	4224
≥ 28																7	SEA-6	7	2432	4448	4449
≥ 20	1	1														8	SEA-4	10	2311	4210	4219
≥ 16				1			1									9	SEA-4	11	2286	4143	4172
≥ 12	1	1		1	2	1	1				1					20	SEA-1	28	2734	4222	4327
≥ 9	14	3	2	1	1	1				1		1	1		1	36	1866-1	62	2953	3902	4200
≥ 6	27	6	2	5	4	5	2	2	2	4	4	4	1	2	3	53	1080-1	126	2883	3301	4127
≥ 3	37	19	18	11	12	18	7	6	5	7	9	2	6	6	1	39	294-1	203	1868	1936	4122

HOURS INTERVAL BETWEEN EVENTS

2 — 63 6N 178 1W

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	T*	TH
≥ 64																6	SEA-6	6	2208	4224	4224
≥ 48																6	SEA-6	6	2208	4224	4224
≥ 34																6	SEA-6	6	2208	4224	4224
≥ 28																6	SEA-6	6	2208	4224	4224
≥ 20		1														11	SEA-2	12	2218	4305	4323
≥ 16											1					17	2136-1	18	2780	4403	4449
≥ 12	2	1		1	1	1		1								31	1860-1	38	2836	4172	4338
≥ 9	6	2	3	4	4	1			1	1	3		3			57	1908-1	85	3290	3770	4209
≥ 6	18	11	3	3		2	6	3	3	7	2	5	1	6	5	58	1338-1	133	2764	3036	4127
≥ 3	30	15	18	12	12	14	17	10	10	2	7	8	4	3	3	28	270-1	193	1628	1730	4105

HOURS INTERVAL BETWEEN EVENTS

3 — 59.4N 172.0W

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	T*	TH
≥ 64																6	SEA-6	6	2208	4224	4224
≥ 48																6	SEA-6	6	2208	4224	4224
≥ 34																6	SEA-6	6	2208	4224	4224
≥ 28																6	SEA-6	6	2208	4224	4224
≥ 20					1					1						14	SEA-1	16	2409	4393	4439
≥ 16			1	1		1					2		1		1	24	2094-1	31	2802	4142	4267
≥ 12	6	2	3	1	1			4	1	2		1	2		3	45	1470-1	71	3239	3894	4245
≥ 9	2	2	3	7	2	6	4	3	4	4	2	3	2	3	1	49	990-1	97	2902	3426	4158
≥ 6	20	16	15	10	4	9	5	6	3	7	6	3	2	6	2	54	462-1	168	2366	2606	4136
≥ 3	35	14	17	12	14	13	7	9	6	4	7	5	3	6	5	11	264-1	168	1120	1167	4104

HOURS INTERVAL BETWEEN EVENTS

4 — 58.0N 167.0W

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	T*	TH
≥ 64																6	SEA-6	6	2208	4224	4224
≥ 48																6	SEA-6	6	2208	4224	4224
≥ 34																6	SEA-6	6	2208	4224	4224
≥ 28																10	SEA-4	10	2399	4229	4242
≥ 20					1	1	1					1				20	2106-1	24	2760	4209	4290
≥ 16	2		1	2				1			1	2		1		34	2100-1	44	3055	4100	4287
≥ 12	4	1	4		2	1	2	2	2	2	3	3		1		55	1500-1	82	3132	3741	4230
≥ 9	7	5	5	6	6	4	4	3	2	2	1	2	1	3	3	59	834-1	113	2877	3251	4156
≥ 6	26	10	9	8	11	8	4	6	7	3	3	4	8	6	6	47	570-1	166	2203	2389	4135
≥ 3	29	15	23	13	20	11	4	7	9	5	1	4	1	8		12	228-1	162	980	1026	4104

HOURS INTERVAL BETWEEN EVENTS

5 — 56.8N 174.8E

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	T*	TH
≥ 64																6	SEA-6	6	2208	4224	4224
≥ 48																6	SEA-6	6	2208	4224	4224
≥ 34																6	SEA-6	6	2208	4224	4224
≥ 28																7	SEA-6	7	2324	4331	4332
≥ 20	1									1						16	SEA-1	18	2822	4326	4365
≥ 16	4	3	1		2			2				1		1		25	2124-1	39	3014	4122	4252
≥ 12	4	5	3		3	1	4	1	2		1		2	2		48	1494-1	76	3092	3816	4238
≥ 9	10	3		2	10	3	4	6	3	3	5	2	3		1	60	1050-1	115	2915	3354	4168
≥ 6	22	11	16	11	9	9	9	5	8	3	5	2	6	2	6	49	672-1	173	2188	2386	4125
≥ 3	27	17	17	16	8	12	14	8	3	2	5	1	4	3	4	12	156-1	153	[illegible]	999	4100

HOURS INTERVAL BETWEEN EVENTS

6 — 52.0N 172.9E

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	T*	TH
≥ 64																6	SEA-6	6	2208	4224	4224
≥ 48																6	SEA-6	6	2208	4224	4224
≥ 34																7	SEA-6	7	2255	4223	4224
≥ 28																7	SEA-5	7	2201	4250	4258
≥ 20	1		1									1	2			20	SEA-1	25	3161	4188	4245
≥ 16	3		2	1		1		1	1	1		1	2	1		33	1818-1	47	3058	3988	4179
≥ 12	6	6		1		3	6	3	5	1	2	1	2	1	1	57	1182-1	95	3190	3661	4182
≥ 9	9	5	6	10	7	7	5	5	3	3	4	4	2	3		69	870-1	142	2860	3172	4166
≥ 6	19	8	18	10	8	11	14	4	6	4	5	7	2	5	7	44	282-2	172	1963	2209	4130
≥ 3	35	21	19	14	9	13	6	6	3	5	5	6	4	1	1	9	222-1	157	864	897	4123

HOURS INTERVAL BETWEEN EVENTS

7 — 54.7N 175.9W

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	T*	TH
≥ 64																6	SEA-6	6	2208	4224	4224
≥ 48																6	SEA-6	6	2208	4224	4224
≥ 34																6	SEA-6	6	2208	4224	4224
≥ 28																6	SEA-4	6	2185	4292	4296
≥ 20	4	2			1		1	1	1	2	2					25	1950-1	39	2487	4214	4316
≥ 16	7	2	2	3			2	1	4		1			1	1	37	1506-1	61	3009	3951	4224
≥ 12	6	7	3	1	4	1	4	3	3	3	3	1	2	1	2	51	1398-1	96	3084	3579	4171
≥ 9	14	10	2	7	8	5	6	10	6	6	4	3	1	5	5	58	774-1	150	2642	2972	4138
≥ 6	25	16	15	11	11	17	3	7	7	7	6	10	6	5	1	36	714-1	183	1900	2089	4122
≥ 3	25	19	16	20	14	5	8	1	4	6	2	4	4		3	3	132-1	134	674	705	4108

HOURS INTERVAL BETWEEN EVENTS

8 — 54.9N 167.2W

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	T*	TH
≥ 64																6	SEA-6	6	2208	4224	4224
≥ 48																6	SEA-6	6	2208	4224	4224
≥ 34																6	SEA-6	6	2208	4224	4224
≥ 28																8	SEA-4	8	2413	4373	4380
≥ 20	1					2	2		1							20	SEA-1	26	2815	4178	4251
≥ 16	7	1	1	2		4	1		1	1	1		1	1	1	33	1848-1	55	3127	4081	4276
≥ 12	5	2	4	6	4	3	2	3	2	1	3	1	6	1	1	53	1398-1	97	3122	3624	4172
≥ 9	10	7	10	9	7	4	3	3	4	4	6	2	2	4	4	58	1392-1	137	2772	3034	4141
≥ 6	25	21	9	12	8	6	6	8	5	7	7	5	8	3	7	40	582-1	177	1960	2110	4136
≥ 3	20	19	19	14	9	13	7	7	3	7	2	5	1	2	1	4	186-1	133	724	777	4103

HOURS INTERVAL BETWEEN EVENTS

9 — 50.3N 171.3W

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	T*	TH
≥ 64																6	SEA-6	6	2208	4224	4224
≥ 48																6	SEA-6	6	2208	4224	4224
≥ 34																6	SEA-6	6	2208	4224	4224
≥ 28																9	SEA-3	9	2326	4318	4325
≥ 20	2	1	2		2				1	2	1					29	1926-1	40	3179	4213	4315
≥ 16	4	1	2	1	3	2	2	3	3			1		1	1	41	1920-1	65	3148	3912	4215
≥ 12	5	4	7	4	5	7	4	2	2		5	3	4	3	4	46	1356-1	105	2867	3468	4176
≥ 9	13	14	11	6	8	3	5	7	8	5	2	5	8		6	58	846-1	159	2556	2786	4131
≥ 6	17	17	15	17	13	10	8	6	7	6	11	6	5	3	8	27	288-1	176	1562	1660	4110
≥ 3	13	23	11	10	7	8	6	12	1	3	1	2		1		2	126-1	100	480	509	4105

HOURS INTERVAL BETWEEN EVENTS

10 — 51.8N 167.3W

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	T*	TH
≥ 64																6	SEA-6	6	2208	4224	4224
≥ 48																6	SEA-6	6	2208	4224	4224
≥ 34																6	SEA-6	6	2208	4224	4224
≥ 28																8	SEA-5	8	2261	4165	4168
≥ 20	2	1		1					3						1	21	SEA-1	29	2877	4168	4249
≥ 16	2	2		1		1	1	3	1		3		4		1	39	1500-1	58	3016	3985	4235
≥ 12	12	4	5	6	5	5	1	3	6	3	2	1	2	3	5	52	1386-1	115	3042	3505	4180
≥ 9	11	11	12	6	6	12	3	5	4	5	6	1	5	4		54	1332-1	145	2634	2849	4141
≥ 6	18	19	21	12	8	9	8	10	5	7	11	9	4	8	2	29	312-2	180	1640	1760	4115
≥ 3	19	20	17	11	11	10	9	3	2	1	1	2				3	132-2	109	479	502	4101

HOURS INTERVAL BETWEEN EVENTS

11 — 51.3N 158.8W

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	T*	TH
≥ 64																6	SEA-6	6	2208	4224	4224
≥ 48																6	SEA-6	6	2208	4224	4224
≥ 34																6	SEA-6	6	2208	4224	4224
≥ 28	1															9	SEA-3	10	2641	4509	4528
≥ 20			1	1					1	1		1				22	2118-1	27	2853	4154	4257
≥ 16	3	1	3		2	1	1	1	4	1		2		2	1	40	1758-1	62	3286	3948	4233
≥ 12	10	11	4	2	3	3	6	5	3	5	3	3	2		3	60	1392-1	123	3055	3368	4153
≥ 9	15	8	10	9	8	8	8	7	5	4	5	2	2	8	4	45	1008-1	148	2519	2665	4109
≥ 6	24	27	18	12	9	6	13	7	9	6	2	5	4	6	2	29	[illegible]88-1	179	1568	1632	4105
≥ 3	17	17	17	5	8	4	2	2	6	1	1	2	3			5	222-1	90	478	520	4100

HOURS INTERVAL BETWEEN EVENTS

12 — 54.4N 158.1W

WAVE HEIGHT ft	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	T*	TH
≥ 64																6	SEA-6	6	2208	4224	4224
≥ 48																6	SEA-6	6	2208	4224	4224
≥ 34																7	SEA-5	7	2389	4167	4170
≥ 28																10	SEA-4	10	2593	4376	4390
≥ 20	1					[illegible]					1			1		25	2106-1	30	2943	4189	4294
≥ 16	2	1	2	1			1	3	1		2	2	1	1	2	38	1842-1	57	3007	3979	4244
≥ 12	1	4	4	1		3	6	4	2	2	3	3	1	1	1	56	1122-1	92	3075	3502	4147
≥ 9	14	8	8	8	9	10	6	5	7	5	8	4	1	1	2	57	654-2	153	2637	2878	4115
≥ 6	23	10	18	17	14	8	11	7	8	5	7	5	5	2	7	31	552-1	178	1744	1845	4112
≥ 3	28	22	13	13	11	2	6	3	3	2	3		1	1	1	6	168-1	115	546	559	4100

HOURS INTERVAL BETWEEN EVENTS

23 Persistence of wave height-interval

Summer

1 — 64.1N 166.7W

Wave height (ft)	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TE	T	T*	TH
≥64																					4545
≥48																					4545
≥34	1	1		1													24-1	3	7	7	4545
≥28	3	1	4			1											36-1	9	23	28	4545
≥20	28	8	4	7	8	4		3			1	1				1	114-1	65	214	224	4567
≥16	17	12	5	9	6	6	8	3	2	1	1	2	1		1	4	162-1	78	413	427	4571
≥12	58	20	13	8	12	1	2	3	9	5	2	3	3	2		12	240-1	153	807	848	4606
≥9	59	23	23	12	17	9	14	6	6	15	9	7	7	4	3	21	282-1	238	1665	1752	4652
≥6	37	19	15	10	13	14	20	7	13	5	7	3	7	10	3	53	714-1	236	2745	2956	4697
≥3	8	10	3	4	8	6	4	3	2	4		2	3	4	2	62	SEA-1	125	3960	4685	5278

HOURS DURATION OF EVENTS

2 — 63.6N 178 1W

Wave height (ft)	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TE	T	T*	TH
≥64																					4545
≥48	1	1															12-1	2	3	4	4545
≥34	6	3	3	2	1		1			1							60-1	17	51	54	4546
≥28	13	5	10	3	2	2	3	1	1					1			84-1	41	139	147	4550
≥20	23	8	7	5	10	9	3	5	6	3	4	3	1			1	108-1	88	440	459	4558
≥16	26	12	19	10	4	11	10	7	3	2	5	6		2	1	10	162-1	128	784	811	4586
≥12	44	16	13	11	9	16	11	10	8	6	8	2	6	4	2	23	246-1	189	1415	1471	4610
≥9	54	16	14	14	10	9	16	8	10	6	6	6	8	4	2	43	498-1	226	2094	2287	4677
≥6	26	11	7	8	7	9	7	5	4	11	12	6	3	4	5	65	750-1	190	2951	3301	467[illegible]
≥3	4	4	3	6	6	5	3	2	4	2	1	3		3	4	68	1242-1	118	3753	4436	4915

HOURS DURATION OF EVENTS

3 — 59.4N 172.0W

Wave height (ft)	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TE	T	T*	TH
≥64																					4545
≥48		1															12-1	1	2	3	4545
≥34	5	5	3	1	1												30-1	15	33	36	4545
≥28	10	11	10	9	6	3	3										42-3	52	167	171	4547
≥20	15	17	14	16	14	12	9	6	5	7	6	1	1	2		2	114-1	127	677	685	4557
≥16	16	24	10	23	15	9	14	16	10	3	4	7	6	6		13	192-1	176	1239	1258	4601
≥12	21	14	13	10	12	16	15	17	12	11	9	7	7	5	4	34	276-1	207	1933	2016	4614
≥9	12	6	14	8	12	8	10	11	10	12	7	7	9	6	5	62	618-1	199	2733	2898	4707
≥6	11	7	9	11	5	8	6	6	7	6	3	6	5	2	6	77	996-1	175	3620	3878	4876
≥3	7	4	1	1	1	3	1			2	1	1				43	SEA-1	65	4312	5358	5575

HOURS DURATION OF EVENTS

4 — 58.0N 167.0W

Wave height (ft)	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TE	T	T*	TH
≥64																					4545
≥48	1																6-1	1	1	2	4545
≥34	4	1	4	2	3		1										42-1	15	48	51	4545
≥28	12	12	11	3	5	2	2				1						66-1	48	143	148	4545
≥20	30	20	24	19	6	10	8	5	5	2	4	1				7	186-1	141	660	668	458[illegible]
≥16	28	18	16	21	25	10	16	18	9	3	3	5	8	2	2	9	198-1	193	1189	1226	458[illegible]
≥12	27	18	19	13	11	8	18	15	13	13	19	10	10	3	2	30	270-1	229	1964	2053	4602
≥9	21	11	11	15	7	10	16	11	5	10	5	6	8	6	11	67	564-1	220	2628	2989	467[illegible]
≥6	8	7	9	6	7		6	5	2	9	7	3	2	6	3	79	1350-1	159	3976	4266	500[illegible]
≥3		2	1	2	1	1						2			1	22	SEA-4	32	3409	5294	5398

HOURS DURATION OF EVENTS

5 — 56.8N 174.8E

Wave height (ft)	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TE	T	T*	TH
≥64																					4545
≥48	1		1														18-1	2	4	4	4545
≥34	3	5	3	2	3	2	3	1									48-1	22	86	88	4546
≥28	10	14	8	7	7	4	5	2	2	1	2	1	1				78-1	64	275	279	4547
≥20	19	18	19	17	16	4	18	12	5	7	5	4	3	6		7	186-1	160	991	1016	4561
≥16	16	11	18	17	22	12	18	9	8	11	7	5	7	2	7	25	216-1	195	1642	1745	4596
≥12	20	11	11	10	13	17	15	13	12	9	9	10	5	4	2	51	438-1	212	2442	2644	4629
≥9	9	6	9	3	8	8	7	6	5	8	10	3	4	1	7	77	852-1	171	3302	3709	4917
≥6	9	11	8	2	1	4	5	2	2	6	2	2	4	3	1	64	1998-1	126	4277	5028	5603
≥3	5	3	1		2					3	1					19	SEA-4	34	2863	4941	5022

HOURS DURATION OF EVENTS

6 — 52.0N 172 9E

Wave height (ft)	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TE	T	T*	TH
≥64	1																6-1	1	1	1	4545
≥48	2	1	1														18-1	4	7	7	4545
≥34	5	9	8	3	2	4	1	1									48-1	33	108	110	454[illegible]
≥28	20	12	6	4	10	7	5	3	3	1	1	1					72-1	73	289	295	4545
≥20	30	22	33	19	18	12	10	9	7	9	2	3	1	3	4	5	132-1	187	969	986	45[illegible]
≥16	25	20	16	26	31	11	15	12	10	7	7	6	9		2	22	210-1	219	1570	1641	45[illegible]
≥12	23	23	31	20	13	16	12	13	10	13	8	8	9	7	5	47	270-1	258	2395	2634	4642
≥9	11	16	8	6	14	13	10	12	11	10	11	9	6	7	2	70	558-1	216	3157	3557	476[illegible]
≥6	7	4	5	1	6	4	3	5	2	4	5	3	4	3		66	1746-1	122	4340	4988	[illegible]
≥3	3			2	1		1			1		1	1		2	20	SEA-[illegible]	32	3289	5290	[illegible]

HOURS DURATION OF EVENTS

7 — 54.7N 175.9W

Wave height (ft)	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TE	T	T*	TH
≥64																					4545
≥48																	12-1	2	[illegible]	3	4545
≥34	14	12	6	4	5												30-5	41	97	100	4545
≥28	18	5	10	7	16	7	3	2	1								54-1	79	274	279	4547
≥20	35	19	16	18	18	10	7	16	7	7	9		2	1	1	5	[illegible]	[illegible]	904	920	4559
≥16	33	24	18	18	15	11	19	17	15	10	9	9	2	3		18	210-1	221	[illegible]	1573	4572
≥12	31	15	13	8	13	9	17	12	12	18	11	10	9	6	7	45	534-1	236	2407	2533	4665
≥9	20	20	10	11	11	6	12	8	6	10	7	7	7	6	5	75	696-1	221	3191	3457	4717
≥6	8	3	3	5	7	4	1	5	4	4	1	4	2	3	1	69	1146-1	124	4039	4622	5085
≥3	2								1				1		1	18	SEA-6	23	3097	5309	5363

HOURS DURATION OF EVENTS

8 — 54 9N 167 2W

Wave height (ft)	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TE	T	T*	TH
≥64																					4545
≥48																					4545
≥34	2	4	3	3	2	1											36-1	15	47	50	4545
≥28	16	6	7	5	4	3	2			1							60-1	44	131	135	454[illegible]
≥20	23	20	16	17	8	13	6	11	4	3	1	2	2			4	132-1	130	627	646	[illegible]
≥16	20	19	19	23	10	21	14	15	9	9	5	7	6	2	4	8	144-1	191	1235	[illegible]	[illegible]
≥12	23	14	14	15	12	15	16	15	14	10	15	9	8	7	6	35	456-1	228	[illegible]	2219	[illegible]
≥9	20	10	11	15	11	7	6	11	9	7	9	10	12	2	7	78	474-1	225	3054	[illegible]	[illegible]
≥6	11	4	4	9	4	6	1	7	2	1	4	3	4	5	4	75	1272-1	144	3886	433[illegible]	[illegible]
≥3	2	2		3												24	SEA-3	31	2946	5227	5328

HOURS DURATION OF EVENTS

9 — 50.3N 171.3W

Wave height (ft)	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TE	T	T*	TH
≥64																					4545
≥48																					4545
≥34	7	5	9	2	6	1		1									48-1	31	96	99	4545
≥28	15	16	10	7	5	4	7		4	1	1					1	102-1	71	277	282	4545
≥20	30	19	24	19	20	9	7	11	8	7	8	3	3	3		7	144-1	178	991	1016	4567
≥16	26	24	14	26	6	16	18	15	12	13	5	8	6	9	6	18	300-1	231	1686	1746	4578
≥12	23	14	12	14	14	7	14	10	11	13	15	10	9	3	6	54	486-1	229	2674	2801	4631
≥9	6	9	11	9	11	4	6	5	9	3	8	7	2	6	5	78	708-1	179	3515	3844	4810
≥6	9	4	2	4	3	5		5		3	1	1	1	5	2	59	1446-1	104	3970	4951	5340
≥3			1		1											14	SEA-6	16	2830	5433	5478

HOURS DURATION OF EVENTS

10 — 51.8N 167 3W

Wave height (ft)	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TE	T	T*	TH
≥64																					4545
≥48																					4545
≥34	1	5	3	7	2	1											36-1	19	64	66	4545
≥28	13	5	6	8	9	6	4		1								54-1	52	191	194	4545
≥20	25	20	18	14	19	12	6	4	7	6	4	1	3	1	4	3	132-1	147	763	785	[illegible]
≥16	37	18	27	16	15	14	21	12	9	7	9	10	8	3	1	16	168-1	223	1464	1529	[illegible]
≥12	18	16	14	17	10	19	17	19	14	16	7	11	10	6	5	45	468-1	244	2553	2687	46[illegible]
≥9	15	11	11	11	5	9	8	7	12	7	9	9	8	6	8	76	504-1	212	3267	3620	4722
≥6	4	1	2	6	1	5	4	2	2	2	3	3	2	2	2	63	1770-1	104	3969	5010	5409
≥3			1		1	1										14	SEA-4	[illegible]	2544	4988	5043

HOURS DURATION OF EVENTS

11 — 51.3N 158.8W

Wave height (ft)	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TE	T	T*	TH
≥64																					4545
≥48	1	1		1													24-1	3	7	7	4545
≥34	5	1	3	4	2	3											36-3	18	60	60	4545
≥28	10	14	10	10	5	2	1	3	2	1							60-1	58	204	205	4545
≥20	33	17	24	17	18	17	13	10	4	3	6	1	4	1	1	7	132-1	176	919	946	4545
≥16	32	21	26	19	20	20	15	11	13	10	5	6	6	2	6	22	378-1	234	1674	1755	4602
≥12	21	15	14	14	18	13	17	19	7	14	11	13	7	8	5	47	432-1	243	2723	2865	4687
≥9	4	8	12	9	6	9	6	4	9	4	9	6	7	11	6	73	750-1	183	3644	3893	4863
≥6	2	3	3	5	5	1	2	2	1	1		2	2	2	2	58	1470-1	91	4270	4963	5278
≥3			1	1				1					1			14	SEA-3	18	2508	4743	4802

HOURS DURATION OF EVENTS

12 — 54.4N 158 1W

Wave height (ft)	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TE	T	T*	TH
≥64																					4545
≥48	2		1	2													24-2	5	13	13	4545
≥34	3	5	3	4	1	2	2										42-2	20	69	69	4545
≥28	12	11	6	8	7	4	2	4	3								54-3	57	216	220	4545
≥20	18	14	19	14	18	13	11	9	5	7	3	3	1	1	3	5	138-1	144	832	846	4547
≥16	37	25	18	23	22	12	19	9	15	6	9	4	2	1	5	19	162-2	226	1456	1514	4553
≥12	35	18	14	13	20	15	13	15	6	6	10	9	4	6	7	53	516-1	244	2503	2610	4698
≥9	25	13	18	13	8	6	12	7	5	5	7	6	8	6	4	80	528-1	223	3510	3667	480[illegible]
≥6	7	4	4	3	5	3	4	5	2	6		2		3	6	63	948-1	117	3866	4590	5032
≥3			1	1		1				2		1	1			18	SEA-4	25	3274	5428	5492

HOURS DURATION OF EVENTS

1 — 64.1N 166.7W

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥64																5	SEA-5	5	1840	4566	4566
≥48																5	SEA-5	5	1840	4566	4566
≥34																8	SEA-5	8	2406	4937	4944
≥28																13	SEA-4	13	2668	4901	4929
≥20	10	5	3	3		1		2								41	SEA-1	65	3042	4811	5013
≥16	11	2	4	1	1	1	2	1		1	3	2		3	46	SEA-1	78	3099	4292	4693	
≥12	13	11	11	5	3	5	4	5	3	4	4	3	3	4	8	64	648-1	150	3001	3931	4718
≥ 9	45	17	14	10	15	12	6	11	6	11	10	6	3	5	10	57	444-1	238	2749	3000	4645
≥ 6	47	22	20	16	23	13	16	10	15	5	6	6	3	4	3	27	342-1	236	1719	1800	4604
≥ 3	32	16	18	18	11	5	5	4	6	1	2	1	1	1	1	5	150-1	127	574	593	4545

HOURS INTERVAL BETWEEN EVENTS

2 — 63.6N 178.1W

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥64																5	SEA-5	5	1840	4566	4566
≥48																7	SEA-5	7	2274	4804	4808
≥34		1												1		19	SEA-3	21	2878	5041	5094
≥28		1	1	2	1		1				3		1	1		32	SEA-1	43	2706	4644	4782
≥20	11	3	2	3	3	2	3	3	1	2		2	1	1	3	48	1920-1	88	3147	4302	4748
≥16	17	5	4	5	2	8	3	2	2	6	4	2	4	2	4	57	1320-1	127	2987	3951	4721
≥12	32	11	14	3	8	11	8	4	7	3	6	5	7	2	4	66	612-1	191	2861	3219	4625
≥ 9	32	18	25	15	11	10	19	9	7	8	11	3	7	7	6	44	516-1	232	2307	2467	4627
≥ 6	36	20	19	21	16	7	8	7	14	5	3	7	3	5	4	20	270-1	195	1370	1432	4601
≥ 3	30	20	13	12	10	11	10	3	2	1	2	2		1	1		90-1	118	470	488	4554

HOURS INTERVAL BETWEEN EVENTS

3 — 59.4N 172.0W

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥64																5	SEA-5	5	1840	4566	4566
≥48																7	SEA-5	7	2532	5062	5065
≥34								3				1				15	SEA-2	19	2143	4645	4681
≥28		3		1	1		2	1	1		1	1				39	1386-1	50	3066	4568	4737
≥20	8	3	4	4	3	4	4	4	5	3	2	5	4	3	1	69	1158-1	126	3083	3992	4665
≥16	13	9	9	8	5	13	4	6	11	5	5	4	6	6	3	69	546-1	176	2919	3485	4687
≥12	18	11	21	19	16	8	8	10	2	13	7	5	5	4	5	56	414-1	208	2427	2715	4662
≥ 9	25	20	23	9	21	11	13	13	10	9	4	4	5	6	7	24	306-1	204	1661	1875	4611
≥ 6	33	28	20	26	23	7	3	8	4	2	6	4	4	1	1	9	270-1	179	945	1002	4549
≥ 3	22	16	9	6	3	2	5	1		1	1					1	108-1	67	214	217	4545

HOURS INTERVAL BETWEEN EVENTS

4 — 58.0N 167.0W

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥64																5	SEA-5	5	1840	4566	4566
≥48																7	SEA-5	7	2170	4700	4702
≥34					1	2	1	1			1					13	SEA-2	19	2293	4658	4709
≥28	4		3	1	2	1			1	2		2				33	1482-1	49	2845	4553	4701
≥20	11	4	6	4	5	3	8	4	5	1	2	3	2	6	5	68	972-1	137	3137	4031	4664
≥16	14	9	15	6	10	14	10	5	7	4	6	4	8	8	2	69	474-1	191	2931	3461	4645
≥12	19	19	15	17	21	15	18	8	10	7	10	6	14	6	4	41	432-1	230	2327	2604	4600
≥ 9	32	35	18	21	17	13	15	10	5	6	7	3	4	6	5	24	306-1	221	1567	1723	4581
≥ 6	38	31	20	20	5	7	5	10	2	4	4	9	2			3	138-2	160	722	743	4554
≥ 3	11	9	4	4	3	1		1	1							1	96-1	34	102	104	4545

HOURS INTERVAL BETWEEN EVENTS

5 — 56.8N 174.8E

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥64																5	SEA-5	5	1840	4566	4566
≥48									1							6	SEA-5	7	2089	4811	4815
≥34			1					1								21	SEA-2	23	2467	4936	5023
≥28	3	2	1	2			2	1	4		1	2		1		45	1914-1	64	3067	4477	4754
≥20	6	8	7	8	9	10	3	8	9	3	6	7	8	3	6	59	894-1	160	3075	3613	4613
≥16	15	7	15	10	14	6	10	10	8	11	11	9	2	3	5	63	456-1	199	2693	2901	4595
≥12	16	20	21	17	16	15	19	9	6	12	8	7	3	7	6	36	246-1	218	1911	2011	4571
≥ 9	25	24	19	16	12	16	6	4	6	6	7	3	7	4	2	15	228-1	172	1128	1208	4545
≥ 6	26	22	17	12	14	6	7	7	3	5	1	2	1	1	1	1	96-1	126	550	575	4545
≥ 3	17	5	7	2		2											42-2	33	70	81	4545

HOURS INTERVAL BETWEEN EVENTS

6 — 52.0N 172.9E

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥64																6	SEA-6	6	2208	4930	4931
≥48			1							1						6	SEA-5	8	1984	4568	4815
≥34	2		2					1				2				26	SEA-1	33	3152	4882	4992
≥28	5	3	2	2	4	1		1	2	1	1					52	SEA-1	74	3050	4413	4768
≥20	11	15	1	11	13	10	6	5	9	8	2	7	5	3	5	76	600-1	187	3295	3675	4651
≥16	14	24	22	11	7	10	14	11	8	4	4	9	11	6	8	60	558-1	223	2738	3002	4618
≥12	42	20	35	26	21	18	10	4	13	10	8	8	6	8	2	31	288-1	262	1938	2031	4568
≥ 9	51	31	28	19	15	10	14	7	9	6	7	3	3	4	4	10	174-1	221	1176	1217	4555
≥ 6	34	26	9	16	7	12	6	7	1	1	4	1		1			84-1	125	471	478	4545
≥ 3	12	6	7	4	1		1		1								54-1	32	82	82	4545

HOURS INTERVAL BETWEEN EVENTS

7 — 54.7N 175.9W

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥64																5	SEA-5	5	1840	4566	4566
≥48																7	SEA-5	7	2200	4926	4929
≥34	3				1	1			2	1		1	2			29	SEA-1	41	2863	4635	4735
≥28	7	2	1	1	1	3	2	1	1	4	3	1	1	1	2	48	SEA-1	79	3490	4749	5026
≥20	13	15	8	4	9	4	9	8	1	6	3	2	2	7	6	74	846-1	170	3238	3817	4723
≥16	21	13	15	19	15	10	11	7	11	6	4	7	5	3	10	63	468-1	220	2641	3086	4632
≥12	31	29	17	23	19	9	10	13	10	6	5	8	11	7	5	32	444-1	235	1963	2188	4601
≥ 9	40	32	27	27	15	16	14	10	10	6	1	5	1	1	3	12	306-1	220	1233	1287	4572
≥ 6	31	28	20	17	9	5	2	5	1		2	1	2	1		1	126-1	125	448	463	4545
≥ 3	8	8	2	1			1		1								60-1	21	52	54	4545

HOURS INTERVAL BETWEEN EVENTS

8 — 54.9N 167.2W

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥64																5	SEA-5	5	1840	4566	4566
≥48																5	SEA-5	5	1840	4566	4566
≥34							2	1								16	SEA-3	19	2737	5235	5286
≥28	2	3		1	3		1	1		1			2		1	31	1464-1	46	2848	4737	4872
≥20	4	11	5	1	2	5	4	6	3	4	3	6	2		1	73	672-1	130	3226	4084	4775
≥16	17	10	8	9	15	10	11	6	6	5	9	2	6	5	7	65	444-1	191	2770	3378	4629
≥12	23	26	16	19	24	15	12	12	6	5	9	2	7	7	3	43	420-1	229	2161	2487	4617
≥ 9	45	35	23	16	14	19	6	9	9	3	3	8	5	6	4	18	282-1	223	1410	1498	4566
≥ 6	39	29	19	20	5	7	5	5	3	1	1	3				5	150-1	142	567	615	4548
≥ 3	14	11	1	4	2							1					72-1	33	77	105	4545

HOURS INTERVAL BETWEEN EVENTS

9 — 50.3N 171.3W

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥64																5	SEA-5	5	1840	4566	4566
≥48																5	SEA-5	5	1840	4566	4566
≥34	2		1		1	2	1	1								24	SEA-1	33	2829	4753	4852
≥28	5	5	1	3		1	1	1	1	1			1	1	1	51	1554-1	73	3671	4847	5129
≥20	20	5	9	9	7	4	12	6	9	10	4	2	3	2	4	70	834-1	176	3018	3752	4746
≥16	20	24	22	15	14	14	7	10	11	3	11	4	8	4	10	54	396-1	231	2509	2950	4663
≥12	35	26	20	29	22	12	10	15	3	11	5	8	4	2	2	23	372-1	227	1645	1866	4581
≥ 9	40	30	21	21	14	8	3	5	4	7	4	2	3	2	5	7	168-1	176	887	978	4557
≥ 6	35	19	13	9	5	4	6	5	2	1	1	1				1	96-1	102	346	389	4545
≥ 3	5	4	4	2	1	1											36-1	17	44	45	4545

HOURS INTERVAL BETWEEN EVENTS

10 — 51.8N 167.3W

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥64																5	SEA-5	5	1840	4566	4566
≥48																6	SEA-5	6	2170	4700	4701
≥34						3		1								20	SEA-1	24	2615	4831	4847
≥28	2	2		3	1	1	2	1						1	2	39	1434-1	54	3311	4911	5004
≥20	14	11	5	4	8	4	10	4	4	6	6		5	4	1	63	732-1	149	3159	3892	4672
≥16	22	17	18	14	16	16	8	12	10	8	4	3	4	5	1	66	636-1	224	2657	3142	4662
≥12	37	27	28	27	12	18	15	11	4	8	3	7	5	7	6	29	318-1	244	1820	2009	4567
≥ 9	46	37	30	26	7	16	9	9	7	4	2	2	2	2	2	10	198-2	210	1028	1111	4560
≥ 6	35	26	10	7	7	4	3	3	2		2	1		1		2	120-1	103	351	399	4545
≥ 3	6	3	1	2	2		3										42-3	17	54	55	4545

HOURS INTERVAL BETWEEN EVENTS

11 — 51.3N 158.8W

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥64																5	SEA-5	5	1840	4566	4566
≥48																8	SEA-4	8	2009	4735	4742
≥34					1	1										19	SEA-1	21	2489	4841	4901
≥28		3	2	1	2	2				1	2	2	1			45	1476-1	61	3355	4764	4969
≥20	13	12	12	8	8	9	10	8	6	6	6	4	6	3	4	63	690-2	178	3177	3776	4722
≥16	24	28	21	18	16	16	14	10	6	9	5	3	5	3	2	60	414-1	240	2645	2943	4641
≥12	35	38	26	24	21	15	12	8	10	10	5		3	2	6	26	294-2	241	1691	1880	4603
≥ 9	43	29	27	14	16	12	4	7	3	2	6	7	3	1		10	270-1	184	972	1009	4584
≥ 6	35	18	7	10	6	1	3	2	2	2	1	2	1		1	1	102-1	92	323	330	4560
≥ 3	5	2	4	2		2	1						1				84-1	17	62	62	4548

HOURS INTERVAL BETWEEN EVENTS

12 — 54.4N 158.1W

WAVE HEIGHT	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96+	MAX	TI	T	Te	TH
≥64																5	SEA-5	5	1840	4566	4566
≥48																10	SEA-5	10	2737	5279	5292
≥34					1		1					1				20	SEA-1	23	2449	4721	4790
≥28		2	2	2			1		1		3	1	1	1	1	42	1860-1	57	3016	4637	4857
≥20	7	8	5	5	6	8	7		6	4	7	3	2	4	2	69	816-1	143	3187	3852	4696
≥16	21	17	22	19	17	11	12	9	8	9	4	4	3	4	4	61	390-1	225	2768	3189	4695
≥12	32	33	26	25	18	13	5	11	10	10	8	1	3	6	2	40	318-1	243	1976	2156	4613
≥ 9	53	35	30	25	16	16	5	4	8	7	4	5	2	1	1	11	198-1	223	1086	1147	4552
≥ 6	35	27	16	7	7	6	8	2	3	2	1		1	2		2	108-2	119	443	448	4551
≥ 3	9	7	4	3				1	1								54-1	25	64	64	4545

HOURS INTERVAL BETWEEN EVENTS

1 — 64.1N 166.7W

WAVE HEIGHT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	∞ MAX	TE	T	Te	TH
≥64																													17219
≥48	1																								1	1	1		17219
≥34	1	1	2	1	1																				2-1	6	19		19	17219
≥28	5	2	5	2	2																				2-1	16	45		50	17219
≥20	44	19	12	12	19	4		1																	5-1	111	338		348	17219
≥16	44	25	18	16	45	13	3	3	1																7-1	168	758		772	17219
≥12	180	51	44	23	72	36	10	11	8																10-1	435	1858		1902	17219
≥ 9	178	56	66	37	37	86	51	21	25	2															12-1	659	4252		4349	17219
≥ 6	160	51	48	44	38	88	70	37	64	28	2	1													36-1	731	7708		8116	17219
≥ 3	80	42	30	28	95	66	44	33	83	35	16	8	3	1											121-1	564	11449		12834	17219

25 5 75 1 2 3 4 5 10 20 30 60 90 180 360 ∞ MAX TE T Te TH

DAYS DURATION OF EVENTS

2 — 63.6N 178.1W

WAVE HEIGHT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	∞ MAX	TE	T	Te	TH
≥64																													17219
≥48	2	1		1																					1-1	4	8	9	17219
≥34	8	6	6	6	4	1																			3-1	31	97	100	17219
≥28	20	13	16	6	16	3	1																		4-1	75	256	264	17219
≥20	68	20	21	22	52	27	3	1																	5-1	214	915	934	17219
≥16	61	27	38	22	90	41	8	10	6																7-1	303	1766	1800	17219
≥12	123	37	33	26	113	65	35	21	22	2															11-1	477	3331	3455	17219
≥ 9	151	51	52	33	122	79	49	27	60	5	1														21-1	630	5340	5652	17219
≥ 6	108	41	42	27	84	96	77	38	83	28	5	1													31-1	630	8233	8959	17219
≥ 3	60	38	28	25	83	52	50	43	105	40	17	11													52-1	552	11457	13129	17219

25 5 75 1 2 3 4 5 10 20 30 60 90 180 360 ∞ MAX TE T Te TH

DAYS DURATION OF EVENTS

3 — 59.4N 172.0W

WAVE HEIGHT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	∞ MAX	TE	T	Te	TH
≥64																													17217
≥48		2																							1-2	2	4	6	17217
≥34	11	10	9	5	3	1																			2-1	39	106	115	17217
≥28	18	20	23	16	27	2		1																	5-1	107	387	398	17217
≥20	42	34	42	36	98	35	12	2	2																8-1	303	1601	1623	17217
≥16	48	51	36	43	137	70	23	9	16																9-1	433	2939	2982	17217
≥12	67	34	40	37	167	103	44	29	34	6															18-1	561	4930	5068	17217
≥ 9	44	25	40	32	136	113	69	37	74	12	4														26-1	586	7109	7460	17217
≥ 6	64	30	33	30	118	95	63	42	92	50	3	4													42-1	624	9798	10603	17217
≥ 3	41	26	21	16	49	30	42	26	67	47	20	13	4	1											95-1	394	12164	14649	17217

25 5 75 1 2 3 4 5 10 20 30 60 90 180 360 ∞ MAX TE T Te TH

DAYS DURATION OF EVENTS

4 — 58.0N 167.0W

WAVE HEIGHT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	∞ MAX	TE	T	Te	TH
≥64																													17219
≥48	2	1	2																						1-2	5	10	11	17219
≥34	12	7	5	10	7	1																			3-1	42	132	136	17219
≥28	25	25	26	20	24	3	1																		3-1	124	419	424	17219
≥20	55	48	54	33	105	34	8	5	2																8-1	344	1729	1742	17219
≥16	59	55	38	44	159	64	32	15	8	1															13-1	475	3115	3163	17219
≥12	61	43	52	43	164	122	50	28	37	6															16-1	606	5347	5508	17219
≥ 9	57	37	38	42	153	108	70	46	76	21	2	1													35-1	651	7817	8160	17219
≥ 6	59	23	30	29	88	90	72	50	103	36	11	7													60-1	598	10861	11614	17219
≥ 3	38	23	14	11	39	36	32	15	69	28	13	13	3	3	1										201-1	338	11679	15603	17219

25 5 75 1 2 3 4 5 10 20 30 60 90 180 360 ∞ MAX TE T Te TH

DAYS DURATION OF EVENTS

5 — 56.8N 174.8E

WAVE HEIGHT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	∞ MAX	TE	T	Te	TH
≥64																													17219
≥48	2	1	2	1																					1-1	6	14	14	17219
≥34	17	14	9	15	25	3		1																	5-1	84	335	337	17219
≥28	29	27	26	18	49	14	4	3	3																7-1	173	852	862	17219
≥20	47	32	43	39	128	53	26	5	13																10-1	386	2606	2656	17219
≥16	50	36	40	32	147	80	37	20	35	4															13-2	481	4162	4330	17219
≥12	52	32	37	38	132	105	37	28	62	21	2														23-1	546	6363	6711	17219
≥ 9	58	29	33	21	108	74	61	39	75	26	12	2													36-1	538	8341	9052	17219
≥ 6	48	45	26	20	90	51	51	48	69	42	10	7	3												83-1	510	10336	11977	17219
≥ 3	45	16	15	9	38	31	26	11	58	34	5	11	2	3	1										229-1	305	10286	15295	17219

25 5 75 1 2 3 4 5 10 20 30 60 90 180 360 ∞ MAX TE T Te TH

DAYS DURATION OF EVENTS

6 — 52.0N 172.9C

WAVE HEIGHT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	∞ MAX	TE	T	Te	TH
≥64	1																												
≥48	4	2	3																						1-3	9	17	17	
≥34	19	29	20	9	24	1																			2-1	102	324	331	
≥28	45	32	22	19	61	12	4	2																	5-2	197	628	650	
≥20	71	62	66	40	211	53	24	7	8																9-1	452	2046	2097	
≥16	67	50	47	65	161	90	37	16	33																10-1	566	4191	4331	
≥12	75	61	62	46	155	100	71	36	59	12															16-1	677	6515	6742	
≥ 9	54	53	27	31	153	109	66	43	79	34	5	1													34-1	655	8943	9[illegible]	
≥ 6	55	25	30	19	87	64	42	33	92	38	16	9	2												73-1	514	11242	12579	
≥ 3	36	16	7	8	32	29	27	15	57	41	5	8	2	6											173-1	284	10832	15635	

25 5 75 1 2 3 4 5 10 20 30 60 90 180 360 ∞ MAX TE T Te TH

DAYS DURATION OF EVENTS

7 — 54.7N 175.9W

WAVE HEIGHT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	∞ MAX	TE	T	Te	TH
≥64																													17219
≥48	1	1		1																					1-1	3	7	7	17219
≥34	23	18	12	9	13	2																			3-2	77	226	233	17219
≥28	47	33	23	15	51	6	3																		4-1	178	641	650	17219
≥20	76	47	43	54	119	51	18	5	5																7-1	418	2240	2261	17219
≥16	73	60	45	43	156	95	32	14	22																10-1	540	3787	3893	17219
≥12	73	48	49	45	126	134	61	41	50	8	1														22-1	636	6134	6395	17219
≥ 9	82	48	38	40	141	104	76	37	88	32	3														29-1	689	8653	9208	17219
≥ 6	71	28	32	25	89	64	58	42	88	49	12	10													49-1	568	11209	12441	17219
≥ 3	23	11	8	5	36	26	18	15	59	34	9	7	1	5	1										254-1	258	10454	15708	17219

25 5 75 1 2 3 4 5 10 20 30 60 90 180 360 ∞ MAX TE T Te TH

DAYS DURATION OF EVENTS

8 — 54.9N 167.2W

WAVE HEIGHT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	∞ MAX	TE	T	Te	TH
≥64																													
≥48																													
≥34	11	11	12	4	4																				2-1	42	106	109	
≥28	29	24	25	17	24	3																			3-1	122	369	406	
≥20	48	50	39	40	110	34	12	2	1																6-1	336	1102	1162	
≥16	71	46	59	46	164	79	23	17	7	1															8-1	513	3247	3329	
≥12	75	37	53	48	170	126	65	28	43	6															19-1	651	5764	5914	
≥ 9	73	34	40	38	149	127	71	55	80	31															20-1	648	8455	8685	
≥ 6	50	26	31	30	93	64	76	46	112	48	13	4													53-1	594	11240	12364	
≥ 3	31	23	7	13	25	18	23	23	54	31	10	11	5	3											169-1	277	10362	15709	

25 5 75 1 2 3 4 5 10 20 30 60 90 180 360 ∞ MAX TE T Te TH

DAYS DURATION OF EVENTS

9 — 50.3N 171.3W

WAVE HEIGHT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	∞ MAX	TE	T	Te	TH
≥64																													17218
≥48	2	1																							1-1	4	7	9	17218
≥34	16	11	13	7	19																				2-3	66	218	231	17218
≥28	40	38	17	18	37	11	1	2																	5-1	164	623	642	17218
≥20	75	53	63	48	126	51	16	5	8																7-2	445	2369	2438	17218
≥16	82	71	39	57	170	95	42	23	22	2															13-1	603	4315	4444	17218
≥12	71	50	48	39	139	133	65	51	64	13	1														20-1	674	7062	7409	17218
≥ 9	63	47	42	33	113	99	67	44	86	45	9	1													38-1	649	9638	10428	17218
≥ 6	34	24	14	15	83	47	59	33	88	47	15	12	1												60-1	472	11427	13628	17218
≥ 3	11	9	6	3	17	13	14	12	42	30	11	8	2	4	1										205-1	183	9469	16201	17218

25 5 75 1 2 3 4 5 10 20 30 60 90 180 360 ∞ MAX TE T Te TH

DAYS DURATION OF EVENTS

10 — 51.8N 167.3W

WAVE HEIGHT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	∞ MAX	TE	T	Te	TH
≥64																													
≥48		1	1																						1-1	2	5	9	
≥34	13	9	10	9	9																				2-3	50	153	165	
≥28	36	24	24	18	37	7																			3-1	148	512	534	
≥20	59	51	43	44	127	41	17	5	3																7-1	390	2054	2101	
≥16	82	57	50	51	180	83	34	26	18																8-1	581	3965	4088	
≥12	68	46	45	39	155	126	32	39	65	8															20-1	677	6858	7145	
≥ 9	66	42	34	41	109	116	80	51	98	38	1	1													32-1	677	9340	10056	
≥ 6	33	25	21	24	77	53	58	45	88	56	13	7	1												74-1	501	11591	13433	
≥ 3	15	2	11	6	22	15	9	11	44	30	13	10	1	1	1										241-1	191	8317	16199	

25 5 75 1 2 3 4 5 10 20 30 60 90 180 360 ∞ MAX TE T Te TH

DAYS DURATION OF EVENTS

11 — 51.3N 158.8W

WAVE HEIGHT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	∞ MAX	TE	T	Te	TH
≥64																													
≥48	2	4	1	1	1																				1-1	9	22	22	
≥34	17	12	13	10	14			1																	4-1	67	211	211	
≥28	26	30	30	33	43	10	1																		4-1	173	668	673	
≥20	76	47	65	39	140	56	21	12	4																6-1	460	2587	2639	
≥16	78	64	67	55	170	100	45	23	26	1															16-1	629	4519	4660	
≥12	67	48	56	55	178	127	62	43	63	17															18-1	716	7393	7687	
≥ 9	42	40	33	31	121	95	84	51	87	45	4	3													35-1	636	9984	10628	
≥ 6	29	20	27	22	85	67	46	39	76	51	13	16	2												64-1	493	12155	13763	
≥ 3	10	3	5	5	9	8	10	12	39	25	11	12	3	2	1										241-1	155	8930	16321	

25 5 75 1 2 3 4 5 10 20 30 60 90 180 360 ∞ MAX TE T Te TH

DAYS DURATION OF EVENTS

12 — 54.4N 158.1W

WAVE HEIGHT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	∞ MAX	TE	T	Te	TH
≥64																													
≥48	4	2	1	3	1																				1-1	11	28	28	
≥34	12	17	10	15	11		1																		3-1	66	215	219	
≥28	31	27	21	26	52	9	1																		4-1	167	663	667	
≥20	56	47	38	43	153	53	19	6	6																6-2	398	2323	2357	
≥16	93	65	53	44	161	93	29	28	21																9-1	587	4010	4114	
≥12	82	54	44	43	174	106	62	47	70	4	1														22-1	691	6747	6951	
≥ 9	80	52	50	45	124	80	80	49	108	34	4														22-1	706	9465	9881	
≥ 6	62	36	24	17	98	56	59	42	88	47	16	11	1												65-1	557	11653	13119	
≥ 3	23	9	2	8	20	18	13	23	36	34	10	18	2	2	1										197-1	219	10325	16162	

25 5 75 1 2 3 4 5 10 20 30 60 90 180 360 ∞ MAX TE T Te TH

DAYS DURATION OF EVENTS

1 — 64.1N 166.7W

WAVE HEIGHT ft	.25	5	75	1	2	3	4	5	10	20	30	60	90	180	360	∞	MAX	TI	T	T*	TH
≥64																				17219	17219
≥48																				17218	17219
≥34											1	2					51−1	3	526	17200	17219
≥28						1	1			1	2	2					48−1	7	613	17169	17219
≥20	15	6	4	5	3	5	3	7	10	13	5	11	6				87−1	93	5375	16871	17219
≥16	17	7	5	5	9	13	6	7	18	32	9	13	4	2			149−1	147	8168	16447	17219
≥12	58	32	31	11	51	38	27	23	73	40	10	5	4	3			159−1	406	11151	15317	17219
≥9	138	35	38	24	104	79	47	29	81	45	3	10	3	1			132−1	637	11113	12870	17219
≥6	156	59	51	42	148	93	48	22	69	18	10	6					45−1	722	8342	9103	17219
≥3	121	70	68	39	125	66	29	19	36	9							16−1	582	4247	4385	17219

DAYS INTERVAL BETWEEN EVENTS

2 — 63.6N 178.1W

WAVE HEIGHT ft	.25	5	75	1	2	3	4	5	10	20	30	60	90	180	360	∞	MAX	TI	T	T*	TH
≥64																				17219	17219
≥48							1					2					49−1	3	328	17210	17219
≥34		2				1	2	1	1	3	4	4	1				69−1	19	1670	17119	17219
≥28		1	1	3	4	5	6	2	7	10	8	9	2				63−1	58	3851	16955	17219
≥20	21	10	6	7	21	14	10	8	26	38	13	10	1	3			157−1	188	8506	16285	17219
≥16	31	9	14	8	34	22	21	21	45	48	13	6	4	2			133−1	278	9758	15419	17219
≥12	65	20	37	11	70	50	43	18	77	44	14	7	1	1			132−1	458	10500	13764	17219
≥9	106	40	45	39	105	76	49	23	80	36	12	7	1	1			115−1	620	10295	11567	17219
≥6	111	61	53	37	113	73	50	35	62	29	3	5					56−1	632	7725	8260	17219
≥3	113	69	57	44	147	58	23	17	35	4							12−1	567	3924	4090	17219

DAYS INTERVAL BETWEEN EVENTS

3 — 59.4N 172.0W

WAVE HEIGHT ft	.25	5	75	1	2	3	4	5	10	20	30	60	90	180	360	∞	MAX	TI	T	T*	TH
≥64																				17217	17217
≥48													1				83−1	1	330	17211	17217
≥34			1		2	4	1		5	3	5	6		1			109−1	28	2212	17102	17217
≥28	1	3	1	2	9	5	5	3	15	20	12	9	1				63−1	86	4759	16819	17217
≥20	15	12	9	7	43	32	26	18	57	40	9	6	2	2			168−1	278	9101	15594	17217
≥16	32	18	17	20	70	56	36	32	66	41	12	4	3	3			149−1	410	10950	14235	17217
≥12	52	32	45	37	106	61	40	32	79	41	7	8	4				89−1	544	10761	12149	17217
≥9	49	54	49	29	136	74	51	24	68	25	10	7					57−1	576	8721	9757	17217
≥6	89	76	70	56	122	66	40	26	55	23	2						23−1	627	6154	6614	17217
≥3	91	54	48	41	87	42	23	14	12	2							11−1	414	2491	2568	17217

DAYS INTERVAL BETWEEN EVENTS

4 — 58.0N 167.0W

WAVE HEIGHT ft	.25	5	75	1	2	3	4	5	10	20	30	60	90	180	360	∞	MAX	TI	T	T*	TH
≥64																				17219	17219
≥48										1			1				69−1	2	330	17208	17219
≥34					6	2			3	6	3	8		1			114−1	29	2638	17084	17219
≥28	6	3	4	3	6	9	3	1	11	32	8	11	2	3			179−1	102	6863	16795	17219
≥20	25	9	13	7	43	31	21	24	66	47	15	6	5	3			167−2	315	11672	15477	17219
≥16	32	22	23	15	82	45	50	31	74	54	13	4	2	3			142−2	450	11830	14056	17219
≥12	51	39	40	38	127	81	49	38	68	42	9	6	3				81−1	591	10434	11711	17219
≥9	74	59	60	56	140	73	47	28	62	31	8	2	1				72−1	641	8241	9059	17219
≥6	118	78	62	58	111	59	35	22	44	14	1	2					34−1	604	5240	5605	17219
≥3	97	47	43	30	77	30	19	10	6								10−1	359	1855	1916	17219

DAYS INTERVAL BETWEEN EVENTS

5 — 56.8N 174.8E

WAVE HEIGHT ft	.25	5	75	1	2	3	4	5	10	20	30	60	90	180	360	∞	MAX	TI	T	T*	TH
≥64																				17219	17219
≥48						1						1	1				63−1	3	406	17205	17219
≥34	3	1		2	3	3	5	6	10	13	7	9	2	1			106−1	65	4313	16882	17219
≥28	6	5	4	4	17	17	12	7	28	31	11	8	1	1	1		216−1	153	7272	16357	17219
≥20	21	20	20	15	65	49	32	27	51	45	6	6	3	4			157−1	364	10292	14563	17219
≥16	43	29	31	21	88	65	34	38	75	28	5	6	2	3			156−1	468	10081	12889	17219
≥12	41	50	47	30	113	73	56	25	59	27	11	5	3				73−1	540	9016	10508	17219
≥9	75	50	33	43	122	67	36	27	41	31	10	4					44−1	539	7298	8167	17219
≥6	90	52	60	40	109	49	37	26	44	15	2						28−1	524	4921	5242	17219
≥3	74	41	41	24	80	24	20	10	9								9−2	323	1851	1924	17219

DAYS INTERVAL BETWEEN EVENTS

6 — 52.0N 172.9E

WAVE HEIGHT ft	.25	5	75	1	2	3	4	5	10	20	30	60	90	180	360	∞	MAX	TI	T	T*	TH
≥64																				17218	17219
≥48			1			1							1				70−1	3	295	17202	17219
≥34	3	3	3	1	5	7	6	3	10	20	5	[illegible]	3				67−1	82	5309	16888	17219
≥28	12	8	5	6	19	13	12	9	28	44	11	6	1	1	1		181−1	176	7632	16369	17219
≥20	33	27	10	21	77	49	38	33	75	45	11	6	1	4			166−1	430	11591	14622	17219
≥16	49	48	42	36	89	63	63	34	74	30	9	10	1	3			109−1	551	10993	12888	17219
≥12	89	62	69	47	124	80	56	29	67	30	16	4					58−1	673	9355	10267	17219
≥9	116	76	60	53	131	68	45	15	65	29	3	3					36−1	664	7158	7609	17219
≥6	92	77	42	42	115	54	35	19	48	7							13−1	531	4347	4640	17219
≥3	80	[illegible]	43	30	56	32	16	5	2	1							12−1	310	1540	1584	17219

DAYS INTERVAL BETWEEN EVENTS

7 — 54.7N 175.9W

WAVE HEIGHT ft	.25	5	75	1	2	3	4	5	10	20	30	60	90	180	360	∞	MAX	TI	T	T*	TH
≥64																				17219	17219
≥48												1					31−1	1	122	17212	17219
≥34	4	1	2	1	2	5	6	1	7	14	7	5	2	1			98−1	58	3645	16986	17219
≥28	12	6	3	2	12	14	16	7	29	30	12	7			1		207−1	151	6272	16569	17219
≥20	33	29	20	10	60	39	37	22	74	48	10	4	3	2			169−1	391	10654	14958	17219
≥16	49	32	36	34	98	63	41	38	69	43	7	7	4	1			104−1	522	10650	13326	17219
≥12	[illegible]	67	36	49	132	72	49	39	63	37	8	4	2				83−1	630	9481	10924	17219
≥9	109	78	64	64	142	78	40	25	57	29	2	4					41−1	692	7412	8011	17219
≥6	108	81	66	50	118	63	32	18	34	11	1						30−1	582	4493	4778	17219
≥3	67	41	32	34	48	31	15	7	6								6−2	281	1466	1511	17219

DAYS INTERVAL BETWEEN EVENTS

8 — 54.9N 167.2W

WAVE HEIGHT ft	.25	5	75	1	2	3	4	5	10	20	30	60	90	180	360	∞	MAX	TI	T	T*	TH
≥64																				[illegible]	[illegible]
≥48																				17216	[illegible]
≥34	1	1			4	1	1		3	5	1	10	2	1			102−1	30	3174	17098	[illegible]
≥28	3	3	2	3	13	2	6	7	16	20	14	8	4	1			179−1	[illegible]	6665	[illegible]	[illegible]
≥20	11	25	10	4	41	38	15	18	63	58	15	5	4	1	1		189−1	309	11239	[illegible]	[illegible]
≥16	55	21	20	24	88	54	49	37	78	48	8	4	5	1			134−1	492	11322	13888	[illegible]
≥12	62	56	50	42	140	68	56	32	73	43	8	6	1				70−1	[illegible]	[illegible]	11243	[illegible]
≥9	106	82	63	59	124	84	48	38	57	28	3	2	1				70−1	695	7745	8356	[illegible]
≥6	112	96	59	59	117	52	32	27	35	9	1						24−1	599	4497	4858	[illegible]
≥3	67	58	32	28	67	26	9	5	4								8−1	296	1411	1508	[illegible]

DAYS INTERVAL BETWEEN EVENTS

9 — 50.3N 171.3W

WAVE HEIGHT ft	.25	5	75	1	2	3	4	5	10	20	30	60	90	180	360	∞	MAX	TI	T	T*	TH
≥64																				17218	17218
≥48												1					35−1	1	139	17209	17218
≥34	2			1	10	2	3	3	6	5	7	6	3				83−1	48	3323	16987	17218
≥28	8	5	4	5	9	9	8	9	31	19	14	17	2	1	1		222−1	142	8822	16576	17218
≥20	37	20	17	15	62	53	40	26	81	47	11	8	3	2			167−1	422	11554	14780	17218
≥16	64	44	47	33	106	78	47	38	73	36	11	8	2	2			131−1	589	11231	12774	17218
≥12	89	74	55	54	138	77	45	26	69	31	5	5	1				76−1	669	8754	9809	17218
≥9	115	81	54	52	128	76	42	28	57	16	5	1					35−1	655	6383	6790	17218
≥6	101	69	49	46	95	49	34	21	20	7							14−1	491	3420	3590	17218
≥3	33	40	29	21	56	16	4	3	3								6−2	205	987	1017	17218

DAYS INTERVAL BETWEEN EVENTS

10 — 51.8N 167.3W

WAVE HEIGHT ft	.25	5	75	1	2	3	4	5	10	20	30	60	90	180	360	∞	MAX	TI	T	T*	TH
≥64																				17218	17218
≥48												1	1				83−1	2	469	[illegible]	[illegible]
≥34	2				8		2	3	6	4	3	5	4	1			98−1	38	[illegible]	[illegible]	17218
≥28	6	2	4	6	11	5	8	4	22	25	13	16	1	1			180−1	124	7801	16684	17218
≥20	30	20	14	12	50	40	30	20	71	52	13	8	4	2			156−1	366	11397	[illegible]	17218
≥16	54	30	31	38	111	68	49	43	83	40	6	7	3	1			95−1	564	11091	13130	17218
≥12	80	69	60	47	136	81	49	34	61	33	9	5	2				70−1	666	9131	10073	17218
≥9	113	79	75	59	140	63	43	32	51	18	3	3					56−1	679	6628	7162	17218
≥6	112	77	55	45	88	52	35	19	23	7							20−1	513	3583	3785	17218
≥3	45	38	26	27	54	13	9		4								6−1	216	995	1019	17218

DAYS INTERVAL BETWEEN EVENTS

11 — 51.3N 158.8W

WAVE HEIGHT ft	.25	5	75	1	2	3	4	5	10	20	30	60	90	180	360	∞	MAX	TI	T	T*	TH
≥64																				17218	17219
≥48	1		1						1			1		1			111−1	5	598	17197	17219
≥34		1		1	3	1	2	1	12	14	8	7		1	1		248−1	52	4461	17008	17219
≥28	5	7	5	2	16	12	10	7	31	29	13	10	2	3			169−1	152	8272	16546	17219
≥20	29	35	23	23	66	51	30	29	83	46	11	4	2	5			166−1	439	11877	14580	17219
≥16	59	53	47	42	122	72	47	32	86	41	2	9	4	1			131−1	617	11240	12559	17219
≥12	83	89	69	57	145	81	49	29	71	30	4	3	2				72−1	712	8785	9532	17219
≥9	115	78	61	44	144	70	40	19	42	23	3	3					51−1	642	6284	6591	17219
≥6	106	89	54	41	101	51	18	18	25	6							17−1	509	3348	3456	17219
≥3	44	27	34	15	32	16	4	1	6								10−1	179	856	898	17219

DAYS INTERVAL BETWEEN EVENTS

12 — 54.4N 158.1W

WAVE HEIGHT ft	.25	5	75	1	2	3	4	5	10	20	30	60	90	180	360	∞	MAX	TI	T	T*	TH
≥64																				17219	17219
≥48									1			2		1			116−1	4	754	17191	17219
≥34		1	1		4	2		1	8	12	7	8	4	2			180−1	50	5184	17004	17219
≥28	3	4	5	6	7	13	8	7	33	32	11	8	2	3			179−1	142	8119	16552	17219
≥20	25	23	12	10	57	39	26	23	70	63	14	5	4	3			144−1	374	12041	14862	17219
≥16	51	40	38	35	102	47	48	35	80	54	9	6	3	1			112−1	569	11408	13105	17219
≥12	73	74	67	47	127	83	52	31	79	33	7	4	2				72−1	679	9414	10268	17219
≥9	114	85	75	59	150	87	28	20	63	21	2	3					36−1	707	6850	7338	17219
≥6	117	88	65	49	117	56	37	12	24	5	3						29−1	573	3942	4100	17219
≥3	64	50	33	26	39	14	6	4	3	1							11−1	240	1026	1057	17219

DAYS INTERVAL BETWEEN EVENTS

Set 24. Annual maximum wind and wave for selected return periods (Refer to introductory text of Section II for additional information.)

Annual Maximum Winds for Selected Return Periods

Values oif the annual maximum sustained wind speeds for selected return periods are presented in the table below for selected coastal stations. These tabular values may be used to construct a graphical analysis of the data similar to the one in Figure 1. The procedure is as follows:

1. Use Fisher-Tippett, Type 1 extreme value probability paper with a natural logarithmic ordinate scale and a probability scaled abscissa. A linear reduced variate scale is also useful in locating intermediate probabilities.

2. Select and plot the annual maximum wind speeds at their corresponding probability values from Table.

3. Draw a straight line connecting those points. This is the line of best fit from which wind speed estimates for intermediate probabilities can be obtained.

4. A one standard error confidence band may be drawn by computing the upper and lowert bound according to Gumbel (1958). The computational procedure is as follows:

   a. $S9 = \sqrt{(1/P-1)/(1-Ln(P))}$
   b. $TP = S9 * A1/N$, $A1 = 1/\beta$
   c. Upper Bound (P) = Exp(Ln(x(P))) + TP
   d. Lower Bound (P) = Exp(Ln(x(P))) - TP

   where S9 = a probability term, TP = standard error at probability P, A1 = scale term $1/\beta$, x [P] is the wind speed at probability [P] in knots, and [N] = sample size. This will give an envelope of the 68-percent confidence band for the estimates.

Graphs similar to Figure 1 have been drawn for each station's annual and monthly values and are available on microfiche from the National Climatic Data Center, Federal Building, Asheville, NC, 28801. Any questions regarding the application of the extreme value model should be addressed to Larry Nicodemus, telephone number (704) 259-0366.

ANNUAL MAXIMUM SUSTAINED WINDS, KNOTS, FOR SELECTED RETURN PERIODS

STATION NAME	RETURN PERIOD (YEARS)						PARAMETERS		
	2	5	10	25	50	100	MODE	BETA	N
NIKOL SKOE, RA	65.4	79.4	90.2	102.5	111.7	134.6	61.4	.1709	26
KHATIRKA-IN-CHUKOT, RA	53.0	61.5	67.9	74.6	84.3	92.4	50.5	.1311	25
UGOL NAJA RA	73.8	84.9	93.1	101.8	114.3	124.5	70.5	.1025	26
BUHTA PROVIDENJA, RA	40.9	46.5	50.7	55.1	61.3	66.3	34.2	.1149	29
NORTHEAST CAPE, AK	48.5	56.2	62.0	68.1	76.9	84.2	44.7	.1321	15
NOME, AK	38.8	44.2	48.2	52.4	58.3	63.4	31.4	.1126	41
UNALAKLEET, AK	42.1	47.5	51.4	55.5	61.3	66.1	41.3	.1065	37
CAPE ROMANZOF , AK	52.0	60.4	66.7	73.4	83.1	91.1	43.6	.1320	33
CAPE NEWENHAM, AK	44.1	51.1	56.3	61.7	69.6	76.2	41.1	.1293	42
KING SALMON, AK	40.6	47.2	52.1	57.3	64.8	71.1	34.7	.1251	38
COLD BAY, AK	50.6	56.1	60.1	64.1	69.8	74.4	48.2	.0911	31
NIKOLSKI, AK	46.1	54.0	60.0	66.3	75.6	83.3	43.8	.1396	17
ST. PAUL, AK	49.1	55.6	60.3	65.3	72.3	78.1	47.1	.1048	32
ADAK, AK	49.2	58.0	64.7	71.9	82.4	91.0	44.6	.1454	36

NOTE : SOME OF THE HIGHER RETURN PERIOD VALUES MAY BE UNREALISTIC BECAUSE OF THE SMALL SAMPLE SIZE. THE CONFIDENCE BANDS AT THESE VALUES MAY BE UNUSUALLY WIDE, WHICH INDICATES A HIGH LEVEL OF UNCERTAINTY.

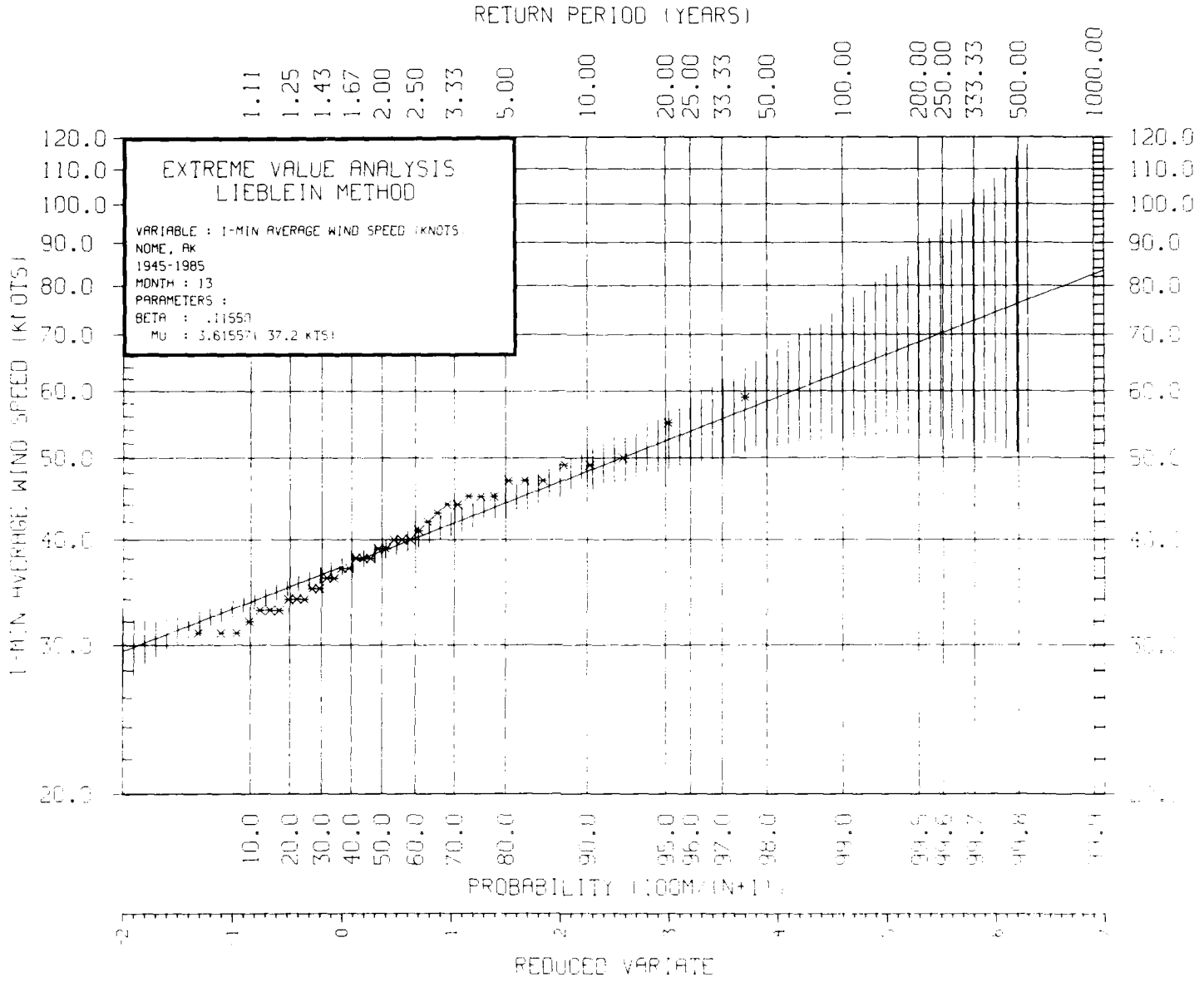


Figure 1. Graphical analysis of annual extreme sustained wind speeds for Nome, A

ANNUAL MAXIMUM SUSTAINED WINDS (KNOTS) FOR SELECTED RETURN PERIODS

GRID PT.	LATITUDE	LONGITUDE	RETURN PERIOD (YEARS)						PARAMETERS		
			2	5	10	25	50	100	MODE	BETA	N
01	64.1 N	166.7 W	49.3	56.4	61.7	67.2	75.1	81.6	47.2	.1190	12
02	63.6 N	178.1 W	61.7	68.8	73.9	79.2	86.6	92.6	59.6	.0958	12
03	59.4 N	172.0 W	56.0	61.5	65.4	69.5	75.0	79.5	54.3	.0828	12
04	58.0 N	167.0 W	58.0	64.6	69.4	74.3	81.2	86.7	56.0	.0950	12
05	56.8 N	174.8 E	64.4	72.1	77.6	83.3	91.3	97.7	62.2	.0984	12
06	52.0 N	172.9 E	68.5	77.6	84.2	91.2	101.0	109.1	65.8	.1101	12
07	54.7 N	175.9 W	63.0	67.7	71.0	74.4	78.9	82.5	61.5	.0639	12
08	54.9 N	167.2 W	55.6	58.9	61.2	63.4	66.4	68.8	54.6	.0502	12
09	50.3 N	171.3 W	60.3	69.1	75.6	82.5	92.3	100.4	57.7	.1205	12
10	51.8 N	167.3 W	56.6	61.7	65.3	68.9	74.0	78.0	55.1	.0757	12
11	51.3 N	158.8 W	60.8	70.1	77.1	84.4	95.0	103.8	58.0	.1265	12
12	54.4 N	158.1 W	62.7	72.9	80.6	88.8	100.6	110.5	59.7	.1339	12

ANNUAL MAXIMUM WAVE HEIGHT (FEET) FOR SELECTED RETURN PERIODS

GRID PT.	LATITUDE	LONGITUDE	RETURN PERIOD (YEARS)						PARAMETERS		
			2	5	10	25	50	100	MODE	BETA	N
01	64.1 N	166.7 W	30.1	36.0	40.0	43.8	48.7	52.4	28.1	5.2793	12
02	63.6 N	178.1 W	40.5	45.3	49.5	52.9	57.4	60.7	38.7	4.7787	12
03	59.4 N	172.0 W	41.0	47.0	51.0	54.9	59.9	63.6	39.0	5.3380	12
04	58.0 N	167.0 W	44.1	53.0	58.9	64.5	71.8	77.3	41.3	7.8397	12
05	56.8 N	174.8 E	46.3	52.3	56.8	61.2	66.4	71.1	43.1	6.5778	12
06	52.0 N	172.9 E	47.2	53.0	57.3	61.1	65.1	68.4	45.2	5.3611	12
07	54.7 N	175.9 W	41.9	48.4	52.8	57.0	62.4	66.5	39.7	5.8353	12
08	54.9 N	167.2 W	41.7	49.2	54.6	58.9	65.1	69.7	39.7	6.6019	12
09	50.3 N	171.7 W	44.0	51.6	55.7	60.1	66.4	70.3	41.7	6.2109	12
10	51.8 N	167.3 W	41.6	47.1	51.2	55.1	60.1	63.9	39.3	5.4090	12
11	51.3 N	158.8 W	45.7	53.6	57.5	62.5	68.5	73.6	43.4	6.4503	12
12	54.4 N	158.1 W	47.6	55.9	61.4	66.7	73.6	78.9	44.9	7.3439	12

NOTE : SOME OF THE HIGHER RETURN PERIOD VALUES MAY BE UNREALISTIC BECAUSE OF THE SMALL SAMPLE SIZE. THE CONFIDENCE BANDS AT THESE VALUES MAY BE UNUSUALLY WIDE, WHICH INDICATES A HIGH DEGREE OF UNCERTAINTY.

Graphical analysis of wave data similar to Figure 1 may be done using the same procedures outlined on the first page of this set. However, the Y-axis should be linearly scaled instead of the log scale used for the wind data. Since the extreme wave statistics are based on the assumption of winds blowing over open water without fetch restrictions, the wave height extremes are likely to be unrealistically high during the winter season for those few grid points located within an area having a probability of ice restricting the development of waves. Refer to the ice statistics on Sets 17-18. Refer to the map on Set 23 for the location of the 12 grid points and to the introductory text for additional information on this set.

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