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SOUTH PACIFIC

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VOLUME V

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The eight volume series of the U.S. Navy Marine Climatic Atlas of the World has had wide acceptance as an authoritative reference for large scale operational planning and applied research. This volume, based on nearly 20 years of additional data, is an update of Volume V (U.S. Navy Marine Climatic Atlas of the World,1959) and is designed to fulfill the same requirements: wind, air temperature, sea surface temperature, humidity, precipitation, visibility, ceiling, barometric pressure, sea ice, ocean tides and ocean waves.

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FOREWORD

A joint feasibility study for producing a combined climatological/oceanographic atlas of the water areas of the world was undertaken by the Naval Weather Service Command and Naval Oceanographic Office in 1969. The results of this feasibility study showed a significant increase in surface marine observations since publication of the original U.S. NAVY MARINE CLIMATIC ATLAS OF THE WORLD. The additional data plus recommendations for revised content and format, provided by various Naval Weather Service fleet units and field activities, warranted the updating of the entire series of marine climatic charts of the world. The data base for this revision of Volume V of the U.S. NAVY MARINE CLIMATIC ATLAS OF THE WORLD contains about 45 percent more data than was available when Volume V was published in 1959.

The Naval Weather Service Detachment, Asheville, was tasked to produce a technical model of the atlas providing a sample of each type of page presentation proposed with supporting documentation. The atlas mock-up was approved by Headquarters, Naval Weather Service Command in 1971 as the model for Volume I (1974), Volume II (1977), Volume III (1976), and Volume IV (1978) as well as this Volume of the series.

ACKNOWLEDGEMENT

The revision of the U.S. NAVY MARINE CLIMATIC ATLAS OF THE WORLD series is managed by the Naval Weather Service Detachment, Asheville, for the Commander, Naval Oceanography Command (formerly the Director, Naval Oceanography and Meteorology). This volume was prepared at the National Climatic Center.

Specific acknowledgement is made to the following members of the National Climatic Center: Project Leaders R. G. Quayle, J. D. Elms and D. C. Fulbright; Ms. Mary Paglia and Mr. Grant W. Goodge for their assistance in the editorial evaluation and analyses of the data; Mr. R. H. Courtney for technical work.

The oceanographic part was based upon data provided by the U.S. Naval Oceanographic Office, whose contribution is acknowledged with thanks.

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PART I - METEOROLOGY

INTRODUCTION

The eight-volume series of the U.S. NAVY MARINE CLIMATIC ATLAS OF THE WORLD has had wide acceptance as an authoritative reference for large scale operational planning and applied research. This volume, based on nearly 125 years of data (1854-1978), is an update of Volume V (U.S. Navy *Marine Climatic Atlas of the World,* 1959), and is designed to fulfill the same requirements. This volume is not, however, a one-for-one revision. Some of the data presentations have been changed and wave statistics have been added. No upper air charts are presented since in recent years several comprehensive volumes of upper air data have been published separately: (*Climate of the Upper Air: Southern Hemisphere,* Volume I, *Temperatures, Dew Points, and Heights at Selected Pressure Levels,* NAVAIR 50-1C-55, 1969; Volume II, *Zonal Geostrophic Winds,* NAVAIR 50-1C-56, 1971; Volume III, *Vector Mean Geostrophic Winds,* NAVAIR 50-1C-57, 1971; Volume IV, *Selected Meridional Cross Sections of Temperature, Dew Points, and Height,* NAVAIR 50-1C-58, 1971).

The descriptive explanations which follow give details concerning the quality control and processing of the observations and the development of the charts and graphs. Limitations imposed by the quality of the data and the methods adapted to help overcome them are also discussed.

This Atlas is the result of a concerted and extensive effort by many people (aided by modern data processing equipment) to present a detailed and useful ocean climatology.

THE GENERAL PLAN OF THE CHARTS

The "point statistics" common to land climatology are made possible by the maintenance of weather records at fixed locations for long periods. Such statistics are not generally available for Ocean Basins. In the past three decades the Ocean Weather Station (OWS) and, more recently, data buoy networks maintained through the cooperation of several maritime nations, have been a real step toward fixed point locations. However, no ocean weather stations or buoys were available for the Southern Hemisphere. Transient ships' logs of surface weather observations are the only source of detailed knowledge of southern ocean climate.

It is sometimes possible to select areas small enough to permit an approximation to the "point statistics" of land stations where the number of observations is sufficient. For this atlas 37 representative areas were selected. These are outlined on the base chart and numbered. Graphs and Tables for these areas have been placed on the facing page for easy reference to the base chart. Unfortunately, many of the areas lack sufficient data for meaningful statistics for certain seasons.

THE OBSERVATIONS AND THEIR PROCESSING

Variations in definitions, codes and units of measurements used by maritime nations for recording and punching marine observations have resulted in over 20 different formats (or "decks") of magnetic tape data available for use at the National Climatic Center. These data have been converted to a common format. For a more detailed explanation of the conversion procedures, the reader is referred to the Tape Data Family-11 (TDF-11) Reference Manual (National Climatic Center, 1968). This tape deck was the primary data source for the Atlas projects. Funding for the development of TDF-11 was provided primarily by the Naval Weather Service Command with supplemental support from the Environmental Science Services Administration (now NOAA) and the Department of Defense.

The data was subjected to complex quality control procedures before processing. First, duplicate observations (which entered the data base from different sources) were eliminated. The remaining observations were then checked for internal consistency. Elements failing to meet the internal consistency checks were either adjusted or eliminated. The data were then subjected to an extreme value check. These quality controlled data have been retained in a separate tape file designated as the U.S Navy Marine Atlas Work Tapes.

Regardless of the amount of quality control to which marine observations are subjected, there are many inherent problems which can be corrected in only a general way. Among these are: the difficulty in taking observations of meteorological elements from an unstable platform, different levels of observer experience, recording errors, variations in observing and coding practices, punching errors, the scarcity of observations over vast areas, and the effect of weather elements themselves on measurements. Ships may avoid bad weather when possible (Quayle, 1974), thus decreasing the amount of bad-weather data; or they may slow down in foul weather, thus making more observations and increasing the data sample.

Complete observations (including all elements) from transient ships are steadily becoming more common. Ships' weather logs of past decades, incomplete by today's standards, show wind direction and speed to be the elements almost invariably recorded. From a survey of the data available for this Atlas, the percentage of observations containing other basic weather elements is as follows:

Elements	*Percent*
Wind	96
Air Temperature	95
Total Cloud Amount	95
Sea Temperature	89
Sea Level Pressure	75
Visibility	65
Present Weather	64
Wet Bulb Temperature	56
Low Cloud Amount	43
Waves	37

Because of incompatible observing or coding procedures, many elements had to be eliminated from the computations. This significantly reduced the percentages of the affected elements in the above table.

Some peculiarities of selected elements are listed below.

PRECIPITATION – This element is one of those most subject to error in interpretation. This derives from a number of causes such as coding practices, observers' preference for certain present weather codes and other biases.

SEA SURFACE TEMPERATURE – This element is recorded with a fairly high frequency in marine observations. The various methods of recording (bucket versus intake, etc.) have been combined for this Atlas. In data sparse regions, satellite data for the period 1973 to mid-1978 were used for guidance but were not included in the graphs. In addition, all data associated with oceanographic hydrocast and bathythermograph samples (expendable and otherwise) were included.

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SEA LEVEL PRESSURE – This element is one of the least accurate in an absolute sense because of instrument, coding and conversion errors. To be capable of registering accurate pressure readings, barometers used on shipboard generally require more frequent calibration than they receive. Despite the inaccuracies of the individual readings, however, the large scale patterns and gradients are relatively accurate.

AIR TEMPERATURE – This element is considered to be generally reliable. However, in the tropics, as the result of poor instrument exposure, observed temperatures on transient ships under sunny conditions appear consistently high. This data subset influences primarily the distribution of maximum temperatures (99th percentile) while the minimum (1st percentile) and mean temperatures are relatively unaffected.

VISIBILITY – It is difficult to measure visibility at sea because of the lack of reference points. Also, some observers report reduced visibility at night because of darkness. The coarseness of the coding intervals, however, tends to minimize serious biases in the summarized data.

WAVE DATA – Suitable quantitative wave records are available only since the late 1940's. This, coupled with an apparent reluctance on the part of many observers to take wave observations, particularly in the early years, leaves waves as the least often recorded element in marine observations. The estimation of wave heights is very subjective and depends upon the experience of the observer and the size of the ship from which the observation is taken. Wave heights reported by most transient ships appear to be about 10% too low when compared to reference measurements. Wave periods also appear to be somewhat low. Adjustment for these apparent biases has not been made in this Atlas.

THE ISOPLETH ANALYSES

The climatic data in this Atlas are presented by isopleths (lines connecting points of equal magnitude) of long-term climatological scalar fields supplemented by graphs and tables. The isopleth analyses were completed cooperatively by a team of meteorologists. The basic charts were automatically plotted from one or two degree area summaries for the entire ocean basin.

As a further aid to data interpretation, the analysts made use of the observation count which was plotted with all summarized data. Additionally, continuing reference was made to the marine atlases and supplemental publications listed in the bibliography.

Extreme caution must be exercised when using statistics south of about 40°S. Data were extremely sparse in this area and a great deal of subjectivity was required in map analyses. A glance at the data coverage for tables and graphs in the

vicinity of any given ocean area being studied will give a good indication of data coverage.

THE GRAPHS AND TABLES

To supplement the isopleth analyses, graphs and tables are presented for each representative area having at least marginal data coverage (about 15 observations). The graphs and tables, in most instances, represent the objective compilation of available raw data for specified areas without regard to suspected biases or inconsistencies.

Since the final isopleth analyses reflect both objective and subjective considerations, differences may be found when comparing the graphical data for a representative area with the analyses.

THE INDIVIDUAL SURFACE CHARTS

The legend is designed to explain data content – tables, graphs and isopleths. Each legend contains detailed instructions on how to read the tables or graphs. The following paragraphs contain additional remarks likely to be of interest to those called upon to interpret the data and provide answers to specific operational questions.

Most of the graphs and tables allow 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, standard deviations are given on the graphs to provide a measure of relative variability. The standard deviation on these graphs is denoted by 's' and was computed using the expression:

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

where N is the number of observations in the sample and x_i is the *ith* realization of the random variable X. The use of (N-1) in the denominator gives the best estimate of the population standard deviation.

SURFACE WINDS

Surface wind is the element most commonly observed and recorded. The wind distribution is presented by a combination of two graphic forms – the bar graph and the contingency table. The bar graph corresponds to the percent scale at the top of the square and gives reference to the wind direction frequency. The contingency table gives the percent frequency of each wind speed class within each direction. By adding the totals lines at the bottom of the graph it is possible to approximate the percent frequency of wind speed occurrence for selected criteria. For the example graph in the legend, 71% of all winds were less than 17 knots.

AIR TEMPERATURE

The percentage of temperatures greater than or equal to 20°C and mean air temperature were selected for isopleth analysis in response to requests by a number of users who considered these to be operationally significant. The mean temperature for each wind direction and calm is shown by dots in the graph opposite each direction and corresponding to the temperature scale at the bottom. The temperature range and scale may vary from area to area and month to month.

A conversion of °C to °F appears in Fig. 1. This is applicable to all temperature information (air, wet bulb, dew point, sea surface).

°C	°F	°C	°F	°C	°F	°C	°F
−12	10.4	−1	30.2	10	50.0	21	69.8
−11	12.2	0	32.0	11	51.8	22	71.6
−10	14.0	1	33.8	12	53.6	23	73.4
−9	15.8	2	35.6	13	55.4	24	75.2
−8	17.6	3	37.4	14	57.2	25	77.0
−7	19.4	4	39.2	15	59.0	26	78.8
−6	21.2	5	41.0	16	60.8	27	80.6
−5	23.0	6	42.8	17	62.6	28	82.4
−4	24.8	7	44.6	18	64.4	29	84.2
−3	26.6	8	46.4	19	66.2	30	86.0
−2	28.4	9	48.2	20	68.0	31	87.8

Fig. 1. Temperature Conversion – Celsius to Fahrenheit.

T-H INDEX AND TEMPERATURE EXTREMES

The American Society of Heating and Ventilating, as early as 1923, introduced a term called "effective temperature"

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°C	°F	°C	°F	°C	°F	°C	°F
−12	10.4	−1	30.2	10	50.0	21	69.8
−11	12.2	0	32.0	11	51.8	22	71.6
−10	14.0	1	33.8	12	53.6	23	73.4
−9	15.8	2	35.6	13	55.4	24	75.2
−8	17.6	3	37.4	14	57.2	25	77.0
−7	19.4	4	39.2	15	59.0	26	78.8
−6	21.2	5	41.0	16	60.8	27	80.6
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Fig. 1. Temperature Conversion – Celsius to Fahrenheit.

T-H INDEX AND TEMPERATURE EXTREMES

The American Society of Heating and Ventilating, as early as 1923, introduced a term called "effective temperature" which is a measure of comfort based on temperature and humidity. This is the term we call THI (Temperature-Humidity Index). It has been empirically determined that a majority of people will be uncomfortable when the index reaches 24°C. THI is computed by the following equation, adapted from one described by E. C. Thom, 1957:

$$THI = 0.4\,(T_d + T_{wb}) + 4.7778$$

where: T_d = Dry Bulb Temperature (°C)
T_{wb} = Wet Bulb Temperature (°C)
THI is in degrees Celsius

Isopleths of the 1% and 99% levels of air temperature have been selected to present extreme temperature conditions. The graphs show air temperature versus wind speed. Use may be made of these charts to determine the extent of discomfort likely because of extreme heat or cold. They may also be used to estimate the likelihood of superstructure icing.

Ice accretion is a complicated process that depends upon sea conditions, temperature, wind and the size and behavior of the ship. Superstructure icing can affect all ships but is more dangerous for smaller vessels. Icing potential exists when the air temperature falls below the freezing temperature of sea water (usually about −2°C) with the wind speed equal to or greater than 11 knots. The lower the temperature and higher the wind speed, the greater the icing potential. Ice accretion may become quite severe with temperatures below −9°C and wind above 34 knots.

SEA SURFACE TEMPERATURE

Sea surface temperature is recorded with fairly high frequency in marine observations. The 1% and 99% isopleths give estimates of the extremes that may be encountered at any location. The graphs are simple cumulative percent frequency presentations. The temperature range and scale on the graphs may vary from area to area and month to month. As stated earlier, satellite data were used for guidance, but were not included in the graphs. Oceanographic data were included in all phases.

Sea surface temperature can be used to estimate the approximate time a person in ordinary clothes and life preserver may be expected to survive in the water. Fig. 2 is adapted from U.S. Coast Guard Manual 308 (1973).

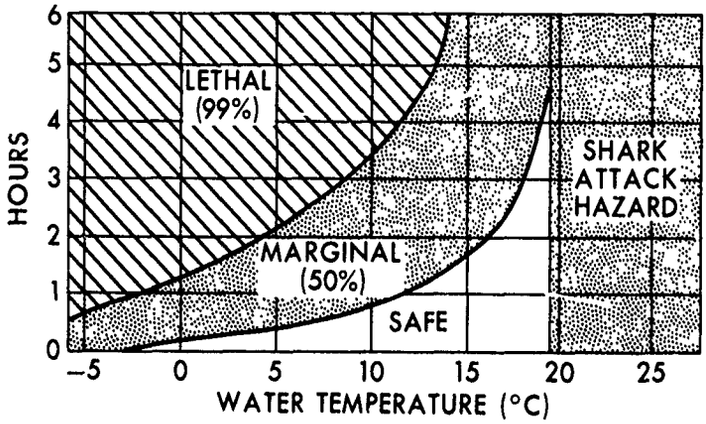

Fig. 2. Life Expectancy Without Antiexposure Suit.

Recent research has shown that chances for survival from drowning are enhanced in cool water, below about 22°C, but above critical levels (see Fig. 2).

For further reference, see Hayward *et al.* (1976) and Nemiroff (1977).

HUMIDITY

Moisture content of the atmosphere is an element which has been recorded relatively infrequently in marine observations. The 1% and 99% dew-point temperature isopleths give estimates of extremes of this element that may be encountered at any location.

The graph depicts wet bulb and relative humidity information. The cumulative percent frequency of wet-bulb temperatures may be read from the solid line with reference to values on the scale at the top of the graph. Relative humidity may be read from the dashed line with reference to the scale at the bottom of the graph.

PRECIPITATION

Precipitation graphs are intended to depict the frequency of precipitation, subdivided into liquid type (including freezing rain and freezing drizzle) and snow, at the time of the observation. Charts show precipitation frequency regardless of form. Based on work done in connection with Volume I (Revised), North Atlantic Ocean, present weather codes 20-27 (precipitation within the past hour) were counted in precipitation frequencies to correct an apparent observational bias. The graphs show precipitation by wind direction. The percent frequency of all observations which reported precipitation is printed in the upper right corner of each graph. The distribution of precipitation by wind direction (and calm) is given by the bar graph. This graph is based on precipitation frequency and not on wind direction frequency. The reader should refer to the surface wind chart for the wind direction and speed distribution.

Satellite guidance was employed in data sparse areas (Rao *et al.*, 1976, 1977).

VISIBILITY

The cumulative percent frequency of horizontal visibility is presented by class intervals defined in terms of nautical miles. The percentage of horizontal visibility equal to or greater than 25 nautical miles can be obtained by subtracting from 100% the cumulative percent frequency at the "less than 25" point on each graph. Caution is advised when interpreting these instances since, because of curvature of the earth, it is virtually impossible to see 25 miles horizontally from the bridge of most ships. The supplemental table at the bottom of the graph gives percentage of visibilities less than 2 nautical miles which occurred with each wind direction and calm.

CLOUD COVER

Even with the increased data base, the quality and quantity of low cloud data is quite poor. The total cloud amount element does not suffer from this deficiency to so great an extent. The use of satellite data also bolsters confidence in the total cloud statistics. Cloud patterns derived from the marine observations and those depicted by satellites show fairly close agreement (U.S. Department of Commerce and United States Air Force, 1971).

The observation count on the graphs is that of observations containing total cloud amount. The low cloud curve on the graph is usually based on less data than the total cloud curve. This could lead to inconsistencies between low cloud amount and total cloud amount. In all cases these were resolved in favor of the total cloud by making the frequency curves coincide.

The cumulative percent frequency of a cloud amount equal to or less than the amount intersected by the curve may be read for total cloud from the solid line or low cloud from the dashed line. The percent frequency of obscurations may be determined by subtracting the cumulative percent frequency corresponding to 8/8 coverage from 100%. The bar graph portion of the figure shows the percent frequency of low cloud amount equal to or greater than 5/8 and equal to or greater than 7/8 for each wind direction and calm. Total sky obscurations are considered as 8/8 coverage for these purposes.

CEILING AND VISIBILITY

Simultaneous ceiling-visibility contingencies are presented in isopleth and tabular form. They are designed as an aid to situations where both vertical and horizontal visibility are the

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CEILING AND VISIBILITY

neous ceiling-visibility contingencies are presented and tabular form. They are designed as an aid to where both vertical and horizontal visibility are the major items of concern. Since an "aircraft" type ceiling value is not available, the ceiling height is estimated from the height of low cloud (h) when the amount of low cloud (N_h) is greater than 4/8. Total sky obscurations are also considered to be ceilings. If they are ground-based, they are considered to have a height equal to zero.

WIND - VISIBILITY - CLOUDINESS

This series of charts is designed to give the planner an estimate of the probability of occurrence of certain significant operational conditions. The conditions for optimum and poor carrier operations are those recommended by the users of the earlier atlas series. Of the elements used in these statistics, height of low cloud ceiling has the least reliability in the case of transient ship observations.

It should be noted that in both the contingency tables and the isopleths, the poor carrier operation conditions are *and/or* situations. This means if any one of the poor conditions of ceiling, visibility or wind speed exists, the event is counted as *poor*. However, in the case of optimum conditions it is an *and* situation. That is, the ceiling must be greater than or equal to 5000 feet *and* visibility greater than or equal to 5 nautical miles *and* wind 11-21 knots.

SEA LEVEL PRESSURE AND MEAN WIND

Two sets of wind statistics are presented. The vector mean wind is shown by arrows (direction of flow toward the locator dot with the resultant magnitude of the vector plotted at the end of the arrow). The scalar mean speed without regard to direction is shown by isopleth analysis. In areas of high persistence of direction, the magnitude of the mean vector is nearly as great as the scalar mean speed. Pressure graphs and charts are also shown.

WAVES (LESS THAN 1.5 AND LESS THAN 2.5 METERS)

In these analyses, the higher of the sea or swell is selected for summarization. If the heights are equal, the wave with the longer period is selected. The graphs accompanying the low wave charts (less than 1.5 and less than 2.5 meters) show wave height versus wave direction. The bar graph and the percent scale at the top of the chart give the percent frequency of waves from each direction. Indeterminate directions are combined with calms. The percent frequency of wave heights (bottom scale) may be read for each height interval and wave direction from the contingency table. The isopleth analyses of the percent frequency of heights less

than 1.5 and less than 2.5 meters are for generally non-hazardous sea conditions.

Fig. 3 shows the conversion from meters to feet.

Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet
0	0	3.0	9.8	6.0	19.7	9.0	29.5
0.5	1.6	3.5	11.5	6.5	21.3	9.5	31.2
1.0	3.3	4.0	13.1	7.0	23.0	10.0	32.8
1.5	4.9	4.5	14.8	7.5	24.6	10.5	34.4
2.0	6.6	5.0	16.4	8.0	26.2	11.0	36.1
2.5	8.2	5.5	18.0	8.5	27.9	11.5	37.7

Fig. 3. Height Conversion – Meters to Feet.

WAVES (GREATER THAN OR EQUAL TO 3.5 AND GREATER THAN OR EQUAL TO 6 METERS)

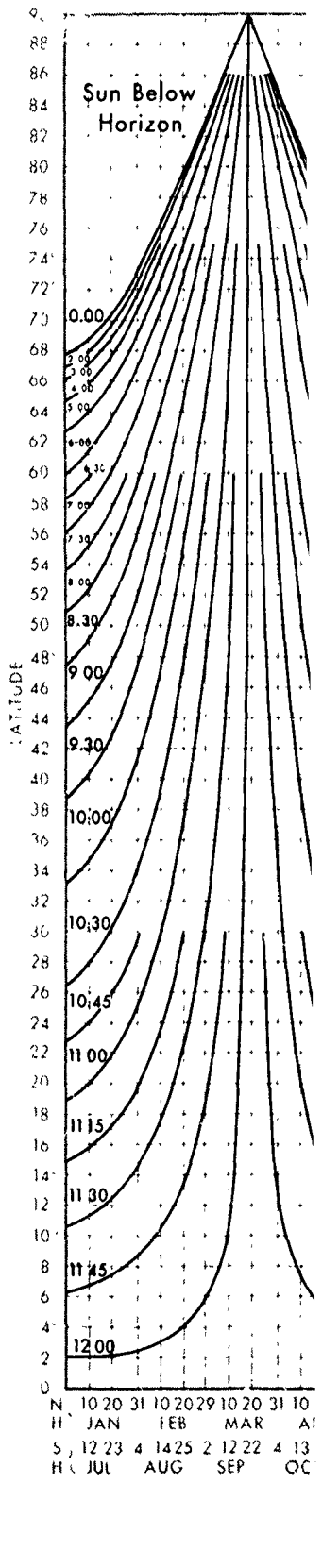
Wave heights in the greater than or equal to 3.5 and greater than or equal to 6 meter range represent increasingly hazardous conditions. Contingency tables of wave period versus wave height accompany these charts.

LOW PRESSURE CENTERS

Detailed data on extratropical cyclone tracks were not available. The data base used for the *Mariners Worldwide Climatic Guide to Tropical Storms at Sea,* NAVAIR 50-1C-61, 1974, was updated through 1976 and used for generating the tropical cyclone movement roses in this Atlas. The data presented here by 5° quadrangle include all tropical cyclones estimated to have wind speeds greater than 33 knots. The period of record is 1897-1976 for the Southwest Pacific and Australian and 1854-1976 for the South Indian. The reader is referred to the above mentioned "Guide" for more detailed information.

DURATION OF DAYLIGHT

The Duration of Daylight Chart (Fig. 4) 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. The data source was the U.S. Naval Observatory (1945), and is accurate for the entire 20th Century. Further details may be obtained from *The Daylighter* by 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.



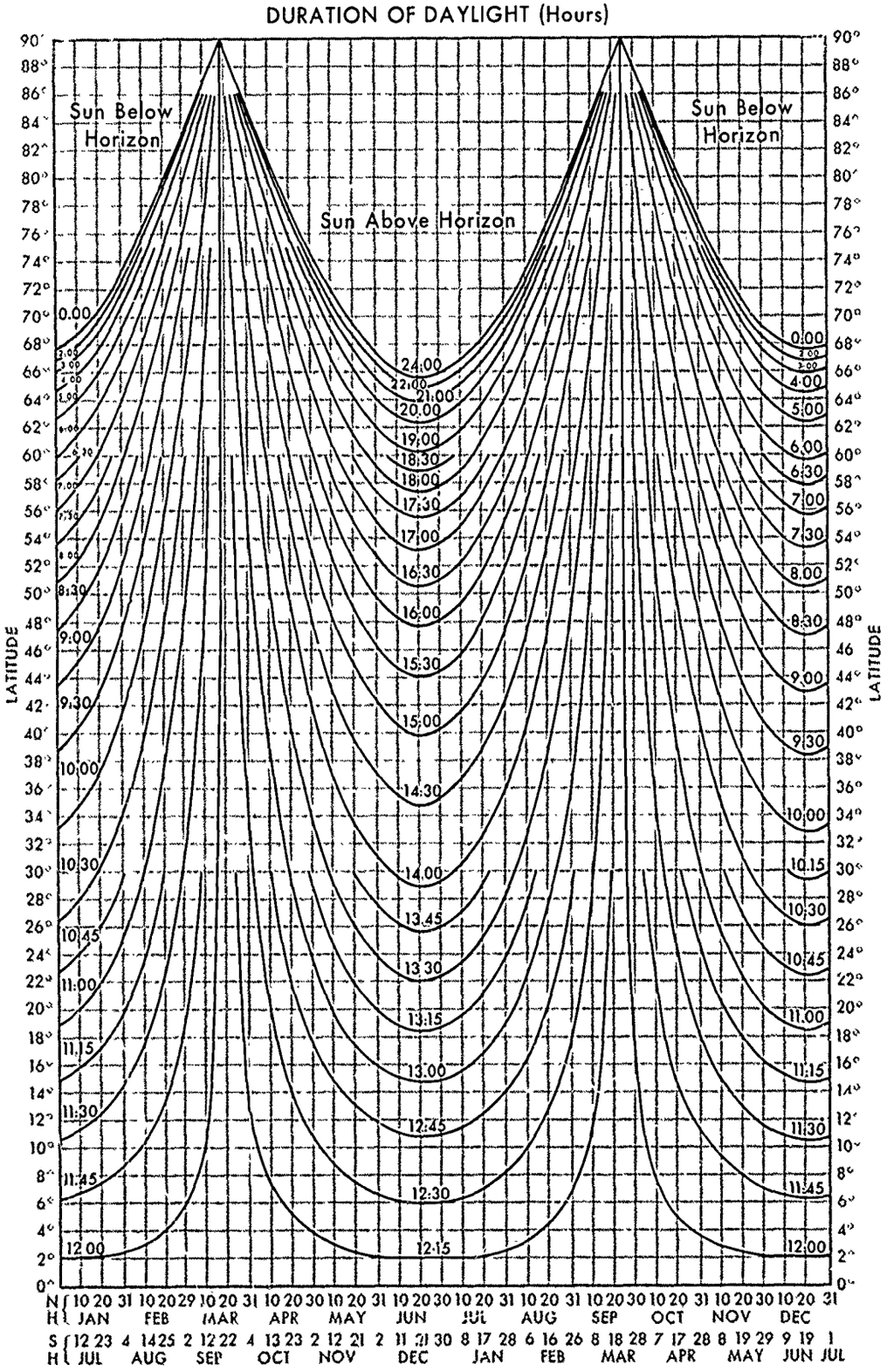


Fig. 4. Duration of Daylight.

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PART II - OCEANOGRAPHY

TIDES

The information presented (types of tides, typical tide curves, and tide ranges) is derived from tide tables. The length of record and the spacing of the observation stations are generally sufficient for most analytical purposes and enough data are available to provide a reasonably reliable picture of the tidal regimes. Tides are not considered of practical importance in the open ocean, and hence, there are no measurements in deep water.

CURRENTS

The ocean current presentations are compiled principally from ship drift reports that were forwarded by the various merchant marines to the Naval Oceanographic Office. As should be expected, the density of observations is greatest, and therefore the reliability of the presentation is best, along the major shipping lanes. From these drift observations the sets and average speeds of the prevailing currents are calculated for each 1 degree quadrangle. Considerable variation from the directions and speeds of the indicated prevailing currents can be expected, especially in areas where the current system is weak. Tidal currents predominate near shore and are subject to change in speed and direction by winds and other nonperiodic variables.

SEA ICE

It is doubtful that the edge of the mass of sea ice that surrounds the Antarctic Continent between 70°W and 160°E remains north of 60°S for any great extent or duration.

An electronically scanning microwave radiometer (ESMR) satellite sensor with a 25 km resolution indicates that the pack edge of 1/8 or greater concentration approached 60°S in the vicinity of 70°W and was northward of 60°S over several small longitude segments generally west of 120°W during periods in the austral winters of 1973-76. The edge of the mass of sea ice between 70°W and 120°W remained at least 100 nm to the south of 60°S during these four winter seasons. The pack ice edge over the entire sector retreats far to the south during the austral summer in conjunction with extensive disintegration that permits access to land areas and broad ice shelves.

In the sector west of 120°W during winter, the average latitude of the pack calculated from these limited data was located north of 60°S only in the sectors 147°W-151°W during mid-August and 138°W-149°W during mid-September. During mid-August when the pack exceeded 60°S during 2 of the 4 years, the most northern average latitude was 59.4°S at 149°W; the pack edge extended as far north as 57°S (149°W) during 1974. During mid-September when the pack exceeded 60°S during 3 of the 4 years, the most northern average latitude was 58.8°S at 144°W; the pack extended as far north as 57°S (145°W) during 1974.

These limited data also showed that the sea ice edge, in usually a 5° to 10° longitude segment between 120°W and 180°W, was located northward of 60°S to as far as 59°S during 2 of the 4 years at mid-June and mid-July. During mid-October and mid-November when 1971 and 1972 ESMR data also were available, the pack edge at locations in this sector was located as far north as 59.5°S during 2 of the 6 years. The sea ice edge at various longitudes between 160°E and 180°E also was located as far north as 59.5°S from mid-June to mid-August during 2 of the 4 years. However, the 4- or 6-year average latitudes of the pack edge for each of these months and sectors was located south of 60°S. Aircraft and shipboard sea ice observations collected during mid-October and mid-November of Operation DEEP FREEZE also show the most northern pack edge from 170°E to 180°E to lie at least 100 nm to the south of 60°S. The pack ice edge should not be taken to be the northern extent of all sea ice, however, because belts and patches can drift considerable distances to the north.

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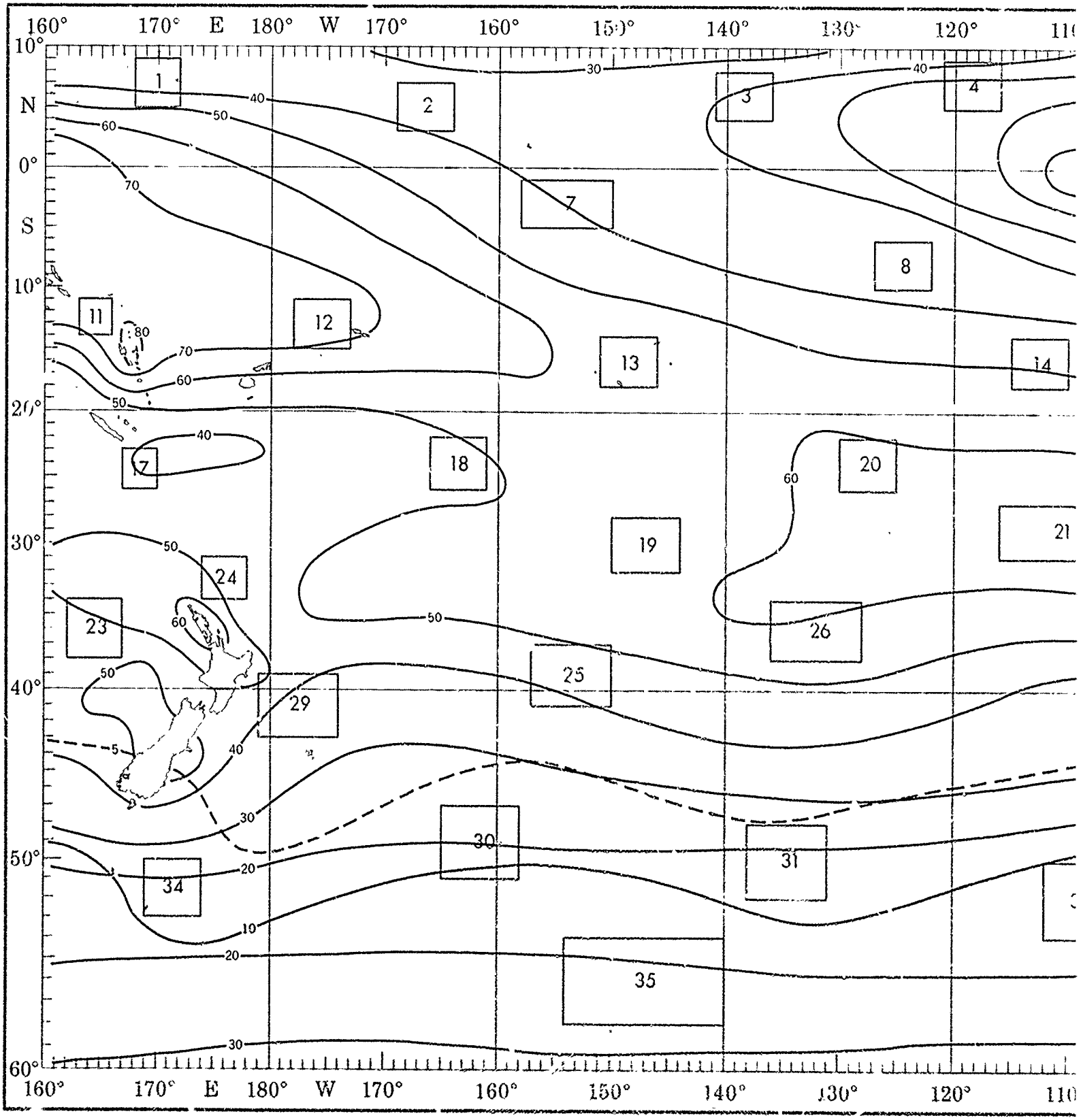
PART I METEOROLOGY

JANUARY


160° 170° E 180° W 170° 160° 150° 140° 130° 120°
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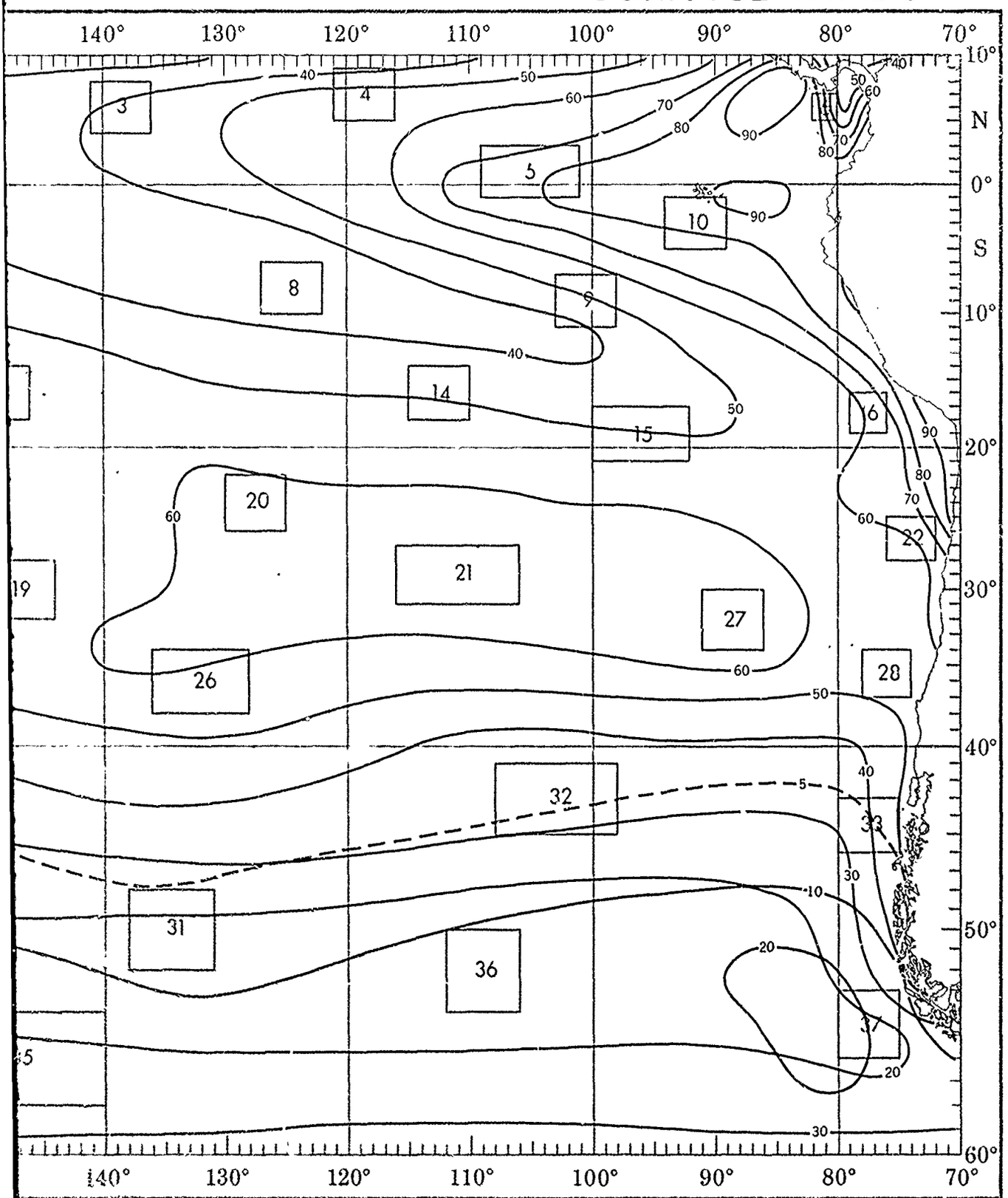
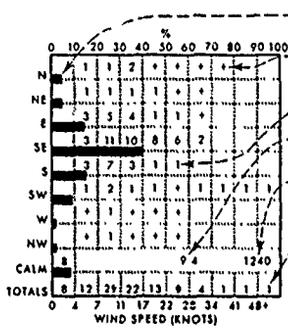
SURFACE WINDS



WIND DIRECTION AND SPEED

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



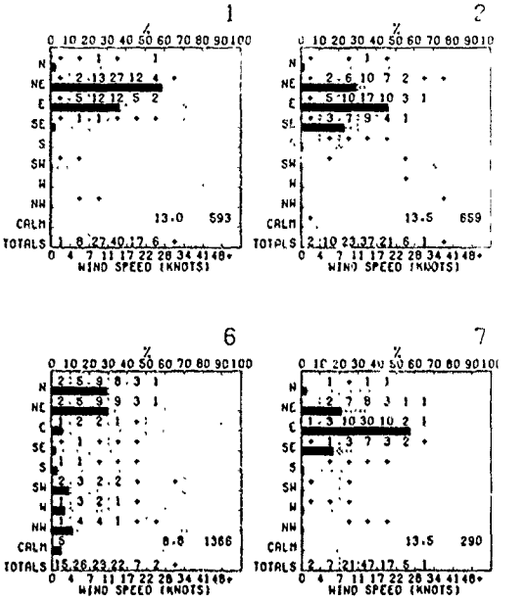
WIND SPEED INTERVAL (KNOTS)

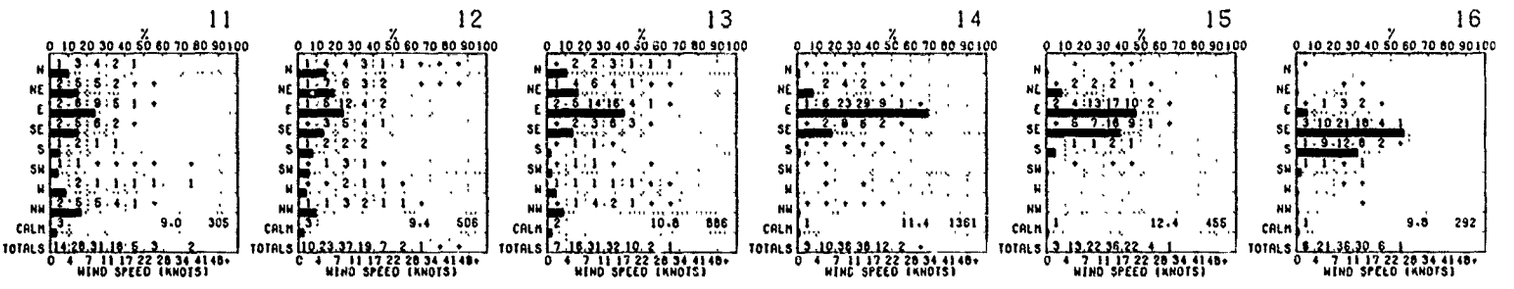
0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	≥48
0	4	7	11	17	22	28	34	41	48+

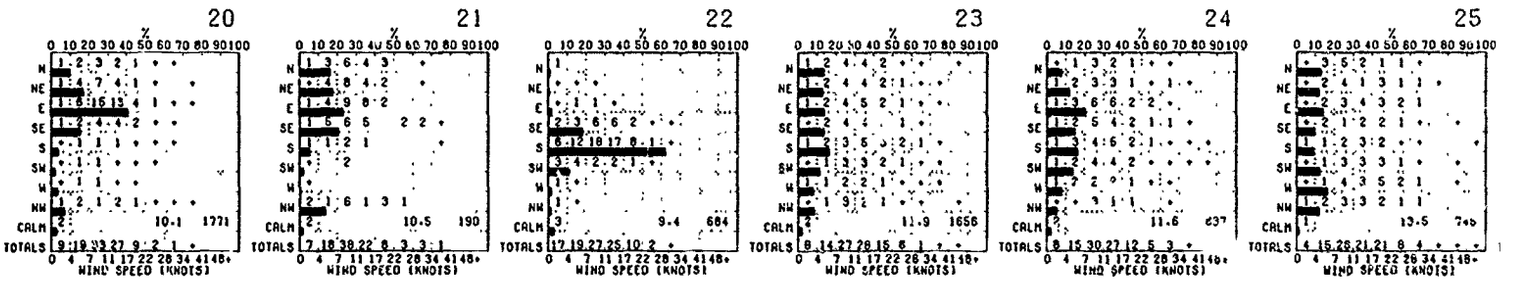
Printed scale on bottom of chart

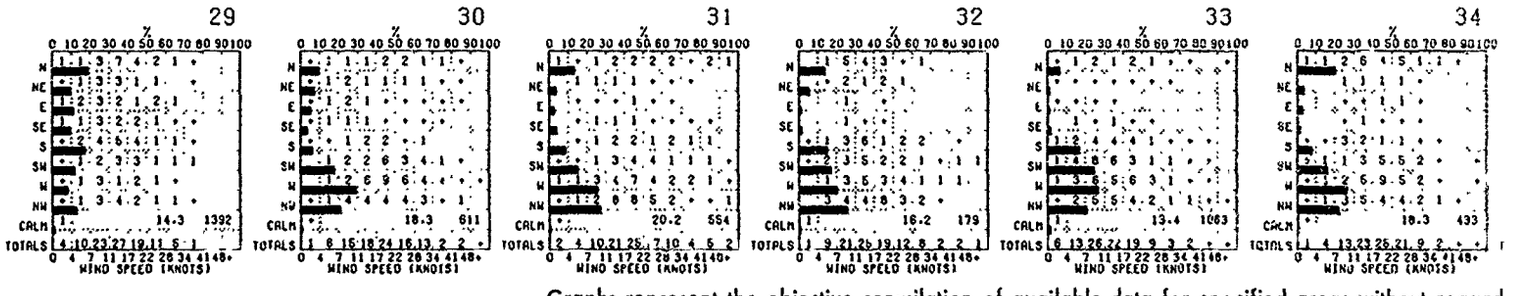
BLUE LINE - Percent frequency of wind speed ≤10 knots

RED LINE - Percent frequency of wind speed ≥34 knots









Graphs represent the objective compilation of available data for specified areas without regard

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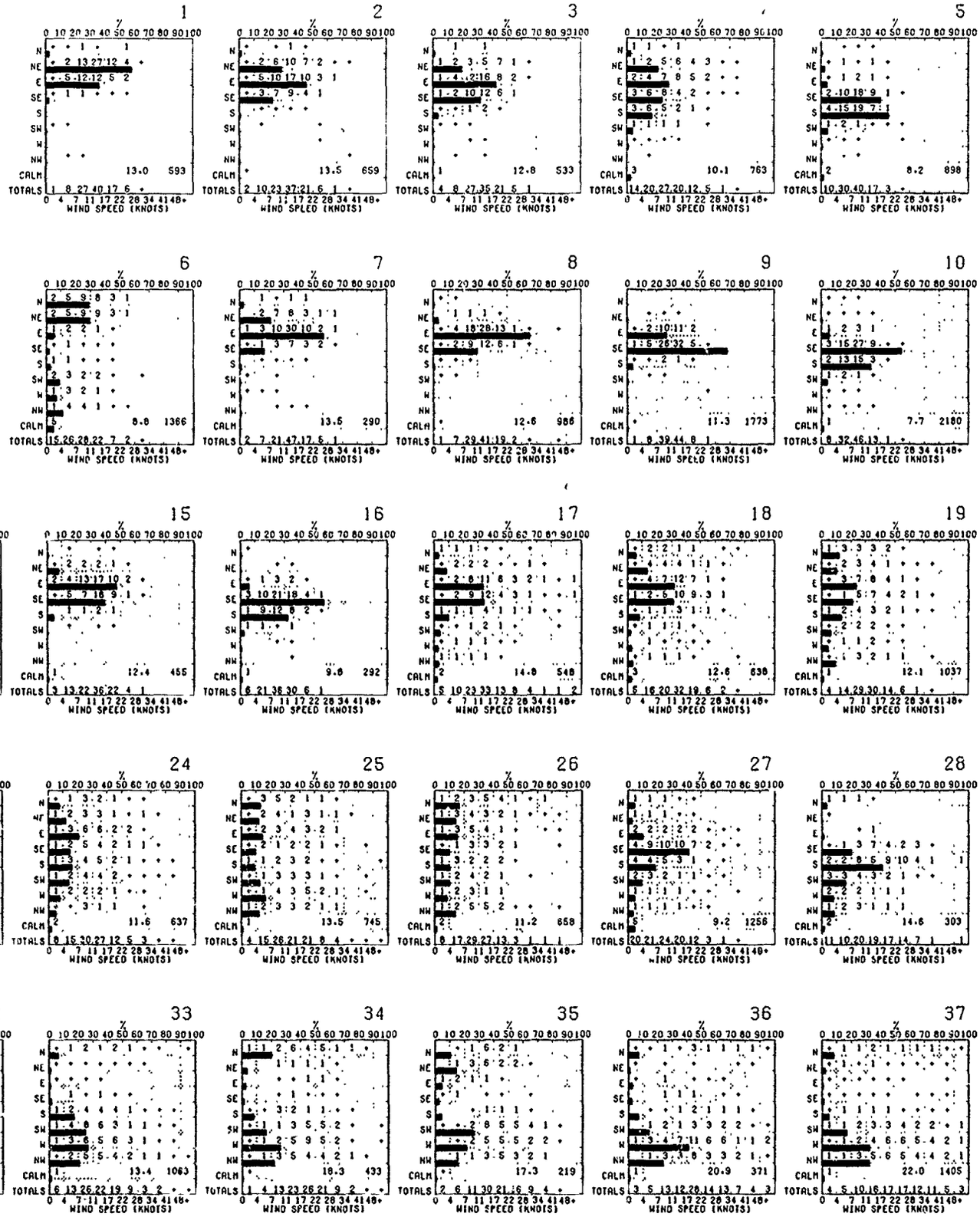

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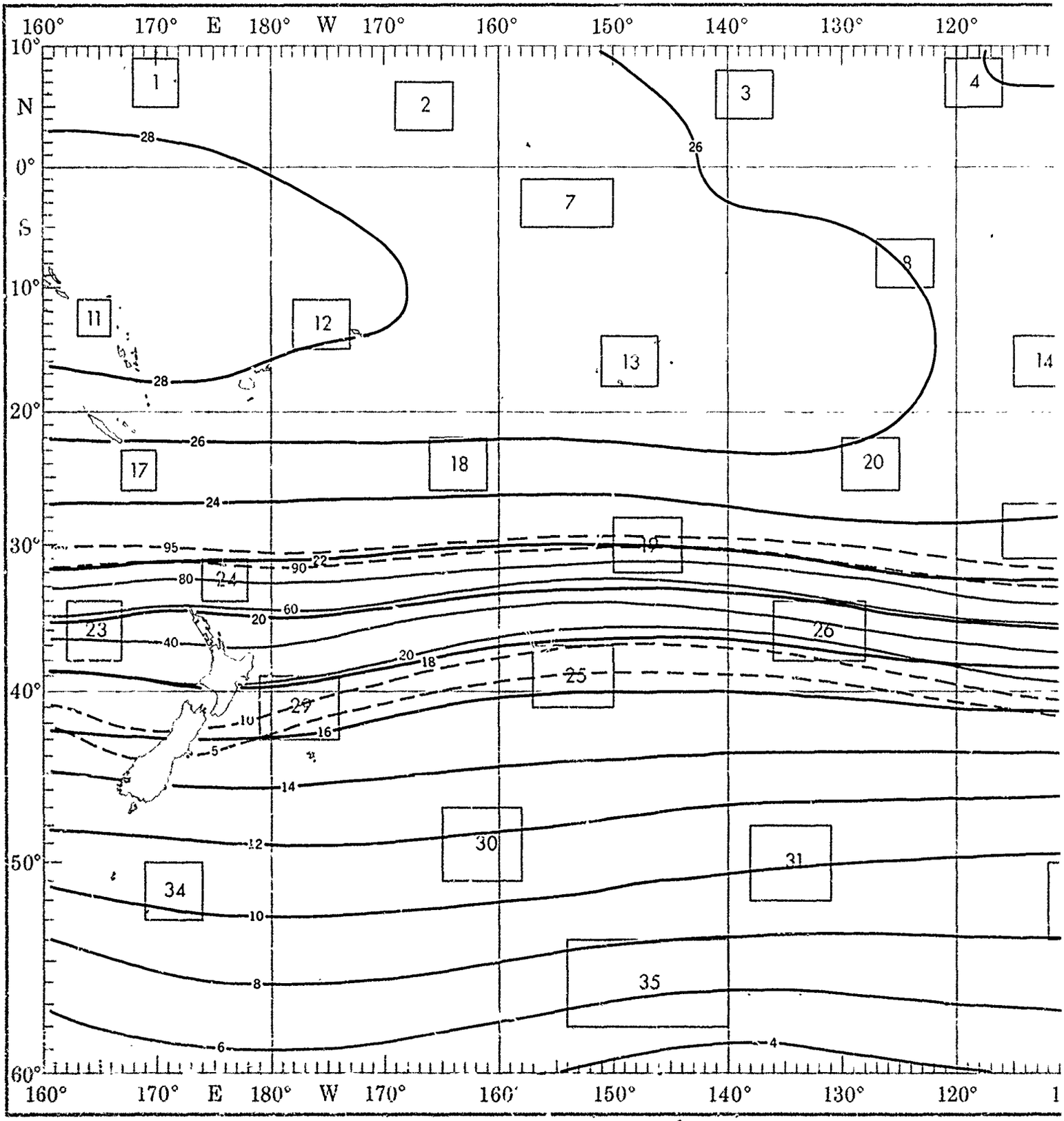
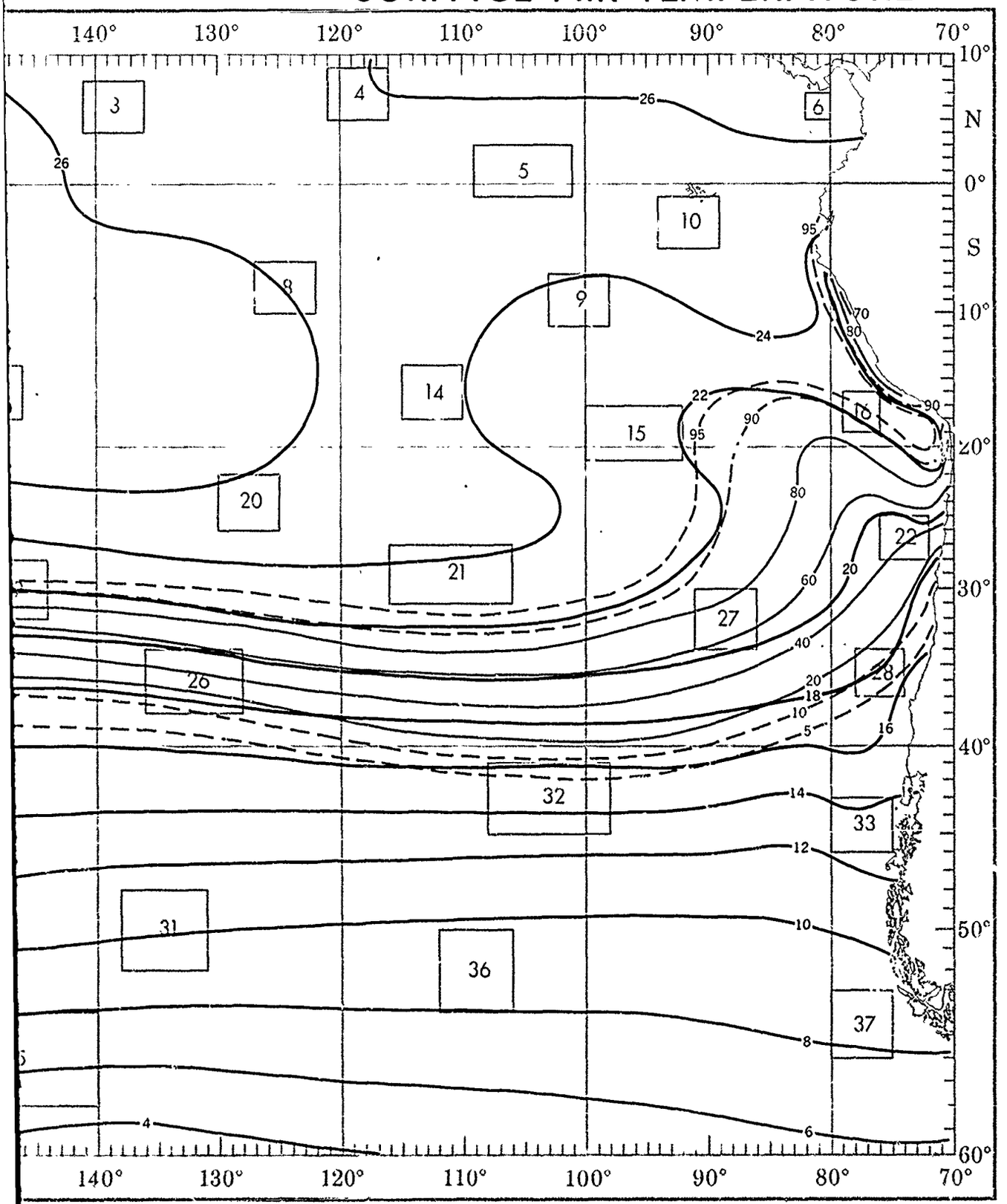
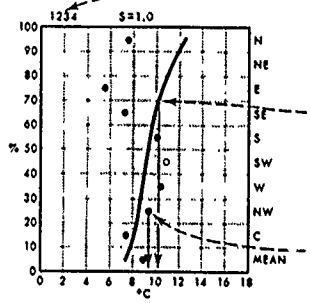


SURFACE AIR TEMPERATURE



SURFACE AIR TEMPERATURE

Air Temperature. ——Number of observations.



Cumulative percent frequency of temperatures equal to or less than the temperature intersected by the curve.

(70% of all temperatures were ≤10.3 °C or ≤50.5 °F.)

S=Standard deviation of temperatures (°C).

Mean temperature for each wind direction, calm and for all data combined are represented by dots

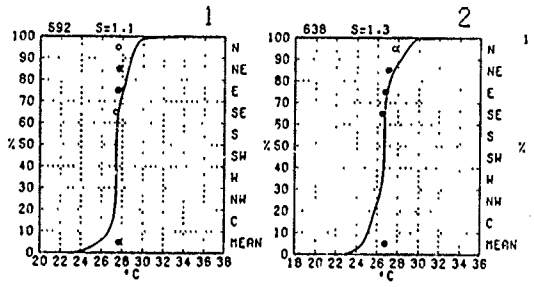
(With NW winds, the mean temperature was 9.4 °C or 48.9 °F.)

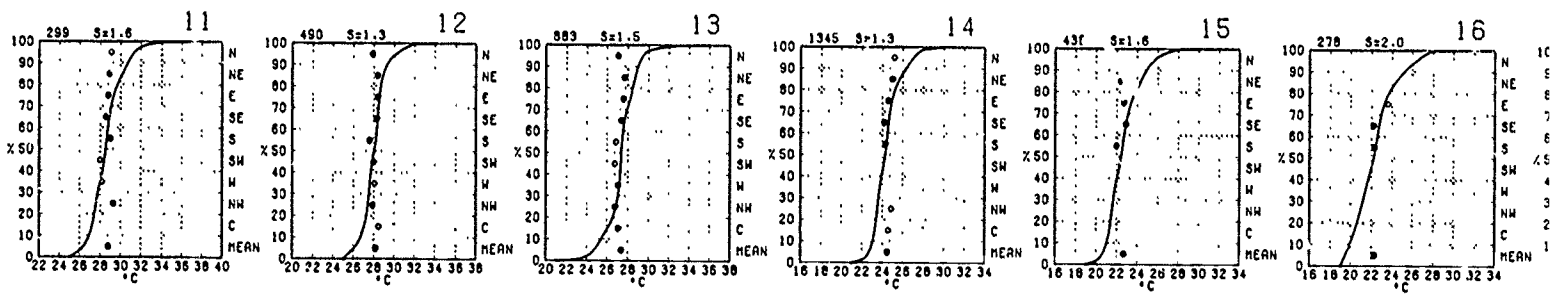
o Indicates that the mean temperature for a direction or calm was computed from 10-30 observations

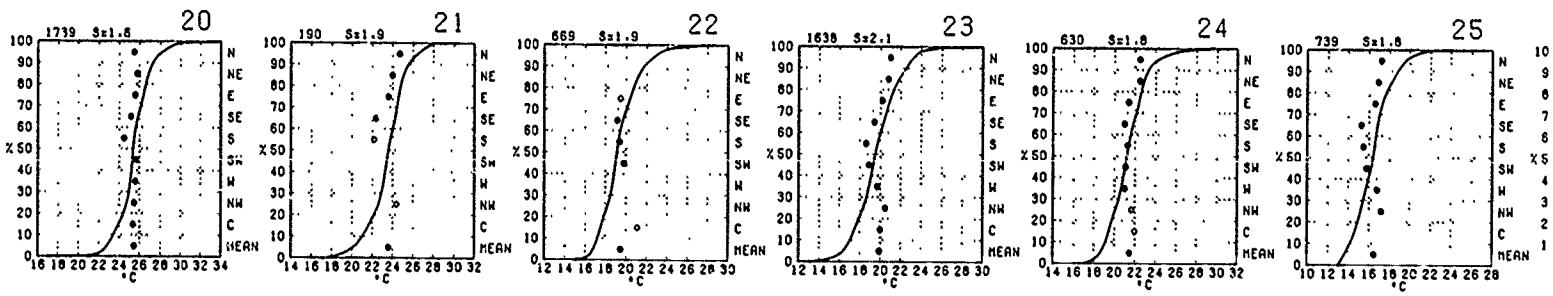
The mean temperature is omitted when less than 10 observations for a direction or calm were available.

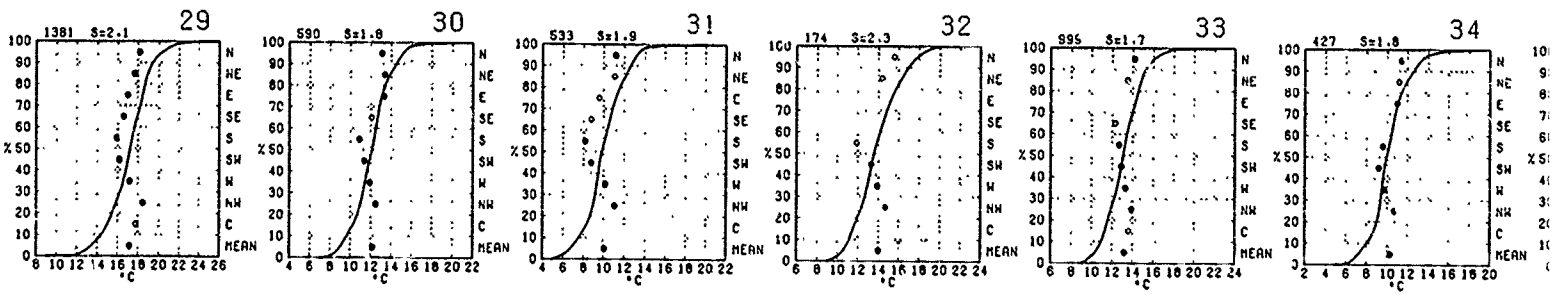
BLACK LINE - Mean air temperature (°C)

RED LINE - Percent frequency of temperature ≥20°C (68°F)









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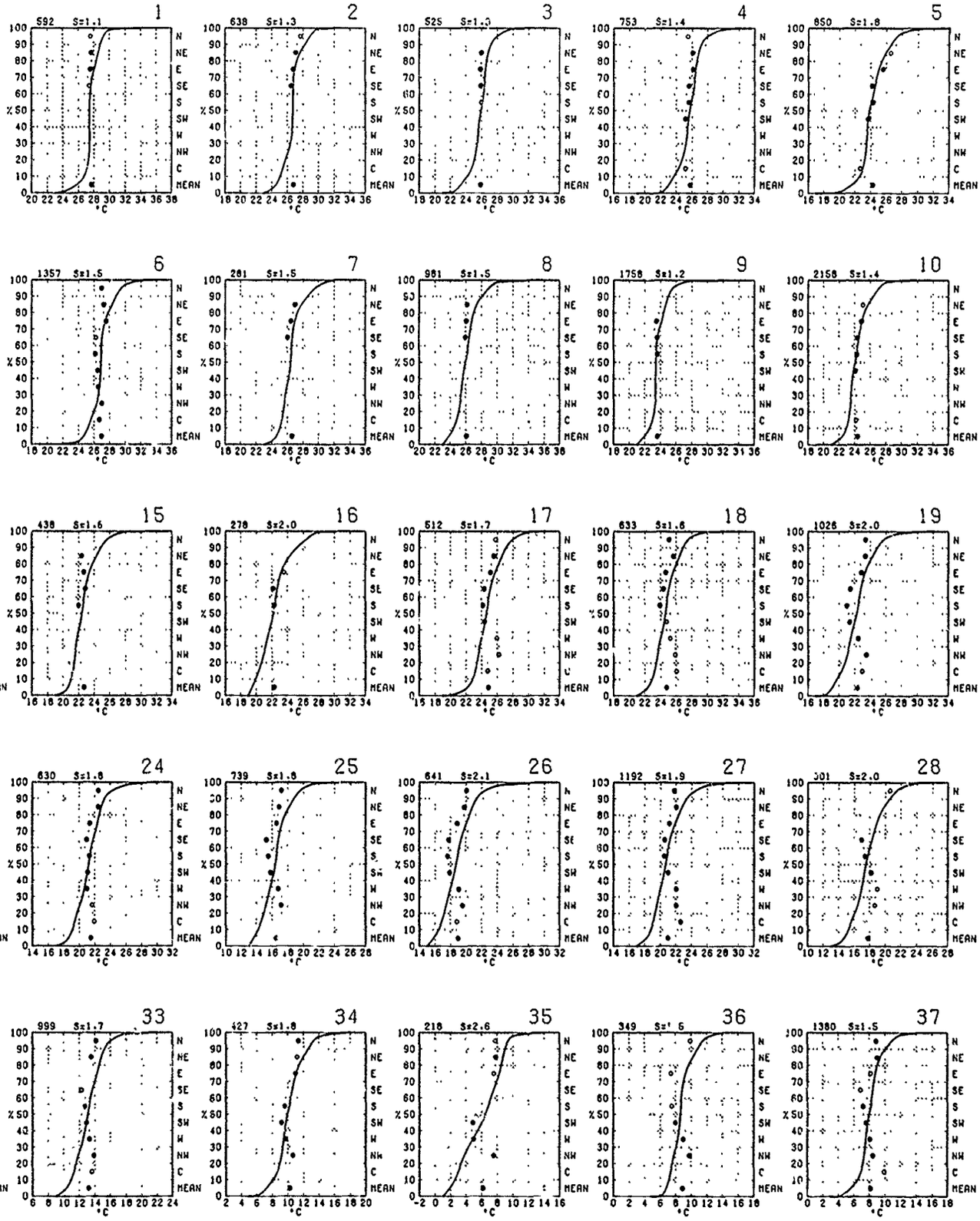

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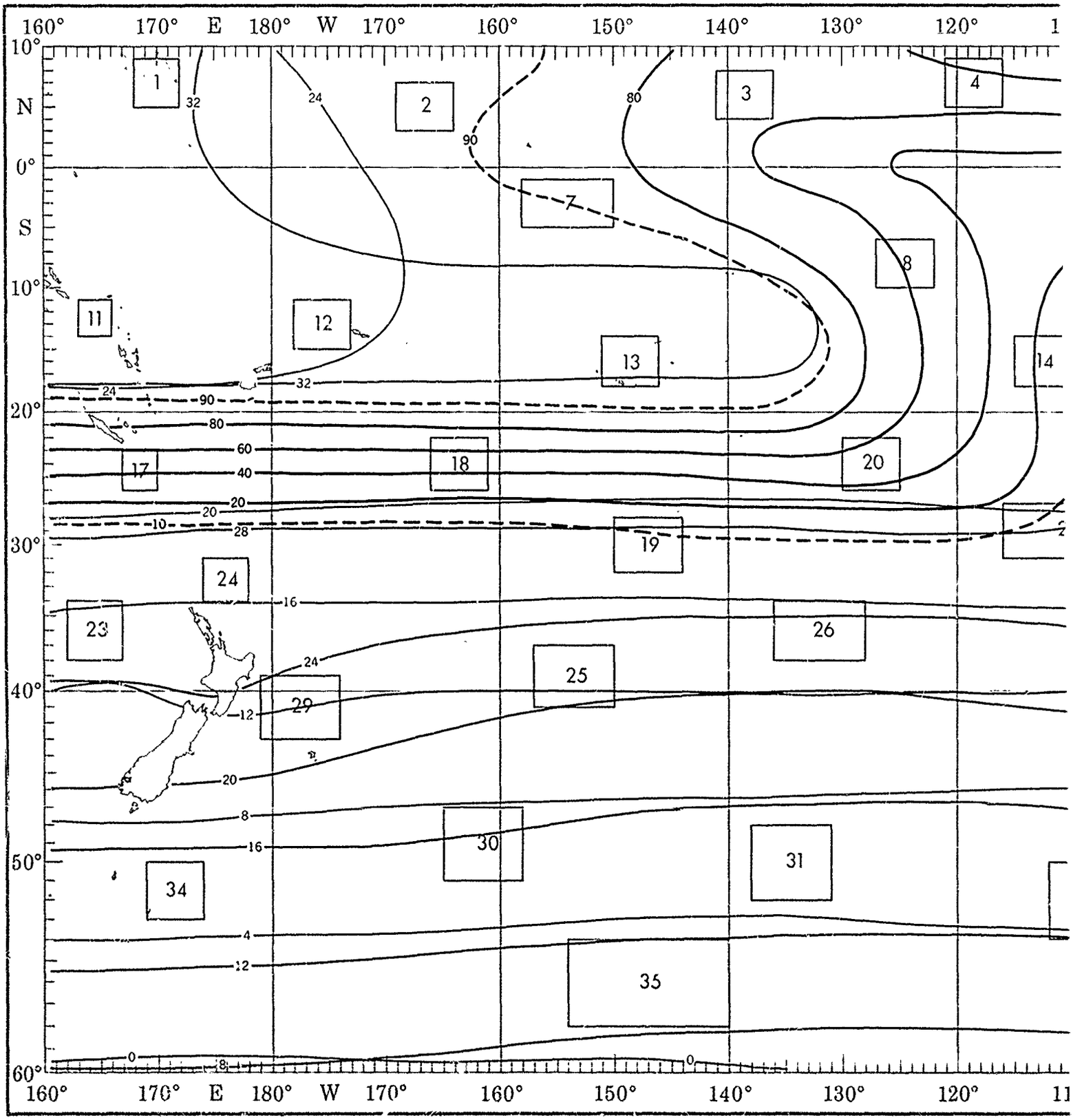
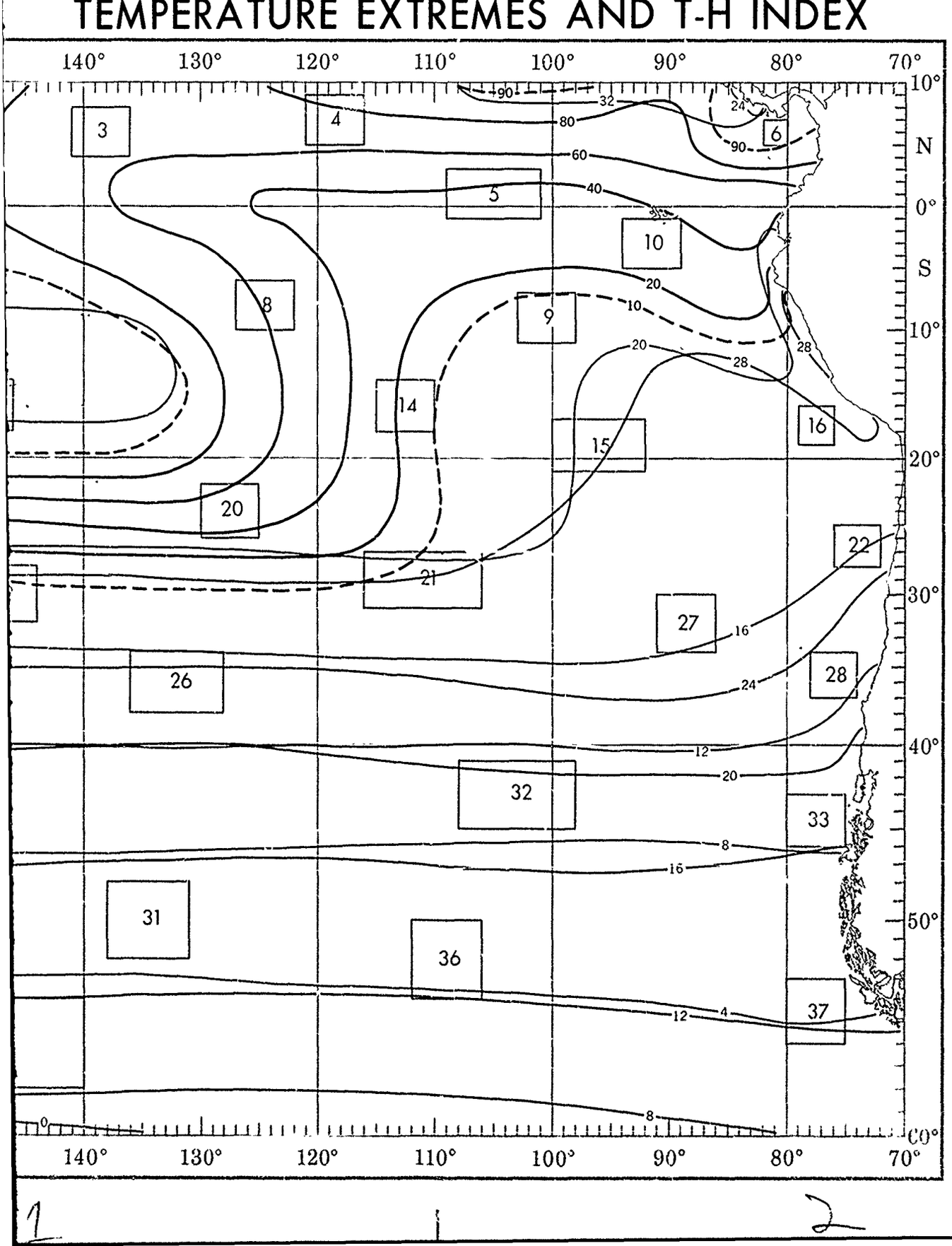


TEMPERATURE EXTREMES AND T-H INDEX



WIND SPEED AND AIR TEMPERATURE

Wind speed and air temperature

Percent frequency of simultaneous occurrence of specified temperature (°C) and wind speed (knots)

WIND SPEED (kts.)

Temp (°C)	0-3	4-10	11-21	22-33	≥34
4-5	18	8	7	1	1
2-3	17	8	7	1	1
0-1	13	6	5	1	1
-2--1	1	+	0	0	0
-4--3	0	0	0	0	0
-6--5	+	0	0	+	+
-8--7	1	+	0	0	0
-10--9	0	0	0	0	0
-12--11	1	+	0	0	0
-14--13	1	0	0	0	0
-16--15	1	+	0	0	0

3550

—(1% of *all observations reported temperature 2-3°C simultaneously with wind speed of 22-33 kts.*)

+ Indicates < 5% but >0.

Number of observations

Use of this table in determination of Potential Superstructure Icing is explained in the text.

WIND SPEED (KTS) 1

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	+	0	0	0	0
32.33	0	0	+	0	0
30.31	0	2	2	+	0
28.29	+	17	34	4	0
26.27	1	15	20	3	0
24.25	+	2	1	1	0
22.23	0	+	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

592

WIND SPEED (KTS) 2

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	1	1	0	0
28.29	+	9	17	1	0
26.27	1	20	33	5	0
24.25	0	3	7	1	0
22.23	0	+	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

639

WIND SPEED (KTS) 6

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	+	0	0
30.31	1	2	1	+	0
28.29	4	14	8	+	0
26.27	11	30	16	2	0
24.25	1	5	3	+	0
22.23	+	+	+	+	0
20.21	0	+	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1418

WIND SPEED (KTS) 7

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	0	0	0
30.31	0	3	2	0	0
28.29	0	8	11	+	0
26.27	2	13	42	3	0
24.25	0	5	10	3	0
22.23	0	0	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

281

BLACK LINE - Percent frequency of T-H index ≥24°C (75.2°F) (discomfort may be experienced due to heat)

BLUE LINE - Minimum (1%) air temperature (°C) (1% of the temperatures were equal to or less than the given value)

RED LINE - Maximum (99%) air temperature (°C) (1% of the temperatures were greater than the given value)

WIND SPEED (KTS) 11

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	+	1	0	0	0
32.33	1	2	1	0	0
30.31	5	13	6	1	0
28.29	8	33	11	+	0
26.27	2	10	5	1	1
24.25	0	0	+	+	+
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

301

WIND SPEED (KTS) 12

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	0	0	0
32.33	0	1	+	0	0
30.31	1	6	2	+	0
28.29	6	37	16	1	+
26.27	3	14	8	1	+
24.25	+	1	+	0	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

496

WIND SPEED (KTS) 13

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	1	0	0
30.31	1	2	2	0	0
28.29	3	18	20	2	0
26.27	4	23	16	1	0
24.25	+	3	3	1	0
22.23	0	1	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

892

WIND SPEED (KTS) 14

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	+	0	0
28.29	+	1	1	0	0
26.27	1	11	10	1	0
24.25	2	25	27	1	0
22.23	1	8	12	+	0
20.21	0	+	+	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

1350

WIND SPEED (KTS) 15

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	+	1	0	0
26.27	+	2	3	+	0
24.25	1	9	10	2	0
22.23	1	16	30	1	0
20.21	1	7	15	+	0
18.19	0	+	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
9.9	0	0	0	0	0

441

WIND SPEED (KTS) 16

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	1	+	0	0
26.27	+	6	1	0	0
24.25	0	10	5	0	0
22.23	3	22	14	+	0
20.21	3	17	12	+	0
18.19	1	2	2	+	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
9.9	0	0	0	0	0

278

WIND SPEED (KTS) 20

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	0	0	0
32.33	+	+	0	0	0
30.31	+	+	+	0	0
28.29	2	5	2	+	0
26.27	3	21	15	1	+
24.25	5	22	15	1	0
22.23	1	2	2	+	0
20.21	+	+	1	+	0
18.19	0	0	+	0	0
16.17	0	+	0	0	0
14.15	0	0	0	0	0

1779

WIND SPEED (KTS) 21

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	1	0	0	0
26.27	0	11	5	1	0
24.25	3	17	15	1	0
22.23	3	22	7	2	0
20.21	1	6	2	2	0
18.19	1	0	1	1	1
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
9.9	0	0	0	0	0

190

WIND SPEED (KTS) 22

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	+	0	0	0	0
26.27	+	+	+	0	0
24.25	1	1	+	0	0
22.23	3	5	2	+	0
20.21	7	15	9	1	0
18.19	5	19	20	1	0
16.17	1	4	5	0	0
14.15	0	+	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
9.9	0	0	0	0	0

669

WIND SPEED (KTS) 23

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	0	+	0	0
28.29	0	0	+	0	0
26.27	+	+	+	+	0
24.25	+	1	1	+	0
22.23	2	7	8	1	0
20.21	3	13	13	2	+
18.19	2	14	15	3	+
16.17	1	4	4	2	+
14.15	+	1	+	+	+
12.13	0	+	0	0	0
10.11	0	0	0	0	0

1657

WIND SPEED (KTS) 24

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	+	+	0	0	0
26.27	+	1	1	0	0
24.25	1	5	3	0	0
22.23	3	16	14	3	+
20.21	3	17	10	4	+
18.19	2	5	5	1	0
16.17	0	+	+	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
9.9	0	0	0	0	0

635

WIND SPEED (KTS) 25

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	+	+	+	+	0
20.21	+	2	1	+	0
18.19	1	10	8	3	0
16.17	2	18	21	6	+
14.15	1	7	10	2	1
12.13	0	2	1	1	+
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

745

WIND SPEED (KTS) 29

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	+	+	0	0	0
22.23	+	+	1	0	0
20.21	1	3	4	1	+
18.19	2	10	15	5	+
16.17	2	12	17	6	+
14.15	1	5	6	2	1
12.13	0	2	1	1	+
10.11	+	+	+	+	0
8.9	0	0	+	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

1401

WIND SPEED (KTS) 30

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	+	+	0	0
16.17	+	1	1	+	1
14.15	+	7	8	3	1
12.13	1	9	18	14	2
10.11	+	5	12	9	1
8.9	0	+	4	3	+
6.7	0	0	+	+	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2--1	0	0	0	0	0

596

WIND SPEED (KTS) 31

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	0	0	+	0
16.17	0	0	+	0	0
14.15	0	1	1	1	+
12.13	1	4	12	3	3
10.11	1	4	17	10	2
8.9	+	6	16	7	3
6.7	0	0	2	3	1
4.5	0	0	+	1	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2--1	0	0	0	0	0

534

WIND SPEED (KTS) 32

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	1	1	0	0
18.19	1	3	2	1	0
16.17	1	3	7	3	0
14.15	0	14	16	2	1
12.13	0	5	16	8	2
10.11	0	3	3	3	1
8.9	0	0	1	1	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

174

WIND SPEED (KTS) 33

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	+	0	0	0
18.19	+	+	1	+	0
16.17	1	3	4	1	+
14.15	2	14	14	3	1
12.13	2	16	18	6	1
10.11	1	4	5	2	1
8.9	0	+	1	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

999

WIND SPEED (KTS) 34

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	+	+	0	0
14.15	0	1	2	1	0
12.13	+	4	13	5	+
10.11	1	5	19	12	2
8.9	+	6	15	10	1
6.7	0	1	1	2	+
4.5	0	0	0	+	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2--1	0	0	0	0	0
-4--3	0	0	0	0	0

427

Graphs represent the objective compilation of available data for specified areas without regard t
The isopleth analyses (opposite page) are based on all available data subjectively adjusted wher

R TEMPERATURE

JANUARY

ature (°C) and wind speed

wind speed of 22 33 kts)

s explained in the text

ed due to heat)

ess than the given value)

an the given value)

1

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	+	0	0	0	0
32.33	0	0	+	0	0
30.31	0	2	2	+	0
28.29	+	17	34	4	0
26.27	1	15	20	3	0
24.25	+	2	1	1	0
22.23	0	+	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

592

2

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	1	1	0	0
28.29	+	9	17	1	0
26.27	1	20	33	5	0
24.25	0	3	7	1	0
22.23	0	+	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

639

3

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	+	0	0
28.29	0	3	6	+	0
26.27	2	19	35	3	0
24.25	2	13	13	2	0
22.23	0	1	2	0	0
20.21	0	0	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

526

4

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	1	1	0	0
28.29	1	4	4	1	+
26.27	6	20	21	4	0
24.25	7	21	6	1	0
22.23	+	1	+	0	0
20.21	0	+	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

764

5

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	+	0	0
30.31	+	+	1	0	0
28.29	1	2	2	0	0
26.27	+	12	5	0	0
24.25	4	30	9	0	0
22.23	5	23	4	0	0
20.21	1	1	+	0	0
18.19	+	0	0	+	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

859

6

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	+	0	0
30.31	1	2	1	+	0
28.29	4	14	8	+	0
26.27	11	30	16	2	0
24.25	1	5	3	+	0
22.23	+	+	+	+	0
20.21	0	+	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1418

7

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	0	0	0
30.31	0	3	2	0	0
28.29	0	6	11	+	0
26.27	2	13	42	3	0
24.25	0	5	10	3	0
22.23	0	0	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

281

8

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	0	0	0
32.33	+	+	+	0	0
30.31	+	1	1	0	0
28.29	+	4	9	+	0
26.27	1	17	30	1	+
24.25	0	14	19	+	0
22.23	0	1	1	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

981

9

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	0	0	0
28.29	+	+	+	0	0
26.27	+	4	3	0	0
24.25	1	18	22	+	0
22.23	1	24	26	+	0
20.21	0	+	1	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

1763

10

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	+	0	0	0
28.29	+	2	+	0	0
26.27	2	15	3	0	0
24.25	4	36	7	+	0
22.23	3	23	3	0	0
20.21	+	1	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

2189

13

≥ 34
0
0
0
0
0
0
0
0
0
0
0

892

14

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	+	0	0
28.29	+	1	1	0	0
26.27	1	11	10	1	0
24.25	2	25	27	1	0
22.23	1	8	12	+	0
20.21	0	+	+	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

1350

15

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	+	1	0	0
26.27	+	2	3	+	0
24.25	1	9	10	2	0
22.23	1	16	30	1	0
20.21	1	7	15	+	0
18.19	0	+	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
9.9	0	0	0	0	0

441

16

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	1	+	0	0
26.27	+	6	1	0	0
24.25	0	10	5	0	0
22.23	3	22	14	+	0
20.21	3	17	12	+	0
18.19	1	2	2	+	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
9.9	0	0	0	0	0

278

17

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	+	+	0	0
28.29	+	4	2	+	0
26.27	3	10	14	2	1
24.25	2	15	21	6	1
22.23	1	4	8	2	1
20.21	+	1	+	1	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

517

18

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	0	0	0
30.31	0	0	+	0	0
28.29	1	2	3	+	+
26.27	2	13	12	1	+
24.25	3	14	24	3	0
22.23	+	5	11	3	0
20.21	0	+	1	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

637

19

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	0	0	0
28.29	0	1	+	0	0
26.27	+	3	4	+	0
24.25	1	11	7	1	0
22.23	3	16	17	3	+
20.21	2	10	14	3	+
18.19	+	3	3	+	+
16.17	0	+	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

1049

22

≥ 34
0
0
0
0
0
0
0
0
0
0
0

669

23

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	0	+	0	0
28.29	0	0	+	0	0
26.27	+	+	+	+	0
24.25	+	1	1	+	0
22.23	2	7	8	1	0
20.21	3	13	13	2	+
18.19	2	14	15	3	+
16.17	1	4	4	2	+
14.15	+	1	+	+	+
12.13	0	+	0	0	0
10.11	0	0	0	0	0

1657

24

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	+	+	0	0	0
26.27	+	1	1	0	0
24.25	1	5	3	0	0
22.23	3	16	14	3	+
20.21	3	17	16	4	+
18.19	2	6	6	1	0
16.17	0	+	+	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
9.9	0	0	0	0	0

635

25

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	+	+	+	+	0
20.21	+	2	1	+	0
18.19	1	10	6	3	0
16.17	2	18	21	6	+
14.15	1	7	10	2	1
12.13	0	2	1	1	+
10.11	0	0	0	0	0
9.9	0	0	0	0	0
8.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

745

26

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	+	0	0	0	0
26.27	+	+	1	0	0
24.25	+	1	1	0	0
22.23	1	5	1	+	0
20.21	2	11	11	1	+
18.19	3	17	16	2	1
16.17	1	11	9	1	+
14.15	0	1	1	+	+
12.13	0	0	0	0	0
10.11	0	0	0	0	0
9.9	0	0	0	0	0

647

27

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	0	0	0	0
28.29	+	+	0	0	0
26.27	1	1	+	0	0
24.25	4	3	2	+	0
22.23	6	12	7	1	0
20.21	5	20	16	2	+
18.19	3	9	8	1	0
16.17	+	1	+	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

1132

28

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	0	+	+	0	0
22.23	1	1	2	0	0
20.21	4	8	2	1	0
18.19	2	10	14	8	1
16.17	3	9	15	10	1
14.15	1	1	1	3	1
12.13	0	1	1	0	0
10.11	0	0	0	0	0
8.8	0	0	0	0	0
8.7	0	0	0	0	0
4.5	0	0	0	0	0

301

31

≥ 34
0
0
+
3
2
3
1
0
0
0
0

534

32

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	1	1	0	0
18.19	1	3	2	1	0
16.17	1	3	7	+	0
14.15	0	14	16	2	1
12.13	0	5	16	6	2
10.11	0	3	3	3	1
9.9	0	3	1	1	0
8.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

17

33

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	+	0	0	0
18.19	+	+	1	+	0
16.17	1	3	4	1	+
14.15	2	14	14	3	1
12.13	2	18	18	6	1
10.11	1	6	5	2	1
9.9	0	+	1	0	0
8.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

999

34

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	+	+	0	0
14.15	0	1	2	1	0
12.13	+	4	13	5	+
10.11	1	5	19	12	2
8.9	+	6	15	10	1
6.7	0	1	1	2	+
4.5	0	0	0	+	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

427

35

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	0	+	0	0
10.11	0	+	3	+	0
8.9	1	9	16	9	+
6.7	0	3	14	4	1
4.5	1	4	11	4	2
2.3	1	1	7	7	+
0.1	0	0	0	1	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

219

36

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	0	+	+	0	0
12.13	0	+	2	2	1
10.11	1	3	11	5	4
8.9	1	9	22	14	4
6.7	1	5	6	6	1
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0

352

37

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	+	+	+	+	0
12.13	1	+	1	+	0
10.11	1	3	5	5	3
8.9	2	7	17	14	11
6.7	1	4	9	9	5
4.5	+	1	+	1	+
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0

1380

nt the objective compilation of available data for specified areas without regard to suspected biases.

lyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

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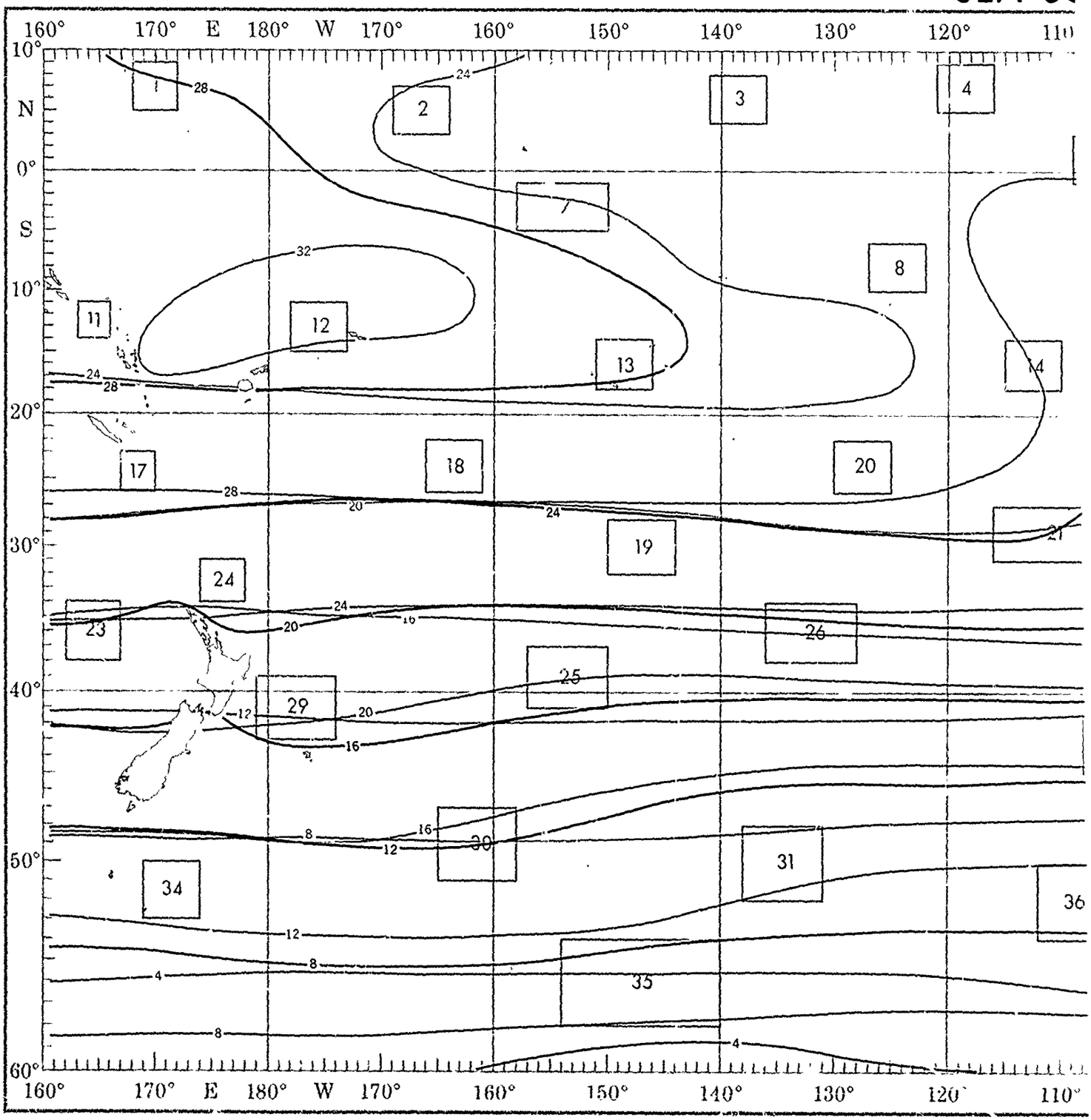
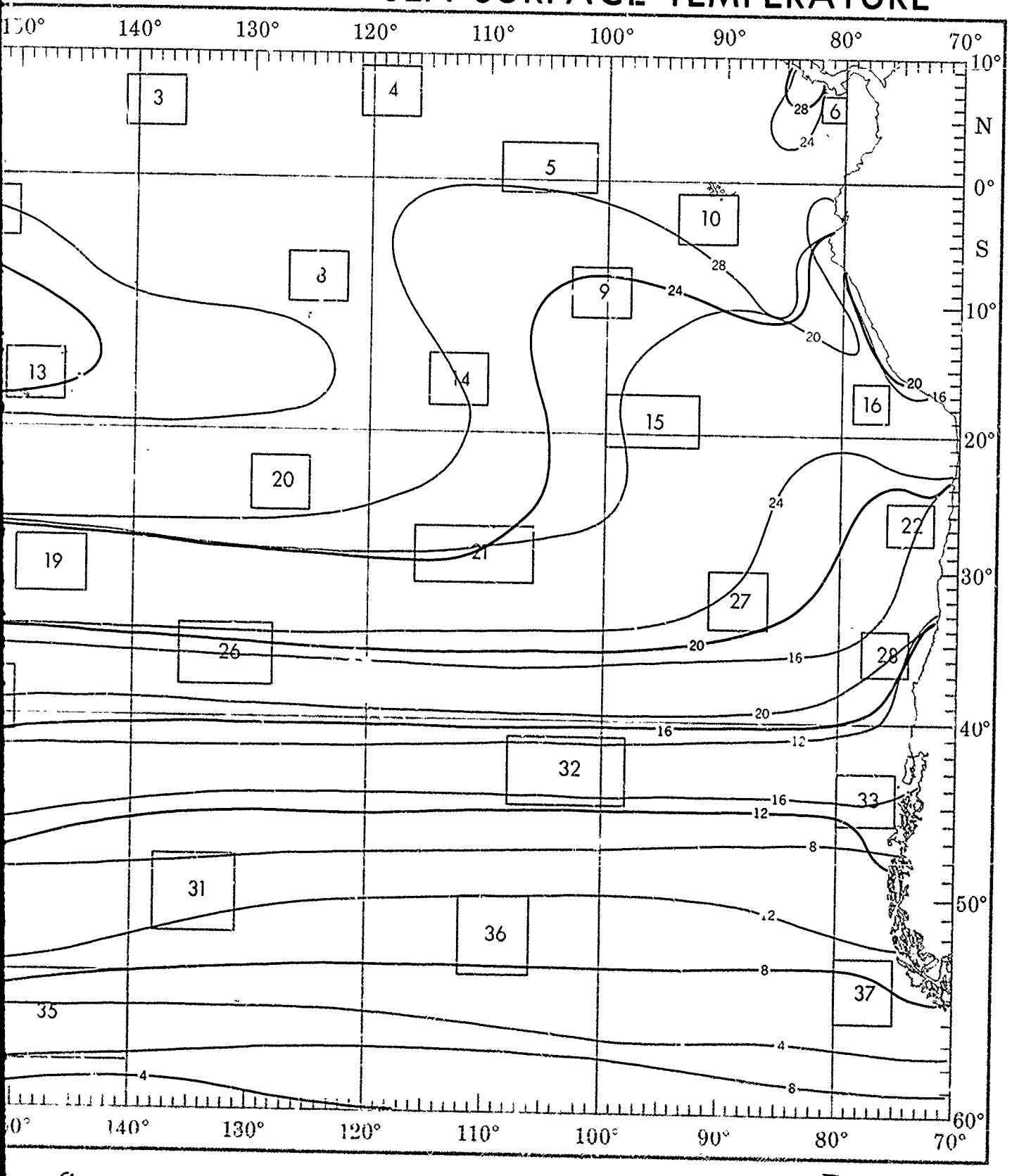
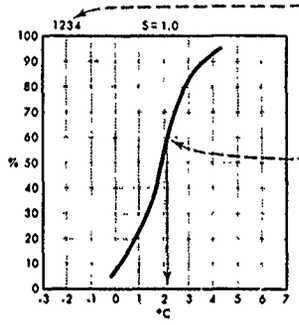
SEA SU



SEA SURFACE TEMPERATURE



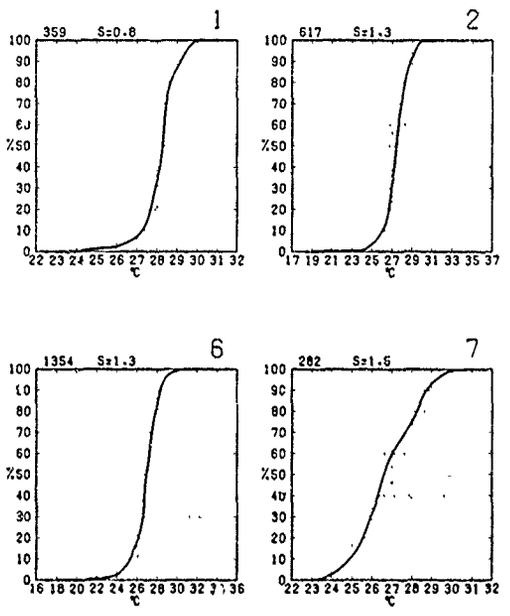
SEA SURFACE TEMPERATURE

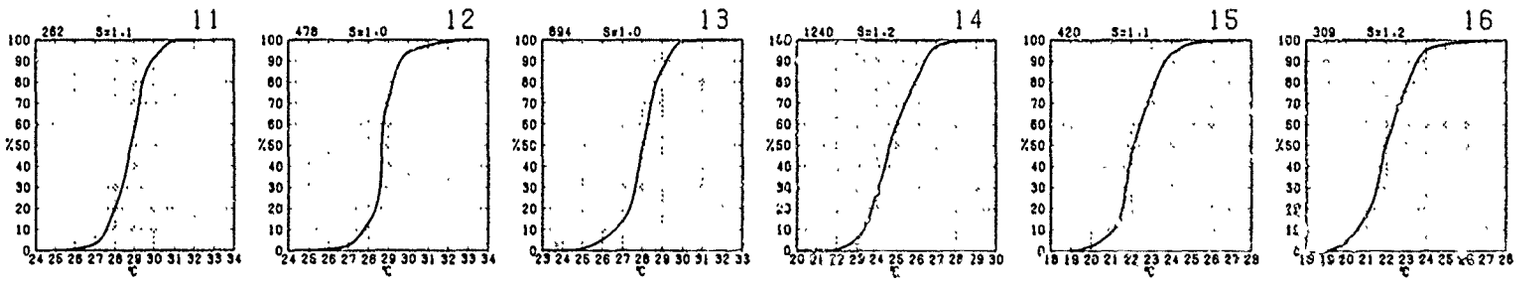


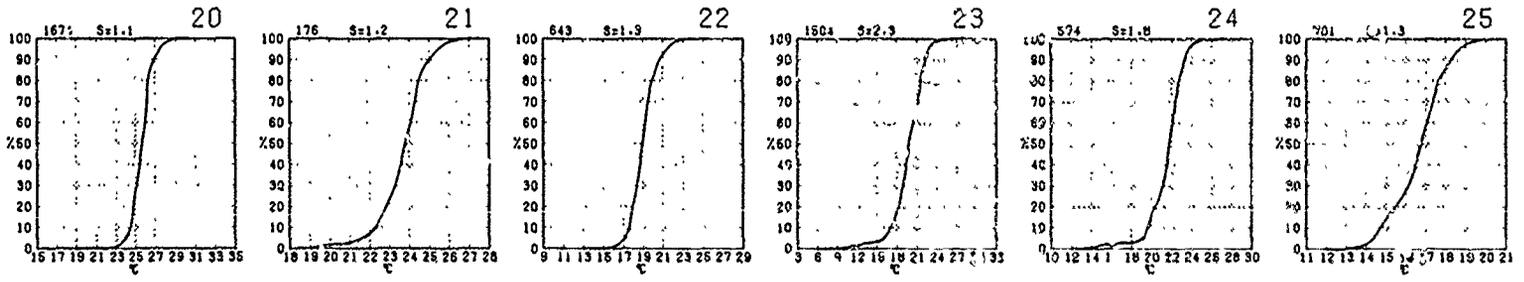
BLACK LINE - Mean sea surface temperature (°C)

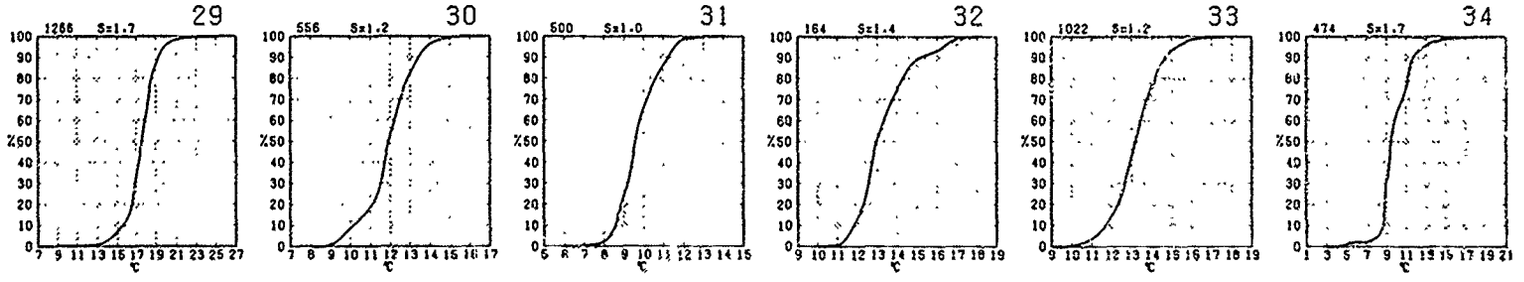
BLUE LINE - Minimum (1%) sea surface temperature (°C) (1% of the temperatures were equal to or less than the given value)

RED LINE - Maximum (99%) sea surface temperature (°C) (1% of the temperatures were greater than the given value)









Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

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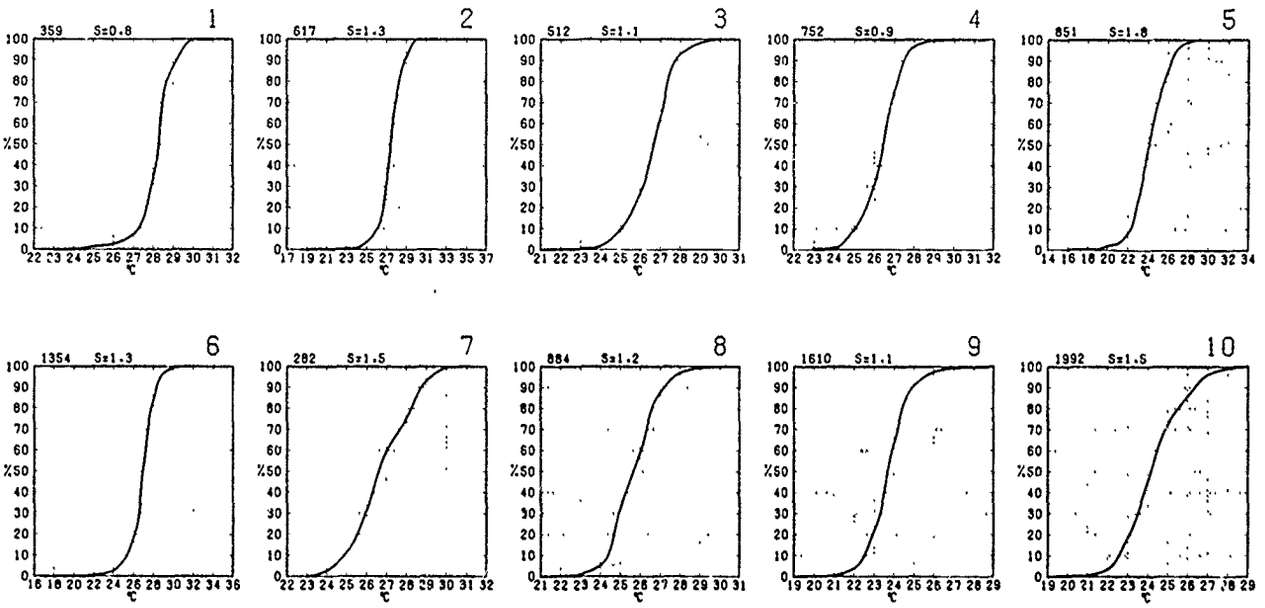

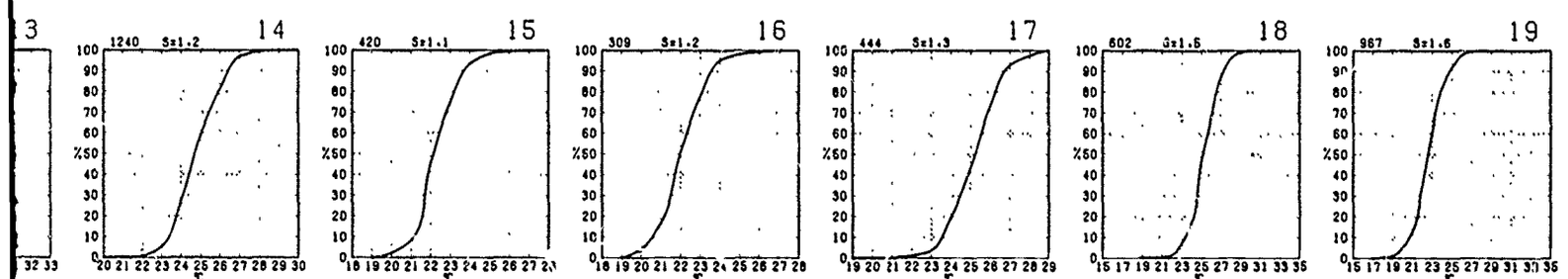

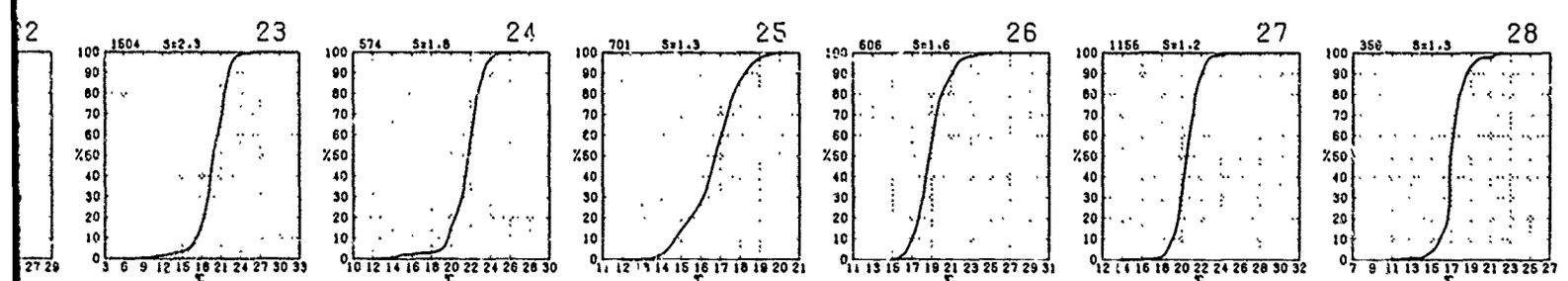

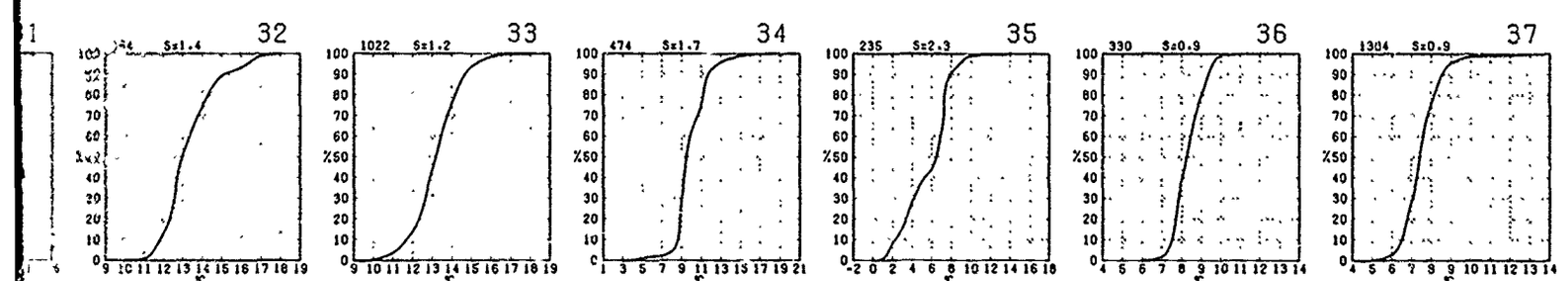

) The objective compilation of available data for specified areas without regard to suspected biases.
lyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

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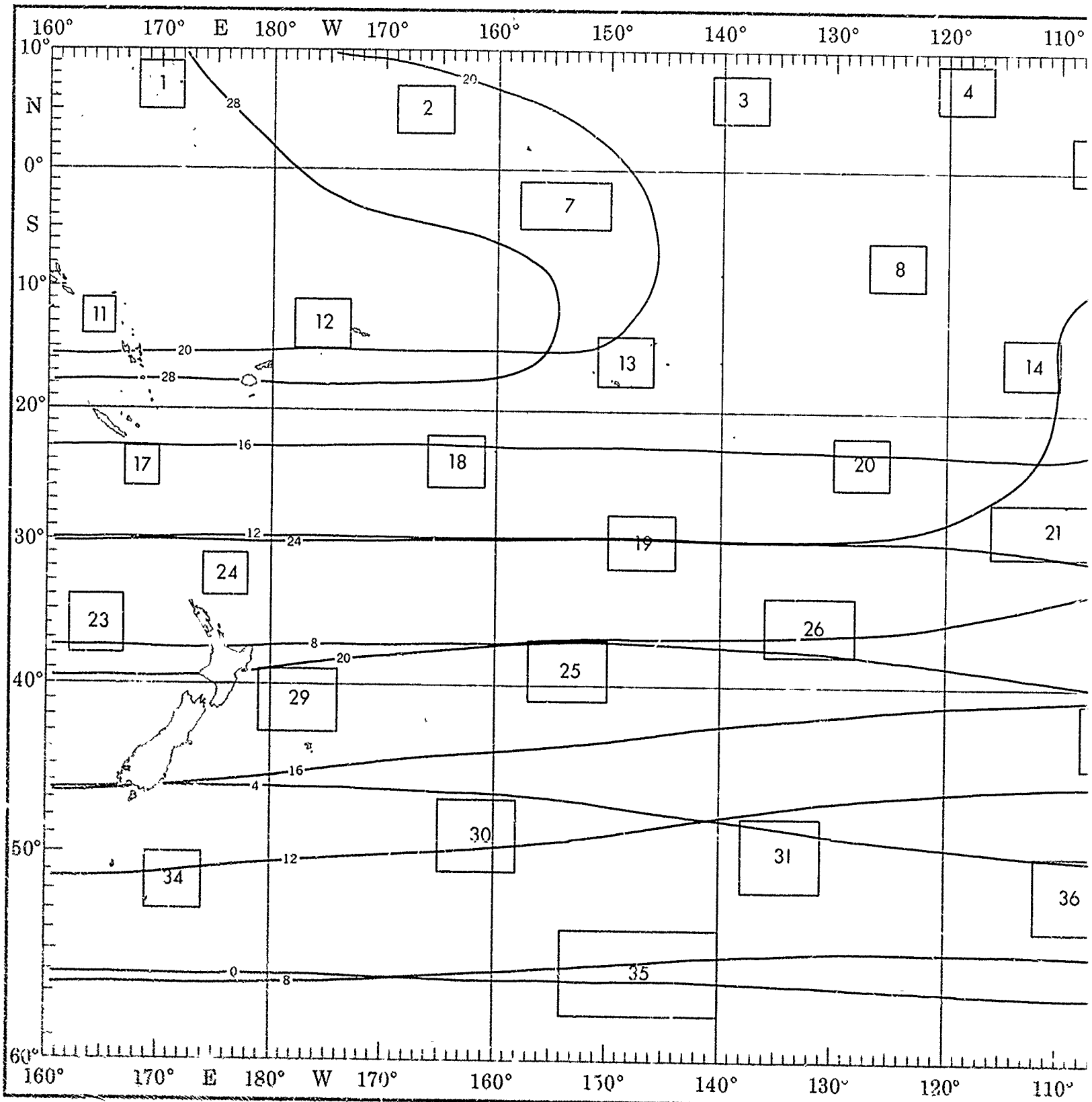
160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
10° N 0° S 10° 20° 30° 40° 50° 60°
1
2
3
4
7
8
11
12
13
14
17
18
20
21
19
24
23
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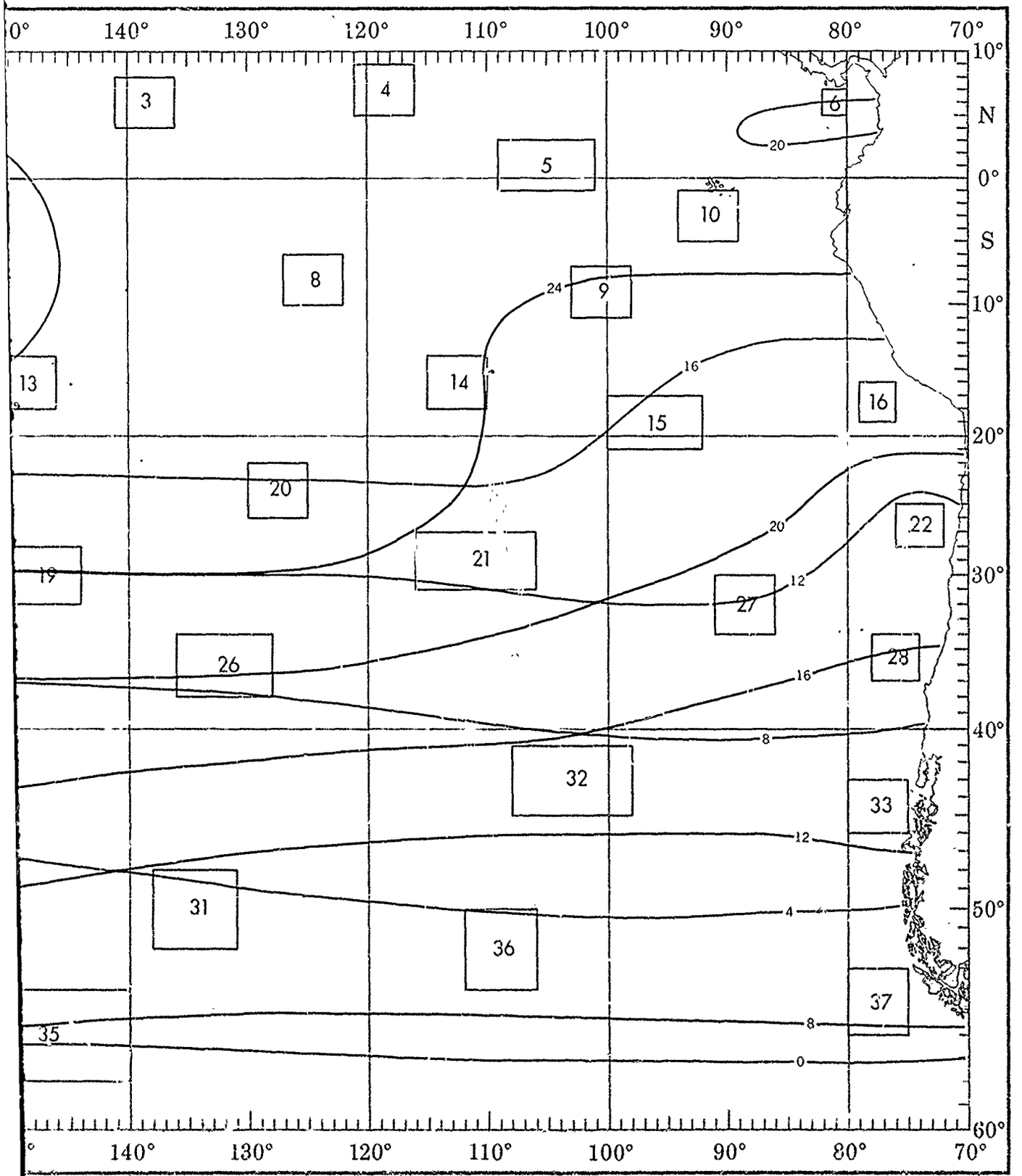
20
16
12
24
8
4
0

1

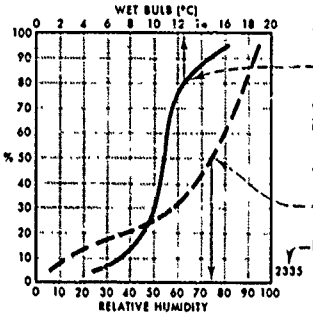
HUMIDITY


0°
140°
130°
120°
110°
100°
90°
80°
70°
10° N
0°
10° S
20°
30°
40°
50°
60°
3
4
5
6
10
8
9
13
14
15
16
20
21
22
19
27
26
28
32
33
31
36
37
35
24
20
16
12
8
4
0

WET BULB AND RELATIVE HUMIDITY

Wet bulb - Relative humidity

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* ≤12.5°C or *54.5°F.*)

Cumulative percent frequency of relative humidities equal to or less than the humidity intersected by the curve (bottom scale)

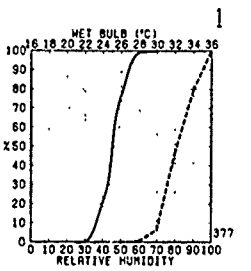
Relative humidity (%)

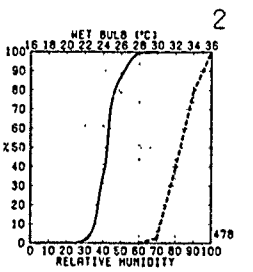
—(50% of *all observed relative humidities were* ≤74%.)

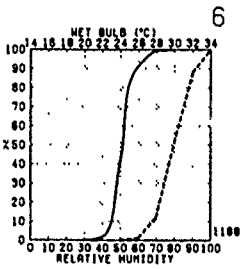
—Number of observations.

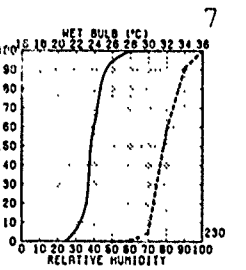
BLUE LINE - Minimum (1%) dew-point temperature (°C) (1% of the computed values were equal to or less than the given value)

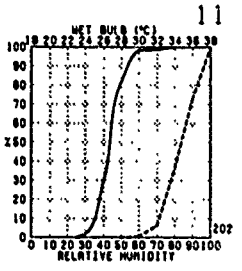
RED LINE - Maximum (99%) dew-point temperature (°C) (1% of the computed values were greater than the given value)

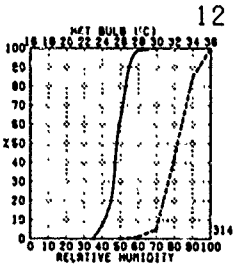


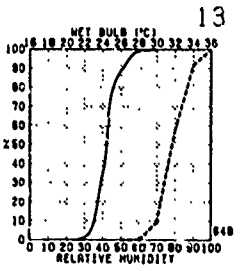


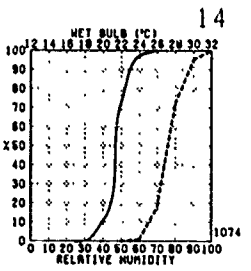


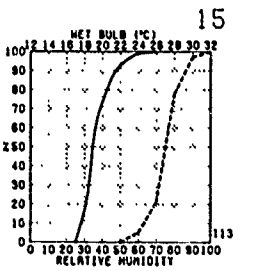


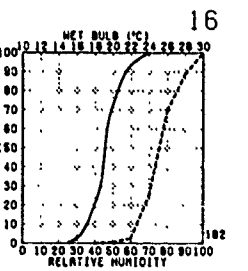


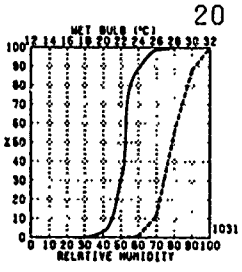


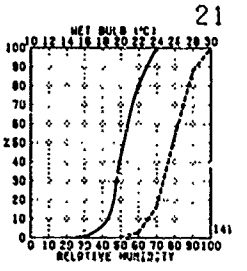


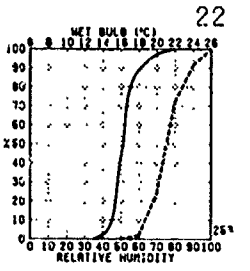


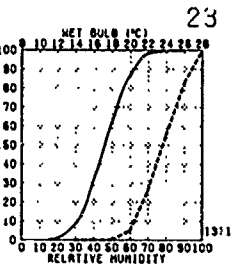


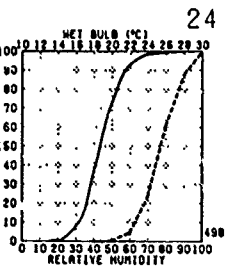


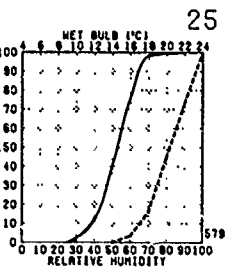


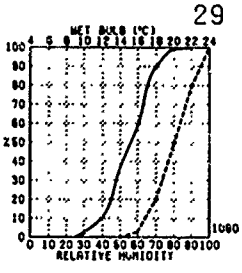


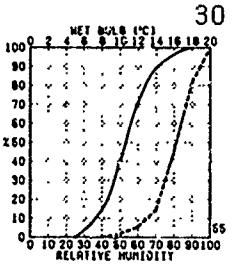


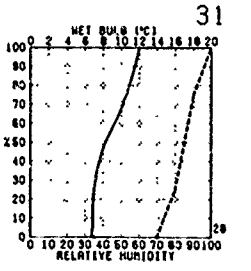


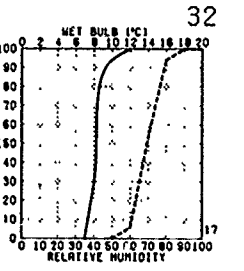


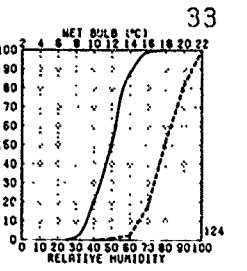


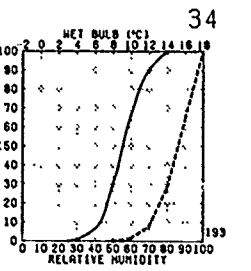












Graphs represent the objective compilation of available data for specified areas without regard to s
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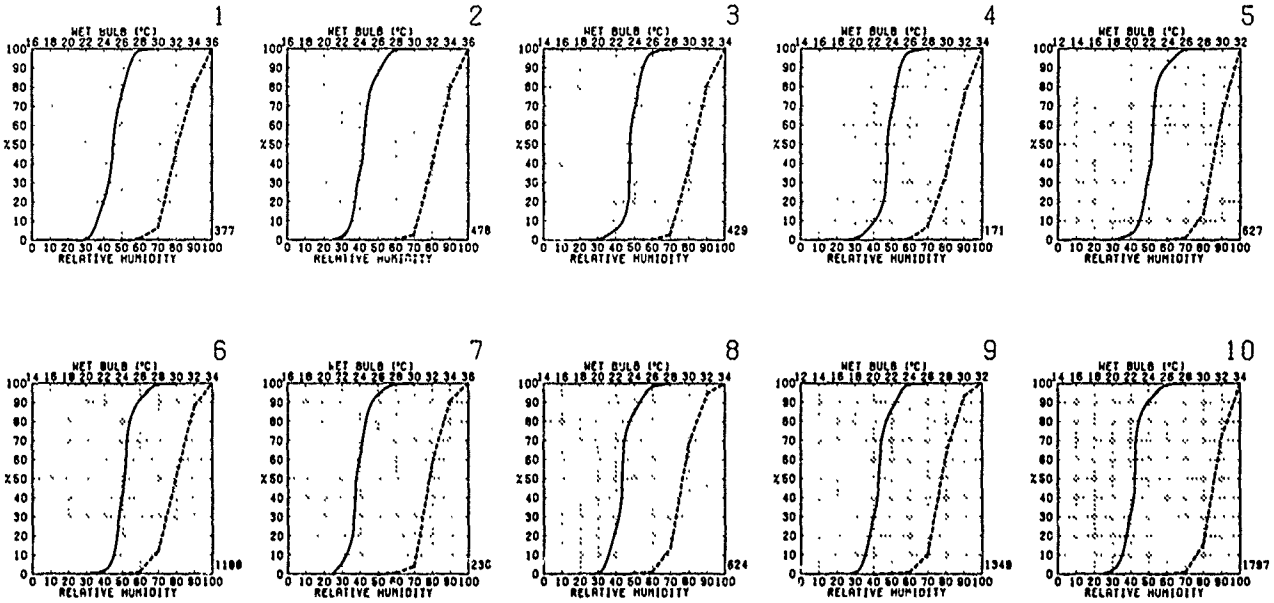

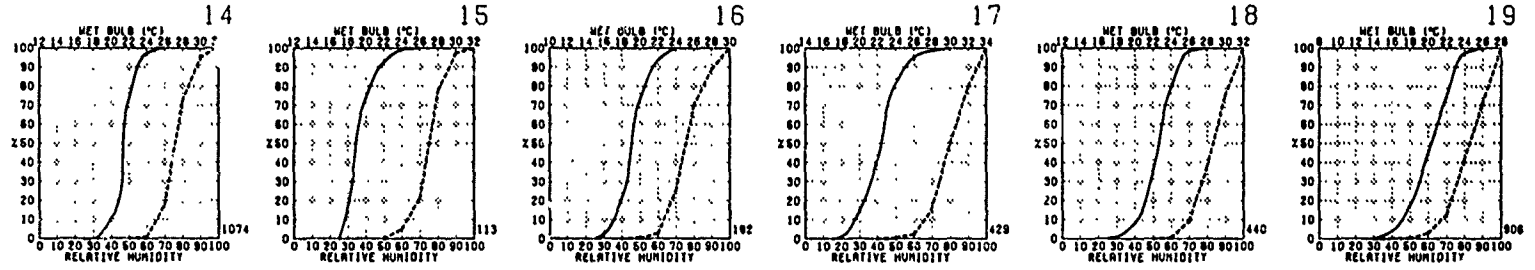

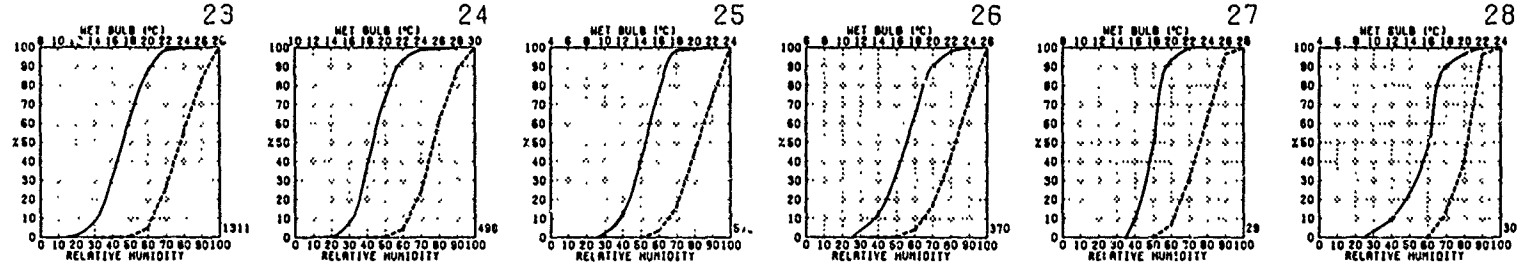

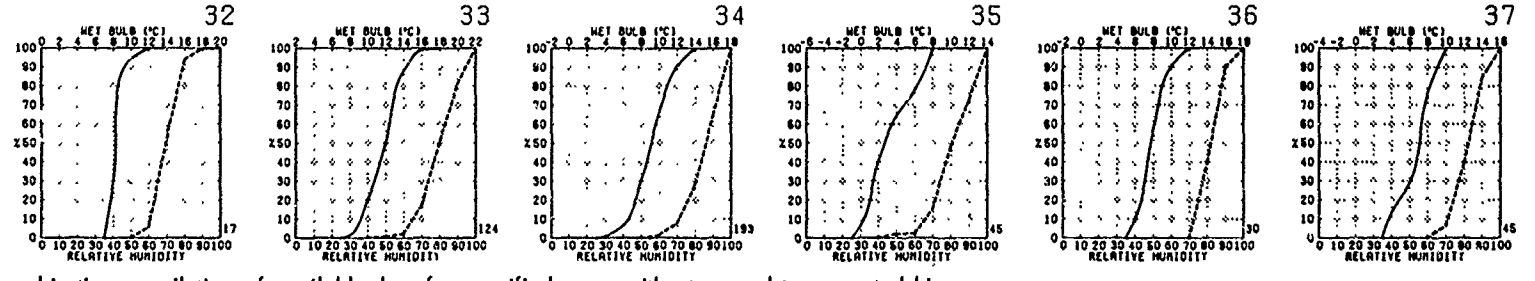

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ses (opposite page) are based on all available data subjectively adjusted where bias was evident.

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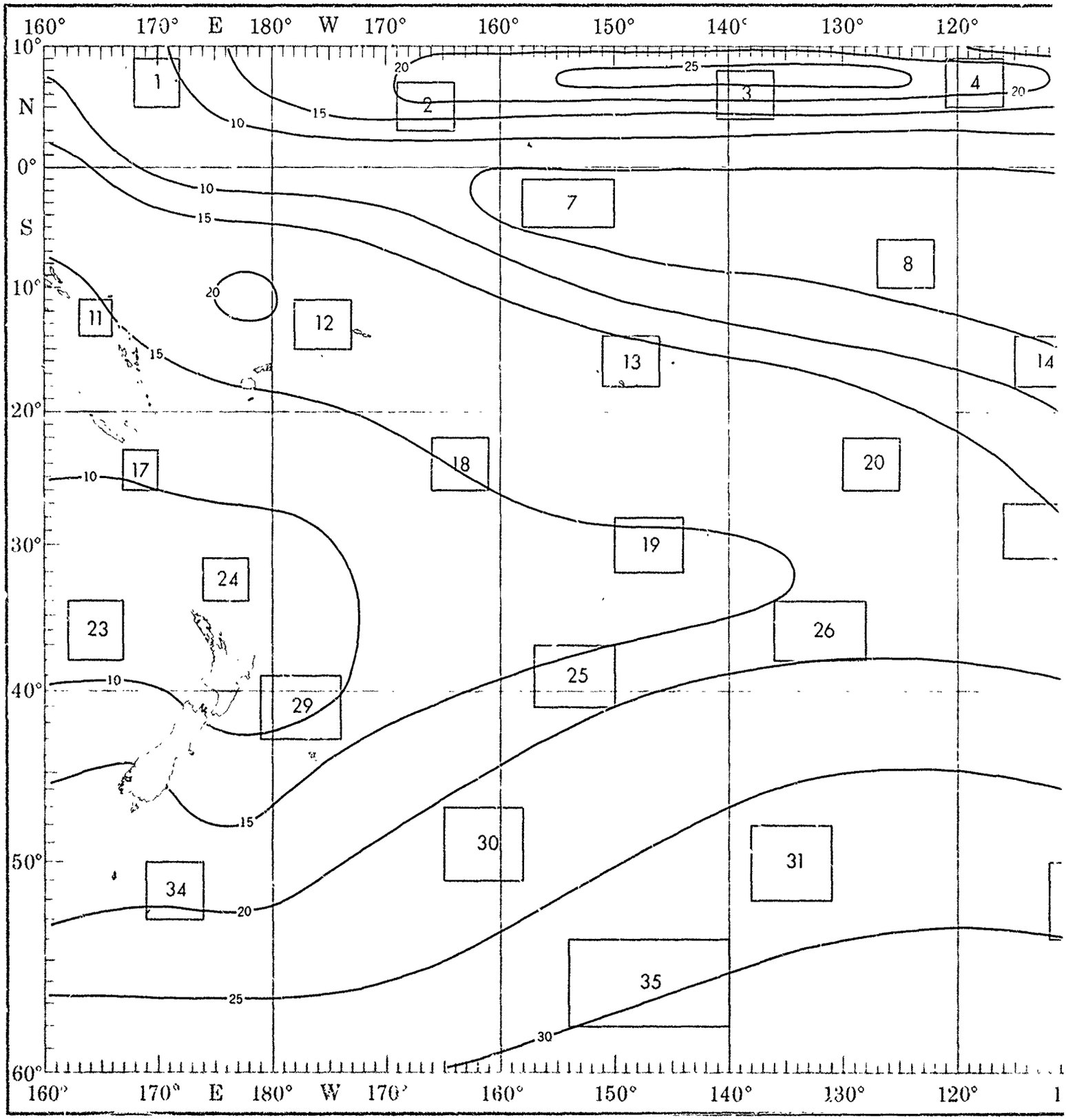
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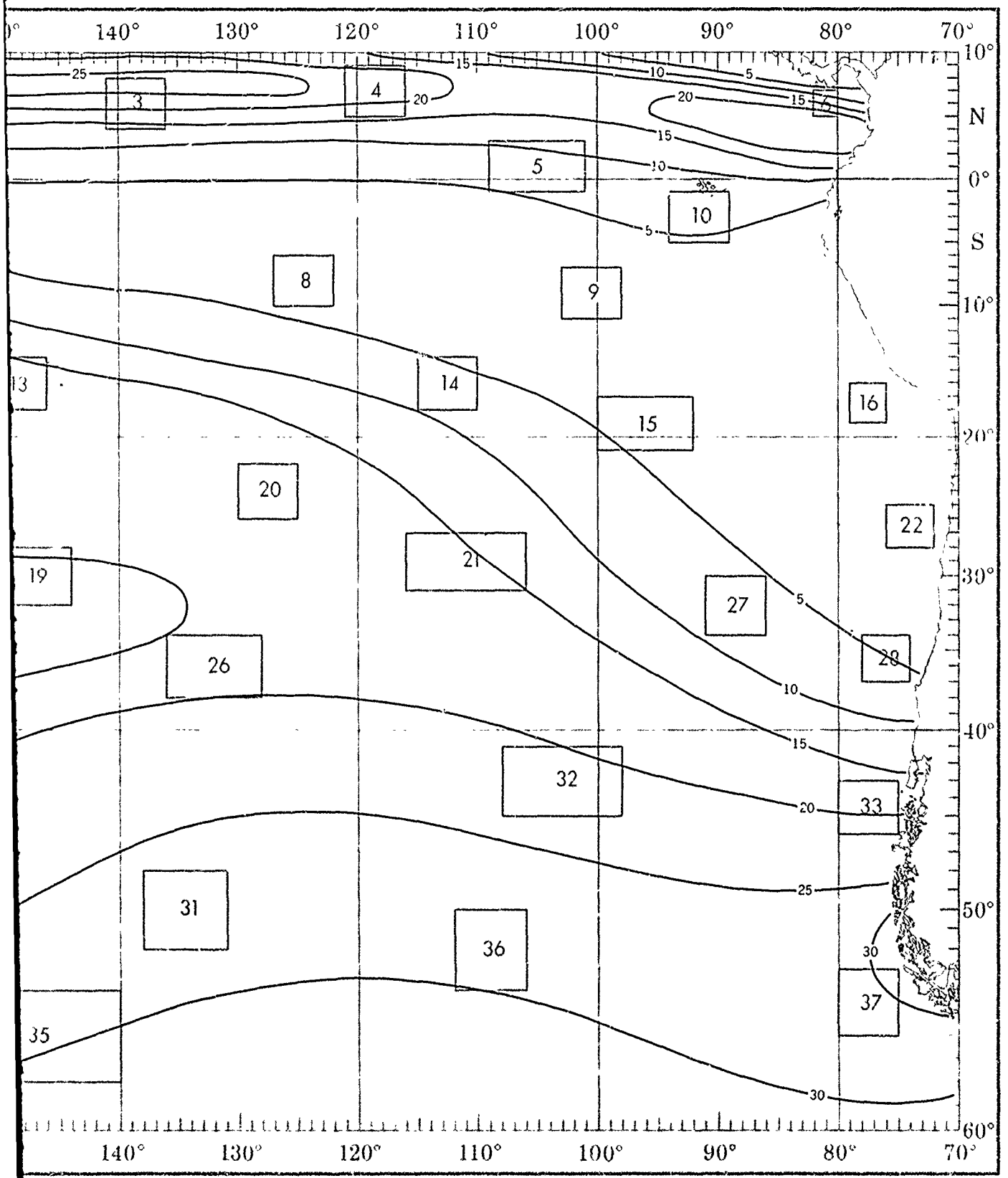
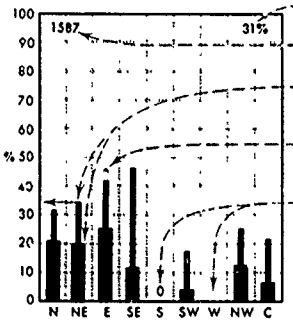
PRECIPITATION



PRECIPITATION

% Pcpn { % Liquid / % Snow

Percent frequency of surface wind observations from each direction and calm that were accompanied by precipitation, subdivided into liquid type (including freezing rain and freezing drizzle) and snow



—Percentage of present weather observations reporting precipitation

—Number of observations

—(34% of all NE winds were accompanied by precipitation, of which 14% was liquid and 20% was snow.)

—An asterisk in the column for a given direction or calm indicates that the percentage was based on 10 30 observations of present weather and wind direction

—0 replaces bar when no precipitation was observed with winds from a given direction or calm No bar graph is presented if less than 10 observations containing present weather were reported for a given direction or calm

RED LINE - Percent frequency of observations reporting precipitation

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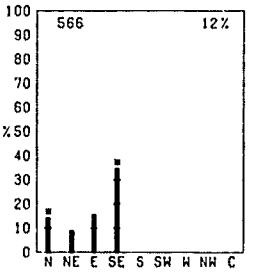

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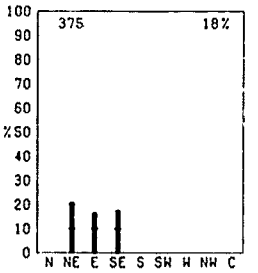

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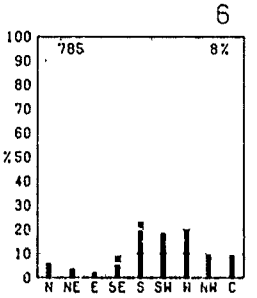

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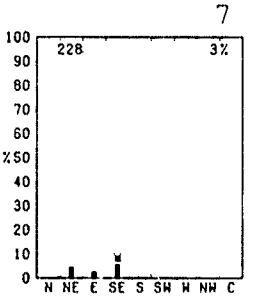

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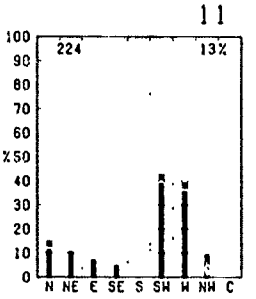

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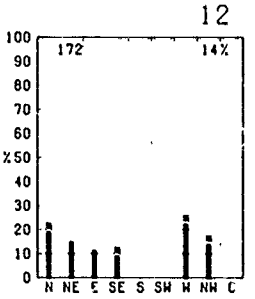

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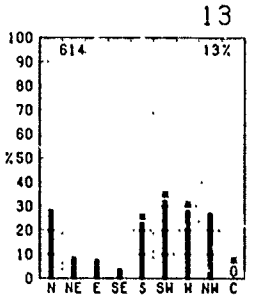

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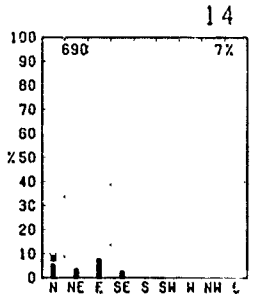

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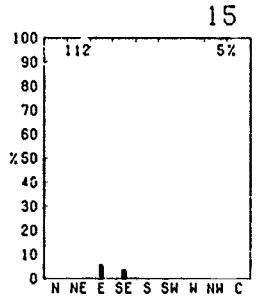

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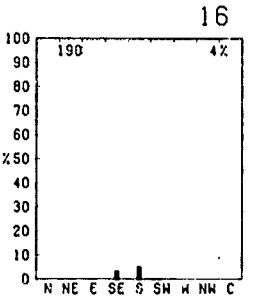

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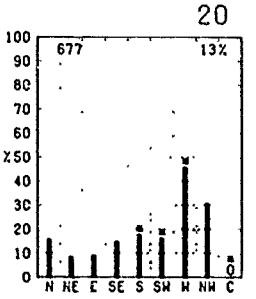

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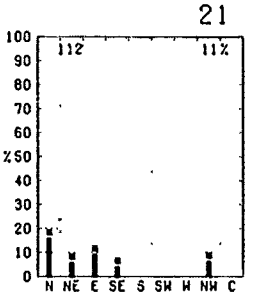

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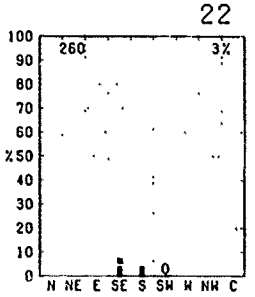

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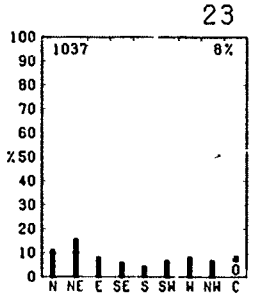

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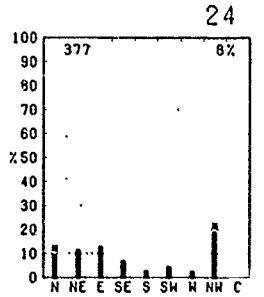

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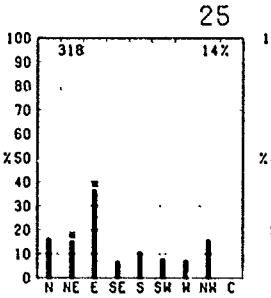

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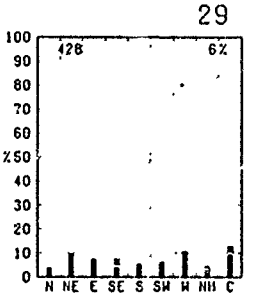

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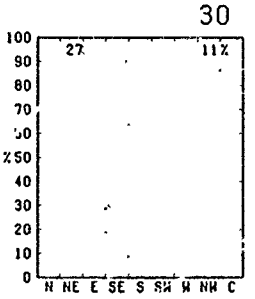

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INSUFFICIENT DATA

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INSUFFICIENT DATA

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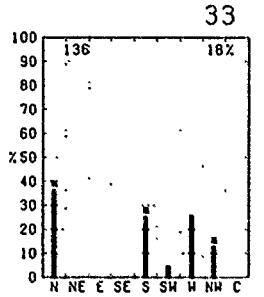

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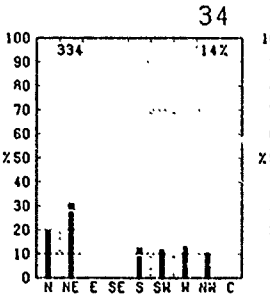

Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

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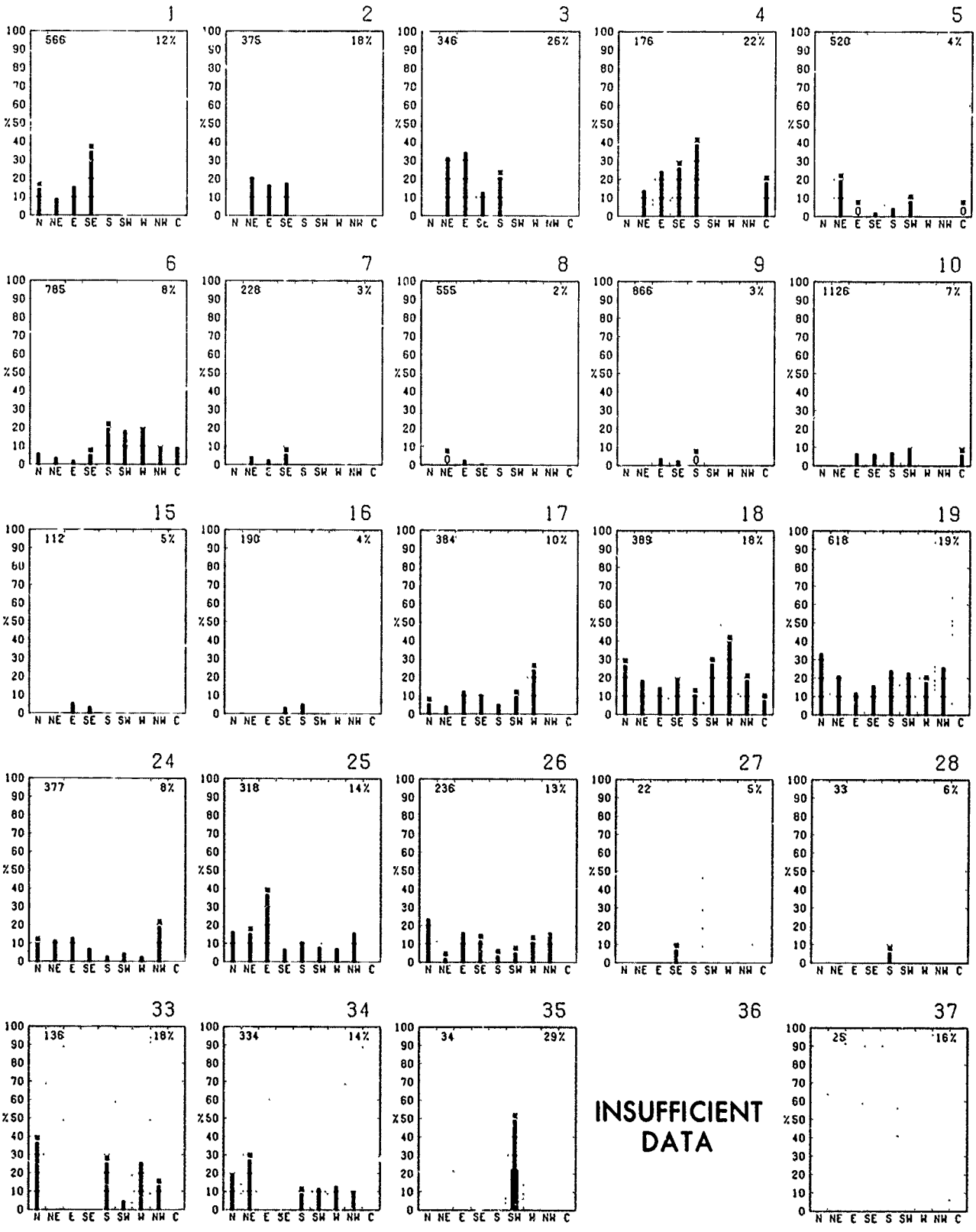

INSUFFICIENT DATA

INSUFFICIENT DATA

objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

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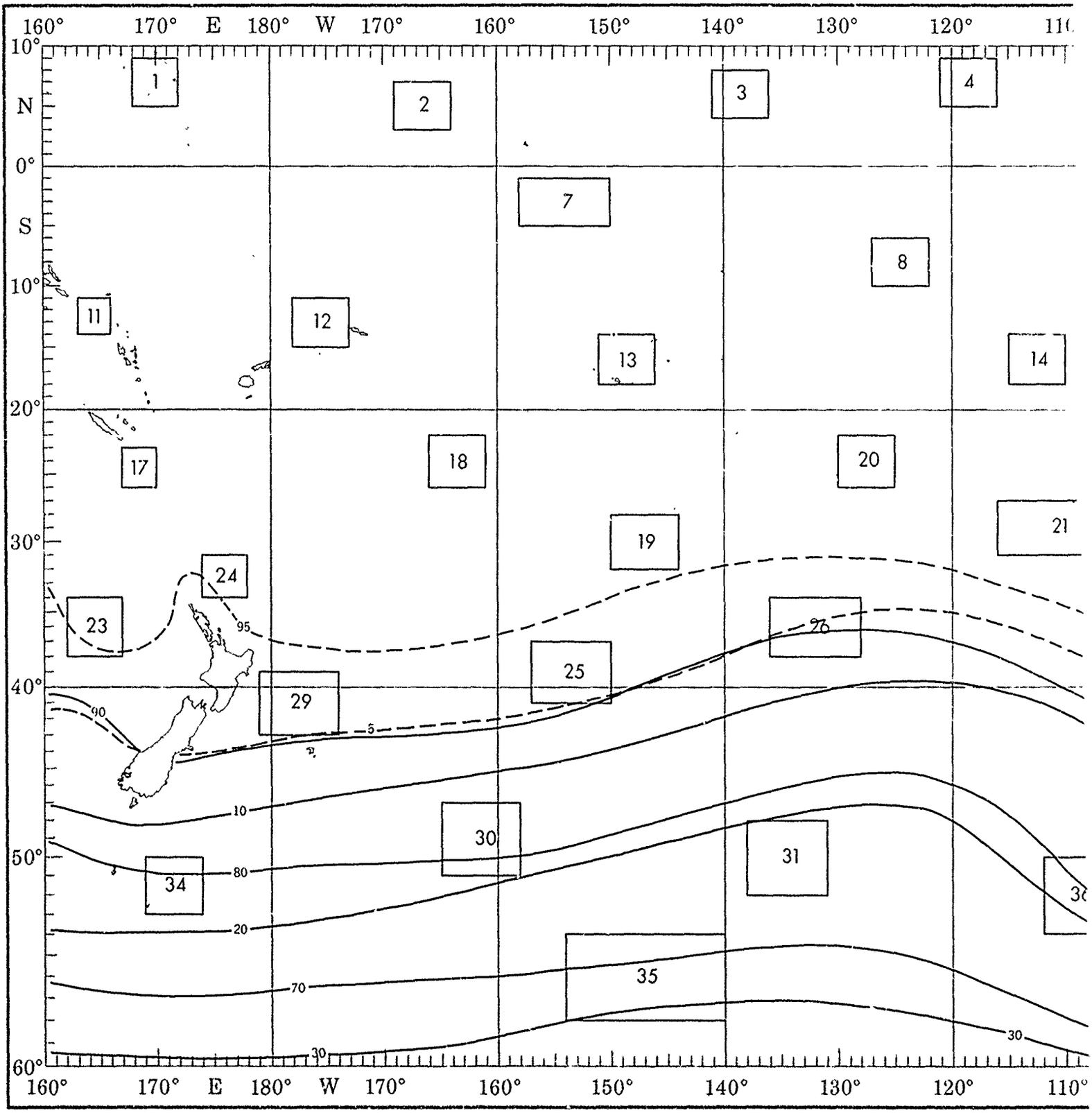
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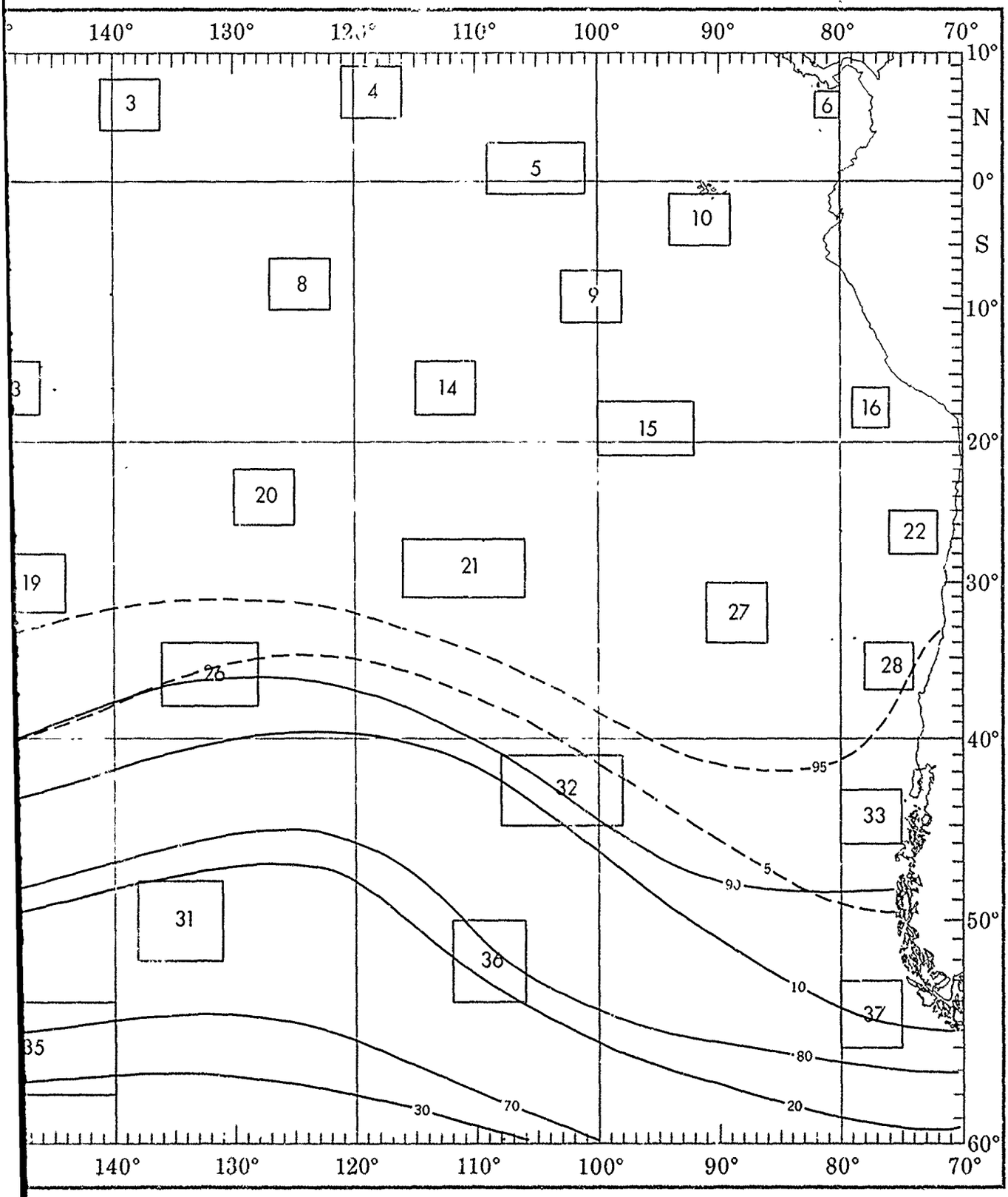
VISIBILITY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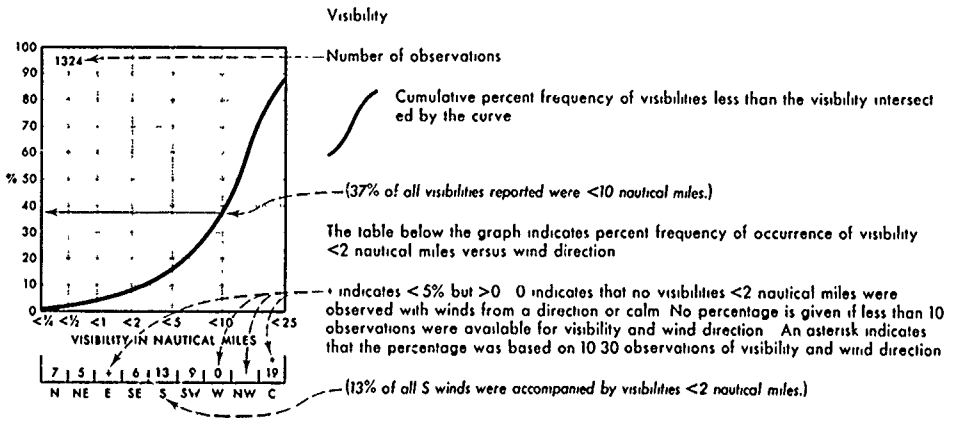
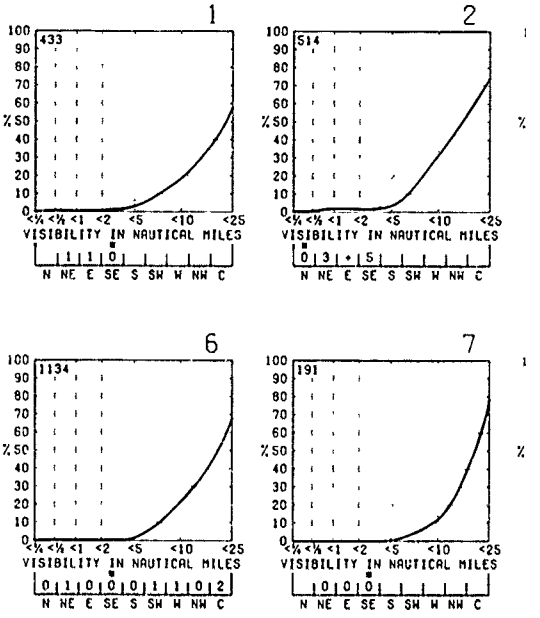
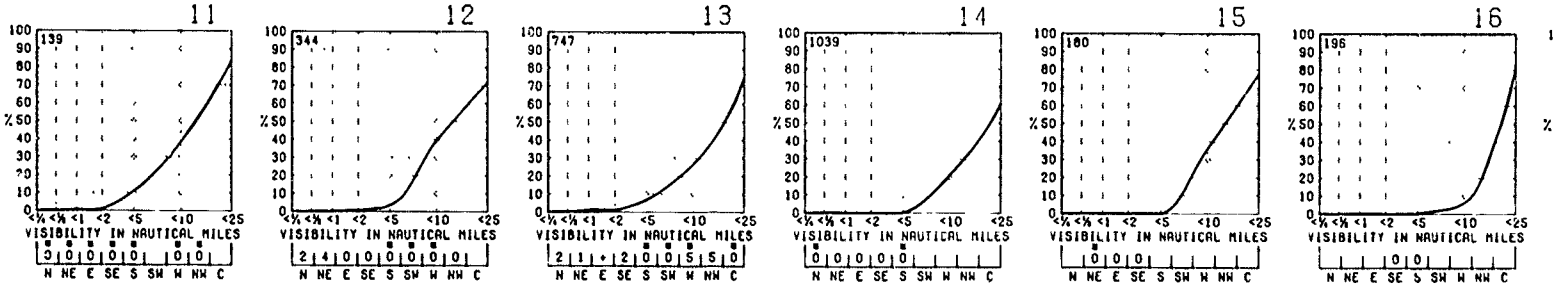
VISIBILITY

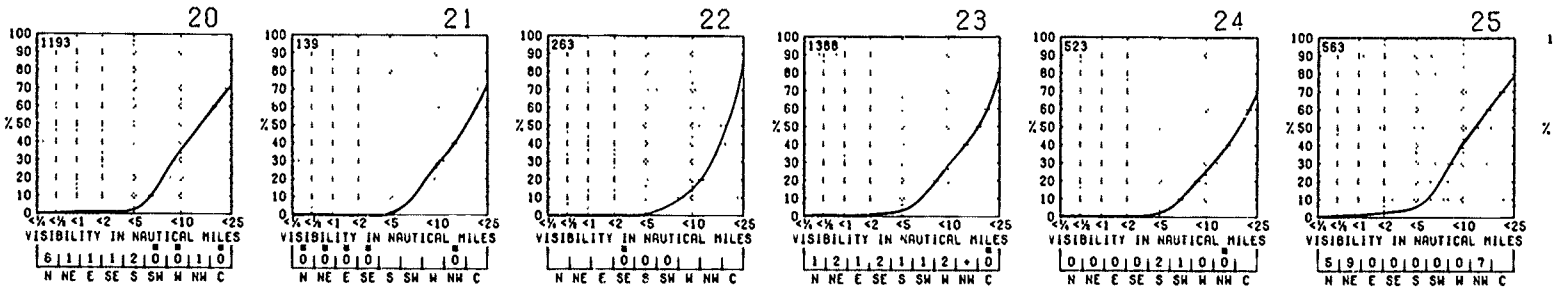


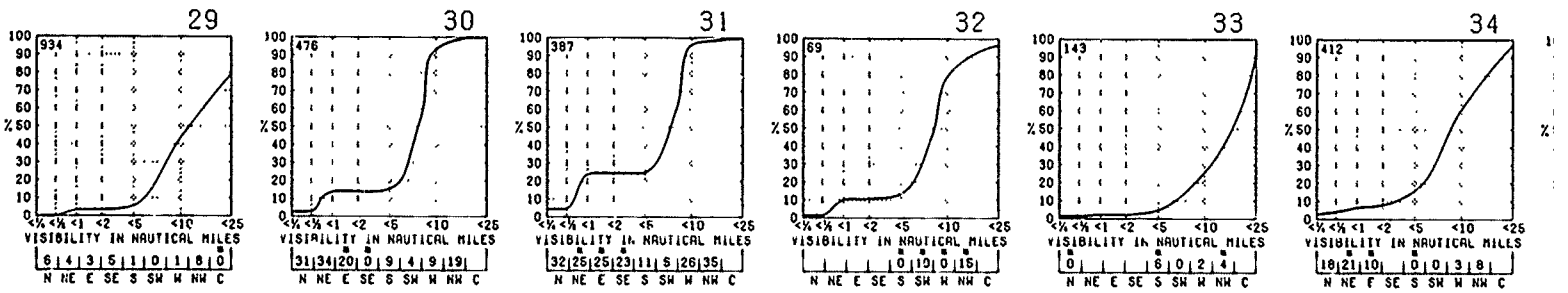
BLUE LINE - Percent frequency of visibilities ≥5 nautical miles

RED LINE - Percent frequency of visibilities <2 nautical miles









Graphs represent the objective compilation of available data for specified areas without regard t
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

JANUARY

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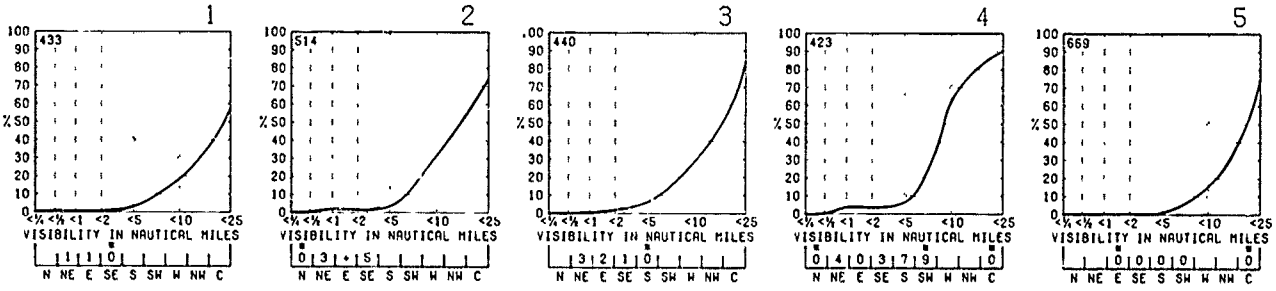

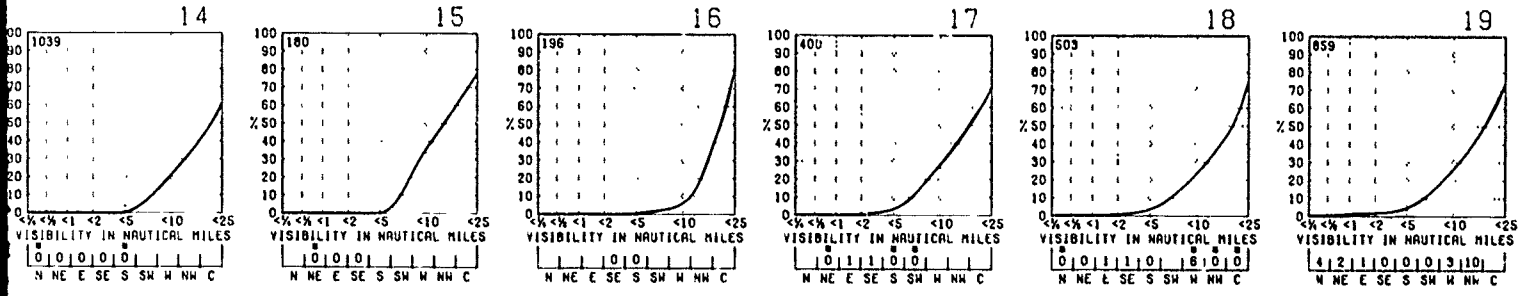

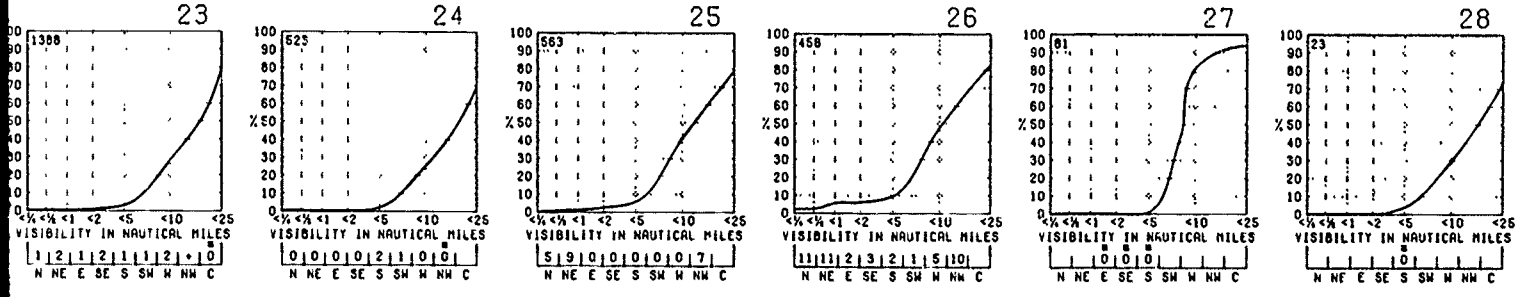

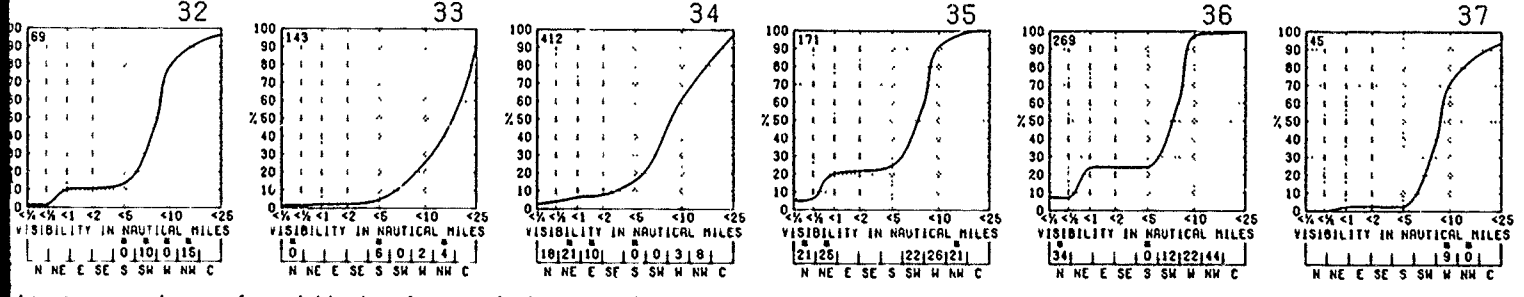

bjective compilation of available data for specified areas without regard to suspected biases.
opposite page) are based on all available data subjectively adjusted where bias was evident.

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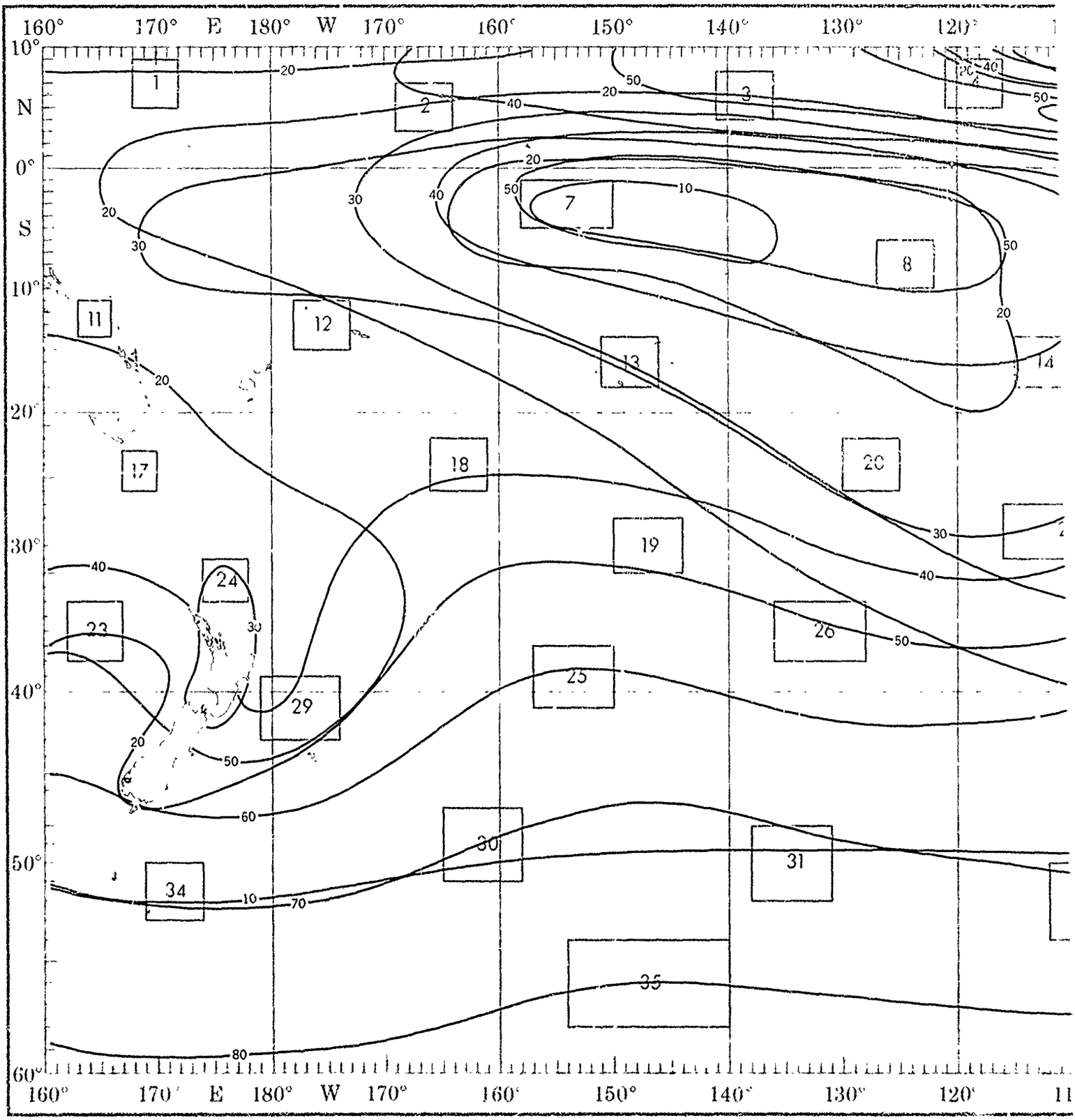
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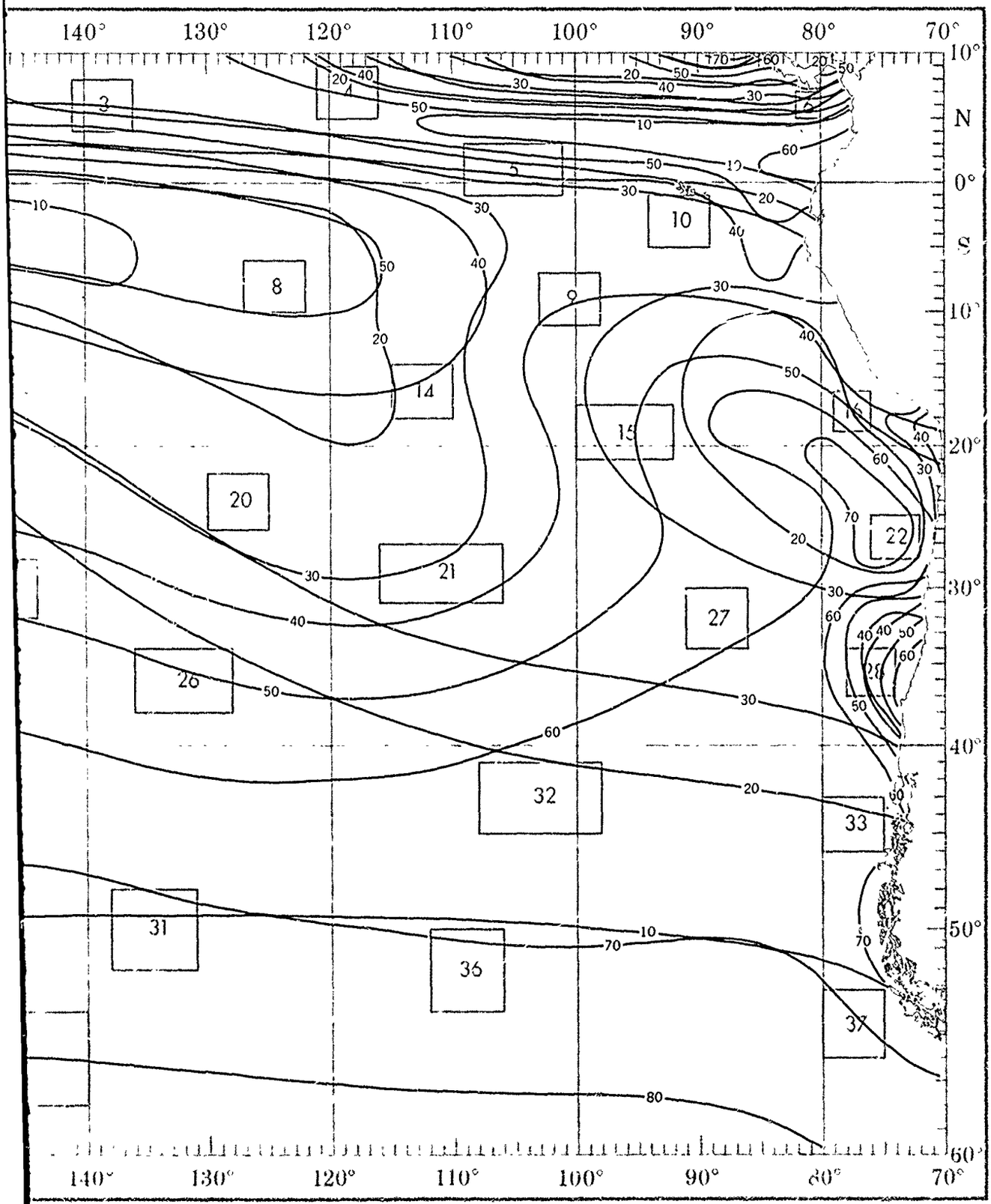
CLOUD COVER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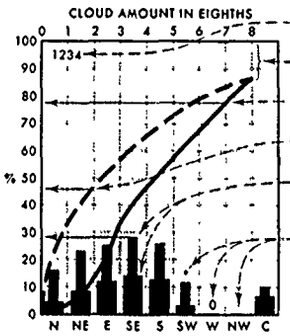
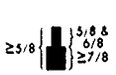
CLOUD COVER

Total Cloud Amount
Low Cloud Amount
} Cumulative percent frequency of indicated cloud amount equal to or less than the amount intersected by the curve



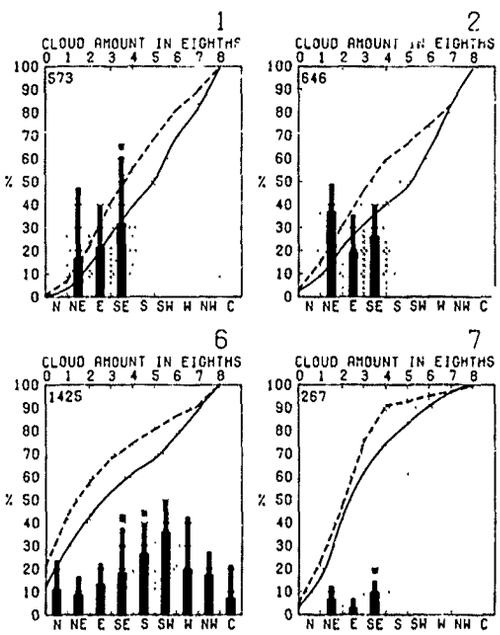
- Number of observations containing total cloud amount
- Obscurations
- (77% of all total cloud amounts were ≤7/8)
- (46% of all low cloud amounts were ≤2/8)
- (28% of all SE winds were accompanied by low cloud amounts ≥5/8 and 14% by low cloud amounts ≥7/8)
- An asterisk indicates that the percentage 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

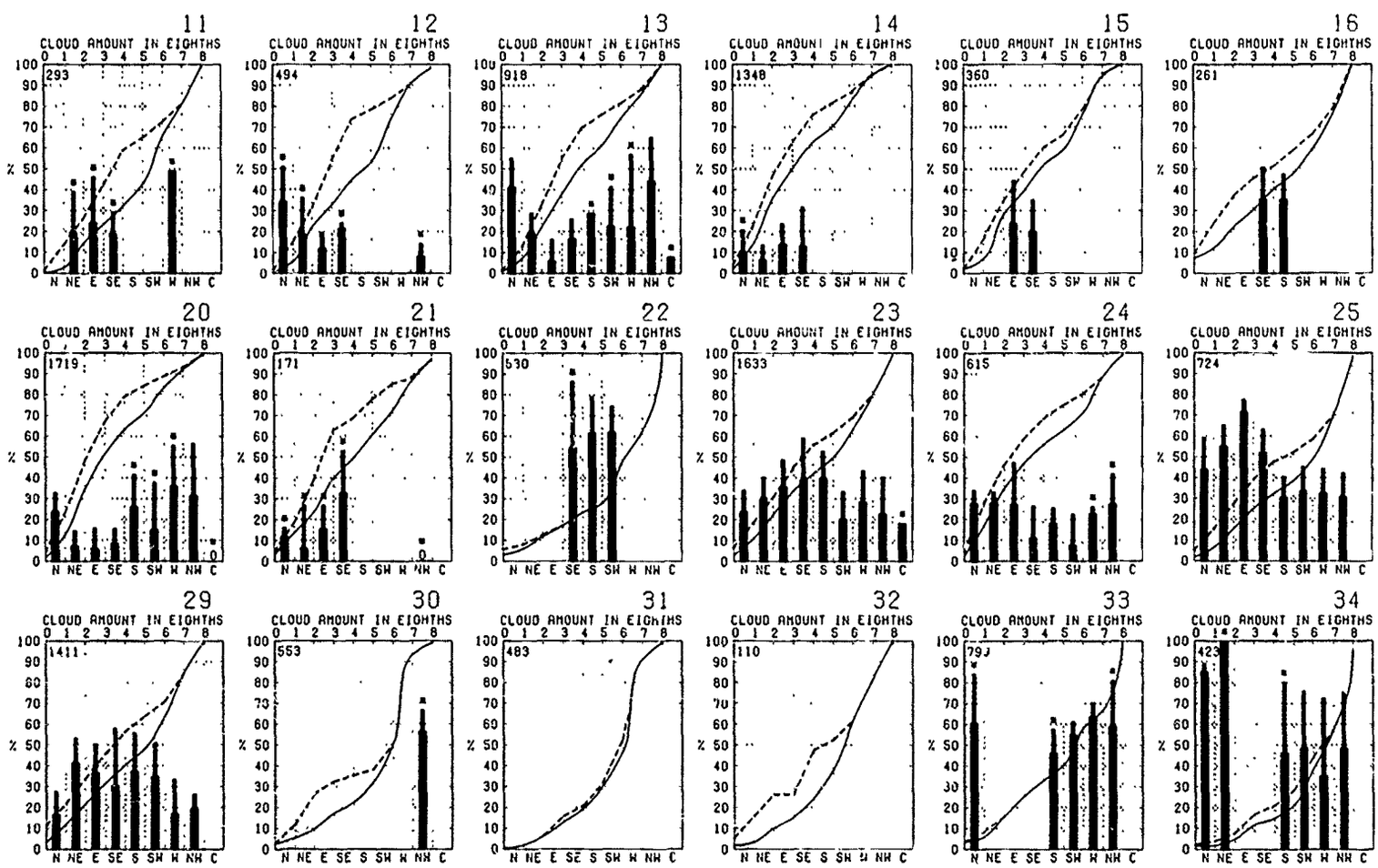


Low cloud amount. Percent frequency of observations from each direction and calm that were accompanied by low cloud amounts ≥5/8 and ≥7/8
Low clouds are clouds with bases <8000 feet

BLUE LINE - Percent frequency of total cloud amount ≤2/8

RED LINE - Percent frequency of low cloud amount ≥5/8





Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

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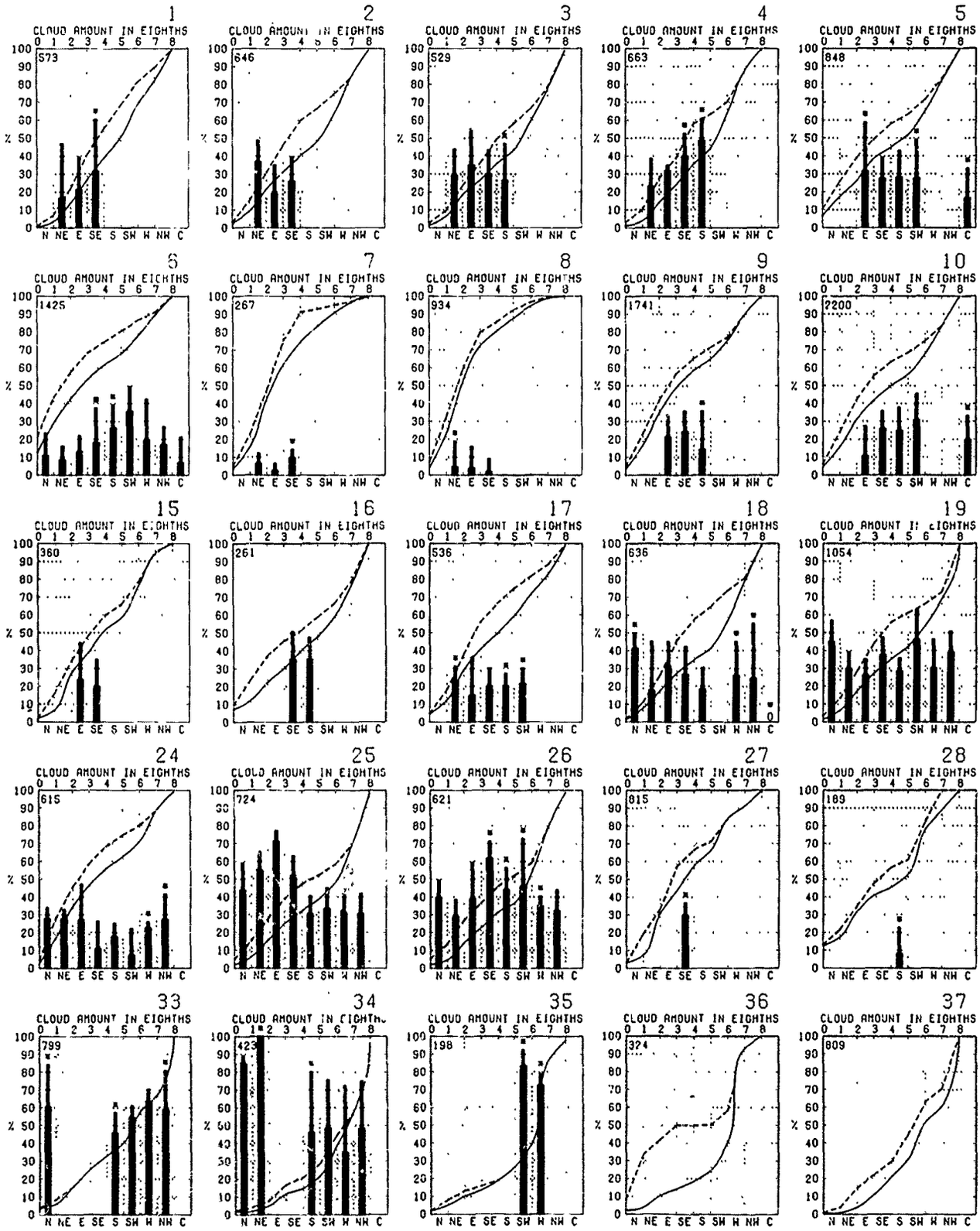
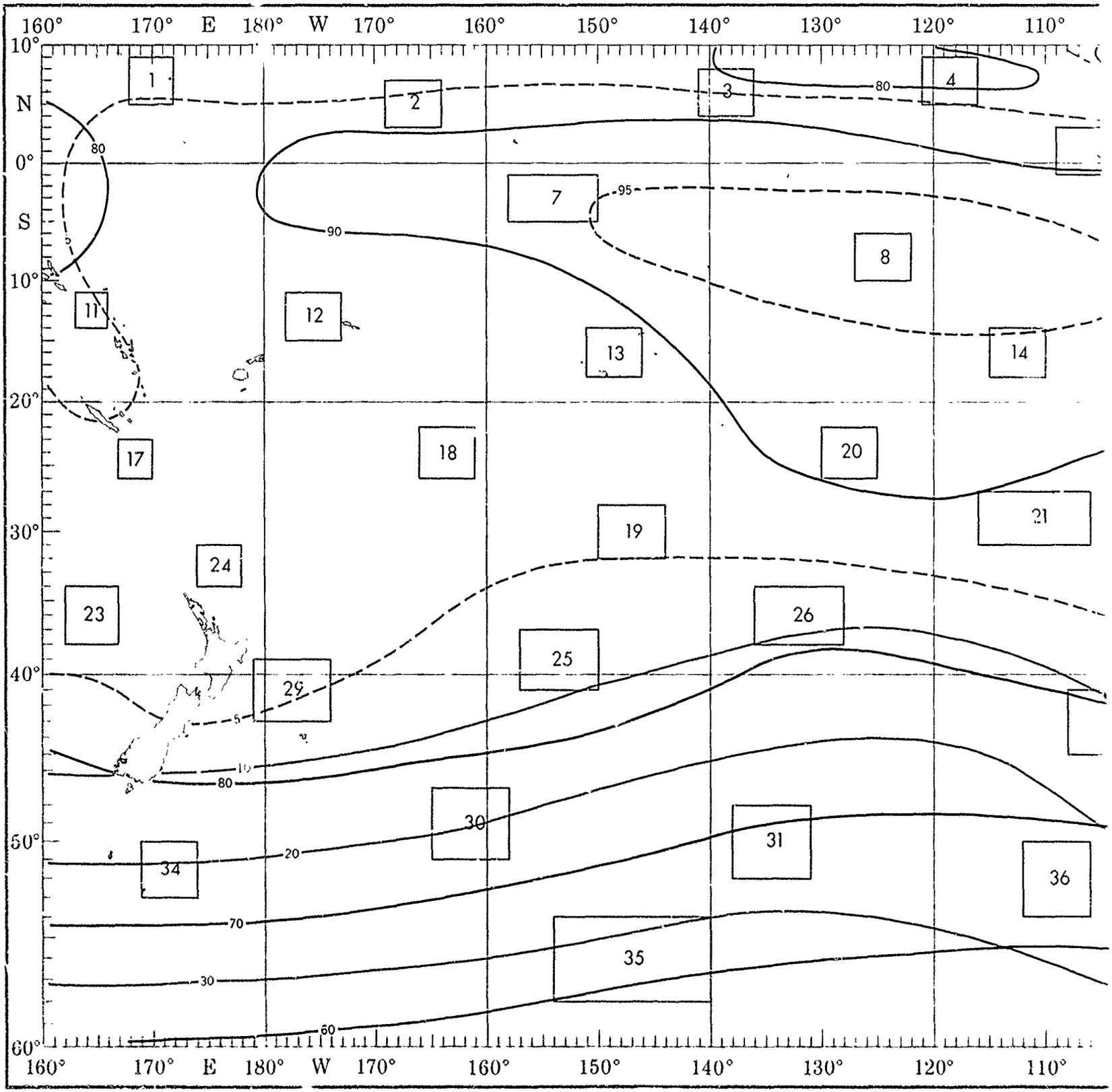


objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

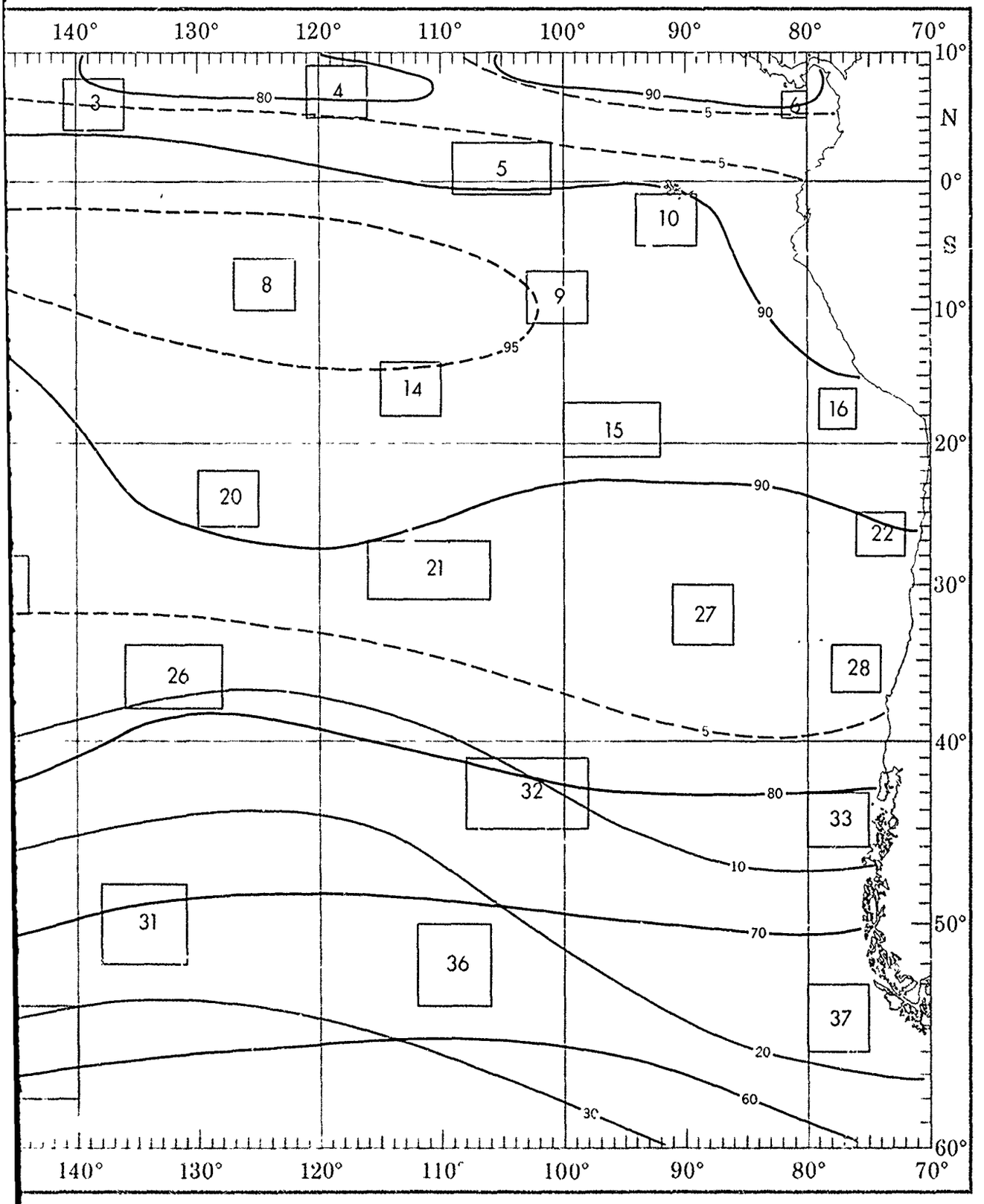
JANUARY

CEIL



1

CEILING AND VISIBILITY



CEILING AND VISIBILITY

Low cloud ceiling - Visibility.

Percent frequency of simultaneous occurrence of specified low cloud ceilings (hundreds of feet) and visibilities (nautical miles)

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 <15".

"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8.

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	+	3	13	64
50<80	0	0	0	0	+	1
35<50	0	+	0	0	0	4
20<35	0	+	1	1	2	2
10<20	0	+	1	1	2	1
6<10	0	1	0	+	+	0
3<6	+	+	0	+	+	0
1.5<3	+	0	0	0	0	0
0<1.5	+	0	0	0	0	0

334

(2% of *all observations reported ceiling ≥1000 but <2000 feet simultaneously with visibility ≥5 but <10 nautical miles.*)

+ indicates <.5% but >0

Number of observations

BLUE LINE - Percent frequency of low cloud ceiling ≥1000 feet (or no low cloud ceiling) and visibility ≥5 nautical miles

RED LINE Percent frequency of low cloud ceiling <600 feet and/or visibility <2 nautical miles

1

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	+	1	7	47
50<80	0	0	0	+	0	0
35<50	0	0	0	+	0	1
20<35	0	0	0	0	2	4
10<20	0	0	0	+	6	12
6<10	0	0	0	+	1	9
3<6	0	0	0	0	1	4
1.5<3	0	0	0	0	0	0
0<1.5	+	0	0	+	0	0

209

2

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	2	59
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	1
20<35	0	0	0	0	1	5
10<20	0	+	0	1	3	14
6<10	0	1	+	+	3	8
3<6	+	1	0	1	0	+
1.5<3	+	0	0	0	0	0
0<1.5	0	0	0	0	0	0

313

6

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	2	73
50<80	0	0	0	0	0	1
35<50	0	0	0	0	+	2
20<35	0	0	0	+	+	3
10<20	0	0	+	+	2	8
6<10	0	0	0	+	1	3
3<6	+	0	0	+	+	1
1.5<3	0	0	0	+	0	+
0<1.5	0	0	0	0	+	0

816

7

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	8	84
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	0
20<35	0	0	0	0	0	1
10<20	0	0	0	0	1	5
6<10	0	0	0	0	0	1
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	1	0

155

11

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	C	0	0	4	3	54
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	1
20<35	0	0	0	0	1	1
10<20	0	0	0	1	6	4
6<10	0	0	0	10	0	6
3<6	0	0	0	1	3	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	1	0

69

12

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	1	73
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	0
20<35	0	0	0	0	0	3
10<20	0	0	1	1	1	6
6<10	0	0	0	3	3	7
3<6	0	0	0	0	1	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

115

13

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	7	64
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	+
20<35	0	0	0	2	2	3
10<20	0	+	+	2	4	6
6<10	0	+	+	1	2	4
3<6	0	1	0	+	+	+
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	+	+	0

530

14

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	1	75
50<80	0	0	0	0	0	+
35<50	0	0	0	0	+	4
20<35	0	0	0	0	+	5
10<20	0	0	0	0	+	8
6<10	0	0	0	+	1	4
3<6	0	0	0	0	+	+
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

763

15

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	0	60
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	3
20<35	0	0	0	0	1	3
10<20	0	0	0	0	1	21
6<10	0	0	0	0	0	11
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	1

107

16

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	2	51
50<80	0	0	0	0	0	3
35<50	0	0	0	1	0	5
20<35	0	0	0	0	1	13
10<20	0	0	0	0	2	15
6<10	0	0	0	0	1	8
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

172

20

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	C	0	0	+	3	76
50<80	0	0	0	0	+	1
35<50	0	0	0	0	+	1
20<35	0	0	0	0	+	3
10<20	0	0	+	+	1	5
6<10	0	0	+	+	2	3
3<6	0	0	0	+	1	1
1.5<3	0	0	0	0	0	+
0<1.5	0	0	0	0	0	0

776

21

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	5	64
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	1
20<35	0	0	0	0	1	3
10<20	0	0	0	0	4	10
6<10	0	0	0	0	1	9
3<6	0	0	0	1	0	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

106

22

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	2	20
50<80	0	0	0	0	+	3
35<50	0	0	0	0	1	5
20<35	0	0	0	+	4	16
10<20	0	0	0	0	3	33
6<10	0	0	0	+	1	8
3<6	0	0	0	0	+	2
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

230

23

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	+	+	2	54
50<80	0	0	0	0	0	1
35<50	0	0	0	0	+	2
20<35	0	0	0	0	2	7
10<20	0	+	+	1	3	16
6<10	0	0	+	1	4	6
3<6	0	+	+	+	1	0
1.5<3	0	0	0	0	0	+
0<1.5	0	0	+	+	0	0

1010

24

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	2	68
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	1
20<35	0	0	0	1	1	3
10<20	0	0	0	+	1	12
6<10	0	0	0	1	3	5
3<6	0	0	0	0	1	+
1.5<3	0	0	0	0	+	0
0<1.5	0	0	0	0	0	0

351

25

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	1	50
50<80	0	0	0	+	0	2
35<50	0	0	0	0	0	1
20<35	0	0	0	0	1	10
10<20	0	0	1	0	3	16
6<10	0	0	+	1	3	5
3<6	0	0	+	1	2	1
1.5<3	0	0	0	+	+	1
0<1.5	1	0	0	1	0	0

356

29

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	C	0	0	+	3	53
50<80	0	0	0	+	+	1
35<50	0	0	0	0	+	4
20<35	0	0	0	0	1	9
10<20	0	0	0	+	3	13
6<10	0	0	0	2	2	5
3<6	0	+	0	1	+	1
1.5<3	0	0	0	0	0	0
0<1.5	+	0	0	0	0	+

517

30

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	3	34
50<80	0	0	0	0	0	6
35<50	0	0	0	0	0	0
20<35	0	0	0	0	0	25
10<20	0	0	0	0	3	5
6<10	0	0	0	6	3	3
3<6	0	0	0	6	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

32

31

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	0	21
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	0
20<35	0	0	0	0	0	26
10<20	0	0	0	0	0	21
6<10	0	0	5	11	5	11
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

19

32

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	11	37
50<80	0	0	0	0	0	16
35<50	0	0	0	0	0	0
20<35	0	0	0	0	0	5
10<20	0	0	0	11	0	11
6<10	0	0	0	0	0	0
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	11
0<1.5	0	0	0	0	0	0

19

33

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	6	78
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	5
20<35	0	0	0	0	4	7
10<20	0	0	0	2	4	11
6<10	0	0	0	0	6	15
3<6	0	0	0	2	0	7
1.5<3	1	0	0	0	0	0
0<1.5	0	1	0	0	1	0

122

34

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	10
NC	+	0	0	1	8	13
50<80	0	0	0	1	+	2
35<50	0	0	0	+	1	3
20<35	0	0	+	1	11	16
10<20	1	+	+	3	13	11
6<10	0	0	+	1	3	2
3<6	0	0	0	+	1	0
1.5<3	0	0	0	0	0	0
0<1.5	2	1	1	1	1	0

302

Graphs represent the objective compilation of available data for specified areas without regard t

The isopleth analyses (opposite page) are based on all available data subjectively adjusted wher

Y

JANUARY

ceilings (hundreds of feet)

(h) when low cloud amount

urrences of N_h <5/8

usly with visibility ≥5 but <10

sibility ≥5 nautical miles

es

1

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	*	1	7	47
50-<80	0	0	0	*	0	0
35-<50	0	0	0	*	0	1
20-<35	0	0	0	0	2	4
10-<20	0	0	0	*	6	12
6-<10	0	0	0	*	1	9
3-<6	0	0	0	0	1	4
1.5-<3	0	0	0	0	0	0
0-<1.5	*	0	0	*	0	0

209

2

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	1	2	58
50-<80	0	0	0	0	0	0
35-<50	0	0	0	0	0	1
20-<35	0	0	0	0	1	5
10-<20	0	*	0	1	3	14
6-<10	0	1	*	*	3	8
3-<6	*	1	0	1	0	*
1.5-<3	*	0	0	0	0	0
0-<1.5	0	0	0	0	0	0

313

3

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	4	46
50-<80	0	0	0	0	0	1
35-<50	0	0	0	0	0	1
20-<35	0	0	0	0	1	6
10-<20	0	0	0	2	3	14
6-<10	0	1	*	2	6	9
3-<6	0	0	*	*	0	2
1.5-<3	0	0	0	0	*	*
0-<1.5	0	*	0	*	*	0

301

4

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	1	4	55
50-<80	0	0	0	0	0	0
35-<50	0	0	0	0	0	0
20-<35	0	0	0	1	0	3
10-<20	0	0	0	1	2	13
6-<10	0	1	0	2	6	12
3-<6	0	0	0	0	1	0
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	1	0

162

5

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	*	2	57
50-<80	0	0	0	0	0	1
35-<50	0	0	0	0	*	3
20-<35	0	0	0	0	1	9
10-<20	0	0	0	0	1	18
6-<10	0	0	0	0	2	5
3-<6	0	0	0	*	*	1
1.5-<3	0	0	0	0	0	0
0-<1.5	*	0	0	*	*	*

503

6

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	*	2	73
50-<80	0	0	0	0	0	1
35-<50	0	0	0	0	*	2
20-<35	0	0	0	*	*	3
10-<20	0	0	*	*	2	8
6-<10	0	0	0	*	1	3
3-<6	*	0	0	*	*	1
1.5-<3	0	0	0	*	0	*
0-<1.5	0	0	0	0	*	0

816

7

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	8	84
50-80	0	0	0	0	0	0
35-<50	0	0	0	0	0	0
20-<35	0	0	0	0	0	1
10-<20	0	0	0	0	1	5
6-<10	0	0	0	0	0	1
3-<6	0	0	0	0	0	0
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	1	0

155

8

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	1	85
50-<80	0	0	0	0	0	0
35-<50	0	0	0	0	0	1
20-<35	0	0	0	0	0	3
10-<20	0	0	0	0	1	6
6-<10	0	0	0	0	1	3
3-<6	0	0	0	0	0	0
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	0	0

521

9

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	*	66
50-<80	0	0	0	0	0	1
35-<50	0	0	0	0	*	3
20-<35	0	0	0	0	*	7
10-<20	0	0	0	*	1	15
6-<10	0	0	0	0	*	6
3-<6	0	0	0	*	0	*
1.5-<3	0	0	0	0	0	*
0-<1.5	0	0	0	0	*	0

970

10

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	1	63
50-<80	0	0	0	0	*	1
35-<50	0	0	0	*	*	3
20-<35	0	0	*	*	*	8
10-<20	0	0	*	*	1	14
6-<10	0	0	0	*	1	6
3-<6	0	0	0	0	*	1
1.5-<3	0	0	0	0	0	*
0-<1.5	0	0	0	0	0	*

1240

14

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	1	75
50-<80	0	0	0	0	0	*
35-<50	0	0	0	0	*	4
20-<35	0	0	0	0	*	5
10-<20	0	0	0	0	*	8
6-<10	0	0	0	*	1	4
3-<6	0	0	0	0	*	*
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	0	0

763

15

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	0	60
50-<80	0	0	0	0	0	0
35-<50	0	0	0	0	0	3
20-<35	0	0	0	0	1	3
10-<20	0	0	0	0	1	21
6-<10	0	0	0	0	0	11
3-<6	0	0	0	0	0	0
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	0	1

107

16

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	2	51
50-<80	0	0	0	0	0	3
35-<50	0	0	0	1	0	5
20-<35	0	0	0	0	1	13
10-<20	0	0	0	0	2	15
6-<10	0	0	0	0	1	8
3-<6	0	0	0	0	0	0
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	0	0

172

17

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	1	*	66
50-<80	0	0	0	0	*	*
35-<50	0	0	0	0	*	1
20-<35	0	0	0	0	2	5
10-<20	0	*	0	1	3	9
6-<10	0	0	0	0	2	6
3-<6	0	0	0	*	1	0
1.5-<3	0	0	0	0	0	0
0-<1.5	*	0	*	0	*	0

256

18

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	*	3	54
50-<80	0	0	0	0	0	0
35-<50	0	0	0	0	1	1
20-<35	0	0	0	0	1	4
10-<20	0	0	0	1	2	18
6-<10	0	0	*	1	3	8
3-<6	*	0	*	*	1	*
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	0	0

364

19

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	*	0	0	*	2	55
50-<80	0	0	0	*	0	*
35-<50	0	0	0	0	*	4
20-<35	0	*	0	0	1	4
10-<20	0	0	0	*	3	13
6-<10	*	*	*	1	4	8
3-<6	*	0	0	*	2	*
1.5-<3	0	0	0	*	0	*
0-<1.5	0	0	0	0	0	0

686

23

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	*	*	2	54
50-<80	0	0	0	0	0	1
35-<50	0	0	0	0	*	2
20-<35	0	0	0	0	2	7
10-<20	0	*	*	1	3	16
6-<10	0	0	*	1	4	8
3-<6	0	*	*	*	1	0
1.5-<3	0	0	0	0	0	*
0-<1.5	0	0	*	*	0	0

1010

24

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	1	2	68
50-<80	0	0	0	0	0	1
35-<50	0	0	0	0	0	1
20-<35	0	0	0	1	1	3
10-<20	0	0	0	*	1	12
6-<10	0	0	0	1	3	5
3-<6	0	0	0	0	1	*
1.5-<3	0	0	0	0	*	0
0-<1.5	0	0	0	0	0	0

351

25

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	1	50
50-<80	0	0	0	*	0	2
35-<50	0	0	0	0	0	1
20-<35	0	0	0	0	1	10
10-<20	0	0	1	0	3	16
6-<10	0	0	*	1	3	5
3-<6	0	0	*	1	2	1
1.5-<3	0	0	0	*	*	1
0-<1.5	1	0	0	1	0	0

350

26

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	*	0	*	2	46
50-<80	0	0	0	0	0	1
35-<50	0	0	0	0	0	4
20-<35	0	0	0	1	2	8
10-<20	0	0	0	0	2	18
6-<10	0	0	0	2	1	5
3-<6	0	0	*	1	*	*
1.5-<3	*	0	0	1	*	1
0-<1.5	*	*	0	*	*	*

252

27

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	0	67
50-<80	0	0	0	0	0	0
35-<50	0	0	0	0	0	0
20-<35	0	0	0	0	24	0
10-<20	0	0	0	0	5	5
6-<10	0	0	0	0	0	0
3-<6	0	0	0	0	0	0
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	0	0

21

28

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	4	52
50-<80	0	0	0	0	0	0
35-<50	0	0	0	0	0	0
20-<35	0	0	0	0	17	0
10-<20	0	0	0	0	0	4
6-<10	0	0	0	4	0	9
3-<6	0	0	0	0	0	4
1.5-<3	0	0	0	0	4	0
0-<1.5	0	0	0	0	0	0

29

32

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	11	37
50-<80	0	0	0	0	0	16
35-<50	0	0	0	0	0	0
20-<35	0	0	0	0	0	5
10-<20	0	0	0	11	0	11
6-<10	0	0	0	0	0	0
3-<6	0	0	0	0	0	0
1.5-<3	0	0	0	0	0	11
0-<1.5	0	0	0	0	0	0

19

33

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	6	28
50-<80	0	0	0	0	0	1
35-<50	0	0	0	0	0	5
20-<35	0	0	0	0	4	7
10-<20	0	0	0	2	4	11
6-<10	0	0	0	0	6	15
3-<6	0	0	0	2	0	7
1.5-<3	1	0	0	0	0	0
0-<1.5	0	1	0	0	1	0

122

34

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	*	0	0	1	8	19
50-<80	0	0	0	1	*	2
35-<50	0	0	0	*	1	3
20-<35	0	0	*	1	11	16
10-<20	1	*	*	3	13	11
6-<10	0	0	*	1	3	2
3-<6	0	0	0	*	1	0
1.5-<3	0	0	0	0	0	0
0-<1.5	2	1	1	1	1	0

302

35

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	3	16
50-<80	0	0	0	0	0	0
35-<50	0	0	0	0	0	5
20-<35	0	0	0	8	5	8
10-<20	0	3	0	5	14	11
6-<10	0	0	0	0	5	0
3-<6	0	0	0	0	3	0
1.5-<3	0	0	0	0	0	0
0-<1.5	8	0	3	3	0	0

37

36

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	8	42
50-<80	0	0	0	0	0	0
35-<50	0	0	0	0	0	0
20-<35	0	0	0	0	8	8
10-<20	0	0	0	0	17	8
6-<10	0	0	0	0	0	8
3-<6	0	0	0	0	0	0
1.5-<3	0	0	0	0	0	0
0-<1.5	0	3	0	0	0	0

12

37

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	19	12
50-<80	0	0	0	0	0	0
35-<50	0	0	0	0	0	8
20-<35	0	0	0	0	8	12
10-<20	0	0	0	0	12	19
6-<10	0	0	0	0	0	8
3-<6	0	0	0	0	0	0
1.5-<3	0	0	0	0	0	0
0-<1.5	0	4	0	0	0	0

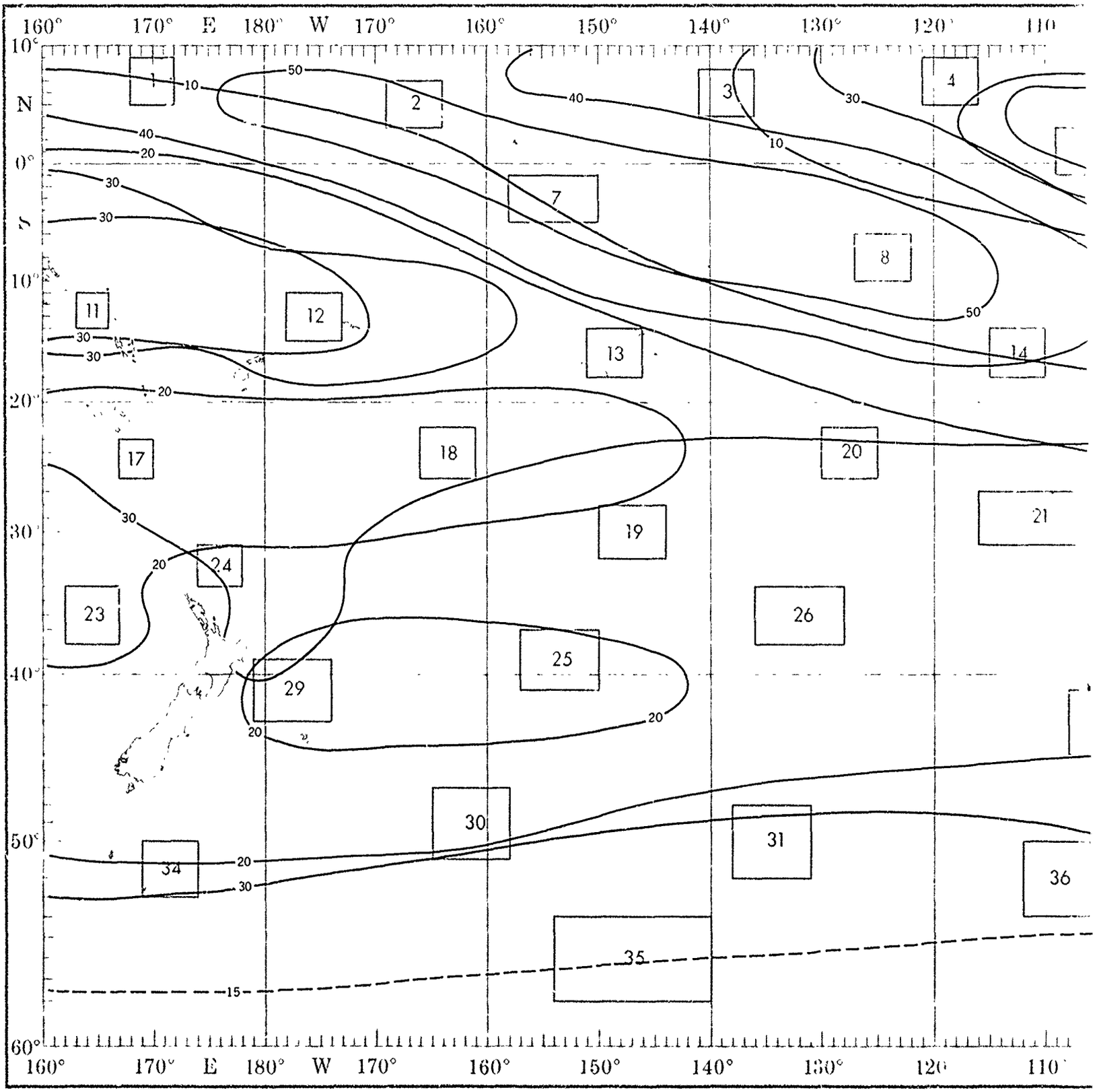
26

the objective compilation of available data for specified areas without regard to suspected biases.

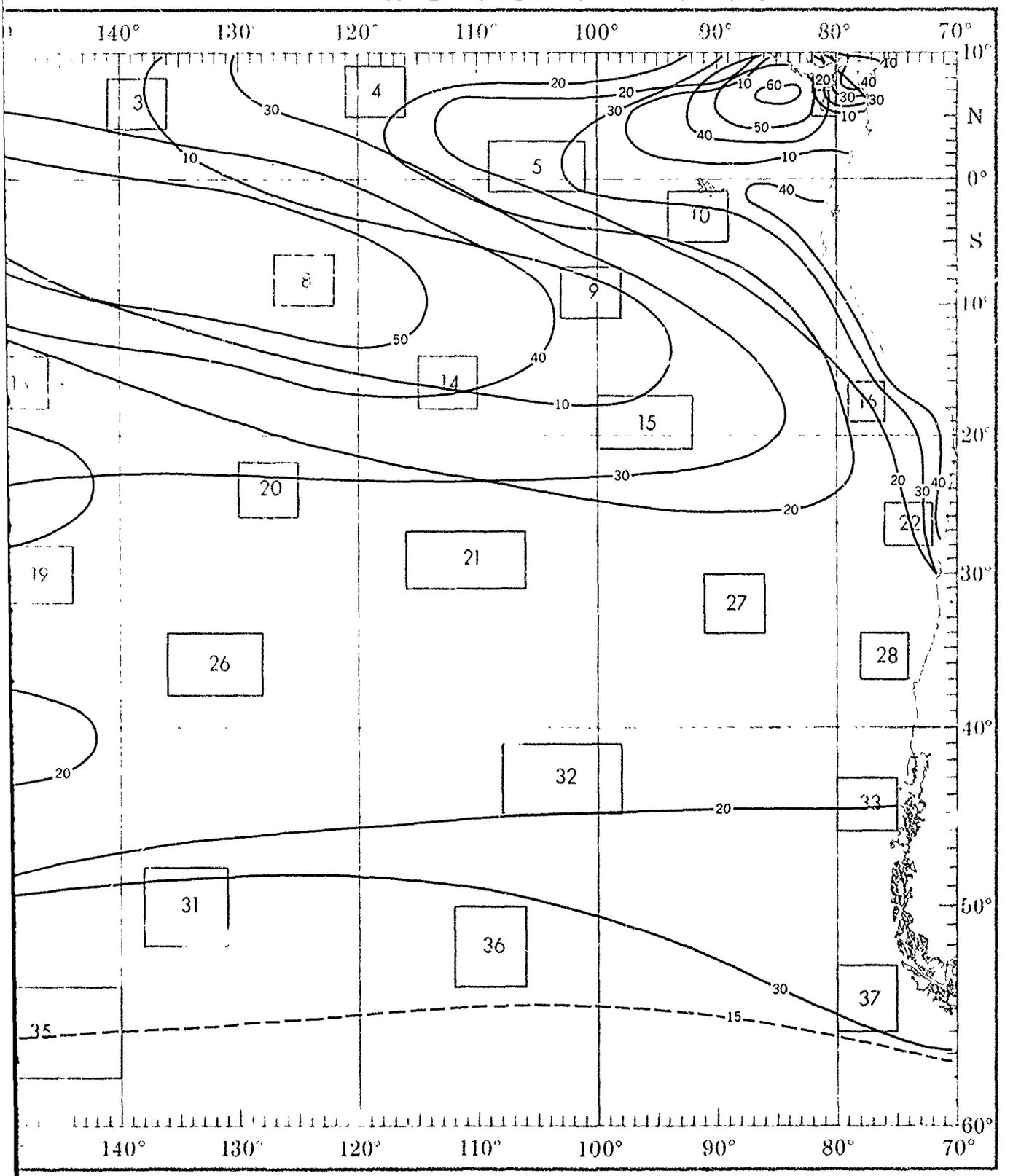
ses (opposite page) are based on all available data subjectively adjusted where bias was evident.

JANUARY

WIND-VIS



WIND-VISIBILITY-CLOUDINESS



LOW CLOUD CEILING-VISIBILITY-WIND

Percent frequency of occurrence of specified wind speed in knots, visibility (Vsby) in nautical miles, and low cloud ceiling (LCC) in hundreds of feet

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

WIND SPEED (knots)

LCC - Vsby	0-3	4-10	11-21	22-33	≥34
<1.5 & or <.5	+	1	1	+	0
<6 & or <2	2	2	1	1	+
Vsby <2	1	2	1	1	+
<10 & or <2	3	4	2	1	1
<20 & or <5	8	9	6	5	2
Vsby ≥5	9	11	12	3	1
≥50 & ≥5	12	13	15	7	3
NC & ≥10	4	2	1	+	0
	1234				

(2% of the observations reported wind speeds of 11-21 knots, a low cloud ceiling <1000 feet and/or visibility <2 nautical miles)

"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8.

+ indicates < 5% but >0

Number of observations

Conditions for Carrier Operations

BLUE LINE - Percent frequency of optimum conditions LCC ≥5000 ft, (or no LCC), Vsby ≥5 nm and Wind 11 21 kts

RED LINE Percent frequency of poor conditions Any one of the following constitutes poor conditions LCC <300 ft, Vsby <1 nm, Wind <6 or ≥34 kts

Satisfactory conditions between poor and optimum

1

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	C	+	+	0	0
<6 & OR <2	0	4	2	+	0
VSBY <2	0	0	+	+	0
<10 & OR <2	0	10	6	1	0
<20 & OR <5	0	16	20	2	0
VSBY ≥5	1	38	54	3	0
≥50 & ≥5	1	20	32	1	0
NC & ≥ 10	1	15	30	1	0

209

2

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	0	0	0
<6 & OR <2	0	2	2	+	0
VSBY <2	0	2	2	0	0
<10 & OR <2	0	7	7	1	+
<20 & OR <5	+	12	19	3	1
VSBY ≥5	+	29	56	8	1
≥50 & ≥5	0	17	37	5	+
NC & ≥ 10	0	17	36	5	+

312

6

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	0	1	1	0	0
VSBY <2	0	0	+	0	0
<10 & OR <2	1	4	2	0	0
<20 & OR <5	2	10	6	+	0
VSBY ≥5	18	51	27	3	0
≥50 & ≥5	14	39	21	2	0
NC & ≥ 10	13	38	20	2	0

798

7

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	0	0	0
<6 & OR <2	0	1	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	1	1	0	0
<20 & OR <5	0	3	5	0	0
VSBY ≥5	2	18	79	1	0
≥50 & ≥5	2	16	73	1	0
NC & ≥ 10	2	14	66	1	0

154

11

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	0	0	0	0
<6 & OR <2	1	1	0	1	1
VSBY <2	0	0	0	0	0
<10 & OR <2	3	4	0	6	7
<20 & OR <5	3	12	9	6	7
VSBY ≥5	13	45	18	6	0
≥50 & ≥5	9	34	12	3	0
NC & ≥ 10	7	33	10	3	0

67

12

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	2	0
VSBY <2	0	0	0	1	0
<10 & OR <2	0	9	1	4	2
<20 & OR <5	0	14	4	4	2
VSBY ≥5	10	61	19	4	0
≥50 & ≥5	10	48	15	1	0
NC & ≥ 10	10	48	15	0	0

113

13

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	+	2	1	0
VSBY <2	0	+	1	+	0
<10 & OR <2	+	2	5	1	0
<20 & OR <5	1	9	12	3	0
VSBY ≥5	8	43	39	3	0
≥50 & ≥5	7	34	28	2	0
NC & ≥ 10	6	32	26	1	0

516

14

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	+	+	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	2	4	+	0
<20 & OR <5	+	4	10	+	0
VSBY ≥5	3	42	52	3	0
≥50 & ≥5	3	34	37	2	0
NC & ≥ 10	3	34	36	2	0

758

15

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	1	0	0
<6 & OR <2	0	0	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	4	8	0	0
<20 & OR <5	1	9	23	0	0
VSBY ≥5	4	31	63	3	0
≥50 & ≥5	2	18	37	3	0
NC & ≥ 10	2	18	37	3	0

107

16

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	5	2	0	0
<20 & OR <5	3	16	6	0	0
VSBY ≥5	8	56	33	2	0
≥50 & ≥5	4	30	22	1	0
NC & ≥ 10	3	27	20	1	0

172

20

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	C	0	0	0	0
<6 & OR <2	0	1	1	+	0
VSBY <2	0	+	0	+	0
<10 & OR <2	+	3	4	1	0
<20 & OR <5	1	5	8	2	0
VSBY ≥5	8	47	40	4	+
≥50 & ≥5	7	40	30	2	+
NC & ≥ 10	7	38	28	2	+

759

21

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	7	2	4	0
<20 & OR <5	0	13	5	8	+
VSBY ≥5	3	61	25	9	1
≥50 & ≥5	3	47	17	1	1
NC & ≥ 10	3	46	14	1	0

106

22

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	+	+	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	7	5	+	0
<20 & OR <5	3	23	21	2	0
VSBY ≥5	8	43	45	3	0
≥50 & ≥5	3	9	12	1	0
NC & ≥ 10	1	7	10	+	0

229

23

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR < 5	+	+	+	0	0
<6 & OR <2	+	1	1	+	0
VSBY <2	0	+	1	0	0
<10 & OR <2	+	4	7	2	0
<20 & OR <5	1	11	16	4	+
VSBY ≥5	7	39	44	8	+
≥50 & ≥5	5	24	24	3	+
NC & ≥ 10	5	24	23	3	0

1000

24

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	1	+	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	2	4	3	0
<20 & OR <5	1	9	10	5	0
VSBY ≥5	8	42	40	7	+
≥50 & ≥5	8	32	28	2	+
NC & ≥ 10	7	31	28	2	0

345

25

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	0	1	0
<6 & OR <2	1	3	1	3	1
VSBY <2	0	1	0	1	+
<10 & OR <2	1	6	5	5	1
<20 & OR <5	2	12	15	7	1
VSBY ≥5	5	40	41	8	1
≥50 & ≥5	3	26	21	3	0
NC & ≥ 10	3	24	21	3	0

349

29

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	C	+	1	0	0
<6 & OR <2	+	1	1	+	+
VSBY <2	+	0	+	0	0
<10 & OR <2	+	1	7	3	+
<20 & OR <5	1	7	13	6	1
VSBY ≥5	5	32	43	14	1
≥50 & ≥5	4	21	25	6	1
NC & ≥ 10	4	20	23	5	1

508

30

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	3	3	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	6	9	3	0
<20 & OR <5	0	13	16	3	0
VSBY ≥5	3	13	56	16	0
≥50 & ≥5	3	3	28	9	0
& ≥10	0	3	25	6	0

32

31

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR < 5	0	0	0	0	0
<6 & OR <2	0	0	5	0	0
VSBY <2	0	0	5	0	0
<10 & OR <2	0	5	16	11	0
<20 & OR <5	0	11	32	11	0
VSBY ≥5	0	32	47	5	0
≥50 & ≥5	0	5	16	0	0
NC & ≥ 10	0	5	16	0	0

19

32

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR < 5	0	0	0	0	0
<6 & OR <2	0	6	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	6	0	0	0
<20 & OR <5	0	28	0	0	0
VSBY ≥5	0	50	28	11	0
≥50 & ≥5	0	28	28	11	0
NC & ≥ 10	0	17	11	11	0

18

33

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR < 5	0	1	1	1	0
<6 & OR <2	0	2	7	2	0
VSBY <2	0	1	1	0	0
<10 & OR <2	0	11	15	7	0
<20 & OR <5	0	15	25	10	0
VSBY ≥5	1	30	48	16	1
≥50 & ≥5	1	11	19	3	0
NC & ≥ 10	1	10	16	1	0

122

34

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	2	2	2	0
<6 & OR <2	+	2	4	2	0
VSBY <2	+	2	3	1	0
<10 & OR <2	+	3	9	3	1
<20 & OR <5	1	7	22	14	2
VSBY ≥5	1	11	46	26	2
≥50 & ≥5	0	3	14	6	+
NC & ≥ 10	0	1	8	3	0

294

Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

1

VISIBILITY-WIND

JANUARY

ibility (Vsby) in nautical

s (h) when low cloud amount

ceiling <1000 feet and/or

currences of N_h <5/8

m and Wind 11-21 kts

nditions LCC <300 ft,

1

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR < .5	C	+	+	0	0
<6 & OR <2	0	4	2	+	0
VSBY <2	0	0	+	+	0
<10 & OR <2	C	10	6	1	0
<20 & OR <5	0	16	20	2	0
VSBY ≥5	1	38	54	3	0
≥50 & ≥5	1	20	32	1	0
NC & ≥10	1	15	30	1	0

209

2

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	0	0	0
<6 & OR <2	0	2	2	+	0
VSBY <2	0	2	2	0	0
<10 & OR <2	0	7	7	1	+
<20 & OR <5	+	12	19	3	1
VSBY ≥5	+	29	56	8	1
≥50 & ≥5	0	17	37	5	+
NC & ≥10	0	17	36	5	+

312

3

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	0	0
<6 & OR <2	0	1	3	1	0
VSBY <2	0	1	1	0	0
<10 & OR <2	+	5	15	2	0
<20 & OR <5	1	10	26	4	0
VSBY ≥5	2	29	58	5	0
≥50 & ≥5	1	19	30	2	0
NC & ≥10	1	18	26	2	0

297

4

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	0	0	0
<6 & OR <2	0	2	0	0	0
VSBY <2	0	1	0	0	0
<10 & OR <2	3	11	7	1	0
<20 & OR <5	4	23	10	1	0
VSBY ≥5	10	52	31	2	0
≥50 & ≥5	6	28	23	2	0
NC & ≥10	5	27	22	2	0

162

5

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	0	0	0
<6 & OR <2	0	2	+	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	6	2	0	0
<20 & OR <5	3	18	7	0	0
VSBY ≥5	10	70	19	+	0
≥50 & ≥5	5	43	11	+	0
NC & ≥10	5	41	11	0	0

498

6

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	0	1	1	0	0
VSBY <2	0	0	+	0	0
<10 & OR <2	1	4	2	0	0
<20 & OR <5	2	10	6	+	0
VSBY ≥5	18	51	27	3	0
≥50 & ≥5	14	39	21	2	0
NC & ≥10	13	38	20	2	0

798

7

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	0	0	0
<6 & OR <2	0	1	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	1	1	0	0
<20 & OR <5	0	3	5	0	C
VSBY ≥5	2	18	79	1	0
≥50 & ≥5	2	16	73	1	0
NC & ≥10	2	14	66	1	0

154

8

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	+	2	1	+	0
<20 & OR <5	+	6	4	+	0
VSBY ≥5	+	38	60	2	0
≥50 & ≥5	+	30	54	1	0
NC & ≥10	+	29	54	1	0

521

9

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	+	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	2	5	+	0
<20 & OR <5	0	8	14	+	0
VSBY ≥5	2	45	53	+	0
≥50 & ≥5	2	32	33	+	0
NC & ≥10	1	32	32	+	0

967

10

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	0	0	0	0
<6 & OR <2	+	1	+	0	0
VSBY <2	0	+	0	0	0
<10 & OR <2	1	7	1	0	0
<20 & OR <5	2	19	4	0	0
VSBY ≥5	9	76	14	+	0
≥50 & ≥5	6	50	9	+	0
NC & ≥10	5	48	9	+	0

1231

14

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR < .5	0	0	0	0	0
<6 & OR <2	0	+	+	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	2	4	+	0
<20 & OR <5	+	4	10	+	0
VSBY ≥5	3	42	52	3	0
≥50 & ≥5	3	34	37	2	0
NC & ≥10	3	34	36	2	0

758

15

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR < .5	0	0	1	0	0
<6 & OR <2	0	0	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	4	8	0	0
<20 & OR <5	1	9	23	0	0
VSBY ≥5	4	31	63	3	0
≥50 & ≥5	2	18	37	3	0
NC & ≥10	2	18	37	3	0

107

16

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	5	2	0	0
<20 & OR <5	3	16	6	0	0
VSBY ≥5	8	56	33	2	0
≥50 & ≥5	4	30	22	1	0
NC & ≥10	3	27	20	1	0

172

17

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	1	+	0
<6 & OR <2	0	+	1	+	1
VSBY <2	0	0	1	0	+
<10 & OR <2	0	2	4	2	2
<20 & OR <5	+	4	11	4	4
VSBY ≥5	5	33	45	10	4
≥50 & ≥5	5	28	29	4	1
NC & ≥10	5	28	28	4	1

253

18

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	0
<6 & OR <2	0	1	1	1	0
VSBY <2	0	+	+	+	0
<10 & OR <2	+	5	7	2	0
<20 & OR <5	1	12	18	5	+
VSBY ≥5	6	34	50	8	1
≥50 & ≥5	5	21	29	2	+
NC & ≥10	5	20	27	2	0

361

19

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	+	0
<6 & OR <2	+	1	2	1	0
VSBY <2	+	+	+	+	0
<10 & OR <2	1	5	8	2	+
<20 & OR <5	1	11	17	4	+
VSBY ≥5	5	40	45	6	+
≥50 & ≥5	4	26	26	2	0
NC & ≥10	3	26	24	2	0

678

23

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1 5 & OR < 5	+	+	+	0	0
<6 & OR <2	+	1	1	+	0
VSBY <2	0	+	1	0	0
<10 & OR <2	+	4	7	2	0
<20 & OR <5	1	11	16	4	+
VSBY ≥5	7	39	44	6	+
≥50 & ≥5	5	24	24	3	+
NC & ≥10	5	24	23	3	0

1000

24

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22 33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	1	+	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	2	4	3	0
<20 & OR <5	1	9	10	5	0
VSBY ≥5	8	42	40	7	+
≥50 & ≥5	8	32	28	2	+
NC & ≥10	7	31	28	2	0

345

25

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	0	1	0
<6 & OR <2	1	3	1	3	1
VSBY <2	0	1	0	1	+
<10 & OR <2	1	6	5	5	1
<20 & OR <5	2	12	15	7	1
VSBY ≥5	5	40	41	8	1
≥50 & ≥5	3	26	21	3	0
NC & ≥10	3	24	21	3	0

349

26

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	0	0
<6 & OR <2	1	2	2	1	+
VSBY <2	+	1	0	0	+
<10 & OR <2	1	3	8	2	1
<20 & OR <5	2	15	16	2	2
VSBY ≥5	6	45	39	3	+
≥50 & ≥5	4	25	19	1	0
NC & ≥10	4	23	18	1	0

245

27

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	0	0	0
<20 & OR <5	0	0	10	0	0
VSBY ≥5	10	43	29	19	0
≥50 & ≥5	10	43	14	0	0
NC & ≥10	10	43	14	0	0

21

28

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	4	4	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	9	13	0	0
<20 & OR <5	4	9	13	0	0
VSBY ≥5	13	26	43	13	0
≥50 & ≥5	0	17	26	13	0
NC & ≥10	0	13	26	13	0

23

32

WIND SPEED (KNOTS)

LCC VSBY	0-3	4-10	11-21	22-33	≥34
<1 5 & OR < 5	0	0	0	0	0
<6 & OR <2	0	6	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	6	0	0	0
<20 & OR <5	0	28	0	0	0
VSBY ≥5	0	50	28	11	0
≥50 & ≥5	0	28	28	11	0
NC & ≥10	0	17	11	11	0

18

33

WIND SPEED (KNOTS)

LCC VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	1	1	0
<6 & OR <2	0	2	7	2	0
VSBY <2	0	1	1	0	0
<10 & OR <2	0	11	15	7	0
<20 & OR <5	0	15	25	10	0
VSBY ≥5	1	30	48	16	1
≥50 & ≥5	1	11	19	3	0
NC & ≥10	1	10	16	1	0

122

34

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1 5 & OR < 5	+	2	2	2	0
<6 & OR <2	+	2	4	2	0
VSBY <2	+	2	3	1	0
<10 & OR <2	+	3	9	3	1
<20 & OR <5	1	7	22	14	2
VSBY ≥5	1	11	46	26	2
≥50 & ≥5	0	3	14	6	+
NC & ≥10	0	1	8	3	0

294

35

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	6	8	0	0
<6 & OR <2	0	6	14	0	0
VSBY <2	0	6	8	0	0
<10 & OR <2	0	6	14	6	0
<20 & OR <5	0	6	33	25	0
VSBY ≥5	3	0	50	17	0
≥50 & ≥5	0	0	17	0	0
NC & ≥10	0	0	17	0	0

36

36

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1 5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	8	0	0	0
<20 & OR <5	0	8	8	17	0
VSBY ≥5	0	17	50	25	8
≥50 & ≥5	0	8	33	0	8
NC & ≥10	0	0	33	0	8

12

37

WIND SPEED (KNOTS)

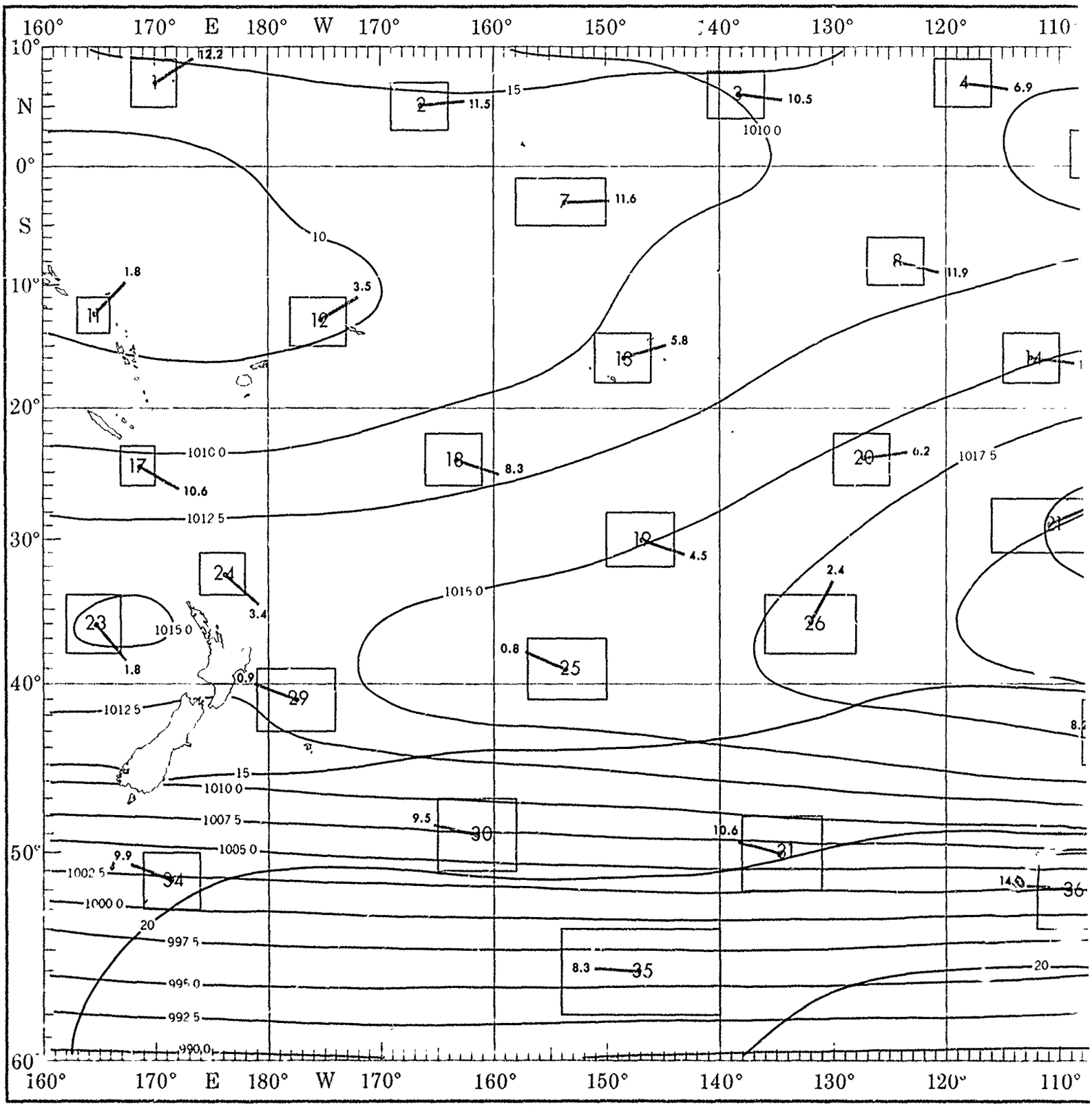
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	4	0	0	0
<6 & OR <2	0	4	0	0	0
VSBY <2	0	4	0	0	0
<10 & OR <2	0	4	9	0	0
<20 & OR <5	0	8	23	12	0
VSBY ≥5	4	15	38	38	0
≥50 & ≥5	0	8	8	15	0
NC & ≥10	0	0	4	8	0

26

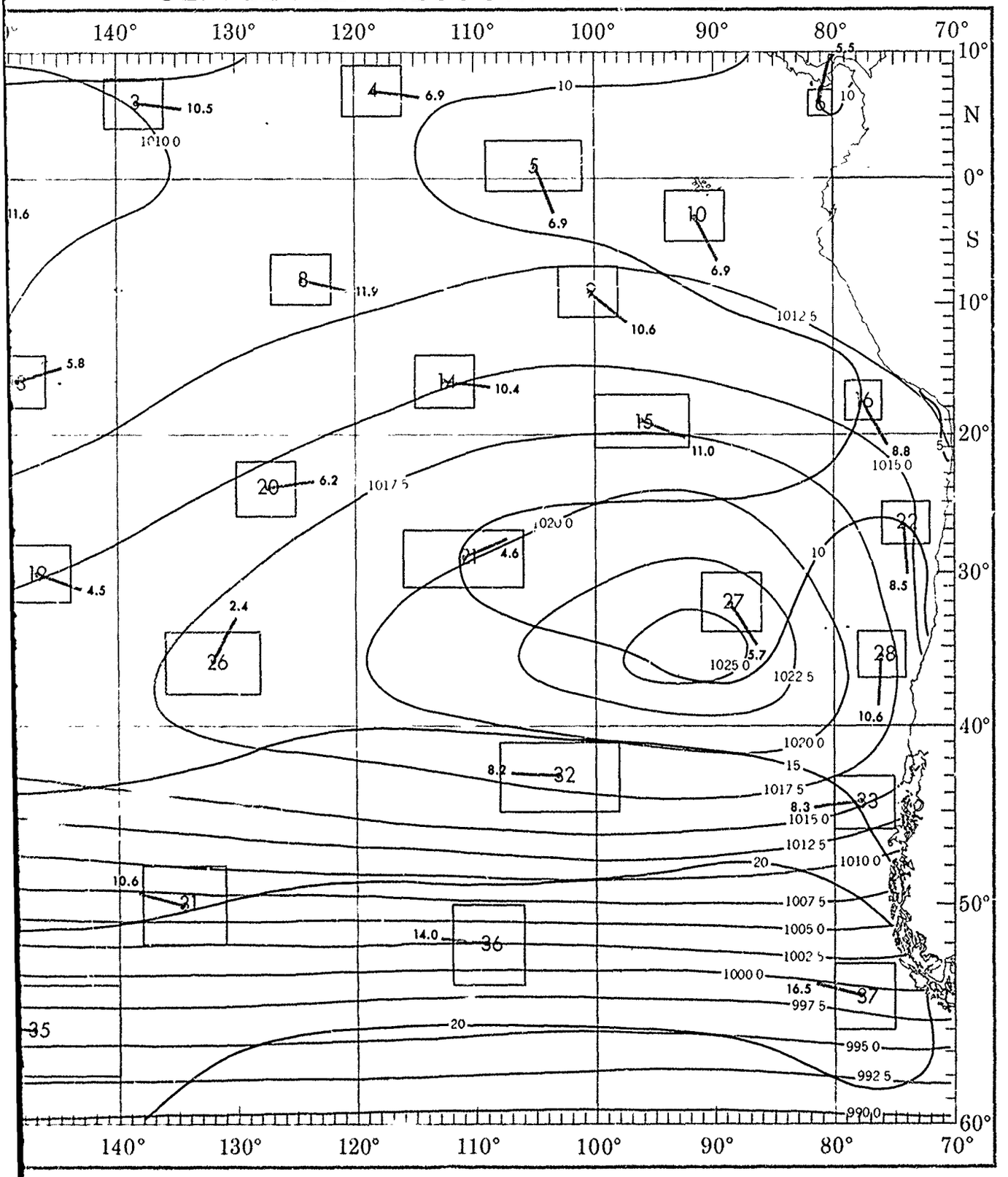
the objective compilation of available data for specified areas without regard to suspected biases.

ses (opposite page) are based on all available data subjectively adjusted where bias was evident.

JANUARY SEA LEVEL PRESSU



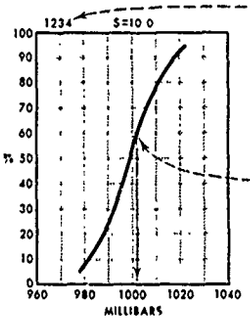
SEA LEVEL PRESSURE AND MEAN WIND



SEA LEVEL PRESSURE

Sea level pressure and mean wind

Number of observations



Cumulative percent frequency of sea level pressures equal to or less than the pressure intersected by the curve

S=Standard deviation of pressure (mbs).

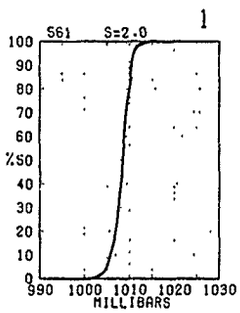
(60% of all observed sea level pressures were ≤1002 millibars.)

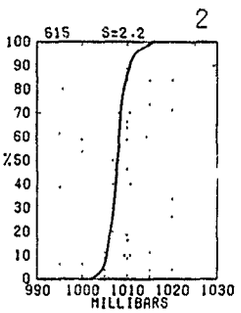
Vector mean wind is plotted from the direction which the mean flow occurs with the magnitude in knots at the end of the vector.

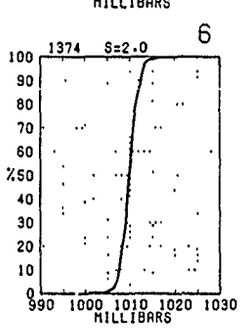
10.2 Vector mean wind is from the northeast at 10.2 knots

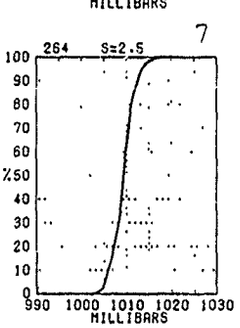
BLUE LINE - Scalar mean wind speed (kts)

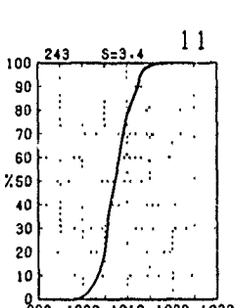
RED LINE - Mean sea level pressure (mbs)

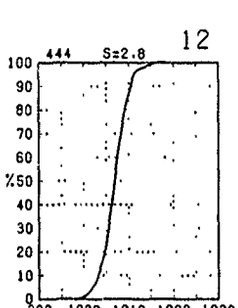


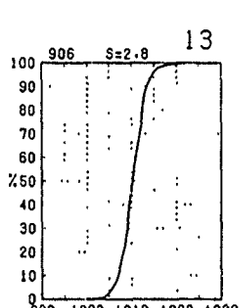


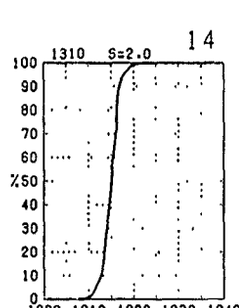


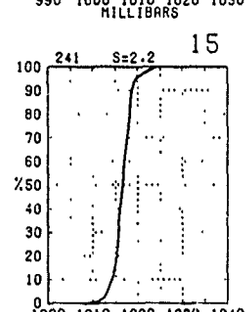


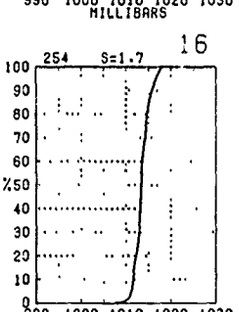


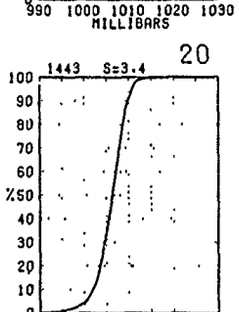


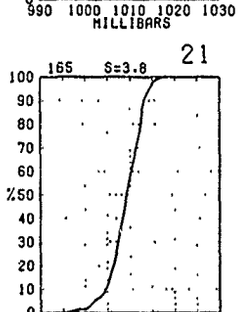


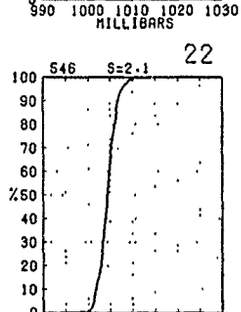


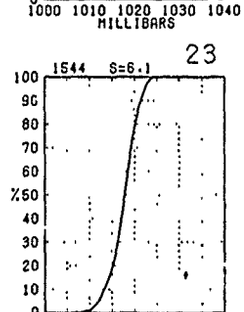


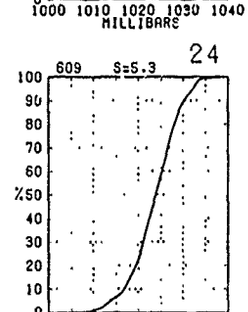


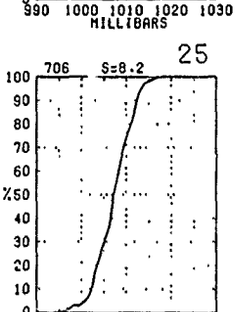


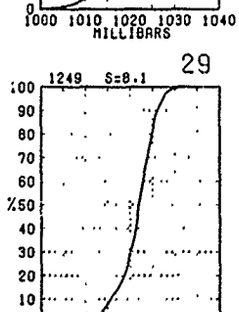


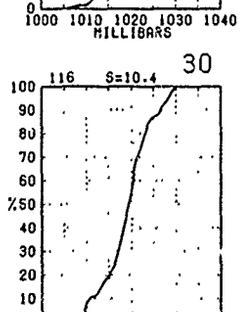


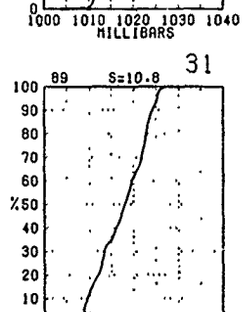


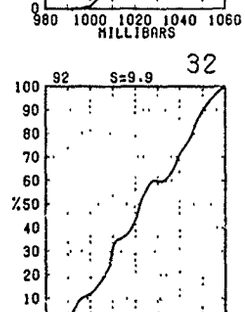


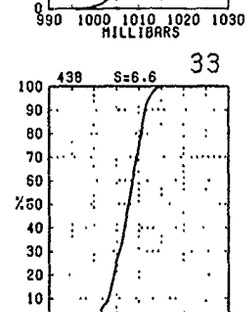


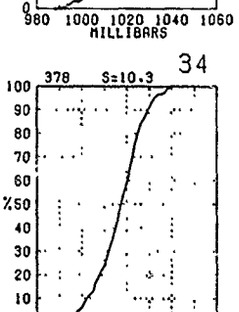












Graphs represent the objective compilation of available data for specified areas without regard to sus
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bia

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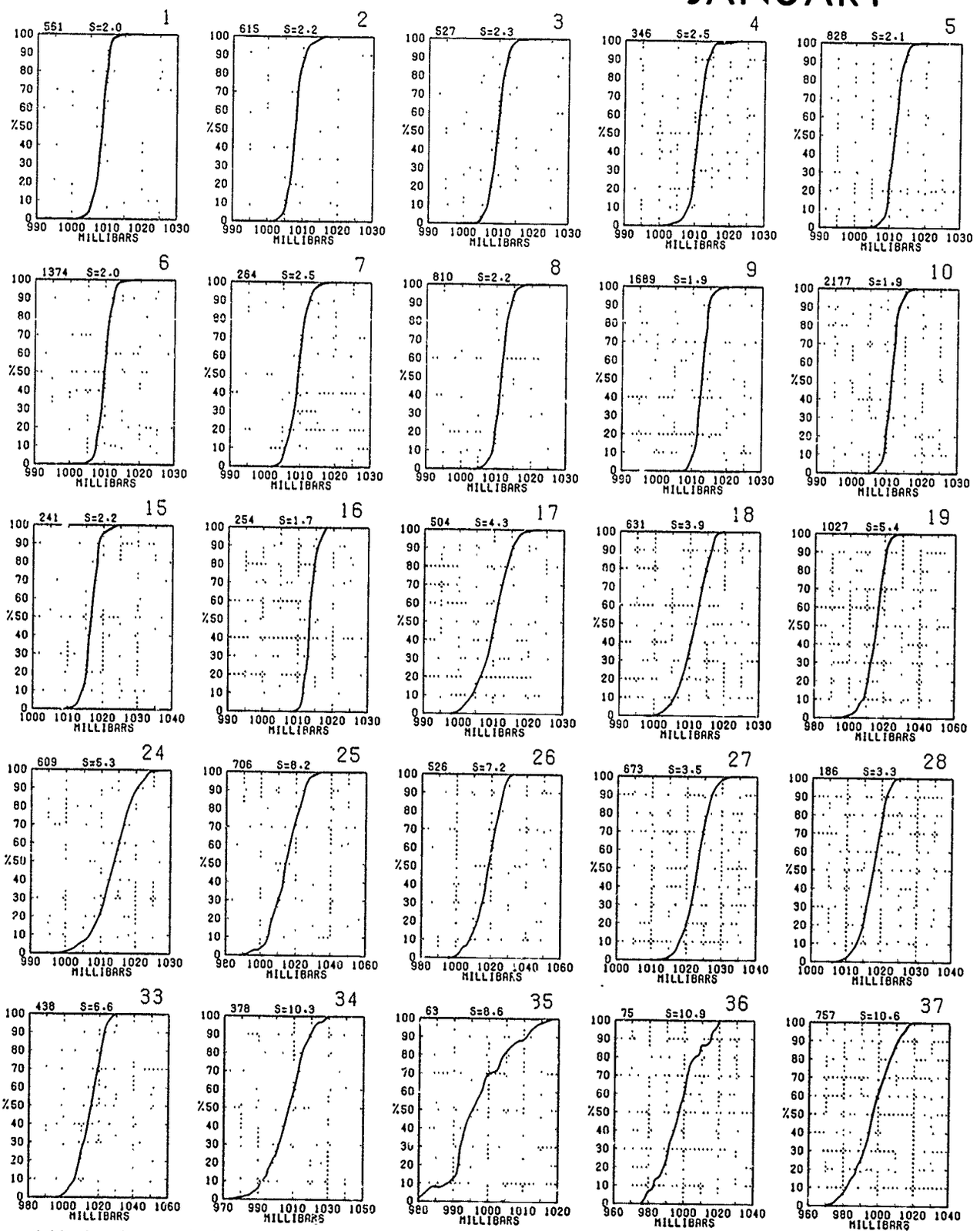

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objective compilation of available data for specified areas without regard to suspected biases.
opposite page) are based on all available data subjectively adjusted where bias was evident.

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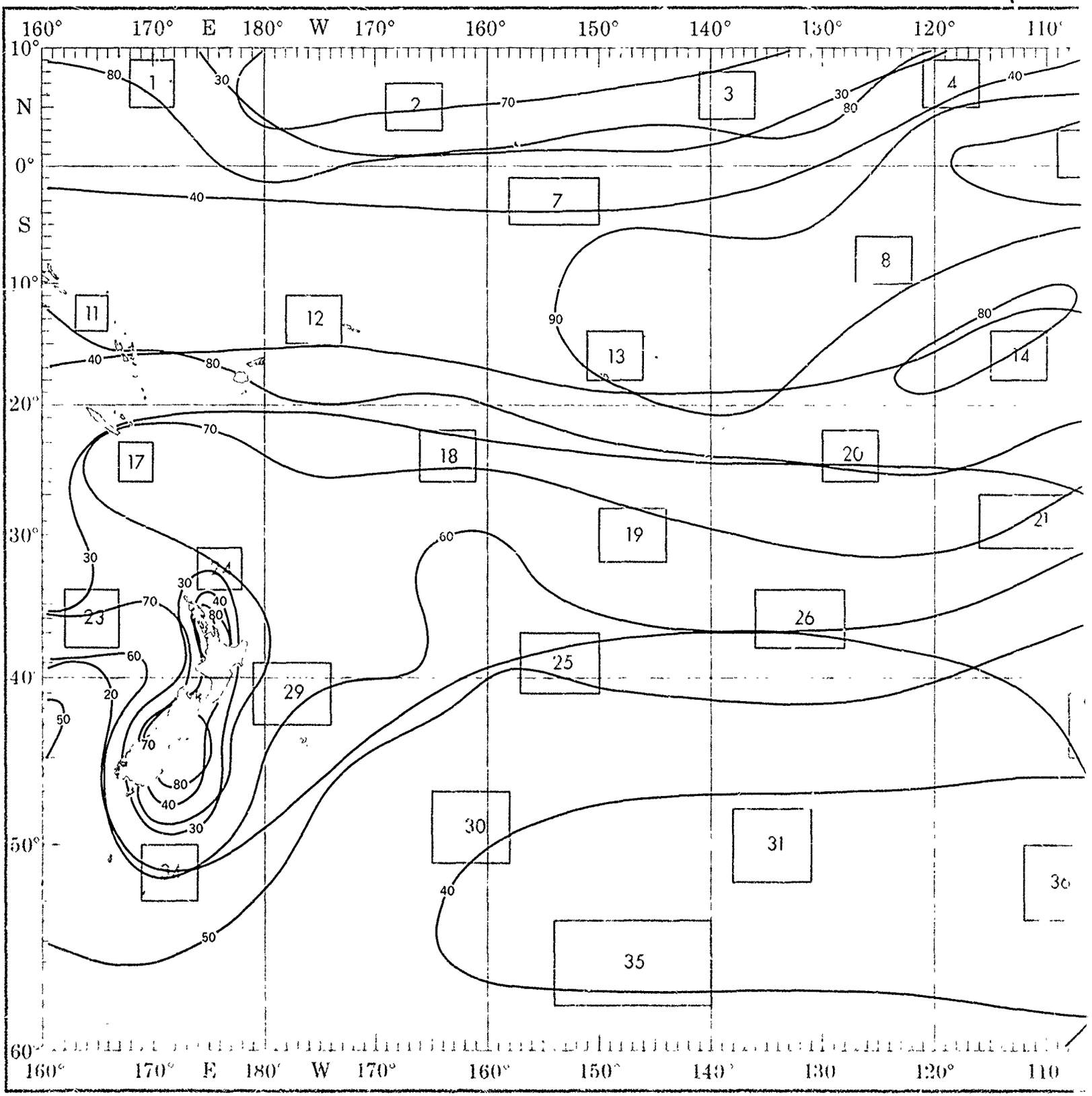
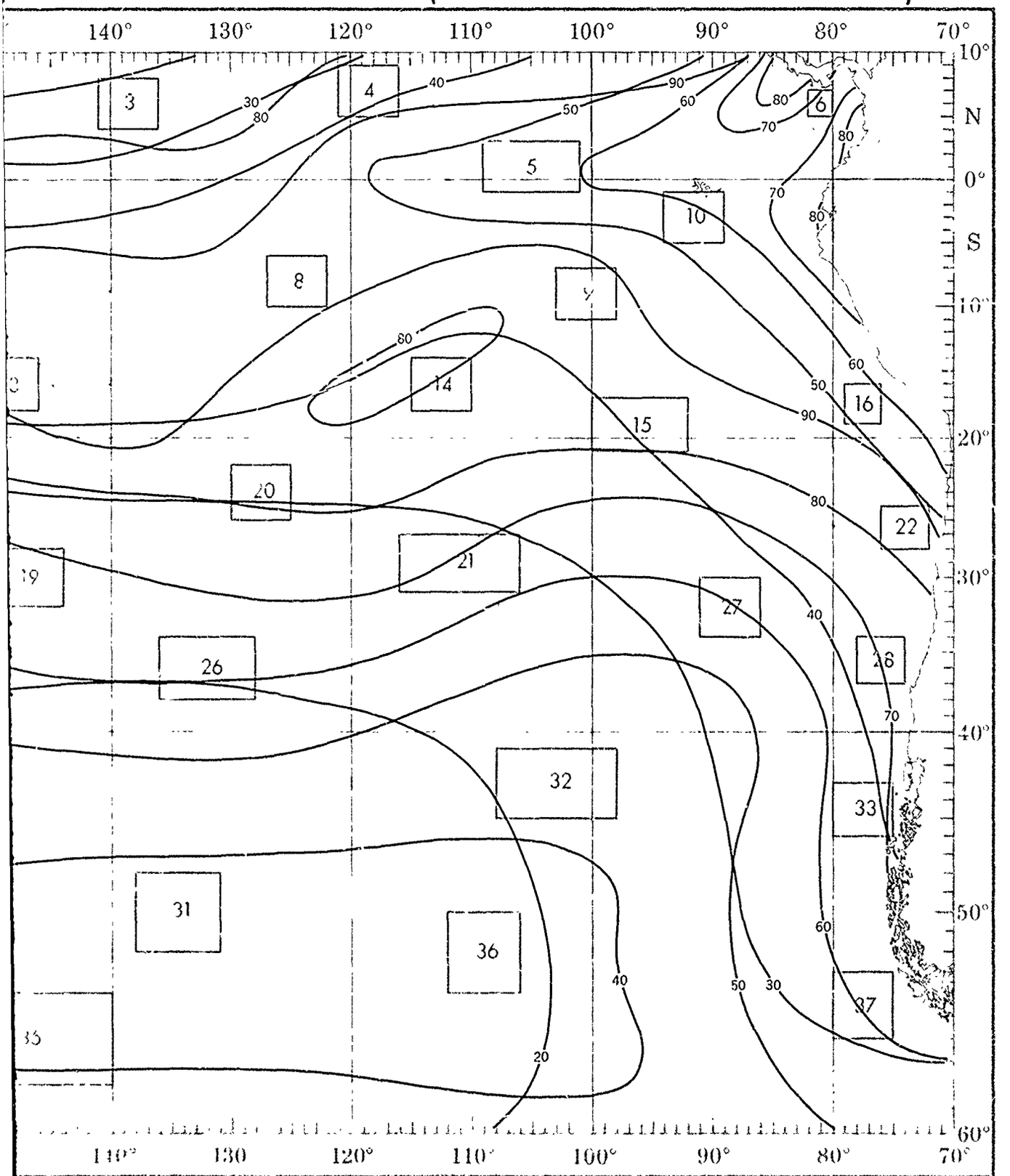
WAVES (<1.



WAVES (<1.5 AND <2.5 METERS)

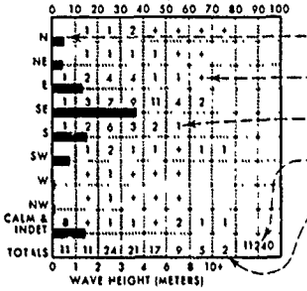


WAVE DIRECTION AND HEIGHT

Wave direction and height

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.



—(5% of all waves were from the N.)

+ indicates < 5% but > 0

—(1% of all waves were from the S with heights from 6 7.5 meters.)

—Number of observations

—(2% of the waves from all directions had heights ≥10 meters.)

WAVE HEIGHT INTERVAL

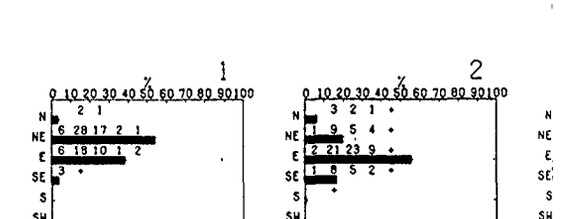
Feet	0-2	3-6	7-9	10-12	13-19	20-25	26-32	≥33
Meters	0-5	1-1.5	2-2.5	3-3.5	4-5.5	6-7.5	8-9.5	≥10

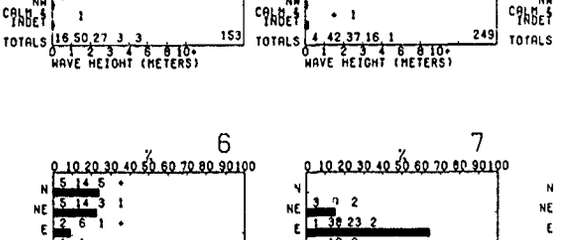
0 1 2 3 4 6 8 10+

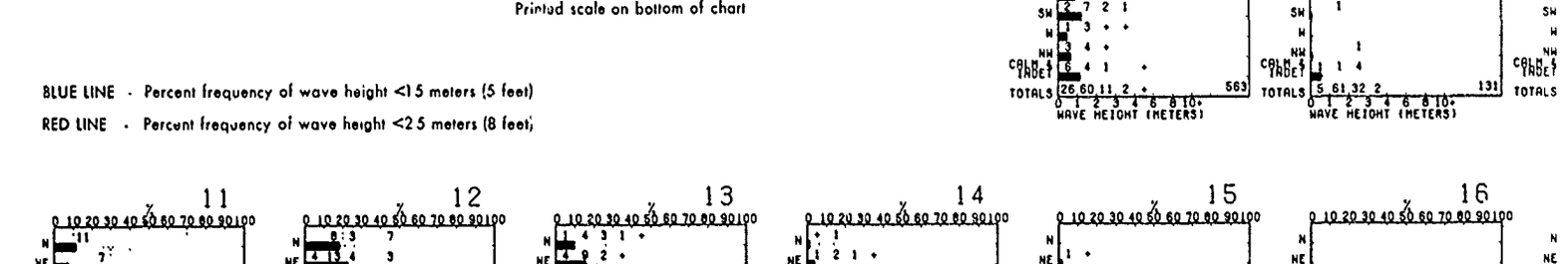
Printed scale on bottom of chart

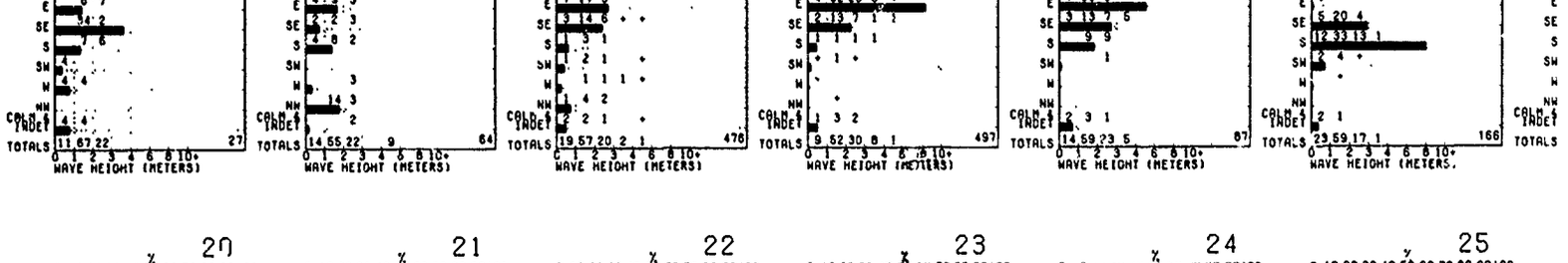
BLUE LINE - Percent frequency of wave height <1.5 meters (5 feet)

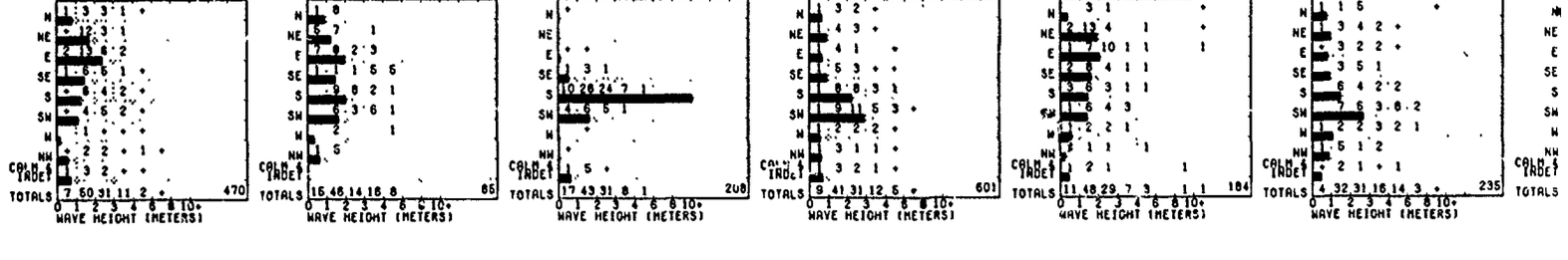
RED LINE - Percent frequency of wave height <2.5 meters (8 feet)











INSUFFICIENT DATA

Graphs represent the objective compilation of available data for specified areas without regard to s
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where t

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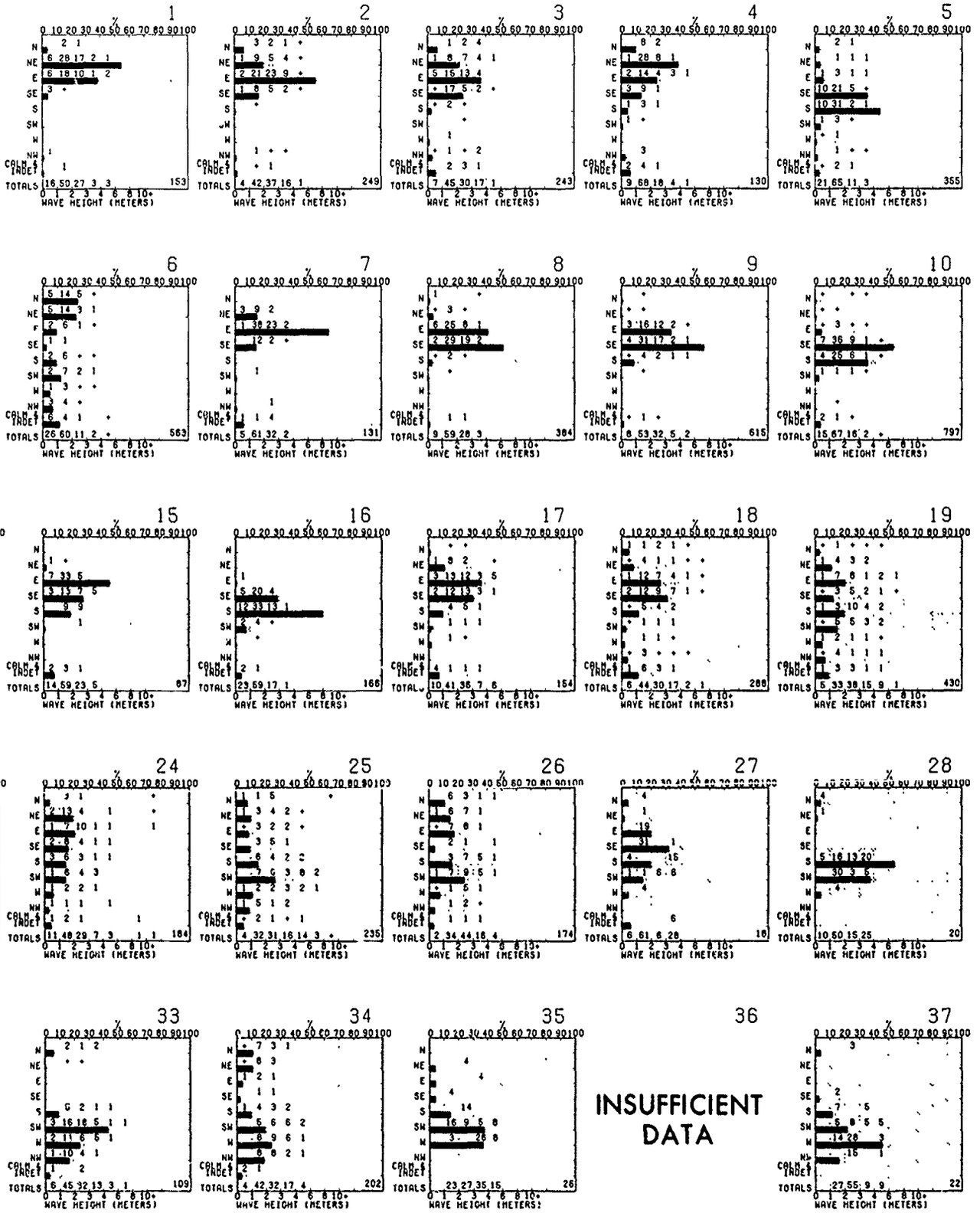

INSUFFICIENT DATA

INSUFFICIENT DATA

bjective compilation of available data for specified areas without regard to suspected biases.
pposite page) are based on all available data subjectively adjusted where bias was evident.

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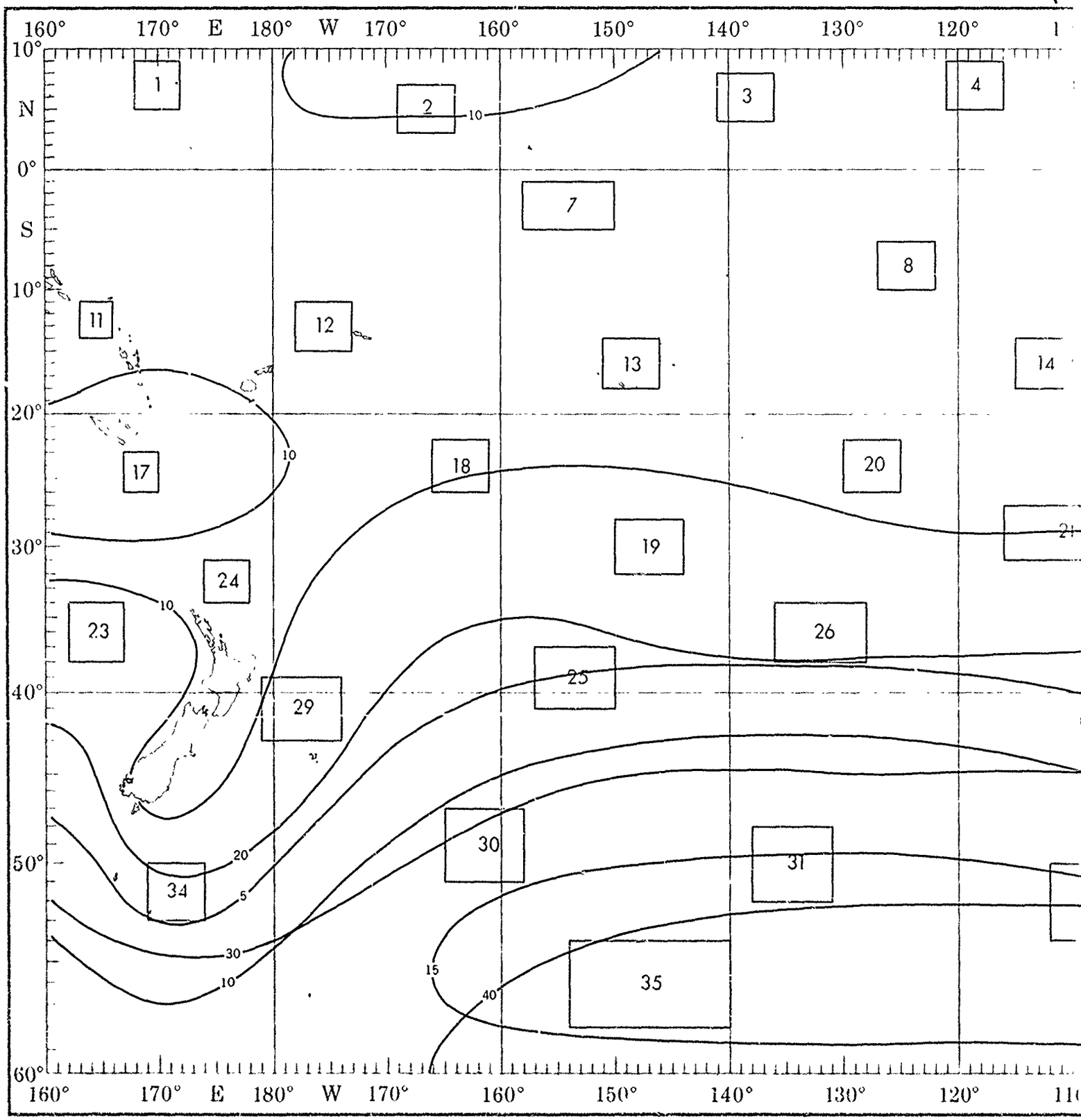
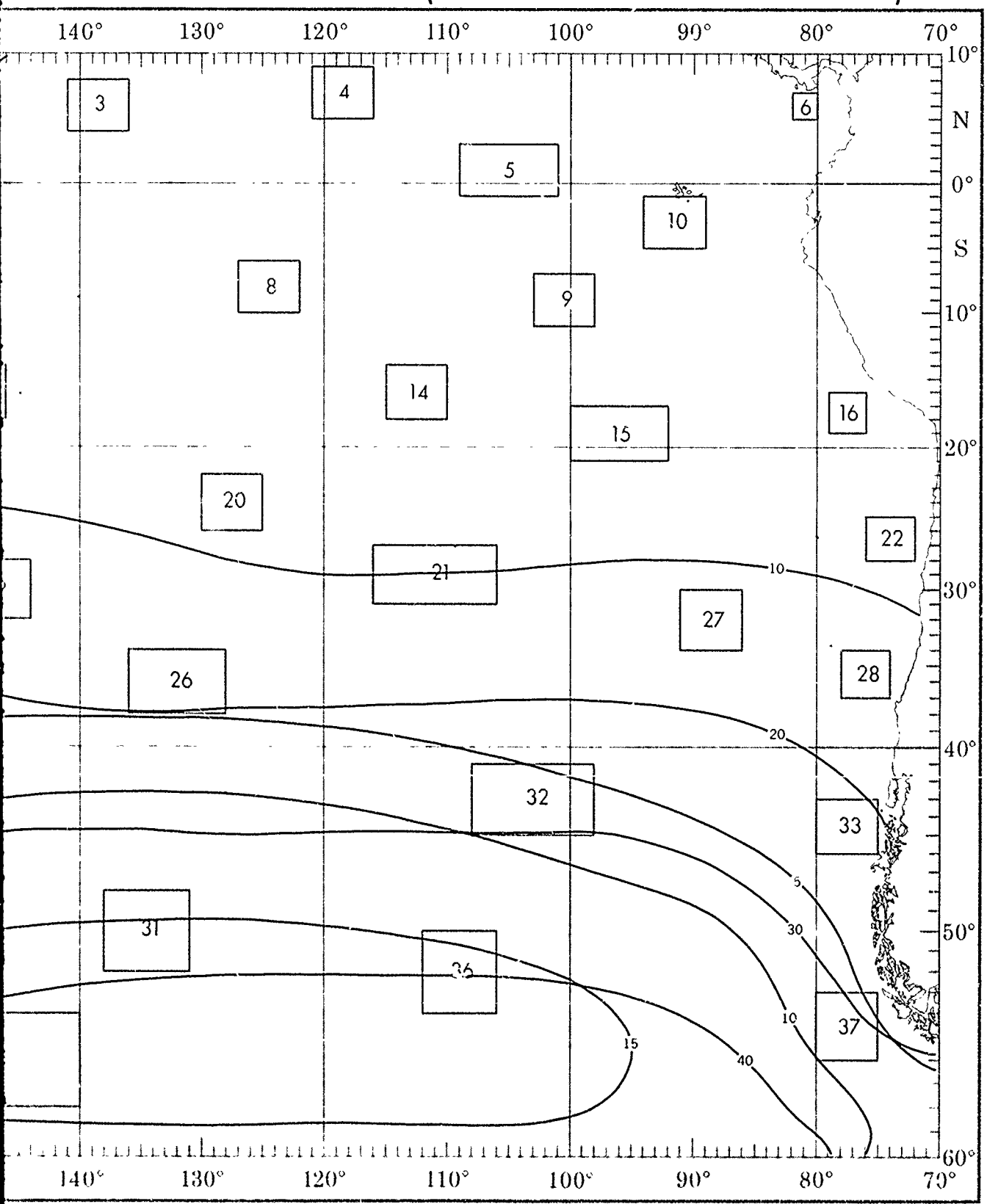
WAVES (



WAVES (≥3.5 AND ≥6 METERS)



WAVE PERIOD AND HEIGHT

Percent frequency of occurrence of wave period and height

PERIOD (Seconds)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	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

—(2% of observed waves had a height of 1-1.5 meters and a period of 10-11 seconds)

+ indicates < 5% but >0

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

BLUE LINE - Percent frequency of wave height ≥3.5 meters (12 feet)

RED LINE - Percent frequency of wave height ≥6 meters (20 feet)

1

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	20	1	0	0	0	0	1
1-1.5	25	12	3	4	2	0	1
2-2.5	9	9	3	2	2	1	0
3-3.5	1	2	0	1	0	0	0
4-5.5	0	3	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

164

2

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	2	0	0	0	0	0
1-1.5	20	14	5	0	+	+	1
2-2.5	3	16	9	4	2	0	3
3-3.5	+	4	5	3	+	0	2
4-5.5	0	0	1	0	0	0	+
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

250

6

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	19	2	1	1	0	0	8
1-1.5	30	15	4	2	2	+	5
2-2.5	3	4	2	1	+	0	1
3-3.5	0	1	1	+	0	0	0
4-5.5	0	0	0	0	0	0	+
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

591

7

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	0	1	0	0	0	2
1-1.5	25	12	16	2	2	0	4
2-2.5	4	11	8	0	2	2	6
3-3.5	0	0	0	1	2	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

131

11

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	0	0	0	0	0	4
1-1.5	33	22	4	4	0	0	4
2-2.5	0	11	11	0	0	0	0
3-3.5	0	0	0	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

27

12

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	12	3	0	0	0	0	0
1-1.5	15	28	6	2	3	0	0
2-2.5	3	8	5	0	3	2	2
3-3.5	0	0	0	0	0	0	0
4-5.5	0	5	5	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

65

13

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	13	4	1	1	0	0	2
1-1.5	22	21	5	1	1	1	4
2-2.5	3	8	4	1	+	+	3
3-3.5	+	+	1	+	0	0	0
4-5.5	+	+	+	0	0	0	+
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

488

14

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	+	+	0	0	0	1
1-1.5	23	20	4	1	2	1	2
2-2.5	7	14	5	1	+	0	2
3-3.5	1	4	1	1	+	+	0
4-5.5	0	+	+	0	0	0	+
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

500

15

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	10	1	0	0	0	0	2
1-1.5	25	17	7	6	0	0	3
2-2.5	7	6	0	5	1	3	1
3-3.5	0	5	0	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

87

16

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	14	3	3	0	0	0	5
1-1.5	20	21	10	3	1	0	2
2-2.5	4	4	7	2	0	0	0
3-3.5	0	0	1	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

170

20

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	6	+	0	0	0	0	1
1-1.5	20	13	7	2	2	1	4
2-2.5	6	11	7	3	1	0	3
3-3.5	+	4	4	1	1	+	+
4-5.5	+	+	1	+	0	+	+
6-7.5	0	+	+	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

475

21

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	15	0	0	0	0	0	1
1-1.5	14	16	8	3	3	0	0
2-2.5	1	5	6	2	0	0	0
3-3.5	0	2	6	5	3	0	0
4-5.5	0	3	2	1	0	0	1
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

86

22

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	12	2	1	0	0	0	4
1-1.5	16	11	6	3	0	+	6
2-2.5	5	7	13	3	1	1	+
3-3.5	1	2	2	1	1	+	0
4-5.5	0	0	1	0	+	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

214

23

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	9	1	+	+	0	0	1
1-1.5	17	13	5	2	2	+	1
2-2.5	4	11	8	3	2	1	2
3-3.5	1	4	3	2	1	+	1
4-5.5	0	1	3	+	+	+	+
6-7.5	0	0	0	+	0	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

610

24

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	13	1	0	1	0	0	2
1-1.5	17	12	4	3	2	0	8
2-2.5	5	9	5	2	3	1	3
3-3.5	0	2	3	1	0	1	1
4-5.5	0	0	2	0	1	1	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	1
≥10	0	0	1	0	0	0	0

194

25

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	0	0	0	0	0	3
1-1.5	11	12	7	+	0	0	2
2-2.5	5	8	8	5	1	1	2
3-3.5	3	5	4	3	1	1	+
4-5.5	+	8	1	1	2	1	1
6-7.5	0	+	1	1	0	0	0
8-9.5	0	+	0	0	0	0	0
≥10	0	0	0	0	0	0	0

238

29

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	1	0	+	0	0	2
1-1.5	11	12	5	+	1	+	3
2-2.5	7	14	6	3	+	+	3
3-3.5	1	4	3	2	1	0	2
4-5.5	1	1	1	3	1	1	0
6-7.5	0	0	1	+	0	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

265

30

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	0	0	0	0	0	0
1-1.5	4	8	0	0	0	0	0
2-2.5	4	28	4	0	0	0	0
3-3.5	16	4	12	8	0	0	0
4-5.5	0	4	0	4	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

25

31

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	0	0	6	0	0	0	0
1-1.5	11	0	0	0	6	6	0
2-2.5	11	0	6	0	17	6	0
3-3.5	0	6	6	0	0	0	0
4-5.5	0	0	6	0	0	0	0
6-7.5	0	0	11	0	6	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

18

32

INSUFFICIENT DATA

33

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	1	0	0	0	0	5
1-1.5	14	14	4	0	0	1	13
2-2.5	2	8	14	4	1	0	4
3-3.5	2	4	1	2	0	2	3
4-5.5	2	0	0	0	1	0	0
6-7.5	0	0	0	0	0	1	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

111

34

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	0	0	0	0	0	2
1-1.5	21	14	4	1	1	0	1
2-2.5	5	11	8	7	0	1	0
3-3.5	2	5	5	4	1	1	0
4-5.5	0	1	1	1	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

202

Graphs represent the objective compilation of available data for specified areas without regard t

The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

IGHT

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h are reported If both

1

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	20	1	0	0	0	0	1
1-1.5	25	12	3	4	2	0	1
2-2.5	9	9	3	2	2	1	0
3-3.5	1	2	0	1	0	0	0
4-4.5	0	3	0	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

164

2

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	2	0	0	0	0	0
1-1.5	20	14	5	0	+	+	1
2-2.5	3	16	9	4	2	0	3
3-3.5	+	4	5	3	+	0	2
4-4.5	0	0	1	0	0	0	+
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

250

3

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	6	+	0	0	0	0	+
1-1.5	18	13	10	+	1	0	2
2-2.5	4	11	8	3	1	0	4
3-3.5	2	2	7	3	1	+	1
4-4.5	0	0	1	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

243

4

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	6	0	1	0	0	0	3
1-1.5	24	26	12	1	2	0	3
2-2.5	2	9	2	2	0	1	1
3-3.5	1	1	0	2	0	0	0
4-4.5	0	0	0	0	0	0	1
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

131

5

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	15	6	1	1	0	0	1
1-1.5	25	24	7	2	2	1	3
2-2.5	3	3	3	0	1	0	1
3-3.5	0	1	1	1	0	0	0
4-4.5	0	0	0	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

366

6

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	19	2	1	1	0	0	8
1-1.5	30	15	4	2	2	+	5
2-2.5	3	4	2	1	+	0	1
3-3.5	0	1	1	+	0	0	0
4-4.5	0	0	0	0	0	0	+
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

591

7

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	0	1	0	0	0	2
1-1.5	25	12	16	2	2	0	4
2-2.5	4	11	8	0	2	2	6
3-3.5	0	0	0	1	2	0	0
4-4.5	0	0	0	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

131

8

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	1	1	+	0	0	+
1-1.5	22	25	6	1	1	2	1
2-2.5	2	16	5	3	1	+	2
3-3.5	0	1	+	1	+	0	0
4-4.5	0	0	0	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

389

9

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	6	1	0	0	0	0	2
1-1.5	23	18	7	1	1	1	1
2-2.5	8	15	6	+	+	1	+
3-3.5	1	3	1	1	0	0	0
4-4.5	+	+	+	1	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

622

10

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	12	1	+	1	0	0	3
1-1.5	28	23	8	2	2	1	1
2-2.5	4	7	2	2	+	+	+
3-3.5	+	1	+	+	0	+	0
4-4.5	+	0	0	+	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

813

14

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	+	+	0	0	0	1
1-1.5	23	20	4	1	2	1	2
2-2.5	7	14	5	1	+	0	2
3-3.5	1	4	1	1	+	+	0
4-4.5	0	+	+	0	0	0	+
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

500

15

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	10	1	0	0	0	0	2
1-1.5	25	17	7	6	0	0	3
2-2.5	7	6	0	5	1	3	1
3-3.5	0	5	0	0	0	0	0
4-4.5	0	0	0	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

87

16

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	14	3	3	0	0	0	5
1-1.5	20	21	10	3	1	0	2
2-2.5	4	4	7	2	0	0	0
3-3.5	0	0	1	0	0	0	0
4-4.5	0	0	0	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

170

17

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	6	0	1	0	0	0	5
1-1.5	15	15	5	1	3	1	0
2-2.5	9	9	10	4	0	2	1
3-3.5	1	2	3	1	0	1	0
4-4.5	0	2	2	2	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

155

18

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	+	0	0	0	0	1
1-1.5	15	16	5	1	+	0	6
2-2.5	4	11	8	2	1	1	3
3-3.5	3	7	5	1	1	0	1
4-4.5	+	+	1	+	+	0	0
5-7.5	0	0	0	+	1	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

292

19

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	+	0	+	0	0	1
1-1.5	12	8	6	+	1	+	4
2-2.5	6	11	13	3	1	1	3
3-3.5	+	7	3	1	1	+	2
4-4.5	+	3	2	2	1	+	+
5-7.5	0	+	0	+	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

436

23

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	9	1	+	+	0	0	1
1-1.5	17	13	5	2	2	+	1
2-2.5	4	14	8	3	2	1	2
3-3.5	1	4	3	2	1	+	1
4-4.5	0	1	3	+	+	+	+
5-7.5	0	0	0	+	0	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

610

24

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	13	1	0	1	0	0	2
1-1.5	17	12	4	3	2	0	8
2-2.5	5	9	5	2	3	1	3
3-3.5	0	2	3	1	0	1	1
4-4.5	0	0	2	0	1	1	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	1
≥10	0	0	1	0	0	0	0

194

25

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	0	0	0	0	0	3
1-1.5	11	12	7	+	0	0	2
2-2.5	5	8	8	5	1	1	2
3-3.5	3	5	4	3	1	1	+
4-4.5	+	8	1	1	2	1	1
5-7.5	0	+	1	1	0	0	0
8-9.5	0	+	0	0	0	0	0
≥10	0	0	0	0	0	0	0

238

26

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	0	0	0	0	0	1
1-1.5	17	10	4	2	1	0	0
2-2.5	9	19	10	4	0	0	2
3-3.5	1	3	6	3	1	0	1
4-4.5	1	1	1	1	1	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

178

27

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	5	0	0	0	0	0
1-1.5	47	11	0	0	0	0	0
2-2.5	0	0	5	0	0	0	0
3-3.5	0	0	16	6	0	0	5
4-4.5	0	0	0	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

19

28

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	0	5	0	0	0	0
1-1.5	20	10	20	0	0	0	0
2-2.5	5	10	0	0	0	0	0
3-3.5	10	10	5	0	0	0	0
4-4.5	0	0	0	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

20

32

INSUFFICIENT DATA

33

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	1	0	0	0	0	5
1-1.5	14	14	4	0	0	1	13
2-2.5	2	8	14	4	1	0	4
3-3.5	2	4	1	2	0	2	3
4-4.5	2	0	0	0	1	0	0
5-7.5	0	0	0	0	0	1	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

111

34

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	0	0	0	0	0	2
1-1.5	21	14	4	1	1	0	1
2-2.5	5	11	8	7	0	1	0
3-3.5	2	5	5	4	1	1	0
4-4.5	0	1	1	1	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

202

35

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	0	0	0	0	0	0	0
1-1.5	23	0	0	0	0	0	0
2-2.5	23	4	0	0	0	0	0
3-3.5	0	0	31	0	0	4	0
4-4.5	0	0	12	4	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

26

36

INSUFFICIENT DATA

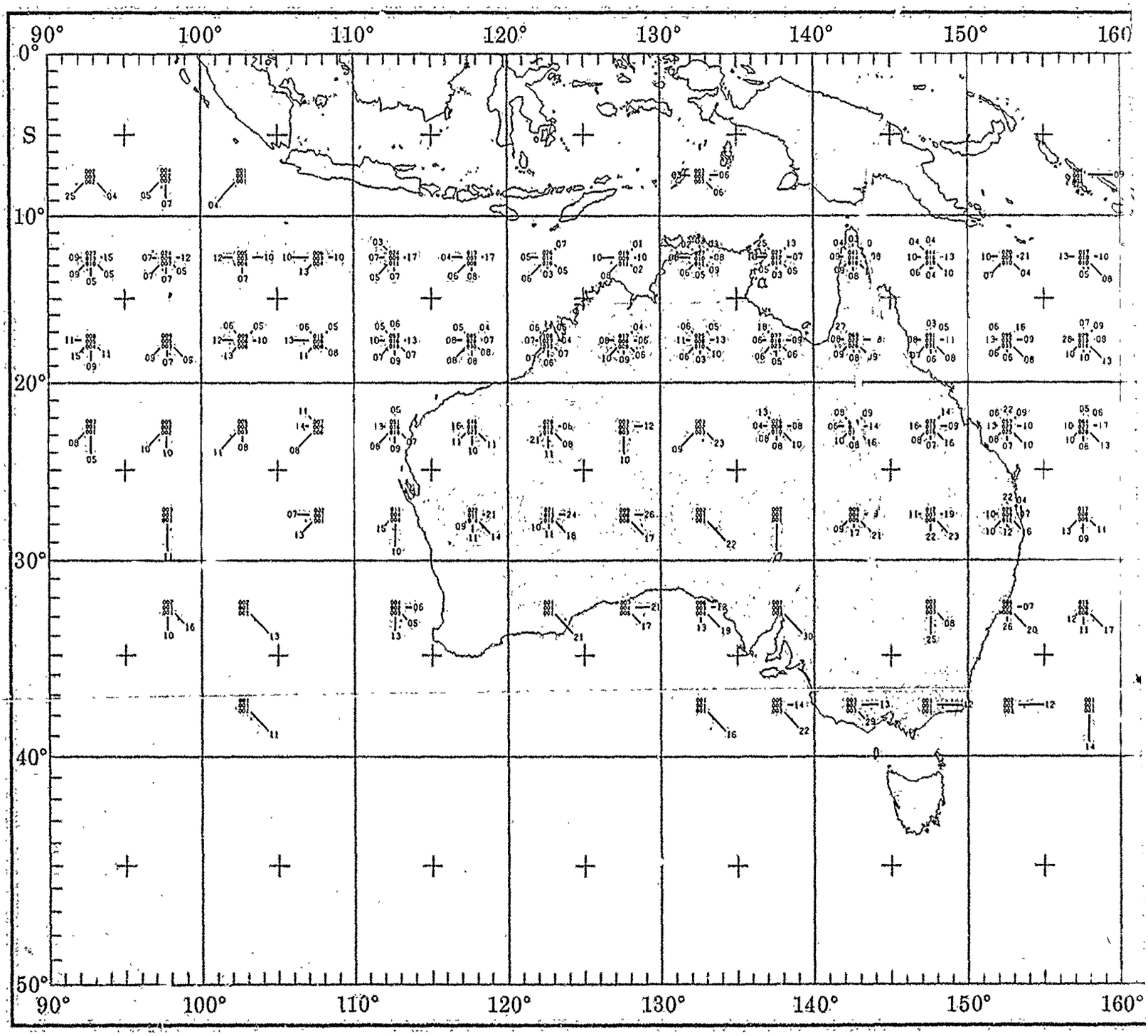
37

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	0	0	0	0	0	0	0
1-1.5	13	4	4	0	4	0	0
2-2.5	22	4	26	0	0	0	0
3-3.5	0	0	4	4	0	4	0
4-4.5	4	4	0	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

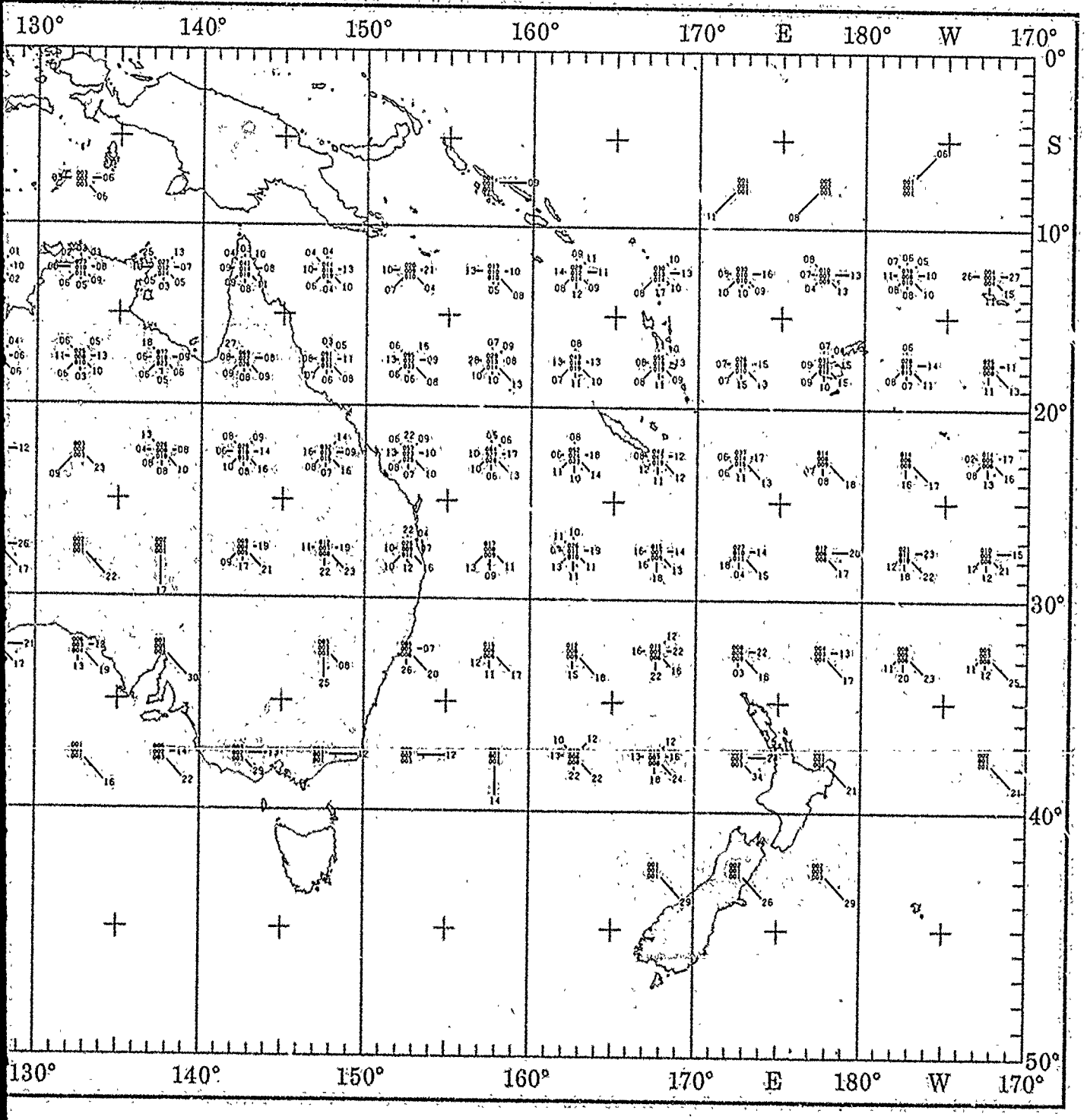
23

objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

JANUARY



TROPICAL CYCLONE



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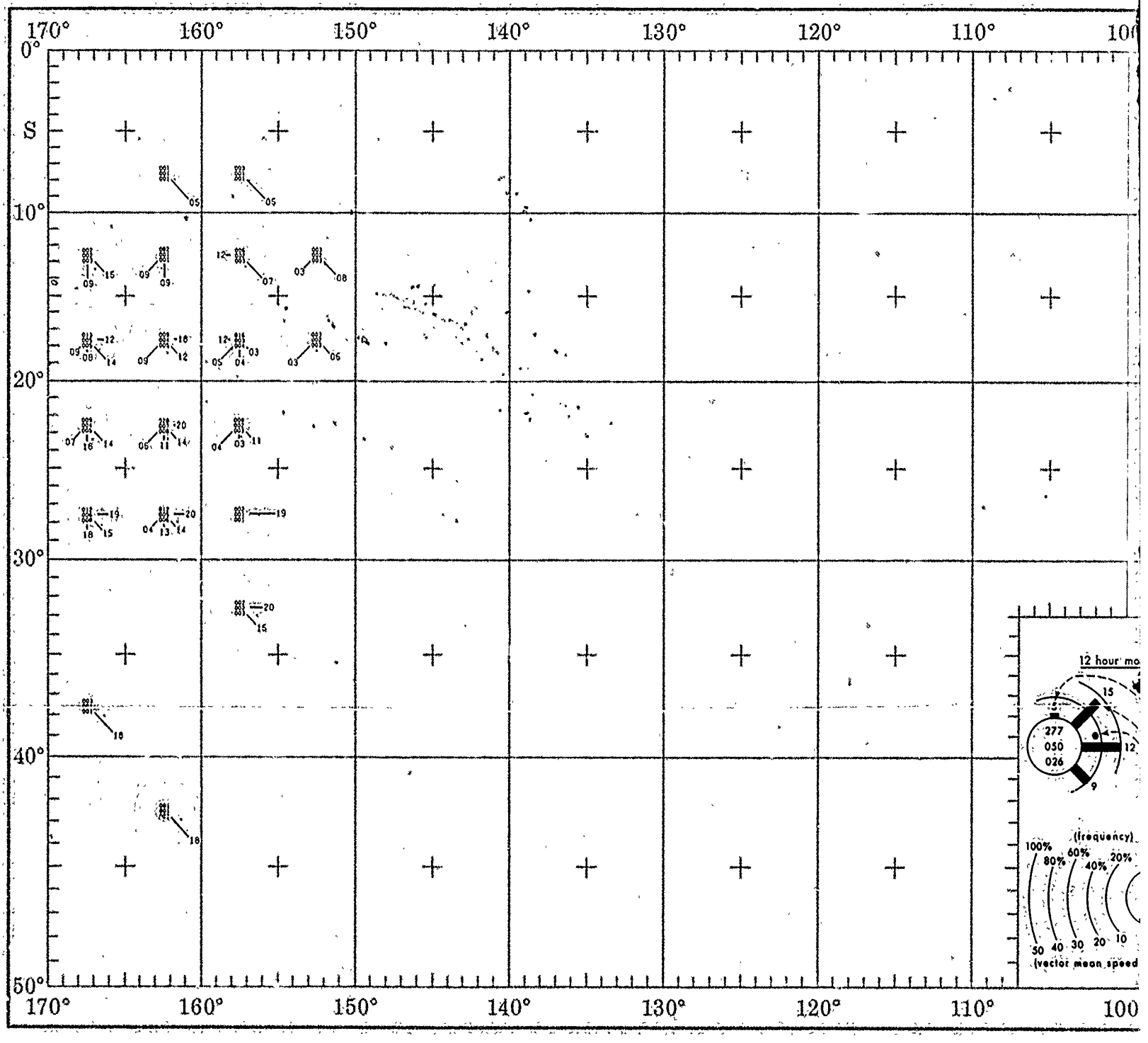
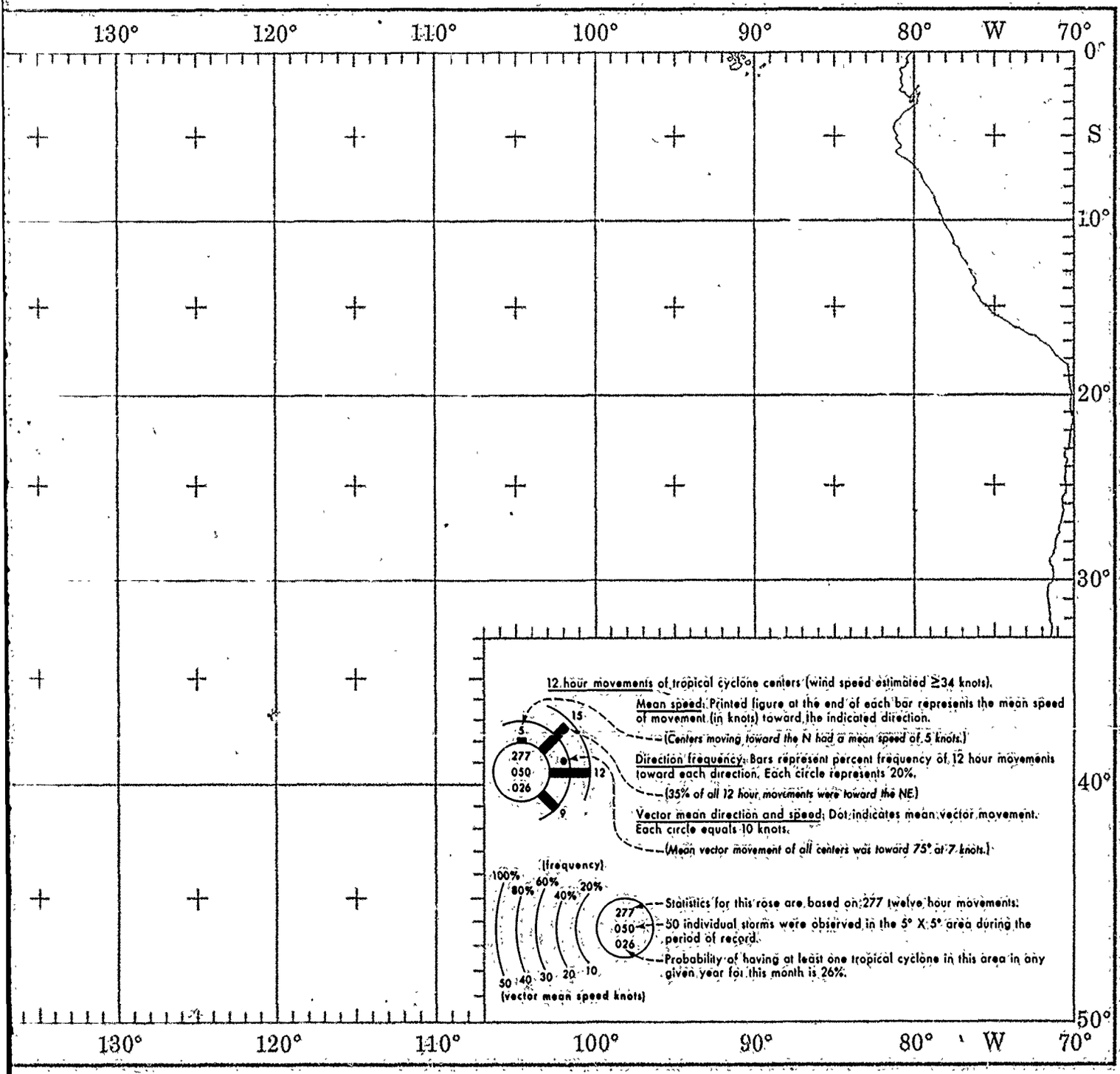
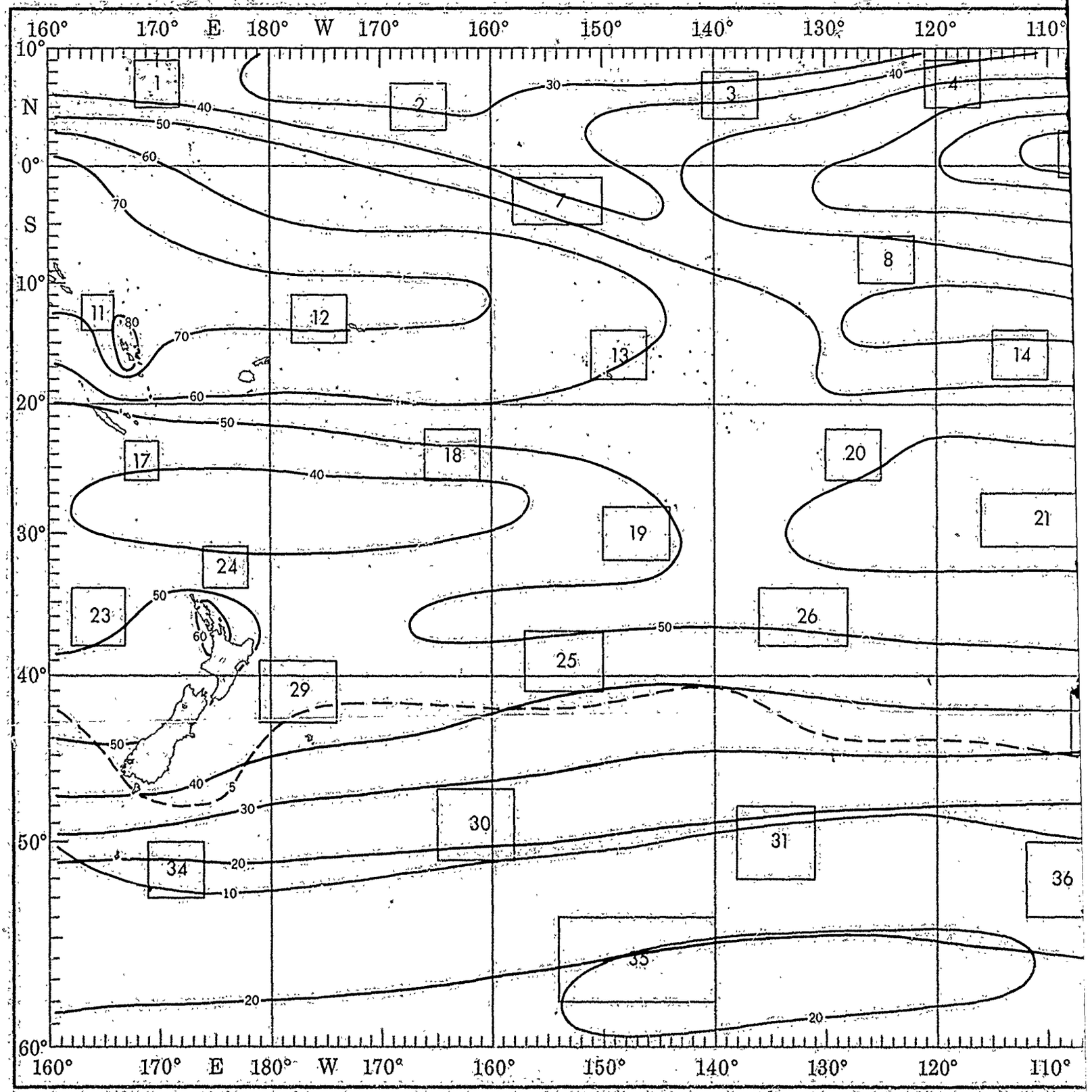


JANUARY


130°
120°
110°
100°
90°
80°
W
70°
0°
S
10°
20°
30°
40°
50°
12 hour movements of tropical cyclone centers (wind speed estimated ≥34 knots).
Mean speed: Printed figure at the end of each bar represents the mean speed of movement (in knots) toward the indicated direction.
(Centers moving toward the N had a mean speed of 5 knots.)
Direction frequency: Bars represent percent frequency of 12 hour movements toward each direction. Each circle represents 20%.
(35% of all 12 hour movements were toward the NE.)
Vector mean direction and speed: Dot indicates mean vector movement. Each circle equals 10 knots.
(Mean vector movement of all centers was toward 75° at 7 knots.)
277
050
026
5
15
12
9
(frequency)
100%
80%
60%
40%
20%
50
40
30
20
10
(vector mean speed knots)
Statistics for this rose are based on 277 twelve hour movements.
50 individual storms were observed in the 5° X 5° area during the period of record.
Probability of having at least one tropical cyclone in this area in any given year for this month is 26%.

FEBRUARY


160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
10° N 0° S 10° 20° 30° 40° 50° 60°
1
2
3
4
7
8
11
12
13
14
17
18
19
20
21
23
24
25
26
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40
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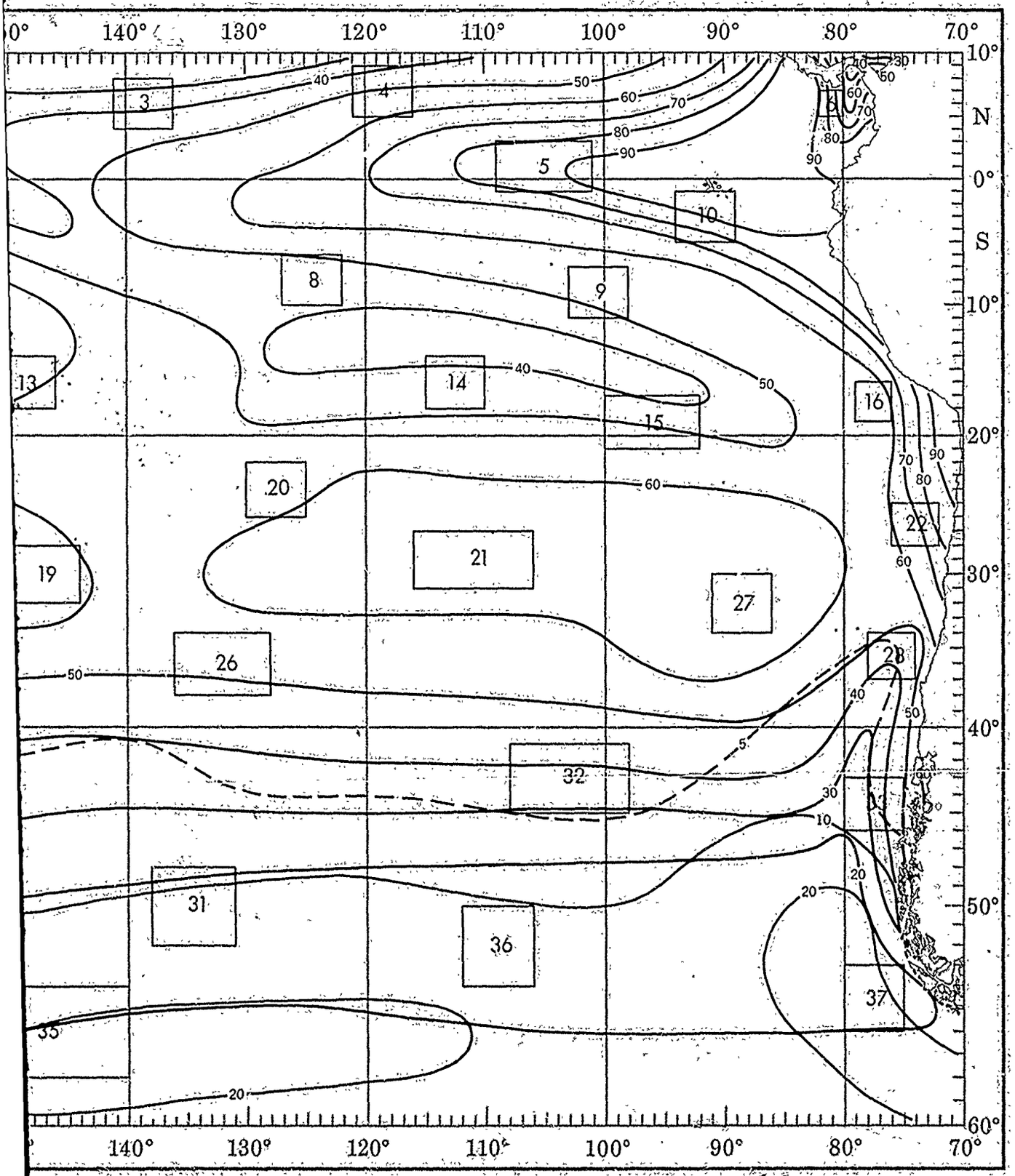
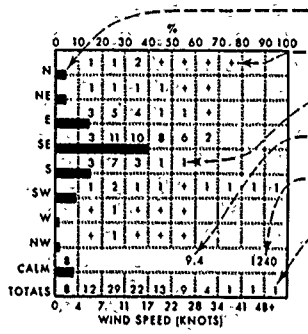
60
70
80
5
10
20

SURFACE WINDS



WIND DIRECTION AND SPEED

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.



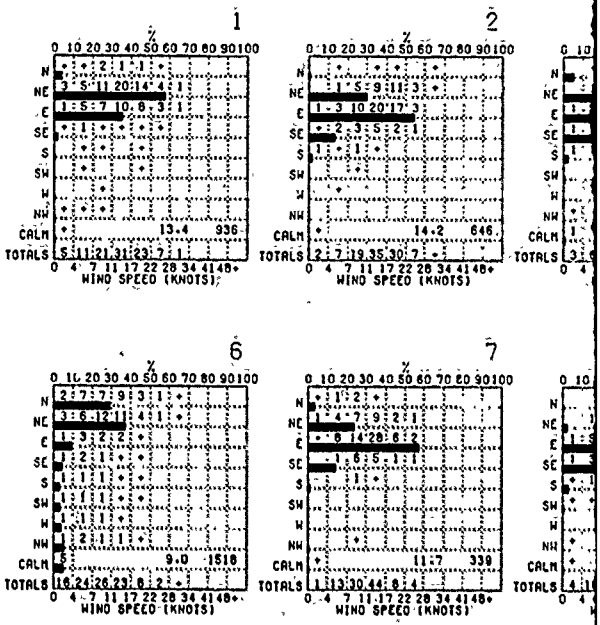
WIND SPEED INTERVAL (KNOTS)

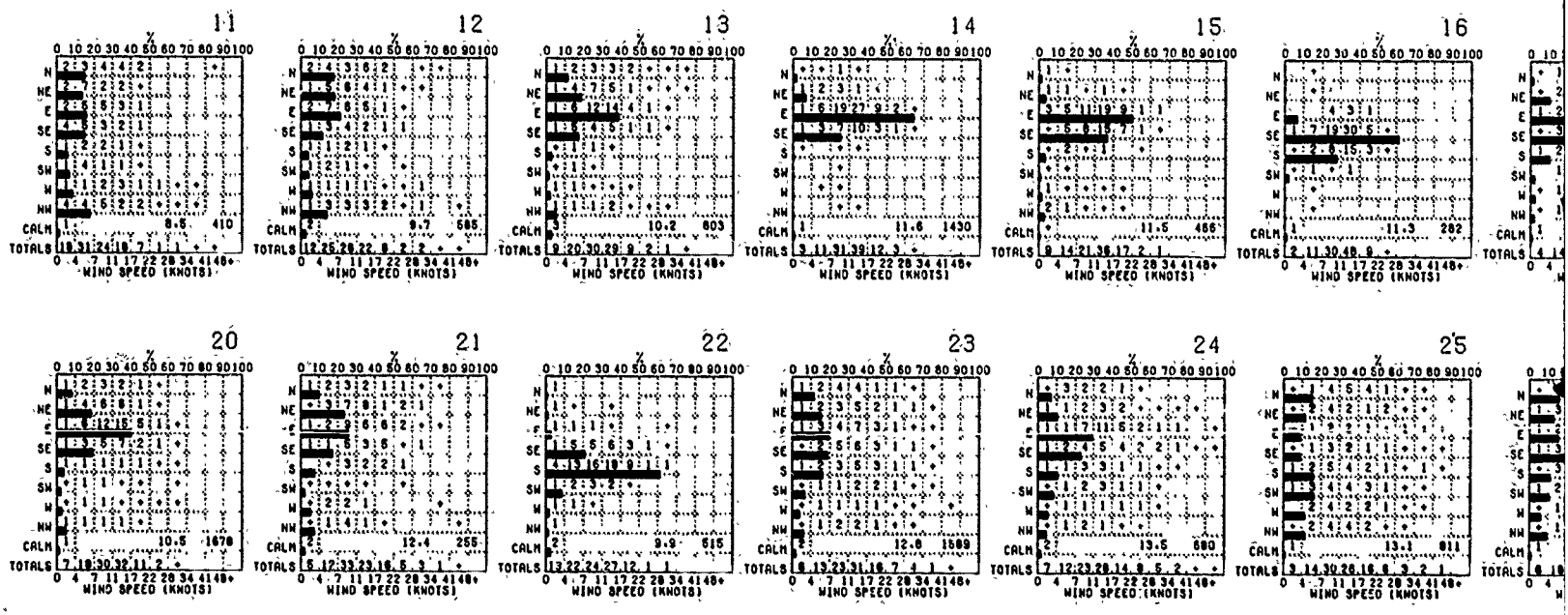
0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	≥48
0	4	7	11	17	22	28	34	41	48+

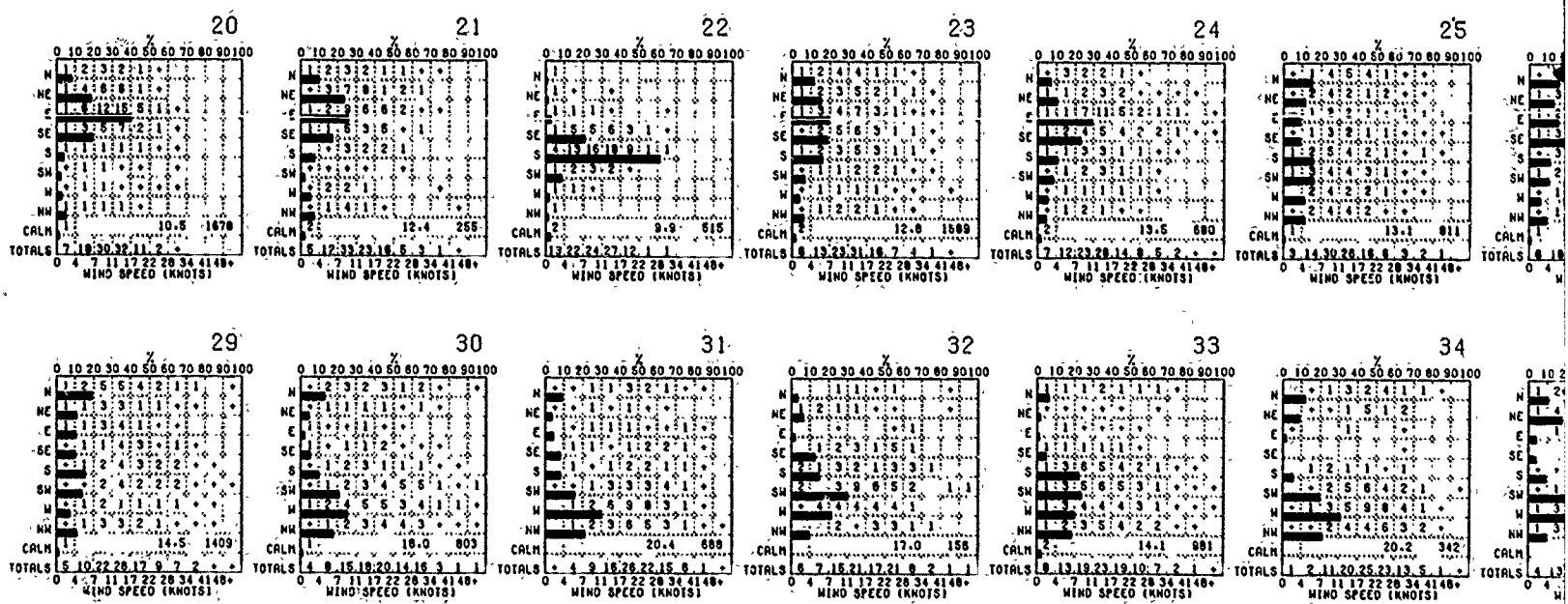
Printed scale on bottom of chart

BLUE LINE - Percent frequency of wind speed ≤10 knots

RED LINE - Percent frequency of wind speed ≥34 knots





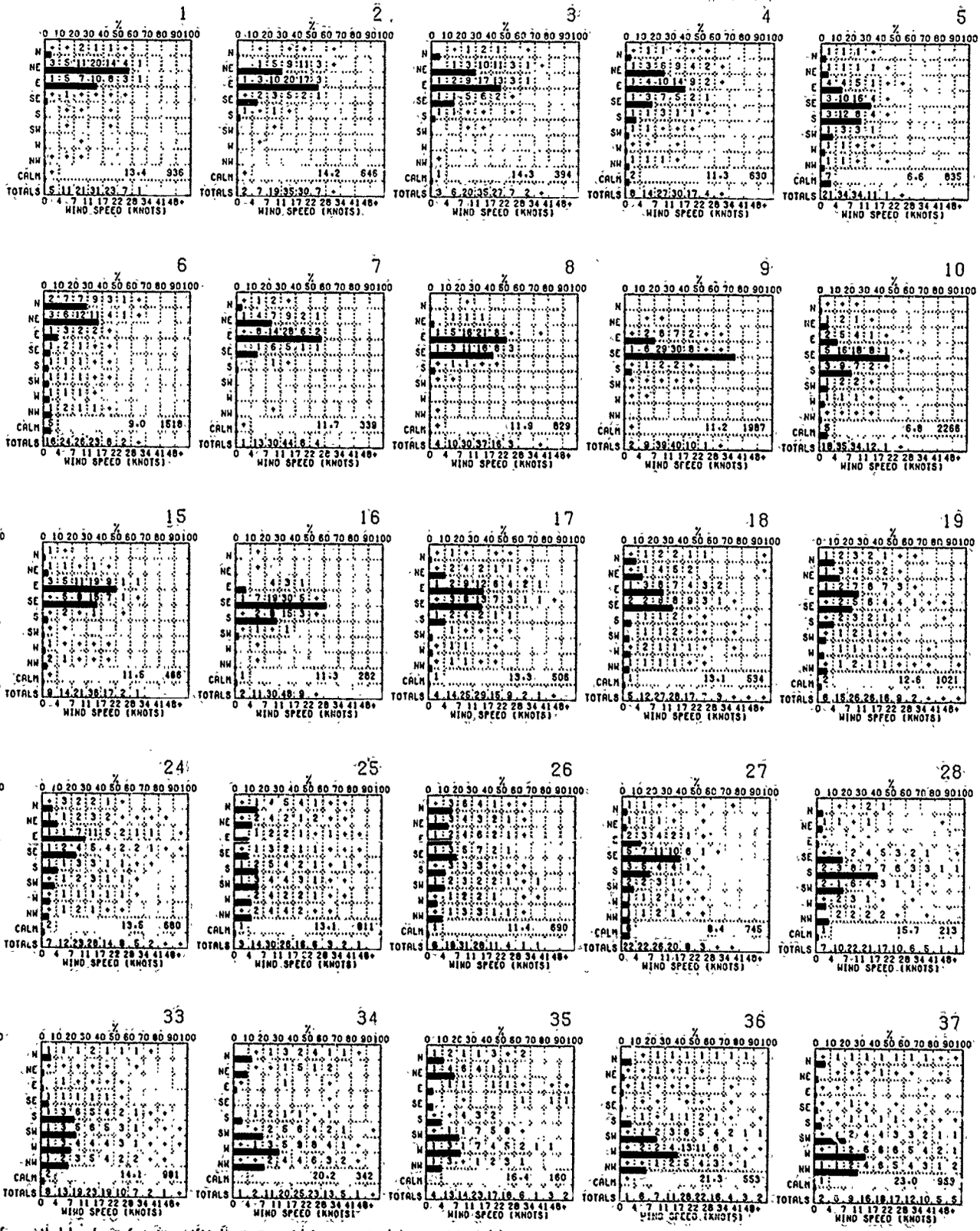


Graphs represent the objective compilation of available data for specified areas without regard to susp
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bias

SPEED

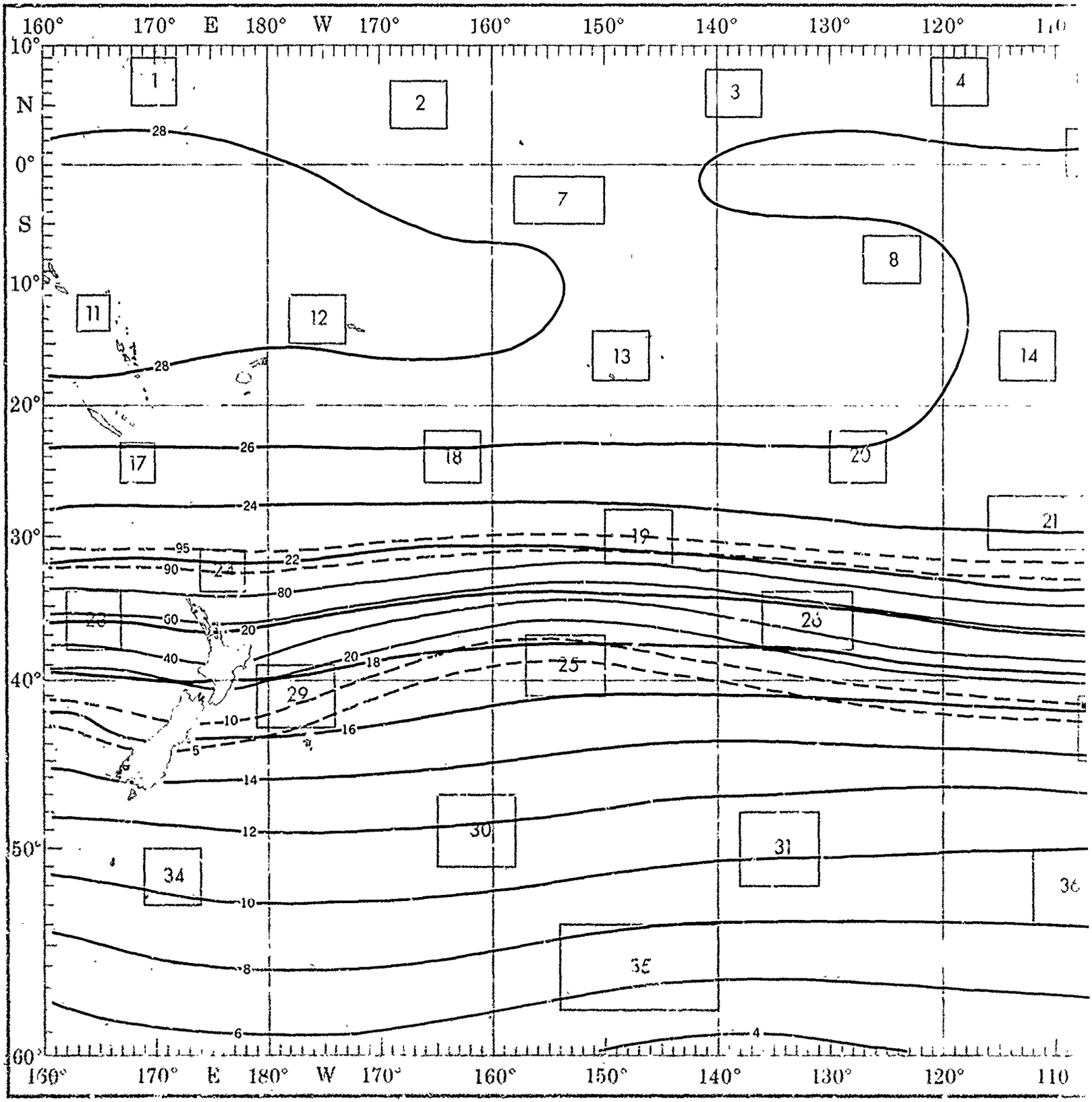
FEBRUARY

direction Speed frequency
direction.

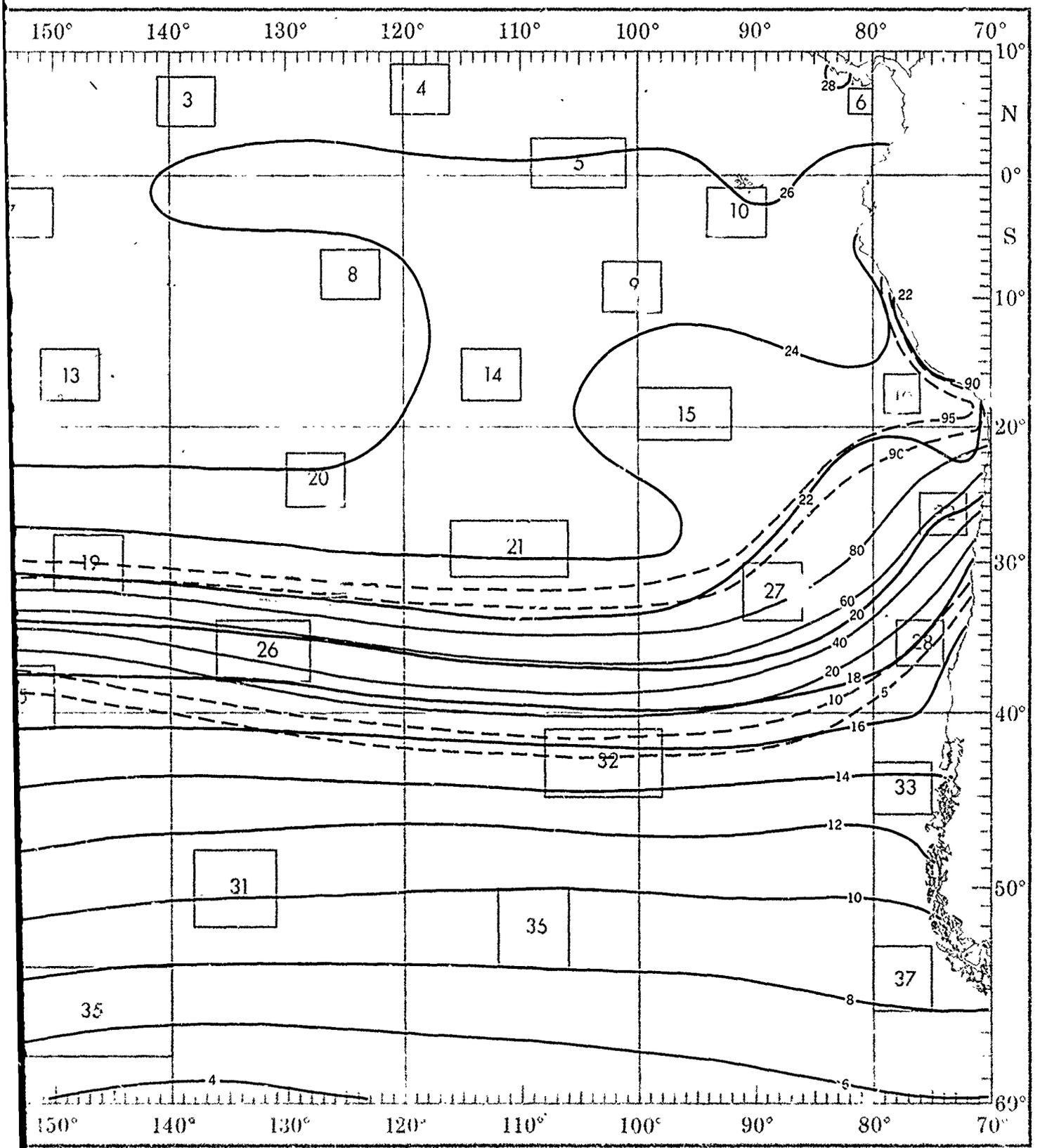


he objective compilation of available data for specified areas without regard to suspected biases.
es (opposite page) are based on all available data subjectively adjusted where bias was evident.

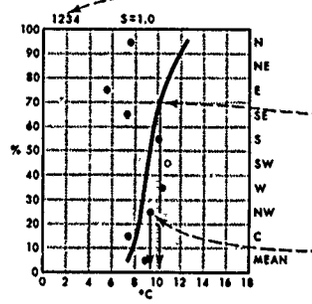
FEBRUARY SURFA



SURFACE AIR TEMPERATURE



SURFACE AIR TEMPERATURE



Air Temperature. —Number of observations.

Cumulative percent frequency of temperatures equal to or less than the temperature intersected by the curve.

—(70% of all temperatures were ≤10.3 °C or ≤50.5 °F.)

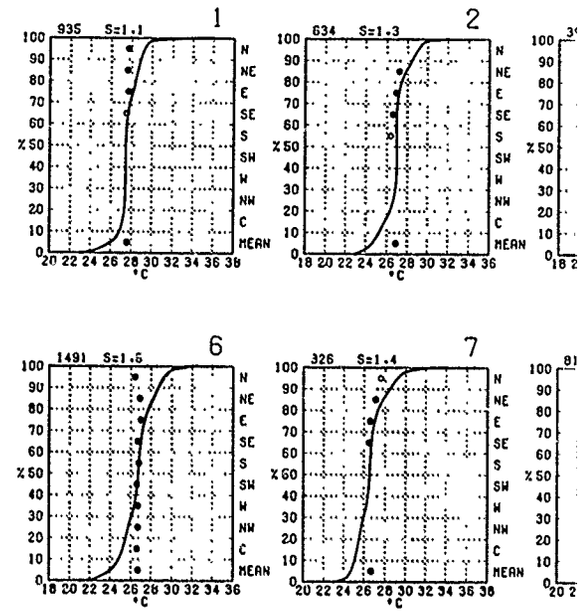
S=Standard deviation of temperatures (°C).

Mean temperature for each wind direction, calm and for all data combined are represented by dots.

—(With NW winds, the mean temperature was 9.4 °C or 48.9 °F.)

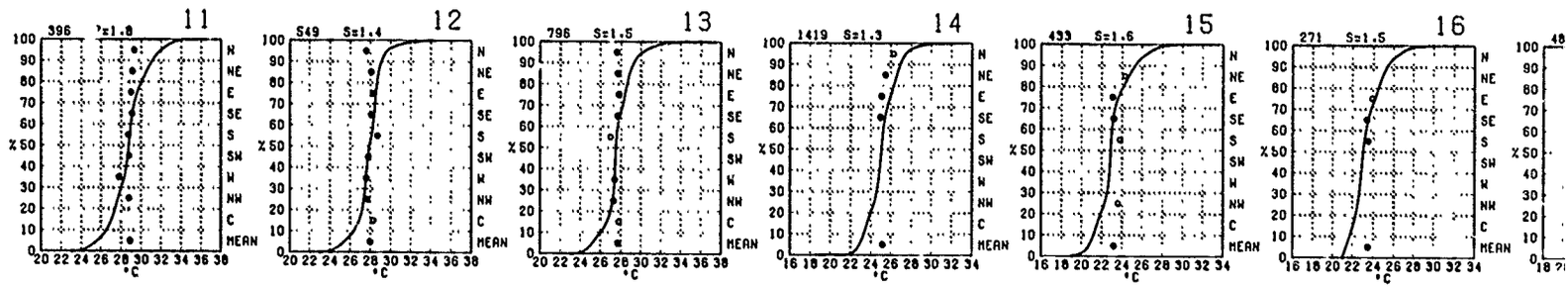
o Indicates that the mean temperature for a direction or calm was computed from 10-30 observations.

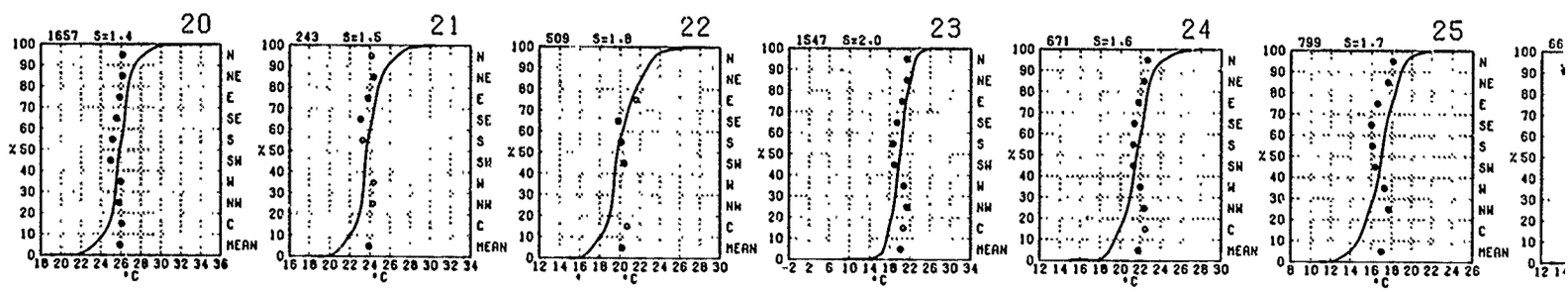
The mean temperature is omitted when less than 10 observations for a direction or calm were available.

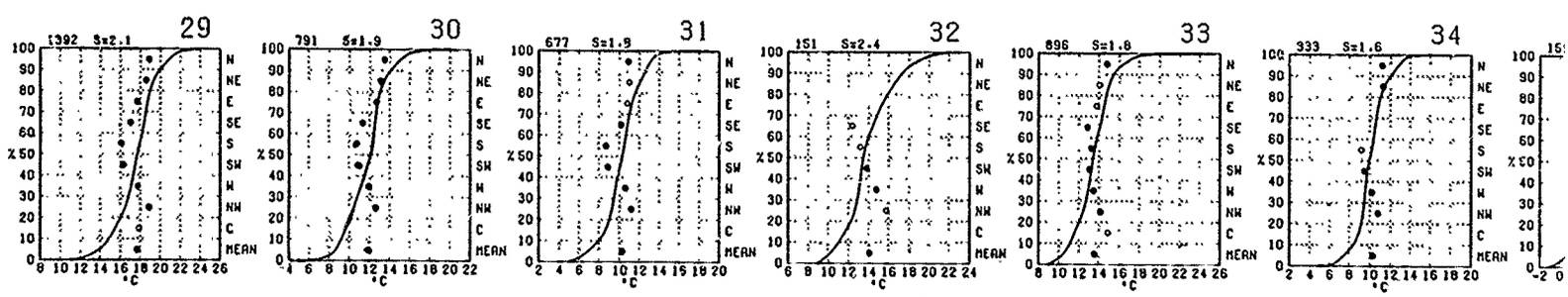


BLACK LINE - Mean air temperature (°C)

RED LINE - Percent frequency of temperature ≥20°C (68°F)







Graphs represent the objective compilation of available data for specified areas without regard to su
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bi

ATURE

FEBRUARY

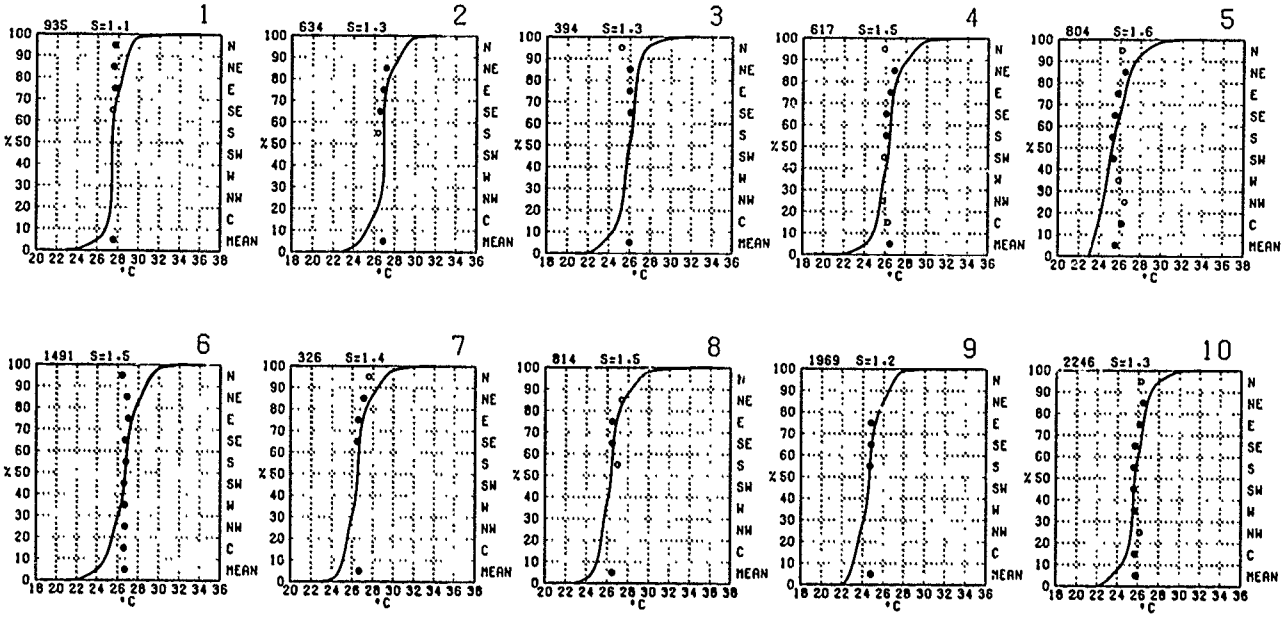
qual to or less than the temp-

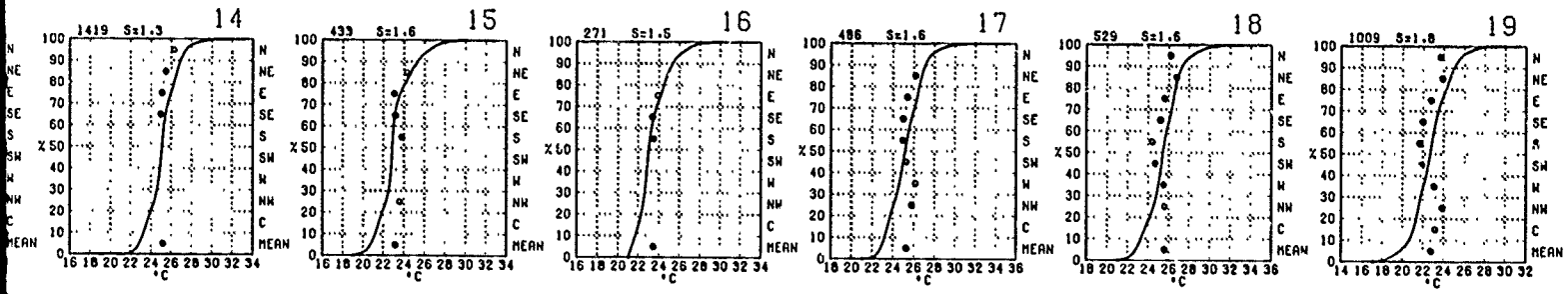
all data combined are

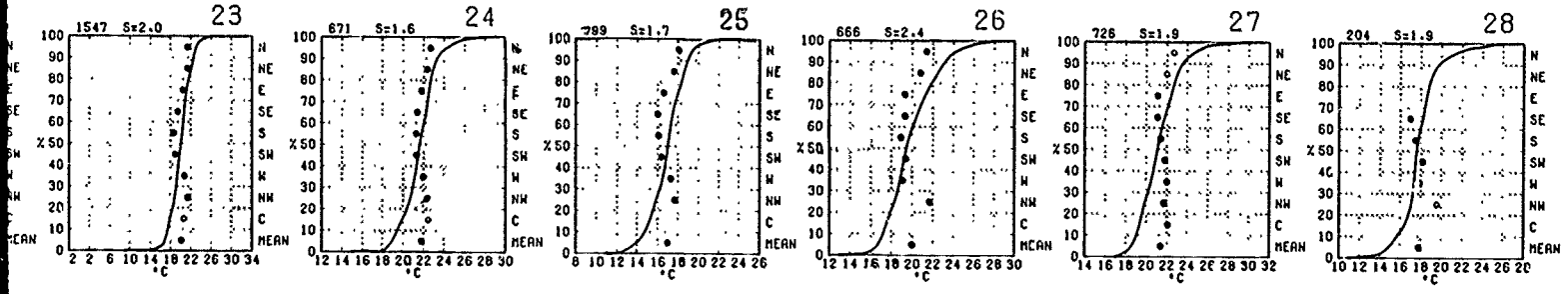
°F.)

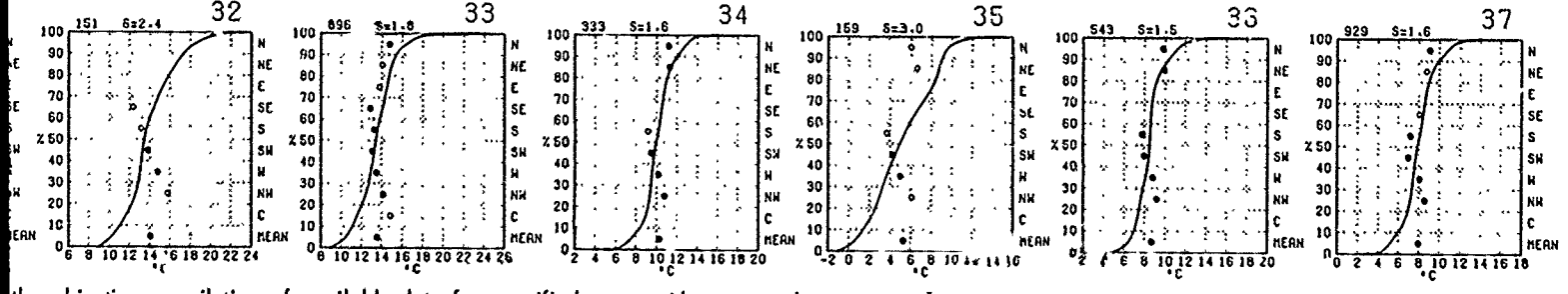
calm was computed from

available.









the objective compilation of available data for specified areas without regard to suspected biases.
ses (opposite page) are based on all available data subjectively adjusted where bias was evident.

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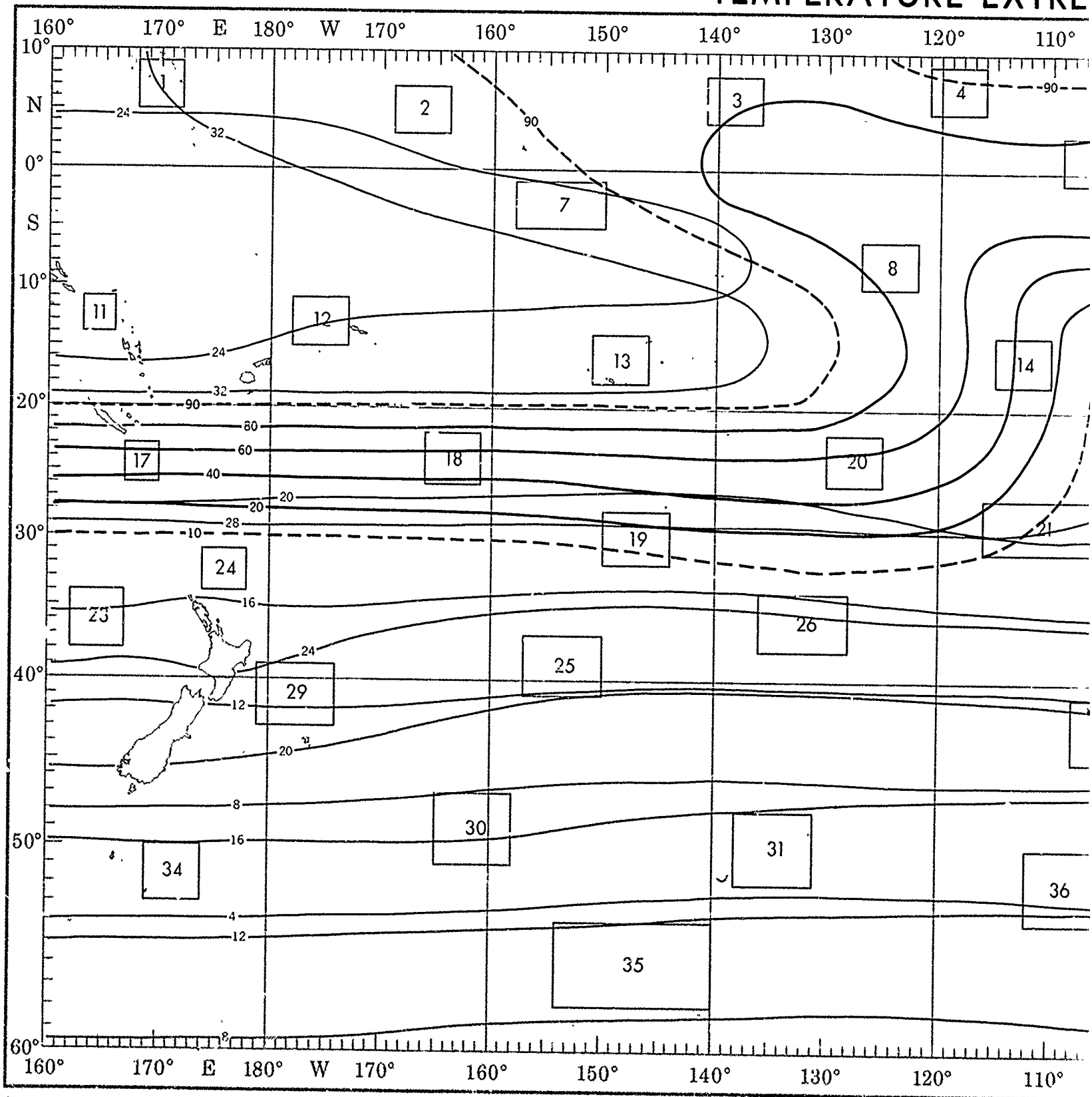
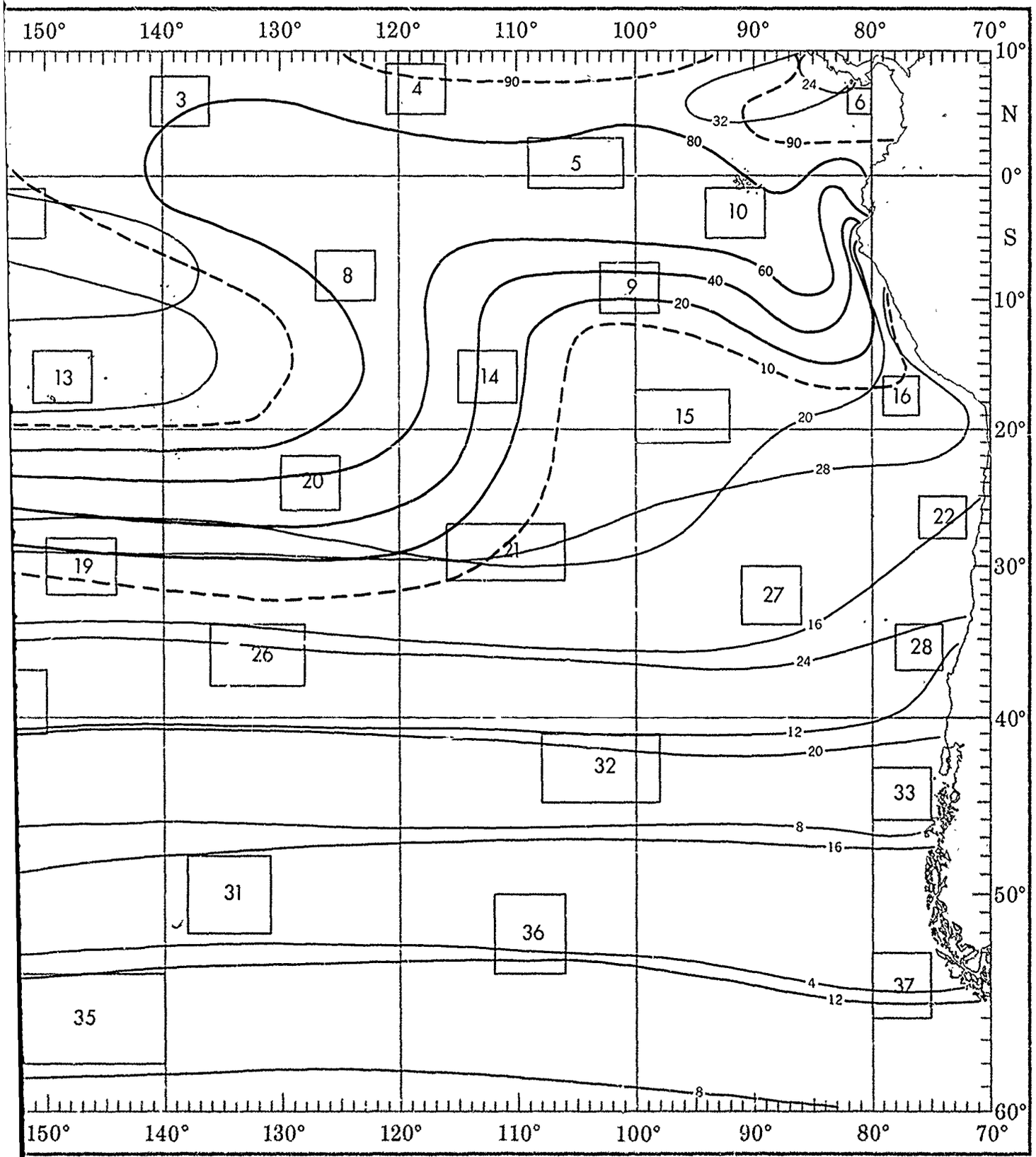
TEMPERATURE EXTRE



TEMPERATURE EXTREMES AND T-H INDEX



WIND SPEED AND AIR TEMPERATURE

Wind speed and air temperature.

Percent frequency of simultaneous occurrence of specified temperature (°C) and wind speed (knots).

WIND SPEED (kts)

Temp °C	0-3	4-10	11-21	22-33	≥34
4.5	18	8	7	1	1
3.5	17	8	7	1	1
0.5	13	6	5	1	1
-2 -1	1	+	0	0	0
-4 -3	0	0	0	0	0
-6 -5	+	0	0	+	+
-8 -7	1	+	0	0	0
-10 -9	0	0	0	0	0
12 11	1	+	0	0	0
-14 -13	1	0	0	0	0
-16 -15	1	+	0	0	0

3550

—(1% of all observations reported temperature 2-3°C simultaneously with wind speed of 22-33 kts.)

+ Indicates < 5% but > 0

Number of observations.

Use of this table in determination of Potential Superstructure Icing is explained in the text.

BLACK LINE - Percent frequency of T H index ≥24°C (75.2°F) (discomfort may be experienced due to heat)

BLUE LINE - Minimum (1%) air temperature (°C) (1% of the temperatures were equal to or less than the given value)

RED LINE - Maximum (99%) air temperature (°C) (1% of the temperatures were greater than the given value)

1

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	0	0	0
32.33	0	+	+	0	0
30.31	+	1	1	+	0
28.29	2	15	27	6	0
26.27	2	15	25	3	0
24.25	+	1	1	0	0
22.23	0	+	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

935

2

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	0	0	0
30.31	0	+	1	+	0
28.29	+	7	18	3	0
26.27	1	16	41	3	0
24.25	+	2	5	1	0
22.23	0	0	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

637

WI

TEMP (°C)
30.31
28.29
26.27
24.25
22.23
20.21
18.19
16.17
14.15
12.13
10.11

6

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	0	0	0
32.33	0	+	0	0	0
30.31	1	2	1	0	0
28.29	4	13	6	+	0
26.27	12	26	17	2	0
24.25	2	6	5	1	0
22.23	+	1	1	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

1551

7

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	1	+	0	0
30.31	0	2	+	0	0
28.29	1	11	11	+	0
26.27	1	22	34	3	0
24.25	0	6	7	0	0
22.23	0	1	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

326

WI

TEMP (°C)
34.35
32.33
30.31
28.29
26.27
24.25
22.23
20.21
18.19
16.17
14.15

11

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	1	0	0	0
32.33	2	6	+	0	0
30.31	6	13	5	0	0
28.29	9	26	13	1	+
26.27	1	10	6	1	0
24.25	0	1	2	0	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

399

12

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	1	+	0	0
30.31	1	4	2	+	0
28.29	8	30	17	2	0
26.27	3	15	10	2	+
24.25	0	2	2	1	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

657

13

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	0	0	0
32.33	1	1	+	0	0
30.31	1	5	2	+	0
28.29	5	22	15	1	0
26.27	3	20	18	2	+
24.25	+	1	2	0	0
22.23	0	+	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

805

14

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	0	0	0
30.31	0	+	+	0	0
28.29	+	2	2	0	0
26.27	2	14	19	1	0
24.25	1	23	26	1	0
22.23	+	4	4	1	0
20.21	0	+	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1423

15

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	0	0	0
28.29	+	2	2	0	0
26.27	2	14	19	1	0
24.25	1	23	26	1	0
22.23	+	4	4	1	0
20.21	0	+	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
9.9	0	0	0	0	0

433

16

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	+	1	1	0	0
26.27	0	3	4	+	0
24.25	1	13	23	+	0
22.23	1	21	27	0	0
20.21	0	1	3	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
9.9	0	0	0	0	0

271

WIN

TEMP (°C)
32.33
30.31
28.29
26.27
24.25
22.23
20.21
18.19
16.17
14.15
12.13

20

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	0	0	0
30.31	+	1	+	0	0
28.29	1	5	3	+	0
26.27	4	27	25	1	0
24.25	2	14	12	1	0
22.23	+	1	1	0	0
20.21	0	+	+	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1672

21

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	+	1	1	0	0
26.27	1	5	3	1	0
24.25	3	23	19	5	+
22.23	2	13	15	2	1
20.21	0	1	2	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
9.9	0	0	0	0	0

246

22

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	+	+	+	+	0
24.25	+	3	+	+	0
22.23	5	9	5	0	0
20.21	5	17	16	+	0
18.19	3	15	16	1	0
16.17	0	1	2	+	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
9.9	0	0	0	0	0
6.7	0	0	0	0	0

509

23

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	+	+	0	0
24.25	+	1	2	+	0
22.23	2	9	11	2	+
20.21	3	13	16	3	+
18.19	1	11	12	4	+
16.17	+	3	4	1	+
14.15	+	+	+	+	+
12.13	0	0	0	+	+
10.11	+	+	0	0	0
9.9	0	0	0	0	0
6.7	0	0	0	0	0

1558

24

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	+	1	+	+	0
24.25	1	5	4	+	0
22.23	3	17	20	4	1
20.21	2	11	16	6	1
18.19	1	1	3	1	+
16.17	+	+	0	+	0
14.15	0	+	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
9.9	0	0	0	0	0
6.7	0	0	0	0	0

678

25

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	+	0	0	0
20.21	+	2	2	1	0
18.19	1	13	16	2	+
16.17	2	22	18	5	1
14.15	1	5	6	2	1
12.13	0	1	1	0	+
10.11	0	+	0	0	0
9.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

806

WIN

TEMP (°C)
28.29
26.27
24.25
22.23
20.21
18.19
16.17
14.15
12.13
10.11
8.9

29

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	0	+	0	0	0
22.23	+	1	1	+	0
20.21	1	6	6	2	+
18.19	2	12	16	5	+
16.17	2	10	16	5	1
14.15	+	2	4	2	+
12.13	+	+	1	1	1
10.11	0	0	+	+	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

1405

30

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	+	0	0	0
16.17	+	1	1	1	0
14.15	1	6	7	3	+
12.13	2	9	16	12	2
10.11	1	5	10	8	2
8.9	1	1	3	5	1
6.7	0	+	0	1	0
4.5	0	0	+	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0

802

31

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	+	0	+	0
14.15	0	+	1	1	0
12.13	0	3	14	10	1
10.11	+	6	15	12	3
8.9	+	3	12	10	2
6.7	+	1	1	3	1
4.5	0	0	+	1	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

681

32

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	1	1	1	0
18.19	1	2	4	1	0
16.17	0	6	4	3	1
14.15	1	7	10	7	1
12.13	4	10	11	14	1
10.11	0	1	4	3	0
8.9	0	0	2	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

160

33

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	+	0	0	0
20.21	0	+	+	+	0
18.19	+	+	1	+	+
16.17	2	4	3	2	+
14.15	3	13	18	7	+
12.13	2	11	17	7	1
10.11	+	2	3	2	+
8.9	0	+	+	+	+
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

896

34

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	0	1	0	0
14.15	0	0	+	1	0
12.13	+	4	9	8	2
10.11	+	6	22	16	2
8.9	0	3	12	9	1
6.7	0	0	2	1	1
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

333

WIN

TEMP (°C)
12.13
10.11
8.9
6.7
4.5
2.3
0.1
-2.-1
-4.-3
-6.-5
-8.-7

Graphs represent the objective compilation of available data for specified areas without regard to suspe

The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bias

TEMPERATURE

FEBRUARY

re (°C) and wind speed

nd speed of 22-33 kts.)

explained in the text.

due to heat)

than the given value)

the given value)

WIND SPEED (KTS)

1

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	0	0	0
32.33	0	+	0	0	0
30.31	+	1	1	+	0
28.29	2	14	27	6	0
26.27	2	15	25	3	0
24.25	+	1	1	0	0
22.23	0	+	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

935

WIND SPEED (KTS)

2

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	0	0	0
30.31	0	+	1	+	0
28.29	+	7	18	3	0
26.27	1	16	41	3	0
24.25	+	2	5	1	0
22.23	0	0	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

637

WIND SPEED (KTS)

3

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	+	1	0	0
28.29	1	3	5	2	0
26.27	1	13	40	6	+
24.25	1	8	15	1	0
22.23	0	1	2	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

394

WIND SPEED (KTS)

4

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	+	+	0	0	0
32.33	+	+	0	0	0
30.31	+	1	+	+	0
28.29	1	6	9	1	0
26.27	3	26	29	2	0
24.25	3	7	8	1	0
22.23	+	1	1	0	0
20.21	0	0	0	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

623

WIND SPEED (KTS)

5

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	0	0	0
30.31	+	1	+	0	0
28.29	2	5	1	+	0
26.27	8	27	5	+	0
24.25	8	29	4	0	0
22.23	2	5	1	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

817

WIND SPEED (KTS)

6

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	0	0	0
32.33	0	+	0	0	0
30.31	1	2	1	0	0
28.29	4	13	6	+	0
26.27	12	26	17	2	0
24.25	2	6	5	+	0
22.23	+	1	1	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

1551

WIND SPEED (KTS)

7

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	1	+	0	0
30.31	0	2	+	0	0
28.29	1	11	11	+	0
26.27	1	22	34	3	0
24.25	0	5	7	0	0
22.23	0	1	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

326

WIND SPEED (KTS)

8

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	0	0	0
32.33	+	+	0	0	0
30.31	1	1	1	0	0
28.29	+	7	10	+	+
26.27	2	22	33	2	0
24.25	1	10	9	+	0
22.23	0	0	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

814

WIND SPEED (KTS)

9

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	0	0	0	0
30.31	0	+	+	0	0
28.29	+	1	1	0	0
26.27	+	12	14	+	0
24.25	1	29	31	1	0
22.23	+	6	4	+	0
20.21	0	+	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1971

WIND SPEED (KTS)

10

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	0	0	0	0
30.31	+	+	+	0	0
28.29	3	5	1	0	0
26.27	11	35	7	+	0
24.25	6	25	4	+	0
22.23	+	2	+	0	0
20.21	0	+	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

2340

WIND SPEED (KTS)

14

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	1	0	0
30.31	0	+	+	0	0
28.29	+	2	2	0	0
26.27	2	14	19	1	0
24.25	1	23	26	1	0
22.23	+	4	4	1	0
20.21	0	+	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1423

WIND SPEED (KTS)

15

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	1	+	1	0	0
26.27	0	4	3	+	0
24.25	4	9	15	1	0
22.23	4	16	30	2	0
20.21	<	6	3	+	0
18.19	0	+	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

433

WIND SPEED (KTS)

16

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	+	1	1	0	0
26.27	0	3	4	0	0
24.25	1	13	23	+	0
22.23	1	21	27	0	0
20.21	0	1	3	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

271

WIND SPEED (KTS)

17

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	0	0	0
30.31	0	+	1	0	0
28.29	1	4	2	1	0
26.27	2	17	16	2	+
24.25	1	14	20	6	1
22.23	+	4	6	1	0
20.21	0	0	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

491

WIND SPEED (KTS)

18

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	1	1	0	0
28.29	1	5	2	+	0
26.27	2	16	21	3	+
24.25	1	13	17	6	+
22.23	1	3	4	1	0
20.21	0	0	+	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

531

WIND SPEED (KTS)

19

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	+	1	+	0	0
26.27	+	4	3	+	0
24.25	3	12	11	1	+
22.23	3	16	16	5	+
20.21	1	6	10	3	+
18.19	+	+	1	+	+
16.17	0	+	+	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

1033

WIND SPEED (KTS)

23

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	+	+	0	0
24.25	+	1	2	+	0
22.23	2	9	11	2	+
20.21	3	13	16	3	+
18.19	1	11	12	4	+
16.17	+	3	4	1	+
14.15	+	+	+	+	+
12.13	0	0	0	+	+
10.11	+	+	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

1558

WIND SPEED (KTS)

24

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	+	1	+	+	0
24.25	1	5	4	+	0
22.23	3	17	20	4	1
20.21	2	11	16	6	1
18.19	1	1	3	1	+
16.17	0	+	0	+	0
14.15	0	+	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

678

WIND SPEED (KTS)

25

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	+	+	0	0
20.21	+	2	2	1	0
18.19	1	13	16	2	+
16.17	2	22	18	5	1
14.15	1	6	6	2	1
12.13	0	1	1	0	+
10.11	0	+	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

806

WIND SPEED (KTS)

26

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	+	+	0	0	0
26.27	+	2	1	0	0
24.25	+	4	2	+	0
22.23	1	9	5	+	0
20.21	2	14	10	2	0
18.19	2	16	16	2	0
16.17	1	4	4	1	1
14.15	0	0	1	+	+
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

675

WIND SPEED (KTS)

27

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	0	0	0	0
28.29	1	+	0	0	0
26.27	1	1	+	0	0
24.25	4	4	2	0	0
22.23	7	16	7	1	+
20.21	8	20	14	1	0
18.19	2	4	5	1	0
16.17	+	+	+	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

728

WIND SPEED (KTS)

28

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	+	0	0	0	0
24.25	0	1	0	0	0
22.23	0	2	+	0	0
20.21	1	7	4	0	0
18.19	3	11	17	5	2
16.17	2	8	17	8	5
14.15	+	1	1	2	0
12.13	0	0	0	+	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

204

WIND SPEED (KTS)

32

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	1	1	1	0
18.19	1	2	4	1	0
16.17	0	6	4	3	1
14.15	1	7	10	7	1
12.13	4	10	11	14	1
10.11	0	1	4	3	0
8.9	0	0	2	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

160

WIND SPEED (KTS)

33

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	+	0	0	0
20.21	0	+	+	+	0
18.19	+	+	1	+	+
16.17	2	4	3	2	+
14.15	3	13	18	7	+
12.13	2	11	17	7	1
10.11	+	2	3	2	+
8.9	0	+	+	+	+
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

896

WIND SPEED (KTS)

34

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	0	1	0	0
14.15	0	0	+	1	0
12.13	+	4	3	8	2
10.11	+	6	22	16	2
8.9	0	3	12	9	1
6.7	0	0	2	1	1
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

333

WIND SPEED (KTS)

35

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	1	0	0	0
10.11	0	4	1	3	3
8.9	0	2	11	5	1
6.7	0	3	10	4	0
4.5	3	11	4	3	0
2.3	1	7	9	4	0
0.1	0	1	5	3	2
-2.-1	0	0	0	1	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

153

WIND SPEED (KTS)

36

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	0	0	+	0	0
12.13	0	1	1	1	1
10.11	1	3	6	10	1
8.9	1	8	23	20	3
6.7	0	1	8	7	3
4.5	0	+	+	+	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0

548

WIND SPEED (KTS)

37

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	+	0	0	0	0
12.13	0	1	1	1	+
10.11	+	3	5	4	3
8.9	1	6	16	16	10
6.7	1	4	10	8	6
4.5	+	1	2	1	1
2.3	0	0	+	+	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0

929

the objective compilation of available data for specified areas without regard to suspected biases.

ses (opposite page) are based on all available data subjectively adjusted where bias was evident.

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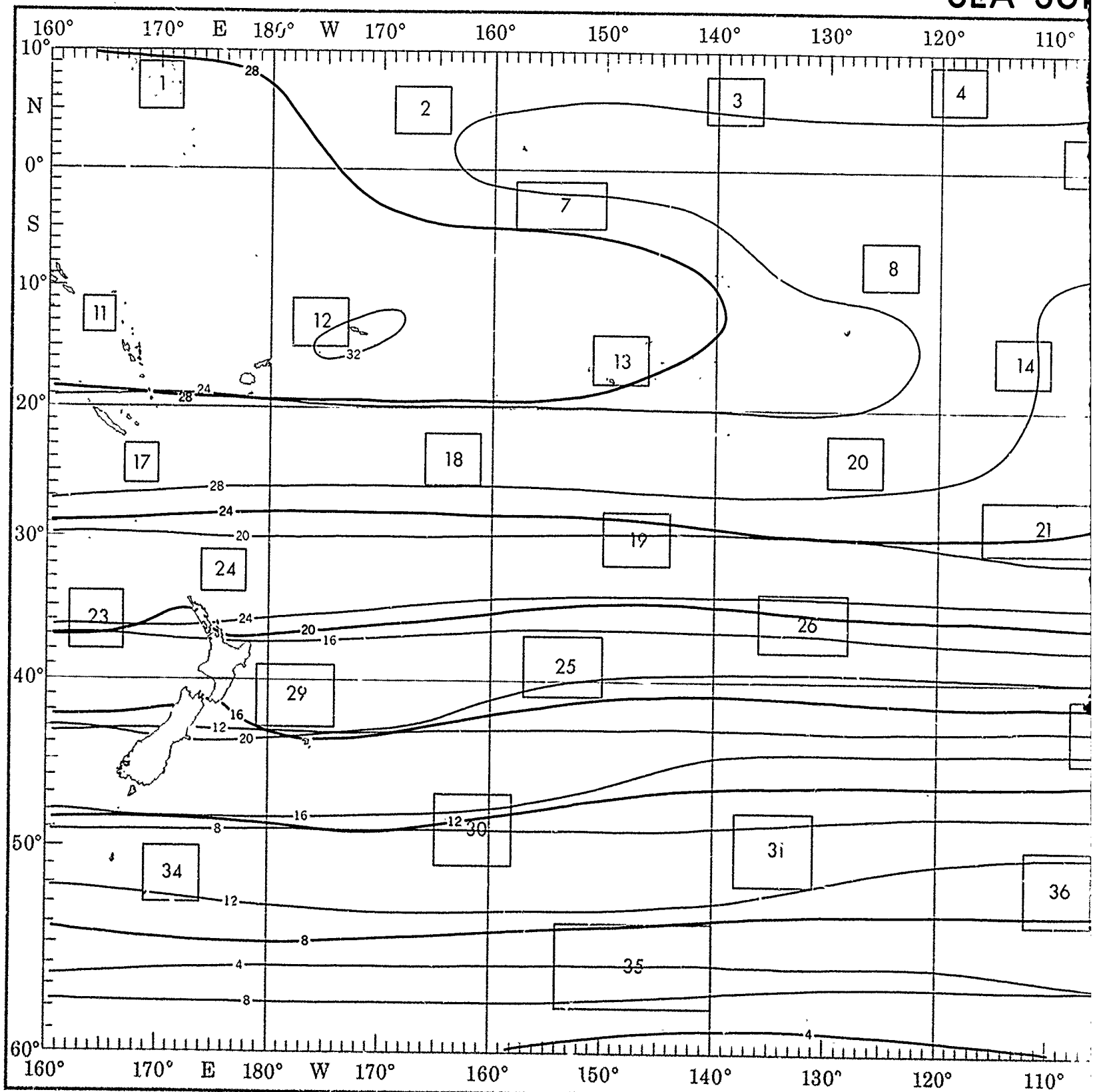
160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
10° N 0° S 10° 20° 30° 40° 50° 60°
1
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3
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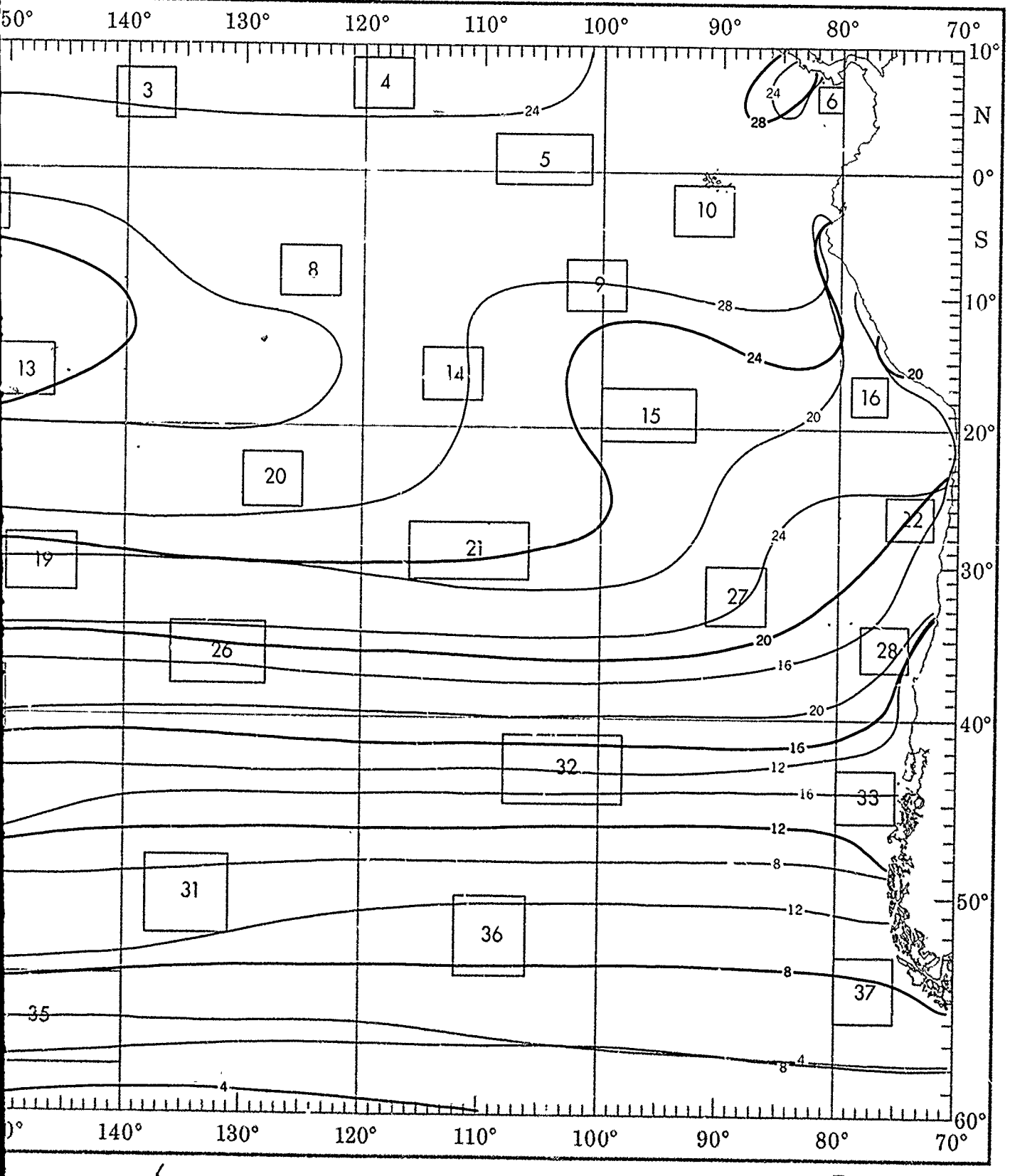
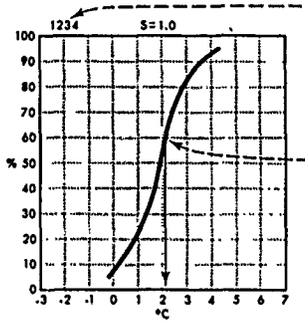
32

SEA SURFACE TEMPERATURE



SEA SURFACE TEMPERATURE



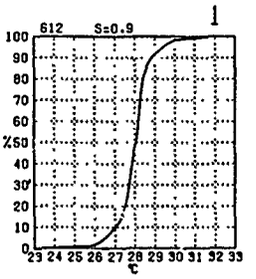
Sea surface temperature.

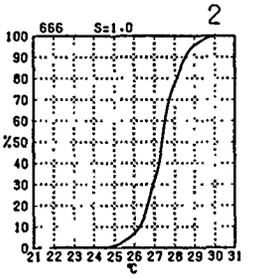
Number of observations.

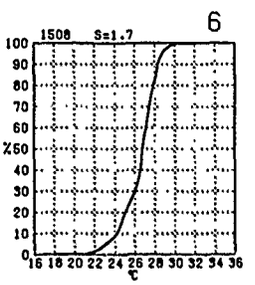
Cumulative percent frequency of sea surface temperatures equal to or less than the temperature intersected by the curve.

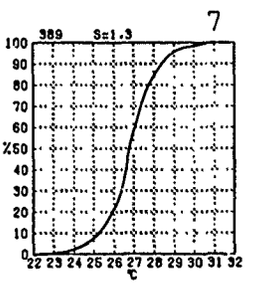
(60% of all observed sea surface temperatures were ≤2.1°C or ≤35.8°F.)

S=Standard deviation of sea surface temperatures (°C).





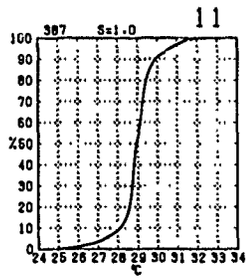


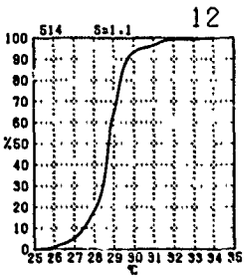


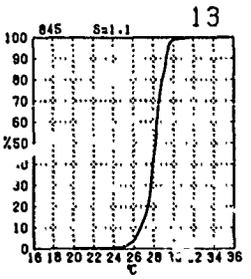
BLACK LINE - Mean sea surface temperature (°C)

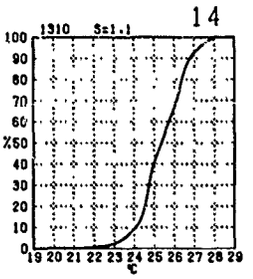
BLUE LINE - Minimum (1%) sea surface temperature (°C) (1% of the temperatures were equal to or less than the given value)

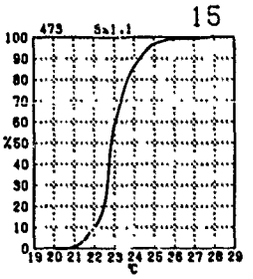
RED LINE - Maximum (99%) sea surface temperature (°C) (1% of the temperatures were greater than the given value)

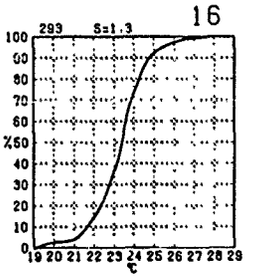


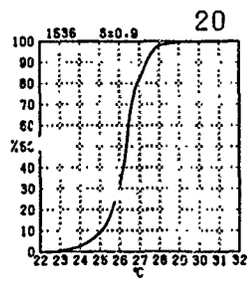


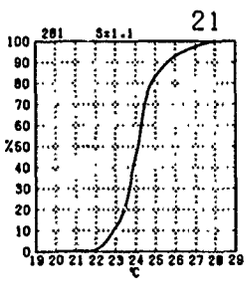


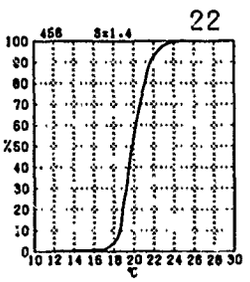


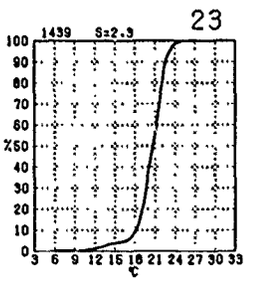


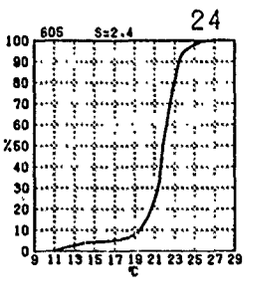


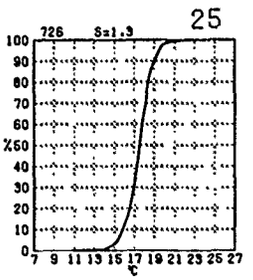


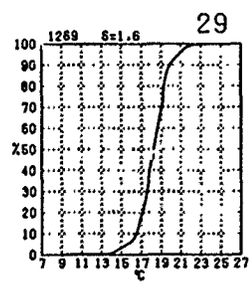


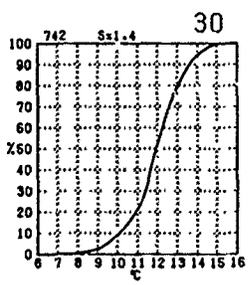


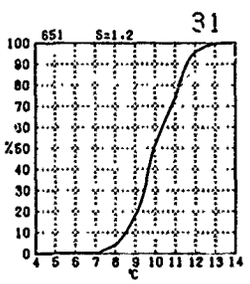


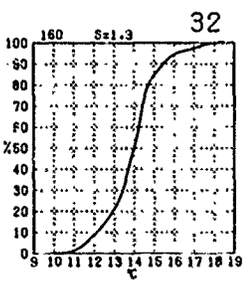


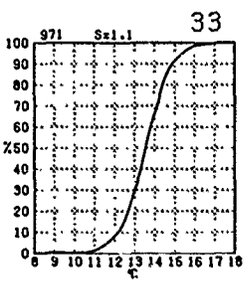


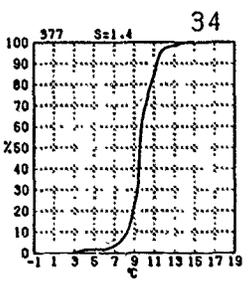












Graphs represent the objective compilation of available data for specified areas without regard to sus
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bia

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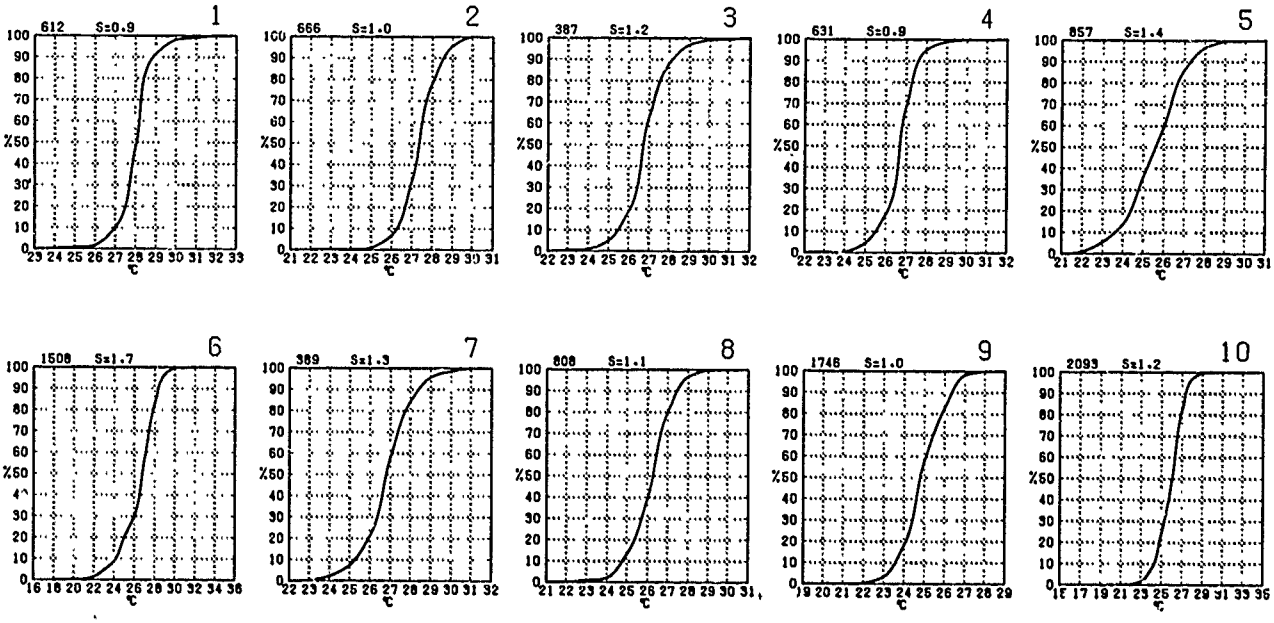

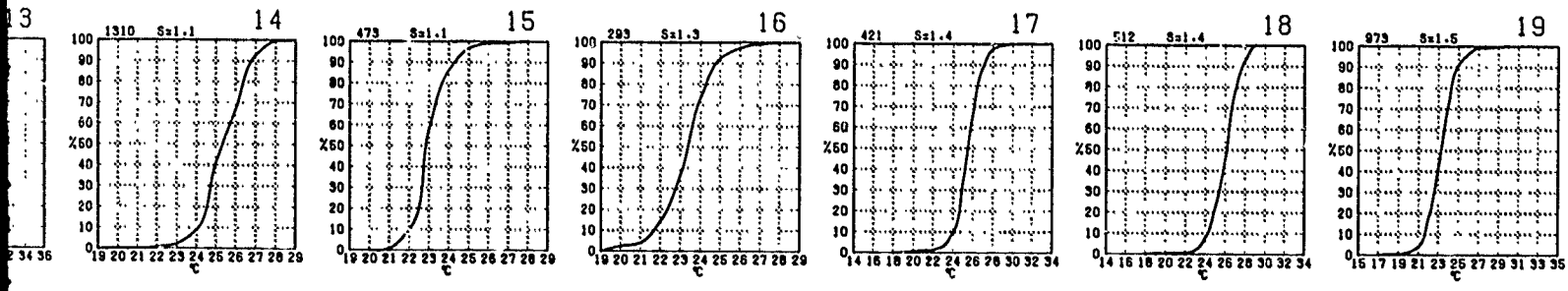

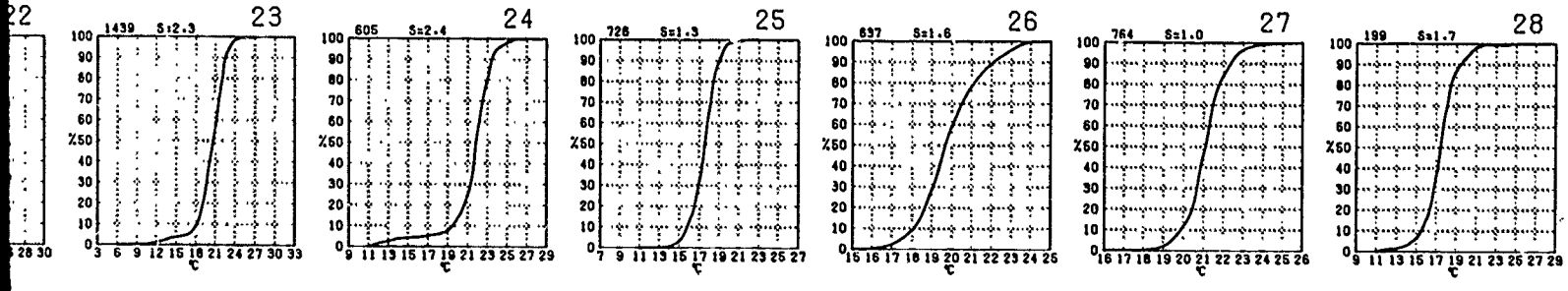

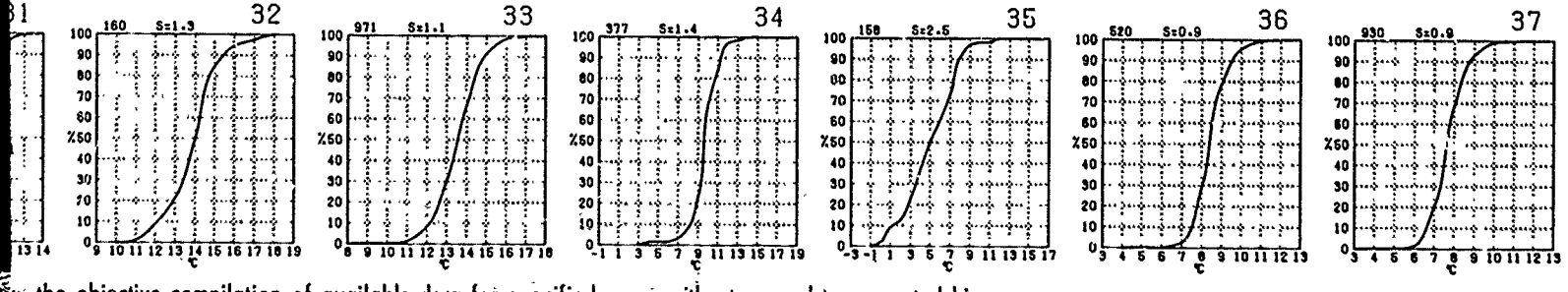

the objective compilation of available data for specified areas without regard to suspected biases.
lyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

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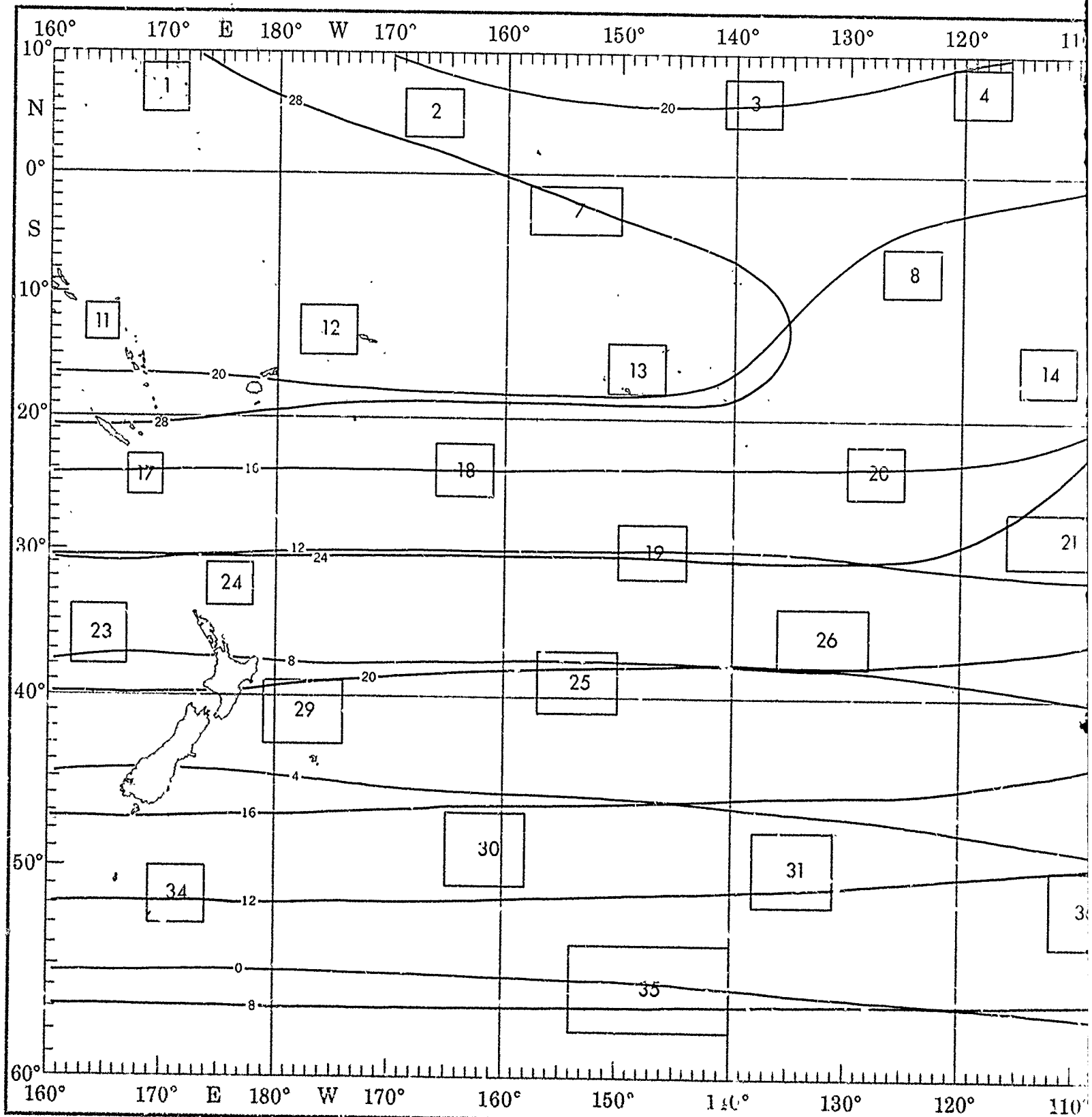
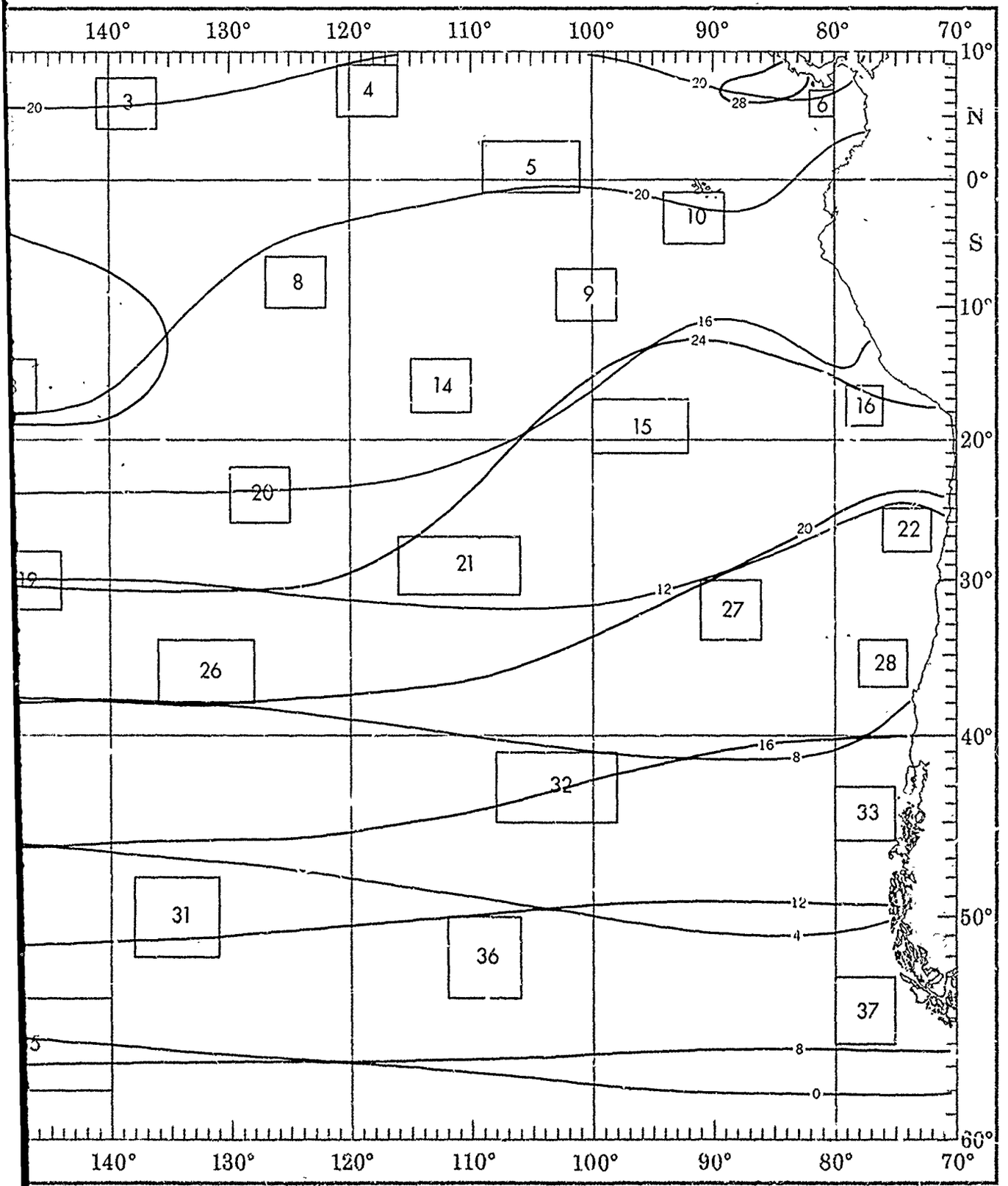

160°
170°
E
180°
W
170°
160°
150°
140°
130°
120°
10°
N
0°
S
10°
20°
30°
40°
50°
60°
1
2
3
4
7
8
11
12
13
14
17
18
20
21
24
23
26
25
29
30
31
34
35
28
20
28
16
12
24
8
20
4
16
12
0
8

HUMIDITY


140°
130°
120°
110°
100°
90°
80°
70°
10° N
0°
S
10°
20°
30°
40°
50°
60°
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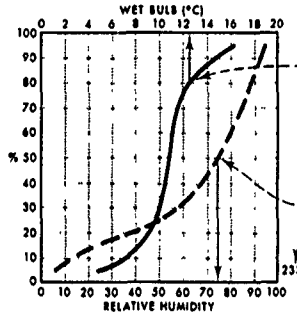
0

WET BULB AND RELATIVE HUMIDITY



Wet bulb - Relative humidity.

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* ≤12.5°C *or* 54.5°F.)

Cumulative percent frequency of relative humidities equal to or less than the humidity intersected by the curve (bottom scale)

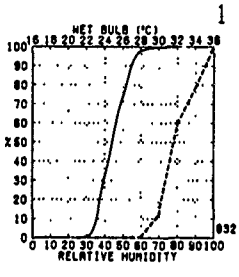
Relative humidity (%).

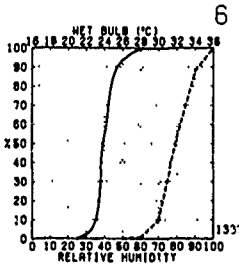
—(50% of *all observed relative humidities were* ≤74%.)

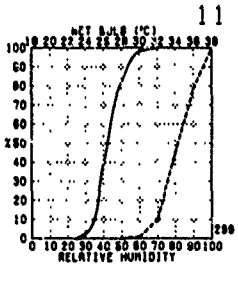
—Number of observations

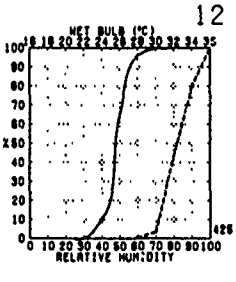
BLUE LINE - Minimum (1%) dew-point temperature (°C) (1% of the computed values were equal to or less than the given value)

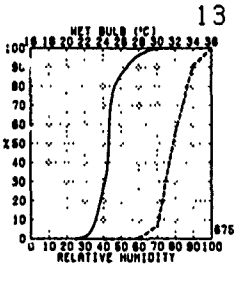
RED LINE - Maximum (99%) dew-point temperature (°C) (1% of the computed values were greater than the given value)

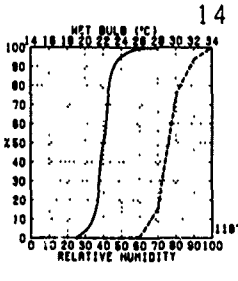


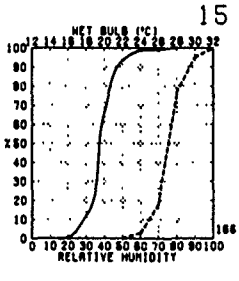


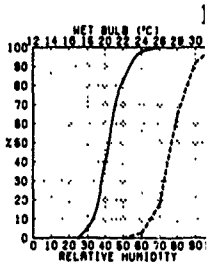


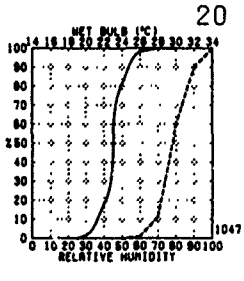


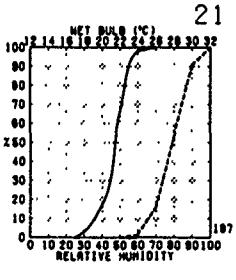


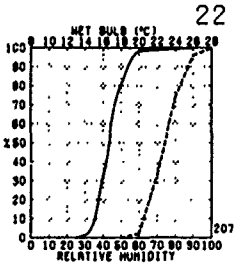


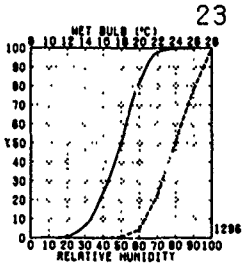


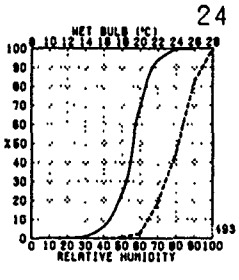


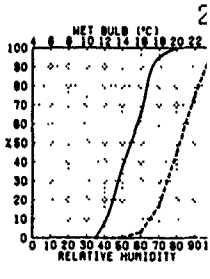


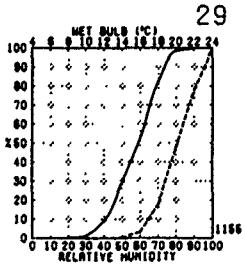


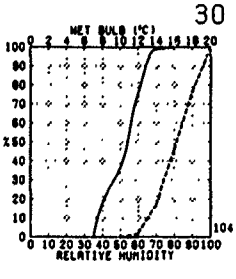


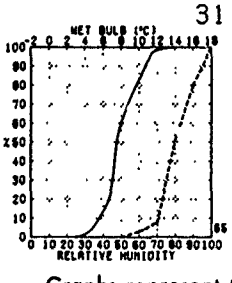


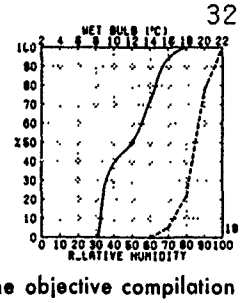


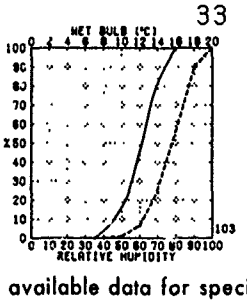


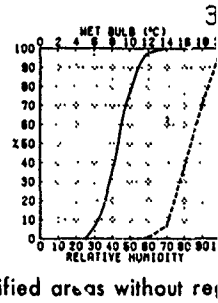












Graphs represent the objective compilation of available data for specified areas without re
The isopleth analyses (opposite page) are based on all available data subjectively adjusted

TIVE HUMIDITY

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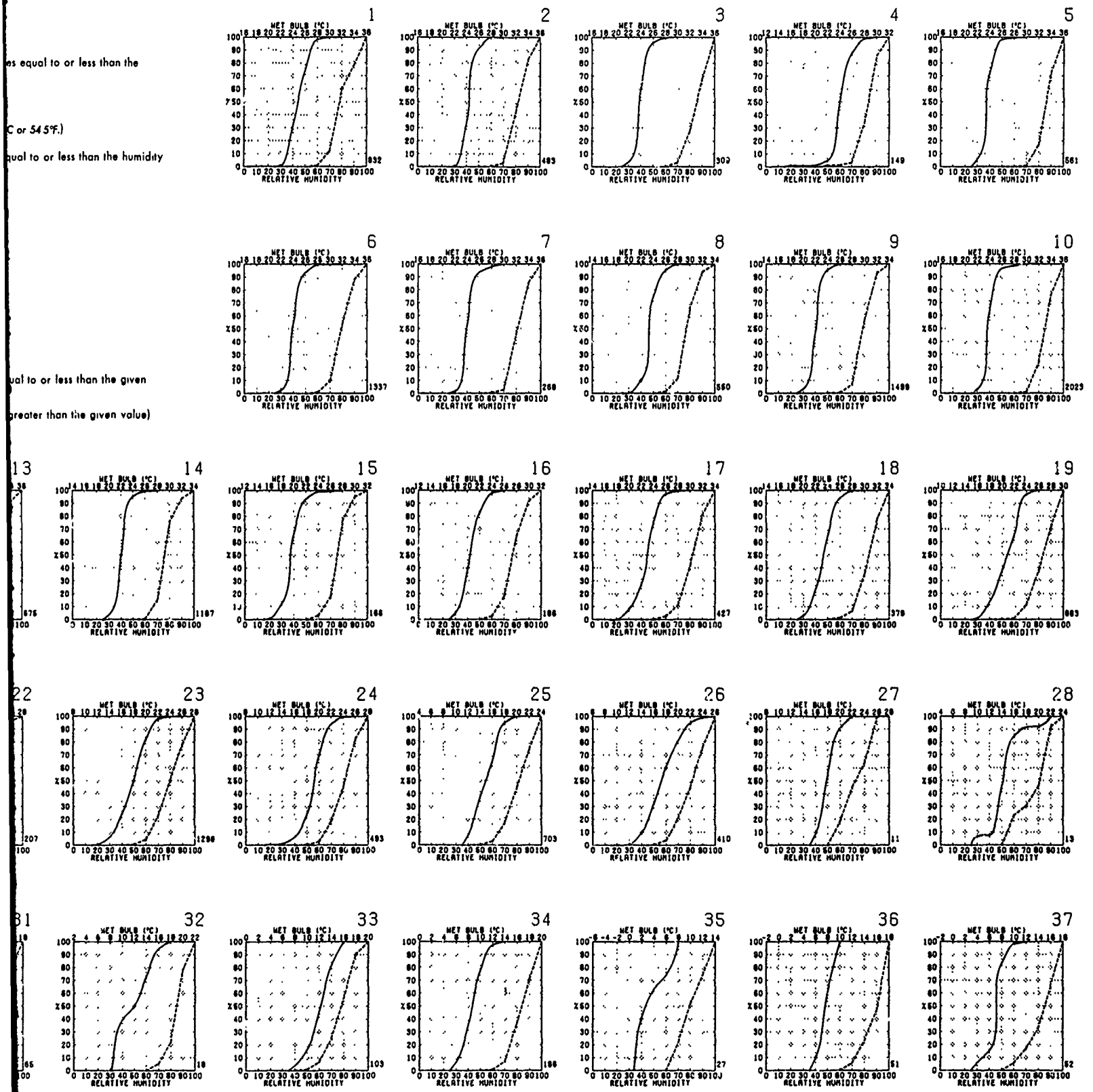
greater than the given value)



nt the objective compilation of available data for specified areas without regard to suspected biases.
alyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

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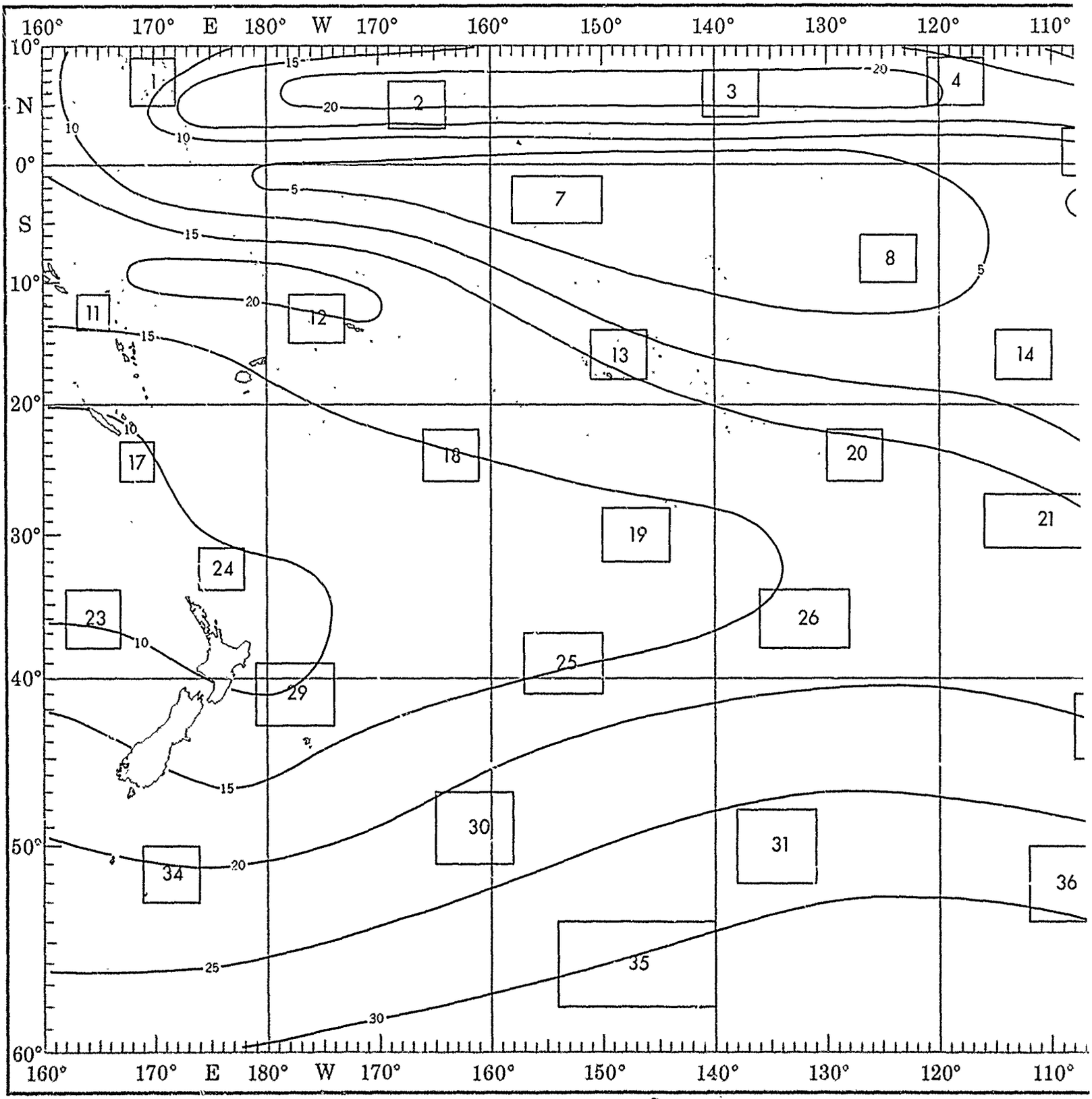
160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
10° N
0°
S 10°
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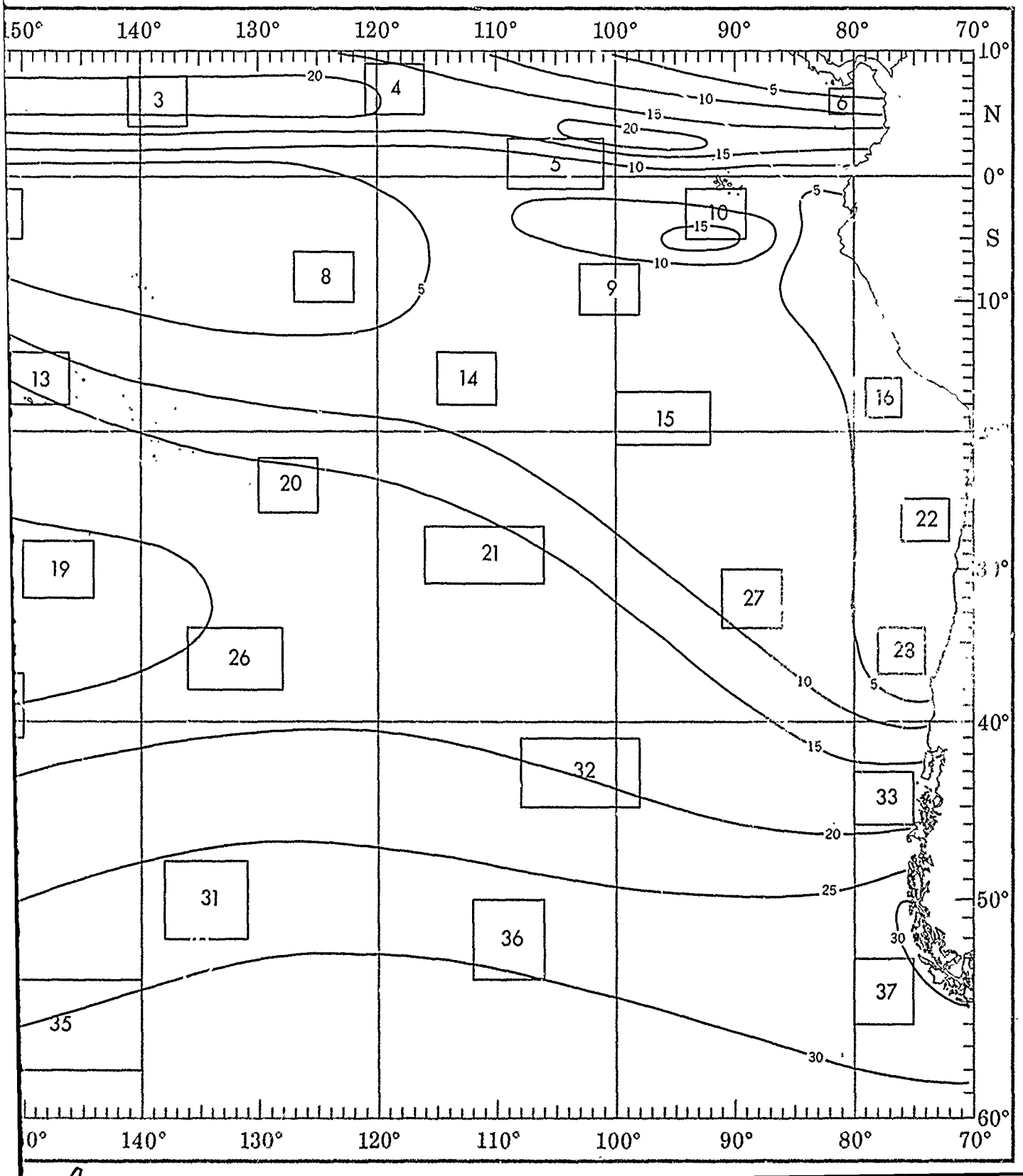
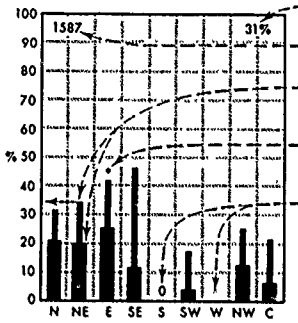
PRECIPITATION



PRECIPITATION

% Pcpn. { % Liquid / % Snow

Percent frequency of surface wind observations from each direction and calm that were accompanied by precipitation, subdivided into liquid type (including freezing rain and freezing drizzle) and snow.



—Percentage of present weather observations reporting precipitation.

—Number of observations.

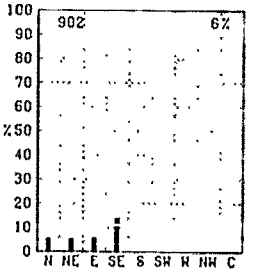
—(34% of all NE winds were accompanied by precipitation, of which 14% was liquid and 20% was snow.)

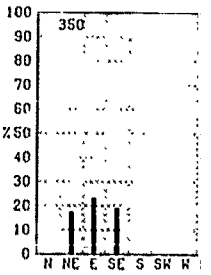
—An asterisk in the column for a given direction or calm indicates that the percentage was based on 10-30 observations of present weather and wind direction.

—0 replaces bar when no precipitation was observed with winds from a given direction or calm. No bar graph is presented if less than 10 observations containing present weather were reported for a given direction or calm.

RED LINE - Percent frequency of observations reporting precipitation

1





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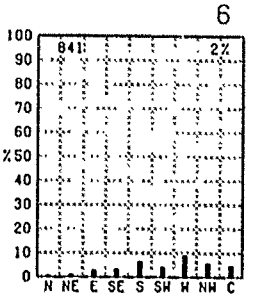

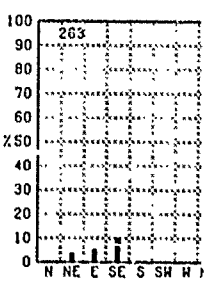

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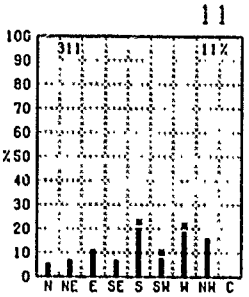

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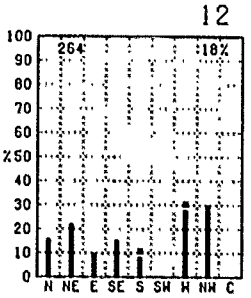

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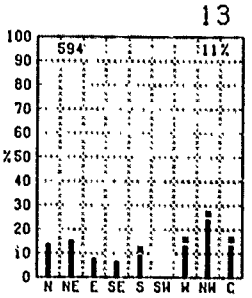

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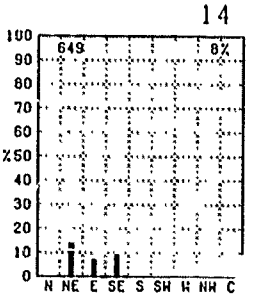

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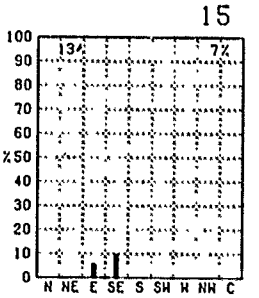

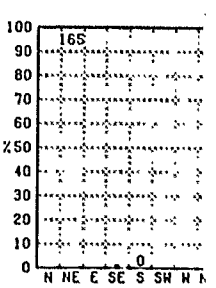

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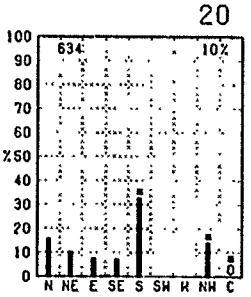

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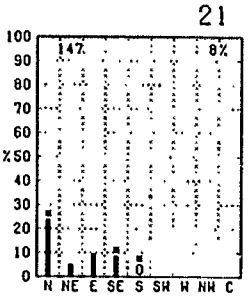

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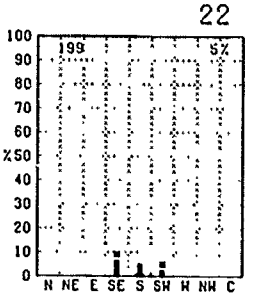

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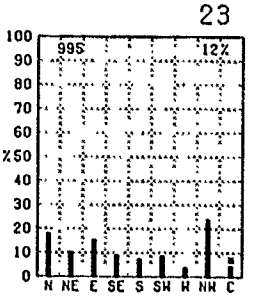

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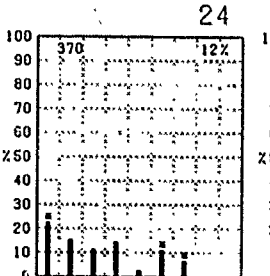

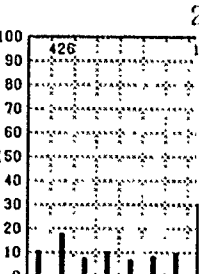

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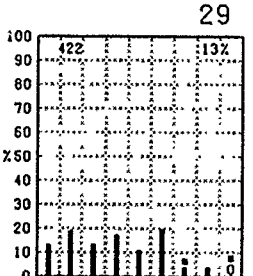

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INSUFFICIENT DATA

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INSUFFICIENT DATA

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INSUFFICIENT DATA

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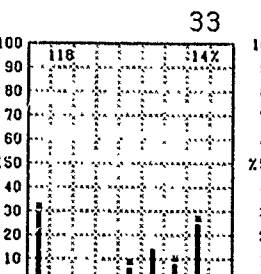

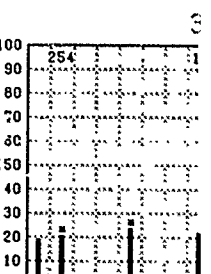

Graphs represent the objective compilation of available data for specified areas without reg
The isopleth analyses (opposite page) are based on all available data subjectively adjusted

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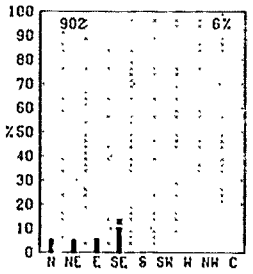

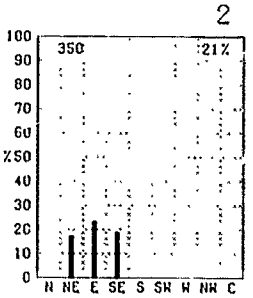

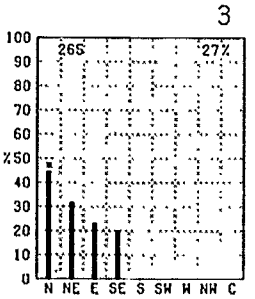

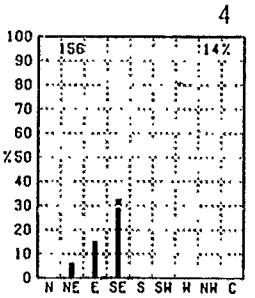

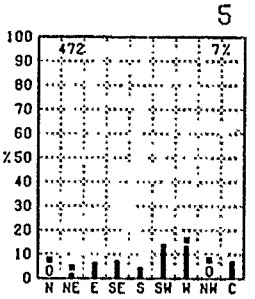

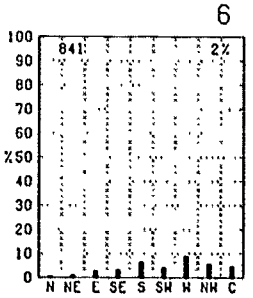

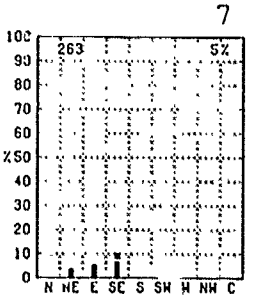

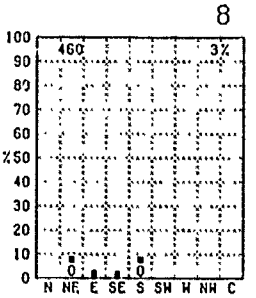

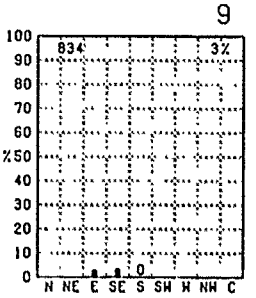

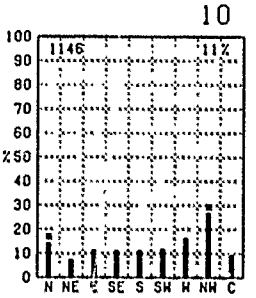

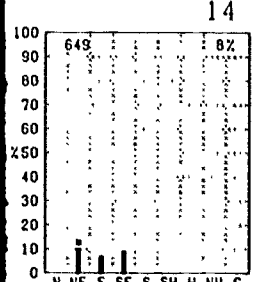

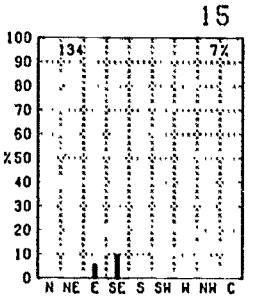

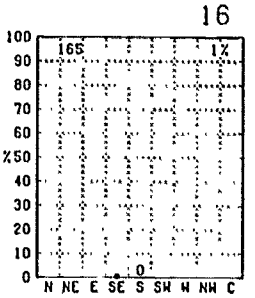

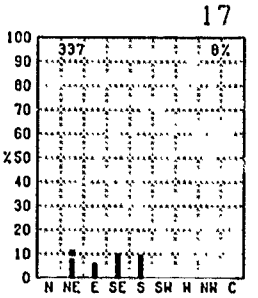

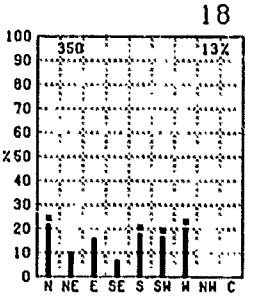

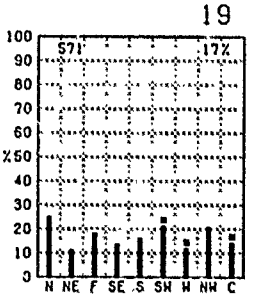

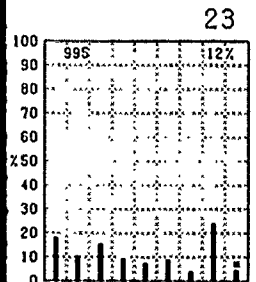

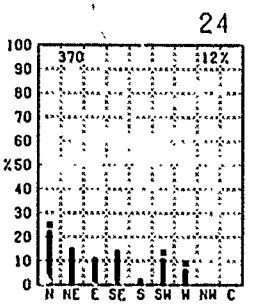

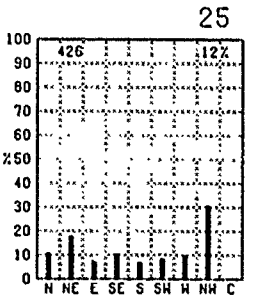

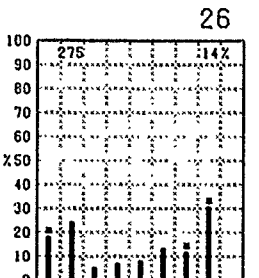

27

INSUFFICIENT DATA

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INSUFFICIENT DATA

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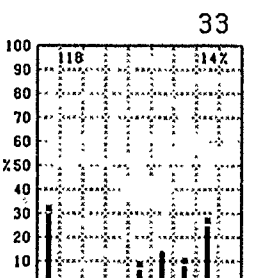

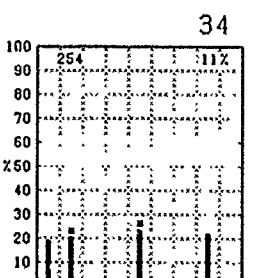

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INSUFFICIENT DATA

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INSUFFICIENT DATA

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INSUFFICIENT DATA

objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

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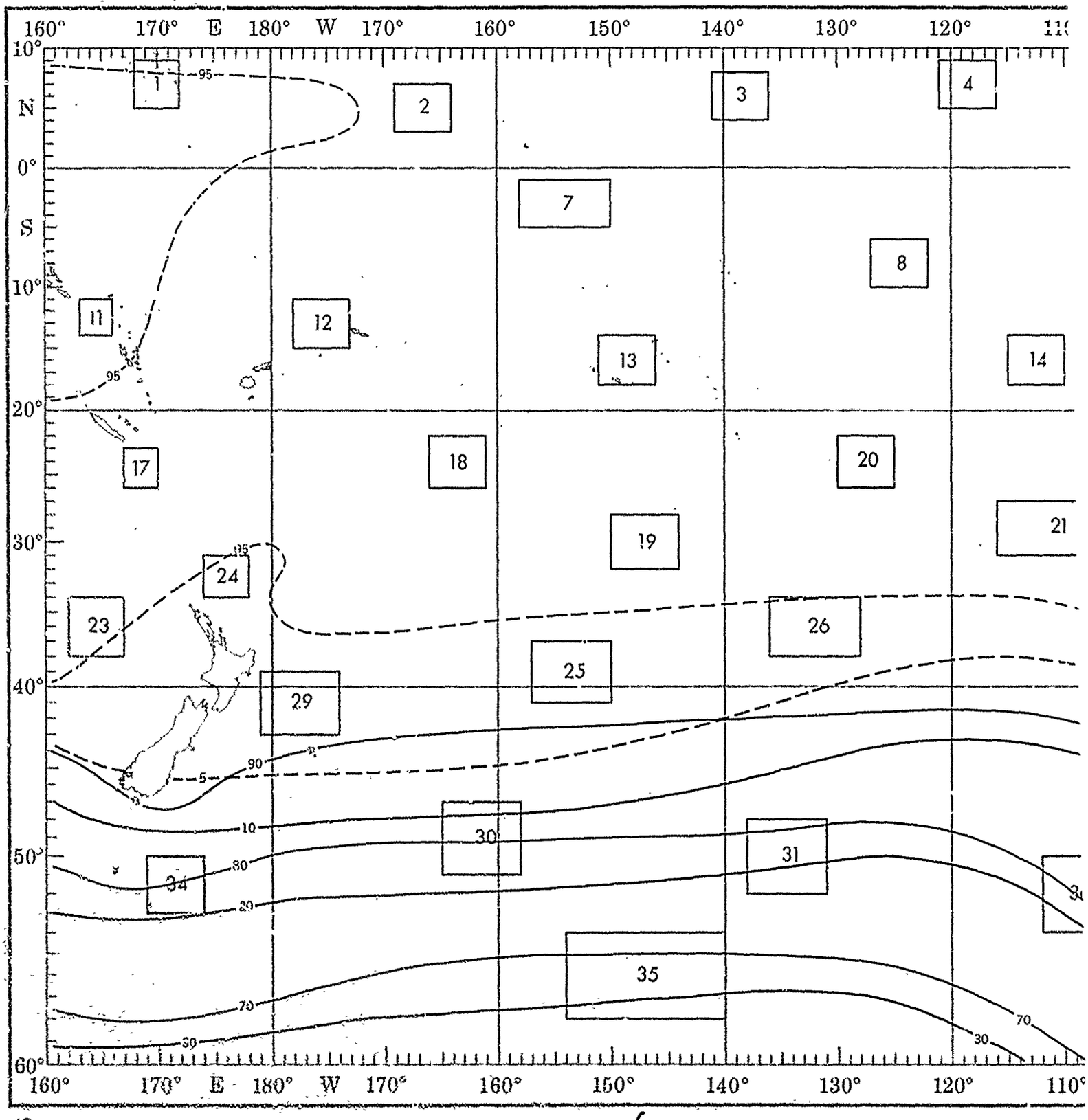
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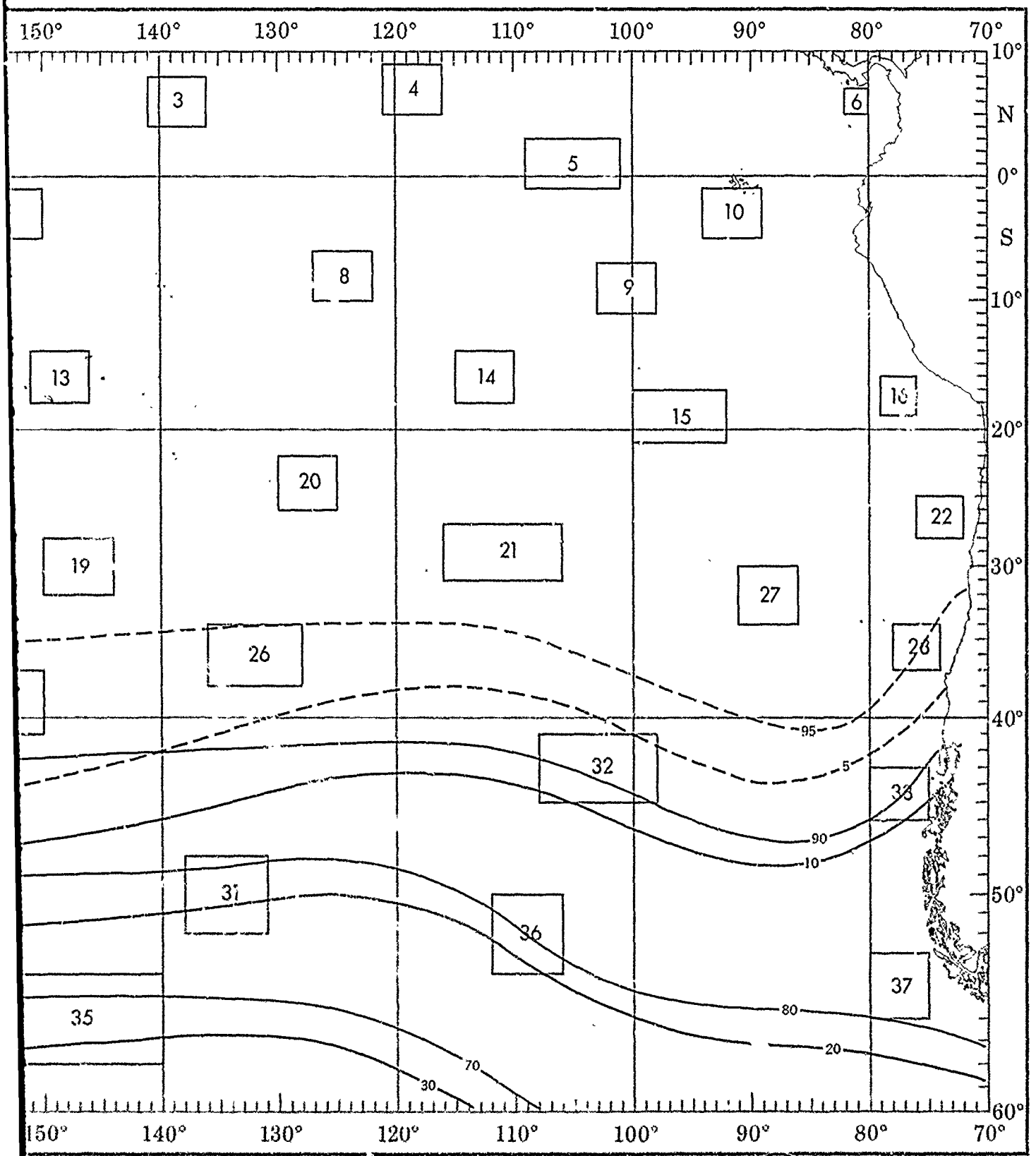
VISIBILITY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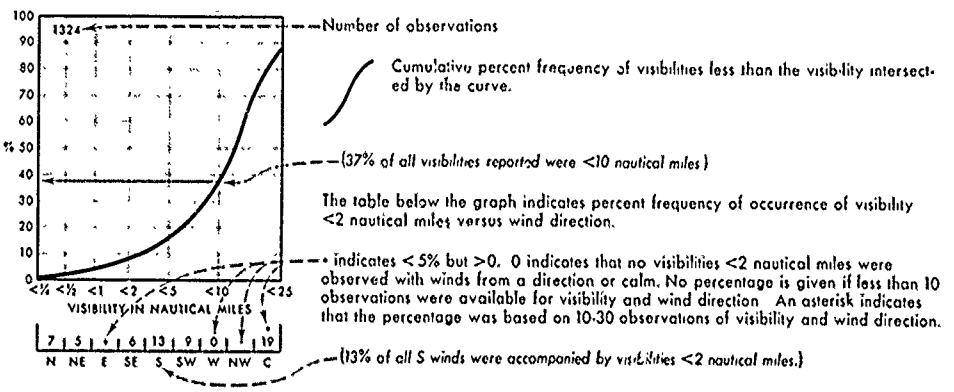
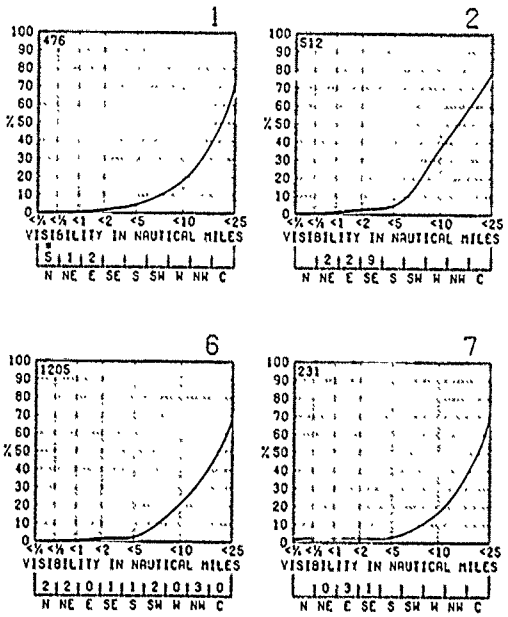
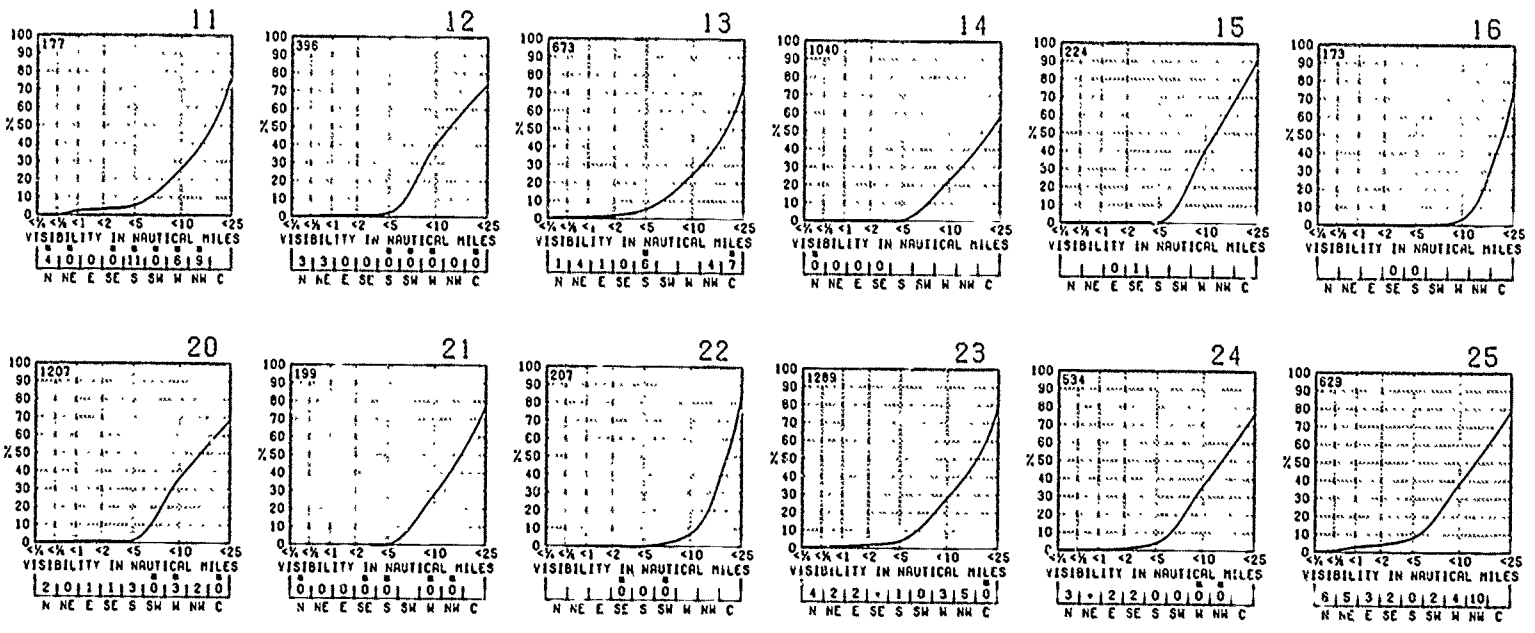
VISIBILITY

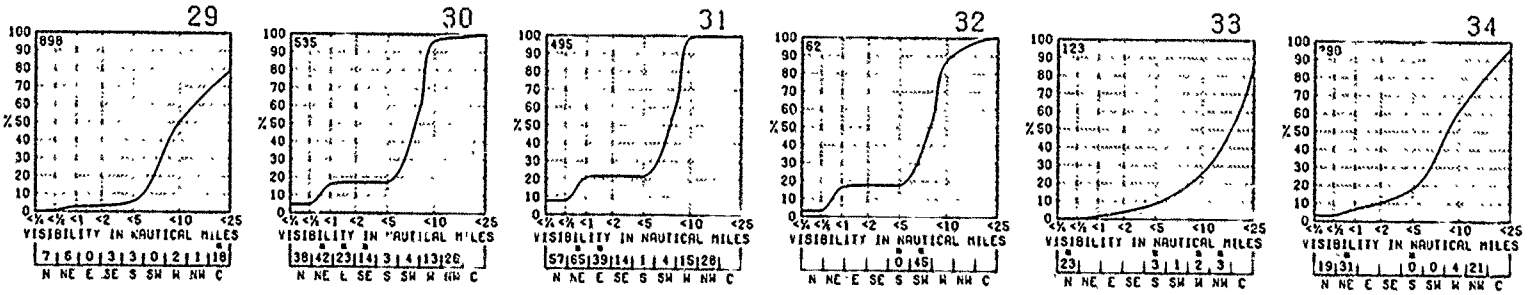


BLUE LINE - Percent frequency of visibilities ≥5 nautical miles

RED LINE - Percent frequency of visibilities <2 nautical miles







Graphs represent the objective compilation of available data for specified areas without regard to s
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where t

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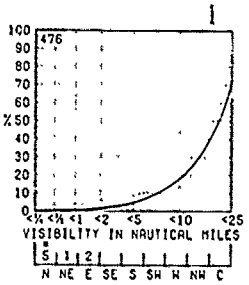
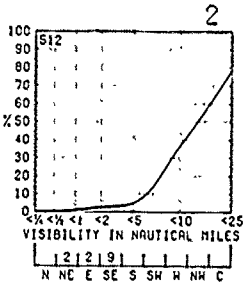
s than the visibility intersect-

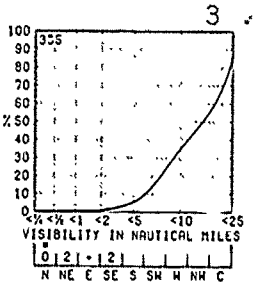
of occurrence of visibility

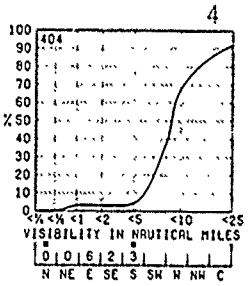
2 nautical miles were
ntage is given if less than 10
tion. An asterisk indicates
visibility and wind direction.

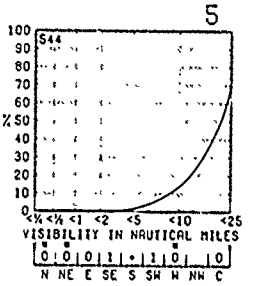
tical miles.)

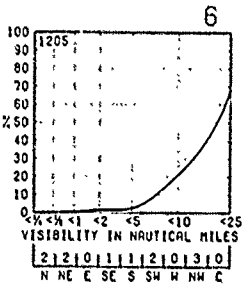


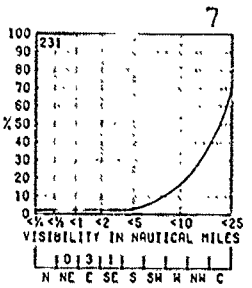


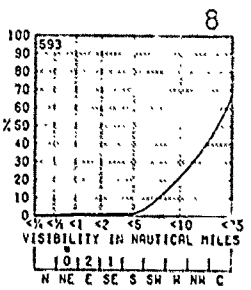


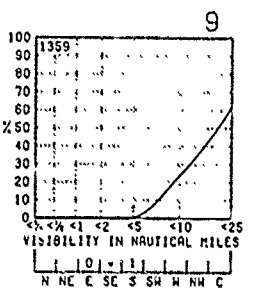


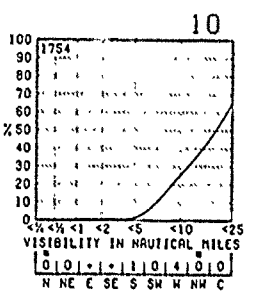


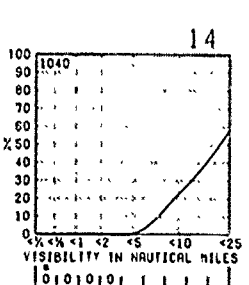


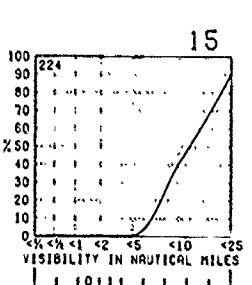


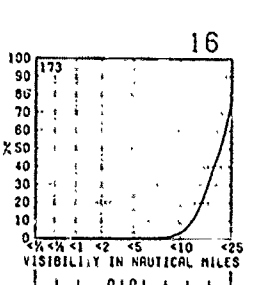


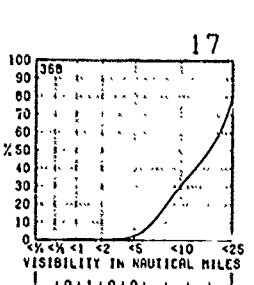


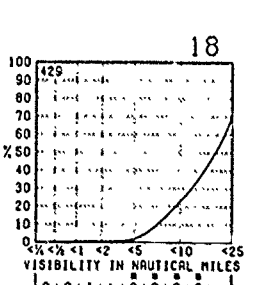


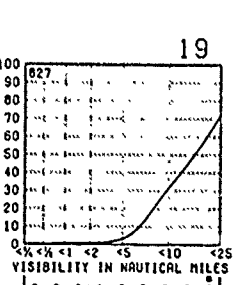


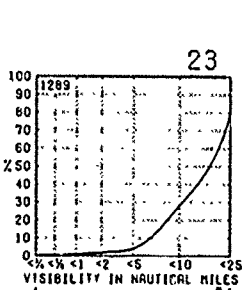


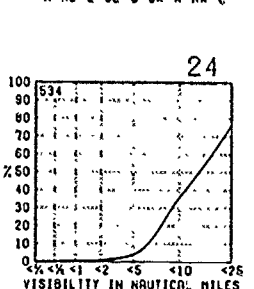


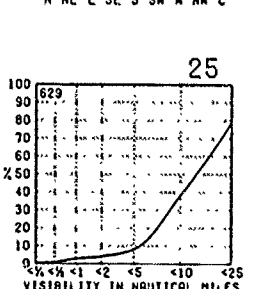


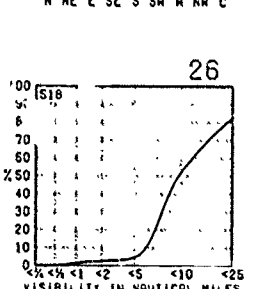


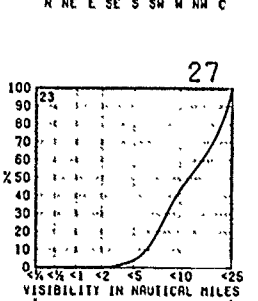


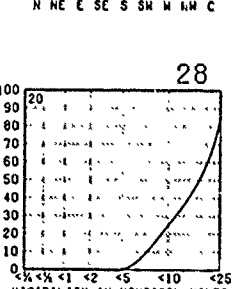


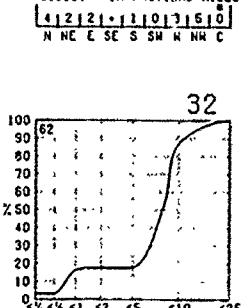


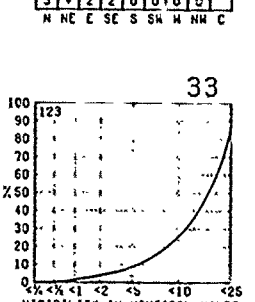


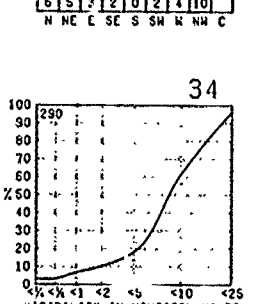


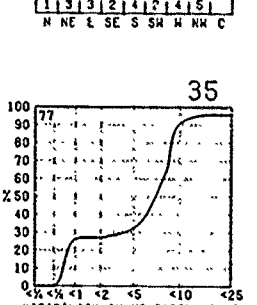


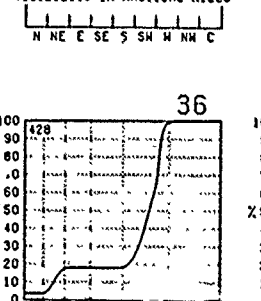


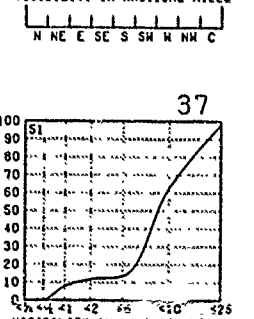












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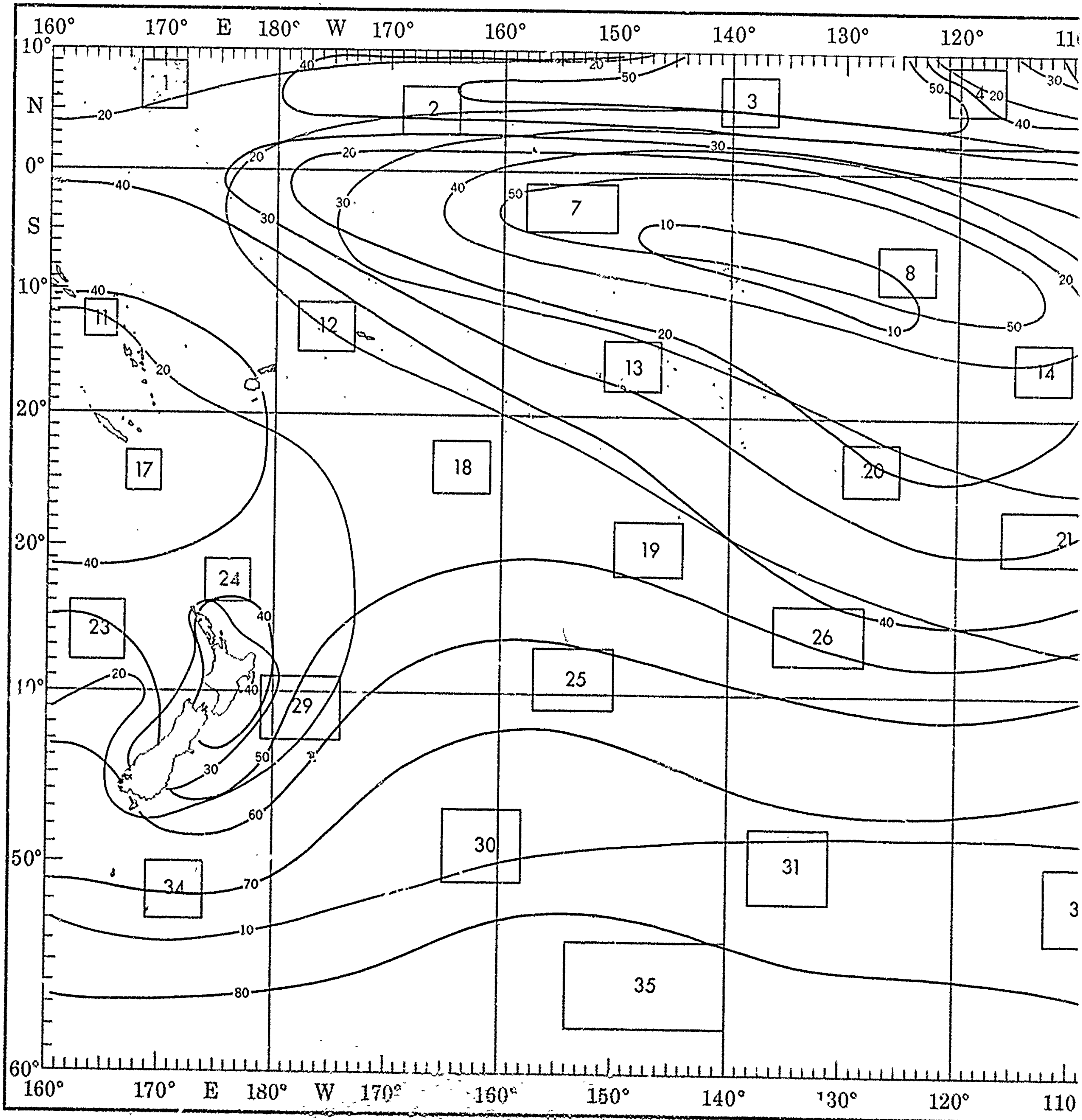
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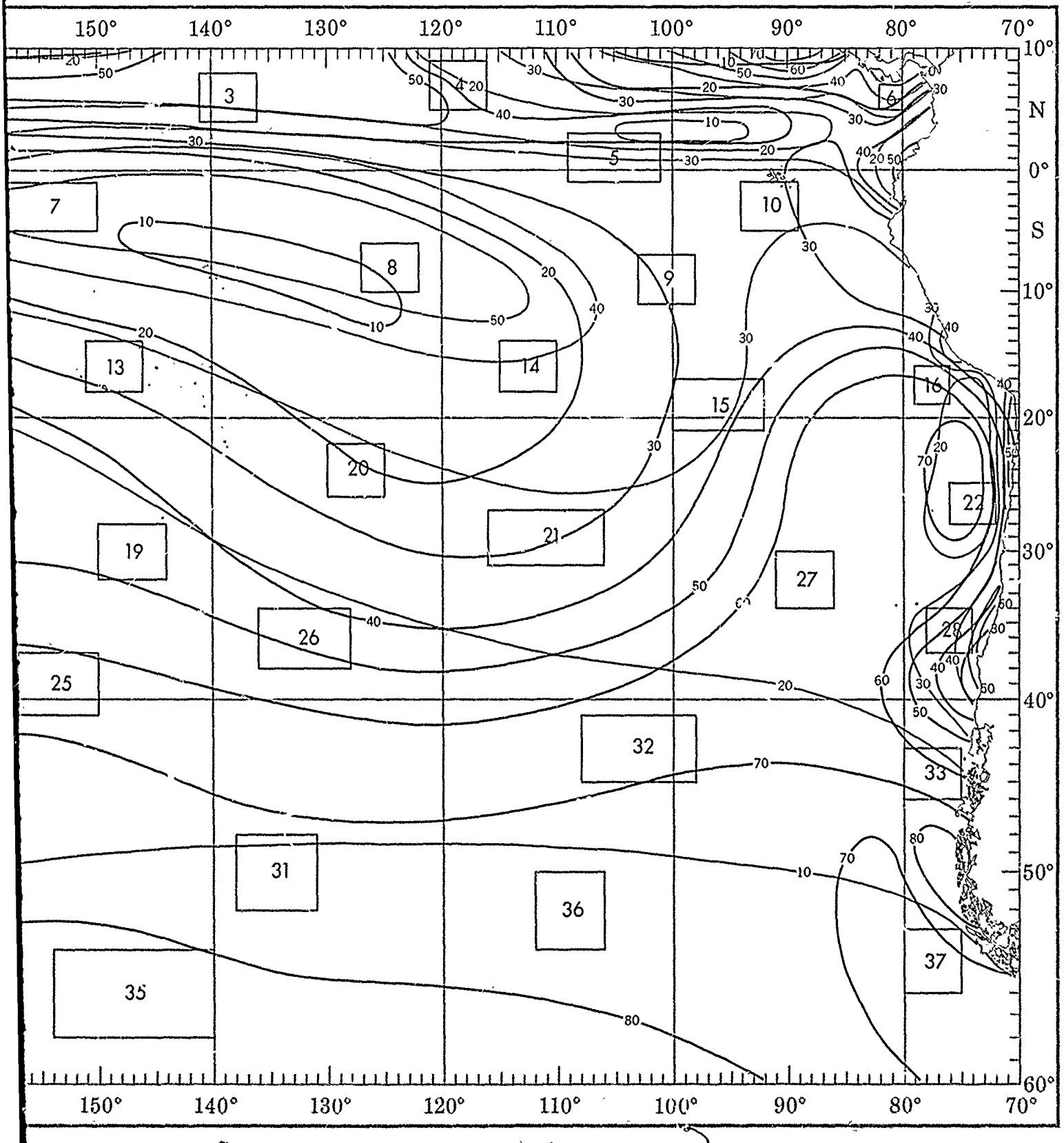
CLOUD COVER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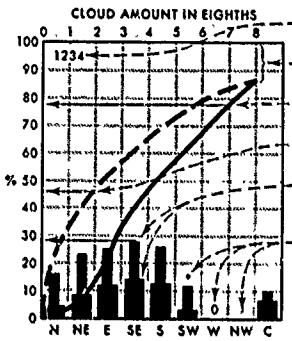
CLOUD COVER

Total Cloud Amount } Cumulative percent frequency of indicated cloud amount equal to or less than the amount
Low Cloud Amount } intersected by the curve.

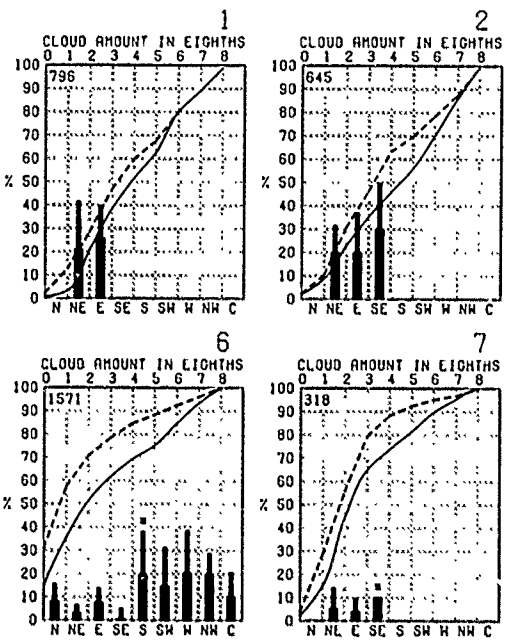


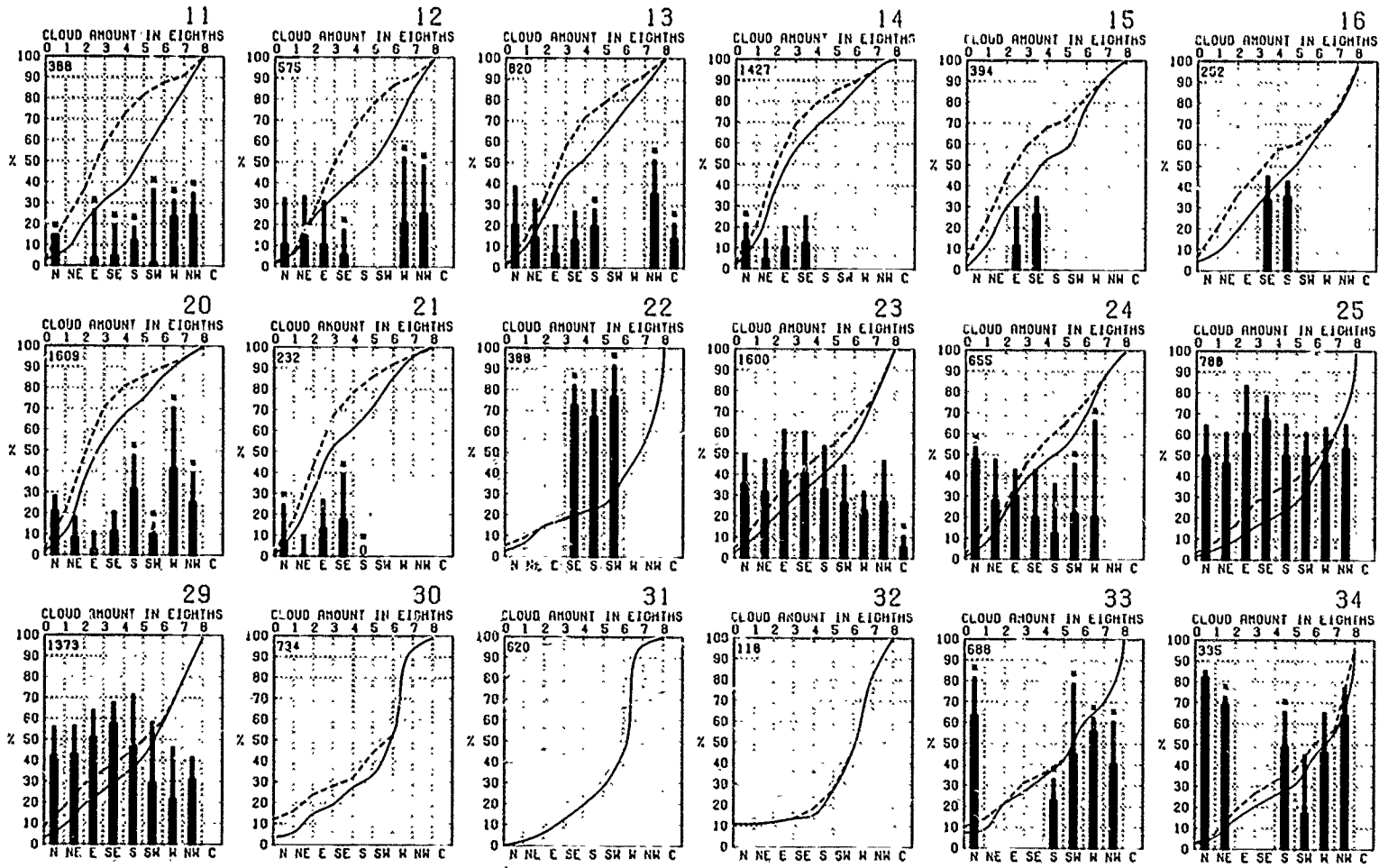
- Number of observations containing total cloud amount.
- Obscurations.
- (77% of all total cloud amounts were ≤7/8.)
- (46% of all low cloud amounts were ≤2/8.)
- (28% of all SE winds were accompanied by low cloud amounts ≥5/8 and 14% by low cloud amounts ≥7/8.)
- An asterisk indicates that the percentage 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.

Low cloud amount: Percent frequency of observations from each direction and calm that were accompanied by low cloud amounts ≥5/8 and ≥7/8.
Low clouds are clouds with bases <8000 feet.

BLUE LINE - Percent frequency of total cloud amount ≤2/8

RED LINE - Percent frequency of low cloud amount ≥5/8





Graphs represent the objective compilation of available data for specified areas without regard t
The isopleth analyses (opposite page) are based on all available data subjectively adjusted wher

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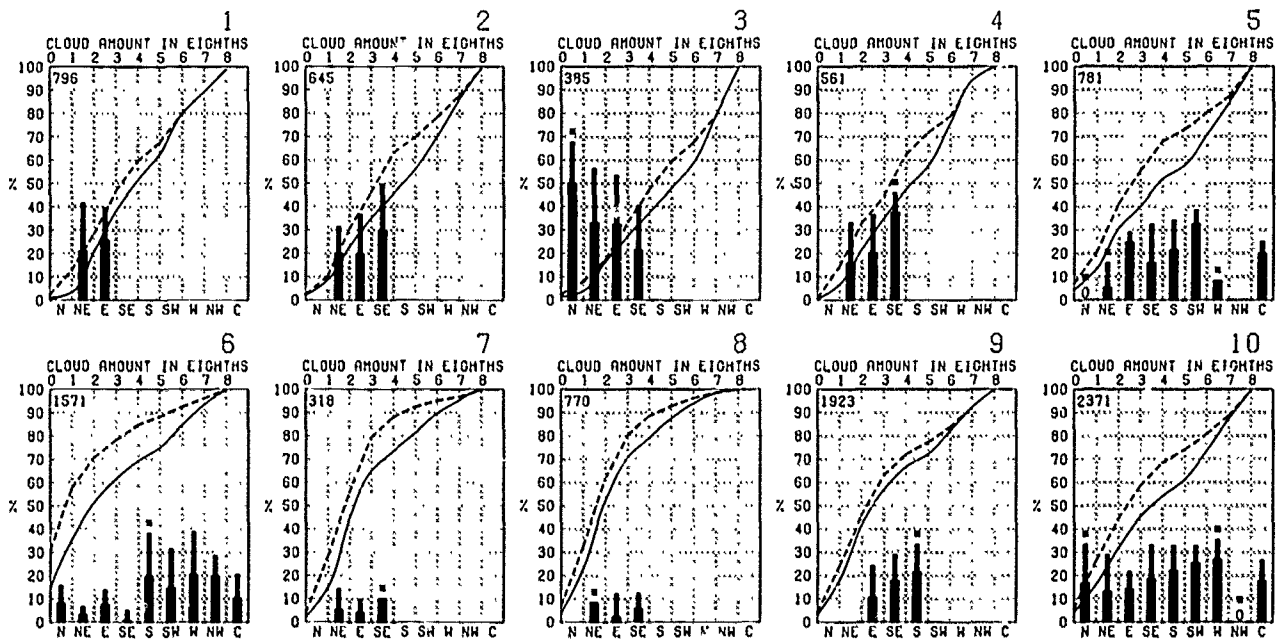

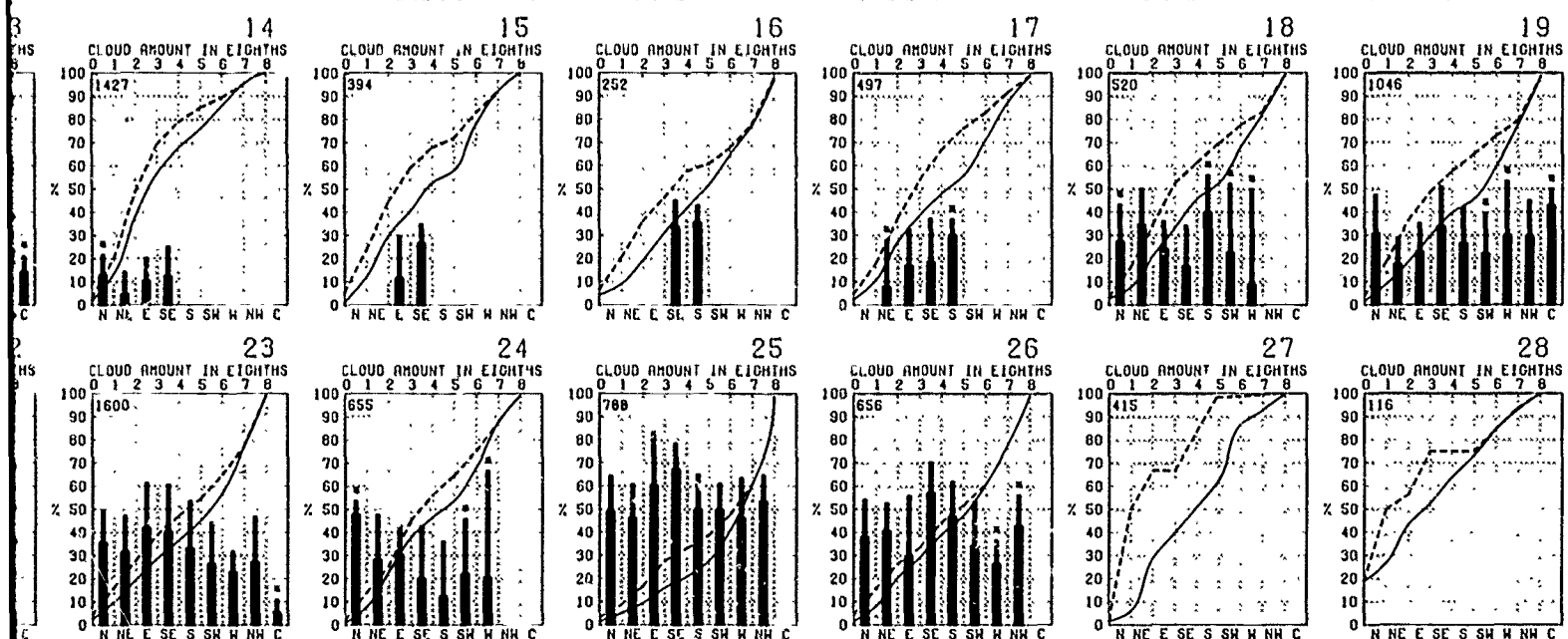

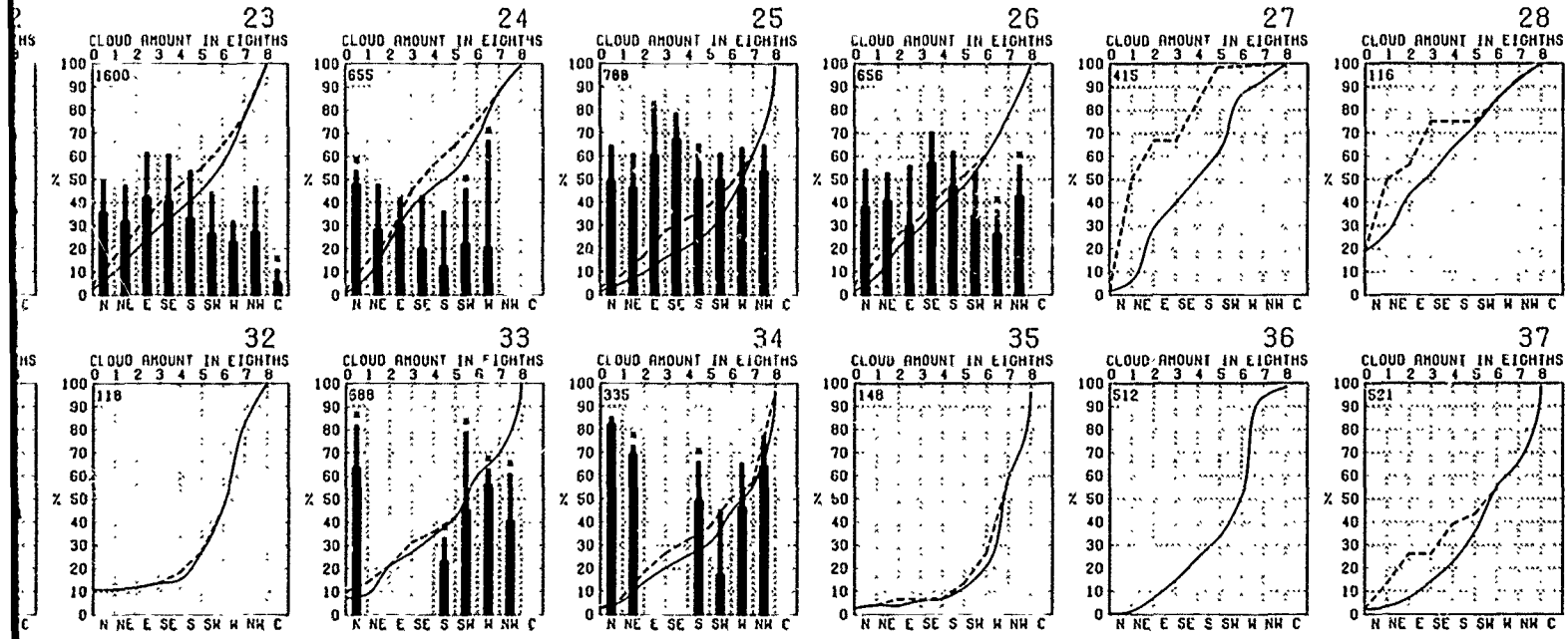

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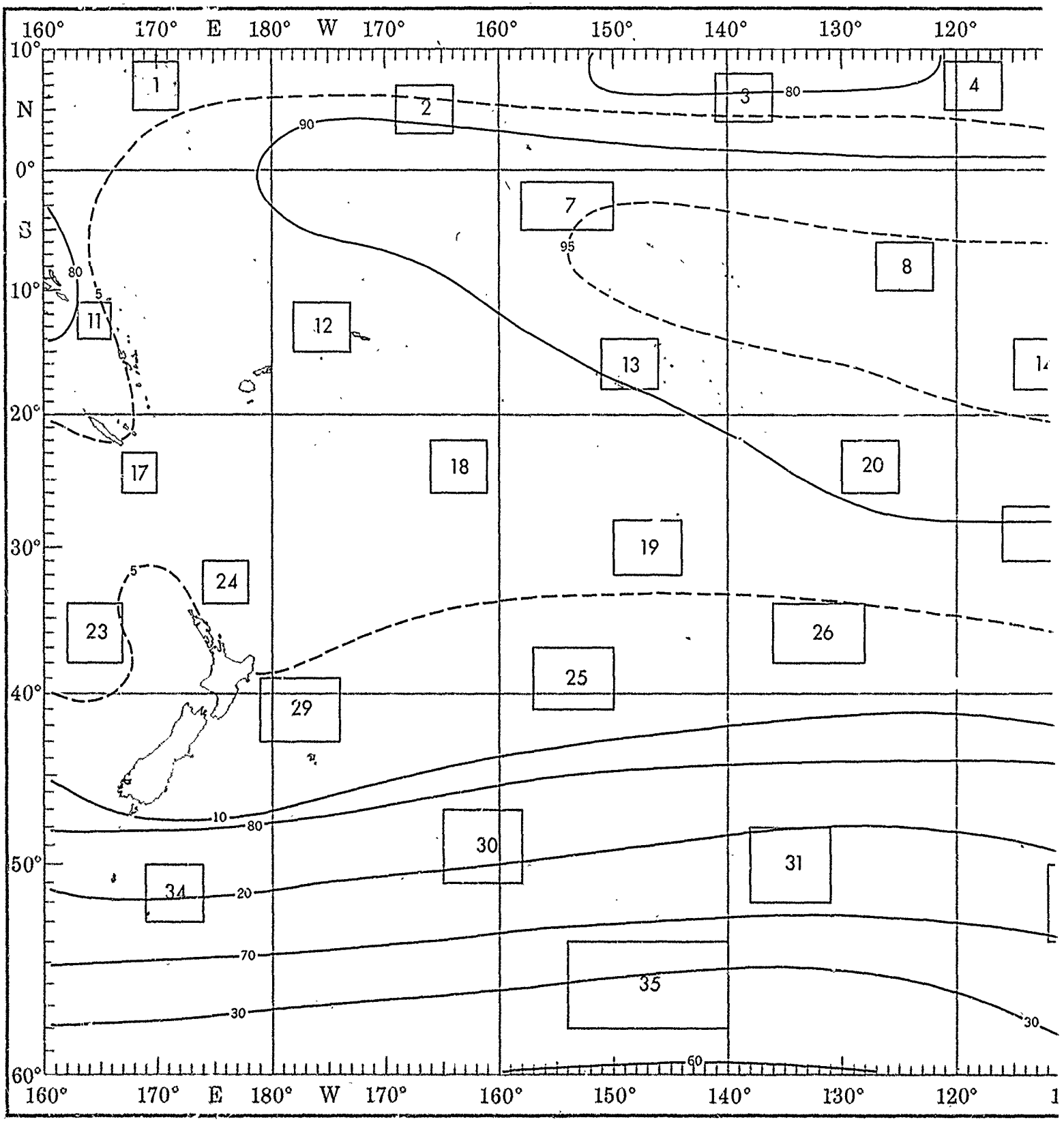
ses (opposite page) are based on all available data subjectively adjusted where bias was evident.

FEBRUARY


160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N
0°
S
10°
20°
30°
40°
50°
60°
1
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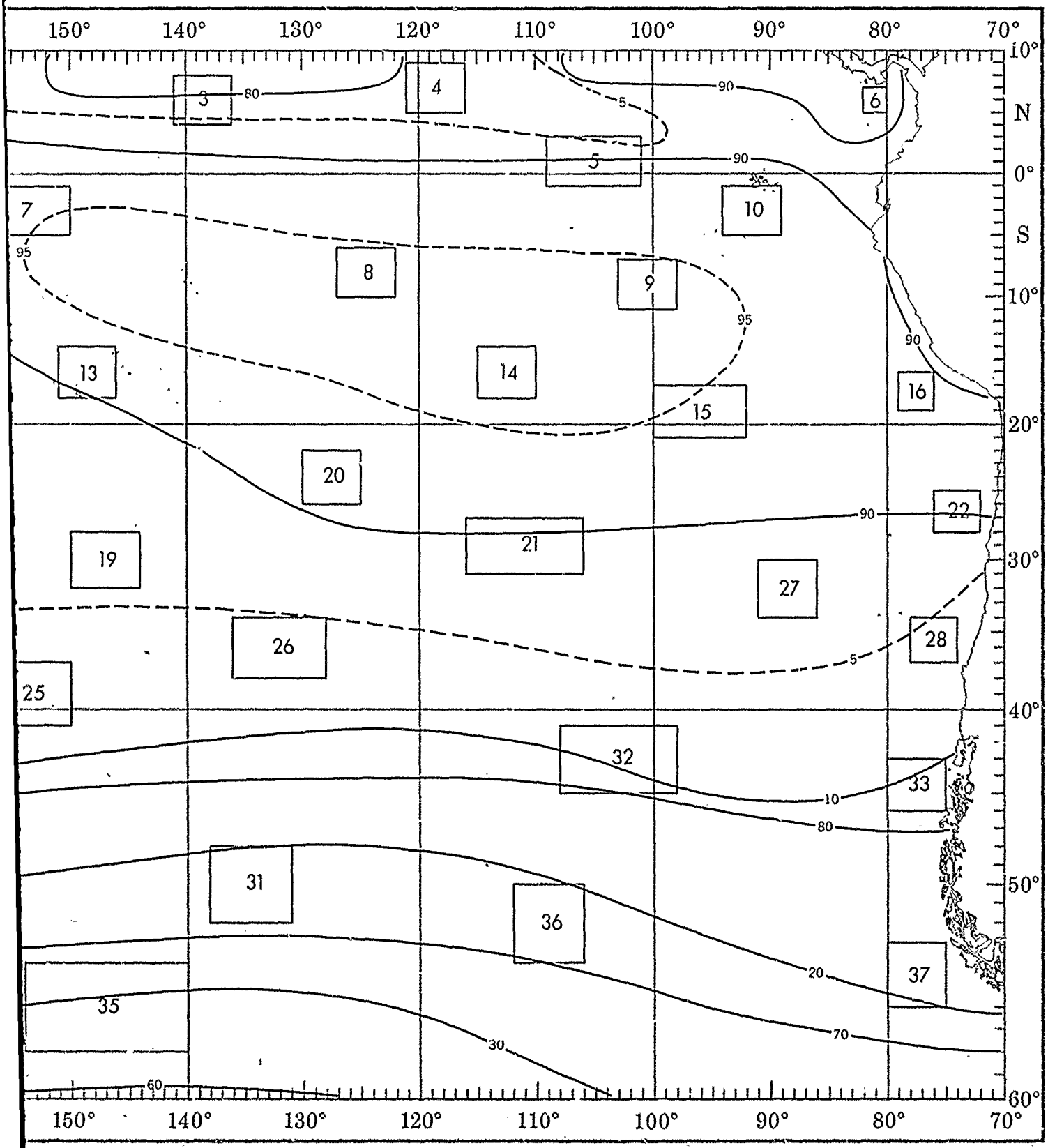
60

CEILING AND VISIBILITY



CEILING AND VISIBILITY

Low cloud ceiling - Visibility.

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

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 <15".

"N C (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8.

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	+	3	13	64
50<80	0	0	0	0	+	1
35<50	0	+	0	0	0	4
20<35	0	+	1	1	2	2
10<20	0	+	1	1	2	1
6<10	0	1	0	+	+	0
3<6	+	+	0	+	+	0
1.5<3	+	0	0	0	0	0
0<1.5	+	0	0	0	0	0

334

(2% of all observations reported ceiling ≥1000 but <2000 feet simultaneously with visibility ≥5 but <10 nautical miles)

+ indicates <5% but >0.

Number of observations.

BLUE LINE Percent frequency of low cloud ceiling ≥1000 feet (or no low cloud ceiling) and visibility ≥5 nautical miles

RED LINE - Percent frequency of low cloud ceiling <600 feet and/or visibility <2 nautical miles

1

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	7	50
50<80	0	0	0	0	0	+
35<50	0	0	0	0	0	1
20<35	0	0	0	0	+	6
10<20	0	0	0	0	3	6
6<10	0	0	0	+	3	15
3<6	0	0	0	1	2	3
1.5<3	0	0	0	0	0	0
0<1.5	+	0	0	+	0	1

249

2

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	5	57
50<80	0	0	0	0	+	+
35<50	0	0	0	0	0	1
20<35	0	0	0	0	+	4
10<20	0	0	0	1	5	14
6<10	+	0	1	1	2	3
3<6	+	0	1	1	1	1
1.5<3	0	0	0	0	+	0
0<1.5	0	0	0	0	0	0

287

6

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	4	83
50<80	0	0	0	0	0	+
35<50	0	0	0	0	0	1
20<35	0	0	0	0	0	2
10<20	0	0	0	0	1	4
6<10	0	0	0	0	1	3
3<6	0	0	+	0	+	0
1.5<3	0	0	0	+	0	0
0<1.5	0	0	0	0	0	+

828

7

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	1	87
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	1
20<35	0	0	0	0	1	4
10<20	0	0	0	1	1	5
6<10	0	0	0	0	1	0
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

171

11

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	2	0	1	8	65
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	1
20<35	0	0	0	0	0	2
10<20	0	0	0	0	1	8
6<10	0	0	0	0	3	6
3<6	0	0	2	1	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	1	0	0

106

12

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	1	0	0	5	63
50<80	0	0	0	0	0	1
35<50	0	0	0	0	1	1
20<35	0	0	0	0	2	4
10<20	0	0	0	1	5	9
6<10	1	0	0	1	1	5
3<6	0	0	0	1	1	1
1.5<3	0	0	0	1	0	0
0<1.5	1	0	0	1	1	0

199

13

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	+	1	7	64
50<80	0	0	0	+	0	1
35<50	0	0	0	0	+	+
20<35	0	0	0	0	1	4
10<20	0	0	0	1	4	7
6<10	0	0	0	1	2	4
3<6	0	0	0	+	+	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	+	0

505

14

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	1	78
50<80	0	0	0	0	0	+
35<50	0	0	0	0	+	3
20<35	0	0	0	0	1	5
10<20	0	0	0	+	1	8
6<10	0	0	0	+	1	3
3<6	0	0	0	0	0	+
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

744

15

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	2	65
50<80	0	0	0	0	0	2
35<50	0	0	0	0	0	4
20<35	0	0	0	0	1	9
10<20	0	0	1	0	2	15
6<10	0	0	0	0	0	1
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

129

16

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	4	55
50<80	0	0	0	0	0	4
35<50	0	0	0	0	0	4
20<35	0	0	0	0	0	11
10<20	0	0	0	0	0	15
6<10	0	0	0	0	0	8
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

157

20

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	+	0	0	+	1	80
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	1
20<35	0	0	0	0	+	3
10<20	0	+	+	+	+	7
6<10	0	0	0	0	1	4
3<6	0	0	0	+	+	+
1.5<3	0	0	0	0	0	0
0<1.5	0	+	0	+	0	0

721

21

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	3	77
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	3
20<35	0	0	0	0	1	6
10<20	0	0	0	0	1	6
6<10	0	0	0	0	1	2
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

145

22

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	0	22
50<80	0	0	0	0	1	3
35<50	0	0	0	0	0	5
20<35	0	0	0	0	3	22
10<20	0	0	0	0	3	28
6<10	0	0	0	0	1	10
3<6	0	0	0	0	0	2
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

183

23

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	3	46
50<80	0	+	0	0	+	2
35<50	0	0	0	+	+	3
20<35	0	0	0	+	1	8
10<20	0	0	+	1	5	19
6<10	+	0	+	1	3	6
3<6	0	0	+	+	1	1
1.5<3	0	0	+	0	0	+
0<1.5	+	0	+	+	+	0

962

24

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	3	52
50<80	0	0	0	0	0	0
35<50	0	0	0	0	+	1
20<35	0	0	0	+	1	5
10<20	0	0	+	1	4	16
6<10	0	0	0	1	3	7
3<6	0	0	0	1	1	1
1.5<3	0	0	0	+	1	0
0<1.5	0	1	+	1	0	+

349

25

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	+	+	0	3	30
50<80	0	0	0	+	+	1
35<50	0	+	0	+	1	6
20<35	0	0	+	+	1	9
10<20	+	+	0	2	4	22
6<10	0	0	0	1	5	10
3<6	0	+	+	1	1	+
1.5<3	0	0	0	+	+	0
0<1.5	0	+	+	+	0	+

459

29

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	2	40
50<80	0	0	0	0	0	2
35<50	0	0	0	1	+	9
20<35	+	0	+	+	3	10
10<20	0	0	+	+	4	13
6<10	0	+	0	1	3	3
3<6	0	0	+	1	1	1
1.5<3	0	0	0	0	+	0
0<1.5	1	+	+	+	+	0

520

30

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	0	33
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	17
20<35	0	0	0	0	4	0
10<20	0	0	0	4	8	21
6<10	0	0	0	0	4	8
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

24

31

INSUFFICIENT DATA

32

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	0	18
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	36
20<35	0	0	0	0	0	9
10<20	0	0	0	0	0	0
6<10	0	0	0	0	0	9
3<6	0	0	9	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	18	0	0	0	0	0

11

33

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	1	0	0	3	33
50<80	0	0	0	0	0	1
35<50	0	0	1	0	1	3
20<35	0	0	0	0	6	12
10<20	0	0	0	2	3	7
6<10	0	0	0	0	3	20
3<6	0	0	0	2	1	1
1.5<3	0	0	0	0	1	0
0<1.5	0	0	0	2	0	0

107

34

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	16	17
50<80	0	0	0	0	1	1
35<50	0	0	0	0	1	1
20<35	0	0	1	1	11	11
10<20	0	0	0	1	11	9
6<10	0	0	0	0	3	3
3<6	0	0	1	1	1	0
1.5<3	0	0	0	0	0	0
0<1.5	2	1	1	3	+	0

232

Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

FEBRUARY

ings (hundreds of feet)

when low cloud amount

nces of N_h <5/8.

with visibility ≥5 but <10

ity ≥5 nautical miles

1

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	7	50
50<80	0	0	0	0	0	*
35<50	0	0	0	0	0	1
20<35	0	0	0	0	*	6
10<20	0	0	0	0	3	6
6<10	0	0	0	*	3	15
3<6	0	0	0	1	2	3
1.5<3	0	0	0	0	0	0
0<1.5	*	0	0	*	0	1

249

2

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	5	57
50<80	0	0	0	0	*	*
35<50	0	0	0	0	0	1
20<35	0	0	0	0	*	4
10<20	0	0	0	1	5	14
6<10	*	0	1	1	2	3
3<6	*	0	1	1	1	1
1.5<3	0	0	0	0	*	0
0<1.5	0	0	0	0	0	0

287

3

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	0	0	1	2	43
50<80	0	0	0	0	*	2
35<50	0	0	0	0	0	3
20<35	0	0	0	0	4	5
10<20	0	0	0	1	5	12
6<10	0	*	*	1	6	9
3<6	0	0	0	0	2	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	*	0

217

4

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	3	59
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	3
20<35	0	0	0	0	1	3
10<20	0	0	0	0	0	14
6<10	0	0	1	1	4	4
3<6	0	0	0	3	1	2
1.5<3	0	0	0	0	1	0
0<1.5	0	0	0	0	0	0

135

5

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
.C	0	0	0	0	2	67
50<80	0	0	0	0	0	*
35<50	0	0	0	0	0	2
20<35	0	0	0	*	1	3
10<20	0	0	0	0	1	13
6<10	0	*	0	1	2	5
3<6	0	0	0	*	*	1
1.5<3	0	0	0	0	0	*
0<1.5	0	0	0	0	*	0

460

6

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	4	83
50<80	0	0	0	0	0	*
35<50	0	0	0	0	0	1
20<35	0	0	0	0	0	2
10<20	0	0	0	0	1	4
6<10	0	0	0	0	1	3
3<6	0	0	*	0	*	0
1.5<3	0	0	0	*	0	0
0<1.5	0	0	0	0	0	*

828

7

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	1	87
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	1
20<35	0	0	0	0	1	4
10<20	0	0	0	1	1	5
6<10	0	0	0	0	1	0
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

171

8

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	1	87
50<80	0	0	0	0	0	*
35<50	0	0	0	0	0	0
20<35	0	0	0	0	*	2
10<20	0	0	0	0	0	6
6<10	0	0	0	*	0	3
3<6	0	0	*	0	0	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

432

9

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	*	72
50<80	0	0	0	0	0	1
35<50	0	0	0	0	*	3
20<35	0	0	0	0	*	1
10<20	0	0	0	0	1	11
6<10	0	0	*	*	1	3
3<6	0	0	0	0	*	*
1.5<3	0	0	0	0	0	*
0<1.5	0	0	0	0	0	0

949

10

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	2	67
50<80	0	0	0	0	*	1
35<50	0	0	0	0	*	3
20<35	0	0	0	*	1	4
10<20	0	0	*	*	2	11
6<10	0	*	*	*	2	5
3<6	0	0	0	*	1	1
1.5<3	0	0	0	0	*	*
0<1.5	0	0	0	0	0	*

1248

14

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	1	78
50<80	0	0	0	0	0	*
35<50	0	0	0	0	*	3
20<35	0	0	0	0	1	5
10<20	0	0	0	*	1	8
6<10	0	0	0	*	1	3
3<6	0	0	0	0	0	*
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

744

15

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	2	65
50<80	0	0	0	0	0	2
35<50	0	0	0	0	0	4
20<35	0	0	0	0	1	9
10<20	0	0	1	0	2	15
6<10	0	0	0	0	0	1
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

129

16

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	4	55
50<80	0	0	0	0	0	4
35<50	0	0	0	0	0	4
20<35	0	0	0	0	0	11
10<20	0	0	0	0	0	15
6<10	0	0	0	0	0	8
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

157

17

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	5	61
50<80	0	0	0	0	*	*
35<50	0	0	0	0	0	2
20<35	0	0	0	0	*	1
10<20	0	0	0	0	2	13
6<10	0	0	0	*	2	8
3<6	0	0	0	1	1	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

246

18

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	1	61
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	1
20<35	0	0	0	0	*	4
10<20	0	0	0	1	6	14
6<10	0	*	0	1	3	6
3<6	0	0	0	0	1	1
1.5<3	0	0	*	0	0	0
0<1.5	0	0	0	*	0	0

312

19

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	1	57
50<80	0	0	0	0	0	*
35<50	0	0	0	0	*	3
20<35	0	0	0	*	1	4
10<20	*	0	0	*	3	11
6<10	0	0	0	1	5	8
3<6	0	0	0	*	1	1
1.5<3	0	0	0	0	*	*
0<1.5	0	0	0	0	*	*

618

23

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	3	46
50<80	0	*	0	0	*	2
35<50	0	0	0	*	*	3
20<35	0	0	0	*	1	8
10<20	0	0	*	1	5	19
6<10	*	0	*	1	3	6
3<6	0	0	*	*	1	1
1.5<3	0	0	*	0	0	*
0<1.5	*	0	*	*	*	0

962

24

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	3	52
50<80	0	0	0	0	0	0
35<50	0	0	0	0	*	1
20<35	0	0	0	*	1	5
10<20	0	0	*	1	4	16
6<10	0	0	0	1	3	7
3<6	0	0	0	1	1	1
1.5<3	0	0	0	*	1	0
0<1.5	0	1	*	1	0	*

348

25

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	*	*	0	3	30
50<80	0	0	0	*	*	1
35<50	0	*	0	*	1	6
20<35	0	0	*	*	1	9
10<20	*	*	0	2	4	22
6<10	0	0	0	1	5	10
3<6	0	*	*	1	1	*
1.5<3	0	0	0	*	*	0
0<1.5	0	*	*	*	0	*

459

26

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	*	0	0	1	44
50<80	0	0	0	0	0	2
35<50	0	0	0	0	1	2
20<35	0	0	*	0	3	14
10<20	0	0	0	1	4	12
6<10	0	0	1	1	5	5
3<6	0	0	0	1	2	*
1.5<3	0	0	0	0	0	0
0<1.5	0	0	*	1	*	0

286

27

INSUFFICIENT DATA

28

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	25	50
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	0
20<35	0	0	0	0	0	6
10<20	0	0	0	0	0	3
6<10	0	0	0	0	0	0
3<6	0	0	0	0	6	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

16

32

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	0	18
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	36
20<35	0	0	0	0	0	9
10<20	0	0	0	0	0	0
6<10	0	0	0	0	0	9
3<6	0	0	9	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	18	0	0	0	0	0

11

33

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	1	0	0	3	33
50<80	0	0	0	0	0	1
35<50	0	0	1	0	1	3
20<35	0	0	0	0	6	12
10<20	0	0	0	2	3	7
6<10	0	0	0	0	3	20
3<6	0	0	0	2	1	1
1.5<3	0	0	0	0	1	0
0<1.5	0	0	0	2	0	0

107

34

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	16	17
50<80	0	0	0	0	1	1
35<50	0	0	0	0	1	1
20<35	0	0	1	1	11	11
10<20	0	0	0	1	11	9
6<10	0	0	0	0	3	3
3<6	0	0	1	1	1	0
1.5<3	0	0	0	0	0	0
0<1.5	2	1	1	3	*	0

232

35

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	7	0
50<80	0	0	0	0	7	0
35<50	0	0	0	0	0	0
20<35	0	0	0	0	14	14
10<20	0	0	0	14	21	0
6<10	0	0	0	0	0	0
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	7	7	7	0	0

14

36

INSUFFICIENT DATA

37

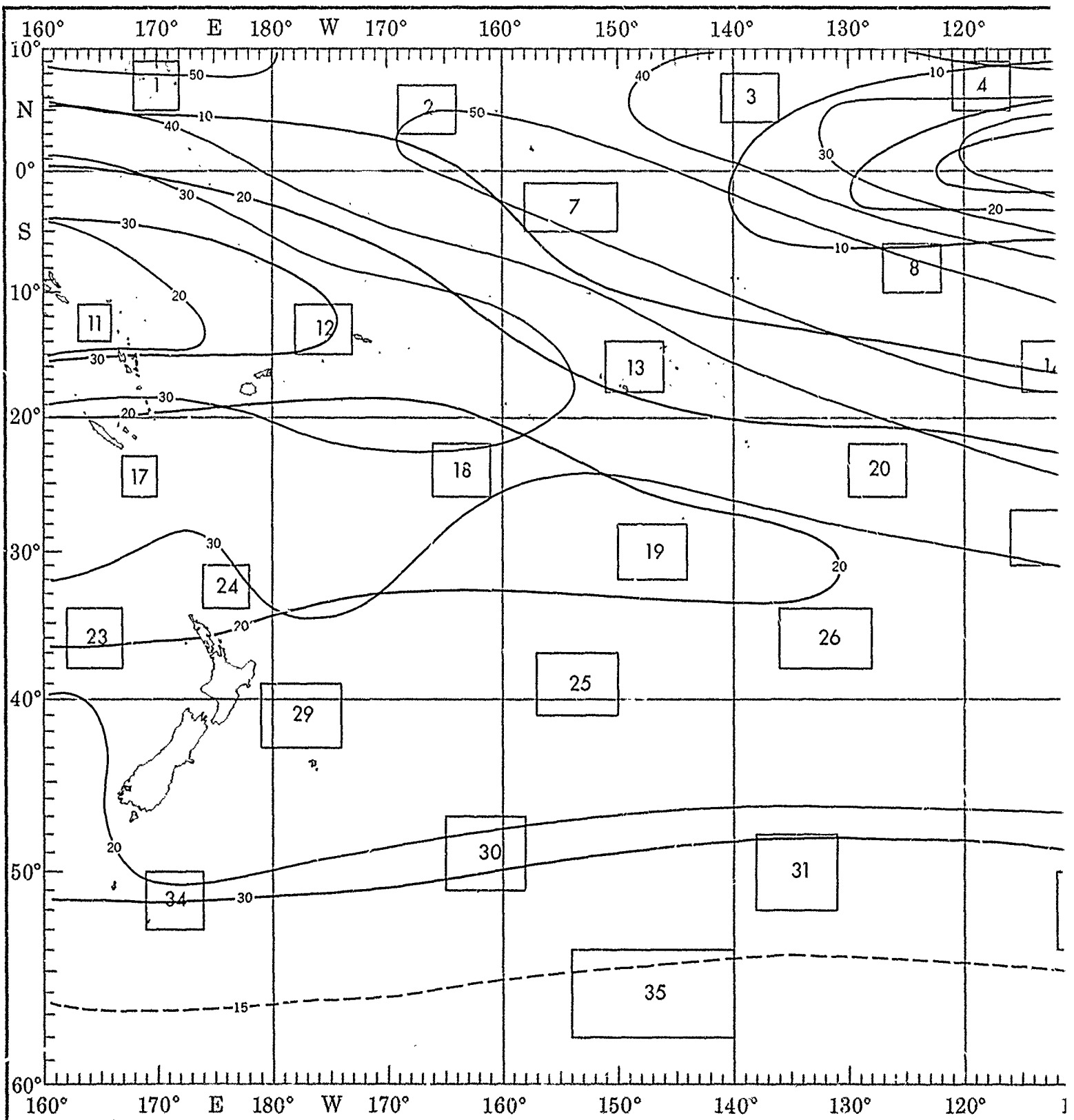
LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	0	39
50<80	0	0	0	0	0	0
35<50	0	0	0	0	4	4
20<35	0	0	0	0	4	4
10<20	0	0	0	0	0	0
6<10	0	0	4	4	9	17
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	4	0	4	0

23

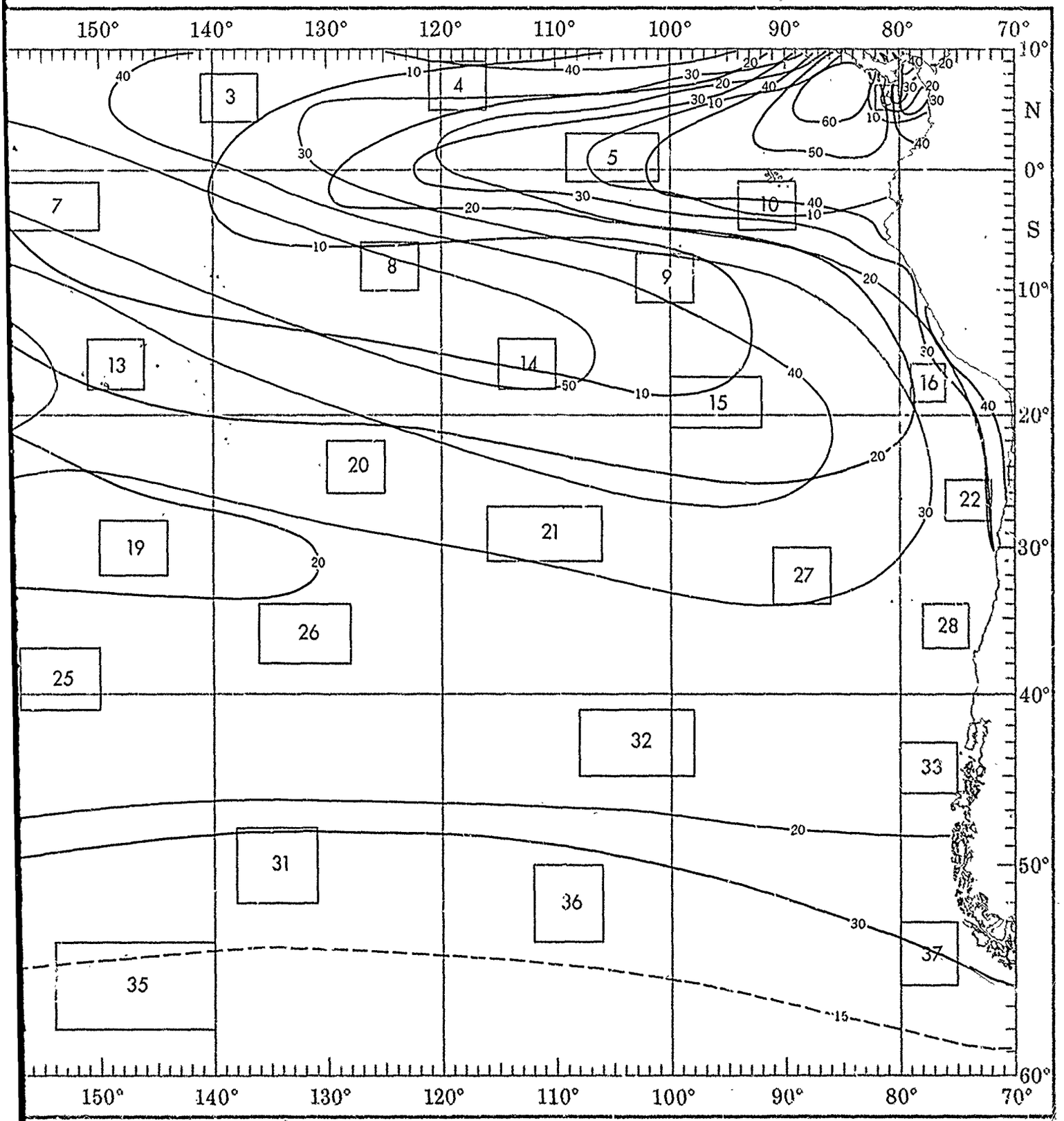
e objective compilation of available data for specified areas without regard to suspected biases.
s (opposite page) are based on all available data subjectively adjusted where bias was evident.

FEBRUARY

WIND



WIND-VISIBILITY-CLOUDINESS



LOW CLOUD CEILING-VISIBILITY-WIND

Percent frequency of occurrence of specified wind speed in knots, visibility (Vsby) in nautical miles, and low cloud ceiling (LCC) in hundreds of feet.

WIND SPEED (knots)

LCC - Vsby	0-3	4-10	11-21	22-33	≥34
<1.5 & or <.5	+	1	1	+	0
<6 & or <2	2	2	1	1	+
Vsby <2	1	2	1	1	+
<20 & or <5	3	4	2	1	1
<20 & or <5	8	9	6	5	2
Vsby ≥5	9	11	12	3	1
≥30 & ≥5	12	13	15	7	3
NC & ≥30	4	2	1	+	0
	1	2	3	4	

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

(2% of the observations reported wind speeds of 11-21 knots, a low cloud ceiling <1000 feet and/or visibility <2 nautical miles.)

"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8.

+ indicates <.5% but >0.

Number of observations.

Conditions for Carrier Operations

BLUE LINE Percent frequency of optimum conditions. LCC ≥5000 ft, (or no LCC), Vsby ≥5 nm, and Wind 11-21 kts.

RED LINE Percent frequency of poor conditions Any one of the following constitutes poor conditions; LCC <300 ft., Vsby <1 nm, Wind <6 or ≥34 kts.

Satisfactory conditions between poor and optimum

1

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	1	0	0
<6 & OR <2	+	2	4	0	0
VSBY <2	0	0	+	0	0
<10 & OR <2	1	7	17	+	0
<20 & OR <5	1	10	24	1	0
VSBY ≥5	3	24	63	8	0
≥50 & ≥5	2	12	38	6	0
NC & ≥10	2	10	34	4	0

247

2

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	+	0
<6 & OR <2	0	1	2	2	0
VSBY <2	0	1	1	1	0
<10 & OR <2	0	2	7	2	0
<20 & OR <5	1	6	21	5	0
VSBY ≥5	1	20	61	12	0
≥50 & ≥5	1	16	38	6	0
NC & ≥10	1	14	35	7	0

286

6

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	+	+	+	0	0
VSBY <2	0	+	0	0	0
<10 & OR <2	1	2	1	+	0
<20 & OR <5	3	5	1	+	0
VSBY ≥5	19	47	30	3	0
≥50 & ≥5	16	41	28	3	0
NC & ≥10	15	39	27	2	0

807

7

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	1	0	0
<20 & OR <5	1	1	5	1	0
VSBY ≥5	2	34	61	3	0
≥50 & ≥5	1	31	54	3	0
NC & ≥10	1	30	53	3	0

169

11

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	0	0	0
<6 & OR <2	0	3	3	0	0
VSBY <2	0	2	2	0	0
<10 & OR <2	1	5	8	1	0
<20 & OR <5	1	9	13	1	0
VSBY ≥5	10	50	32	1	0
≥50 & ≥5	8	43	23	0	0
NC & ≥10	8	35	22	0	0

105

12

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	1	1	0
<6 & OR <2	0	1	2	2	0
VSBY <2	0	0	1	1	0
<10 & OR <2	0	4	4	3	0
<20 & OR <5	1	9	11	4	0
VSBY ≥5	10	46	34	6	0
≥50 & ≥5	10	35	20	4	0
NC & ≥10	9	34	17	4	0

197

13

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	0
<6 & OR <2	+	1	1	0	+
VSBY <2	+	0	0	0	0
<10 & OR <2	1	3	5	+	+
<20 & OR <5	1	8	12	1	+
VSBY ≥5	6	47	39	3	0
≥50 & ≥5	5	37	28	2	0
NC & ≥10	4	35	24	1	0

500

14

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR < 5	0	0	0	0	0
<6 & OR <2	0	+	+	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	1	2	+	0
<20 & OR <5	0	4	8	1	0
VSBY ≥5	2	39	56	3	0
≥50 & ≥5	2	32	44	2	0
NC & ≥10	2	31	43	2	0

743

15

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR < 5	0	0	0	0	0
<6 & OR <2	0	0	1	0	0
VSBY <2	0	0	1	0	0
<10 & OR <2	0	1	1	0	0
<20 & OR <5	0	5	11	1	0
VSBY ≥5	1	49	48	2	0
≥50 & ≥5	1	38	30	0	0
NC & ≥10	1	36	29	0	0

128

16

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	3	5	0	0
<20 & OR <5	1	7	15	0	0
VSBY ≥5	2	36	62	1	0
≥50 & ≥5	1	24	36	1	0
NC & ≥10	1	24	29	0	0

157

20

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	0
<6 & OR <2	0	+	1	+	0
VSBY <2	0	+	+	+	0
<10 & OR <2	0	2	4	+	0
<20 & OR <5	0	6	7	+	0
VSBY ≥5	4	47	46	2	0
≥50 & ≥5	4	40	37	1	0
NC & ≥10	4	39	36	1	0

714

21

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	2	1	0	0
<20 & OR <5	0	4	6	0	0
VSBY ≥5	6	47	41	6	1
≥50 & ≥5	6	41	29	4	0
NC & ≥10	6	40	28	4	0

145

22

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	6	6	0	0
<20 & OR <5	3	19	22	0	0
VSBY ≥5	8	40	50	2	0
≥50 & ≥5	4	10	10	2	0
NC & ≥10	4	10	7	2	0

183

23

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	+	+	0
<6 & OR <2	+	1	1	1	0
VSBY <2	0	1	1	+	0
<10 & OR <2	1	4	6	3	0
<20 & OR <5	1	12	17	7	+
VSBY ≥5	6	36	45	10	1
≥50 & ≥5	4	22	21	3	+
NC & ≥10	4	20	19	3	+

947

24

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	1	1	0
<6 & OR <2	1	2	1	1	0
VSBY <2	0	1	+	+	0
<10 & OR <2	1	6	7	3	0
<20 & OR <5	2	11	17	7	1
VSBY ≥5	5	31	45	12	1
≥50 & ≥5	3	19	28	5	1
NC & ≥10	3	18	27	4	1

344

25

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	0	+
<6 & OR <2	+	3	2	2	+
VSBY <2	+	1	1	+	0
<10 & OR <2	+	7	9	3	2
<20 & OR <5	2	19	19	6	3
VSBY ≥5	3	40	41	6	2
≥50 & ≥5	1	18	14	1	+
NC & ≥10	1	16	13	1	+

456

29

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR < 5	+	+	+	1	0
<6 & OR <2	1	+	2	3	1
VSBY <2	+	+	+	2	+
<10 & OR <2	1	1	5	6	1
<20 & OR <5	2	5	15	9	2
VSBY ≥5	5	29	41	15	3
≥50 & ≥5	3	19	17	5	0
NC & ≥10	3	18	16	4	0

511

30

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	4	4	4
<20 & OR <5	0	4	25	13	4
VSBY ≥5	0	13	63	17	4
≥50 & ≥5	0	8	21	4	0
NC & ≥10	0	8	21	4	0

24

31

INSUFFICIENT DATA

32

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	18	0	0
<6 & OR <2	0	9	18	0	0
VSBY <2	0	9	18	0	0
<10 & OR <2	0	18	18	0	0
<20 & OR <5	0	18	18	0	0
VSBY ≥5	0	36	36	0	0
≥50 & ≥5	0	9	9	0	0
NC & ≥10	0	9	9	0	0

11

33

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	1	0	0
<6 & OR <2	0	3	3	3	0
VSBY <2	0	0	0	2	0
<10 & OR <2	7	13	7	5	0
<20 & OR <5	7	16	12	7	1
VSBY ≥5	9	41	29	11	2
≥50 & ≥5	3	13	16	4	1
NC & ≥10	3	12	13	4	1

106

34

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	3	3	+
<6 & OR <2	0	2	4	4	1
VSBY <2	0	2	1	3	+
<10 & OR <2	0	3	8	5	1
<20 & OR <5	+	5	13	17	4
VSBY ≥5	1	12	37	32	5
≥50 & ≥5	+	5	20	9	+
NC & ≥10	+	4	8	5	0

224

Graphs represent the objective compilation of available data for specified areas without regard to The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

-VISIBILITY-WIND

FEBRUARY

visibility (Vsby) in nautical

uds (h) when low cloud amount

oud ceiling <1000 feet and/or

occurrences of N_h <5/8.

nm and Wind 11-21 kts.

conditions: LCC <300 ft.

1

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	1	0	0
<6 & OR <2	*	2	4	0	0
VSBY <2	0	0	*	0	0
<10 & OR <2	1	7	17	*	0
<20 & OR <5	1	10	24	1	0
VSBY ≥5	3	24	63	8	0
≥50 & ≥5	2	12	38	6	0
NC & ≥ 10	2	10	34	4	0

247

2

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	*	0	*	0
<6 & OR <2	0	1	2	2	0
VSBY <2	0	1	1	1	0
<10 & OR <2	0	2	7	2	0
<20 & OR <5	1	6	21	5	0
VSBY ≥5	1	20	61	12	0
≥50 & ≥5	1	16	38	8	0
NC & ≥ 10	1	14	35	7	0

286

3

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	*	0
<6 & OR <2	0		4	*	0
VSBY <2	0	0	1	0	0
<10 & OR <2	*	6	14	1	0
<20 & OR <5	*	9	27	4	0
VSBY ≥5	2	24	58	11	0
≥50 & ≥5	1	13	29	4	0
NC & ≥ 10	1	12	26	4	0

214

4

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	1	3	3	0	0
VSBY <2	1	0	0	0	0
<10 & OR <2	1	7	9	0	0
<20 & OR <5	2	12	16	0	0
VSBY ≥5	6	45	43	2	0
≥50 & ≥5	4	31	25	2	0
NC & ≥ 10	4	29	23	2	0

134

5

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	*	0	0	0
<6 & OR <2	1	1	0	0	0
VSBY <2	0	*	0	0	0
<10 & OR <2	1	6	2	0	0
<20 & OR <5	4	16	5	0	0
VSBY ≥5	20	67	11	*	0
≥50 & ≥5	15	49	6	*	0
NC & ≥ 10	14	47	6	*	0

455

6

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	*	0	0
<6 & OR <2	*	*	*	0	0
VSBY <2	0	*	0	0	0
<10 & OR <2	1	2	1	*	0
<20 & OR <5	3	5	1	*	0
VSBY ≥5	19	47	30	3	0
≥50 & ≥5	16	41	28	3	0
NC & ≥ 10	15	39	27	2	0

807

7

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	1	0	0
<20 & OR <5	1	1	5	1	0
VSBY ≥5	2	34	61	3	0
≥50 & ≥5	1	31	54	3	0
NC & ≥ 10	1	30	53	3	0

169

8

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	*	0	0
VSBY <2	0	0	*	0	0
<10 & OR <2	0	2	2	0	0
<20 & OR <5	0	4	6	0	0
VSBY ≥5	2	44	53	*	*
≥50 & ≥5	2	39	46	*	*
NC & ≥ 10	2	39	46	*	*

431

9

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	*	1	0	0
VSBY <2	0	0	*	0	0
<10 & OR <2	0	2	3	0	0
<20 & OR <5	*	7	10	0	0
VSBY ≥5	1	44	54	1	0
≥50 & ≥5	1	34	38	1	0
NC & ≥ 10	1	34	37	1	0

948

10

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	*	0	0	0
<6 & OR <2	*	*	1	0	0
VSBY <2	0	*	*	0	0
<10 & OR <2	1	6	1	*	0
<20 & OR <5	4	15	4	*	0
VSBY ≥5	18	67	13	*	0
≥50 & ≥5	14	48	8	0	0
NC & ≥ 10	13	46	7	0	0

1223

13

OTS)

22-33	≥34
0	0
0	*
0	0
*	*
1	*
3	0
2	0
1	0

500

14

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	*	*	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	1	2	*	0
<20 & OR <5	0	4	8	1	0
VSBY ≥5	2	39	56	3	0
≥50 & ≥5	2	32	44	2	0
NC & ≥ 10	2	31	43	2	0

743

15

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	1	0	0
VSBY <2	0	0	1	0	0
<10 & OR <2	0	1	1	0	0
<20 & OR <5	0	5	11	1	0
VSBY ≥5	1	49	46	2	0
≥50 & ≥5	1	38	30	0	0
NC & ≥ 10	1	36	29	0	0

128

16

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	3	5	0	0
<20 & OR <5	1	7	15	0	0
VSBY ≥5	2	36	62	1	0
≥50 & ≥5	1	24	36	1	0
NC & ≥ 10	1	24	29	0	0

157

17

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	2	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	2	9	2	1
<20 & OR <5	*	5	18	5	2
VSBY ≥5	2	30	51	12	2
≥50 & ≥5	2	25	33	6	*
NC & ≥ 10	2	24	29	5	0

243

18

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	*	0	0	0
<6 & OR <2	0	1	1	1	0
VSBY <2	0	0	*	*	0
<10 & OR <2	0	4	5	2	1
<20 & OR <5	0	8	16	7	1
VSBY ≥5	4	34	46	13	*
≥50 & ≥5	4	25	27	6	0
NC & ≥ 10	4	25	26	6	0

310

19

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	*	*	*	0
<6 & OR <2	*	1	1	1	*
VSBY <2	0	0	*	0	0
<10 & OR <2	2	5	7	4	*
<20 & OR <5	2	10	13	6	1
VSBY ≥5	7	40	40	9	1
≥50 & ≥5	4	29	23	2	*
NC & ≥ 10	4	28	23	2	*

614

22

DTS)

22-33	≥34
0	0
0	0
0	0
0	0
0	0
2	0
2	0
1	0

183

23

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	*	1	*	*	0
<6 & OR <2	*	1	1	1	0
VSBY <2	0	1	1	*	0
<10 & OR <2	1	4	6	3	0
<20 & OR <5	1	12	17	7	*
VSBY ≥5	6	36	45	10	1
≥50 & ≥5	4	22	21	3	*
NC & ≥ 10	4	20	19	3	*

947

24

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	1	1	0
<6 & OR <2	1	2	1	1	0
VSBY <2	0	1	*	*	0
<10 & OR <2	1	6	7	3	0
<20 & OR <5	2	11	17	7	1
VSBY ≥5	5	31	45	12	1
≥50 & ≥5	3	19	28	5	1
NC & ≥ 10	3	18	27	4	1

344

25

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	*	*	*	0	*
<6 & OR <2	*	3	2	2	*
VSBY <2	*	1	1	*	0
<10 & OR <2	*	7	9	3	2
<20 & OR <5	2	19	19	6	3
VSBY ≥5	3	40	41	6	2
≥50 & ≥5	1	18	14	1	*
NC & ≥ 10	1	16	13	1	*

456

26

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	*	*	1	0
<6 & OR <2	0	2	2	1	0
VSBY <2	0	1	*	1	0
<10 & OR <2	*	6	7	2	0
<20 & OR <5	1	12	17	3	0
VSBY ≥5	5	41	43	5	0
≥50 & ≥5	2	23	19	2	0
NC & ≥ 10	2	23	17	1	0

261

27

INSUFFICIENT DATA

28

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	6
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	0	0	6
<20 & OR <5	0	6	6	0	6
VSBY ≥5	0	25	50	19	6
≥50 & ≥5	0	19	44	13	0
NC & ≥ 10	0	13	31	6	0

16

31

NT

32

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	18	0	0
<6 & OR <2	0	9	18	0	0
VSBY <2	0	9	18	0	0
<10 & OR <2	0	18	10	0	0
<20 & OR <5	0	19	18	0	0
VSBY ≥5	0	36	36	0	0
≥50 & ≥5	0	9	9	0	0
NC & ≥ 10	0	9	9	0	0

11

33

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	1	0	0
<6 & OR <2	0	3	3	3	0
VSBY <2	0	0	0	2	0
<10 & OR <2	7	13	7	5	0
<20 & OR <5	7	16	12	7	1
VSBY ≥5	9	41	29	11	2
≥50 & ≥5	3	13	16	4	1
NC & ≥ 10	3	12	13	4	1

106

34

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	3	3	*
<6 & OR <2	0	2	4	4	1
VSBY <2	0	2	1	3	*
<10 & OR <2	0	3	8	5	1
<20 & OR <5	*	5	13	17	4
VSBY ≥5	1	12	37	32	5
≥50 & ≥5	*	5	20	9	*
NC & ≥ 10	*	4	8	5	0

224

35

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	7	7	7	0	0
<6 & OR <2	7	7	7	0	0
VSBY <2	7	0	7	0	0
<10 & OR <2	7	7	7	0	0
<20 & OR <5	7	7	21	21	0
VSBY ≥5	0	14	29	21	0
≥50 & ≥5	0	0	14	0	0
NC & ≥ 10	0	0	0	0	0

14

36

INSUFFICIENT DATA

37

WIND SPEED (KNOTS)

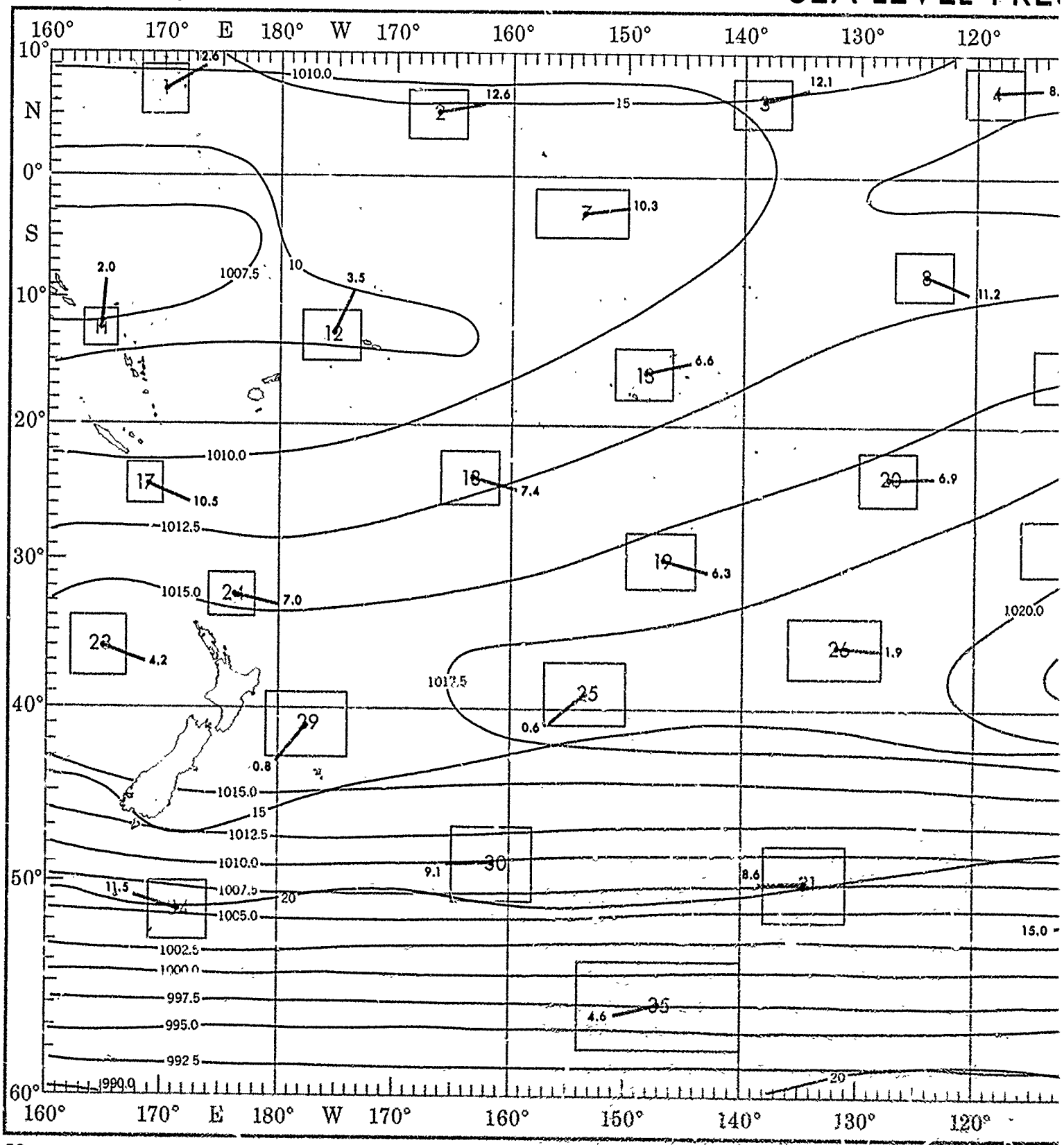
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	9	0
<6 & OR <2	0	0	0	9	4
VSBY <2	0	0	0	4	4
<10 & OR <2	0	0	26	13	4
<20 & OR <5	0	0	26	13	4
VSBY ≥5	0	22	35	30	0
≥50 & ≥5	0	13	9	17	0
NC & ≥ 10	0	13	9	17	0

23

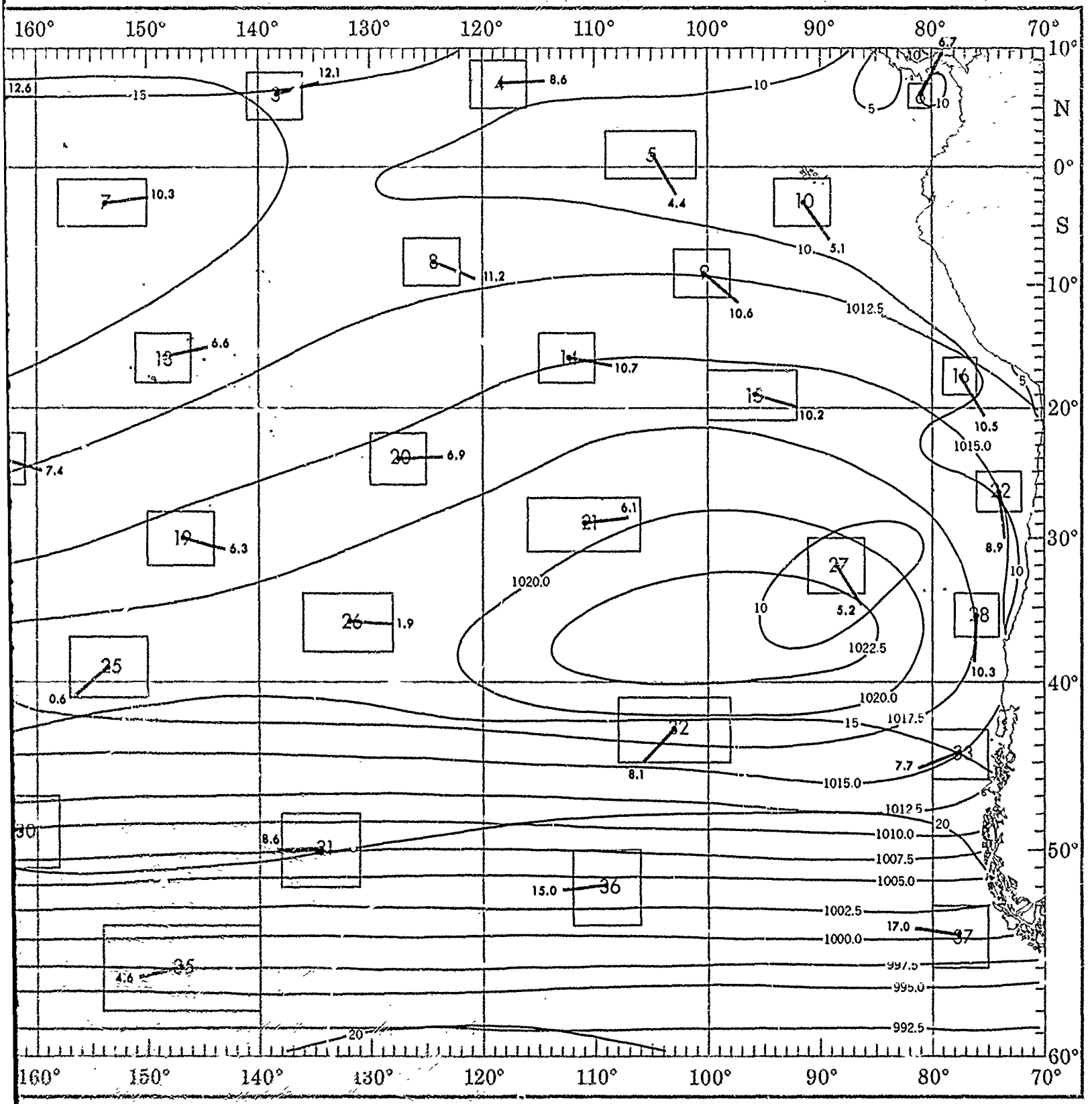
nt the objective compilation of available data for specified areas without regard to suspected biases.
lyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

FEBRUARY

SEA LEVEL PRES

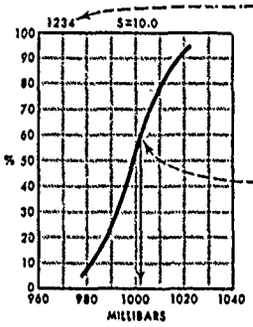


SEA LEVEL PRESSURE AND MEAN WIND



SEA LEVEL PRESSURE

Sea level pressure and mean wind.



Number of observations.

Cumulative percent frequency of sea level pressures equal to or less than the pressure intersected by the curve.

S=Standard deviation of pressure (mbs).

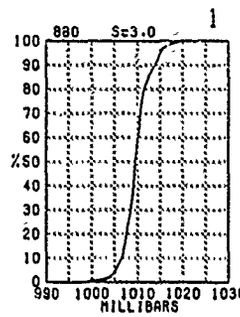
(60% of all observed sea level pressures were ≤1002 millibars.)

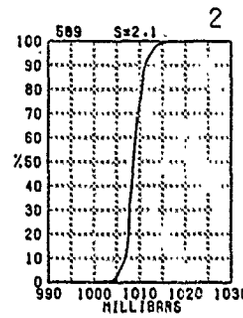
Vector mean wind is plotted from the direction which the mean flow occurs with the magnitude in knots at the end of the vector.

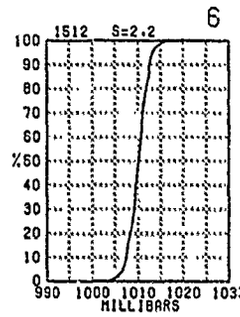
10.2 Vector mean wind is from the northeast at 10.2 knots.

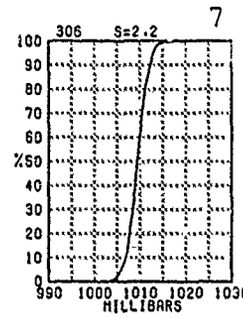
BLUE LINE - Scalar mean wind speed (kts.)

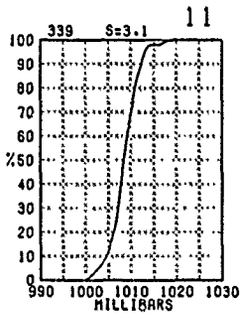
RED LINE - Mean sea level pressure (mbs.)

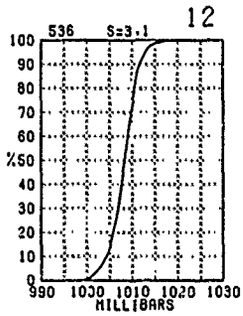


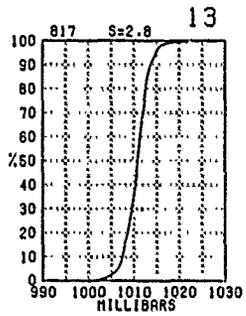


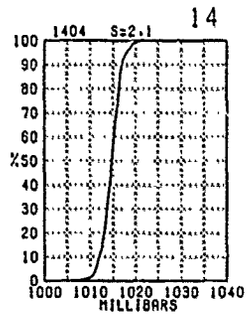


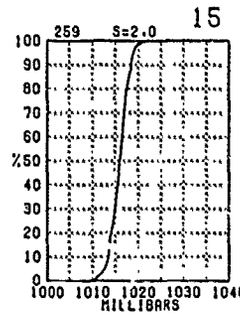


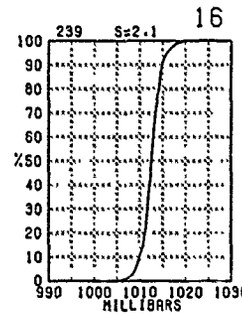


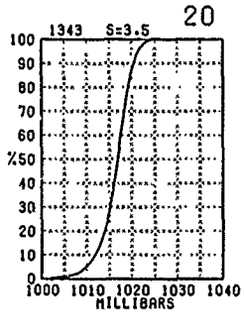


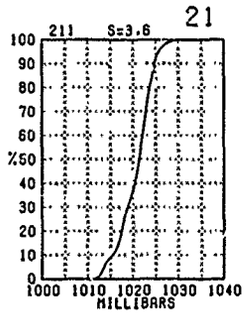


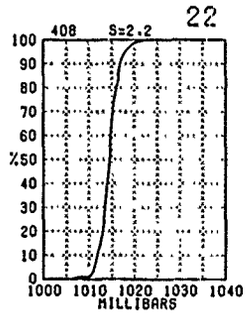


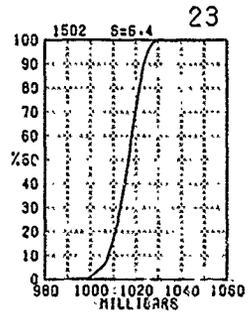


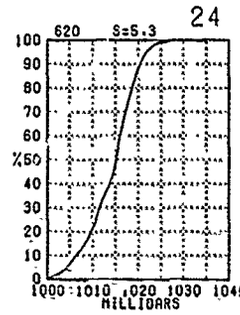


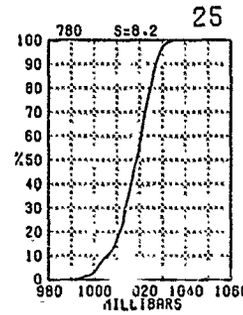


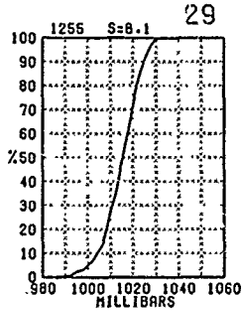


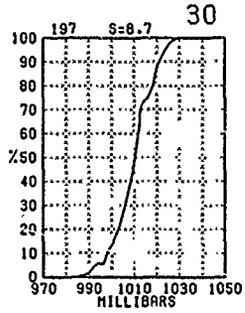


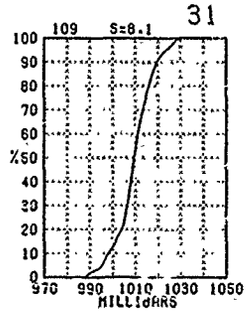


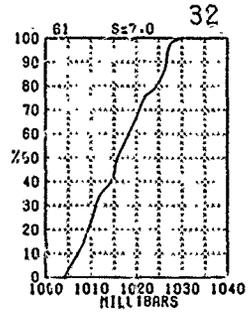


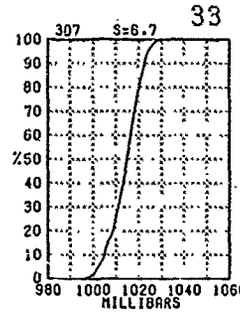


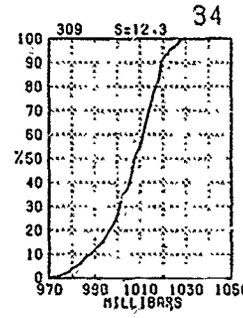






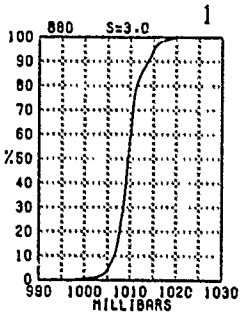


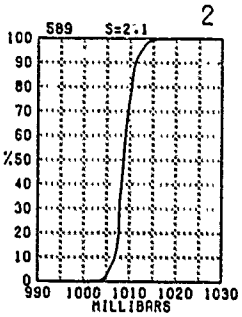


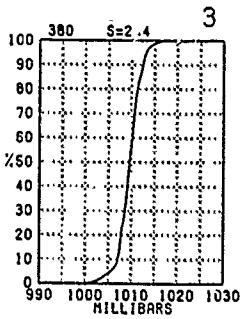


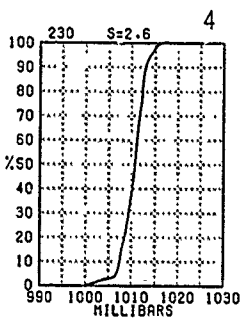
Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

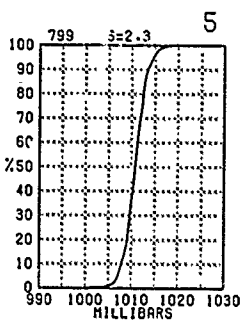
FEBRUARY

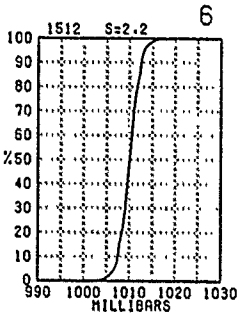


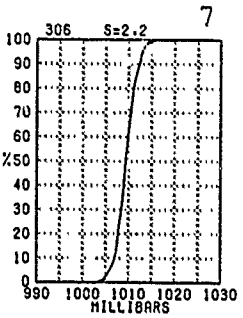


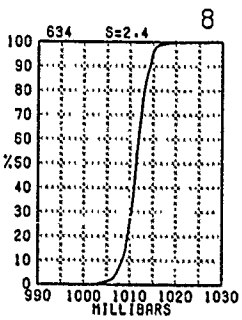


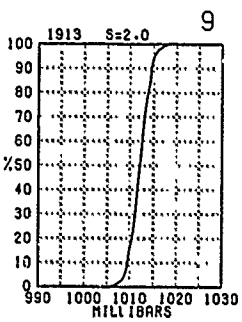


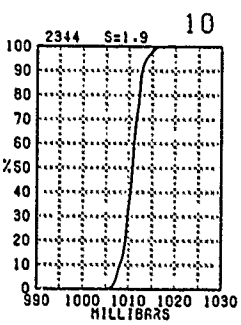


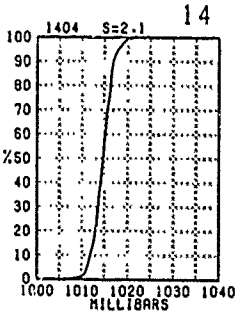


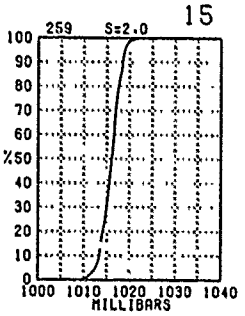


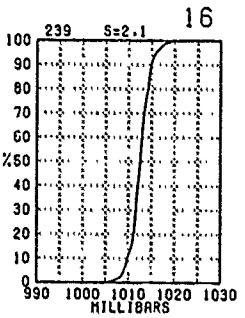


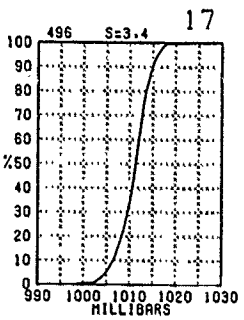


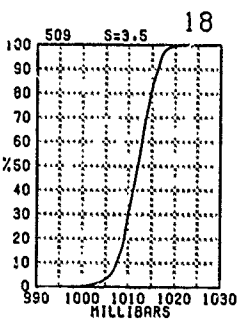


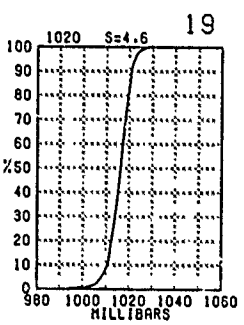


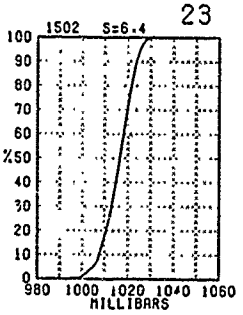


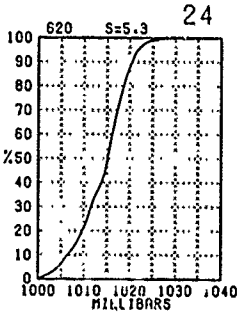


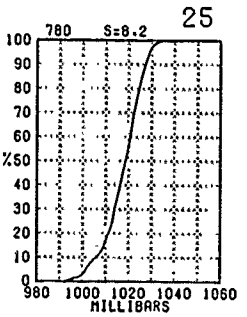


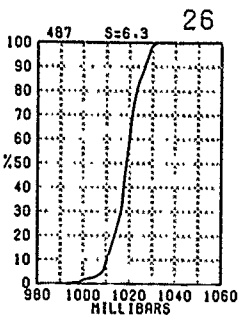


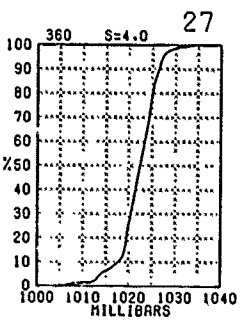


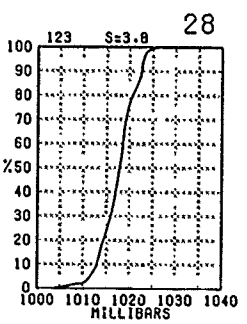


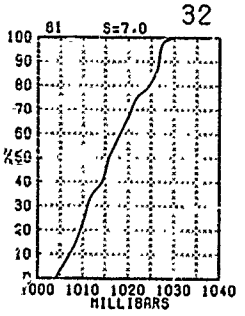


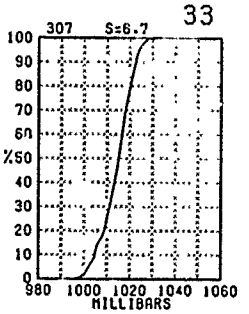


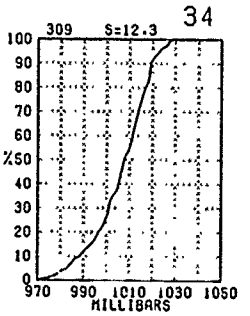


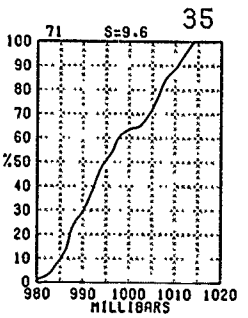


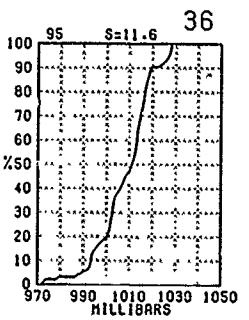


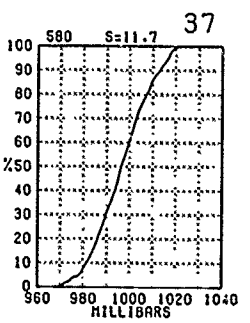












equal to or less than the

flow occurs with the

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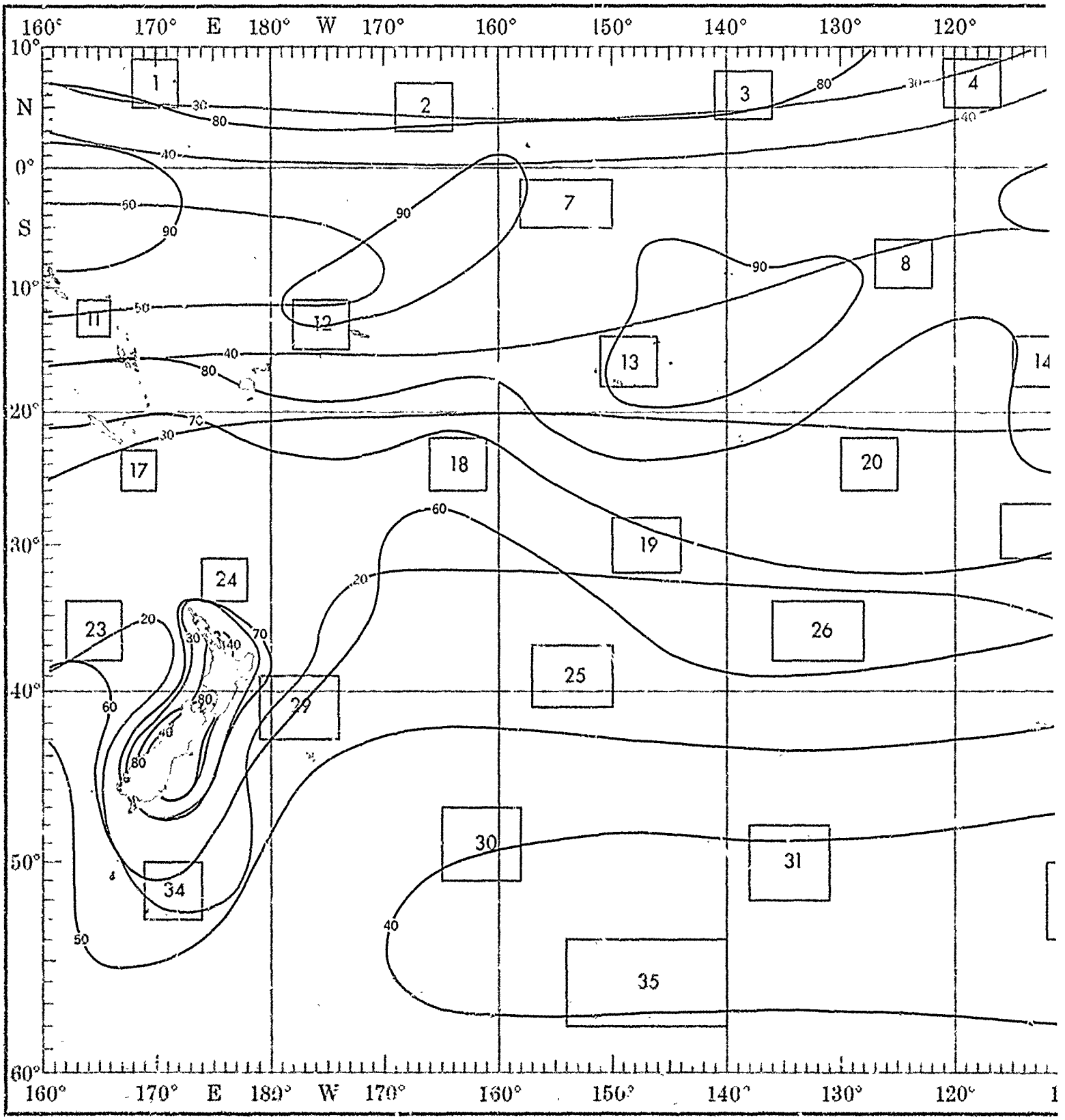
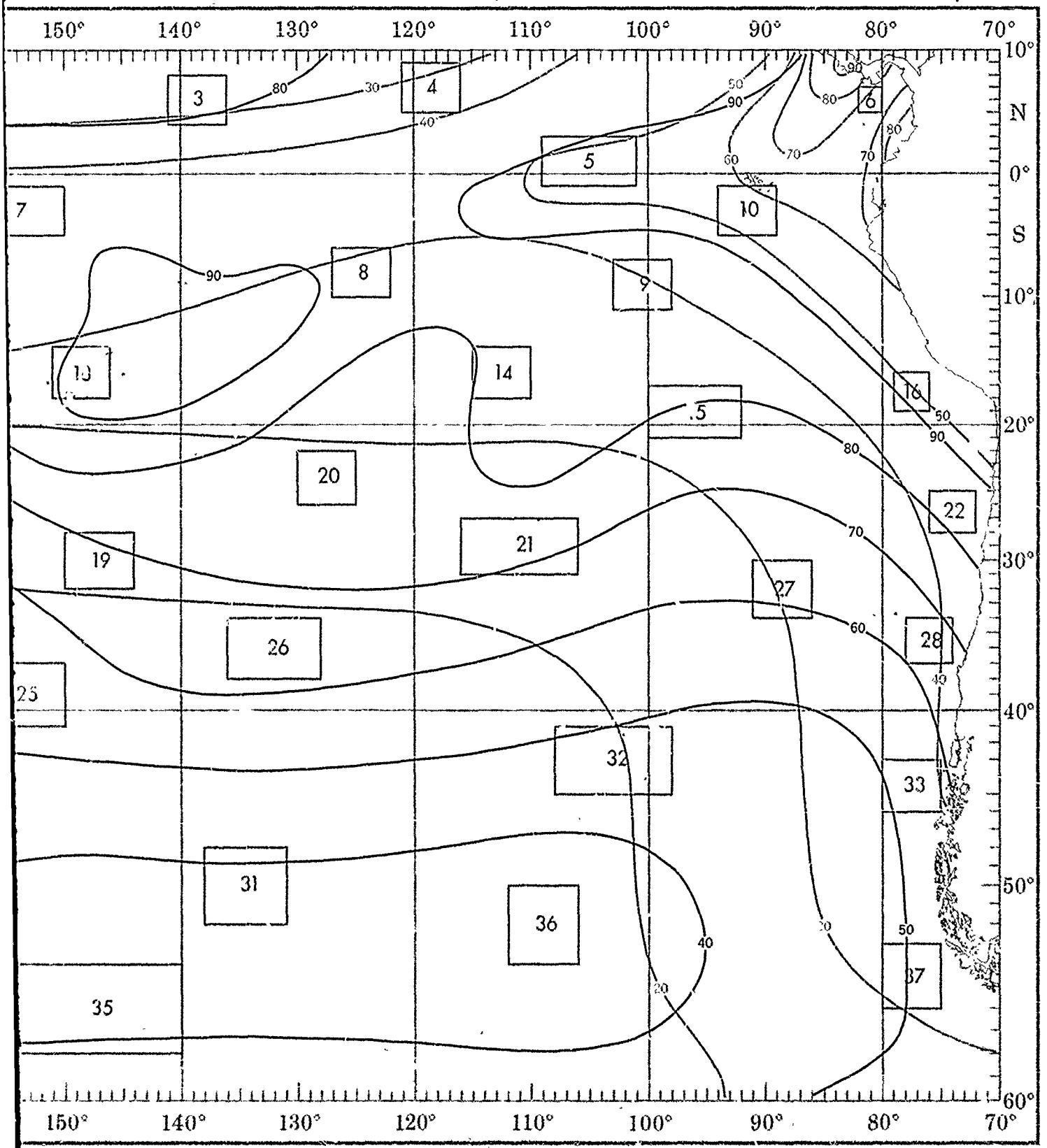
he objective compilation of available data for specified areas without regard to suspected biases.
es (opposite page) are based on all available data subjectively adjusted where bias was evident.

FEBRUARY

WAVES (



WAVES (<1.5 AND <2.5 METERS)

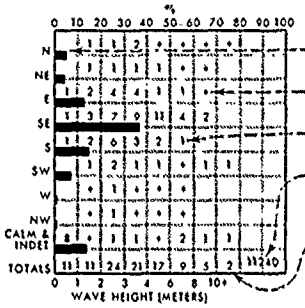


WAVE DIRECTION AND HEIGHT

Wave direction and height.

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



(5% of all waves were from the N.)

indicates < 5% but >0.

(1% of all waves were from the S with heights from 6-7.5 meters.)

Number of observations.

(2% of the waves from all directions had heights ≥10 meters.)

WAVE HEIGHT INTERVAL

Feet	0-2	3-6	7-9	10-12	13-19	20-25	26-32	≥33
Meters	0-.5	1-1.5	2-2.5	3-3.5	4-5.5	6-7.5	8-9.5	≥10

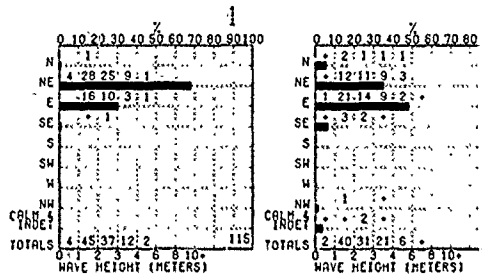
0 1 2 3 4 6 8 10+

Printed scale on bottom of chart

BLUE LINE - Percent frequency of wave height <1.5 meters (5 feet)

RED LINE - Percent frequency of wave height <2.5 meters (8 feet)

1



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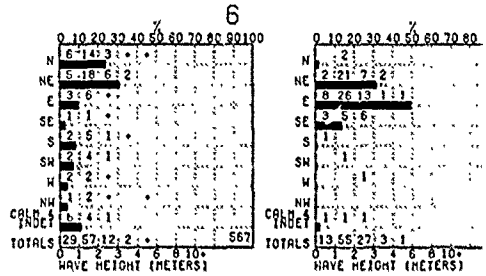

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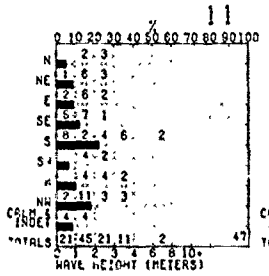

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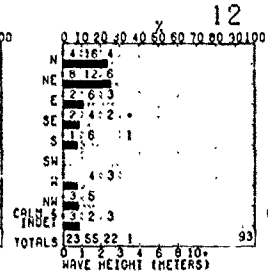

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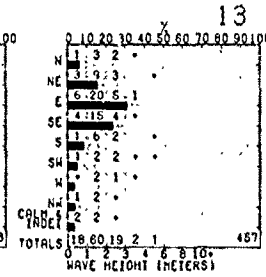

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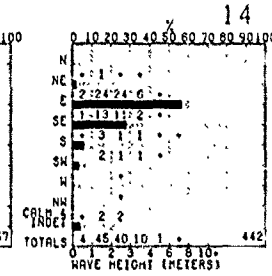

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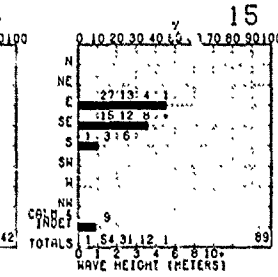

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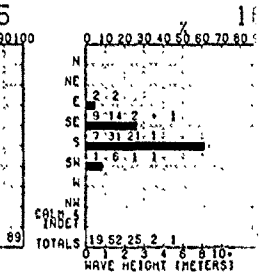

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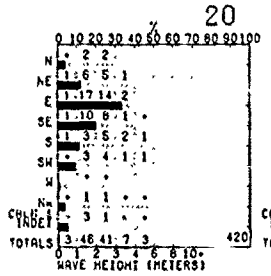

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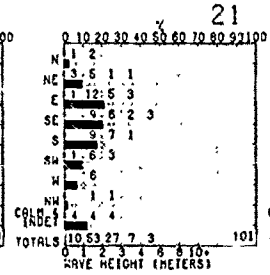

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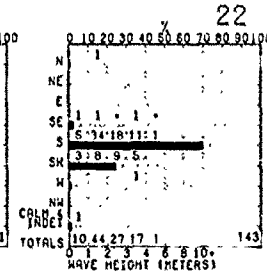

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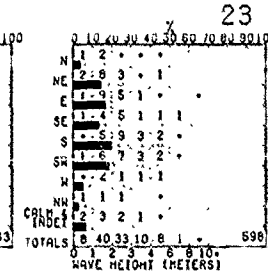

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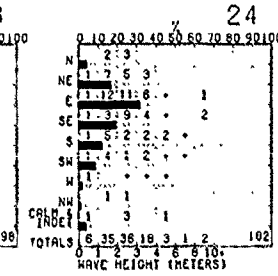

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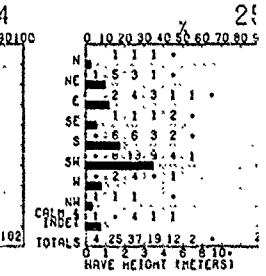

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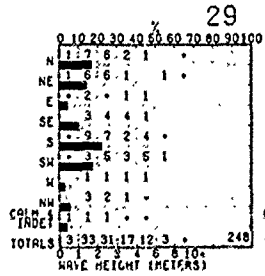

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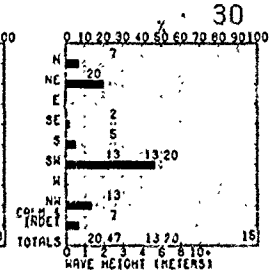


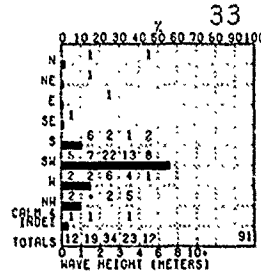
31

INSUFFICIENT DATA

32

INSUFFICIENT DATA

33



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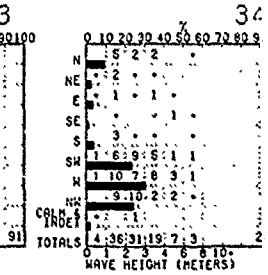


Graphs represent the objective compilation of available data for specified areas without reg
The isopleth analyses (opposite page) are based on all available data subjectively adjusted

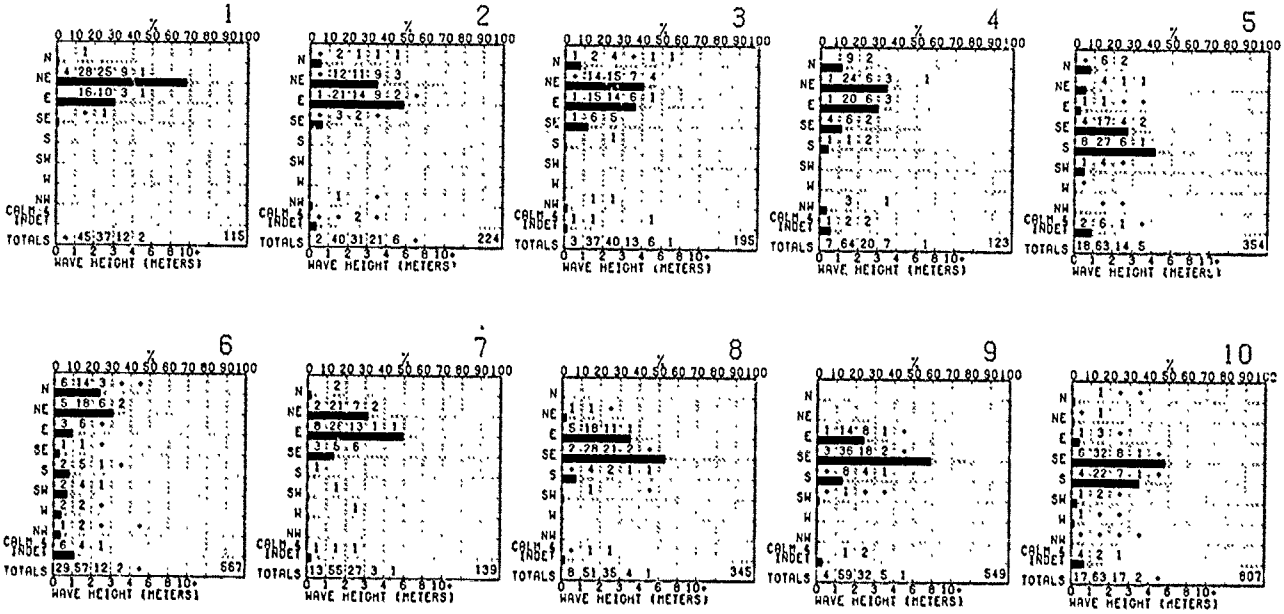
D HEIGHT

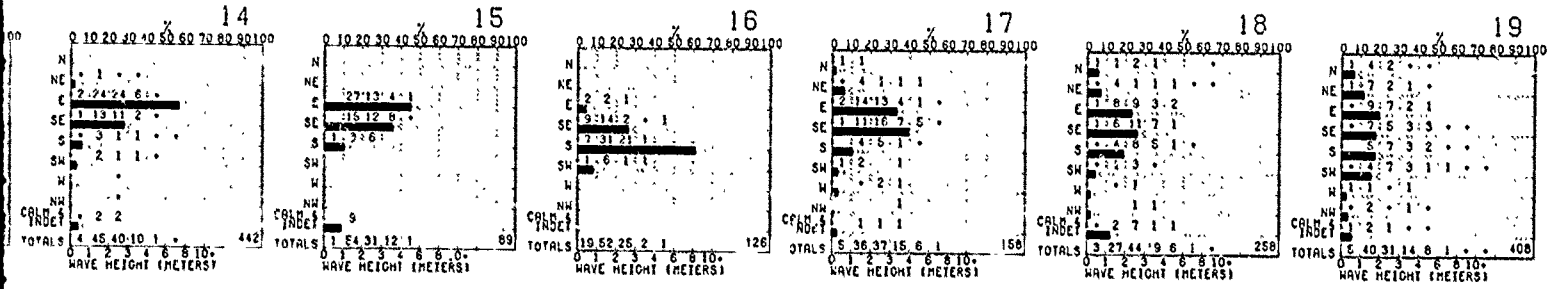
FEBRUARY

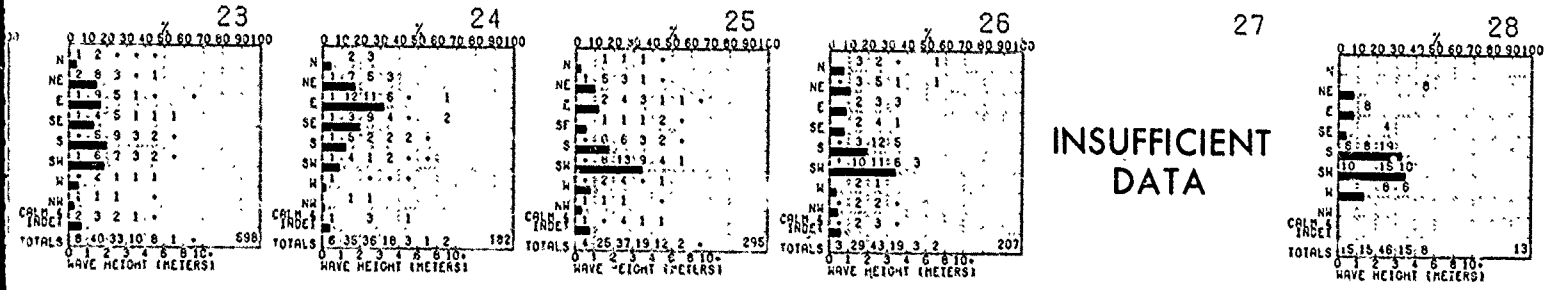
equency of waves from

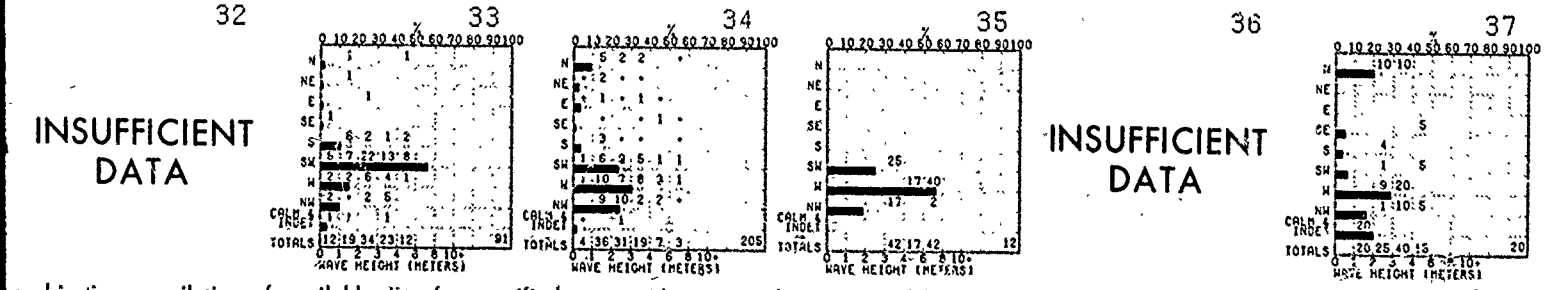
percent frequency of wave

ters)









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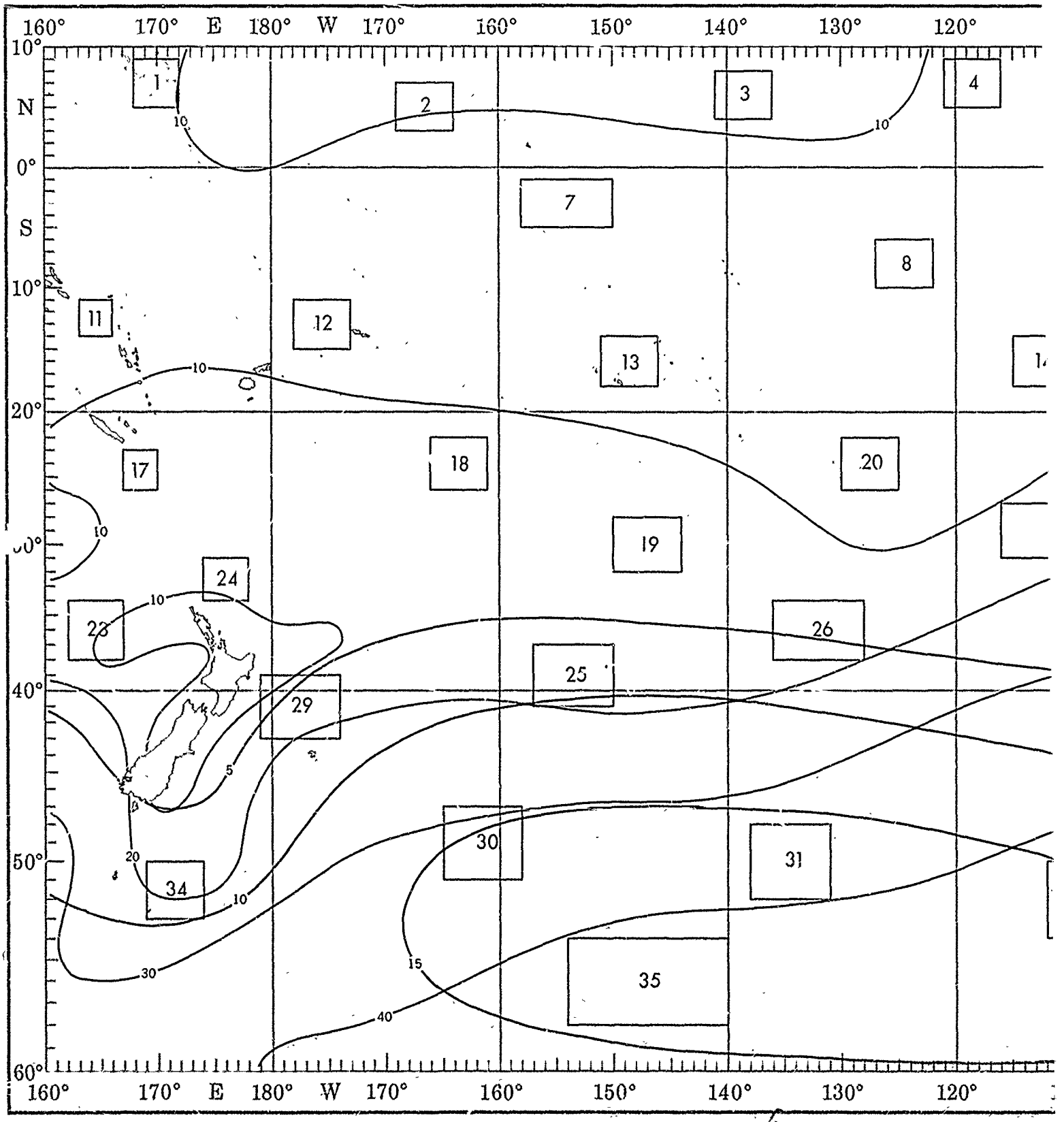
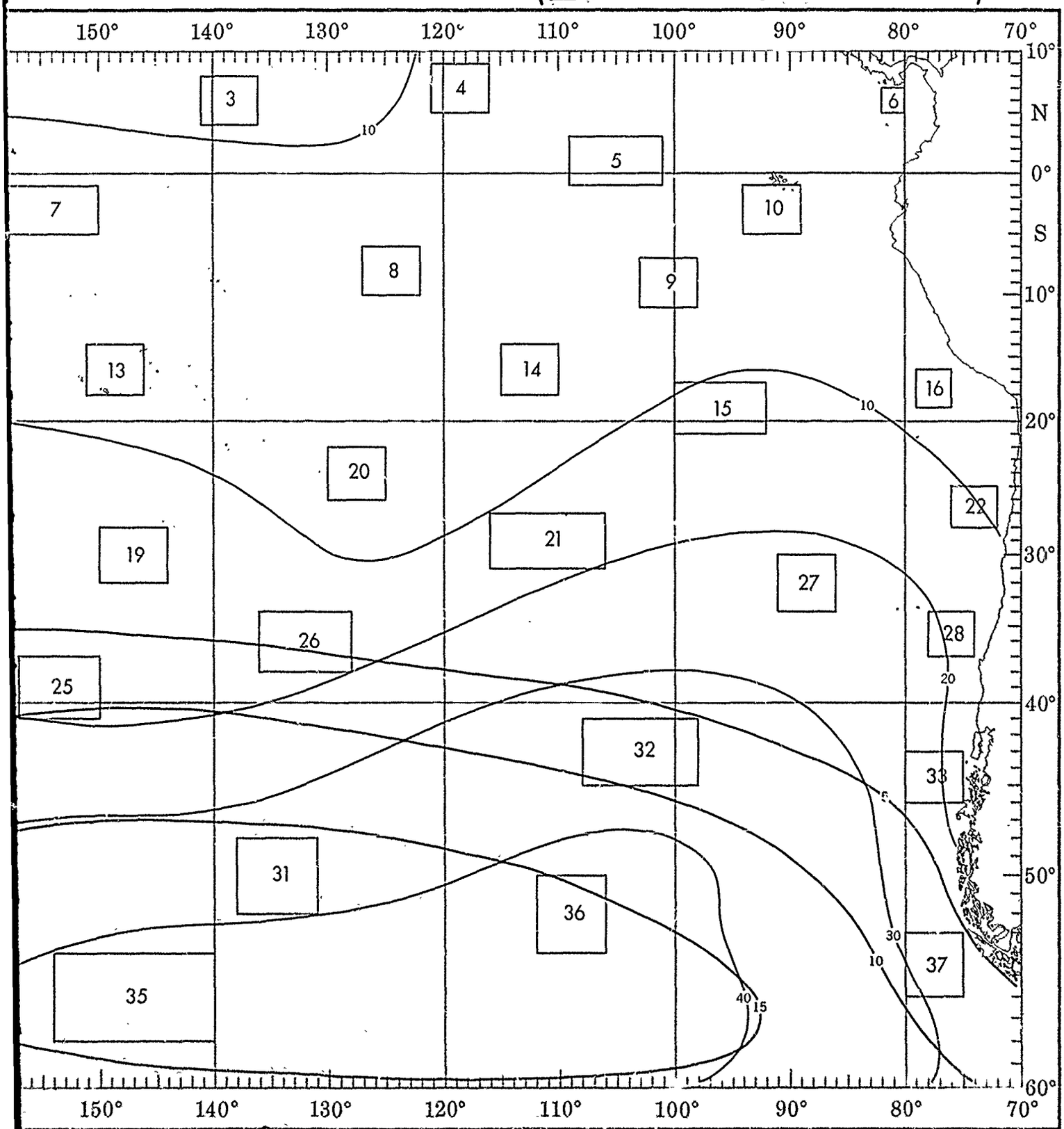
FEBRUARY WAVES



WAVES (≥3.5 AND ≥6 METERS)



WAVE PERIOD AND HEIGHT

Percent frequency of occurrence of wave period and height.

PERIOD (Seconds)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	21	3	1	+	+	+	6
.5-1.5	22	16	6	2	1	+	+
1.5-2.5	3	6	4	3	1	+	+
2.5-3.5	+	1	1	1	1	+	+
3.5-4.5	+	+	+	+	+	+	0
4.5-7.5	0	+	+	0	0	+	0
7.5-9.5	0	0	0	+	0	0	0
≥10	0	0	0	0	0	+	0

4010

—(2% of observed waves had a height of 1-1.5 meters and a period of 10-11 seconds.)

+ indicates <.5% but >0.

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.

BLUE LINE - Percent frequency of wave height ≥3.5 meters (12 feet)

RED LINE - Percent frequency of wave height ≥6 meters (20 feet)

1

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	7	1	0	0	0	0	0
.5-1.5	15	16	5	3	3	2	0
1.5-2.5	5	21	8	0	1	1	0
2.5-3.5	0	4	2	6	0	0	0
3.5-4.5	0	0	1	0	1	0	0
4.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

119

2

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	2	+	0	0	0	0	+
.5-1.5	12	21	3	1	0	0	2
1.5-2.5	5	13	8	2	0	1	1
2.5-3.5	4	8	7	+	1	1	+
3.5-4.5	1	1	1	1	1	+	0
4.5-7.5	0	+	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

226

6

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	21	2	1	1	0	0	8
.5-1.5	28	13	5	1	2	1	5
1.5-2.5	5	4	1	1	+	1	1
2.5-3.5	1	1	1	+	0	0	0
3.5-4.5	0	0	+	0	0	0	0
4.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

587

7

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	11	1	0	0	0	0	1
.5-1.5	19	19	8	5	1	0	4
1.5-2.5	7	9	7	2	1	0	1
2.5-3.5	1	1	1	0	0	0	0
3.5-4.5	0	1	0	0	0	0	0
4.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

139

11

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	14	8	0	0	0	0	4
.5-1.5	22	4	0	0	4	0	12
1.5-2.5	4	10	4	0	0	0	2
2.5-3.5	0	4	6	0	0	0	0
3.5-4.5	0	0	0	0	0	0	0
4.5-7.5	0	2	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

50

12

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	12	2	1	2	0	0	8
.5-1.5	23	12	7	3	6	0	2
1.5-2.5	9	5	4	1	1	0	1
2.5-3.5	0	1	0	0	0	0	0
3.5-4.5	0	0	0	0	0	0	0
4.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

94

13

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	14	2	1	1	0	0	2
.5-1.5	20	20	11	2	3	0	3
1.5-2.5	3	7	4	3	+	1	+
2.5-3.5	0	+	+	+	+	+	0
3.5-4.5	0	+	+	1	0	0	0
4.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

470

14

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	4	+	0	0	0	0	+
.5-1.5	20	18	2	2	+	1	2
1.5-2.5	11	15	8	2	0	1	3
2.5-3.5	1	5	4	1	0	+	0
3.5-4.5	0	+	+	0	0	0	0
4.5-7.5	0	0	0	0	0	+	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

443

15

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	1	0	0	0	0	0	0
.5-1.5	27	7	11	1	0	0	6
1.5-2.5	6	17	2	3	0	3	0
2.5-3.5	3	2	7	0	0	0	0
3.5-4.5	1	0	0	0	0	0	0
4.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

89

16

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	10	3	1	2	0	0	3
.5-1.5	20	18	5	2	2	0	5
1.5-2.5	2	8	9	2	2	1	2
2.5-3.5	0	0	1	2	0	0	0
3.5-4.5	0	0	0	0	0	0	1
4.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

127

20

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	4	0	0	0	0	0	+
.5-1.5	22	11	3	3	2	+	4
1.5-2.5	7	17	9	3	2	2	1
2.5-3.5	1	2	3	1	+	0	0
3.5-4.5	0	+	1	+	+	+	+
4.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

427

21

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	8	0	0	0	0	0	5
.5-1.5	14	15	13	4	1	0	4
1.5-2.5	4	9	8	3	0	0	3
2.5-3.5	1	4	1	0	1	0	0
3.5-4.5	3	0	0	0	0	0	0
4.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

104

22

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	5	3	3	1	0	0	2
.5-1.5	20	11	7	2	1	0	1
1.5-2.5	1	7	12	3	2	1	0
2.5-3.5	2	0	9	2	0	1	3
3.5-4.5	0	0	1	0	0	0	0
4.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

146

23

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	8	1	1	+	0	0	2
.5-1.5	14	16	4	2	2	+	2
1.5-2.5	4	13	8	5	2	1	2
2.5-3.5	1	3	2	2	1	1	1
3.5-4.5	+	2	4	1	+	1	+
4.5-7.5	0	+	1	0	0	0	+
7.5-9.5	0	+	0	0	0	0	0
≥10	0	0	0	0	0	0	0

504

24

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	7	0	0	0	0	0	2
.5-1.5	14	13	3	1	1	0	2
1.5-2.5	4	20	1	4	2	2	3
2.5-3.5	3	6	3	3	2	1	0
3.5-4.5	0	1	1	1	1	1	0
4.5-7.5	0	1	0	0	0	0	0
7.5-9.5	0	0	2	0	0	0	0
≥10	0	0	0	0	0	0	0

188

25

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	4	+	0	0	0	0	1
.5-1.5	10	8	1	3	2	+	1
1.5-2.5	5	12	9	4	3	0	4
2.5-3.5	0	4	8	3	1	2	1
3.5-4.5	0	2	3	5	1	1	1
4.5-7.5	0	+	2	0	+	0	0
7.5-9.5	0	0	0	0	0	0	+
≥10	0	0	0	0	0	0	0

300

29

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	2	+	0	0	0	0	1
.5-1.5	16	11	4	2	1	0	+
1.5-2.5	9	10	8	2	+	+	1
2.5-3.5	2	5	6	3	1	0	+
3.5-4.5	+	3	3	4	2	+	+
4.5-7.5	0	0	0	0	1	2	0
7.5-9.5	0	0	0	0	0	+	0
≥10	0	0	0	0	0	0	0

249

30

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	0	0	0	0	0	0	0
.5-1.5	0	20	0	0	0	0	0
1.5-2.5	20	13	7	0	0	0	7
2.5-3.5	0	0	0	0	0	0	0
3.5-4.5	0	0	0	13	0	0	0
4.5-7.5	0	0	20	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

15

31

INSUFFICIENT DATA

32

INSUFFICIENT DATA

33

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	6	4	0	0	0	0	3
.5-1.5	9	6	1	1	0	0	1
1.5-2.5	1	9	11	6	0	1	5
2.5-3.5	3	5	8	3	0	1	2
3.5-4.5	2	1	1	1	0	0	6
4.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

93

34

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	1	1	1	+	0	0	+
.5-1.5	15	12	4	1	3	0	0
1.5-2.5	6	11	10	2	+	1	+
2.5-3.5	2	7	5	2	1	0	0
3.5-4.5	+	2	2	2	0	+	0
4.5-7.5	0	1	0	1	1	+	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

205

Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

EIGHT

FEBRUARY

seconds.)

both are reported. If both

1

HEIGHT (NTAB)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	7	1	0	0	0	0	0
1-1.5	15	16	5	3	3	2	0
2-2.5	5	21	8	0	1	1	0
3-3.5	0	4	2	6	0	0	0
4-4.5	0	0	1	0	1	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

119

2

HEIGHT (NTAB)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	2	+	0	0	0	0	+
1-1.5	12	21	3	1	0	0	2
2-2.5	5	13	8	2	0	1	1
3-3.5	4	8	7	+	1	1	+
4-4.5	1	1	1	1	1	+	0
5-7.5	0	+	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

226

3

HEIGHT (NTAB)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	2	1	0	0	0	0	1
1-1.5	14	16	4	1	1	1	2
2-2.5	7	15	7	8	3	1	1
3-3.5	2	4	4	1	2	1	1
4-4.5	0	1	0	3	1	0	1
5-7.5	0	0	0	1	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

198

4

HEIGHT (NTAB)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	5	1	0	1	0	0	1
1-1.5	22	23	7	7	2	1	2
2-2.5	2	8	3	2	0	3	2
3-3.5	1	6	0	0	1	0	0
4-4.5	0	0	0	0	0	0	0
5-7.5	0	1	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

124

5

HEIGHT (NTAB)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	13	3	0	+	0	0	3
1-1.5	16	24	8	3	3	2	6
2-2.5	2	7	3	1	1	0	1
3-3.5	0	3	+	1	0	0	+
4-4.5	0	0	0	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

360

6

HEIGHT (NTAB)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	21	2	1	1	0	0	6
1-1.5	28	13	5	1	2	1	5
2-2.5	5	4	1	1	+	1	1
3-3.5	1	1	1	+	0	0	0
4-4.5	0	0	+	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

587

7

HEIGHT (NTAB)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	11	1	0	0	0	0	1
1-1.5	19	19	8	5	1	0	4
2-2.5	7	9	7	2	1	0	1
3-3.5	1	1	1	0	0	0	0
4-4.5	0	1	0	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

139

8

HEIGHT (NTAB)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	8	+	0	+	0	0	1
1-1.5	20	20	7	1	1	0	1
2-2.5	5	12	9	5	1	+	2
3-3.5	0	1	2	+	1	+	0
4-4.5	0	0	1	0	0	+	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

347

9

HEIGHT (NTAB)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	4	1	0	+	0	0	+
1-1.5	27	21	6	1	2	1	2
2-2.5	9	11	6	+	+	2	2
3-3.5	+	2	3	+	0	0	0
4-4.5	0	0	+	+	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

552

10

HEIGHT (NTAB)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	12	3	1	+	0	0	3
1-1.5	27	20	8	2	2	+	3
2-2.5	3	8	4	1	1	1	1
3-3.5	+	+	1	+	0	0	0
4-4.5	+	0	0	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

825

14

HEIGHT (NTAB)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	4	+	0	0	0	0	+
1-1.5	20	18	2	2	+	1	2
2-2.5	11	15	8	2	0	1	3
3-3.5	1	6	4	1	0	+	0
4-4.5	0	+	+	0	0	0	0
5-7.5	0	0	0	0	0	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

443

15

HEIGHT (NTAB)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	1	0	0	0	0	0	0
1-1.5	27	7	11	1	0	0	6
2-2.5	6	17	2	3	0	3	0
3-3.5	3	2	7	0	0	0	0
4-4.5	1	0	0	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

89

16

HEIGHT (NTAB)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	10	3	1	2	0	0	3
1-1.5	20	18	5	2	2	0	5
2-2.5	2	8	9	2	2	1	2
3-3.5	0	0	1	2	0	0	0
4-4.5	0	0	0	0	0	0	1
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

127

17

HEIGHT (NTAB)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	5	1	1	0	0	0	0
1-1.5	19	11	3	4	0	1	1
2-2.5	8	8	16	4	0	1	2
3-3.5	1	5	4	2	2	1	1
4-4.5	1	2	2	1	0	1	1
5-7.5	0	0	1	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

161

18

HEIGHT (NTAB)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	4	+	1	0	0	0	+
1-1.5	10	8	2	1	+	1	3
2-2.5	3	12	14	3	1	1	8
3-3.5	2	5	5	4	+	+	2
4-4.5	0	2	2	+	+	0	1
5-7.5	0	0	+	0	0	+	0
8-9.5	0	0	0	0	0	+	0
≥10	0	0	0	0	0	0	0

284

19

HEIGHT (NTAB)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	4	+	0	0	0	0	2
1-1.5	16	15	4	1	1	+	2
2-2.5	4	11	7	3	1	1	2
3-3.5	3	4	4	1	1	1	+
4-4.5	+	1	4	1	0	1	+
5-7.5	0	+	1	+	0	0	0
8-9.5	0	0	+	0	0	+	0
≥10	0	0	0	0	0	+	0

414

23

HEIGHT (NTAB)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	6	1	1	+	0	0	2
1-1.5	14	15	4	2	2	+	2
2-2.5	4	13	6	5	2	1	2
3-3.5	1	3	2	2	1	1	1
4-4.5	+	2	4	1	+	1	+
5-7.5	0	+	1	0	0	0	+
8-9.5	0	+	0	0	0	0	0
≥10	0	0	0	0	0	0	0

604

24

HEIGHT (NTAB)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	7	0	0	0	0	0	2
1-1.5	14	13	3	1	1	0	2
2-2.5	4	20	1	4	2	2	3
3-3.5	3	6	3	3	2	1	0
4-4.5	0	1	1	1	1	1	0
5-7.5	0	1	0	0	0	0	0
8-9.5	0	0	2	0	0	0	0
≥10	0	0	0	0	0	0	0

166

25

HEIGHT (NTAB)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	4	+	0	0	0	0	1
1-1.5	10	8	1	3	2	+	1
2-2.5	5	12	9	4	3	0	4
3-3.5	0	4	8	3	1	2	1
4-4.5	0	2	3	5	1	1	1
5-7.5	0	+	2	0	+	0	0
8-9.5	0	0	0	0	0	0	+
≥10	0	0	0	0	0	0	0

300

26

HEIGHT (NTAB)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	2	1	0	0	0	0	+
1-1.5	9	10	6	+	1	0	2
2-2.5	4	11	14	5	2	0	7
3-3.5	0	5	6	4	1	2	+
4-4.5	0	0	1	1	0	1	0
5-7.5	0	2	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

209

27

INSUFFICIENT DATA

28

HEIGHT (NTAB)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	15	0	0	0	0	0	0
1-1.5	8	0	6	0	0	0	0
2-2.5	0	31	8	0	8	0	0
3-3.5	0	0	8	0	8	0	0
4-4.5	0	0	8	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

13

32

INSUFFICIENT DATA

33

HEIGHT (NTAB)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	6	4	0	0	0	0	3
1-1.5	9	6	1	1	0	0	1
2-2.5	[illegible]	9	11	3	0	1	5
3-3.5	3	5	8	3	0	1	2
4-4.5	2	1	1	1	0	0	6
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

33

34

HEIGHT (NTAB)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	1	1	1	+	0	0	+
1-1.5	15	12	4	1	3	0	0
2-2.5	6	11	10	2	+	1	+
3-3.5	2	7	6	2	1	0	0
4-4.5	+	2	2	2	0	+	0
5-7.5	0	1	0	1	1	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

208

35

HEIGHT (NTAB)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	0	0	0	0	0	0	0
1-1.5	0	0	0	0	0	0	0
2-2.5	0	0	0	0	0	0	0
3-3.5	0	17	25	0	0	0	0
4-4.5	0	0	8	8	0	0	0
5-7.5	0	0	17	25	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

12

36

INSUFFICIENT DATA

37

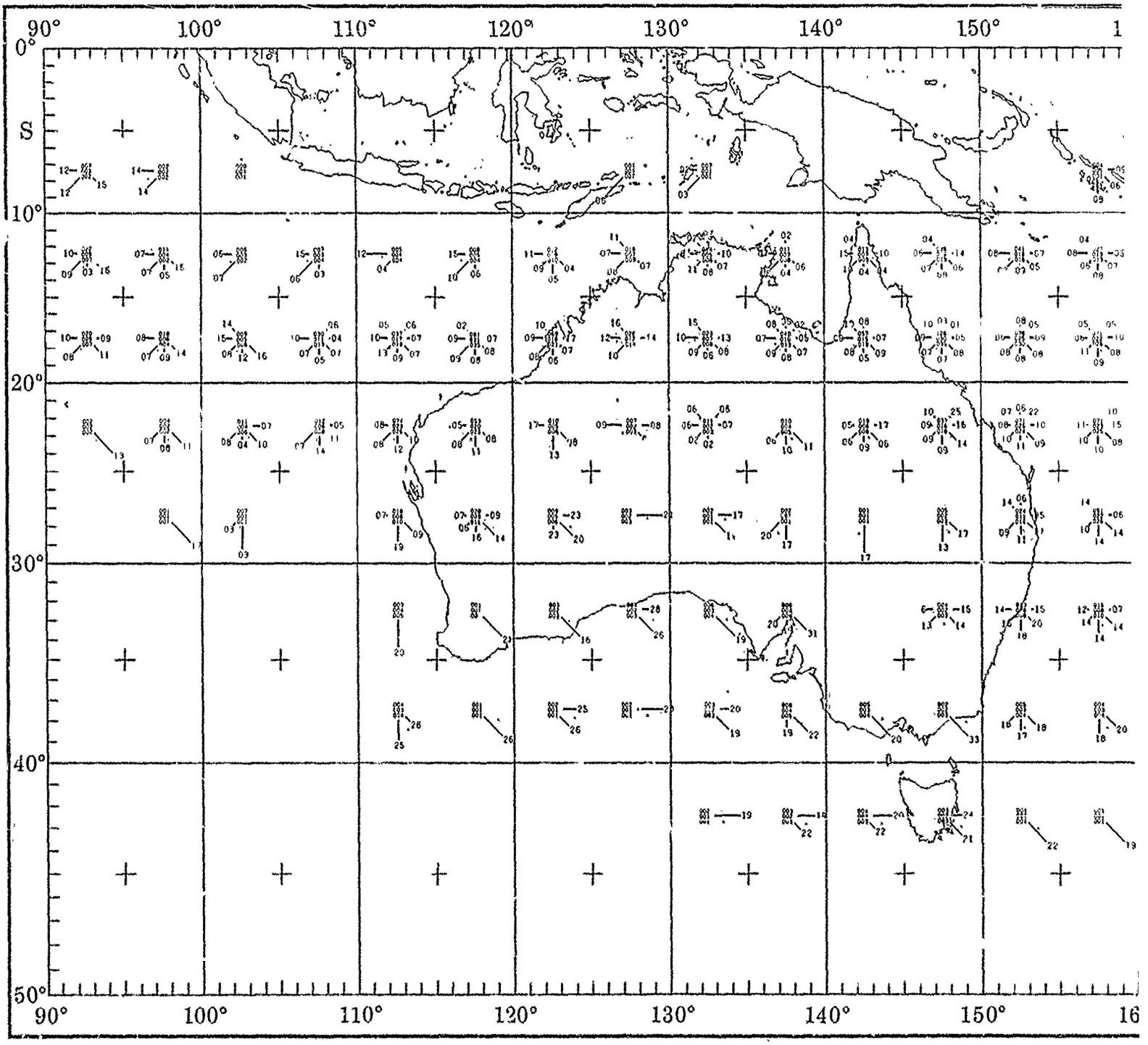
HEIGHT (NTAB)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	0	0	0	0	0	0	0
1-1.5	0	0	0	0	0	0	20
2-2.5	15	5	0	0	0	0	5
3-3.5	25	0	10	5	0	0	0
4-4.5	0	0	10	0	0	5	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

20

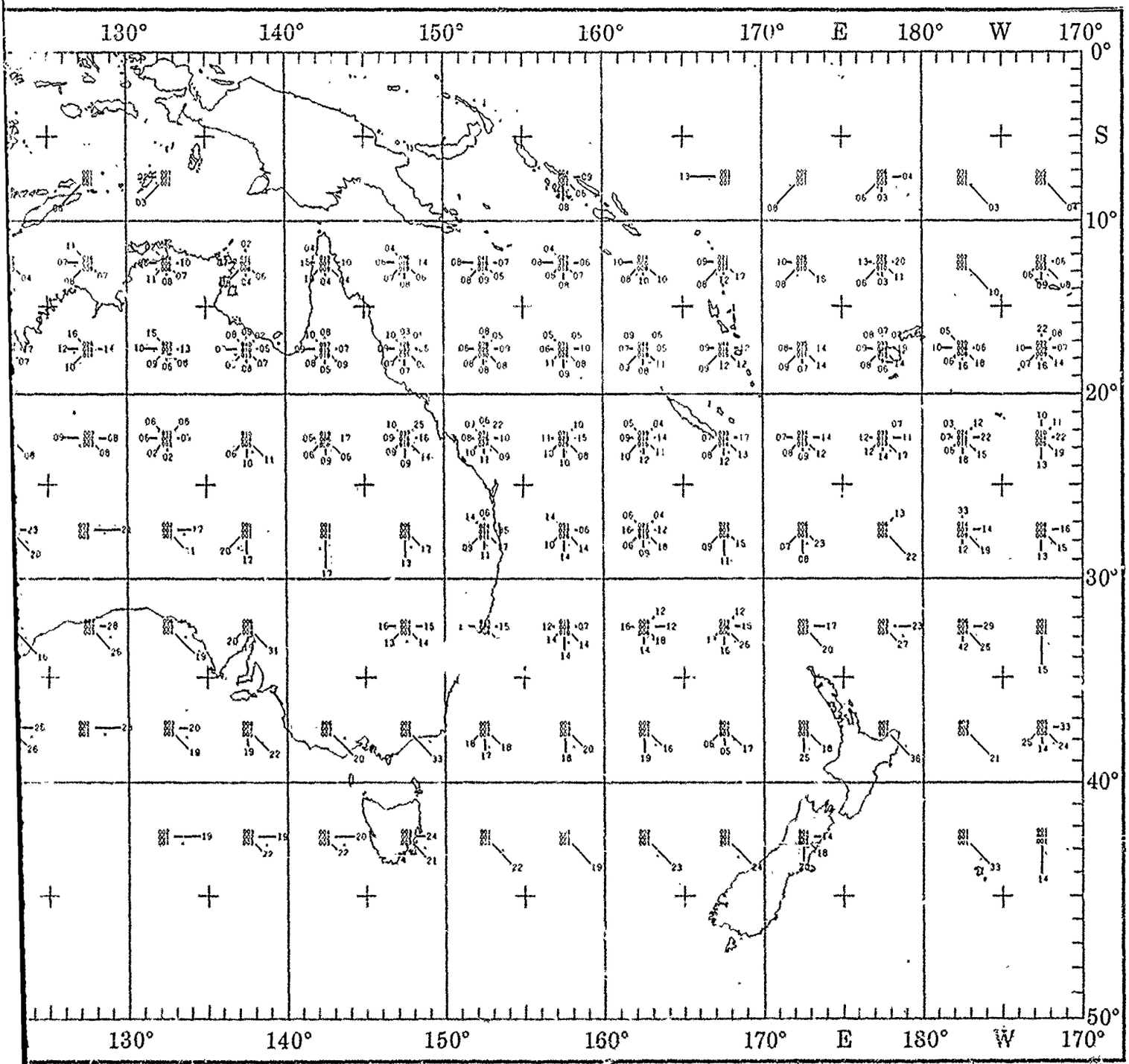
the objective compilation of available data for specified areas without regard to suspected biases.
ses (opposite page) are based on all available data subjectively adjusted where bias was evident.

4 1 2

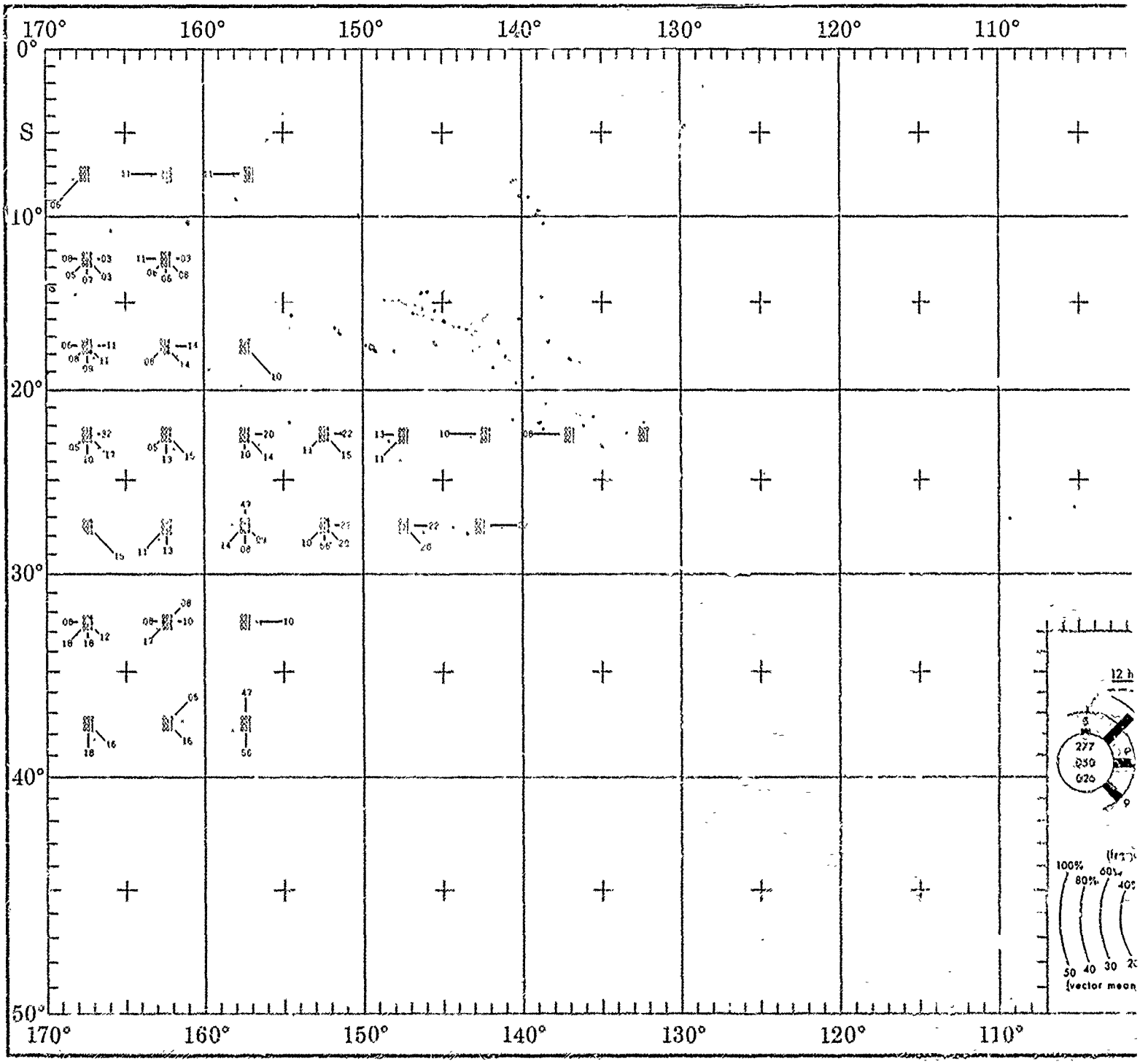
FEBRUARY



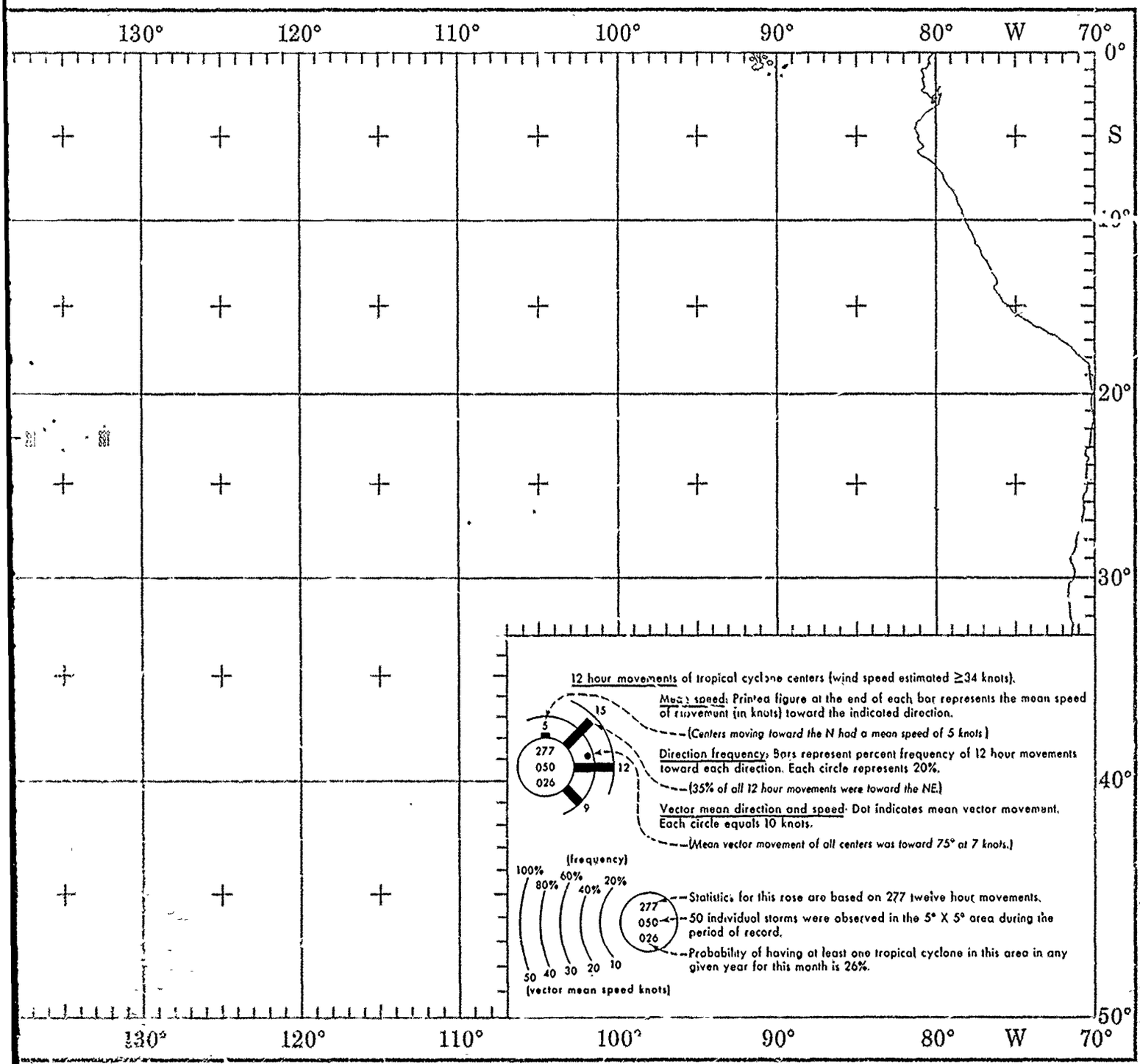
TROPICAL CYCLONE



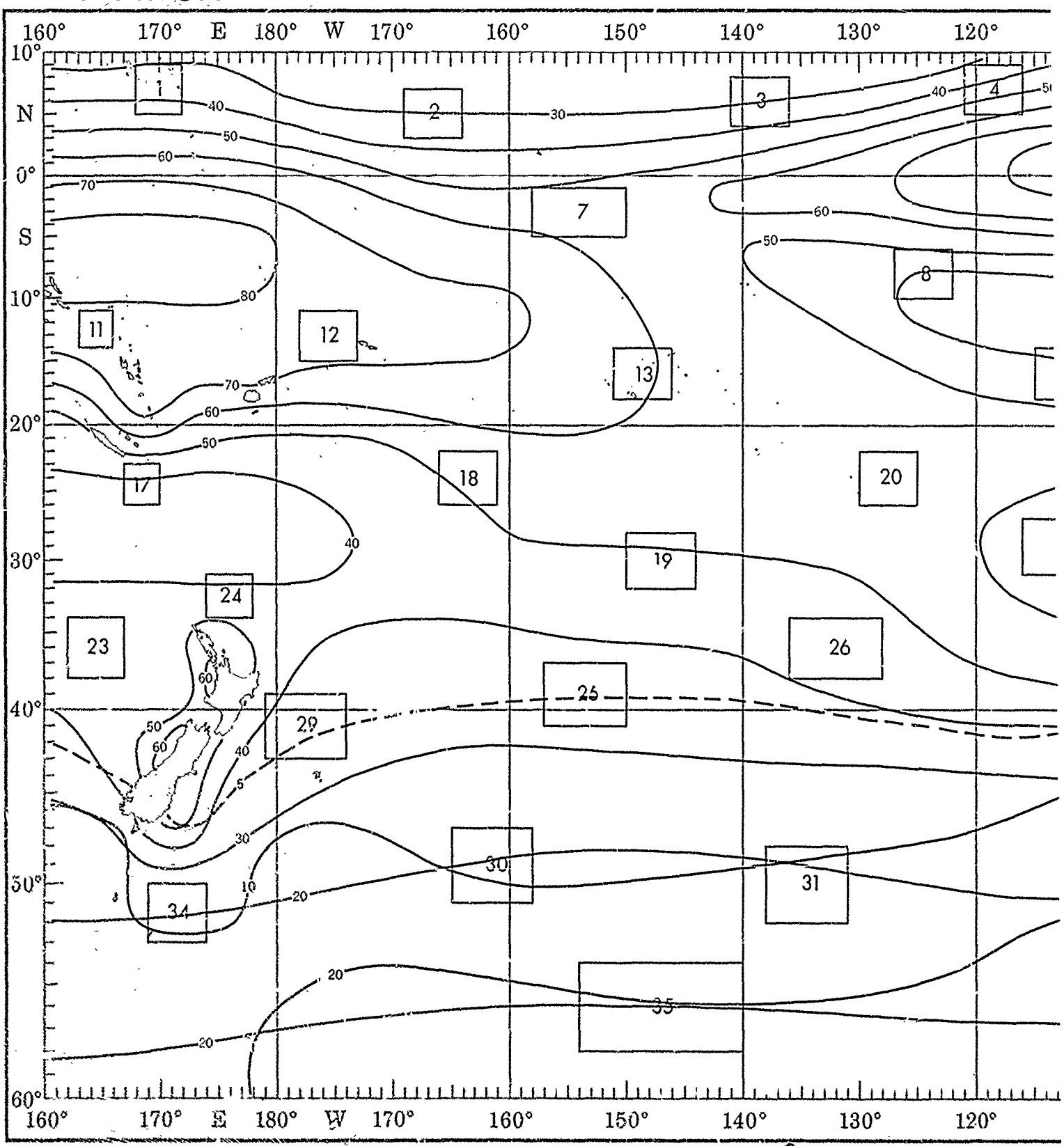
TROPICAL CYCLONE



FEBRUARY


130°
120°
110°
100°
90°
80°
W
70°
0°
S
10°
20°
30°
40°
50°
12 hour movements of tropical cyclone centers (wind speed estimated ≥34 knots).
Mean speed: Printed figure at the end of each bar represents the mean speed of movement (in knots) toward the indicated direction.
(Centers moving toward the N had a mean speed of 5 knots.)
Direction frequency: Bars represent percent frequency of 12 hour movements toward each direction. Each circle represents 20%.
(35% of all 12 hour movements were toward the NE.)
Vector mean direction and speed: Dot indicates mean vector movement. Each circle equals 10 knots.
(Mean vector movement of all centers was toward 75° at 7 knots.)
5
15
12
9
277
050
026
(frequency)
100%
80%
60%
40%
20%
50 40 30 20 10
(vector mean speed knots)
Statistics for this rose are based on 277 twelve hour movements.
50 individual storms were observed in the 5° X 5° area during the period of record.
Probability of having at least one tropical cyclone in this area in any given year for this month is 26%.

MARCH


160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N 0° S 10° 20° 30° 40° 50° 60°
1
2
3
4
7
8
11
12
13
17
18
19
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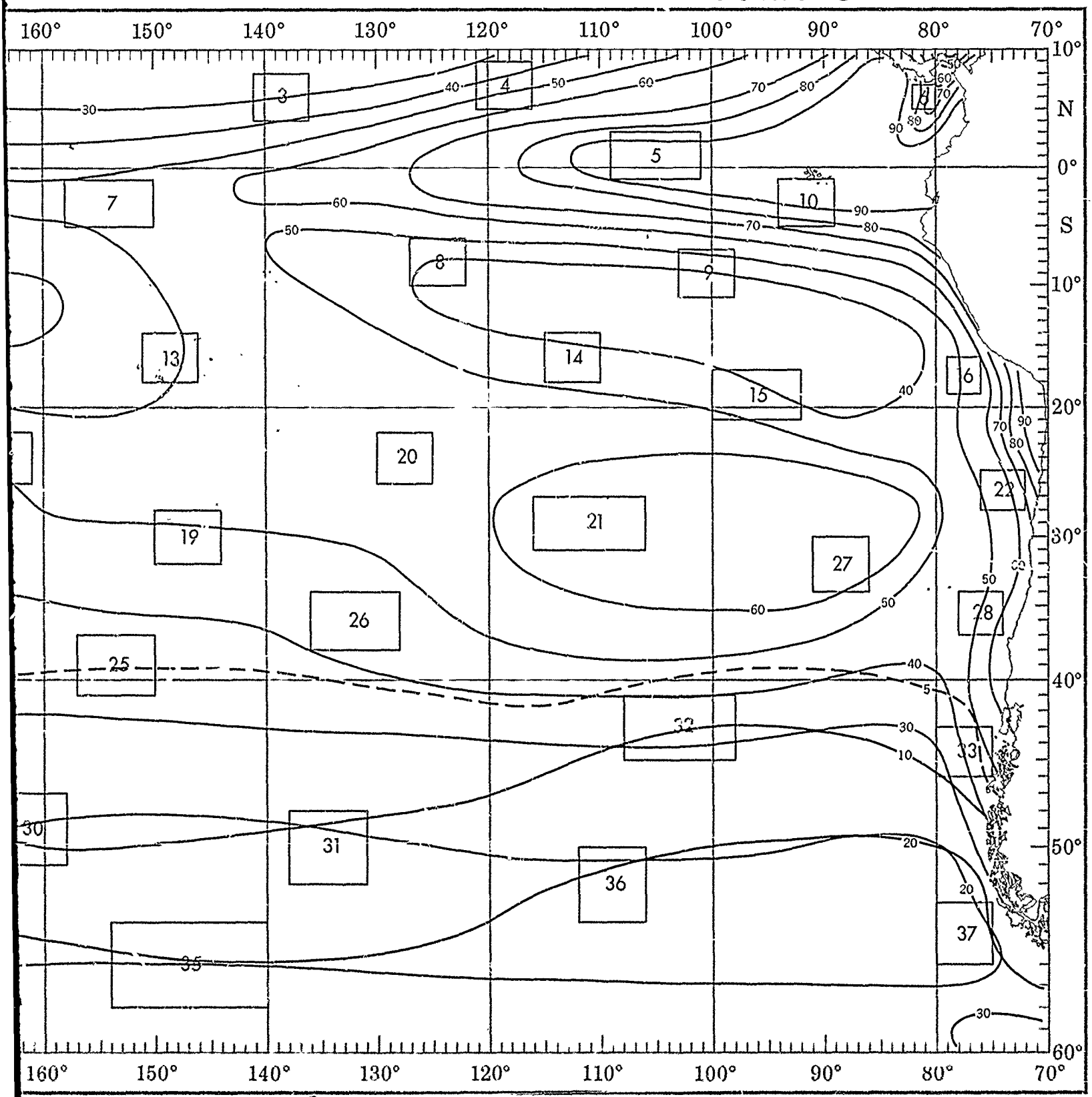
30
10
20
5

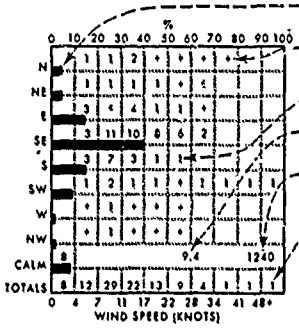
SURFACE WINDS



1 1 2

WIND DIRECTION AND SPEED

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.



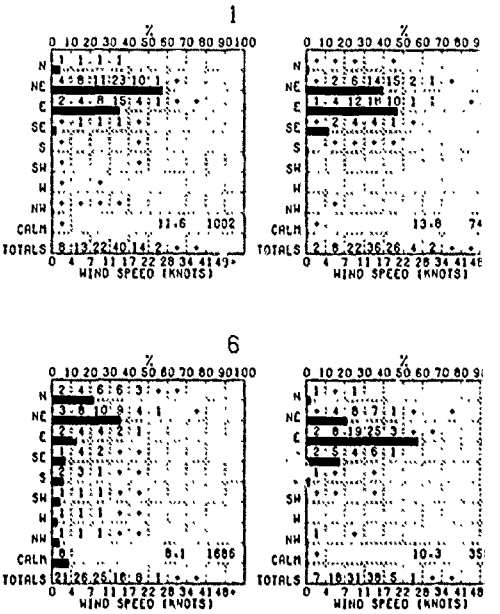
WIND SPEED INTERVAL (KNOTS)

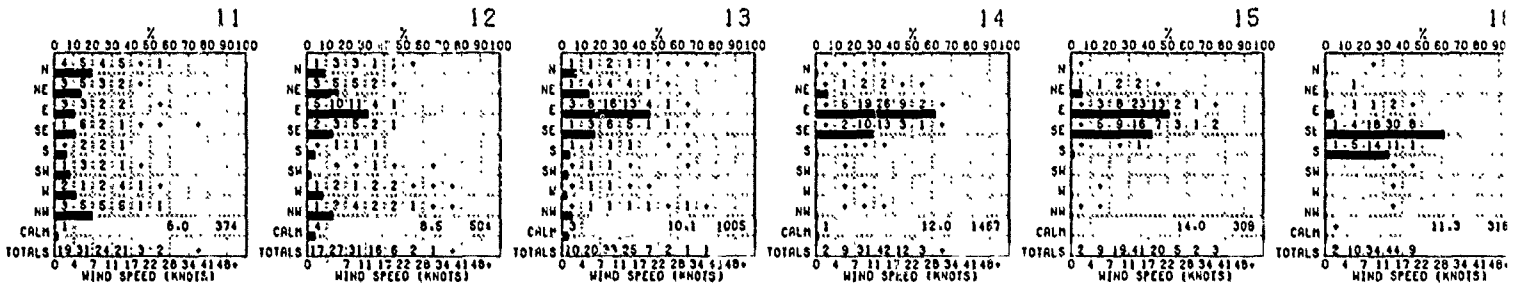
0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	≥48
0	4	7	11	17	22	28	34	41	48+

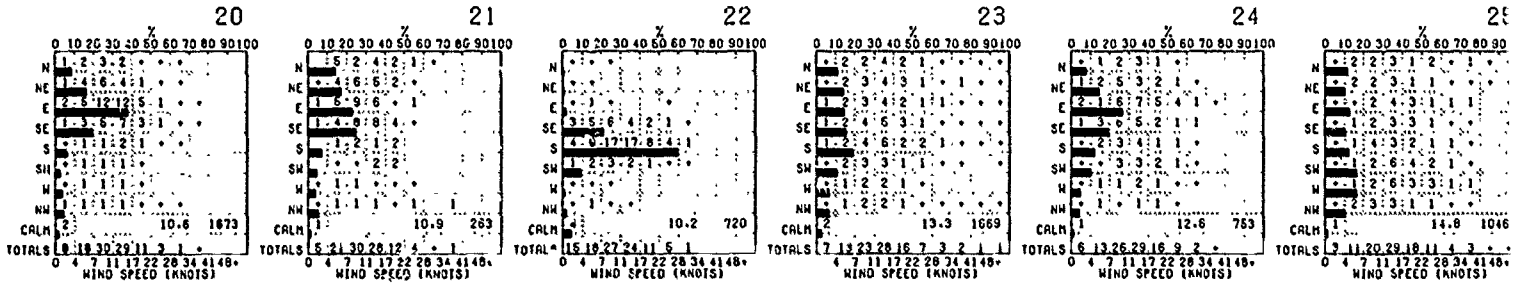
Printed scale on bottom of chart

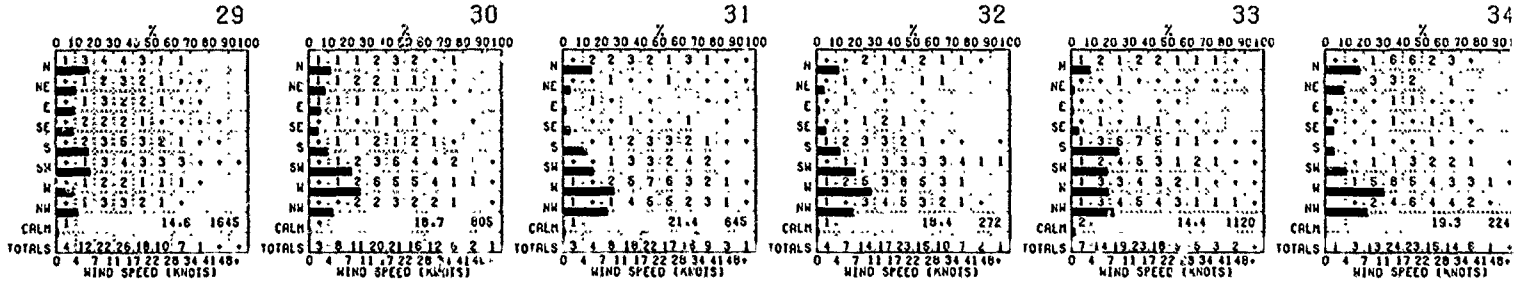
BLUE LINE - Percent frequency of wind speed ≤10 knots

RED LINE - Percent frequency of wind speed ≥34 knots









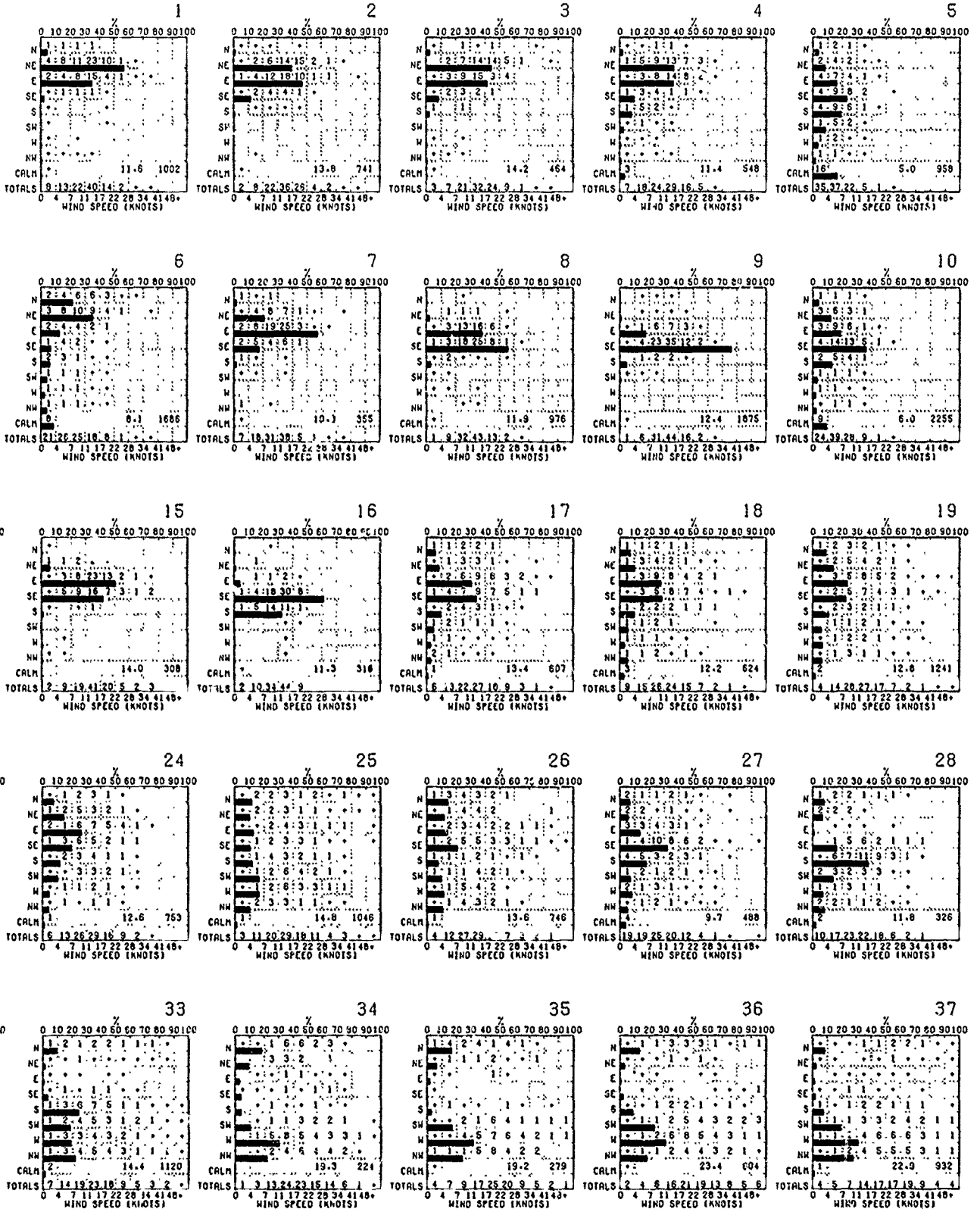
Graphs represent the objective compilation of available data for specified areas without rega
The isopleth analyses (opposite page) are based on all available data subjectively adjusted w

SPEED

MARCH

ection Speed frequency
ection.

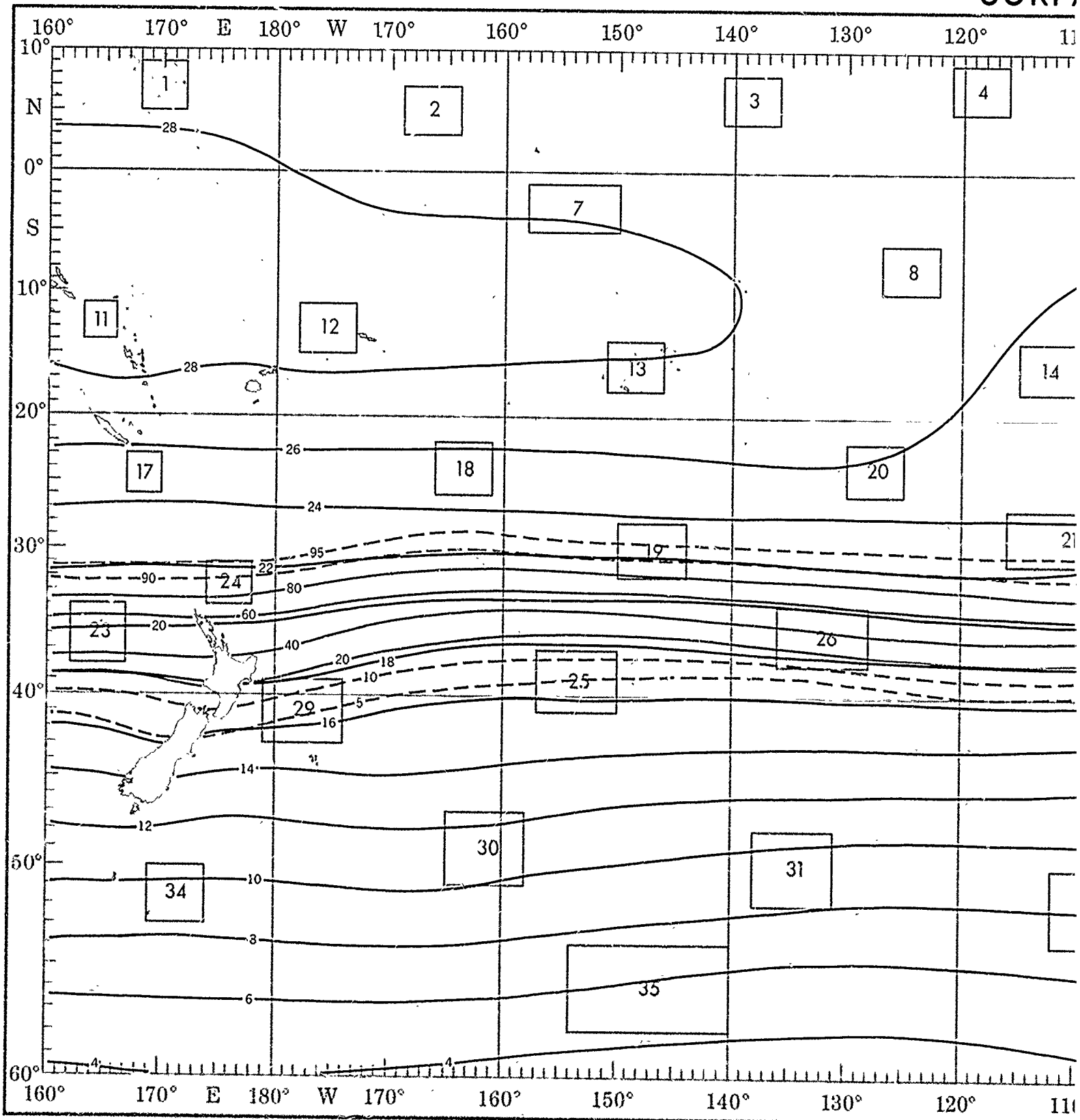
.47 | ≥48 |
48+



objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

MARCH

SURF


160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N
0°
S 10°
20°
30°
40°
50°
60°
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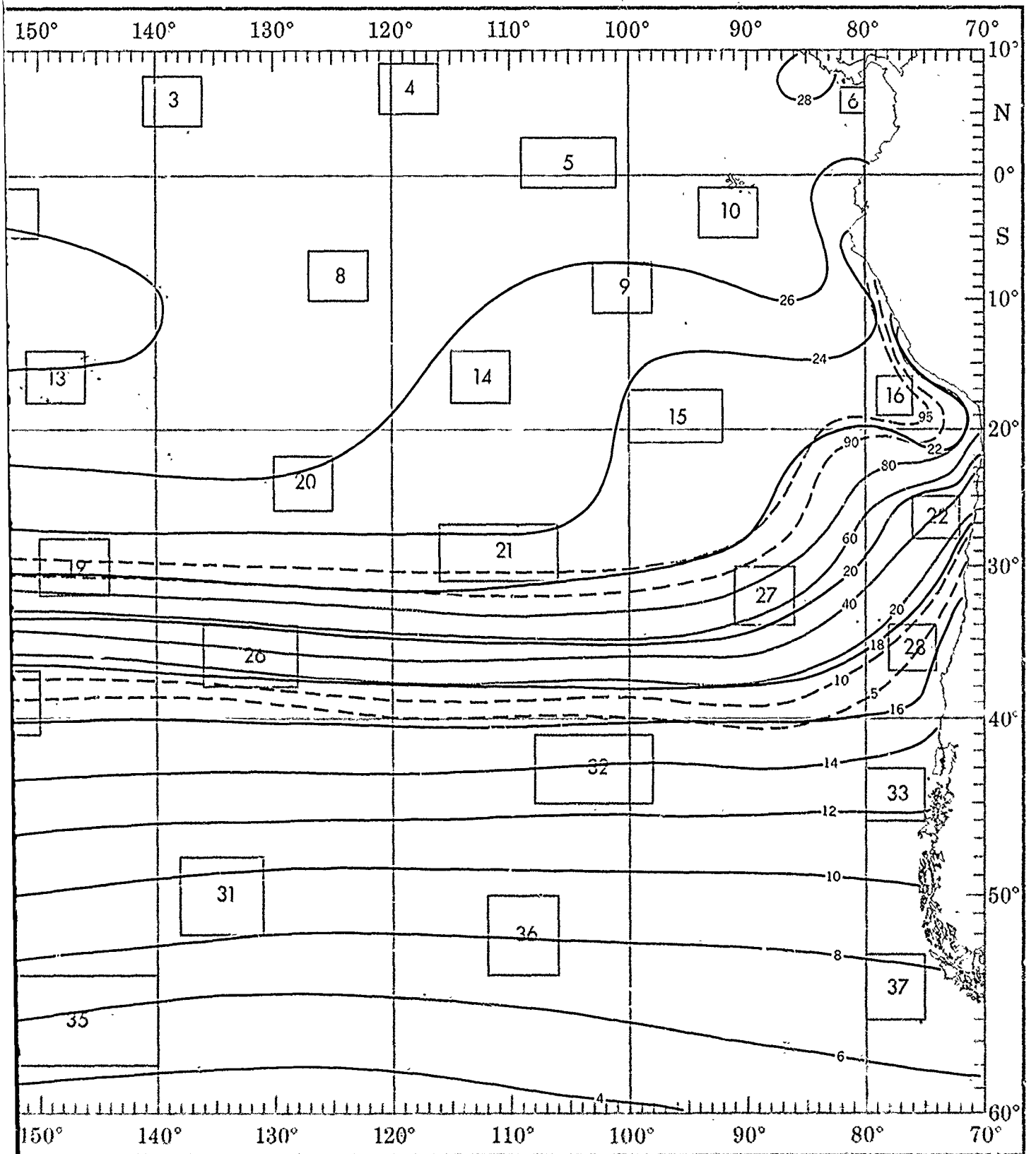
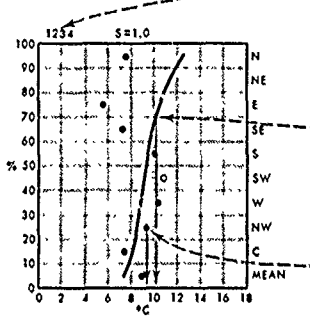
4

SURFACE AIR TEMPERATURE



SURFACE AIR TEMPERATURE



Cumulative percent frequency of temperatures equal to or less than the temperature intersected by the curve.

(70% of all temperatures were ≤10.3 °C or ≤50.5 °F.)

S=Standard deviation of temperatures (°C).

Mean temperature for each wind direction, calm and for all data combined are represented by dots.

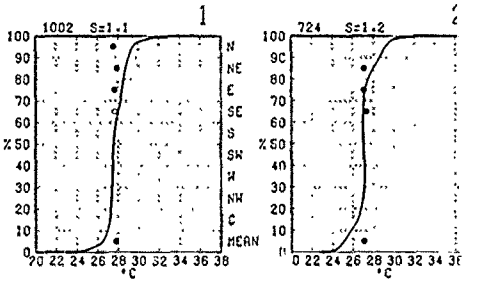
(With NW winds, the mean temperature was 9.4 °C or 48.9 °F.)

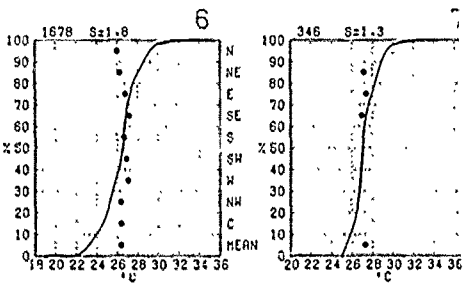
o Indicates that the mean temperature for a direction or calm was computed from 10-30 observations.

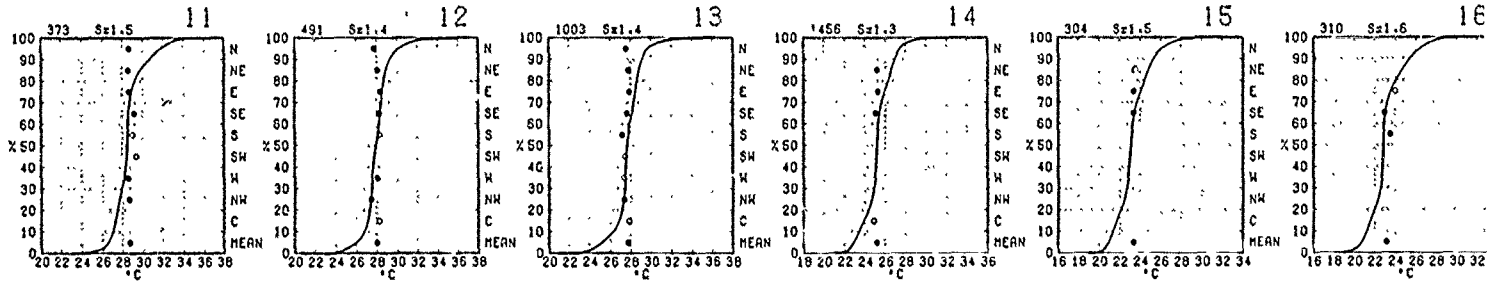
The mean temperature is omitted when less than 10 observations for a direction or calm were available.

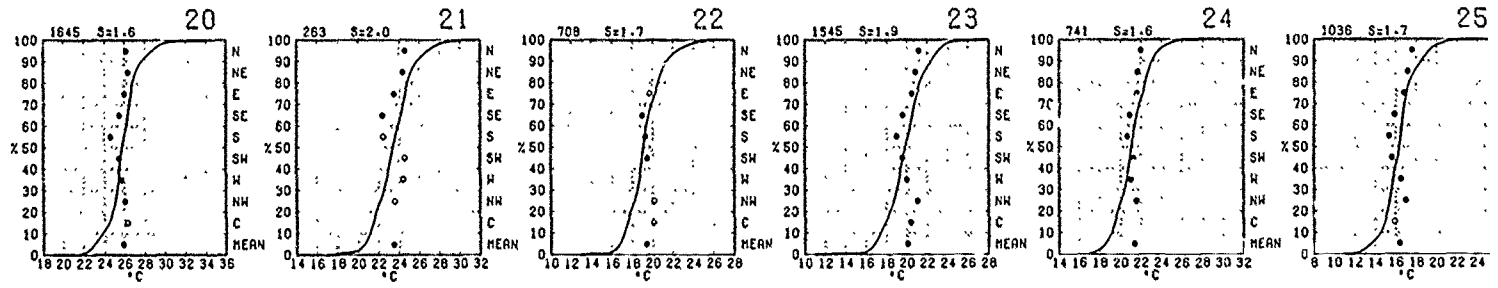
BLACK LINE - Mean air temperature (°C)

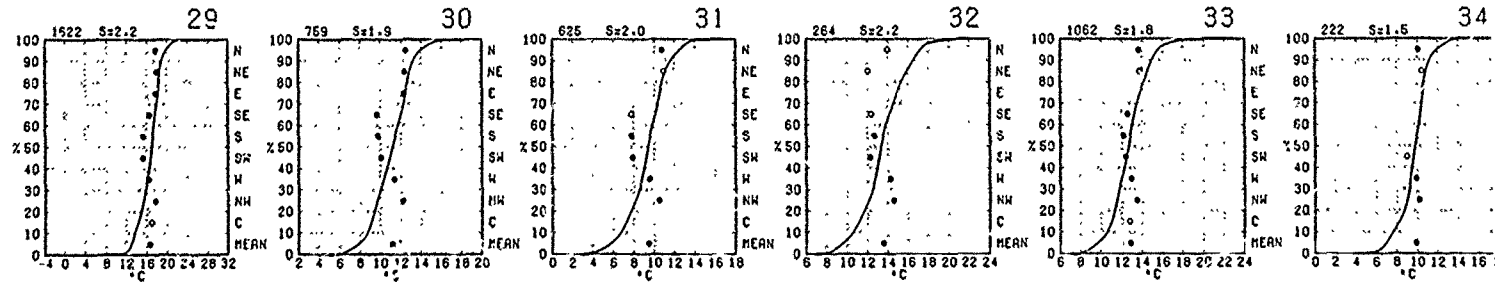
RED LINE - Percent frequency of temperature ≥20°C (68°F)











Graphs represent the objective compilation of available data for specified areas without re
The isopleth analyses (opposite page) are based on all available data subjectively adjusted

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MARCH

to or less than the temp-

data combined are

was computed from

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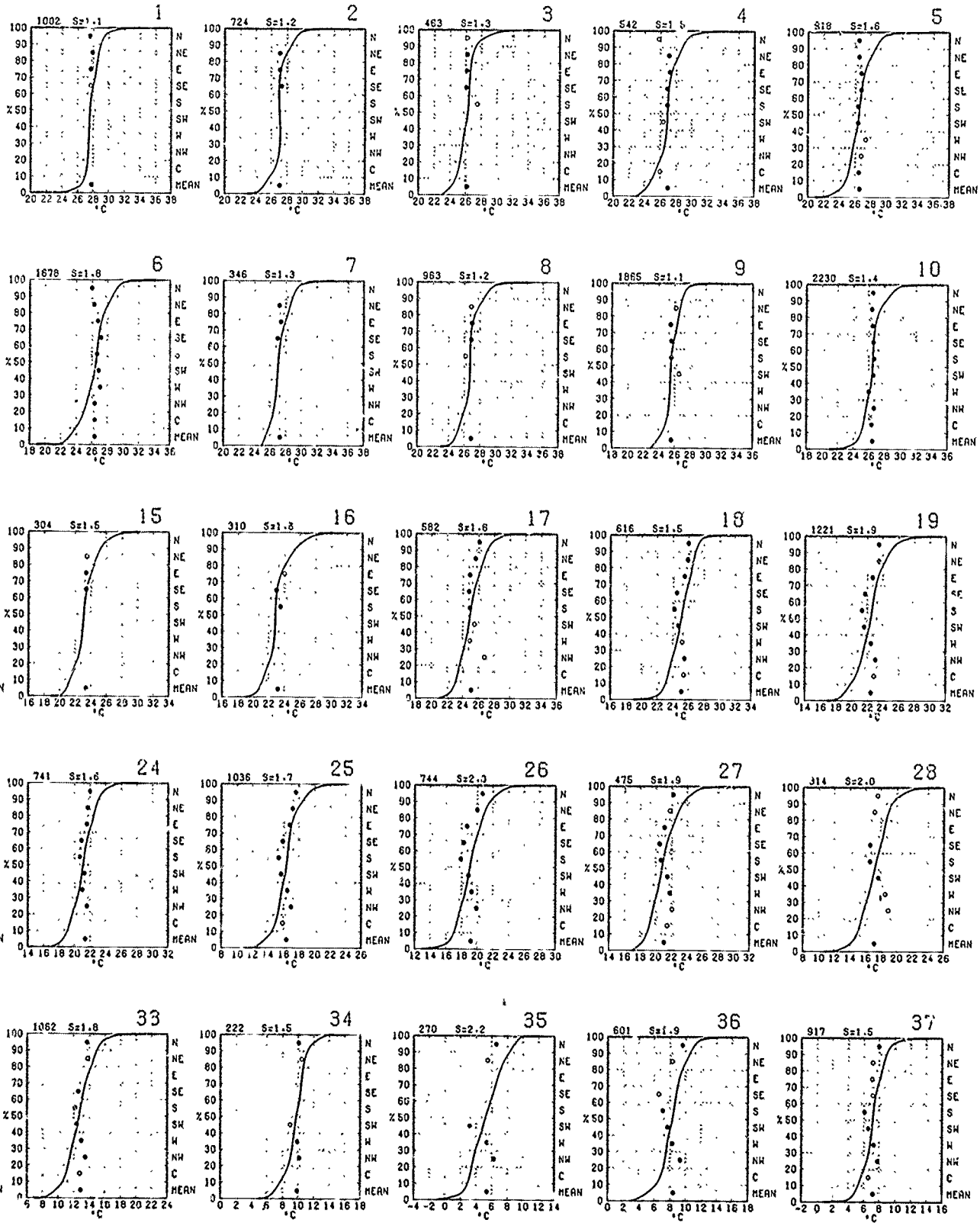
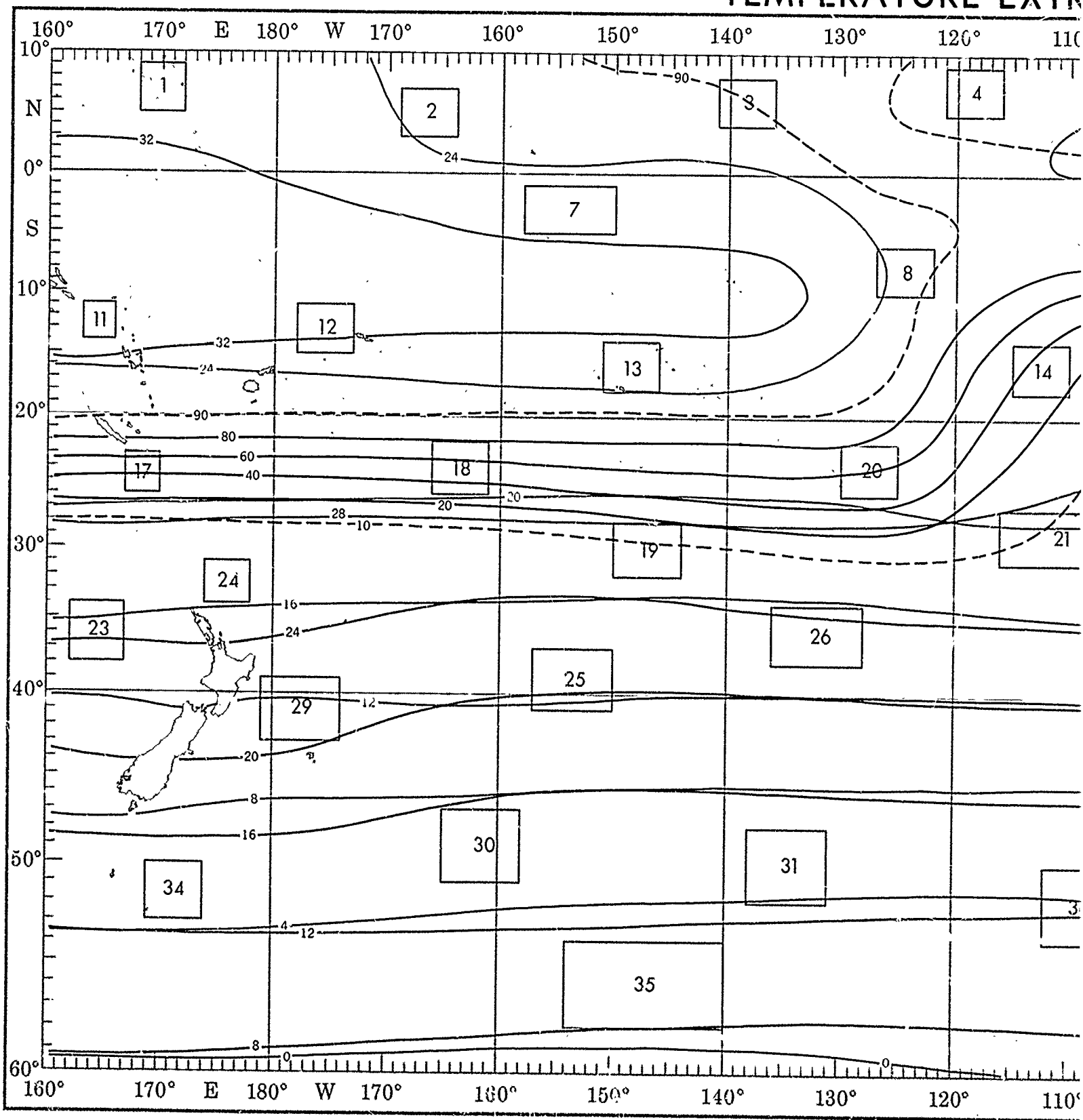


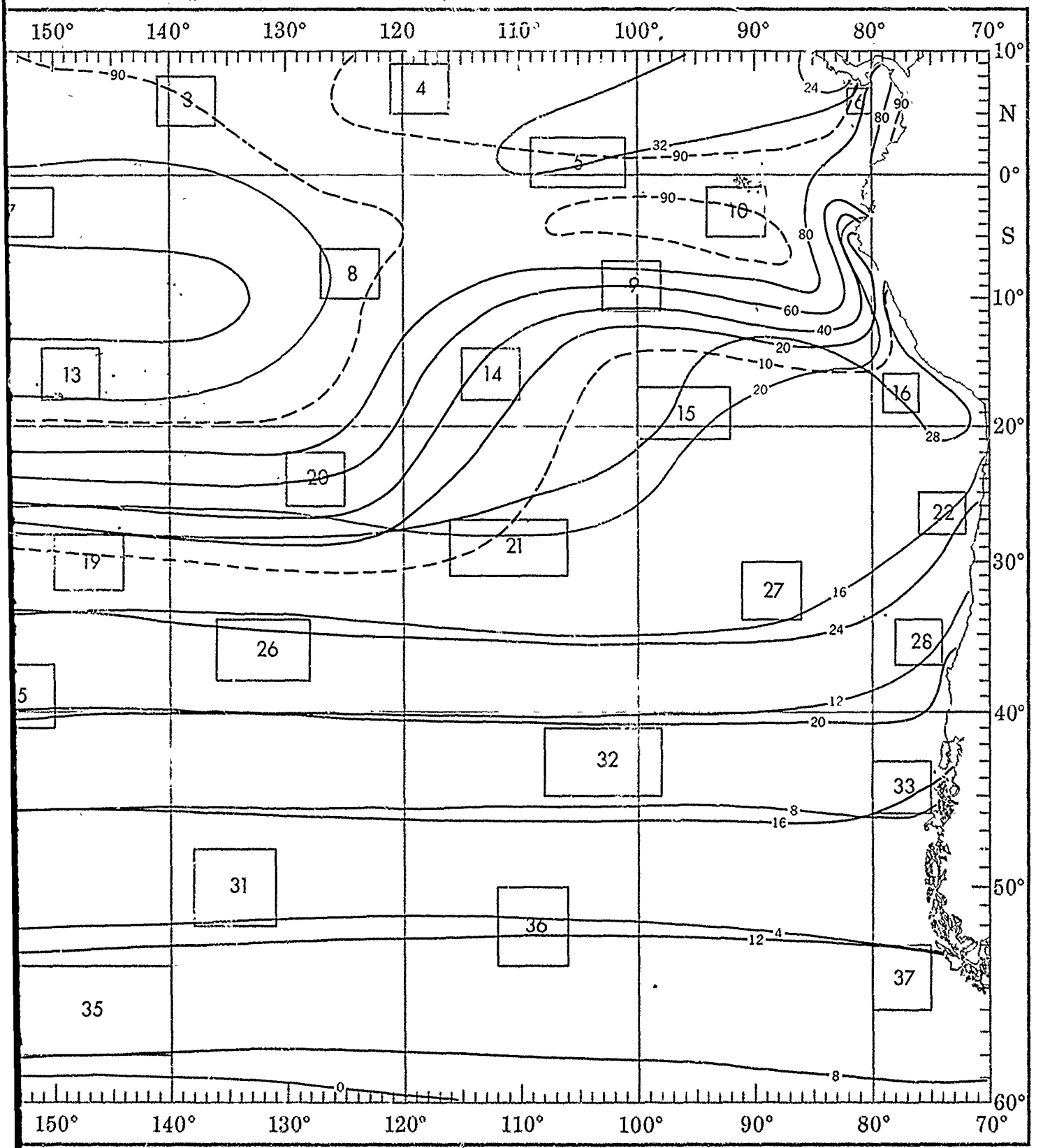
objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

MARCH

TEMPERATURE EXTR



TEMPERATURE EXTREMES AND T-H INDEX



1 1 2

WIND SPEED AND AIR TEMPERATURE

Wind speed and air temperature.

Percent frequency of simultaneous occurrence of specified temperature (°C) and wind speed (knots).

WIND SPEED (kts)

Temp (°C)	0-3	4-10	11-21	22-33	≥34
4.5	18	8	7	1	1
2.3	17	8	7	1	1
0.1	13	6	5	1	1
-2..-1	1	+	0	0	0
-4..-3	0	0	0	0	0
-6..-5	+	0	0	+	+
-8..-7	1	+	0	0	0
-10..-9	0	0	0	0	0
-12..-11	1	+	0	0	0
-14..-13	1	0	0	0	0
-16..-15	1	+	0	0	0

3550

—(1% of all observations reported temperature 2-3°C simultaneously with wind speed of 22-33 kts.)

+ Indicates <.5% but >0.

Number of observations.

Use of this table in determination of Potential Superstructure Icing is explained in the text.

BLACK LINE - Percent frequency of T-H index ≥24°C (75.2°F) (discomfort may be experienced due to heat)

BLUE LINE - Minimum (1%) air temperature (°C) (1% of the temperatures were equal to or less than the given value)

RED LINE - Maximum (99%) air temperature (°C) (1% of the temperatures were greater than the given value)

1

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
32.33	+	+	+	0	0
30.31	1	2	3	+	0
28.29	5	20	28	1	+
26.27	3	13	23	1	0
24.25	+	+	+	+	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1002

WIND SPEED (KTS

TEMP (°C)	0-3	4-10	11-21	22
32.33	0	+	+	
30.31	0	1	2	
28.29	+	7	18	
26.27	1	20	39	
24.25	0	1	3	
22.23	0	+	0	
20.21	0	0	0	
18.19	0	0	0	
16.17	0	0	0	
14.15	0	0	0	
12.13	0	0	0	

6

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
32.33	+	+	+	0	0
30.31	+	3	+	0	0
28.29	6	12	5	+	+
26.27	12	22	11	1	+
24.25	4	10	6	+	0
22.23	1	3	2	0	0
20.21	0	+	+	0	0
18.19	+	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1758

WIND SPEED (KTS

TEMP (°C)	0-3	4-10	11-21	22
32.33	0	+	+	
30.31	+	2	2	
28.29	3	17	14	
26.27	3	27	25	
24.25	+	3	1	
22.23	0	0	0	
20.21	0	0	0	
18.19	0	0	0	
16.17	0	0	0	
14.15	0	0	0	
12.13	0	0	0	

11

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
34.35	+	+	0	0	0
32.33	1	4	+	0	0
30.31	5	9	4	0	0
28.29	12	31	14	1	+
26.27	2	10	5	1	0
24.25	+	+	1	0	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

376

12

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
34.35	+	1	0	0	0
32.33	+	1	+	0	0
30.31	1	4	2	0	0
28.29	14	36	11	1	+
26.27	3	13	8	2	0
24.25	0	1	+	+	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

504

13

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
34.35	0	+	+	0	0
32.33	+	1	+	0	0
30.31	1	3	2	+	0
28.29	5	28	17	2	0
26.27	4	19	12	1	1
24.25	+	1	1	+	+
22.23	+	+	+	+	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

1016

14

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
30.31	0	+	+	0	0
28.29	+	2	3	+	0
26.27	1	14	19	1	0
24.25	1	23	30	2	0
22.23	+	2	2	+	0
20.21	0	0	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

1462

15

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
28.29	0	+	1	0	0
26.27	+	4	3	+	0
24.25	2	10	23	3	1
22.23	1	12	29	2	1
20.21	+	1	5	1	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

310

WIND SPEED (KTS

TEMP (°C)	0-3	4-10	11-21	22
28.29	0	2	1	
26.27	0	3	4	
24.25	1	11	12	
22.23	1	26	31	
20.21	1	3	5	
18.19	0	+	0	
16.17	0	0	0	
14.15	0	0	0	
12.13	0	0	0	
10.11	0	0	0	
8.9	0	0	0	

20

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
32.33	+	+	+	0	0
30.31	+	1	1	+	0
28.29	1	6	3	+	0
26.27	4	27	19	1	0
24.25	3	13	12	1	+
22.23	+	1	3	1	0
20.21	0	+	+	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1585

21

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
28.29	0	1	2	0	0
26.27	2	6	6	1	0
24.25	3	17	13	2	0
22.23	1	15	14	1	+
20.21	0	11	4	1	+
18.19	0	0	0	0	0
16.17	0	1	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

267

22

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
28.27	0	0	+	0	0
24.26	1	1	0	0	0
22.23	3	4	3	+	0
20.21	5	15	9	1	0
18.19	5	20	19	3	0
16.17	2	4	3	2	0
14.15	0	+	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

710

23

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
25.27	+	+	+	+	0
24.25	+	2	1	+	0
22.23	2	7	8	2	+
20.21	3	14	18	4	1
18.19	2	10	12	3	1
16.17	+	2	4	1	+
14.15	0	+	+	+	+
12.13	0	0	+	0	+
10.11	0	0	0	0	+
8.9	0	0	0	0	0
6.7	0	0	0	0	0

1663

24

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
29.29	+	0	0	0	0
26.27	0	+	1	0	0
24.25	+	3	4	+	0
22.23	2	13	18	3	0
20.21	3	18	19	5	+
18.19	1	5	3	1	0
16.17	0	+	+	+	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

743

WIND SPEED (KTS

TEMP (°C)	0-3	4-10	11-21	22
22.23	+	+	+	
20.21	+	1	2	
18.19	1	6	8	
16.17	2	15	24	
14.15	1	7	12	
12.13	+	+	1	
10.11	0	0	+	
8.9	0	0	0	
6.7	0	0	0	
4.5	0	0	0	
2.3	0	0	0	

29

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
24.26	0	0	+	+	0
22.23	0	+	+	+	0
20.21	+	3	4	1	+
18.19	1	10	13	4	+
16.17	2	15	16	5	+
14.15	1	4	7	3	+
12.13	+	2	2	3	+
10.11	0	+	+	+	0
8.9	0	0	+	+	+
6.7	0	0	0	0	0
4.5	0	0	0	0	0

1635

30

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
16.17	0	+	+	+	0
14.15	1	2	5	3	+
12.13	1	7	15	9	2
10.11	1	6	14	9	2
8.9	1	3	6	7	4
6.7	0	+	1	1	+
4.5	0	0	0	+	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2..-1	0	0	0	0	0
-4..-3	0	0	0	0	0

762

31

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
14.15	0	+	+	+	0
12.13	1	3	6	5	2
10.11	1	4	11	12	5
8.9	+	4	18	8	3
6.7	0	1	3	7	2
4.5	0	0	1	1	2
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2..-1	0	0	0	0	0
-4..-3	0	0	0	0	0
-6..-5	0	0	0	0	0

627

32

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
20.21	0	+	0	0	0
18.19	+	2	+	1	0
16.17	1	4	8	4	1
14.15	1	4	13	7	4
12.13	1	10	13	8	3
10.11	1	1	4	2	2
8.9	0	1	2	2	+
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

267

33

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
20.21	0	+	0	0	0
18.19	+	+	+	+	0
16.17	1	3	3	+	+
14.15	2	10	13	4	1
12.13	3	14	17	6	2
10.11	1	5	9	4	2
8.9	0	1	+	0	+
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

1062

WIND SPEED (KTS

TEMP (°C)	0-3	4-10	11-21	22
12.13	0	4	6	
10.11	0	9	27	
8.9	0	4	10	
6.7	1	+	3	
4.5	0	0	+	
2.3	0	0	0	
0.1	0	0	0	
-2..-1	0	0	0	
-4..-3	0	0	0	
-6..-5	0	0	0	
-8..-7	0	0	0	

Graphs represent the objective compilation of available data for specified areas without r
The isopleth analyses (opposite page) are based on all available data subjectively adjuste

TEMPERATURE

MARCH

(°C) and wind speed

speed of 22-33 kts.)

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han the given value)

e given value)

1

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	*	*	*	0	0
30.31	1	2	3	*	0
28.29	5	20	28	1	*
26.27	3	13	23	1	0
24.25	*	*	*	*	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1002

2

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	*	*	0	0
30.31	0	1	2	*	0
28.29	*	7	18	2	0
26.27	1	20	39	3	0
24.25	0	1	3	*	0
22.23	0	*	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

726

3

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	0	*	*	0
30.31	*	0	*	*	0
28.29	1	2	5	2	0
26.27	2	18	40	6	*
24.25	*	8	11	2	*
22.23	0	*	1	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

464

4

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	1	*	*	0	0
30.31	1	2	2	*	0
28.29	1	12	13	2	0
26.27	3	24	26	3	0
24.25	2	3	3	1	0
22.23	*	*	*	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

544

5

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	*	0	0	0	0
32.33	*	*	*	0	0
30.31	2	1	*	0	0
28.29	9	12	1	0	0
26.27	18	34	2	*	0
24.25	7	11	1	0	0
22.23	1	1	*	0	0
20.21	0	*	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

942

6

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	*	*	*	0	0
30.31	*	3	*	0	0
28.29	6	12	5	*	*
26.27	12	22	11	1	*
24.25	4	10	6	*	0
22.23	1	3	2	0	0
20.21	0	*	*	0	0
18.19	*	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1758

7

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	*	*	0	0
30.31	*	2	2	0	0
28.29	3	17	14	0	0
26.27	3	27	25	1	*
24.25	*	3	1	0	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

346

8

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	*	0	*	0	0
30.31	0	1	1	*	0
28.29	*	10	13	1	0
26.27	1	28	36	1	0
24.25	*	5	4	*	0
22.23	0	*	*	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

967

9

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	0	*	0	0
28.29	*	2	2	*	0
26.27	*	19	32	1	0
24.25	*	17	25	1	0
22.23	0	*	1	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

1867

10

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	*	*	0	0	0
30.31	1	1	*	0	0
28.29	5	10	2	0	0
26.27	15	42	6	*	0
24.25	5	10	1	0	0
22.23	1	1	*	0	0
20.21	0	0	*	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

2352

14

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	*	*	0	0
28.29	*	2	3	*	0
26.27	1	14	19	1	0
24.26	1	23	30	2	0
22.23	*	2	2	*	0
20.21	0	0	*	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

1462

15

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	*	1	0	0
26.27	*	4	3	*	0
24.25	2	10	23	3	1
22.23	1	12	29	2	1
20.21	*	1	5	1	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

310

16

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	2	1	0	0
26.27	0	3	4	0	0
24.25	1	11	12	0	0
22.23	1	26	31	0	0
20.21	1	3	5	0	0
18.19	0	*	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

313

17

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	*	*	0	0
28.29	2	3	2	*	0
26.27	3	13	15	2	*
24.25	1	16	23	7	*
22.23	*	4	5	1	*
20.21	0	*	0	*	1
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

582

18

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	*	*	0	0
28.29	1	3	1	*	0
26.27	5	20	13	1	0
24.23	4	13	19	5	*
22.23	1	4	5	2	1
20.21	0	*	*	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

629

19

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	*	*	*	0	0
26.27	*	3	2	*	0
24.26	1	10	9	1	0
22.23	2	19	17	4	*
20.21	1	8	12	3	1
18.19	*	2	2	1	0
16.17	0	0	*	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

1235

23

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.27	*	*	*	*	0
24.26	*	2	1	*	0
22.23	2	7	8	2	*
20.21	3	14	18	4	1
18.19	2	10	12	3	1
16.17	*	2	4	1	*
14.15	0	*	*	*	*
12.13	0	0	*	0	*
10.11	0	0	0	0	*
8.8	0	0	0	0	0
6.7	0	0	0	0	0

1663

24

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.28	*	0	0	0	0
26.27	0	*	1	0	0
24.25	*	3	4	*	*
22.23	2	13	18	3	0
20.21	3	18	19	6	*
18.19	1	5	3	1	0
16.17	0	*	*	*	0
14.16	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

743

25

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	*	*	*	0	0
20.21	*	1	2	*	0
18.19	1	6	8	4	1
16.17	2	15	24	6	1
14.15	1	7	12	4	1
12.13	*	*	1	*	0
10.11	0	0	*	*	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

1048

26

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	*	0	0	*	0
24.25	*	1	1	*	0
22.23	1	5	4	1	0
20.21	1	11	14	2	1
18.19	1	15	18	5	1
16.17	1	6	6	2	2
14.15	*	1	1	*	0
12.13	0	0	0	*	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

749

27

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	*	0	0	0
26.27	1	1	*	0	0
24.25	2	4	2	*	0
22.23	6	13	7	1	0
20.21	7	18	17	3	*
18.19	2	6	6	1	0
16.17	*	*	1	*	0
14.16	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

481

28

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	*	0	0	0	0
22.23	*	2	*	0	0
20.21	2	4	3	1	0
18.19	3	14	12	2	0
16.17	4	13	16	3	1
14.15	1	7	7	3	1
12.13	0	*	2	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

314

32

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	*	0	0	0
18.19	*	2	*	1	0
16.17	1	4	8	4	1
14.15	1	4	13	7	4
12.13	1	10	13	8	3
10.11	1	1	4	2	2
8.9	0	1	2	2	*
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

267

33

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	*	0	0	0
18.19	*	*	*	*	0
16.17	1	3	3	*	*
14.15	2	10	13	4	1
12.13	3	14	17	6	2
10.11	1	5	9	4	2
8.9	0	1	*	0	*
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

1062

34

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	4	6	4	*
10.11	0	9	27	14	1
8.9	0	4	10	9	5
6.7	1	*	3	3	*
4.5	0	0	*	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

222

35

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	0	*	1	*	*
8.9	*	3	7	4	1
6.7	1	4	13	11	2
4.5	2	6	8	7	2
2.3	0	2	11	6	2
0.1	0	0	1	0	0
-2.-1	0	0	*	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0

270

36

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.16	0	0	*	*	0
12.13	0	*	1	1	*
10.11	1	2	7	8	4
8.9	*	5	15	15	8
6.7	1	3	11	5	6
4.5	*	1	2	1	*
2.3	0	0	1	*	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0

603

37

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	*	*	0	*
10.11	*	*	2	3	1
8.9	1	4	11	15	7
6.7	2	6	15	15	7
4.5	1	2	3	3	2
2.3	0	0	*	*	*
0.1	0	0	*	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

917

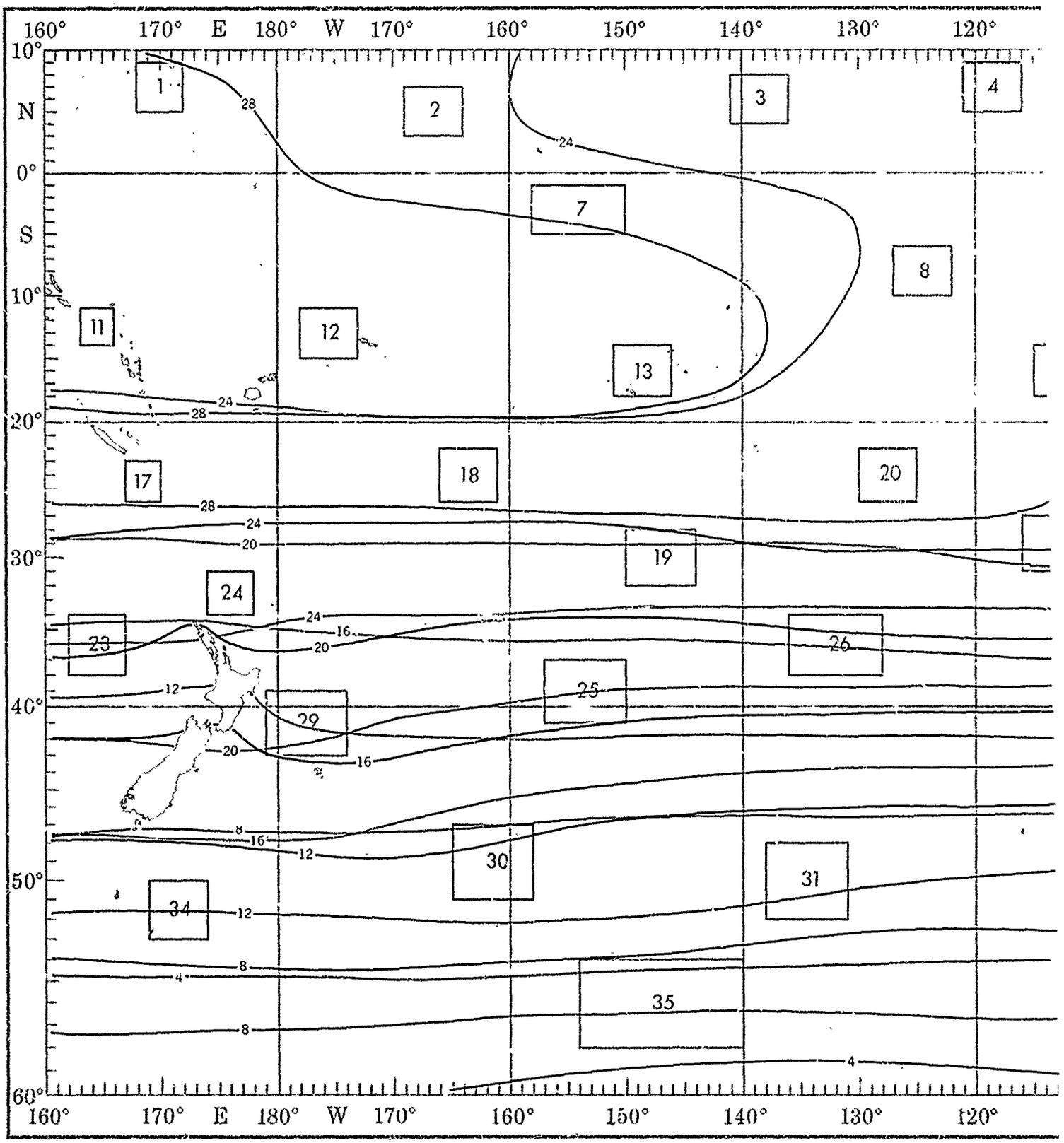
he objective compilation of available data for specified areas without regard to suspected biases.

es (opposite page) are based on all available data subjectively adjusted where bias was evident.

1 1 2

MARCH

SEA


160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N
0°
S 10°
20°
30°
40°
50°
60°
1
2
3
4
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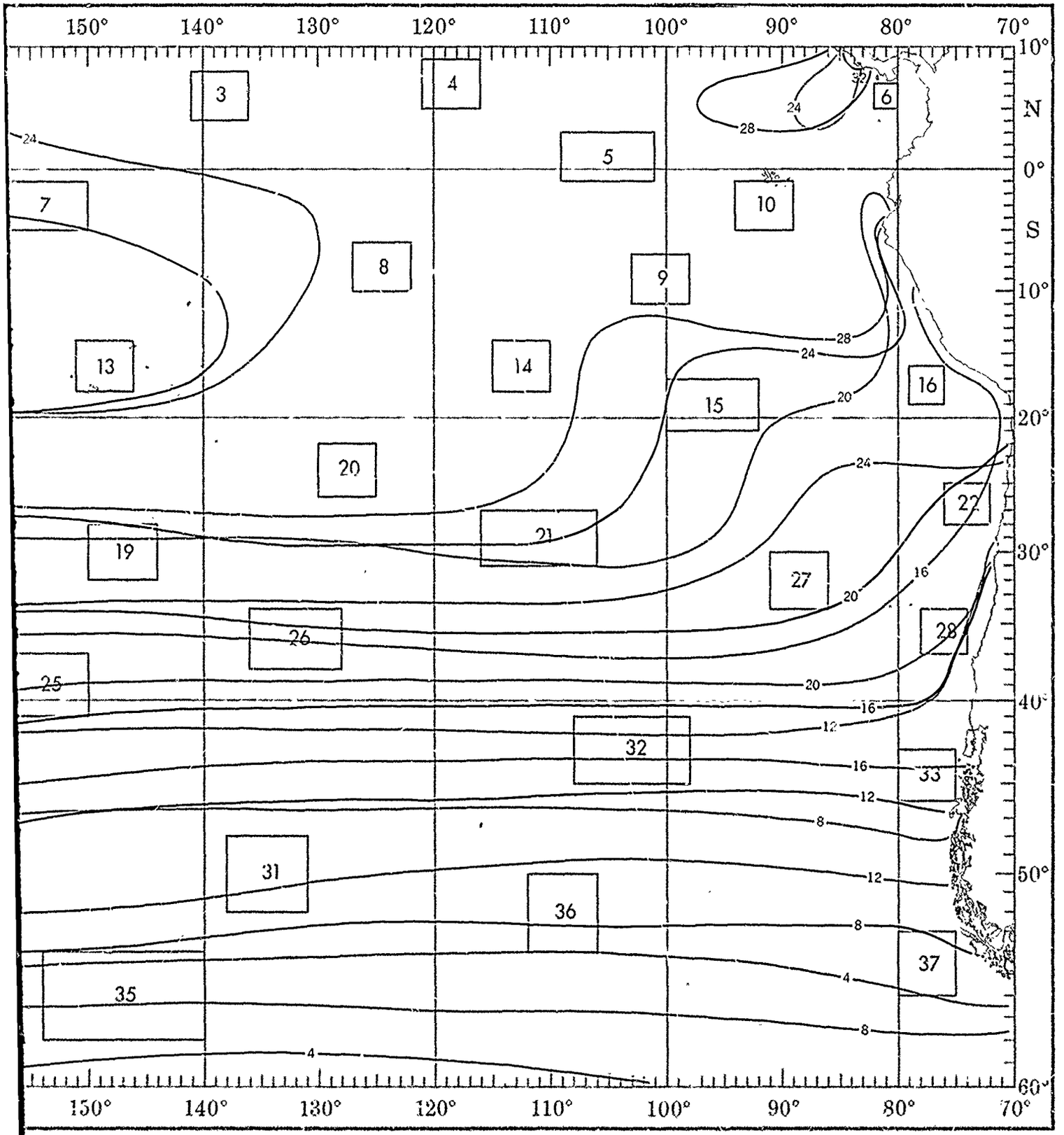
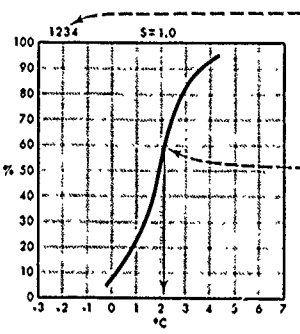
1

SEA SURFACE TEMPERATURE



1 1 2

SEA SURFACE TEMPERATURE



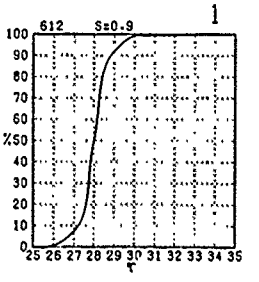
Sea surface temperature.

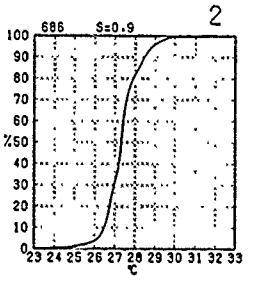
Number of observations.

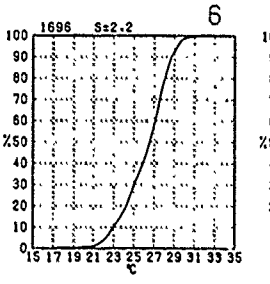
Cumulative percent frequency of sea surface temperatures equal to or less than the temperature intersected by the curve.

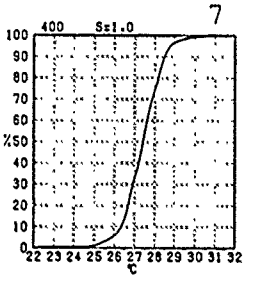
(60% of *all observed sea surface temperatures were* ≤2.1°C or ≤35.8°F.)

S=Standard deviation of sea surface temperatures (°C).





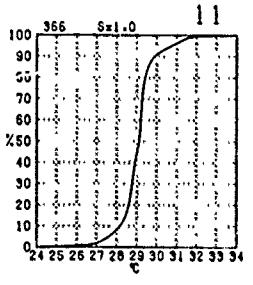


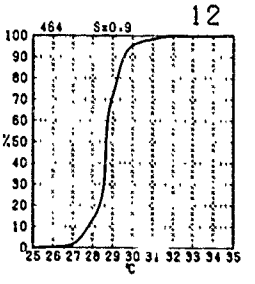


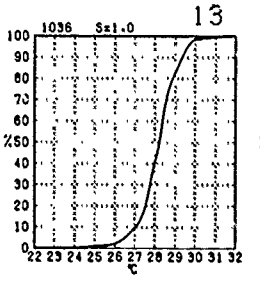
BLACK LINE - Mean sea surface temperature (°C)

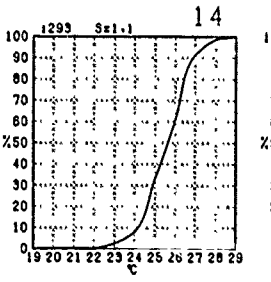
BLUE LINE - Minimum (1%) sea surface temperature (°C) (1% of the temperatures were equal to or less than the given value)

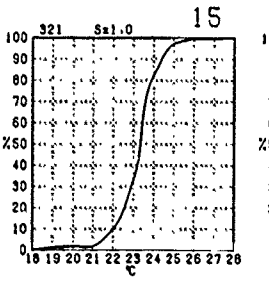
RED LINE - Maximum (99%) sea surface temperature (°C) (1% of the temperatures were greater than the given value)

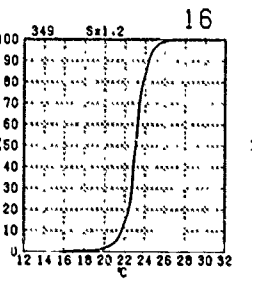


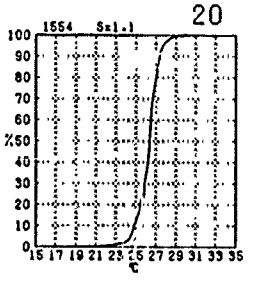


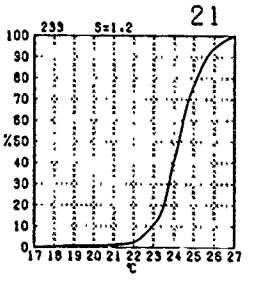


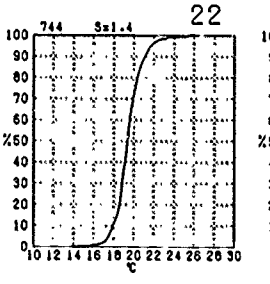


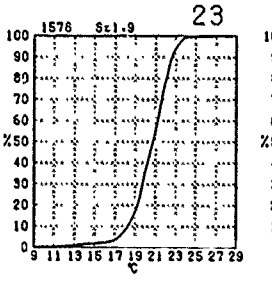


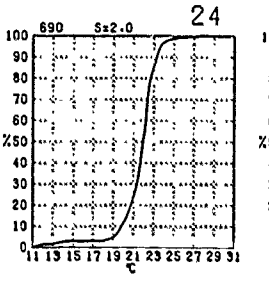


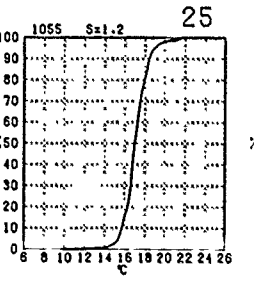


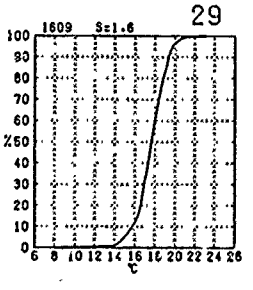


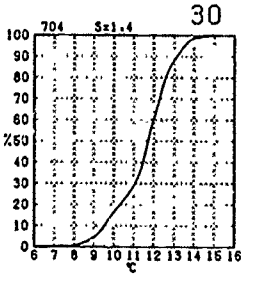


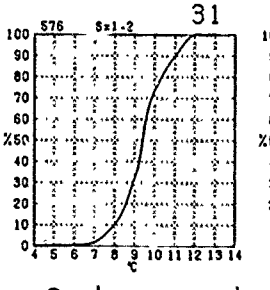


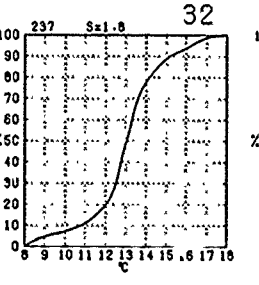


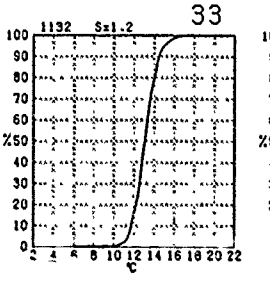


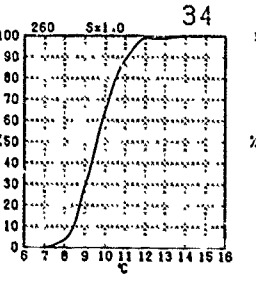












Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted when

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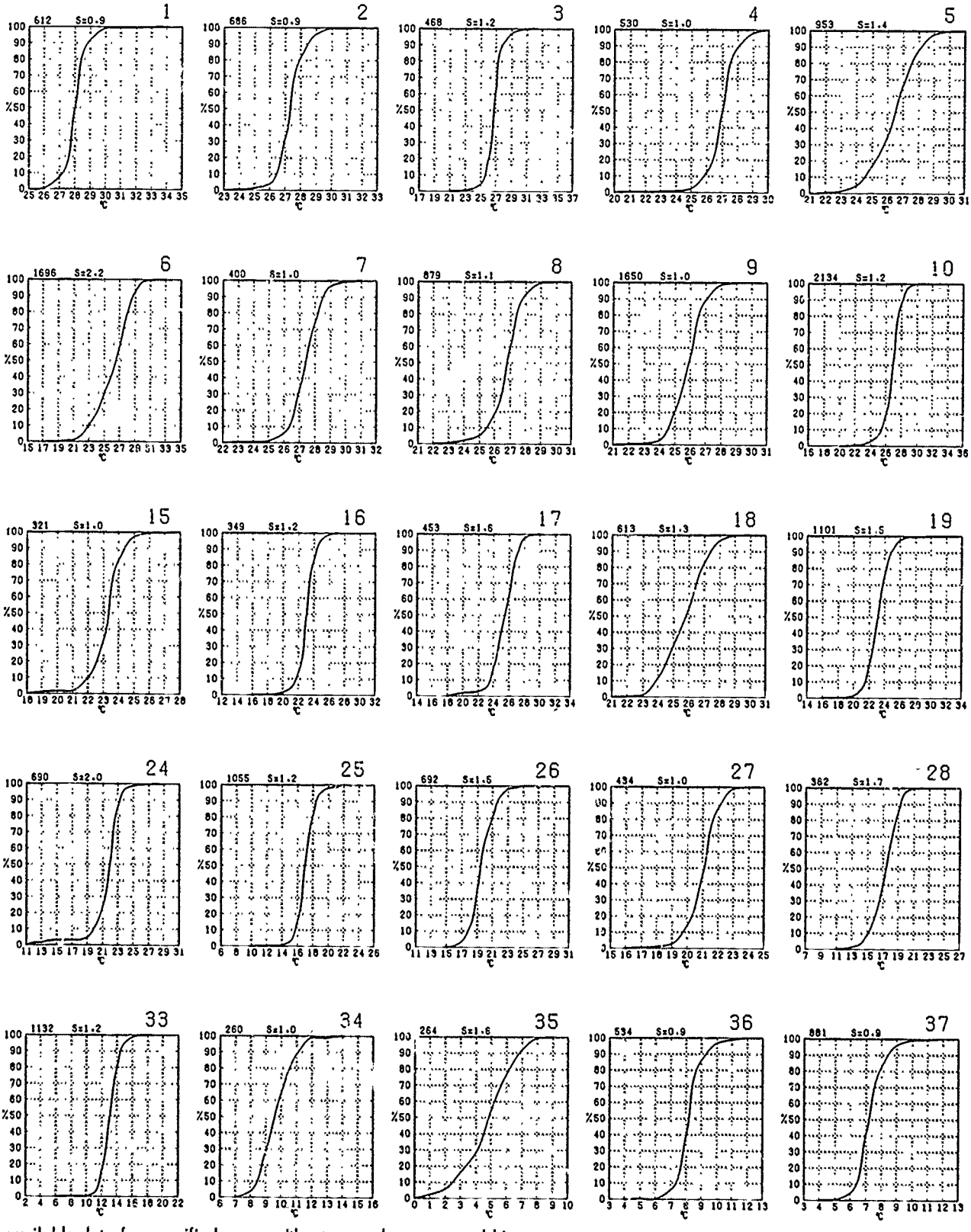
nperatures equal to or less

or ≤358°F.)

or less than the given

er than the given value)



he objective compilation of available data for specified areas without regard to suspected biases.
es (opposite page) are based on all available data subjectively adjusted where bias was evident.

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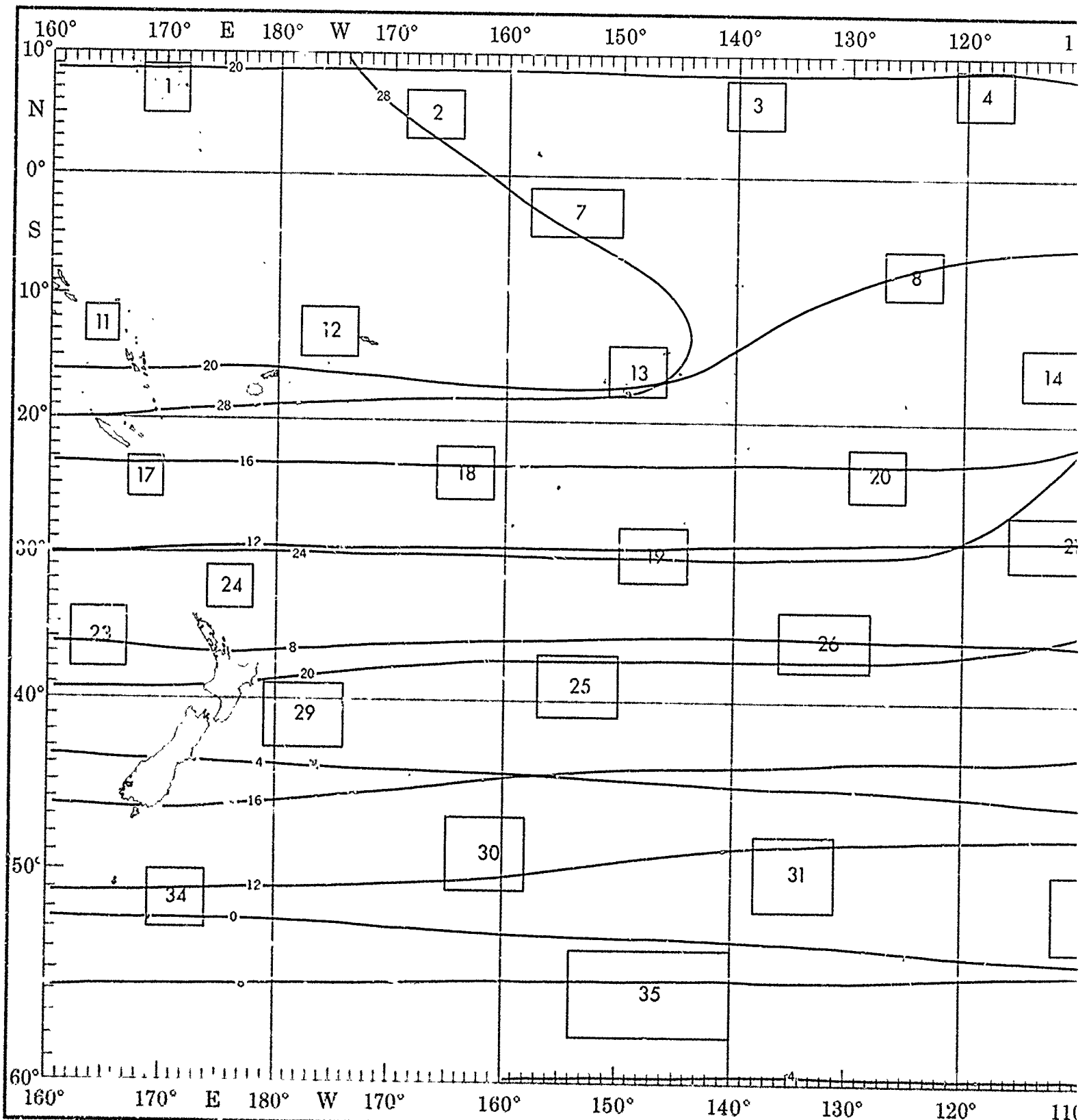
160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N
0°
S 10°
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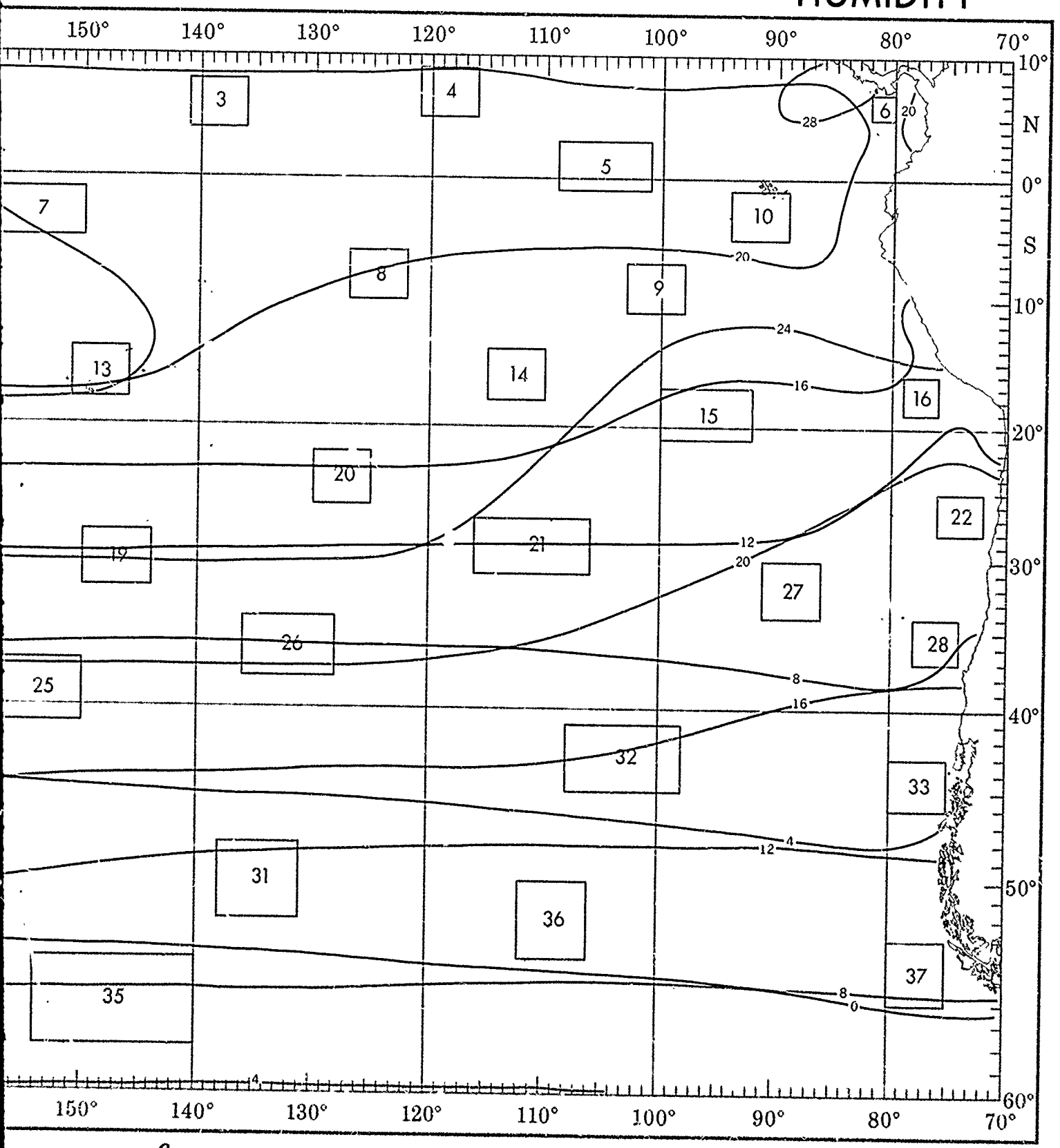
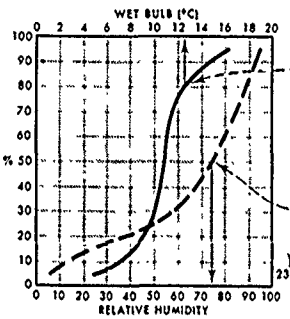
HUMIDITY



1 1 2

WET BULB AND RELATIVE HUMIDITY



Wet bulb - Relative humidity.

Cumulative percent frequency of wet-bulb temperatures equal to or less than the temperature intersected by the curve (top scale).

Wet bulb (°C).

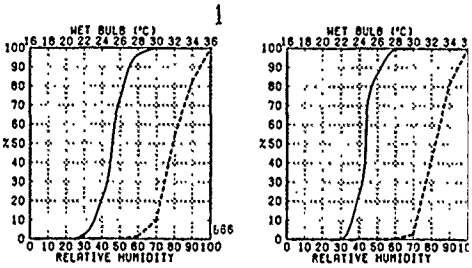
(80% of all observed wet-bulb temperatures were ≤12.5°C or 54.5°F.)

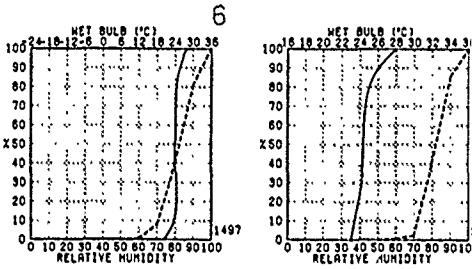
Cumulative percent frequency of relative humidities equal to or less than the humidity intersected by the curve (bottom scale).

Relative humidity (%).

(50% of all observed relative humidities were ≤74%.)

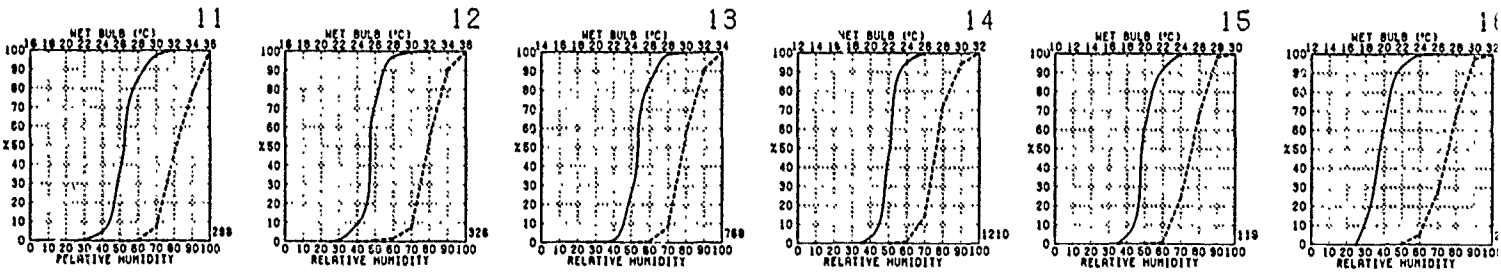
Number of observations.

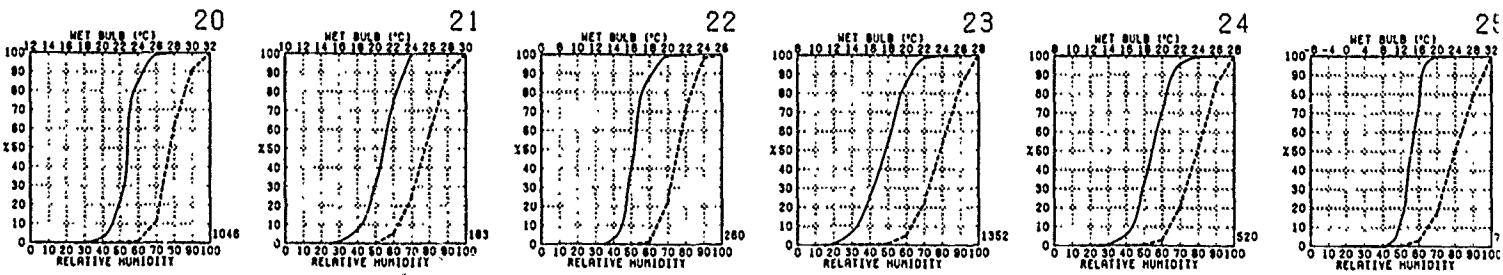


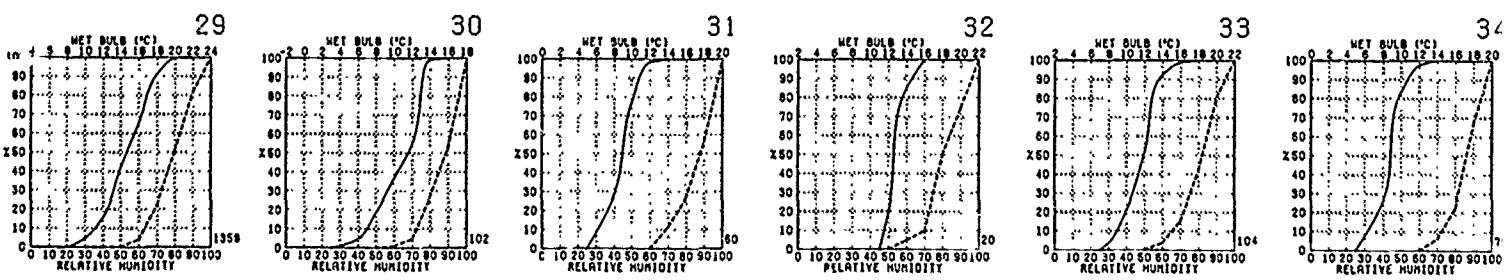


BLUE LINE - Minimum (1%) dew point temperature (°C) (1% of the computed values were equal to or less than the given value)

RED LINE - Maximum (99%) dew-point temperature (°C) (1% of the computed values were greater than the given value)







Graphs represent the objective compilation of available data for specified areas without reg
The isopleth analyses (opposite page) are based on all available data subjectively adjusted

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54.5°F.)

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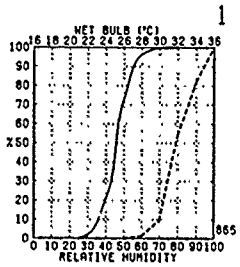

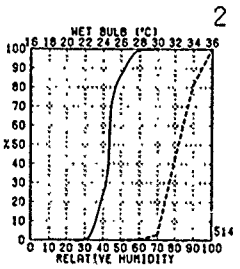

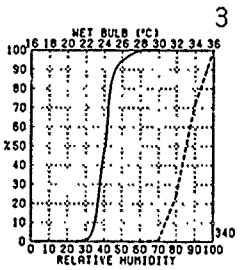

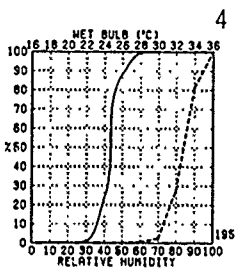

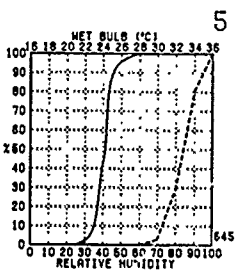

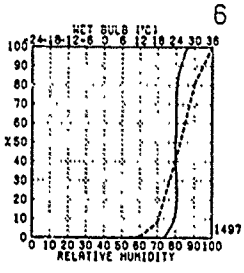

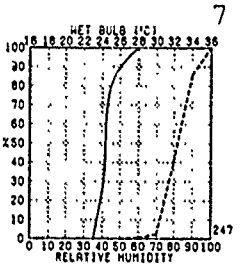

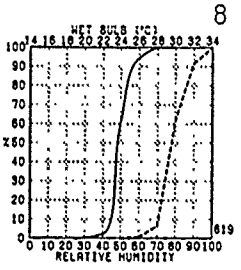

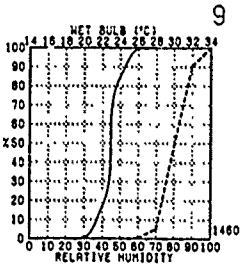

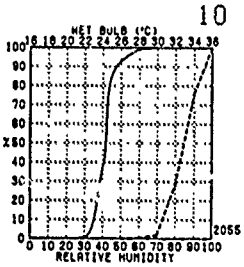

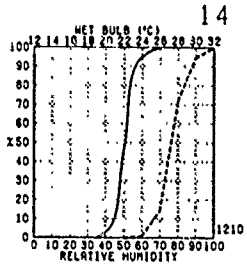

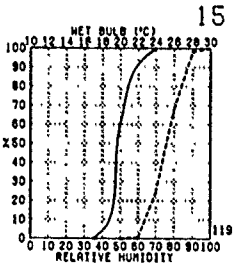

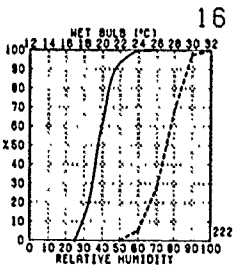

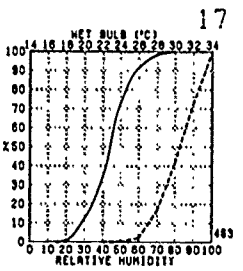

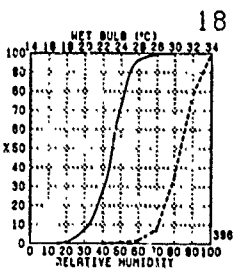

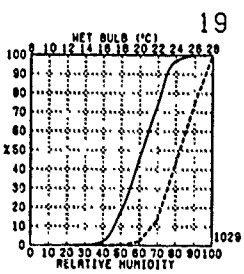

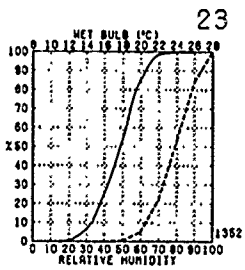

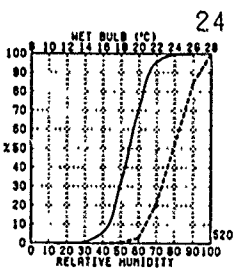

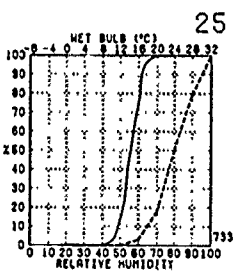

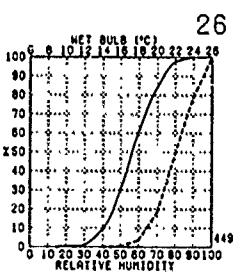

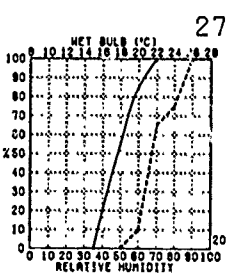

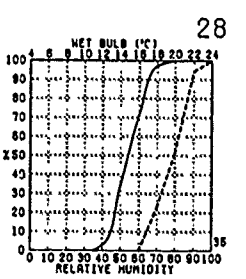

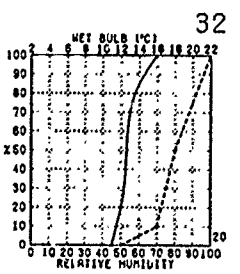

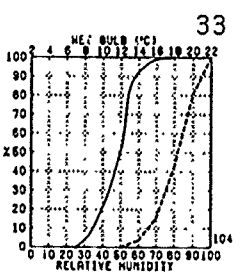

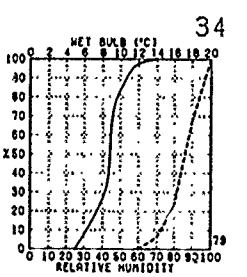

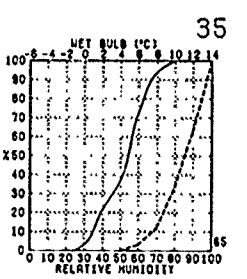

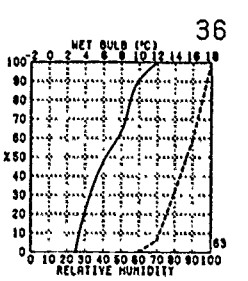

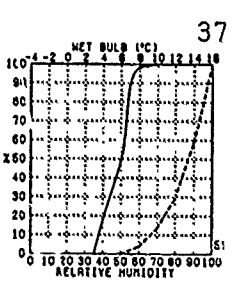

he objective compilation of available data for specified areas without regard to suspected biases.

ses (opposite page) are based on all available data subjectively adjusted where bias was evident.

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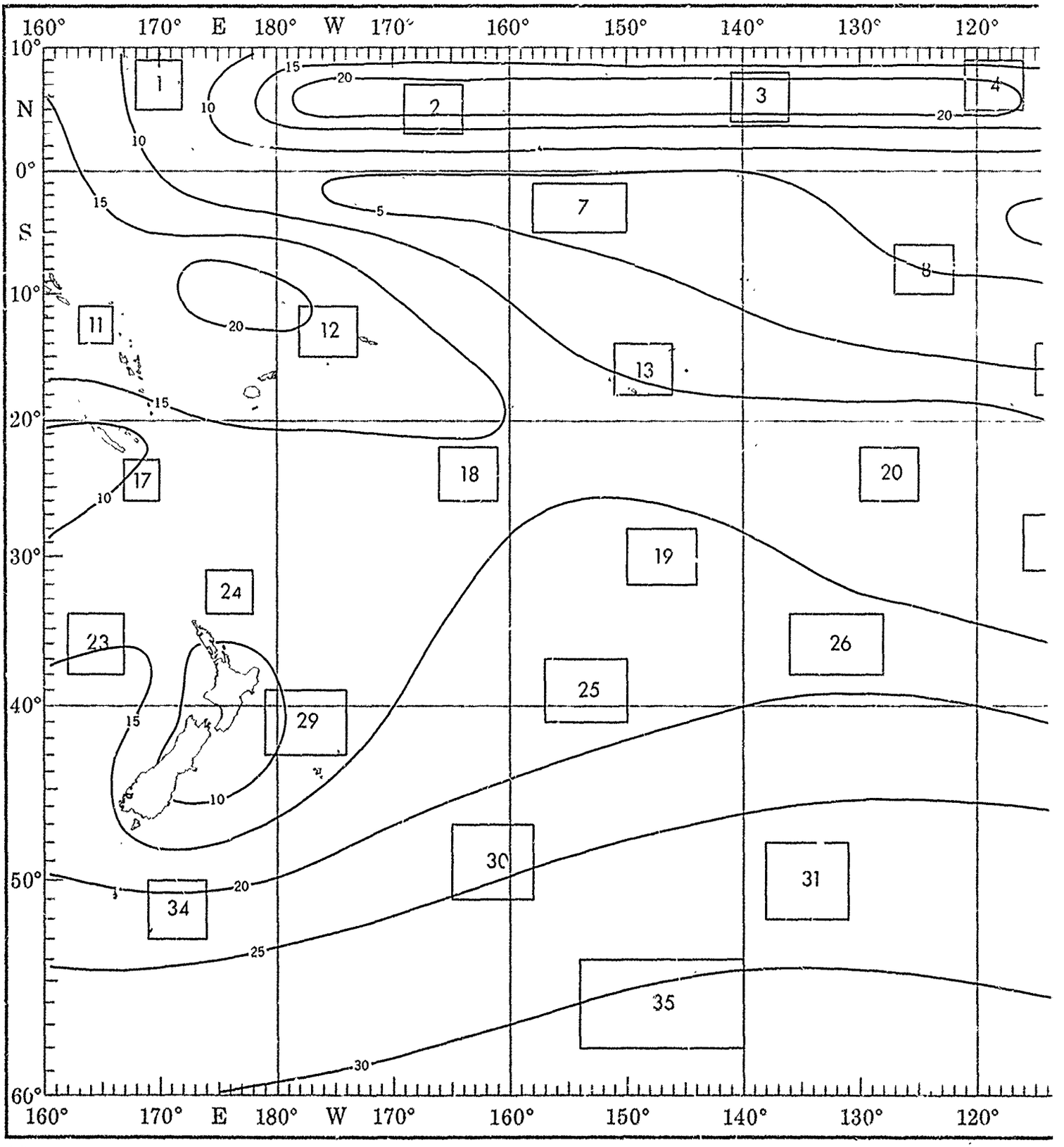
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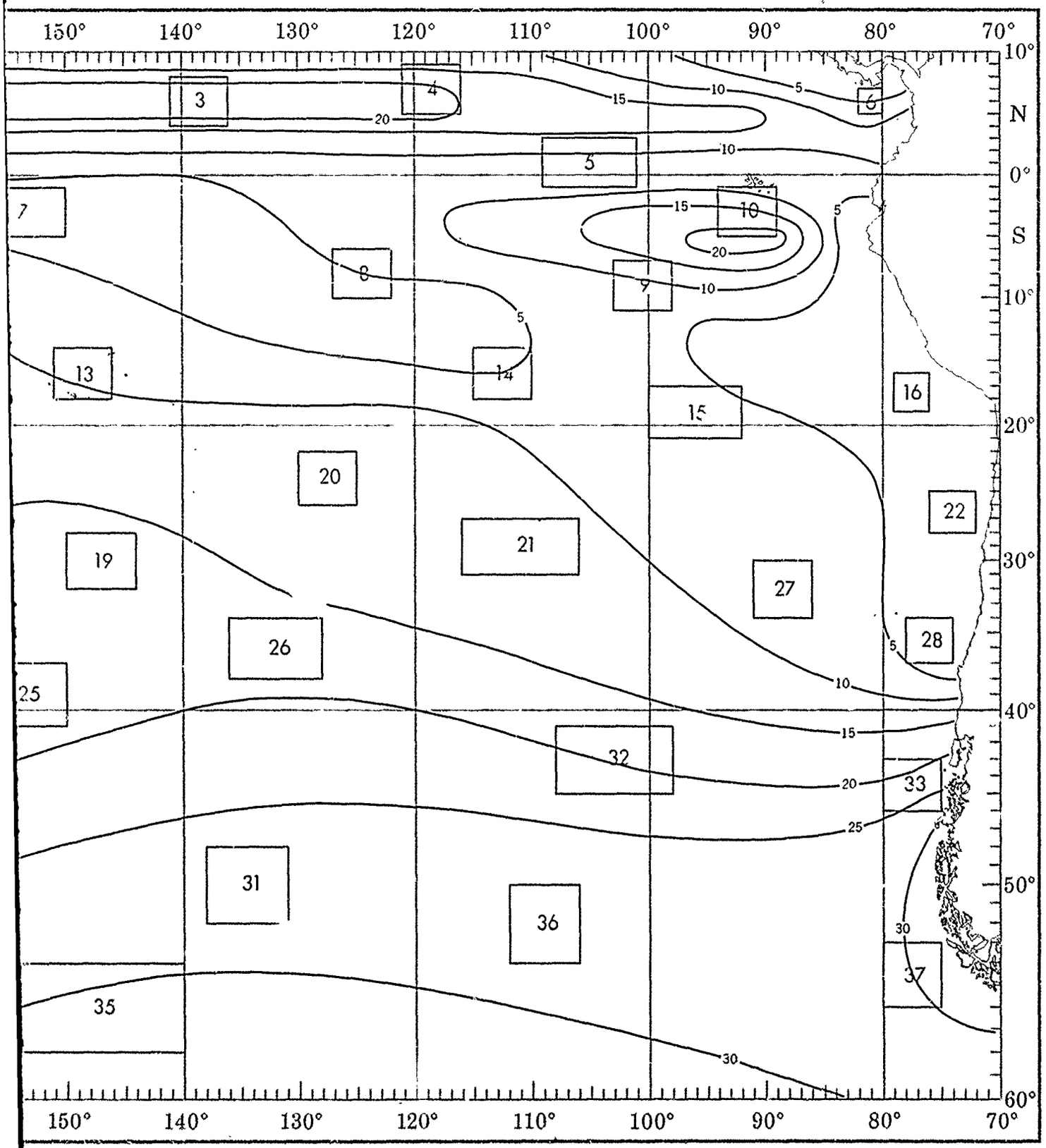
PRECIPITATION



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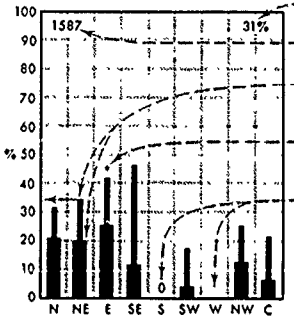
PRECIPITATION

% Pcpn — % Liquid / % Snow

Percent frequency of surface wind observations from each direction and calm that were accompanied by precipitation, subdivided into liquid type (including freezing rain and freezing drizzle) and snow.



—Percentage of present weather observations reporting precipitation

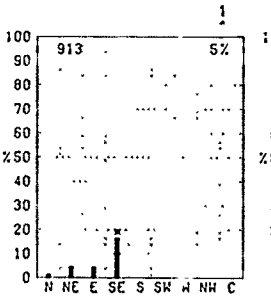
—Number of observations.

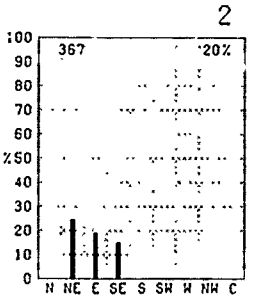
—(34% of all NE winds were accompanied by precipitation, of which 14% was liquid and 20% was snow.)

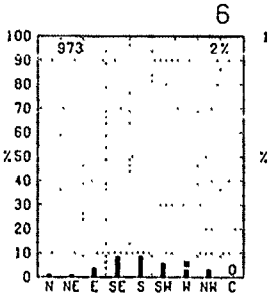
—An asterisk in the column for a given direction or calm indicates that the percentage was based on 10 30 observations of present weather and wind direction.

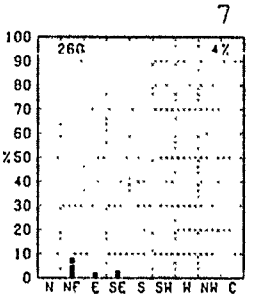
—0 replaces bar when no precipitation was observed with winds from a given direction or calm. No bar graph is presented if less than 10 observations containing present weather were reported for a given direction or calm.

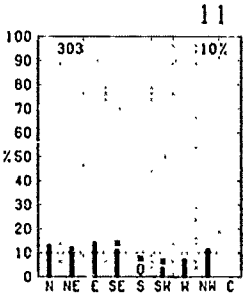
RED LINE - Percent frequency of observations reporting precipitation

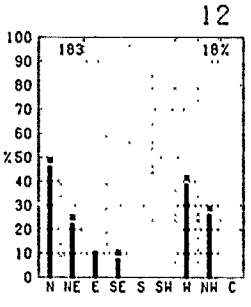


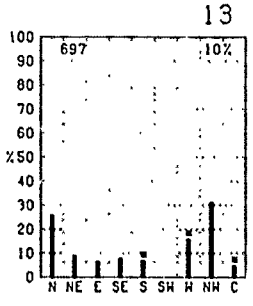


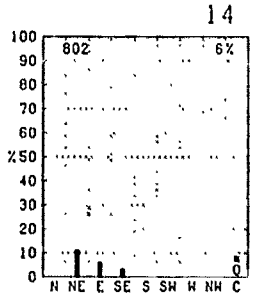


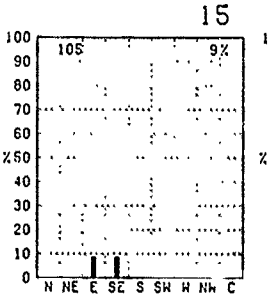


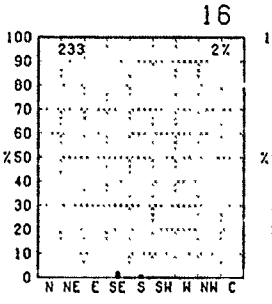


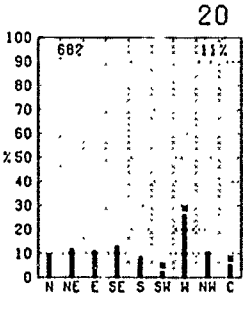


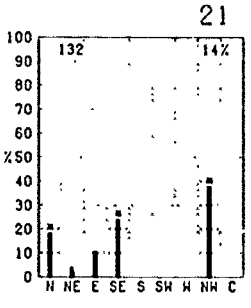


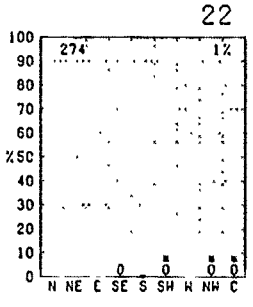


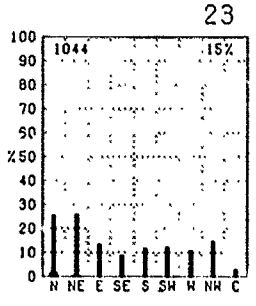


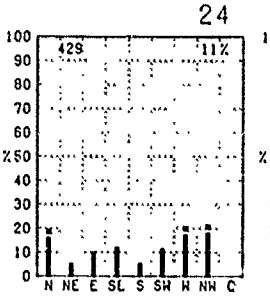


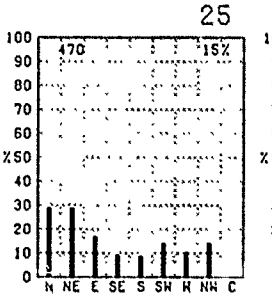


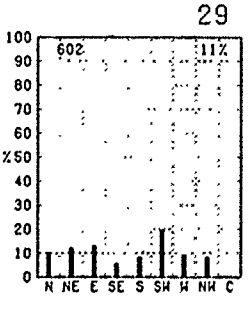


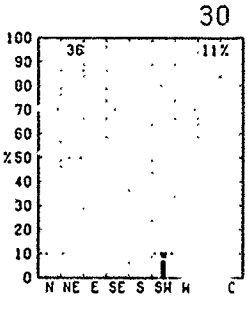












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INSUFFICIENT DATA

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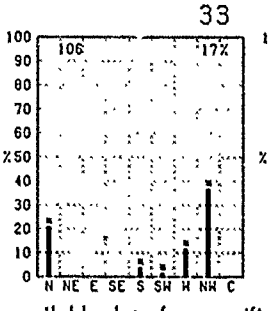

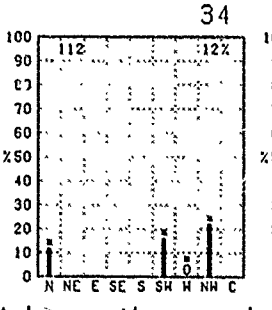

Graphs represent the objective compilation of available data for specified areas without regard to susp
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bias

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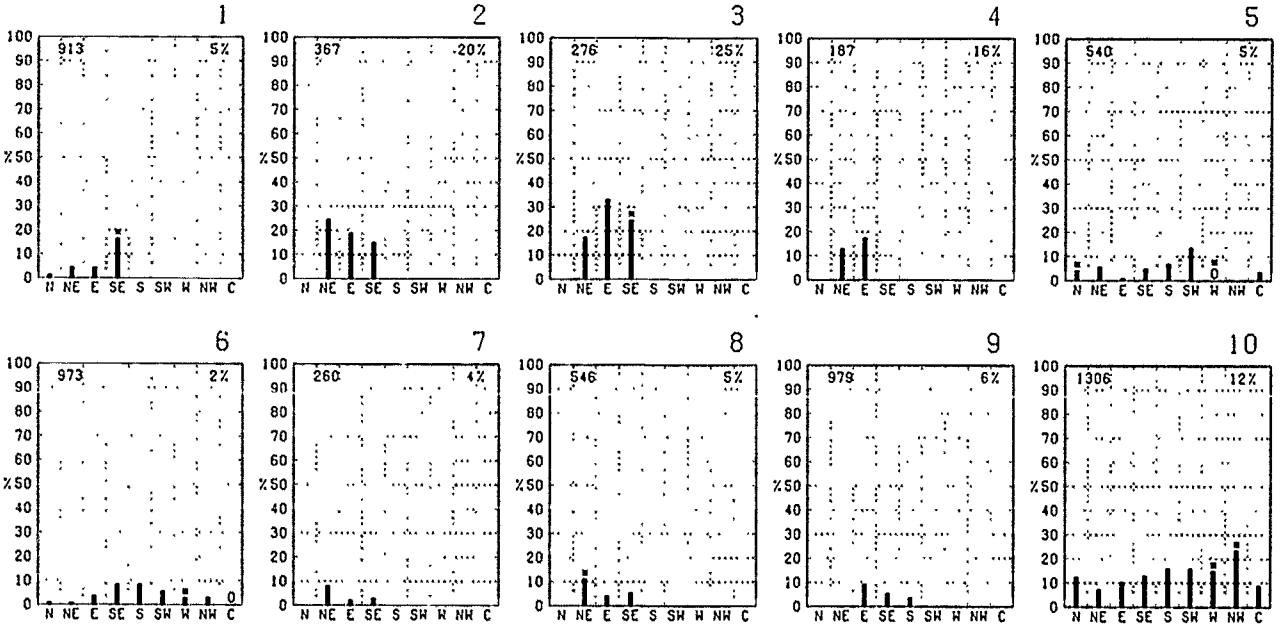

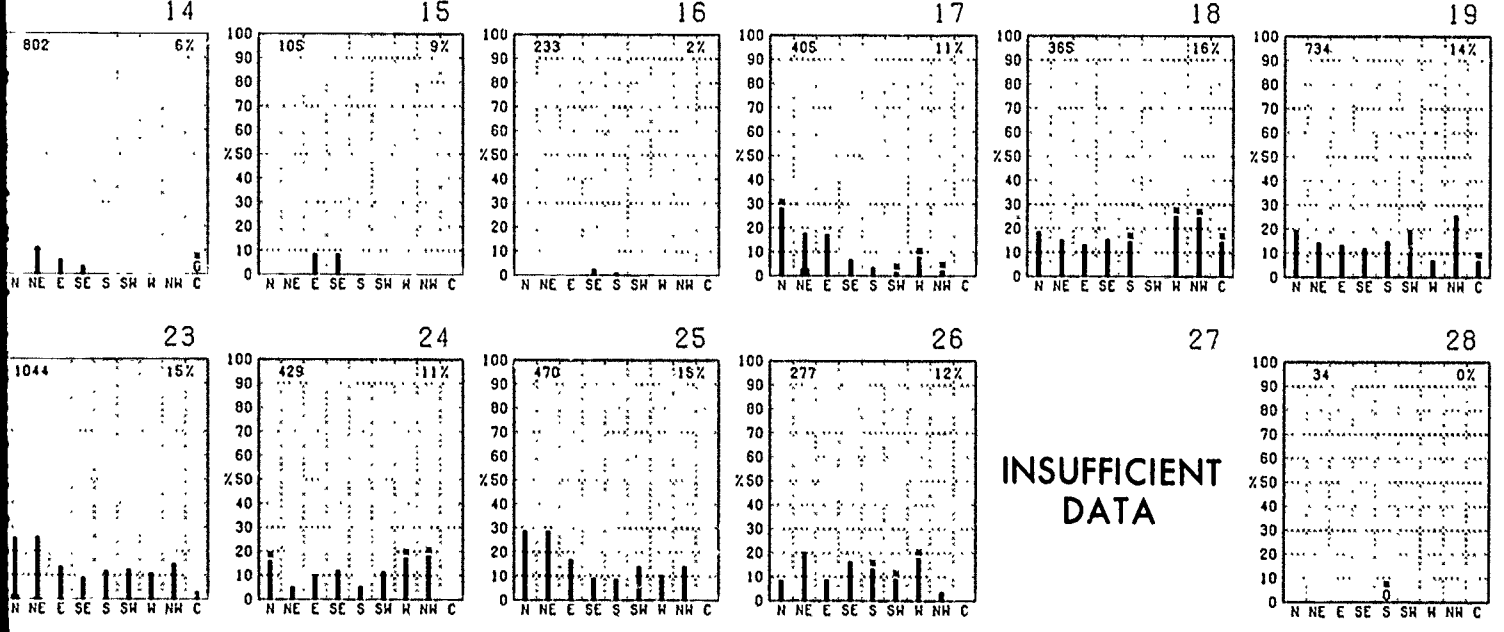

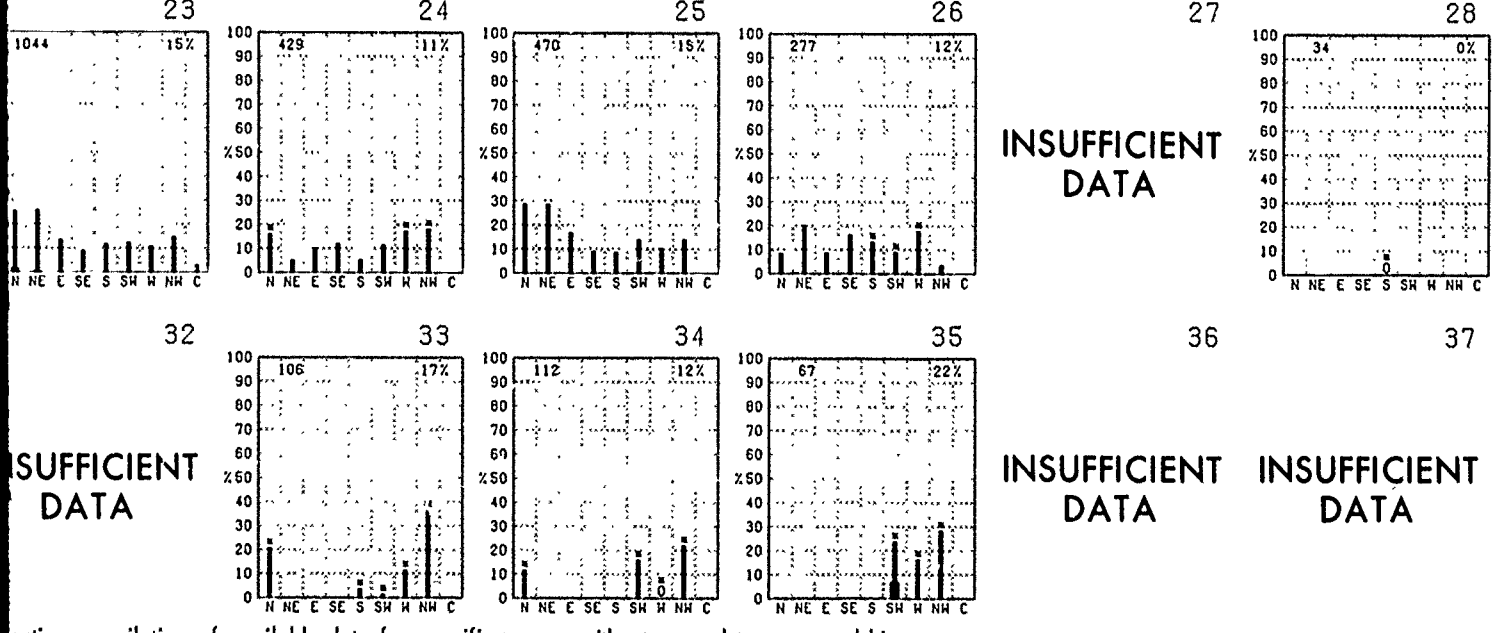

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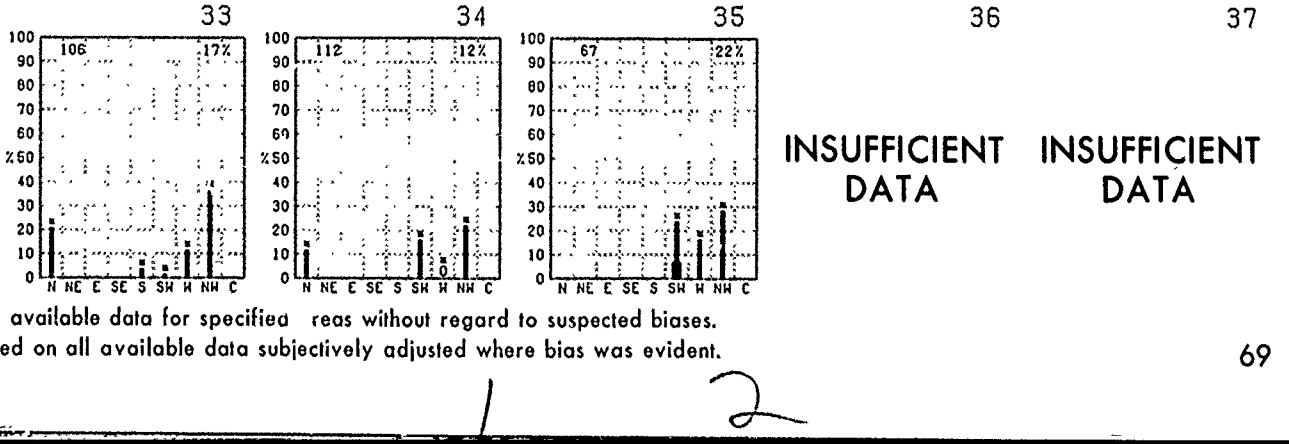

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active compilation of available data for specified areas without regard to suspected biases.
posite page) are based on all available data subjectively adjusted where bias was evident.

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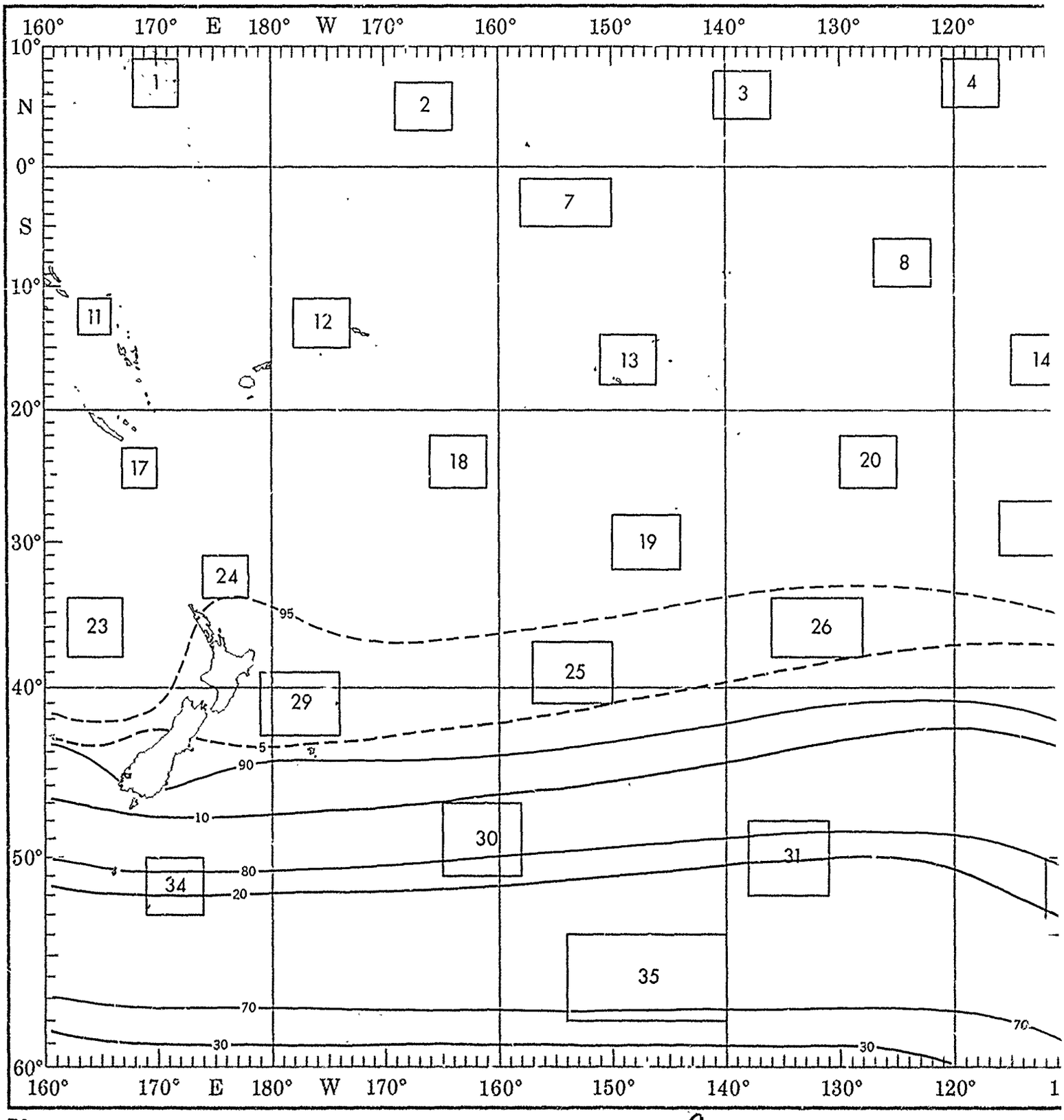
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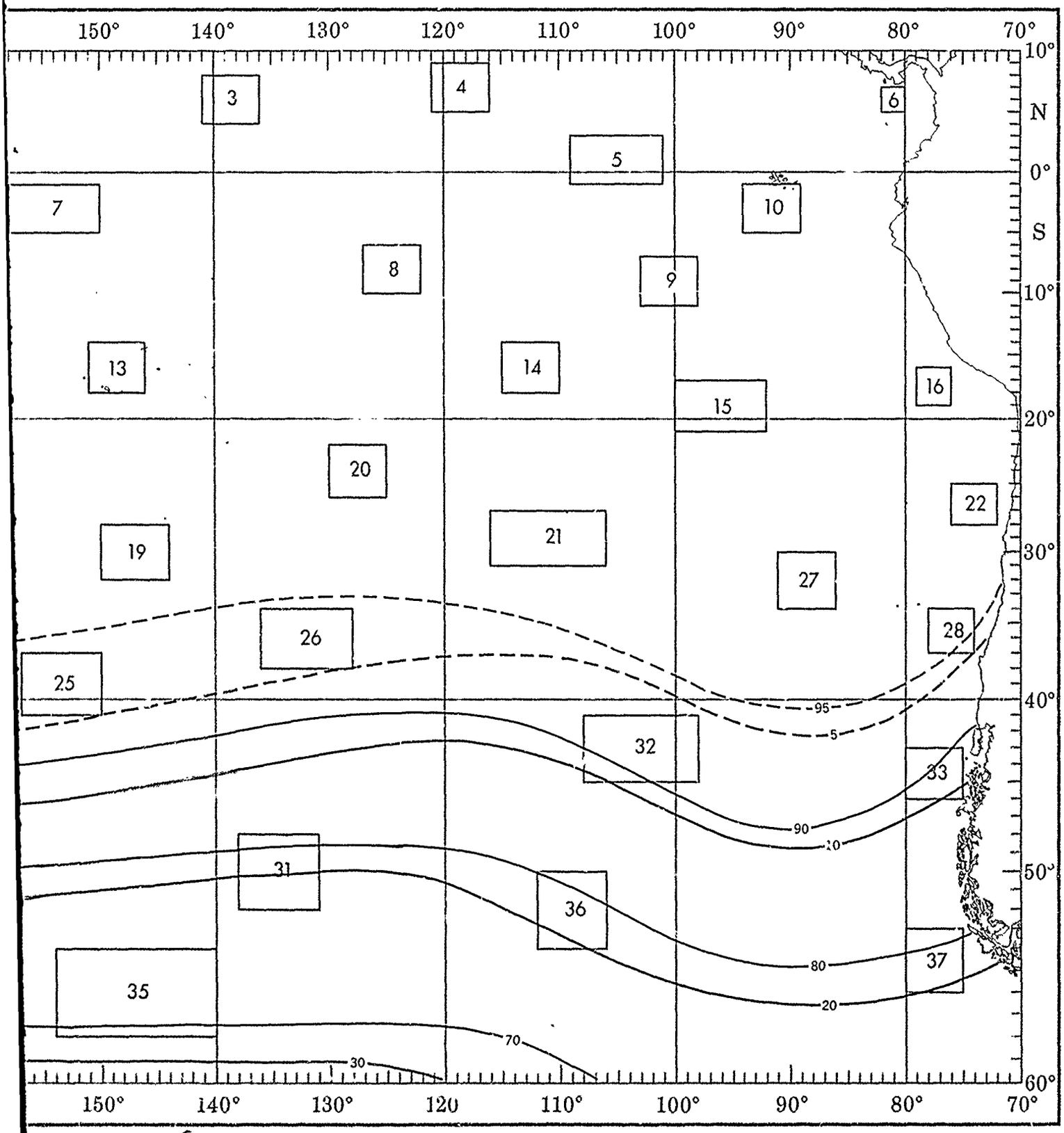
VISIBILITY



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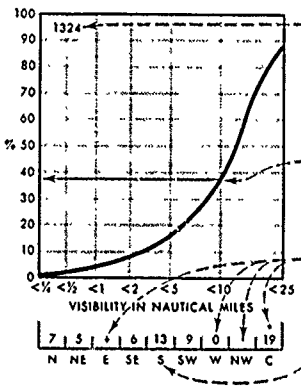
VISIBILITY



Visibility.

—Number of observations.

Cumulative percent frequency of visibilities less than the visibility intersected by the curve.

—(37% of all visibilities reported were <10 nautical miles)

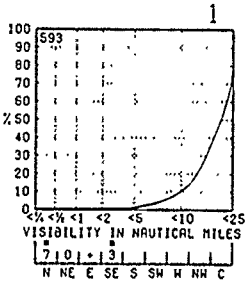
The table below the graph indicates percent frequency of occurrence of visibility <2 nautical miles versus wind direction.

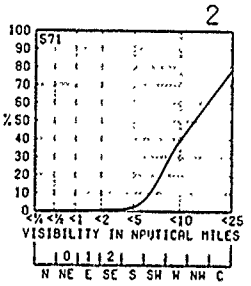
• indicates < 5% but >0. 0 indicates that no visibilities <2 nautical miles were observed with winds from a direction or calm. No percentage is given if less than 10 observations were available for visibility and wind direction. An asterisk indicates that the percentage was based on 10-30 observations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

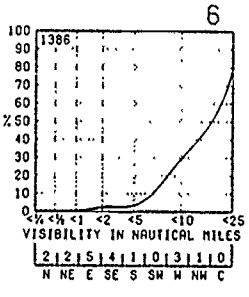
—(13% of all S winds were accompanied by visibilities <2 nautical miles.)

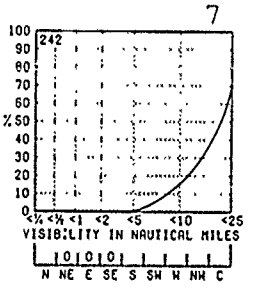
BLUE LINE - Percent frequency of visibilities ≥5 nautical miles

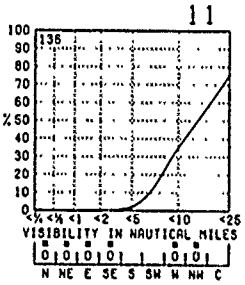
RED LINE - Percent frequency of visibilities <2 nautical miles

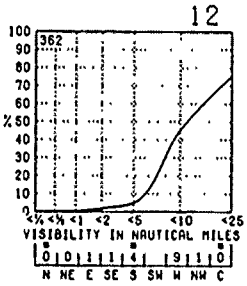


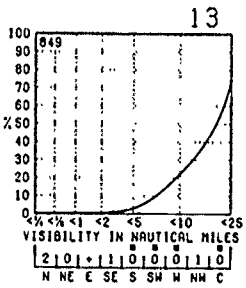


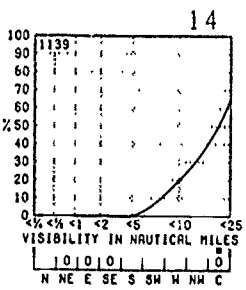


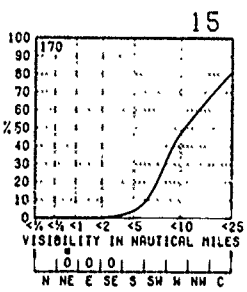


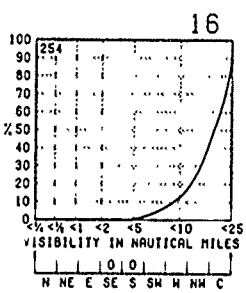


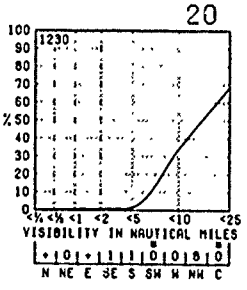


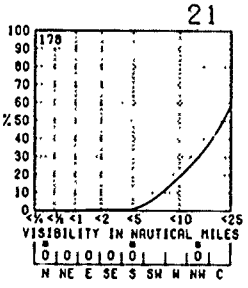


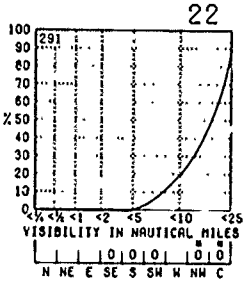


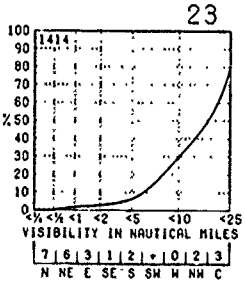


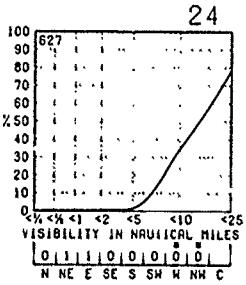


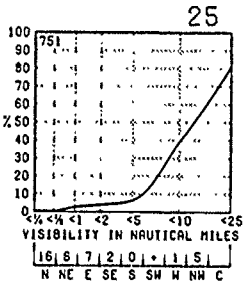


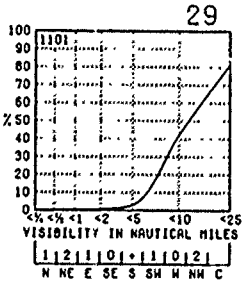


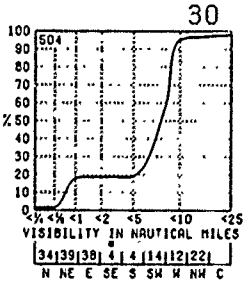


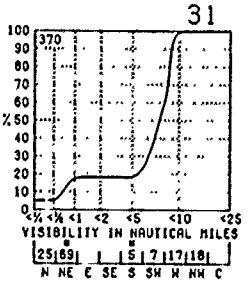


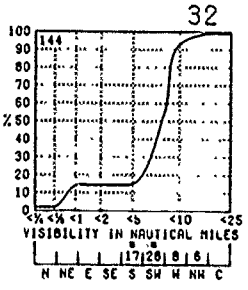


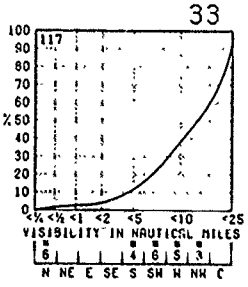


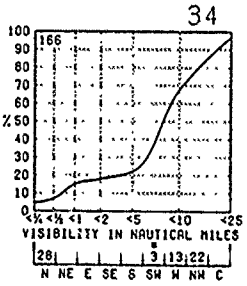












Graphs represent the objective compilation of available data for specified areas without regard to su
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bi

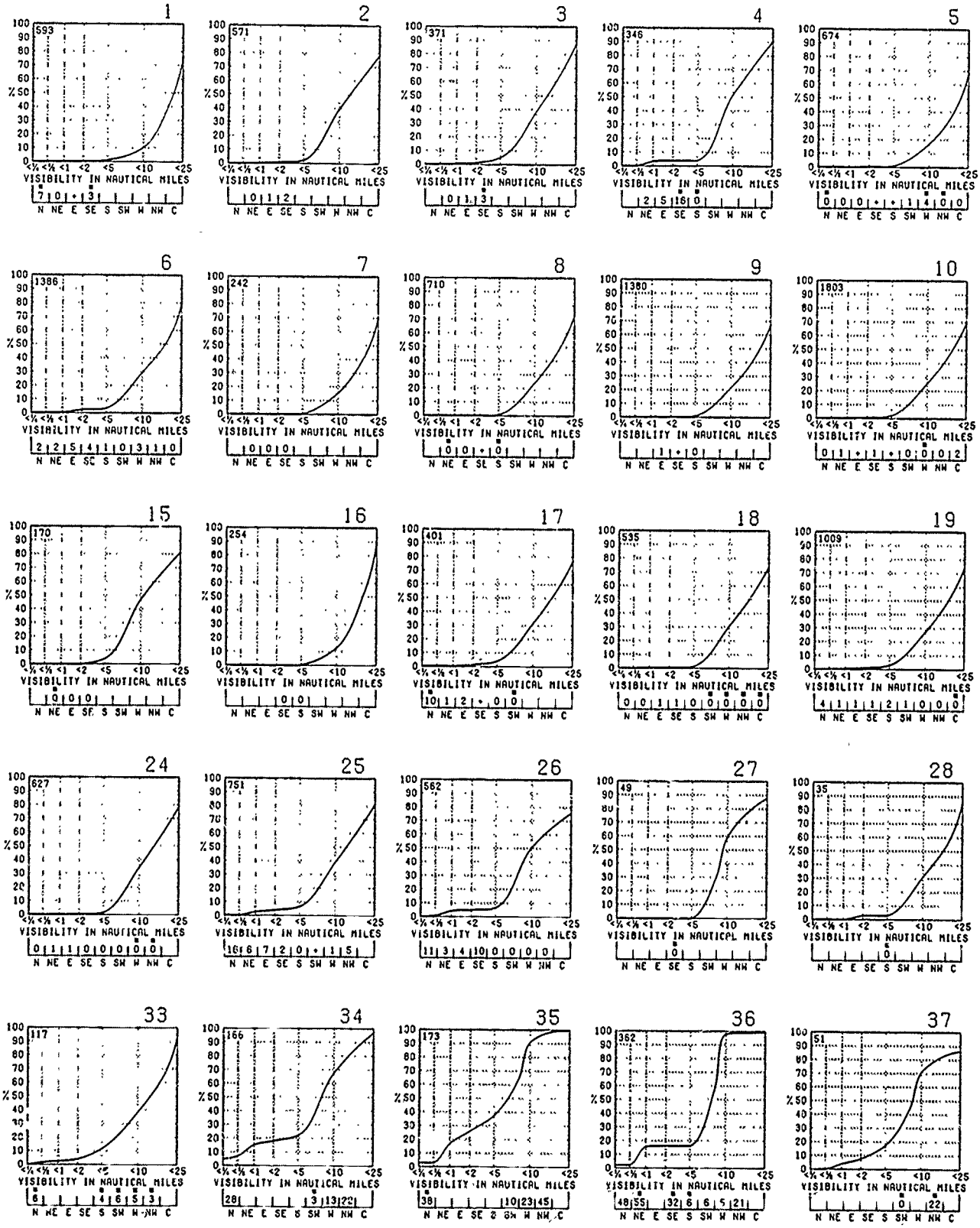
MARCH

the visibility intersect-

currence of visibility

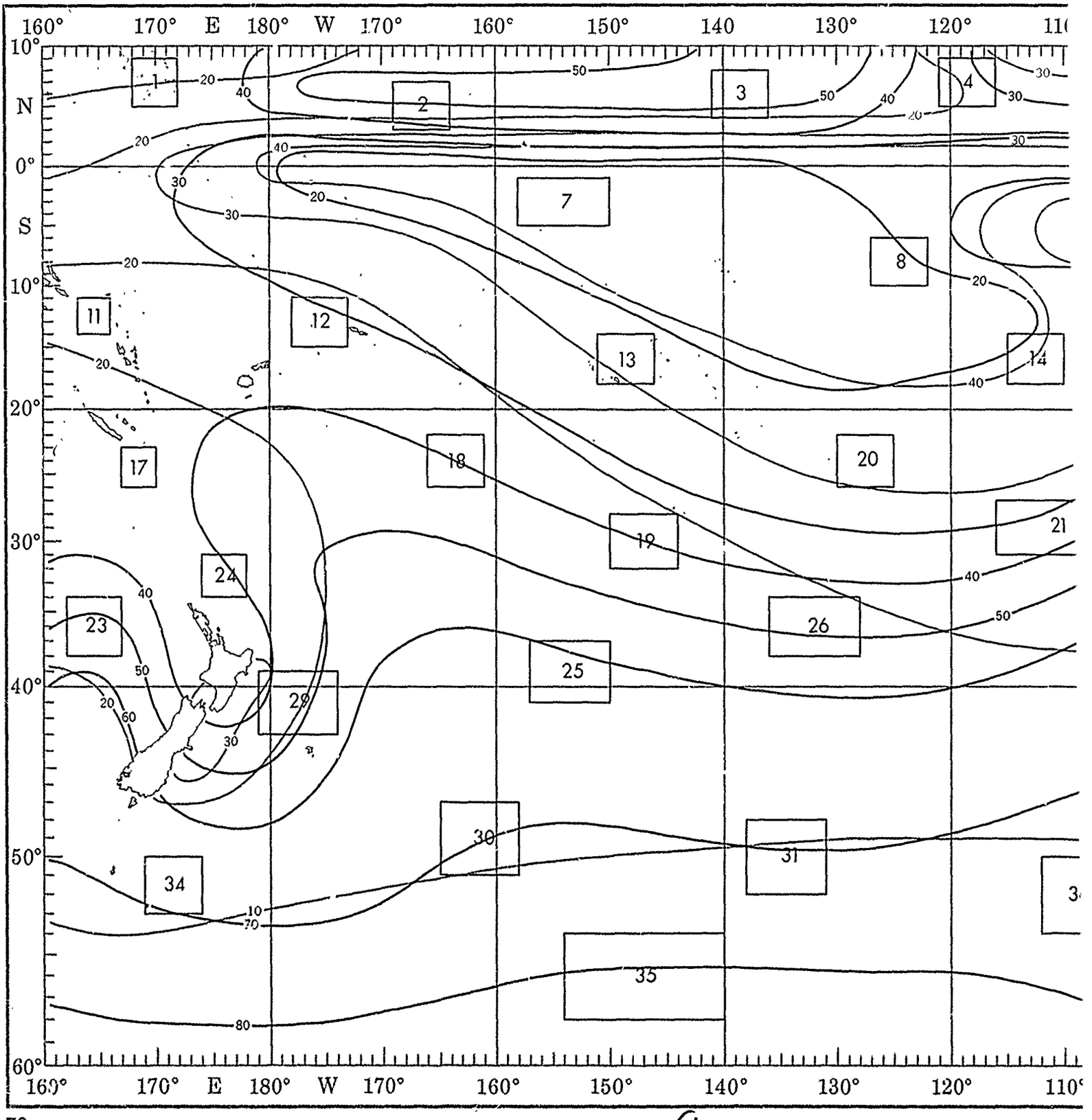
utical miles were
is given if less than 10
An asterisk indicates
lity and wind direction.

les.)



objective compilation of available data for specified areas without regard to suspected biases.
opposite page) are based on all available data subjectively adjusted where bias was evident.

MARCH


160° 170° E 180° W 170° 160° 150° 140 130° 120° 11
10° N 0° S 10° 20° 30° 40° 50° 60°
1
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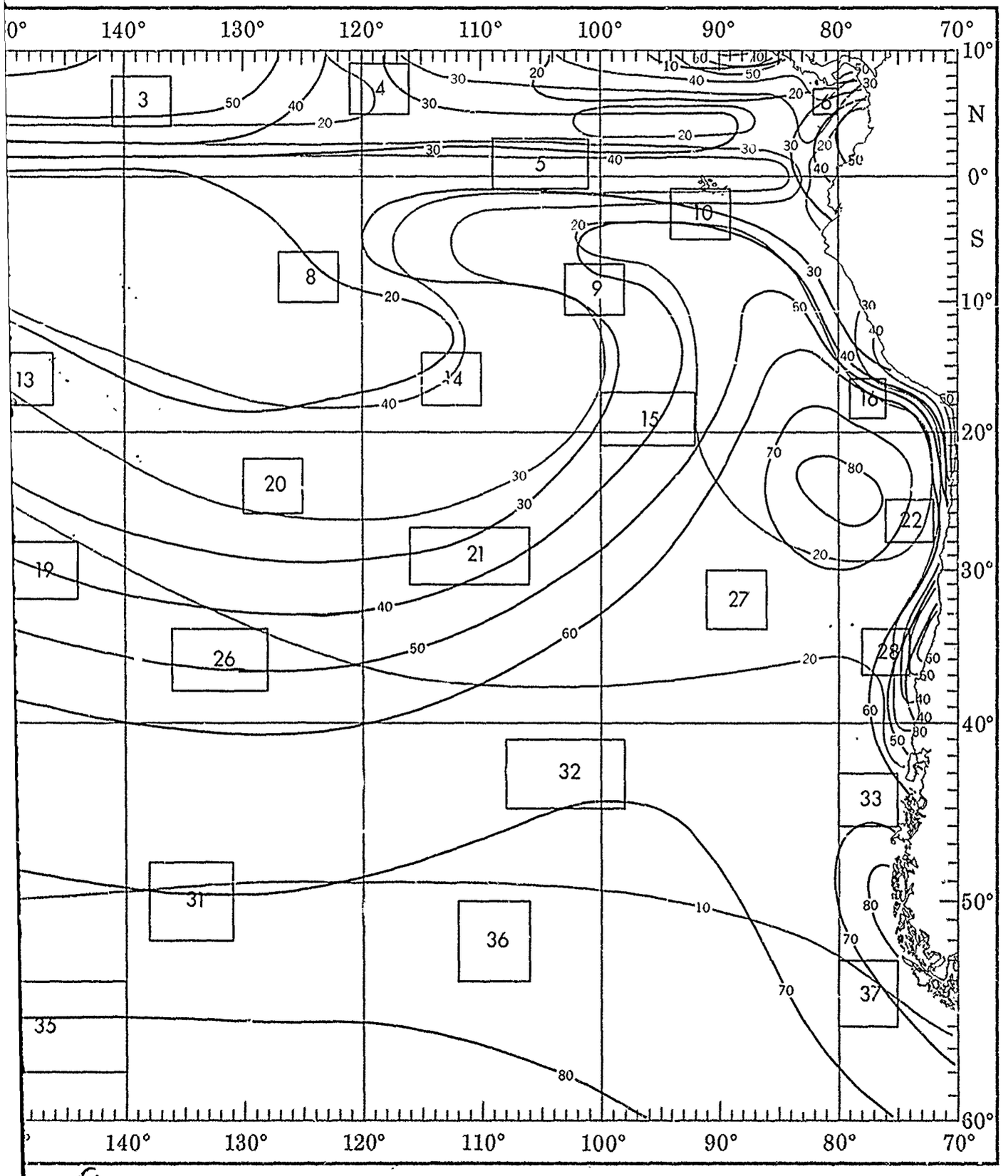
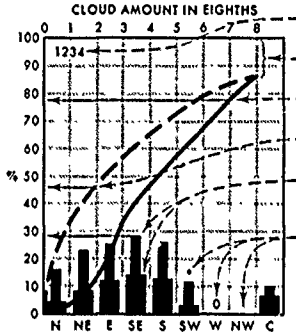
CLOUD COVER



11 1 2

CLOUD COVER

Total Cloud Amount
Low Cloud Amount
} Cumulative percent frequency of indicated cloud amount equal to or less than the amount intersected by the curve.

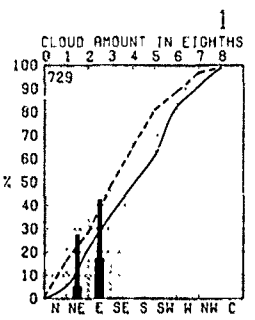


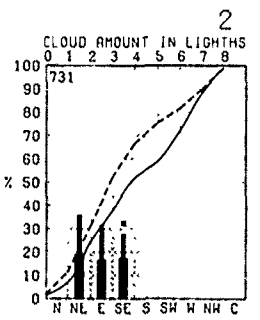
- Number of observations containing total cloud amount.
- Obscurations.
- (77% of all total cloud amounts were ≤7/8.)
- (46% of all low cloud amounts were ≤2/8.)
- (28% of all SE winds were accompanied by low cloud amounts ≥5/8 and 14% by low cloud amounts ≥7/8.)
- An asterisk indicates that the percentage 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.

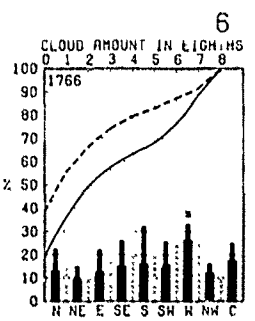
Low cloud amount. Percent frequency of observations from each direction and calm that were accompanied by low cloud amounts ≥5/8 and ≥7/8.
Low clouds are clouds with bases <8000 feet.

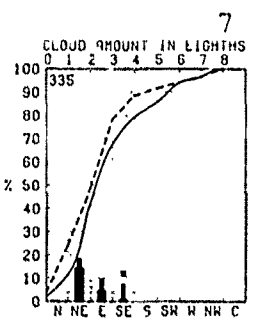
BLUE LINE - Percent frequency of total cloud amount ≤2/8

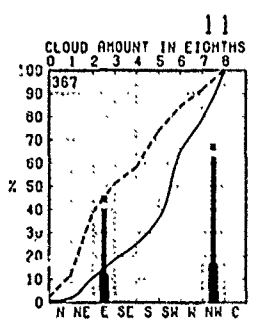
RED LINE - Percent frequency of low cloud amount ≥5/8

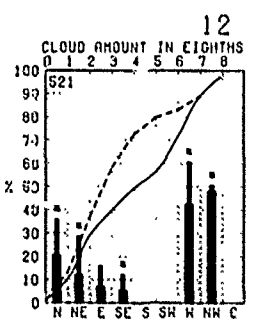


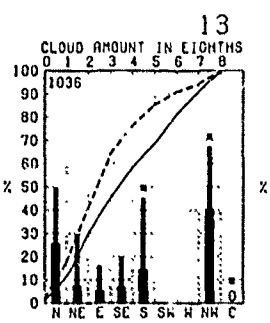


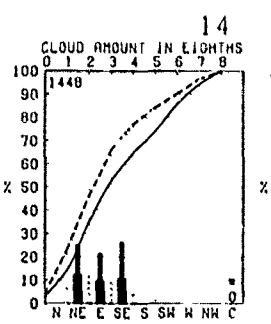


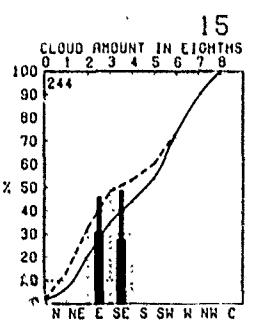


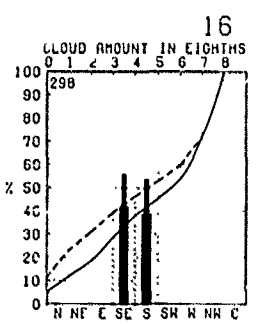


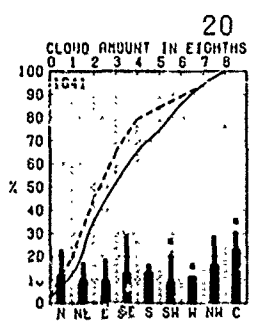


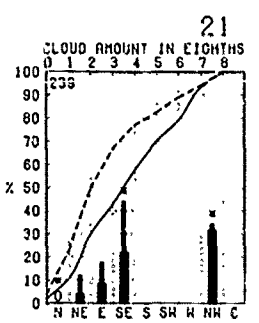


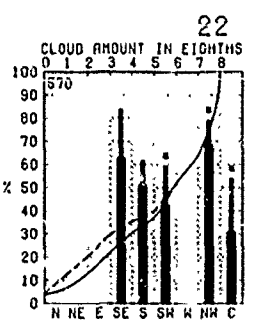


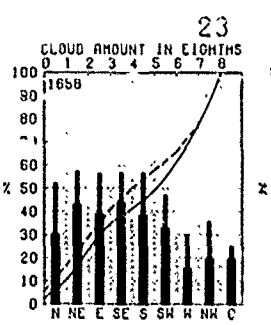


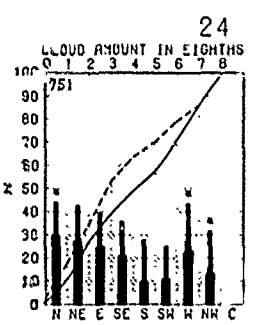


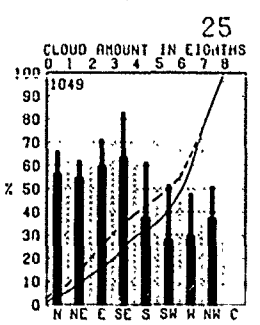


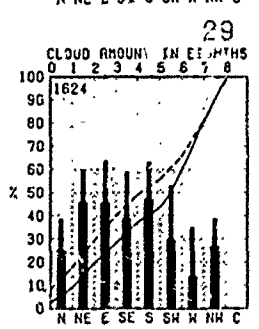


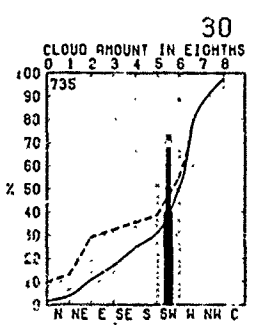


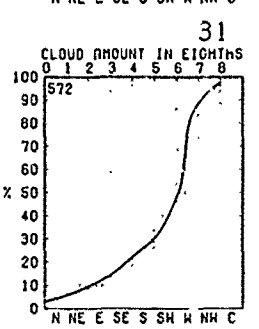


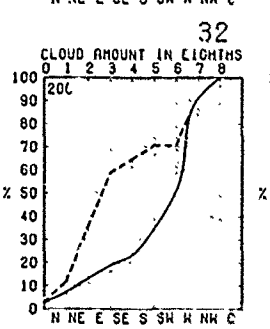


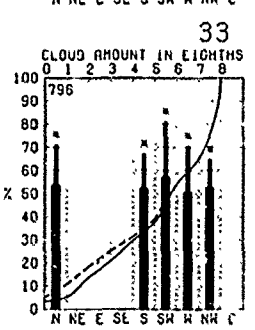


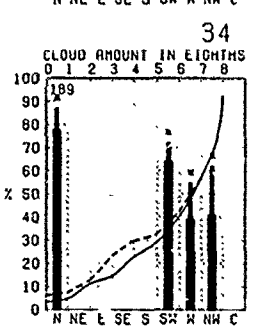












Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

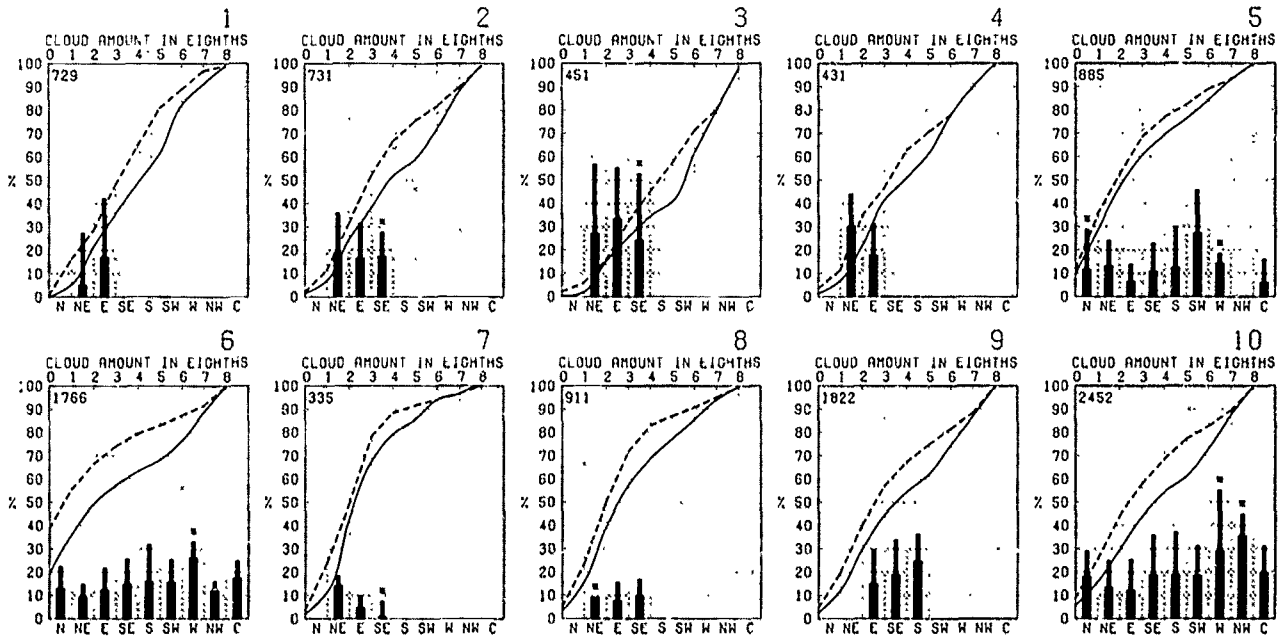
MARCH

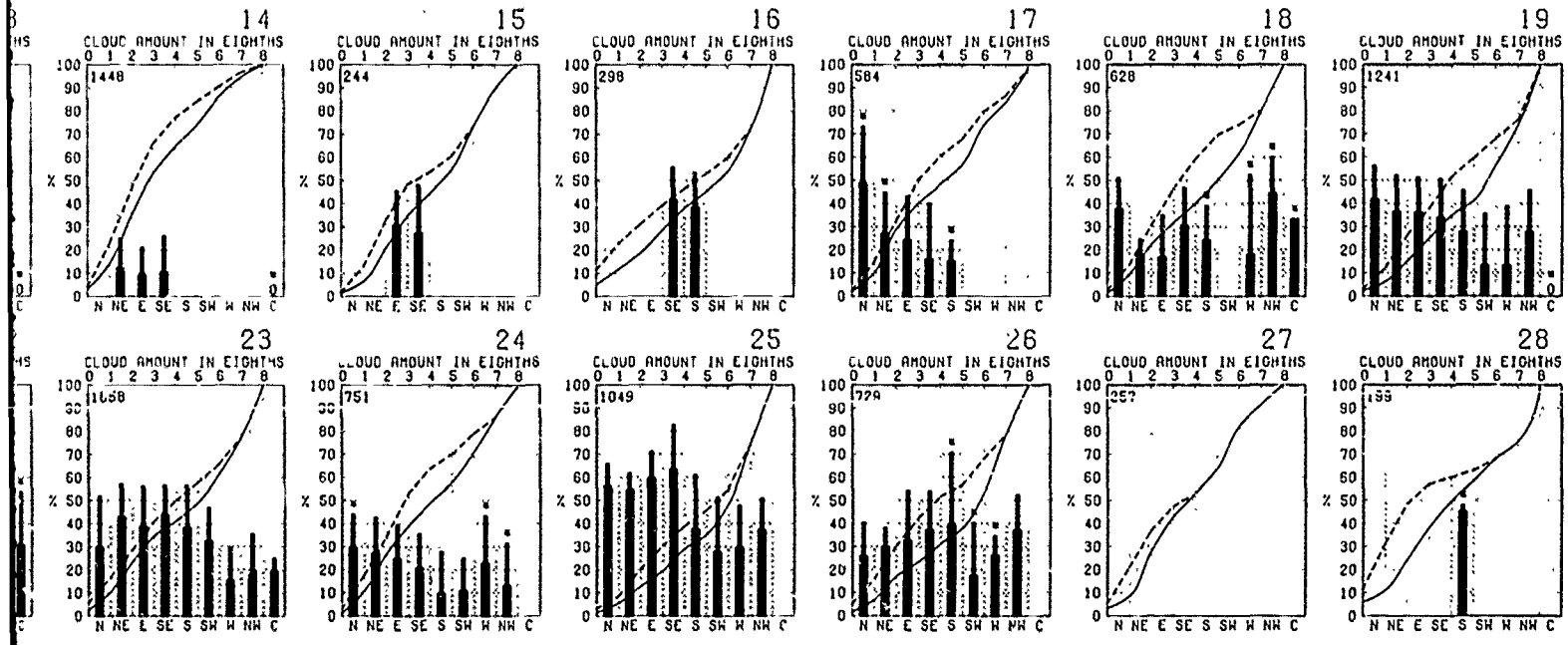
al to or less than the amount

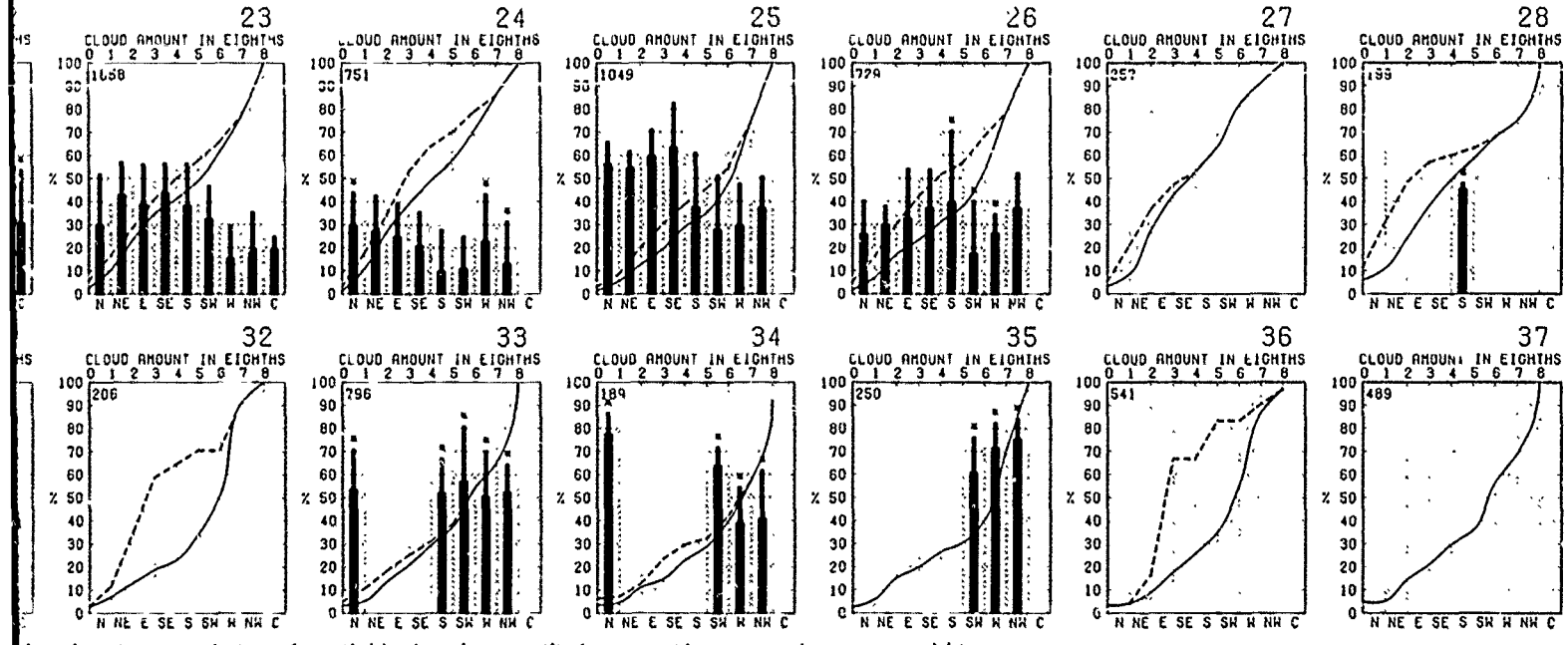
nts ≥5, 8 and 14% by low

observations of wind
n when no low cloud
n 0 or bar is omitted when
n a wind d rection or calm is

n that were accompanied by







the objective compilation of available data for specified areas without regard to suspected biases.
ses (opposite page) are based on all available data subjectively adjusted where bias was evident.

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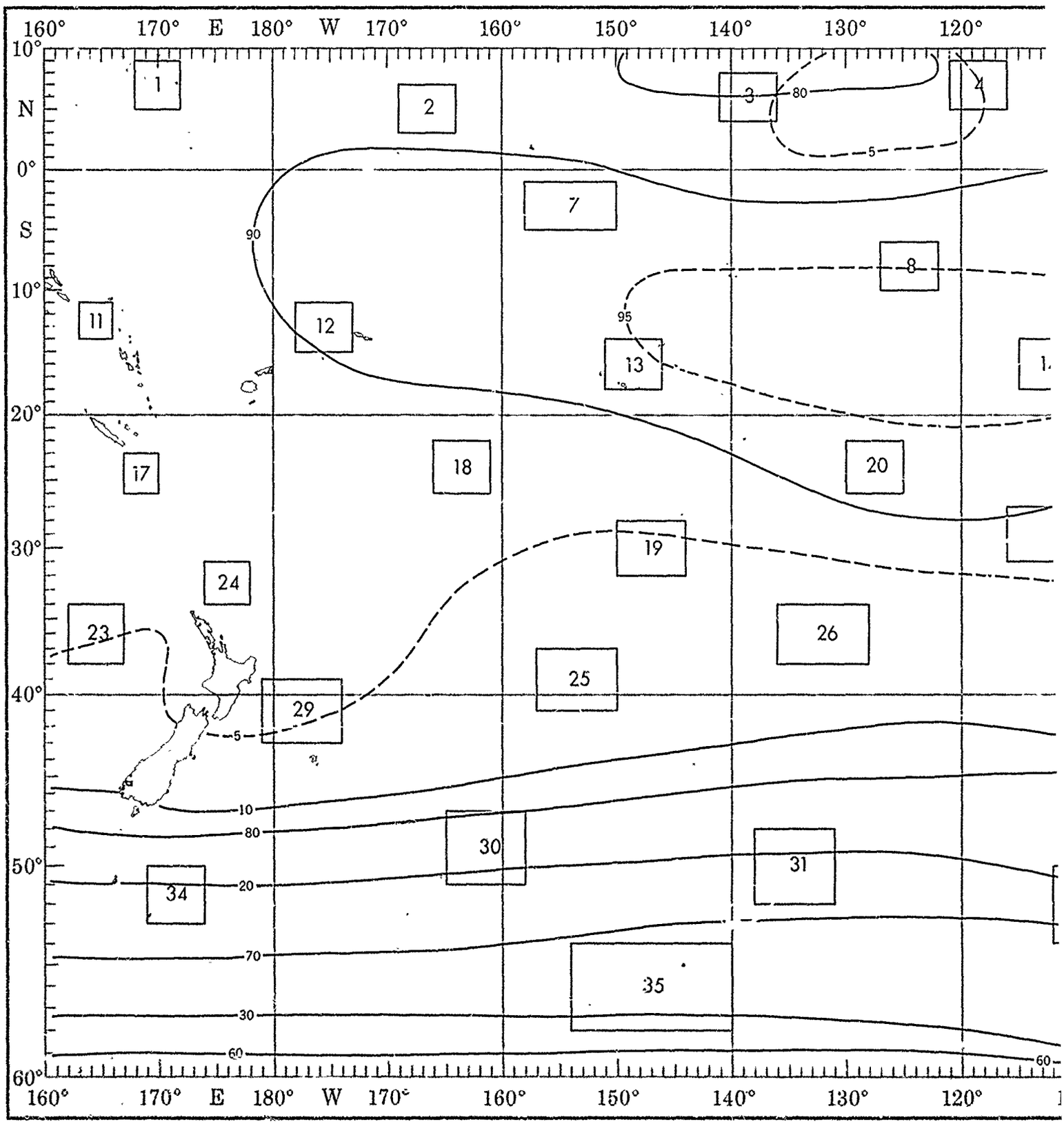
160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N
0°
S 10°
20°
30°
40°
50°
60°
1
2
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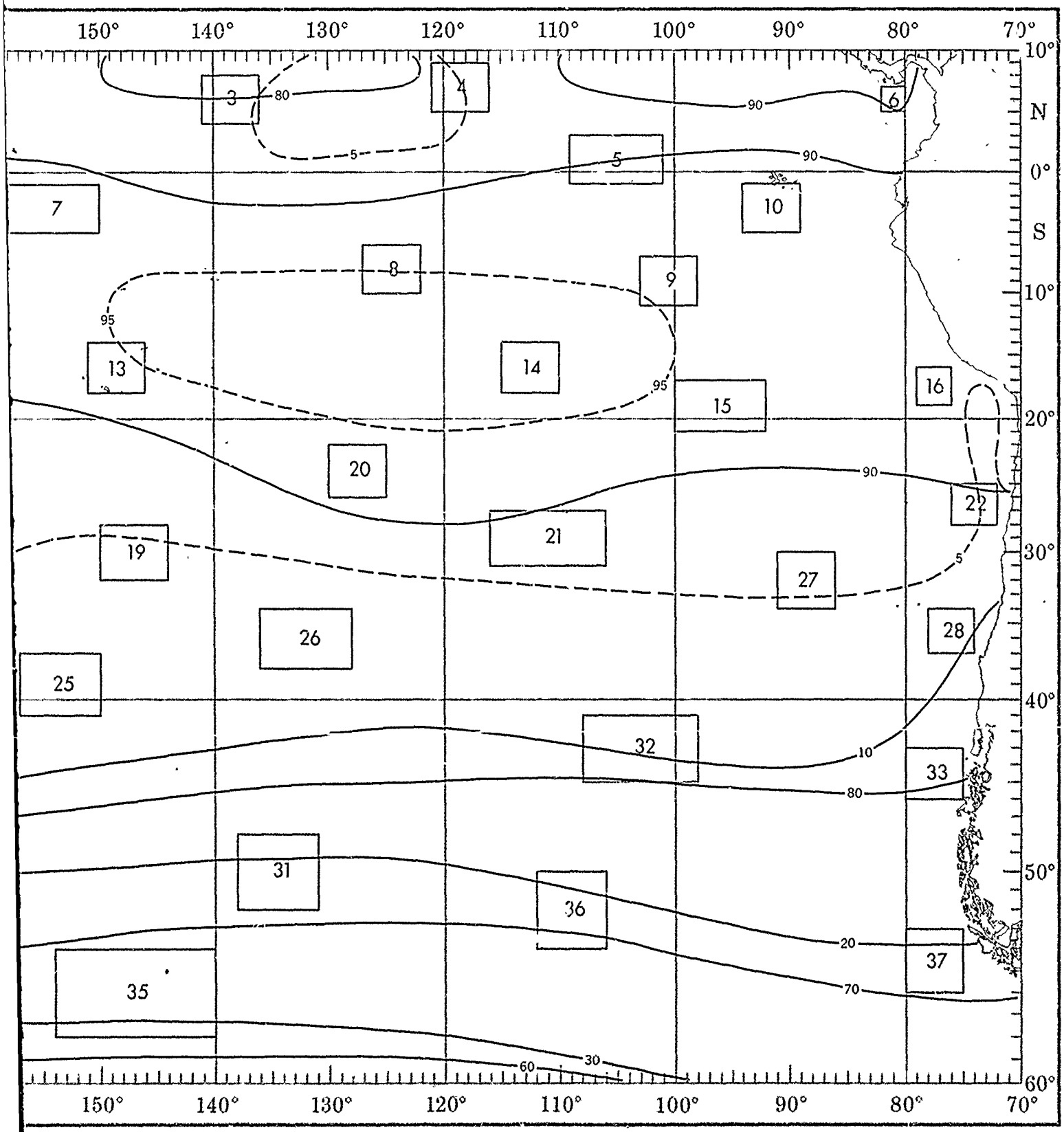
CEILING AND VISIBILITY



1 1 2

CEILING AND VISIBILITY

Low cloud ceiling - Visibility.

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

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".

'N C' (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	+	3	13	64
50<80	0	0	0	0	+	1
35<50	0	+	0	0	0	4
20<35	0	+	1	1	2	2
10<20	0	+	1	1	2	1
6<10	0	1	0	+	+	0
3<6	+	+	0	+	+	0
1.5<3	+	0	0	0	0	0
0<1.5	+	0	0	0	0	0

334

(2% of all observations reported ceiling ≥1000 but <2000 feet simultaneously with visibility ≥5 but <10 nautical miles)

+ indicates <5% but >0.

Number of observations.

1

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	9	57
50<80	0	0	0	0	0	0
35<50	0	0	0	0	+	+
20<35	0	0	0	0	1	10
10<20	0	0	0	0	1	13
6<10	0	0	0	0	2	5
3<6	0	0	0	0	+	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	+

211

2

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	4	62
50<80	0	0	0	0	+	0
35<50	0	0	0	0	0	1
20<35	0	0	0	+	+	4
10<20	0	0	0	+	3	14
6<10	0	0	0	+	2	5
3<6	0	0	0	1	1	1
1.5<3	0	0	+	0	0	0
0<1.5	0	0	0	0	0	0

294

6

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	10	73
50<80	0	0	0	0	+	1
35<50	0	0	0	0	+	1
20<35	0	0	0	+	2	3
10<20	0	0	0	+	1	4
6<10	0	0	0	+	1	2
3<6	0	0	0	0	+	+
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	+

960

7

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	2	87
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	0
20<35	0	0	0	1	1	2
10<20	0	0	0	0	1	2
6<10	0	0	0	0	1	2
3<6	0	0	0	0	1	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

182

BLUE LINE Percent frequency of low cloud ceiling ≥1000 feet (or no low cloud ceiling) and visibility ≥5 nautical miles

RED LINE - Percent frequency of low cloud ceiling <600 feet and/or visibility <2 nautical miles

11

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	C	0	0	1	9	48
50<80	0	0	0	0	0	0
35<50	0	0	0	0	1	0
20<35	0	0	0	0	4	4
10<20	0	0	0	0	2	15
6<10	0	0	0	1	1	10
3<6	0	0	0	0	2	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

81

12

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	4	70
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	1
20<35	0	0	0	0	1	1
10<20	0	1	0	1	4	4
6<10	0	0	1	3	1	7
3<6	0	0	0	1	0	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

142

13

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	7	69
50<80	0	0	0	0	0	+
35<50	0	0	0	0	+	1
20<35	0	0	0	+	2	4
10<20	0	0	0	+	4	6
6<10	0	0	+	1	1	2
3<6	0	0	0	+	0	1
1.5<3	0	0	0	0	0	0
0<1.5	+	0	0	0	0	0

629

14

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	+	77
50<80	0	0	0	0	0	1
35<50	0	0	0	0	+	2
20<35	0	0	0	0	+	4
10<20	0	0	0	+	1	8
6<10	0	0	0	+	1	5
3<6	0	0	0	0	+	+
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

848

15

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	11	42
50<80	0	0	0	0	2	2
35<50	0	0	0	0	1	2
20<35	0	0	0	2	4	6
10<20	0	0	0	2	4	13
6<10	0	0	0	3	1	5
3<6	0	0	0	0	0	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

114

16

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	5	43
50<80	0	0	0	0	+	1
35<50	0	0	0	0	+	3
20<35	0	0	0	0	4	14
10<20	0	0	0	0	+	18
6<10	0	0	0	0	1	7
3<6	0	0	0	+	0	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

211

20

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	C	0	0	+	1	79
50<80	0	0	0	0	0	0
35<50	0	0	0	0	+	1
20<35	0	0	0	0	1	3
10<20	0	0	0	+	1	7
6<10	0	0	0	1	2	2
3<6	0	0	0	+	+	1
1.5<3	0	0	+	0	+	0
0<1.5	0	0	0	0	0	0

755

21

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	4	73
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	6
20<35	0	0	0	0	1	3
10<20	0	0	0	0	1	4
6<10	0	0	0	0	1	3
3<6	0	0	0	1	2	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	1

145

22

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	5	31
50<80	0	0	0	0	+	1
35<50	0	0	0	0	3	3
20<35	0	0	0	0	4	15
10<20	0	0	0	0	5	19
6<10	0	0	0	0	2	9
3<6	0	0	0	0	0	2
1.5<3	0	0	0	+	0	0
0<1.5	0	0	0	0	0	+

259

23

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	2	49
50<80	0	0	0	0	+	1
35<50	0	0	0	+	+	2
20<35	0	0	0	+	1	7
10<20	+	0	+	1	4	15
6<10	+	1	+	2	4	7
3<6	0	0	+	+	1	+
1.5<3	0	0	0	+	+	0
0<1.5	0	0	+	+	+	+

1051

24

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	3	62
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	1
20<35	0	0	0	0	+	4
10<20	+	0	0	+	4	11
6<10	0	0	0	+	4	5
3<6	0	0	+	+	+	1
1.5<3	0	0	0	0	+	0
0<1.5	0	0	0	+	+	0

409

25

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	4	35
50<80	0	0	0	0	1	1
35<50	0	0	0	0	1	4
20<35	0	0	0	0	2	11
10<20	0	+	+	1	5	16
6<10	0	+	+	1	4	9
3<6	+	0	1	+	0	0
1.5<3	0	0	0	+	+	0
0<1.5	0	+	+	+	+	0

513

29

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	C	0	0	0	4	45
50<80	0	0	0	+	+	2
35<50	0	0	0	0	1	2
20<35	0	0	0	+	2	11
10<20	+	0	0	0	4	16
6<10	0	0	0	+	3	6
3<6	0	0	0	0	1	+
1.5<3	0	0	+	+	+	0
0<1.5	+	0	0	0	0	0

652

30

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	7	30
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	3
20<35	0	0	0	0	3	0
10<20	0	0	3	0	10	17
6<10	0	0	0	7	7	0
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	3	7	0	3	0	0

30

31

INSUFFICIENT DATA

32

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	18	47
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	0
20<35	0	0	0	0	12	12
10<20	0	0	0	6	6	0
6<10	0	0	0	0	0	0
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

17

33

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	9	24
50<80	0	0	0	0	0	0
35<50	0	0	0	1	0	1
20<35	0	0	0	1	7	9
10<20	0	0	0	2	7	16
6<10	0	0	0	0	3	7
3<6	0	0	0	1	0	5
1.5<3	0	0	1	1	0	0
0<1.5	1	1	1	1	0	0

99

34

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	5	25
50<80	0	0	0	0	0	1
35<50	0	0	0	0	1	1
20<35	0	0	0	3	16	5
10<20	0	1	0	0	8	9
6<10	0	1	0	3	2	5
3<6	0	0	2	0	0	0
1.5<3	1	0	0	0	0	0
0<1.5	7	3	2	1	0	0

110

Graphs represent the objective compilation of available data for specified areas without regard to su
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bi

MARCH

(hundreds of feet)

n low cloud amount

of N_h <5/8

visibility ≥5 but <10

5 nautical miles

1

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	9	57
50<80	0	0	0	0	0	0
35<50	0	0	0	0	+	+
20<35	0	0	0	0	1	10
10<20	0	0	0	0	1	13
6<10	0	0	0	0	2	5
3<6	0	0	0	0	+	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	+

211

2

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	4	62
50<80	0	0	0	0	+	0
35<50	0	0	0	0	0	1
20<35	0	0	0	+	+	4
10<20	0	0	0	+	3	14
6<10	0	0	0	+	2	5
3<6	0	0	0	1	1	1
1.5<3	0	0	+	0	0	0
0<1.5	0	0	0	0	0	0

294

3

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	1	8	36
50<80	0	0	0	0	0	0
35<50	0	0	0	0	1	2
20<35	0	0	0	1	2	5
10<20	0	0	0	1	6	12
6<10	0	0	0	2	7	13
3<6	0	0	0	0	2	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

252

4

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	3	60
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	0
20<35	0	0	1	0	1	5
10<20	0	0	0	0	6	9
6<10	0	0	0	0	3	8
3<6	0	0	0	0	0	2
1.5<3	0	0	0	0	0	1
0<1.5	0	0	1	1	0	0

172

5

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	4	74
50<80	0	0	0	0	0	+
35<50	0	0	0	0	+	1
20<35	0	0	0	0	+	2
10<20	0	0	0	+	1	8
6<10	0	0	0	+	1	4
3<6	0	0	0	0	+	+
1.5<3	0	0	0	0	+	1
0<1.5	0	0	0	0	+	0

541

6

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	10	73
50<80	0	0	0	0	+	1
35<50	0	0	0	0	+	1
20<35	0	0	0	+	2	3
10<20	0	0	0	+	1	4
6<10	0	0	0	+	1	2
3<6	0	0	0	0	+	+
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	+

960

7

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	2	87
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	0
20<35	0	0	0	1	1	2
10<20	0	0	0	0	1	2
6<10	0	0	0	0	1	2
3<6	0	0	0	0	1	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

182

8

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	2	81
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	1
20<35	0	0	0	0	0	2
10<20	0	0	0	0	1	8
6<10	0	0	0	+	1	3
3<6	0	0	0	+	0	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	+	+	0

533

9

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	1	67
50<80	0	0	0	0	0	+
35<50	0	0	0	0	0	3
20<35	0	0	0	0	1	7
10<20	0	0	0	+	1	12
6<10	0	0	+	+	+	5
3<6	0	0	0	+	+	1
1.5<3	0	0	+	0	+	0
0<1.5	0	0	0	0	0	0

1040

10

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	+	0	+	3	66
50<80	0	0	0	0	0	+
35<50	0	0	0	0	+	1
20<35	0	0	0	+	1	5
10<20	+	0	+	+	2	10
6<10	0	0	+	1	3	4
3<6	0	0	0	+	1	1
1.5<3	0	0	+	+	+	+
0<1.5	+	0	0	0	0	+

1386

14

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	+	77
50<80	0	0	0	0	0	1
35<50	0	0	0	0	+	2
20<35	0	0	0	0	+	4
10<20	0	0	0	+	1	8
6<10	0	0	0	+	1	5
3<6	0	0	0	0	+	+
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

848

15

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	11	42
50<80	0	0	0	0	2	2
35<50	0	0	0	0	1	2
20<35	0	0	0	2	4	6
10<20	0	0	0	2	4	13
6<10	0	0	0	3	1	5
3<6	0	0	0	0	0	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

114

16

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	5	43
50<80	0	0	0	0	+	1
35<50	0	0	0	0	+	3
20<35	0	0	0	0	4	14
10<20	0	0	0	0	+	18
6<10	0	0	0	0	1	7
3<6	0	0	0	+	0	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

211

17

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	0	0	0	2	59
50<80	0	0	0	0	0	+
35<50	0	0	0	0	0	2
20<35	0	0	0	+	1	3
10<20	0	0	+	0	3	11
6<10	0	0	0	1	3	11
3<6	0	0	0	1	+	2
1.5<3	0	0	0	+	0	+
0<1.5	0	0	0	0	+	+

261

18

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	6	54
50<80	0	0	0	0	+	1
35<50	0	0	0	0	0	2
20<35	0	0	0	0	1	8
10<20	0	0	0	0	3	14
6<10	0	+	0	0	2	5
3<6	0	0	0	1	1	3
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

353

19

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	2	51
50<80	0	0	0	0	0	+
35<50	0	0	+	0	+	2
20<35	0	0	0	0	1	8
10<20	0	0	+	+	3	17
6<10	+	0	+	1	4	7
3<6	+	0	0	1	1	1
1.5<3	0	0	0	0	1	+
0<1.5	0	+	0	0	0	0

772

23

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	2	49
50<80	0	0	0	0	+	1
35<50	0	0	0	+	+	2
20<35	0	0	0	+	1	7
10<20	+	0	+	1	4	15
6<10	+	1	+	2	4	7
3<6	0	0	+	+	1	+
1.5<3	0	0	0	+	+	0
0<1.5	0	0	+	+	+	+

1051

24

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	3	62
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	1
20<35	0	0	0	0	+	4
10<20	+	0	0	+	4	11
6<10	0	0	0	+	4	5
3<6	+	0	1	+	+	1
1.5<3	0	0	0	0	+	0
0<1.5	0	0	0	+	+	0

409

25

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	4	35
50<80	0	0	0	0	1	1
35<50	0	0	0	0	1	4
20<35	0	0	0	0	2	11
10<20	0	+	+	1	5	18
6<10	0	+	+	1	4	9
3<6	+	0	1	+	0	0
1.5<3	0	0	0	+	+	0
0<1.5	0	+	+	+	+	0

513

26

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	4	48
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	5
20<35	0	+	0	0	3	7
10<20	0	0	0	1	3	12
6<10	0	+	+	1	3	7
3<6	+	0	+	1	1	1
1.5<3	0	0	0	0	+	0
0<1.5	1	0	0	0	0	+

311

27

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	0	59
50<80	0	0	0	0	0	5
35<50	0	0	0	0	5	11
20<35	0	0	0	0	0	0
10<20	0	0	0	0	0	5
6<10	0	0	0	0	0	21
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

19

28

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	23	37
50<80	0	0	0	0	0	3
35<50	0	0	0	0	3	3
20<35	0	0	0	0	0	14
10<20	0	0	0	0	3	11
6<10	0	0	0	0	0	0
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	3	0	0	0

35

32

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	18	47
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	0
20<35	0	0	0	0	12	12
10<20	0	0	0	6	6	0
6<10	0	0	0	0	0	0
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

17

33

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	9	24
50<80	0	0	0	0	0	0
35<50	0	0	0	1	0	1
20<35	0	0	0	1	7	9
10<20	0	0	0	2	7	16
6<10	0	0	0	0	3	7
3<6	0	0	0	1	0	5
1.5<3	0	0	1	1	0	0
0<1.5	1	1	1	1	0	0

99

34

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	5	25
50<80	0	0	0	0	0	1
35<50	0	0	0	0	1	1
20<35	0	0	0	3	16	6
10<20	0	1	0	0	8	9
6<10	0	1	0	3	2	5
3<6	0	0	2	0	0	0
1.5<3	1	0	0	0	0	0
0<1.5	7	3	2	1	0	0

110

35

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	6	6	7
50<80	0	0	0	1	1	4
35<50	0	0	0	1	3	1
20<35	0	0	1	3	7	4
10<20	0	0	1	4	11	4
6<10	0	0	8	13	3	0
3<6	0	1	3	0	0	0
1.5<3	0	3	0	0	0	0
0<1.5	3	0	0	0	0	0

72

36

INSUFFICIENT DATA

37

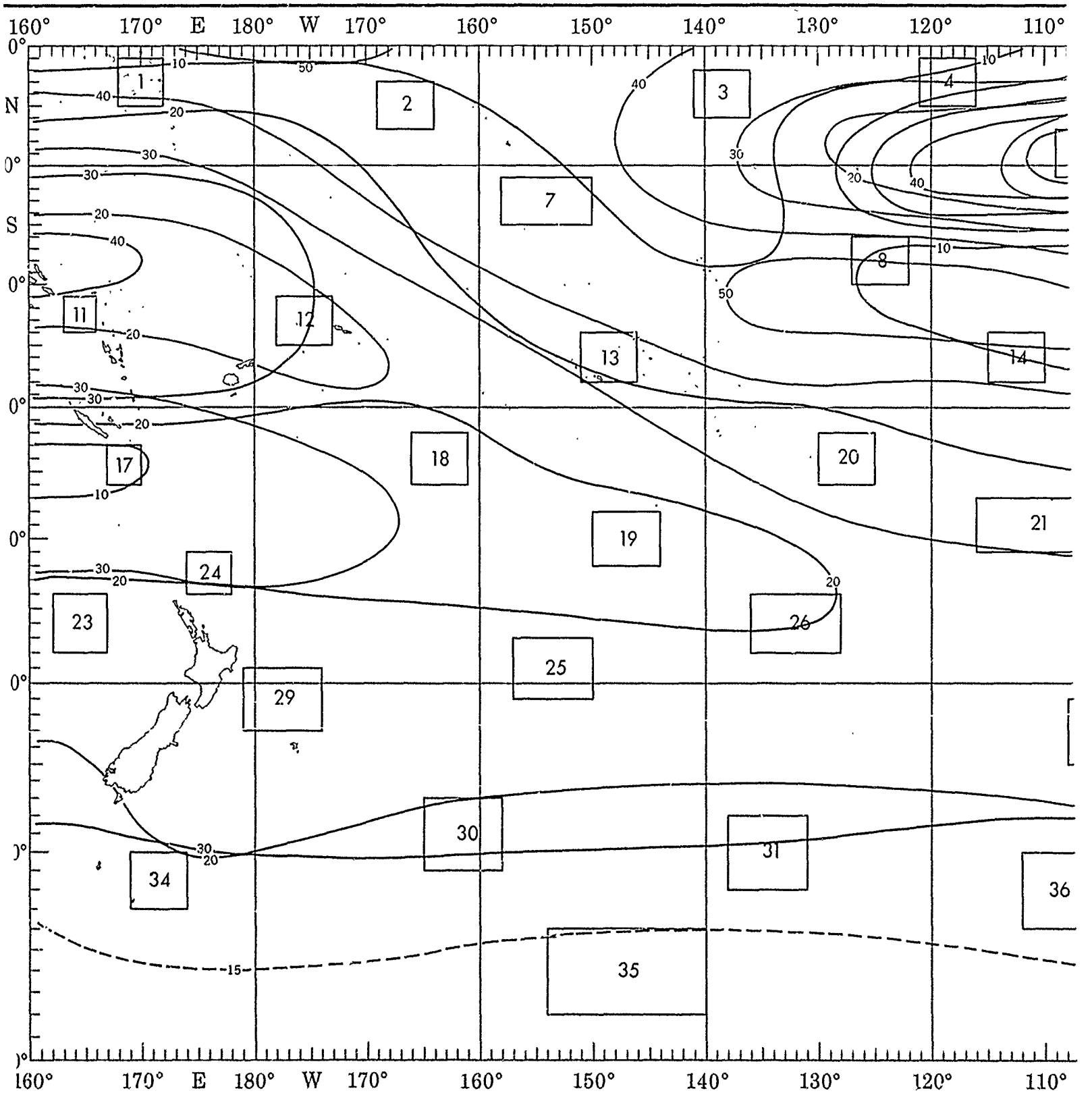
LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	0	29
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	0
20<35	0	0	0	0	0	43
10<20	0	0	0	7	0	0
6<10	0	0	0	0	0	0
3<6	0	0	0	0	0	7
1.5<3	0	0	0	0	0	7
0<1.5	0	7	0	0	0	0

14

bjective compilation of available data for specified areas without regard to suspected biases.
pposite page) are based on all available data subjectively adjusted where bias was evident.

MARCH

WIND-V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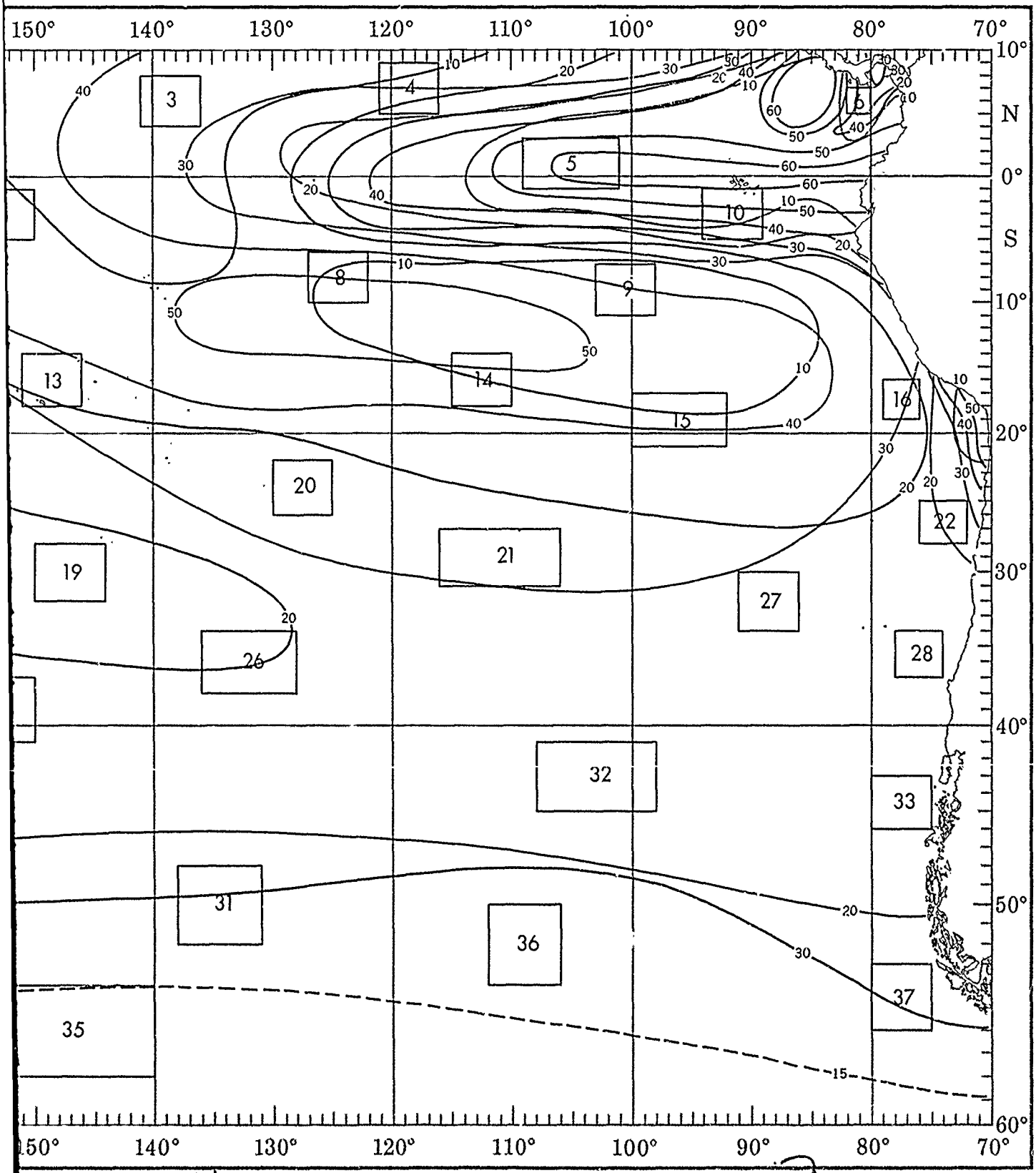
15

WIND-VISIBILITY-CLOUDINESS



LOW CLOUD CEILING-VISIBILITY-WIND

Percent frequency of occurrence of specified wind speed in knots, visibility (Vsby) in nautical miles, and low cloud ceiling (LCC) in hundreds of feet.

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

WIND SPEED (knots)

LCC - Vsby	0-3	4-10	11-21	22-33	≥34
<1.5 & or <.5	+	1	1	+	0
<6 & or <2	2	2	1	1	+
Vsby <2	1	2	1	1	1
<10 & or <2	3	4	2	1	1
<20 & or <5	8	9	6	5	2
Vsby ≥5	9	11	12	3	1
≥50 & ≥5	12	13	15	7	3
NC & ≥10	4	2	1	+	0
	1	2	3	4	

—(2% of the observations reported wind speeds of 11-21 knots, a low cloud ceiling <1000 feet and/or visibility <2 nautical miles.)

"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8.

+ indicates <5% but >0.

—Number of observations

Conditions for Carrier Operations

BLUE LINE Percent frequency of optimum conditions. LCC ≥5000 ft, (or no LCC), Vsby ≥5 nm, and Wind 11-21 kts.

RED LINE Percent frequency of poor conditions Any one of the following constitutes poor conditions. LCC <300 ft, Vsby <1 nm, Wind <6 or ≥34 kts

Satisfactory conditions between poor and optimum

1

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	+	0
<6 & OR <2	0	0	+	+	0
VSBY <2	0	0	0	0	0
<10 & OR <2	+	1	6	+	0
<20 & OR <5	1	5	16	+	0
VSBY ≥5	5	25	66	4	+
≥50 & ≥5	3	16	43	2	+
NC & ≥10	3	13	39	2	0

210

2

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	2	+	+
VSBY <2	0	0	+	0	0
<10 & OR <2	0	2	8	1	+
<20 & OR <5	0	5	19	4	1
VSBY ≥5	1	22	65	9	1
≥50 & ≥5	1	15	44	5	1
NC & ≥10	1	15	41	4	1

293

6

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	+	+	+	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	2	1	0	0
<20 & OR <5	3	5	1	0	0
VSBY ≥5	24	49	25	1	+
≥50 & ≥5	19	42	22	1	+
NC & ≥10	15	37	20	1	+

932

7

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	2	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	3	1	0	0
<20 & OR <5	1	5	2	0	0
VSBY ≥5	4	43	50	2	0
≥50 & ≥5	3	38	46	2	0
NC & ≥10	3	37	45	2	0

182

11

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	1	0	3	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	8	6	1	0
<20 & OR <5	1	23	10	1	0
VSBY ≥5	11	58	27	1	0
≥50 & ≥5	10	33	14	0	0
NC & ≥10	10	27	11	0	0

79

12

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	3	0	0
VSBY <2	0	0	1	0	0
<10 & OR <2	1	4	11	0	0
<20 & OR <5	1	6	15	1	0
VSBY ≥5	14	45	33	1	0
≥50 & ≥5	11	40	23	0	0
NC & ≥10	11	37	21	0	0

142

13

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	+	1	+	+
VSBY <2	0	0	+	0	0
<10 & OR <2	+	3	2	+	1
<20 & OR <5	+	7	8	1	1
VSBY ≥5	8	45	39	5	+
≥50 & ≥5	8	35	30	3	0
NC & ≥10	8	33	26	2	0

618

14

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	+	0	+	+	0
VSBY <2	0	0	0	0	0
<10 & OR <2	+	2	4	1	0
<20 & OR <5	+	5	10	1	0
VSBY ≥5	3	38	56	3	0
≥50 & ≥5	2	32	42	2	0
NC & ≥10	2	31	41	2	0

848

15

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	10	0	0
<20 & OR <5	3	7	18	2	0
VSBY ≥5	9	25	55	5	0
≥50 & ≥5	4	18	32	4	0
NC & ≥10	4	16	20	2	0

114

16

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	+	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	5	5	0	0
<20 & OR <5	+	14	14	0	0
VSBY ≥5	1	44	54	0	0
≥50 & ≥5	+	26	23	0	0
NC & ≥10	+	22	20	0	0

207

20

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	1	+	0
VSBY <2	0	0	+	0	0
<10 & OR <2	+	2	4	+	+
<20 & OR <5	1	6	8	1	+
VSBY ≥5	9	46	40	3	0
≥50 & ≥5	8	39	31	2	0
NC & ≥10	8	39	31	2	0

741

21

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	0	0	0
<6 & OR <2	0	1	1	0	1
VSBY <2	0	0	0	0	0
<10 & OR <2	0	3	2	0	1
<20 & OR <5	0	3	6	1	1
VSBY ≥5	8	44	43	3	1
≥50 & ≥5	8	37	33	1	0
NC & ≥10	8	33	31	1	0

144

22

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	0
<6 & OR <2	0	3	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	9	4	+	0
<20 & OR <5	2	18	15	3	0
VSBY ≥5	10	39	42	8	0
≥50 & ≥5	6	12	15	4	0
NC & ≥10	5	9	12	4	0

259

23

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	+
<6 & OR <2	0	+	1	1	2
VSBY <2	0	0	+	+	1
<10 & OR <2	+	4	7	3	3
<20 & OR <5	1	10	17	6	3
VSBY ≥5	8	34	43	8	1
≥50 & ≥5	6	20	23	[illegible]	+
NC & ≥10	6	19	21	2	+

1028

24

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	1	0
<6 & OR <2	+	0	2	1	0
VSBY <2	0	0	+	+	0
<10 & OR <2	+	2	7	3	0
<20 & OR <5	+	6	17	5	0
VSBY ≥5	4	32	51	10	+
≥50 & ≥5	4	25	31	5	+
NC & ≥10	4	24	29	5	+

401

25

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	+	0
<6 & OR <2	0	1	1	1	+
VSBY <2	0	1	1	+	+
<10 & OR <2	+	3	8	3	2
<20 & OR <5	1	11	19	6	3
VSBY ≥5	4	32	44	14	3
≥50 & ≥5	2	17	17	6	+
NC & ≥10	1	16	13	5	0

509

29

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	+	0
<6 & OR <2	+	0	1	1	+
VSBY <2	0	0	+	+	0
<10 & OR <2	+	3	7	2	+
<20 & OR <5	2	9	16	5	+
VSBY ≥5	4	33	48	13	1
≥50 & ≥5	1	20	23	5	+
NC & ≥10	1	18	21	5	+

642

30

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	13	0	0	0
<6 & OR <2	0	17	0	0	0
VSBY <2	0	13	0	0	0
<10 & OR <2	0	20	3	7	0
<20 & OR <5	0	23	17	17	0
VSBY ≥5	0	10	33	27	7
≥50 & ≥5	0	7	17	7	7
NC & ≥10	0	7	17	7	0

30

31

INSUFFICIENT DATA

32

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	0	0	0
<20 & OR <5	0	0	0	12	0
VSBY ≥5	12	18	35	24	6
≥50 & ≥5	12	18	29	6	0
NC & ≥10	12	6	24	6	0

17

33

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	2	0	0
<6 & OR <2	0	3	5	3	0
VSBY <2	0	1	2	1	0
<10 & OR <2	0	7	11	4	0
<20 & OR <5	0	13	27	11	0
VSBY ≥5	1	28	48	11	1
≥50 & ≥5	1	11	18	3	1
NC & ≥10	1	7	12	3	1

95

34

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	4	9	1	0
<6 & OR <2	0	4	13	1	0
VSBY <2	0	4	12	1	0
<10 & OR <2	1	5	14	6	1
<20 & OR <5	2	9	20	12	4
VSBY ≥5	2	10	35	20	10
≥50 & ≥5	0	6	15	6	6
NC & ≥10	0	6	12	3	5

109

Graphs represent the objective compilation of available data for specified areas without regard to su
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bi

ISIBILITY-WIND

MARCH

y (Vsby) in nautical

when low cloud amount

g <1000 feet and/or

nces of N_h <5/8.

nd Wind 11-21 kts.

ions LCC <300 ft,

1

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	+	0
<6 & OR <2	0	0	+	+	0
VSBY <2	0	0	0	0	0
<10 & OR <2	+	1	6	+	0
<20 & OR <5	1	5	16	+	0
VSBY ≥5	5	25	66	4	+
≥50 & ≥5	3	16	43	2	+
NC & ≥10	3	13	39	2	0

210

2

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	2	+	+
VSBY <2	0	0	+	0	0
<10 & OR <2	0	2	8	1	+
<20 & OR <5	0	5	19	4	1
VSBY ≥5	1	22	65	9	1
≥50 & ≥5	1	15	44	5	1
NC & ≥10	1	15	41	4	1

293

3

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	2	0	0
VSBY <2	0	0	+	0	0
<10 & OR <2	0	4	18	4	0
<20 & OR <5	0	7	32	8	0
VSBY ≥5	1	16	63	14	0
≥50 & ≥5	+	8	29	6	0
NC & ≥10	+	6	24	4	0

250

4

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	1	0	0
<6 & OR <2	0	2	2	1	0
VSBY <2	0	0	1	0	0
<10 & OR <2	0	6	9	1	0
<20 & OR <5	0	10	19	1	0
VSBY ≥5	2	41	53	2	0
≥50 & ≥5	2	28	33	2	0
NC & ≥10	2	26	31	1	0

172

5

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	1	+	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	2	6	1	0	0
<20 & OR <5	4	13	1	0	0
VSBY ≥5	33	60	5	0	0
≥50 & ≥5	29	45	4	0	0
NC & ≥10	27	43	4	0	0

533

6

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	+	+	+	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	2	1	0	0
<20 & OR <5	3	5	1	0	0
VSBY ≥5	24	49	25	1	+
≥50 & ≥5	19	42	22	1	+
NC & ≥10	15	37	20	1	+

932

7

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	2	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	3	1	0	0
<20 & OR <5	1	5	2	0	0
VSBY ≥5	4	43	50	2	0
≥50 & ≥5	3	38	46	2	0
NC & ≥10	3	37	45	2	0

182

8

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	0	1	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	+	2	3	0	0
<20 & OR <5	+	6	8	0	0
VSBY ≥5	1	45	52	1	0
≥50 & ≥5	1	39	43	1	0
NC & ≥10	1	37	42	1	0

531

9

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	+	1	0	0
VSBY <2	0	+	+	0	0
<10 & OR <2	0	3	4	+	0
<20 & OR <5	0	7	13	+	0
VSBY ≥5	1	36	60	1	0
≥50 & ≥5	1	26	41	1	0
NC & ≥10	1	25	40	1	0

1039

10

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	0	0	0
<6 & OR <2	1	1	+	0	0
VSBY <2	+	+	0	0	0
<10 & OR <2	3	6	2	0	0
<20 & OR <5	5	15	3	+	0
VSBY ≥5	27	61	10	+	0
≥50 & ≥5	21	43	6	0	0
NC & ≥10	19	41	5	0	0

1347

14

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	+	0	+	+	0
VSBY <2	0	0	0	0	0
<10 & OR <2	+	2	4	1	0
<20 & OR <5	+	5	10	1	0
VSBY ≥5	3	38	56	3	0
≥50 & ≥5	2	32	42	2	0
NC & ≥10	2	31	41	2	0

848

15

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	10	0	0
<20 & OR <5	3	7	18	2	0
VSBY ≥5	9	25	55	5	0
≥50 & ≥5	4	18	32	4	0
NC & ≥10	4	16	20	2	0

114

16

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	+	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	5	5	0	0
<20 & OR <5	+	14	14	0	0
VSBY ≥5	1	44	54	0	0
≥50 & ≥5	+	26	23	0	0
NC & ≥10	+	22	20	0	0

207

17

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	0	0
<6 & OR <2	0	1	3	1	0
VSBY <2	0	0	1	0	0
<10 & OR <2	+	5	10	3	0
<20 & OR <5	+	8	17	7	1
VSBY ≥5	2	29	52	13	1
≥50 & ≥5	2	19	36	5	+
NC & ≥10	2	18	35	4	+

260

18

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	+	1	2	1	0
VSBY <2	0	0	+	0	0
<10 & OR <2	1	3	7	1	0
<20 & OR <5	3	8	17	2	0
VSBY ≥5	9	41	44	5	0
≥50 & ≥5	5	29	24	2	0
NC & ≥10	5	26	21	1	0

348

19

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	+	1	2	+	1
VSBY <2	0	1	+	+	0
<10 & OR <2	+	6	7	2	1
<20 & OR <5	1	12	17	5	2
VSBY ≥5	5	38	43	10	1
≥50 & ≥5	3	22	22	4	+
NC & ≥10	3	21	22	4	+

761

23

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	+
<6 & OR <2	0	+	+	+	2
VSBY <2	0	0	+	+	1
<10 & OR <2	+	4	7	3	3
<20 & OR <5	1	10	17	6	3
VSBY ≥5	8	34	43	8	1
≥50 & ≥5	6	20	23	3	+
NC & ≥10	6	19	21	2	+

1028

24

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	1	0
<6 & OR <2	+	0	2	1	0
VSBY <2	0	0	+	+	0
<10 & OR <2	+	2	7	3	0
<20 & OR <5	+	6	17	5	0
VSBY ≥5	4	32	51	10	+
≥50 & ≥5	4	25	31	5	+
NC & ≥10	4	24	29	5	+

401

25

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	+	0
<6 & OR <2	0	+	1	1	+
VSBY <2	0	1	1	+	+
<10 & OR <2	+	3	8	3	2
<20 & OR <5	1	11	19	6	3
VSBY ≥5	1	32	44	14	3
≥50 & ≥5	2	17	17	6	+
NC & ≥10	1	16	13	5	0

509

26

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	0	0	0
<6 & OR <2	+	2	+	+	2
VSBY <2	0	+	0	+	1
<10 & OR <2	+	5	6	2	2
<20 & OR <5	1	10	13	4	3
VSBY ≥5	3	39	43	10	+
≥50 & ≥5	1	25	24	4	+
NC & ≥10	1	25	20	2	0

308

27

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	11	11	0	0
<20 & OR <5	0	16	11	0	0
VSBY ≥5	21	37	42	0	0
≥50 & ≥5	21	16	21	0	0
NC & ≥10	16	16	21	0	0

19

28

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	3	0	0	0	0
<6 & OR <2	3	0	0	0	0
VSBY <2	3	0	0	0	0
<10 & OR <2	3	0	0	0	0
<20 & OR <5	3	0	14	0	0
VSBY ≥5	6	26	57	6	3
≥50 & ≥5	3	23	31	6	0
NC & ≥10	0	14	23	0	0

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32

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	0	0	0
<20 & OR <5	0	0	0	12	0
VSBY ≥5	12	18	35	24	6
≥50 & ≥5	12	18	29	6	0
NC & ≥10	12	6	24	6	0

17

33

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	2	0	0
<6 & OR <2	0	3	5	3	0
VSBY <2	0	1	2	1	0
<10 & OR <2	0	7	11	4	0
<20 & OR <5	0	13	27	11	0
VSBY ≥5	1	28	48	11	1
≥50 & ≥5	1	11	18	3	1
NC & ≥10	1	7	12	3	1

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34

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	4	9	1	0
<6 & OR <2	0	4	13	1	0
VSBY <2	0	4	12	1	0
<10 & OR <2	1	5	14	6	1
<20 & OR <5	2	9	20	12	4
VSBY ≥5	2	10	35	20	10
≥50 & ≥5	0	6	15	6	6
NC & ≥10	0	6	12	3	5

109

35

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	3	0	0
<6 & OR <2	0	1	11	6	3
VSBY <2	0	1	11	6	3
<10 & OR <2	0	1	17	15	3
<20 & OR <5	0	3	35	24	6
VSBY ≥5	0	4	31	15	1
≥50 & ≥5	0	0	14	4	0
NC & ≥10	0	0	4	3	0

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INSUFFICIENT DATA

37

WIND SPEED (KNOTS)

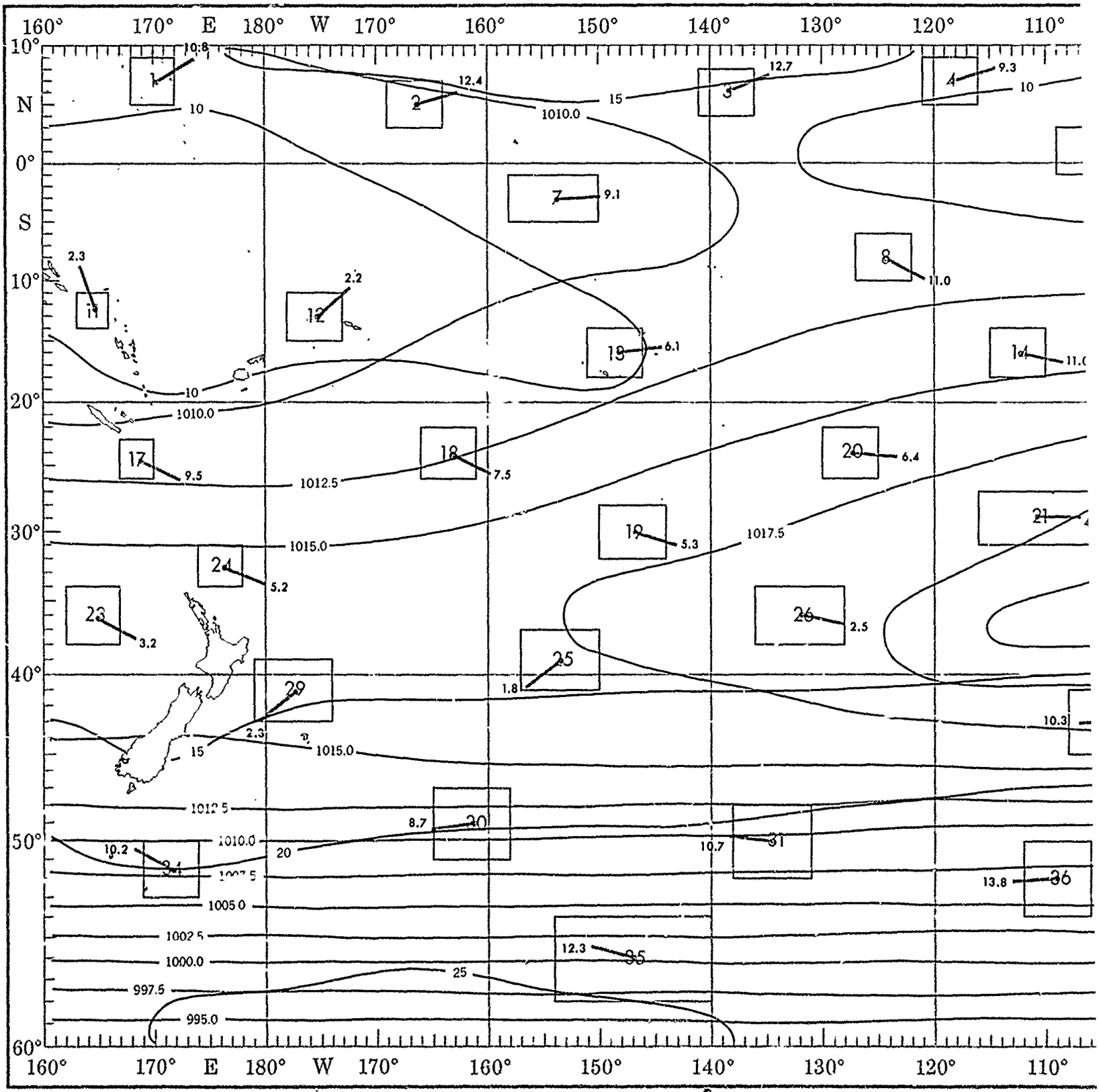
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	7	0	0	0
<6 & OR <2	0	7	14	0	0
VSBY <2	0	7	0	0	0
<10 & OR <2	0	7	14	0	0
<20 & OR <5	0	7	14	7	0
VSBY ≥5	0	0	36	50	0
≥50 & ≥5	0	0	7	21	0
NC & ≥10	0	0	7	21	0

14

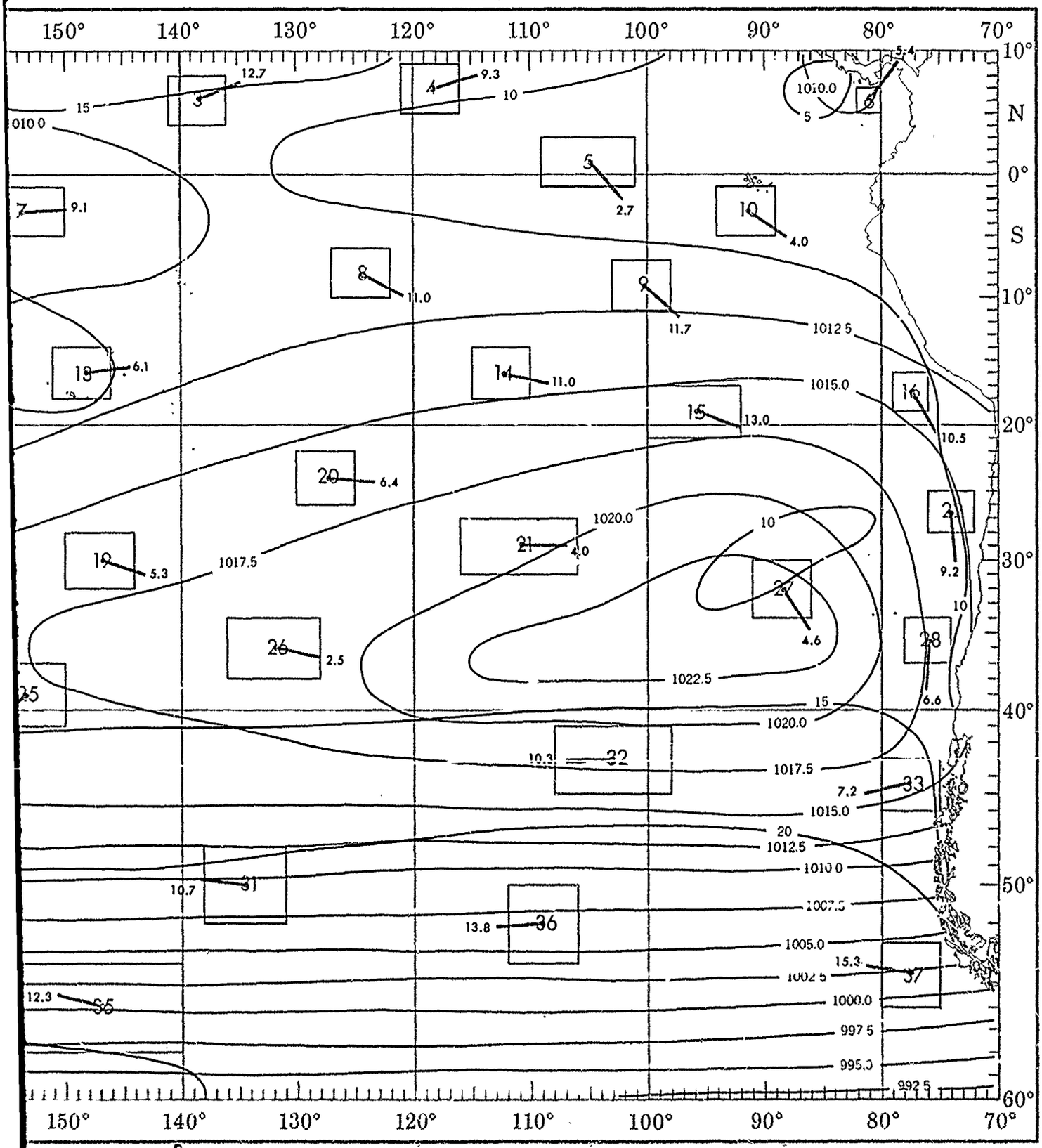
objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

MARCH

SEA LEVEL PRESSUI



SEA LEVEL PRESSURE AND MEAN WIND



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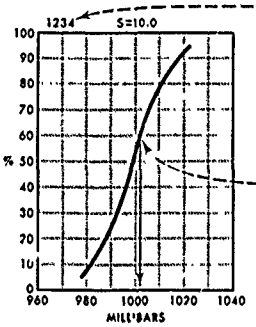
SEA LEVEL PRESSURE

Sea level pressure and mean wind.



Number of observations

*Cumulative percent frequency of sea level pressures equal to or less than the pressure intersected by the curve.

S=Standard deviation of pressure (mbs).

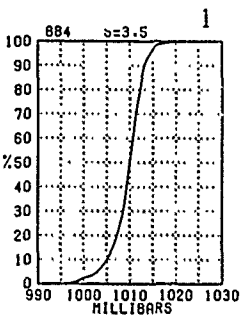
(60% of all observed sea level pressures were ≤1002 millibars.)

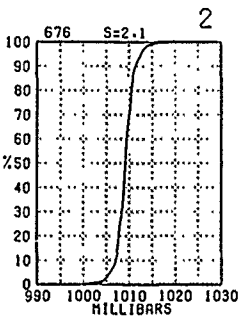
Vector mean wind is plotted from the direction which the mean flow occurs with the magnitude in knots at the end of the vector.

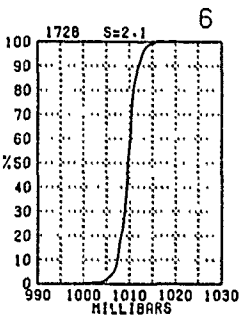
10.2 Vector mean wind is from the northeast at 10.2 knots.

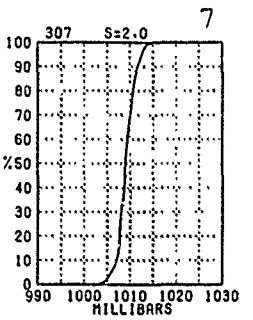
BLUE LINE - Scalar mean wind speed (kts.)

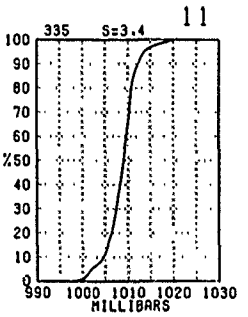
RED LINE - Mean sea level pressure (mbs.)

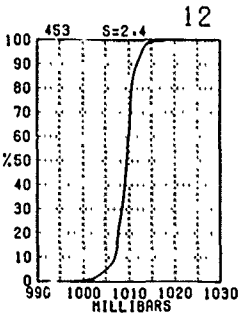


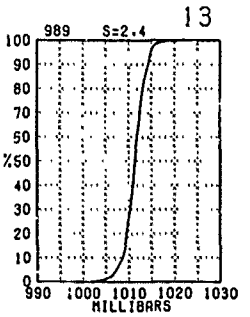


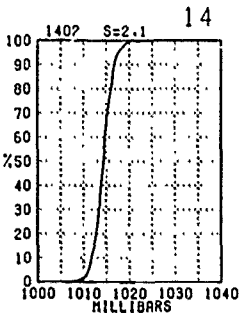


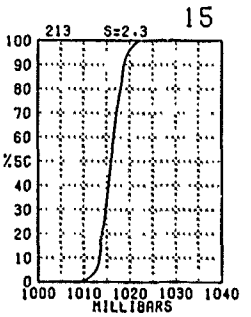


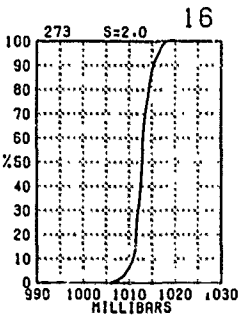


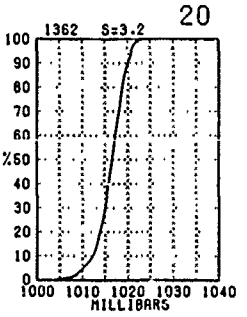


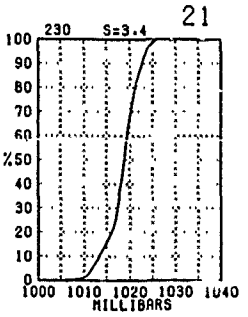


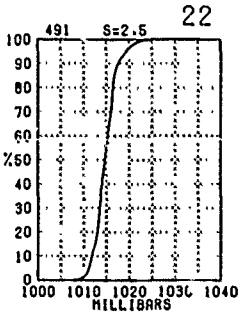


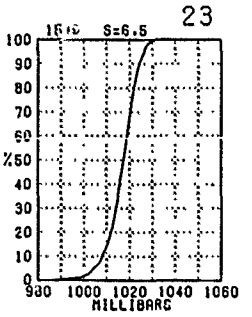


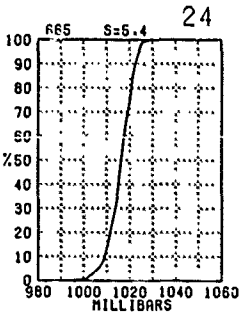


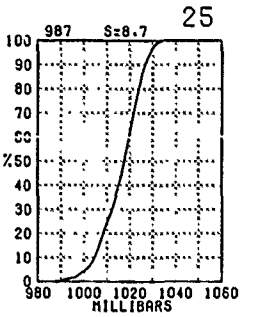


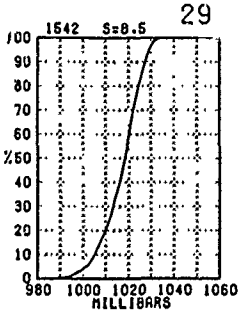


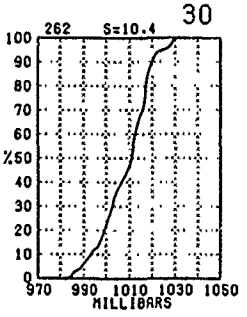


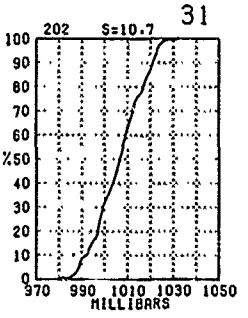


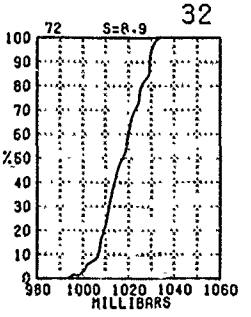


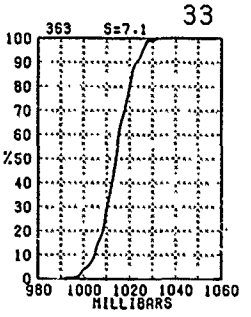


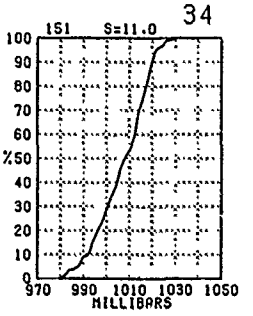












Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

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pressures equal to or less than the

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h the mean flow occurs with the

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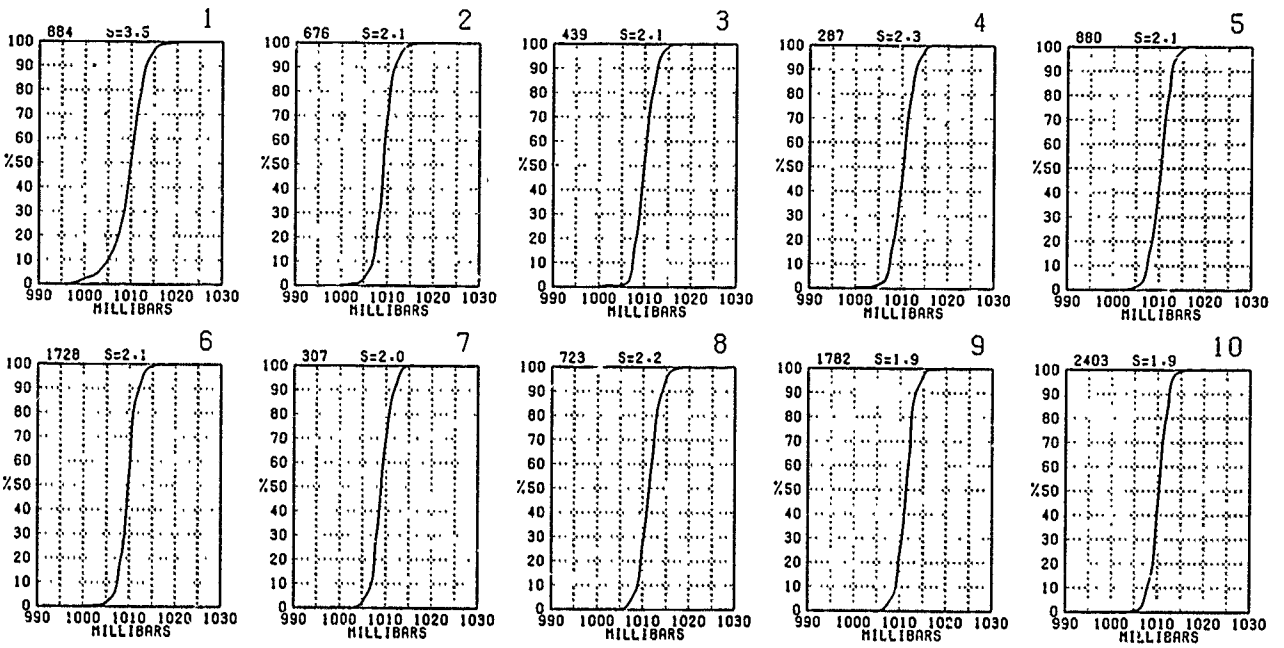

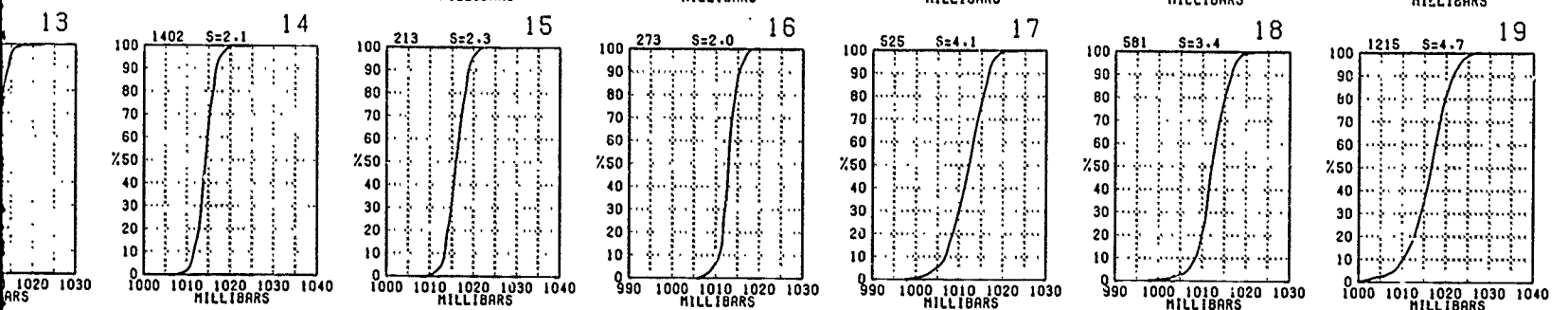

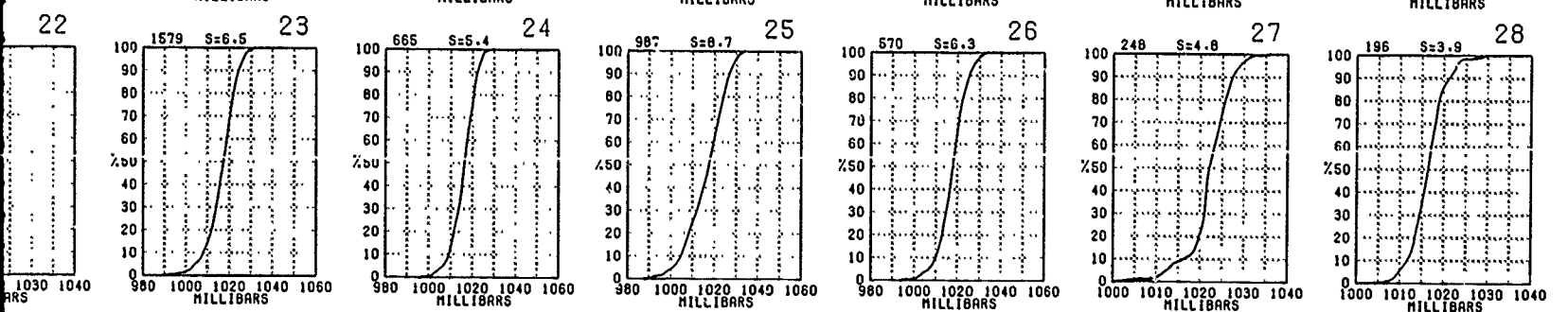

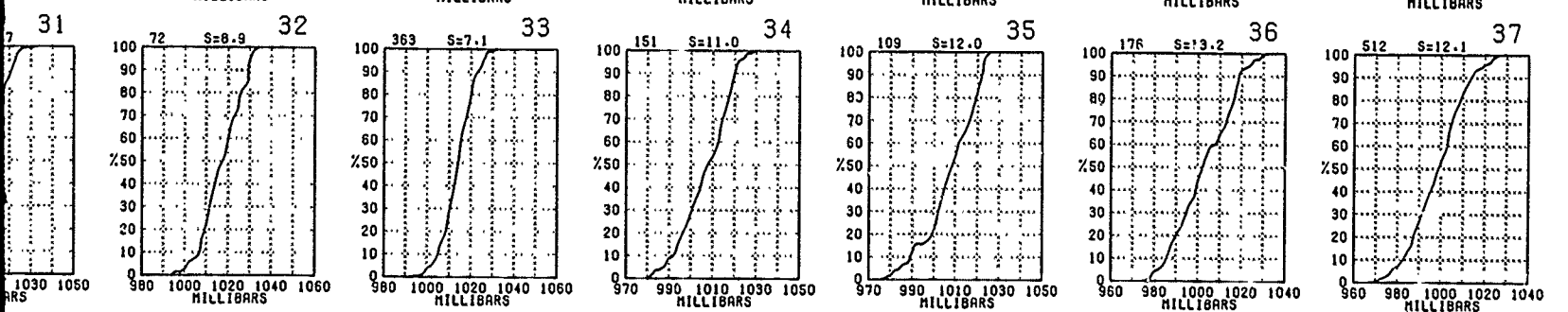

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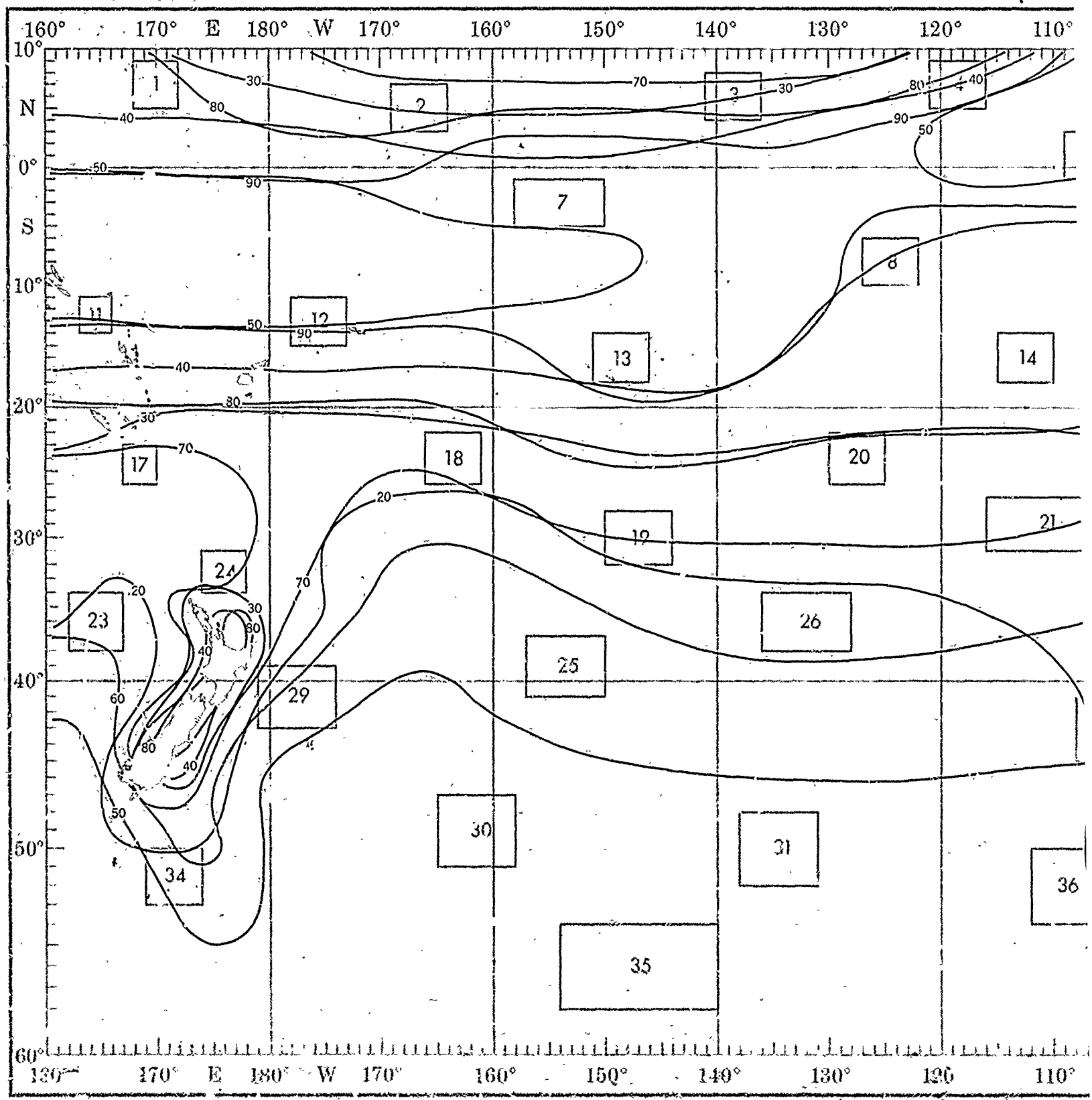
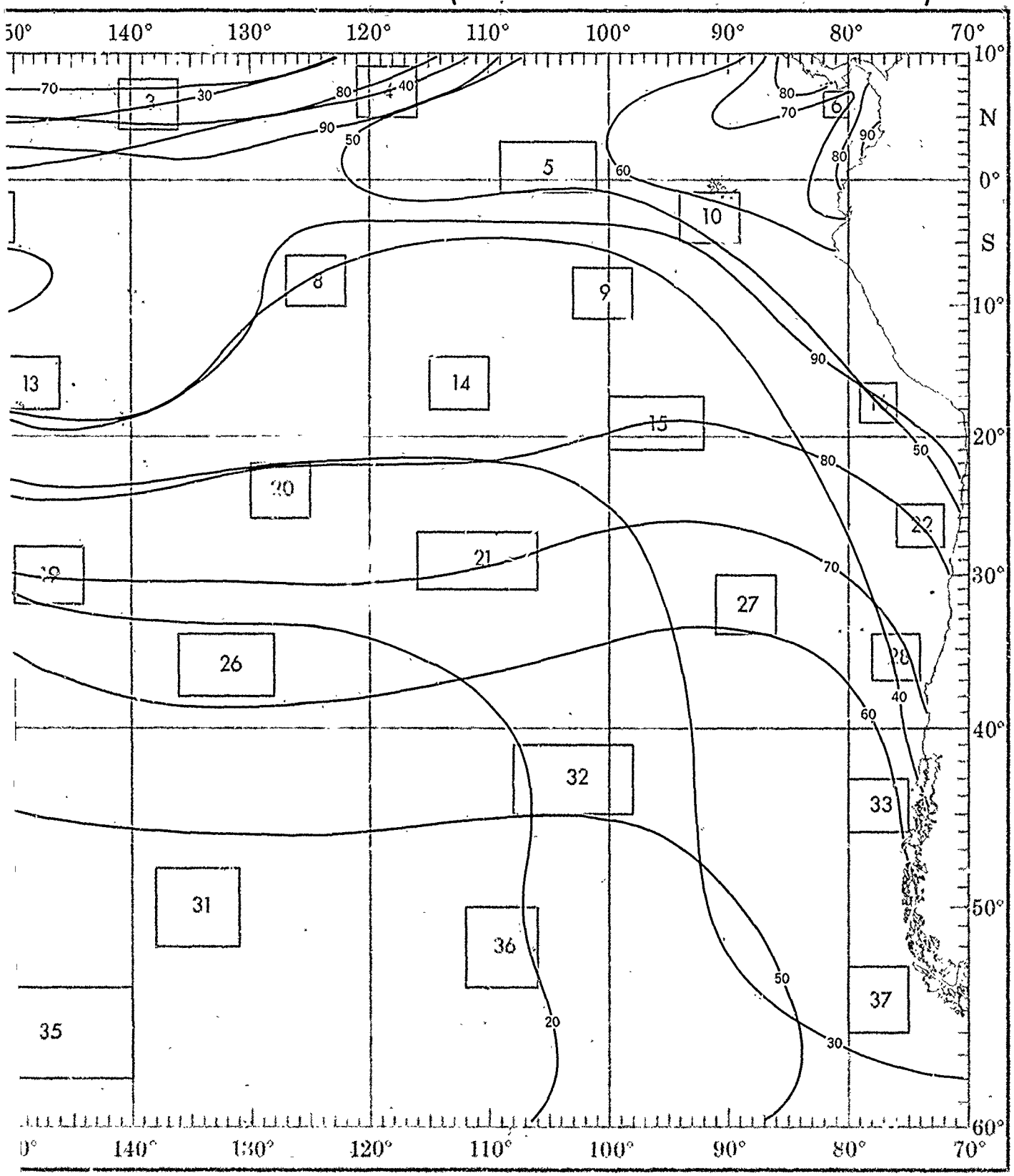
WAVES (<1



WAVES (<1.5 AND <2.5 METERS)

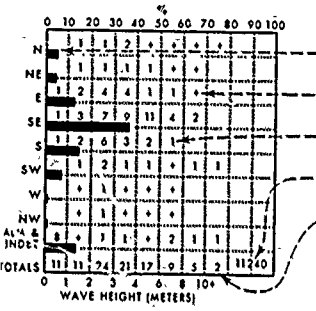


WAVE DIRECTION AND HEIGHT

Wave direction and height.

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.



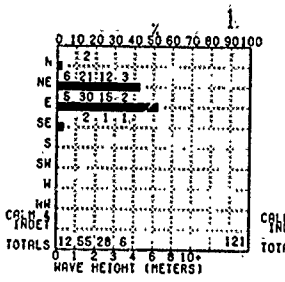
WAVE HEIGHT INTERVAL								
Feet	0-2	3-6	7-9	10-12	13-19	20-25	26-32	≥33
Meters	0-.5	1-1.5	2-2.5	3-3.5	4-5.5	6-7.5	8-9.5	≥10

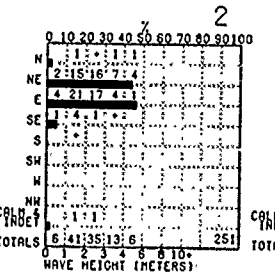
0 1 2 3 4 6 8 10+

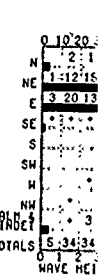
Printed scale on bottom of chart

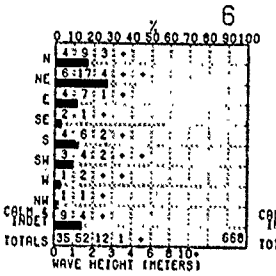
BLUE LINE - Percent frequency of wave height <1.5 meters (5 feet)

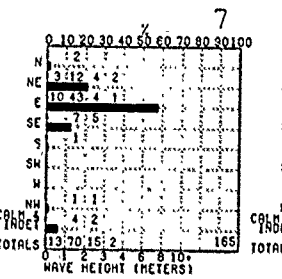
RED LINE - Percent frequency of wave height <2.5 meters (8 feet)

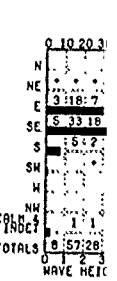


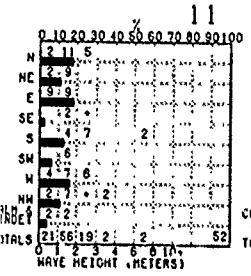


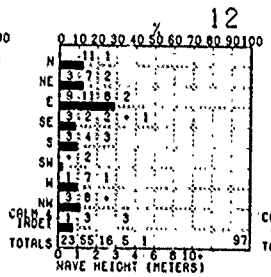


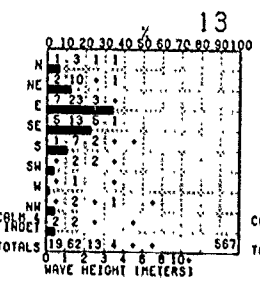


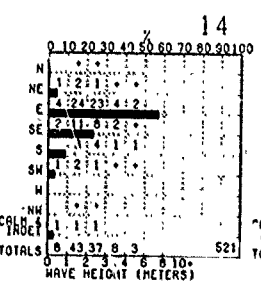


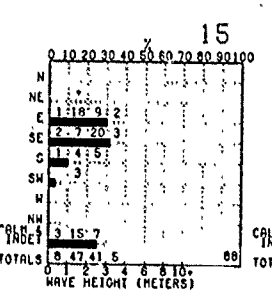


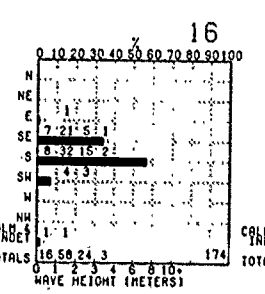


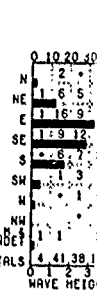


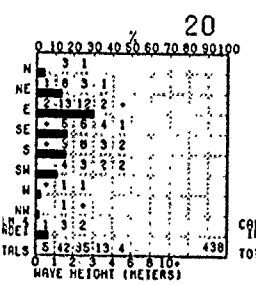


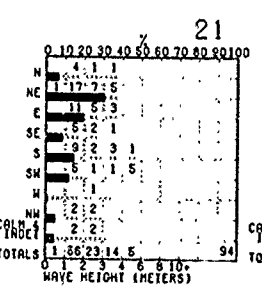


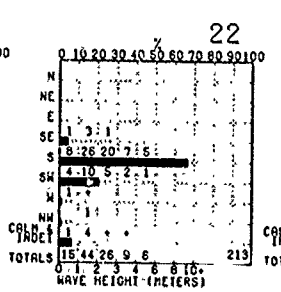


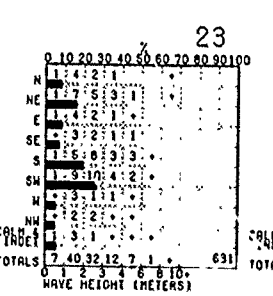


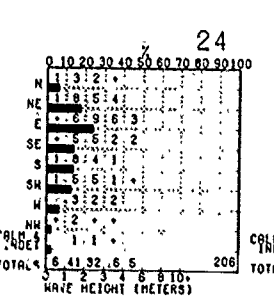


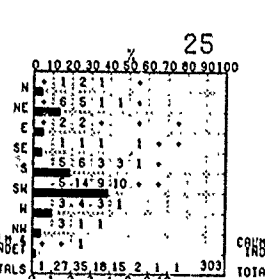


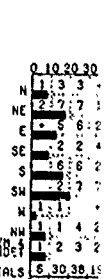


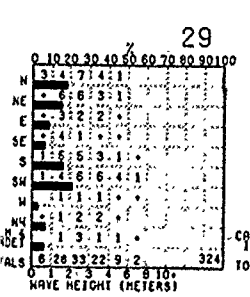




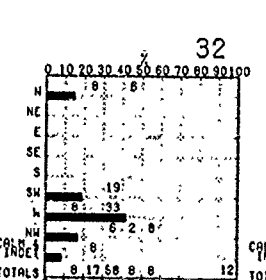


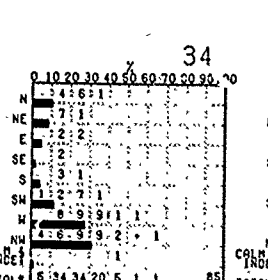


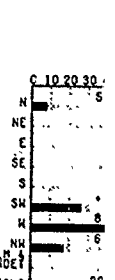




INSUFFICIENT DATA







Graphs represent the objective compilation of available data for specified areas without regard to suspecte
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bias was

HEIGHT

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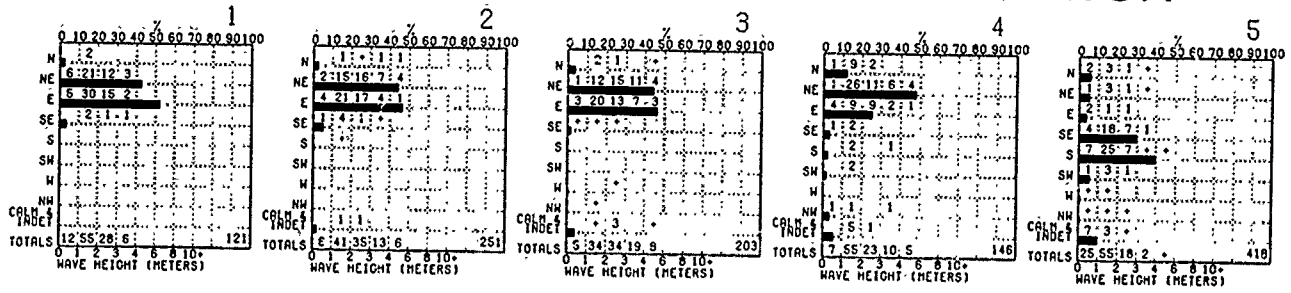
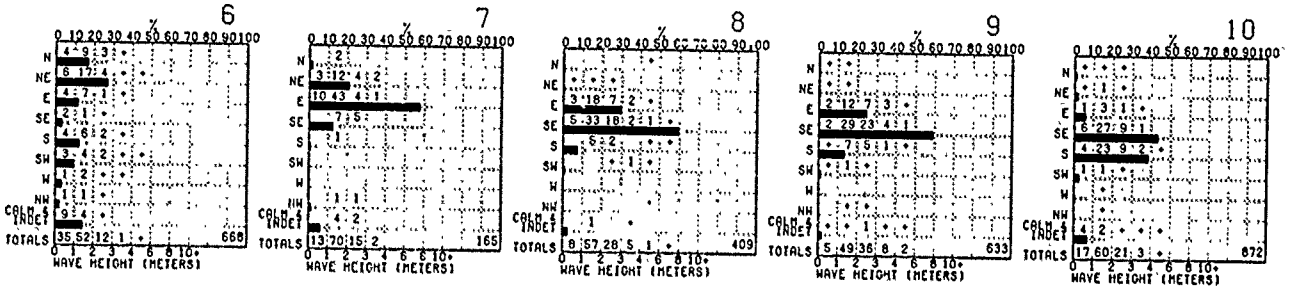
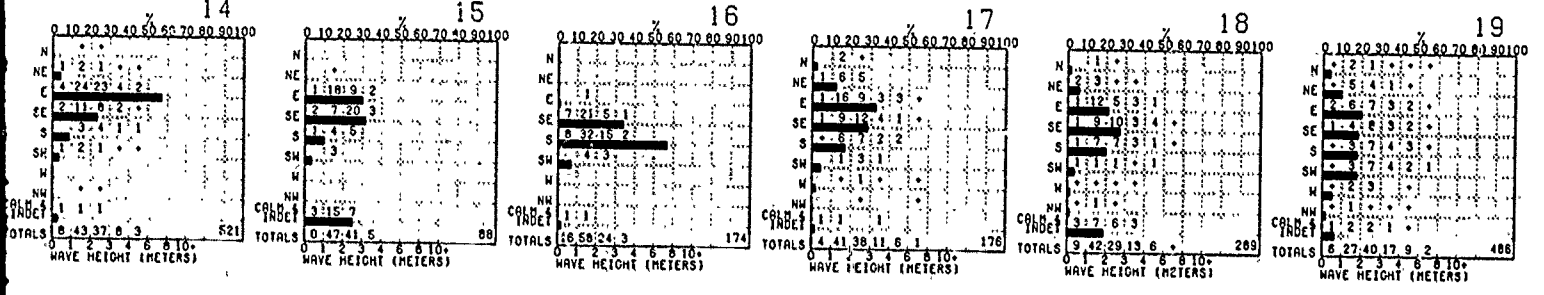
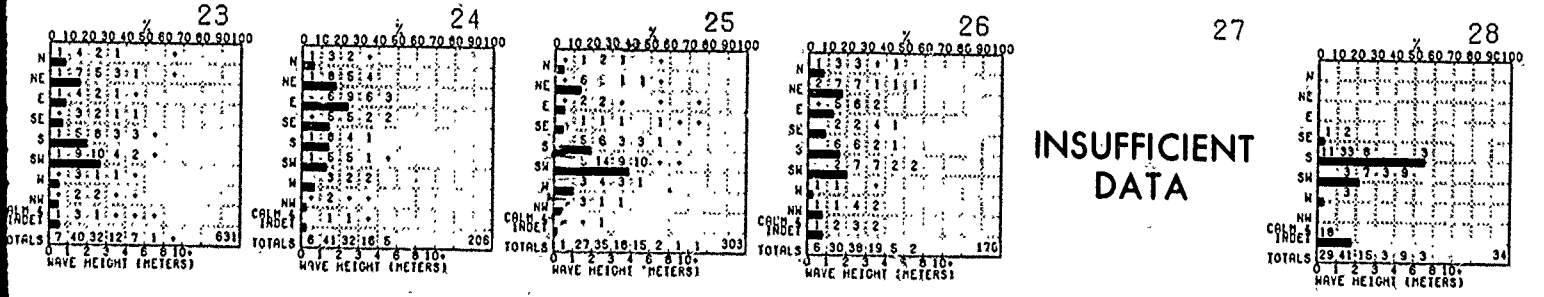
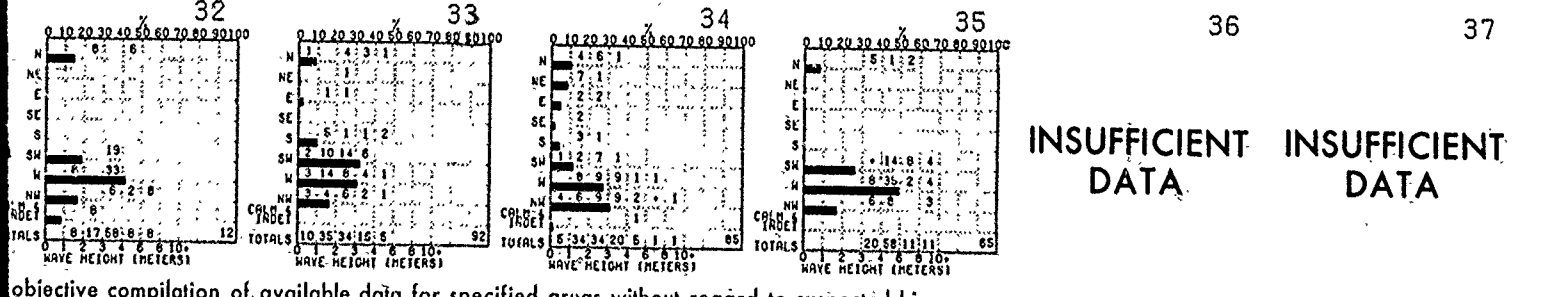








INSUFFICIENT DATA



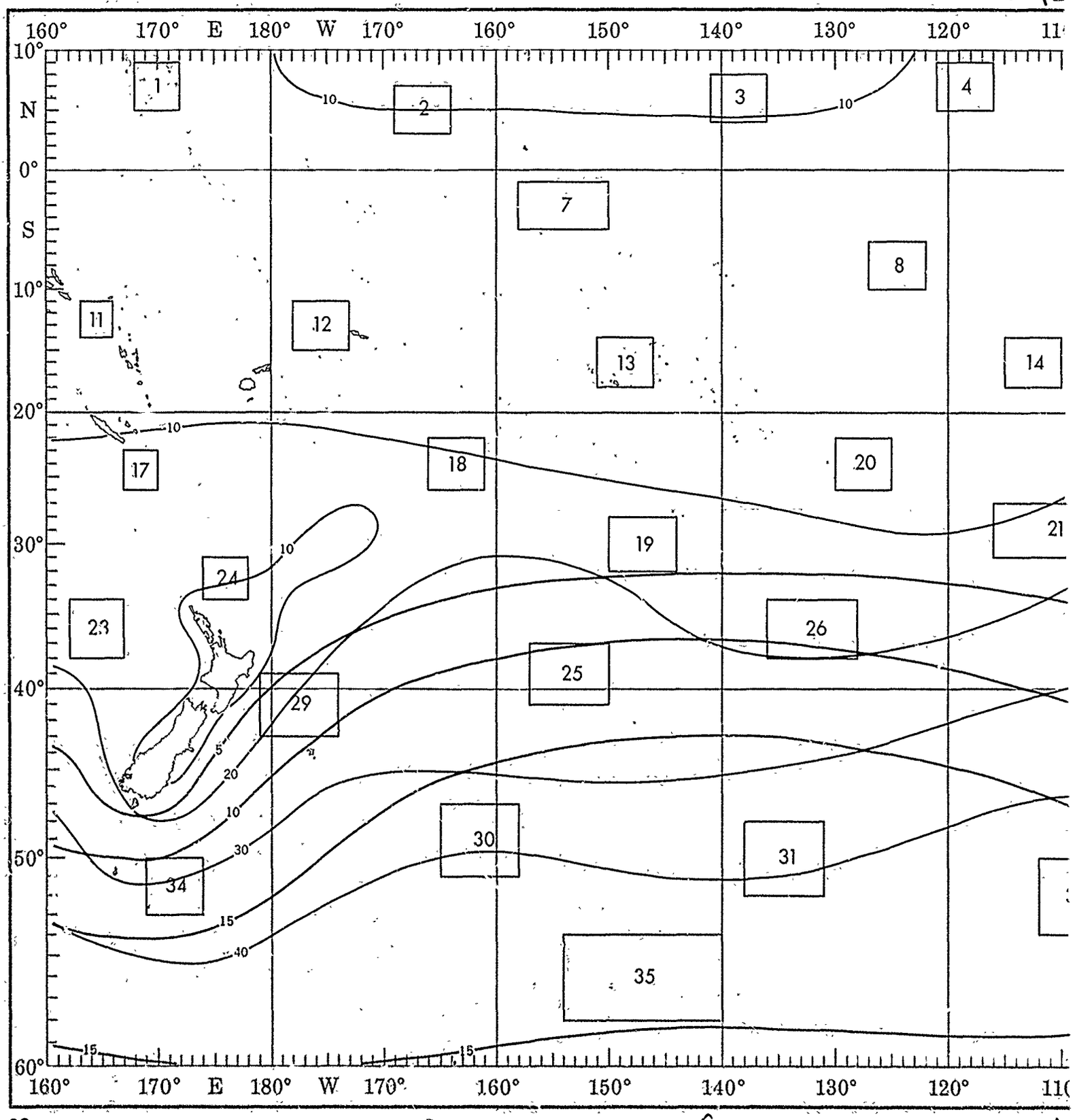
INSUFFICIENT DATA

INSUFFICIENT DATA

objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

MARCH

WAVES (≥


160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N
0°
S 10°
20°
30°
40°
50°
60°
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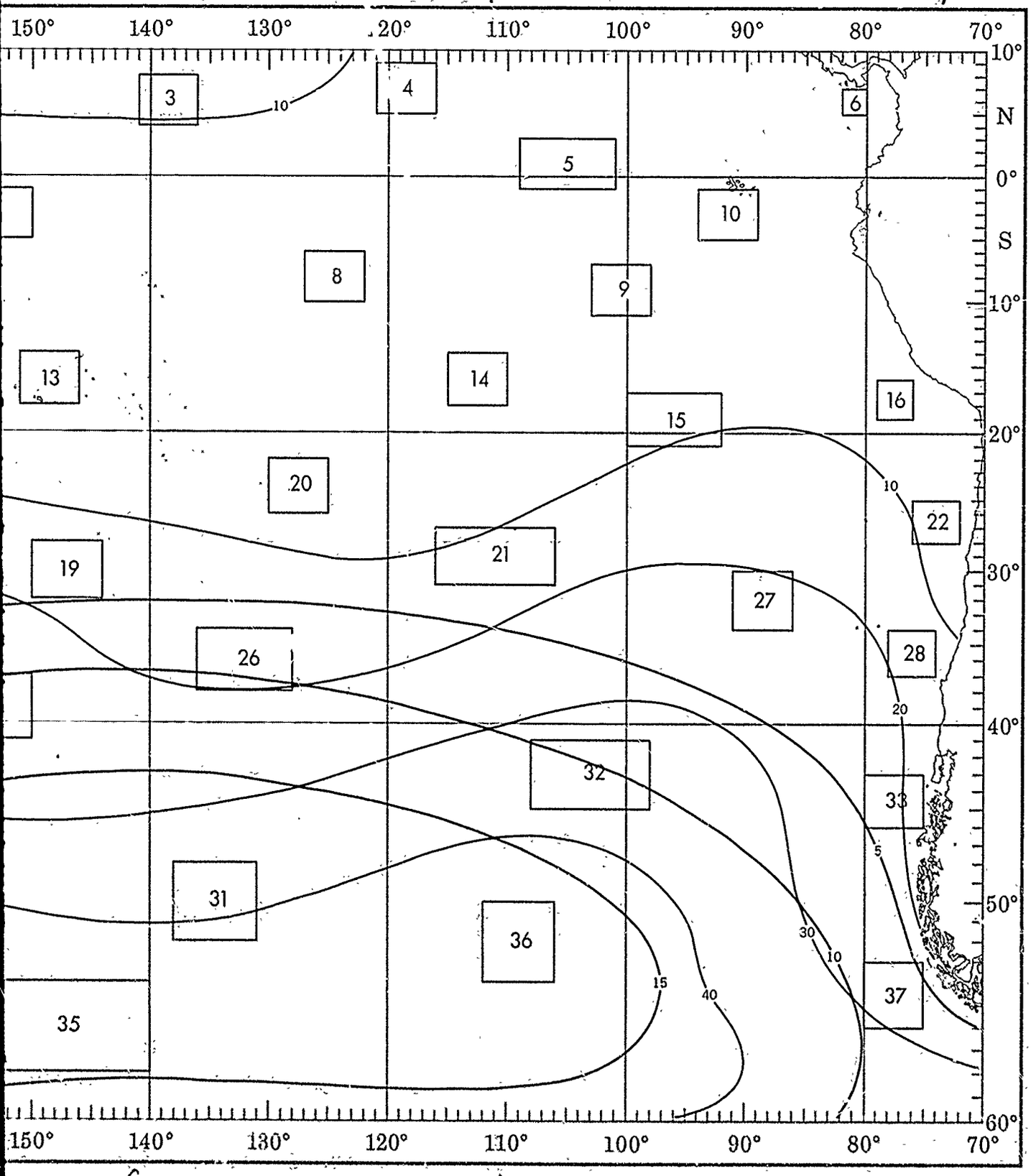
15

WAVES (≥3.5 AND ≥6 METERS)



WAVE PERIOD AND HEIGHT

Percent frequency of occurrence of wave period and height.

PERIOD (Seconds)

HEIGHT (METERS)	≤6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	21	3	1	+	+	4	6
1-2.5	22	16	6	2	1	+	+
2-3.5	3	6	4	3	1	+	+
3-4.5	+	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

—(2% of observed waves had a height of 1-1.5 meters and a period of 10-11 seconds.)

+ indicates < 5% but >0.

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.

BLUE LINE - Percent frequency of wave height ≥3.5 meters (12 feet)

RED LINE - Percent frequency of wave height ≥6 meters (20 feet)

1

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	9	3	1	0	0	0	0
1-2.5	24	15	11	2	0	0	2
2-3.5	2	18	2	5	1	0	0
3-4.5	0	1	4	0	1	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

123

2

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	5	+	1	0	0	0	0
1-2.5	12	18	6	1	1	1	1
2-3.5	4	17	11	1	1	1	+
3-4.5	1	+	3	3	1	+	+
4-5.5	0	1	2	2	0	1	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

252

6

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	23	3	1	2	0	0	10
1-2.5	23	11	4	2	1	2	6
2-3.5	2	4	3	+	1	+	1
3-4.5	+	+	+	0	+	0	0
4-5.5	0	+	+	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

709

7

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	13	0	0	0	0	0	1
1-2.5	36	14	9	7	1	0	2
2-3.5	4	7	2	1	0	0	1
3-4.5	0	1	2	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

166

11

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	17	2	0	0	0	0	2
1-2.5	23	19	8	2	0	0	4
2-3.5	6	10	4	0	0	0	0
3-4.5	0	0	0	2	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	2	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

52

12

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	21	2	0	0	0	0	2
1-2.5	17	20	9	2	3	0	2
2-3.5	1	6	4	3	0	1	1
3-4.5	0	1	1	2	0	0	1
4-5.5	0	0	1	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

100

13

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	17	2	1	1	0	0	3
1-2.5	22	21	8	2	1	+	4
2-3.5	3	4	2	2	1	+	1
3-4.5	1	1	1	1	+	+	0
4-5.5	0	0	0	+	0	0	+
6-7.5	0	0	0	0	+	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

593

14

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	7	1	0	0	0	0	2
1-2.5	19	10	8	2	2	1	2
2-3.5	7	15	10	1	2	1	1
3-4.5	2	3	+	1	1	+	0
4-5.5	0	1	1	+	1	+	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

523

15

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	1	0	1	0	0	0	6
1-2.5	14	14	1	3	0	0	15
2-3.5	2	11	15	3	1	1	7
3-4.5	0	0	3	1	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

88

16

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	11	1	0	1	0	0	4
1-2.5	23	20	5	3	2	1	4
2-3.5	1	8	5	5	1	1	2
3-4.5	0	3	0	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

177

20

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	5	1	0	0	0	0	2
1-2.5	17	14	6	1	1	0	2
2-3.5	7	11	10	3	1	1	2
3-4.5	1	4	5	1	1	1	0
4-5.5	0	1	1	1	1	1	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥12	0	0	0	0	0	0	0

454

21

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	1	0	0	0	0	0	1
1-2.5	24	23	4	2	0	0	2
2-3.5	7	8	4	1	0	0	2
3-4.5	4	4	1	4	0	0	0
4-5.5	0	0	1	4	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

95

22

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	14	1	+	3	0	0	1
1-2.5	15	10	6	3	+	1	0
2-3.5	1	10	3	2	2	+	+
3-4.5	0	4	3	0	0	+	1
4-5.5	0	2	3	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

229

23

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	6	+	0	+	0	0	1
1-2.5	12	15	6	1	3	+	2
2-3.5	6	10	10	3	1	1	1
3-4.5	1	3	4	2	1	+	+
4-5.5	+	1	2	2	1	1	0
6-7.5	0	+	+	0	+	0	+
8-9.5	0	0	0	0	+	0	0
≥10	0	0	0	0	0	0	0

635

24

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	6	+	+	0	0	0	+
1-2.5	15	17	2	2	1	0	3
2-3.5	8	13	6	2	+	+	1
3-4.5	1	5	8	+	+	1	+
4-5.5	+	1	2	+	1	+	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

210

25

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	1	0	0	0	0	0	0
1-2.5	12	6	7	1	1	1	+
2-3.5	4	9	12	6	4	1	1
3-4.5	+	5	5	4	4	2	0
4-5.5	1	3	3	5	2	+	1
6-7.5	0	+	0	1	1	0	0
8-9.5	0	0	0	0	+	1	0
≥10	0	0	0	0	1	0	0

303

29

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	6	1	0	0	0	0	0
1-2.5	13	10	2	2	+	+	1
2-3.5	5	12	8	1	2	2	3
3-4.5	2	8	5	4	1	0	2
4-5.5	1	1	2	2	1	2	1
6-7.5	0	0	1	0	+	0	+
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

325

30

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	0	0	0	0	0	0	0
1-2.5	4	0	4	0	0	0	0
2-3.5	13	26	4	0	-	-	0
3-4.5	0	4	4	0	0	0	0
4-5.5	0	0	9	0	0	0	0
6-7.5	0	13	0	0	-	0	0
8-9.5	0	0	0	17	0	0	0
≥10	0	0	0	0	0	0	0

23

31

INSUFFICIENT DATA

32

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	0	0	0	0	0	0	0
1-2.5	0	0	0	0	0	8	0
2-3.5	0	0	0	8	0	0	8
3-4.5	0	0	17	8	33	0	0
4-5.5	0	0	8	0	0	0	0
6-7.5	0	0	0	0	0	8	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

12

33

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	8	0	0	0	0	0	2
1-2.5	13	2	7	3	5	2	2
2-3.5	7	10	9	4	1	1	2
3-4.5	2	3	4	4	1	1	0
4-5.5	1	1	0	1	1	1	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

92

34

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	4	1	0	0	0	0	0
1-2.5	16	18	0	0	0	0	0
2-3.5	6	8	13	6	1	0	0
3-4.5	0	2	14	4	0	0	0
4-5.5	0	0	1	2	0	0	1
6-7.5	0	0	0	1	0	0	0
8-9.5	0	0	0	0	0	1	0
≥10	0	0	0	0	0	0	0

85

Graphs represent the objective compilation of available data for specified areas without regard to susp
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bias

HEIGHT

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0-11 seconds)

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1

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	9	3	1	0	0	0	0
1-1.5	24	15	11	2	0	0	2
2-2.5	2	18	2	5	1	0	0
3-3.5	0	1	4	0	1	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

123

2

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	5	+	1	0	0	0	0
1-1.5	12	18	6	1	1	1	1
2-2.5	4	17	11	1	1	1	+
3-3.5	1	4	3	3	1	+	+
4-5.5	0	1	2	2	0	1	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

252

3

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	5	0	0	0	0	0	0
1-1.5	15	7	7	1	0	1	2
2-2.5	4	16	6	3	0	1	3
3-3.5	2	8	8	0	0	0	0
4-5.5	0	1	6	+	0	0	+
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

204

4

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	6	0	0	0	0	0	1
1-1.5	22	13	12	3	1	1	5
2-2.5	7	7	3	4	0	1	1
3-3.5	0	3	5	0	3	0	0
4-5.5	0	1	2	0	1	1	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

147

5

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	12	4	2	1	0	0	8
1-1.5	13	18	11	5	2	1	4
2-2.5	2	6	4	3	2	0	+
3-3.5	0	0	1	1	0	0	0
4-5.5	0	0	+	+	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

429

6

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	23	3	1	2	0	0	10
1-1.5	23	11	4	2	1	2	6
2-2.5	2	4	3	+	1	+	1
3-3.5	+	+	+	0	+	0	0
4-5.5	0	+	+	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

709

7

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	13	0	0	0	0	0	1
1-1.5	36	14	9	7	1	0	2
2-2.5	4	7	2	1	0	0	1
3-3.5	0	1	2	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

166

8

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	8	+	0	+	0	0	+
1-1.5	20	19	9	3	1	1	4
2-2.5	4	9	8	2	1	0	3
3-3.5	+	2	2	1	+	0	0
4-5.5	0	1	1	0	0	0	0
6-7.5	0	0	0	0	0	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

412

9

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	5	+	0	0	0	0	+
1-1.5	21	16	8	1	1	1	2
2-2.5	8	15	8	2	1	1	1
3-3.5	1	4	1	1	+	+	1
4-5.5	0	1	+	0	0	0	+
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

635

10

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	12	2	+	0	0	0	4
1-1.5	20	16	11	4	4	1	2
2-2.5	4	7	5	2	1	1	+
3-3.5	+	1	1	+	+	+	+
4-5.5	+	0	+	0	0	0	+
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

895

13

IND
3
4
1
0
+
0
0
0

593

14

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	7	1	0	0	0	0	2
1-1.5	19	10	8	2	2	1	2
2-2.5	7	15	10	1	2	1	1
3-3.5	2	3	+	1	1	+	0
4-5.5	0	1	1	+	1	+	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

523

15

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	1	0	1	0	0	0	6
1-1.5	14	14	1	3	0	0	15
2-2.5	2	11	15	3	1	1	7
3-3.5	0	0	3	1	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

88

16

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	11	1	0	1	0	0	4
1-1.5	23	20	5	3	2	1	4
2-2.5	1	8	5	5	1	1	2
3-3.5	0	3	0	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

177

17

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	3	1	0	0	0	0	1
1-1.5	13	18	5	3	1	0	1
2-2.5	6	7	17	5	1	2	0
3-3.5	1	5	3	1	1	1	0
4-5.5	0	2	1	1	0	0	1
6-7.5	0	1	1	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

177

18

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	7	0	0	2	0	0	3
1-1.5	14	11	5	1	1	+	8
2-2.5	7	6	9	1	1	0	5
3-3.5	1	3	0	2	1	1	2
4-5.5	+	1	2	1	1	+	0
6-7.5	0	0	0	0	0	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

297

19

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	5	+	0	0	0	0	1
1-1.5	12	7	4	+	+	+	3
2-2.5	6	14	9	5	3	1	2
3-3.5	2	3	5	3	2	2	1
4-5.5	0	1	4	3	1	+	+
6-7.5	0	0	1	1	+	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

489

22

IND
1
6
+
1
0
0
0
0

229

23

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	6	+	0	+	0	0	1
1-1.5	12	15	6	1	3	+	2
2-2.5	6	10	10	3	1	1	1
3-3.5	1	3	4	2	1	+	+
4-5.5	+	1	2	2	1	1	0
6-7.5	0	+	+	0	+	0	+
8-9.5	0	0	0	0	+	0	0
≥10	0	0	0	0	0	0	0

635

24

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	6	+	+	0	0	0	+
1-1.5	15	17	2	2	1	0	3
2-2.5	8	13	6	2	+	+	1
3-3.5	1	5	8	+	+	1	+
4-5.5	+	1	2	+	1	+	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

210

25

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	1	0	0	0	0	0	0
1-1.5	12	6	7	1	1	1	+
2-2.5	4	9	12	6	4	1	1
3-3.5	+	5	5	4	4	2	0
4-5.5	1	3	3	5	2	+	1
6-7.5	0	+	0	1	1	0	0
8-9.5	0	0	0	0	+	1	0
≥10	0	0	0	0	1	0	0

303

26

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	4	0	0	1	0	0	1
1-1.5	11	9	6	0	1	1	2
2-2.5	6	14	9	1	4	2	2
3-3.5	2	5	5	5	1	1	2
4-5.5	0	1	2	1	0	0	0
6-7.5	0	0	1	1	1	1	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

170

27

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	0	0	0	0	0	0	0
1-1.5	0	22	0	0	0	0	0
2-2.5	0	11	22	22	0	0	0
3-3.5	0	0	22	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

9

28

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	6	0	0	6	0	0	18
1-1.5	26	6	6	3	0	0	0
2-2.5	0	9	0	6	0	0	0
3-3.5	0	0	0	3	0	0	0
4-5.5	0	0	0	6	0	3	0
6-7.5	0	0	0	3	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

34

31

IND
0
0
0
8
0
0
0
0

T

32

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	0	0	0	0	0	0	0
1-1.5	0	0	0	0	0	0	0
2-2.5	0	0	0	8	0	0	8
3-3.5	0	0	17	8	33	0	0
4-5.5	0	0	8	0	0	0	0
6-7.5	0	0	0	0	0	8	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

12

33

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	8	0	0	0	0	0	2
1-1.5	13	2	7	3	5	2	2
2-2.5	7	10	9	4	1	1	2
3-3.5	2	3	4	4	1	1	0
4-5.5	1	1	0	1	1	1	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

92

34

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	4	1	0	0	0	0	0
1-1.5	16	18	0	0	0	0	0
2-2.5	5	8	13	5	1	0	0
3-3.5	0	2	14	4	0	0	0
4-5.5	0	0	1	2	0	0	1
6-7.5	0	0	0	1	0	0	0
8-9.5	0	0	0	0	0	1	0
≥10	0	0	0	0	0	0	0

85

35

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	0	0	0	0	0	0	0
1-1.5	0	0	0	0	0	0	0
2-2.5	0	0	0	0	0	0	0
3-3.5	0	17	3	0	0	0	0
4-5.5	0	5	42	11	0	2	0
6-7.5	0	0	5	6	0	0	0
8-9.5	0	0	0	11	0	0	0
≥10	0	0	0	0	0	0	0

65

36

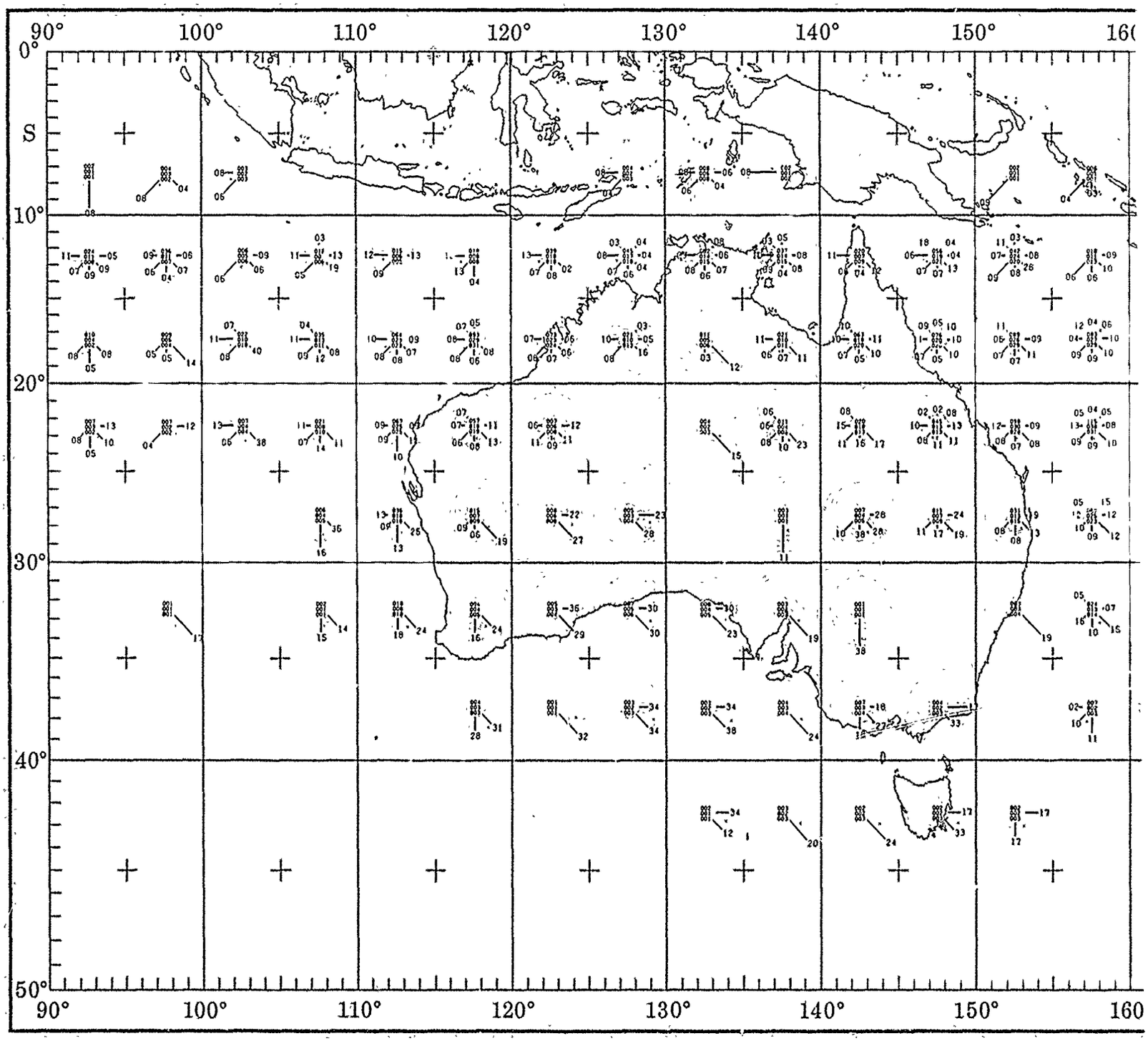
INSUFFICIENT DATA

37

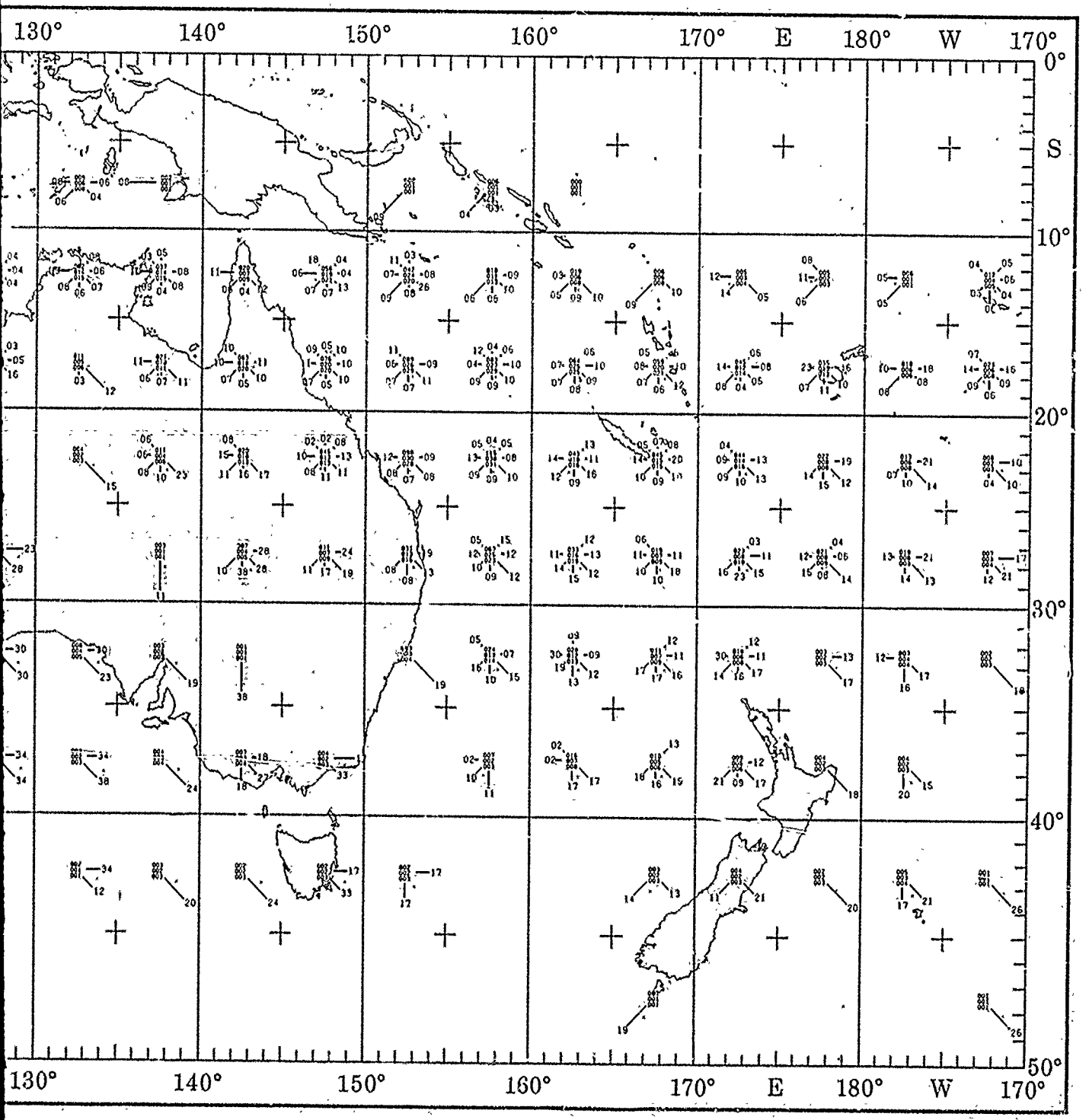
INSUFFICIENT DATA

t the objective compilation of available data for specified areas without regard to suspected biases.
lyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

MARCH

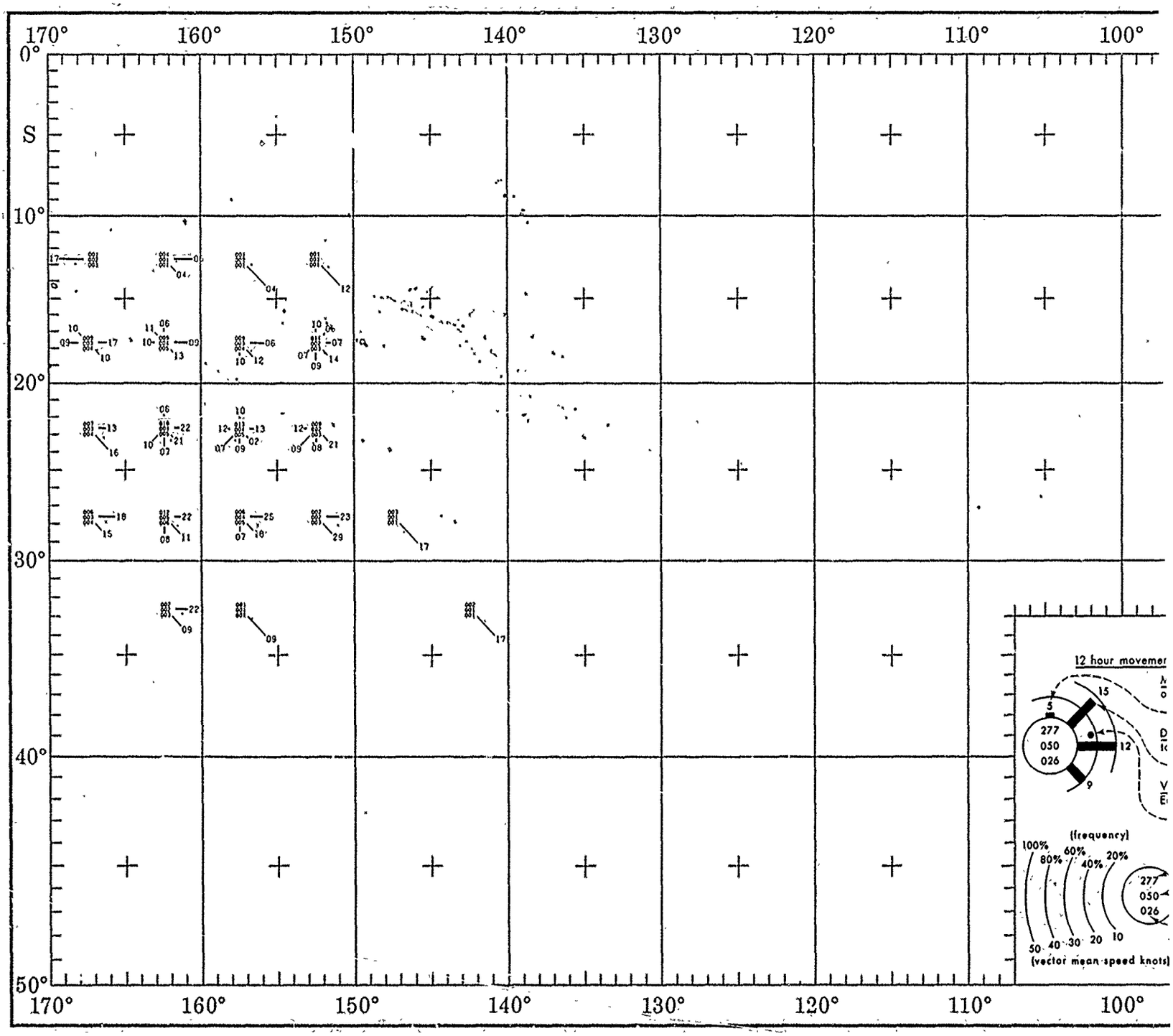


TROPICAL CYCLONE



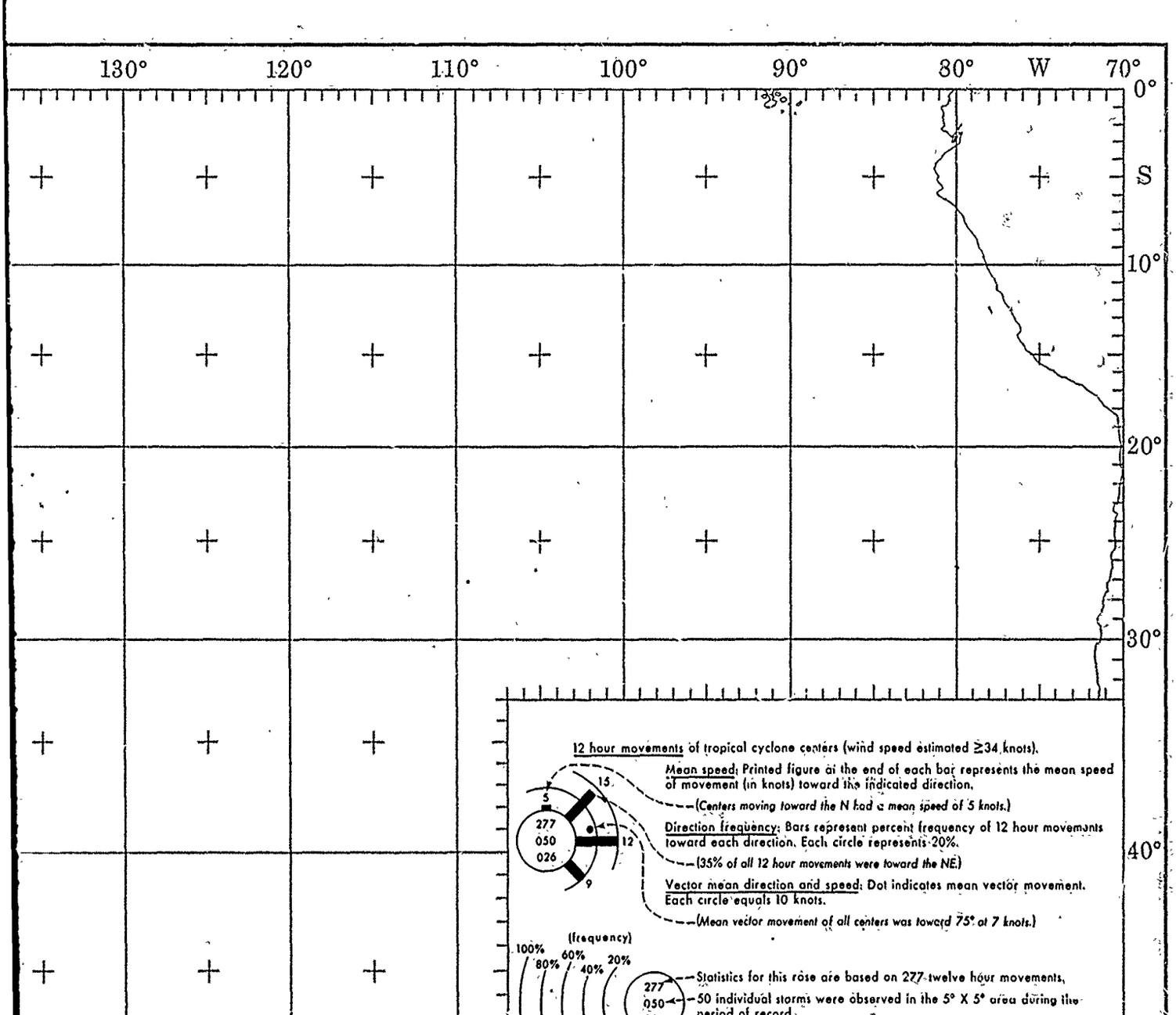
1 1 2

TROPICAL CYCLONE

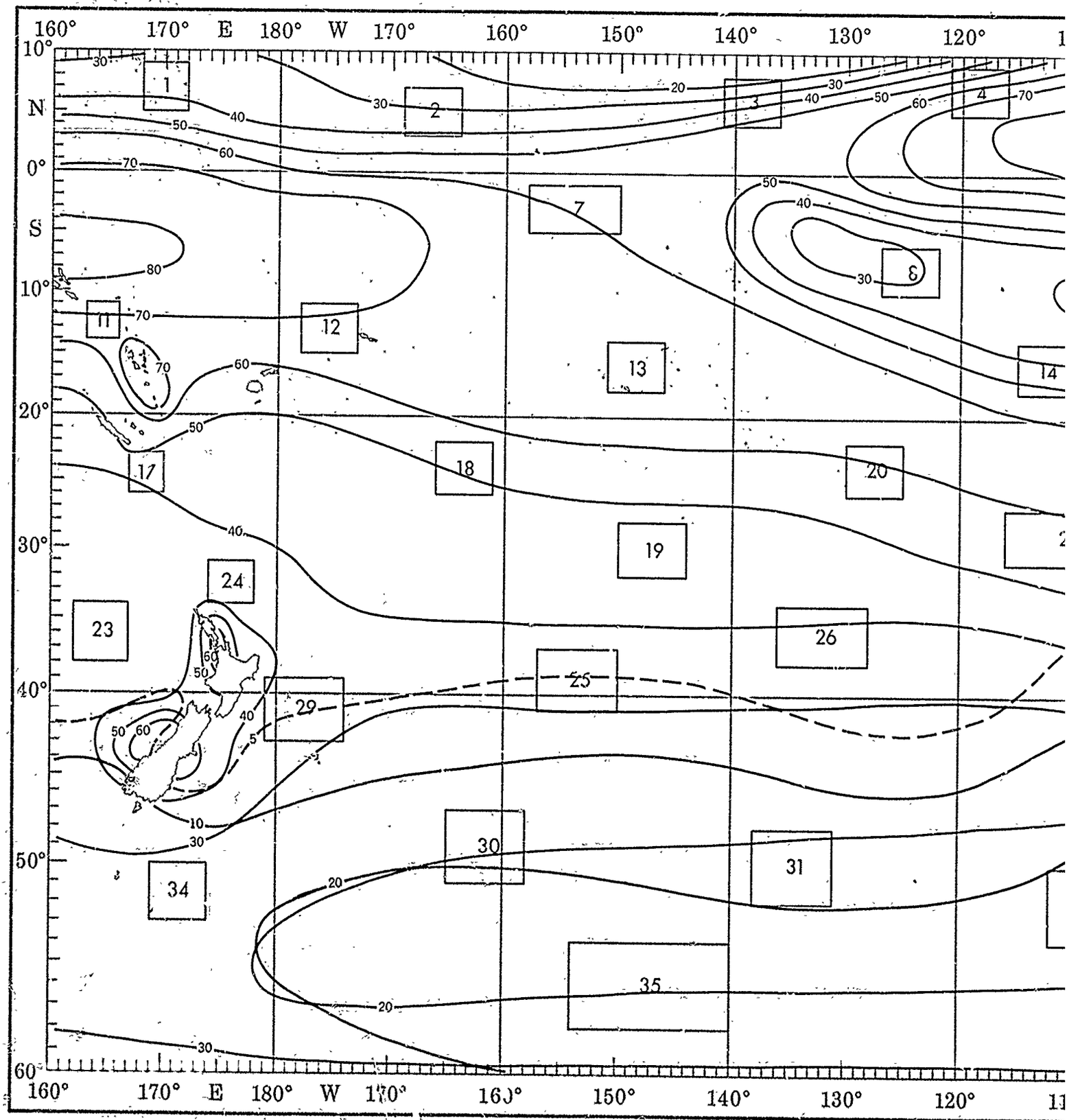


1

MARCH

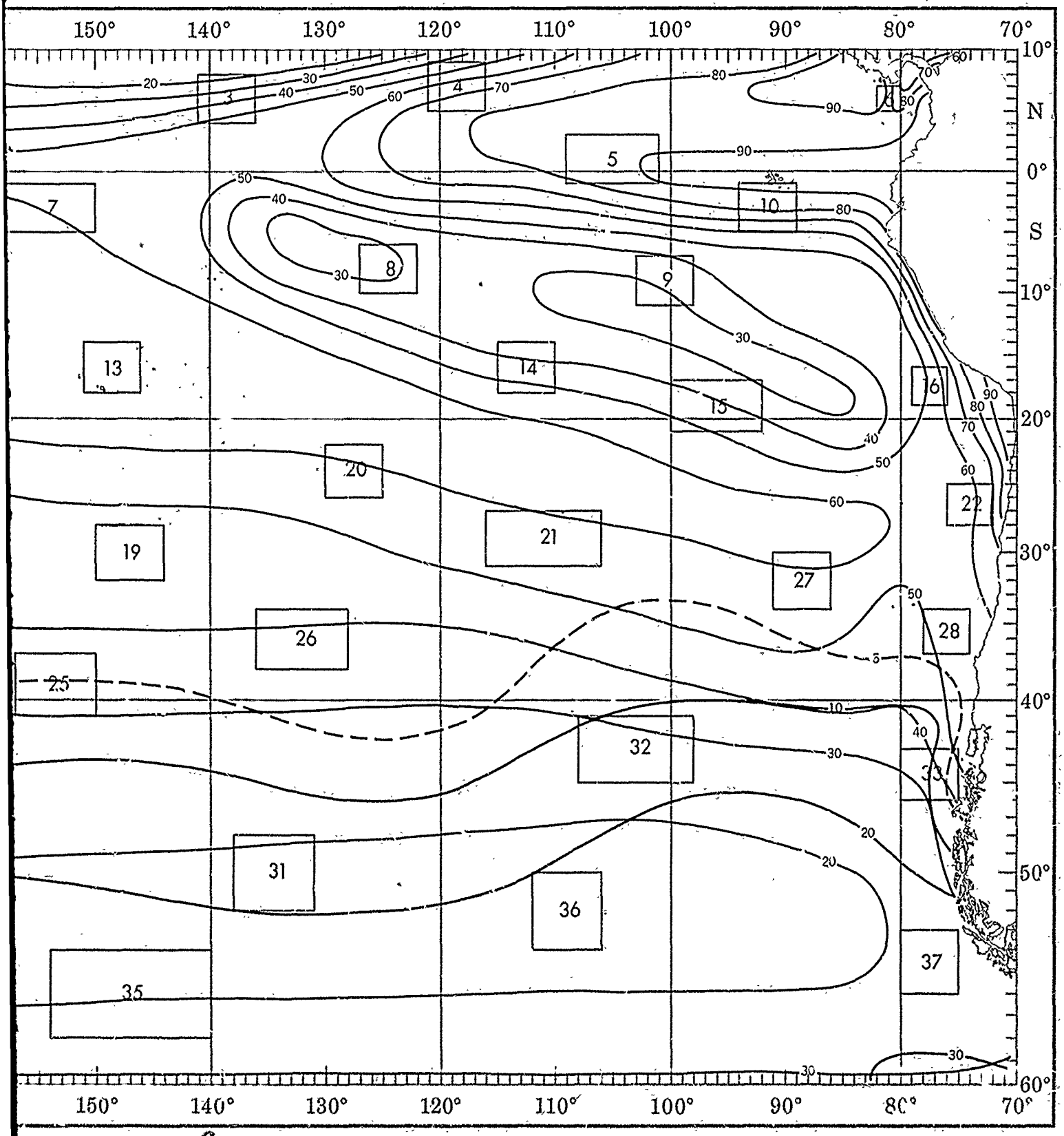

130°
120°
110°
100°
90°
80°
W
70°
0°
S
10°
20°
30°
40°
50°
12 hour movements of tropical cyclone centers (wind speed estimated ≥34 knots).
Mean speed: Printed figure at the end of each bar represents the mean speed of movement (in knots) toward the indicated direction.
(Centers moving toward the N had a mean speed of 5 knots.)
Direction frequency: Bars represent percent frequency of 12 hour movements toward each direction. Each circle represents 20%.
(35% of all 12 hour movements were toward the NE.)
Vector mean direction and speed: Dot indicates mean vector movement. Each circle equals 10 knots.
(Mean vector movement of all centers was toward 75° at 7 knots.)
5
15
277
050
026
12
9
(frequency)
100%
80%
60%
40%
20%
50
40
30
20
10
(vector mean speed knots)
277
050
026
Statistics for this rose are based on 277 twelve hour movements.
50 individual storms were observed in the 5° X 5° area during the period of record.
Probability of having at least one tropical cyclone in this area in any given year for this month is 26%.

APRIL


160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N 0° S 10° 20° 30° 40° 50° 60°
1
2
3
4
7
8
11
12
13
14
17
18
19
20
23
24
25
26
29
30
31
34
35
30
20
40
50
60
70
80
10
5

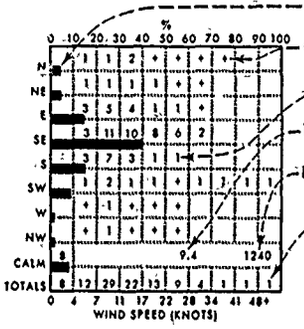
1

SURFACE WINDS



WIND DIRECTION AND SPEED

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.



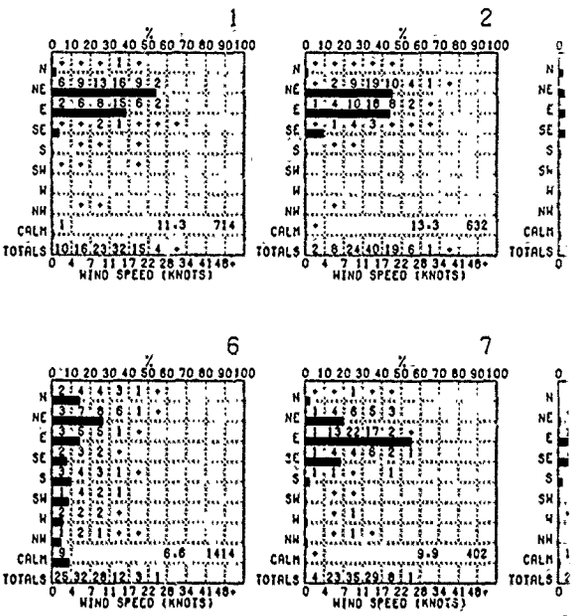
WIND SPEED INTERVAL (KNOTS)

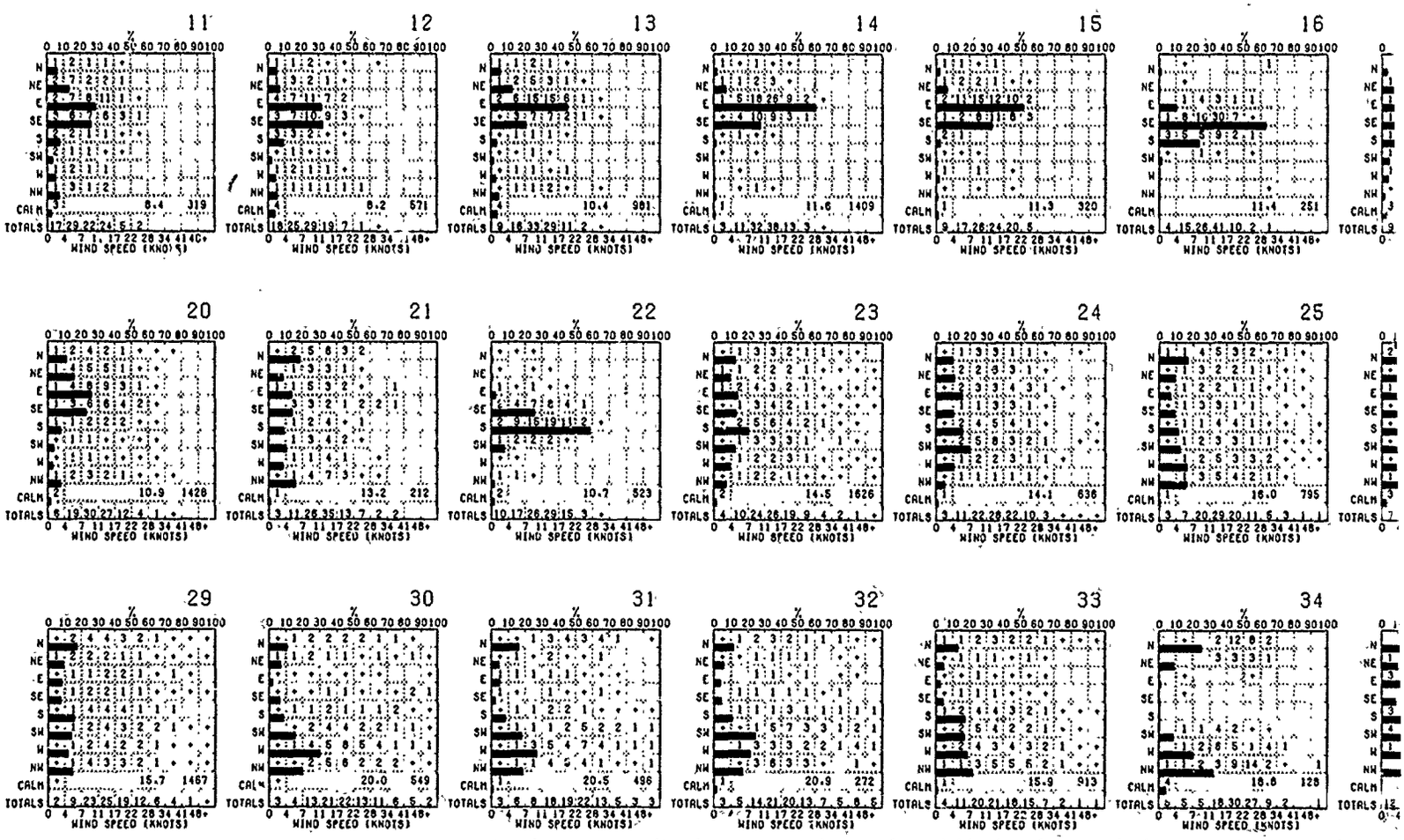
0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	≥48
0	4	7	11	17	22	28	34	41	48+

Printed scale on bottom of chart

BLUE LINE - Percent frequency of wind speed ≤10 knots

RED LINE - Percent frequency of wind speed ≥34 knots





Graphs represent the objective compilation of available data for specified areas without regard to sus

The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bia

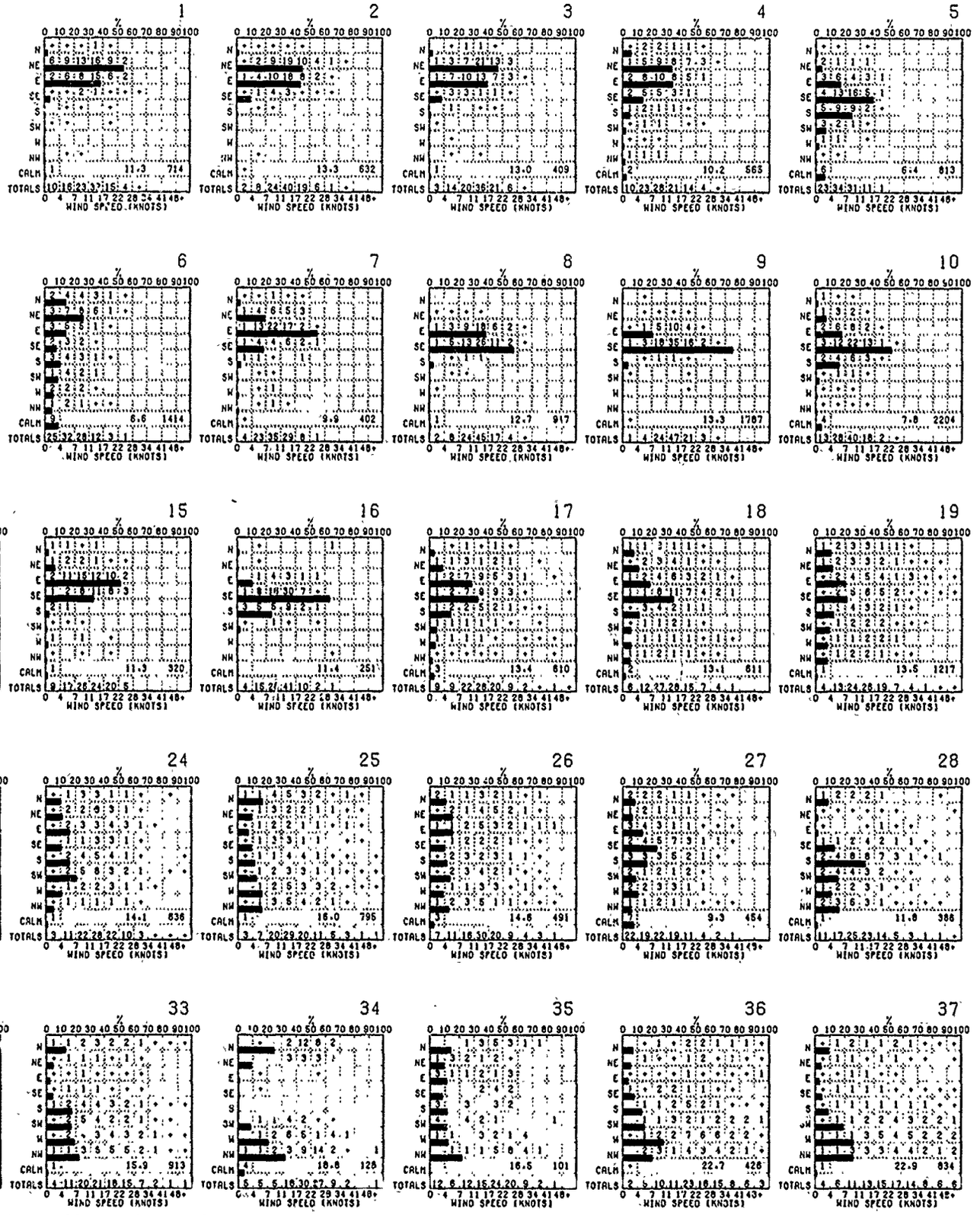
SPEED

APRIL

n. Speed frequency

n.

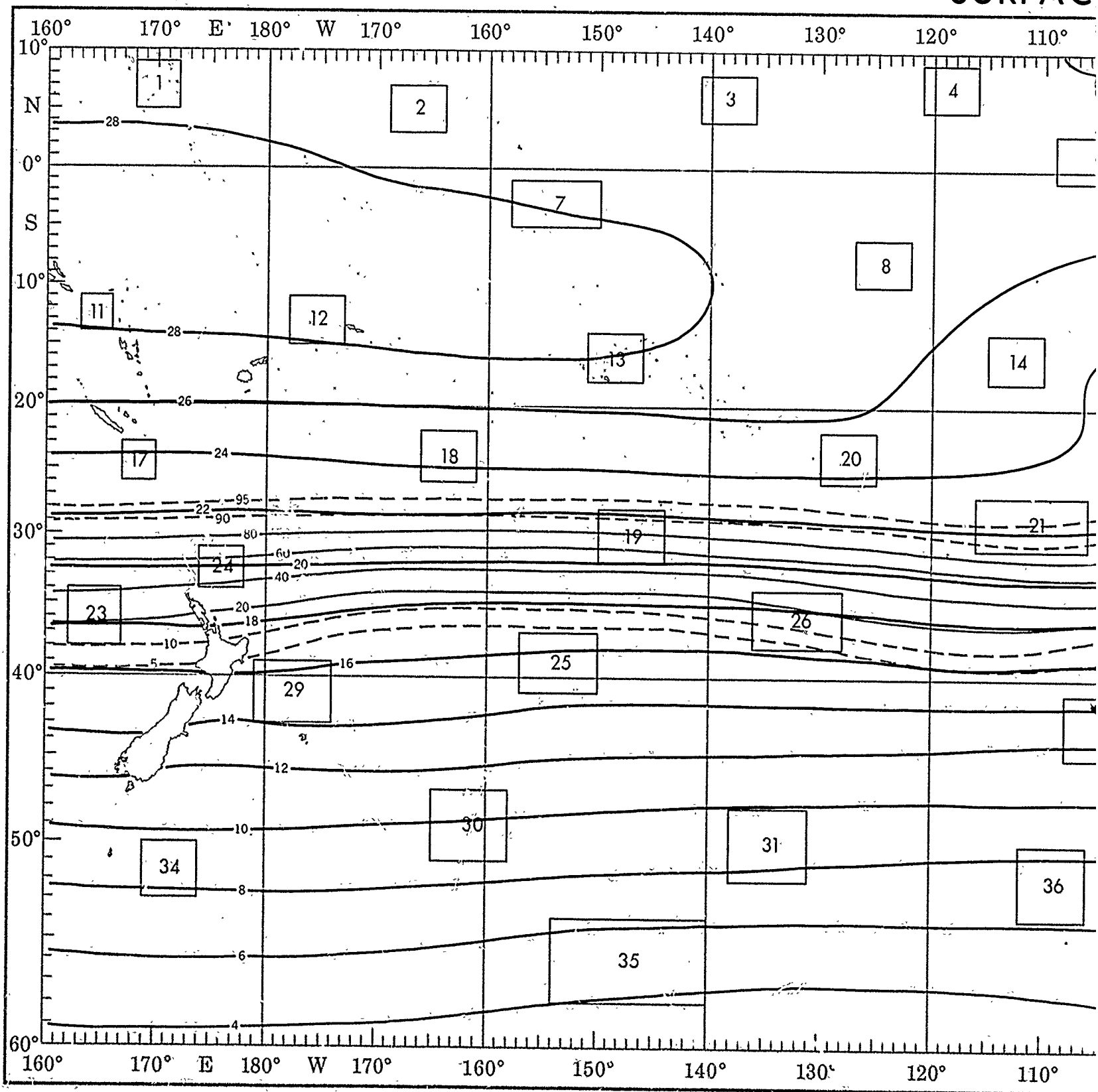
≥48



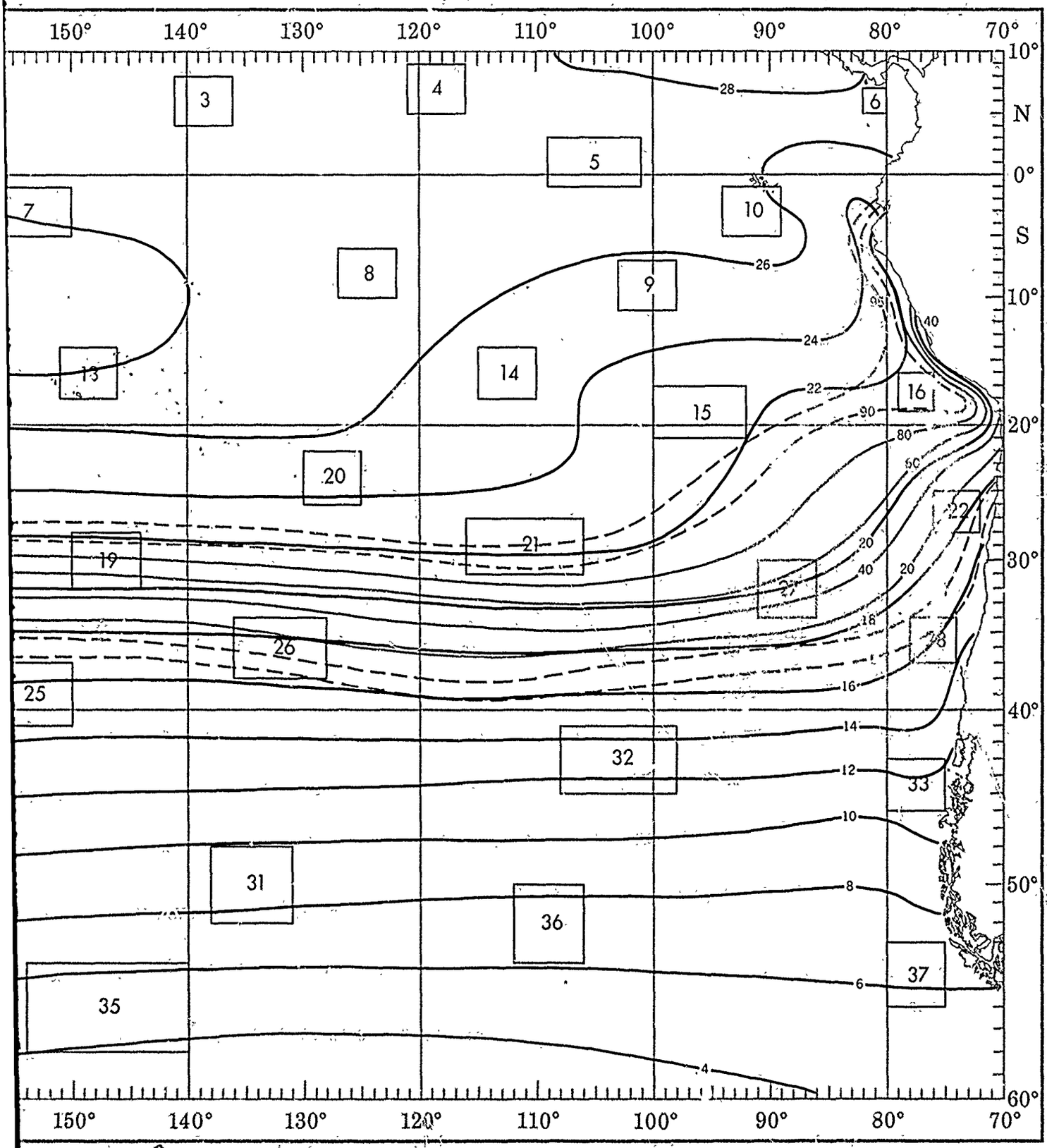
ective compilation of available data for specified areas without regard to suspected biases.
posite page) are based on all available data subjectively adjusted where bias was evident.

APRIL

SURFAC



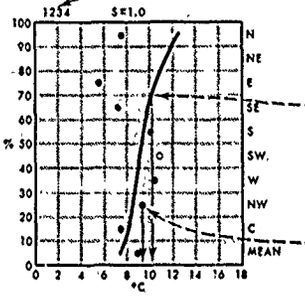
SURFACE AIR TEMPERATURE



SURFACE AIR TEMPERATURE

Air Temperature.

Number of observations.



Cumulative percent frequency of temperatures equal to or less than the temperature intersected by the curve.

(70% of all temperatures were ≤10.3 °C or ≤50.5 °F.)

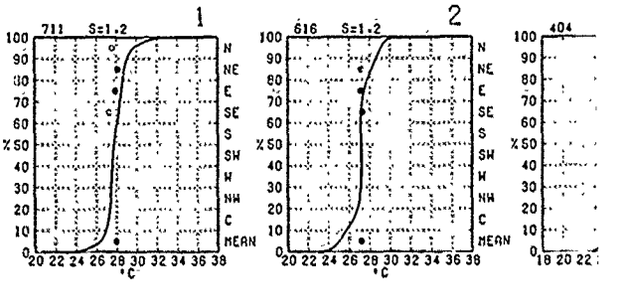
S=Standard deviation of temperatures (°C).

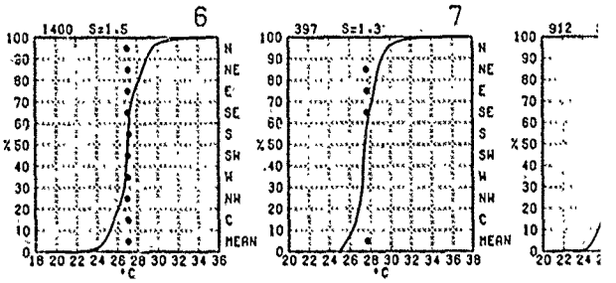
Mean temperature for each wind direction, calm and for all data combined are represented by dots.

(With NW winds, the mean temperature was 9.4 °C or 48.9 °F.)

o Indicates that the mean temperature for a direction or calm was computed from 10-30 observations.

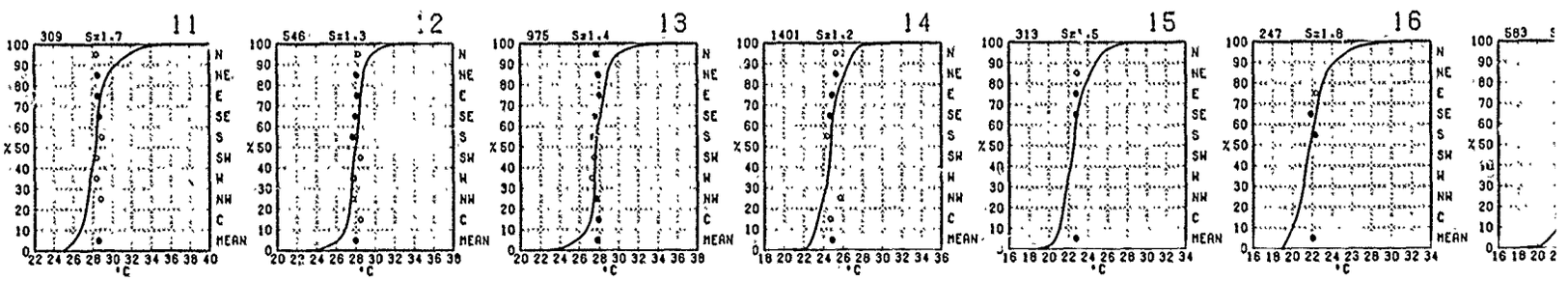
The mean temperature is omitted when less than 10 observations for a direction or calm were available.

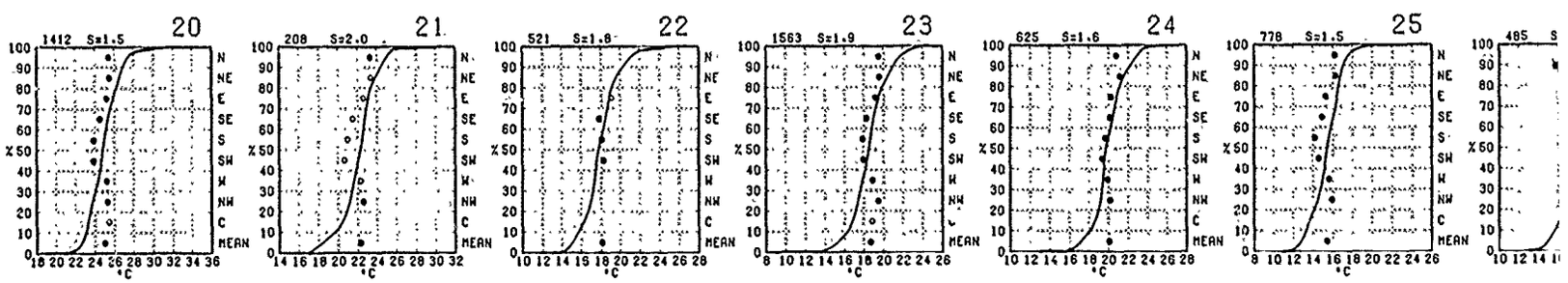


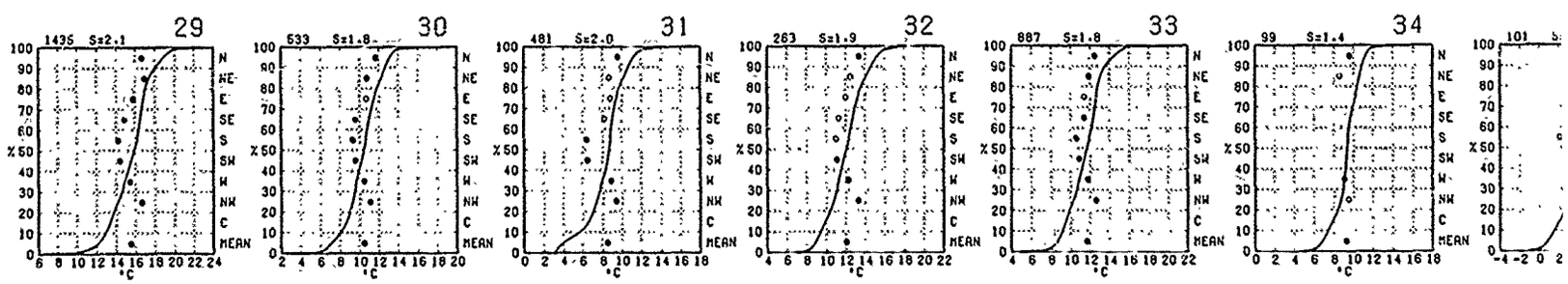


BLACK LINE - Mean air temperature (°C)

RED LINE - Percent frequency of temperature ≥20°C (68°F)







Graphs represent the objective compilation of available data for specified areas without regard to suspe
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bias v

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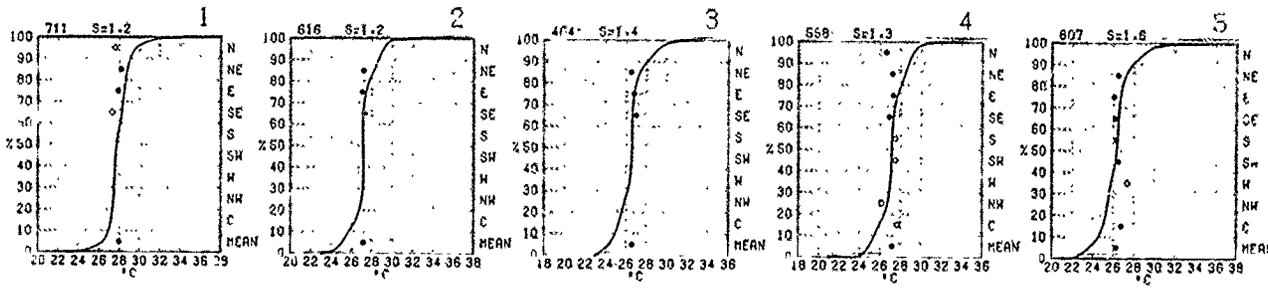
equal to or less than the temp

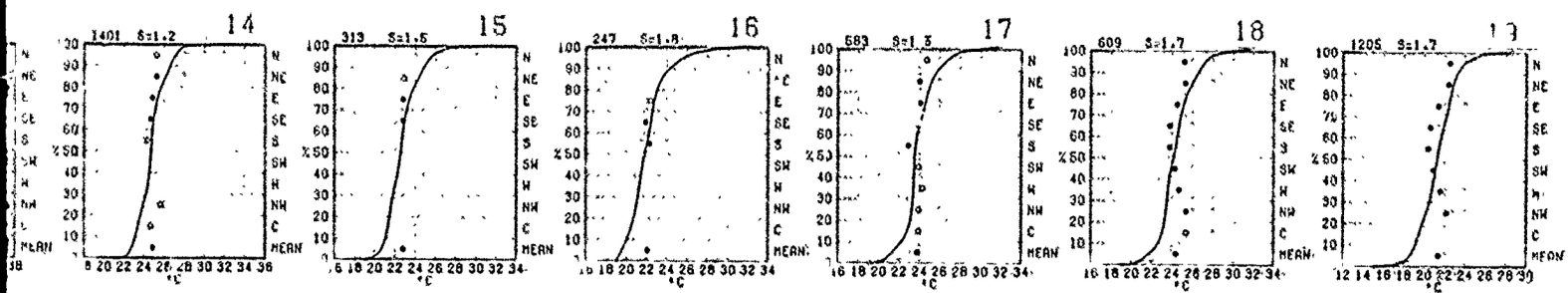
or all data combined are

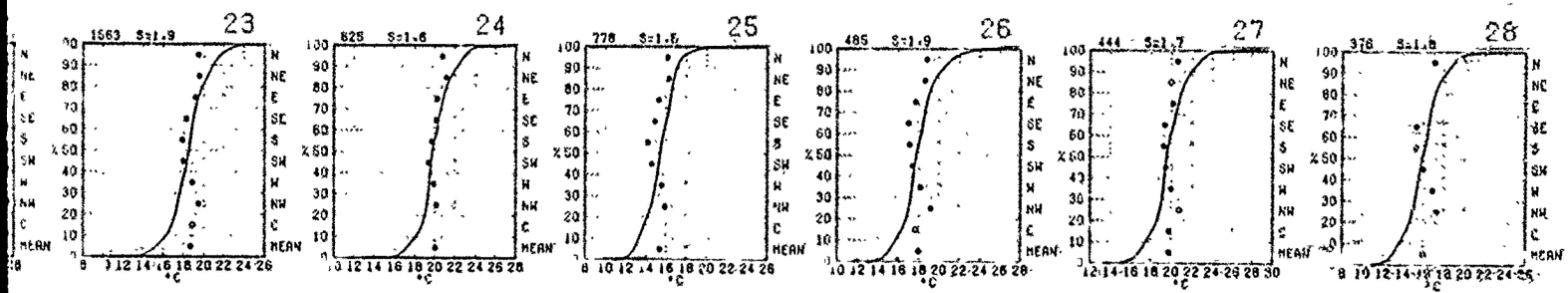
9 °F.)

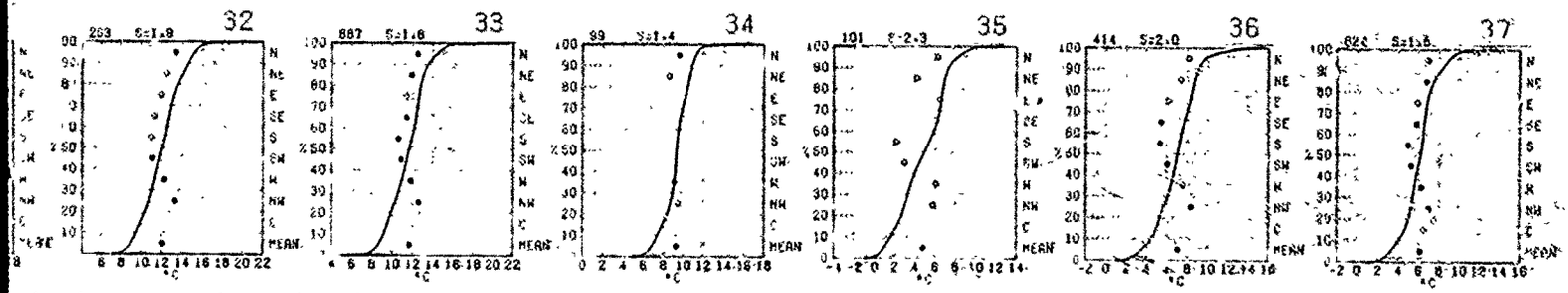
r calm was computed from

available.









the objective compilation of available data for specified areas without regard to suspected biases)

ses (opposite page) are based on all available data subjectively adjusted where bias was evident)

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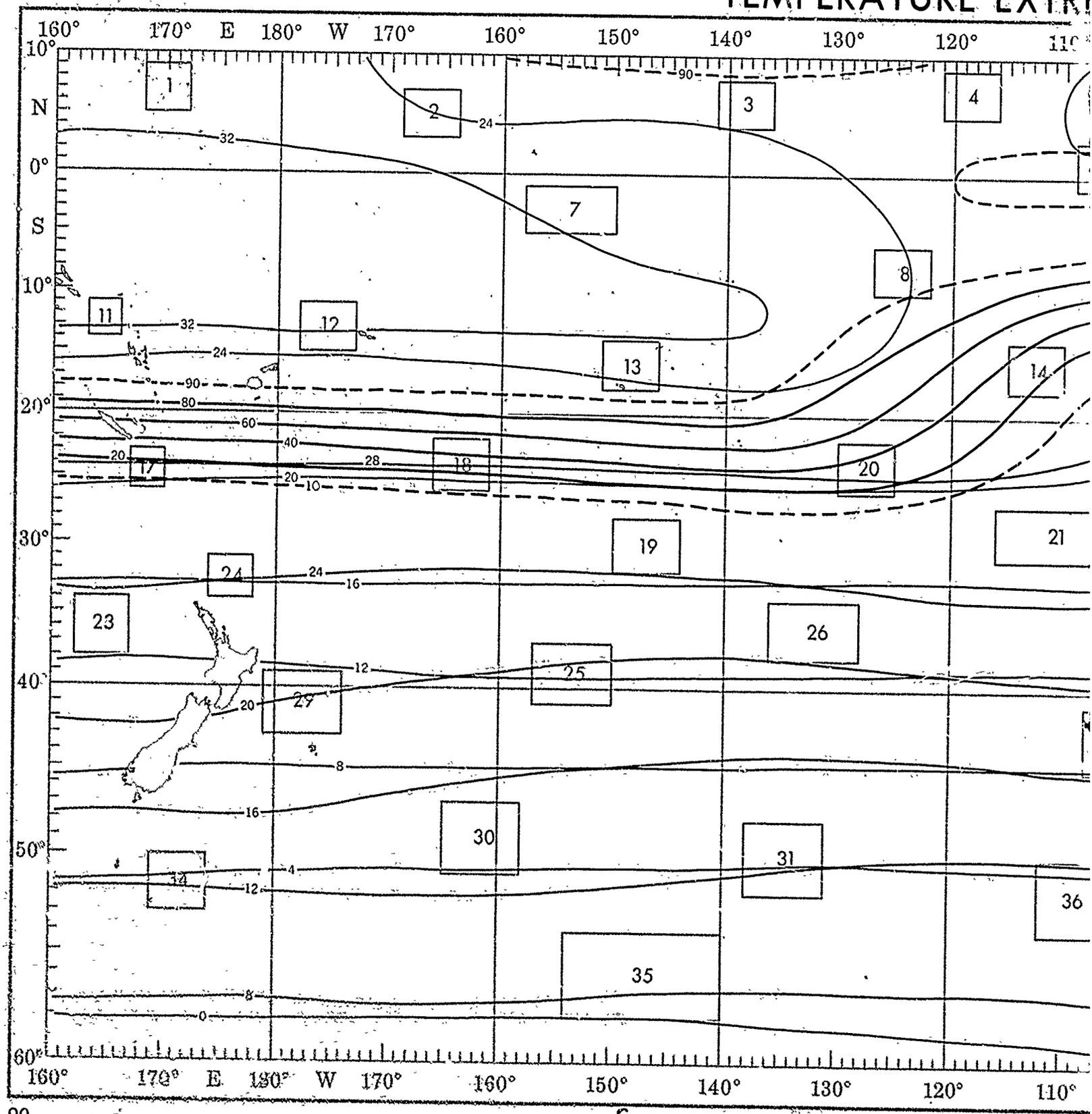
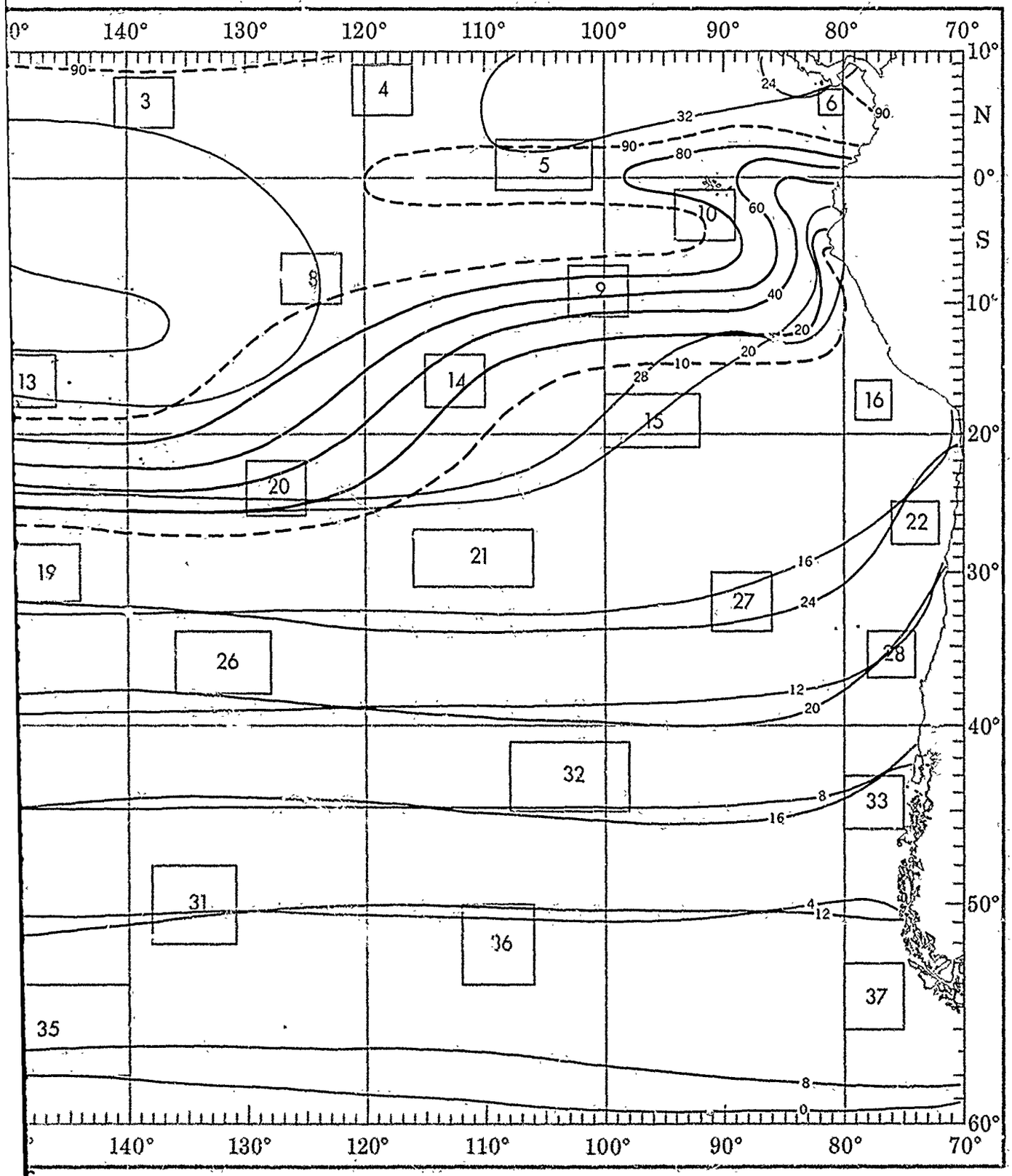
TEMPERATURE EXTRI



TEMPERATURE EXTREMES AND T-H INDEX



WIND SPEED AND AIR TEMPERATURE

Wind speed and air temperature.

Percent frequency of simultaneous occurrence of specified temperature (°C) and wind speed (knots).

WIND SPEED (kts)

Temp (°C)	0-3	4-10	11-21	22-33	≥34
4.5	18	8	7	1	1
2.3	17	8	7	1	1
0.1	13	6	5	1	1
-2.-1	1	+	0	0	0
-4.-3	0	0	0	0	0
-6.-5	+	0	0	+	+
-8.-7	1	+	0	0	0
-10.-9	0	0	0	0	0
-12.-11	1	+	0	0	0
-14.-13	1	0	0	0	0
-16.-15	1	+	0	0	0
					3550

—(1% of all observations reported temperature 2-3°C simultaneously with wind speed of 22-33 kts.)

— + Indicates <.5% but >0.

— Number of observations.

Use of this table in determination of Potential Superstructure Icing is explained in the text.

BLACK LINE - Percent frequency of T-H index ≥24°C (75.2°F) (discomfort may be experienced due to heat).

BLUE LINE - Minimum (1%) air temperature (°C) (1% of the temperatures were equal to or less than the given value)

RED LINE - Maximum (99%) air temperature (°C) (1% of the temperatures were greater than the given value)

1

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
32.33	+	1	+	0	0
30.31	1	3	2	0	0
28.29	7	24	30	2	0
26.27	2	11	14	2	0
24.25	+	+	+	+	0
22.23	0	0	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
					711

2

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
32.33	0	+	0	0	0
30.31	0	1	1	+	0
28.29	0	10	21	3	0
26.27	2	19	35	3	0
24.25	+	2	3	1	0
22.23	0	+	+	+	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
					618

6

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
34.35	0	+	0	0	0
32.33	+	1	+	0	0
30.31	1	3	+	0	0
28.29	8	16	4	+	0
26.27	16	32	7	+	0
24.25	2	5	2	0	0
22.23	+	+	+	+	0
20.21	0	+	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
					1498

7

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
34.35	0	+	0	0	0
32.33	+	1	1	0	0
30.31	1	3	2	+	0
28.29	3	27	16	+	0
26.27	1	25	16	+	0
24.25	0	2	1	+	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
					397

11

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
34.35	+	1	0	0	0
32.33	3	2	+	0	0
30.31	3	9	2	0	0
28.29	7	27	20	2	0
26.27	5	11	8	0	0
24.25	0	1	1	0	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
					310

12

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
32.33	1	1	0	0	0
30.31	1	5	2	0	0
28.29	11	35	16	1	0
26.27	5	13	8	1	0
24.25	0	1	1	0	0
22.23	0	+	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
					556

13

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
34.35	0	+	0	0	0
32.33	+	2	1	0	0
30.31	1	4	2	+	0
28.29	5	25	21	1	0
26.27	4	17	14	1	0
24.25	+	1	1	+	0
22.23	0	+	+	+	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
					994

14

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
32.33	+	0	0	0	0
30.31	0	+	+	0	0
28.29	0	1	1	+	0
26.27	1	12	14	1	0
24.25	2	26	31	2	0
22.23	+	4	4	+	0
20.21	0	+	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
					1409

15

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
28.29	0	+	0	0	0
26.27	1	4	2	0	0
24.25	2	7	11	1	0
22.23	5	23	23	2	0
20.21	+	9	8	1	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
					313

16

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
28.29	0	0	1	+	0
26.27	+	2	2	+	0
24.25	1	6	6	0	0
22.23	2	16	20	1	0
20.21	1	15	20	2	0
18.19	0	1	3	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
					247

20

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
32.33	+	+	0	0	0
30.31	+	+	+	0	0
28.29		2	1	+	0
26.27	3	17	13	+	+
24.26	3	23	18	2	+
22.23	+	6	7	1	0
20.21	+	+	+	+	0
18.19	0	+	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
					1443

21

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
28.29	0	0	+	0	0
26.27	0	+	+	0	0
24.25	1	11	17	3	0
22.23	2	17	14	1	+
20.21	0	7	11	4	1
18.19	+	3	2	+	+
16.17	0	1	1	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
					211

22

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
24.25	+	1	0	0	0
22.23	+	2	1	+	0
20.21	3	8	7	+	0
18.19	4	16	20	2	0
16.17	2	13	16	1	0
14.15	1	2	2	0	0
12.13	0	+	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
					522

23

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
24.25	0	0	1	0	0
22.23	+	2	3	1	0
20.21	1	9	11	3	+
18.19	2	16	20	5	2
16.17	1	6	9	3	+
14.15	+	1	2	1	+
12.13	0	+	+	+	0
10.11	0	0	0	+	+
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
					1572

24

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
28.27	+	0	0	0	0
27.23	1	6	10	1	+
20.21	+	13	22	8	+
18.19	1	11	14	4	0
16.17	+	2	3	+	0
14.15	+	+	0	0	0
12.13	0	+	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
					627

25

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
24.25	0	0	+	0	0
22.23	0	0	+	0	0
20.21	0	+	+	0	0
18.19	+	2	3	1	+
16.17	1	12	22	8	2
14.15	1	11	18	6	2
12.13	+	2	4	2	1
10.11	0	+	+	+	+
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
					782

29

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
22.23	+	+	+	0	0
20.21	+	+	1	+	+
18.19	+	4	6	2	1
16.17	1	15	18	8	1
14.15	1	7	11	5	2
12.13	+	3	7	3	1
10.11	+	+	+	1	+
8.9	0	+	0	+	0
6.7	0	+	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
					1447

30

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
16.17	0	0	0	0	+
14.15	0	+	+	1	+
12.13	1	4	17	8	2
10.11	1	10	14	7	5
8.9	+	3	6	5	5
6.7	0	1	3	2	+
4.5	0	0	0	+	0
2.3	0	0	0	+	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
					537

31

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
14.15	0	+	+	0	0
12.13	0	1	1	+	1
10.11	1	3	9	11	2
8.9	2	7	20	14	2
6.7	1	2	5	5	3
4.5	+	1	1	2	2
2.3	+	1	+	1	+
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
					487

32

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
16.17	0	1	3	1	+
14.16	+	3	9	4	2
12.13	1	11	15	5	5
10.11	1	3	13	6	6
8.9	0	2	3	2	4
6.7	0	0	0	+	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
					263

33

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
20.21	0	0	+	0	0
18.19	0	+	0	0	0
16.17	+	1	+	+	0
14.15	1	4	5	3	1
12.13	1	11	17	10	2
10.11	2	12	13	7	1
8.9	1	3	3	2	+
6.7	+	+	0	+	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
					887

34

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
12.13	0	1	6	2	0
10.11	1	2	15	15	0
8.9	0	6	24	17	0
6.7	-	0	8	1	0
4.5	0	1	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
					99

Graphs represent the objective compilation of available data for specified areas without regard to su
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bi

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) and wind speed

d of 22-33 kts.)

ed in the text.

heat)

the given value)

ven value)

1 WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	*	1	*	1	0
30.31	1	3	2	0	0
28.29	7	24	30	2	0
26.27	2	11	14	2	0
24.25	*	*	*	*	0
22.23	0	0	*	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

711

2 WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	*	0	0	0
30.31	0	1	1	*	0
28.29	0	10	21	3	0
26.27	2	19	35	3	0
24.25	*	2	3	1	0
22.23	0	*	*	*	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

618

3 WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	*	2	1	0	0
28.29	1	6	10	1	0
26.27	1	21	37	3	0
24.25	1	5	8	2	0
22.23	0	0	0	*	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

406

4 WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	*	0	0	0
30.31	1	2	1	*	0
28.29	3	17	12	2	0
26.27	5	29	20	2	0
24.25	1	4	2	1	0
22.23	0	0	0	0	0
20.21	0	*	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

560

5 WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	*	0	0	0	0
32.33	*	*	0	0	0
30.31	1	1	*	0	0
28.29	5	8	2	0	0
26.27	11	38	6	0	0
24.25	6	15	3	0	0
22.23	1	2	*	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

826

6 WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	*	0	0	0
32.33	*	1	*	0	0
30.31	1	3	*	0	0
28.29	8	16	4	*	0
26.27	16	32	7	*	0
24.25	2	5	2	0	0
22.23	*	*	*	*	0
20.21	0	*	*	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

1498

7 WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	*	0	0	0
32.33	*	1	1	0	0
30.31	1	3	2	*	0
28.29	3	27	16	*	0
26.27	1	25	16	*	0
24.25	0	2	1	*	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

397

8 WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	*	*	0	0
30.31	*	1	2	0	0
28.29	1	11	16	1	0
26.27	1	19	42	3	0
24.25	0	1	2	*	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

914

9 WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	0	*	0	0
28.29	*	2	4	*	0
26.27	*	17	38	2	0
24.25	*	9	25	1	0
22.23	0	*	1	0	0
20.21	0	0	*	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

1773

10 WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	*	1	*	0	0
28.29	2	9	2	0	0
26.27	7	40	14	*	0
24.25	4	15	3	0	0
22.23	1	1	*	0	0
20.21	*	*	*	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

2261

14 WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	*	0	0	0	0
30.31	0	*	*	0	0
28.29	0	1	1	*	0
26.27	1	12	14	1	0
24.25	2	26	31	2	0
22.23	*	4	4	*	0
20.21	0	*	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1409

15 WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	*	0	0	0
26.27	1	4	2	0	0
24.25	2	7	11	1	0
22.23	5	23	23	2	0
20.21	*	9	8	1	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

313

16 WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	0	1	*	0
26.27	*	2	2	*	0
24.25	1	6	6	0	0
22.23	2	16	20	1	0
20.21	1	15	20	2	0
18.19	0	1	3	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

247

17 WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	*	0	0	0
28.29	*	1	1	0	0
26.27	2	5	5	1	0
24.25	3	12	18	5	1
22.23	4	13	23	4	*
20.21	1	1	1	*	0
18.19	0	*	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

587

18 WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	1	0	0	0
28.29	1	2	1	*	0
26.27	2	9	9	1	0
24.25	3	16	18	5	0
22.23	1	10	13	5	1
20.21	0	1	2	*	0
18.19	0	0	0	*	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

617

19 WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	1	1	0	0
24.25	*	4	3	1	0
22.23	3	13	17	3	1
20.21	2	15	17	5	*
18.19	*	3	7	2	*
16.17	0	*	1	*	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

1224

23 WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	0	0	1	0	0
22.23	*	2	3	1	0
20.21	1	9	11	3	*
18.19	2	16	20	5	2
16.17	1	6	9	3	*
14.15	*	1	2	1	*
12.13	0	*	*	*	0
10.11	0	0	0	*	*
8.9	0	0	0	0	0
6.7	0	0	0	0	0
5	0	0	0	0	0

1572

24 WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	*	0	0	0	0
24.25	0	0	1	0	0
22.23	1	6	10	1	*
20.21	*	13	22	8	*
18.19	1	11	14	4	0
16.17	*	2	3	*	0
14.15	*	*	0	0	0
12.13	0	*	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

627

25 WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	0	0	*	0	0
22.23	0	0	*	0	0
20.21	0	*	*	0	0
18.19	*	2	3	1	*
16.17	1	12	22	8	2
14.15	1	11	18	6	2
12.13	*	2	4	2	1
10.11	0	*	*	*	*
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

782

26 WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	*	0	0	0
24.25	0	0	0	0	0
22.23	*	1	1	*	1
20.21	2	5	8	*	*
18.19	2	10	17	7	1
16.17	1	8	21	5	1
14.15	1	2	2	1	*
12.13	0	*	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

487

27 WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	*	0	0	0	0
24.25	*	1	*	*	0
22.23	3	6	4	*	0
20.21	9	19	11	2	0
18.19	8	14	12	2	*
16.17	2	1	2	1	*
14.15	0	0	*	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

444

28 WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	*	0	0	0	0
20.21	1	1	1	*	0
18.19	2	10	7	1	0
16.17	6	18	12	3	1
14.15	2	12	15	2	1
12.13	1	1	3	1	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

376

32 WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	1	3	1	*
14.15	*	3	9	4	2
12.13	1	11	15	5	5
10.11	1	3	13	6	6
8.9	0	2	3	2	4
6.7	0	0	0	*	0
4.5	0	0	0	0	0
3.3	0	0	0	0	0
2.1	0	0	0	0	0
1.3	0	0	0	0	0

263

33 WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	0	*	0	0
18.19	0	*	0	0	0
16.17	*	1	*	*	0
14.15	1	4	5	3	1
12.13	1	11	17	10	2
10.11	2	12	13	7	1
8.9	1	3	3	2	*
6.7	*	*	0	*	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

887

34 WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	1	6	2	0
10.11	1	2	15	15	0
8.9	0	6	24	17	0
6.7	0	0	8	1	0
4.5	0	1	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-8.-5	0	0	0	0	0
-9.-7	0	0	0	0	0

99

35 WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
8.9	1	0	5	5	2
6.7	1	2	14	15	0
4.5	2	7	7	4	0
2.3	10	8	12	4	0
0.1	0	0	1	1	1
-2.-1	0	1	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0
-12.-11	0	0	0	0	0

103

36 WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	0	*	0	0	0
12.13	0	0	1	0	*
10.11	0	1	2	2	2
8.9	*	5	8	14	3
6.7	*	6	14	11	7
4.5	1	3	9	4	2
2.3	*	*	*	*	1
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0

414

37 WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	0	*	0	0
10.11	*	*	1	1	*
8.9	1	3	4	8	3
6.7	1	8	15	14	8
4.5	1	6	7	7	6
2.3	*	*	*	*	2
0.1	0	0	0	0	*
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-5.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

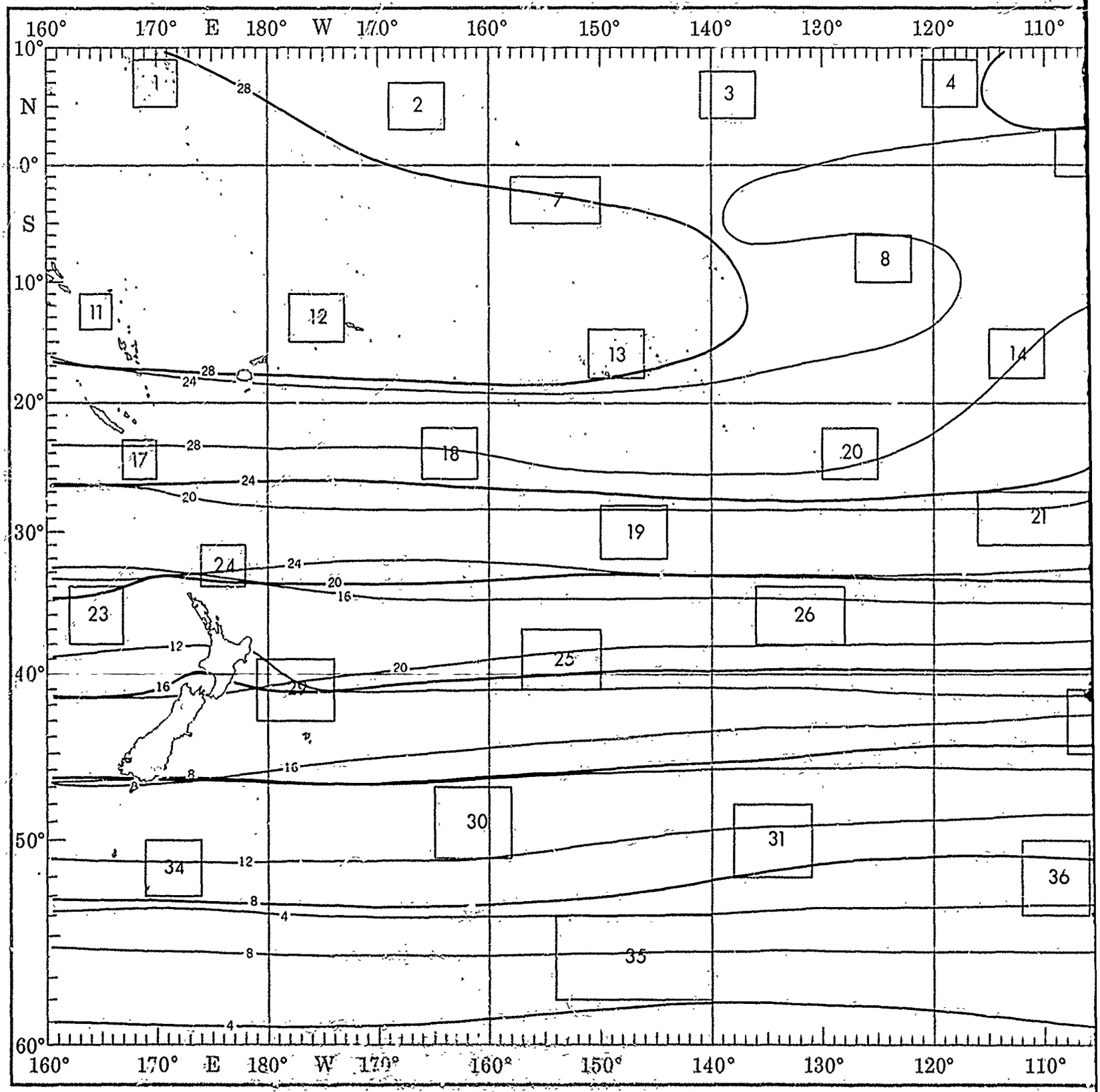
825

objective compilation of available data for specified areas without regard to suspected biases.

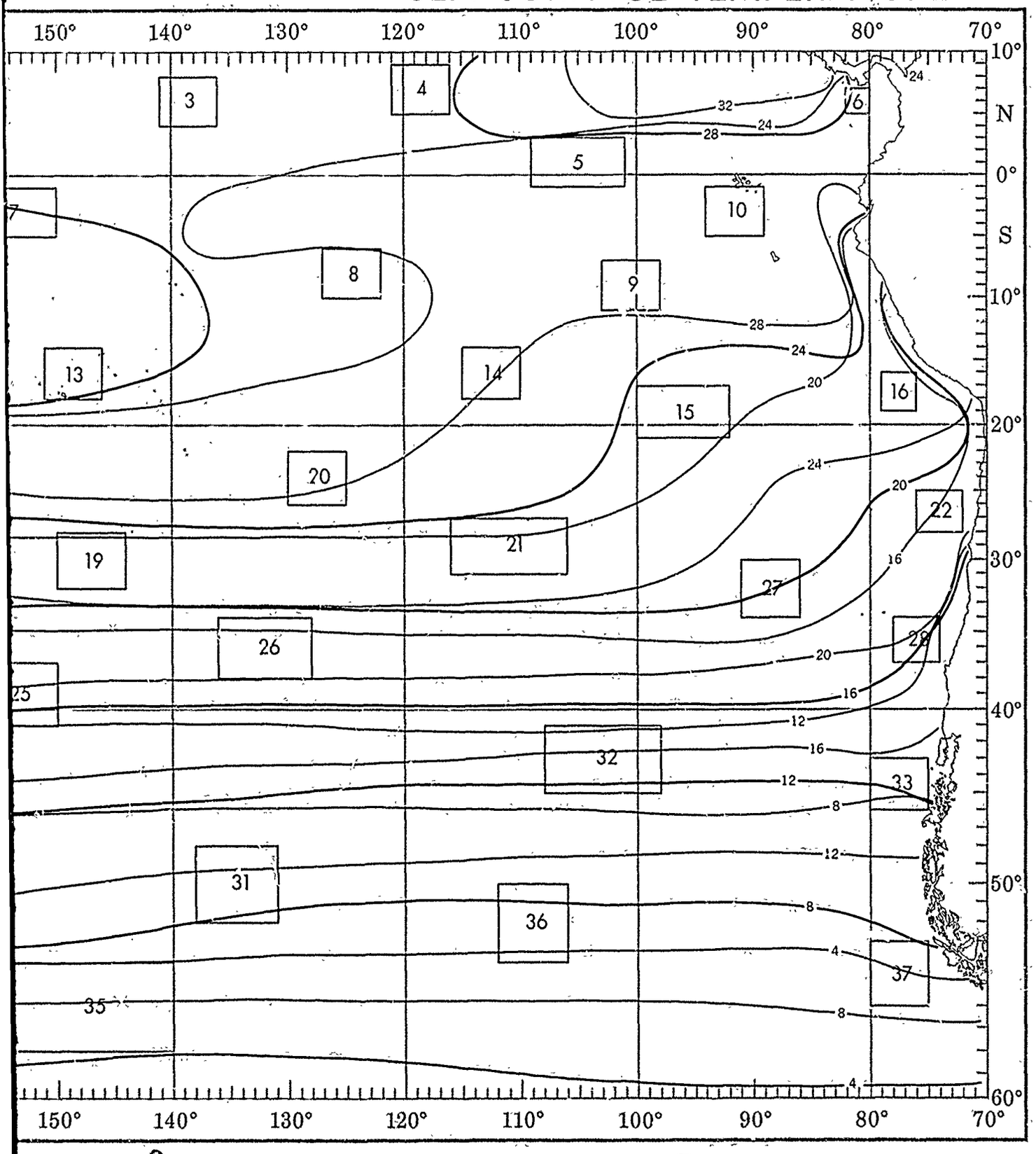
opposite page) are based on all available data subjectively adjusted where bias was evident.

APRIL

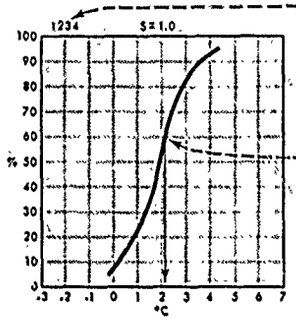
SEA SUR



SEA SURFACE TEMPERATURE



SEA SURFACE TEMPERATURE



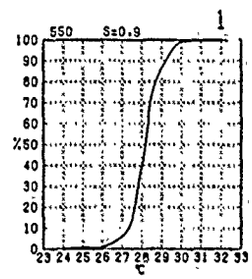
Sea surface temperature.

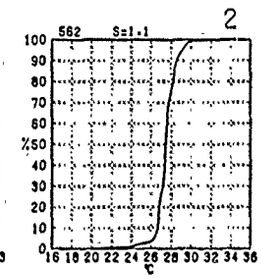
Number of observations.

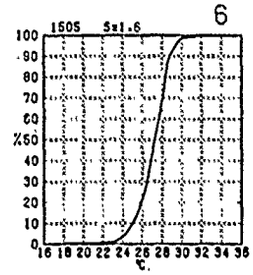
Cumulative percent frequency of sea surface temperatures equal to or less than the temperature intersected by the curve.

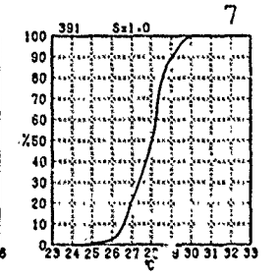
(60% of all observed sea surface temperatures were ≤2.1°C or ≤35.8°F.)

S=Standard deviation of sea surface temperatures (°C).





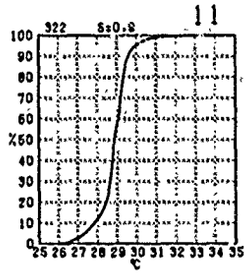


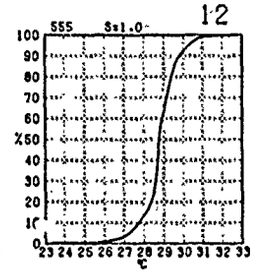


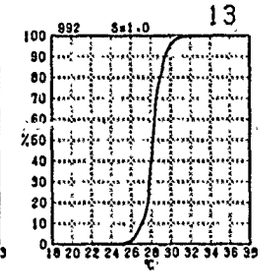
BLACK LINE - Mean sea surface temperature (°C)

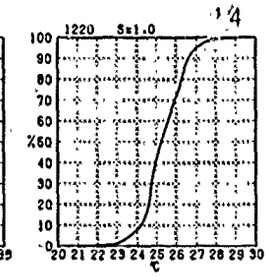
BLUE LINE - Minimum (1%) sea surface temperature (°C) (1% of the temperatures were equal to or less than the given value)

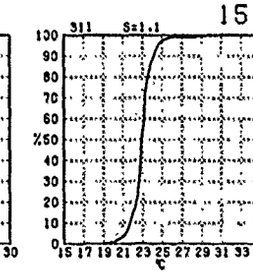
RED LINE - Maximum (99%) sea surface temperature (°C) (1% of the temperatures were greater than the given value)

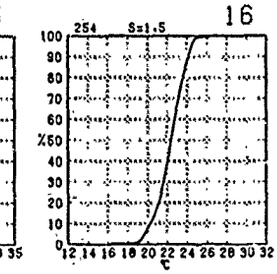


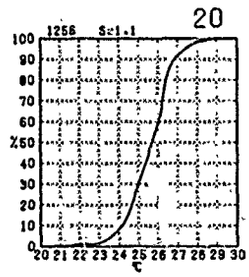


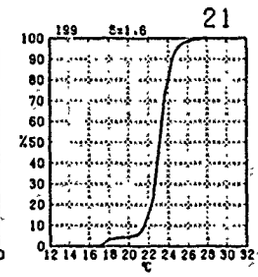


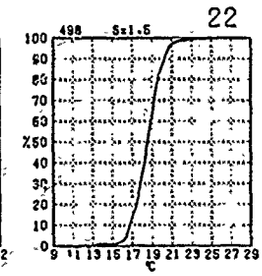


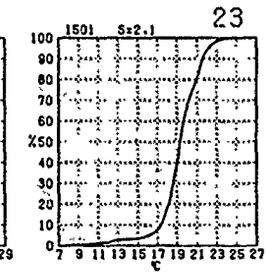


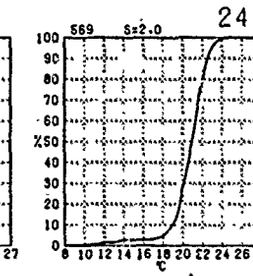


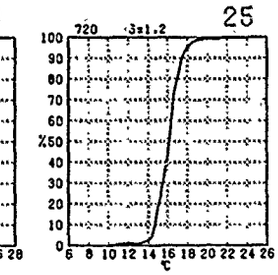


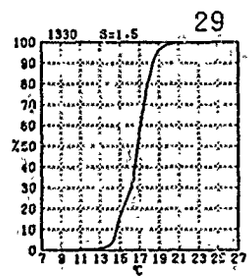


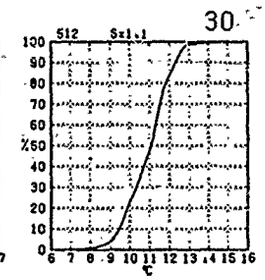


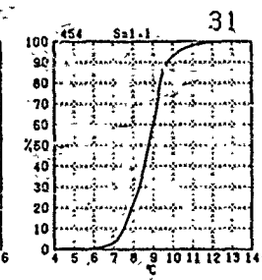


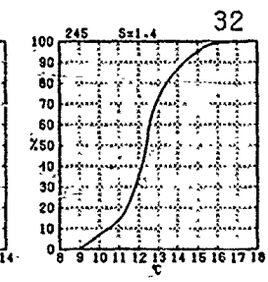


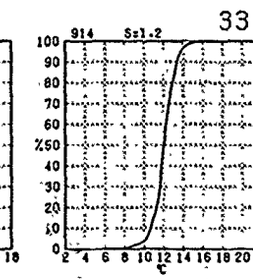


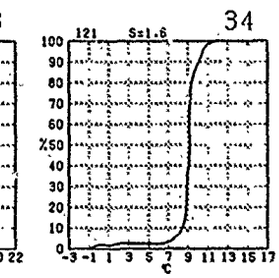












Graphs represent the objective compilation of available data for specified areas without regard to su
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bio

TURE

APRIL

atures equal to or less

35.8°F.)

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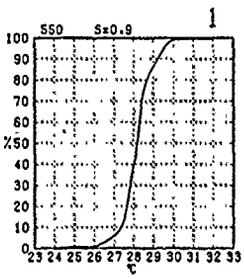

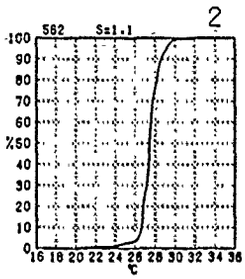

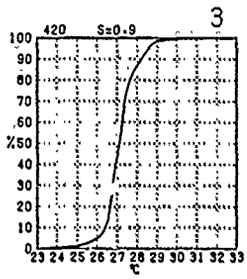

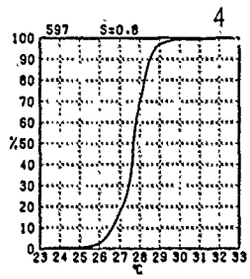

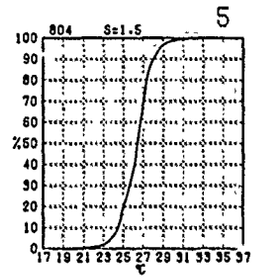

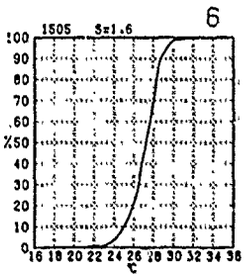

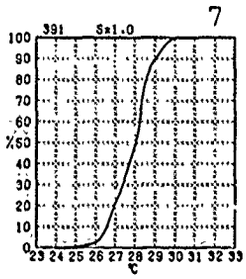

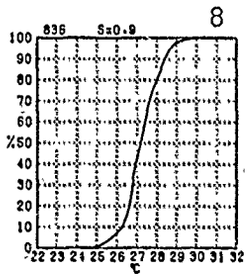

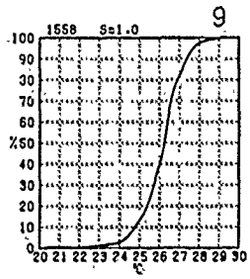

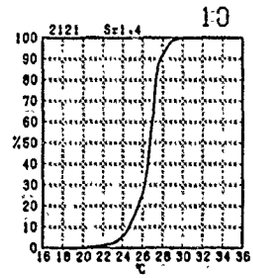

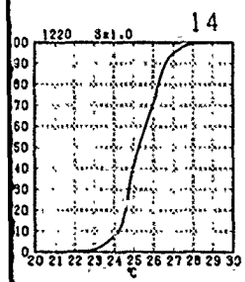

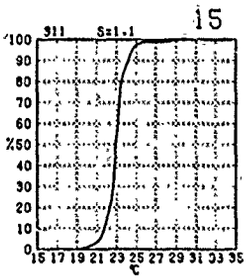

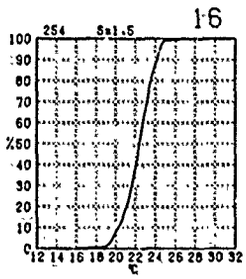

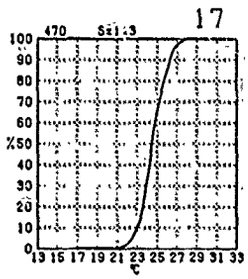

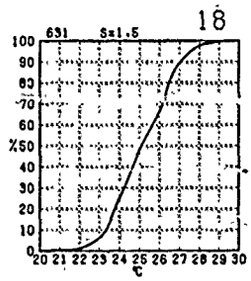

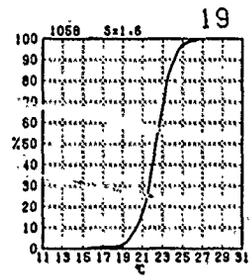

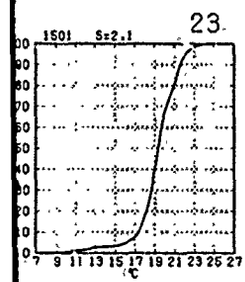

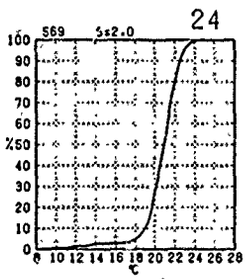

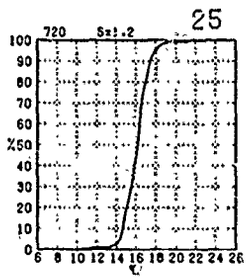

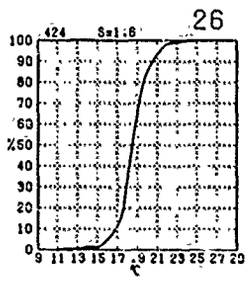

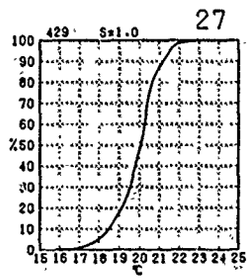

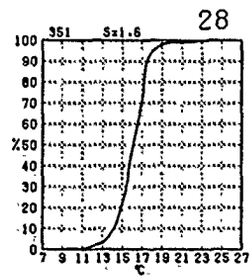

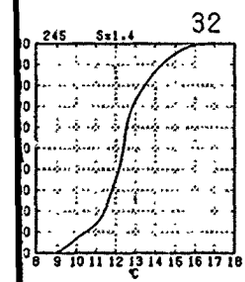

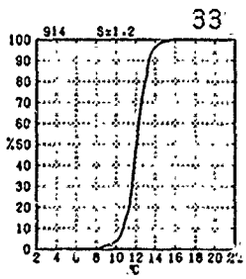

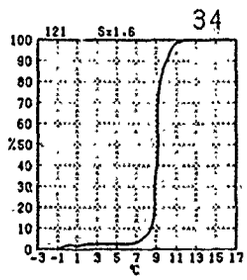

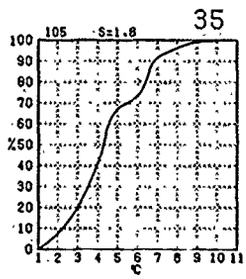

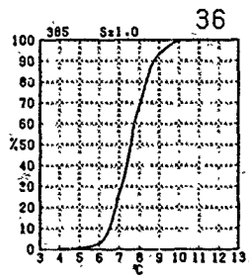

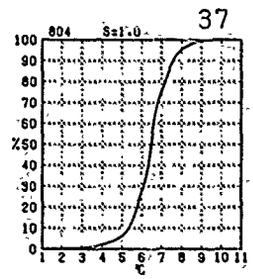

bjective compilation of available data for specified areas without regard to suspected biases.
pposite page) are based on all available data subjectively adjusted where bias was evident.

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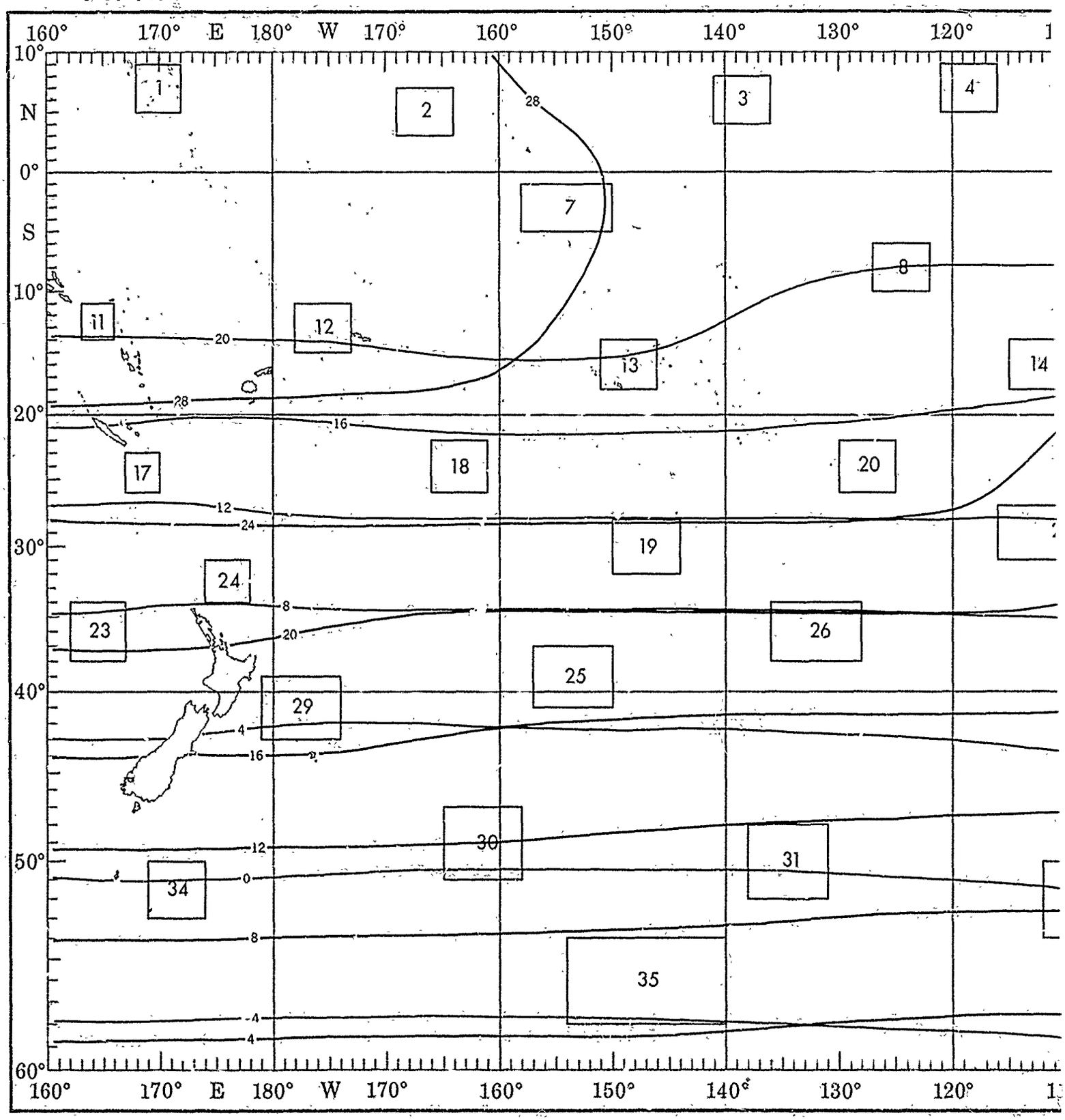
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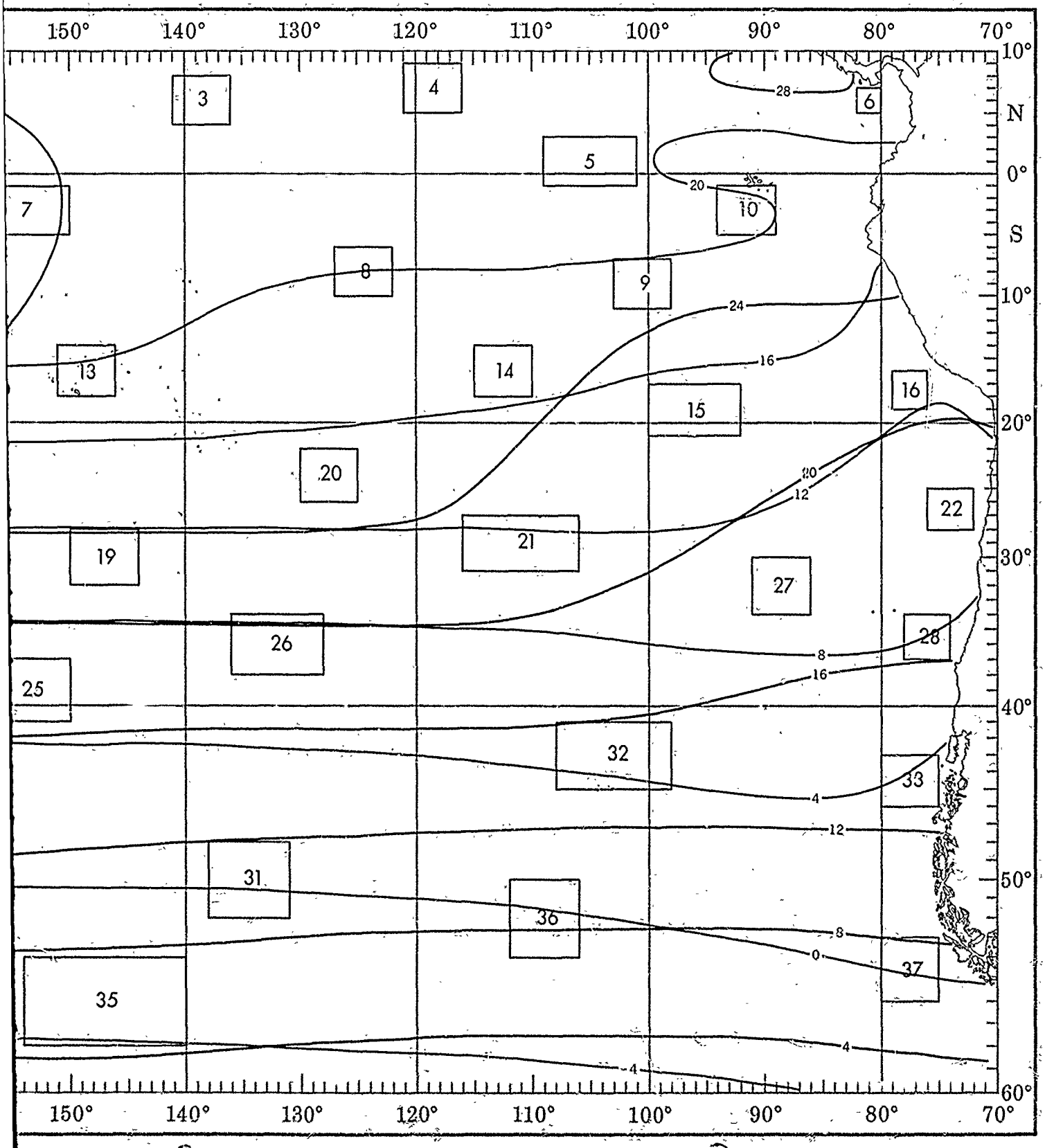
HUMIDITY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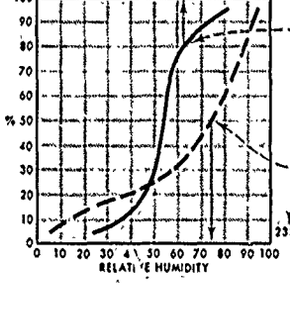
WET BULB AND RELATIVE HUMIDITY



Wet bulb - Relative humidity.

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 ≤12.5°C or 54.5°F.)

Cumulative percent frequency of relative humidities equal to or less than the humidity intersected by the curve (bottom scale).

Relative humidity (%).

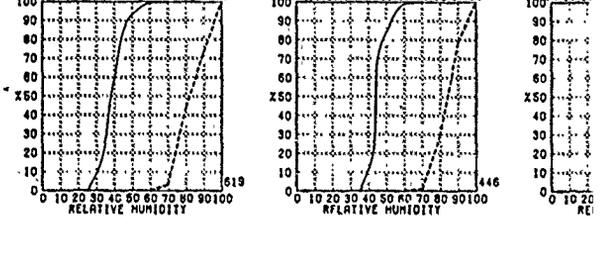
(50% of all observed relative humidities were ≤74%.)

Number of observations.

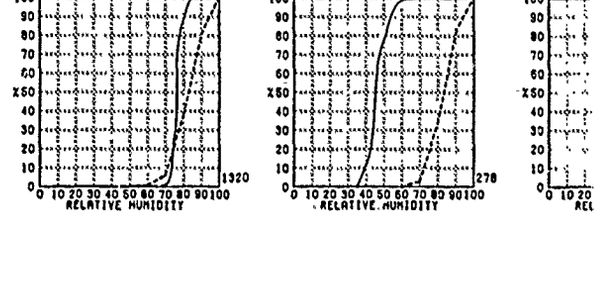
BLUE LINE - Minimum (1%) dew-point temperature (°C) (1% of the computed values were equal to or less than the given value)

RED LINE - Maximum (99%) dew-point temperature (°C) (1% of the computed values were greater than the given value)

1 2



6 7



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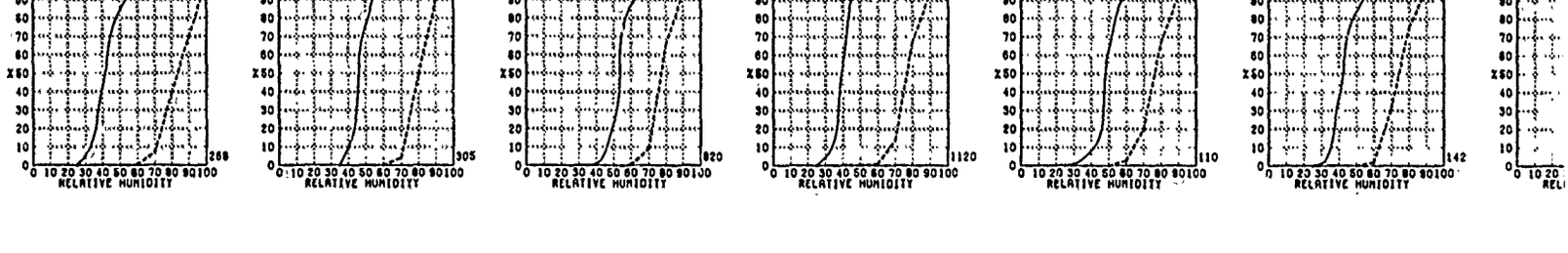

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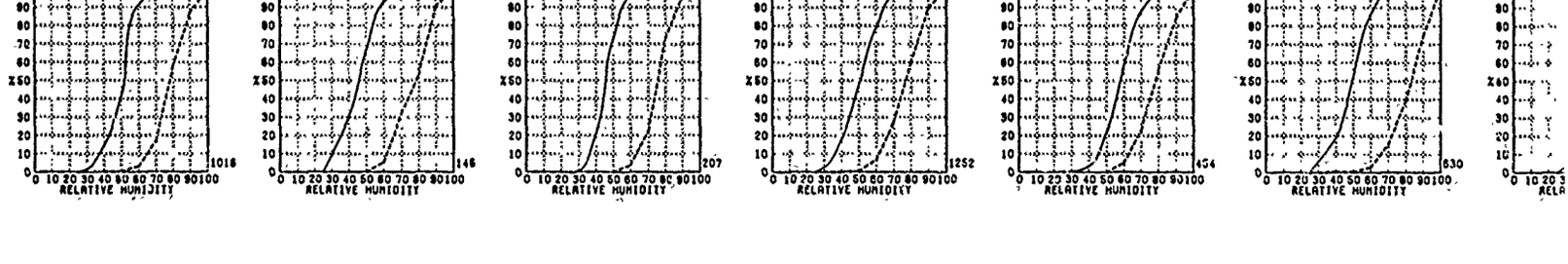

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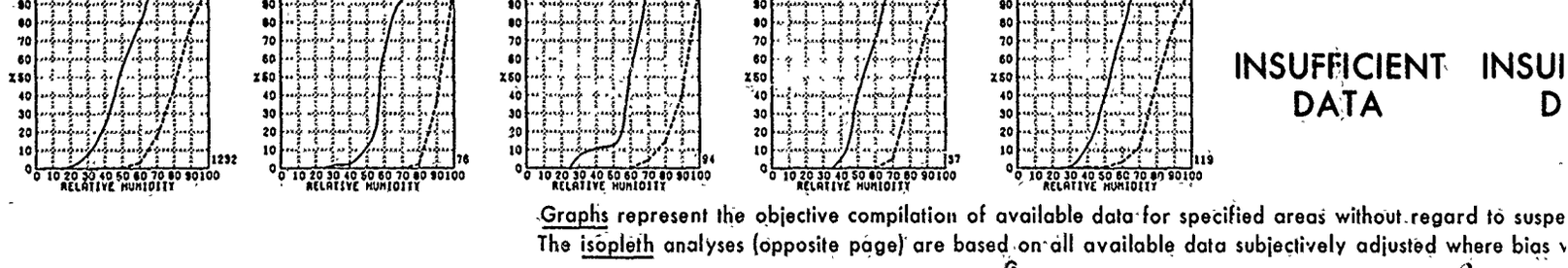

INSUFFICIENT DATA

INSUI D

Graphs represent the objective compilation of available data for specified areas without regard to suspe
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bias

IVE HUMIDITY

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equal to or less than the

54.5°F.)

l to or less than the humidity

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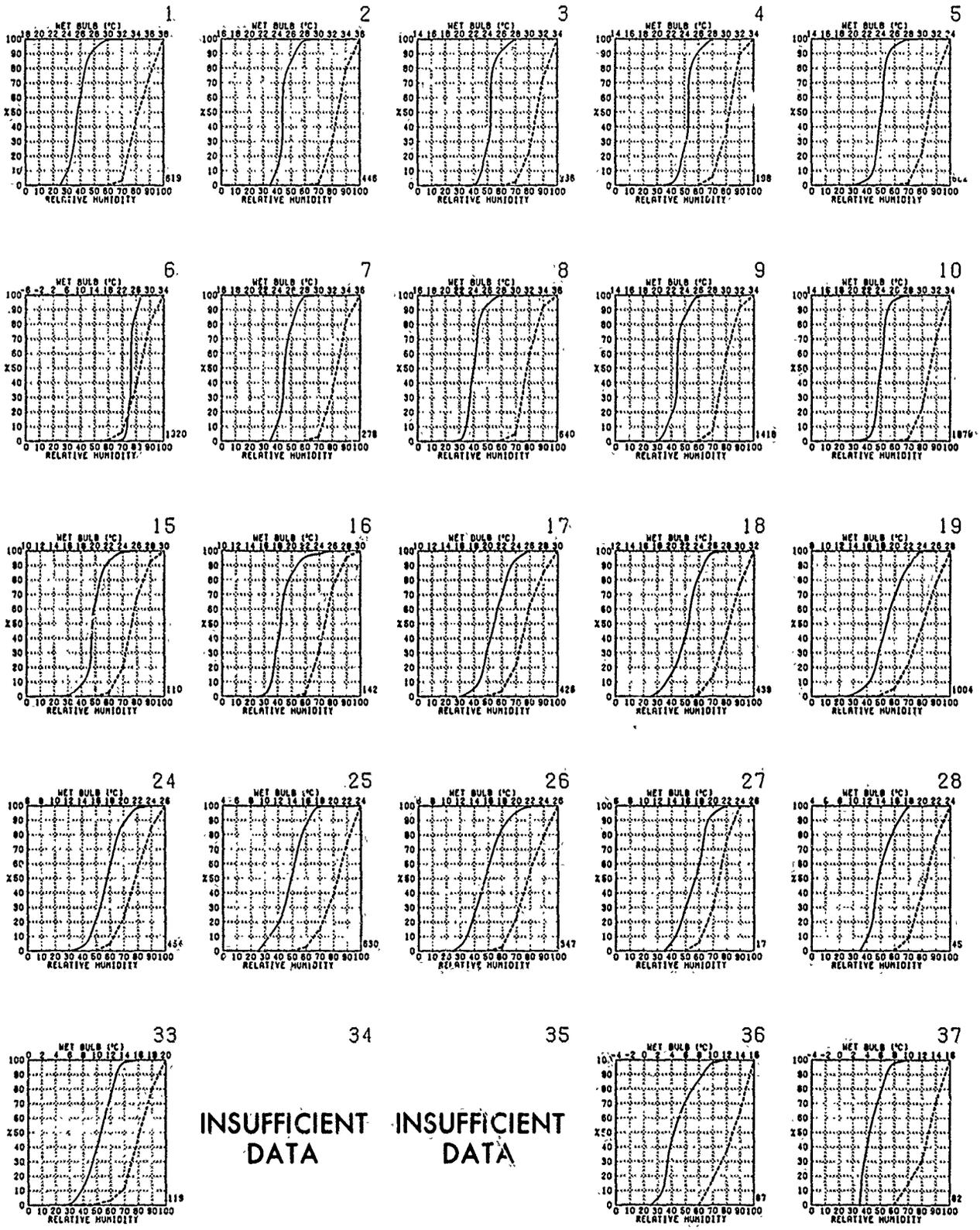
ater than the given value)



the objective compilation of available data for specified areas without regard to suspected biases.
ses (opposite page) are based on all available data subjectively adjusted where bias was evident.

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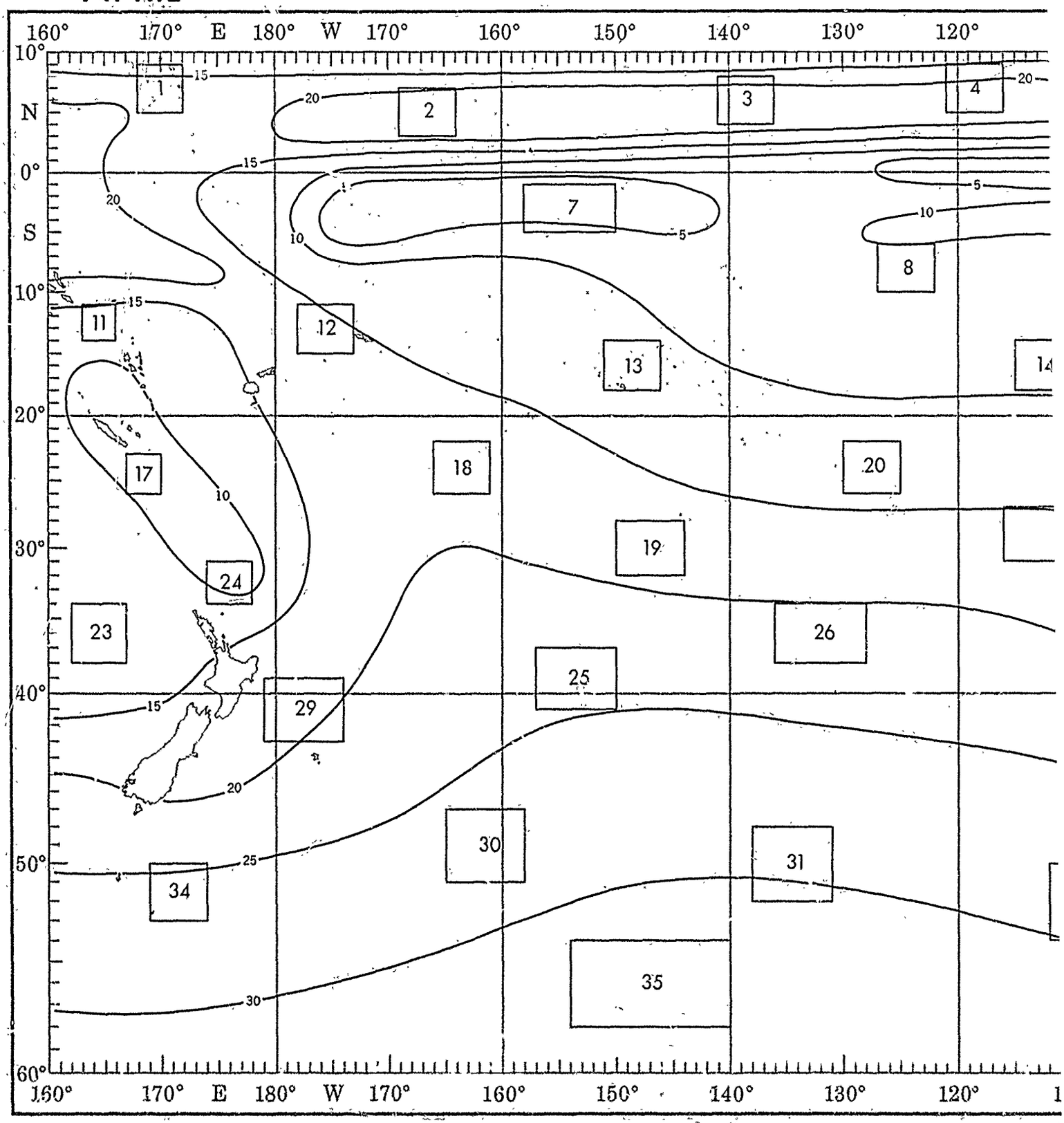
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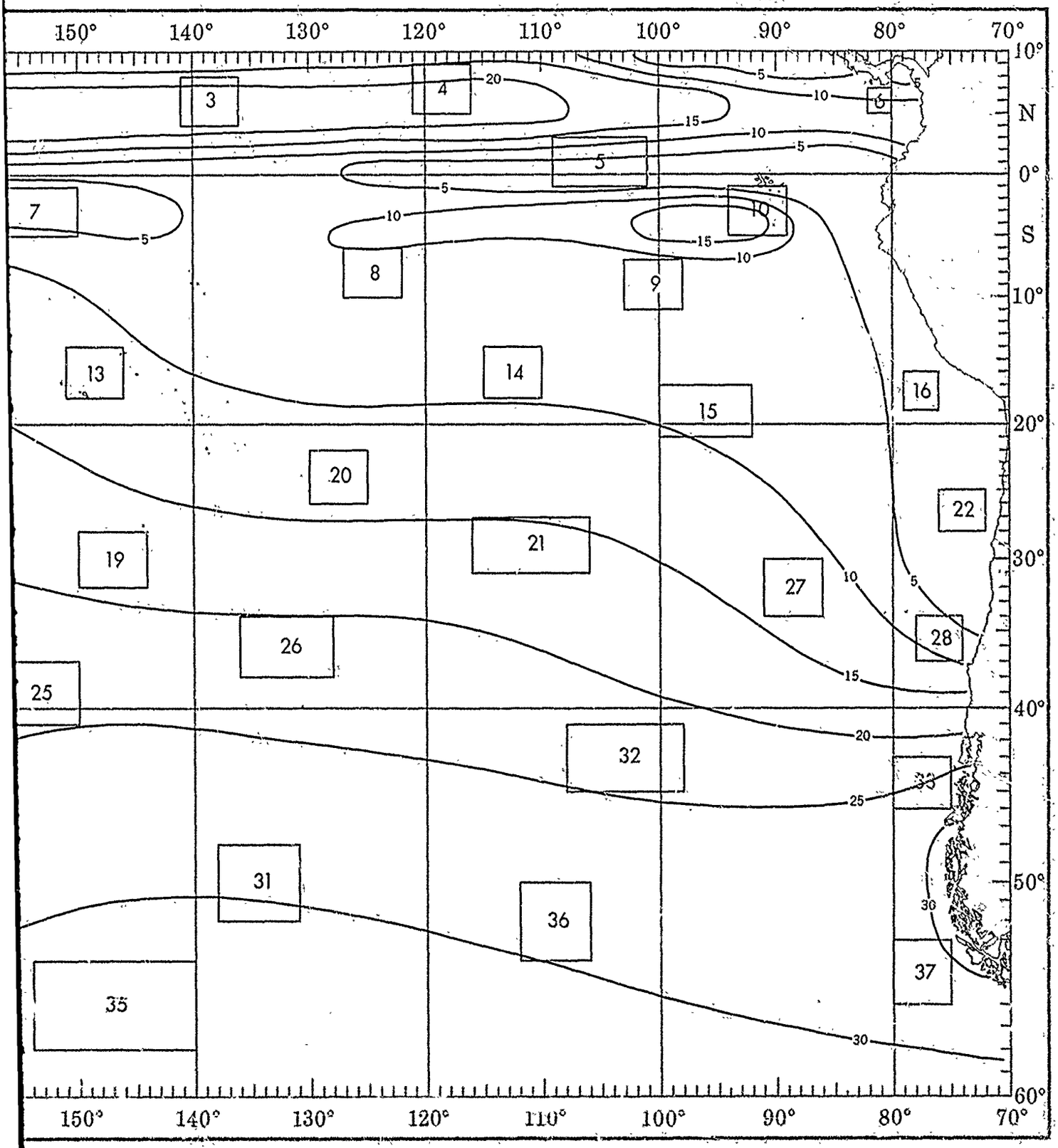
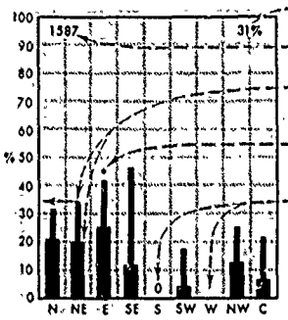
PRECIPITATION



PRECIPITATION

% Pcpn. { % Liquid / % Snow }

Percent frequency of surface wind observations from each direction and calm that were accompanied by precipitation, subdivided into liquid type (including freezing rain and freezing drizzle) and snow.



—Percentage of present weather observations reporting precipitation.

—Number of observations.

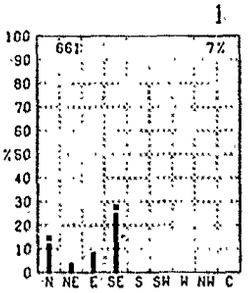
—(34% of all NE winds were accompanied by precipitation, of which 14% was liquid and 20% was snow.)

—An asterisk in the column for a given direction or calm indicates that the percentage was based on 10-30 observations of present weather and wind direction.

—0 replaces bar when no precipitation was observed with winds from a given direction or calm. No bar graph is presented if less than 10 observations containing present weather were reported for a given direction or calm.

RED LINE - Percent frequency of observations reporting precipitation

1



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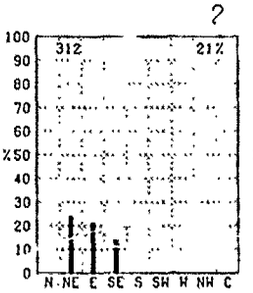

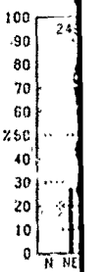

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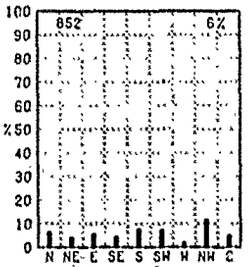

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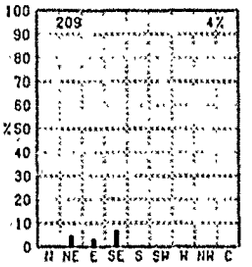

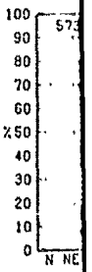

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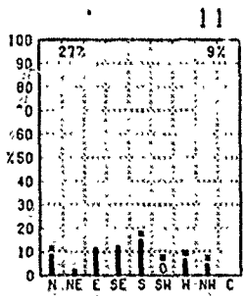

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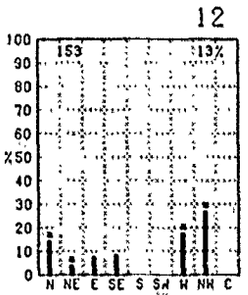

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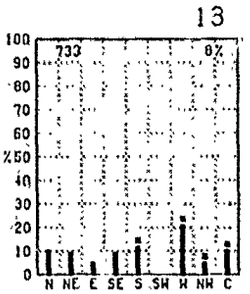

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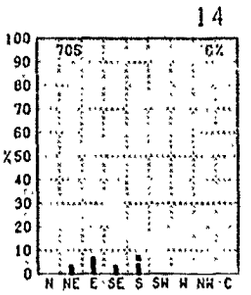

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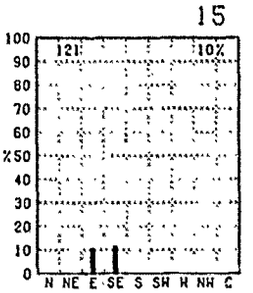

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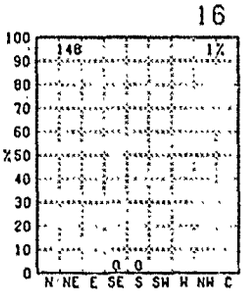

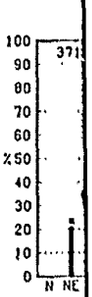

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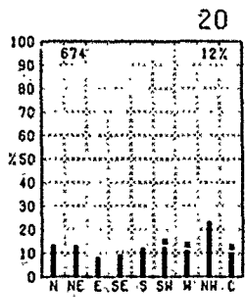

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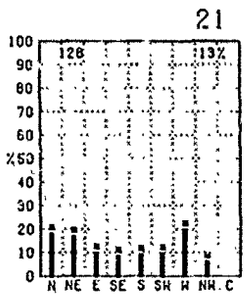

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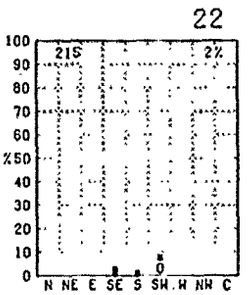

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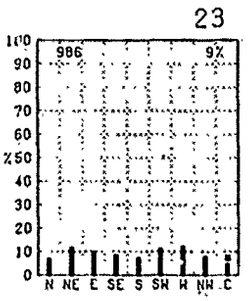

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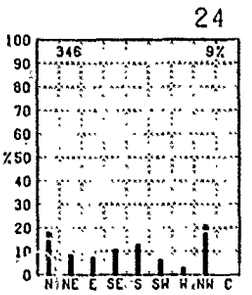

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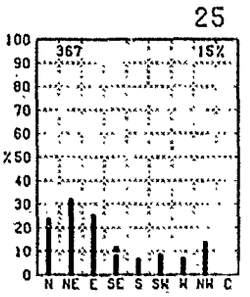

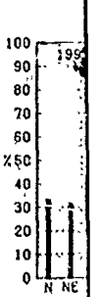

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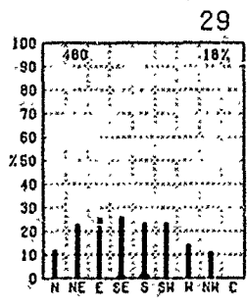

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INSUFFICIENT DATA

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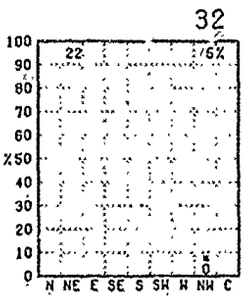

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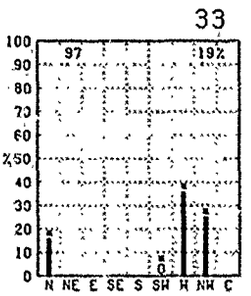

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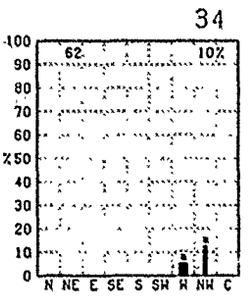

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Graphs represent the objective compilation of available data for specified areas without regard to suspe
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bias w

APRIL

n and calm that were
freezing rain and freezing

recipitation.

f wh ch 14% was liquid and

indicates that the percentage
d wind direction

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n 10 observations containing
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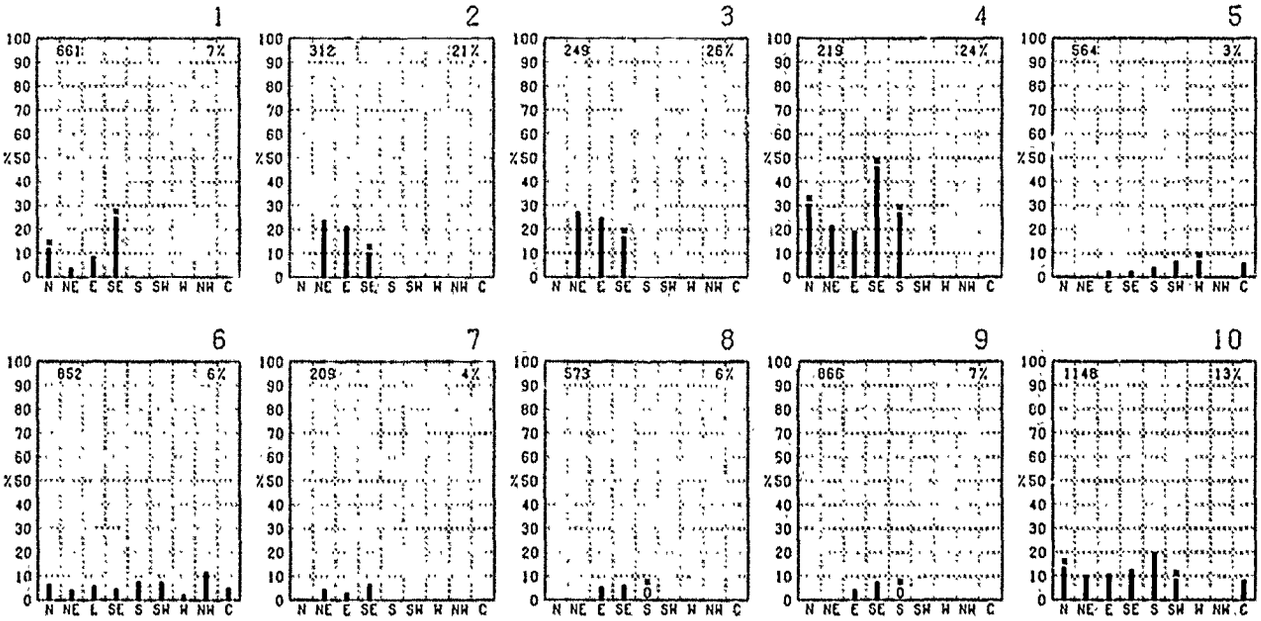

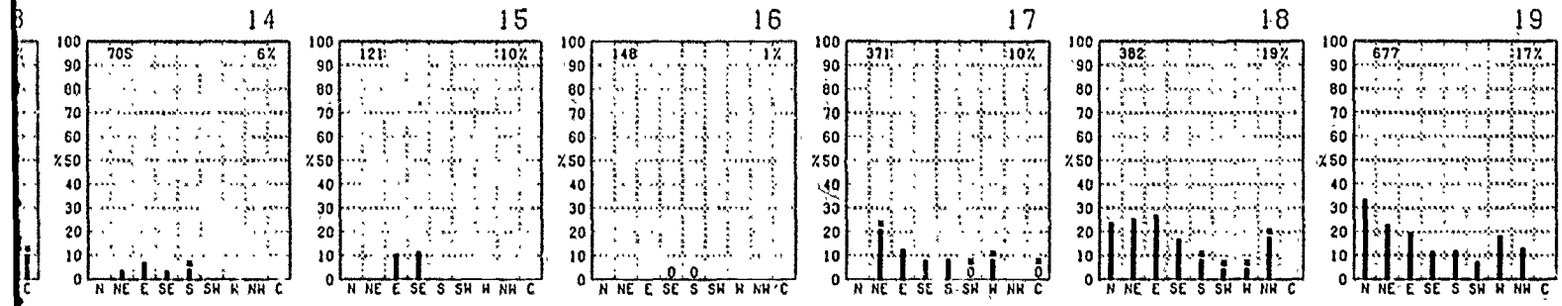

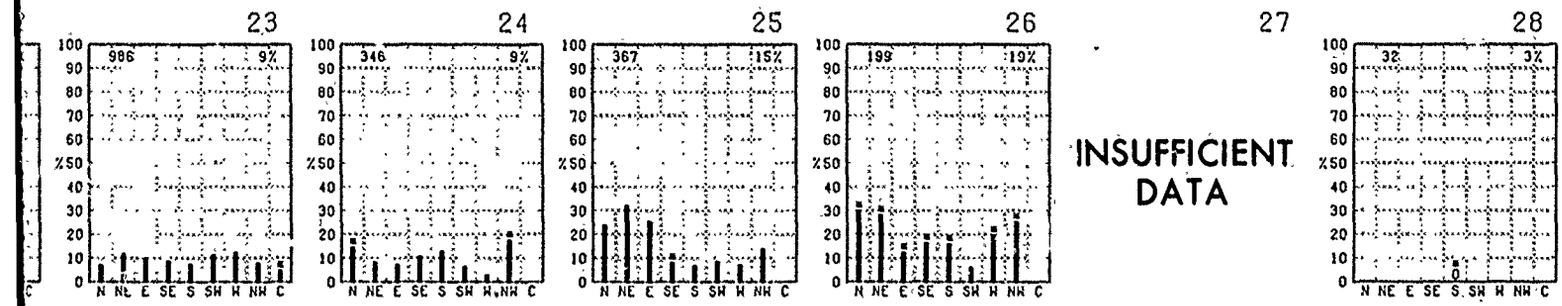

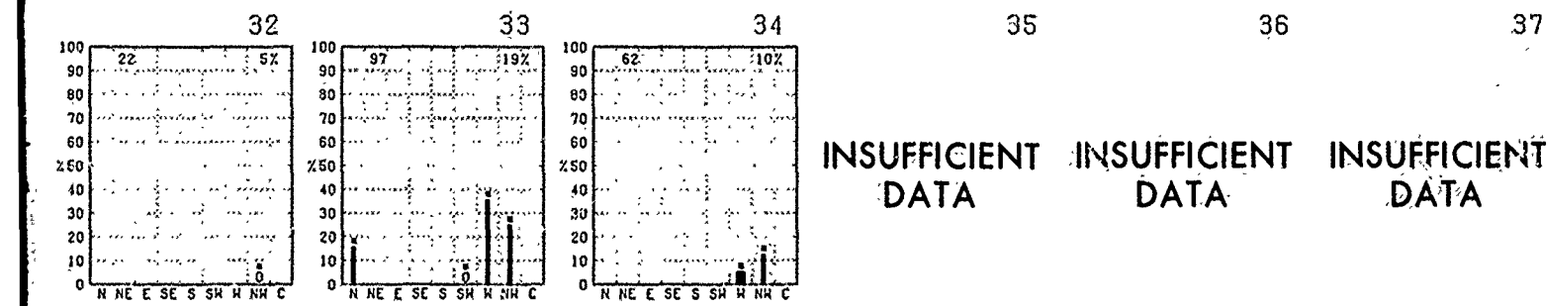

he objective compilation of available data for specified areas without regard to suspected biases.
es (opposite page) are based on all available data subjectively adjusted where bias was evident.

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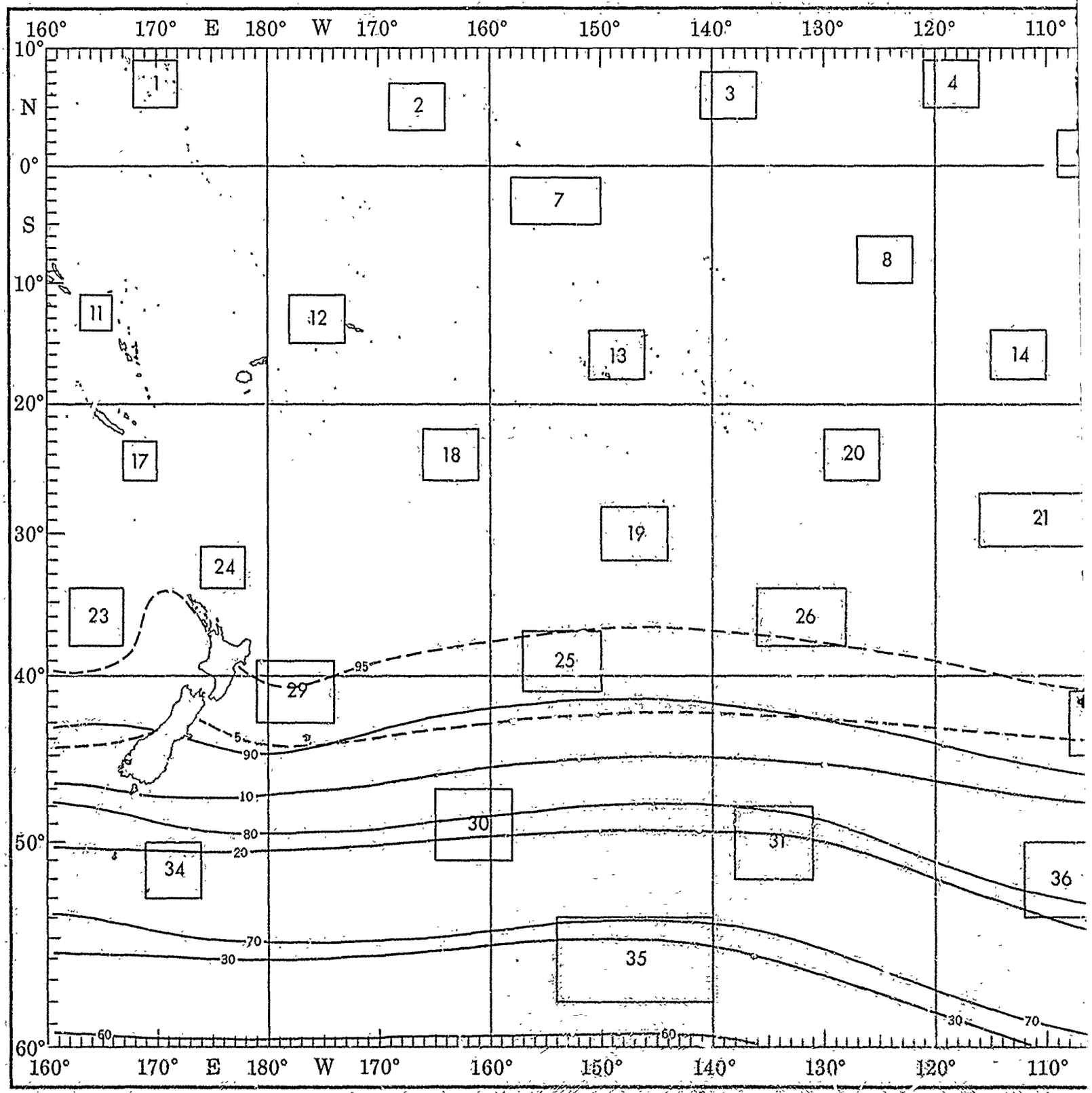
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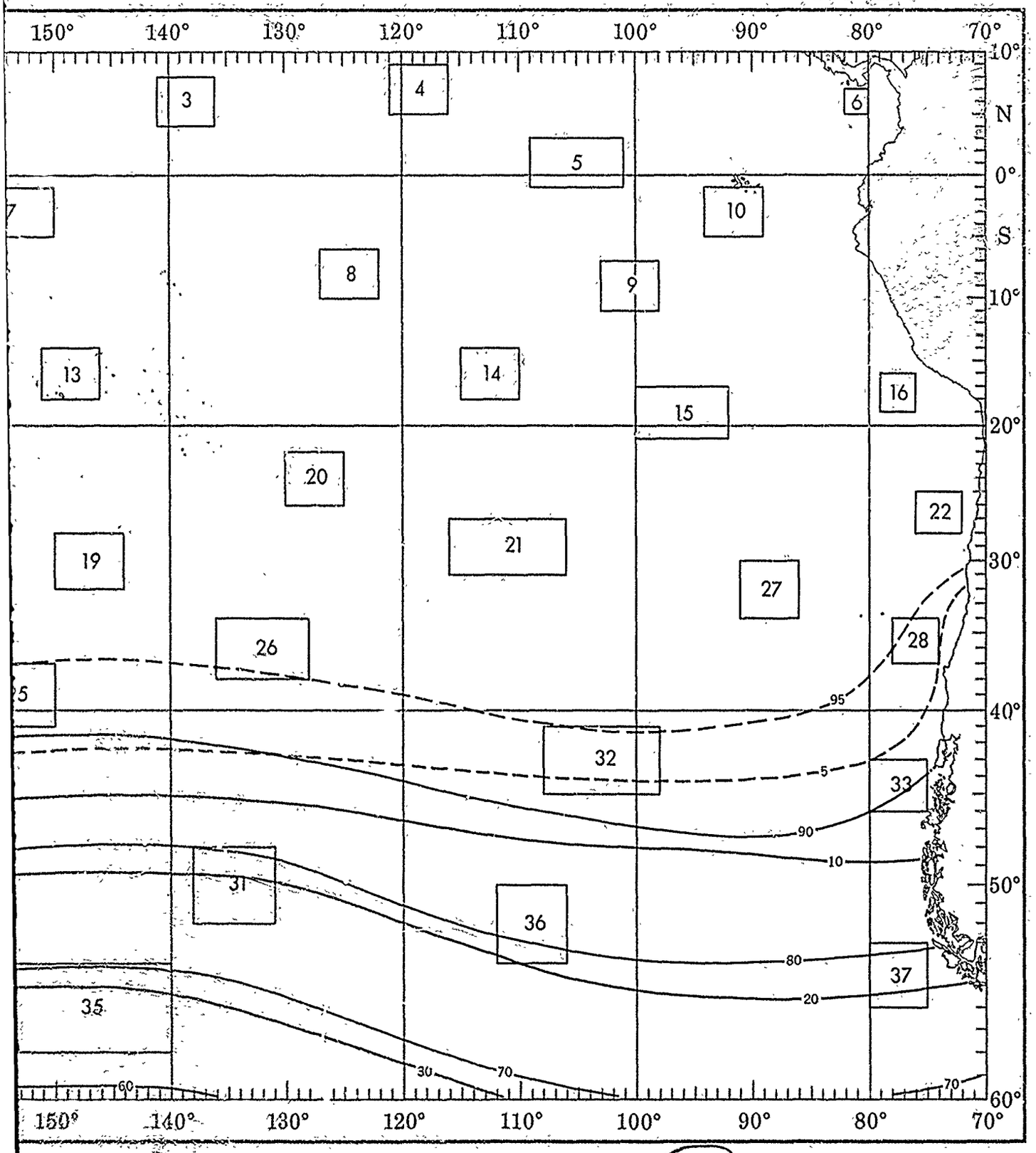
VISIBILITY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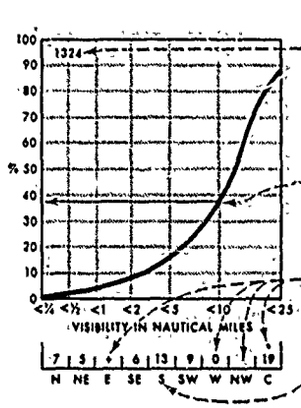
VISIBILITY



Visibility.

Number of observations.

Cumulative percent frequency of visibilities less than the visibility intersected by the curve

(37% of all visibilities reported were <10 nautical miles.)

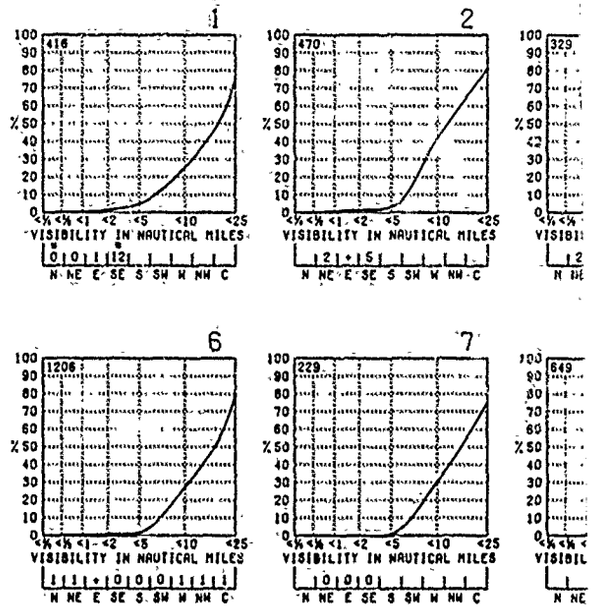
The table below the graph indicates percent frequency of occurrence of visibility <2 nautical miles versus wind direction.

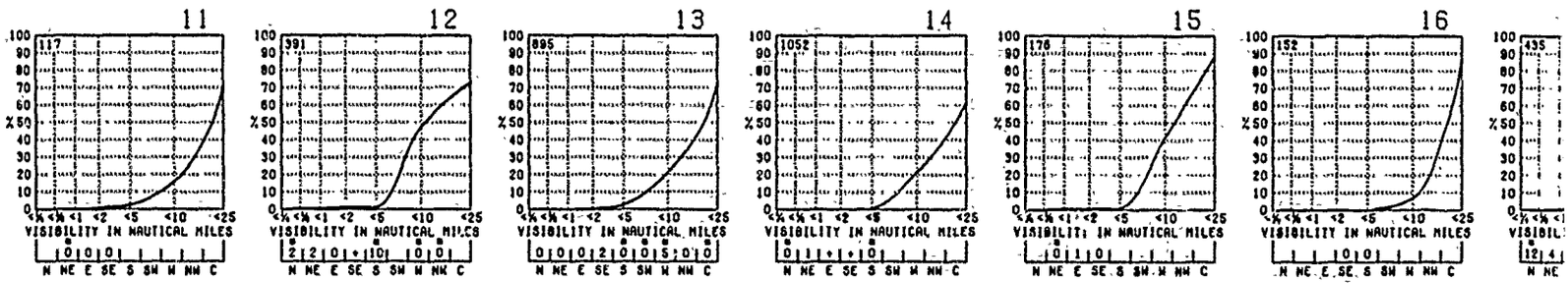
+ indicates < 5% but >0. 0 indicates that no visibilities <2 nautical miles were observed with winds from a direction or calm. No percentage is given if less than 10 observations were available for visibility and wind direction. An asterisk indicates that the percentage was based on 10-30 observations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

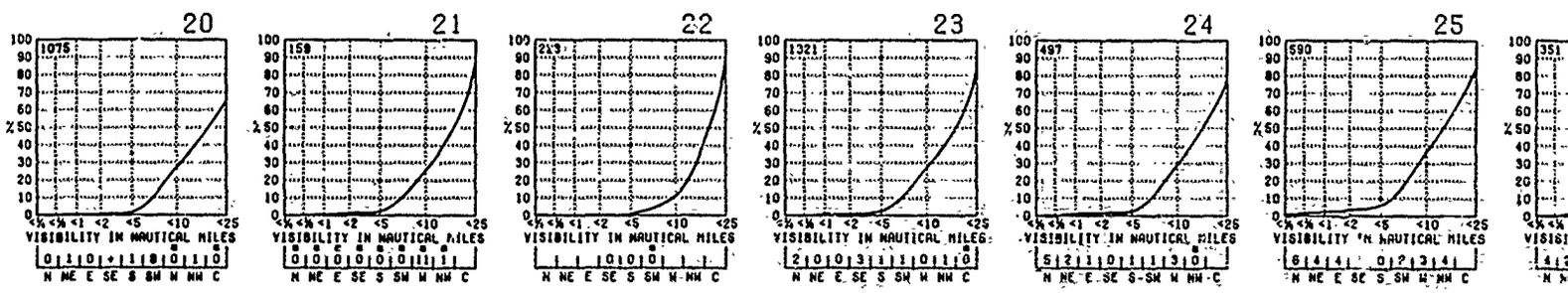
(13% of all S winds were accompanied by visibilities <2 nautical miles.)

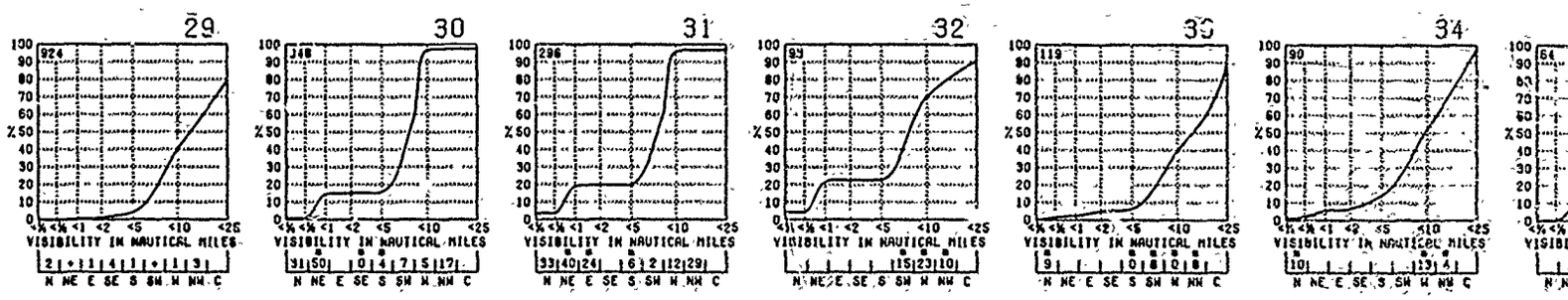
BLUE LINE - Percent frequency of visibilities ≥5 nautical miles

RED LINE - Percent frequency of visibilities <2 nautical miles









Graphs represent the objective compilation of available data for specified areas without regard to suspe
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bias

APRIL

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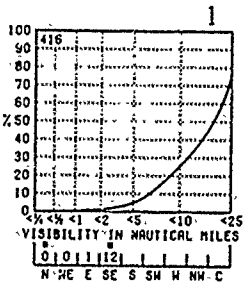
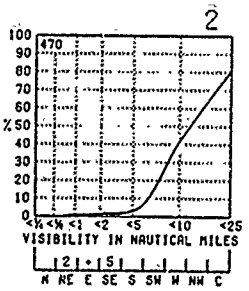
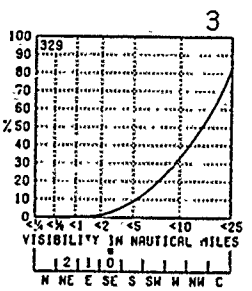
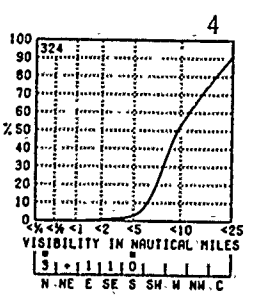
2 nautical miles were
ntage is given if less than 10.
ion. An asterisk indicates
visibility and wind direction.

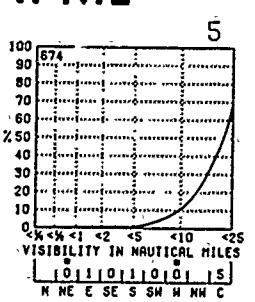
cal miles.)

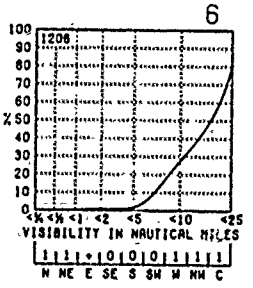


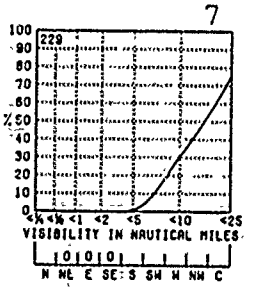


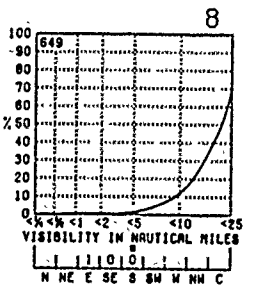


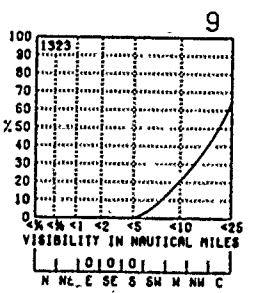


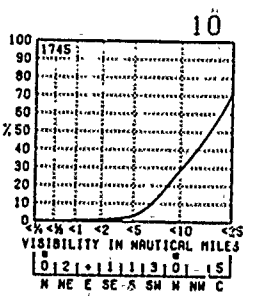


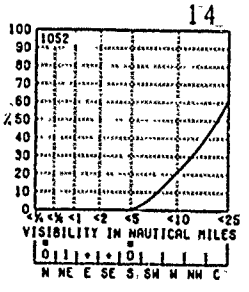


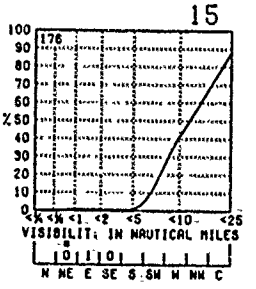


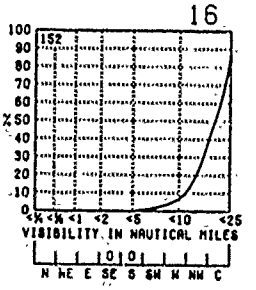


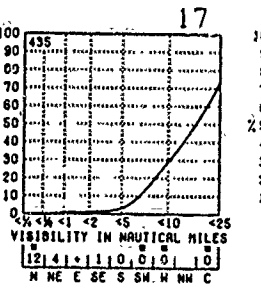


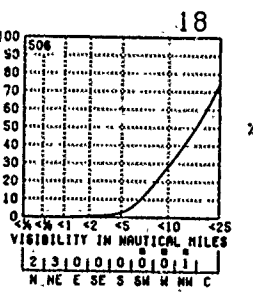


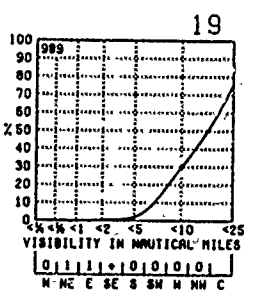


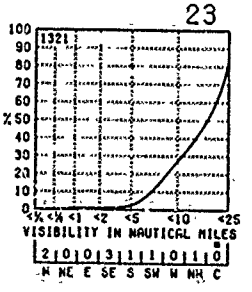


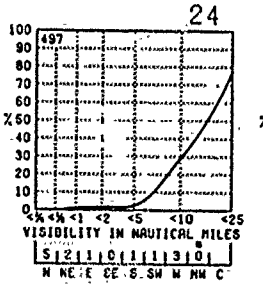


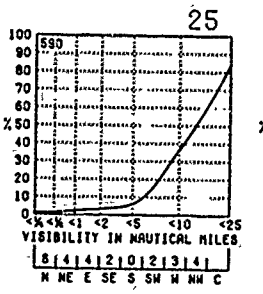


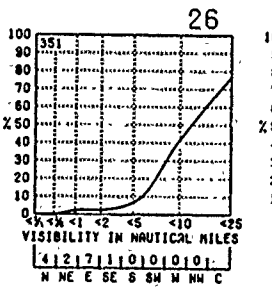


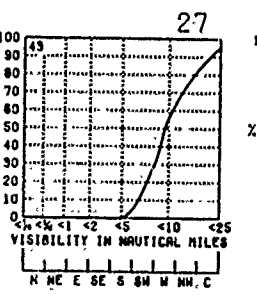


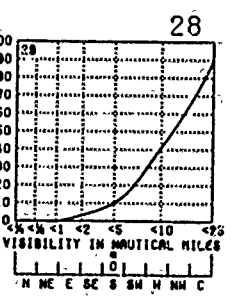


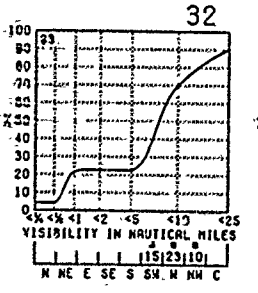


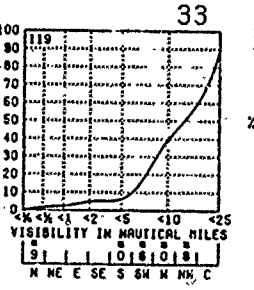


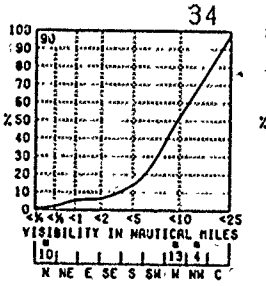


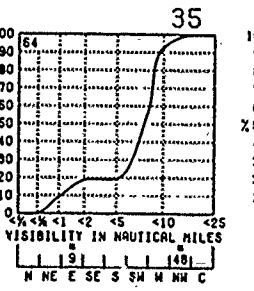


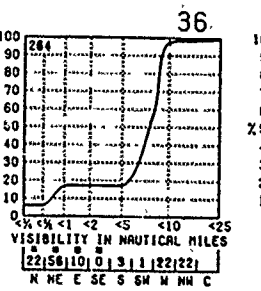


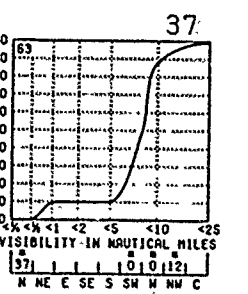












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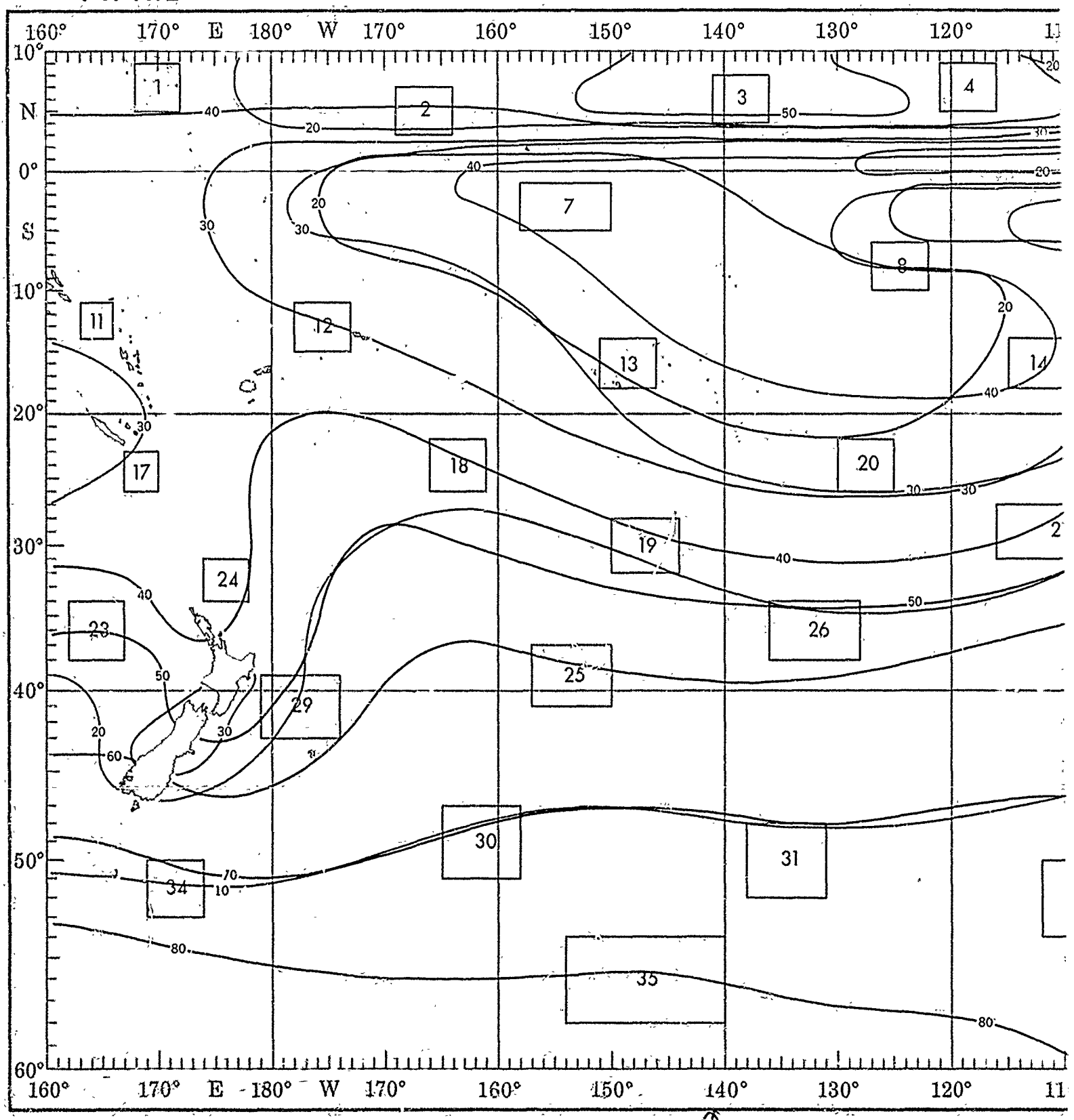
APRIL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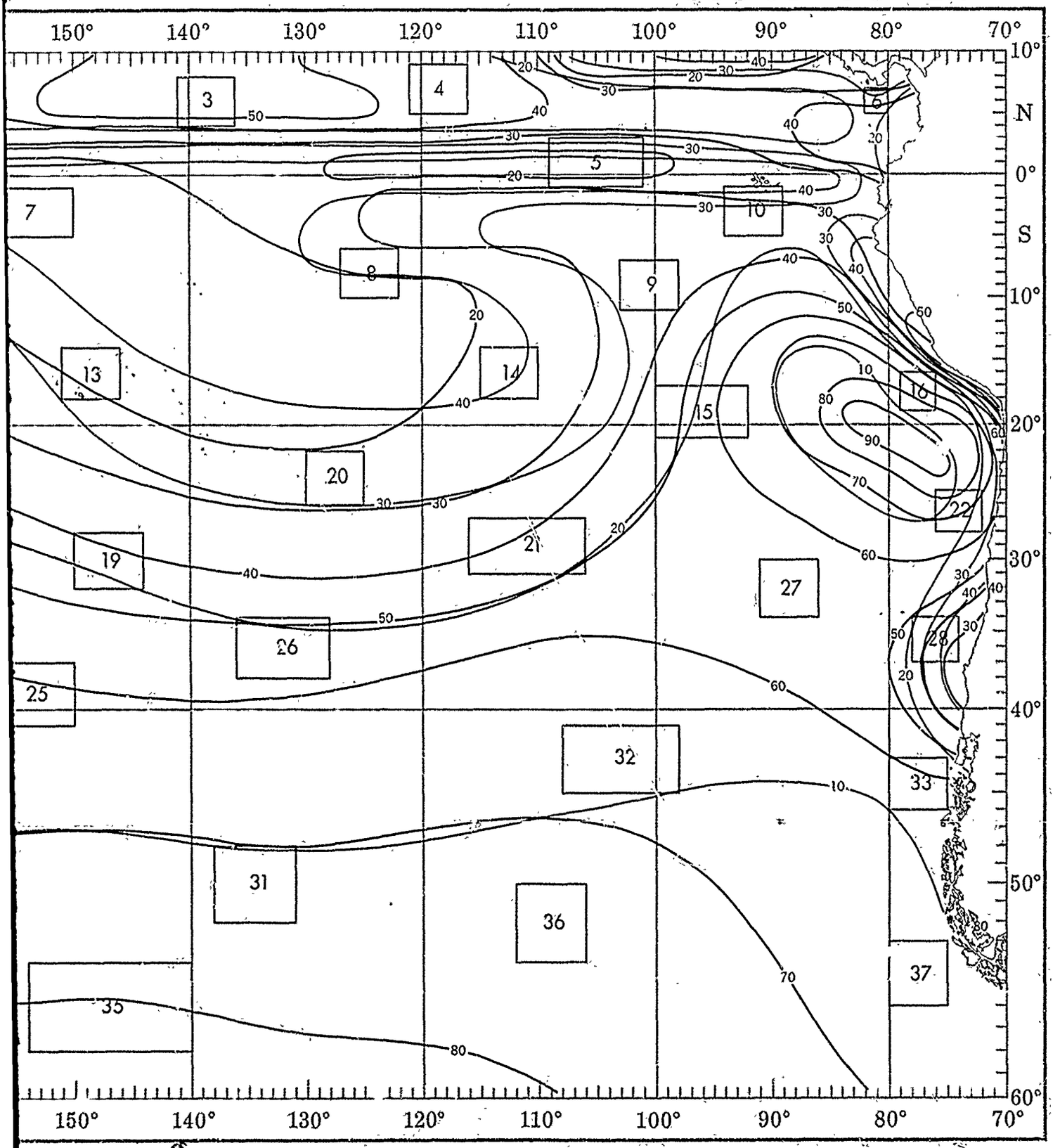
CLOUD COVER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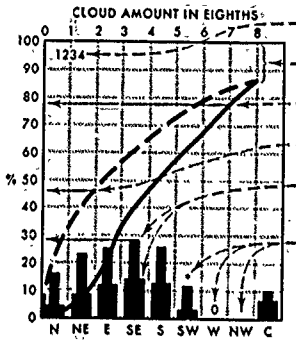
CLOUD COVER

Total Cloud Amount
Low Cloud Amount
Cumulative percent frequency of indicated cloud amount equal to or less than the amount intersected by the curve.



Number of observations containing total cloud amount.

Obscurations.

(77% of all total cloud amounts were ≤7/8.)

(46% of all low cloud amounts were ≤2/8.)

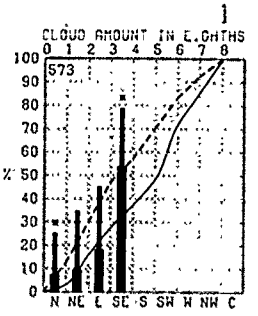
(28% of all SE winds were accompanied by low cloud amounts ≥5/8 and 14% by low cloud amounts ≥7/8.)

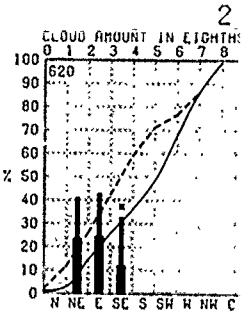
An asterisk indicates that the percentage is based on 10 30 observations of wind direction, total and low cloud amount. 0 replaces bar graph when no low cloud amounts ≥5/8 were observed with a wind direction or calm. 0 or bar is omitted when number of observations of total and low cloud amount from a wind direction or calm is less than 10.

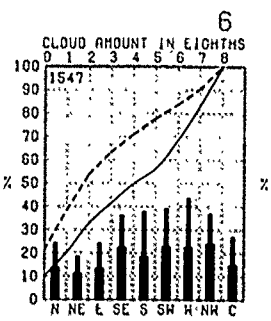
Low cloud amount: Percent frequency of observations from each direction and calm that were accompanied by low cloud amounts ≥5/8 and ≥7/8.
Low clouds are clouds with bases <8000 feet.

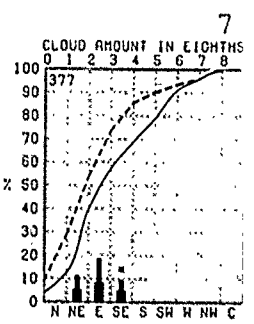
BLUE LINE - Percent frequency of total cloud amount ≤2/8

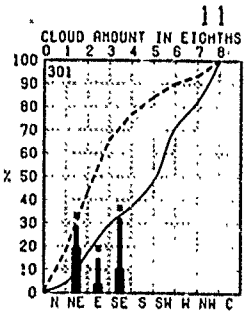
RED LINE - Percent frequency of low cloud amount ≥5/8

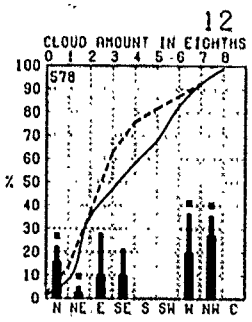


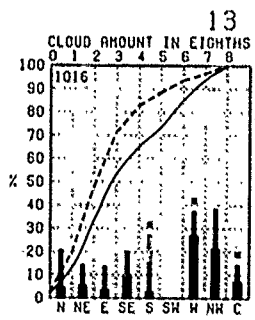


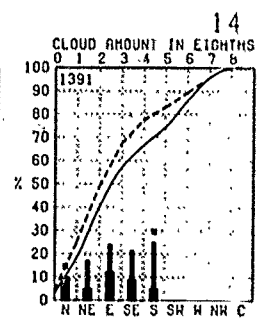


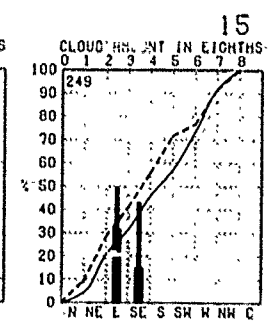


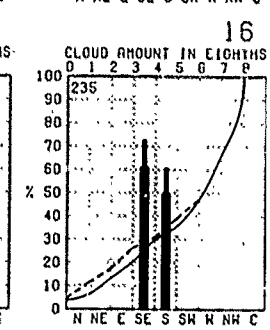


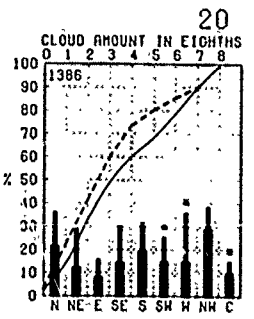


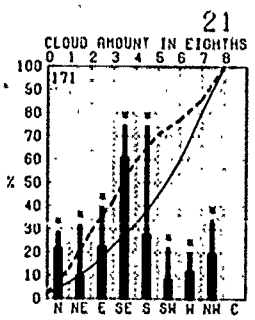


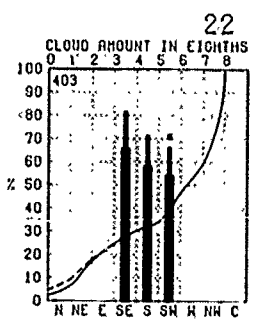


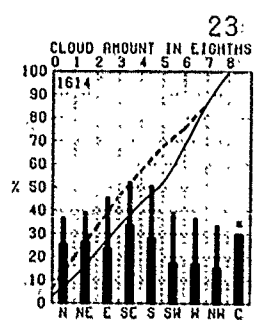


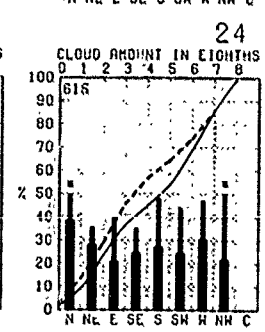


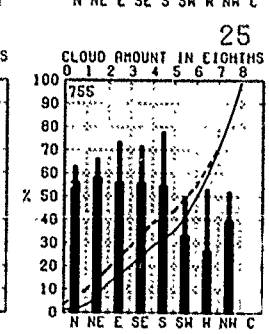


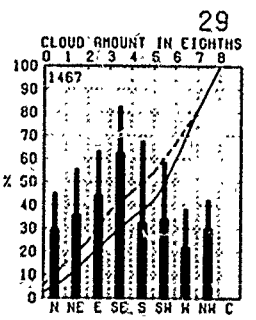


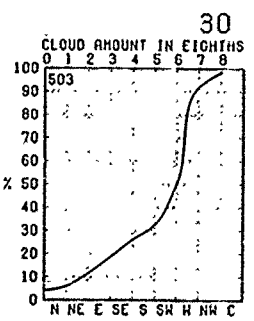


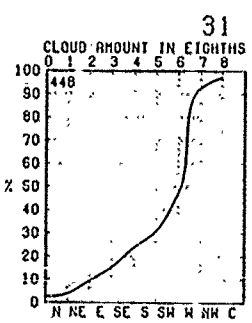


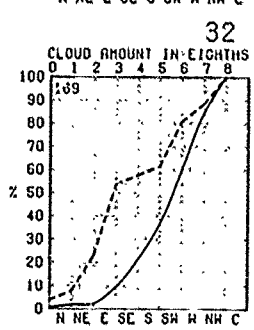


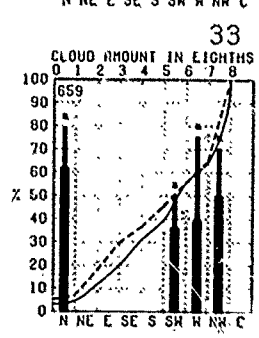


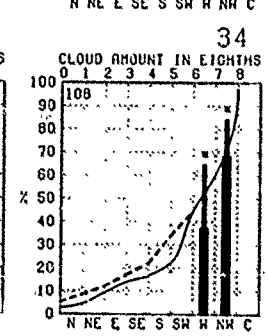












Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analysis (opposite page) are based on all available data subjectively adjusted whe

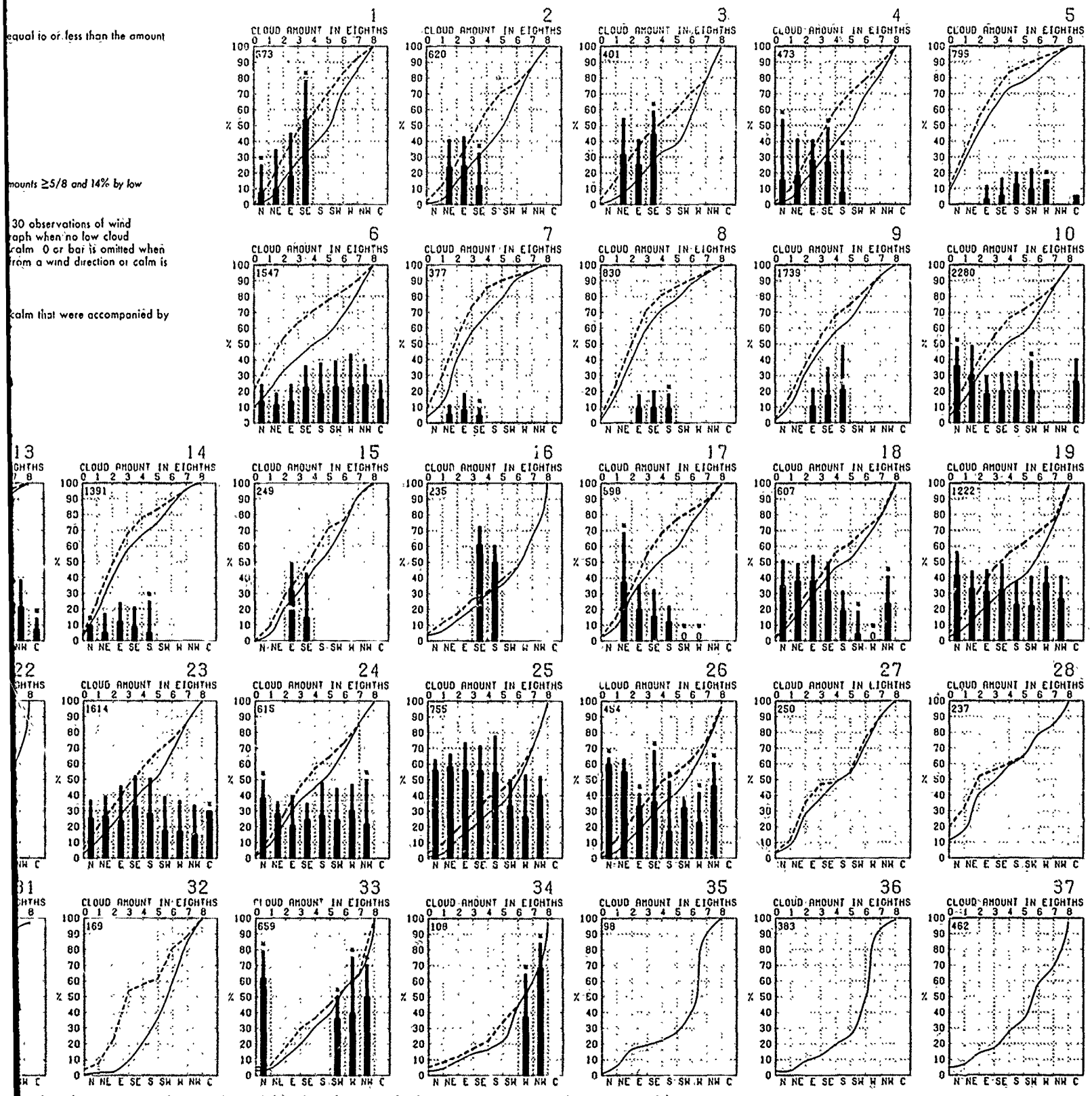
APRIL

equal to or less than the amount

mounts ≥5/8 and 14% by low

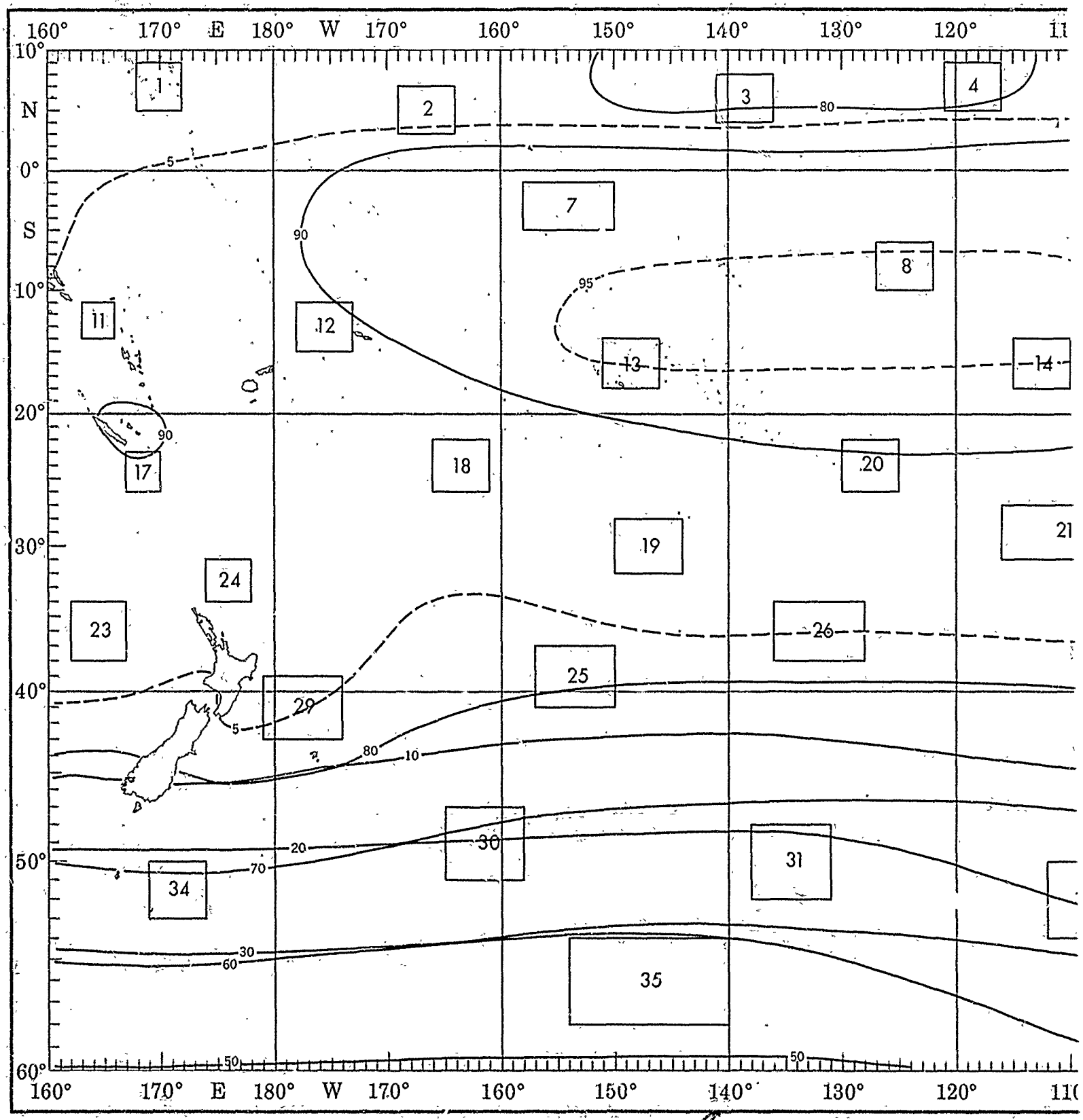
30 observations of wind
raph when no low cloud
calm 0 or bar is omitted when
from a wind direction or calm is

calm that were accompanied by



the objective compilation of available data for specified areas without regard to suspected biases.
lyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

APRIL


160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N
0°
S 10°
20°
30°
40°
50°
60°
1
2
3
4
5
7
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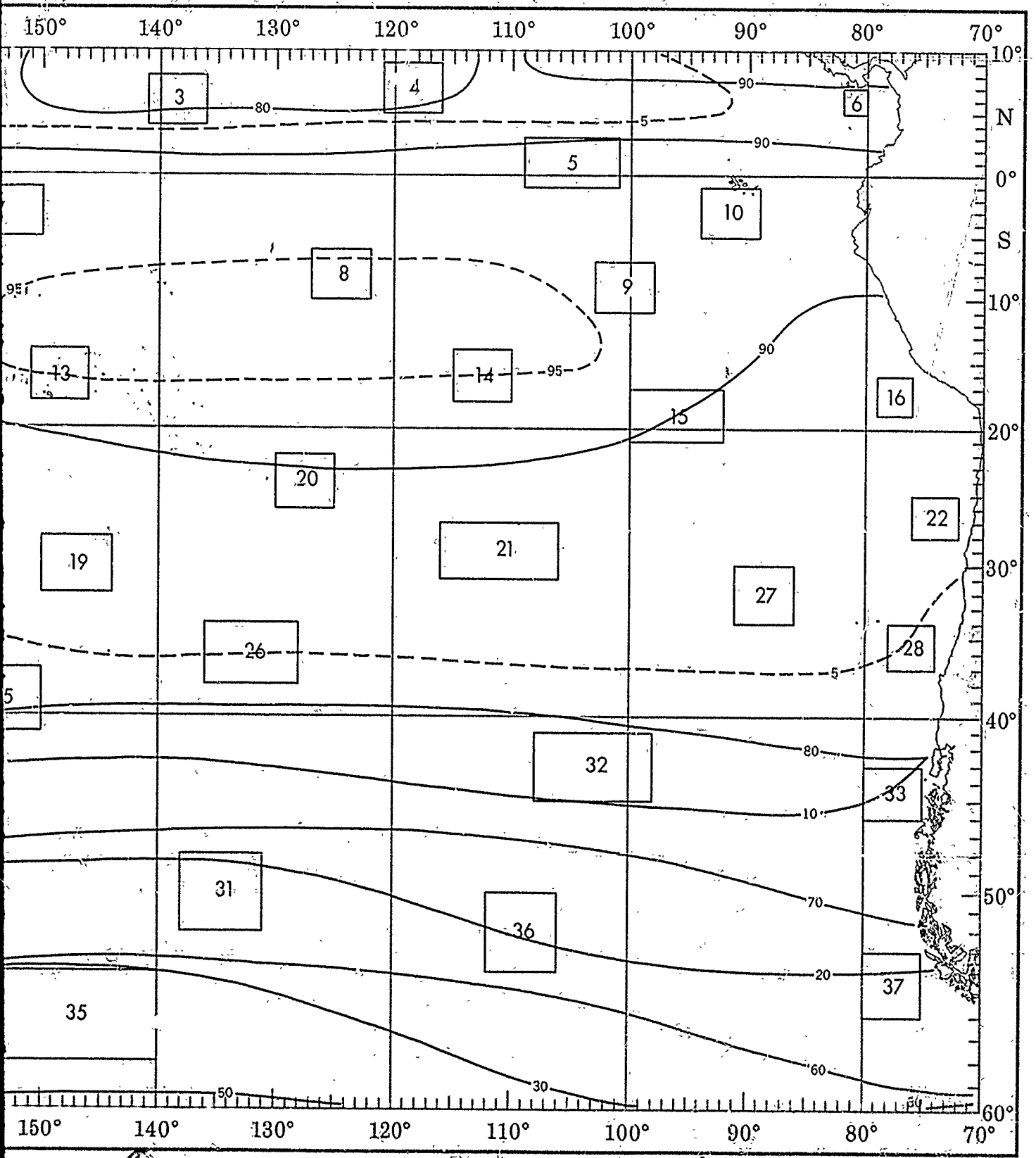
CEILING AND VISIBILITY



CEILING AND VISIBILITY

Low cloud ceiling - Visibility.

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

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".

"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8.

VISIBILITY / LOW CLOUD CEILING

	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	3	13	64
50<80	0	0	0	0	+	1
35<50	0	+	0	0	0	4
20<35	0	+	1	1	2	2
10<20	0	+	1	1	2	1
6<10	0	1	0	+	+	0
3<6	+	+	0	+	+	0
1.5<3	+	0	0	0	0	0
0<1.5	+	0	0	0	0	0

334

(2% of all observations reported ceiling ≥1000 but <2000 feet simultaneously with visibility ≥5 but <10 nautical miles.)

+ indicates < 5% but >0.

Number of observations.

BLUE LINE - Percent frequency of low cloud ceiling ≥1000 feet (or no low cloud ceiling) and visibility ≥5 nautical miles

RED LINE - Percent frequency of low cloud ceiling <600 feet and/or visibility <2 nautical miles

1

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	9	48
50<80	0	0	0	0	1	1
35<50	0	0	0	0	0	1
20<35	0	0	1	2	1	4
10<20	0	0	0	1	6	5
6<10	0	0	0	1	4	8
3<6	0	0	0	1	1	5
1.5<3	0	0	0	0	1	0
0<1.5	0	0	1	0	0	0

191

2

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	4	56
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	1
20<35	0	0	+	+	+	6
10<20	0	0	0	+	4	15
6<10	0	0	+	+	1	7
3<6	0	+	0	0	0	1
1.5<3	0	0	0	0	+	0
0<1.5	0	+	0	0	0	0

234

6

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	+	0	+	8	64
50<80	0	0	0	0	+	1
35<50	0	0	0	0	1	2
20<35	0	0	0	0	1	3
10<20	+	0	0	0	2	8
6<10	0	0	0	+	1	5
3<6	0	0	0	+	1	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

892

7

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	4	82
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	0
20<35	0	0	0	0	1	1
10<20	0	0	0	0	0	4
6<10	0	0	0	1	3	3
3<6	0	0	0	0	0	1
1.5<3	0	0	0	0	0	1
0<1.5	0	0	0	0	0	0

142

11

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	0	79
50<80	0	0	0	0	0	0
35<50	0	0	0	1	0	0
20<35	0	0	0	0	1	1
10<20	0	0	0	0	2	4
6<10	0	0	0	0	4	7
3<6	0	0	0	0	1	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

85

12

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	1	0	5	71
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	1
20<35	0	0	0	0	0	4
10<20	0	0	0	0	1	6
6<10	0	0	0	0	4	2
3<6	1	0	0	0	4	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

143

13

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	1	8	76
50<80	0	0	0	0	+	+
35<50	0	0	0	+	+	1
20<35	0	0	0	+	1	3
10<20	0	0	0	1	2	3
6<10	0	0	+	+	1	2
3<6	0	0	0	0	0	+
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	+	0

704

14

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	1	77
50<80	0	0	0	0	0	+
35<50	0	0	0	0	0	3
20<35	0	0	0	0	+	3
10<20	0	0	0	+	2	8
6<10	0	0	0	0	1	4
3<6	0	0	0	+	0	+
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	+	0

759

15

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	1	0	1	7	47
50<80	0	0	0	0	0	2
35<50	0	0	0	0	0	4
20<35	0	0	0	0	1	9
10<20	0	0	0	0	7	10
6<10	0	0	0	0	3	8
3<6	0	0	0	0	1	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

114

16

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	2	29
50<80	0	0	0	0	0	3
35<50	0	0	0	0	1	4
20<35	0	0	0	0	4	17
10<20	0	0	0	0	2	26
6<10	0	0	0	0	1	9
3<6	0	0	0	0	0	2
1.5<3	0	0	0	0	0	1
0<1.5	0	0	0	0	0	0

119

20

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	+	2	72
50<80	0	0	0	0	0	+
35<50	0	0	0	0	+	1
20<35	0	0	0	0	1	4
10<20	0	0	0	+	2	11
6<10	0	0	+	+	1	4
3<6	+	0	+	1	1	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

738

21

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	2	58
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	2
20<35	0	0	0	0	1	4
10<20	0	0	0	1	3	14
6<10	0	0	0	1	2	9
3<6	0	0	0	0	0	0
1.5<3	0	1	0	0	1	0
0<1.5	0	0	0	0	0	0

124

22

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	1	28
50<80	0	0	0	0	1	2
35<50	0	0	0	0	0	5
20<35	0	0	0	0	5	21
10<20	0	0	0	1	1	21
6<10	0	0	0	0	2	10
3<6	0	0	0	0	1	1
1.5<3	0	0	0	0	0	1
0<1.5	0	0	0	1	2	0

191

23

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	2	55
50<80	0	0	0	0	+	+
35<50	0	0	0	0	0	2
20<35	0	0	0	+	1	6
10<20	0	0	0	+	5	17
6<10	0	0	0	1	2	6
3<6	0	0	0	+	1	+
1.5<3	0	0	0	0	0	+
0<1.5	0	+	0	0	0	0

921

24

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	0	2	55
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	3
20<35	0	0	0	0	+	3
10<20	0	0	+	0	4	14
6<10	0	0	0	1	4	11
3<6	0	0	0	+	+	+
1.5<3	0	0	0	0	+	+
0<1.5	0	0	0	0	0	0

326

25

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	0	3	35
50<80	0	0	0	0	+	2
35<50	0	0	0	+	1	3
20<35	0	0	0	0	1	9
10<20	+	0	+	0	4	15
6<10	+	+	+	2	6	11
3<6	0	0	+	+	1	+
1.5<3	0	0	0	0	0	0
0<1.5	+	1	0	+	0	0

411

29

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	2	43
50<80	0	0	0	0	+	+
35<50	0	0	0	1	1	6
20<35	0	0	0	1	1	9
10<20	0	0	1	1	4	15
6<10	0	0	+	1	4	6
3<6	0	0	1	0	1	1
1.5<3	0	0	0	0	+	0
0<1.5	0	0	+	0	0	0

566

30

INSUFFICIENT DATA

31

INSUFFICIENT DATA

32

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	0	62
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	4
20<35	0	0	0	0	0	4
10<20	0	0	0	0	4	12
6<10	0	0	0	0	0	4
3<6	0	0	0	0	0	8
1.5<3	0	0	0	0	0	4
0<1.5	0	0	0	0	0	0

26

33

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	7	31
50<80	0	0	0	0	0	0
35<50	0	0	0	0	5	1
20<35	0	0	0	0	3	4
10<20	0	0	1	0	4	19
6<10	0	0	0	1	7	6
3<6	1	0	1	1	3	2
1.5<3	0	0	0	0	0	0
0<1.5	1	0	0	0	0	1

98

34

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	0	22
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	2
20<35	0	0	0	0	3	37
10<20	0	0	0	5	10	8
6<10	0	0	0	5	2	0
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	2	2	2	0

59

Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

APRIL

gs (hundreds of feet)

when low cloud amount

ces of N_h <5/8.

ith visibility ≥5 but <10

y ≥5 nautical miles

1 — VISIBILITY

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	9	48
50<80	0	0	0	0	1	1
35<50	1	0	0	0	0	1
20<35	0	0	1	2	1	4
10<20	0	0	0	1	6	5
6<10	0	0	0	1	4	8
3<6	0	0	0	1	1	5
1.5<3	0	0	0	0	1	0
0<1.5	0	0	1	0	0	0

191

2 — VISIBILITY

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	4	56
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	1
20<35	0	0	+	+	+	6
10<20	0	0	0	+	4	15
6<10	0	0	+	+	1	7
3<6	0	+	0	0	0	1
1.5<3	0	0	0	0	+	0
0<1.5	0	+	0	0	0	0

234

3 — VISIBILITY

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	2	49
50<80	0	0	0	+	+	1
35<50	0	0	+	0	+	1
20<35	0	0	0	+	+	2
10<20	0	0	0	1	2	10
6<10	0	+	0	2	6	13
3<6	0	0	0	1	4	1
1.5<3	0	0	0	0	+	0
0<1.5	0	0	0	0	0	0

220

4 — VISIBILITY

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	2	54
50<80	0	0	0	0	0	1
35<50	0	0	0	0	1	2
20<35	0	0	0	0	1	1
10<20	0	0	1	0	2	3
6<10	0	0	1	1	5	9
3<6	0	0	0	1	3	3
1.5<3	0	0	0	0	2	0
0<1.5	0	0	0	0	1	0

184

5 — VISIBILITY

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	2	81
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	1
20<35	0	+	+	0	1	4
10<20	0	0	0	+	+	5
6<10	0	0	0	0	1	3
3<6	0	0	0	0	1	0
1.5<3	0	0	0	0	0	0
0<1.5	+	0	0	0	0	0

574

6 — VISIBILITY

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	+	0	+	8	64
50<80	0	0	0	0	+	1
35<50	0	0	0	0	1	2
20<35	0	0	0	0	1	3
10<20	+	0	0	0	2	8
6<10	0	0	0	+	1	5
3<6	0	0	0	+	1	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

892

7 — VISIBILITY

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	4	82
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	0
20<35	0	0	0	0	1	1
10<20	0	0	0	0	0	4
6<10	0	0	0	0	1	3
3<6	0	0	0	0	0	1
1.5<3	0	0	0	0	0	1
0<1.5	0	0	0	0	0	0

142

8 — VISIBILITY

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	2	79
50<80	0	0	0	0	0	+
35<50	0	0	0	+	0	1
20<35	0	0	0	0	+	4
10<20	0	0	0	0	1	6
6<10	0	0	0	+	1	3
3<6	0	0	0	+	+	+
1.5<3	0	0	0	0	0	+
0<1.5	0	0	0	0	0	0

560

9 — VISIBILITY

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	1	68
50<80	0	0	0	0	0	1
35<50	0	0	0	0	+	3
20<35	0	0	0	0	+	7
10<20	0	0	0	0	1	13
6<10	0	0	0	0	1	5
3<6	0	0	0	0	+	+
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	+

946

10 — VISIBILITY

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	+	+	+	4	63
50<80	0	0	0	0	+	1
35<50	0	0	0	0	+	2
20<35	0	0	0	+	1	5
10<20	0	0	+	1	2	9
6<10	0	0	+	1	3	5
3<6	0	+	0	+	1	1
1.5<3	0	0	0	+	+	+
0<1.5	+	0	0	+	0	0

1241

14 — VISIBILITY

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	1	77
50<80	0	0	0	0	0	+
35<50	0	0	0	0	0	3
20<35	0	0	0	0	+	3
10<20	0	0	0	+	2	8
6<10	0	0	0	0	1	4
3<6	0	0	0	+	0	+
1.5<3	0	0	0	0	1	0
0<1.5	0	0	0	0	+	0

759

15 — VISIBILITY

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	1	0	1	7	47
50<80	0	0	0	0	0	2
35<50	0	0	0	0	0	4
20<35	0	0	0	0	1	9
10<20	0	0	0	0	7	10
6<10	0	0	0	0	3	8
3<6	0	0	0	0	1	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

114

16 — VISIBILITY

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	2	29
50<80	0	0	0	0	0	3
35<50	0	0	0	0	1	4
20<35	0	0	0	0	4	17
10<20	0	0	0	0	2	26
6<10	0	0	0	0	1	9
3<6	0	0	0	0	0	2
1.5<3	0	0	0	0	0	1
0<1.5	0	0	0	0	0	0

119

17 — VISIBILITY

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	3	68
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	1
20<35	0	0	0	0	1	6
10<20	0	0	0	+	2	10
6<10	0	0	0	+	1	3
3<6	0	0	0	2	1	2
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	+	0

254

18 — VISIBILITY

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	0	2	55
50<80	0	0	0	0	0	+
35<50	0	0	0	0	0	1
20<35	0	0	0	0	1	7
10<20	0	0	0	1	3	15
6<10	0	0	+	1	5	5
3<6	0	0	0	1	1	1
1.5<3	0	0	0	0	+	+
0<1.5	0	0	+	1	0	0

372

19 — VISIBILITY

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	2	55
50<80	0	0	0	0	+	1
35<50	0	0	0	0	+	2
20<35	0	0	0	+	1	6
10<20	0	0	0	1	4	14
6<10	0	0	+	+	4	8
3<6	0	0	0	1	1	1
1.5<3	0	0	0	0	+	+
0<1.5	0	0	0	0	0	+

716

23 — VISIBILITY

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	3	55
50<80	0	0	0	0	0	+
35<50	0	0	0	0	0	2
20<35	0	0	0	+	1	6
10<20	0	0	0	+	5	17
6<10	0	0	0	1	2	3
3<6	0	0	0	+	1	+
1.5<3	0	0	0	0	0	+
0<1.5	0	+	0	0	0	0

921

24 — VISIBILITY

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	0	2	55
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	3
20<35	0	0	0	0	+	3
10<20	0	0	+	0	4	14
6<10	0	0	0	1	4	11
3<6	0	0	0	+	+	+
1.5<3	0	0	0	0	+	+
0<1.5	0	0	0	0	0	0

326

25 — VISIBILITY

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	0	3	35
50<80	0	0	0	0	+	2
35<50	0	0	0	+	1	3
20<35	0	0	0	0	1	9
10<20	+	0	+	+	4	15
6<10	+	+	+	2	6	11
3<6	0	0	+	+	1	+
1.5<3	0	0	0	0	0	0
0<1.5	+	1	0	+	0	0

411

26 — VISIBILITY

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	2	49
50<80	0	0	0	0	0	+
35<50	0	0	0	+	+	2
20<35	0	0	0	0	2	7
10<20	0	0	0	2	6	15
6<10	0	0	0	2	4	4
3<6	0	+	0	0	0	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	1	0	0

223

27 — VISIBILITY

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	0	47
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	0
20<35	0	0	0	0	6	6
10<20	0	0	0	0	12	29
6<10	0	0	0	0	0	0
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

17

28 — VISIBILITY

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	21	42
50<80	0	0	0	0	0	4
35<50	0	0	4	0	0	0
20<35	0	0	0	0	4	0
10<20	0	0	0	0	0	4
6<10	0	0	0	0	4	8
3<6	0	0	0	0	4	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	4	0	0

24

32 — VISIBILITY

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	0	62
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	4
20<35	0	0	0	0	0	4
10<20	0	0	0	0	4	12
6<10	0	0	0	0	0	4
3<6	0	0	0	0	0	8
1.5<3	0	0	0	0	0	4
0<1.5	0	0	0	0	0	0

26

33 — VISIBILITY

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	7	31
50<80	0	0	0	0	0	0
35<50	0	0	0	0	5	1
20<35	0	0	0	0	3	4
10<20	0	0	1	0	4	19
6<10	0	0	0	1	7	6
3<6	1	0	1	1	3	2
1.5<3	0	0	0	0	0	0
0<1.5	1	0	0	0	0	1

98

34 — VISIBILITY

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	0	22
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	2
20<35	0	0	0	0	3	37
10<20	0	0	0	5	10	8
6<10	0	0	0	5	2	0
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	2	2	2	0

59

35

INSUFFICIENT DATA

36

INSUFFICIENT DATA

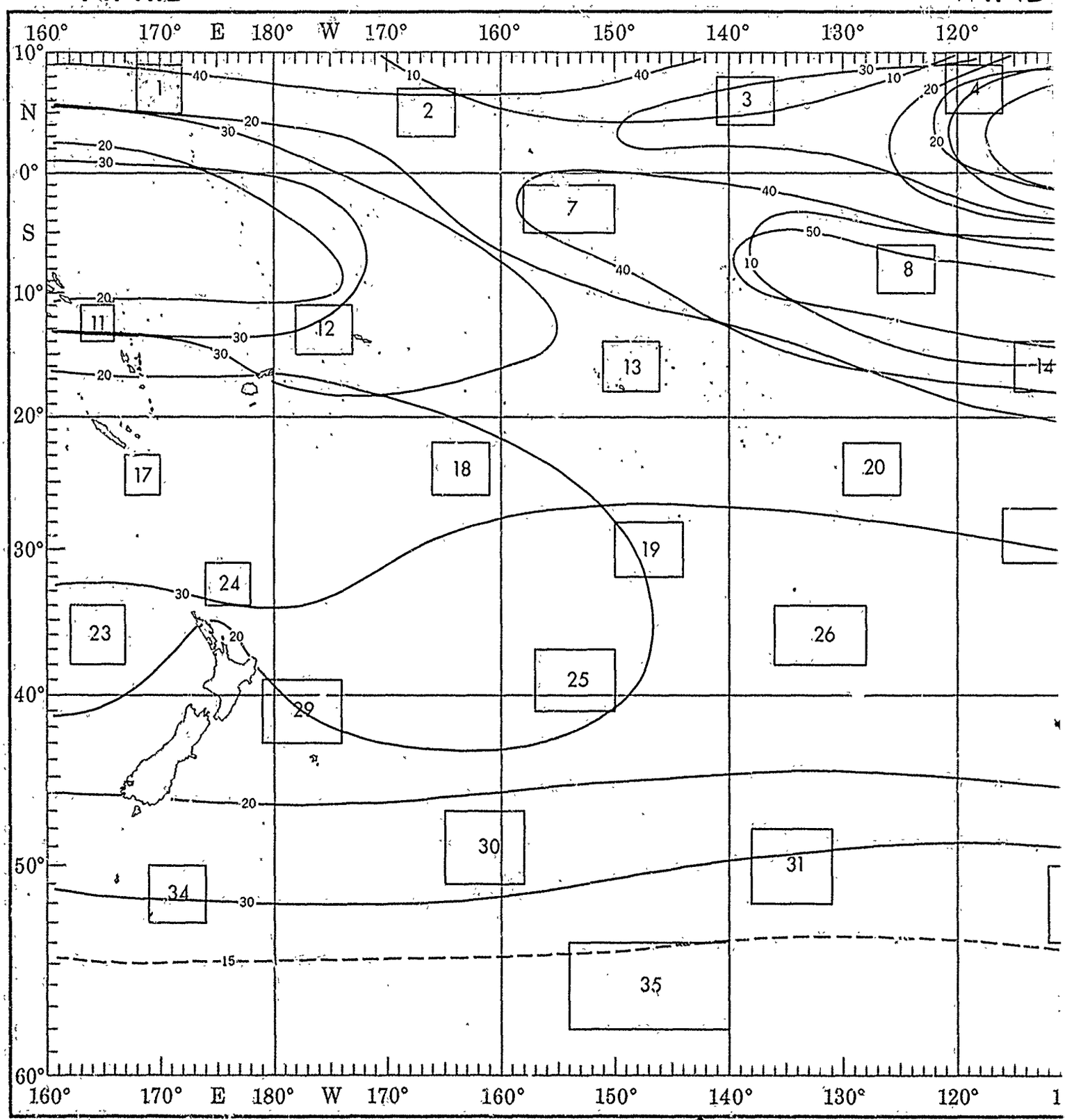
37 — VISIBILITY

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	0	27
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	0
20<35	0	0	0	0	9	9
10<20	0	0	0	0	9	27
6<10	0	0	0	0	0	0
3<6	0	0	0	0	18	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

11

objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

APRIL WIND


160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N
0°
S 10°
20°
30°
40°
50°
60°
160° 170° E 180° W 170° 160° 150° 140° 130° 120°
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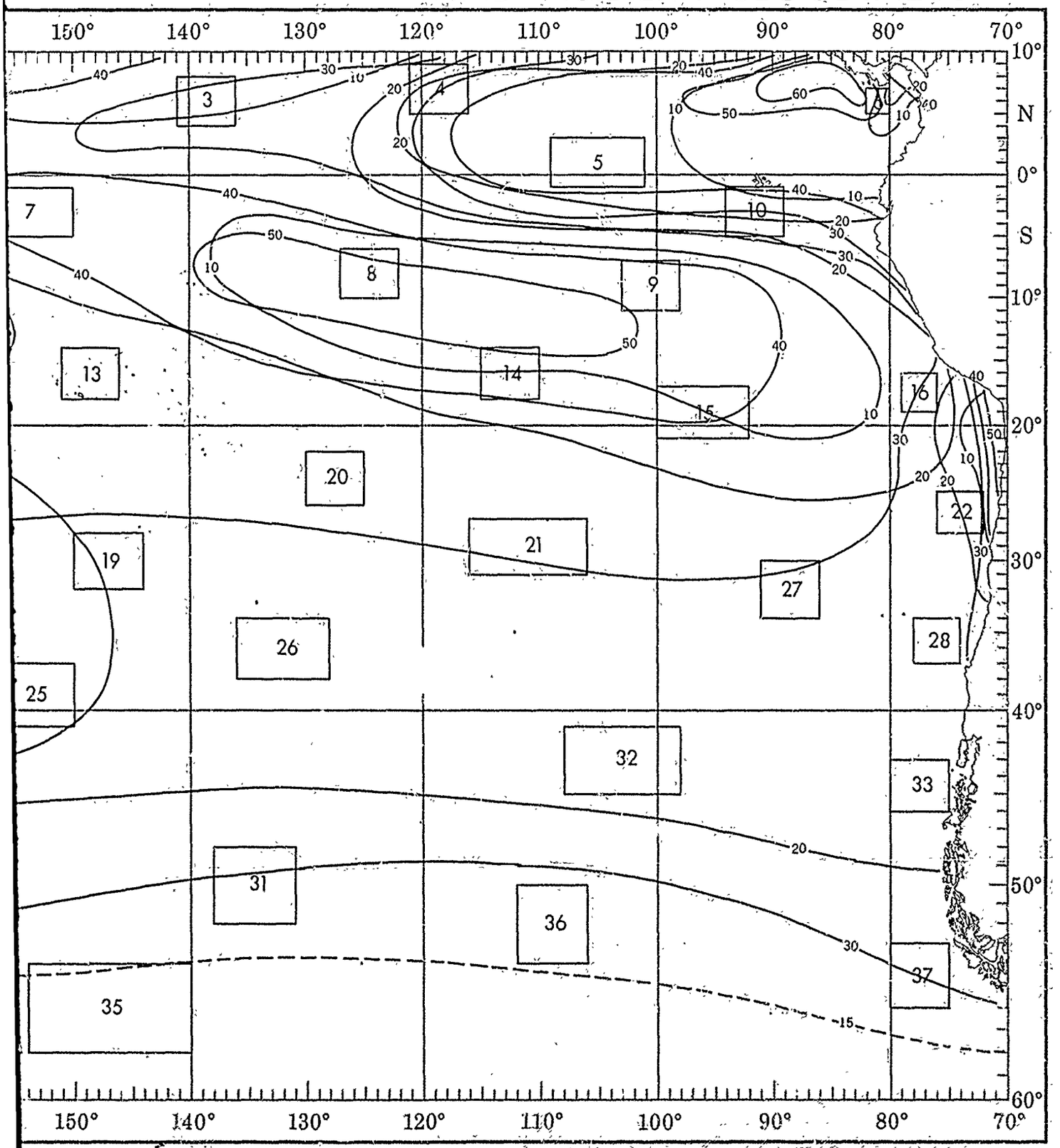
15

WIND-VISIBILITY-CLOUDINESS



LOW CLOUD CEILING-VISIBILITY-WIND

Percent frequency of occurrence of specified wind speed in knots, visibility (Vsby) in nautical miles, and low cloud ceiling (LCC) in hundreds of feet.

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

WIND SPEED (knots)

LCC - Vsby	0-3	4-10	11-21	22-33	≥34
<1.5 & or <.5	+	1	1	+	0
<6 & or <2	2	2	1	1	+
Vsby <2	1	2	1	1	+
<10 & or <2	3	4	2	1	1
<20 & or <5	8	9	6	5	2
Vsby ≥5	9	11	12	3	1
≥50 & ≥5	12	13	15	7	3
NC & ≥10	4	2	1	+	0
	1234				

(2% of the observations reported wind speeds of 11-21 knots, a low cloud ceiling <1000 feet and/or visibility <2 nautical miles)

"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8.

+ indicates <5% but >0.

Number of observations.

Conditions for Carrier Operations

BLUE LINE - Percent frequency of optimum conditions. LCC ≥5000 ft., (or no LCC), Vsby ≥5 nm., and Wind 11-21 kts.

RED LINE - Percent frequency of poor conditions. Any one of the following constitutes poor conditions: LCC <300 ft., Vsby <1 nm., Wind <6 or ≥34 kts.

Satisfactory conditions between poor and optimum

1

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	1	1	0
<6 & OR <2	0	4	3	1	0
VSBY <2	0	0	1	1	0
<10 & OR <2	1	12	7	1	0
<20 & OR <5	1	15	18	2	0
VSBY ≥5	4	37	49	4	0
≥50 & ≥5	3	22	31	3	0
NC & ≥10	2	19	24	3	0
					169

2

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	1	2	0	0
VSBY <2	0	0	2	0	0
<10 & OR <2	0	2	8	1	+
<20 & OR <5	0	6	21	4	+
VSBY ≥5	1	30	56	10	1
≥50 & ≥5	1	20	35	5	+
NC & ≥10	1	18	33	4	+
					234

6

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	0	0	0	0
<6 & OR <2	+	1	+	0	0
VSBY <2	+	0	0	0	0
<10 & OR <2	2	5	1	0	0
<20 & OR <5	6	11	2	0	0
VSBY ≥5	27	57	15	+	0
≥50 & ≥5	20	43	12	+	0
NC & ≥10	16	38	10	+	0
					855

7

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	4	4	0	0
<20 & OR <5	0	7	4	1	0
VSBY ≥5	0	54	42	2	0
≥50 & ≥5	0	46	38	1	0
NC & ≥10	0	46	35	1	0
					142

11

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	1	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	2	2	7	0	0
<20 & OR <5	4	4	12	0	0
VSBY ≥5	16	36	41	6	0
≥50 & ≥5	12	34	28	5	0
NC & ≥10	12	34	26	5	0
					83

12

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	0	0	0
<6 & OR <2	0	2	1	1	0
VSBY <2	0	1	0	0	0
<10 & OR <2	0	4	7	1	0
<20 & OR <5	1	5	10	2	0
VSBY ≥5	13	49	33	4	0
≥50 & ≥5	12	41	22	1	0
NC & ≥10	12	39	22	0	0
					138

13

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	+	+	+	0
VSBY <2	0	+	0	+	0
<10 & OR <2	+	2	2	+	0
<20 & OR <5	1	5	5	1	0
VSBY ≥5	10	45	41	1	0
≥50 & ≥5	9	39	34	1	0
NC & ≥10	9	36	31	1	0
					667

14

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	0
<6 & OR <2	0	+	+	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	2	4	+	0
<20 & OR <5	0	5	11	1	0
VSBY ≥5	3	49	56	3	0
≥50 & ≥5	3	32	41	2	0
NC & ≥10	3	32	41	2	0
					753

15

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	1	1	0
VSBY <2	0	0	1	0	0
<10 & OR <2	0	3	10	1	0
<20 & OR <5	0	6	21	4	0
VSBY ≥5	1	25	61	11	0
≥50 & ≥5	1	16	33	6	0
NC & ≥10	1	15	27	4	0
					114

16

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	2	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	7	6	1	0
<20 & OR <5	1	16	23	2	0
VSBY ≥5	3	40	54	3	0
≥50 & ≥5	2	16	15	1	0
NC & ≥10	1	16	1	1	0
					119

20

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	+
<6 & OR <2	0	1	1	+	+
VSBY <2	0	+	+	0	+
<10 & OR <2	0	2	4	1	+
<20 & OR <5	1	8	10	2	+
VSBY ≥5	8	48	38	6	0
≥50 & ≥5	7	39	26	2	0
NC & ≥10	7	38	26	2	0
					730

21

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	1	2	0
VSBY <2	0	0	1	1	0
<10 & OR <2	2	3	5	5	0
<20 & OR <5	2	9	14	7	0
VSBY ≥5	5	38	44	11	1
≥50 & ≥5	1	29	27	4	0
NC & ≥10	1	28	26	3	0
					122

22

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	2	0	0	0
<6 & OR <2	1	3	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	8	6	1	0
<20 & OR <5	2	19	15	1	0
VSBY ≥5	6	47	44	2	0
≥50 & ≥5	4	16	12	1	0
NC & ≥10	4	13	11	1	0
					190

23

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0		0
<6 & OR <2	+	+	+	+	+
VSBY <2	0	0	0	+	0
<10 & OR <2	+	3	5	2	+
<20 & OR <5	1	8	16	6	3
VSBY ≥5	4	35	44	11	4
≥50 & ≥5	3	24	25	7	2
NC & ≥10	3	23	24	4	1
					124

24

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	+	0	+
VSBY <2	0	0	0	0	+
<10 & OR <2	0	5	11	2	1
<20 & OR <5	0	8	22	5	1
VSBY ≥5	2	27	58	11	+
≥50 & ≥5	1	10	33	6	0
NC & ≥10		15	32	5	0
					329

25

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	0	0
<6 & OR <2	+	+	3	1	0
VSBY <2	+	0	2	+	0
<10 & OR <2	1	8	9	5	2
<20 & OR <5	+	12	20	10	2
VSBY ≥5	2	23	49	17	3
≥50 & ≥5	1	10	22	6	1
NC & ≥10	1	10	19	5	+
					410

29

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	0	1	1	1	1
VSBY <2	0	+	+	1	+
<10 & OR <2	+	4	6	4	1
<20 & OR <5	+	11	15	7	3
VSBY ≥5	2	32	42	15	3
≥50 & ≥5	1	19	21	5	1
NC & ≥10	1	18	19	4	1
					561

30

INSUFFICIENT DATA

31

INSUFFICIENT DATA

32

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	12	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	12	4	0
<20 & OR <5	0	0	27	4	0
VSBY ≥5	0	23	62	15	0
≥50 & ≥5	0	23	27	12	0
NC & ≥10	0	23	27	12	0
					26

33

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	2	0	1	0
<6 & OR <2	1	2	5	2	1
VSBY <2	0	1	1	1	1
<10 & OR <2	1	6	12	5	1
<20 & OR <5	2	11	24	10	1
VSBY ≥5	2	27	49	22	0
≥50 & ≥5	1	10	20	7	0
NC & ≥10	1	10	14	5	0
					97

34

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	2	0	
<6 & OR <2	0	0	2	2	0
VSBY <2	0	0	2	0	0
<10 & OR <2	0	0	9	2	0
<20 & OR <5	2	0	8	5	0
VSBY ≥5	9	9	3	26	5
≥50 & ≥5	2	4	14	2	2
NC & ≥10	2	4	14	2	2
					57

Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted whe

-VISIBILITY-WIND

APRIL

isibility (Vsby) in nautical

ds (h) when low cloud amount

d ceiling <1000 feet and/or

ccurrences of N_h <5/8.

nm and Wind 11-21 kts

conditions. LCC <300 ft.,

1

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	1	1	0
<6 & OR <2	0	4	3	1	0
VSBY <2	0	0	1	1	0
<10 & OR <2	1	12	7	1	0
<20 & OR <5	1	15	18	2	0
VSBY ≥5	4	37	49	4	0
≥50 & ≥5	3	22	31	3	0
NC & ≥10	2	19	24	3	0

189

2

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	1	2	0	0
VSBY <2	0	0	2	0	0
<10 & OR <2	0	2	8	1	+
<20 & OR <5	0	6	21	4	+
VSBY ≥5	1	30	56	10	1
≥50 & ≥5	1	20	35	5	+
NC & ≥10	1	18	33	4	+

234

3

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	+	+	6	0	0
VSBY <2	0	0	1	0	0
<10 & OR <2	1	6	20	1	0
<20 & OR <5	1	10	29	3	0
VSBY ≥5	3	27	56	7	0
≥50 & ≥5	2	17	29	5	0
NC & ≥10	2	17	27	4	0

218

4

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	1	0	0
<6 & OR <2	0	5	4	2	0
VSBY <2	0	1	1	0	0
<10 & OR <2	1	13	10	3	0
<20 & OR <5	1	15	14	4	0
VSBY ≥5	10	51	30	3	0
≥50 & ≥5	9	34	17	1	0
NC & ≥10	8	30	15	1	0

184

5

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	0	0	0
<6 & OR <2	+	1	0	0	0
VSBY <2	+	+	0	0	0
<10 & OR <2	1	3	1	0	0
<20 & OR <5	2	7	2	0	0
VSBY ≥5	23	64	13	0	0
≥50 & ≥5	20	54	10	0	0
NC & ≥10	20	52	10	0	0

571

6

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	0	0	0	0
<6 & OR <2	+	1	+	0	0
VSBY <2	+	0	0	0	0
<10 & OR <2	2	5	1	0	0
<20 & OR <5	6	11	2	0	0
VSBY ≥5	27	57	15	+	0
≥50 & ≥5	20	43	12	+	0
NC & ≥10	16	38	10	+	0

855

7

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	4	4	0	0
<20 & OR <5	0	7	4	1	0
VSBY ≥5	0	54	42	2	0
≥50 & ≥5	0	45	38	1	0
NC & ≥10	0	46	35	1	0

142

8

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	1	+	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	2	4	+	0
<20 & OR <5	0	4	9	1	0
VSBY ≥5	1	32	53	2	0
≥50 & ≥5	1	27	52	1	0
NC & ≥10	1	26	51	1	0

560

9

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	+	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	2	5	+	0
<20 & OR <5	0	4	16	1	0
VSBY ≥5	+	24	71	4	0
≥50 & ≥5	+	19	48	3	0
NC & ≥10	+	18	46	3	0

945

10

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	0	0	0
<6 & OR <2	1	2	+	+	0
VSBY <2	+	+	0	+	0
<10 & OR <2	2	8	1	+	0
<20 & OR <5	4	17	4	+	0
VSBY ≥5	13	64	19	0	0
≥50 & ≥5	9	45	14	0	0
NC & ≥10	8	43	13	0	0

1212

3

TS)

					≥34
					0
					0
					0
					0
					0
					0
					0
					0

687

14

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	0
<6 & OR <2	0	+	+	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	2	4	+	0
<20 & OR <5	0	5	11	1	0
VSBY ≥5	3	39	56	3	0
≥50 & ≥5	3	32	41	2	0
NC & ≥10	3	32	41	2	0

753

15

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	1	1	0
VSBY <2	0	0	1	0	0
<10 & OR <2	0	3	10	1	0
<20 & OR <5	0	6	21	4	0
VSBY ≥5	1	25	61	11	0
≥50 & ≥5	1	16	33	6	0
NC & ≥10	1	15	27	4	0

114

16

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	2	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	7	5	1	0
<20 & OR <5	1	15	23	2	0
VSBY ≥5	3	40	54	3	0
≥50 & ≥5	2	28	35	1	0
NC & ≥10	1	16	11	1	0

119

17

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	0
<6 & OR <2	0	+	1	3	+
VSBY <2	0	0	0	0	0
<10 & OR <2	0	2	4	3	1
<20 & OR <5	+	5	10	5	1
VSBY ≥5	7	26	50	13	2
≥50 & ≥5	6	20	37	8	1
NC & ≥10	5	18	35	7	1

254

18

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	0	0
<6 & OR <2	0	1	2	1	0
VSBY <2	0	1	+	0	0
<10 & OR <2	1	4	8	2	0
<20 & OR <5	2	9	17	5	1
VSBY ≥5	6	32	48	10	1
≥50 & ≥5	4	21	27	5	+
NC & ≥10	4	20	26	5	+

367

19

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	+	1	1	1	+
VSBY <2	0	0	+	+	0
<10 & OR <2	1	3	7	3	1
<20 & OR <5	1	9	17	6	1
VSBY ≥5	5	38	43	10	1
≥50 & ≥5	4	26	24	4	+
NC & ≥10	4	24	23	3	+

711

2

					≥34
					0
					0
					0
					0
					0
					0
					0
					0

190

23

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	+	0
<6 & OR <2	+	+	+	+	+
VSBY <2	0	0	0	+	0
<10 & OR <2	+	3	5	2	1
<20 & OR <5	1	8	16	6	3
VSBY ≥5	4	35	44	11	4
≥50 & ≥5	3	26	25	5	1
NC & ≥10	3	23	24	4	1

904

24

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	+	0	+
VSBY <2	0	0	0	0	+
<10 & OR <2	0	5	11	2	2
<20 & OR <5	0	8	22	5	1
VSBY ≥5	2	27	58	11	+
≥50 & ≥5	2	16	33	6	0
NC & ≥10	2	15	32	5	0

323

25

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	0	0
<6 & OR <2	+	2	3	1	0
VSBY <2	+	1	2	+	0
<10 & OR <2	+	8	9	5	2
<20 & OR <5	+	12	20	10	2
VSBY ≥5	2	23	49	17	3
≥50 & ≥5	1	10	22	6	1
NC & ≥10	1	10	19	5	+

410

26

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	1	0
<6 & OR <2	+	+	+	1	0
VSBY <2	+	0	0	0	0
<10 & OR <2	+	3	5	3	0
<20 & OR <5	1	10	17	6	3
VSBY ≥5	4	35	44	9	2
≥50 & ≥5	3	22	23	3	+
NC & ≥10	3	21	21	3	+

221

27

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	0	2	0
<20 & OR <5	0	18	24	10	0
VSBY ≥5	6	47	47	0	0
≥50 & ≥5	6	24	18	0	0
NC & ≥10	6	24	18	0	0

17

28

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	4	0	0
<6 & OR <2	0	4	8	0	0
VSBY <2	0	4	0	0	0
<10 & OR <2	0	8	17	0	0
<20 & OR <5	0	8	27	0	0
VSBY ≥5	4	29	54	4	0
≥50 & ≥5	4	25	38	0	0
NC & ≥10	4	21	29	0	0

24

1

					≥34
					0
					0
					0
					0
					0
					0
					0
					0

T

26

32

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	12	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	12	4	0
<20 & OR <5	0	0	27	4	0
VSBY ≥5	0	23	62	15	0
≥50 & ≥5	0	23	27	12	0
NC & ≥10	0	23	27	12	0

97

33

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	2	0	1	0
<6 & OR <2	1	2	5	2	1
VSBY <2	0	1	1	1	1
<10 & OR <2	1	6	12	5	1
<20 & OR <5	2	11	24	10	1
VSBY ≥5	2	27	43	22	0
≥50 & ≥5	1	10	20	7	0
NC & ≥10	1	10	14	5	0

57

34

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	2	2	0
<6 & OR <2	0	0	2	2	0
VSBY <2	0	0	2	0	0
<10 & OR <2	0	0	9	2	0
<20 & OR <5	2	0	18	16	0
VSBY ≥5	9	9	37	26	5
≥50 & ≥5	2	4	14	2	2
NC & ≥10	2	4	14	2	2

35

INSUFFICIENT DATA

36

INSUFFICIENT DATA

37

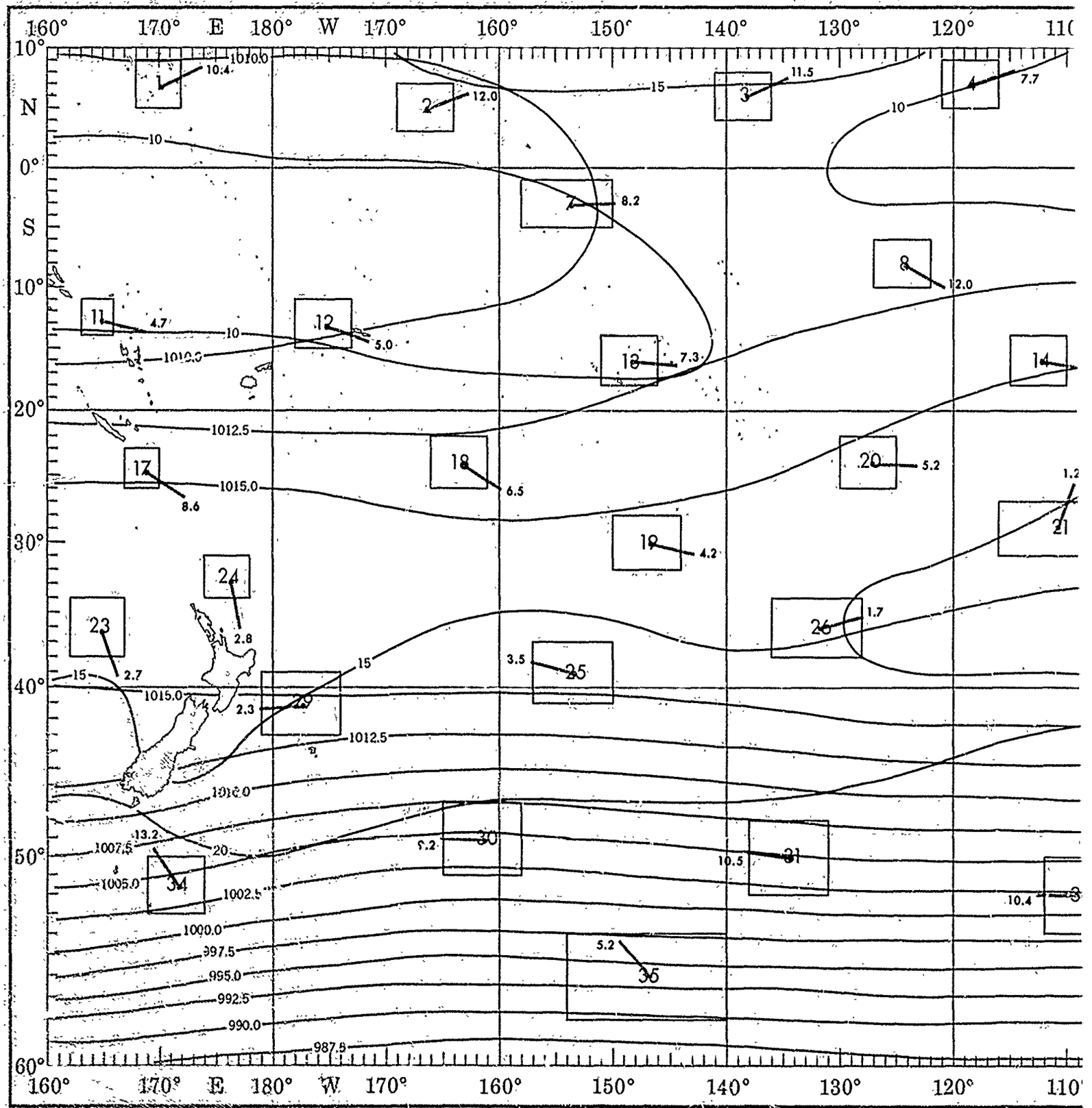
WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	18	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	0	18	0
<20 & OR <5	0	9	18	27	0
VSBY ≥5	0	27	36	36	0
≥50 & ≥5	0	9	9	9	0
NC & ≥10	0	9	9	9	0

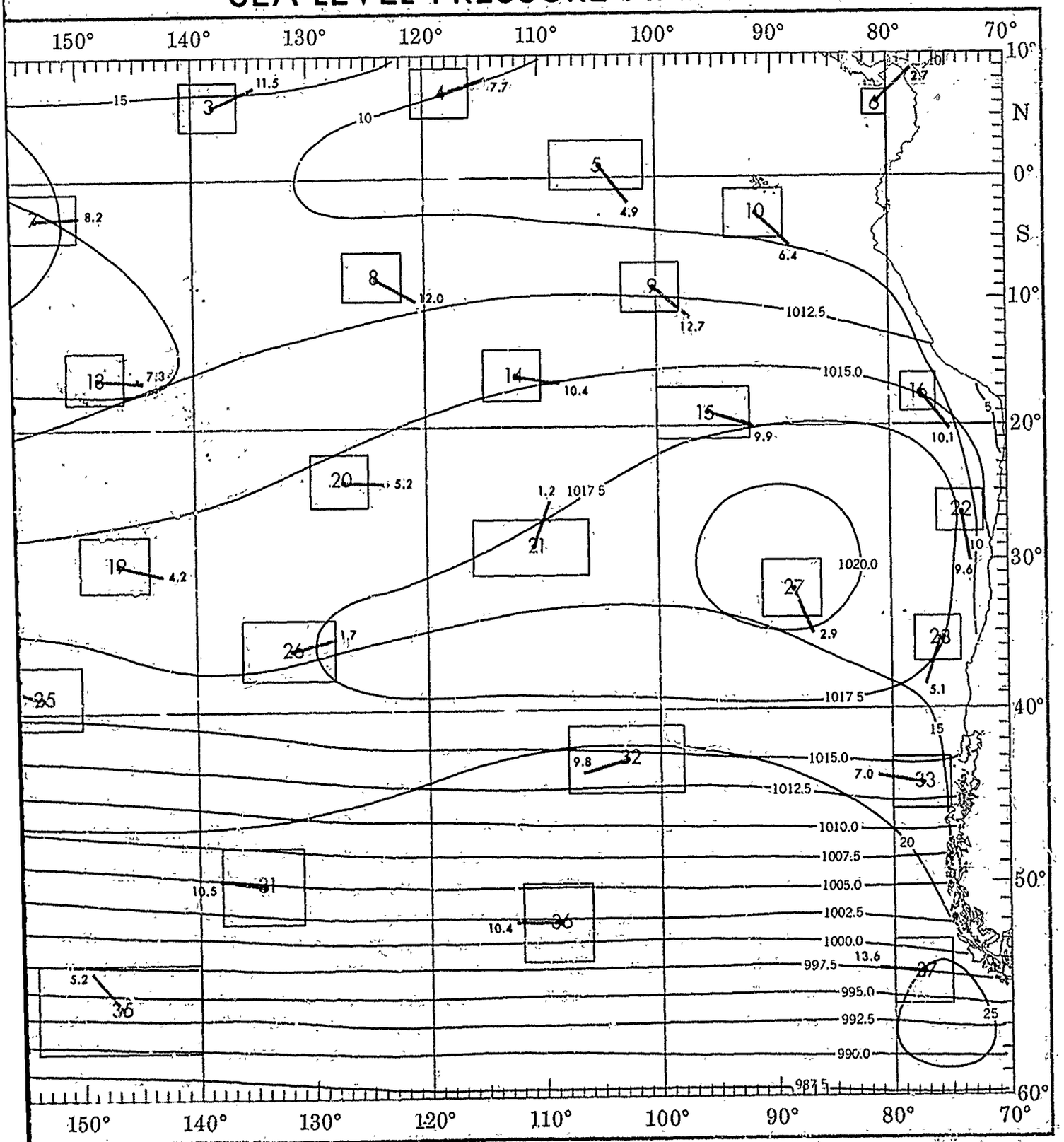
11

the objective compilation of available data for specified areas without regard to suspected biases.
yses (opposite page) are based on all available data subjectively adjusted where bias was evident.

APRIL SEA LEVEL PRESS

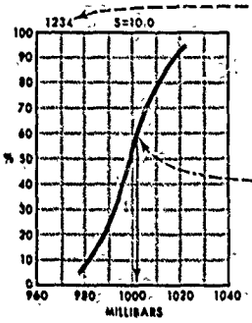


SEA LEVEL PRESSURE AND MEAN WIND



SEA LEVEL PRESSURE

Sea level pressure and mean wind.



Number of observations.

Cumulative percent frequency of sea level pressures equal to or less than the pressure intersected by the curve.

S=Standard deviation of pressure (mbs).

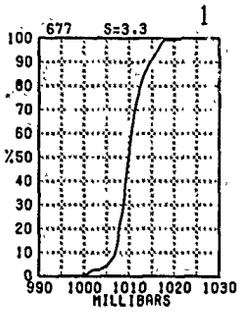
(60% of all observed sea level pressures were ≤1002 millibars.)

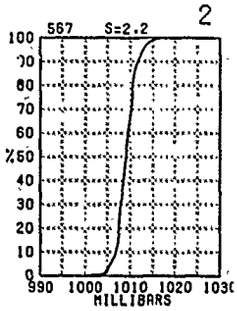
Vector mean wind is plotted from the direction which the mean flow occurs with the magnitude in knots at the end of the vector.

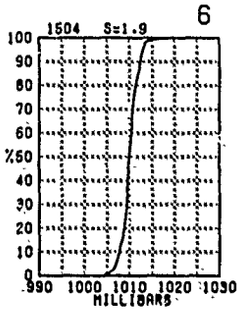
10.2 Vector mean wind is from the northeast at 10.2 knots.

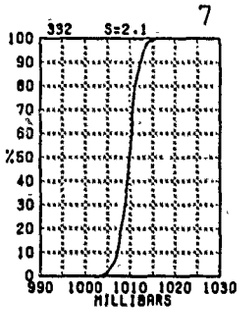
BLUE LINE - Scalar mean wind speed (kts.)

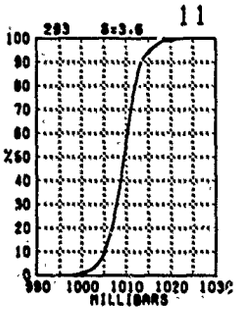
RED LINE - Mean sea level pressure (mbs.)

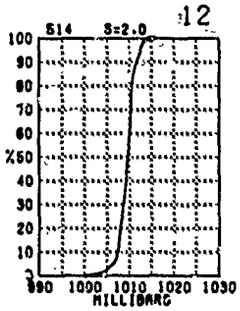


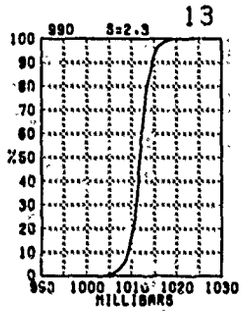


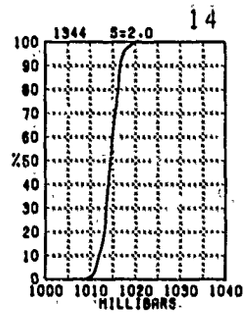


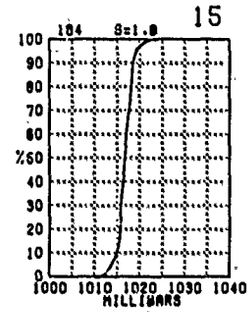


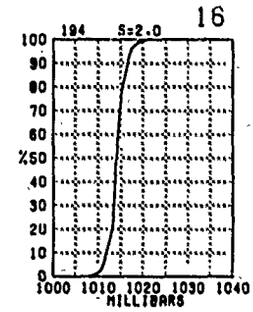


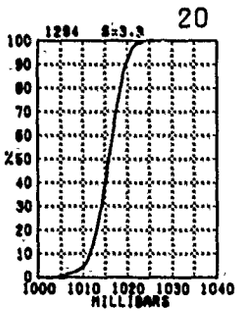


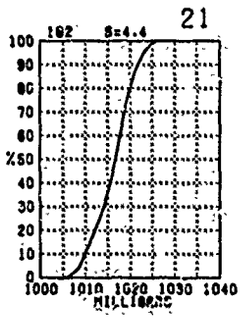


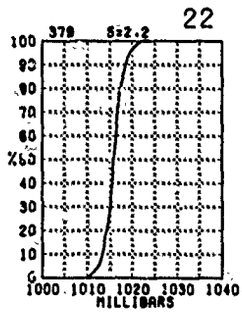


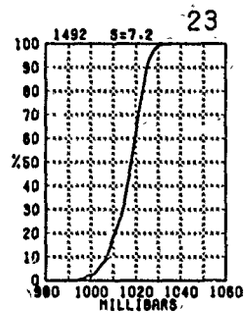


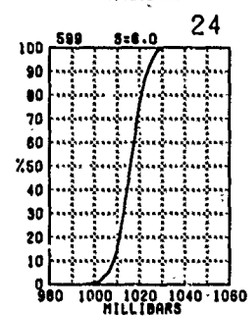


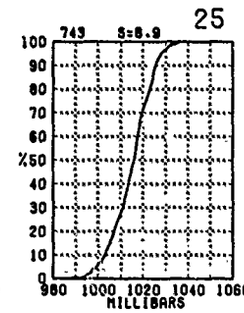


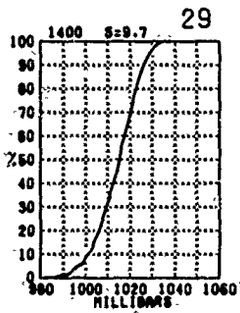


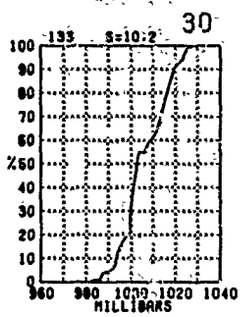


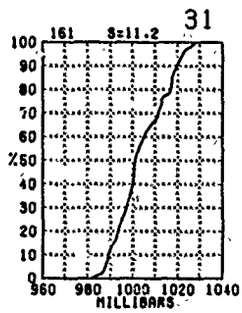


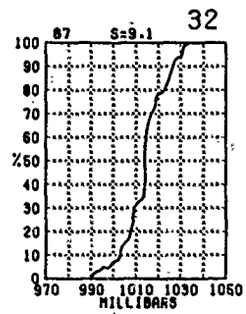


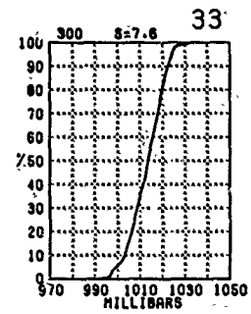


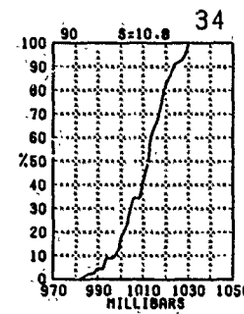












Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted whe

APRIL

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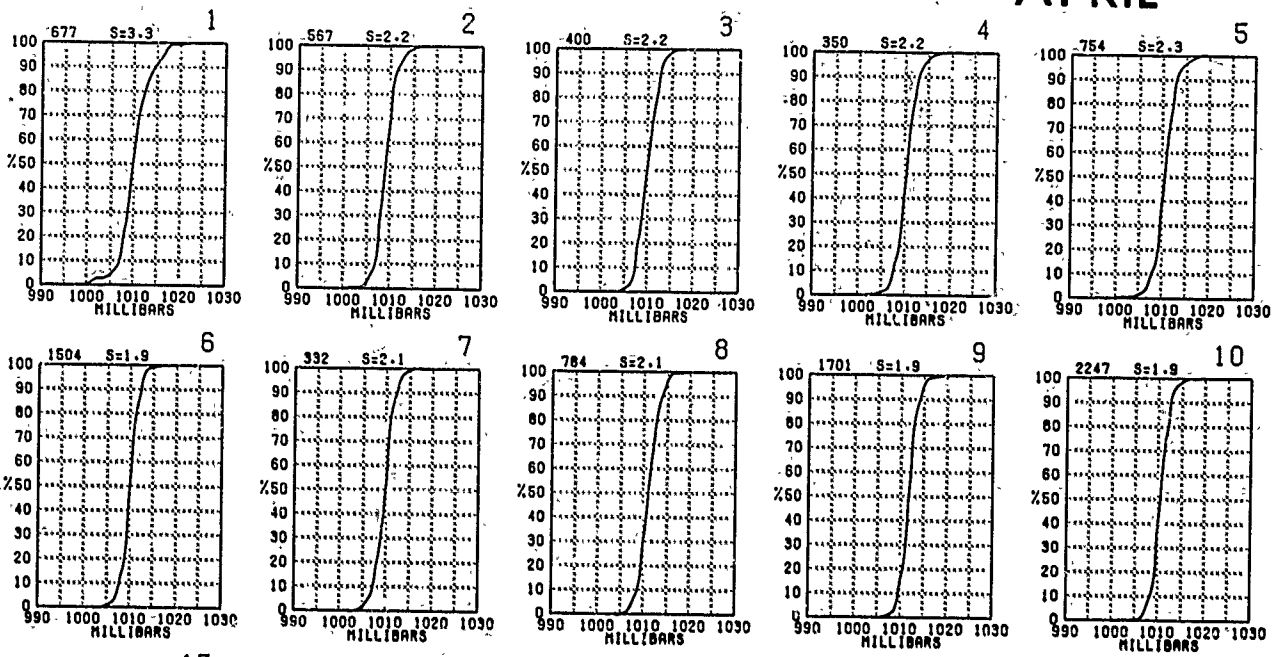
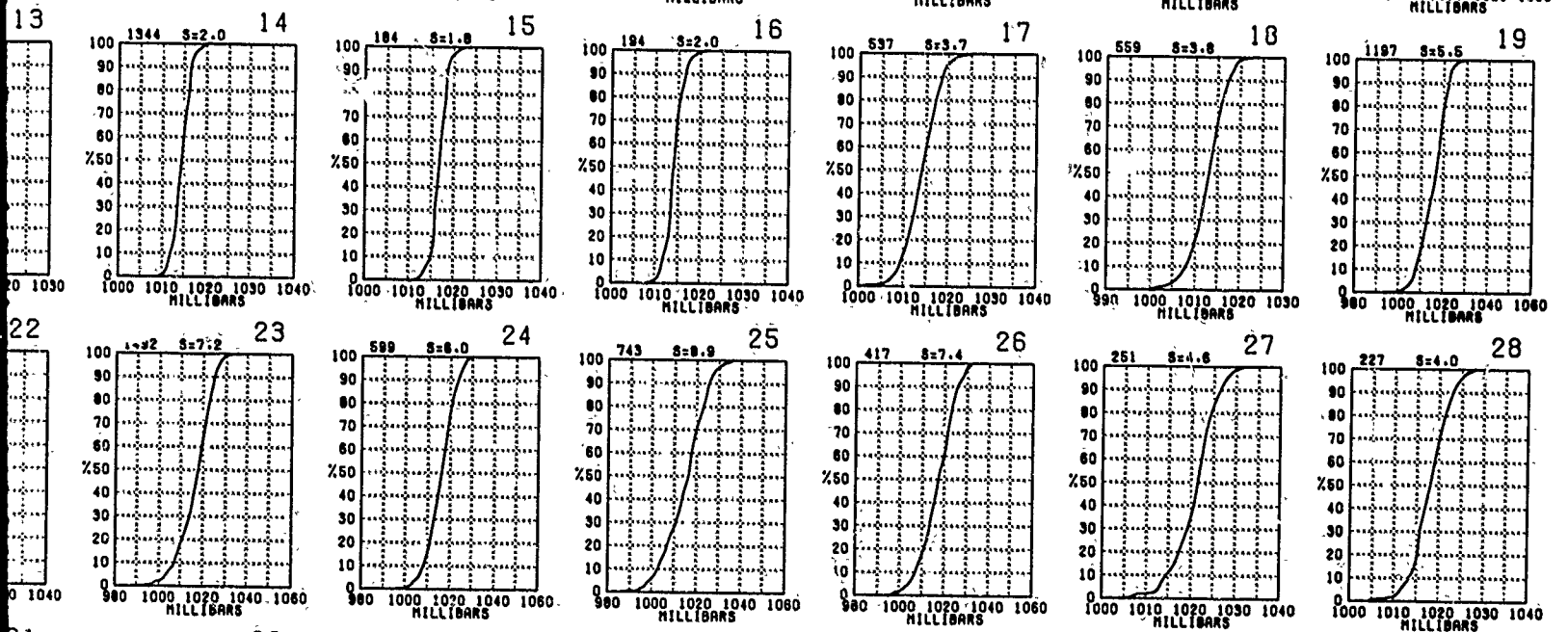
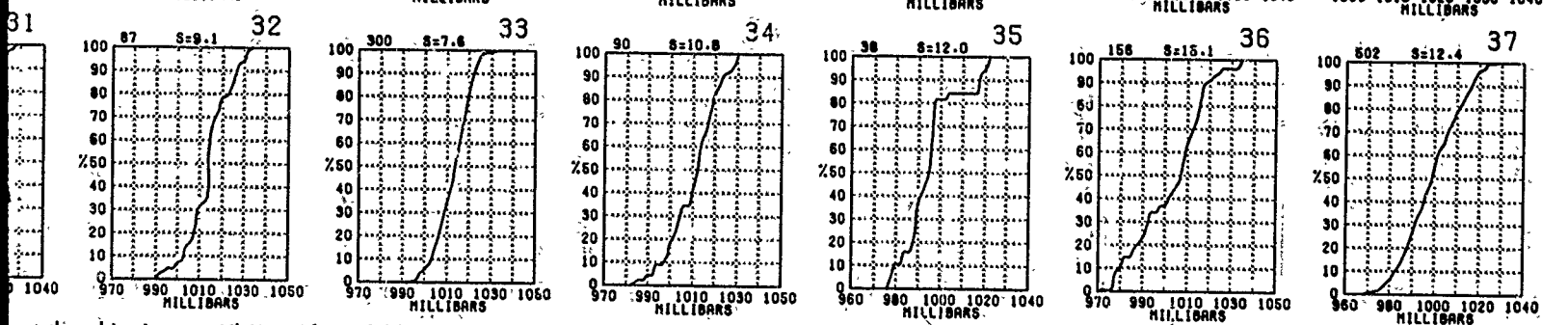
10.2 knots.



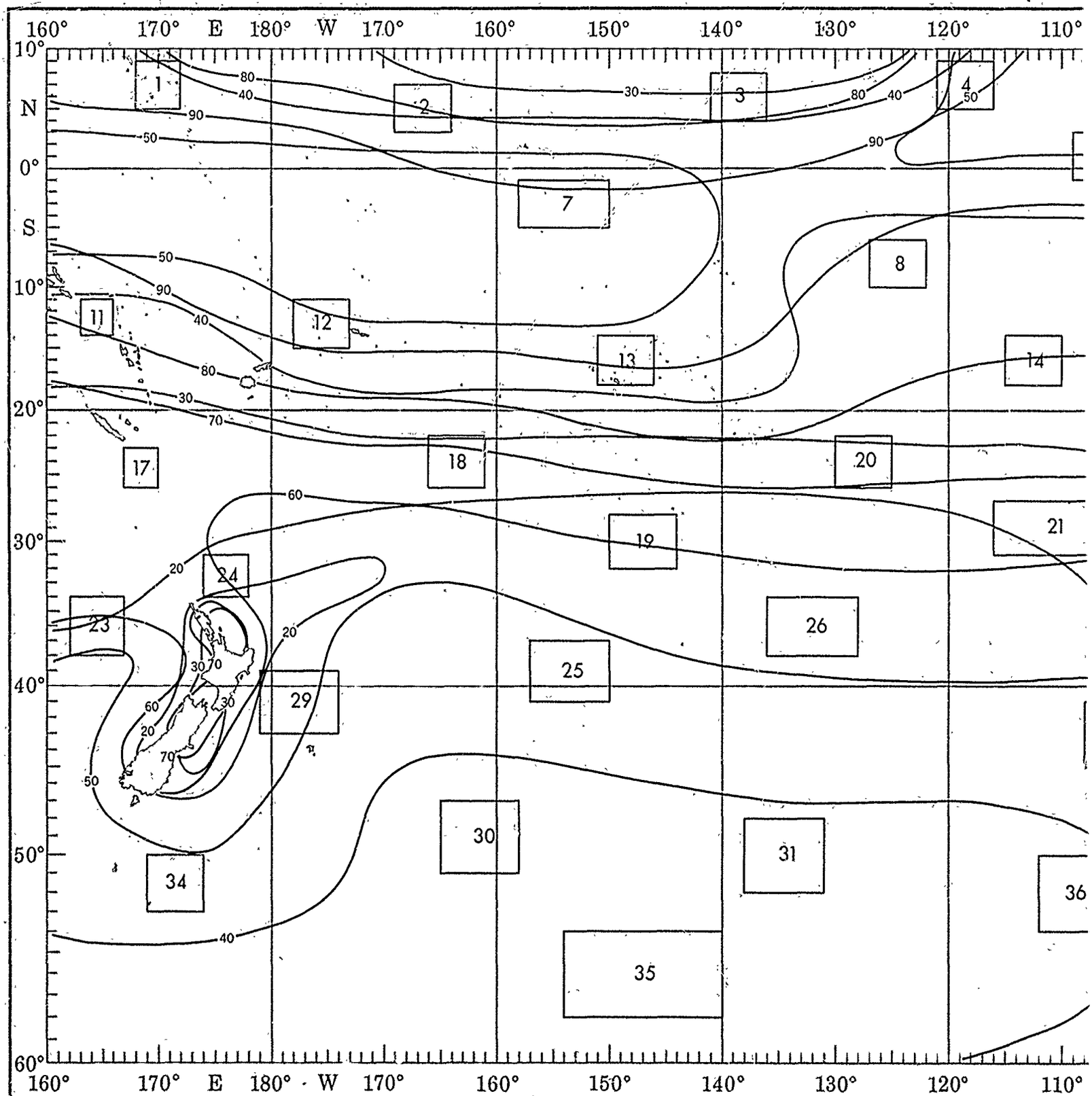




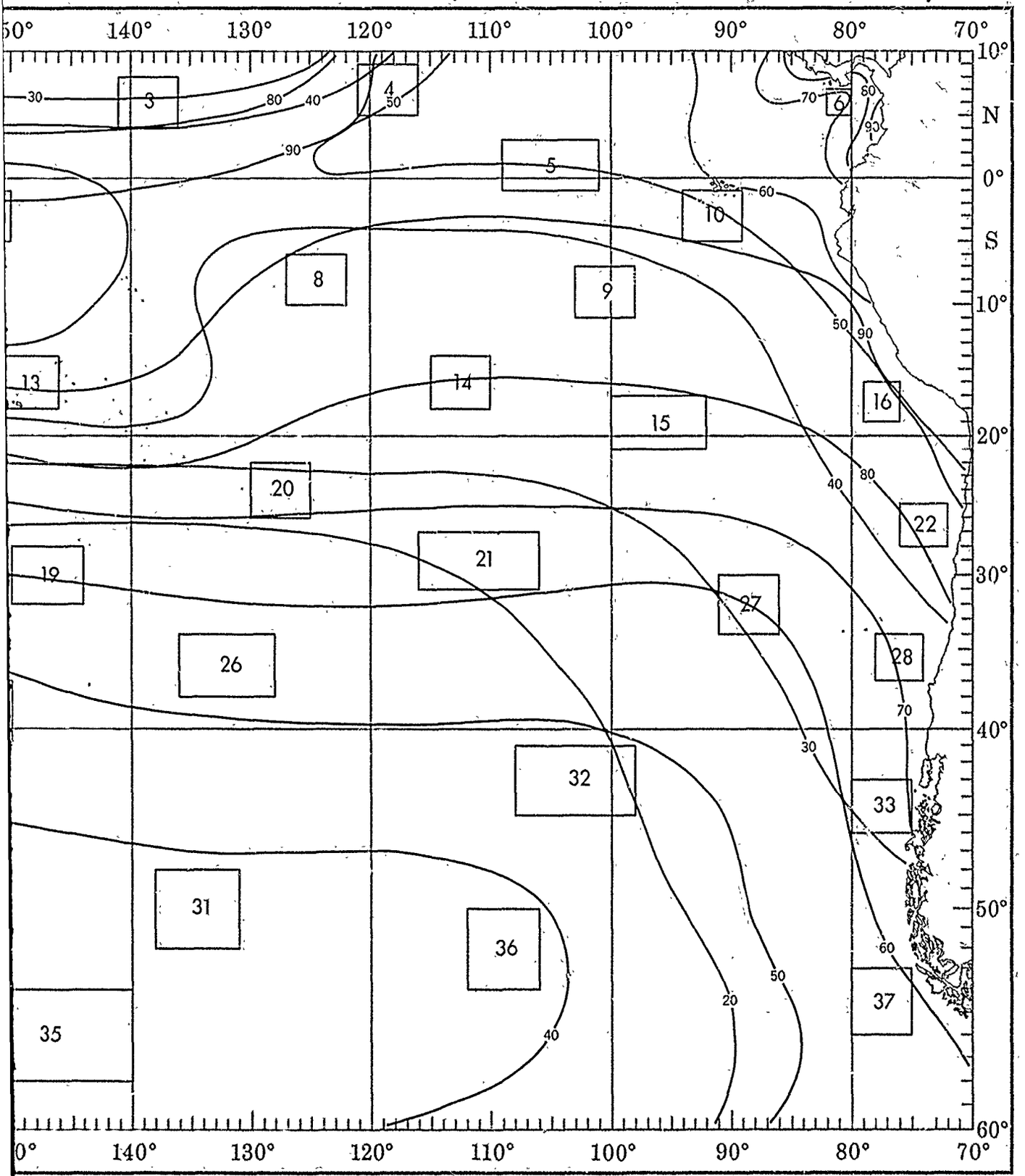
ent the objective compilation of available data for specified areas without regard to suspected biases.
nalyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

APRIL

WAVES (<1



WAVES (<1.5 AND <2.5 METERS)

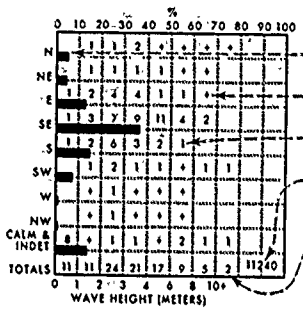


WAVE DIRECTION AND HEIGHT

Wave direction and height.

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.



—(5% of all waves were from the N.)

+ indicates < 5% but > 0.

—(1% of all waves were from the S with heights from 6-7.5 meters)

—Number of observations.

—(2% of the waves from all directions had heights ≥10 meters.)

WAVE HEIGHT INTERVAL

Feet	0-2	3-6	7-9	10-12	13-19	20-25	26-32	≥33
Meters	0-.5	1-1.5	2-2.5	3-3.5	4-5.5	6-7.5	8-9.5	≥10

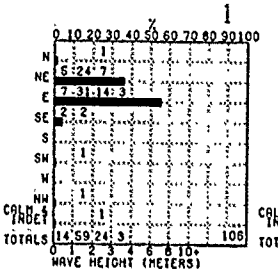
0 1 2 3 4 6 8 10+

Printed scale on bottom of chart

BLUE LINE - Percent frequency of wave height <1.5 meters (5 feet)

RED LINE - Percent frequency of wave height <2.5 meters (8 feet)

1



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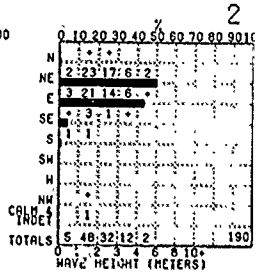

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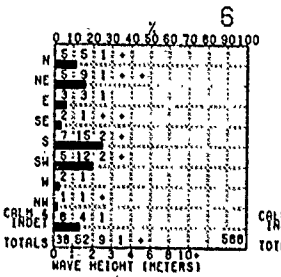

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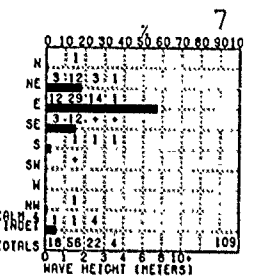

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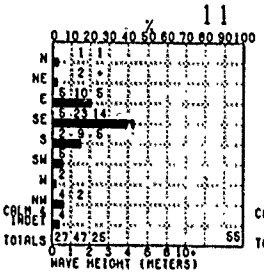

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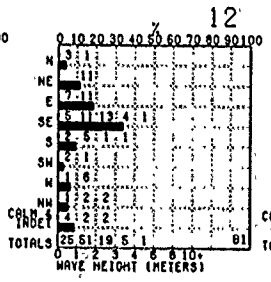

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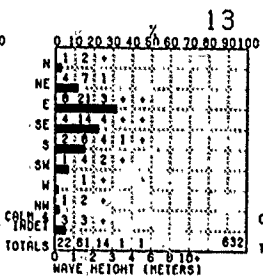

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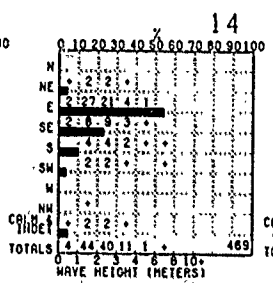

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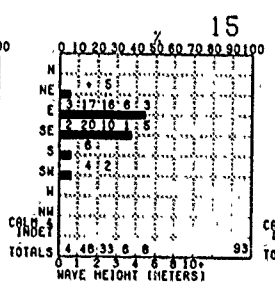

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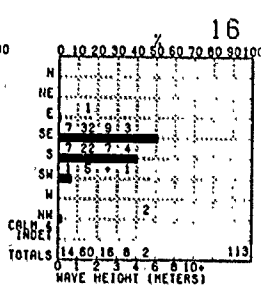

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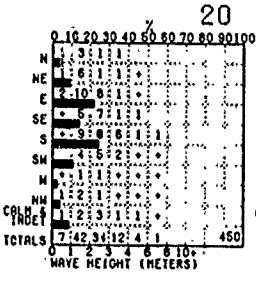

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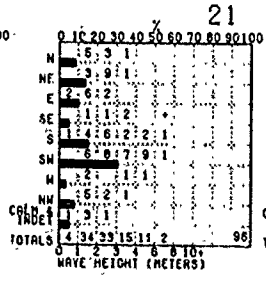

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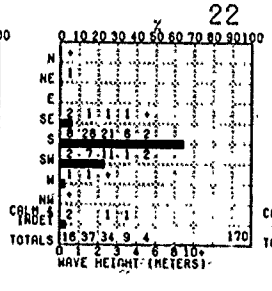

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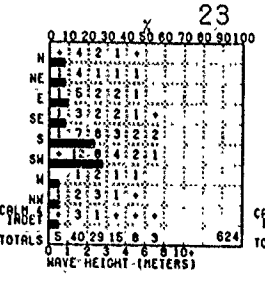

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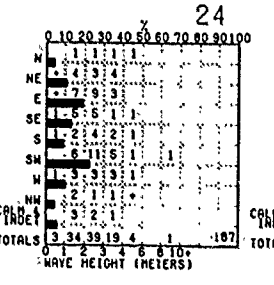

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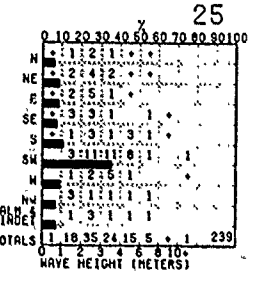

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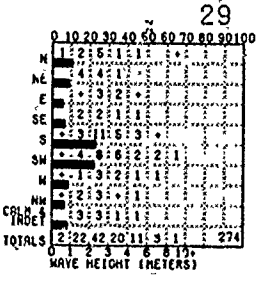

30

INSUFFICIENT DATA

31

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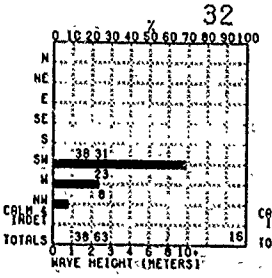
32



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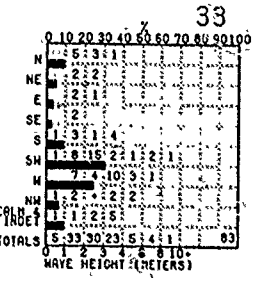


34

INSUFFICIENT DATA

Graphs represent the objective compilation of available data for specified areas without regard

The isopleth analyses (opposite page) are based on all available data subjectively adjusted whe

ND HEIGHT

APRIL

nt frequency of waves from

esent percent frequency of wave

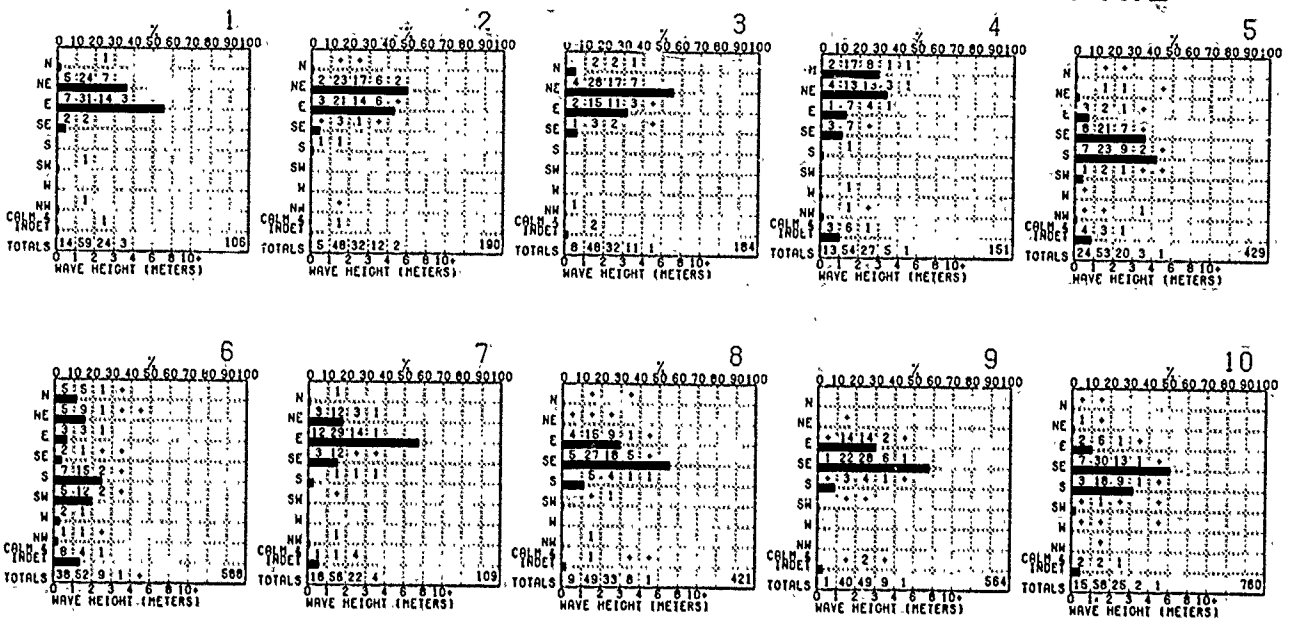
.5 meters)

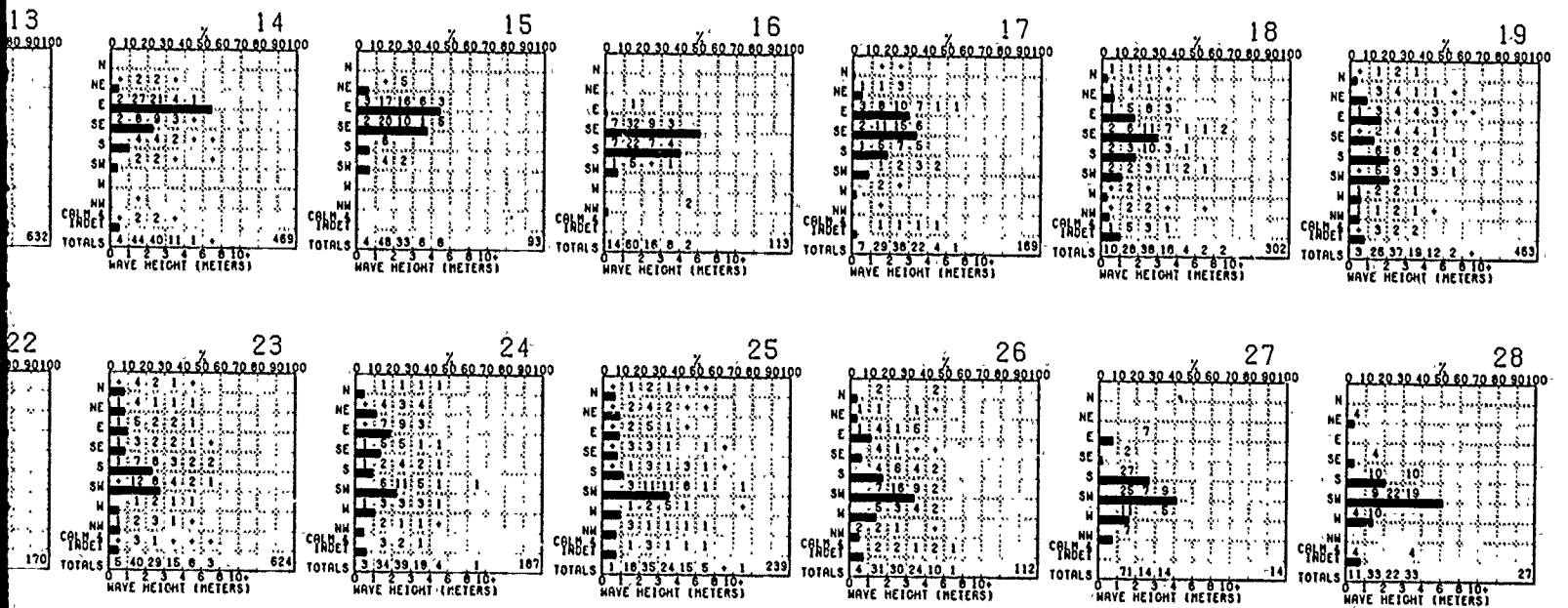
eters.)

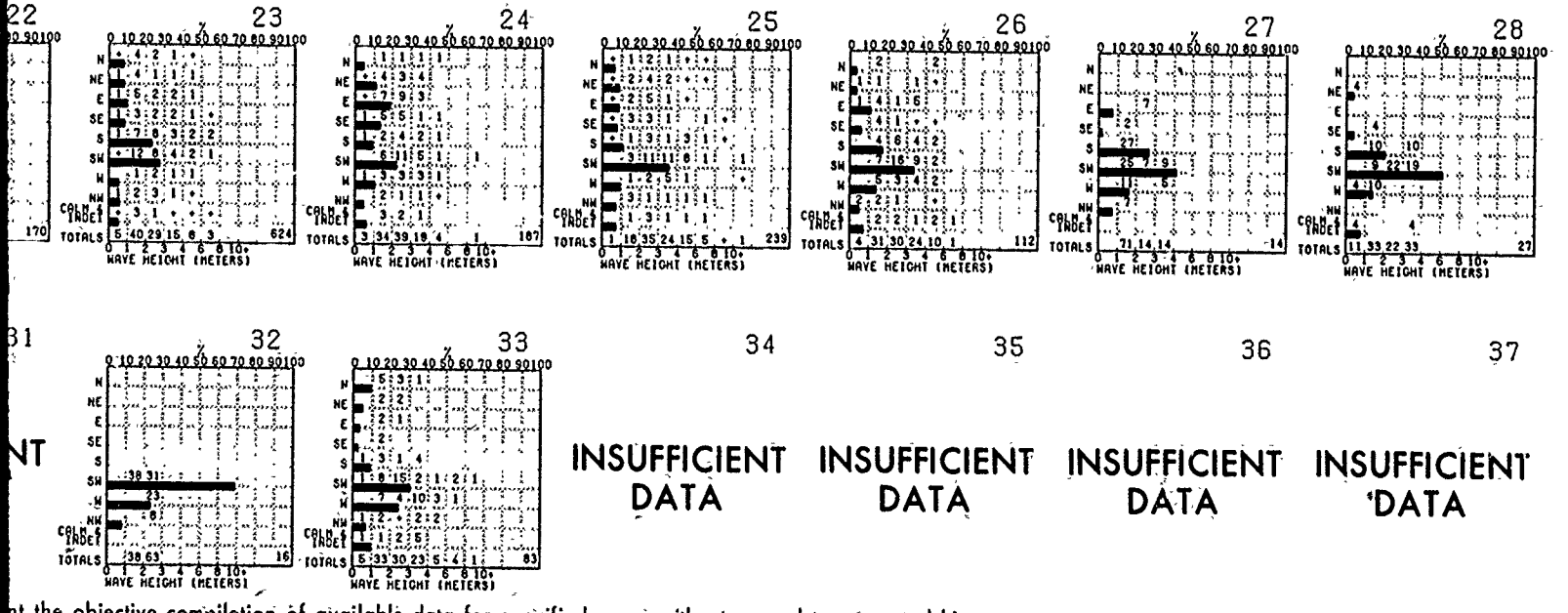
25	26-32	≥33
7.5	8-9.5	≥10

8 10+

f chart







INSUFFICIENT DATA

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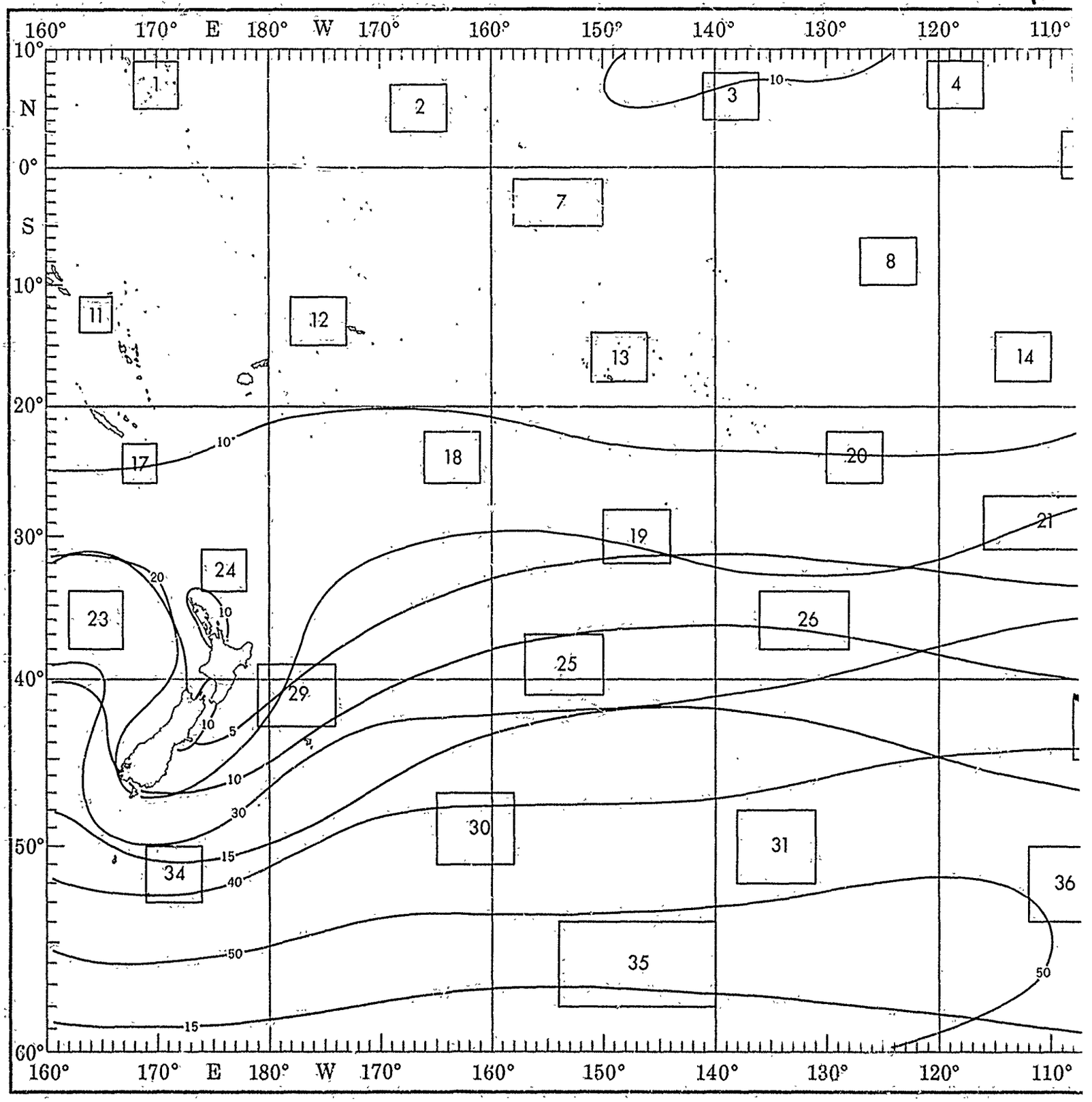
APRIL

WAVES (≥


160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
10° N
0°
S 10°
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30°
40°
50°
60°
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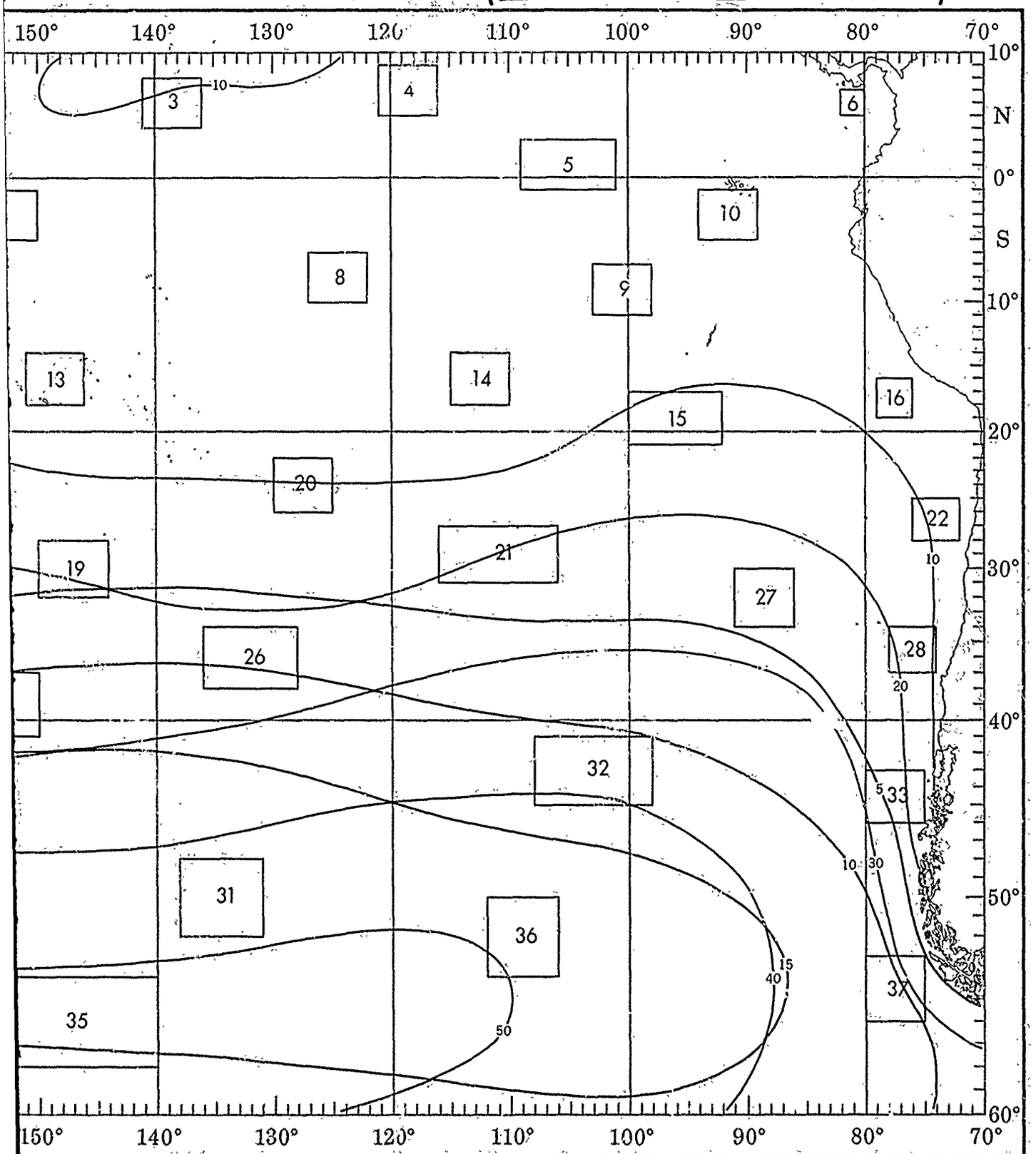
15

WAVES (≥3.5 AND ≥6 METERS)



WAVE PERIOD AND HEIGHT

Percent frequency of occurrence of wave period and height.

PERIOD (Seconds)

HEIGHT (METERS)	≤6	6–7	8–9	10–11	12–13	>13	IND
0–1.5	21	3	1	+	+	+	0
1–1.5	22	16	6	2	1	+	+
2–2.5	3	0	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

(2% of observed waves had a height of 1-1.5 meters and a period of 10-11 seconds)

+ indicates <.5% but >0.

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.

BLUE LINE - Percent frequency of wave height ≥3.5 meters (12 feet)

RED LINE - Percent frequency of wave height ≥6 meters (20 feet)

1

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6–7	8–9	10–11	12–13	>13	IND
0–1.5	12	4	0	0	0	0	0
1–1.5	31	20	6	1	0	0	0
2–2.5	7	11	4	0	1	0	0
3–3.5	0	2	0	0	0	1	0
4–5.5	0	0	0	0	0	0	0
6–7.5	0	0	0	0	0	0	0
8–9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

108

2

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6–7	8–9	10–11	12–13	>13	IND
0–1.5	4	1	0	0	0	0	1
1–1.5	25	15	4	1	3	0	1
2–2.5	3	16	11	3	0	0	0
3–3.5	1	6	4	0	1	1	0
4–5.5	0	1	1	1	0	0	0
6–7.5	0	0	0	0	0	0	0
8–9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

190

6

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6–7	8–9	10–11	12–13	>13	IND
0–1.5	26	4	1	2	0	0	9
1–1.5	19	11	7	2	3	1	5
2–2.5	2	3	1	1	+	1	1
3–3.5	+	+	0	+	0	0	0
4–5.5	0	0	0	0	0	+	0
6–7.5	0	0	0	0	0	0	0
8–9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

636

7

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6–7	8–9	10–11	12–13	>13	IND
0–1.5	17	1	0	0	0	0	4
1–1.5	14	30	5	3	0	0	2
2–2.5	3	9	6	0	1	0	3
3–3.5	1	0	3	0	0	0	0
4–5.5	0	0	0	0	0	0	0
6–7.5	0	0	0	0	0	0	0
8–9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

113

11

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6–7	8–9	10–11	12–13	>13	IND
0–1.5	24	0	0	0	0	0	4
1–1.5	25	15	5	2	0	0	0
2–2.5	4	16	4	0	2	0	0
3–3.5	0	0	0	0	0	0	0
4–5.5	0	0	0	0	0	0	0
6–7.5	0	0	0	0	0	0	0
8–9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

55

12

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6–7	8–9	10–11	12–13	>13	IND
0–1.5	13	5	1	0	0	0	8
1–1.5	21	11	8	1	0	1	6
2–2.5	7	5	2	1	0	0	2
3–3.5	0	4	1	0	0	0	0
4–5.5	0	0	0	0	0	0	1
6–7.5	0	0	0	0	0	0	0
8–9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

64

13

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6–7	8–9	10–11	12–13	>13	IND
0–1.5	13	5	2	2	0	0	2
1–1.5	19	18	9	2	4	+	6
2–2.5	2	4	4	1	1	1	1
3–3.5	0	+	+	+	0	+	0
4–5.5	+	+	+	0	+	0	0
6–7.5	0	0	0	0	0	0	0
8–9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

647

14

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6–7	8–9	10–11	12–13	>13	IND
0–1.5	3	1	0	0	0	0	1
1–1.5	14	17	7	1	1	1	2
2–2.5	9	15	9	3	1	+	3
3–3.5	1	4	2	2	+	1	+
4–5.5	0	+	1	+	0	0	0
6–7.5	0	0	0	+	0	0	0
8–9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

470

15

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6–7	8–9	10–11	12–13	>13	IND
0–1.5	4	0	1	0	0	0	1
1–1.5	23	13	8	0	2	1	0
2–2.5	9	8	12	3	0	0	0
3–3.5	1	2	2	1	0	0	0
4–5.5	2	1	0	3	0	0	1
6–7.5	0	0	0	0	0	0	0
8–9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

95

16

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6–7	8–9	10–11	12–13	>13	IND
0–1.5	10	0	0	0	0	0	5
1–1.5	30	15	7	3	0	2	4
2–2.5	3	4	5	3	0	1	0
3–3.5	1	4	1	2	0	0	1
4–5.5	0	0	2	0	0	0	0
6–7.5	0	0	0	0	0	0	0
8–9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

114

20

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6–7	8–9	10–11	12–13	>13	IND
0–1.5	4	1	0	+	0	0	2
1–1.5	11	16	8	1	2	2	3
2–2.5	8	9	8	2	2	1	4
3–3.5	+	3	3	3	2	+	1
4–5.5	1	1	1	0	1	0	1
6–7.5	0	0	+	1	0	0	+
8–9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

453

21

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6–7	8–9	10–11	12–13	>13	IND
0–1.5	4	0	0	0	0	0	1
1–1.5	16	5	4	3	2	0	3
2–2.5	3	14	8	4	1	1	1
3–3.5	1	5	4	1	2	1	0
4–5.5	0	7	2	0	1	1	0
6–7.5	0	0	0	1	0	1	0
8–9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

97

22

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6–7	8–9	10–11	12–13	>13	IND
0–1.5	10	1	0	0	0	0	6
1–1.5	10	10	10	3	2	0	2
2–2.5	3	10	10	6	1	1	3
3–3.5	0	1	2	3	1	0	2
4–5.5	0	1	3	0	0	0	0
6–7.5	0	0	0	0	0	0	0
8–9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

173

23

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6–7	8–9	10–11	12–13	>13	IND
0–1.5	4	1	0	+	0	0	+
1–1.5	13	13	7	2	1	1	2
2–2.5	4	9	9	4	2	+	+
3–3.5	1	4	5	3	1	1	+
4–5.5	1	2	3	2	1	+	+
6–7.5	0	+	+	1	+	+	+
8–9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

629

24

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6–7	8–9	10–11	12–13	>13	IND
0–1.5	3	1	0	0	0	0	0
1–1.5	12	14	4	0	1	0	3
2–2.5	4	15	9	4	2	2	4
3–3.5	2	10	5	1	1	0	0
4–5.5	1	1	2	1	1	0	0
6–7.5	0	0	0	0	0	0	0
8–9.5	0	0	1	0	0	0	0
≥10	0	0	0	0	0	0	0

188

25

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6–7	8–9	10–11	12–13	>13	IND
0–1.5	2	0	0	0	0	0	0
1–1.5	5	3	6	0	1	0	2
2–2.5	3	9	9	6	3	1	4
3–3.5	+	4	10	5	3	0	1
4–5.5	+	4	3	3	3	0	1
6–7.5	0	+	2	1	1	0	1
8–9.5	0	0	+	0	0	0	0
≥10	0	0	0	+	+	0	0

240

29

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6–7	8–9	10–11	12–13	>13	IND
0–1.5	3	0	0	0	0	0	0
1–1.5	5	9	3	1	0	0	4
2–2.5	2	20	9	5	1	+	4
3–3.5	1	4	5	6	1	0	2
4–5.5	1	3	3	2	+	+	1
6–7.5	0	1	1	1	0	+	0
8–9.5	0	1	+	0	0	0	0
≥10	0	0	0	0	0	0	0

276

30

INSUFFICIENT DATA

31

INSUFFICIENT DATA

32

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6–7	8–9	10–11	12–13	>13	IND
0–1.5	0	0	0	0	0	0	0
1–1.5	0	0	0	13	25	0	0
2–2.5	0	0	6	13	44	0	0
3–3.5	0	0	0	0	0	0	0
4–5.5	0	0	0	0	0	0	0
6–7.5	0	0	0	0	0	0	0
8–9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

16

33

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6–7	8–9	10–11	12–13	>13	IND
0–1.5	2	1	0	0	0	0	2
1–1.5	17	12	0	2	0	0	1
2–2.5	7	8	5	4	2	1	2
3–3.5	4	4	2	1	6	2	4
4–5.5	0	1	1	0	0	1	1
6–7.5	0	1	2	0	0	0	0
8–9.5	0	1	0	0	0	0	0
≥10	0	0	0	0	0	0	0

84

34

INSUFFICIENT DATA

Graphs represent the objective compilation of available data for specified areas without regard to

The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

HEIGHT

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9-11 seconds.)

hen both are reported. If both.

1

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	12	4	0	0	0	0	0
1-1.5	31	20	6	1	0	0	0
2-2.5	7	11	4	0	1	0	0
3-3.5	0	2	0	0	0	1	0
4-4.5	0	0	0	0	0	0	0
5-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

108

2

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	1	0	0	0	0	1
1-1.5	25	15	4	1	3	0	1
2-2.5	3	16	11	3	0	0	0
3-3.5	1	6	4	0	1	1	0
4-4.5	0	1	1	1	0	0	0
5-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

190

3

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	1	2	0	0	0	1
1-1.5	12	22	10	1	0	0	3
2-2.5	5	13	11	2	0	0	1
3-3.5	1	2	4	2	0	1	2
4-4.5	0	1	0	0	0	0	0
5-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

185

4

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	9	3	0	0	0	0	3
1-1.5	20	16	10	1	0	0	6
2-2.5	5	10	7	1	3	0	1
3-3.5	0	2	1	2	0	0	0
4-4.5	0	1	0	1	0	0	0
5-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

153

5

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	14	4	2	1	0	0	8
1-1.5	11	13	12	4	3	+	6
2-2.5	3	5	6	2	1	+	1
3-3.5	0	+	1	1	1	0	0
4-4.5	0	0	+	+	0	0	0
5-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

456

6

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	26	4	1	2	0	0	9
1-1.5	19	11	7	2	3	1	5
2-2.5	2	3	1	1	+	1	1
3-3.5	+	+	0	+	0	0	0
4-4.5	0	0	0	0	0	+	0
5-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

636

7

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	17	1	0	0	0	0	4
1-1.5	14	30	5	3	0	0	2
2-2.5	3	9	6	0	1	0	3
3-3.5	1	0	3	0	0	0	0
4-4.5	0	0	0	0	0	0	0
5-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

113

8

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	+	+	0	0	1	1
1-1.5	20	15	4	2	2	0	7
2-2.5	5	12	7	4	2	0	2
3-3.5	+	2	3	+	+	1	1
4-4.5	+	0	+	+	0	+	0
5-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

424

9

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	1	0	0	0	0	0	+
1-1.5	17	15	4	1	1	1	1
2-2.5	9	22	13	2	+	1	2
3-3.5	+	3	3	2	0	0	+
4-4.5	0	1	+	0	0	0	0
5-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

566

10

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	11	2	1	+	0	0	2
1-1.5	20	20	8	3	2	2	3
2-2.5	5	9	6	2	1	1	1
3-3.5	+	1	+	+	0	0	0
4-4.5	+	+	0	+	0	0	0
5-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

772

13

IND
2
6
1
0
0
0
0
0

647

14

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	1	0	0	0	0	1
1-1.5	14	17	7	1	1	1	2
2-2.5	9	15	9	3	1	+	3
3-3.5	1	4	2	2	+	1	+
4-4.5	0	+	1	+	0	0	0
5-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	+	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

470

15

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	0	1	0	0	0	1
1-1.5	23	13	8	0	2	1	0
2-2.5	9	8	12	3	0	0	0
3-3.5	1	2	2	1	0	0	0
4-4.5	2	1	0	3	0	0	1
5-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

95

16

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	10	0	0	0	0	0	5
1-1.5	30	15	7	3	0	2	4
2-2.5	3	4	5	3	0	1	0
3-3.5	1	4	1	2	0	0	1
4-4.5	0	0	2	0	0	0	0
5-5.5	0	0	0	0	0	0	0
6-7.5	0	0	1	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

114

17

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	6	1	0	0	0	0	1
1-1.5	11	11	2	1	1	0	4
2-2.5	5	16	9	4	2	1	1
3-3.5	1	6	7	4	3	1	1
4-4.5	1	1	1	0	2	0	1
5-5.5	0	0	1	0	0	0	0
6-7.5	0	0	1	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

170

18

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	2	+	0	0	0	2
1-1.5	6	13	2	+	1	+	5
2-2.5	6	9	9	7	2	1	3
3-3.5	2	3	4	3	3	+	1
4-4.5	0	+	1	1	1	1	0
5-5.5	0	1	0	+	1	+	0
6-7.5	0	0	1	+	0	0	0
8-9.5	0	0	1	+	0	0	0
≥10	0	0	0	0	0	0	0

307

19

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	0	0	0	0	0	1
1-1.5	7	8	6	1	+	1	2
2-2.5	6	13	10	3	2	+	1
3-3.5	1	3	7	3	3	1	2
4-4.5	1	1	6	2	+	1	0
5-5.5	0	+	+	1	0	+	0
6-7.5	0	0	0	+	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

473

22

IND
6
2
3
2
0
0
0
0
0

73

23

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	1	0	+	0	0	+
1-1.5	13	13	7	2	1	1	2
2-2.5	4	9	9	4	2	+	+
3-3.5	1	4	5	3	1	1	+
4-4.5	1	2	3	2	1	+	+
5-5.5	0	0	0	0	0	0	0
6-7.5	0	+	+	1	+	+	+
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

629

24

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	1	0	0	0	0	0
1-1.5	12	14	4	0	1	0	3
2-2.5	4	15	3	4	2	2	4
3-3.5	2	10	5	1	1	0	0
4-4.5	1	1	2	1	1	0	0
5-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	1	0	0	0	0
≥10	0	0	0	0	0	0	0

188

25

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	0	0	0	0	0	0
1-1.5	5	3	6	0	1	0	2
2-2.5	3	9	9	6	3	1	4
3-3.5	+	4	10	5	3	0	1
4-4.5	+	4	3	3	3	0	1
5-5.5	0	0	0	0	0	0	0
6-7.5	0	+	2	1	1	0	1
8-9.5	0	0	+	0	0	0	0
≥10	0	0	0	1	+	0	0

240

26

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	0	0	0	0	0	0
1-1.5	10	12	5	0	1	1	3
2-2.5	3	10	10	4	3	0	2
3-3.5	0	6	8	4	4	1	1
4-4.5	1	1	4	0	1	1	2
5-5.5	0	0	0	0	0	0	1
6-7.5	0	0	0	0	0	0	1
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

113

27

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	0	0	0	0	0	0	0
1-1.5	7	21	29	14	0	0	0
2-2.5	7	0	7	0	0	0	0
3-3.5	0	0	14	0	0	0	0
4-4.5	0	0	0	0	0	0	0
5-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

14

28

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	0	0	0	0	0	7
1-1.5	19	7	4	4	0	0	0
2-2.5	11	4	0	4	0	0	4
3-3.5	0	4	7	19	0	0	4
4-4.5	0	0	0	0	0	0	0
5-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

27

31

IND
0
0
0
0
0
0
0
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32

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	0	0	0	1	0	0	0
1-1.5	0	0	0	13	25	0	0
2-2.5	0	0	6	13	44	0	0
3-3.5	0	0	0	0	0	0	0
4-4.5	0	0	0	0	0	0	0
5-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

16

33

PERIOD (SECONDS)

HEIGHT (ENTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	1	0	0	0	0	2
1-1.5	17	12	0	2	0	0	1
2-2.5	7	8	5	4	2	1	2
3-3.5	4	4	2	1	6	2	4
4-4.5	0	1	1	0	0	1	1
5-5.5	0	1	2	0	0	0	0
6-7.5	0	1	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

84

34

INSUFFICIENT DATA

35

INSUFFICIENT DATA

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INSUFFICIENT DATA

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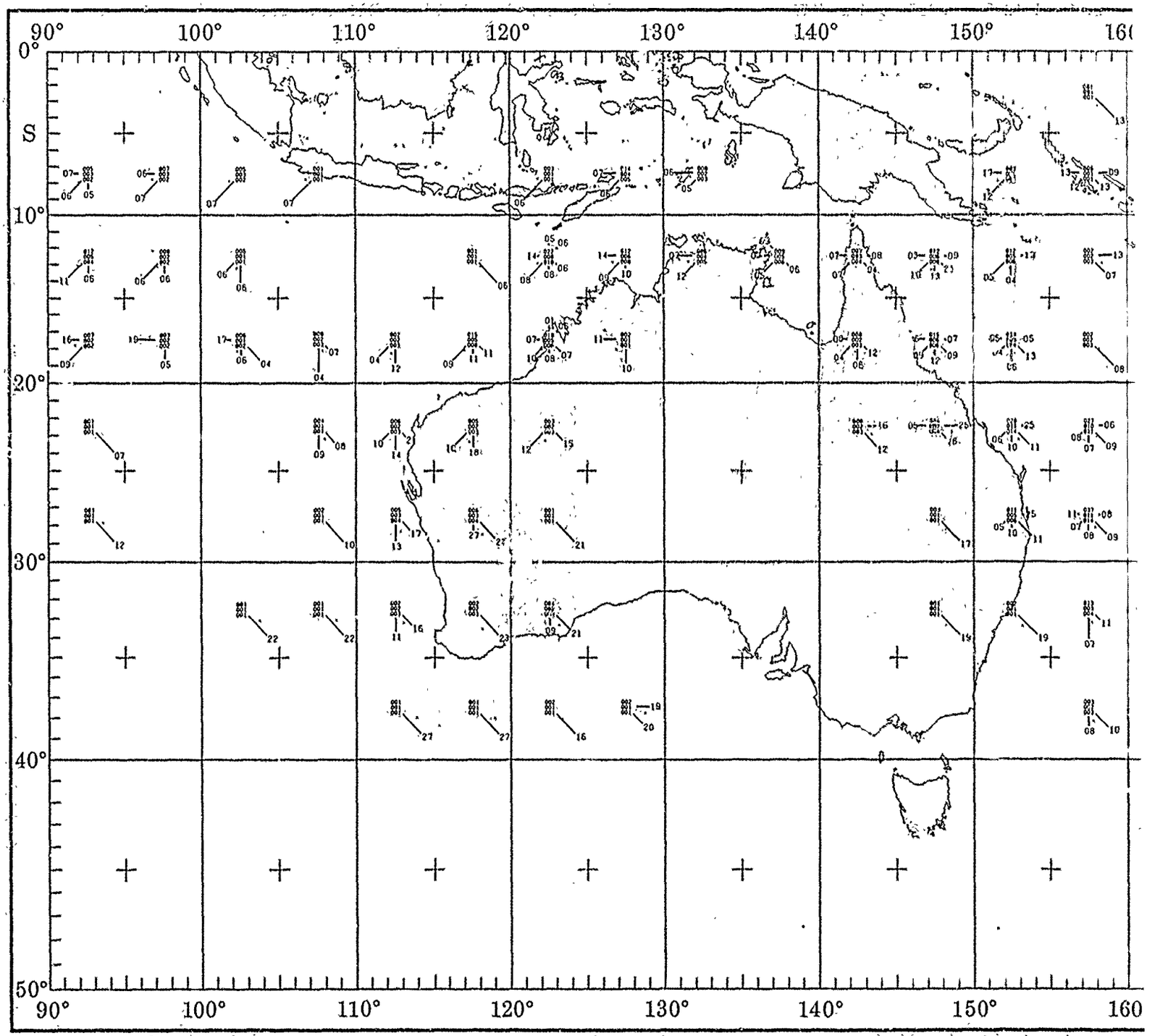
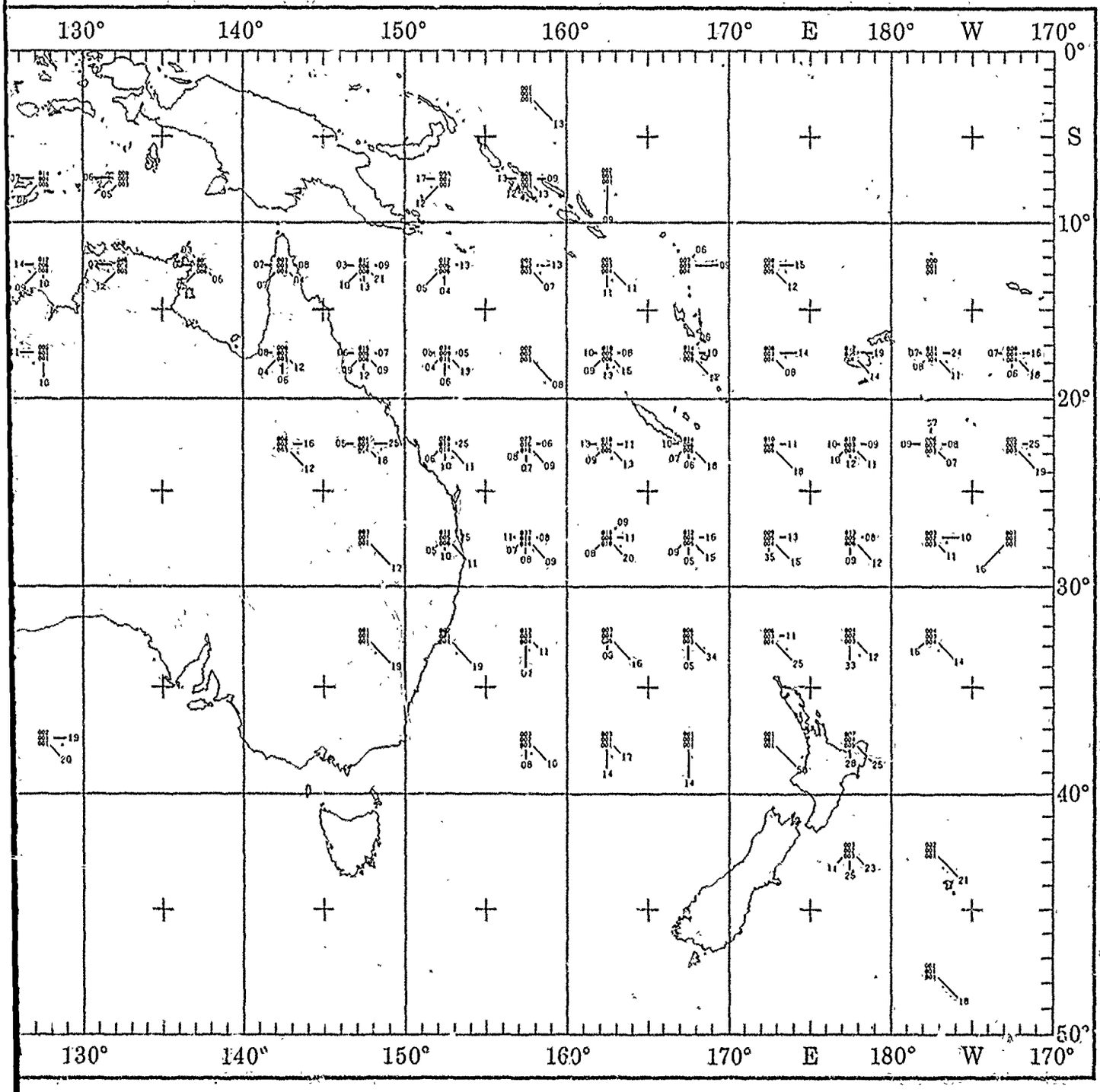
t the objective compilation of available data for specified areas without regard to suspected biases.
lyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

APRIL



TROPICAL CYCLONE



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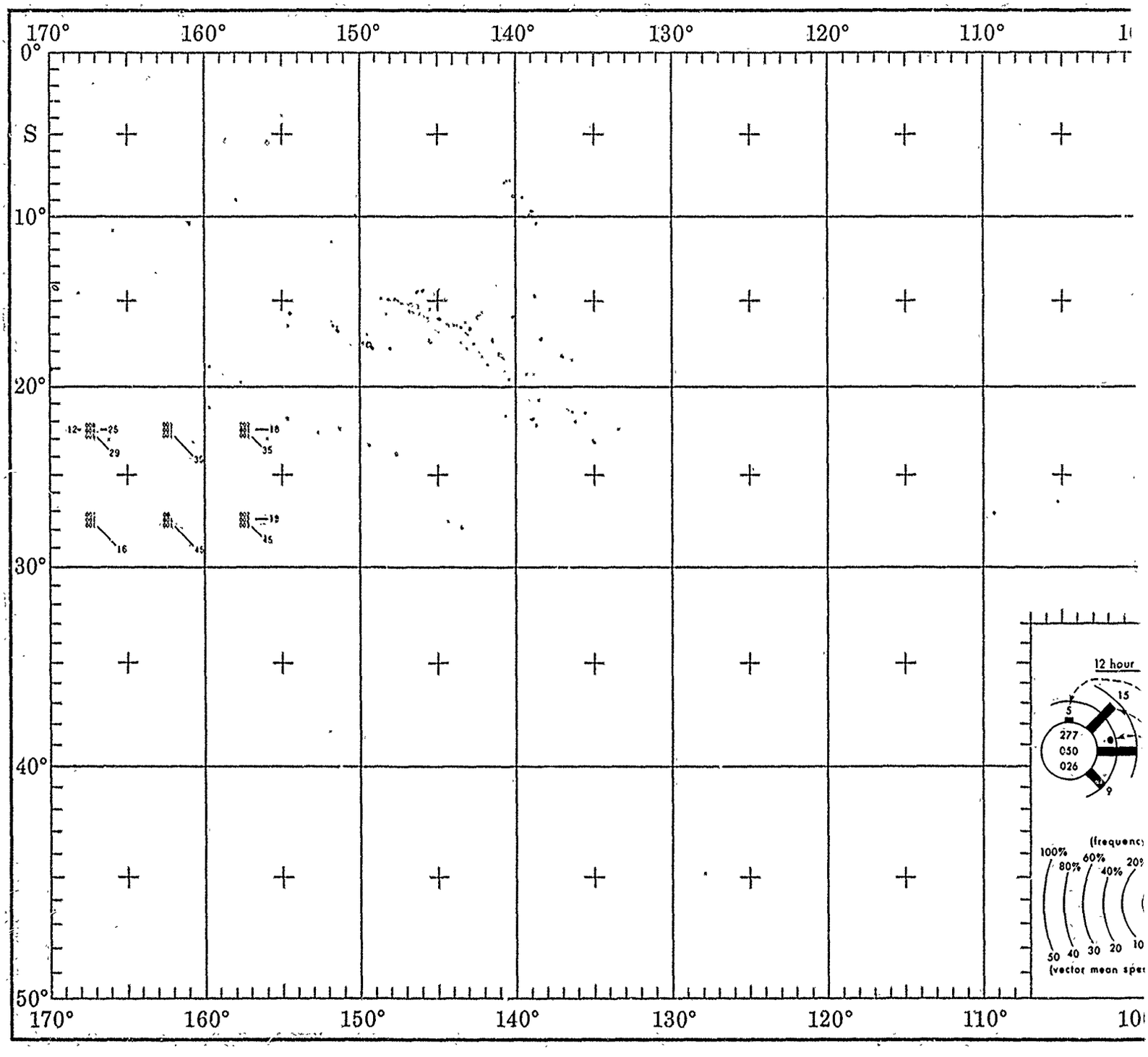
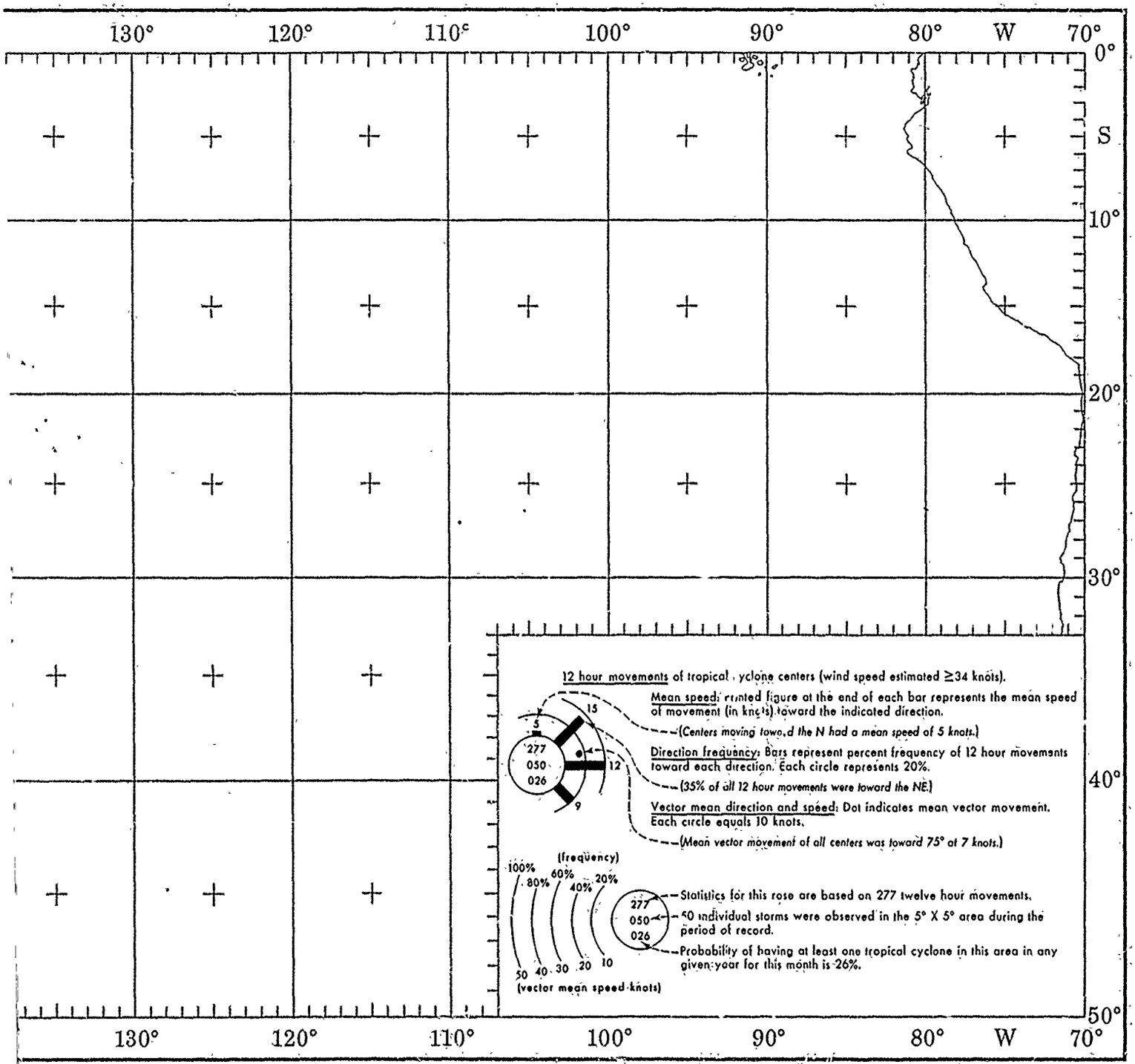
TROPICAL CYCLONE



APRIL


130°
120°
110°
100°
90°
80°
W
70°
0°
S
10°
20°
30°
40°
50°
12 hour movements of tropical cyclone centers (wind speed estimated ≥34 knots).
Mean speed: Printed figure at the end of each bar represents the mean speed of movement (in knots) toward the indicated direction.
(Centers moving toward the N had a mean speed of 5 knots.)
Direction frequency: Bars represent percent frequency of 12 hour movements toward each direction. Each circle represents 20%.
(35% of all 12 hour movements were toward the NE.)
Vector mean direction and speed: Dot indicates mean vector movement. Each circle equals 10 knots.
(Mean vector movement of all centers was toward 75° at 7 knots.)
5
15
12
9
277
050
026
(frequency)
100%
80%
60%
40%
20%
50
40
30
20
10
(vector mean speed-knots)
Statistics for this rose are based on 277 twelve hour movements.
50 individual storms were observed in the 5° X 5° area during the period of record.
Probability of having at least one tropical cyclone in this area in any given year for this month is 26%.

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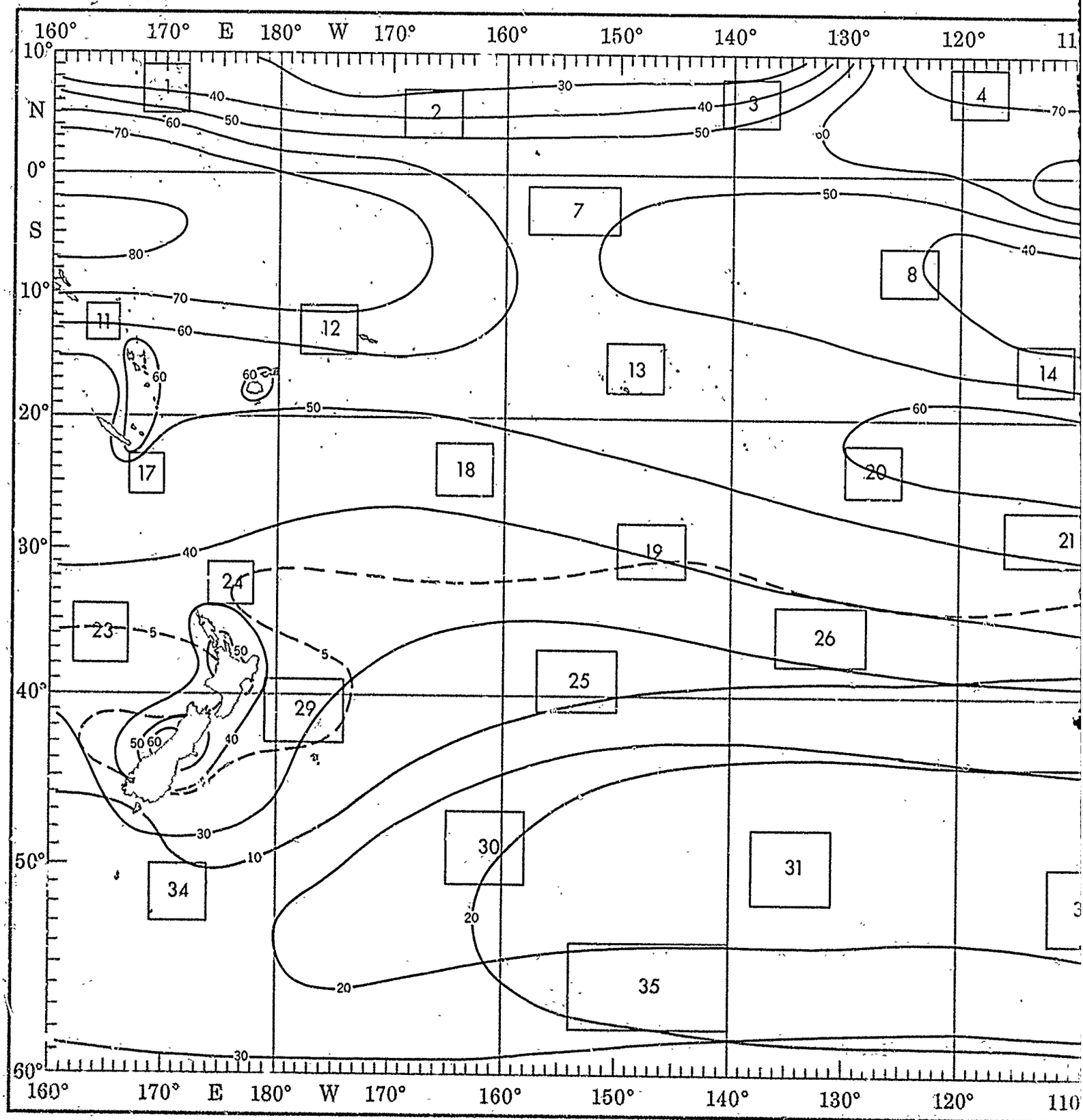
160° 170° E 180° W 170° 160° 150° 140° 130° 120° 11
10° N 0° S 10° 20° 30° 40° 50° 60°
1
2
3
4
7
8
11
12
13
14
17
18
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21
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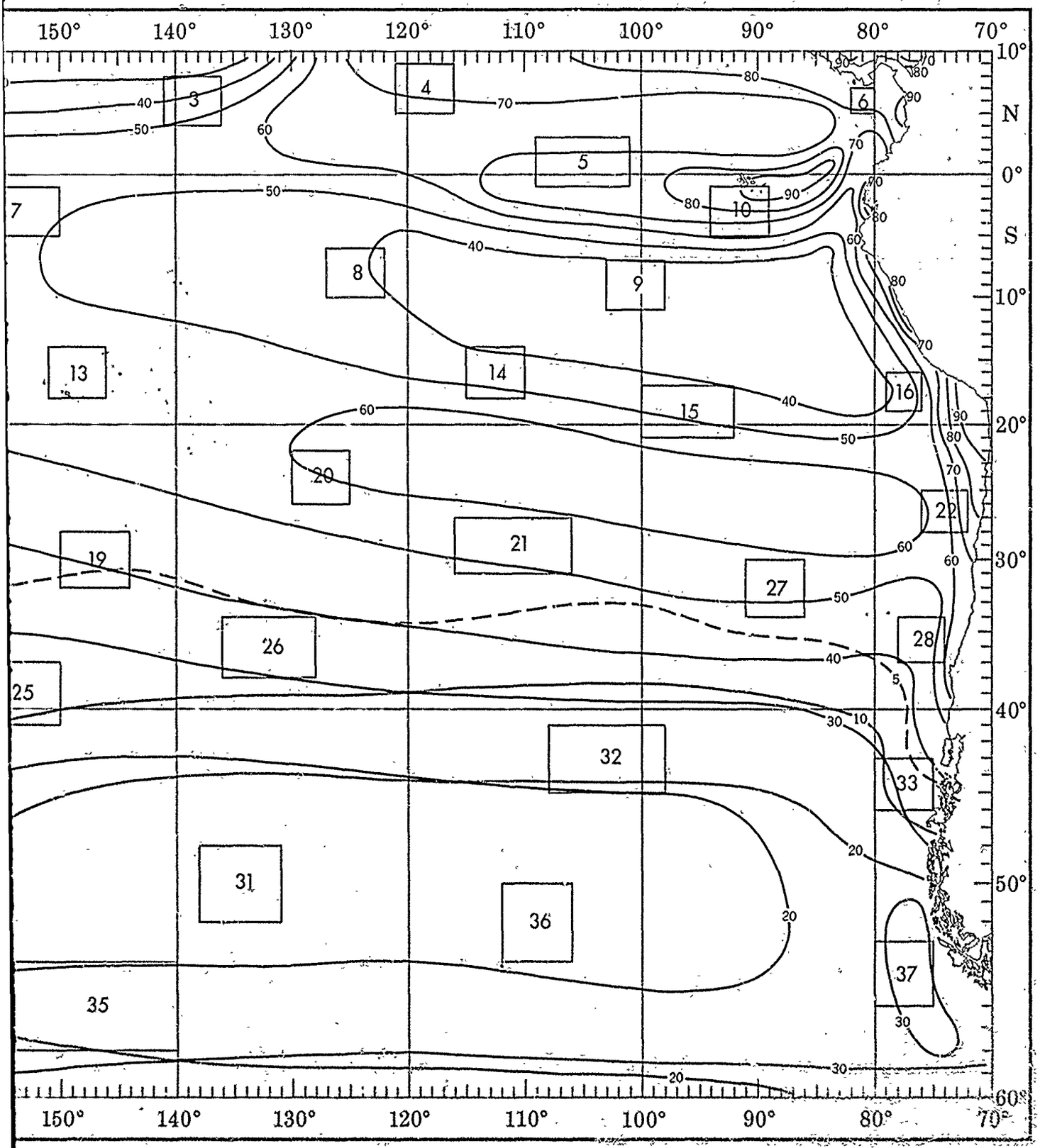
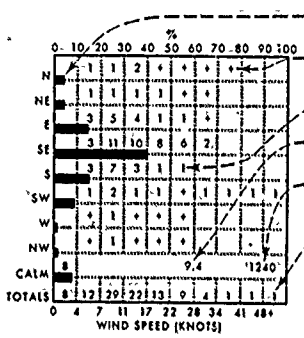
20

SURFACE WINDS



WIND DIRECTION AND SPEED

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.



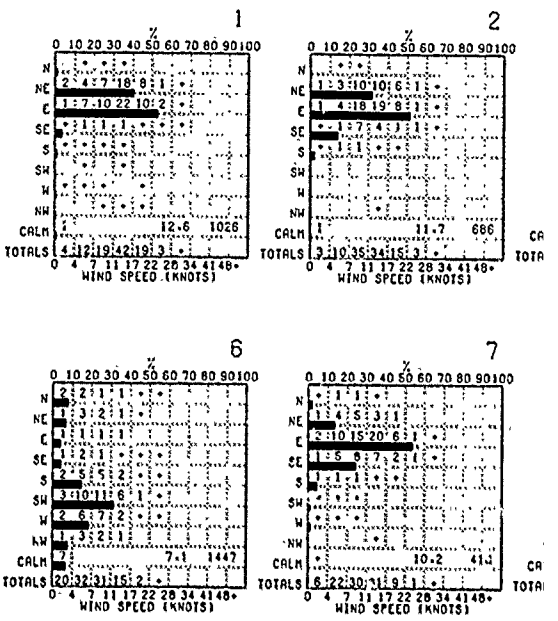
WIND SPEED INTERVAL (KNOTS)

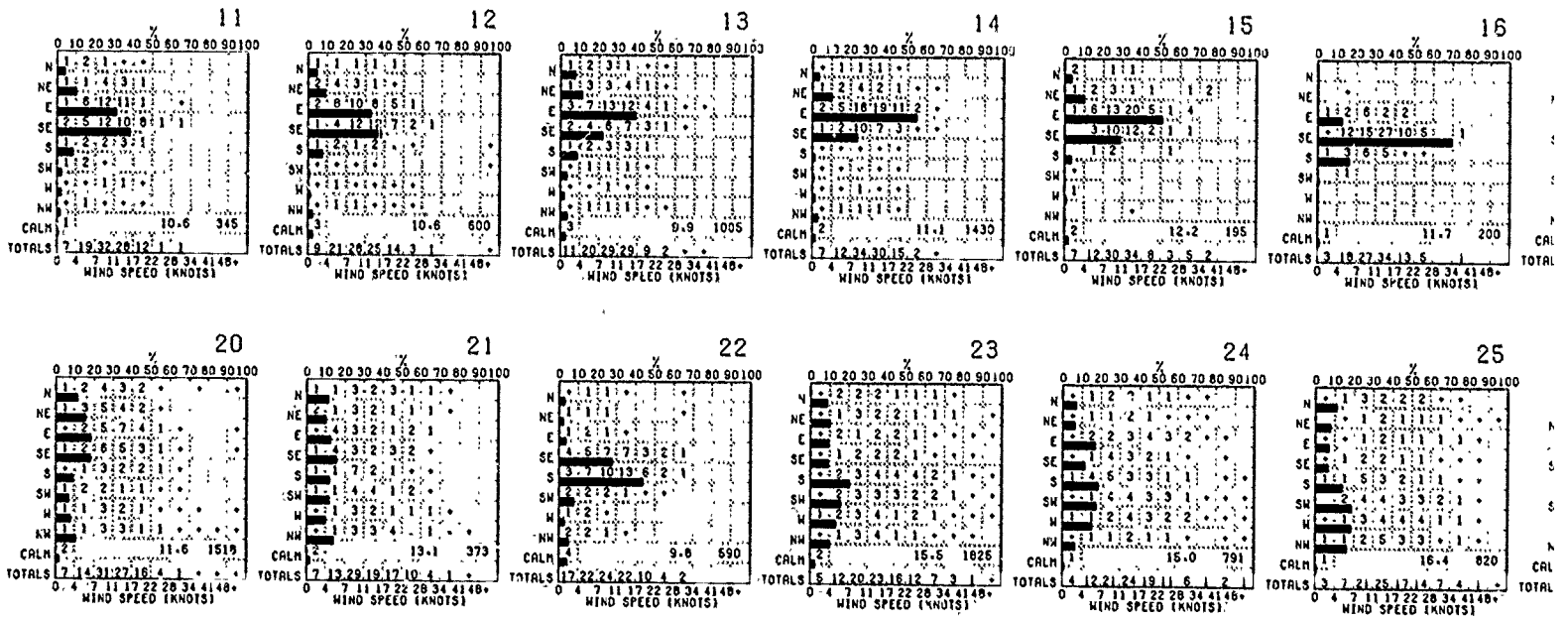
0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	≥48
0	4	7	11	17	22	28	34	41	48+

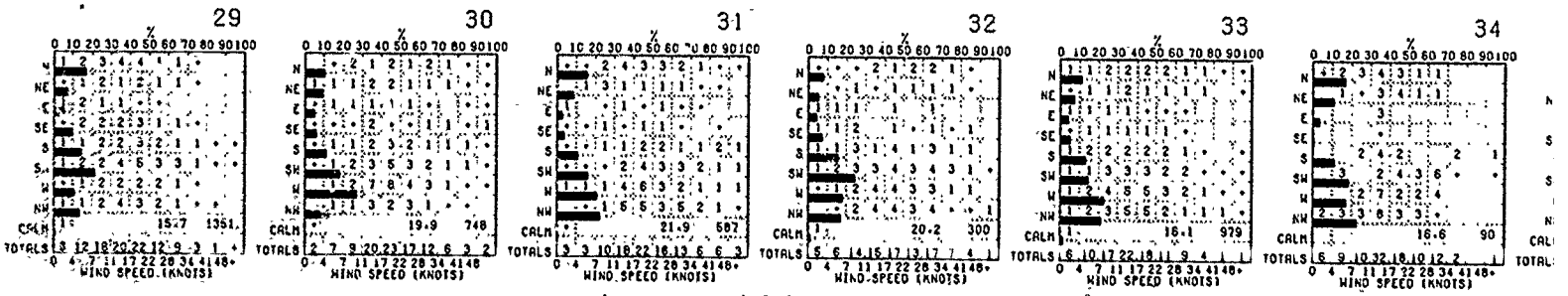
Printed scale on bottom of chart

BLUE LINE - Percent frequency of wind speed ≤10 knots

RED LINE - Percent frequency of wind speed ≥34 knots







Graphs represent the objective compilation of available data for specified areas without regard to

The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

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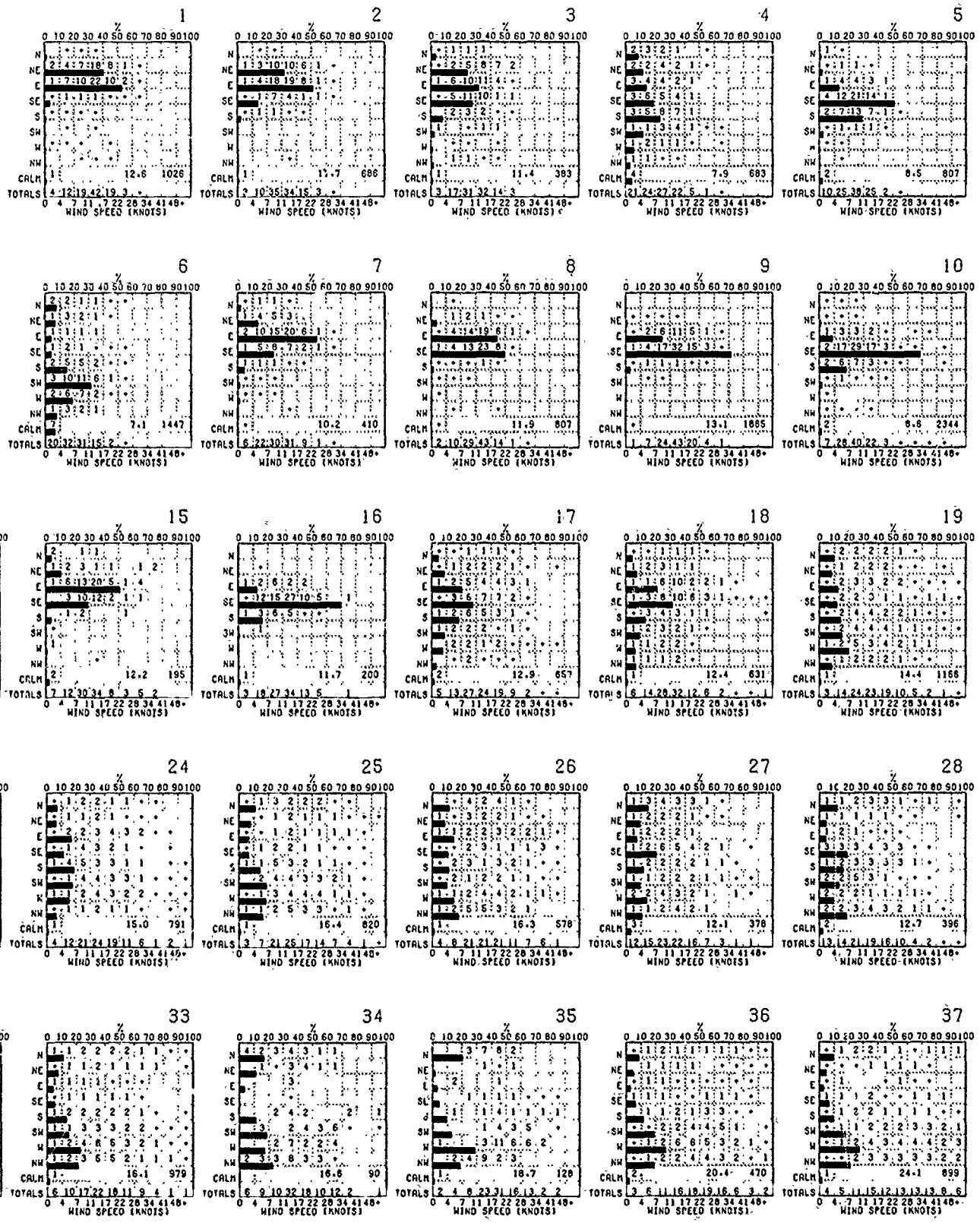

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ses (opposite page) are based on all available data subjectively adjusted where bias was evident.

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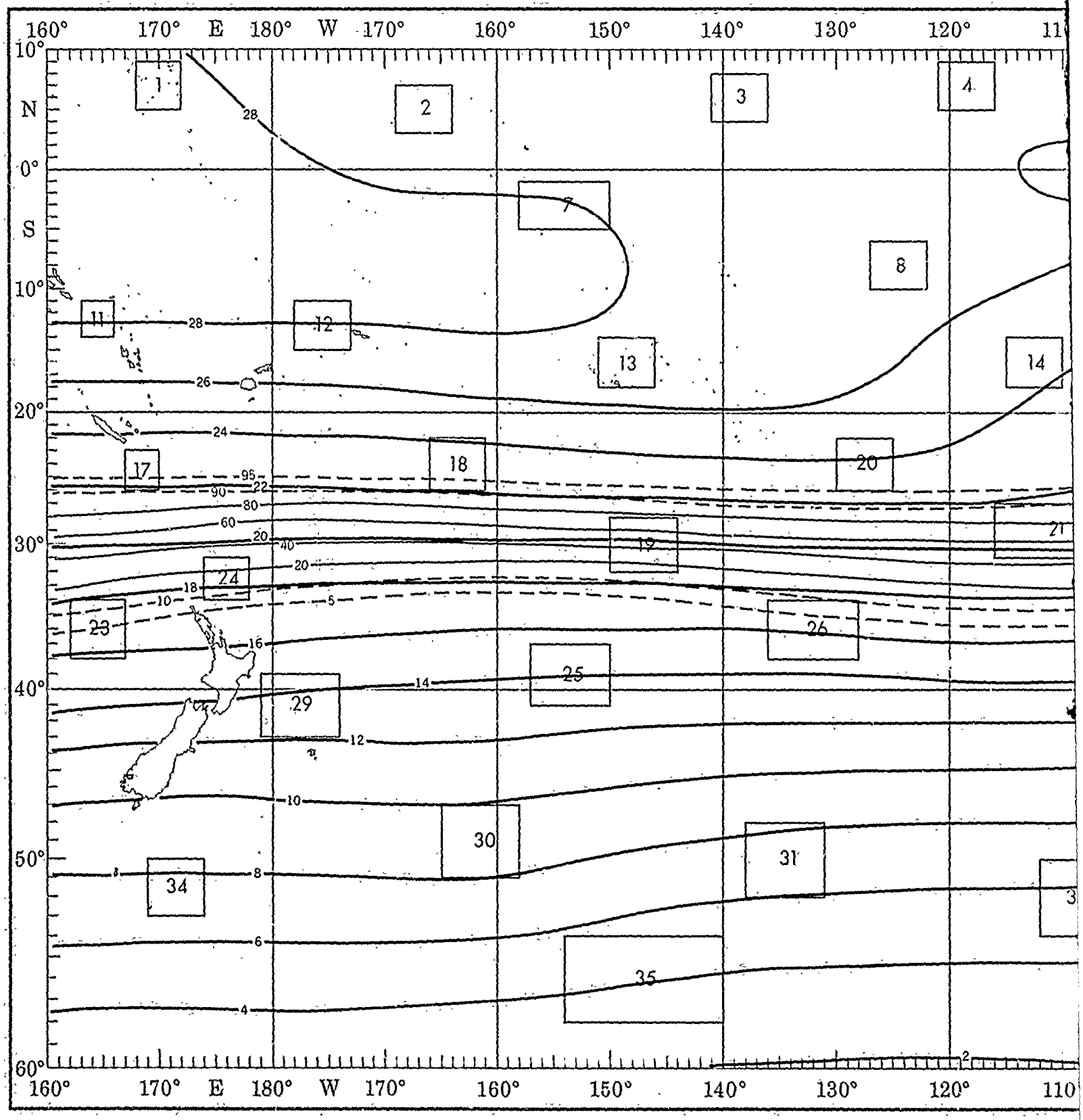
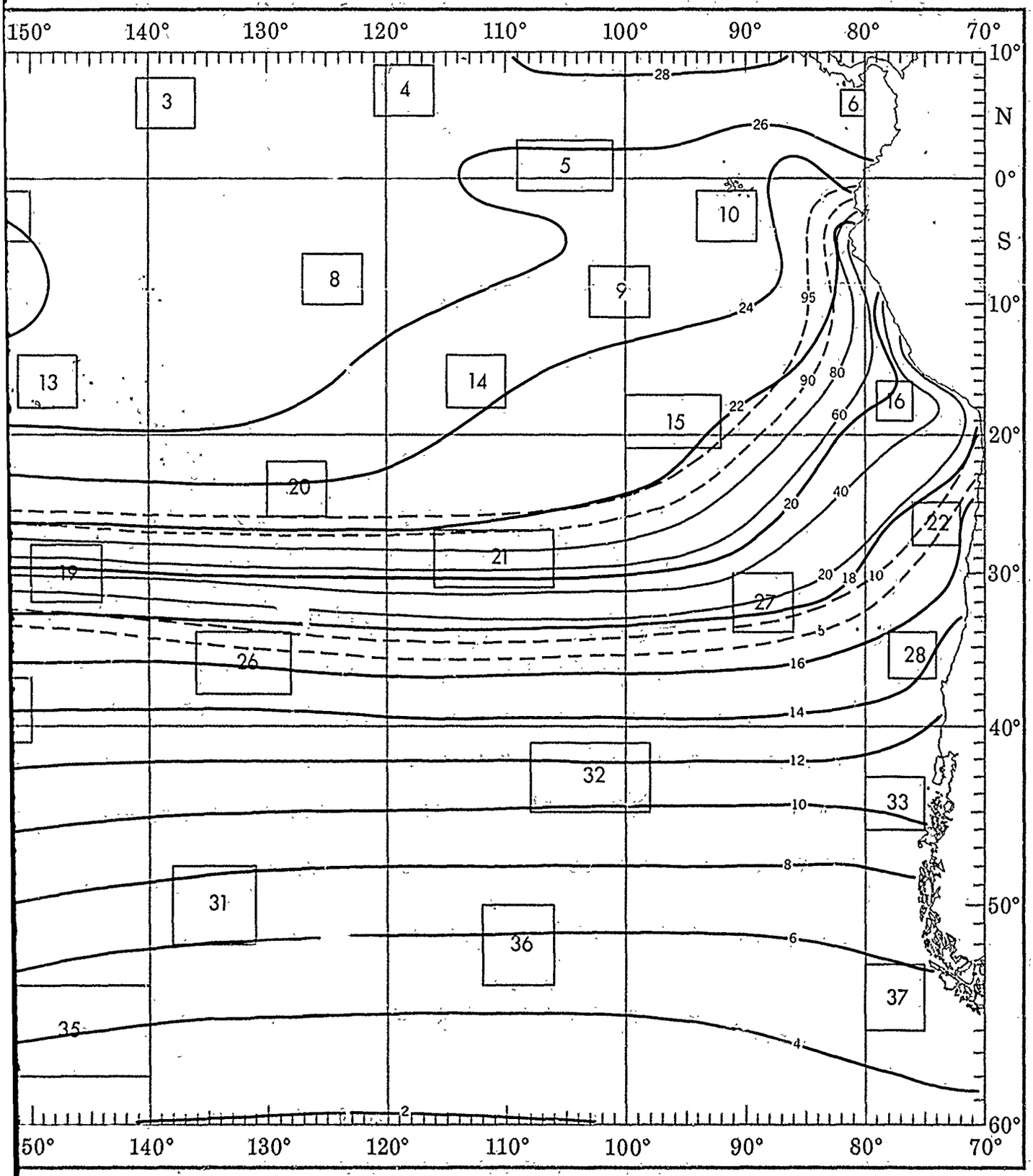


116

SURFACE AIR TEMPERATURE



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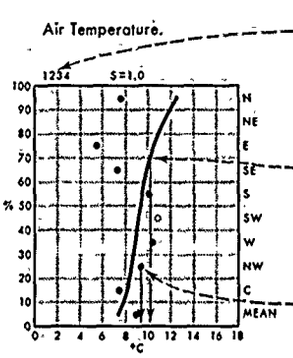
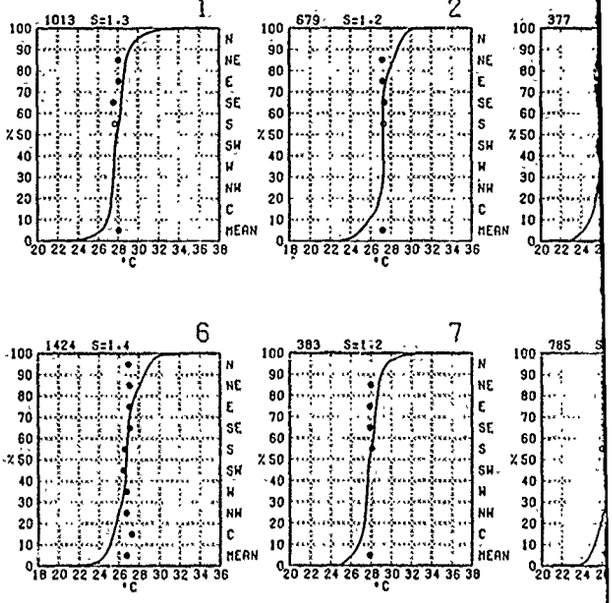
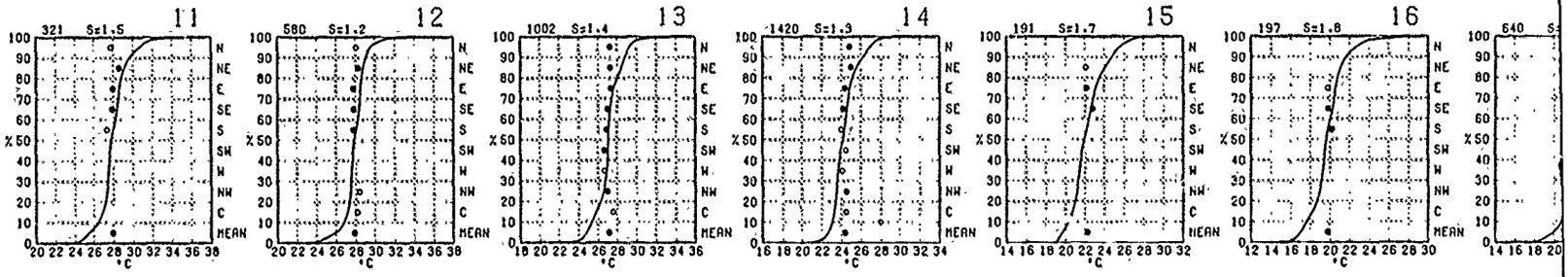
SURFACE AIR TEMPERATURE

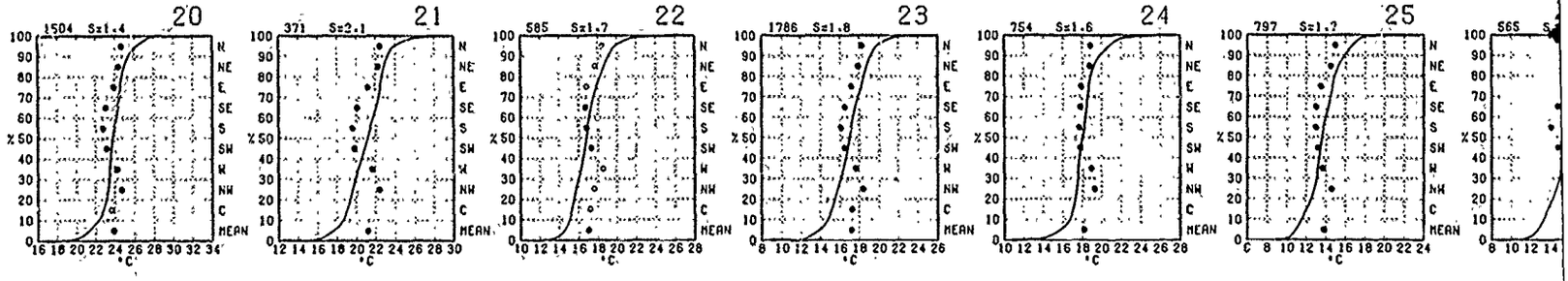


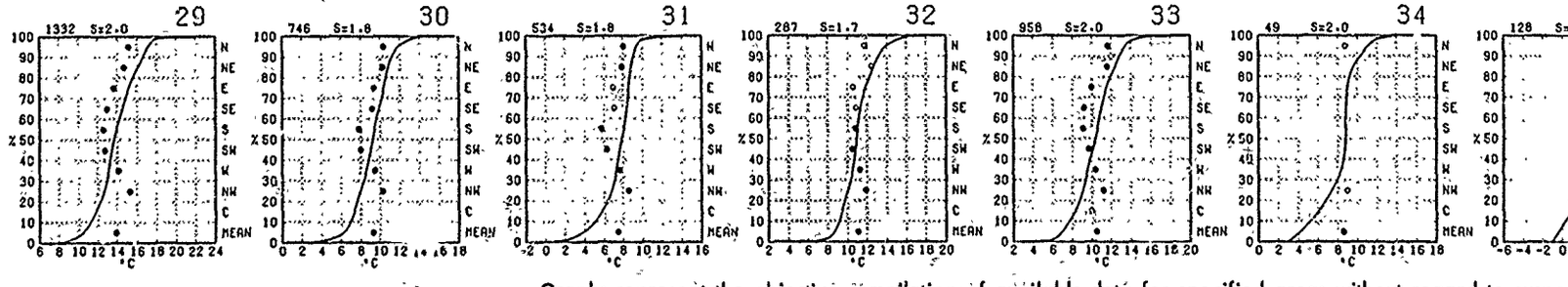
BLACK LINE - Mean air temperature (°C)

RED LINE - Percent frequency of temperature ≥20°C (68°F)









Graphs represent the objective compilation of available data for specified areas without regard to suspect
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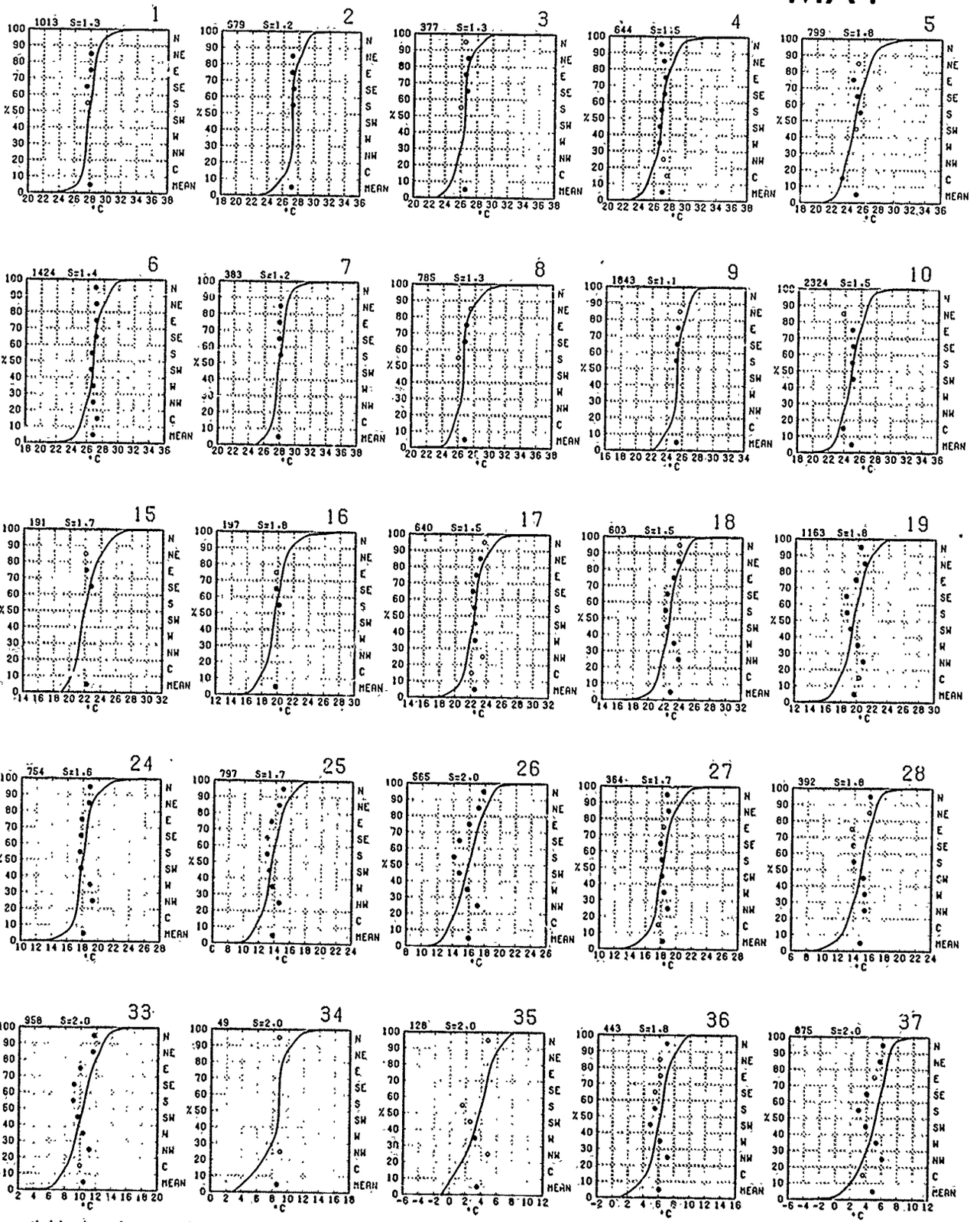

jective compilation of available data for specified areas without regard to suspected biases.
posite page) are based on all available data subjectively adjusted where bias was evident.

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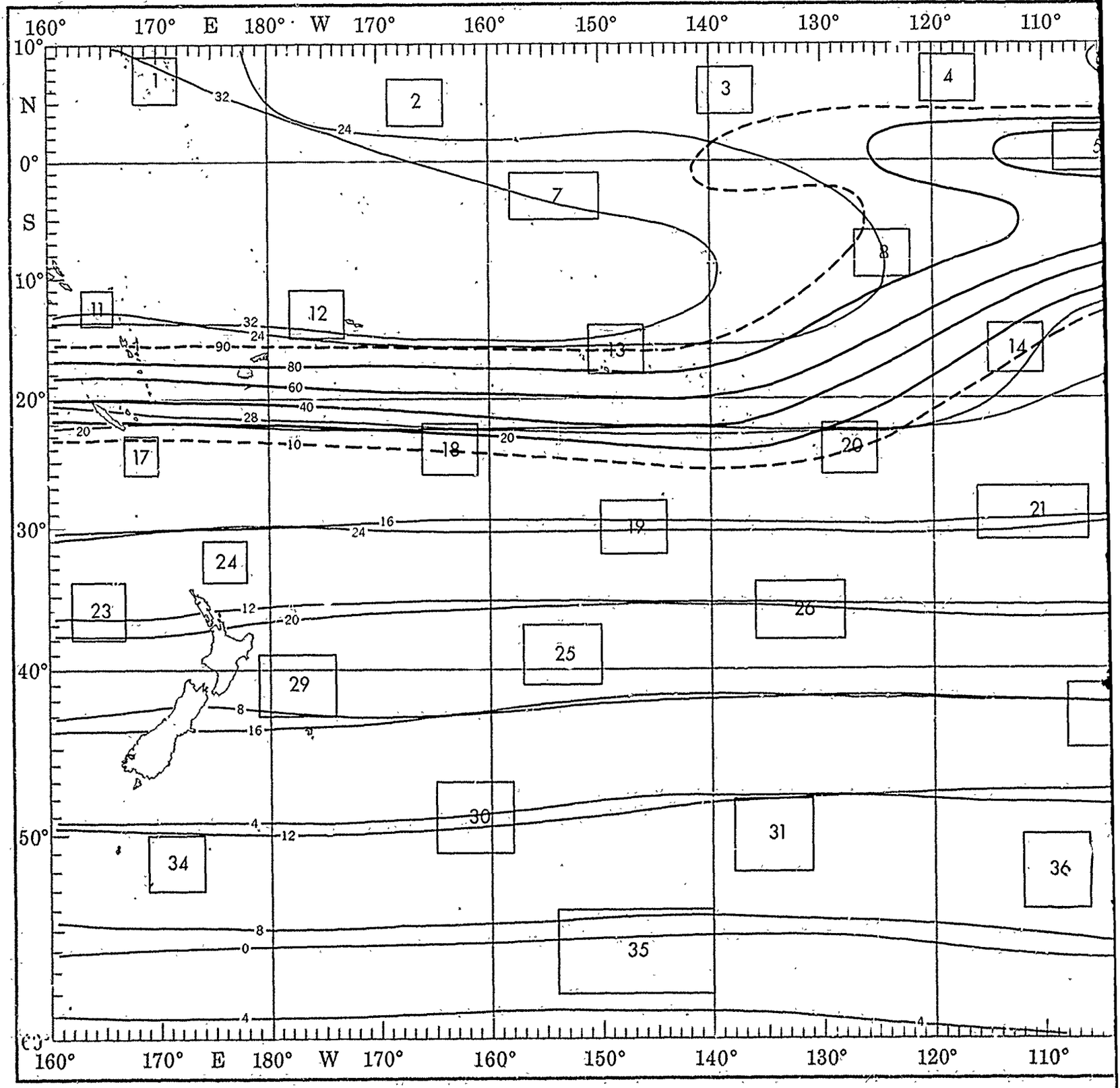
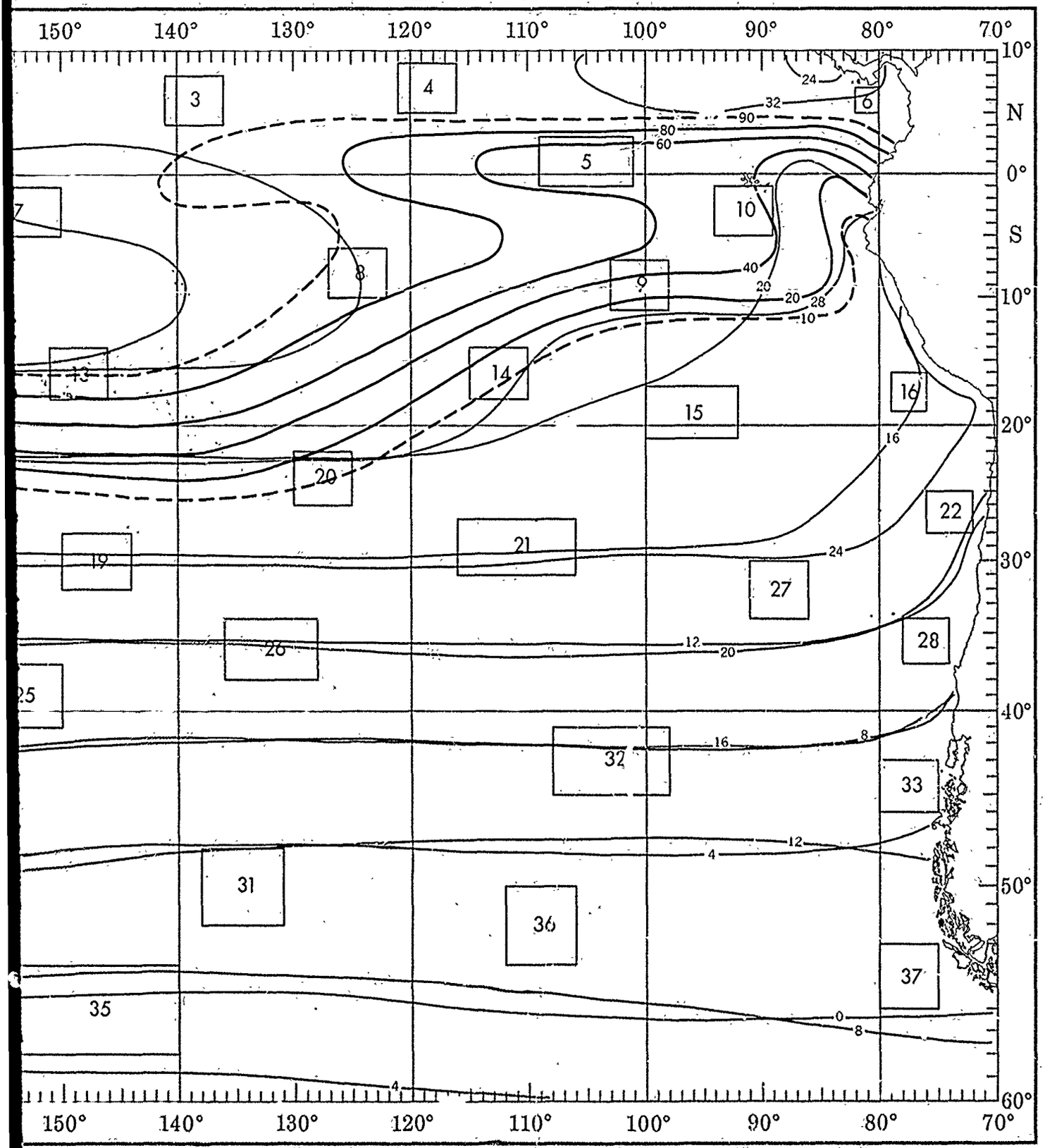
TEMPERATURE EXTREM



TEMPERATURE EXTREMES AND T-H INDEX



WIND SPEED AND AIR TEMPERATURE

Wind speed and air temperature.

Percent frequency of simultaneous occurrence of specified temperature (°C) and wind speed (knots).

WIND SPEED (kts)

Temp (°C)	0-3	4-10	11-21	22-33	≥34
-4 -5	18	8	7	1	1
-2 -3	17	8	7	1	1
-0 -1	13	6	5	1	1
+2 +1	1	+	0	0	0
+4 +3	0	0	0	0	0
+6 +5	+	0	0	+	+
+8 +7	1	+	0	0	0
+10 +9	0	0	0	0	0
+12 +11	1	+	0	0	0
+14 +13	1	0	0	0	0
+16 +15	1	+	0	0	0

3550

(1% of all observations reported temperature 2-3°C simultaneously with wind speed of 22-33 kts.)

+ Indicates < 5% but >0.

Number of observations.

Use of this table in determination of Potential Superstructure Icing is explained in the text.

BLACK LINE - Percent frequency of T-H index ≥24°C (75.2°F) (discomfort may be experienced due to heat)

BLUE LINE - Minimum (1%) air temperature (°C) (1% of the temperatures were equal to or less than the given value)

RED LINE - Maximum (99%) air temperature (°C) (1% of the temperatures were greater than the given value)

1

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	1	+	0	0
30.31	+	3	4	+	0
28.29	2	19	38	3	0
26.27	1	7	18	+	0
24.25	0	1	+	+	0
22.23	0	+	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1013

2

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	2	1	0	0
28.29	1	16	17	1	0
26.27	1	26	28	1	0
24.25	+	2	2	1	0
22.23	0	+	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

684

6

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	+	0	0
30.31	1	1	1	0	0
28.29	7	14	2	+	0
26.27	14	37	10	+	0
24.25	1	7	3	+	0
22.23	0	1	+	+	0
20.21	0	+	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1514

7

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	+	0	0	0	0
32.33	0	+	+	0	0
30.31	1	2	3	0	0
28.29	4	31	23	1	0
26.27	2	19	14	+	0
24.25	+	0	1	+	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

385

11

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	3	0	0	0
30.31	1	7	1	+	0
28.29	4	22	23	2	0
26.27	2	15	15	1	0
24.25	+	1	3	0	0
22.23	+	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

321

12

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	0	0	0
30.31	1	3	1	0	0
28.29	6	31	23	1	0
26.27	3	13	11	2	+
24.25	0	1	2	+	0
22.23	0	0	+	+	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

586

13

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	+	0	0
30.31	1	2	1	+	0
28.29	4	17	13	1	0
26.27	6	26	20	1	0
24.25	+	3	3	+	+
22.23	0	+	+	+	0
20.21	0	+	0	0	0
18.18	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1013

14

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	+	+	0	0
28.29	+	1	+	+	0
26.27	1	9	6	+	0
24.25	4	27	27	1	0
22.23	2	9	10	1	0
20.21	0	+	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

1443

15

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	5	2	0	0
24.25	1	5	6	2	0
22.23	5	19	21	5	0
20.21	2	11	14	1	2
18.18	0	1	1	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

191

16

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	0	1	0	0
26.27	0	1	0	0	0
24.25	0	1	1	0	0
22.23	1	7	5	1	0
20.21	1	18	21	2	0
18.19	1	16	16	3	1
16.17	1	3	4	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
9.9	0	0	0	0	0

197

20

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	0	+	0	0
28.29	0	1	+	0	0
26.27	1	6	6	+	0
24.26	4	23	19	2	+
22.23	2	14	14	3	+
20.21	+	2	2	+	0
18.19	+	+	+	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

1530

21

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	+	0	0	0
26.27	0	1	1	0	0
24.26	1	4	2	1	1
22.23	2	11	15	6	1
20.21	3	17	10	3	0
18.18	1	6	6	3	0
16.17	0	2	1	1	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

372

22

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	0	0	+	0
24.25	0	0	0	0	0
22.23	1	+	1	+	0
20.21	2	4	1	+	0
18.18	6	11	8	1	0
16.17	6	24	17	3	0
14.16	3	6	4	2	0
12.13	0	+	+	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

587

23

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	0	+	0	0
24.25	0	+	+	0	0
22.23	+	+	+	+	0
20.21	+	3	4	1	+
18.19	2	12	13	5	1
16.17	3	11	16	7	3
14.15	1	4	5	4	1
12.13	+	1	1	1	+
10.11	0	0	0	0	+
8.9	0	0	0	0	0
6.7	0	0	0	0	0

1801

24

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	0	+	0	0	0
22.23	+	1	2	+	0
20.21	1	4	7	1	+
18.19	2	17	23	8	2
16.17	2	11	11	5	1
14.15	+	+	1	1	+
12.13	0	+	+	+	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

761

25

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	+	0	0	0
20.21	0	0	0	+	0
18.19	0	+	1	0	+
16.17	+	3	8	4	1
14.15	1	11	15	7	3
12.13	1	11	17	8	2
10.11	1	3	2	1	+
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

801

29

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	+	0	+	0
18.18	0	1	1	1	+
16.17	1	6	12	3	+
14.16	2	11	12	5	1
12.13	3	9	14	8	1
10.11	1	1	2	3	1
8.9	0	+	1	1	+
6.7	0	0	0	+	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

1347

30

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	+	1	5	3	1
10.11	1	6	15	11	3
8.9	1	8	15	9	4
6.7	0	1	6	5	1
4.5	0	0	1	1	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

750

31

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	0	+	+	0
10.11	0	+	2	4	1
8.9	1	7	23	12	5
6.7	2	3	13	10	3
4.5	+	1	2	2	1
2.3	0	0	1	2	2
0.1	0	0	0	+	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

535

32

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	+	+	0	+
14.15	1	2	2	2	1
12.13	1	5	12	10	1
10.11	2	11	15	13	8
8.9	2	2	2	4	3
6.7	+	0	+	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

290

33

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	+	+	0	0
16.17	0	0	+	0	0
14.16	+	1	1	2	1
12.13	1	7	12	5	2
10.11	2	11	16	7	2
8.9	2	7	8	4	1
6.7	1	1	3	2	+
4.5	+	0	+	+	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0

959

34

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	2	0	0	0
10.11	8	10	14	6	0
8.9	2	6	22	6	0
6.7	0	4	6	0	0
4.5	0	0	6	4	0
2.3	0	0	2	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

49

Graphs represent the objective compilation of available data for specified areas without regard to su
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4

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WIND SPEED (KTS) 1

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	1	+	0	0
30.31	+	3	4	+	0
28.29	2	19	38	3	0
26.27	1	7	18	+	0
24.25	0	1	+	+	0
22.23	0	+	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1013

WIND SPEED (KTS) 2

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	2	1	0	0
28.29	1	16	17	1	0
26.27	1	26	28	1	0
24.25	+	2	2	1	0
22.23	0	+	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

684

WIND SPEED (KTS) 3

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	0	0	0
32.33	0	+	+	0	0
30.31	0	1	+	0	0
28.29	+	8	9	1	0
26.27	2	31	30	1	0
24.25	2	8	5	1	0
22.23	0	+	1	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	01	0	0

384

WIND SPEED (KTS) 4

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	0	0	0
32.33	+	1	+	0	0
30.31	1	2	1	0	0
28.29	7	18	8	0	0
26.27	9	24	14	1	0
24.25	3	6	4	+	0
22.23	0	0	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

665

WIND SPEED (KTS) 5

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	0	0	0
32.33	0	0	+	0	0
30.31	+	1	1	0	0
28.29	+	4	2	0	0
26.27	3	20	10	0	0
24.25	4	29	10	+	0
22.23	4	9	2	0	0
20.21	+	+	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

820

WIND SPEED (KTS) 6

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	+	0	0
30.31	1	1	1	0	0
28.29	7	14	2	+	0
26.27	14	37	10	+	0
24.25	1	7	3	+	0
22.23	0	1	+	+	0
20.21	0	+	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1514

WIND SPEED (KTS) 7

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	+	0	0	0	0
32.33	0	+	+	0	0
30.31	1	2	3	0	0
28.29	4	31	23	1	0
26.27	2	19	14	+	0
24.25	+	0	1	+	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

385

WIND SPEED (KTS) 8

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	+	0	0
32.33	0	0	+	0	0
30.31	0	1	1	0	0
28.29	1	9	13	0	0
26.27	1	26	39	1	0
24.25	0	3	4	+	0
22.23	0	+	0	0	0
20.21	0	0	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

790

WIND SPEED (KTS) 9

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	+	0	0
28.29	0	1	2	+	0
26.27	1	13	26	2	0
24.25	1	16	32	2	0
22.23	0	1	3	+	0
20.21	0	0	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

1845

WIND SPEED (KTS) 10

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	0	0	0
30.31	+	+	+	0	0
28.29	+	3	1	0	0
26.27	2	23	10	+	0
24.25	3	31	12	+	+
22.23	2	10	1	+	+
20.21	+	+	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

2347

WIND SPEED (KTS) 14

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	+	+	0	0
28.29	+	1	+	+	0
26.27	1	9	6	+	0
24.25	4	27	27	1	0
22.23	2	9	10	1	0
20.21	0	+	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

1443

WIND SPEED (KTS) 15

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	5	2	0	0
24.25	1	5	6	2	0
22.23	5	19	21	5	0
20.21	2	11	14	1	2
18.19	0	1	1	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
9.9	0	0	0	0	0
8.7	0	0	0	0	0

191

WIND SPEED (KTS) 16

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	0	1	0	0
26.27	0	1	0	0	0
24.25	0	1	1	0	0
22.23	1	7	5	1	0
20.21	1	18	21	2	0
18.19	1	16	16	3	1
16.17	1	3	4	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
9.9	0	0	0	0	0

197

WIND SPEED (KTS) 17

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	+	+	0	0	0
26.27	+	2	1	+	0
24.25	+	8	6	1	0
22.23	3	23	25	7	+
20.21	1	6	10	2	0
18.19	0	1	+	+	0
16.17	0	0	+	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
9.9	0	0	0	0	0

647

WIND SPEED (KTS) 18

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	0	+	0	0
26.27	+	3	2	+	0
24.25	2	11	13	1	0
22.23	3	21	22	3	+
20.21	1	8	6	2	0
18.19	0	+	1	0	0
16.17	0	0	+	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

604

WIND SPEED (KTS) 19

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	0	+	+	0
24.25	0	+	+	+	0
22.23	1	7	7	2	+
20.21	2	14	14	6	1
18.19	2	13	16	5	1
16.17	+	4	3	1	1
14.15	+	0	+	+	+
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

1191

WIND SPEED (KTS) 23

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	0	+	0	0
24.25	0	+	+	0	0
22.23	+	+	+	0	0
20.21	+	3	4	1	+
18.19	2	12	13	5	1
16.17	3	11	16	7	3
14.15	1	4	5	4	1
12.13	+	1	1	1	+
10.11	0	0	0	0	+
8.9	0	0	0	0	0
6.7	0	0	0	0	0

1801

WIND SPEED (KTS) 24

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	0	+	0	0	0
22.23	+	1	2	+	0
20.21	1	4	7	1	+
18.19	2	17	23	8	2
16.17	2	11	11	5	1
14.15	+	+	1	1	+
12.13	0	+	+	+	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

761

WIND SPEED (KTS) 25

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	+	0	0	0
20.21	0	0	0	+	0
18.19	0	+	1	0	+
16.17	+	3	8	4	1
14.15	1	11	15	7	3
12.13	1	11	17	8	2
10.11	1	3	2	1	+
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

801

WIND SPEED (KTS) 26

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	+	0	0	0
20.21	0	1	4	+	0
18.19	0	9	7	2	+
16.17	5	8	15	6	2
14.15	1	8	12	7	3
12.13	+	4	3	2	1
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

573

WIND SPEED (KTS) 27

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	1	2	1	0	0
20.21	2	8	8	1	0
18.19	6	20	15	5	1
16.17	3	8	3	3	+
14.15	1	0	2	1	+
12.13	0	0	0	0	+
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

364

WIND SPEED (KTS) 28

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	+	0	+	0
18.19	1	1	3	+	0
16.17	4	14	11	3	1
14.15	8	15	15	4	1
12.13	1	4	5	5	+
10.11	0	1	1	1	0
8.9	+	+	+	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

392

WIND SPEED (KTS) 32

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	+	+	0	+
14.15	1	2	2	2	1
12.13	1	5	12	10	1
10.11	2	11	15	13	8
8.9	2	2	2	4	3
6.7	+	0	+	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

290

WIND SPEED (KTS) 33

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	+	+	0	0
16.17	0	0	+	0	0
14.15	+	1	1	2	1
12.13	1	7	12	5	2
10.11	2	11	16	7	2
8.9	2	7	8	4	1
6.7	1	1	3	2	+
4.5	+	0	+	+	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0

959

WIND SPEED (KTS) 34

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	2	0	0	0
10.11	8	10	14	6	0
8.9	2	6	22	6	0
6.7	0	4	6	0	0
4.5	0	0	6	4	0
2.3	0	0	2	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

49

WIND SPEED (KTS) 35

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
8.9	0	0	0	2	0
6.7	0	2	14	2	0
4.5	0	2	23	4	2
2.3	1	4	10	16	2
0.1	0	3	6	4	1
-2.-1	1	0	2	2	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0
-12.-11	0	0	0	0	0

128

WIND SPEED (KTS) 36

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	+	0	0	1	+
8.9	1	4	8	5	3
6.7	2	8	17	14	5
4.5	+	6	7	11	1
2.3	0	+	2	2	1
0.1	0	0	+	1	+
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0

444

WIND SPEED (KTS) 37

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	0	+	+	0	0
8.9	0	+	2	2	2
6.7	1	4	10	11	13
4.5	2	6	9	8	7
2.3	1	3	4	3	4
0.1	+	1	2	1	1
-2.-1	0	+	+	+	1
-4.-3	0	0	0	0	+
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0

875

objective compilation of available data for specified areas without regard to suspected biases.

opposite page) are based on all available data subjectively adjusted where bias was evident.

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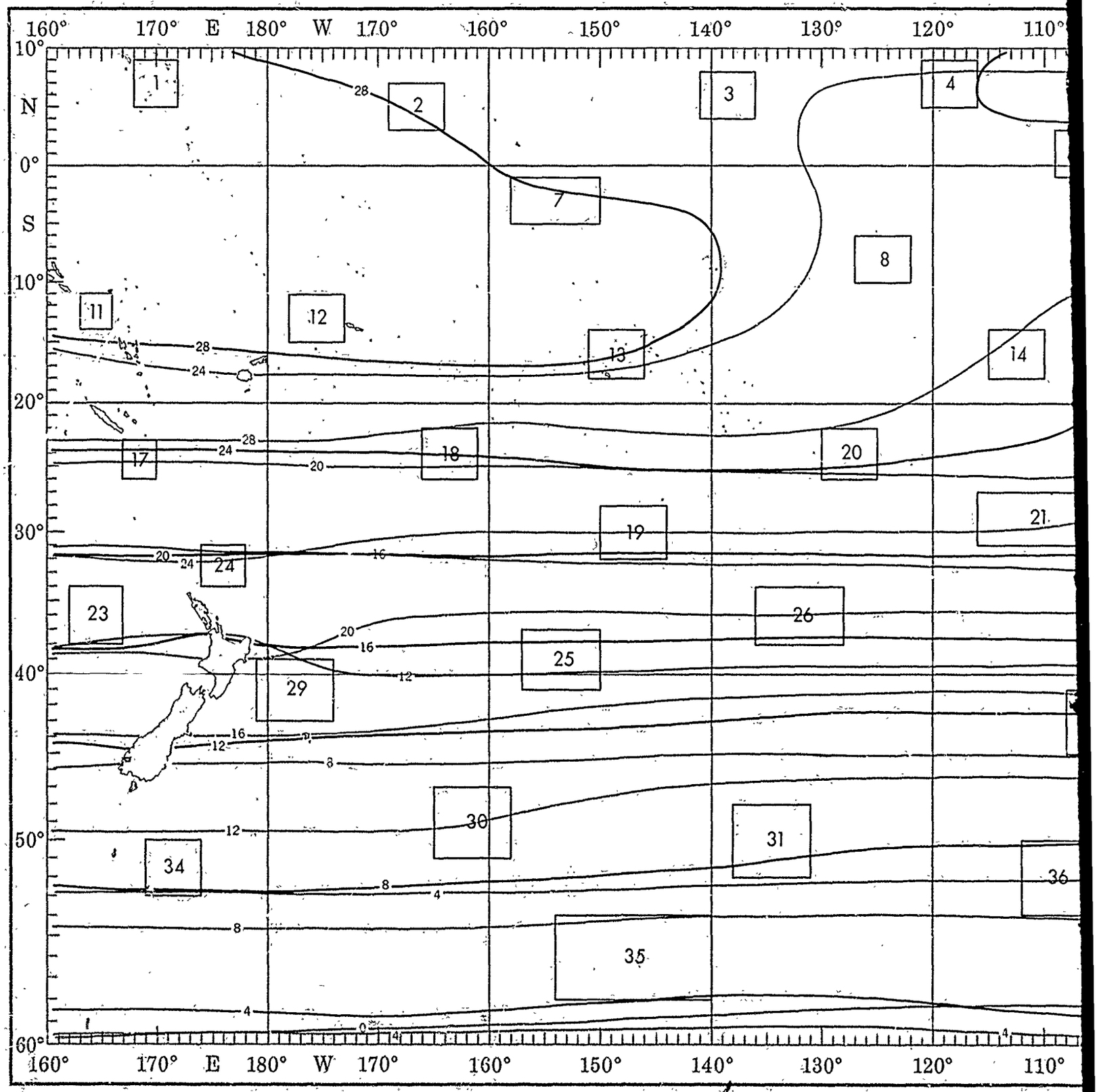
160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
10° N
0°
S 10°
20°
30°
40°
50°
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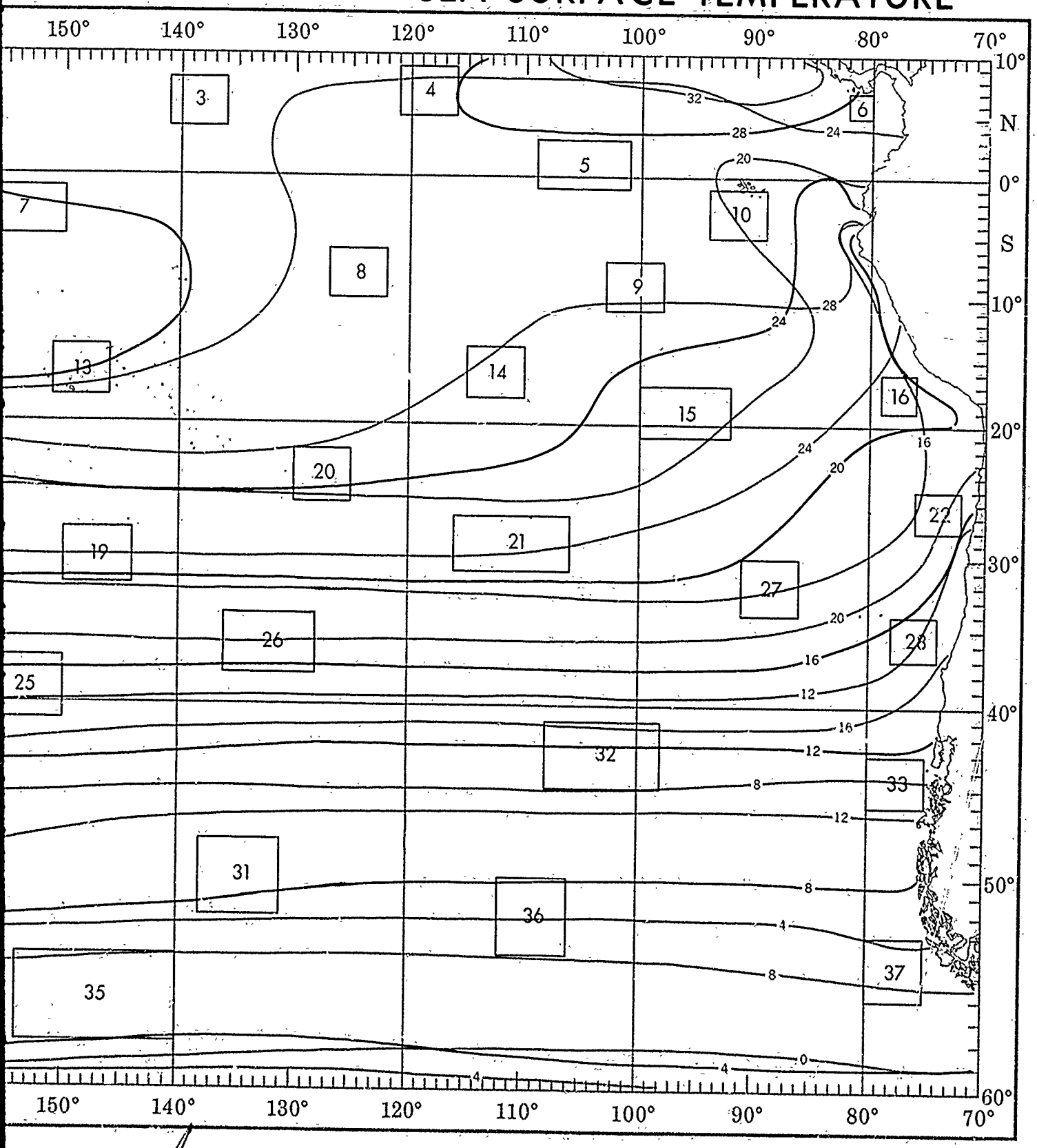
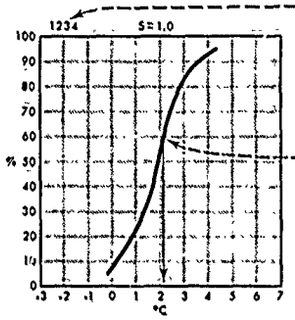
SEA SURFACE TEMPERATURE



SEA SURFACE TEMPERATURE



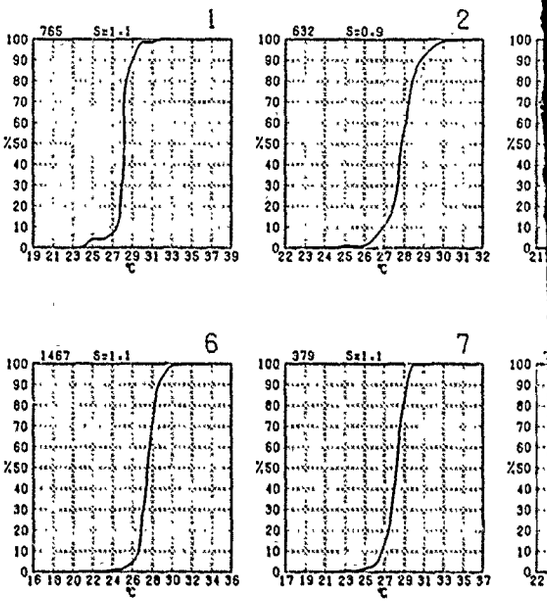
Sea surface temperature.

Number of observations.

Cumulative percent frequency of sea surface temperatures equal to or less than the temperature intersected by the curve.

(60% of all observed sea surface temperatures were ≤2.1°C or ≤35.8‰)

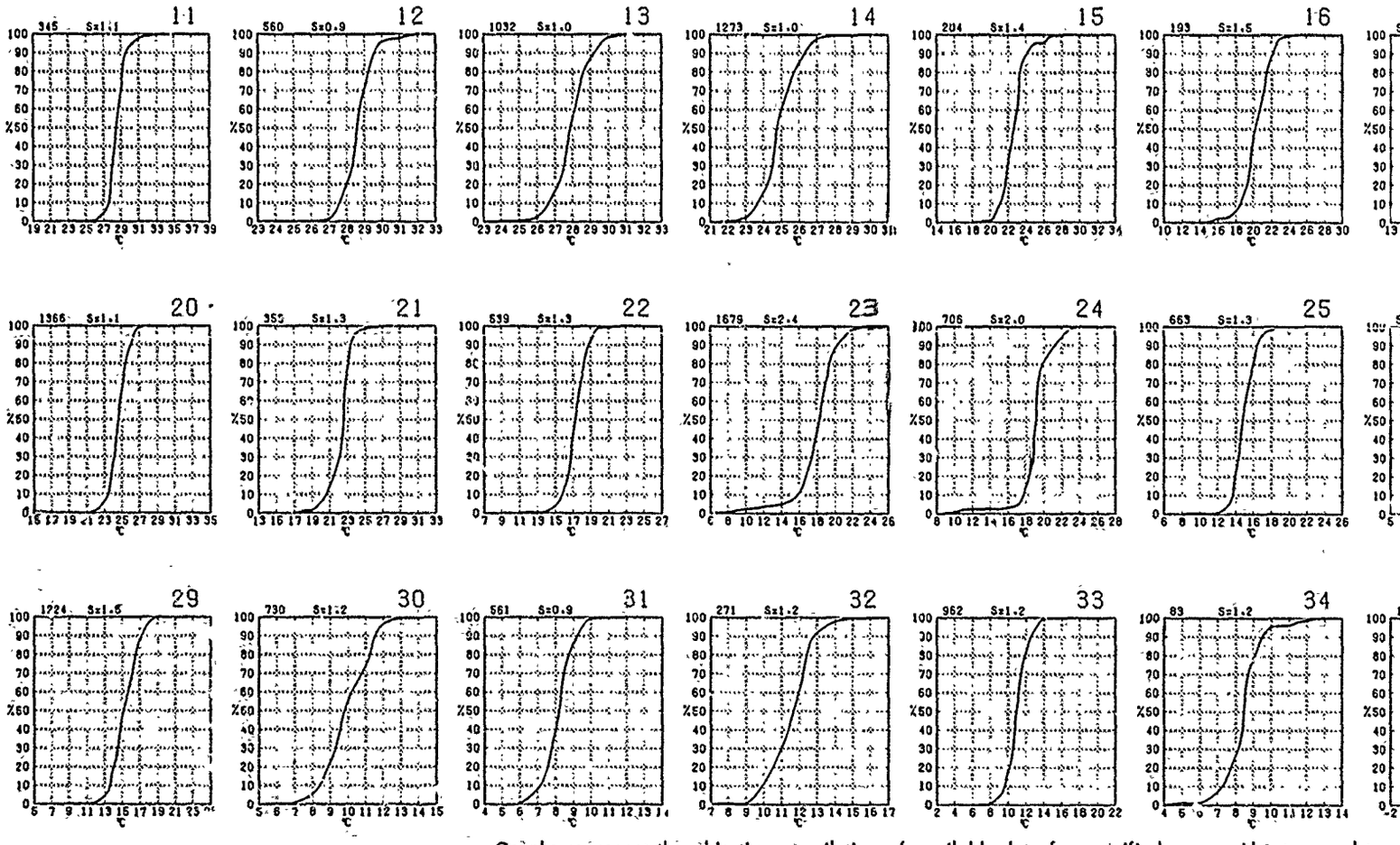
S=Standard deviation of sea surface temperatures (°C).



BLACK LINE - Mean sea surface temperature (°C)

BLUE LINE - Minimum (1%) sea surface temperature (°C) (1% of the temperatures were equal to or less than the given value)

RED LINE - Maximum (99%) sea surface temperature (°C) (1% of the temperatures were greater than the given value)



Graphs represent the objective compilation of available data for specified areas without regard to sus
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bia

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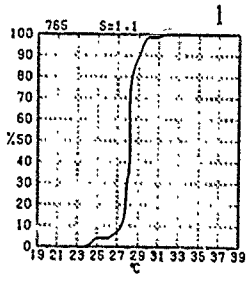

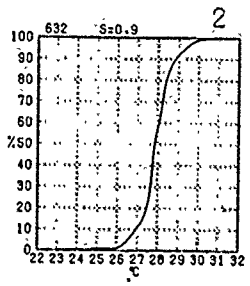

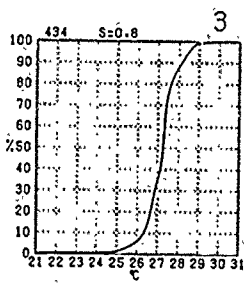

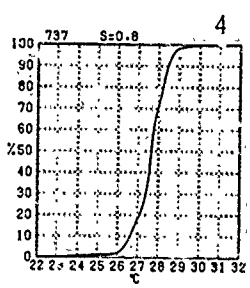

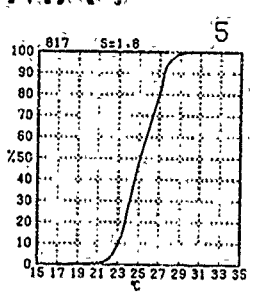

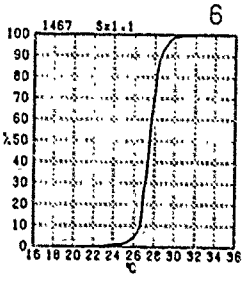

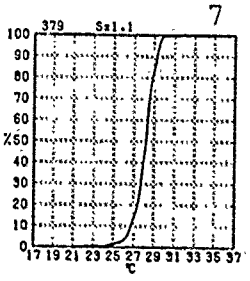

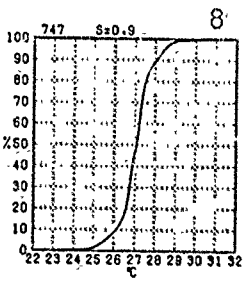

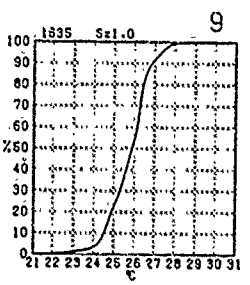

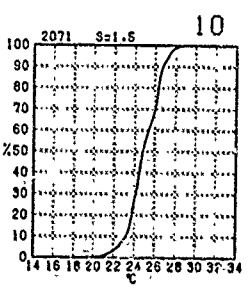

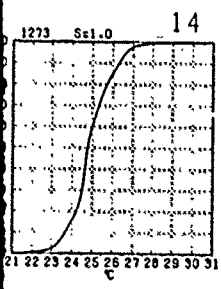

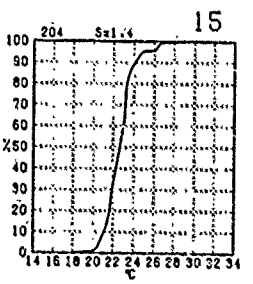

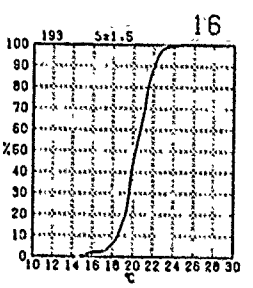

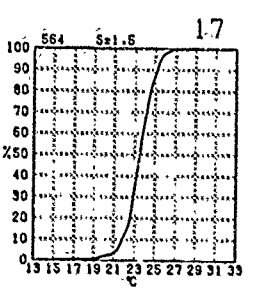

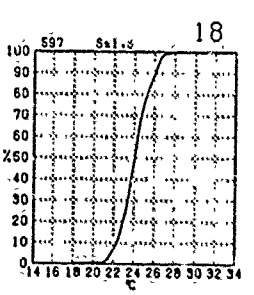

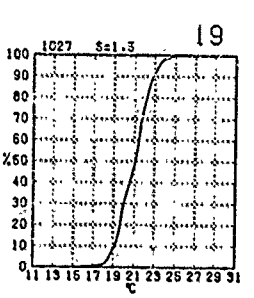

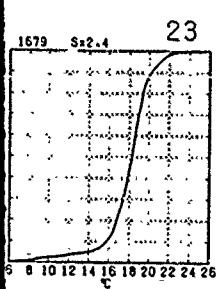

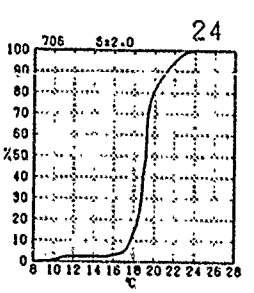

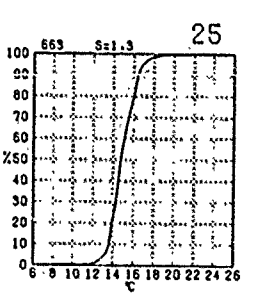

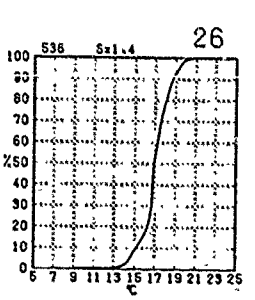

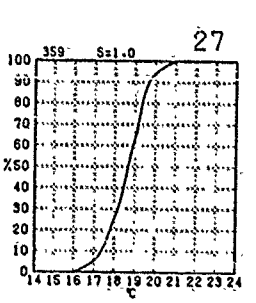

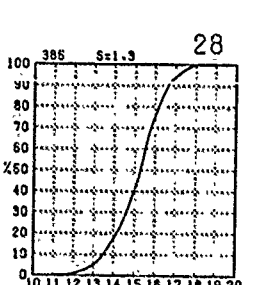

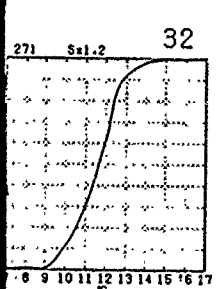

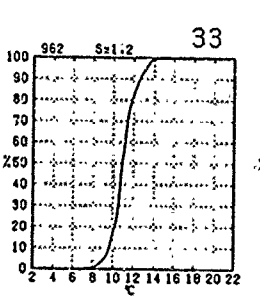

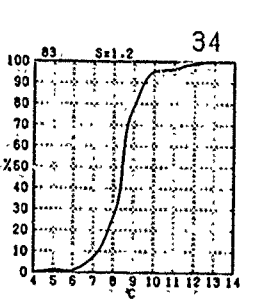

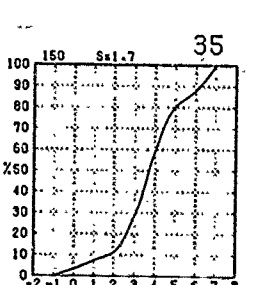

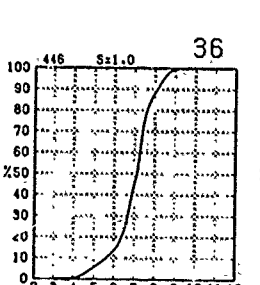

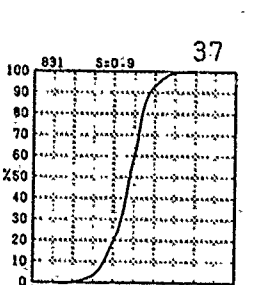

jective compilation of available data for specified areas without regard to suspected biases.
pposite page) are based on all available data subjectively adjusted where bias was evident.

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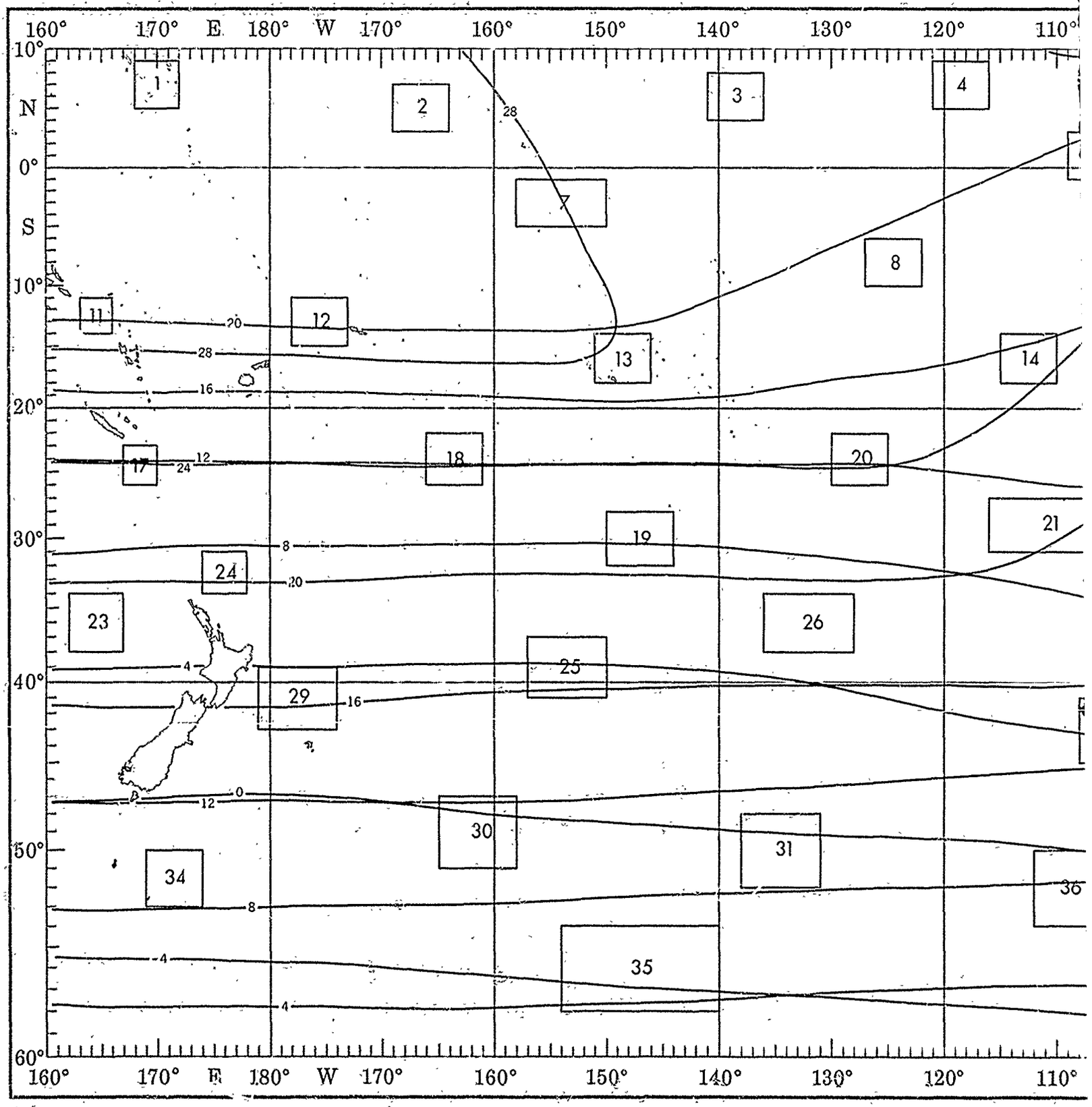
160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
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10° S
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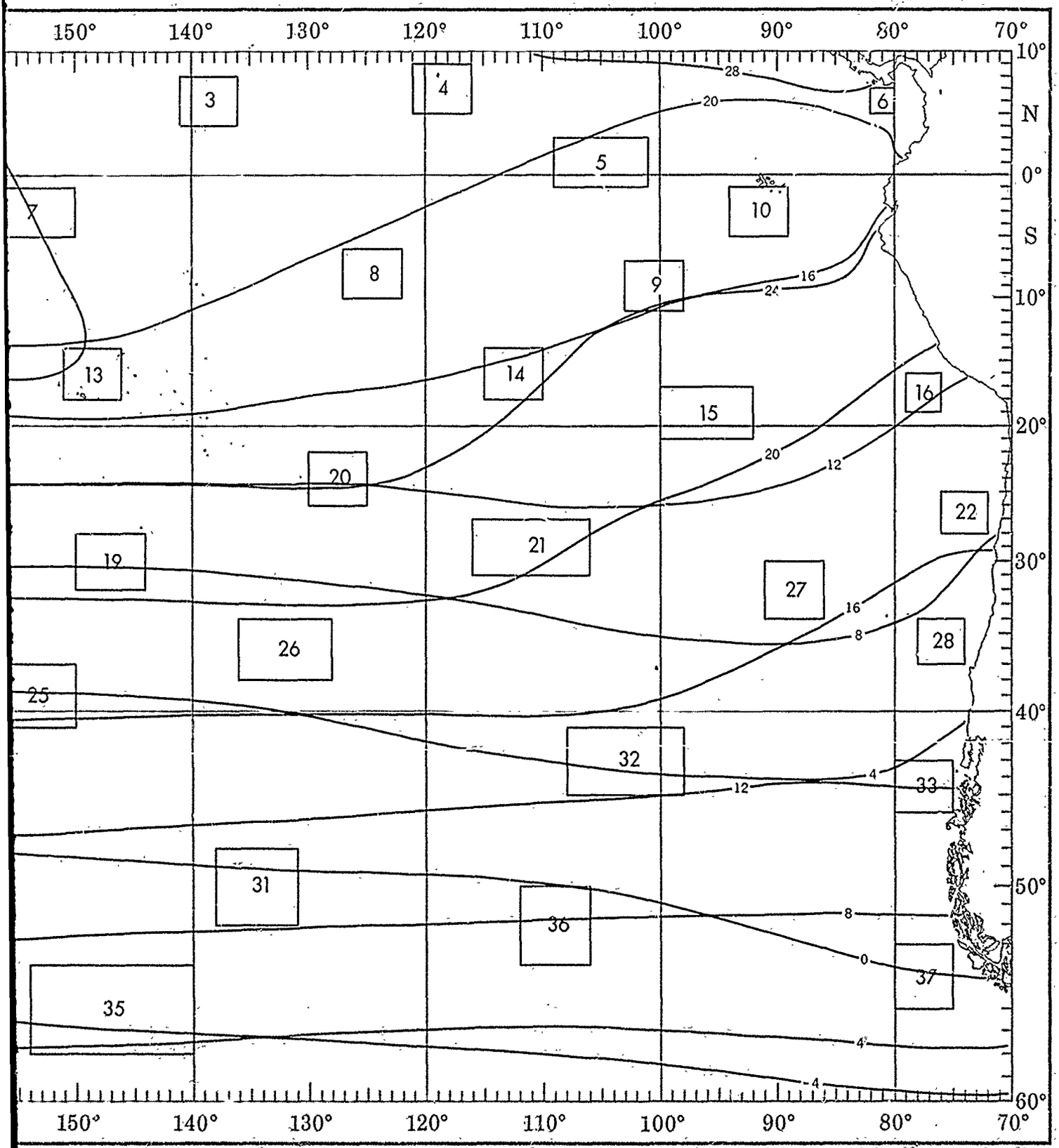
HUMIDITY



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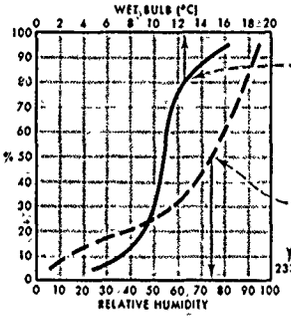
WET BULB AND RELATIVE HUMIDITY



Wet bulb - Relative humidity.

Cumulative percent frequency of wet-bulb temperatures equal to or less than the temperature intersected by the curve (top scale).

Wet bulb (°C).

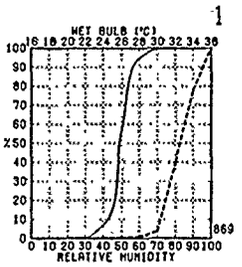
(80% of all observed wet-bulb temperatures were ≤12.5°C or 54.5°F.)

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 ≤74%.)

Number of observations.

1


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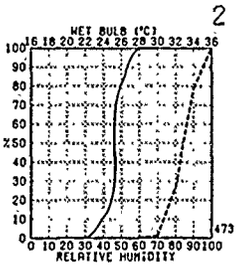

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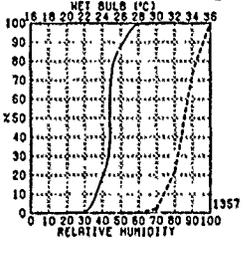

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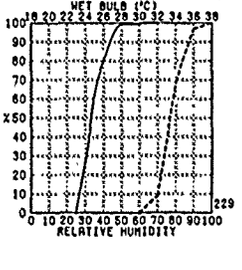
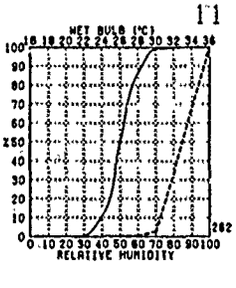


BLUE LINE - Minimum (1%) dew-point temperature (°C) (1% of the computed values were equal to or less than the given value)

RED LINE - Maximum (99%) dew-point temperature (°C) (1% of the computed values were greater than the given value)

11


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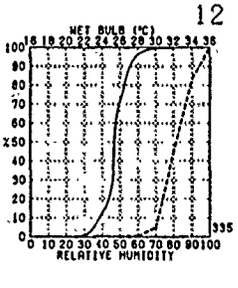

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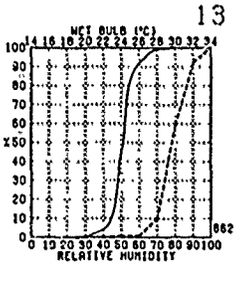

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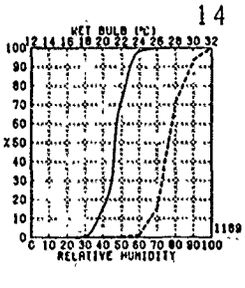

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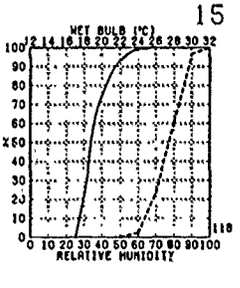

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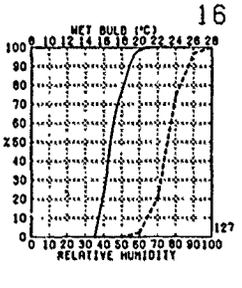

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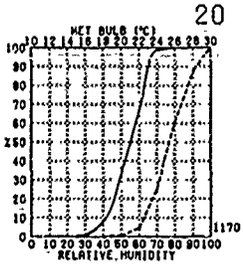

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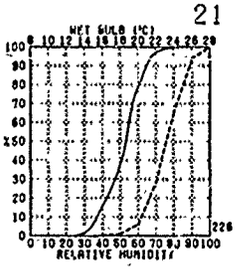

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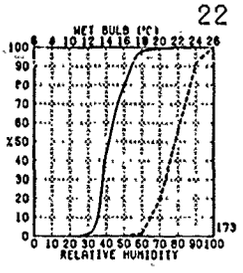

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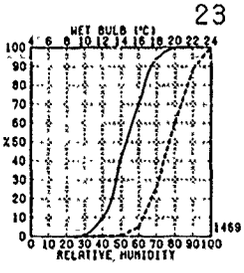

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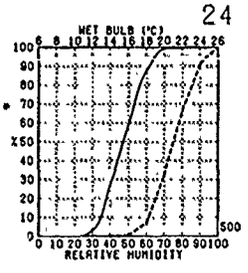

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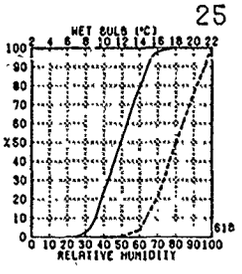

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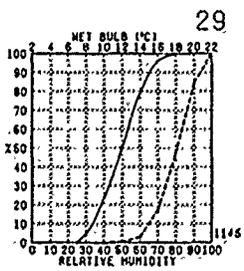

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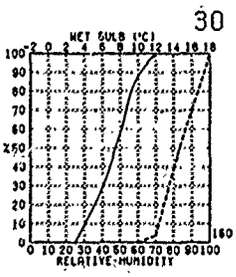

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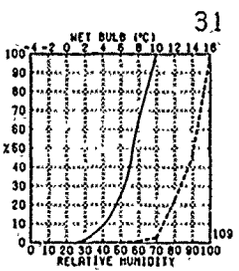
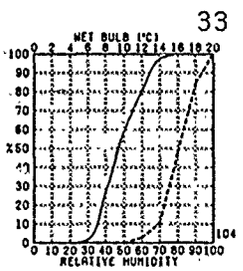


32

INSUFFICIENT DATA

33


34

INSUFFICIENT DATA

Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

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equal to or less than the

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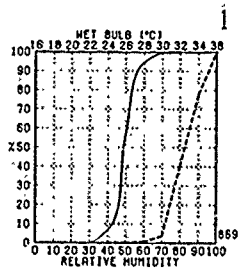

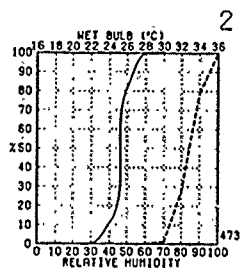

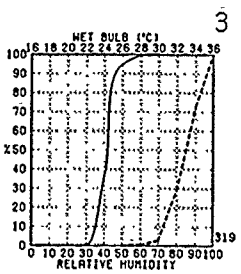

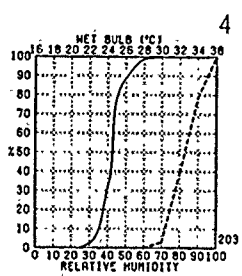

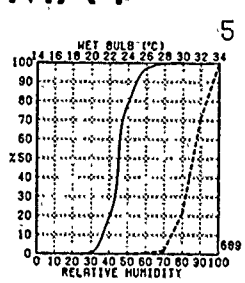

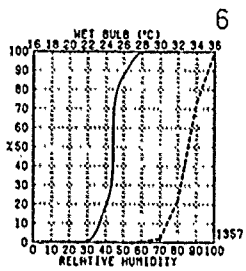

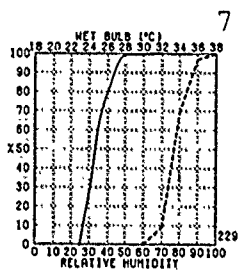

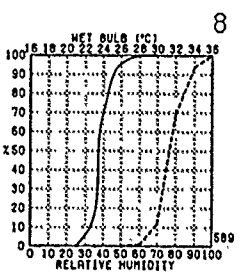

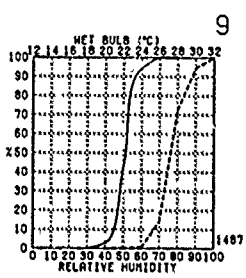

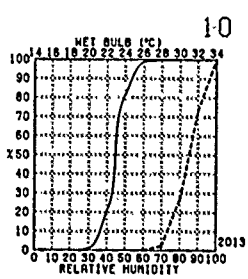

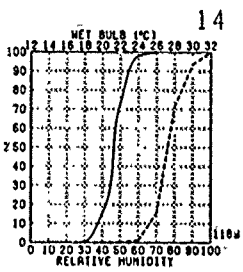

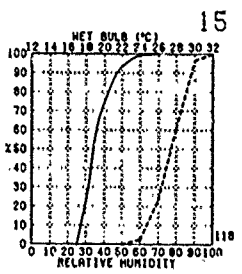

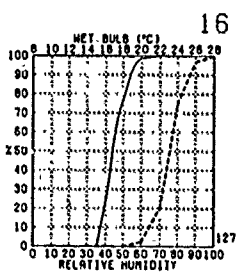

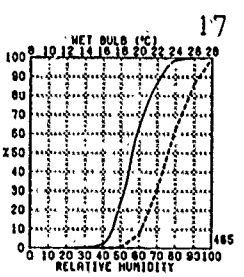

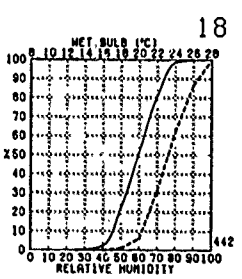

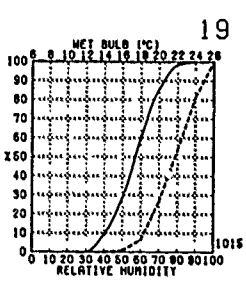

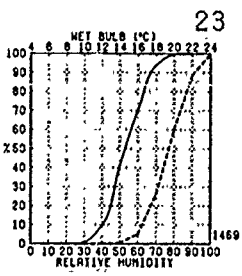

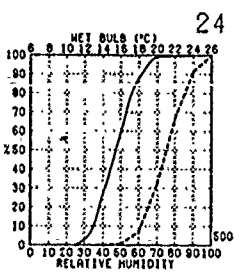

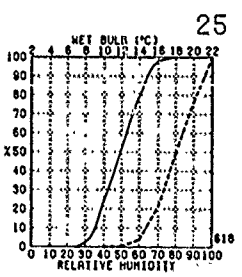

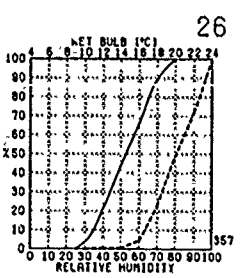

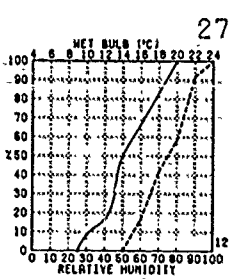

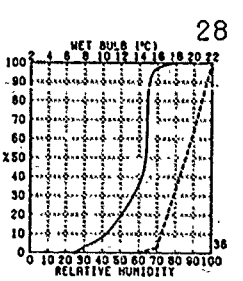

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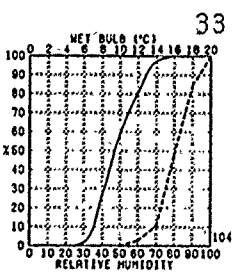
INSUFFICIENT DATA



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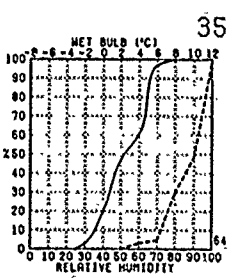

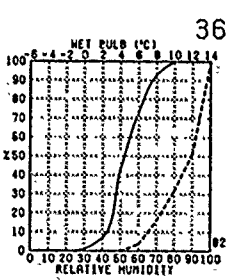

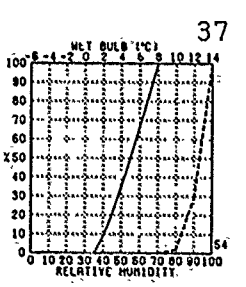

the objective compilation of available data for specified areas without regard to suspected biases.
yses (opposite page) are based on all available data subjectively adjusted where bias was evident.

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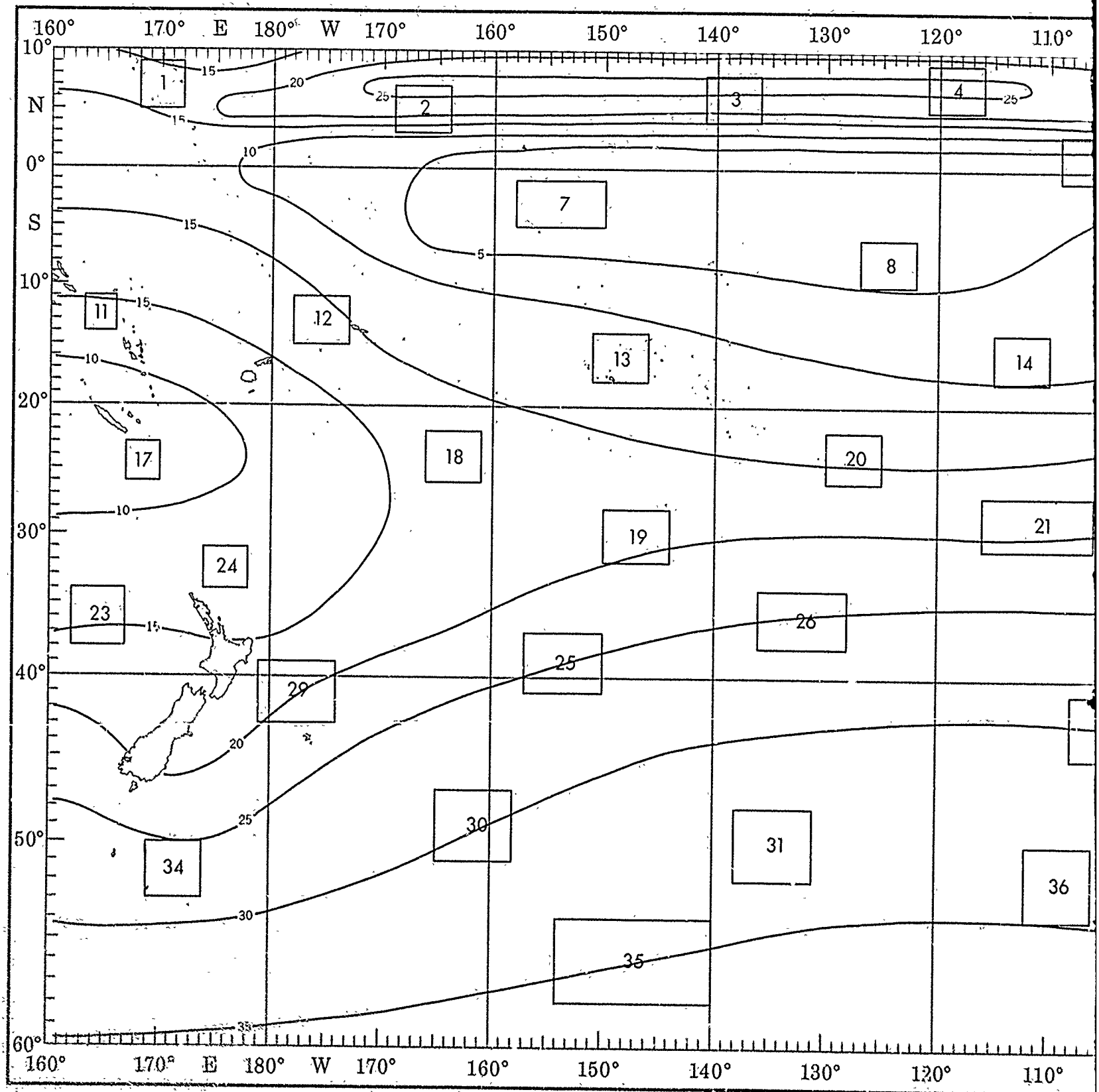
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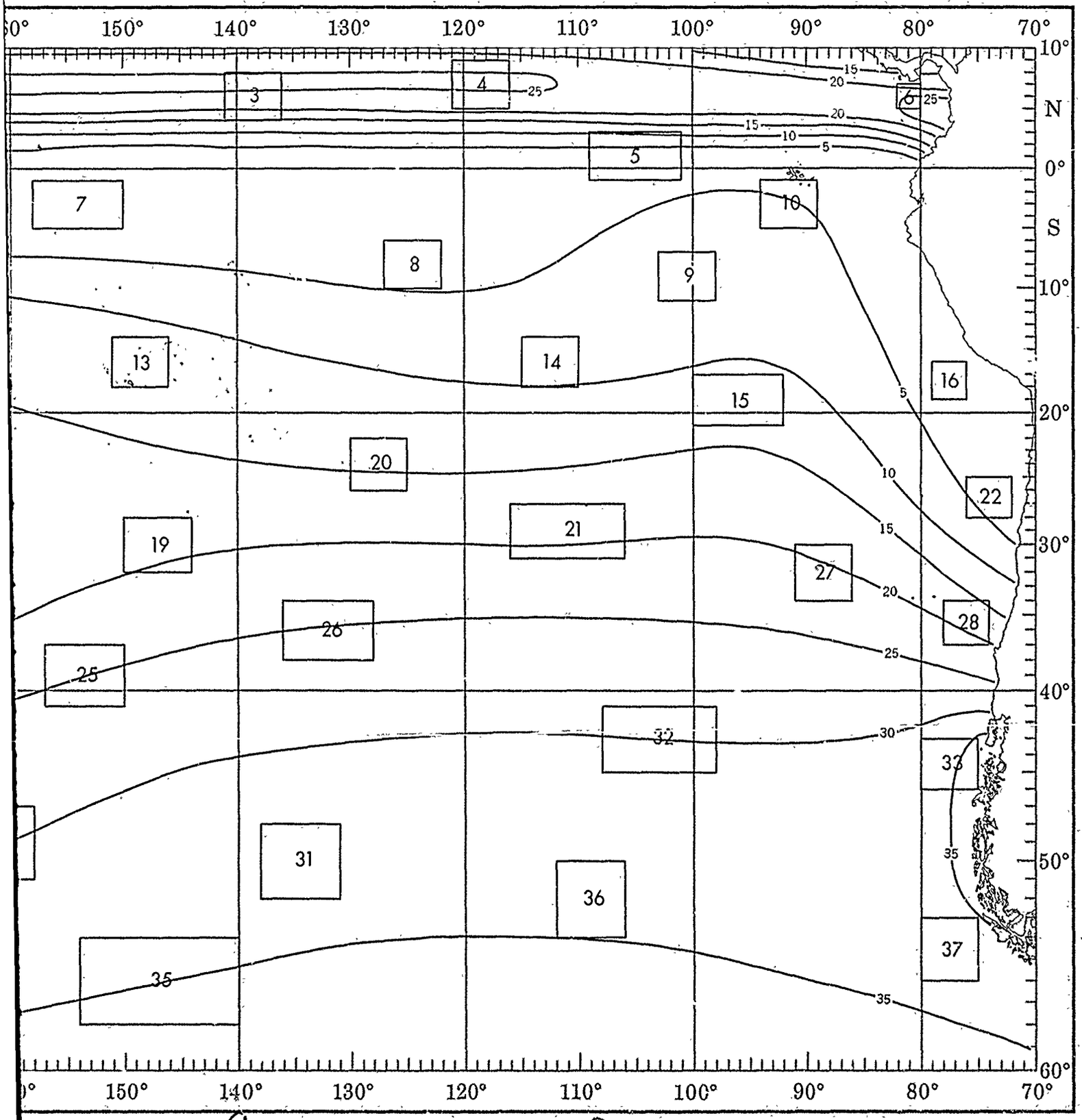
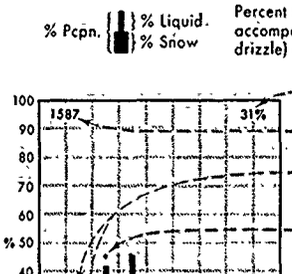
PRECIPITATION



PRECIPITATION

% Pcpn. { % Liquid. % Snow

Percent frequency of surface wind observations from each direction and calm that were accompanied by precipitation, subdivided into liquid type (including freezing rain and freezing drizzle) and snow.



—Percentage of present weather observations reporting precipitation.

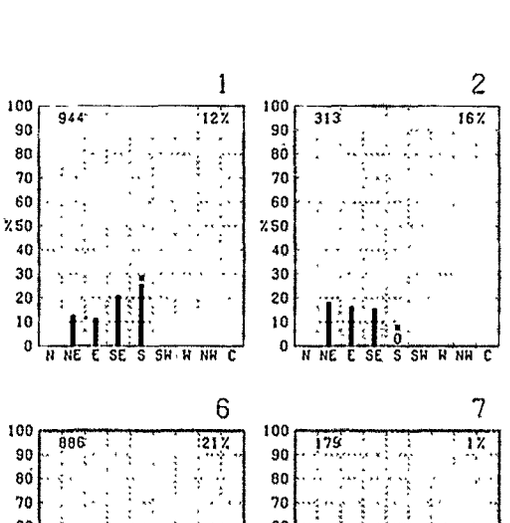
—Number of observations.

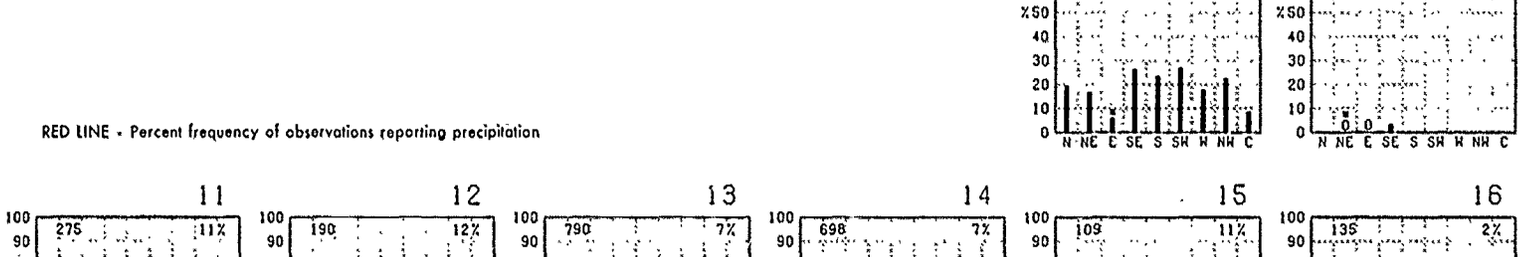
—(34% of all NE winds were accompanied by precipitation, of which 14% was liquid and 20% was snow.)

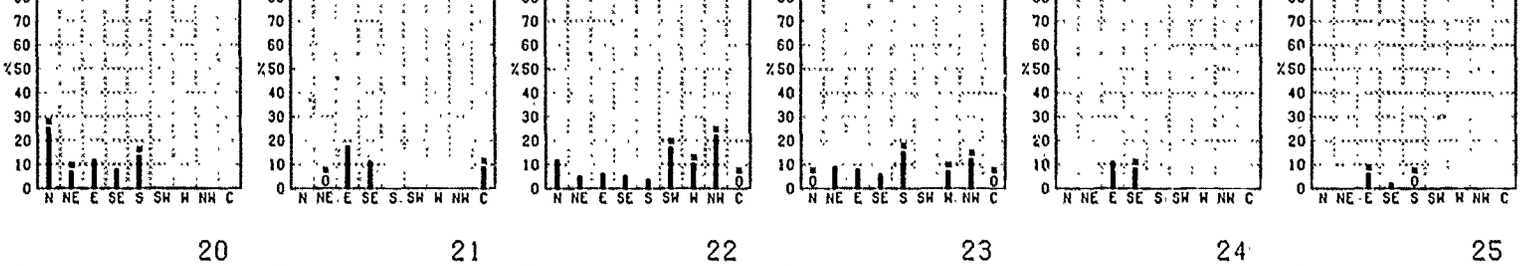
—An asterisk in the column for a given direction or calm indicates that the percentage was based on 10-30 observations of present weather and wind direction.

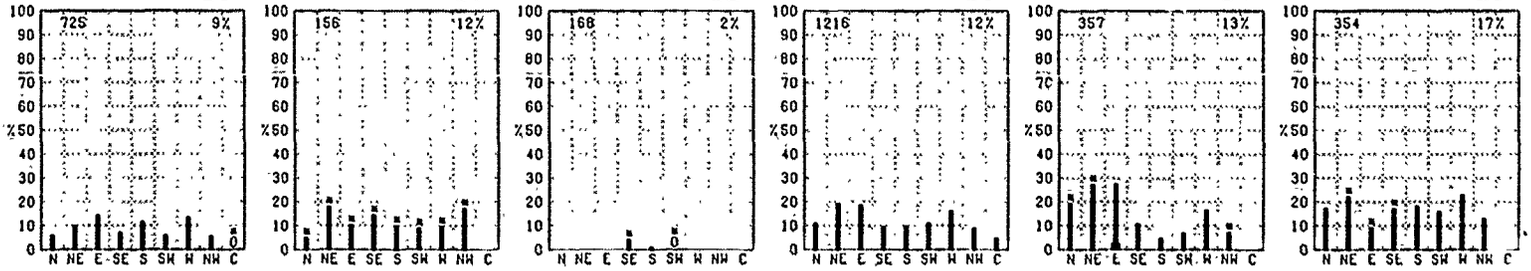
—0 replaces bar when no precipitation was observed with winds from a given direction or calm. No bar graph is presented if less than 10 observations containing present weather were reported for a given direction or calm.

RED LINE - Percent frequency of observations reporting precipitation









31 INSUFFICIENT DATA

32 INSUFFICIENT DATA

Graphs represent the objective compilation of available data for specified areas without regard to sus
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bia

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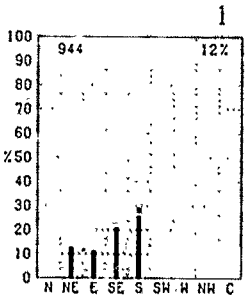

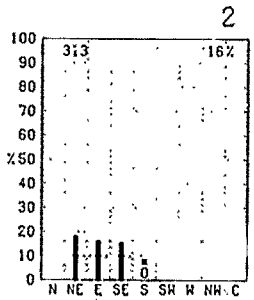

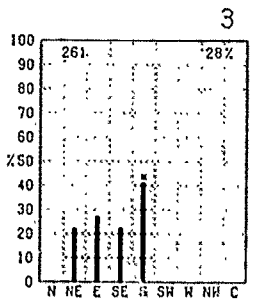

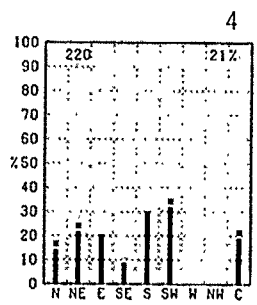

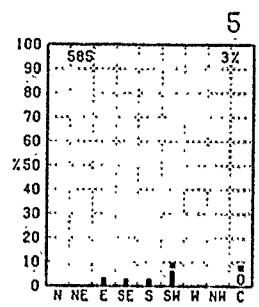

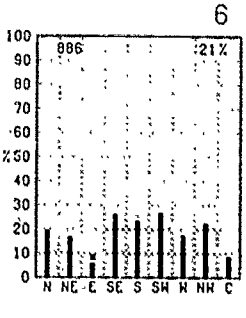

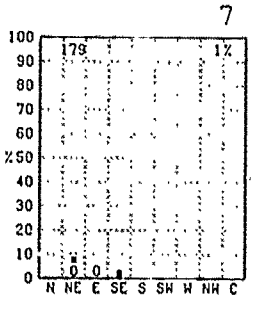

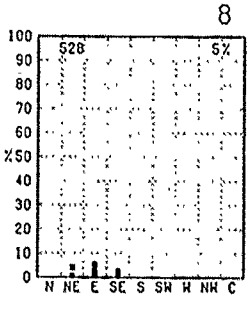

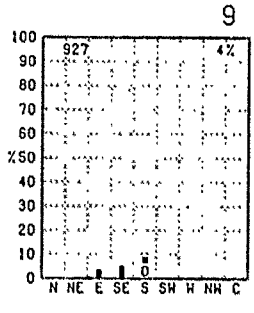

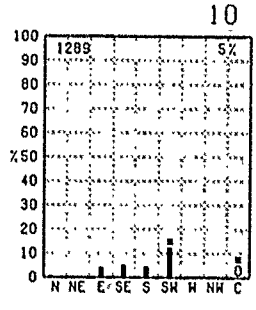

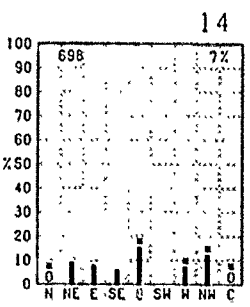

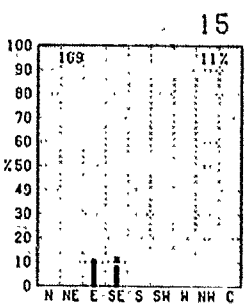

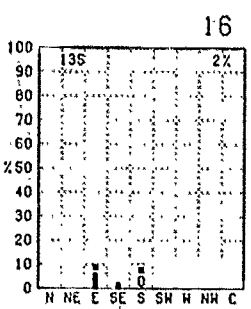

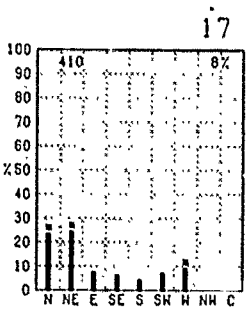

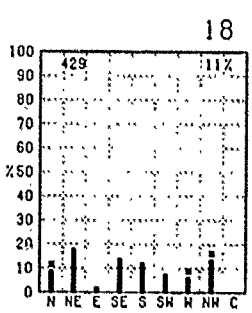

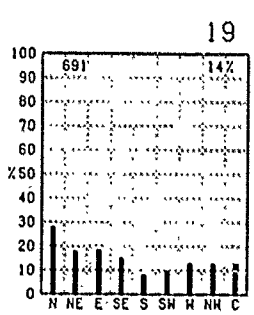

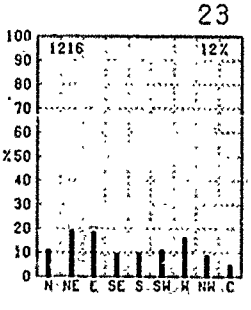

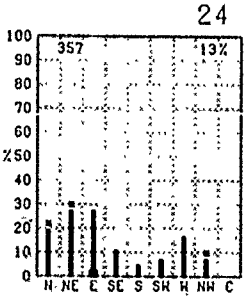

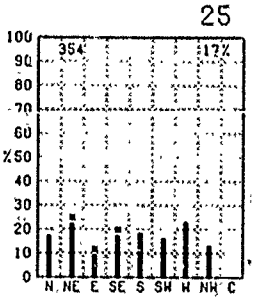

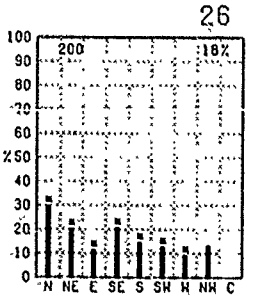

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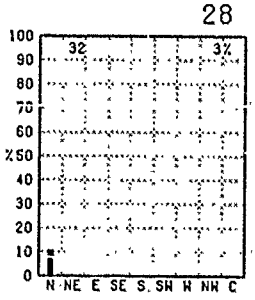
INSUFFICIENT DATA



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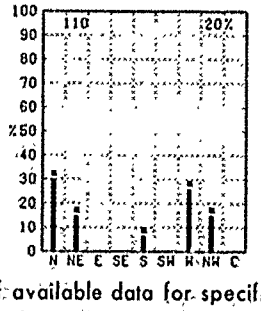

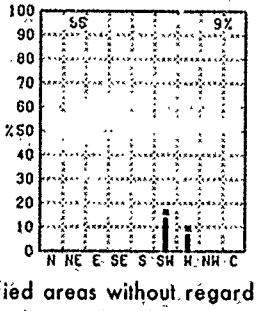

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e objective compilation of available data for specified areas without regard to suspected biases.
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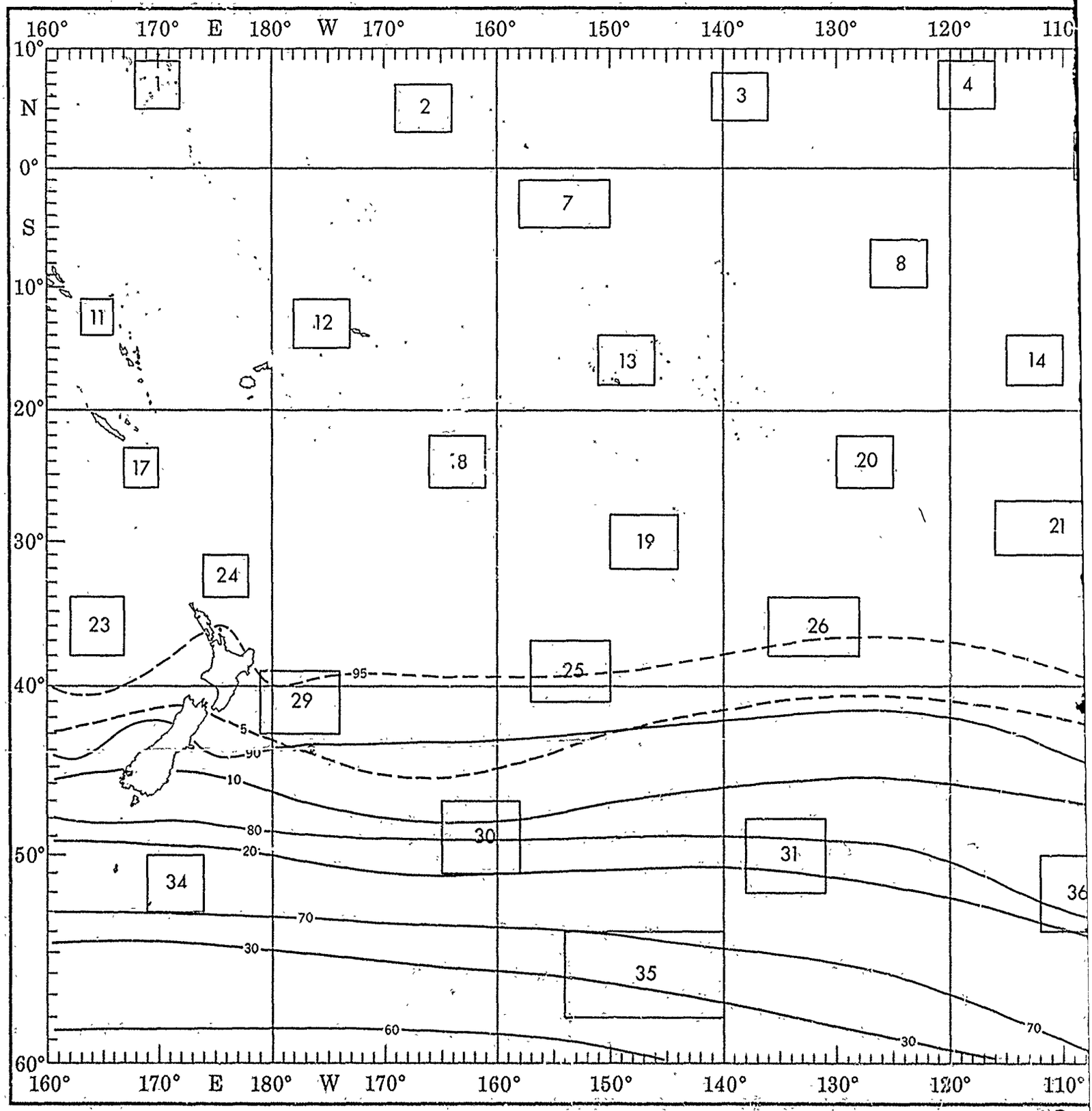
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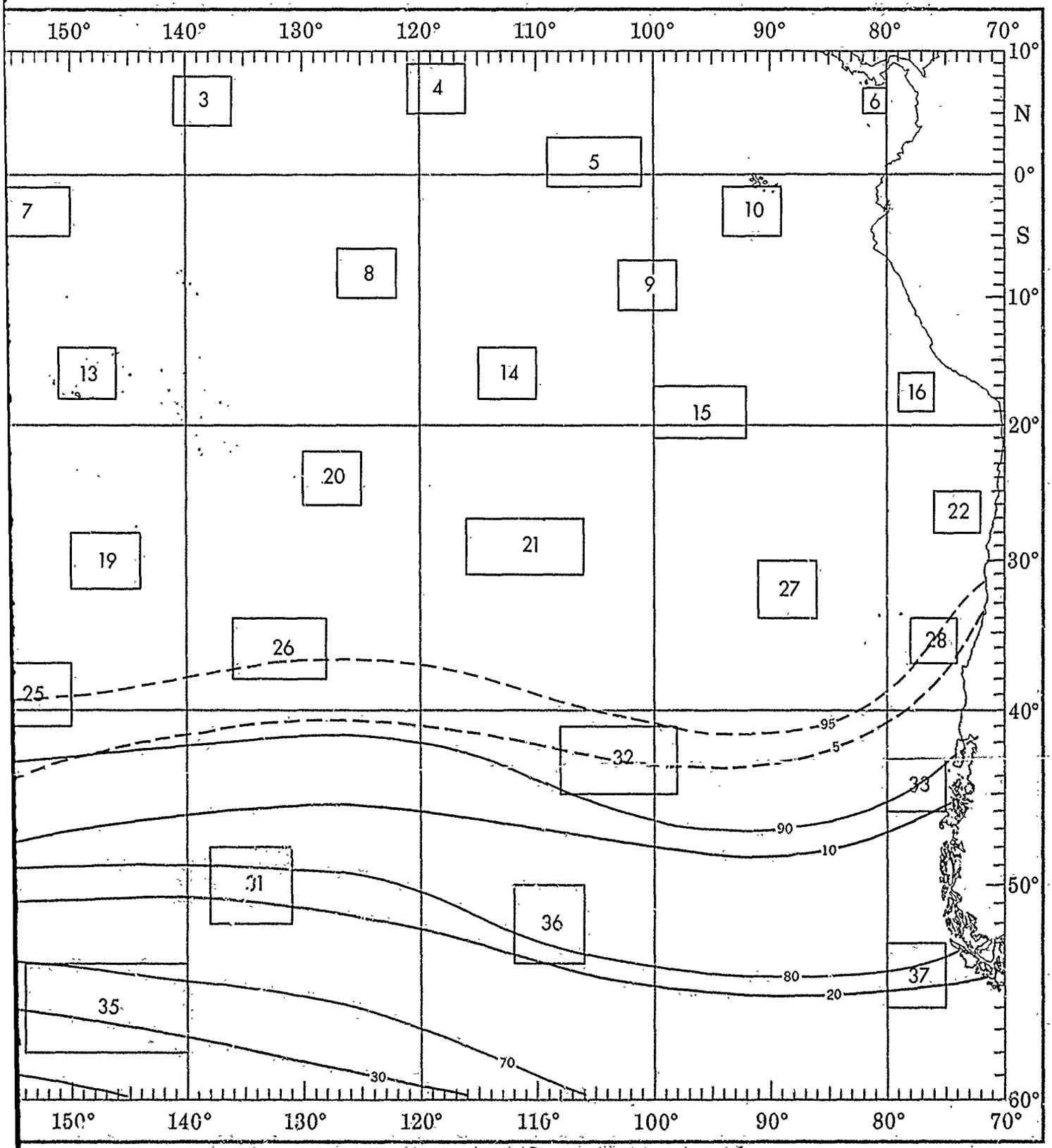
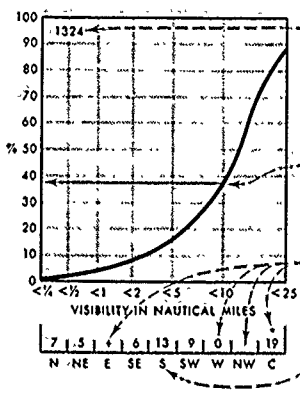
VISIBILITY



1 1 2

VISIBILITY



Visibility.

Number of observations.

Cumulative percent frequency of visibilities less than the visibility intersected by the curve.

(37% 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.

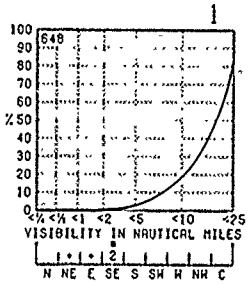
• indicates <.5% but >0. 0 indicates that no visibilities <2 nautical miles were observed with winds from a direction or calm. No percentage is given if less than 10 observations were available for visibility and wind direction. An asterisk indicates that the percentage was based on 10-30 observations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

(13% of all S winds were accompanied by visibilities <2 nautical miles.)

BLUE LINE - Percent frequency of visibilities ≥5 nautical miles

RED LINE - Percent frequency of visibilities <2 nautical miles

1



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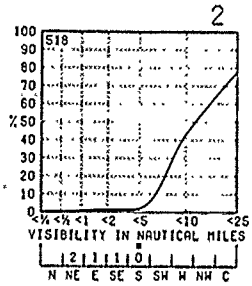

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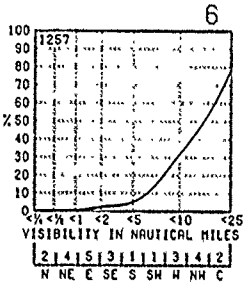

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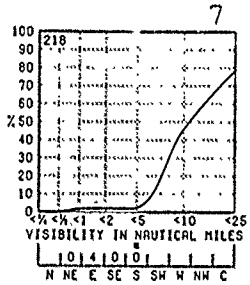

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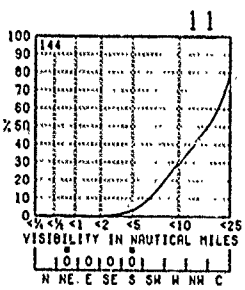

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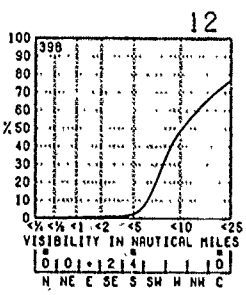

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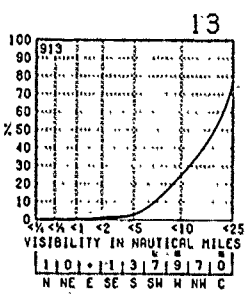

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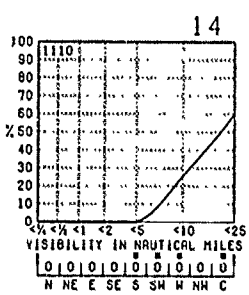

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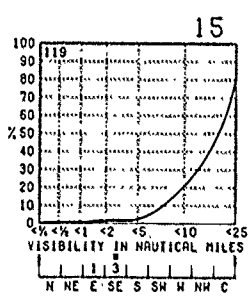

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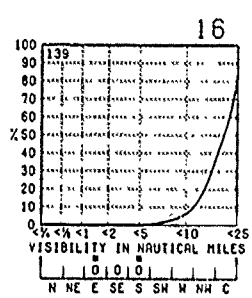

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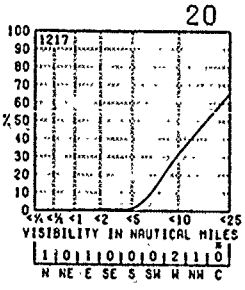

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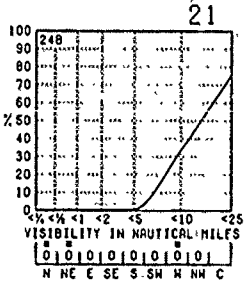

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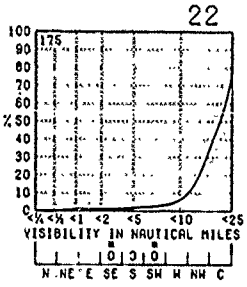

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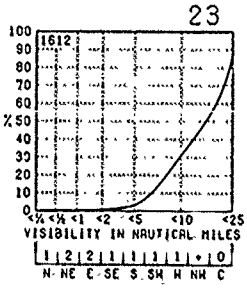

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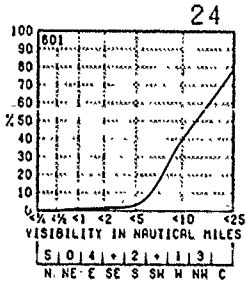

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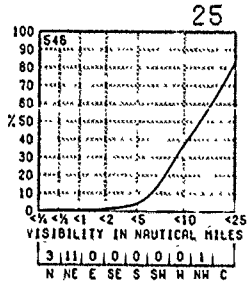

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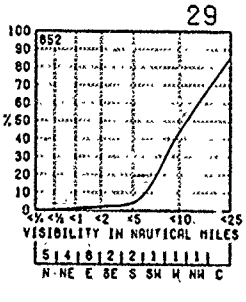

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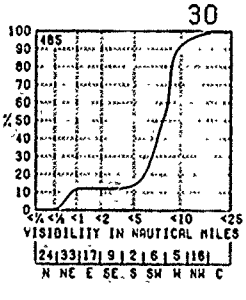

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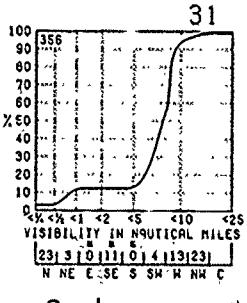

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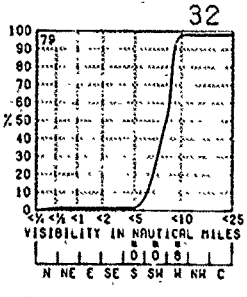

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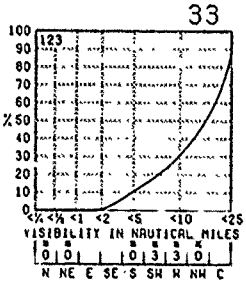

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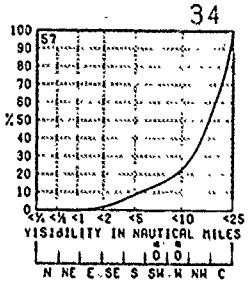

Graphs represent the objective compilation of available data for specified areas without regard t
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

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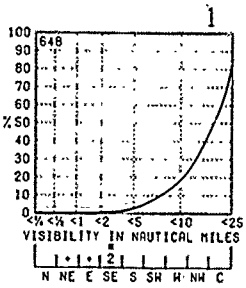
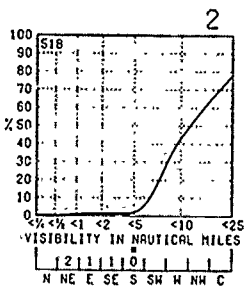
than the visibility intersect-

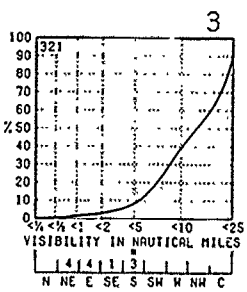
occurrence of visibility

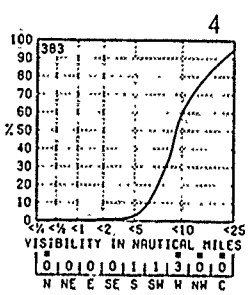
nautical miles were
age is given if less than 10
on. An asterisk indicates
isibility and wind direction.

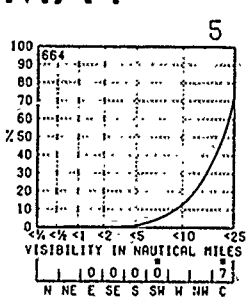
al miles.)

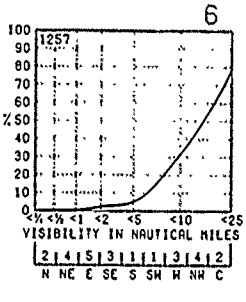


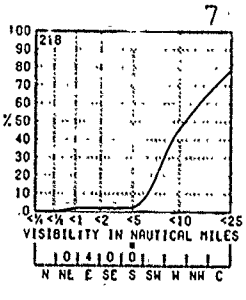


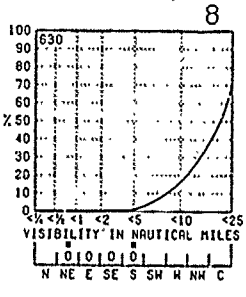


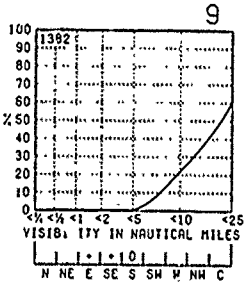


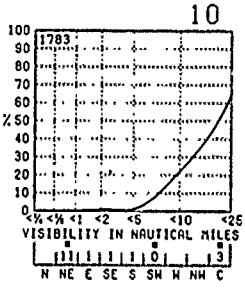


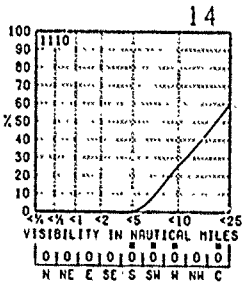


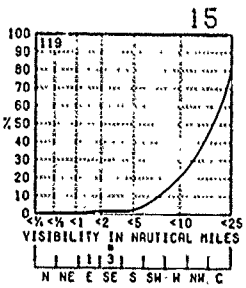


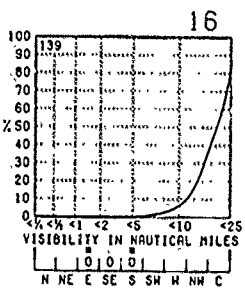


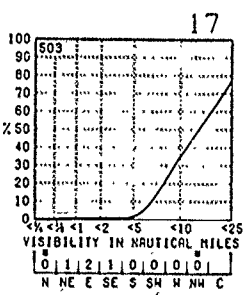


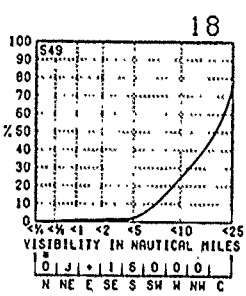


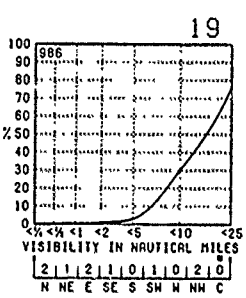


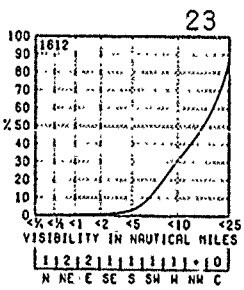


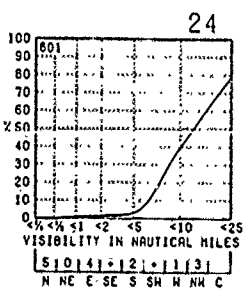


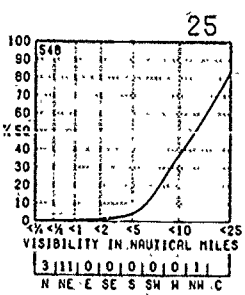


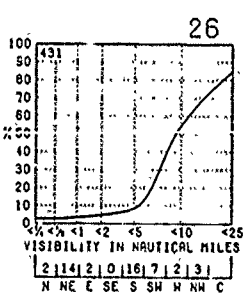


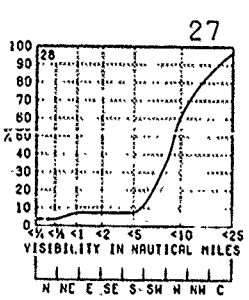


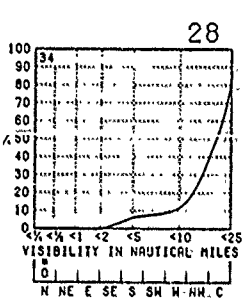


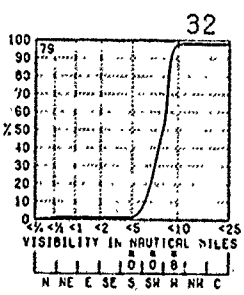


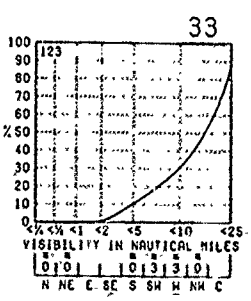


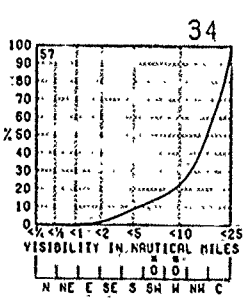


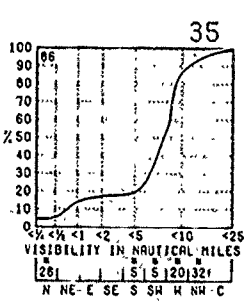


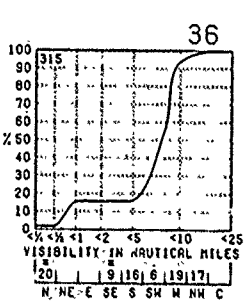


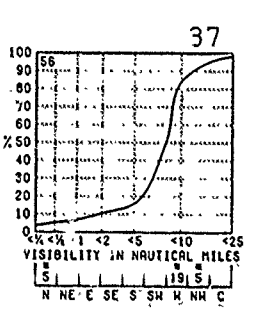






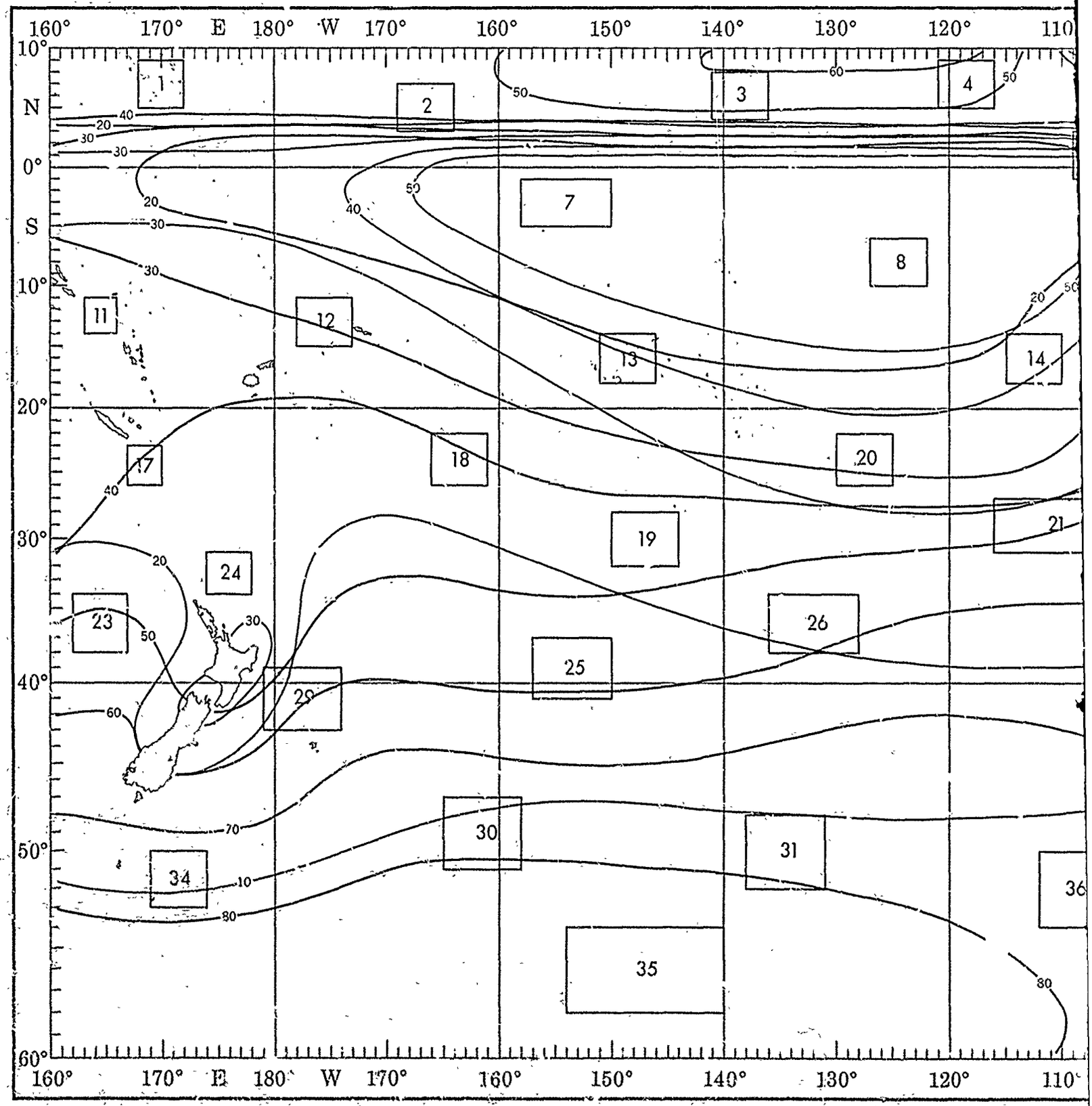






e objective compilation of available data for specified areas without regard to suspected biases.
s (opposite page) are based on all available data subjectively adjusted where bias was evident.

MAY


160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110
10° N 0° S 10° 20° 30° 40° 50° 60°
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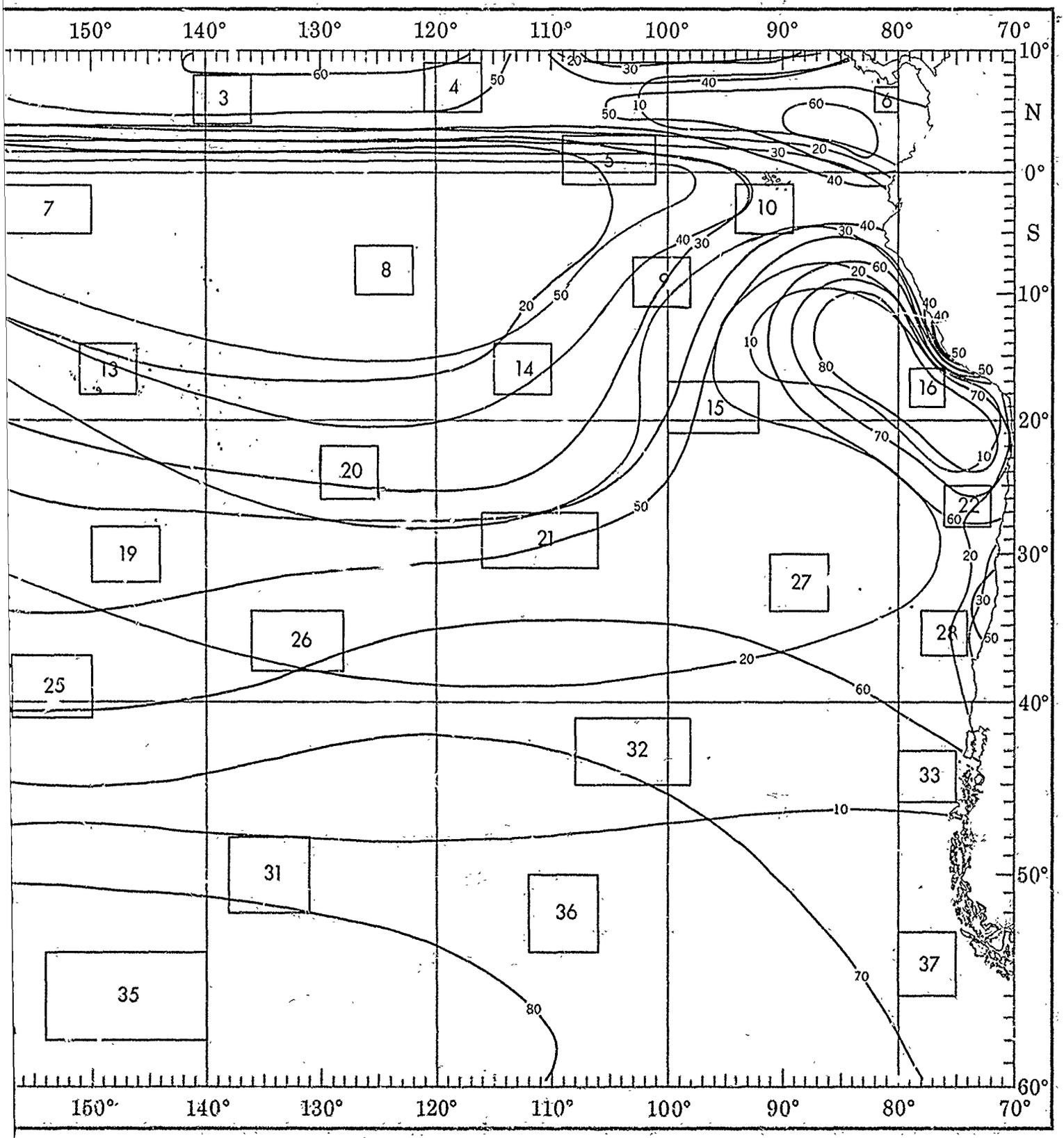
CLOUD COVER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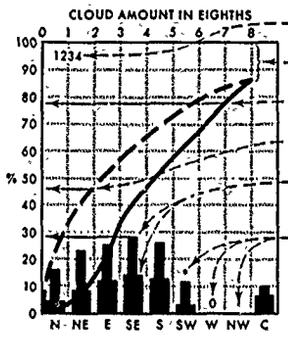
CLOUD COVER

Total Cloud Amount } Cumulative percent frequency of indicated cloud amount equal to or less than the amount
Low Cloud Amount } intersected by the curve.



Number of observations containing total cloud amount.

Obscurations.

(77% of all total cloud amounts were ≤7/8.)

(46% of all low cloud amounts were ≤2/8.)

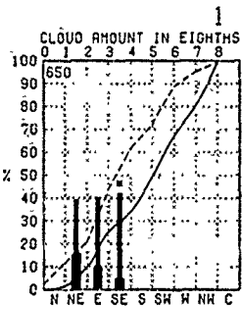
(28% of all SE winds were accompanied by low cloud amounts ≥5/8 and 14% by low cloud amounts ≥7/8)

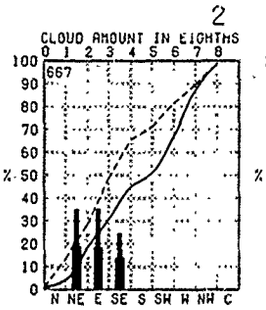
An asterisk indicates that the percentage is based on 10-30 observations of wind direction, total and low cloud amount. 0 replaces bar graph when no low cloud amounts ≥5/8 were observed with a wind direction or calm. 0 or bar is omitted when number of observations of total and low cloud amount from a wind direction or calm is less than 10.

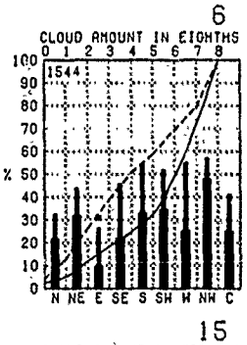
Low cloud amount: Percent frequency of observations from each direction and calm that were accompanied by low cloud amounts ≥5/8 and ≥7/8.
Low clouds are clouds with bases <8000 feet.

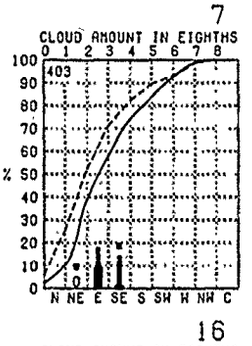
BLUE LINE - Percent frequency of total cloud amount ≤2/8

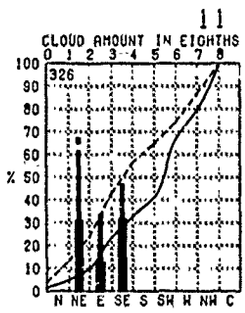
RED LINE - Percent frequency of low cloud amount ≥5/8

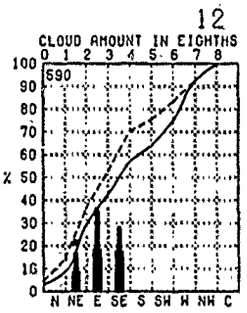


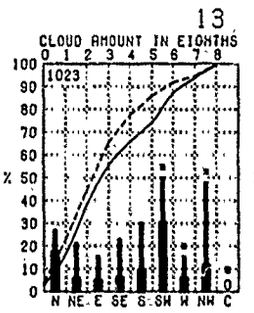


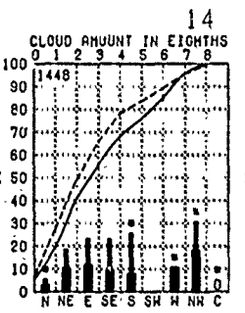


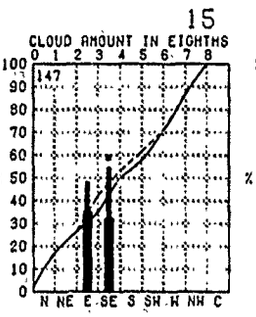


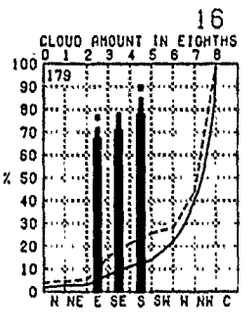


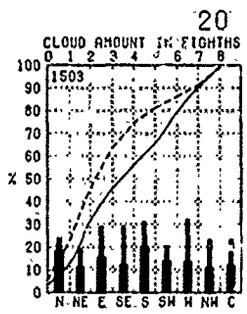


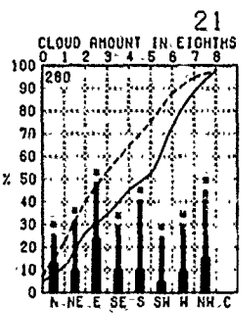


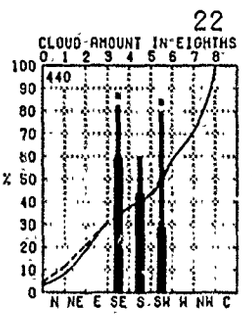


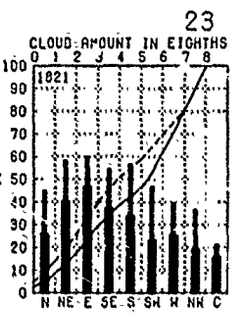


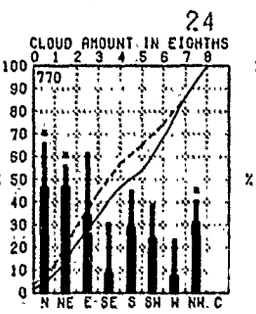


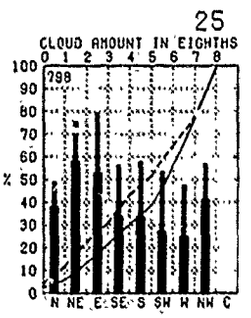


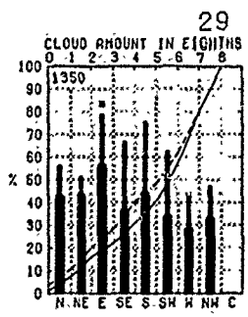


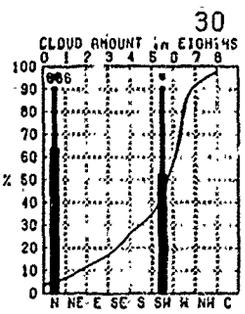


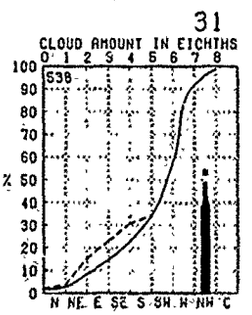


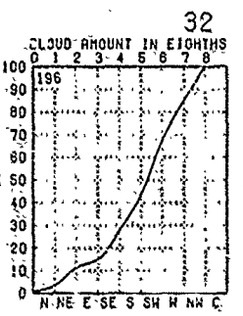


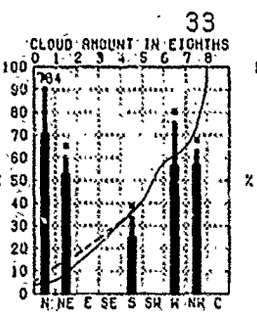


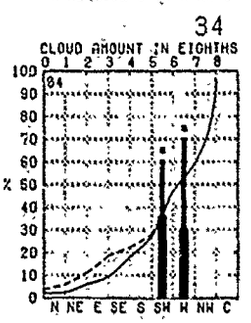












Graphs represent the objective compilation of available data for specified areas without regard to sus
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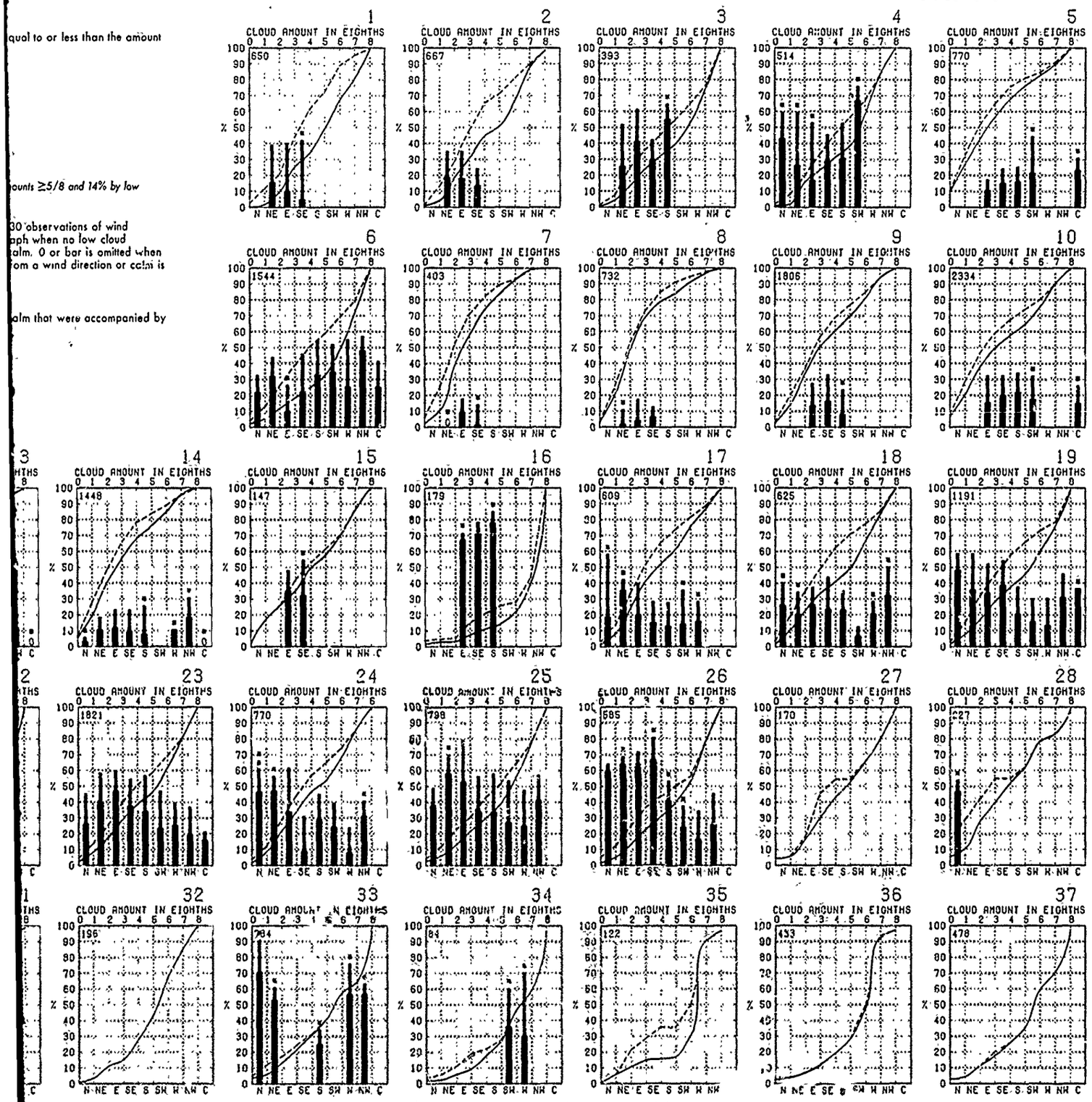
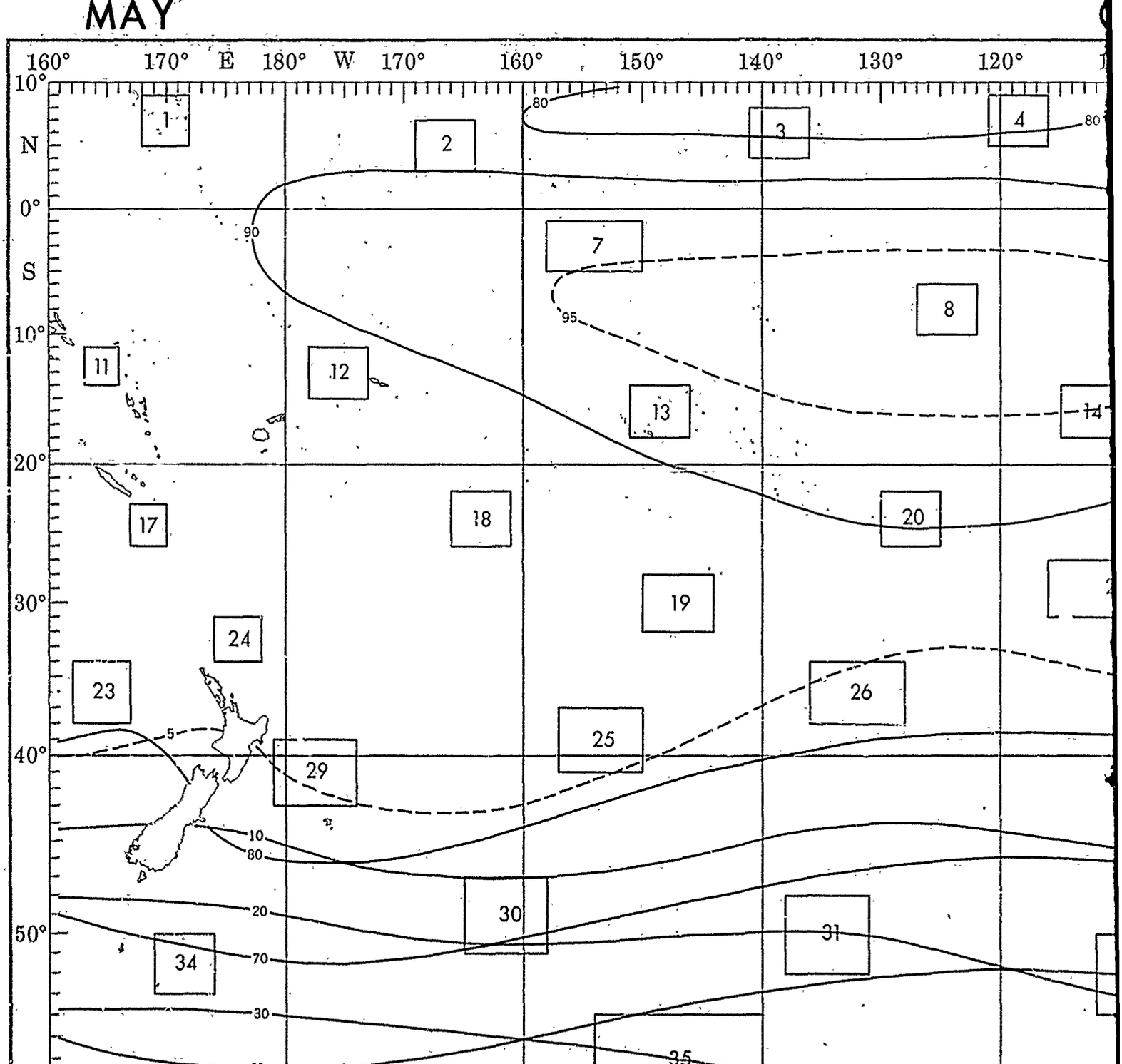


the objective compilation of available data for specified areas without regard to suspected biases.
yses (opposite page) are based on all available data subjectively adjusted where bias was evident.

MAY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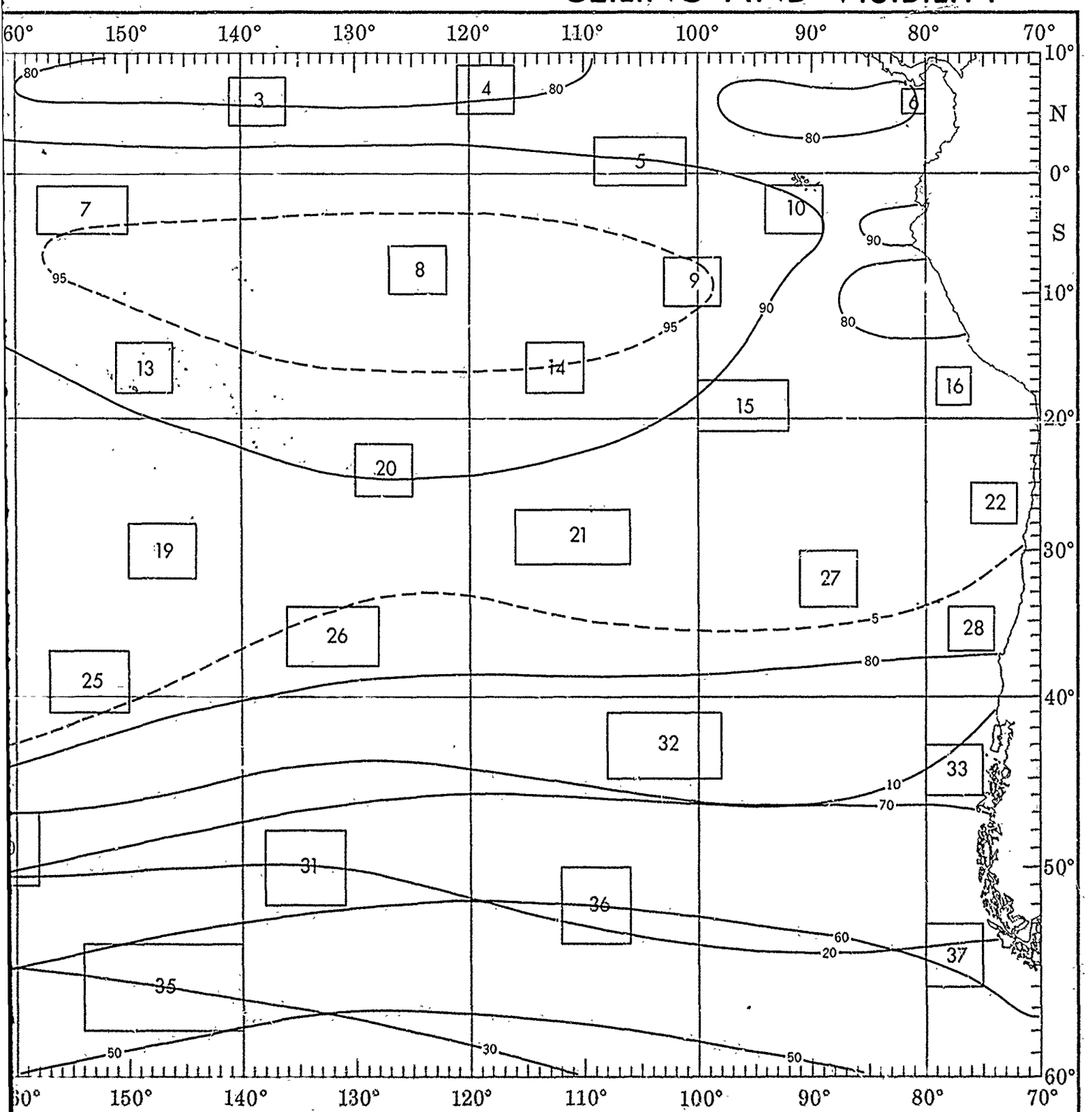
CEILING AND VISIBILITY



4 1 2

CEILING AND VISIBILITY

Low cloud ceiling - Visibility.

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

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".

"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8.

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	+	3	13	64
50<80	0	0	0	0	+	1
35<50	0	+	0	0	0	4
20<35	0	+	1	1	2	2
10<20	0	+	1	1	2	1
6<10	0	+	0	+	+	0
3<6	+	+	0	+	+	0
1.5<3	+	0	0	0	0	0
0<1.5	+	0	0	0	0	0

334

(2% of all observations reported ceiling ≥1000 but <2000 feet simultaneously with visibility ≥5 but <10 nautical miles)

+ indicates <.5% but >0.

Number of observations.

BLUE LINE - Percent frequency of low cloud ceiling ≥1000 feet (or no low cloud ceiling) and visibility ≥5 nautical miles

RED LINE - Percent frequency of low cloud ceiling <600 feet and/or visibility <2 nautical miles

1

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	10	53
50<80	0	0	0	0	1	0
35<50	0	0	0	0	0	0
20<35	0	0	0	0	1	2
10<20	0	0	0	1	4	9
6<10	0	0	0	2	7	10
3<6	0	0	0	0	0	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

123

2

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	2	7	57
50<80	0	0	0	0	+	0
35<50	0	0	0	0	0	2
20<35	0	0	0	0	1	4
10<20	0	0	0	0	4	10
6<10	+	0	0	0	2	7
3<6	0	0	0	0	2	2
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

234

6

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	3	49
50<80	0	0	0	+	+	1
35<50	0	0	0	+	1	3
20<35	0	+	+	0	2	4
10<20	0	0	+	1	3	14
6<10	+	0	+	1	4	9
3<6	0	0	+	1	1	1
1.5<3	0	0	0	0	+	+
0<1.5	0	+	0	0	0	+

916

7

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	1	82
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	1
20<35	0	0	0	0	0	1
10<20	0	0	0	0	0	10
6<10	0	0	0	0	1	3
3<6	0	0	0	0	1	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

109

11

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	7	50
50<80	0	0	0	0	0	0
35<50	0	0	0	0	1	5
20<35	0	0	0	0	2	7
10<20	0	0	0	0	3	8
6<10	0	0	0	2	3	10
3<6	0	0	0	0	1	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	1	0

103

12

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	2	69
50<80	0	0	0	0	0	0
35<50	0	0	0	0	1	1
20<35	0	0	1	0	0	3
10<20	0	0	0	0	1	8
6<10	0	0	0	1	4	8
3<6	0	0	0	0	0	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	1	0

136

13

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	+	+	8	69
50<80	0	0	0	0	0	+
35<50	0	0	0	0	+	+
20<35	0	0	0	0	2	3
10<20	0	+	1	1	3	6
6<10	0	0	0	+	1	2
3<6	+	0	0	0	+	+
1.5<3	0	0	0	0	0	0
0<1.5	0	+	0	0	+	0

716

14

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	1	78
50<80	0	0	0	0	+	+
35<50	0	0	0	0	1	2
20<35	0	0	0	0	+	4
10<20	0	0	0	0	1	9
6<10	0	0	0	0	+	3
3<6	0	0	0	0	+	+
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	+	0	0

789

15

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	4	53
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	2
20<35	0	0	0	0	0	4
10<20	0	0	0	0	0	10
6<10	0	0	0	1	11	11
3<6	0	0	0	0	0	3
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

99

16

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	3	18
50<80	0	0	0	0	0	2
35<50	0	0	0	0	0	2
20<35	0	0	0	0	0	9
10<20	0	0	0	0	2	38
6<10	0	0	0	0	2	20
3<6	0	0	0	0	1	1
1.5<3	0	0	0	0	0	3
0<1.5	0	0	0	0	0	1

117

20

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	+	0	0	0	2	73
50<80	0	0	0	0	0	+
35<50	0	0	0	0	+	3
20<35	0	0	+	0	+	4
10<20	0	0	0	+	2	10
6<10	0	0	+	+	1	4
3<6	0	0	+	+	0	+
1.5<3	0	0	0	0	+	0
0<1.5	0	0	0	0	0	0

823

21

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	1	65
50<80	0	0	0	0	1	1
35<50	0	0	0	0	0	2
20<35	0	0	0	0	0	10
10<20	0	0	0	0	2	14
6<10	0	0	0	0	1	2
3<6	0	0	0	0	0	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	1

167

22

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	1	0	0	2	35
50<80	0	0	0	0	0	1
35<50	0	0	0	0	1	3
20<35	0	0	0	0	0	9
10<20	0	0	0	0	0	31
6<10	0	0	0	0	2	14
3<6	0	0	0	1	0	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

147

23

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	+	0	0	+	3	48
50<80	0	0	0	0	+	+
35<50	0	0	0	0	+	2
20<35	0	0	0	0	1	7
10<20	0	0	0	1	5	19
6<10	0	0	+	1	3	7
3<6	+	0	0	+	1	1
1.5<3	0	+	0	+	+	+
0<1.5	0	0	0	+	+	0

1165

24

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	4	53
50<80	0	0	0	0	0	+
35<50	0	0	0	0	0	1
20<35	0	0	0	0	1	6
10<20	0	0	0	1	5	15
6<10	0	1	+	1	2	6
3<6	0	0	0	0	1	1
1.5<3	0	+	0	0	0	+
0<1.5	0	0	0	+	+	+

346

25

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	3	40
50<80	0	0	0	0	0	+
35<50	0	0	0	+	1	5
20<35	0	0	0	0	2	10
10<20	0	0	0	1	5	16
6<10	0	0	0	2	4	3
3<6	0	0	0	1	+	+
1.5<3	0	0	0	0	0	0
0<1.5	0	+	0	0	1	0

378

29

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	4	37
50<80	0	0	0	+	1	1
35<50	0	0	0	+	1	6
20<35	0	0	0	+	1	10
10<20	0	0	+	1	6	16
6<10	0	0	0	1	2	11
3<6	0	0	+	+	+	1
1.5<3	0	0	0	+	0	0
0<1.5	0	0	0	+	0	+

491

30

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	2	7	18
50<80	0	0	0	2	0	0
35<50	0	0	0	2	0	0
20<35	0	0	0	0	2	13
10<20	0	0	0	0	9	16
6<10	0	0	0	4	9	4
3<6	0	0	0	2	2	2
1.5<3	0	0	0	0	0	0
0<1.5	0	0	2	0	0	0

45

31

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	0	33
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	10
20<35	0	0	0	0	5	0
10<20	0	0	0	0	10	10
6<10	0	0	0	5	5	19
3<6	0	0	0	0	0	5
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

21

32

INSUFFICIENT DATA

33

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	5	28
50<80	0	0	0	0	0	0
35<50	0	0	0	0	1	1
20<35	0	0	0	0	3	11
10<20	0	0	0	1	4	17
6<10	0	0	1	3	4	13
3<6	0	0	0	1	2	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	3	0	0

96

34

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	2	4	17
50<80	0	0	0	0	0	2
35<50	0	0	0	0	0	0
20<35	0	0	0	2	0	54
10<20	0	0	2	0	0	4
6<10	0	0	0	0	4	2
3<6	0	0	0	0	2	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	4	2	0

52

Graphs represent the objective compilation of available data for specified areas without regard to s

The isopleth analyses (opposite page) are based on all available data subjectively adjusted where b

MAY

gs (hundreds of feet)

hen low cloud amount

es of N_h <5/8

th visibility ≥5 but <10

≥5 nautical miles

1

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	10	53
50<80	0	0	0	0	1	0
35<50	0	0	0	0	0	0
20<35	0	0	0	0	1	2
10<20	0	0	0	1	4	9
6<10	0	0	0	2	7	10
3<6	0	0	0	0	0	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

123

2

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	2	7	57
50<80	0	0	0	0	+	0
35<50	0	0	0	0	0	2
20<35	0	0	0	0	1	4
10<20	0	0	0	0	4	10
6<10	+	0	0	0	2	7
3<6	0	0	0	0	2	2
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

234

3

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	4	43
50<80	0	0	0	0	0	+
35<50	0	0	+	0	0	+
20<35	0	0	0	0	1	3
10<20	0	1	0	1	9	18
6<10	+	1	+	2	5	5
3<6	0	0	+	0	1	1
1.5<3	0	0	0	+	0	0
0<1.5	0	0	0	+	1	0

229

4

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	2	46
50<80	0	0	0	0	1	0
35<50	0	0	0	0	0	1
20<35	0	0	0	1	2	3
10<20	0	0	1	1	6	13
6<10	0	0	0	0	5	13
3<6	0	0	0	1	1	2
1.5<3	0	0	0	1	0	0
0<1.5	0	0	0	0	1	0

182

5

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	2	75
50<80	0	0	0	0	+	0
35<50	0	0	0	0	0	1
20<35	0	0	0	0	0	2
10<20	0	0	0	0	1	10
6<10	0	0	0	+	1	6
3<6	0	0	0	+	+	1
1.5<3	0	0	0	0	0	+
0<1.5	0	0	0	+	0	+

543

6

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	3	49
50<80	0	0	0	+	+	1
35<50	0	0	0	+	1	3
20<35	0		+	0	2	4
10<20	0	0	+	1	3	14
6<10	+	0	+	1	4	9
3<6	0	0	+	1	1	1
1.5<3	0	0	0	0	+	+
0<1.5	0	+	0	0	0	+

916

7

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	1	82
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	1
20<35	0	0	0	0	0	1
10<20	0	0	0	0	0	10
6<10	0	0	0	0	1	3
3<6	0	0	0	0	1	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

109

8

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	0	1	85
50<80	0	0	0	+	0	0
35<50	0	0	0	0	+	+
20<35	0	0	0	0	0	2
10<20	0	0	0	+	0	7
6<10	0	0	0	1	1	3
3<6	0	0	0	0	0	+
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

504

9

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	1	69
50<80	0	0	0	0	0	1
35<50	0	0	0	0	+	4
20<35	0	0	0	+	1	7
10<20	0	0	0	0	1	13
6<10	0	+	0	+	+	3
3<6	0	0	0	0	0	+
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	+

1010

10

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	2	66
50<80	0	0	0	+	+	1
35<50	0	0	0	+	+	2
20<35	0	0	0	+	+	6
10<20	0	0	0	0	1	12
6<10	0	0	0	+	1	6
3<6	0	0	0	0	+	1
1.5<3	0	0	0	0	+	+
0<1.5	+	0	0	0	0	0

1349

14

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	1	78
50<80	0	0	0	0	+	+
35<50	0	0	0	0	1	2
20<35	0	0	0	0	+	4
10<20	0	0	0	0	1	9
6<10	0	0	0	0	+	3
3<6	0	0	0	0	+	+
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	+	0	0

789

15

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	4	53
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	2
20<35	0	0	0	0	0	4
10<20	0	0	0	0	0	10
6<10	0	0	0	1	11	11
3<6	0	0	0	0	0	3
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

99

16

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	3	18
50<80	0	0	0	0	0	2
35<50	0	0	0	0	0	2
20<35	0	0	0	0	0	9
10<20	0	0	0	0	2	38
6<10	0	0	0	0	2	20
3<6	0	0	0	0	1	1
1.5<3	0	0	0	0	0	3
0<1.5	0	0	0	0	0	1

117

17

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	3	63
50<80	0	0	0	0	0	+
35<50	0	0	0	0	+	1
20<35	0	0	0	0	+	6
10<20	0	0	0	1	1	19
6<10	0	0	0	1	3	5
3<6	0	0	+	0	1	+
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	+	+

272

18

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	2	61
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	1
20<35	0	0	0	0	+	7
10<20	0	+	0	0	1	16
6<10	0	+	0	+	3	6
3<6	0	+	0	+	+	+
1.5<3	0	0	0	0	0	0
0<1.5	0	0	+	0	0	0

367

19

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	0	0	0	2	56
50<80	0	0	0	0	+	1
35<50	0	0	0	+	+	1
20<35	0	0	0	0	1	8
10<20	0	+	+	1	2	15
6<10	0	0	+	1	4	6
3<6	+	0	+	1	2	1
1.5<3	0	0	0	+	0	+
0<1.5	0	0	0	+	0	+

764

23

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	0	0	+	3	48
50<80	0	0	0	0	+	+
35<50	0	0	0	0	+	2
20<35	0	0	0	0	1	7
10<20	0	0	0	1	5	19
6<10	0	0	+	1	3	7
3<6	+	0	0	+	1	1
1.5<3	0	+	0	+	+	+
0<1.5	0	0	0	+	+	0

1165

24

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	4	53
50<80	0	0	0	0	0	+
35<50	0	0	0	0	0	1
20<35	0	0	0	0	1	6
10<20	0	0	0	1	5	15
6<10	0	1	+	1	2	6
3<6	0	0	0	0	1	1
1.5<3	0	+	0	0	0	+
0<1.5	0	0	0	+	+	+

346

25

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	3	40
50<80	0	0	0	0	0	+
35<50	0	0	0	+	1	5
20<35	0	0	0	0	2	10
10<20	0	0	0	1	5	16
6<10	0	0	0	2	4	9
3<6	0	0	0	1	+	+
1.5<3	0	0	0	0	0	0
0<1.5	0	+	0	0	1	0

378

26

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	3	41
50<80	0	0	+	0	0	1
35<50	0	0	1	1	1	4
20<35	0	0	+	+	0	8
10<20	0	+	+	1	5	15
6<10	0	0	+	2	6	7
3<6	0	0	0	2	+	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

239

27

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	0	55
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	0
20<35	0	0	0	0	0	45
10<20	0	0	0	0	0	0
6<10	0	0	0	0	0	0
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

11

28

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	0	55
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	0
20<35	0	0	0	0	0	23
10<20	0	0	0	3	0	6
6<10	0	0	0	0	6	0
3<6	0	0	0	3	0	3
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

31

32

INSUFFICIENT DATA

33

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	5	28
50<80	0	0	0	0	0	0
35<50	0	0	0	0	1	1
20<35	0	0	0	0	3	11
10<20	0	0	0	1	4	17
6<10	0	0	1	3	4	13
3<6	0	0	0	1	2	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	3	0	0

96

34

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	2	4	17
50<80	0	0	0	0	0	2
35<50	0	0	0	0	0	0
20<35	0	0	0	2	0	54
10<20	0	0	2	0	0	4
6<10	0	0	0	0	4	2
3<6	0	0	0	0	2	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	4	2	0

62

35

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	0	36
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	0
20<35	0	0	0	0	0	14
10<20	0	0	0	0	0	29
6<10	0	0	0	0	21	0
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

14

36

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	0	8
50<80	0	0	0	0	0	8
35<50	0	0	0	0	0	8
20<35	0	0	0	0	15	0
10<20	0	0	0	8	0	8
6<10	0	0	0	8	0	31
3<6	0	0	0	0	0	8
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

13

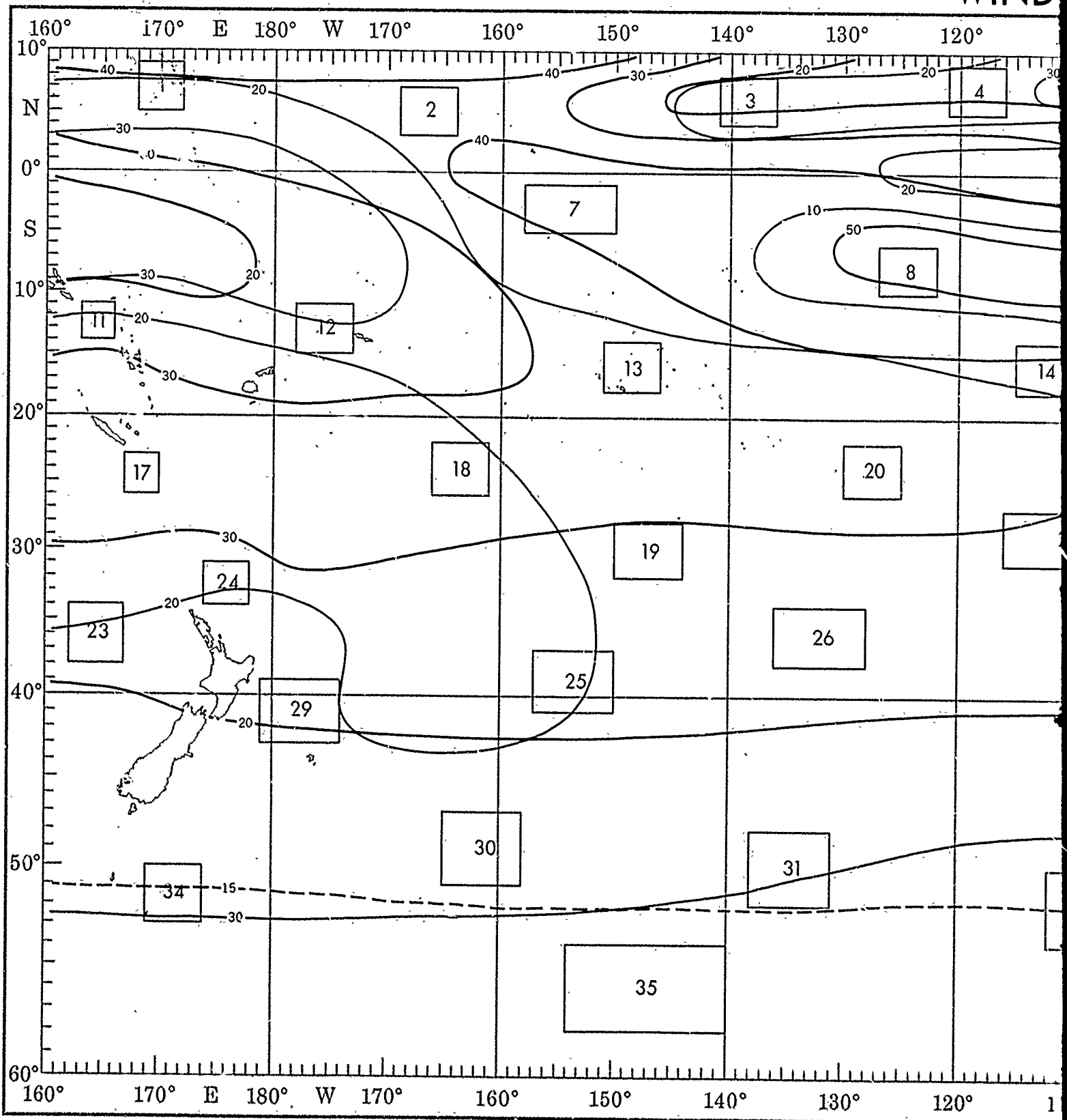
37

INSUFFICIENT DATA

objective compilation of available data for specified areas without regard to suspected biases, (opposite page) are based on all available data subjectively adjusted where bias was evident.

MAY

WIND


160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N 0° S 10° 20° 30° 40° 50° 60°
40
30
20
10
50
0
15
1
2
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7
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11
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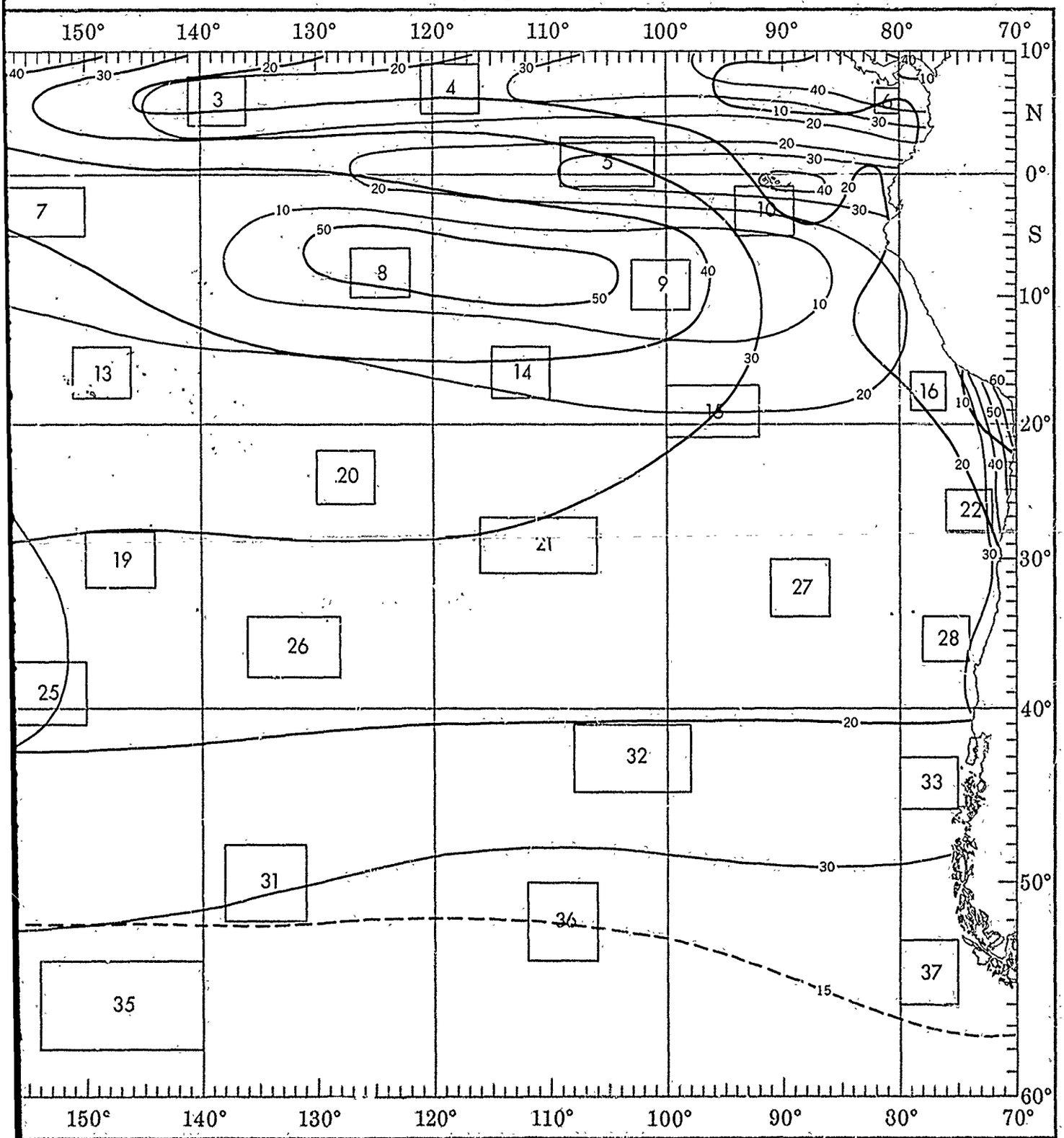
35

WIND-VISIBILITY-CLOUDINESS



LOW CLOUD CEILING-VISIBILITY-WIND

Percent frequency of occurrence of specified wind speed in knots, visibility (Vsby) in nautical miles, and low cloud ceiling (LCC) in hundreds of feet.

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

WIND SPEED (knots)

LCC + Vsby	0-3	4-10	11-21	22-33	≥34
<1.5 & or <.5	+	1	1	+	0
<6 & or <2	2	2	1	1	+
Vsby <2	1	2	1	1	+
<10 & or <2	3	4	2	1	1
<20 & or <5	8	9	6	5	2
Vsby ≥5	9	11	12	3	1
≥50 & ≥5	12	13	15	7	3
NC & ≥10	4	2	1	+	0
	1234				

(2% of the observations reported wind speeds of 11-21 knots, a low cloud ceiling <1000 feet and/or visibility <2 nautical miles.)

"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8.

+ indicates < 5% but >0.

Number of observations.

Conditions for Carrier Operations

BLUE LINE - Percent frequency of optimum conditions. LCC ≥5000 ft., (or no LCC), Vsby ≥5 nm. and Wind 11-21 kts.

RED LINE - Percent frequency of poor conditions. Any one of the following constitutes poor conditions: LCC <300 ft., Vsby <1 nm., Wind <6 or ≥34 kts.

Satisfactory conditions between poor and optimum

1

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	2	8	9	1	0
<20 & OR <5	3	14	17	1	0
VSBY ≥5	7	31	56	2	0
≥50 & ≥5	4	18	39	2	0
NC & ≥10	4	16	32	1	0

121

2

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	+	+	3	0	0
VSBY <2	0	0	+	0	0
<10 & OR <2	1	6	6	0	0
<20 & OR <5	1	11	16	1	0
VSBY ≥5	3	41	51	2	0
≥50 & ≥5	2	29	32	1	0
NC & ≥10	2	26	29	0	0

234

6

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	0	0
<6 & OR <2	1	3	1	0	0
VSBY <2	+	1	1	0	0
<10 & OR <2	4	11	4	0	0
<20 & OR <5	7	23	7	+	0
VSBY ≥5	21	60	15	+	0
≥50 & ≥5	13	32	8	+	0
NC & ≥10	13	29	7	+	0

886

7

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	1	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	0	4	0	0
<20 & OR <5	1	2	13	0	0
VSBY ≥5	2	50	42	6	0
≥50 & ≥5	1	47	29	6	0
NC & ≥10	1	47	28	6	0

109

11

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	1	0	0
<6 & OR <2	0	1	2	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	2	15	0	0
<20 & OR <5	1	6	23	0	0
VSBY ≥5	5	33	54	5	0
≥50 & ≥5	4	23	27	3	0
NC & ≥10	4	21	23	3	0

102

12

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	0	0	0
<6 & OR <2	0	1	1	0	0
VSBY <2	0	0	1	0	0
<10 & OR <2	1	4	11	0	0
<20 & OR <5	1	9	14	0	0
VSBY ≥5	13	40	41	3	0
≥50 & ≥5	11	30	27	3	0
NC & ≥10	11	30	26	2	0

135

13

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	0
<6 & OR <2	+	1	1	+	0
VSBY <2	0	+	1	+	0
<10 & OR <2	+	2	3	+	0
<20 & OR <5	1	6	8	1	0
VSBY ≥5	11	46	38	3	0
≥50 & ≥5	9	38	29	1	0
NC & ≥10	9	35	25	1	0

707

14

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	+	+	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	+	1	2	+	0
<20 & OR <5	1	5	8	+	0
VSBY ≥5	6	45	46	3	0
≥50 & ≥5	5	37	35	2	0
NC & ≥10	5	36	35	2	0

785

15

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	2	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	12	13	0	0
<20 & OR <5	2	17	17	0	0
VSBY ≥5	8	43	46	1	0
≥50 & ≥5	6	26	24	1	0
NC & ≥10	5	25	21	1	0

99

16

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	1	0	0
<6 & OR <2	0	1	4	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	2	12	11	2	0
<20 & OR <5	3	30	32	3	0
VSBY ≥5	3	43	47	6	1
≥50 & ≥5	1	10	9	1	1
NC & ≥10	1	9	8	1	0

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20

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	0
<6 & OR <2	0	+	+	+	0
VSBY <2	0	+	+	0	0
<10 & OR	+	2	3	1	+
<20 & OR <5	1	6	10	1	+
VSBY ≥5	9	40	39	5	+
≥50 & ≥5	8	37	26	4	+
NC & ≥10	8	36	26	4	+

815

21

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	1	0	0
<6 & OR <2	0	1	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	1	2	2	0
<20 & OR <5	0	7	8	5	0
VSBY ≥5	7	49	30	14	0
≥50 & ≥5	7	34	19	8	0
NC & ≥10	6	34	18	7	0

166

22

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	1	2	0	0	0
VSBY <2	1	3	0	0	0
<10 & OR <2	3	13	3	0	0
<20 & OR <5	4	28	17	1	0
VSBY ≥5	6	44	41	6	0
≥50 & ≥5	2	12	19	6	0
NC & ≥10	2	11	18	4	0

144

23

WIND SPEED (KNOTS)

LCC VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	+
<6 & OR <2	+	1	+	1	+
VSBY <2	0	+	0	+	+
<10 & OR <2	+	3	5	4	2
<20 & OR <5	2	9	14	10	3
VSBY ≥5	6	31	39	17	4
≥50 & ≥5	4	19	21	7	1
NC & ≥10	4	18	20	5	1

1152

24

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	1	0	0
<6 & OR <2	0	1	1	1	+
VSBY <2	0	0	0	1	+
<10 & OR <2	1	2	6	4	1
<20 & OR <5	2	7	16	7	2
VSBY ≥5	4	35	42	13	2
≥50 & ≥5	2	25	23	5	2
NC & ≥10	2	24	21	4	1

336

25

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	+
<6 & OR <2	0	1	1	+	
VSBY <2	0	+	0	0	0
<10 & OR <2	+	5	8	3	1
<20 & OR <5	+	11	17	9	2
VSBY ≥5	2	27	44	18	4
≥50 & ≥5	2	12	21	6	2
NC & ≥10	2	11	21	5	1

373

29

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	+	0
<6 & OR <2	0	+	1	1	1
VSBY <2	0	0	0	0	+
<10 & OR <2	0	4	6	0	2
<20 & OR <5	0	7	18	12	4
VSBY ≥5	3	23	44	21	5
≥50 & ≥5	2	12	20	7	1
NC & ≥10	2	12	17	6	1

483

30

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	2	0
<6 & OR <2	0	2	2	2	2
VSBY <2	0	0	0	2	0
<10 & OR <2	0	2	2	13	9
<20 & OR <5	0	7	9	22	22
VSBY ≥5	0	4	22	36	22
≥50 & ≥5	0	4	11	7	2
NC & ≥10	0	4	4	7	2

45

31

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	5	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	5	0	14	14	0
<20 & OR <5	5	10	14	24	0
VSBY ≥5	5	19	52	19	0
≥50 & ≥5	0	5	29	0	0
NC & ≥10	0	5	29	0	0

21

32

INSUFFICIENT DATA

33

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	0	0	2
<6 & OR <2	0	1	3	1	3
VSBY <2	0	0	1	0	0
<10 & OR <2	0	6	14	4	4
<20 & OR <5	0	9	27	9	4
VSBY ≥5	2	19	45	23	2
≥50 & ≥5	2	9	15	7	0
NC & ≥10	2	8	13	5	0

96

34

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	2	4	0
<6 & OR <2	0	2	4	4	0
VSBY <2	0	0	2	0	0
<10 & OR <2	0	2	10	4	0
<20 & OR <5	0	4	15	4	0
VSBY ≥5	0	17	44	23	6
≥50 & ≥5	0	10	10	4	0
NC & ≥10	0	8	6	4	0

52

Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

VISIBILITY-WIND

MAY

ility (Vsby) in nautical

h) when low cloud amount

iling <1000 feet and/or

rrences of N_h <5/8

and Wind 11-21 kts.

ditions LCC <300 ft.,

1

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	2	8	9	1	0
<20 & OR <5	3	14	17	1	0
VSBY ≥5	7	31	56	2	0
≥50 & ≥5	4	18	39	2	0
NC & ≥ 10	4	16	32	1	0

121

2

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	+	+	3	0	0
VSBY <2	0	0	+	0	0
<10 & OR <2	1	6	6	0	0
<20 & OR <5	1	11	16	1	0
VSBY ≥5	3	41	51	2	0
≥50 & ≥5	2	29	32	1	0
NC & ≥ 10	2	26	29	0	0

234

3

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	1	0	0
<6 & OR <2	1	1	4	1	0
VSBY <2	+	+	2	+	0
<10 & OR <2	2	6	10	2	0
<20 & OR <5	2	22	22	2	0
VSBY ≥5	4	50	36	2	0
≥50 & ≥5	3	29	16	0	0
NC & ≥ 10	3	26	15	0	0

227

4

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	0	0	0
<6 & OR <2	0	4	2	0	0
VSBY <2	0	0	1	0	0
<10 & OR <2	2	16	6	1	0
<20 & OR <5	3	28	13	2	0
VSBY ≥5	11	57	26	2	0
≥50 & ≥5	9	28	13	0	0
NC & ≥ 10	9	26	12	0	0

180

5

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	0
<6 & OR <2	1	1	+	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	2	6	2	0	0
<20 & OR <5	3	10	7	0	0
VSBY ≥5	11	63	25	0	0
≥50 & ≥5	7	52	18	0	0
NC & ≥ 10	7	51	17	0	0

541

6

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	0	0
<6 & OR <2	1	3	1	0	0
VSBY <2	+	1	1	0	0
<10 & OR <2	4	14	4	0	0
<20 & OR <5	7	23	7	+	0
VSBY ≥5	21	60	15	+	0
≥50 & ≥5	13	32	8	+	0
NC & ≥ 10	13	29	7	+	0

886

7

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	1	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	0	4	0	0
<20 & OR <5	1	2	13	0	0
VSBY ≥5	2	50	42	6	0
≥50 & ≥5	1	47	29	6	0
NC & ≥ 10	1	47	28	6	0

109

8

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	+	+	0	0
VSBY <2	0	0	+	0	0
<10 & OR <2	0	3	2	0	0
<20 & OR <5	0	5	6	+	0
VSBY ≥5	1	35	61	1	0
≥50 & ≥5	1	31	53	1	0
NC & ≥ 10	1	31	53	1	0

502

9

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	+	0
<6 & OR <2	0	0	1	+	0
VSBY <2	0	0	+	0	0
<10 & OR <2	0	1	3	+	0
<20 & OR <5	+	4	13	1	0
VSBY ≥5	1	30	65	4	0
≥50 & ≥5	1	23	45	2	0
NC & ≥ 10	1	22	44	2	0

1009

10

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	0	0	0
<6 & OR <2	+	1	+	0	0
VSBY <2	+	+	0	0	0
<10 & OR <2	1	6	2	0	0
<20 & OR <5	1	16	5	+	0
VSBY ≥5	7	67	25	+	0
≥50 & ≥5	5	45	18	+	0
NC & ≥ 10	5	43	17	+	0

1339

14

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	+	+	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	+	1	2	+	0
<20 & OR <5	1	5	8	+	0
VSBY ≥5	6	45	46	3	0
≥50 & ≥5	5	37	35	2	0
NC & ≥ 10	5	36	35	2	0

785

15

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	2	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	12	13	0	0
<20 & OR <5	2	17	17	0	0
VSBY ≥5	8	43	46	1	0
≥50 & ≥5	6	26	24	1	0
NC & ≥ 10	5	25	21	1	0

99

16

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	1	0	0
<6 & OR <2	0	1	4	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	2	12	11	2	0
<20 & OR <5	3	30	32	3	0
VSBY ≥5	3	43	47	6	1
≥50 & ≥5	1	10	9	1	1
NC & ≥ 10	1	9	8	1	0

117

17

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	1	0	0
<6 & OR <2	0	0	2	0	0
VSBY <2	0	0	+	0	0
<10 & OR <2	+	2	5	3	+
<20 & OR <5	1	7	15	4	+
VSBY ≥5	6	34	49	9	0
≥50 & ≥5	4	26	31	6	0
NC & ≥ 10	3	25	29	5	0

268

18

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	1	+	1	0
VSBY <2	0	1	+	+	0
<10 & OR <2	0	4	5	2	1
<20 & OR <5	+	10	13	4	1
VSBY ≥5	4	41	44	7	2
≥50 & ≥5	4	29	28	2	+
NC & ≥ 10	4	29	27	2	+

362

19

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	0	0	0
<6 & OR <2	+	1	2	1	1
VSBY <2	+	+	+	+	+
<10 & OR <2	+	5	5	2	1
<20 & OR <5	1	11	13	6	2
VSBY ≥5	3	39	38	14	2
≥50 & ≥5	2	26	23	8	1
NC & ≥ 10	2	25	21	7	1

750

23

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	+
<6 & OR <2	+	1	+	1	+
VSBY <2	0	+	0	+	+
<10 & OR <2	+	3	5	4	2
<20 & OR <5	2	9	14	10	3
VSBY ≥5	6	31	39	17	4
≥50 & ≥5	4	19	21	7	1
NC & ≥ 10	4	18	20	5	1

1152

24

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	1	0	0
<6 & OR <2	0	1	1	1	+
VSBY <2	0	0	0	1	+
<10 & OR <2	1	2	6	4	1
<20 & OR <5	2	7	16	7	2
VSBY ≥5	4	35	42	13	2
≥50 & ≥5	2	25	23	5	2
NC & ≥ 10	2	24	21	4	1

336

25

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	+
<6 & OR <2	0	1	1	1	+
VSBY <2	0	+	0	0	0
<10 & OR <2	+	5	8	3	1
<20 & OR <5	+	11	17	9	2
VSBY ≥5	2	27	44	18	4
≥50 & ≥5	2	12	21	6	2
NC & ≥ 10	2	11	21	5	1

373

26

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	+	4	+	1
VSBY <2	0	+	3	0	0
<10 & OR <2	0	5	9	3	4
<20 & OR <5	1	13	18	5	5
VSBY ≥5	2	35	38	11	5
≥50 & ≥5	1	19	19	5	1
NC & ≥ 10	1	18	18	5	+

239

27

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	0	0	0
<20 & OR <5	0	0	0	0	0
VSBY ≥5	0	27	73	0	0
≥50 & ≥5	0	27	27	0	0
NC & ≥ 10	0	27	27	0	0

11

28

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	3	3	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	3	10	0	0
<20 & OR <5	0	3	17	0	0
VSBY ≥5	10	20	57	10	0
≥50 & ≥5	7	10	37	3	0
NC & ≥ 10	7	10	37	3	0

30

32

INSUFFICIENT DATA

33

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	0	0	2
<6 & OR <2	0	1	3	1	3
VSBY <2	0	0	1	0	0
<10 & OR <2	0	6	14	4	4
<20 & OR <5	0	9	27	9	4
VSBY ≥5	2	19	45	23	2
≥50 & ≥5	2	9	15	7	0
NC & ≥ 10	2	8	13	5	0

96

34

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	2	4	0
<6 & OR <2	0	2	4	4	0
VSBY <2	0	0	2	0	0
<10 & OR <2	0	2	10	4	0
<20 & OR <5	0	4	15	4	0
VSBY ≥5	0	17	44	23	6
≥50 & ≥5	0	10	10	4	0
NC & ≥ 10	0	8	6	4	0

52

35

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	7	0	14
<20 & OR <5	0	0	36	0	14
VSBY ≥5	0	14	50	21	14
≥50 & ≥5	0	7	14	14	0
NC & ≥ 10	0	7	14	14	0

14

36

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	8	0	0
VSBY <2	0	0	1	0	0
<10 & OR <2	0	8	23	8	8
<20 & OR <5	0	15	31	8	8
VSBY ≥5	0	38	23	15	8
≥50 & ≥5	0	8	0	8	0
NC & ≥ 10	0	0	0	8	0

13

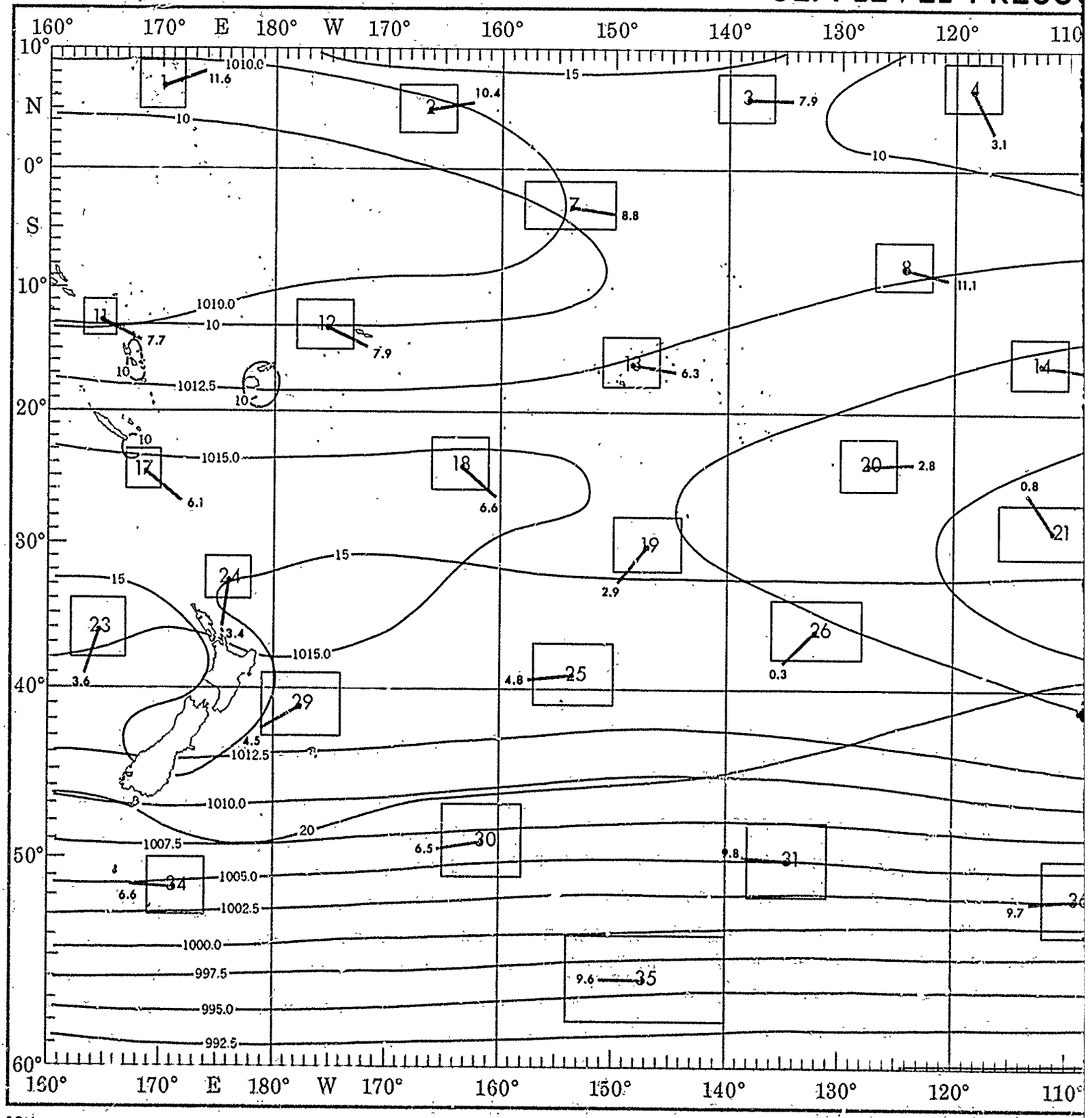
37

INSUFFICIENT DATA

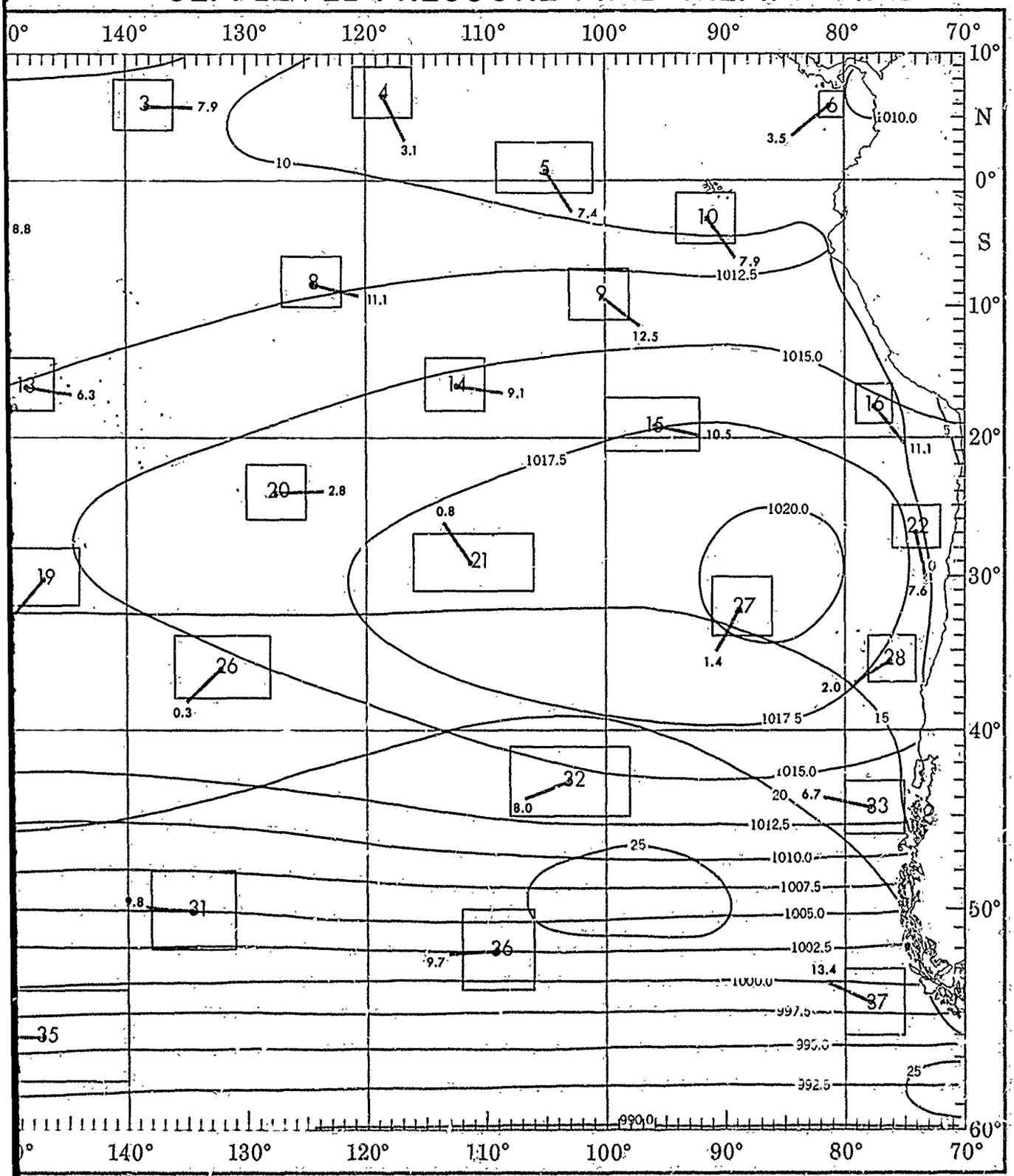
e objective compilation of available data for specified areas without regard to suspected biases.
s (opposite page) are based on all available data subjectively adjusted where bias was evident.

MAY

SEA LEVEL PRESSU

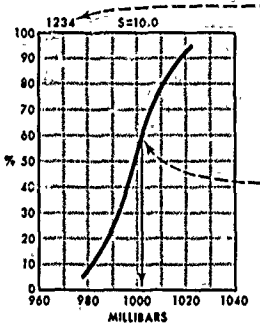


SEA LEVEL PRESSURE AND MEAN WIND



SEA LEVEL PRESSURE

Sea level pressure and mean wind.



Number of observations.

Cumulative percent frequency of sea level pressures equal to or less than the pressure intersected by the curve.

S=Standard deviation of pressure (mbs).

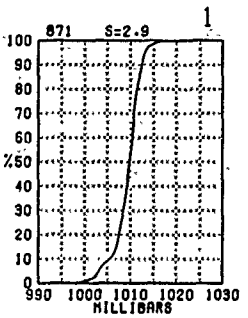
(60% of all observed sea level pressures were ≤1002 millibars.)

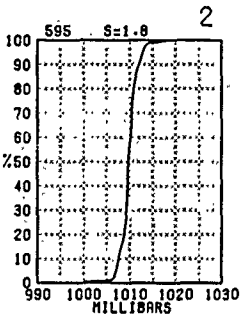
Vector mean wind is plotted from the direction which the mean flow occurs with the magnitude in knots at the end of the vector.

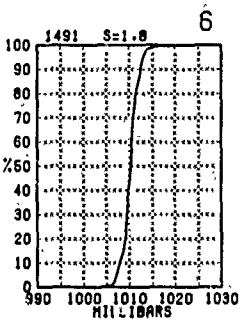
10.2 Vector mean wind is from the northeast at 10.2 knots.

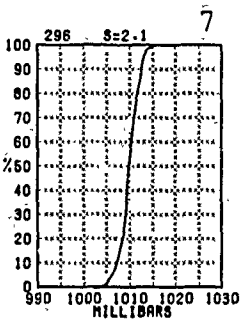
BLUE LINE - Scalar mean wind speed (kts.)

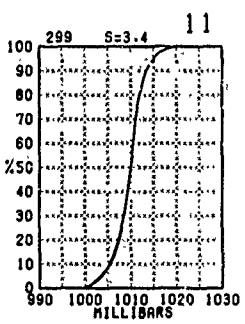
RED LINE - Mean sea level pressure (mbs.)

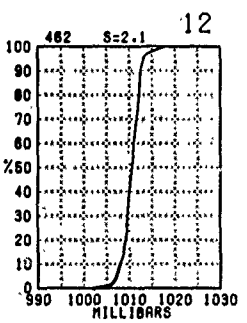


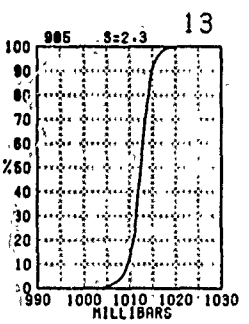


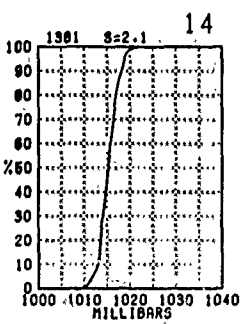


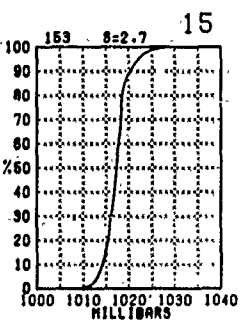


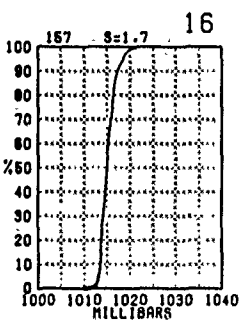


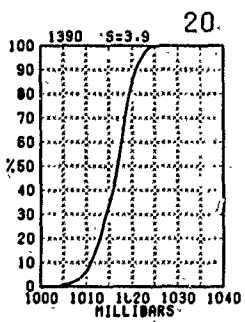


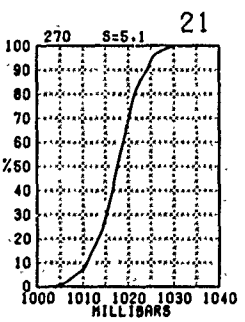


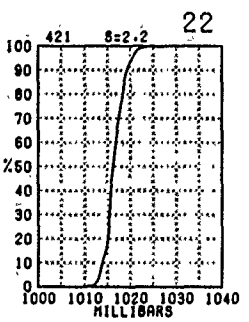


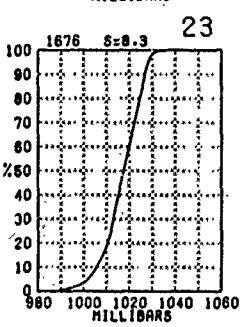


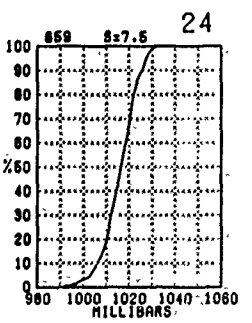


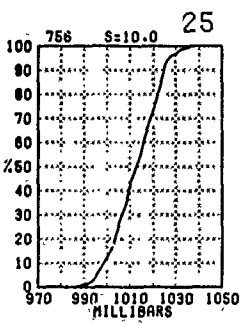


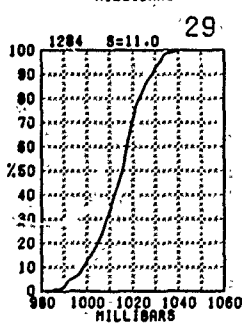


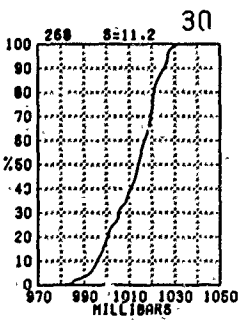


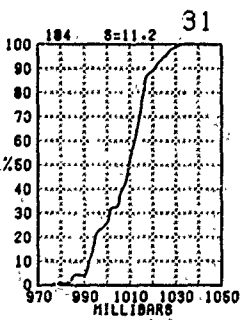


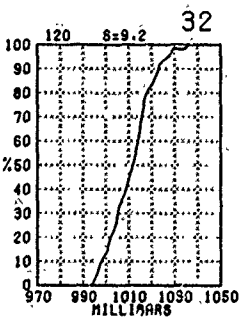


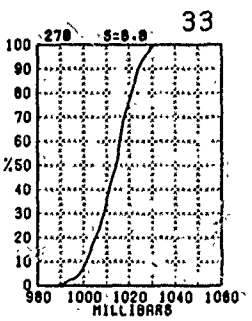


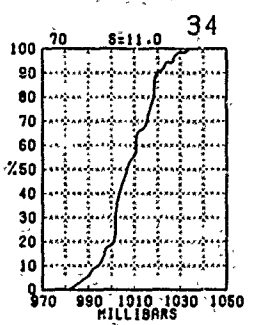












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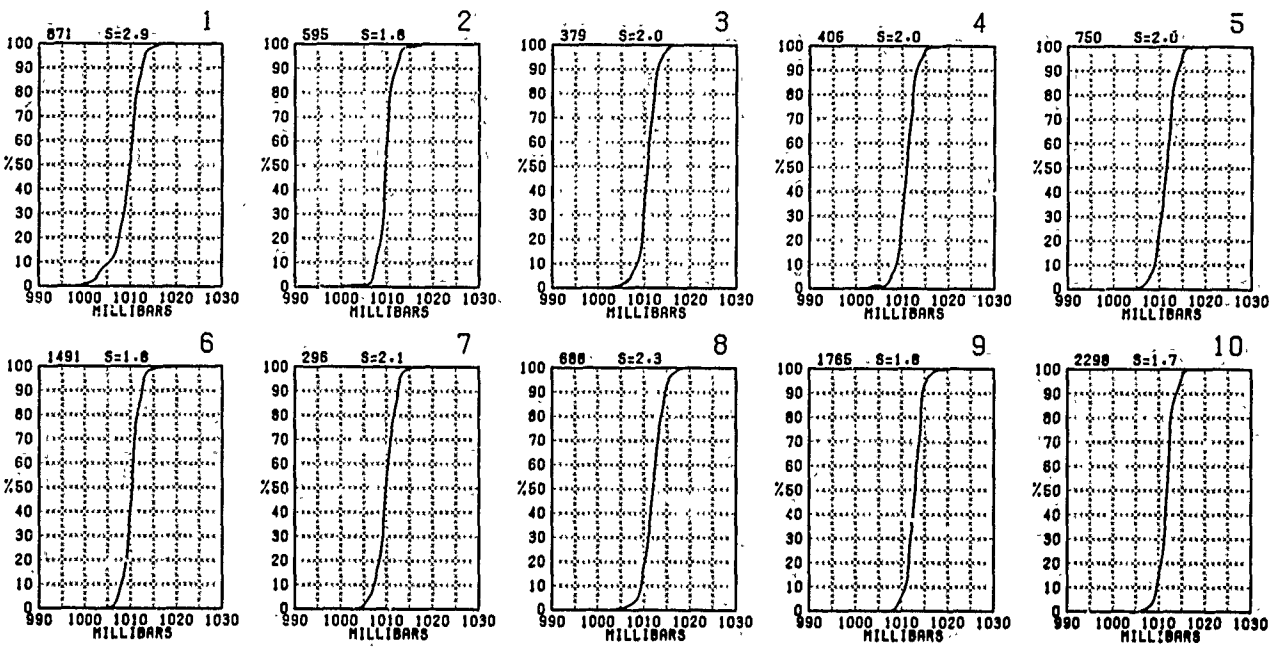

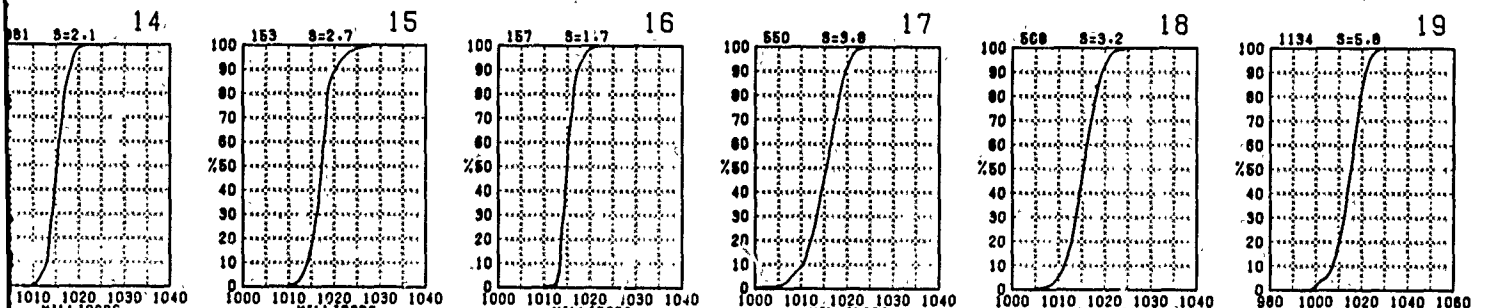

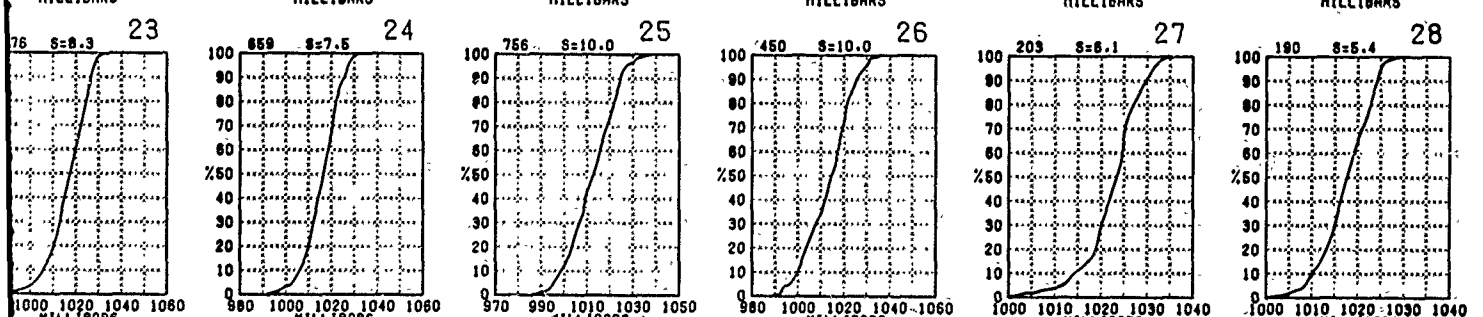

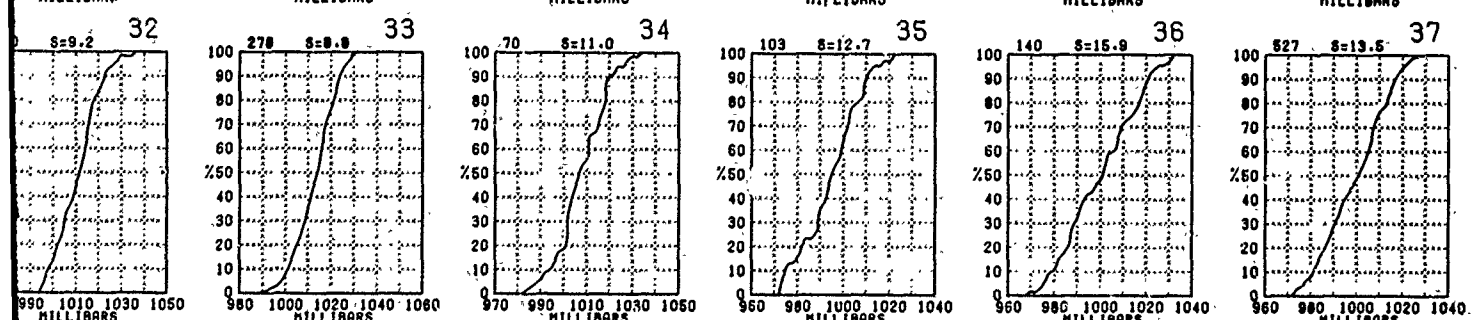

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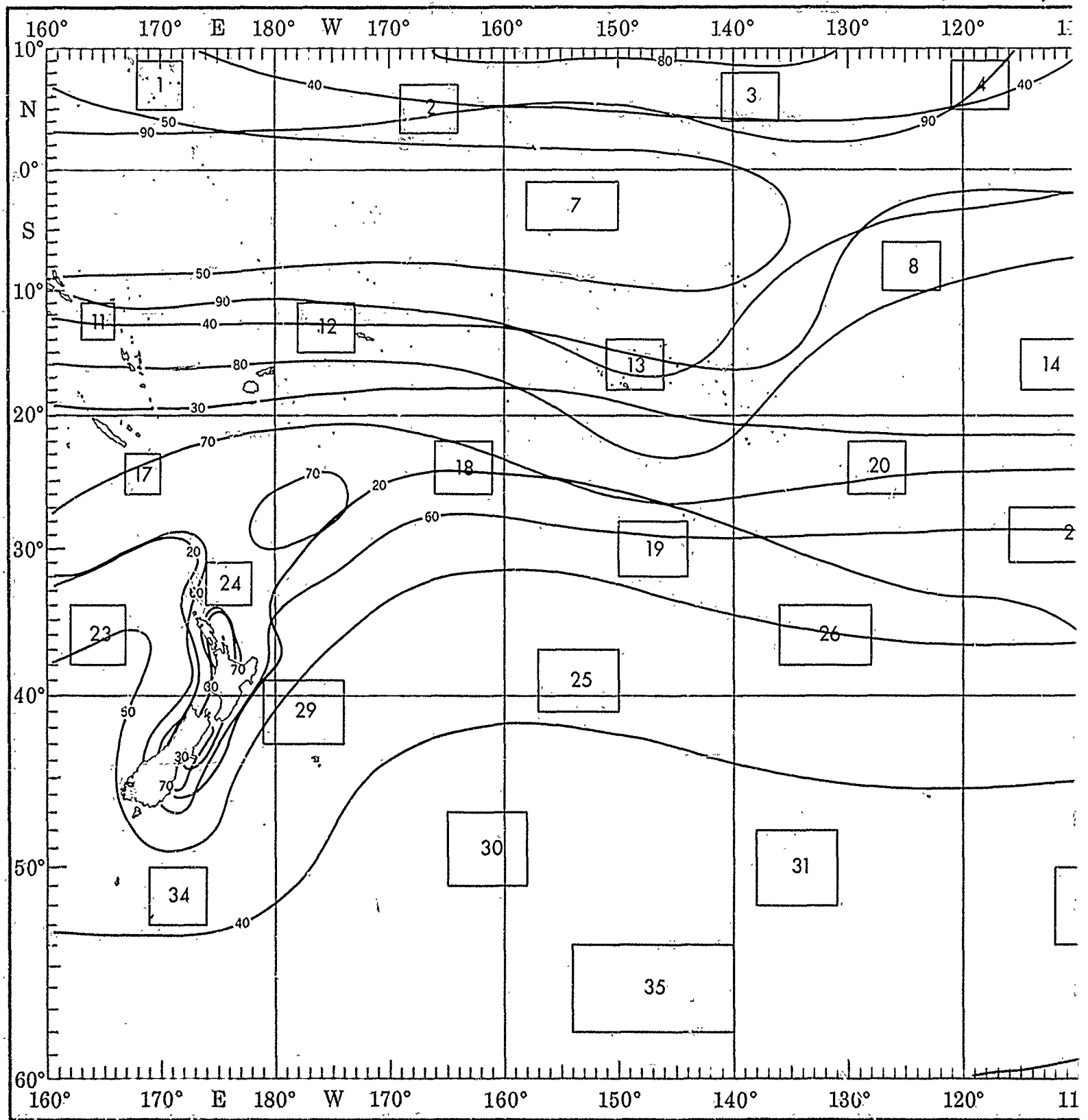
WAVES (<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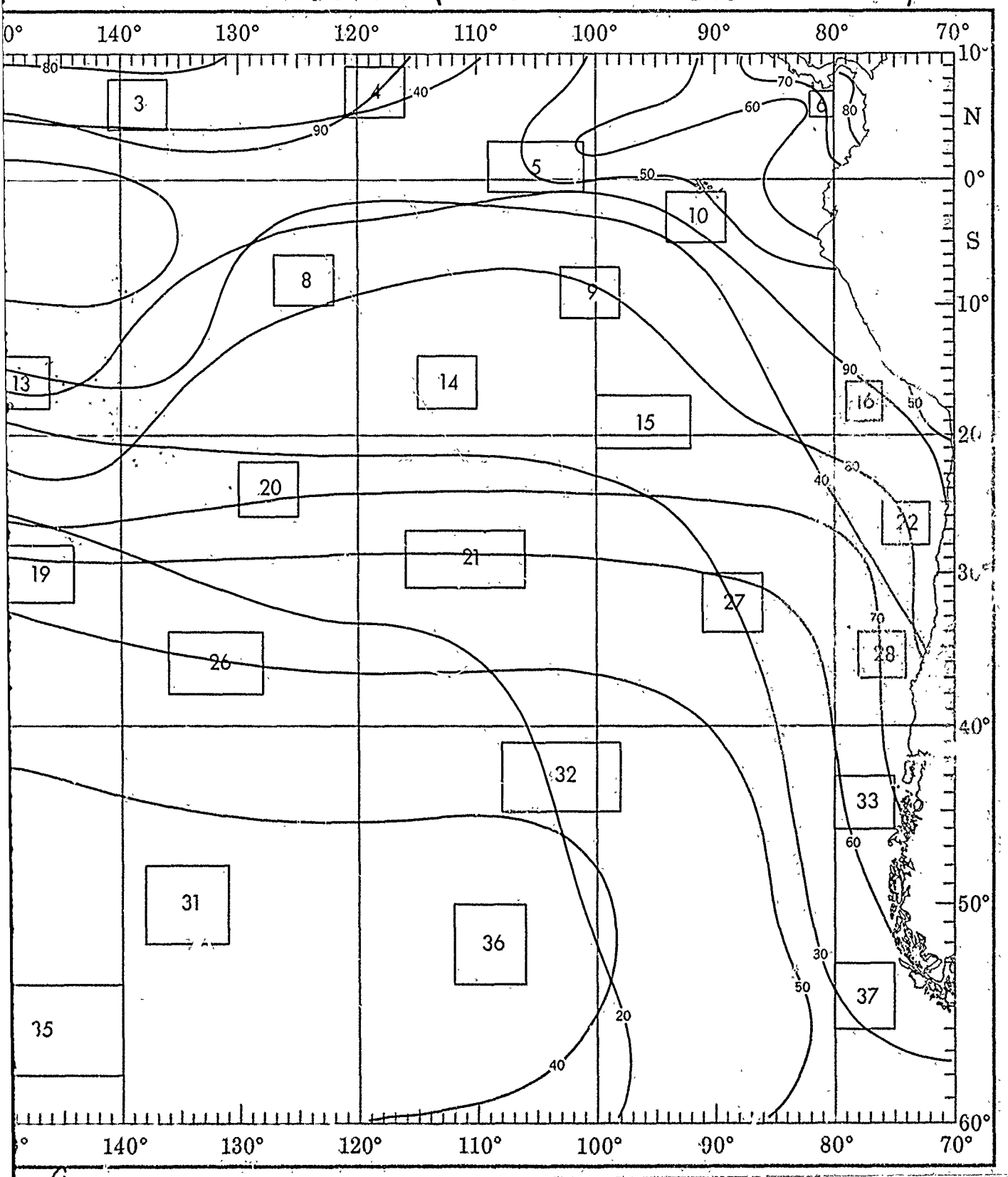
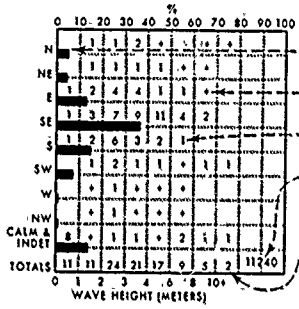
WAVES (<1.5 AND <2.5 METERS)



WAVE DIRECTION AND HEIGHT



Wave direction and height.

Directic ~ 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.

—(5% of all waves were from the N.)

+ indicates < 5% but >0.

—(1% of all waves were from the S with heights from 6-7.5 meters.)

—Number of observations.

—(2% of the waves from all directions had heights ≥10 meters.)

WAVE HEIGHT INTERVAL

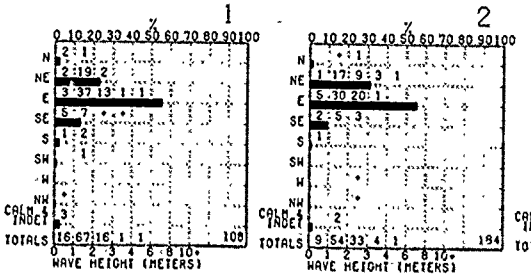
Feet	0-2	3-6	7-9	10-12	13-19	20-25	26-32	≥33
Meters	0-.5	1-1.5	2-2.5	3-3.5	4-5.5	6-7.5	8-9.5	≥10

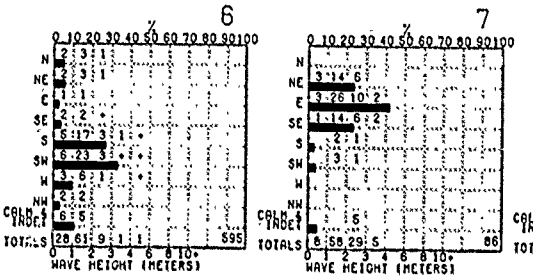
0 1 2 3 4 6 8 10+

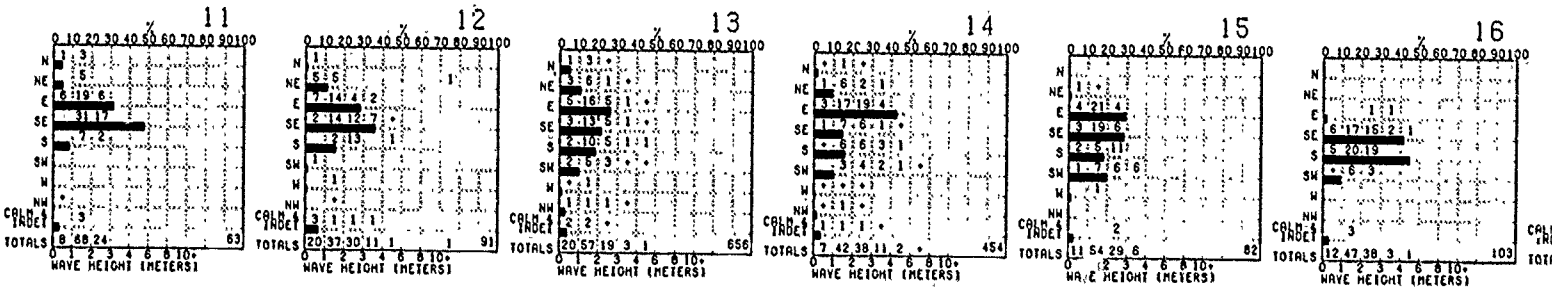
Printed scale on bottom of chart

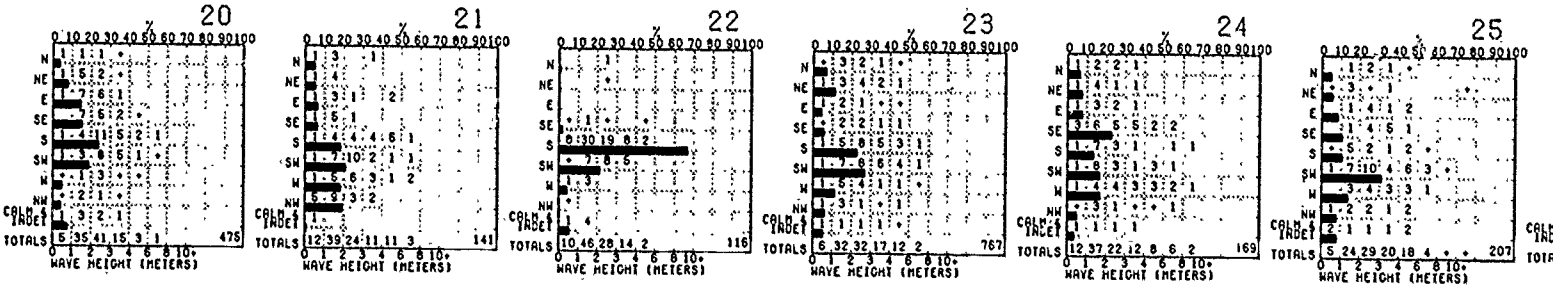
BLUE LINE - Percent frequency of wave height <1.5 meters (5 feet)

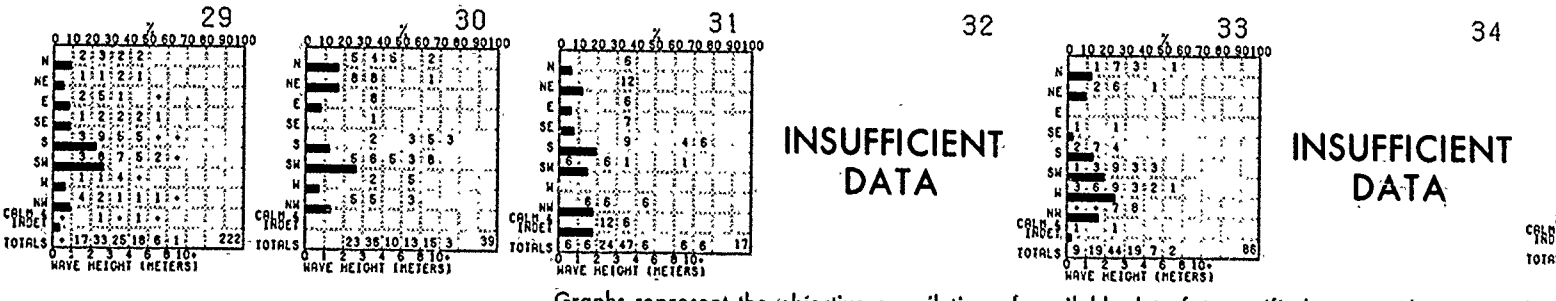
RED LINE - Percent frequency of wave height <2.5 meters (8 feet)











INSUFFICIENT DATA

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Graphs represent the objective compilation of available data for specified areas without regard to sus

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≥33
≥10
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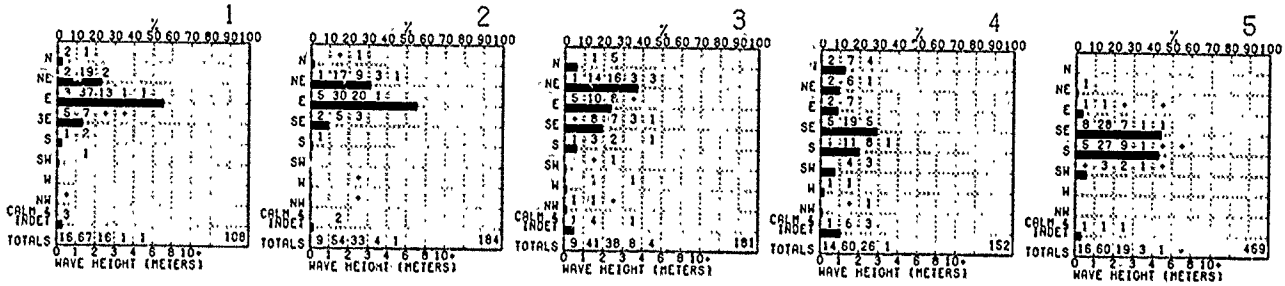

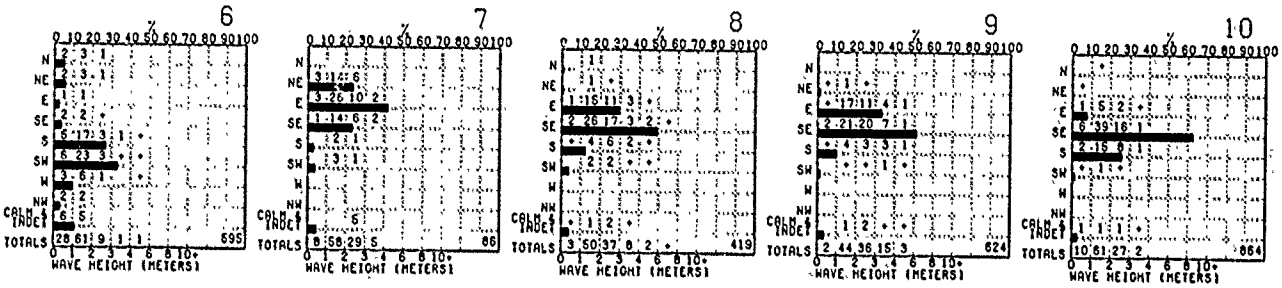

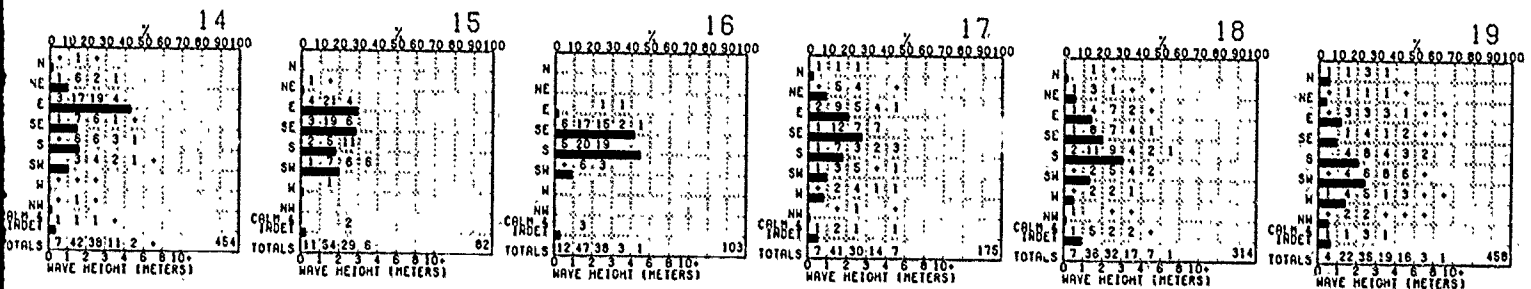

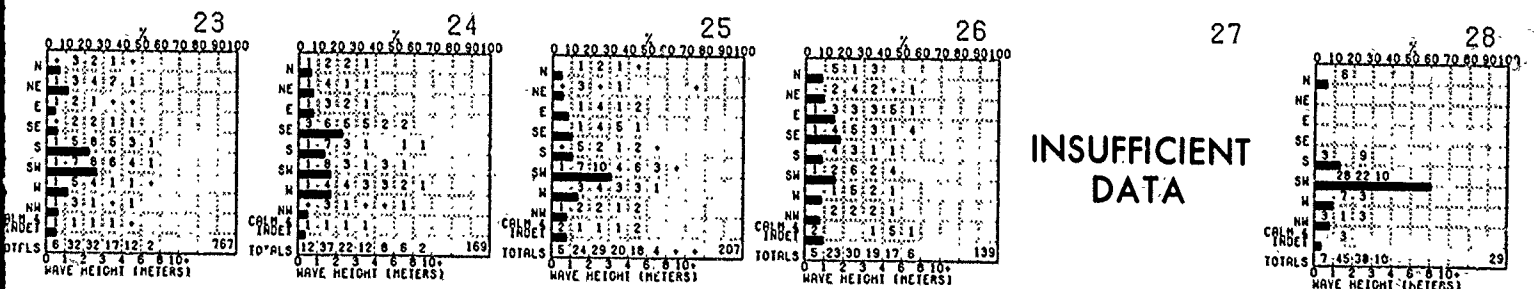

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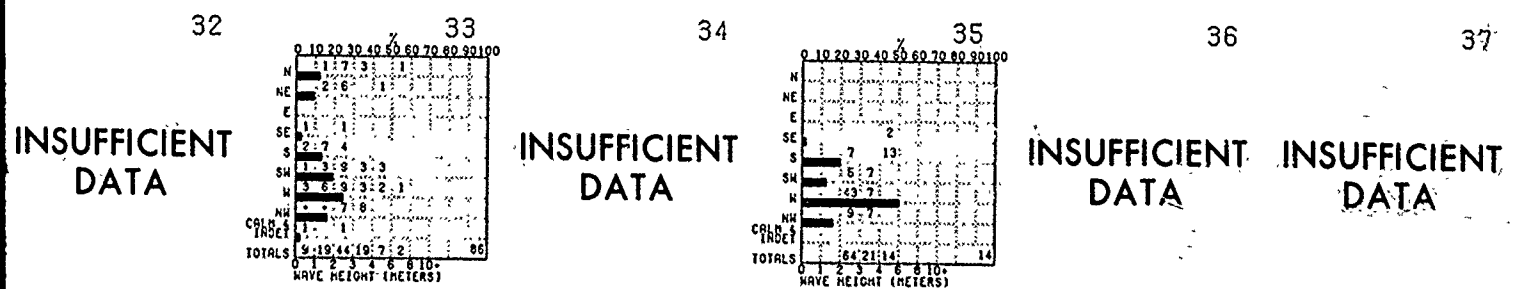
INSUFFICIENT DATA



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(opposite page) are based on all available data subjectively adjusted where bias was evident.

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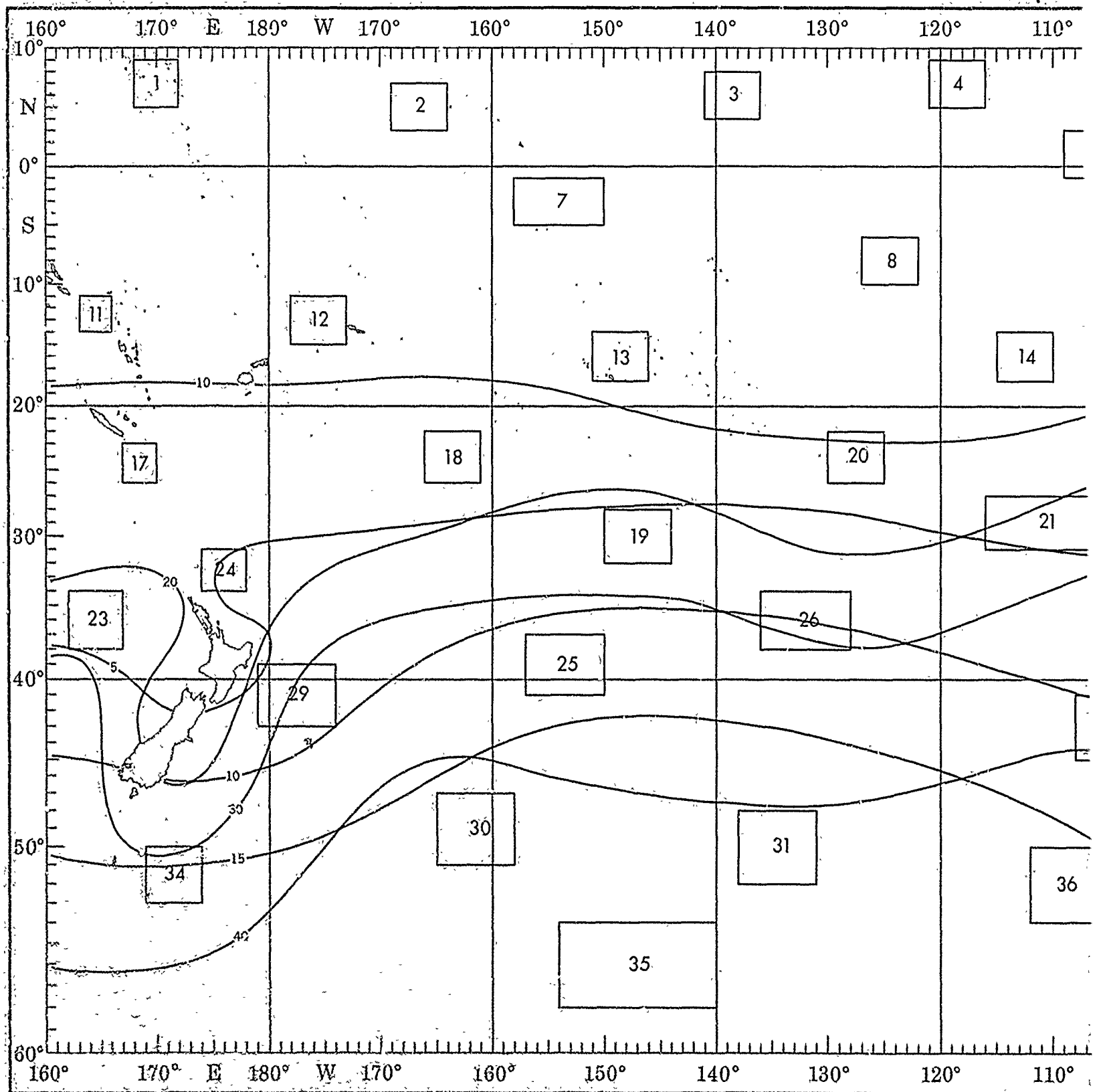
160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
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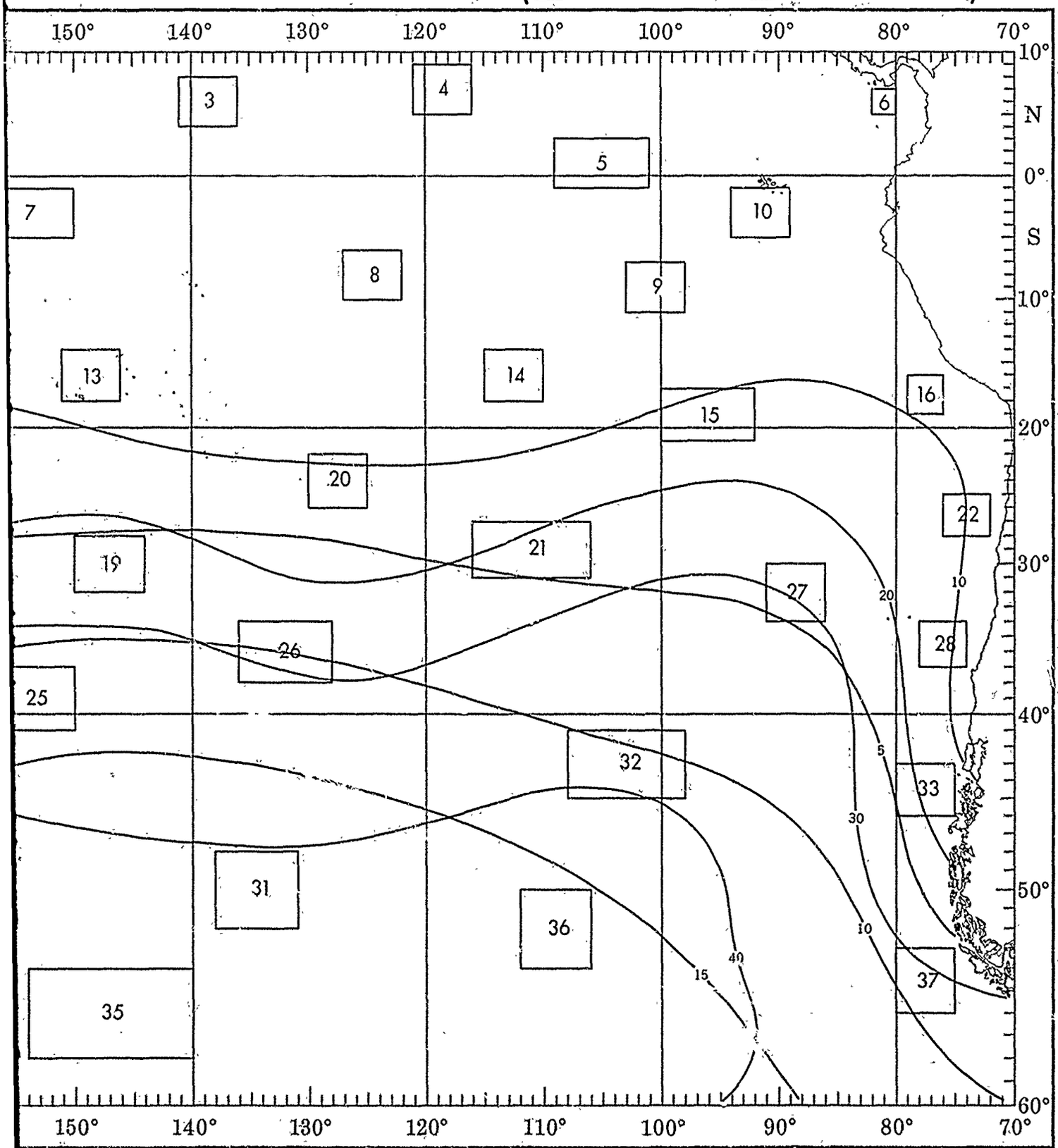
WAVES (≥3.5 AND ≥6 METERS)



WAVE PERIOD AND HEIGHT

Percent frequency of occurrence of wave period and height.

PERIOD (Seconds)

HEIGHT (METERS)	≤6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	21	3	1	+	+	+	0
1.5-3	22	16	6	2	1	+	+
3-4.5	3	6	4	3	1	+	+
4.5-6	+	1	1	1	1	+	+
6-7.5	+	+	+	+	+	+	0
7.5-9	0	+	+	0	0	+	0
9-12	0	0	0	+	0	0	0
12+	0	0	0	0	0	+	0
							4010

—(2% of observed waves had a height of 1-1.5 meters and a period of 10-11 seconds.)

+ indicates <.5% but >0.

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.

BLUE LINE - Percent frequency of wave height ≥3.5 meters (12 feet)

RED LINE - Percent frequency of wave height ≥6 meters (20 feet)

1

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	14	2	0	0	0	0	3
1-1.5	17	33	9	3	2	0	1
2-2.5	5	5	3	2	0	0	1
3-3.5	1	0	0	0	0	0	0
4-5.5	1	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

111

2

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	7	1	0	0	0	0	
1-1.5	23	14	9	1	2	1	
2-2.5	2	14	11	4	2	0	
3-3.5	0	1	1	1	0	0	
4-5.5	0	1	0	0	0	0	
6-7.5	0	0	0	0	0	0	
8-9.5	0	0	0	0	0	0	
≥10	0	0	0	0	0	0	

18

6

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	20	2	1	1	0	0	7
1-1.5	25	17	5	2	2	+	6
2-2.5	2	3	2	1	+	+	+
3-3.5	+	+	+	+	0	+	0
4-5.5	+	0	0	+	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

624

7

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IN
0-1.5	7	0	2	0			0
1-1.5	28	18	7	1	0	0	
2-2.5	2	13	7	2	0	0	
3-3.5	0	1	3	0	0	0	
4-5.5	0	0	0	0	0	0	
6-7.5	0	0	0	0	0	0	
8-9.5	0	0	0	0	0	0	
≥10	0	0	0	0	0	0	

87

11

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	5	3	0	0	0	0	0
1-1.5	30	30	2	2	0	0	5
2-2.5	5	11	5	2	0	2	0
3-3.5	0	0	0	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

63

12

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	17	0	0	0	0	0	4
1-1.5	14	8	6	2	0	0	6
2-2.5	1	10	12	4	0	0	2
3-3.5	0	5	3	0	0	1	1
4-5.5	0	0	1	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	1	0	0

93

13

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	13	3	2	1	0	0	4
1-1.5	19	17	10	3	2	+	5
2-2.5	3	6	5	2	1	+	1
3-3.5	+	1	1	1	+	+	+
4-5.5	+	0	+	+	0	+	+
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

673

14

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	5	+	0	0	0	0	1
1-1.5	19	12	3	3	1	1	2
2-2.5	9	13	8	5	2	1	1
3-3.5	2	3	2	2	1	0	+
4-5.5	0	1	1	+	+	0	+
6-7.5	0	0	+	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

455

15

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	7	0	0	0	0	0	9
1-1.5	30	5	7	3	0	0	6
2-2.5	3	3	1	9	1	7	2
3-3.5	0	0	1	0	5	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

87

16

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	6	3	0	0	0	0	
1-1.5	14	11	5	4	0	2	1
2-2.5	8	8	13	6	1	1	
3-3.5	0	1	1	1	0	0	
4-5.5	0	0	0	1	0	0	
6-7.5	0	0	0	0	0	0	
8-9.5	0	0	0	0	0	0	
≥10	0	0	0	0	0	0	

105

20

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	4	+	+	+	0	0	1
1-1.5	11	9	6	3	3	+	3
2-2.5	7	13	11	5	1	+	3
3-3.5	1	3	4	5	+	+	1
4-5.5	0	+	1	+	1	+	0
6-7.5	0	0	+	1	+	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

476

21

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	7	2	3	0	0	0	1
1-1.5	12	13	3	0	7	3	1
2-2.5	3	4	5	4	1	6	0
3-3.5	1	5	4	0	0	2	0
4-5.5	0	3	1	3	1	3	0
6-7.5	0	0	0	0	3	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

142

22

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	7	1	0	0	0	0	4
1-1.5	11	13	12	0	1	1	8
2-2.5	2	10	5	5	3	0	3
3-3.5	0	4	1	8	1	0	0
4-5.5	0	0	1	0	1	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

118

23

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	4	+	+	0	0	0	2
1-1.5	12	13	4	1	1	+	1
2-2.5	5	11	6	6	2	1	1
3-3.5	2	5	5	3	1	+	1
4-5.5	+	2	4	2	1	1	+
6-7.5	0	+	1	+	0	0	+
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

774

24

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	9	2	0	0	0	0	2
1-1.5	14	14	2	3	2	0	1
2-2.5	5	6	5	3	1	0	1
3-3.5	2	5	1	3	1	1	1
4-5.5	0	2	3	3	1	0	0
6-7.5	0	1	2	1	2	0	0
8-9.5	0	0	0	1	1	0	0
≥10	0	0	0	0	0	0	0

171

25

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	3	0	0	0	0	0	
1-1.5	8	6	2	1	1	0	
2-2.5	5	9	6	3	2	0	
3-3.5	1	7	5	3	2	+	
4-5.5	0	1	6	4	2	3	
6-7.5	0	+	+	1	1	+	
8-9.5	0	0	0	0	+	0	
≥10	0	0	0	+	0	0	

207

29

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	0	0	0	0	0	0	+
1-1.5	5	7	3	1	+	1	0
2-2.5	7	14	7	3	2	+	+
3-3.5	0	9	10	3	2	+	+
4-5.5	0	7	4	5	1	+	1
6-7.5	0	0	2	3	+	0	+
8-9.5	0	0	+	1	0	0	0
≥10	0	0	0	0	0	0	0

222

30

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	0	0	0	0	0	0	0
1-1.5	0	0	0	0	0	0	0
2-2.5	8	3	3	3	0	0	8
3-3.5	0	10	0	21	5	0	0
4-5.5	0	0	5	3	0	0	3
6-7.5	0	5	5	3	0	0	0
8-9.5	0	3	0	5	0	8	0
≥10	0	0	0	3	0	0	0

39

31

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	6	0	0	0	0	0	0
1-1.5	0	6	0	0	0	0	0
2-2.5	0	6	6	0	0	0	12
3-3.5	0	6	18	0	0	0	24
4-5.5	0	0	0	0	0	0	6
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	6	0	0	0
≥10	0	0	0	8	0	0	0

17

32

INSUFFICIENT DATA

33

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	7	0	0	2	0	0	2
1-1.5	8	5	1	1	2	0	1
2-2.5	13	7	9	8	1	1	5
3-3.5	0	3	5	2	6	1	1
4-5.5	0	1	1	1	0	2	1
6-7.5	0	0	0	2	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

88

34

INSUFFICIENT DATA

Graphs represent the objective compilation of available data for specified areas without regar

The isopleth analyses (opposite page) are based on all available data subjectively adjusted wi

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MAY

1 seconds.)

n both are reported. If both

1

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	14	2	0	0	0	0	3
.5-1.5	17	33	9	3	2	0	1
1.5-2.5	5	5	3	2	0	0	1
2.5-3.5	1	0	0	0	0	0	0
3.5-4.5	1	0	0	0	0	0	0
4.5-6.5	0	0	0	0	0	0	0
6.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

111

2

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	1	0	0	0	0	3
.5-1.5	23	14	9	1	2	1	4
1.5-2.5	2	14	11	4	2	0	0
2.5-3.5	0	1	1	1	0	0	1
3.5-4.5	0	1	0	0	0	0	0
4.5-6.5	0	0	0	0	0	0	0
6.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

188

3

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	1	0	0	0	0	1
.5-1.5	13	16	7	2	1	0	3
1.5-2.5	4	8	16	6	0	2	2
2.5-3.5	0	3	4	0	0	0	1
3.5-4.5	0	2	2	1	0	0	1
4.5-6.5	0	0	0	0	0	0	0
6.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

182

4

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	10	1	0	0	0	0	4
.5-1.5	26	19	9	0	0	0	5
1.5-2.5	3	6	8	2	0	2	4
2.5-3.5	1	0	0	0	0	0	0
3.5-4.5	0	0	0	0	0	0	0
4.5-6.5	0	0	0	0	0	0	0
6.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

155

5

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	10	1	1	5	0	0	1
.5-1.5	19	18	10	5	4	*	3
1.5-2.5	1	4	8	2	2	1	1
2.5-3.5	*	1	1	*	0	0	0
3.5-4.5	*	1	*	0	*	0	0
4.5-6.5	0	0	0	0	*	0	0
6.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

431

6

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	20	2	1	1	0	0	7
.5-1.5	25	17	5	2	2	*	6
1.5-2.5	2	3	2	1	*	*	*
2.5-3.5	*	*	*	*	0	*	0
3.5-4.5	*	0	0	*	0	0	0
4.5-6.5	0	0	0	0	0	0	0
6.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

624

7

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	0	2	0	0	0	0
.5-1.5	28	18	7	1	0	0	3
1.5-2.5	2	13	7	2	0	0	5
2.5-3.5	0	1	3	0	0	0	0
3.5-4.5	0	0	0	0	0	0	0
4.5-6.5	0	0	0	0	0	0	0
6.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

87

8

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	0	0	0	0	0	*
.5-1.5	21	14	6	1	2	2	4
1.5-2.5	5	12	11	4	1	0	3
2.5-3.5	2	2	2	*	1	0	*
3.5-4.5	0	*	1	*	0	0	0
4.5-6.5	0	*	0	0	0	0	0
6.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

419

9

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	0	0	0	0	0	0
.5-1.5	18	17	3	1	3	1	1
1.5-2.5	6	17	8	2	1	*	2
2.5-3.5	1	6	5	1	*	*	*
3.5-4.5	*	1	1	*	0	*	*
4.5-6.5	0	0	0	0	0	0	0
6.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

624

10

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	1	*	*	0	0	1
.5-1.5	24	23	7	1	2	*	2
1.5-2.5	7	12	4	2	*	*	1
2.5-3.5	*	1	1	*	0	0	*
3.5-4.5	0	0	0	0	0	0	0
4.5-6.5	0	0	0	0	0	0	0
6.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

872

3

14

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
ND							
4							
5							
1							
*							
*							
0							
0							
3							

455

15

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	0	0	0	0	0	9
.5-1.5	30	5	7	3	0	0	6
1.5-2.5	3	3	1	9	1	7	2
2.5-3.5	0	0	1	0	5	0	0
3.5-4.5	0	0	0	0	0	0	0
4.5-6.5	0	0	0	0	0	0	0
6.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

87

16

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	6	3	0	0	0	0	5
.5-1.5	14	11	5	4	0	2	10
1.5-2.5	8	8	13	6	1	1	1
2.5-3.5	0	1	1	1	0	0	0
3.5-4.5	0	0	0	1	0	0	0
4.5-6.5	0	0	0	0	0	0	0
6.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

105

17

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	1	1	0	0	0	2
.5-1.5	11	21	5	1	1	0	1
1.5-2.5	4	9	11	3	1	1	1
2.5-3.5	1	1	6	2	3	1	0
3.5-4.5	0	2	2	1	0	1	2
4.5-6.5	0	0	0	0	0	0	0
6.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

181

18

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	*	*	*	0	0	1
.5-1.5	13	9	5	1	2	*	5
1.5-2.5	3	14	6	3	2	1	3
2.5-3.5	1	2	7	3	1	1	2
3.5-4.5	*	1	2	2	*	1	1
4.5-6.5	0	1	0	0	*	0	0
6.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

322

19

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	0	0	*	0	0	1
.5-1.5	7	8	2	1	1	1	2
1.5-2.5	5	13	7	6	1	2	3
2.5-3.5	1	5	3	3	2	2	2
3.5-4.5	1	5	3	4	2	*	*
4.5-6.5	0	*	*	1	*	1	0
6.5-7.5	0	*	0	0	0	*	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

460

2

23

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
ND							
4							
8							
3							
0							
0							
0							
0							
3							

774

24

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	9	2	0	0	0	0	2
.5-1.5	14	14	2	3	2	0	1
1.5-2.5	5	6	5	3	1	0	1
2.5-3.5	2	5	1	3	1	1	1
3.5-4.5	0	2	3	3	1	0	0
4.5-6.5	0	1	2	1	2	0	0
6.5-7.5	0	0	0	1	1	0	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

171

25

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	0	0	0	0	0	2
.5-1.5	8	8	2	1	1	0	2
1.5-2.5	5	9	8	3	2	0	1
2.5-3.5	1	7	5	9	2	*	1
3.5-4.5	0	*	6	4	2	3	2
4.5-6.5	0	*	*	1	1	*	0
6.5-7.5	0	0	1	0	*	0	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	*	0	0	0

207

26

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	0	1	0	0	0	0
.5-1.5	13	7	0	0	3	0	0
1.5-2.5	4	8	11	2	2	1	1
2.5-3.5	0	10	3	2	3	0	1
3.5-4.5	0	4	4	4	1	0	5
4.5-6.5	0	1	0	3	1	1	1
6.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	*	0	0	0	0	0

139

27

INSUFFICIENT DATA

28

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	0	0	0	0	0	0
.5-1.5	7	14	7	10	3	0	3
1.5-2.5	0	17	0	10	7	3	0
2.5-3.5	0	0	0	10	0	0	0
3.5-4.5	0	0	0	0	0	0	0
4.5-6.5	0	0	0	0	0	0	0
6.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

29

32

INSUFFICIENT DATA

33

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	0	0	2	0	0	2
.5-1.5	8	5	1	1	2	0	1
1.5-2.5	13	7	9	8	1	1	5
2.5-3.5	0	3	5	2	6	1	1
3.5-4.5	0	1	1	1	0	2	1
4.5-6.5	0	0	0	2	0	0	0
6.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

88

34

INSUFFICIENT DATA

35

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	0	0	0	0	0	0	0
.5-1.5	0	0	0	0	0	0	0
1.5-2.5	0	7	21	29	7	0	0
2.5-3.5	0	0	7	7	7	0	0
3.5-4.5	0	0	0	14	0	0	0
4.5-6.5	0	0	0	0	0	0	0
6.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

14

36

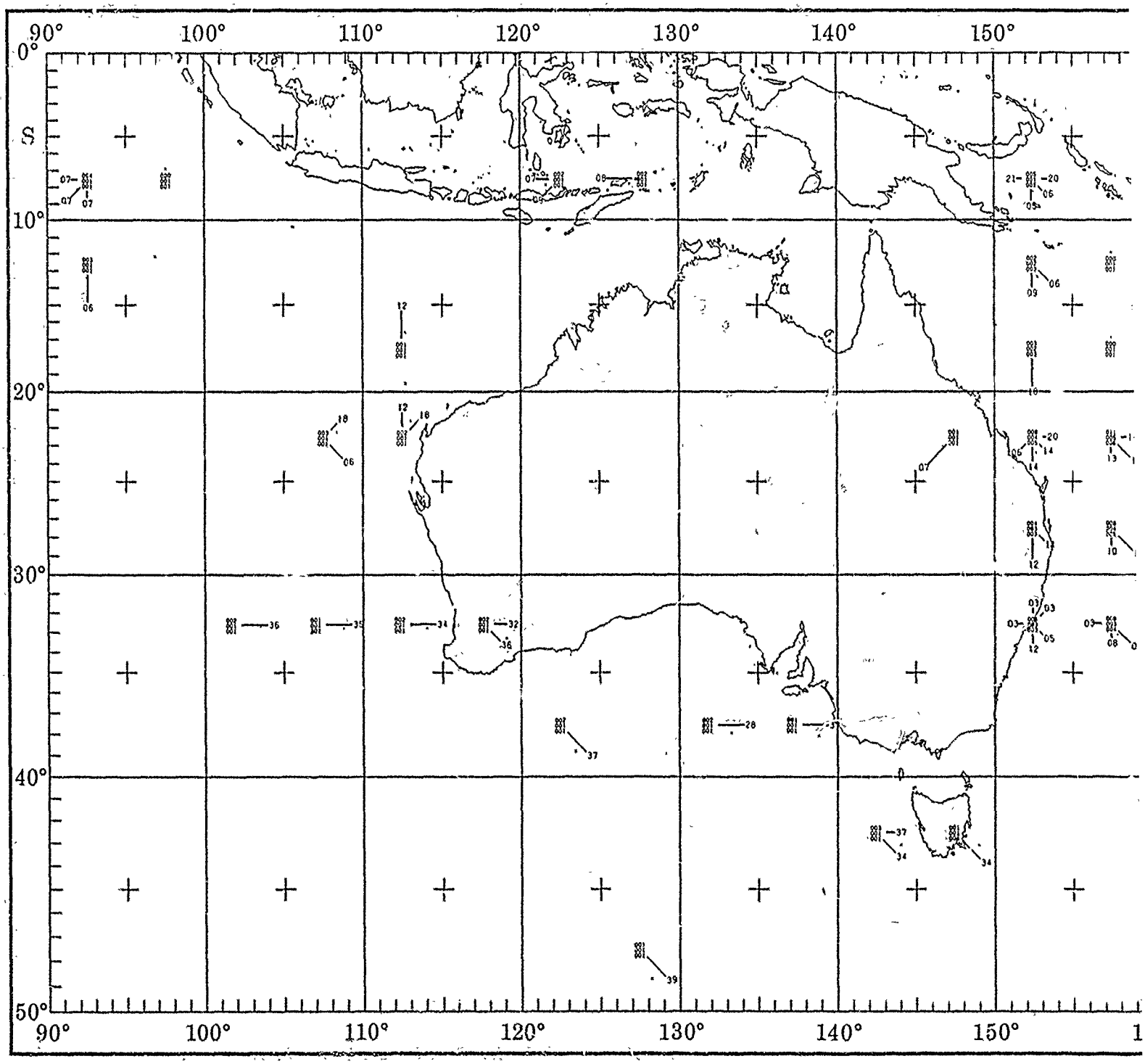
INSUFFICIENT DATA

37

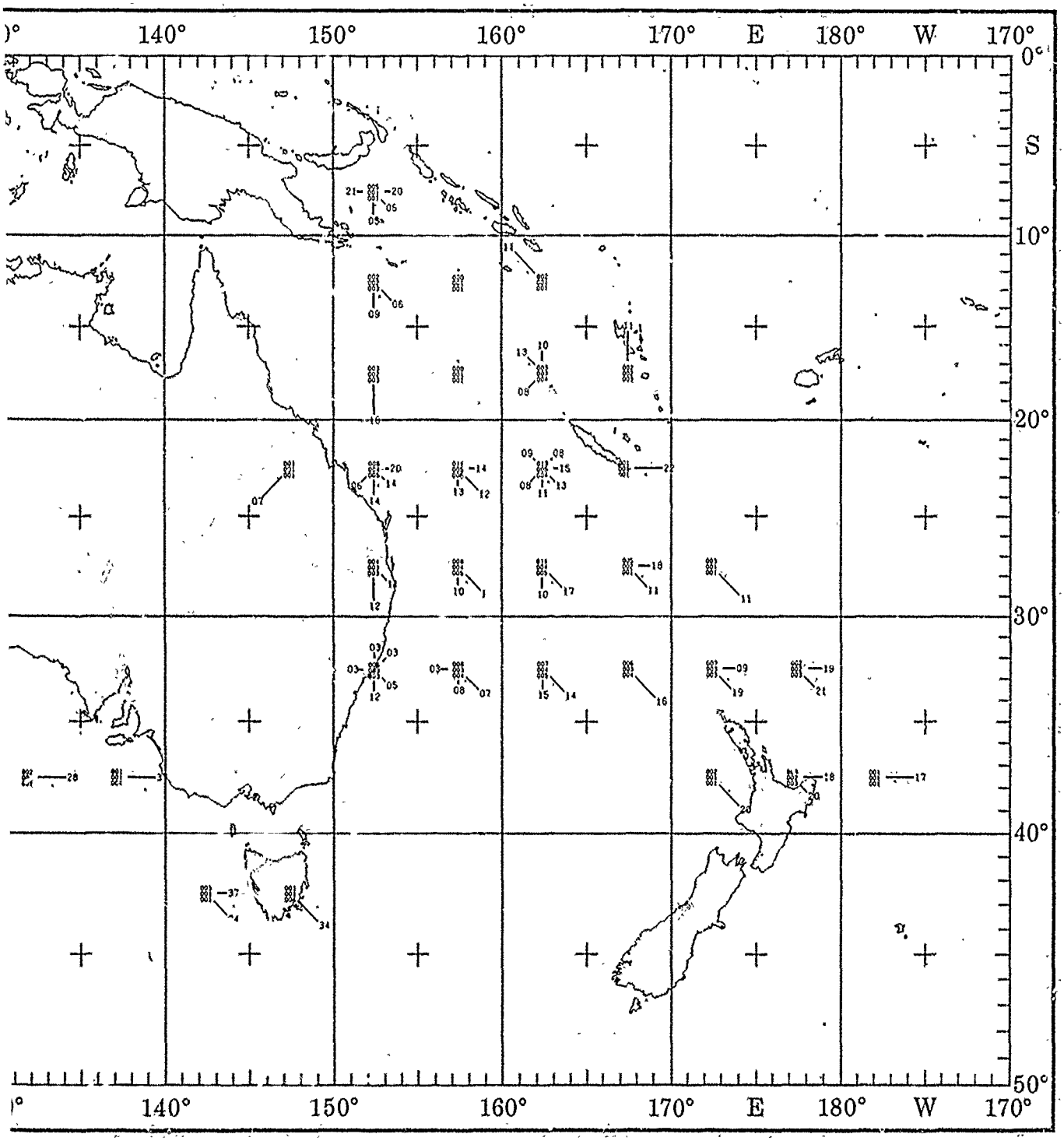
INSUFFICIENT DATA

the objective compilation of available data for specified areas without regard to suspected biases.
ses (opposite page) are based on all available data subjectively adjusted where bias was evident.

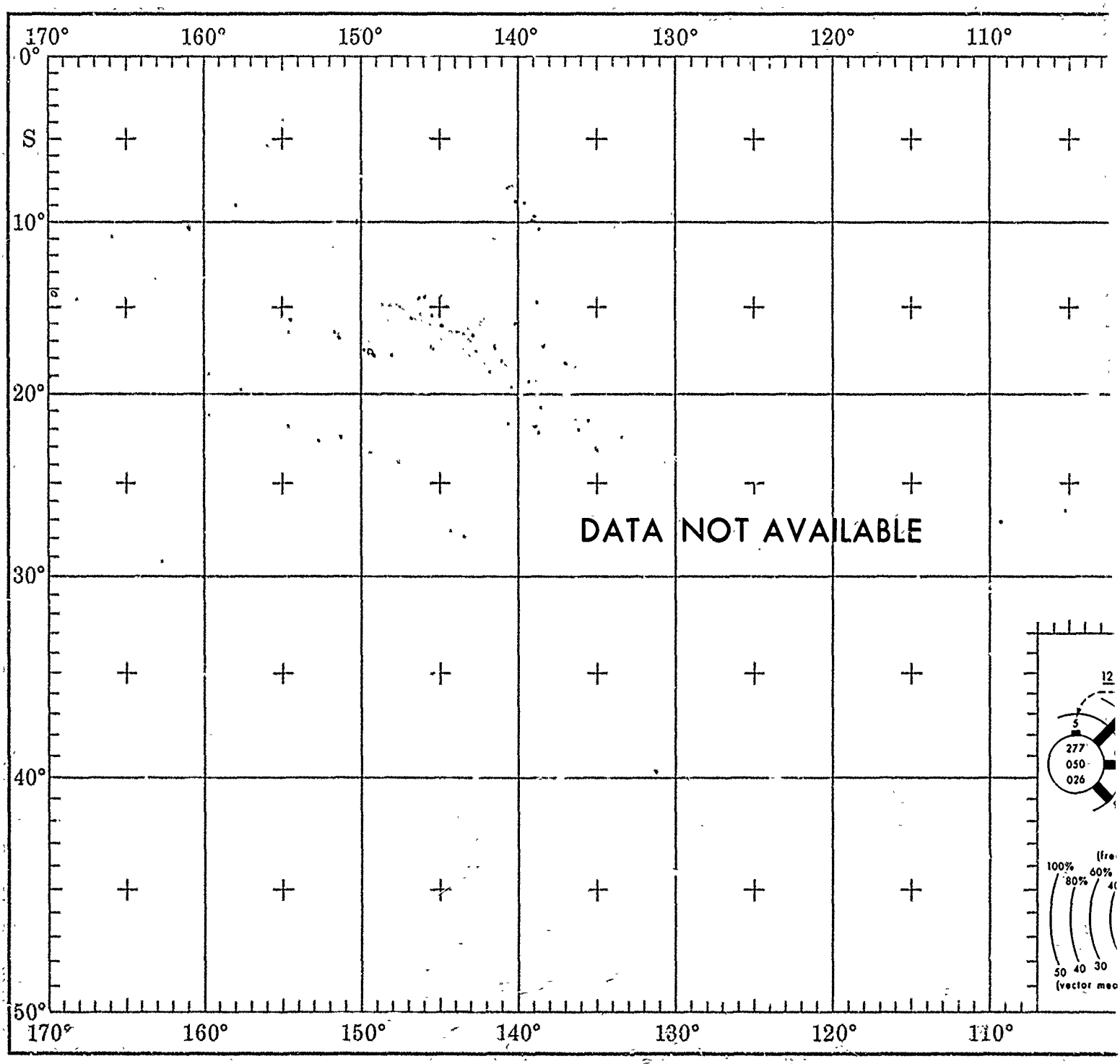
MAY



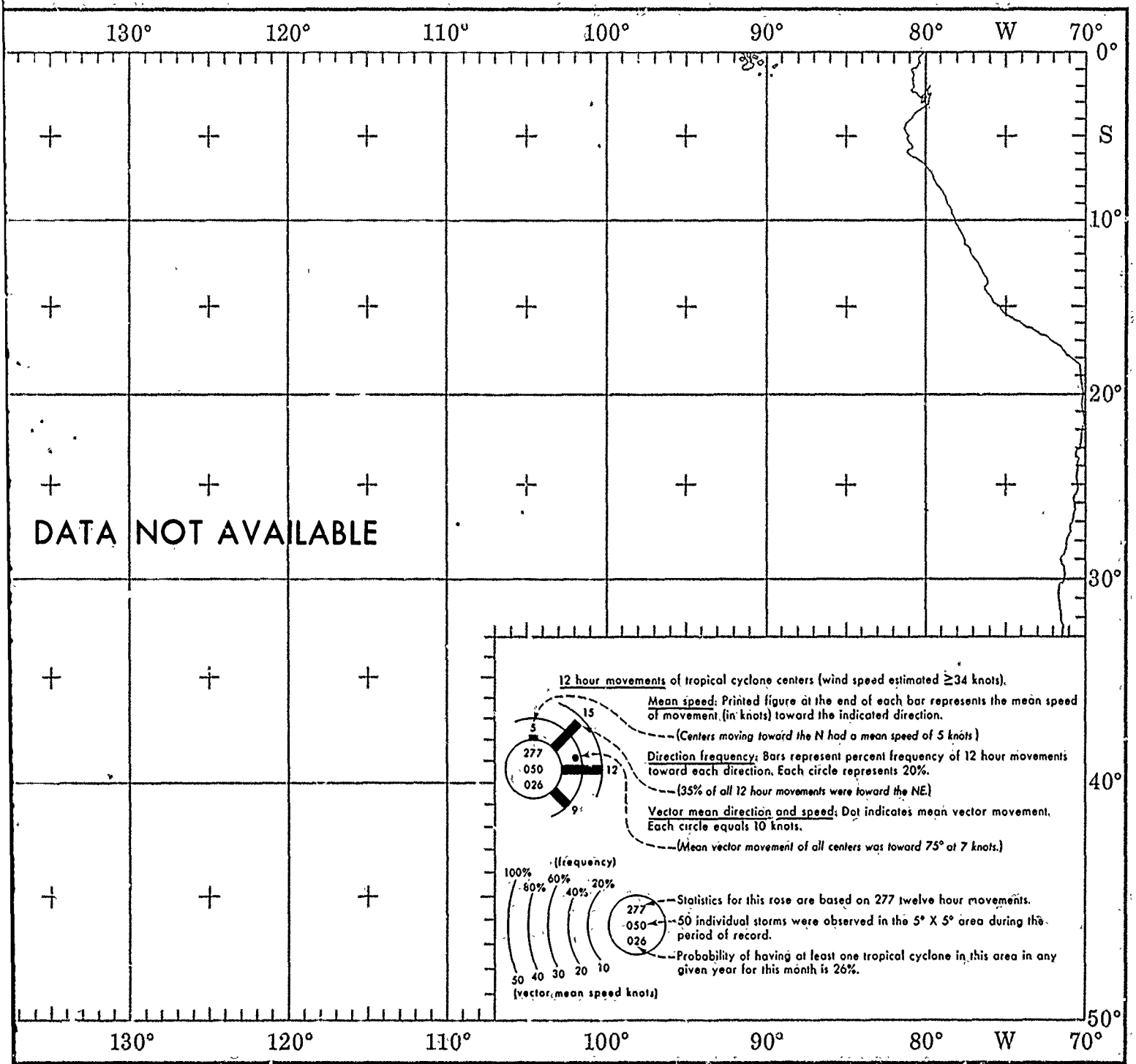
TROPICAL CYCLONE



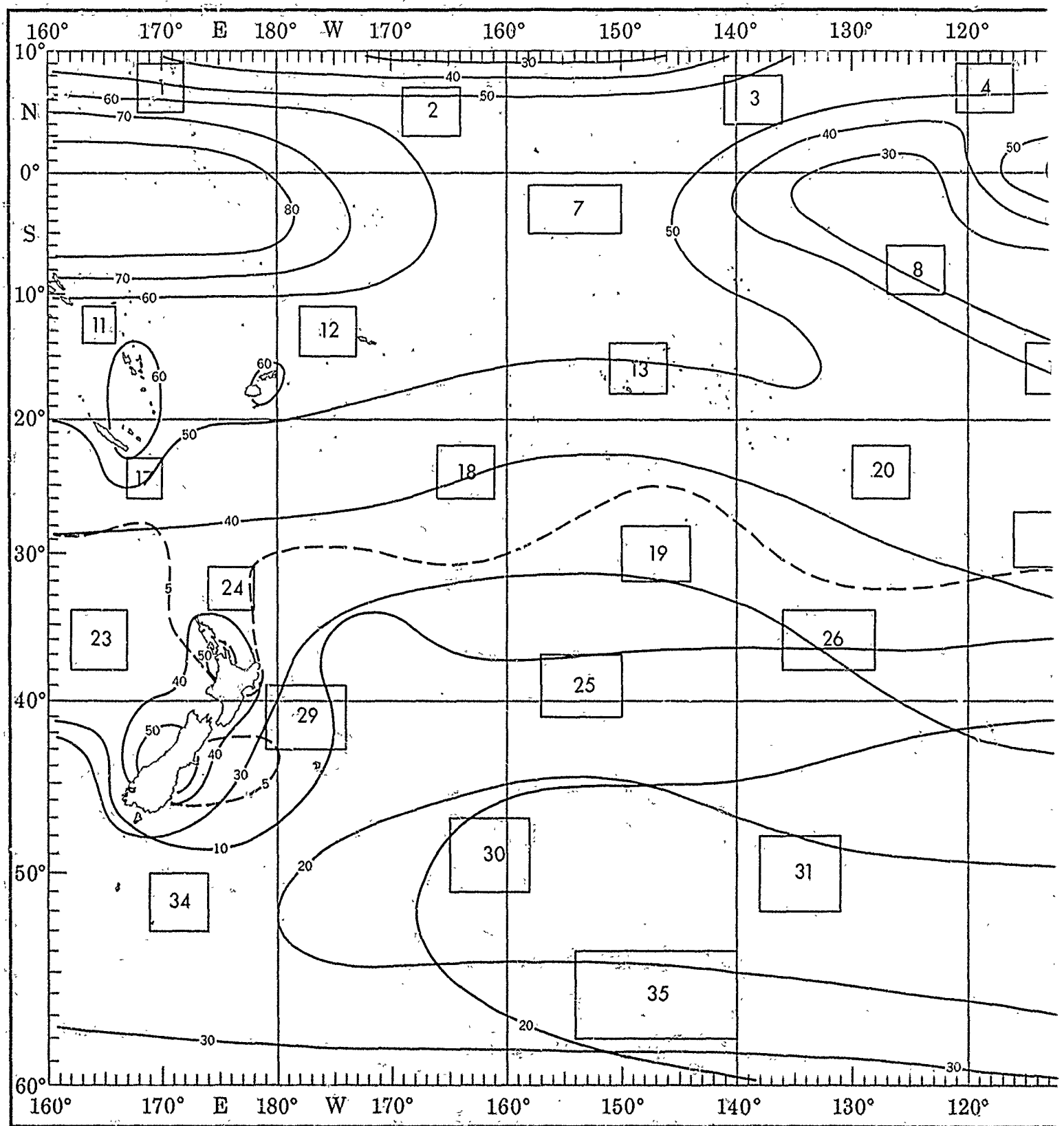
TROPICAL CYCLONE



MAY


130°
120°
110°
100°
90°
80°
W
70°
0°
S
10°
20°
30°
40°
50°
DATA NOT AVAILABLE
12 hour movements of tropical cyclone centers (wind speed estimated ≥34 knots).
Mean speed: Printed figure at the end of each bar represents the mean speed of movement (in knots) toward the indicated direction.
(Centers moving toward the N had a mean speed of 5 knots.)
Direction frequency: Bars represent percent frequency of 12 hour movements toward each direction. Each circle represents 20%.
(35% of all 12 hour movements were toward the NE.)
Vector mean direction and speed: Dot indicates mean vector movement. Each circle equals 10 knots.
(Mean vector movement of all centers was toward 75° at 7 knots.)
5
15
12
9
277
050
026
(frequency)
100%
80%
60%
40%
20%
50 40 30 20 10
(vector mean speed knots)
277
050
026
Statistics for this rose are based on 277 twelve hour movements.
50 individual storms were observed in the 5° X 5° area during the period of record.
Probability of having at least one tropical cyclone in this area in any given year for this month is 26%.

JUNE


160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N 0° S 10° 20° 30° 40° 50° 60°
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2
3
4
7
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11
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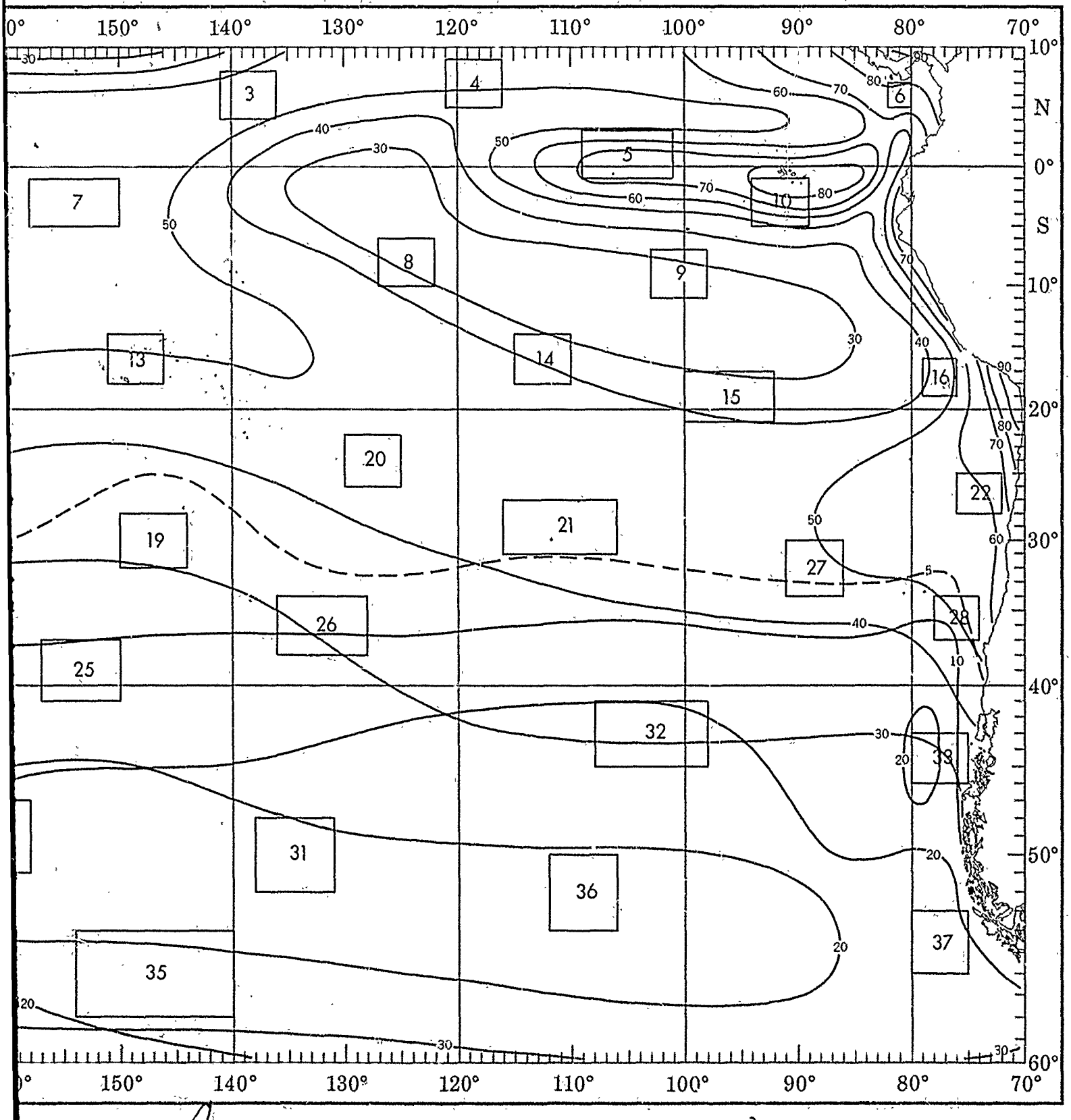
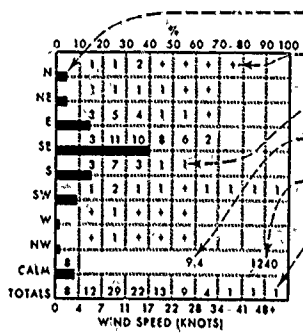
5

SURFACE WINDS



WIND DIRECTION AND SPEED

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.



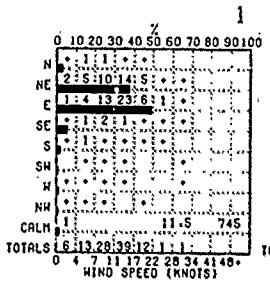
WIND SPEED INTERVAL (KNOTS)

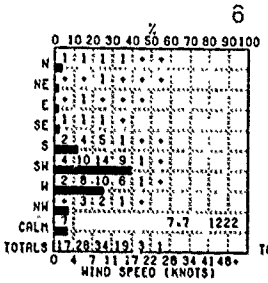
0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	≥48
0	4	7	11	17	22	28	34	41	48+

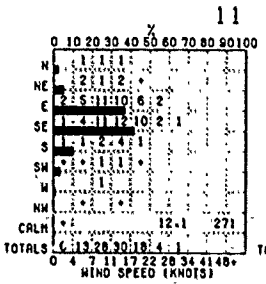
Printed scale on bottom of chart

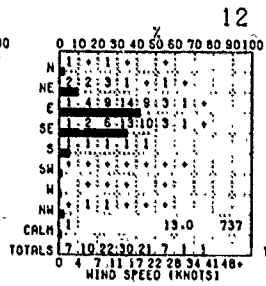
BLUE LINE - Percent frequency of wind speed ≤10 knots

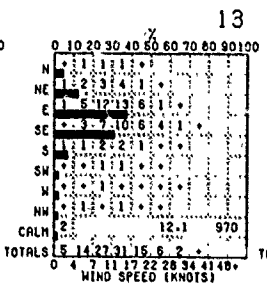
RED LINE - Percent frequency of wind speed ≥34 knots

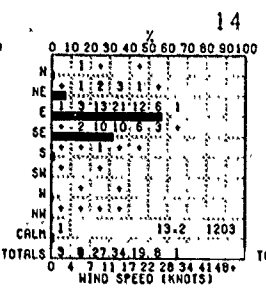


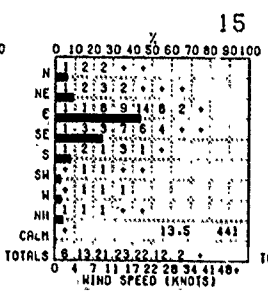


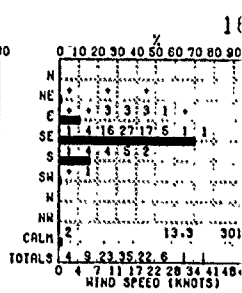


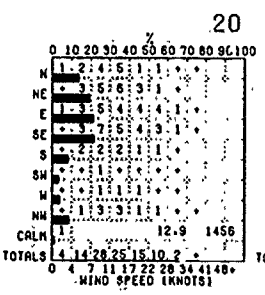


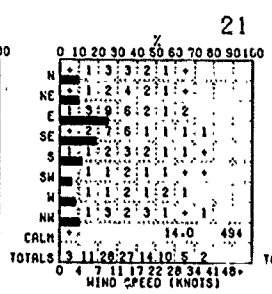


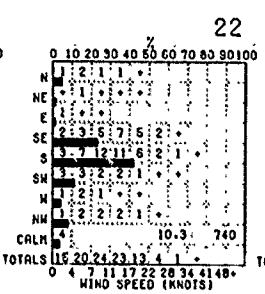


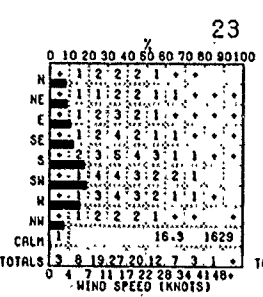


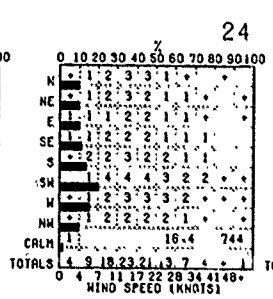


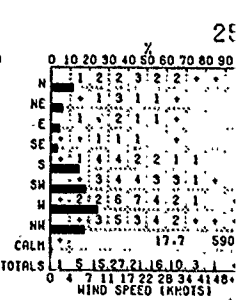


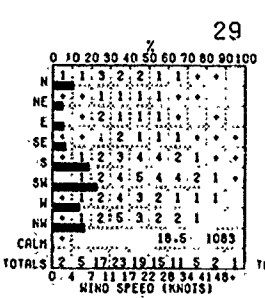


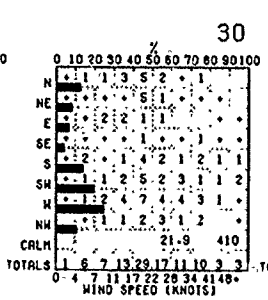


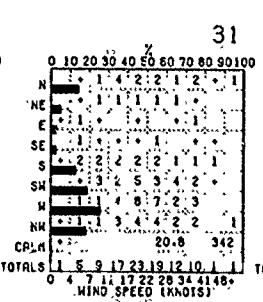


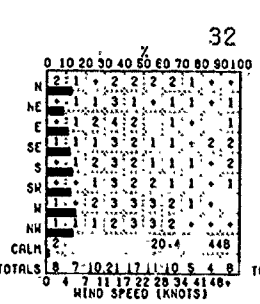


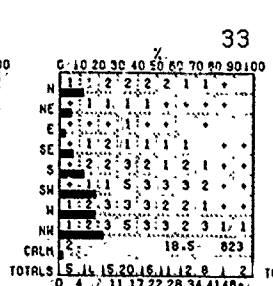


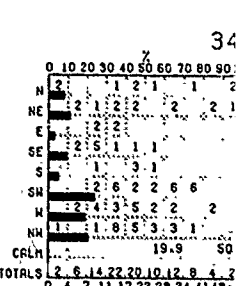












Graphs represent the objective compilation of available data for specified areas without rega
The isopleth analyses (opposite page) are based on all available data subjectively adjusted w

D SPEED

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34-40 41-47 ≥48
41 48+
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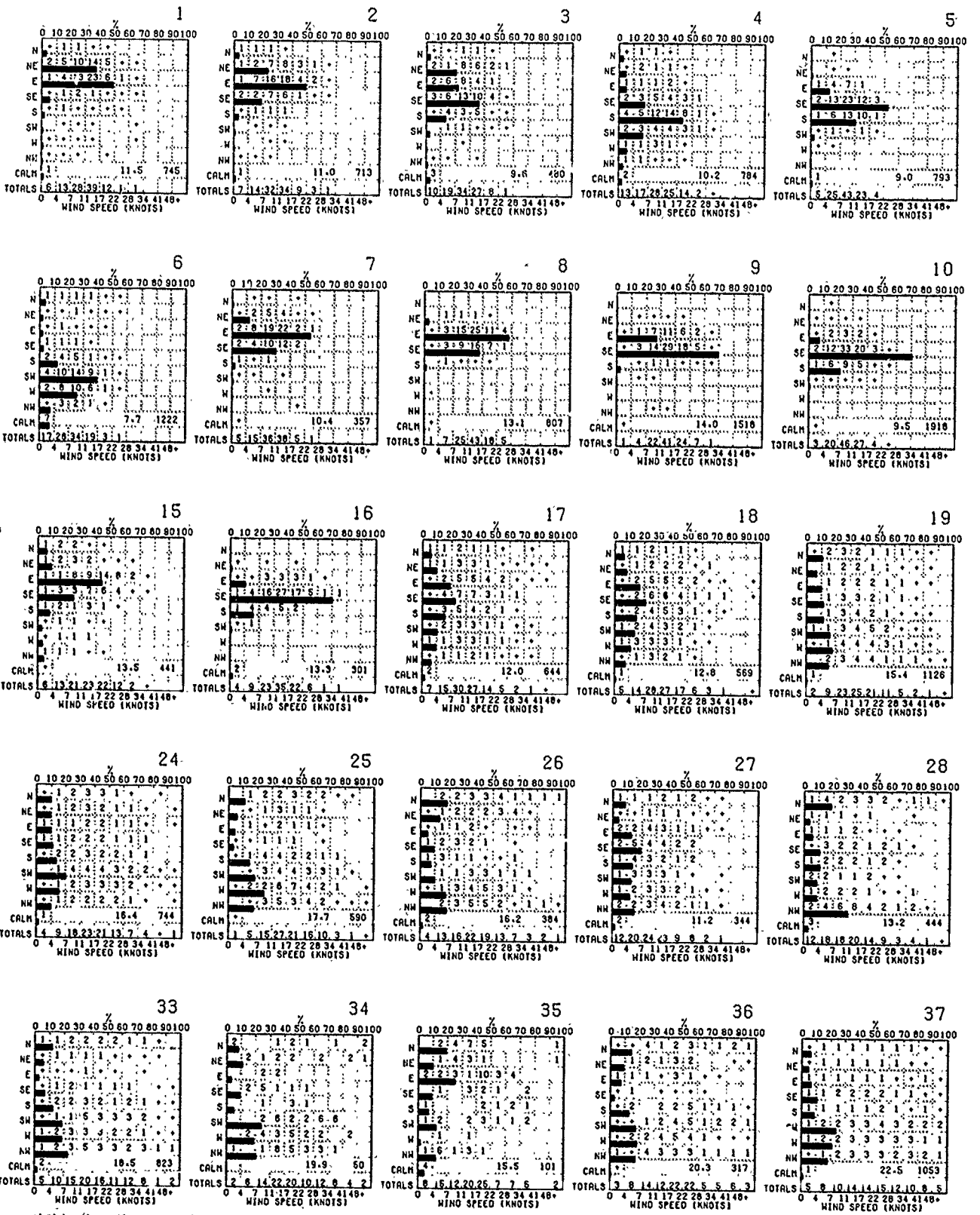
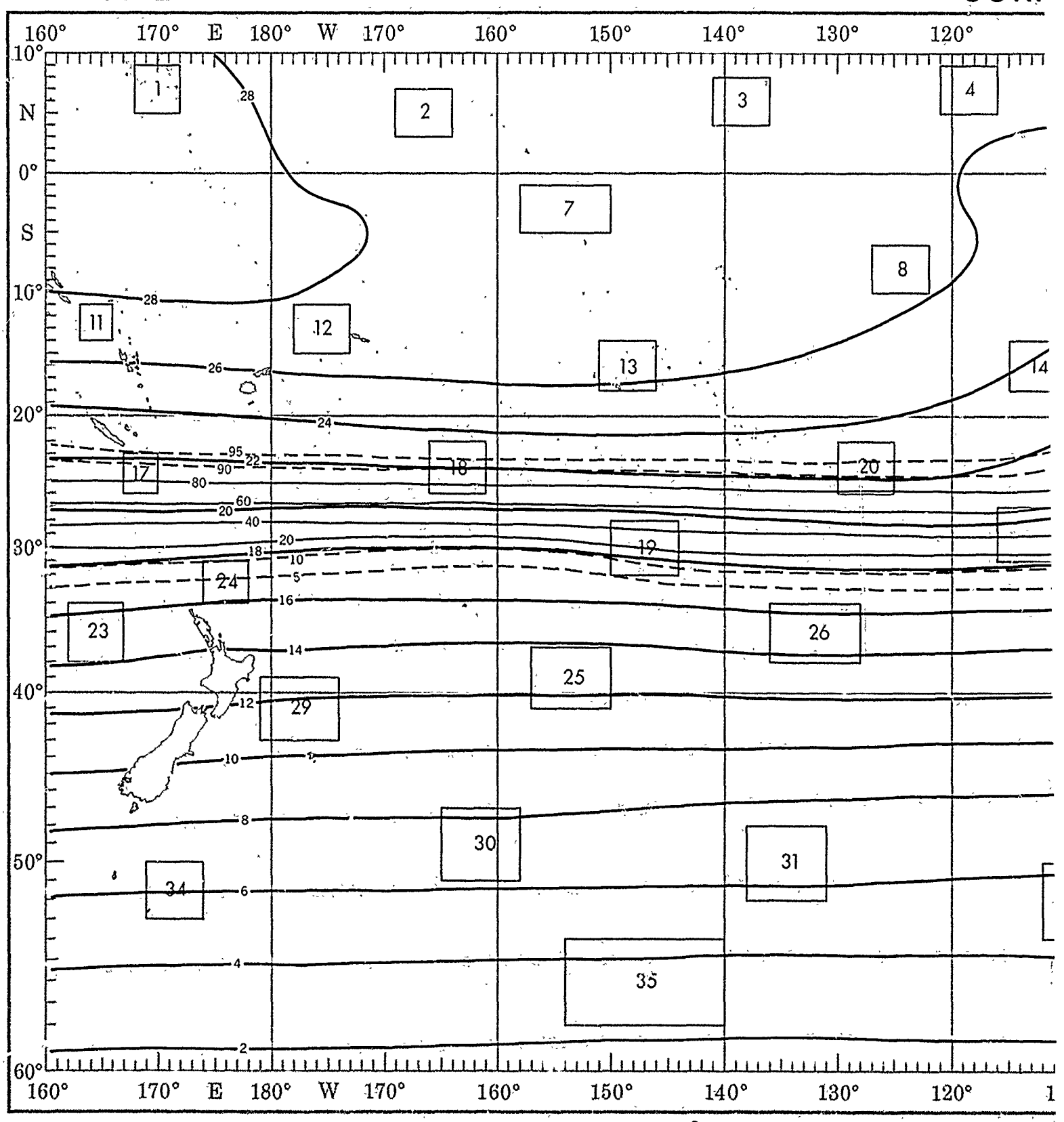


t the objective compilation of available data for specified areas without regard to suspected biases.
yses (opposite page) are based on all available data subjectively adjusted where bias was evident.

JUNE

SURF


160° 170° E 180° W 170° 160° 150° 140° 130° 120°
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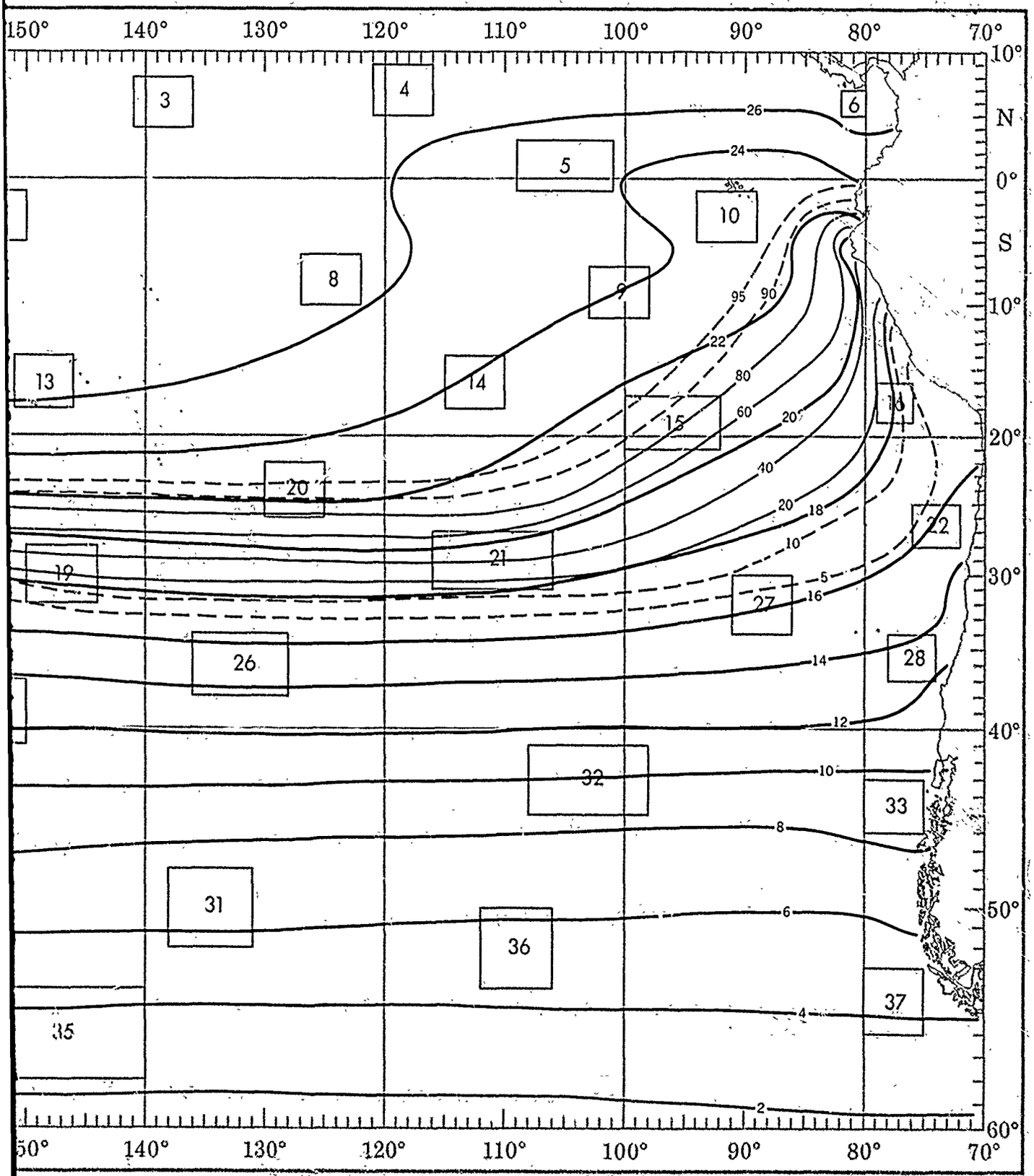
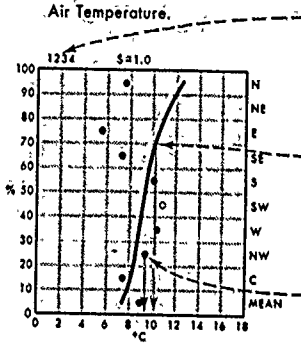
SURFACE AIR TEMPERATURE



SURFACE AIR TEMPERATURE



Cumulative percent frequency of temperatures equal to or less than the temperature intersected by the curve.

(70% of all temperatures were ≤10.3 °C or ≤50.5 °F.)

S=Standard deviation of temperatures (°C).

Mean temperature for each wind direction, calm and for all data combined are represented by dots.

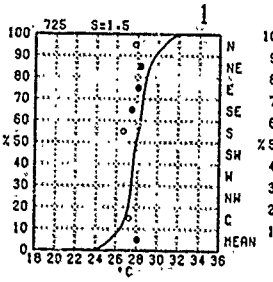
(With NW winds, the mean temperature was 9.4 °C or 48.9 °F.)

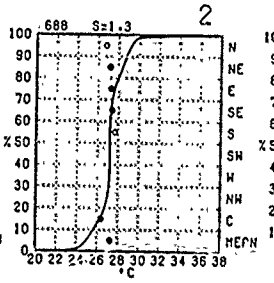
o Indicates that the mean temperature for a direction or calm was computed from 10-30 observations.

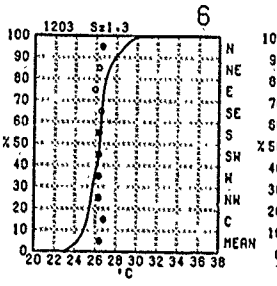
The mean temperature is omitted when less than 10 observations for a direction or calm were available.

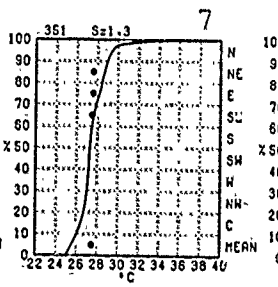
BLACK LINE - Mean air temperature (°C)

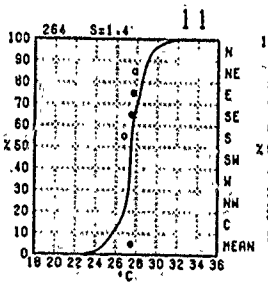
RED LINE - Percent frequency of temperature ≥20°C (68°F)

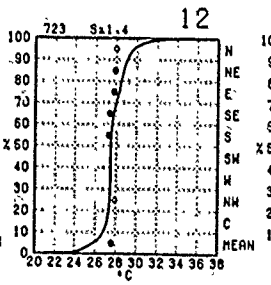


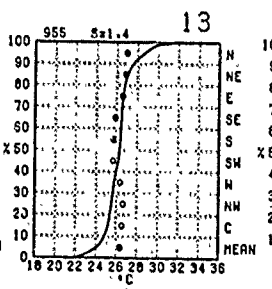


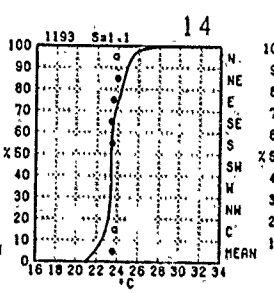


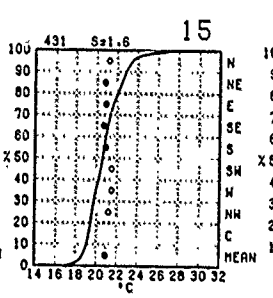


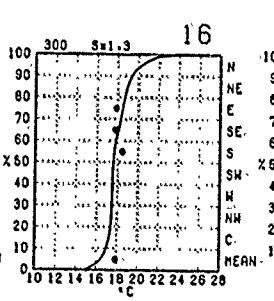


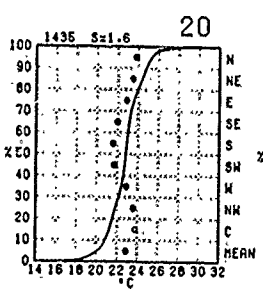


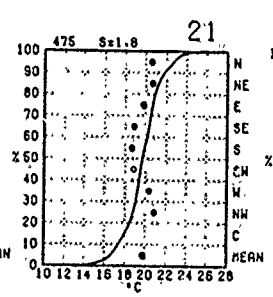


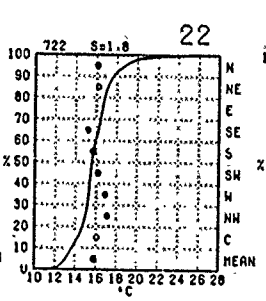


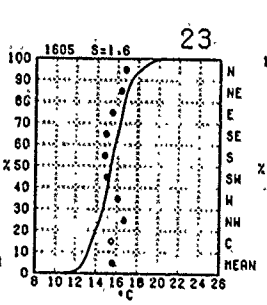


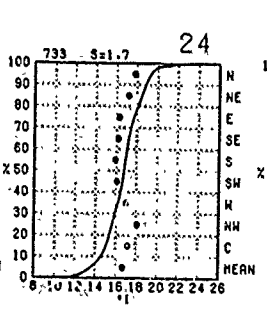


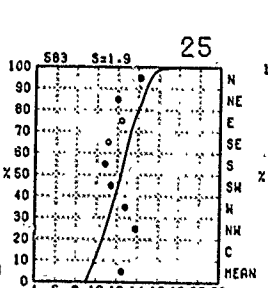


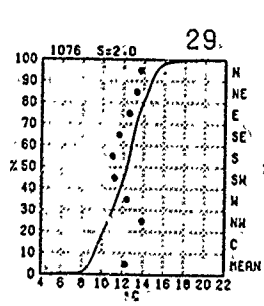


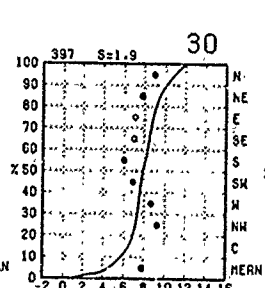


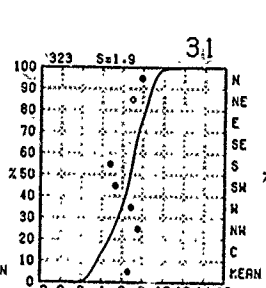


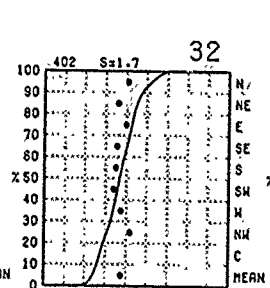


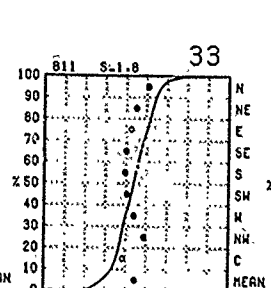


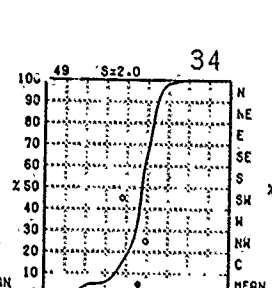












Graphs represent the objective compilation of available data for specified areas without regard to s
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where b

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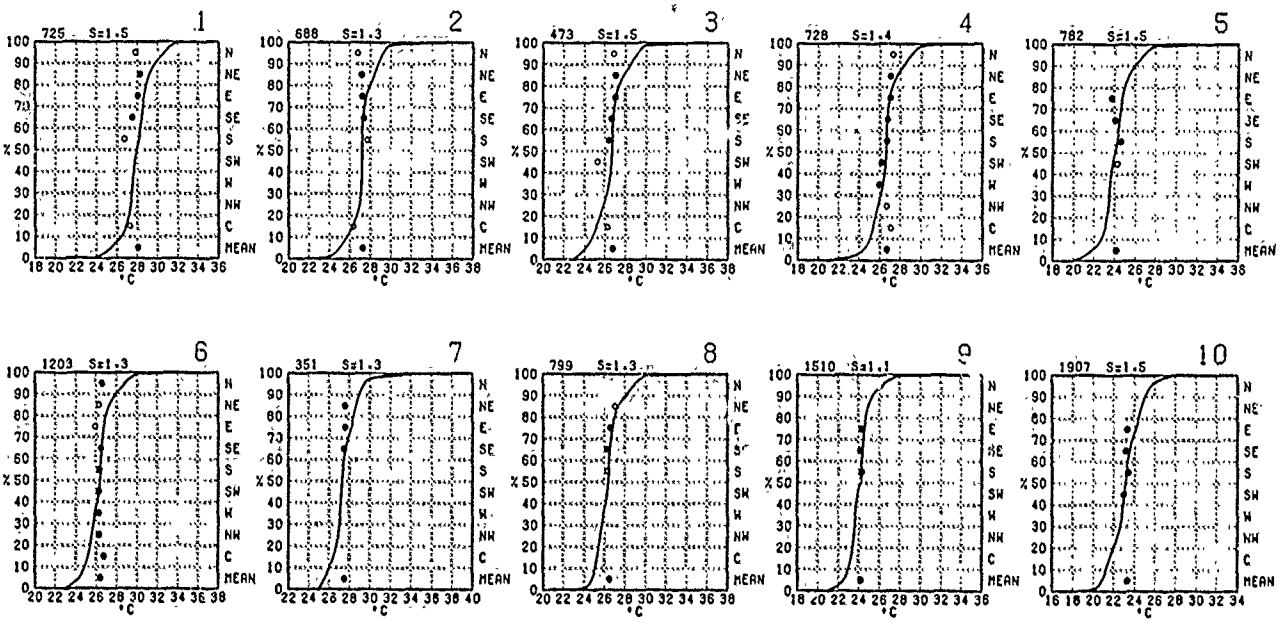
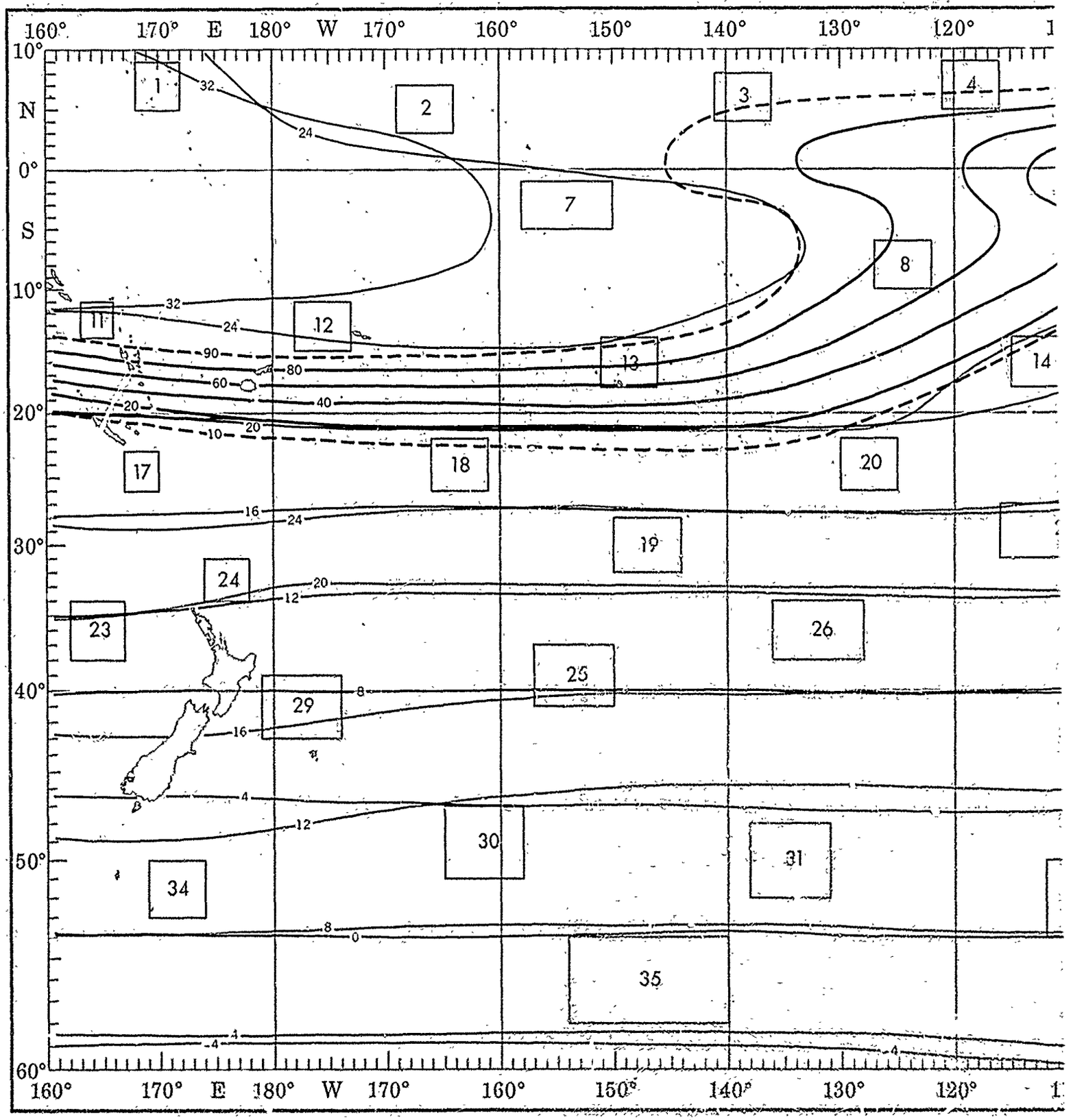


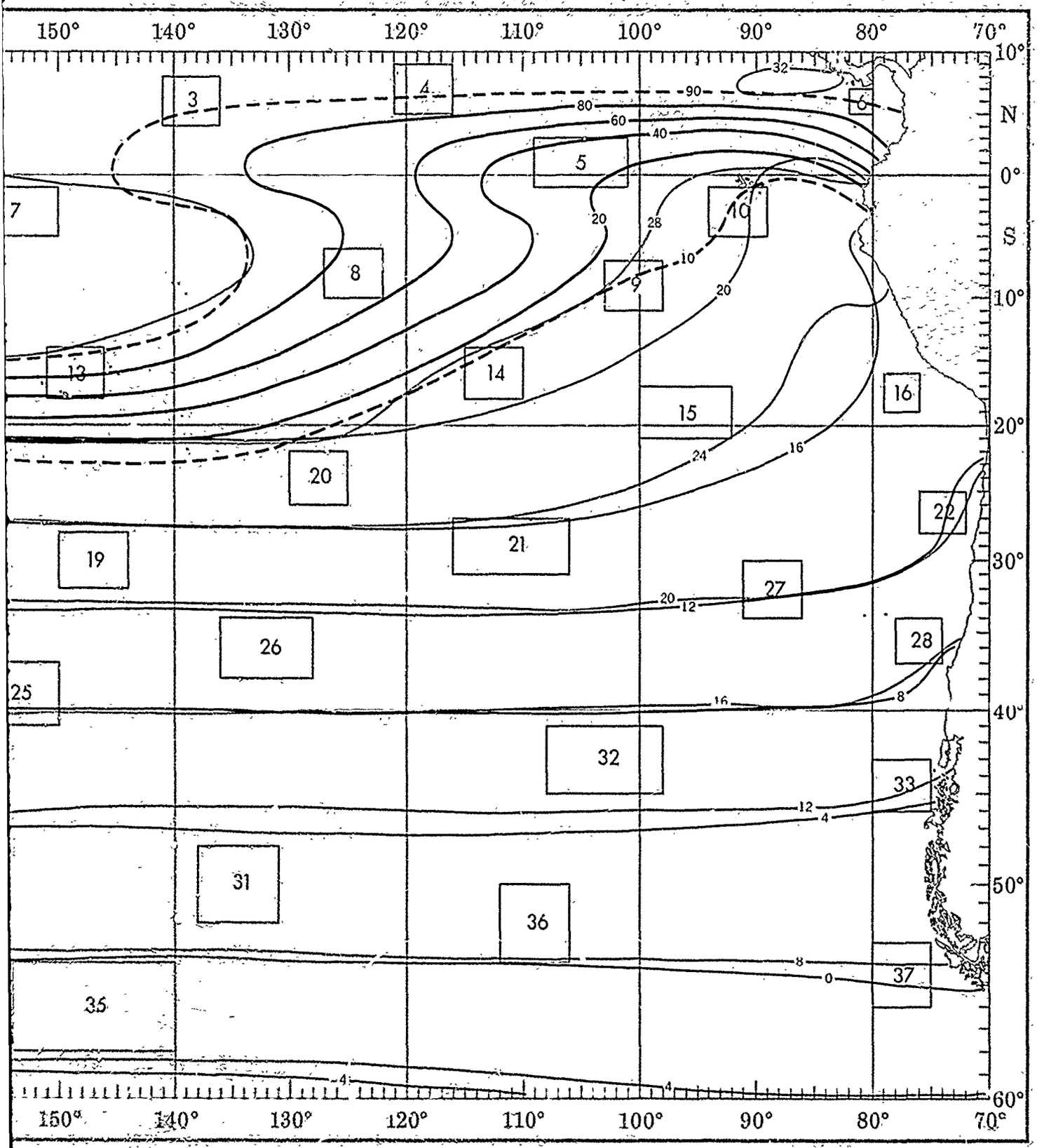
objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

JUNE

TEMPERATURE EXT



TEMPERATURE EXTREMES AND T-H INDEX



WIND SPEED AND AIR TEMPERATURE

Wind speed and air temperature

Percent frequency of simultaneous occurrence of specified temperature (°C) and wind speed (knots)

WIND SPEED (kts)

Temp (°C)	0-3	4-10	11-21	22-33	≥34
4-5	18	8	7	1	1
2-3	17	8	7	1	1
0-1	13	6	5	1	1
-2--1	1	+	0	0	0
-4--3	0	0	0	0	0
-6--5	+	0	0	+	+
-8--7	1	+	0	0	0
-10--9	0	0	0	0	0
-12--11	1	+	0	0	0
-14--13	1	0	0	0	0
-16--15	1	+	0	0	0

3550

(1% of *all observations reported temperature 2-3°C simultaneously with wind speed of 22-33 kts*)

+ Indicates < 5% but >0

Number of observations

Use of this table in determination of Potential Superstructure Icing is explained in the text

BLACK LINE Percent frequency of T-H index ≥24°C (75.2°F) (discomfort may be experienced due to heat)

BLUE LINE - Minimum (1%) air temperature (°C) (1% of the temperatures were equal to or less than the given value)

RED LINE - Maximum (99%) air temperature (°C) (1% of the temperatures were greater than the given value)

1

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.35	0	+	2	0	0
30.31	1	3	9	+	0
28.29	2	24	30	1	0
26.27	2	11	12	1	0
24.25	+	2	1	+	0
22.23	+	+	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

725

2

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 3
34.35	0	+	0	0	
32.33	+	+	+	0	
30.31	+	1	1	0	
28.29	3	16	16	+	
26.27	4	25	3	2	
24.25	1	3		1	
22.23	0	0	0	+	
20.21	0	0	0	0	
18.19	0	0	0	0	
16.17	0	0	0	0	
14.15	0	0	0	0	

59

6

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	+	0	0
30.31	+	1	+	+	0
28.29	5	9	2	+	0
26.27	12	39	12	+	0
24.25	2	10	7	+	0
22.23	+	1	+	+	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1274

7

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 3
34.35	0	+	+	0	
32.33	0	1	+	0	
30.31	0	3	+	0	
28.29	2	20	21	1	
26.27	3	26	21	+	
24.25	+	1	+	0	
22.23	0	0	0	0	
20.21	0	0	0	0	
18.19	0	0	0	0	
16.17	0	0	0	0	
14.15	0	0	0	0	

35

11

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	+	0	0
30.31	1	3	3	+	0
28.29	1	19	16	2	0
26.27	2	15	28	3	0
24.25	2	2	1	+	0
22.23	0	+	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

267

12

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	0	0	0
32.33	+	+	+	0	0
30.31	1	3	2	+	0
28.29	3	14	22	4	0
26.27	3	14	26	5	1
24.25	0	1	1	+	0
22.23	0	0	0	0	0
20.21	0	0	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

726

13

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	0	0	0
30.31	+	1	1	0	0
28.29	1	7	7	1	0
26.27	4	26	27	4	0
24.25	1	7	9	3	+
22.23	+	1	1	+	0
20.21	+	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

964

14

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	+	+	0	0
26.27	+	2	2	+	0
24.25	2	14	25	4	0
22.23	1	19	24	5	0
20.21	+	1	1	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

1203

15

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	0	+	0	0
26.27	+	1	0	0	0
24.25	+	2	2	1	0
22.23	1	10	10	3	0
20.21	3	14	27	11	0
18.19	2	6	7	1	+
16.17	0	1	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

434

16

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	1	1	0	0
20.21	+	5	4	+	+
18.19	2	17	30	2	+
16.17	2	9	22	5	0
14.15	0	1	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

302

20

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	0	+	0	0
28.29	+	+	+	0	0
26.27	+	2	2	+	0
24.25	1	13	13	3	+
22.23	3	20	18	5	+
20.21	+	6	6	3	+
18.19	0	+	1	1	0
16.17	0	+	+	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

1461

21

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	+	1	1	0	0
22.23	1	4	5	1	+
20.21	1	17	20	7	+
18.19	+	14	11	4	0
16.17	0	2	4	3	1
14.15	0	+	+	+	0
12.13	0	0	+	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

475

22

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	0	+	0	0
24.25	0	0	+	0	0
22.23	+	+	+	0	0
20.21	+	1	1	+	0
18.19	2	6	3	+	+
16.17	7	19	16	1	+
14.15	6	16	12	4	0
12.13	1	2	3	+	0
10.11	0	+	+	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

724

23

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	+	1	+	0
18.19	1	3	5	2	+
16.17	1	11	19	7	1
14.15	1	11	18	7	1
12.13	+	2	4	2	1
10.11	0	0	+	+	+
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

1609

24

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	+	+	+	+	0
20.21	+	1	1	1	0
18.19	1	7	12	6	1
16.17	2	13	20	10	3
14.15	1	4	9	3	1
12.13	+	+	1	1	1
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

736

25

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	0	0	+	0
16.17	0	1	2	2	0
14.15	0	5	11	9	1
12.13	1	6	20	7	2
10.11	+	7	11	6	1
8.9	0	1	3	2	+
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1		0	0	0	0

586

29

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	+	+	0	0
16.17	0	+	3	1	+
14.15	+	6	12	5	2
12.13	1	9	14	8	3
10.11	+	5	10	8	2
8.9	+	1	4	4	1
6.7	0	0	0	+	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0

1084

30

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	+	0	1	0
10.11	+	1	4	8	4
8.9	0	5	22	9	4
6.7	1	6	15	9	4
4.5	0	1	1	2	1
2.3	0	0	0	0	2
0.1	0	0	0	0	1
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

398

31

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	0	0	0	+
10.11	0	+	1	1	2
8.8	0	2	14	14	4
6.7	1	8	16	7	4
4.5	0	3	7	5	2
2.3	+	2	2	3	1
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

323

32

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	0	0	1	+	+
12.13	+	2	4	5	1
10.11	1	7	19	7	5
8.9	6	5	11	8	9
6.7	1	2	1	2	2
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0

402

33

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	0	+	0	+	0
12.13	+	1	3	2	1
10.11	2	7	12	8	3
8.9	1	10	13	9	5
6.7	1	5	6	4	3
4.5	+	+	+	1	+
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0

811

34

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	0	2	2	0	0
8.9	0	6	27	8	8
6.7	0	8	12	10	2
4.5	2	2	2	2	0
2.3	0	2	0	0	2
0.1	0	0	0	0	2
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0

49

Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted wh

R TEMPERATURE

JUNE

erature (°C) and wind speed

h wind speed of 22-33 kts)

is explained in the text.

1

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	2	0	0
30.31	1	3	9	+	0
28.29	2	24	30	1	0
26.27	2	11	12	1	0
24.25	+	2	1	+	0
22.23	+	+	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

725

2

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	0	0	0
32.33	+	+	+	0	0
30.31	+	1	1	0	0
28.29	3	16	16	+	0
26.27	4	25	23	2	0
24.25	1	3	2	1	0
22.23	0	0	0	+	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

697

3

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	0	0	0
32.33	0	+	+	0	0
30.31	+	2	1	0	0
28.29	3	11	8	0	0
26.27	6	31	22	1	0
24.25	2	7	4	0	0
22.23	0	1	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

479

4

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	+	0	0
30.31	+	2	1	0	0
28.29	4	10	7	+	0
26.27	7	26	27	2	0
24.25	2	7	5	+	0
22.23	+	+	+	+	0
20.21	0	+	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

737

5

WIND SPEED (KTS)

TEMP (°C)	0-	4-10	11-21	22-33	≥ 34
34.35	0	0	+	0	0
32.33	0	0	0	0	0
30.31	0	1	+	0	0
28.29	+	1	+	0	0
26.27	1	10	7	0	0
24.25	2	31	16	0	0
22.23	2	23	5	0	0
20.21	0	2	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

788

ced due to heat)

less than the given value)

han the given value)

6

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	+	0	0
30.31	+	1	+	+	0
28.29	5	9	2	+	0
26.27	12	39	12	+	0
24.25	2	10	7	+	0
22.23	+	1	+	+	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1274

7

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	+	0	0
32.33	0	1	+	0	0
30.31	0	3	+	0	0
28.29	2	20	21	1	0
26.27	3	26	21	+	0
24.25	+	1	+	0	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

352

8

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	0	+	0	0
34.35	0	+	0	0	0
32.33	0	+	+	0	0
30.31	0	+	1	0	0
28.29	0	5	11	1	0
26.27	1	21	39	4	0
24.25	+	6	9	1	0
22.23	0	0	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

800

9

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	+	0	0
28.29	0	+	+	0	0
26.27	+	3	8	+	0
24.25	+	18	41	5	0
22.23	+	5	16	3	0
20.21	0	+	+	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

1511

10

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	+	+	+	0	0
26.27	+	3	3	+	0
24.25	1	19	12	+	0
22.23	2	36	13	+	0
20.21	1	6	3	0	0
18.19	+	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

1927

13

≥ 34
0
0
0
0
0
+
0
0
0
0
0
0

964

14

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	+	+	0	0
26.27	+	2	2	+	0
24.25	2	14	23	4	0
22.23	1	19	24	5	0
20.21	+	1	1	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

1203

15

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	0	+	0	0
26.27	+	1	0	0	0
24.25	+	2	2	1	0
22.23	1	10	10	3	0
20.21	3	14	27	11	0
18.19	2	6	7	1	+
16.17	0	1	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

434

16

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	1	1	0	0
20.21	+	5	4	+	+
18.19	2	17	30	2	+
16.17	2	9	22	5	0
14.15	0	1	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

302

17

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	0	+	0	0
26.27	+	1	1	0	+
24.25	+	3	3	+	+
22.23	3	18	15	3	0
20.21	3	16	16	2	1
18.19	+	6	5	1	0
16.17	0	+	+	+	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

638

18

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	+	1	+	0	0
24.25	1	7	6	1	+
22.23	2	16	15	3	1
20.21	2	13	17	3	+
18.19	+	4	5	1	+
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

564

19

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	0	0	+	0	0
22.23	+	1	1	+	0
20.21	1	7	11	4	1
18.18	1	14	20	9	2
16.17	1	9	12	3	+
14.15	+	1	1	1	+
12.13	0	0	+	+	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

1135

22

≥ 34
0
0
0
0
0
+
0
0
0
0
0
0

724

23

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	+	1	+	0
18.18	1	3	5	2	+
16.17	1	11	19	7	1
14.16	1	11	18	7	1
12.13	+	2	4	2	1
10.11	0	0	+	+	+
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

1609

24

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	+	+	+	+	0
20.21	+	1	1	1	0
18.18	1	7	12	6	1
16.17	2	13	20	10	3
14.16	1	4	9	3	1
12.13	+	+	1	1	1
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

736

25

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.18	0	0	0	+	0
16.17	0	1	2	2	0
14.16	0	5	11	9	1
12.13	1	6	20	7	2
10.11	+	7	11	6	1
8.9	0	1	3	2	+
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0

586

26

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	+	+	+	0	0
18.18	0	1	4	3	+
16.17	1	9	18	7	2
14.16	3	11	16	7	3
12.13	1	7	2	3	0
10.11	0	+	+	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

371

27

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	+	0	+	0
20.21	+	2	+	+	+
18.18	3	11	9	2	0
16.17	6	21	17	5	1
14.16	4	7	6	3	+
12.13	0	+	1	1	+
10.11	0	0	+	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

332

28

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	+	0	0	0
18.18	0	+	0	0	0
16.17	2	4	3	+	+
14.16	5	18	16	5	4
12.13	4	9	12	4	1
10.11	1	3	3	2	1
8.9	0	+	0	0	+
8.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

437

31

≥ 34
+
2
4
4
2
1
0
0
0
0
0
0

323

32

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	0	0	1	+	+
12.13	+	2	4	5	1
10.11	1	7	19	7	5
8.9	6	5	11	8	9
6.7	1	2	1	2	2
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0

402

33

WIND SPEED (KTS)

TEMP (°C)	0-3	4- 0	11 21	22 33	≥ 34
14.15	0	+	0	+	0
12.13	+	1	3	2	1
10.11	2	7	12	8	3
8.9	1	10	13	9	5
6.7	1	6	6	4	3
4.5	+	+	+	1	+
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0

811

34

WIND SPEED (KTS)

TEMP (°C)	0 3	4-10	11-21	22-33	≥ 34
10.11	0	2	2	0	0
8.9	0	6	27	8	8
6.7	0	8	12	10	2
4.5	2	2	2	2	0
2.3	0	2	0	0	2
0.1	0	0	0	0	2
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0

49

35

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
8.7	0	7	16	0	2
4.5	2	11	15	6	0
2.3	6	9	5	4	2
0.1	1	1	2	0	0
-2.-1	0	0	4	4	3
-4.-3	0	0	3	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0
-12.-11	0	0	0	0	0
-14.-13	0	0	0	0	0

103

36

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	0	0	0	0	+
8.9	0	0	1	2	2
6.7	1	12	21	10	4
4.5	1	8	8	13	6
2.3	1	2	5	3	1
0.1	0	0	0	0	+
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0

306

37

WIND SPEED (KTS)

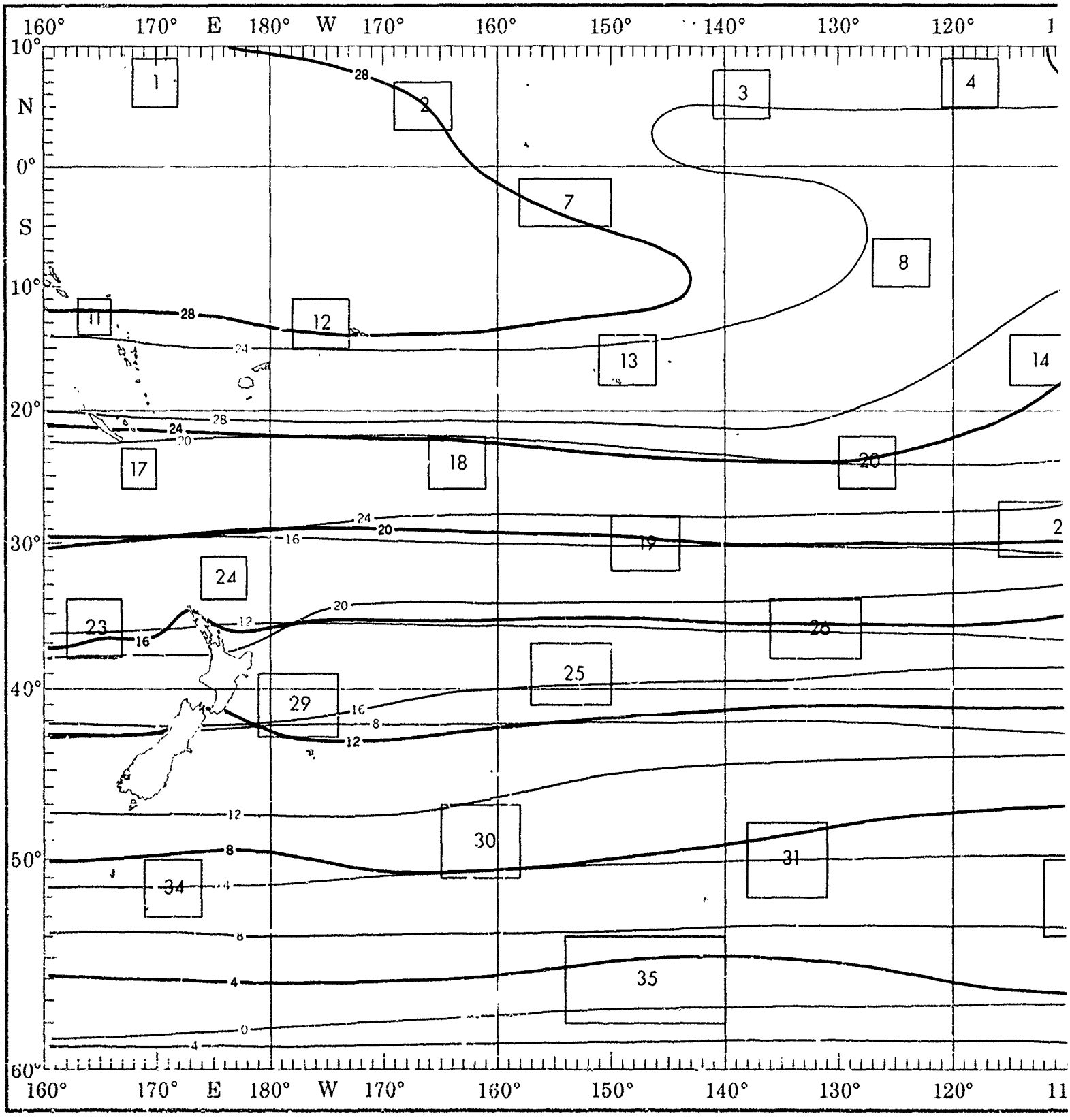
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
8.9	0	+	+	+	+
6.7	1	6	6	7	5
4.5	2	8	13	12	11
2.3	1	4	6	6	4
0.1	+	1	3	1	2
-2.-1	0	+	+	+	+
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0
-12.-11	0	0	0	0	0

1032

nt the objective compilation of available data for specified areas without regard to suspected biases.

alyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

JUNE


160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N 0° S 10° 20° 30° 40° 50° 60°
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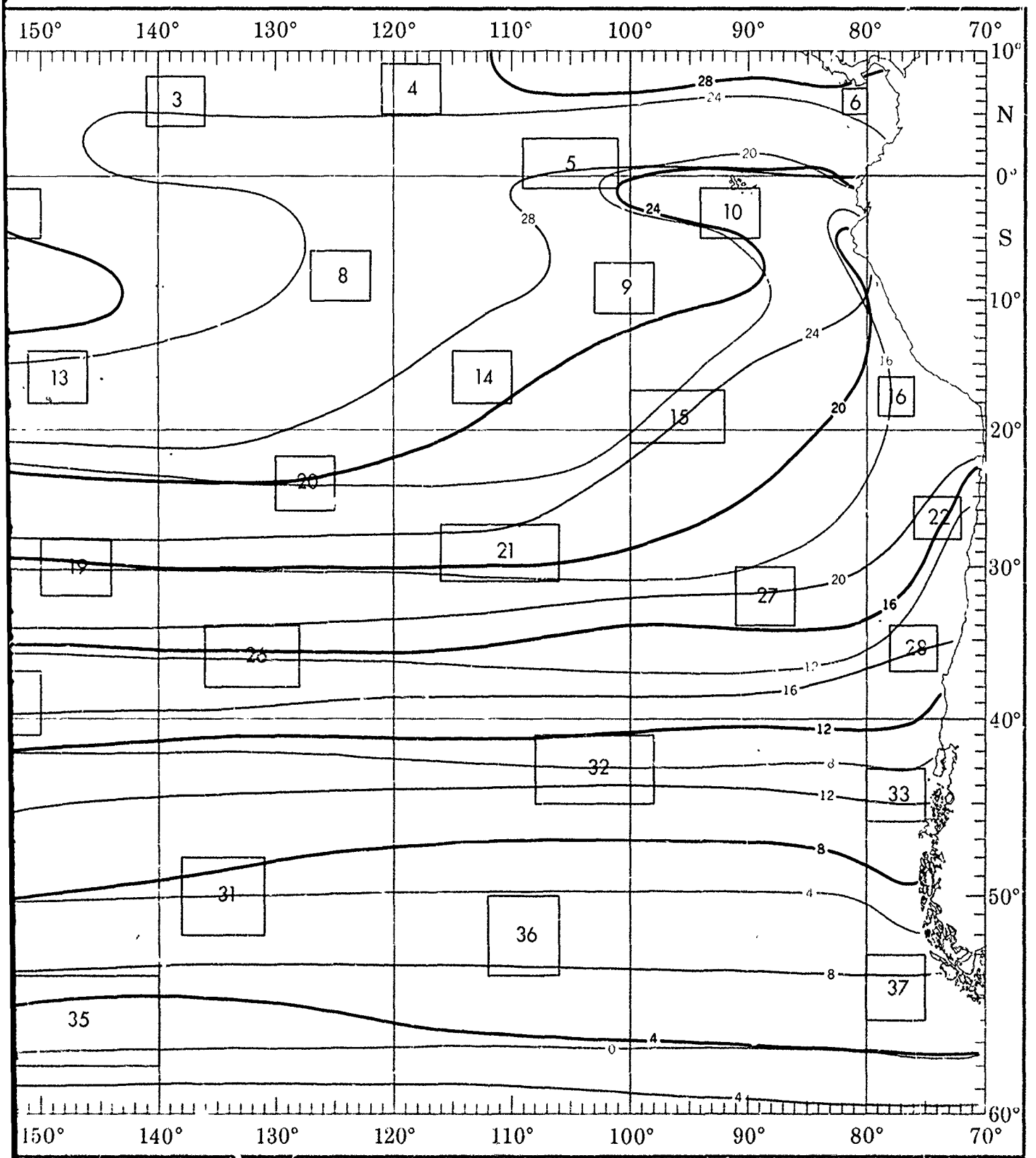
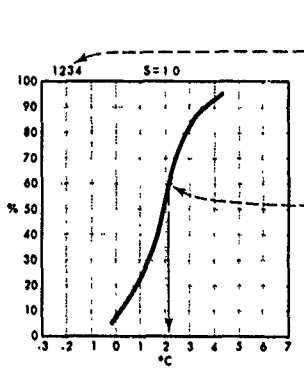
SEA SURFACE TEMPERATURE



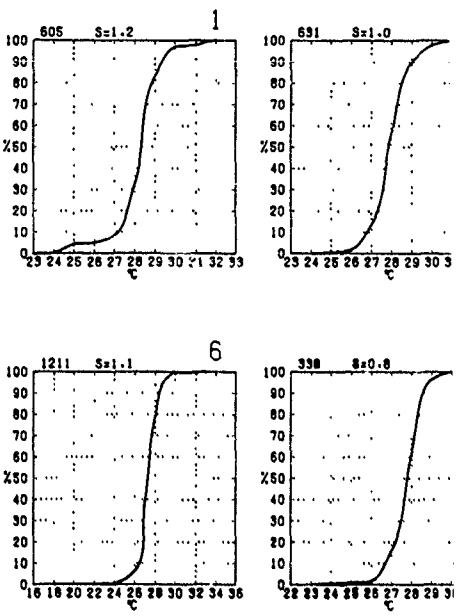
SEA SURFACE TEMPERATURE

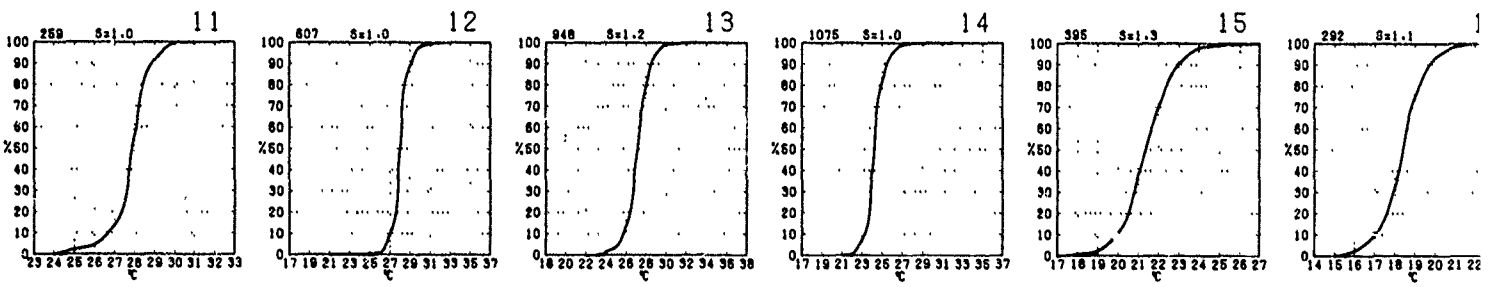


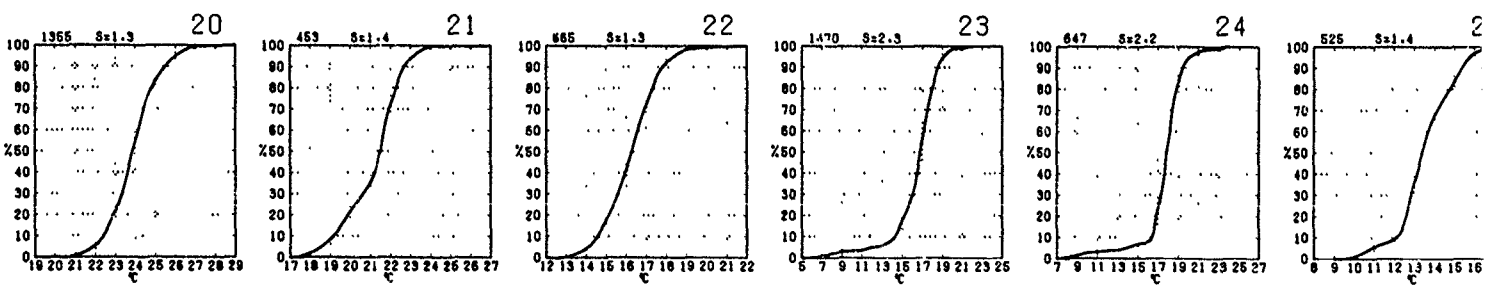
BLACK LINE - Mean sea surface temperature (°C)

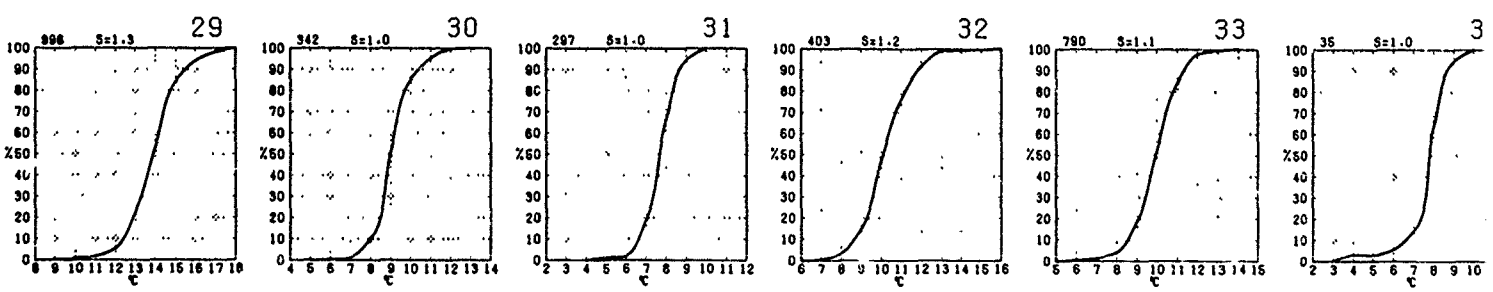
BLUE LINE - Minimum (1%) sea surface temperature (°C) (1% of the temperatures were equal to or less than the given value)

RED LINE - Maximum (99%) sea surface temperature (°C) (1% of the temperatures were greater than the given value)









Graphs represent the objective compilation of available data for specified areas without re
The isopleth analyses (opposite page) are based on all available data subjectively adjusted

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temperatures equal to or less
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°C or ≤358°F)
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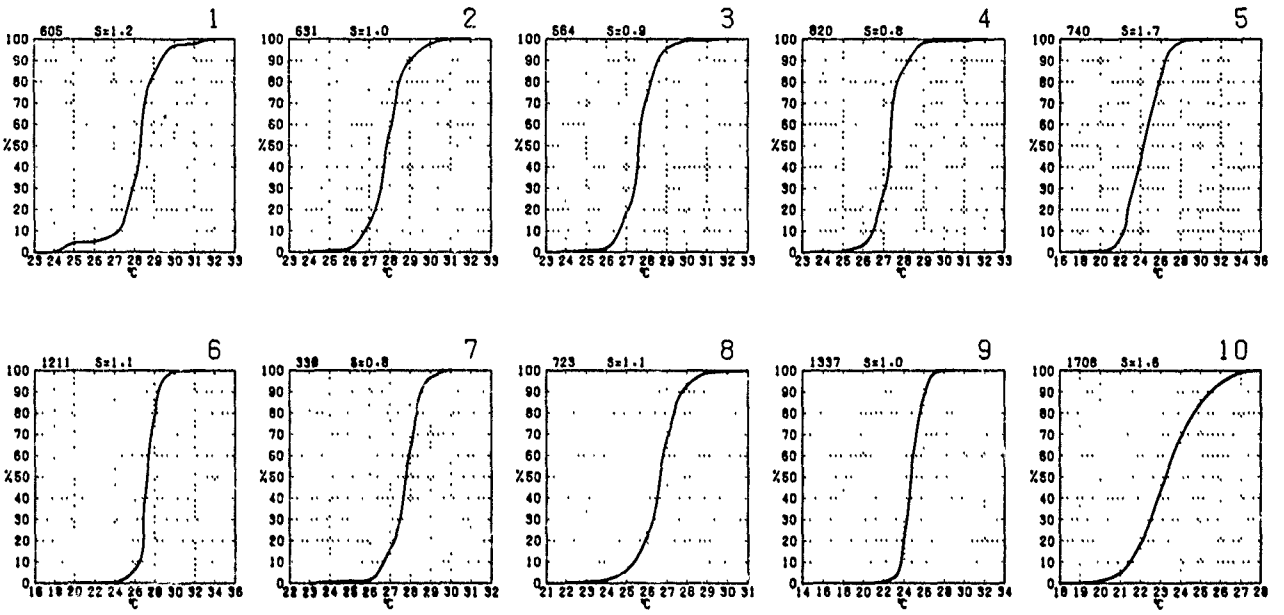
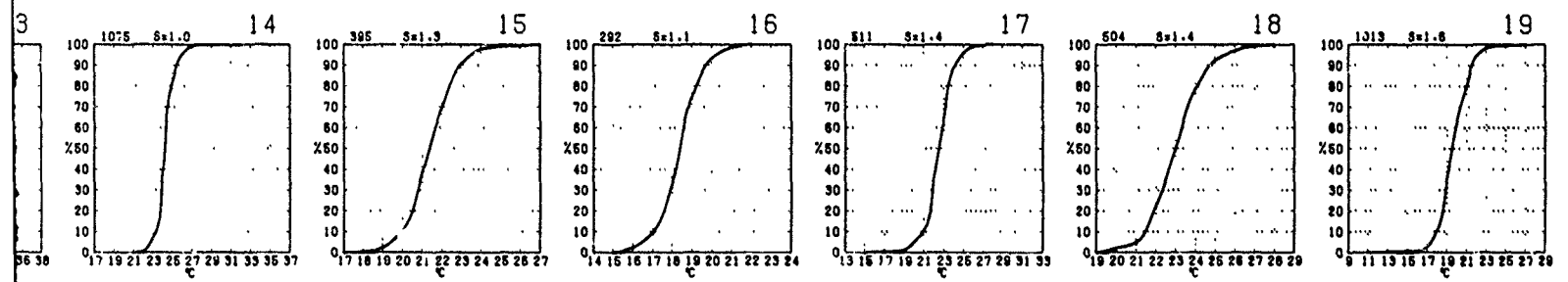
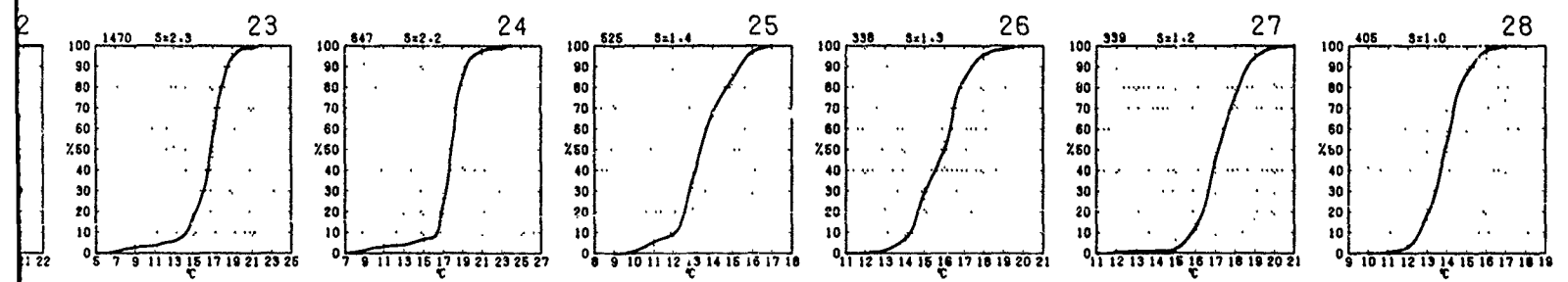
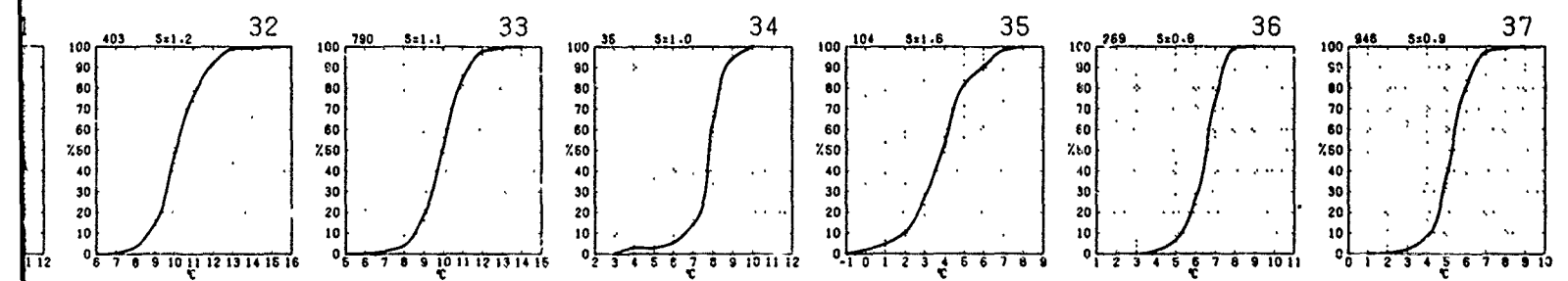
to or less than the given

ater than the given value)



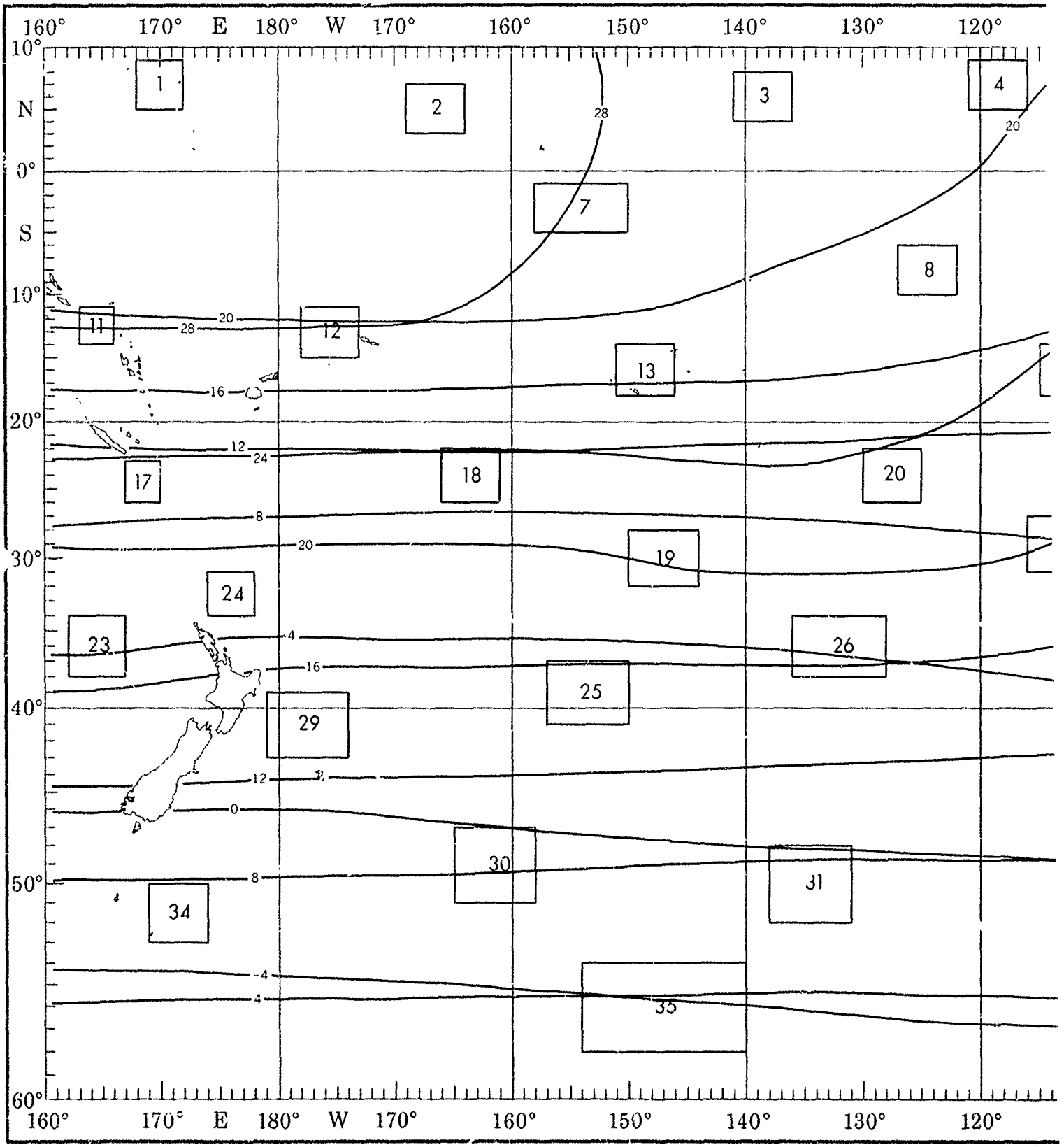






the objective compilation of available data for specified areas without regard to suspected biases.
yses (opposite page) are based on all available data subjectively adjusted where bias was evident.

JUNE


160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N 0° S 10° 20° 30° 40° 50° 60°
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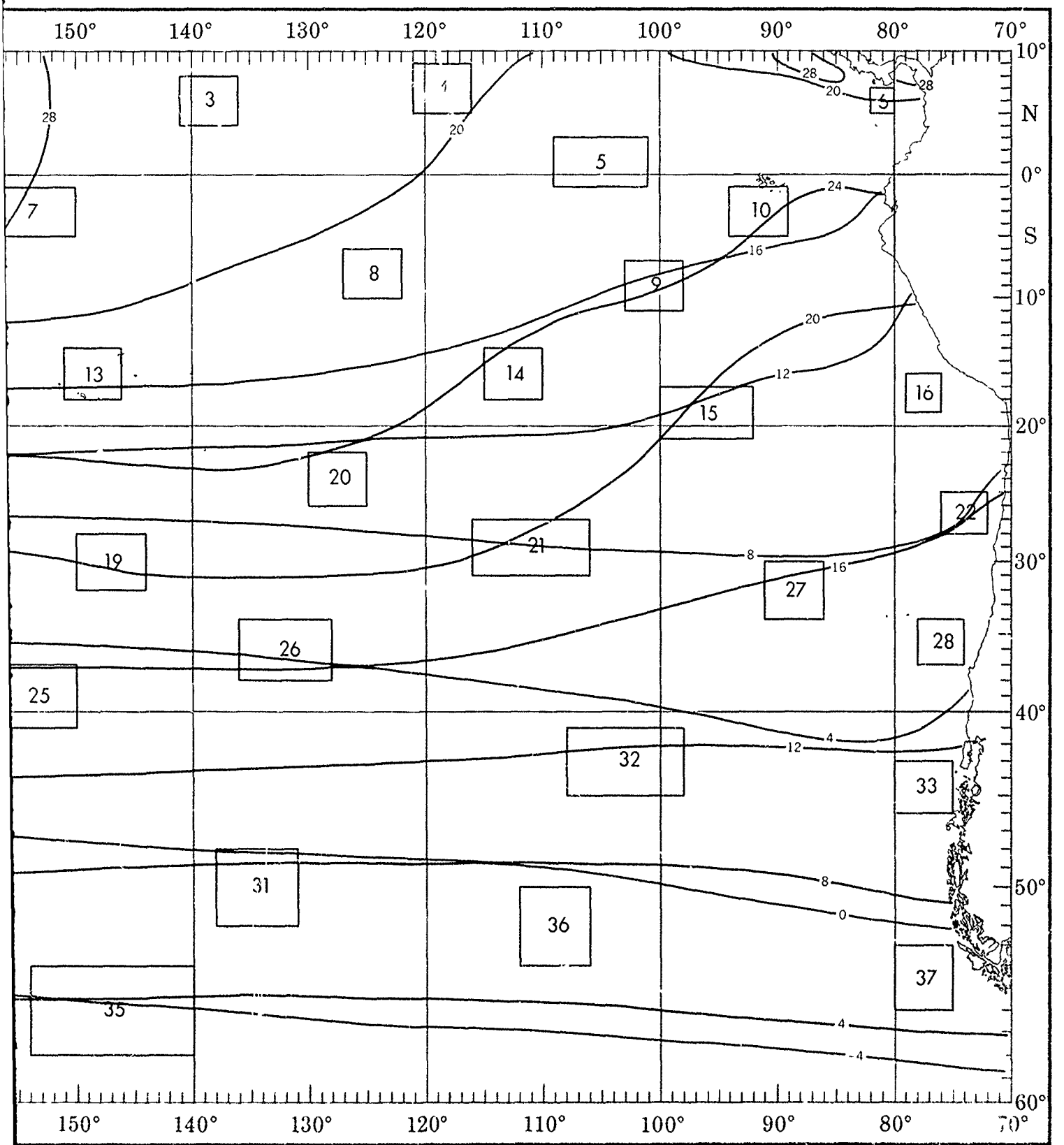
HUMIDITY



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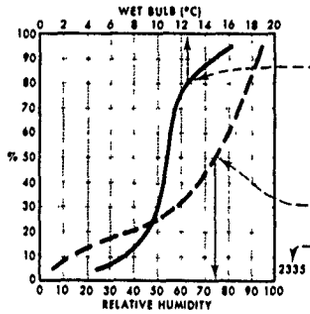
WET BULB AND RELATIVE HUMIDITY



Wet bulb - Relative humidity

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 ≤12.5°C or 54.5°F.)

Cumulative percent frequency of relative humidities equal to or less than the humidity intersected by the curve (bottom scale)

Relative humidity (%)

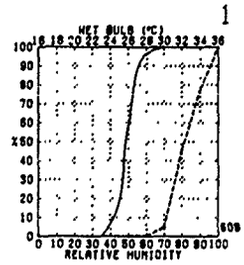
(50% of all observed relative humidities were ≤74%)

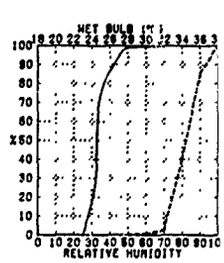
Number of observations

BLUE LINE - Minimum (1%) dew-point temperature (°C) (1% of the computed values were equal to or less than the given value)

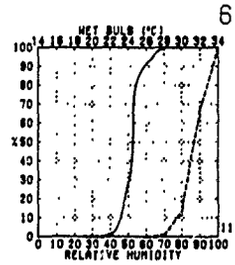
RED LINE - Maximum (99%) dew-point temperature (°C) (1% of the computed values were greater than the given value)

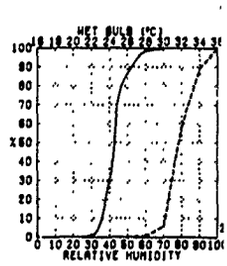
1



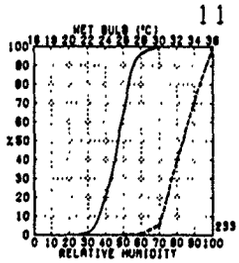


6

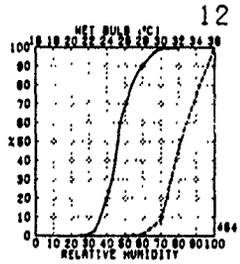




11



12



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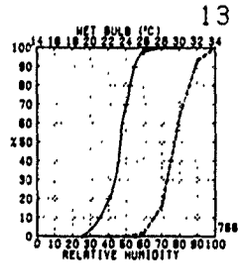

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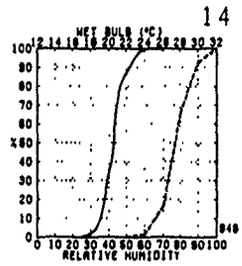

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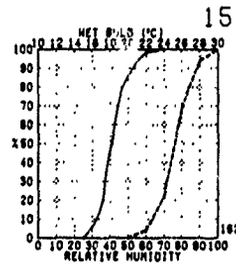

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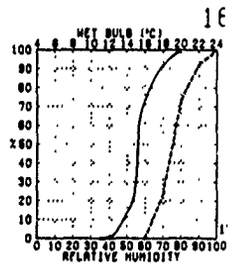

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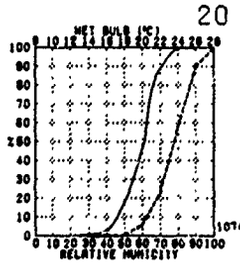

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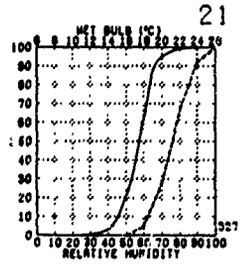

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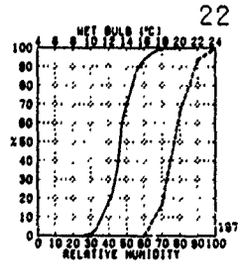

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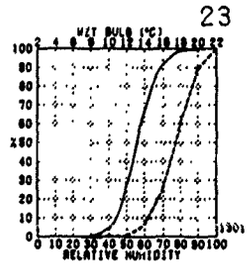

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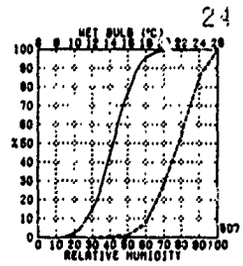

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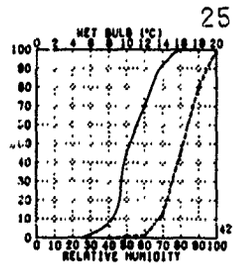

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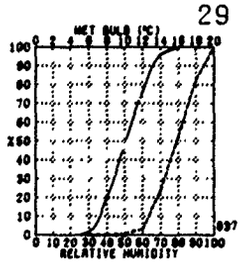

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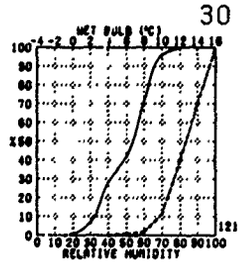

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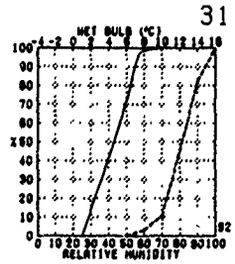

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INSUFFICIENT DATA

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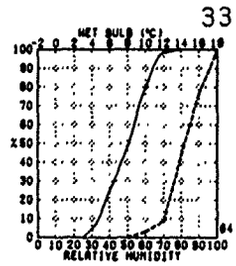

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Graphs represent the objective compilation of available data for specified areas without rega
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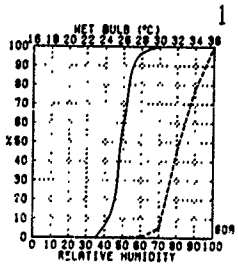

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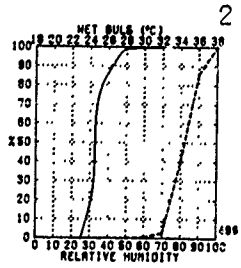

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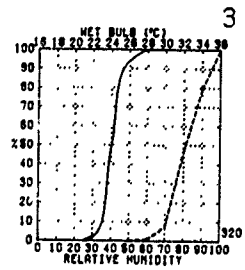

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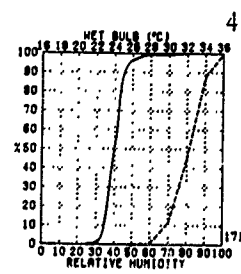

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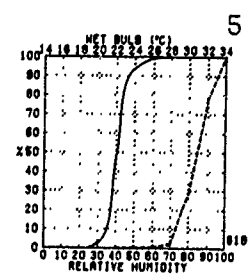

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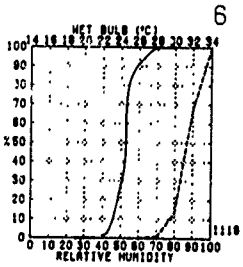

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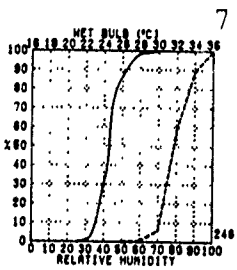

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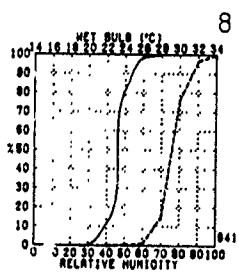

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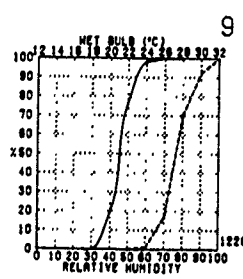

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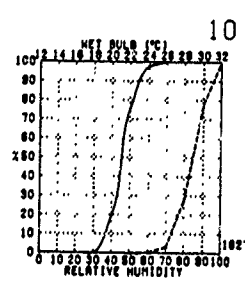

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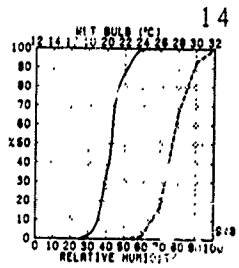

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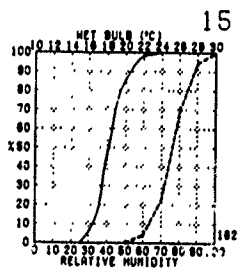

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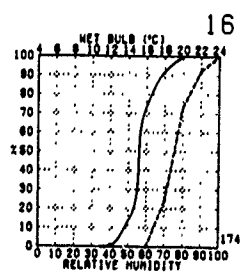

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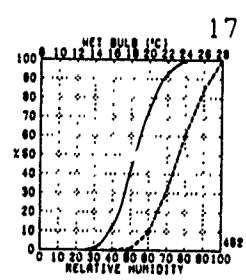

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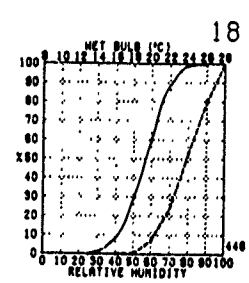

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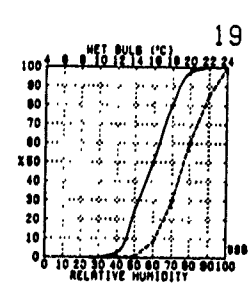

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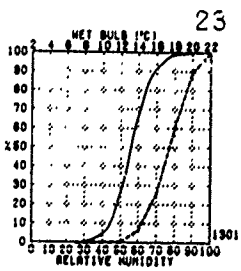

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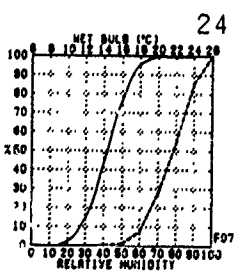

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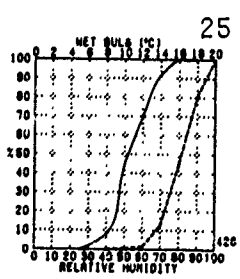

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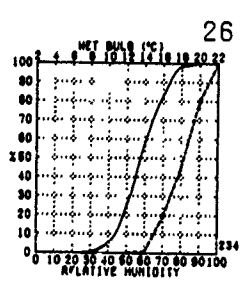

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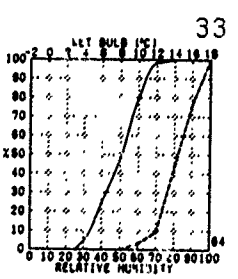

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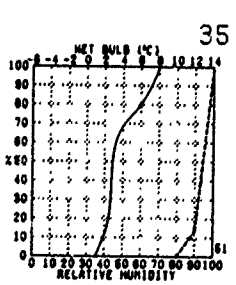

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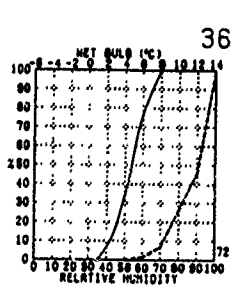

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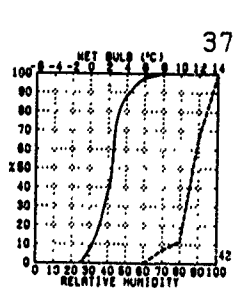

objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

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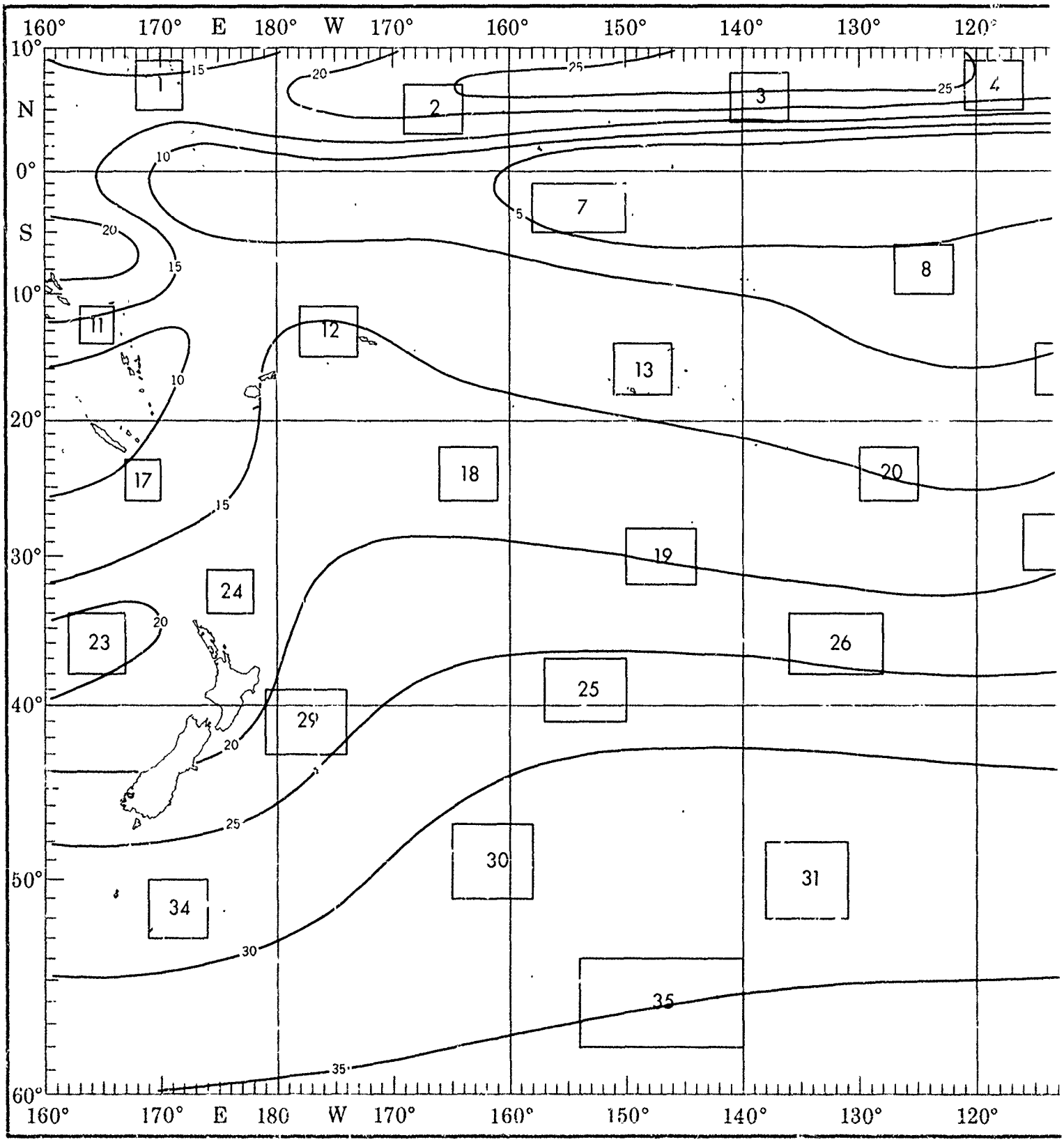
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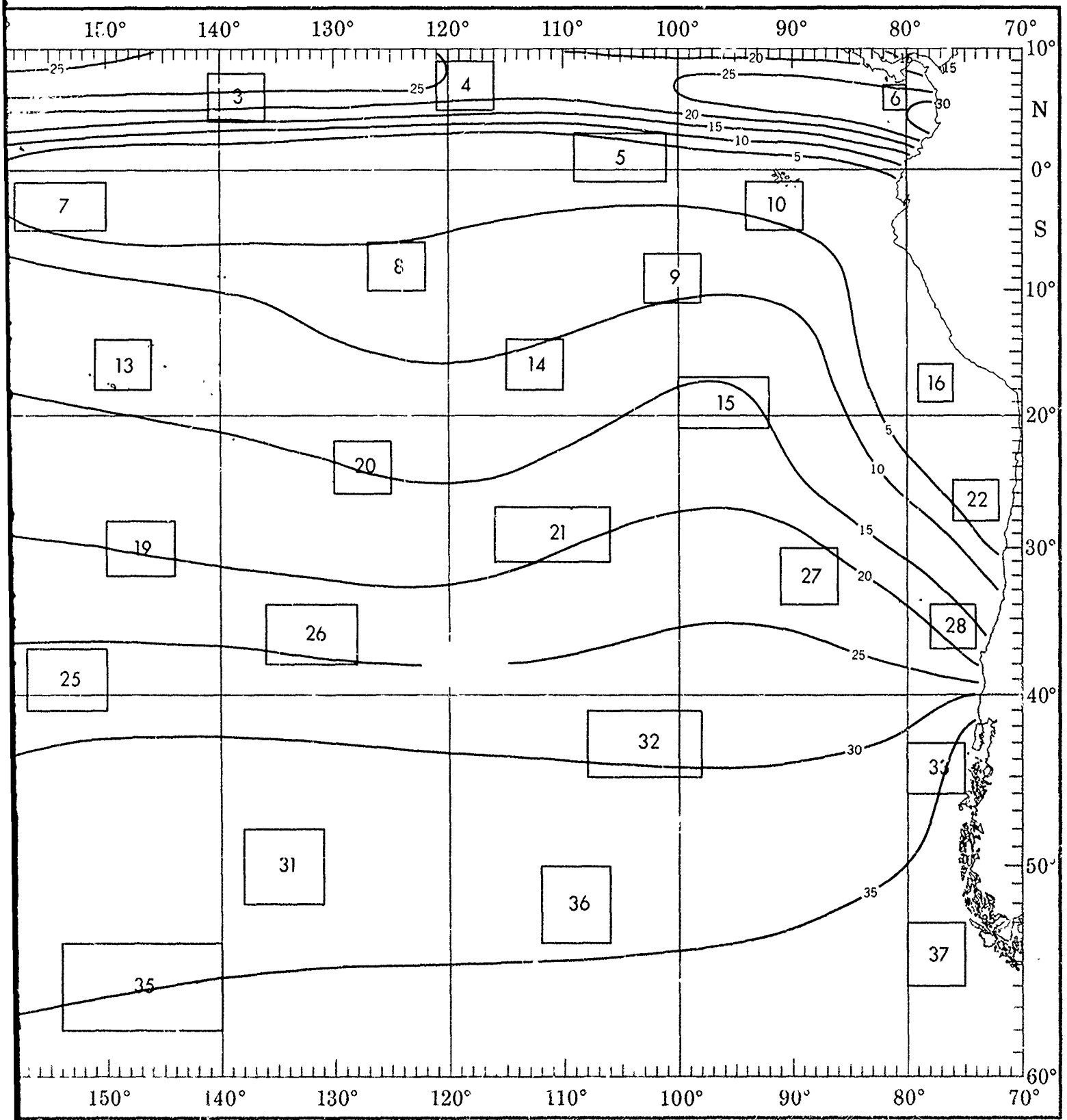
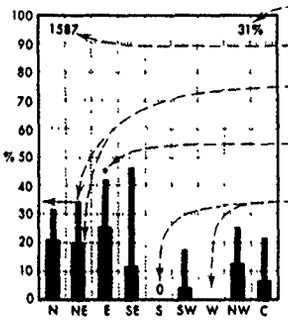
PRECIPITATION



PRECIPITATION

% Pcpn { % Liquid / % Snow

Percent frequency of surface wind observations from each direction and calm that were accompanied by precipitation, subdivided into liquid type (including freezing rain and freezing drizzle) and snow



—Percentage of present weather observations reporting precipitation

—Number of observations

—(34% of all NE winds were accompanied by precipitation, of which 14% was liquid and 20% was snow.)

—An asterisk in the column for a given direction or calm indicates that the percentage was based on 10 30 observations of present weather and wind direction

—0 replaces bar when no precipitation was observed with winds from a given direction or calm No bar graph is presented if less than 10 observations containing present weather were reported for a given direction or calm.

RED LINE - Percent frequency of observations reporting precipitation

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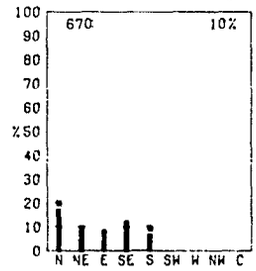

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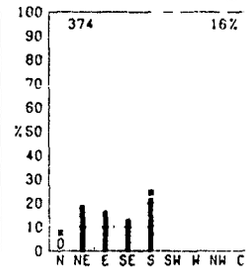

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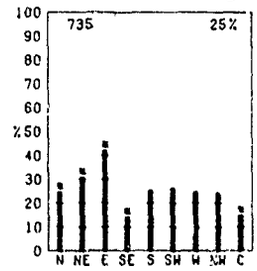

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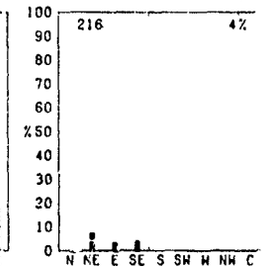

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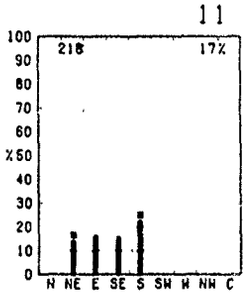

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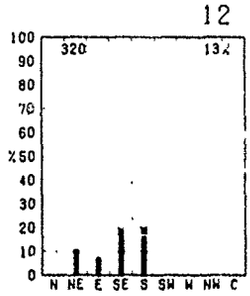

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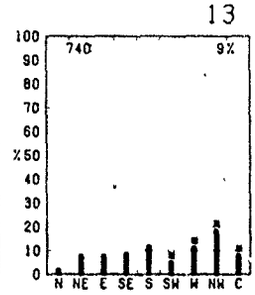

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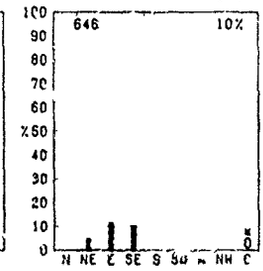

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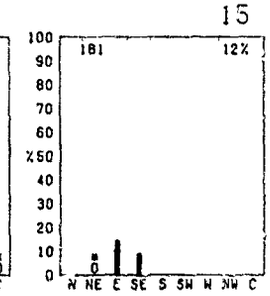

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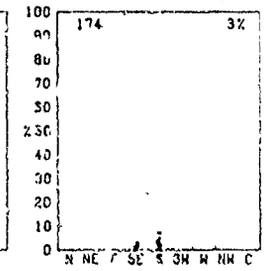

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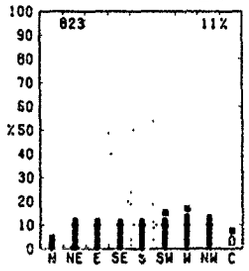

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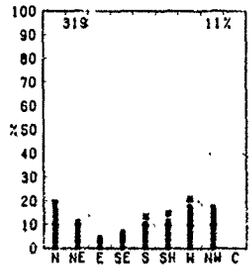

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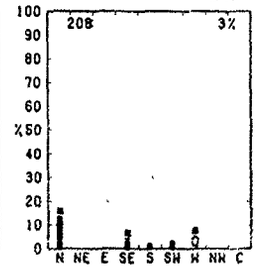

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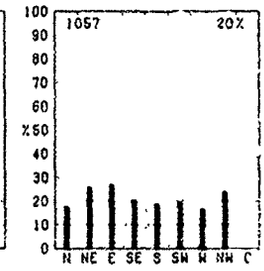

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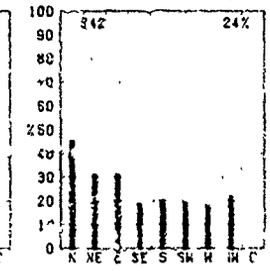

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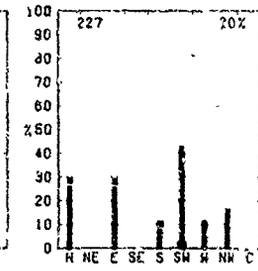

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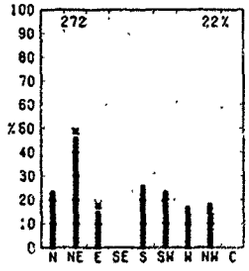

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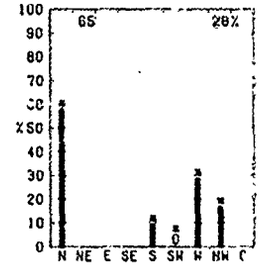

34 INSUFFICIENT DATA

Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted whe

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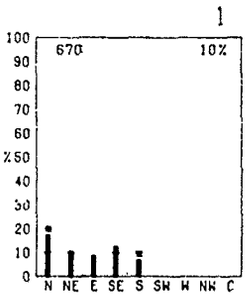

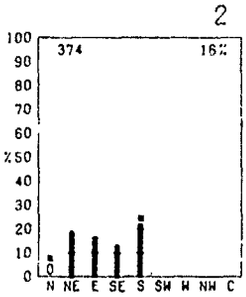

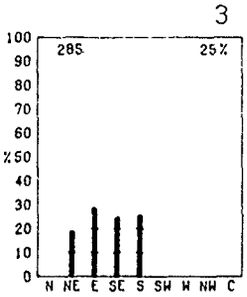

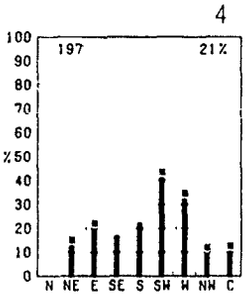

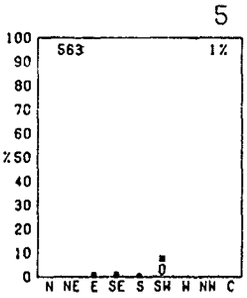

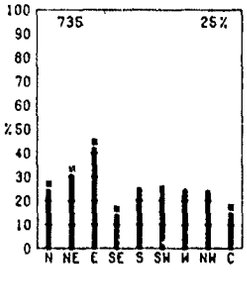

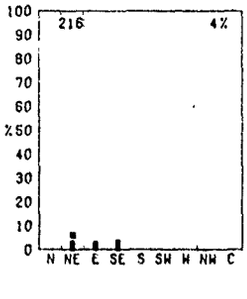

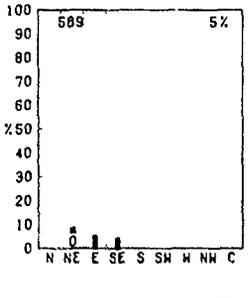

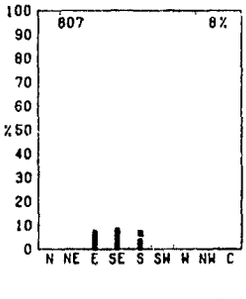

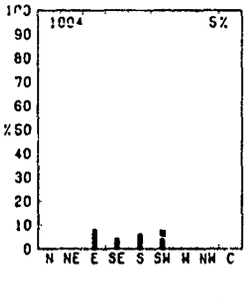

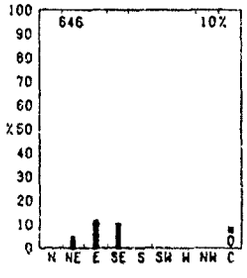

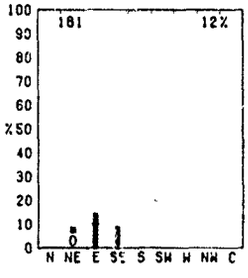

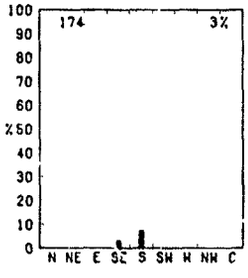

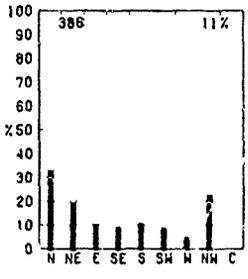

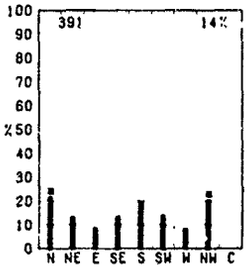

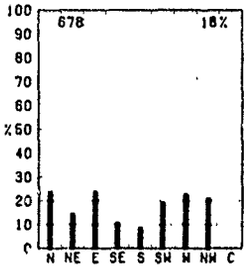

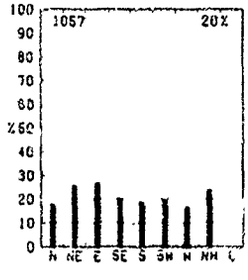

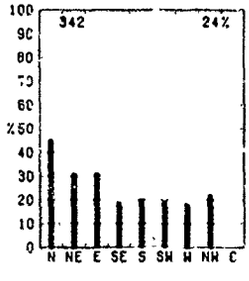

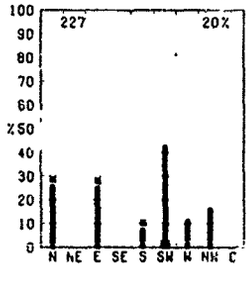

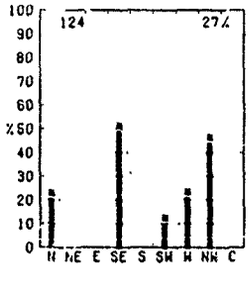

27

INSUFFICIENT DATA

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INSUFFICIENT DATA

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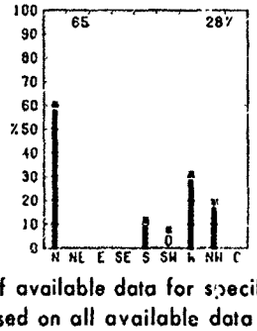
T INSUFFICIENT DATA



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INSUFFICIENT DATA

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INSUFFICIENT DATA

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INSUFFICIENT DATA

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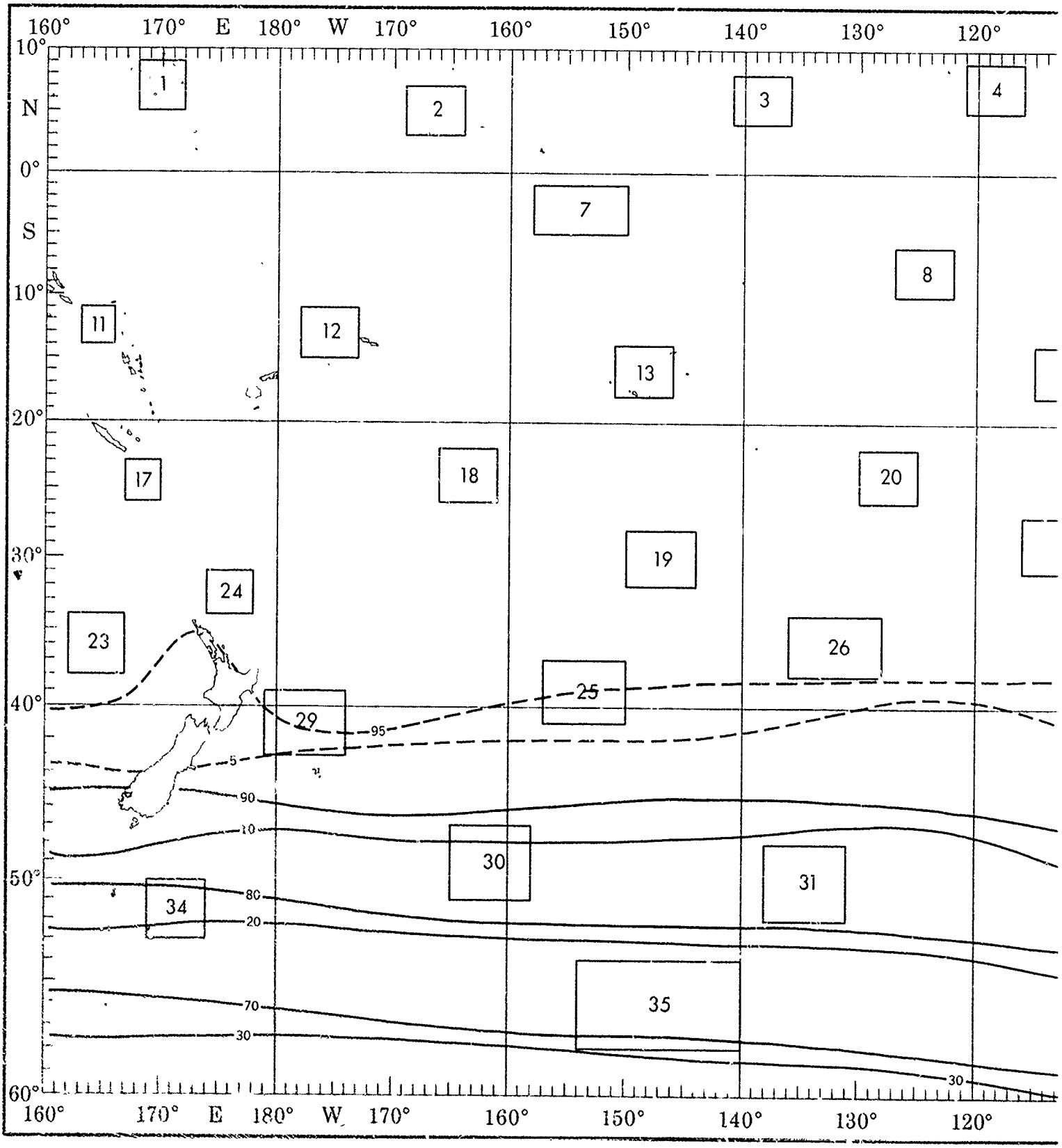
INSUFFICIENT DATA

t the objective compilation of available data for specified areas without regard to suspected biases.
yses (opposite page) are based on all available data subjectively adjusted where bias was evident.

JUNE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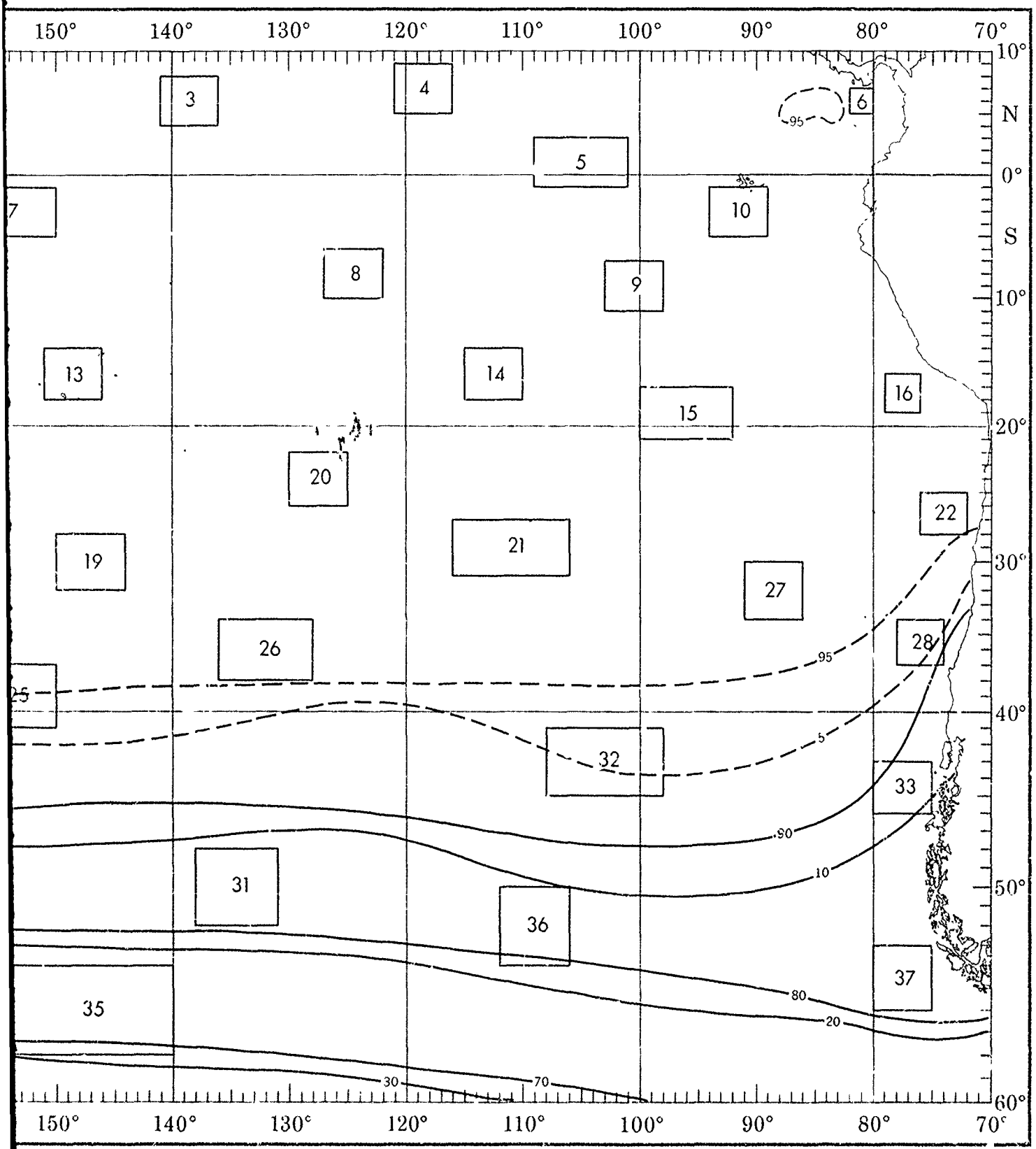
160° 170° E 180° W 170° 160° 150° 140° 130° 120°

VISIBILITY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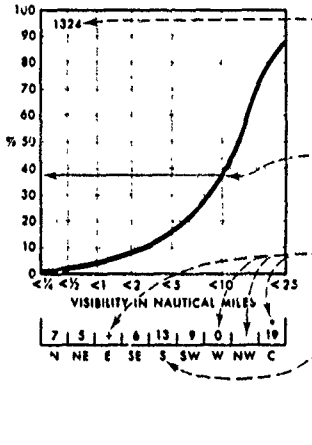
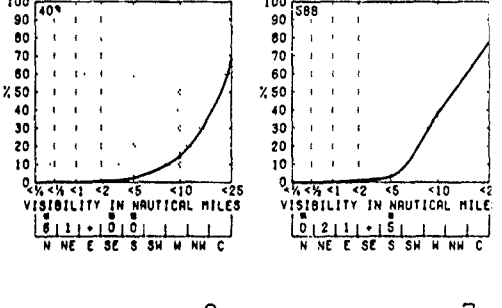
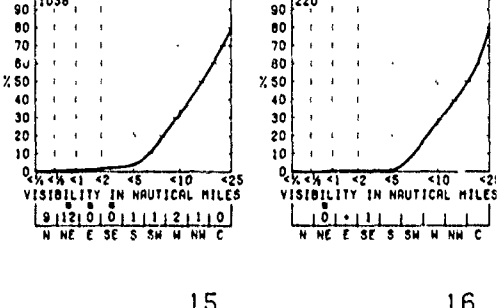
VISIBILITY

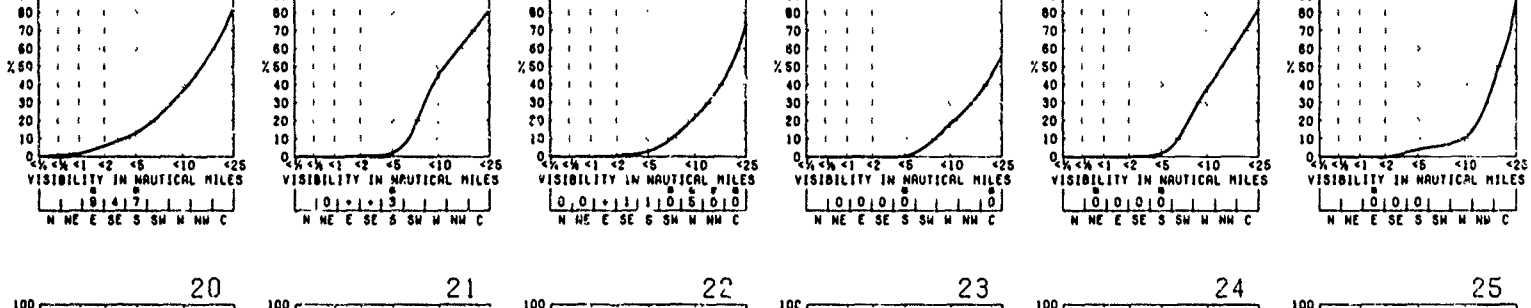


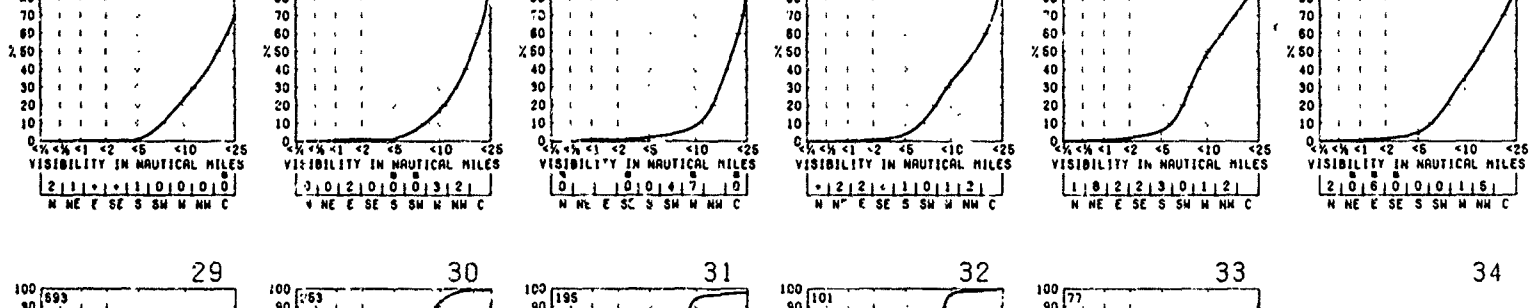
BLUE LINE Percent frequency of visibilities ≥5 nautical miles

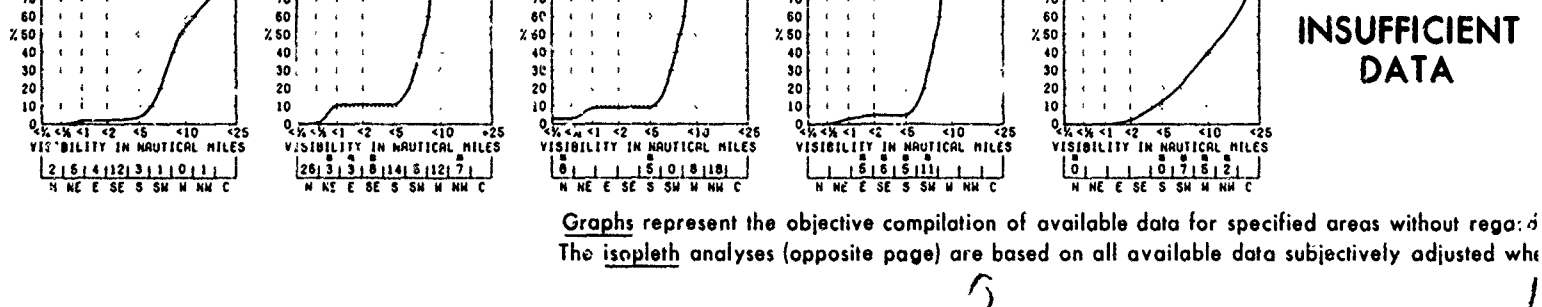
RED LINE - Percent frequency of visibilities <2 nautical miles











34

INSUFFICIENT DATA

Graphs represent the objective compilation of available data for specified areas without rega:
The isopleth analyses (opposite page) are based on all available data subjectively adjusted wh

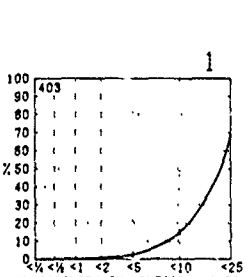
than the visibility intersect

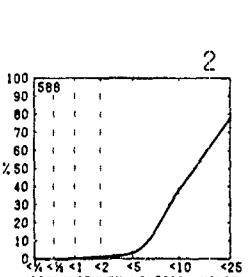
occurrence of visibility

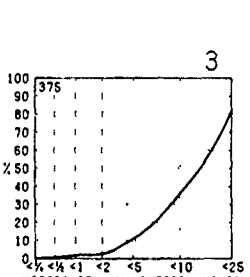
2 nautical miles were
tage is given if less than 10
on. An asterisk indicates
isibility and wind direction

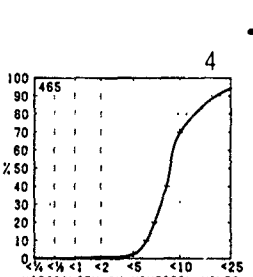
cal miles)

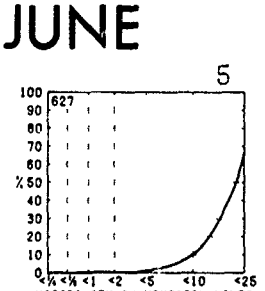
JUNE

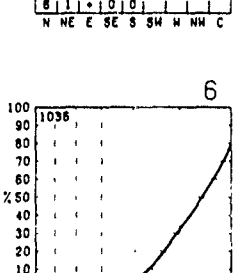


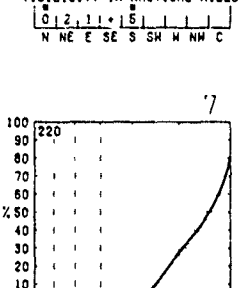


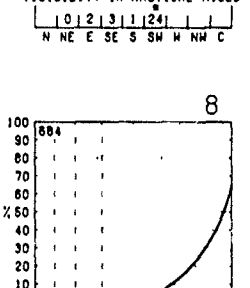


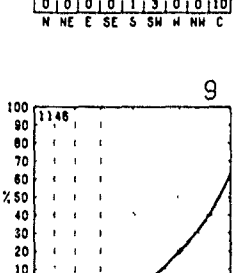


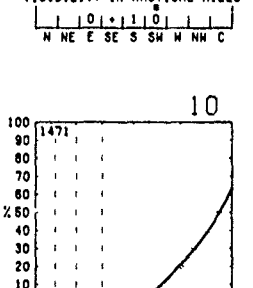


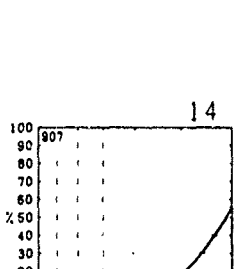


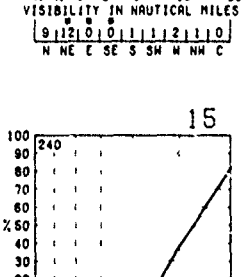


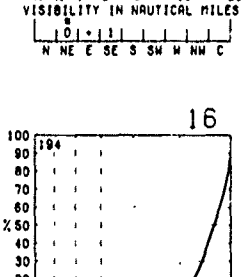


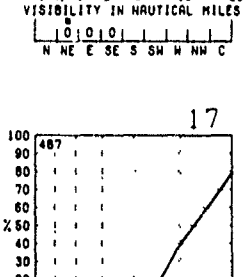


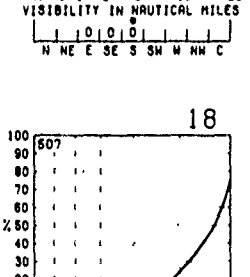


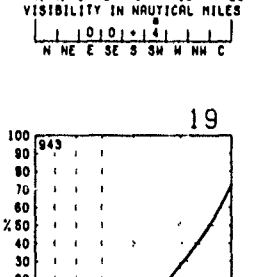


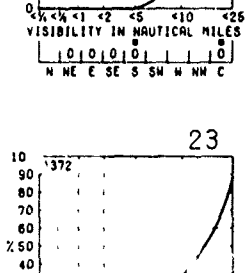


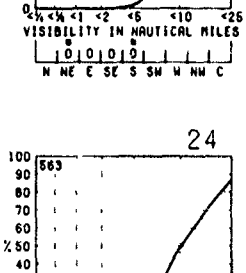


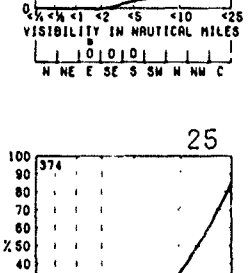


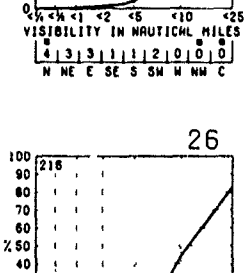


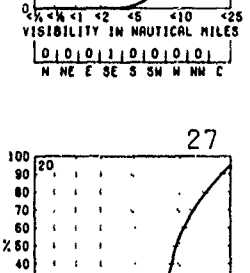












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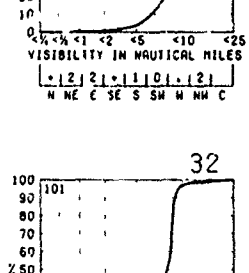
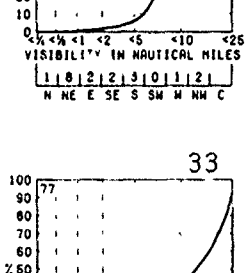
INSUFFICIENT DATA





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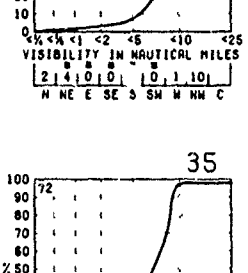
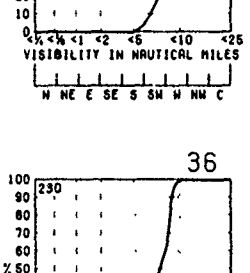
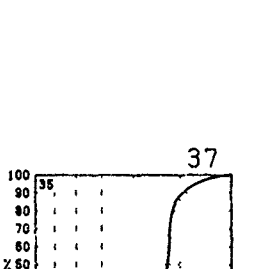
INSUFFICIENT DATA

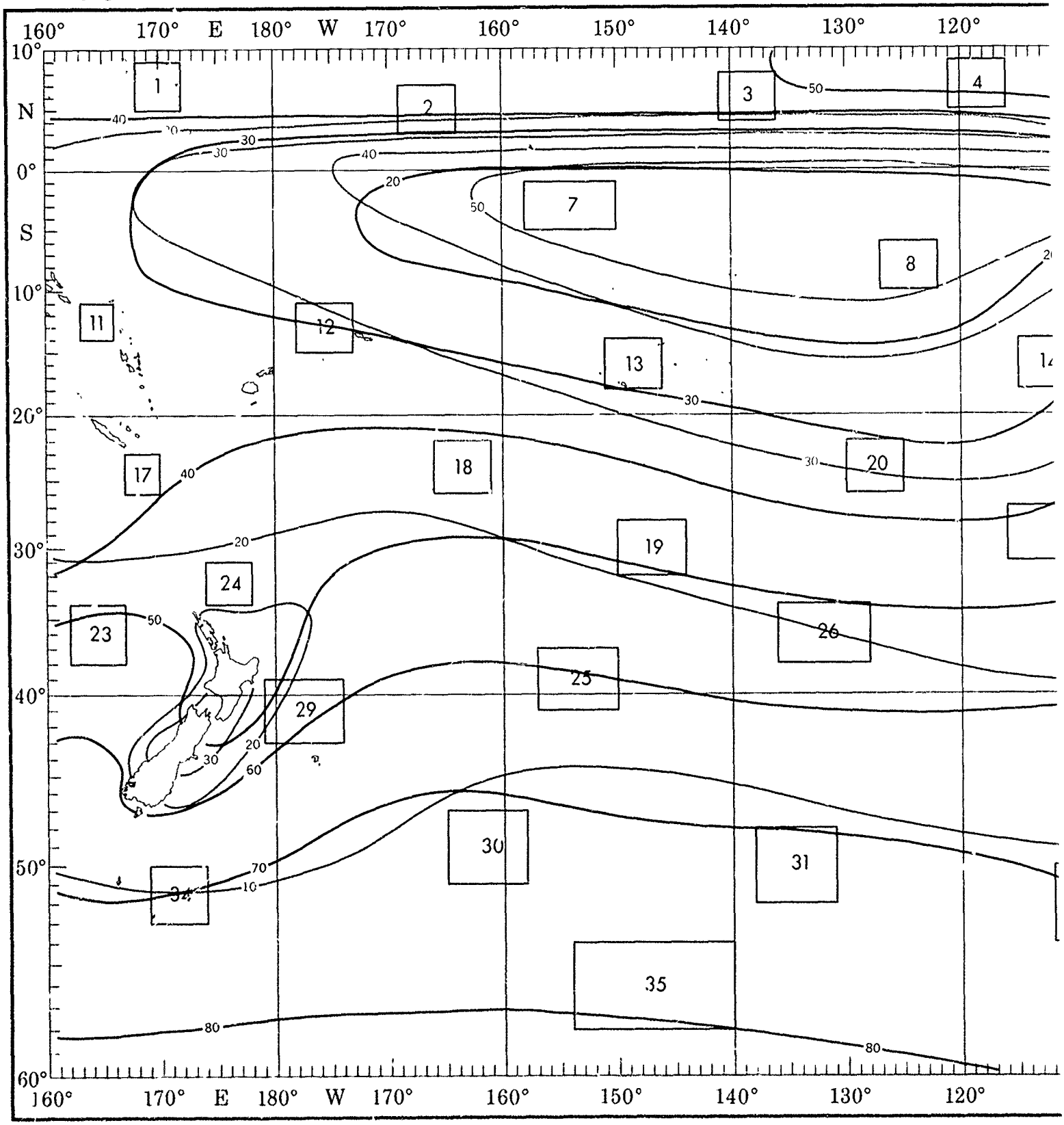






e objective compilation of available data for specified areas without regard to suspected biases.
s (opposite page) are based on all available data subjectively adjusted where bias was evident.

JUNE


160° 170° E 180° W 170° 160° 150° 140° 130° 120°
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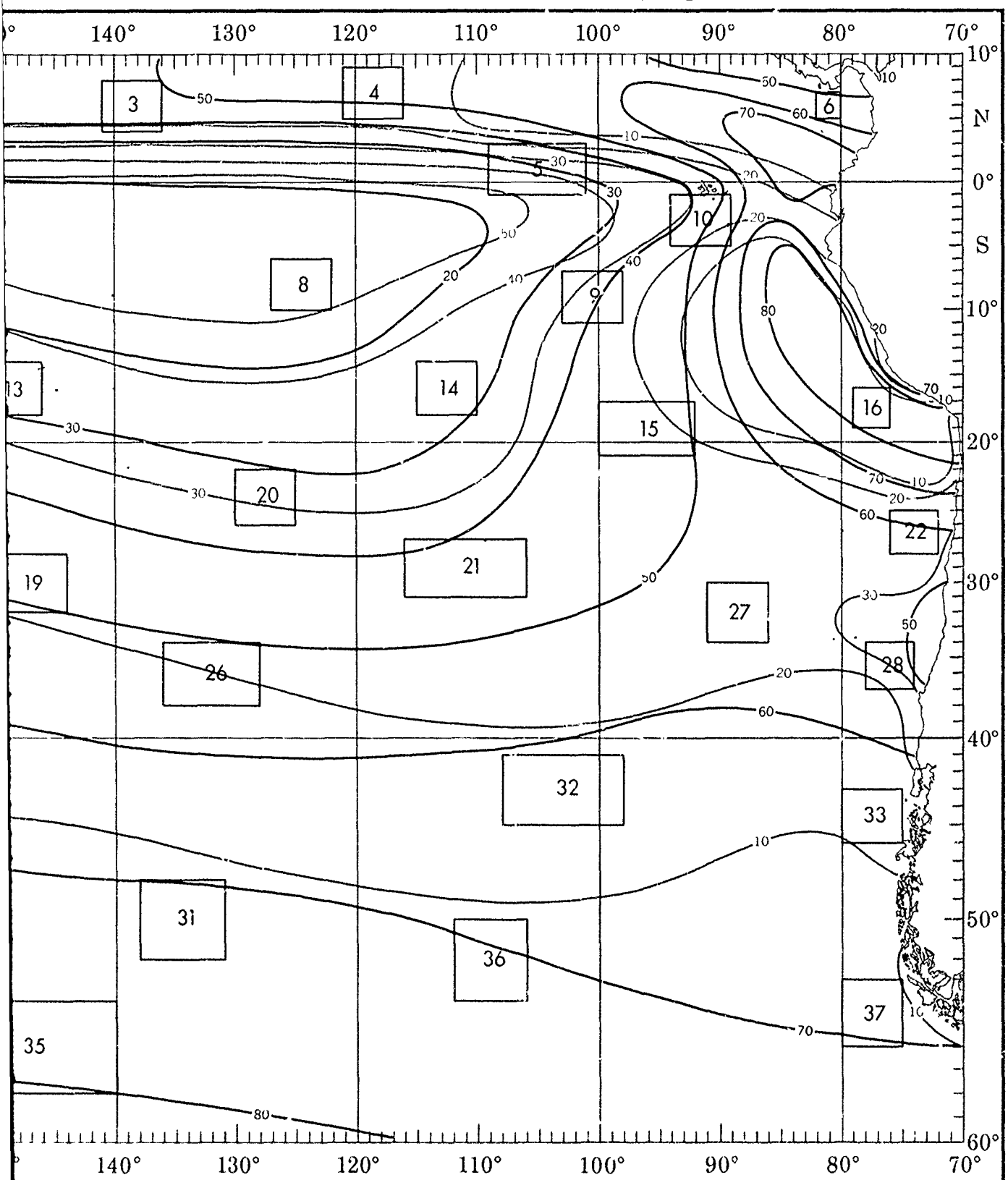
CLOUD COVER


140° 130° 120° 110° 100° 90° 80° 70°
10° N 0° S 10° 20° 30° 40° 50° 60°
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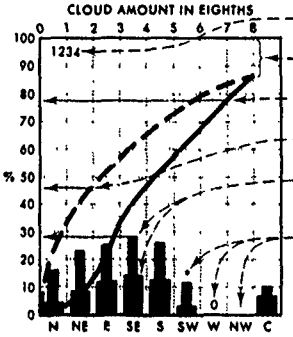
CLOUD COVER

Total Cloud Amount
Low Cloud Amount
} Cumulative percent frequency of indicated cloud amount equal to or less than the amount intersected by the curve



– – Number of observations containing total cloud amount

– Obscurations

– – – (77% of all total cloud amounts were ≤7/8)

– – – (46% of all low cloud amounts were ≤2/8)

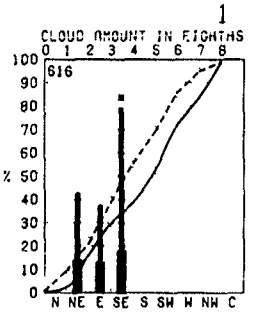
– – – (28% of all SE winds were accompanied by low cloud amounts ≥5/8 and 14% by low cloud amounts ≥7/8)

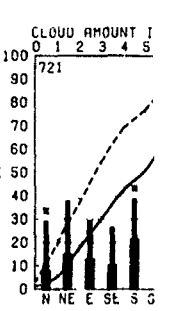
An asterisk indicates that the percentage is based on 10-30 observations of wind direction, total and low cloud amount. 0 replaces bar graph when no low cloud amounts ≥5/8 were observed with a wind direction or calm. 0 or bar is omitted when number of observations of total and low cloud amount from a wind direction or calm is less than 10

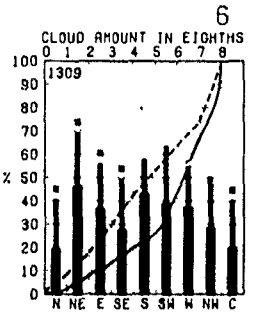
Low cloud amount Percent frequency of observations from each direction and calm that were accompanied by low cloud amounts ≥5/8 and ≥7/8
Low clouds are clouds with bases <8000 feet

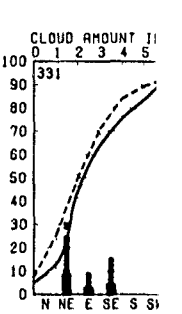
BLUE LINE - Percent frequency of total cloud amount ≤2/8

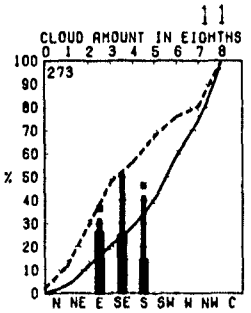
RED LINE - Percent frequency of low cloud amount ≥5/8

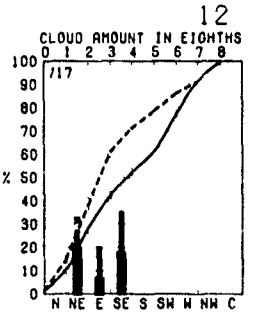


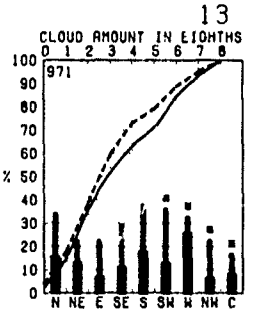


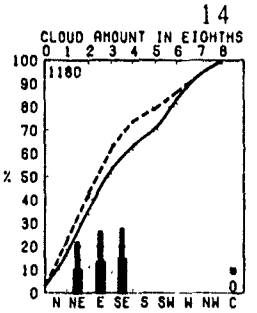


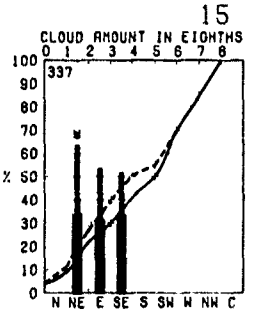


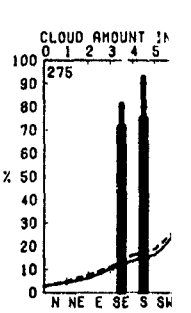


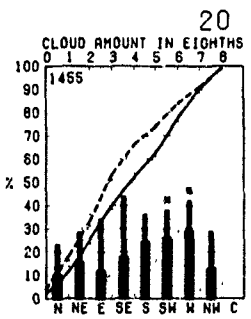


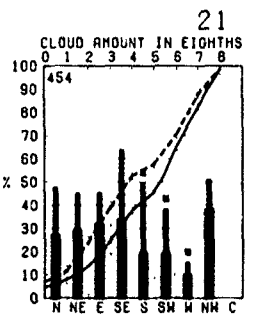


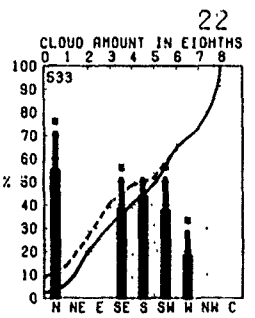


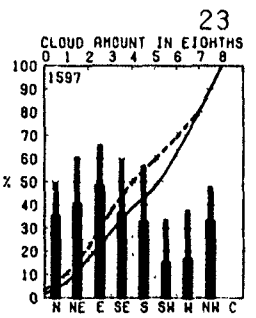


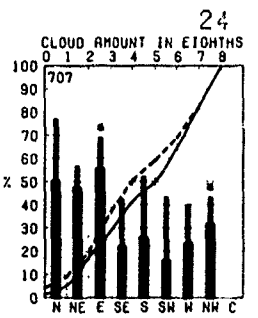


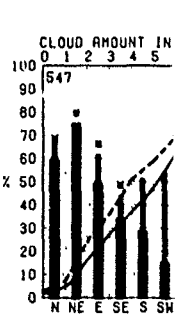


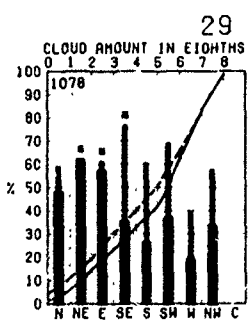


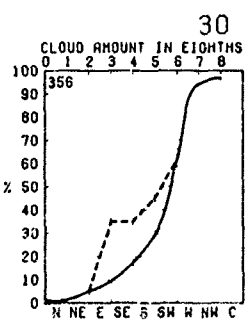


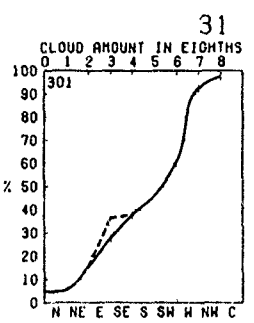


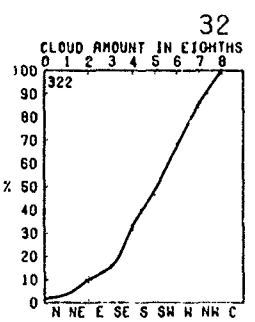


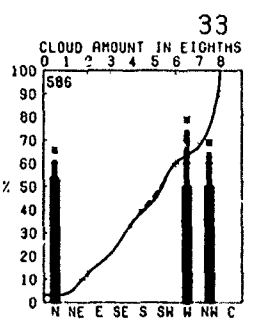


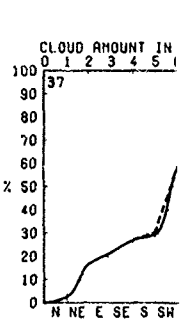












Graphs represent the objective compilation of available data for specified areas without
The isopleth analyses (opposite page) are based on all available data subjectively adjus

JUNE

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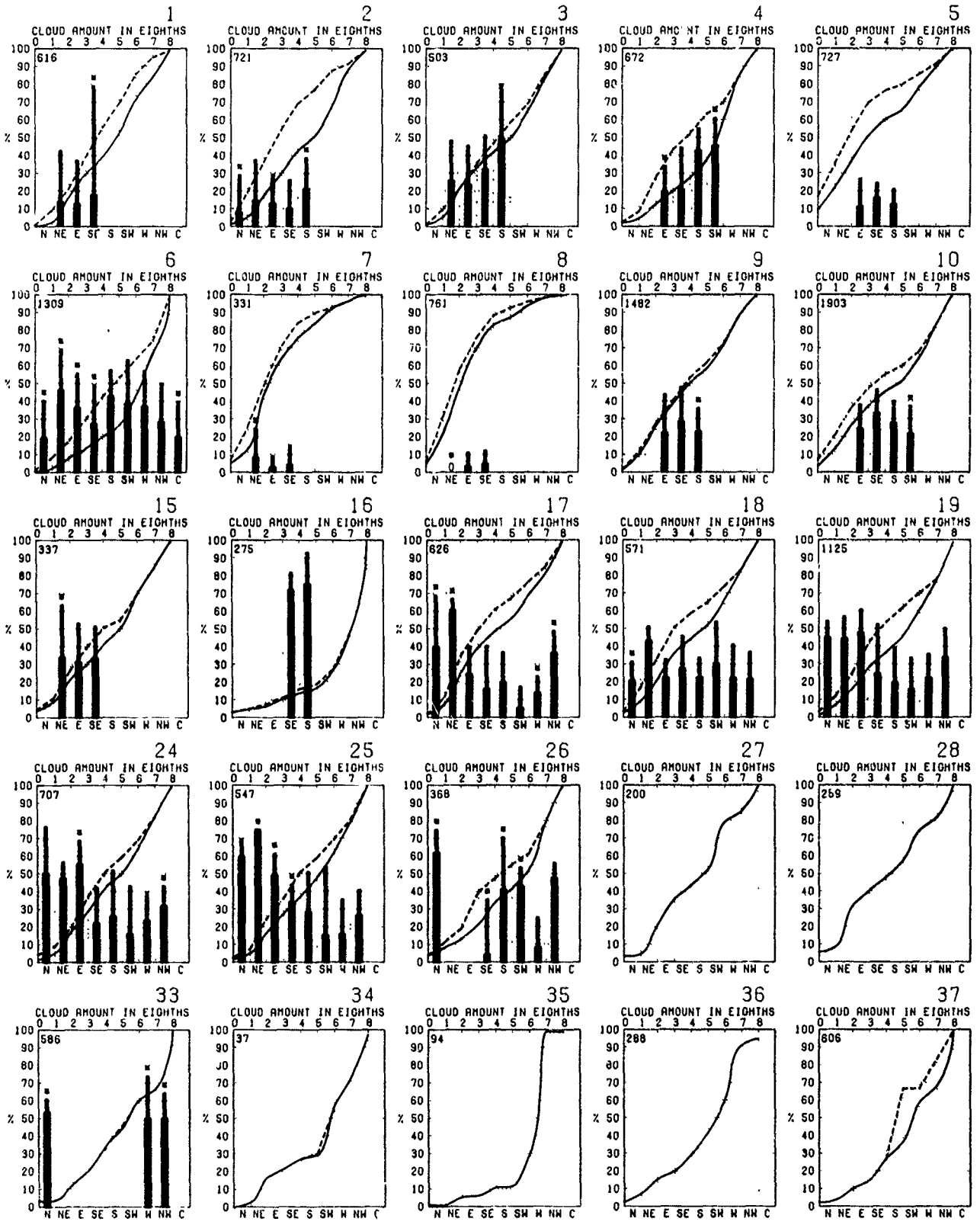
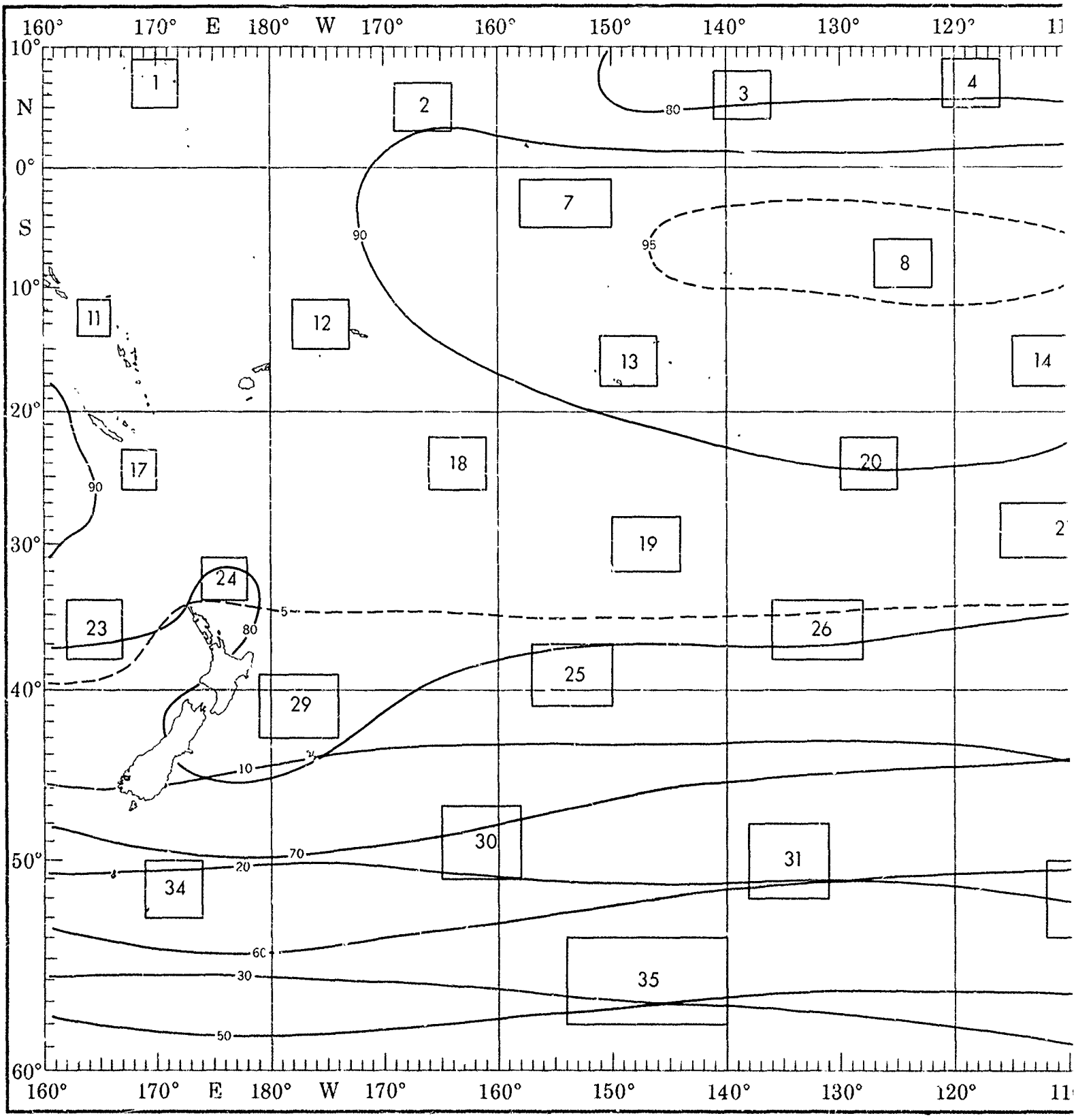


objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

JUNE


160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N
0°
S 10°
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40°
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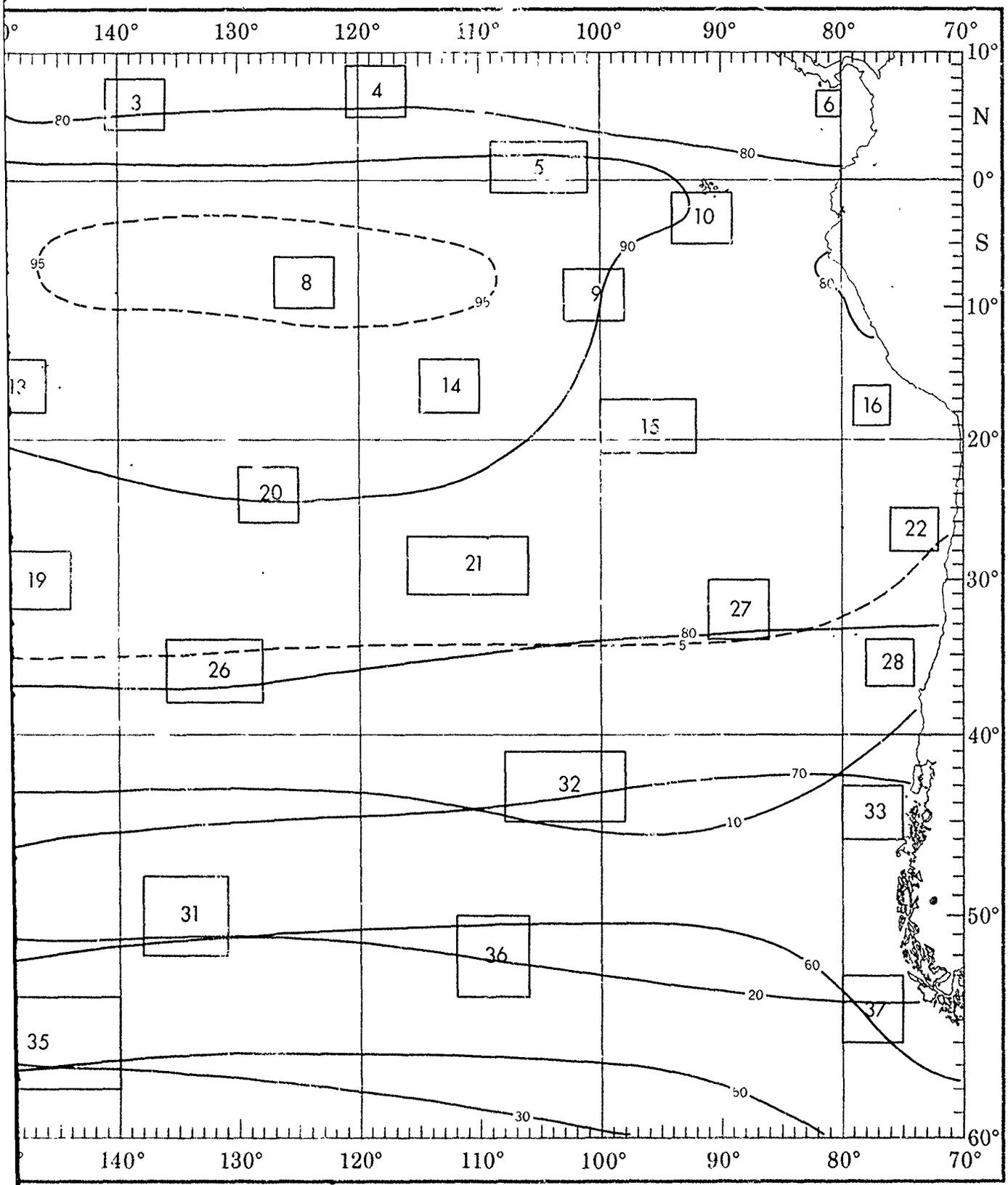
CEILING AND VISIBILITY



CEILING AND VISIBILITY

Low cloud ceiling - Visibility

Percent frequency of simultaneous occurrence of specified low cloud ceilings (hundreds of feet) and visibilities (nautical miles)

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"

"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	+	3	13	64
50<80	0	0	0	0	+	1
35<50	0	+	0	0	0	4
20<35	0	+	1	1	2	2
10<20	0	+	1	1	2	1
6<10	0	1	0	+	+	0
3<6	+	+	0	+	+	0
1.5<3	+	0	0	0	0	0
0<1.5	+	0	0	0	0	0

334

(2% of all observations reported ceiling ≥1000 but <2000 feet simultaneously with visibility ≥5 but <10 nautical miles.)

+ indicates <5% but >0

Number of observations

BLUE LINE - Percent frequency of low cloud ceiling ≥1000 feet (or no low cloud ceiling) and visibility ≥5 nautical miles

RED LINE - Percent frequency of low cloud ceiling <600 feet and/or visibility <2 nautical miles

1

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	1	1	3	52
50<80	0	0	0	1	0	0
35<50	0	0	0	0	0	1
20<35	0	0	0	0	0	3
10<20	0	0	0	1	1	11
6<10	0	0	0	0	6	19
3<6	0	0	0	0	1	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

155

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	+	1	5	6
50<80	0	0	0	0	0	
35<50	0	0	0	0	0	
20<35	0	0	0	+	+	
10<20	0	0	0	0	3	1
6<10	0	0	+	1	1	
3<6	0	0	0	0	0	
1.5<3	0	0	+	0	0	
0<1.5	0	+	+	0	0	

34

6

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	+	0	0	+	3	39
50<80	0	0	0	0	+	+
35<50	0	0	0	+	+	2
20<35	0	0	0	0	1	7
10<20	0	+	+	1	5	16
6<10	+	+	1	1	7	11
3<6	0	+	+	+	+	3
1.5<3	0	0	0	+	0	+
0<1.5	+	0	0	0	0	+

747

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	7	7
50<80	0	0	0	0	0	
35<50	0	0	0	0	0	
20<35	0	0	0	0	1	
10<20	0	0	0	0	0	
6<10	0	0	0	0	1	
3<6	0	0	0	0	1	
1.5<3	0	0	0	0	0	
0<1.5	0	0	0	0	1	

11

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	5	52
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	1
20<35	0	0	0	0	1	2
10<20	0	0	0	2	4	9
6<10	0	0	0	2	6	4
3<6	0	0	2	2	1	0
1.5<3	0	1	1	0	0	0
0<1.5	0	0	1	0	0	0

82

12

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	10	63
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	1
20<35	0	0	0	1	2	1
10<20	0	0	0	0	1	5
6<10	0	0	1	0	2	10
3<6	0	0	0	1	0	1
1.5<3	0	0	0	0	0	1
0<1.5	0	0	0	1	0	0

168

13

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	8	65
50<80	0	0	0	+	+	+
35<50	0	0	0	0	1	1
20<35	0	0	+	+	3	4
10<20	0	0	+	+	3	8
6<10	0	0	0	+	1	3
3<6		0	+	0	0	1
1.5<3	0	0	0	+	0	0
0<1.5	0	0	0	0	0	0

669

14

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	+	74
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	2
20<35	0	0	0	0	+	6
10<20	0	0	0	+	1	9
6<10	0	0	0	+	1	5
3<6	0	0	0	0	1	+
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	+	0

700

15

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	4	48
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	1
20<35	0	0	0	0	1	6
10<20	0	0	0	0	1	16
6<10	0	0	0	1	6	11
3<6	0	0	0	1	0	2
1.5<3	0	0	0	0	1	0
0<1.5	0	0	0	0	0	0

159

16

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	0	1
50<80	0	0	0	0	1	0
35<50	0	0	0	0	0	5
20<35	0	0	0	0	1	21
10<20	0	0	0	0	4	39
6<10	0	0	0	0	0	11
3<6	0	0	0	0	0	1
1.5<3	0	0	0	0	1	1
0<1.5	0	0	0	1	0	1

151

20

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	2	65
50<80	0	0	0	0	+	1
35<50	0	0	0	0	+	3
20<35	0	0	+	+	1	7
10<20	0	0	+	+	1	11
6<10	0	0	0	+	1	4
3<6	+	0	0	0	+	1
1.5<3	0	0	0	0	0	+
0<1.5	0	0	0	0	0	0

875

21

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	+	54
50<80	0	0	0	0	0	+
35<50	0	0	0	0	0	3
20<35	0	0	0	0	1	20
10<20	0	0	0	+	2	13
6<10	0	0	+	0	1	3
3<6	0	0	0	0	+	0
1.5<3	0	0	0	0	0	0
0<1.5	0	1	0	0	0	1

307

22

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	2	46
50<80	0	0	0	1	0	0
35<50	0	0	0	0	0	4
20<35	0	0	0	0	2	9
10<20	0	0	0	0	2	21
6<10	0	0	0	1	1	11
3<6	0	0	0	0	0	1
1.5<3	0	0	0	0	0	0
0<1.5	0	1	0	0	0	0

191

23

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	+	1	4	46
50<80	0	0	0	0	+	+
35<50	0	0	0	0	+	1
20<35	0	0	0	+	1	5
10<20	0	0	+	1	5	18
6<10	0	+	0	1	4	9
3<6	0	0	0	1	1	+
1.5<3	0	0	0	0	0	+
0<1.5	0	0	0	0	0	+

986

24

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	4	47
50<80	0	0	0	+	+	1
35<50	0	0	0	0	0	1
20<35	0	0	0	0	1	4
10<20	0	0	0	1	6	13
6<10	0	0	1	2	7	6
3<6	0	+	+	1	1	1
1.5<3	0	0	+	0	0	+
0<1.5	0	0	+	0	1	+

284

25

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	+	0	1	7	45
50<80	0	0	0	0	0	1
35<50	0	0	0	0	3	2
20<35	0	0	0	+	1	12
10<20	0	0	1	1	1	14
6<10	0	+	0	1	3	6
3<6	0	0	0	0	1	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

258

29

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	4	37
50<80	0	0	0	0	1	2
35<50	0	0	0	1	2	7
20<35	0	0	0	0	2	7
10<20	0	0	0	0	4	15
6<10	0	0	+	1	5	11
3<6	0	0	+	0	1	1
1.5<3	0	0	0	0	0	+
0<1.5	0	0	+	0	0	+

350

30

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	0	35
50<80	0	0	0	0	0	0
35<50	0	0	0	0	5	5
20<35	0	0	0	0	10	0
10<20	0	0	0	0	5	30
6<10	0	0	0	0	0	5
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	5	0	0	0

20

31

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	0	36
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	9
20<35	0	0	0	0	0	0
10<20	0	0	0	0	18	27
6<10	0	0	0	0	0	9
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

11

32

INSUFFICIENT DATA

33

VISIBILITY

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	4	4	27
50<80	0	0	0	0	0	0
35<50	0	0	0	0	2	0
20<35	0	0	0	0	0	7
10<20	0	0	0	2	13	13
6<10	0	0	0	7	7	9
3<6	0	0	0	0	4	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	2	0	2	0

56

34

INSUFFICIENT DATA

Graphs represent the objective compilation of available data for specified areas without regar
The isopleth analyses (opposite page) are based on all available data subjectively adjusted wi

JUNE

s (hundreds of feet)

hen low cloud amount

s of N_h <5/8

h visibility ≥5 but <10

≥5 nautical miles

1

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	1	1	3	52
50<80	0	0	0	1	0	0
35<50	0	0	0	0	0	1
20<35	0	0	0	0	0	3
10<20	0	0	0	1	1	11
6<10	0	0	0	0	6	19
3<6	0	0	0	0	1	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

155

2

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	1	5	65
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	+
20<35	0	0	0	+	+	3
10<20	0	0	0	0	3	12
6<10	0	0	+	1	1	7
3<6	0	0	0	0	0	1
1.5<3	0	0	+	0	0	0
0<1.5	0	+	+	0	0	0

347

3

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	1	4	44
50<80	0	0	0	0	0	0
35<50	0	0	0	0	+	1
20<35	0	0	0	1	+	5
10<20	0	0	0	2	3	15
6<10	0	+	+	3	5	7
3<6	+	1	1	2	+	1
1.5<3	0	+	0	+	1	0
0<1.5	+	0	0	+	1	0

240

4

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	1	52
50<80	0	0	0	0	0	0
35<50	0	0	0	1	1	2
20<35	0	0	0	1	1	2
10<20	0	0	1	1	2	10
6<10	0	0	1	1	5	10
3<6	0	0	0	1	2	3
1.5<3	0	0	0	0	1	0
0<1.5	1	0	0	0	1	1

165

5

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	2	75
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	1
20<35	0	0	0	0	1	4
10<20	0	0	0	0	+	8
6<10	0	0	0	+	1	6
3<6	0	0	0	0	1	+
1.5<3	0	0	0	0	+	+
0<1.5	0	0	0	0	+	0

533

6

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	0	0	+	3	39
50<80	0	0	0	0	+	+
35<50	0	0	0	+	+	2
20<35	0	0	0	0	1	7
10<20	0	+	+	1	5	16
6<10	+		1	1	7	11
3<6	0	+	+	+	+	3
1.5<3	0	0	0	+	0	+
0<1.5	+	0	0	0	0	+

747

7

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	7	76
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	1
20<35	0	0	0	0	1	2
10<20	0	0	0	0	0	6
6<10	0	0	0	0	1	3
3<6	0	0	0	0	1	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	1	0

156

8

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	1	88
50<80	0	0	0	0	0	0
35<50	0	0	0	0	+	1
20<35	0	0	0	0	+	1
10<20	0	0	0	+	+	6
6<10	0	0	0	0	+	2
3<6	0	0	0	0	+	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	+	0	0

582

9

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	2	52
50<80	0	0	0	0	0	+
36<50	0	0	0	0	+	3
20<36	0	0	0	0	1	9
10<20	0	0	0	0	1	21
6<10	0	0	0	+	1	9
3<6	0	0	0	0	+	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

887

10

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	1	55
50<80	0	0	0	0	+	1
36<50	0	0	0	0	+	4
20<36	0	0	0	0	+	9
10<20	0	0	0	+	2	18
6<10	0	0	0	0	1	6
3<6	0	0	0	+	+	1
1.5<3	0	0	0	0	0	+
0<1.5	0	0	0	0	+	0

1114

14

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	+	74
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	2
20<35	0	0	0	0	+	6
10<20	0	0	0	+	1	9
6<10	0	0	0	+	1	5
3<6	0	0	0	0	1	+
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	+	0

700

15

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	4	48
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	1
20<35	0	0	0	0	1	6
10<20	0	0	0	0	1	16
6<10	0	0	0	1	6	11
3<6	0	0	0	1	0	2
1.5<3	0	0	0	0	1	0
0<1.5	0	0	0	0	0	0

159

16

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	0	15
50<80	0	0	0	0	1	0
35<50	0	0	0	0	0	5
20<35	0	0	0	0	1	21
10<20	0	0	0	0	4	39
6<10	0	0	0	0	0	11
3<6	0	0	0	0	0	1
1.5<3	0	0	0	0	1	1
0<1.5	0	0	0	1	0	1

151

17

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	3	59
50<80	0	0	0	0	0	1
36<50	0	0	0	+	+	1
20<35	0	0	0	+	+	5
10<20	0	0	0	+	2	13
6<10	0	0	+	1	3	6
3<6	0	+	1	1	+	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	-

280

18

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	1	58
50<80	0	0	0	0	0	1
36<50	0	0	0	0	0	1
20<36	0	0	0	0	2	7
10<20	0	0	0	1	4	16
6<10	0	0	0	0	2	5
3<6	0	0	0	+	+	1
1.5<3	0	0	+	+	0	0
0<1.5	0	0	0	+	0	1

380

19

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	2	52
50<80	0	0	0	0	+	+
36<50	0	0	0	0	+	2
20<36	0	0	0	0	1	7
10<20	+	0	0	1	3	17
6<10	0	0	+	1	5	7
3<6	0	0	+	+	+	+
1.5<3	0	0	0	0	+	+
0<1.5	0	0	0	+	+	0

715

23

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	1	4	46
50<80	0	0	0	0	+	+
35<50	0	0	0	0	+	1
20<35	0	0	0	+	1	5
10<20	0	0	+	1	5	16
6<10	0	+	0	1	4	9
3<6	0	0	0	1	1	+
1.5<3	0	0	0	0	0	+
0<1.5	0	0	0	0	0	+

986

24

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	4	47
50<80	0	0	0	+	+	1
35<50	0	0	0	0	0	1
20<35	0	0	0	0	1	4
10<20	0	0	0	1	6	13
6<10	0	0	1	2	7	6
3<6	0	+	+	1	1	1
1.5<3	0	0	+	0	0	+
0<1.5	0	0	+	0	1	+

284

25

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	+	0	1	7	45
50<80	0	0	0	0	0	1
35<50	0	0	0	0	3	2
20<35	0	0	0	+	1	12
10<20	0	0	1	1	1	14
6<10	0	+	0	1	3	6
3<6	0	0	0	0	1	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

258

26

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	1	49
50<80	0	0	0	0	0	0
36<50	0	0	0	0	1	3
20<35	0	0	0	0	2	6
10<20	1	0	1	0	4	14
6<10	0	0	1	3	6	6
3<6	0	0	0	0	1	0
1.5<3	0	0	0	0	1	0
0<1.5	1	0	0	0	0	0

139

27

INSUFFICIENT DATA

28

INSUFFICIENT DATA

32

INSUFFICIENT DATA

33

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	4	4	27
50<80	0	0	0	0	0	0
35<50	0	0	0	0	2	0
20<35	0	0	0	0	0	7
10<20	0	0	0	2	3	13
6<10	0	0	0	7	7	9
3<6	0	0	0	0	4	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	2	0	2	0

56

34

INSUFFICIENT DATA

35

INSUFFICIENT DATA

36

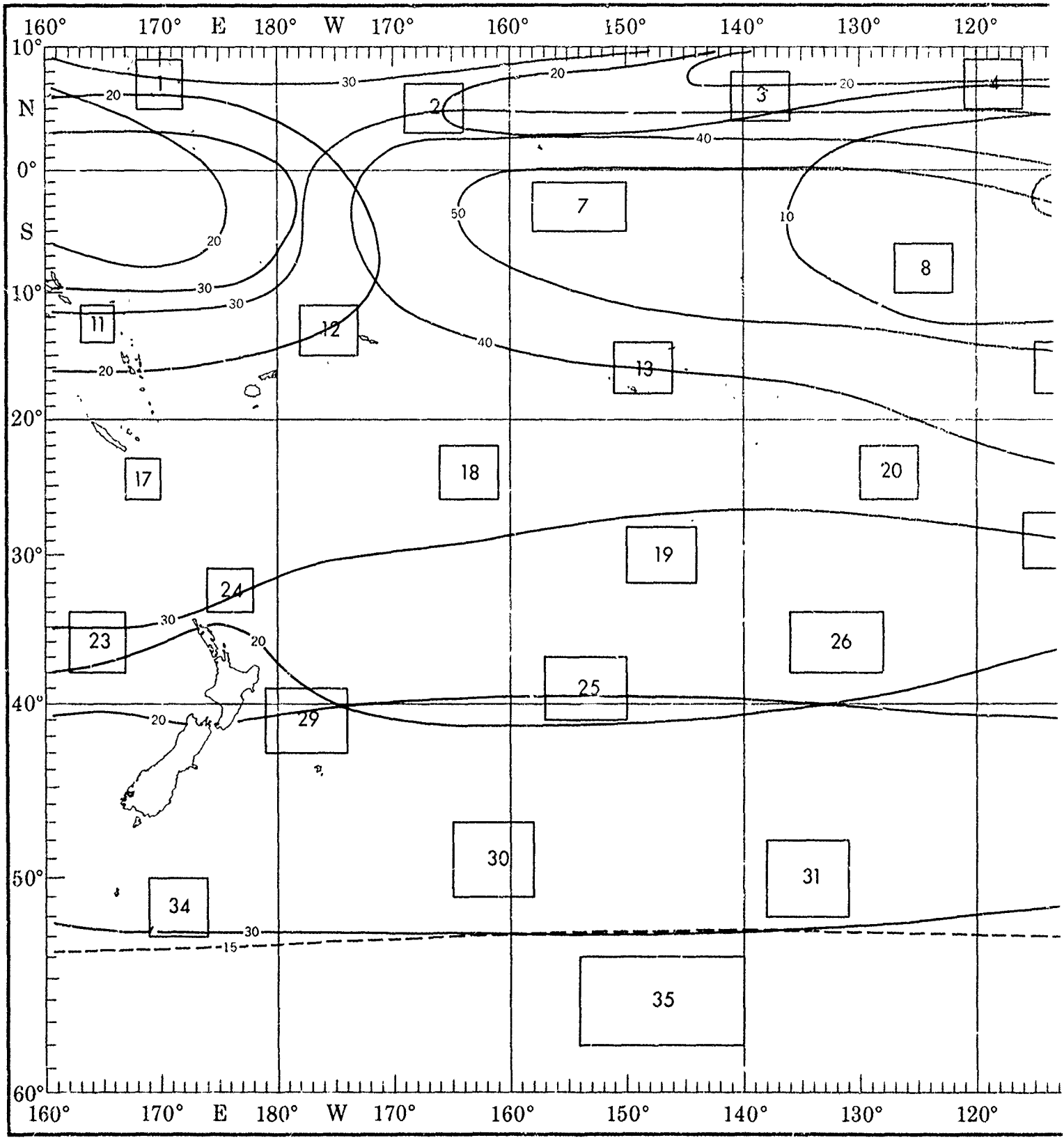
INSUFFICIENT DATA

37

INSUFFICIENT DATA

objective compilation of available data for specified areas without regard to suspected biases.
opposite page) are based on all available data subjectively adjusted where bias was evident.

JUNE


160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N
0°
S 10°
20°
30°
40°
50°
60°
160° 170° E 180° W 170° 160° 150° 140° 130° 120°
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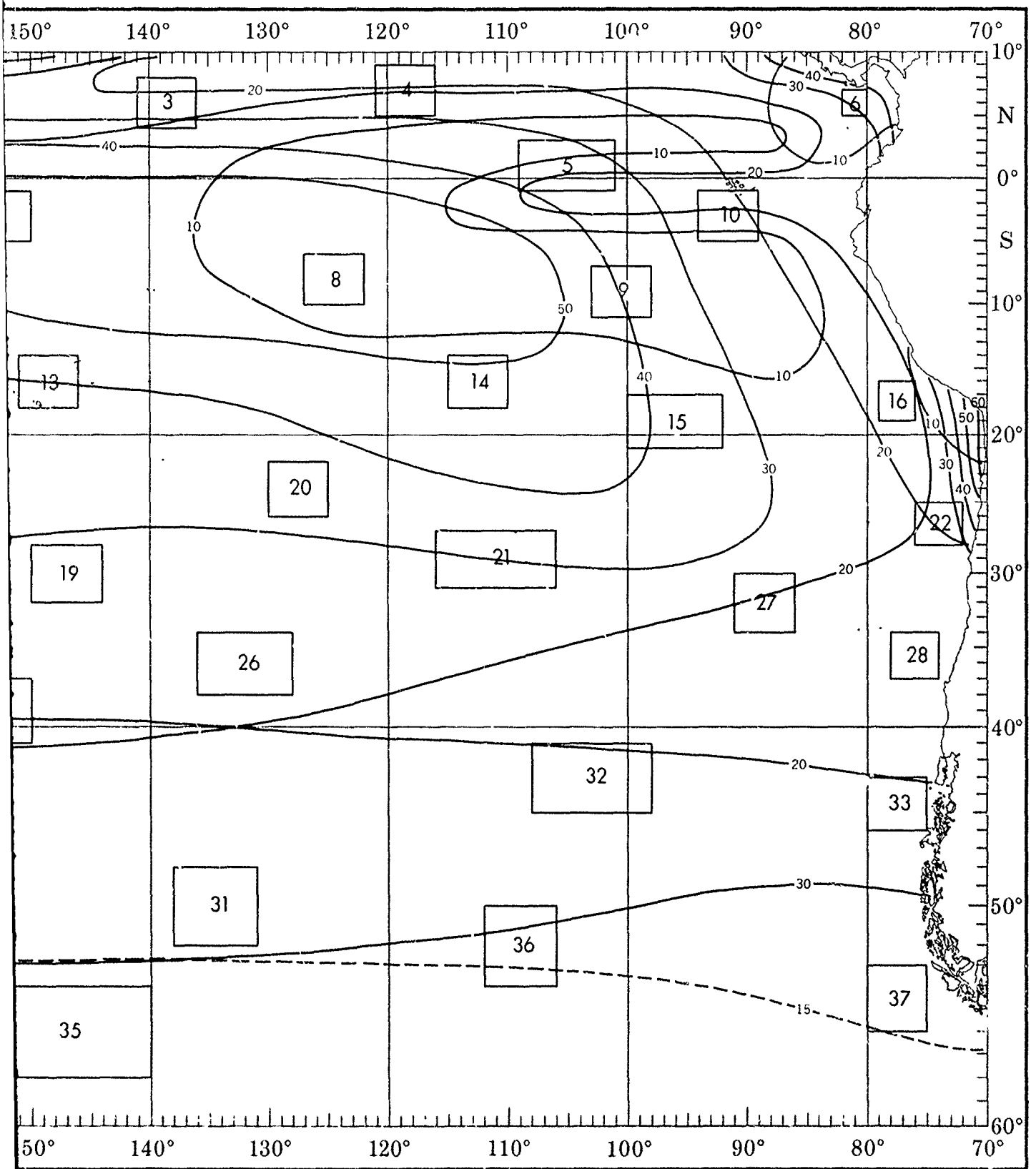
WIND-VISIBILITY-CLOUDINESS



LOW CLOUD CEILING-VISIBILITY-WIND

Percent frequency of occurrence of specified wind speed in knots, visibility (Vsby) in nautical miles, and low cloud ceiling (LCC) in hundreds of feet.

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

WIND SPEED (knots)

LCC - Vsby	0-3	4-10	11-21	22-33	≥34
<1.5 & or <.5	+	1	1	+	0
<6 & or <2	2	2	1	1	+
Vsby <2	1	2	1	1	+
<10 & or <2	3	4	2	1	1
<20 & or <5	8	9	6	5	2
Vsby ≥5	9	11	12	3	1
≥30 & ≥5	12	13	15	7	3
NC & ≥10	4	2	1	+	0
	1234				

—(2% of the observations reported wind speeds of 11-21 knots, a low cloud ceiling <1000 feet and/or visibility <2 nautical miles)

"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8

+ indicates <5% but >0

—Number of observations

Conditions for Carrier Operations

BLUE LINE - Percent frequency of optimum conditions LCC ≥5000 ft, (or no LCC), Vsby ≥5 nm and Wind 11 21 kts

RED LINE - Percent frequency of poor conditions Any one of the following constitutes poor conditions LCC <300 ft, Vsby <1 nm, Wind <6 or ≥34 kts

Satisfactory conditions-between poor and optimum

1

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	C	0	0	0	0
<6 & OR <2	0	2	0	0	0
VSBY <2	0	1	0	0	0
<10 & OR <2	3	15	10	0	0
<20 & OR <5	3	21	18	0	0
VSBY ≥5	8	42	46	1	0
≥30 & ≥5	5	21	28	1	0
NC & ≥10	5	21	26	0	0

155

2

WIND SPEED (KNOTS

LCC - VSBY	0-3	4-10	11-21	22-33	≥
<1.5 & OR <.5	0	+	0	+	
<6 & OR <2	0	1	1	+	
VSBY <2	0	1	+	+	
<10 & OR <2	1	3	6	1	
<20 & OR <5	1	9	14	2	
VSBY ≥5	6	43	46	2	
≥30 & ≥5	4	34	32	+	
NC & ≥10	4	31	30	+	

3

6

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	1	0	0
<6 & OR <2	+	3	2	+	0
VSBY <2	0	1	1	+	0
<10 & OR <2	2	14	8	+	0
<20 & OR <5	5	24	17	+	0
VSBY ≥5	15	57	23	1	0
≥30 & ≥5	9	28	5	+	0
NC & ≥10	9	26	4	+	0

733

7

WIND SPEED (KNOTS

LCC - VSBY	0-3	4-10	11-21	22-33	≥
<1.5 & OR <.5	0	0	1	0	
<6 & OR <2	0	1	2	0	
VSBY <2	0	0	0	0	
<10 & OR <2	1	3	3	0	
<20 & OR <5	1	6	6	0	
VSBY ≥5	3	42	54	1	
≥30 & ≥5	2	34	47	1	
NC & ≥10	2	29	44	1	

11

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	0	0	0
<6 & OR <2	0	G	5	0	0
VSBY <2	0	4	3	0	0
<10 & OR <2	0	9	14	0	0
<20 & OR <5	1	11	25	1	0
VSBY ≥5	6	20	55	4	0
≥30 & ≥5	5	18	33	3	0
NC & ≥10	4	16	30	3	0

80

12

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	0	0	0
<6 & OR <2	0	1	2	0	0
VSBY <2	0	0	1	0	0
<10 & OR <2	0	2	10	2	0
<20 & OR <5	0	5	14	4	0
VSBY ≥5	3	32	51	11	0
≥30 & ≥5	3	26	37	7	0
NC & ≥10	3	23	33	5	0

167

13

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	+	0
<6 & OR <2	0	+	1	+	0
VSBY <2	0	0	+	+	0
<10 & OR <2	+	1	3	1	+
<20 & OR <5	1	5	10	2	+
VSBY ≥5	6	38	46	8	+
≥30 & ≥5	5	31	33	5	+
NC & ≥10	5	29	27	4	+

656

14

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	+	0
<6 & OR <2	0	0	1	+	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	1	5	1	0
<20 & OR <5	+	4	10	2	0
VSBY ≥5	4	32	57	7	0
≥30 & ≥5	3	25	42	5	0
NC & ≥10	3	25	41	5	0

699

15

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	2	1	0
VSBY <2	0	0	0	0	0
<10 & OR <2	3	3	12	5	0
<20 & OR <5	6	6	20	9	0
VSBY ≥5	8	30	43	16	0
≥30 & ≥5	2	24	20	6	0
NC & ≥10	2	23	18	5	0

159

16

WIND SPEED (KNOTS

LCC - VSBY	0-3	4-10	11-21	22-33	≥
<1.5 & OR <.5	0	1	1	0	
<6 & OR <2	0	1	2	0	
VSBY <2	0	0	0	0	
<10 & OR <2	1	7	7	1	
<20 & OR <5	2	20	32	3	
VSBY ≥5	5	33	56	3	
≥30 & ≥5	2	5	8	0	
NC & ≥10	1	5	8	0	

15

20

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	+	1	+	+
VSBY <2	0	0	+	0	+
<10 & OR <2	+	2	4	1	+
<20 & OR <5	+	6	11	3	+
VSBY ≥5	3	38	45	13	+
≥30 & ≥5	2	30	29	7	+
NC & ≥10	2	29	27	7	+

855

21

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	1	0
<6 & OR <2	0	+	+	1	+
VSBY <2	0	0	0	1	0
<10 & OR <2	+	1	+	3	1
<20 & OR <5	+	8	9	3	1
VSBY ≥5	3	45	40	9	1
≥30 & ≥5	2	23	24	6	0
NC & ≥10	2	23	23	6	0

306

22

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	1	0	0	0
<6 & OR <2	1	1	1	0	0
VSBY <2	1	1	0	0	0
<10 & OR <2	3	8	4	0	0
<20 & OR <5	6	22	10	1	0
VSBY ≥5	14	45	33	5	1
≥30 & ≥5	7	17	17	5	1
NC & ≥10	7	17	16	5	1

190

23

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	0
<6 & OR <2	0	+	1	+	1
VSBY <2	0	0	+	+	+
<10 & OR <2	+	2	8	5	2
<20 & OR <5	1	7	20	10	4
VSBY ≥5	3	26	47	17	4
≥30 & ≥5	2	17	24	8	1
NC & ≥10	2	16	22	6	1

976

24

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	1	0
<6 & OR <2	1	1	2	2	1
VSBY <2	+	+	1	+	+
<10 & OR <2	1	4	8	6	3
<20 & OR <5	1	9	20	9	4
VSBY ≥5	4	25	43	17	4
≥30 & ≥5	4	15	23	9	1
NC & ≥10	3	14	21	8	1

279

25

WIND SPEED (KNOTS

LCC - VSBY	0-3	4-10	11-21	22-33	≥
<1.5 & OR <.5	0	0	0	0	
<6 & OR <2	+	0	2	1	
VSBY <2	0	0	2	+	
<10 & OR <2	+	1	6	5	
<20 & OR <5	1	3	14	10	
VSBY ≥5	1	20	48	22	
≥30 & ≥5	+	14	25	12	
NC & ≥10	+	14	22	8	

25

29

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	+	+
<6 & OR <2	0	+	1	1	1
VSBY <2	0	0	+	0	1
<10 & OR <2	0	3	7	6	5
<20 & OR <5	+	6	16	11	6
VSBY ≥5	1	21	41	26	9
≥30 & ≥5	1	12	20	9	2
NC & ≥10	+	11	18	7	1

348

30

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	5	0	0	0
<6 & OR <2	0	5	0	0	0
VSBY <2	0	5	0	0	0
<10 & OR <2	0	5	0	5	0
<20 & OR <5	0	5	30	10	0
VSBY ≥5	0	5	70	20	0
≥30 & ≥5	0	0	25	10	0
NC & ≥10	0	0	25	10	0

20

31

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	9	0	0	0
<20 & OR <5	0	9	0	36	9
VSBY ≥5	0	9	45	36	9
≥30 & ≥5	0	0	36	0	0
NC & ≥10	0	0	36	0	0

11

32

INSUFFICIENT DATA

33

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-2.	22-33	≥34
<1.5 & OR <.5	0	2	0	2	3
<6 & OR <2	0	2	2	4	0
VSBY <2	0	0	0	2	0
<10 & OR <2	0	5	7	16	2
<20 & OR <5	0	11	29	20	2
VSBY ≥5	0	25	46	14	0
≥30 & ≥5	0	13	18	0	0
NC & ≥10	0	11	16	0	0

56

34

INSUFFICIENT DATA

Graphs represent the objective compilation of available data for specified areas without regar
The isopleth analyses (opposite page) are based on all available data subjectively adjusted w

VISIBILITY-WIND

JUNE

ibility (Vsby) in nautical

(h) when low cloud amount

ceiling <1000 feet and/or

currences of N_h <5/8

m and Wind 11-21 kts

nditions LCC <300 ft

1

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR < .5	C	0	0	0	0
<6 & OR <2	0	2	0	0	0
VSBY <2	0	1	0	0	0
<10 & OR <2	3	15	10	0	0
<20 & OR <5	3	21	18	0	0
VSBY ≥5	8	42	46	1	0
≥50 & ≥5	5	21	28	1	0
NC & ≥ 10	5	21	26	0	0

155

2

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR < .5	0	+	0	+	0
<6 & OR <2	0	1	1	+	0
VSBY <2	0	1	+	+	0
<10 & OR <2	1	3	6	1	0
<20 & OR <5	1	9	14	2	0
VSBY ≥5	6	43	46	2	0
≥50 & ≥5	4	34	32	+	0
NC & ≥ 10	4	31	30	+	0

344

3

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR < .5	0	1	1	+	0
<6 & OR <2	1	5	3	+	0
VSBY <2	+	3	+	+	0
<10 & OR <2	2	14	8	+	0
<20 & OR <5	3	24	18	+	0
VSBY ≥5	10	43	34	+	0
≥50 & ≥5	6	25	16	0	0
NC & ≥ 10	5	24	15	0	0

237

4

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	0	1	0	0
<6 & OR <2	1	4	6	0	0
VSBY <2	1	1	1	0	0
<10 & OR <2	1	14	12	0	0
<20 & OR <5	2	20	18	1	0
VSBY ≥5	6	45	43	0	0
≥50 & ≥5	4	25	23	0	0
NC & ≥ 10	4	24	23	0	0

162

5

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	0
<6 & OR <2	+	1	+	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	+	4	4	0	0
<20 & OR <5	1	10	6	0	0
VSBY ≥5	6	66	27	0	0
≥50 & ≥5	5	53	20	0	0
NC & ≥ 10	4	52	19	0	0

531

6

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	1	0	0
<6 & OR <2	+	3	2	+	0
VSBY <2	0	1	1	+	0
<10 & OR <2	2	14	8	+	0
<20 & OR <5	5	24	17	+	0
VSBY ≥5	15	57	23	1	0
≥50 & ≥5	9	28	5	+	0
NC & ≥ 10	9	26	4	+	0

733

7

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	1	0	0
<6 & OR <2	0	1	2	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	3	3	0	0
<20 & OR <5	1	[illegible]	6	0	0
VSBY ≥5	3	42	54	1	0
≥50 & ≥5	2	34	47	1	0
NC & ≥ 10	2	29	44	1	0

156

8

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	0	+	+	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	+	2	+	0
<20 & OR <5	+	2	6	+	0
VSBY ≥5	1	34	61	4	0
≥50 & ≥5	1	29	54	4	0
NC & ≥ 10	1	29	54	4	0

562

9

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	+	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	3	7	2	0
<20 & OR <5	+	7	23	4	0
VSBY ≥5	1	24	67	8	0
≥50 & ≥5	+	15	35	3	0
NC & ≥ 10	+	15	34	3	0

882

10

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	+	1	1	+	0
VSBY <2	0	0	0	0	0
<10 & OR <2	+	5	3	+	0
<20 & OR <5	1	18	9	+	0
VSBY ≥5	4	65	30	+	0
≥50 & ≥5	3	38	17	+	0
NC & ≥ 10	3	36	16	+	0

1109

14

WIND SPEED (KNOTS)

≥34	LCC - VSBY	0-3	4-10	11-21	22-33	≥34
0	<1.5 & OR <.5	0	0	0	+	0
0	<6 & OR <2	0	0	1	+	0
+	VSBY <2	0	0	0	0	0
+	<10 & OR <2	0	1	5	1	0
+	<20 & OR <5	+	4	10	2	0
+	VSBY ≥5	4	32	57	7	0
+	≥50 & ≥5	3	25	42	5	0
+	NC & ≥ 10	3	25	41	5	0

56 699

15

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	2	1	0
VSBY <2	0	0	0	0	0
<10 & OR <2	3	3	12	5	0
<20 & OR <5	6	6	20	9	0
VSBY ≥5	8	30	43	16	0
≥50 & ≥5	2	24	20	6	0
NC & ≥ 10	2	23	18	5	0

159

16

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	1	0	0
<6 & OR <2	0	1	2	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	7	7	1	0
<20 & OR <5	2	20	32	3	1
VSBY ≥5	5	33	56	3	1
≥50 & ≥5	2	5	8	0	0
NC & ≥ 10	1	5	8	0	0

151

17

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	+	1	2	0	1
VSBY <2	0	+	+	0	1
<10 & OR <2	+	4	[illegible]	2	1
<20 & OR <5	1	10	14	3	1
VSBY ≥5	4	41	42	8	1
≥50 & ≥5	3	28	28	3	1
NC & ≥ 10	3	27	25	3	1

276

18

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	1	0	0
<6 & OR <2	0	1	1	+	+
VSBY <2	0	0	0	0	+
<10 & OR <2	+	3	5	1	1
<20 & OR <5	1	9	16	4	1
VSBY ≥5	5	38	45	9	1
≥50 & ≥5	3	25	27	4	+
NC & ≥ 10	3	25	26	4	+

376

19

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	+
<6 & OR <2	0	1	+	1	1
VSBY <2	0	0	+	+	+
<10 & OR <2	+	3	7	5	1
<20 & OR <5	1	9	15	9	2
VSBY ≥5	2	33	44	15	3
≥50 & ≥5	2	20	25	6	1
NC & ≥ 10	2	20	24	5	1

709

23

WIND SPEED (KNOTS)

≥34	LCC - VSBY	0-3	+ 0	11-21	22-33	≥34
0	<1.5 & OR <.5	0	+	0	0	0
0	<6 & OR <2	0	+	1	+	1
0	VSBY <2	0	0	+	+	+
0	<10 & OR <2	+	2	8	5	2
0	<20 & OR <5	1	7	20	10	4
1	VSBY ≥5	3	26	47	17	4
1	≥50 & ≥5	2	17	24	8	1
1	NC & ≥ 10	2	16	22	6	1

60 976

24

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	1	0
<6 & OR <2	1	1	2	2	1
VSBY <2	+	+	1	+	+
<10 & OR <2	1	4	8	6	3
<20 & OR <5	1	9	20	9	4
VSBY ≥5	4	25	43	17	4
≥50 & ≥5	4	15	23	9	1
NC & ≥ 10	3	14	21	8	1

279

25

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	+	0	2	1	0
VSBY <2	0	0	2	+	0
<10 & OR <2	+	1	6	5	+
<20 & OR <5	1	3	14	10	2
VSBY ≥5	1	20	48	22	3
≥50 & ≥5	+	14	25	12	1
NC & ≥ 10	+	14	22	8	1

256

26

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	0	0	1
<6 & OR <2	0	1	2	1	1
VSBY <2	0	1	1	0	1
<10 & OR <2	1	4	10	4	1
<20 & OR <5	2	9	17	8	1
VSBY ≥5	4	28	46	16	0
≥50 & ≥5	1	13	31	6	0
NC & ≥ 10	1	13	31	4	0

138

27

INSUFFICIENT DATA

28

INSUFFICIENT DATA

32

INSUFFICIENT DATA

33

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	2	0	2	0
<6 & OR <2	0	2	2	4	0
VSBY <2	0	0	0	2	0
<10 & OR <2	0	5	7	16	2
<20 & OR <5	0	11	29	20	2
VSBY ≥5	0	25	46	14	0
≥50 & ≥5	0	13	18	0	0
NC & ≥ 10	0	11	16	0	0

56

34

INSUFFICIENT DATA

35

INSUFFICIENT DATA

36

INSUFFICIENT DATA

37

INSUFFICIENT DATA

the objective compilation of available data for specified areas without regard to suspected biases.
ses (opposite page) are based on all available data subjectively adjusted where bias was evident.

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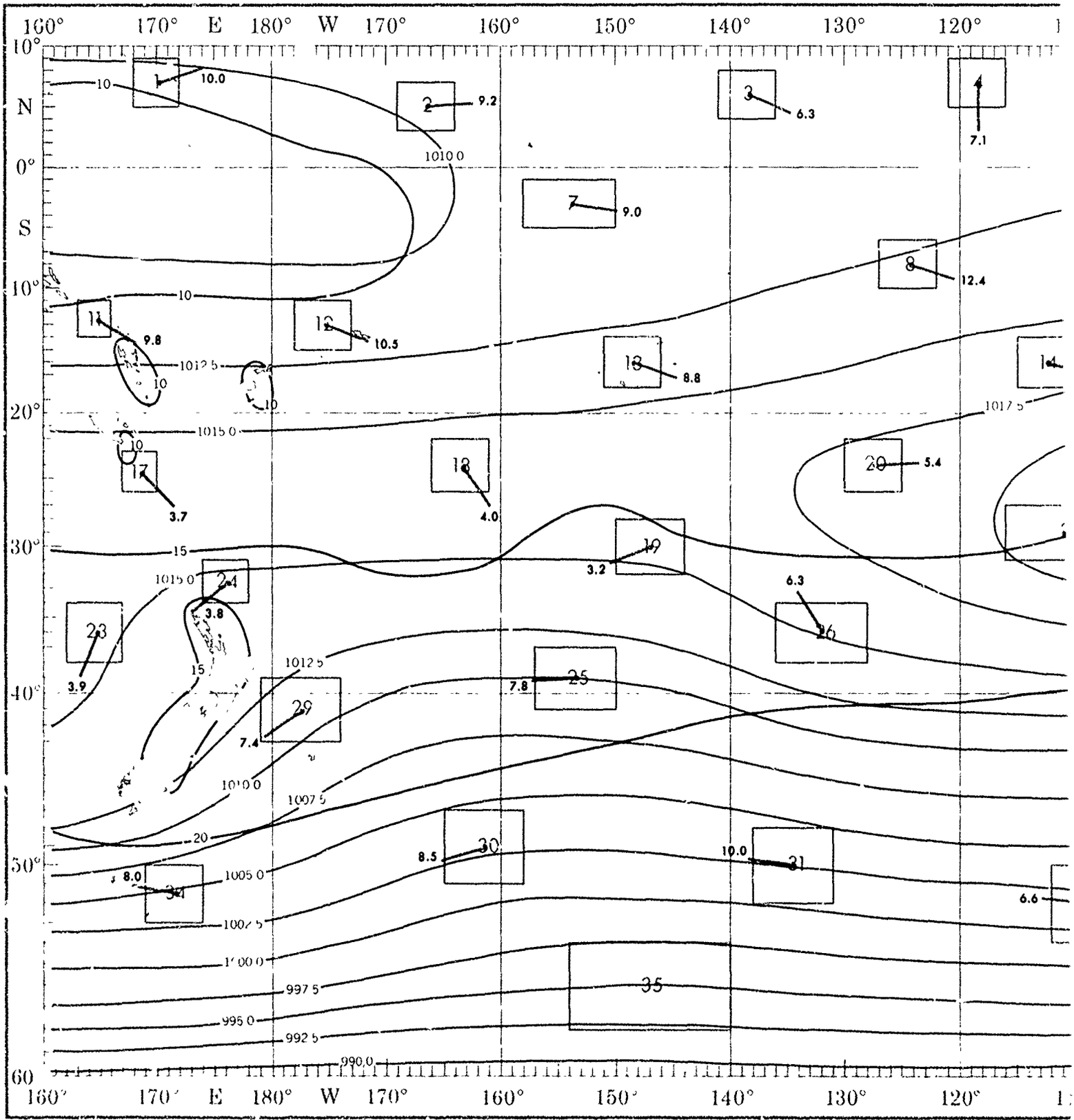
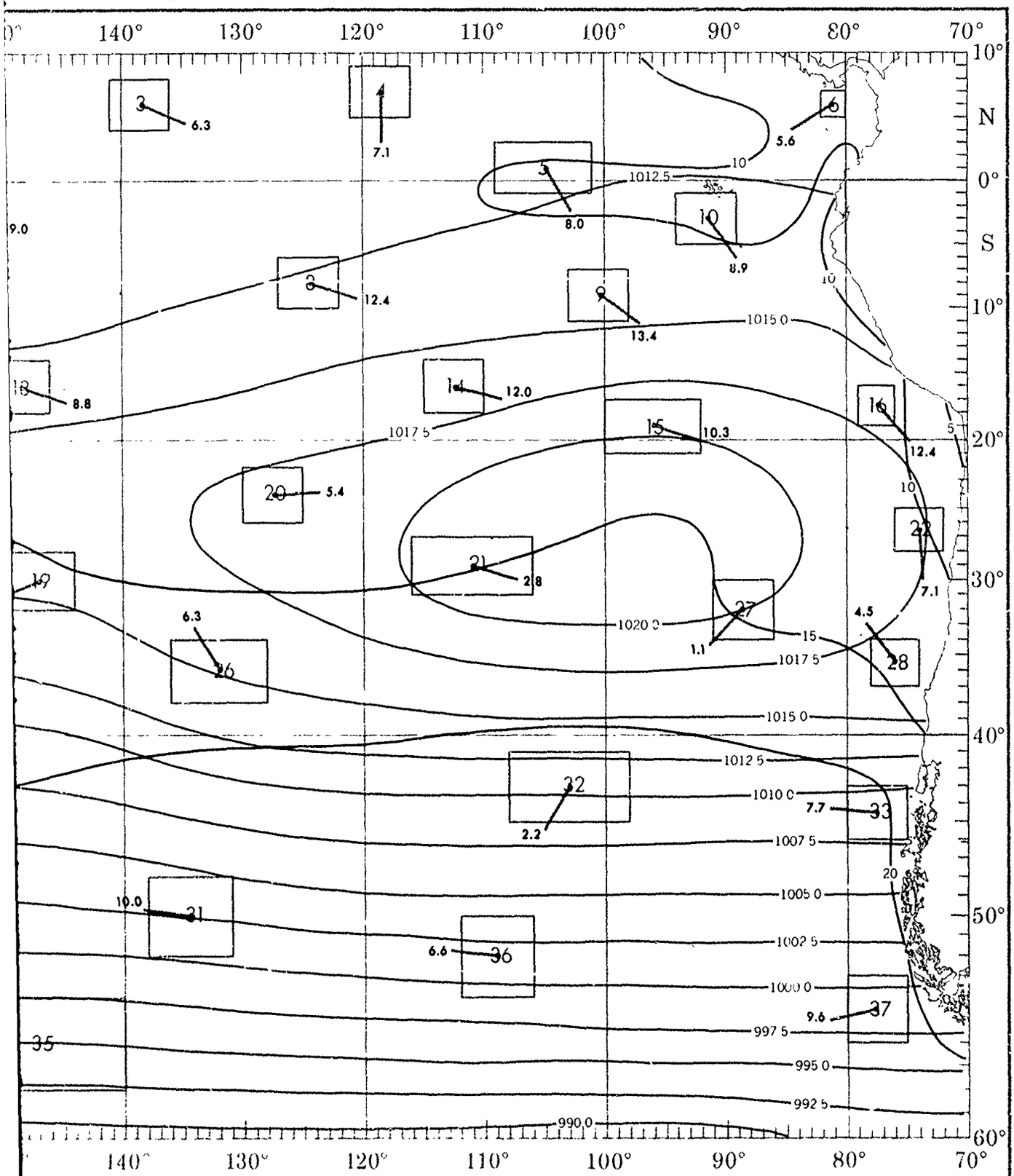
SEA LEVEL PRES

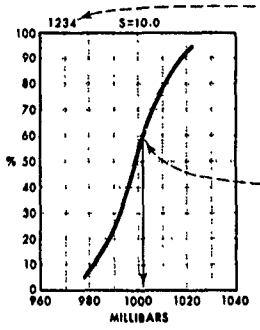


SEA LEVEL PRESSURE AND MEAN WIND



SEA LEVEL PRESSURE

Sea level pressure and mean wind



Number of observations

Cumulative percent frequency of sea level pressures equal to or less than the pressure intersected by the curve

S=Standard deviation of pressure (mbs)

(60% of all observed sea level pressures were ≤1002 millibars)

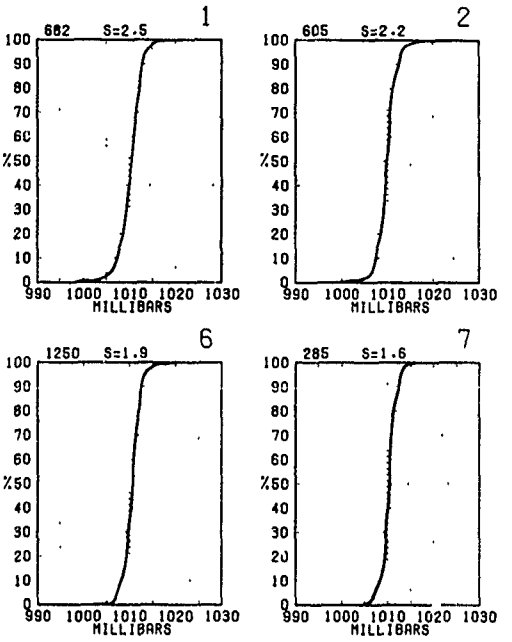
Vector mean wind is plotted from the direction which the mean flow occurs with the magnitude in knots at the end of the vector

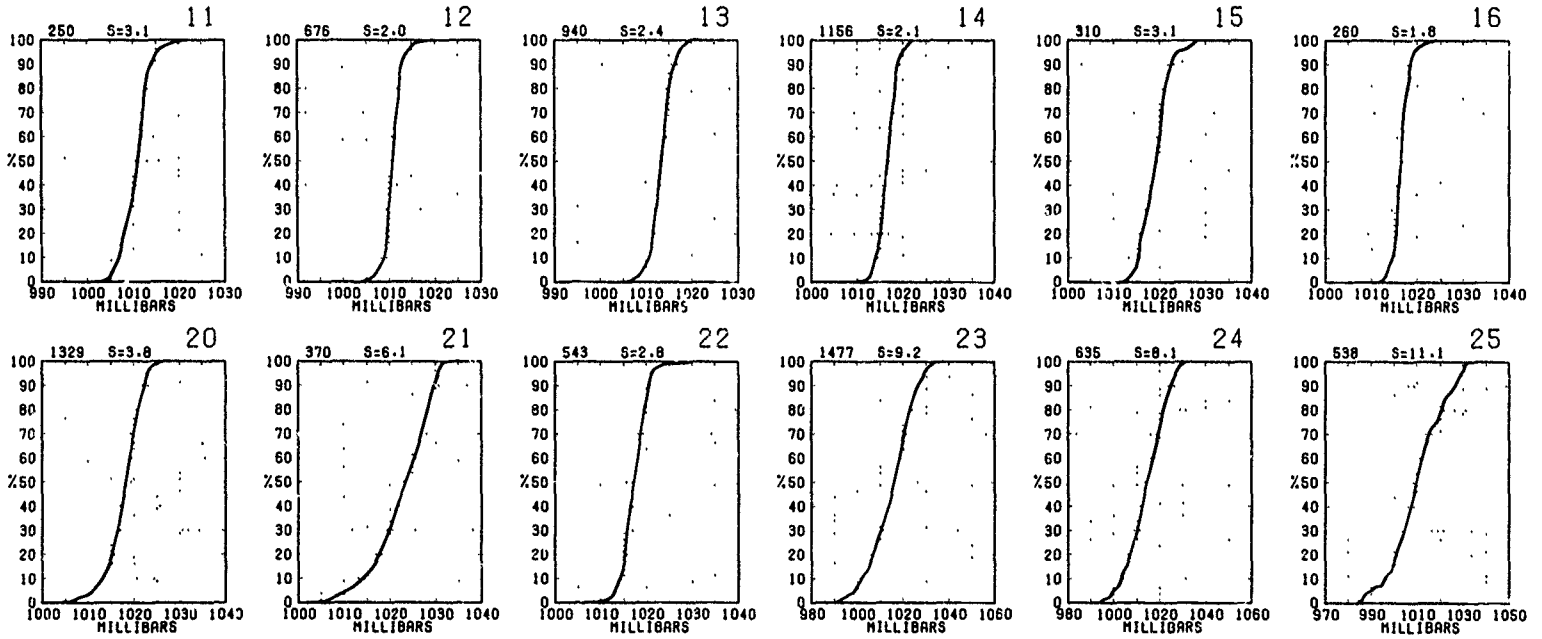
10.2

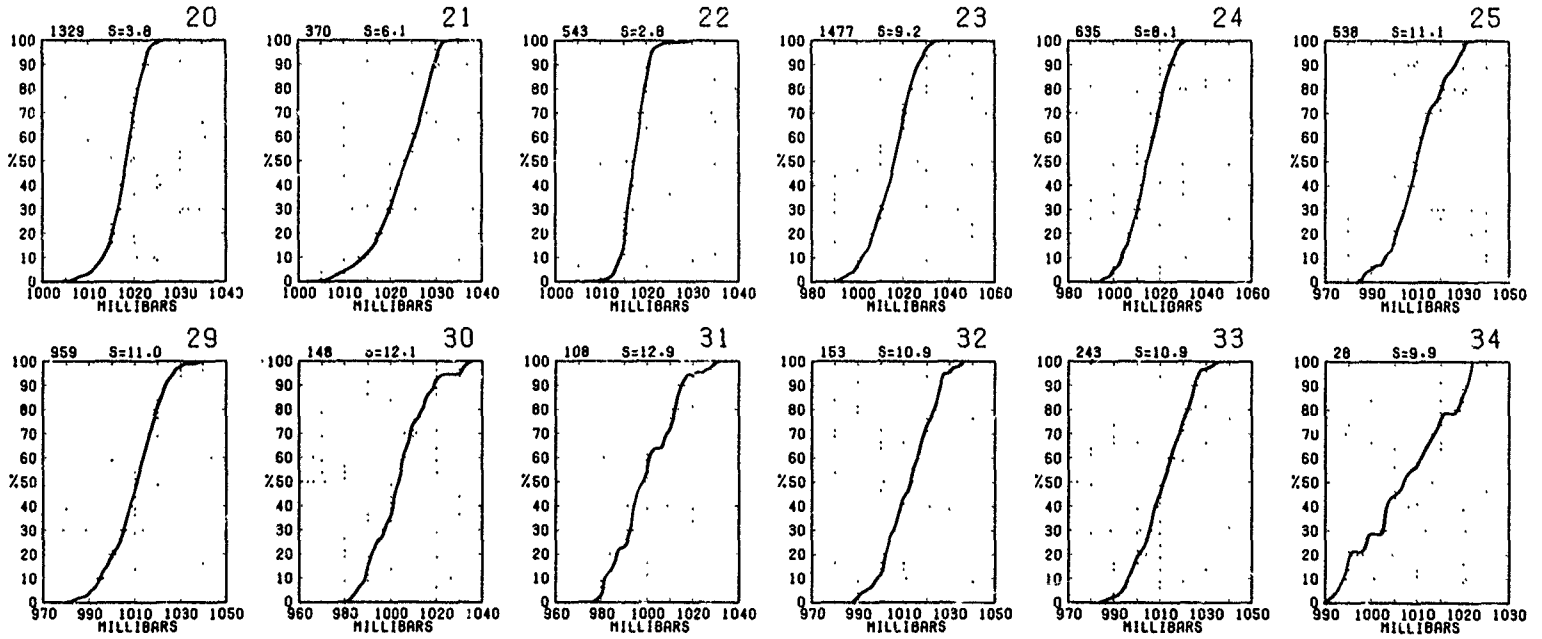
Vector mean wind is from the northeast at 10.2 knots

BLUE LINE - Scalar mean wind speed (kts)

RED LINE - Mean sea level pressure (mbs)







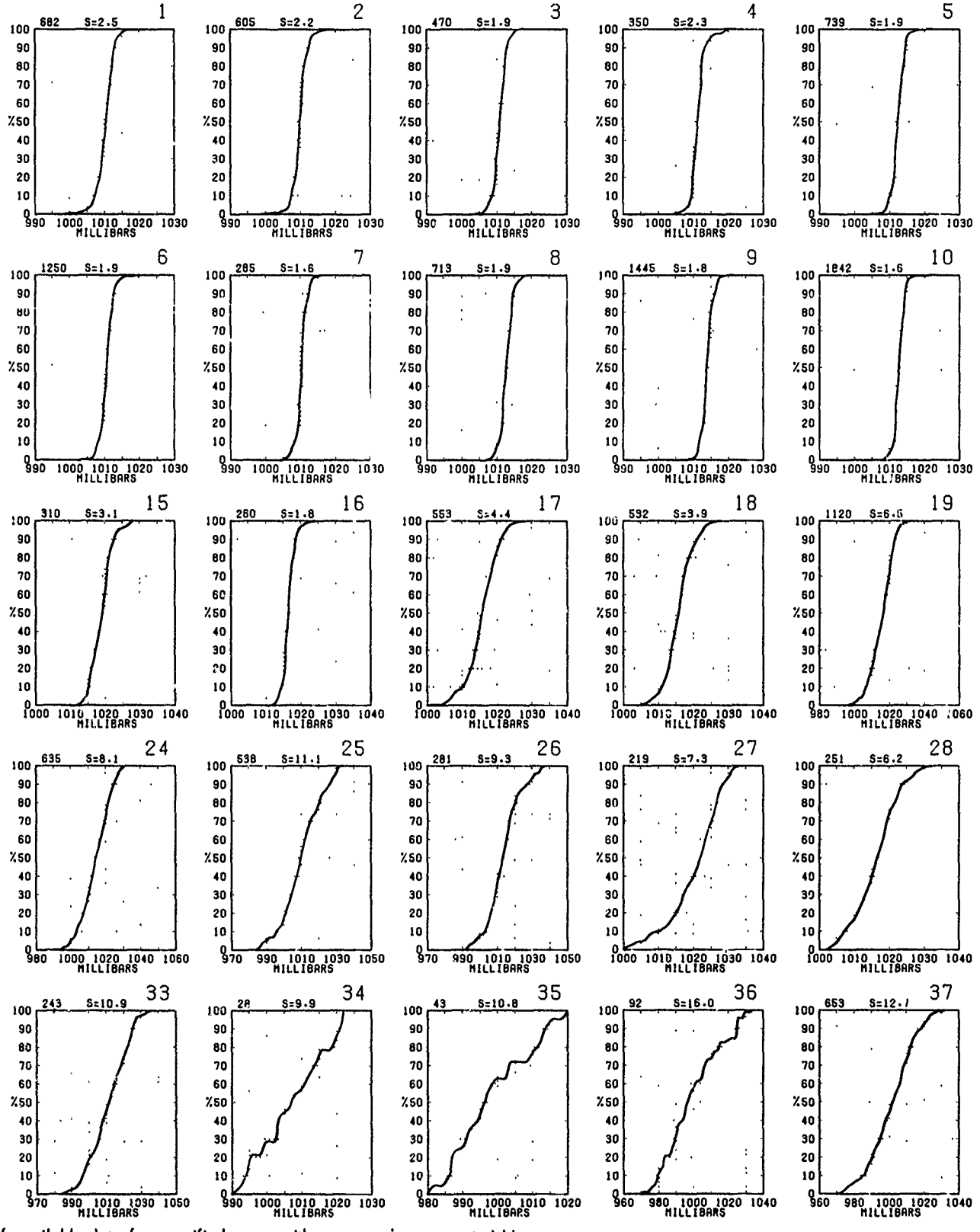
Graphs represent the objective compilation of available data for specified areas without regard to

The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

JUNE

ual to or less than the

ow occurs with the



objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

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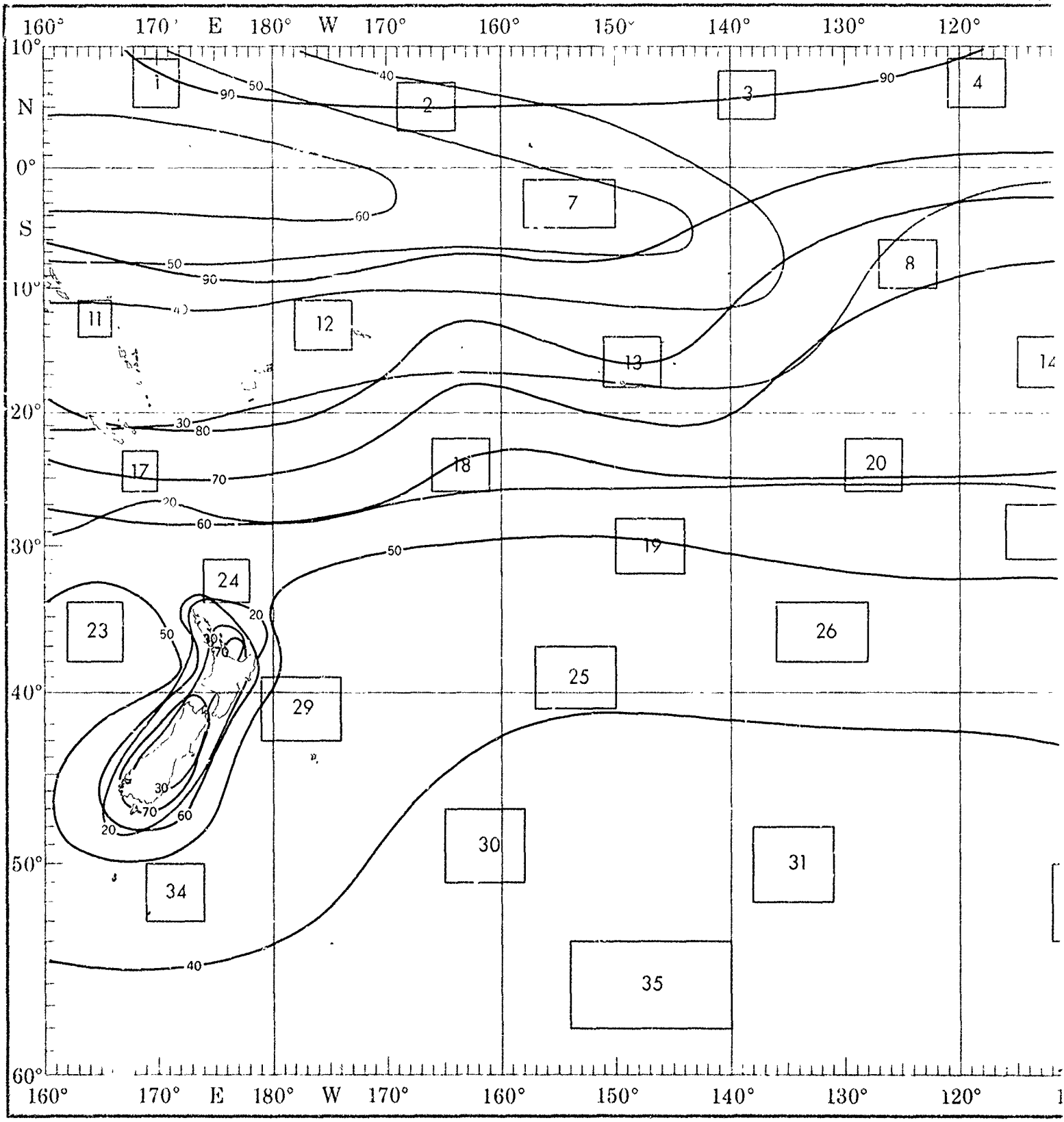
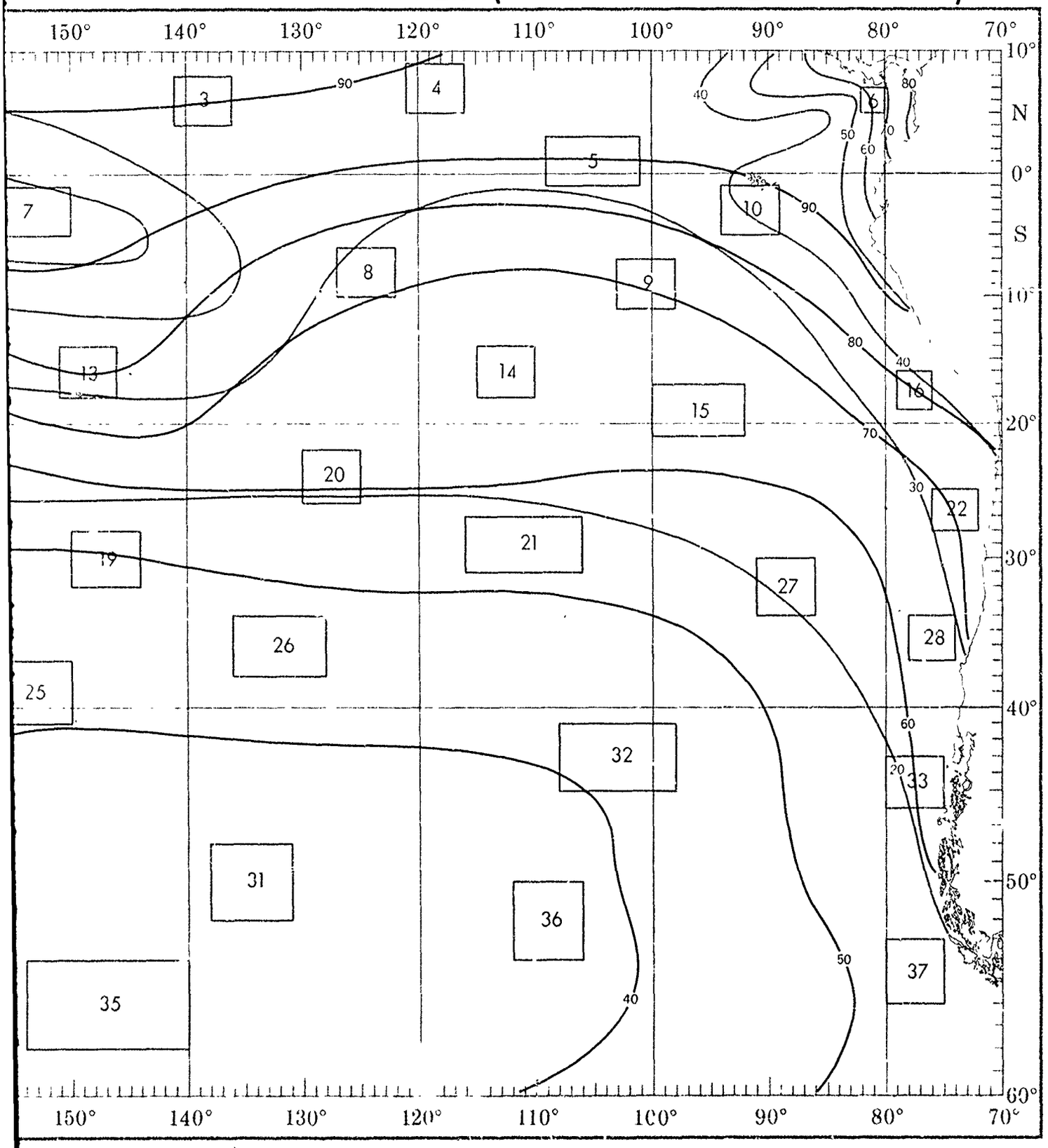
WAVES (


160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N
0°
S
10°
20°
30°
40°
50°
60°
1
2
3
4
7
8
11
12
13
14
17
18
19
20
23
24
25
26
29
30
31
34
35
90
50
40
60
80
70
30
20

WAVES (<1.5 AND <2.5 METERS)

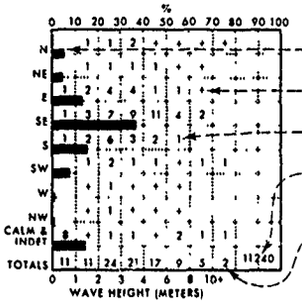


WAVE DIRECTION AND HEIGHT

Wave direction and height

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



—(5% of all waves were from the N)

+ indicates < 5% but >0

—(1% of all waves were from the S with heights from 6 7.5 meters.)

—Number of observations

—(2% of the waves from all directions had heights ≥10 meters)

WAVE HEIGHT INTERVAL

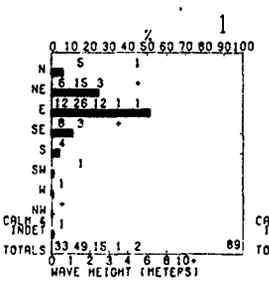
Feet	0-2	3 6	7-9	10-12	13-19	20-25	26-32	≥33
Meters	0-5	1-15	2-25	3-35	4-55	6 7 5	8-95	≥10

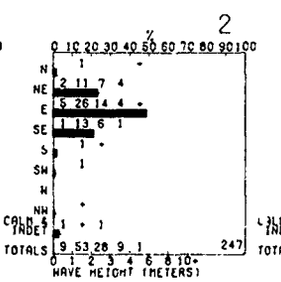
0 1 2 3 4 6 3 10+

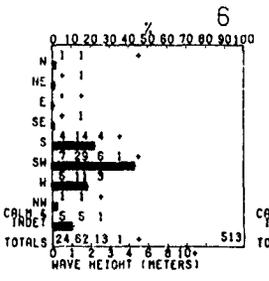
Printed scale on bottom of chart

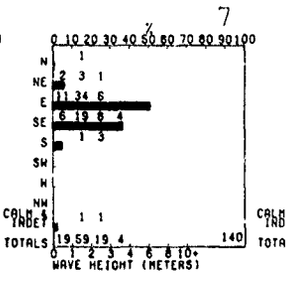
BLUE LINE - Percent frequency of wave height <1 5 meters (5 feet)

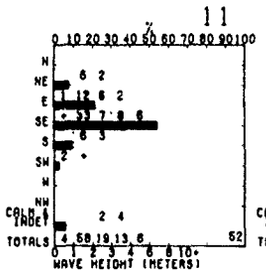
RED LINE - Percent frequency of wave height <2 5 meters (8 feet)

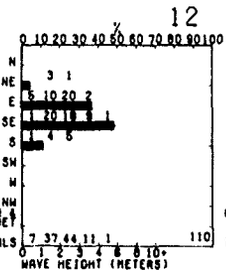


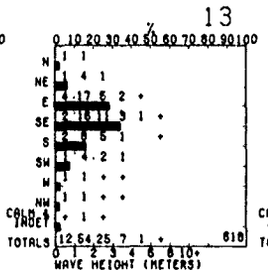


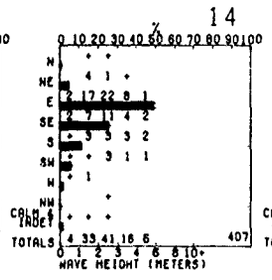


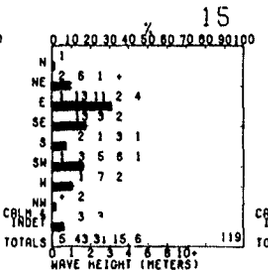


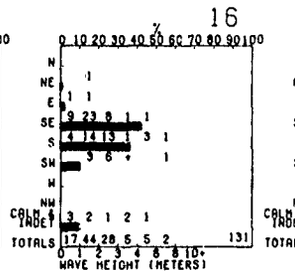


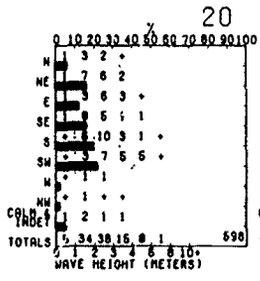


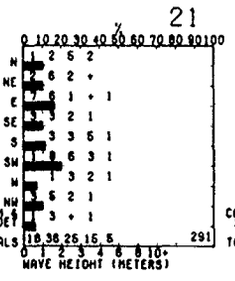


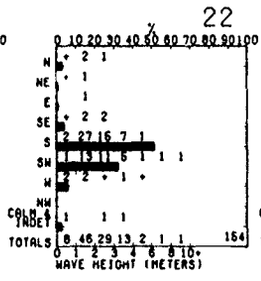


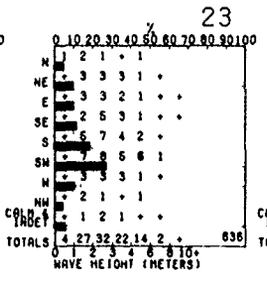


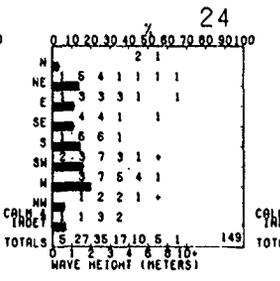


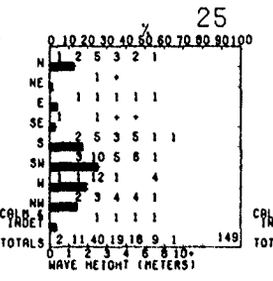


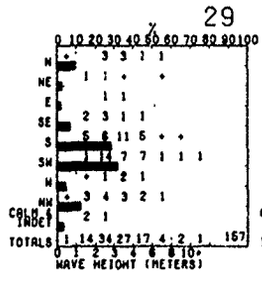


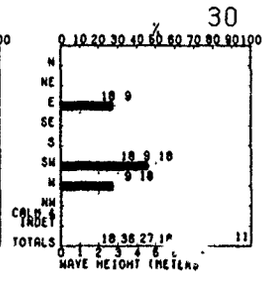










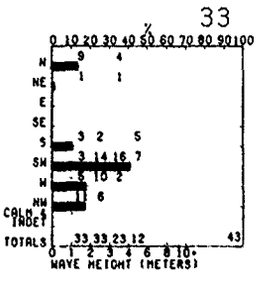


31

INSUFFICIENT DATA

32

INSUFFICIENT DATA



34

INSUFFICIENT DATA

Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

) HEIGHT

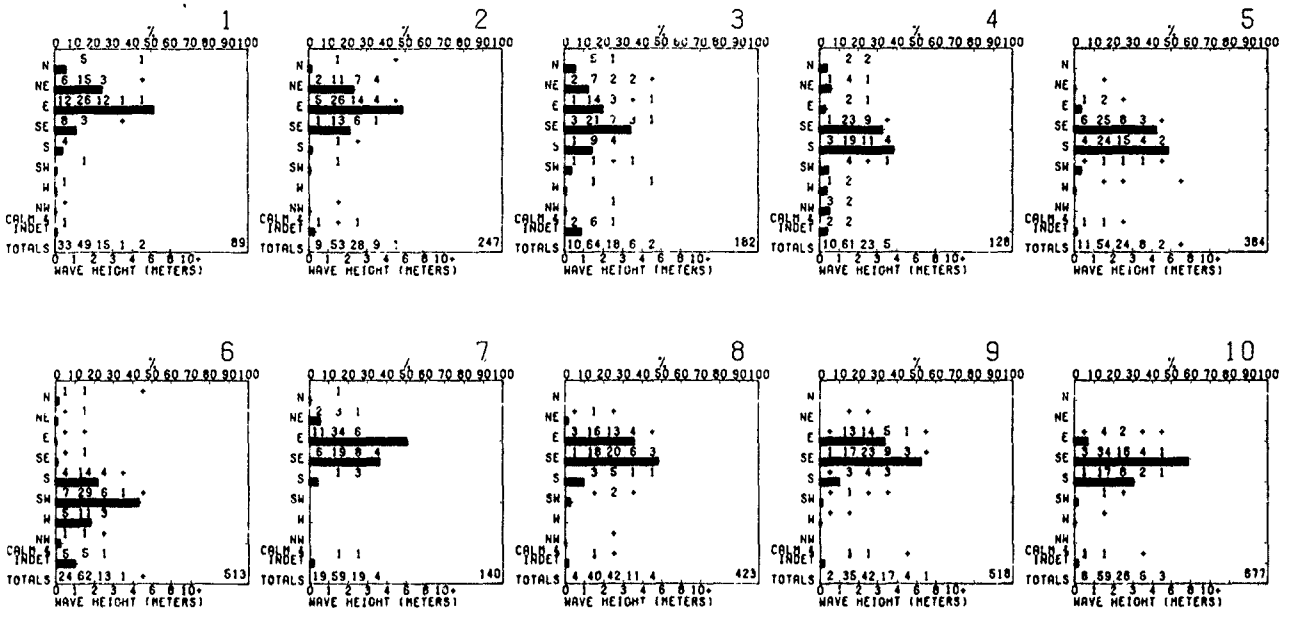
JUNE

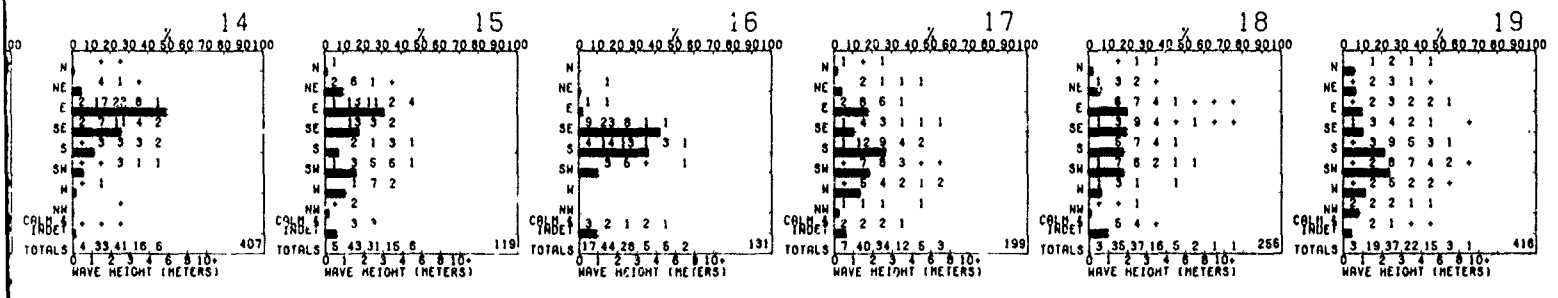
quency of waves from

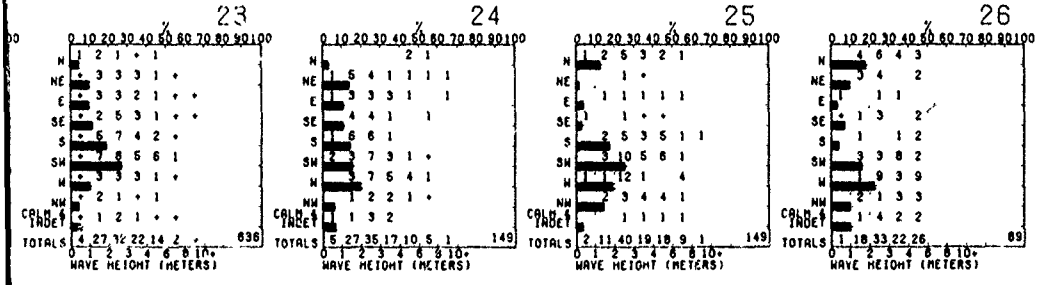
percent frequency of wave

ers)

32 ≥33
9 5 ≥10
10+







27

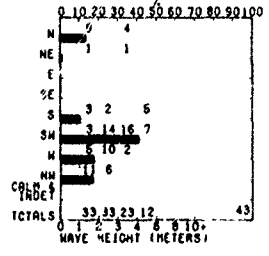
INSUFFICIENT DATA

28

INSUFFICIENT DATA

32

INSUFFICIENT DATA



34

INSUFFICIENT DATA

35

INSUFFICIENT DATA

36

INSUFFICIENT DATA

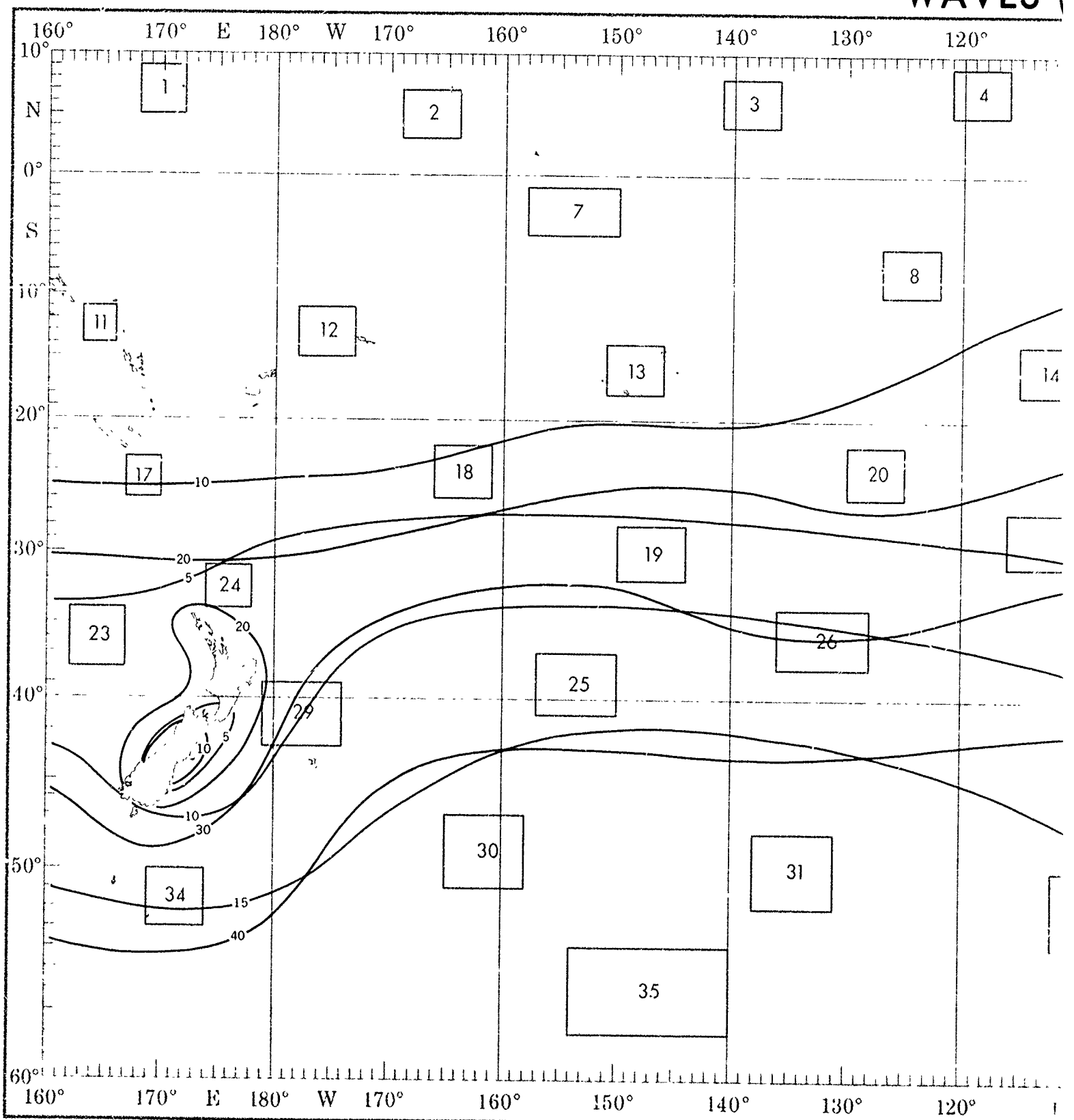
37

INSUFFICIENT DATA

e objective compilation of available data for specified areas without regard to suspected biases.
s (opposite page) are based on all available data subjectively adjusted where bias was evident.

JUNE

WAVES (


160°
170°
E
180°
W
170°
160°
150°
140°
130°
120°
10°
N
0°
S
10°
20°
30°
40°
50°
60°
1
2
3
4
7
8
11
12
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5
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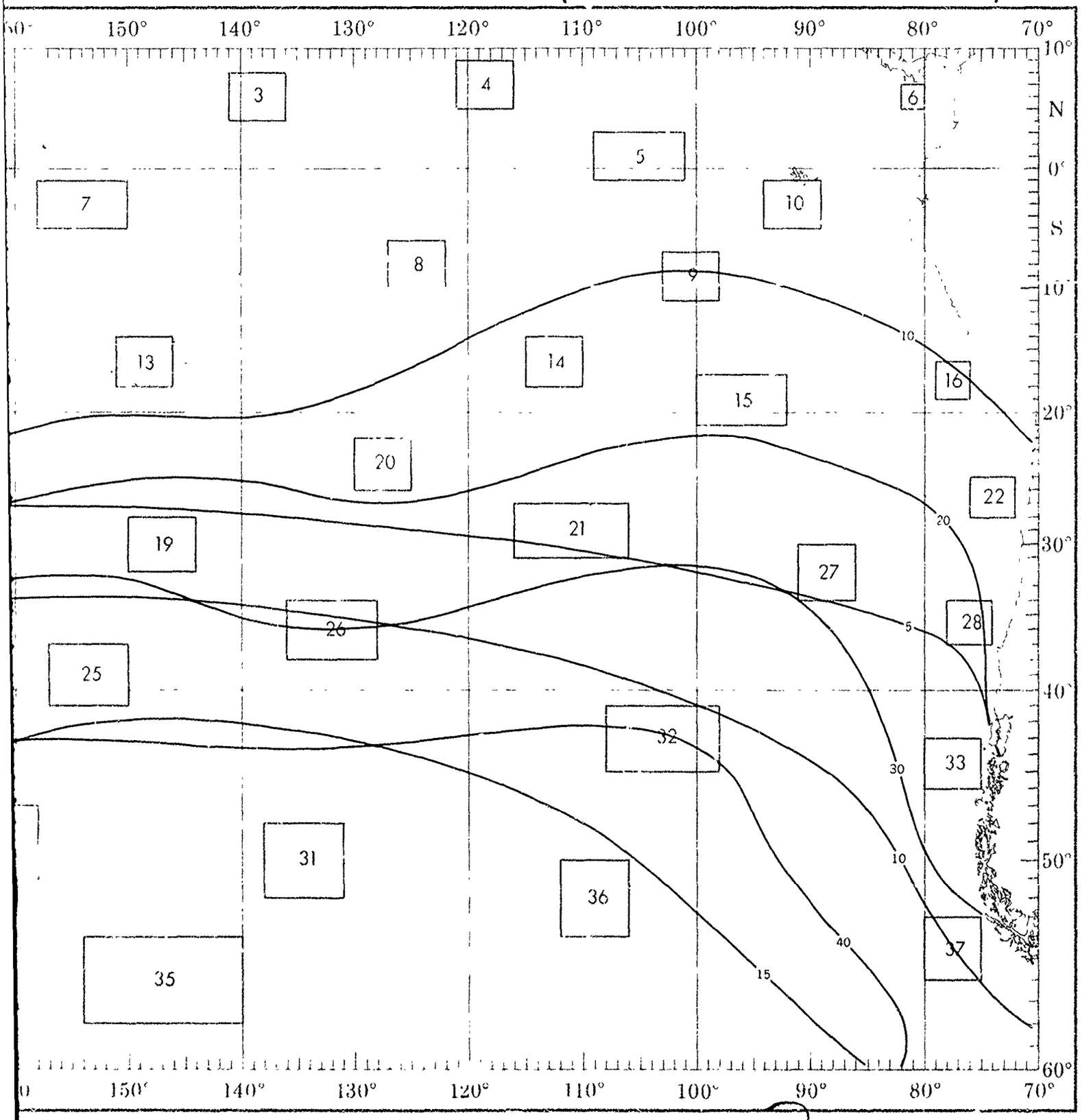
15
40

WAVES (≥3.5 AND ≥6 METERS)



WAVE PERIOD AND HEIGHT

Percent frequency of occurrence of wave period and height

PERIOD (Seconds)

HEIGHT (METERS)	≤6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	21	3	1	+	+	+	6
1.5-3	22	16	9	2	1	+	+
3-4.5	3	6	4	3	1	+	+
4.5-6	+	1	1	1	1	+	+
6-7.5	+	+	+	+	+	+	0
7.5-9	0	+	+	0	0	+	0
9-10.5	0	0	0	+	0	0	0
≥10.5	0	0	0	0	0	+	0

4010

—(2% of observed waves had a height of 1-1.5 meters and a period of 10-11 seconds.)

+ indicates < 5% but >0

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

BLUE LINE Percent frequency of wave height ≥3.5 meters (12 feet)

RED LINE - Percent frequency of wave height ≥6 meters (20 feet)

1

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	28	5	0	2	0	0	5
1-1.5	20	17	3	3	1	0	0
2-2.5	6	2	5	0	0	0	0
3-3.5	0	0	0	0	1	0	0
4-5.5	0	0	2	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

100

2

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	4	2	1	1	0	0	3
1-1.5	21	20	11	1	0	0	1
2-2.5	7	12	5	1	1	+	1
3-3.5	0	4	2	1	1	+	+
4-5.5	0	1	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

251

6

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	17	2	1	1	0	0	6
1.5-3	27	20	5	2	1	1	5
2-2.5	4	4	2	1	0	+	1
3-3.5	0	+	+	+	0	0	0
4-5.5	+	+	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

532

7

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	18	1	1	0	0	0	0
1.5-3	26	23	4	0	1	1	3
2-2.5	1	11	1	2	0	2	1
3-3.5	0	2	1	1	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

142

11

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	0	2	2	0	0	0	0
1-1.5	29	21	8	0	0	0	0
2-2.5	6	10	0	4	0	0	0
3-3.5	0	5	2	2	0	0	4
4-5.5	0	5	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

52

12

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	5	0	1	0	0	0	2
1-1.5	10	18	5	4	0	0	1
2-2.5	4	24	11	0	0	0	5
3-3.5	1	5	3	2	0	0	0
4-5.5	1	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

110

13

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	8	2	1	1	0	0	1
1-1.5	16	19	8	3	3	0	5
2-2.5	5	8	5	4	2	+	1
3-3.5	+	3	2	1	1	+	0
4-5.5	0	1	+	+	+	0	0
6-7.5	0	+	0	0	+	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

629

14

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	5	+	+	0	0	0	+
1-1.5	14	11	2	3	2	+	1
2-2.5	7	12	14	2	2	1	1
3-3.5	1	6	3	5	1	0	+
4-5.5	0	3	1	1	1	+	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

412

15

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	5	0	1	0	0	0	0
1-1.5	8	18	10	2	0	0	1
2-2.5	1	4	13	8	3	2	2
3-3.5	0	3	3	2	5	2	0
4-5.5	0	1	4	1	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

120

16

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	6	2	0	0	0	0	0
1-1.5	17	17	4	2	2	0	2
2-2.5	3	10	6	3	2	3	1
3-3.5	1	0	1	0	0	1	2
4-5.5	1	2	1	1	0	0	1
6-7.5	0	0	0	1	1	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

132

20

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	3	+	+	+	0	0	2
1-1.5	8	8	8	2	3	0	5
2-2.5	4	12	12	3	2	2	3
3-3.5	1	3	4	3	2	1	1
4-5.5	+	2	3	1	1	1	0
6-7.5	0	0	0	+	+	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

600

21

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	14	1	0	0	0	0	3
1-1.5	16	5	4	1	4	0	4
2-2.5	2	9	4	2	3	4	1
3-3.5	2	2	4	1	2	2	1
4-5.5	0	1	2	1	1	+	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

293

22

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	8	1	0	0	0	0	2
1-1.5	14	18	7	1	0	0	4
2-2.5	2	9	6	7	3	1	1
3-3.5	0	4	3	2	2	0	1
4-5.5	0	0	1	1	0	0	0
6-7.5	0	0	1	0	0	0	0
8-9.5	0	0	0	1	0	0	0
≥10	0	0	0	0	0	0	0

161

23

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	4	+	0	0	0	0	1
1-1.5	11	9	3	2	+	0	1
2-2.5	5	12	8	3	1	+	3
3-3.5	2	6	7	4	1	1	1
4-5.5	+	4	4	3	1	2	+
6-7.5	0	+	1	+	0	+	+
8-9.5	0	0	+	0	0	0	0
≥10	0	0	0	0	0	0	0

641

24

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	3	0	1	1	0	0	1
1-1.5	11	12	2	0	0	1	1
2-2.5	6	12	9	5	1	0	1
3-3.5	3	5	4	1	1	1	1
4-5.5	0	2	5	3	0	0	0
6-7.5	0	1	1	0	2	0	1
8-9.5	0	0	0	0	0	1	0
≥10	0	0	0	0	0	0	0

150

25

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	1	0	0	0	0	0	1
1-1.5	5	5	1	1	0	0	0
2-2.5	4	15	13	5	1	1	1
3-3.5	3	4	5	4	1	1	2
4-5.5	1	4	3	2	3	3	1
6-7.5	0	0	3	3	1	1	1
8-9.5	0	0	1	0	0	0	0
≥10	0	0	0	0	0	0	0

149

29

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	1	0	0	0	0	0	0
1-1.5	4	4	2	1	0	0	2
2-2.5	3	15	8	5	3	0	2
3-3.5	1	7	14	3	1	1	0
4-5.5	1	5	4	4	4	1	0
6-7.5	0	3	1	0	0	1	0
8-9.5	0	0	0	1	1	0	0
≥10	0	0	0	1	0	0	0

157

30

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	0	0	0	0	0	0	0
1-1.5	0	0	0	0	0	0	0
2-2.5	9	0	0	0	0	9	0
3-3.5	27	9	0	0	0	0	0
4-5.5	0	9	9	0	9	0	0
6-7.5	0	0	0	18	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

11

31

INSUFFICIENT DATA

32

INSUFFICIENT DATA

33

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	0	0	0	0	0	0	0
1-1.5	7	16	2	0	0	0	7
2-2.5	2	7	5	9	0	7	2
3-3.5	0	2	9	12	0	0	0
4-5.5	0	7	2	2	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

43

34

INSUFFICIENT DATA

Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted wh

EIGHT

JUNE

-11 seconds)

en both are reported If both

1

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	28	5	0	2	0	0	5
1-1.5	20	17	3	3	1	0	0
2-2.5	6	2	5	0	0	0	0
3-3.5	0	0	0	0	1	0	0
4-5.5	0	0	2	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

100

2

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	4	2	1	1	0	0	3
1-1.5	21	20	11	1	0	0	1
2-2.5	7	12	5	1	1	+	1
3-3.5	0	4	2	1	1	+	+
4-5.5	0	1	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

251

3

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	5	1	1	1	0	0	4
1-1.5	25	17	12	4	1	0	5
2-2.5	5	4	5	2	0	0	1
3-3.5	1	2	0	1	1	2	0
4-5.5	1	1	0	1	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

184

4

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	8	0	0	0	0	0	2
1-1.5	29	11	13	4	1	1	2
2-2.5	4	9	8	1	0	1	1
3-3.5	0	2	0	2	1	1	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

128

5

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	10	1	0	1	0	0	3
1-1.5	19	20	9	1	2	1	1
2-2.5	3	11	6	2	1	0	1
3-3.5	+	4	2	2	+	+	0
4-5.5	0	0	1	1	+	0	0
6-7.5	0	0	0	0	0	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

394

6

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	17	2	1	1	0	0	6
1-1.5	27	20	5	2	1	1	5
2-2.5	4	4	2	1	0	+	1
3-3.5	0	+	+	+	0	0	0
4-5.5	+	+	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

532

7

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	18	1	1	0	0	0	0
1-1.5	26	23	4	0	1	1	3
2-2.5	1	11	1	2	0	2	1
3-3.5	0	2	1	1	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

142

8

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	5	1	0	0	0	0	0
1-1.5	16	10	7	2	1	1	2
2-2.5	5	14	17	2	2	1	1
3-3.5	1	5	4	+	+	0	+
4-5.5	0	+	1	1	1	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

429

9

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	1	+	0	0	0	0	0
1-1.5	15	12	3	1	1	+	1
2-2.5	8	17	9	4	2	1	1
3-3.5	1	6	5	3	+	1	1
4-5.5	1	1	1	1	0	0	+
6-7.5	0	+	0	+	0	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

518

10

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	5	1	+	0	0	0	1
1-1.5	23	21	7	2	4	1	3
2-2.5	6	11	5	2	1	1	0
3-3.5	+	2	2	+	+	+	+
4-5.5	1	0	1	+	+	+	+
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

682

3

IND
1
5
1
0
0
0
0
0

29

14

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	5	+	+	0	0	0	+
1-1.5	14	11	2	3	2	+	1
2-2.5	7	12	14	2	2	1	1
3-3.5	1	6	3	5	1	0	+
4-5.5	0	3	1	1	1	+	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

412

15

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	5	0	1	0	0	0	0
1-1.5	8	18	10	2	0	0	4
2-2.5	1	4	13	8	3	2	2
3-3.5	0	3	3	2	5	2	0
4-5.5	0	1	4	1	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

120

16

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	5	2	0	0	0	0	8
1-1.5	17	17	4	2	2	0	2
2-2.5	3	10	6	3	2	3	1
3-3.5	1	0	1	0	0	1	2
4-5.5	1	2	1	1	0	0	1
6-7.5	0	0	0	1	1	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

132

17

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	6	1	0	0	0	0	2
1-1.5	14	13	7	2	0	0	2
2-2.5	2	14	13	1	1	0	1
3-3.5	1	3	4	2	0	0	0
4-5.5	0	1	1	1	1	0	1
6-7.5	0	0	2	0	1	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

202

18

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	4	+	+	0	0	0	0
1-1.5	11	9	5	3	+	1	6
2-2.5	5	14	9	2	2	2	3
3-3.5	1	9	3	2	1	0	+
4-5.5	+	1	2	0	1	1	0
6-7.5	0	0	0	1	+	1	0
8-9.5	0	1	0	0	0	0	0
≥10	0	0	0	+	+	0	0

261

19

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	4	+	0	0	0	0	0
1-1.5	9	6	2	1	+	0	2
2-2.5	5	13	11	2	1	2	3
3-3.5	3	4	7	3	1	2	1
4-5.5	+	2	4	5	2	1	+
6-7.5	0	0	1	1	+	+	0
8-9.5	0	0	0	+	+	+	+
≥10	0	0	0	0	0	0	0

419

2

IND
2
4
1
1
0
0
0
0

61

23

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	4	+	0	0	0	0	1
1-1.5	11	9	3	2	+	0	1
2-2.5	5	12	8	3	1	+	3
3-3.5	2	6	7	4	1	1	1
4-5.5	+	4	4	3	1	2	+
6-7.5	0	+	1	+	0	+	+
8-9.5	0	0	+	0	0	0	0
≥10	0	0	0	0	0	0	0

641

24

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	3	0	1	1	0	0	1
1-1.5	11	12	2	0	0	1	1
2-2.5	6	12	9	5	1	0	1
3-3.5	3	5	4	1	1	1	1
4-5.5	0	2	5	3	0	0	0
6-7.5	0	1	1	0	2	0	1
8-9.5	0	0	0	0	0	1	0
≥10	0	0	0	0	0	0	0

150

25

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	1	0	0	0	0	0	1
1-1.5	5	5	1	1	0	0	0
2-2.5	4	15	13	5	1	1	1
3-3.5	3	4	5	4	1	1	2
4-5.5	1	4	3	2	3	3	1
6-7.5	0	0	3	3	1	1	1
8-9.5	0	0	1	0	0	0	0
≥10	0	0	0	0	0	0	0

149

26

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	2	0	0	0	0	0	0
1-1.5	9	3	3	0	1	0	1
2-2.5	2	10	8	4	1	0	7
3-3.5	1	7	3	2	0	4	4
4-5.5	1	6	8	3	3	2	2
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

90

27

INSUFFICIENT DATA

28

INSUFFICIENT DATA

1

T

32

INSUFFICIENT DATA

33

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	0	0	0	0	0	0	0
1-1.5	7	16	2	0	0	0	7
2-2.5	2	7	5	9	0	7	2
3-3.5	0	2	9	12	0	0	0
4-5.5	0	7	2	2	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

43

34

INSUFFICIENT DATA

35

INSUFFICIENT DATA

36

INSUFFICIENT DATA

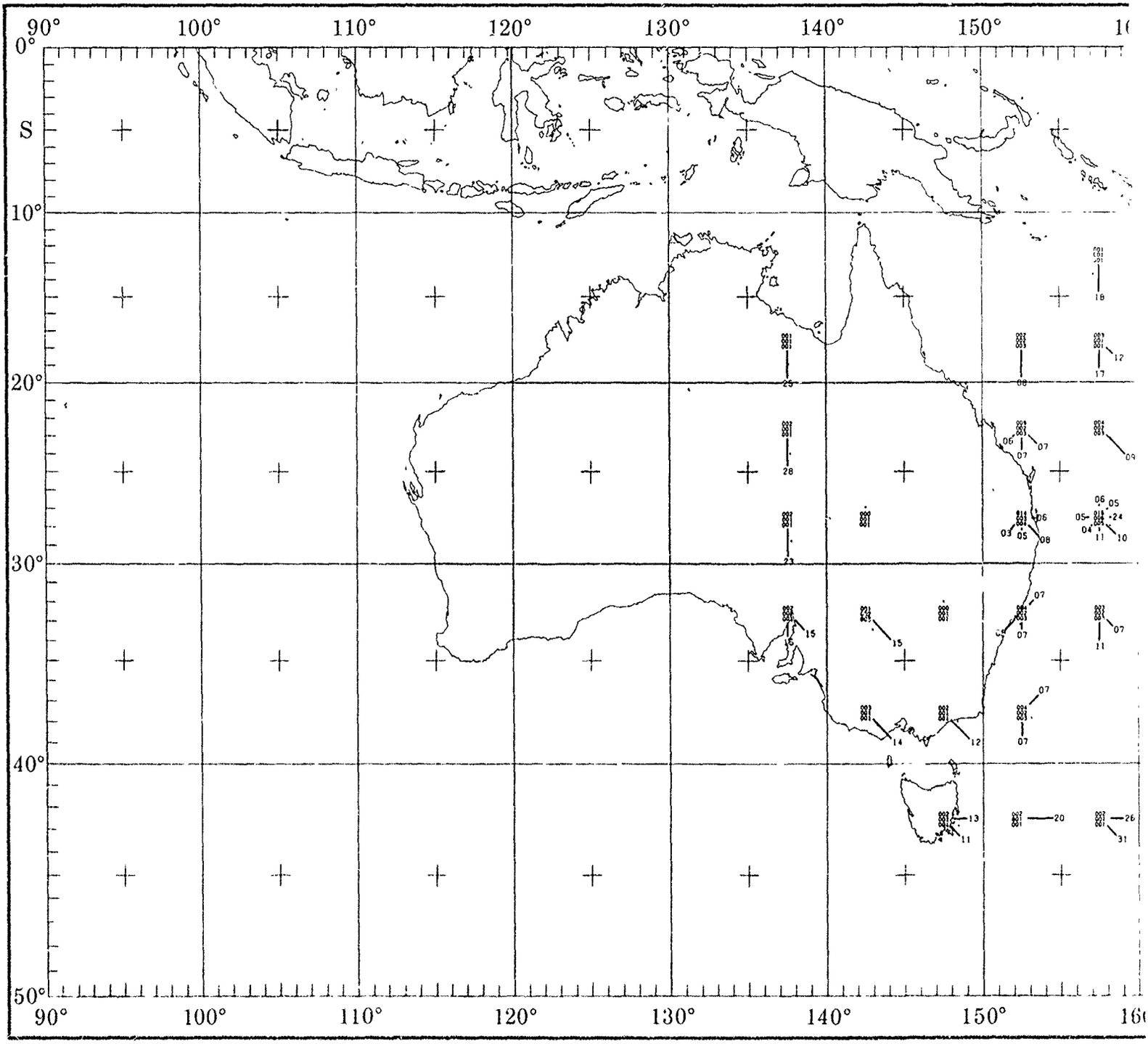
37

INSUFFICIENT DATA

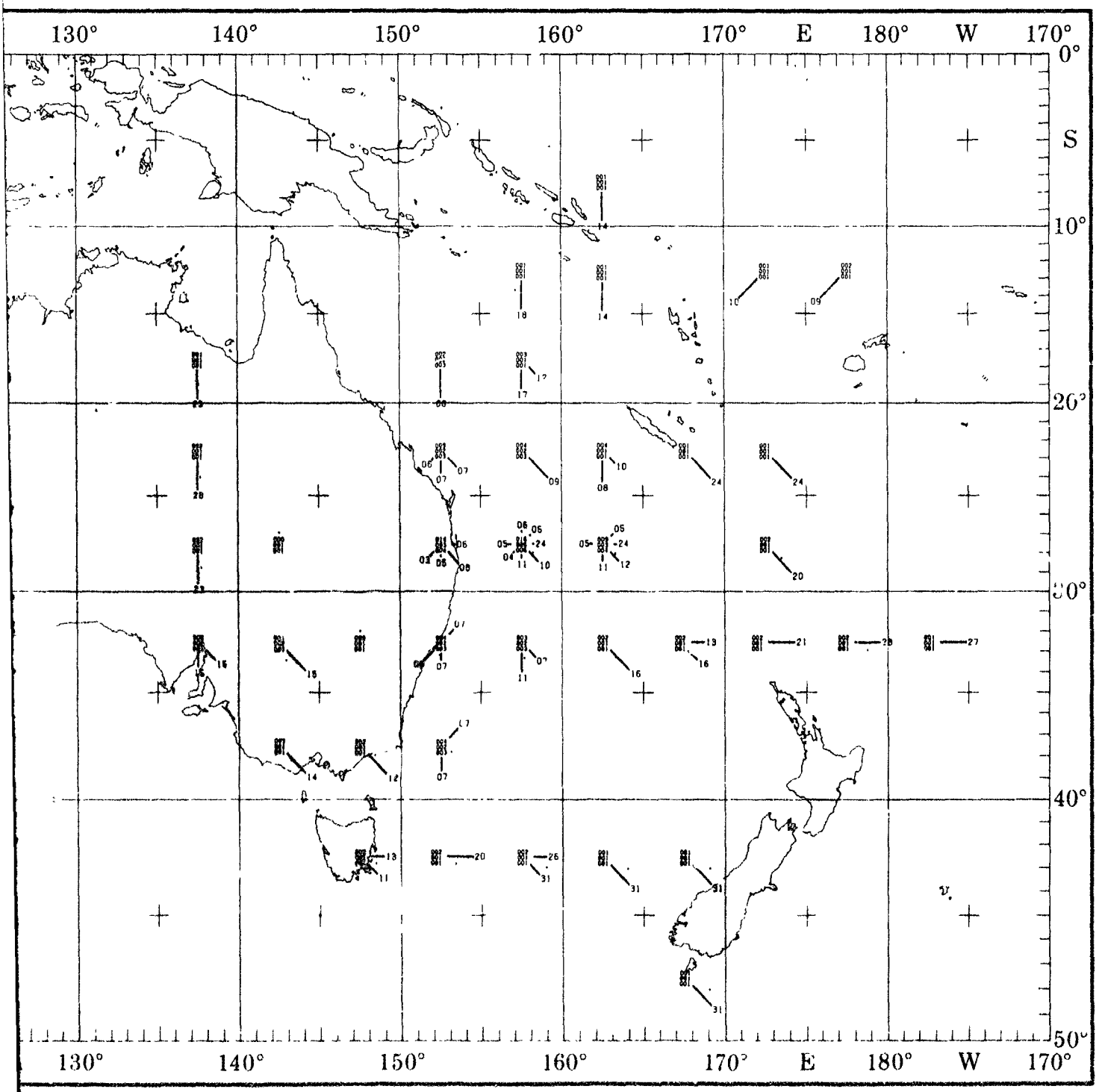
the objective compilation of available data for specified areas without regard to suspected biases.
yses (opposite page) are based on all available data subjectively adjusted where bias was evident.

1 2

JUNE

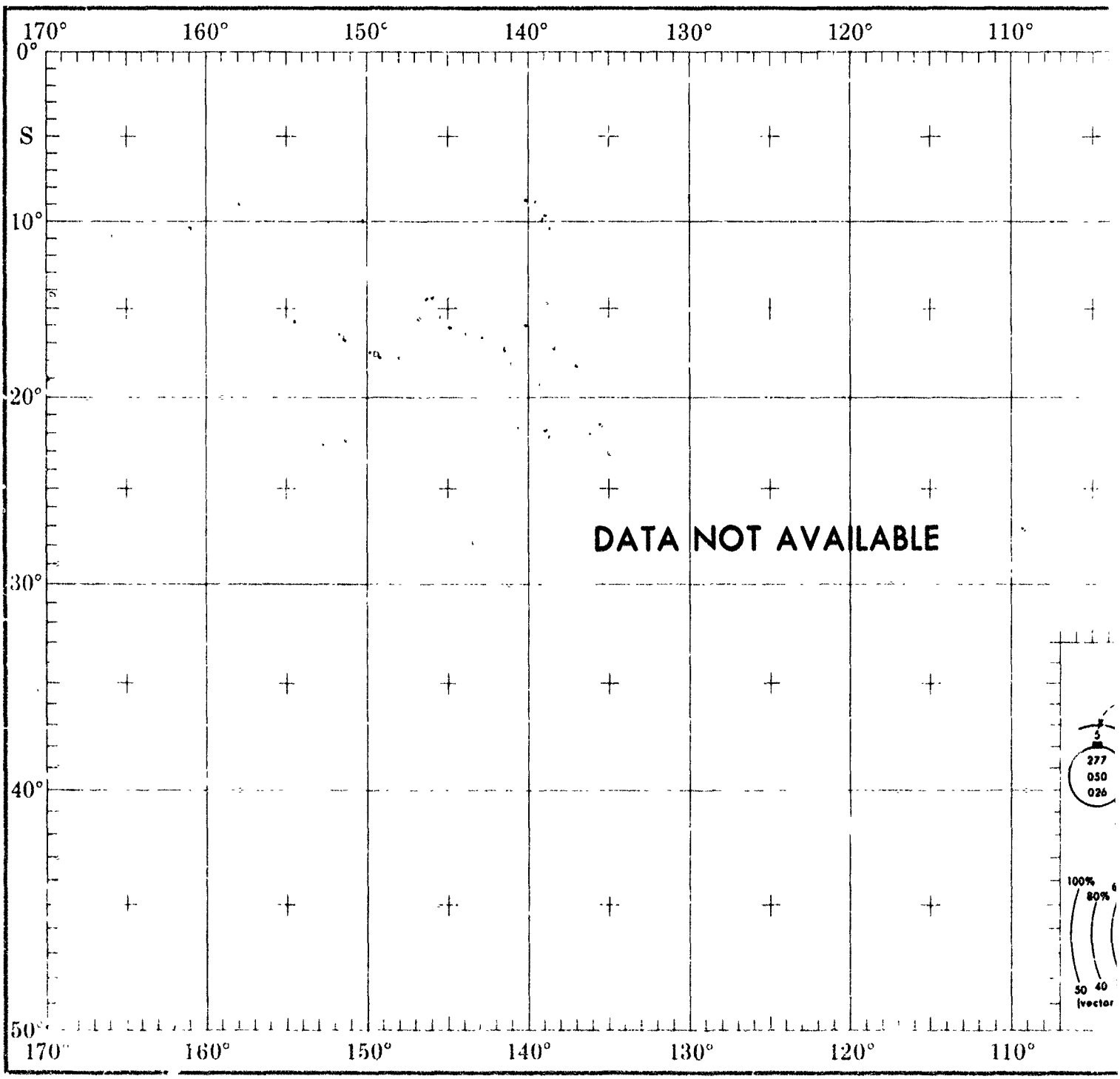


TROPICAL CYCLONE

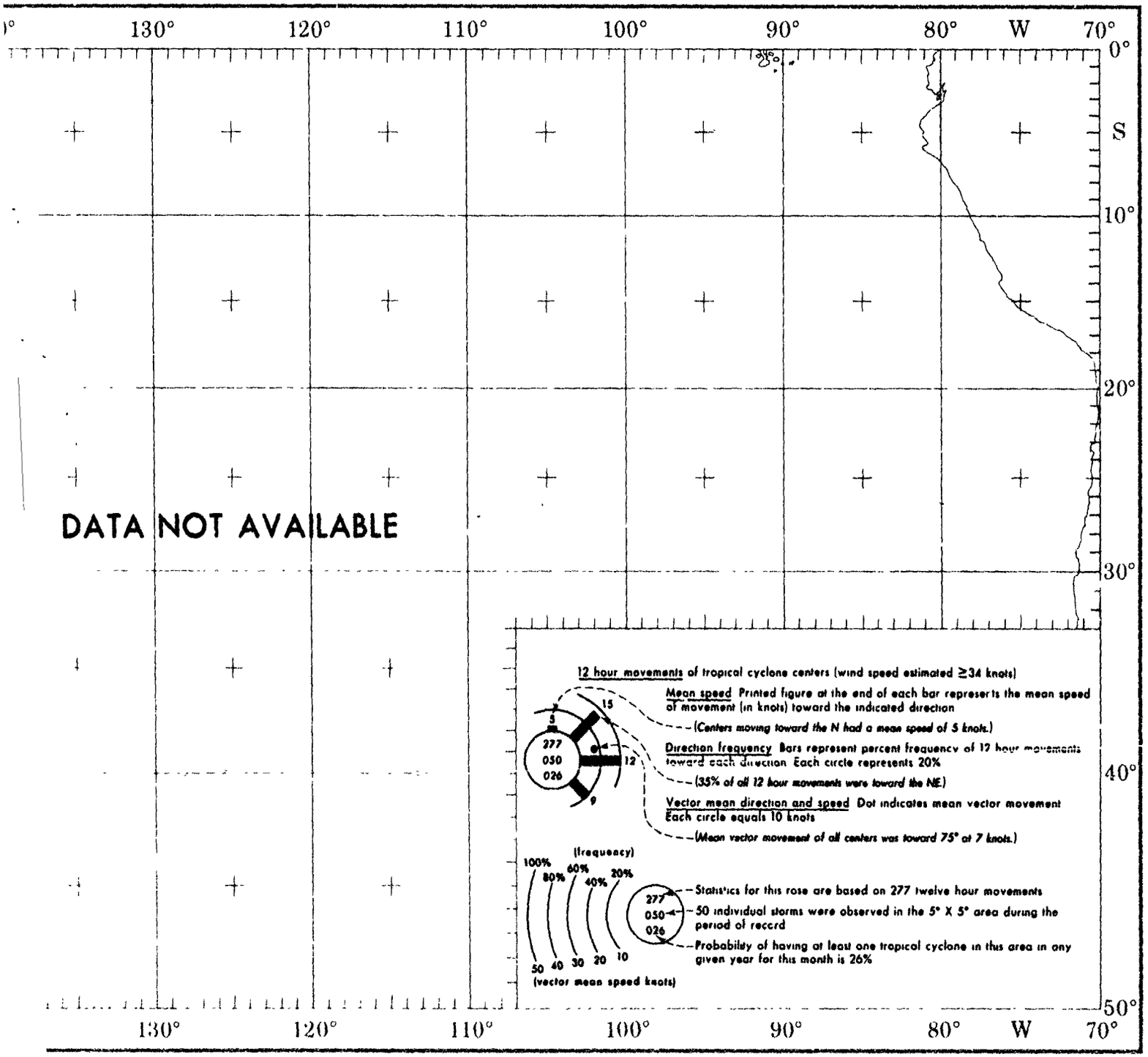


1 1 2

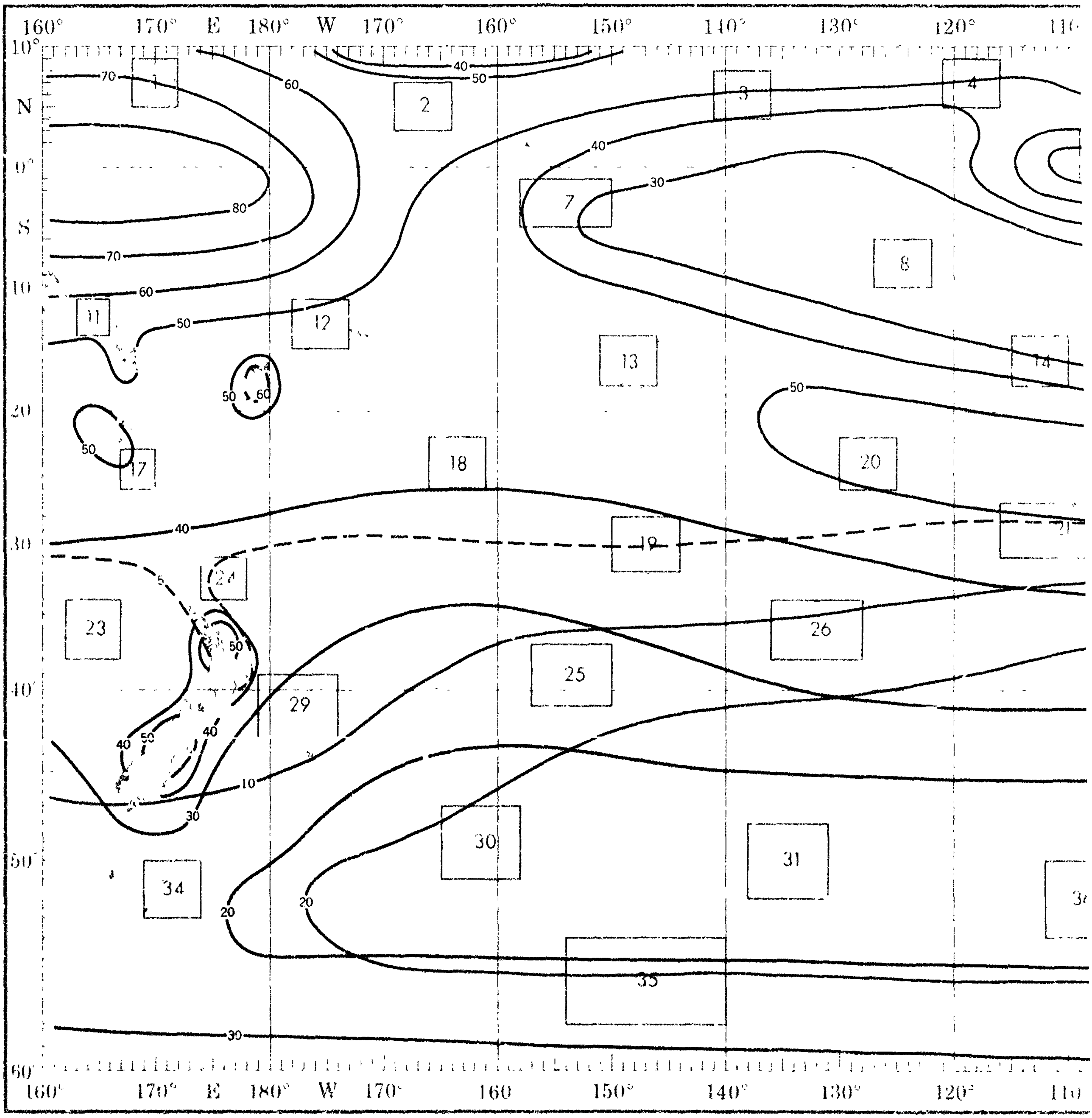
TROPICAL CYCLONE



JUNE


130°
120°
110°
100°
90°
80°
W
70°
0°
S
10°
20°
30°
40°
50°
DATA NOT AVAILABLE
12 hour movements of tropical cyclone centers (wind speed estimated ≥34 knots)
Mean speed Printed figure at the end of each bar represents the mean speed of movement (in knots) toward the indicated direction
(Centers moving toward the N had a mean speed of 5 knots.)
Direction frequency Bars represent percent frequency of 12 hour movements toward each direction Each circle represents 20%
(35% of all 12 hour movements were toward the NE.)
Vector mean direction and speed Dot indicates mean vector movement Each circle equals 10 knots
(Mean vector movement of all centers was toward 75° at 7 knots.)
5
15
277
050
026
12
9
(frequency)
100%
80%
60%
40%
20%
50
40
30
20
10
(vector mean speed knots)
277
050
026
Statistics for this rose are based on 277 twelve hour movements
50 individual storms were observed in the 5° X 5° area during the period of record
Probability of having at least one tropical cyclone in this area in any given year for this month is 26%

JULY



160°
170°
E
180°
W
170°
160°
150°
140°
130°
120°
110
10°
N
0°
S
10
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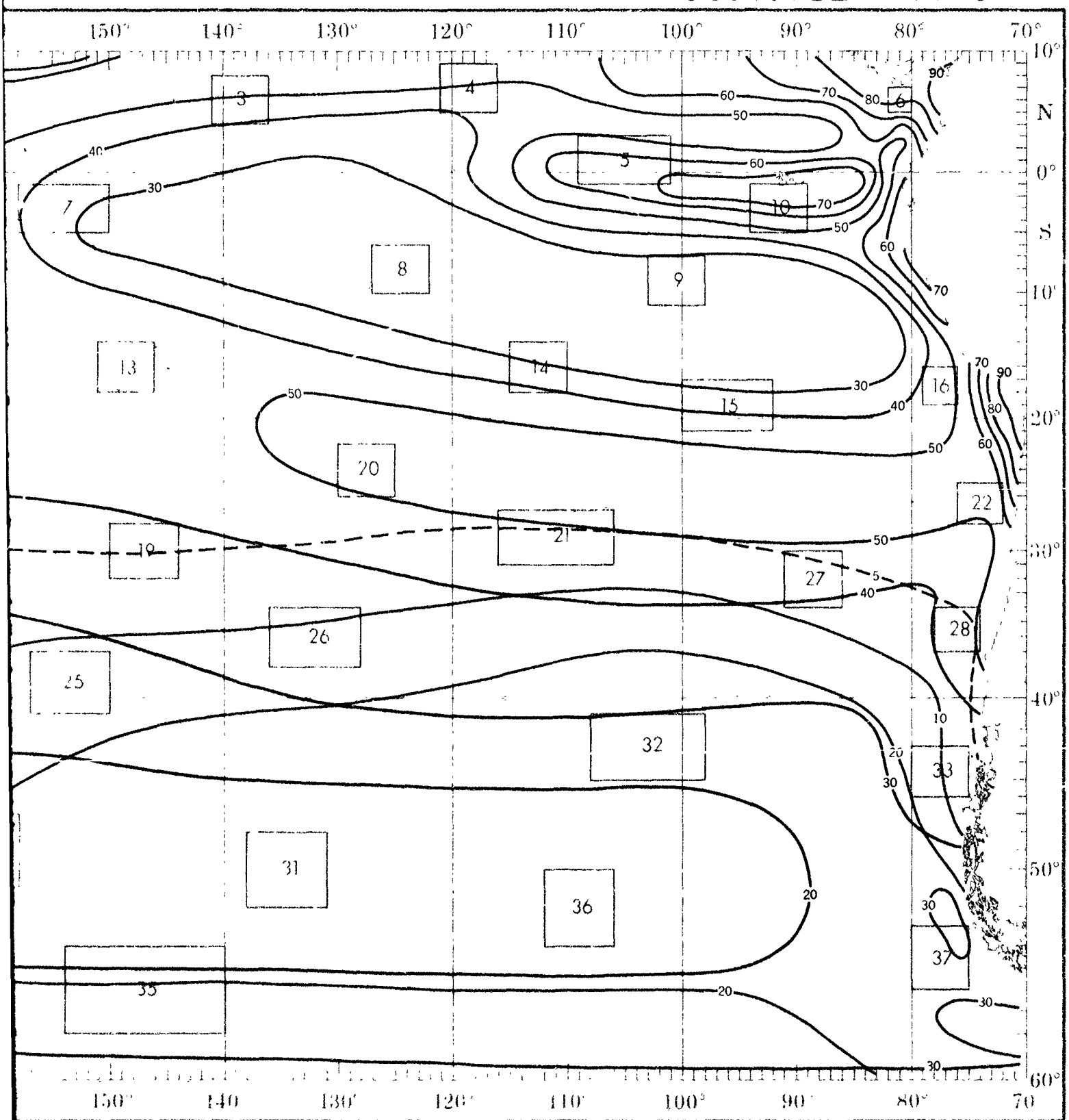
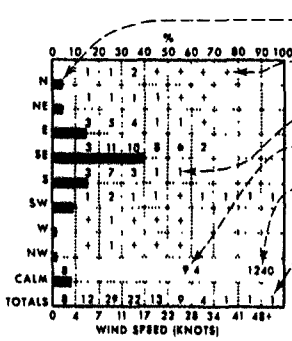
SURFACE WINDS



1 1 2

WIND DIRECTION AND SPEED

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



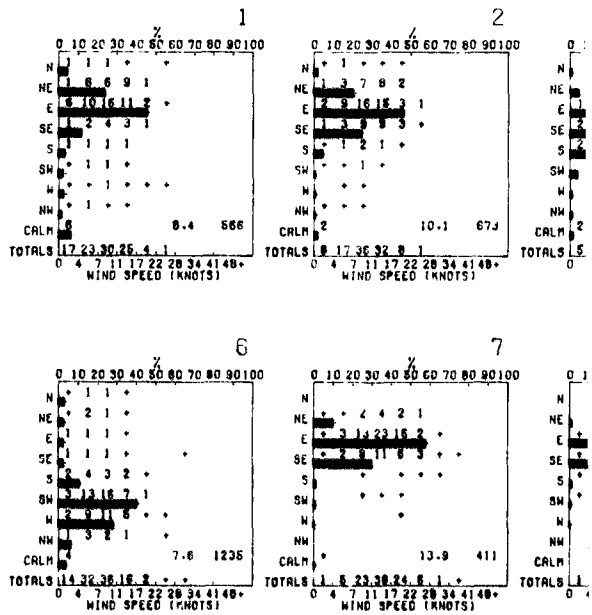
WIND SPEED INTERVAL (KNOTS)

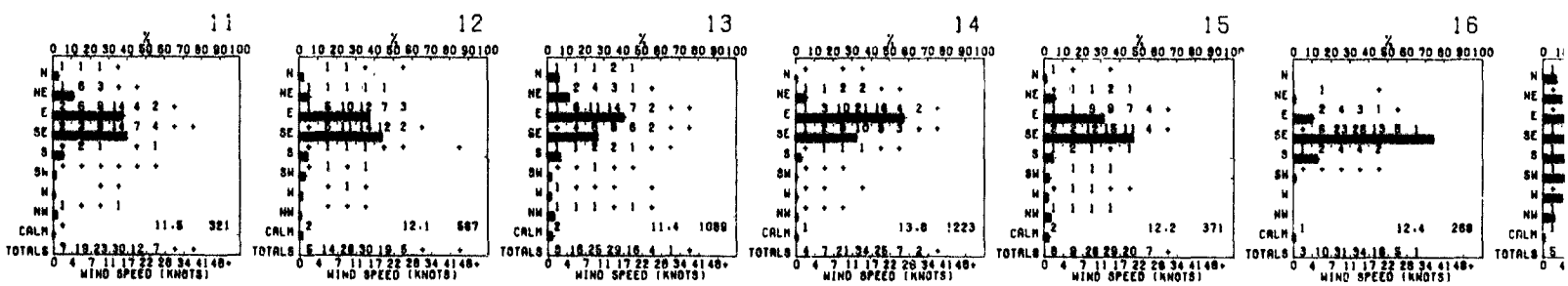
0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	≥48
0	4	7	11	17	22	28	34	41	48+

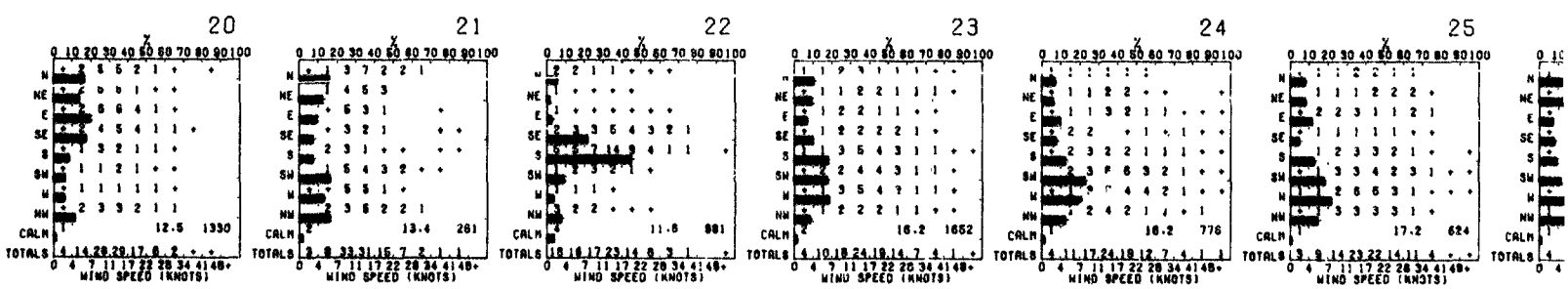
Printed scale on bottom of chart

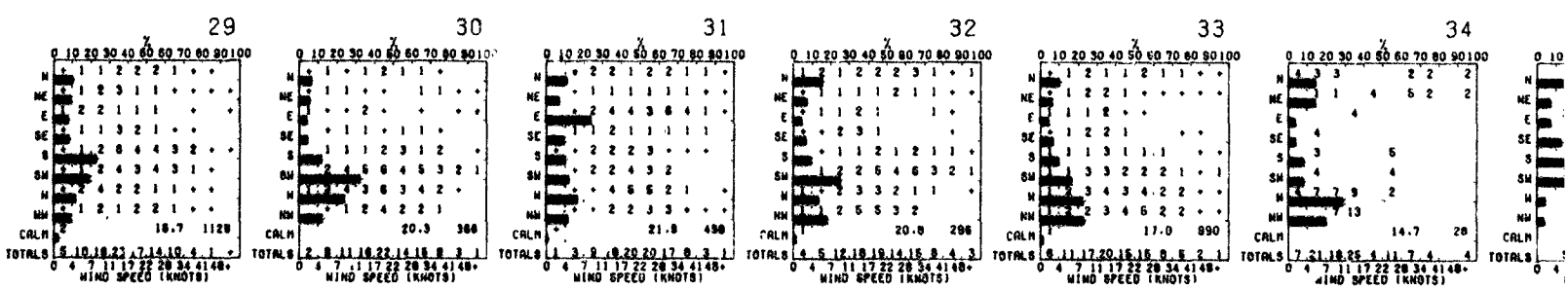
BLUE LINE - Percent frequency of wind speed ≤10 knots

RED LINE Percent frequency of wind speed ≥34 knots









Graphs represent the objective compilation of available data for specified areas without regard to susp
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bias

ID SPEED

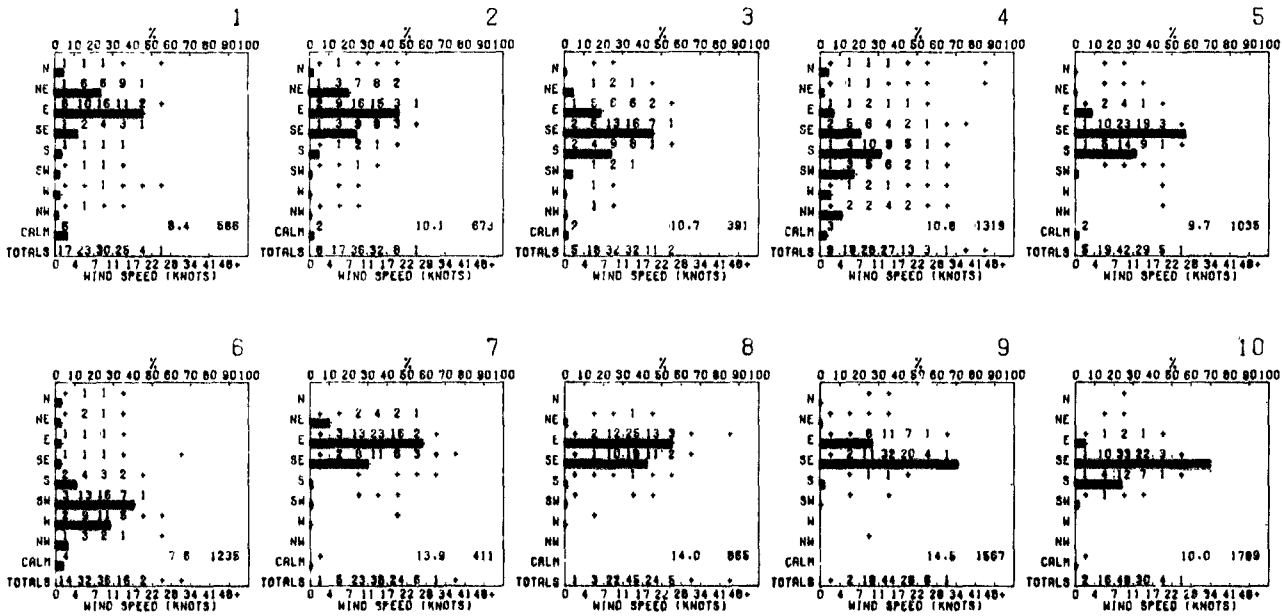
JULY

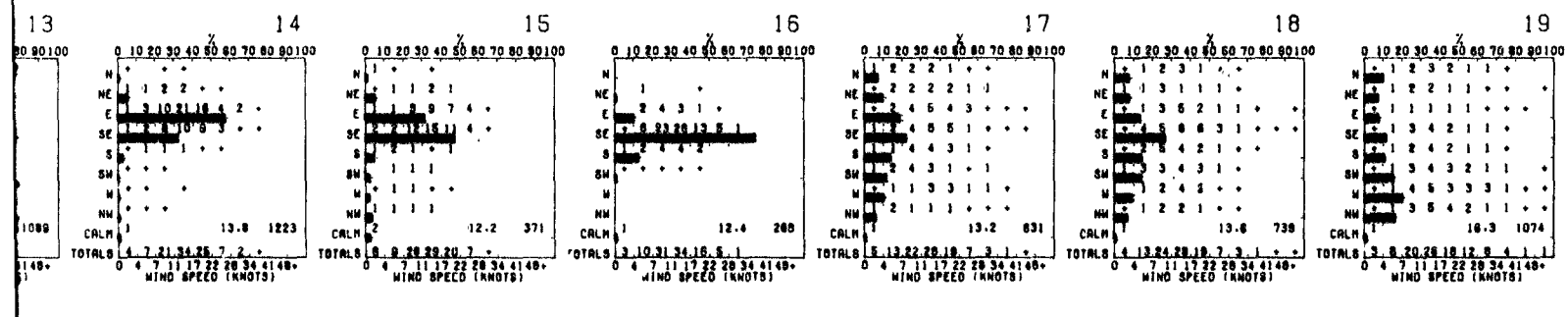
each direction Speed frequency
each direction

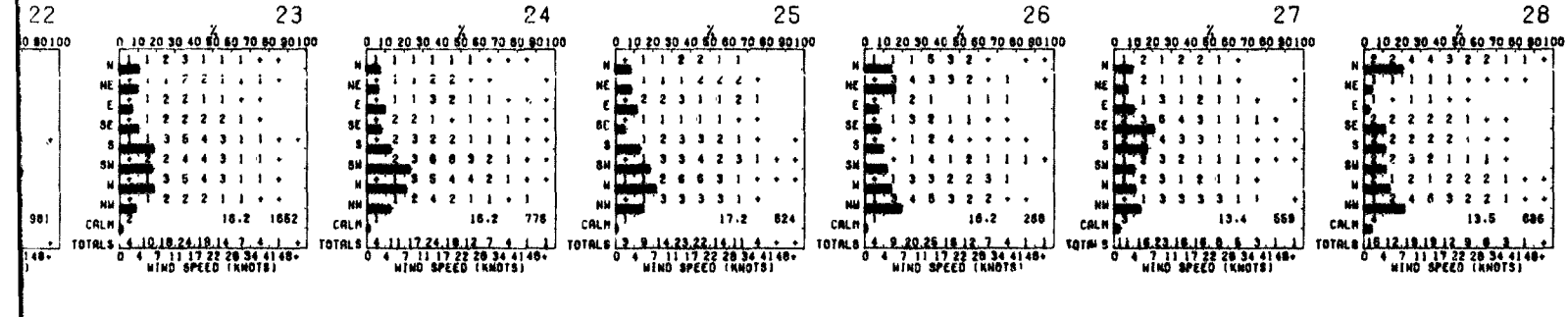
nots)

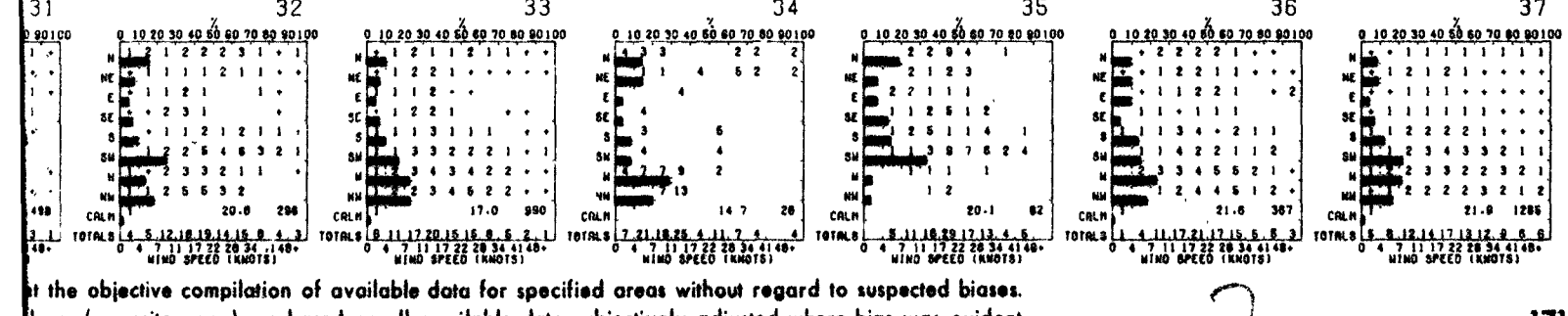
nots)

DTS)
34 40 41 47 ≥48
4 41 48+
hart









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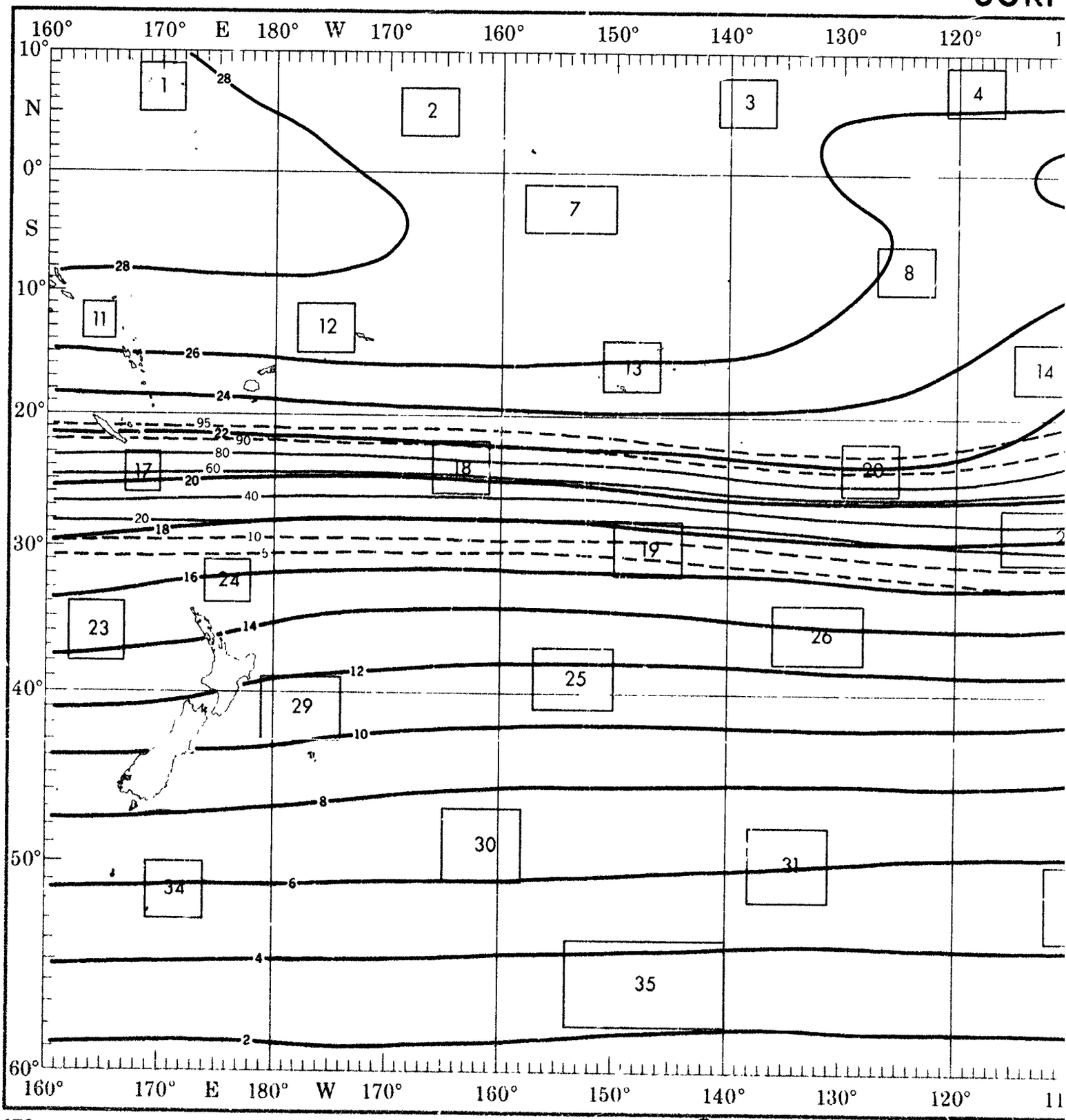
lyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

JULY

SURF


160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N 0° S 10° 20° 30° 40° 50° 60°
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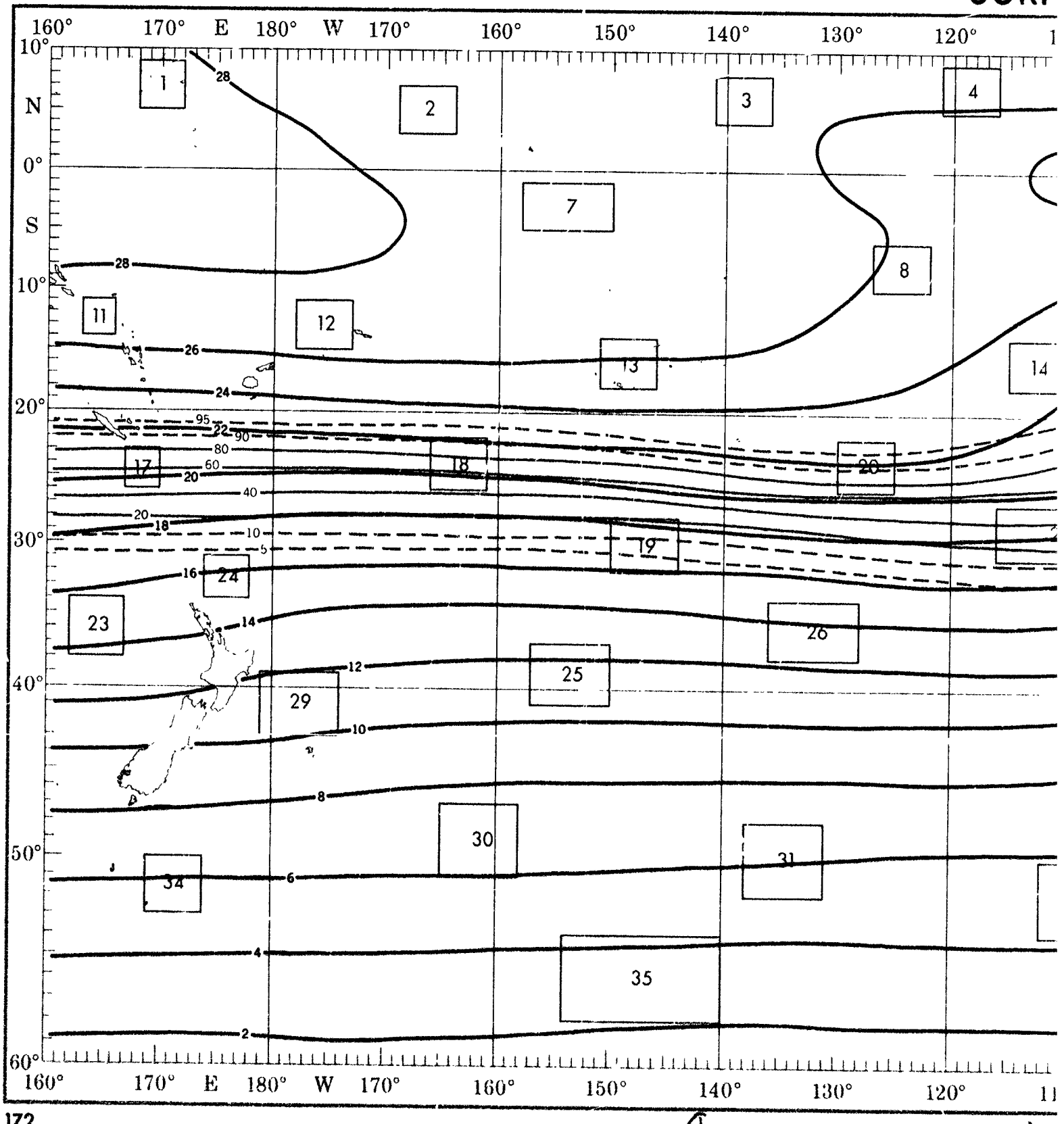
2

JULY

SURF


160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N 0° S 10° 20° 30° 40° 50° 60°
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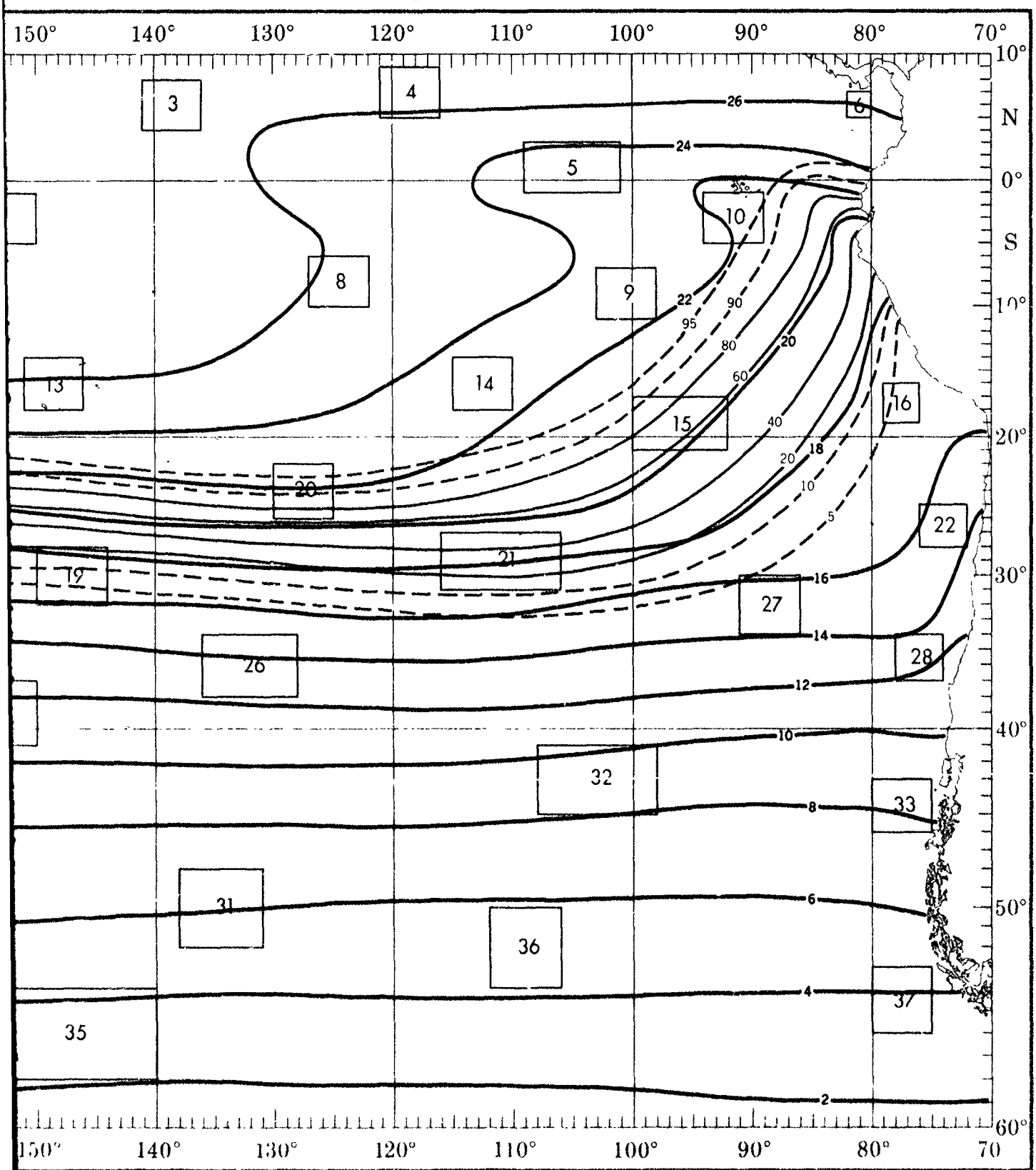
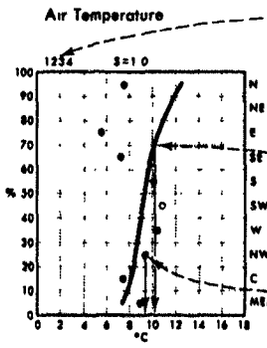
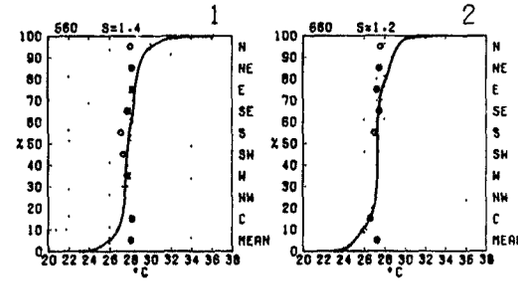
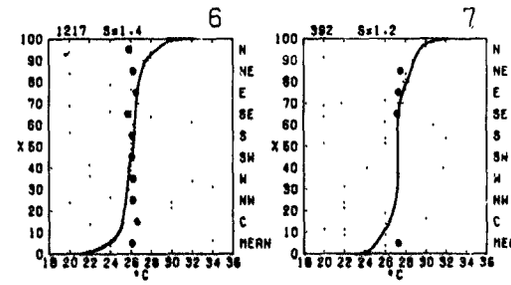
SURFACE AIR TEMPERATURE

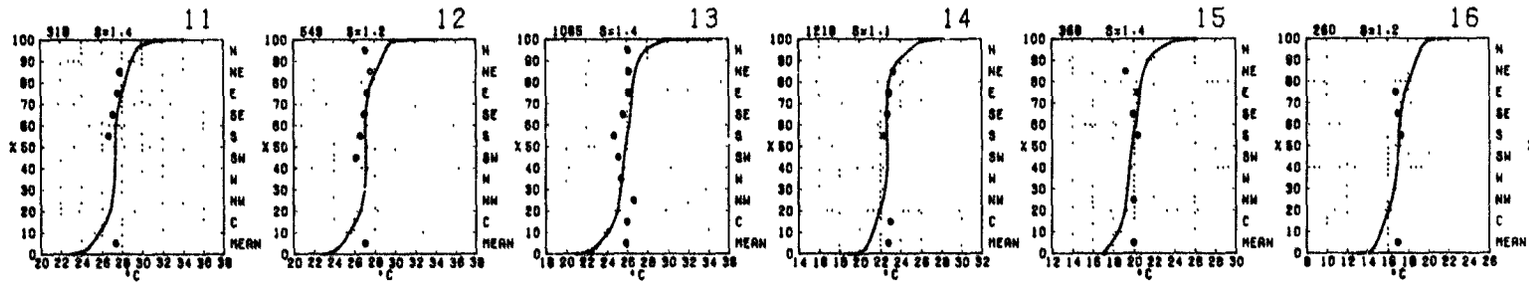


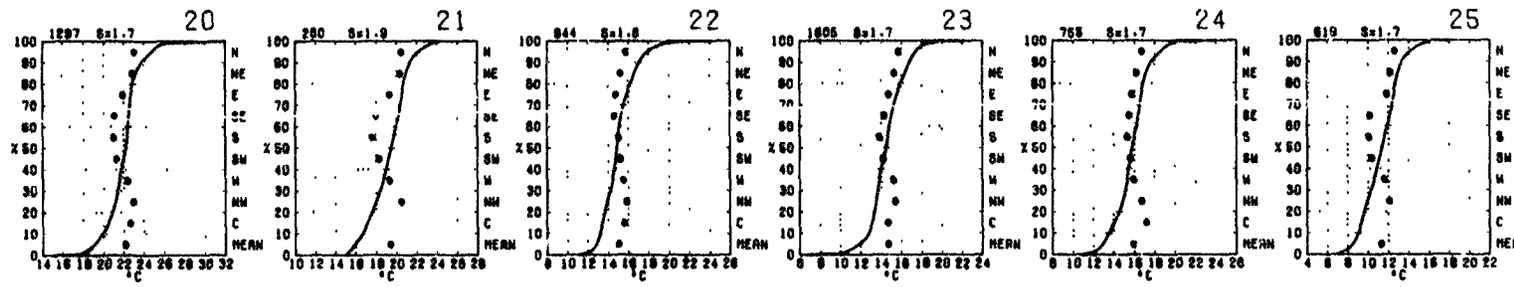
SURFACE AIR TEMPERATURE

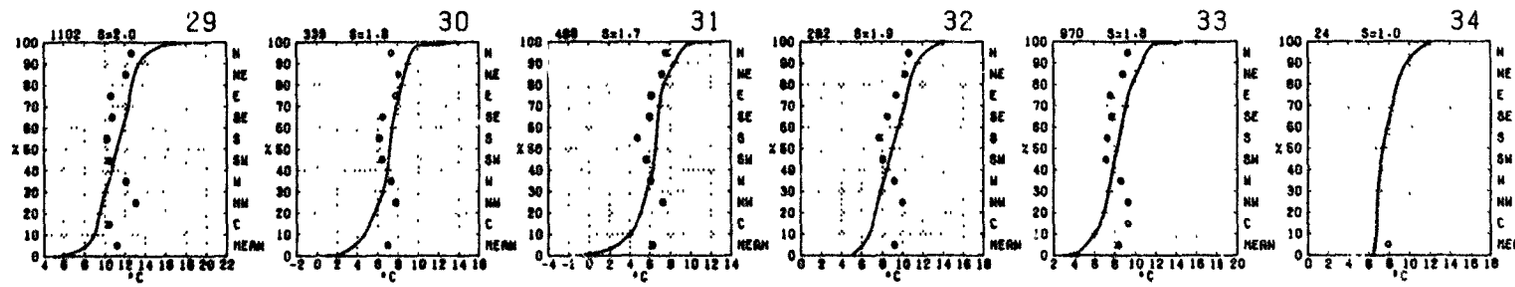












Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted whe

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JULY

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data combined are

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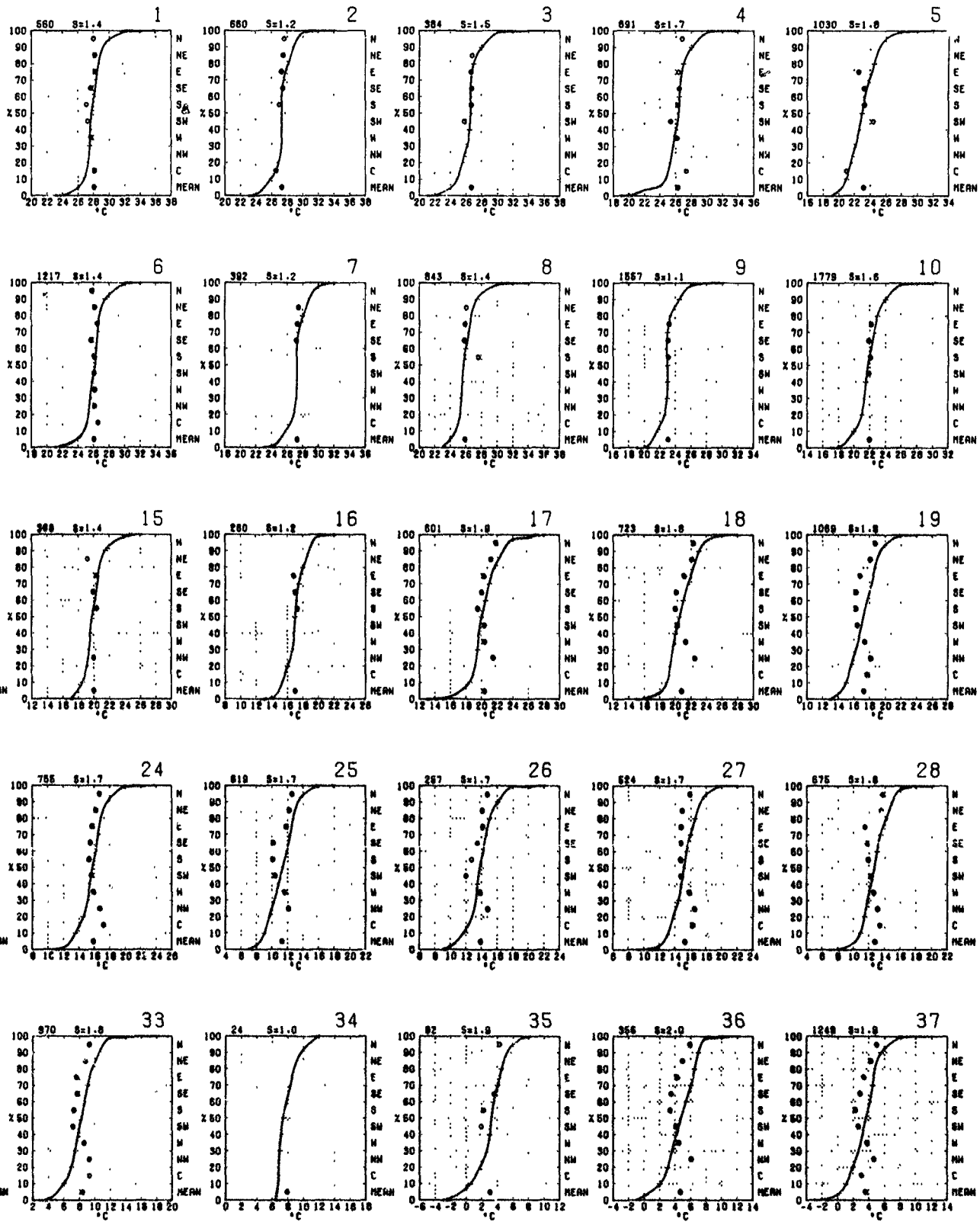
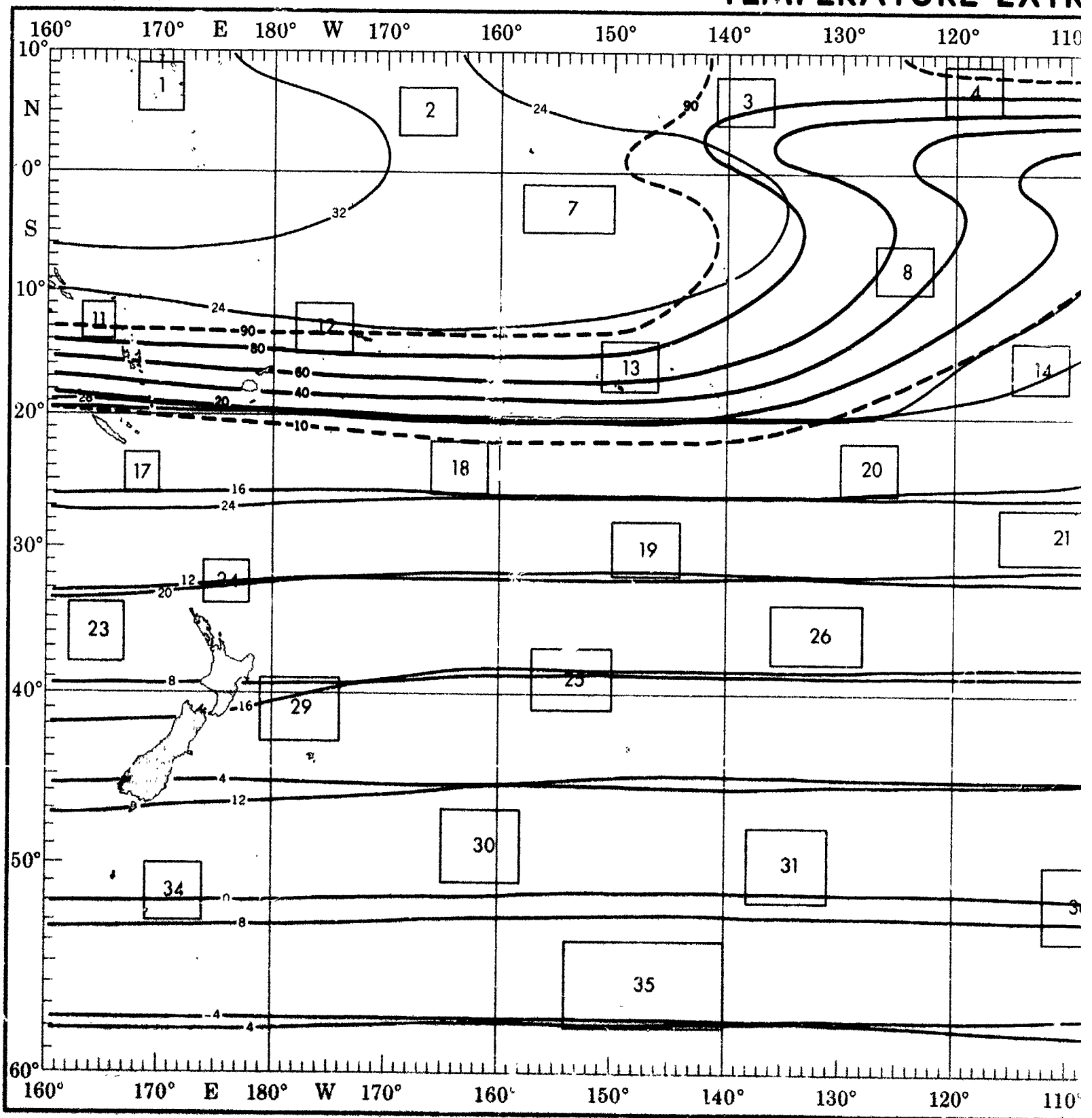


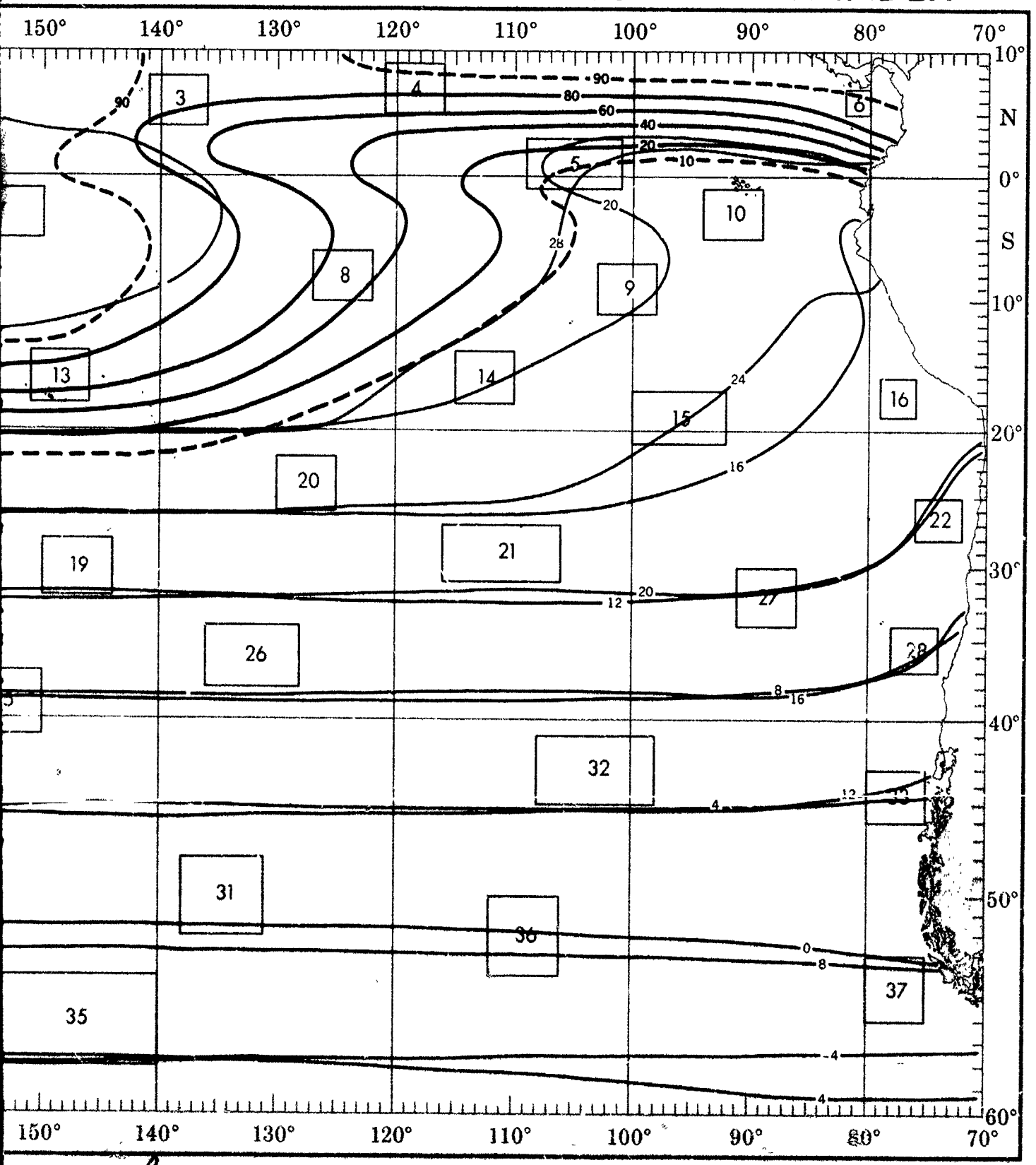
objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

JULY

TEMPERATURE EXTR



TEMPERATURE EXTREMES AND T-H INDEX



WIND SPEED AND AIR TEMPERATURE

Wind speed and air temperature

Percent frequency of simultaneous occurrence of specified temperature (°C) and wind speed (knots)

WIND SPEED (kts)

Temp (°C)	0-3	4-10	11-21	22-33	≥34
4.5	18	8	7	1	1
2.3	17	8	7	1	1
0.1	13	6	5	1	1
-2.-1	1	+	0	0	0
-4.-3	0	0	0	0	0
-6.-5	+	0	0	+	+
-8.-7	1	+	0	0	0
10.-9	0	0	0	0	0
-12.-11	1	+	0	0	0
-14.-13	1	0	0	0	0
-16.-15	1	+	0	0	0

3330

(1% of *all observations reported temperature 2-3°C simultaneously with wind speed of 22-33 kts*)

+ Indicates < 5% but >0

Number of observations

Use of this table in determination of Potential Superstructure Icing is explained in the text

BLACK LINE - Percent frequency of T-H index ≥24°C (75.2°F) (discomfort may be experienced due to heat)

BLUE LINE - Minimum (1%) air temperature (°C) (1% of the temperatures were equal to or less than the given value)

RED LINE - Maximum (99%) air temperature (°C) (1% of the temperatures were greater than the given value)

WIND SPEED (KTS) 1

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	+	0	0	0	0
34.35	+	0	0	0	0
32.33	+	1	0	0	0
30.31	2	4	3	+	0
28.29	8	31	18	+	0
26.27	6	16	9	+	0
24.25	+	1	+	0	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

561

WIND SPEED (KTS) 2

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	0	+	0	0
32.33	0	+	0	0	0
30.31	+	1	1	0	0
28.29	1	19	21	+	0
26.27	4	29	16	+	0
24.25	+	3	2	+	0
22.23	+	0	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

668

WIND SPEED (KTS) 6

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	0	0	0
30.31	+	1	+	0	0
28.29	2	8	1	0	0
26.27	12	41	10	0	0
24.25	2	14	5	+	0
22.23	+	2	1	0	0
20.21	+	+	0	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1266

WIND SPEED (KTS) 7

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	0	+	0	0
30.31	1	2	2	1	0
28.29	0	9	19	3	0
26.27	1	18	39	2	+
24.25	0	1	2	+	0
22.23	0	+	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

392

WIND SPEED (KTS) 11

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	+	0	0
30.31	1	2	1	+	0
28.29	3	18	17	2	0
26.27	4	23	20	3	0
24.25	+	1	3	2	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

320

WIND SPEED (KTS) 12

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	0	+	0	0
30.31	0	1	1	0	0
28.29	1	11	18	2	0
26.27	5	27	25	3	0
24.25	+	1	3	1	0
22.23	0	+	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

555

WIND SPEED (KTS) 13

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	0	0	0
30.31	+	+	+	0	0
28.29	1	3	4	+	0
26.27	4	25	26	2	0
24.25	3	12	13	2	+
22.23	+	1	2	+	0
20.21	0	0	0	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1089

WIND SPEED (KTS) 14

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.29	0	+	+	0	0
28.27	+	1	2	0	0
26.25	1	5	11	1	0
24.23	3	19	42	6	+
22.21	+	3	5	1	0
20.19	0	+	+	0	0
18.17	0	0	0	0	0
16.15	0	0	0	0	0
14.13	0	0	0	0	0
12.11	0	0	0	0	0
10.9	0	0	0	0	0

1223

WIND SPEED (KTS) 15

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	+	0	0	0	0
24.25	+	+	+	1	0
22.23	2	4	8	1	0
20.21	3	16	23	2	0
18.19	3	14	18	4	0
16.17	+	1	1	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

376

WIND SPEED (KTS) 16

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	2	2	0	0
18.18	1	12	13	2	0
16.17	2	25	31	4	0
14.15	+	4	4	+	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

260

WIND SPEED (KTS) 20

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	+	+	0	0
28.28	0	0	+	0	0
26.27	+	1	1	0	0
24.25	1	4	3	0	0
22.23	3	21	21	3	0
20.21	1	10	13	2	+
18.19	+	2	3	1	+
16.17	0	+	+	+	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

1328

WIND SPEED (KTS) 21

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.26	0	+	0	0	0
22.23	0	5	5	1	0
20.21	1	17	22	3	0
18.19	1	13	12	3	0
16.17	1	5	6	2	1
14.15	+	1	2	0	1
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

260

WIND SPEED (KTS) 22

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	+	0	0	+	0
20.21	+	1	+	+	0
18.19	1	2	1	+	0
16.17	6	10	11	2	+
14.15	7	18	20	6	1
12.13	2	5	4	3	+
10.11	0	0	+	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

945

WIND SPEED (KTS) 23

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	+	+	+	0
18.19	+	1	2	2	+
16.17	1	7	13	5	2
14.15	2	13	18	9	2
12.13	1	5	9	5	1
10.11	+	+	1	+	+
8.9	0	0	0	0	+
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

1618

WIND SPEED (KTS) 24

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.26	+	0	0	0	0
22.23	0	0	+	0	0
20.21	+	+	+	0	+
18.18	1	5	7	2	1
16.17	2	13	20	10	2
14.15	1	8	13	5	3
12.13	+	2	2	1	+
10.11	0	+	+	+	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

755

WIND SPEED (KTS) 25

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.17	0	+	1	+	0
16.16	+	1	4	2	+
14.15	1	9	18	11	2
12.13	1	10	16	7	1
10.11	1	10	16	7	1
8.9	+	4	4	4	1
6.7	+	0	1	+	+
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

621

WIND SPEED (KTS) 29

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	+	+	0	0
16.17	+	1	+	+	+
14.16	+	2	4	3	1
12.13	1	11	14	9	2
10.11	3	8	14	7	2
8.9	1	4	7	5	1
6.7	1	1	1	+	+
4.5	0	0	+	+	+
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0

1109

WIND SPEED (KTS) 30

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	+	0	1	0
10.11	0	+	2	1	+
8.9	1	5	17	7	3
6.7	1	11	18	13	5
4.5	0	3	3	4	3
2.3	0	0	1	2	+
0.1	0	0	0	0	+
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

339

WIND SPEED (KTS) 31

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	0	0	+	1	1
8.8	+	2	7	10	3
6.7	+	8	19	17	8
4.5	+	2	8	7	1
2.3	0	+	3	2	0
0.1	0	0	0	+	0
-2.-1	0	0	+	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0

470

WIND SPEED (KTS) 32

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	1	1	5	7	1
10.11	2	7	12	8	4
8.8	1	8	13	8	2
6.7	+	4	4	6	7
4.5	0	0	+	+	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

282

WIND SPEED (KTS) 33

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	+	0	0	0
14.16	+	+	+	0	0
12.13	+	+	1	+	+
10.11	1	5	7	9	3
8.9	3	13	15	9	3
6.7	1	8	10	4	2
4.5	1	1	1	1	+
2.3	0	+	0	0	0
0.1	0	0	0	0	0
-1.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

970

WIND SPEED (KTS) 34

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	0	4	4	0	0
8.8	0	25	25	8	4
6.7	4	13	4	4	4
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0

24

Graphs represent the objective compilation of available data for specified areas without regard t
The isopleth analyses (opposite page) are based on all available data subjectively adjusted wher

1

TEMPERATURE

JULY

(°C) and wind speed

speed of 22 33 kts)

plained in the text

ue to heat)

han the given value)

e given value)

1

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	+	0	0	0	0
34.35	+	0	0	0	0
32.33	+	1	0	0	0
30.31	2	4	3	+	0
28.29	8	31	18	+	0
26.27	6	16	9	+	0
24.25	+	1	+	0	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

561

2

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	0	+	0	0
32.33	0	+	0	0	0
30.31	+	1	1	0	0
28.29	1	19	21	+	0
26.27	4	29	16	+	0
24.25	+	3	2	+	0
22.23	+	0	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

668

3

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	0	+	0	0
32.33	0	+	0	0	0
30.31	1	1	2	0	0
28.29	2	11	7	0	0
26.27	3	30	27	2	0
24.25	1	6	7	+	0
22.23	0	2	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

386

4

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	0	0	0
30.31	1	1	+	0	0
28.29	3	7	5	+	0
26.27	4	26	27	2	0
24.25	1	10	5	+	+
22.23	0	1	1	0	0
20.21	+	1	1	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

693

5

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	+	0	0
28.29	+	1	+	0	0
26.27	+	3	5	+	0
24.25	1	17	15	+	0
22.23	2	27	12	+	0
20.21	2	12	1	+	0
18.19	1	1	+	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

1035

6

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	0	0	0
30.31	+	1	+	0	0
28.29	2	8	1	0	0
26.27	12	41	10	0	0
24.25	2	14	5	+	0
22.23	+	2	1	0	0
20.21	+	+	0	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1268

7

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	0	+	0	0
30.31	1	2	2	1	0
28.29	0	9	19	3	0
26.27	1	16	39	2	+
24.25	0	1	2	+	0
22.23	0	+	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

392

8

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	0	0	0
32.33	0	0	+	0	0
30.31	+	1	1	0	0
28.29	+	2	6	+	0
26.27	+	11	37	4	+
24.25	+	9	25	1	0
22.23	0	+	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

843

9

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	0	+	0	0
28.29	0	+	+	0	0
26.27	0	1	2	+	0
24.25	+	6	20	1	0
22.23	+	13	48	5	0
20.21	0	1	3	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

1557

10

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	+	+	0	0
26.27	0	1	1	0	0
24.25	+	7	6	+	0
22.23	1	28	15	+	0
20.21	1	25	10	+	0
18.19	0	2	2	0	0
16.17	0	+	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

1782

14

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	+	+	0	0
26.27	+	1	2	0	0
24.25	1	5	11	1	0
22.23	3	19	42	6	+
20.21	+	3	5	1	0
18.19	0	+	+	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

1223

15

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	+	0	0	0	0
24.25	+	+	+	1	0
22.23	2	4	8	1	0
20.21	3	16	23	2	0
18.19	3	14	18	4	0
16.17	+	1	1	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

376

16

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	2	2	0	0
18.19	1	12	13	2	0
16.17	2	26	31	4	0
14.15	+	4	4	+	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

260

17

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	+	+	0	0
26.27	0	1	1	0	0
24.25	+	2	1	+	0
22.23	1	8	9	2	0
20.21	3	12	20	4	+
18.19	2	10	16	3	+
16.17	0	2	1	+	0
14.15	+	1	0	0	+
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

603

18

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	+	+	0	0
24.25	+	4	3	1	+
22.23	1	11	14	2	+
20.21	1	14	18	3	1
18.19	1	8	12	3	+
16.17	+	+	1	+	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

723

19

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	0	+	0	0	0
22.23	+	+	+	+	0
20.21	+	3	4	2	+
18.19	1	9	15	8	1
16.17	1	11	18	8	2
14.15	+	4	5	2	1
12.13	+	+	+	+	+
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

1084

23

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	+	+	+	0
18.19	+	1	2	2	+
16.17	1	7	13	5	2
14.15	2	13	18	9	2
12.13	1	5	9	5	1
10.11	+	+	1	+	+
8.9	0	0	0	0	+
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

1616

24

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	+	0	0	0	0
22.23	0	0	+	0	0
20.21	+	+	+	0	+
18.19	1	5	7	2	1
16.17	2	13	20	10	2
14.15	1	8	13	3	3
12.13	+	2	2	1	+
10.11	0	+	+	+	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

755

25

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	+	1	+	0
14.15	+	1	4	2	+
12.13	1	9	18	11	2
10.11	1	10	16	7	1
8.9	+	4	4	4	1
6.7	+	0	1	+	+
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

621

26

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	0	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	+	0
16.17	0	4	7	3	0
14.15	0	11	19	8	1
12.13	5	14	12	5	2
10.11	0	+	3	2	1
8.9	0	0	0	0	1
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

261

27

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	+	0	+	0	0
18.19	2	3	4	2	+
16.17	4	12	9	5	1
14.15	4	21	14	8	2
12.13	1	4	3	1	1
10.11	0	1	0	+	+
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

524

28

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	+	+	0	0
16.17	1	1	1	1	+
14.15	5	8	10	5	2
12.13	8	16	19	7	2
10.11	3	6	7	3	1
8.9	1	0	+	+	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0

675

32

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	1	1	5	7	1
10.11	2	7	12	8	4
8.9	1	6	13	8	2
6.7	+	4	4	6	7
4.5	0	0	+	+	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

282

33

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	+	0	0	0
14.15	+	+	+	0	0
12.13	+	+	1	+	+
10.11		5	7	9	3
8.9	3	13	15	9	3
6.7	1	8	10	4	2
4.5	1	1	1	1	+
2.3	0	+	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

970

34

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	0	4	4	0	0
8.9	0	25	25	8	4
6.7	4	13	4	4	4
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0

24

35

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
6.7	0	5	5	2	1
4.5	0	2	16	7	0
2.3	0	6	21	12	4
0.1	0	1	4	9	1
-2.-1	0	1	0	0	2
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0
-12.-11	0	0	0	0	0
-14.-13	0	0	0	0	0

82

36

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	0	0	+	+	0
8.9	0	+	+	1	1
6.7	+	3	16	14	5
4.5	+	6	12	9	4
2.3	+	4	9	6	1
0.1	1	1	1	1	1
-2.-1	0	0	0	1	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0

356

37

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	0	+	0	0
10.11	0	0	0	0	0
8.9	0	+	1	0	+
6.7	+	2	3	5	5
4.5	1	8	12	9	9
2.3	2	8	11	7	4
0.1	1	2	3	3	2
-2.-1	0	+	+	1	+
-4.-3	0	0	+	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

1249

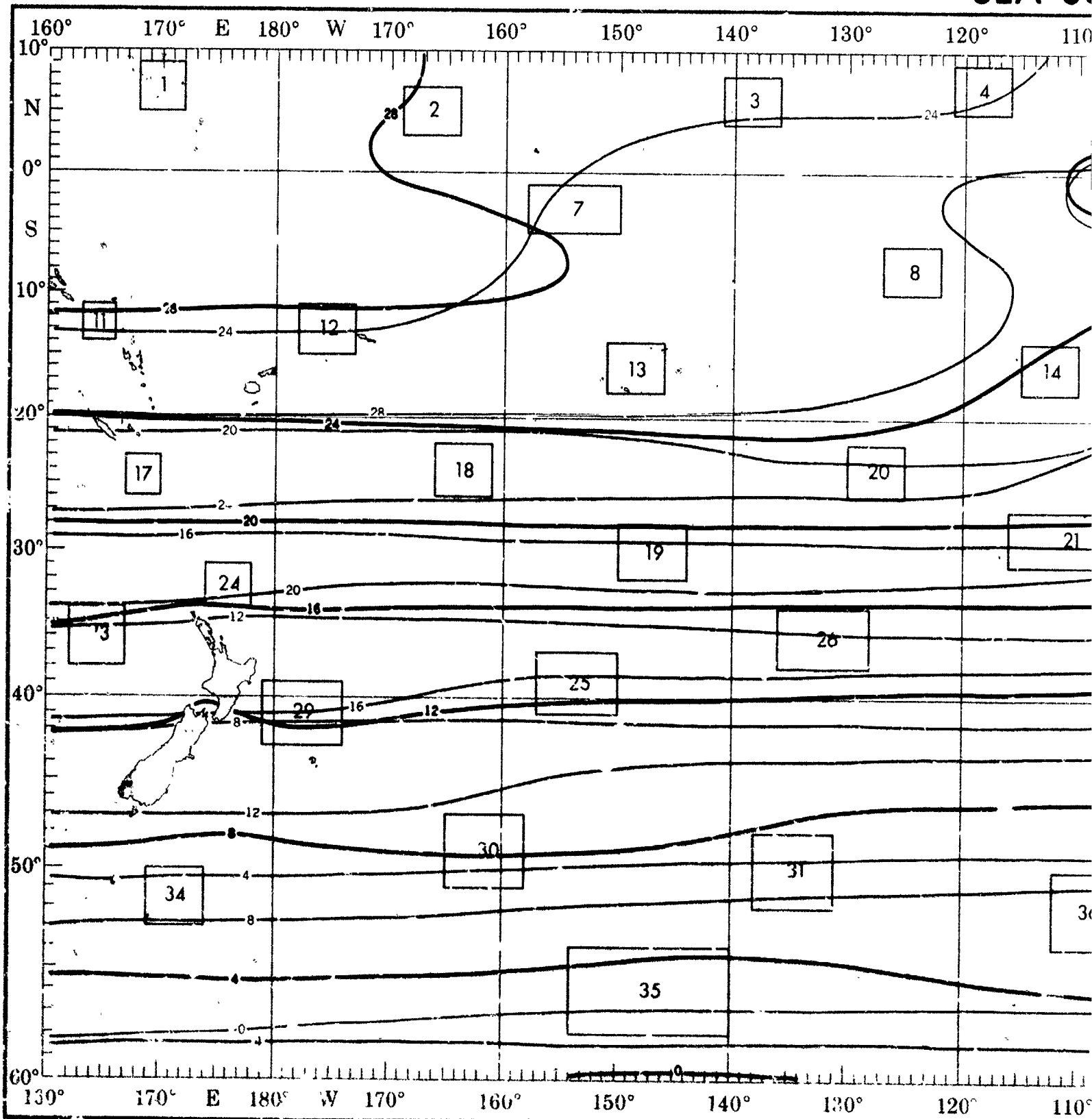
he objective compilation of available data for specified areas without regard to suspected biases.

es (opposite page) are based on all available data subjectively adjusted where bias was evident.

1 1 2

JULY

SEA SU


160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110
10° N 0° S 10° 20° 30° 40° 50° 60°
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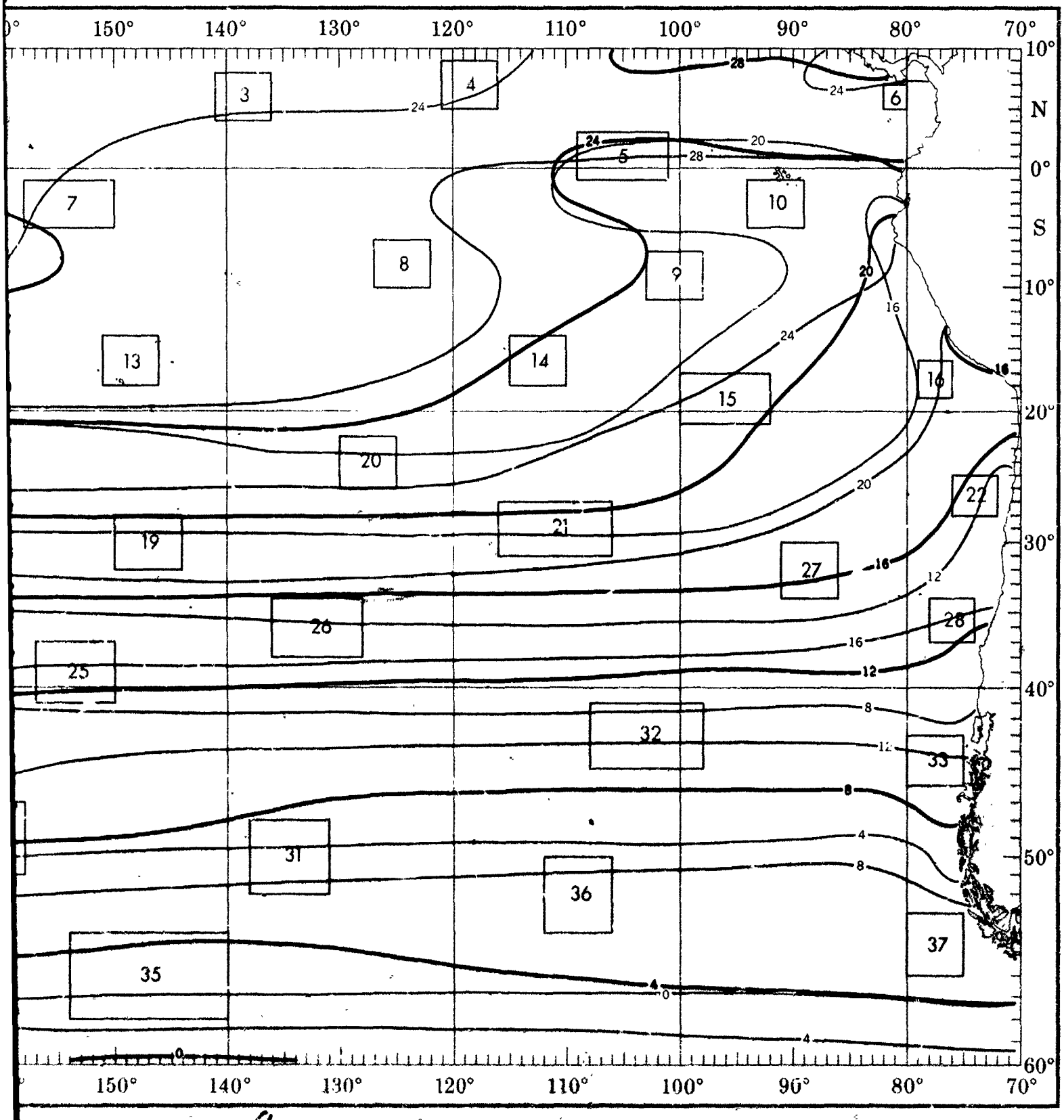
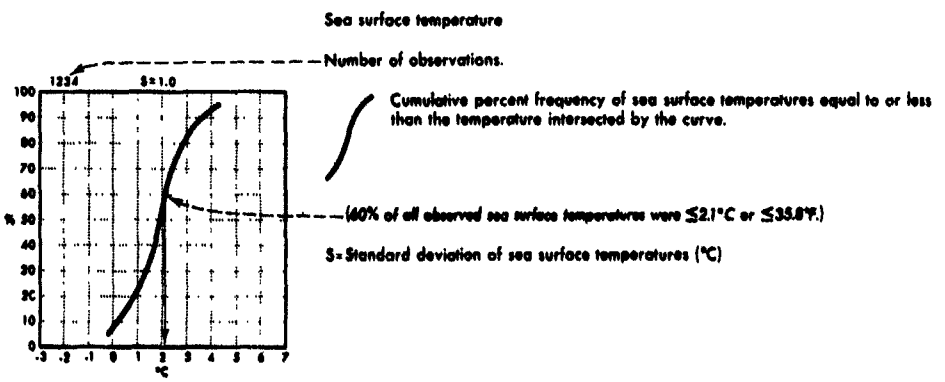
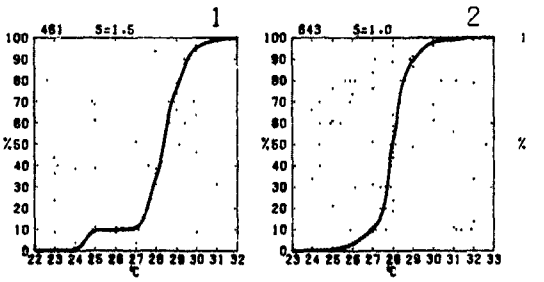
0

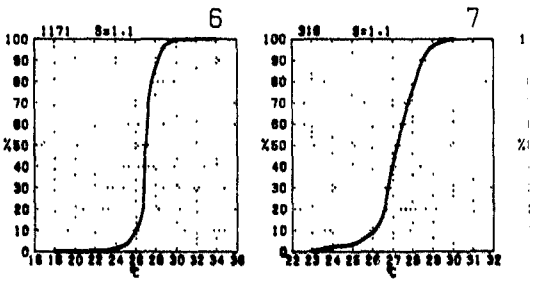
SEA SURFACE TEMPERATURE



SEA SURFACE TEMPERATURE



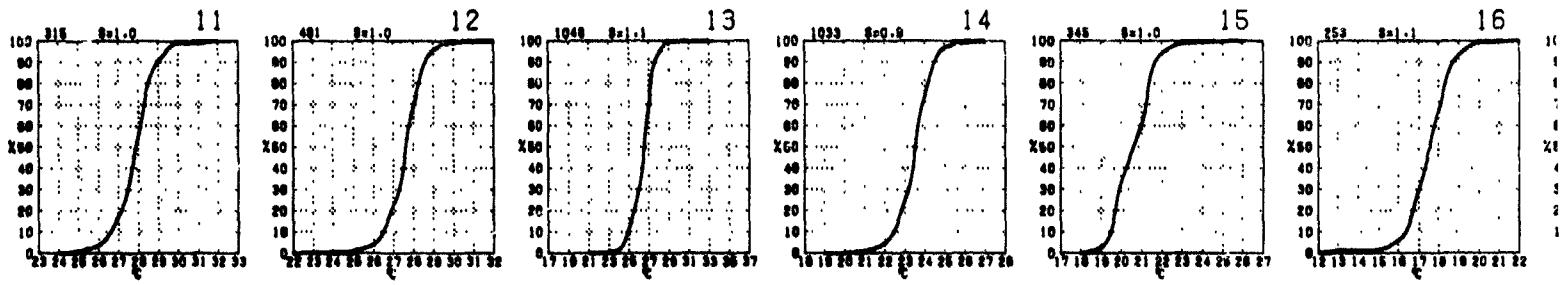


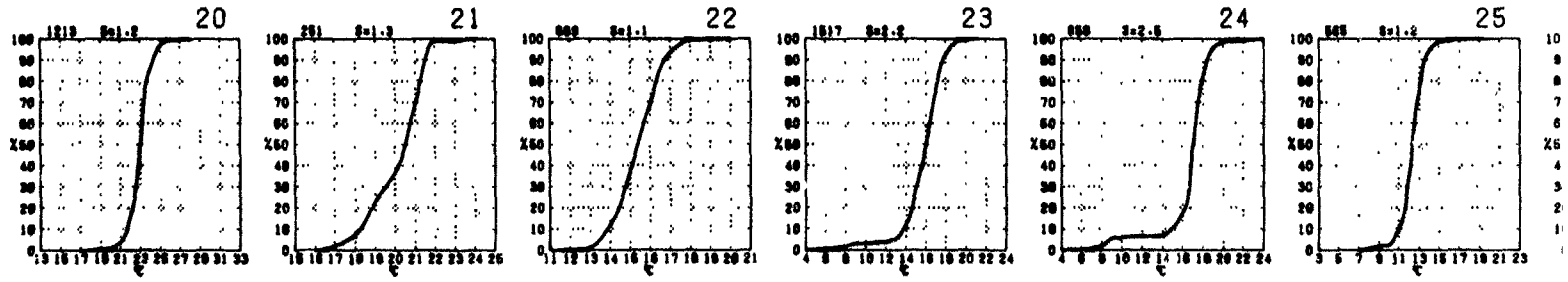


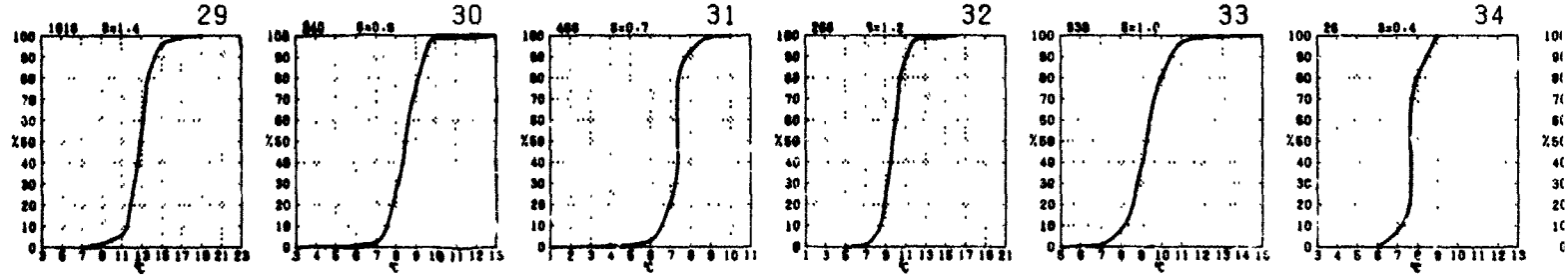
BLACK LINE - Mean sea surface temperature (°C)

BLUE LINE - Minimum (1%) sea surface temperature (°C) (1% of the temperatures were equal to or less than the given value)

RED LINE - Maximum (99%) sea surface temperature (°C) (1% of the temperatures were greater than the given value)







Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

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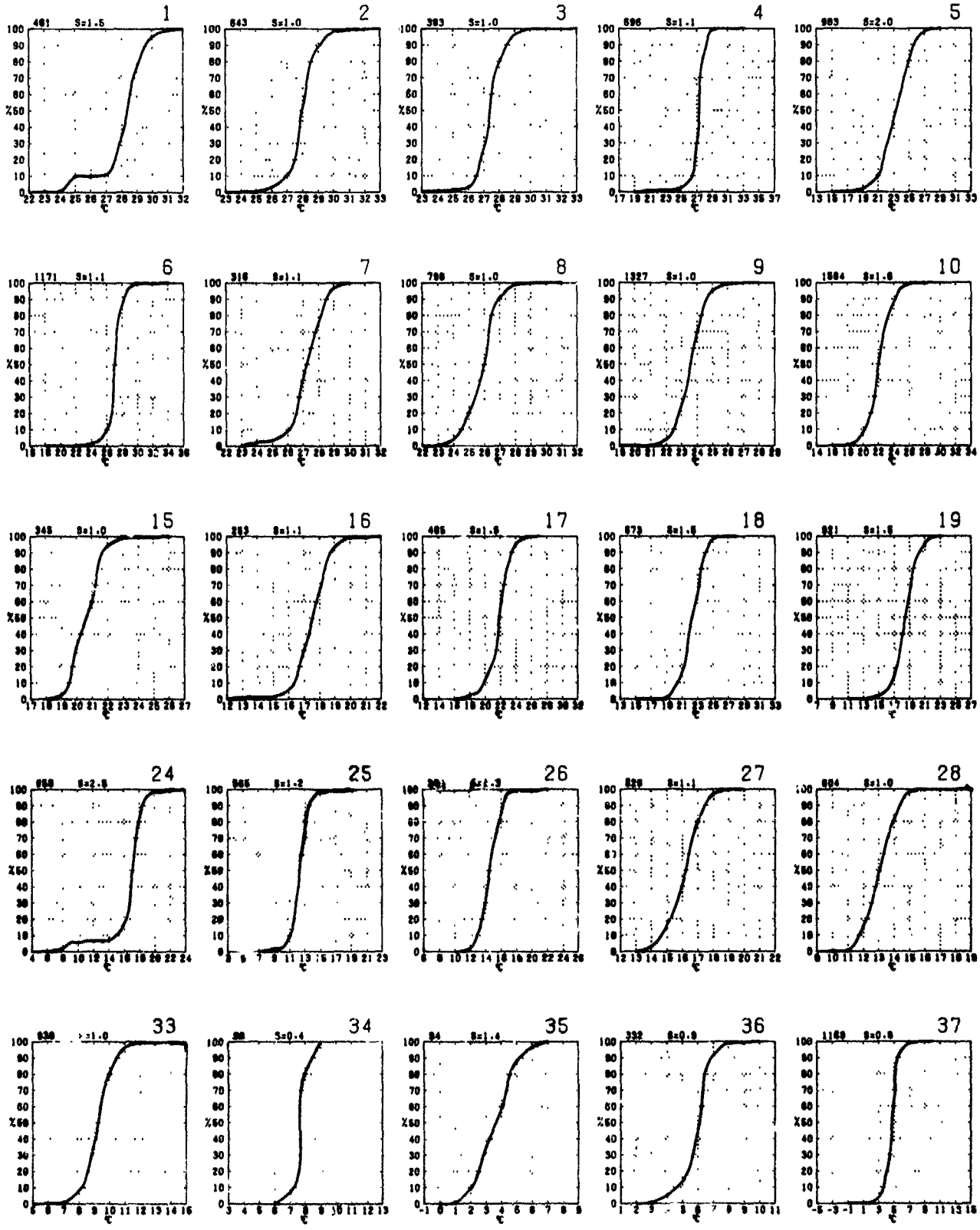
JULY



nperatures equal to or less

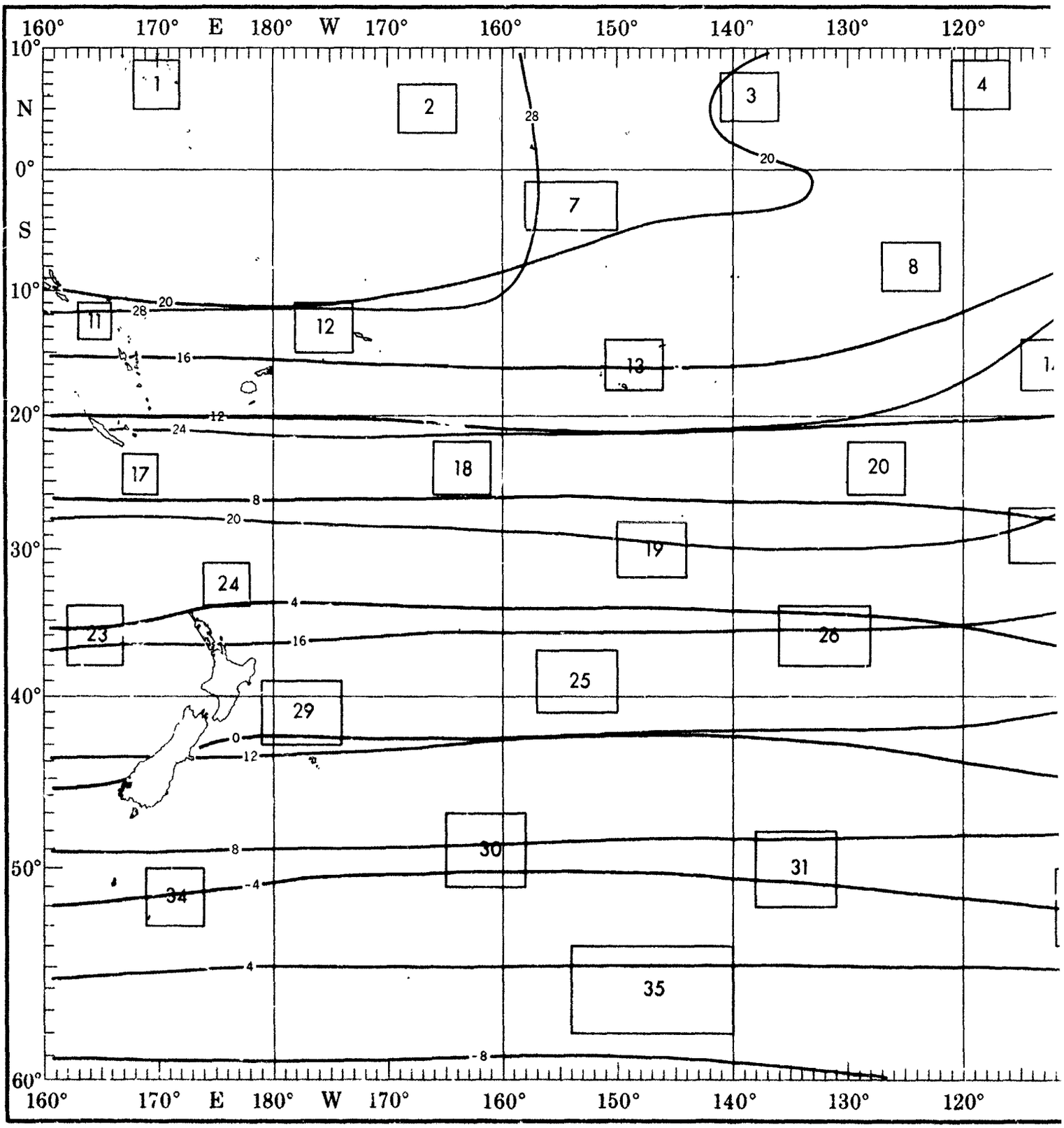
or ≤35.8°F.)

or less than the given

r than the given value)

e objective compilation of available data for specified areas without regard to suspected biases.
s (opposite page) are based on all available data subjectively adjusted where bias was evident.

JULY


160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N 0° S 10° 20° 30° 40° 50° 60°
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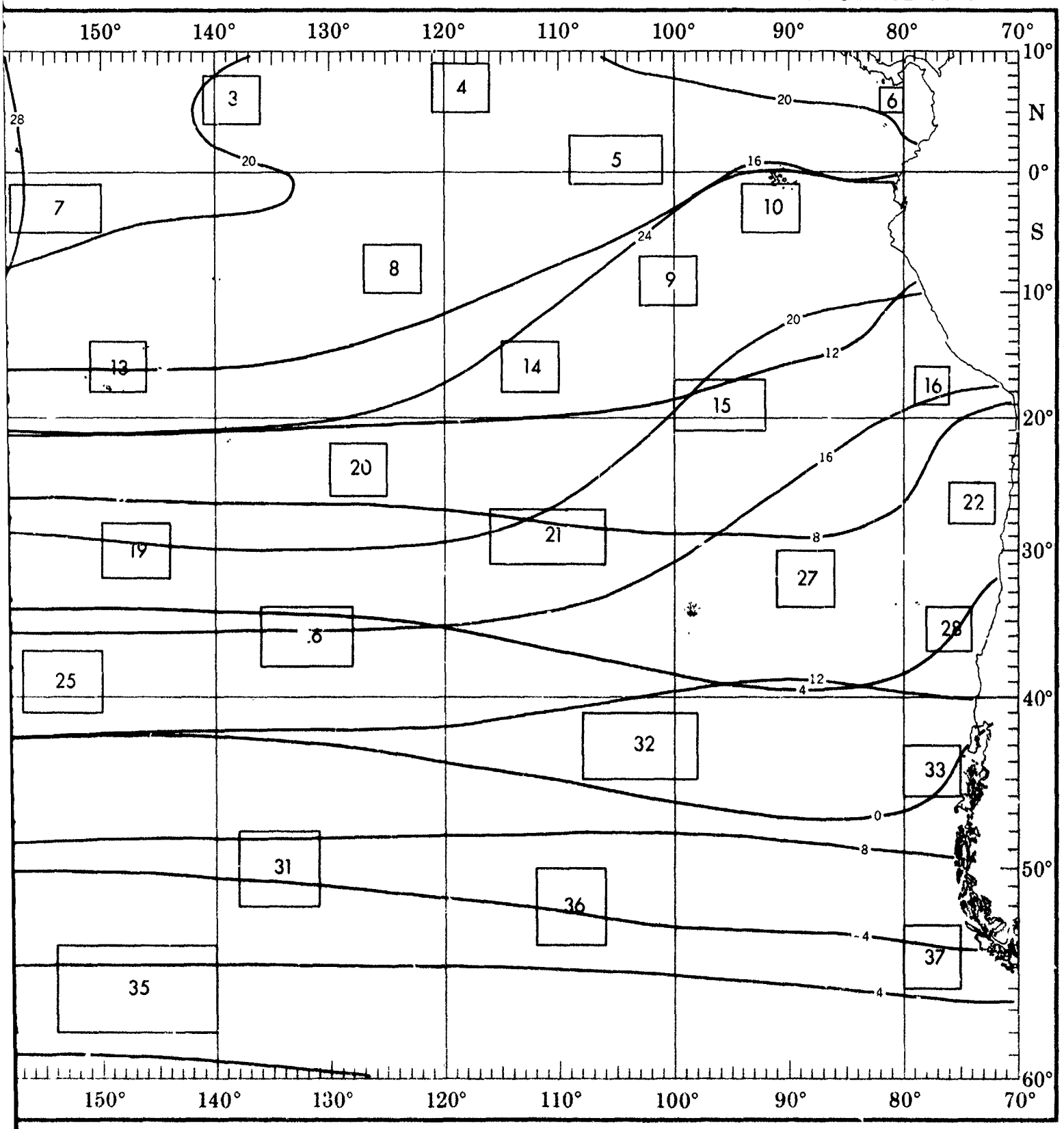
8

HUMIDITY


150°
140°
130°
120°
110°
100°
90°
80°
70°
10° N
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30°
40°
50°
60°
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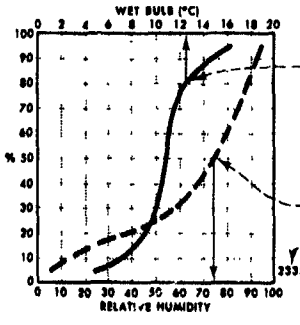
4

WET BULB AND RELATIVE HUMIDITY



Wet bulb - Relative humidity

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* ≤12.5°C *or* 54.5°F.)

Cumulative percent frequency of relative humidities equal to or less than the humidity intersected by the curve (bottom scale)

Relative humidity (%)

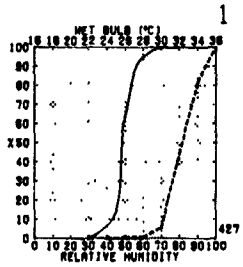
(50% of *all observed relative humidities were* ≤74%)

Number of observations.

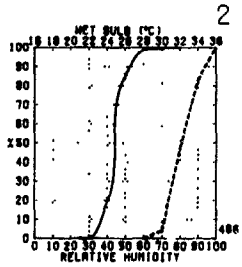
BLUE LINE Minimum (1%) dew-point temperature (°C) (1% of the computed values were equal to or less than the given value)

RED LINE Maximum (99%) dew-point temperature (°C) (1% of the computed values were greater than the given value)

1



2



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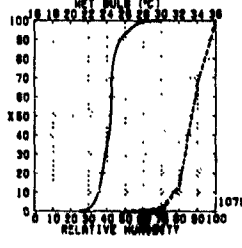

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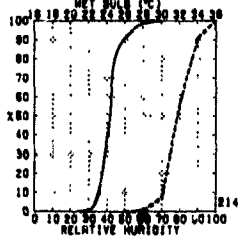

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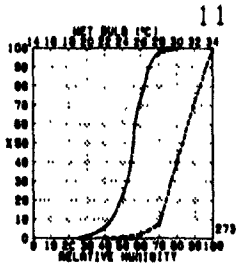

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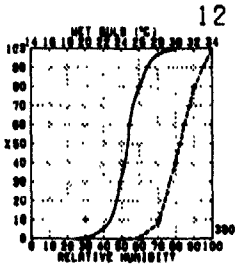

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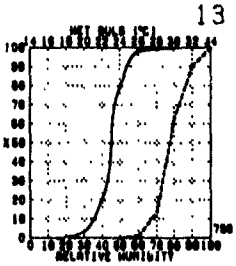

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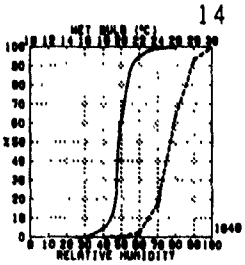

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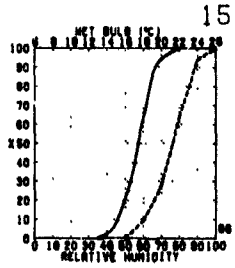

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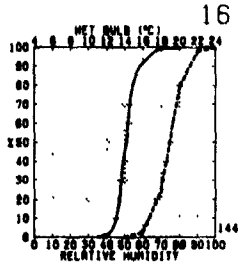

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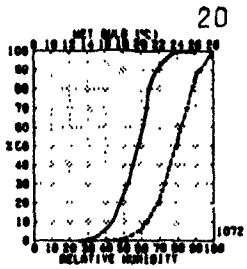

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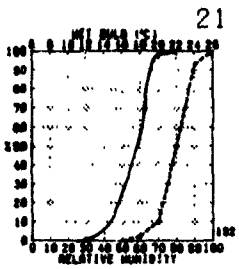

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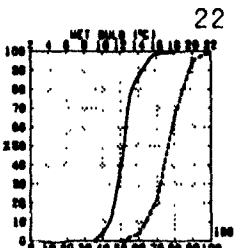

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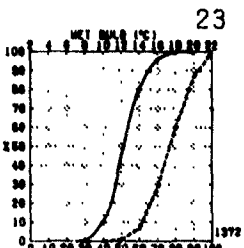

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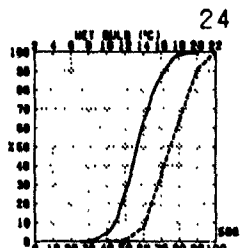

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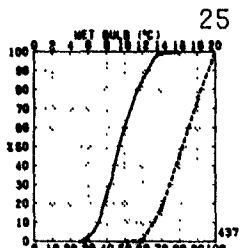

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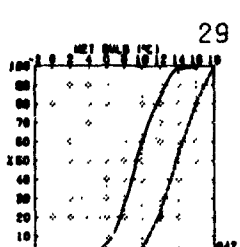

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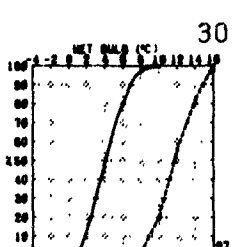

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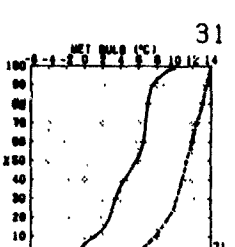
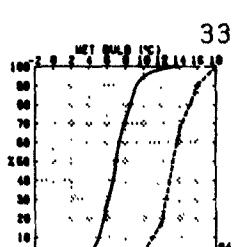


32

INSUFFICIENT DATA

33



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INSUFFICIENT DATA

Graphs represent the objective compilation of available data for specified areas without regard
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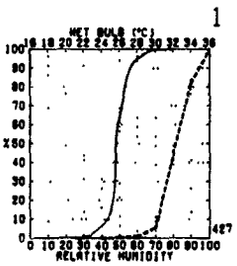

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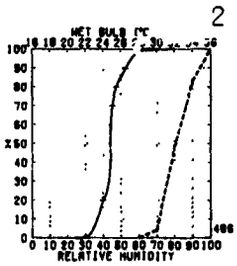

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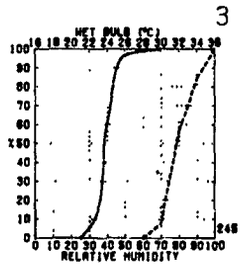

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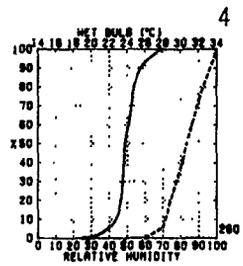

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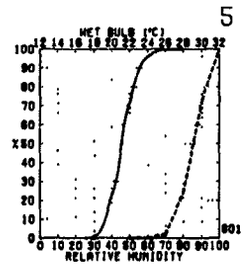

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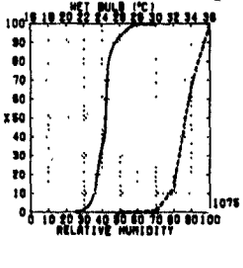

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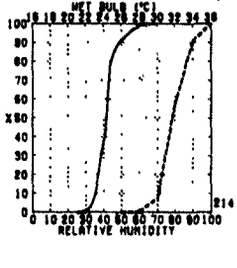

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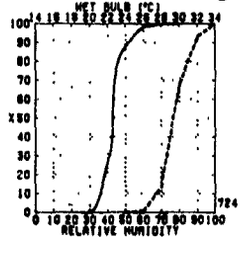

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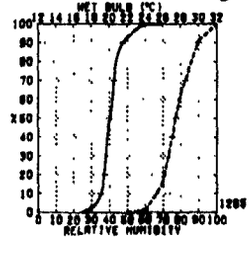

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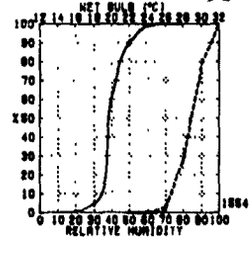

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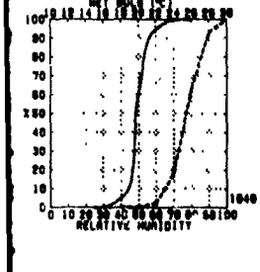

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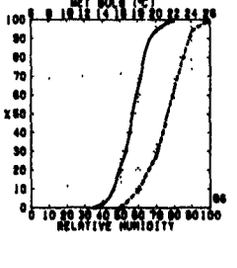

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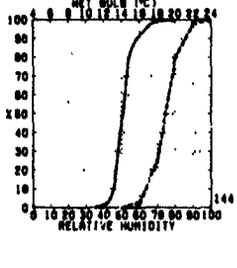

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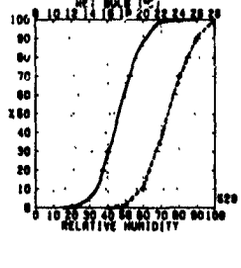

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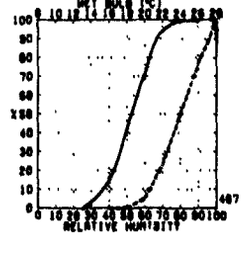

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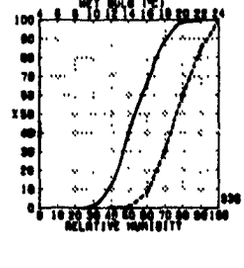

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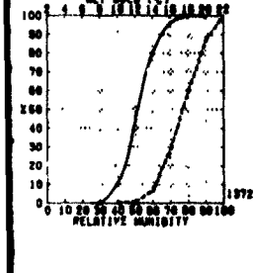

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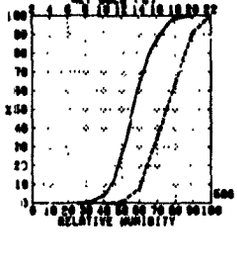

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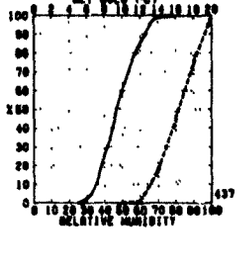

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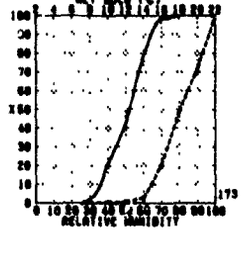

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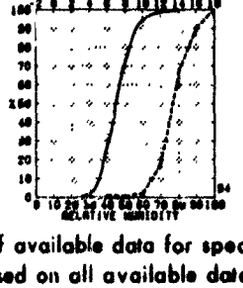

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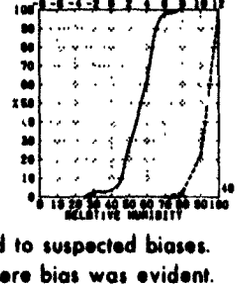

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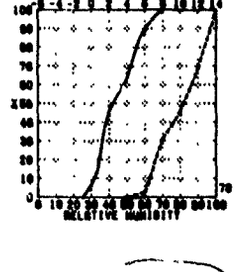

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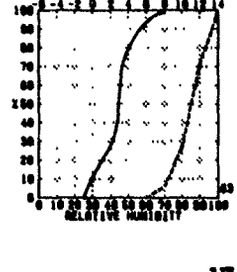

objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

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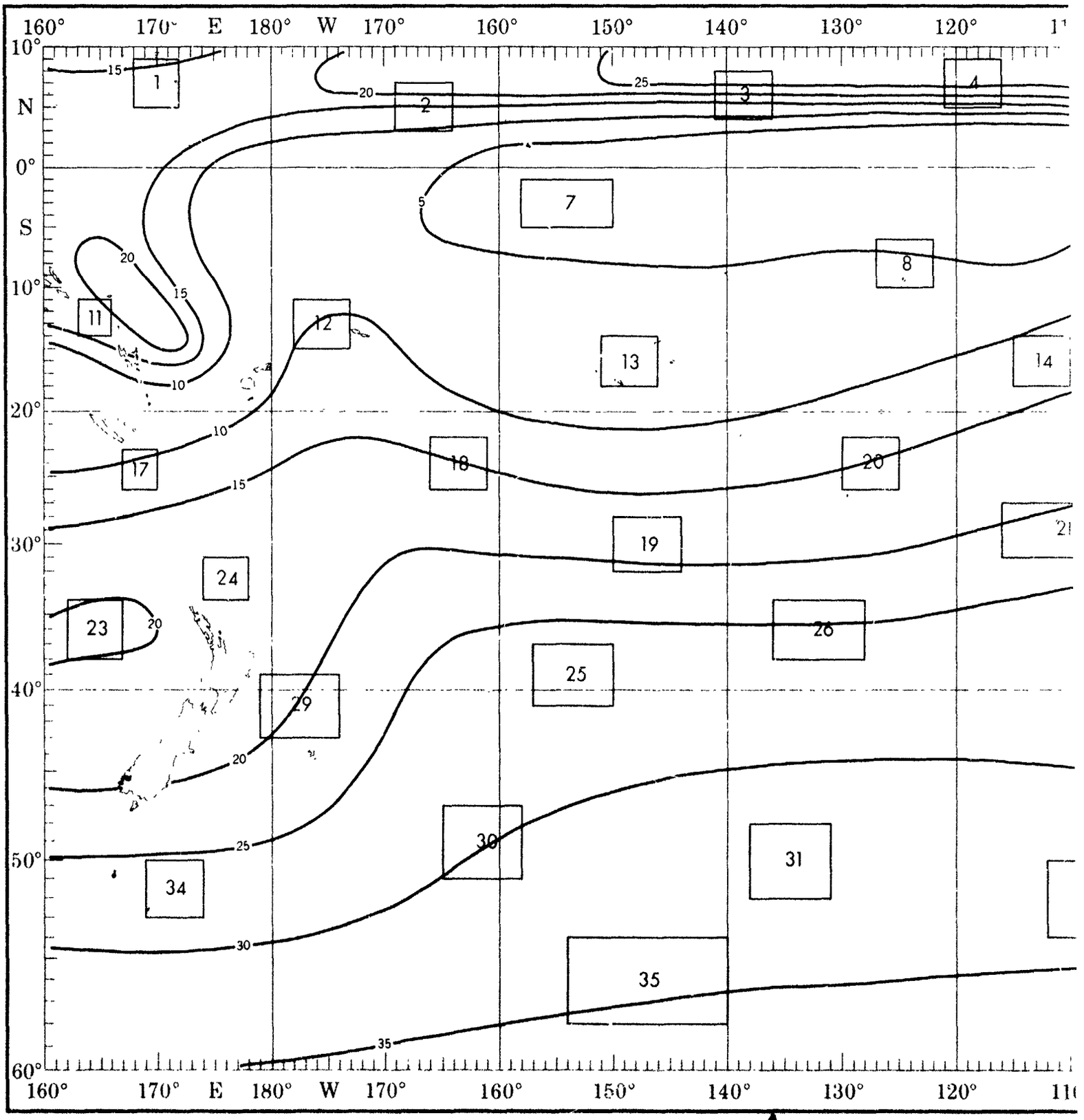
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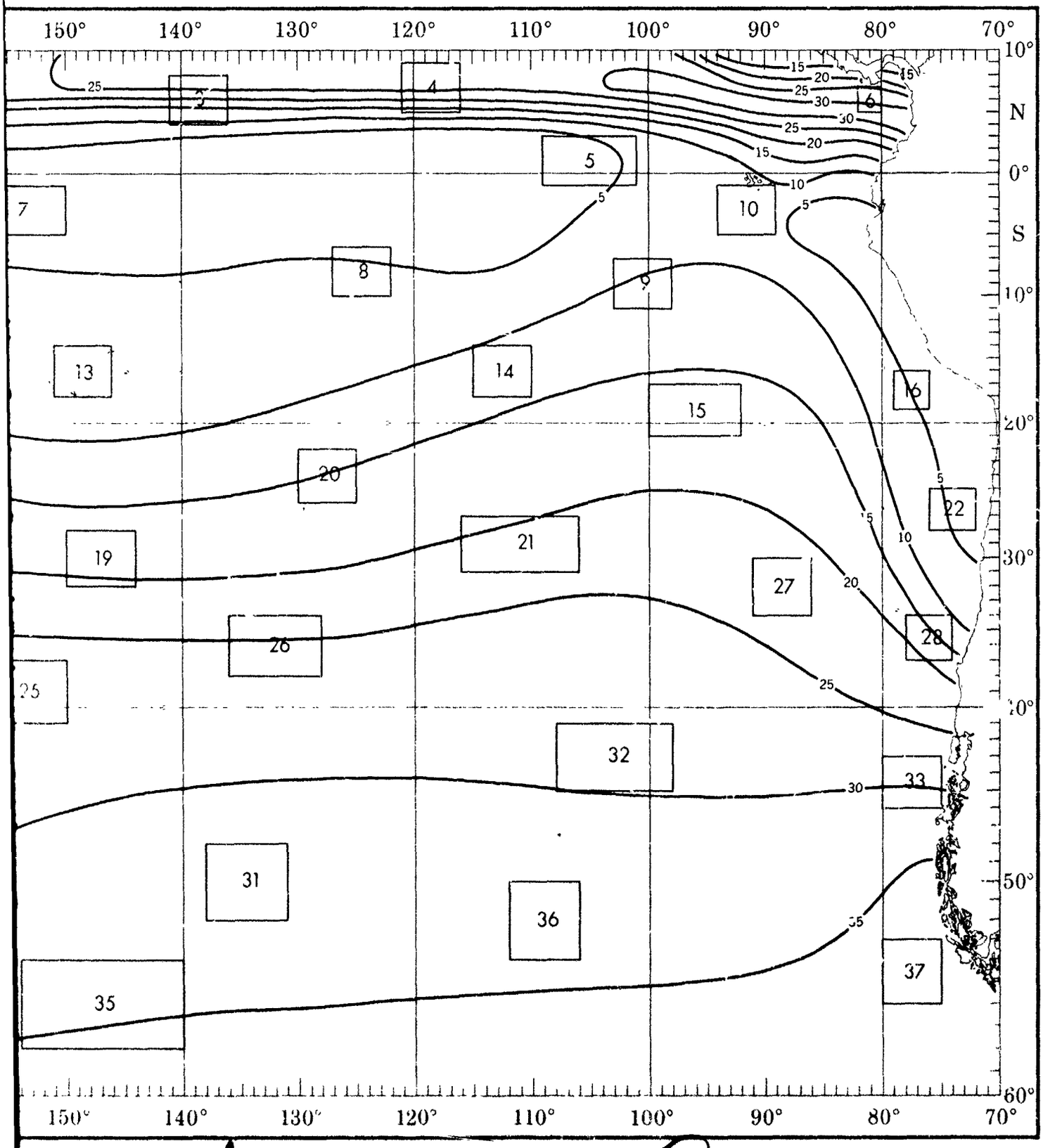
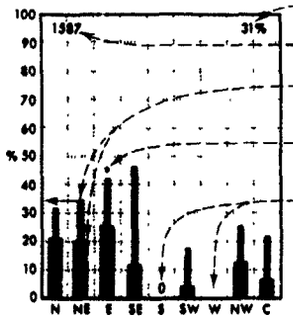
PRECIPITATION



PRECIPITATION

% Pcpn { % Liquid / % Snow

Percent frequency of surface wind observations from each direction and calm that were accompanied by precipitation, subdivided into liquid type (including freezing rain and freezing drizzle) and snow



—Percentage of present weather observations reporting precipitation

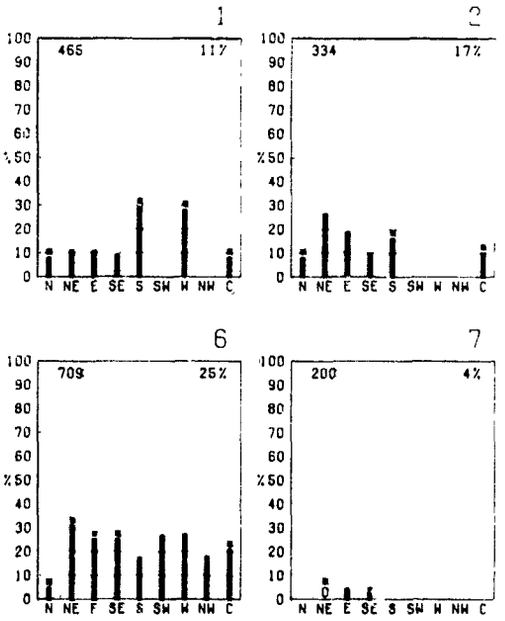
—Number of observations

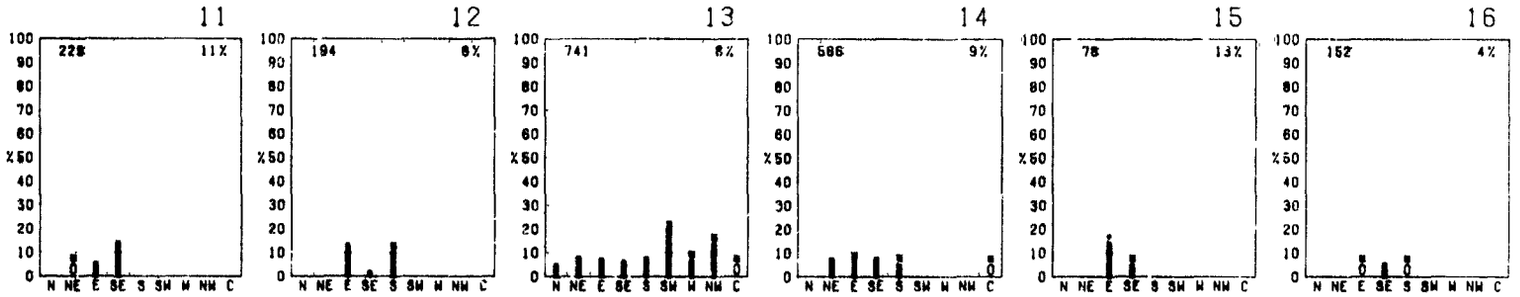
—(34% of all NE winds were accompanied by precipitation, of which 14% was liquid and 20% was snow)

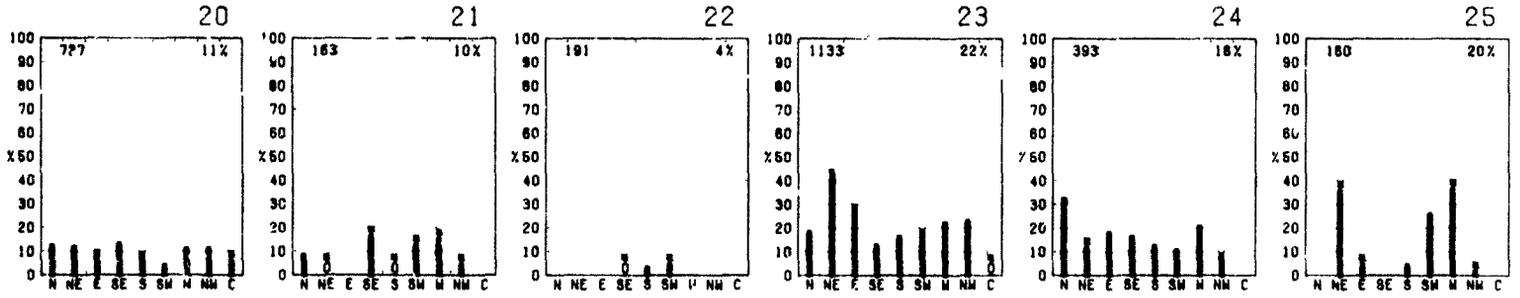
—An asterisk in the column for a given direction or calm indicates that the percentage was based on 10-30 observations of present weather and wind direction

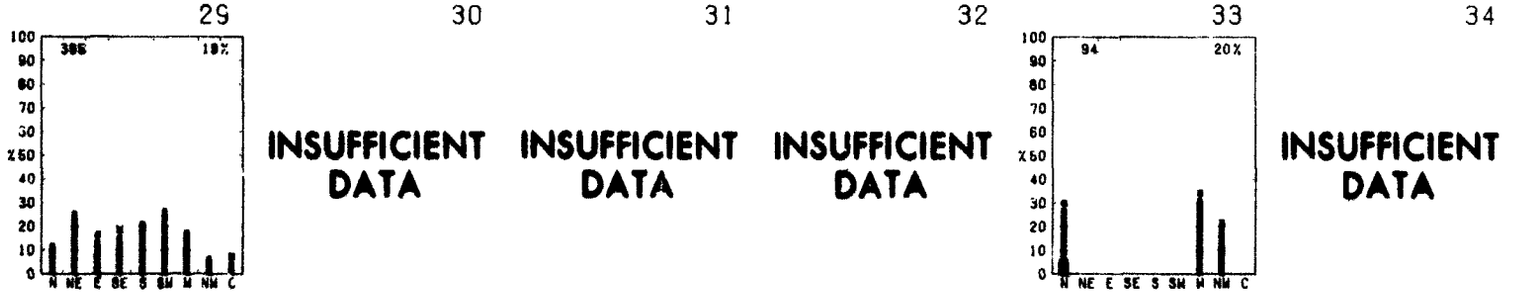
—0 replaces bar when no precipitation was observed with winds from a given direction or calm. No bar graph is presented if less than 10 observations containing present weather were reported for a given direction or calm

RED LINE - Percent frequency of observations reporting precipitation









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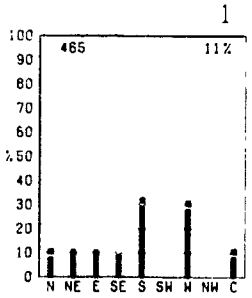

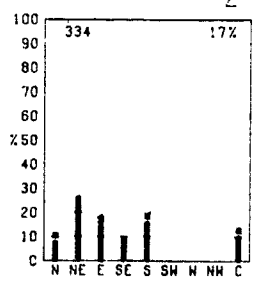

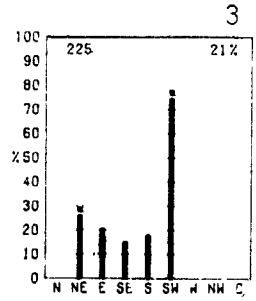

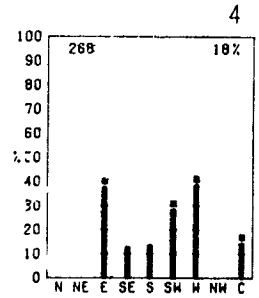

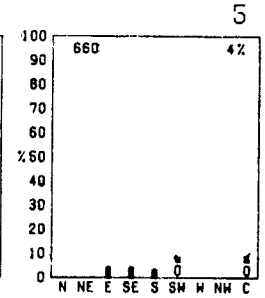

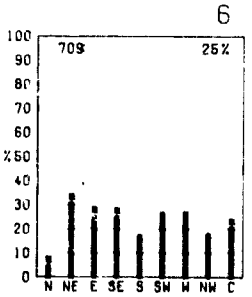

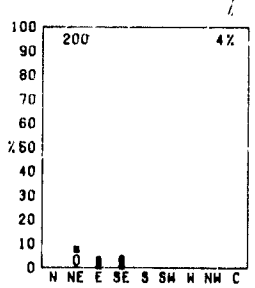

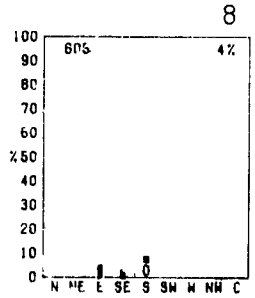

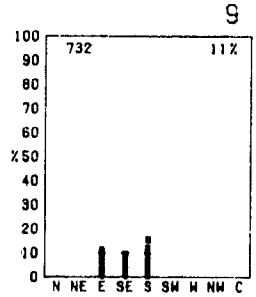

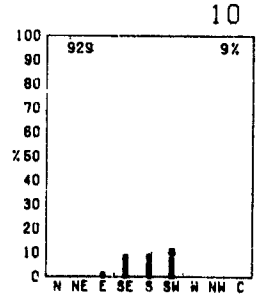

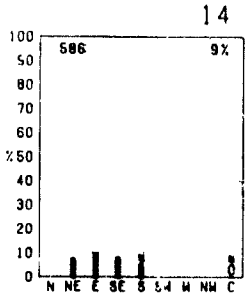

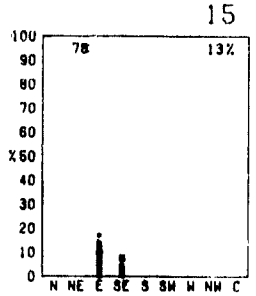

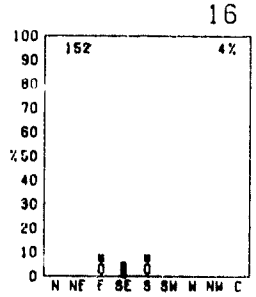

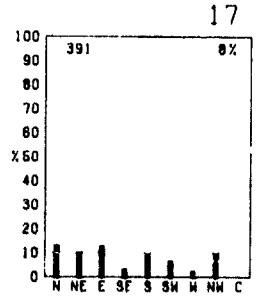

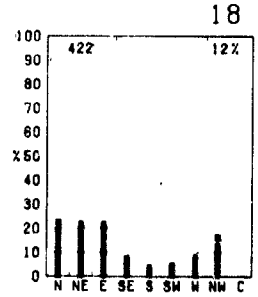

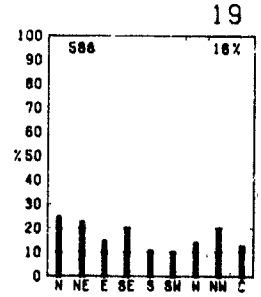

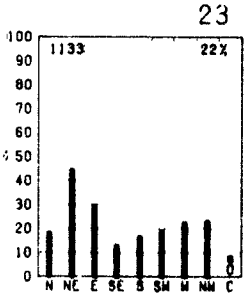

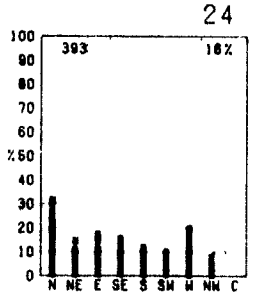

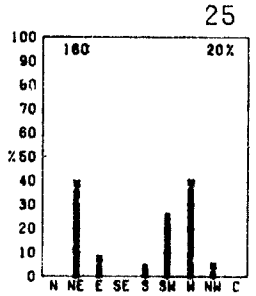

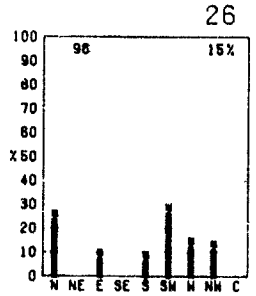

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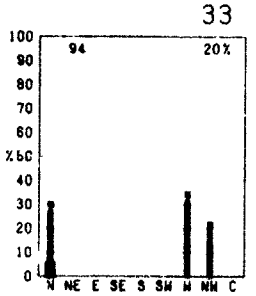

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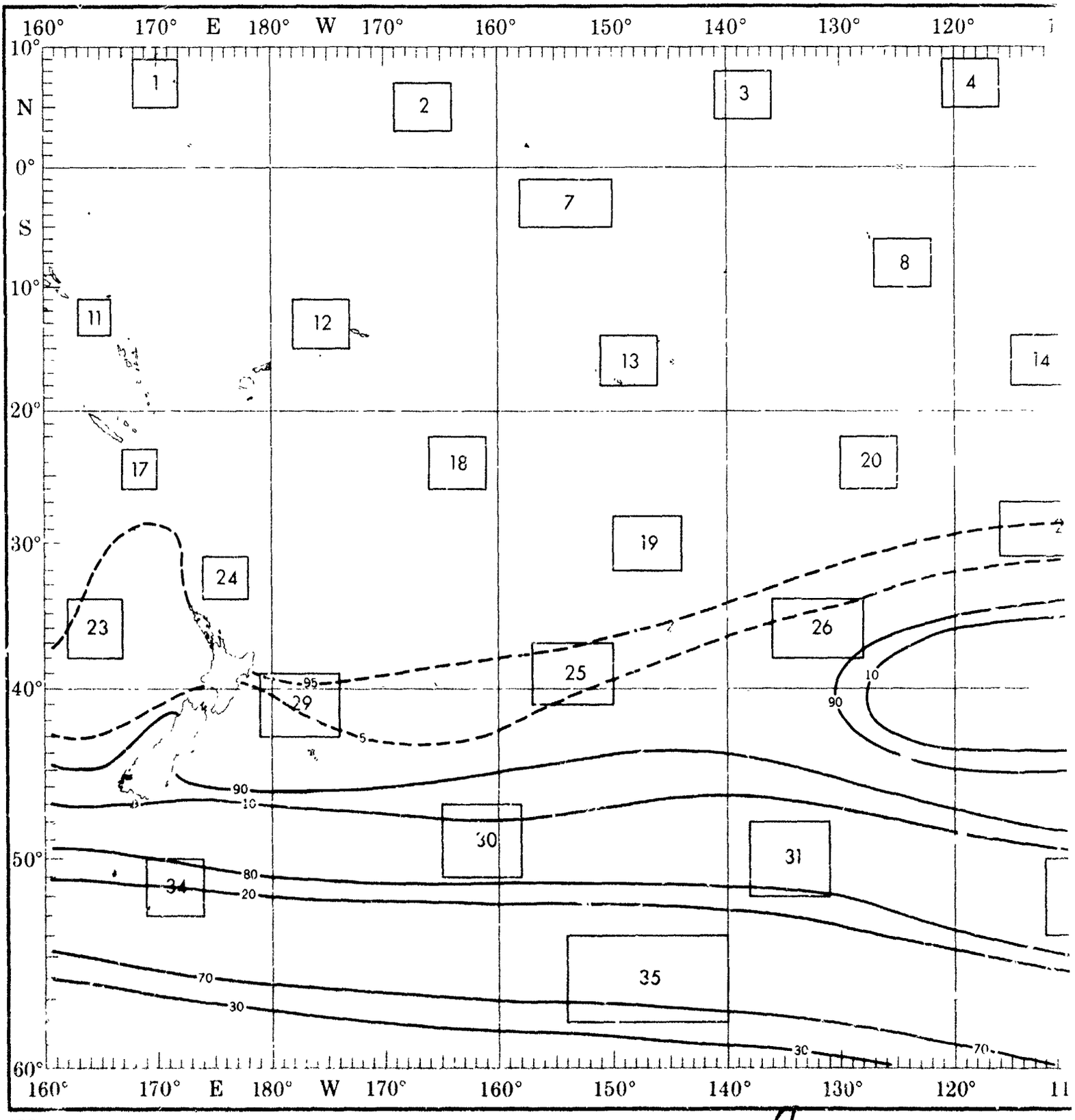
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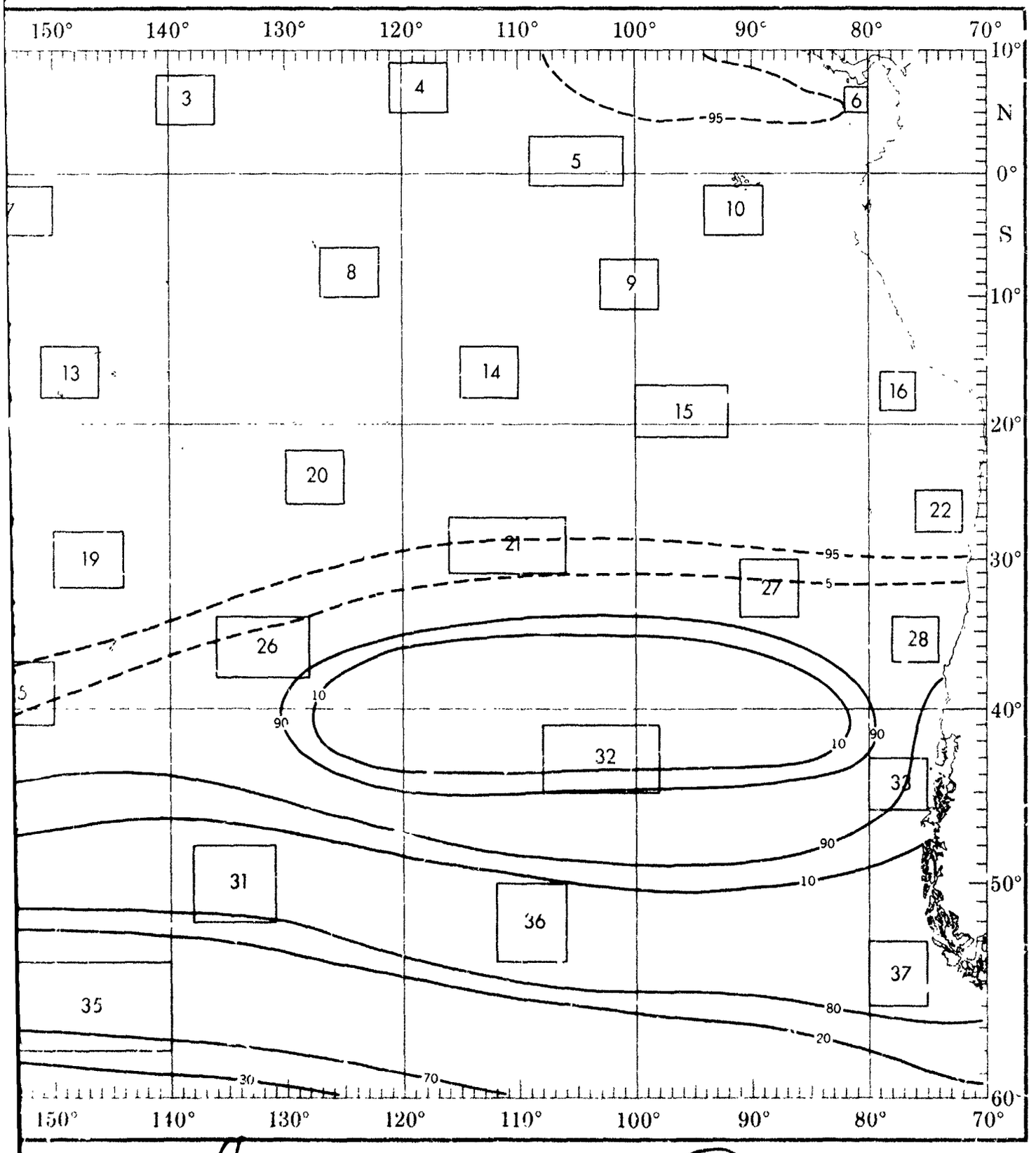
VISIBILITY


150°
140°
130°
120°
110°
100°
90°
80°
70°
10° N
0°
10° S
20°
30°
40°
50°
60°
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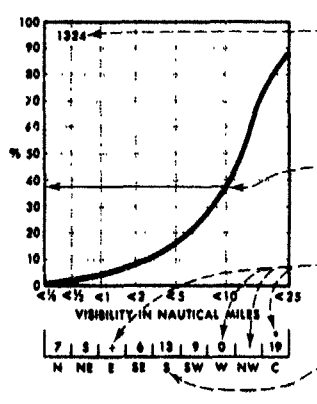
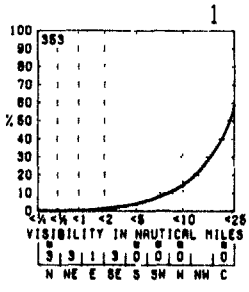
20

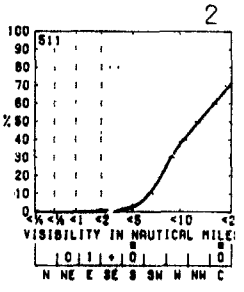
VISIBILITY

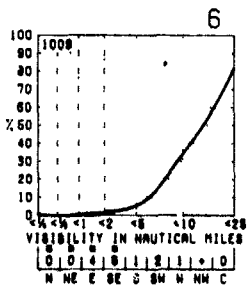


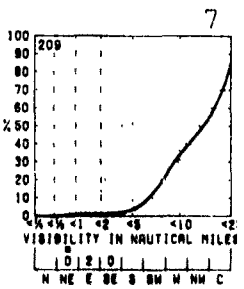
BLUE LINE - Percent frequency of visibilities ≤5 nautical miles

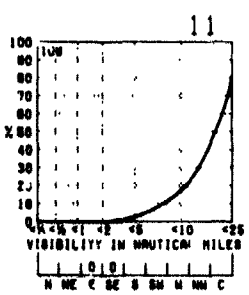
RED LINE - Percent frequency of visibilities <2 nautical miles

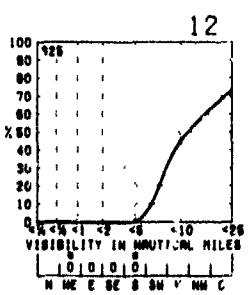


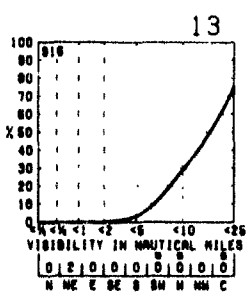


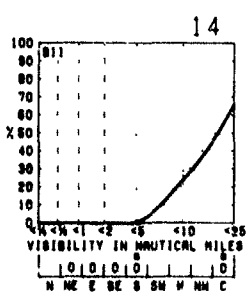


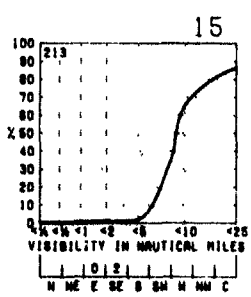


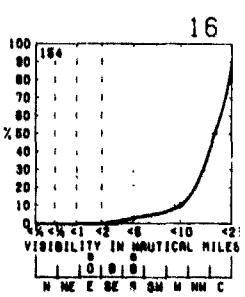


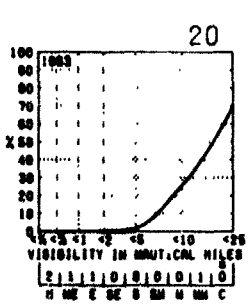


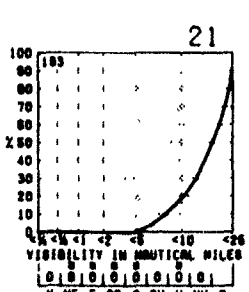


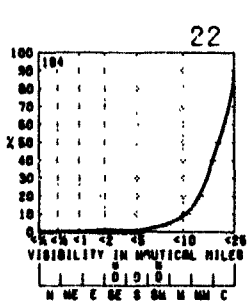


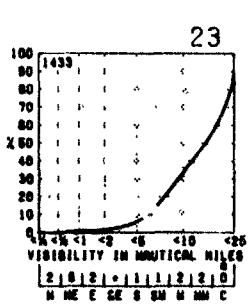


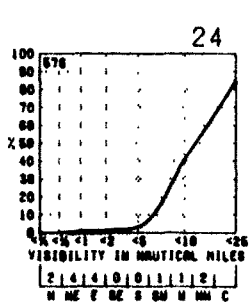


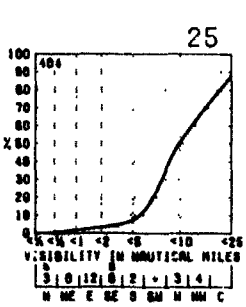


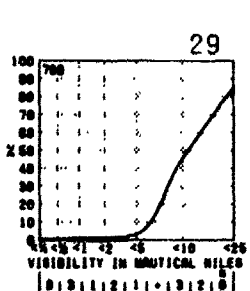


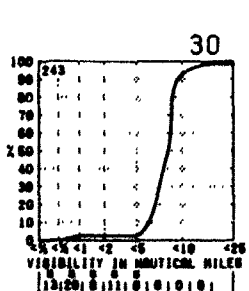


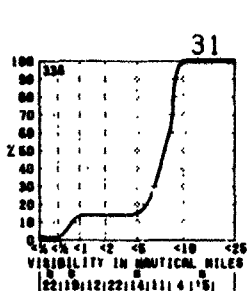


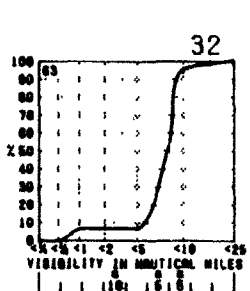


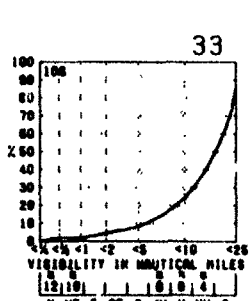












34

INSUFFICIENT DATA

Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted wh

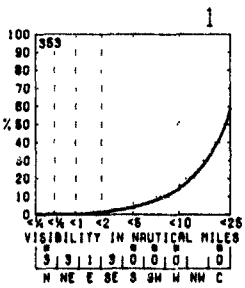
than the visibility intersect

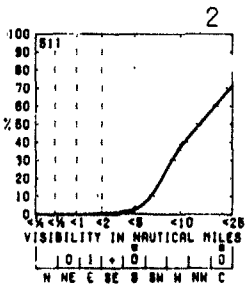
f occurrence of visibility

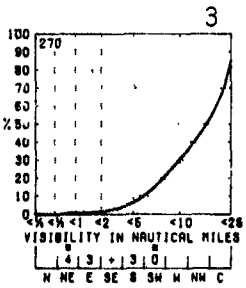
2 nautical miles were
ntage is given if less than 10
ion. An asterisk indicates
visibility and wind direction

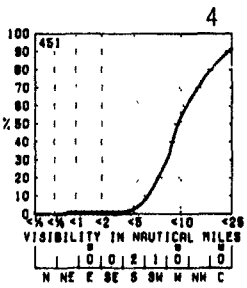
cal miles)

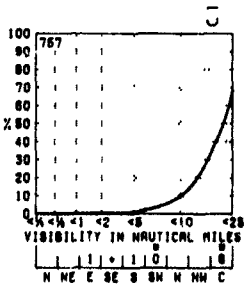
JULY

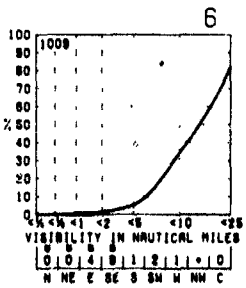


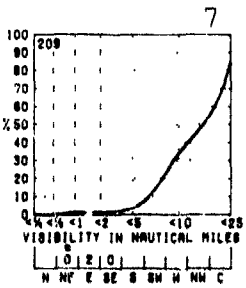


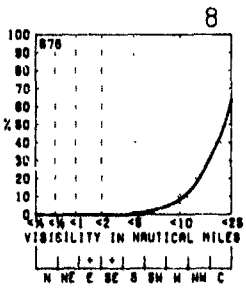


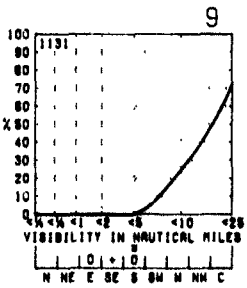


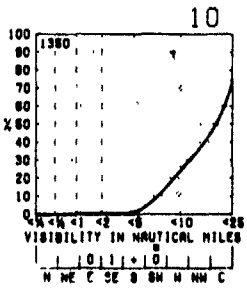


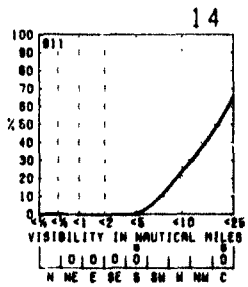


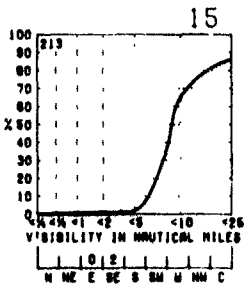


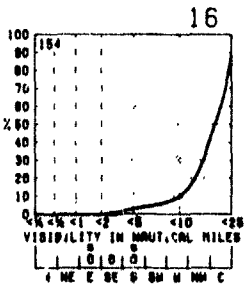


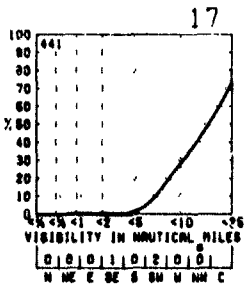


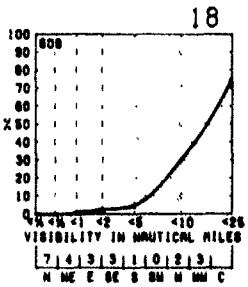


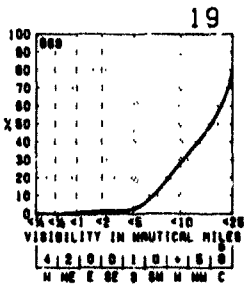


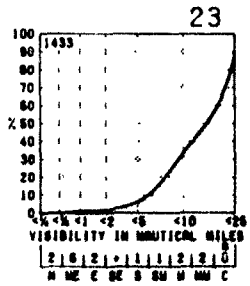


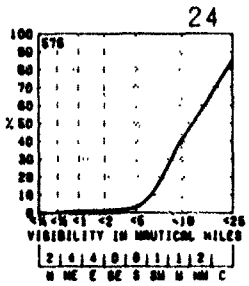


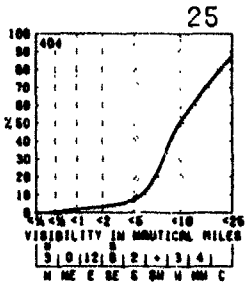


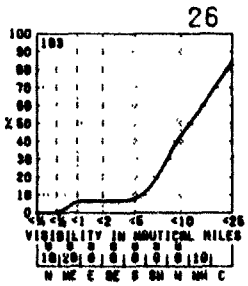


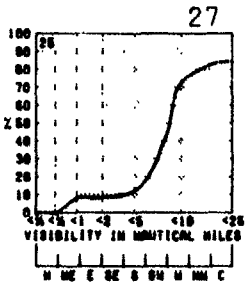












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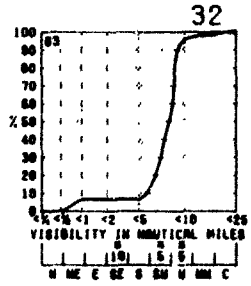
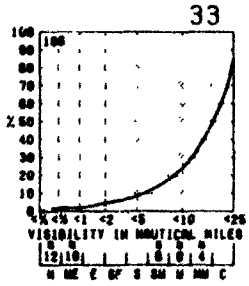
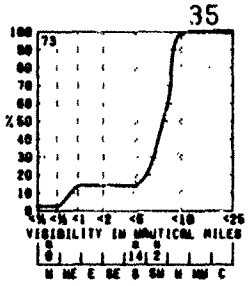
INSUFFICIENT DATA

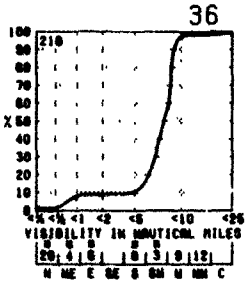


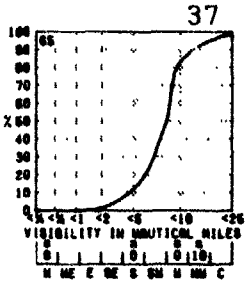


34

INSUFFICIENT DATA

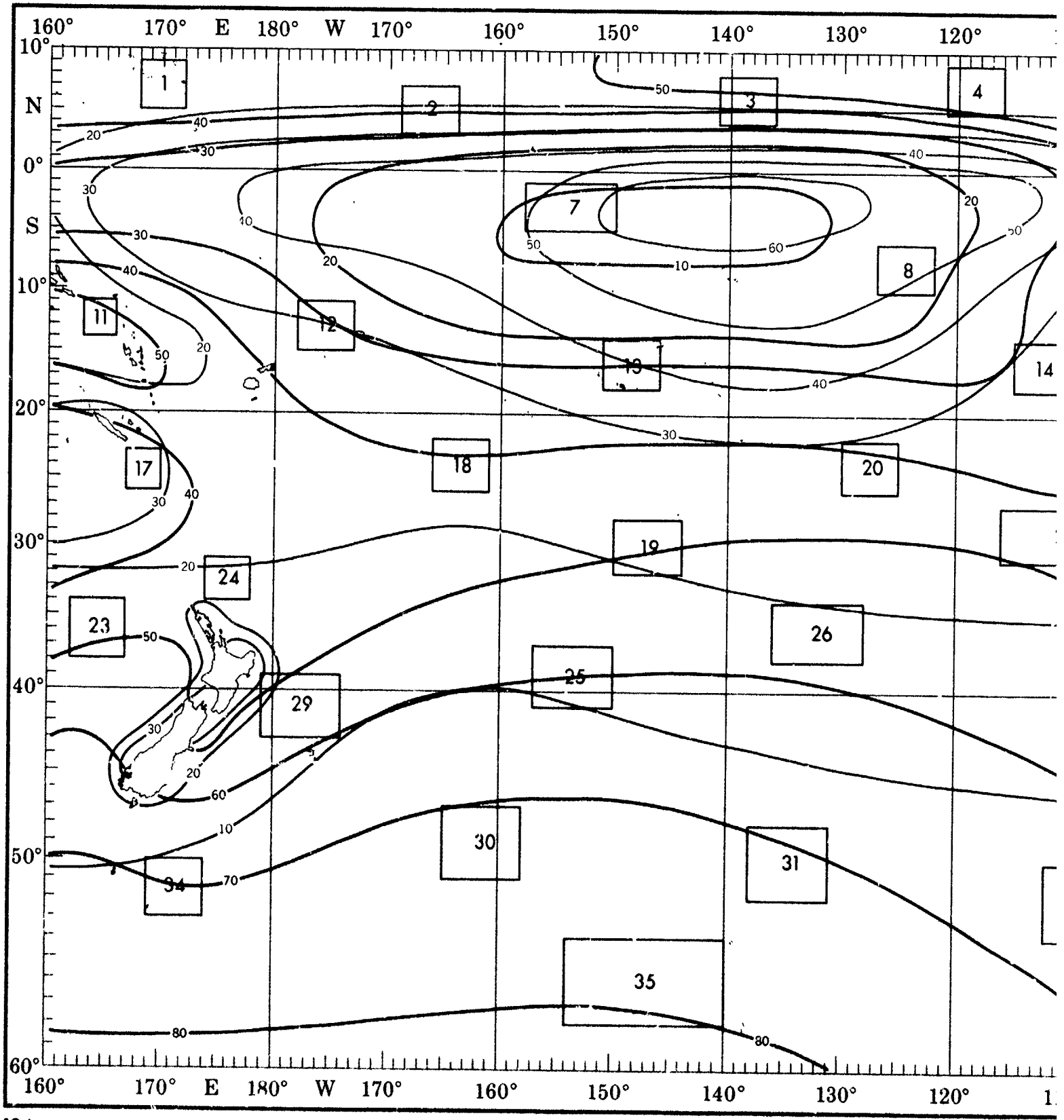






e objective compilation of available data for specified areas without regard to suspected biases.
s (opposite page) are based on all available data subjectively adjusted where bias was evident.

JULY


160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N 0° S 10° 20° 30° 40° 50° 60°
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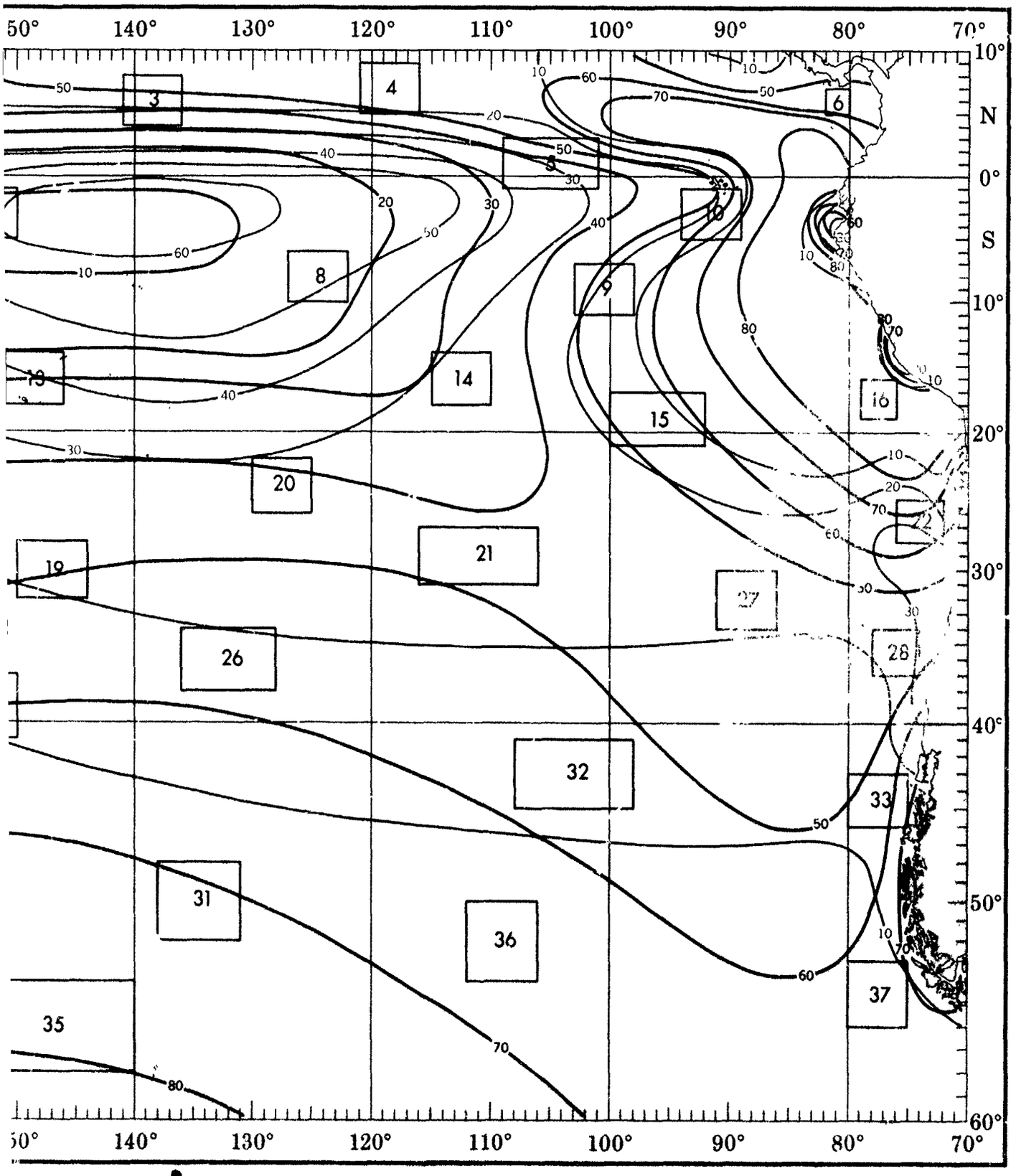
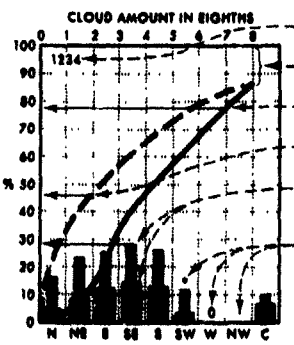
CLOUD COVER



1 1 2

CLOUD COVER

Total Cloud Amount } Cumulative percent frequency of indicated cloud amount equal to or less than the amount
Low Cloud Amount } intersected by the curve



Number of observations containing total cloud amount.

Obscurations

(77% of all total cloud amounts were ≤7/8.)

(46% of all low cloud amounts were ≤2/8.)

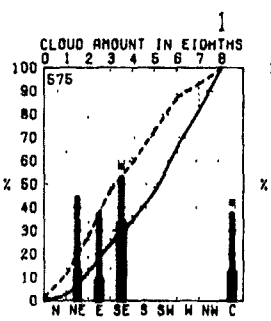
(28% of all SE winds were accompanied by low cloud amounts ≥5/8 and 14% by low cloud amounts ≥7/8.)

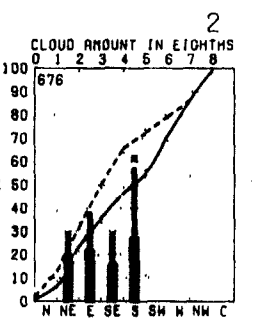
An asterisk indicates that the percentage is based on 10-30 observations of wind direction, total and low cloud amount. 0 replaces bar graph when no low cloud amounts ≥5/8 were observed with a wind direction or calm. 0 or bar is omitted when number of observations of total and low cloud amount from a wind direction or calm is less than 10

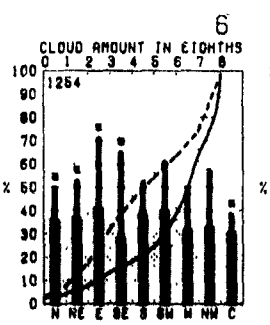
Low cloud amount: Percent frequency of observations from each direction and calm that were accompanied by low cloud amounts ≥5/8 and ≥7/8
Low clouds are clouds with bases <8000 feet.

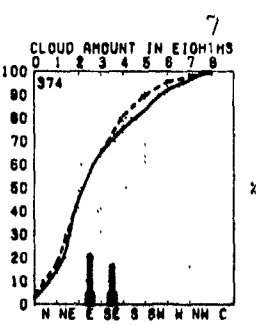
BLUE LINE - Percent frequency of total cloud amount ≤2/8

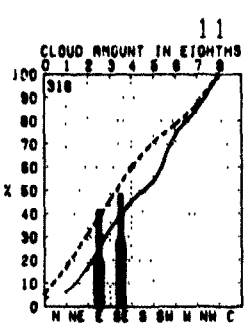
RED LINE - Percent frequency of low cloud amount ≥5/8

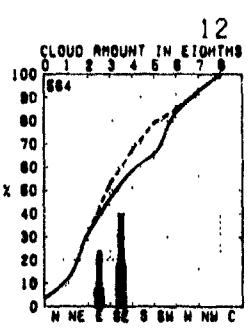


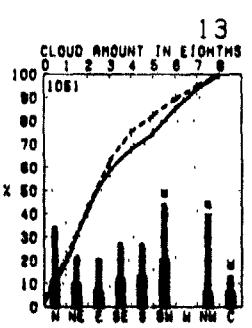


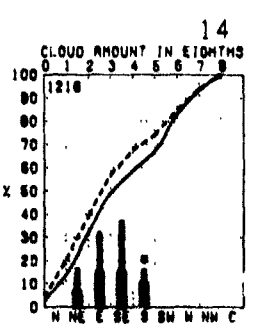


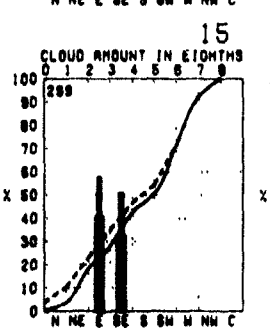


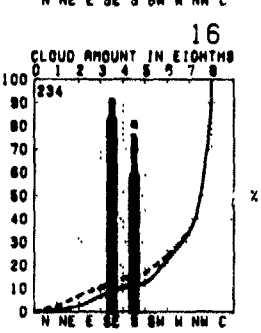


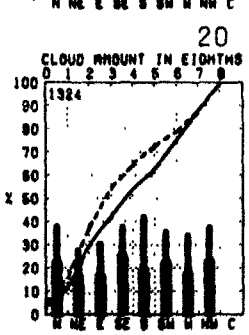


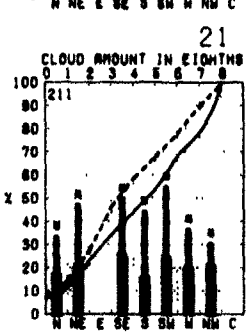


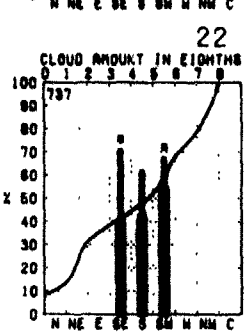


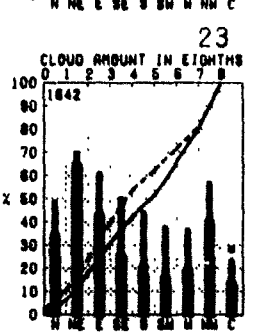


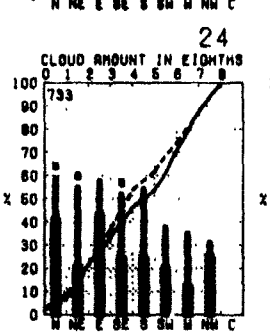


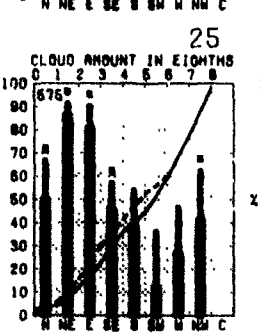


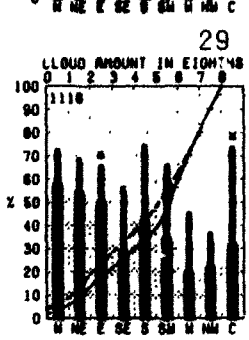


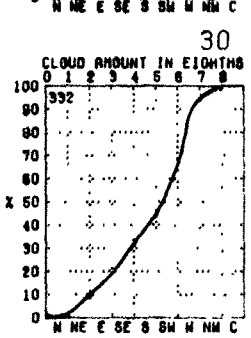


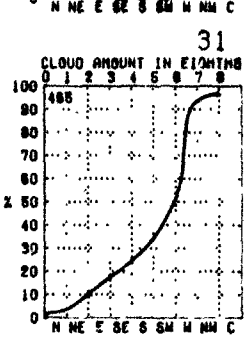


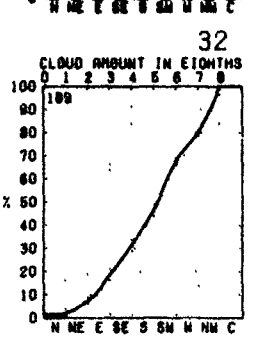


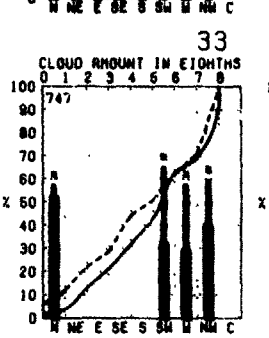


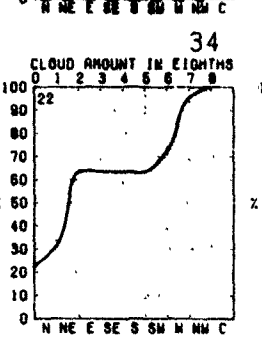












Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

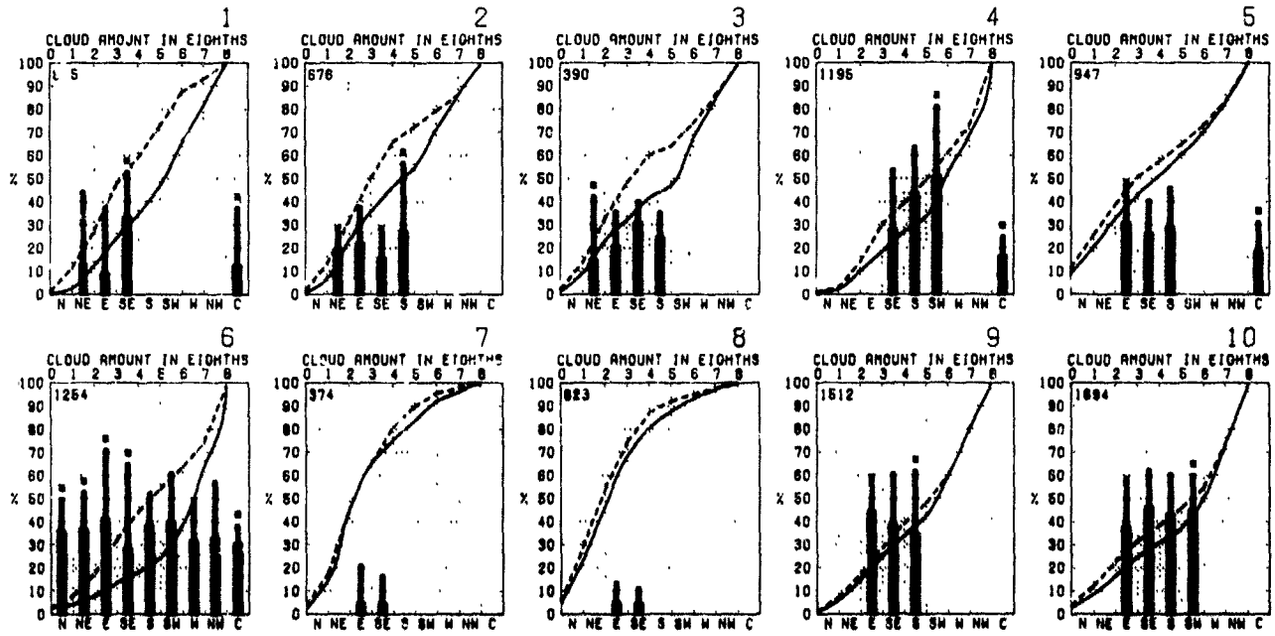
JULY

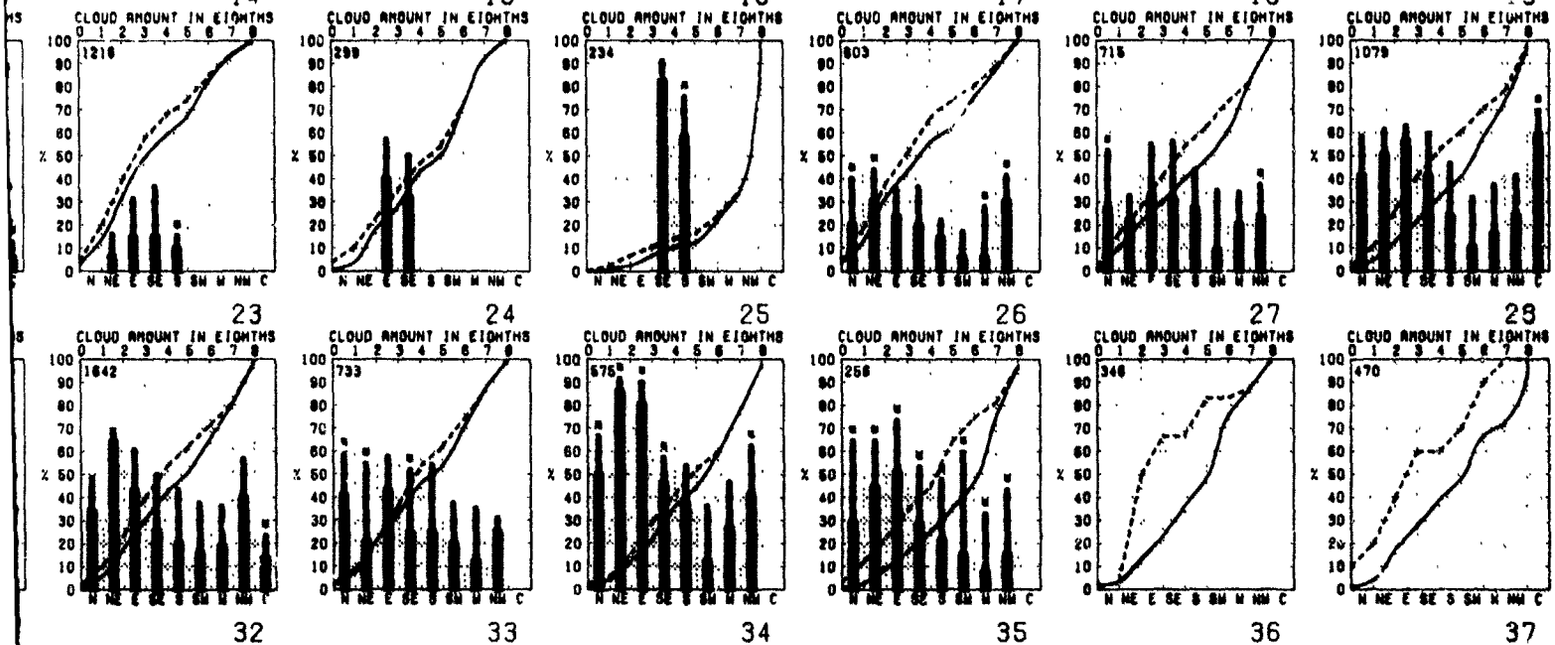
al to or less than the amount

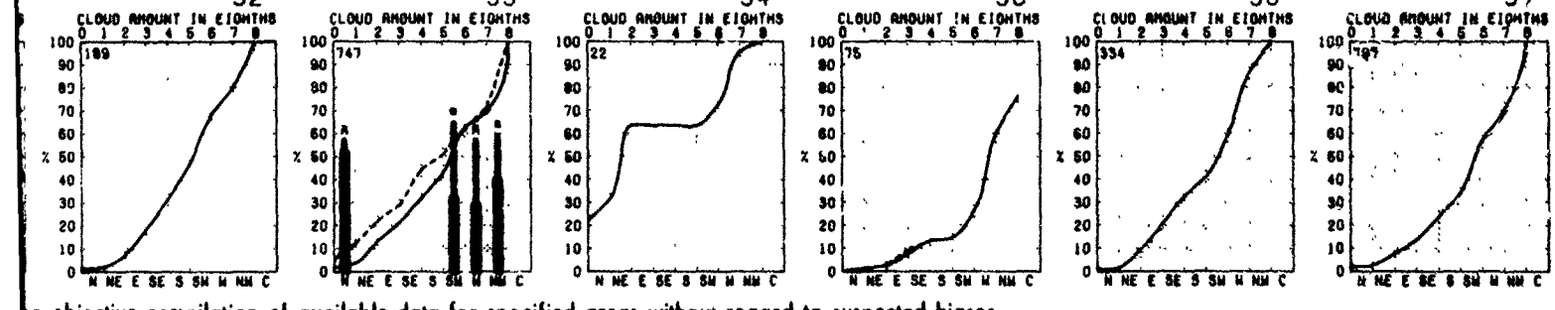
nts ≥5/8 and 14% by low

observations of wind
when no low cloud
0 or bar is omitted when
a wind direction or calm is

that were accompanied by

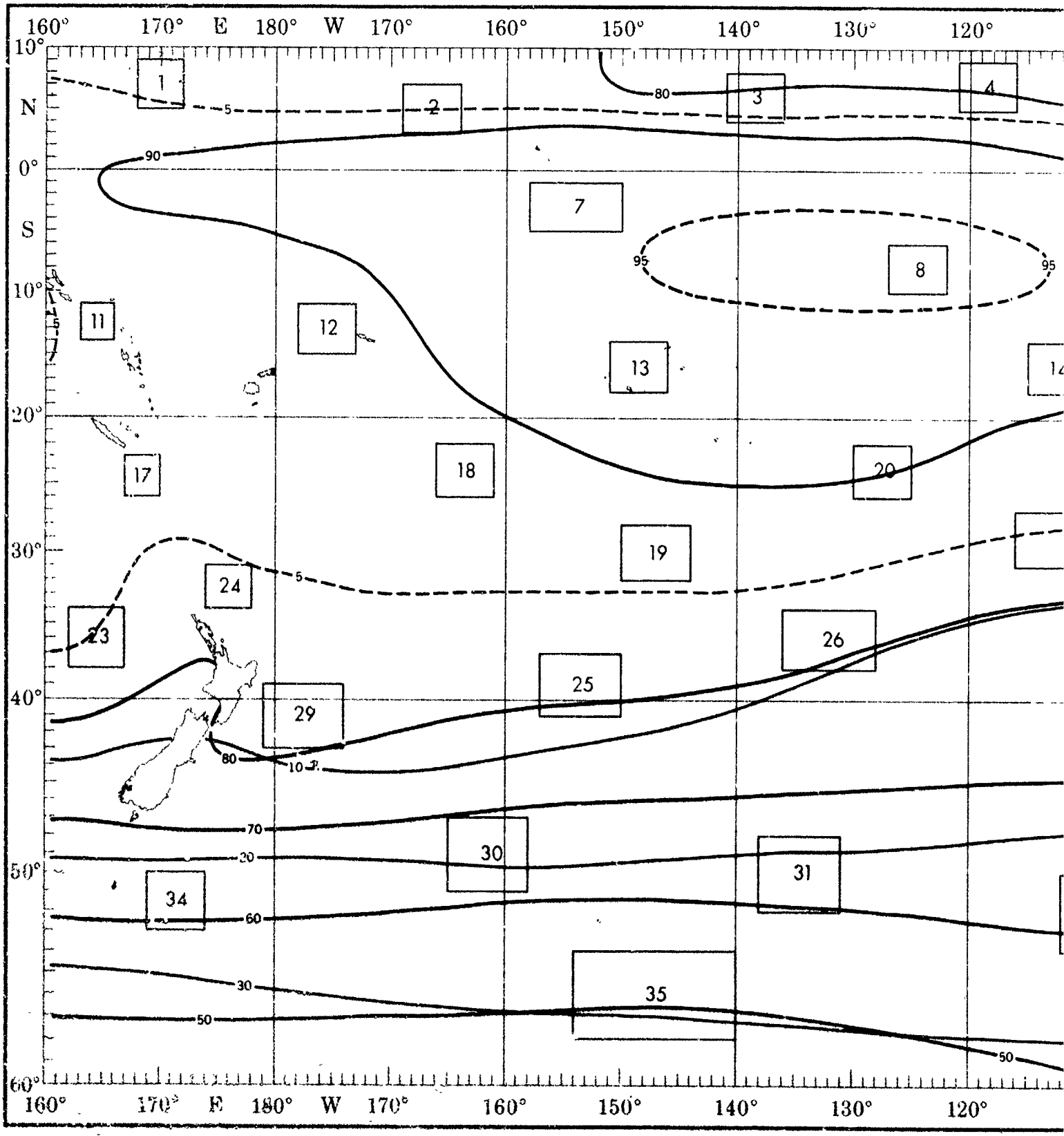






e objective compilation of available data for specified areas without regard to suspected biases.
s (opposite page) are based on all available data subjectively adjusted where bias was evident.

JULY


160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N 0° S 10° 20° 30° 40° 50° 60°
1
2
3
4
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7
8
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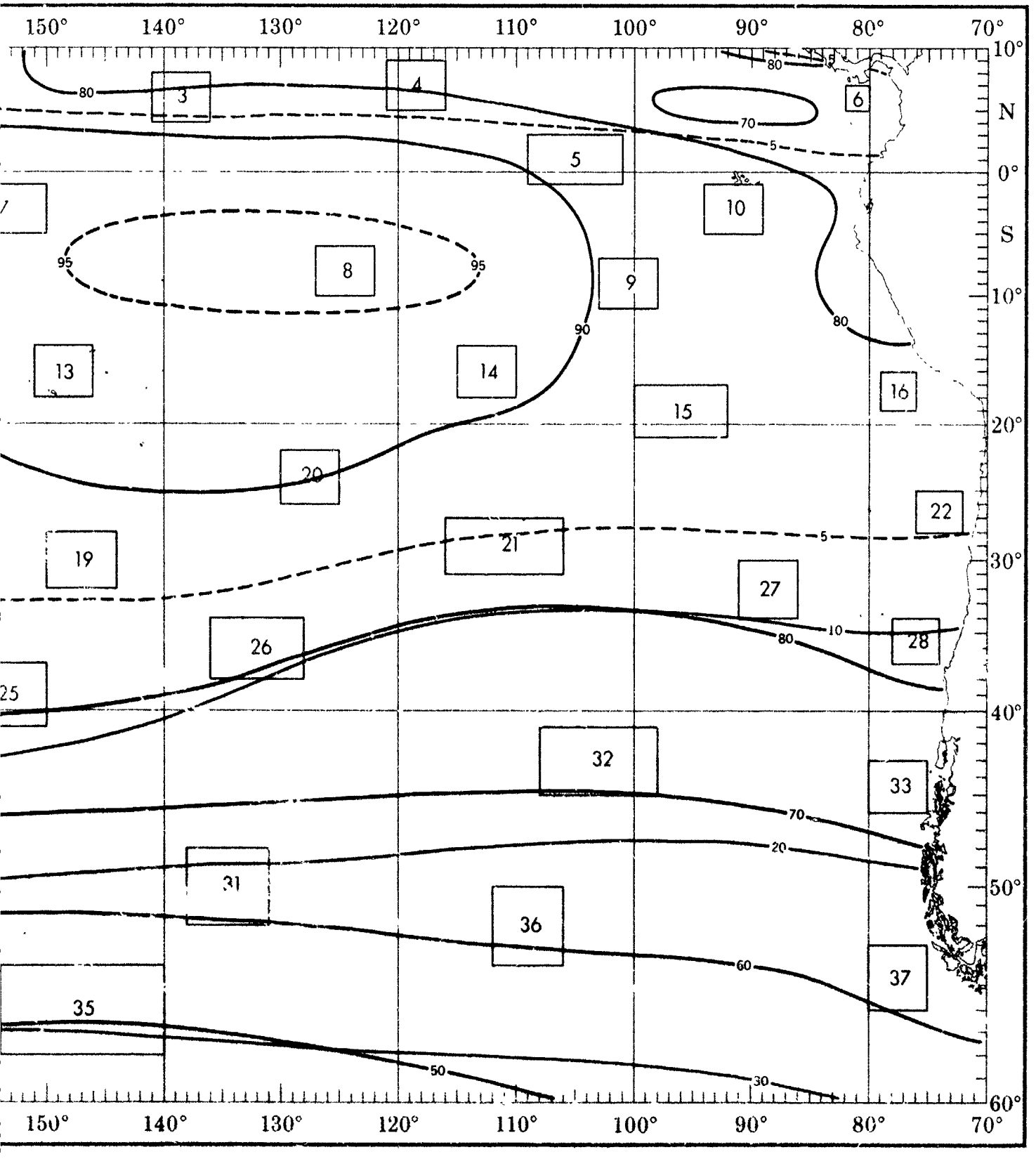
50

CEILING AND VISIBILITY



CEILING AND VISIBILITY

Low cloud ceiling - Visibility

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

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"

"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8.

(2% of all observations reported ceiling ≥1000 but <2000 feet simultaneously with visibility ≥5 but <10 nautical miles.)

+ indicates < 5% but >0

Number of observations

BLUE LINE - Percent frequency of low cloud ceiling ≥1000 feet (or no low cloud ceiling) and visibility ≥5 nautical miles

RED LINE Percent frequency of low cloud ceiling <600 feet and/or visibility <2 nautical miles

1

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	4	57
50<80	0	0	0	0	0	0
30<50	0	0	0	0	1	1
20<30	0	0	0	+	+	5
10<20	0	0	0	+	1	9
5<10	0	0	+	0	2	14
3<5	0	0	0	0	+	1
1.5<3	0	0	0	0	0	0
0<1.5	+	0	0	0	1	0

213

6

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	+	0	1	4	42
50<80	0	0	0	0	+	1
30<50	0	0	+	+	1	2
20<30	0	0	0	0	2	7
10<20	0	0	0	1	4	18
5<10	0	0	1	1	4	10
3<5	0	+	+	1	2	1
1.5<3	0	0	0	1	+	+
0<1.5	0	0	0	0	+	0

735

11

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	1	59
50<80	0	0	0	0	0	0
30<50	0	0	0	0	0	1
20<30	0	0	0	1	3	1
10<20	0	0	0	0	3	10
5<10	0	0	0	1	4	13
3<5	0	0	0	1	0	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

78

12

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	4	64
50<80	0	0	0	0	0	0
30<50	0	0	0	0	0	1
20<30	0	0	0	0	1	3
10<20	0	0	0	0	4	8
5<10	0	0	0	0	1	9
3<5	0	0	0	0	2	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	1	0	1

107

13

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	1	88
50<80	0	0	0	0	0	0
30<50	0	0	0	0	+	1
20<30	0	0	0	+	2	3
10<20	0	0	0	1	5	7
5<10	0	0	+	+	1	3
3<5	0	0	0	0	0	1
1.5<3	0	0	0	+	0	0
0<1.5	0	0	0	+	0	0

832

14

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	2	65
50<80	0	0	0	0	0	1
30<50	0	0	0	+	+	3
20<30	0	0	0	+	1	5
10<20	0	0	0	+	1	14
5<10	0	0	0	+	1	6
3<5	0	0	0	0	0	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	+	0	+

888

15

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	1	43
50<80	0	0	0	0	0	0
30<50	0	0	0	0	0	4
20<30	0	0	0	0	1	9
10<20	0	0	0	1	3	18
5<10	0	0	1	0	1	7
3<5	0	0	0	0	1	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

70

20

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	2	63
50<80	0	0	0	0	0	+
30<50	0	0	0	0	1	3
20<30	0	0	+	+	1	8
10<20	0	0	+	1	1	14
5<10	0	0	0	+	1	5
3<5	0	0	+	+	+	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	+	0	0

814

21

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	1	57
50<80	0	0	0	0	0	0
30<50	0	0	0	0	0	1
20<30	0	0	0	0	0	20
10<20	0	0	0	0	3	8
5<10	0	0	0	1	0	1
3<5	0	0	0	0	1	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	1

107

22

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	3	33
50<80	0	0	0	0	0	0
30<50	0	0	0	0	2	2
20<30	0	0	0	0	2	16
10<20	0	0	0	0	0	33
5<10	0	0	0	0	1	7
3<5	0	0	1	0	0	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	1

182

23

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	4	61
50<80	0	0	0	0	0	+
30<50	0	0	0	1	+	1
20<30	0	0	0	0	1	4
10<20	0	0	+	1	7	14
5<10	0	0	+	1	3	8
3<5	0	+	+	1	1	1
1.5<3	0	+	0	+	+	+
0<1.5	0	+	0	+	+	+

1063

24

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	2	92
50<80	0	0	0	0	+	1
30<50	0	0	0	0	1	1
20<30	0	0	0	0	+	4
10<20	0	0	0	1	4	17
5<10	+	0	0	1	3	9
3<5	0	0	0	1	1	1
1.5<3	0	0	+	0	0	0
0<1.5	0	0	0	0	0	0

930

29

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	0	0	0	2	38
50<80	0	0	0	0	0	0
30<50	0	0	0	0	2	5
20<30	0	0	0	+	2	18
10<20	0	0	+	1	3	15
5<10	0	0	+	1	4	5
3<5	0	+	0	+	1	1
1.5<3	0	0	0	0	0	+
0<1.5	+	0	0	+	0	0

460

30

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	0	24
50<80	0	0	0	0	0	10
30<50	0	0	0	0	0	0
20<30	0	0	0	0	14	5
10<20	0	0	0	3	16	24
5<10	0	0	0	0	0	0
3<5	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

31

INSUFFICIENT DATA

32

INSUFFICIENT DATA

33

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	1	0	2	43
50<80	0	0	0	1	1	0
30<50	0	0	0	0	1	0
20<30	1	0	0	0	0	7
10<20	0	0	1	0	2	17
5<10	0	0	0	0	3	6
3<5	0	0	0	0	0	1
1.5<3	0	0	0	0	1	0
0<1.5	1	0	0	2	1	0

66

INSUFFICIEN DATA

Graphs represent the objective compilation of available data for specified areas without reg
The isopleth analyses (opposite page) are based on all available data subjectively adjusted

JULY

hgs (hundreds of feet)

when low cloud amount

ces of N_h <5/8

vith visibility ≥5 but <10

y ≥5 nautical miles

1

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	4	57
50<90	0	0	0	0	0	0
30<50	0	0	0	0	1	1
20<30	0	0	0	+	+	5
10<20	0	0	0	+	1	9
5<10	0	0	+	0	2	14
3<5	0	0	0	0	+	1
1.5<3	0	0	0	0	0	0
0<1.5	+	0	0	0	1	0

213

2

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	6	80
50<90	0	0	0	0	+	+
30<50	0	0	0	0	0	1
20<30	0	0	0	0	1	3
10<20	0	0	0	1	2	11
5<10	0	0	0	1	3	6
3<5	0	0	0	1	1	2
1.5<3	0	0	0	0	0	+
0<1.5	0	0	0	0	+	0

282

3

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	3	57
50<90	0	0	0	0	0	1
30<50	0	0	0	0	0	1
20<30	0	1	1	1	1	8
10<20	0	0	0	3	3	12
5<10	0	0	1	1	5	4
3<5	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	1

175

4

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	2	38
50<90	0	0	0	0	1	0
30<50	0	0	0	+	1	0
20<30	0	0	0	0	2	8
10<20	0	0	0	1	7	18
5<10	0	0	0	0	4	12
3<5	0	0	0	0	3	1
1.5<3	0	0	0	0	0	1
0<1.5	0	0	0	+	0	+

227

5

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	0	0	+	1	56
50<90	0	0	0	0	+	+
30<50	0	0	0	0	0	3
20<30	0	0	+	0	1	6
10<20	0	0	0	0	1	17
5<10	0	0	+	0	1	10
3<5	0	0	0	0	1	1
1.5<3	0	0	0	0	0	1
0<1.5	0	0	0	+	0	0

667

6

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	+	0	1	4	42
50<90	0	0	0	0	+	1
30<50	0	0	+	+	1	2
20<30	0	0	0	0	2	7
10<20	0	0	0	1	4	15
5<10	0	0	1	1	4	10
3<5	0	+	+	1	2	1
1.5<3	0	0	0	1	+	+
0<1.5	0	0	0	0	+	0

735

7

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	4	8	72
50<90	0	0	0	0	0	0
30<50	0	0	0	0	0	0
20<30	0	0	0	0	0	3
10<20	0	0	0	0	2	7
5<10	0	1	0	0	1	2
3<5	0	0	0	0	0	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	1	0	1

122

8

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	1	88
50<90	0	0	0	0	0	0
30<50	0	0	0	0	0	+
20<30	0	0	0	0	+	2
10<20	0	0	0	0	1	7
5<10	0	0	0	0	0	1
3<5	0	0	0	0	0	1
1.5<3	0	0	0	0	0	+
0<1.5	+	0	0	+	0	0

281

9

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	+	1	38
50<90	0	0	0	0	0	+	2
30<50	0	0	0	0	0	1	8
20<30	0	0	0	0	0	+	8
10<20	0	0	0	+	+	1	28
5<10	0	0	0	0	0	1	10
3<5	0	0	0	0	0	+	+
1.5<3	0	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0	0

613

10

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	+	1	37
50<90	0	0	0	0	0	+	1
30<50	0	0	0	0	0	+	8
20<30	0	0	0	0	+	+	11
10<20	0	0	+	+	2	2	24
5<10	0	0	+	+	2	1	11
3<5	0	0	0	0	+	1	2
1.5<3	0	0	0	0	0	+	0
0<1.5	0	0	0	0	0	0	0

1034

y ≥5 nautical miles

14

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	2	65
50<90	0	0	0	0	0	1
30<50	0	0	0	+	+	3
20<30	0	0	0	+	1	5
10<20	0	0	0	+	1	16
5<10	0	0	0	+	1	8
3<5	0	0	0	0	0	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	+

500

15

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	1	43
50<90	0	0	0	0	0	0
30<50	0	0	0	0	0	4
20<30	0	0	0	0	1	8
10<20	0	0	0	1	0	15
5<10	0	0	1	0	1	7
3<5	0	0	0	0	1	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

70

16

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	2	1	12
50<90	0	0	0	0	0	0
30<50	0	0	0	1	2	6
20<30	0	0	0	0	3	16
10<20	0	0	0	0	0	42
5<10	0	0	0	0	0	12
3<5	0	0	0	0	0	2
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	1	0

110

17

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	2	65
50<90	0	0	0	0	1	0
30<50	0	0	0	+	+	3
20<30	0	0	0	+	1	8
10<20	0	0	0	0	3	8
5<10	0	0	0	+	1	8
3<5	0	0	0	0	1	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	+

206

18

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	0	1	64
50<90	0	0	0	0	0	0
30<50	0	0	0	0	0	2
20<30	0	0	0	0	2	8
10<20	0	1	1	1	2	16
5<10	0	0	0	1	3	6
3<5	0	0	0	+	1	+
1.5<3	0	0	0	0	0	0
0<1.5	0	+	0	0	0	0

304

19

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	2	62
50<90	0	0	0	+	+	1
30<50	0	0	0	0	0	0
20<30	0	0	0	+	1	8
10<20	0	0	+	1	2	16
5<10	0	0	+	1	3	7
3<5	+	0	0	+	+	+
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	+	0	0

247

23

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	4	61
50<90	0	0	0	0	0	+
30<50	0	0	0	1	+	1
20<30	0	0	0	0	1	4
10<20	0	+	+	1	7	16
5<10	0	0	+	1	3	8
3<5	0	+	+	1	1	1
1.5<3	0	+	+	+	+	+
0<1.5	0	+	0	+	+	+

1083

24

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	2	62
50<90	0	0	0	0	+	1
30<50	0	0	0	0	1	1
20<30	0	0	0	+	1	4
10<20	0	0	0	1	4	17
5<10	+	0	0	1	3	8
3<5	0	0	0	0	1	1
1.5<3	0	0	+	0	0	0
0<1.5	0	0	0	0	0	0

330

25

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	1	0	0	0	2	38
50<90	0	0	0	1	0	1
30<50	0	0	0	0	1	4
20<30	0	0	0	0	3	7
10<20	+	0	0	3	4	12
5<10	0	0	+	1	5	12
3<5	0	0	0	0	0	0
1.5<3	0	0	1	0	0	0
0<1.5	0	0	0	1	0	0

210

26

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	5	42
50<90	0	0	0	1	0	2
30<50	0	0	0	1	0	4
20<30	0	0	0	0	2	8
10<20	0	0	0	0	4	18
5<10	0	0	1	0	3	7
3<5	0	0	0	1	1	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

118

27

INSUFFICIENT DATA

28

INSUFFICIENT DATA

32

INSUFFICIENT DATA

33

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	1	0	2	43
50<90	0	0	0	1	1	0
30<50	0	0	0	1	1	0
20<30	1	0	0	6	0	7
10<20	0	0	1	0	2	17
5<10	0	0	0	0	3	6
3<5	0	0	0	0	0	1
1.5<3	0	0	0	0	1	0
0<1.5	1	0	0	0	1	0

80

34

INSUFFICIENT DATA

35

INSUFFICIENT DATA

36

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	0	13
50<90	0	0	0	0	0	0
30<50	0	0	0	0	0	0
20<30	0	0	0	0	0	0
10<20	0	0	0	0	13	13
5<10	0	0	0	0	0	0
3<5	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

18

37

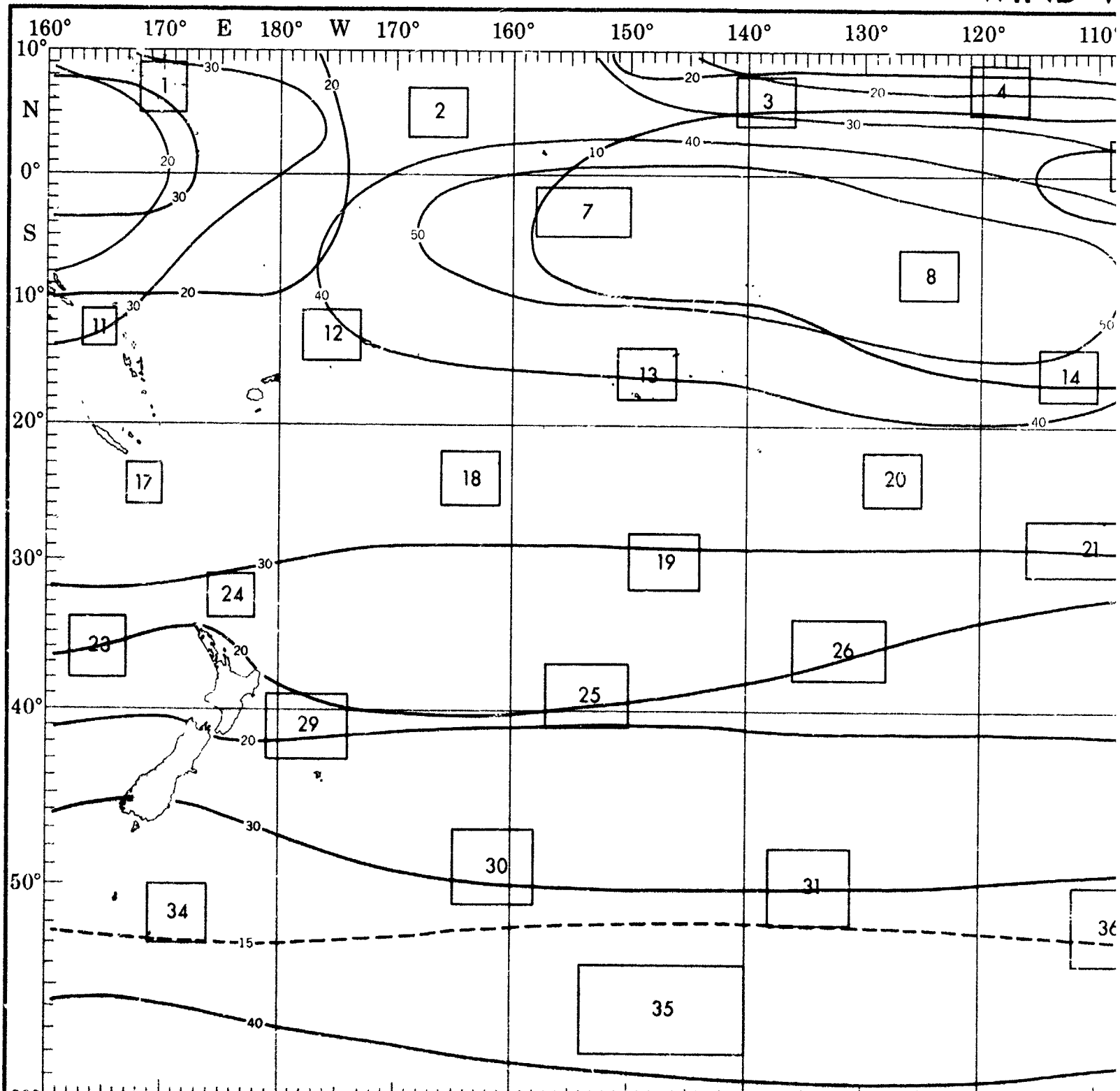
LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	5	0
50<90	0	0	0	0	0	0
30<50	0	0	0	0	0	0
20<30	0	0	0	5	5	0
10<20	0	0	0	0	10	14
5<10	0	0	5	14	29	14
3<5	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

81

objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

JULY

WIND-V


160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
10° N 0° S 10° 20° 30° 40° 50° 60°
1
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4
7
8
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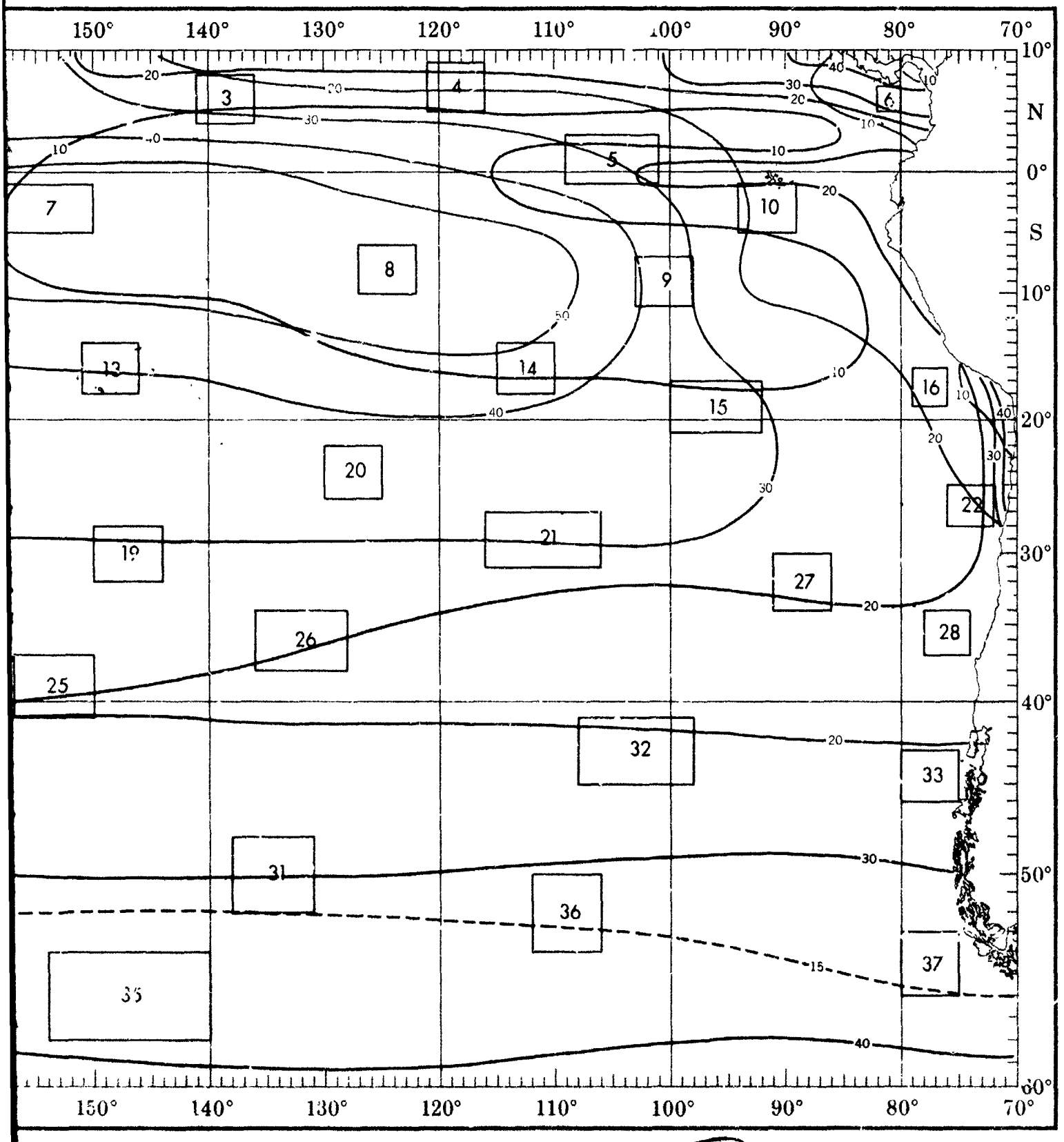
30
40
50
15

WIND-VISIBILITY-CLOUDINESS



LOW CLOUD CEILING-VISIBILITY-WIND

Percent frequency of occurrence of specified wind speed in knots, visibility (Vsby) in nautical miles, and low cloud ceiling (LCC) in hundreds of feet

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

WIND SPEED (knots)

LCC - Vsby	0-3	4-10	11-21	22-33	≥34
<1.5 & or <3	+	1	1	+	0
<6 & or <2	2	2	1	1	+
Vsby <2	1	2	1	1	+
<10 & or <2	3	4	2	1	1
<20 & or <5	8	9	6	5	2
Vsby ≥5	9	11	12	3	1
≥20 & ≥5	12	15	15	7	3
NC & ≥20	4	2	1	+	0
	1234				

(2% of the observations reported wind speeds of 11-21 knots, a low cloud ceiling <1000 feet and/or visibility <2 nautical miles.)

"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8

+ indicates < 5% but >0

Number of observations

Conditions for Carrier Operations

BLUE LINE Percent frequency of optimum conditions LCC ≥5000 ft, (or no LCC), Vsby ≥5 nm and Wind 11 21 kts

RED LINE - Percent frequency of poor conditions Any one of the following constitutes poor conditions LCC <300 ft, Vsby <1 nm, Wind <6 or ≥34 kts

Satisfactory conditions-between poor and optimum

1

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	0	1	0	0
<6 & OR <2	+	0	2	+	0
VSBY <2	0	0	1	0	0
<10 & OR <2	2	7	10	+	0
<20 & OR <5	4	12	16	+	0
VSBY ≥5	11	48	36	1	0
≥20 & ≥5	7	32	20	1	0
NC & ≥10	7	30	19	+	0
					211

WIND SPEED (KNOT

LCC - VSBY	0-3	4-10	11-21	22-33
<1.5 & OR <.5	0	0	+	0
<6 & OR <2	1	3	+	+
VSBY <2	0	0	0	0
<10 & OR <2	1	8	5	
<20 & OR <5	1	11	15	+
VSBY ≥5	6	43	47	1
≥20 & ≥5	F	32	30	1
NC & ≥10	5	29	27	0

6

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	0
<6 & OR <2	1	3	2	+	0
VSBY <2	0	1	+	+	0
<10 & OR <2	2	12	6	+	0
<20 & OR <5	5	27	11	+	0
VSBY ≥5	14	63	18	+	0
≥20 & ≥5	8	32	5	0	0
NC & ≥10	8	29	5	0	0
					723

WIND SPEED (KNOT

LCC - VSBY	0-3	4-10	11-21	22-33
<1.5 & OR <.5	0	2	0	0
<6 & OR <2	0	2	1	1
VSBY <2	0	0	0	1
<10 & OR <2	0	2	2	2
<20 & OR <5	1	6	8	3
VSBY ≥5	2	21	64	9
≥20 & ≥5	1	15	55	7
NC & ≥10	1	15	52	6

11

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	3	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	14	5	0
<20 & OR <5	0	0	25	8	1
VSBY ≥5	5	29	48	12	1
≥20 & ≥5	5	29	23	5	0
NC & ≥10	5	29	22	5	0
					77

12

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	1	0	0
<6 & OR <2	0	1	4	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	2	3	7	1	1
<20 & OR <5	2	7	14	3	1
VSBY ≥5	6	36	48	8	2
≥20 & ≥5	4	28	33	5	1
NC & ≥10	4	25	30	5	1
					102

13

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	0
<6 & OR <2	0	1	+	0	0
VSBY <2	0	+	+	0	0
<10 & OR <2	+	2	3	+	0
<20 & OR <5	1	5	11	2	0
VSBY ≥5	5	40	46	6	0
≥20 & ≥5	4	34	34	3	0
NC & ≥10	4	33	30	3	0
					824

14

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	+	+	+	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	1	5	1	0
<20 & OR <5	1	5	15	2	0
VSBY ≥5	4	27	60	8	1
≥20 & ≥5	3	20	39	5	1
NC & ≥10	3	19	38	5	1
					677

15

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	0	1	0
VSBY <2	0	0	0	1	0
<10 & OR <2	1	1	7	1	0
<20 & OR <5	3	10	23	F	0
VSBY ≥5	4	37	49	8	0
≥20 & ≥5	1	20	20	3	0
NC & ≥10	1	19	20	3	0
					70

1

WIND SPEED (KNOT

LCC - VSBY	0-3	4-10	11-21	22-33
<1.5 & OR <.5	0	0	1	0
<6 & OR <2	0	1	2	0
VSBY <2	0	0	0	0
<10 & OR <2	0	6	9	0
<20 & OR <5	2	19	37	1
VSBY ≥5	3	34	57	3
≥20 & ≥5	0	7	4	2
NC & ≥10	0	7	3	2
				1

20

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	+	0
<6 & OR <2	0	1	+	+	0
VSBY <2	0	+	+	+	0
<10 & OR <2	+	2	2	1	0
<20 & OR <5	1	8	10	3	+
VSBY ≥5	4	37	47	8	1
≥20 & ≥5	3	25	32	4	+
NC & ≥10	3	24	31	4	+
					808

21

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	1	0
<6 & OR <2	0	0	1	1	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	1	2	1	0
<20 & OR <5	0	6	8	1	0
VSBY ≥5	2	42	46	8	0
≥20 & ≥5	1	28	26	4	0
NC & ≥10	1	28	25	3	0
					186

22

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	0	0	0
<6 & OR <2	1	1	1	0	0
VSBY <2	0	1	0	0	0
<10 & OR <2	1	5	5	1	0
<20 & OR <5	4	16	23	1	0
VSBY ≥5	8	35	50	6	0
≥20 & ≥5	2	13	16	5	0
NC & ≥10	2	13	14	4	0
					161

23

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	+
<6 & OR <2	0	1	2	1	1
VSBY <2	0	+	1	0	+
<10 & OR <2	+	3	6	4	2
<20 & OR <5	1	8	16	9	5
VSBY ≥5	4	25	42	17	5
≥20 & ≥5	3	16	25	8	2
NC & ≥10	3	16	23	7	1
					1048

24

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	1	1	1	+
VSBY <2	0	0	1	0	0
<10 & OR <2	0	5	8	2	1
<20 & OR <5	+	10	17	7	2
VSBY ≥5	7	27	45	17	4
≥20 & ≥5	2	16	25	11	3
NC & ≥10	1	15	25	10	2
					326

2

WIND SPEED (KNOT

LCC - VSBY	0-3	4-10	11-21	22-33
<1.5 & OR <.5	0	+	1	+
<6 & OR <2	0	1	2	1
VSBY <2	0	1	1	+
<10 & OR <2	+	4	11	6
<20 & OR <5	1	8	18	12
VSBY ≥5	2	25	46	18
≥20 & ≥5	+	12	22	7
NC & ≥10	+	12	20	7
				2

29

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	0
<6 & OR <2	0	+	+	2	1
VSBY <2	0	+	+	0	1
<10 & OR <2	0	2	4	5	3
<20 & OR <5	1	5	10	10	5
VSBY ≥5	7	23	40	22	5
≥20 & ≥5	2	13	17	6	1
NC & ≥10	2	12	16	4	1
					453

30

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	5	0	0	0
<6 & OR <2	0	5	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	5	0	0	0
<20 & OR <5	0	15	10	15	5
VSBY ≥5	0	30	35	25	10
≥20 & ≥5	0	10	10	10	5
NC & ≥10	0	0	10	10	5
					20

31

INSUFFICIENT DATA

32

INSUFFICIENT DATA

33

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	1	1	2	0
<6 & OR <2	2	1	1	5	1
VSBY <2	1	0	0	3	0
<10 & OR <2	2	2	7	7	1
<20 & OR <5	2	8	10	18	1
VSBY ≥5	2	22	30	36	2
≥20 & ≥5	2	15	16	14	0
NC & ≥10	2	15	15	11	0
					82

34

INSUFFICIENT DATA

Graphs represent the objective compilation of available data for specified areas without rega
The isopleth analyses (opposite page) are based on all available data subjectively adjusted v

-VISIBILITY-WIND

JULY

visibility (Vsby) in nautical

ds (h) when low cloud amount

d ceiling <1000 feet and/or

occurrences of N_h <5/8

nm and Wind 11 21 kts

conditions LCC <300 ft,

1

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	0	1	0	0
<6 & OR <2	+	0	2	+	0
VSBY <2	0	0	1	0	0
<10 & OR <2	2	7	10	+	0
<20 & OR <6	4	12	16	+	0
VSBY ≥6	11	48	36	1	0
≥50 & ≥6	[illegible]	32	20	1	0
NC & ≥10	7	30	19	+	0

211

2

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	1	3	+	+	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	8	5	+	0
<20 & OR <6	1	11	15	+	0
VSBY ≥6	8	43	47	1	0
≥50 & ≥6	5	32	30	1	0
NC & ≥10	5	29	27	0	0

280

3

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	0	0	0
<6 & OR <2	0	2	1	0	0
VSBY <2	0	2	1	0	0
<10 & OR <2	0	7	8	0	0
<20 & OR <6	1	17	15	0	0
VSBY ≥6	5	35	51	2	0
≥50 & ≥6	3	21	35	2	0
NC & ≥10	3	20	32	2	0

179

4

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	0	0	0
<6 & OR <2	0	4	2	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	+	12	10	0	0
<20 & OR <6	1	22	24	+	0
VSBY ≥6	8	42	46	2	0
≥50 & ≥6	6	18	16	1	0
NC & ≥10	6	16	15	1	0

226

5

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	0	0	0
<6 & OR 2	+	2	1	0	0
VSBY <2	+	+	+	0	0
<10 & OR <2	1	8	8	0	0
<20 & OR <5	2	18	12	+	0
VSBY ≥5	6	55	37	+	0
≥50 & ≥6	4	32	21	+	0
NC & ≥10	4	31	21	+	0

653

6

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	0
<6 & OR <2	1	3	2	+	0
VSBY <2	0	1	+	+	0
<10 & OR <2	2	12	8	+	0
<20 & OR <6	5	27	11	+	0
VSBY ≥6	14	63	18	+	0
≥50 & ≥6	8	32	5	0	0
NC & ≥10	8	29	5	0	0

723

7

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	2	0	0	0
<6 & OR <2	0	2	1	1	0
VSBY <2	0	0	0	1	0
<10 & OR <2	0	2	2	2	0
<20 & OR <6	1	6	8	3	0
VSBY ≥6	2	21	64	9	0
≥50 & ≥6	1	16	55	7	0
NC & ≥10	1	15	52	5	0

121

8

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	0	+	1	0	0
VSBY <2	0	+	0	0	0
<10 & OR <2	0	1	2	+	0
<20 & OR <6	+	2	8	1	0
VSBY ≥6	1	24	68	7	0
≥50 & ≥6	1	21	59	6	0
NC & ≥10	1	21	58	5	0

579

9

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	+	1	0	0
VSBY <2	0	0	+	0	0
<10 & OR <2	0	3	9	+	0
<20 & OR <6	0	8	32	3	0
VSBY ≥6	0	17	76	7	0
≥50 & ≥6	0	7	33	1	0
NC & ≥10	0	6	31	[illegible]	0

912

10

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	+	2	2	0	0
VSBY <2	0	0	+	0	0
<10 & OR <2	+	8	7	+	0
<20 & OR <5	+	26	16	+	0
VSBY ≥5	2	60	36	+	0
≥50 & ≥5	+	23	16	+	0
NC & ≥10	+	21	15	+	0

1029

13

[illegible]

[illegible]	≥34
0	0
0	0
0	0
+	0
2	0
6	0
8	0
8	0

624

14

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	+	+	+	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	1	5	1	0
<20 & OR <5	1	5	15	2	0
VSBY ≥5	4	27	60	8	1
≥50 & ≥5	3	20	39	5	1
NC & ≥10	3	19	38	5	1

877

15

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	0	1	0
VSBY <2	0	0	0	1	0
<10 & OR <2	1	1	7	1	0
<20 & OR <5	3	10	23	6	0
VSBY ≥5	4	37	48	6	0
≥50 & ≥5	1	20	20	3	0
NC & ≥10	1	19	20	3	0

70

16

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	1	0	0
<6 & OR <2	0	1	2	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	6	9	0	0
<20 & OR <5	2	19	37	1	0
VSBY ≥5	3	34	57	3	0
≥50 & ≥5	0	7	4	2	0
NC & ≥10	0	7	3	2	0

116

17

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	0
<6 & OR <2	0	1	1	1	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	4	4	2	0
<20 & OR <5	1	8	10	3	0
VSBY ≥5	4	30	52	11	1
≥50 & ≥5	3	19	38	7	1
NC & ≥10	3	18	36	7	+

278

18

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	1	1	1	1
VSBY <2	0	+	1	+	1
<10 & OR <2	0	3	8	2	1
<20 & OR <5	1	9	18	4	2
VSBY ≥5	4	40	46	7	1
≥50 & ≥5	2	25	[illegible]	3	0
NC & ≥10	2	25	25	3	0

303

19

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	+	0
<6 & OR <2	0	+	1	+	+
VSBY <2	0	+	+	0	0
<10 & OR <2	1	2	6	3	1
<20 & OR <5	2	8	13	7	1
VSBY ≥5	4	30	45	18	2
≥50 & ≥5	2	18	26	7	1
NC & ≥10	2	17	25	6	1

637

22

[illegible]

[illegible]	≥34
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0

161

23

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	+
<6 & OR <2	0	1	2	1	1
VSBY <2	0	+	1	0	+
<10 & OR <2	+	3	6	4	2
<20 & OR <5	1	8	16	10	5
VSBY ≥5	4	25	42	17	5
≥50 & ≥5	3	16	25	8	2
NC & ≥10	3	16	23	7	1

1048

24

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	1	1	1	+
VSBY <2	0	0	1	0	0
<10 & OR <2	0	5	8	2	1
<20 & OR <5	+	10	17	7	2
VSBY ≥5	2	27	45	17	4
≥50 & ≥5	2	16	25	11	3
NC & ≥10	1	15	25	10	2

326

25

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	+	+
<6 & OR <2	0	1	2	1	+
VSBY <2	0	1	1	+	+
<10 & OR <2	+	4	11	6	1
<20 & OR <5	1	8	19	12	2
VSBY ≥5	2	23	46	18	2
≥50 & ≥5	+	12	22	7	1
NC & ≥10	+	12	20	7	+

211

26

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	1	0	0
VSBY <2	0	0	1	0	0
<10 & OR <2	0	6	5	2	0
<20 & OR <5	1	8	18	6	2
VSBY ≥5	5	29	49	10	4
≥50 & ≥5	2	17	25	3	3
NC & ≥10	1	18	23	1	2

109

27

INSUFFICIENT DATA

28

INSUFFICIENT DATA

31

[illegible]

INSUFFICIENT DATA

32

33

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	1	1	2	0
<6 & OR <2	2	1	1	5	1
VSBY <2	1	0	0	3	0
<10 & OR <2	2	2	7	7	1
<20 & OR <5	2	8	10	18	1
VSBY ≥5	2	22	30	36	2
≥50 & ≥5	2	15	16	14	0
NC & ≥10	2	15	15	11	0

68

34

INSUFFICIENT DATA

35

INSUFFICIENT DATA

36

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	7	0	7
VSBY <2	0	0	0	0	7
<10 & OR <2	0	0	7	0	7
<20 & OR <5	0	0	13	33	13
VSBY ≥5	0	0	7	47	13
≥50 & ≥5	0	0	0	13	7
NC & ≥10	0	0	0	13	0

16

37

WIND SPEED (KNOTS)

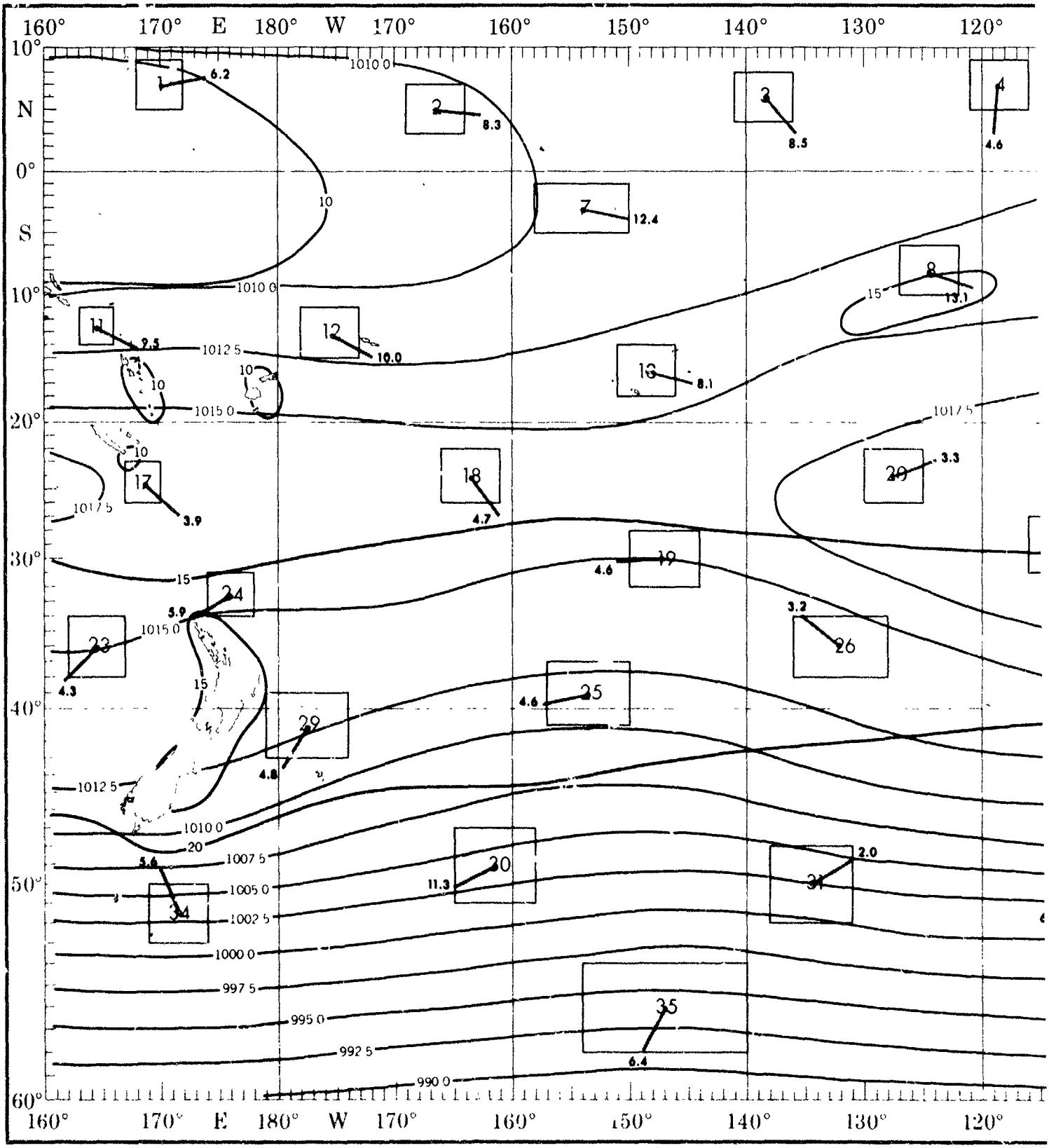
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	5
VSBY <2	0	0	0	0	5
<10 & OR <2	0	0	0	0	5
<20 & OR <5	0	0	10	24	33
VSBY ≥5	0	5	5	33	33
≥50 & ≥5	0	0	0	5	0
NC & ≥10	0	0	0	0	0

21

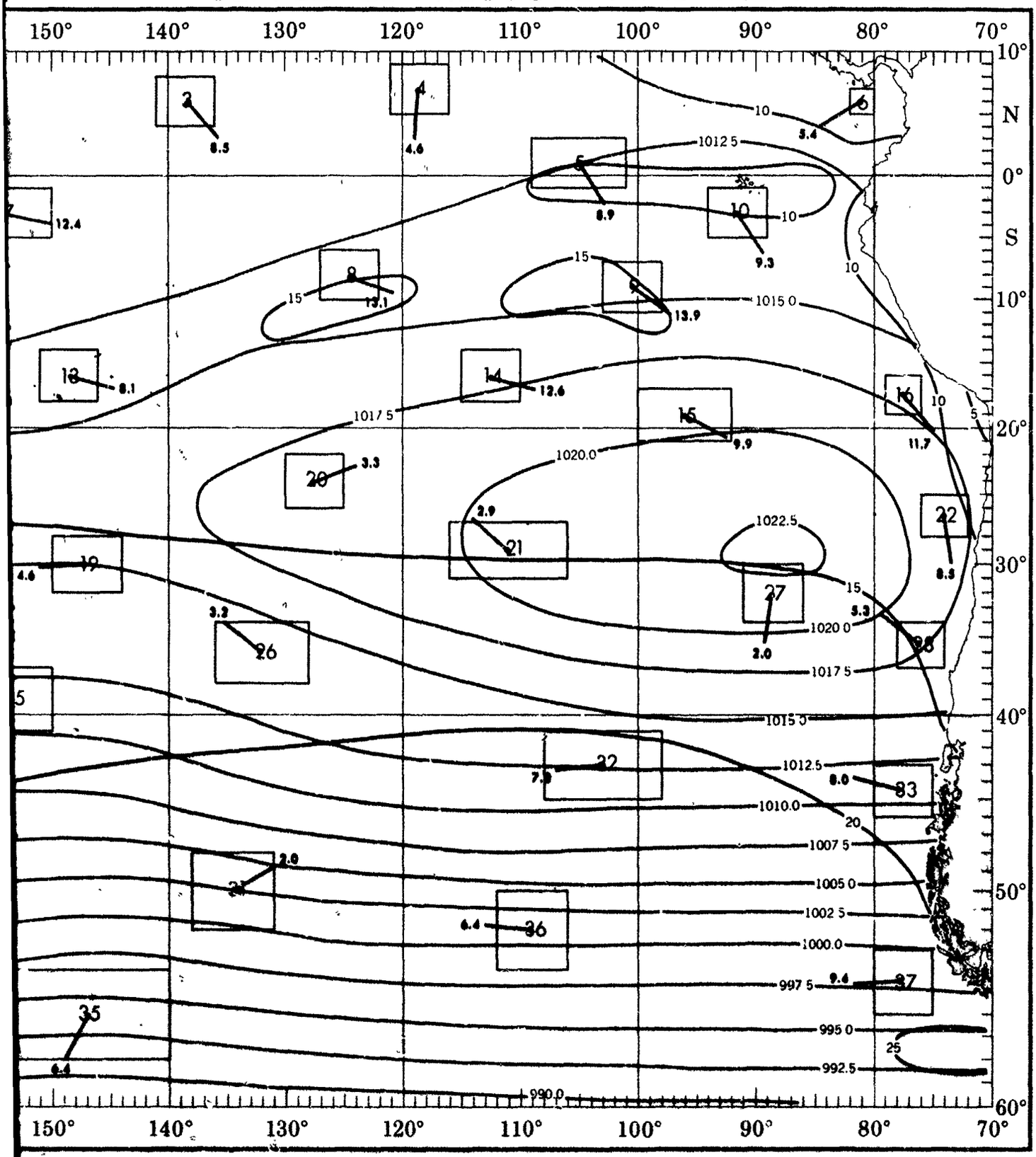
t the objective compilation of available data for specified areas without regard to suspected biases.
yses (opposite page) are based on all available data subjectively adjusted where bias was evident.

JULY

SEA LEVEL PR

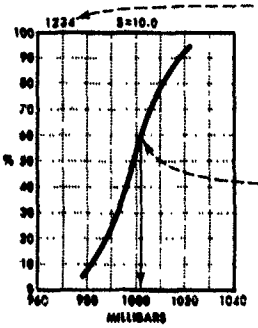


SEA LEVEL PRESSURE AND MEAN WIND



SEA LEVEL PRESSURE

Sea level pressure and mean wind.



Number of observations

Cumulative percent frequency of sea level pressures equal to or less than the pressure intersected by the curve.

S=Standard deviation of pressure (mbs).

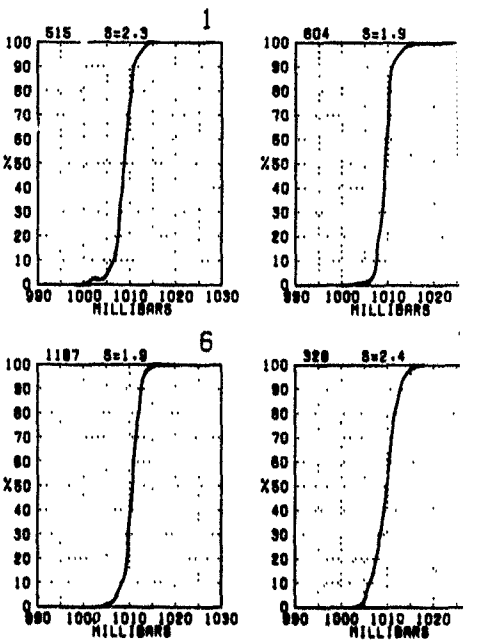
(60% of all observed sea level pressures were ≤1002 millibars.)

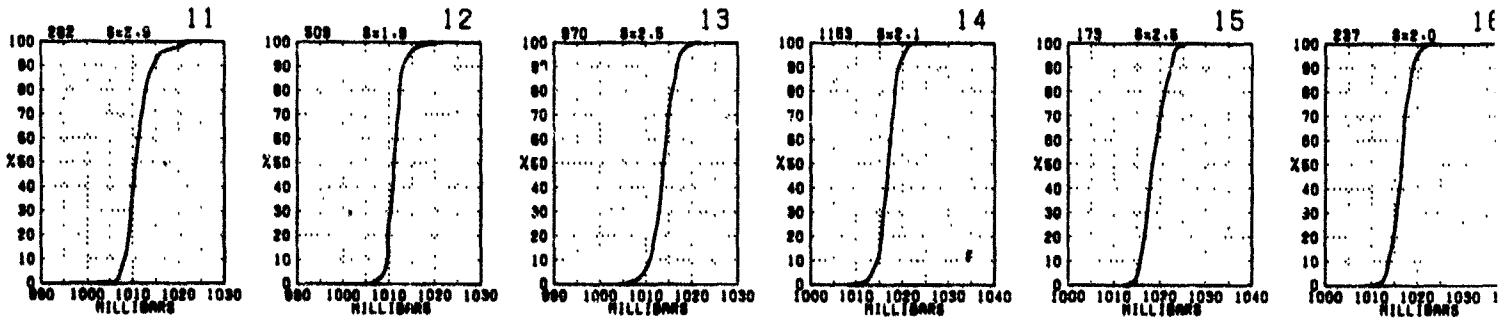
Vector mean wind is plotted from the direction which the mean flow occurs with the magnitude in knots at the end of the vector.

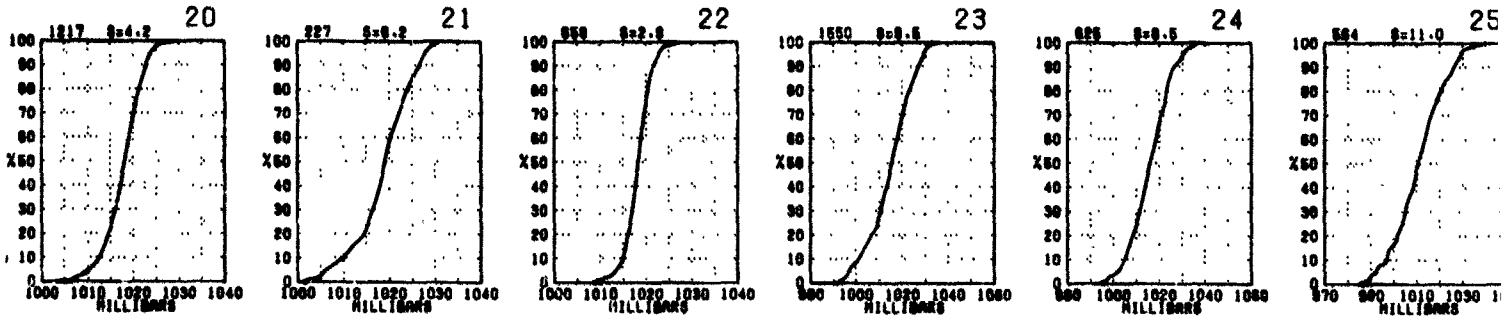
10.2 Vector mean wind is from the northeast at 10.2 knots.

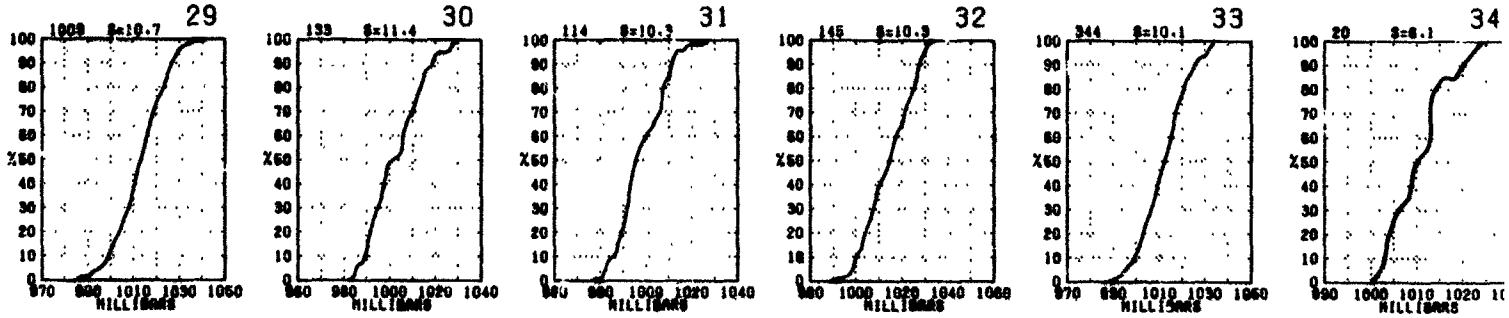
BLUE LINE = Scalar mean wind speed (kts.)

RED LINE = Mean sea level pressure (mbs.)



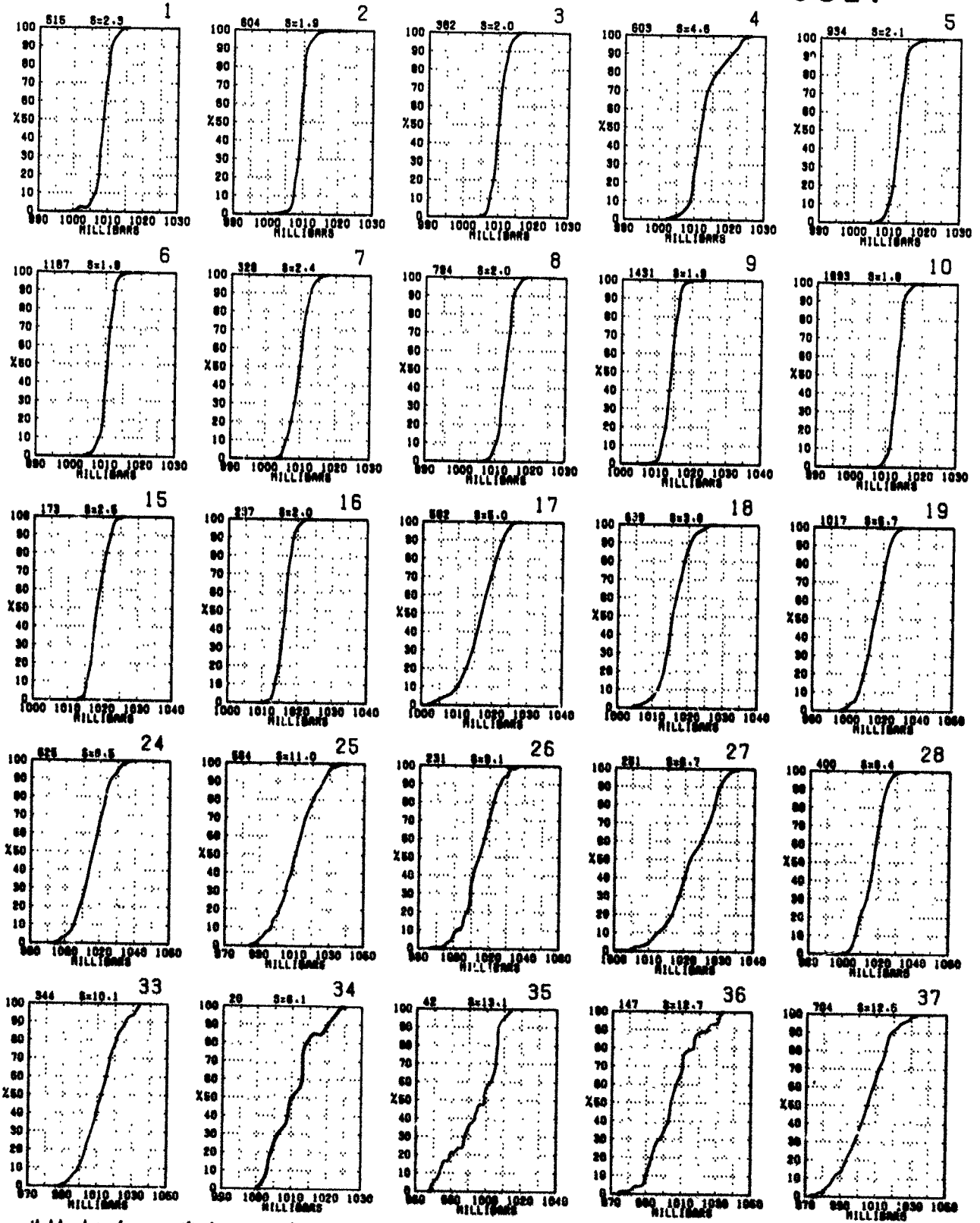






Graphs represent the objective compilation of available data for specified areas without reg
The isopleth analyses (opposite page) are based on all available data subjectively adjusted

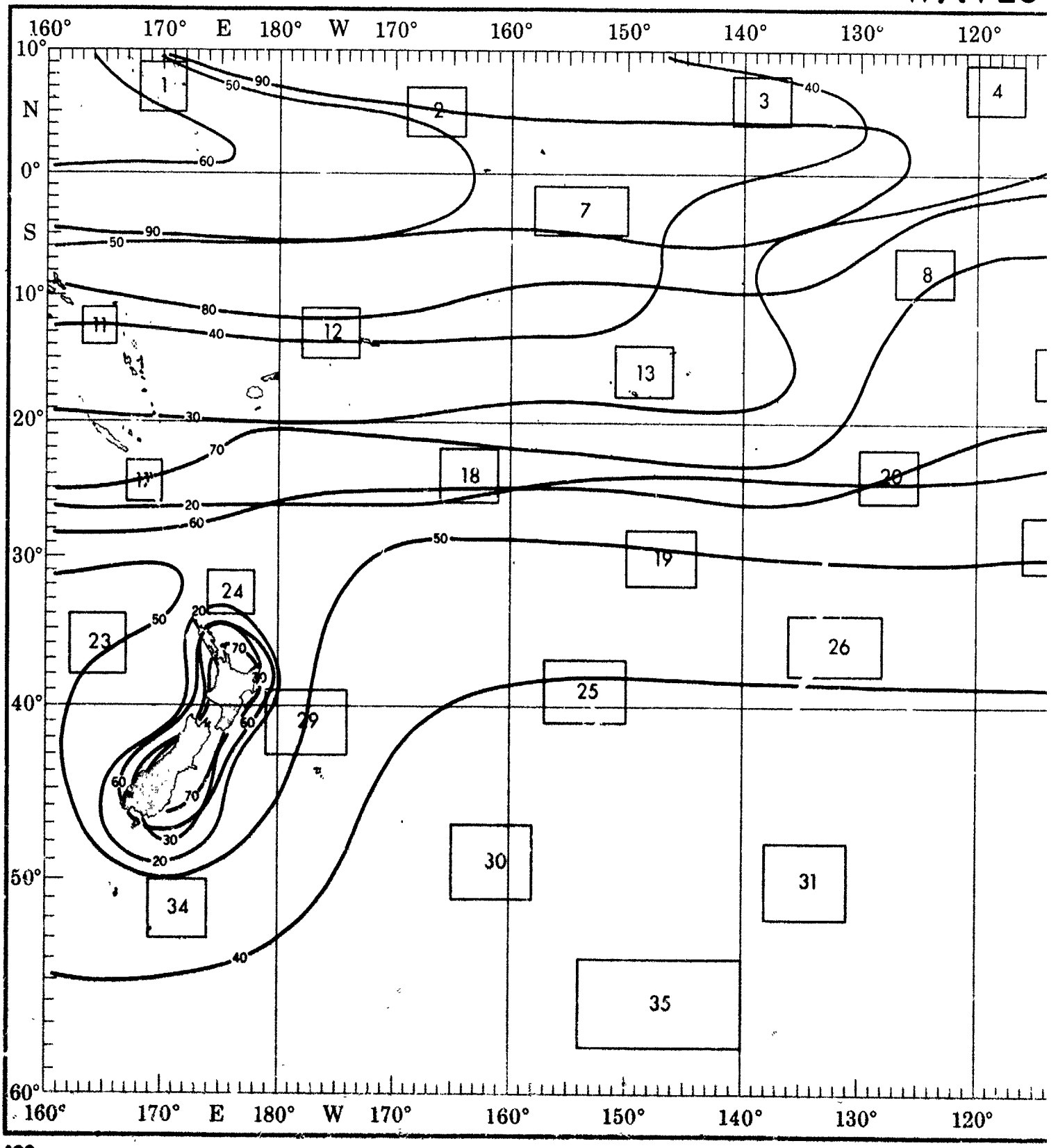
JULY



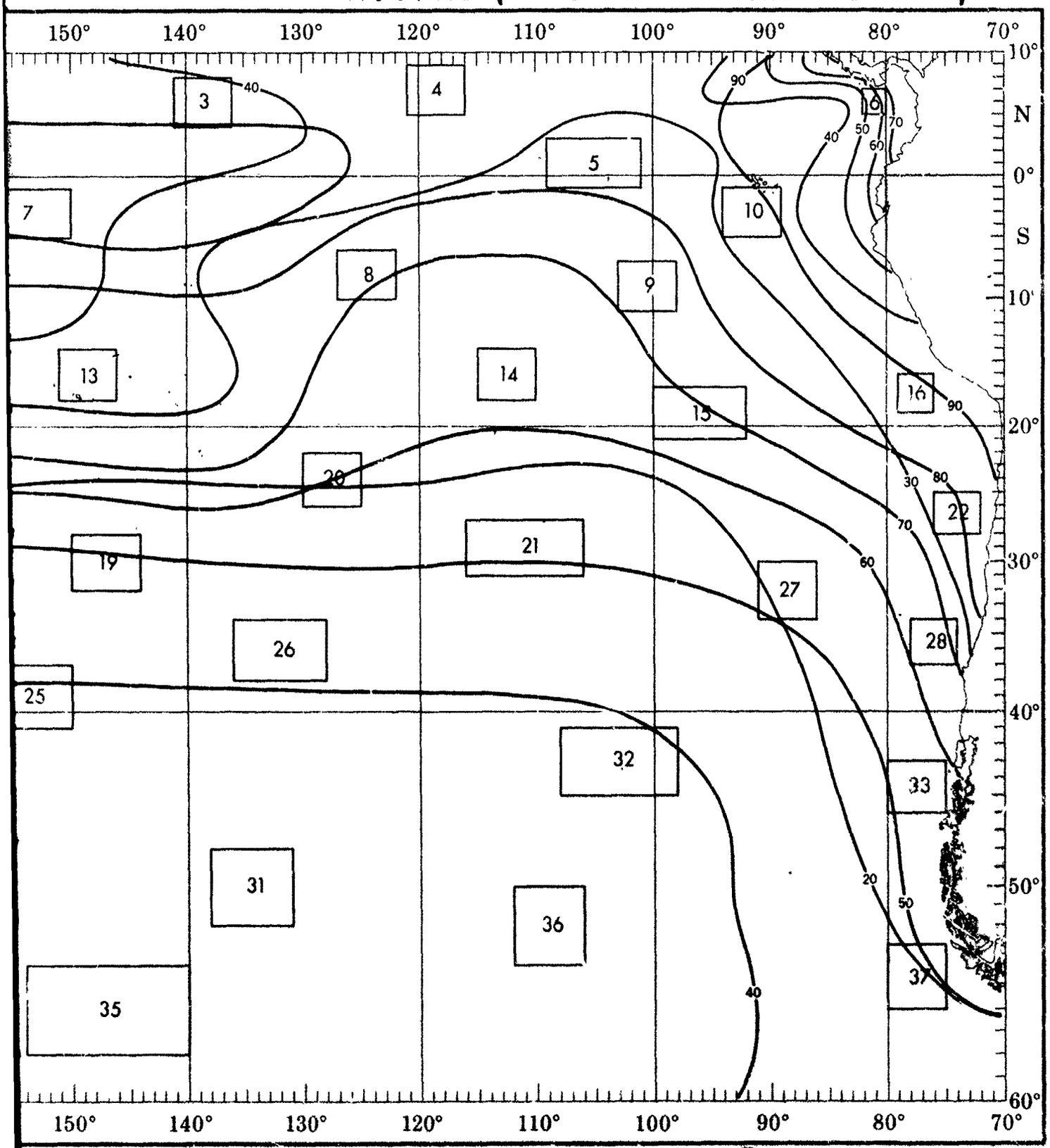
objective compilation of available data for specified areas without regard to suspected biases. (opposite page) are based on all available data subjectively adjusted where bias was evident.

JULY

WAVES


160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N 0° S 10° 20° 30° 40° 50° 60°
1
2
3
4
7
8
11
12
13
17
18
19
20
23
24
25
26
29
30
31
34
35
50
90
40
60
80
30
70
20

WAVES (<1.5 AND <2.5 METERS)

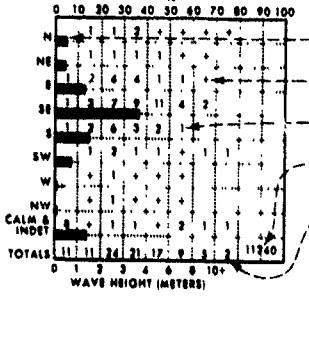


WAVE DIRECTION AND HEIGHT

Wave direction and height

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



—(5% of all waves were from the N)

+ indicates < 5% but >0.

—(1% of all waves were from the S with heights from 6-7.5 meters.)

—Number of observations

—(2% of the waves from all directions had heights ≥10 meters)

WAVE HEIGHT INTERVAL

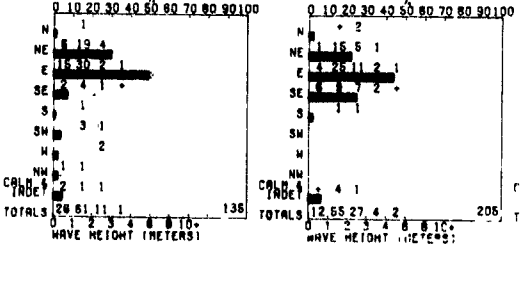
Feet	0-2	3-6	7-9	10-12	13-19	20-25	26-32	≥33
Meters	0-.5	1-1.5	2-2.5	3	3.5	4	5.5	6-7.5	8-9.5	≥10

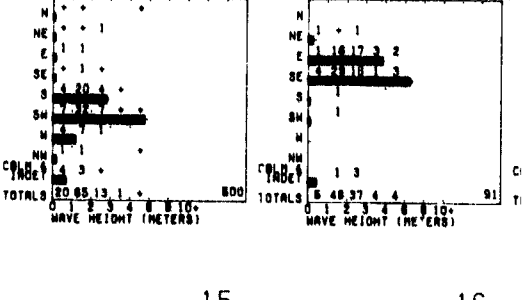
0 1 2 3 4 6 8 10+

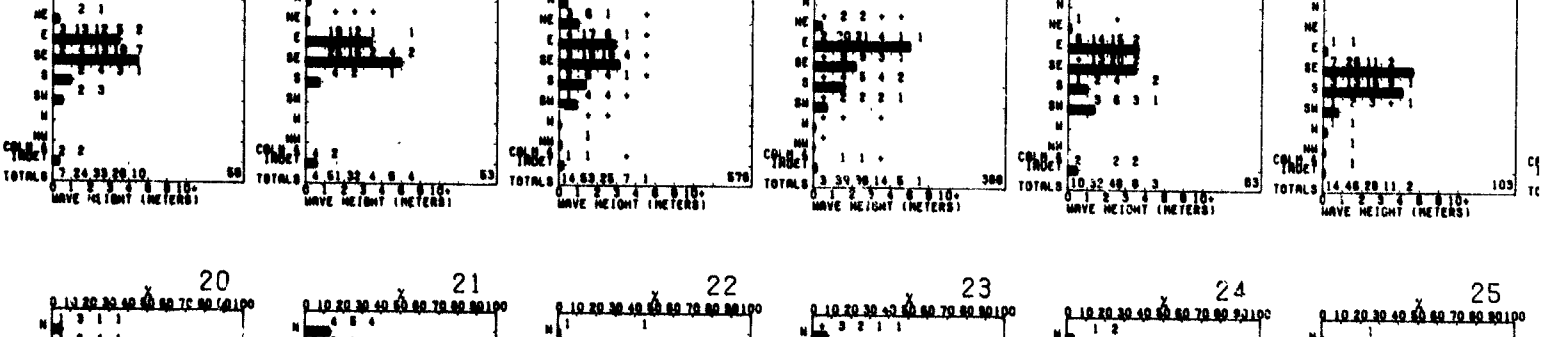
Printed scale on bottom of chart

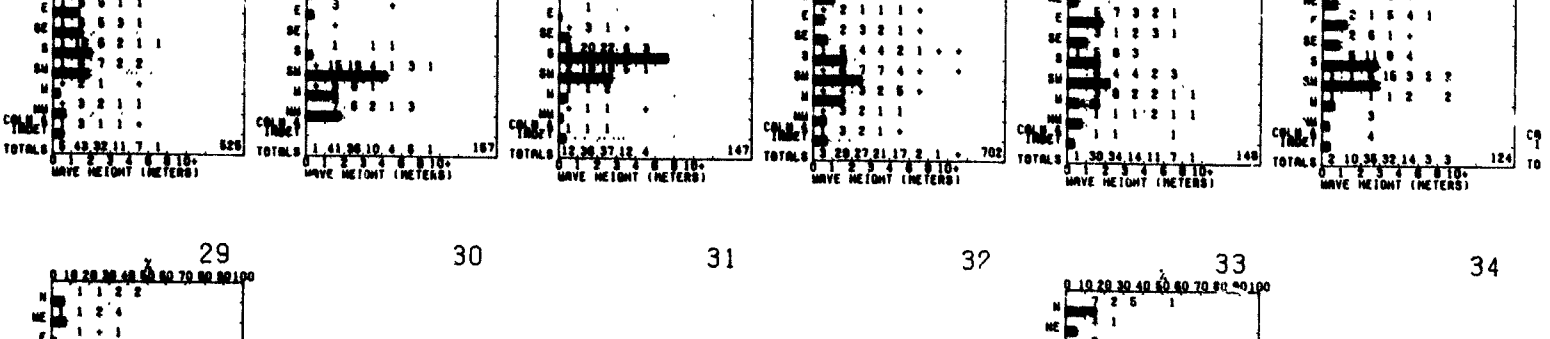
BLUE LINE - Percent frequency of wave height <1.5 meters (5 feet)

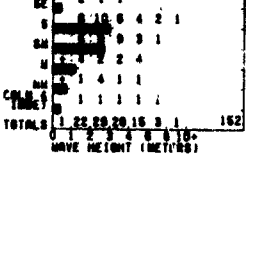
RED LINE - Percent frequency of wave height <2.5 meters (8 feet)







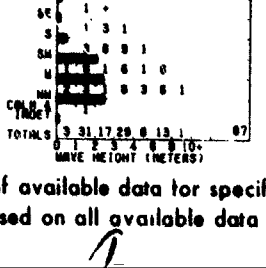




30 INSUFFICIENT DATA

31 INSUFFICIENT DATA

32 INSUFFICIENT DATA



34 INSUFFICIENT DATA

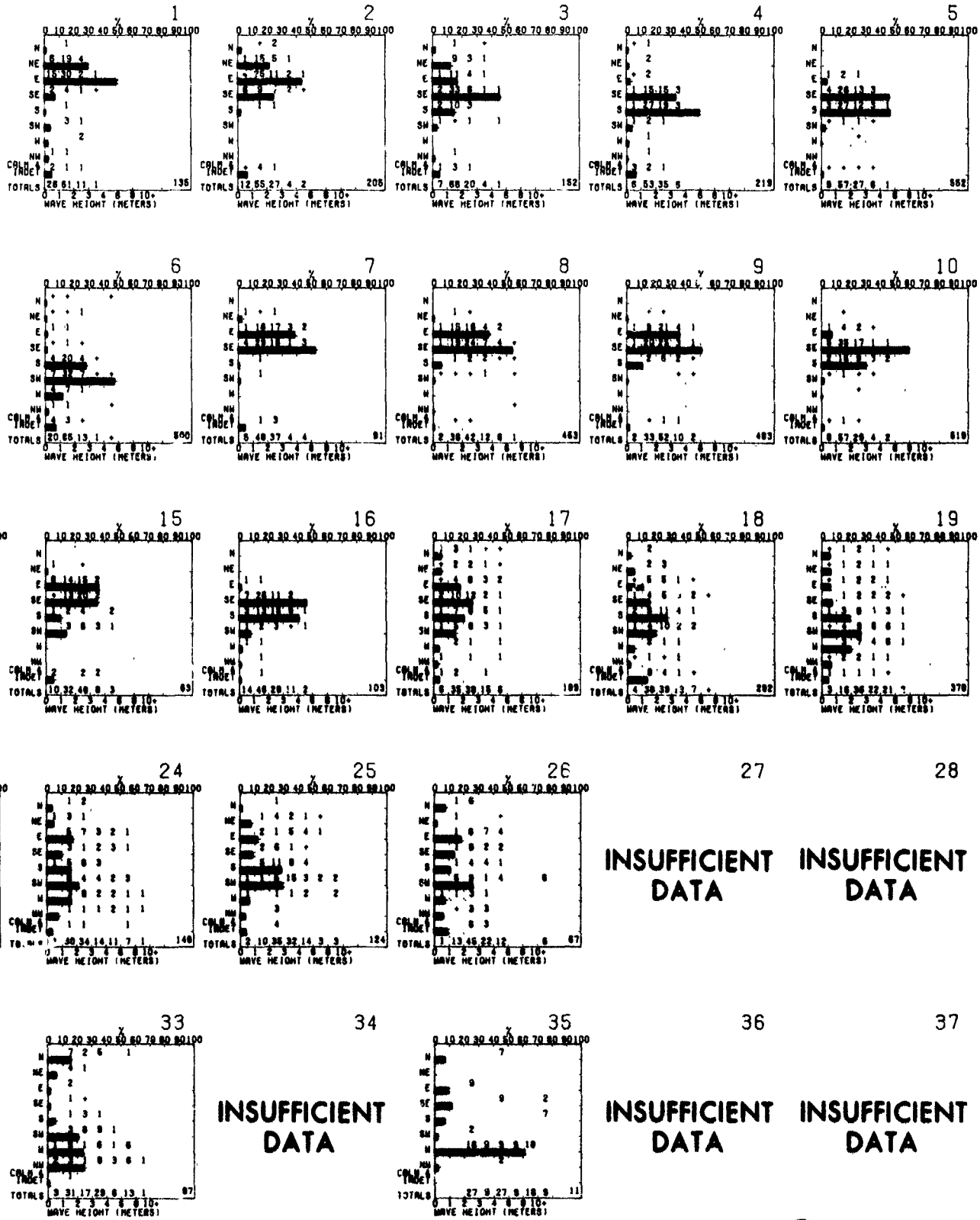
Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted wher

HEIGHT

JULY

cy of waves from

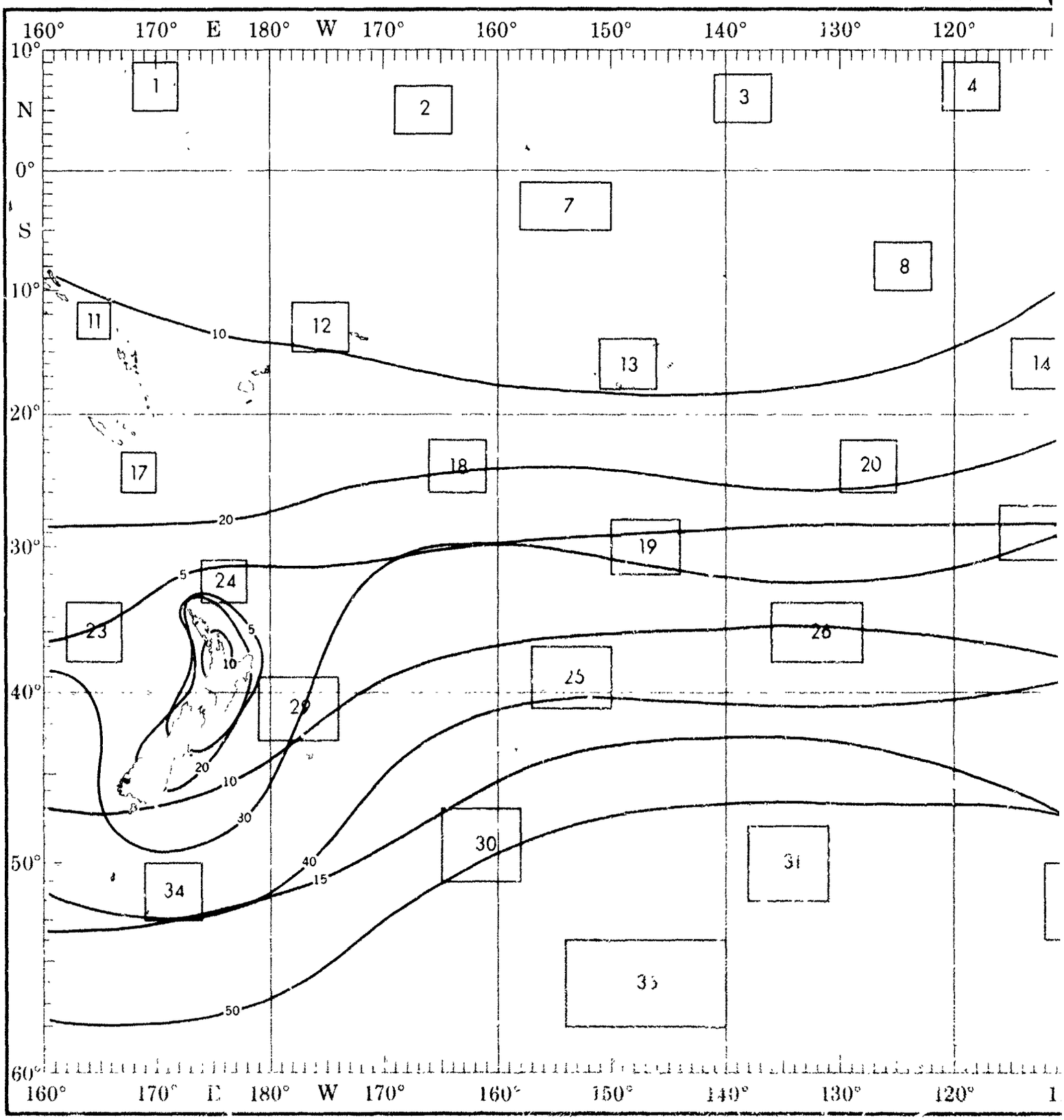
nt frequency of wave



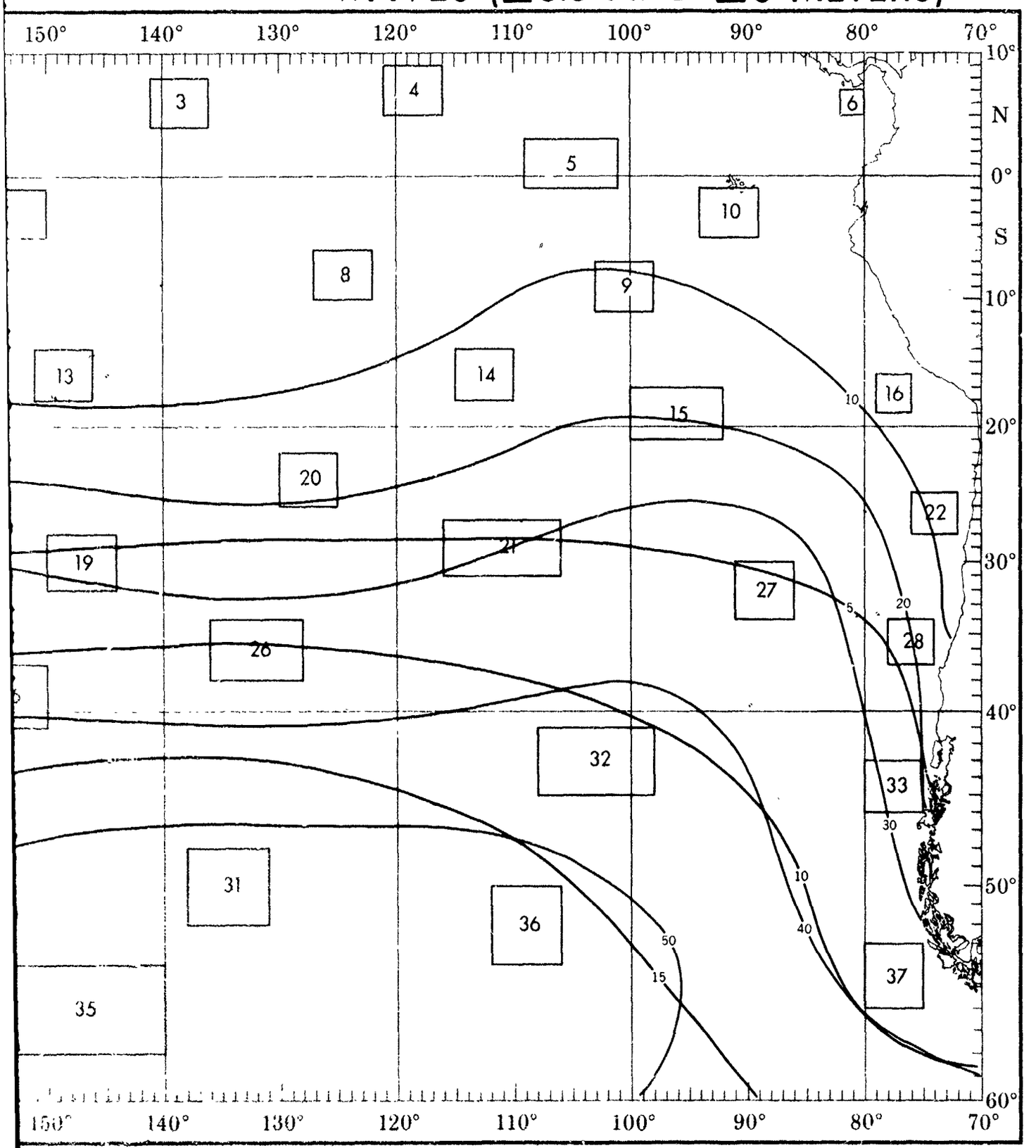
jective compilation of available data for specified areas without regard to suspected biases.
pposite page) are based on all available data subjectively adjusted where bias was evident.

JULY

WAVES (

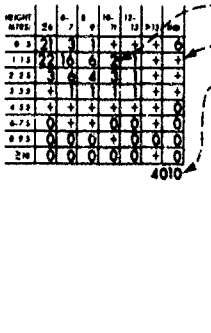

160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N
0°
10° S
20°
30°
40°
50°
60°
1
2
3
4
7
8
11
12
13
14
17
18
20
19
23
24
25
26
29
30
31
34
35
10
20
30
40
50
5
15

WAVES (≥3.5 AND ≥6 METERS)



WAVE PERIOD AND HEIGHT

Percent frequency of occurrence of wave period and height



—(2% of observed waves had a height of 1-1.5 meters and a period of 10-11 seconds.)

— + indicates < 5% but >0

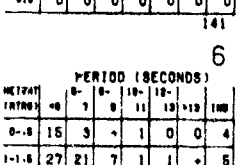
— Number of observations

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

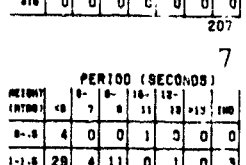
BLUE LINE - Percent frequency of wave height ≥3.5 meters (12 feet)

RED LINE - Percent frequency of wave height ≥6 meters (20 feet)

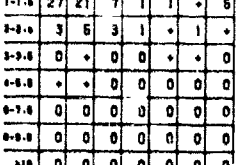
1



2



6



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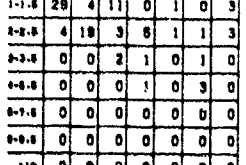

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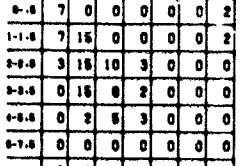

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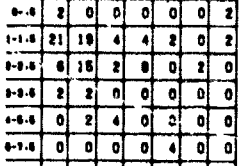
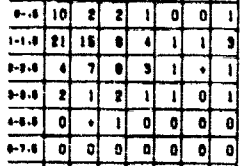
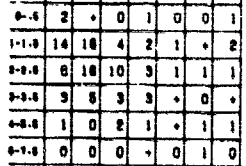


13



14



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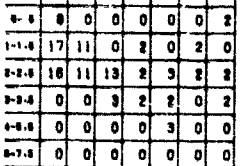

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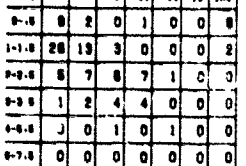

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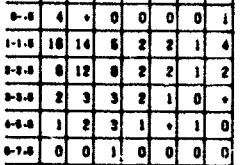

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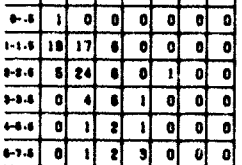

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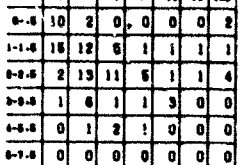

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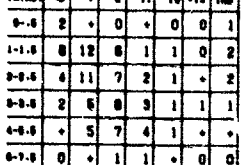

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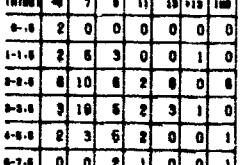
25



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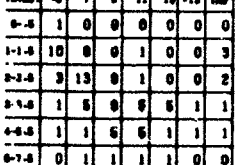


30

INSUFFICIENT DATA

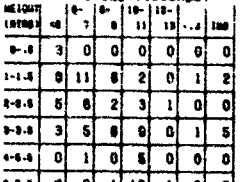
31

INSUFFICIENT DATA

32

INSUFFICIENT DATA

33



34

INSUFFICIENT DATA

Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

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JULY

ls.)

are reported If both

1

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	21	3	0	1	0	0	5
1-1.5	23	18	12	1	1	1	2
2-2.5	2	7	1	0	0	0	1
3-3.5	0	1	0	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

141

2

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	11	+	0	0	0	0	1
1-1.5	22	20	7	+	1	0	4
2-2.5	+	17	5	+	1	+	2
3-3.5	0	1	1	1	+	0	0
4-5.5	0	+	1	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

207

3

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	6	1	1	0	0	0	1
1-1.5	29	22	7	3	1	1	3
2-2.5	3	10	6	0	0	1	0
3-3.5	0	4	0	0	0	0	0
4-5.5	1	0	0	1	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

154

4

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	1	0	0	0	0	3
1-1.5	12	21	12	4	+	1	3
2-2.5	3	13	8	9	0	1	1
3-3.5	0	1	3	+	0	1	+
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

220

5

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	1	+	+	0	0	1
1-1.5	20	19	7	4	3	2	2
2-2.5	4	12	6	3	1	1	+
3-3.5	0	2	3	1	1	0	+
4-5.5	0	0	1	0	+	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

557

6

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	15	3	+	1	0	0	4
1-1.5	27	21	7	1	1	+	5
2-2.5	3	5	3	1	+	1	+
3-3.5	0	+	0	0	+	+	0
4-5.5	+	+	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

518

7

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	0	0	1	0	0	0
1-1.5	29	4	11	0	1	0	3
2-2.5	4	19	3	5	1	1	3
3-3.5	0	0	2	1	0	1	0
4-5.5	0	0	0	1	0	3	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

91

8

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	1	0	0	0	0	0
1-1.5	14	15	5	1	+	0	1
2-2.5	8	12	13	4	2	+	2
3-3.5	1	3	4	1	2	+	1
4-5.5	+	1	2	0	+	0	0
6-7.5	0	0	+	+	0	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

465

9

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	0	0	0	0	0	+
1-1.5	12	14	3	1	2	0	1
2-2.5	11	23	9	3	2	1	2
3-3.5	1	4	3	1	0	+	+
4-5.5	+	1	+	0	+	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

493

10

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	0	+	0	0	0	1
1-1.5	24	18	7	2	2	1	3
2-2.5	4	13	8	2	1	1	+
3-3.5	0	2	1	1	+	+	0
4-5.5	+	+	+	1	+	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

822

14

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	+	0	1	0	0	1
1-1.5	14	16	4	2	1	+	2
2-2.5	6	18	10	3	1	1	1
3-3.5	3	5	3	3	+	0	+
4-5.5	1	0	2	1	+	1	1
6-7.5	0	0	0	+	0	1	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

390

15

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	0	0	0	0	0	2
1-1.5	17	11	0	2	0	2	0
2-2.5	18	11	13	2	3	2	2
3-3.5	0	0	3	2	2	0	2
4-5.5	0	0	0	0	3	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

63

16

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	2	0	1	0	0	8
1-1.5	28	13	3	0	0	0	2
2-2.5	5	7	8	7	1	0	0
3-3.5	1	2	4	4	0	0	0
4-5.5	0	0	1	0	1	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

108

17

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	1	1	0	0	0	2
1-1.5	10	10	8	2	2	1	4
2-2.5	5	10	18	4	0	1	1
3-3.5	1	3	5	4	2	0	1
4-5.5	1	2	1	1	0	0	1
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

194

18

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	1	0	0	0	0	0
1-1.5	12	12	5	1	+	0	7
2-2.5	5	11	12	3	3	1	5
3-3.5	2	2	5	2	0	1	1
4-5.5	1	1	2	1	2	0	1
6-7.5	0	0	0	0	0	0	+
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

284

19

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	+	0	+	0	0	1
1-1.5	8	8	1	1	+	1	1
2-2.5	7	10	8	8	2	1	2
3-3.5	2	7	8	4	2	0	1
4-5.5	1	8	5	4	2	2	+
6-7.5	0	+	+	+	1	1	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

378

23

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	+	0	+	0	0	1
1-1.5	9	12	6	1	1	0	2
2-2.5	4	11	7	2	1	+	2
3-3.5	2	5	8	3	1	1	1
4-5.5	+	5	7	4	1	+	+
6-7.5	0	+	1	1		0	0
8-9.5	0	0	+	0	1	0	0
≥10	0	0	+	0	0	+	0

707

24

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	1	0	1	0	0	0	0
1-1.5	14	11	3	1	0	0	1
2-2.5	5	12	11	2	0	1	3
3-3.5	1	3	4	5	0	0	1
4-5.5	0	2	5	2	0	2	0
6-7.5	0	3	0	3	1	0	0
8-9.5	0	0	0	0	1	0	0
≥10	0	0	0	0	0	0	0

148

25

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	0	0	0	0	0	0
1-1.5	2	5	3	0	0	1	0
2-2.5	8	10	8	2	8	0	8
3-3.5	3	19	5	2	3	1	0
4-5.5	2	3	5	2	0	0	1
6-7.5	0	0	2	1	0	0	1
8-9.5	0	0	0	3	0	0	0
≥10	0	0	0	0	0	0	0

124

26

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	1	0	0	0	0	0	0
1-1.5	8	1	0	0	0	3	0
2-2.5	13	18	0	4	1	1	6
3-3.5	1	3	6	7	0	1	3
4-5.5	1	0	7	1	0	1	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	1	4	0	0

67

27

INSUFFICIENT DATA

28

INSUFFICIENT DATA

32

INSUFFICIENT DATA

33

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	0	0	0	0	0	0
1-1.5	8	11	6	2	0	1	2
2-2.5	5	8	2	3	1	0	0
3-3.5	3	5	8	9	0	1	5
4-5.5	0	1	0	5	0	0	0
6-7.5	0	0	1	10	1	0	0
8-9.5	0	0	0	0	0	0	1
≥10	0	0	0	0	0	0	0

87

34

INSUFFICIENT DATA

35

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	0	0	0	0	0	0	0
1-1.5	0	0	0	0	0	0	0
2-2.5	8	8	8	0	0	0	0
3-3.5	0	8	0	0	0	0	0
4-5.5	0	18	8	0	0	0	0
6-7.5	0	0	8	0	0	0	0
8-9.5	0	0	0	0	18	0	0
≥10	0	0	0	0	8	0	0

11

36

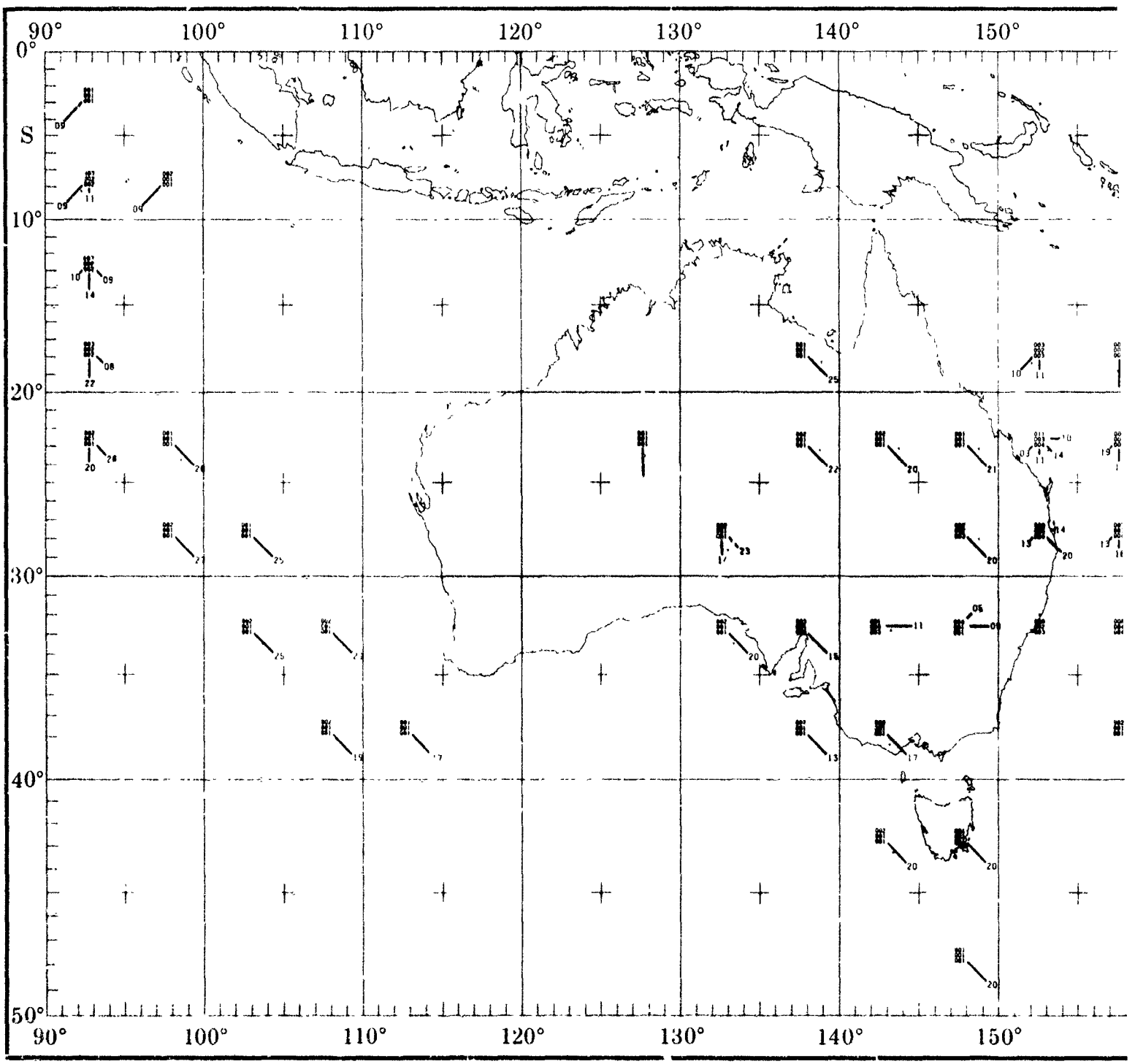
INSUFFICIENT DATA

37

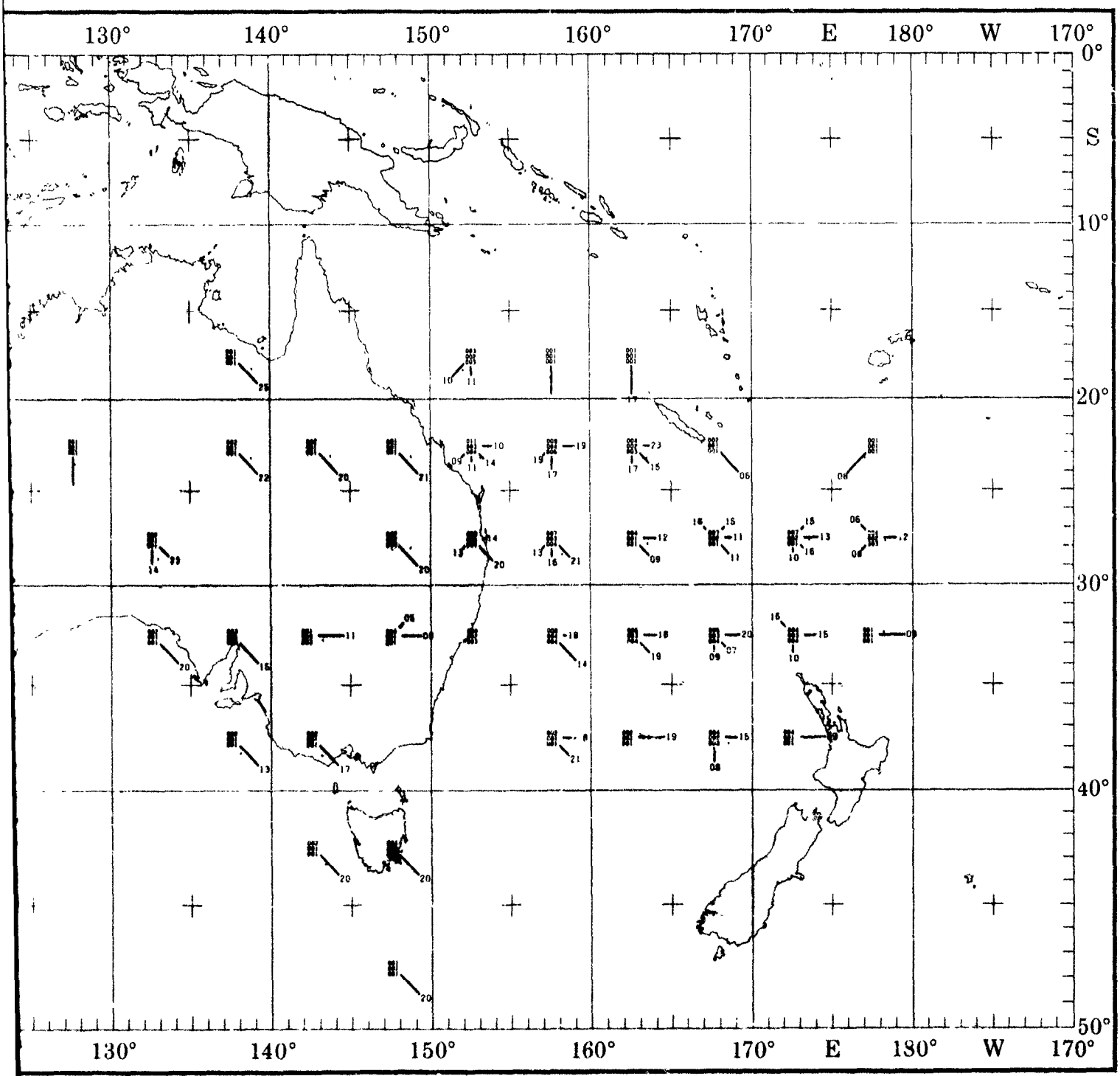
INSUFFICIENT DATA

objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

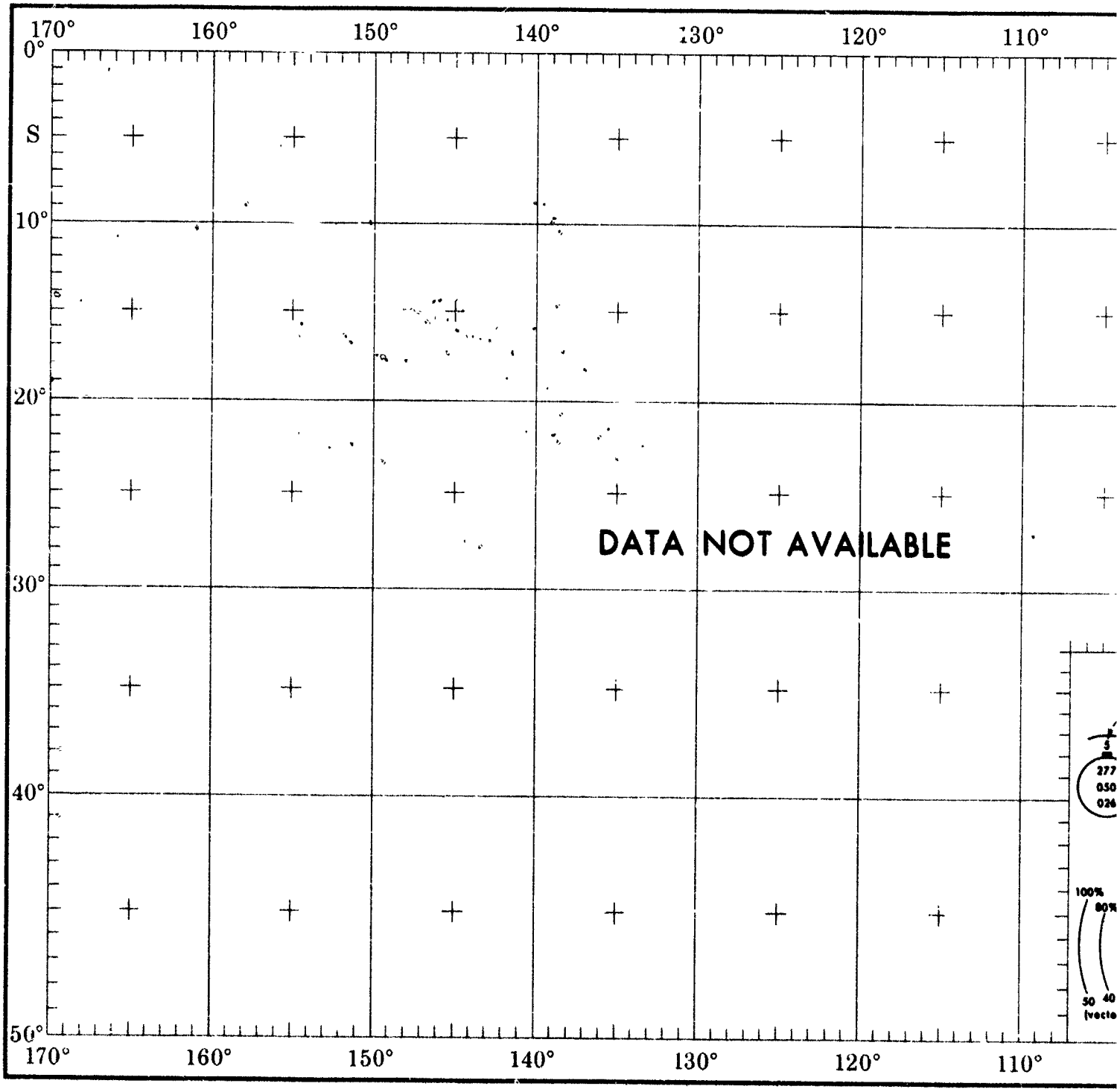
JULY



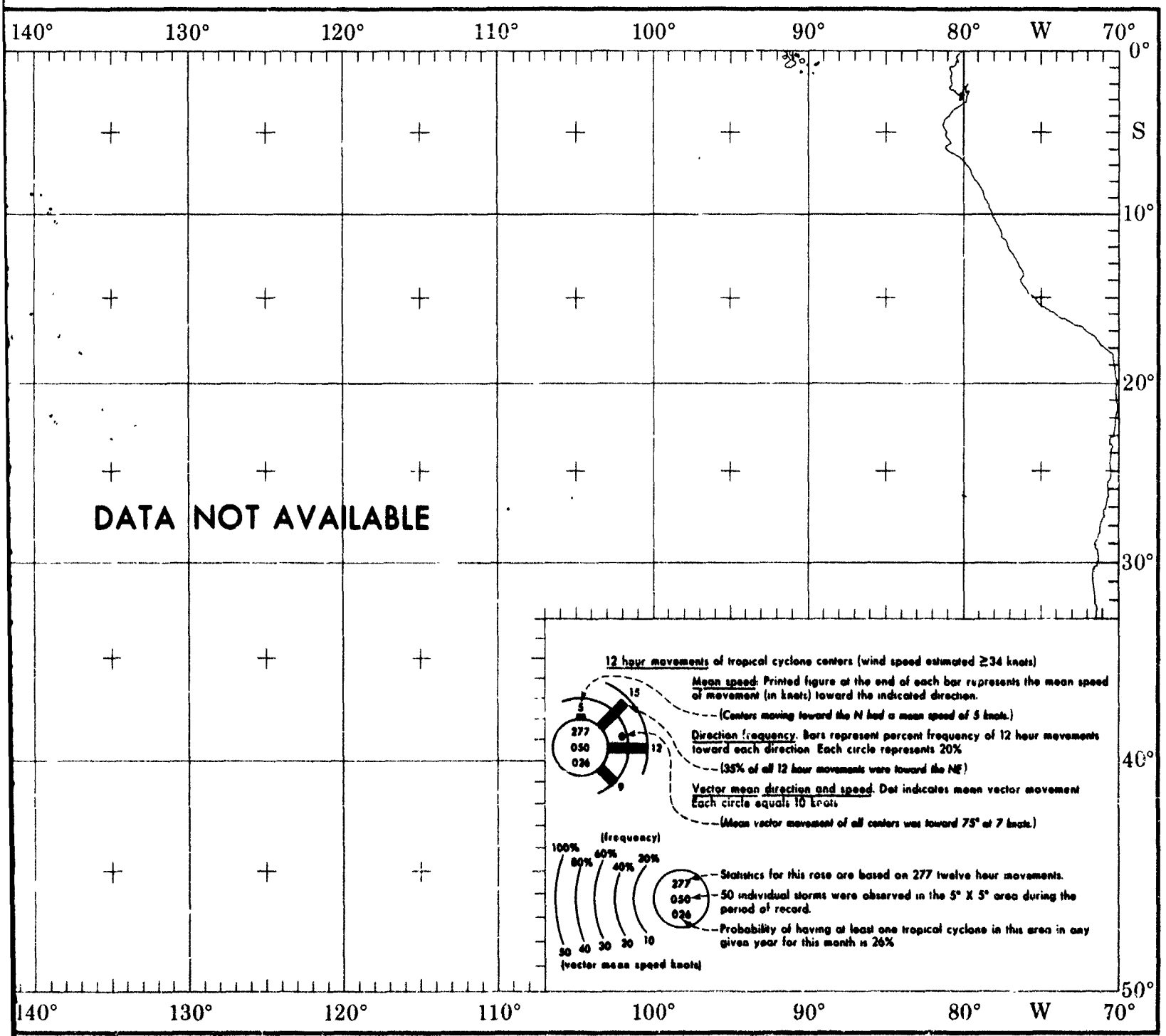
TROPICAL CYCLONE



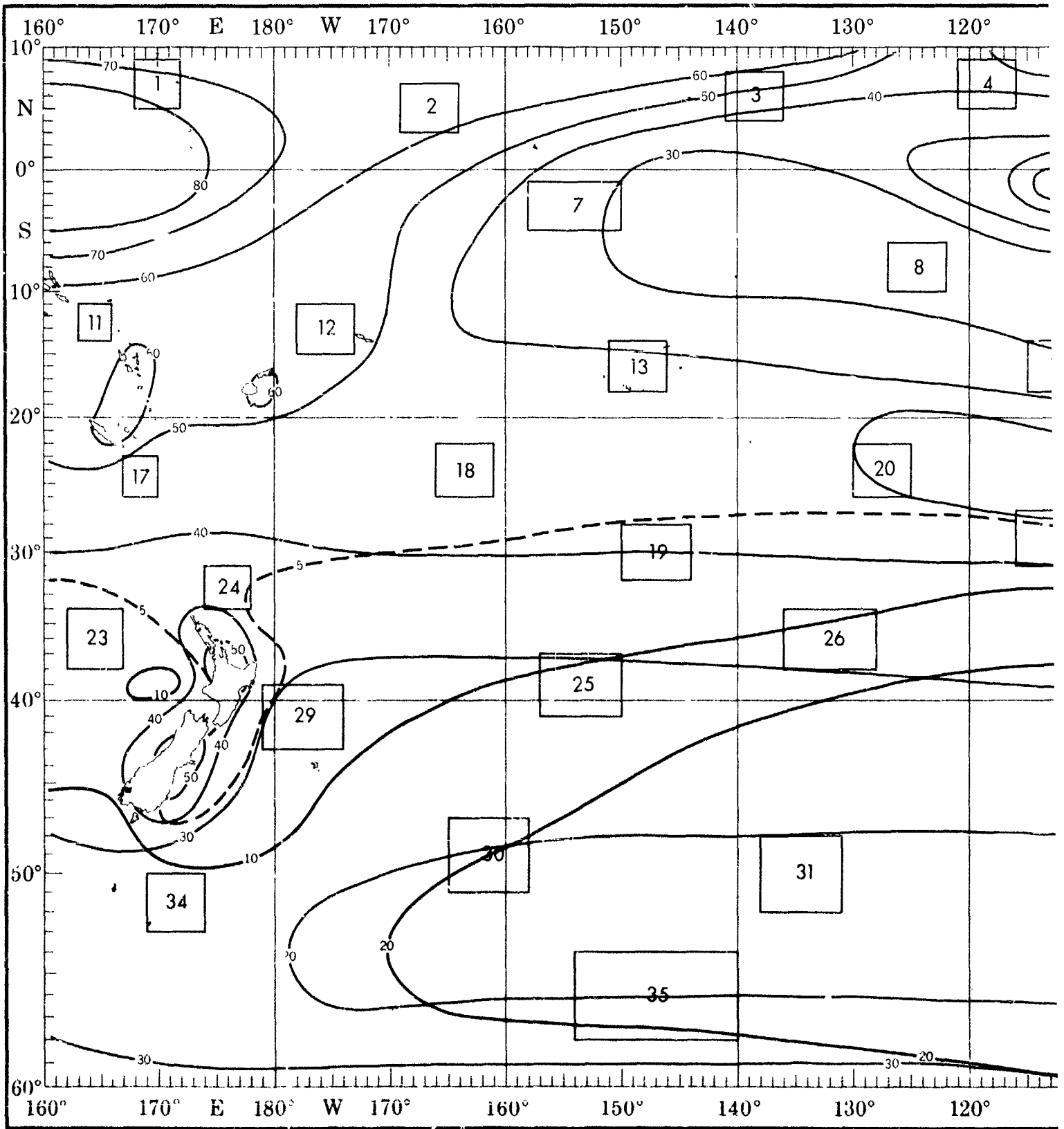
TROPICAL CYCLONE



JULY


140°
130°
120°
110°
100°
90°
80°
W
70°
0°
S
10°
20°
30°
40°
50°
DATA NOT AVAILABLE
12 hour movements of tropical cyclone centers (wind speed estimated ≥34 knots)
Mean speed: Printed figure at the end of each bar represents the mean speed of movement (in knots) toward the indicated direction.
(Centers moving toward the N had a mean speed of 5 knots.)
Direction frequency. Bars represent percent frequency of 12 hour movements toward each direction. Each circle represents 20%
(35% of all 12 hour movements were toward the NE)
Vector mean direction and speed. Dot indicates mean vector movement. Each circle equals 10 knots
(Mean vector movement of all centers was toward 75° at 7 knots.)
277
050
026
(frequency)
100%
80%
60%
40%
20%
50
40
30
20
10
(vector mean speed knots)
Statistics for this rose are based on 277 twelve hour movements.
50 individual storms were observed in the 5° X 5° area during the period of record.
Probability of having at least one tropical cyclone in this area in any given year for this month is 26%

AUGUST


160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N 0° S 10° 20° 30° 40° 50° 60°
1
2
3
4
7
8
11
12
13
17
18
19
20
23
24
25
26
29
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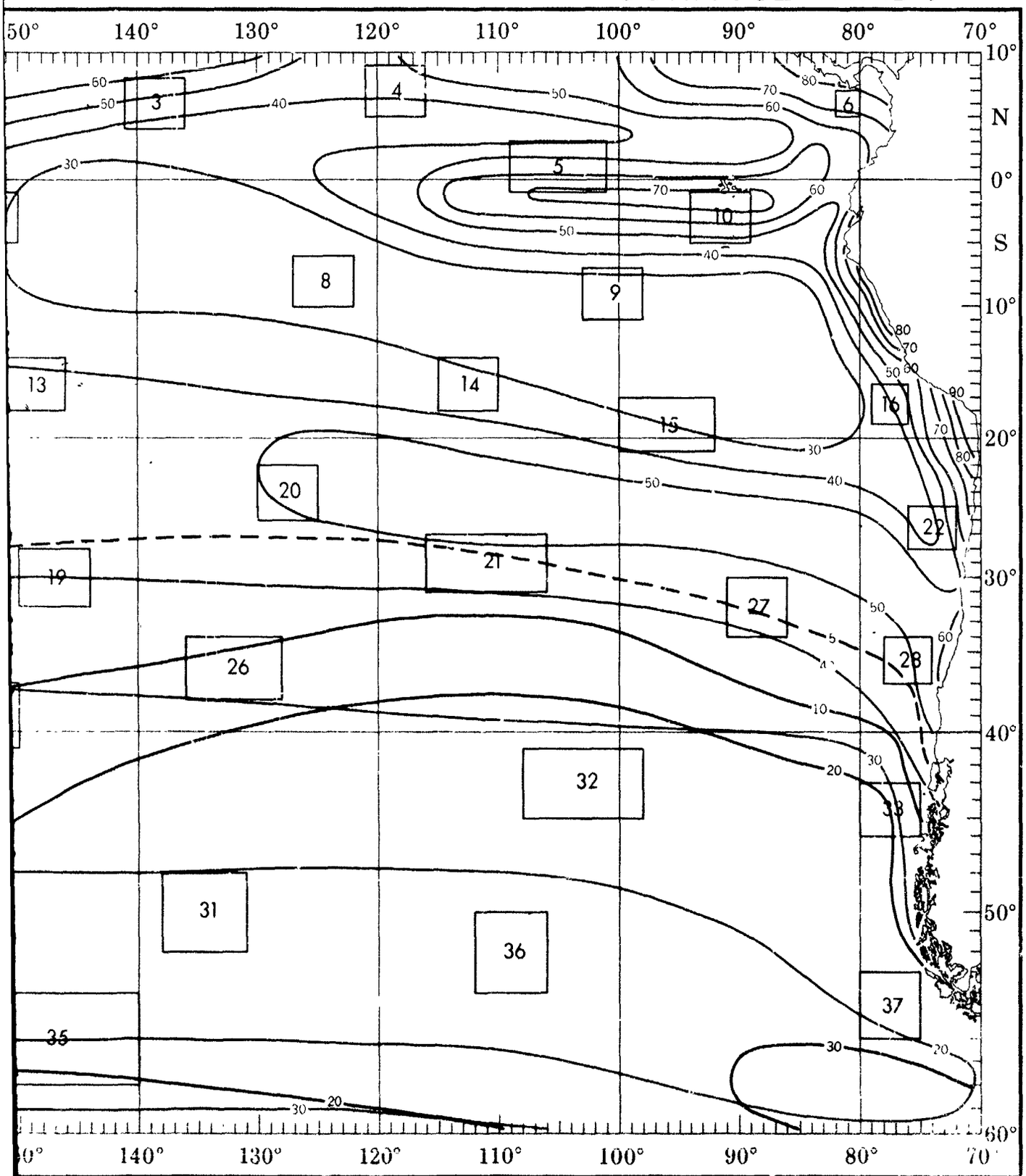
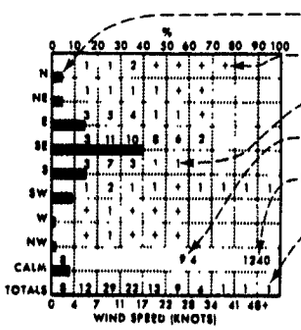
31
34
35
70
80
60
50
40
30
20
10
5

SURFACE WINDS



WIND DIRECTION AND SPEED

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.



WIND SPEED INTERVAL (KNOTS)

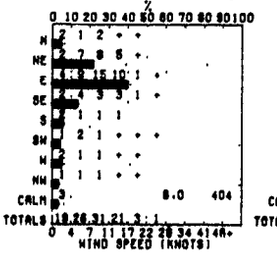
0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	≥48
0	4	7	11	17	22	28	34	41	48+

Printed scale on bottom of chart

BLUE LINE - Percent frequency of wind speed ≤10 knots

RED LINE - Percent frequency of wind speed ≥34 knots

1



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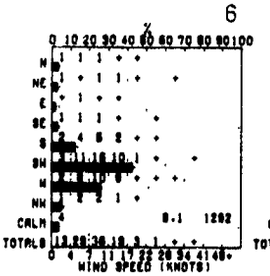

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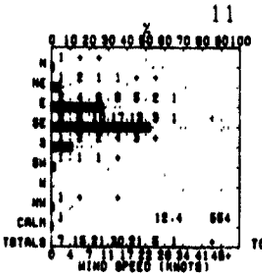

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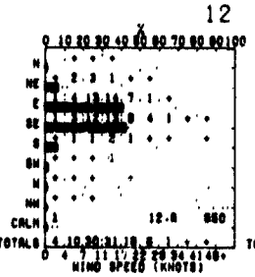

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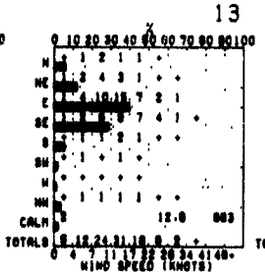

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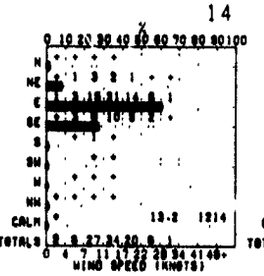

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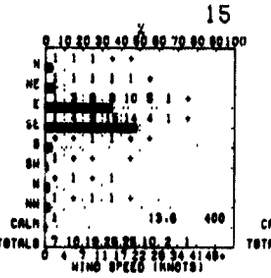

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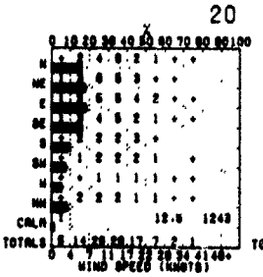

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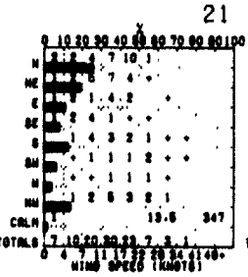

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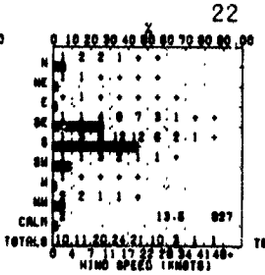

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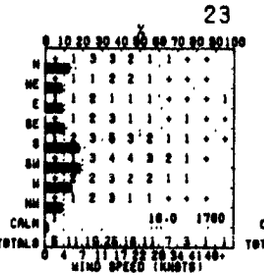

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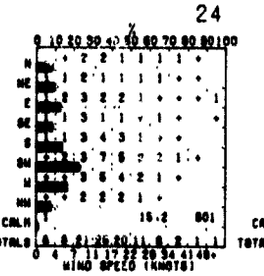

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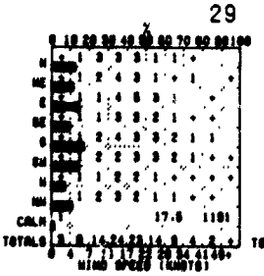

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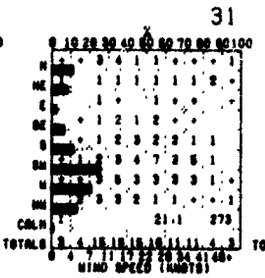

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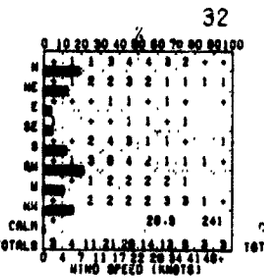

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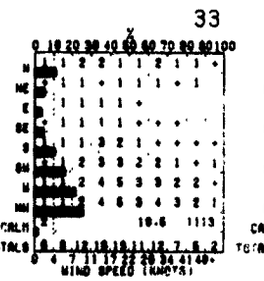
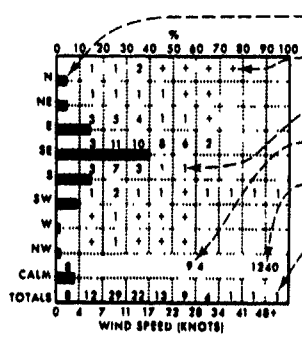


Graphs represent the objective compilation of available data for specified areas without
The isopleth analyses (opposite page) are based on all available data subjectively adjus

WIND DIRECTION AND SPEED

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



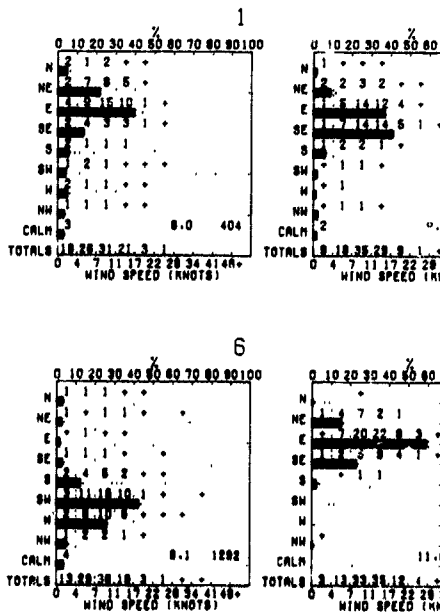
WIND SPEED INTERVAL (KNOTS)

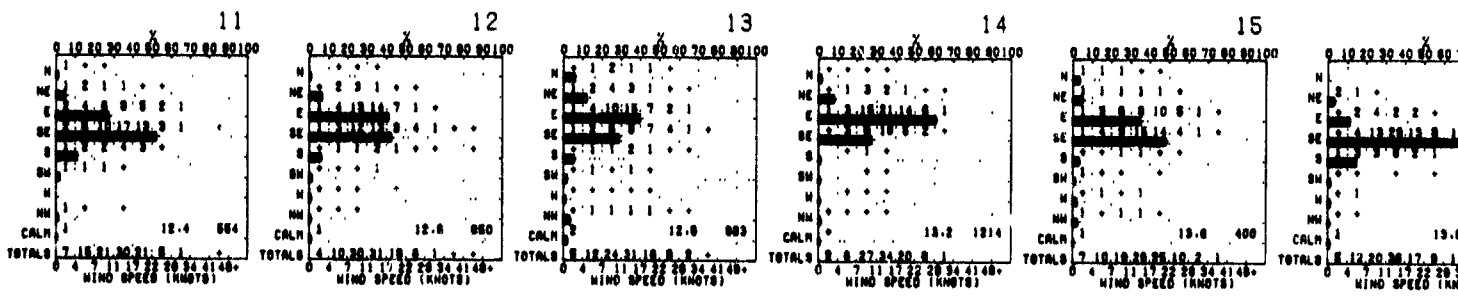
0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	≥48
0	4	7	11	17	22	28	34	41	48+

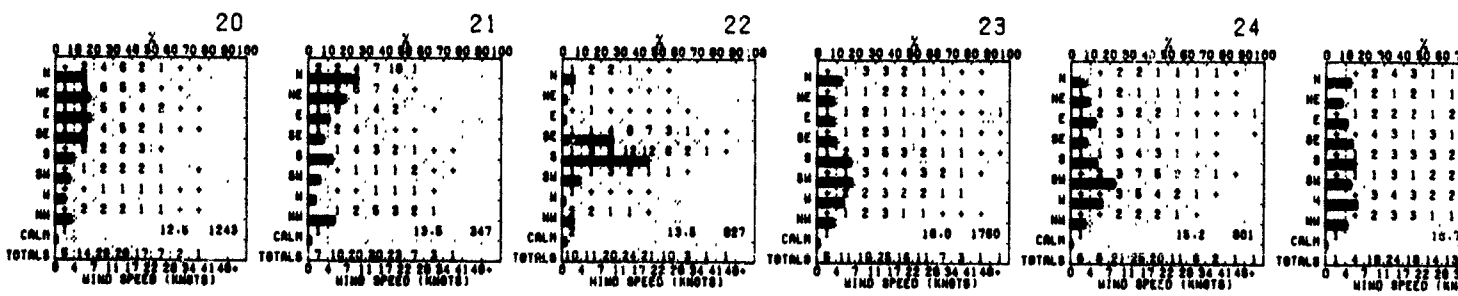
Printed scale on bottom of chart

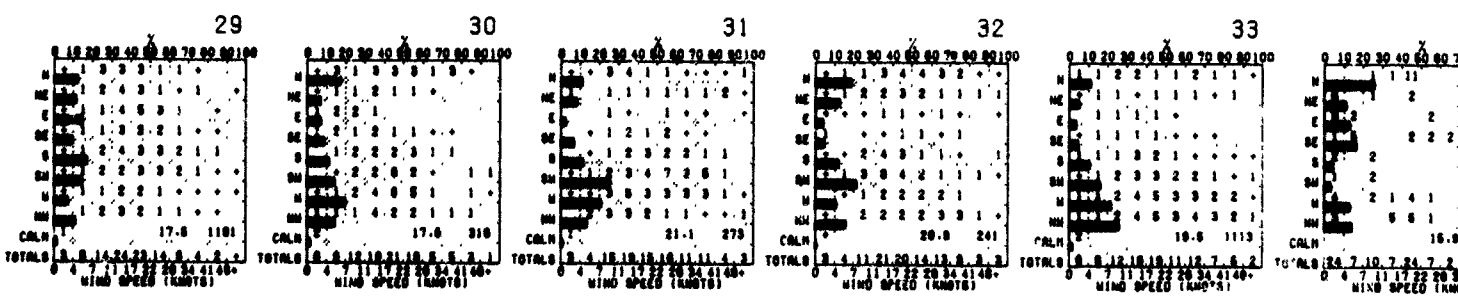
BLUE LINE - Percent frequency of wind speed ≤10 knots

RED LINE - Percent frequency of wind speed ≥34 knots









Graphs represent the objective compilation of available data for specified areas without
The isopleth analyses (opposite page) are based on all available data subjectively adju

SPEED

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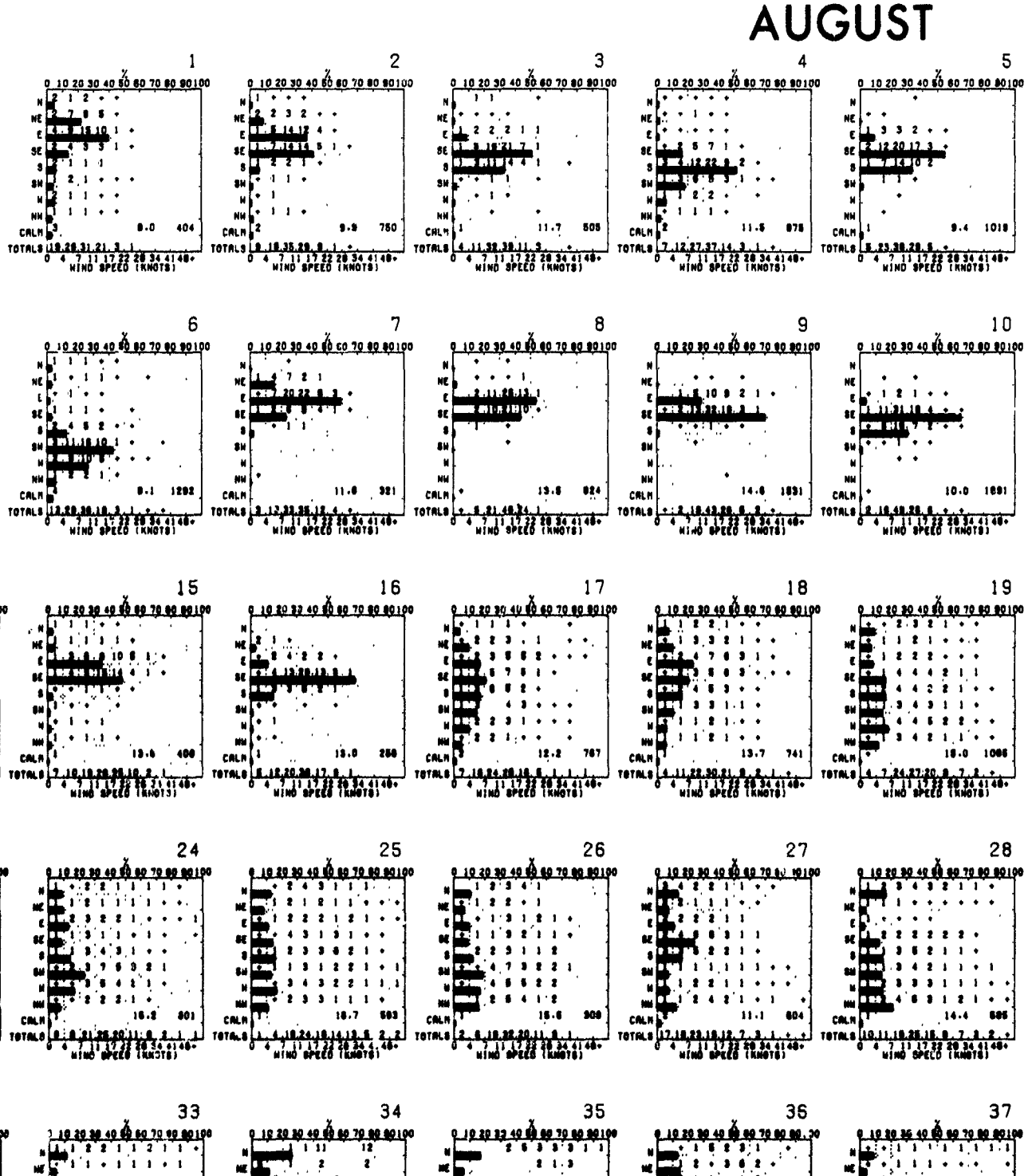
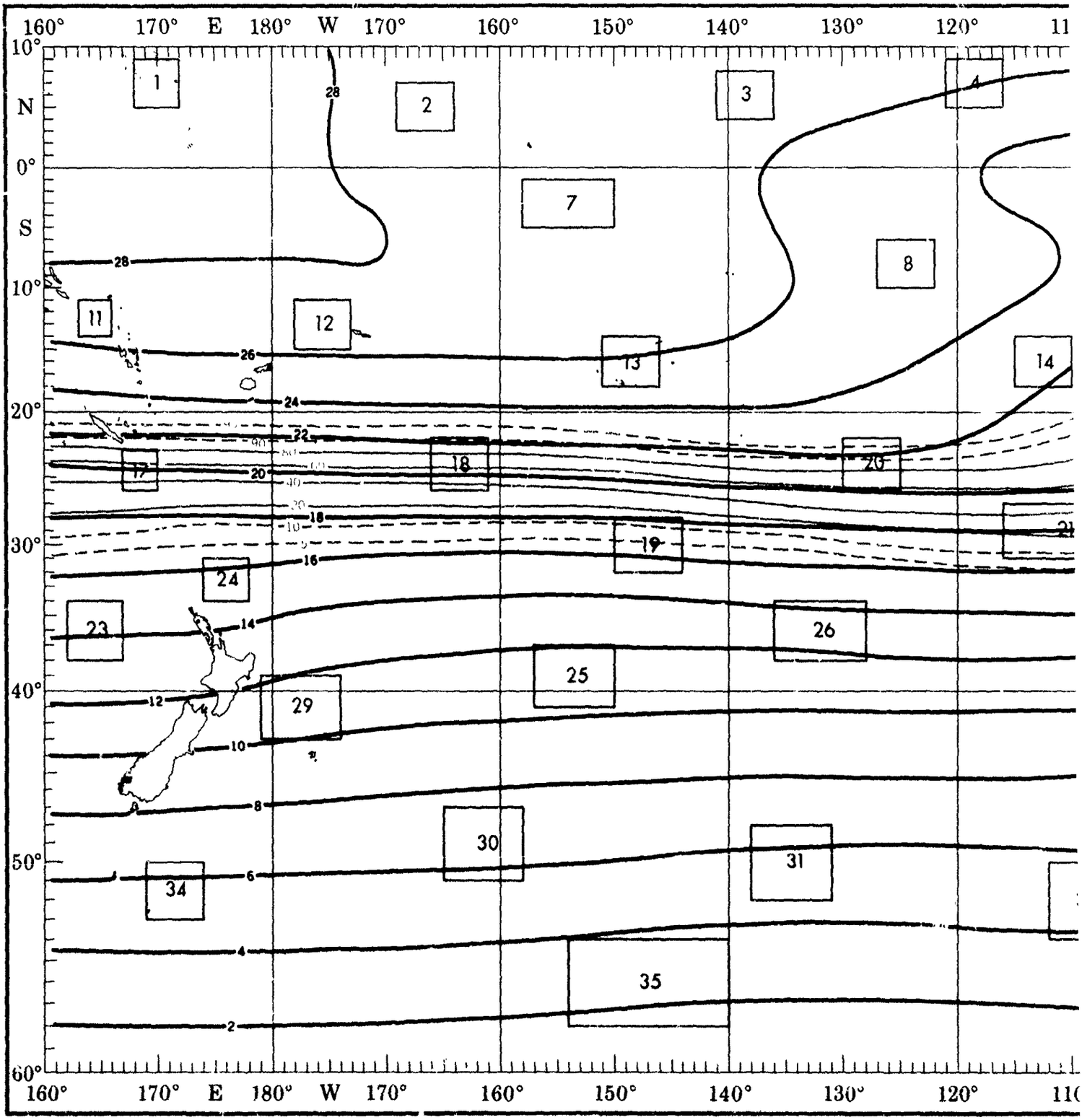
ction



objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

AUGUST


160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N
0°
S 10°
20°
30°
40°
50°
60°
1
2
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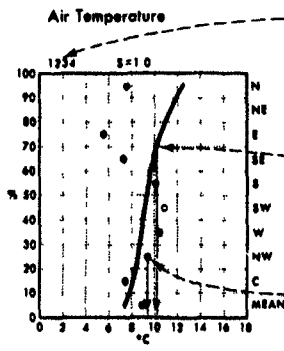
SURFACE AIR TEMPERATURE



Cumulative percent frequency of temperatures equal to or less than the temperature intersected by the curve.

(70% of all temperatures were ≤10.3 °C or ≤50.5 °F.)

S=Standard deviation of temperatures (°C)

Mean temperature for each wind direction, calm and for all data combined are represented by dots.

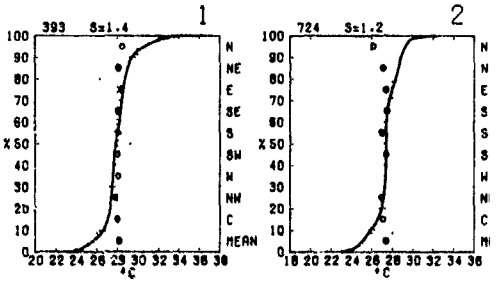
(With NW winds, the mean temperature was 9.4 °C or 48.9 °F.)

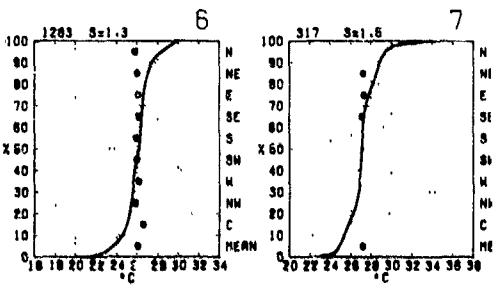
o Indicates that the mean temperature for a direction or calm was computed from 10-30 observations

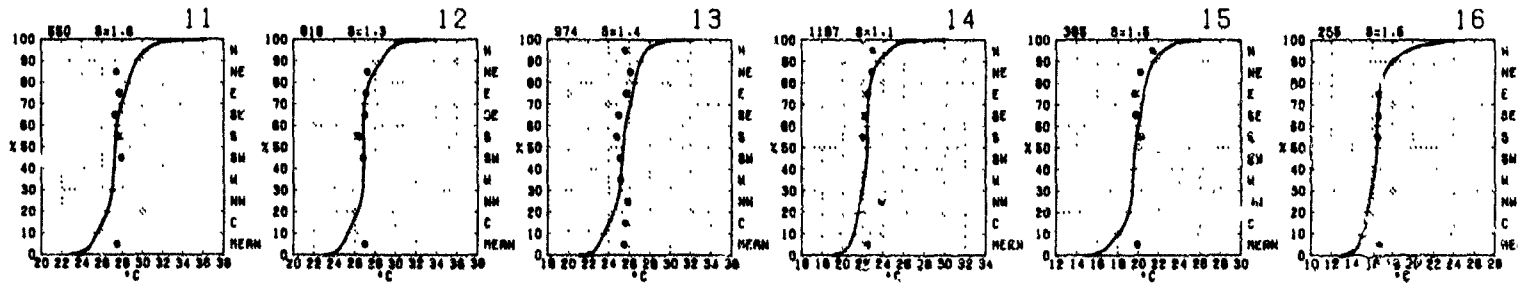
The mean temperature is omitted when less than 10 observations for a direction or calm were available.

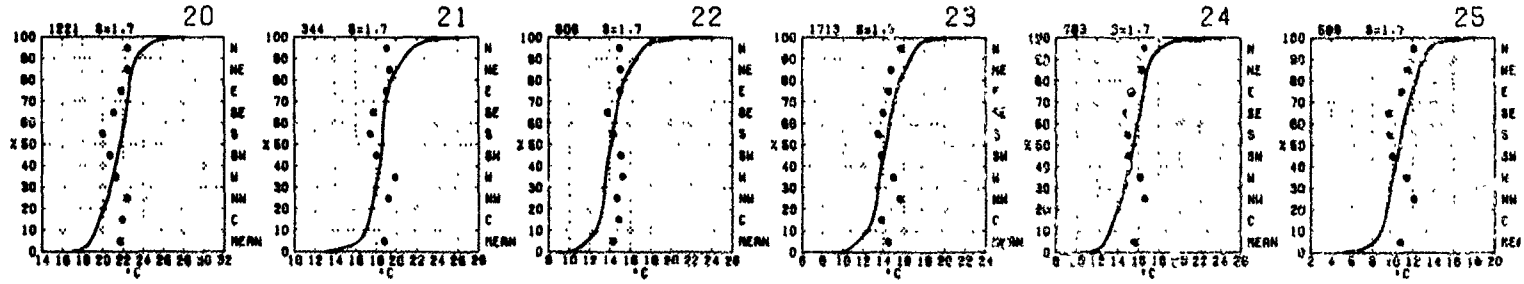
BLACK LINE - Mean air temperature (°C)

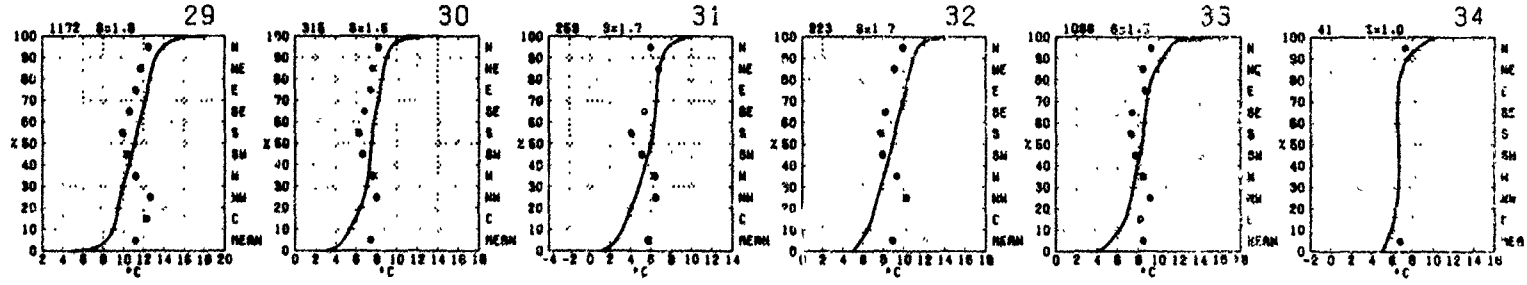
RED LINE - Percent frequency of temperature ≥20°C (68°F)











Graphs represent the objective compilation of available data for specified areas without regar
The isopleth analyses (opposite page) are based on all available data subjectively adjusted wi

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AUGUST

equal to or less than the temp-

or all data combined are

9 °F.)

r calm was computed from

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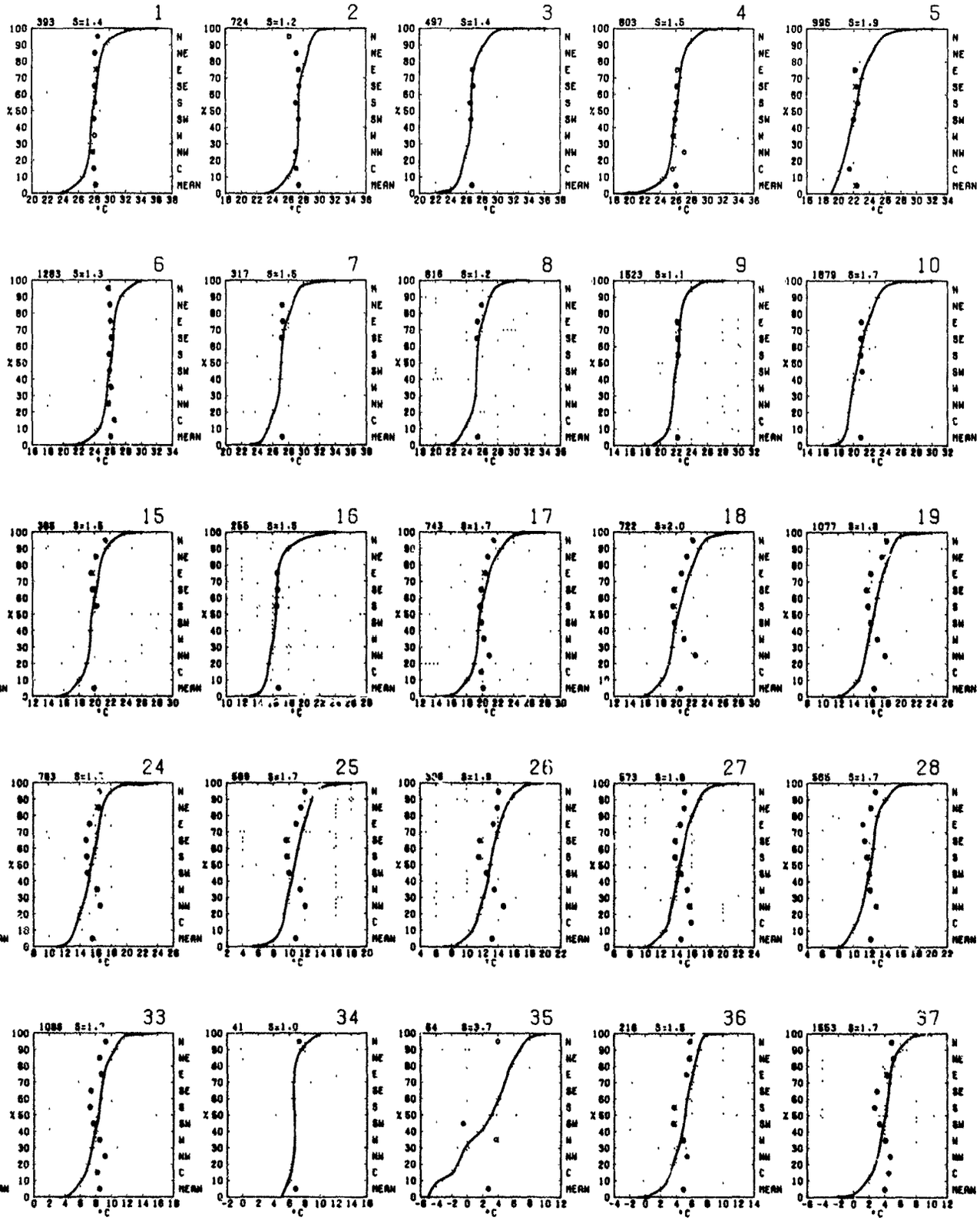

the objective compilation of available data for specified areas without regard to suspected biases.
ses (opposite page) are based on all available data subjectively adjusted where bias was evident.

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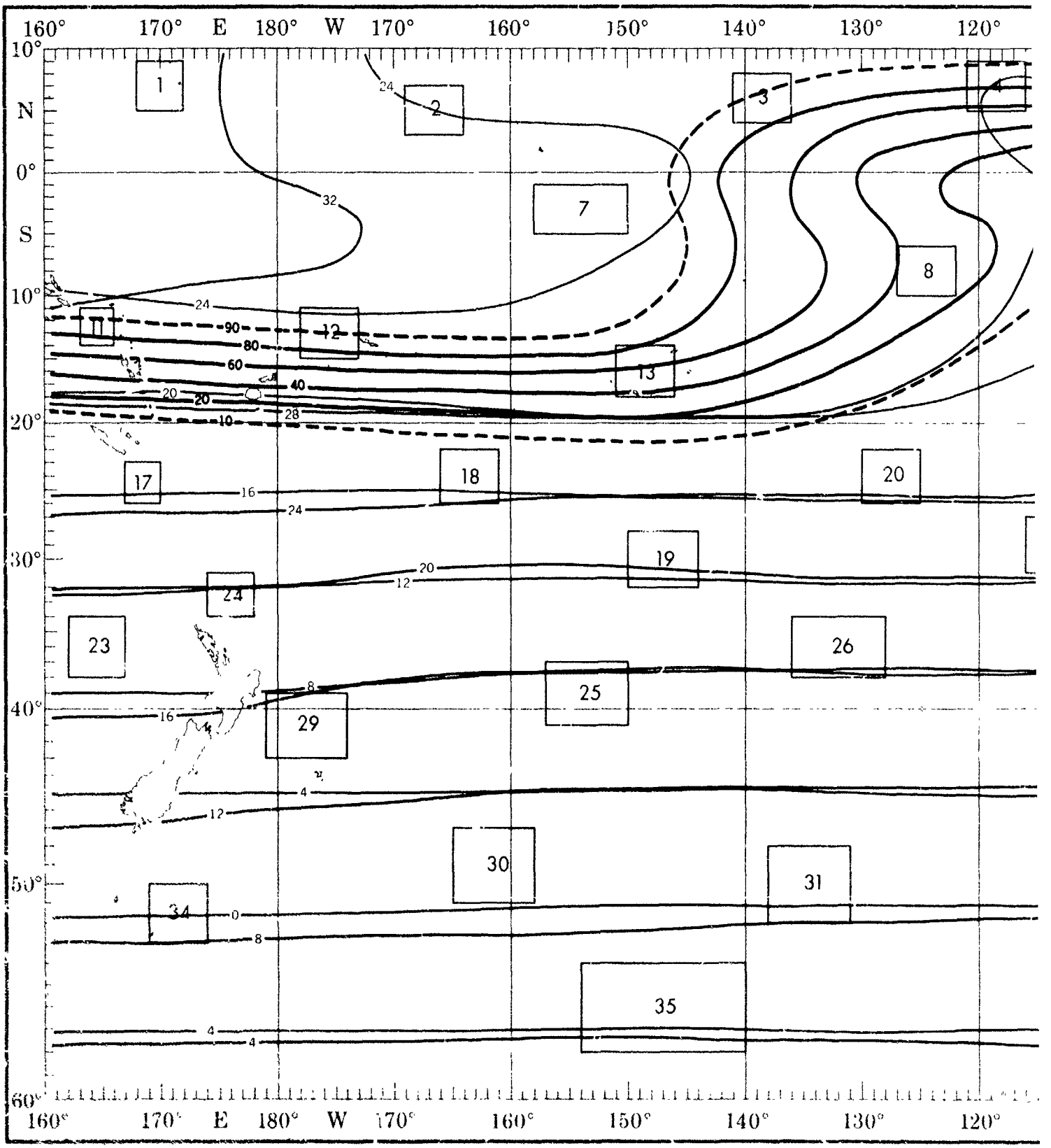
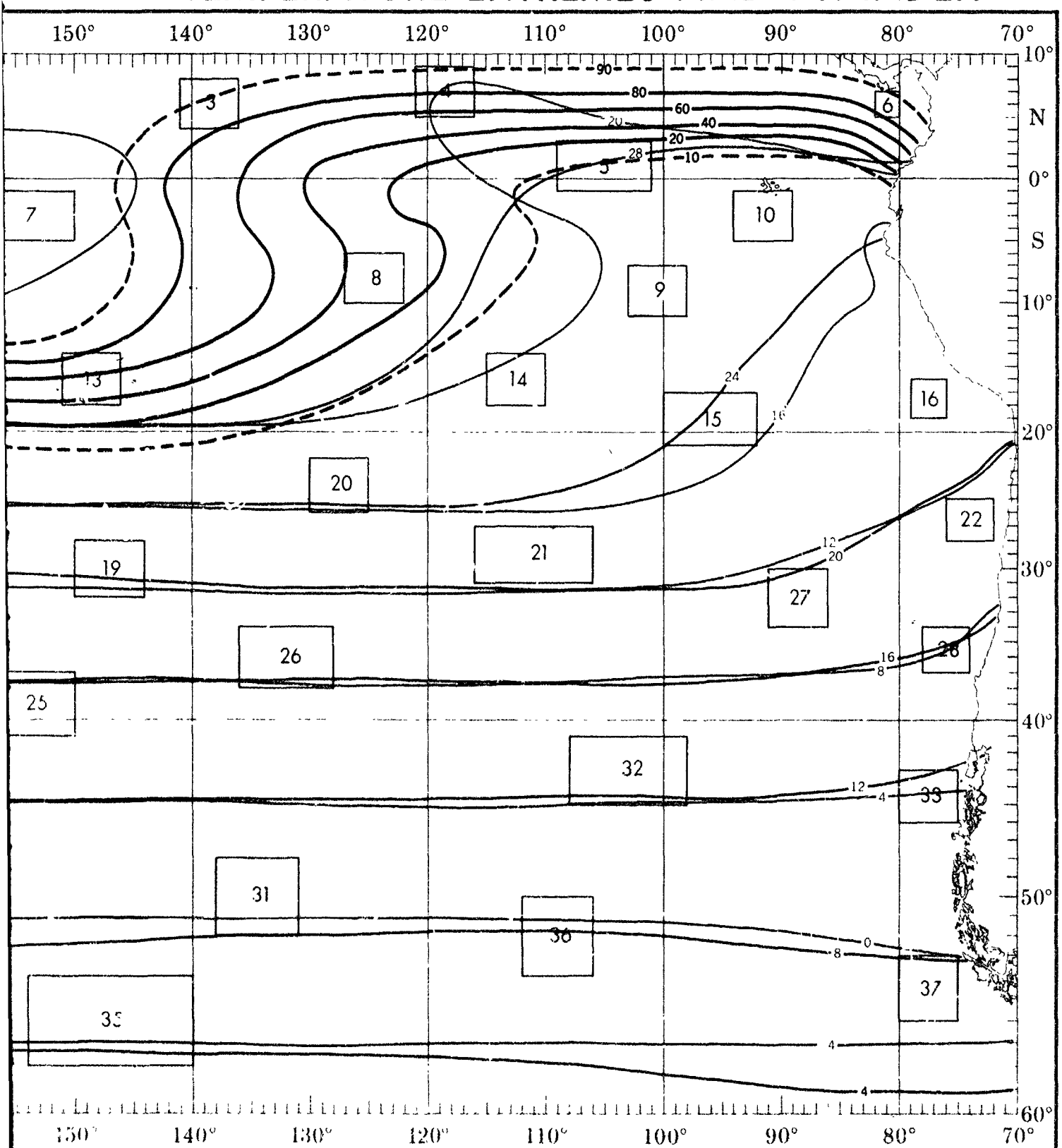
TEMPERATURE E



TEMPERATURE EXTREMES AND T-H INDEX



WIND SPEED AND AIR TEMPERATURE

Wind speed and air temperature

Percent frequency of simultaneous occurrence of specified temperature (°C) and wind speed (knots)

WIND SPEED (kts)

Temp (°C)	0-3	4-10	11-21	22-33	≥34
4.5	15	8	7	1	1
2.3	17	8	7	2	1
0.1	13	8	5	1	1
-2.-1	1	+	0	0	0
-4.-3	0	0	0	0	0
-6.-5	+	0	0	+	+
-8.-7	1	+	0	0	0
-10.-9	0	0	0	0	0
-12.-11	1	+	0	0	0
-14.-13	1	0	0	0	0
-16.-15	1	+	0	0	0

3330

(1% of *all observations reported temperature 2-3°C simultaneously with wind speed of 22 33 kts.*)

+ Indicates < 5% but >0

Number of observations

Use of this table in determination of Potential Superstructure Icing is explained in the text

1

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	+	0	0	0	0
32.33	1	1	1	0	0
30.31	3	5	2	0	0
28.29	10	34	16	+	0
26.27	6	15	5	1	0
24.25	0	1	1	0	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

393

WIND SPEED (KTS

TEMP (°C)	0-3	4-10	11-21	22-
32.33	+	0	0	
30.31	+	1	1	
28.29	4	21	17	
26.27	4	28	19	
24.25	1	2	1	
22.23	0	+	0	
20.21	0	0	0	
18.19	0	0	0	
16.17	0	0	0	
14.15	0	0	0	
12.13	0	0	0	

6

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	1	+	0	0
28.29	3	8	2	0	0
26.27	10	38	13	+	0
24.25	2	16	7	+	0
22.23	+	1	+	+	
20.21	0	+	+	0	0
18.19	0	0	+	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

1328

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-
32.33	0	0	1	
30.31	1	1	5	
28.29	1	16	13	
26.27	1	22	26	
24.25	+	7	3	
22.23	0	+	0	
20.21	0	0	0	
18.19	0	0	0	
16.17	0	0	0	
14.15	0	0	0	
12.13	0	0	0	

BLACK LINE - Percent frequency of T-H index ≥24°C (75.2°F) (discomfort may be experienced due to heat)

BLUE LINE Minimum (1%) air temperature (°C) (1% of the temperatures were equal to or less than the given value)

RED LINE Maximum (99%) air temperature (°C) (1% of the temperatures were greater than the given value)

11

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	+	0	0	0	0
32.33	1	1	1	0	0
30.31	1	3	2	+	0
28.29	3	18	17	1	0
26.27	1	16	29	4	+
24.25	+	1	2	1	0
22.23	0	0	0	+	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

650

12

WIND SPEED (KTS)

TEMP (°C)	0-3	4-15	11-21	22-33	≥ 34
32.33	0	1	+	0	0
30.31	+	1	1	0	0
28.29	1	10	12	1	+
26.27	3	28	31	4	0
24.25	+	2	4	2	0
22.23	0	+	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

821

13

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	0	+	0	0
30.31	0	+	+	0	0
28.29	+	3	3	+	0
26.27	3	19	22	3	0
24.25	2	14	21	5	0
22.23	+	1	3	1	+
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

978

14

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	0	+	0	0
26.27	+	+	1	+	0
24.25	+	7	7	1	0
22.23	2	24	38	8	0
20.21	+	4	7	1	0
18.19	0	+	+	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
9.0	0	0	0	0	0

1200

15

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.27	0	+	0	0	0
26.25	0	1	1	0	0
24.23	0	4	6	1	0
22.21	3	15	21	6	+
20.19	2	9	23	4	+
18.17	0	1	2	+	0
16.15	0	0	+	0	0
14.13	0	0	0	0	0
12.11	0	0	0	0	0
10.9	0	0	0	0	0
8.7	0	0	0	0	0

386

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-
22.23	0	2	+	
20.21	0	2	+	
18.19	1	5	7	
16.17	3	20	39	
14.15	1	3	7	
12.13	0	+	0	
10.11	0	0	0	
8.9	0	0	0	
6.7	0	0	0	
4.5	0	0	0	
2.3	0	0	0	

20

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.27	+	+	1	+	0
26.25	+	4	4	1	0
24.23	3	21	19	4	0
22.21	2	11	13	4	1
20.19	+	3	8	1	+
18.17	0	+	1	0	0
16.15	0	0	0	0	0
14.13	0	0	0	0	0
12.11	0	0	0	0	0
10.9	0	0	0	0	0
8.7	0	0	0	0	0

1247

21

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.27	0	0	+	0	0
26.25	0	+	1	+	0
24.23	+	1	3	0	0
22.21	1	8	16	4	0
20.19	2	18	25	9	0
18.17	3	6	10	3	0
16.15	0	+	1	1	1
14.13	0	+	0	0	0
12.11	0	0	0	0	0
10.9	0	0	0	0	0
8.7	0	0	0	0	0

344

22

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	0	+	0	0
20.21	+	+	+	0	0
18.19	1	2	2	+	0
16.17	2	7	8	2	+
14.15	5	14	23	8	+
12.13	2	7	11	4	2
10.11	0	+	1	1	+
9.0	0	0	0	0	0
8.7	0	0	0	0	0
6.5	0	0	0	0	0
4.3	0	0	0	0	0

81

23

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	+	0	+	+	+
18.19	+	2	2	1	0
16.17	1	7	10	5	1
14.15	2	14	17	7	2
12.13	2	7	11	5	1
10.11	+	+	1	1	+
9.0	0	0	0	+	+
8.7	0	0	0	0	0
6.5	0	0	0	0	0
4.3	0	0	0	0	0
2.1	0	0	0	0	0

1725

24

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	0	+	0	0	0
22.23	0	+	+	0	0
20.21	+	+	+	+	0
18.19	+	3	5	2	0
16.17	3	11	20	7	2
14.15	2	12	13	7	1
12.13	1	3	6	1	+
10.11	0	+	+	+	0
9.0	0	0	0	0	0
8.7	0	0	0	0	0
6.5	0	0	0	0	0

785

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33
18.19	0	+	0	0
16.17	0	+	0	1
14.15	+	1	2	1
12.13	+	7	15	7
10.11	1	9	16	11
9.0	+	5	8	6
8.7	0	1	1	1
6.5	0	0	0	+
4.3	0	0	0	0
2.1	0	0	0	0
-2.-1	0	0	0	0

29

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	0	+	0	0
14.15	+	2	4	3	1
12.13	1	8	17	6	1
10.11	1	8	18	8	2
9.0	+	3	8	8	2
8.7	0	+	+	+	+
6.5	0	0	0	1	0
4.3	0	0	0	0	0
2.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

1181

30

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	+	0	0	0
10.11	1	1	3	3	+
9.0	+	7	18	11	2
8.7	2	10	18	9	5
6.5	1	3	1	1	1
4.3	0	+	0	0	1
2.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

316

31

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.11	0	0	0	+	0
9.0	0	2	2	5	3
8.7	2	11	21	11	5
6.5	1	5	9	8	3
4.3	+	2	4	2	3
2.1	0	+	0	0	+
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0

264

32

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	+	1	1	1	1
10.11	+	5	13	12	8
9.0	1	7	14	9	5
8.7	1	4	12	2	1
6.5	0	0	1	1	+
4.3	0	0	0	0	0
2.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

223

33

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	0	+	0	0
14.15	0	+	+	+	0
12.13	+	1	1	+	+
10.11	1	5	9	6	5
9.0	2	9	17	11	6
8.7	2	4	8	5	3
6.5	+	1	2	1	+
4.3	0	0	0	0	0
2.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

1086

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33
8.9	0	7	10	0
8.7	24	7	20	7
6.5	0	2	2	2
4.3	0	0	0	0
2.1	0	0	0	0
-2.-1	0	0	0	0
-4.-3	0	0	0	0
-6.-5	0	0	0	0
-8.-7	0	0	0	0
-10.-9	0	0	0	0
-12.-11	0	0	0	0

Graphs represent the objective compilation of available data for specified areas without re

The isopleth analyses (opposite page) are based on all available data subjectively adjusted

EMPERATURE

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and wind speed

of 22 33 kts)

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heat)

e given value)

n value)

WIND SPEED (KTS) 1

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	+	0	0	0	0
32.33	1	1	1	0	0
30.31	3	5	2	0	0
28.29	10	34	16	+	0
26.27	6	15	6	1	0
24.25	0	1	1	0	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

393

WIND SPEED (KTS) 2

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	0	0	0	0
30.31	+	1	1	0	0
28.29	4	21	17	1	0
26.27	4	28	19	+	0
24.25	1	2	1	+	0
22.23	0	+	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

733

WIND SPEED (KTS) 3

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	0	0	0
32.33	0	+	0	0	0
30.31	0	1	1	0	0
28.29	1	6	11	1	0
26.27	3	30	34	1	0
24.25	+	4	5	+	0
22.23	0	+	0	0	0
20.21	0	0	0	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

499

WIND SPEED (KTS) 4

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	0	0	0
30.31	+	1	1	0	0
28.29	1	6	5	+	0
26.27	2	21	32	2	+
24.25	3	9	12	1	0
22.23	0	1	1	+	0
20.21	0	+	1	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

804

WIND SPEED (KTS) 5

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	0	+	0	0
30.31	0	+	+	0	0
28.29	+	1	+	0	0
26.27	0	2	3	0	0
24.25	+	10	10	+	0
22.23	1	26	14	0	0
20.21	3	19	7	0	0
18.19	1	3	+	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1000

WIND SPEED (KTS) 6

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	1	+	0	0
28.29	3	8	2	0	0
26.27	10	38	13	+	0
24.25	2	16	7	+	0
22.23	+	1	+	+	+
20.21	0	+	+	0	0
18.19	0	0	+	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

1328

WIND SPEED (KTS) 7

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	0	1	0	0
30.31	1	1	5	+	0
28.29	1	16	13	2	0
26.27	1	22	26	2	0
24.25	+	7	3	0	0
22.23	0	+	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

317

WIND SPEED (KTS) 8

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	0	0	0
30.31	0	+	+	0	0
28.29	0	2	4	+	0
26.27	0	9	30	1	0
24.25	+	15	36	1	0
22.23	0	1	1	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

817

WIND SPEED (KTS) 9

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.27	0	+	1	+	0
24.25	0	2	7	1	+
22.23	+	14	46	4	0
20.21	+	5	16	2	+
18.19	0	0	1	+	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

1523

WIND SPEED (KTS) 10

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	+	+	0	0
26.27	+	1	+	0	0
24.25	+	3	3	+	0
22.23	+	15	10	+	0
20.21	1	31	14	+	0
18.19	1	15	4	+	0
16.17	0	+	+	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

1891

WIND SPEED (KTS) 14

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	0	+	0	0
26.27	+	+	1	+	0
24.25	+	7	7	1	0
22.23	2	24	39	6	0
20.21	+	4	7	1	0
18.19	0	+	+	0	0
16.17	0	0	3	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

1200

WIND SPEED (KTS) 15

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	+	0	0	0
24.25	0	+	1	0	0
22.23	2	4	6	1	0
20.21	3	15	21	6	+
18.19	2	9	29	4	+
16.17	0	1	2	+	0
14.15	0	0	+	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

385

WIND SPEED (KTS) 16

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	2	+	0	0
26.27	0	2	+	0	0
24.25	1	5	7	3	0
22.23	3	20	39	7	0
20.21	1	3	7	+	0
18.19	0	+	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

255

WIND SPEED (KTS) 17

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	+	+	0	0
26.27	0	+	1	0	0
24.25	1	8	7	1	+
22.23	3	15	19	2	1
20.21	2	18	15	3	1
18.19	1	1	2	+	0
16.17	0	+	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

747

WIND SPEED (KTS) 18

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	0	+	0	0
26.27	+	+	1	0	0
24.25	1	2	2	+	0
22.23	1	8	12	2	+
20.21	1	11	18	5	1
18.19	1	9	15	4	+
16.17	0	3	2	+	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

728

WIND SPEED (KTS) 19

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	+	+	+	0
20.21	+	1	2	1	0
18.19	1	7	12	4	1
16.17	2	15	22	7	1
14.15	1	8	11	4	1
12.13	+	1	1	+	+
10.11	0	+	0	+	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

1089

WIND SPEED (KTS) 23

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	+	0	+	+	+
18.19	+	2	2	1	0
16.17	1	7	10	5	1
14.15	2	14	17	7	2
12.13	2	7	11	5	1
10.11	+	+	1	1	+
8.9	0	0	0	+	+
6.7	0	0	0	-	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

1725

WIND SPEED (KTS) 24

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	0	+	0	0	0
22.23	0	+	0	0	0
20.21	+	+	+	+	0
18.19	+	3	5	2	0
16.17	3	11	20	7	2
14.15	2	12	19	7	1
12.13	1	3	5	1	+
10.11	0	+	+	+	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

785

WIND SPEED (KTS) 25

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	+	0	0	0
16.17	0	+	0	1	0
14.15	+	1	2	1	+
12.13	+	7	15	7	2
10.11	1	9	16	11	5
8.9	+	5	8	6	2
6.7	0	1	1	1	0
4.5	0	0	0	+	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0

595

WIND SPEED (KTS) 26

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	0	+	0	0
18.19	0	1	1	0	0
16.17	+	1	7	1	0
14.15	+	7	16	5	0
12.13	2	13	19	8	1
10.11	1	2	7	4	+
8.9	0	0	1	2	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

310

WIND SPEED (KTS) 27

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	+	0	+	0	0
18.19	1	1	3	+	+
16.17	5	9	8	2	+
14.15	5	18	14	5	1
12.13	5	10	6	2	0
10.11	1	1	1	+	0
8.9	0	0	+	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

573

WIND SPEED (KTS) 28

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	+	1	0	0	0
16.17	0	1	1	+	0
14.15	2	5	7	3	1
12.13	4	15	20	7	2
10.11	2	8	11	4	1
8.9	1	1	1	1	1
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0

565

WIND SPEED (KTS) 32

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	+	1	1	1	1
10.11	+	5	13	12	6
8.9	1	7	14	9	5
6.7	1	4	12	2	1
4.5	0	0	1	1	+
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

223

WIND SPEED (KTS) 33

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	0	+	0	0
14.15	0	+	+	+	0
12.13	+	1	1	+	+
10.11	1	5	9	6	5
8.9	2	9	17	11	6
6.7	2	4	8	5	3
4.5	+	1	2	1	+
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

1088

WIND SPEED (KTS) 34

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
8.9	0	7	10	0	5
6.7	24	7	20	7	12
4.5	0	2	2	2	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0
-12.-11	0	0	0	0	0

41

WIND SPEED (KTS) 35

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	0	0	0	2	2
8.9	0	0	0	0	0
6.7	0	6	11	2	3
4.5	0	2	9	5	8
2.3	0	2	0	16	2
0.1	0	0	2	5	3
-2.-1	0	0	5	6	3
-4.-3	0	0	3	3	2
-6.-5	0	2	0	0	2
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0

64

WIND SPEED (KTS) 36

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
8.9	0	0	+	0	0
6.7	1	8	17	18	2
4.5	0	5	17	17	2
2.3	0	+	2	8	1
0.1	0	0	2	1	+
-2.-1	0	0	+	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0
-12.-11	0	0	0	0	0

219

WIND SPEED (KTS) 37

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	0	0	0	+	0
8.9	+	+	+	+	1
6.7	+	2	4	4	6
4.5	2	9	14	14	10
2.3	2	6	8	5	4
0.1	+	1	2	2	1
-2.-1	0	+	+	+	+
-4.-3	0	0	0	+	+
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0

1553

bjective compilation of available data for specified areas without regard to suspected biases.
pposite page) are based on all available data subjectively adjusted where bias was evident.

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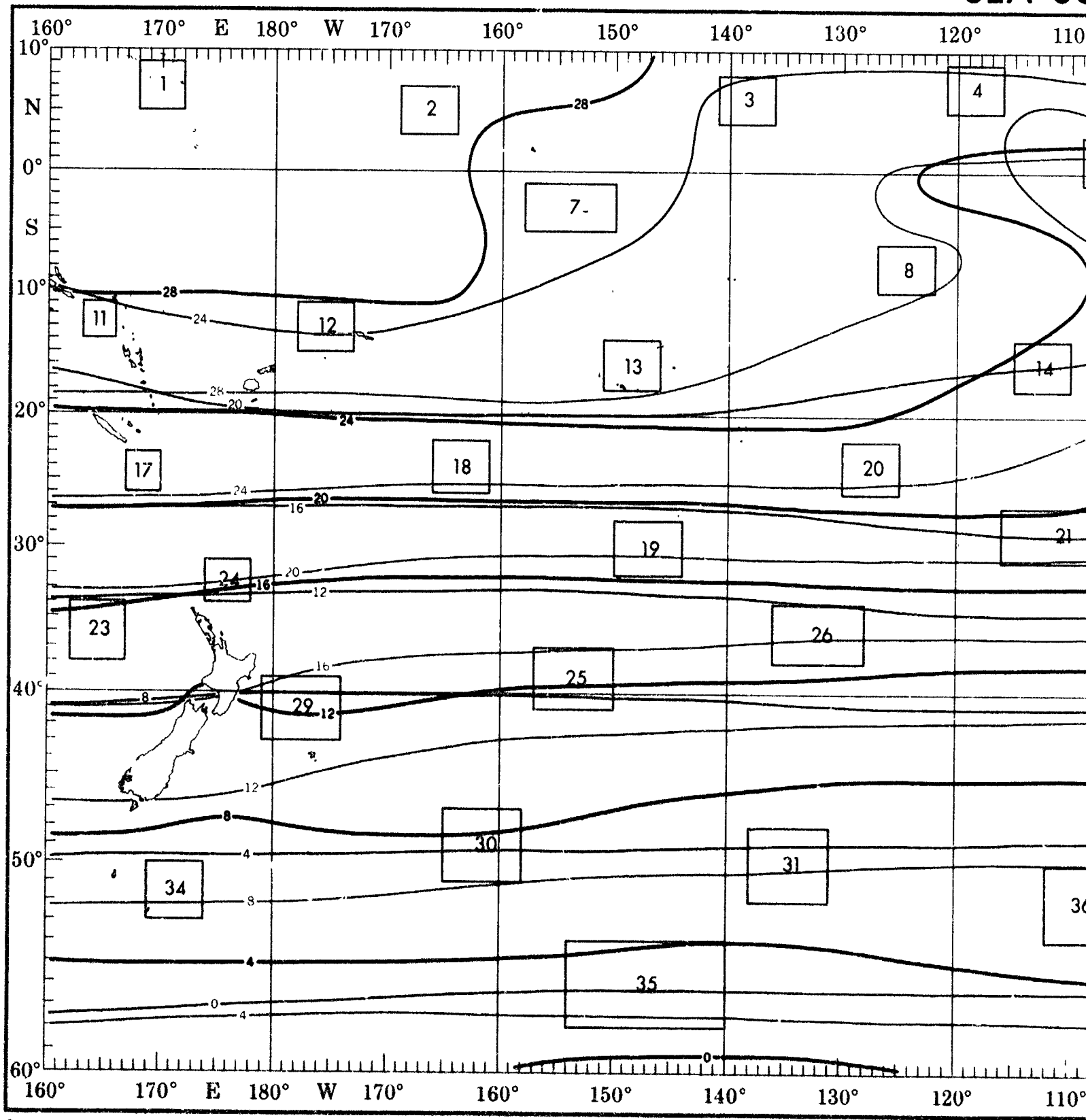
160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110
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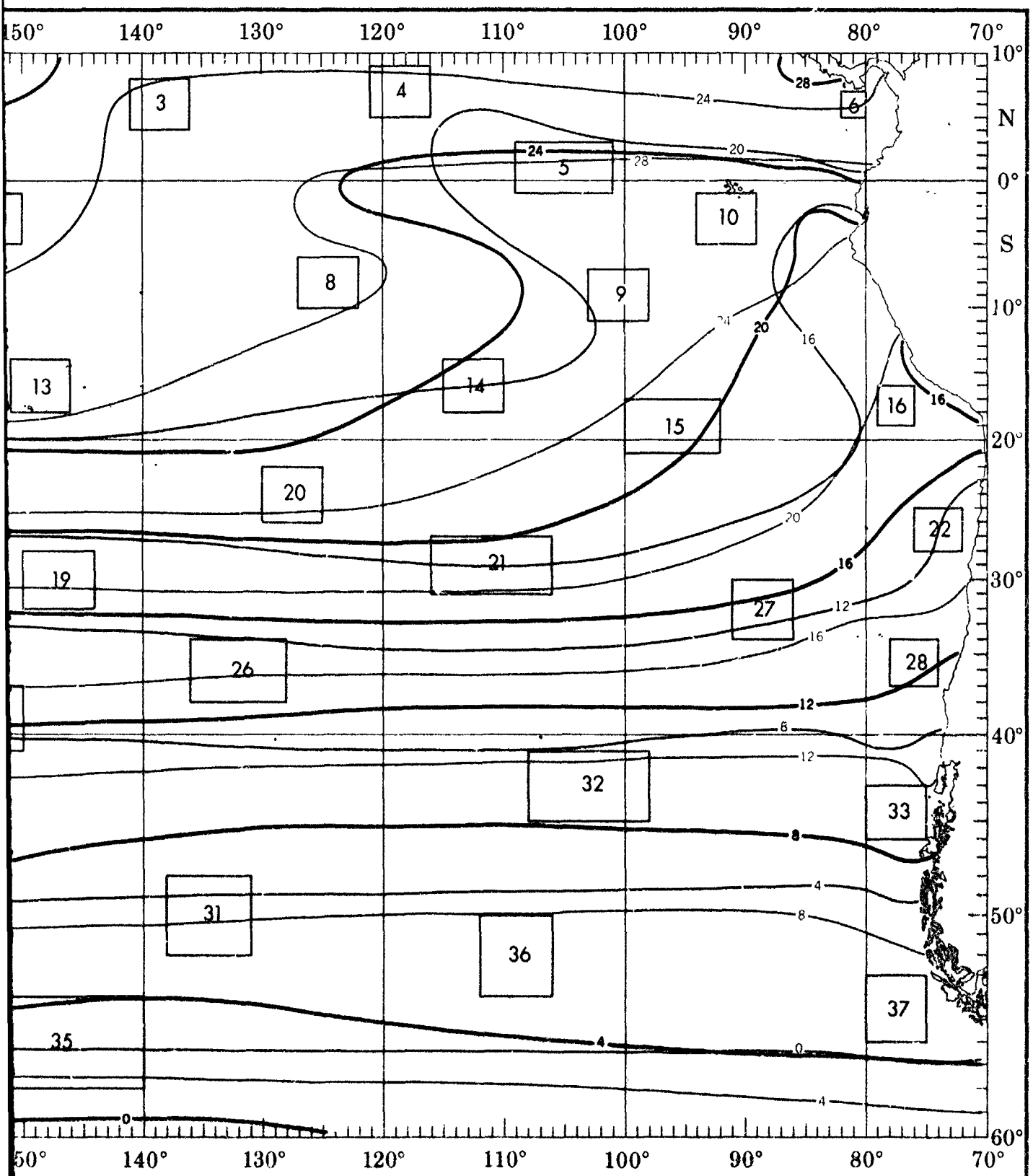
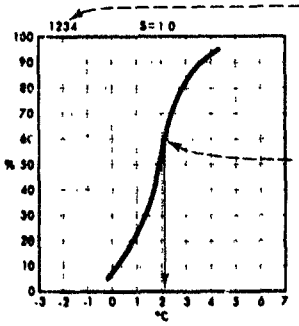
SEA SURFACE TEMPERATURE



SEA SURFACE TEMPERATURE



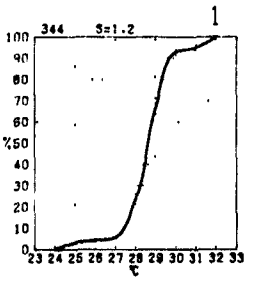
Sea surface temperature

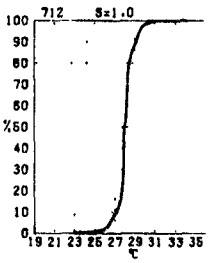
Number of observations

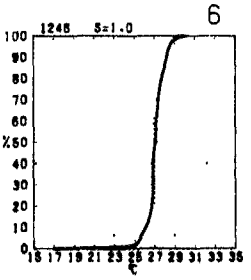
Cumulative percent frequency of sea surface temperatures equal to or less than the temperature intersected by the curve

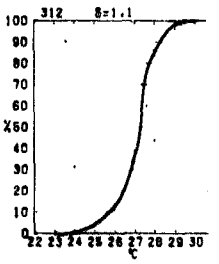
(60% of all observed sea surface temperatures were ≤2.1°C or ≤35.8°F.)

S= Standard deviation of sea surface temperatures (°C).





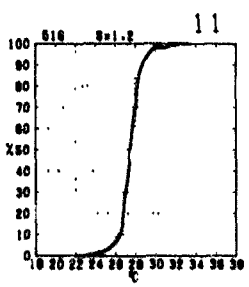


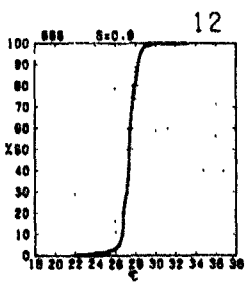


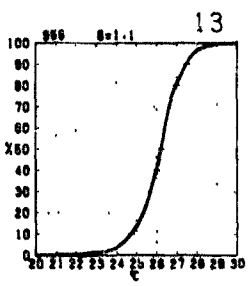
BLACK LINE - Mean sea surface temperature (°C)

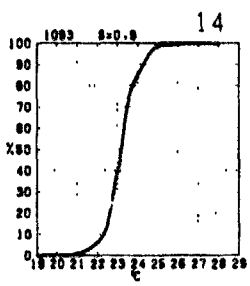
BLUE LINE - Minimum (1%) sea surface temperature (°C) (1% of the temperatures were equal to or less than the given value)

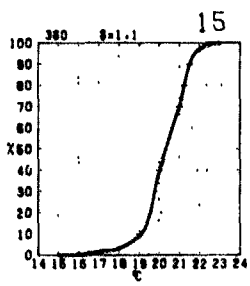
RED LINE - Maximum (99%) sea surface temperature (°C) (1% of the temperatures were greater than the given value)

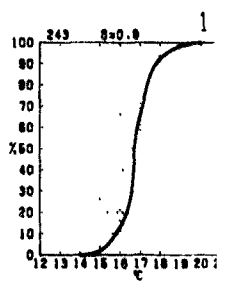


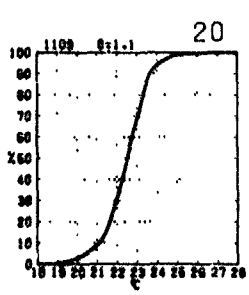


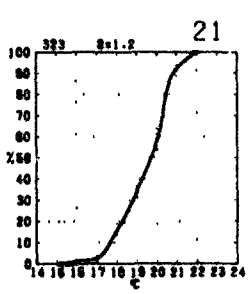


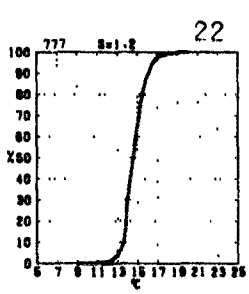


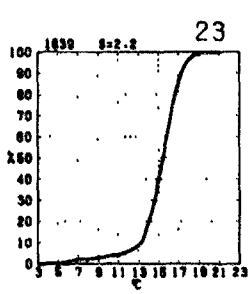


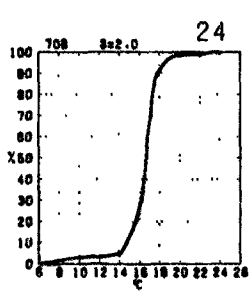


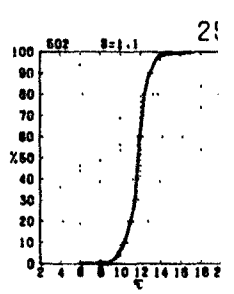


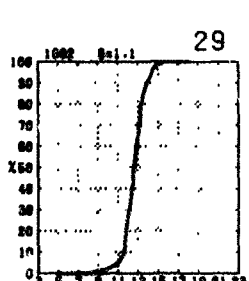


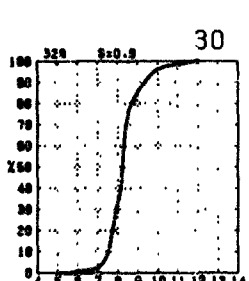


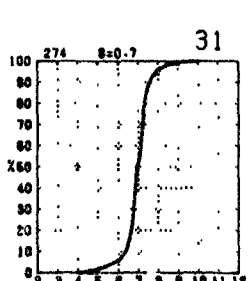


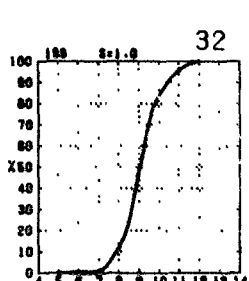


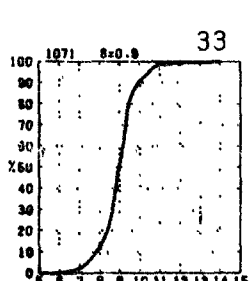


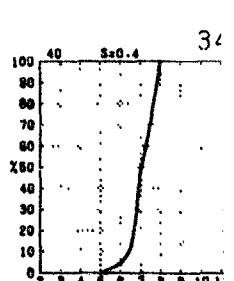












Graphs represent the objective compilation of available data for specified areas without reg

The isopleth analyses (opposite page) are based on all available data subjectively adjusted

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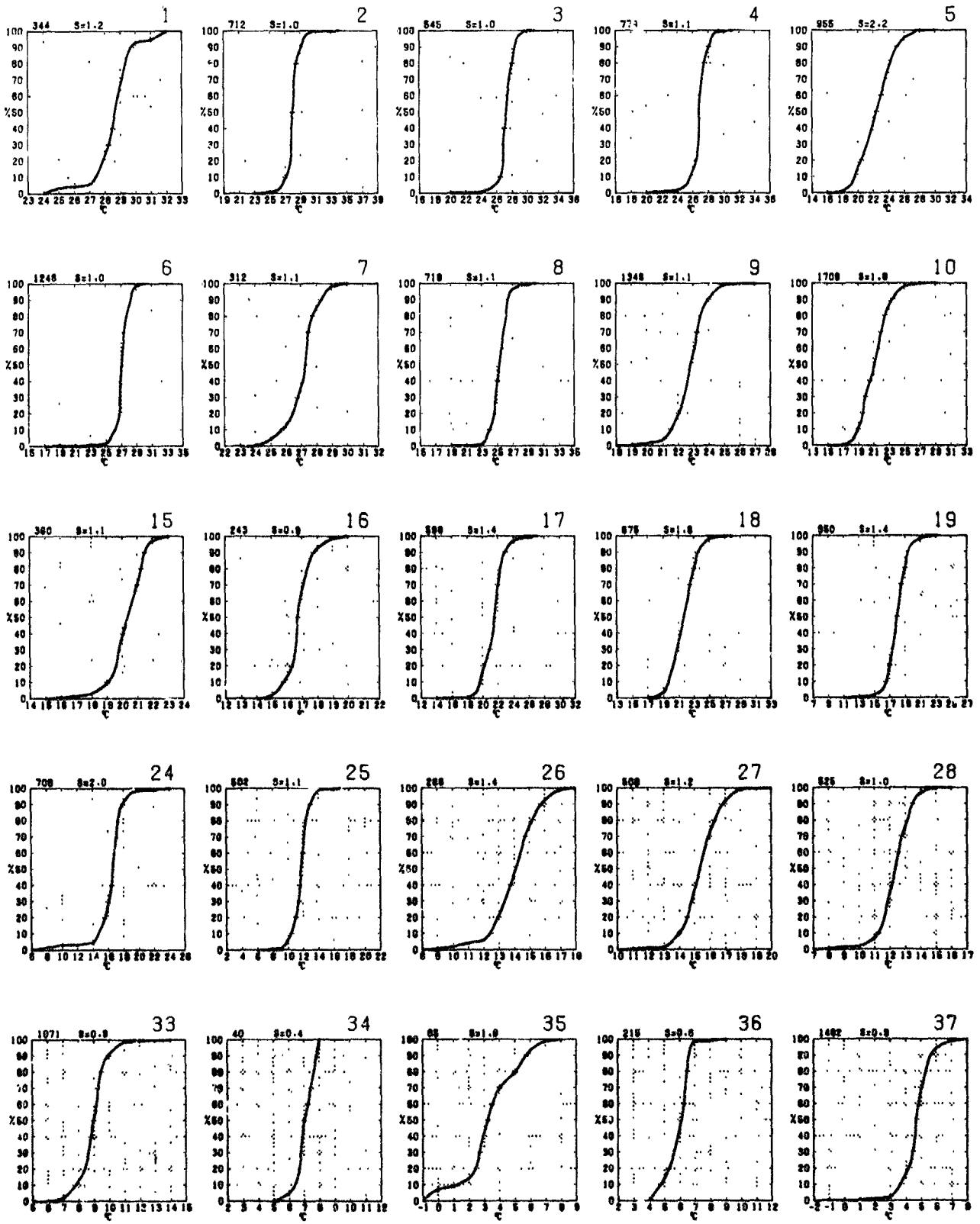

objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

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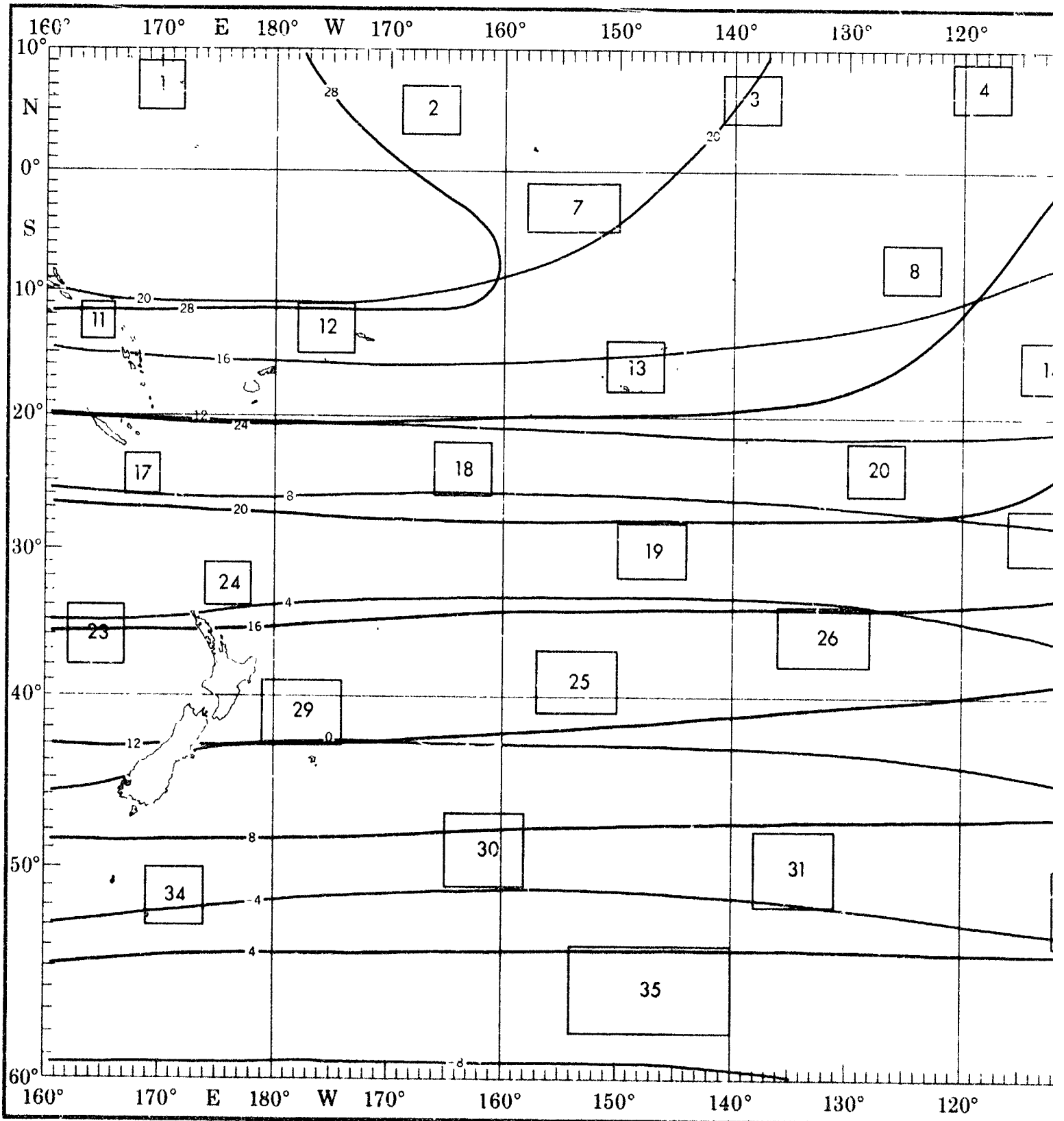
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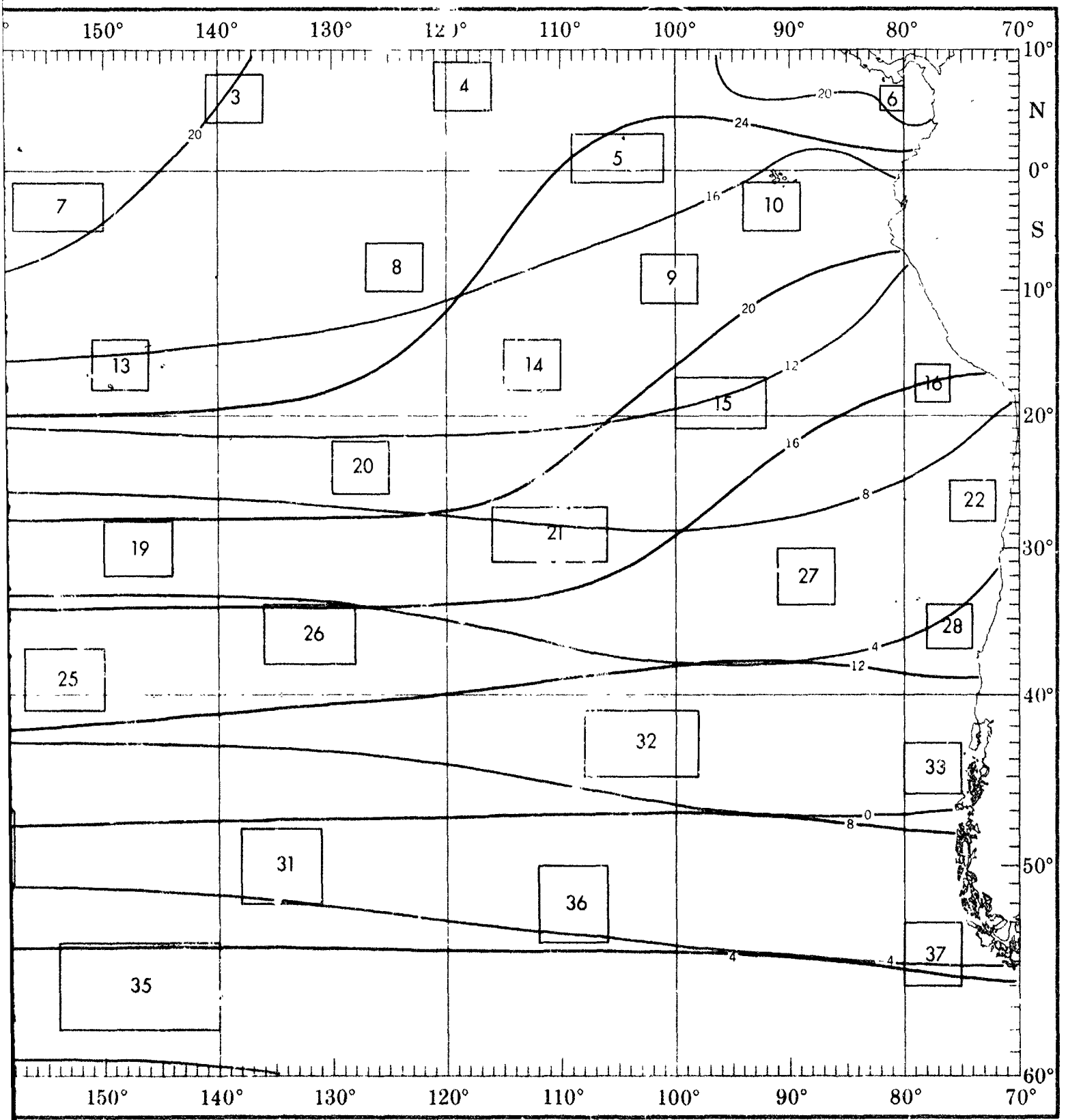
HUMIDITY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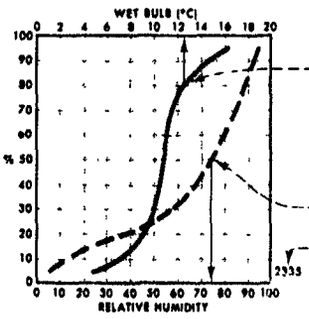
WET BULB AND RELATIVE HUMIDITY



Wet bulb - Relative humidity

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 ≤12.5°C or 54.5°F.)

Cumulative percent frequency of relative humidities equal to or less than the humidity intersected by the curve (bottom scale)

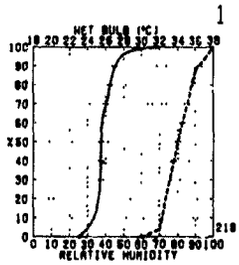
Relative humidity (%)

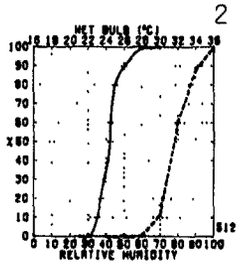
—(50% of *all observed relative humidities* were ≤74%)

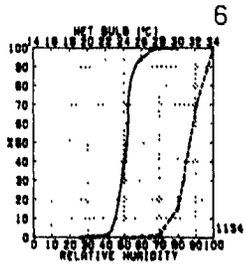
—Number of observations

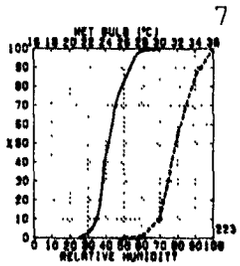
BLUE LINE - Minimum (1%) dew-point temperature (°C) (1% of the computed values were equal to or less than the given value)

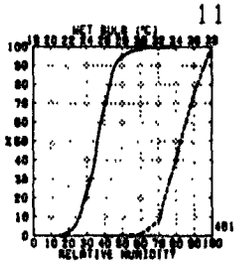
RED LINE Maximum (99%) dew point temperature (°C) (1% of the computed values were greater than the given value)

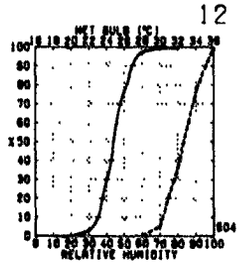
1 

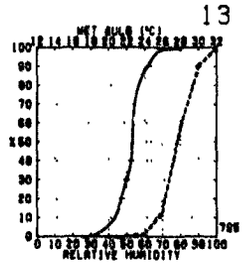
2 

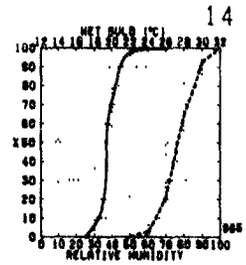
6 

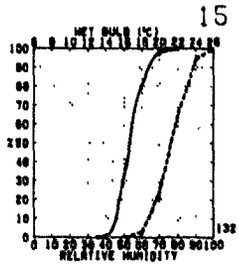
7 

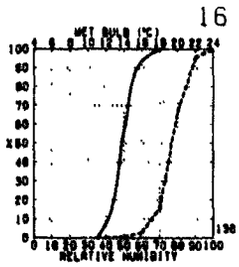
11 

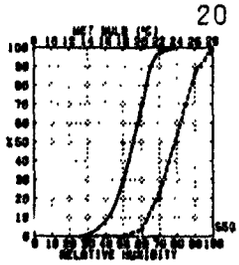
12 

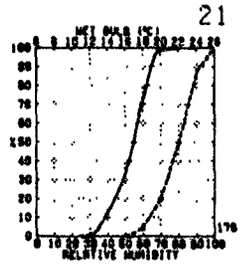
13 

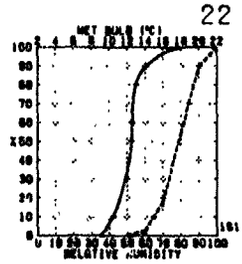
14 

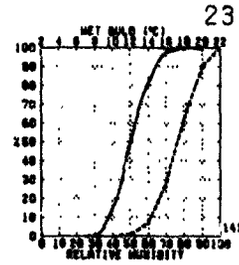
15 

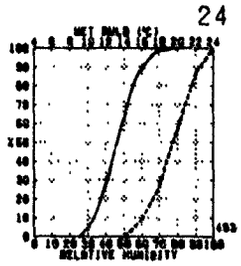
16 

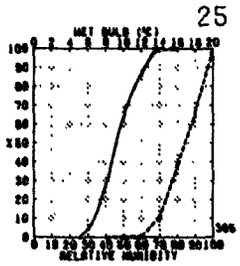
20 

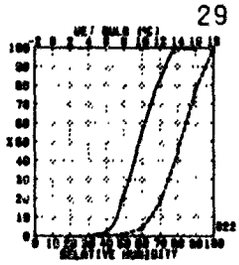
21 

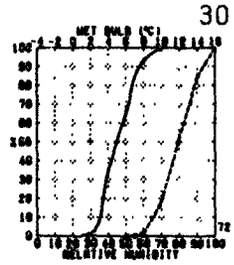
22 

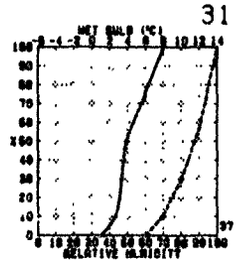
23 

24 

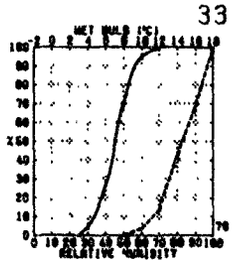
25 

29 

30 

31 

32 **INSUFFICIENT DATA**

33 

34 **INSUFFICIENT DATA**

Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

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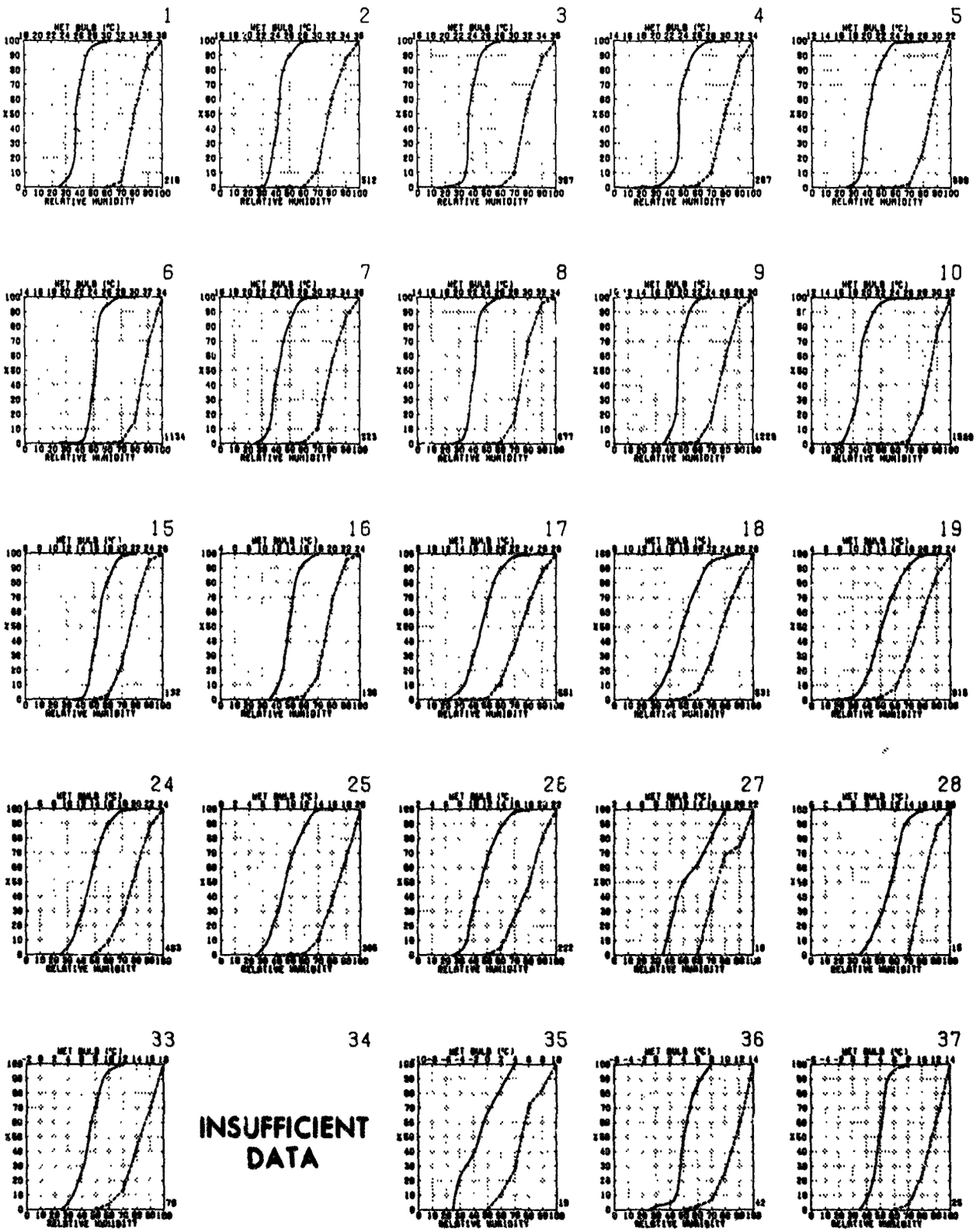

...NSUFFICIENT DATA

INSUFFICIENT DATA

...objective compilation of available data for specified areas without regard to suspected biases.
...opposite page) are based on all available data subjectively adjusted where bias was evident.

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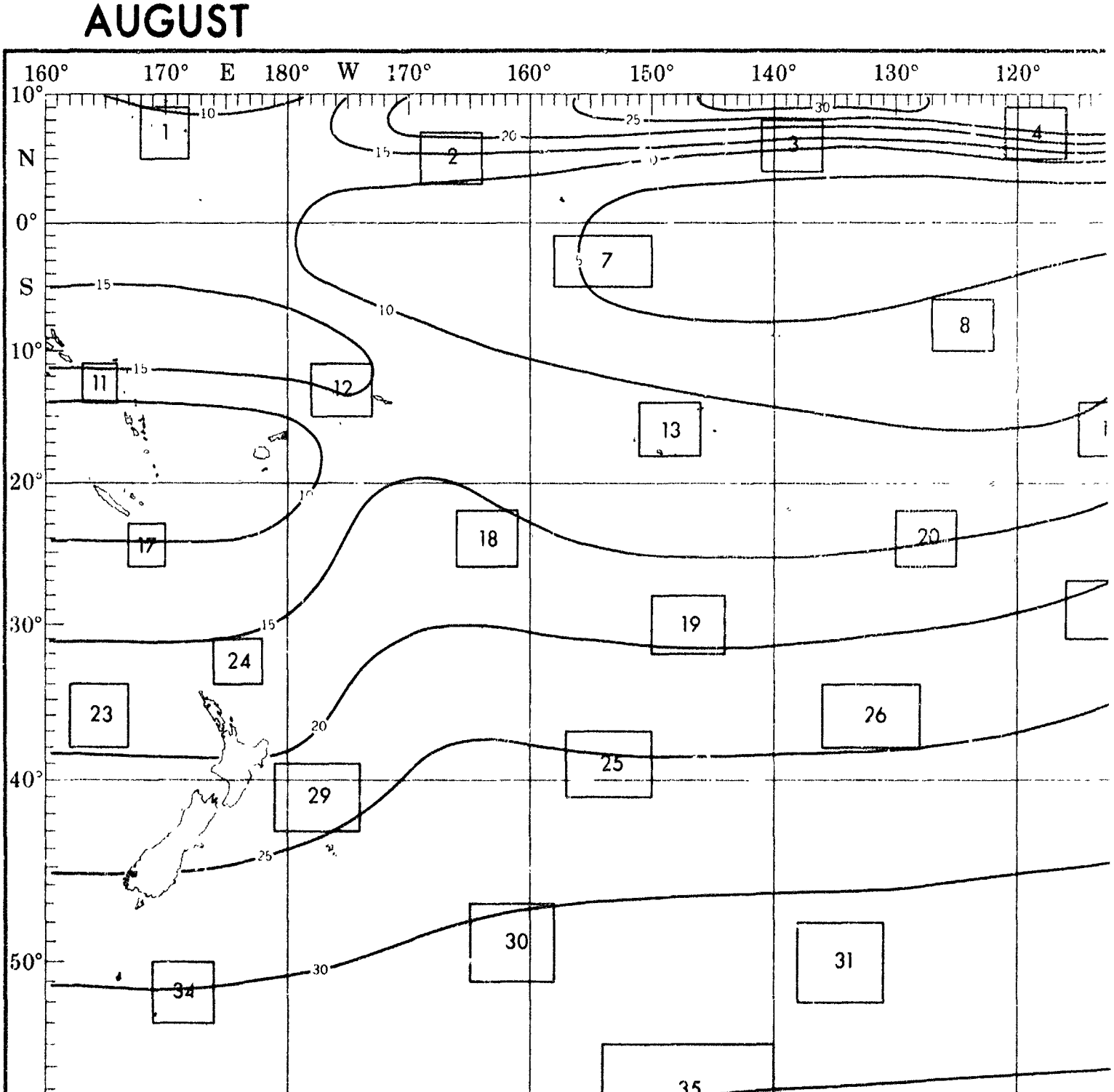
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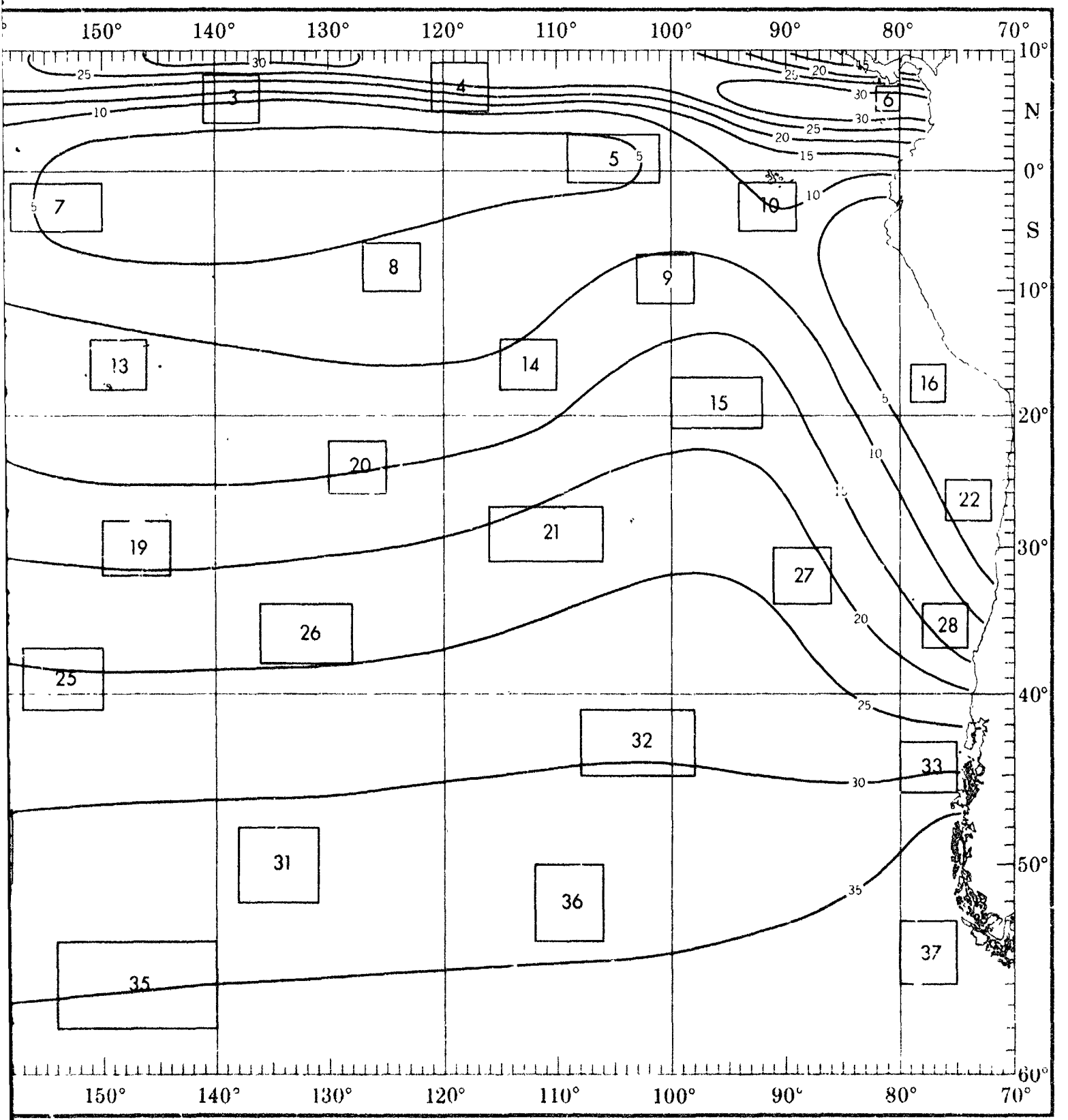
PRECIPITATION



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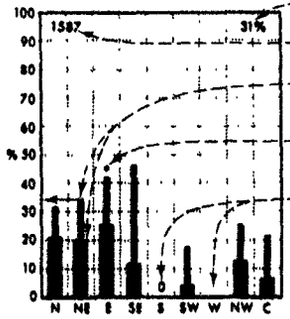
PRECIPITATION



Percent frequency of surface wind observations from each direction and calm that were accompanied by precipitation, subdivided into liquid type (including freezing rain and freezing drizzle) and snow

—Percentage of present weather observations reporting precipitation

—Number of observations

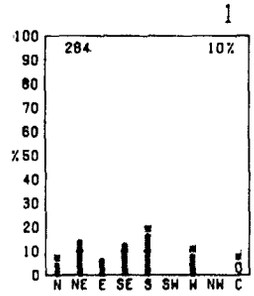
—*(34% of all NE winds were accompanied by precipitation, of which 14% was liquid and 20% was snow.)*

—An asterisk in the column for a given direction or calm indicates that the percentage was based on 10-30 observations of present weather and wind direction

—0 replaces bar when no precipitation was observed with winds from a given direction or calm No bar graph is presented if less than 10 observations containing present weather were reported for a given direction or calm

RED LINE - Percent frequency of observations reporting precipitation

1



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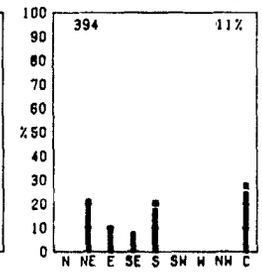

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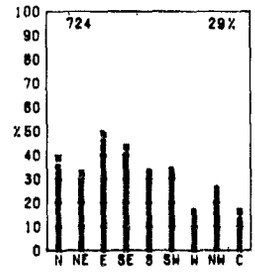

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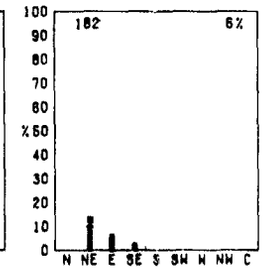

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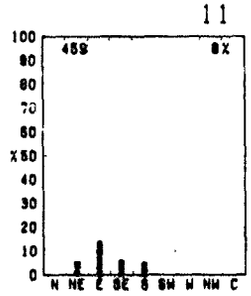

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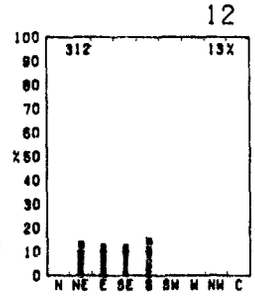

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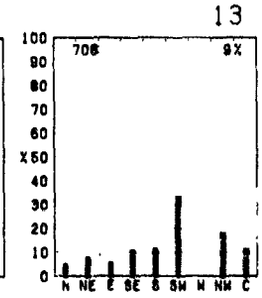

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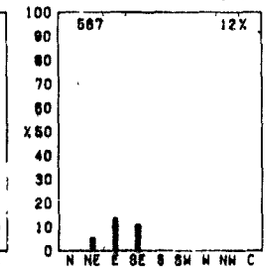

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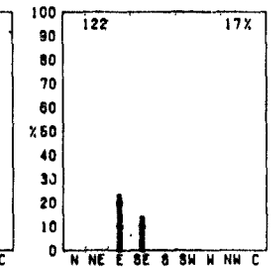

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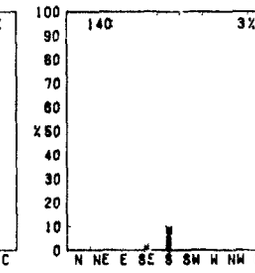

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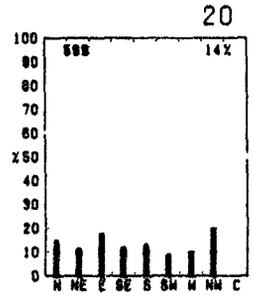

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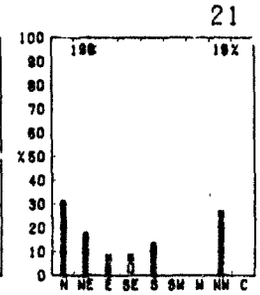

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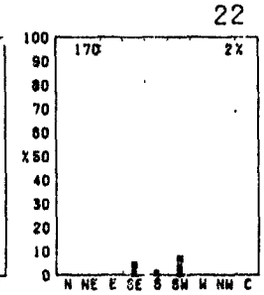

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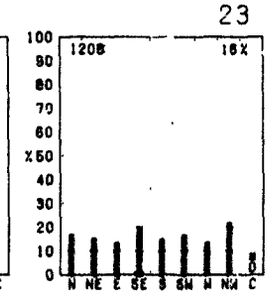

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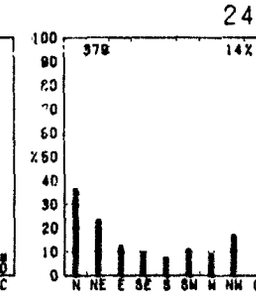

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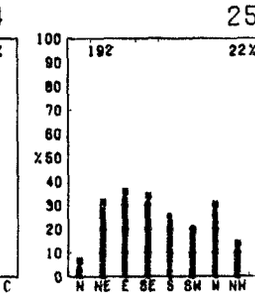

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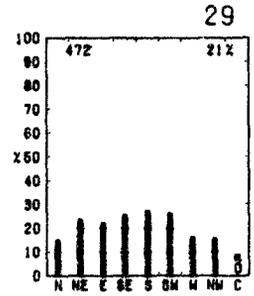

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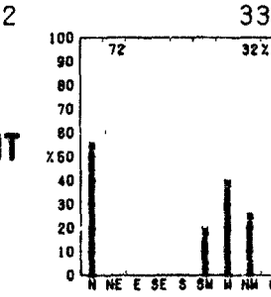

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Graphs represent the objective compilation of available data for specified areas without regard t
The isopleth analyses (opposite page) are based on all available data subjectively adjusted wher

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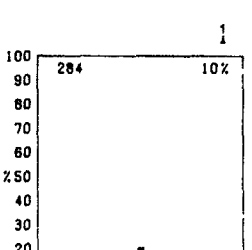

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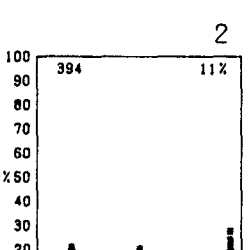

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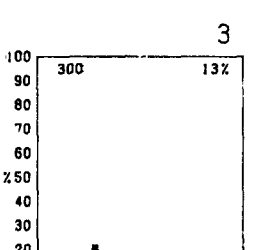

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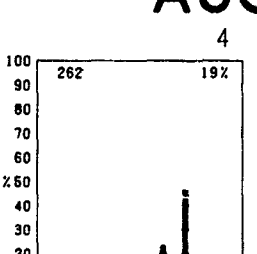

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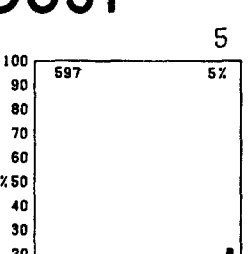

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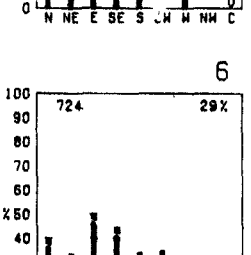

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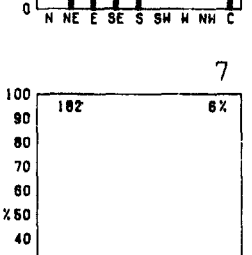

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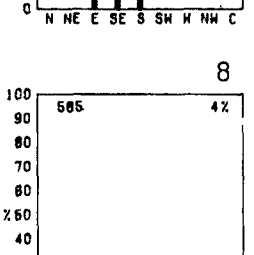

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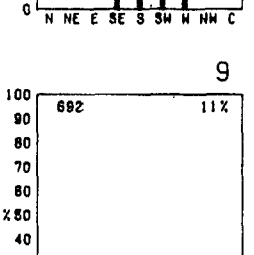

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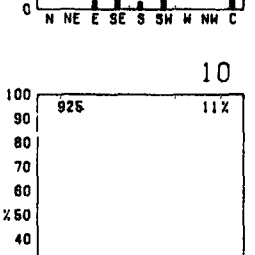

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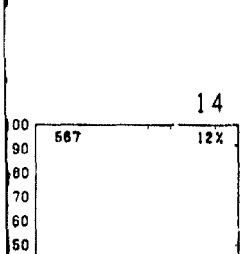

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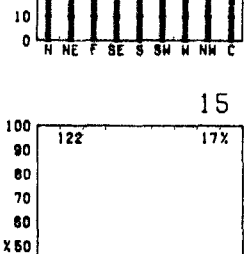

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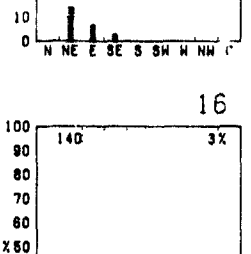

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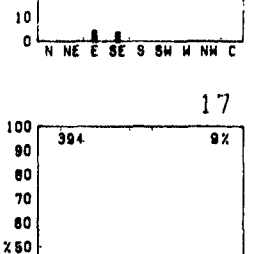

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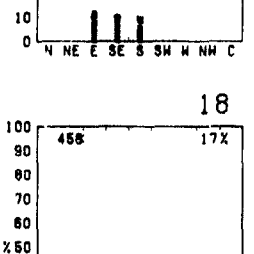

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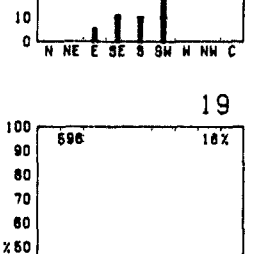

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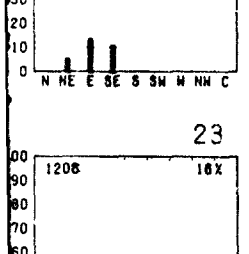

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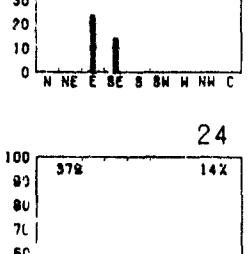

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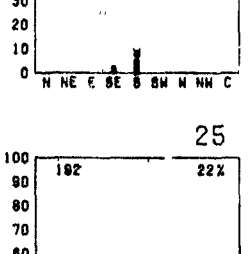

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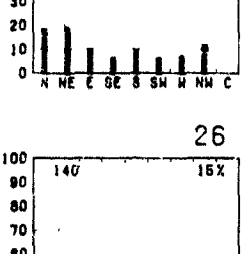

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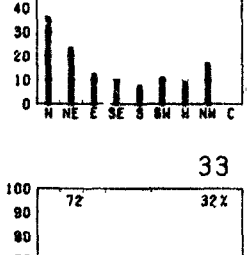

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bjective compilation of available data for specified areas without regard to suspected biases.
pposite page) are based on all available data subjectively adjusted where bias was evident.

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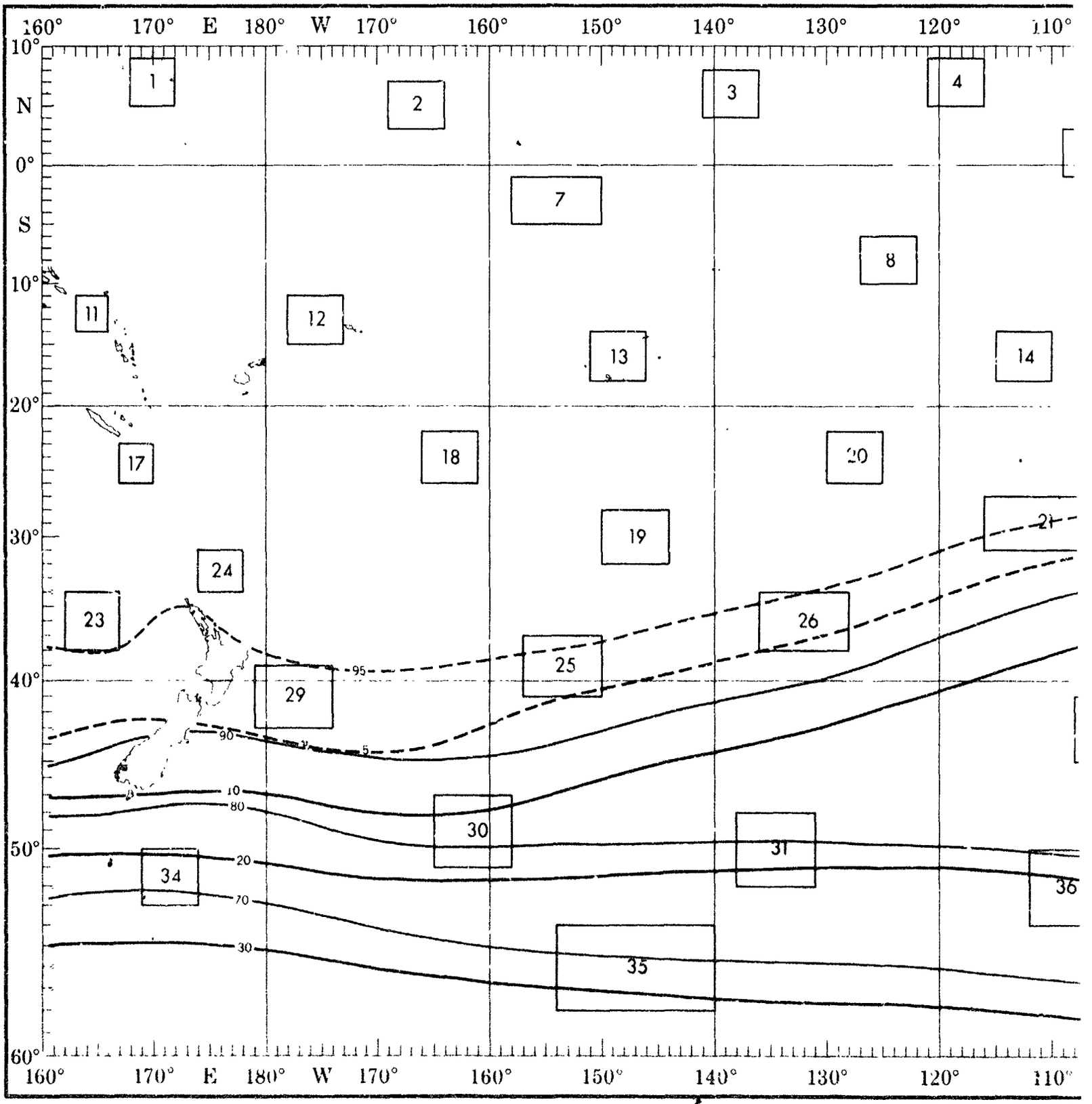
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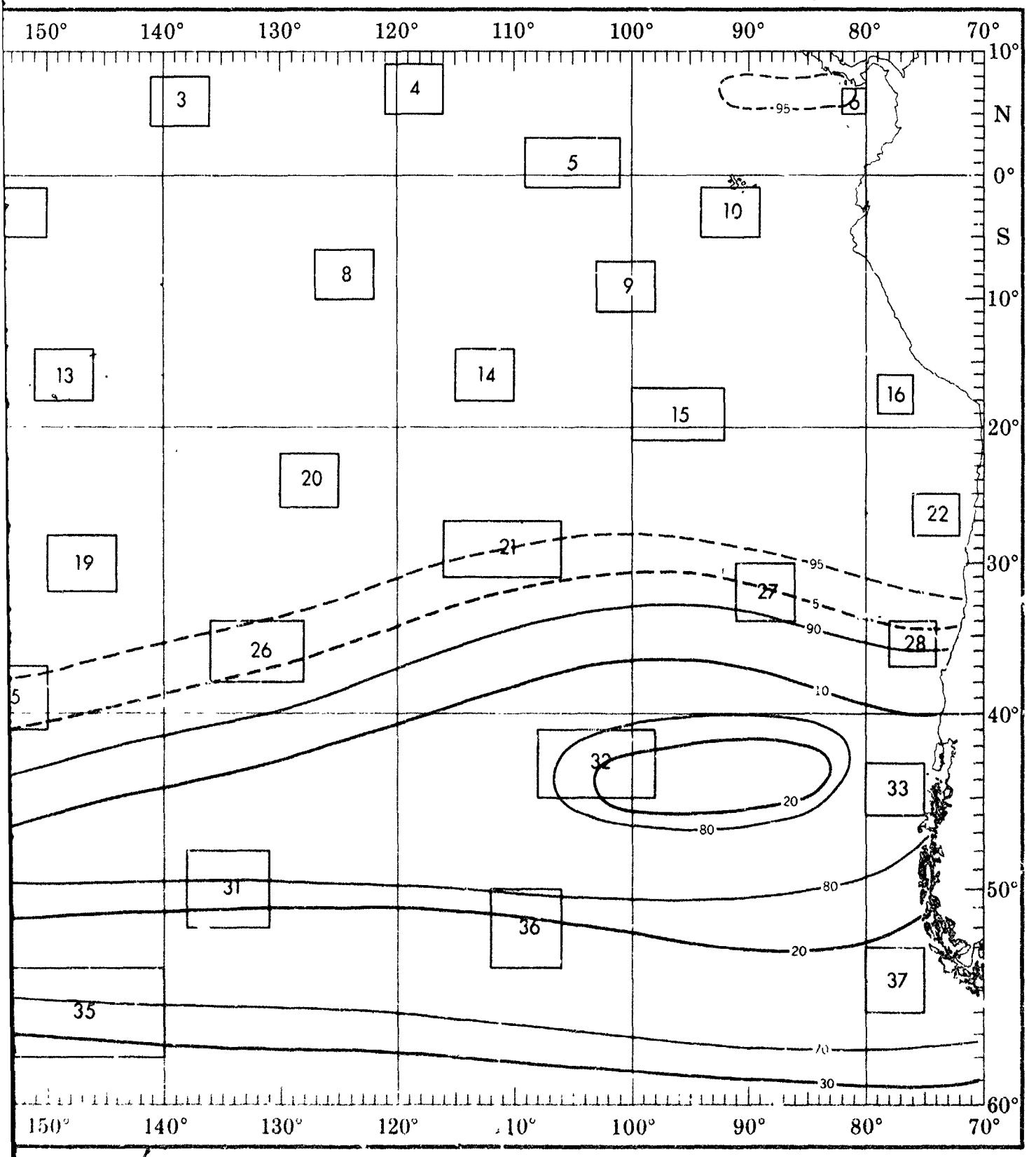
VISIBILITY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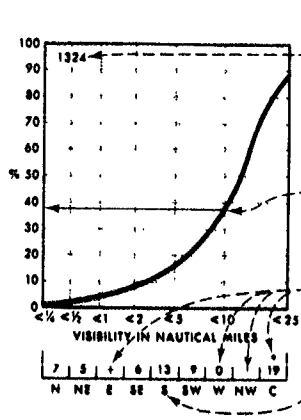
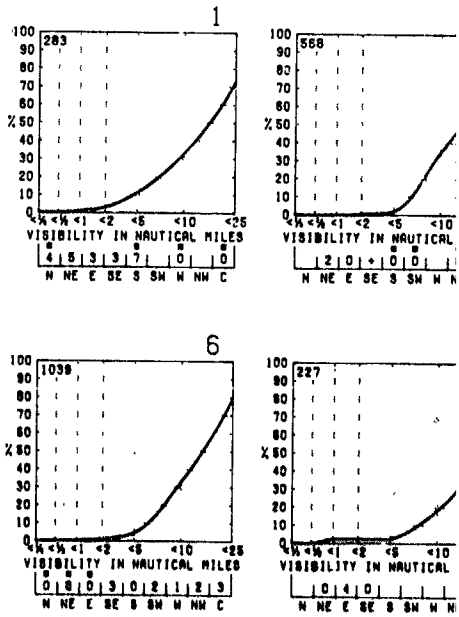
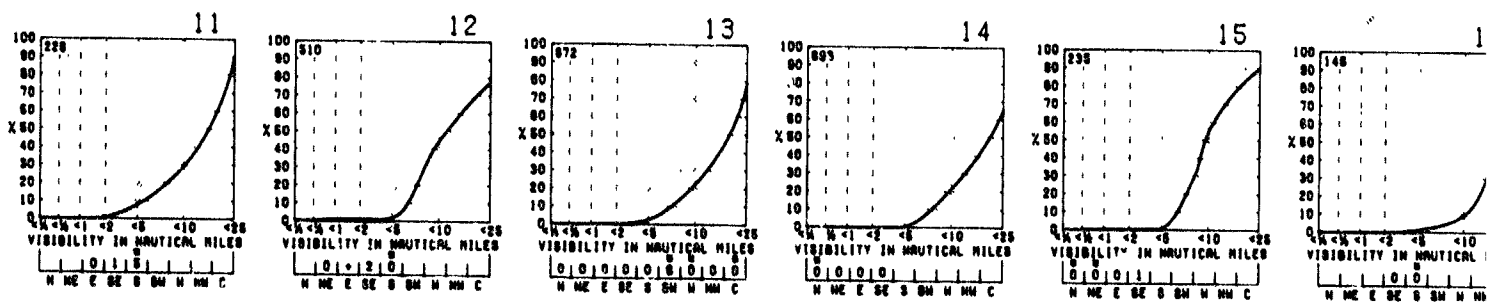
VISIBILITY

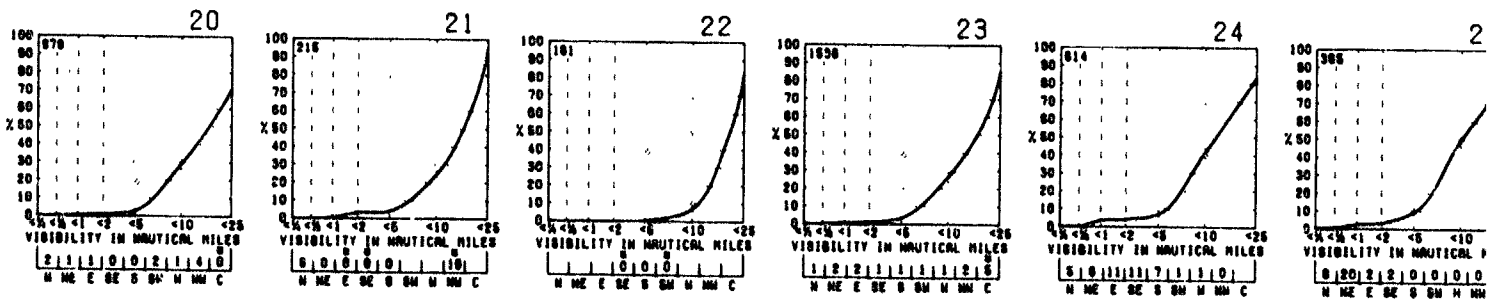


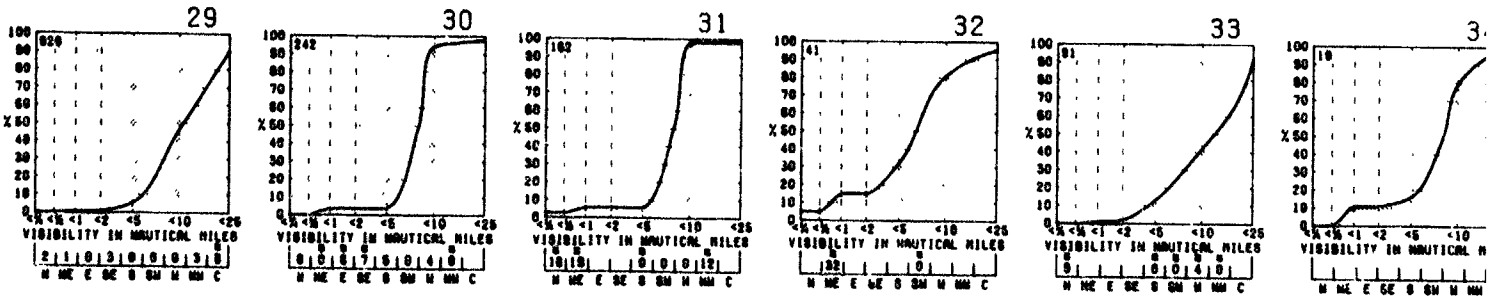
BLUE LINE - Percent frequency of visibilities ≥5 nautical miles

RED LINE Percent frequency of visibilities <2 nautical miles









Graphs represent the objective compilation of available data for specified areas without re
The isopleth analyses (opposite page) are based on all available data subjectively adjusted

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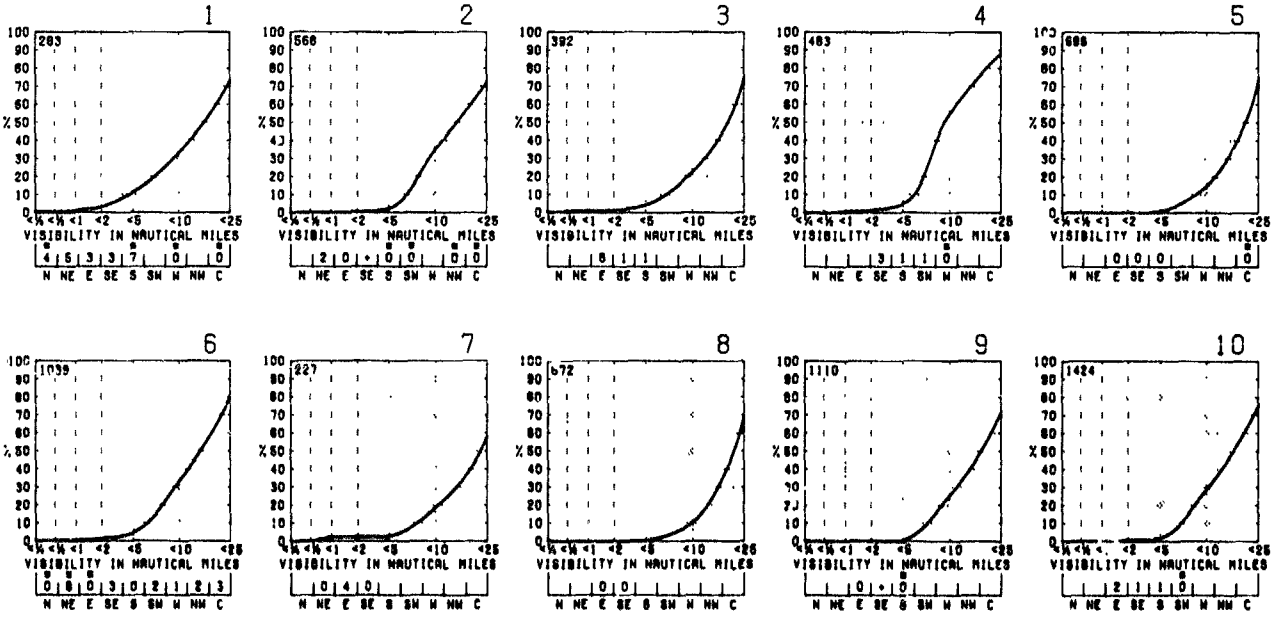

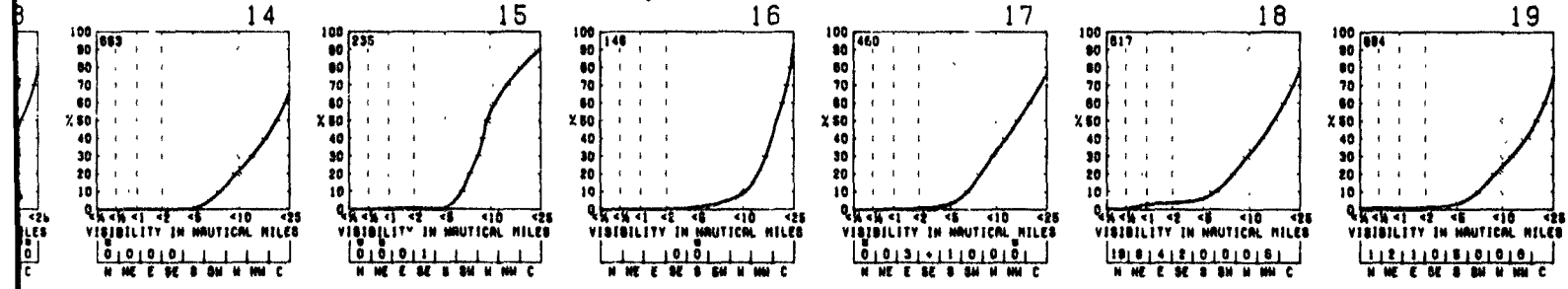

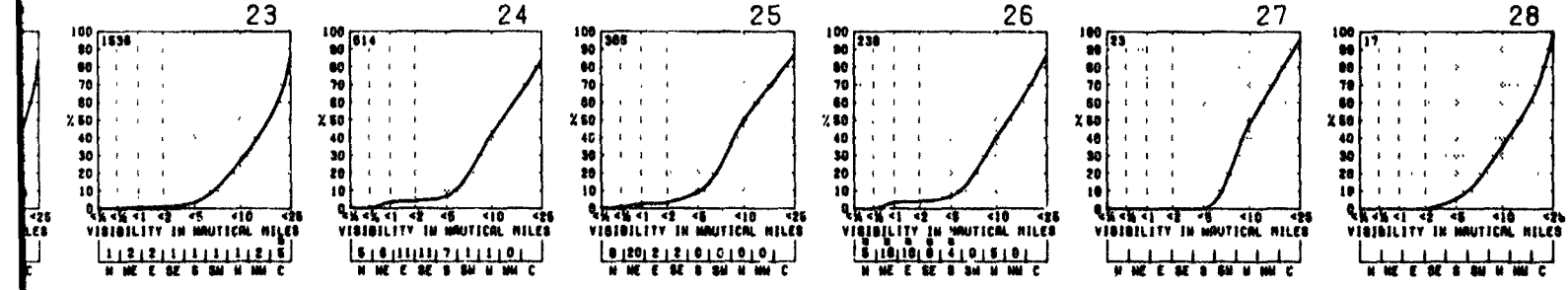

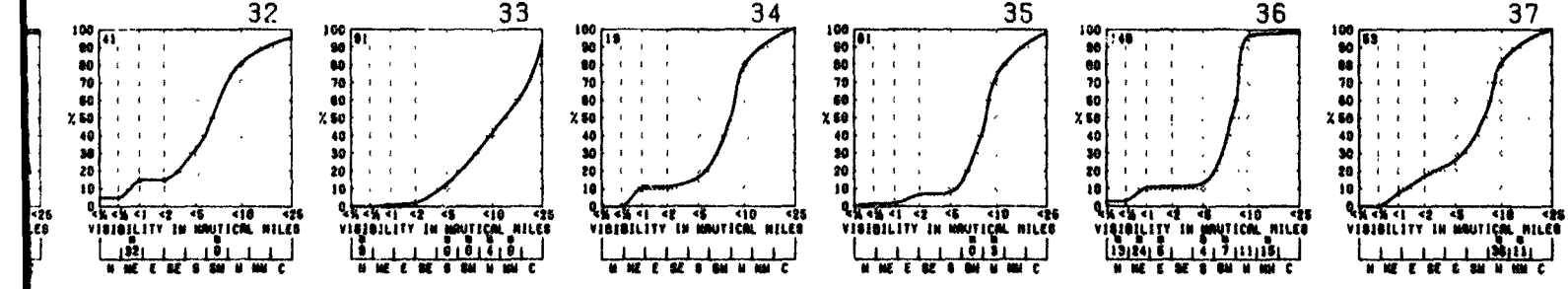

the objective compilation of available data for specified areas without regard to suspected biases.
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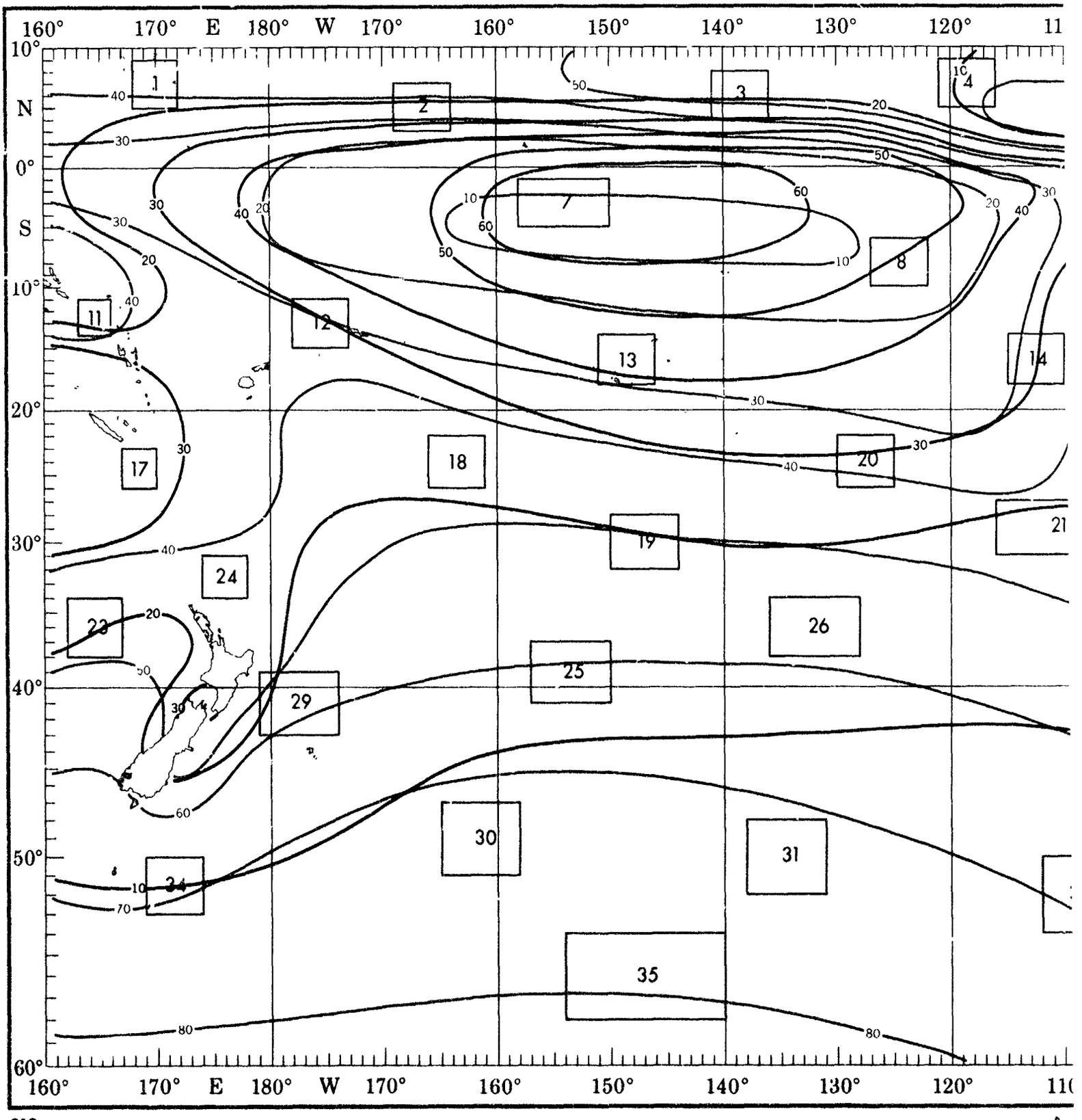
AUGUST


160° 170° E 180° W 170° 160° 150° 140° 130° 120° 11
10° N 0° S 10° 20° 30° 40° 50° 60°
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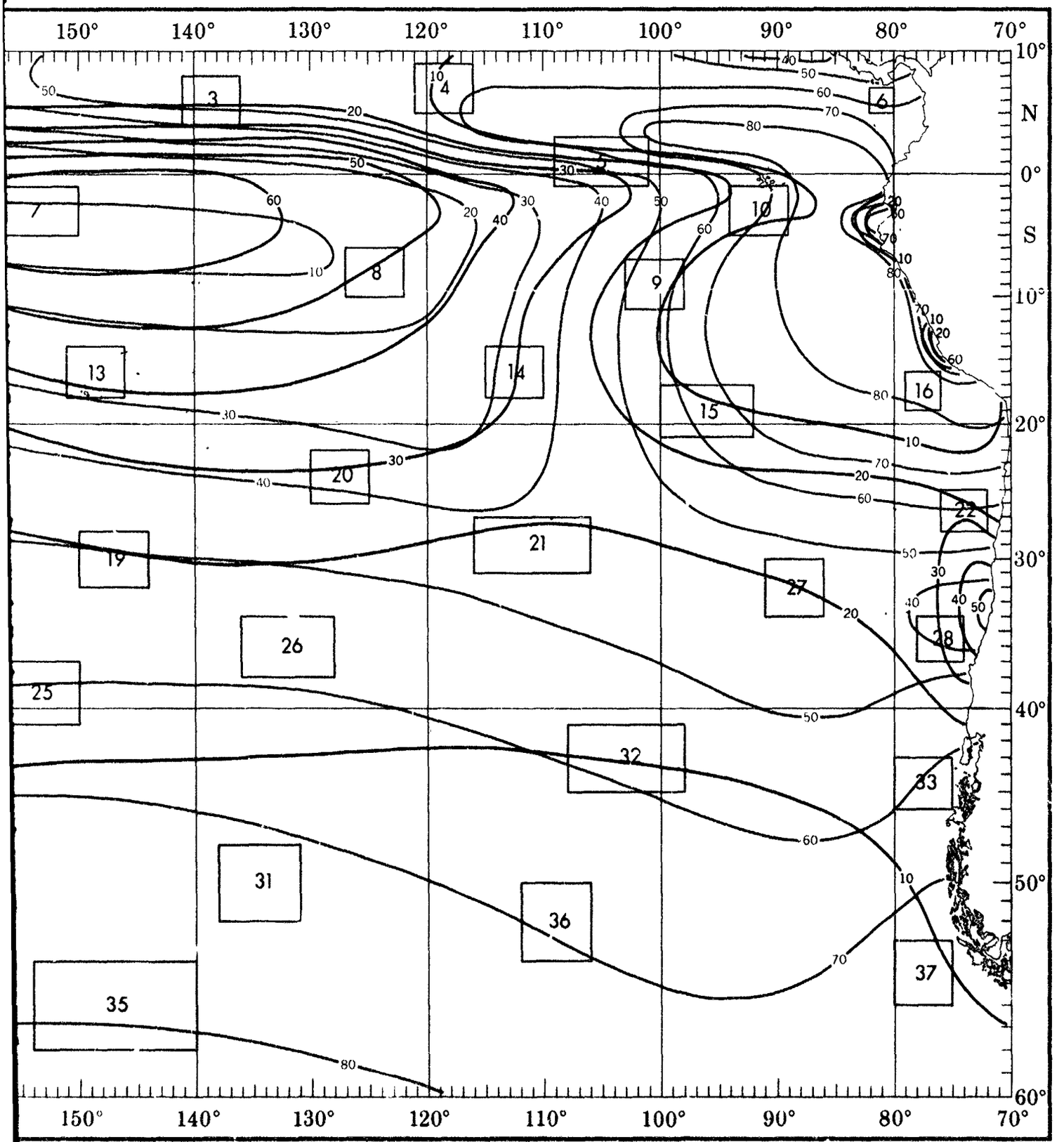
CLOUD COVER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30°
40°
50°
60°
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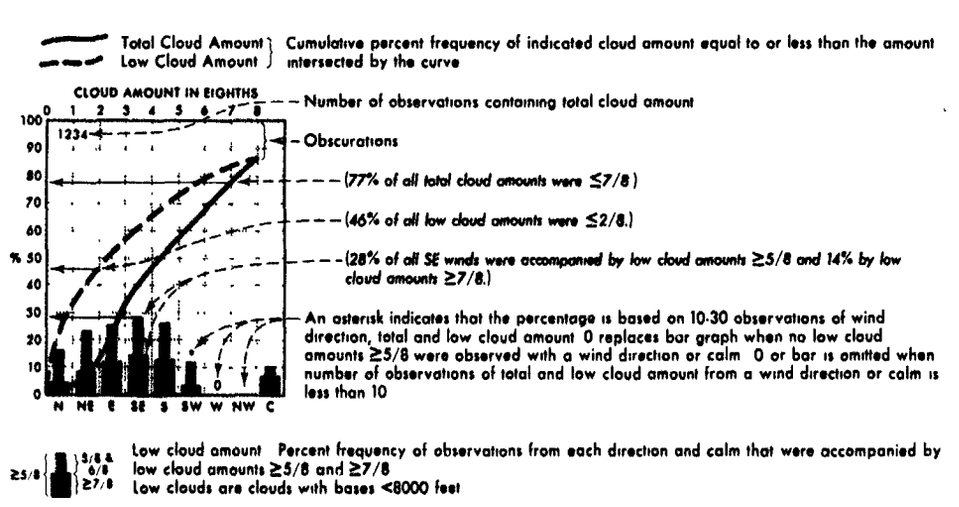
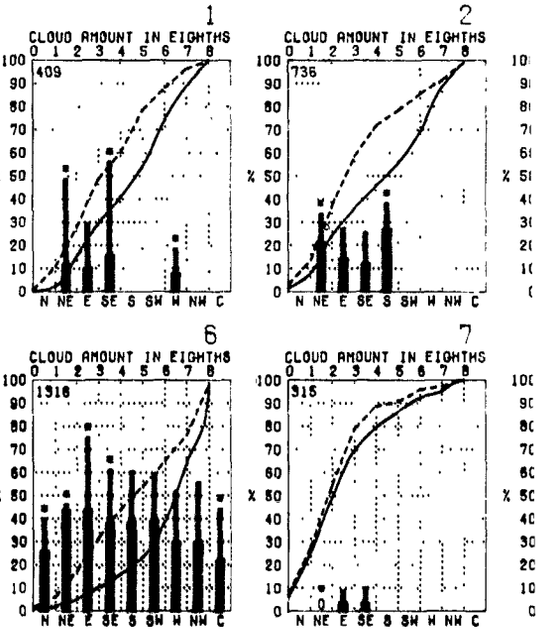
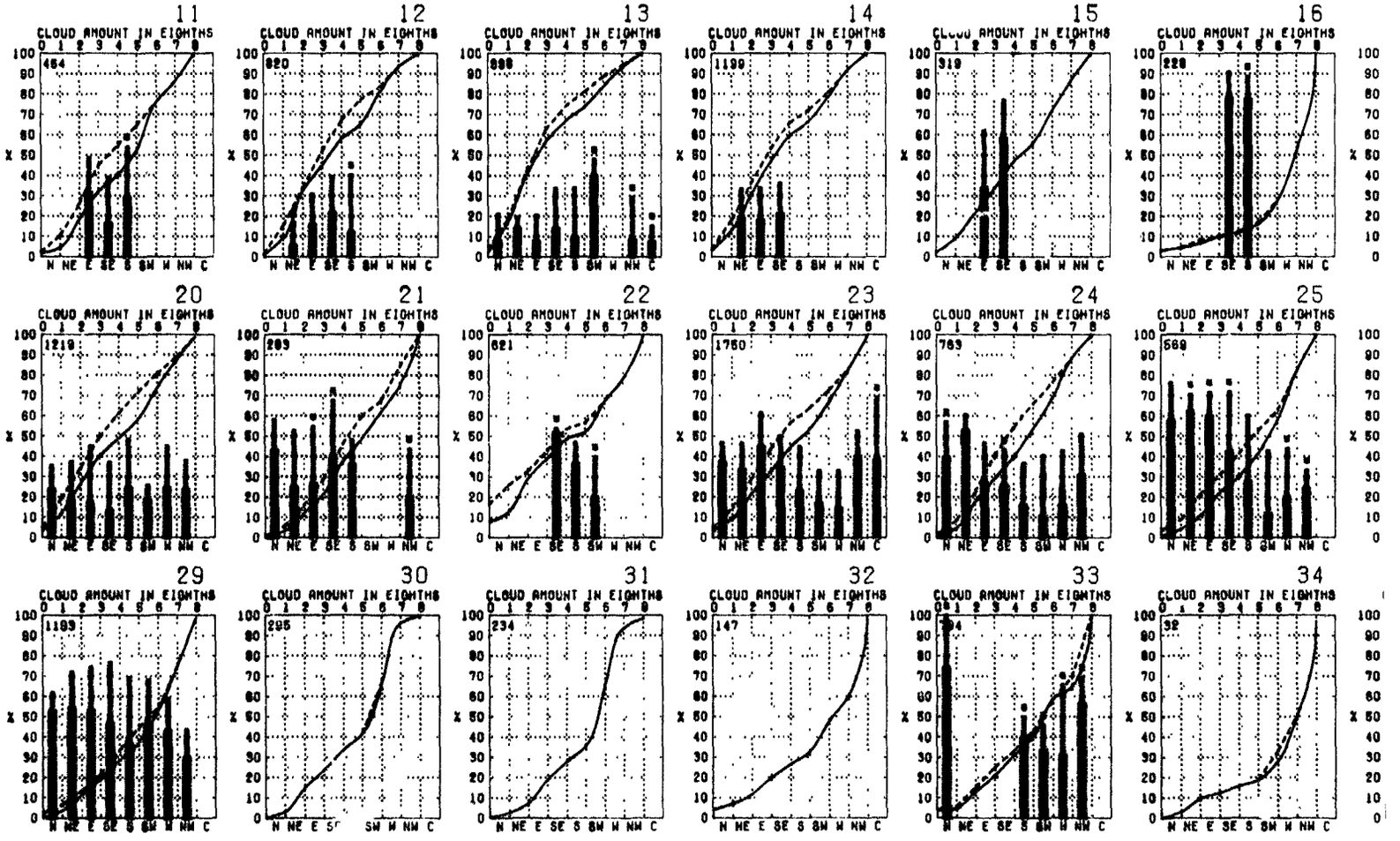
CLOUD COVER



BLUE LINE - Percent frequency of total cloud amount ≤2/8

RED LINE - Percent frequency of low cloud amount ≥5/8





Graphs represent the objective compilation of available data for specified areas without regard to s
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where b

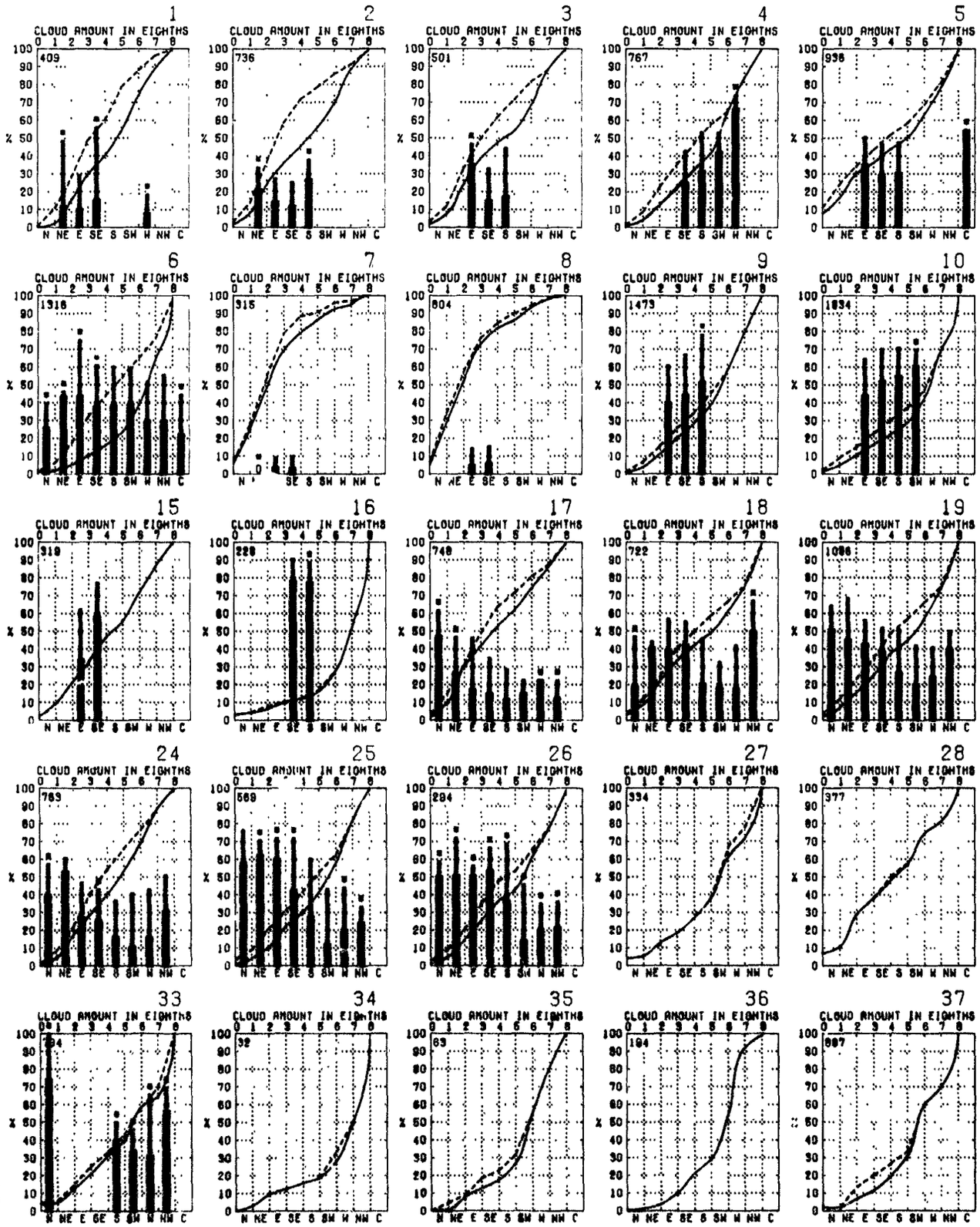
AUGUST

to or less than the amount

≥5/8 and 14% by low

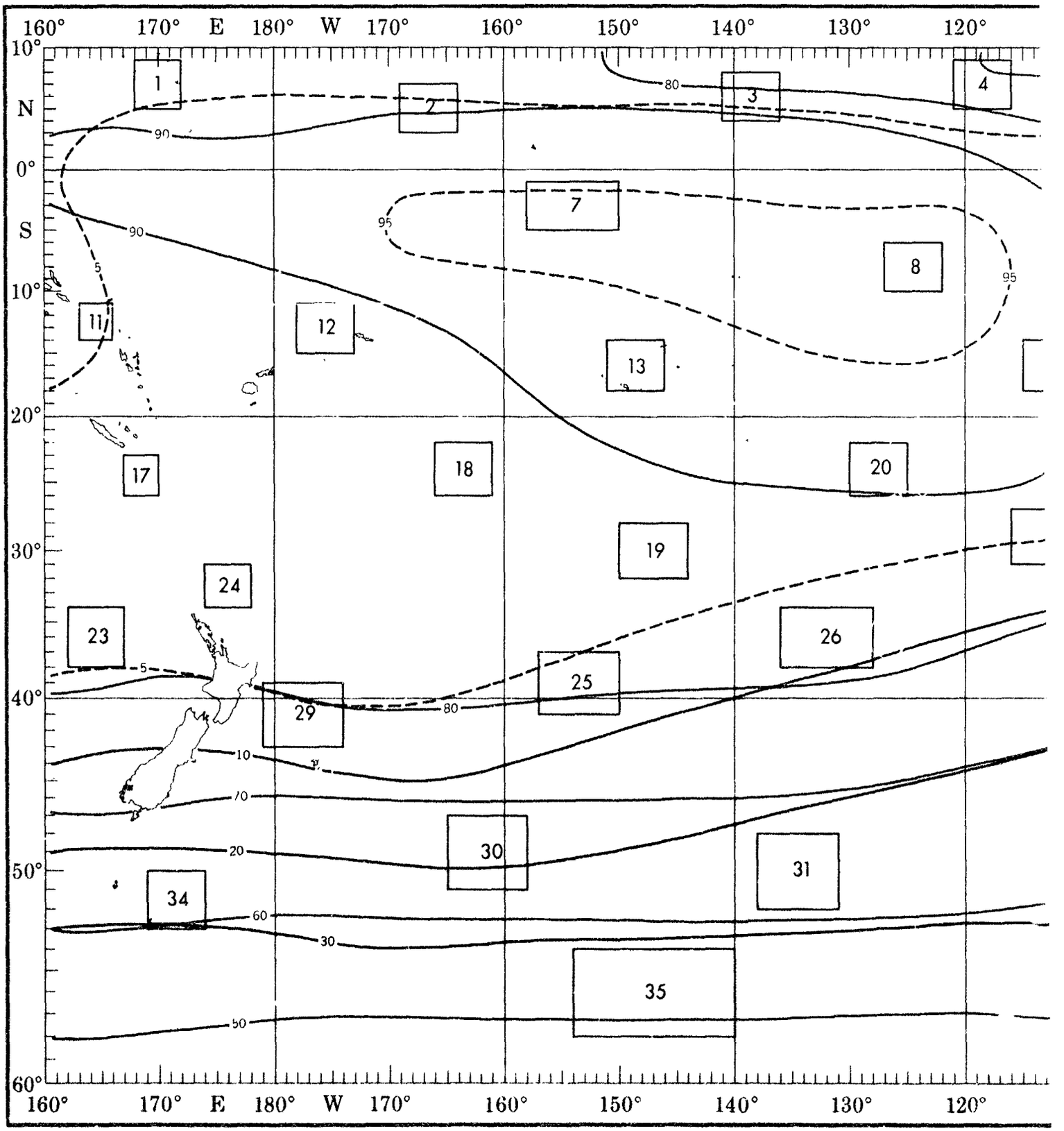
servations of wind
when no low cloud
0 or bar is omitted when
wind direction or calm is

hat were accompanied by



objective compilation of available data for ... cified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

AUGUST


160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N 0° S 10° 20° 30° 40° 50° 60°
1
2
3
4
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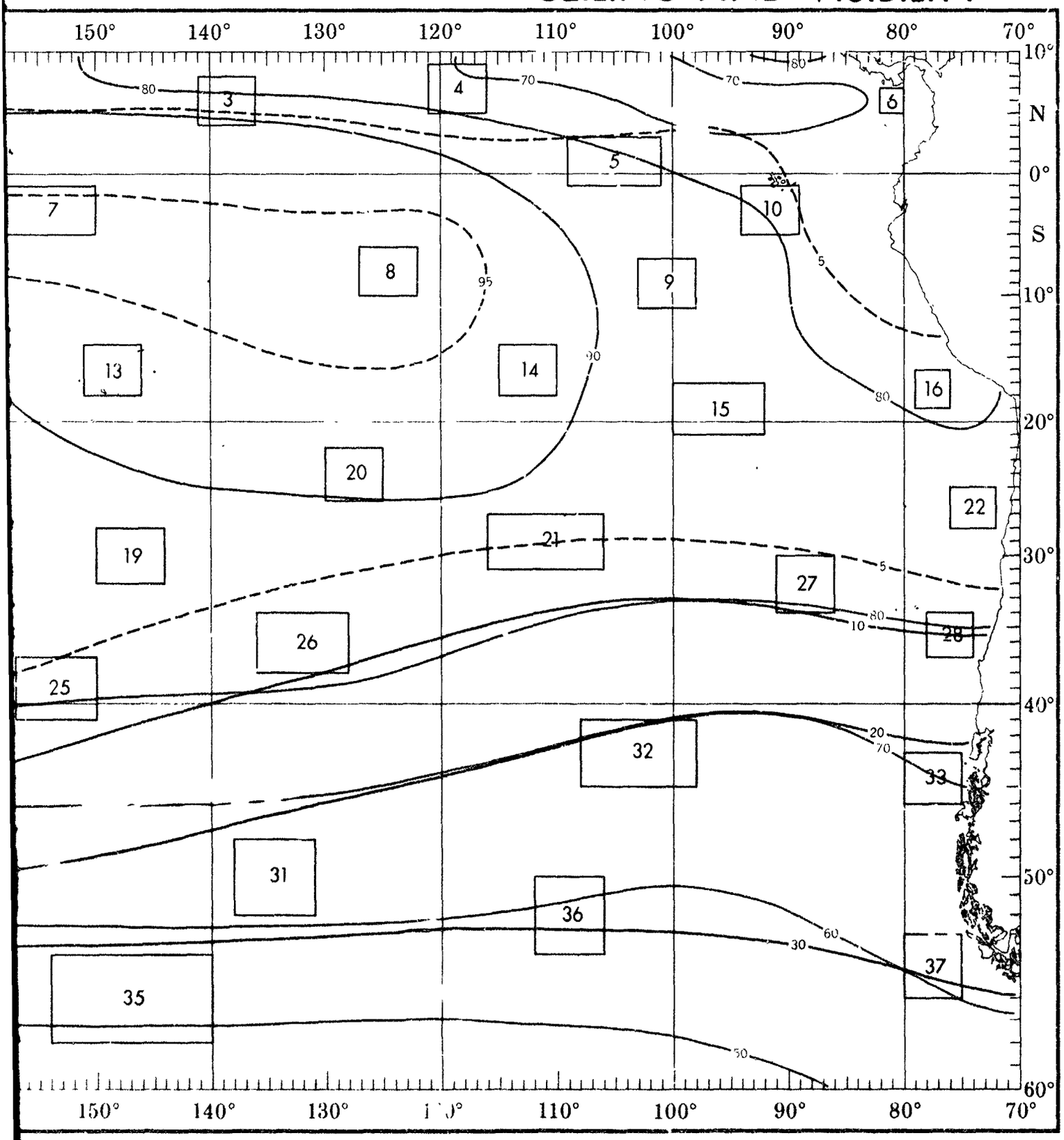
50

CEILING AND VISIBILITY



1 1 2

CEILING AND VISIBILITY

Low cloud ceiling - Visibility

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

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"

"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8.

(2% of all observations reported ceiling ≥1000 but <2000 feet simultaneously with visibility ≥5 but <10 nautical miles)

+ indicates <.5% but >0

Number of observations

BLUE LINE - Percent frequency of low cloud ceiling ≥1000 feet (or no low cloud ceiling) and visibility ≥5 nautical miles

RED LINE - Percent frequency of low cloud ceiling <600 feet and/or visibility <2 nautical miles

1

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	4	7	49
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	0
20<35	0	0	0	1	0	8
10<20	0	0	0	2	2	13
5<10	0	0	0	2	0	11
3<5	0	0	0	0	1	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	1	0	1

139

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<
NC	0	0	0	+	
50<80	0	0	0	+	
35<50	0	0	0	0	
20<35	0	0	0	0	
10<20	0	0	0	0	
5<10	0	0	+	+	
3<5	0	0	0	0	
1.5<3	0	0	0	0	
0<1.5	0	0	0	0	

6

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	4	40
50<80	0	0	0	+	+	1
35<50	0	0	+	+	+	2
20<35	0	0	+	0	2	6
10<20	0	0	0	1	4	15
5<10	+	0	+	1	5	10
3<5	+	0	0	+	2	1
1.5<3	0	0	0	0	+	1
0<1.5	0	0	0	+	+	0

771

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<
NC	0	0	0	0	
50<80	0	0	0	0	
35<50	0	0	0	0	
20<35	0	0	0	0	
10<20	0	0	0	0	
5<10	0	0	0	0	
3<5	0	0	0	1	
1.5<3	0	0	0	0	
0<1.5	0	0	0	0	

11

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	1	1	5	48
50<80	0	0	0	0	0	1
35<50	0	0	0	0	2	0
20<35	0	0	0	5	2	8
10<20	0	0	0	2	3	8
5<10	0	0	0	2	3	4
3<5	0	0	0	2	1	2
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

87

12

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	2	61
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	2
20<35	0	0	0	0	1	4
10<20	1	0	0	0	5	11
5<10	1	0	0	1	2	5
3<5	0	0	0	1	0	2
1.5<3	0	0	0	0	0	1
0<1.5	0	0	0	0	0	0

171

13

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	2	7	66
50<80	0	0	0	+	0	+
35<50	0	0	0	0	0	1
20<35	0	0	0	+	2	3
10<20	0	0	0	1	3	8
5<10	0	0	0	+	2	3
3<5	+	0	0	+	1	+
1.5<3	0	0	0	0	+	+
0<1.5	0	0	0	0	+	0

666

14

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	1	65
50<80	0	0	0	0	+	1
35<50	0	0	0	0	0	3
20<35	0	0	0	0	1	8
10<20	0	0	0	+	2	11
5<10	0	0	0	0	1	8
3<5	0	0	0	0	0	+
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	+	0	0

893

15

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	9	95
50<80	0	0	0	0	0	0
35<50	0	0	0	0	1	3
20<35	0	0	0	0	2	8
10<20	0	0	0	0	8	15
5<10	0	0	0	0	9	24
3<5	0	0	0	1	2	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

117

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<
NC	0	0	0	0	
50<80	0	0	0	0	
35<50	0	0	0	0	
20<35	0	0	0	0	
10<20	0	0	0	0	
5<10	0	0	0	0	
3<5	0	0	0	1	
1.5<3	0	0	0	0	
0<1.5	0	0	0	0	

20

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	2	60
50<80	0	0	0	0	0	1
35<50	0	0	0	+	+	2
20<35	0	0	0	+	1	7
10<20	0	+	+	1	3	15
5<10	0	0	+	1	2	4
3<5	0	0	0	+	+	+
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

859

21

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	1	46
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	1
20<35	0	0	0	0	2	15
10<20	0	0	0	1	10	22
5<10	0	0	0	0	1	0
3<5	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	1	0

178

22

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	3	55
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	2
20<35	0	0	0	0	0	5
10<20	0	0	0	0	1	22
5<10	0	0	0	0	0	12
3<5	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	1	0

148

23

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	3	54
50<80	0	0	0	0	0	+
35<50	0	0	0	0	+	2
20<35	0	0	0	+	1	5
10<20	0	+	+	1	4	18
5<10	+	+	+	1	5	5
3<5	0	0	+	+	+	+
1.5<3	+	0	+	0	+	+
0<1.5	0	0	+	0	+	+

1125

24

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	2	53
50<80	0	0	0	0	0	1
35<50	0	0	0	0	1	1
20<35	0	0	0	0	1	5
10<20	+	0	+	1	2	17
5<10	0	0	+	2	3	8
3<5	0	0	+	1	0	+
1.5<3	0	0	+	1	0	0
0<1.5	0	0	0	0	0	0

328

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<
NC	0	0	0	+	
50<80	0	0	0	+	
35<50	0	0	0	+	
20<35	0	0	0	1	
10<20	0	0	+	4	
5<10	0	0	+	2	
3<5	+	0	+	1	
1.5<3	0	0	0	0	
0<1.5	0	0	0	0	

29

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	2	31
50<80	0	0	0	0	1	+
35<50	0	0	0	+	1	3
20<35	0	0	0	1	6	20
10<20	0	0	0	3	8	10
5<10	0	0	+	1	5	5
3<5	0	0	+	+	1	1
1.5<3	0	0	0	+	0	0
0<1.5	+	0	+	1	+	+

566

30

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	13	20
50<80	0	0	0	0	7	0
35<50	0	0	0	7	7	7
20<35	0	0	0	0	0	7
10<20	0	0	0	0	7	7
5<10	0	0	0	0	13	7
3<5	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

16

31

INSUFFICIENT DATA

32

INSUFFICIENT DATA

33

LOW CLOUD CEILING	<½	½<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	6	29
50<80	0	0	0	0	0	0
35<50	0	0	0	0	3	0
20<35	0	0	0	2	3	6
10<20	0	0	0	2	8	11
5<10	0	2	0	5	6	8
3<5	0	0	0	2	0	2
1.5<3	0	0	0	2	0	0
0<1.5	0	0	2	0	2	0

82

INSUFFICIEN DATA

Graphs represent the objective compilation of available data for specified areas without req
The isopleth analyses (opposite page) are based on all available data subjectively adjusted

TY

AUGUST

d ceilings (hundreds of feet)

ds (h) when low cloud amount

ccurrences of N_h <5/8

ously with visibility ≥5 but <10

visibility ≥5 nautical miles

iles

1

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	4	7	49
50-80	0	0	0	0	0	1
35-50	0	0	0	0	0	0
20-35	0	0	0	1	0	6
10-20	0	0	0	2	2	13
5-10	0	0	0	2	0	11
3-5	0	0	0	0	1	0
1.5-3	0	0	0	0	0	0
0-1.5	0	0	0	1	0	1

139

2

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	+	3	70
50-80	0	0	0	+	0	+
35-50	0	0	0	0	0	+
20-35	0	0	0	0	1	3
10-20	0	0	0	0	3	10
5-10	0	0	+	+	2	6
3-5	0	0	0	0	0	+
1.5-3	0	0	0	0	0	0
0-1.5	0	0	0	0	0	0

291

3

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	+	1	2	60
50-80	0	0	0	0	0	1
35-50	0	0	0	0	0	1
20-35	0	0	0	0	2	3
10-20	0	0	0	3	2	13
5-10	0	0	0	1	1	8
3-5	0	+	0	0	1	1
1.5-3	0	0	0	0	+	0
0-1.5	1	0	+	0	0	0

270

4

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	2	2	43
50-80	0	0	0	0	0	+
35-50	0	0	0	0	0	+
20-35	0	0	+	0	2	5
10-20	0	1	+	1	3	17
5-10	0	0	0	3	4	8
3-5	0	0	0	1	+	3
1.5-3	0	0	0	0	+	+
0-1.5	0	0	0	0	+	0

220

5

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	+	3	51
50-80	0	0	0	0	0	+
35-50	0	0	0	0	0	2
20-35	0	0	0	0	1	9
10-20	0	0	0	+	2	18
5-10	0	0	0	0	2	10
3-5	0	0	0	+	1	1
1.5-3	0	0	0	0	0	0
0-1.5	0	0	0	0	0	+

569

6

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	+	4	40
50-80	0	0	0	+	+	1
35-50	C	0	+	+	+	2
20-35	0	0	+	0	2	6
10-20	0	0	0	1	4	15
5-10	+	0	+	1	5	10
3-5	+	0	0	+	2	1
1.5-3	0	0	0	0	+	1
0-1.5	0	0	0	+	+	0

771

7

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	2	87
50-80	0	0	0	0	0	0
35-50	0	0	0	0	0	0
20-35	0	0	0	0	1	2
10-20	0	0	0	0	2	2
5-10	0	0	0	0	0	2
3-5	0	0	0	1	0	0
1.5-3	0	0	0	0	0	0
0-1.5	0	0	0	0	0	0

123

8

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	2	84
50-80	0	0	0	0	0	+
35-50	0	0	0	0	0	1
20-35	0	0	0	+	1	3
10-20	0	0	0	+	+	5
5-10	0	3	0	+	+	3
3-5	0	0	0	0	+	+
1.5-3	0	0	0	0	0	0
0-1.5	0	0	0	0	0	0

576

9

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	1	34
50-80	0	0	0	0	0	1
35-50	0	0	0	0	+	5
20-35	0	0	0	+	1	11
10-20	0	0	0	+	2	30
5-10	0	0	0	+	2	11
3-5	0	0	0	0	+	+
1.5-3	0	0	0	0	0	+
0-1.5	0	0	0	0	0	+

782

10

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	+	+	+	1	29
50-80	0	0	0	0	1	2
35-50	0	0	0	+	1	4
20-35	0	0	0	+	1	13
10-20	+	0	0	+	3	25
5-10	0	0	0	+	4	12
3-5	0	0	0	+	1	1
1.5-3	0	0	0	+	+	+
0-1.5	0	0	0	0	0	0

1072

13

≥10
66
+
1
3
8
3
+
+
0

66

14

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	+	1	66
50-80	0	0	0	0	+	1
35-50	0	0	0	0	0	3
20-35	0	0	0	0	1	8
10-20	0	0	0	+	2	11
5-10	0	0	0	0	1	6
3-5	0	0	0	0	0	+
1.5-3	0	0	0	0	0	0
0-1.5	0	0	0	+	0	0

699

15

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	3	35
50-80	0	0	0	0	0	0
35-50	0	0	0	0	1	3
20-35	0	0	0	0	2	8
10-20	0	0	0	0	6	15
5-10	0	0	0	0	3	24
3-5	0	0	0	1	2	0
1.5-3	0	0	0	0	0	0
0-1.5	0	0	0	0	0	0

117

16

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	0	12
50-80	0	0	0	0	0	0
35-50	0	0	0	0	0	4
20-35	0	0	0	0	0	18
10-20	0	0	0	0	0	39
5-10	0	0	0	0	1	24
3-5	0	0	0	0	1	1
1.5-3	0	0	0	0	0	0
0-1.5	0	0	0	0	1	0

118

17

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	+	+	0	1	62
50-80	0	0	0	0	0	1
35-50	0	0	0	0	1	2
20-35	0	0	0	1	0	4
10-20	0	0	0	1	1	15
5-10	0	0	+	0	2	8
3-5	0	0	0	0	1	0
1.5-3	0	0	0	+	0	0
0-1.5	0	0	0	+	0	0

284

18

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	3	48
50-80	0	0	0	0	0	1
35-50	0	0	0	0	0	1
20-35	0	0	0	+	2	6
10-20	0	+	+	+	5	17
5-10	0	+	+	1	5	8
3-5	+	0	0	1	1	1
1.5-3	0	0	0	+	0	+
0-1.5	0	0	0	+	0	0

436

19

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	+	+	2	48
50-80	0	0	0	0	+	1
35-50	0	0	0	0	+	4
20-35	0	0	0	0	1	8
10-20	0	0	0	1	2	18
5-10	0	0	0	+	3	8
3-5	0	0	0	1	+	1
1.5-3	0	0	0	0	+	+
0-1.5	0	0	0	0	0	+

648

22

≥10
55
0
2
5
22
12
0
0
0

48

23

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	+	3	54
50-80	0	0	0	0	0	+
35-50	0	0	0	0	+	2
20-35	0	0	0	+	1	5
10-20	0	+	+	1	4	18
5-10	+	+	+	1	5	5
3-5	0	0	+	+	+	+
1.5-3	+	0	+	0	+	+
0-1.5	0	0	+	0	+	+

1125

24

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	+	2	53
50-80	0	0	0	0	0	1
35-50	0	0	0	0	1	1
20-35	0	0	0	0	1	5
10-20	+	0	+	1	2	17
5-10	0	0	+	2	3	8
3-5	0	0	+	1	0	+
1.5-3	0	0	+	1	0	0
0-1.5	0	0	0	0	0	0

328

25

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	+	6	38
50-80	0	0	0	+	0	+
35-50	0	0	0	+	1	5
20-35	0	0	0	1	1	8
10-20	0	0	+	4	7	17
5-10	0	0	+	2	+	6
3-5	+	0	+	1	0	2
1.5-3	0	0	0	0	0	0
0-1.5	0	0	0	0	0	0

236

26

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	1	0	0	3	45
50-80	0	0	0	0	0	1
35-50	0	0	0	0	0	3
20-35	0	0	0	0	1	10
10-20	0	0	0	0	4	17
5-10	0	0	0	1	1	15
3-5	0	0	1	1	1	1
1.5-3	0	0	0	0	0	0
0-1.5	0	0	0	0	0	0

143

27

INSUFFICIENT DATA

28

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	U	0	0	7	0	40
50-80	0	0	0	0	0	0
35-50	0	0	0	0	0	0
20-35	0	0	0	0	0	7
10-20	0	0	0	0	27	20
5-10	0	0	0	0	0	0
3-5	0	0	0	0	0	0
1.5-3	0	0	0	0	0	0
0-1.5	0	0	0	0	0	0

15

31

T INSUFFICIENT DATA

32

33

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	6	29
50-80	0	0	0	0	0	0
35-50	0	0	0	0	3	0
20-35	0	0	0	2	3	6
10-20	0	0	0	2	8	11
5-10	0	2	0	5	6	8
3-5	0	0	0	2	0	2
1.5-3	0	0	0	2	0	0
0-1.5	0	0	2	0	2	0

62

INSUFFICIENT DATA

34

INSUFFICIENT DATA

35

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	0	23
50-80	0	0	0	0	0	0
35-50	0	0	0	0	0	0
20-35	0	0	0	0	5	18
10-20	0	0	0	0	5	18
5-10	5	0	5	5	0	9
3-5	0	0	8	0	0	0
1.5-3	0	C	0	0	0	3
0-1.5	0	0	0	0	0	0

22

INSUFFICIENT DATA

36

37

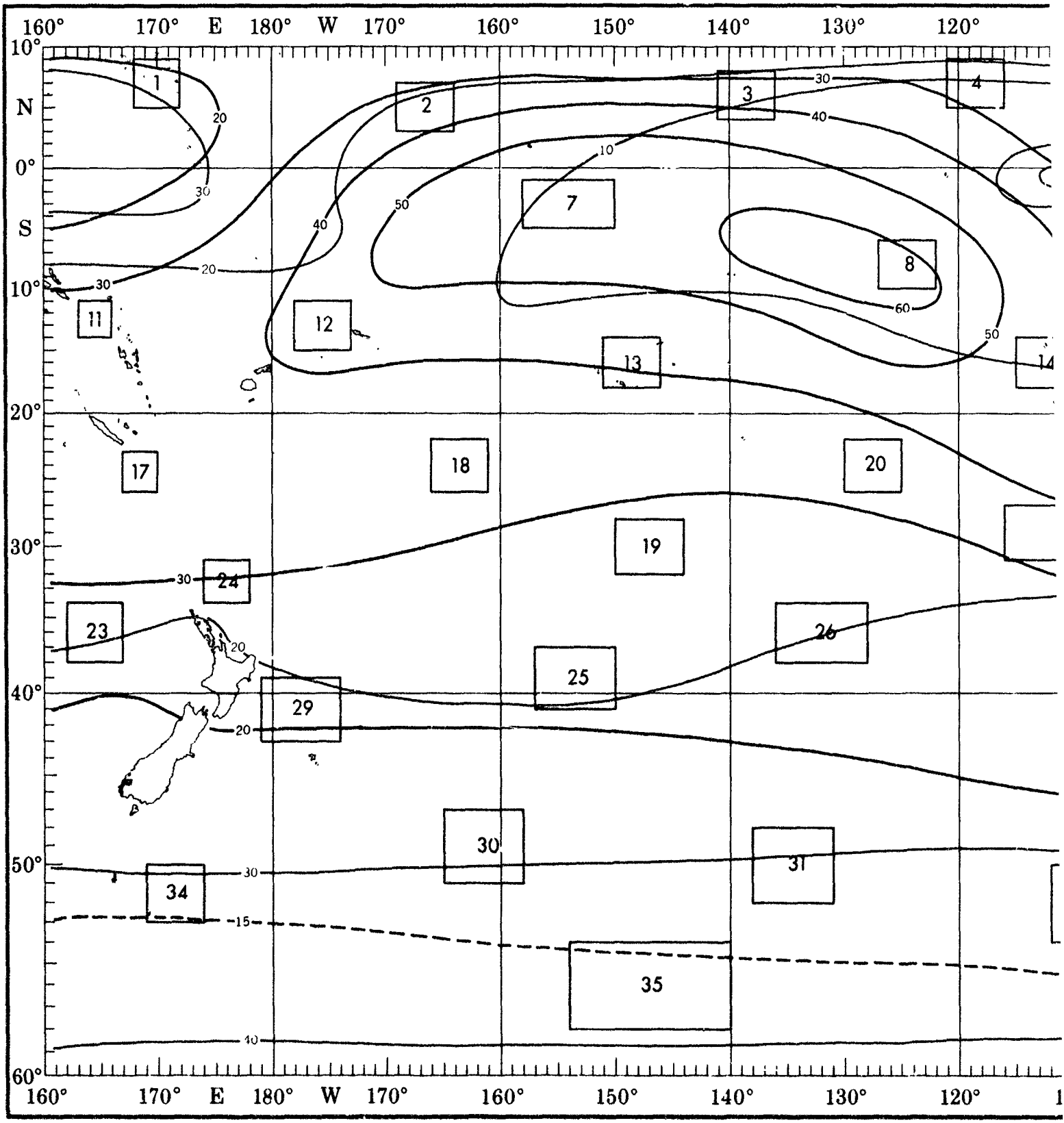
LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	14	14
50-80	0	0	0	0	0	0
35-50	0	0	0	0	0	0
20-35	0	0	0	0	7	0
10-20	0	0	0	14	14	14
5-10	0	0	7	7	7	0
3-5	0	0	0	0	0	0
1.5-3	0	0	0	0	0	0
0-1.5	0	0	0	0	0	0

14

the objective compilation of available data for specified areas without regard to suspected biases.
yses (opposite page) are based on all available data subjectively adjusted where bias was evident.

AUGUST

WIND


160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N 0° S 10° 20° 30° 40° 50° 60°
1
2
3
4
7
8
11
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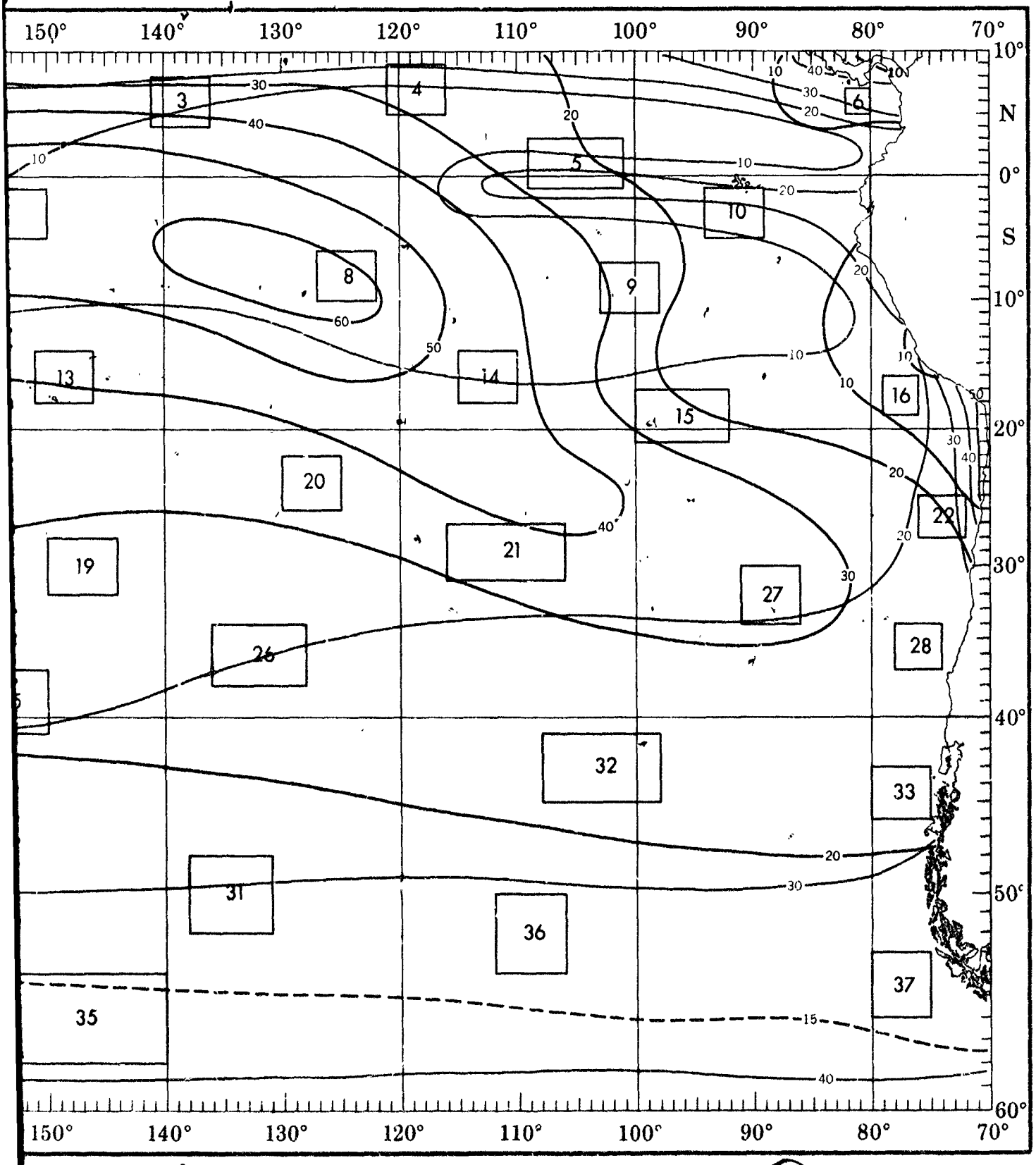
50
60
15

WIND-VISIBILITY-CLOUDINESS



1 1 2

LOW CLOUD CEILING-VISIBILITY-WIND

Percent frequency of occurrence of specified wind speed in knots, visibility (Vsby) in nautical miles, and low cloud ceiling (LCC) in hundreds of feet.

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

WIND SPEED (knots)

LCC - Vsby	0-3	4-10	11-21	22-33	≥34
<1.5 & or <3	+	1	1	+	0
<6 & or <3	2	2	1	1	+
Vsby <3	1	2	1	1	+
<10 & or <3	3	4	2	1	1
<20 & or <3	8	9	6	3	2
Vsby ≥3	9	11	12	3	1
≥20 & ≥3	12	13	15	7	3
NC & ≥10	4	2	1	+	0
	1	2	3	4	

(2% of the observations reported wind speeds of 11-21 knots, a low cloud ceiling <1000 feet and/or visibility <2 nautical miles.)

"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8

+ indicates < 5% but >0

Number of observations

1234

1

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	1	0	0
<6 & OR <2	0	1	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	6	9	0	0
<20 & OR <5	3	17	17	4	0
VSBY ≥5	13	53	24	1	0
≥60 & ≥5	10	39	8	0	0
NC & ≥10	9	32	8	0	0
					138

2

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥3
<1.5 & OR <.5	0	0	0	0	
<6 & OR <2	+	+	0	0	
VSBY <2	+	0	0	0	
<10 & OR <2	1	3	4	0	
<20 & OR <5	2	9	11	0	
VSBY ≥5	7	48	43	1	
≥60 & ≥5	4	36	32	1	
NC & ≥10	3	34	31	1	
					290

6

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	0	0
<6 & OR <2	1	3	2	+	0
VSBY <2	+	+	+	+	0
<10 & OR <2	3	13	7	+	0
<20 & OR <5	4	26	14	+	0
VSBY ≥5	13	60	22	1	0
≥60 & ≥5	8	32	7	+	0
NC & ≥10	7	28	5	0	0
					755

7

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	2	1	0	0
<20 & OR <5	0	4	3	0	0
VSBY ≥5	1	35	58	5	0
≥60 & ≥5	0	32	53	5	0
NC & ≥10	0	32	52	5	0
					120

Conditions for Carrier Operations

BLUE LINE - Percent frequency of optimum conditions LCC ≥5000 ft, (or no LCC), Vsby ≥5 nm and Wind 11-21 kts

RED LINE Percent frequency of poor conditions Any one of the following constitutes poor conditions LCC <300 ft., Vsby <1 nm, Wind <6 or ≥34 kts

Satisfactory conditions-between poor and optimum

11

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	2	3	1	0
VSBY <2	0	0	1	0	0
<10 & OR <2	0	3	9	4	0
<20 & OR <5	0	8	21	7	0
VSBY ≥5	2	22	56	6	0
≥60 & ≥5	2	13	39	2	0
NC & ≥10	2	11	33	2	0
					86

12

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	1	0	0
<6 & OR <2	0	1	4	1	0
VSBY <2	0	0	1	0	0
<10 & OR <2	0	1	8	2	0
<20 & OR <5	1	8	18	4	0
VSBY ≥5	5	37	46	7	2
≥60 & ≥5	4	28	28	3	2
NC & ≥10	3	27	27	2	2
					170

13

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	+	+	1	1	0
VSBY <2	0	0	+	0	0
<10 & OR <2		2	4	1	0
<20 & OR <5	1	5	12	3	+
VSBY ≥5	4	32	51	10	0
≥60 & ≥5	4	26	37	6	0
NC & ≥10	3	25	33	5	0
					855

14

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	+	0
<6 & OR <2	0	0	+	+	0
VSBY <2	0	0	0	0	0
<10 & OR <2	+	2	4	1	0
<20 & OR <5	+	5	13	2	0
VSBY ≥5	2	31	55	11	0
≥60 & ≥5	1	23	36	8	0
NC & ≥10	1	22	35	8	0
					890

15

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	2	1	0
VSBY <2	0	0	0	0	0
<10 & OR <2	2	8	18	3	0
<20 & OR <5	3	15	42	6	0
VSBY ≥5	3	26	61	9	0
≥60 & ≥5	0	6	6	0	0
NC & ≥10	0	5	6	0	0
					119

16

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	0	0	0
<6 & OR <2	1	1	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	2	8	18	0	0
<20 & OR <5	3	15	42	6	0
VSBY ≥5	3	26	61	9	0
≥60 & ≥5	0	6	6	0	0
NC & ≥10	0	5	6	0	0
					119

20

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	+	1	+	0
VSBY <2	0	+	+	+	0
<10 & OR <2	+	2	4	1	0
<20 & OR <5	1	5	16	3	+
VSBY ≥5	5	29	45	8	+
≥60 & ≥5	4	27	27	5	+
NC & ≥10	4	26	25	5	+
					848

21

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	0	0	0
<6 & OR <2	0	1	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	1	1	1	0
<20 & OR <5	1	12	19	3	0
VSBY ≥5	2	33	56	8	0
≥60 & ≥5	2	14	28	3	0
NC & ≥10	2	14	27	3	0
					177

22

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	0	0	0	0
<6 & OR <2	1	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	4	5	2	0
<20 & OR <5	2	9	18	8	0
VSBY ≥5	11	27	42	18	2
≥60 & ≥5	9	16	19	12	2
NC & ≥10	9	13	19	12	2
					148

23

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	+
<6 & OR <2	0	1	1	1	1
VSBY <2	0	+	+	+	1
<10 & OR <2	+	3	6	3	3
<20 & OR <5	1	9	14	7	5
VSBY ≥5	4	28	43	16	5
≥60 & ≥5	3	17	26	10	1
NC & ≥10	3	16	25	9	1
					1105

24

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	1	2	1	0
VSBY <2	0	1	1	0	0
<10 & OR <2	0	5	9	2	0
<20 & OR <5	1	11	19	7	0
VSBY ≥5	4	32	48	10	1
≥60 & ≥5	2	19	28	5	1
NC & ≥10	2	10	27	4	+
					323

25

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	+	0
<6 & OR <2	0	+	2	3	0
VSBY <2	0	0	1	1	0
<10 & OR <2	0	2	8	4	+
<20 & OR <5	+	6	18	15	4
VSBY ≥5	1	23	37	24	3
≥60 & ≥5	1	12	18	11	+
NC & ≥10	1	11	16	7	+
					233

29

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	+	0	0
<6 & OR <2	+	1	1	1	1
VSBY <2	+	+	+	0	+
<10 & OR <2	1	3	4	5	3
<20 & OR <5	1	8	12	9	6
VSBY ≥5	3	24	44	23	5
≥60 & ≥5	1	11	17	7	0
NC & ≥10	1	10	15	5	0
					143

30

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	13	7	0
<20 & OR <5	0	7	27	7	0
VSBY ≥5	0	27	53	13	0
≥60 & ≥5	0	0	33	7	0
NC & ≥10	0	0	20	0	0
					15

31

INSUFFICIENT DATA

32

INSUFFICIENT DATA

33

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	2	0	2
<6 & OR <2	0	0	2	5	3
VSBY <2	0	0	0	0	3
<10 & OR <2	0	3	10	10	6
<20 & OR <5	2	6	23	15	6
VSBY ≥5	3	16	53	10	3
≥60 & ≥5	2	8	23	3	0
NC & ≥10	2	8	18	2	0
					62

34

INSUFFICIENT DATA

Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted whe

ISIBILITY-WIND

AUGUST

(Vsby) in nautical

hen low cloud amount

<1000 feet and/or

ces of N_h <5/8

Wind 11-21 kts

ns LCC <300 ft

1

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	1	0	0
<5 & OR <2	0	1	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	6	9	0	0
<20 & OR <5	3	17	17	1	0
VSBY ≥5	13	53	24	1	0
≥50 & ≥5	10	39	8	0	0
NC & ≥10	9	32	9	0	0

138

2

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<5 & OR <2	+	+	0	0	0
VSBY <2	+	0	0	0	0
<10 & OR <2	1	3	4	0	0
<20 & OR <5	2	9	11	0	0
VSBY ≥5	7	46	43	1	0
≥50 & ≥5	4	36	32	1	0
NC & ≥10	3	34	31	1	0

290

3

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	0	0	0
<5 & OR <2	1	1	2	0	0
VSBY <2	1	1	+	0	0
<10 & OR <2	1	3	8	+	0
<20 & OR <5	2	8	19	2	0
VSBY ≥5	3	33	53	5	+
≥50 & ≥5	3	24	35	3	0
NC & ≥10	3	22	33	2	0

269

4

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	0
<5 & OR <2	+	3	4	+	0
VSBY <2	0	0	2	0	0
<10 & OR <2	2	7	13	1	0
<20 & OR <5	3	17	26	1	0
VSBY ≥5	4	33	52	2	0
≥50 & ≥5	1	18	26	1	0
NC & ≥10	1	15	25	1	0

220

5

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	0
<5 & OR <2	0	2	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	8	5	0	0
<20 & OR <5	2	21	13	+	0
VSBY ≥5	4	58	37	+	0
≥50 & ≥5	2	31	21	0	0
NC & ≥10	1	30	20	0	0

566

6

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	0	0
<5 & OR <2	1	3	2	+	0
VSBY <2	+	+	+	+	0
<10 & OR <2	3	19	7	+	0
<20 & OR <5	4	26	14	+	0
VSBY ≥5	13	60	22	1	0
≥50 & ≥5	8	32	7	+	0
NC & ≥10	7	28	6	0	0

755

7

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<5 & OR <2	0	1	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	2	1	0	0
<20 & OR <5	0	4	3	0	0
VSBY ≥5	1	35	58	5	0
≥50 & ≥5	0	32	53	5	0
NC & ≥10	0	32	52	5	0

120

8

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<5 & OR <2	0	+	+	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	2	2	0	0
<20 & OR <5	0	3	6	+	0
VSBY ≥5	0	25	73	2	0
≥50 & ≥5	0	20	64	2	0
NC & ≥10	0	20	62	2	0

575

9

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	0
<5 & OR <2	0	+	1	0	+
VSBY <2	0	0	0	0	0
<10 & OR <2	0	3	10	1	+
<20 & OR <5	0	10	33	4	+
VSBY ≥5	+	21	71	7	+
≥50 & ≥5	+	7	27	2	0
NC & ≥10	+	7	25	2	0

782

10

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	0
<5 & OR <2	+	3	1	+	0
VSBY <2	0	+	0	0	0
<10 & OR <2	+	14	5	+	0
<20 & OR <5	2	32	14	1	0
VSBY ≥5	3	63	32	1	0
≥50 & ≥5	1	19	12	+	0
NC & ≥10	1	17	11	+	0

1069

14

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	+	0
<5 & OR <2	0	0	+	+	0
VSBY <2	0	0	0	0	0
<10 & OR <2	+	2	4	1	0
<20 & OR <5	+	5	13	2	0
VSBY ≥5	2	31	55	11	0
≥50 & ≥5	1	23	36	8	0
NC & ≥10	1	22	35	8	0

630

15

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<5 & OR <2	0	0	2	1	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	8	18	3	0
<20 & OR <5	1	12	29	8	0
VSBY ≥5	3	27	52	17	0
≥50 & ≥5	1	8	21	8	0
NC & ≥10	1	8	21	6	0

117

16

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	0	0	0
<5 & OR <2	1	1	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	2	8	18	0	0
<20 & OR <5	3	15	42	8	0
VSBY ≥5	3	26	61	9	0
≥50 & ≥5	0	8	8	0	0
NC & ≥10	0	8	8	0	0

118

17

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	+	0
<5 & OR <2	0	2	0	1	0
VSBY <2	0	1	0	+	0
<10 & OR <2	0	8	2	1	1
<20 & OR <5	1	10	13	3	2
VSBY ≥5	3	33	50	8	3
≥50 & ≥5	3	23	34	5	+
NC & ≥10	3	23	32	5	+

280

18

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	+	0
<5 & OR <2	0	1	3	1	1
VSBY <2	0	0	+	1	0
<10 & OR <2	+	4	9	3	1
<20 & OR <5	1	11	22	5	1
VSBY ≥5	3	30	49	13	1
≥50 & ≥5	2	16	24	8	0
NC & ≥10	2	16	23	7	0

431

19

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<5 & OR <2	+	+	1	1	0
VSBY <2	0	+	+	0	0
<10 & OR <2	1	2	8	3	+
<20 & OR <5	2	9	19	5	1
VSBY ≥5	4	34	44	13	2
≥50 & ≥5	3	20	21	7	1
NC & ≥10	2	19	21	6	1

641

23

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	+
<5 & OR <2	0	1	1	1	1
VSBY <2	0	+	+	+	1
<10 & OR <2	+	3	6	3	3
<20 & OR <5	1	8	14	7	5
VSBY ≥5	4	28	43	16	5
≥50 & ≥5	3	17	26	10	1
NC & ≥10	3	16	25	9	1

1105

24

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<5 & OR <2	0	1	2	1	0
VSBY <2	0	1	1	0	0
<10 & OR <2	0	5	9	2	0
<20 & OR <5	1	11	19	7	0
VSBY ≥5	4	32	40	10	1
≥50 & ≥5	2	19	28	5	1
NC & ≥10	2	18	27	4	+

323

25

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	+	0
<5 & OR <2	0	+	2	3	0
VSBY <2	0	0	1	1	0
<10 & OR <2	0	2	6	4	+
<20 & OR <5	+	6	18	15	4
VSBY ≥5	1	23	37	24	3
≥50 & ≥5	1	12	18	11	+
NC & ≥10	1	11	16	7	+

293

26

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<5 & OR <2	0	1	3	1	0
VSBY <2	0	0	1	0	0
<10 & OR <2	1	6	9	4	0
<20 & OR <5	1	12	22	4	0
VSBY ≥5	4	30	54	8	1
≥50 & ≥5	3	18	24	4	0
NC & ≥10	3	15	21	4	0

140

27

INSUFFICIENT DATA

28

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<5 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	0	0	0
<20 & OR <5	0	0	47	7	0
VSBY ≥5	0	20	60	13	0
≥50 & ≥5	0	13	20	7	0
NC & ≥10	0	13	20	7	0

15

32

INSUFFICIENT DATA

33

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	2	0	2
<5 & OR <2	0	0	2	5	3
VSBY <2	0	0	0	0	3
<10 & OR <2	0	3	10	10	6
<20 & OR <5	2	6	23	15	6
VSBY ≥5	3	16	53	10	3
≥50 & ≥5	2	8	23	3	0
NC & ≥10	2	8	18	2	0

62

34

INSUFFICIENT DATA

35

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	C	0	0	0	0
<5 & OR <2	0	0	0	10	5
VSBY <2	0	0	0	10	5
<10 & OR <2	0	0	5	14	10
<20 & OR <5	0	0	5	28	19
VSBY ≥5	0	5	14	38	24
≥50 & ≥5	0	0	0	18	5
NC & ≥10	0	0	0	19	5

21

36

INSUFFICIENT DATA

37

WIND SPEED (KNOTS)

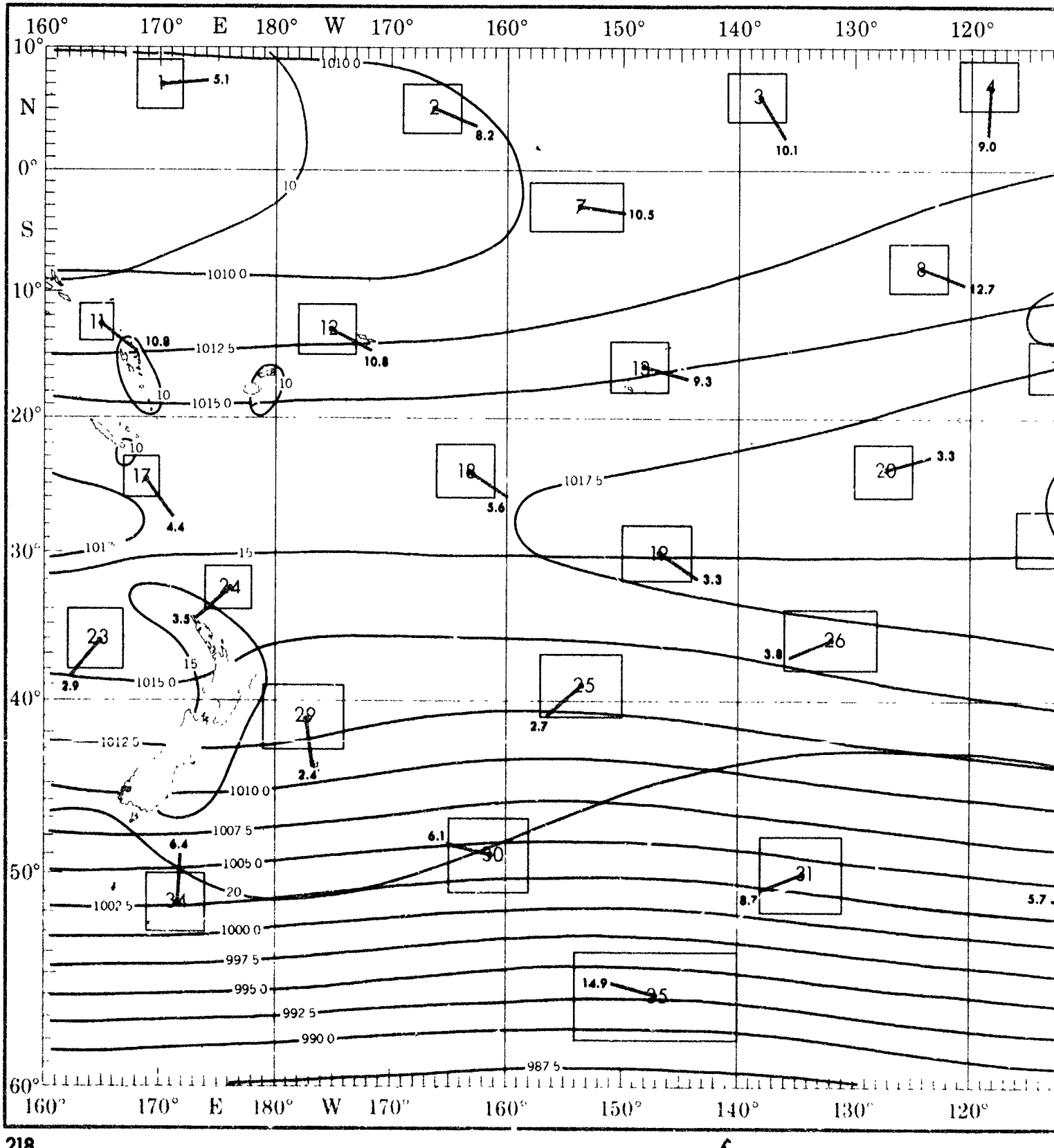
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<5 & OR <2	0	0	0	7	0
VSBY <2	0	0	0	7	0
<10 & OR <2	0	0	0	21	0
<20 & OR <5	0	0	7	21	36
VSBY ≥5	0	0	7	43	21
≥50 & ≥5	0	0	0	29	0
NC & ≥10	0	0	0	14	0

14

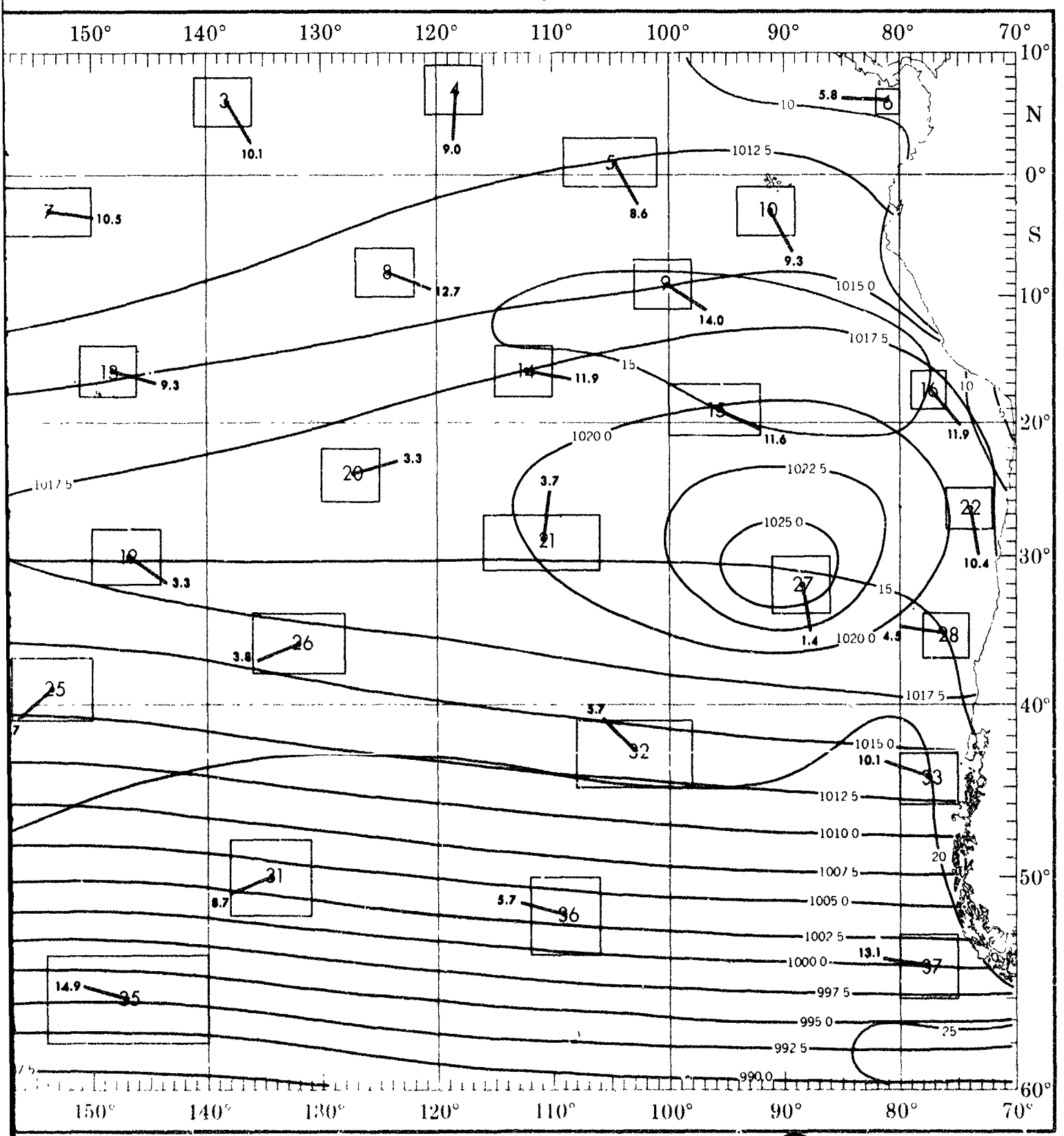
objective compilation of available data for specified areas without regard to suspected biases.
opposite page) are based on all available data subjectively adjusted where bias was evident.

AUGUST

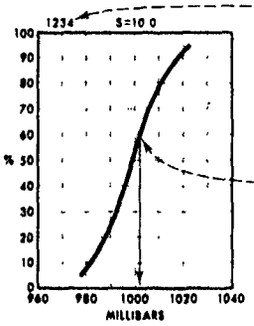
SEA LEVEL PRES



SEA LEVEL PRESSURE AND MEAN WIND



SEA LEVEL PRESSURE



Sea level pressure and mean wind

Number of observations

Cumulative percent frequency of sea level pressures equal to or less than the pressure intersected by the curve

S-Standard deviation of pressure (mbs)

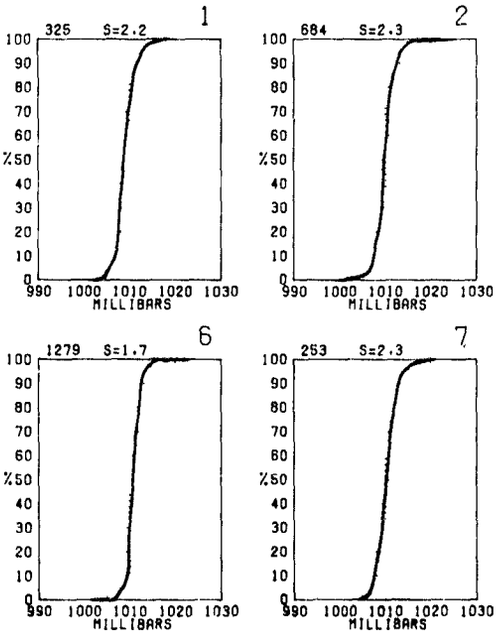
(60% of all observed sea level pressures were ≤1002 millibars)

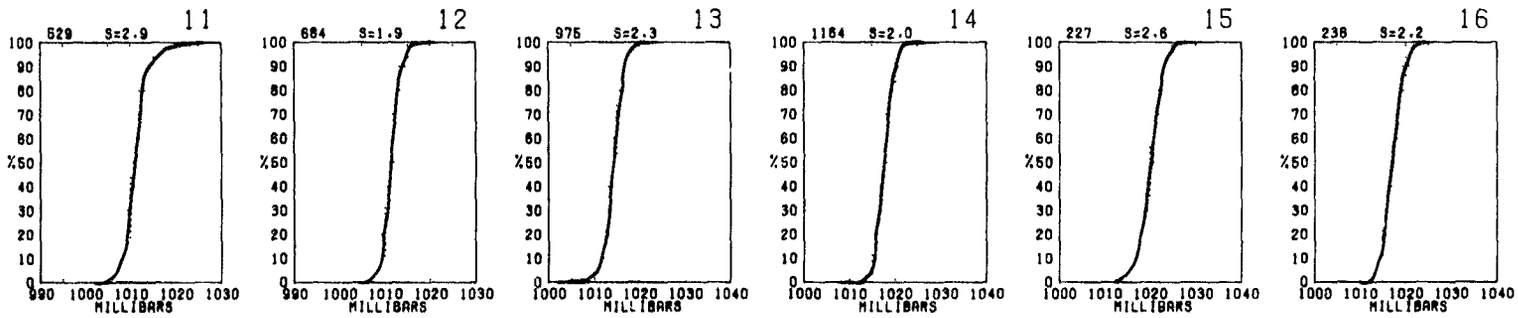
Vector mean wind is plotted from the direction which the mean flow occurs with the magnitude in knots at the end of the vector

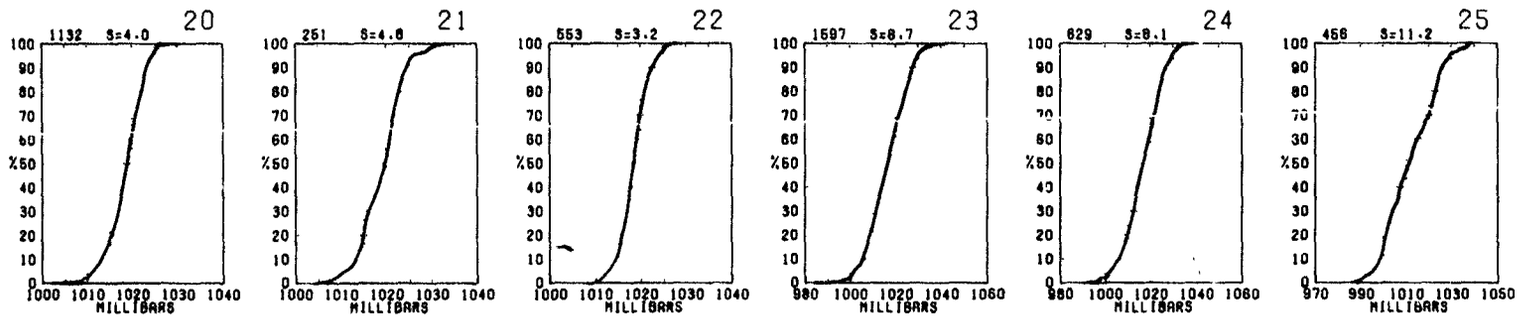
10.2 Vector mean wind is from the northeast at 10.2 knots

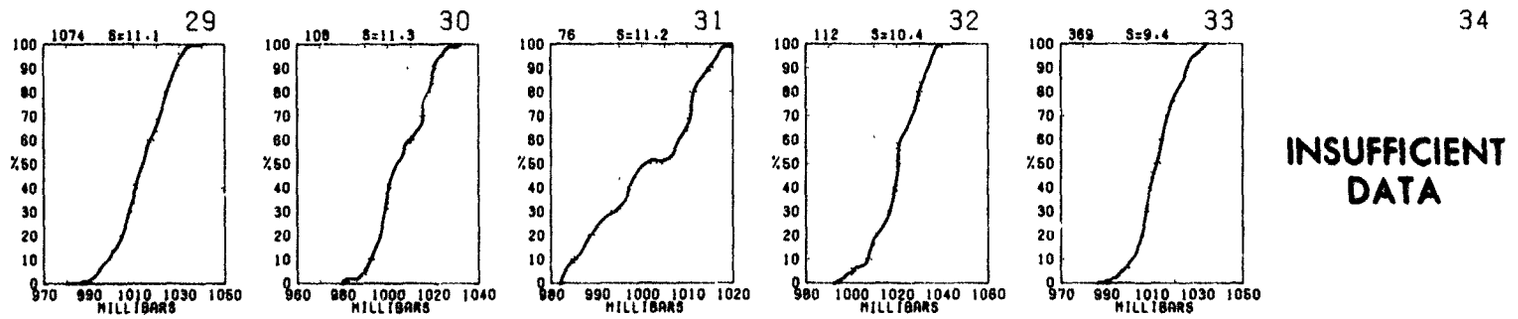
BLUE LINE Scalar mean wind speed (kts)

RED LINE Mean sea level pressure (mbs)









34

INSUFFICIENT DATA

Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

AUGUST

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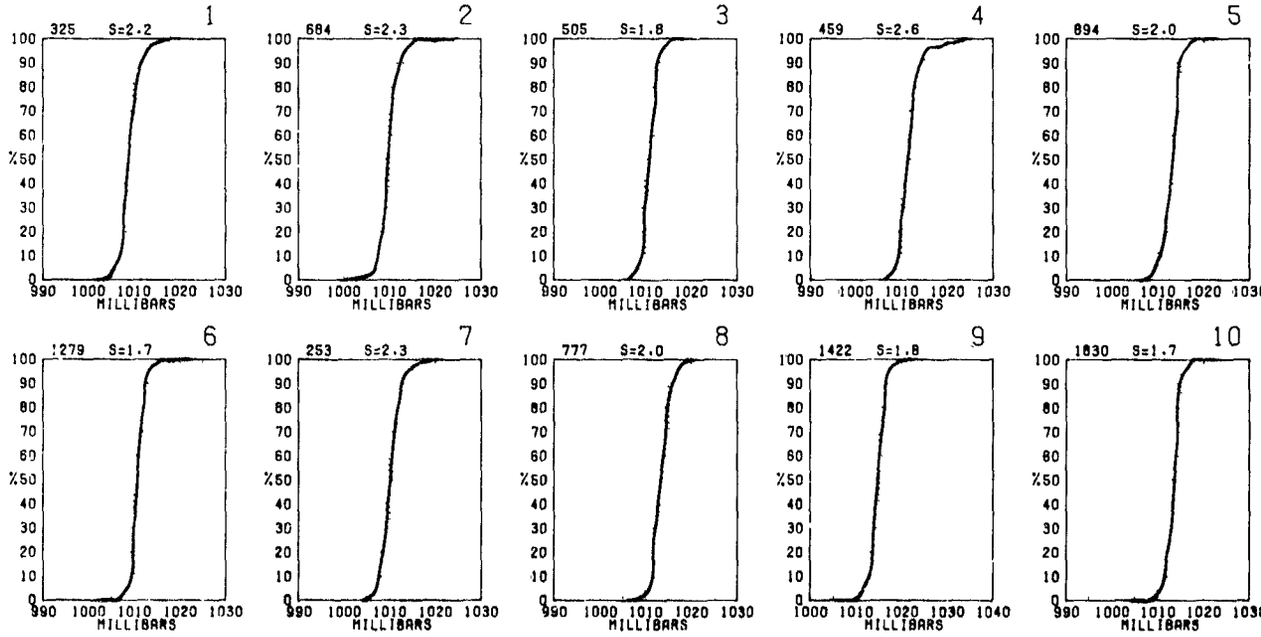
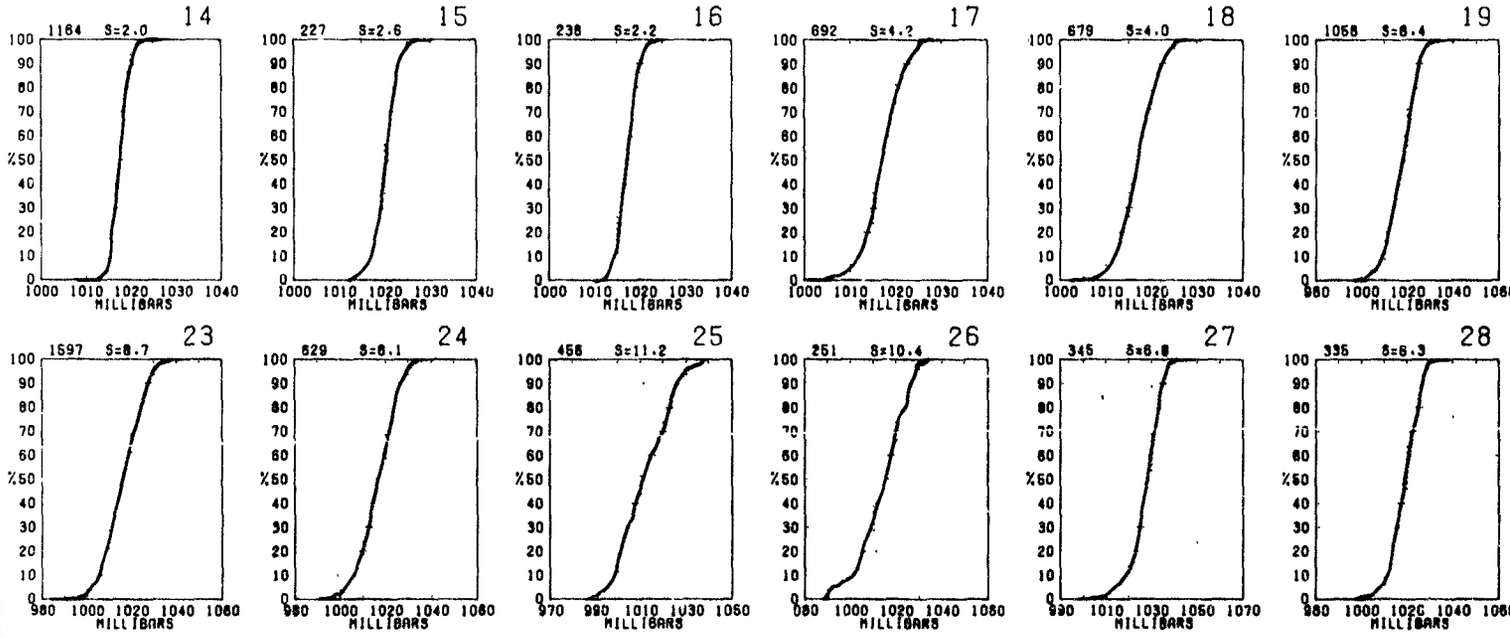
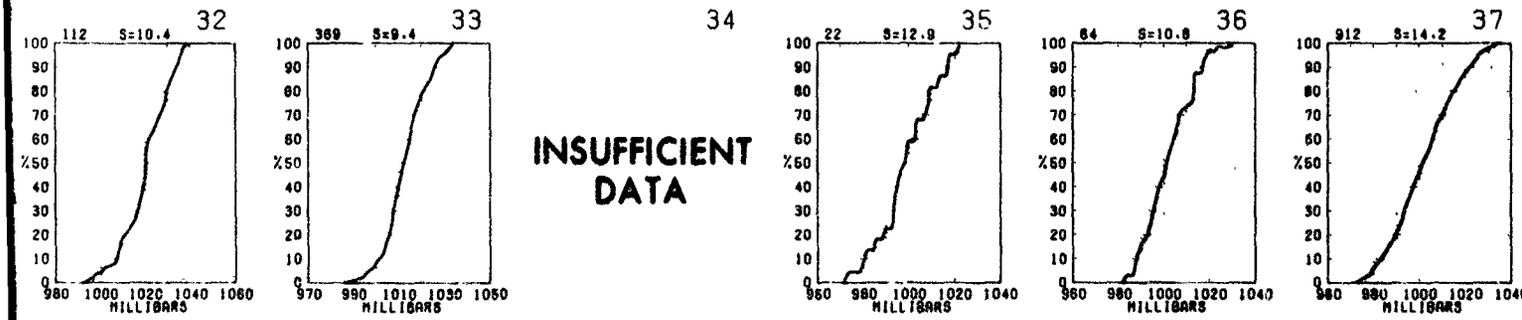




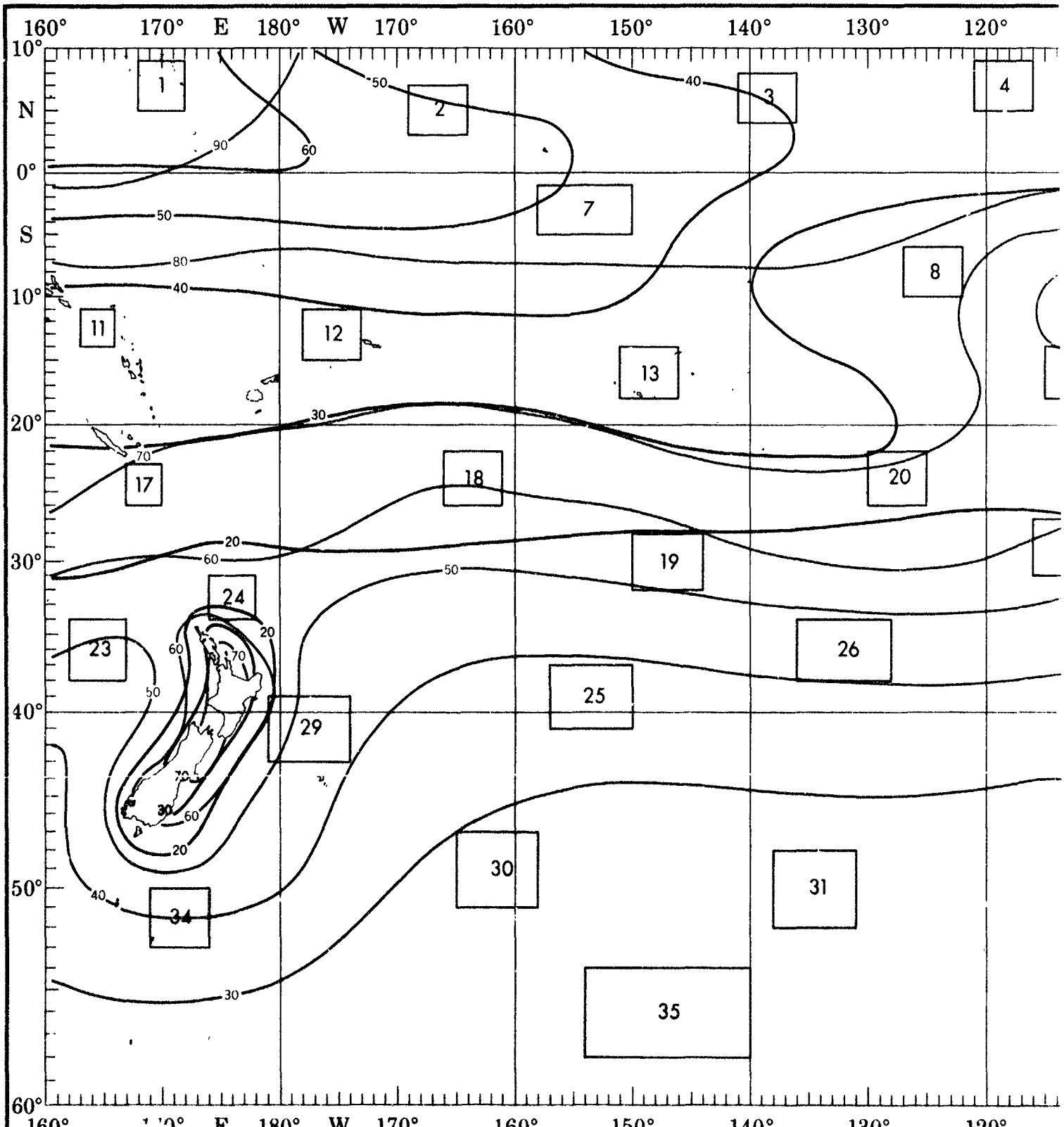


INSUFFICIENT DATA

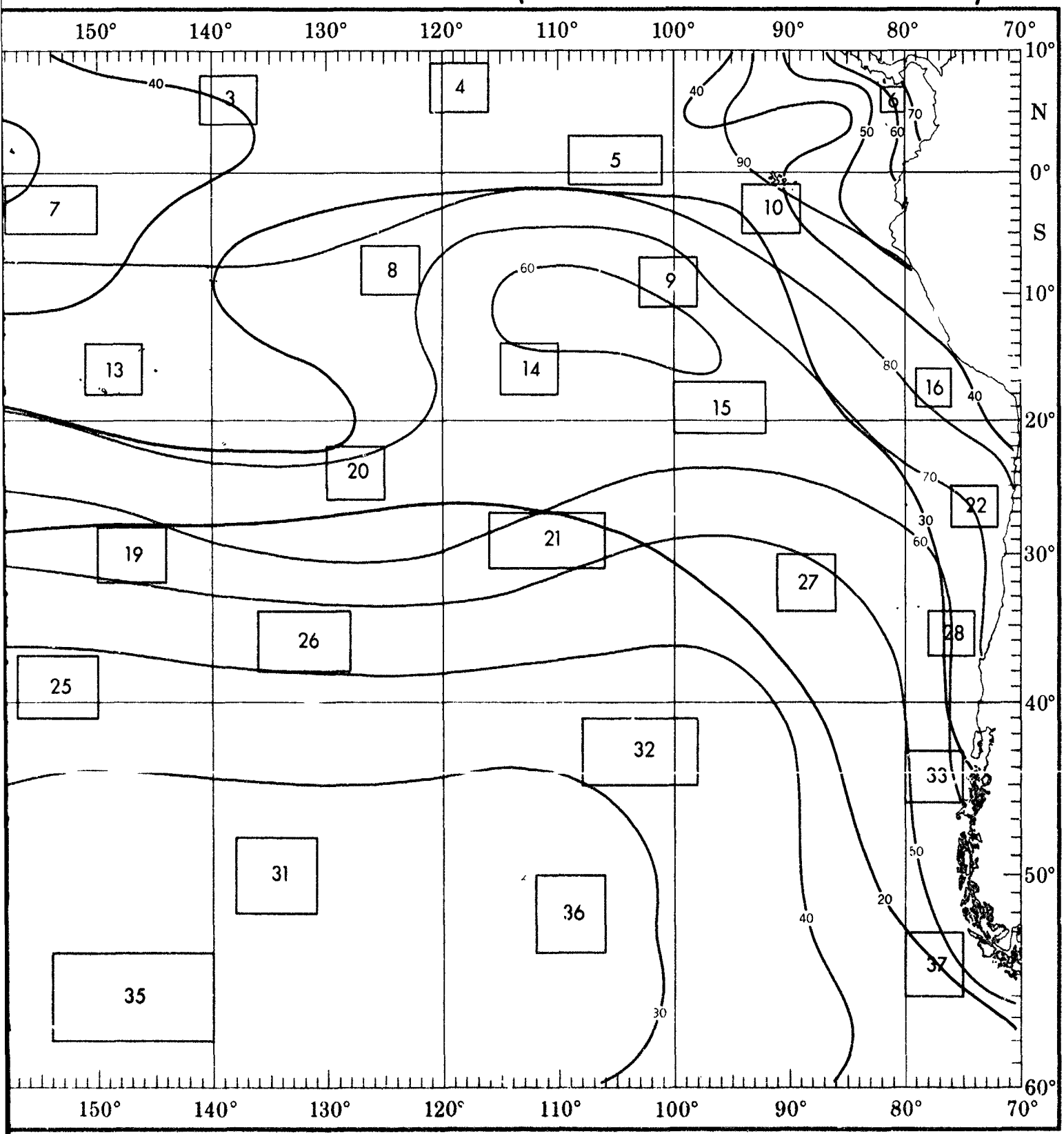
objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

AUGUST

WAVES



WAVES (<1.5 AND <2.5 METERS)

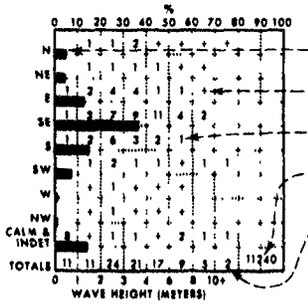


WAVE DIRECTION AND HEIGHT

Wave direction and height

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



—(5% of all waves were from the N.)

+ indicates < 5% but > 0

—(1% of all waves were from the S with heights from 6-7.5 meters.)

—Number of observations

—(2% of the waves from all directions had heights ≥10 meters.)

WAVE HEIGHT INTERVAL

Feet	0-2	3-6	7-9	10-12	13-19	20-25	26-32	≥33
Meters	0-.5	1-1.5	2-2.5	3-3.5	4-5.5	6-7.5	8-9.5	≥10

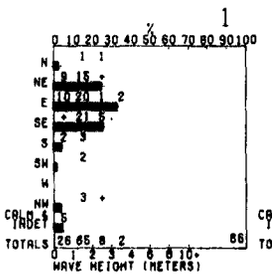
0 1 2 3 4 6 8 10+

Printed scale on bottom of chart

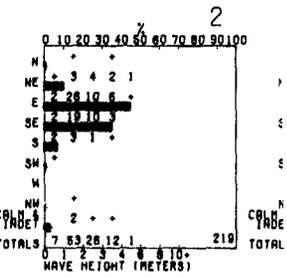
BLUE LINE Percent frequency of wave height <1.5 meters (5 feet)

RED LINE · Percent frequency of wave height <2.5 meters (8 feet)

1



2



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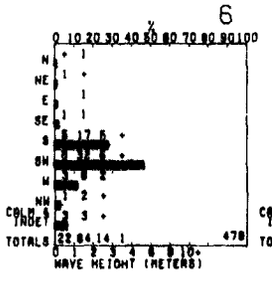

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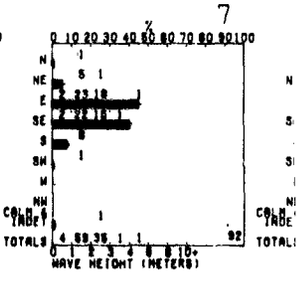

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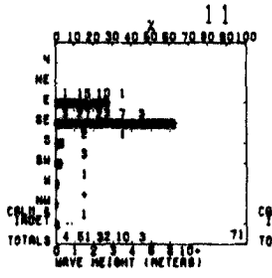

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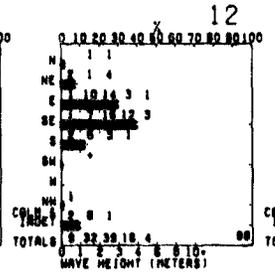

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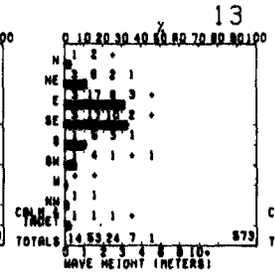

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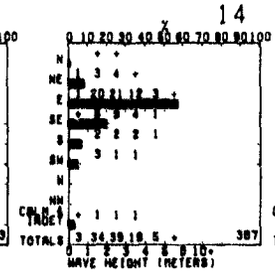

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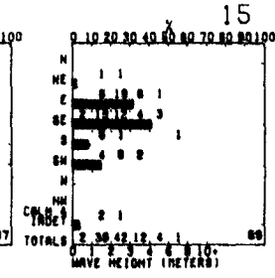

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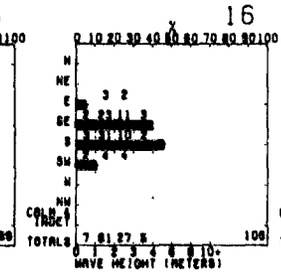

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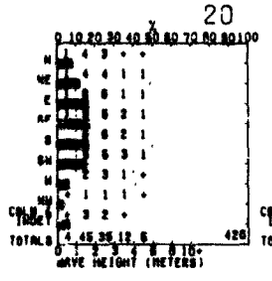

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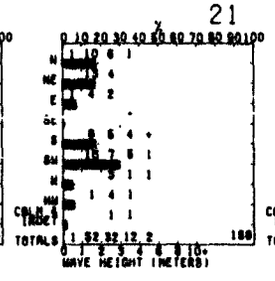

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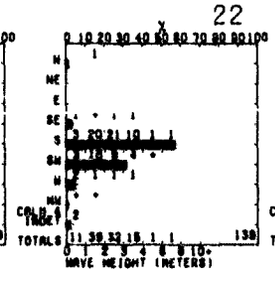

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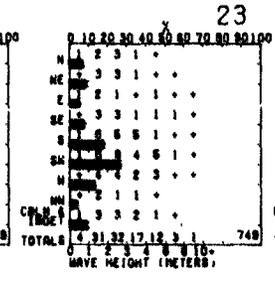

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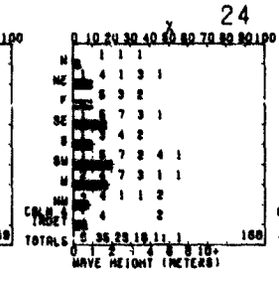

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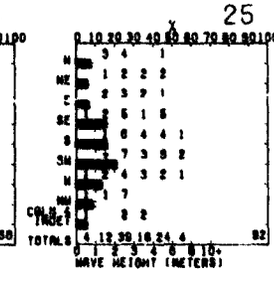

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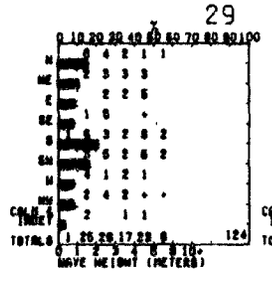

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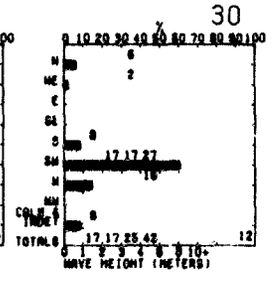


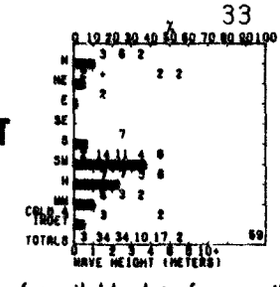
31

INSUFFICIENT DATA

32

INSUFFICIENT DATA

33



34

INSUFFICIENT DATA

Graphs represent the objective compilation of available data for specified areas without regard to s
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where b

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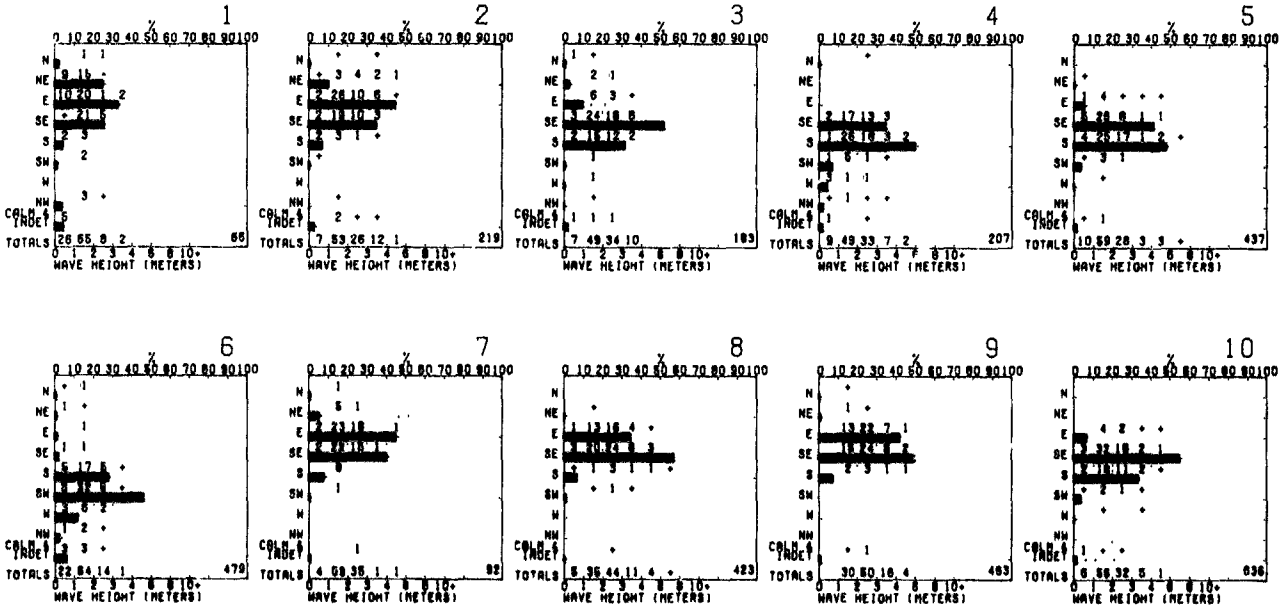
HEIGHT

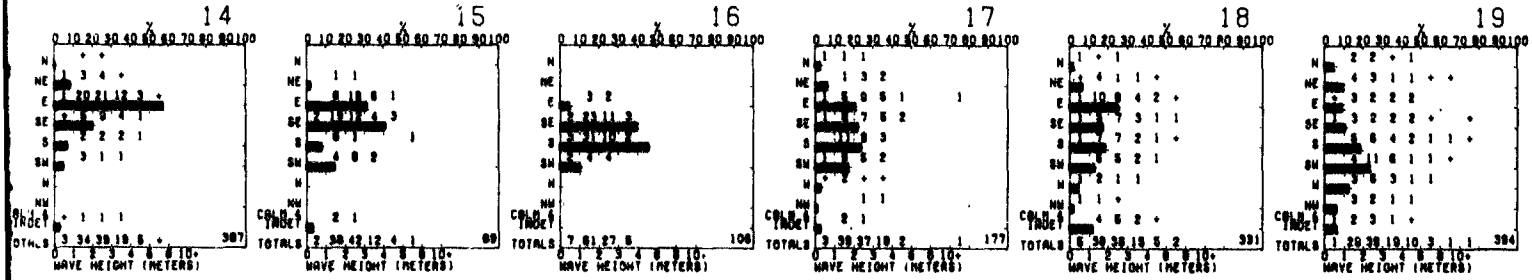
AUGUST

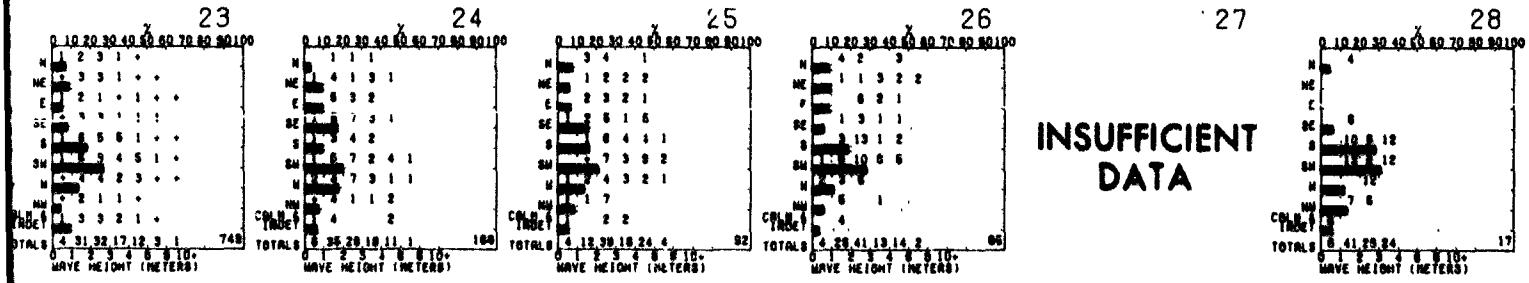
ency of waves from

rcent frequency of wave

≥33
≥10
0+







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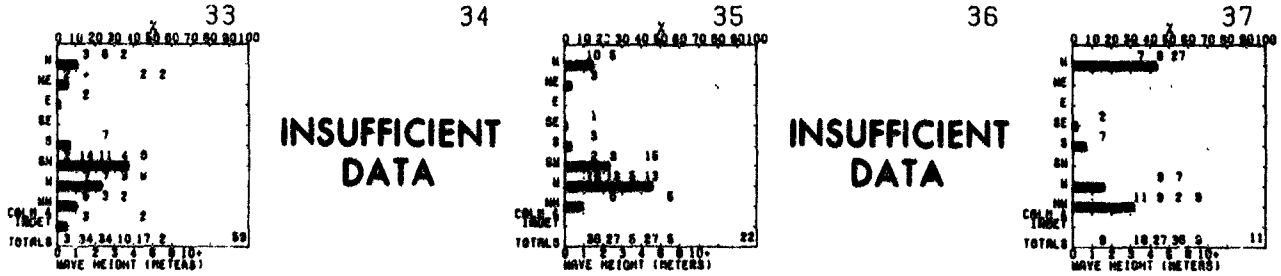


INSUFFICIENT DATA

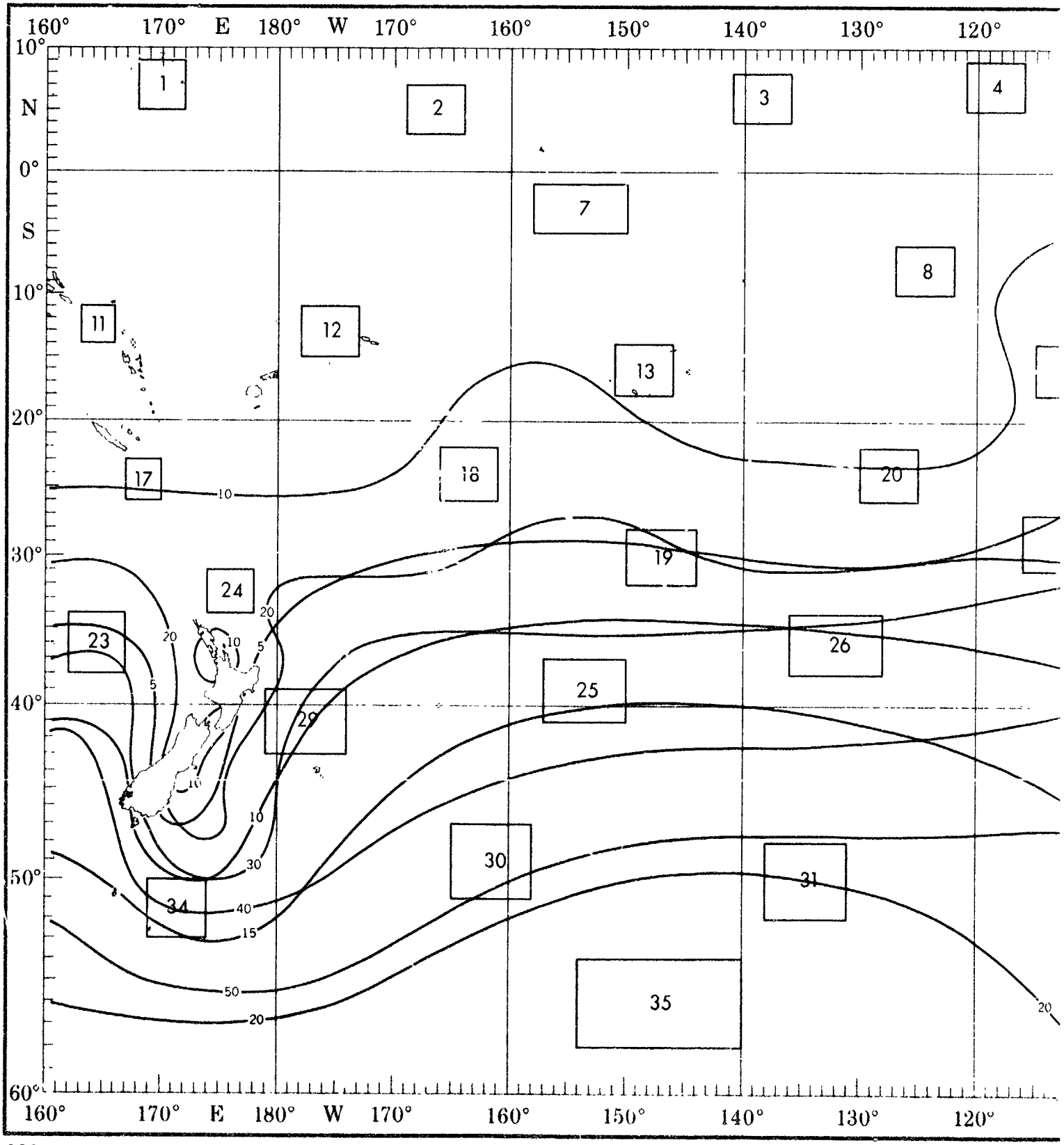
INSUFFICIENT DATA

INSUFFICIENT DATA

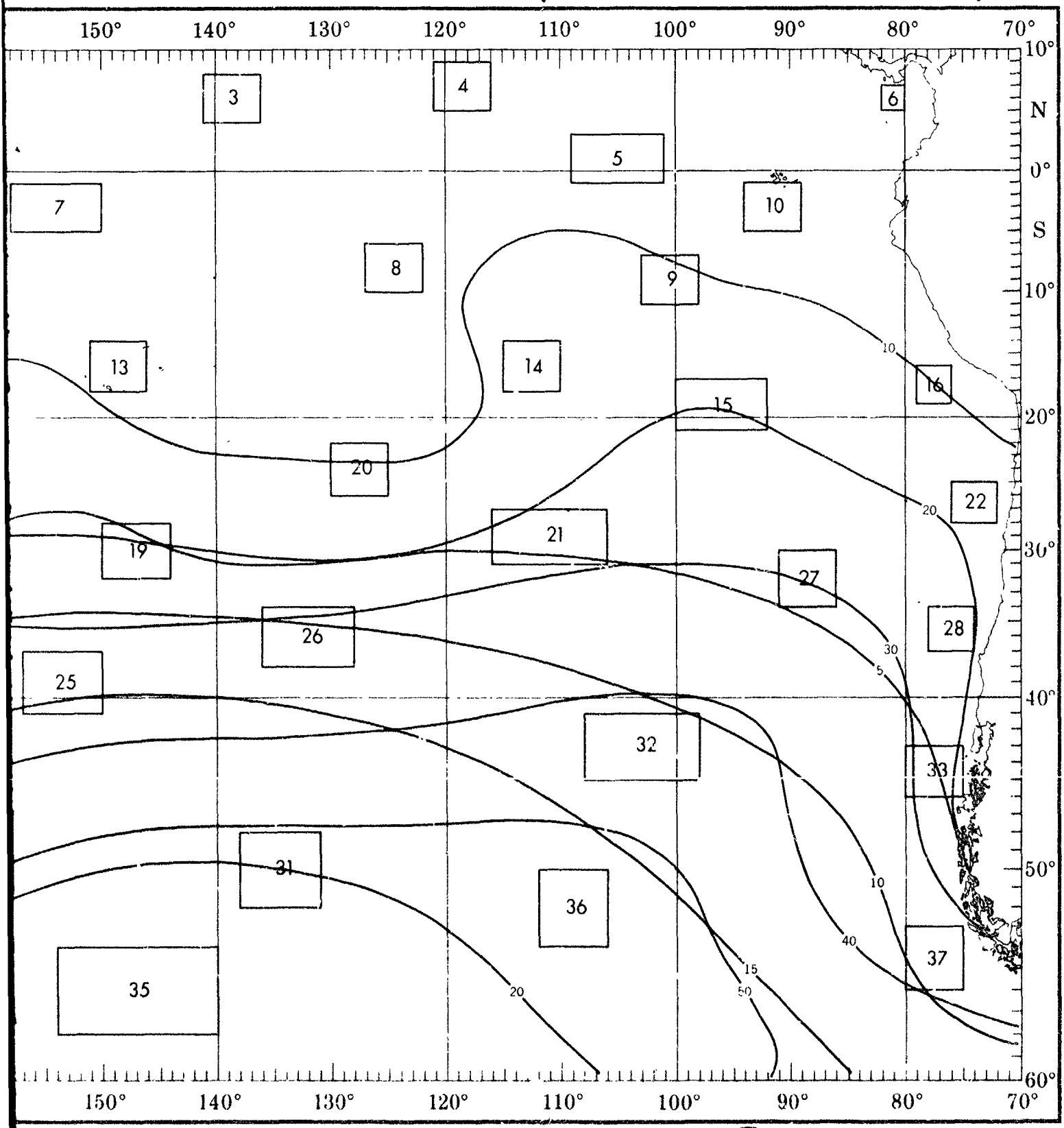
objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

AUGUST

WAVES



WAVES (≥3.5 AND ≥6 METERS)



1 2

WAVE PERIOD AND HEIGHT

Percent frequency of occurrence of wave period and height

PERIOD (Seconds)

HEIGHT (METERS)	≤6	6-7	8-9	10-11	12-13	>13	INC
0-.5	21	3	1	+	+	+	0
1-1.5	22	16	6	2	1	+	+
2-2.5	3	6	4	3	1	+	+
3-3.5	+	1	1	1	1	+	+
4-4.5	+	+	+	+	+	+	0
5-7.5	0	+	+	0	0	+	0
8-9.5	0	0	0	+	0	0	0
≥10	0	0	0	0	0	+	0

4010

—(2% of observed waves had a height of 1-1.5 meters and a period of 10-11 seconds.)

+ indicates <.5% but >0

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

BLUE LINE - Percent frequency of wave height ≥3.5 meters (12 feet)

RED LINE - Percent frequency of wave height ≥6 meters (20 feet)

1

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	20	0	3	0	0	0	6
1-1.5	28	17	10	1	6	0	0
2-2.5	4	1	1	0	0	0	0
3-3.5	0	1	0	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

69

2

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	4	2	+	0	0	0	0
1-1.5	22	18	7	0	4	0	2
2-2.5	4	10	8	4	1	0	+
3-3.5	0	7	3	1	1	0	+
4-5.5	0	1	+	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

219

6

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	16	3	1	+	0	0	6
1-1.5	22	22	7	2	3	+	4
2-2.5	3	5	3	1	+	+	+
3-3.5	0	+	+	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

506

7

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	3	2	0	0	0	0	0
1-1.5	25	25	7	3	1	0	2
2-2.5	6	12	12	2	0	0	1
3-3.5	0	0	1	0	0	0	0
4-5.5	0	0	1	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

93

11

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	4	0	0	0	0	0	0
1-1.5	15	20	14	0	0	0	1
2-2.5	8	15	10	1	0	0	0
3-3.5	1	1	1	6	0	0	0
4-5.5	0	0	3	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

71

12

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	10	0	0	0	0	0	3
1-1.5	10	7	6	0	2	0	6
2-2.5	3	18	11	6	1	0	1
3-3.5	0	6	5	1	1	1	2
4-5.5	2	1	1	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

102

13

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	12	2	1	+	0	0	2
1-1.5	18	18	10	2	1	+	2
2-2.5	5	7	6	2	1	1	2
3-3.5	1	2	2	1	1	+	+
4-5.5	1	+	1	0	0	+	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

885

14

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	3	0	0	0	0	0	+
1-1.5	12	13	6	1	+	0	2
2-2.5	6	14	11	3	1	+	2
3-3.5	2	3	9	3	1	1	1
4-5.5	0	2	1	1	0	1	0
6-7.5	0	0	0	+	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

387

15

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	2	0	0	0	0	0	0
1-1.5	4	10	20	1	0	0	2
2-2.5	2	10	22	8	0	0	1
3-3.5	0	8	2	0	2	0	0
4-5.5	0	0	2	1	1	0	0
6-7.5	0	1	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

69

16

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	4	1	1	0	0	0	2
1-1.5	29	21	9	1	1	0	0
2-2.5	5	7	9	5	0	2	0
3-3.5	0	3	0	1	1	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

107

20

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	3	+	0	+	0	0	1
1-1.5	14	17	8	1	+	+	4
2-2.5	4	11	8	4	2	2	2
3-3.5	1	4	4	1	1	+	+
4-5.5	+	2	2	+	0	1	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

429

21

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	1	1	0	0	0	0	0
1-1.5	35	12	5	1	0	0	0
2-2.5	7	13	8	2	1	0	1
3-3.5	2	1	4	2	0	0	1
4-5.5	0	1	1	1	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

188

22

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	6	1	1	0	0	0	2
1-1.5	14	16	7	1	1	0	0
2-2.5	5	8	11	6	0	1	0
3-3.5	0	4	6	2	2	0	0
4-5.5	0	0	1	0	0	1	0
6-7.5	0	0	1	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

140

23

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	3	1	+	0	0	0	1
1-1.5	10	13	4	1	1	+	2
2-2.5	3	12	8	3	1	1	3
3-3.5	2	6	6	2	1	+	2
4-5.5	1	2	6	2	1	+	1
6-7.5	0	+	1	+	1	+	0
8-9.5	0	+	+	0	0	+	0
≥10	0	0	0	0	0	0	0

765

24

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	5	0	1	0	0	0	2
1-1.5	13	11	4	0	1	1	5
2-2.5	2	10	9	3	2	1	2
3-3.5	1	5	5	3	1	1	1
4-5.5	1	4	2	1	1	1	2
6-7.5	0	0	0	1	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

170

25

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	3	0	0	0	0	0	1
1-1.5	5	4	0	0	0	0	2
2-2.5	4	16	10	7	0	0	2
3-3.5	2	5	7	0	0	0	2
4-5.5	2	13	7	2	0	0	0
6-7.5	0	2	0	1	1	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

92

29

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	2	0	0	0	0	0	0
1-1.5	7	9	6	2	1	0	2
2-2.5	6	5	5	4	1	0	0
3-3.5	0	0	5	1	2	1	1
4-5.5	2	2	10	2	4	2	1
6-7.5	0	2	1	0	0	4	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

125

30

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	0	0	0	0	0	0	0
1-1.5	0	0	0	8	0	0	17
2-2.5	0	8	8	8	0	0	0
3-3.5	8	8	8	0	0	0	8
4-5.5	0	0	42	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

12

31

INSUFFICIENT DATA

32

INSUFFICIENT DATA

33

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	INC
0-.5	3	0	0	0	0	0	0
1-1.5	14	10	5	0	0	2	3
2-2.5	10	12	6	2	0	0	2
3-3.5	2	0	5	0	0	0	3
4-5.5	2	3	0	3	7	0	2
6-7.5	0	2	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

59

34

INSUFFICIENT DATA

Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted whe

EIGHT

AUGUST

seconds)

both are reported. If both

1

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	20	0	3	0	0	0	6
1-1.5	28	17	10	1	6	0	0
2-2.5	4	1	1	0	0	0	0
3-3.5	0	1	0	0	0	0	0
4-4.5	0	0	0	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

69

2

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	2	+	0	0	0	0
1-1.5	22	18	7	0	4	0	2
2-2.5	4	10	8	4	1	0	+
3-3.5	0	7	3	1	1	0	+
4-4.5	0	1	+	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

219

3

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	1	1	2	0	0	2
1-1.5	22	19	8	0	1	0	0
2-2.5	3	12	13	4	2	0	1
3-3.5	1	5	3	0	1	0	0
4-4.5	0	0	0	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

183

4

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	0	0	0	0	0	1
1-1.5	19	16	8	1	0	1	4
2-2.5	4	8	19	+	+	0	1
3-3.5	+	1	5	0	0	0	0
4-4.5	0	1	+	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

207

5

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	+	1	+	0	0	1
1-1.5	20	23	8	3	2	+	3
2-2.5	3	11	5	5	2	+	1
3-3.5	0	1	1	1	+	0	0
4-4.5	0	+	2	+	+	0	0
5-7.5	0	0	0	0	+	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

440

6

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	16	3	1	+	0	0	8
1-1.5	22	22	7	2	3	+	4
2-2.5	3	5	3	1	+	+	+
3-3.5	0	+	+	0	0	0	0
4-4.5	0	0	0	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

506

7

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	2	0	0	0	0	0
1-1.5	25	25	2	3	1	0	2
2-2.5	8	12	12	2	0	0	1
3-3.5	0	0	1	0	0	0	0
4-4.5	0	0	1	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

93

8

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	0	0	0	0	0	+
1-1.5	14	12	5	1	+	0	3
2-2.5	3	15	15	8	1	1	2
3-3.5	1	4	3	2	1	0	+
4-4.5	+	1	1	+	+	+	0
5-7.5	0	0	0	0	+	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

424

9

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	0	0	0	0	0	0	0
1-1.5	12	13	3	+	1	+	+
2-2.5	7	24	11	4	1	0	2
3-3.5	3	5	8	1	0	0	+
4-4.5	0	1	3	+	+	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

463

10

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	+	0	0	0	0	1
1-1.5	20	22	9	3	2	1	1
2-2.5	7	15	5	3	1	+	1
3-3.5	1	2	1	1	0	0	0
4-4.5	0	+	1	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

638

14

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	0	0	0	0	0	+
1-1.5	12	13	8	1	+	0	2
2-2.5	8	14	11	3	1	+	2
3-3.5	2	3	9	3	1	1	1
4-4.5	0	2	1	1	0	1	0
5-7.5	0	0	0	+	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

387

15

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	0	0	0	0	0	0
1-1.5	4	10	20	1	0	0	2
2-2.5	2	10	22	6	0	0	1
3-3.5	0	8	2	0	2	0	0
4-4.5	0	0	2	1	1	0	0
5-7.5	0	1	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

89

16

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	1	1	0	0	0	2
1-1.5	29	21	9	1	1	0	0
2-2.5	5	7	9	5	0	2	0
3-3.5	0	3	0	1	1	0	0
4-4.5	0	0	0	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

107

17

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	1	0	0	0	0	0
1-1.5	8	17	7	4	1	0	2
2-2.5	5	12	14	3	1	1	1
3-3.5	1	6	7	4	1	0	0
4-4.5	0	1	1	0	1	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	1	0	0	0	0

178

18

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	+	+	0	0	0	0
1-1.5	15	12	5	2	1	0	3
2-2.5	8	11	9	2	2	0	4
3-3.5	1	6	4	1	0	1	2
4-4.5	0	2	2	1	+	+	+
5-7.5	0	+	+	0	0	1	+
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

334

19

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	1	+	0	+	0	0	1
1-1.5	11	6	5	1	1	1	3
2-2.5	6	11	10	3	2	1	3
3-3.5	2	6	8	4	1	+	1
4-4.5	+	2	4	2	1	1	+
5-7.5	0	1	1	1	0	1	0
8-9.5	0	+	+	+	0	+	0
≥10	0	+	0	+	0	0	0

395

23

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	1	+	0	0	0	1
1-1.5	10	13	4	1	1	+	2
2-2.5	3	12	8	3	1	1	3
3-3.5	2	5	5	2	1	+	2
4-4.5	1	2	5	2	1	+	1
5-7.5	0	+	1	+	1	+	0
8-9.5	0	+	+	0	0	+	0
≥10	0	0	0	0	0	0	0

766

24

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	0	1	0	0	0	2
1-1.5	13	11	4	0	1	1	5
2-2.5	2	10	9	3	2	1	2
3-3.5	1	6	5	3	1	1	1
4-4.5	1	4	2	1	1	1	2
5-7.5	0	0	0	1	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

170

25

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	0	0	0	0	0	1
1-1.5	5	4	0	0	0	0	2
2-2.5	4	16	10	7	0	0	2
3-3.5	2	5	7	0	0	0	2
4-4.5	2	13	7	2	0	0	0
5-7.5	0	2	0	1	1	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

92

26

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	0	0	0	0	0	0
1-1.5	15	5	2	0	1	0	2
2-2.5	7	24	5	4	2	0	0
3-3.5	2	2	5	1	1	0	0
4-4.5	0	1	4	4	2	1	2
5-7.5	0	0	1	1	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

85

27

INSUFFICIENT DATA

28

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	0	0	0	0	0	0	6
1-1.5	29	0	12	0	0	0	0
2-2.5	5	0	18	6	0	0	0
3-3.5	0	6	18	0	0	0	0
4-4.5	0	0	0	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

17

32

INSUFFICIENT DATA

33

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	0	0	0	0	0	0
1-1.5	14	10	5	0	0	2	3
2-2.5	10	12	5	2	0	0	2
3-3.5	2	0	5	0	0	0	3
4-4.5	2	3	0	3	7	0	2
5-7.5	0	2	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

59

34

INSUFFICIENT DATA

35

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	0	0	0	0	0	0	0
1-1.5	14	9	14	0	0	0	0
2-2.5	0	23	5	0	0	0	0
3-3.5	0	0	5	0	0	0	0
4-4.5	0	23	0	5	0	0	0
5-7.5	0	0	5	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

22

36

INSUFFICIENT DATA

37

PERIOD (SECONDS)

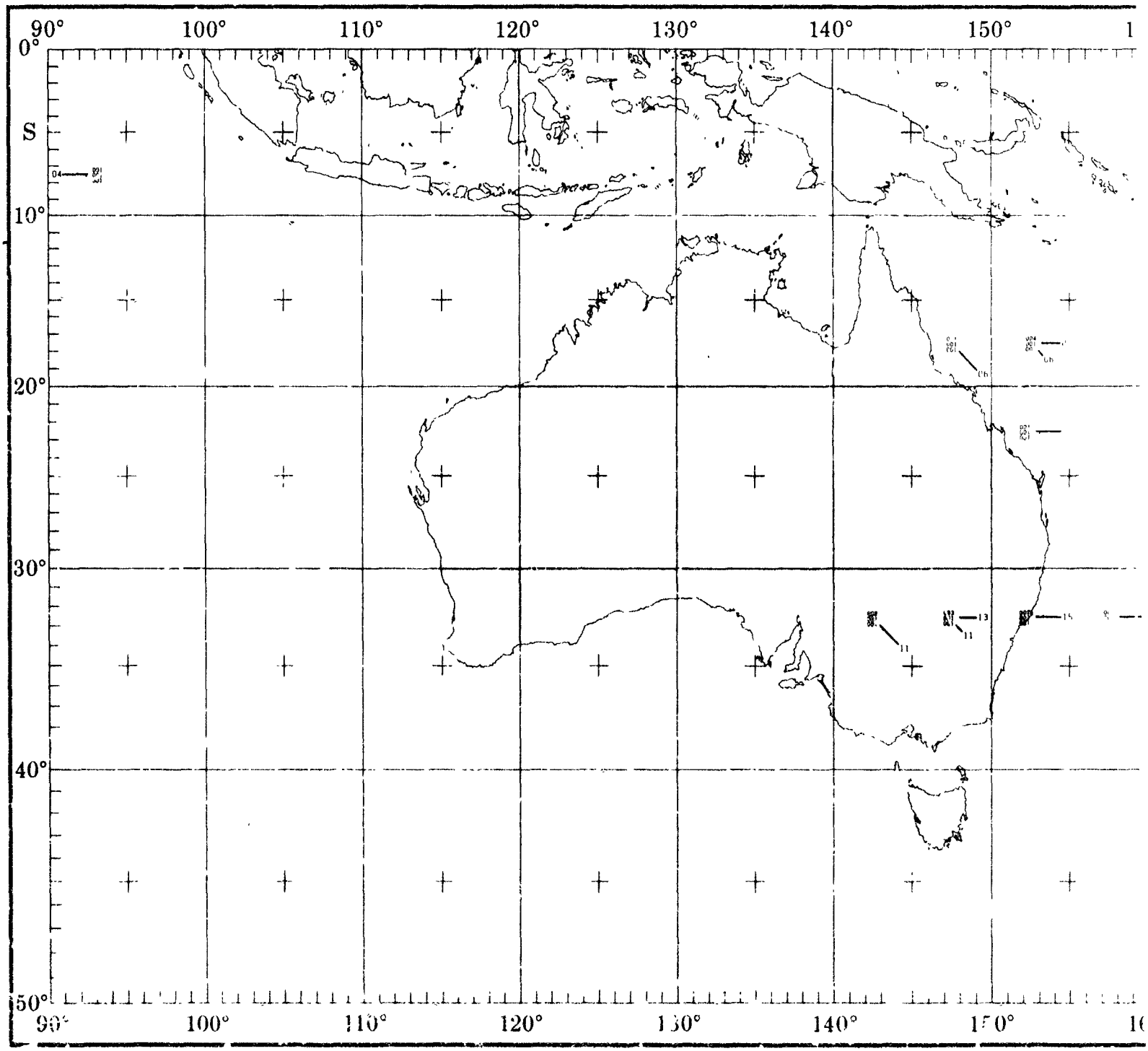
HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	0	0	0	0	0	0	0
1-1.5	9	0	0	0	0	0	0
2-2.5	0	0	0	0	0	0	0
3-3.5	0	18	0	0	0	0	0
4-4.5	0	9	9	9	2	0	0
5-7.5	0	0	0	36	0	0	0
8-9.5	0	0	9	0	0	0	0
≥10	0	0	0	0	0	0	0

11

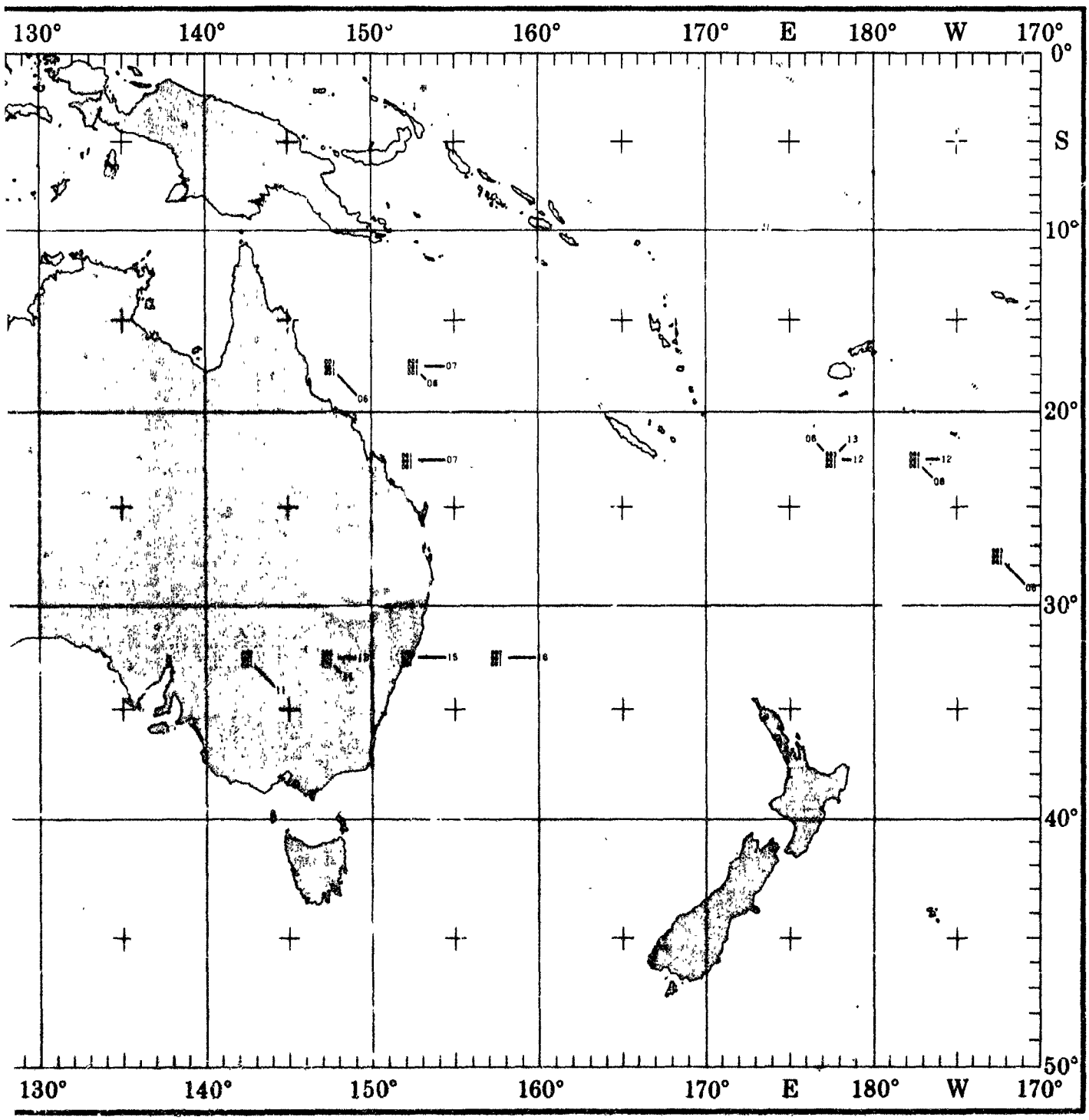
he objective compilation of available data for specified areas without regard to suspected biases.
es (opposite page) are based on all available data subjectively adjusted where bias was evident.

1 1 2

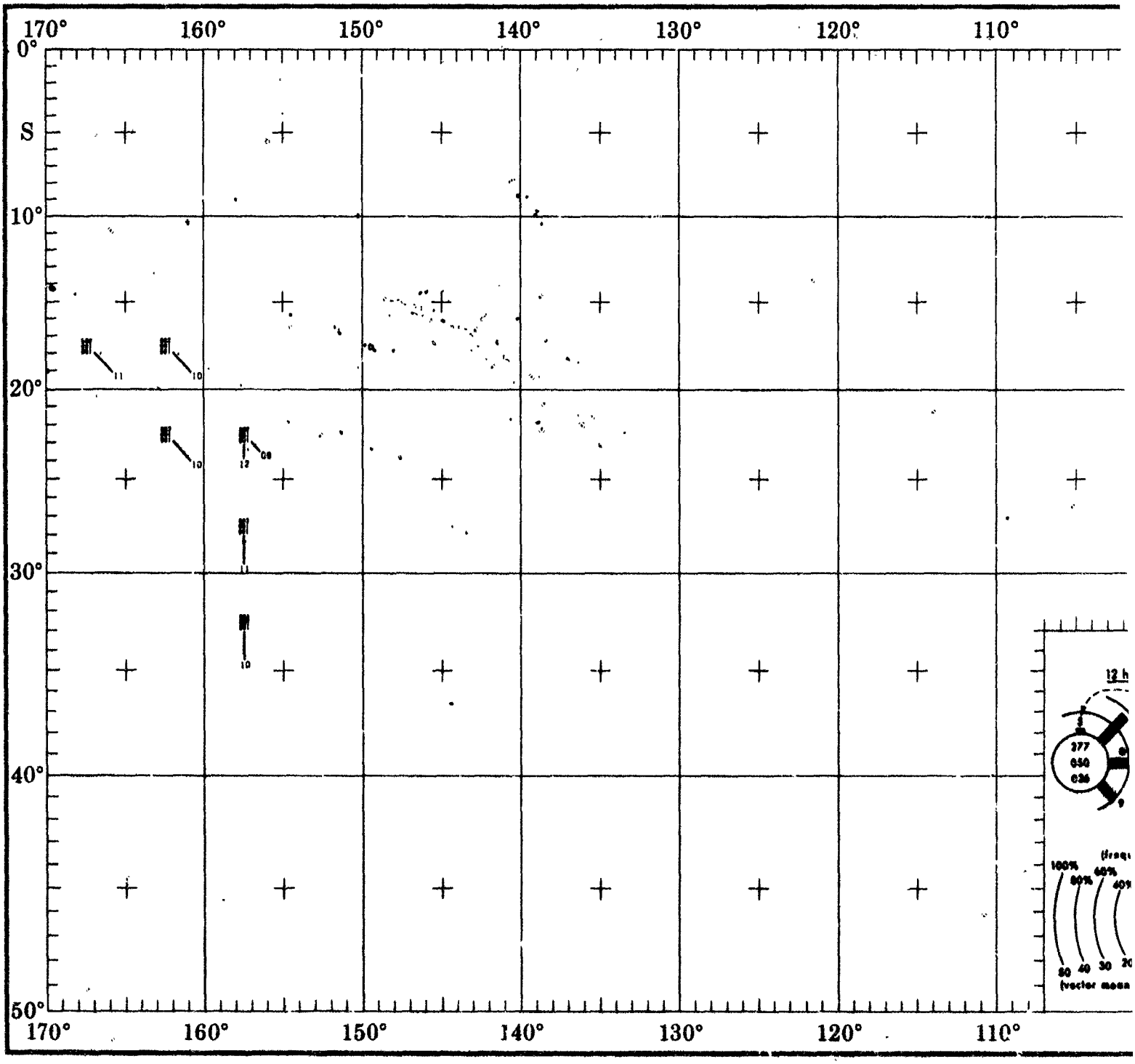
AUGUST



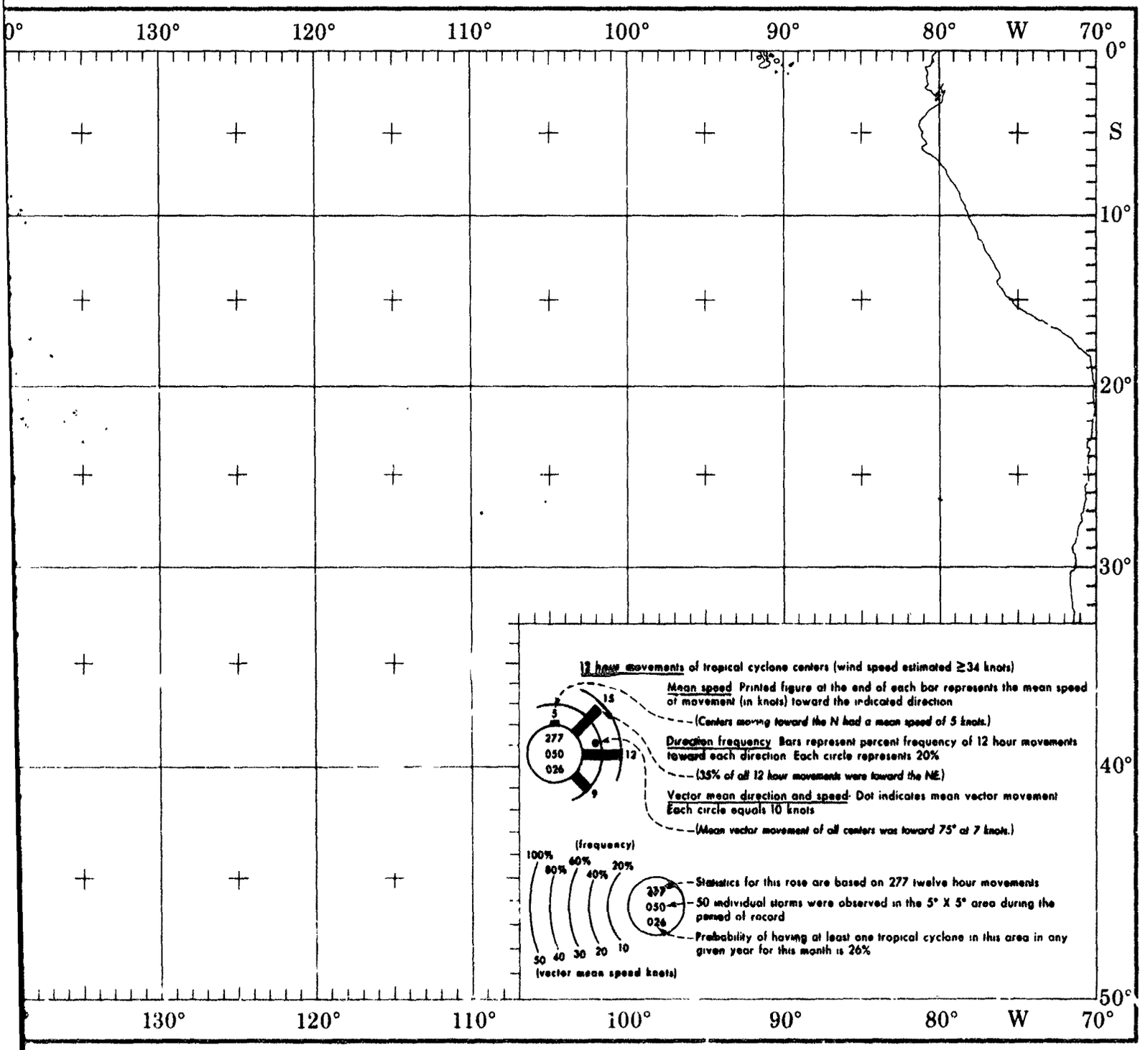
TROPICAL CYCLONE



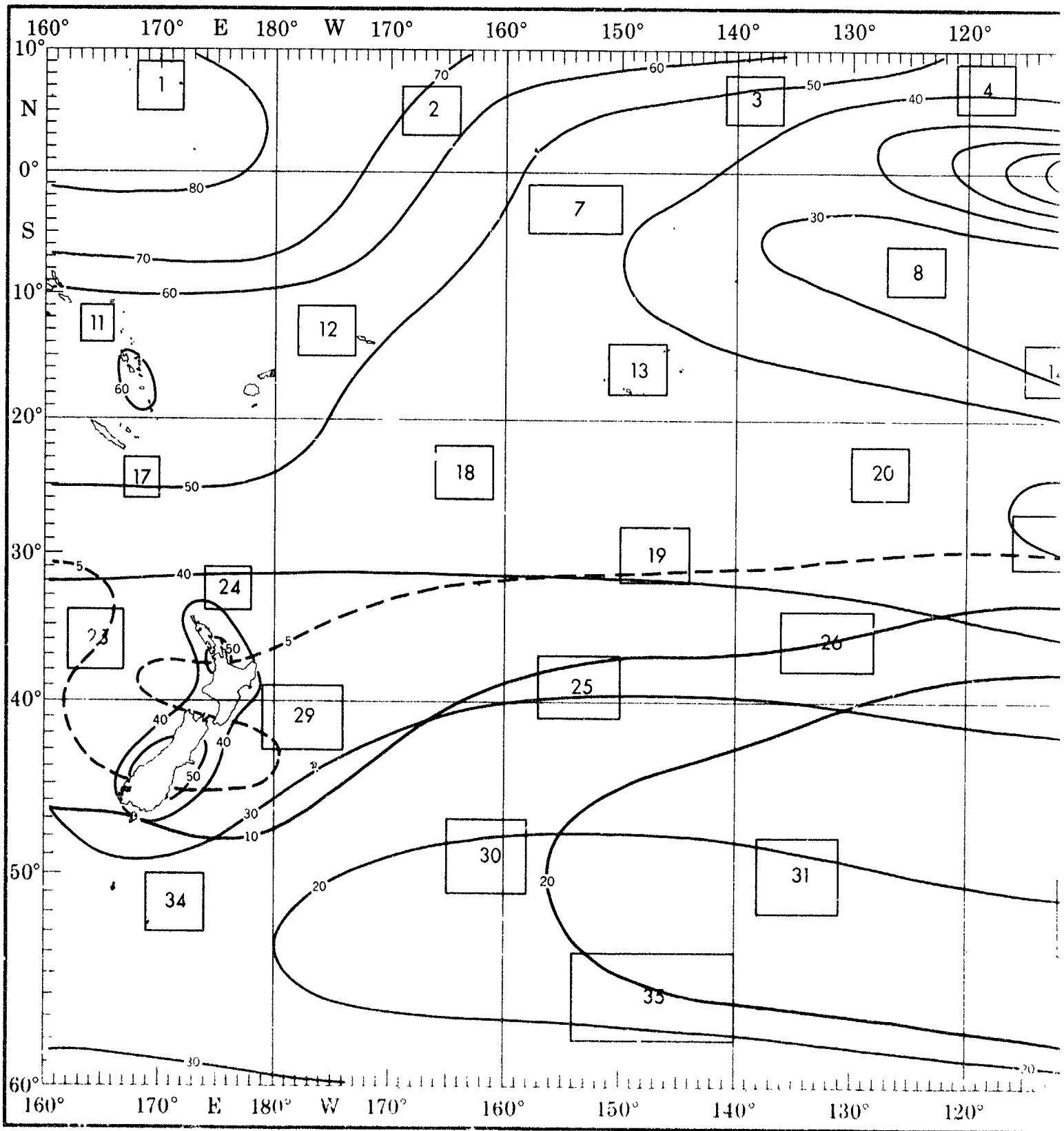
TROPICAL CYCLONE



AUGUST


0°
130°
120°
110°
100°
90°
80°
W
70°
0°
S
10°
20°
30°
40°
50°
12 hour movements of tropical cyclone centers (wind speed estimated ≥34 knots)
Mean speed Printed figure at the end of each bar represents the mean speed of movement (in knots) toward the indicated direction
(Centers moving toward the N had a mean speed of 5 knots.)
Direction frequency Bars represent percent frequency of 12 hour movements toward each direction Each circle represents 20%
(35% of all 12 hour movements were toward the NE.)
Vector mean direction and speed Dot indicates mean vector movement Each circle equals 10 knots
(Mean vector movement of all centers was toward 75° at 7 knots.)
277
050
026
(frequency)
100%
80%
60%
40%
20%
50 40 30 20 10
(vector mean speed knots)
Statistics for this rose are based on 277 twelve hour movements
50 individual storms were observed in the 5° X 5° area during the period of record
Probability of having at least one tropical cyclone in this area in any given year for this month is 26%

SEPTEMBER


160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N 0° S 10° 20° 30° 40° 50° 60°
1
2
3
4
7
8
11
12
13
17
18
19
20
23
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29
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35
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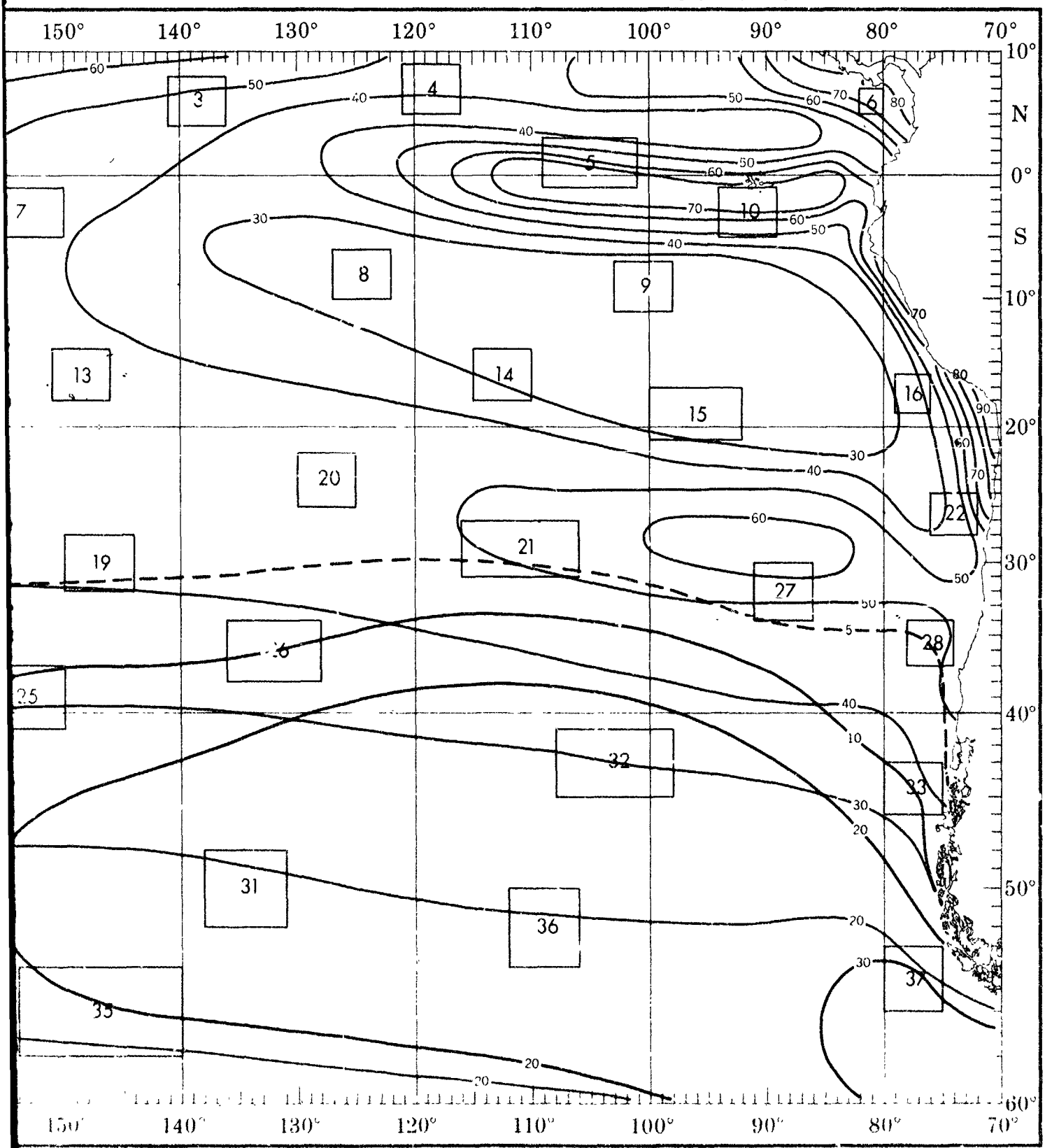
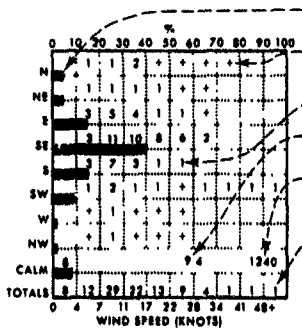
5
10
20

SURFACE WINDS



WIND DIRECTION AND SPEED

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



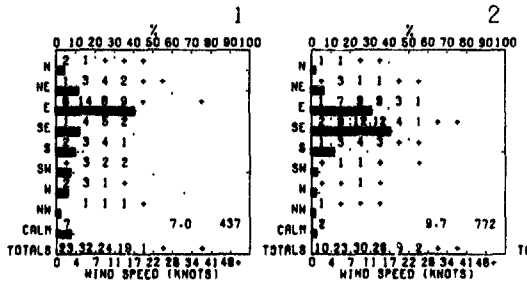
WIND SPEED INTERVAL (KNOTS)

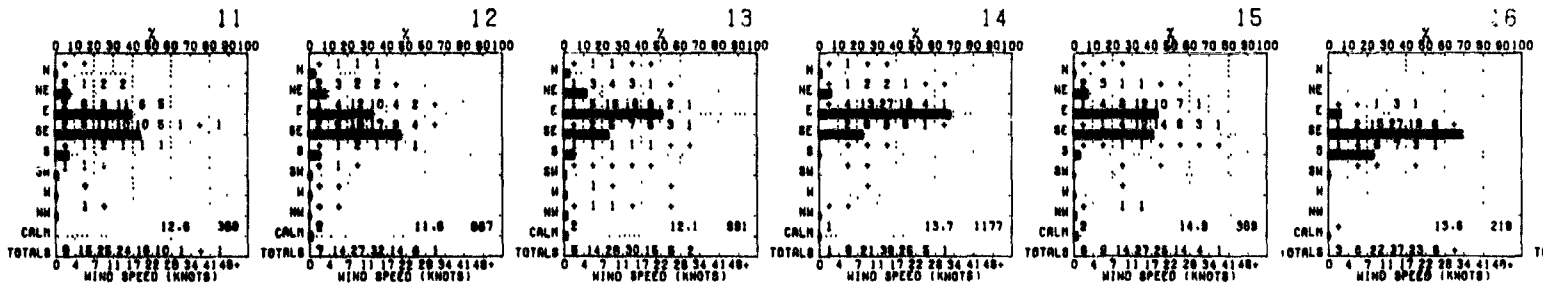
0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	≥48
0	4	7	11	17	22	28	34	41	48+

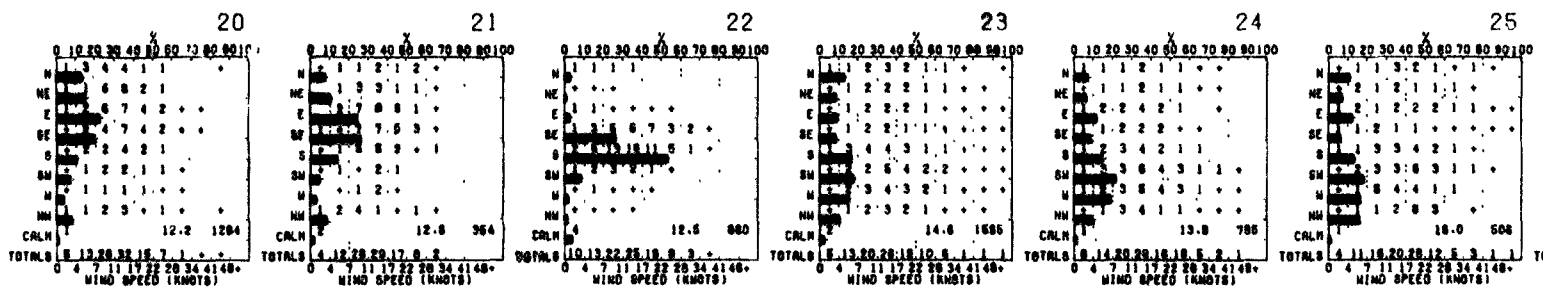
Printed scale on bottom of chart

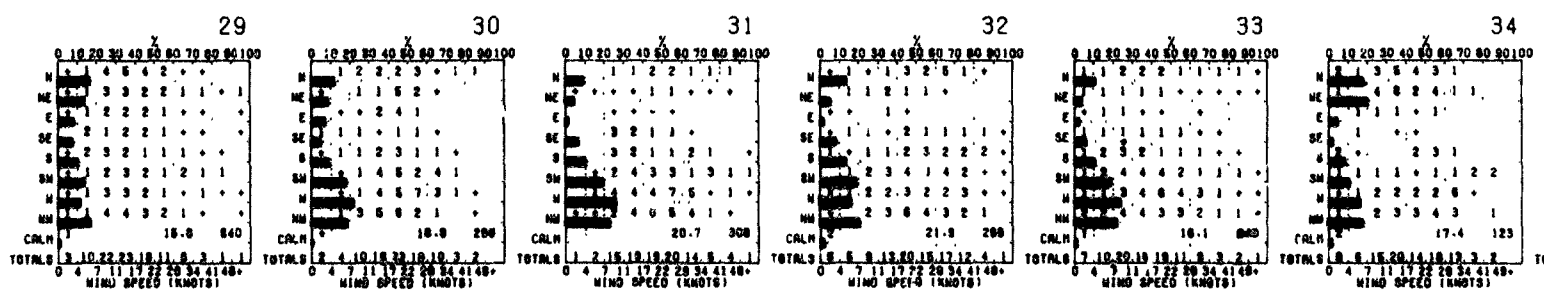
BLUE LINE Percent frequency of wind speed ≤10 knots

RED LINE - Percent frequency of wind speed ≥34 knots









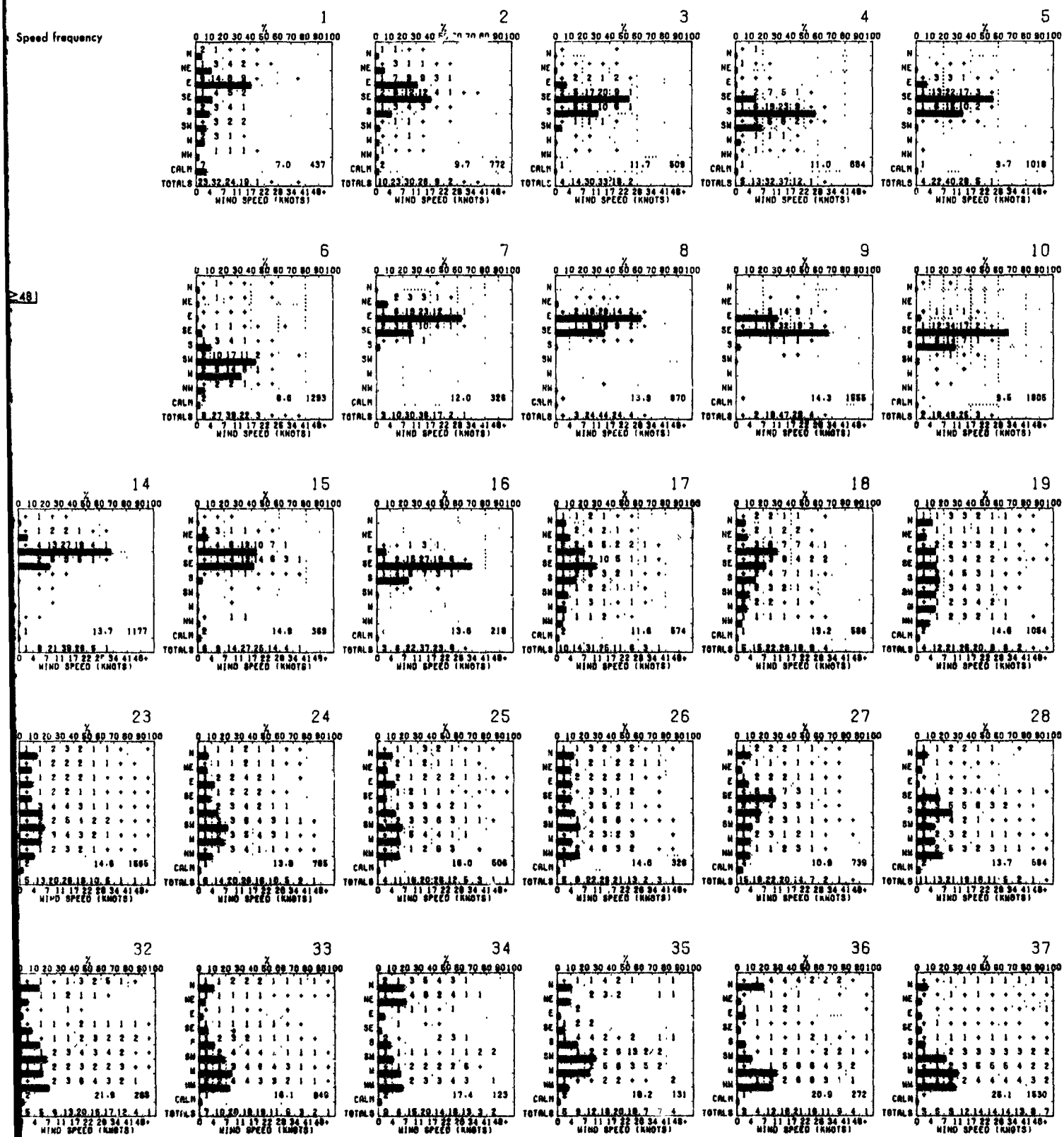
Graphs represent the objective compilation of available data for specified areas without regard to

The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

SPEED

SEPTEMBER

Speed frequency

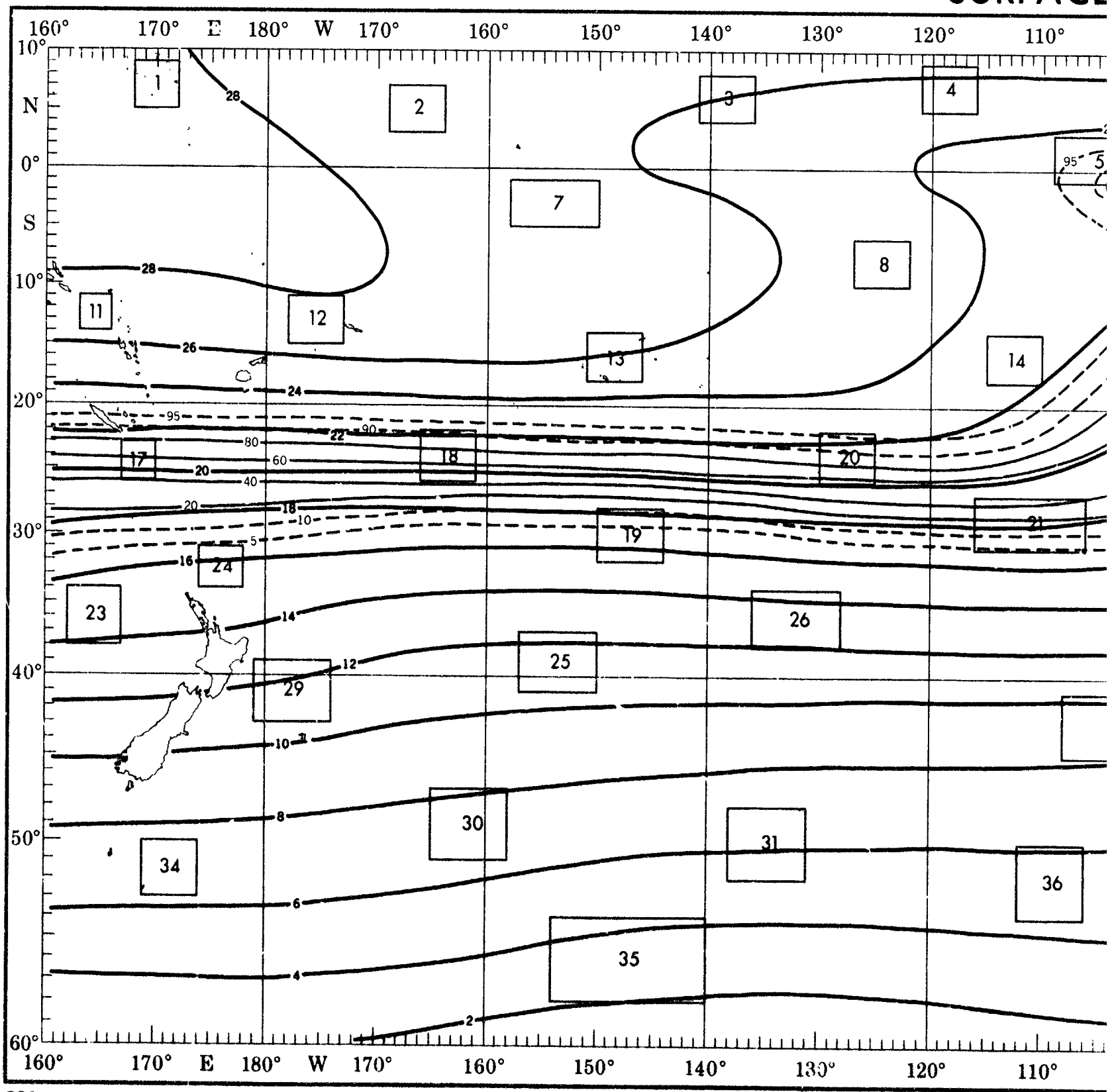


ective compilation of available data for specified areas without regard to suspected biases.

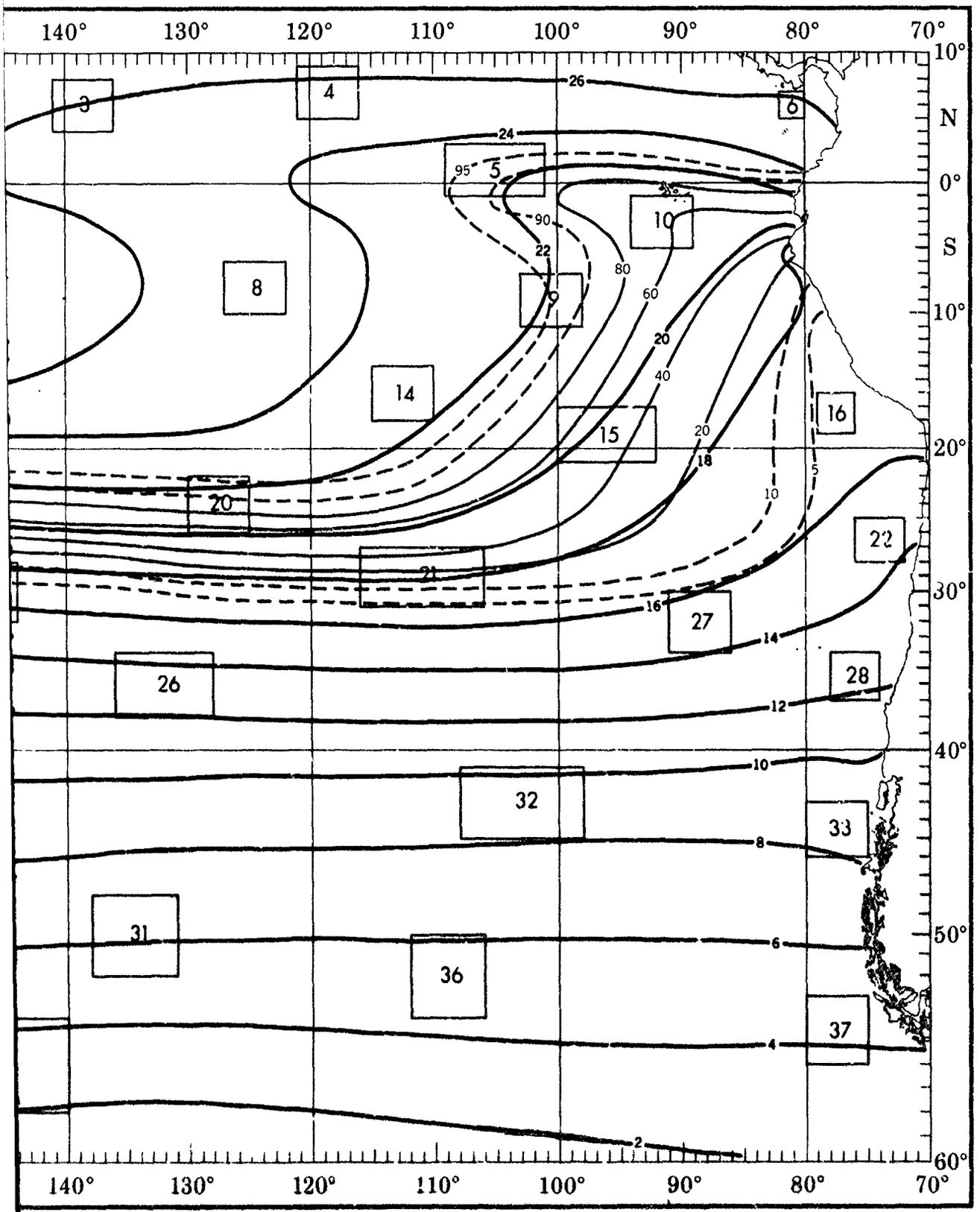
posite page) are based on all available data subjectively adjusted where bias was evident.

SEPTEMBER

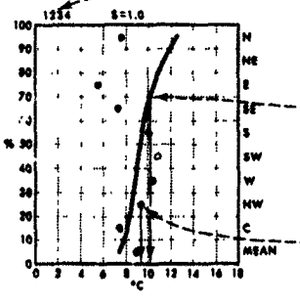
SURFACE



SURFACE AIR TEMPERATURE



SURFACE AIR TEMPERATURE



Cumulative percent frequency of temperatures equal to or less than the temperature intersected by the curve

(70% of all temperatures were ≤10.3 °C or ≤50.5 °F.)

S=Standard deviation of temperatures (°C)

Mean temperature for each wind direction, calm and for all data combined are represented by dots.

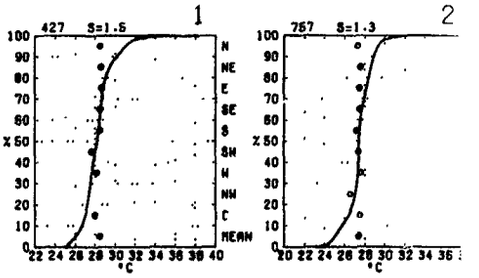
(With NW winds, the mean temperature was 9.4 °C or 48.9 °F.)

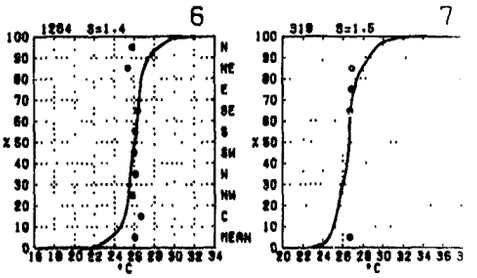
o Indicates that the mean temperature for a direction or calm was computed from 10-30 observations.

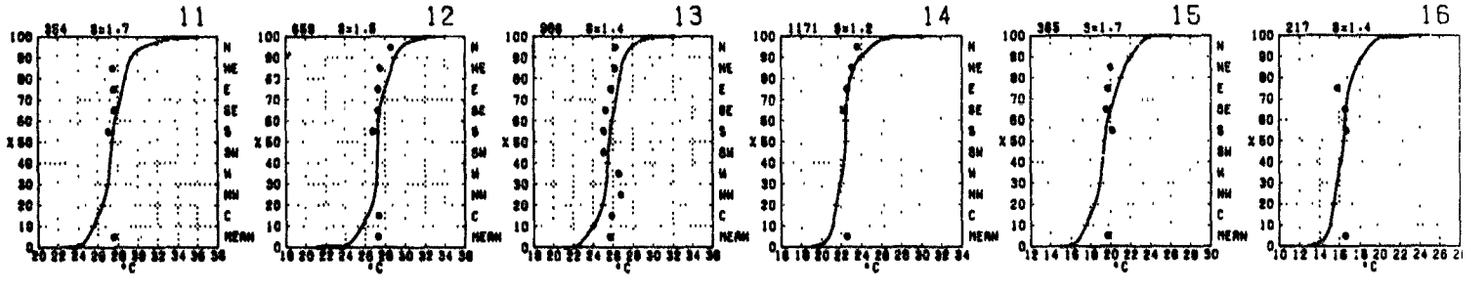
The mean temperature is omitted when less than 10 observations for a direction or calm were available

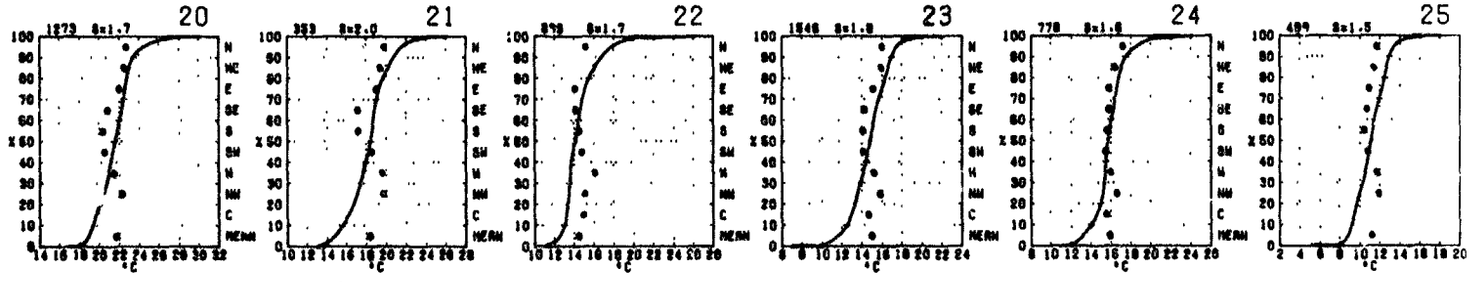
BLACK LINE - Mean air temperature (°C)

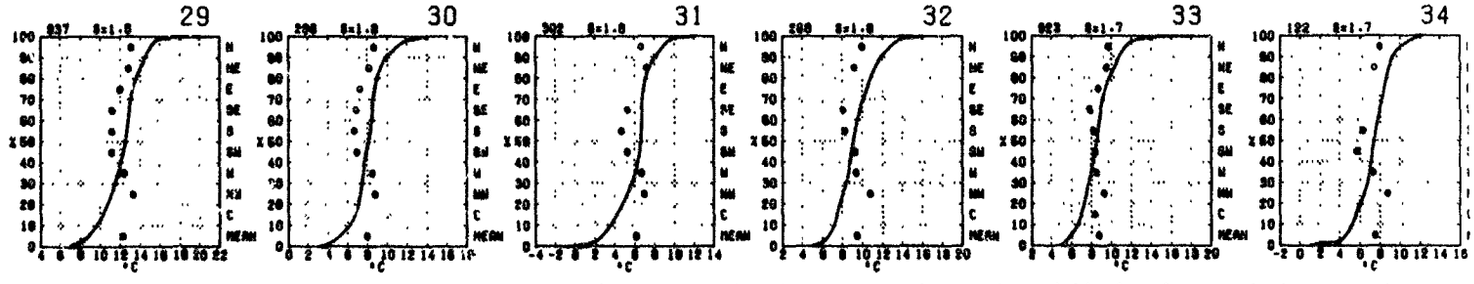
RED LINE - Percent frequency of temperature ≥20°C (68°F)











Graphs represent the objective compilation of available data for specified areas without reg
The isopleth analyses (opposite page) are based on all available data subjectively adjusted

TURE

SEPTEMBER

to or less than the temp-

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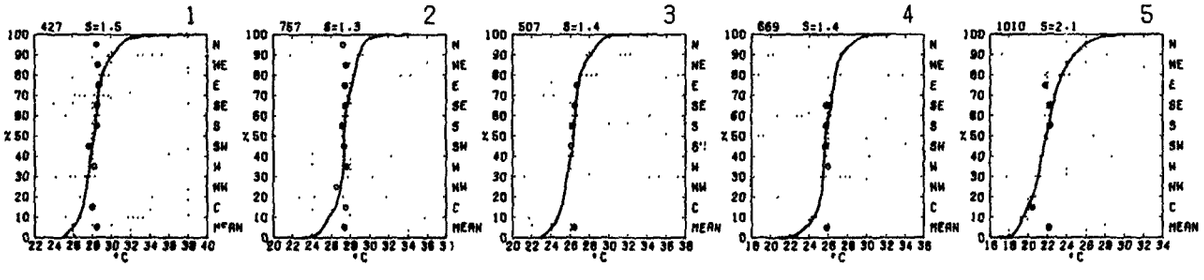

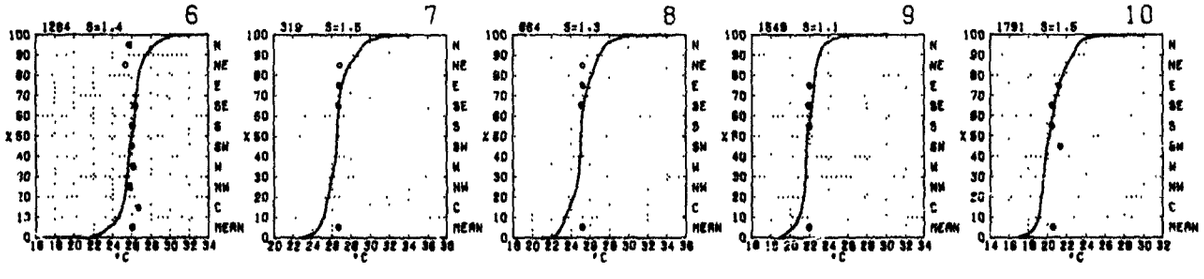

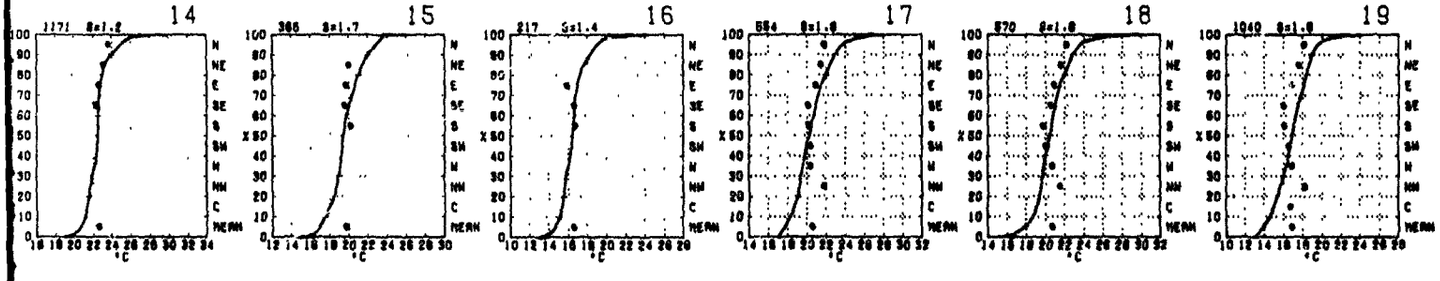

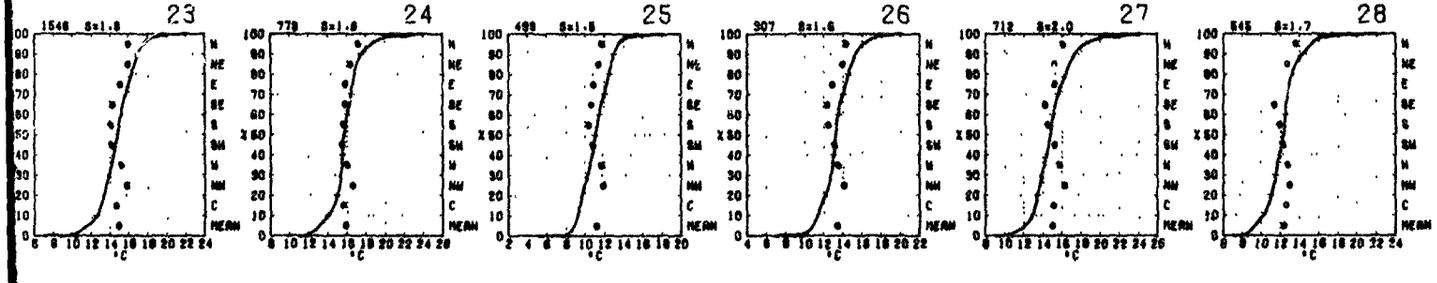

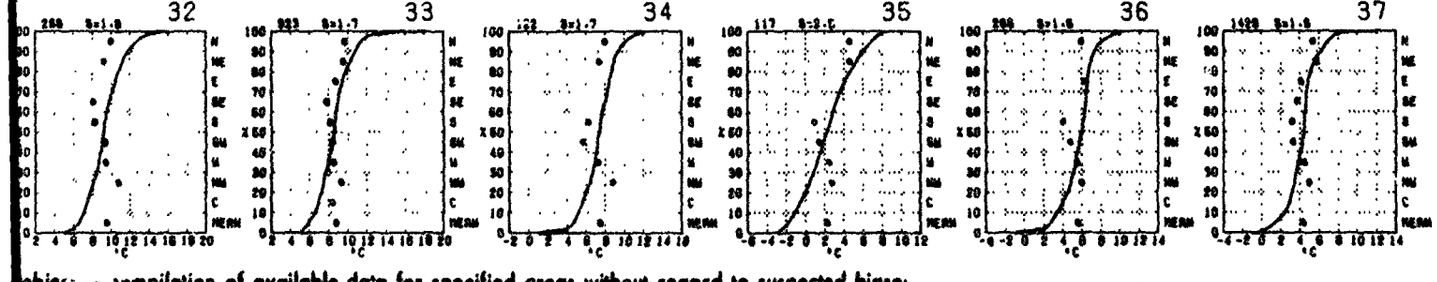

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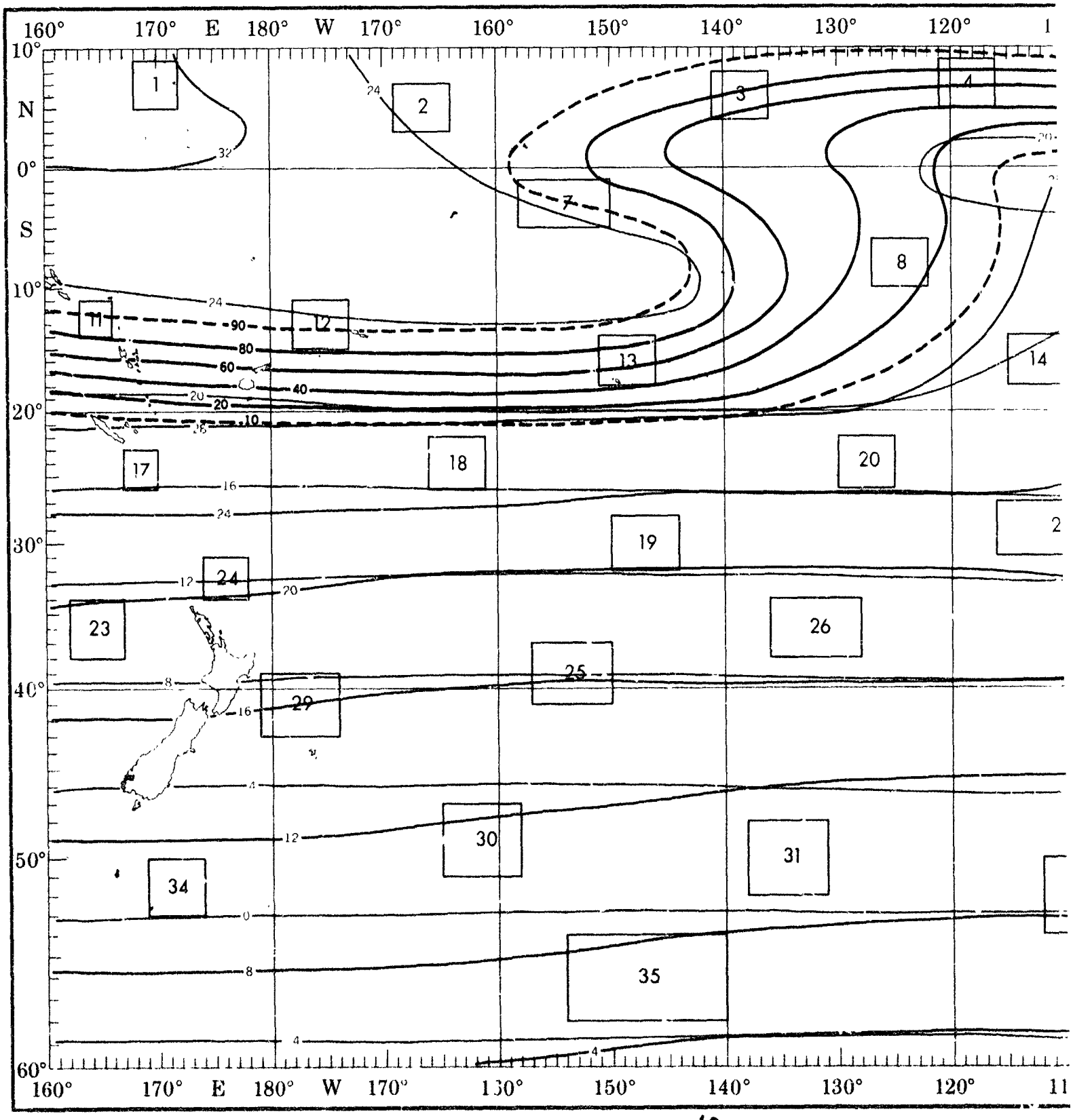
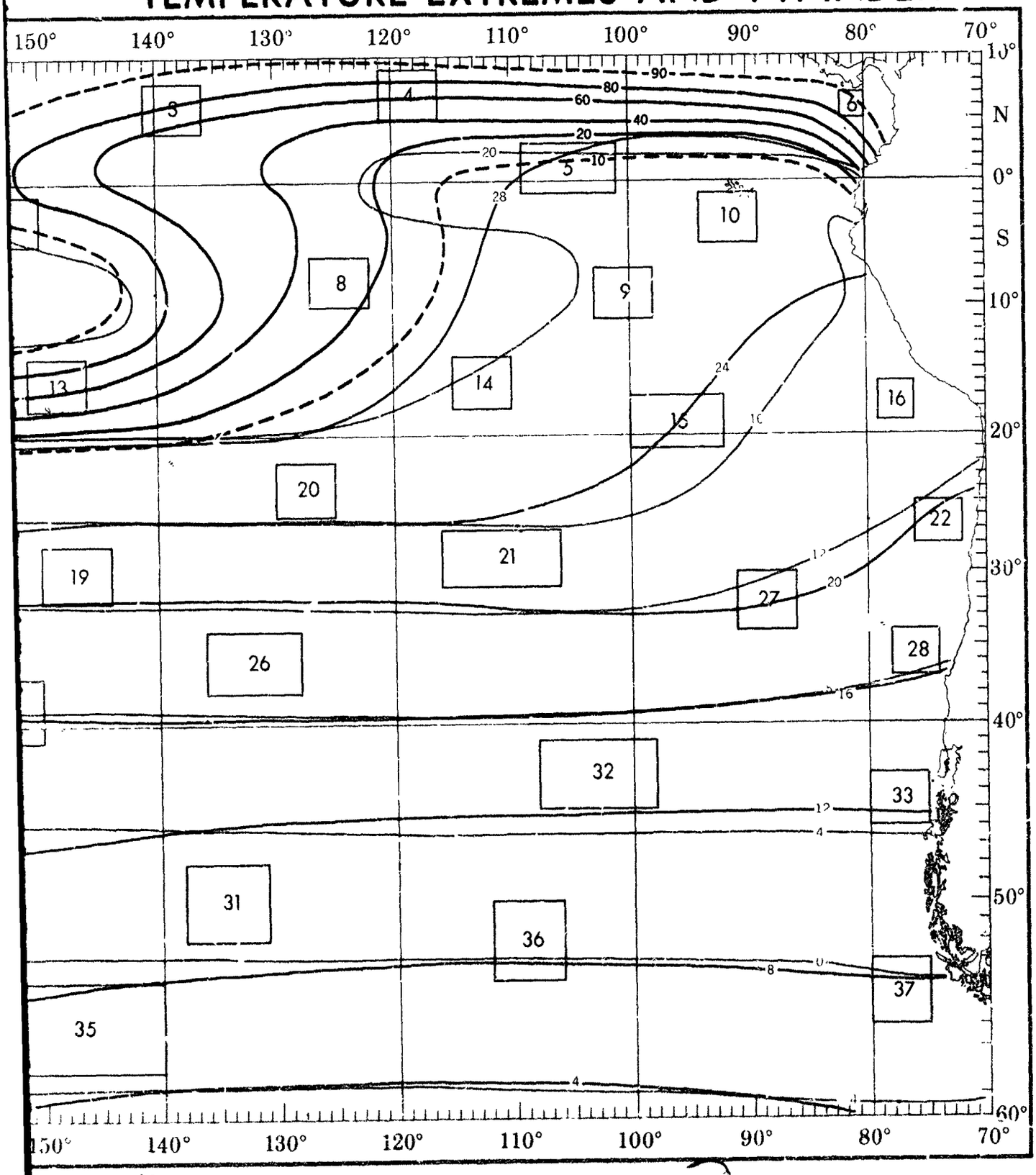
SEPTEMBER TEMPERATURE EXT



TEMPERATURE EXTREMES AND T-H INDEX



WIND SPEED AND AIR TEMPERATURE

Wind speed and air temperature

Percent frequency of simultaneous occurrence of specified temperature (°C) and wind speed (knots).

WIND SPEED (kts)

Temp (°C)	0-3	4-10	11-21	22-33	≥34
4.9	18	8	7	1	1
2.3	17	11	7	1	
0.1	15	8	3	1	
-2.7	1	+	0	0	0
-4.9	0	0	0	0	0
-6.5	+	0	0	+	+
-8.7	1	+	0	0	0
-10.9	0	0	0	0	0
-12.9	1	+	0	0	0
-14.10		0	0	0	0
-16.10	1	+	0	0	0

3330

—(1% of *all observations reported temperature 2-3°C simultaneously with wind speed of 22-33 kts.*)

—+ Indicates <.5% but >0.

—Number of observations.

Use of this table in determination of Potential Superstructure Icing is explained in the text.

1

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
30.37	+	0	0	0	0
34.36	+	0	0	0	0
32.33	1	1	1	0	0
30.31	4	9	3	0	+
28.28	14	32	12	+	0
26.27	4	13	4	0	0
24.25	+	1	+	0	0
22.23	1	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

427

TEMP (°C)	0-3
32.33	0
30.31	1
28.29	5
26.27	5
24.25	1
22.23	+
20.21	0
18.19	0
16.17	0
14.15	0
12.13	0

6

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
32.33	0	+	0	0	0
30.31	+	1	+	0	0
28.29	1	6	2	+	+
26.27	7	42	14	+	0
24.25	1	14	7	+	0
22.23	+	2	1	+	0
20.21	0	+	+	0	0
18.19	+	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1317

TEMP (°C)	0-3
32.33	0
30.31	0
28.29	1
26.27	2
24.25	1
22.23	0
20.21	0
18.19	0
16.17	0
14.15	0
12.13	0

BLACK LINE - Percent frequency of T-H index ≥24°C (75.2°F) (discomfort may be experienced due to heat)

BLUE LINE - Minimum (1%) air temperature (°C) (1% of the temperatures were equal to or less than the given value)

RED LINE - Maximum (99%) air temperature (°C) (1% of the temperatures were greater than the given value)

11

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
34.36	+	+	0	0	0
32.33	1	2	0	0	0
30.31	1	3	2	+	+
28.29	4	10	10	2	0
26.27	1	17	21	7	+
24.25	+	2	2	1	+
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

365

12

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
32.33	+	+	+	0	0
30.31	1	2	3	+	0
28.29	4	13	11	3	0
26.27	2	33	20	3	0
24.25	+	2	3	1	0
22.23	0	+	+	0	0
20.21	0	0	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

682

13

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
32.33	+	0	0	0	0
30.31	0	+	1	0	0
28.29	1	3	3	+	0
26.27	2	24	23	2	0
24.25	3	13	17	4	0
22.23	+	2	2	1	0
20.21	0	0	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

891

14

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
30.29	0	+	0	0	0
28.27	+	2	1	0	0
26.25	+	5	0	1	0
24.23	1	10	45	4	0
22.21	+	4	8	2	0
20.19	0	0	+	+	0
18.17	0	0	0	0	0
16.15	0	0	0	0	0
14.13	0	0	0	0	0
12.11	0	0	0	0	0
10.9	0	0	0	0	0

1174

15

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
26.25	0	1	1	+	0
24.23	2	5	7	1	0
22.21	2	9	17	6	0
20.19	2	8	22	8	+
18.17	0	1	4	1	1
16.15	0	0	0	+	0
14.13	0	0	0	0	0
12.11	0	0	0	0	0
10.9	0	0	0	0	0
8.7	0	0	0	0	0
6.5	0	0	0	0	0

366

TEMP (°C)	0-3
24.25	0
22.23	0
20.21	0
18.19	+
16.17	2
14.15	0
12.13	0
10.11	0
8.9	0
6.7	0
4.5	0

20

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
30.29	0	+	+	0	0
28.27	+	1	1	0	0
26.25	1	4	4	+	0
24.23	3	18	20	2	+
22.21	2	11	16	4	+
20.19	+	4	6	1	+
18.17	0	0	0	+	0
16.15	0	0	0	0	0
14.13	0	0	0	0	0
12.11	0	0	0	0	0
10.9	0	0	0	0	0

1295

21

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
26.27	0	0	0	+	0
24.25	0	0	+	0	0
22.23	1	1	2	1	0
20.21	1	8	10	3	0
18.19	2	20	21	2	0
16.17	1	8	8	4	0
14.15	1	3	4	0	0
12.13	0	+	+	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

359

22

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
24.25	0	+	0	0	0
22.23	+	0	+	0	0
20.21	+	+	0	0	0
18.19	+	3	1	+	0
16.17	2	7	7	1	+
14.15	3	16	23	8	+
12.13	4	8	12	4	+
10.11	0	0	+	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

838

23

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
26.25	0	+	0	0	0
24.23	0	+	+	0	0
22.21	0	+	+	0	0
20.19	1	3	3	1	+
18.17	2	10	18	6	+
16.15	1	8	7	3	1
14.13	2	14	18	8	1
12.11	1	8	7	3	1
10.9	0	+	1	1	+
8.7	0	0	+	+	0
6.5	0	0	0	0	0

1552

24

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
24.25	0	+	0	0	0
22.23	0	+	+	+	0
20.21	0	+	1	+	0
18.19	1	3	7	1	+
16.17	4	17	20	9	1
14.15	2	11	14	5	1
12.13	+	1	3	1	+
10.11	0	+	0	0	+
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

784

TEMP (°C)	0-3
18.17	0
16.15	+
14.13	1
12.11	2
10.9	1
8.7	0
6.5	0
4.3	0
2.1	0
0.-1	0
-2.-3	0
-4.-5	0

29

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
18.19	0	+	0	0	0
16.17	+	1	1	+	0
14.15	+	0	0	0	1
12.13	2	16	21	8	2
10.11	1	7	8	3	1
8.9	+	2	3	2	1
6.7	+	+	+	+	+
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-0.-1	0	0	0	0	0

948

30

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
12.13	0	0	+	1	0
10.11	0	2	8	4	+
8.9	1	8	24	13	3
6.7	1	9	18	8	+
4.5	0	2	8	1	1
2.3	0	0	+	0	0
0.1	0	0	0	0	0
-0.-1	0	0	0	0	0
-2.-3	0	0	0	0	0
-4.-5	0	0	0	0	0
-6.-7	0	0	0	0	0

298

31

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
10.11	0	+	1	0	0
8.9	+	3	8	2	0
6.7	+	10	24	13	3
4.5	1	4	8	1	1
2.3	0	0	1	1	0
0.1	0	+	+	0	0
-0.-1	0	0	0	+	0
-2.-3	0	0	0	0	0
-4.-5	0	0	0	0	0
-6.-7	0	0	0	0	0
-8.-9	0	0	0	0	0
-10.-11	0	0	0	0	0

304

32

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
14.15	0	1	1	0	0
12.13	0	+	5	7	1
10.11	+	2	8	8	7
8.9	4	8	18	10	8
6.7	0	3	2	4	2
4.5	0	0	0	0	1
2.3	C	0	0	0	0
0.1	0	0	0	0	0
-2.-3	0	0	0	0	0
-4.-5	0	0	0	0	0
-6.-7	0	0	0	0	0

274

33

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
16.17	0	0	+	0	0
14.15	+	1	+	+	0
12.13	+	1	1	+	+
10.11	2	8	8	7	5
8.9	2	13	18	8	2
6.7	2	5	8	4	1
4.5	0	+	+	+	+
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-3	0	0	0	0	0
-4.-5	0	0	0	0	0

925

Graphs represent the objective compilation of available data for specified areas wi
The isopleth analyses (opposite page) are based on all available data subjectively

R TEMPERATURE

SEPTEMBER

ature (°C) and wind speed

wind speed of 22-33 kts.)

is explained in the text

ed due to heat)

ess than the given value)

an the given value)

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	+	0	0	0	0
34.36	+	0	0	0	0
32.33	1	1	1	0	0
30.31	4	9	3	0	+
28.29	14	32	12	+	0
26.27	4	13	4	0	0
24.26	+	1	+	0	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

1 — 427

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	+	0	0
30.31	1	1	1	0	0
28.29	5	21	17	2	0
26.27	5	27	14	1	0
24.26	1	3	1	0	0
22.23	+	+	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

2 — 769

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	0	0	0
30.31	+	+	2	0	0
28.29	1	11	8	+	0
26.27	2	24	30	1	0
24.26	1	8	10	+	0
22.23	0	1	1	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

3 — 609

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	1	1	0	0
28.29	1	5	4	0	0
26.27	2	20	27	1	0
24.26	2	18	17	+	0
22.23	+	1	+	0	0
20.21	0	+	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

4 — 689

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	0	+	0	0
28.29	0	1	+	0	0
26.27	0	3	2	+	0
24.26	+	9	10	+	0
22.23	1	21	13	+	0
20.21	2	23	8	+	0
18.19	+	5	1	+	0
16.17	0	0	+	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

5 — 1019

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	0	+	0	0
30.31	0	1	+	0	0
28.29	0	3	2	+	0
26.27	0	9	10	+	0
24.26	+	16	8	+	0
22.23	1	31	14	+	0
20.21	1	20	6	+	0
18.19	0	+	+	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

6 — 1317

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	0	0	0
30.31	+	1	+	0	0
28.29	1	6	2	+	+
26.27	7	42	14	+	0
24.26	1	14	7	+	0
22.23	+	2	1	+	0
20.21	0	+	+	0	0
18.19	+	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

7 — 919

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	1	0	0	0
30.31	0	3	2	0	0
28.29	1	7	13	+	0
26.27	2	24	33	1	0
24.26	1	7	8	+	0
22.23	0	0	1	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

8 — 884

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	0	+	0	0
30.31	+	+	+	0	0
28.29	0	1	3	+	0
26.27	0	7	24	2	0
24.26	+	17	37	2	0
22.23	0	1	3	+	0
20.21	0	+	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

9 — 1548

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	0	+	0	0
28.29	0	0	+	0	0
26.27	+	+	+	0	0
24.26	+	1	4	+	0
22.23	0	12	44	2	0
20.21	+	8	27	2	0
18.19	0	+	+	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

10 — 1795

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	0	+	0	0
28.29	0	0	+	0	0
26.27	0	+	+	0	0
24.26	+	1	1	0	0
22.23	+	16	8	+	0
20.21	1	31	14	+	0
18.19	1	20	6	+	0
16.17	0	+	+	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

13 — 991

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	0	0	0
28.29	+	2	1	0	0
26.27	+	5	0	1	0
24.26	1	13	46	4	0
22.23	+	4	9	2	0
20.21	0	0	+	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

14 — 1174

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	+	0	0
28.29	2	5	7	1	0
26.27	2	9	17	6	0
24.26	2	8	22	6	+
22.23	0	1	4	1	1
20.21	0	0	0	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

15 — 368

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	1	1	+	0
28.29	2	5	7	1	0
26.27	2	9	17	6	0
24.26	2	8	22	6	+
22.23	0	1	4	1	1
20.21	0	0	0	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

16 — 217

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	0	+	0	0
28.29	0	0	+	0	0
26.27	0	+	1	0	0
24.26	+	7	8	1	0
22.23	2	15	43	8	0
20.21	0	6	8	1	0
18.19	0	+	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

17 — 687

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	1	1	+	0	0
28.29	1	2	1	+	0
26.27	3	12	6	+	0
24.26	4	19	16	3	0
22.23	1	11	13	4	+
20.21	0	1	1	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

18 — 570

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	0	+	0	0
28.29	0	1	1	+	0
26.27	0	2	2	+	0
24.26	2	11	11	2	0
22.23	2	17	20	4	0
20.21	2	8	11	4	0
18.19	0	1	2	1	0
16.17	0	+	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

19 — 1062

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	+	+	0	+
26.27	1	1	3	1	+
24.26	1	10	14	4	1
22.23	2	16	16	6	1
20.21	2	6	9	2	1
18.19	0	+	1	1	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

22 — 839

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	+	0	0	0
26.27	0	+	+	0	0
24.26	1	3	3	1	+
22.23	2	10	18	5	+
20.21	2	14	18	6	1
18.19	1	5	7	3	1
16.17	0	+	1	1	+
14.15	0	0	+	+	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

23 — 1552

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	0	0	0	0
26.27	0	+	+	0	0
24.26	1	3	7	1	+
22.23	1	9	7	1	+
20.21	4	17	20	7	1
18.19	2	11	14	6	1
16.17	+	1	2	1	+
14.15	0	+	0	0	+
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

24 — 784

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	+	0	0	0
26.27	0	+	+	+	0
24.26	+	+	1	+	0
22.23	1	3	7	1	+
20.21	2	11	21	9	1
18.19	1	3	7	3	1
16.17	0	+	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	+	0	0	+
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

25 — 503

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	+	+	0	0
14.15	+	1	3	1	1
12.13	1	12	17	6	2
10.11	2	11	21	9	1
8.9	1	3	7	3	1
6.7	0	+	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

26 — 311

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	+	+	1	0	0
16.17	1	2	3	3	1
14.15	3	11	13	3	+
12.13	1	15	26	6	2
10.11	0	3	3	1	+
8.9	0	0	0	0	+
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

27 — 712

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.26	+	0	0	0	0
22.23	1	+	0	0	0
20.21	1	3	3	0	0
18.19	1	3	3	0	0
16.17	4	11	8	2	+
14.15	7	18	18	4	1
12.13	2	7	8	3	+
10.11	0	+	+	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

28 — 848

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	+	+	0	0
18.19	0	+	0	0	0
16.17	1	+	1	1	0
14.15	3	6	7	2	1
12.13	6	18	18	8	1
10.11	1	6	10	6	1
8.9	+	1	1	+	+
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

31 — 304

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	0	0	0	0
14.15	0	+	+	0	0
12.13	0	+	0	0	0
10.11	+	2	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0

32 — 274

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	0	1	1	0	0
12.13	0	+	0	0	0
10.11	+	2	0	0	0
8.9	4	9	16	10	6
6.7	0	3	2	4	2
4.5	0	0	0	0	1
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0

33 — 829

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	0	+	0	0
14.15	+	1	+	+	0
12.13	+	1	1	+	+
10.11	2	9	8	7	3
8.9	2	13	19	8	2
6.7	2	5	8	4	1
4.5	0	+	+	+	+
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0

34 — 122

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	0	1	0	0
16.17	2	0	3	4	0
14.15	1	6	15	17	2
12.13	3	13	15	6	2
10.11	1	4	2	0	0
8.9	0	0	1	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0

35 — 117

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
8.7	2	2	4	3	2
6.6	0	1	8	3	4
4.5	1	7	15	8	3
2.3	0	7	8	3	3
0.1	1	4	2	0	0
-2.-1	1	1	2	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0
-12.-11	0	0	0	0	0
-14.-13	0	0	0	0	0

36 — 268

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
8.8	1	2	3	3	1
6.7	0	3	21	13	5
4.5	1	3	9	6	0
2.3	1	1	3	1	2
0.1	0	+	1	0	1
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0
-12.-11	0	0	0	0	0

37 — 1428

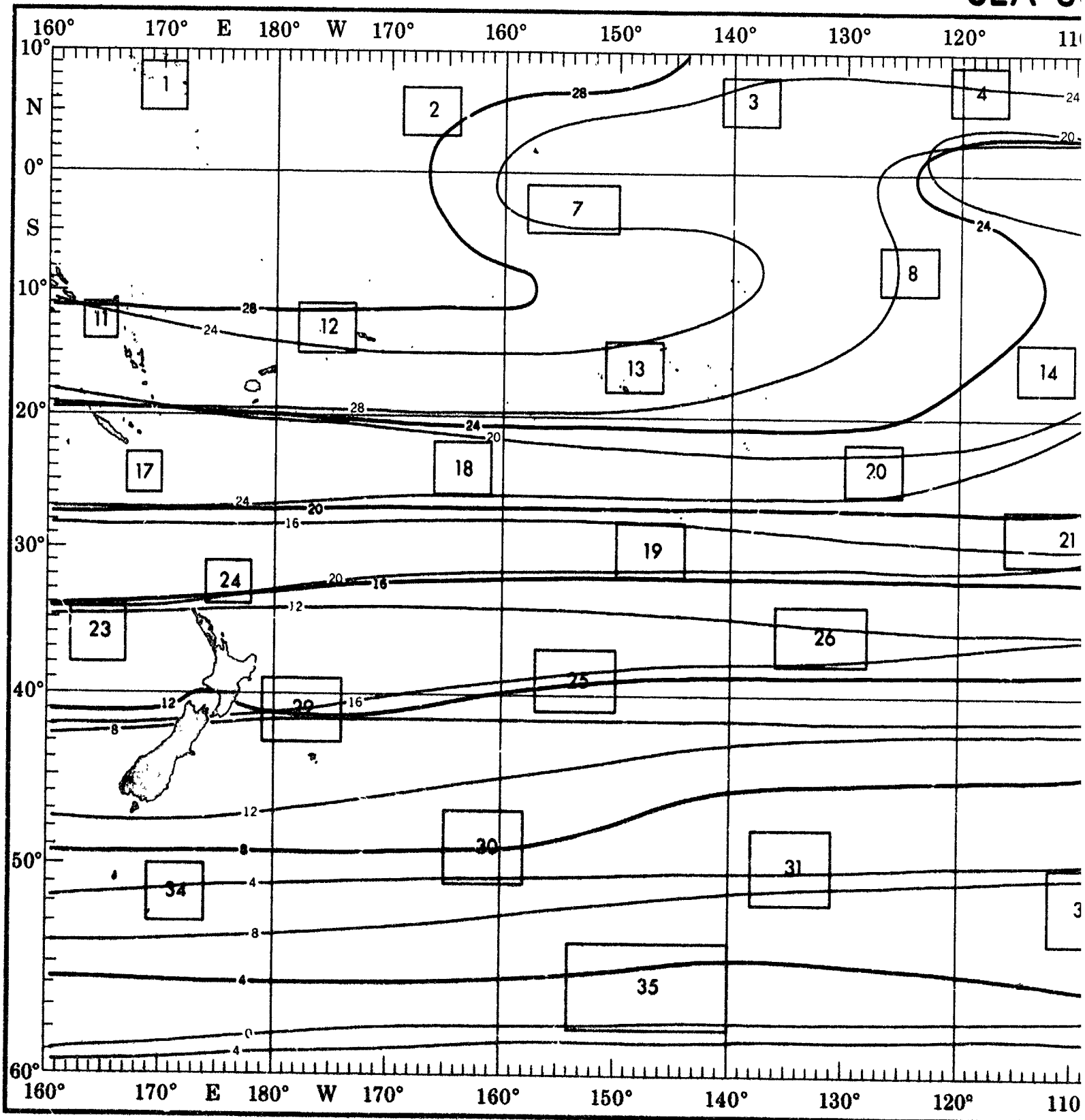
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	0	+	+	0	0
8.8	0	+	1	1	+
6.7	1	3	9	8	3
4.5	1	7	13	15	10
2.3	1	8	8	5	3
0.1	+	+	1	1	2
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0

t the objective compilation of available data for specified areas without regard to suspected biases.

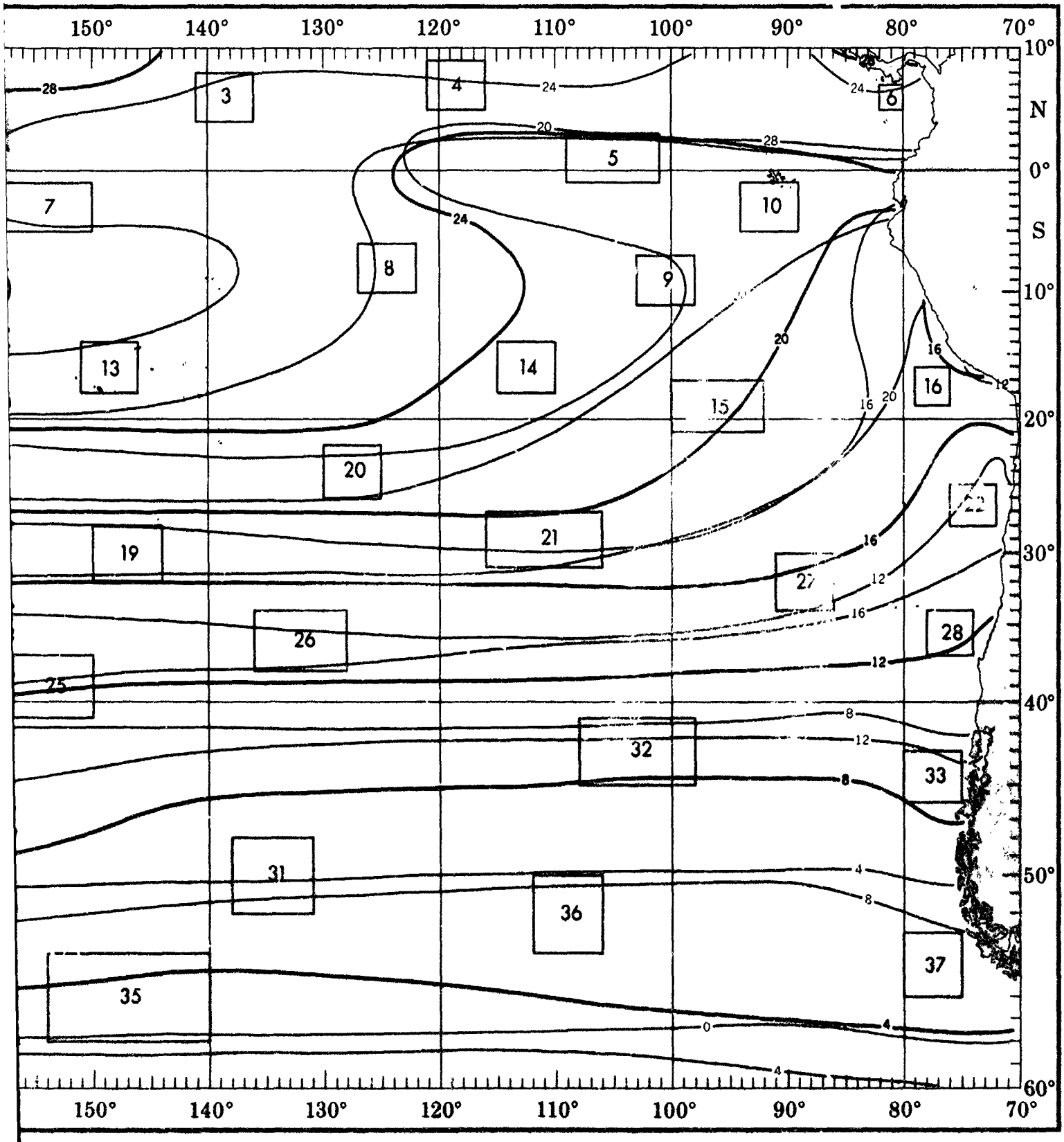
yses (opposite page) are based on all available data subjectively adjusted where bias was evident.

SEPTEMBER

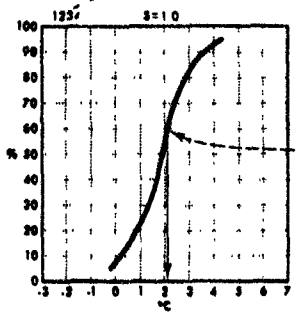
SEA S



SEA SURFACE TEMPERATURE



SEA SURFACE TEMPERATURE



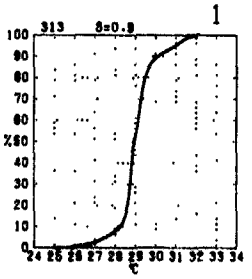
Sea surface temperature.

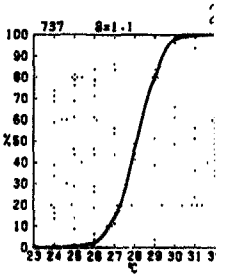
Number of observations.

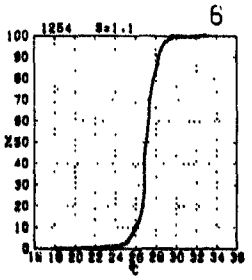
Cumulative percent frequency of sea surface temperatures equal to or less than the temperature intersected by the curve

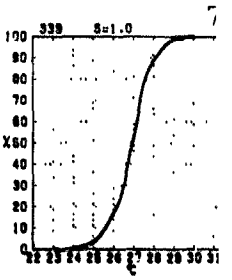
(60% of all observed sea surface temperatures were ≤2.1°C or ≤35.8°F.)

S=Standard deviation of sea surface temperatures (°C).





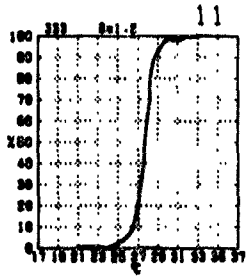


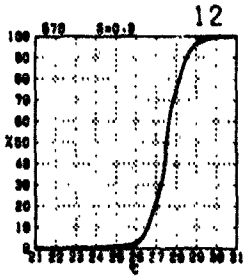


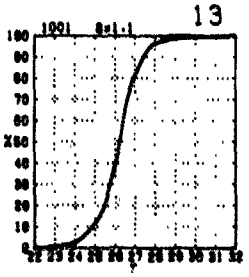
BLACK LINE - Mean sea surface temperature (°C)

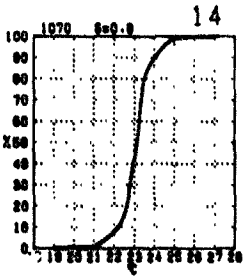
BLUE LINE - Minimum (1%) sea surface temperature (°C) (1% of the temperatures were equal to or less than the given value)

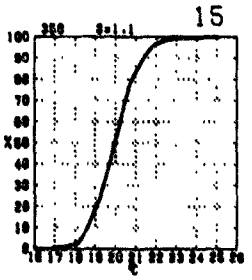
RED LINE - Maximum (99%) sea surface temperature (°C) (1% of the temperatures were greater than the given value)

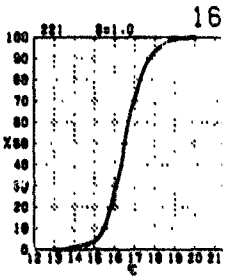


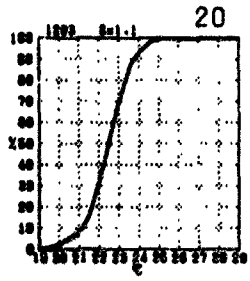


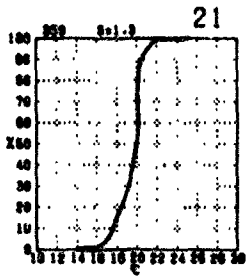


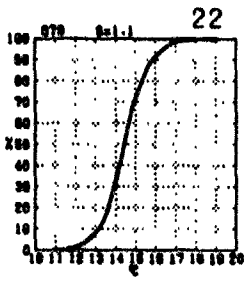


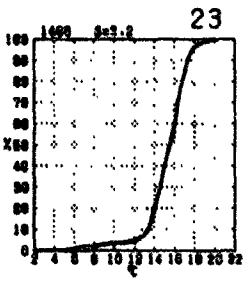


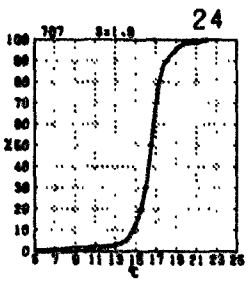


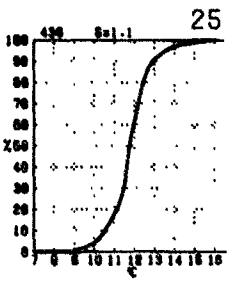


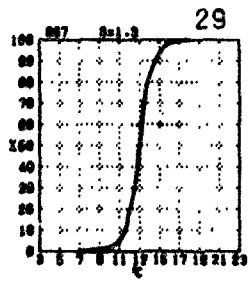


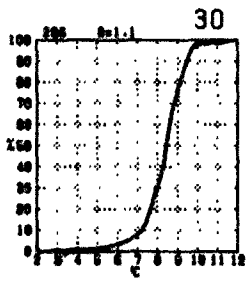


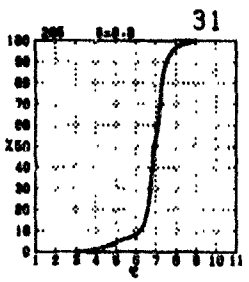


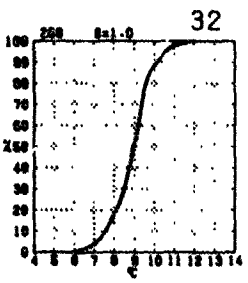


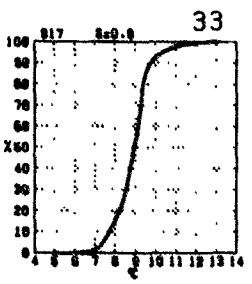


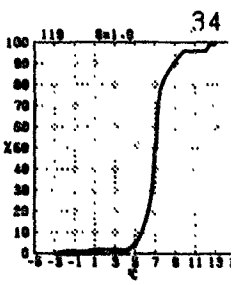












Graphs represent the objective compilation of available data for specified areas without rega
The isopleth analyses (opposite page) are based on all available data subjectively adjusted w

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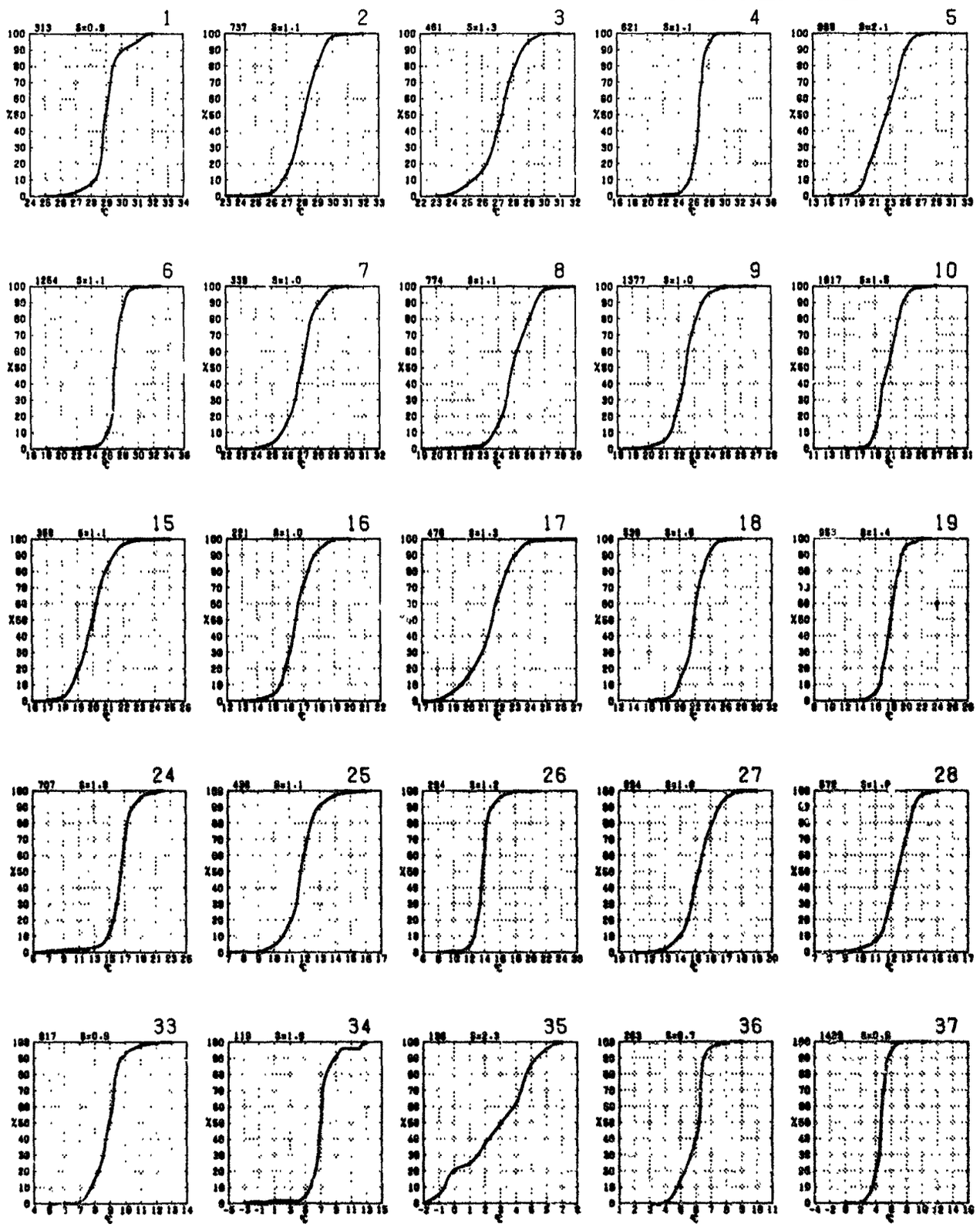
SEPTEMBER

peratures equal to or less

≤35.8°F.)

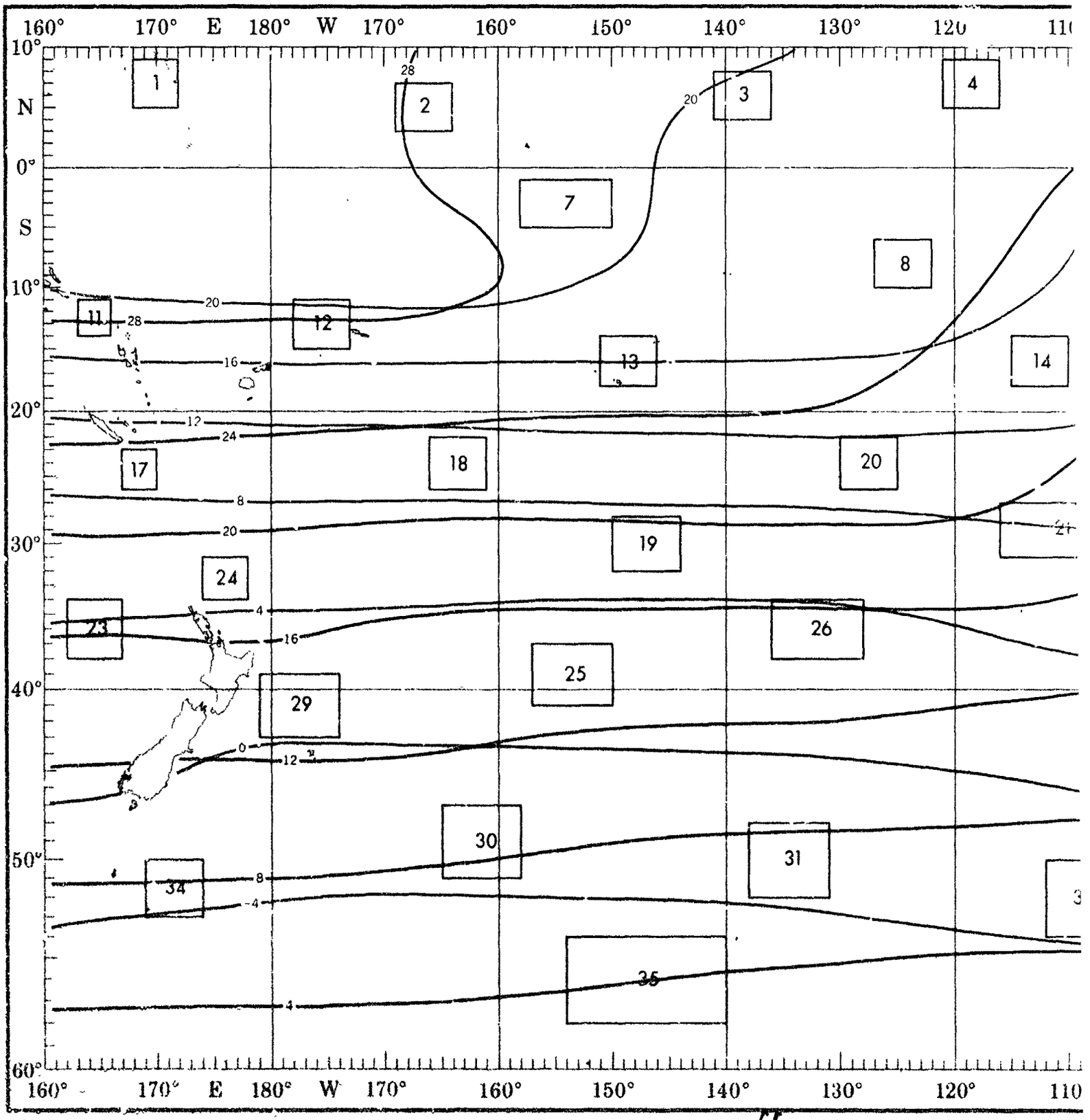
r less than the given

than the given value)

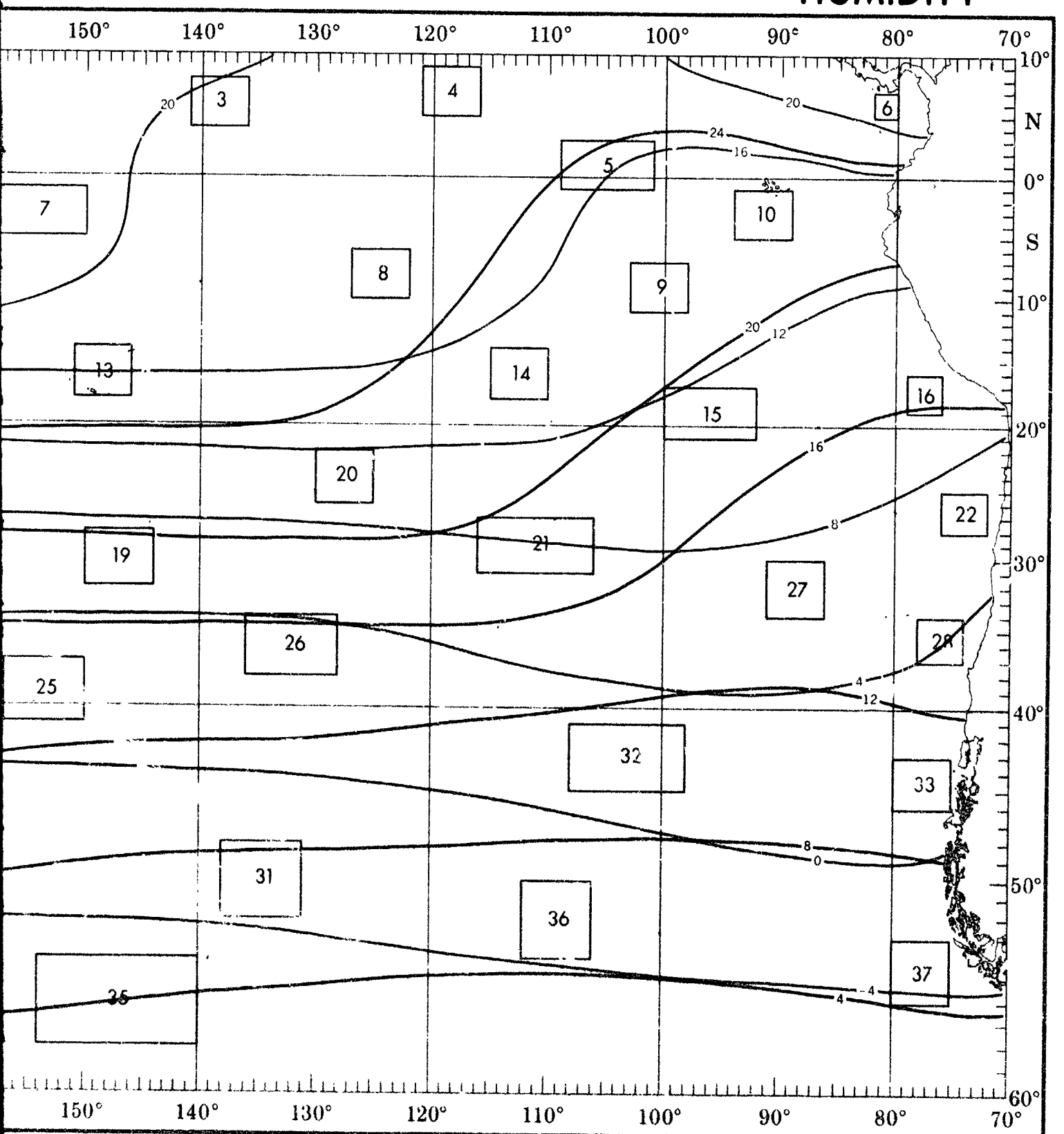


objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

SEPTEMBER


160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N
0°
10° S
20°
30°
40°
50°
60°
1
2
3
4
7
8
11
12
13
14
17
18
19
20
21
23
24
25
26
29
30
31
34
35
28
20
16
12
24
8
4
0

HUMIDITY


150°
140°
130°
120°
110°
100°
90°
80°
70°
10°
N
0°
S
10°
20°
30°
40°
50°
60°
3
4
5
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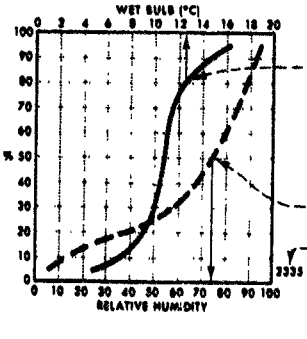
32
33
36
37
20
24
16
12
8
4
0

WET BULB AND RELATIVE HUMIDITY

Wet bulb - Relative humidity

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 ≤12.5°C or 54.5°F.)

Cumulative percent frequency of relative humidities equal to or less than the humidity intersected by the curve (bottom scale)

Relative humidity (%).

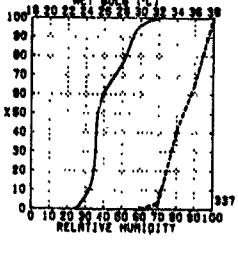
(50% of all observed relative humidities were ≤74%.)

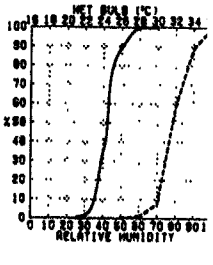
Number of observations

BLUE LINE - Minimum (1%) dew-point temperature (°C) (1% of the computed values were equal to or less than the given value)

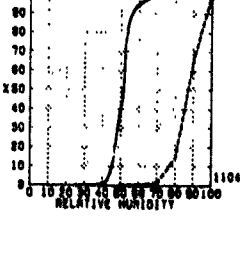
RED LINE - Maximum (99%) dew-point temperature (°C) (1% of the computed values were greater than the given value)

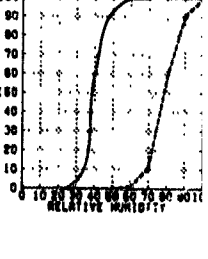
1





6





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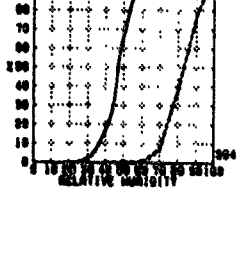
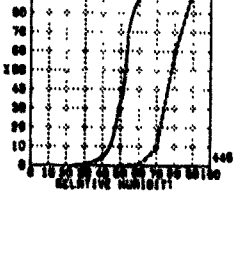


12



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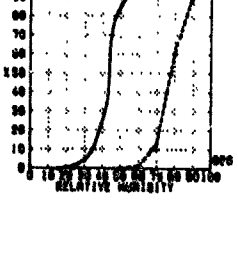

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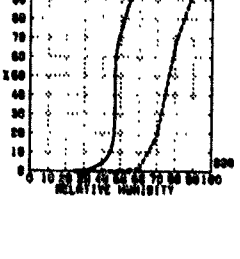

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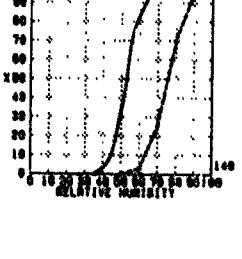
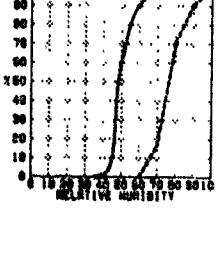


1



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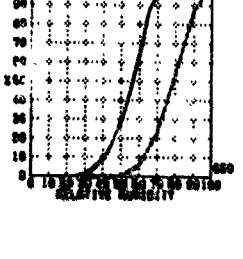

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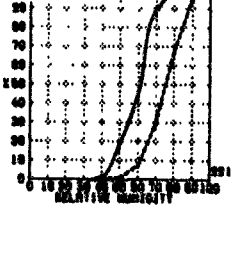

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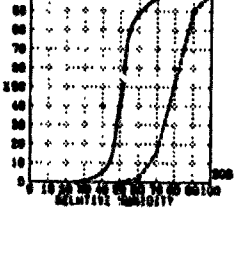
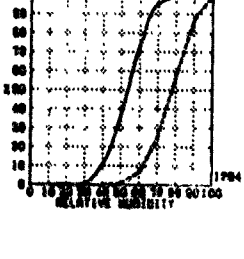
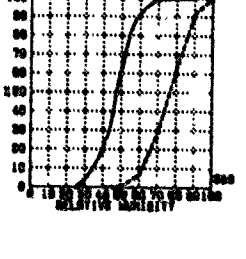


23



24



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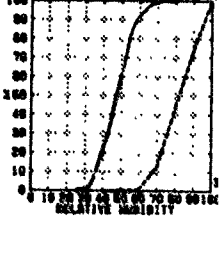

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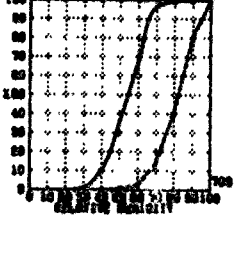
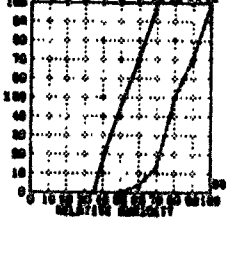


30



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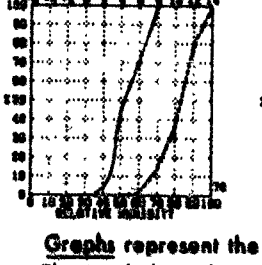

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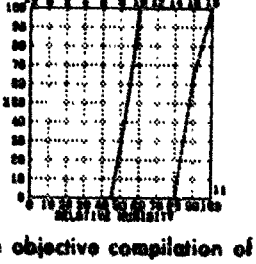

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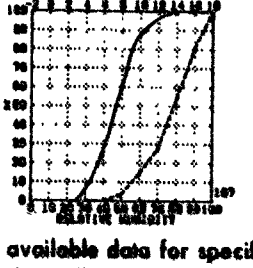

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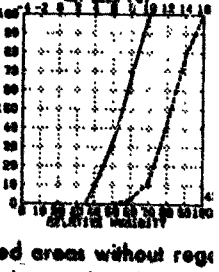

Graphs represent the objective compilation of available data for specified areas without rega
The isopleth analyses (opposite page) are based on all available data subjectively adjusted

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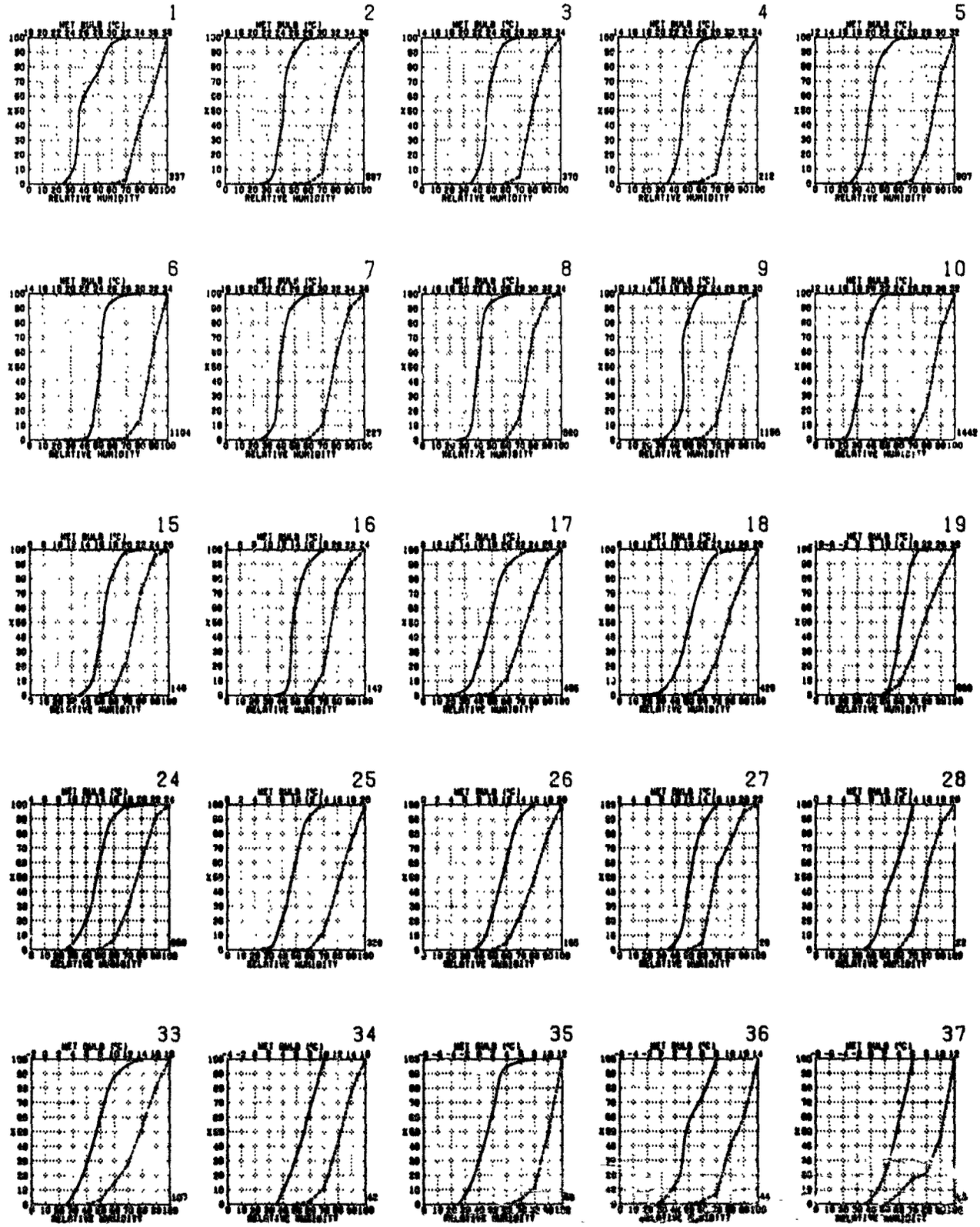
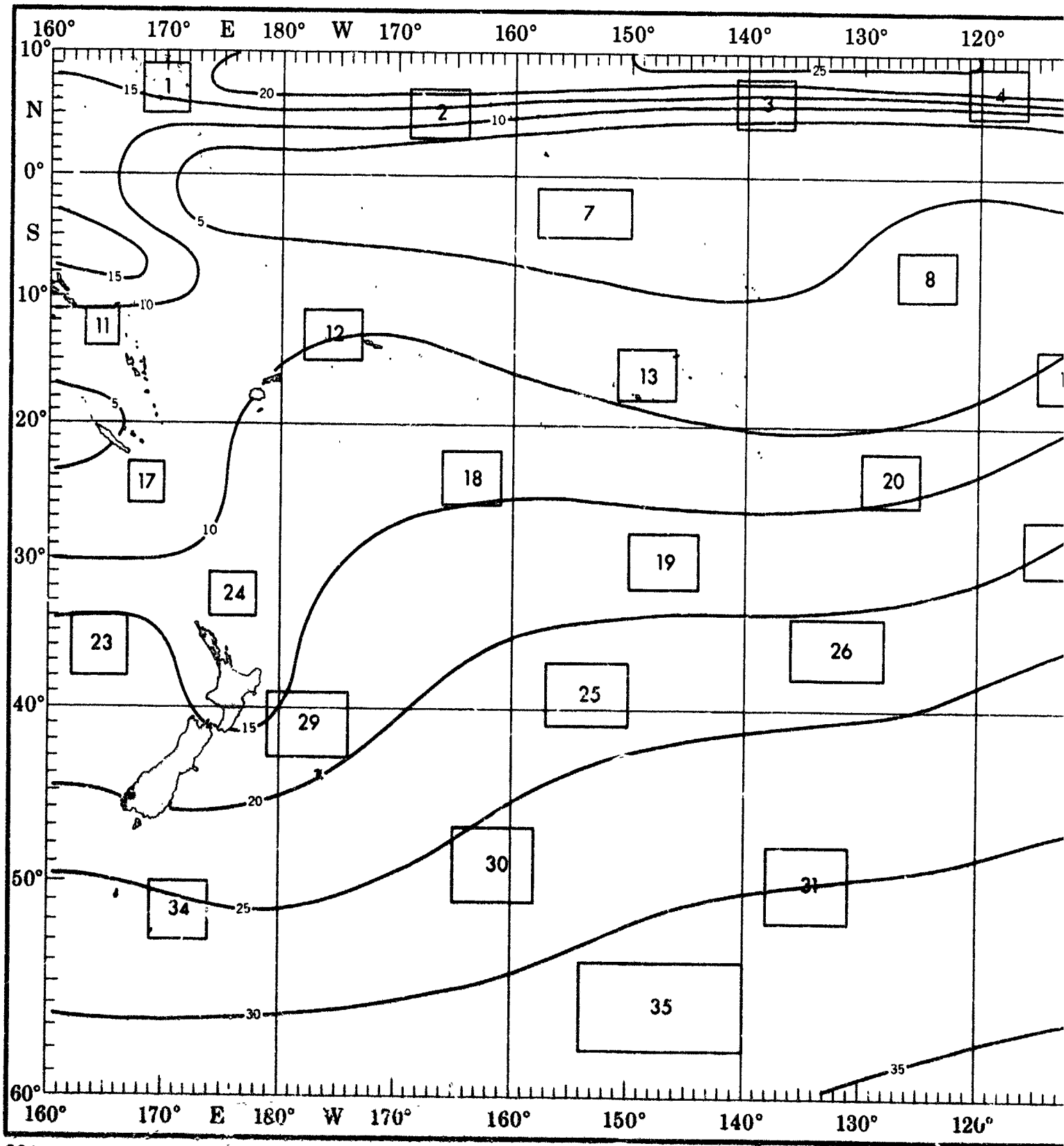


objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

SEPTEMBER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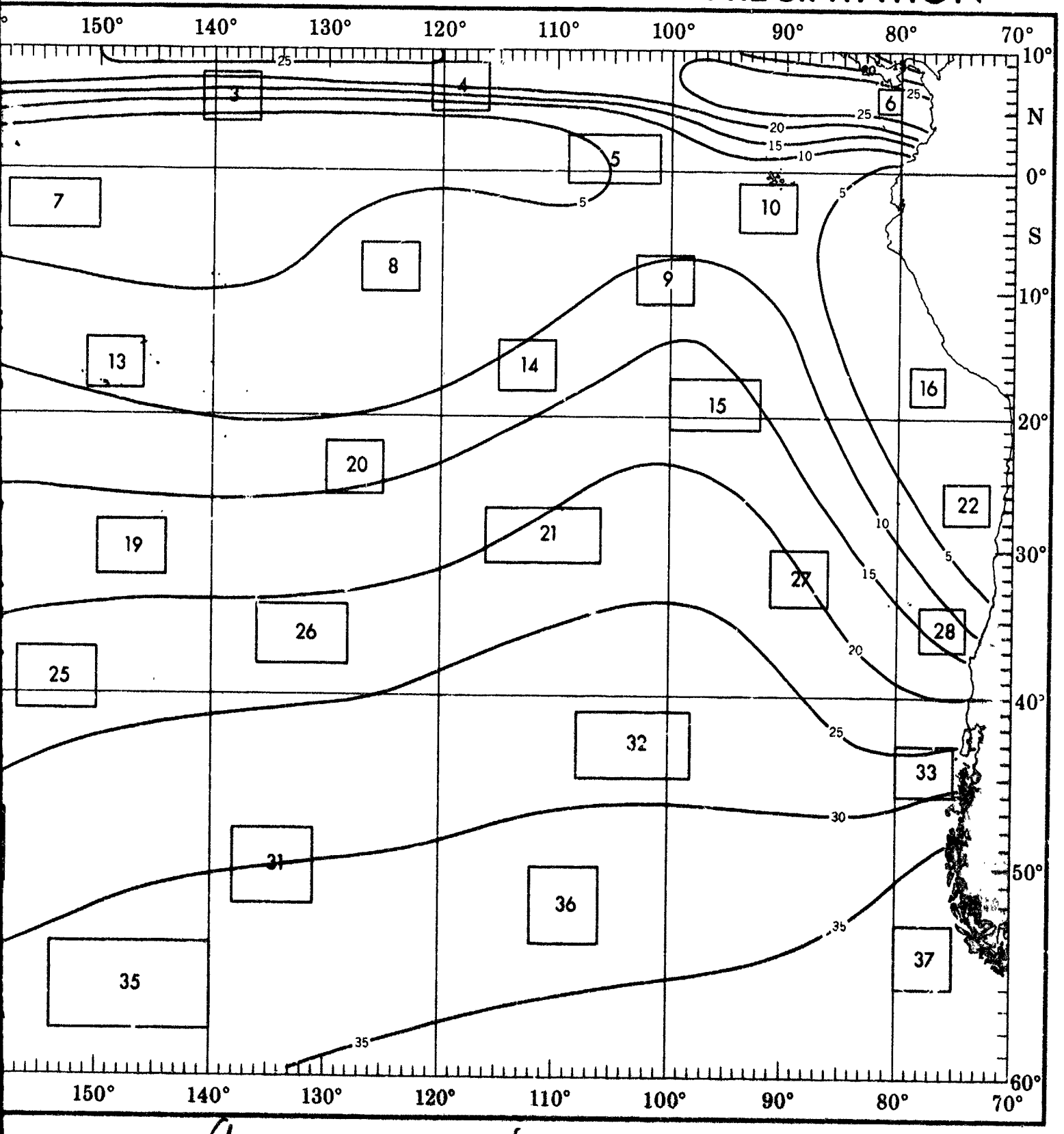
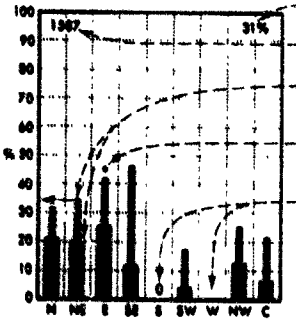
PRECIPITATION



PRECIPITATION

% Pcpn | % Liquid | % Snow

Percent frequency of surface wind observations from each direction and calm that were accompanied by precipitation, subdivided into liquid type (including freezing rain and freezing drizzle) and snow



—Percentage of present weather observations reporting precipitation

—Number of observations

—(36% of all NE winds were accompanied by precipitation, of which 16% was liquid and 20% was snow.)

—An asterisk in the column for a given direction or calm indicates that the percentage was based on 10-30 observations of present weather and wind direction

—0 replaces bar when no precipitation was observed with winds from a given direction or calm. No bar graph is presented if less than 10 observations containing present weather were reported for a given direction or calm

RED LINE - Percent frequency of observations reporting precipitation

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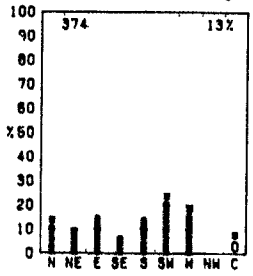

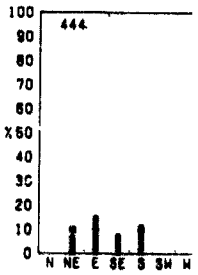

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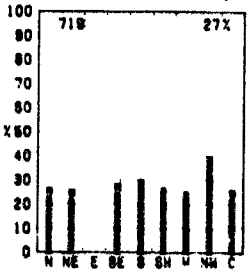

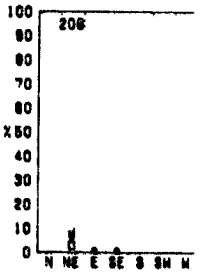

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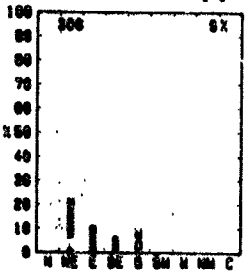

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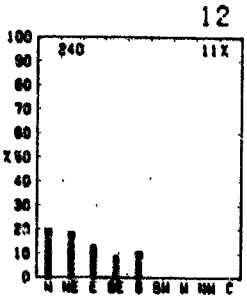

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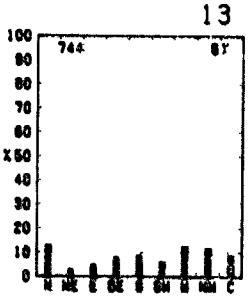

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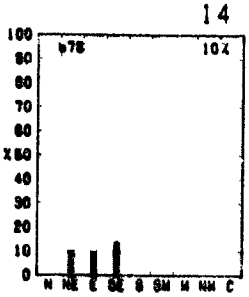

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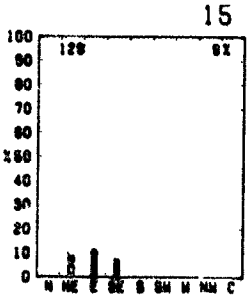

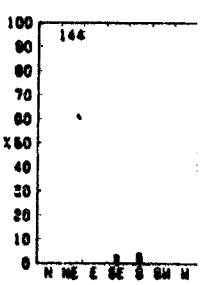

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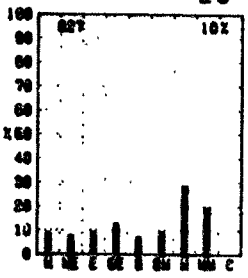

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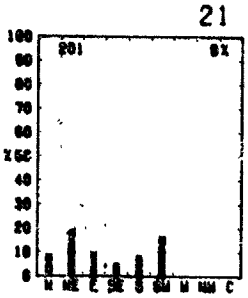

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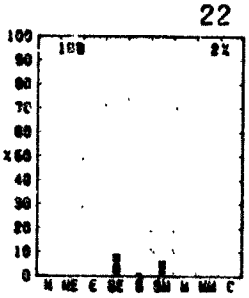

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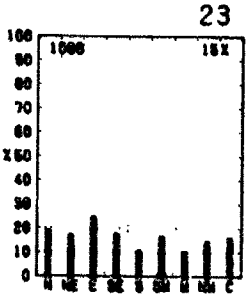

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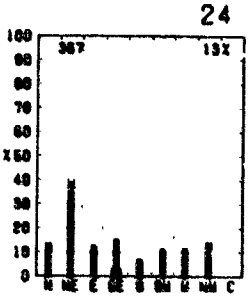

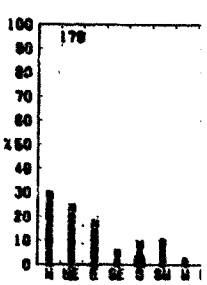

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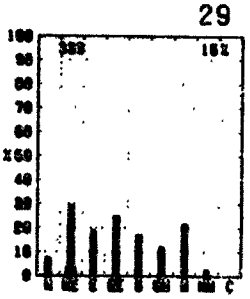

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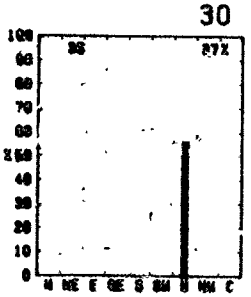

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INSUFFICIENT DATA

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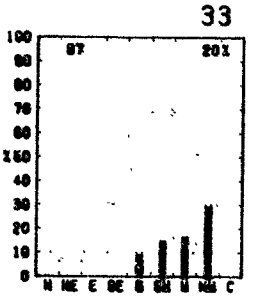

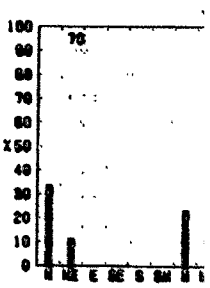

Graphs represent the objective compilation of available data for specified areas without re
The isopleth analyses (opposite page) are based on all available data subjectively adjusted

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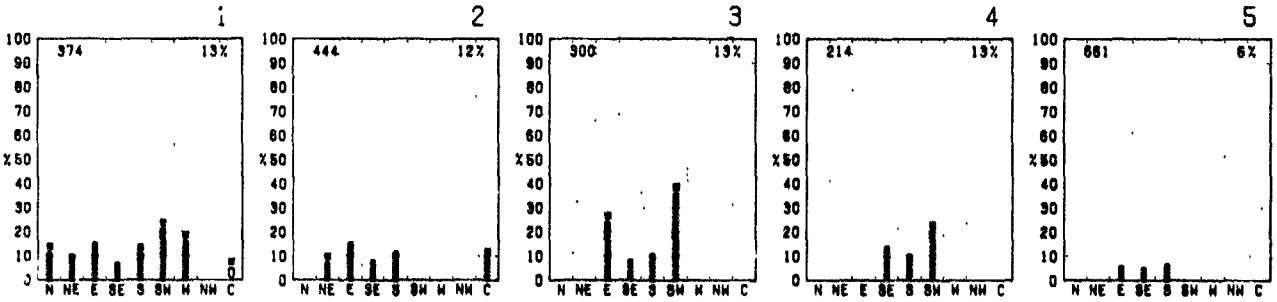

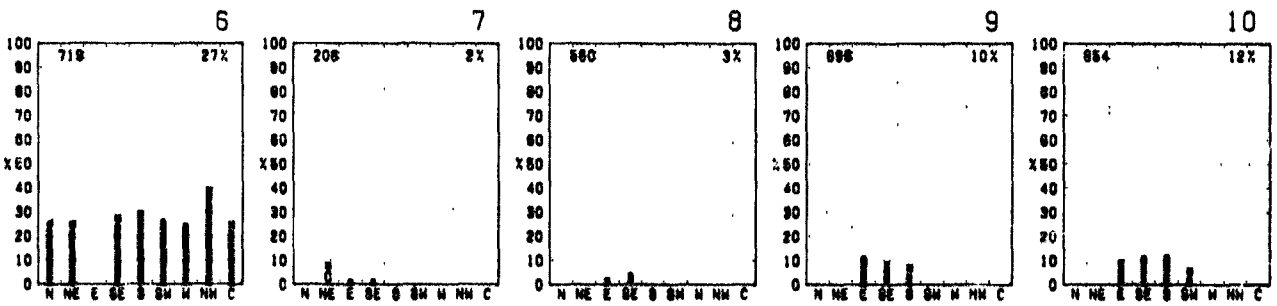

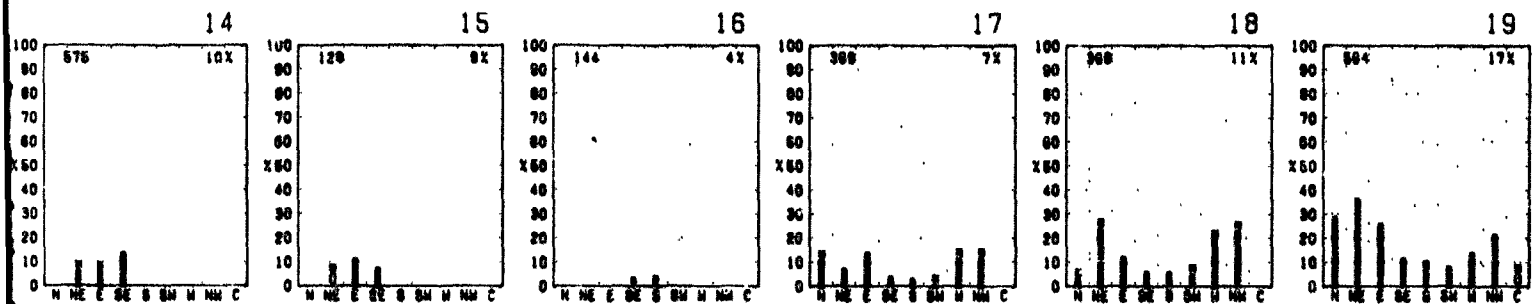

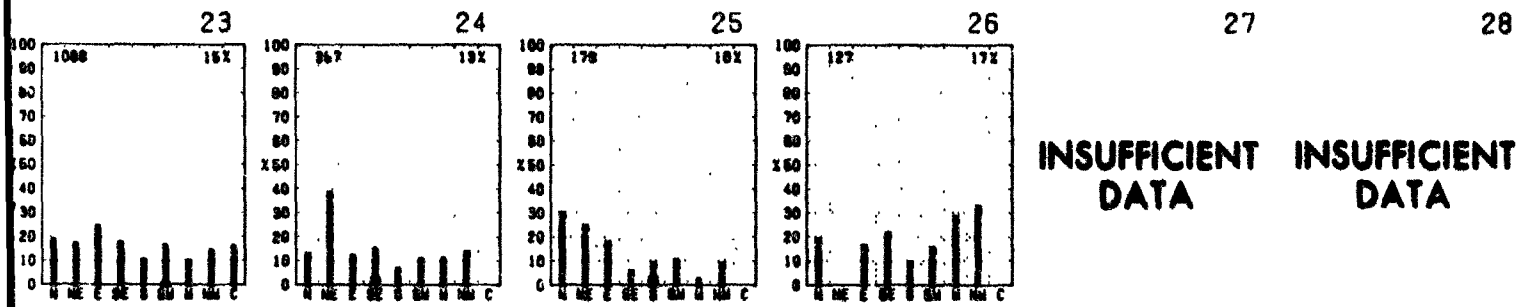

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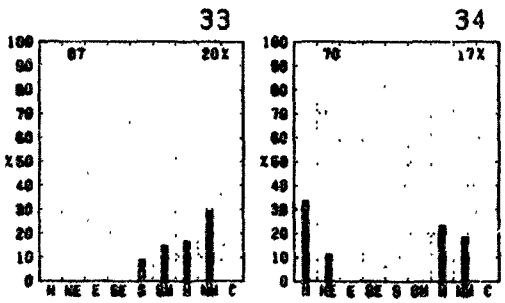

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objective compilation of available data for specified areas without regard to suspected biases.
opposite page) are based on all available data subjectively adjusted where bias was evident.

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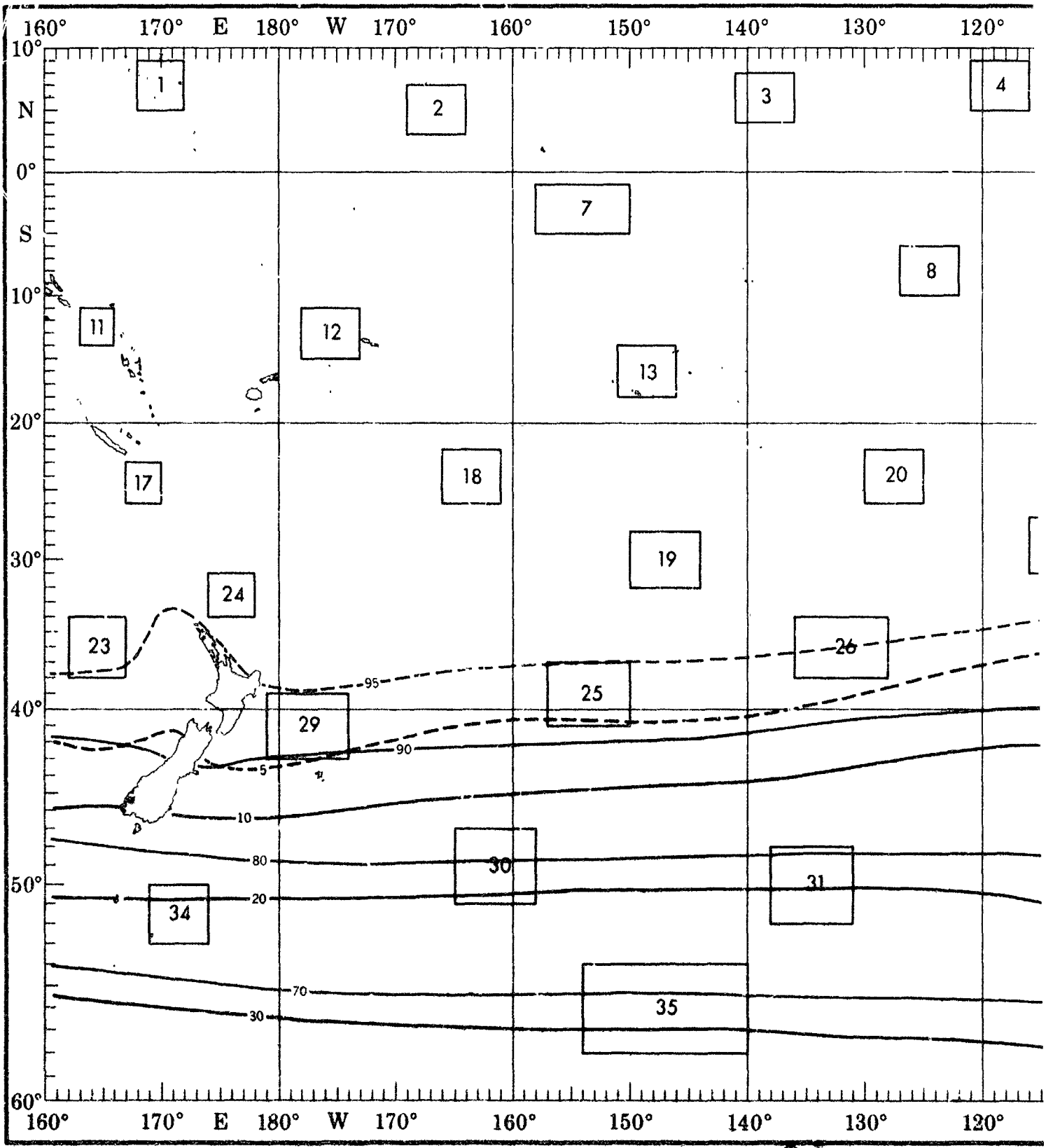
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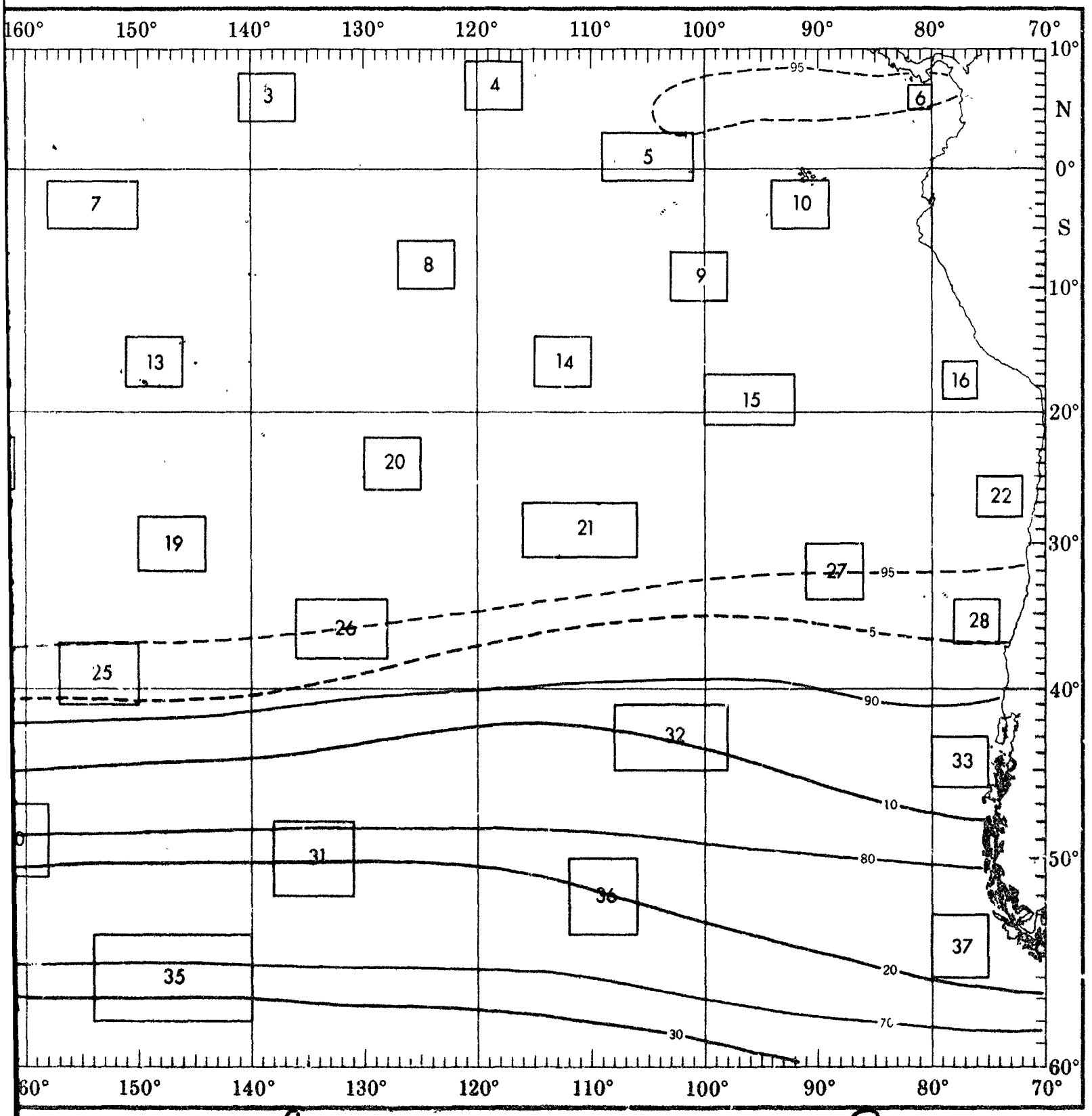
VISIBILITY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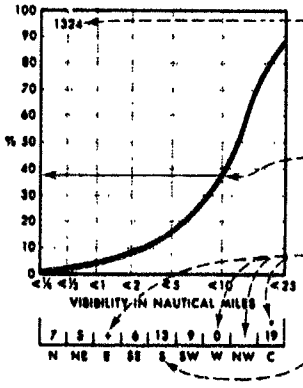


Visibility

—Number of observations

Cumulative percent frequency of visibilities less than the visibility intersected by the curve

—(37% of all visibilities reported were <10 nautical miles.)

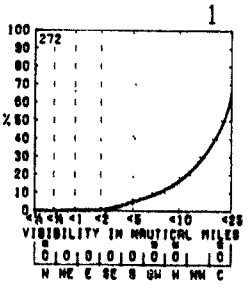
The table below the graph indicates percent frequency of occurrence of visibility <2 nautical miles versus wind direction.

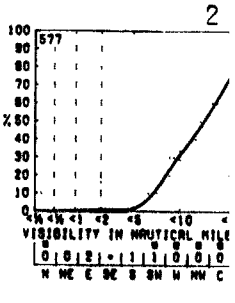
+ indicates < 5% but >0 0 indicates that no visibilities <2 nautical miles were observed with winds from a direction or calm No percentage is given if less than 10 observations were available for visibility and wind direction An asterisk indicates that the percentage was based on 10-30 observations of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

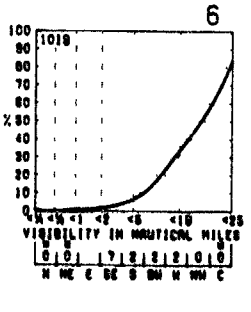
—(13% of all S winds were accompanied by visibilities <2 nautical miles.)

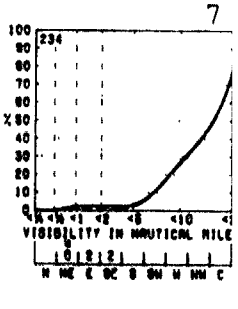
BLUE LINE - Percent frequency of visibilities ≥5 nautical miles

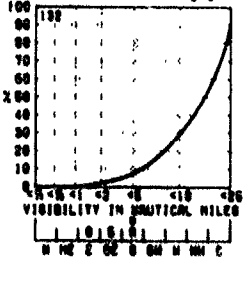
RED LINE Percent frequency of visibilities <2 nautical miles

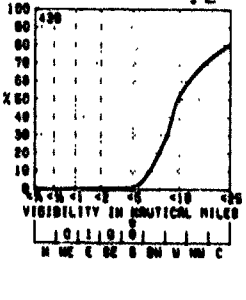


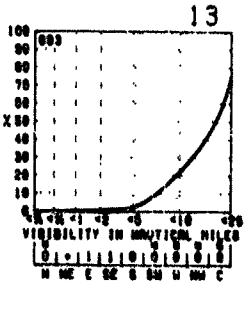


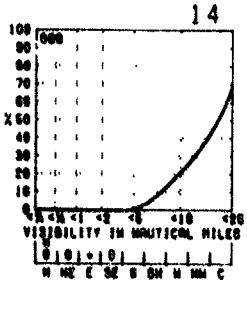


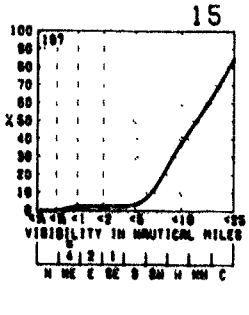


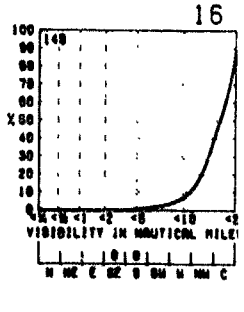


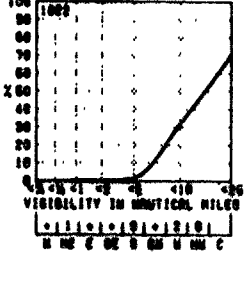


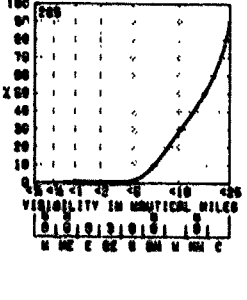


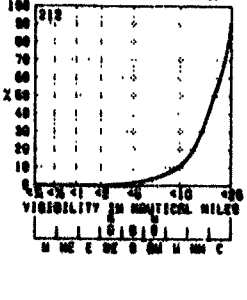


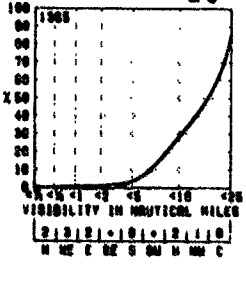


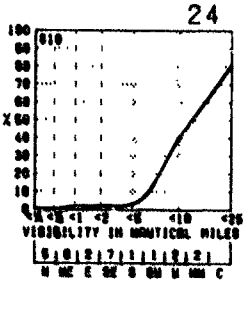


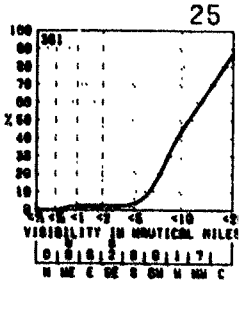


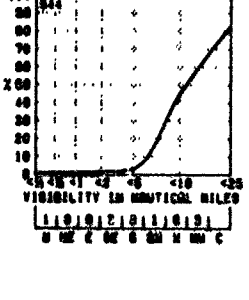


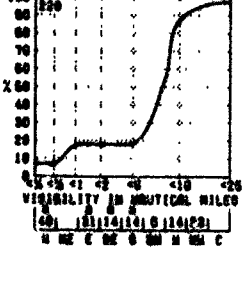


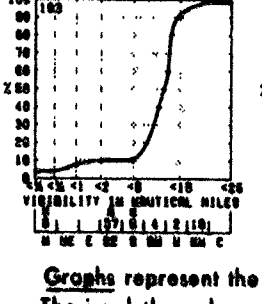


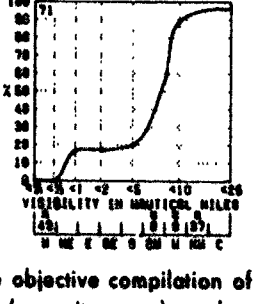


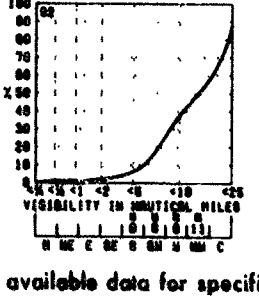


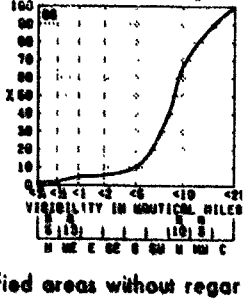












Graphs represent the objective compilation of available data for specified areas without regar
The isopleth analyses (opposite page) are based on all available data subjectively adjusted w

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An asterisk indicates
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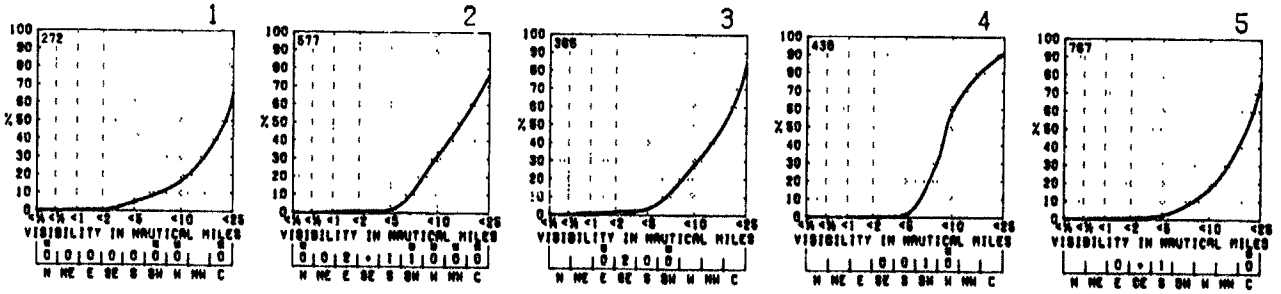

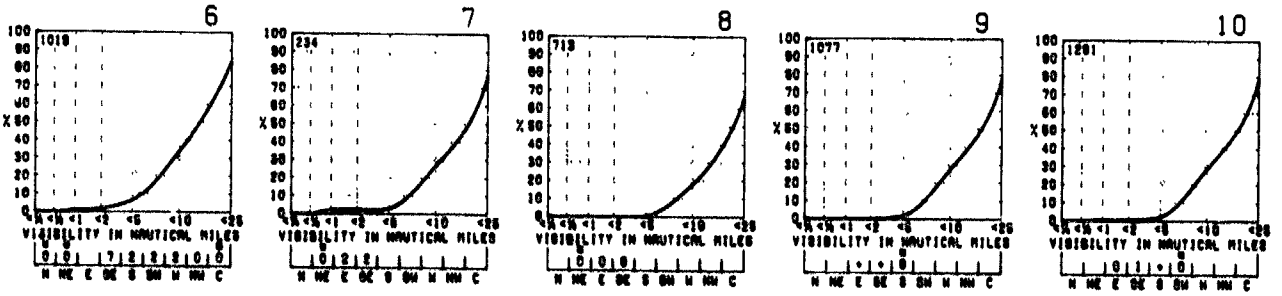

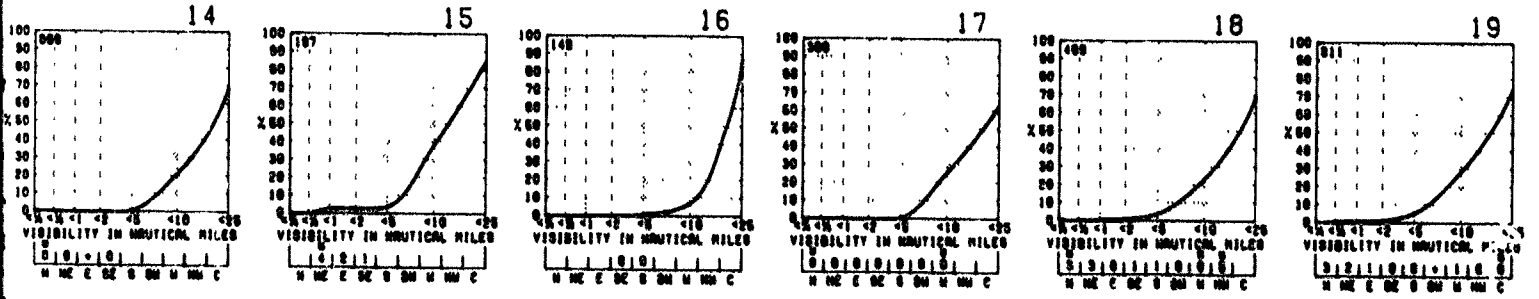

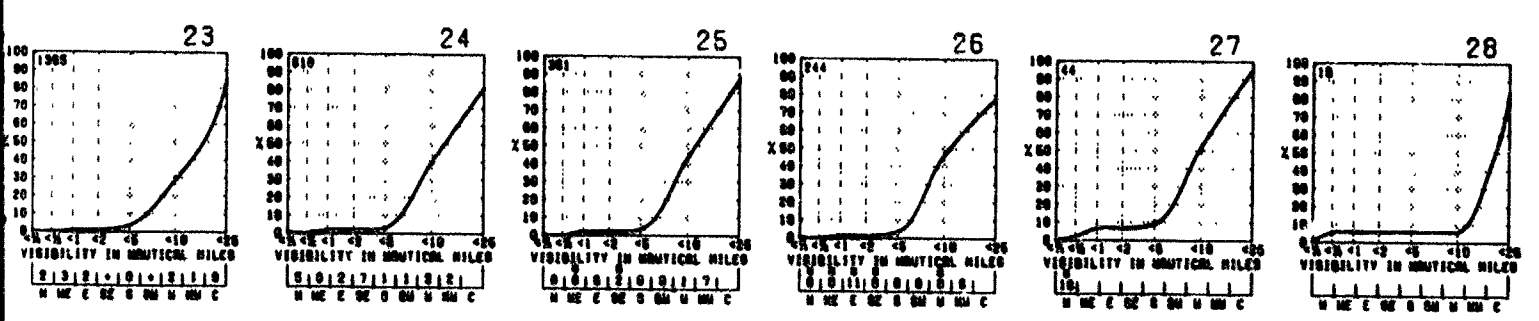

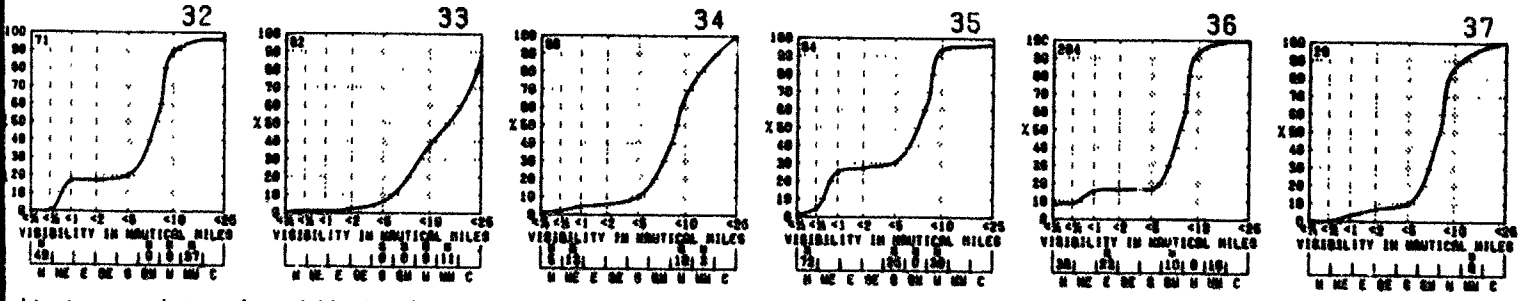

objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

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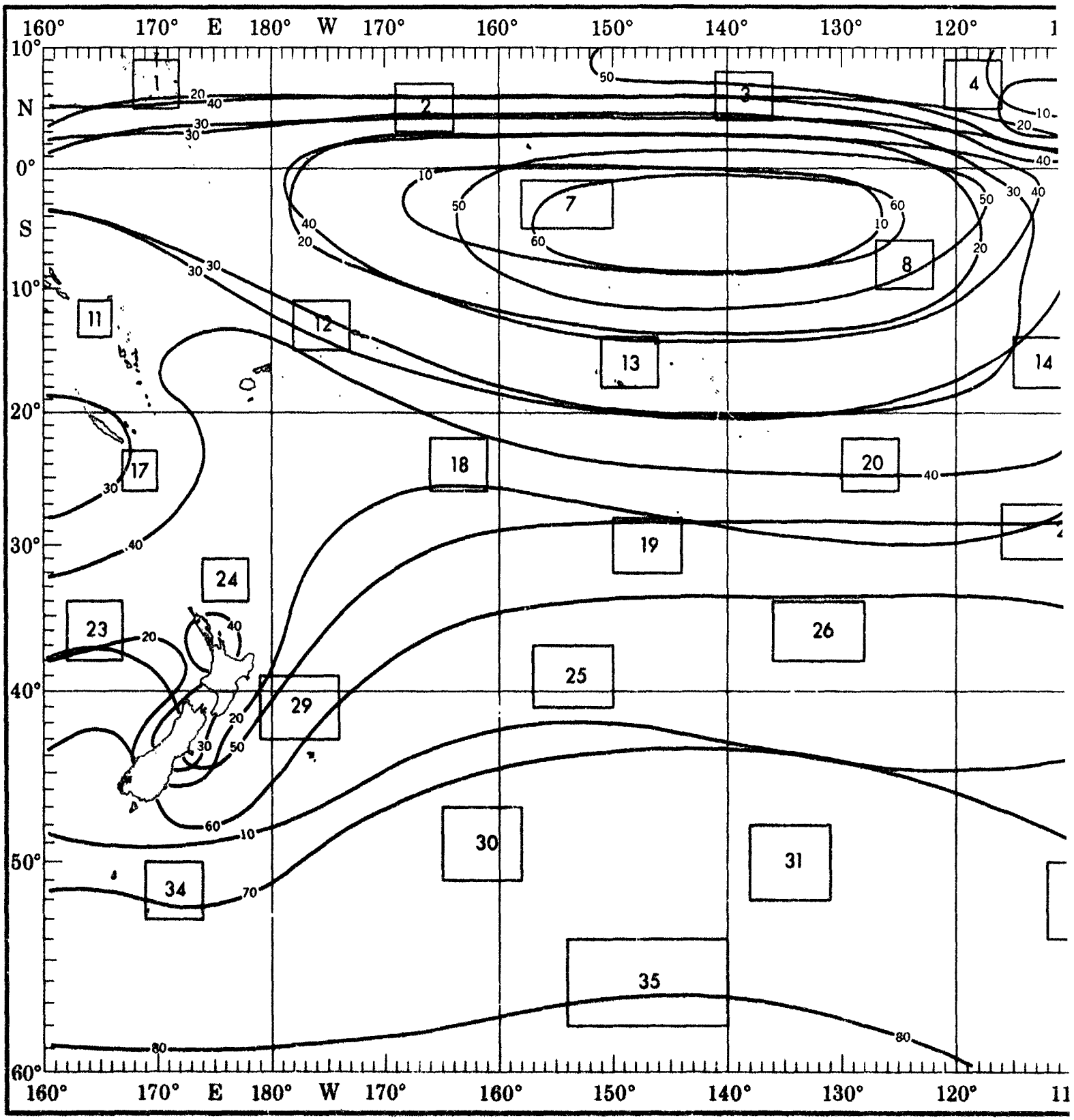
160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N 0° S 10° 20° 30° 40° 50° 60°
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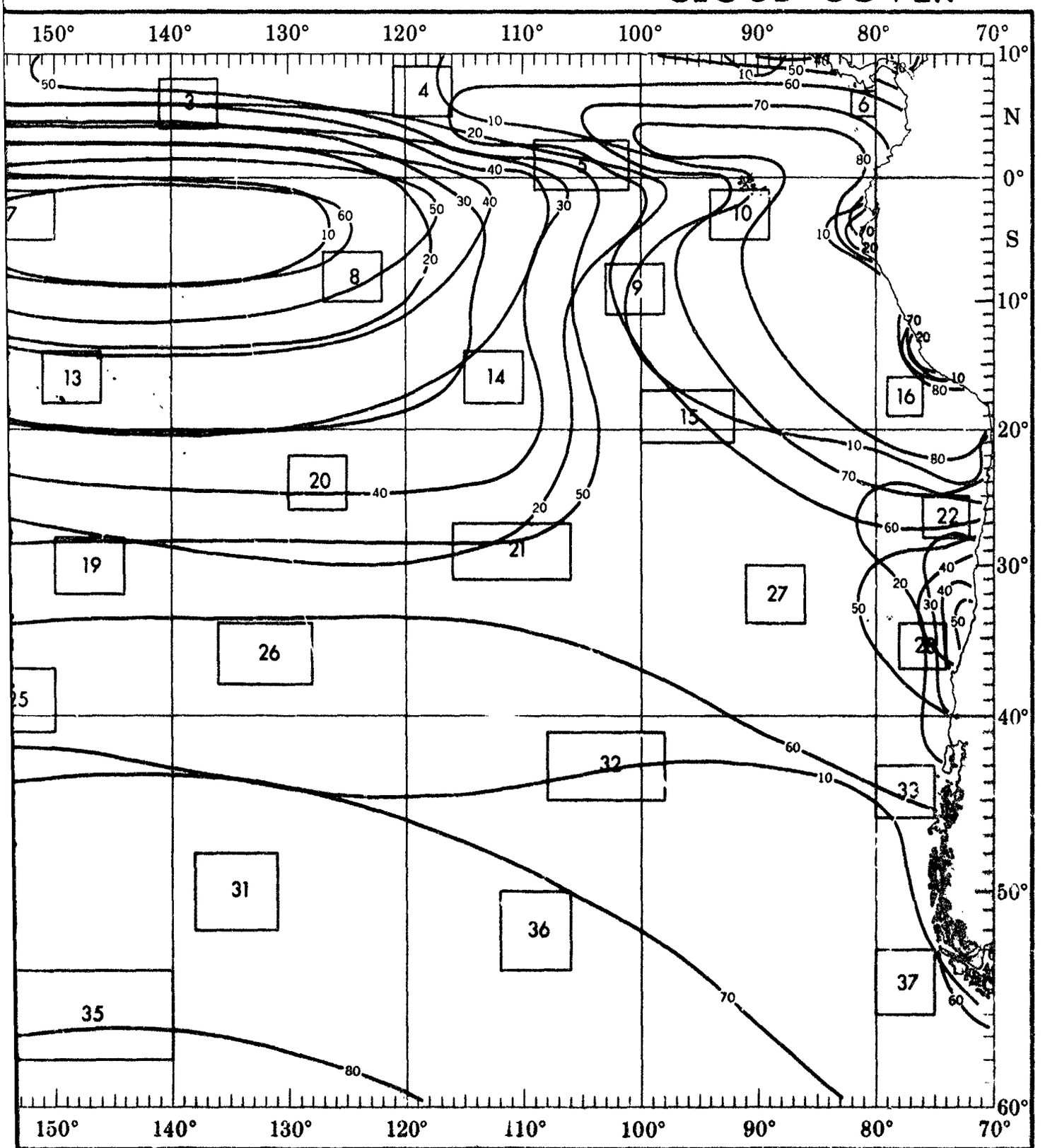
CLOUD COVER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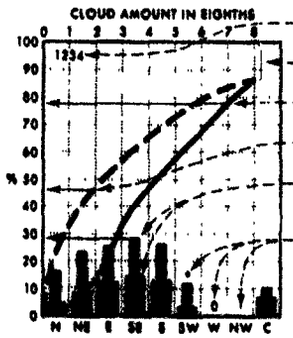
CLOUD COVER

Total Cloud Amount
Low Cloud Amount
Cumulative percent frequency of indicated cloud amount equal to or less than the amount intersected by the curve



Number of observations containing total cloud amount.

Obscurations.

(77% of all total cloud amounts were ≤7/8)

(46% of all low cloud amounts were ≤2/8.)

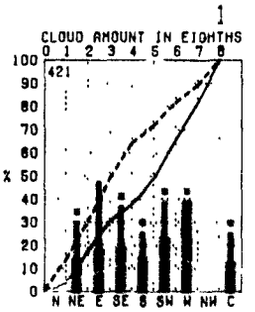
(28% of all SE winds were accompanied by low cloud amounts ≥5/8 and 14% by low cloud amounts ≥7/8.)

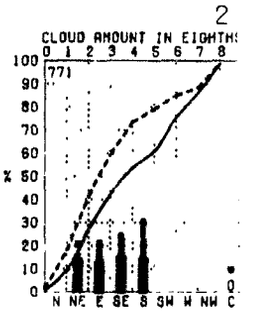
An asterisk indicates that the percentage is based on 10-30 observations of wind direction, total and low cloud amount. 0 replaces bar graph when no low cloud amounts ≥5/8 were observed with a wind direction or calm. 0 or bar is omitted when number of observations of total and low cloud amount from a wind direction or calm is less than 10

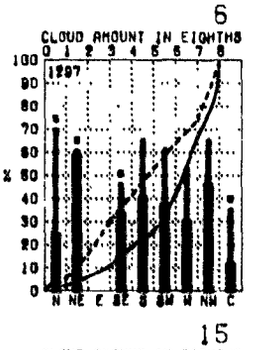
≥5/8 ≥7/8
Low cloud amount. Percent frequency of observations from each direction and calm that were accompanied by low cloud amounts ≥5/8 and ≥7/8
Low clouds are clouds with bases <6000 feet

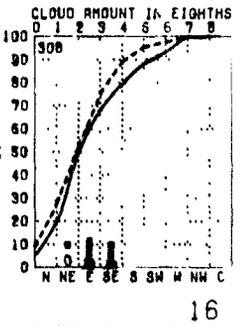
BLUE LINE - Percent frequency of total cloud amount ≤2/8

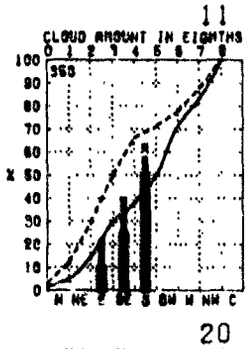
RED LINE - Percent frequency of low cloud amount ≥5/8

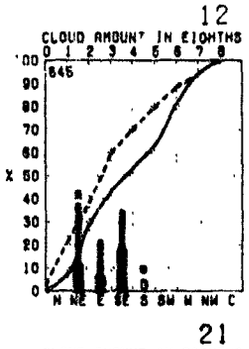


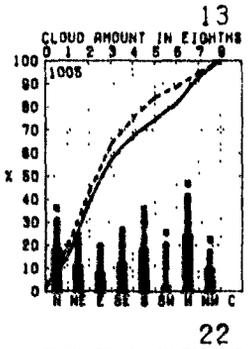


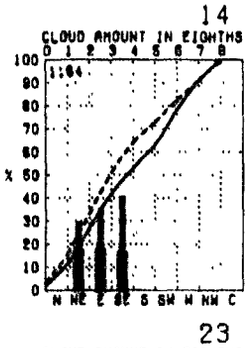


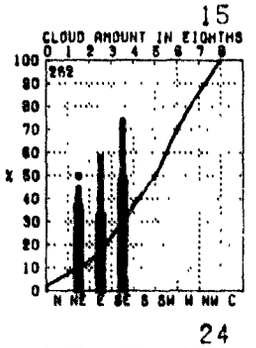


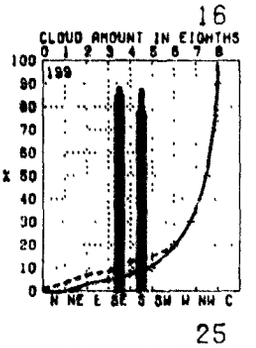


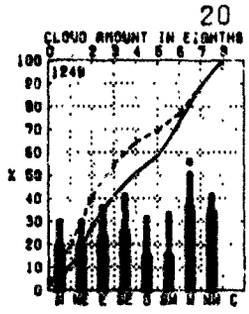


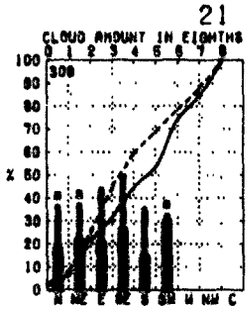


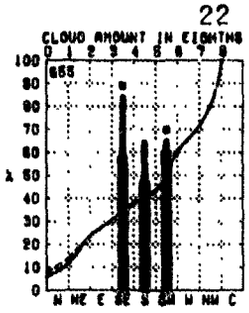


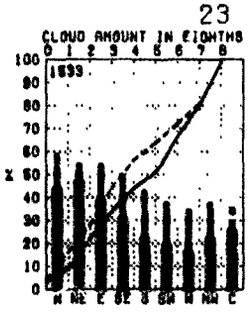


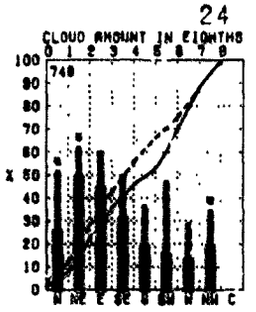


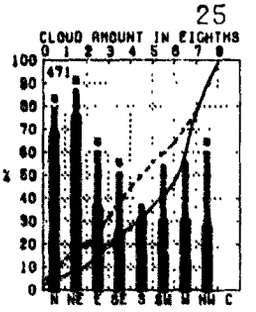


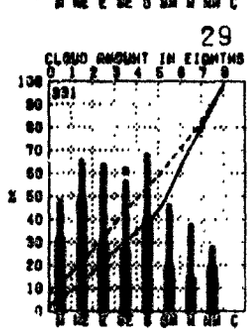


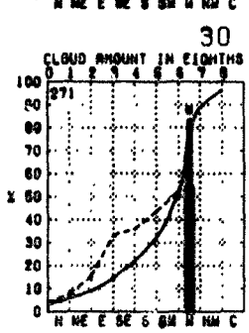


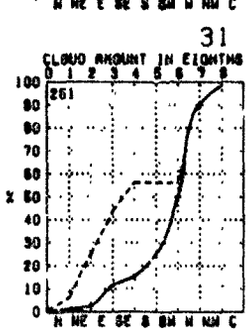


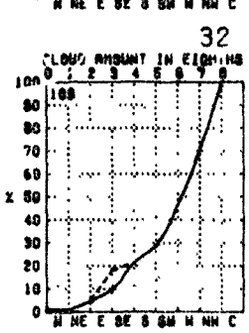


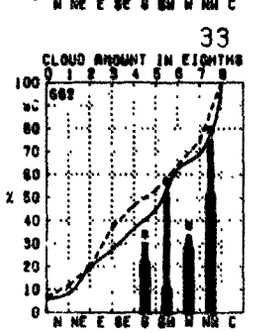


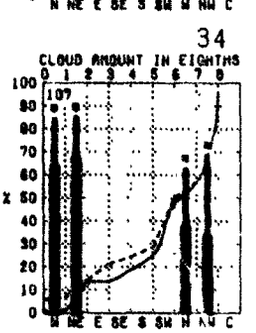












Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted whe

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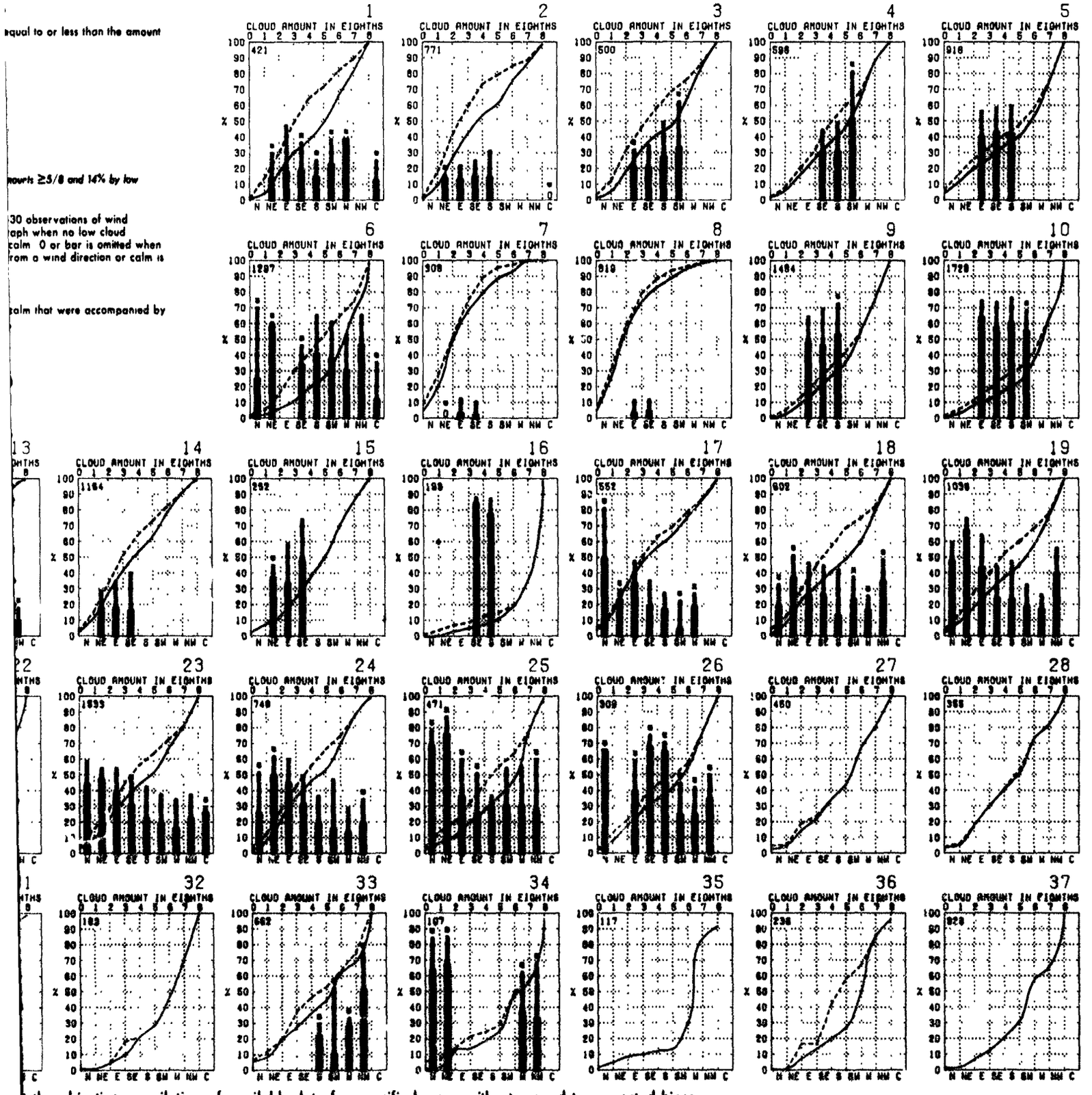

the objective compilation of available data for specified areas without regard to suspected biases.
yses (opposite page) are based on all available data subjectively adjusted where bias was evident.

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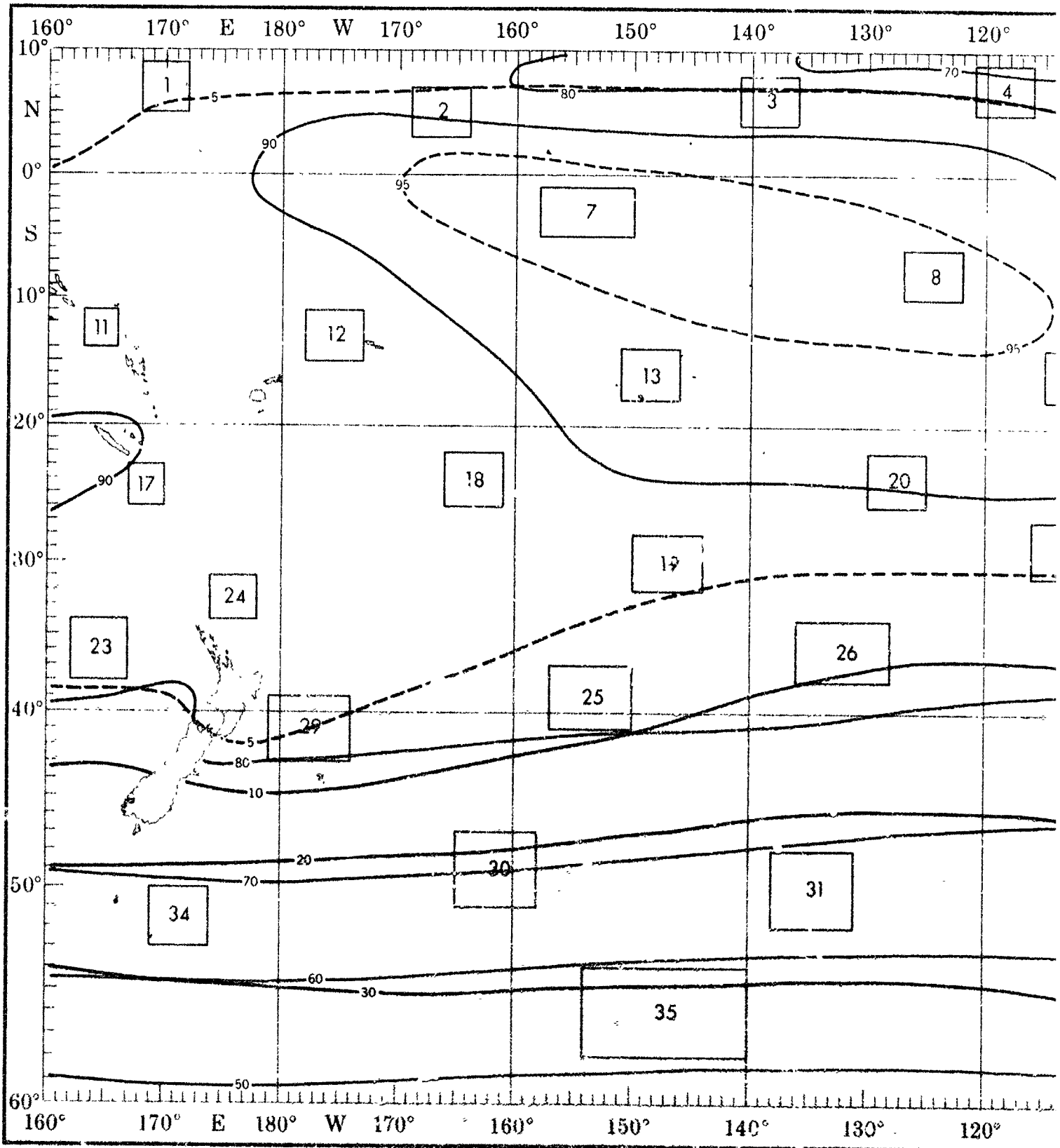
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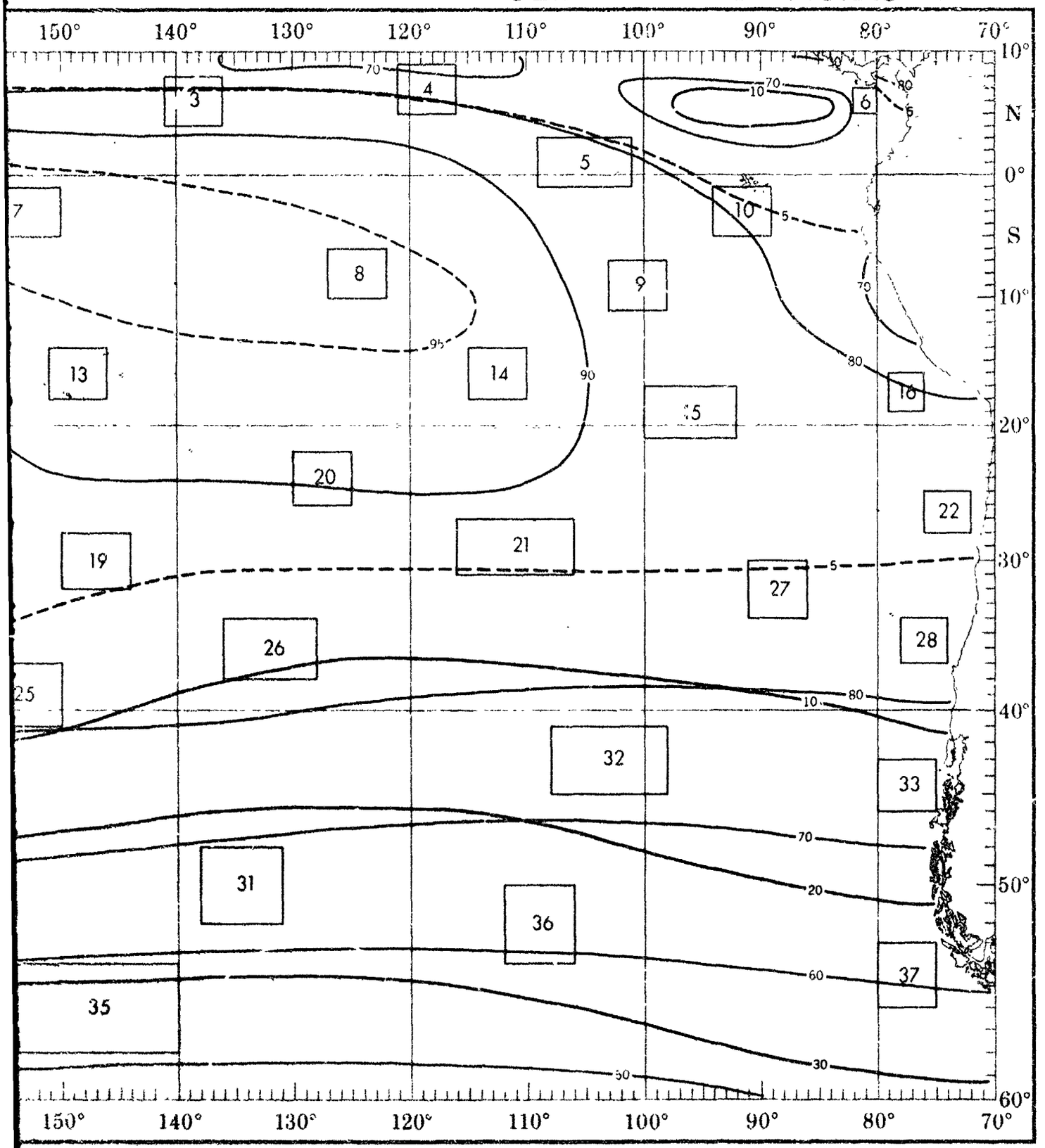
CEILING AND VISIBILITY



CEILING AND VISIBILITY

Low cloud ceiling - Visibility.

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

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".

"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8.

(2% of all observations reported ceiling ≥1000 but <2000 feet simultaneously with visibility ≥5 but <10 nautical miles.)

+ indicates <.5% but >0.

Number of observations

BLUE LINE - Percent frequency of low cloud ceiling ≥1000 feet (or no low cloud ceiling) and visibility ≥5 nautical miles

RED LINE - Percent frequency of low cloud ceiling <600 feet and/or visibility <2 nautical miles

INSUFFICIENT DATA

Graphs represent the objective compilation of available data for specified areas without rega

The isopleth analyses (opposite page) are based on all available data subjectively adjusted w

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lings (hundreds of feet)

) when low cloud amount

ences of N_h <5/8

with visibility ≥5 but <10

ility ≥5 nautical miles

1

LOW CLOUD CEILING	<1/4	1/4-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	1	4	61
50-<90	0	0	0	0	0	1
35-<50	0	0	0	0	1	1
20-<35	0	0	0	0	2	5
10-<20	0	0	0	0	2	8
5-<10	0	0	0	1	4	10
3-<5	0	0	0	0	0	1
1-<3	0	0	0	0	0	0
0-<1	0	0	0	0	0	0

178

2

LOW CLOUD CEILING	<1/4	1/4-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	+	2	71
50-<90	0	0	0	0	0	0
35-<50	0	0	0	0	1	1
20-<35	0	0	0	0	1	3
10-<20	0	+	0	1	1	10
5-<10	0	0	+	1	2	4
3-<5	0	0	0	0	+	0
1-<3	0	0	0	0	0	+
0-<1	0	0	0	0	1	0

336

3

LOW CLOUD CEILING	<1/4	1/4-<1	1-<2	2-<5	5-<10	≥10
NC	0	+	+	1	4	54
50-<90	0	0	0	0	0	0
35-<50	0	0	0	0	1	2
20-<35	0	0	+	0	0	7
10-<20	0	0	0	+	4	11
5-<10	0	0	+	1	4	7
3-<5	0	0	0	+	2	+
1-<3	0	0	0	0	0	0
0-<1	+	0	0	0	0	+

277

5

LOW CLOUD CEILING	<1/4	1/4-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	2	46
50-<90	0	0	0	0	1	0
35-<50	0	0	0	0	1	2
20-<35	0	0	0	0	1	7
10-<20	0	0	0	1	4	16
5-<10	0	0	0	1	5	7
3-<5	0	0	1	1	1	2
1-<3	0	0	0	0	0	1
0-<1	0	0	0	0	1	1

190

5

LOW CLOUD CEILING	<1/4	1/4-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	2	40
50-<90	0	0	0	0	+	2
35-<50	0	0	0	0	0	2
20-<35	0	0	0	+	2	10
10-<20	0	0	+	1	2	22
5-<10	0	0	0	1	1	12
3-<5	0	0	0	+	1	1
1-<3	0	0	0	0	+	+
0-<1	+	0	0	0	+	0

893

6

LOW CLOUD CEILING	<1/4	1/4-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	1	3	98
50-<90	0	0	0	0	+	1
35-<50	0	+	0	0	1	2
20-<35	0	0	+	+	2	7
10-<20	0	0	0	2	4	17
5-<10	0	+	+	1	4	12
3-<5	0	0	+	1	1	1
1-<3	0	0	+	+	+	+
0-<1	0	0	0	+	0	+

733

7

LOW CLOUD CEILING	<1/4	1/4-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	1	3	86
50-<90	0	0	0	0	0	0
35-<50	0	0	0	0	0	2
20-<35	0	0	0	0	0	1
10-<20	0	0	0	0	0	6
5-<10	0	0	0	0	+	1
3-<5	0	0	0	0	0	0
1-<3	0	0	0	0	0	0
0-<1	0	0	0	0	0	0

148

8

LOW CLOUD CEILING	<1/4	1/4-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	+	3	85
50-<90	0	0	0	0	+	+
35-<50	0	0	0	0	0	+
20-<35	0	0	0	0	0	1
10-<20	0	0	0	0	+	6
5-<10	0	0	0	0	+	1
3-<5	0	0	0	0	0	1
1-<3	0	0	0	0	0	0
0-<1	0	0	0	0	0	0

845

9

LOW CLOUD CEILING	<1/4	1/4-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	2	91
50-<90	0	0	0	0	0	1
35-<50	0	0	0	0	+	6
20-<35	0	0	0	+	2	13
10-<20	0	0	+	+	2	24
5-<10	0	0	0	+	1	14
3-<5	0	0	0	+	+	1
1-<3	0	0	0	0	0	+
0-<1	0	0	0	0	0	0

766

10

LOW CLOUD CEILING	<1/4	1/4-<1	1-<2	2-<5	5-<10	≥10
NC	+	0	0	0	2	25
50-<90	0	0	0	0	+	1
35-<50	0	0	0	0	1	6
20-<35	0	0	0	+	3	12
10-<20	0	0	0	1	4	26
5-<10	0	0	0	1	3	13
3-<5	0	0	0	+	1	1
1-<3	0	0	0	0	+	0
0-<1	0	0	0	0	+	+

976

14

LOW CLOUD CEILING	<1/4	1/4-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	+	3	62
50-<90	0	0	0	0	0	2
35-<50	0	0	0	0	+	4
20-<35	0	0	0	0	1	6
10-<20	0	0	0	+	1	14
5-<10	0	0	+	+	1	6
3-<5	0	0	0	0	+	+
1-<3	0	0	0	0	0	0
0-<1	0	0	0	0	0	0

503

15

LOW CLOUD CEILING	<1/4	1/4-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	3	96
50-<90	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	0	2	3	22
5-<10	0	0	0	0	3	19
3-<5	0	0	0	0	0	0
1-<3	0	0	0	0	0	0
0-<1	0	0	0	0	0	0

118

16

LOW CLOUD CEILING	<1/4	1/4-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	1	11
50-<90	0	0	0	0	0	4
35-<50	0	0	0	0	2	7
20-<35	0	0	0	0	1	21
10-<20	0	0	0	0	3	24
5-<10	0	0	0	0	1	14
3-<5	0	0	0	0	0	2
1-<3	0	0	0	0	0	0
0-<1	0	0	0	0	0	0

132

17

LOW CLOUD CEILING	<1/4	1/4-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	3	81
50-<90	0	0	0	0	0	1
35-<50	0	0	0	0	0	4
20-<35	0	0	0	0	1	8
10-<20	0	0	0	0	2	12
5-<10	0	0	0	0	2	8
3-<5	0	0	0	0	+	+
1-<3	0	0	0	+	1	0
0-<1	0	0	0	0	+	0

973

18

LOW CLOUD CEILING	<1/4	1/4-<1	1-<2	2-<5	5-<10	≥10
NC	+	0	0	+	1	58
50-<90	0	0	0	+	0	1
35-<50	0	0	0	0	0	1
20-<35	0	0	0	0	2	10
10-<20	0	0	0	1	3	15
5-<10	0	+	+	1	1	8
3-<5	0	0	0	0	1	1
1-<3	0	0	0	0	0	0
0-<1	0	0	0	0	1	0

581

19

LOW CLOUD CEILING	<1/4	1/4-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	+	+	4	48
50-<90	0	0	0	0	0	1
35-<50	0	0	0	+	+	4
20-<35	0	0	0	1	1	7
10-<20	0	0	+	2	3	12
5-<10	+	+	+	1	3	8
3-<5	0	0	+	1	1	+
1-<3	0	0	0	+	0	0
0-<1	+	0	0	+	0	0

649

23

LOW CLOUD CEILING	<1/4	1/4-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	+	3	64
50-<90	0	0	0	0	0	0
35-<50	0	0	0	0	+	1
20-<35	0	0	0	0	1	4
10-<20	0	0	0	1	5	10
5-<10	0	0	+	1	4	7
3-<5	0	0	+	+	1	1
1-<3	0	0	0	+	+	+
0-<1	0	0	0	+	0	0

360

24

LOW CLOUD CEILING	<1/4	1/4-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	4	52
50-<90	0	0	0	0	0	1
35-<50	0	0	0	0	+	1
20-<35	0	0	0	0	+	7
10-<20	0	0	0	+	3	18
5-<10	0	0	0	+	4	8
3-<5	0	0	0	1	+	0
1-<3	0	0	+	0	0	0
0-<1	0	0	0	+	0	+

344

25

LOW CLOUD CEILING	<1/4	1/4-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	+	3	41
50-<90	0	0	0	0	0	2
35-<50	0	0	0	0	0	4
20-<35	0	0	0	0	1	8
10-<20	0	0	0	+	2	21
5-<10	0	0	0	+	4	8
3-<5	0	0	0	+	+	1
1-<3	0	0	0	0	0	0
0-<1	0	0	0	0	+	0

206

26

LOW CLOUD CEILING	<1/4	1/4-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	3	40
50-<90	0	0	0	0	0	1
35-<50	0	0	0	0	0	1
20-<35	0	0	0	0	2	5
10-<20	0	0	0	2	1	22
5-<10	0	0	0	2	5	12
3-<5	0	0	0	2	1	2
1-<3	0	0	0	0	0	0
0-<1	0	0	0	0	0	0

126

27

LOW CLOUD CEILING	<1/4	1/4-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	0	29
50-<90	0	0	0	0	0	0
35-<50	0	0	0	0	0	0
20-<35	0	0	0	0	0	14
10-<20	0	0	0	0	5	19
5-<10	0	0	0	0	5	14
3-<5	0	0	0	0	5	0
1-<3	0	0	0	0	5	0
0-<1	5	0	0	0	0	0

21

28

LOW CLOUD CEILING	<1/4	1/4-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	0	44
50-<90	0	0	0	0	0	0
35-<50	0	0	0	0	0	13
20-<35	0	0	0	0	0	28
10-<20	0	0	0	0	0	0
5-<10	0	0	0	0	0	0
3-<5	0	0	0	0	0	0
1-<3	0	0	0	0	0	0
0-<1	6	0	0	0	0	0

16

32

INSUFFICIENT DATA

33

LOW CLOUD CEILING	<1/4	1/4-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	0	37
50-<90	0	0	2	0	0	0
35-<50	0	0	0	0	2	3
20-<35	2	0	0	0	2	3
10-<20	0	0	0	2	2	0
5-<10	0	0	0	0	14	11
3-<5	0	0	0	0	2	0
1-<3	0	0	0	0	3	0
0-<1	0	0	0	2	0	0

68

34

LOW CLOUD CEILING	<1/4	1/4-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	13	12
50-<90	0	0	0	0	4	0
35-<50	0	0	0	0	3	0
20-<35	0	0	0	1	7	15
10-<20	0	0	0	1	16	6
5-<10	0	0	0	0	4	4
3-<5	0	0	1	0	0	0
1-<3	0	0	0	0	0	0
0-<1	1	3	0	1	1	0

68

35

INSUFFICIENT DATA

36

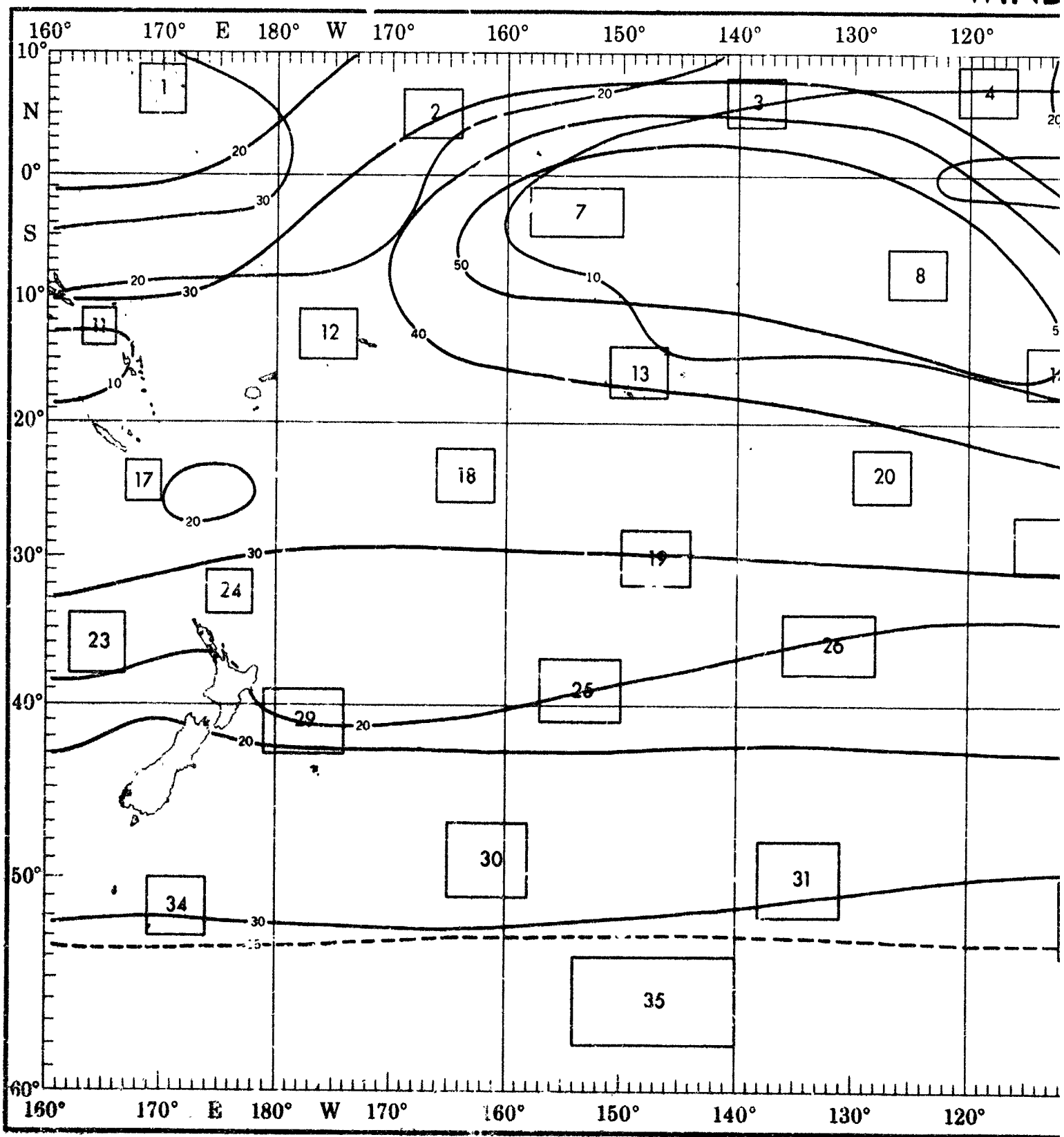
INSUFFICIENT DATA

37

INSUFFICIENT DATA

objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

SEPTEMBER


160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N 0° S 10° 20° 30° 40° 50° 60°
1
2
3
4
7
8
11
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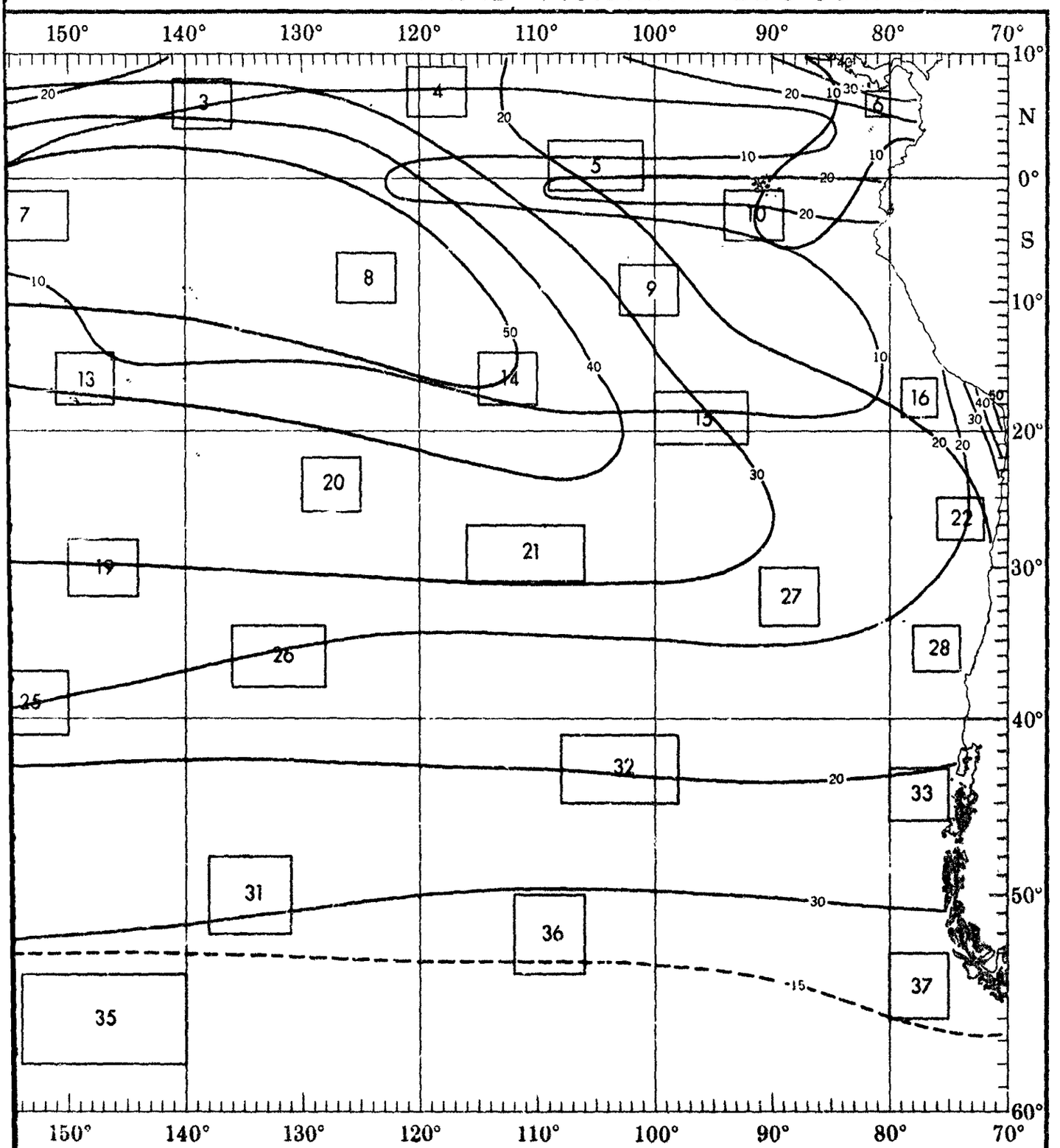
15

WIND-VISIBILITY-CLOUDINESS



LOW CLOUD CEILING-VISIBILITY-WIND

Percent frequency of occurrence of specified wind speed in knots, visibility (Vsby) in nautical miles, and low cloud ceiling (LCC) in hundreds of feet.

WIND SPEED (knots)

LCC - Vsby	0-3	4-10	11-21	22-33	≥34
<1.5 & or <.5	+	1	1	+	0
<5 & or <2	2	2	1	1	+
Vsby <2	1	2	1	1	+
<10 & or <3	3	4	2	1	1
<20 & or <5	5	9	6	3	2
Vsby ≥5	9	11	12	3	1
≥20 & ≥5	12	13	13	7	3
NC & ≥10	4	2	1	+	0
	1	2	3	4	

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

(2% of the observations reported wind speeds of 11-21 knots, a low cloud ceiling <1000 feet and/or visibility <2 nautical miles.)

"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8

+ indicates <.5% but >0

Number of observations

1

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<5 & OR <2	0	0	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <3	0	6	10	0	0
<20 & OR <5	2	11	14	0	0
VSBY ≥5	14	52	32	1	0
≥20 & ≥5	11	36	18	1	0
NC & ≥10	11	34	15	1	0
					177

WIND SPEED (

LCC - VSBY	0-3	4-10	11-
<1.5 & OR <.5	0	+	+
<5 & OR <2	0	1	1
VSBY <2	0	1	0
<10 & OR <3	1	5	2
<20 & OR <5	2	10	7
VSBY ≥5	9	47	37
≥20 & ≥5	8	37	28
NC & ≥10	6	36	27

6

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	0
<5 & OR <2	+	3	2	+	0
VSBY <2	+	+	1	0	0
<10 & OR <3	2	14	7	+	0
<20 & OR <5	4	29	14	+	0
VSBY ≥5	10	80	2[illegible]	+	0
≥20 & ≥5	5	29	8	0	0
NC & ≥10	[illegible]	27	7	0	0
					719

WIND SPEED (

LCC - VSBY	0-3	4-10	11-
<1.5 & OR <.5	0	0	0
<5 & OR <2	0	0	0
VSBY <2	0	0	0
<10 & OR <3	0	0	1
<20 & OR <5	0	3	5
VSBY ≥5	1	33	63
≥20 & ≥5	1	30	57
NC & ≥10	1	27	57

Conditions for Carrier Operations

BLUE LINE - Percent frequency of optimum conditions LCC ≥5000 ft., (or no LCC), Vsby ≥5 nm. and Wind 11-21 kts

RED LINE - Percent frequency of poor conditions. Any one of the following constitutes poor conditions: LCC <300 ft., Vsby <1 nm., Wind <6 or ≥34 kts.

Satisfactory conditions between poor and optimum

11

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<5 & OR <2	0	1	1	1	3
VSBY <2	0	0	0	0	3
<10 & OR <3	0	4	9	1	3
<20 & OR <5	0	8	18	1	3
VSBY ≥5	3	31	52	4	0
≥20 & ≥5	3	27	31	4	0
NC & ≥10	3	22	31	3	0
					89

12

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	0	0	0
<5 & OR <2	0	2	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <3	0	4	1	0	0
<20 & OR <5	0	10	10	3	0
VSBY ≥5	4	47	48	3	0
≥20 & ≥5	4	36	33	1	0
NC & ≥10	4	35	30	1	0
					148

13

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	+	0
<5 & OR <2	0	1	0	+	0
VSBY <2	0	1	0	+	0
<10 & OR <3	+	2	2	1	0
<20 & OR <5	+	4	8	2	0
VSBY ≥5	4	38	50	8	0
≥20 & ≥5	3	29	39	5	0
NC & ≥10	3	27	34	4	0
					691

14

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<5 & OR <2	0	+	+	0	0
VSBY <2	0	0	+	0	0
<10 & OR <3	+	2	5	+	0
<20 & OR <5	+	5	15	3	0
VSBY ≥5	1	25	66	8	0
≥20 & ≥5	1	18	42	5	0
NC & ≥10	1	17	39	5	0
					667

15

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<5 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <3	1	3	17	1	0
<20 & OR <5	1	10	28	13	0
VSBY ≥5	3	34	43	18	0
≥20 & ≥5	3	18	14	4	0
NC & ≥10	3	17	12	4	0
					110

WIND SPEED (K

LCC - VSBY	0-3	4-10	11-
<1.5 & OR <.5	0	0	0
<5 & OR <2	0	2	1
VSBY <2	0	0	0
<10 & OR <3	0	4	11
<20 & OR <5	1	17	33
VSBY ≥5	2	32	57
≥20 & ≥5	1	7	8
NC & ≥10	0	5	5

20

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	+	0
<5 & OR <2	0	+	+	+	0
VSBY <2	0	0	0	+	0
<10 & OR <3	0	3	4	2	+
<20 & OR <5	+	7	10	3	+
VSBY ≥5	5	40	45	8	+
≥20 & ≥5	4	30	29	4	+
NC & ≥10	4	29	28	4	+
					708

21

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	1	0	0
<5 & OR <2	0	0	2	1	0
VSBY <2	0	0	0	0	0
<10 & OR <3	0	1	4	3	0
<20 & OR <5	1	5	9	4	0
VSBY ≥5	2	40	50	8	0
≥20 & ≥5	2	25	31	3	0
NC & ≥10	2	24	28	3	0
					189

22

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	0	0	0	0
<5 & OR <2	1	2	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <3	3	5	8	1	0
<20 & OR <5	5	17	27	5	0
VSBY ≥5	5	28	51	13	1
≥20 & ≥5	3	18	18	6	1
NC & ≥10	3	18	15	5	1
					182

23

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	0
<5 & OR <2	0	+	1	1	+
VSBY <2	0	+	+	+	+
<10 & OR <3	+	3	6	5	1
<20 & OR <5	1	9	17	9	1
VSBY ≥5	5	36	44	16	2
≥20 & ≥5	4	29	28	7	1
NC & ≥10	4	18	24	7	+
					852

24

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	+	0
<5 & OR <2	0	1	0	1	0
VSBY <2	0	+	0	0	0
<10 & OR <3	1	2	7	3	1
<20 & OR <5	1	8	16	8	1
VSBY ≥5	6	31	43	18	3
≥20 & ≥5	5	20	23	7	1
NC & ≥10	4	18	29	8	1
					341

WIND SPEED (KI

LCC - VSBY	0-3	4-10	11-
<1.5 & OR <.5	0	0	0
<5 & OR <2	0	1	1
VSBY <2	0	0	0
<10 & OR <3	0	2	7
<20 & OR <5	1	6	21
VSBY ≥5	3	31	48
≥20 & ≥5	2	20	20
NC & ≥10	2	17	19

29

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	0	1	1
<5 & OR <2	+	+	+	2	1
VSBY <2	0	0	0	0	+
<10 & OR <3	+	2	3	3	2
<20 & OR <5	1	7	7	7	3
VSBY ≥5	4	31	43	16	4
≥20 & ≥5	3	18	23	6	1
NC & ≥10	2	15	21	5	1
					582

30

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<5 & OR <2	0	0	3	0	3
VSBY <2	0	0	0	0	0
<10 & OR <3	0	5	10	5	5
<20 & OR <5	0	5	20	18	5
VSBY ≥5	0	0	64	21	5
≥20 & ≥5	0	3	31	3	0
NC & ≥10	0	0	31	3	0
					38

31

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<5 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <3	0	0	13	0	0
<20 & OR <5	0	0	33	0	0
VSBY ≥5	0	27	67	7	0
≥20 & ≥5	0	20	27	2	0
NC & ≥10	0	20	20	7	0
					16

32

INSUFFICIENT DATA

33

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	2	0	2	0
<5 & OR <2	0	3	2	3	2
VSBY <2	0	2	0	2	0
<10 & OR <3	0	5	12	12	3
<20 & OR <5	0	9	16	17	5
VSBY ≥5	3	26	40	22	5
≥20 & ≥5	3	15	20	8	0
NC & ≥10	3	14	14	8	8
					85

WIND SPEED (KN

LCC - VSBY	0-3	4-10	11-
<1.5 & OR <.5	0	3	2
<5 & OR <2	0	3	3
VSBY <2	0	2	3
<10 & OR <3	0	5	8
<20 & OR <5	0	8	17
VSBY ≥5	2	14	33
≥20 & ≥5	0	9	11
NC & ≥10	0	2	8

Graphs represent the objective compilation of available data for specified areas without re
The isopleth analyses (opposite page) are based on all available data subjectively adjuste

VISIBILITY-WIND

SEPTEMBER

bility (Vsby) in nautical

(h) when low cloud amount

eiling <1000 feet and or

rrences of N_h <5 8

and Wind 11 21 kts

ditions LCC <300 ft,

1

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1 5 & OR < 5	0	0	0	0	0
<6 & OR <2	0	0	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	6	10	0	0
<20 & OR <5	2	11	14	0	0
VSBY ≥5	14	52	32	1	0
≥50 & ≥5	11	36	18	1	0
NC & ≥ 10	11	34	15	1	0

177

2

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1 5 & OR <.5	0	+	+	0	0
<6 & OR <2	0	1	1	0	0
VSBY <2	0	1	0	0	0
<10 & OR <2	1	5	2	1	0
<20 & OR <5	2	10	7	2	+
VSBY ≥5	9	47	37	4	+
≥50 & ≥5	6	37	28	3	0
NC & ≥ 10	6	36	27	2	0

334

3

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1 5 & OR < 5	0	+	+	0	0
<6 & OR <2	+	3	2	0	0
VSBY <2	+	1	+	0	0
<10 & OR <2	1	7	8	1	0
<20 & OR <5	1	13	17	1	0
VSBY ≥5	3	35	56	1	0
≥50 & ≥5	2	21	34	1	0
NC & ≥ 10	2	19	33	1	0

276

4

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1 5 & OR < 5	0	0	2	0	0
<6 & OR <2	1	4	2	0	0
VSBY <2	0	1	0	0	0
<10 & OR <2	1	6	12	1	0
<20 & OR <5	2	14	24	2	0
VSBY ≥5	3	41	52	2	0
≥50 & ≥5	2	23	24	0	0
NC & ≥ 10	1	22	23	0	0

190

5

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1 5 & OR < 5	0	+	0	0	0
<6 & OR <2	0	2	1	0	0
VSBY <2	0	+	+	0	0
<10 & OR <2	1	11	5	0	0
<20 & OR <5	1	25	15	0	0
VSBY ≥5	3	58	36	1	0
≥50 & ≥5	1	27	16	+	0
NC & ≥ 10	1	24	14	+	0

633

6

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1 5 & OR < 5	0	+	+	+	0
<6 & OR <2	+	3	2	+	0
VSBY <2	+	+	1	0	0
<10 & OR <2	2	14	7	+	0
<20 & OR <5	4	29	14	+	0
VSBY ≥5	10	60	24	+	0
≥50 & ≥5	5	29	8	0	0
NC & ≥ 10	5	27	7	0	0

719

7

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1 5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	1	0	0
<20 & OR <5	0	3	5	0	0
VSBY ≥5	1	33	63	1	0
≥50 & ≥5	1	30	57	1	0
NC & ≥ 10	1	27	57	1	0

145

8

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1 5 & OR < 5	0	0	0	0	0
<6 & OR <2	0	+	+	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	1	2	0	0
<20 & OR <5	0	4	6	+	0
VSBY ≥5	0	27	70	2	0
≥50 & ≥5	0	23	64	2	0
NC & ≥ 10	0	23	61	1	0

540

9

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1 5 & OR < 5	0	0	0	0	0
<6 & OR <2	0	+	1	0	0
VSBY <2	0	0	+	0	0
<10 & OR <2	0	2	14	1	0
<20 & OR <5	+	6	34	3	0
VSBY ≥5	+	15	78	5	0
≥50 & ≥5	+	5	28	1	0
NC & ≥ 10	+	4	25	1	0

784

10

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1 5 & OR < 5	0	+	0	0	0
<6 & OR <2	0	2	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	+	14	6	0	0
<20 & OR < 5	1	32	17	+	0
VSBY ≥5	1	64	32	1	0
≥50 & ≥5	+	18	9	+	0
NC & ≥ 10	+	16	8	+	0

973

14

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1 5 & OR < 5	0	0	0	0	0
<6 & OR <2	0	+	+	0	0
VSBY <2	0	0	+	0	0
<10 & OR <2	+	2	5	+	0
<20 & OR <5	+	5	15	3	0
VSBY ≥5	1	25	66	8	0
≥50 & ≥5	1	18	42	5	0
NC & ≥ 10	1	17	39	5	0

657

15

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-17	11-21	22-33	≥34
<1 5 & OR < 5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	3	17	1	0
<20 & OR <5	1	10	25	13	0
VSBY ≥5	3	34	43	18	0
≥50 & ≥5	3	18	14	4	0
NC & ≥ 10	3	17	12	4	0

118

16

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1 5 & OR < 5	0	0	0	0	0
<6 & OR <2	0	2	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	4	11	2	0
<20 & OR <5	1	17	33	4	0
VSBY ≥5	2	32	57	10	0
≥50 & ≥5	1	7	6	2	0
NC & ≥ 10	0	5	5	1	0

132

17

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1 5 & OR < 5	0	0	+	0	0
<6 & OR <2	0	1	1	1	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	2	6	2	0
<20 & OR <5	1	8	12	3	0
VSBY ≥5	6	41	42	10	1
≥50 & ≥5	4	30	25	6	1
NC & ≥ 10	3	27	25	6	1

268

18

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1 5 & OR < 5	0	+	1	0	0
<6 & OR <2	0	1	2	1	0
VSBY <2	0	+	0	1	0
<10 & OR <2	0	2	6	3	0
<20 & OR <5	+	6	19	5	0
VSBY ≥5	2	31	51	12	0
≥50 & ≥5	1	22	28	5	0
NC & ≥ 10	1	21	27	5	0

350

19

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1 5 & OR < 5	0	+	1	0	0
<6 & OR <2	0	1	2	+	+
VSBY <2	0	+	1	+	+
<10 & OR <2	0	4	8	3	1
<20 & OR <5	+	9	15	9	2
VSBY ≥5	4	32	44	13	2
≥50 & ≥5	3	20	25	5	+
NC & ≥ 10	3	19	22	4	+

641

23

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1 5 & OR < 5	0	+	0	0	0
<6 & OR <2	0	+	1	1	+
VSBY <2	0	+	+	+	+
<10 & OR <2	+	3	6	5	1
<20 & OR <5	1	9	17	9	1
VSBY ≥5	5	30	44	16	2
≥50 & ≥5	4	20	26	7	1
NC & ≥ 10	4	19	24	7	1

952

24

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	+	0
<6 & OR <2	0	1	0	1	0
VSBY <2	0	+	0	0	0
<10 & OR <2	1	2	7	3	1
<20 & OR <5	1	9	16	8	1
VSBY ≥5	6	31	43	16	3
≥50 & ≥5	5	20	23	7	1
NC & ≥ 10	4	18	23	6	1

341

25

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1 5 & OR < 5	0	0	0	1	0
<6 & OR <2	0	1	1	1	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	2	7	5	1
<20 & OR <5	1	6	21	9	2
VSBY ≥5	3	31	46	15	3
≥50 & ≥5	2	20	20	5	1
NC & ≥ 10	2	17	19	4	1

202

26

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1 5 & OR < 5	0	0	0	0	0
<6 & OR <2	0	2	1	0	2
VSBY <2	0	0	0	0	0
<10 & OR <2	0	6	8	7	2
<20 & OR <5	0	15	21	9	2
VSBY ≥5	5	32	46	13	0
≥50 & ≥5	5	16	21	2	0
NC & ≥ 10	5	16	17	2	0

128

27

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1 5 & OR < 5	0	5	0	0	0
<6 & OR <2	0	10	5	0	0
VSBY <2	0	5	0	0	0
<10 & OR <2	5	10	19	0	0
<20 & OR <5	10	19	24	0	5
VSBY ≥5	14	38	38	0	5
≥50 & ≥5	5	14	10	0	0
NC & ≥ 10	5	14	10	0	0

21

28

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1 5 & OR <.5	0	7	0	0	0
<6 & OR <2	0	7	0	0	0
VSBY <2	0	7	0	0	0
<10 & OR <2	0	7	0	0	0
<20 & OR <5	0	7	0	0	0
VSBY ≥5	0	47	33	7	7
≥50 & ≥5	0	13	20	7	7
NC & ≥ 10	0	13	20	7	7

15

32

INSUFFICIENT DATA

33

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
& OR < 5	0	2	0	2	0
<6 & OR <2	0	3	2	3	2
VSBY <2	0	2	0	2	0
<10 & OR <2	0	6	12	12	3
<20 & OR <5	0	9	15	17	5
VSBY ≥5	3	25	40	22	5
≥50 & ≥5	3	15	20	6	0
NC & ≥ 10	3	14	14	6	0

65

34

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1 5 & OR < 5	0	3	2	2	2
<6 & OR <2	0	3	3	2	2
VSBY <2	0	2	3	2	0
<10 & OR <2	0	5	6	6	2
<20 & OR <5	0	6	11	23	2
VSBY ≥5	2	14	33	41	0
≥50 & ≥5	0	9	11	9	0
NC & ≥ 10	0	2	6	3	0

66

35

INSUFFICIENT DATA

36

INSUFFICIENT DATA

37

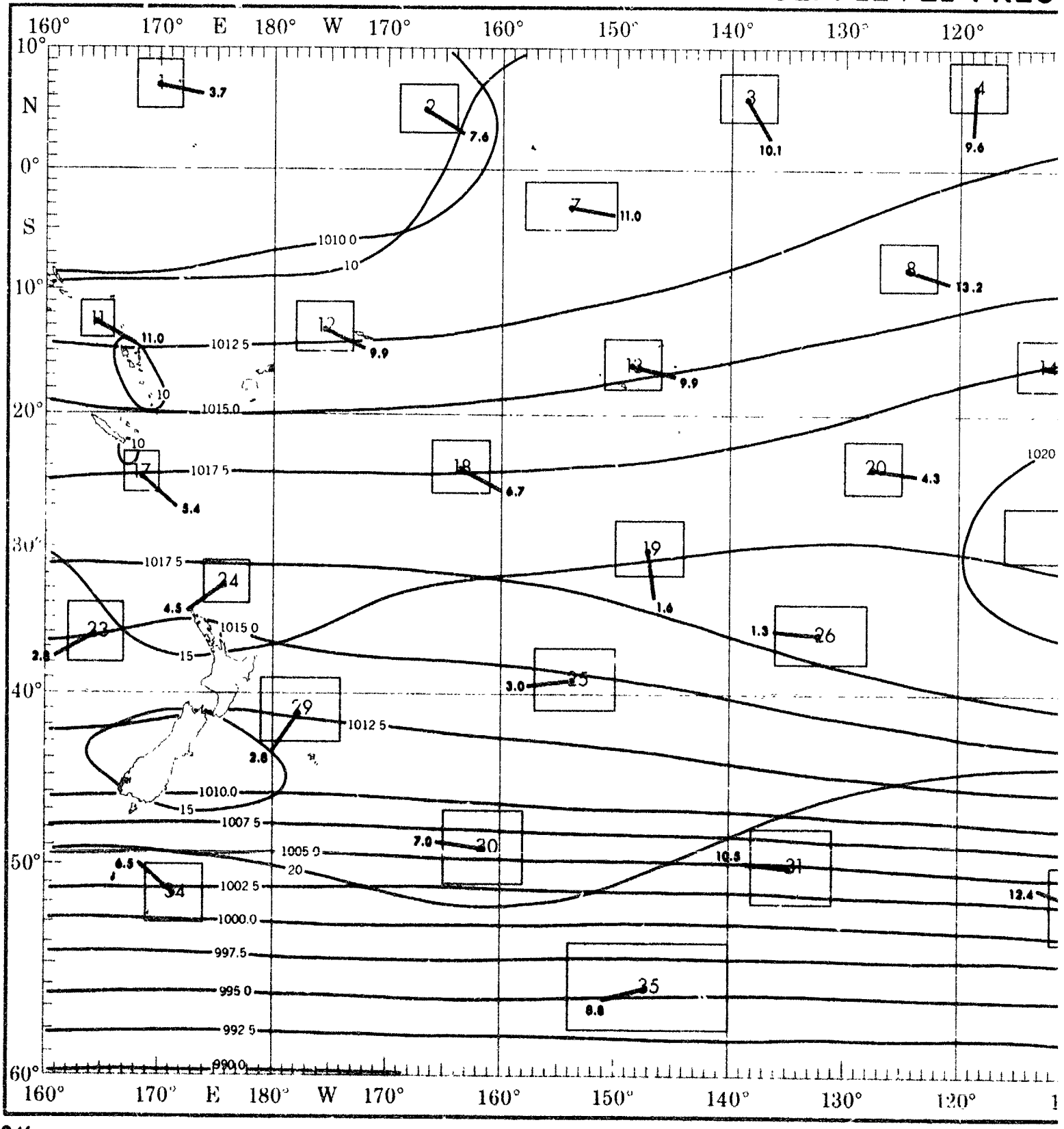
INSUFFICIENT DATA

e objective compilation of available data for specified areas without regard to suspected biases

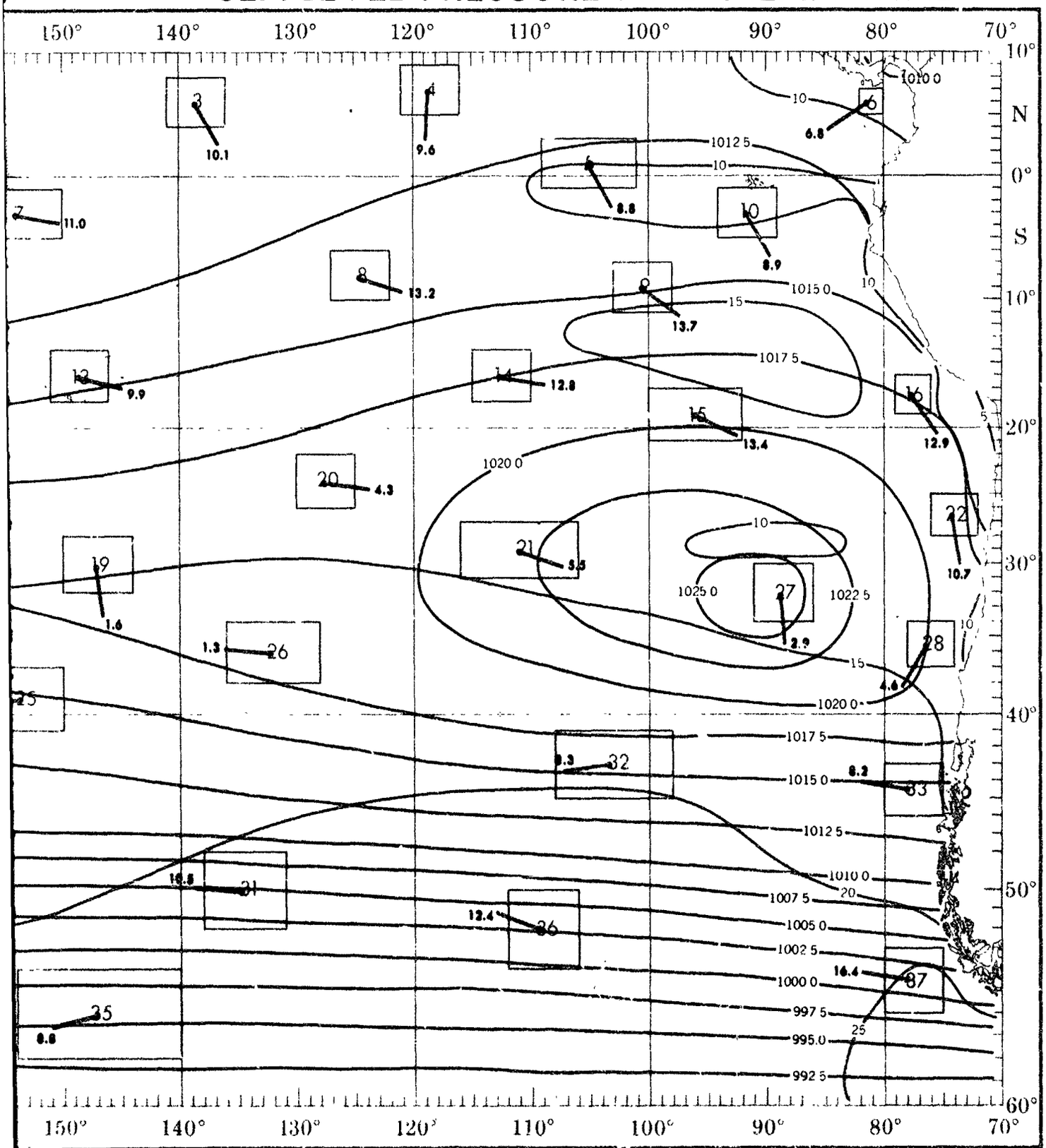
s (opposite page) are based on all available data subjectively adjusted where bias was evident

SEPTEMBER

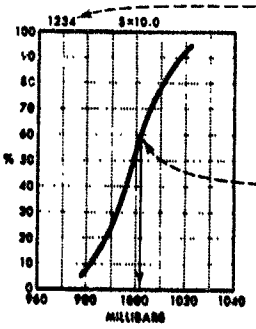
SEA LEVEL PRES



SEA LEVEL PRESSURE AND MEAN WIND



SEA LEVEL PRESSURE



Sea level pressure and mean wind.

Number of observations.

Cumulative percent frequency of sea level pressures equal to or less than the pressure intersected by the curve.

S=Standard deviation of pressure (mbs).

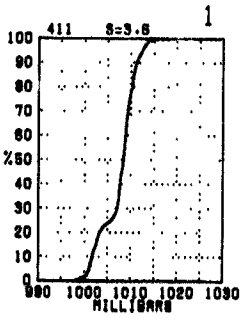
(60% of all observed sea level pressures were ≤1002 millibars.)

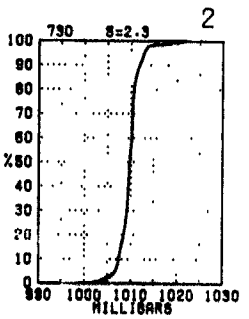
Vector mean wind is plotted from the direction which the mean flow occurs with the magnitude in knots at the end of the vector.

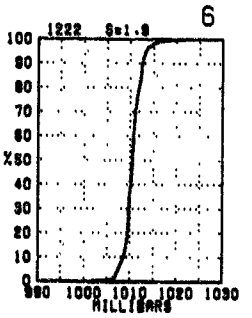
10.2 Vector mean wind is from the northeast at 10.2 knots.

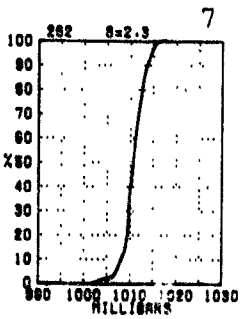
BLUE LINE - Scalar mean wind speed (kts.)

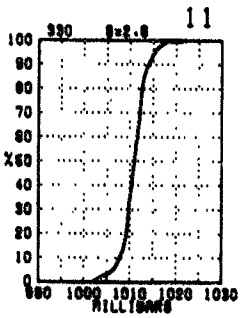
RED LINE - Mean sea level pressure (mbs.)

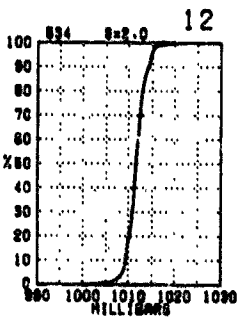


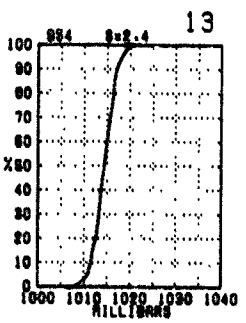


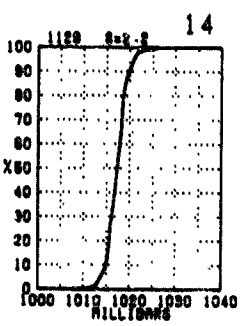


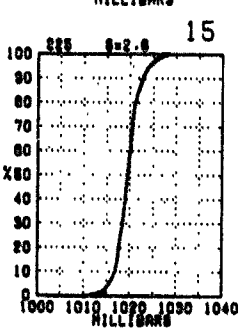


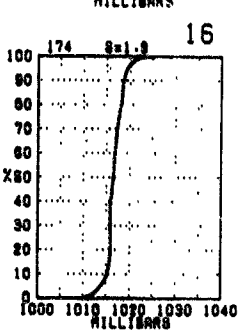


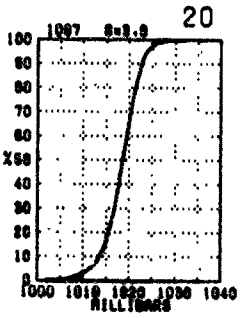


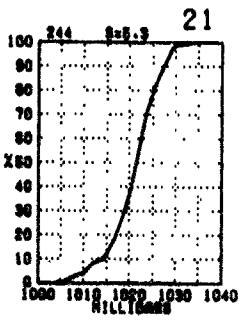


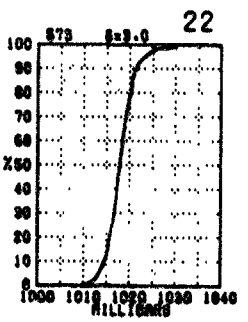


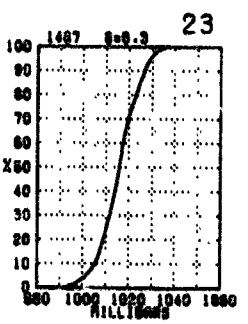


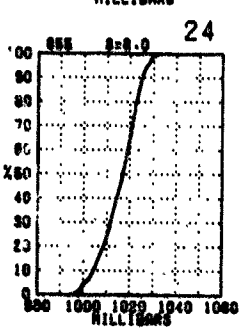


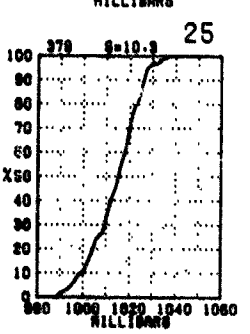


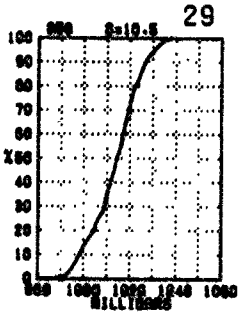


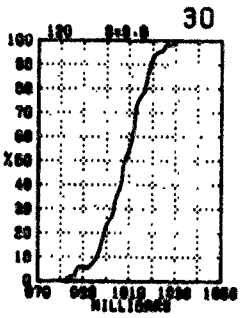


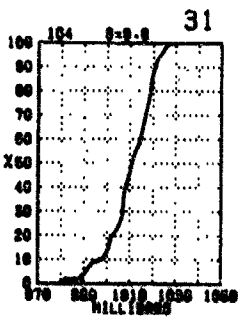


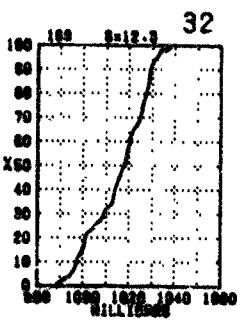


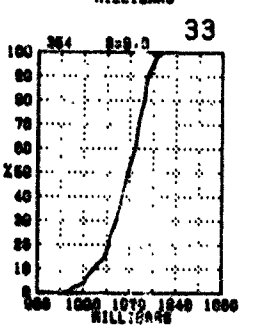


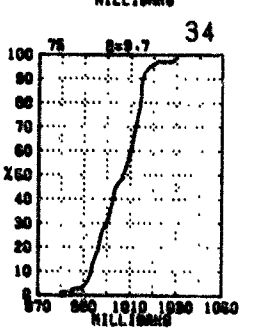












Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted wh

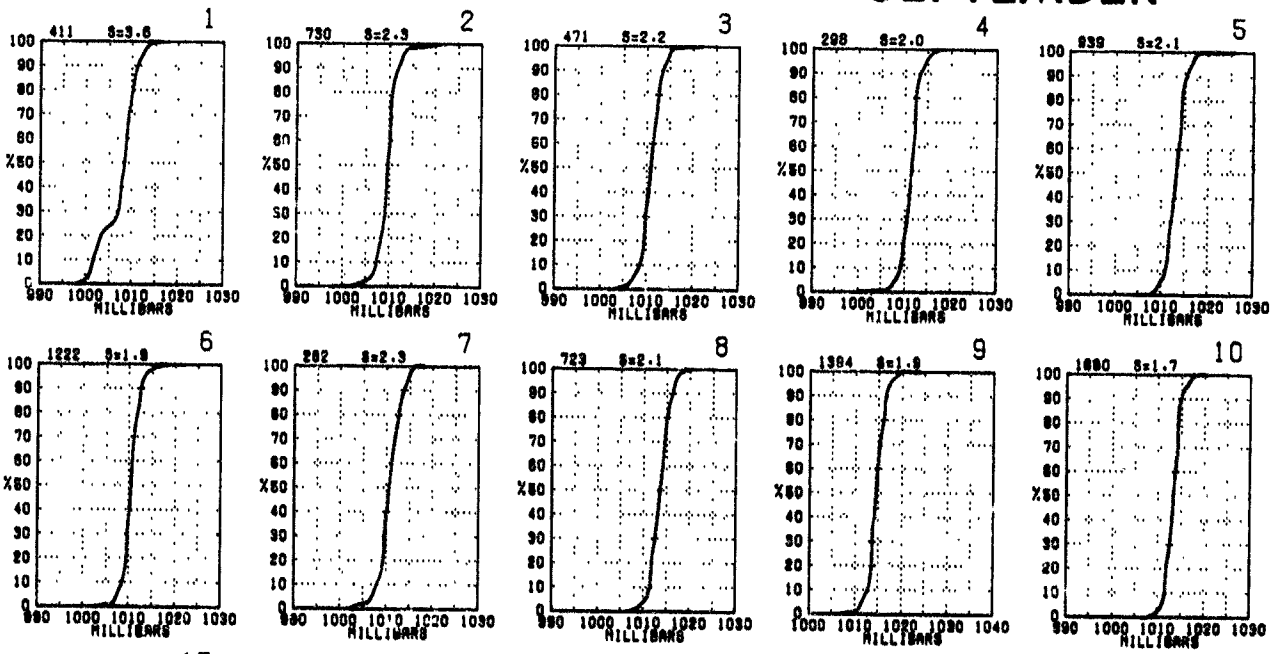
SEPTEMBER

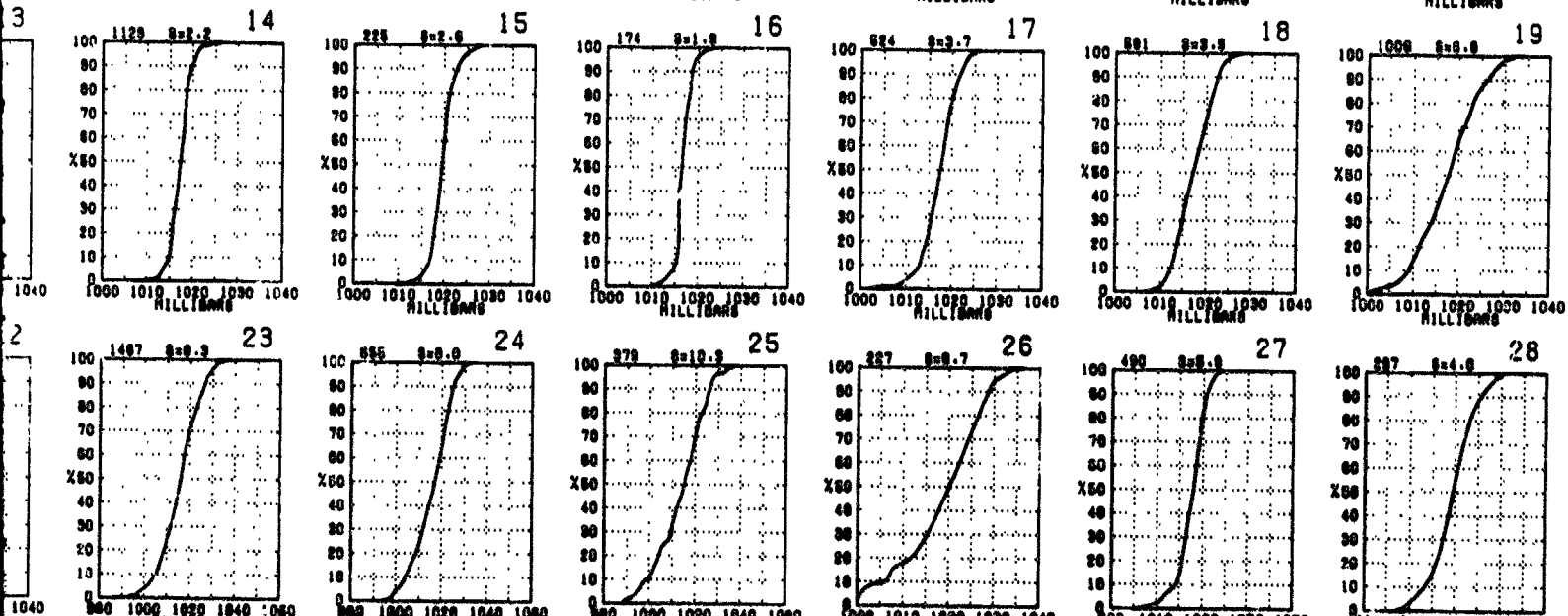
ures equal to or less than the

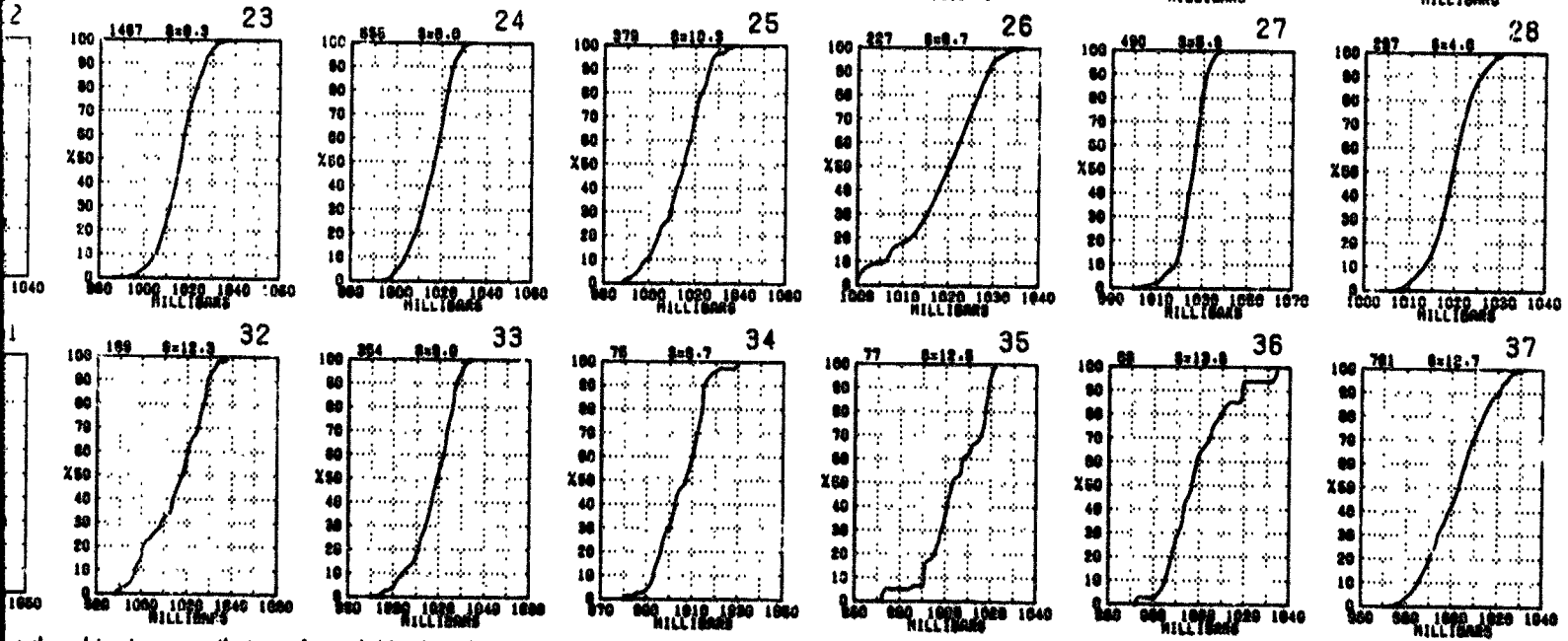
)

mean flow occurs with the

.2 knots.



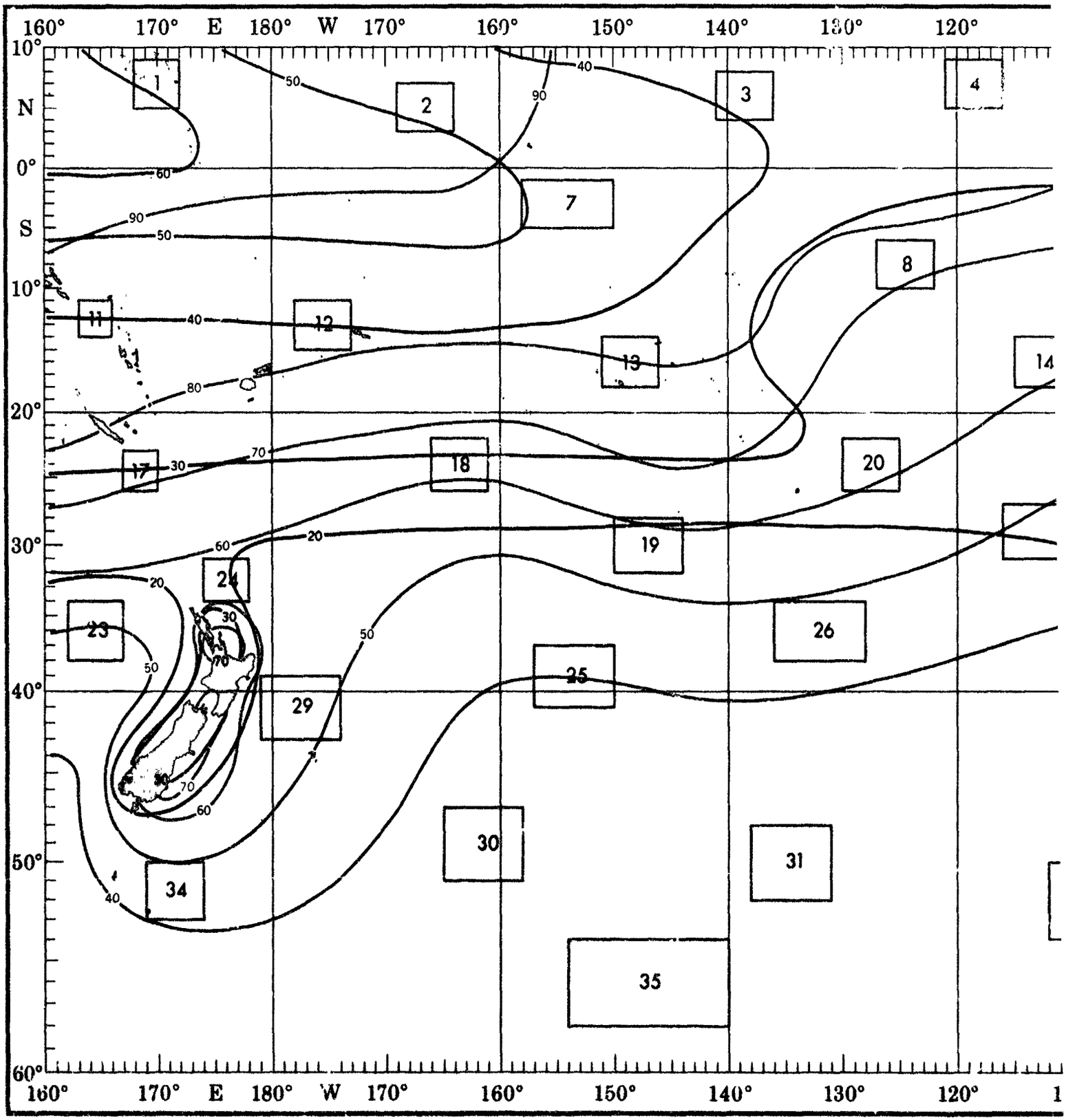




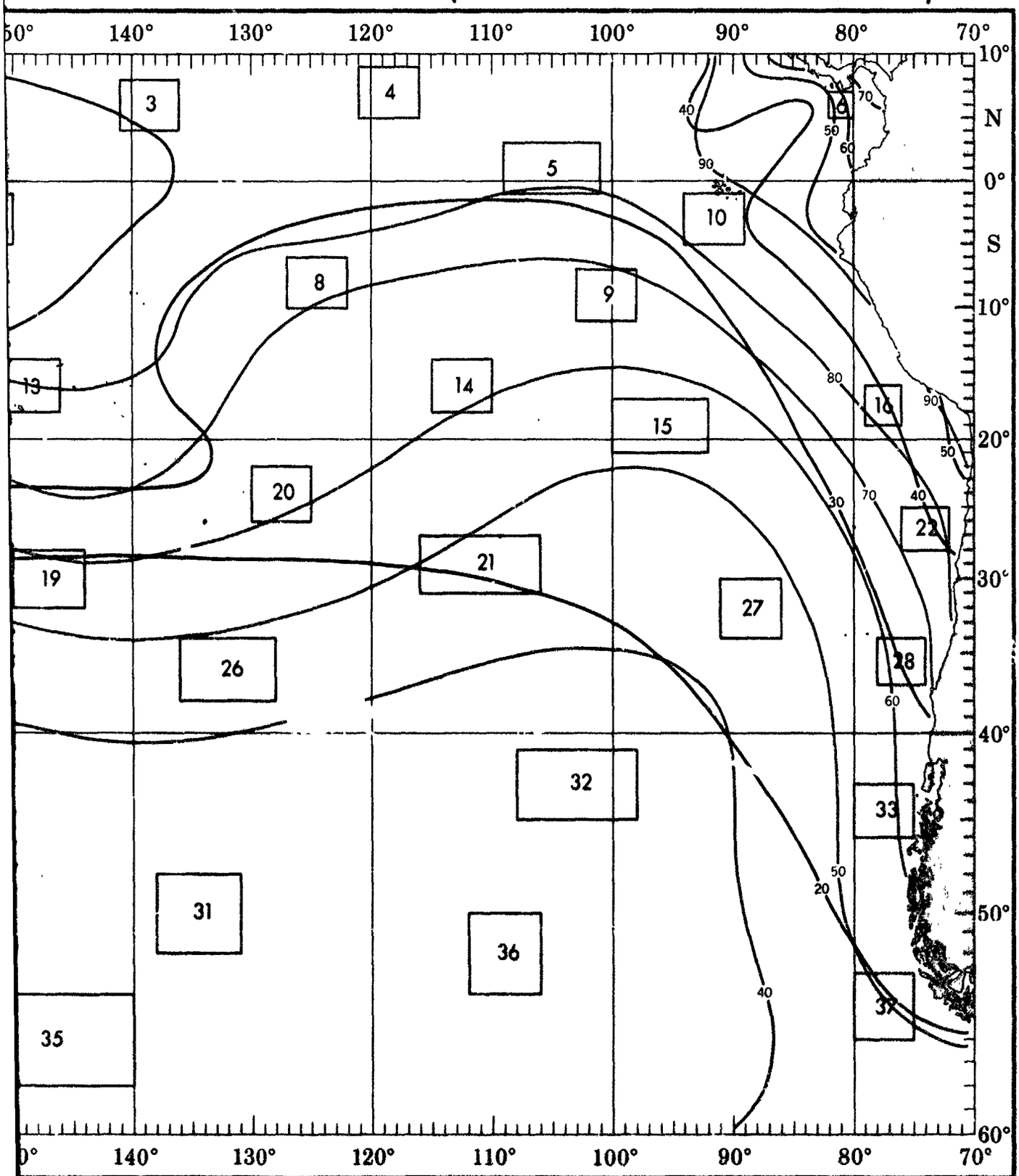
nt the objective compilation of available data for specified areas without regard to suspected biases.
lyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

SEPTEMBER

WAVES (



WAVES (<1.5 AND <2.5 METERS)

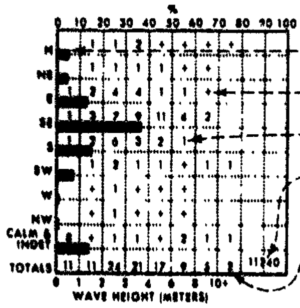


WAVE DIRECTION AND HEIGHT

Wave direction and height

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



—(5% of all waves were from the N.)

—+ indicates <.5% but >0

—(1% of all waves were from the S with heights from 6-7.5 meters.)

—Number of observations

—(2% of the waves from all directions had heights ≥10 meters.)

WAVE HEIGHT INTERVAL

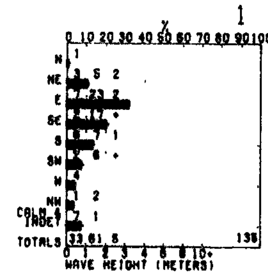
Feet	0-2	3-6	7-9	10-12	13-19	20-25	26-32	≥33
Meters	0-.5	1-1.5	2-2.5	3-3.5	4-5.5	6-7.5	8-9.5	≥10
	0	1	2	3	4	6	8	10+

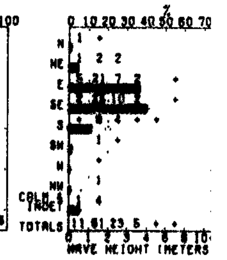
Printed scale on bottom of chart

BLUE LINE - Percent frequency of wave height <1.5 meters (5 feet)

RED LINE - Percent frequency of wave height <2.5 meters (8 feet)

1





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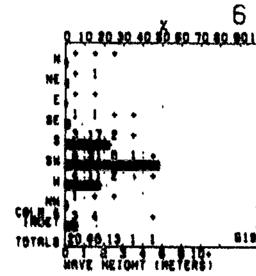

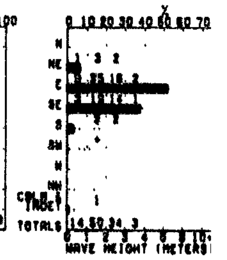

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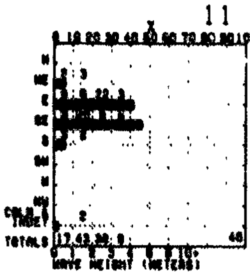

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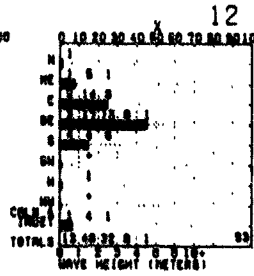

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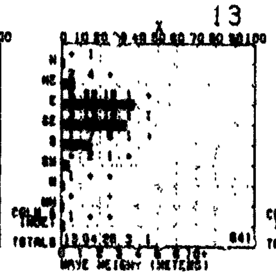
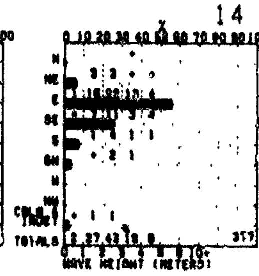


14



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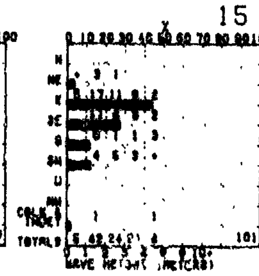

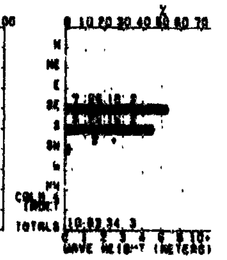

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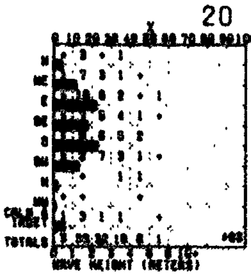

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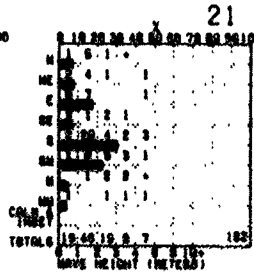

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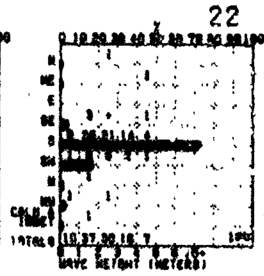

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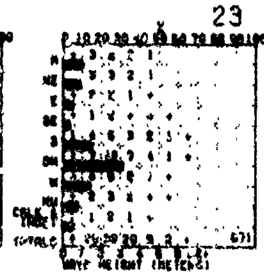

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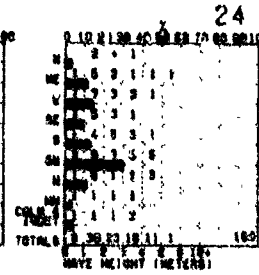

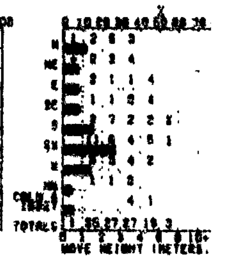

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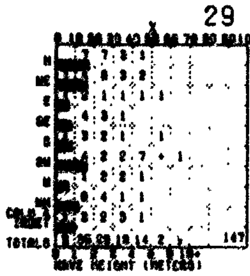

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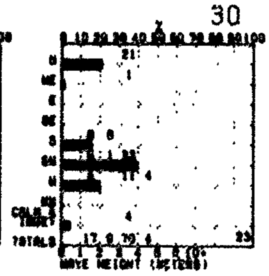
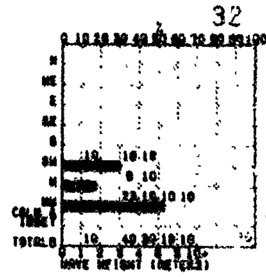


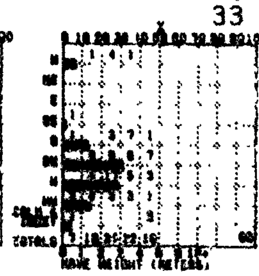
31

INSUFFICIENT DATA

32



33



Graphs represent the objective compilation of available data for specified areas without r

The isopleth analyses (opposite page) are based on all available data subjectively adjusts

) HEIGHT

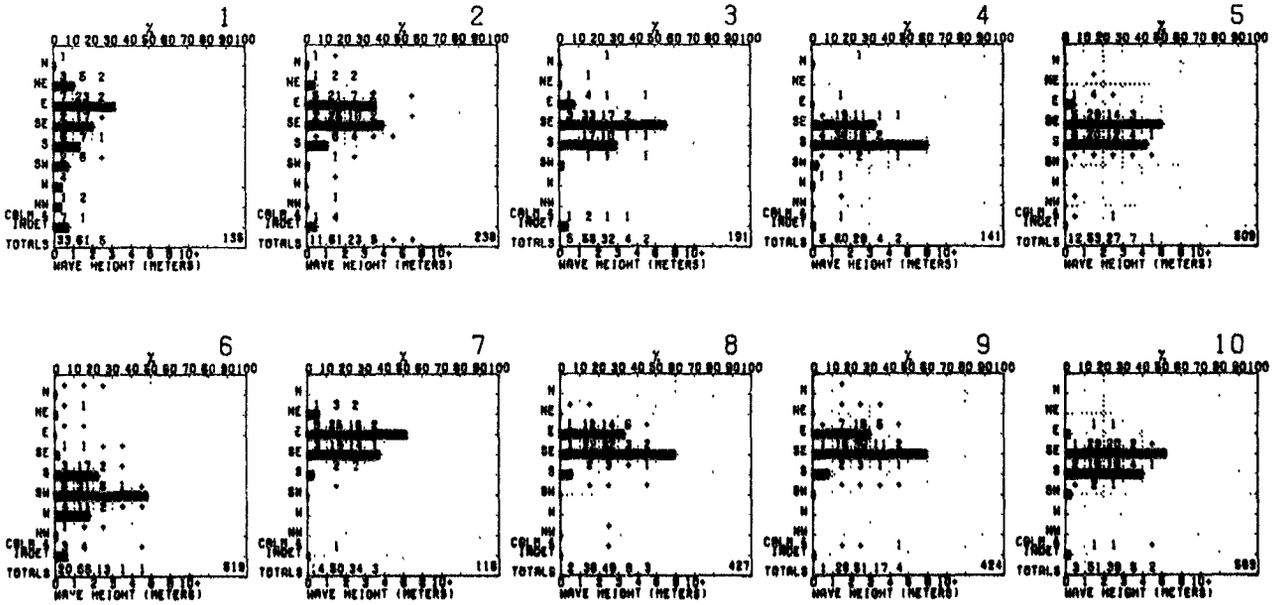
SEPTEMBER

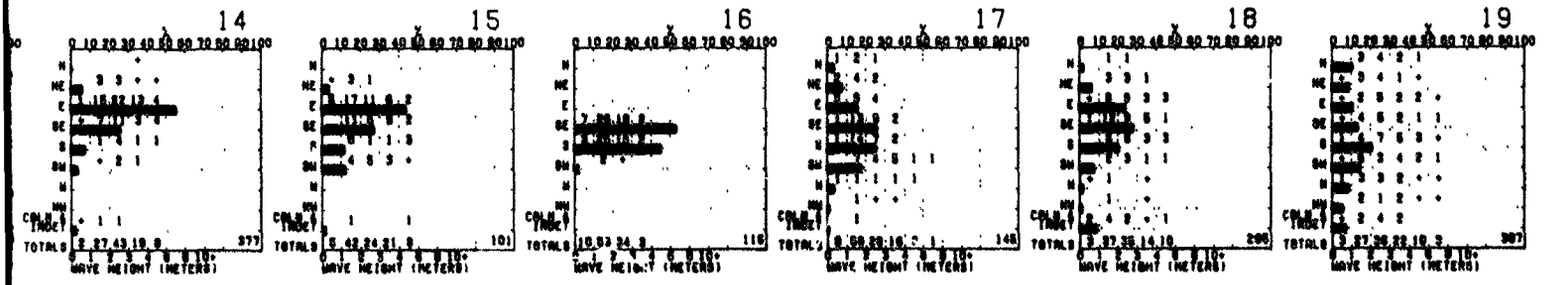
quency of waves from

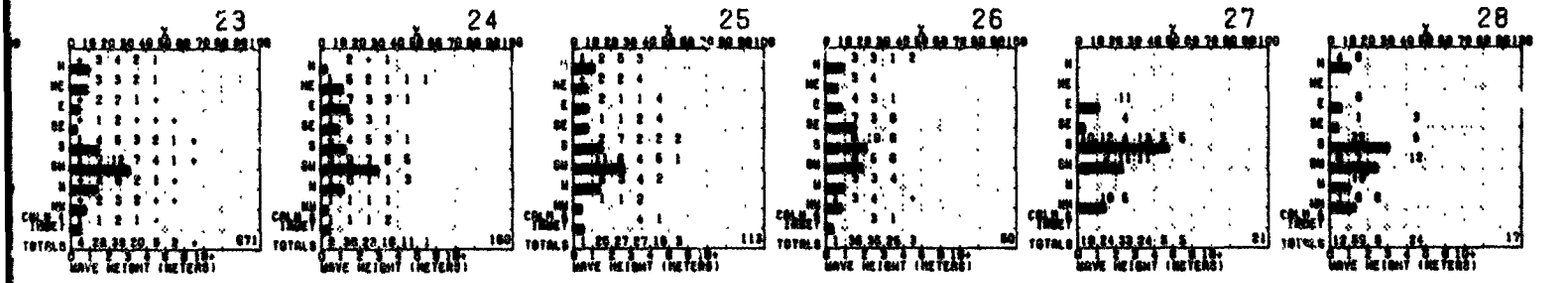
ercent frequency of wave

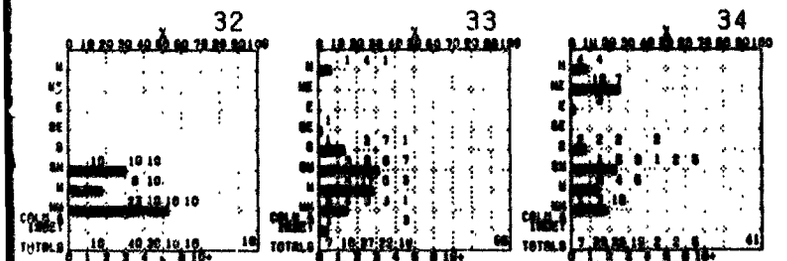
ws)

32 ≥33
5 ≥10
10+









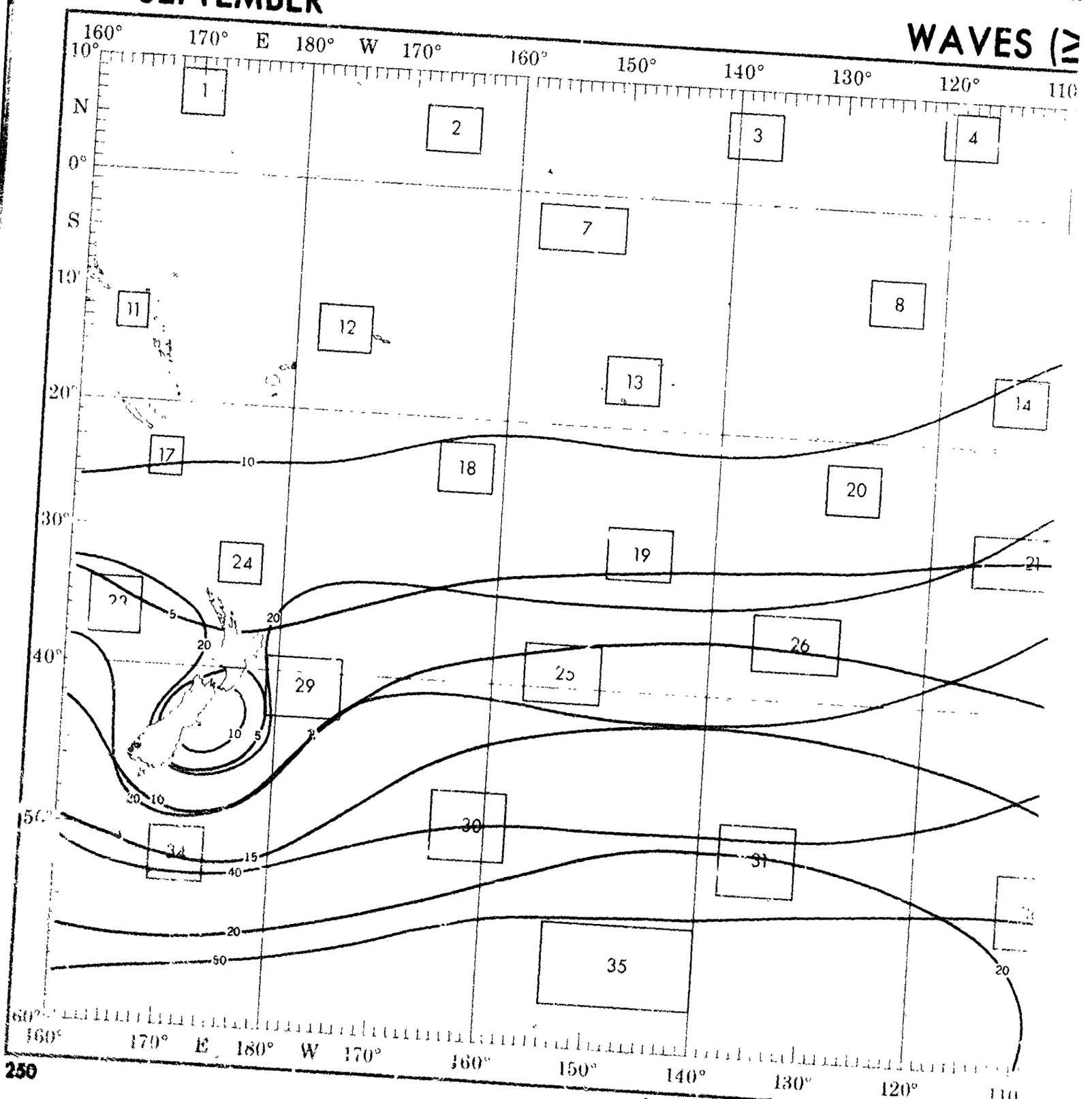
35 **INSUFFICIENT DATA**

36 **INSUFFICIENT DATA**

37 **INSUFFICIENT DATA**

e objective compilation of available data for specified areas without regard to suspected biases.
s (opposite page) are based on all available data subjectively adjusted where bias was evident.

SEPTEMBER


WAVES (≥
160°
170°
E
180°
W
170°
160°
150°
140°
130°
120°
110
10°
N
0°
S
10°
20°
30°
40°
50°
60°
1
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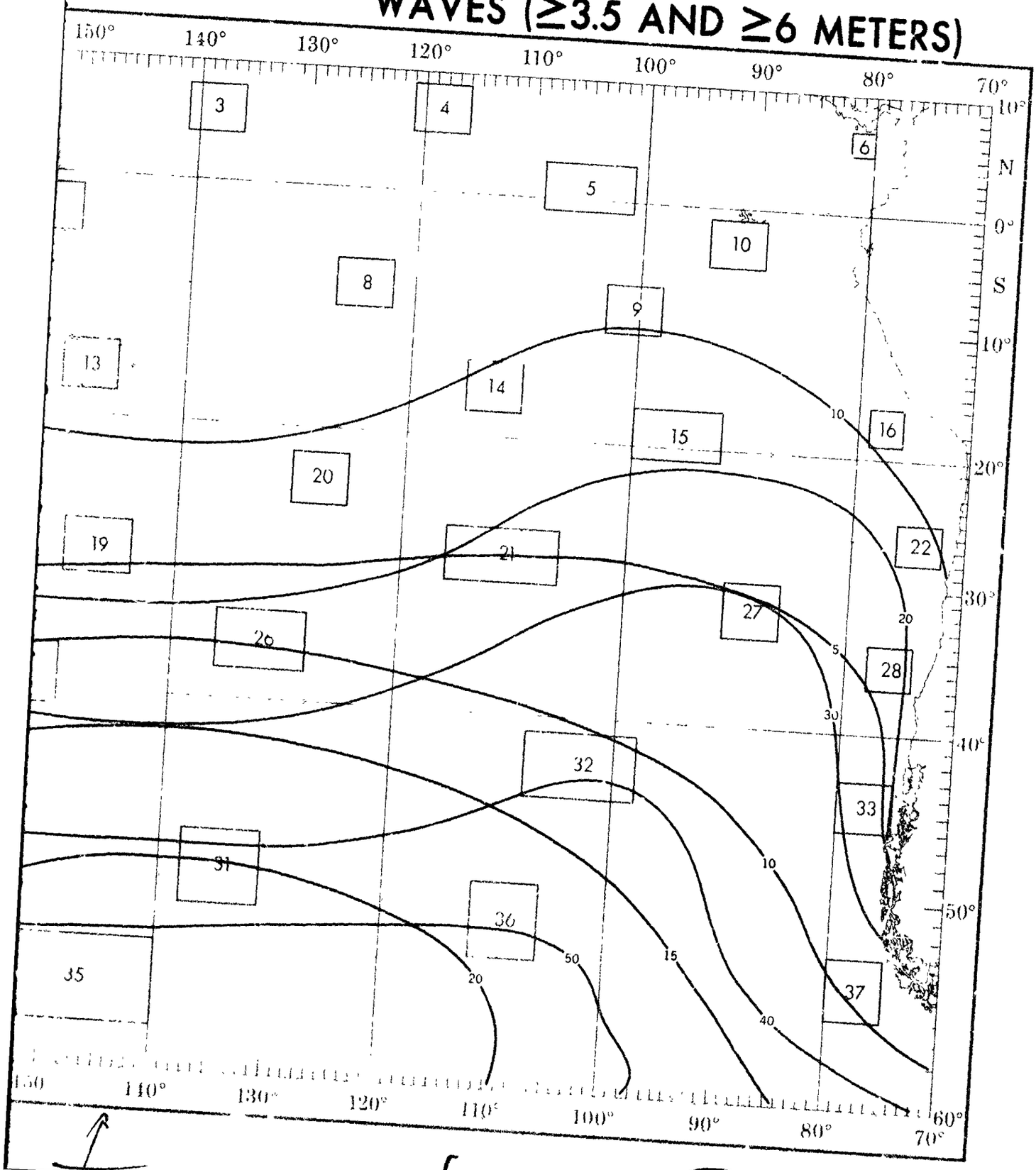
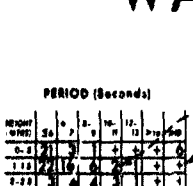
50

WAVES (≥3.5 AND ≥6 METERS)



WAVE PERIOD AND HEIGHT

Percent frequency of occurrence of wave period and height.



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.

BLUE LINE - Percent frequency of wave height ≥3.5 meters (12 feet)

RED LINE - Percent frequency of wave height ≥6 meters (20 feet)

1

HEIGHT (METERS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	23	1	2	1	0	0	9
1-1.5	29	18	4	4	2	0	4
2-2.5	1	4	1	0	0	0	0
3-3.5	0	0	0	0	0	0	0
4-4.5	0	0	0	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

140

6

HEIGHT (METERS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	16	2	1	+	0	0	4
1-1.5	28	20	7	1	1	1	5
2-2.5	4	4	3	1	+	+	+
3-3.5		0	+	+	+	0	0
4-4.5	+	+	+	0	0	0	+
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

539

11

HEIGHT (METERS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	4	0	0	0	0	10
1-1.5	18	18	4	0	0	0	0
2-2.5	12	10	6	0	0	0	0
3-3.5	4	4	0	0	0	0	0
4-4.5	0	0	0	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

45

12

HEIGHT (METERS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	10	1	0	2	0	0	2
1-1.5	14	21	6	0	1	0	3
2-2.5	4	14	6	0	2	0	3
3-3.5	1	0	6	0	0	0	0
4-4.5	0	1	0	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

94

13

HEIGHT (METERS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	9	2	1	1	0	0	2
1-1.5	21	20	6	1	2	1	2
2-2.5	5	16	7	2	1	+	1
3-3.5	+	1	1	+	0	+	+
4-4.5	+	1	1	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

653

14

HEIGHT (METERS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	1	+	0	0	0	0	+
1-1.5	9	9	6	1	1	1	3
2-2.5	4	16	14	3	3	1	2
3-3.5	3	2	8	5	1	2	1
4-4.5	0	1	5	1	+	1	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

377

15

HEIGHT (METERS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	12	1	0	0	0	0	0
1-1.5	8	15	7	3	0	0	0
2-2.5	8	5	10	0	0	0	0
3-3.5	0	5	7	5	0	1	0
4-4.5	0	0	1	0	0	0	1
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

116

20

HEIGHT (METERS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	+	+	+	0	0	1
1-1.5	13	12	6	2	+	1	3
2-2.5	4	8	9	4	1	+	2
3-3.5	0	4	4	2	4	+	1
4-4.5	+	2	1	1	+	1	+
5-7.5	0	0	1	0	+	0	+
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

411

21

HEIGHT (METERS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	18	1	+	0	0	0	1
1-1.5	16	25	1	1	0	0	0
2-2.5	2	7	6	3	0	1	0
3-3.5	1	2	3	2	0	0	0
4-4.5	2	1	2	1	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

187

22

HEIGHT (METERS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	10	1	0	0	0	0	1
1-1.5	18	12	5	0	1	0	2
2-2.5	3	12	8	4	2	1	1
3-3.5	1	5	7	2	0	1	0
4-4.5	0	3	3	0	0	1	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

184

23

HEIGHT (METERS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	+	+	+	0	0	1
1-1.5	8	10	4	1	1	+	1
2-2.5	4	14	12	6	1	+	1
3-3.5	+	6	6	4	2	1	1
4-4.5	+	2	3	3	+	0	+
5-7.5	0	1	+	1	+	+	0
8-9.5	0	0	0	0	+	+	0
≥10	0	0	0	0	0	0	0

679

24

HEIGHT (METERS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	1	1	0	0	0	2
1-1.5	18	7	7	0	0	1	4
2-2.5	6	8	6	2	0	0	1
3-3.5	2	3	8	1	0	0	2
4-4.5	0	2	4	2	2	0	0
5-7.5	0	0	1	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

152

29

HEIGHT (METERS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	1	1	1	0	0	0	1
1-1.5	16	14	2	0	0	0	4
2-2.5	4	7	13	2	0	0	3
3-3.5	2	4	3	2	1	1	3
4-4.5	4	1	2	3	1	3	1
5-7.5	0	0	0	1	1	0	0
8-9.5	0	0	0	0	0	1	0
≥10	0	0	0	0	0	0	3

147

30

HEIGHT (METERS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	0	0	0	0	0	0	0
1-1.5	0	17	0	0	0	0	0
2-2.5	0	4	0	4	0	0	0
3-3.5	0	13	22	4	0	17	4
4-4.5	0	3	4	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

23

31

INSUFFICIENT DATA

32

INSUFFICIENT DATA

33

HEIGHT (METERS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	1	1	0	0	0	1
1-1.5	6	0	6	4	0	0	1
2-2.5	1	12	12	12	0	0	0
3-3.5	6	3	3	4	4	1	0
4-4.5	0	6	1	0	3	3	3
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

68

Graphs represent the objective compilation of available data for specified areas without re
The isopleth analyses (opposite page) are based on all available data subjectively adjuste

IEIGHT

SEPTEMBER

11 seconds)

en both are reported If both

1

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	23	1	2	1	0	0	9
1-1.5	29	18	4	4	2	0	4
2-2.5	1	4	1	0	0	0	0
3-3.5	0	0	0	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

140

2

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	3	1	0	0	0	2
1-1.5	26	21	7	1	1	+	4
2-2.5	5	8	8	1	+	0	2
3-3.5	+	2	1	1	0	0	0
4-5.5	0	0	0	+	0	0	0
6-7.5	0	0	0	0	0	0	+
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

244

3

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	0	0	0	0	0	1
1-1.5	19	17	16	2	0	0	3
2-2.5	3	18	9	1	1	1	0
3-3.5	1	2	0	1	0	1	0
4-5.5	1	0	2	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

134

4

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	2	0	0	0	0	0
1-1.5	36	16	4	2	1	0	1
2-2.5	6	9	7	1	2	2	1
3-3.5	0	1	0	1	1	0	0
4-5.5	0	0	0	1	0	1	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

142

5

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	9	2	[illegible]	1	0	0	+
1-1.5	20	21	7	1	2	+	1
2-2.5	5	9	7	3	1	0	1
3-3.5	+	4	2	+	+	0	0
4-5.5	0	0	1	+	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

516

6

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	16	2	1	+	0	0	4
1-1.5	28	20	7	1	1	1	6
2-2.5	4	4	3	1	+	+	+
3-3.5	1	0	+	+	+	0	0
4-5.5	+	+	+	0	0	0	+
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

539

7

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	9	0	1	0	0	0	3
1-1.5	28	15	5	0	0	0	3
2-2.5	10	16	4	3	0	0	1
3-3.5	0	1	2	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

118

8

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	0	0	0	0	0	0
1-1.5	12	11	7	4	1	0	2
2-2.5	4	15	17	9	2	+	2
3-3.5	1	2	4	1	1	+	0
4-5.5	0	1	1	+	+	1	+
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

427

9

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	+	+	0	0	0	0	1
1-1.5	10	13	2	1	0	+	+
2-2.5	10	21	12	3	1	1	3
3-3.5	1	6	5	3	2	+	+
4-5.5	0	+	2	1	+	0	1
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

426

10

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	1	1	0	0	0	1
1-1.5	19	22	5	2	+	+	1
2-2.5	5	17	10	4	1	1	1
3-3.5	+	3	2	1	0	0	0
4-5.5	0	0	1	+	0	0	+
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

578

13

HEIGHT (MTRS)	IND
0-.5	7
1-1.5	2
2-2.5	1
3-3.5	+
4-5.5	0
6-7.5	0
8-9.5	0
≥10	0

59

14

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	1	+	0	0	0	0	+
1-1.5	9	8	3	1	[illegible]	1	3
2-2.5	4	16	14	3	3	1	2
3-3.5	3	2	6	5	1	2	1
4-5.5	0	1	5	1	+	1	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

377

15

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	12	1	0	0	0	0	0
1-1.5	6	15	7	3	0	0	8
2-2.5	8	5	10	0	0	0	0
3-3.5	0	5	7	5	0	1	0
4-5.5	0	0	5	2	0	0	1
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

110

16

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	9	1	0	0	0	0	2
1-1.5	22	14	8	3	3	0	2
2-2.5	9	9	7	4	2	3	0
3-3.5	0	1	1	0	0	1	1
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

117

17

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	1	0	1	0	0	1
1-1.5	22	19	7	1	1	0	1
2-2.5	3	8	7	4	1	0	3
3-3.5	1	3	5	1	0	0	0
4-5.5	0	0	1	1	0	0	0
6-7.5	0	0	0	1	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

148

18

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	0	+	0	0	0	1
1-1.5	14	13	5	1	0	0	4
2-2.5	4	15	8	3	2	+	2
3-3.5	+	6	3	3	+	1	0
4-5.5	2	4	1	2	+	+	1
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

266

19

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	+	0	0	0	0	+
1-1.5	11	9	5	1	1	1	1
2-2.5	8	11	11	3	1	0	4
3-3.5	2	8	5	4	1	+	2
4-5.5	2	3	3	1	1	1	0
6-7.5	0	+	+	2	+	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

366

22

HEIGHT (MTRS)	IND
0-.5	1
1-1.5	2
2-2.5	1
3-3.5	0
4-5.5	0
6-7.5	0
8-9.5	0
≥10	0

4

23

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	+	+	+	0	0	1
1-1.5	9	10	4	1	1	+	1
2-2.5	4	14	12	6	1	+	1
3-3.5	+	6	5	4	2	1	1
4-5.5	+	2	3	3	+	0	+
6-7.5	0	1	+	1	+	+	0
8-9.5	0	0	0	0	+	+	0
≥10	0	0	0	0	0	0	0

679

24

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	1	1	0	0	0	2
1-1.5	10	7	7	0	0	1	4
2-2.5	6	8	8	2	0	0	1
3-3.5	2	3	9	1	0	8	2
4-5.5	0	2	4	2	2	0	0
6-7.5	0	0	1	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

162

25

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	0	0	0	0	0	0
1-1.5	6	11	4	2	0	0	2
2-2.5	6	3	9	5	0	1	3
3-3.5	2	5	6	5	2	1	5
4-5.5	4	3	2	5	1	3	1
6-7.5	0	0	0	0	0	3	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

114

26

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	1	0	0	0	0	0	0
1-1.5	11	14	8	1	1	0	1
2-2.5	4	8	8	15	0	0	3
3-3.5	0	13	1	4	8	0	1
4-5.5	0	0	0	1	1	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

60

27

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	0	5	0	0	0	0
1-1.5	0	10	5	0	0	0	10
2-2.5	0	33	0	0	0	0	0
3-3.5	0	14	5	5	0	0	0
4-5.5	0	0	0	5	0	0	0
6-7.5	0	0	0	0	5	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

21

28

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	12	0	0	0	0	0	0
1-1.5	29	0	24	0	0	0	0
2-2.5	0	0	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
4-5.5	0	12	0	12	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

17

31

T

32

INSUFFICIENT DATA

33

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	1	1	0	0	0	1
1-1.5	6	0	8	4	0	0	1
2-2.5	1	12	12	12	0	0	0
3-3.5	6	3	3	4	4	1	0
4-5.5	0	8	1	8	3	3	3
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

68

34

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	2	0	0	0	0	0
1-1.5	5	15	17	2	0	0	0
2-2.5	10	5	10	5	0	0	0
3-3.5	0	0	7	7	0	0	0
4-5.5	0	2	0	0	0	0	0
6-7.5	0	0	2	0	0	0	0
8-9.5	0	0	5	0	0	0	0
≥10	0	0	0	0	0	0	0

41

35

INSUFFICIENT DATA

36

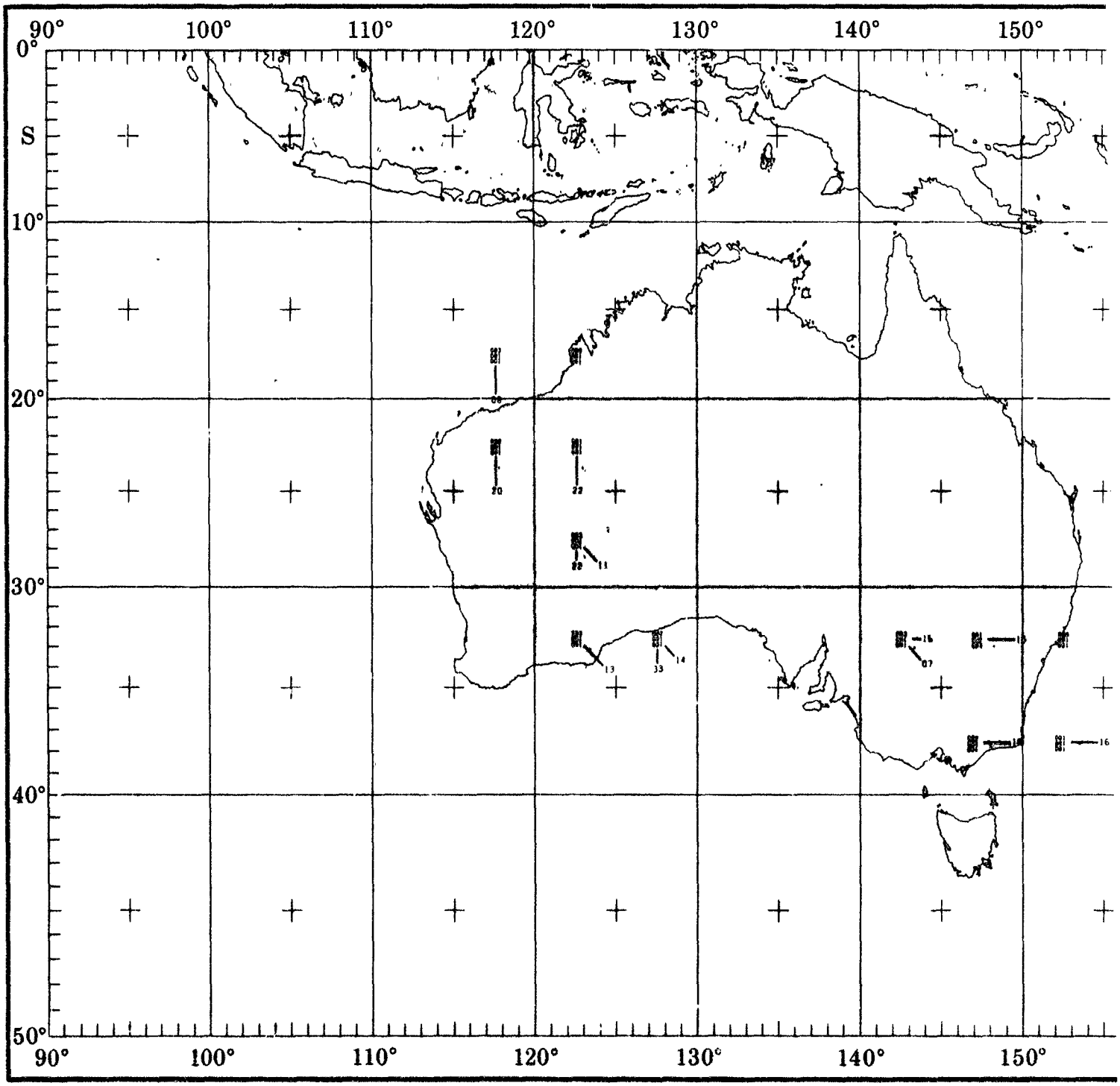
INSUFFICIENT DATA

37

INSUFFICIENT DATA

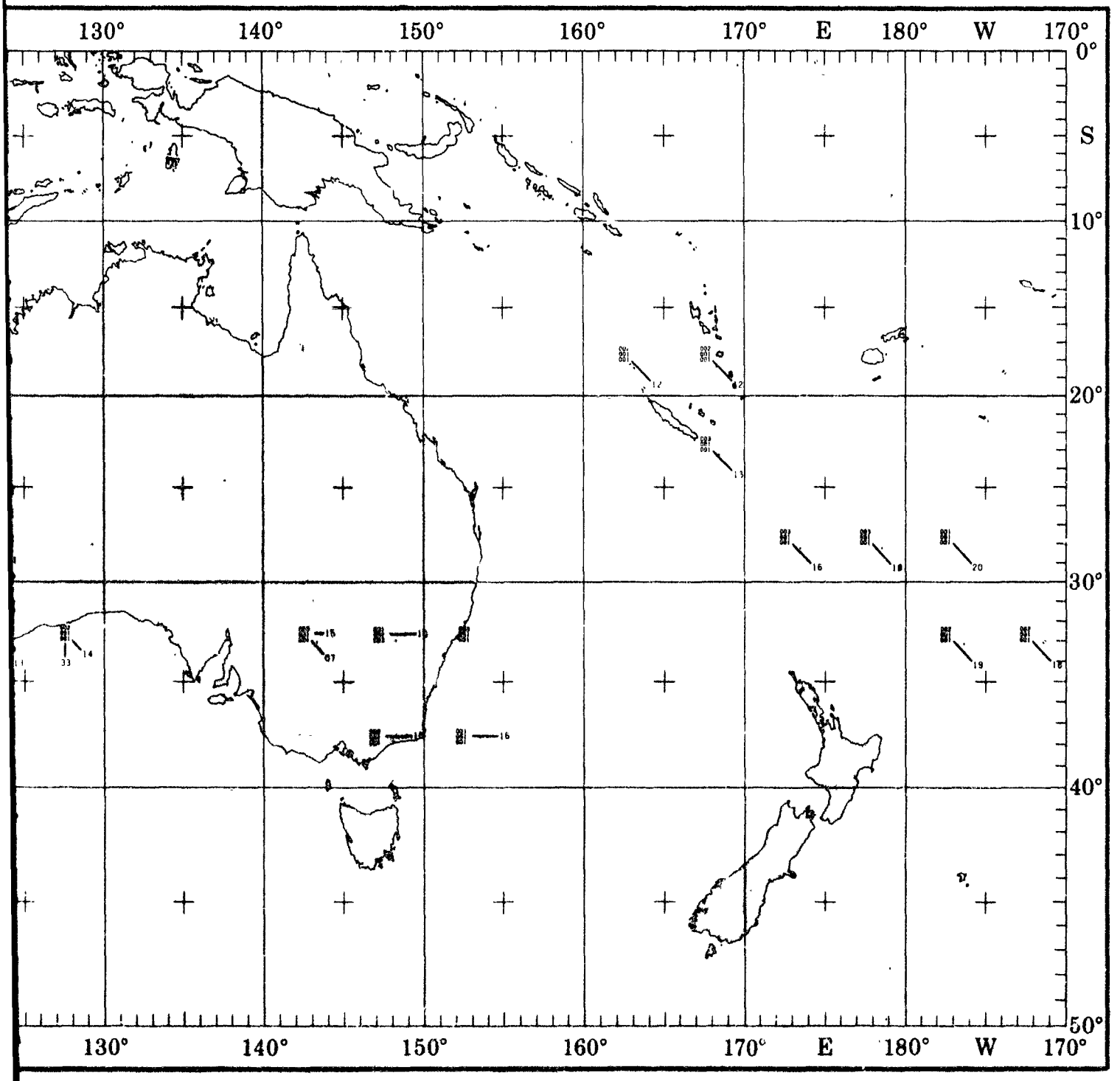
the objective compilation of available data for specified areas without regard to suspected biases.
yses (opposite page) are based on all available data subjectively adjusted where bias was evident.

SEPTEMBER



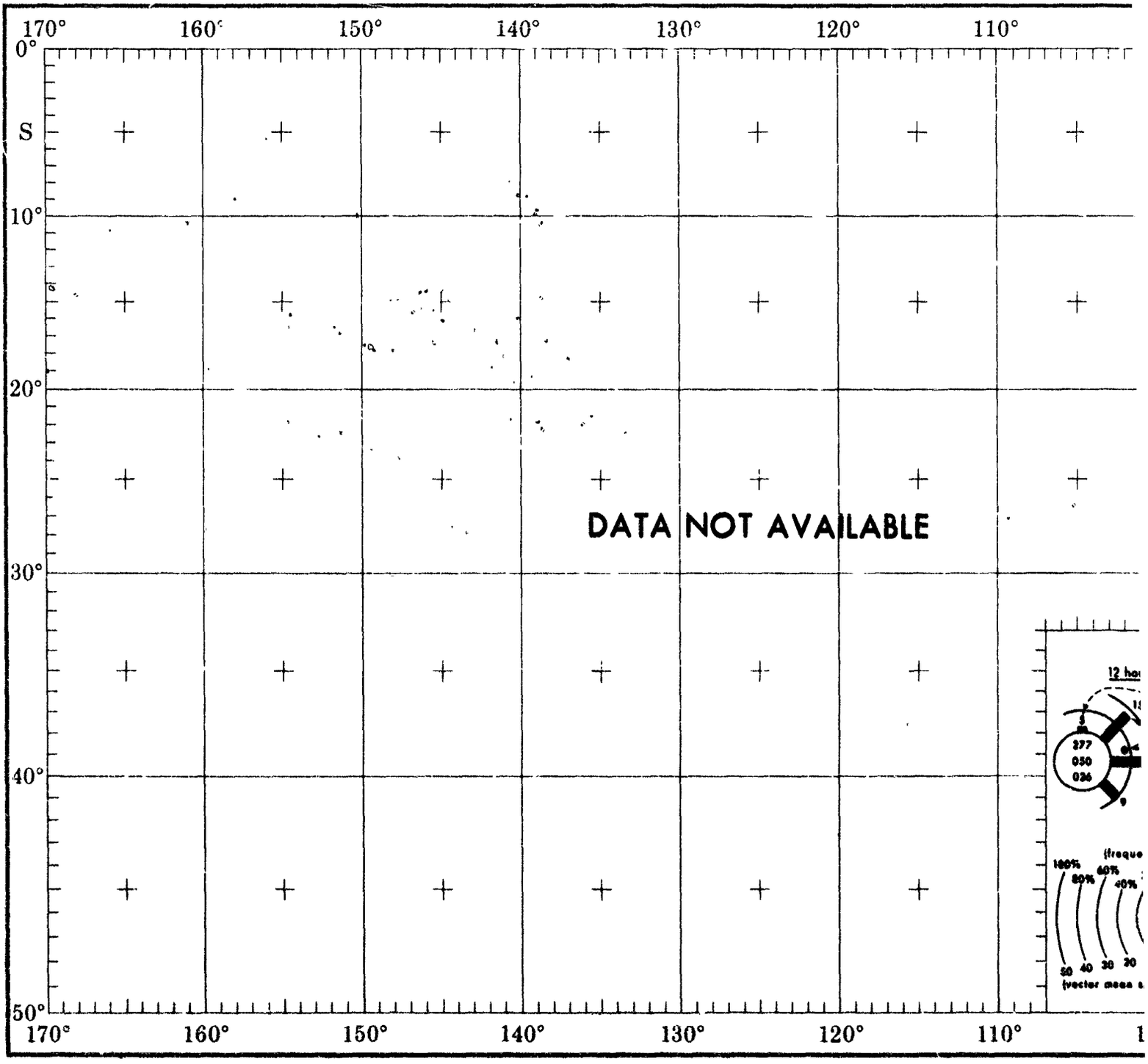
1

TROPICAL CYCLONE



1 1 2

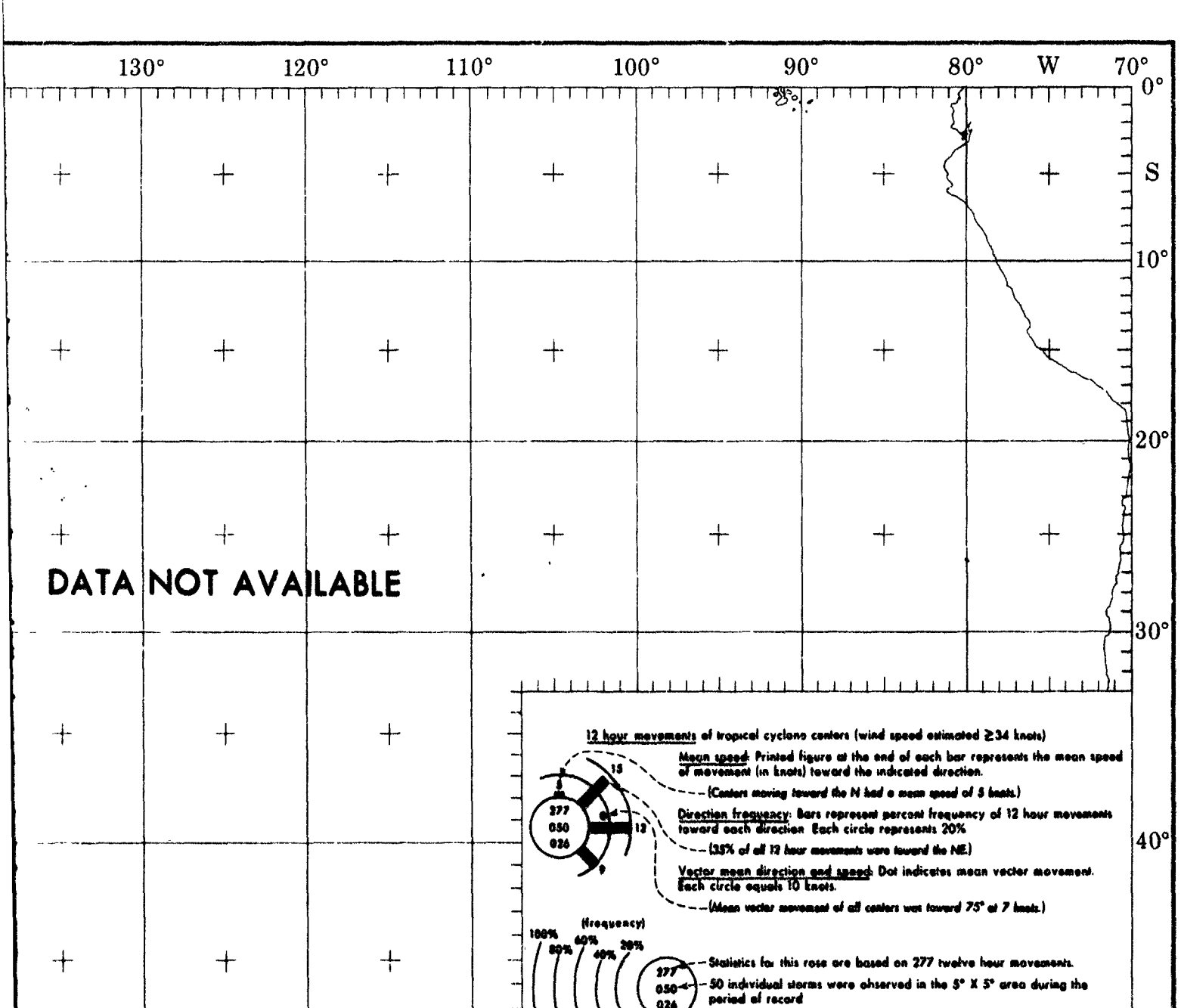
TROPICAL CYCLONE



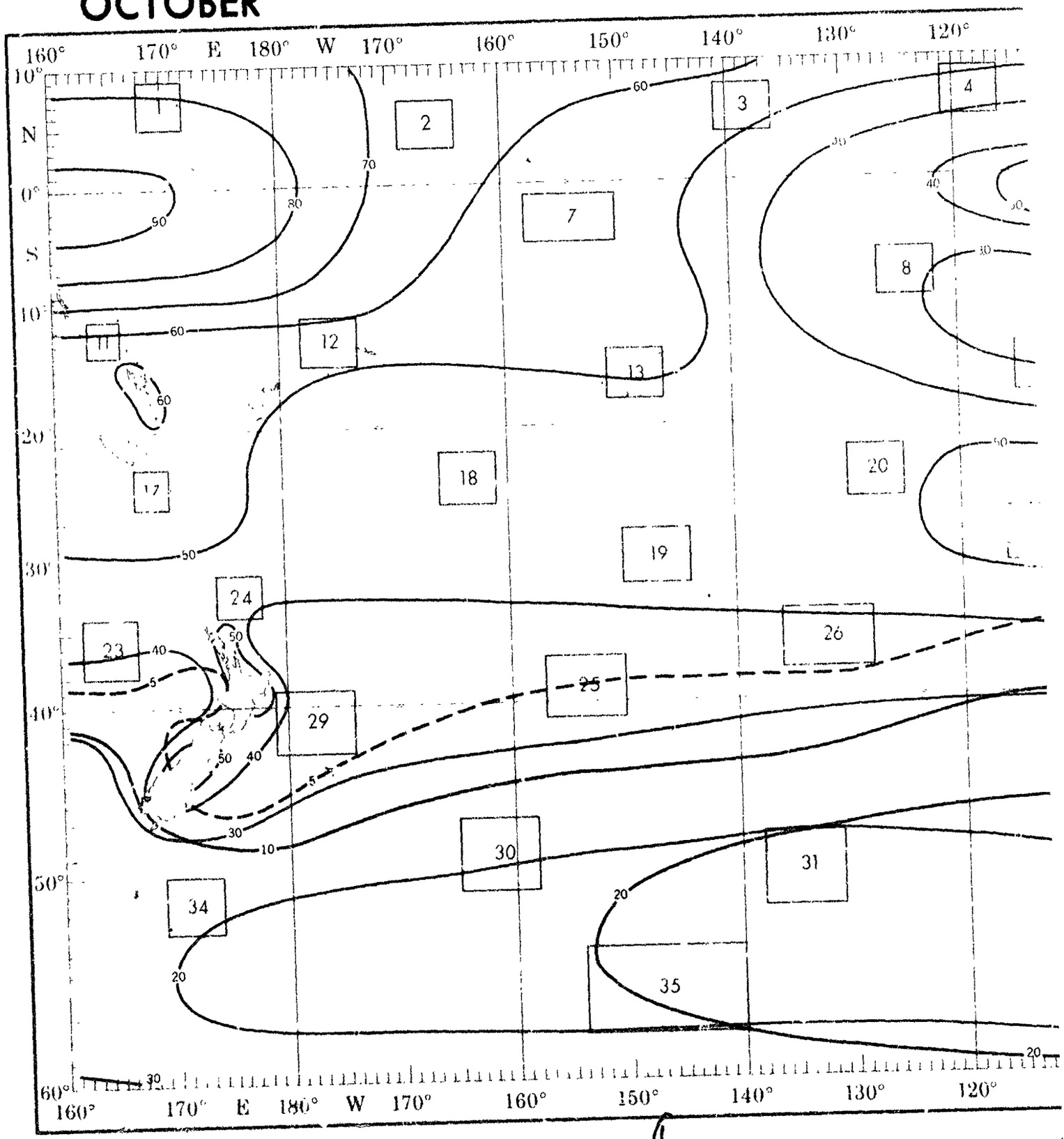
1

91

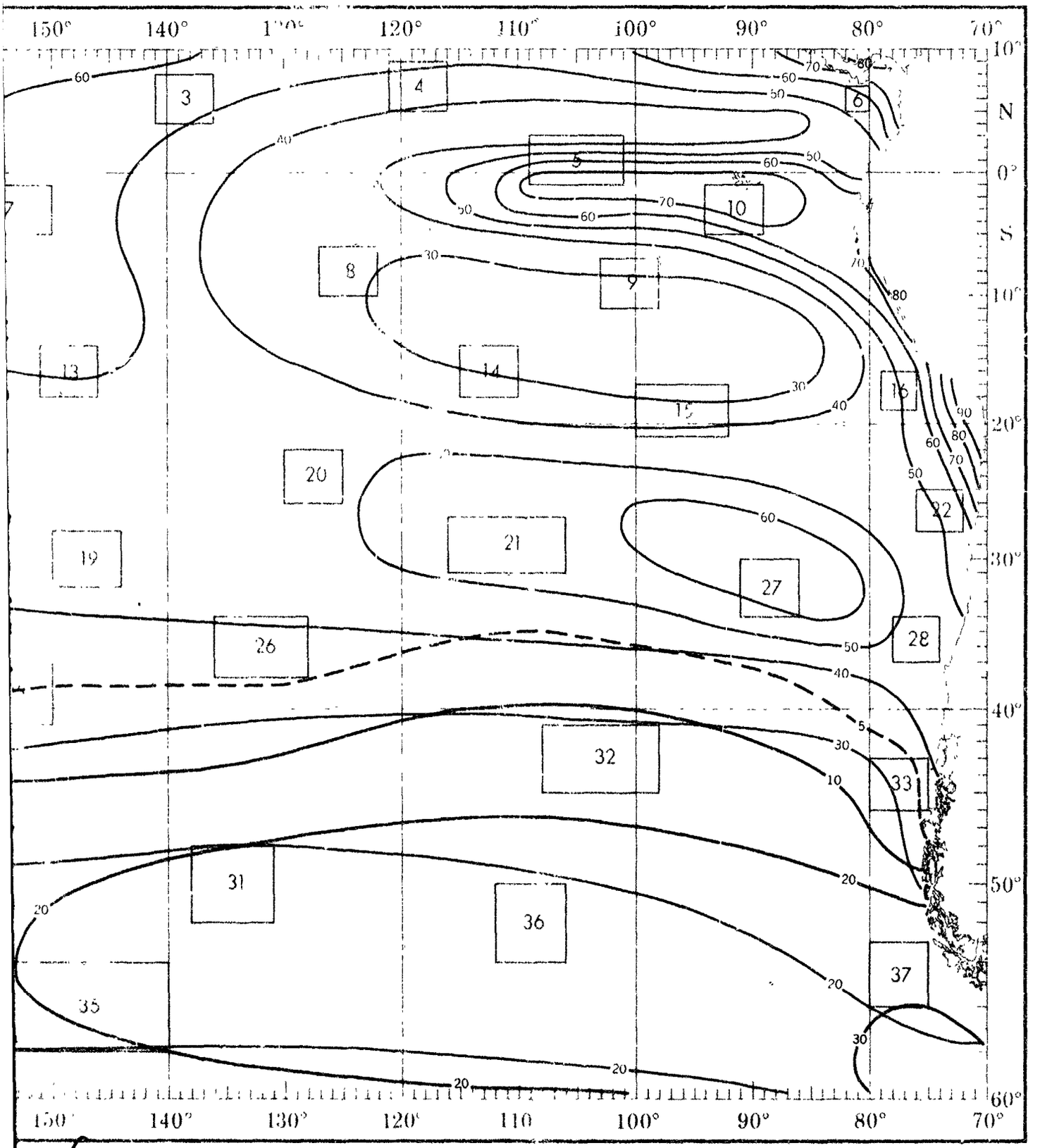
SEPTEMBER


130°
120°
110°
100°
90°
80°
W
70°
0°
S
10°
20°
30°
40°
50°
DATA NOT AVAILABLE
12 hour movements of tropical cyclone centers (wind speed estimated ≥34 knots)
Mean speed: Printed figure at the end of each bar represents the mean speed of movement (in knots) toward the indicated direction.
(Centers moving toward the N had a mean speed of 5 knots.)
Direction frequency: Bars represent percent frequency of 12 hour movements toward each direction. Each circle represents 20%
(33% of all 12 hour movements were toward the NE.)
Vector mean direction and speed: Dot indicates mean vector movement. Each circle equals 10 knots.
(Mean vector movement of all centers was toward 75° at 7 knots.)
277
050
026
15
12
9
(frequency)
100%
80%
60%
40%
20%
50
40
30
20
10
(vector mean speed knots)
Statistics for this rose are based on 277 twelve hour movements.
50 individual storms were observed in the 5° X 5° area during the period of record
Probability of having at least one tropical cyclone in this area in any given year for this month is 26%.

OCTOBER

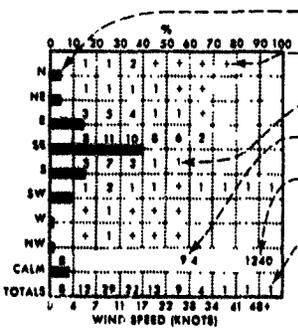

160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N
0°
S
10°
20°
30°
40°
50°
60°
1
2
3
4
7
8
11
12
13
17
18
19
20
23
24
25
26
29
30
31
34
35
90
80
70
60
50
40
30
20
10
5

SURFACE WINDS



WIND DIRECTION AND SPEED

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.



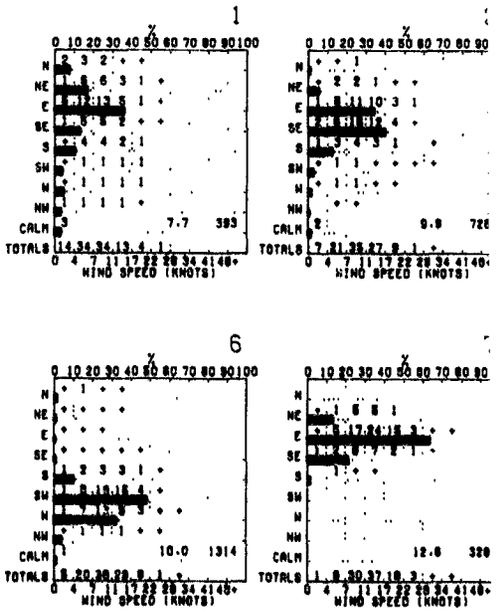
WIND SPEED INTERVAL (KNOTS)

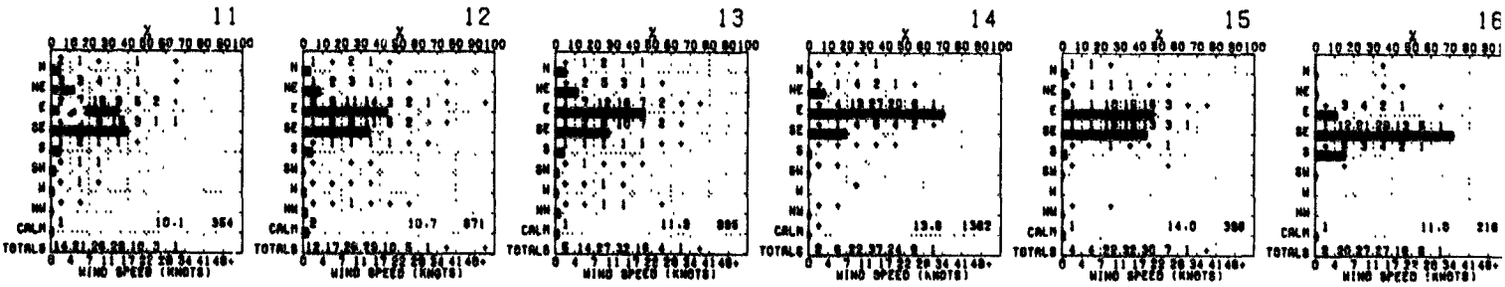
0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	≥48
0	4	7	11	17	22	28	34	41	48+

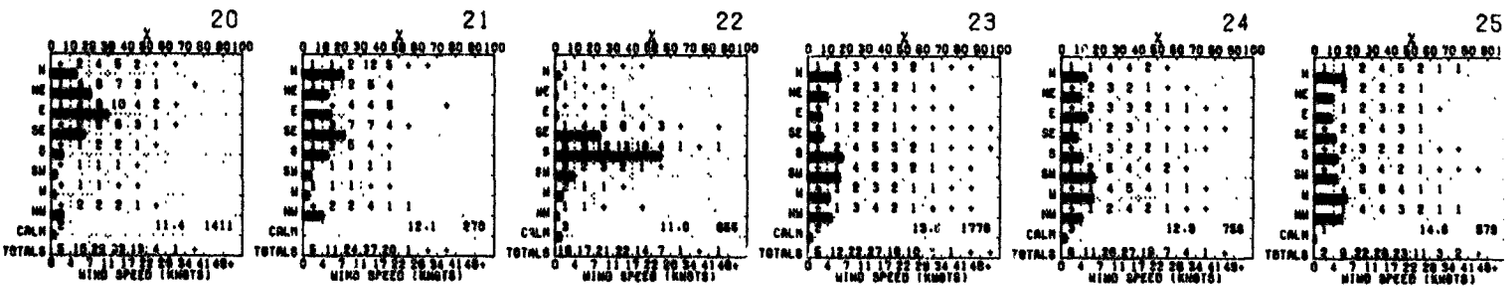
Printed scale on bottom of chart

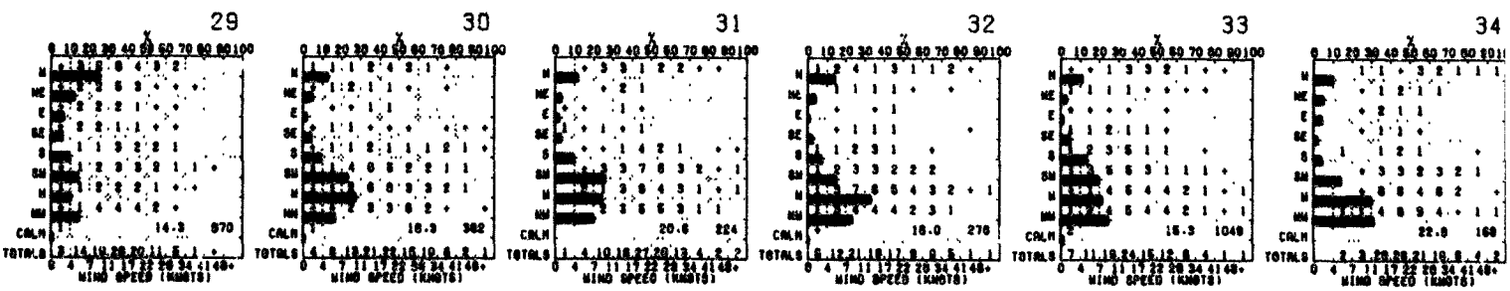
BLUE LINE - Percent frequency of wind speed ≤10 knots

RED LINE - Percent frequency of wind speed ≥34 knots









Graphs represent the objective compilation of available data for specified areas without regar

The isopleth analyses (opposite page) are based on all available data subjectively adjusted w

D SPEED

OCTOBER

ach direction Speed frequency
ach direction

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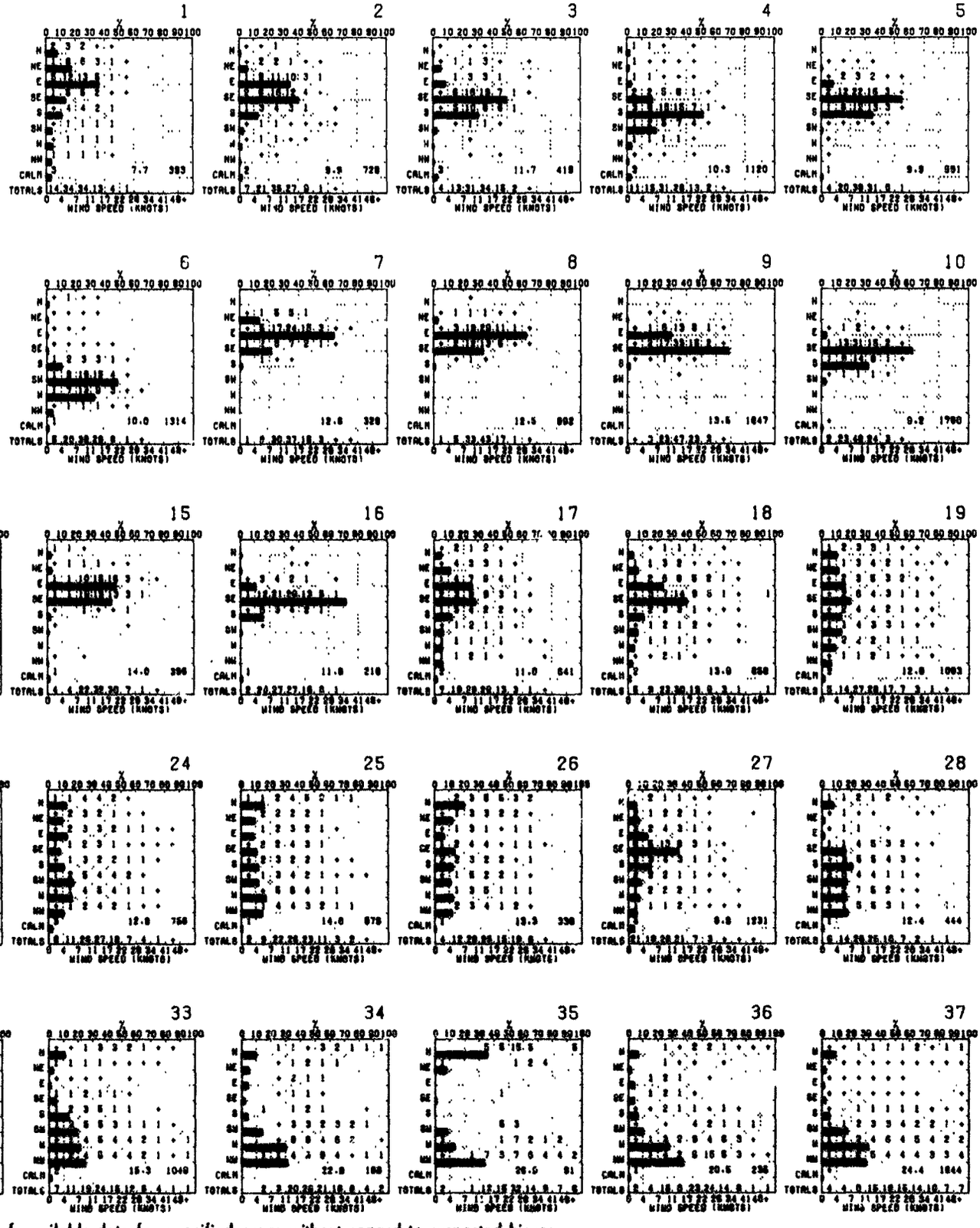
ats)

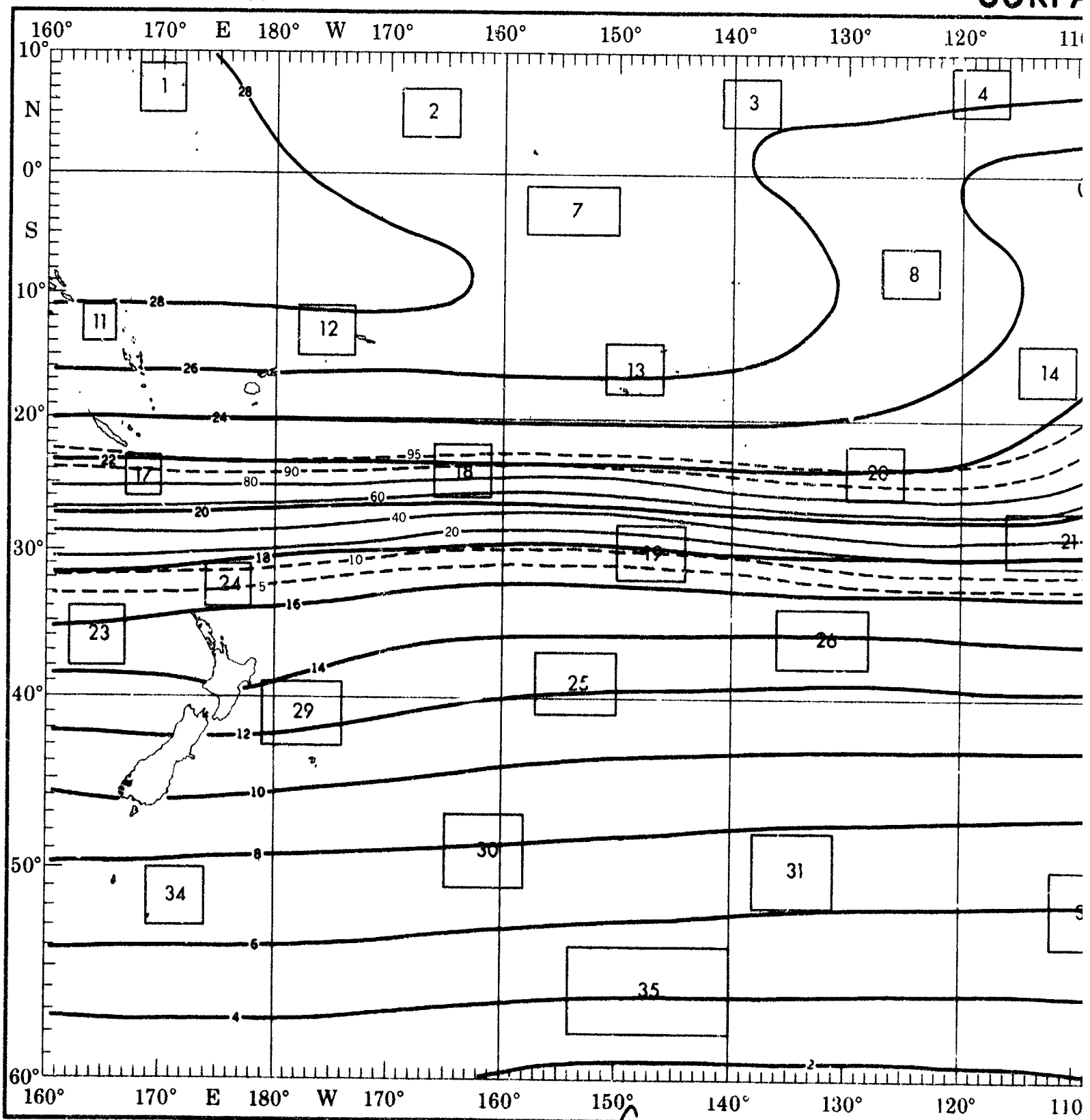
TS)
4-40|41-47|≥48|
41 48+
part



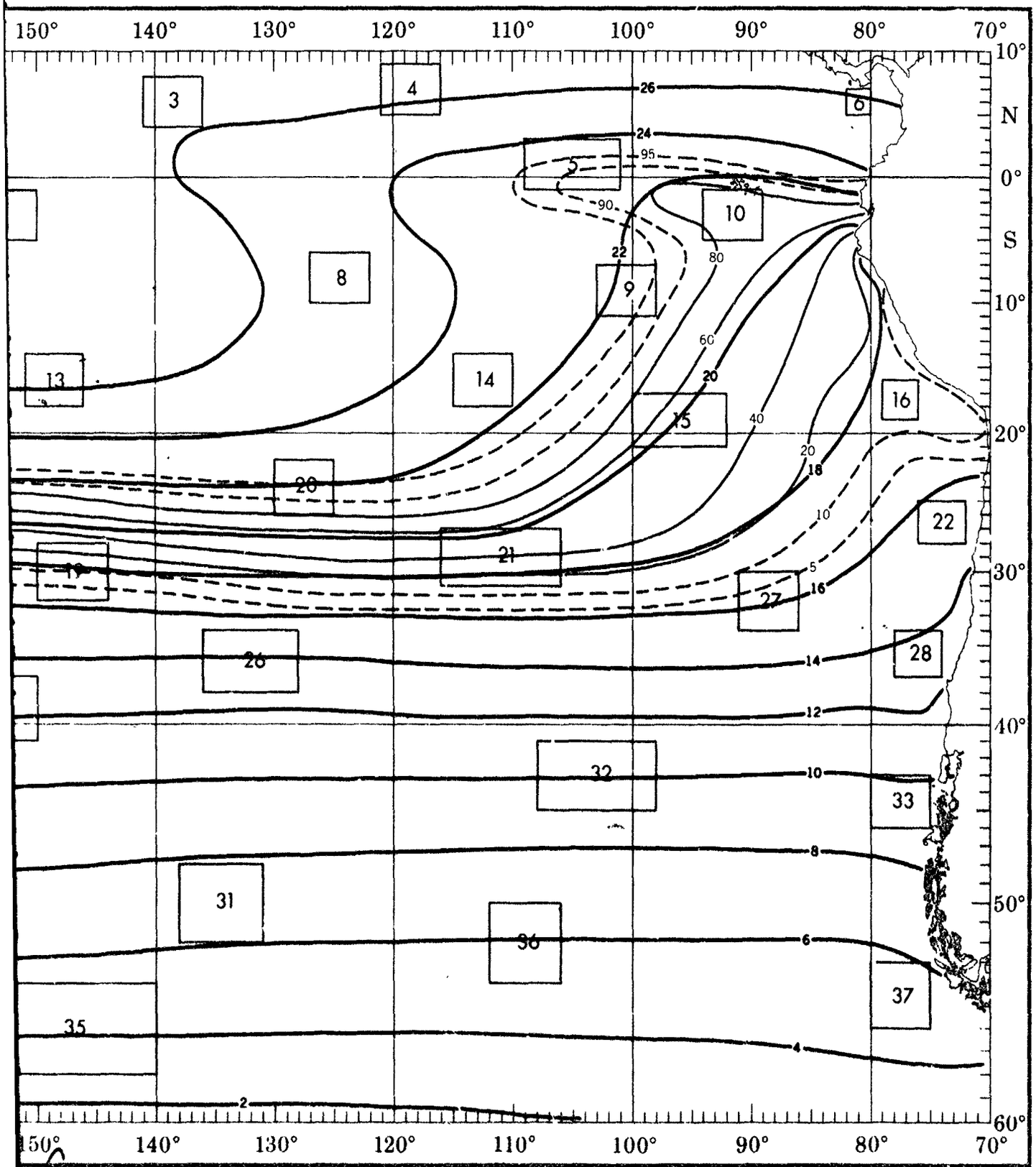
t the objective compilation of available data for specified areas without regard to suspected biases.
yses (opposite page) are based on all available data subjectively adjusted where bias was evident.

OCTOBER

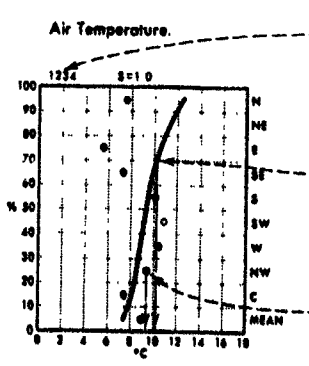
SURFA

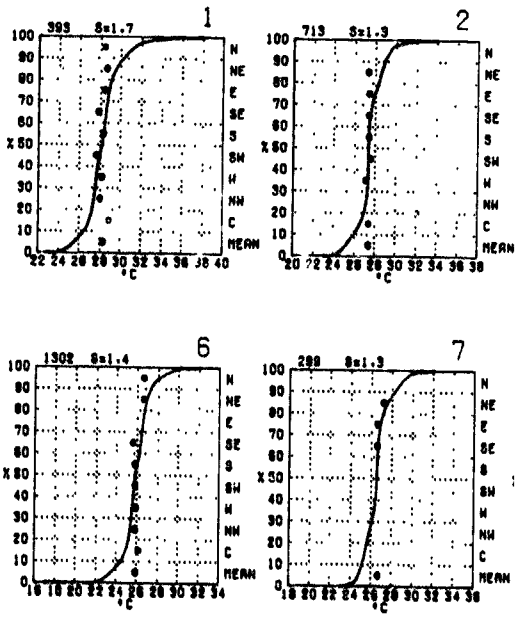


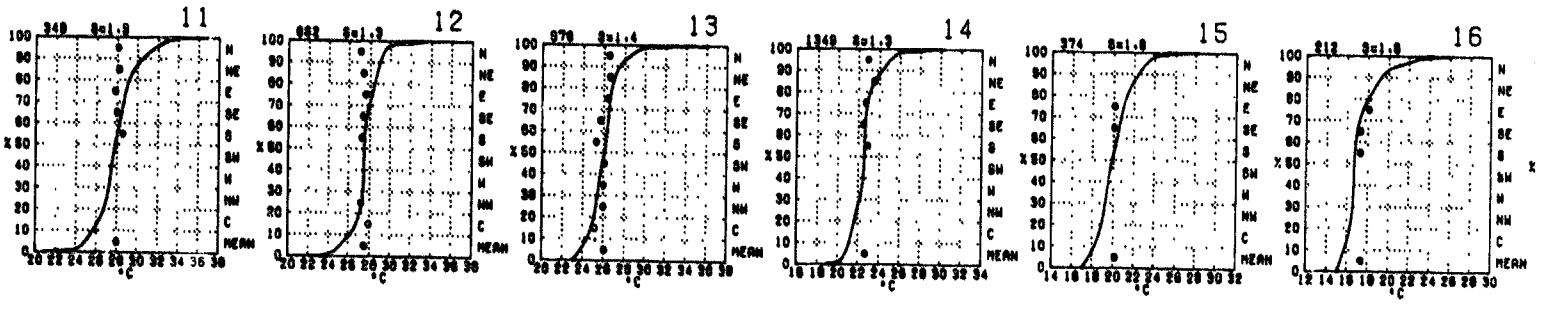
SURFACE AIR TEMPERATURE

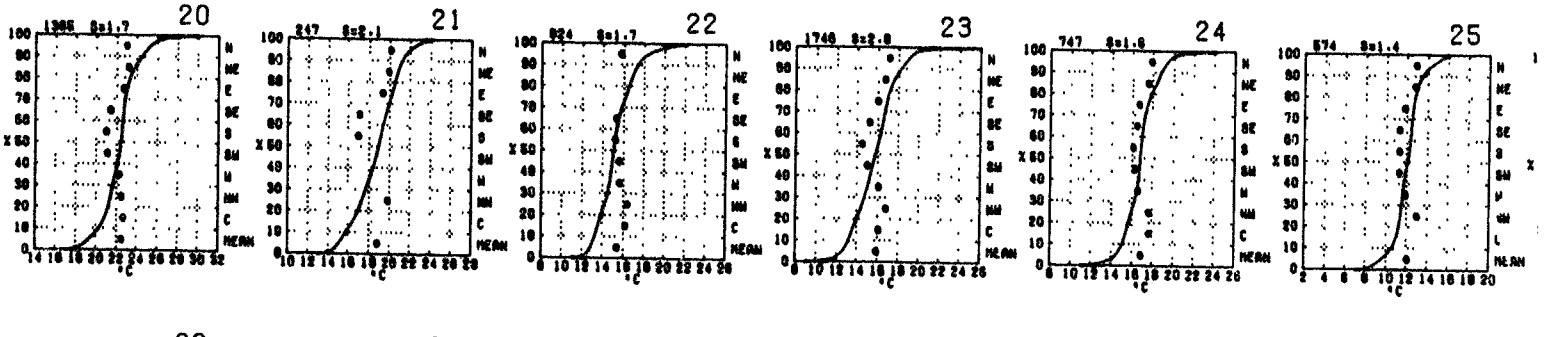


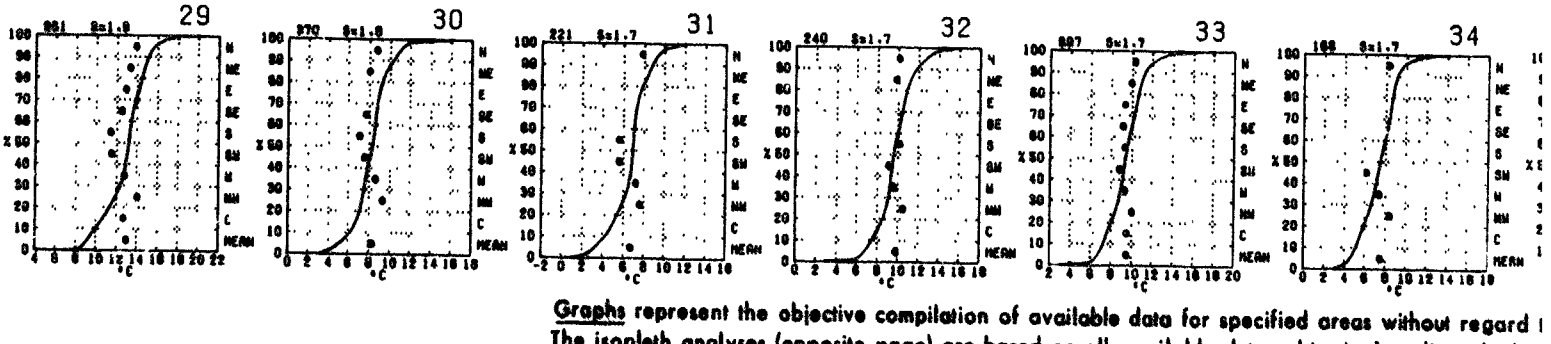
SURFACE AIR TEMPERATURE











Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted wher

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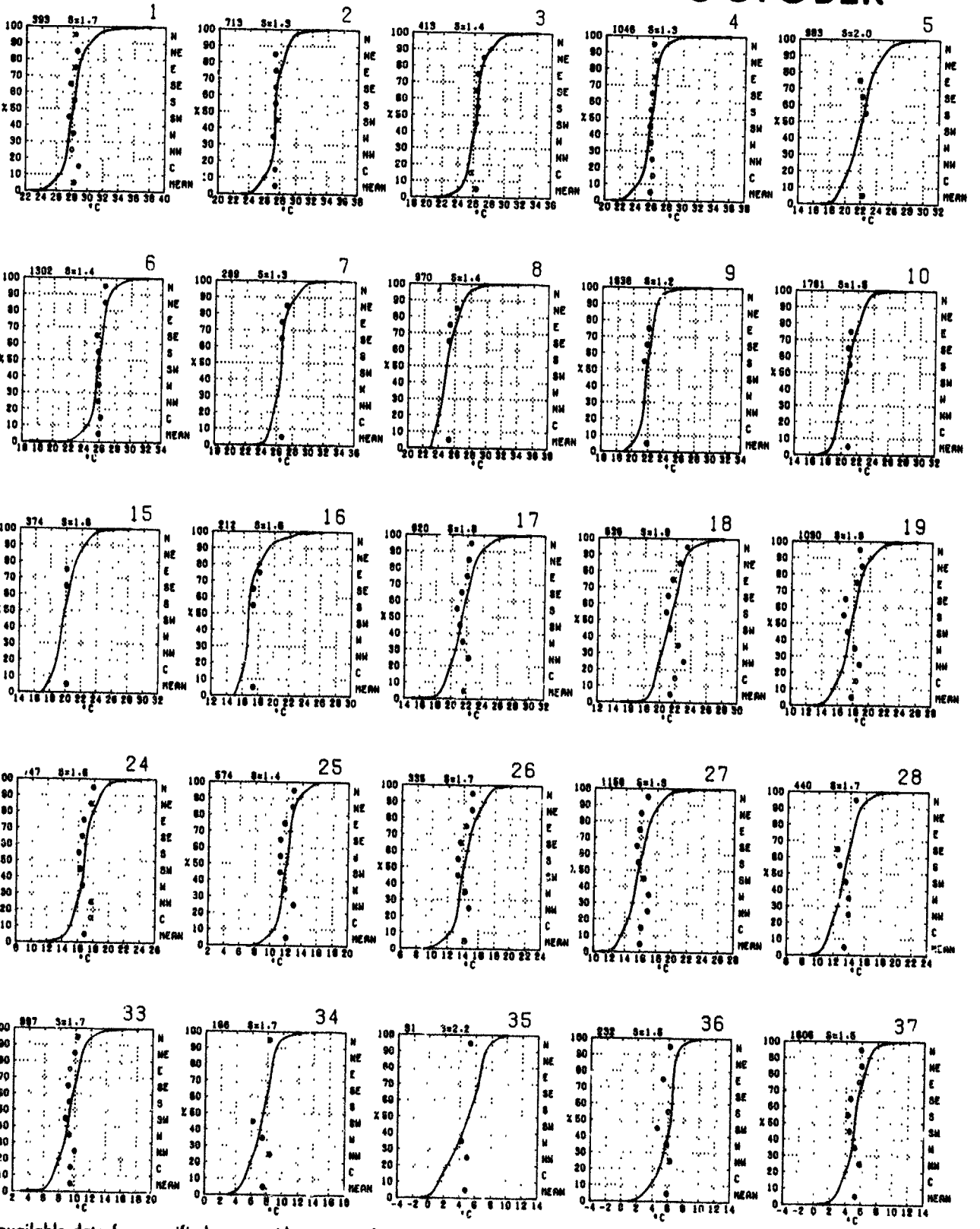
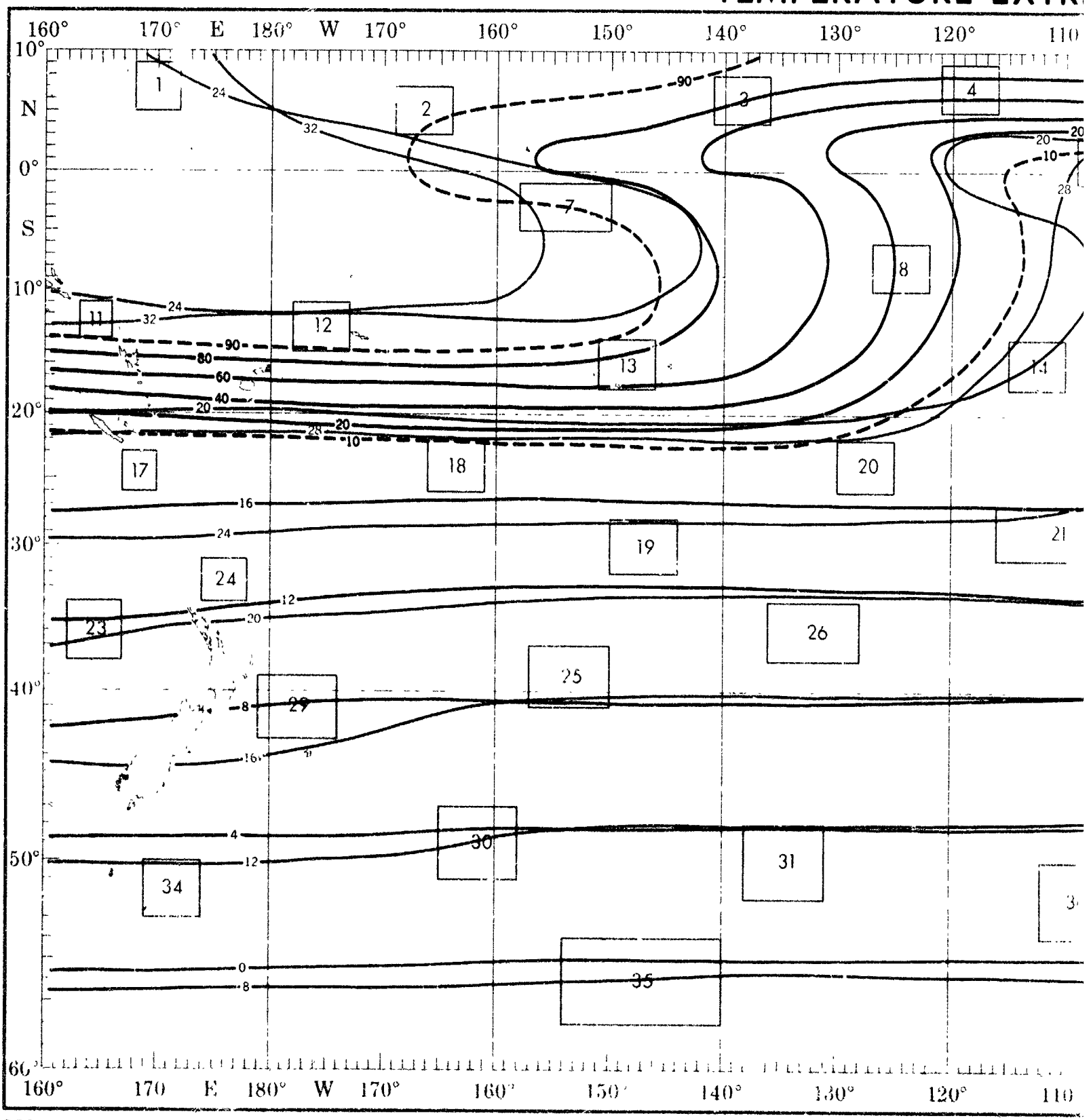
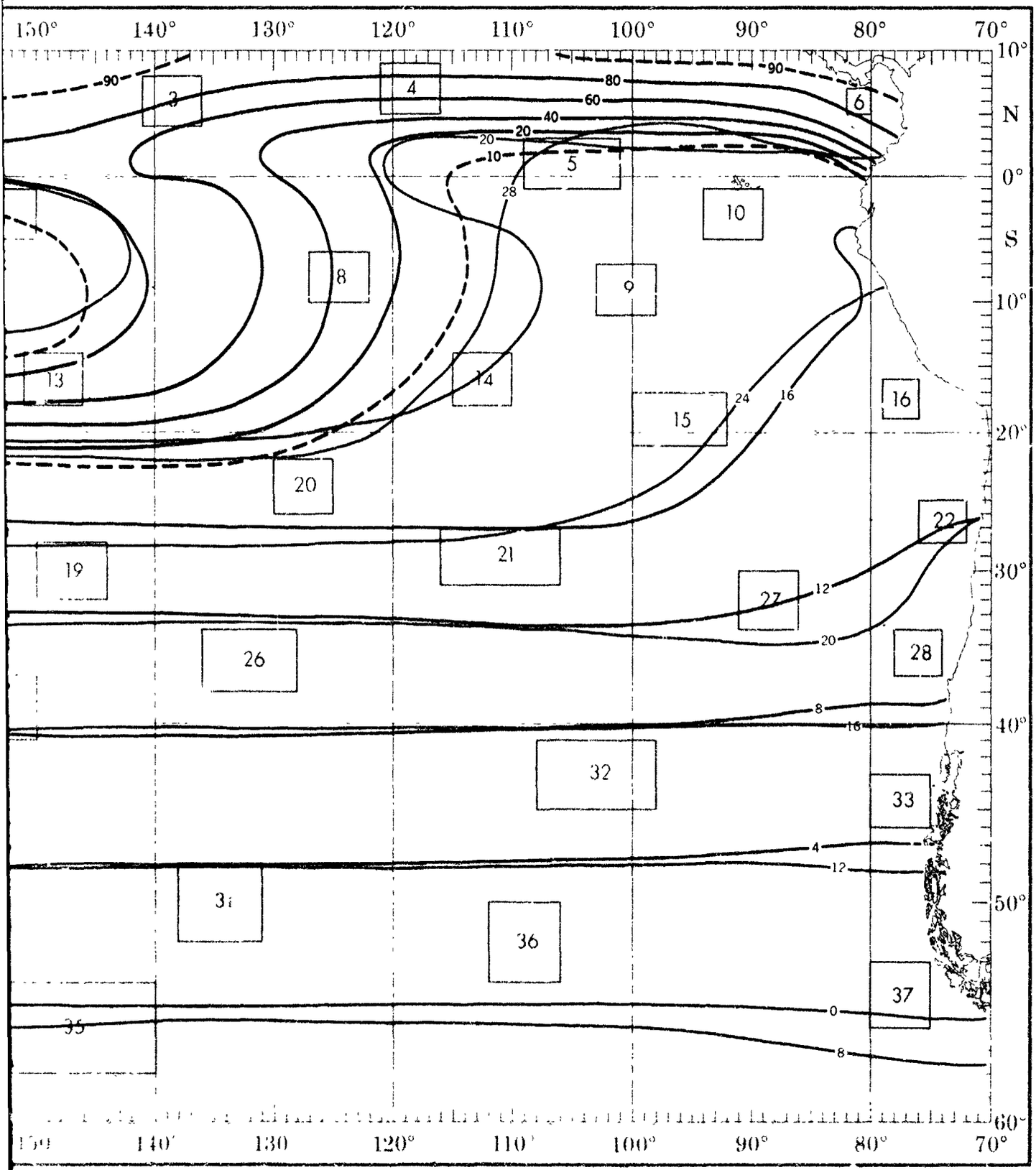


objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

OCTOBER TEMPERATURE EXTR



TEMPERATURE EXTREMES AND T-H INDEX



WIND SPEED AND AIR TEMPERATURE

Wind speed and air temperature

Percent frequency of simultaneous occurrence of specified temperature (°C) and wind speed (knots)

WIND SPEED (kts)

Temp (°C)	0-3	4-10	11-21	22-33	≥34
4.5	16	8	7	1	1
2.3	17	8	7	1	+
0.1	15	6	3	1	1
-1	1	+	0	0	0
-4.-3	0	0	0	0	0
-6.-5	+	0	0	+	+
-8.-7	1	+	0	0	0
-10.-9	0	0	0	0	0
-12.-11	1	+	0	0	0
-14.-13	1	0	0	0	0
-16.-15	1	+	0	0	0

3350

—(1% of all observations reported temperature 2-3°C simultaneously with wind speed of 22-33 kts.)

+ Indicates < 5% but >0

Number of observations

Use of this table in determination of Potential Superstructure Icing is explained in the text

BLACK LINE - Percent frequency of T-H index ≥24°C (75.2°F) (discomfort may be experienced due to heat)

BLUE LINE - Minimum (1%) air temperature (°C) (1% of the temperatures were equal to or less than the given value)

RED LINE - Maximum (99%) air temperature (°C) (1% of the temperatures were greater than the given value)

1

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	1	0	0	0	0
34.35	1	1	0	0	0
32.33	1	1	0	0	0
30.31	3	7	1	0	0
28.29	7	39	10	+	0
26.27	2	18	5	+	0
24.25	+	1	1	1	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

393

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥
32.33	+	+	1	0	
30.31	+	2	1	0	
28.29	3	23	17	1	
26.27	4	28	15	1	
24.25	+	3	2	0	
22.23	0	0	0	0	
20.21	0	0	0	0	
18.19	0	0	0	0	
16.17	0	0	0	0	
14.15	0	0	0	0	
12.13	0	0	0	0	

7

6

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	1	+	0	0
28.29	1	6	2	0	0
26.27	3	33	18	1	0
24.25	2	16	15	+	0
22.23	+	1	1	0	0
20.21	0	+	+	0	0
18.19	0	0	+	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

1325

7

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥
32.33	0	0	+	0	
30.31	0	2	1	0	
28.29	1	12	9	0	
26.27	1	25	33	2	
24.25	0	4	9	1	
22.23	+	0	0	0	
20.21	0	0	0	0	
18.19	0	0	0	0	
16.17	0	0	0	0	
14.15	0	0	0	0	
12.13	0	0	0	0	

3(

11

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.36	1	0	0	0	0
32.33	2	3	+	0	0
30.31	3	7	2	0	0
28.29	5	20	14	2	0
26.27	4	14	17	2	0
24.25	0	3	2	1	0
22.23	0	+	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

351

12

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	1	0	0
30.31	+	1	1	+	0
28.29	7	20	16	1	0
26.27	5	20	20	3	+
24.25	+	2	1	1	0
22.23	0	+	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

669

13

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.36	0	+	+	0	0
32.33	0	+	0	0	0
30.31	0	+	1	0	0
28.29	1	6	7	+	0
26.27	3	24	25	2	+
24.25	2	8	14	3	0
22.23	+	1	1	+	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

983

14

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	1	+	0	0
26.27	0	1	1	+	0
24.25	+	6	11	1	0
22.23	1	18	41	8	0
20.21	+	2	8	1	0
18.19	0	+	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

1351

15

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	+	+	0	0	0
24.25	+	1	2	0	0
22.23	1	8	10	1	0
20.21	1	9	29	5	0
18.19	1	9	21	3	+
16.17	0	1	1	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

374

16

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 3
26.27	0	+	0	0	
24.25	0	+	0	0	
22.23	0	2	+	0	
20.21	0	2	3	+	
18.19	1	18	8	2	
16.17	1	23	28	4	
14.15	0	2	4	0	
12.13	0	0	0	0	
10.11	0	0	0	0	
8.9	0	0	0	0	
6.7	0	0	0	0	

21

20

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	+	1	+	0	0
26.27	+	1	1	+	0
24.25	1	10	8	+	+
22.23	3	22	23	2	0
20.21	1	8	11	2	0
18.19	+	1	1	1	0
16.17	0	+	0	+	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

1388

21

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	0	0	+	0	0
22.23	+	4	6	0	0
20.21	2	8	21	2	0
18.19	+	9	23	+	0
16.17	+	8	9	0	0
14.15	0	7	+	0	0
12.13	0	+	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

250

22

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	+	+	0	+	0
20.21	1	1	+	0	0
18.19	1	5	3	+	0
16.17	6	12	8	2	0
14.15	7	18	20	6	1
12.13	1	2	4	1	0
10.11	+	+	+	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

825

23

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	0	+	0	0	0
22.23	0	+	0	0	0
20.21	+	1	1	+	0
18.19	1	5	9	2	+
16.17	2	15	18	5	+
14.15	2	10	14	4	1
12.13	1	3	5	2	+
10.11	+	+	+	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

1760

24

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	+	+	+	0	0
20.21	+	2	2	+	0
18.19	2	11	12	2	0
16.17	3	20	25	6	1
14.15	1	4	8	2	0
12.13	0	+	+	0	0
10.11	0	0	0	0	+
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

751

25

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.17	0	1	1	+	0
16.15	0	4	5	2	+
14.13	1	16	29	8	1
12.11	1	10	15	4	1
10.9	0	1	+	1	+
8.7	0	0	0	0	0
6.5	0	0	0	0	0
4.3	0	0	0	0	0
2.1	0	0	0	0	0
0.-1	0	0	0	0	0
-2.-3	0	0	0	0	0
-4.-5	0	0	0	0	0

578

29

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	0	+	0	0
16.17	+	3	4	1	+
14.15	1	11	17	4	0
12.13	1	13	17	5	+
10.11	1	5	6	3	+
8.9	+	1	3	2	+
6.7	0	0	0	0	+
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0

872

30

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	0	0	+	0	0
12.13	0	1	0	0	0
10.11	1	4	11	5	1
8.9	1	8	20	13	2
6.7	2	5	10	5	5
4.5	0	+	2	2	1
2.3	0	0	+	1	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0

373

31

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.11	0	1	1	2	0
8.9	0	3	13	11	3
6.7	+	7	21	16	3
4.5	+	3	8	4	3
2.3	+	+	2	1	0
0.1	0	0	0	0	+
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0

226

32

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	+	0	0	0
14.15	0	0	2	0	+
12.13	+	6	6	3	1
10.11	1	13	14	6	4
8.9	2	11	13	11	3
6.7	1	2	3	1	+
4.5	0	0	0	+	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

240

33

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.17	0	+	+	0	0
14.15	+	1	+	0	0
12.13	+	3	4	1	+
10.11	2	12	18	9	2
8.9	3	11	15	7	3
6.7	1	3	3	1	1
4.5	0	0	+	+	+
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

897

34

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	0	0	1	0
10.11	0	1	5	6	2
8.9	0	2	19	18	6
6.7	0	1	16	13	4
4.5	0	0	8	3	1
2.3	0	1	0	0	1
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

166

Graphs represent the objective compilation of available data for specified areas without regar
The isopleth analyses (opposite page) are based on all available data subjectively adjusted wh

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WIND SPEED (KTS) 1

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	1	0	0	0	0
34.36	1	1	0	0	0
32.35	1	1	0	0	0
30.31	3	7	1	0	0
28.29	7	39	10	+	0
26.27	2	18	5	+	0
24.25	+	1	1	1	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

393

WIND SPEED (KTS) 2

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	1	0	0
30.31	+	2	1	0	0
28.29	3	23	17	1	0
26.27	4	28	15	1	0
24.25	+	3	2	0	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

721

WIND SPEED (KTS) 3

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	+	0	0
30.31	0	1	2	0	0
28.29	+	6	9	1	0
26 27	2	26	26	1	0
24.25	1	10	9	+	0
22.23	+	0	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

417

WIND SPEED (KTS) 4

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	+	0	+	0	0
32.33	+	0	0	0	0
30.31	+	+	+	0	0
28.29	2	5	3	+	0
26.27	8	25	23	1	0
24.25	3	15	15	1	0
22.23	0	1	1	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

1053

WIND SPEED (KTS) 5

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	0	0	0
28.29	+	+	+	0	0
26.27	0	1	3	+	0
24.25	+	8	12	+	0
22.23	2	19	16	0	0
20.21	2	23	6	+	0
18.19	1	6	1	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

991

WIND SPEED (KTS) 6

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	1	+	0	0
28.29	1	8	2	0	0
26.27	3	33	18	1	0
24.25	2	15	15	+	0
22.23	+	1	1	0	0
20.21	0	+	+	0	0
18.19	0	0	+	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

1326

WIND SPEED (KTS) 7

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	0	+	0	0
30.31	0	2	1	0	0
28.29	1	12	9	0	0
26.27	1	25	33	2	0
24.25	0	4	9	1	0
22.23	+	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

300

WIND SPEED (KTS) 8

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	0	+	0	0
30.31	0	+	1	0	0
28.29	+	2	4	+	0
26.27	0	13	22	1	0
24.25	1	21	29	1	0
22.23	0	3	3	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

871

WIND SPEED (KTS) 9

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	+	+	0	0
26.27	0	+	+	0	0
24.25	0	2	4	+	0
22.23	+	15	42	2	0
20.21	+	10	23	1	0
18.19	0	+	1	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

1636

WIND SPEED (KTS) 10

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	0	+	0	0
26.27	0	+	+	0	0
24.25	+	2	1	+	0
22.23	1	19	9	+	0
20.21	1	34	13	+	0
18.19	1	15	3	0	0
16.17	0	+	+	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

1773

WIND SPEED (KTS) 14

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	1	+	0	0
26.27	0	1	1	+	0
24.25	+	5	11	1	0
22.23	1	19	41	6	0
20.21	+	2	6	1	0
18.19	0	+	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

1351

WIND SPEED (KTS) 15

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.27	+	+	0	0	0
26.26	+	1	2	0	0
24.25	1	6	10	1	0
22.23	1	9	29	5	0
20.21	1	9	21	3	+
18.17	7	1	1	0	0
16.15	0	0	0	0	0
14.13	0	0	0	0	0
12.11	0	0	0	0	0
10.9	0	0	0	0	0
8.7	0	0	0	0	0

374

WIND SPEED (KTS) 16

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.27	0	+	0	0	0
26.26	0	+	0	0	0
24.25	0	2	+	0	0
22.23	0	2	3	+	0
20.21	0	2	3	+	0
18.17	1	23	28	4	0
16.15	0	2	4	0	0
14.13	0	0	0	0	0
12.11	0	0	0	0	0
10.9	0	0	0	0	0
8.7	0	0	0	0	0

212

WIND SPEED (KTS) 17

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.28	0	+	+	0	0
26.27	0	2	+	0	0
24.26	1	8	4	+	0
22.23	4	17	15	1	0
20.21	2	17	17	1	0
18.19	+	5	5	1	0
16.17	0	0	+	+	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

824

WIND SPEED (KTS) 18

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.28	0	+	0	0	0
26.27	+	1	1	+	0
24.25	1	5	3	1	0
22.23	2	13	19	3	0
20.21	2	10	18	5	+
18.19	+	4	8	3	+
16.17	0	+	+	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

839

WIND SPEED (KTS) 19

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	+	+	+	+	0
22.23	+	1	1	0	+
20.21	1	5	7	1	+
18.19	3	15	16	4	+
16.17	3	16	14	4	+
14.15	0	3	4	1	+
12.13	0	0	+	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	3	0	0	0
4.5	0	0	0	0	0

1112

WIND SPEED (KTS) 23

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	0	+	0	0	0
22.23	0	+	+	0	0
20.21	+	1	1	+	0
18.19	1	5	9	2	+
16.17	2	15	16	5	+
14.15	2	10	14	4	1
12.13	1	3	5	2	+
10.11	+	+	+	+	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

1780

WIND SPEED (KTS) 24

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	+	+	+	0	0
20.21	+	2	2	+	0
18.19	2	11	12	2	0
16.17	3	20	25	6	1
14.15	1	4	8	2	0
12.13	0	+	+	0	0
10.11	0	0	0	0	+
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

751

WIND SPEED (KTS) 25

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.17	0	1	1	+	0
16.16	0	4	6	2	+
14.15	1	16	28	6	1
12.13	1	10	15	4	1
10.11	0	1	1	1	+
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

575

WIND SPEED (KTS) 26

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.18	0	1	1	+	0
16.17	2	8	10	5	0
14.16	2	17	13	6	0
12.13	2	12	14	4	0
10.11	0	1	1	1	+
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0

341

WIND SPEED (KTS) 27

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.26	0	+	0	0	0
22.23	+	+	+	0	0
20.21	1	2	1	0	0
18.18	5	7	4	+	0
16.17	7	20	11	1	+
14.16	5	14	13	2	+
12.13	2	4	1	+	0
10.11	0	+	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

1181

WIND SPEED (KTS) 28

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.18	+	1	+	0	+
16.17	2	7	4	1	0
14.16	2	14	13	3	+
12.13	2	15	20	5	1
10.11	0	6	5	1	0
8.9	0	+	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0

440

WIND SPEED (KTS) 32

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	+	0	0	0
14.16	0	0	2	0	+
12.13	+	5	6	3	1
10.11	1	13	14	6	4
8.9	2	11	13	11	3
6.7	1	2	3	1	+
4.5	0	0	0	+	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

240

WIND SPEED (KTS) 33

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.17	0	+	+	0	0
16.16	0	+	1	0	0
14.15	+	3	4	1	+
12.13	2	12	18	8	2
10.11	3	11	16	7	3
8.9	1	3	3	1	1
6.7	+	+	+	+	+
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

997

WIND SPEED (KTS) 34

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.18	0	0	0	1	0
16.17	0	1	5	5	2
14.16	0	2	19	16	6
12.13	0	1	16	13	4
10.11	0	0	8	9	1
8.9	0	1	0	0	1
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

166

WIND SPEED (KTS) 35

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
9.8	0	0	2	3	1
8.7	0	0	8	14	21
6.6	2	0	5	18	1
5.5	0	1	6	7	0
3.4	0	0	7	4	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0
-12.-11	0	0	0	0	0

91

WIND SPEED (KTS) 36

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	0	0	0	1	0
8.9	+	2	4	2	0
6.7	2	10	18	25	8
4.5	0	0	0	0	0
2.3	0	0	1	2	+
0.1	0	0	+	1	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0

293

WIND SPEED (KTS) 37

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	+	0	+	+
10.11	0	+	+	0	0
8.9	+	1	2	1	1
6.7	1	4	12	11	10
4.5	2	6	14	13	12
2.3	+	1	3	3	2
0.1	0	0	+	1	+
-2.-1	0	0	0	+	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

1605

objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

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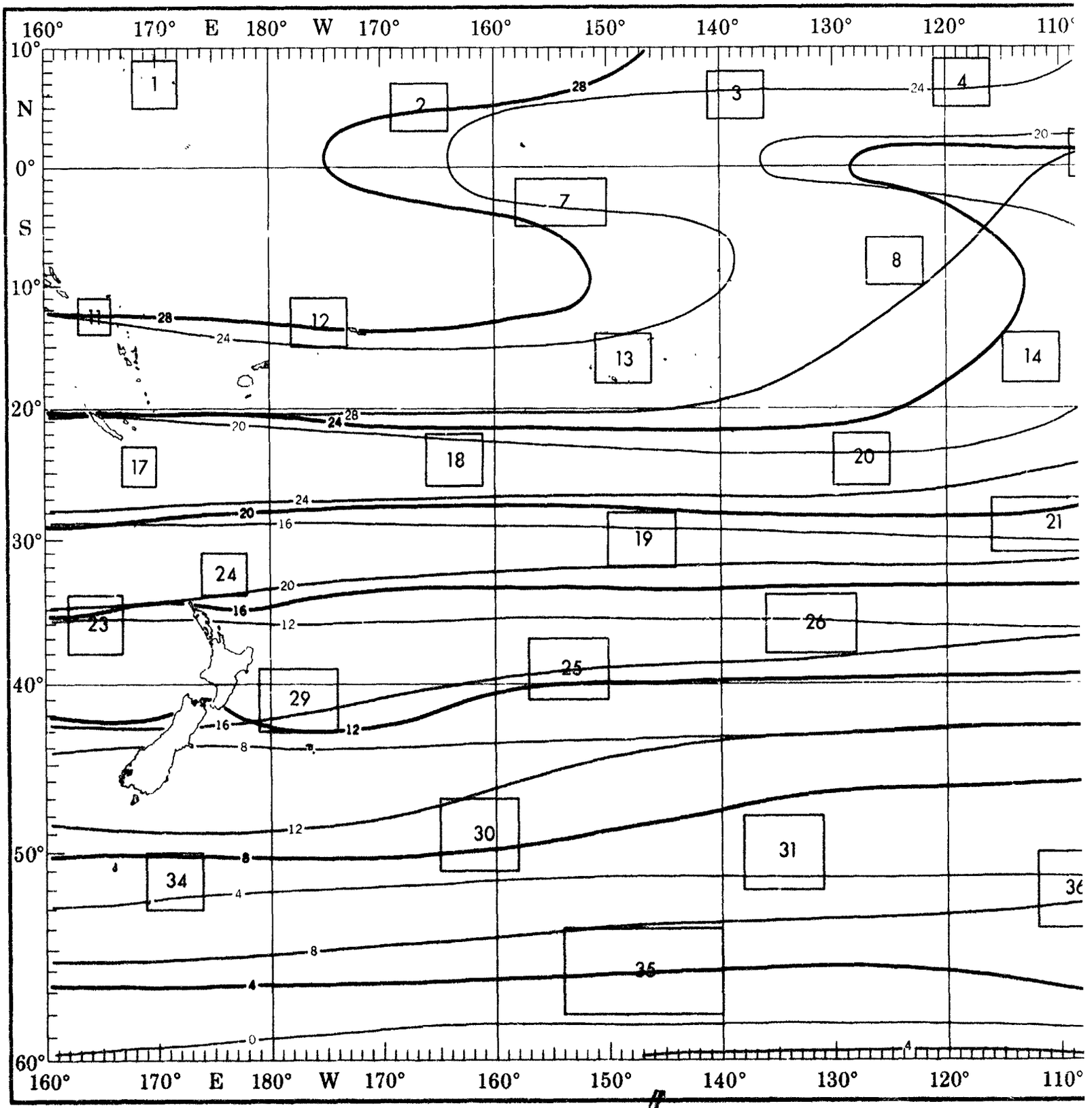
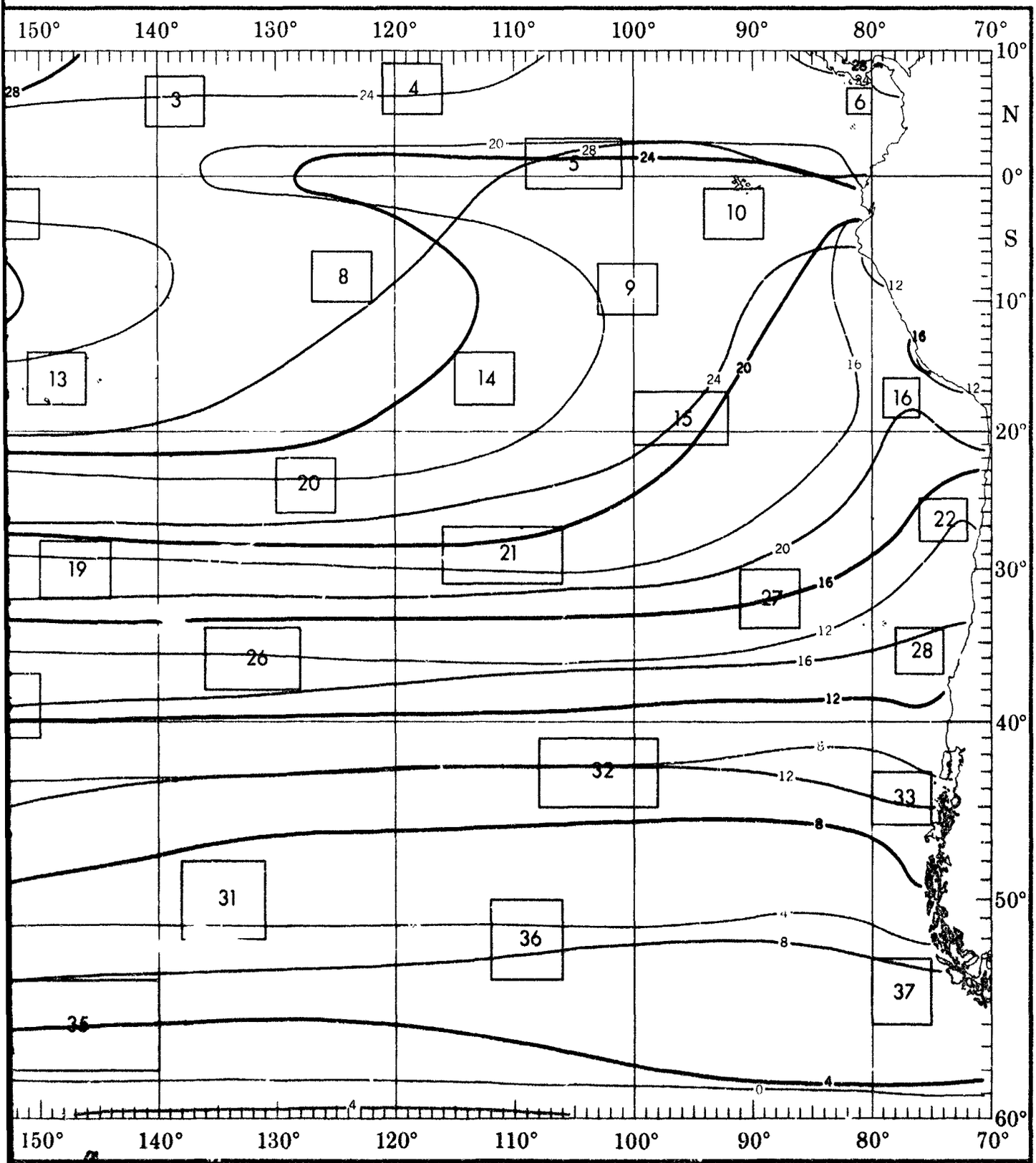
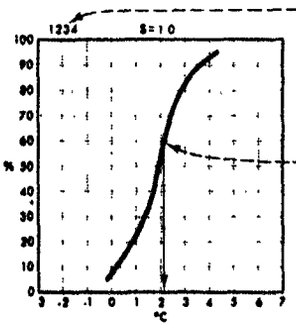
SEA SU

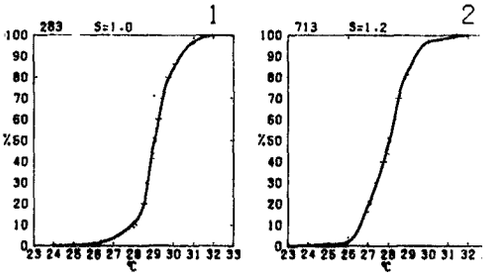


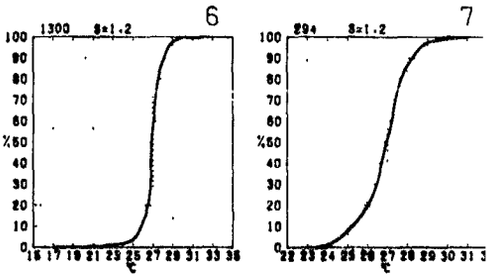
SEA SURFACE TEMPERATURE



SEA SURFACE TEMPERATURE



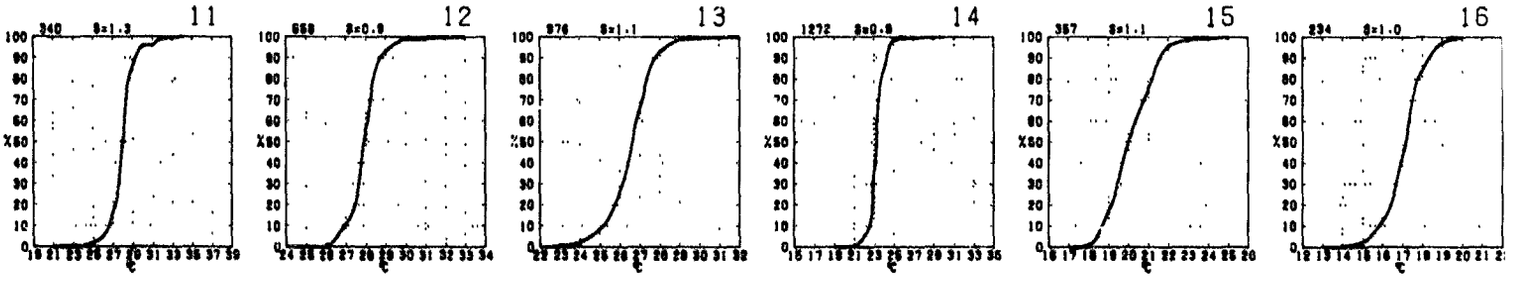


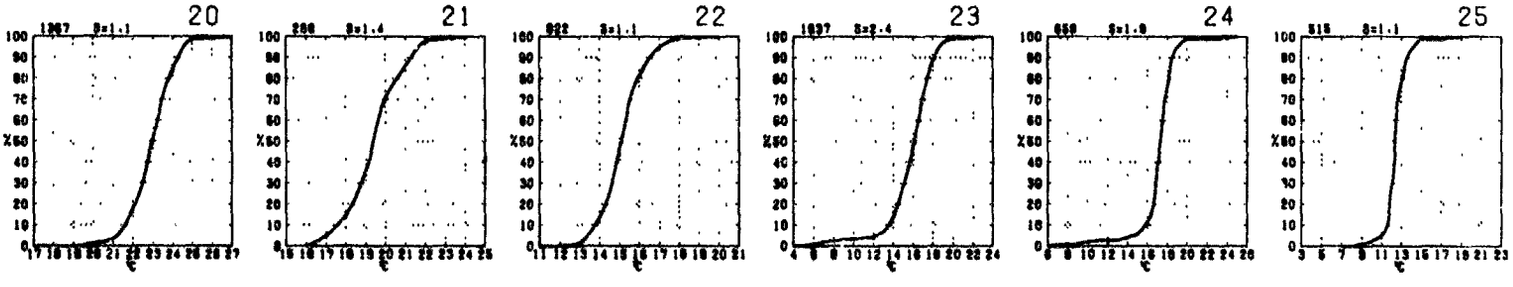


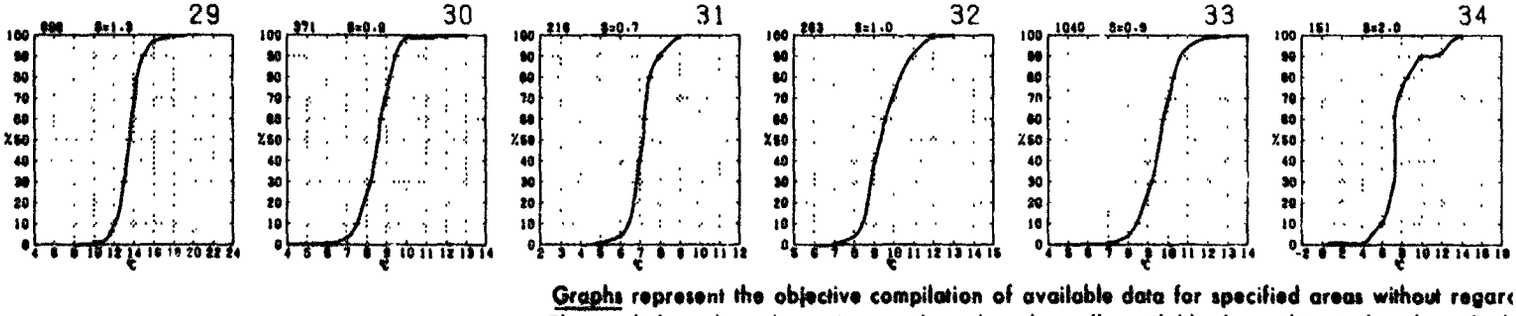
BLACK LINE - Mean sea surface temperature (°C)

BLUE LINE - Minimum (1%) sea surface temperature (°C) (1% of the temperatures were equal to or less than the given value)

RED LINE - Maximum (99%) sea surface temperature (°C) (1% of the temperatures were greater than the given value)







Graphs represent the objective compilation of available data for specified areas without regard
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mperatures equal to or less

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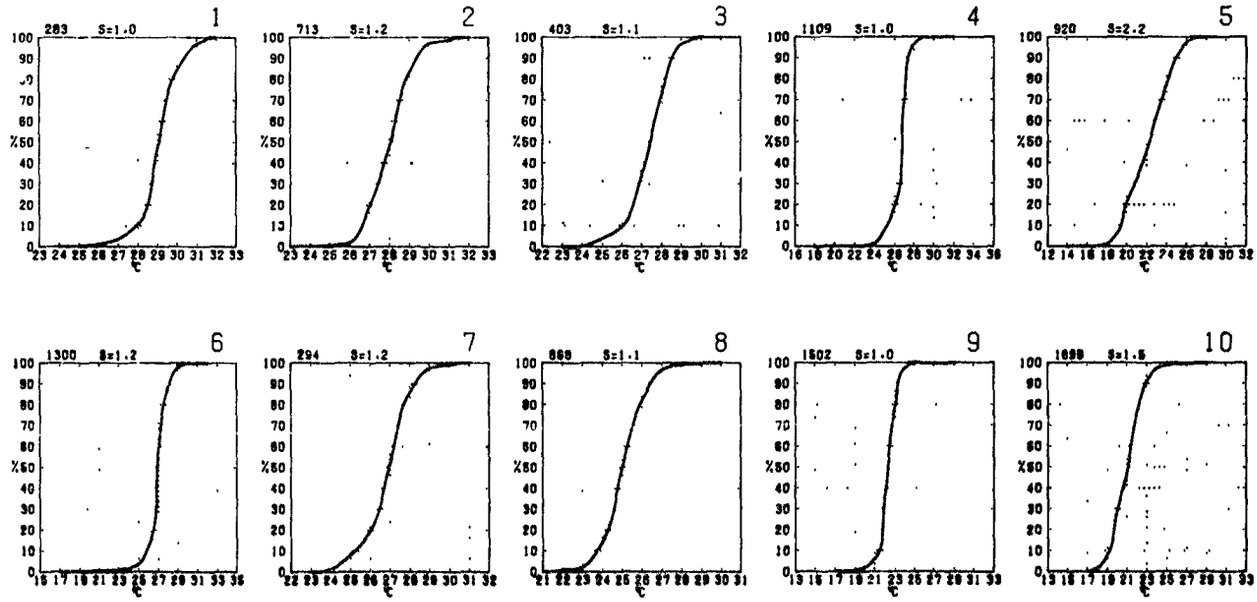

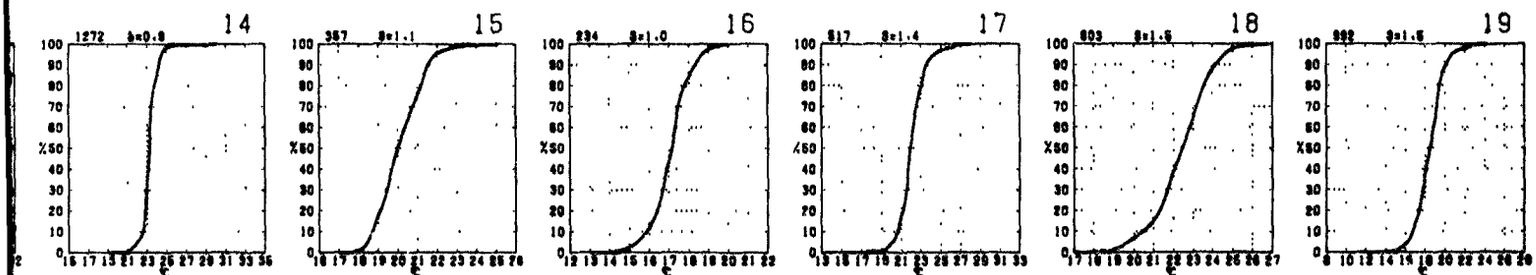

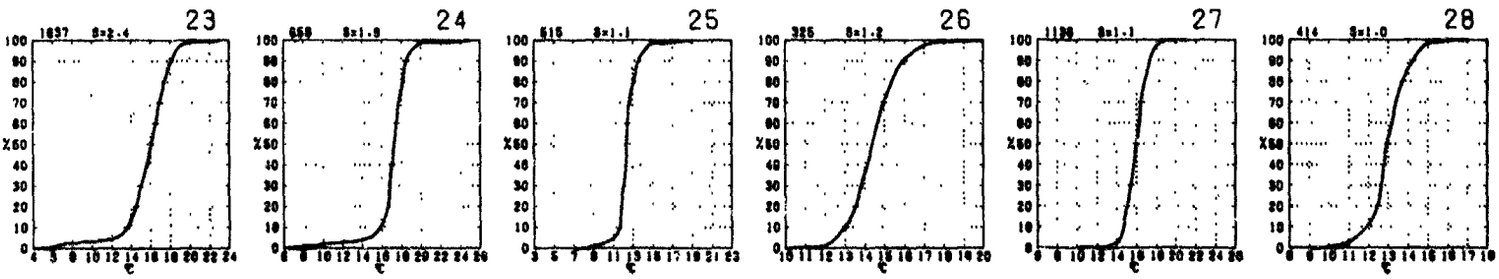

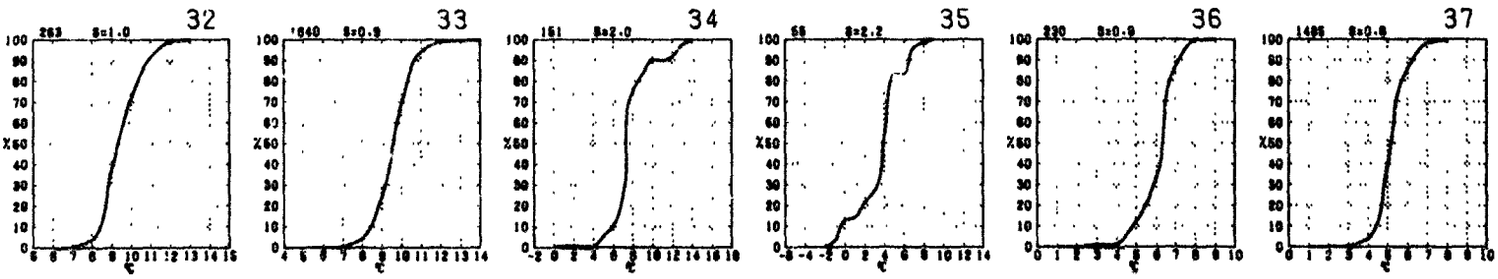

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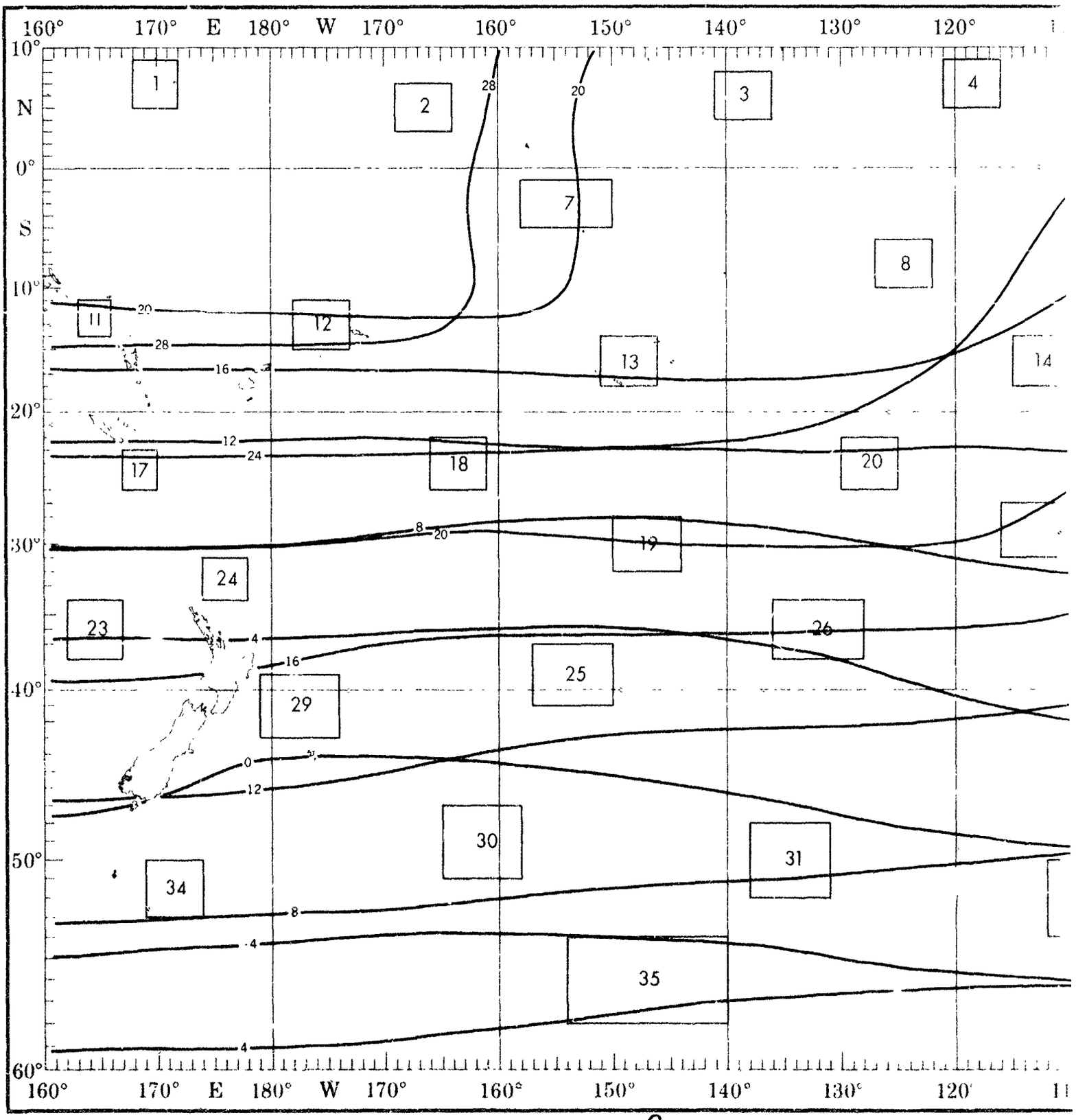
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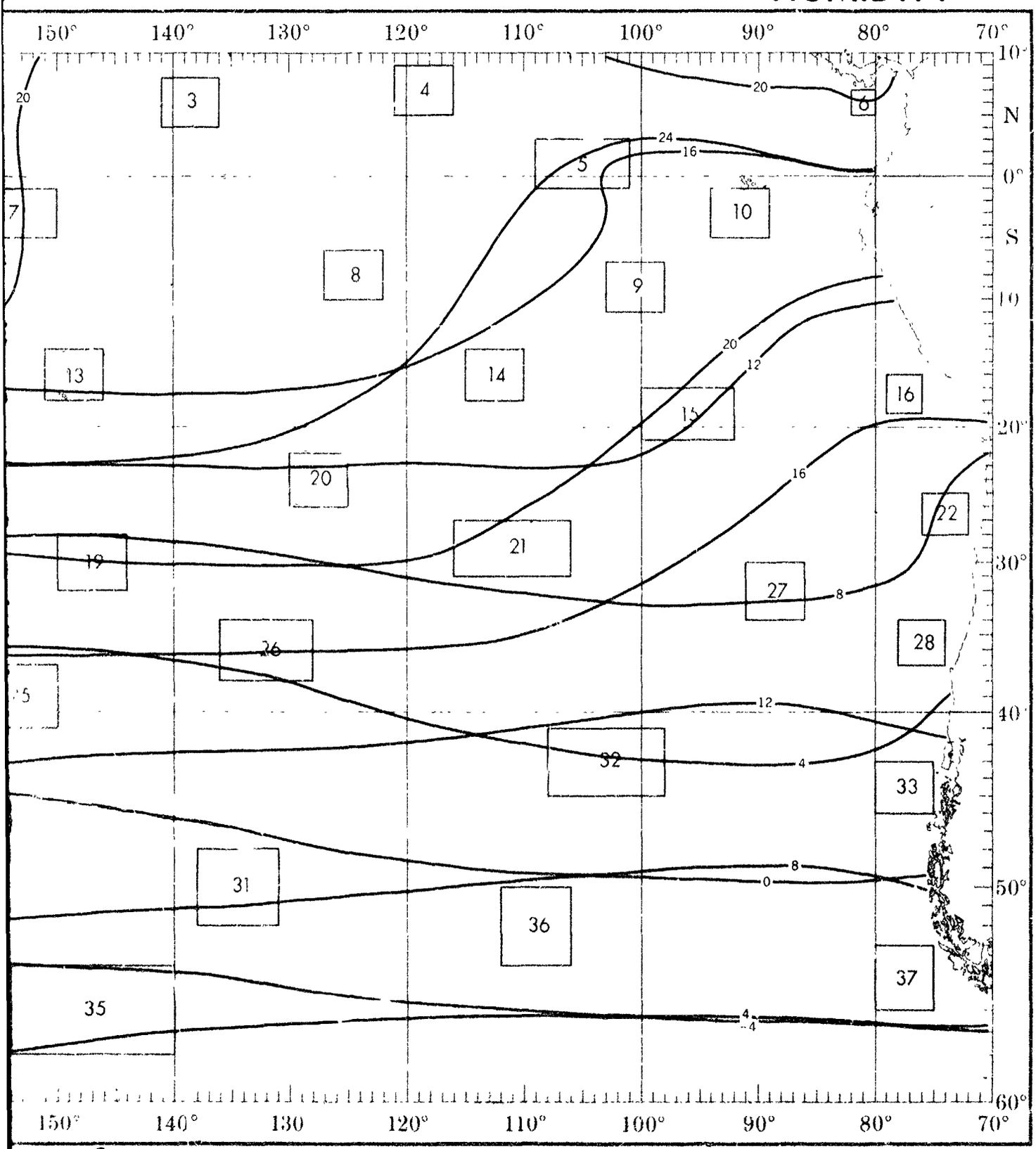
HUMIDITY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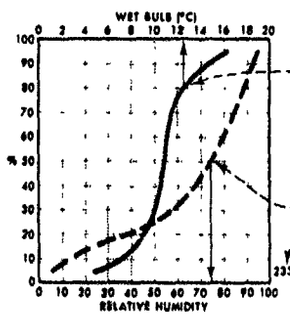
WET BULB AND RELATIVE HUMIDITY



Wet bulb - Relative humidity

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 ≤12.5°C or 54.5°F.)

Cumulative percent frequency of relative humidities equal to or less than the humidity intersected by the curve (bottom scale)

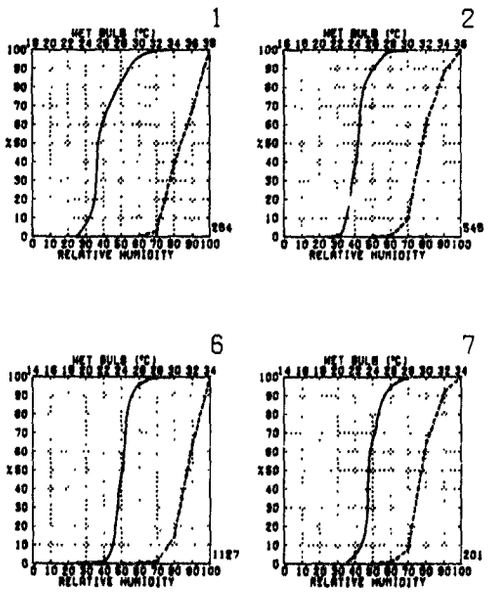
Relative humidity (%).

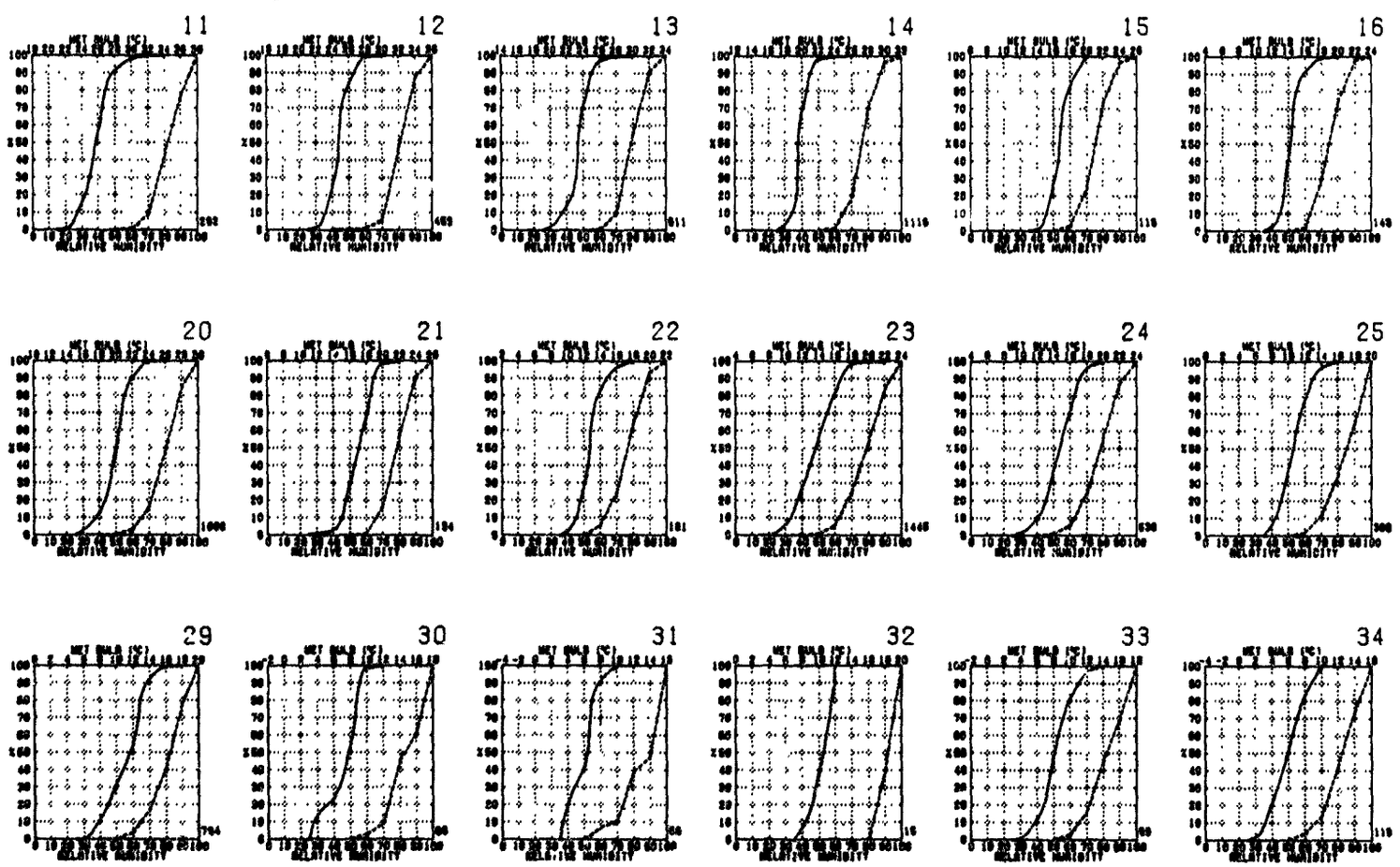
(50% of all observed relative humidities were ≤74%.)

—Number of observations

BLUE LINE - Minimum (1%) dew-point temperature (°C) (1% of the computed values were equal to or less than the given value)

RED LINE - Maximum (99%) dew-point temperature (°C) (1% of the computed values were greater than the given value)





Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

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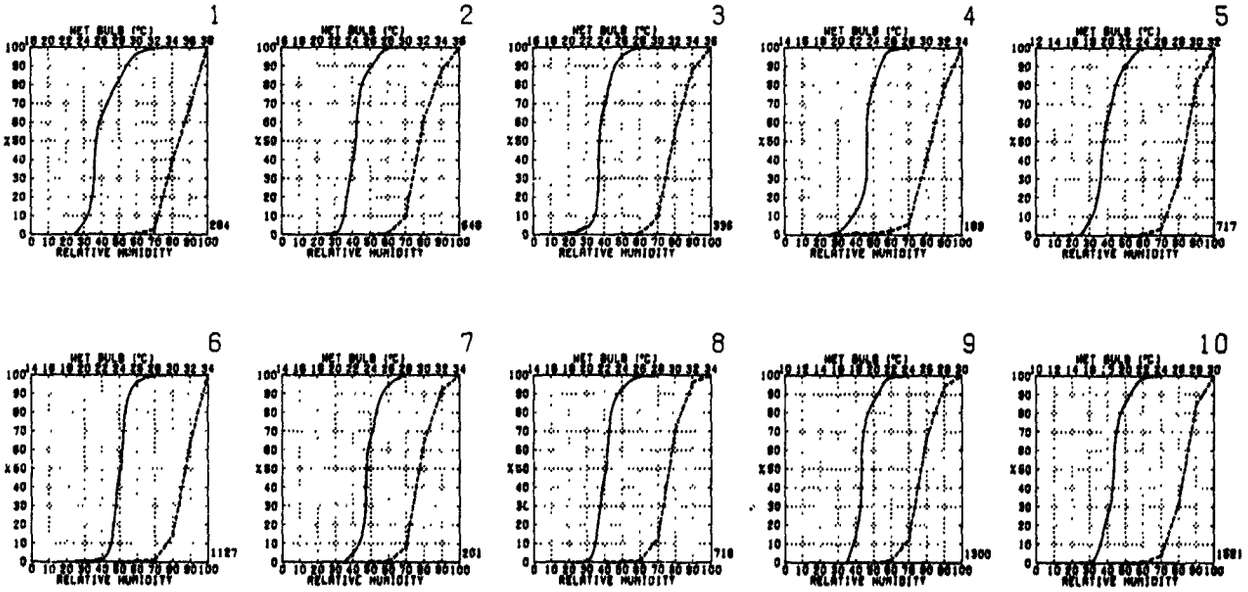

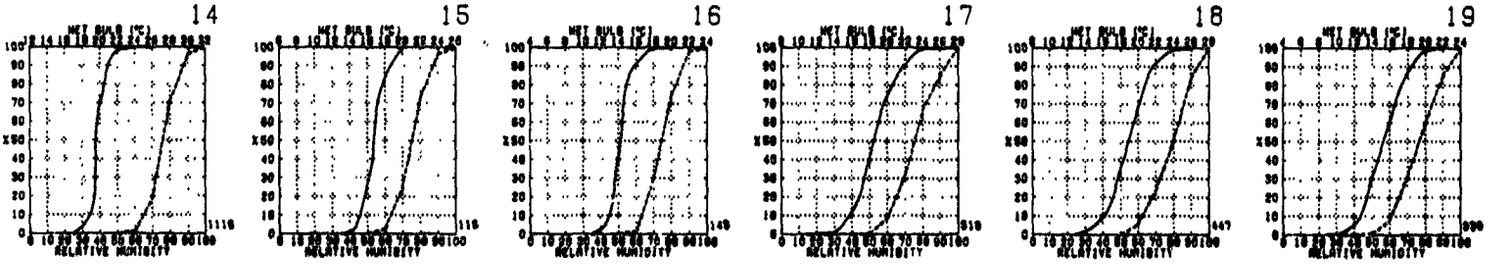

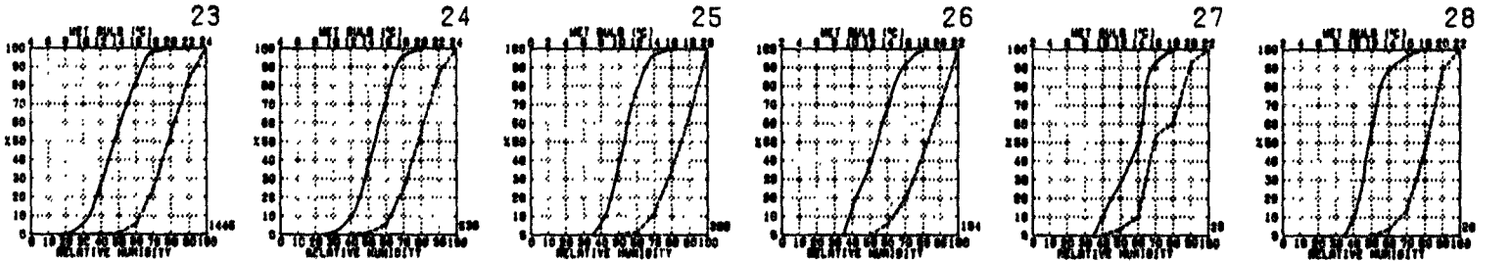

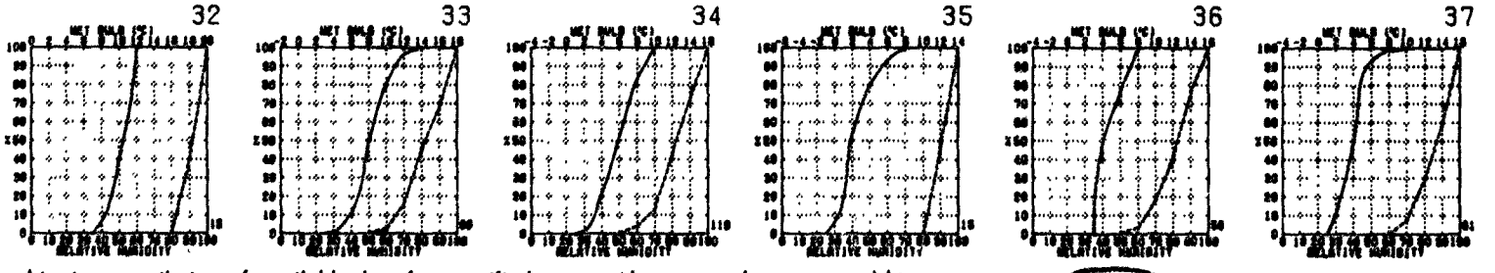

e objective compilation of available data for specified areas without regard to suspected biases.
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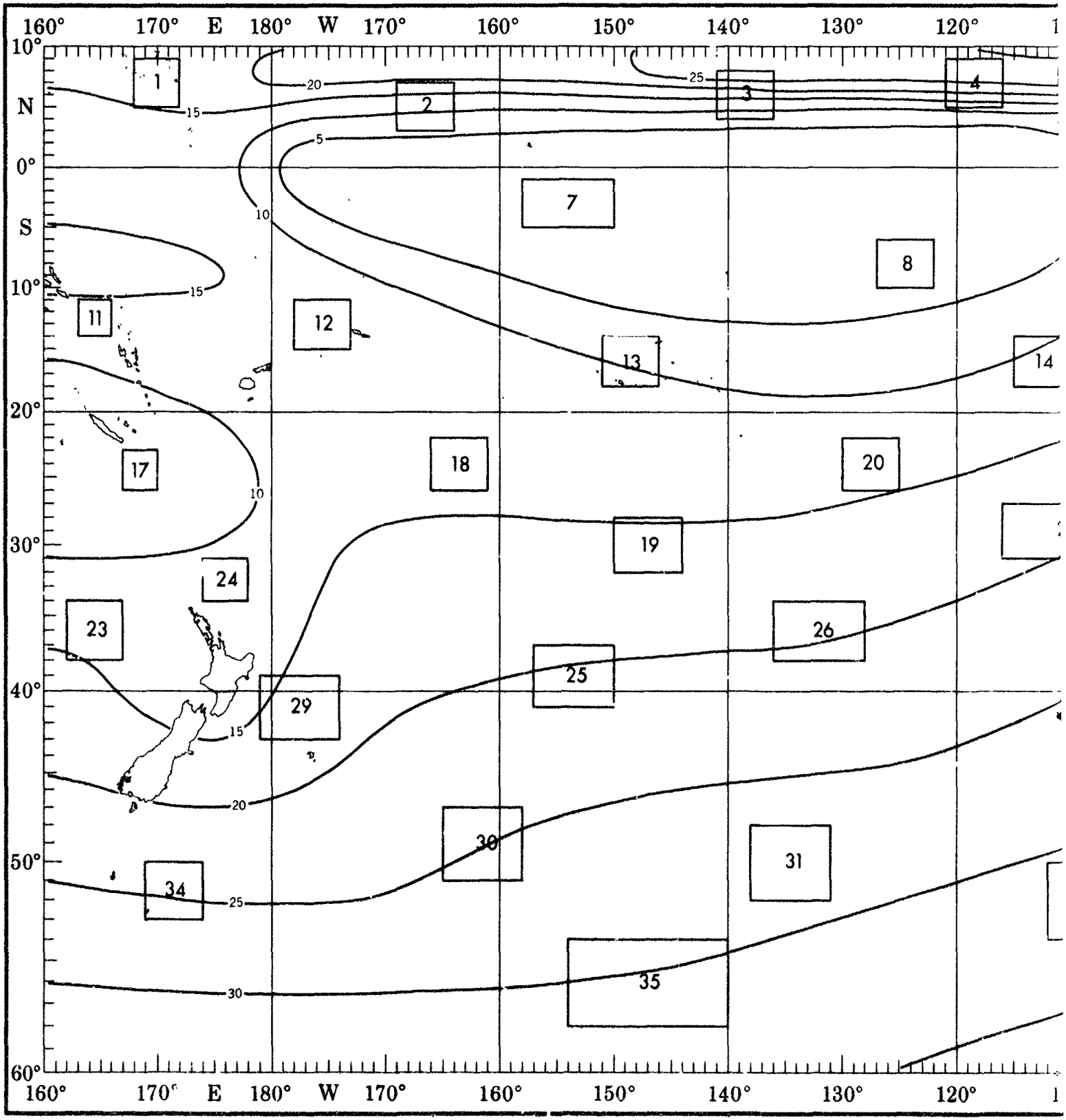
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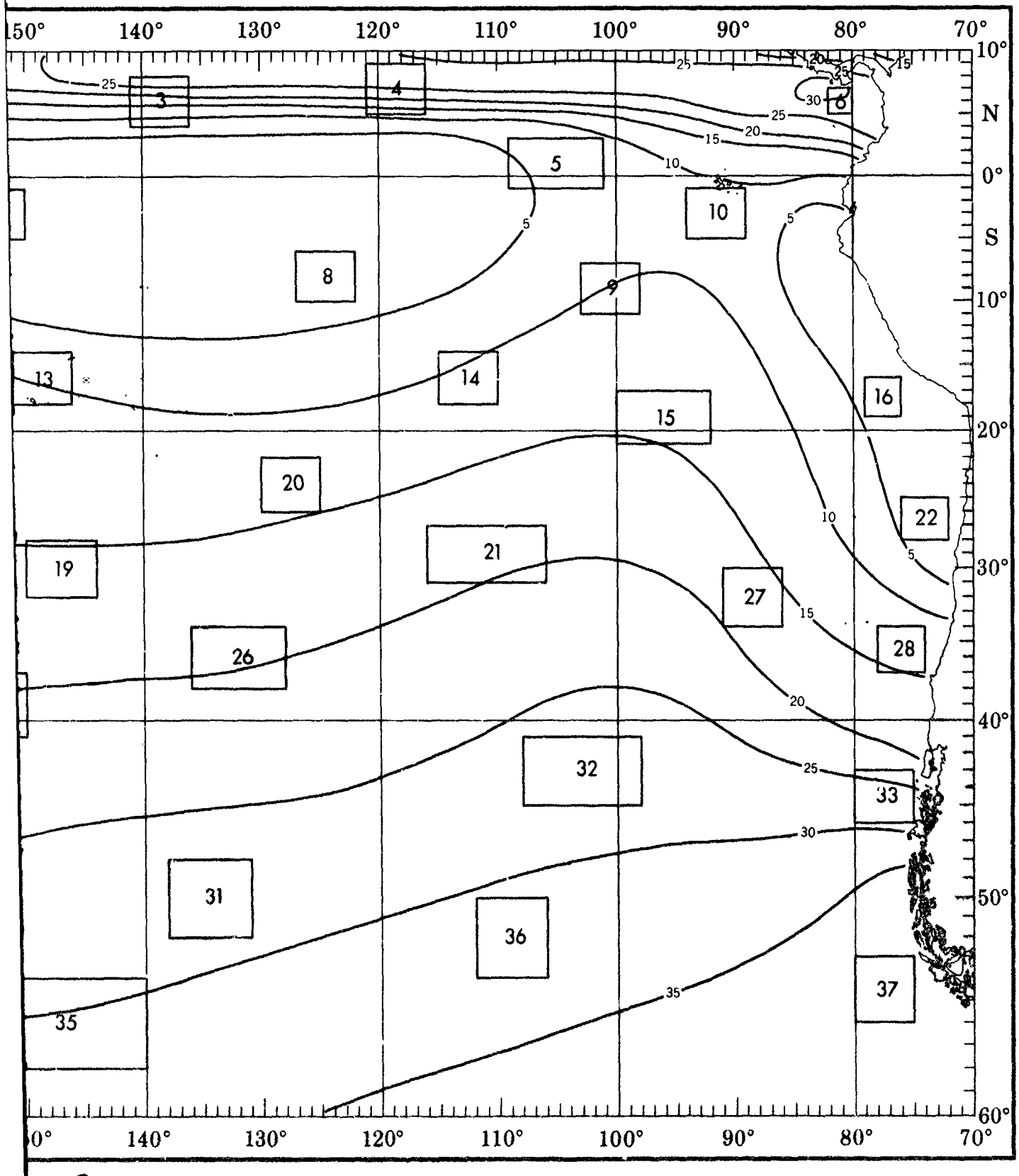
PRECIPITATION



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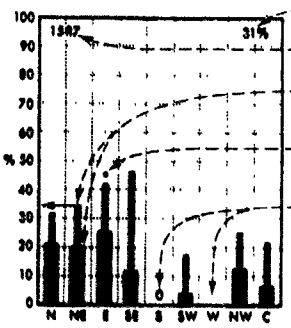
PRECIPITATION

% Pcpn | % Liquid | % Snow

Percent frequency of surface wind observations from each direction and calm that were accompanied by precipitation, subdivided into liquid type (including freezing rain and freezing drizzle) and snow



—Percentage of present weather observations reporting precipitation

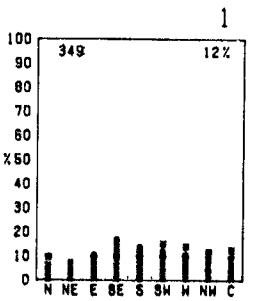
—Number of observations

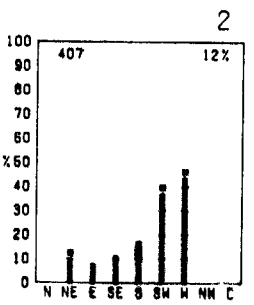
—(34% of all NE winds were accompanied by precipitation, of which 14% was liquid and 20% was snow.)

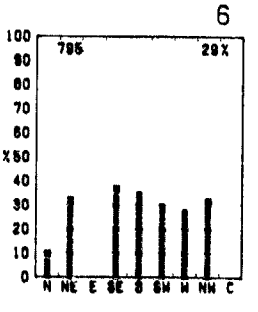
—An asterisk in the column for a given direction or calm indicates that the percentage was based on 10-30 observations of present weather and wind direction

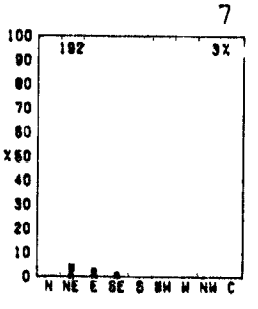
—0 replaces bar when no precipitation was observed with winds from a given direction or calm. No bar graph is presented if less than 10 observations containing present weather were reported for a given direction or calm

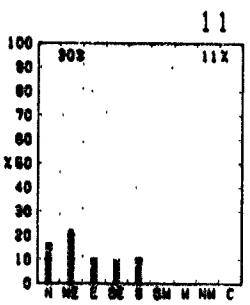
RED LINE - Percent frequency of observations reporting precipitation

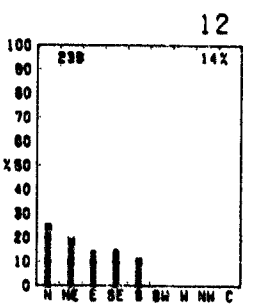


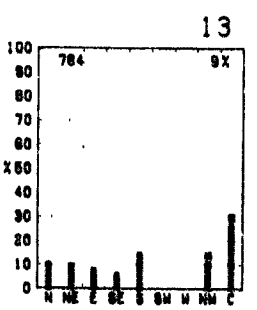


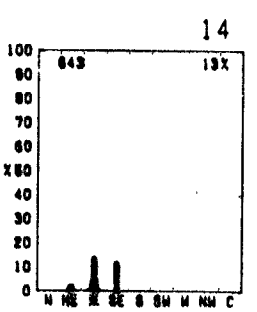


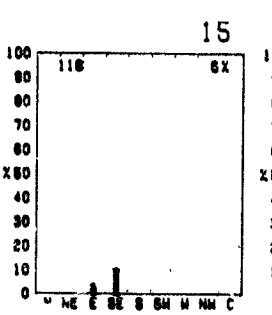


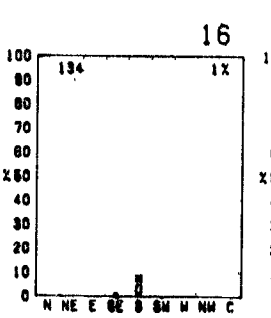


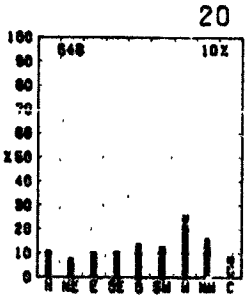


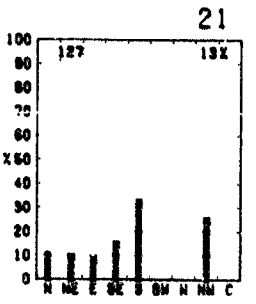


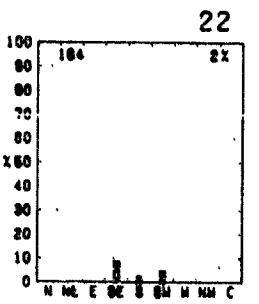


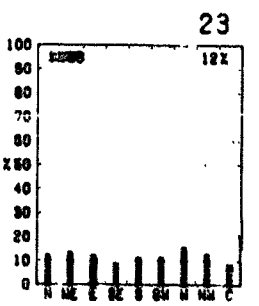


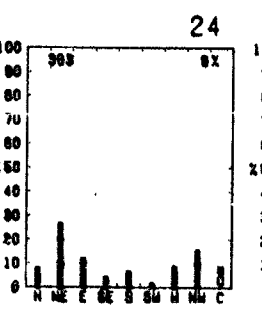


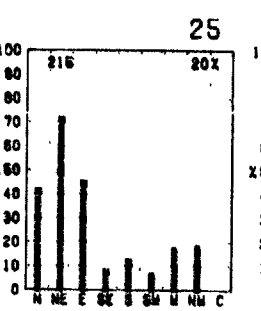


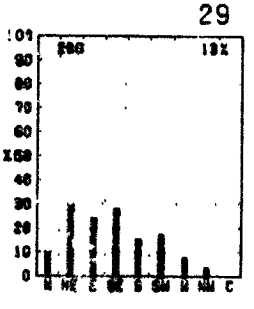












30

INSUFFICIENT DATA

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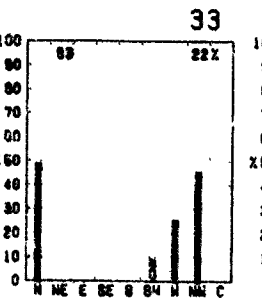

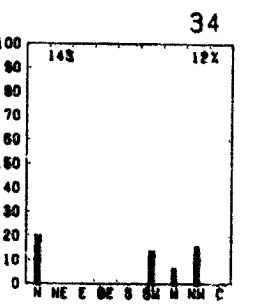

Graphs represent the objective compilation of available data for specified areas without regard to sus
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bia

OCTOBER

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h 14% was liquid and

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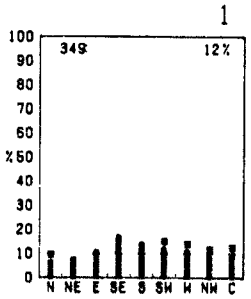
observations containing

1



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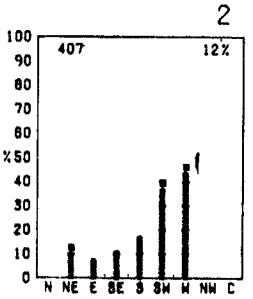

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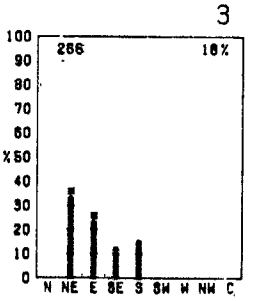

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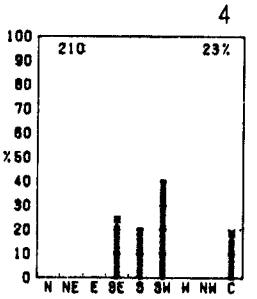

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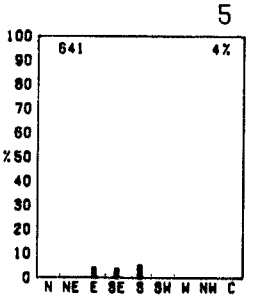

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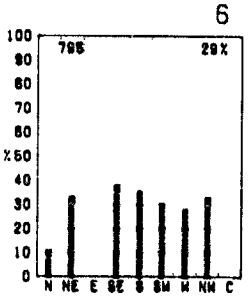

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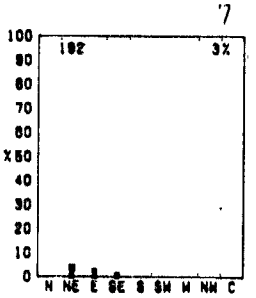

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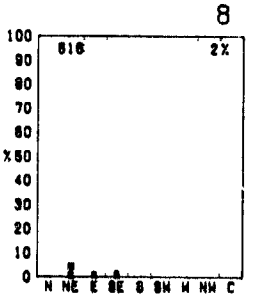

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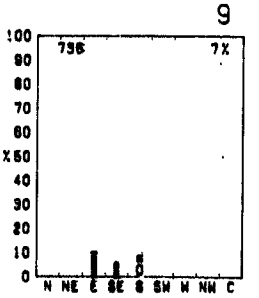

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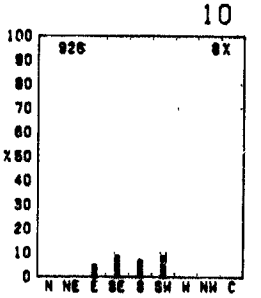

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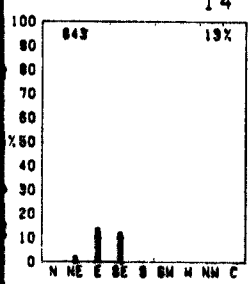

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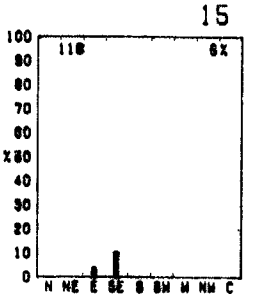

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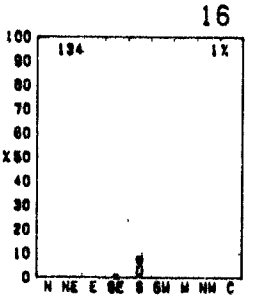

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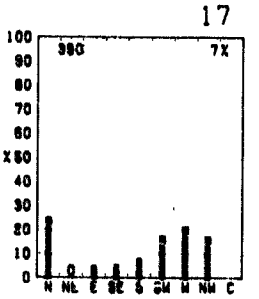

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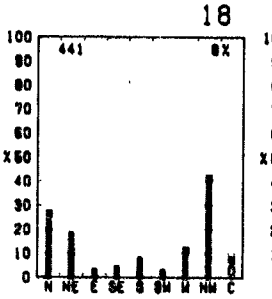

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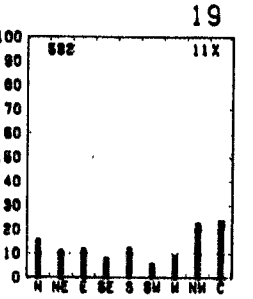

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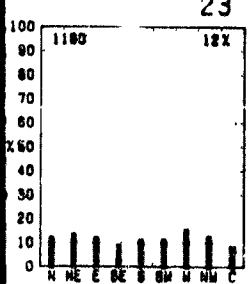

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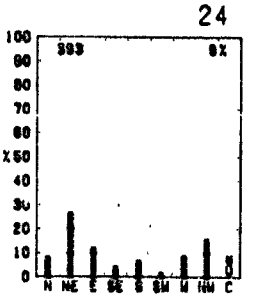

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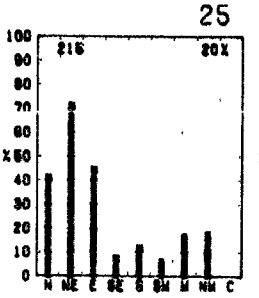

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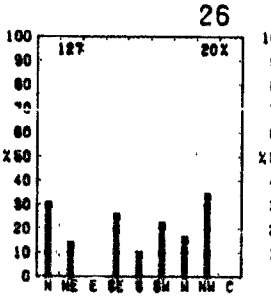

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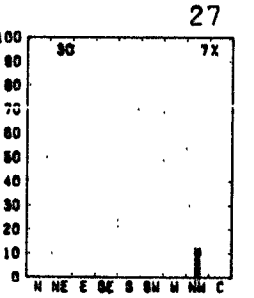

28

INSUFFICIENT DATA

32

INSUFFICIENT DATA

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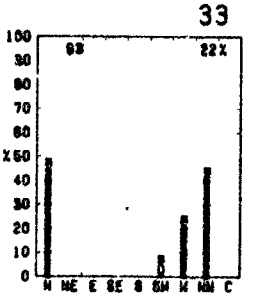

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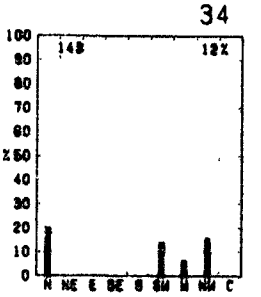

35

INSUFFICIENT DATA

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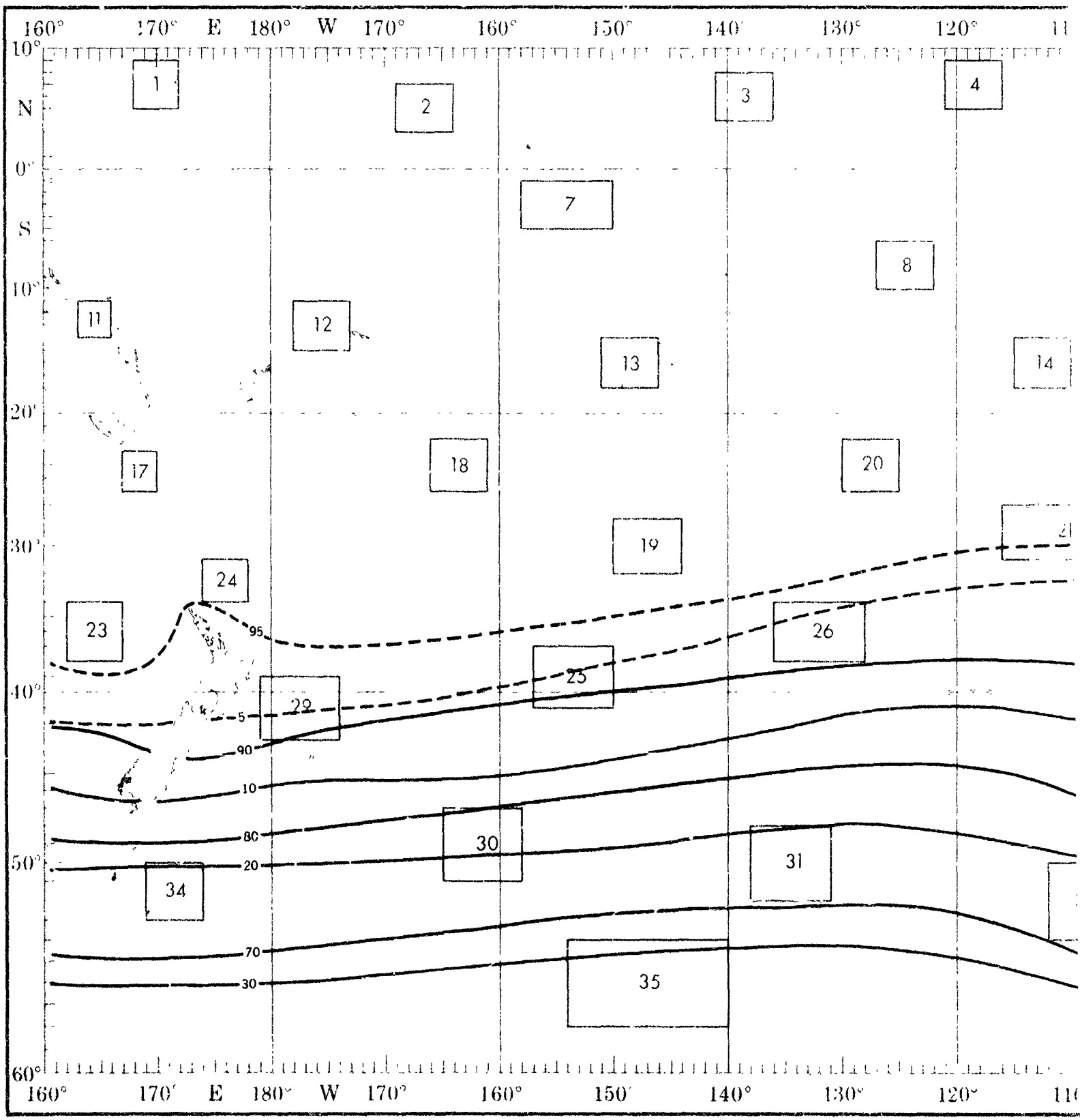
INSUFFICIENT DATA

37

INSUFFICIENT DATA

objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

OCTOBER


160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N
0°
S 10°
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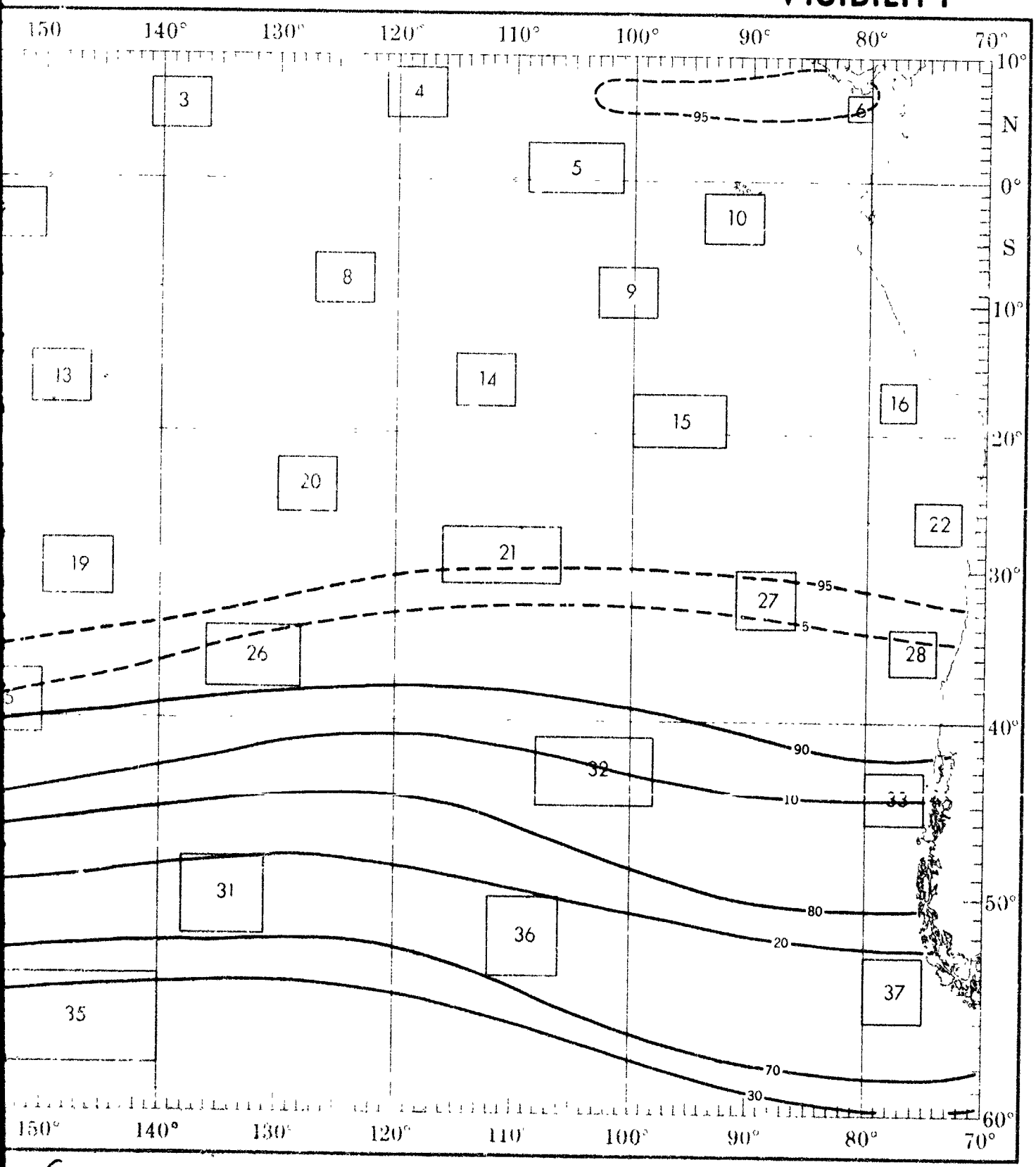
VISIBILITY



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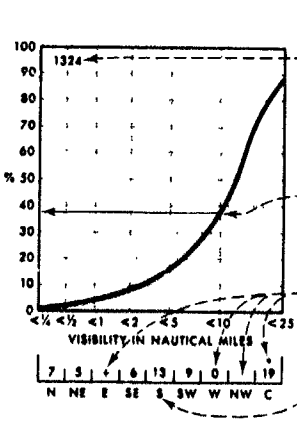
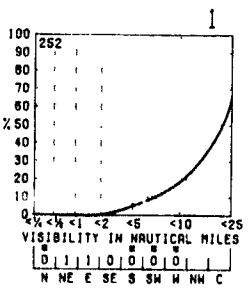
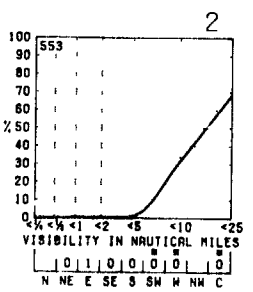
VISIBILITY

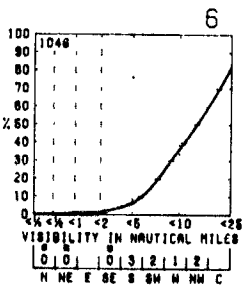


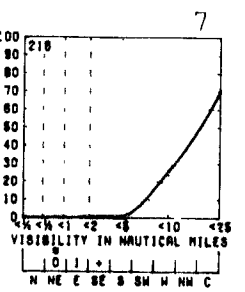
BLUE LINE - Percent frequency of visibilities ≥5 nautical miles

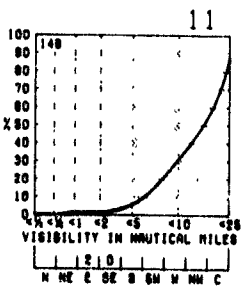
RED LINE - Percent frequency of visibilities <2 nautical miles

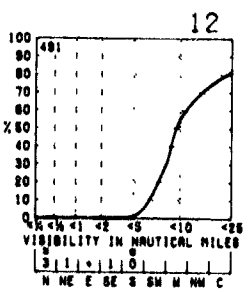


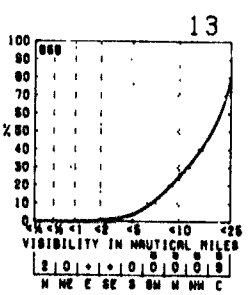


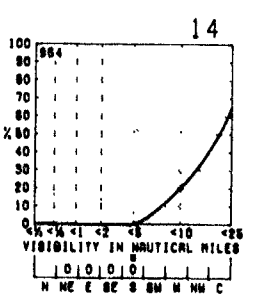


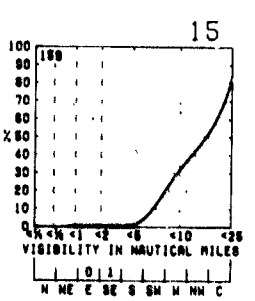


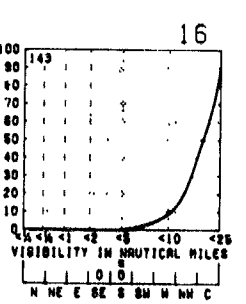


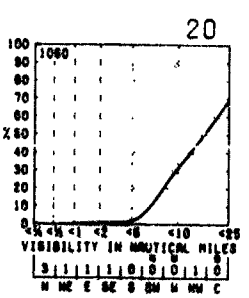


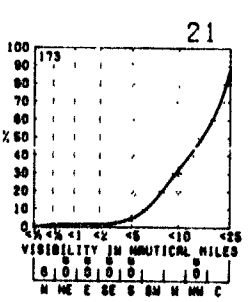


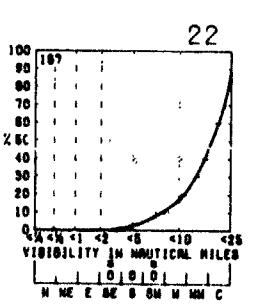


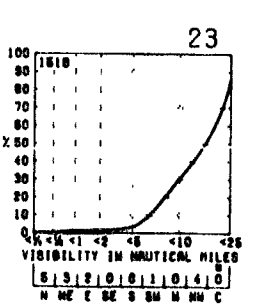


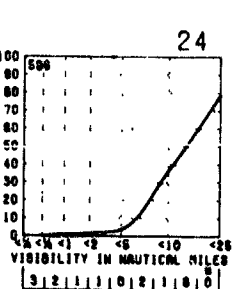


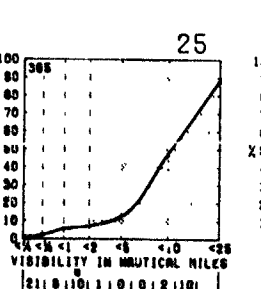


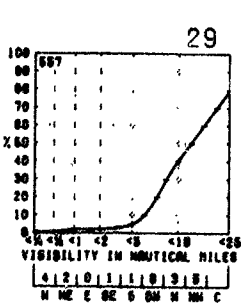


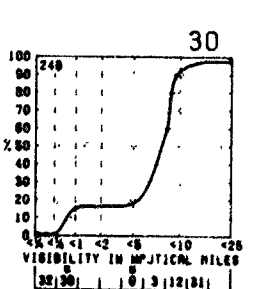


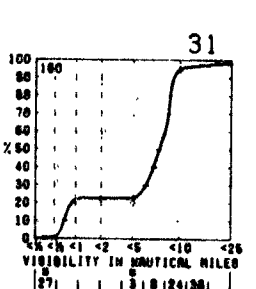


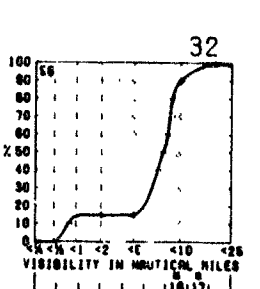


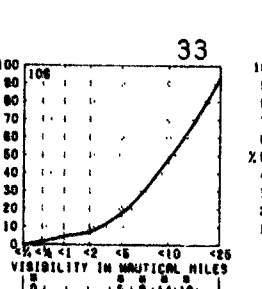


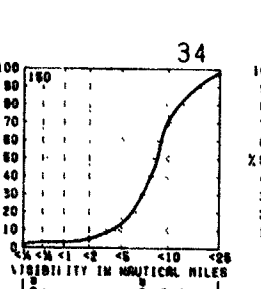












Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

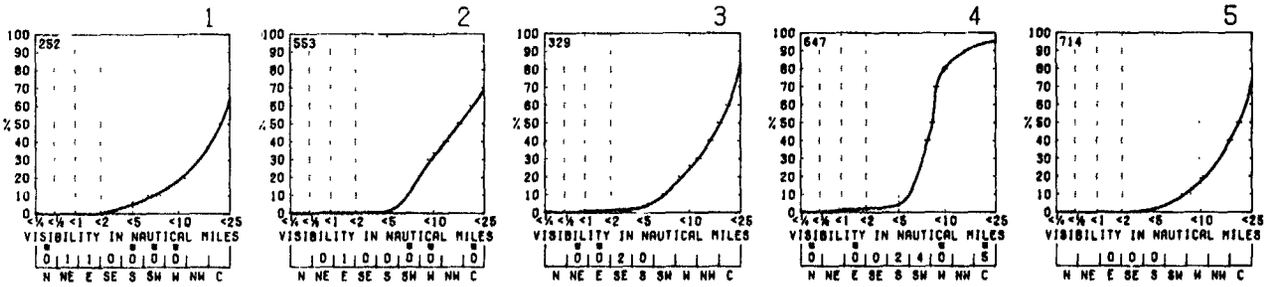
than the visibility intersect

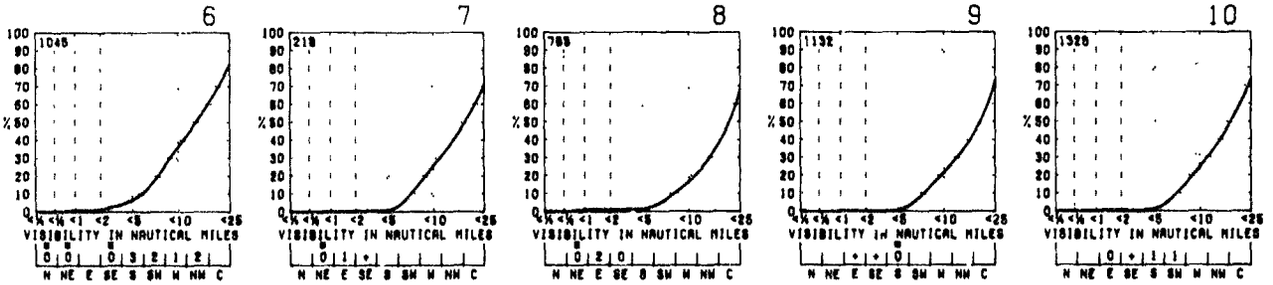
f occurrence of visibility

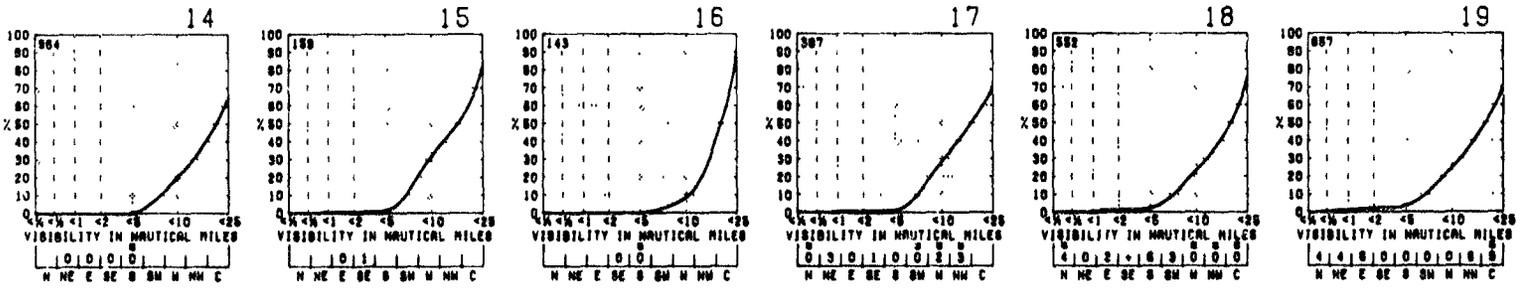
2 nautical miles were
ntage is given if less than 10
ion An asterisk indicates
visibility and wind direction

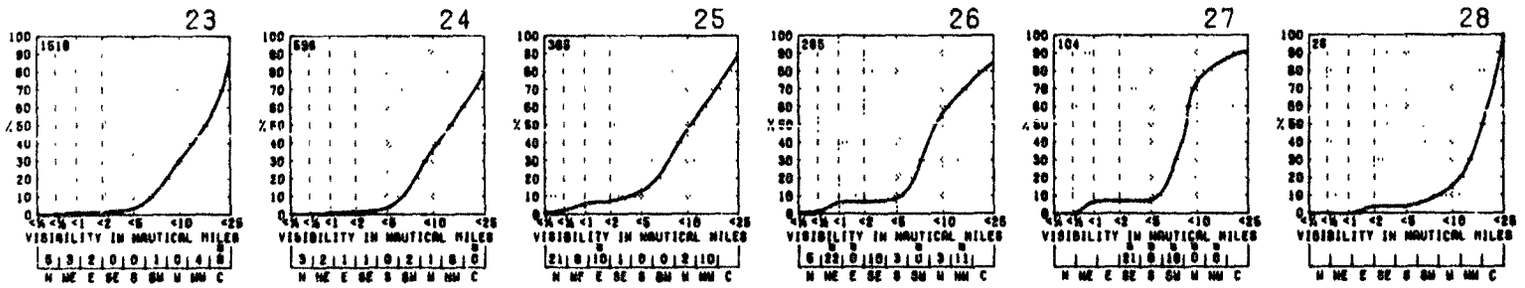
cal miles)

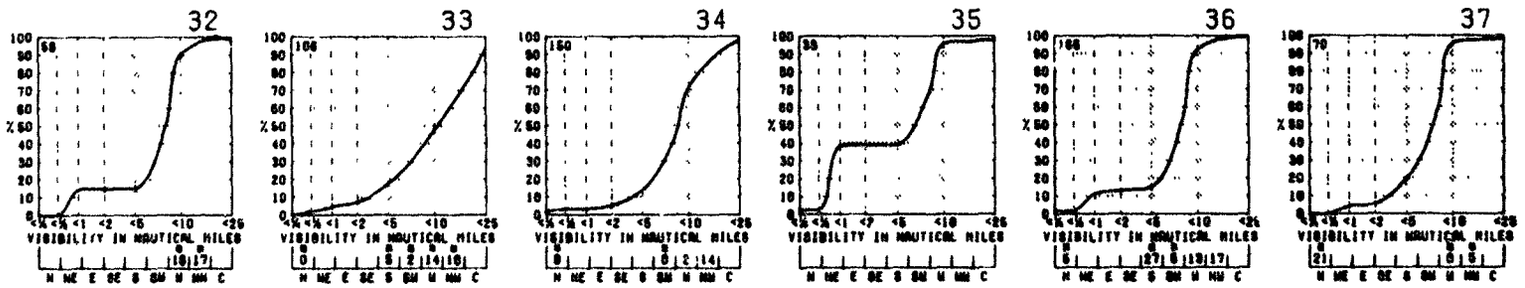
OCTOBER





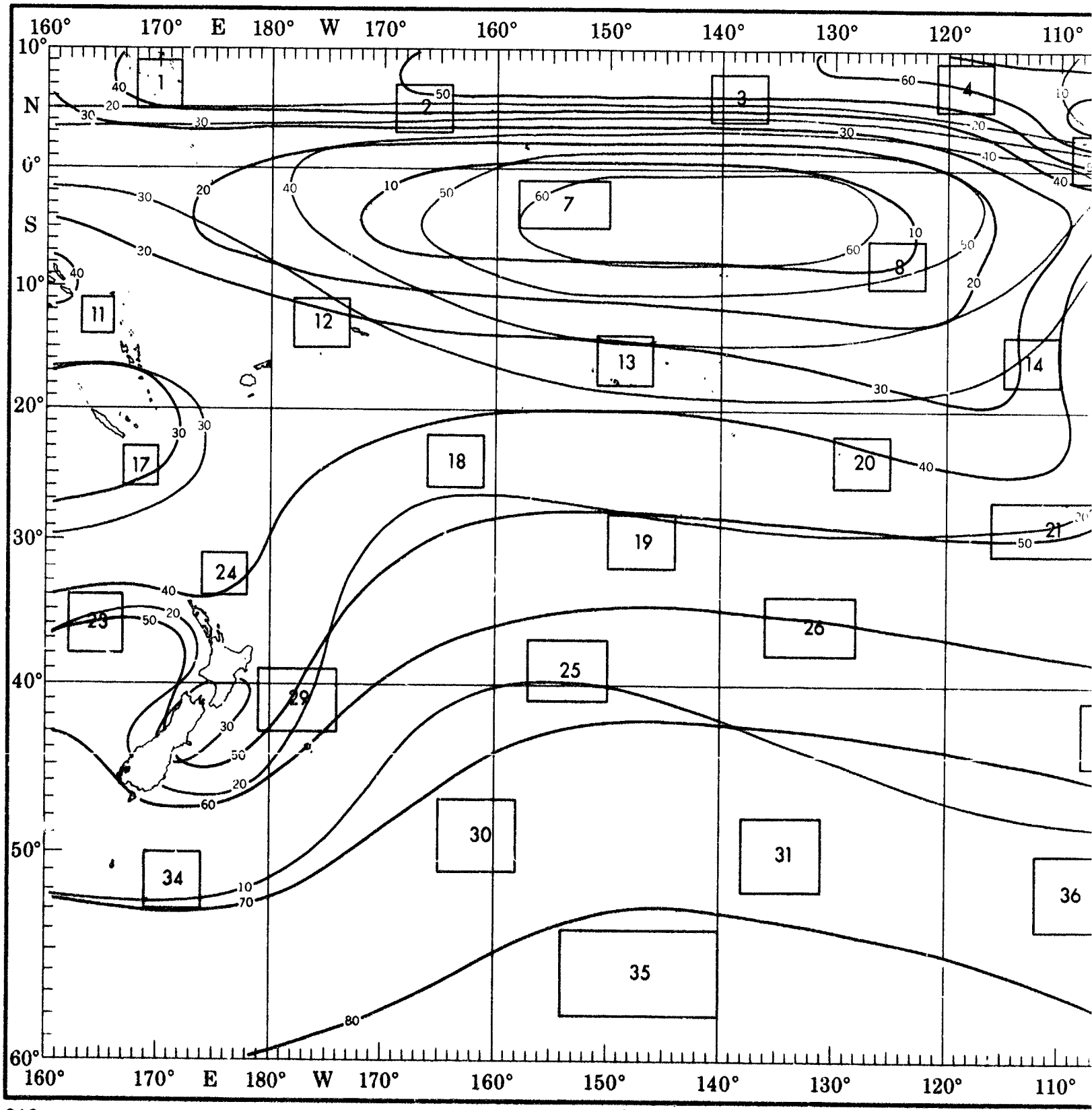






e objective compilation of available data for specified areas without regard to suspected biases.
s (opposite page) are based on all available data subjectively adjusted where bias was evident.

OCTOBER


160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
10° N
0°
S
10°
20°
30°
40°
50°
60°
1
2
3
4
7
8
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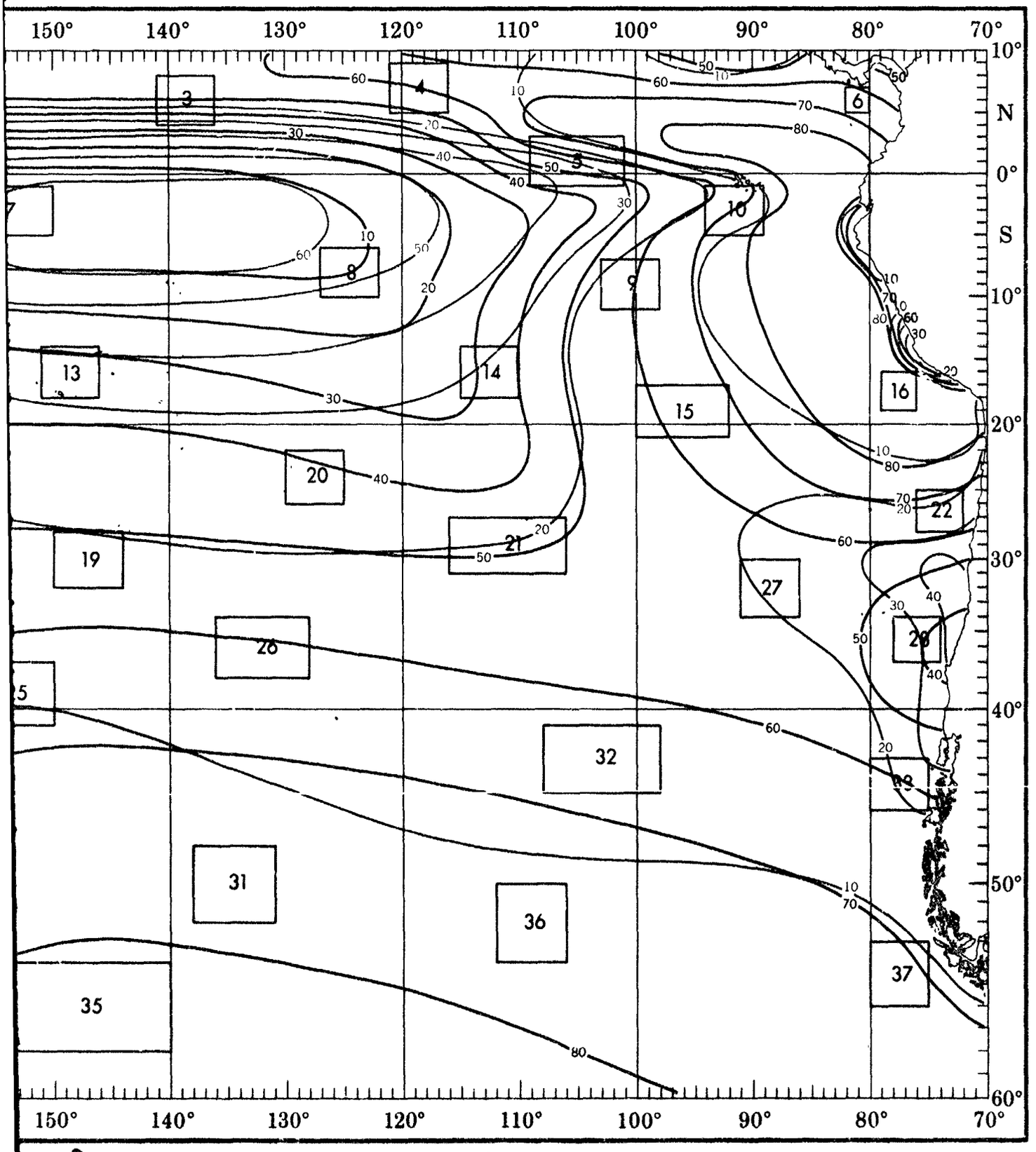
36

CLOUD COVER


150°
140°
130°
120°
110°
100°
90°
80°
70°
10°
N
0°
S
10°
20°
30°
40°
50°
60°
3
4
5
6
7
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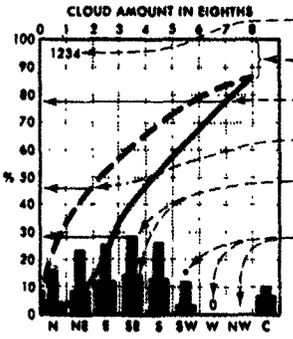
CLOUD COVER

Total Cloud Amount
Low Cloud Amount
} Cumulative percent frequency of indicated cloud amount equal to or less than the amount intersected by the curve



Number of observations containing total cloud amount

Obscurations.

(77% of all total cloud amounts were ≤7/8.)

(46% of all low cloud amounts were ≤2/8.)

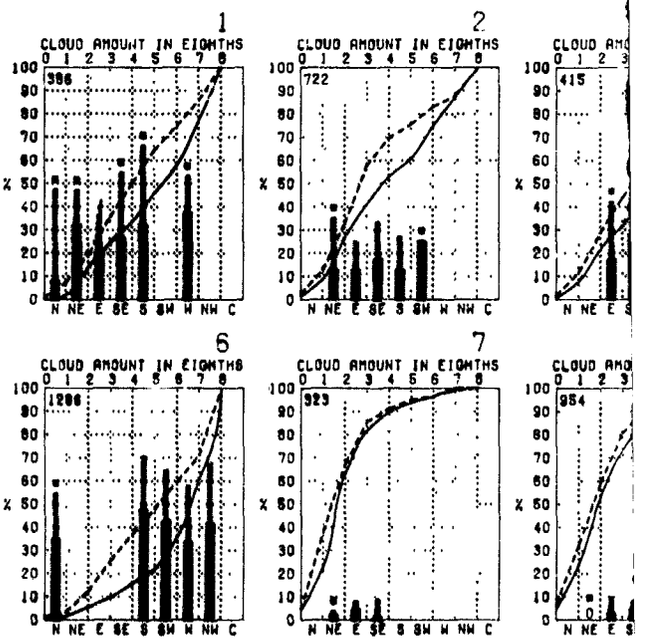
(28% of all SE winds were accompanied by low cloud amounts ≥5/8 and 14% by low cloud amounts ≥7/8.)

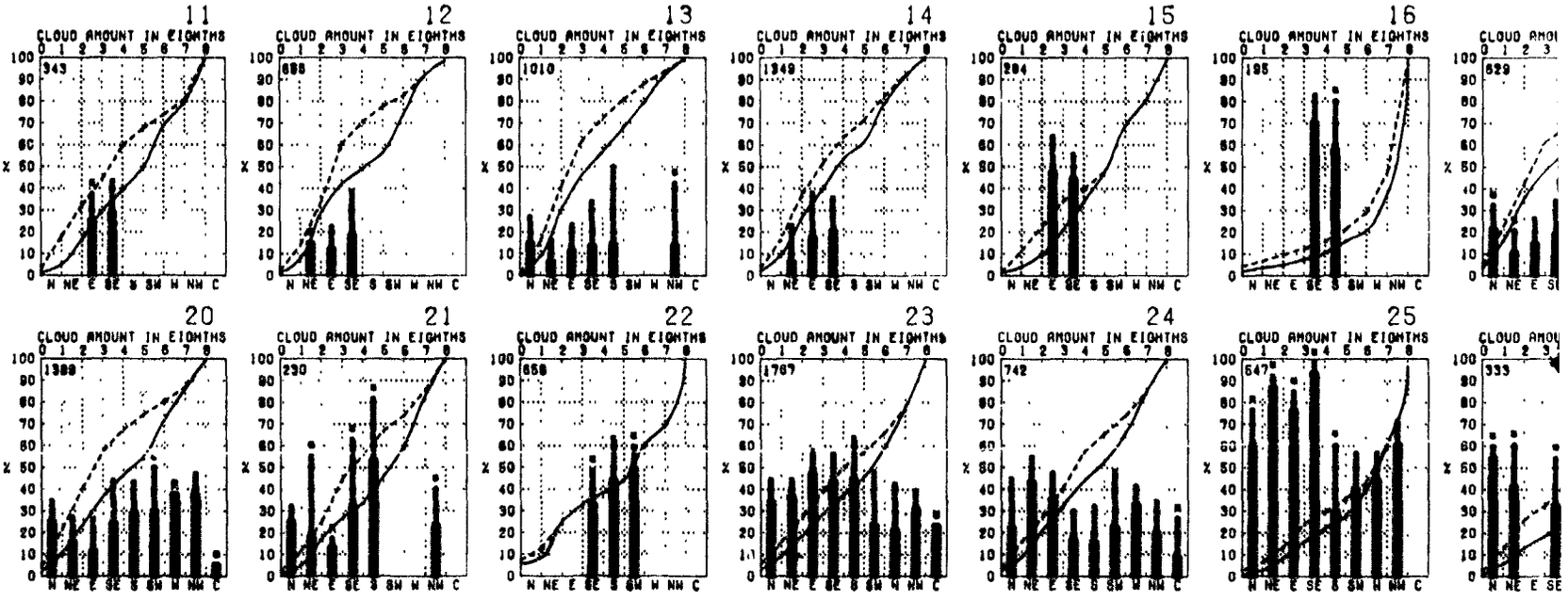
An asterisk indicates that the percentage is based on 10-30 observations of wind direction, total and low cloud amount 0 replaces bar graph when no low cloud amounts ≥5/8 were observed with a wind direction or calm 0 or bar is omitted when number of observations of total and low cloud amount from a wind direction or calm is less than 10

Low cloud amount Percent frequency of observations from each direction and calm that were accompanied by low cloud amounts ≥5/8 and ≥7/8
Low clouds are clouds with bases <8000 feet

BLUE LINE - Percent frequency of total cloud amount ≤2/8

RED LINE - Percent frequency of low cloud amount ≥5/8





Graphs represent the objective compilation of available data for specified areas without regard to suspected
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bias was

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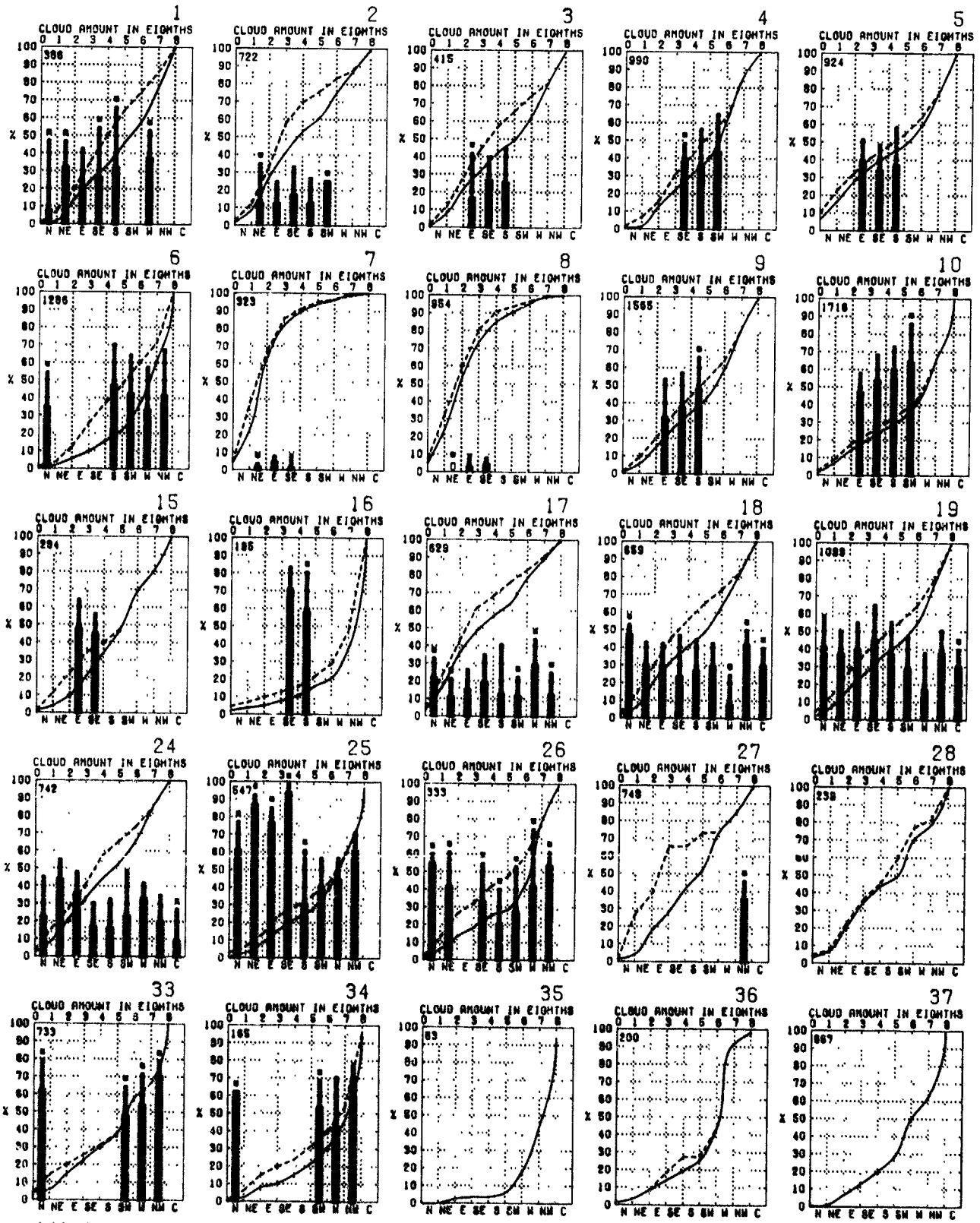
to or less than the amount

≥5/8 and 14% by low

bservations of wind
when no low cloud
0 or bar is omitted when
a wind direction or calm is

that were accompanied by



e objective compilation of available data for specified areas without regard to suspected biases.
s (opposite page) are based on all available data subjectively adjusted where bias was evident.

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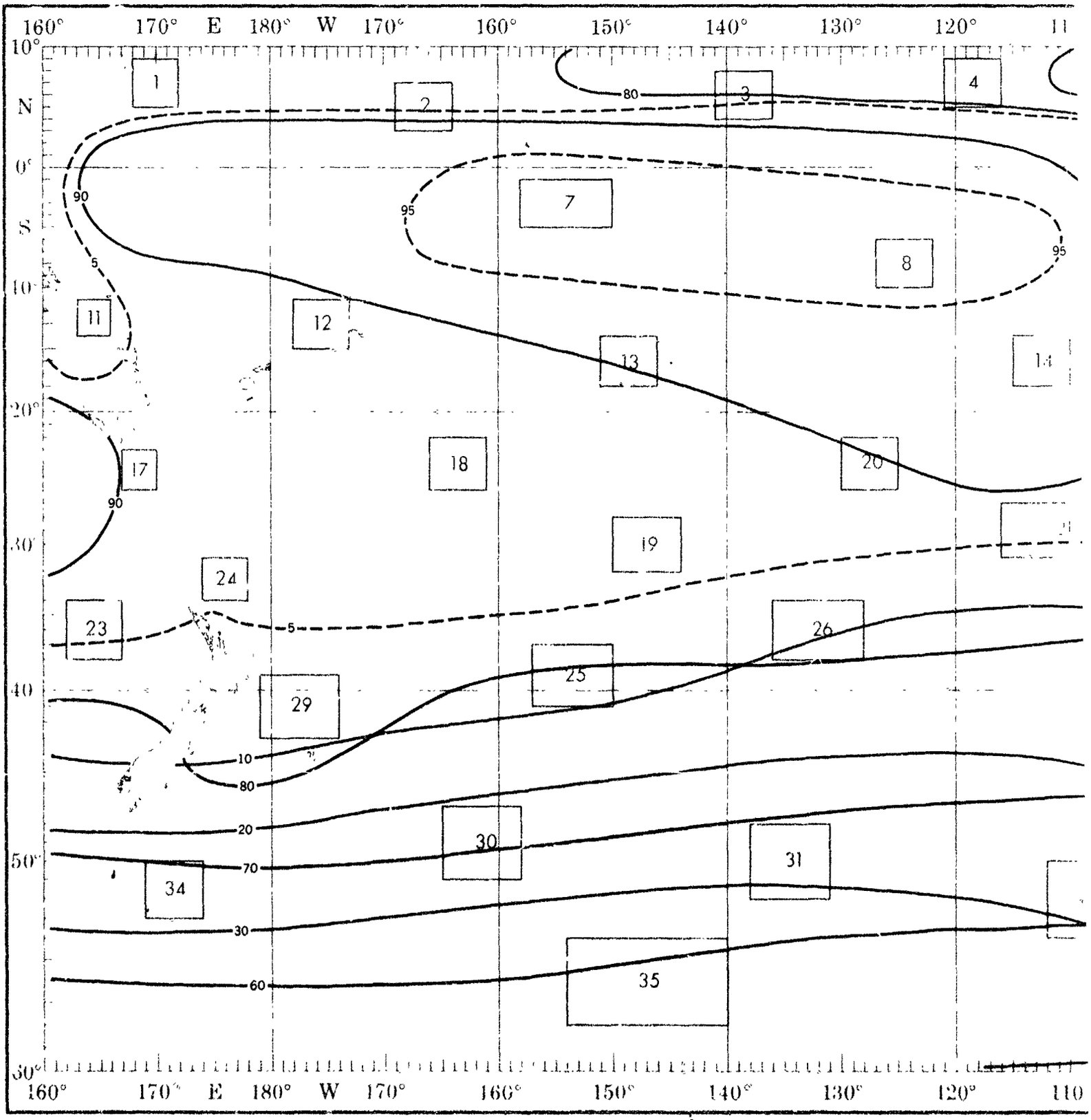
160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N
0°
S
10°
20°
30°
40°
50°
1
2
3
4
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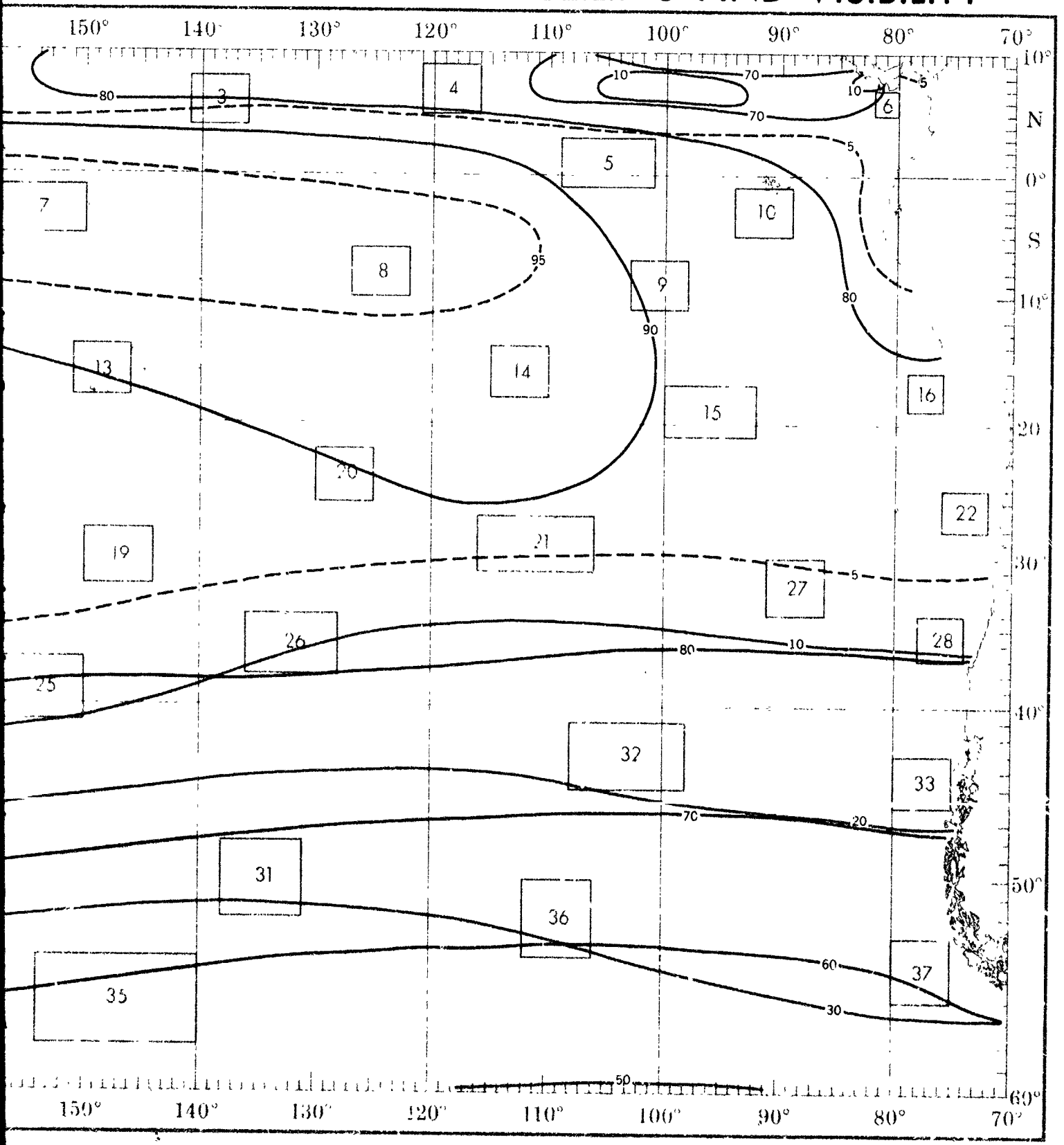
60

CEILING AND VISIBILITY



1 2

CEILING AND VISIBILITY

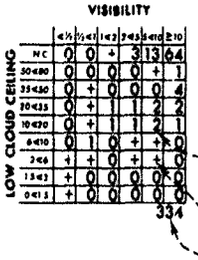
Low cloud ceiling - Visibility

Percent frequency of simultaneous occurrence of specified low cloud ceilings (hundreds of feet) and visibilities (nautical miles)

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"

"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8



(2% of all observations reported ceiling ≥1000 but <2000 feet simultaneously with visibility ≥5 but <10 nautical miles.)

+ indicates < 5% but >0

Number of observations

1

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	4	45
50<80	0	0	0	0	1	1
35<50	0	0	0	0	0	1
20<35	0	0	0	0	1	1
10<20	0	0	0	1	2	19
6<10	0	0	0	1	4	14
3<6	0	0	0	0	2	1
1.5<3	0	0	0	0	0	1
0<1.5	0	0	0	1	0	1

161

2

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	3	67
50<80	0	0	0	0	0	+
35<50	0	0	0	0	+	2
20<35	0	0	0	0	1	6
10<20	0	0	0	0	2	8
6<10	0	0	0	+	2	5
3<6	0	0	0	+	1	1
1.5<3	0	0	0	0	0	1
0<1.5	0	0	0	0	0	0

296

6

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	4	34
50<80	0	0	0	0	+	+
35<50	0	0	+	+	1	2
20<35	0	0	0	+	2	8
10<20	0	0	0	1	6	17
6<10	+	+	1	2	6	12
3<6	0	0	0	1	2	1
1.5<3	0	0	0	+	+	+
0<1.5	+	0	0	0	+	0

782

7

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	1	80
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	0
20<35	0	0	0	0	0	1
10<20	0	0	0	0	0	5
6<10	0	0	1	0	0	1
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

157

BLUE LINE - Percent frequency of low cloud ceiling ≥1000 feet (or no low cloud ceiling) and visibility ≥5 nautical miles

RED LINE - Percent frequency of low cloud ceiling <600 feet and/or visibility <2 nautical miles

11

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	4	5	52
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	0
20<35	0	0	0	0	0	4
10<20	0	0	0	0	5	11
6<10	0	0	0	1	4	6
3<6	0	0	0	2	2	1
1.5<3	0	0	0	0	0	1
0<1.5	0	0	0	0	0	0

94

12

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	3	87
50<80	0	0	0	0	0	0
35<50	0	0	0	0	1	0
20<35	0	0	0	0	0	5
10<20	0	0	0	0	3	13
6<10	0	0	0	1	2	5
3<6	0	0	0	1	0	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	1	0	0

176

13

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	7	66
50<80	0	0	0	0	+	+
35<50	0	0	0	+	+	+
20<35	0	0	0	1	2	4
10<20	0	0	+	1	3	8
6<10	0	0	0	1	1	3
3<6	0	+	0	+	0	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

881

14

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	1	82
50<80	0	0	0	0	0	2
35<50	0	0	0	0	+	4
20<35	0	0	0	+	1	7
10<20	0	0	0	+	1	14
6<10	0	0	0	+	1	7
3<6	0	0	0	0	0	1
1.5<3	0	0	0	0	+	0
0<1.5	0	0	0	0	0	+

709

15

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	9	98
50<80	0	0	0	0	0	0
35<50	0	0	0	0	2	0
20<35	0	0	0	0	0	7
10<20	0	0	0	0	0	22
6<10	0	0	0	0	7	18
3<6	0	0	0	0	0	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

107

16

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	0	14
50<80	0	0	0	0	0	3
35<50	0	0	0	0	5	3
20<35	0	0	0	0	1	23
10<20	0	0	0	0	0	34
6<10	0	0	0	0	3	14
3<6	0	0	0	0	0	2
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

118

20

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	2	66
50<80	0	0	0	0	+	+
35<50	0	0	0	0	1	2
20<35	0	0	0	+	+	7
10<20	0	0	+	+	2	10
6<10	0	0	+	+	1	5
3<6	0	+	0	+	+	0
1.5<3	0	0	0	0	0	+
0<1.5	0	0	0	0	0	0

726

21

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	3	84
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	0
20<35	0	0	0	0	0	24
10<20	0	1	0	1	2	7
6<10	0	0	0	2	2	1
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

123

22

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	4	93
50<80	0	0	0	0	0	2
35<50	0	0	0	0	0	3
20<35	0	0	0	1	1	16
10<20	0	0	0	0	3	21
6<10	0	0	0	1	1	10
3<6	0	0	0	0	0	2
1.5<3	0	0	0	0	0	1
0<1.5	0	0	0	0	0	1

155

23

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	3	47
50<80	0	0	0	+	+	+
35<50	0	0	0	0	+	1
20<35	0	0	0	+	2	7
10<20	0	0	0	+	3	19
6<10	+	0	+	1	1	9
3<6	+	+	+	+	1	1
1.5<3	0	0	0	0	0	0
0<1.5	+	0	0	+	+	+

1139

24

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	0	0	1	3	54
50<80	0	0	0	0	+	1
35<50	0	0	0	0	0	1
20<35	0	0	0	0	1	8
10<20	0	0	0	1	4	15
6<10	0	0	0	1	1	8
3<6	0	+	0	1	1	1
1.5<3	0	0	0	+	+	0
0<1.5	+	0	0	0	0	0

370

25

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	0	0	0	2	28
50<80	0	0	0	0	+	1
35<50	0	0	0	0	0	1
20<35	+	0	1	1	2	7
10<20	0	0	0	0	2	21
6<10	0	0	0	0	1	9
3<6	+	0	0	0	2	+
1.5<3	0	0	0	0	1	0
0<1.5	2	0	0	0	0	0

238

29

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	3	48
50<80	0	0	0	0	0	+
35<50	+	0	0	0	1	4
20<35	0	0	0	+	1	12
10<20	+	0	0	+	4	15
6<10	+	0	0	1	1	7
3<6	0	0	+	1	0	1
1.5<3	0	0	0	1	0	+
0<1.5	+	0	0	0	0	0

381

30

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	0	24
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	0
20<35	0	0	0	0	0	6
10<20	0	0	0	0	0	6
6<10	0	0	0	12	24	0
3<6	0	0	0	5	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

17

31

INSUFFICIENT DATA

32

INSUFFICIENT DATA

33

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	5	25
50<80	0	0	0	0	0	1
35<50	0	0	0	1	1	2
20<35	0	0	0	1	10	8
10<20	0	0	0	5	8	7
6<10	0	0	0	2	5	10
3<6	0	0	0	1	1	2
1.5<3	0	0	1	0	0	0
0<1.5	0	0	0	1	1	0

87

34

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	1	1	20	0
50<80	0	1	0	0	0	0
35<50	0	0	0	0	1	0
20<35	0	0	0	0	19	9
10<20	0	0	1	0	15	5
6<10	1	0	0	0	1	1
3<6	0	0	0	1	0	0
1.5<3	0	0	0	0	0	0
0<1.5	3	0	0	1	1	0

144

Graphs represent the objective compilation of available data for specified areas without regard to su
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bia

ITY

OCTOBER

loud ceilings (hundreds of feet)

louds (h) when low cloud amount

s occurrences of N_h <5/8

taneously with visibility ≥5 but <10

nd visibility ≥5 nautical miles

al miles

1

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	1	4	45
50-<80	0	0	0	0	1	1
35-<50	0	0	0	0	0	1
20-<35	0	0	0	0	1	1
10-<20	0	0	0	1	2	19
6-<10	0	0	0	1	4	14
3-<6	0	0	0	0	2	1
1.5-<3	0	0	0	0	0	1
0-<1.5	0	0	0	1	0	1

161

2

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	1	3	67
50-<80	0	0	0	0	0	+
35-<50	0	0	0	0	+	2
20-<35	0	0	0	0	1	6
10-<20	0	0	0	0	2	8
6-<10	0	0	0	+	2	5
3-<6	0	0	0	+	1	1
1.5-<3	0	0	0	0	0	1
0-<1.5	0	0	0	0	0	0

296

3

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	2	56
50-<80	0	0	0	0	+	+
35-<50	0	0	0	0	1	1
20-<35	0	0	0	0	1	3
10-<20	0	0	0	0	2	12
6-<10	+	+	+	1	1	12
3-<6	0	0	0	+	1	2
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	1	0	+	0

232

4

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	1	0	0	2	5	35
50-<80	0	0	0	0	0	1
35-<50	0	0	0	1	1	2
20-<35	0	0	1	1	2	3
10-<20	0	0	0	2	8	9
6-<10	0	0	1	2	5	12
3-<6	0	0	1	1	1	1
1.5-<3	0	0	0	0	0	1
0-<1.5	0	1	1	1	0	1

175

5

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	+	2	46
50-<80	0	0	0	0	+	1
35-<50	0	0	0	0	1	3
20-<35	0	0	0	+	2	7
10-<20	0	0	0	1	3	22
6-<10	0	0	0	0	1	8
3-<6	0	0	0	+	1	1
1.5-<3	0	0	0	0	0	+
0-<1.5	0	0	0	+	0	0

602

6

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	+	4	34
50-<80	0	0	0	0	+	+
35-<50	0	0	+	+	1	2
20-<35	0	0	0	+	2	6
10-<20	0	0	0	1	6	17
6-<10	+	+	1	2	6	12
3-<6	0	0	0	1	2	1
1.5-<3	0	0	0	+	+	+
0-<1.5	+	0	0	0	+	0

782

7

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	1	80
50-<80	0	0	0	0	0	0
35-<50	0	0	0	0	0	0
20-<35	0	0	0	0	0	1
10-<20	0	0	0	0	0	5
6-<10	0	0	1	0	0	1
3-<6	0	0	0	0	0	0
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	0	0

157

8

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	1	80
50-<80	0	0	0	0	0	+
35-<50	0	0	0	0	+	1
20-<35	0	0	0	0	0	1
10-<20	0	0	0	+	+	5
6-<10	0	0	0	0	0	2
3-<6	0	0	0	0	0	+
1.5-<3	0	0	0	0	0	+
0-<1.5	0	0	0	0	0	0

618

9

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	1	44
50-<80	0	0	0	0	+	2
35-<50	0	0	0	+	0	7
20-<35	0	0	0	+	1	12
10-<20	0	0	0	0	1	22
6-<10	0	0	0	+	1	8
3-<6	0	0	0	+	+	+
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	0	+

807

10

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	+	0	0	0	1	29
50-<80	0	0	0	0	+	2
35-<50	0	0	0	0	1	7
20-<35	0	0	0	+	2	15
10-<20	0	+	0	+	2	27
6-<10	0	0	+	+	2	9
3-<6	0	0	0	0	1	1
1.5-<3	0	0	0	+	+	+
0-<1.5	0	0	0	0	0	0

993

13

LOW CLOUD CEILING \ VISIBILITY	5-<10	≥10
NC	7	68
50-<80	+	+
35-<50	+	+
20-<35	2	4
10-<20	3	8
6-<10	1	3
3-<6	0	1
1.5-<3	0	0
0-<1.5	0	0

681

14

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	0	82
50-<80	0	0	0	0	0	2
35-<50	0	0	0	0	+	4
20-<35	0	0	0	+	1	7
10-<20	0	0	0	+	1	14
6-<10	0	0	0	+	1	7
3-<6	0	0	0	0	0	1
1.5-<3	0	0	0	0	+	0
0-<1.5	0	0	0	0	0	+

709

15

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	3	36
50-<80	0	0	0	0	0	0
35-<50	0	0	0	0	2	0
20-<35	0	0	0	0	0	7
10-<20	0	0	0	0	0	22
6-<10	0	0	0	0	7	19
3-<6	0	0	0	0	0	1
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	0	0

107

16

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	0	14
50-<80	0	0	0	0	0	3
35-<50	0	0	0	0	5	3
20-<35	0	0	0	0	1	23
10-<20	0	0	0	0	0	34
6-<10	0	0	0	0	3	14
3-<6	0	0	0	0	0	2
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	0	0

118

17

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	3	65
50-<80	0	0	0	0	0	1
35-<50	0	0	0	0	0	1
20-<35	0	0	0	0	1	5
10-<20	0	0	0	0	2	12
6-<10	0	0	0	0	2	6
3-<6	0	0	0	0	0	1
1.5-<3	0	0	0	0	0	+
0-<1.5	0	0	0	0	0	0

240

18

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	+	+	3	52
50-<80	0	0	0	0	0	1
35-<50	0	0	0	0	0	2
20-<35	0	0	0	0	2	8
10-<20	0	0	0	0	2	16
6-<10	0	0	1	+	2	7
3-<6	0	0	0	0	1	1
1.5-<3	0	0	0	0	+	+
0-<1.5	0	0	0	0	0	+

409

19

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	+	3	45
50-<80	0	0	0	0	+	1
35-<50	0	+	0	+	+	5
20-<35	0	0	+	+	+	12
10-<20	0	0	0	+	2	19
6-<10	+	0	0	+	2	5
3-<6	0	+	+	+	1	1
1.5-<3	0	0	+	0	+	0
0-<1.5	+	0	0	+	+	0

654

22

LOW CLOUD CEILING \ VISIBILITY	5-<10	≥10
NC	4	33
50-<80	0	2
35-<50	0	3
20-<35	1	16
10-<20	3	21
6-<10	1	10
3-<6	0	2
1.5-<3	0	1
0-<1.5	0	1

155

23

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	+	3	47
50-<80	0	0	0	+	+	+
35-<50	0	0	0	0	+	1
20-<35	0	0	0	+	2	7
10-<20	0	0	0	+	3	18
6-<10	+	0	+	1	4	7
3-<6	+	+	+	+	1	1
1.5-<3	0	0	0	0	0	0
0-<1.5	+	0	0	+	+	+

1139

24

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	+	0	0	1	3	54
50-<80	0	0	0	0	+	1
35-<50	0	0	0	0	0	1
20-<35	0	0	0	0	1	6
10-<20	0	0	0	1	4	16
6-<10	0	0	+	1	1	9
3-<6	0	+	0	1	1	1
1.5-<3	0	0	0	+	+	0
0-<1.5	+	0	0	0	0	0

370

25

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	+	0	0	0	2	29
50-<80	0	0	0	0	+	1
35-<50	0	0	0	0	2	3
20-<35	+	0	1	1	2	7
10-<20	0	0	0	2	8	21
6-<10	0	0	0	1	3	5
3-<6	+	0	0	3	2	+
1.5-<3	0	0	0	1	0	0
0-<1.5	2	0	0	0	0	0

239

26

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	1	1	0	1	1	42
50-<80	0	0	0	0	0	1
35-<50	0	0	0	0	1	0
20-<35	0	0	0	0	2	10
10-<20	0	0	0	0	2	18
6-<10	1	0	1	1	3	5
3-<6	0	0	0	0	4	1
1.5-<3	0	0	0	0	0	0
0-<1.5	1	0	0	0	1	0

134

27

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	4	65
50-<80	0	0	0	0	0	0
35-<50	0	0	0	0	0	12
20-<35	0	0	0	0	0	15
10-<20	0	0	0	0	0	0
6-<10	0	0	0	0	4	0
3-<6	0	0	0	0	0	0
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	0	0

26

28

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	0	36
50-<80	0	0	0	0	0	5
35-<50	0	0	0	0	0	5
20-<35	0	0	0	0	0	18
10-<20	0	0	0	0	0	9
6-<10	0	0	0	0	0	14
3-<6	0	0	0	0	0	0
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	0	0

22

31

32

NT INSUFFICIENT DATA

33

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	5	25
50-<80	0	0	0	0	0	1
35-<50	0	0	0	1	1	2
20-<35	0	0	0	1	10	8
10-<20	0	0	0	5	8	7
6-<10	0	0	0	2	5	10
3-<6	0	0	0	1	1	2
1.5-<3	0	0	1	0	0	0
0-<1.5	0	0	0	1	1	0

87

34

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	1	1	20	0
50-<80	0	0	0	0	0	0
35-<50	0	0	0	0	1	0
20-<35	0	0	0	0	19	0
10-<20	0	0	1	0	15	0
6-<10	1	0	0	0	1	1
3-<6	0	0	0	1	0	0
1.5-<3	0	0	0	0	0	0
0-<1.5	3	0	0	1	1	0

144

35

INSUFFICIENT DATA

36

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	0	27
50-<80	0	0	0	0	0	0
35-<50	0	0	0	0	0	0
20-<35	0	0	0	0	0	36
10-<20	0	0	0	0	0	16
6-<10	0	0	0	0	0	*
3-<6	0	0	0	0	0	0
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	0	0

11

37

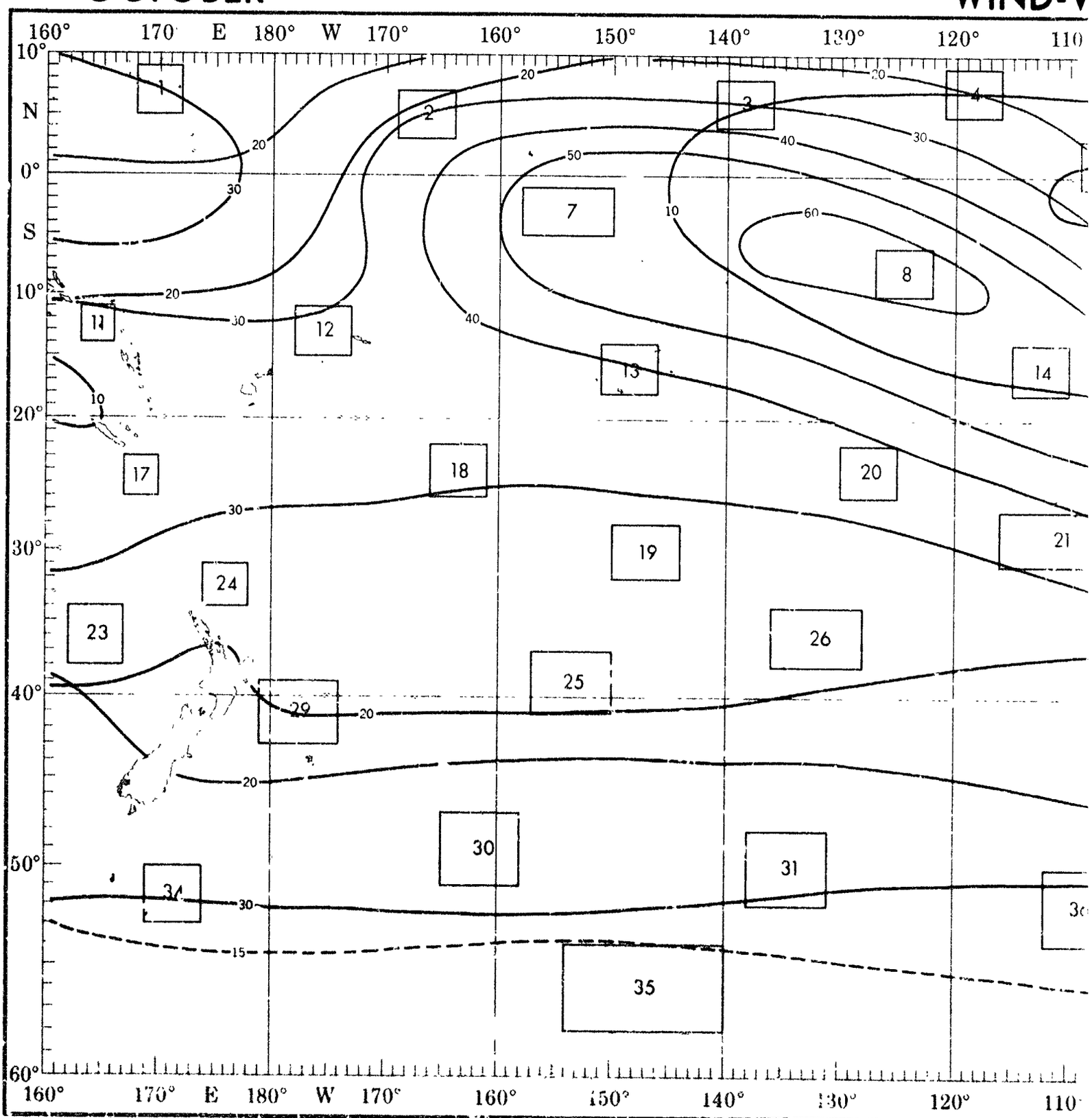
LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	0	0
50-<80	0	0	0	0	0	0
35-<50	0	0	0	0	0	0
20-<35	0	0	0	0	0	17
10-<20	0	0	0	0	33	0
6-<10	0	0	0	0	0	0
3-<6	0	0	0	0	0	0
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	0	0

12

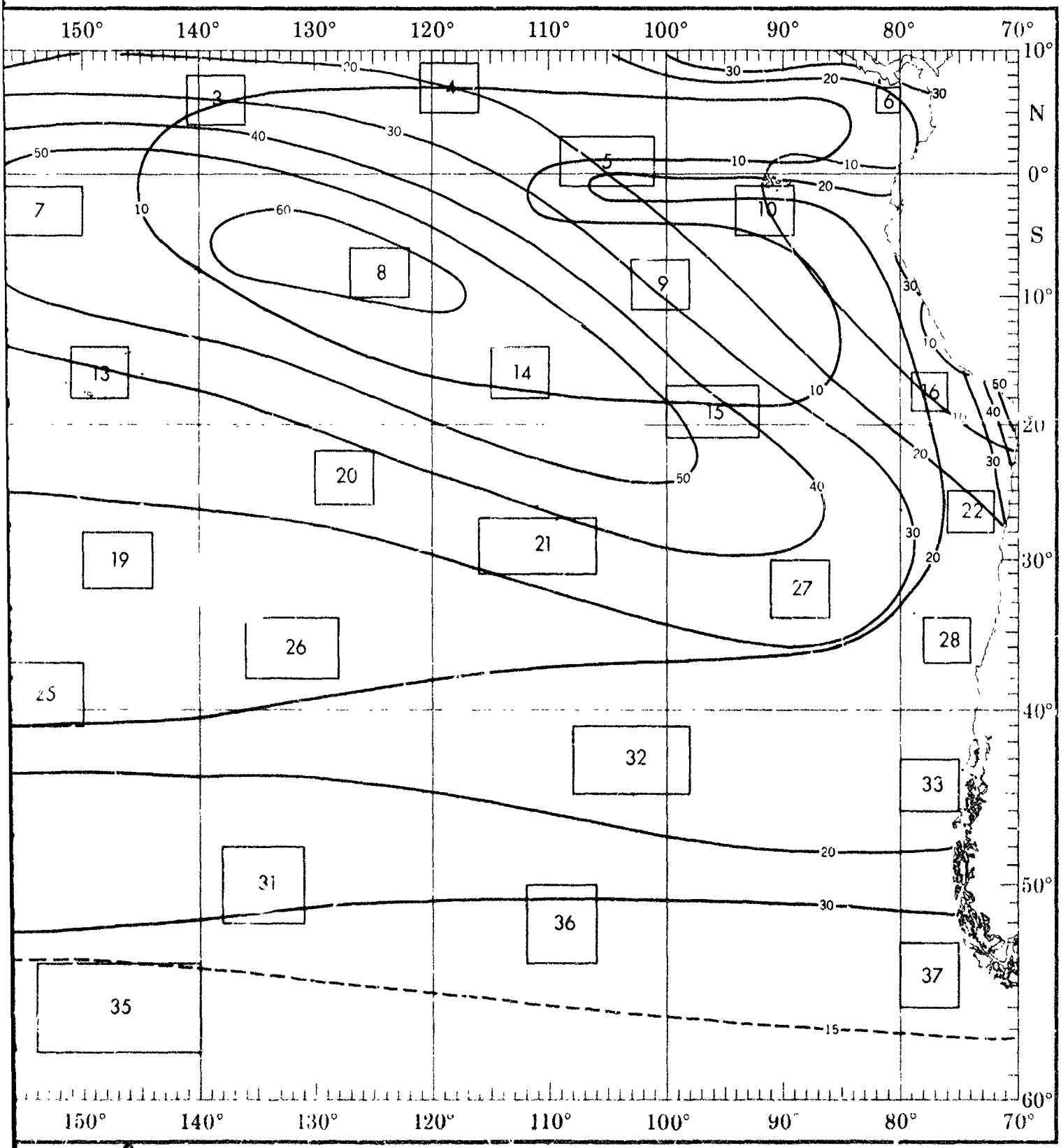
ent the objective compilation of available data for specified areas without regard to suspected biases.
alyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

OCTOBER

WIND-V



WIND-VISIBILITY-CLOUDINESS



LOW CLOUD CEILING-VISIBILITY-WIND

Percent frequency of occurrence of specified wind speed in knots, visibility (Vsby) in nautical miles, and low cloud ceiling (LCC) in hundreds of feet

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

(2% of the observations reported wind speeds of 11-21 knots, a low cloud ceiling <1000 feet and/or visibility <2 nautical miles)

"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8

+ indicates <.5% but >0

Number of observations

WIND SPEED (knots)

LCC - Vsby	0-3	4-10	11-21	22-33	≥34
<1.5 & or <.5	+	1	1	+	0
<6 & or <2	2	2	1	1	+
Vsby <2	1	2	1	1	+
<10 & or <2	3	4	2	1	1
<20 & or <5	8	9	6	3	2
Vsby ≥5	9	11	12	3	1
≥30 & ≥5	12	13	15	7	3
N C & ≥10	4	2	1	+	0
	1234				

Conditions for Carrier Operations

BLUE LINE Percent frequency of optimum conditions LCC ≥5000 ft, (or no LCC), Vsby ≥5 nm and Wind 11-21 kts

RED LINE Percent frequency of poor conditions Any one of the following constitutes poor conditions. LCC <300 ft, Vsby <1 nm., Wind <6 or ≥34 kts

Satisfactory conditions-between poor and optimum

1

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	1	0	0
<6 & OR <2	1	1	2	1	0
VSBY <2	0	0	0	0	0
<10 & OR <2	2	13	7	1	0
<20 & OR <5	5	25	14	1	0
VSBY ≥5	9	60	25	2	0
≥30 & ≥5	4	34	12	1	0
NC & ≥10	4	30	11	0	0

161

2

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	2	+	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	6	2	+	0
<20 & OR <5	1	12	7	1	0
VSBY ≥5	6	50	41	2	0
≥30 & ≥5	4	34	32	1	0
NC & ≥10	4	31	31	1	0

294

6

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	1	3	2	0	0
VSBY <2	+	1	1	0	0
<10 & OR <2	1	13	11	+	0
<20 & OR <5	2	26	23	1	0
VSBY ≥5	5	62	38	1	0
≥30 & ≥5	3	23	12	+	0
NC & ≥10	3	21	10	+	0

777

7

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	1	0
VSBY <2	0	0	0	1	0
<10 & OR <2	0	0	1	1	0
<20 & OR <5	1	1	5	1	0
VSBY ≥5	2	39	53	5	1
≥30 & ≥5	1	38	49	3	1
NC & ≥10	1	37	49	3	1

164

11

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	5	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	2	5	10	1	0
<20 & OR <5	3	10	21	4	0
VSBY ≥5	8	31	48	5	0
≥30 & ≥5	8	20	31	1	0
NC & ≥10	4	18	29	1	0

84

12

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	1	0	0
<6 & OR <2	0	1	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	2	2	3	2	0
<20 & OR <5	4	8	10	5	0
VSBY ≥5	17	33	38	8	1
≥30 & ≥5	13	26	26	3	1
NC & ≥10	13	24	24	3	1

172

13

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	+	+	+	+	0
VSBY <2	+	0	0	0	0
<10 & OR <2	+	2	3	+	0
<20 & OR <5	1	8	11	1	0
VSBY ≥5	4	39	48	5	+
≥30 & ≥5	3	32	35	3	+
NC & ≥10	3	30	30	3	+

671

14

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	0	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	3	8	1	0
<20 & OR <5	0	5	16	2	0
VSBY ≥5	2	26	65	7	0
≥30 & ≥5	1	18	40	4	0
NC & ≥10	1	19	38	4	0

707

15

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	7	21	0	0
<20 & OR <5	0	11	38	0	0
VSBY ≥5	4	28	68	2	0
≥30 & ≥5	3	18	22	1	0
NC & ≥10	3	15	20	1	0

107

16

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	6	13	0	0
<20 & OR <5	1	21	26	4	0
VCBY ≥5	3	41	47	8	0
≥30 & ≥5	3	5	7	2	0
NC & ≥10	3	3	7	2	0

118

20

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	1	0	0
VSBY <2	0	+	+	0	0
<10 & OR <2	1	3	3	1	0
<20 & OR <5	1	8	10	2	0
VSBY ≥5	8	43	46	4	+
≥30 & ≥5	5	31	31	1	+
NC & ≥10	5	30	29	1	+

717

21

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	2	0	0
<6 & OR <2	0	0	2	0	0
VSBY <2	0	0	2	0	0
<10 & OR <2	0	1	7	0	0
<20 & OR <5	0	4	15	1	0
VSBY ≥5	1	25	67	2	0
≥30 & ≥5	1	19	37	1	0
NC & ≥10	1	17	35	1	0

122

22

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	0	0	0
<6 & OR <2	0	3	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	7	8	1	0
<20 & OR <5	3	16	17	5	0
VSBY ≥5	8	33	42	15	0
≥30 & ≥5	3	10	18	7	0
NC & ≥10	3	10	16	4	0

153

23

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	+	+
<6 & OR <2	+	+	1	1	+
VSBY <2	+	+	+	+	+
<10 & OR <2	+	4	6	4	1
<20 & OR <5	1	12	18	8	1
VSBY ≥5	4	33	45	13	1
≥30 & ≥5	3	18	24	5	+
NC & ≥10	3	17	22	4	+

1121

24

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	0	1	2	1	0
VSBY <2	0	+	1	0	0
<10 & OR <2	+	3	8	3	0
<20 & OR <5	1	11	18	5	+
VSBY ≥5	7	35	44	10	+
≥30 & ≥5	5	22	26	5	0
NC & ≥10	5	22	24	4	0

387

25

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	2	+	0	+
<6 & OR <2	1	4	3	2	1
VSBY <2	1	2	+	0	1
<10 & OR <2	1	8	11	3	1
<20 & OR <5	1	18	28	7	1
VSBY ≥5	1	27	49	8	1
≥30 & ≥5	1	10	17	3	1
NC & ≥10	1	10	15	2	1

237

29

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	+	0	0
<6 & OR <2	0	1	3	1	0
VSBY <2	0	1	1	0	0
<10 & OR <2	0	3	8	2	+
<20 & OR <5	+	10	17	5	1
VSBY ≥5	3	29	47	15	1
≥30 & ≥5	1	16	24	7	+
NC & ≥10	1	16	23	6	0

367

30

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	12	0	0
VSBY <2	0	0	8	0	0
<10 & OR <2	0	6	41	0	0
<20 & OR <5	0	6	41	12	0
VSBY ≥5	0	8	47	24	0
≥30 & ≥5	0	0	10	6	0
NC & ≥10	0	0	18	6	0

17

31

INSUFFICIENT DATA

32

INSUFFICIENT DATA

33

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	1	0	0
<6 & OR <2	0	0	5	2	0
VSBY <2	0	0	0	1	0
<10 & OR <2	0	3	19	2	0
<20 & OR <5	1	6	33	7	0
VSBY ≥5	2	26	53	6	0
≥30 & ≥5	2	12	14	3	0
NC & ≥10	1	12	10	2	0

86

34

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	3	2	1
<6 & OR <2	0	0	4	2	3
VSBY <2	0	0	2	1	3
<10 & OR <2	0	1	4	3	3
<20 & OR <5	0	2	14	15	4
VSBY ≥5	0	4	38	37	9
≥30 & ≥5	0	1	13	12	2
NC & ≥10	0	1	4	4	0

136

Graphs represent the objective compilation of available data for specified areas without regard to su
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bia

VISIBILITY-WIND

OCTOBER

ibility (Vsby) in nautical

s (h) when low cloud amount

ceiling <1000 feet and/or

currences of N_h <5/8

n and Wind 11 21 kts

nditions LCC <300 ft,

1

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	1	0	0
<6 & OR <2	1	1	2	1	0
VSBY <2	0	0	0	0	0
<10 & OR <2	2	13	7	1	0
<20 & OR <5	5	25	14	1	0
VSBY ≥5	9	60	25	2	0
≥50 & ≥5	4	34	12	1	0
NC & ≥10	4	30	11	0	0

161

2

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	2	+	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	6	2	+	0
<20 & OR <5	1	12	7	1	0
VSBY ≥5	6	50	41	2	0
≥50 & ≥5	4	34	32	1	0
NC & ≥10	4	31	31	1	0

294

3

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	+	0	0
<6 & OR <2	0	3	3	0	0
VSBY <2	0	1	1	0	0
<10 & OR <2	1	9	10	+	0
<20 & OR <5	2	14	17	1	0
VSBY ≥5	4	36	54	2	0
≥50 & ≥5	2	22	34	1	0
NC & ≥10	2	21	32	+	0

231

4

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	1	1	1	0
<6 & OR <2	1	3	3	1	0
VSBY <2	1	2	2	1	0
<10 & OR <2	2	9	16	1	0
<20 & OR <5	3	17	29	1	0
VSBY ≥5	6	40	42	1	0
≥50 & ≥5	3	24	15	0	0
NC & ≥10	3	20	13	0	0

173

5

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	0
<6 & OR <2	+	1	+	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	8	4	0	0
<20 & OR <5	3	21	15	0	0
VSBY ≥5	5	57	35	1	0
≥50 & ≥5	3	31	15	+	0
NC & ≥10	2	29	14	+	0

599

6

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	1	3	2	0	0
VSBY <2	+	1	1	0	0
<10 & OR <2	1	13	11	+	0
<20 & OR <5	2	25	23	1	0
VSBY ≥5	5	62	36	1	0
≥50 & ≥5	3	23	12	+	0
NC & ≥10	3	21	10	+	0

777

7

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	1	0
VSBY <2	0	0	0	1	0
<10 & OR <2	0	0	1	1	0
<20 & OR <5	1	1	5	1	0
VSBY ≥5	2	39	53	8	1
≥50 & ≥5	1	38	49	3	1
NC & ≥10	1	37	49	3	1

154

8

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	+	+	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	1	1	+	0
<20 & OR <5	0	2	6	+	0
VSBY ≥5	+	36	63	1	0
≥50 & ≥5	+	33	57	1	0
NC & ≥10	+	32	58	1	0

614

9

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	0	1	+	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	2	9	+	0
<20 & OR <5	0	8	25	1	0
VSBY ≥5	0	24	73	3	0
≥50 & ≥5	0	11	34	1	0
NC & ≥10	0	10	32	1	0

806

10

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	0
<6 & OR <2	+	2	1	0	0
VSBY <2	0	+	+	0	0
<10 & OR <2	+	10	3	0	0
<20 & OR <5	1	31	10	0	0
VSBY ≥5	3	71	26	+	0
≥50 & ≥5	1	24	8	+	0
NC & ≥10	1	22	7	+	0

991

14

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	0	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	3	8	1	0
<20 & OR <5	0	5	16	2	0
VSBY ≥5	2	26	65	7	0
≥50 & ≥5	1	19	40	4	0
NC & ≥10	1	18	38	4	0

707

15

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	7	21	0	0
<20 & OR <5	0	11	38	0	0
VSBY ≥5	4	28	66	2	0
≥50 & ≥5	3	16	22	1	0
NC & ≥10	3	15	20	1	0

107

16

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	6	13	0	0
<20 & OR <5	1	21	26	4	0
VSBY ≥5	3	41	47	8	0
≥50 & ≥5	3	5	7	2	0
NC & ≥10	3	3	7	2	0

118

17

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	+	+	+
VSBY <2	0	0	0	0	0
<10 & OR <2	0	3	3	3	+
<20 & OR <5	1	8	11	4	+
VSBY ≥5	4	39	50	7	1
≥50 & ≥5	3	26	36	3	+
NC & ≥10	3	26	33	3	+

238

18

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	1	2	+	+
VSBY <2	0	1	+	0	0
<10 & OR <2	+	3	8	2	1
<20 & OR <5	1	8	15	5	1
VSBY ≥5	5	31	49	11	2
≥50 & ≥5	4	22	26	4	1
NC & ≥10	3	20	25	3	+

408

19

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	+	1	2	+	0
VSBY <2	0	1	1	+	0
<10 & OR <2	1	4	5	2	0
<20 & OR <5	1	12	18	4	1
VSBY ≥5	6	40	41	9	1
≥50 & ≥5	4	20	19	5	+
NC & ≥10	4	19	17	4	0

848

23

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	+	+
<6 & OR <2	+	+	1	1	+
VSBY <2	+	+	+	+	+
<10 & OR <2	+	4	6	4	1
<20 & OR <5	1	12	16	8	1
VSBY ≥5	4	33	45	13	1
≥50 & ≥5	3	18	24	5	+
NC & ≥10	3	17	22	4	+

1121

24

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2		1	2	1	0
VSBY <2	0	+	1	0	0
<10 & OR <2	+	3	8	3	0
<20 & OR <5	1	11	16	5	+
VSBY ≥5	7	35	44	10	+
≥50 & ≥5	5	22	26	5	0
NC & ≥10	5	22	24	4	0

367

25

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	2	+	0	+
<6 & OR <2	1	4	3	2	1
VSBY <2	1	2	+	0	1
<10 & OR <2	1	8	11	3	1
<20 & OR <5	1	16	28	7	1
VSBY ≥5	1	27	49	8	1
≥50 & ≥5	1	10	17	3	1
NC & ≥10	1	10	16	2	1

237

26

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	2	1	1	0
<6 & OR <2	0	2	4	4	0
VSBY <2	0	2	1	1	0
<10 & OR <2	0	5	8	6	1
<20 & OR <5	0	16	18	7	1
VSBY ≥5	5	33	43	13	1
≥50 & ≥5	5	14	22	5	0
NC & ≥10	6	14	20	3	0

133

27

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	4	0	0	0
<20 & OR <5	0	4	0	0	0
VSBY ≥5	12	46	42	0	0
≥50 & ≥5	8	31	31	0	0
NC & ≥10	8	27	31	0	0

26

28

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	5
VSBY <2	0	0	0	0	5
<10 & OR <2	0	5	9	0	5
<20 & OR <5	0	14	9	0	5
VSBY ≥5	0	36	50	9	0
≥50 & ≥5	0	18	27	5	0
NC & ≥10	0	14	18	5	0

22

32

INSUFFICIENT DATA

33

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	1	0	0
<6 & OR <2	0	0	5	2	0
VSBY <2	0	0	0	1	0
<10 & OR <2	0	3	19	2	0
<20 & OR <5	1	6	33	7	0
VSBY ≥5	2	26	53	6	0
≥50 & ≥5	2	12	14	3	0
NC & ≥10	1	12	10	2	0

66

34

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	3	2	1
<6 & OR <2	0	0	4	2	3
VSBY <2	0	0	2	1	3
<10 & OR <2	0	1	4	3	3
<20 & OR <5	0	2	14	15	4
VSBY ≥5	0	4	38	37	9
≥50 & ≥5	0	1	13	12	2
NC & ≥10	0	1	4	4	0

139

35

INSUFFICIENT DATA

36

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	18	0	0
<20 & OR <5	0	0	27	9	0
VSBY ≥5	0	9	64	27	0
≥50 & ≥5	0	0	27	0	0
NC & ≥10	0	0	27	0	0

11

37

WIND SPEED (KNOTS)

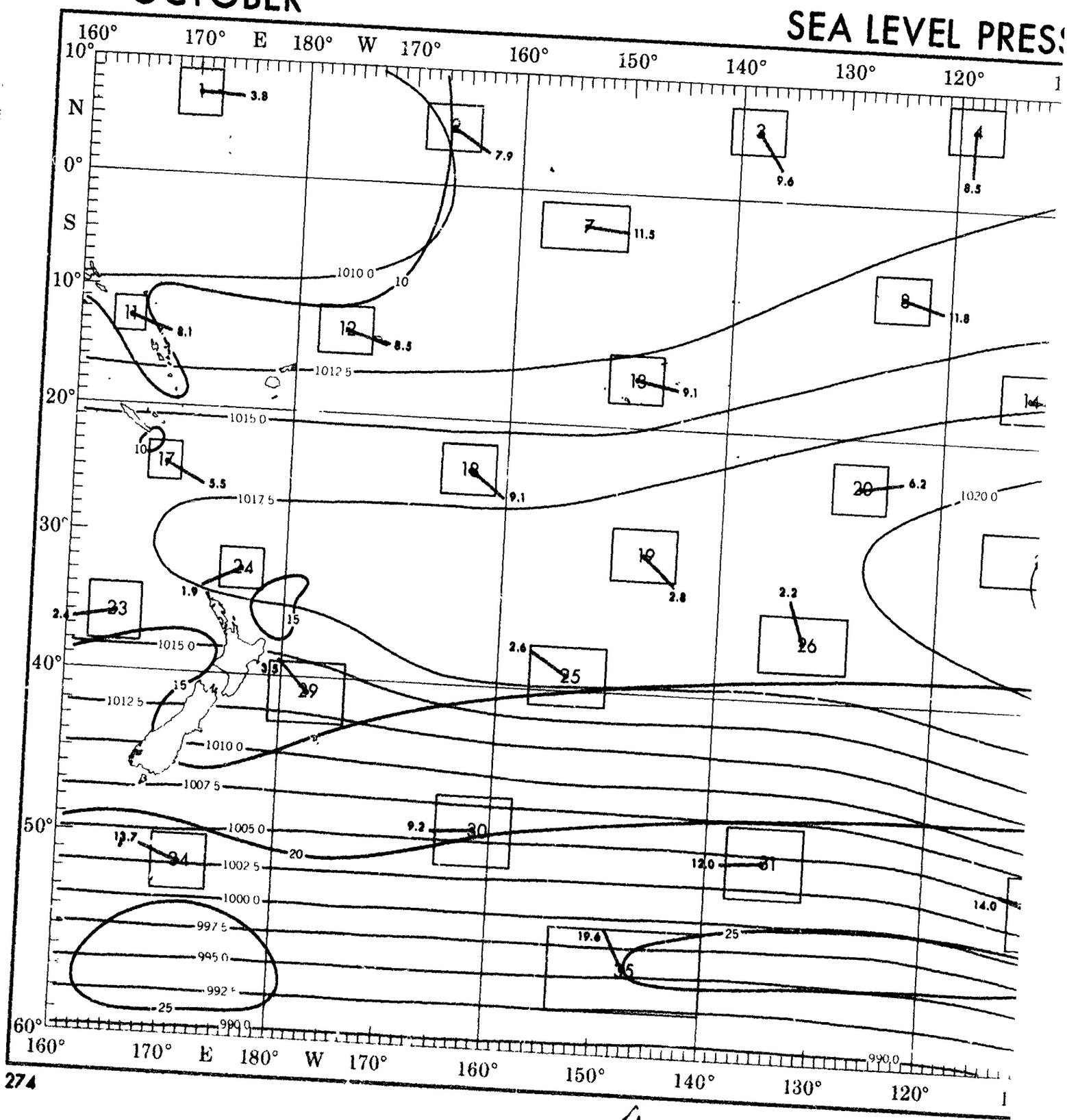
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	17	0	8
<20 & OR <5	0	0	33	17	25
VSBY ≥5	0	0	50	17	8
≥50 & ≥5	0	0	0	0	0
NC & ≥10	0	0	0	0	0

12

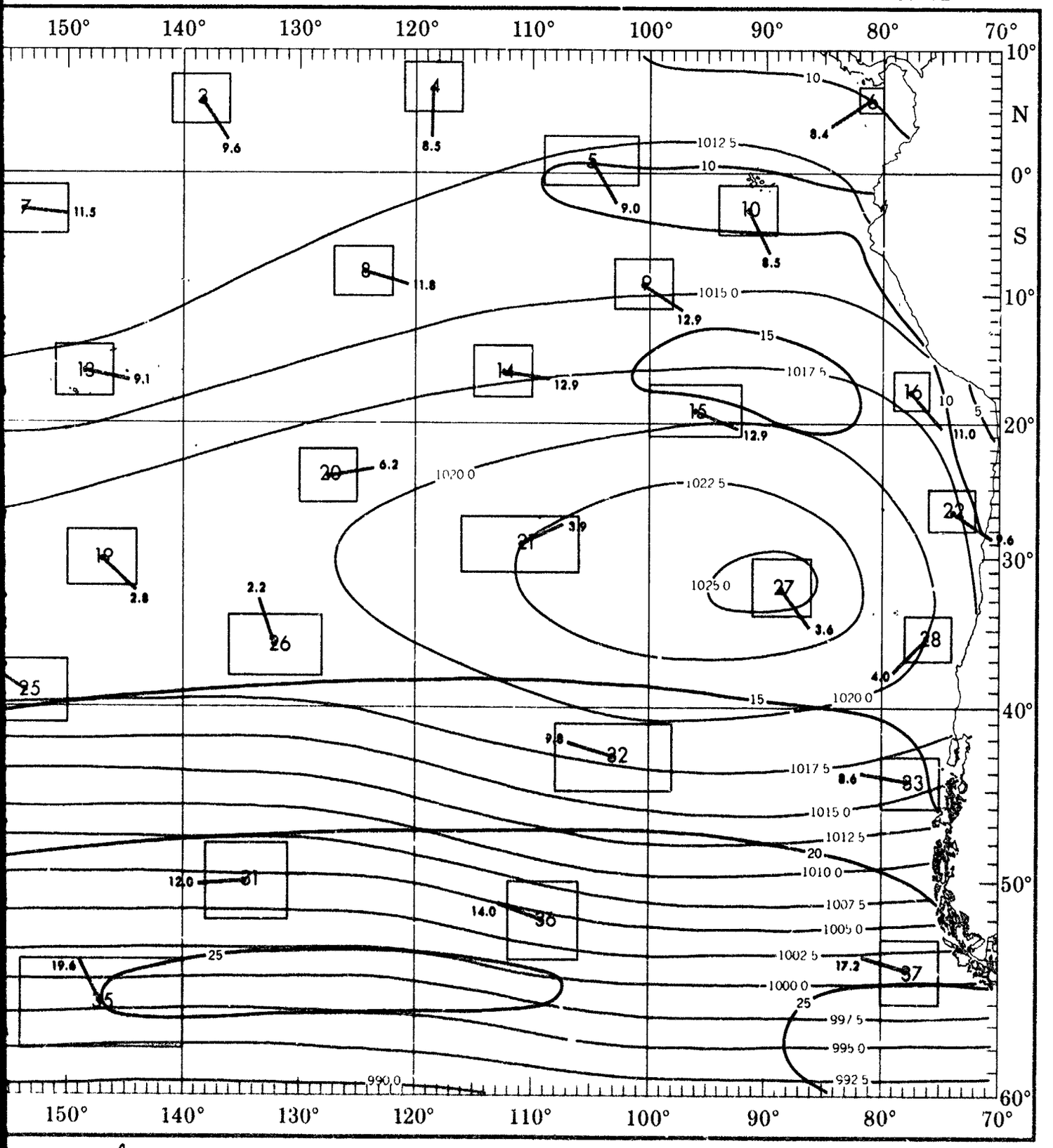
e objective compilation of available data for specified areas without regard to suspected biases.
s (opposite page) are based on all available data subjectively adjusted where bias was evident.

OCTOBER

SEA LEVEL PRES

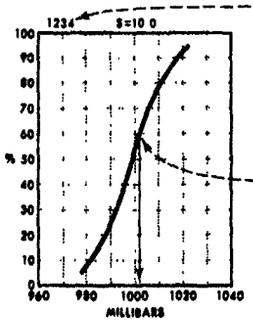


SEA LEVEL PRESSURE AND MEAN WIND



SEA LEVEL PRESSURE

Sea level pressure and mean wind



Number of observations

Cumulative percent frequency of sea level pressures equal to or less than the pressure intersected by the curve

S=Standard deviation of pressure (mbs)

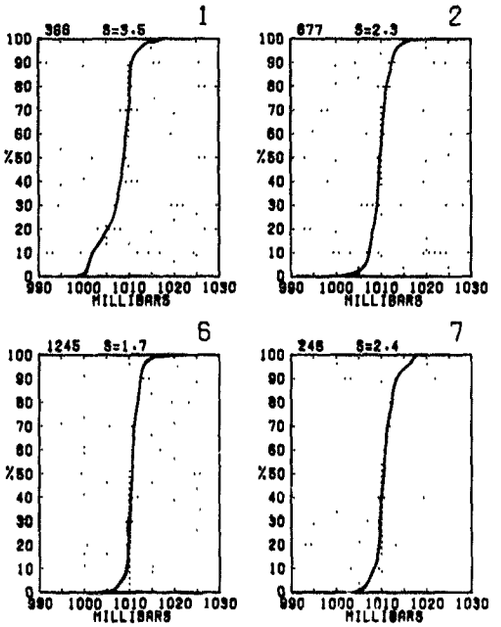
(60% of all observed sea level pressures were ≤1002 millibars.)

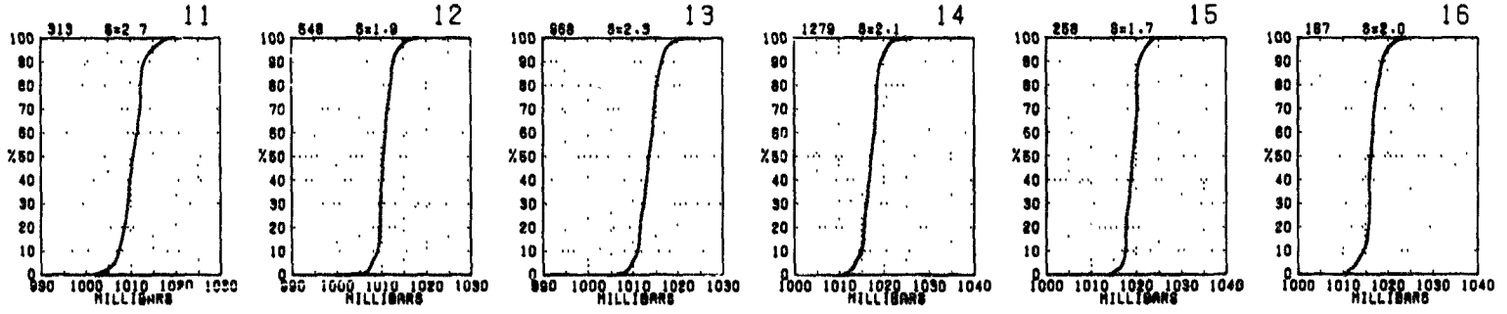
Vector mean wind is plotted from the direction which the mean flow occurs with the magnitude in knots at the end of the vector.

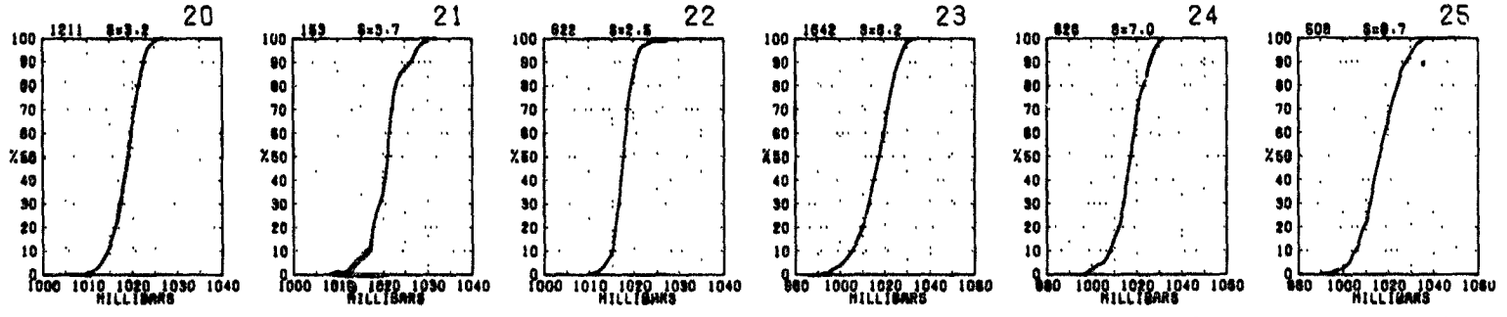
10.2 Vector mean wind is from the northeast at 10.2 knots.

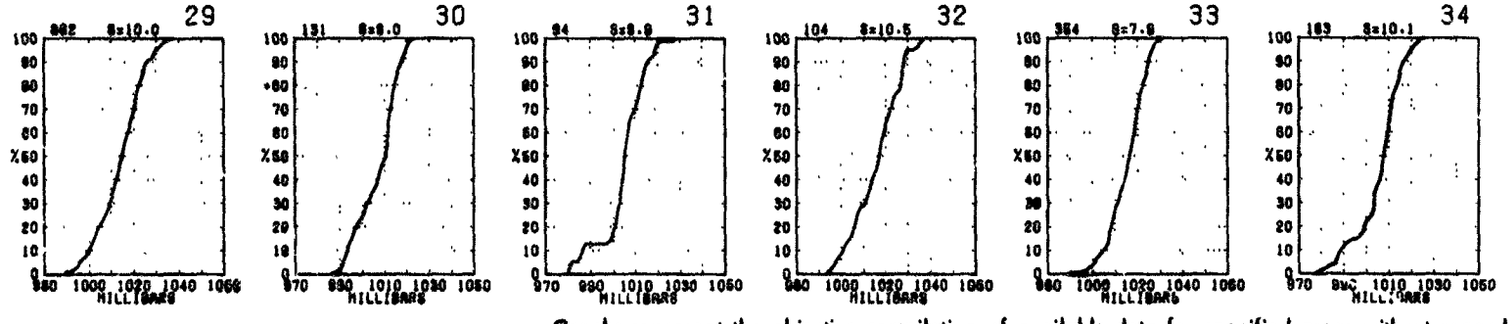
BLUE LINE - Scalar mean wind speed (kts)

RED LINE - Mean sea level pressure (mbs.)









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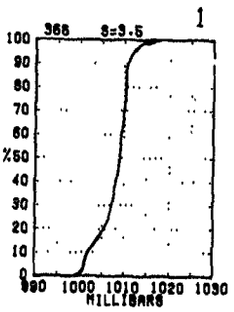

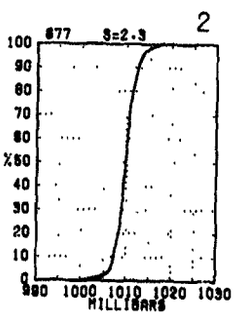

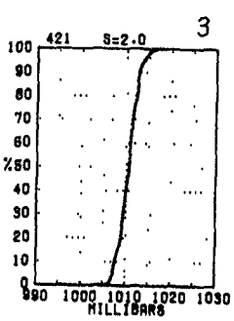

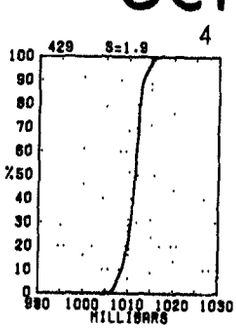

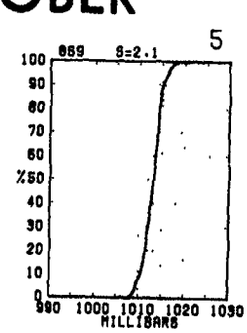

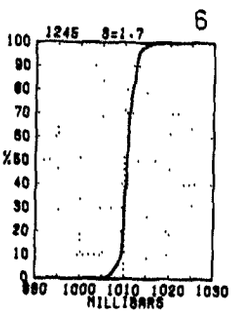

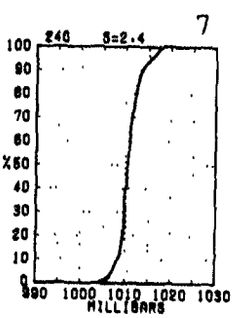

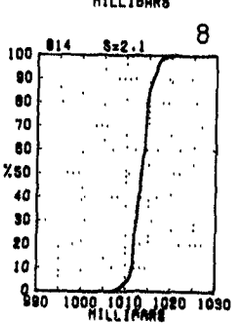

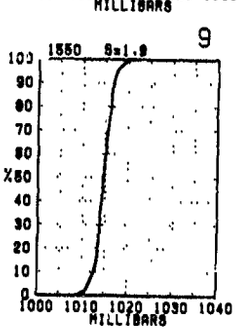

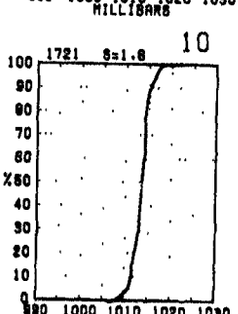

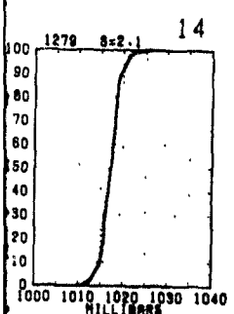

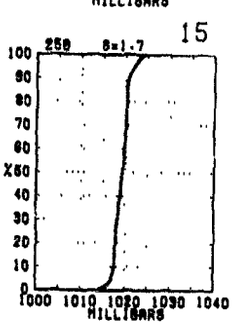

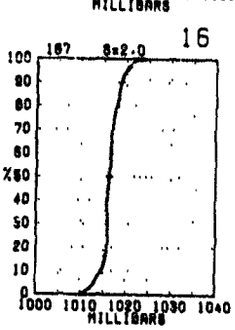

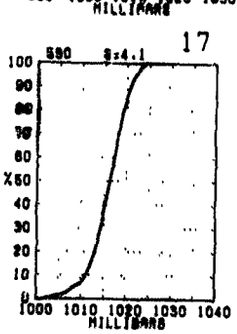

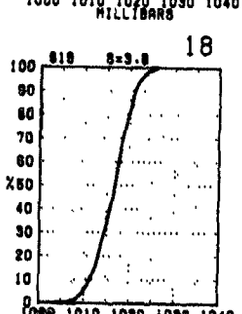

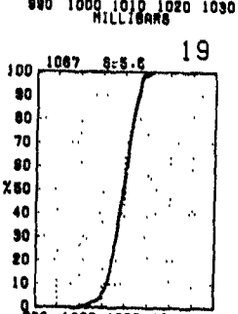

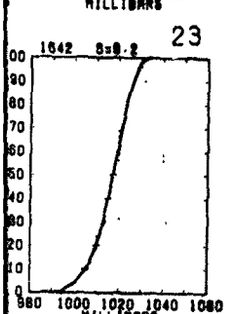

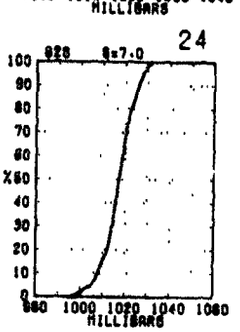

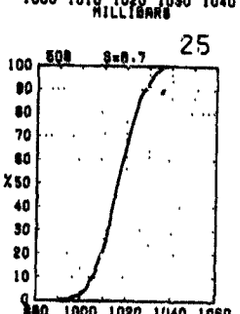

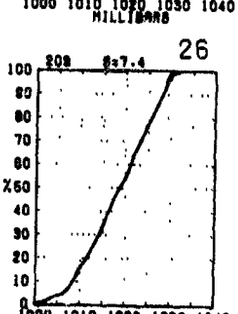

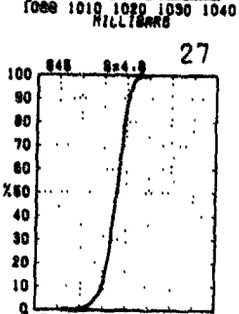

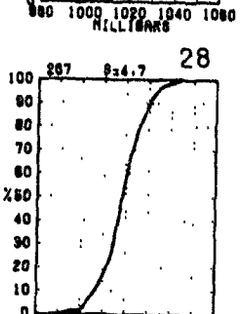

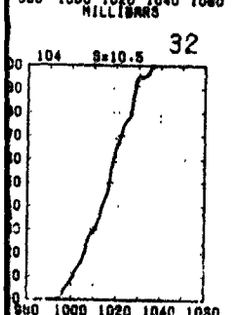

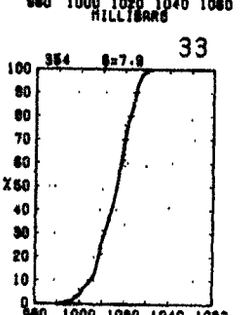

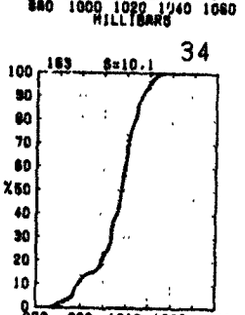

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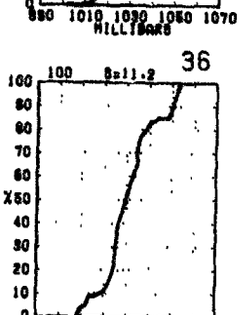
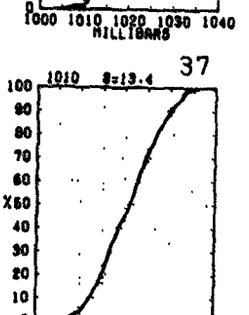
INSUFFICIENT DATA





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pposite page) are based on all available data subjectively adjusted where bias was evident.

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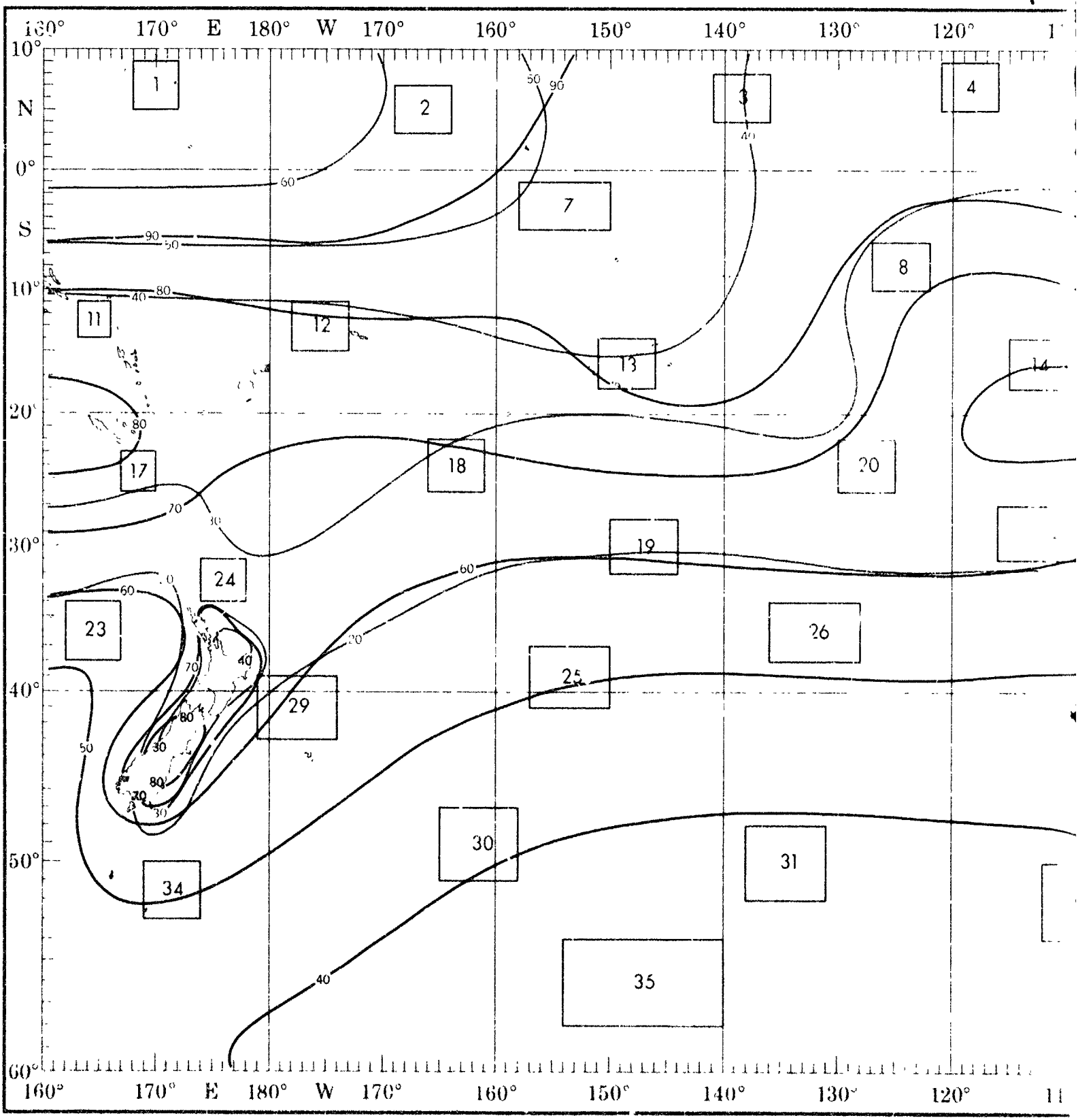
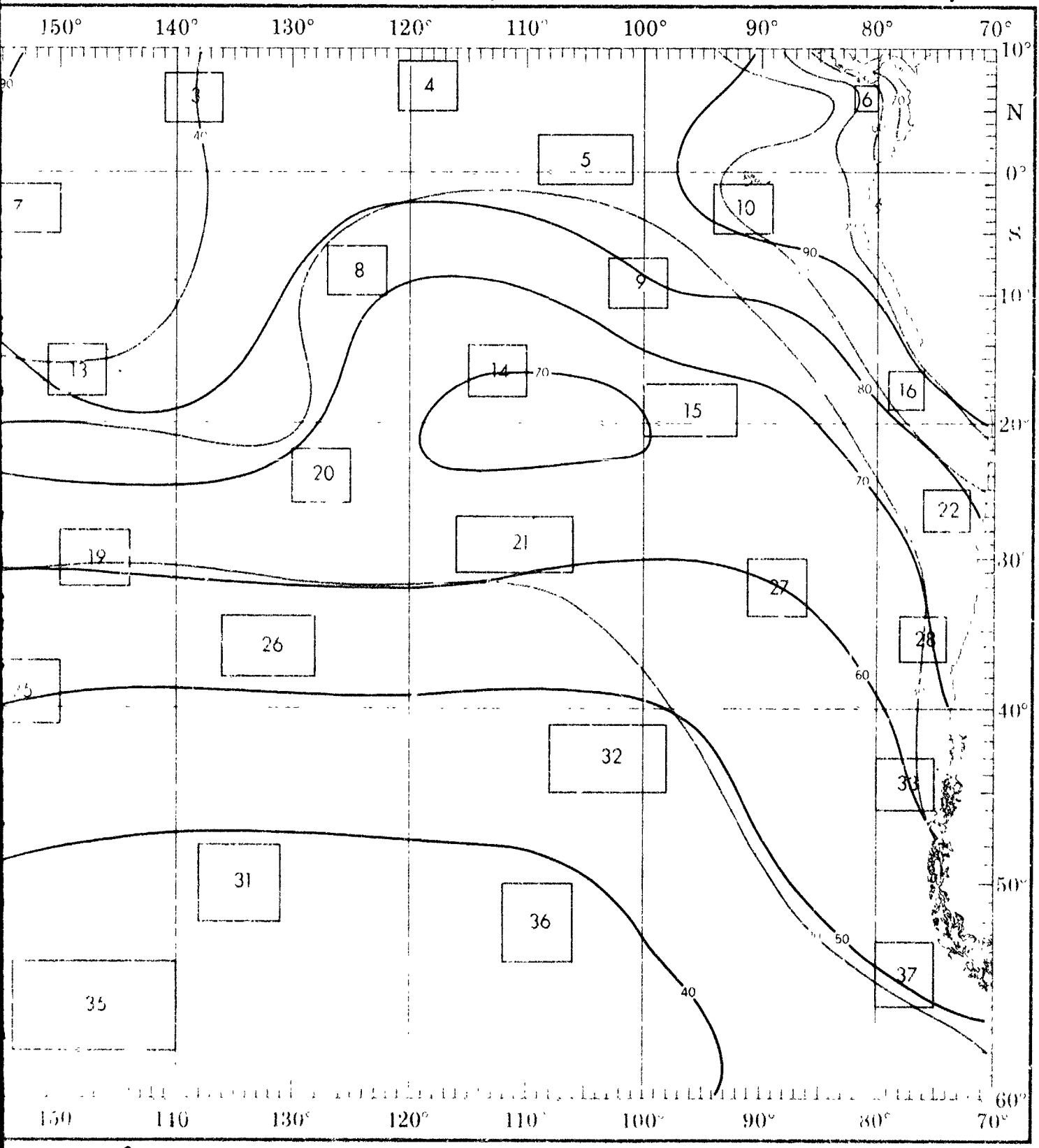
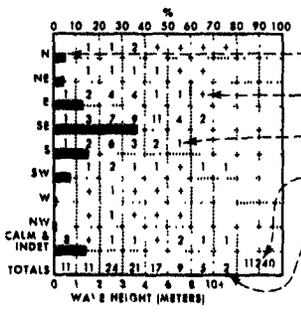
WAVES (<



WAVES (<1.5 AND <2.5 METERS)



WAVE DIRECTION AND HEIGHT



Wave direction and height

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

—(5% of all waves were from the N.)

— + indicates < 5% but >0

—(1% of all waves were from the S with heights from 6-7.5 meters.)

—Number of observations

—(2% of the waves from all directions had heights ≥10 meters.)

WAVE HEIGHT INTERVAL

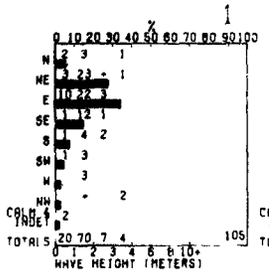
Feet	0-2	3 6	7 9	10-12	13 19	20-25	26 32	≥33
Meters	0-.5	1-1.5	2-2.5	3-3.5	4-5.5	6 7.5	8 9.5	≥10

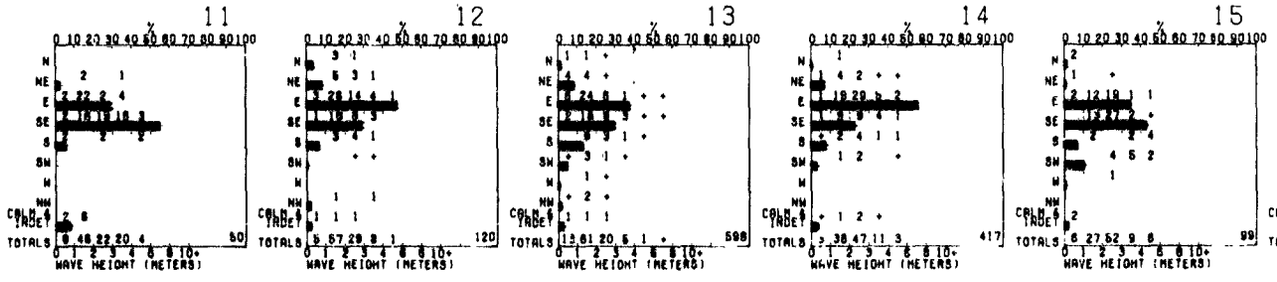
0 1 2 3 4 6 8 10+

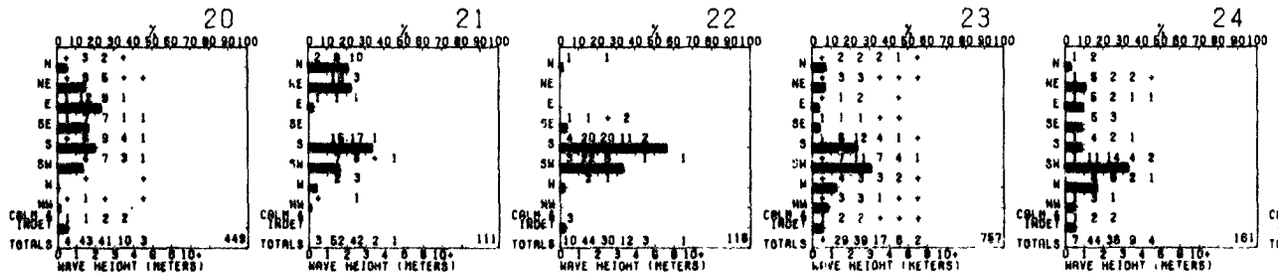
Printed scale on bottom of chart

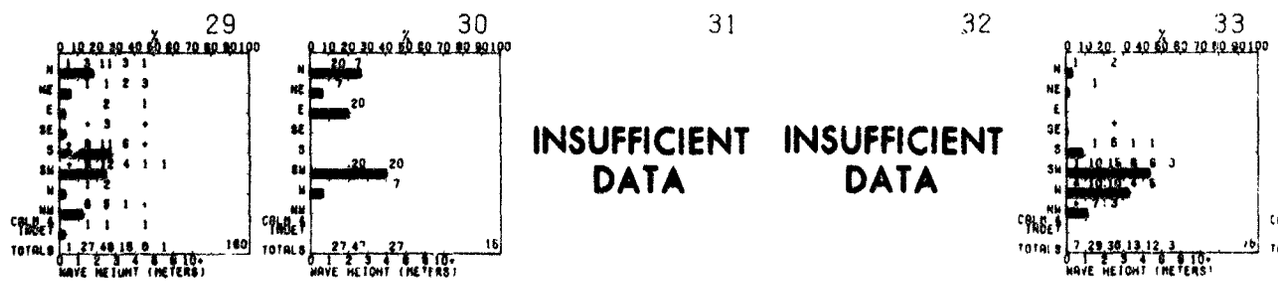
BLUE LINE - Percent frequency of wave height <1.5 meters (5 feet)

RED LINE Percent frequency of wave height <2.5 meters (8 feet)









INSUFFICIENT DATA **INSUFFICIENT DATA**

Graphs represent the objective compilation of available data for specified areas without regard to ...
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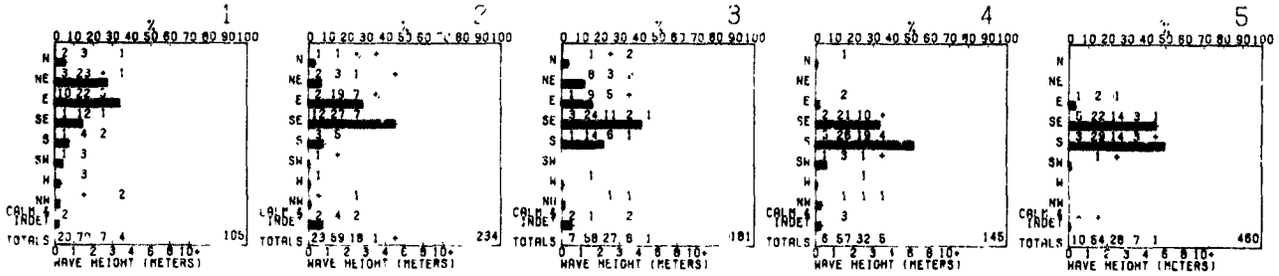

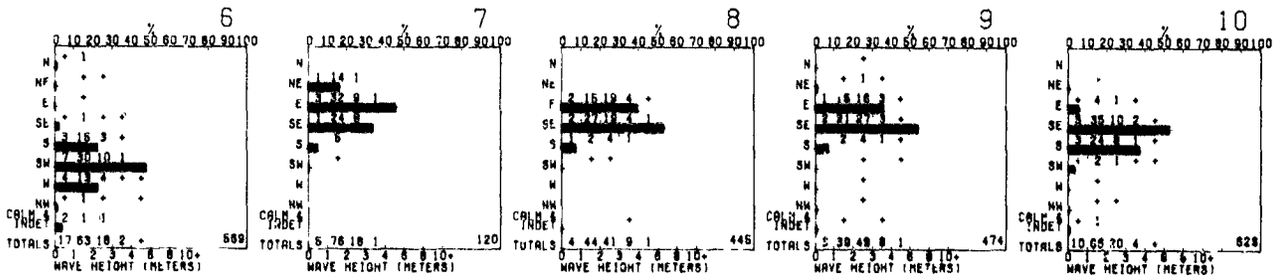

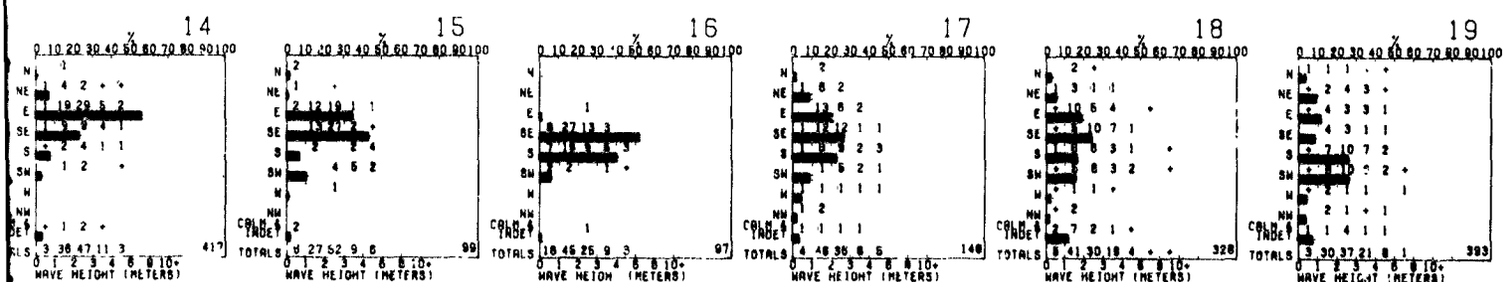

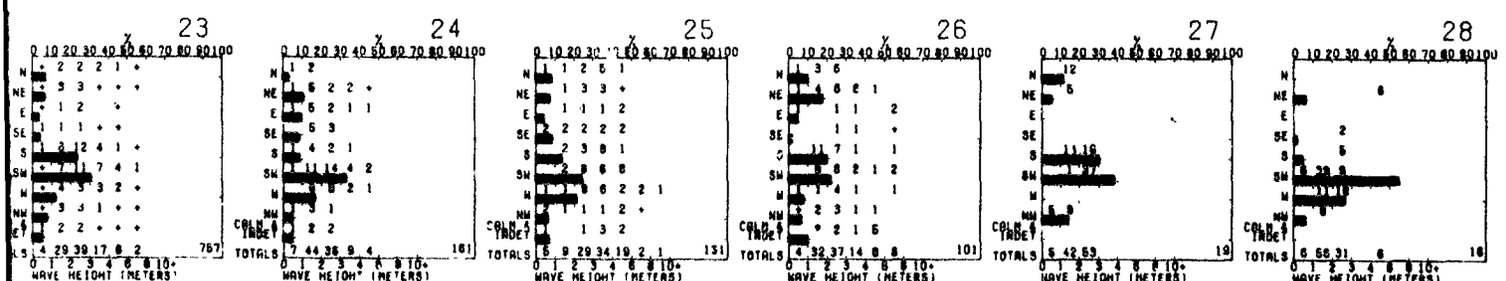

32 33 34 35 36 37

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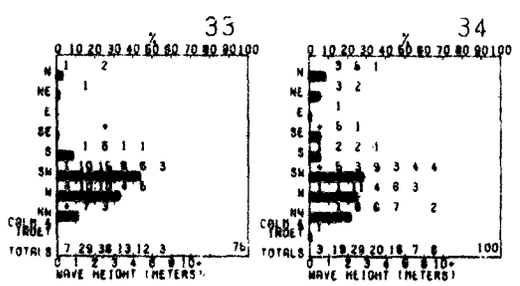

INSUFFICIENT DATA **INSUFFICIENT DATA** **INSUFFICIENT DATA**

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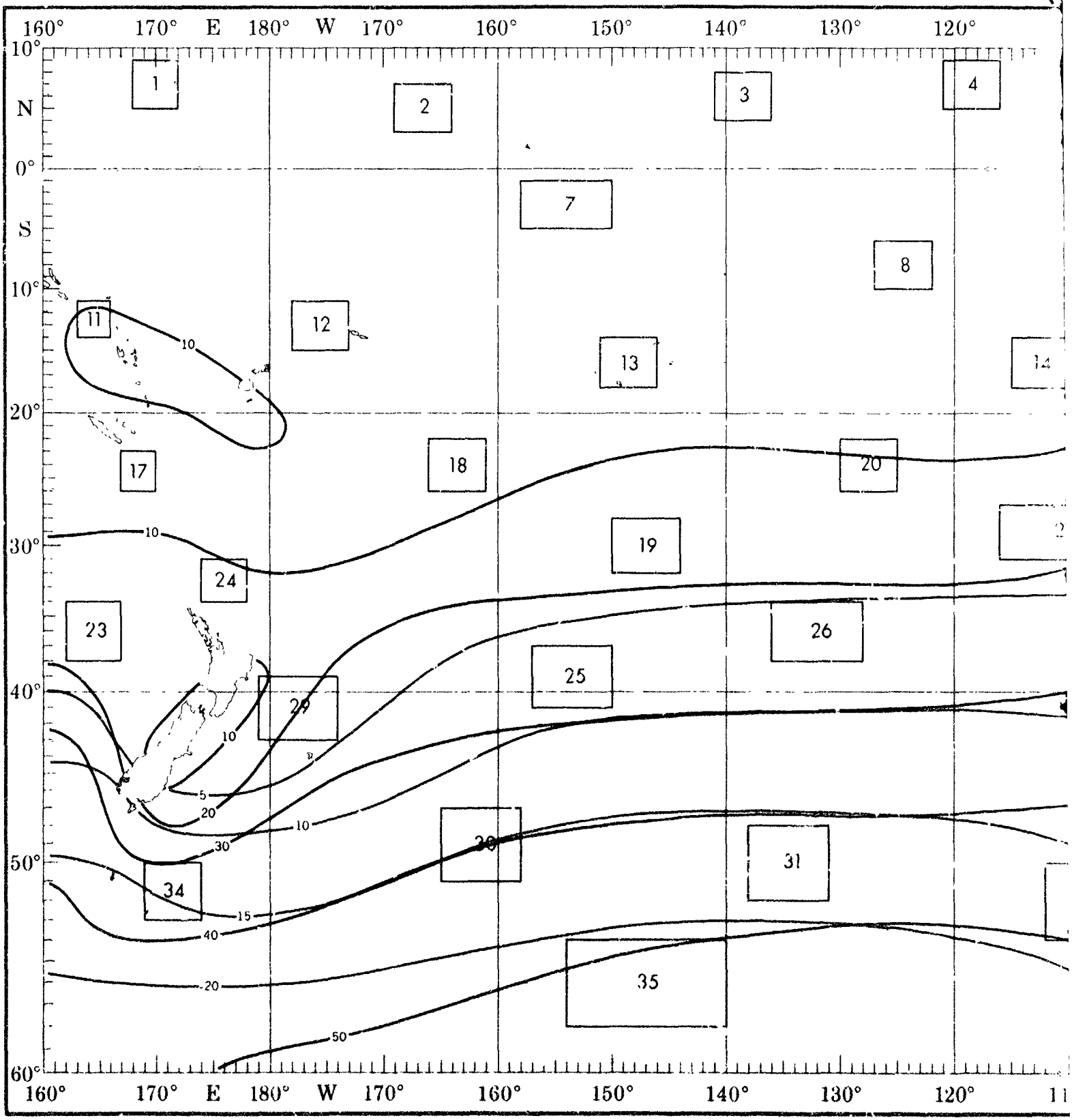
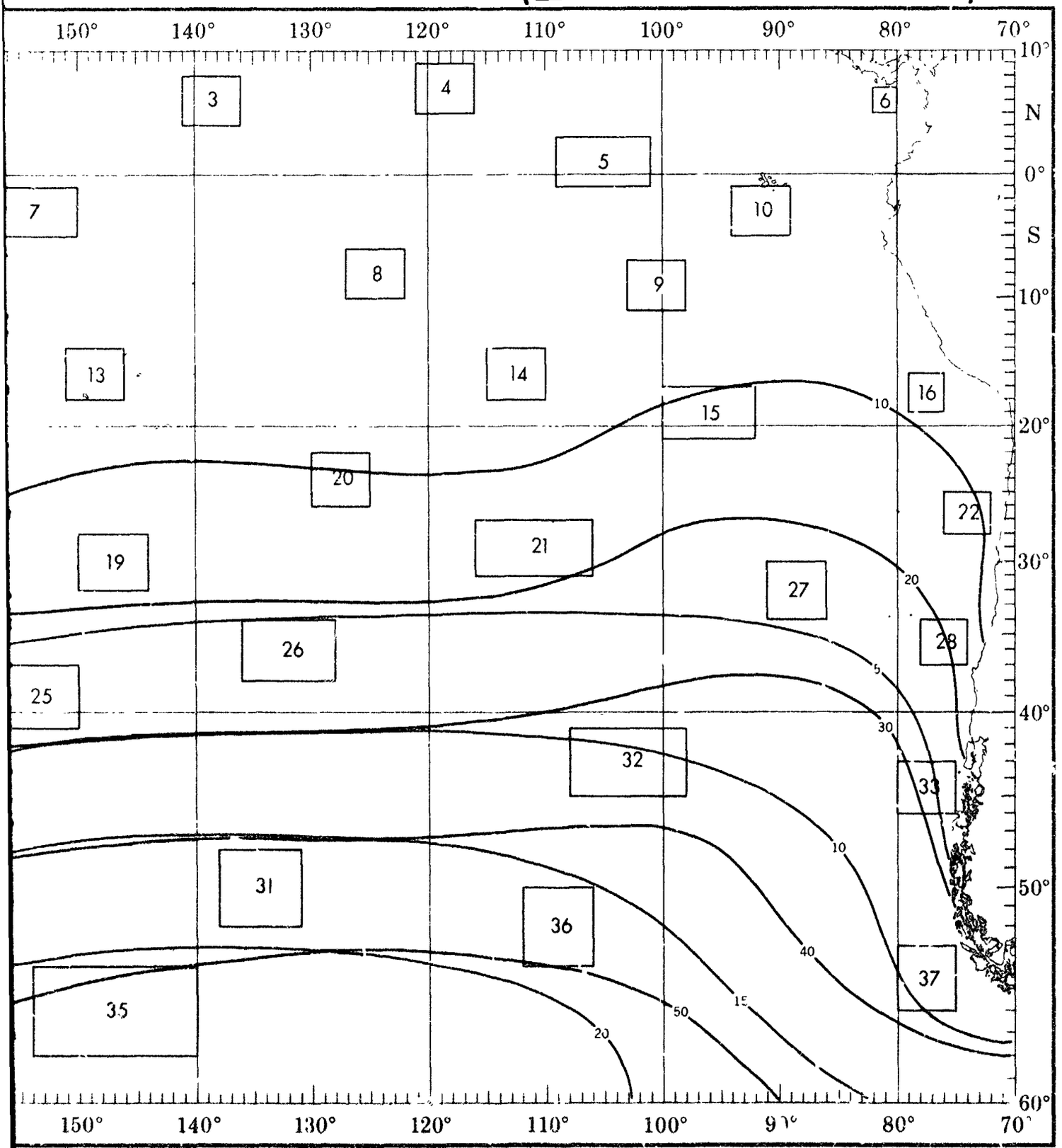
WAVES (

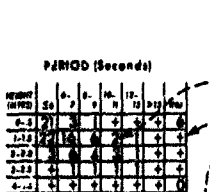


WAVES (≥3.5 AND ≥6 METERS)



WAVE PERIOD AND HEIGHT

Percent frequency of occurrence of wave period and height.



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.

BLUE LINE - Percent frequency of wave height ≥3.5 meters (12 feet)

RED LINE - Percent frequency of wave height ≥6 meters (20 feet)

1

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	TIME
0-.5	18	1	0	0	0	0	3
1-1.5	37	24	3	1	2	1	0
2-2.5	3	1	2	1	0	0	0
3-3.5	0	3	1	0	0	0	0
4-4.5	0	0	0	0	0	0	0
5-5.5	0	0	0	0	0	0	0
6-6.5	0	0	0	0	0	0	0
≥7	0	0	0	0	0	0	0

109

HEIGHT (METERS)	<8	8-9	10-11	12-13
0-.5	20	2	+	1
1-1.5	27	21	6	1
2-2.5	4	6	5	+
3-3.5	0	+	0	+
4-4.5	0	+	0	0
5-5.5	0	0	0	0
6-6.5	0	0	0	0
≥7	0	0	0	0

6

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	TIME
0-.5	19	2	1	0	0	0	2
1-1.5	31	21	4	1	1	1	3
2-2.5	6	6	5	1	+	+	1
3-3.5	1	1	+	0	0	0	0
4-4.5	0	+	0	0	0	0	+
5-5.5	0	0	0	0	0	0	0
6-6.5	0	0	0	0	0	0	0
≥7	0	0	0	0	0	0	0

878

HEIGHT (METERS)	<8	8-9	10-11	12-13
0-.5	5	0	0	0
1-1.5	41	22	8	4
2-2.5	9	8	4	0
3-3.5	0	1	0	0
4-4.5	0	0	0	0
5-5.5	0	0	0	0
6-6.5	0	0	0	0
≥7	0	0	0	0

11

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	TIME
0-.5	4	0	0	0	0	0	4
1-1.5	18	22	4	0	2	0	0
2-2.5	0	0	0	2	2	0	2
3-3.5	2	0	0	2	0	2	0
4-4.5	0	0	4	0	0	0	0
5-5.5	0	0	0	0	0	0	0
6-6.5	0	0	0	0	0	0	0
≥7	0	0	0	0	0	0	0

86

12

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	TIME
0-.5	5	0	1	0	0	0	1
1-1.5	18	32	6	1	0	0	1
2-2.5	1	11	11	6	0	0	1
3-3.5	1	3	2	2	0	0	0
4-4.5	0	0	1	0	0	0	0
5-5.5	0	0	0	0	0	0	0
6-6.5	0	0	0	0	0	0	0
≥7	0	0	0	0	0	0	0

122

13

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	TIME
0-.5	8	3	1	+	0	0	1
1-1.5	19	24	8	2	2	1	3
2-2.5	4	7	6	2	+	+	+
3-3.5	1	1	2	+	0	+	0
4-4.5	+	+	0	0	0	0	0
5-5.5	0	+	0	0	0	0	0
6-6.5	0	0	0	0	0	0	0
≥7	0	0	0	0	0	0	0

611

14

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	TIME
0-.5	2	+	0	0	0	0	+
1-1.5	12	13	8	1	+	+	2
2-2.5	10	10	11	2	1	1	4
3-3.5	3	4	2	1	+	0	1
4-4.5	+	1	1	+	0	+	0
5-5.5	0	0	0	0	0	0	0
6-6.5	0	0	0	0	0	0	0
≥7	0	0	0	0	0	0	0

419

15

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	TIME
0-.5	3	0	0	0	0	0	0
1-1.5	18	3	5	0	0	0	0
2-2.5	4	22	18	4	0	0	3
3-3.5	0	0	4	2	3	0	0
4-4.5	0	0	5	0	1	0	0
5-5.5	0	0	0	0	0	0	0
6-6.5	0	0	0	0	0	0	0
≥7	0	0	0	0	0	0	0

151

20

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	TIME
0-.5	3	+	0	0	0	0	1
1-1.5	16	16	8	4	2	+	2
2-2.5	7	14	8	8	1	1	3
3-3.5	+	3	4	1	1	0	1
4-4.5	0	+	1	1	0	+	0
5-5.5	0	0	0	0	0	0	0
6-6.5	0	0	0	0	0	0	0
≥7	0	0	0	0	0	0	0

448

21

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	TIME
0-.5	3	0	0	0	0	0	0
1-1.5	22	25	9	1	2	0	3
2-2.5	0	20	11	2	0	0	2
3-3.5	0	0	2	0	0	0	0
4-4.5	0	0	0	0	1	0	0
5-5.5	0	0	0	0	0	0	0
6-6.5	0	0	0	0	0	0	0
≥7	0	0	0	0	0	0	0

111

22

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	TIME
0-.5	10	0	0	0	0	0	3
1-1.5	6	23	6	1	1	0	2
2-2.5	7	3	11	5	1	2	1
3-3.5	0	2	5	4	1	0	0
4-4.5	0	0	1	2	0	0	0
5-5.5	0	0	0	0	0	0	0
6-6.5	0	0	0	0	1	0	0
≥7	0	0	0	0	0	0	0

120

23

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	TIME
0-.5	3	+	+	+	0	0	+
1-1.5	9	11	4	1	1	1	2
2-2.5	8	12	11	5	2	1	2
3-3.5	1	5	5	3	3	+	+
4-4.5	0	2	3	2	1	1	+
5-5.5	0	0	1	+	+	0	+
6-6.5	0	0	0	0	0	0	0
≥7	0	0	0	0	0	0	0

168

24

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	TIME
0-.5	7	1	0	0	0	0	1
1-1.5	25	12	3	1	1	0	3
2-2.5	10	12	7	2	1	0	2
3-3.5	1	4	1	2	1	0	0
4-4.5	0	2	0	2	0	0	0
5-5.5	0	0	0	0	0	0	0
6-6.5	0	0	0	0	0	0	0
≥7	0	0	0	0	0	0	0

185

29

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	TIME
0-.5	1	0	0	0	0	0	0
1-1.5	9	11	5	1	1	0	1
2-2.5	5	22	11	7	2	0	1
3-3.5	3	4	2	5	0	1	0
4-4.5	1	1	1	2	1	1	1
5-5.5	0	1	0	0	0	0	0
6-6.5	0	0	0	0	0	0	0
≥7	0	0	0	0	0	0	0

161

30

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	TIME
0-.5	0	0	0	0	0	0	0
1-1.5	13	13	0	0	0	0	0
2-2.5	7	29	0	0	29	0	0
3-3.5	0	0	0	0	0	0	0
4-4.5	0	0	0	29	7	0	0
5-5.5	0	0	0	0	0	0	0
6-6.5	0	0	0	0	0	0	0
≥7	0	0	0	0	0	0	0

16

31

INSUFFICIENT DATA

32

INSUFFICIENT DATA

33

HEIGHT (METERS)	<6	6-7	8-9	10-11	12-13	>13	TIME
0-.5	1	3	0	0	0	0	3
1-1.5	11	15	3	0	0	0	1
2-2.5	0	0	17	8	0	0	1
3-3.5	0	5	4	4	0	0	0
4-4.5	0	1	4	4	3	0	0
5-5.5	0	0	0	3	0	0	0
6-6.5	0	0	0	0	0	0	0
≥7	0	0	0	0	0	0	0

75

Graphs represent the objective compilation of available data for specified areas without reg
The isopleth analyses (opposite page) are based on all available data subjectively adjusted

HEIGHT

OCTOBER

0-11 seconds.)

hen both are reported. If both

1

PERIOD (SECONDS)

HEIGHT (KTS)	<6	6-7	8-9	10-11	12-13	>13	TOT
0-.5	19	1	0	0	0	0	3
1-1.5	37	24	3	1	2	1	0
2-2.5	3	1	2	1	0	0	0
3-3.5	0	3	1	0	0	0	0
4-4.5	0	0	0	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

109

2

PERIOD (SECONDS)

HEIGHT (KTS)	<6	6-7	8-9	10-11	12-13	>13	TOT
0-.5	20	2	+	1	0	0	2
1-1.5	27	21	8	1	0	0	2
2-2.5	4	6	5	+	1	0	1
3-3.5	0	+	0	+	0	0	0
4-4.5	0	+	0	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

241

3

PERIOD (SECONDS)

HEIGHT (KTS)	<6	6-7	8-9	10-11	12-13	>13	TOT
0-.5	4	1	0	0	0	0	2
1-1.5	21	23	11	1	0	0	2
2-2.5	5	9	9	1	0	2	0
3-3.5	1	2	1	1	1	0	2
4-4.5	0	1	0	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

181

4

PERIOD (SECONDS)

HEIGHT (KTS)	<6	6-7	8-9	10-11	12-13	>13	TOT
0-.5	7	1	0	0	0	0	0
1-1.5	18	28	10	1	0	0	3
2-2.5	12	12	6	0	1	1	1
3-3.5	[illegible]	1	4	0	0	0	0
4-4.5	0	0	0	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

147

5

PERIOD (SECONDS)

HEIGHT (KTS)	<6	6-7	8-9	10-11	12-13	>13	TOT
0-.5	7	2	1	0	0	0	1
1-1.5	18	18	10	3	3	0	2
2-2.5	5	10	8	3	2	0	1
3-3.5	+	3	1	1	+	0	0
4-4.5	1	0	+	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

461

6

PERIOD (SECONDS)

HEIGHT (KTS)	<6	6-7	8-9	10-11	12-13	>13	TOT
0-.5	75	2	1	0	0	0	2
1-1.5	31	21	4	1	1	1	3
2-2.5	5	6	5	1	+	+	1
3-3.5	1	1	+	0	0	0	0
4-4.5	0	+	0	0	0	0	+
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

878

7

PERIOD (SECONDS)

HEIGHT (KTS)	<6	6-7	8-9	10-11	12-13	>13	TOT
0-.5	5	0	0	0	0	0	0
1-1.5	41	22	8	4	0	0	1
2-2.5	9	5	4	0	0	0	0
3-3.5	0	1	0	0	0	0	0
4-4.5	0	0	0	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

120

8

PERIOD (SECONDS)

HEIGHT (KTS)	<6	6-7	8-9	10-11	12-13	>13	TOT
0-.5	2	2	0	0	0	0	1
1-1.5	17	13	8	2	1	0	2
2-2.5	4	11	17	6	2	+	1
3-3.5	2	3	2	1	1	0	1
4-4.5	0	1	0	+	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

447

9

PERIOD (SECONDS)

HEIGHT (KTS)	<6	6-7	8-9	10-11	12-13	>13	TOT
0-.5	1	1	+	0	0	0	+
1-1.5	18	14	5	1	0	0	3
2-2.5	14	17	8	5	1	1	1
3-3.5	2	3	1	1	0	+	+
4-4.5	+	+	1	+	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

476

10

PERIOD (SECONDS)

HEIGHT (KTS)	<6	6-7	8-9	10-11	12-13	>13	TOT
0-.5	8	1	1	+	0	0	2
1-1.5	27	23	8	2	3	1	3
2-2.5	4	7	5	1	+	1	0
3-3.5	1	1	1	1	0	+	0
4-4.5	+	0	+	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

626

13

TOT
1
3
+
0
0
0
0
0

811

14

PERIOD (SECONDS)

HEIGHT (KTS)	<6	6-7	8-9	10-11	12-13	>13	TOT
0-.5	2	+	0	0	0	0	+
1-1.5	12	13	6	1	+	+	2
2-2.5	10	18	11	2	1	1	4
3-3.5	2	4	2	1	+	0	1
4-4.5	+	1	1	+	0	+	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

418

15

PERIOD (SECONDS)

HEIGHT (KTS)	<6	6-7	8-9	10-11	12-13	>13	TOT
0-.5	3	0	0	0	0	0	0
1-1.5	19	3	5	0	0	0	0
2-2.5	4	22	18	4	0	0	3
3-3.5	0	0	4	2	3	0	0
4-4.5	0	0	5	0	1	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

161

16

PERIOD (SECONDS)

HEIGHT (KTS)	<6	6-7	8-9	10-11	12-13	>13	TOT
0-.5	12	2	0	0	0	0	6
1-1.5	18	12	6	5	0	0	2
2-2.5	0	9	6	4	2	0	3
3-3.5	0	3	3	2	1	0	0
4-4.5	0	1	1	0	1	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

100

17

PERIOD (SECONDS)

HEIGHT (KTS)	<6	6-7	8-9	10-11	12-13	>13	TOT
0-.5	3	0	0	0	0	0	1
1-1.5	18	14	7	2	3	0	1
2-2.5	3	18	11	4	3	0	1
3-3.5	1	2	2	2	1	0	1
4-4.5	1	1	1	1	1	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

148

18

PERIOD (SECONDS)

HEIGHT (KTS)	<6	6-7	8-9	10-11	12-13	>13	TOT
0-.5	4	+	0	0	0	0	1
1-1.5	15	11	7	2	+	1	0
2-2.5	6	9	9	4	2	0	2
3-3.5	2	5	7	6	3	2	1
4-4.5	2	1	2	2	2	0	1
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

335

19

PERIOD (SECONDS)

HEIGHT (KTS)	<6	6-7	8-9	10-11	12-13	>13	TOT
0-.5	2	0	0	0	0	0	1
1-1.5	8	14	5	8	+	1	1
2-2.5	5	16	8	3	2	1	0
3-3.5	2	5	7	0	1	1	1
4-4.5	2	1	2	2	2	0	1
5-7.5	0	0	1	1	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

384

22

TOT
3
2
1
0
0
0
0
0

20

23

PERIOD (SECONDS)

HEIGHT (KTS)	<6	6-7	8-9	10-11	12-13	>13	TOT
0-.5	2	+	+	+	0	0	+
1-1.5	9	11	4	1	1	1	2
2-2.5	9	12	11	5	2	1	2
3-3.5	1	6	5	2	2	+	+
4-4.5	0	2	2	2	1	1	+
5-7.5	0	0	1	+	+	0	+
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

168

24

PERIOD (SECONDS)

HEIGHT (KTS)	<6	6-7	8-9	10-11	12-13	>13	TOT
0-.5	7	1	0	0	0	0	1
1-1.5	23	12	3	1	1	0	3
2-2.5	10	12	7	2	1	0	2
3-3.5	1	4	1	2	1	0	0
4-4.5	0	2	0	2	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

189

25

PERIOD (SECONDS)

HEIGHT (KTS)	<6	6-7	8-9	10-11	12-13	>13	TOT
0-.5	5	0	0	0	0	0	1
1-1.5	3	3	2	0	0	0	1
2-2.5	4	14	5	2	2	2	1
3-3.5	1	11	6	5	5	2	4
4-4.5	1	8	3	5	2	0	2
5-7.5	0	1	2	0	0	0	0
8-9.5	0	0	1	0	0	0	0
>10	0	0	0	0	0	0	0

151

26

PERIOD (SECONDS)

HEIGHT (KTS)	<6	6-7	8-9	10-11	12-13	>13	TOT
0-.5	4	0	0	0	0	0	0
1-1.5	11	10	7	2	0	0	2
2-2.5	17	12	4	2	0	0	2
3-3.5	1	5	4	2	0	1	1
4-4.5	1	0	2	0	0	0	0
5-7.5	0	0	2	2	2	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

101

27

PERIOD (SECONDS)

HEIGHT (KTS)	<6	6-7	8-9	10-11	12-13	>13	TOT
0-.5	5	0	0	0	0	0	0
1-1.5	11	10	8	0	11	0	5
2-2.5	0	42	0	0	11	0	0
3-3.5	0	0	0	0	0	0	0
4-4.5	0	0	0	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

19

28

PERIOD (SECONDS)

HEIGHT (KTS)	<6	6-7	8-9	10-11	12-13	>13	TOT
0-.5	0	0	0	0	0	0	0
1-1.5	25	8	13	13	0	0	0
2-2.5	0	18	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
4-4.5	0	0	0	0	0	0	0
5-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

16

31

TOT
1

32

PERIOD (SECONDS)

HEIGHT (KTS)	<6	6-7	8-9	10-11	12-13	>13	TOT
0-.5	1	3	0	0	0	0	3
1-1.5	11	15	3	0	0	0	1
2-2.5	0	0	17	0	0	0	1
3-3.5	0	6	4	4	0	0	0
4-4.5	0	1	4	4	3	0	0
5-7.5	0	0	0	3	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

76

33

PERIOD (SECONDS)

HEIGHT (KTS)	<6	6-7	8-9	10-11	12-13	>13	TOT
0-.5	2	0	0	0	0	0	1
1-1.5	8	8	1	4	0	0	0
2-2.5	5	18	10	3	0	1	0
3-3.5	2	7	0	1	0	1	0
4-4.5	3	4	2	5	0	2	0
5-7.5	0	1	0	4	2	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

160

T INSUFFICIENT DATA

INSUFFICIENT DATA

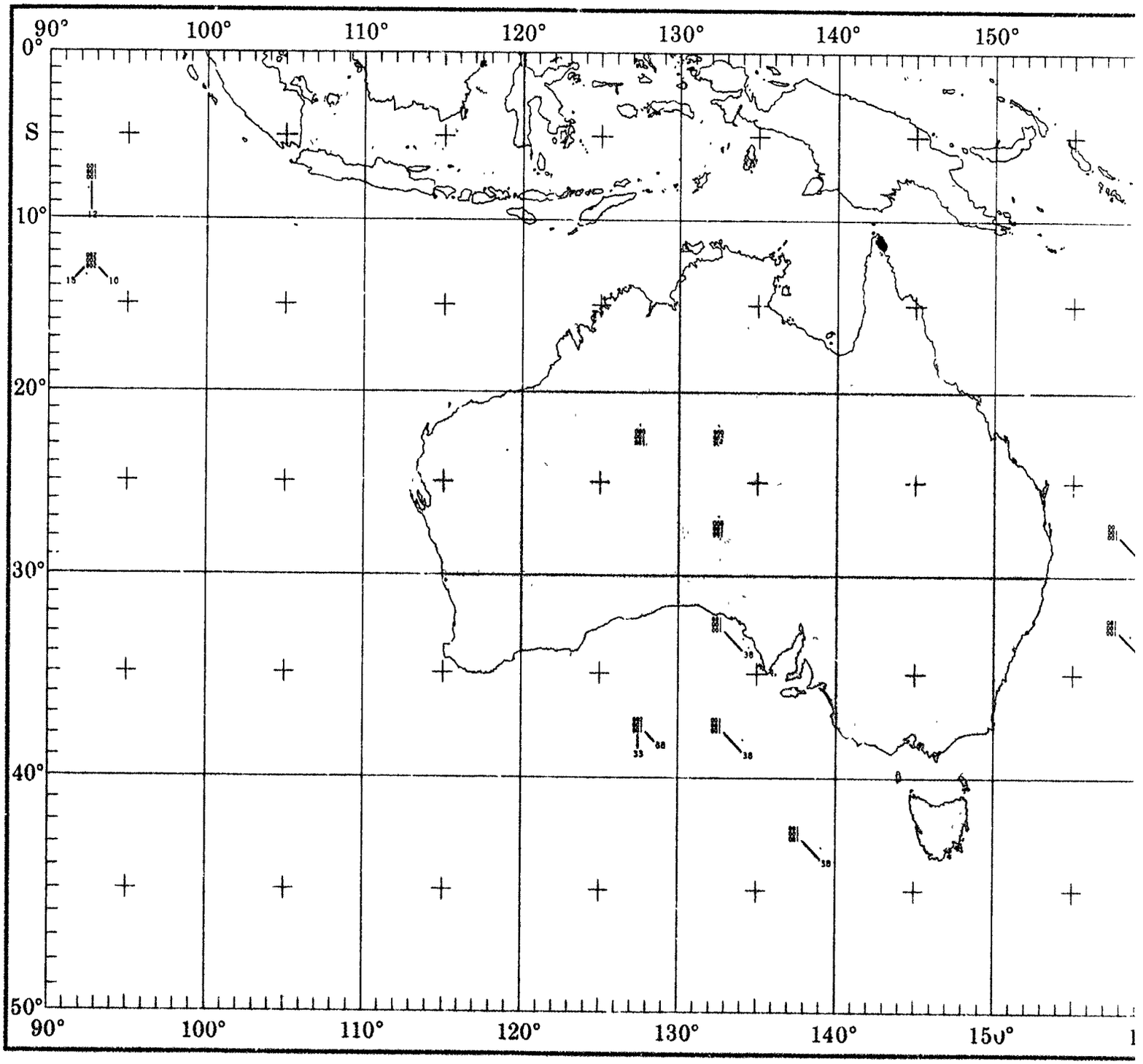
INSUFFICIENT DATA

INSUFFICIENT DATA

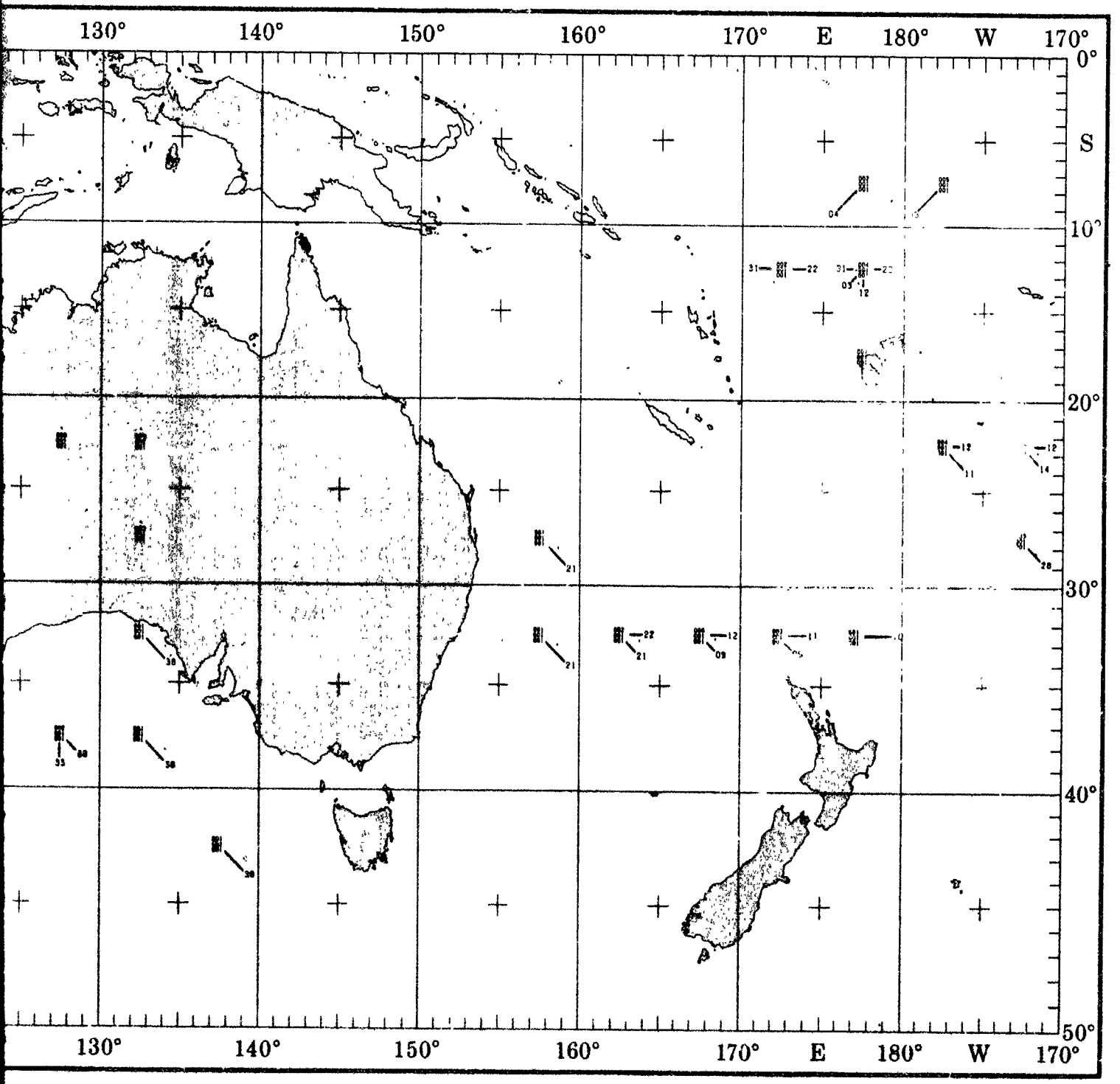
INSUFFICIENT DATA

t the objective compilation of available data for specified areas without regard to suspected biases.
lyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

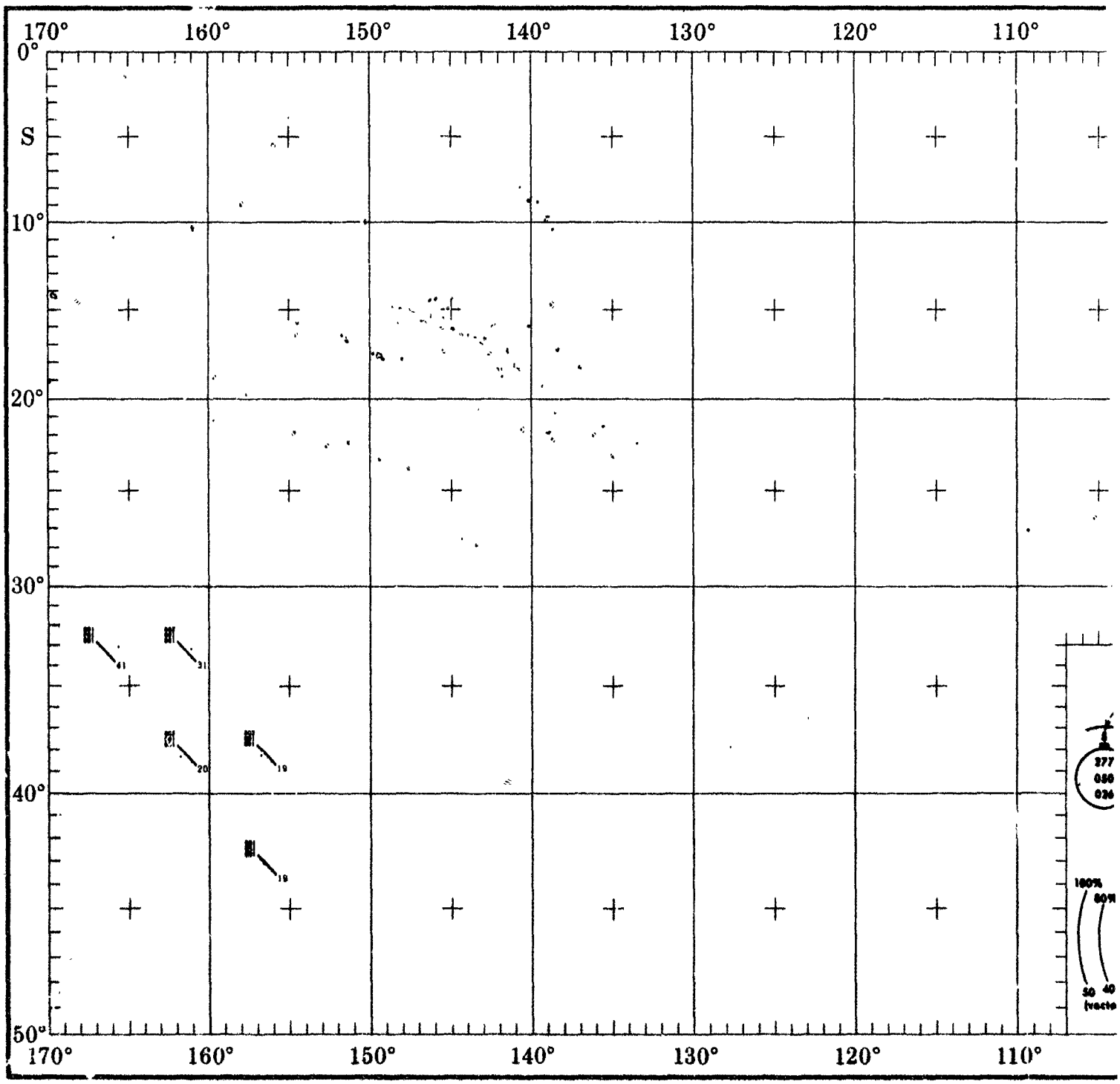
OCTOBER



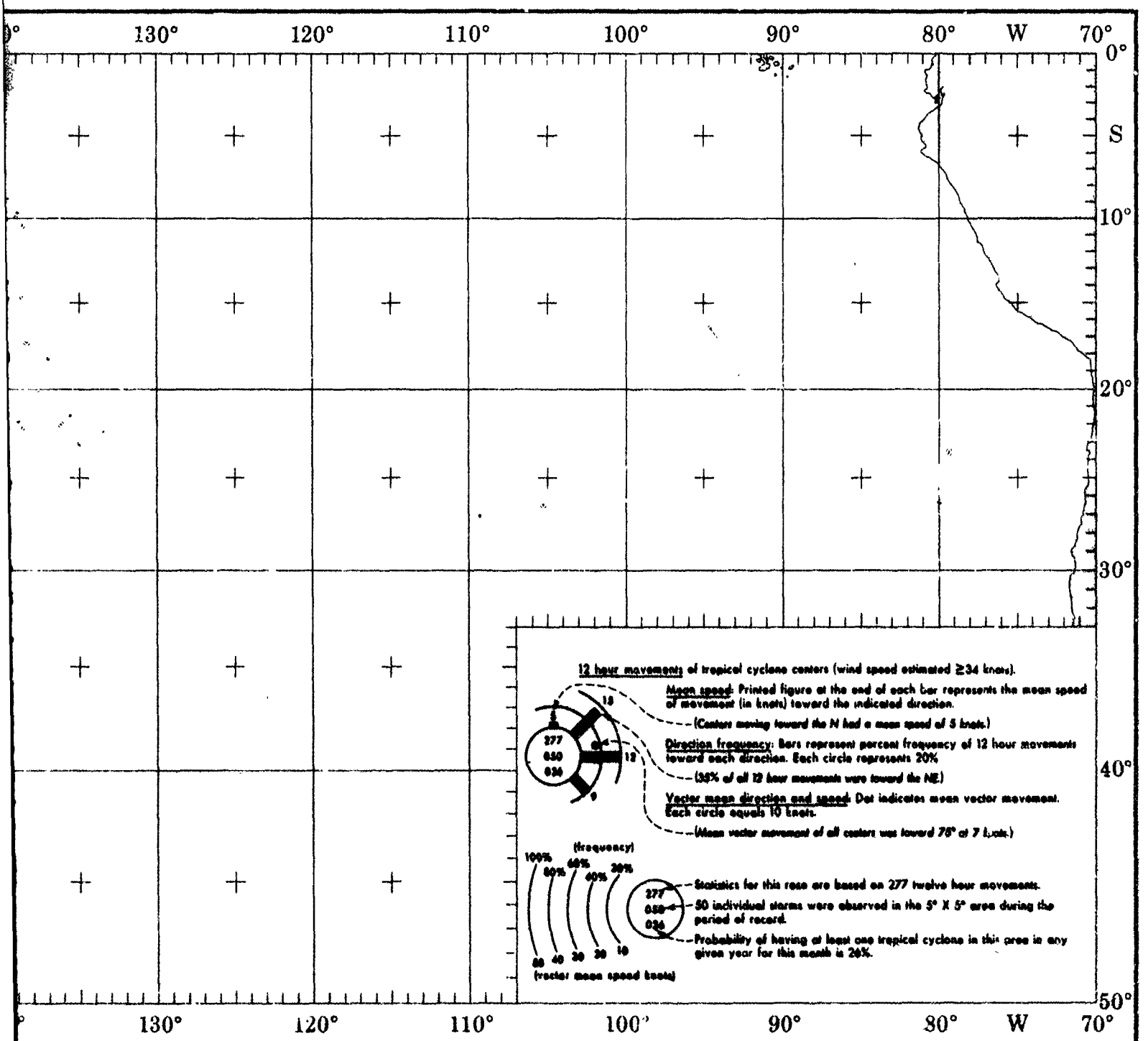
TROPICAL CYCLONE



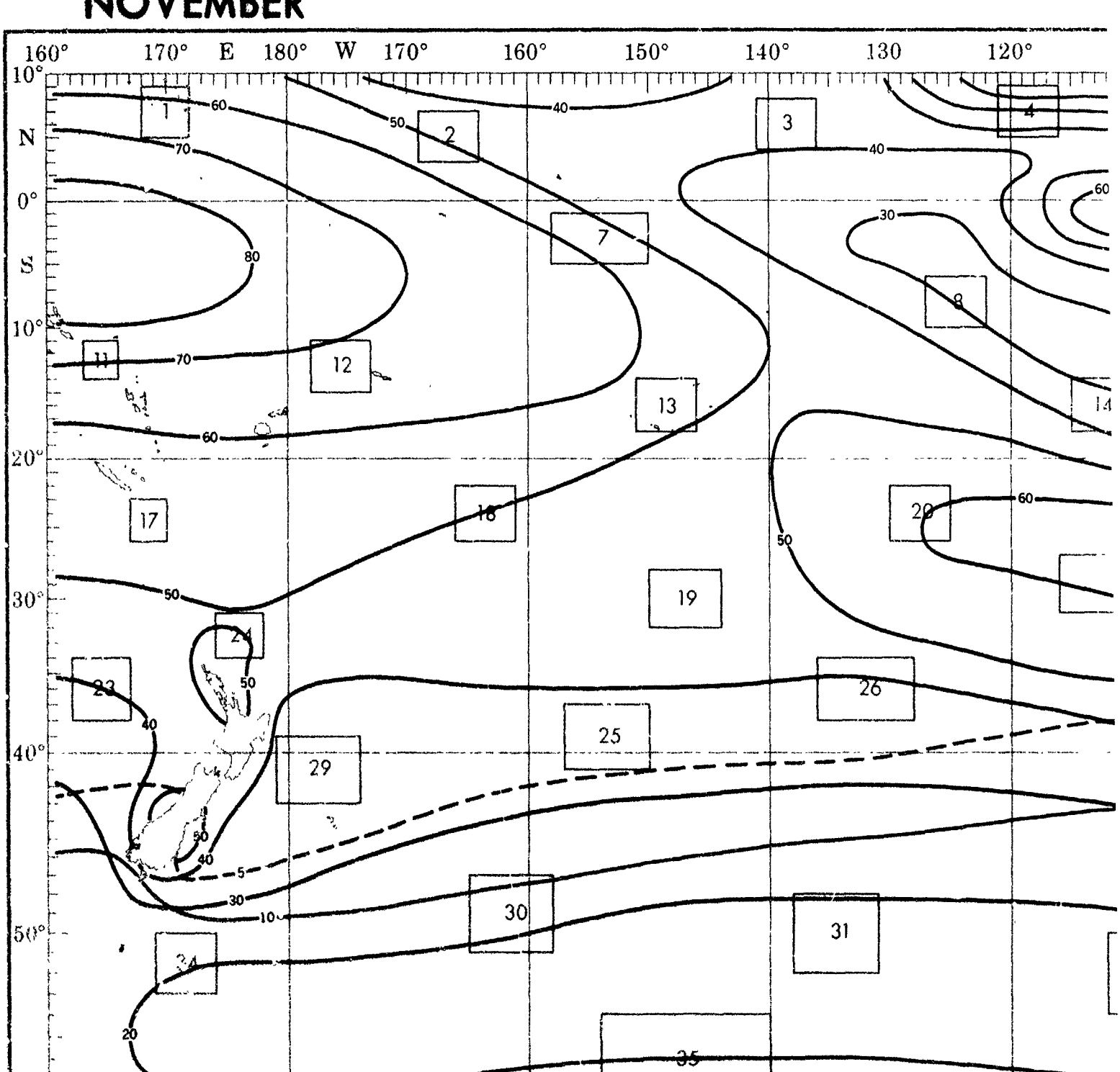
TROPICAL CYCLONE



OCTOBER


130°
120°
110°
100°
90°
80°
W
70°
0°
S
10°
20°
30°
40°
50°
12 hour movements of tropical cyclone centers (wind speed estimated ≥34 knots).
Mean speed: Printed figure at the end of each bar represents the mean speed of movement (in knots) toward the indicated direction.
(Centers moving toward the N had a mean speed of 5 knots.)
Direction frequency: Bars represent percent frequency of 12 hour movements toward each direction. Each circle represents 20%
(35% of all 12 hour movements were toward the NE.)
Vector mean direction and speed: Dot indicates mean vector movement. Each circle equals 10 knots.
(Mean vector movement of all centers was toward 75° at 7 knots.)
277
050
026
(frequency)
100%
80%
60%
40%
20%
40
30
20
10
(vector mean speed knots)
Statistics for this rose are based on 277 twelve hour movements.
50 individual storms were observed in the 5° X 5° area during the period of record.
Probability of having at least one tropical cyclone in this area in any given year for this month is 26%.

NOVEMBER


160° 170° E 180° W 170° 160° 150° 140° 130 120°
10° N 0° S 10° 20° 30° 40° 50° 60°
1
2
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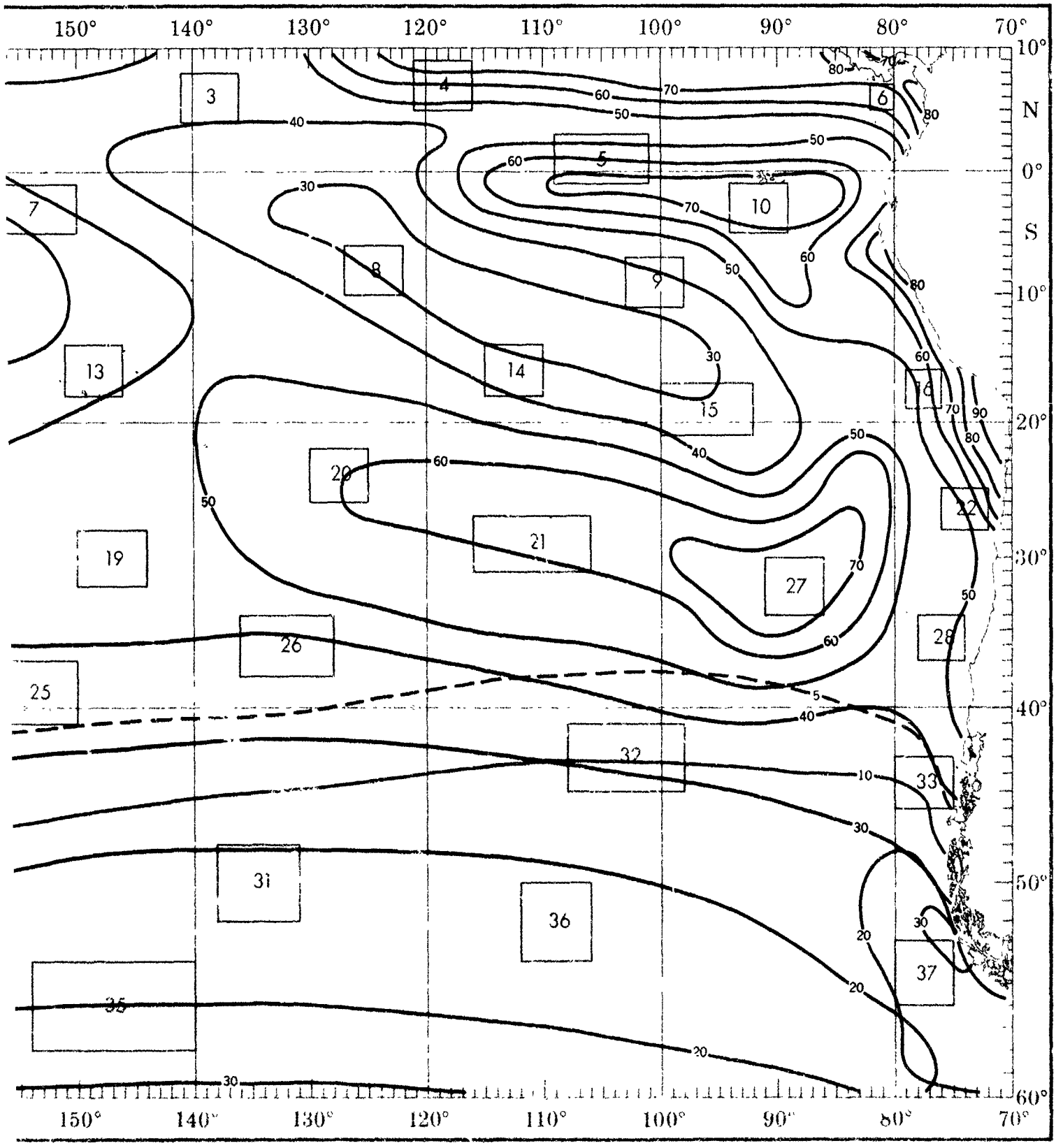
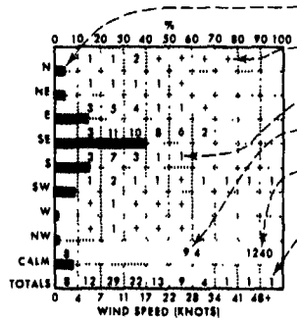
SURFACE WINDS



WIND DIRECTION AND SPEED

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



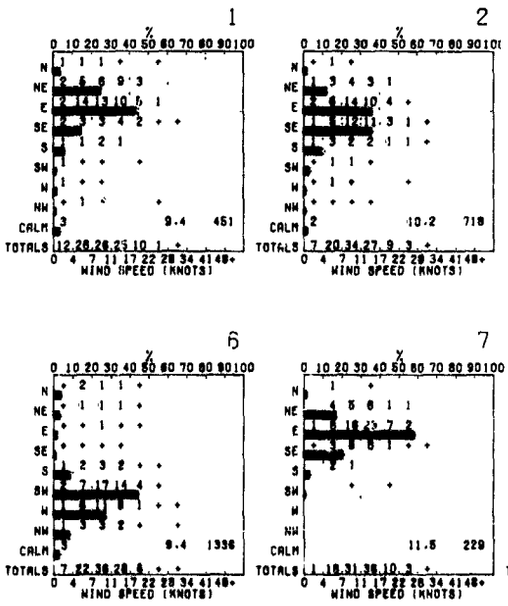
WIND SPEED INTERVAL (KNOTS)

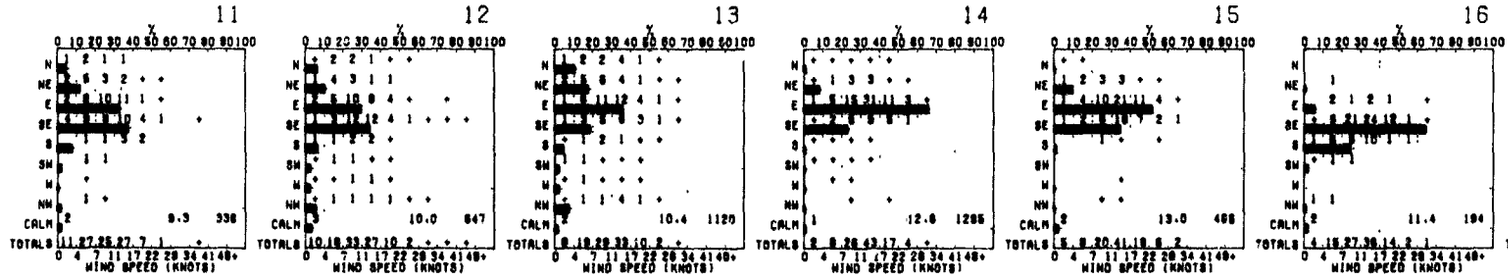
0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	≥48
0	4	7	11	17	22	28	34	41	48+

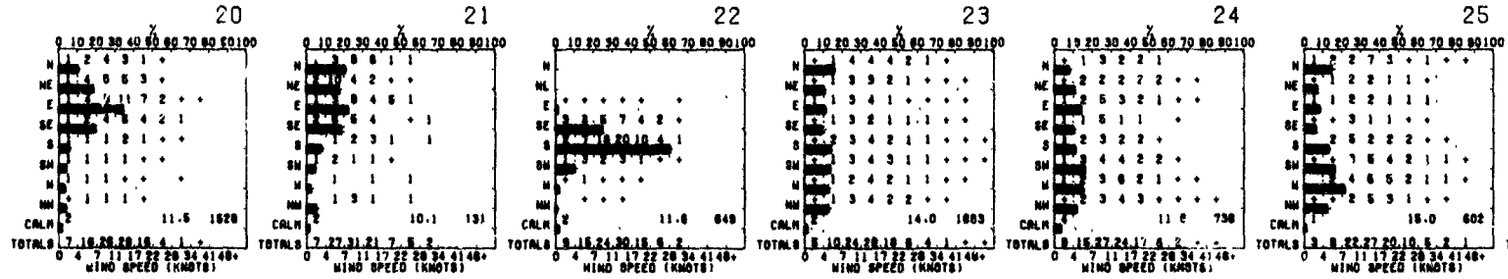
Printed scale on bottom of chart

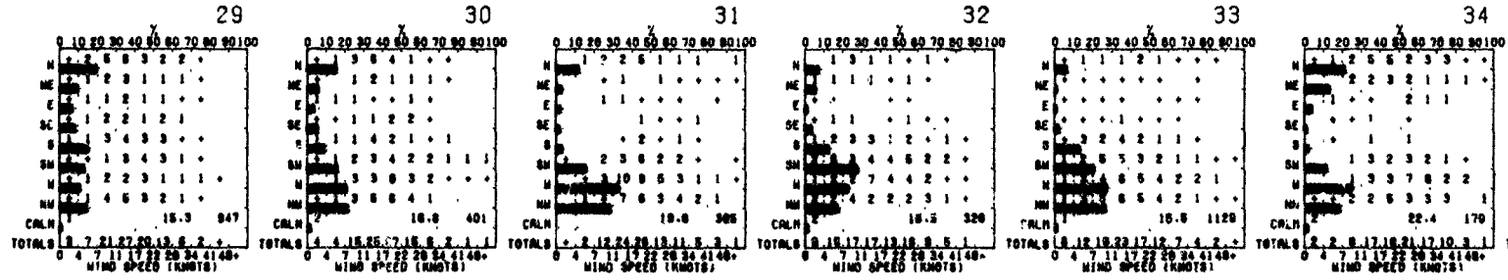
BLUE LINE Percent frequency of wind speed ≤10 knots

RED LINE - Percent frequency of wind speed ≥34 knots









Graphs represent the objective compilation of available data for specified areas without regard t
The isopleth analyses (opposite page) are based on all available data subjectively adjusted wher

SPEED

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irection Speed frequency
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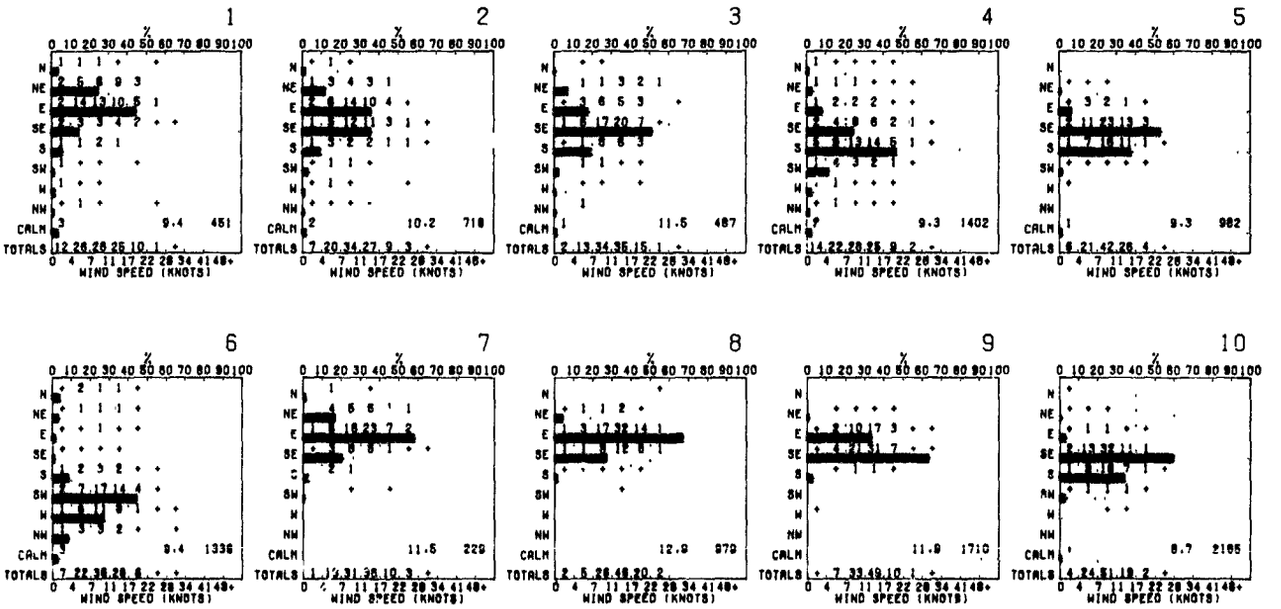
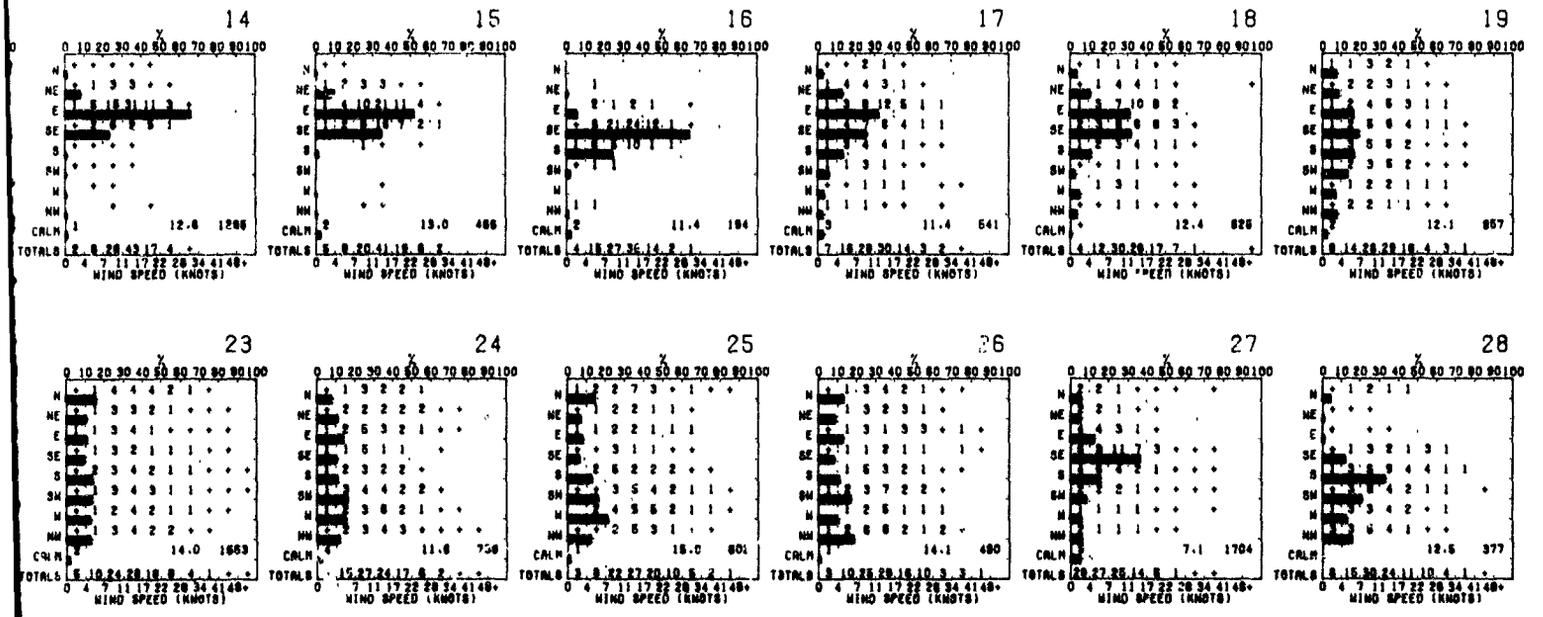
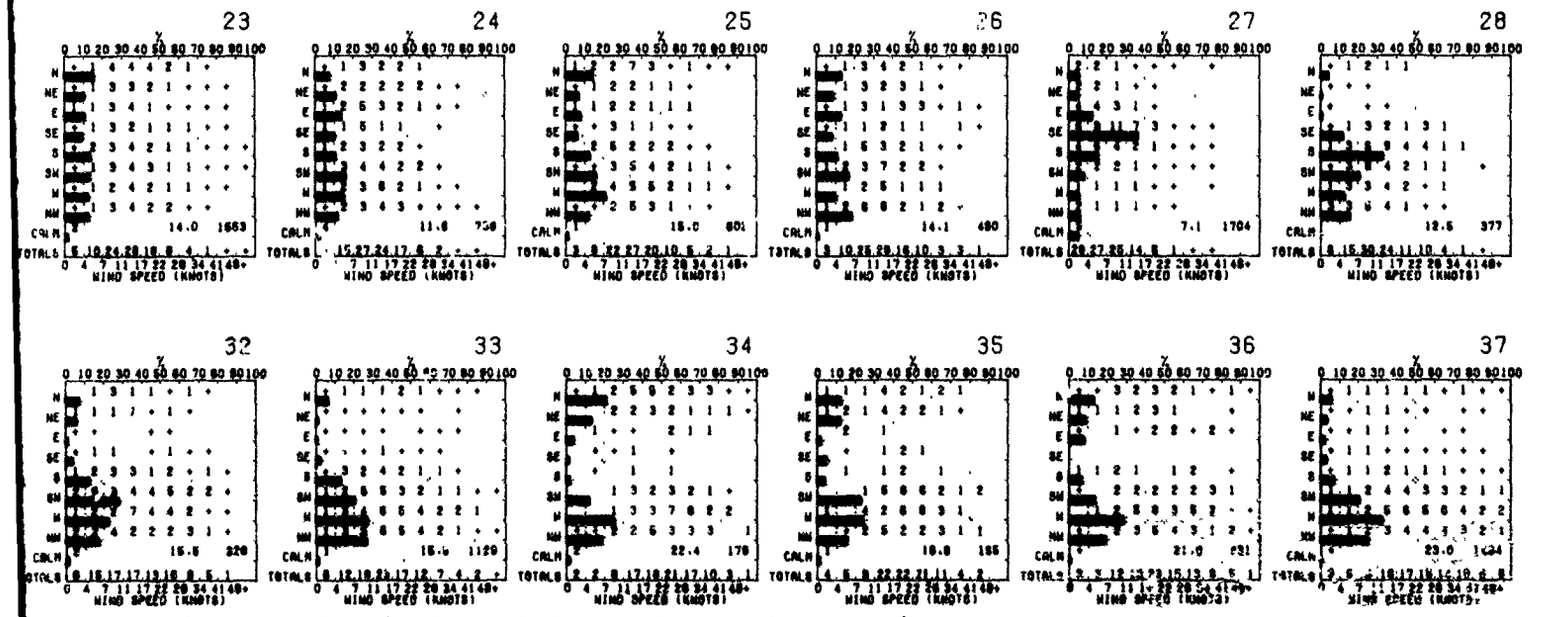
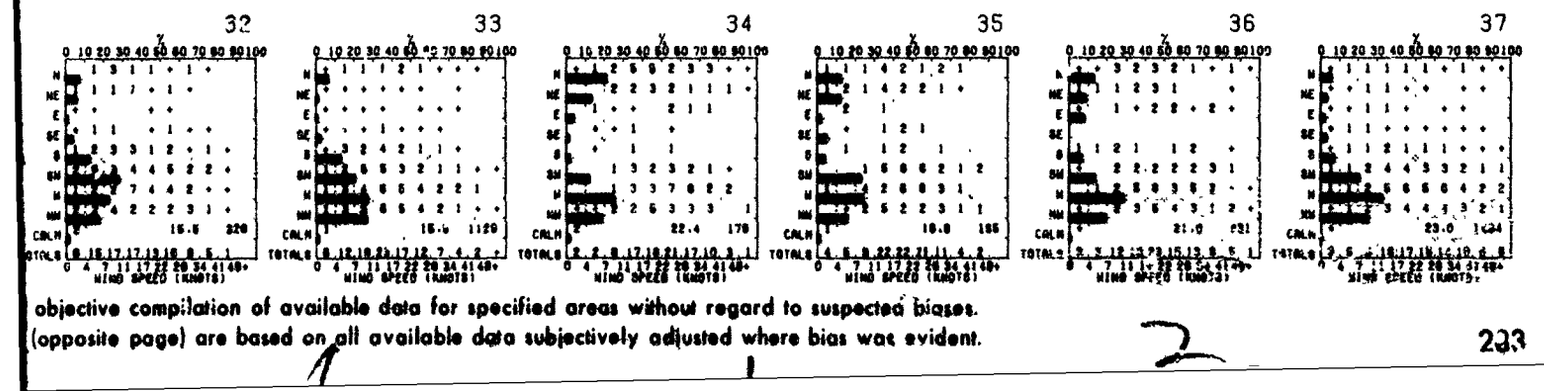
41 47 ≥48
48+





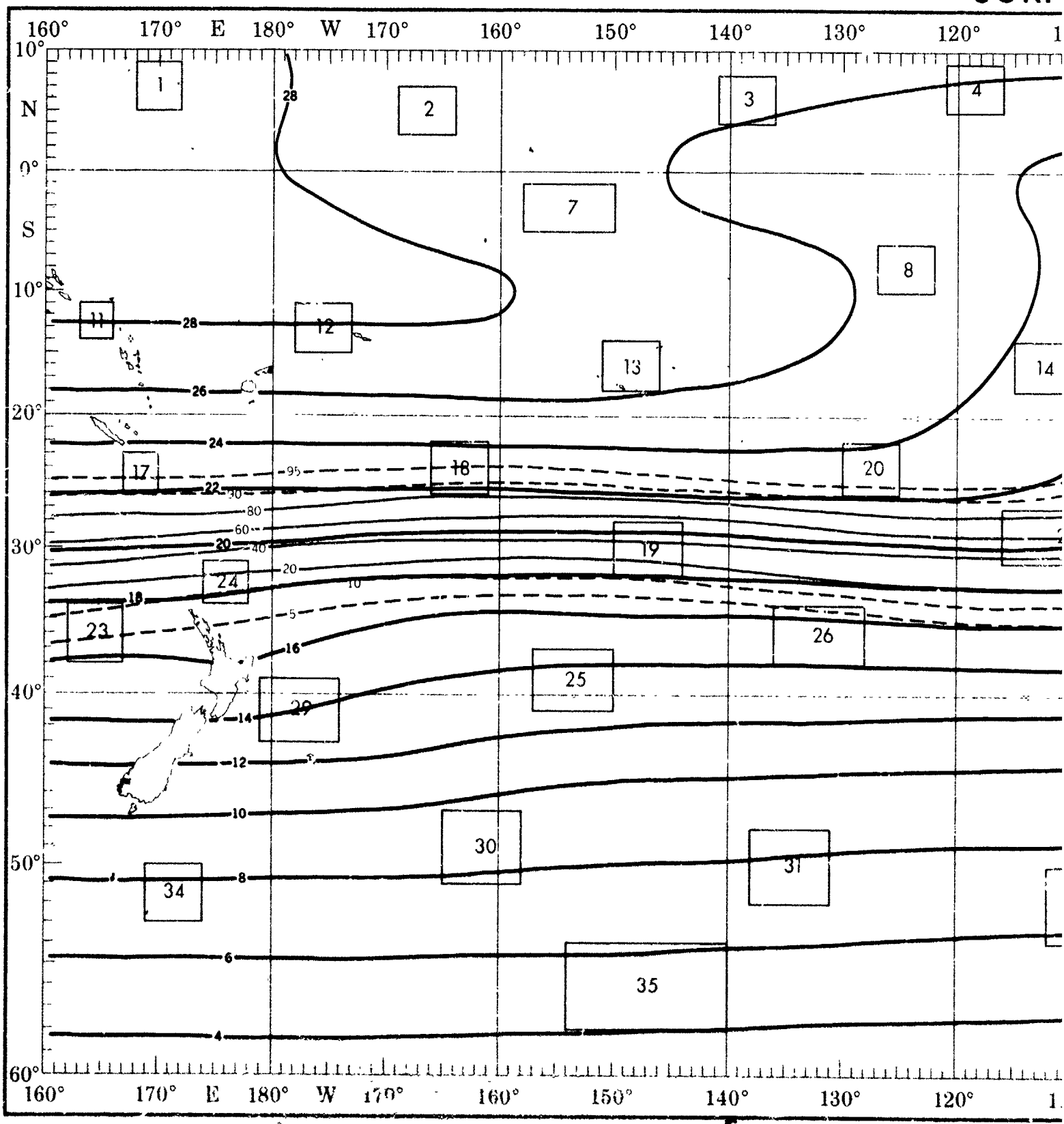




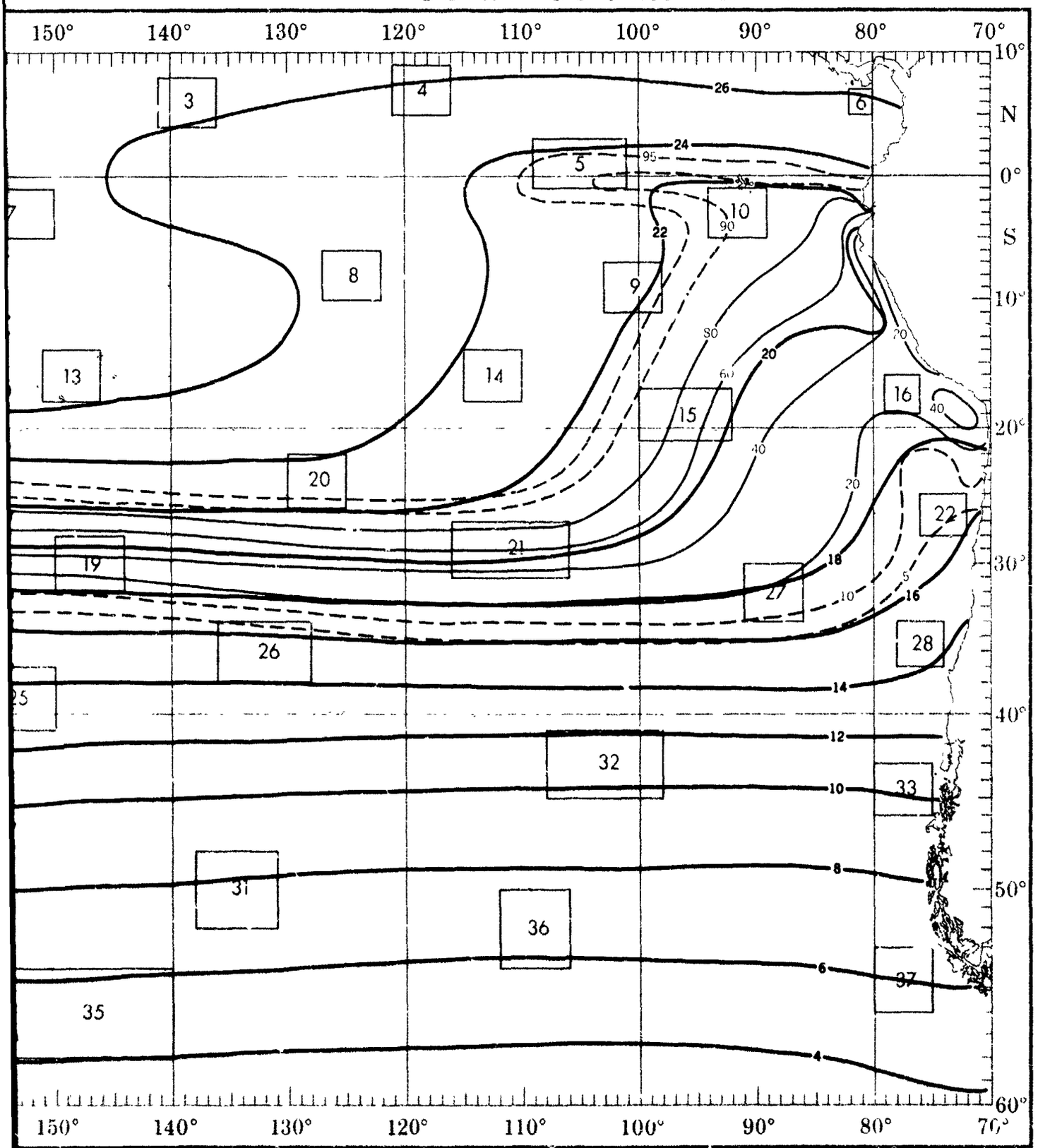
objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

NOVEMBER

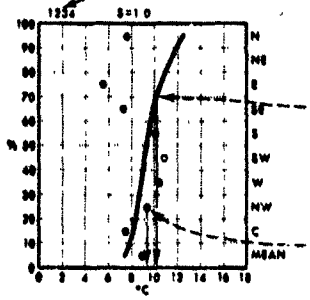
SURF



SURFACE AIR TEMPERATURE



SURFACE AIR TEMPERATURE



Cumulative percent frequency of temperatures equal to or less than the temperature intersected by the curve.

(70% of all temperatures were ≤10.3 °C or ≤50.5 °F.)

S=Standard deviation of temperatures (°C).

Mean temperature for each wind direction, calm and for all data combined are represented by dots

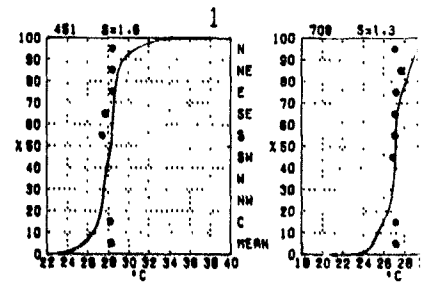
(With NW winds, the mean temperature was 9.4 °C or 48.9 °F.)

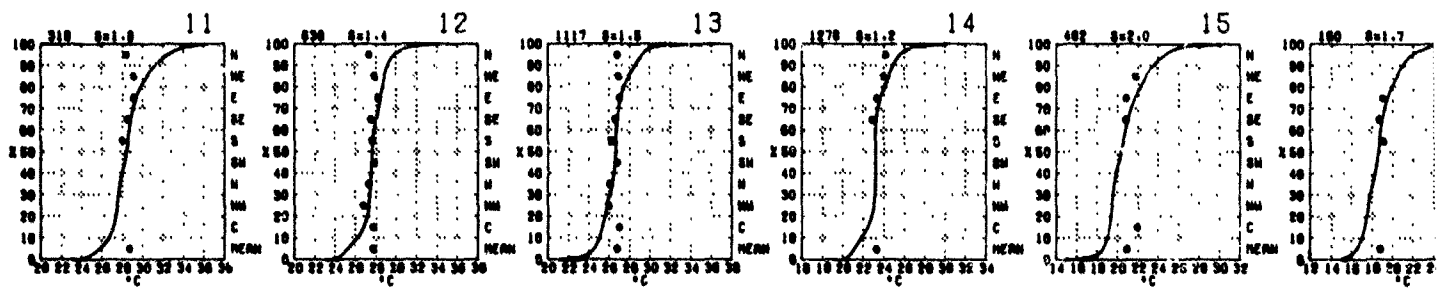
○ Indicates that the mean temperature for a direction or calm was computed from 10-30 observations.

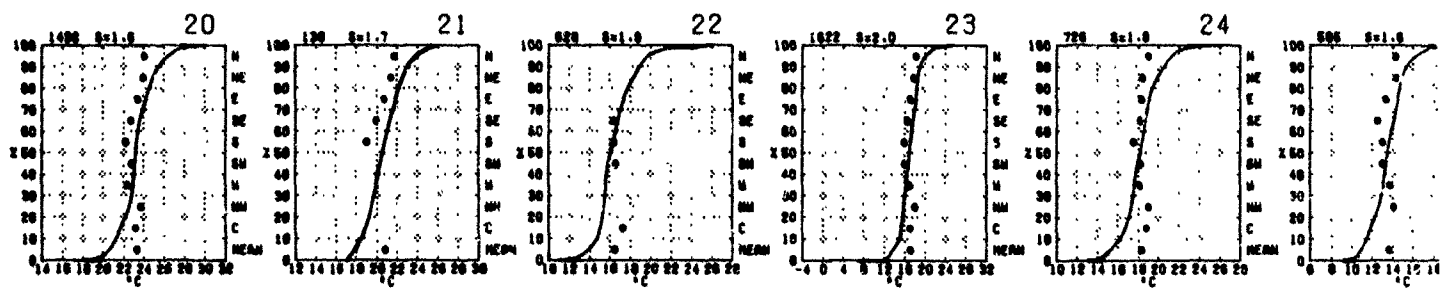
The mean temperature is omitted when less than 10 observations for a direction or calm were available

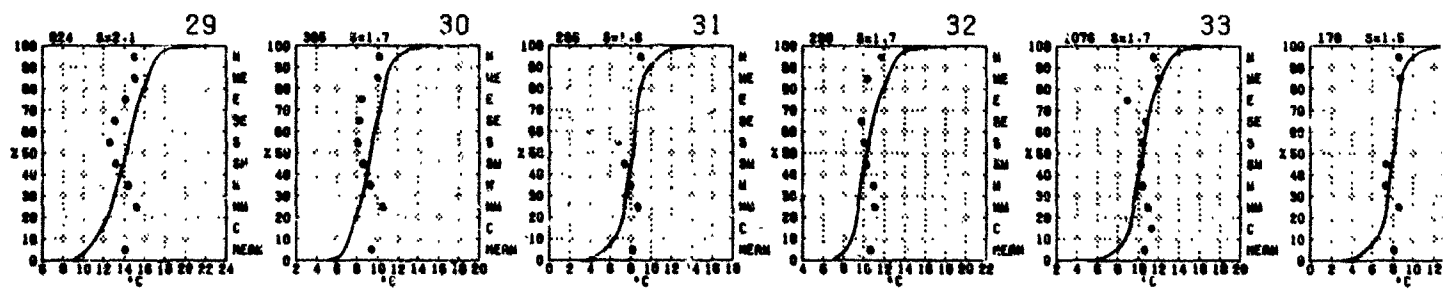
BLACK LINE - Mean air temperature (°C)

RED LINE - Percent frequency of temperature ≥20°C (68°F)









Graphs represent the objective compilation of available data for specified areas witho
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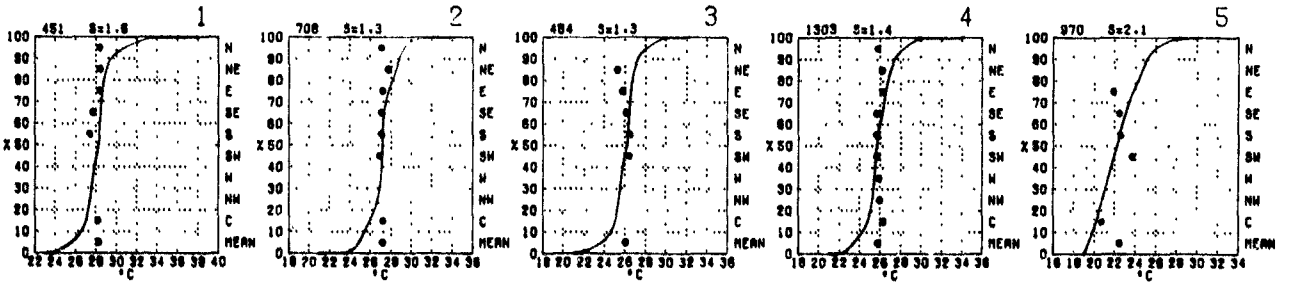
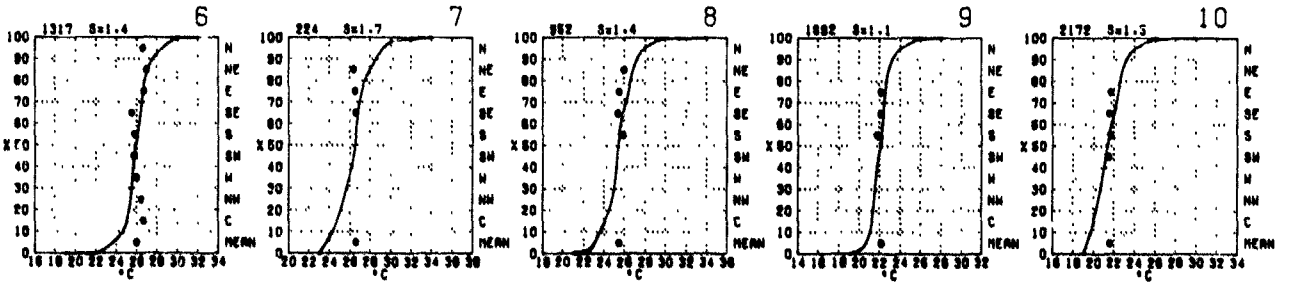
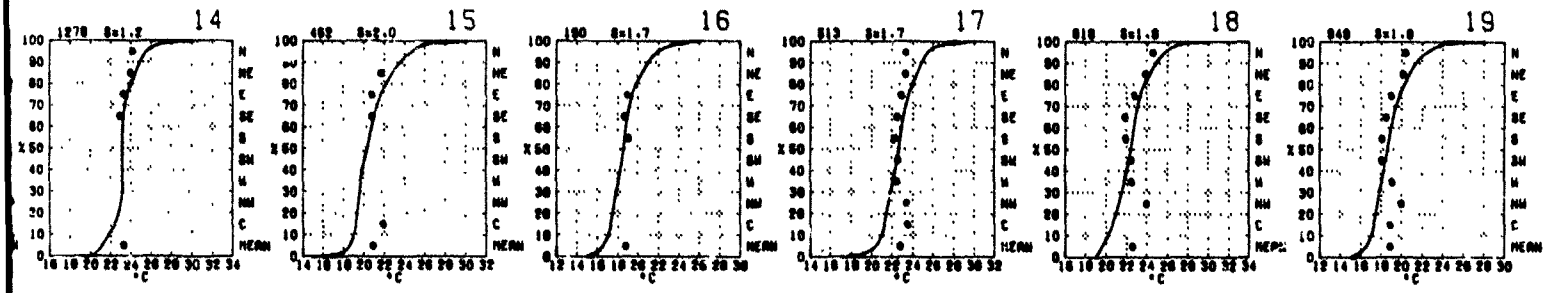
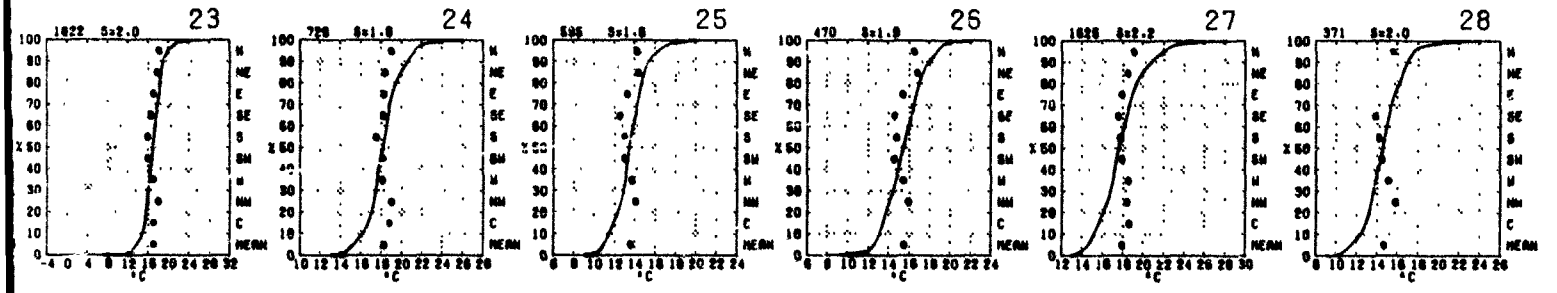
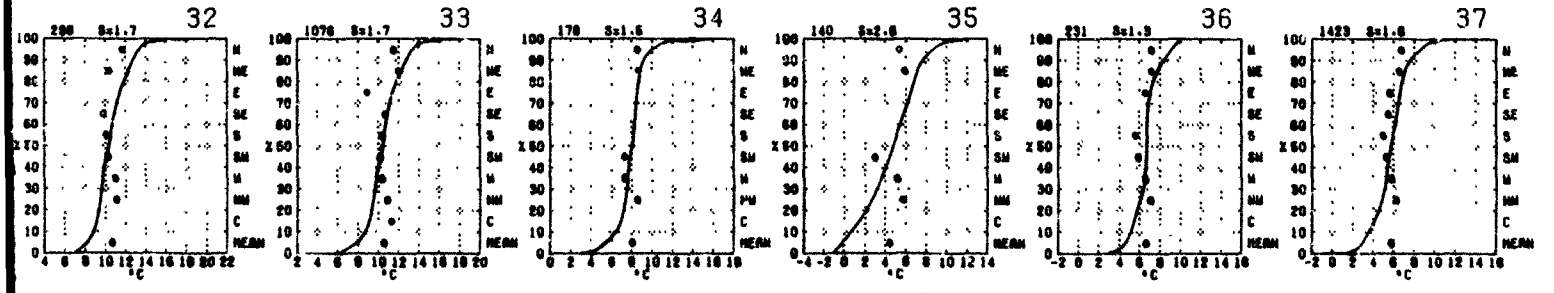




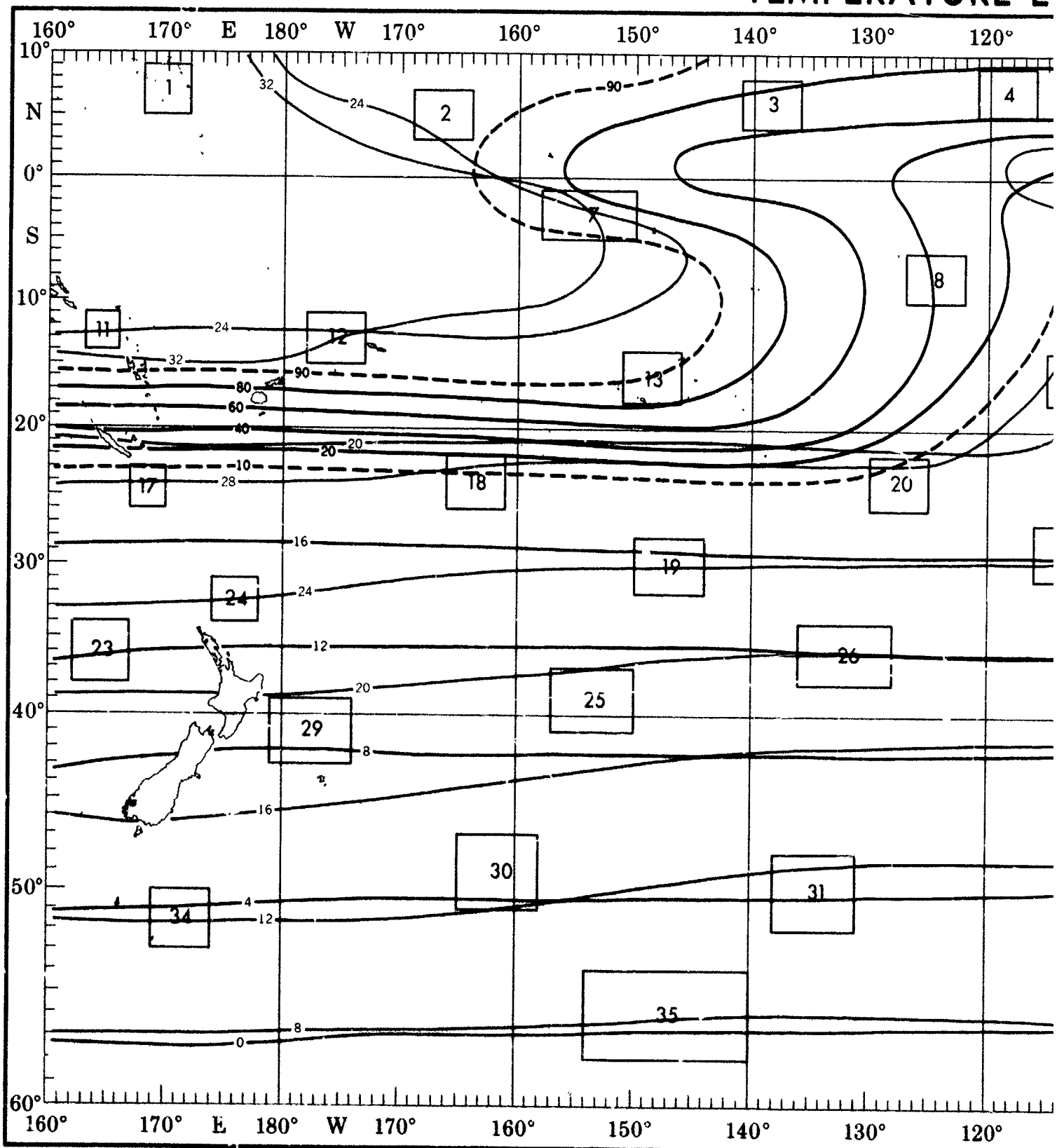




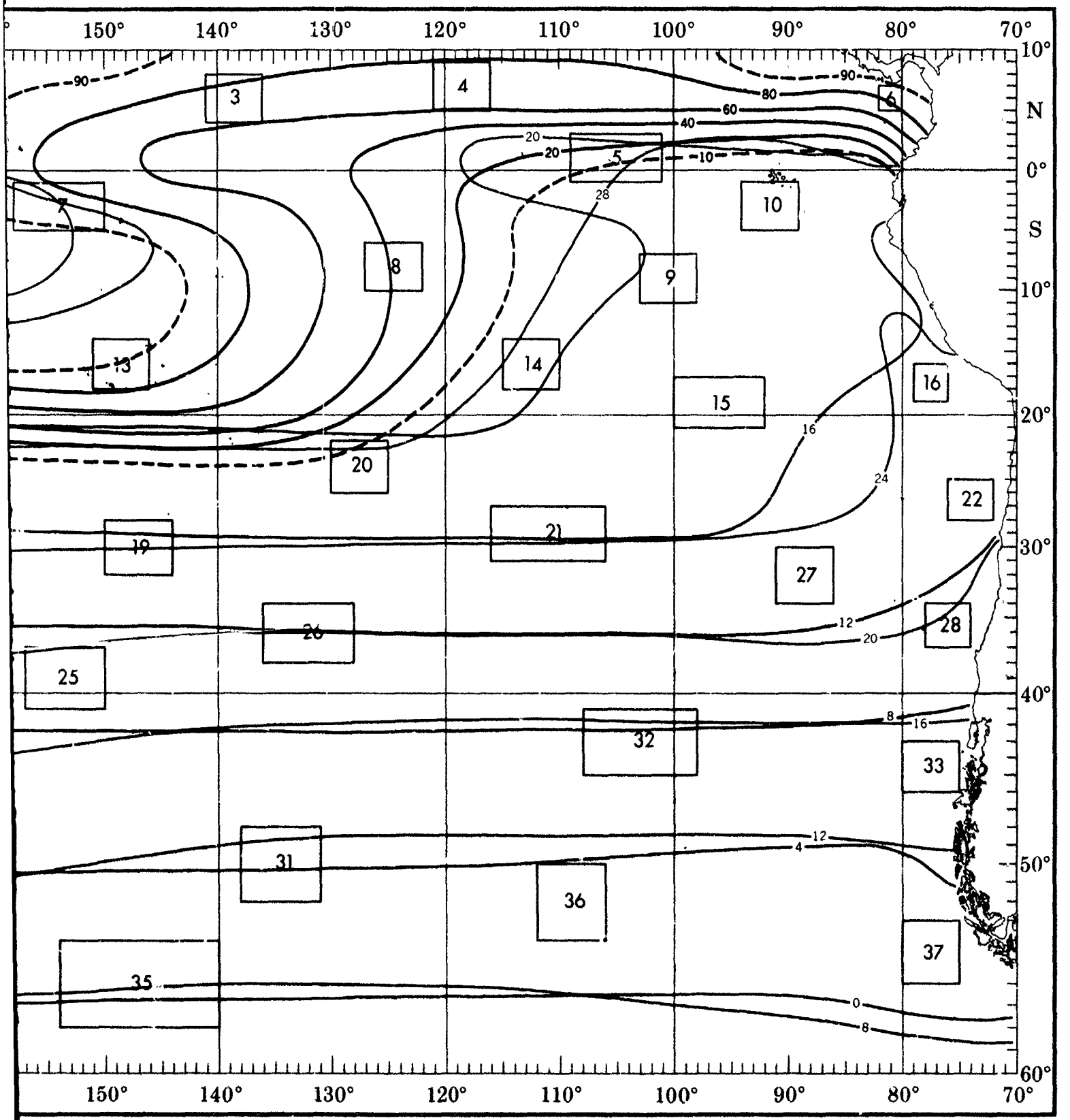


objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

NOVEMBER TEMPERATURE E



TEMPERATURE EXTREMES AND T-H INDEX



WIND SPEED AND AIR TEMPERATURE

Wind speed and air temperature

Percent frequency of simultaneous occurrence of specified temperature (°C) and wind speed (knots).

WIND SPEED (kts)

Temp (°C)	0-3	4-10	11-21	22-33	≥34
4, 5	18	8	7	1	1
2, 3	17	8	7	1	1
0, 1	13	6	3	1	1
-2, -1	1	+	0	0	0
-4, -3	0	0	0	0	0
-6, -5	+	0	0	+	+
-8, -7	1	+	0	0	0
-10, -9	0	0	0	0	0
-12, -11	1	+	0	0	0
-14, -13	1	0	0	0	0
-16, -15	1	+	0	0	0
					3330

—(1% of all observations reported temperature 2-3°C simultaneously with wind speed of 22-33 kts)

+ Indicates <5% but >0.

Number of observations

Use of this table in determination of Potential Superstructure Icing is explained in the text

1

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
36,37	0	+	0	0	0
34,35	0	0	+	0	0
32,33	0	2	+	0	0
30,31	2	6	2	+	0
28,29	8	31	19	+	0
26,27	2	11	10	+	0
24,25	0	1	3	+	0
22,23	0	0	0	0	0
20,21	0	0	0	0	0
18,19	0	0	0	0	0
16,17	0	0	0	0	0
					452

WIND SPEED (KT

TEMP (°C)	0-3	4-10	11-21
32,33	0	+	+
30,31	+	2	1
28,29	3	23	11
26,27	4	25	21
24,25	1	4	3
22,23	0	0	+
20,21	0	0	+
18,19	0	0	0
16,17	0	0	0
14,15	0	0	0
12,13	0	0	0

6

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
32,33	0	+	0	0	0
30,31	+	1	+	0	0
28,29	2	7	3	0	0
26,27	4	33	16	+	0
24,25	2	17	12	+	0
22,23	+	1	1	0	0
20,21	0	+	0	0	0
18,19	0	+	0	0	0
16,17	0	0	0	0	0
14,15	0	0	0	0	0
12,13	0	0	0	0	0
					1346

WIND SPEED (KTS

TEMP (°C)	0-3	4-10	11-21
32,33	0	+	+
30,31	+	2	1
28,29	0	13	6
26,27	1	27	27
24,25	0	7	10
22,23	0	1	1
20,21	0	0	0
18,19	0	0	0
16,17	0	0	0
14,15	0	0	0
12,13	0	0	0

BLACK LINE - Percent frequency of T-H index ≥24°C (75.2°F) (discomfort may be experienced due to heat)

BLUE LINE - Minimum (1%) air temperature (°C) (1% of the temperatures were equal to or less than the given value)

RED LINE - Maximum (99%) air temperature (°C) (1% of the temperatures were greater than the given value)

11

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
34,35	1	1	+	0	0
32,33	1	4	1	0	0
30,31	3	11	3	+	0
28,29	6	28	13	1	0
26,27	1	10	12	0	0
24,25	0	1	2	0	+
22,23	0	0	0	0	0
20,21	0	0	0	0	0
18,19	0	0	0	0	0
16,17	0	0	0	0	0
14,15	0	0	0	0	0
					320

12

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
32,33	+	1	0	0	0
30,31	1	3	2	0	0
28,29	5	27	15	+	0
26,27	4	20	17	1	0
24,25	+	1	2	+	0
22,23	0	0	0	0	0
20,21	0	0	0	0	0
18,19	0	0	0	0	0
16,17	0	0	0	0	0
14,15	0	0	0	0	0
12,13	0	0	0	0	0
					645

13

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
34,35	0	+	0	0	0
32,33	+	+	+	0	0
30,31	+	2	1	0	0
28,29	2	11	10	+	0
26,27	5	28	24	1	0
24,25	1	5	7	1	0
22,23	0	1	1	0	0
20,21	0	0	0	0	0
18,19	0	0	0	0	0
16,17	0	0	0	0	0
14,15	0	0	0	0	0
					1131

14

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
30,31	+	0	0	0	0
28,29	0	+	+	0	0
26,27	+	2	2	0	0
24,25	1	11	18	1	0
22,23	1	19	38	3	0
20,21	+	2	3	+	0
18,19	0	0	0	0	0
16,17	0	0	0	0	0
14,15	0	0	0	0	0
12,13	0	0	0	0	0
10,11	0	0	0	0	0
					1284

15

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
28,29	0	1	0	0	0
26,27	+	2	+	+	0
24,25	1	4	3	0	0
22,23	2	8	13	2	0
20,21	2	10	30	3	0
18,19	1	5	13	2	0
16,17	0	+	1	0	0
14,15	0	0	0	0	0
12,13	0	0	0	0	0
10,11	0	0	0	0	0
8,9	0	0	0	0	0
					462

WIND SPEED (KTS

TEMP (°C)	0-3	4-10	11-21
26,27	0	0	1
24,25	0	1	1
22,23	1	2	3
20,21	1	8	12
18,19	1	27	27
16,17	2	8	8
14,15	0	0	0
12,13	0	0	0
10,11	0	0	0
8,9	0	0	0
6,7	0	0	0

20

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
30,31	0	0	+	0	0
28,29	+	1	1	0	0
26,27	1	4	3	+	0
24,25	3	14	15	1	+
22,23	4	20	21	3	0
20,21	1	2	4	1	0
18,19	0	+	1	+	0
16,17	0	0	+	0	0
14,15	0	0	0	0	0
12,13	0	0	0	0	0
10,11	0	0	0	0	0
					1532

21

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
24,25	2	5	0	1	0
22,23	3	14	8	2	0
20,21	1	27	13	2	0
18,19	2	12	6	0	0
16,17	0	0	0	2	0
14,15	0	0	0	0	0
12,13	0	0	0	0	0
10,11	0	0	0	0	0
8,9	0	0	0	0	0
6,7	0	0	0	0	0
4,5	0	0	0	0	0
					131

22

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
24,25	+	+	+	0	0
22,23	+	1	+	0	0
20,21	1	2	1	0	0
18,19	3	8	7	1	0
16,17	3	17	18	3	0
14,15	3	9	18	3	0
12,13	+	1	1	0	0
10,11	0	0	0	0	0
8,9	0	0	0	0	0
6,7	0	0	0	0	0
4,5	0	0	0	0	0
					828

23

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
26,27	0	+	0	0	0
24,25	0	+	0	0	0
22,23	+	+	1	+	0
20,21	+	3	3	1	+
18,19	2	12	14	4	+
16,17	2	13	18	5	+
14,15	1	6	8	2	1
12,13	+	1	1	+	+
10,11	0	0	+	0	0
8,9	0	+	+	+	0
6,7	0	0	0	0	0
					1630

24

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
24,25	+	+	0	0	0
22,23	1	2	2	0	0
20,21	2	9	6	1	+
18,19	3	18	21	3	+
16,17	3	12	10	3	0
14,15	+	2	2	1	0
12,13	0	0	0	0	0
10,11	0	0	0	0	0
8,9	0	0	0	0	0
6,7	0	0	0	0	0
4,5	0	0	0	0	0
					733

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21
20,21	0	+	0
18,19	0	0	1
16,17	+	3	6
14,15	1	9	20
12,13	2	15	18
10,11	+	3	3
8,9	0	0	0
6,7	0	0	0
4,5	0	0	0
2,3	0	0	0
0,1	0	0	0

29

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
22,23	0	+	0	0	0
20,21	0	+	+	0	0
18,19	+	1	2	+	0
16,17	1	7	11	6	+
14,15	1	10	17	5	1
12,13	1	8	14	5	1
10,11	+	1	4	3	+
8,9	0	+	+	1	0
6,7	0	0	0	0	0
4,5	0	0	0	0	0
2,3	0	0	0	0	0
					929

30

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
16,17	0	0	+	0	0
14,15	0	0	+	0	0
12,13	0	1	8	3	+
10,11	+	8	18	8	1
8,9	3	9	20	7	2
6,7	1	2	7	4	1
4,5	0	0	+	+	0
2,3	0	0	0	0	0
0,1	0	0	0	0	0
-2,-1	0	0	0	0	0
-4,-3	0	0	0	0	0
					386

31

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
12,13	0	2	1	0	0
10,11	0	3	8	2	+
8,9	+	5	28	14	5
6,7	0	4	12	7	2
4,5	0	0	1	2	2
2,3	0	0	0	0	0
0,1	0	0	0	0	0
-2,-1	0	0	0	0	0
-4,-3	0	0	0	0	0
-6,-5	0	0	0	0	0
-8,-7	0	0	0	0	0
					298

32

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
16,17	0	1	0	0	0
14,15	1	3	1	+	1
12,13	3	10	8	4	0
10,11	2	11	11	11	3
8,9	2	4	10	10	2
6,7	0	+	0	0	+
4,5	0	0	0	0	0
2,3	0	0	0	0	0
0,1	0	0	0	0	0
-2,-1	0	0	0	0	0
-4,-3	0	0	0	0	0
					298

33

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥34
18,19	0	+	0	0	0
16,17	+	+	+	0	0
14,15	+	2	2	1	+
12,13	2	9	9	3	1
10,11	2	13	19	10	3
8,9	1	5	9	5	2
6,7	+	1	1	+	+
4,5	0	0	0	0	0
2,3	0	0	0	0	0
0,1	0	0	0	0	0
-2,-1	0	0	0	0	0
					1076

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21
14,15	0	0	0
12,13	0	0	1
10,11	1	3	7
8,9	2	4	17
6,7	0	2	10
4,5	0	1	0
2,3	0	0	1
0,1	0	0	0
-2,-1	0	0	0
-4,-3	0	0	0
-6,-5	0	0	0

Graphs represent the objective compilation of available data for specified areas without re

The isopleth analyses (opposite page) are based on all available data subjectively adjuste

TEMPERATURE

NOVEMBER

°C) and wind speed

peed of 22-33 kts)

ained in the text

to heat)

n the given value)

given value)

1

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	+	0	0	0
34.35	0	0	+	0	0
32.33	0	2	+	0	0
30.31	2	6	2	+	0
28.29	8	31	19	+	0
26.27	2	11	10	+	0
24.25	0	1	3	+	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

452

2

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	+	0	0
30.31	+	2	1	0	0
28.29	3	23	11	1	0
26.27	4	25	21	1	0
24.25	1	4	3	+	0
22.23	0	0	+	0	0
20.21	0	0	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

711

3

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	1	0	0
28.29	+	6	7	0	0
26.27	2	30	30	1	0
24.25	2	10	9	+	0
22.23	0	+	1	+	0
20.21	0	0	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

495

4

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	+	0	0	0	0
32.33	+	0	0	0	0
30.31	1	+	+	0	0
28.29	2	5	2	0	0
26.27	6	23	18	1	0
24.25	5	19	13	1	0
22.23	+	2	1	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

1318

5

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	+	1	+	0	0
26.27	+	6	3	+	0
24.25	+	11	10	+	0
22.23	1	20	13	0	0
20.21	3	22	4	0	0
18.19	1	4	+	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

974

6

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	0	0	0
30.31	+	1	+	0	0
28.29	2	7	3	0	0
26.27	4	33	16	+	0
24.25	2	17	12	+	0
22.23	+	1	1	0	0
20.21	0	+	0	0	0
18.19	0	+	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1348

7

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	+	0	0
30.31	+	2	1	0	0
28.29	0	13	8	1	0
26.27	1	27	27	1	0
24.25	0	7	10	+	0
22.23	0	1	1	+	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

224

8

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	0	0	0
30.31	+	+	1	0	0
28.29	+	2	4	0	0
26.27	1	11	30	1	0
24.25	1	15	29	1	0
22.23	0	2	2	+	0
20.21	0	0	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

952

9

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	+	0	0	0
26.27	+	+	1	0	0
24.25	0	4	5	+	0
22.23	+	25	38	1	0
20.21	+	9	15	+	0
18.19	0	+	+	+	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

1692

10

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	+	0	0	0
26.27	+	1	1	0	0
24.25	+	6	3	0	0
22.23	2	31	8	+	0
20.21	2	32	9	+	0
18.19	+	4	1	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

2182

14

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	0	0	0	0
28.29	0	+	+	0	0
26.27	+	2	2	0	0
24.25	1	11	19	1	0
22.23	1	18	36	3	0
20.21	+	2	3	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

1284

15

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	1	0	0	0
26.27	+	2	+	+	0
24.25	1	4	3	0	0
22.23	2	8	13	2	0
20.21	2	10	30	3	0
18.19	1	5	13	2	0
16.17	0	+	1	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

462

16

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	0	1	0	0
26.27	+	3	6	1	1
24.25	1	9	20	5	1
22.23	2	15	18	6	2
20.21	+	3	3	2	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

586

17

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	1	0	+	0	0
26.27	1	3	2	+	0
24.25	3	10	9	1	0
22.23	3	23	21	1	+
20.21	1	8	11	1	0
18.19	0	1	1	0	0
16.17	0	0	+	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

472

18

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	0	+	0	0
28.29	0	+	0	0	0
26.27	+	4	3	0	0
24.25	2	10	10	1	+
22.23	2	18	18	4	0
20.21	1	9	12	2	0
18.19	0	1	2	+	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

622

19

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	+	+	0	0
24.25	+	+	+	+	0
22.23	+	4	3	+	0
20.21	3	11	9	1	0
18.18	4	16	21	3	+
16.17	2	7	11	2	+
14.15	0	+	+	+	+
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

979

23

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	+	0	0	0
24.25	0	+	0	0	0
22.23	+	+	1	+	0
20.21	+	3	3	1	+
18.19	2	12	14	4	+
16.17	2	13	19	5	+
14.15	1	5	8	2	1
12.13	+	1	1	+	+
10.11	0	0	+	0	0
8.9	0	+	+	+	0
6.7	0	0	0	0	0

1030

24

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	+	+	0	0	0
22.23	1	2	2	0	0
20.21	2	9	6	1	+
18.19	3	18	21	3	+
16.17	3	12	10	3	0
14.15	+	2	2	1	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

733

25

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	+	0	0	0
18.19	0	0	1	1	0
16.17	+	3	6	1	1
14.15	1	9	20	5	1
12.13	2	15	18	6	2
10.11	+	3	3	2	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

586

26

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	+	1	+	0
18.19	+	7	6	1	0
16.17	3	15	17	3	1
14.15	1	10	15	6	1
12.13	0	3	7	3	1
10.11	0	0	1	1	0
8.9	0	0	+	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

472

27

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	+	+	0	0	0
24.25	1	1	+	0	0
22.23	2	2	+	0	0
20.21	5	7	2	+	0
18.18	8	18	7	+	+
16.17	6	19	9	+	+
14.15	3	5	2	+	+
12.13	+	1	+	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

1629

28

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	+	0	0	0	0
20.21	+	1	+	+	0
18.18	1	4	1	+	0
16.17	2	13	7	1	+
14.15	2	18	15	5	+
12.13	+	8	8	7	+
10.11	0	2	2	1	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

371

32

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.17	0	1	0	0	0
16.16	1	3	1	+	1
12.13	3	10	5	4	0
10.11	2	11	11	11	3
8.8	2	4	10	10	2
6.7	0	+	0	0	+
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

298

33

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.18	0	+	0	0	0
16.17	+	+	+	0	0
14.15	+	2	2	1	+
12.13	2	8	9	3	1
10.11	2	13	19	10	3
8.8	1	5	9	5	2
6.7	+	1	1	+	+
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

1076

34

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	0	0	0	1	0
12.13	0	0	1	0	0
10.11	1	3	7	3	0
8.8	2	4	17	20	10
6.7	0	2	10	13	4
4.5	0	1	0	2	1
2.3	0	0	1	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0

178

35

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	0	0	0	0	1
8.8	0	1	3	3	2
6.7	1	2	9	12	3
4.5	0	2	15	11	1
2.3	1	6	8	3	0
0.1	0	1	7	2	0
-2.-1	0	0	2	2	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0

140

36

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
8.8	+	3	13	7	3
6.7	3	9	20	16	8
4.5	+	3	4	5	4
2.3	0	0	+	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0
-12.-11	0	0	0	0	0

232

37

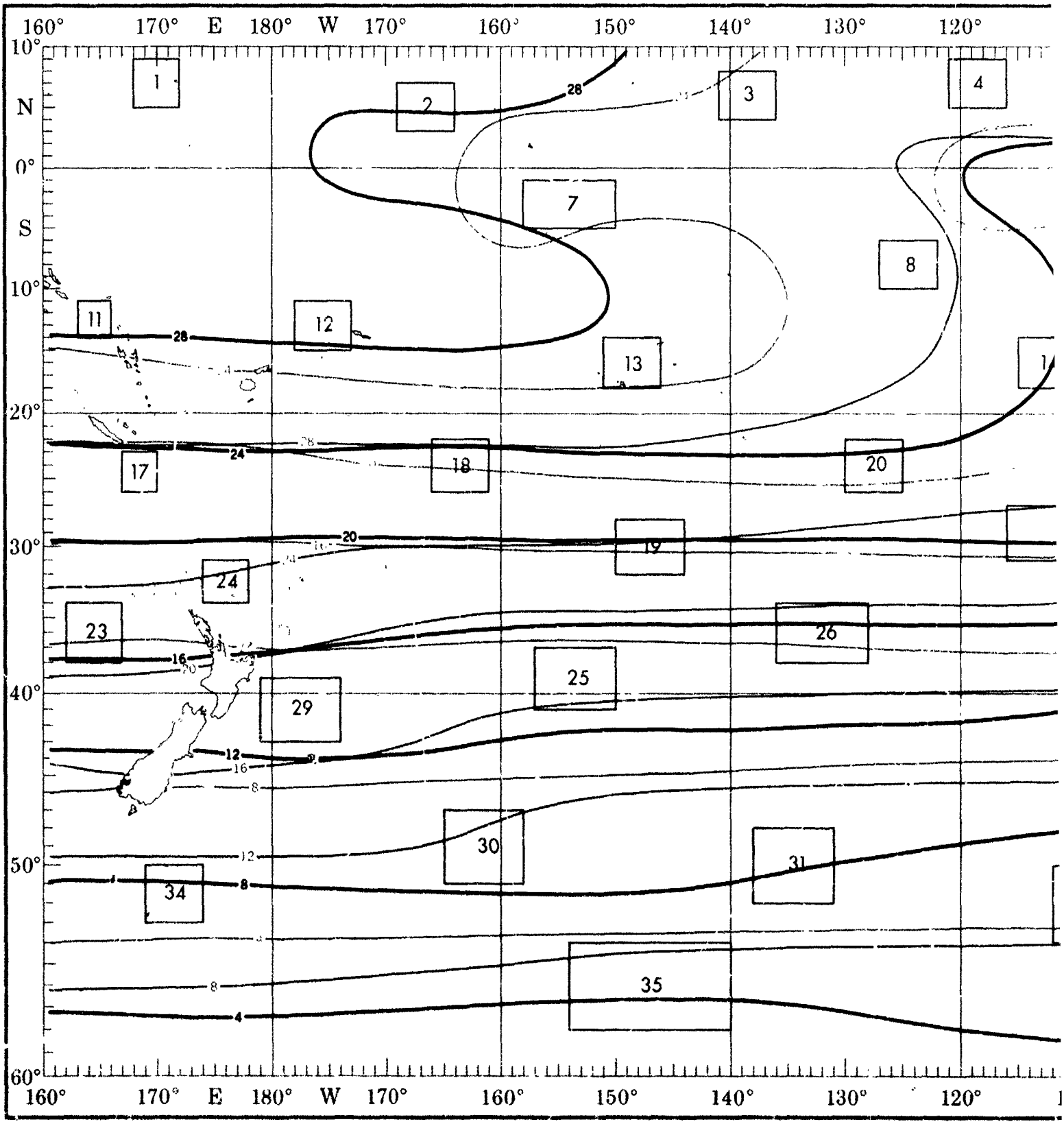
WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	+	0	0	0
10.11	+	+	+	0	+
8.8	1	2	5	3	3
6.7	1	6	15	13	10
4.5	1	5	10	11	6
2.3	+	1	3	3	1
0.1	0	0	+	+	+
-2.-1	0	0	0	0	+
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

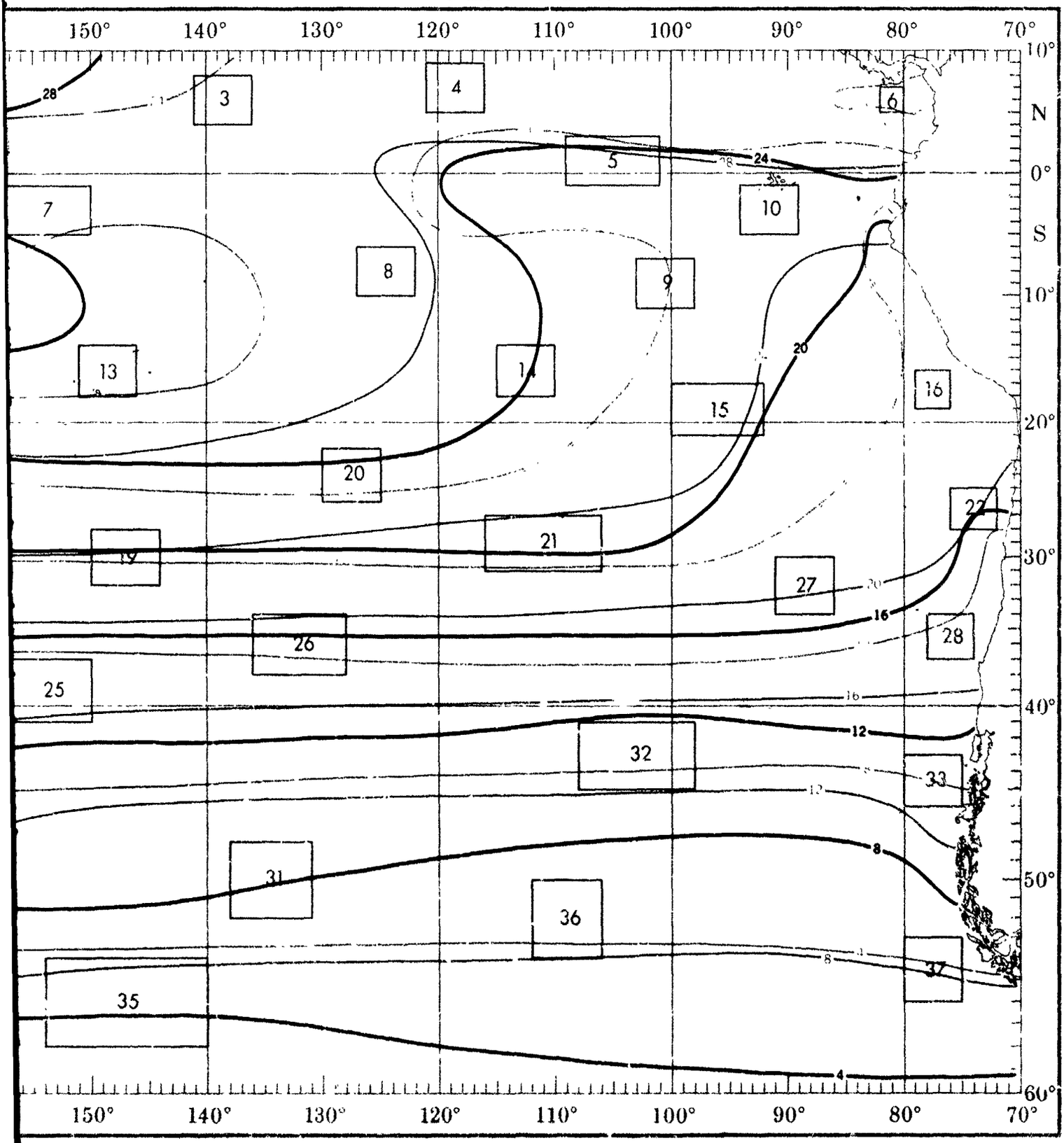
1429

objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

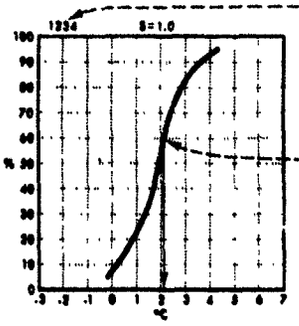
NOVEMBER SEA



SEA SURFACE TEMPERATURE



SEA SURFACE TEMPERATURE



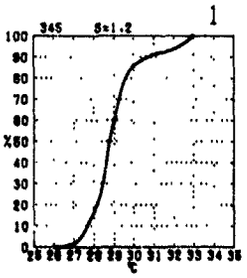
Sea surface temperature

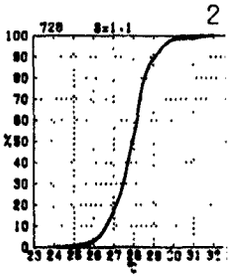
Number of observations.

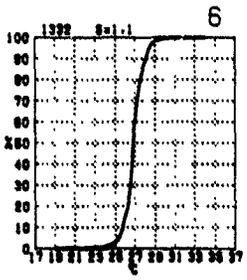
Cumulative percent frequency of sea surface temperatures equal to or less than the temperature intersected by the curve.

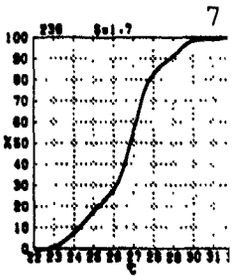
(60% of all observed sea surface temperatures were ≤2.1°C or ≤35.8°F.)

S = Standard deviation of sea surface temperatures (°C).





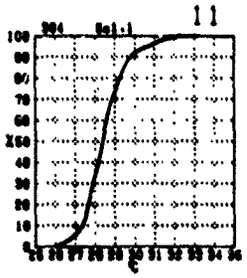


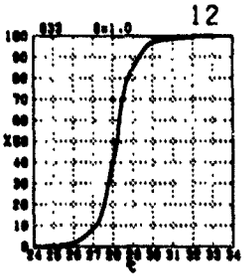


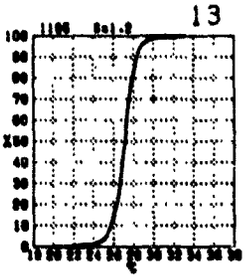
BLACK LINE - Mean sea surface temperature (°C)

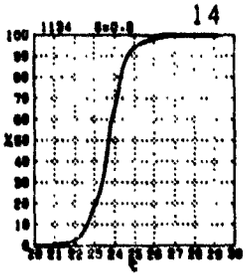
BLUE LINE - Minimum (1%) sea surface temperature (°C) (1% of the temperatures were equal to or less than the given value)

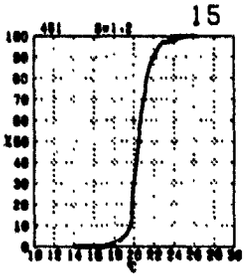
RED LINE - Maximum (99%) sea surface temperature (°C) (1% of the temperatures were greater than the given value)

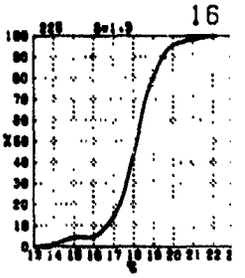


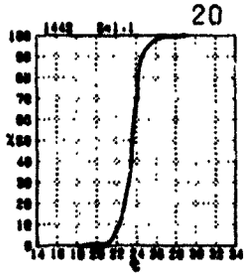


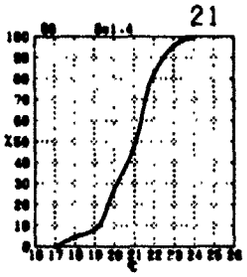


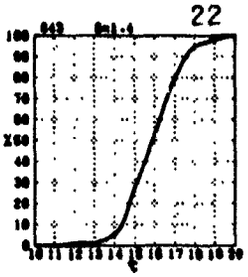


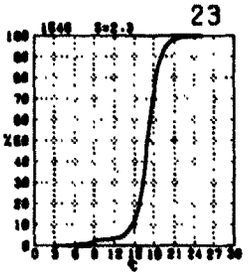


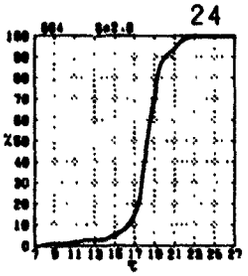


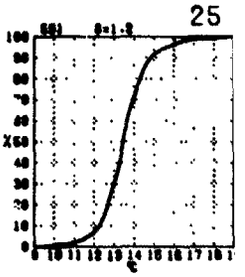


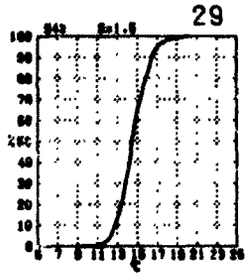


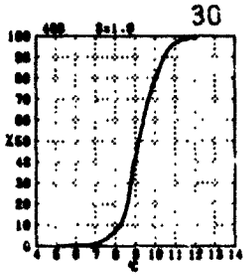


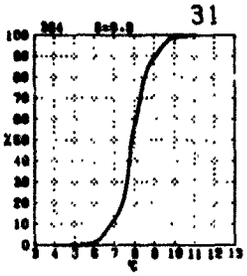


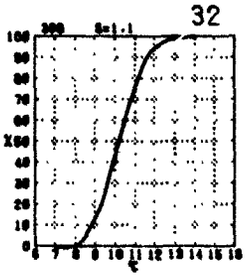


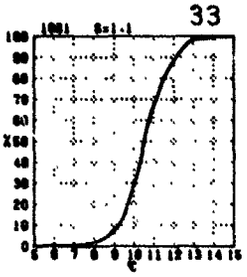


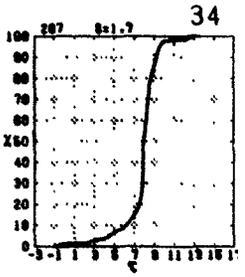












Graphs represent the objective compilation of available data for specified areas without regar

The isopleth analyses (opposite page) are based on all available data subjectively adjusted w

ATURE

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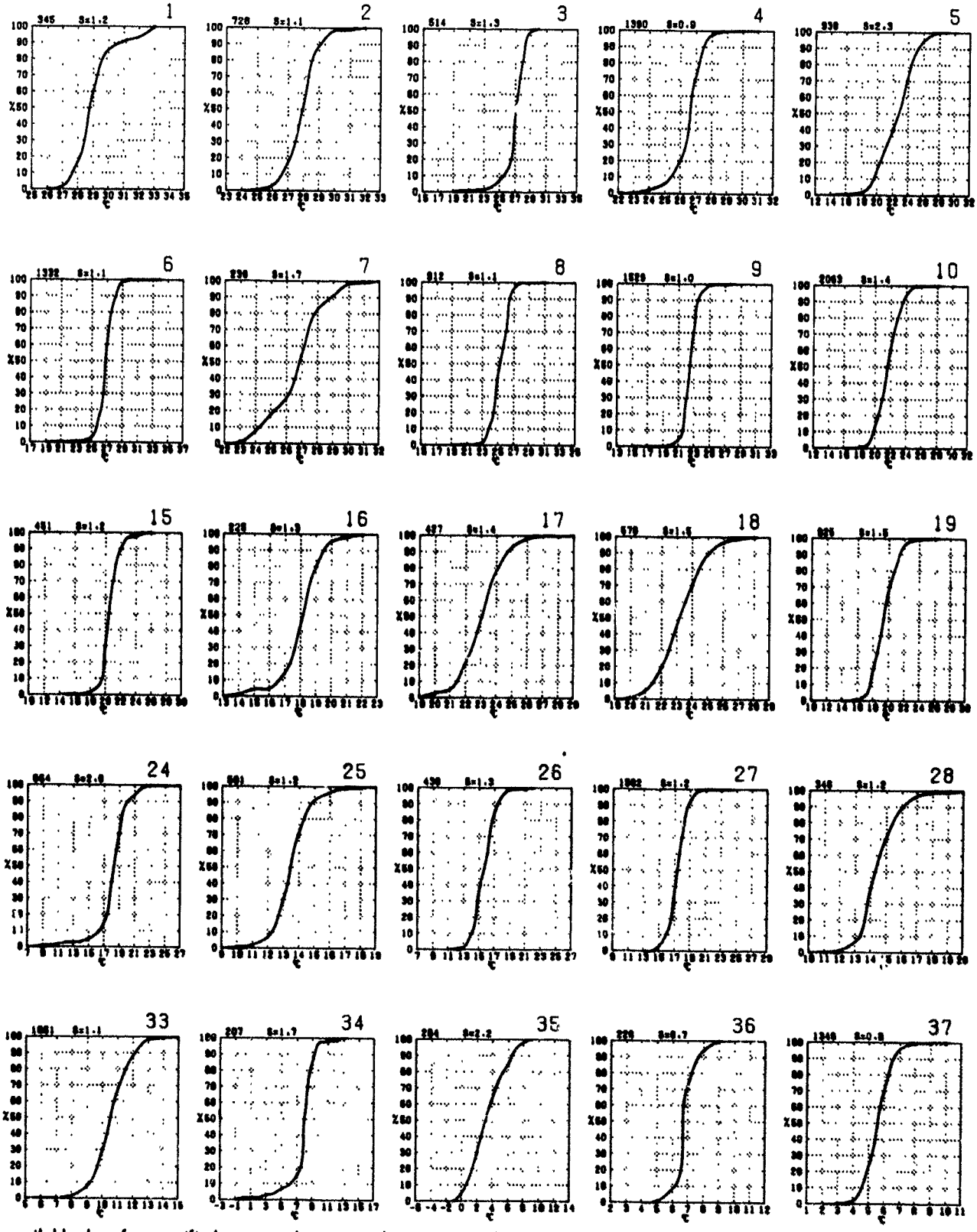
temperatures equal to or less

°C or ≤35.8°F.)

to or less than the given

eater than the given value)



the objective compilation of available data for specified areas without regard to suspected biases.
yses (opposite page) are based on all available data subjectively adjusted where bias was evident.

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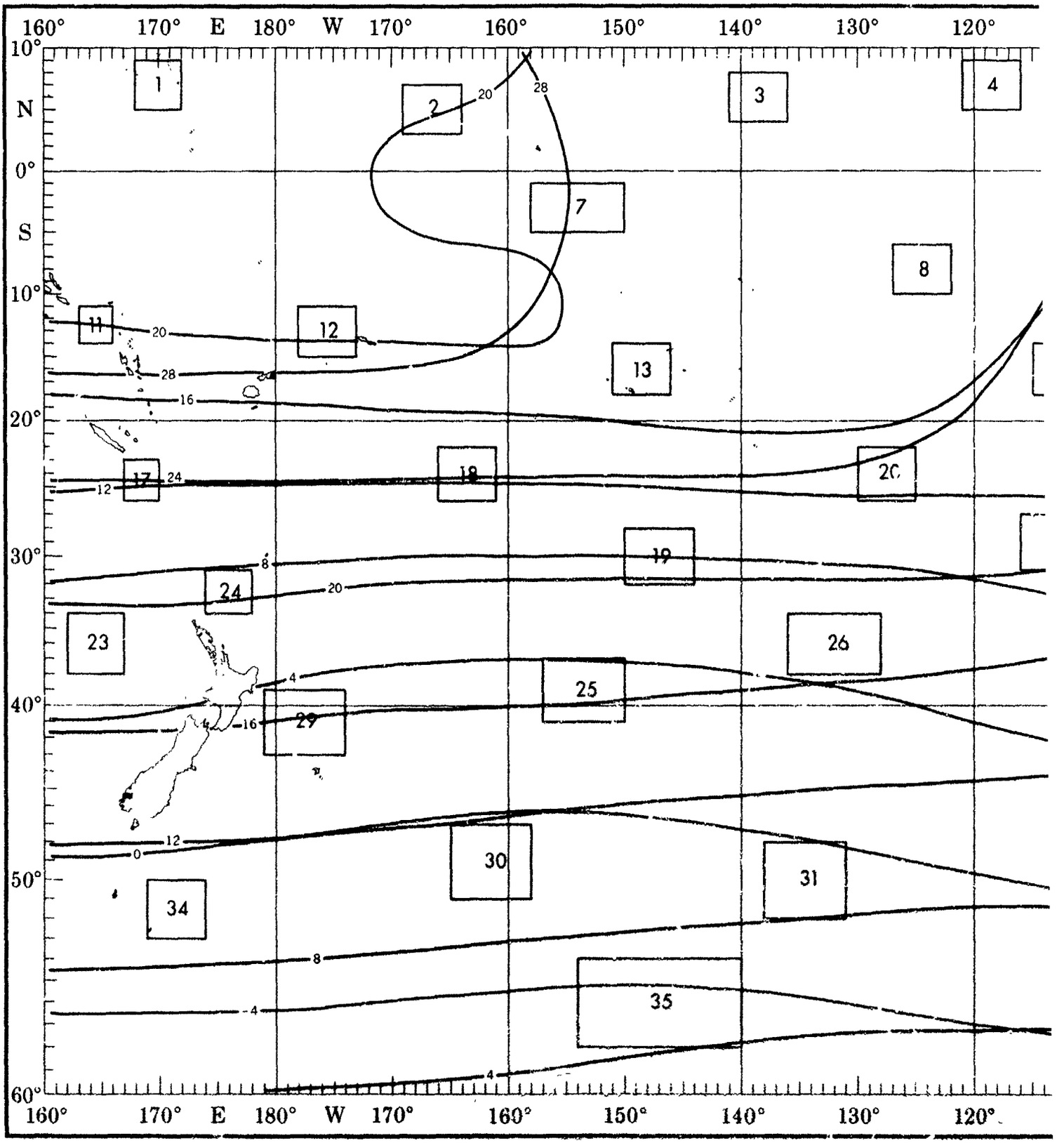
160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N 0° S 10° 20° 30° 40° 50° 60°
1
2
3
4
7
8
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12
13
17
18
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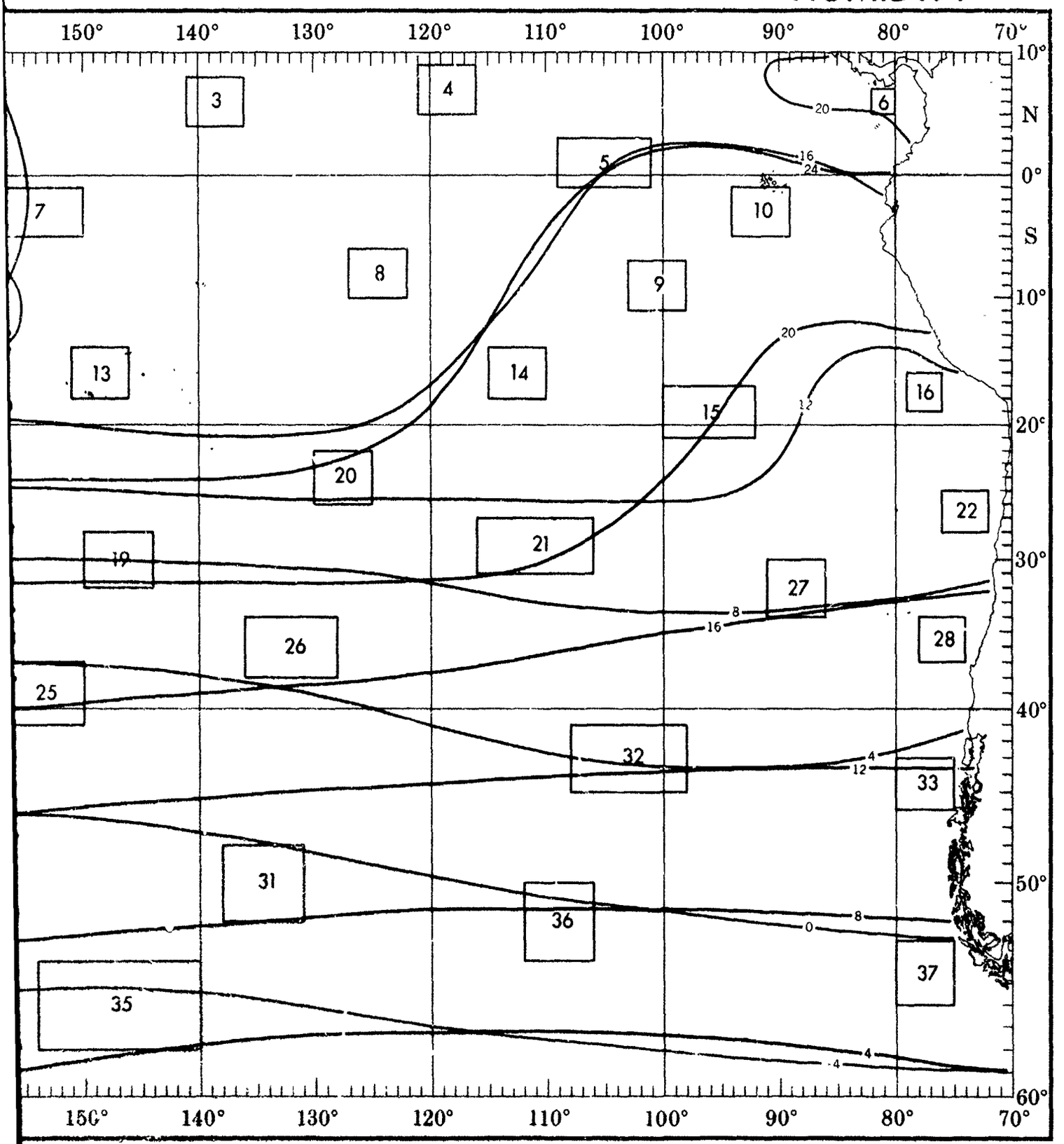
HUMIDITY


150°
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120°
110°
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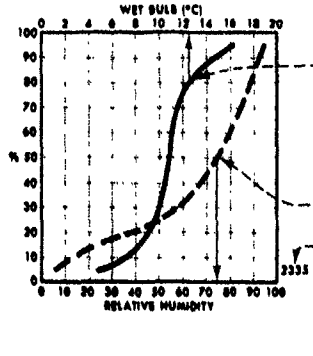
WET BULB AND RELATIVE HUMIDITY



Wet bulb - Relative humidity.

Cumulative percent frequency of wet-bulb temperatures equal to or less than the temperature intersected by the curve (top scale)

Wet bulb (°C).

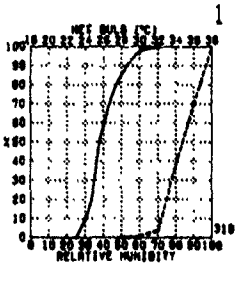
(80% of all observed wet-bulb temperatures were ≤12.5°C or 54.5°F.)

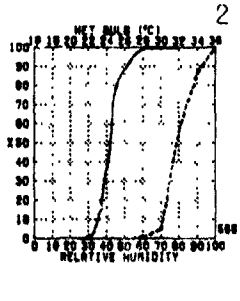
Cumulative percent frequency of relative h midities equal to or less than the humidity intersected by tl.e curve (bottom scale).

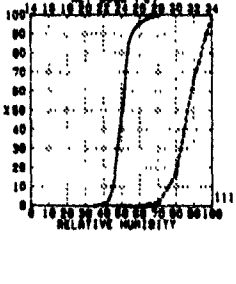
Relative humidity (%)

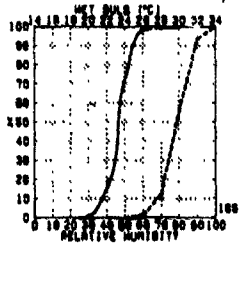
(50% of all observed relative humidities were ≤74%.)

Number of observations.



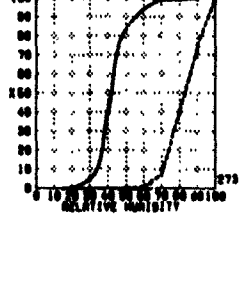


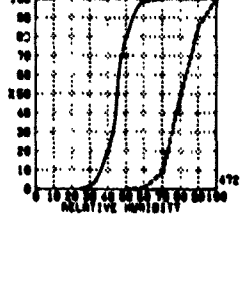


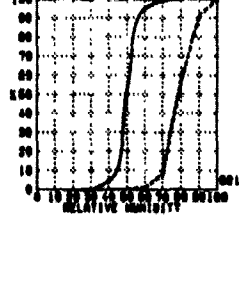


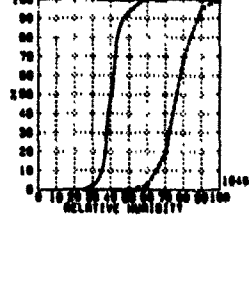
BLUE LINE - Minimum (1%) dew-point temperature (°C) (1% of the computed values were equal to or less than the given value)

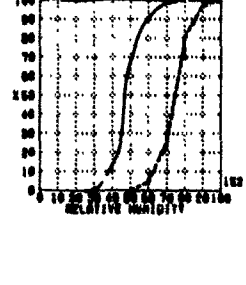
RED LINE - Maximum (99%) dew-point temperature (°C) (1% of the computed values were greater than the given value)

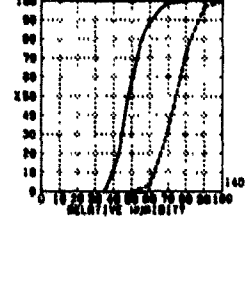


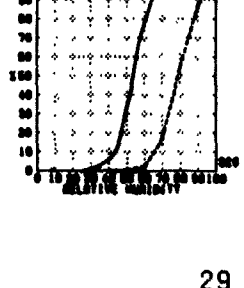


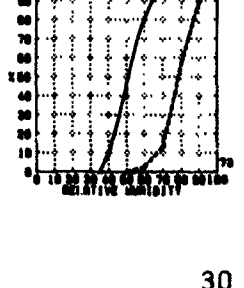


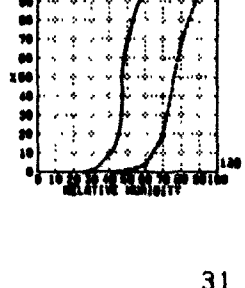


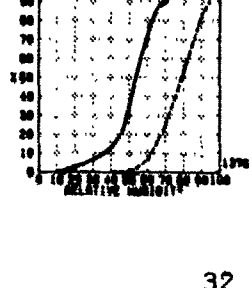


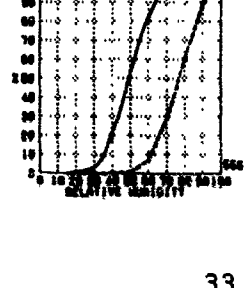


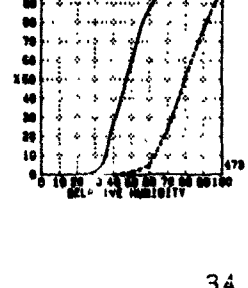


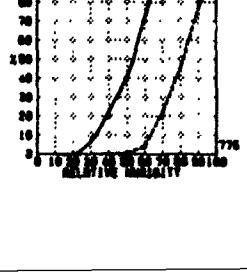


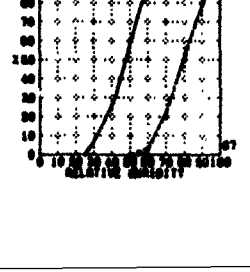


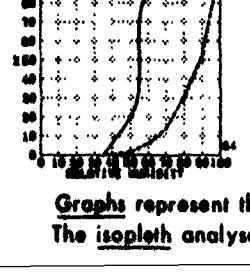


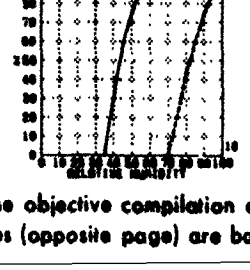


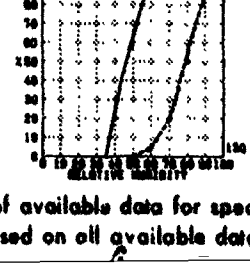


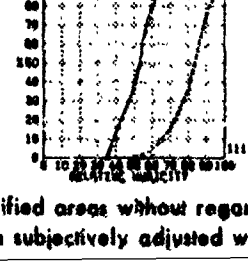












Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted whe

VE HUMIDITY

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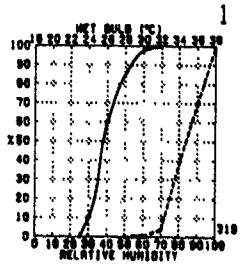
qual to or less than the

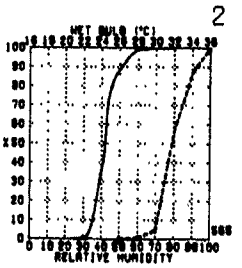
54.5°F)

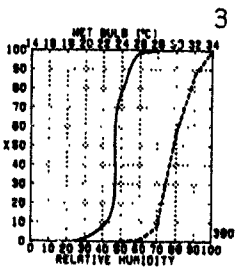
to or less than the humidity

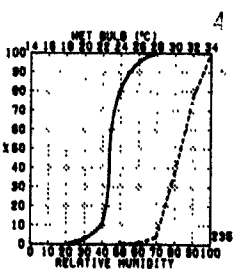
or less than the given

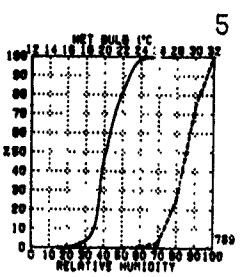
er than the given value)

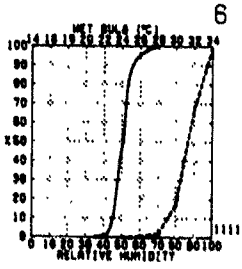


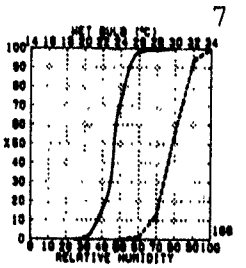


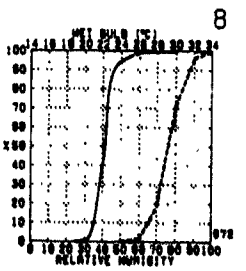


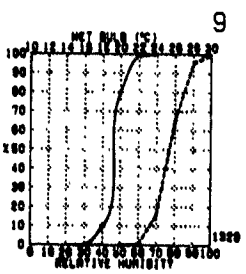


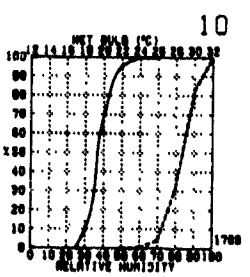


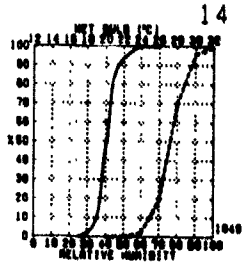


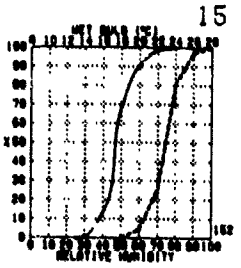


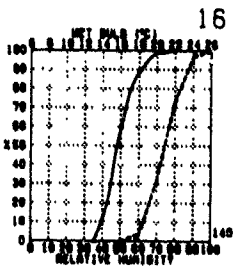


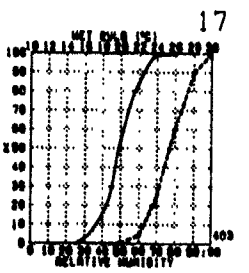


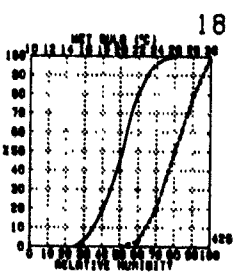


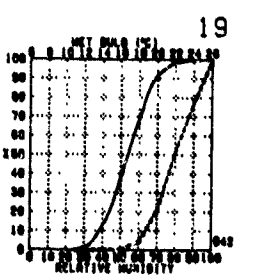


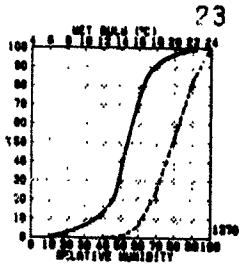


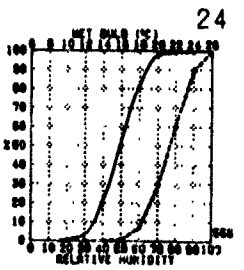


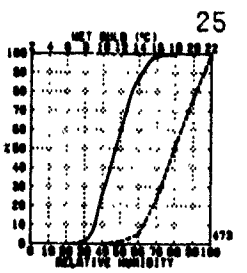


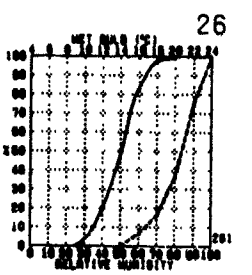


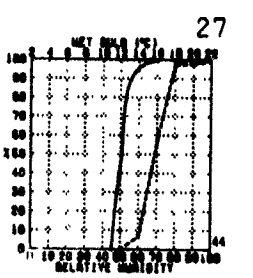


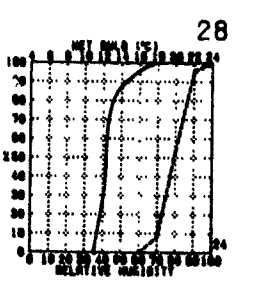


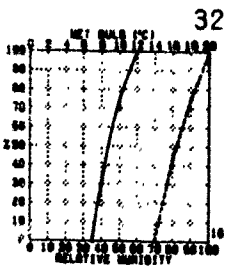


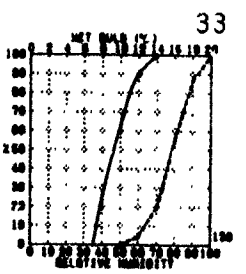


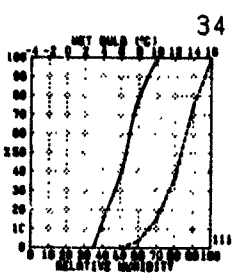


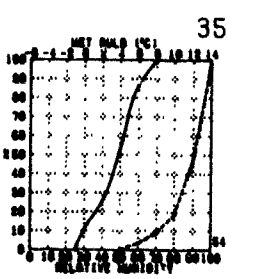


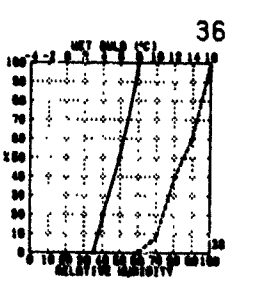


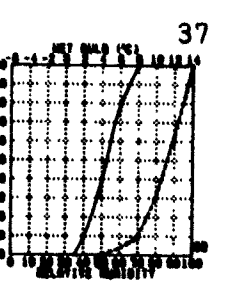












he objective compilation of available data for specified areas without regard to suspected biases.

s (opposite page) are based on all available data subjectively adjusted where bias was evident.

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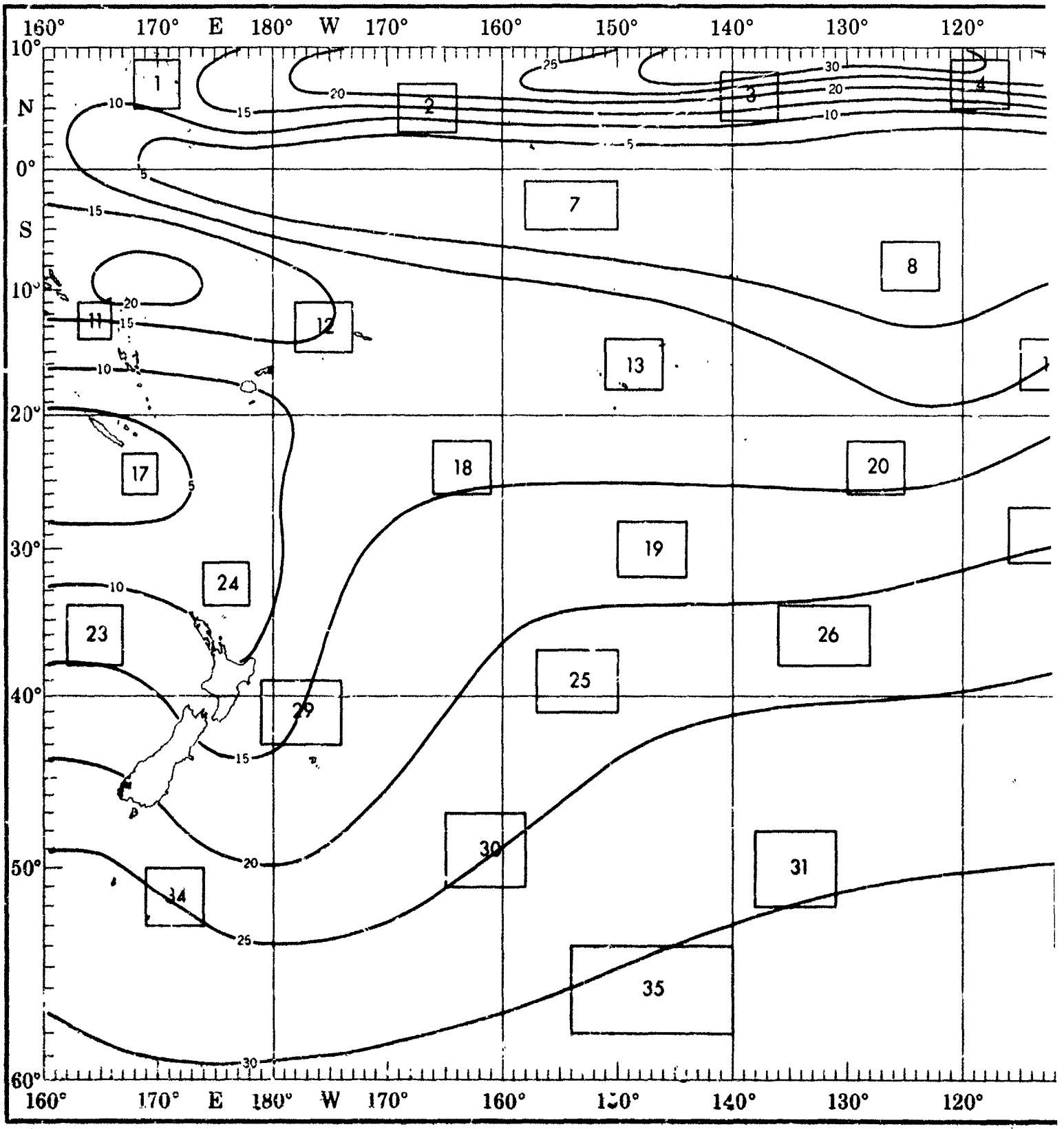
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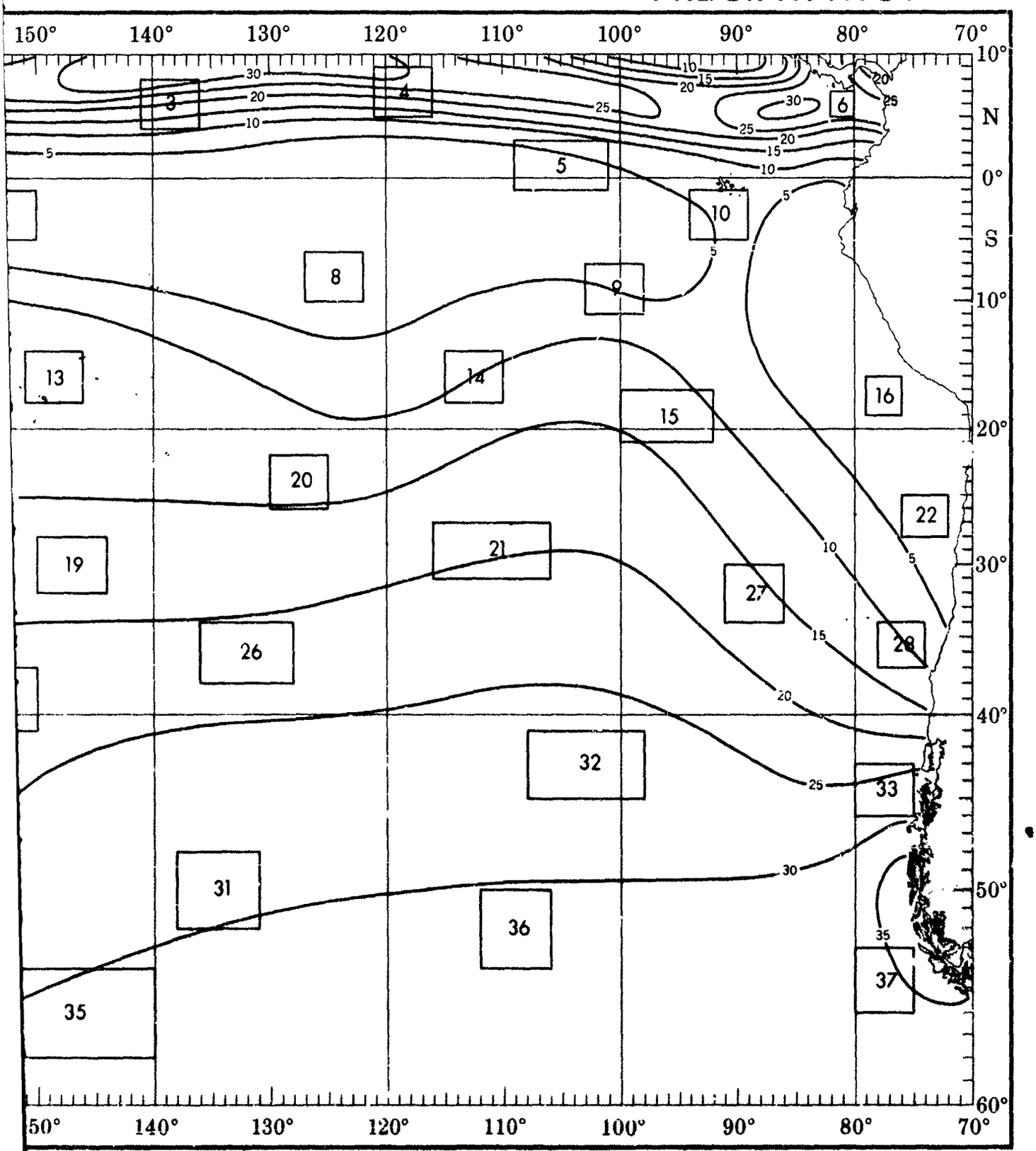
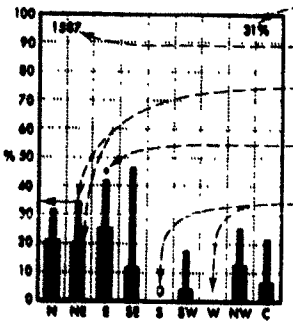
PRECIPITATION



PRECIPITATION

% Pcpn. (% Liquid / % Snow)

Percent frequency of surface wind observations from each direction and calm that were accompanied by precipitation, subdivided into liquid type (including freezing rain and freezing drizzle) and snow.



—Percentage of present weather observations reporting precipitation.

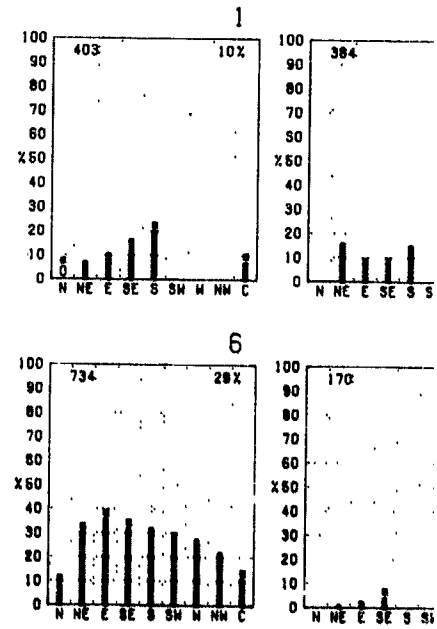
—Number of observations

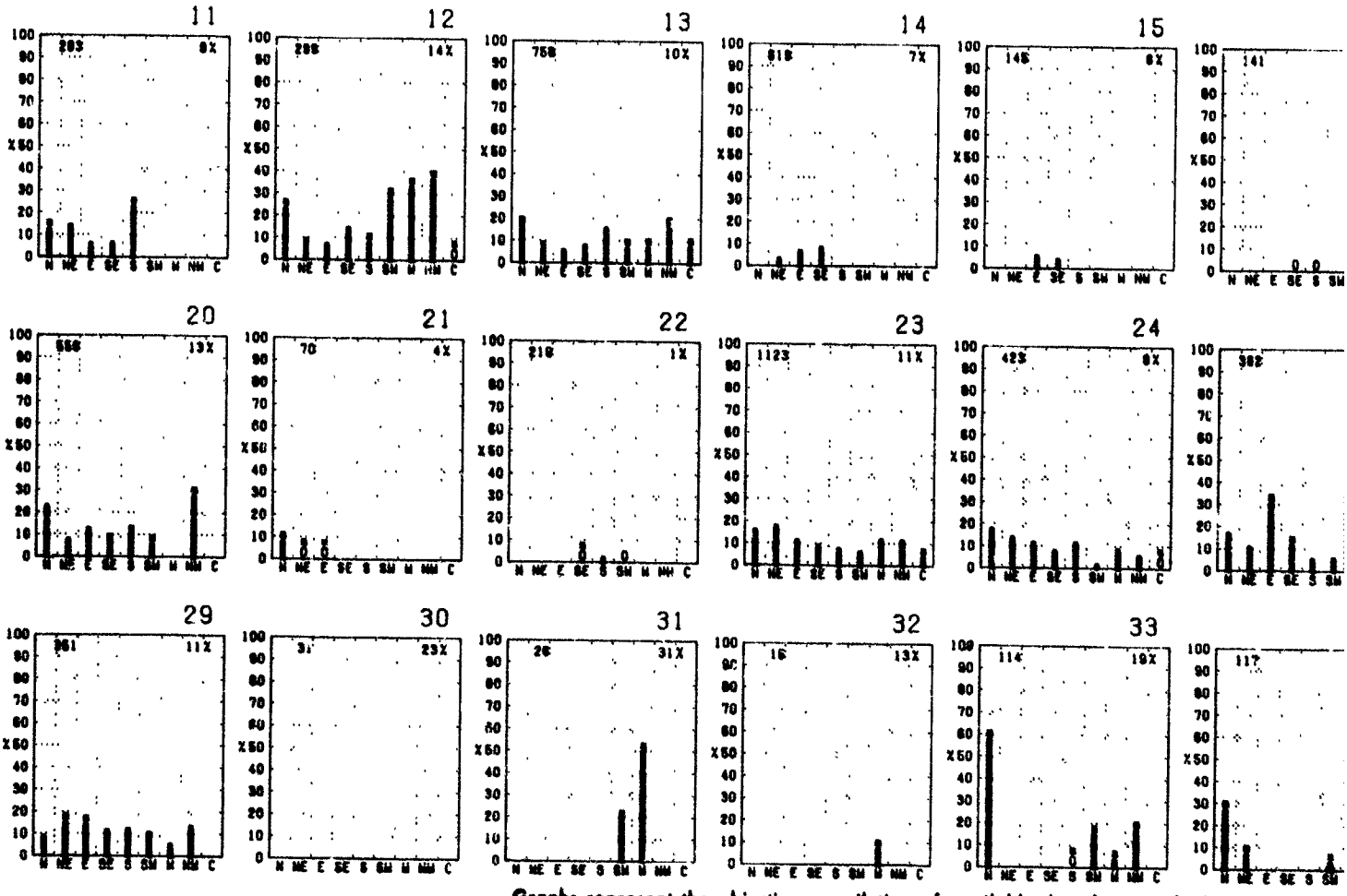
—(34% of all NE winds were accompanied by precipitation, of which 14% was liquid and 20% was snow.)

—An asterisk in the column for a given direction or calm indicates that the percentage was based on 10-30 observations of present weather and wind direction

—0 replaces bar when no precipitation was observed with winds from a given direction or calm. No bar graph is presented if less than 10 observations containing present weather were reported for a given direction or calm.

RED LINE - Percent frequency of observations reporting precipitation





Graphs represent the objective compilation of available data for specified areas without
The isopleth analyses (opposite page) are based on all available data subjectively adjus

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which 14% was liquid and

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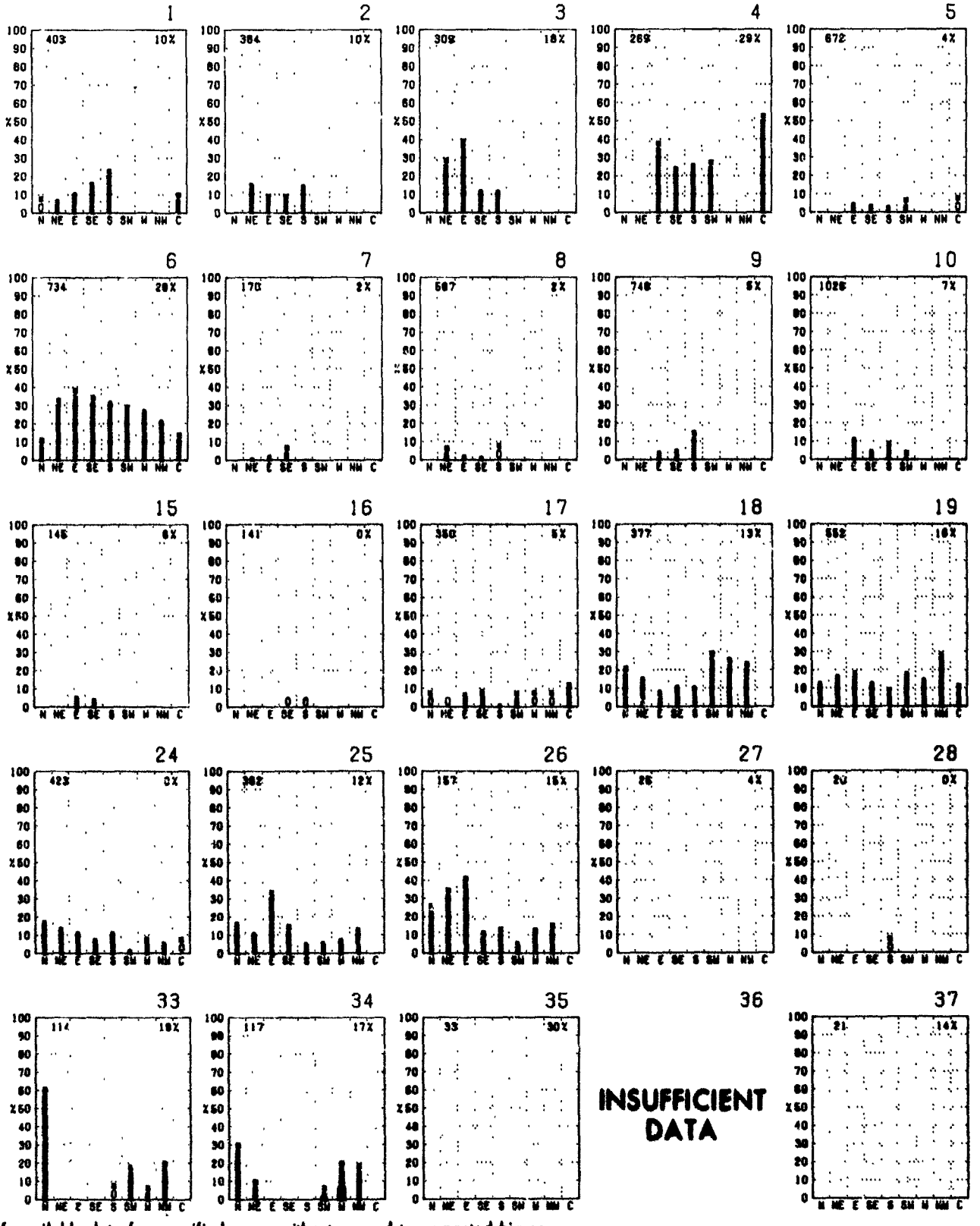

INSUFFICIENT DATA

objective compilation of available data for specified areas without regard to suspected biases.
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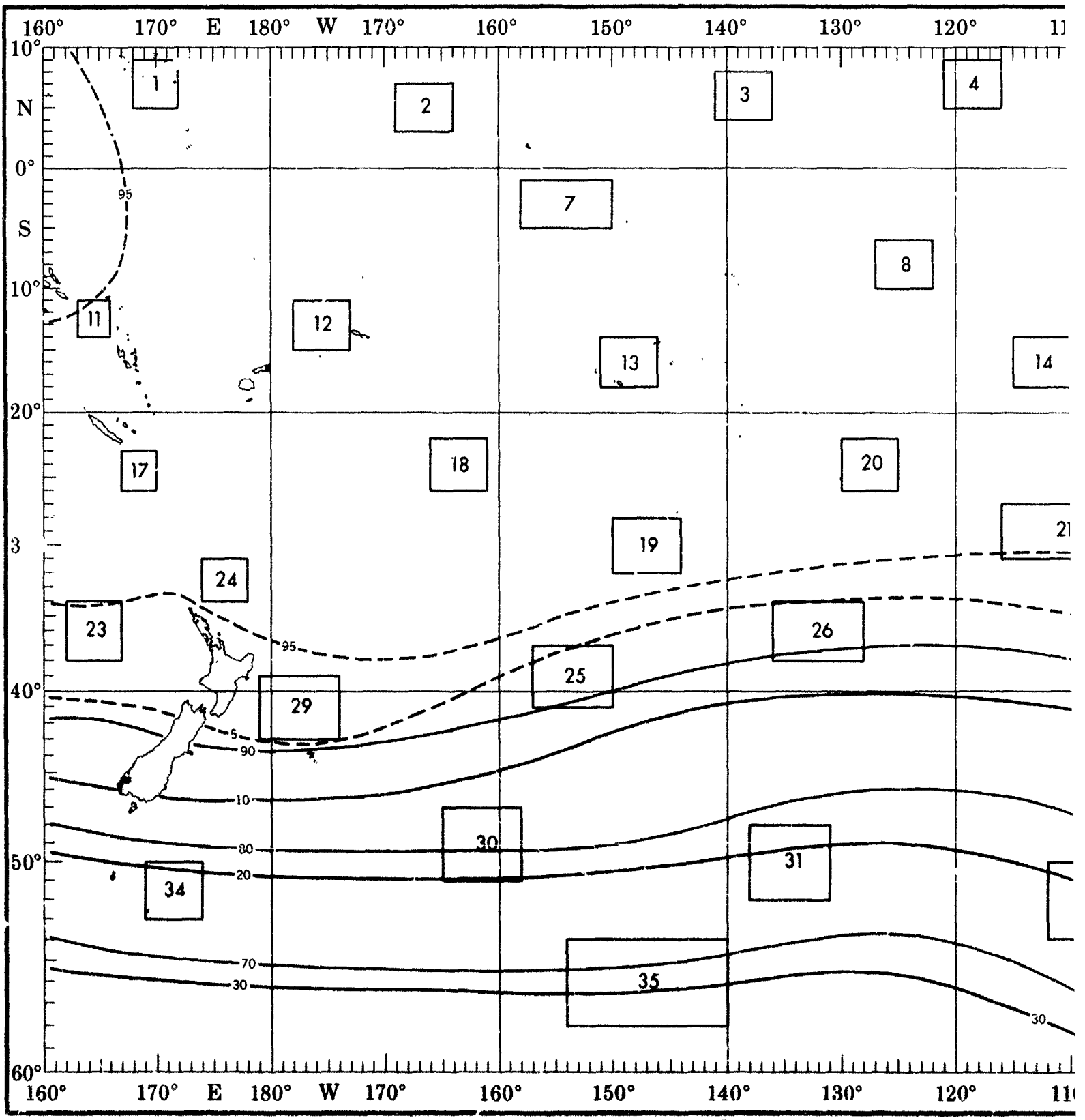
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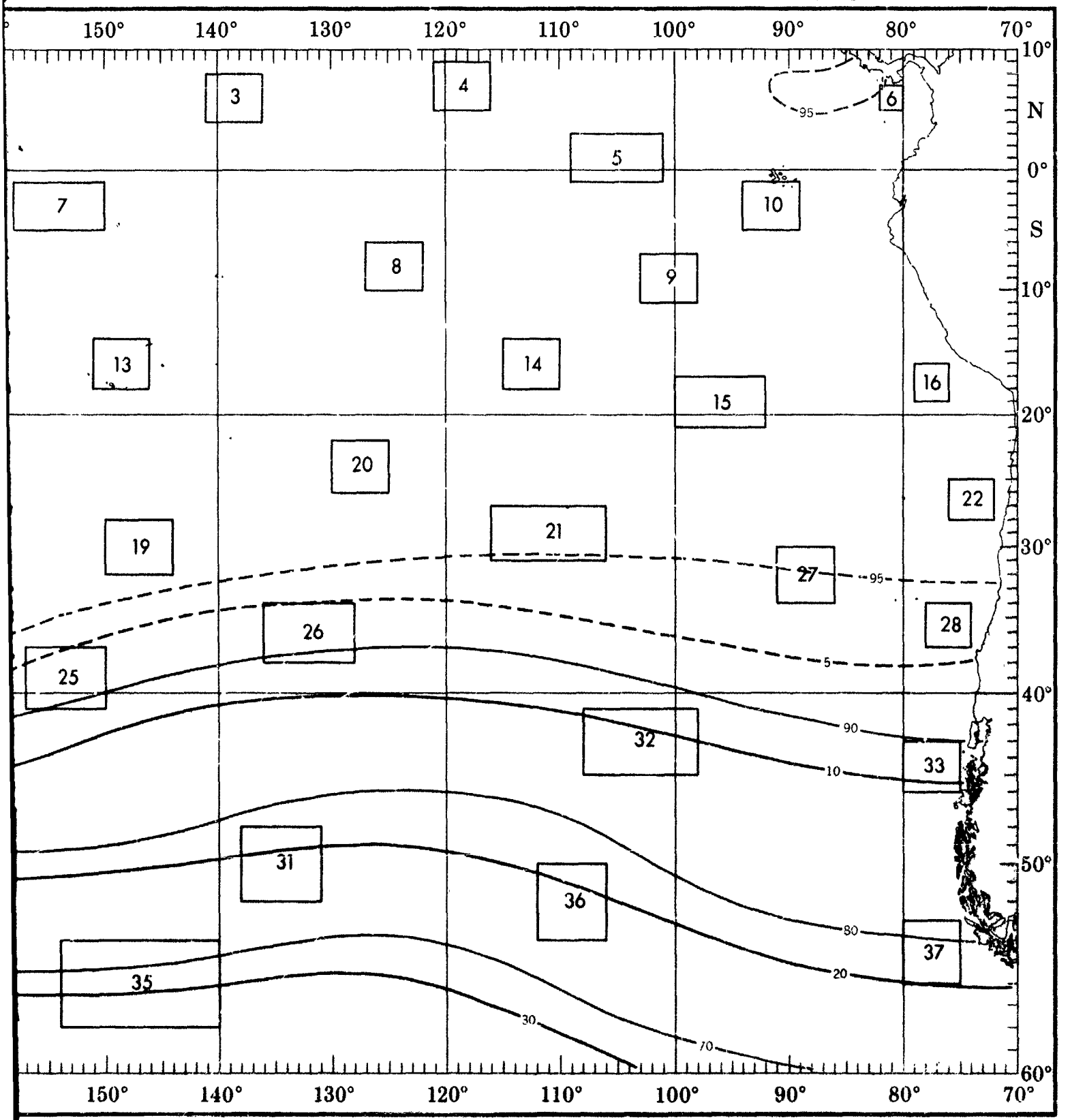
VISIBILITY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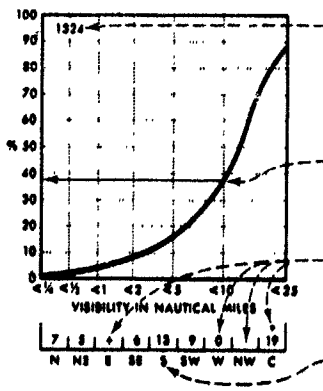
VISIBILITY



Visibility.

Number of observations

Cumulative percent frequency of visibilities less than the visibility intersected by the curve.

(37% of all visibilities reported were <10 nautical miles.)

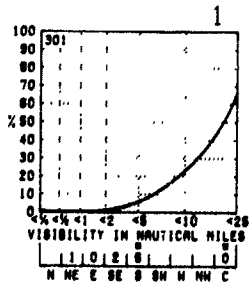
The table below the graph indicates percent frequency of occurrence of visibility <2 nautical miles versus wind direction

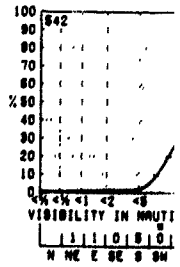
• indicates <.5% but >0 0 indicates that no visibilities <2 nautical miles were observed with winds from a direction or calm No percentage is given if less than 10 observations were available for visibility and wind direction. An asterisk indicates that the percentage was based on 10-30 observations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

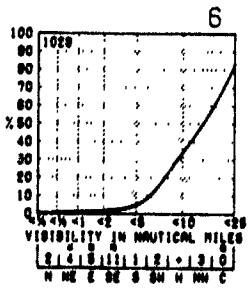
(13% of all S winds were accompanied by visibilities <2 nautical miles.)

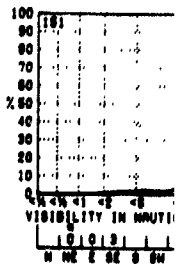
BLUE LINE - Percent frequency of visibilities ≥5 nautical miles

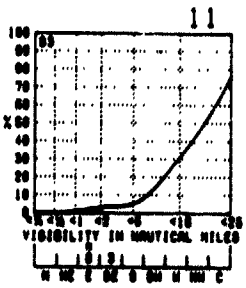
RED LINE - Percent frequency of visibilities <2 nautical miles

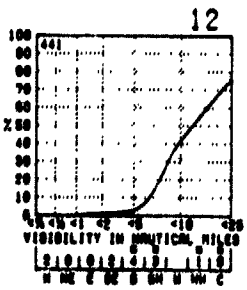


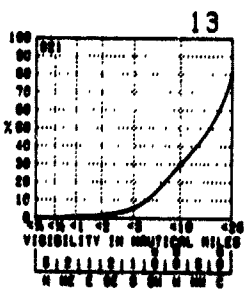


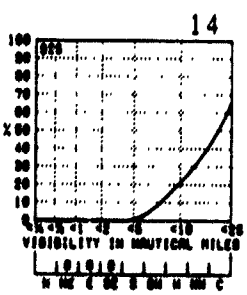


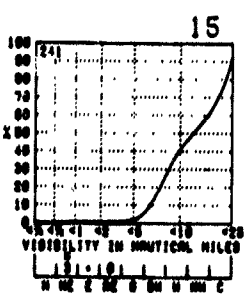


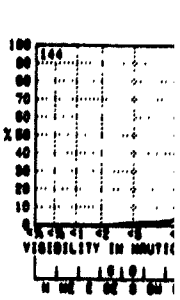


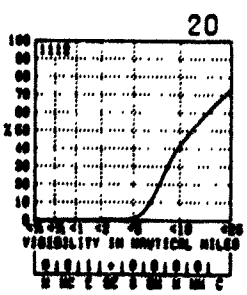


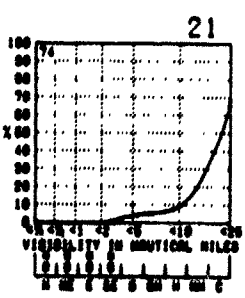


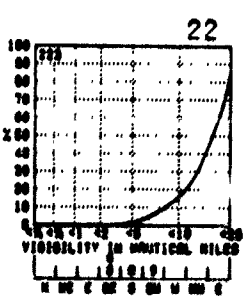


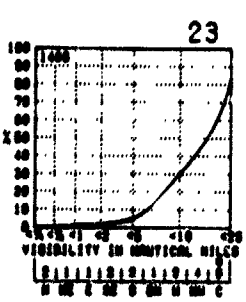


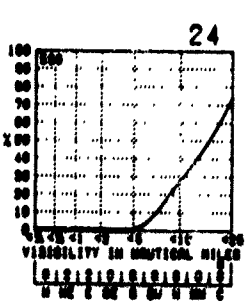


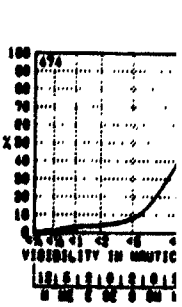


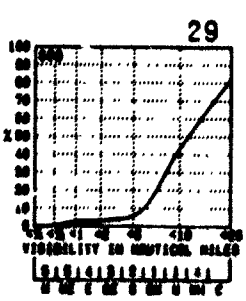


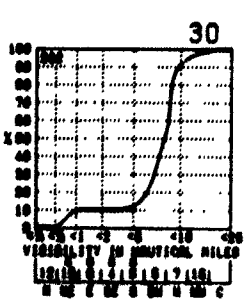


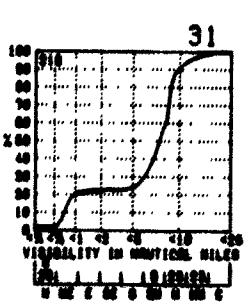


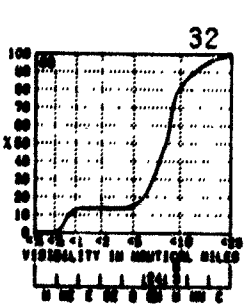


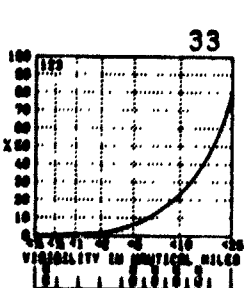


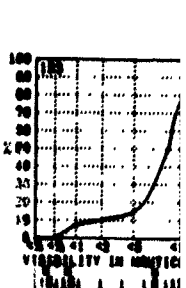












Graphs represent the objective compilation of available data for specified areas without

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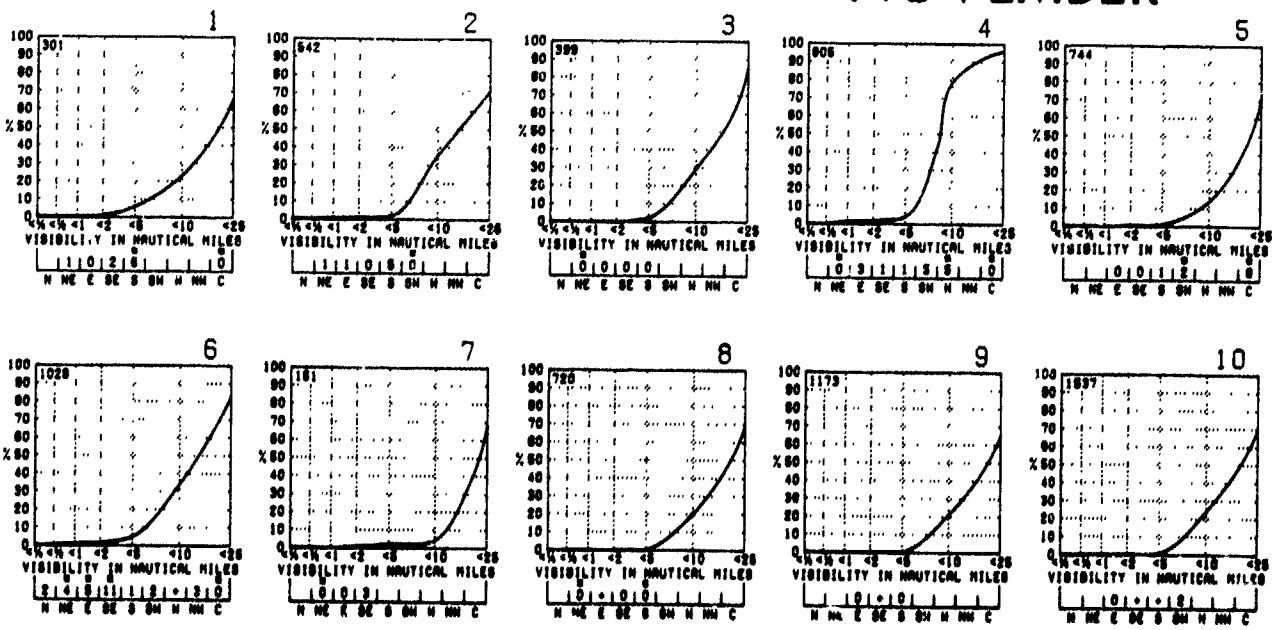

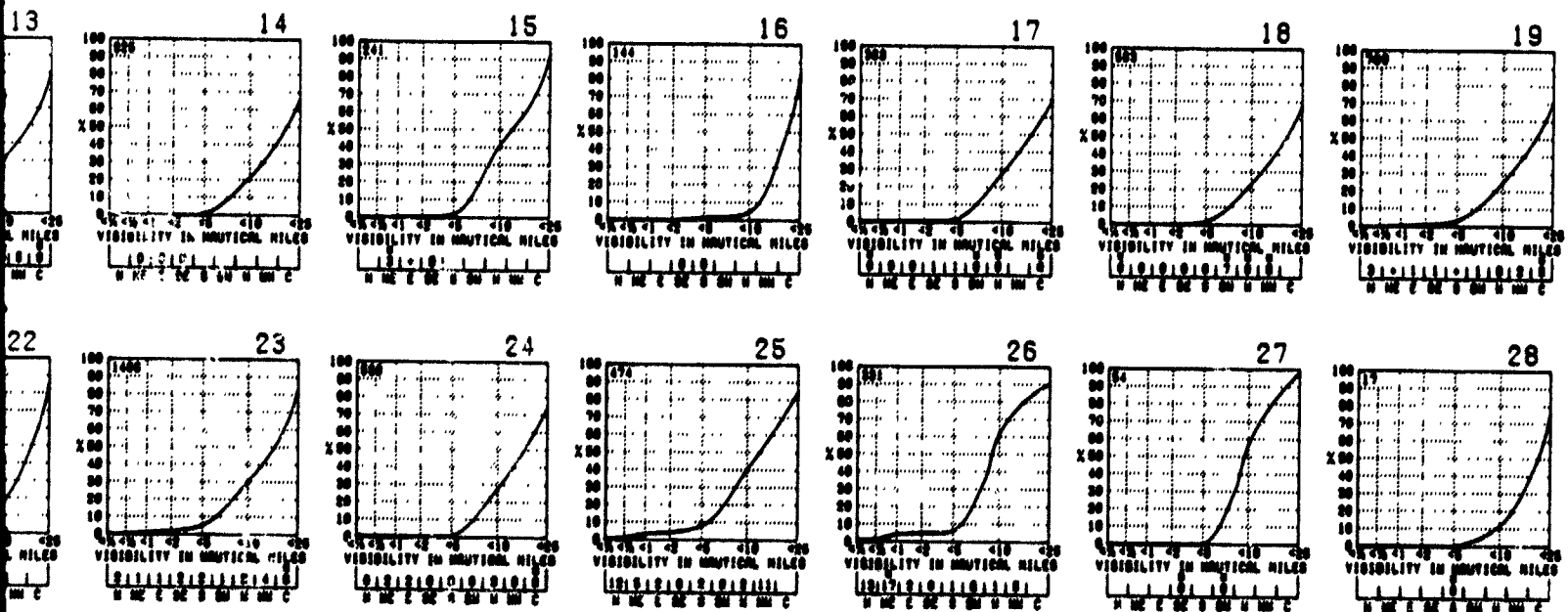

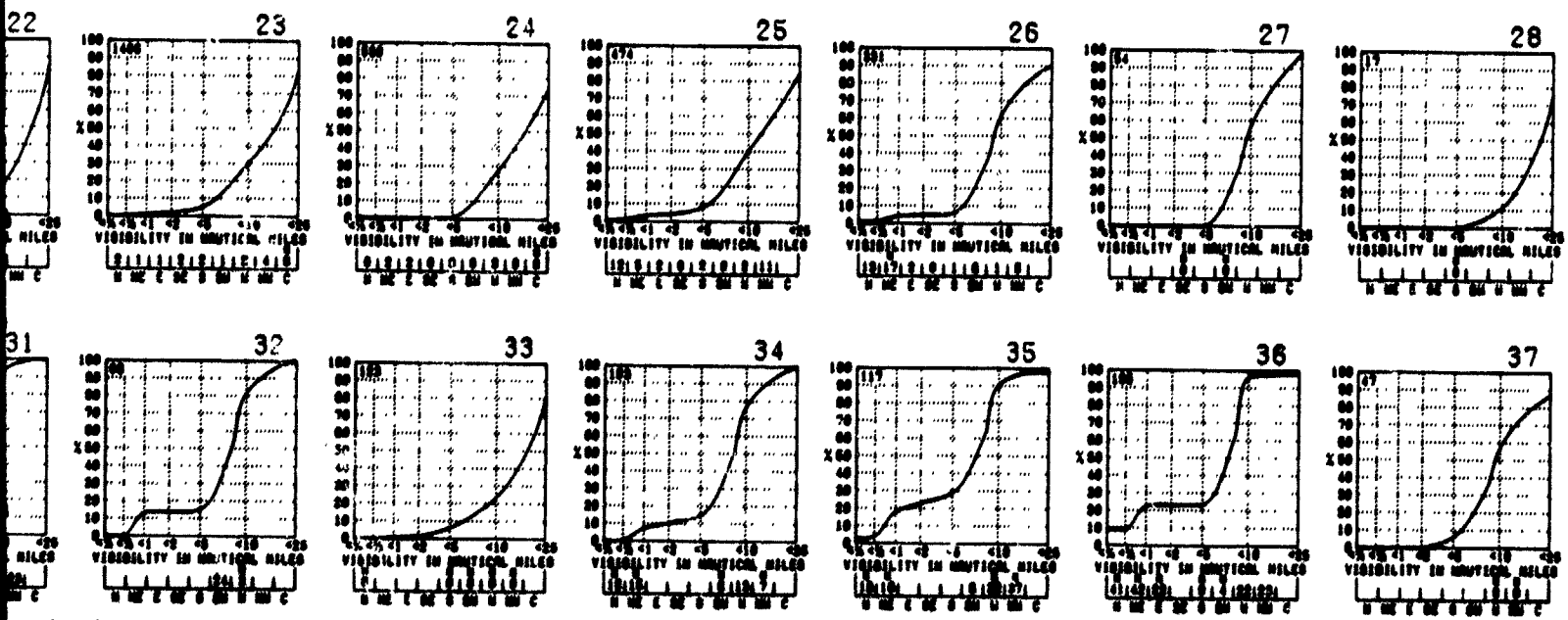

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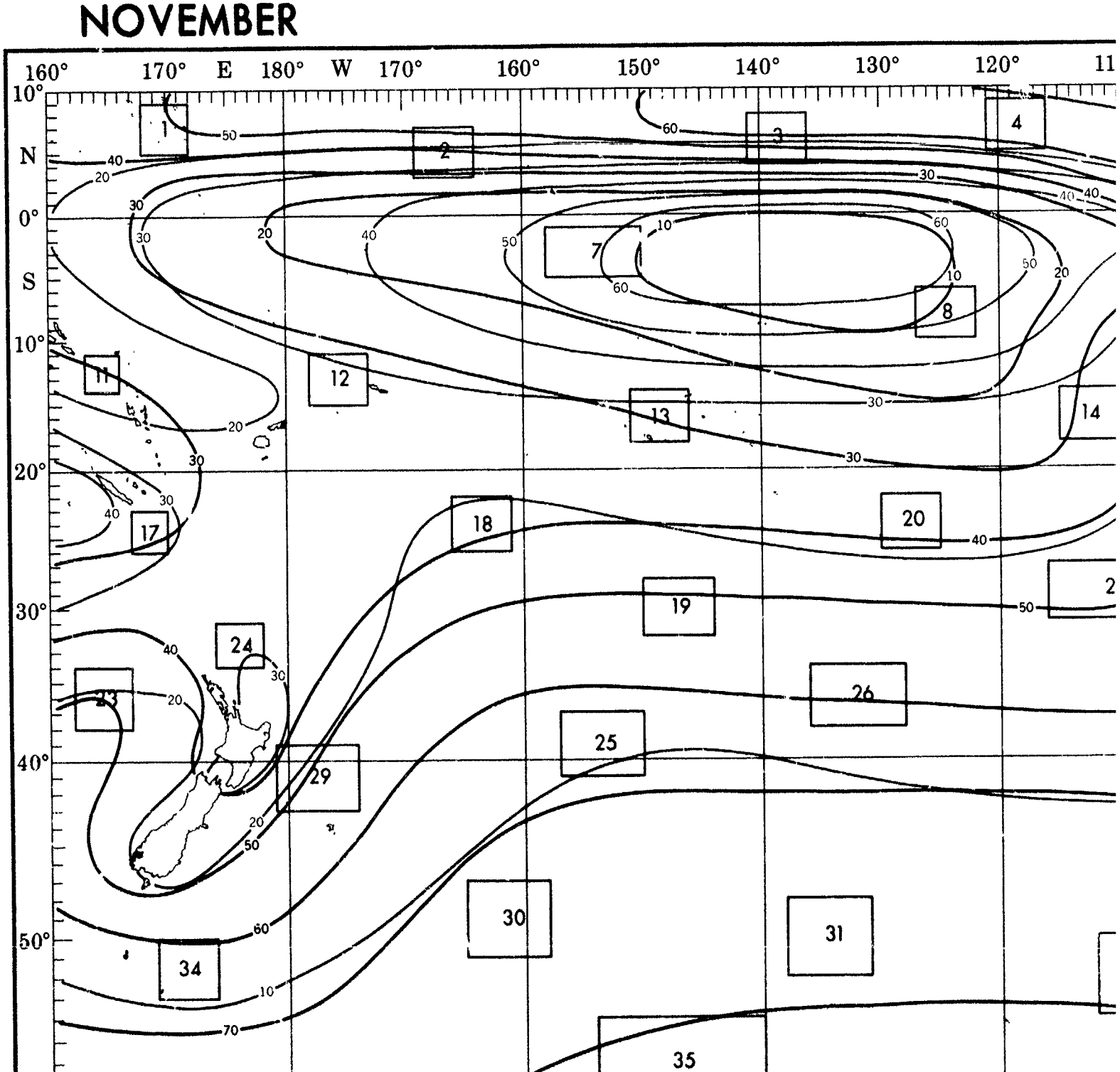
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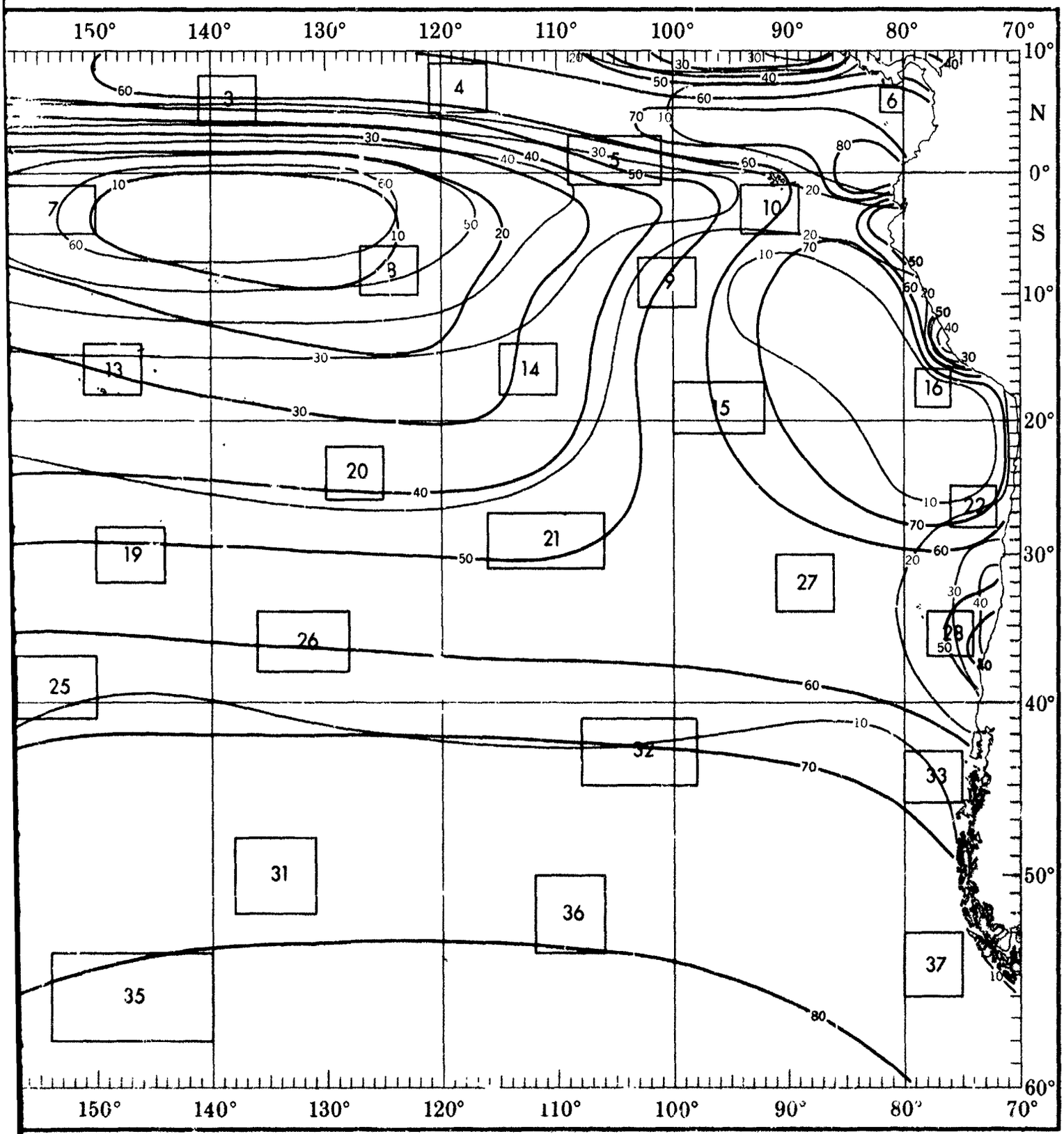
CLOUD COVER


150° 140° 130° 120° 110° 100° 90° 80° 70°
10° N 0° S 10° 20° 30° 40° 50° 60°
3
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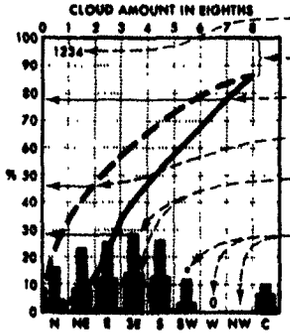
CLOUD COVER

Total Cloud Amount
Low Cloud Amount
Cumulative percent frequency of indicated cloud amount equal to or less than the amount intersected by the curve

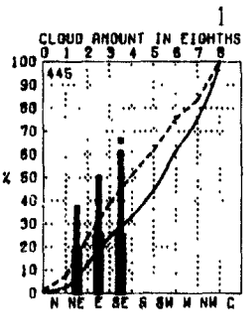


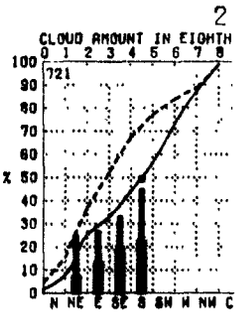
- Number of observations containing total cloud amount.
- Obscurations
- (77% of all total cloud amounts were ≤7/8.)
- (46% of all low cloud amounts were ≤2/8.)
- (28% of all SE winds were accompanied by low cloud amounts ≥5/8 and 14% by low cloud amounts ≥7/8.)
- An asterisk indicates that the percentage 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

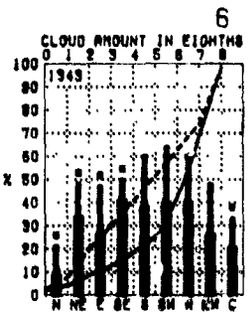
≥5/8 (≥5/8 & ≥7/8, ≥7/8)
Low cloud amount: Percent frequency of observations from each direction and calm that were accompanied by low cloud amounts ≥5/8 and ≥7/8
Low clouds are clouds with bases <8000 feet

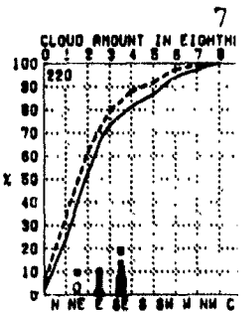
BLUE LINE - Percent frequency of total cloud amount ≤2/8

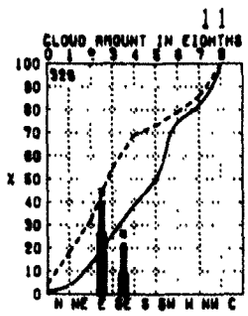
RED LINE - Percent frequency of low cloud amount ≥5/8

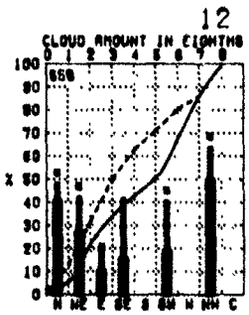


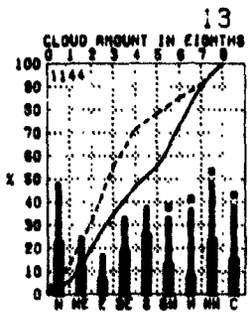


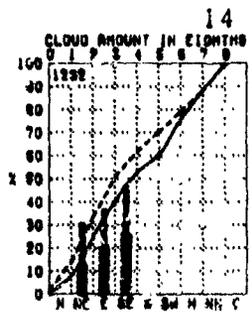


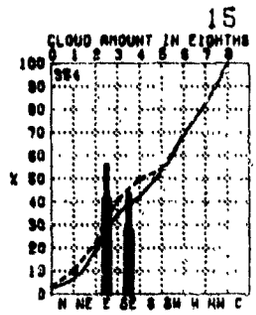


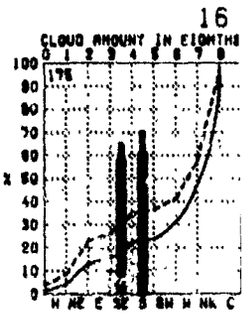


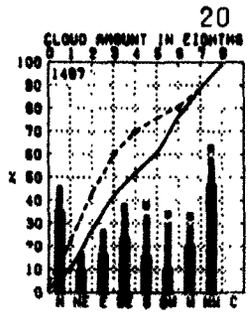


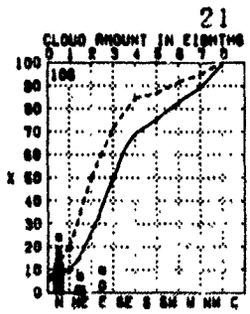


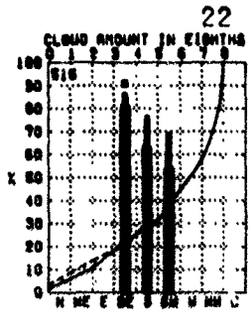


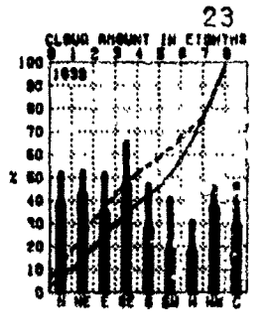


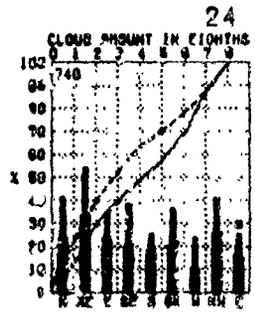


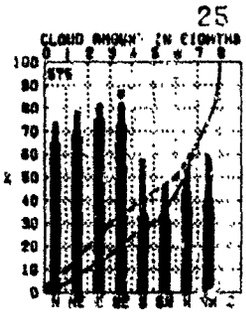


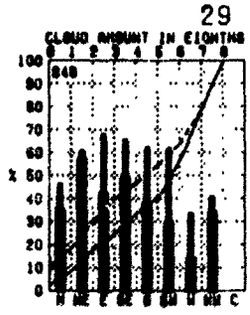


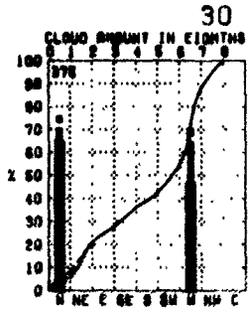


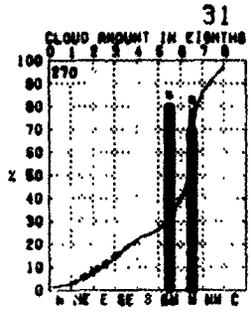


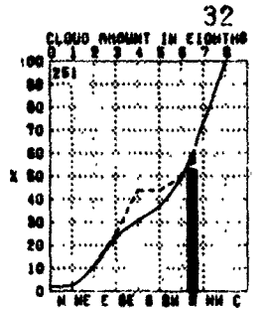


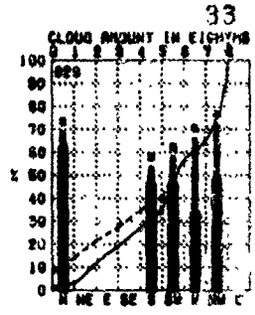


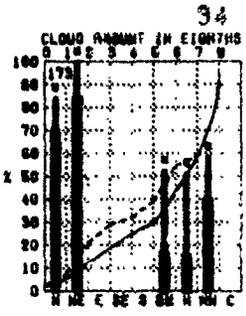












Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted wh

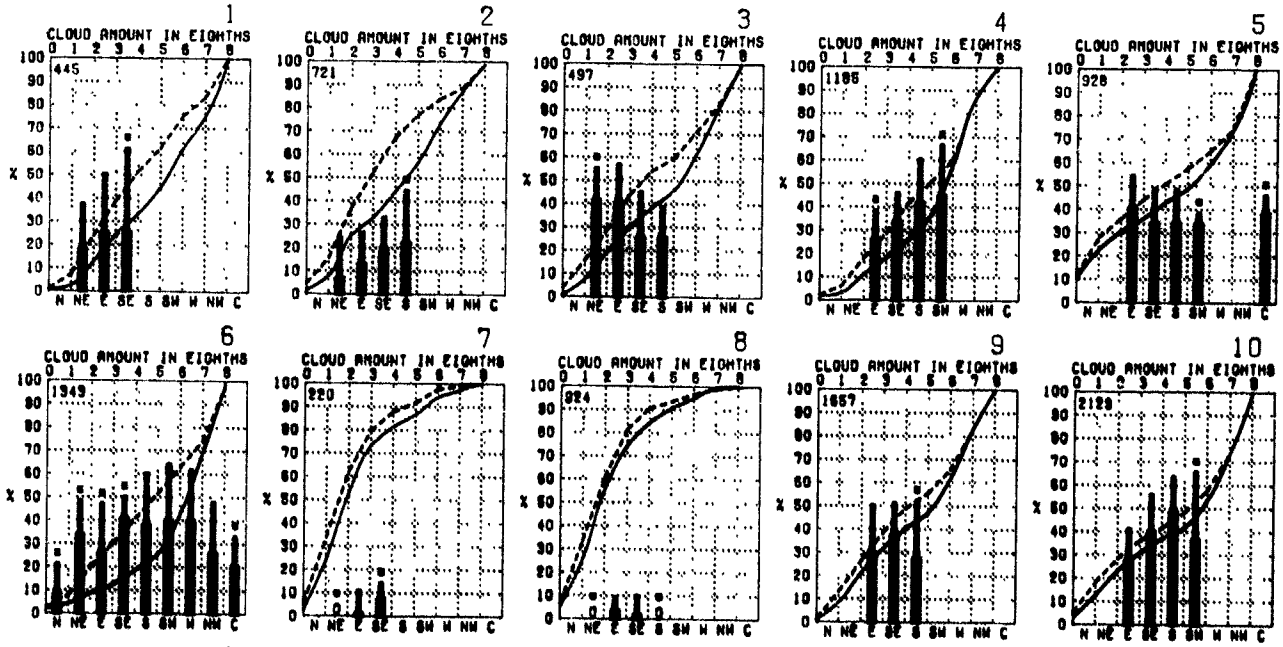
NOVEMBER

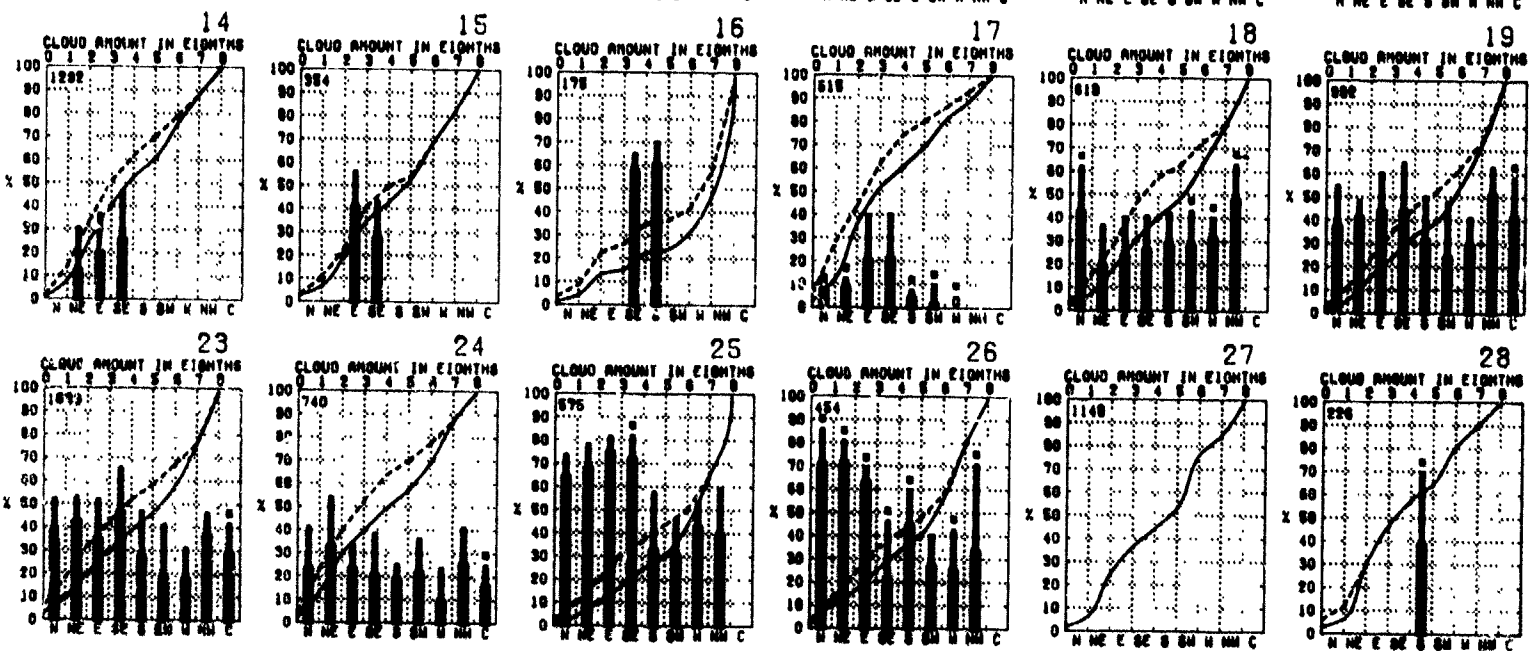
to or less than the amount

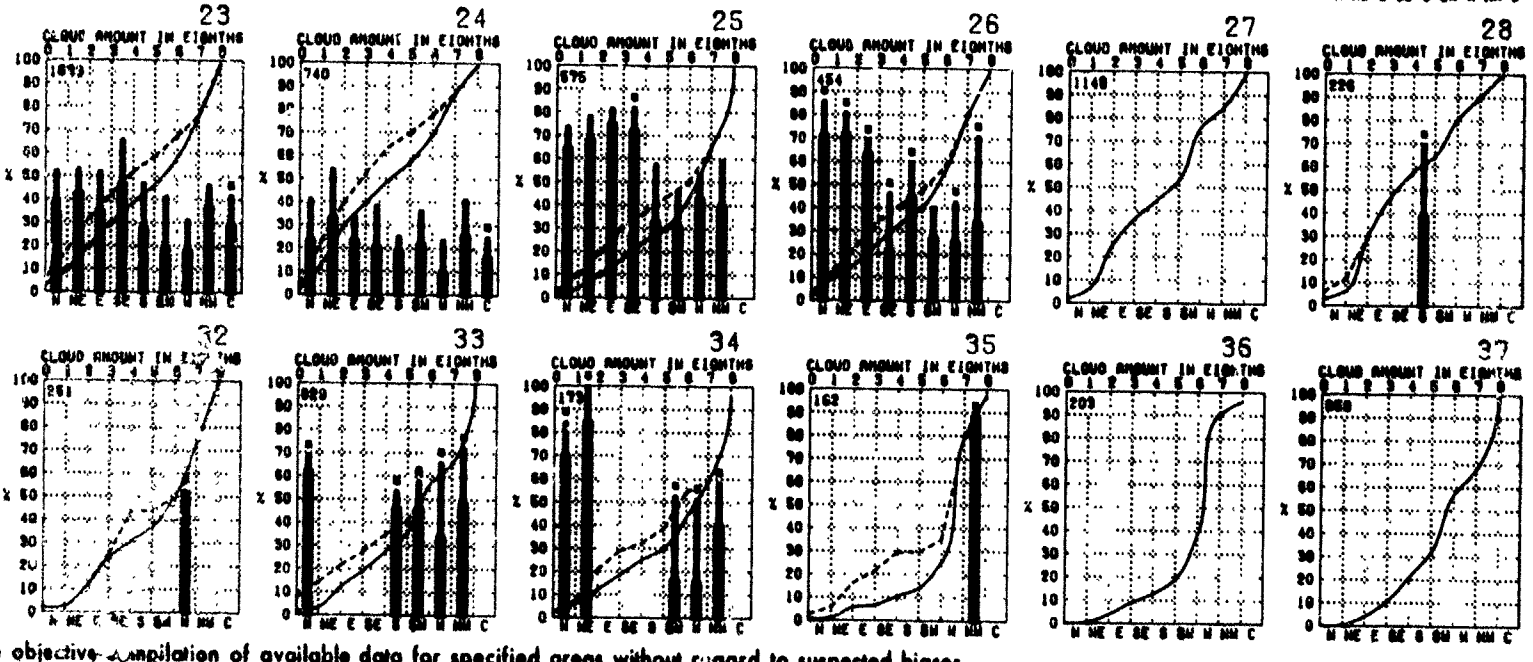
≥5/8 and 14% by low

servations of wind
when no low cloud
0 or bar is omitted when
wind direction or calm is

hat were accompanied by

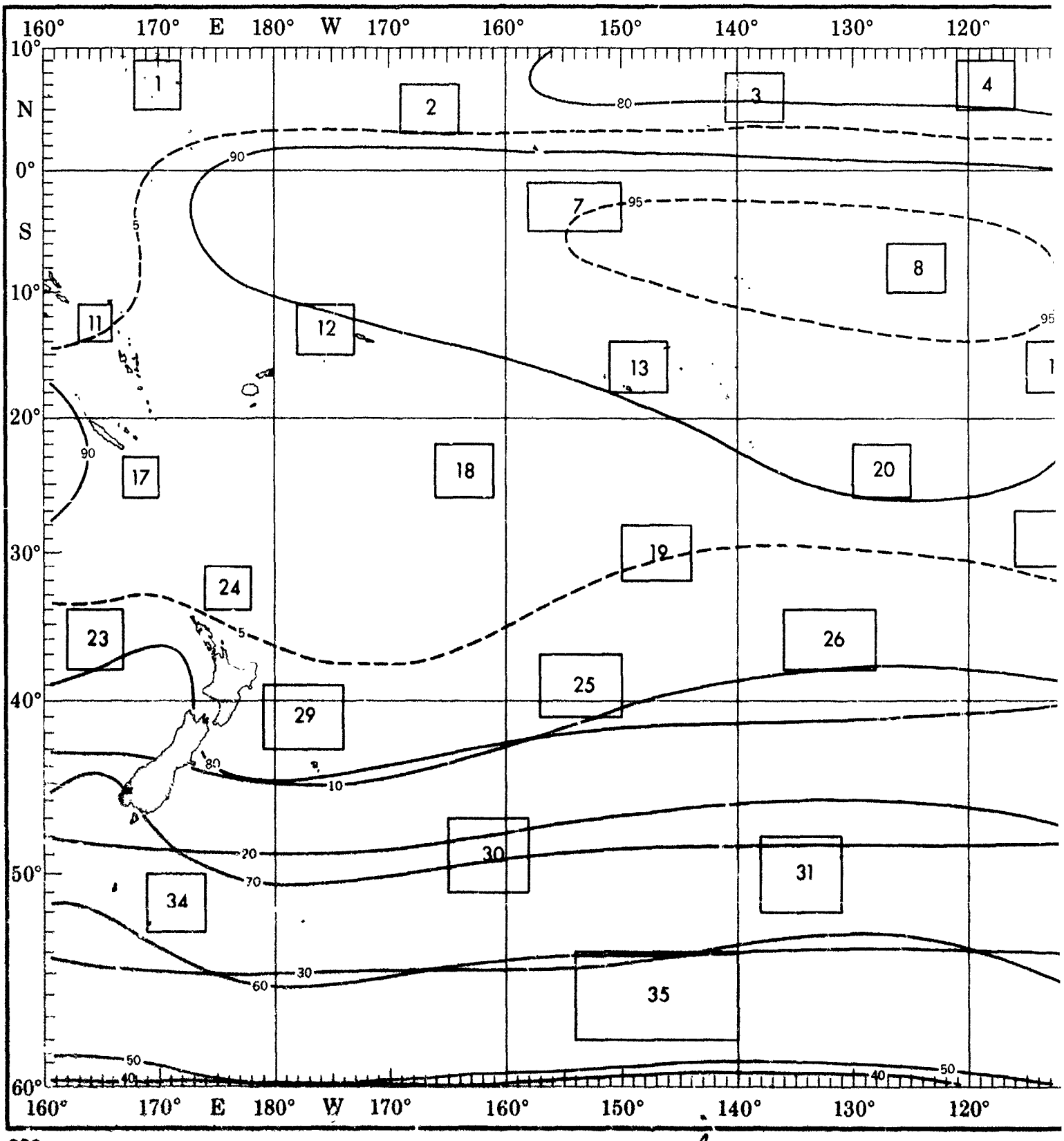






objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

NOVEMBER


160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N
0°
S 10°
20°
30°
40°
50°
60°
160° 170° E 180° W 170° 160° 150° 140° 130° 120°
1
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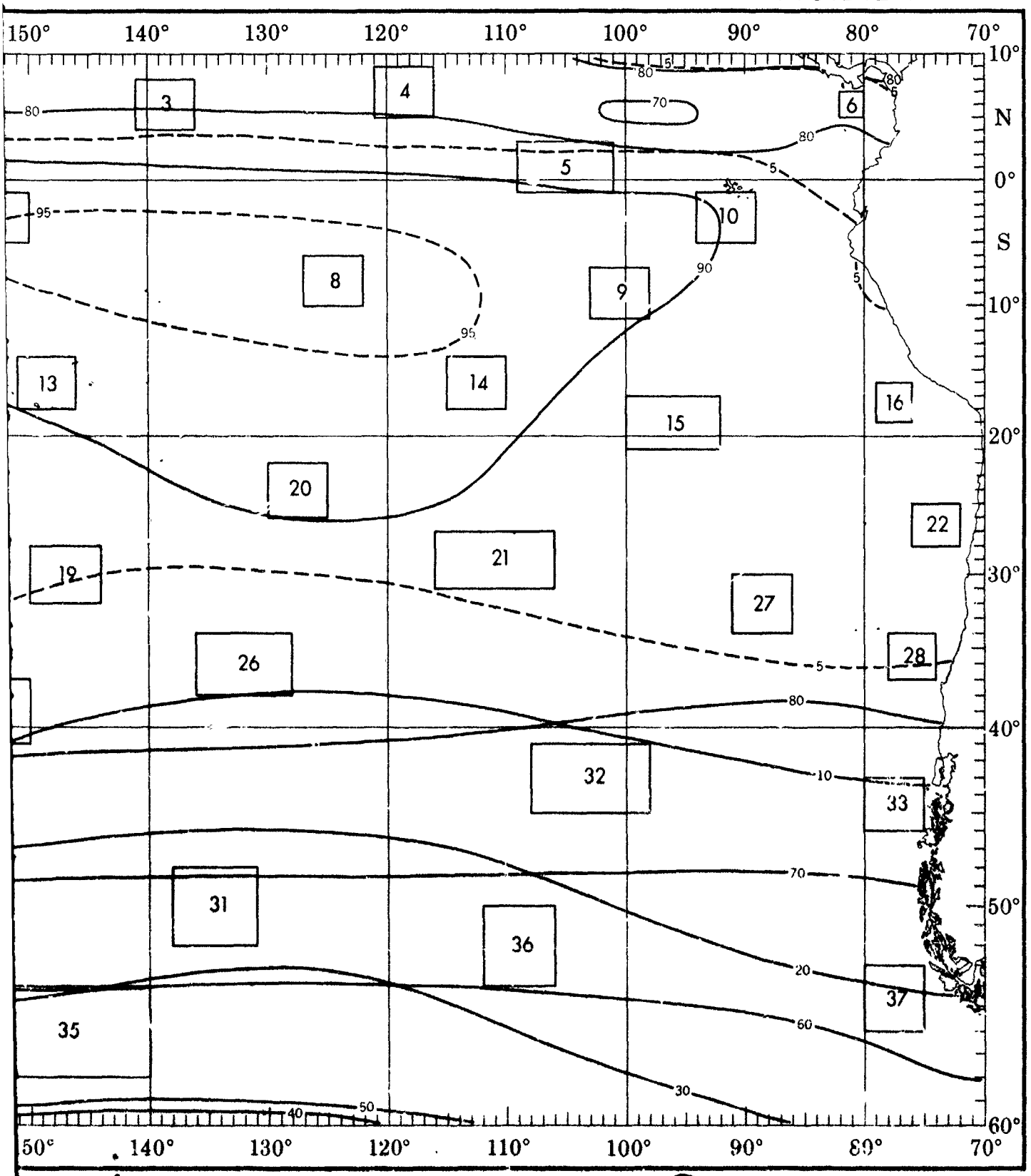
CEILING AND VISIBILITY



1 1 2

CEILING AND VISIBILITY

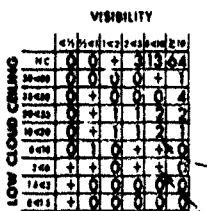
Low cloud ceiling - Visibility

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

Low cloud ceiling heights are estimated from the height of low clouds (h) when low cloud amount (i_{+h}) is ≥5/8

Obscurations are included under ceiling "0 <1.5"

"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8.



(2% of all observations reported ceiling ≥1000 but <2000 feet simultaneously with visibility ≥5 but <10 nautical miles.)

+ indicates < 5% but >0

Number of observations

BLUE LINE - Percent frequency of low cloud ceiling ≥1000 feet (or no low cloud ceiling) and visibility ≥5 nautical miles

RED LINE - Percent frequency of low cloud ceiling <600 feet and/or visibility <2 nautical miles

1

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	6	47
50<60	0	0	0	0	0	0
30<50	0	0	0	0	0	0
20<30	0	0	0	0	5	8
10<20	0	0	0	1	5	9
5<10	0	0	1	2	3	12
3<5	0	0	0	0	0	2
1.5<3	0	0	0	0	1	0
0<1.5	0	0	0	0	0	0

163

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5
NC	0	0	0	1
50<60	0	0	0	0
30<50	0	0	0	0
20<30	0	0	0	+
10<20	0	0	0	+
5<10	0	0	+	0
3<5	0	0	0	0
1.5<3	+	0	0	0
0<1.5	0	0	1	0

6

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	4	38
50<60	0	0	0	0	+	1
30<50	0	0	0	0	1	2
20<30	0	+	0	+	3	8
10<20	+	+	+	1	4	18
5<10	0	0	+	1	4	11
3<5	0	0	+	1	1	2
1.5<3	0	+	0	+	+	0
0<1.5	0	0	0	+	0	+

731

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5
NC	0	0	0	0
50<60	0	0	0	0
30<50	0	0	0	0
20<30	0	0	0	0
10<20	0	0	0	0
5<10	0	0	0	0
3<5	0	0	0	0
1.5<3	0	0	0	0
0<1.5	0	0	0	0

11

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	12	54
50<60	0	0	0	0	0	0
30<50	0	0	0	0	0	3
20<30	0	0	0	0	3	4
10<20	0	0	0	0	3	4
5<10	0	0	0	0	1	8
3<5	0	0	1	0	0	3
1.5<3	0	0	0	0	0	0
0<1.5	0	0	1	0	1	0

68

12

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	3	82
50<60	0	0	0	+	0	0
30<50	0	0	0	+	0	1
20<30	0	0	0	1	1	2
10<20	0	0	+	1	5	13
5<10	0	0	+	0	3	4
3<5	0	0	0	1	1	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

211

13

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	11	80
50<60	0	0	0	0	0	+
30<50	0	0	0	+	0	1
20<30	0	0	+	+	2	2
10<20	+	+	0	1	4	7
5<10	0	+	1	1	2	4
3<5	0	+	0	0	1	+
1.5<3	0	0	0	0	+	0
0<1.5	0	0	+	0	+	0

690

14

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	1	82
50<60	0	0	0	0	0	1
30<50	0	0	0	+	+	2
20<30	0	0	0	+	1	8
10<20	0	0	0	+	2	16
5<10	0	0	0	0	1	5
3<5	0	0	0	0	+	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	+

680

15

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	2	48
50<60	0	0	0	0	0	0
30<50	0	0	0	0	0	2
20<30	0	0	0	0	1	7
10<20	0	0	0	1	2	22
5<10	0	0	0	1	1	11
3<5	0	0	0	0	0	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

141

20

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	2	59
50<60	0	0	0	0	+	+
30<50	0	0	0	0	+	2
20<30	0	0	0	0	+	5
10<20	0	0	0	0	3	10
5<10	0	0	0	1	1	5
3<5	0	0	0	+	0	+
1.5<3	0	0	0	+	+	+
0<1.5	0	0	0	0	+	+

630

21

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	0	82
50<60	0	0	0	0	0	0
30<50	0	0	0	0	0	2
20<30	0	0	0	0	0	3
10<20	0	0	0	0	0	7
5<10	0	0	0	0	0	3
3<5	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

60

22

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	3	92
50<60	0	0	0	0	0	1
30<50	0	0	0	1	1	8
20<30	0	0	0	1	3	10
10<20	0	0	0	1	1	25
5<10	0	0	0	0	5	11
3<5	0	0	0	0	1	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

200

23

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	4	48
50<60	0	0	0	0	0	1
30<50	0	0	+	0	1	3
20<30	0	0	+	+	2	5
10<20	0	0	0	+	4	14
5<10	+	0	+	1	5	8
3<5	0	0	+	1	1	1
1.5<3	0	0	0	+	+	0
0<1.5	+	+	0	+	0	+

1061

24

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	1	63
50<60	0	0	0	0	0	1
30<50	0	0	0	0	1	2
20<30	0	0	0	0	1	7
10<20	0	0	0	+	2	12
5<10	0	0	0	0	4	6
3<5	0	0	0	0	1	1
1.5<3	0	0	0	0	0	+
0<1.5	0	0	0	0	+	+

396

29

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	4	44
50<60	0	0	+	0	1	3
30<50	0	0	0	1	1	3
20<30	0	0	0	1	4	8
10<20	0	0	0	1	4	15
5<10	0	0	0	1	2	6
3<5	0	0	+	+	1	0
1.5<3	0	0	0	0	0	0
0<1.5	+	+	0	0	+	0

388

30

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	0	26
50<60	0	0	0	0	0	3
30<50	0	0	0	0	0	17
20<30	0	0	0	0	0	11
10<20	0	0	0	0	0	8
5<10	0	0	0	0	0	6
3<5	0	0	0	0	3	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

35

31

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	0	15
50<60	0	0	0	0	0	0
30<50	0	0	0	0	0	0
20<30	0	0	0	0	0	0
10<20	0	0	0	0	0	0
5<10	0	0	0	0	0	0
3<5	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

33

32

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	0	47
50<60	0	0	0	0	0	0
30<50	0	0	0	0	0	0
20<30	0	0	0	0	0	0
10<20	0	0	0	0	0	0
5<10	0	0	0	0	0	0
3<5	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

15

33

LOW CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	4	30
50<60	0	0	0	0	0	0
30<50	0	0	0	0	0	1
20<30	0	0	0	0	3	2
10<20	0	0	0	0	1	5
5<10	0	0	0	1	1	8
3<5	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	1	0	0	0	0

83

Graphs represent the objective compilation of available data for specified areas without re

The isopleth analyses (opposite page) are based on all available data subjectively adjuste

TY

NOVEMBER

ceilings (hundreds of feet)

s (h) when low cloud amount

currences of N_h <5/8.

ously with visibility ≥5 but <10

visibility ≥5 nautical miles

iles

1

LOW CLOUD CEILING	VISIBILITY <1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	1	6	47
50-<80	0	0	0	0	0	0
35-<50	0	0	0	0	0	0
20-<35	0	0	0	0	5	6
10-<20	0	0	0	1	5	9
5-<10	0	0	1	2	3	12
3-<5	0	0	0	0	0	2
1.5-<3	0	0	0	0	1	0
0-<1.5	0	0	0	0	0	0

163

2

LOW CLOUD CEILING	VISIBILITY <1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	1	4	62
50-<80	0	0	0	0	0	+
35-<50	0	0	0	0	0	1
20-<35	0	0	0	+	1	6
10-<20	0	0	0	+	3	9
5-<10	0	0	+	0	2	6
3-<5	0	0	0	0	+	2
1.5-<3	+	0	0	0	0	0
0-<1.5	0	0	1	0	+	0

286

3

LOW CLOUD CEILING	VISIBILITY <1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	+	5	50
50-<80	0	0	0	0	1	0
35-<50	0	0	0	0	1	2
20-<35	0	0	0	1	2	5
10-<20	0	0	0	+	4	12
5-<10	0	0	0	1	5	9
3-<5	0	0	0	+	1	2
1.5-<3	0	0	0	0	0	+
0-<1.5	0	0	0	0	0	0

282

4

LOW CLOUD CEILING	VISIBILITY <1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	+	0	+	1	2	39
50-<80	0	0	0	0	+	0
35-<50	0	0	0	0	+	1
20-<35	0	0	0	0	1	2
10-<20	0	0	0	1	6	14
5-<10	0	+	+	3	6	9
3-<5	0	0	0	+	4	4
1.5-<3	0	0	+	+	0	0
0-<1.5	0	0	0	1	0	+

221

5

LOW CLOUD CEILING	VISIBILITY <1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	2	49
50-<80	0	0	0	0	+	1
35-<50	0	0	0	0	+	2
20-<35	0	0	+	0	1	8
10-<20	0	0	0	0	2	19
5-<10	0	0	+	+	2	9
3-<5	0	0	0	0	+	1
1.5-<3	0	0	0	+	+	+
0-<1.5	0	0	0	0	0	0

845

6

LOW CLOUD CEILING	VISIBILITY <1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	1	4	38
50-<80	0	0	0	0	+	1
35-<50	0	0	0	0	1	2
20-<35	0	+	0	+	3	8
10-<20	+	+	+	1	4	16
5-<10	0	0	+	1	4	11
3-<5	0	0	+	1	1	2
1.5-<3	0	+	0	+	+	0
0-<1.5	0	0	0	+	0	+

731

7

LOW CLOUD CEILING	VISIBILITY <1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	3	84
50-<80	0	0	0	0	0	0
35-<50	0	0	0	0	0	0
20-<35	0	0	0	0	0	7
10-<20	0	0	0	0	0	3
5-<10	0	0	0	0	0	3
3-<5	0	0	0	0	0	0
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	0	0

118

8

LOW CLOUD CEILING	VISIBILITY <1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	+	+	90
50-<80	0	0	0	0	0	+
35-<50	0	0	0	0	+	1
20-<35	0	0	0	+	+	2
10-<20	0	0	0	0	+	4
5-<10	0	0	0	0	0	1
3-<5	0	0	0	0	+	+
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	0	0

864

9

LOW CLOUD CEILING	VISIBILITY <1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	1	49
50-<80	0	0	0	0	+	2
35-<50	0	0	0	0	+	8
20-<35	0	0	0	0	1	12
10-<20	0	0	0	+	1	21
5-<10	0	0	0	0	1	7
3-<5	0	0	0	+	0	+
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	0	0

890

10

LOW CLOUD CEILING	VISIBILITY <1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	+	2	40
50-<80	0	0	0	0	+	1
35-<50	0	0	0	+	1	5
20-<35	0	0	0	0	1	11
10-<20	0	0	0	+	4	21
5-<10	0	0	+	+	1	11
3-<5	0	0	+	+	1	1
1.5-<3	0	0	0	0	+	0
0-<1.5	0	0	+	+	+	+

1148

13

≥10
60
+
1
2
7
4
+
0
0

88

14

LOW CLOUD CEILING	VISIBILITY <1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	1	62
50-<80	0	0	0	0	0	1
35-<50	0	0	0	+	0	2
20-<35	0	0	0	+	1	8
10-<20	0	0	0	+	2	16
5-<10	0	0	0	0	1	8
3-<5	0	0	0	0	+	1
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	0	+

690

15

LOW CLOUD CEILING	VISIBILITY <1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	2	49
50-<80	0	0	0	0	0	2
35-<50	0	0	0	0	0	2
20-<35	0	0	0	0	1	7
10-<20	0	0	0	1	2	22
5-<10	0	0	0	1	1	11
3-<5	0	0	0	0	0	1
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	0	0

141

16

LOW CLOUD CEILING	VISIBILITY <1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	1	2	31
50-<80	0	0	0	0	0	2
35-<50	0	0	0	0	0	6
20-<35	0	0	0	0	1	10
10-<20	0	0	0	0	1	27
5-<10	0	0	0	0	1	10
3-<5	0	0	0	0	0	0
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	0	0

125

17

LOW CLOUD CEILING	VISIBILITY <1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	+	0	0	0	2	71
50-<80	0	0	0	0	0	+
35-<50	0	0	0	0	+	3
20-<35	0	0	0	0	+	4
10-<20	0	0	0	1	1	8
5-<10	0	0	0	0	1	7
3-<5	0	0	0	0	0	0
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	0	0

229

18

LOW CLOUD CEILING	VISIBILITY <1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	2	56
50-<80	0	0	0	0	0	2
35-<50	0	0	0	0	1	2
20-<35	0	0	0	0	+	6
10-<20	0	0	0	+	2	15
5-<10	0	0	0	+	3	6
3-<5	0	+	0	1	4	1
1.5-<3	0	0	0	1	0	0
0-<1.5	0	0	0	0	0	0

365

19

LOW CLOUD CEILING	VISIBILITY <1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	+	2	45
50-<80	0	0	0	0	+	2
35-<50	0	0	0	0	+	2
20-<35	0	0	0	0	1	9
10-<20	0	0	0	1	4	18
5-<10	+	0	+	1	2	8
3-<5	0	0	0	+	1	1
1.5-<3	0	+	0	0	0	+
0-<1.5	0	0	0	0	+	0

614

22

≥10
22
1
8
18
25
11
1
0
0

100

23

LOW CLOUD CEILING	VISIBILITY <1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	1	4	48
50-<80	0	0	0	0	0	1
35-<50	0	0	+	0	1	3
20-<35	0	0	+	+	2	6
10-<20	0	0	0	+	4	14
5-<10	+	0	+	1	5	8
3-<5	0	0	+	1	1	1
1.5-<3	0	0	0	+	+	0
0-<1.5	+	+	0	+	0	+

1061

24

LOW CLOUD CEILING	VISIBILITY <1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	+	1	63
50-<80	0	0	0	0	0	1
35-<50	0	0	0	0	1	2
20-<35	0	0	0	0	1	7
10-<20	0	0	0	+	2	12
5-<10	0	0	0	0	4	6
3-<5	0	0	0	0	1	1
1.5-<3	0	0	3	0	0	+
0-<1.5	0	0	0	0	+	+

386

25

LOW CLOUD CEILING	VISIBILITY <1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	7	32
50-<80	0	0	0	0	1	2
35-<50	0	0	0	0	3	4
20-<35	0	0	0	1	4	10
10-<20	1	0	+	+	5	16
5-<10	1	0	1	3	1	7
3-<5	0	0	0	0	1	0
1.5-<3	0	0	0	1	+	0
0-<1.5	+	1	0	+	1	0

386

26

LOW CLOUD CEILING	VISIBILITY <1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	1	0	8	38
50-<80	0	0	0	0	1	4
35-<50	0	0	0	0	1	7
20-<35	0	1	0	0	2	8
10-<20	0	1	0	2	4	17
5-<10	0	0	1	1	8	4
3-<5	0	0	0	0	1	0
1.5-<3	0	0	0	0	0	0
0-<1.5	0	1	0	0	0	0

158

27

LOW CLOUD CEILING	VISIBILITY <1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	4	18
50-<80	0	0	0	0	0	0
35-<50	0	0	0	0	12	4
20-<35	0	0	0	0	0	18
10-<20	0	0	0	0	4	27
5-<10	0	0	0	0	0	8
3-<5	0	0	0	0	0	4
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	0	0

26

28

LOW CLOUD CEILING	VISIBILITY <1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	0	41
50-<80	0	0	0	0	0	0
35-<50	0	0	0	0	0	0
20-<35	0	0	0	0	0	12
10-<20	0	0	0	0	0	24
5-<10	0	0	0	0	0	12
3-<5	0	0	0	0	0	0
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	0	0

17

31

≥10
55
0
0
2
2
5
0
0
0

93

32

LOW CLOUD CEILING	VISIBILITY <1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	0	47
50-<80	0	0	0	0	0	0
35-<50	0	0	0	0	0	0
20-<35	0	0	0	7	0	0
10-<20	0	0	0	0	0	20
5-<10	0	0	0	0	7	20
3-<5	0	0	0	0	0	0
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	0	0

16

33

LOW CLOUD CEILING	VISIBILITY <1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	4	30
50-<80	0	0	0	0	0	0
35-<50	0	0	0	0	0	1
20-<35	0	0	0	3	2	13
10-<20	0	0	0	1	5	22
5-<10	0	0	1	1	5	8
3-<5	0	0	0	0	0	0
1.5-<3	0	0	0	0	0	0
0-<1.5	0	1	0	0	0	0

93

34

LOW CLOUD CEILING	VISIBILITY <1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	1	1	18	18
50-<80	0	0	0	0	1	2
35-<50	0	0	0	0	0	1
20-<35	0	0	1	1	23	0
10-<20	1	0	0	1	15	9
5-<10	0	0	0	1	2	2
3-<5	0	0	0	0	0	0
1.5-<3	0	0	0	2	1	0
0-<1.5	0	4	3	0	0	0

120

35

LOW CLOUD CEILING	VISIBILITY <1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	3	9	21
50-<80	0	0	0	0	0	0
35-<50	0	0	0	0	0	0
20-<35	0	0	0	0	12	3
10-<20	0	0	0	3	16	0
5-<10	0	0	0	0	6	0
3-<5	0	0	6	9	0	0
1.5-<3	0	0	0	3	0	0
0-<1.5	9	3	0	0	0	0

94

36

INSUFFICIENT DATA

37

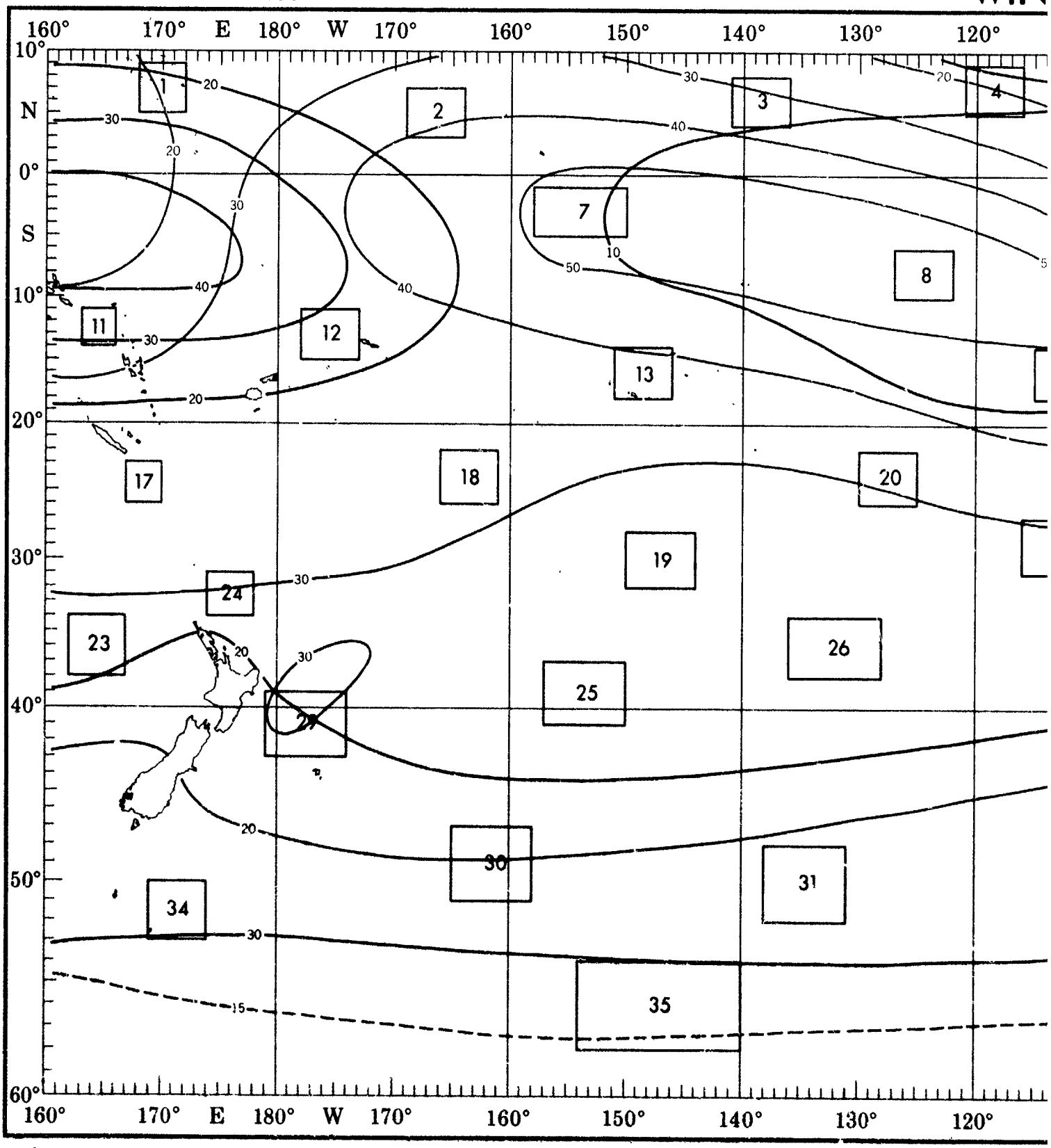
LOW CLOUD CEILING	VISIBILITY <1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	0	11
50-<80	0	0	0	0	0	0
35-<50	0	0	0	0	0	0
20-<35	0	0	0	0	0	11
10-<20	0	0	0	0	0	50
5-<10	0	0	0	0	17	6
3-<5	0	0	0	0	6	0
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	0	0

18

the objective compilation of available data for specified areas without regard to suspected biases.
yses (opposite page) are based on all available data subjectively adjusted where bias was evident.

4 1 2

NOVEMBER


160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N 0° S 10° 20° 30° 40° 50° 60°
1
2
3
4
7
8
11
12
13
17
18
19
20
23
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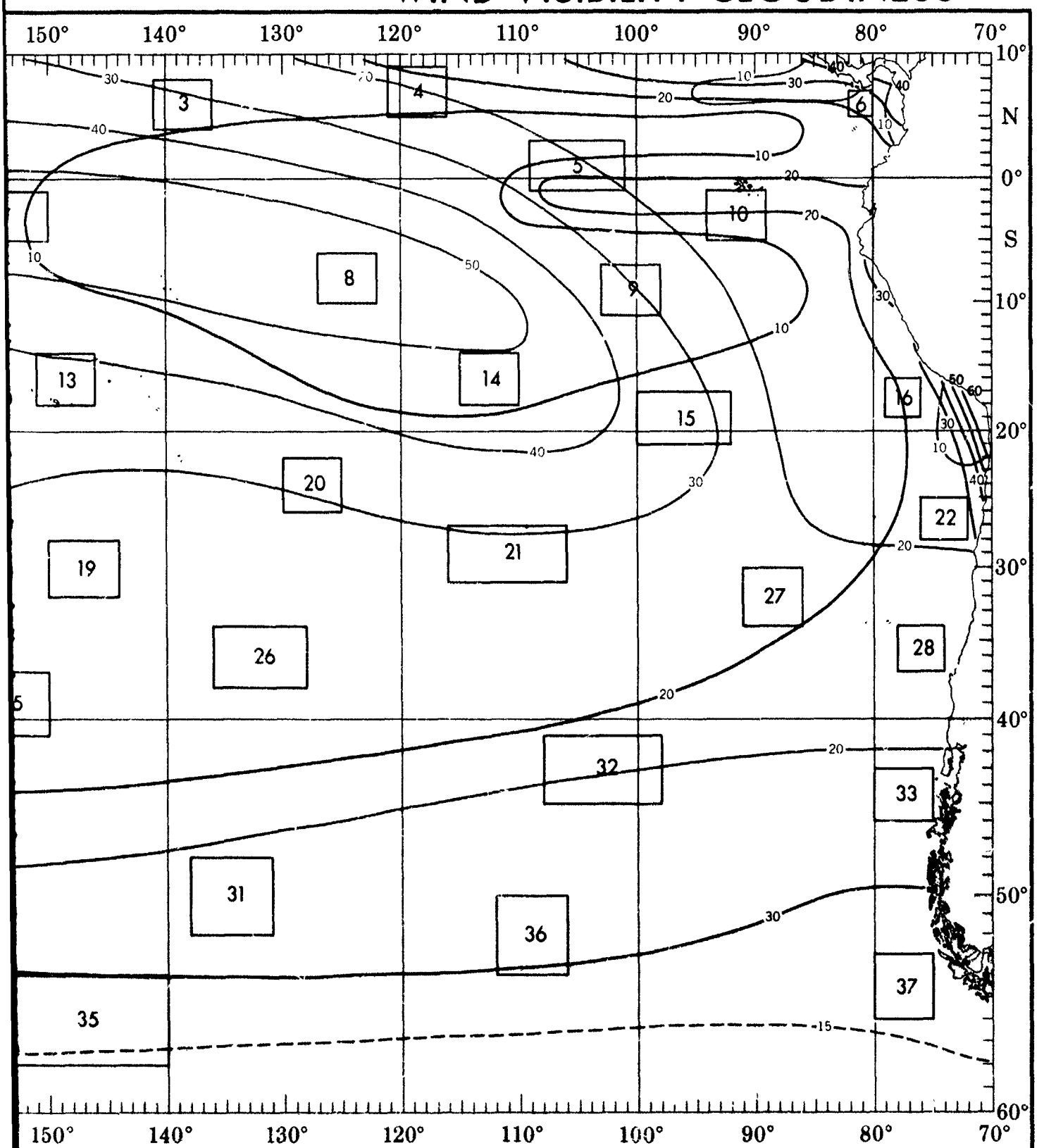
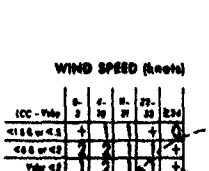
26
29
30
31
34
35
10
15
20
30
40
50

WIND-VISIBILITY-CLOUDINESS



1 2

LOW CLOUD CEILING-VISIBILITY-WIND



Percent frequency of occurrence of specified wind speed in knots, visibility (Vsby) in nautical miles, and low cloud ceiling (LCC) in hundreds of feet.

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

1

LCC - VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & ≥1	0	0	0	0	0
<1.5 & <1	0	0	0	0	0
<3 & ≥2	0	0	3	0	0
VSBY <2	0	0	1	0	0
<10 & ≥2	0	8	12	0	0
<20 & ≥6	2	12	22	1	0
VSBY ≥6	9	42	42	1	0
≥30 & ≥5	7	30	15	1	0
NC & ≥10	7	25	14	1	0

169

LCC - VSBY	WIND SPEED 0-3	4-10	
<1.5 & <1	0	1	
<3 & ≥2	+	2	
VSBY <2	0	1	
<10 & ≥2	+	5	
<20 & ≥6	1	12	1
VSBY ≥6	6	47	4
≥30 & ≥5	5	34	2
NC & ≥10	4	31	2

6

LCC - VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & <1	+	+	+	0	0
<3 & ≥2	+	3	3	0	0
VSBY <2	+	1	+	0	0
<10 & ≥2	1	12	8	+	0
<20 & ≥6	3	23	17	1	0
VSBY ≥6	9	55	31	1	0
≥30 & ≥5	5	27	10	+	0
NC & ≥10	4	26	8	0	0

710

LCC - VSBY	WIND SPEED 0-3	4-10	
<1.5 & <1	0	0	
<3 & ≥2	0	0	
VSBY <2	0	0	
<10 & ≥2	0	1	
<20 & ≥6	0	2	
VSBY ≥6	0	46	8
≥30 & ≥5	0	41	4
NC & ≥10	0	41	4

Conditions for Carrier Operations

BLUE LINE - Percent frequency of optimum conditions: LCC ≥5000 ft, (or no LCC), Vsby ≥5 nm. and Wind 11-21 kts

RED LINE - Percent frequency of poor conditions. Any one of the following constitutes poor conditions: LCC <300 ft., Vsby <1 nm, Wind <6 or ≥34 kts.

Satisfactory conditions-between poor and optimum

11

LCC - VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & <1	0	0	3	0	0
<3 & ≥2	0	0	7	0	0
VSBY <2	0	0	3	0	0
<10 & ≥2	0	4	10	0	0
<20 & ≥6	0	9	15	0	0
VSBY ≥6	4	56	36	0	0
≥30 & ≥5	4	42	19	0	0
NC & ≥10	4	33	18	0	0

67

12

LCC - VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & <1	0	0	0	0	0
<3 & ≥2	0	+	2	+	0
VSBY <2	0	+	0	+	0
<10 & ≥2	+	3	5	1	0
<20 & ≥6	3	10	16	1	1
VSBY ≥6	10	42	40	1	+
≥30 & ≥5	8	32	26	+	0
NC & ≥10	8	31	23	+	0

211

13

LCC - VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & <1	0	+	+	+	0
<3 & ≥2	0	1	2	+	0
VSBY <2	0	1	1	+	0
<10 & ≥2	1	4	5	1	0
<20 & ≥6	1	10	11	1	0
VSBY ≥6	5	43	45	2	0
≥30 & ≥5	4	34	32	1	0
NC & ≥10	4	30	26	1	0

676

14

LCC - VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & <1	0	+	0	0	0
<3 & ≥2	0	+	+	0	0
VSBY <2	0	0	0	0	0
<10 & ≥2	0	2	5	0	0
<20 & ≥6	+	7	17	1	0
VSBY ≥6	2	31	64	3	0
≥30 & ≥5	2	21	40	2	0
NC & ≥10	2	20	30	2	0

887

15

LCC - VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & <1	0	0	0	0	0
<3 & ≥2	0	0	1	0	0
VSBY <2	0	0	0	0	0
<10 & ≥2	0	4	11	1	0
<20 & ≥6	0	10	28	3	0
VSBY ≥6	4	27	58	7	0
≥30 & ≥5	4	13	28	4	0
NC & ≥10	4	13	28	4	0

141

LCC - VSBY	WIND SPEED 0-3	4-10	
<1.5 & <1	0	0	
<3 & ≥2	0	0	
VSBY <2	0	0	
<10 & ≥2	0	9	1
<20 & ≥6	1	20	18
VSBY ≥6	3	41	52
≥30 & ≥5	1	12	24
NC & ≥10	0	12	20

20

LCC - VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & <1	0	+	+	0	0
<3 & ≥2	0	+	1	0	0
VSBY <2	0	0	0	0	0
<10 & ≥2	+	2	5	1	0
<20 & ≥6	+	8	12	3	0
VSBY ≥6	5	41	47	5	+
≥30 & ≥5	5	31	32	3	+
NC & ≥10	5	30	32	3	+

621

21

LCC - VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & <1	0	0	0	0	0
<3 & ≥2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & ≥2	0	3	0	0	0
<20 & ≥6	0	7	3	0	0
VSBY ≥6	0	60	31	2	0
≥30 & ≥5	0	56	27	2	0
NC & ≥10	0	56	27	2	0

69

22

LCC - VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & <1	0	0	0	0	0
<3 & ≥2	0	0	1	0	0
VSBY <2	0	0	0	0	0
<10 & ≥2	1	7	7	2	0
<20 & ≥6	2	17	22	4	0
VSBY ≥6	6	38	48	8	0
≥30 & ≥5	1	13	11	2	0
NC & ≥10	1	11	10	1	0

190

23

LCC - VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & <1	+	+	+	+	0
<3 & ≥2	+	1	2	1	+
VSBY <2	+	0	+	+	+
<10 & ≥2	+	4	8	4	1
<20 & ≥6	1	9	18	7	1
VSBY ≥6	5	32	45	11	2
≥30 & ≥5	4	20	24	5	1
NC & ≥10	3	19	22	4	+

1051

24

LCC - VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & <1	0	0	0	+	+
<3 & ≥2	0	1	+	+	+
VSBY <2	0	0	0	0	0
<10 & ≥2	0	4	5	2	1
<20 & ≥6	1	8	13	3	1
VSBY ≥6	5	41	46	7	1
≥30 & ≥5	4	30	28	3	+
NC & ≥10	4	29	27	2	0

390

LCC - VSBY	WIND SPEED 0-3	4-10	
<1.5 & <1	0	+	2
<3 & ≥2	0	1	3
VSBY <2	0	0	2
<10 & ≥2	1	4	8
<20 & ≥6	1	11	17
VSBY ≥6	2	26	46
≥30 & ≥5	1	10	21
NC & ≥10	1	8	18

29

LCC - VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & <1	0	1	8	+	0
<3 & ≥2	0	1	1	1	0
VSBY <2	0	1	+	0	0
<10 & ≥2	0	2	6	4	0
<20 & ≥6	1	8	14	10	2
VSBY ≥6	2	23	49	20	2
≥30 & ≥5	1	15	28	8	+
NC & ≥10	1	13	23	7	+

302

30

LCC - VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & <1	0	0	0	0	0
<3 & ≥2	0	0	3	0	0
VSBY <2	0	0	0	0	0
<10 & ≥2	0	0	6	3	0
<20 & ≥6	0	0	23	8	3
VSBY ≥6	0	17	49	20	0
≥30 & ≥5	0	9	14	8	0
NC & ≥10	0	8	14	8	0

96

31

LCC - VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & <1	0	6	3	0	0
<3 & ≥2	0	0	3	6	3
VSBY <2	0	0	0	3	3
<10 & ≥2	0	3	10	9	3
<20 & ≥6	0	13	28	19	3
VSBY ≥6	0	22	38	22	0
≥30 & ≥5	0	6	6	9	0
NC & ≥10	0	0	6	9	0

32

32

LCC - VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & <1	0	0	0	0	0
<3 & ≥2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & ≥2	0	0	13	13	0
<20 & ≥6	0	7	20	27	0
VSBY ≥6	0	7	33	53	0
≥30 & ≥5	0	7	13	27	0
NC & ≥10	0	7	13	27	0

16

33

LCC - VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & <1	0	0	0	0	1
<3 & ≥2	0	0	0	0	2
VSBY <2	0	0	0	0	2
<10 & ≥2	0	5	8	3	2
<20 & ≥6	2	14	25	4	4
VSBY ≥6	3	36	41	11	1
≥30 & ≥5	1	15	13	4	0
NC & ≥10	1	11	13	4	0

92

LCC - VSBY	WIND SPEED 0-3	4-10	
<1.5 & <1	0	2	5
<3 & ≥2	0	4	5
VSBY <2	0	2	5
<10 & ≥2	0	5	8
<20 & ≥6	2	8	18
VSBY ≥6	3	10	34
≥30 & ≥5	2	3	15
NC & ≥10	1	3	8

Graphs represent the objective compilation of available data for specified areas without r
The isopleth analyses (opposite page) are based on all available data subjectively adjuste

-VISIBILITY-WIND

NOVEMBER

isibility (Vsby) in nautical

ds (h) when low cloud amount

d ceiling <1000 feet and/or

ccurrences of N_h <5/8.

nm and Wind 11-21 kts.

onditions: LCC <300 ft,

1

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<3 & OR <2	0	0	3	0	0
VSBY <2	0	0	1	0	0
<10 & OR <2	0	8	12	0	0
<20 & OR <5	2	12	22	1	0
VSBY ≥5	9	42	42	1	0
≥30 & ≥5	7	30	15	1	0
NC & ≥10	7	25	14	1	0

169

2

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	+	0	0
<3 & OR <2	+	2	1	+	0
VSBY <2	0	1	+	0	0
<10 & OR <2	+	5	6	1	0
<20 & OR <5	1	12	13	1	0
VSBY ≥5	6	47	41	3	0
≥30 & ≥5	5	34	26	2	0
NC & ≥10	4	31	24	2	0

293

3

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<3 & OR <2	0	3	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	7	10	1	0
<20 & OR <5	1	15	18	1	0
VSBY ≥5	2	42	53	1	0
≥30 & ≥5	1	25	29	0	0
NC & ≥10	+	23	26	0	0

201

4

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	0	0
<3 & OR <2	1	8	3	0	0
VSBY <2	+	1	+	0	0
<10 & OR <2	3	15	14	0	0
<20 & OR <5	5	26	23	0	0
VSBY ≥5	6	41	42	1	0
≥30 & ≥5	1	19	21	0	0
NC & ≥10	1	18	20	0	0

221

5

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<3 & OR <2	+	2	+	0	0
VSBY <2	+	0	+	0	0
<10 & OR <2	1	9	4	+	0
<20 & OR <5	3	21	11	+	0
VSBY ≥5	7	60	31	+	0
≥30 & ≥5	3	33	17	0	0
NC & ≥10	3	31	16	0	0

641

6

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	0	0
<3 & OR <2	+	3	3	0	0
VSBY <2	+	1	+	0	0
<10 & OR <2	1	12	9	+	0
<20 & OR <5	3	23	17	1	0
VSBY ≥5	9	55	31	1	0
≥30 & ≥5	5	27	10	+	0
NC & ≥10	4	25	8	0	0

718

7

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<3 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	1	2	0	0
<20 & OR <5	0	2	4	0	0
VSBY ≥5	0	46	50	4	0
≥30 & ≥5	0	41	42	4	0
NC & ≥10	0	41	40	4	0

116

8

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<3 & OR <2	0	+	+	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	1	1	0	0
<20 & OR <5	0	2	5	0	0
VSBY ≥5	0	34	64	1	0
≥30 & ≥5	0	32	58	1	0
NC & ≥10	0	32	57	1	0

563

9

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<3 & OR <2	0	+	+	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	3	5	0	0
<20 & OR <5	0	9	20	1	0
VSBY ≥5	1	37	60	1	0
≥30 & ≥5	1	22	28	+	0
NC & ≥10	1	21	27	+	0

970

10

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	0	0
<3 & OR <2	+	2	+	0	0
VSBY <2	0	+	+	0	0
<10 & OR <2	1	11	2	0	0
<20 & OR <5	2	29	9	+	0
VSBY ≥5	4	75	20	+	0
≥30 & ≥5	1	32	9	0	0
NC & ≥10	1	31	8	0	0

1145

3

0					
0					
0					
0					
0					
0					
0					
0					

378

14

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	0
<3 & OR <2	0	+	+	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	2	5	0	0
<20 & OR <5	+	7	17	1	0
VSBY ≥5	2	31	64	3	0
≥30 & ≥5	2	21	40	2	0
NC & ≥10	2	20	38	2	0

887

15

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<3 & OR <2	0	0	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	4	11	1	0
<20 & OR <5	0	10	28	3	0
VSBY ≥5	4	27	59	7	0
≥30 & ≥5	4	13	28	4	0
NC & ≥10	4	13	26	4	0

141

16

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<3 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	8	1	0	0
<20 & OR <5	1	20	16	0	0
VSBY ≥5	3	41	52	2	0
≥30 & ≥5	1	12	24	0	0
NC & ≥10	0	12	20	0	0

121

17

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<3 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	1	7	0	0
<20 & OR <5	0	3	13	1	0
VSBY ≥5	6	36	48	5	+
≥30 & ≥5	6	33	31	3	+
NC & ≥10	6	33	29	3	+

224

18

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<3 & OR <2	0	1	3	1	+
VSBY <2	0	0	0	+	0
<10 & OR <2	0	5	7	3	+
<20 & OR <5	1	9	18	4	+
VSBY ≥5	4	42	43	8	0
≥30 & ≥5	2	30	24	4	0
NC & ≥10	2	28	22	4	0

363

19

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	+	0
<3 & OR <2	+	2	2	1	0
VSBY <2	+	+	+	+	0
<10 & OR <2	1	8	7	2	+
<20 & OR <5	2	13	18	5	1
VSBY ≥5	6	37	48	6	1
≥30 & ≥3	4	21	22	2	+
NC & ≥10	3	18	20	2	+

606

2

0					
0					
0					
0					
0					
0					
0					
0					

99

23

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	+	0
<3 & OR <2	+	1	2	1	+
VSBY <2	+	0	+	+	+
<10 & OR <2	+	4	8	4	1
<20 & OR <5	1	8	18	7	1
VSBY ≥5	5	32	45	11	2
≥30 & ≥5	4	20	24	6	1
NC & ≥10	3	19	22	4	+

1051

24

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	+	+
<3 & OR <2	0	1	+	+	+
VSBY <2	0	0	0	0	0
<10 & OR <2	0	4	5	2	1
<20 & OR <5	1	8	13	3	1
VSBY ≥5	5	41	46	7	1
≥30 & ≥5	4	30	28	3	+
NC & ≥10	4	29	27	2	0

390

25

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	2	1	+
<3 & OR <2	0	1	3	1	+
VSBY <2	0	0	2	1	+
<10 & OR <2	1	4	8	3	+
<20 & OR <5	1	11	17	7	1
VSBY ≥5	2	26	46	16	3
≥30 & ≥5	1	10	21	8	1
NC & ≥10	1	8	16	8	0

362

26

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	1	0
<3 & OR <2	0	1	2	2	0
VSBY <2	0	0	2	2	0
<10 & OR <2	0	5	6	3	1
<20 & OR <5	0	10	19	6	1
VSBY ≥5	3	26	46	12	3
≥30 & ≥5	3	12	27	4	1
NC & ≥10	1	10	21	4	0

155

27

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<3 & OR <2	0	4	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	13	0	0	0
<20 & OR <5	4	38	0	0	0
VSBY ≥5	4	63	13	0	0
≥30 & ≥5	0	21	0	0	0
NC & ≥10	0	17	0	0	0

24

28

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<3 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	24	0	0
<20 & OR <5	0	24	24	0	0
VSBY ≥5	0	24	53	24	0
≥30 & ≥5	0	0	29	12	0
NC & ≥10	0	0	29	12	0

17

2

0					
3					
3					
3					
3					
0					
0					
0					

2

32

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<3 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	13	13	0
<20 & OR <5	0	7	20	27	0
VSBY ≥5	0	7	33	53	0
≥30 & ≥5	0	7	13	27	0
NC & ≥10	0	7	13	27	0

15

33

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	1
<3 & OR <2	0	0	0	0	2
VSBY <2	0	0	0	0	2
<10 & OR <2	0	5	8	3	2
<20 & OR <5	2	14	25	4	4
VSBY ≥5	3	36	41	11	1
≥30 & ≥5	1	15	13	4	0
NC & ≥10	1	11	13	4	0

82

34

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	2	5	0	1
<3 & OR <2	0	4	5	1	2
VSBY <2	0	2	5	1	2
<10 & OR <2	0	5	8	1	2
<20 & OR <5	2	8	18	12	4
VSBY ≥5	3	10	34	31	7
≥30 & ≥5	2	3	15	11	3
NC & ≥10	1	3	8	3	1

119

35

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	3	8	3	0
<3 & OR <2	0	8	15	8	0
VSBY <2	0	3	12	3	0
<10 & OR <2	0	6	18	12	0
<20 & OR <5	0	6	29	21	0
VSBY ≥5	0	3	44	18	0
≥30 & ≥5	0	3	24	3	0
NC & ≥10	0	3	18	8	0

34

36

INSUFFICIENT DATA

37

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<3 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	17	8	11
<20 & OR <5	0	0	29	30	11
VSBY ≥5	0	0	39	50	11
≥30 & ≥5	0	0	8	8	0
NC & ≥10	0	0	8	8	0

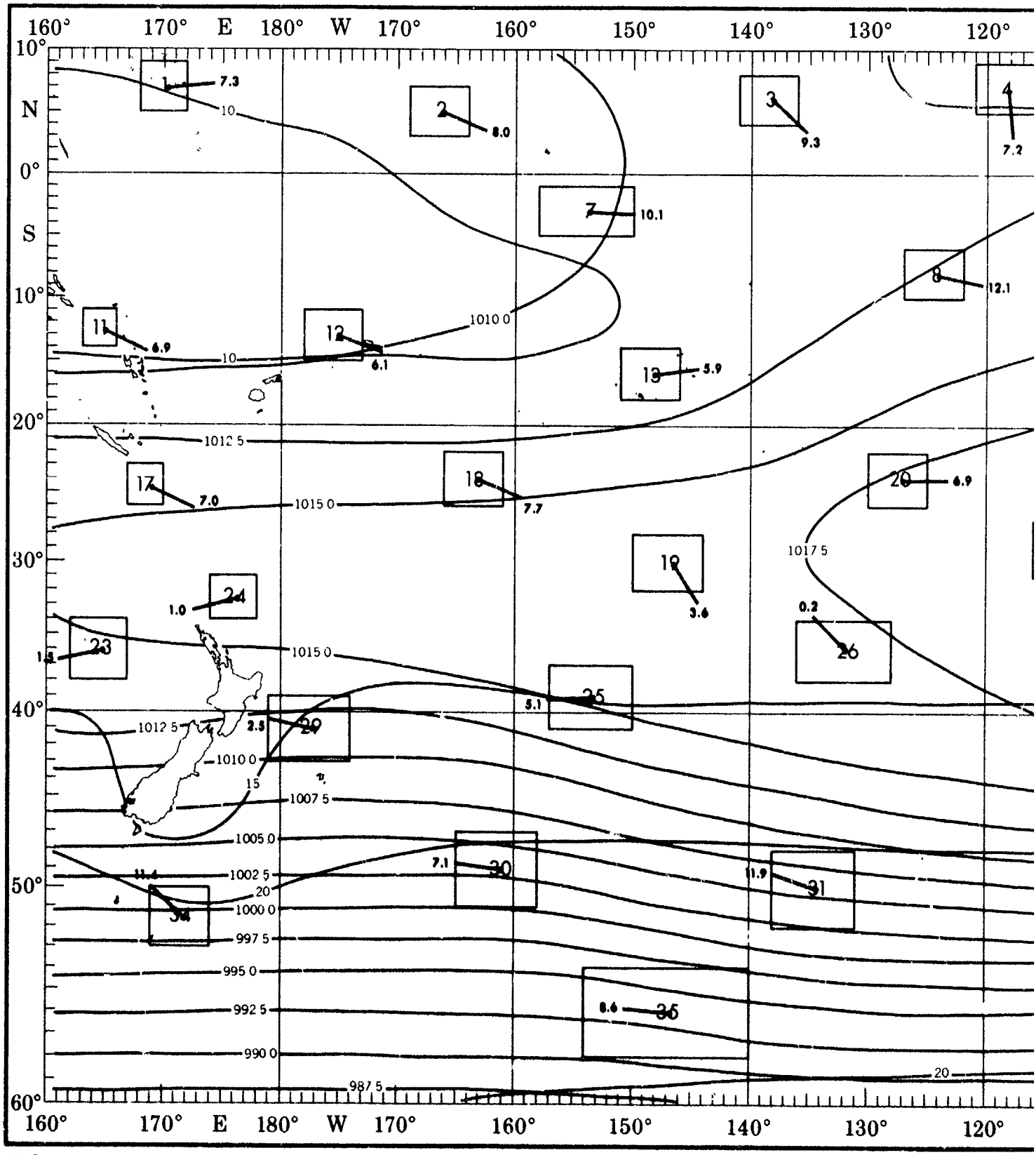
10

the objective compilation of available data for specified areas without regard to suspected biases.
ses (opposite page) are based on all available data subjectively adjusted where bias was evident.

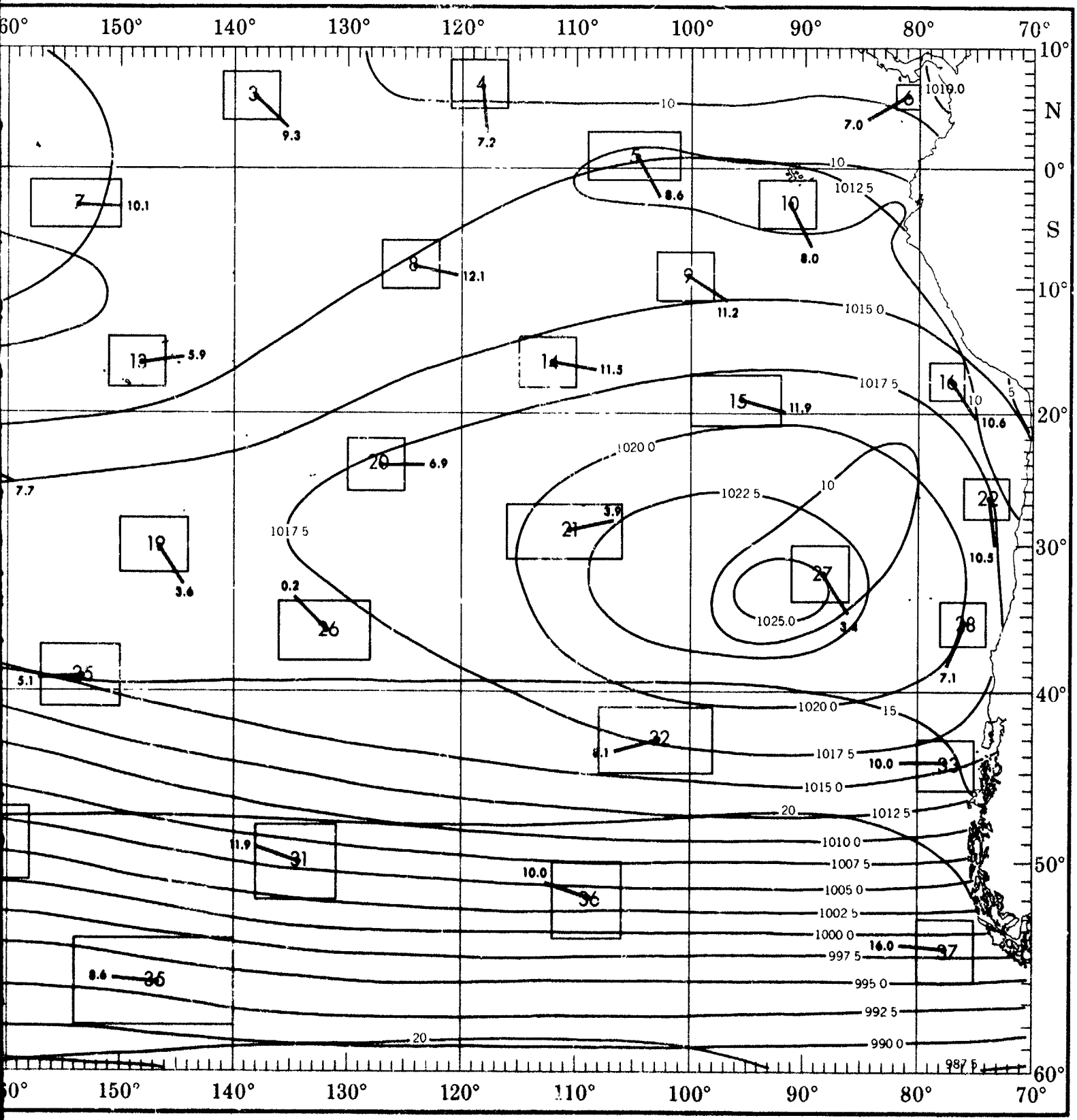
2

NOVEMBER

SEA LEVEL PR



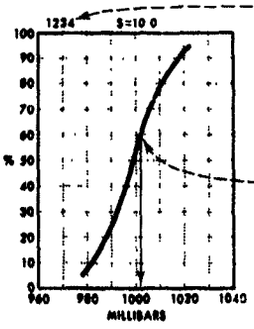
SEA LEVEL PRESSURE AND MEAN WIND



SEA LEVEL PRESSURE

Sea level pressure and mean wind

Number of observations



Cumulative percent frequency of sea level pressures equal to or less than the pressure intersected by the curve

S=Standard deviation of pressure (mbs)

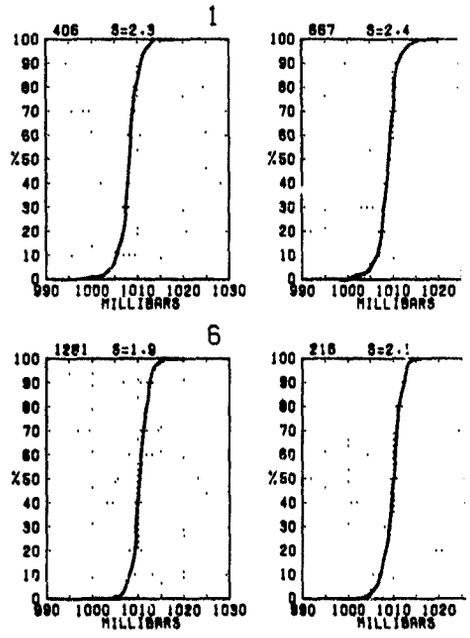
(60% of all observed sea level pressures were ≤1002 millibars.)

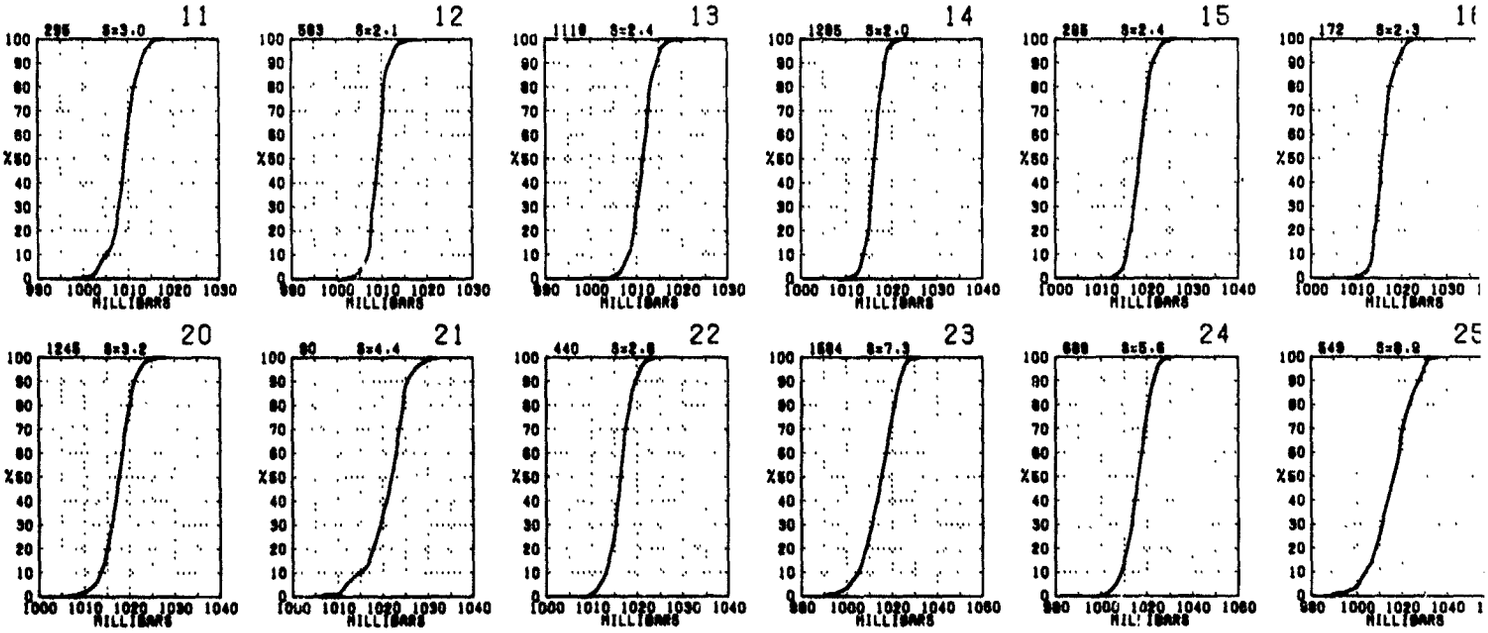
Vector mean wind is plotted from the direction which the mean flow occurs with the magnitude in knots at the end of the vector.

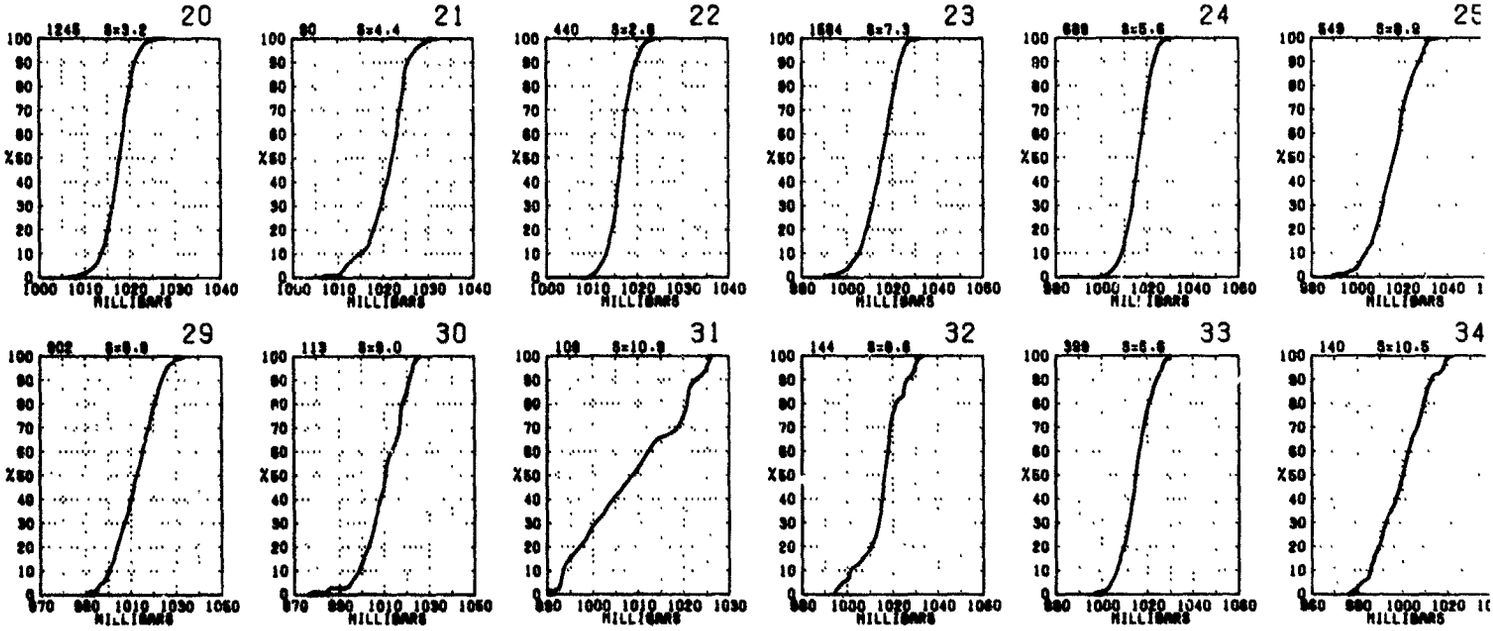
10.2 Vector mean wind is from the northeast at 10.2 knots.

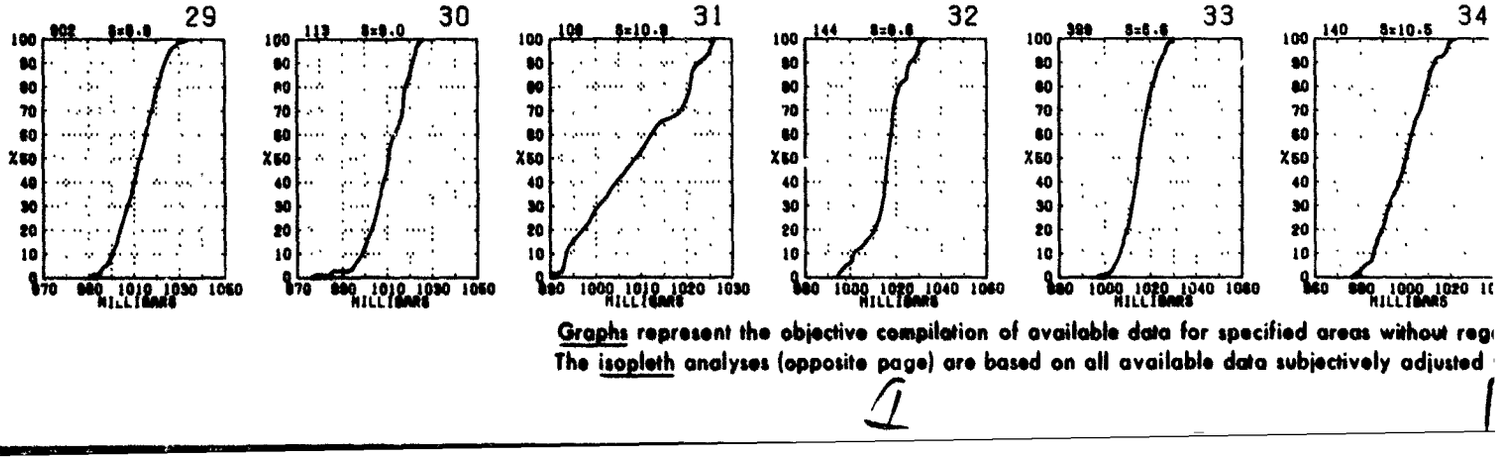
BLUE LINE - Scalar mean wind speed (kts.)

RED LINE - Mean sea level pressure (mbs.)









Graphs represent the objective compilation of available data for specified areas without reg
The isopleth analyses (opposite page) are based on all available data subjectively adjusted

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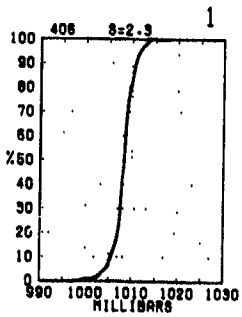
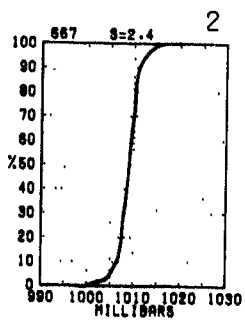
NOVEMBER

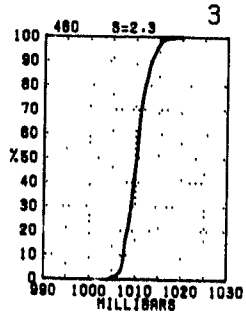
equal to or less than the

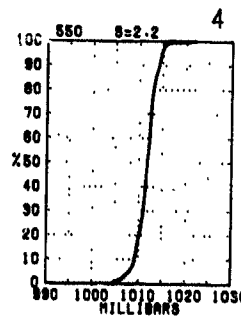
flow occurs with the

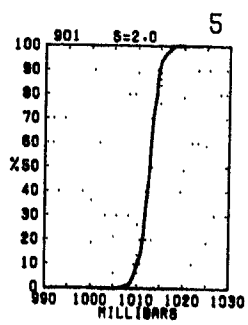
ors

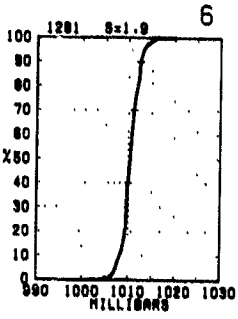


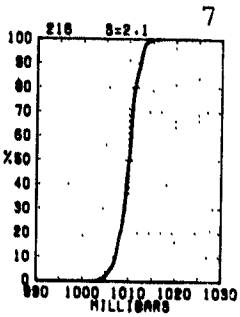


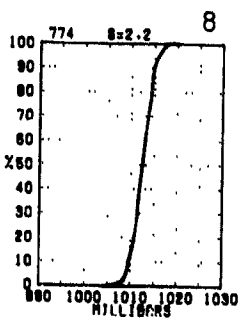


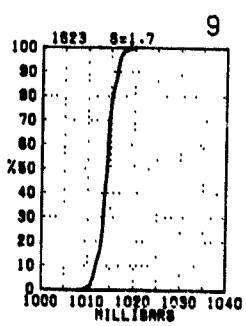


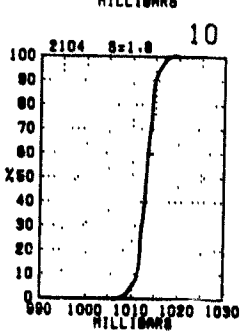


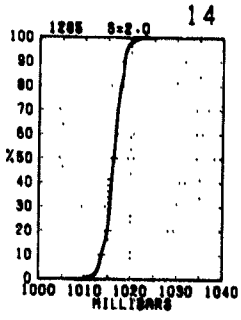


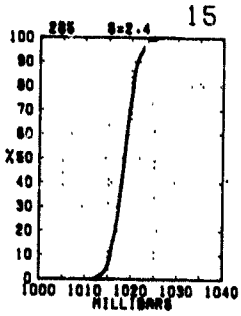


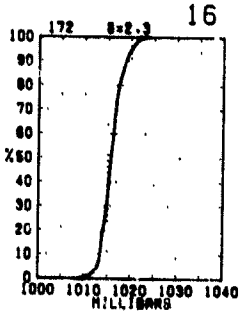


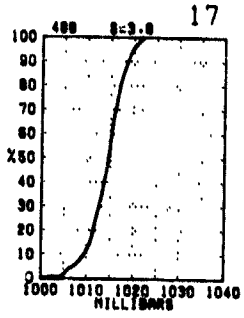


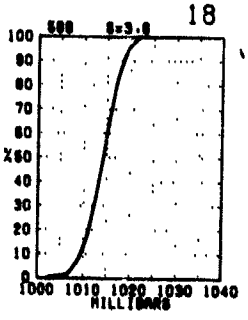


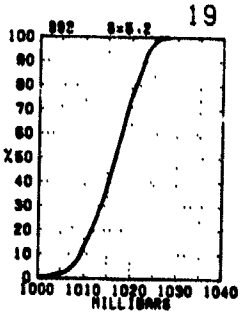


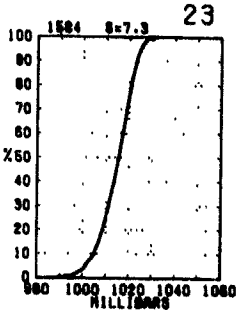


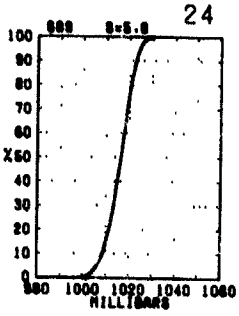


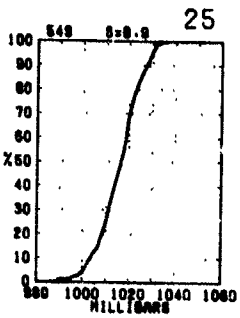


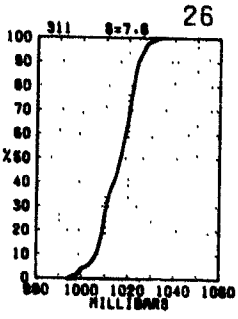


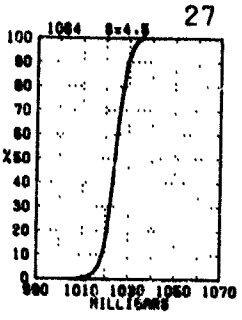


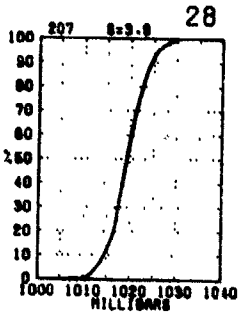


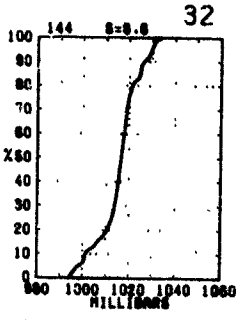


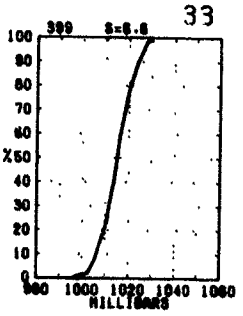


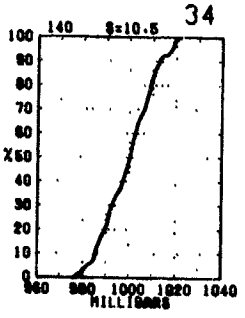


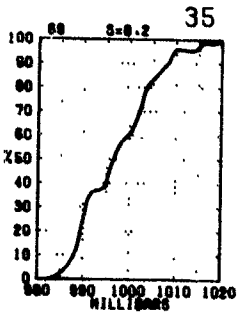


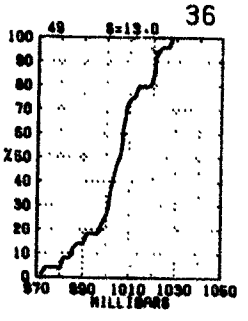


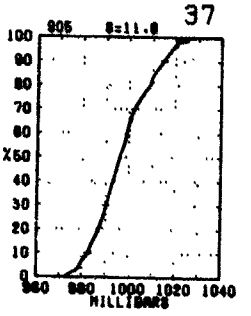








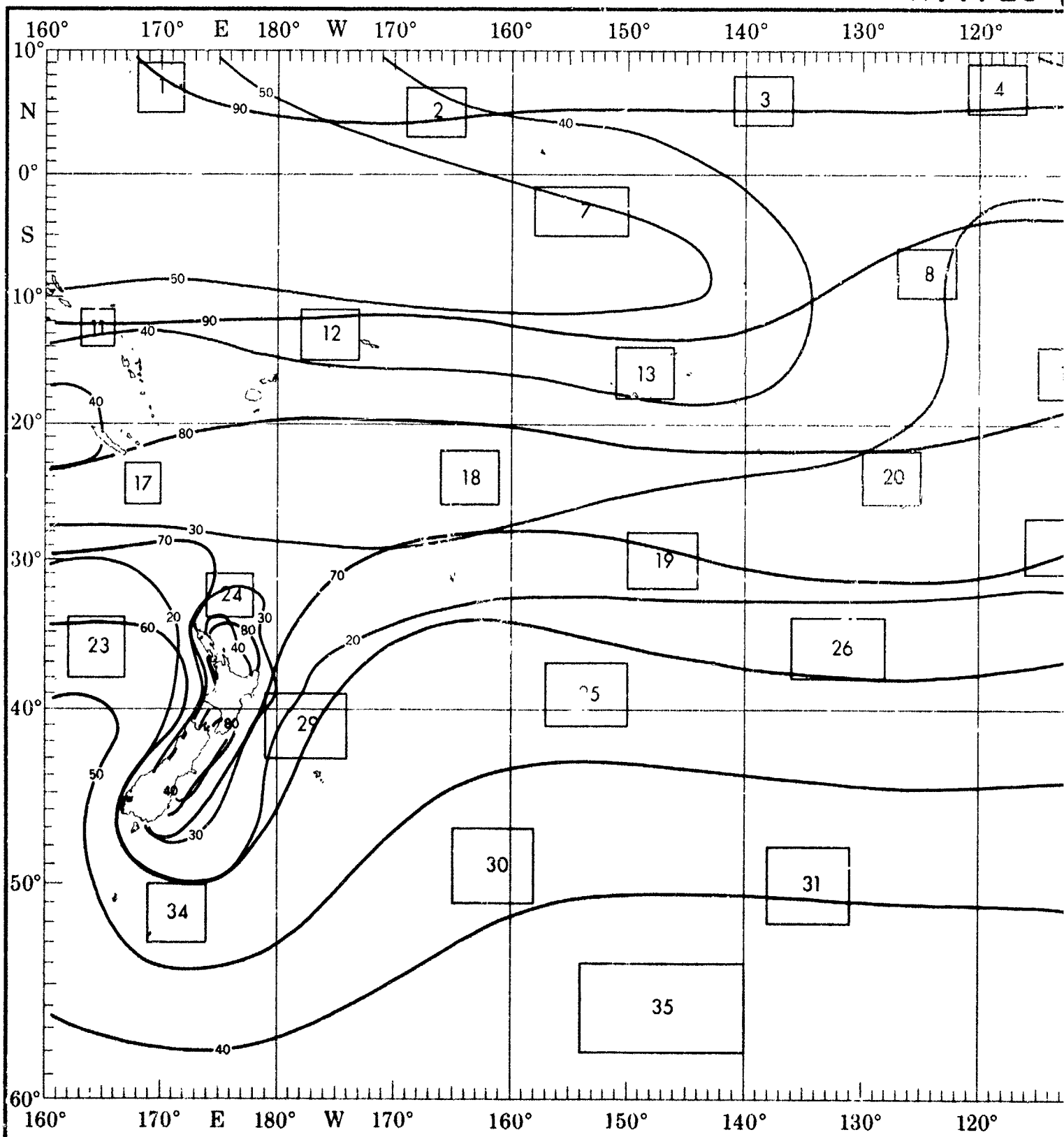




e objective compilation of available data for specified areas without regard to suspected biases.
s (opposite page) are based on all available data subjectively adjusted where bias was evident.

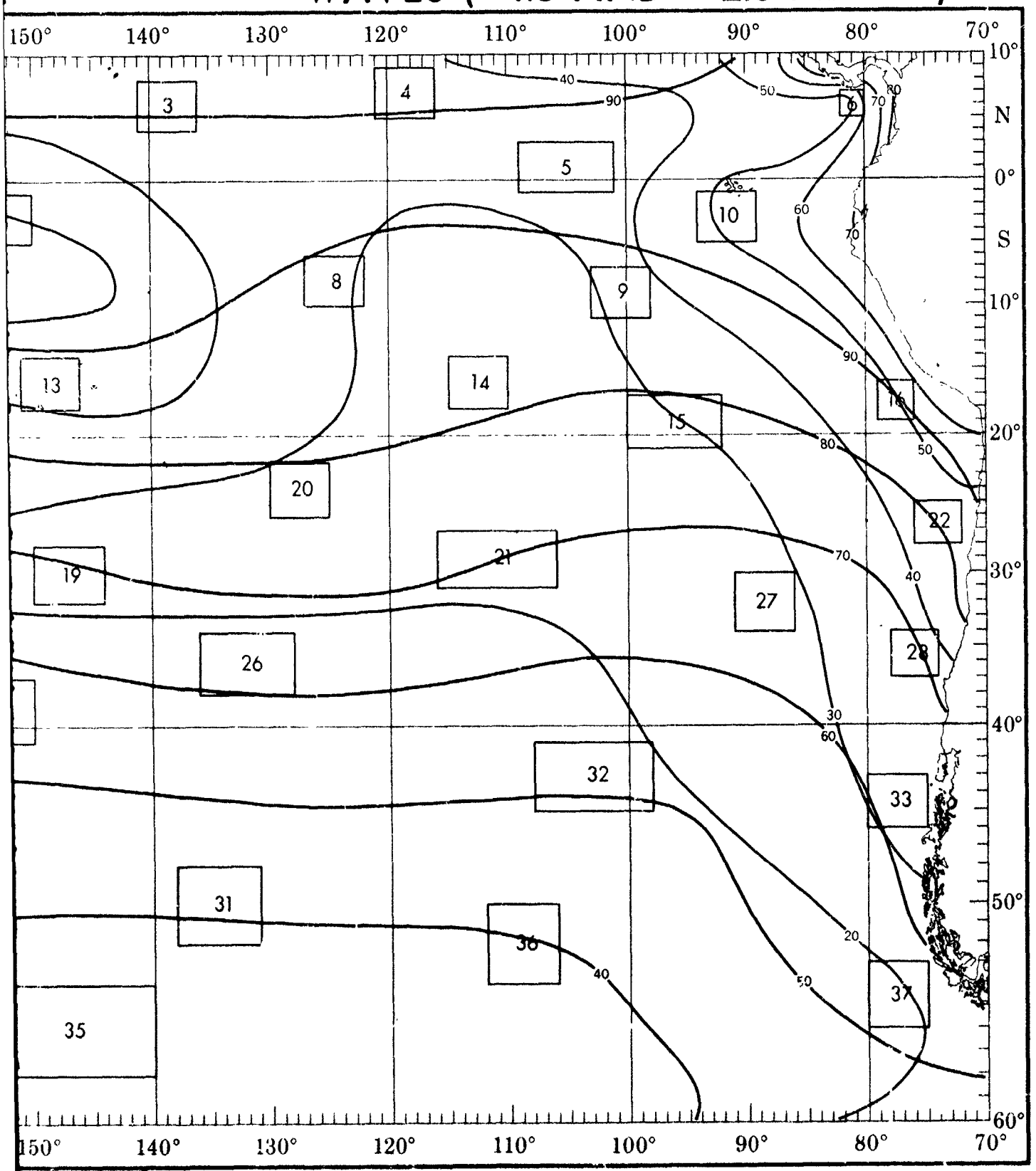
NOVEMBER

WAVES



1

WAVES (<1.5 AND <2.5 METERS)

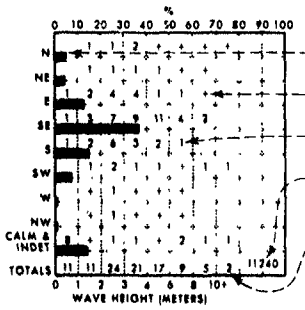


WAVE DIRECTION AND HEIGHT

Wave direction and height

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



—(5% of all waves were from the N)

+ indicates < 5% but >0

—(1% of all waves were from the S with heights from 6-7.5 meters)

—Number of observations

—(2% of the waves from all directions had heights ≥10 meters.)

WAVE HEIGHT INTERVAL

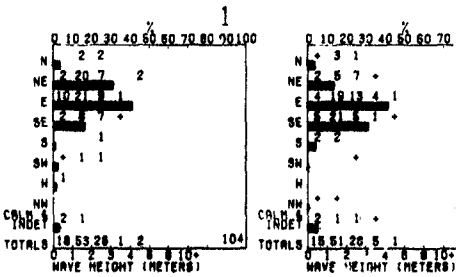
Feet	0-2	3-6	7-9	10-12	13-19	20-25	26-32	≥33
Meters	0-.5	1-1.5	2-2.5	3-3.5	4-5.5	6-7.5	8-9.5	≥10

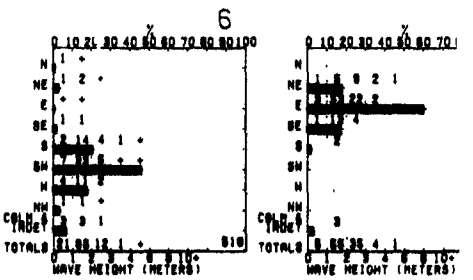
0 1 2 3 4 6 8 10+

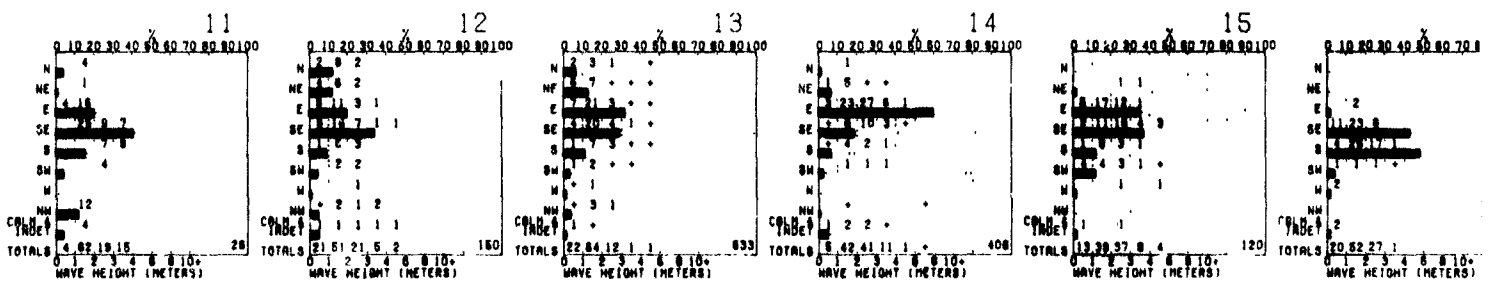
Printed scale on bottom of chart

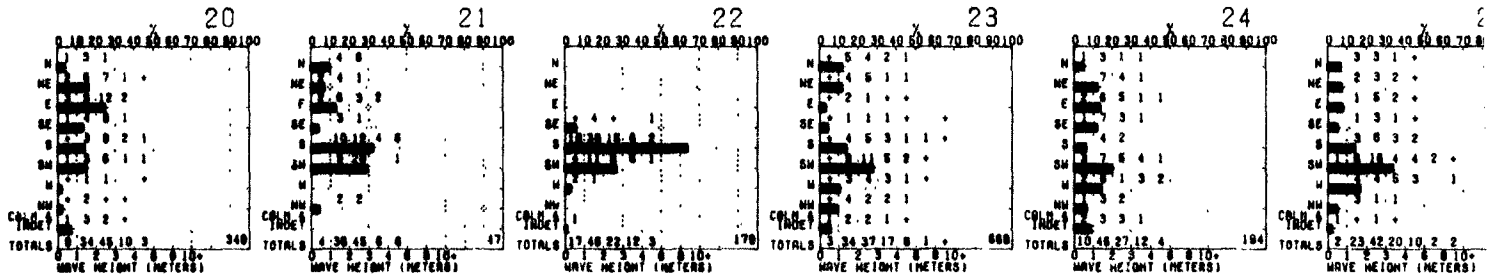
BLUE LINE Percent frequency of wave height <1.5 meters (5 feet)

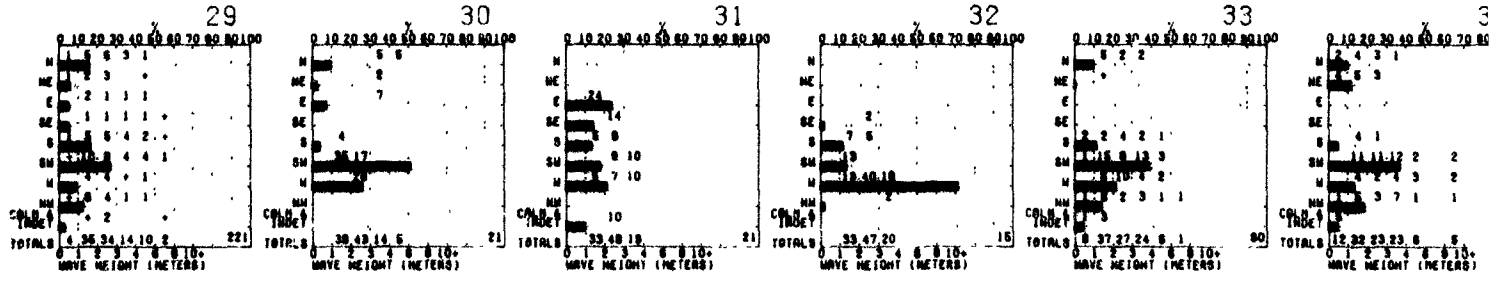
RED LINE Percent frequency of wave height <2.5 meters (8 feet)











Graphs represent the objective compilation of available data for specified areas without re

The isopleth analyses (opposite page) are based on all available data subjectively adjustec

D HEIGHT

NOVEMBER

frequency of waves from

n: percent frequency of wave

neters)

s)

26	32	≥33
8	9	≥10

10+

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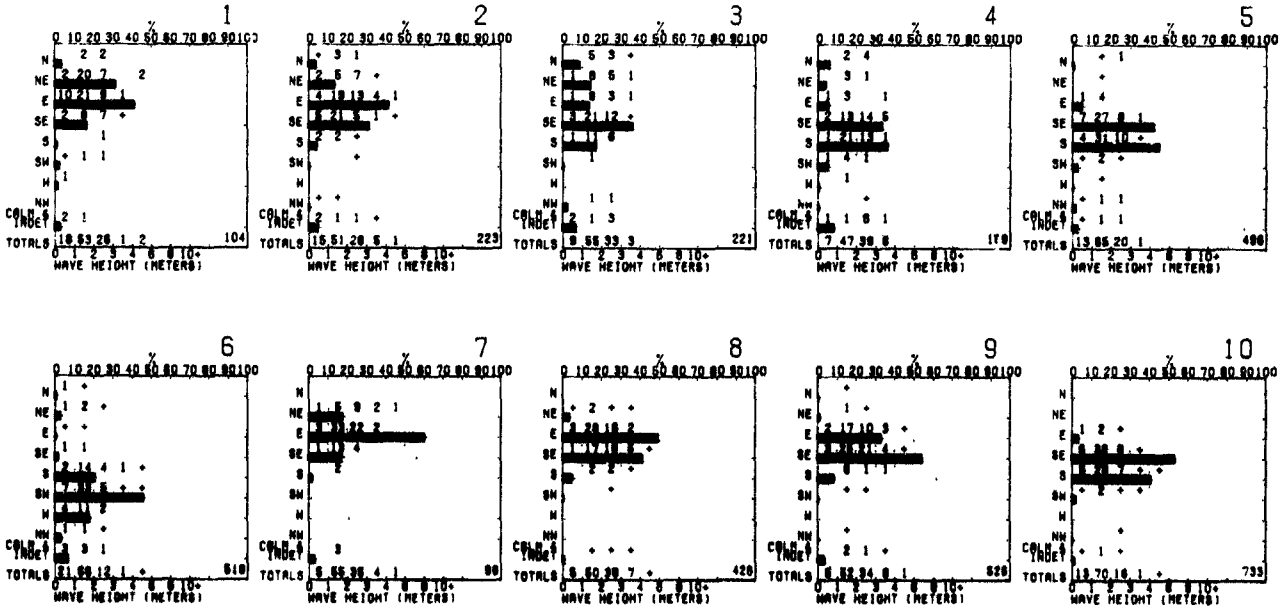
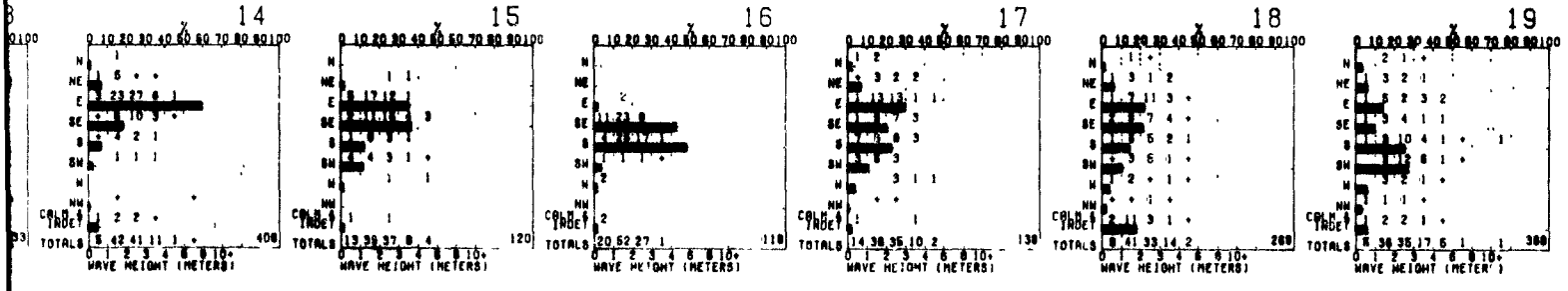
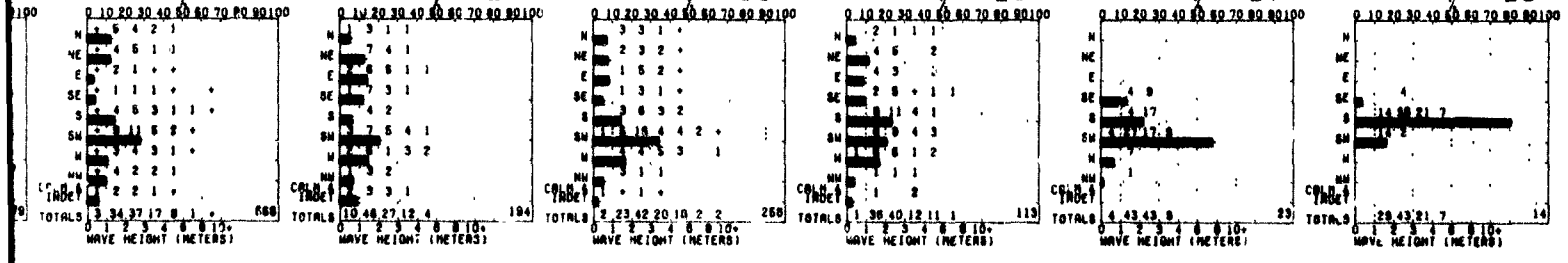
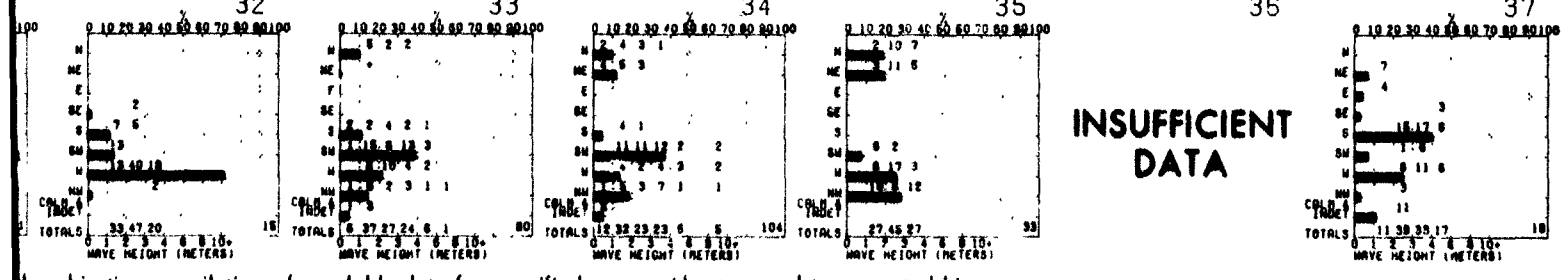






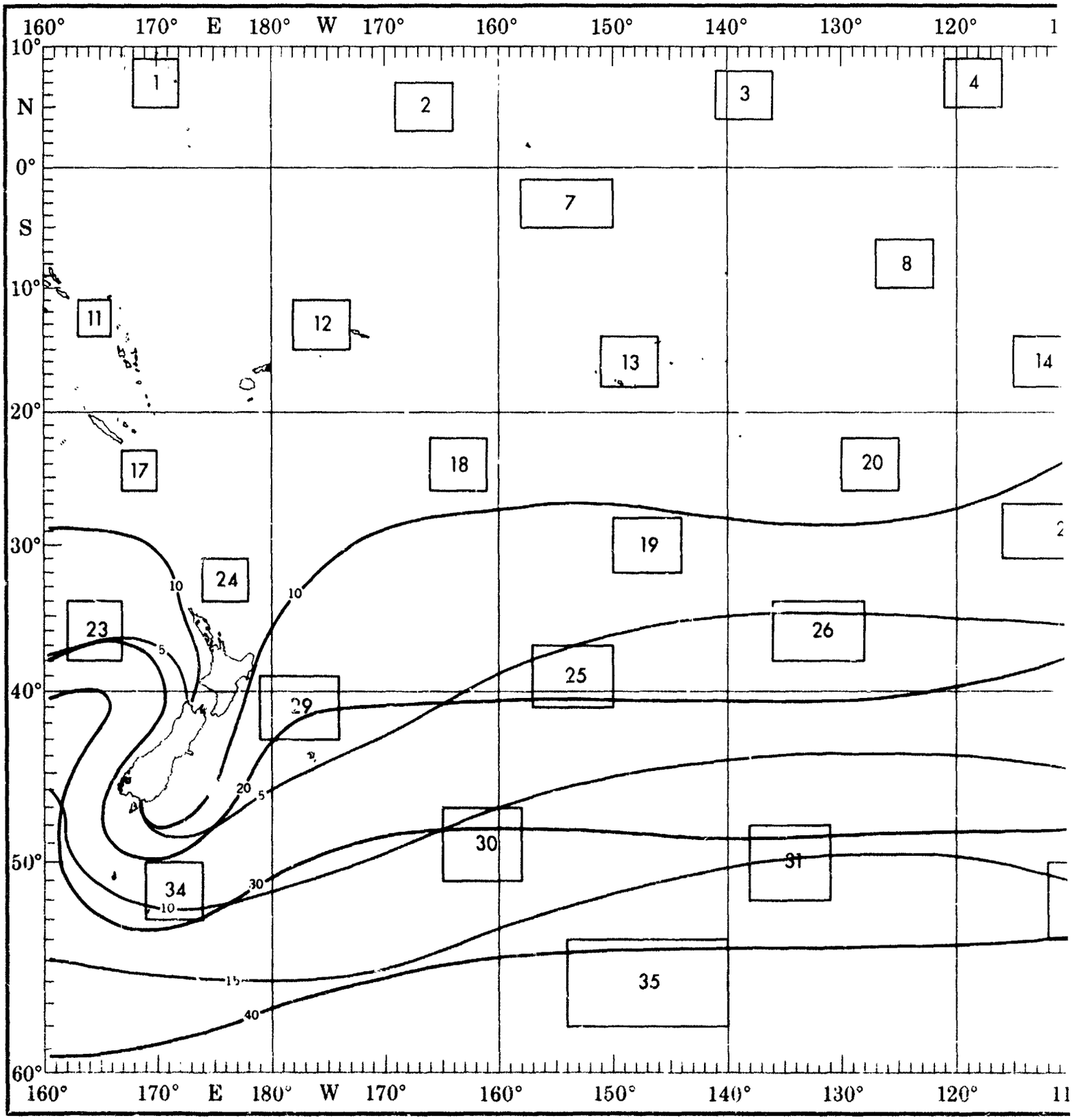


he objective compilation of available data for specified areas without regard to suspected biases.

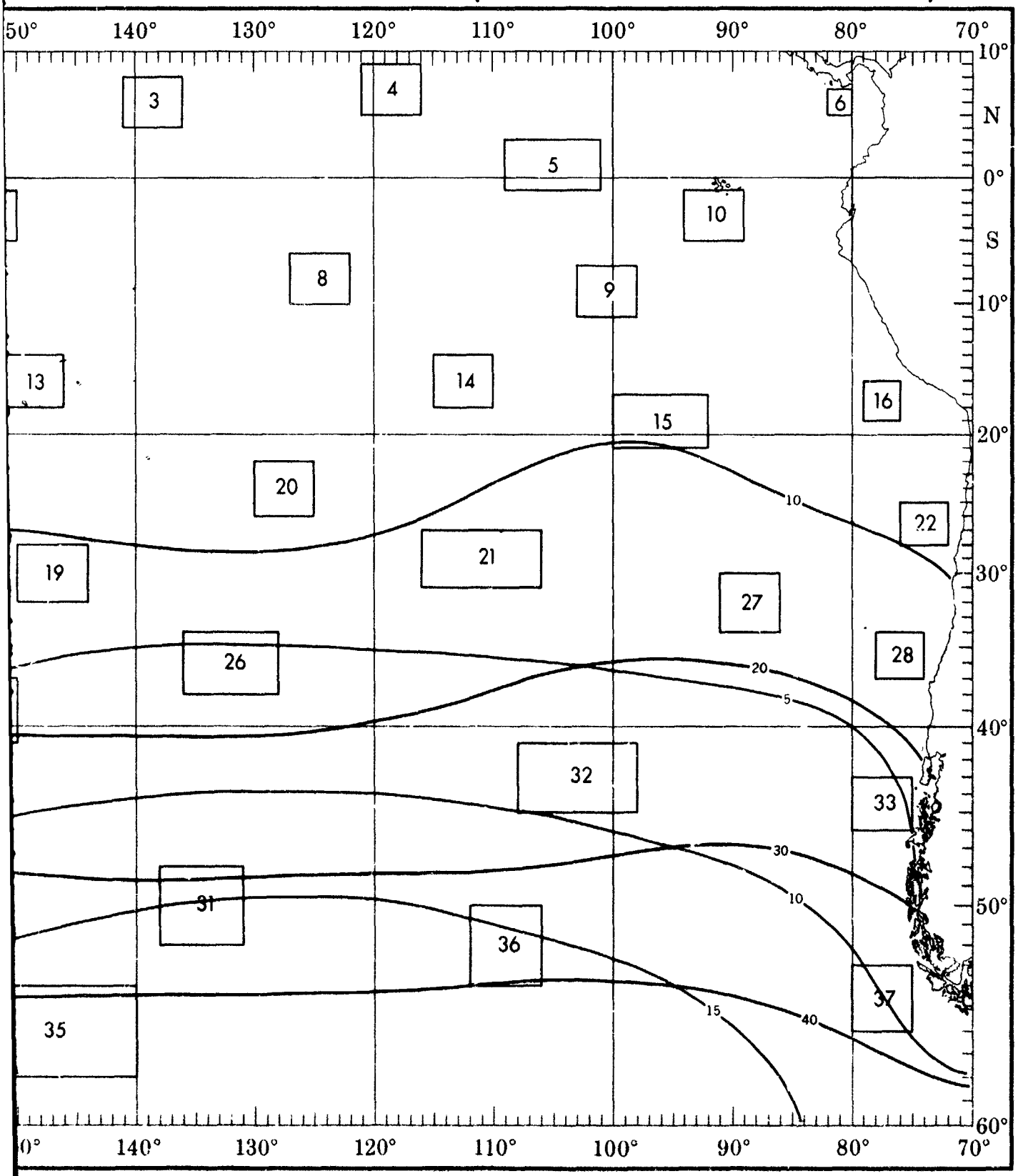
es (opposite page) are based on all available data subjectively adjusted where bias was evident.

NOVEMBER

WAVES (



WAVES (≥3.5 AND ≥6 METERS)



WAVE PERIOD AND HEIGHT

Percent frequency of occurrence of wave period and height

PERIOD (Seconds)

HEIGHT (FEET)	≤6	6-7	8-9	10-11	12-13	>13	IND
0-3	21	3	1	+	2	+	6
3-6	22	16	6	2	1	+	+
6-9	3	6	4	3	1	+	+
9-12	+	1	1	1	1	+	+
12-15	+	+	+	+	+	+	0
15-18	0	+	+	0	0	+	0
18-21	0	0	0	0	+	0	0
≥21	0	0	0	0	0	+	0

4010

—(2% of observed waves had a height of 1-1.5 meters and a period of 10-11 seconds.)

+ indicates <.5% but >0

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

BLUE LINE - Percent frequency of wave height ≥3.5 meters (12 feet)

RED LINE - Percent frequency of wave height ≥6 meters (20 feet)

1

PERIOD (SECONDS)

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	14	0	2	0	0	0	2
1-1.5	40	8	1	0	3	0	1
2-2.5	3	17	4	1	0	0	1
3-3.5	0	1	0	0	0	0	0
4-5.5	0	2	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

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1

PERIOD (SECONDS

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	
0-1.5	11	3	2	+	0		
1-1.5	17	17	8	3	0		
2-2.5	3	13	6	3	1		
3-3.5	+	1	1	2	+		
4-5.5	+	+	+	0	0		
6-7.5	0	0	0	0	0		
8-9.5	0	0	0	0	0		
≥10	0	0	0	0	0		

6

PERIOD (SECONDS)

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	16	3	0	1	0	0	4
1-1.5	30	21	5	1	1	+	5
2-2.5	4	4	1	1	1	+	1
3-3.5	0	1	+	0	0	0	0
4-5.5	0	0	+	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

536

PERIOD (SECONDS

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	
0-1.5	3	0	1	0	0	0	
1-1.5	23	11	2	3	3	0	
2-2.5	13	13	2	2	0	3	
3-3.5	0	2	2	0	0	0	
4-5.5	0	0	0	0	0	0	
6-7.5	0	0	0	0	0	0	
8-9.5	0	0	0	0	0	0	
≥10	0	0	0	0	0	0	

11

PERIOD (SECONDS)

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	10	0	0	0	0	0	3
1-1.5	24	17	3	0	3	0	7
2-2.5	0	7	7	3	0	0	0
3-3.5	0	10	3	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

29

12

PERIOD (SECONDS)

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	18	0	1	0	0	0	3
1-1.5	26	15	4	3	1	1	1
2-2.5	5	9	3	2	1	0	1
3-3.5	0	3	1	0	0	0	1
4-5.5	0	1	0	0	0	0	1
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

150

13

PERIOD (SECONDS)

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	12	8	2	1	0	0	2
1-1.5	24	22	10	5	1	+	1
2-2.5	+	5	4	2	+	+	+
3-3.5	0	1	+	0	0	0	0
4-5.5	0	1	0	0	+	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

640

14

PERIOD (SECONDS)

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	4	0	0	0	0	0	1
1-1.5	18	12	5	2	1	1	3
2-2.5	8	12	9	7	+	1	4
3-3.5	1	4	3	1	1	+	+
4-5.5	0	0	+	+	0	0	0
6-7.5	0	0	0	0	0	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

407

15

PERIOD (SECONDS)

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	15	1	0	0	0	0	1
1-1.5	9	19	7	2	0	0	0
2-2.5	3	21	8	2	0	0	2
3-3.5	0	3	3	1	0	0	0
4-5.5	0	2	2	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

126

1

PERIOD (SECONDS

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	
0-1.5	9	4	2	2	0	0	
1-1.5	23	22	3	2	0	0	
2-2.5	3	9	6	3	3	2	
3-3.	0	0	0	1	0	0	
4-5.5	0	0	0	0	0	0	
6-7.5	0	0	0	0	0	0	
8-9.5	0	0	0	0	0	0	
≥10	0	0	0	0	0	0	

1

20

PERIOD (SECONDS)

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	8	1	0	1	0	0	4
1-1.5	16	8	4	2	+	0	3
2-2.5	6	19	7	5	2	1	2
3-3.5	+	3	1	2	2	1	1
4-5.5	0	0	2	0	1	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

356

21

PERIOD (SECONDS)

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	4	0	0	0	0	0	0
1-1.5	13	6	11	4	4	0	0
2-2.5	9	6	17	9	0	4	0
3-3.5	2	4	0	0	0	0	0
4-5.5	0	0	0	0	6	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

47

22

PERIOD (SECONDS)

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	14	1	1	1	0	0	2
1-1.5	16	17	8	1	1	0	1
2-2.5	4	8	4	3	1	1	1
3-3.5	2	3	1	3	3	1	0
4-5.5	1	1	0	1	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

183

23

PERIOD (SECONDS)

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	2	0	0	+	0	0	1
1-1.5	11	13	8	2	1	0	1
2-2.5	7	11	12	4	1	+	2
3-3.5	+	5	4	4	2	+	1
4-5.5	+	1	4	2	1	1	+
6-7.5	0	+	1	0	0	+	0
8-9.5	0	0	0	0	0	+	0
≥10	0	0	0	0	0	0	0

668

24

PERIOD (SECONDS)

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	8	2	0	0	0	0	2
1-1.5	12	16	10	3	2	0	4
2-2.5	4	7	8	4	1	0	2
3-3.5	1	5	4	1	1	0	1
4-5.5	1	1	1	1	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

196

2

PERIOD (SECONDS)

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	1	0	0	0	0	0	0
1-1.5	8	8	5	+	0	0	
2-2.5	4	11	19	1	4	2	
3-3.5	0	7	6	8	1	0	
4-5.5	2	2	3	2	1	0	
6-7.5	0	0	+	1	+	0	
8-9.5	0	0	0	1	1	0	
≥10	0	0	0	0	0	0	

2

29

PERIOD (SECONDS)

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	3	0	0	1	0	0	+
1-1.5	15	12	5	+	0	+	1
2-2.5	8	10	9	2	1	+	3
3-3.5	1	3	6	3	1	+	0
4-5.5	0	1	3	3	4	0	0
6-7.5	0	0	0	+	1	0	1
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

221

30

PERIOD (SECONDS)

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	0	0	0	0	0	0	0
1-1.5	0	24	14	0	0	0	0
2-2.5	10	0	10	24	0	0	0
3-3.5	0	0	0	14	0	0	0
4-5.5	0	0	0	5	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

21

31

PERIOD (SECONDS)

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	0	0	0	0	0	0	0
1-1.5	24	10	0	0	0	0	0
2-2.5	0	19	19	0	0	0	10
3-3.5	0	5	10	5	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

21

32

PERIOD (SECONDS)

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	0	0	0	0	0	0	0
1-1.5	13	20	0	0	0	0	0
2-2.5	0	0	47	0	0	0	0
3-3.5	0	0	20	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

15

33

PERIOD (SECONDS)

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	4	0	0	0	0	0	1
1-1.5	12	17	4	0	1	0	2
2-2.5	4	3	12	3	3	0	0
3-3.5	0	8	7	2	4	0	3
4-5.5	0	1	2	6	1	0	1
6-7.5	0	1	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

90

3

PERIOD (SECONDS)

HEIGHT (METRES)	<6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	7	1	0	0	0	0	0
1-1.5	14	6	8	1	2	0	
2-2.5	8	10	3	1	0	0	
3-3.5	3	4	9	7	0	0	
4-5.5	0	2	0	3	1	0	
6-7.5	0	0	0	0	0	0	
8-9.5	0	4	0	0	0	1	
≥10	0	0	0	0	0	0	

1

Graphs represent the objective compilation of available data for specified areas without reg

The isopleth analyses (opposite page) are based on all available data subjectively adjusted

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1

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	14	0	2	0	0	0	2
1-1.5	40	8	1	0	3	0	1
2-2.5	3	17	4	1	0	0	1
3-3.5	0	1	0	0	0	0	0
4-4.5	0	2	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-8.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

104

2

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	11	3	2	+	0	0	2
1-1.5	17	17	8	3	0	1	3
2-2.5	3	13	6	3	1	+	1
3-3.5	+	1	1	2	+	0	+
4-4.5	+	+	+	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-8.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

232

3

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	+	0	0	0	0	3
1-1.5	25	12	9	3	2	0	3
2-2.5	4	8	10	4	+	2	3
3-3.5	1	1	+	0	0	0	0
4-4.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-8.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

224

4

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	1	0	0	0	0	1
1-1.5	17	12	11	2	2	0	1
2-2.5	8	10	6	4	1	0	8
3-3.5	2	5	0	0	0	0	1
4-4.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-8.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

174

5

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	9	2	2	1	0	0	2
1-1.5	26	22	9	3	2	+	2
2-2.5	2	5	7	2	2	1	2
3-3.5	+	1	+	+	+	0	0
4-4.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-8.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

506

6

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	16	3	0	1	0	0	4
1-1.5	30	21	5	1	1	+	5
2-2.5	4	4	1	1	1	+	1
3-3.5	0	1	+	0	0	0	0
4-4.5	0	0	+	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-8.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

536

7

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	0	1	0	0	0	2
1-1.5	23	11	2	3	3	0	12
2-2.5	13	13	2	2	0	3	1
3-3.5	0	2	2	0	0	0	0
4-4.5	0	0	0	0	0	0	1
6-7.5	0	0	0	0	0	0	0
8-8.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

99

8

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	+	0	+	0	0	1
1-1.5	21	16	7	1	1	+	3
2-2.5	4	16	9	5	1	+	1
3-3.5	+	4	2	1	+	0	+
4-4.5	0	+	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-8.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

427

9

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	6	+	0	0	0	0	+
1-1.5	21	18	4	2	2	+	4
2-2.5	6	11	10	2	1	1	2
3-3.5	1	3	2	+	+	0	+
4-4.5	0	+	+	1	0	0	0
6-7.5	0	0	0	0	0	0	0
8-8.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

532

10

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	11	1	+	+	0	0	1
1-1.5	29	25	8	1	3	1	2
2-2.5	3	6	3	2	1	1	+
3-3.5	0	+	+	+	+	0	0
4-4.5	+	0	0	1	0	0	0
6-7.5	0	0	0	0	0	0	0
8-8.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

780

14

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	0	0	0	0	0	1
1-1.5	18	12	5	2	1	1	3
2-2.5	8	12	9	7	+	1	4
3-3.5	1	4	3	1	1	+	+
4-4.5	0	0	+	+	0	0	0
6-7.5	0	0	0	0	0	+	0
8-8.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

407

15

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	16	1	0	0	0	0	1
1-1.5	9	19	7	2	0	0	0
2-2.5	3	21	6	2	0	0	2
3-3.5	0	3	3	1	0	0	0
4-4.5	0	2	2	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-8.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

126

16

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	9	4	2	2	0	0	3
1-1.5	23	22	3	2	0	0	3
2-2.5	3	8	8	3	3	2	1
3-3.5	0	0	0	1	0	0	0
4-4.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-8.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

116

17

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	15	0	0	0	0	0	1
1-1.5	17	11	7	2	0	0	1
2-2.5	1	18	8	4	1	1	1
3-3.5	0	1	5	3	0	1	0
4-4.5	0	0	2	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-8.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

142

18

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	1	1	+	0	0	4
1-1.5	15	10	4	2	0	0	10
2-2.5	6	12	7	4	1	0	3
3-3.5	3	4	3	2	1	0	1
4-4.5	0	1	0	1	+	+	0
6-7.5	0	0	0	0	0	0	0
8-8.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

272

19

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	0	0	0	0	0	2
1-1.5	11	13	7	1	1	1	3
2-2.5	3	12	12	4	1	+	2
3-3.5	1	5	6	2	1	1	1
4-4.5	0	2	1	2	+	0	+
6-7.5	0	0	0	1	3	0	0
8-8.5	0	0	0	0	0	0	0
≥10	0	0	1	0	0	0	0

381

23

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	0	0	+	0	0	1
.-1.5	11	13	8	2	1	0	1
2-2.5	7	11	12	4	1	+	2
3-3.5	+	5	4	4	2	+	1
4-4.5	+	1	4	2	1	1	+
6-7.5	0	+	1	0	0	+	0
8-8.5	0	0	0	0	0	+	0
≥10	0	0	0	0	0	0	0

668

24

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	2	0	0	0	0	2
1-1.5	12	16	10	3	2	0	4
2-2.5	4	7	9	4	1	0	2
3-3.5	1	5	4	1	1	0	1
4-4.5	1	1	1	1	0	0	0
6-7.5	0	0	0	0	0	0	0
8-8.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

196

25

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	1	0	0	0	0	0	1
1-1.5	8	8	5	+	0	0	1
2-2.5	4	11	19	1	4	2	1
3-3.5	0	7	5	6	1	0	+
4-4.5	2	2	3	2	1	0	0
6-7.5	0	0	+	1	+	0	0
8-8.5	0	0	0	1	1	0	0
≥10	0	0	0	0	0	0	0

259

26

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	1	0	0	0	0	0	0
1-1.5	12	12	6	1	3	1	1
2-2.5	9	13	12	2	0	4	0
3-3.5	0	1	6	4	0	0	1
4-4.5	0	3	2	1	0	4	1
6-7.5	0	0	1	0	0	0	0
8-8.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

119

27

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	0	0	4	0	0	0	0
1-1.5	4	9	22	9	0	0	0
2-2.5	0	22	9	9	0	4	0
3-3.5	0	0	0	9	0	0	0
4-4.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-8.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

23

28

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	0	0	0	0	0	0	0
1-1.5	7	21	0	0	0	0	0
2-2.5	0	21	21	0	0	0	0
3-3.5	0	7	14	0	0	0	0
4-4.5	0	0	7	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-8.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

14

32

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	0	0	0	0	0	0	0
1-1.5	13	20	0	0	0	0	0
2-2.5	0	0	47	0	0	0	0
3-3.5	0	0	20	0	0	0	0
4-4.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-8.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

15

33

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	0	0	0	0	0	1
1-1.5	12	17	4	0	1	0	2
2-2.5	4	3	12	3	3	0	0
3-3.5	0	8	7	2	4	0	3
4-4.5	0	1	2	0	1	0	1
6-7.5	0	1	0	0	0	0	0
8-8.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

90

34

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	1	0	0	0	0	5
1-1.5	14	8	8	1	2	0	1
2-2.5	8	10	3	1	0	0	1
3-3.5	3	4	9	7	0	0	1
4-4.5	0	2	0	3	1	0	0
6-7.5	0	0	0	0	0	0	0
8-8.5	0	4	0	0	0	1	0
≥10	0	0	0	0	0	0	0

106

35

PERIOD (SECONDS)

HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	0	0	0	0	0	0	0
1-1.5	6	15	6	0	0	0	0
2-2.5	6	33	3	3	0	0	0
3-3.5	0	6	15	6	0	0	0
4-4.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-8.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

33

36

INSUFFICIENT DATA

37

PERIOD (SECONDS)

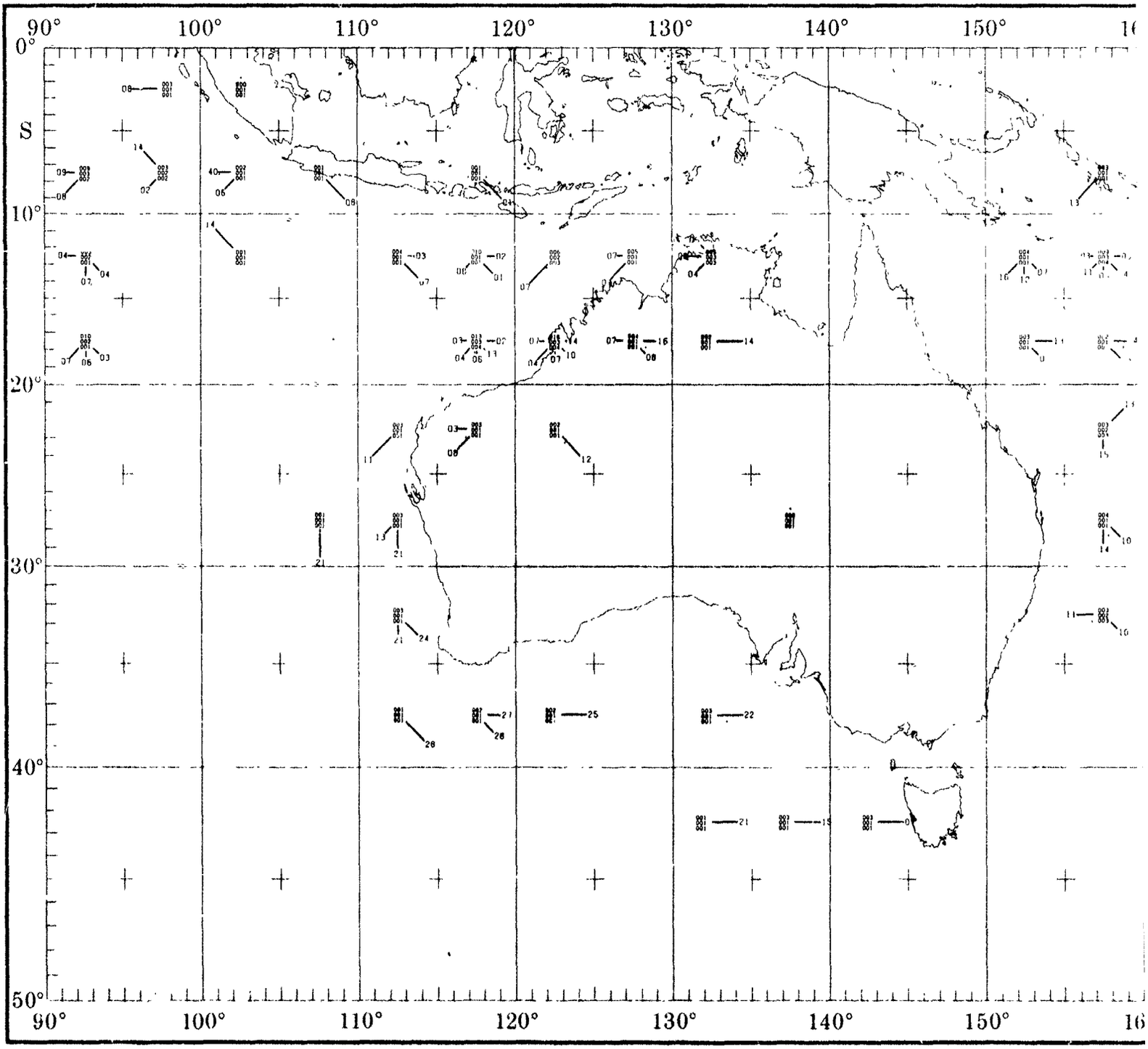
HEIGHT (NTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	0	0	0	0	0	0	0
1-1.5	0	0	11	0	0	0	0
2-2.5	0	11	11	6	0	0	11
3-3.5	11	0	17	6	0	0	0
4-4.5	6	6	6	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-8.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

18

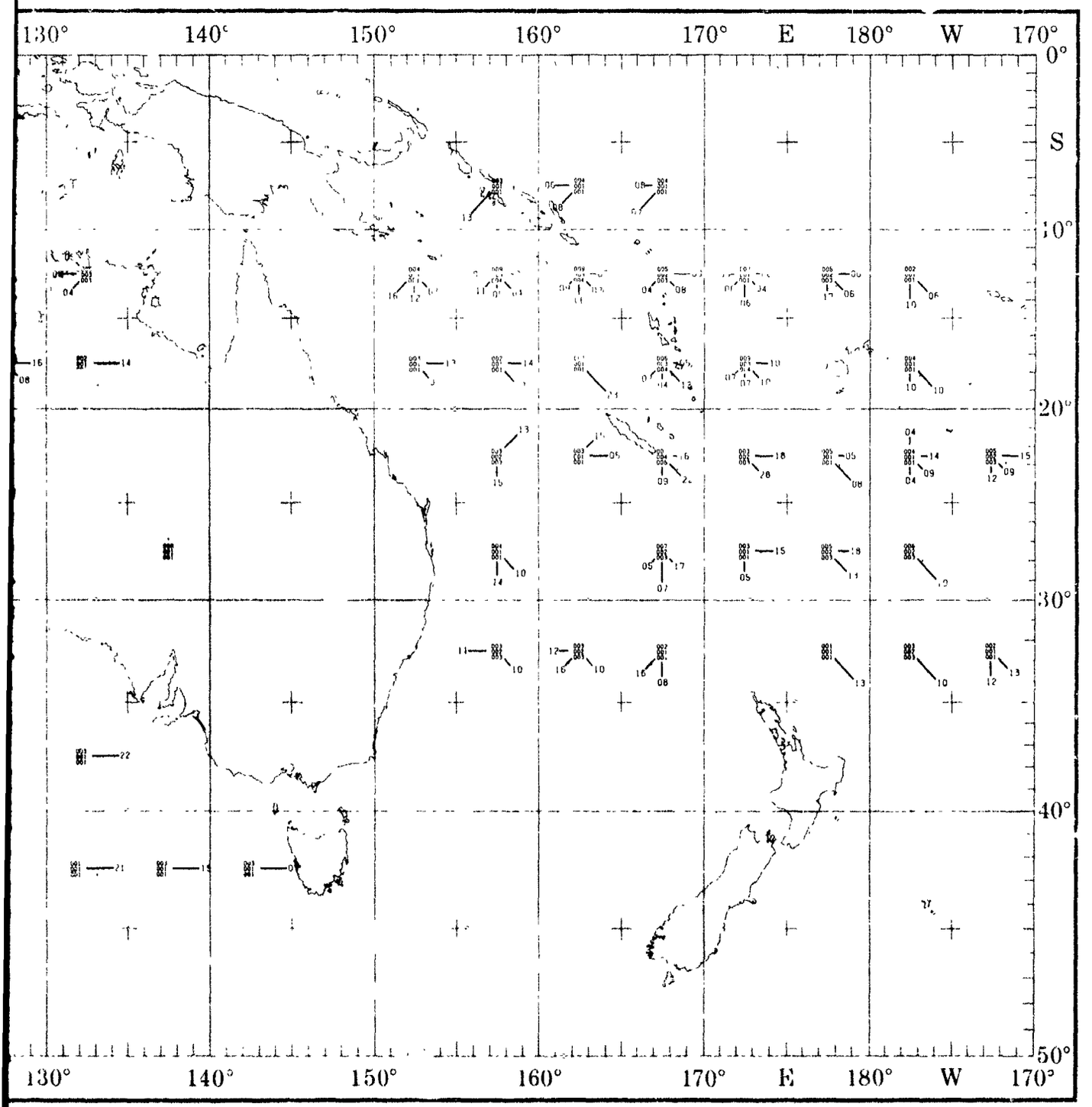
objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

1 1 2

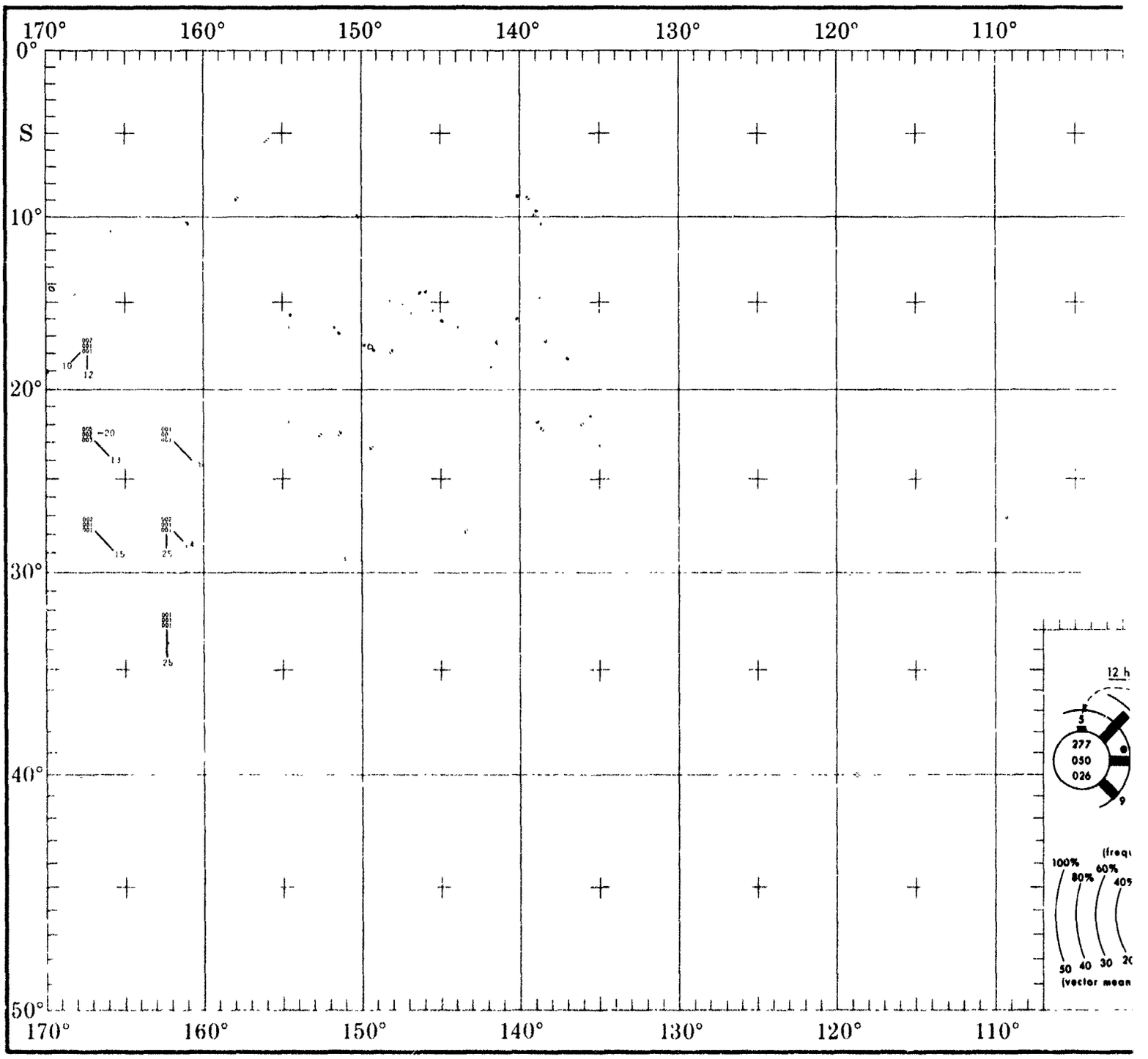
NOVEMBER



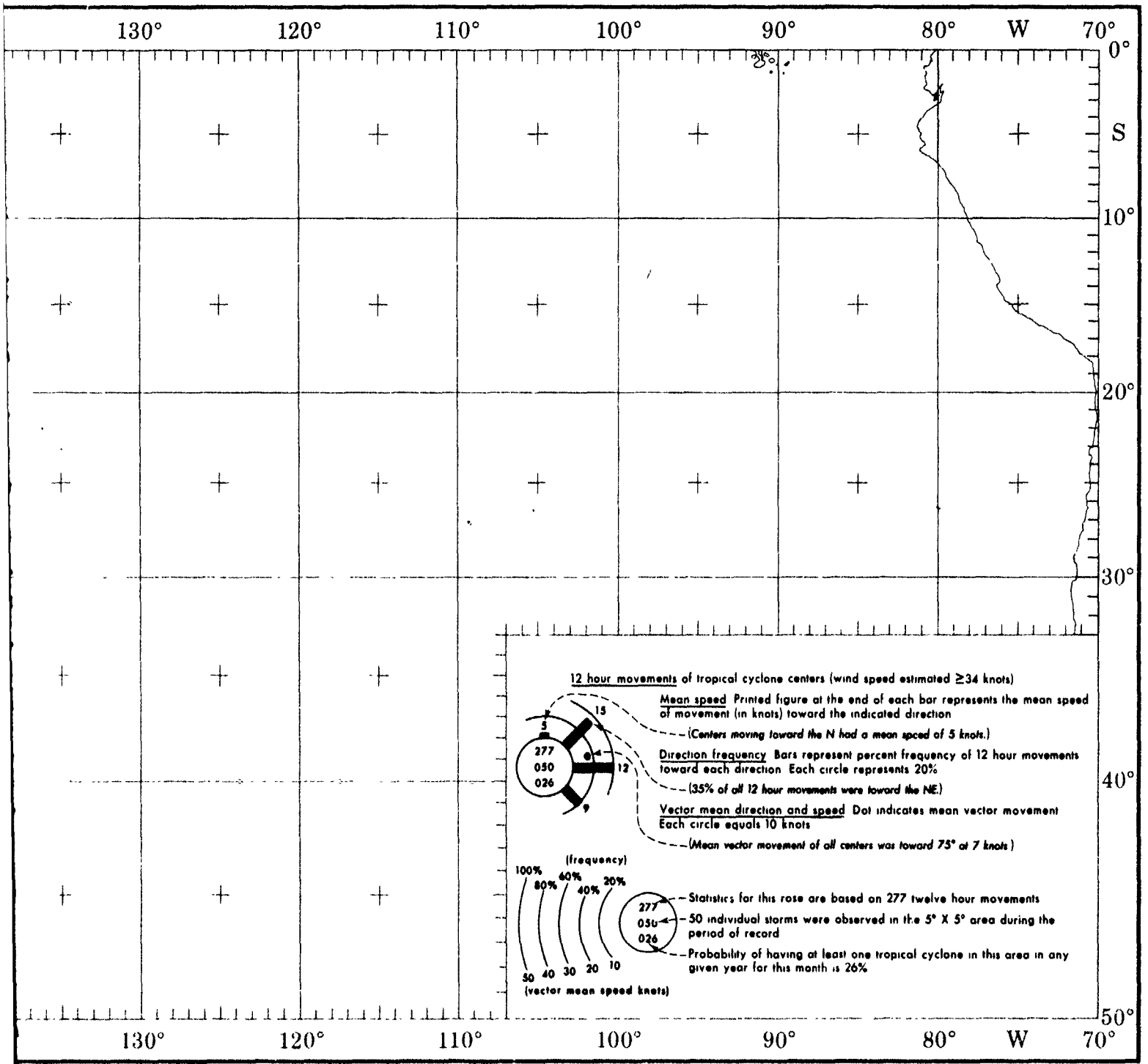
TROPICAL CYCLONE



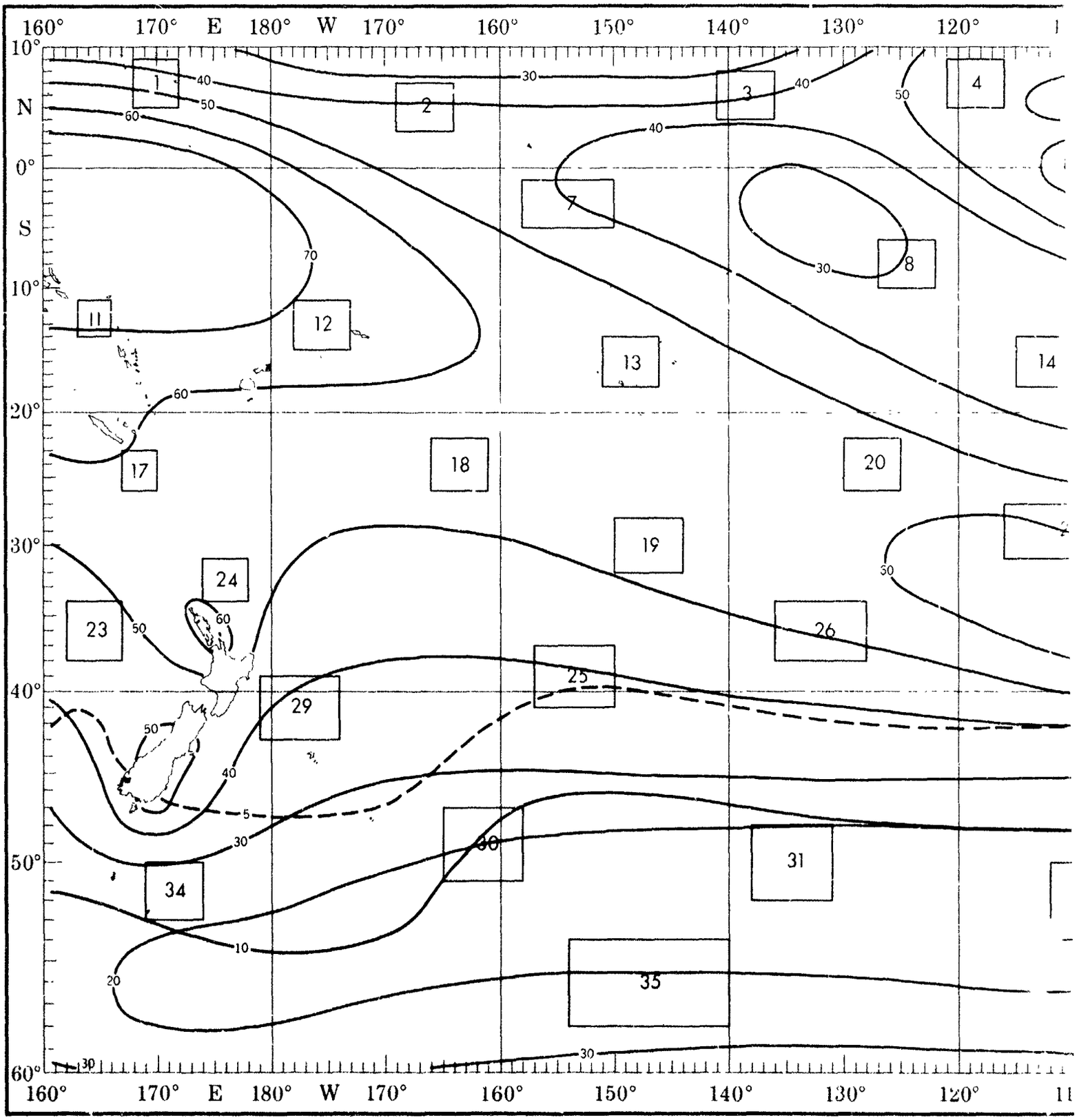
TROPICAL CYCLONE



NOVEMBER


130°
120°
110°
100°
90°
80°
W
70°
0°
S
10°
20°
30°
40°
50°
12 hour movements of tropical cyclone centers (wind speed estimated ≥34 knots)
Mean speed Printed figure at the end of each bar represents the mean speed of movement (in knots) toward the indicated direction
(Centers moving toward the N had a mean speed of 5 knots.)
Direction frequency Bars represent percent frequency of 12 hour movements toward each direction Each circle represents 20%
(35% of all 12 hour movements were toward the NE.)
Vector mean direction and speed Dot indicates mean vector movement Each circle equals 10 knots
(Mean vector movement of all centers was toward 75° at 7 knots)
5
15
12
9
277
050
026
(frequency)
100%
80%
60%
40%
20%
50 40 30 20 10
(vector mean speed knots)
Statistics for this rose are based on 277 twelve hour movements
50 individual storms were observed in the 5° X 5° area during the period of record
Probability of having at least one tropical cyclone in this area in any given year for this month is 26%

DECEMBER


160° 170° E 180° W 170° 160° 150° 140° 130° 120°
10° N
0°
S
10°
20°
30°
40°
50°
60°
1
2
3
4
7
8
11
12
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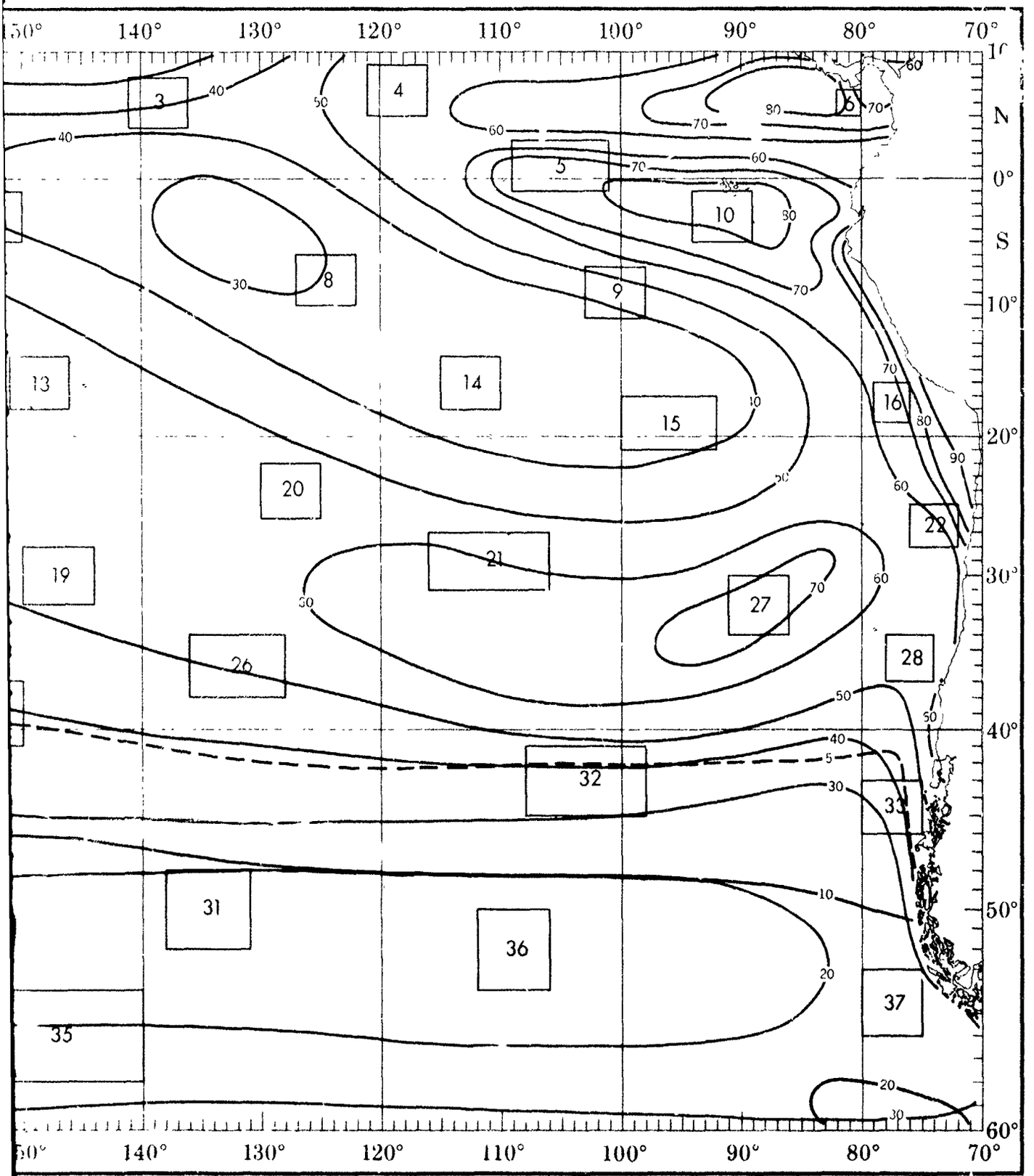
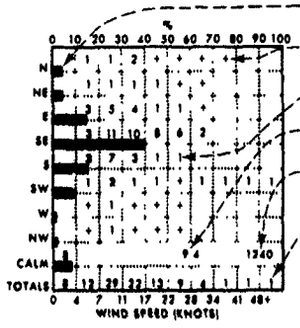
5

SURFACE WINDS



WIND DIRECTION AND SPEED

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



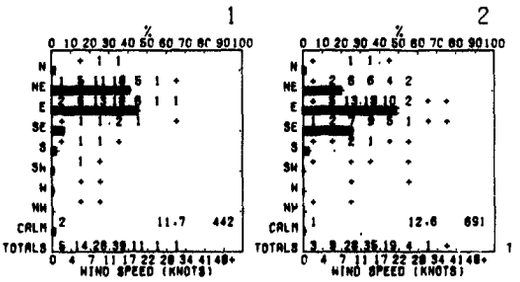
WIND SPEED INTERVAL (KNOTS)

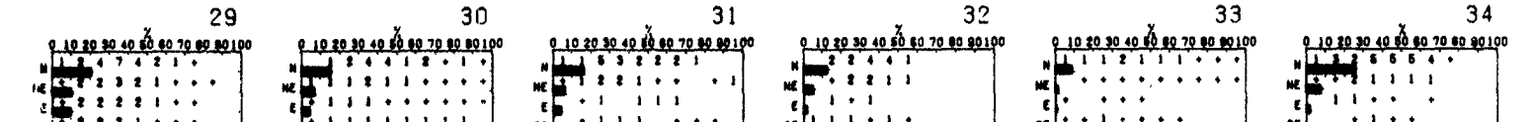
0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	≥48
0	4	7	11	17	22	28	34	41	48+

Printed scale on bottom of chart

BLUE LINE - Percent frequency of wind speed ≤10 knots

RED LINE - Percent frequency of wind speed ≥34 knots





Graphs represent the objective compilation of available data for specified areas without regard t

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SPEED

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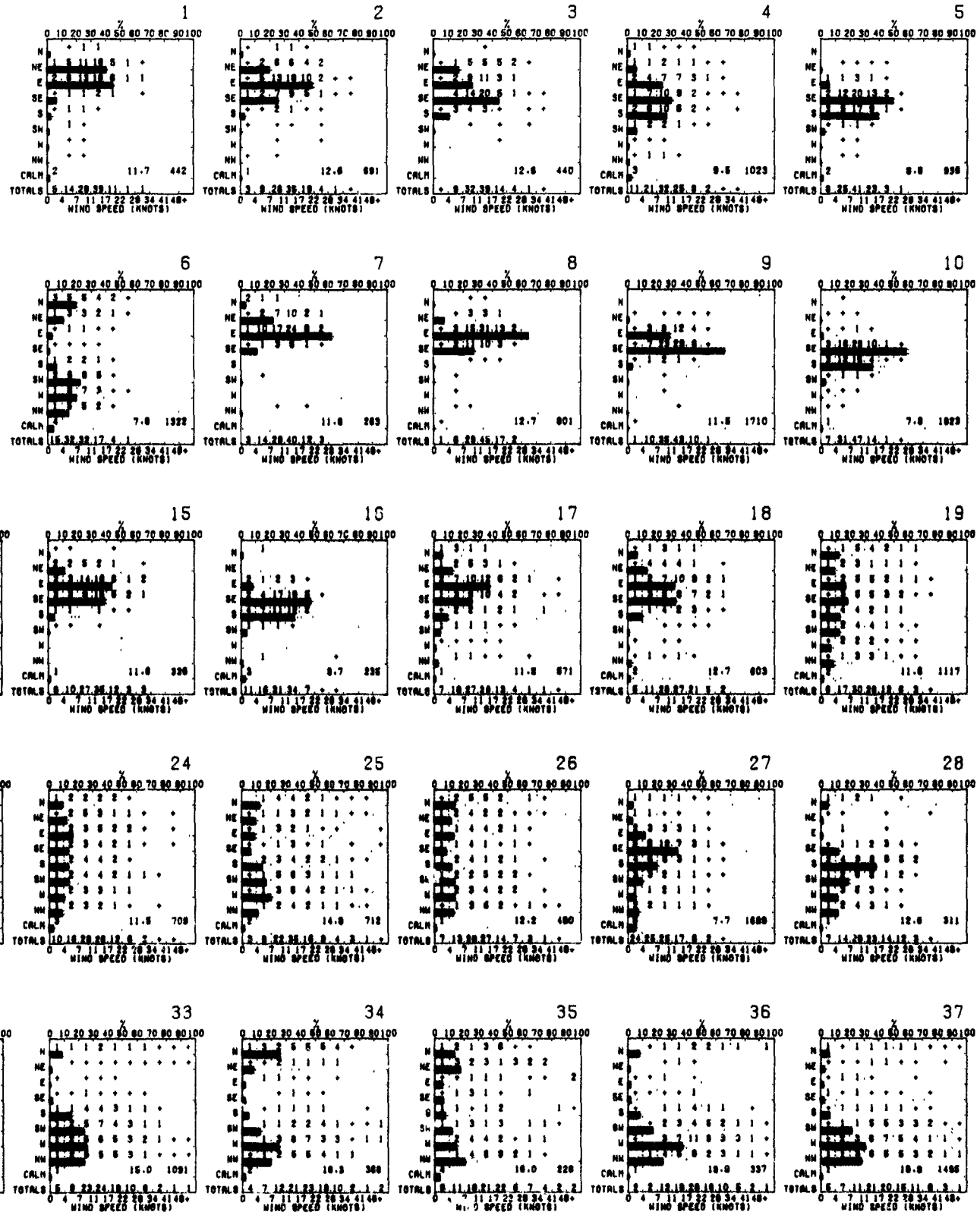
1-47 | ≥48
48+



objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

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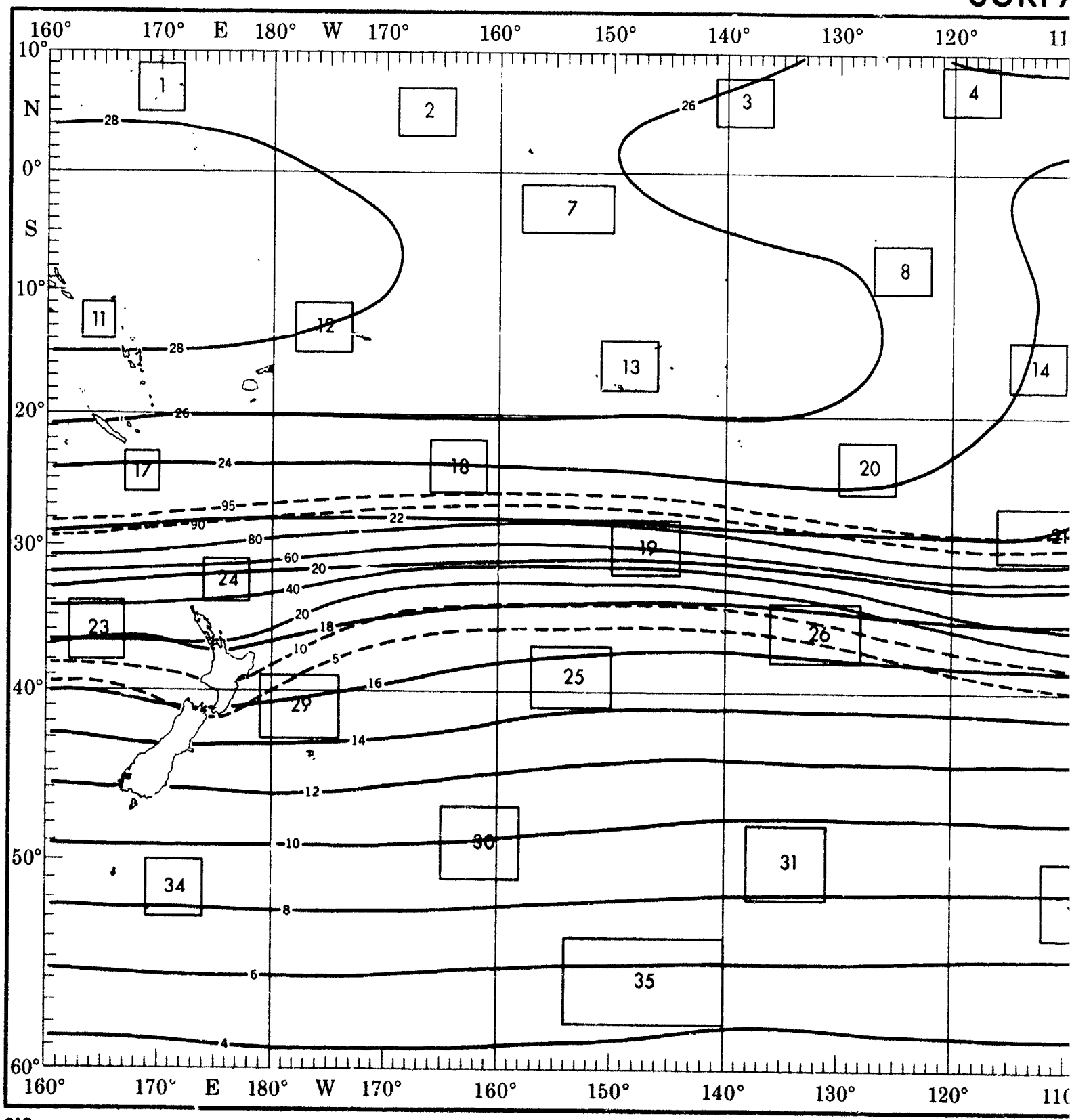
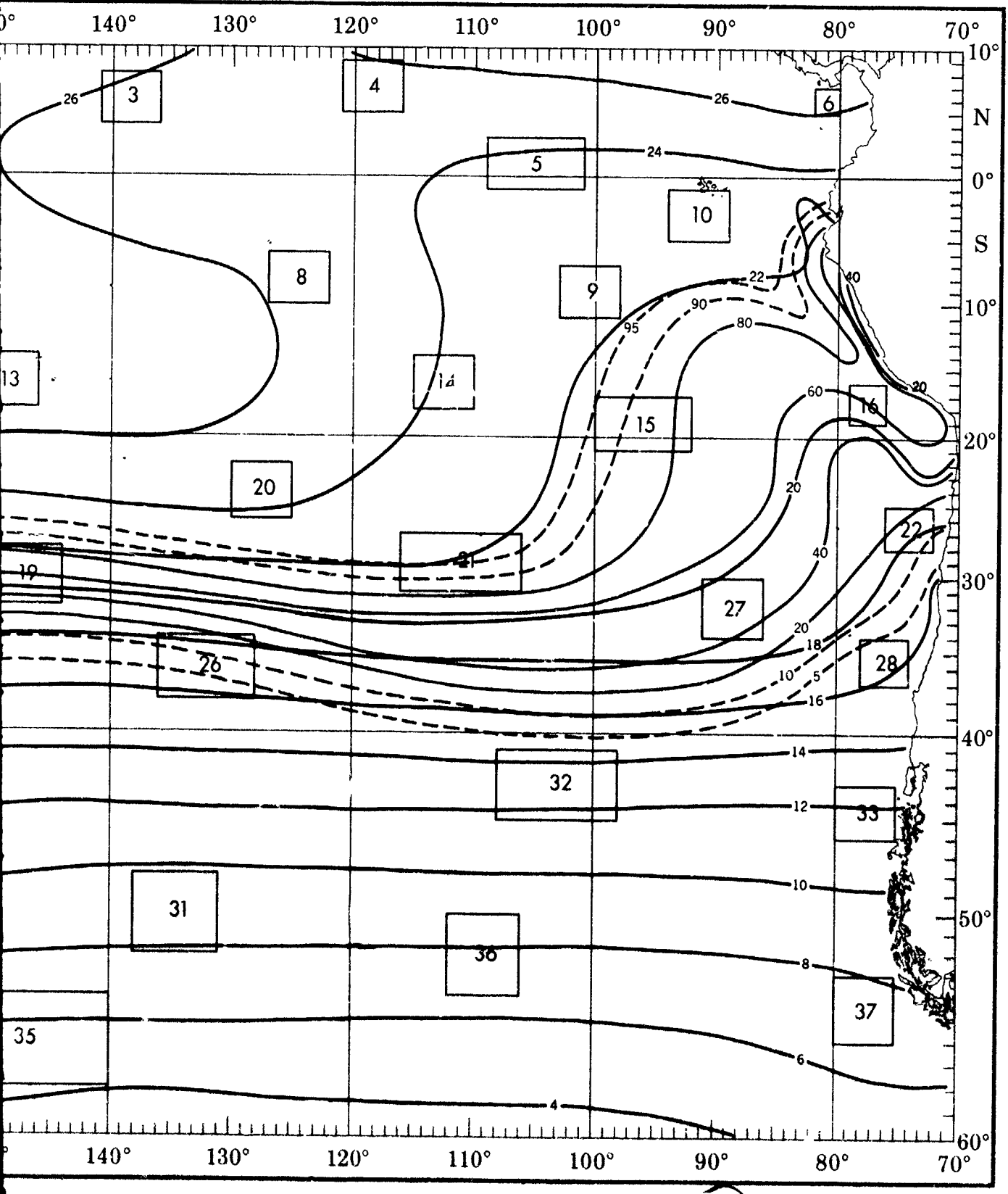
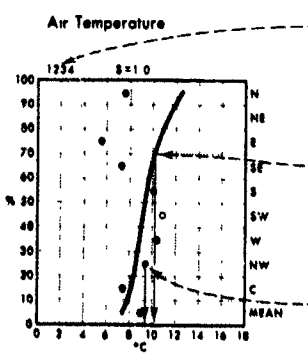


SURFACE AIR TEMPERATURE

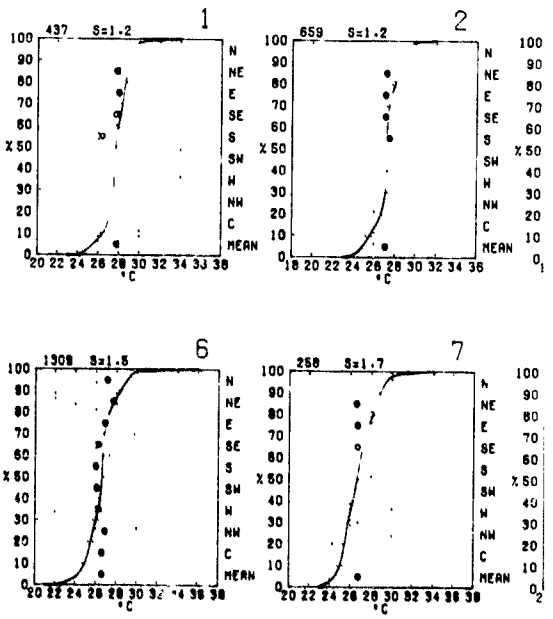


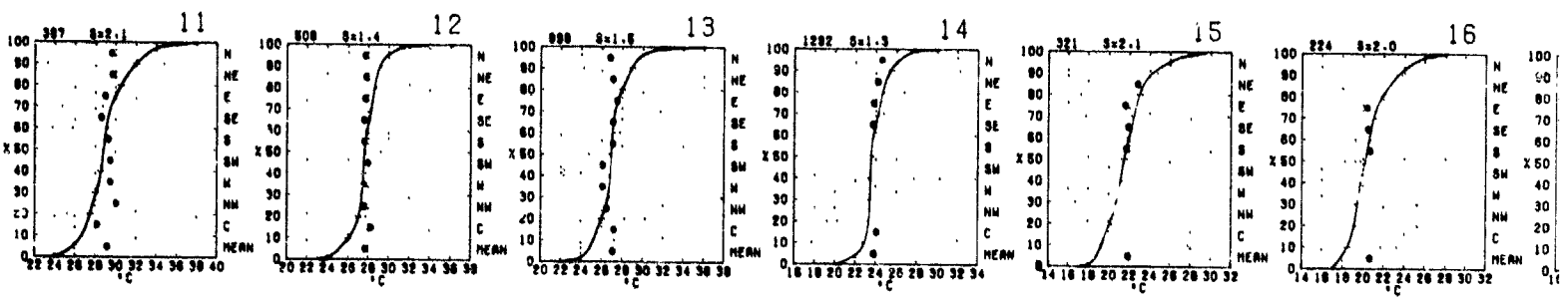
SURFACE AIR TEMPERATURE

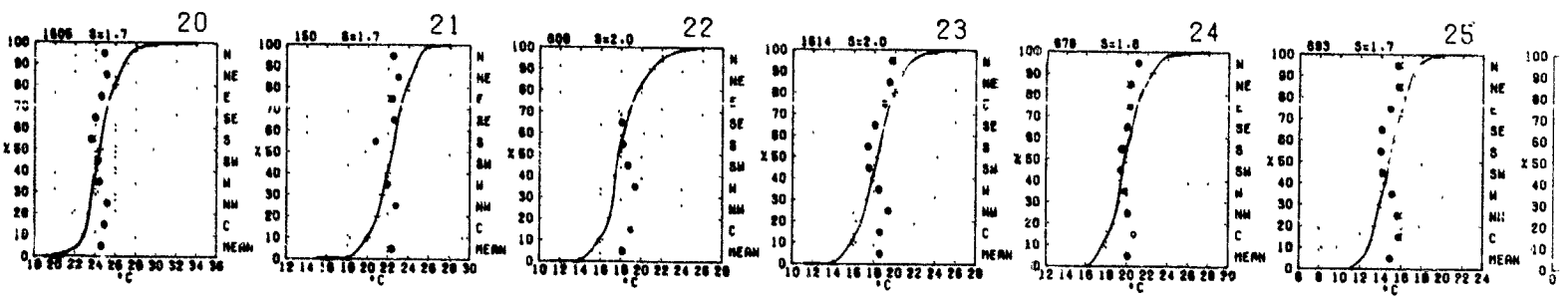


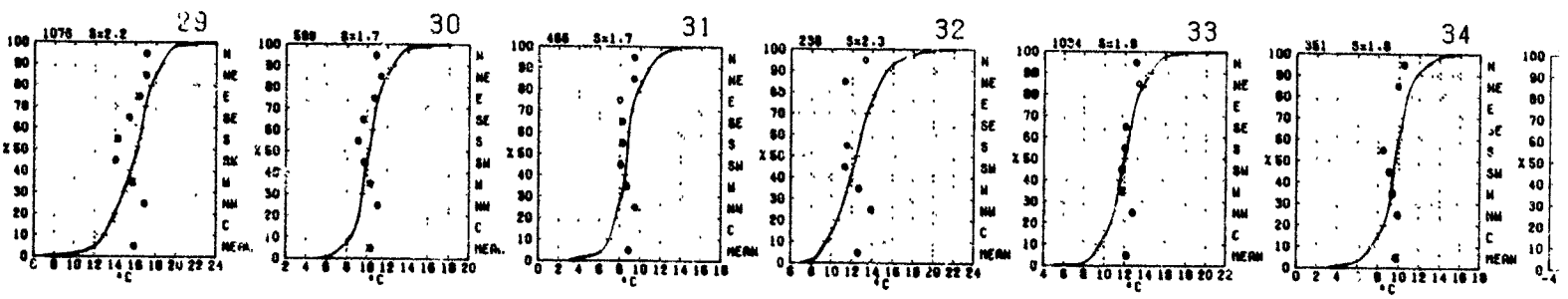
BLACK LINE - Mean air temperature (°C)

RED LINE - Percent frequency of temperature ≥20°C (68°F)









Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

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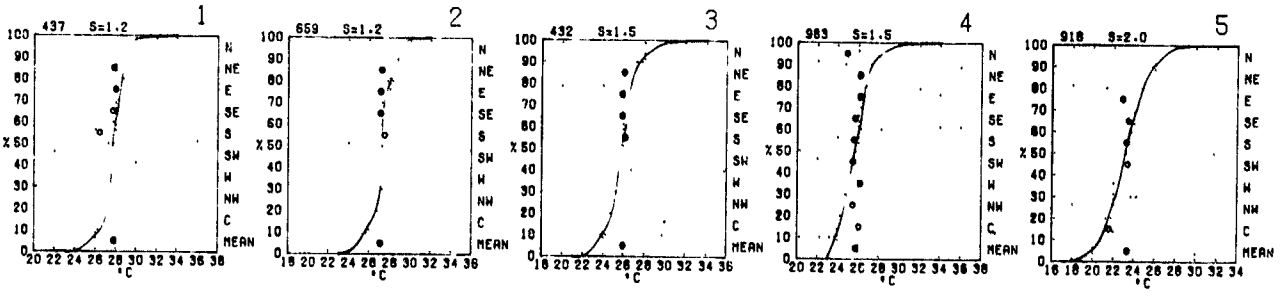

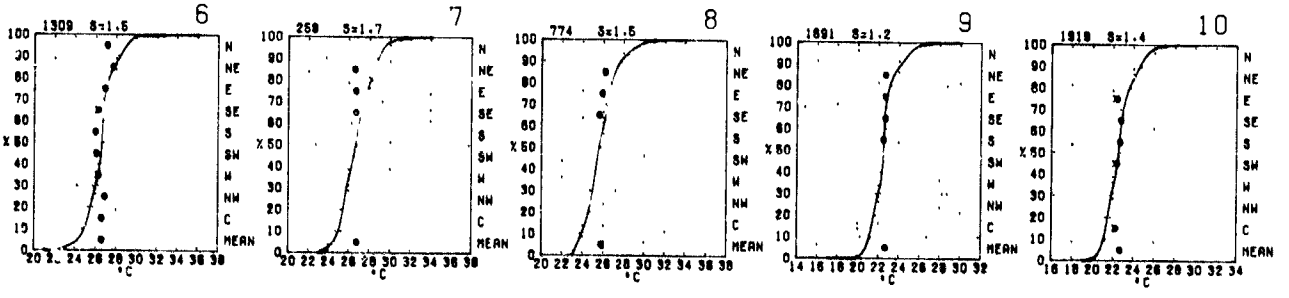

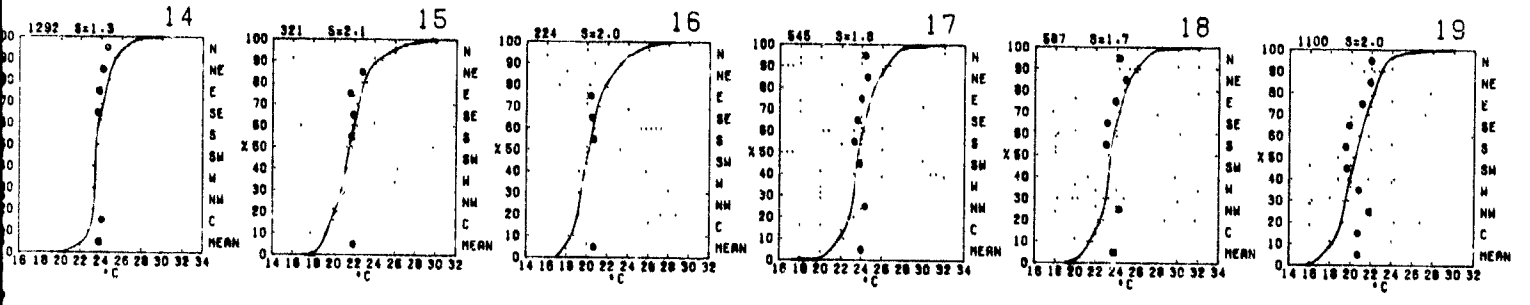

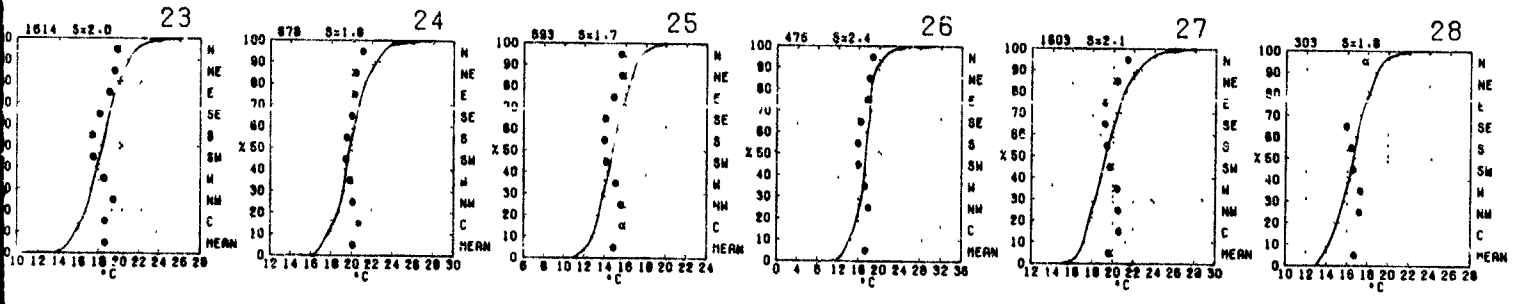

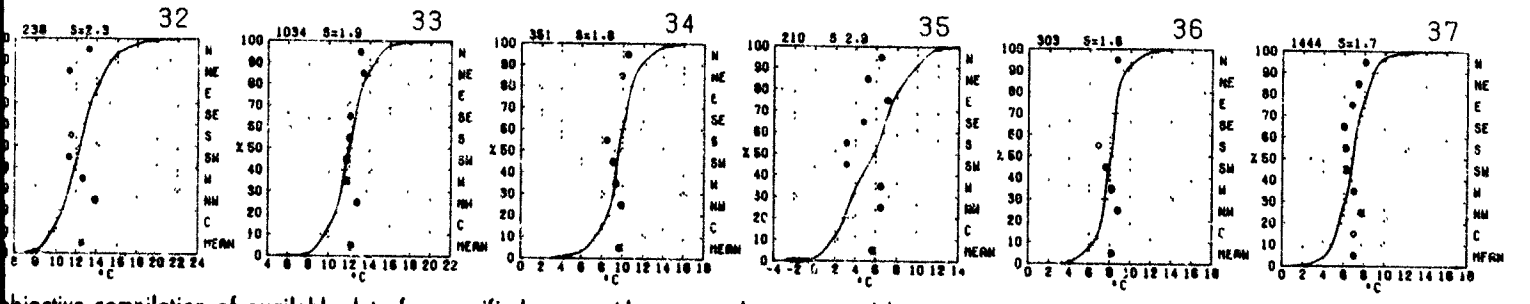

objective compilation of available data for specified areas without regard to suspected biases.
opposite page) are based on all available data subjectively adjusted where bias was evident

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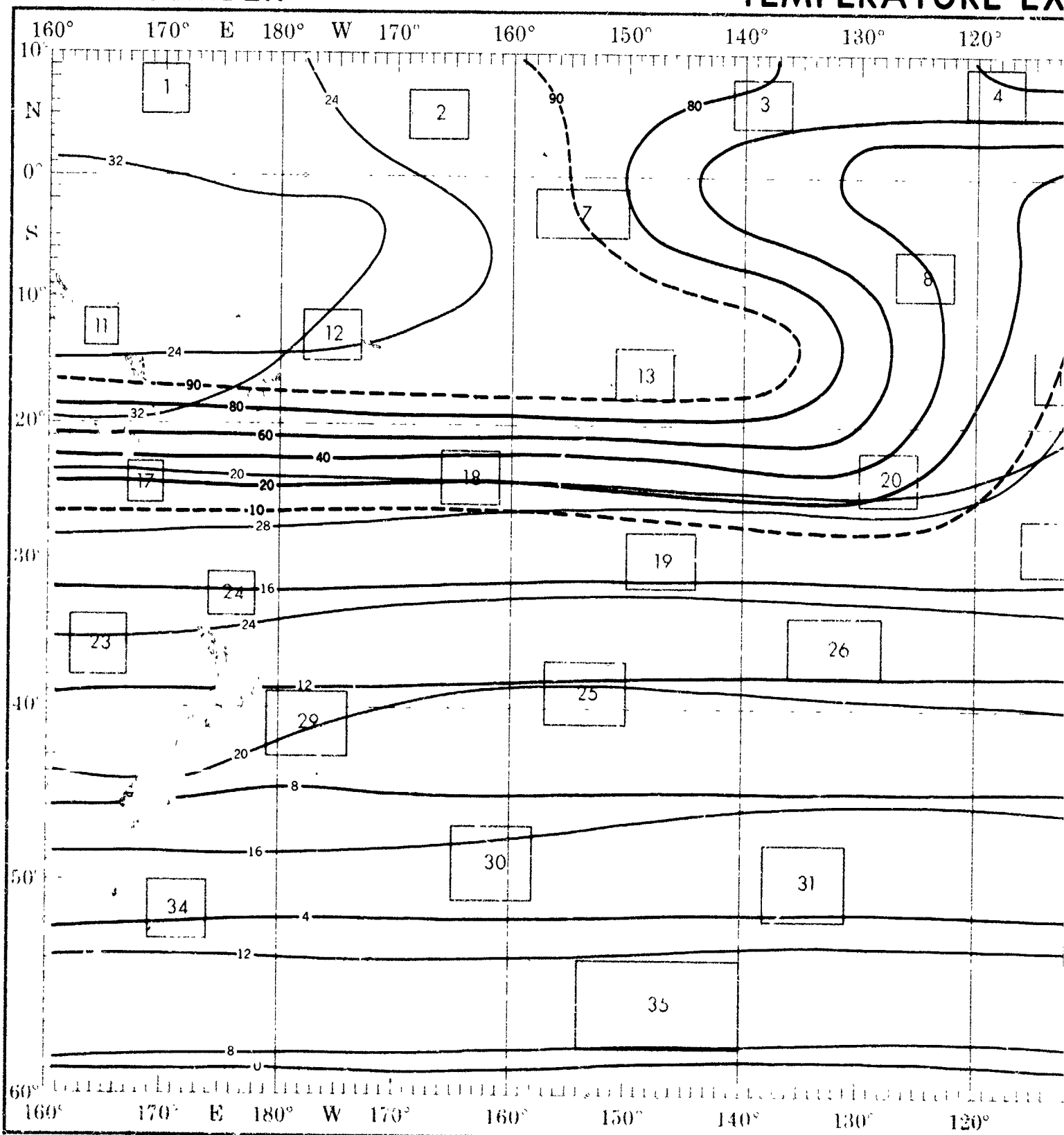
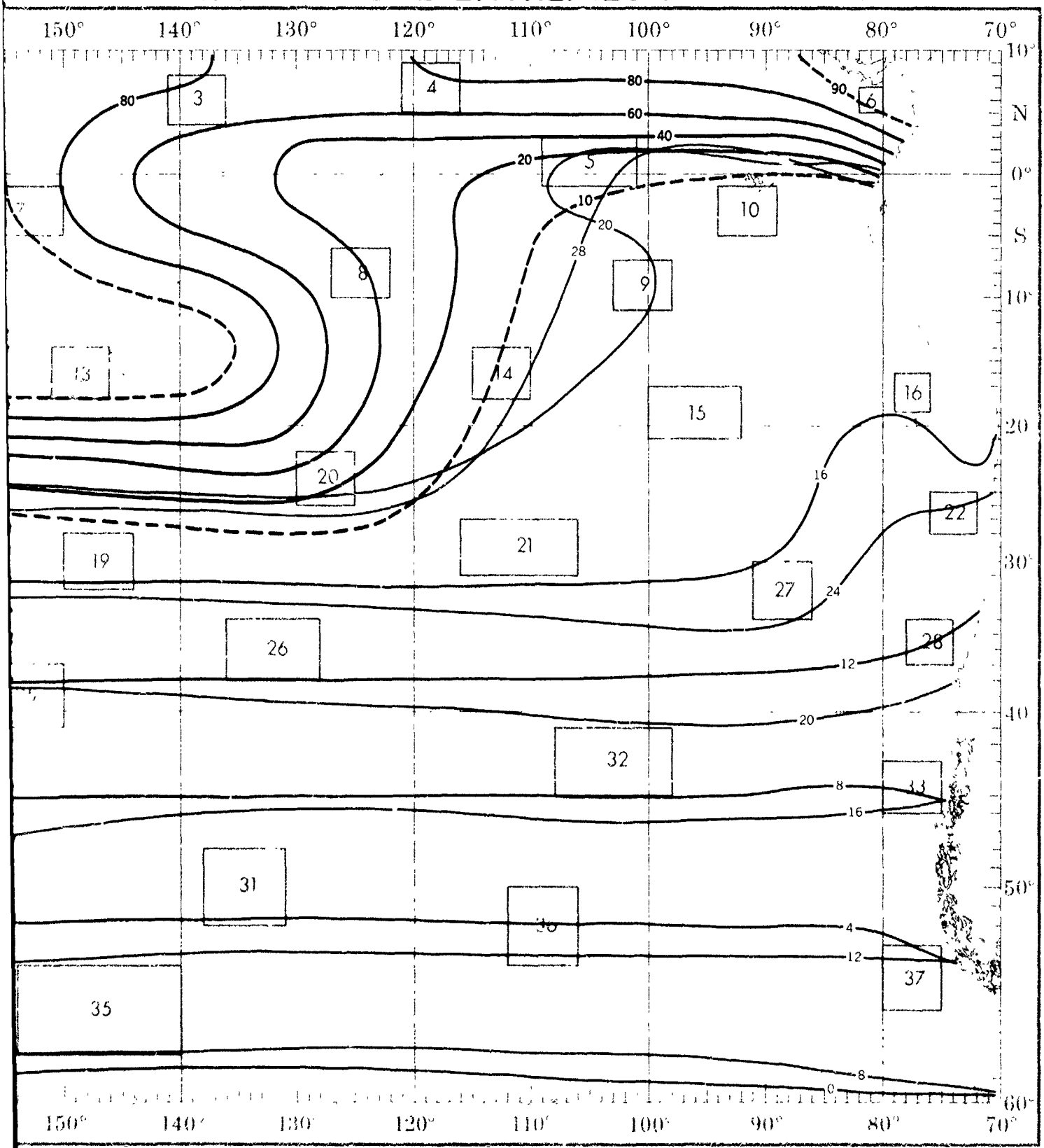
TEMPERATURE EX



TEMPERATURE EXTREMES AND T-H INDEX



WIND SPEED AND AIR TEMPERATURE

Wind speed and air temperature

Percent frequency of simultaneous occurrence of specified temperature (°C) and wind speed (knots)

WIND SPEED (kts)

Temp (°C)	0-3	4-10	11-21	22-33	≥34
4.3	18	6	7	1	1
2.2	17	8	7	1	1
0.1	13	6	5	1	1
-2.-1	1	+	0	0	0
-4.-3	0	0	0	0	0
-6.-5	+	0	0	+	+
-8.-7	1	+	0	0	0
-10.-9	0	0	0	0	0
-12.-11	1	+	0	0	0
-14.-13	1	0	0	0	0
-16.-15	1	+	0	0	0

3350

(1% of all observations reported temperature 2-3°C simultaneously with wind speed of 22-33 kts)

+ Indicates < 5% but >0

Number of observations

Use of this table in determination of Potential Superstructure Icing is explained in the text

BLACK LINE Percent frequency of T H index ≥24°C (75.2°F) (discomfort may be experienced due to heat)

BLUE LINE - Minimum (1%) air temperature (°C) (1% of the temperatures were equal to or less than the given value)

RED LINE Maximum (99%) air temperature (°C) (1% of the temperatures were greater than the given value)

1

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	0	+	0	0
30.31	+	1	2	0	0
28.29	2	28	35	2	0
26.27	2	12	12	1	0
24.25	+	2	1	+	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

437

2

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 3
30.31	+	1	1	+	
28.29	1	13	19	1	
26.27	2	21	32	2	
24.25	+	2	2	1	
22.23	0	+	+	0	
20.21	0	0	0	0	
18.19	0	0	0	0	
16.17	0	0	0	0	
14.15	0	0	0	0	
12.13	0	0	0	0	
10.11	0	0	0	0	

6

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	+	0	0
32.33	+	+	0	0	0
30.31	+	1	+	0	0
28.29	4	13	4	+	0
26.27	10	36	11	+	0
24.25	2	10	5	0	0
22.23	+	1	1	0	0
20.21	0	+	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

1374

7

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 3
32.33	0	+	+	0	
30.31	1	3	1	0	
28.29	2	12	13	1	
26.27	0	19	25	2	
24.25	+	8	12	+	
22.23	0	+	0	0	
20.21	0	0	0	0	
18.19	0	0	0	0	
16.17	0	0	0	0	
14.15	0	0	0	0	
12.13	0	0	0	0	

25

11

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	+	1	0	0	0
34.36	2	1	0	0	0
32.33	3	6	1	0	0
30.31	6	12	3	0	0
28.29	12	26	10	1	0
26.27	2	10	4	+	+
24.25	0	2	+	+	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

387

12

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	1	+	0	0
30.31	2	3	1	0	0
28.29	7	26	16	1	+
26.27	6	17	14	2	+
24.25	+	1	2	1	+
22.23	0	0	+	+	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

522

13

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	+	0	0	0
34.35	0	+	+	0	0
32.33	+	+	1	0	0
30.31	+	2	2	+	0
28.29	3	14	11	1	0
26.27	8	29	18	1	0
24.25	1	4	3	+	0
22.23	0	+	0	+	0
20.21	0	+	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

911

14

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.28	0	1	+	0	0
26.27	+	6	3	+	0
24.25	2	19	24	1	0
22.23	1	18	24	1	0
20.21	0	1	1	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

1298

15

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.28	1	1	1	0	0
26.27	1	2	2	0	0
24.25	2	6	4	1	0
22.23	3	12	20	1	0
20.21	3	14	13	3	0
18.19	+	3	6	1	0
16.17	0	+	+	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

321

16

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.27	0	1	2	+	
26.25	1	4	1	0	
24.25	4	8	6	0	
22.23	2	24	17	0	
20.21	4	11	12	+	
18.19	+	1	1	0	
16.17	0	0	0	0	
14.15	0	0	0	0	
12.13	0	0	0	0	
10.11	0	0	0	0	
8.9	0	0	0	0	
6.7	0	0	0	0	

22

20

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	+	0	0
30.31	+	+	+	0	0
28.29	1	3	1	+	0
26.27	3	12	8	+	0
24.25	5	24	16	2	+
22.23	2	9	11	1	0
20.21	+	+	1	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1636

21

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.28	0	1	0	0	0
26.27	1	1	0	0	0
24.25	1	14	6	0	0
22.23	5	22	19	3	0
20.21	4	12	10	1	0
18.19	1	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	1	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

154

22

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.27	+	0	+	0	0
26.26	1	+	+	0	0
24.25	1	2	2	0	0
22.23	3	7	8	1	0
20.21	5	14	13	1	+
18.19	3	15	16	1	0
16.17	+	+	2	1	0
14.15	0	+	+	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

609

23

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.27	0	+	+	0	0
26.26	+	1	+	0	0
24.25	1	9	9	+	+
22.23	2	9	11	1	+
20.21	2	14	17	5	+
18.19	1	10	10	4	1
16.17	+	1	3	1	+
14.15	0	+	+	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

1624

24

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.27	+	+	0	0	0
26.26	+	1	1	0	0
24.25	1	9	9	+	+
22.23	3	9	6	+	+
20.21	3	19	16	3	+
18.19	2	12	13	3	+
16.17	1	3	3	1	+
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

680

25

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	+	0	0	0
18.18	1	2	3	1	+
18.17	1	8	17	3	1
14.15	1	15	19	5	+
12.13	+	4	11	4	1
10.11	0	+	+	+	1
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

700

29

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	+	+	0	0
20.21	0	1	1	+	0
18.18	1	8	9	3	+
16.17	2	13	20	4	1
14.15	1	8	8	3	1
12.13	1	3	5	3	1
10.11	0	+	1	1	+
8.9	0	0	+	+	0
6.7	0	0	0	+	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

1090

30

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	1	1	+	+	0
14.15	+	1	1	+	0
12.13	2	6	9	4	2
10.11	1	8	21	9	2
8.9	1	2	14	8	5
6.7	0	1	2	2	+
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

600

31

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	0	0	+	0	+
12.13	+	2	3	1	0
10.11	+	4	13	8	2
8.9	2	10	19	16	2
6.7	+	2	8	8	+
4.5	0	0	1	+	+
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0

468

32

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.18	+	1	1	0	0
16.17	0	2	6	1	0
14.15	1	6	11	1	0
12.13	+	10	22	10	1
10.11	+	5	10	4	0
8.9	1	3	3	3	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0

238

33

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	0	+	0	0
18.19	+	+	+	+	0
16.17	+	2	1	1	+
14.15	2	6	9	3	+
12.13	2	15	17	5	2
10.11	1	7	14	6	2
8.9	0	1	3	1	0
6.7	0	0	+	+	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

1034

34

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.17	0	0	0	+	0
14.15	+	0	1	1	0
12.13	1	4	5	2	0
10.11	1	7	22	10	1
8.9	2	7	14	11	1
6.7	0	1	3	3	1
4.5	0	+	0	+	1
2.3	0	+	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

351

Graphs represent the objective compilation of available data for specified areas without regar
The **isopleth** analyses (opposite page) are based on all available data subjectively adjusted wi

TEMPERATURE

DECEMBER

°C) and wind speed

eed of 22-33 kts)

ined in the text

to heat)

n the given value)

given value)

WIND SPEED (KTS) 1

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	0	+	0	0
30.31	+	1	2	0	0
28.29	2	28	35	2	0
26.27	2	12	12	1	0
24.25	+	2	1	+	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

437

WIND SPEED (KTS) 2

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	1	1	+	0
28.29	1	13	19	1	0
26.27	2	21	32	2	0
24.25	+	2	2	1	0
22.23	0	+	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

663

WIND SPEED (KTS) 3

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	+	0	0
30.31	0	+	1	0	0
28.29	0	5	5	+	0
26.27	1	19	31	3	0
24.25	+	15	14	1	0
22.23	0	2	1	1	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

440

WIND SPEED (KTS) 4

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	0	0	+	0
30.31	1	1	+	0	0
28.29	1	5	4	1	0
26.27	4	26	15	1	+
24.25	4	19	12	+	0
22.23	1	3	1	+	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

989

WIND SPEED (KTS) 5

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	0	0	0
30.31	0	+	+	0	0
28.29	0	1	1	0	0
26.27	+	7	5	+	0
24.25	2	18	10	+	0
22.23	4	26	7	+	0
20.21	2	11	2	+	0
18.19	1	1	+	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

931

WIND SPEED (KTS) 6

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	+	0	0
32.33	+	+	0	0	0
30.31	+	1	+	0	0
28.29	4	13	4	+	0
26.27	10	36	11	+	0
24.25	2	10	5	0	0
22.23	+	1	1	0	0
20.21	0	+	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

1374

WIND SPEED (KTS) 7

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	+	0	0
30.31	1	3	1	0	0
28.29	2	12	13	1	0
26.27	0	19	25	2	0
24.25	+	8	12	+	0
22.23	0	+	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

259

WIND SPEED (KTS) 8

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	+	0	0
30.31	0	1	2	0	0
28.29	+	3	7	+	0
26.27	+	15	27	1	0
24.25	+	15	24	1	0
22.23	0	2	1	+	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

775

WIND SPEED (KTS) 9

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	0	0	0
28.29	0	+	+	0	0
26.27	0	1	1	0	0
24.25	+	9	11	+	0
22.23	+	30	35	1	0
20.21	+	5	7	+	0
18.19	0	+	0	0	0
16.17	0	+	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

1692

WIND SPEED (KTS) 10

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	0	0	0	0
28.29	0	+	0	0	0
26.27	+	3	1	0	0
24.25	2	17	5	+	0
22.23	4	43	7	0	0
20.21	2	14	2	0	0
18.19	0	+	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

1948

WIND SPEED (KTS) 14

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.28	0	1	+	0	0
26.27	+	6	3	+	0
24.25	2	19	24	1	0
22.23	1	18	24	1	0
20.21	0	1	1	0	0
18.19	0	2	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

1298

WIND SPEED (KTS) 15

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.28	1	1	1	0	0
26.27	1	2	2	0	0
24.25	2	8	4	1	0
22.23	3	12	20	1	0
20.21	3	14	13	3	0
18.19	+	3	6	1	0
16.17	0	0	+	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

321

WIND SPEED (KTS) 16

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	1	2	+	0
24.25	1	4	1	0	0
22.23	4	8	6	0	0
20.21	2	24	17	0	0
18.19	4	11	12	+	0
16.17	0	1	1	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

224

WIND SPEED (KTS) 17

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	1	0	0	0
28.29	+	1	1	0	0
26.27	1	10	7	0	0
24.25	4	15	17	1	0
22.23	2	14	16	3	+
20.21	0	2	3	+	0
18.19	0	+	0	+	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

554

WIND SPEED (KTS) 18

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	0	+	0	0
30.31	0	+	0	0	0
28.29	1	1	1	0	0
26.27	1	8	5	0	0
24.25	2	15	18	2	0
22.23	1	14	21	4	0
20.21	+	3	3	1	0
18.19	0	+	+	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

589

WIND SPEED (KTS) 19

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.28	0	+	+	0	0
26.27	0	1	1	0	0
24.25	+	3	2	+	0
22.23	3	14	11	1	0
20.21	2	16	13	4	+
18.19	2	12	9	3	+
16.17	+	2	3	+	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

1127

WIND SPEED (KTS) 23

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	+	+	0	0
24.25	+	1	+	0	0
22.23	1	2	3	+	+
20.21	2	9	11	1	+
18.19	2	14	17	5	+
16.17	1	10	10	4	1
14.15	+	1	3	1	+
12.13	0	0	+	+	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

1624

WIND SPEED (KTS) 24

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	+	+	0	0	0
24.25	+	1	1	0	0
22.23	3	9	6	+	0
20.21	3	15	15	3	+
18.19	2	12	13	3	+
16.17	1	3	3	1	+
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

680

WIND SPEED (KTS) 25

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.28	0	+	0	0	0
26.27	1	2	3	1	+
24.25	1	8	17	3	1
22.23	1	15	19	5	+
20.21	1	4	11	4	1
18.19	0	+	+	+	1
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

700

WIND SPEED (KTS) 26

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.28	+	0	0	0	0
26.27	0	0	+	0	0
24.25	+	+	+	0	0
22.23	+	1	1	0	0
20.21	1	4	3	1	0
18.19	3	12	16	2	+
16.17	2	16	14	3	+
14.15	1	5	4	2	+
12.13	0	2	3	1	0
10.11	0	1	0	0	0
8.9	0	0	0	0	0

484

WIND SPEED (KTS) 27

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.28	+	0	0	0	0
26.27	1	+	0	0	0
24.25	2	2	+	0	0
22.23	4	7	2	+	0
20.21	7	17	6	+	0
18.19	7	19	12	1	0
16.17	3	7	3	+	0
14.15	+	+	+	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

1603

WIND SPEED (KTS) 28

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	1	0	+	0
20.21	+	2	2	+	0
18.19	1	15	8	3	0
16.17	3	18	19	4	+
14.15	2	8	7	6	0
12.13	0	1	1	1	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

303

WIND SPEED (KTS) 32

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.18	+	1	1	0	0
16.17	0	2	5	1	0
14.16	1	8	11	1	0
12.13	+	10	22	10	1
10.11	+	5	10	4	0
8.9	1	3	3	3	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0

258

WIND SPEED (KTS) 33

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	0	+	0	0
18.19	+	+	+	+	0
16.17	+	2	1	1	+
14.15	2	6	9	3	+
12.13	2	15	17	5	2
10.11	1	7	14	6	2
8.9	0	1	3	1	0
6.7	0	0	+	+	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

1034

WIND SPEED (KTS) 34

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.17	0	0	0	+	0
16.15	+	0	1	1	0
14.13	1	4	5	2	0
12.11	1	7	22	10	1
10.9	2	7	14	11	1
8.7	0	1	3	3	1
6.5	0	+	+	+	1
4.3	0	+	0	0	0
2.1	0	0	0	0	0
-0.-1	0	0	0	0	0
-2.-3	0	0	0	0	0

351

WIND SPEED (KTS) 35

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	+	1	+	0	0
10.11	1	4	3	0	0
8.9	0	5	9	3	1
6.7	1	6	11	4	6
4.5	1	6	9	3	1
2.3	2	7	6	3	1
0.1	1	1	3	0	0
-2.-1	0	0	+	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

211

WIND SPEED (KTS) 36

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	0	+	0	0	0
12.13	+	0	1	+	0
10.11	1	1	7	4	2
8.9	1	7	24	15	4
6.7	+	8	13	10	2
4.5	0	+	2	+	0
2.3	0	0	+	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0

306

WIND SPEED (KTS) 37

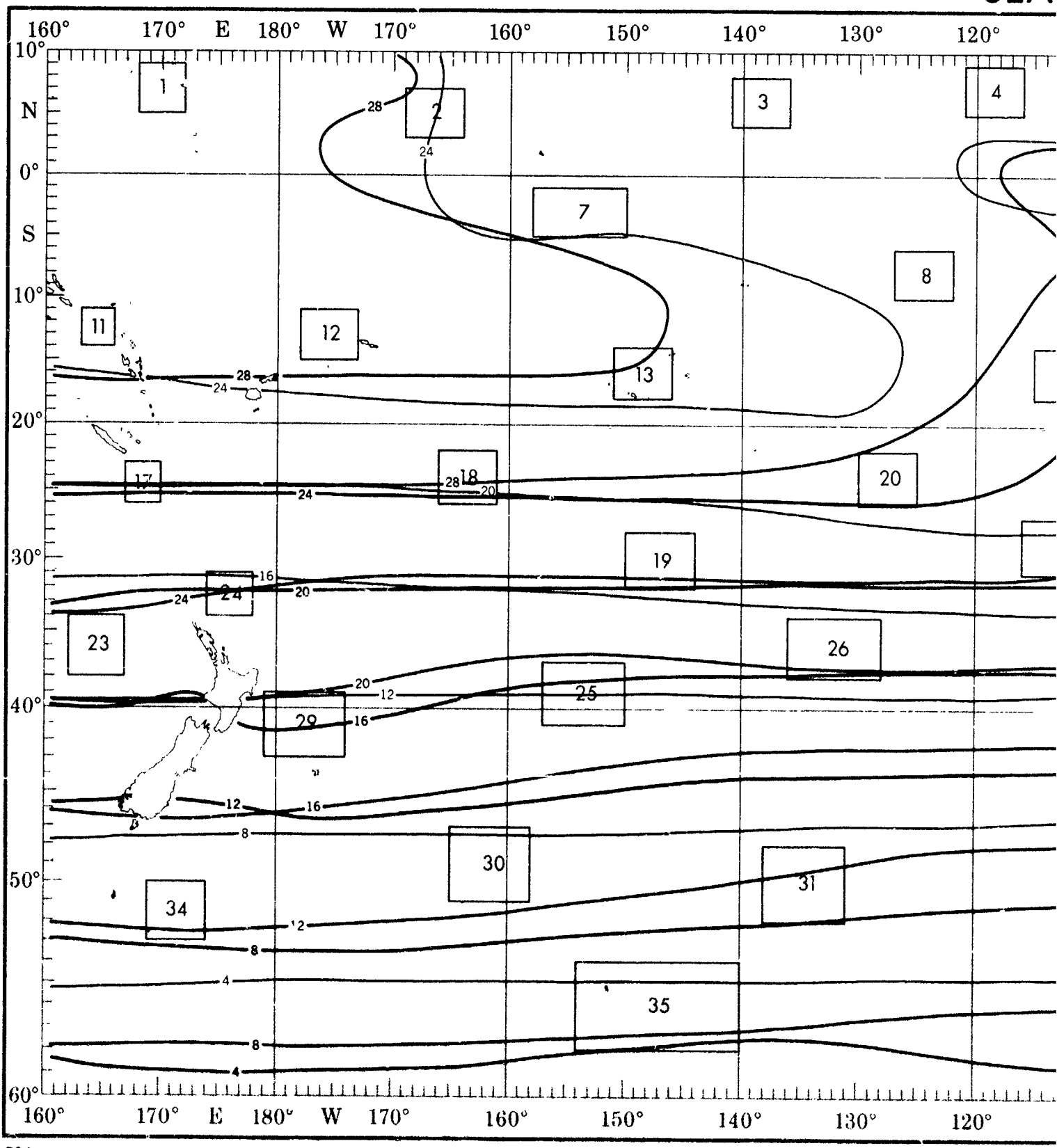
(TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	+	0	0	0	0
14.15	0	+	+	0	0
12.13	+	+	+	+	0
10.11	1	2	2	1	1
8.9	1	8	15	8	3
6.7	2	8	18	12	5
4.5	1	2	7	5	2
2.3	0	+	1	+	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

1445

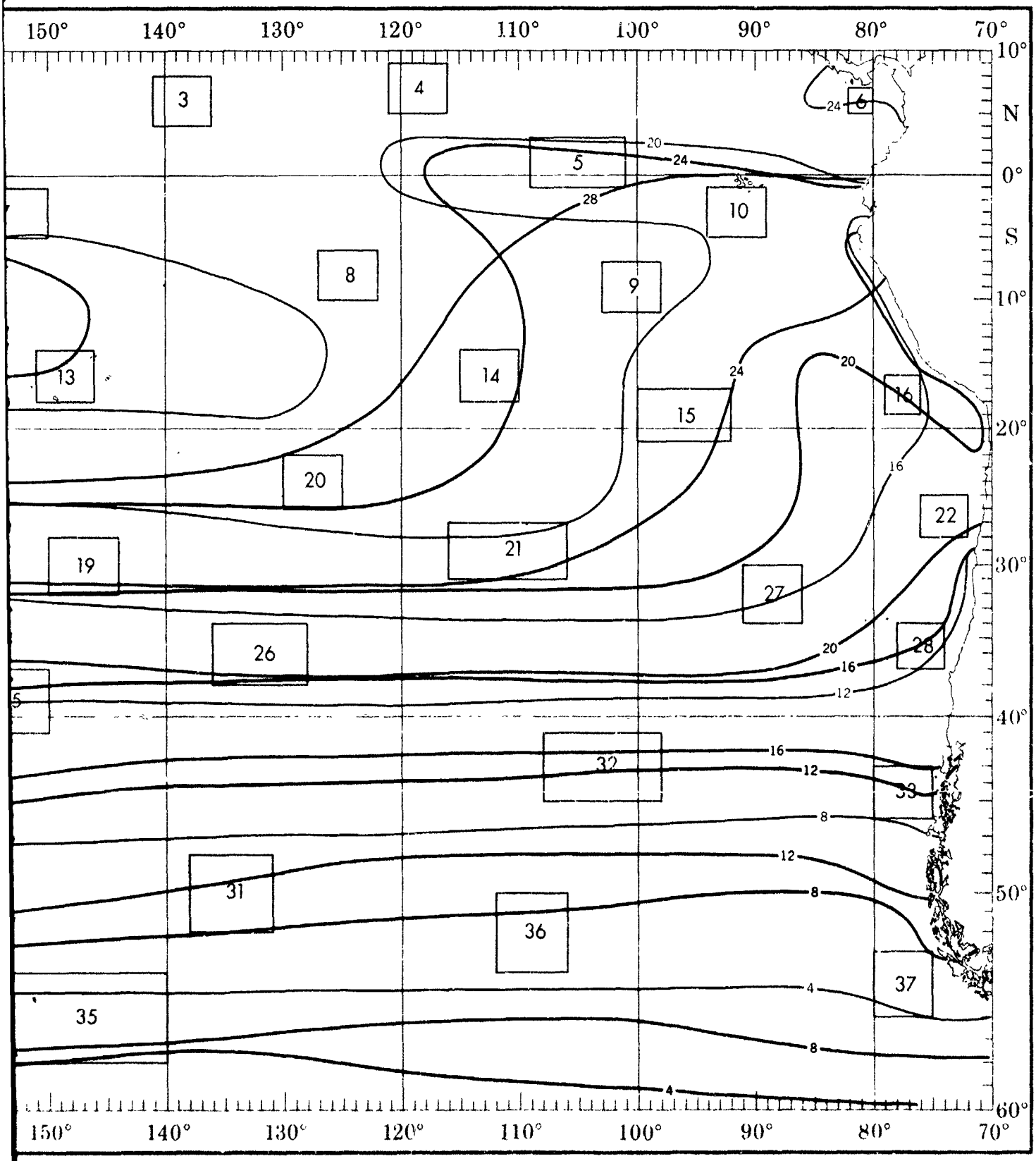
objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

DECEMBER

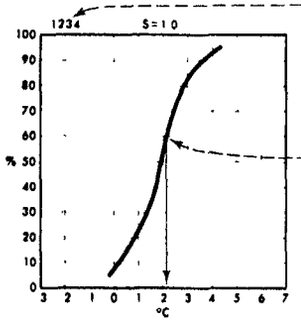
SEA

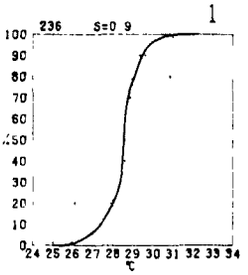


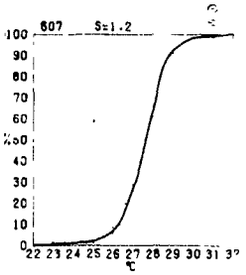
SEA SURFACE TEMPERATURE

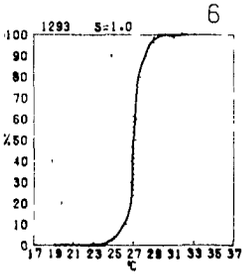


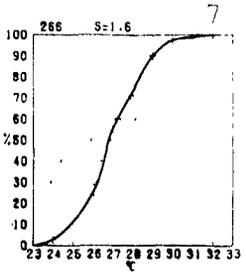
SEA SURFACE TEMPERATURE







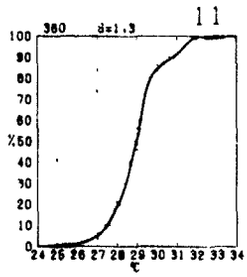


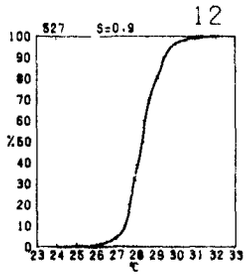


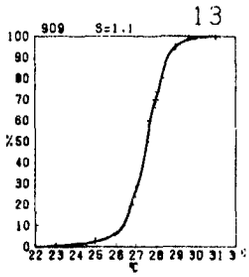
BLACK LINE Mean sea surface temperature (°C)

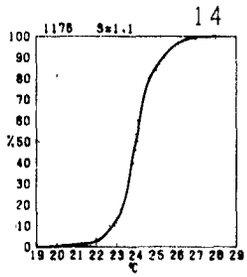
BLUE LINE Minimum (1%) sea surface temperature (°C) (1% of the temperatures were equal to or less than the given value)

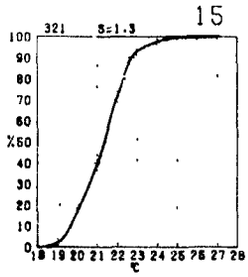
RED LINE Maximum (99%) sea surface temperature (°C) (1% of the temperatures were greater than the given value)

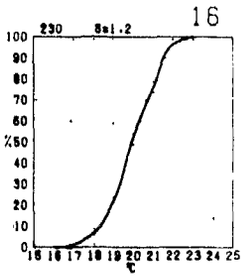


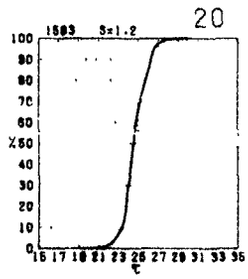


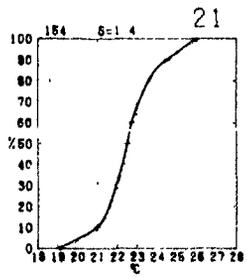


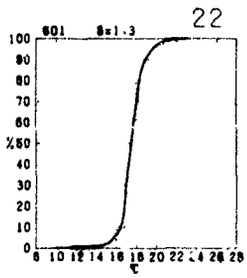


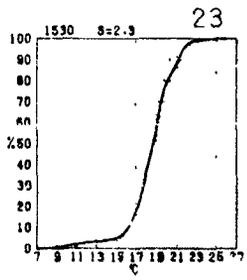


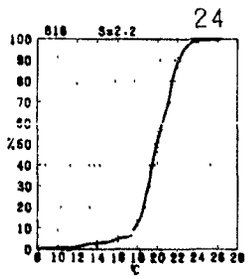


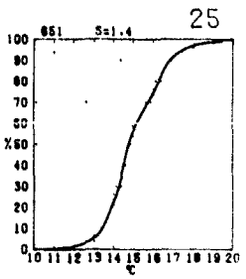


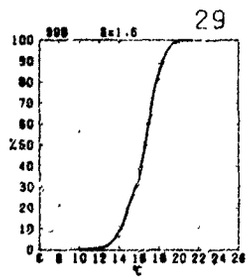


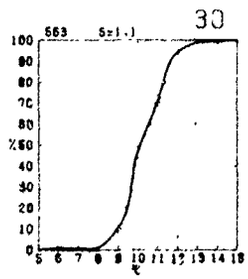


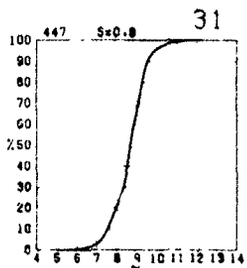


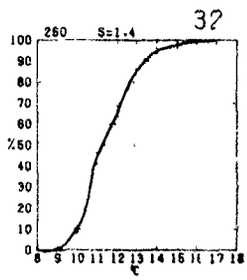


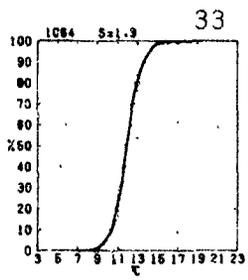


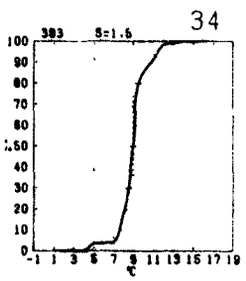












Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted whe

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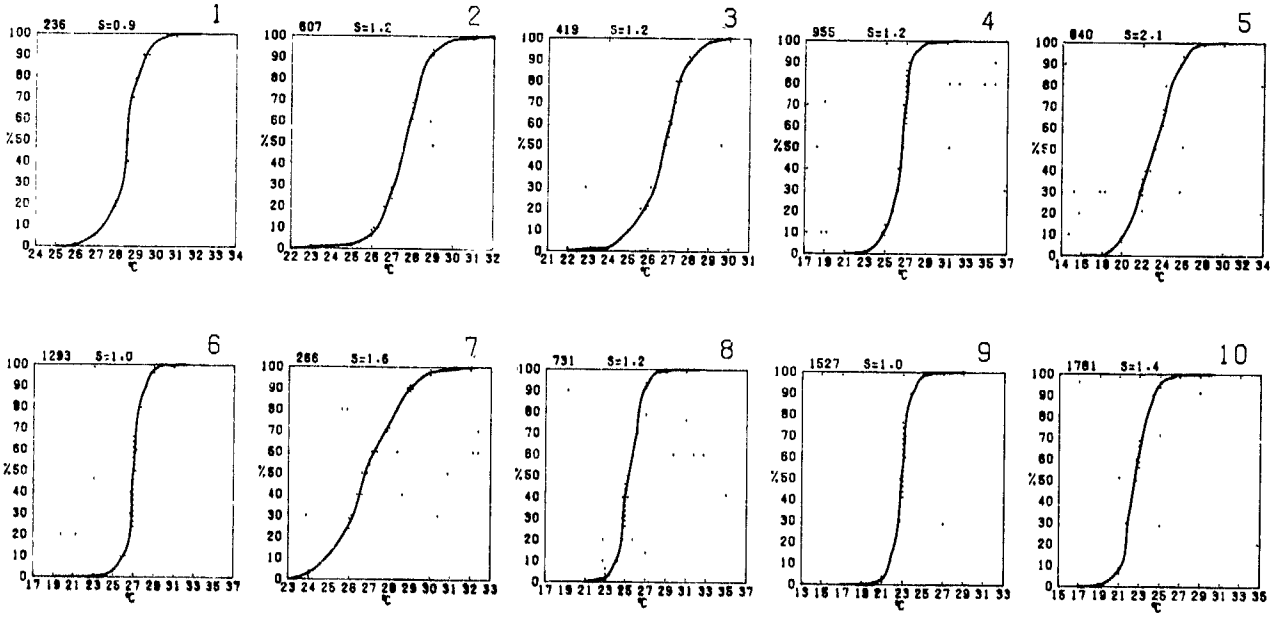

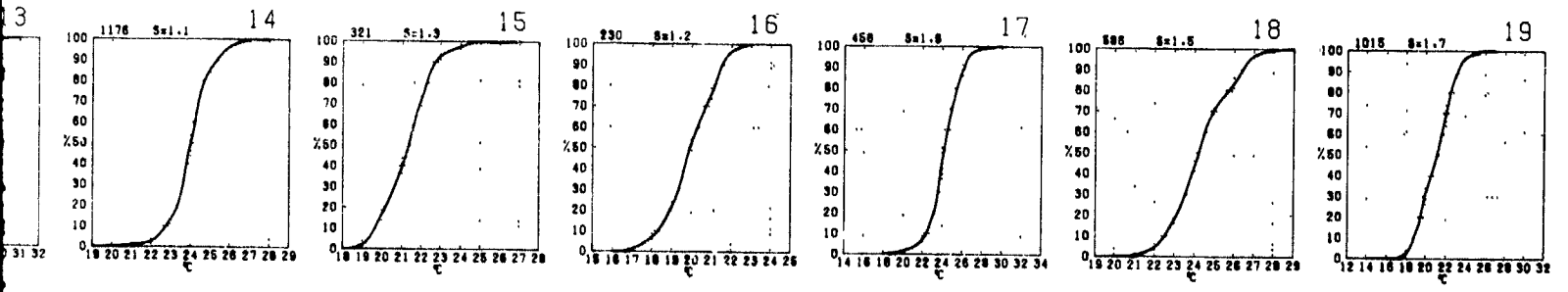

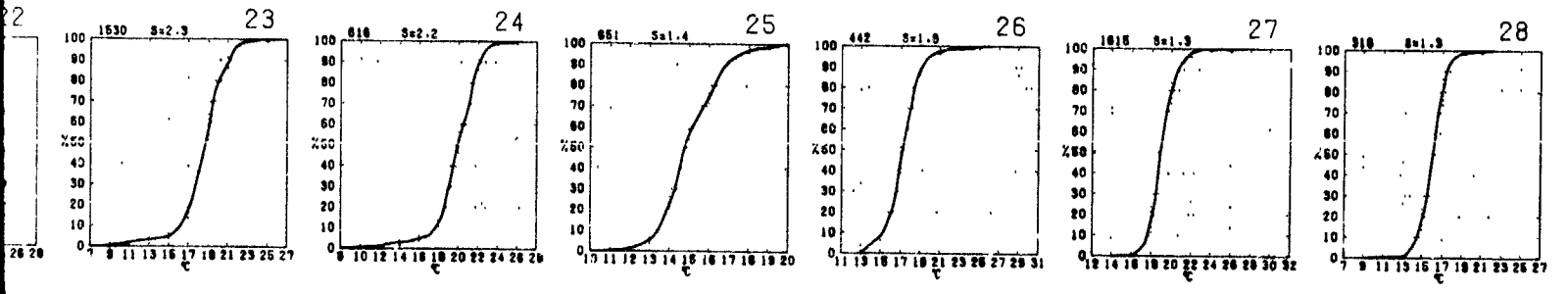

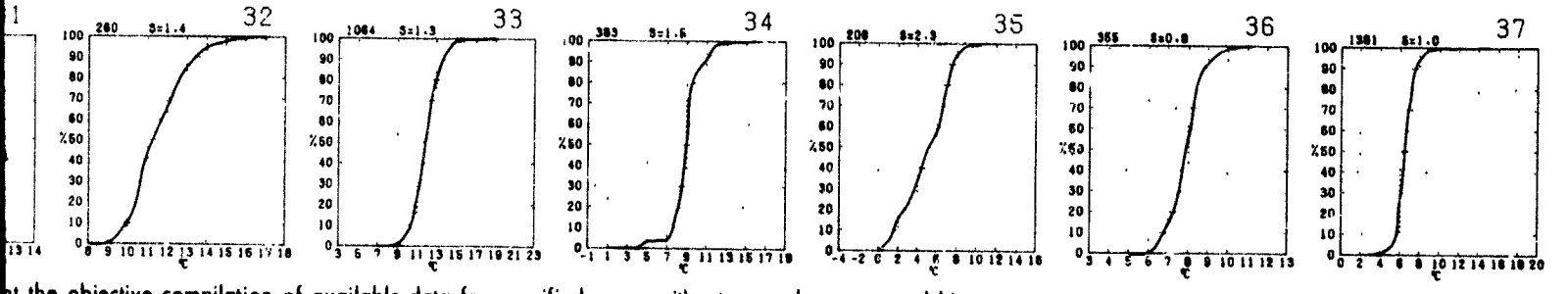

nt the objective compilation of available data for specified areas without regard to suspected biases.
lyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

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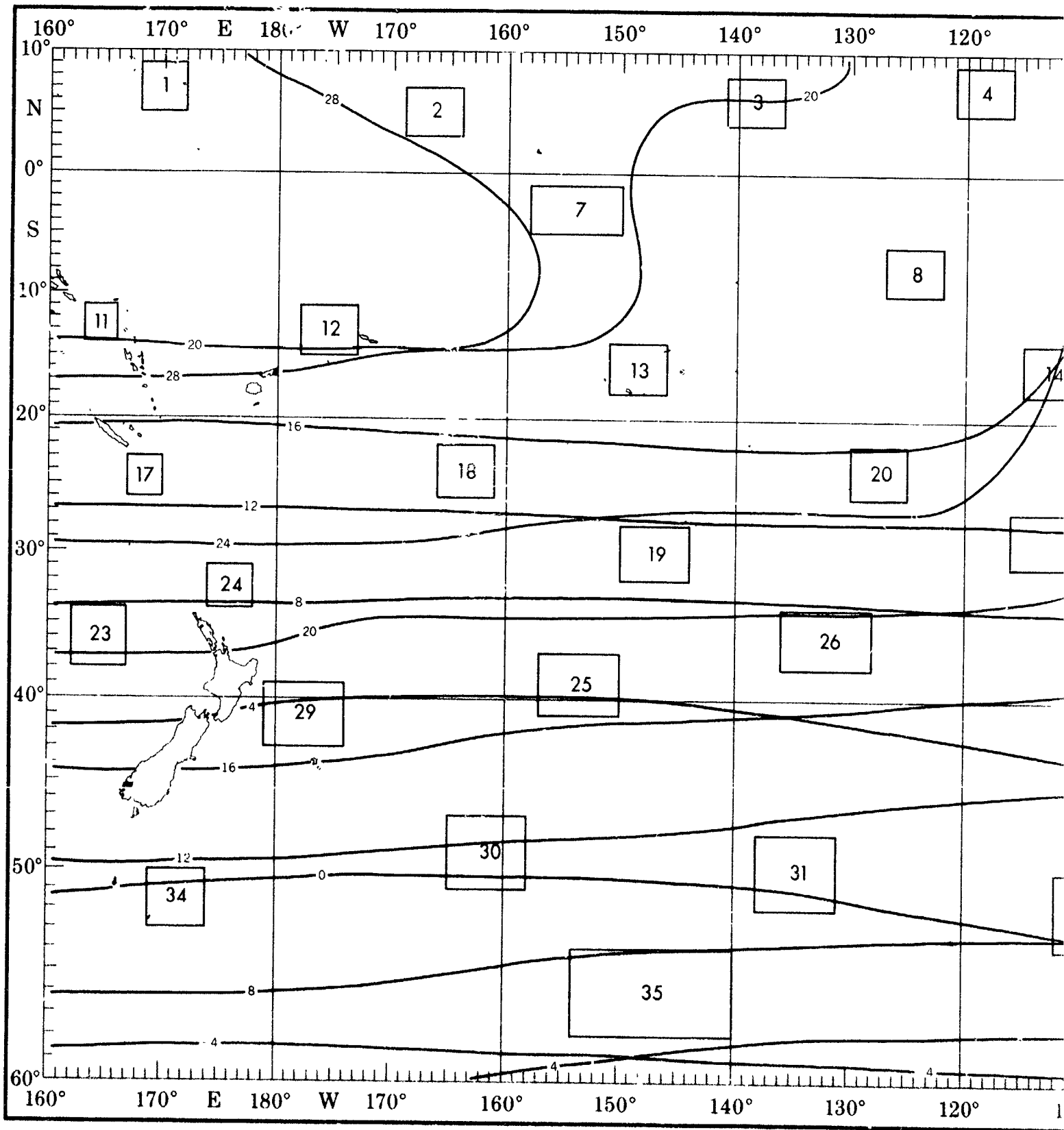
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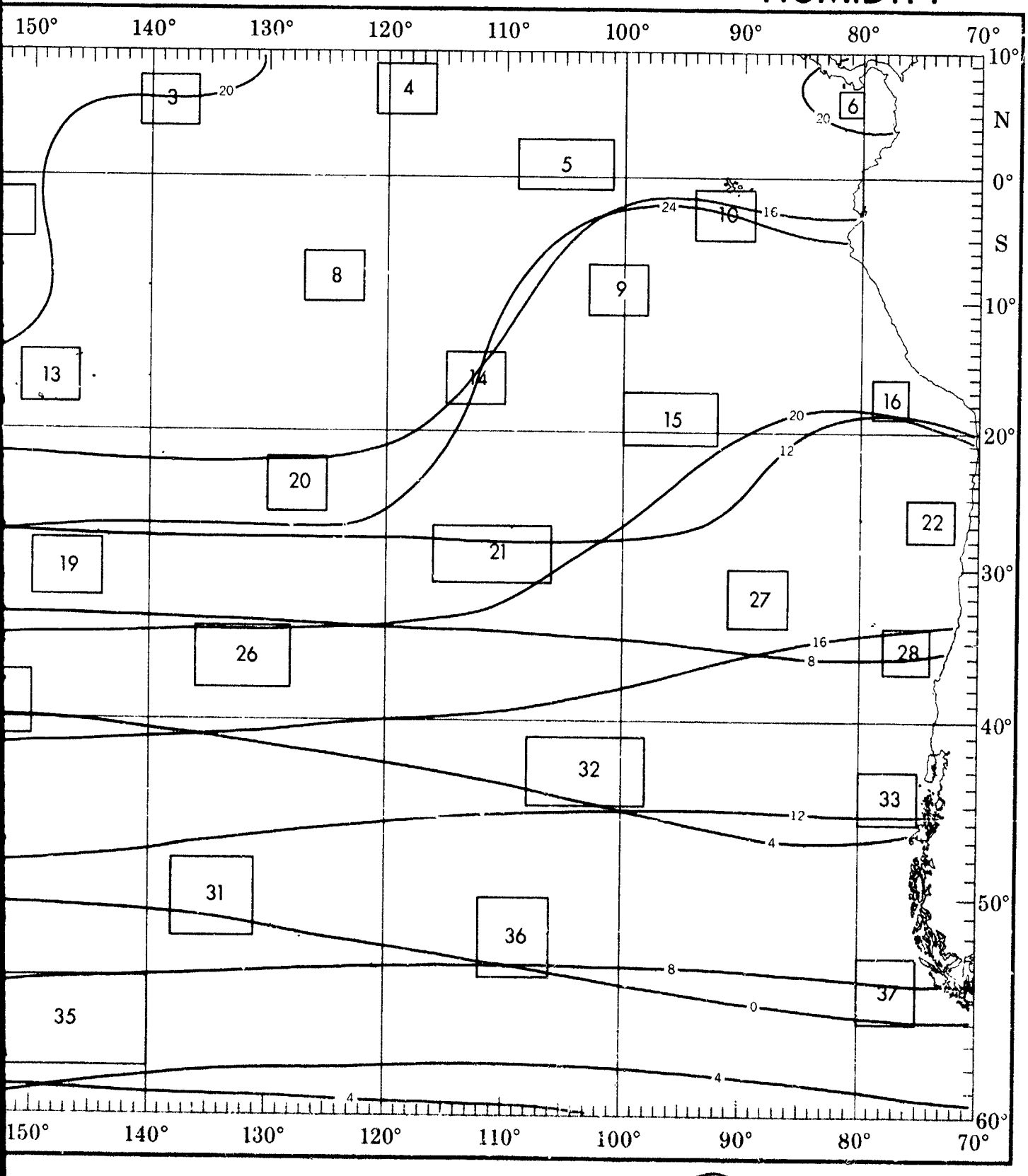
HUMIDITY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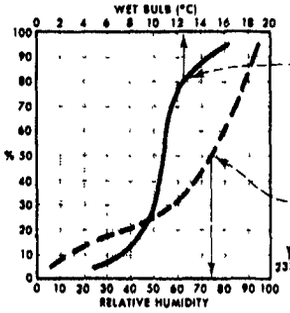
WET BULB AND RELATIVE HUMIDITY



Wet bulb - Relative humidity

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 ≤12.5°C or 54.5°F)

Cumulative percent frequency of relative humidities equal to or less than the humidity intersected by the curve (bottom scale)

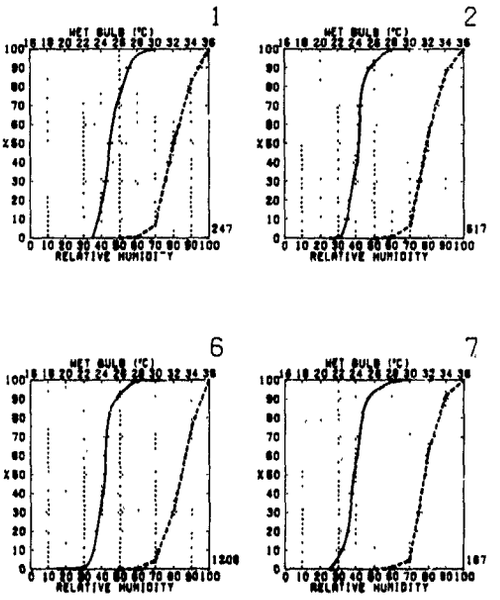
Relative humidity (%)

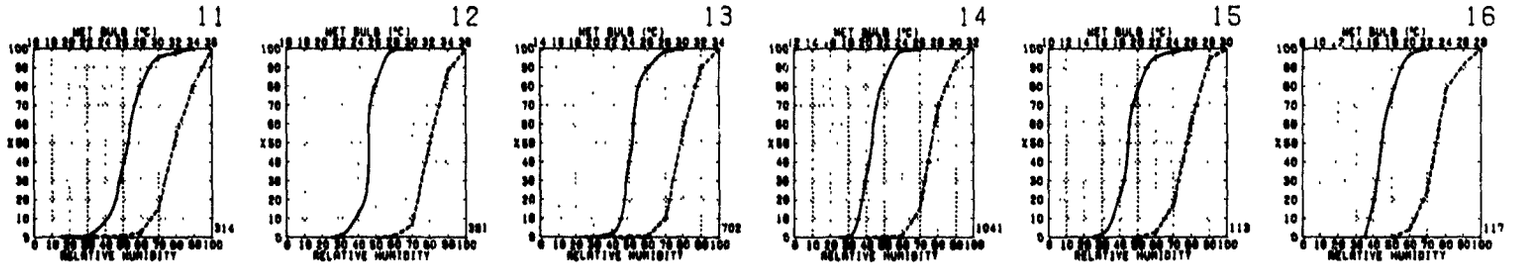
(50% of all observed relative humidities were ≤74%)

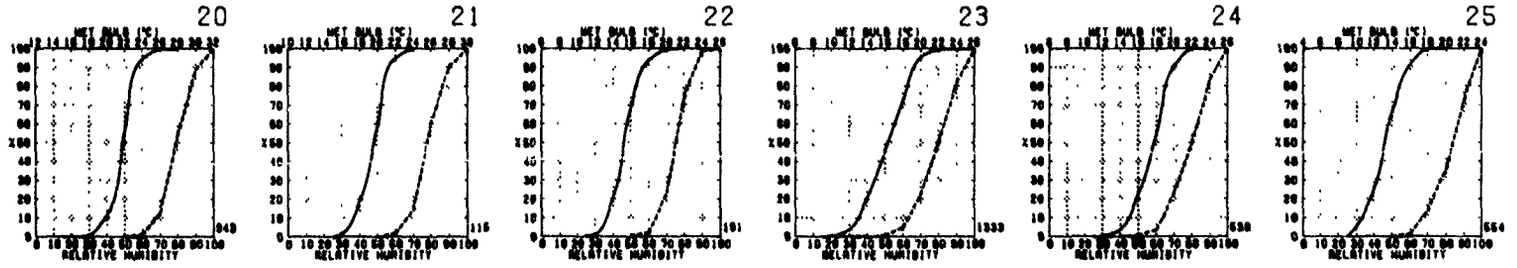
Number of observations

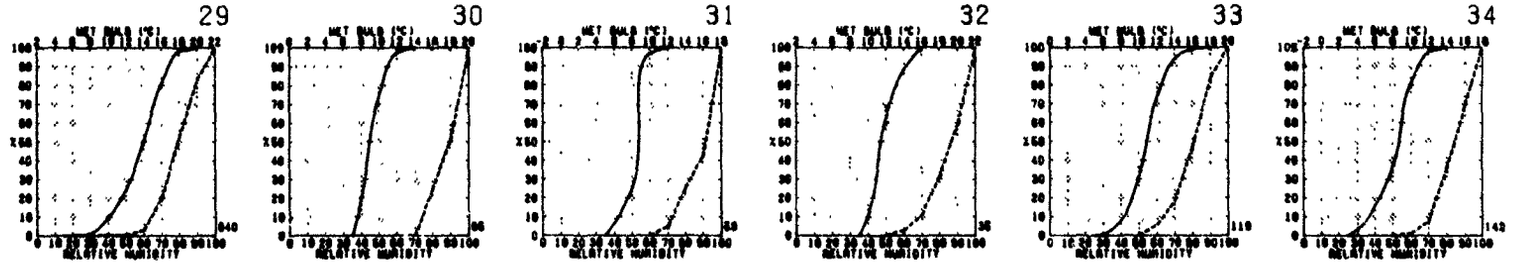
BLUE LINE Minimum (1%) dew point temperature (°C) (1% of the computed values were equal to or less than the given value)

RED LINE Maximum (99%) dew-point temperature (°C) (1% of the computed values were greater than the given value)









Graphs represent the objective compilation of available data for specified areas without regard
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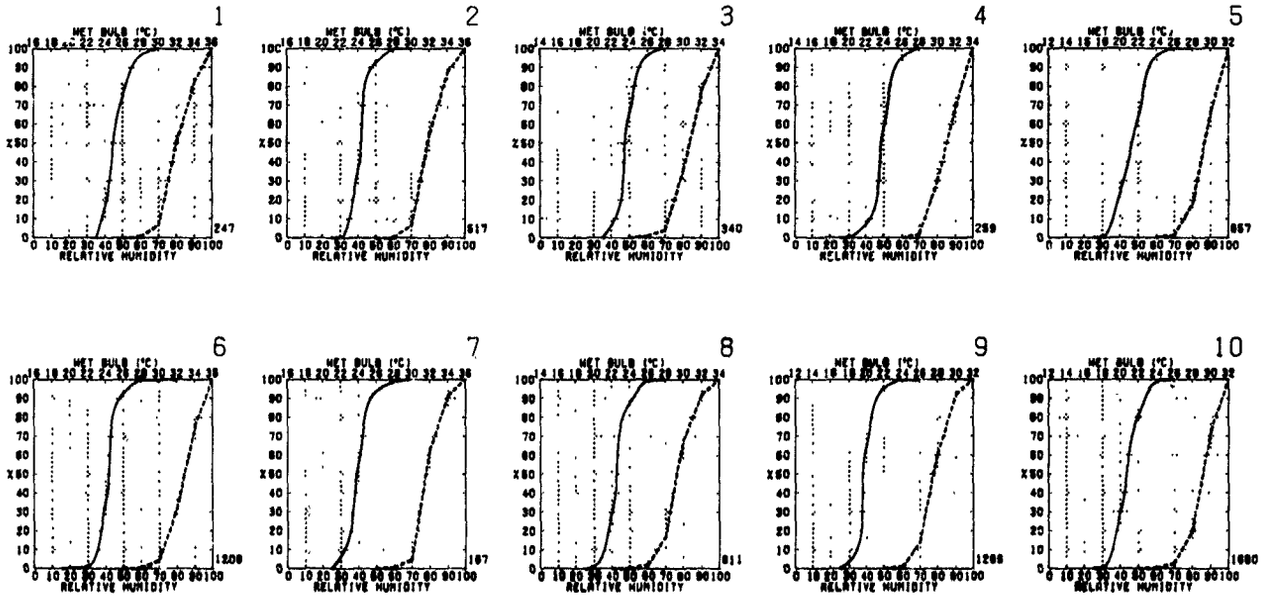

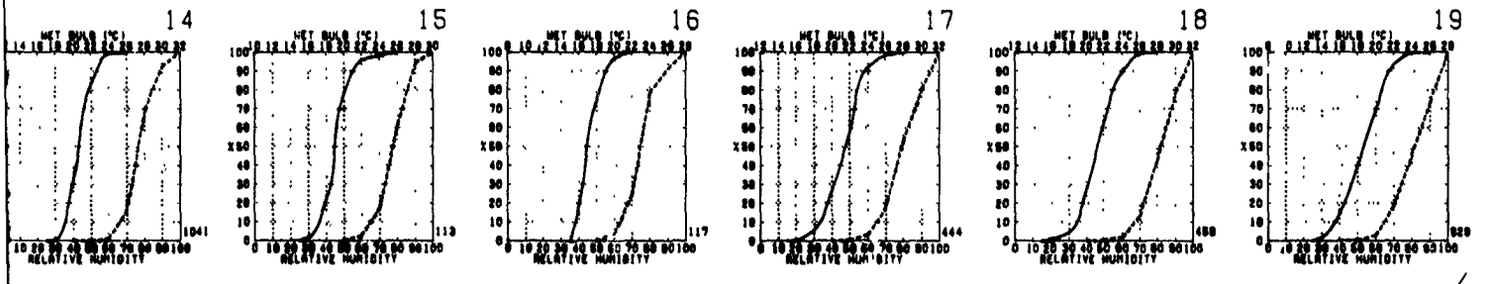

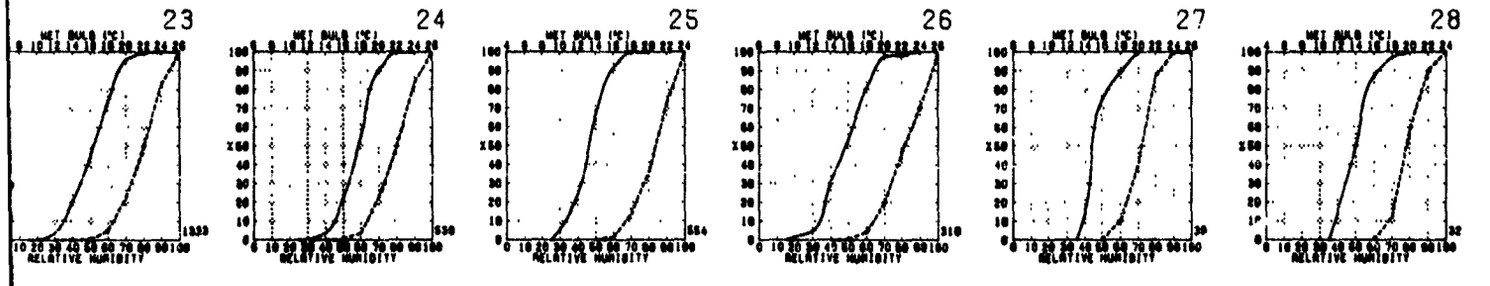

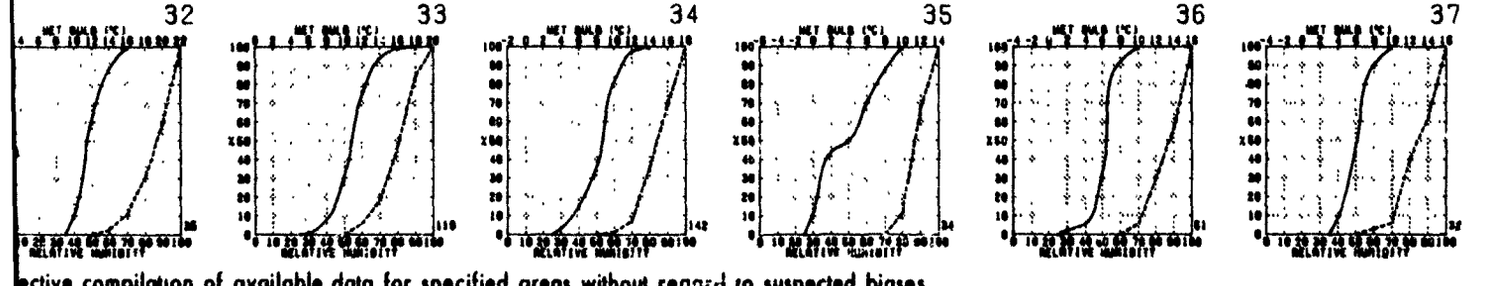

ective compilation of available data for specified areas without regard to suspected biases.

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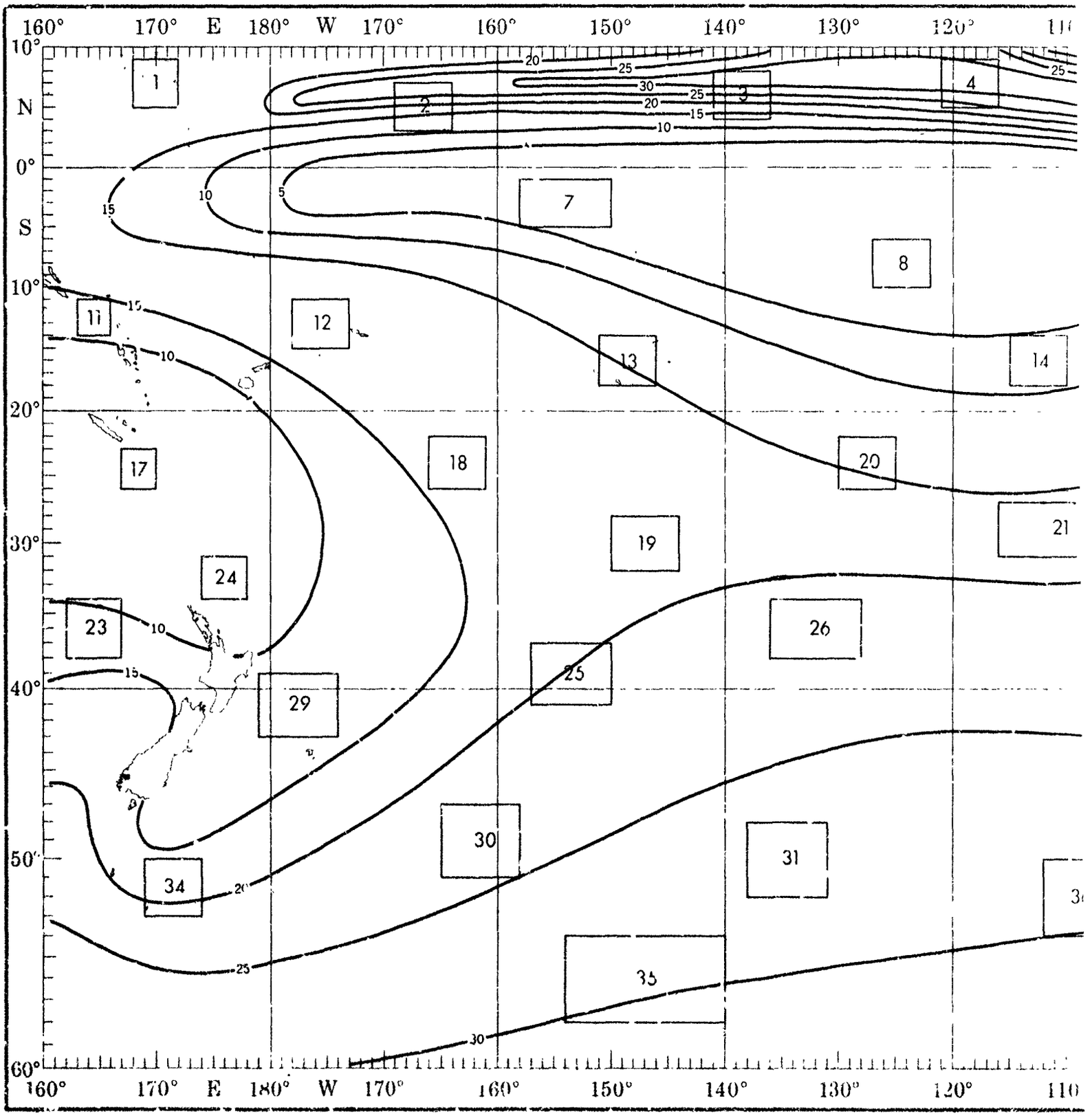
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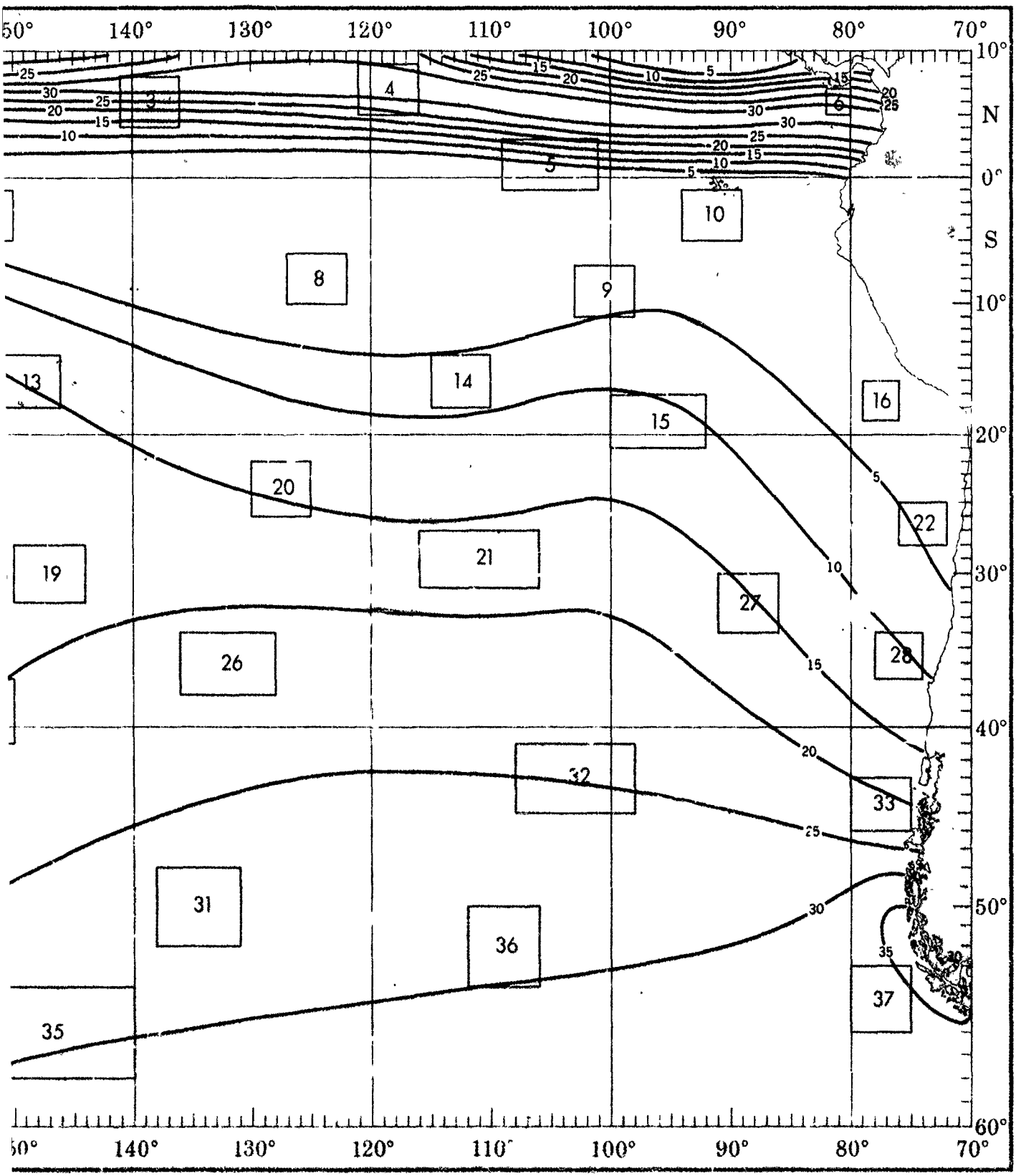
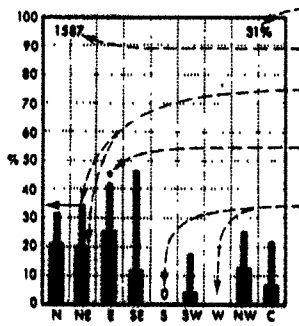
PRECIPITATION



PRECIPITATION

% Pcpn. { % Liquid / % Snow

Percent frequency of surface wind observations from each direction and calm that were accompanied by precipitation, subdivided into liquid type (including freezing rain and freezing drizzle) and snow.



—Percentage of present weather observations reporting precipitation.

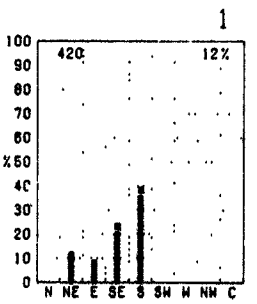
—Number of observations

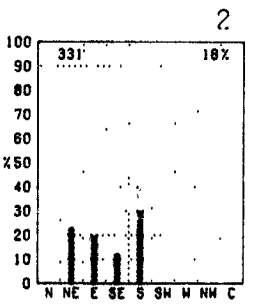
—(34% of all NE winds were accompanied by precipitation, of which 14% was liquid and 20% was snow.)

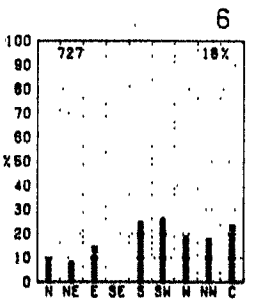
—An asterisk in the column for a given direction or calm indicates that the percentage was based on 10-30 observations of present weather and wind direction.

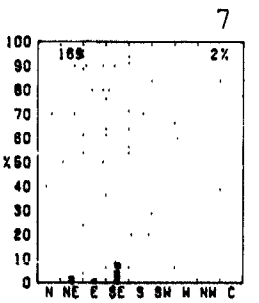
—0 replaces bar when no precipitation was observed with winds from a given direction or calm. No bar graph is presented if less than 10 observations containing present weather were reported for a given direction or calm.

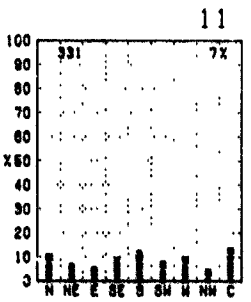
RED LINE - Percent frequency of observations reporting precipitation

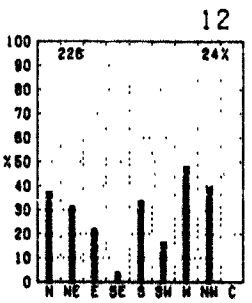


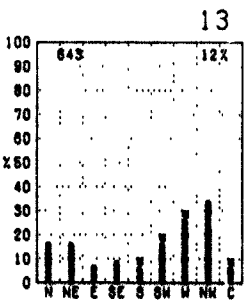


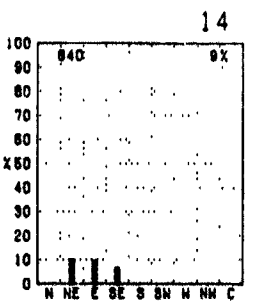


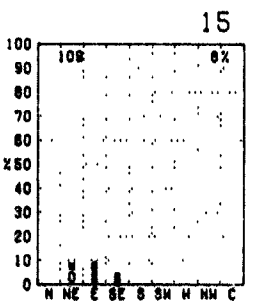


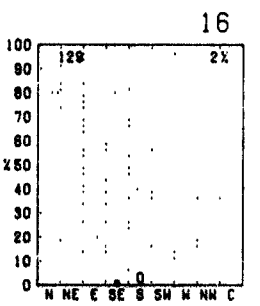


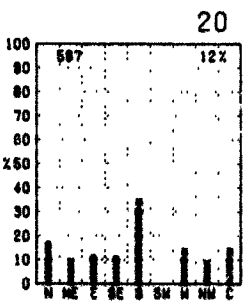


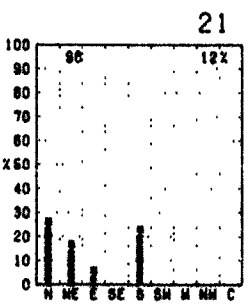


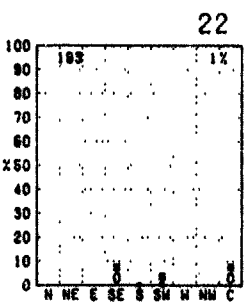


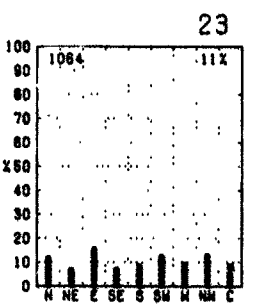


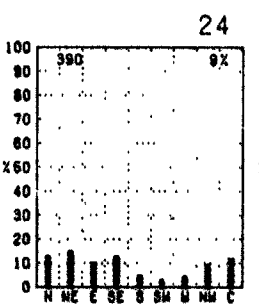


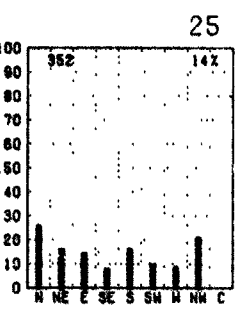


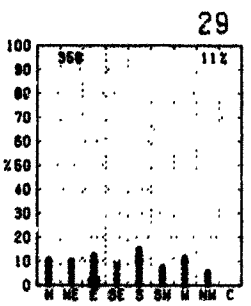


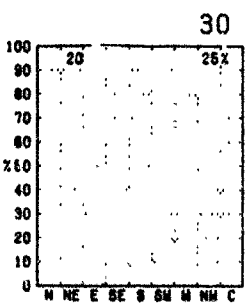






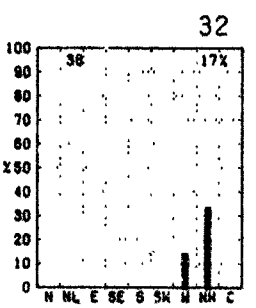


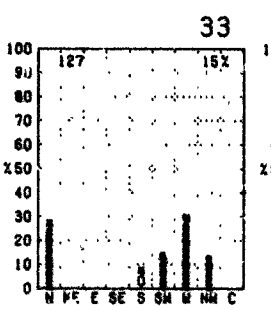


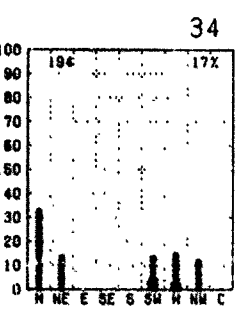


31

INSUFFICIENT DATA







Graphs represent the objective compilation of available data for specified areas without regard
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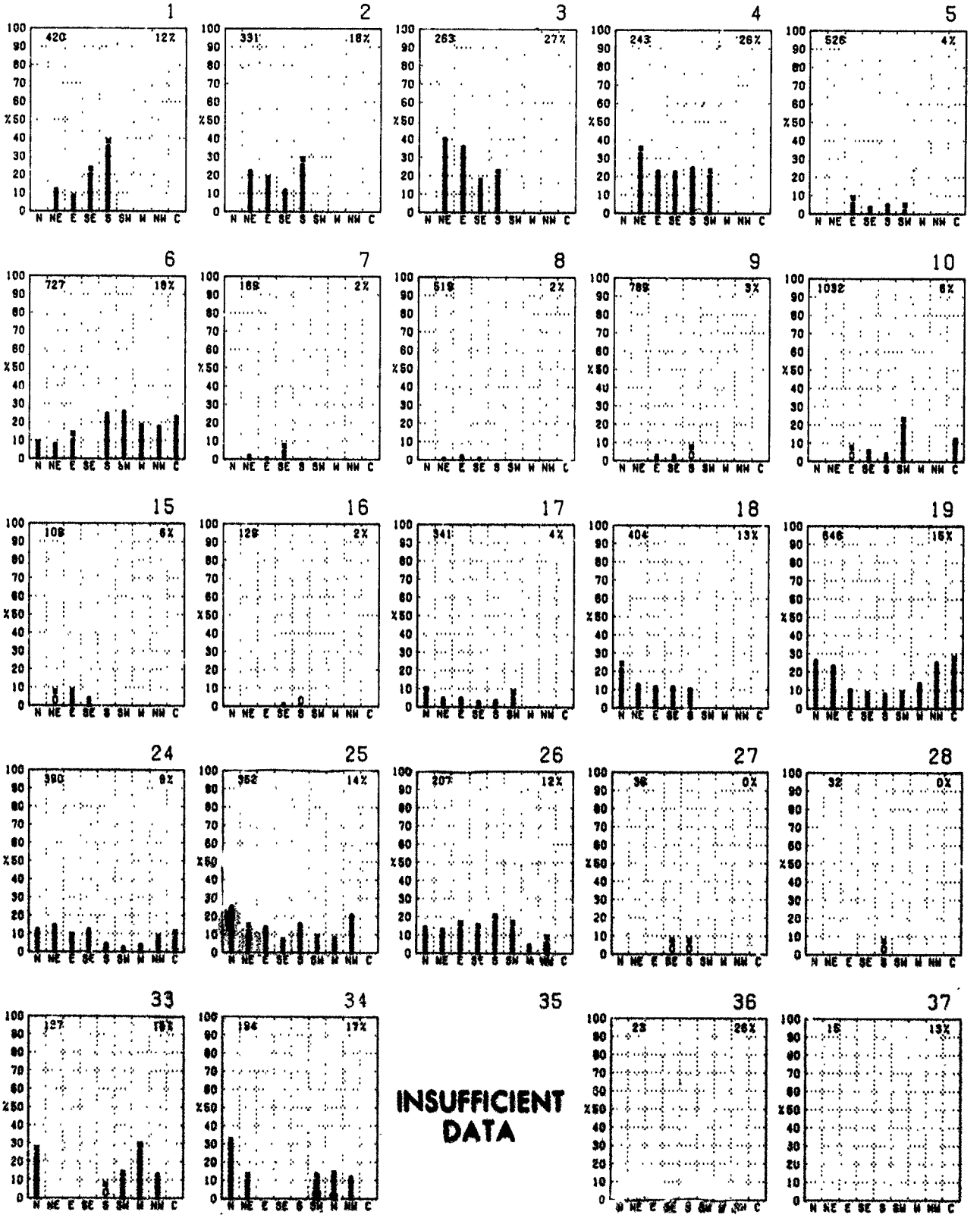

INSUFFICIENT DATA

objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

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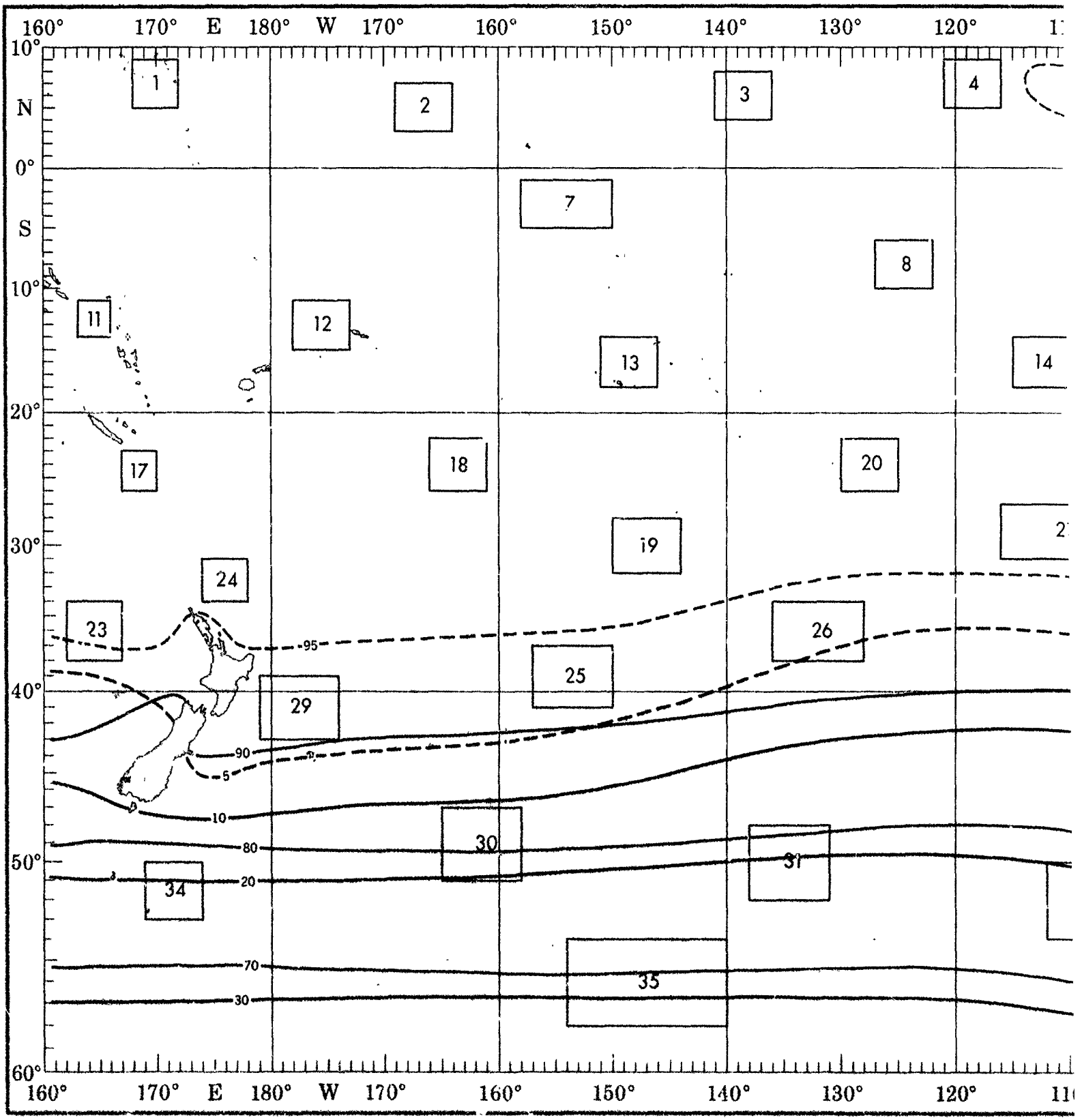
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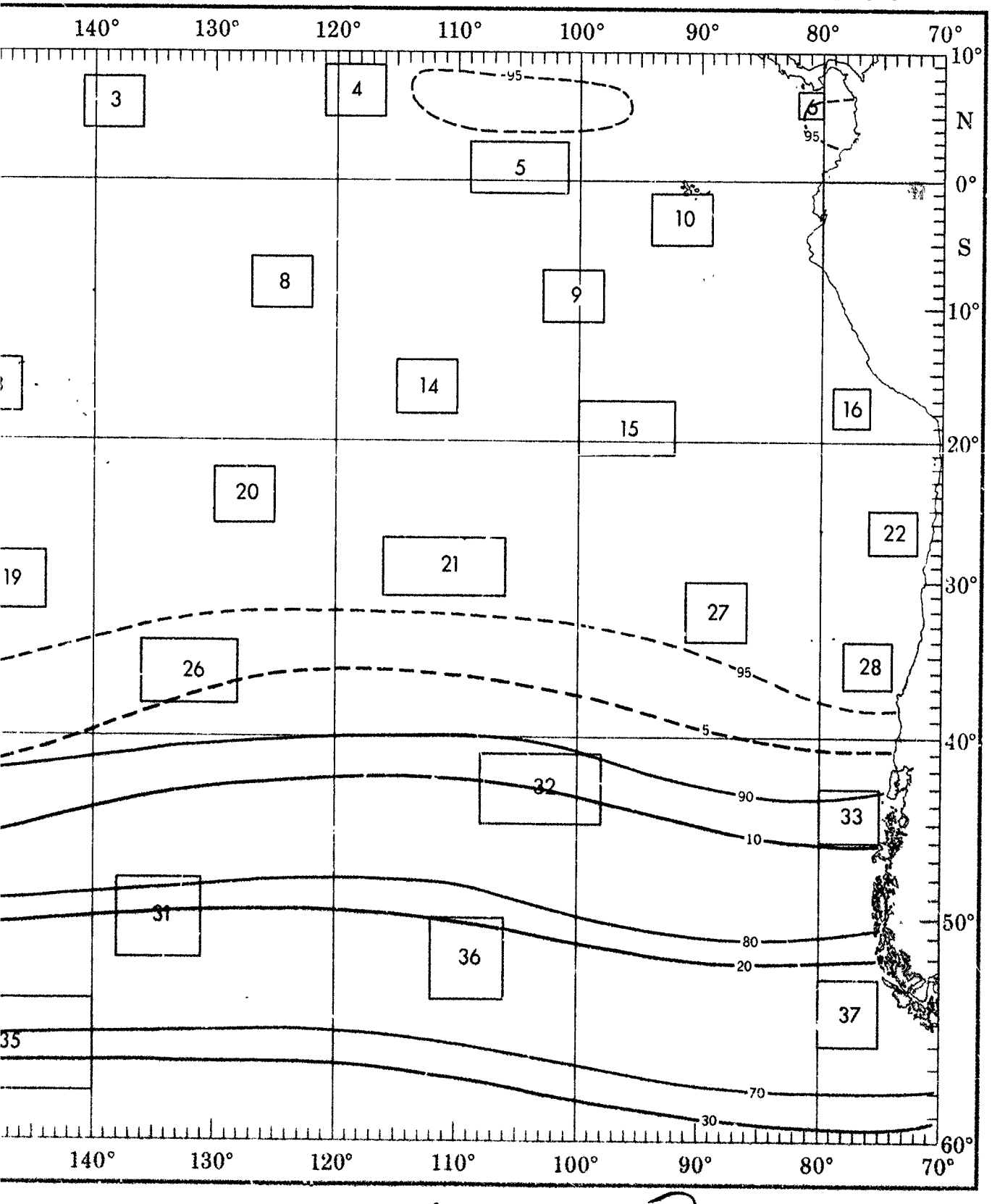
VISIBILITY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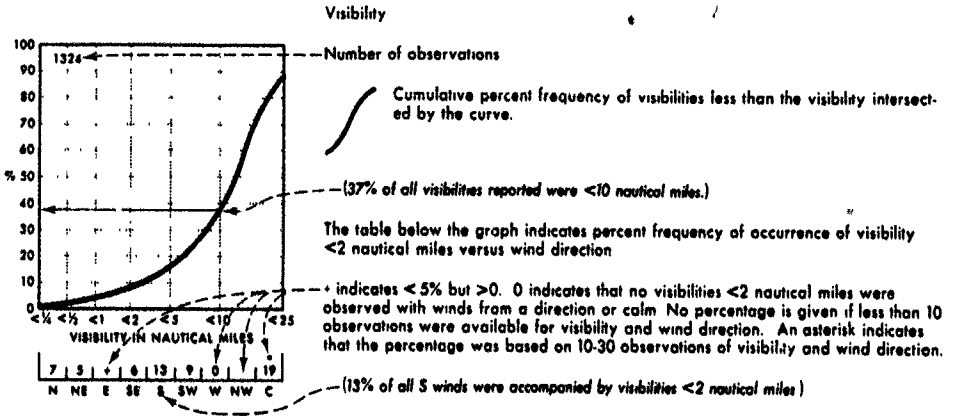
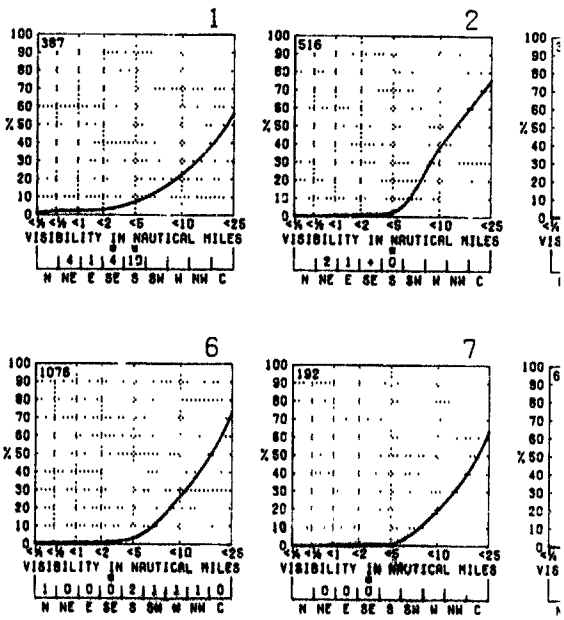
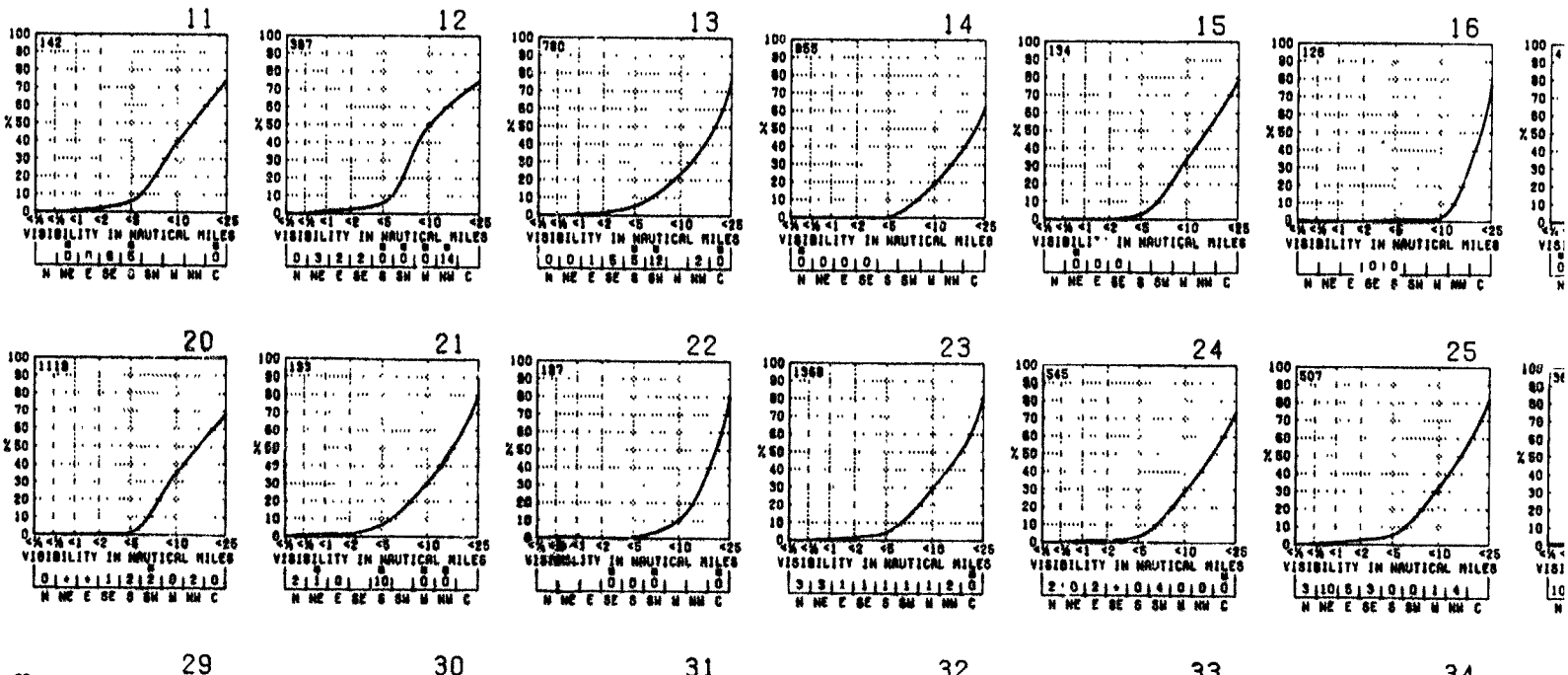
VISIBILITY

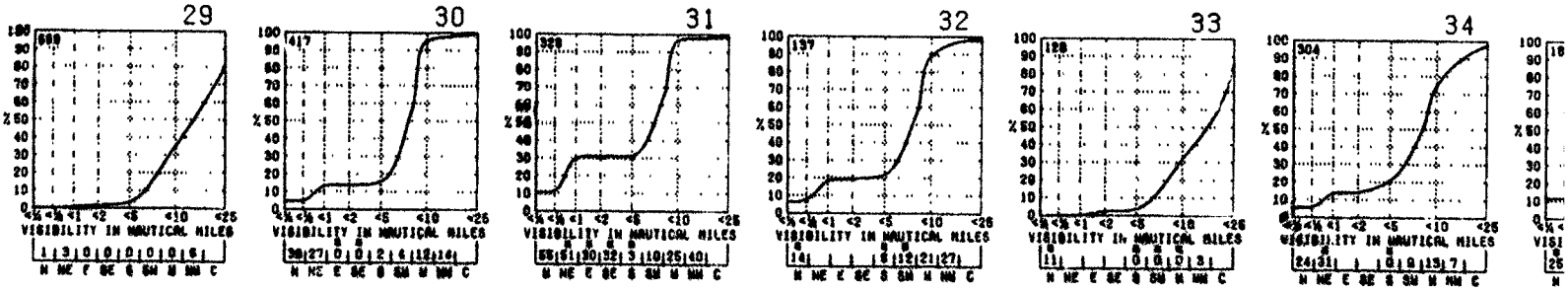


BLUE LINE - Percent frequency of visibilities ≥5 nautical miles

RED LINE - Percent frequency of visibilities <2 nautical miles







Graphs represent the objective compilation of available data for specified areas without regard to su
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bic

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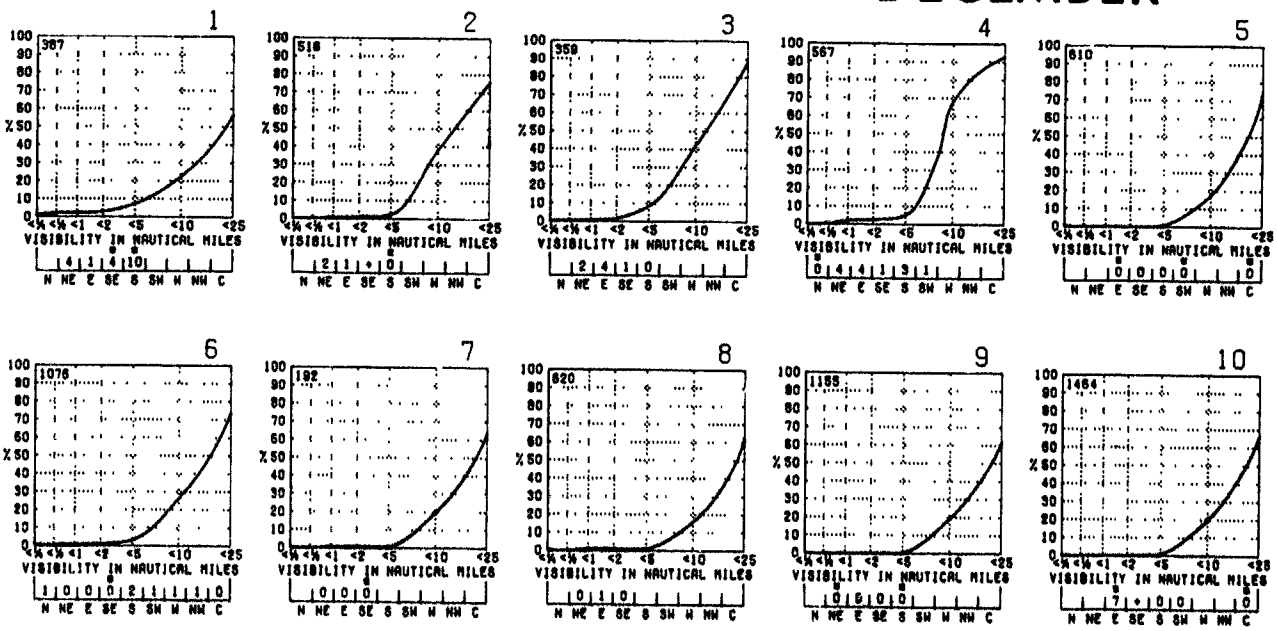

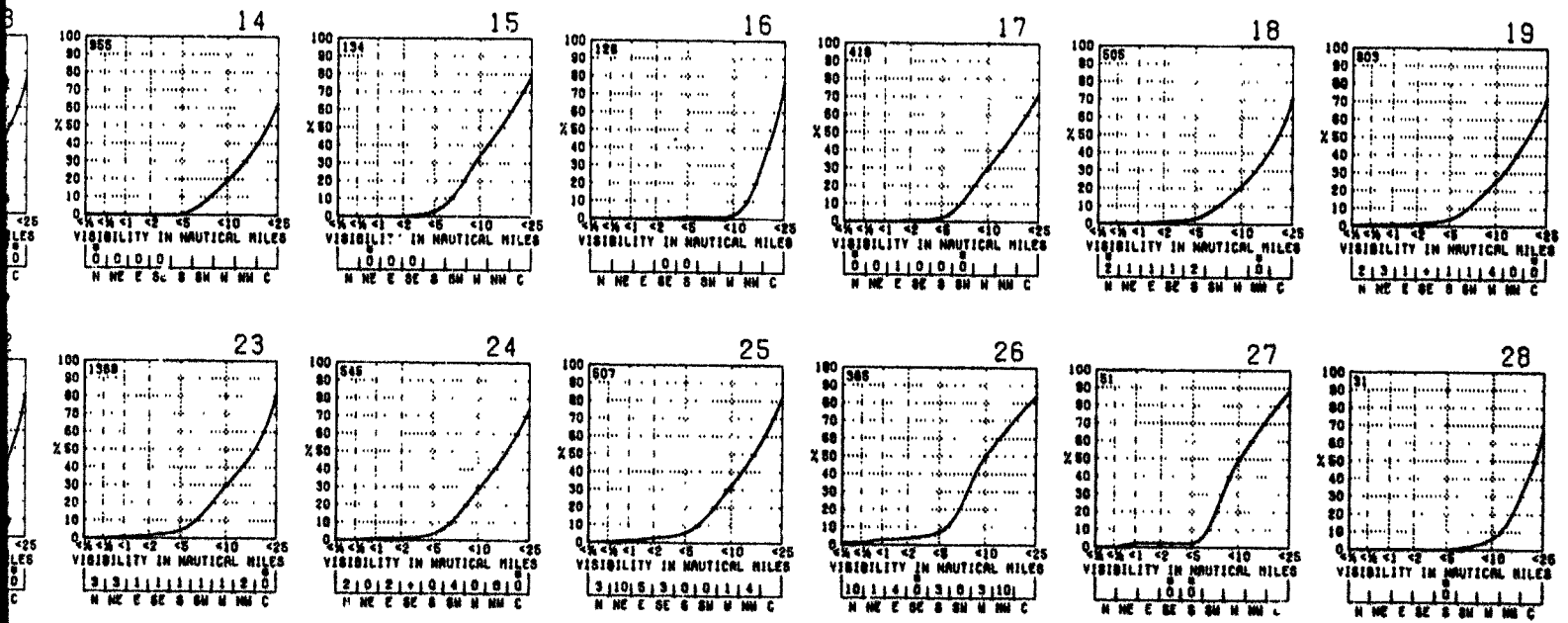

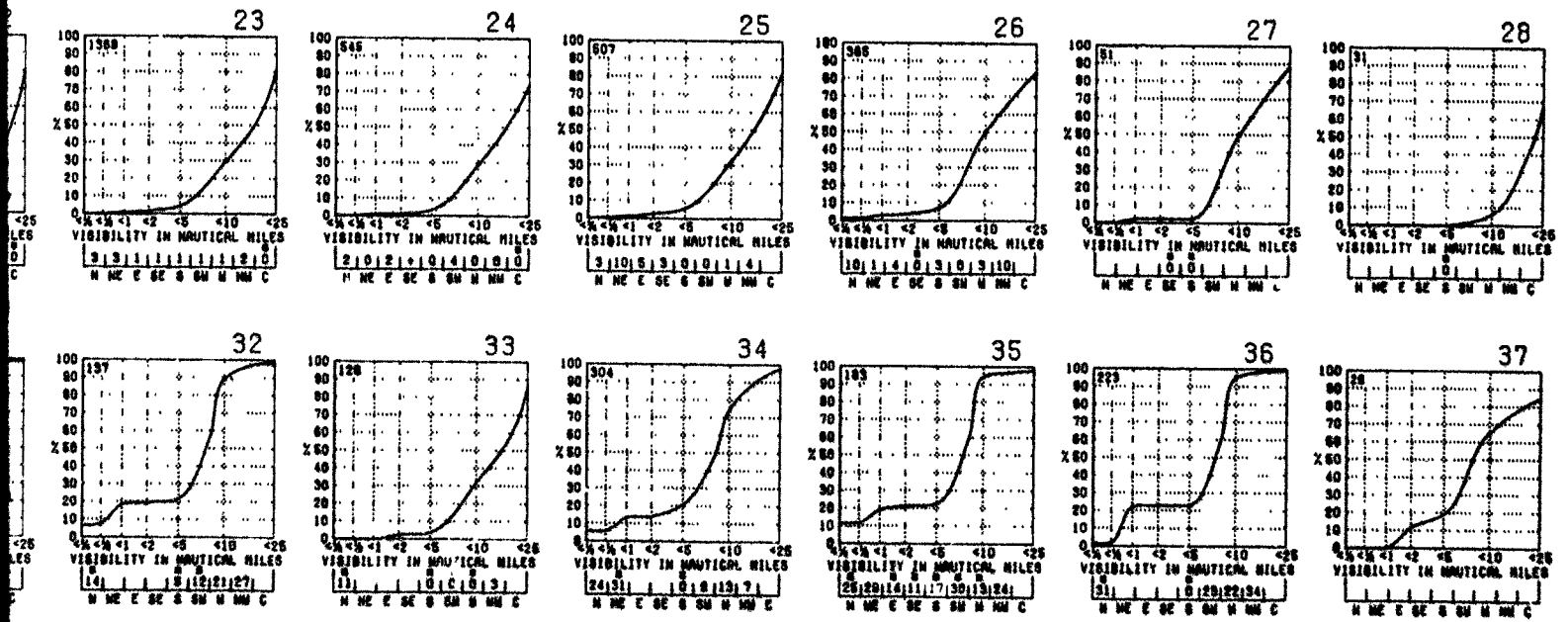

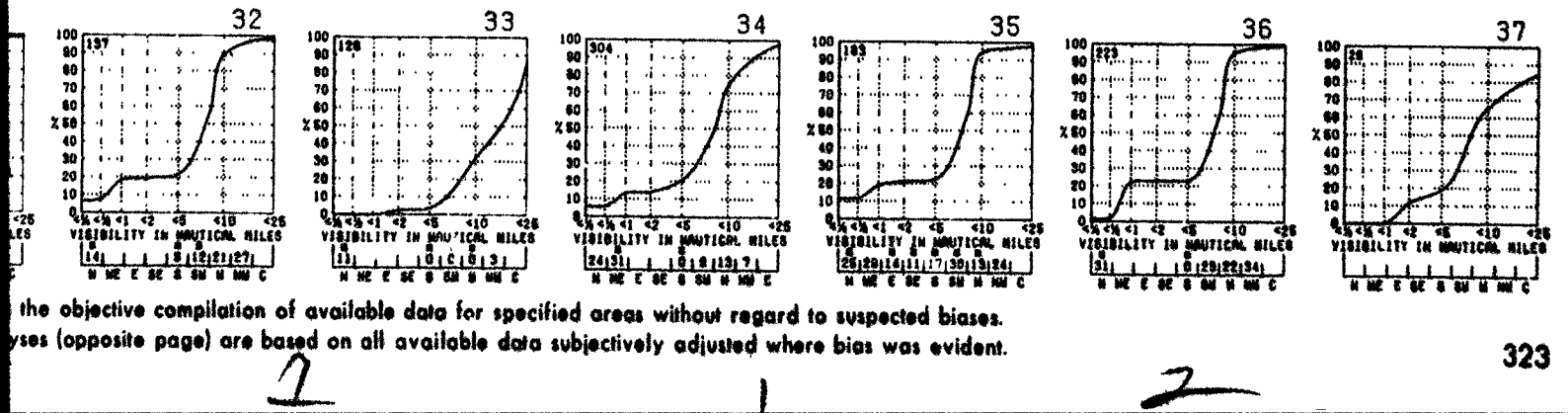

the objective compilation of available data for specified areas without regard to suspected biases.
yses (opposite page) are based on all available data subjectively adjusted where bias was evident.

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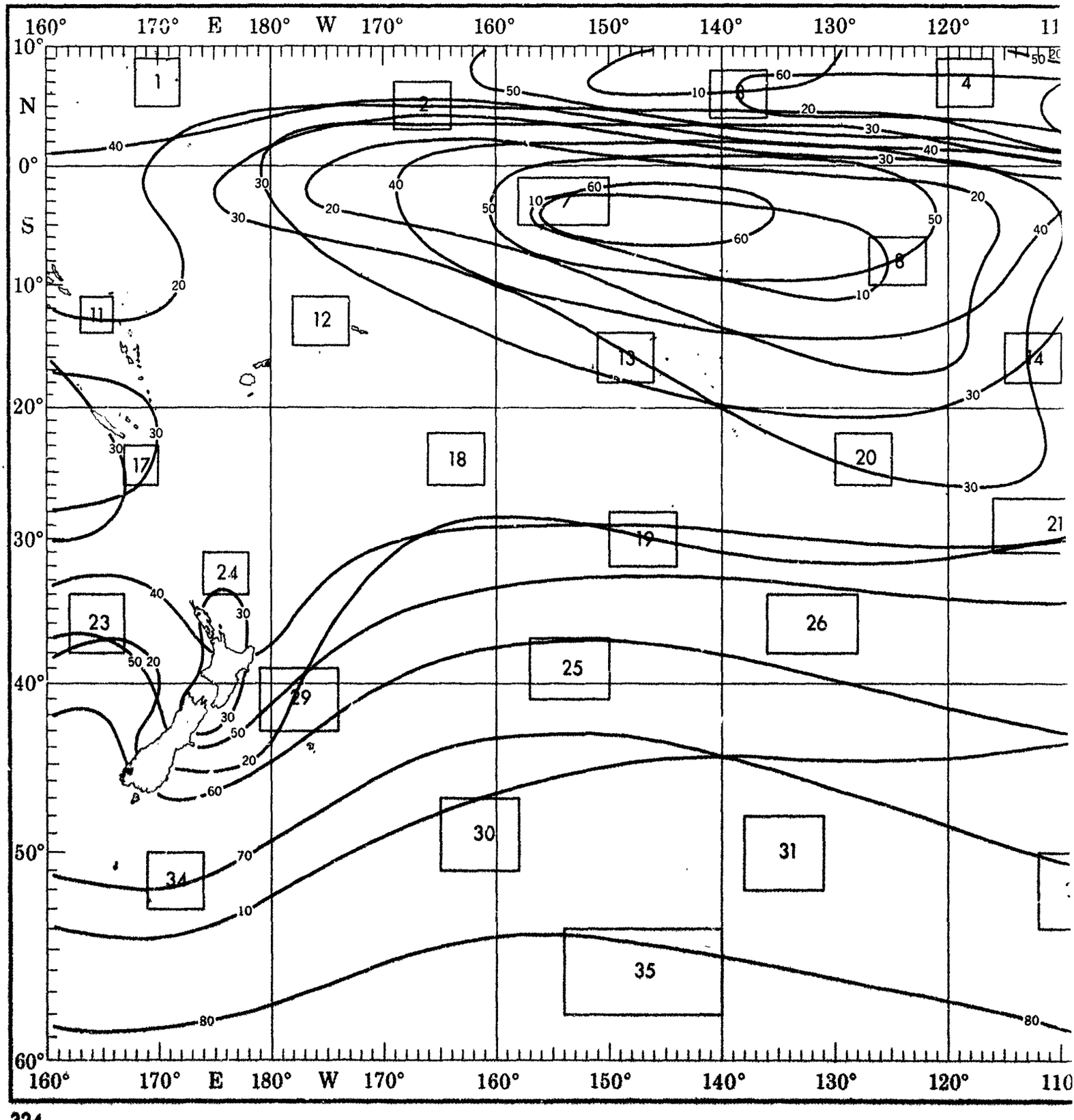
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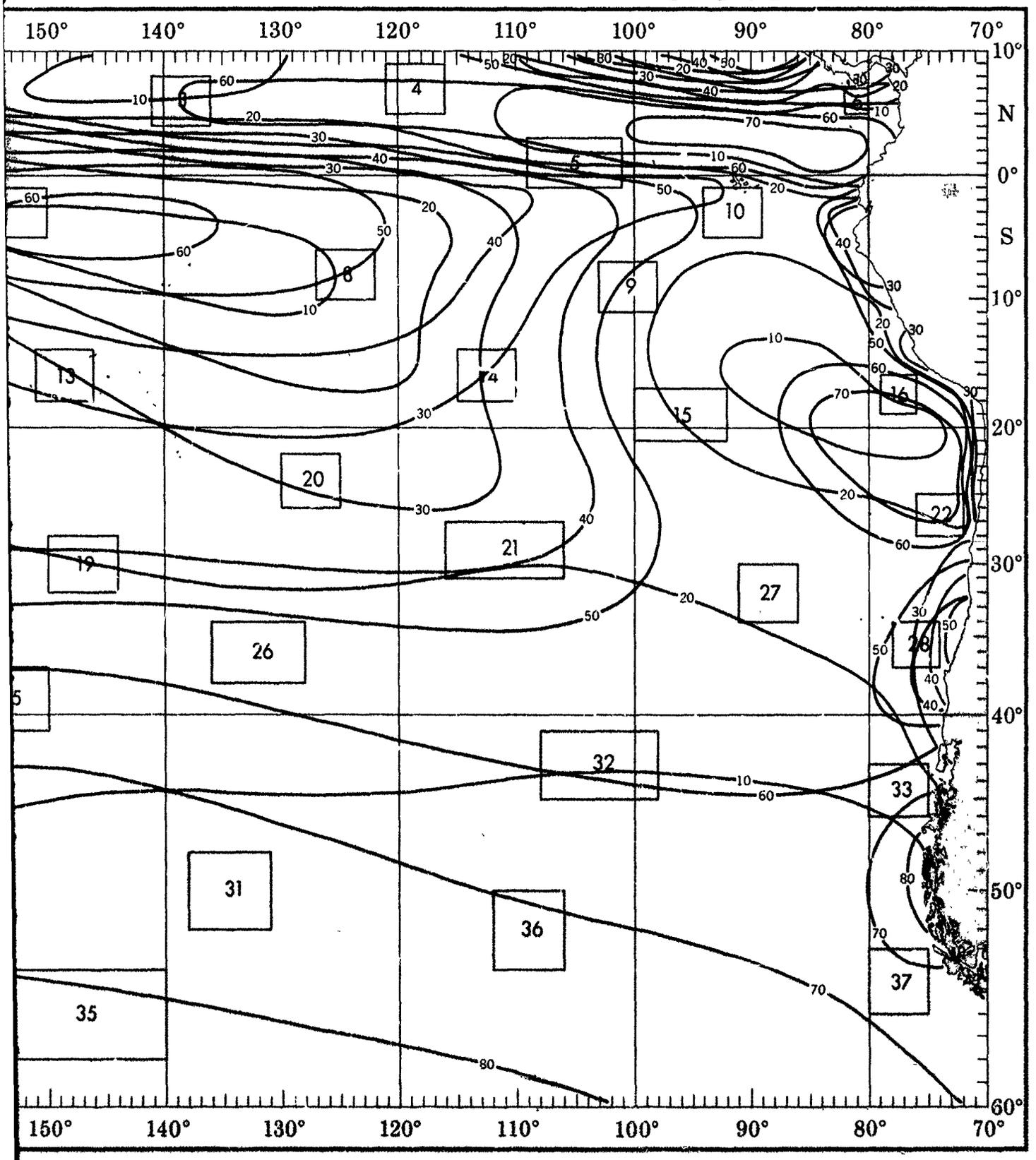
CLOUD COVER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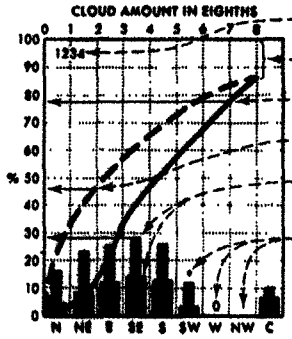
CLOUD COVER

Total Cloud Amount
Low Cloud Amount
} Cumulative percent frequency of indicated cloud amount equal to or less than the amount intersected by the curve

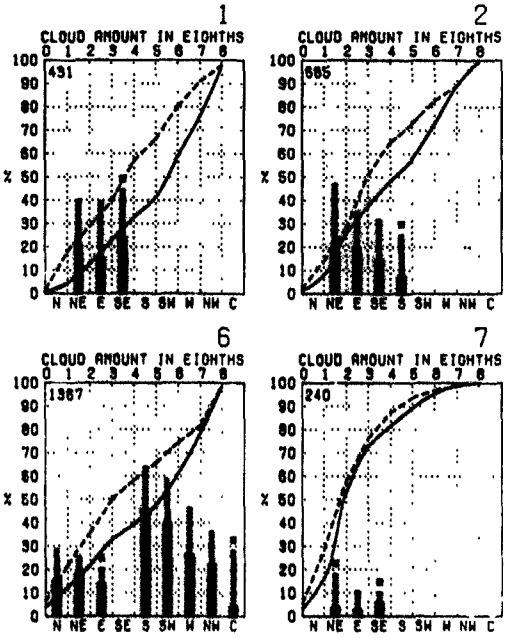


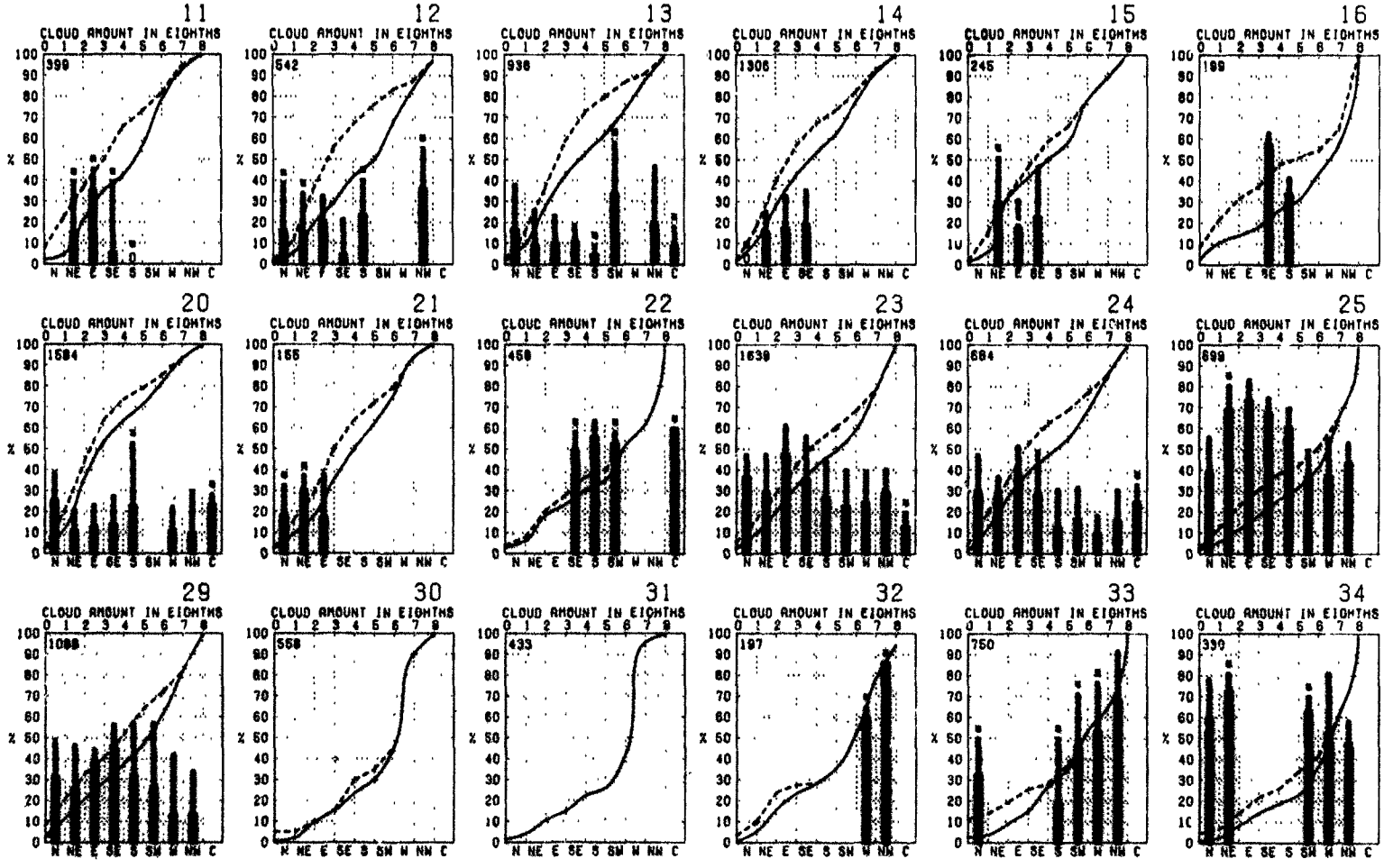
- Number of observations containing total cloud amount.
- Obscurations.
- (77% of all total cloud amounts were ≤7/8.)
- (46% of all low cloud amounts were ≤2/8.)
- (28% of all SE winds were accompanied by low cloud amounts ≥5/8 and 14% by low cloud amounts ≥7/8.)
- An asterisk indicates that the percentage 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

Low cloud amount: Percent frequency of observations from each direction and calm that were accompanied by low cloud amounts ≥5/8 and ≥7/8.
Low clouds are clouds with bases <8000 feet.

BLUE LINE - Percent frequency of total cloud amount ≤2/8

RED LINE - Percent frequency of low cloud amount ≥5/8





Graphs represent the objective compilation of available data for specified areas without regard
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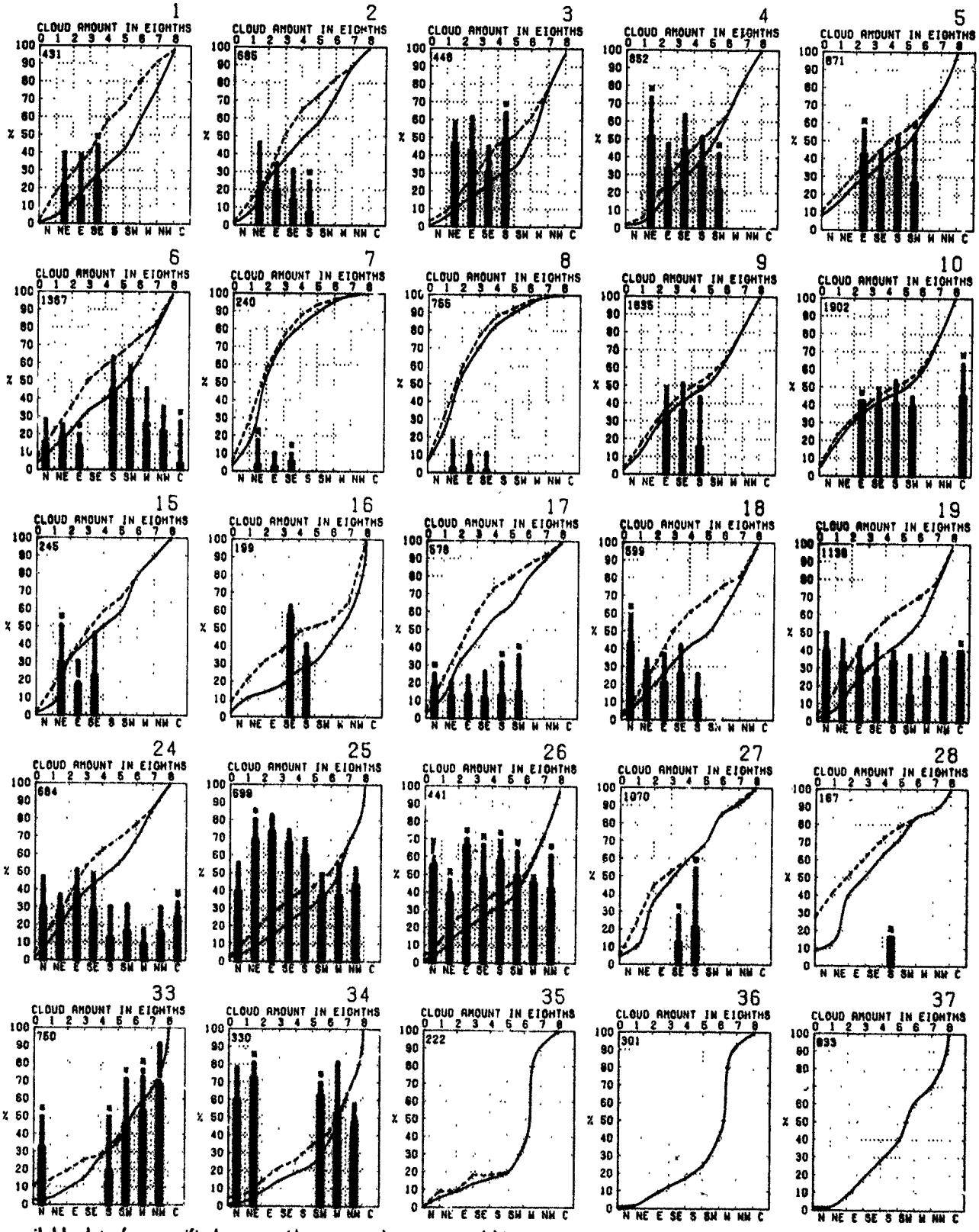

objectiv[illegible]pilation of available data for specified areas without regard to suspected biases.
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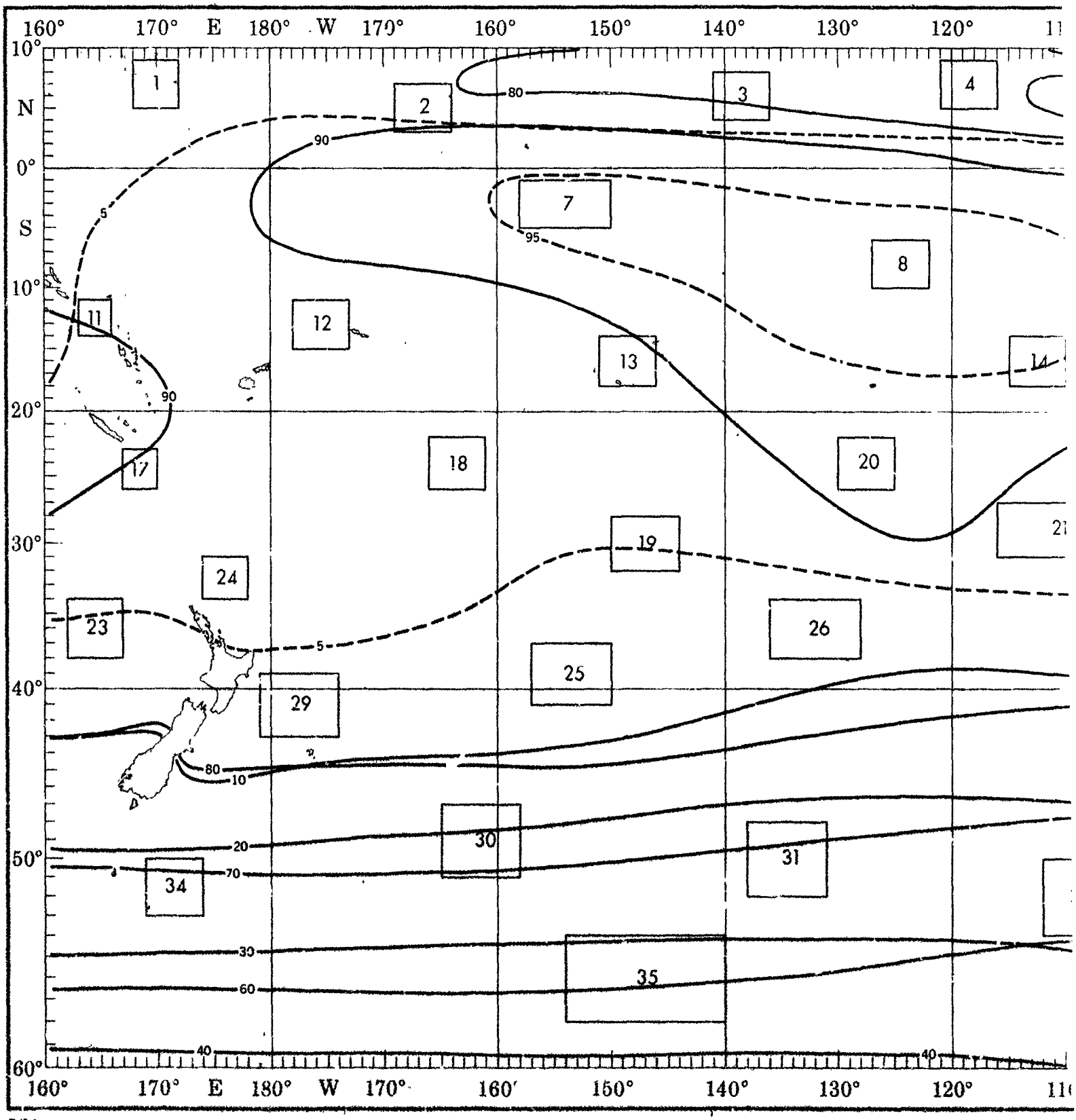
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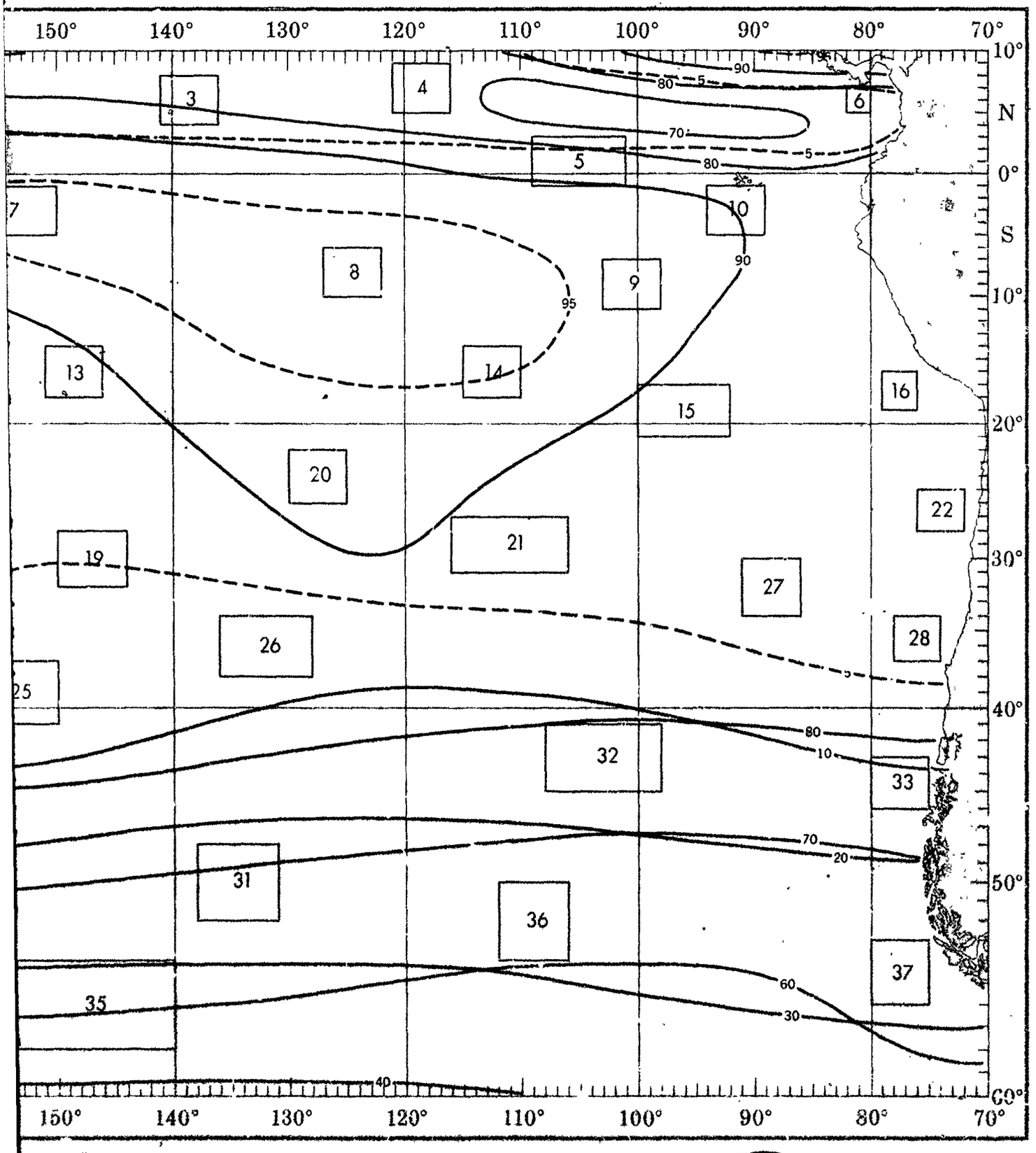
CEILING AND VISIBILITY



CEILING AND VISIBILITY

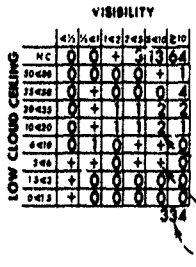
Low cloud ceiling - Visibility

Percent frequency of simultaneous occurrence of specified low cloud ceilings (hundreds of feet) and visibilities (nautical miles)

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".

"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8



BLUE LINE - Percent frequency of low cloud ceiling ≥1000 feet (or no low cloud ceiling) and visibility ≥5 nautical miles

RED LINE - Percent frequency of low cloud ceiling <600 feet and/or visibility <2 nautical miles

1

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	2	6	50
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	1
20<35	0	0	0	0	0	3
10<20	0	0	0	1	2	11
5<10	0	0	0	0	4	14
3<5	0	0	0	0	1	1
1.5<3	0	0	0	0	0	0
0<1.5	3	0	1	0	1	0

191

2

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	5	50
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	1
20<35	0	0	0	0	1	5
10<20	0	0	0	1	3	12
5<10	0	0	0	1	2	8
3<5	0	0	0	0	+	+
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

279

6

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	1	57
50<80	0	0	0	0	0	1
35<50	0	0	0	0	+	2
20<35	+	0	0	0	1	8
10<20	0	+	+	1	3	10
5<10	0	+	+	1	4	7
3<5	0	0	0	+	1	2
1.5<3	0	0	0	0	0	+
0<1.5	+	0	0	+	0	+

786

7

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	7	91
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	0
20<35	0	0	0	0	0	1
10<20	0	0	0	0	2	8
5<10	0	0	0	0	1	0
3<5	0	0	0	0	1	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

120

11

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	9	57
50<80	0	0	1	0	0	1
35<50	0	0	0	0	0	1
20<35	0	0	0	0	0	5
10<20	0	0	C	1	2	8
5<10	0	0	0	2	3	8
3<5	0	0	0	0	1	1
1.5<3	0	0	0	0	0	0
0<1.5	8	0	0	0	0	0

87

12

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	1	0	1	6	61
50<80	0	0	0	1	0	2
35<50	0	0	0	0	0	0
20<35	0	0	0	0	2	4
10<20	0	1	1	2	1	5
5<10	0	0	0	1	4	4
3<5	0	0	0	1	2	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	1	C	1	0

178

13

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	+	0	1	4	67
50<80	0	0	0	0	0	+
35<50	0	0	0	+	+	1
20<35	0	0	1	1	1	3
10<20	0	+	+	1	2	8
5<10	0	0	0	+	2	4
3<5	0	0	0	+	1	1
1.5<3	0	0	0	0	+	+
0<1.5	0	0	0	+	+	0

566

14

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	1	67
50<80	0	0	0	0	+	1
35<50	0	0	0	0	0	5
20<35	0	0	0	0	+	8
10<20	0	0	0	0	1	15
5<10	0	0	0	+	+	3
3<5	0	0	0	+	+	+
1.5<3	0	0	0	0	0	+
0<1.5	0	0	0	0	0	0

709

15

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	8	52
50<80	0	0	0	0	3	2
35<50	0	0	0	0	0	2
20<35	0	0	0	0	5	3
10<20	0	0	0	4	0	13
5<10	0	0	0	0	2	6
3<5	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

106

16

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	1	47
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	7
20<35	0	0	0	0	0	9
10<20	0	0	0	0	1	22
5<10	0	0	0	0	0	8
3<5	0	0	0	0	0	2
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

108

20

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	^	0	0	+	2	72
50<80	0	0	0	0	+	1
35<50	0	0	0	0	+	2
20<35	0	0	0	+	1	4
10<20	0	0	+	+	2	8
5<10	0	0	0	1	2	4
3<5	0	0	0	+	+	+
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	+	0

678

21

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	2	2	60
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	1
20<35	0	1	0	1	1	15
10<20	0	0	0	1	1	4
5<10	0	0	0	2	1	8
3<5	0	0	0	1	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

99

22

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	2	34
50<80	0	0	0	0	0	0
35<50	0	0	0	0	1	3
20<35	0	0	0	1	2	11
10<20	0	0	0	0	4	20
5<10	0	0	0	0	1	12
3<5	0	0	0	0	0	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

178

23

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	3	51
50<80	0	0	+	+	0	1
35<50	0	0	+	0	+	3
20<35	+	0	0	+	1	8
10<20	0	0	+	+	4	16
5<10	0	0	+	1	4	5
3<5	+	+	+	+	1	1
1.5<3	0	0	+	+	+	0
0<1.5	0	+	0	+	0	+

1093

24

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	2	60
50<80	0	0	0	0	0	2
35<50	0	0	0	0	+	2
20<35	0	0	0	+	1	8
10<20	0	0	0	1	2	8
5<10	+	0	0	1	3	8
3<5	0	0	+	+	2	+
1.5<3	0	0	0	0	+	0
0<1.5	0	0	0	0	+	+

381

25

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	3	38
50<80	0	0	0	0	0	1
35<50	0	0	0	0	+	4
20<35	0	0	0	+	1	8
10<20	0	0	1	+	4	23
5<10	0	0	0	3	4	7
3<5	0	0	-	-	2	+
1.5<3	0	0	0	0	+	0
0<1.5	1	0	+	0	0	0

394

29

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	5	46
50<80	0	0	0	0	1	1
35<50	0	0	0	0	1	7
20<35	0	0	0	0	1	8
10<20	0	0	0	1	2	13
5<10	0	0	0	1	4	5
3<5	0	0	0	+	1	1
1.5<3	0	0	0	+	+	+
0<1.5	0	0	+	0	+	+

644

30

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	C	0	0	0	0	32
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	0
20<35	0	0	0	0	0	16
10<20	0	0	0	0	0	11
5<10	0	0	0	5	0	21
3<5	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	16	0	0

19

31

INSUFFICIENT DATA

32

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	3	24
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	0
20<35	0	0	0	0	3	0
10<20	0	0	0	0	7	21
5<10	0	0	0	0	3	0
3<5	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	7	7	7	7	10	0

29

33

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	3	28
50<80	0	0	0	0	0	4
35<50	0	0	0	0	0	1
20<35	0	0	0	0	5	10
10<20	0	0	1	0	10	15
5<10	0	0	0	2	7	7
3<5	0	0	0	0	2	4
1.5<3	0	0	0	0	1	0
0<1.5	0	0	1	0	0	0

107

34

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	11	17
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	1
20<35	0	0	1	2	16	10
10<20	0	0	0	5	18	7
5<10	0	0	0	2	6	1
3<5	0	0	0	1	1	0
1.5<3	0	0	0	0	0	0
0<1.5	0	2	1	0	0	1

193

Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted wh

Y

DECEMBER

ilings (hundreds of feet)

) when low cloud amount

ences of N_h <5/8

with visibility ≥5 but <10

ility ≥5 nautical miles

1

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	2	6	50
60-<80	0	0	0	0	0	0
35-<60	0	0	0	0	0	1
20-<35	0	0	0	0	0	3
10-<20	0	0	0	1	2	11
5-<10	0	0	0	0	4	14
3-<5	0	0	0	0	1	1
1.5-<3	0	0	0	0	0	0
0-<1.5	3	0	1	0	1	0

191

2

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	+	5	60
60-<80	0	0	0	0	0	0
35-<60	0	0	0	0	0	1
20-<35	0	0	0	0	1	5
10-<20	0	0	0	1	3	12
5-<10	0	0	0	1	2	8
3-<5	0	0	0	0	+	+
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	0	0

279

3

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	4	44
60-<80	0	0	0	0	0	0
35-<60	0	0	0	0	+	+
20-<35	0	0	0	0	1	3
10-<20	0	0	0	2	4	12
5-<10	0	0	+	2	5	11
3-<5	+	0	0	2	4	1
1.5-<3	0	0	+	0	0	0
0-<1.5	0	+	0	1	+	1

221

4

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	+	0	0	+	8	38
60-<80	0	0	0	0	0	+
35-<60	0	0	0	+	+	5
20-<35	0	0	+	+	1	5
10-<20	0	0	0	1	3	8
5-<10	0	+	0	1	6	11
3-<5	0	0	+	1	5	1
1.5-<3	0	0	0	+	0	0
0-<1.5	0	0	+	+	0	1

219

5

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	+	3	50
60-<80	0	0	0	0	0	1
35-<60	0	0	0	0	0	2
20-<35	0	0	0	0	1	9
10-<20	0	0	0	+	1	18
5-<10	0	0	0	+	2	10
3-<5	0	0	0	0	1	1
1.5-<3	0	0	0	0	+	+
0-<1.5	0	0	0	0	0	0

315

6

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	+	1	57
60-<80	0	0	0	0	0	1
35-<60	0	0	0	0	+	2
20-<35	+	0	0	0	1	6
10-<20	0	+	+	1	3	10
5-<10	0	+	+	1	4	7
3-<5	0	0	0	+	1	2
1.5-<3	0	0	0	0	0	+
0-<1.5	+	0	0	+	0	+

785

7

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	7	81
60-<80	0	0	0	0	0	0
35-<60	0	0	0	0	0	0
20-<35	0	0	0	0	0	1
10-<20	0	0	0	0	2	8
5-<10	0	0	0	0	1	0
3-<5	0	0	0	0	1	1
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	0	0

120

8

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	2	88
60-<80	0	0	0	0	0	0
35-<60	0	0	0	0	0	1
20-<35	0	0	0	0	+	3
10-<20	0	0	0	+	0	8
5-<10	0	0	0	0	+	1
3-<5	0	0	0	0	0	0
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	0	0

498

9

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	1	49
60-<80	0	0	0	0	0	1
35-<60	0	0	0	0	+	7
20-<35	0	0	0	0	1	9
10-<20	0	0	0	0	1	22
5-<10	0	0	0	+	1	8
3-<5	0	0	0	0	0	+
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	+	+	0

866

10

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	1	49
60-<80	0	0	0	0	+	2
35-<60	0	0	0	0	+	4
20-<35	0	0	0	+	1	10
10-<20	0	0	0	+	2	21
5-<10	0	0	0	+	2	8
3-<5	0	0	0	0	1	1
1.5-<3	0	0	0	0	+	0
0-<1.5	0	0	0	0	0	+

1127

14

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	+	1	67
60-<80	0	0	0	0	+	1
35-<60	0	0	0	0	0	5
20-<35	0	0	0	0	+	6
10-<20	0	0	0	0	1	15
5-<10	0	0	0	+	+	3
3-<5	0	0	0	+	+	+
1.5-<3	0	0	0	0	0	+
0-<1.5	0	0	0	0	0	0

709

15

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	9	52
60-<80	0	0	0	0	3	2
35-<60	0	0	0	0	0	2
20-<35	0	0	0	0	5	3
10-<20	0	0	0	4	0	13
5-<10	0	0	0	0	2	6
3-<5	0	0	0	0	0	0
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	0	0

105

16

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	1	1	47
60-<80	0	0	0	0	0	1
35-<60	0	0	0	0	0	7
20-<35	0	0	0	0	0	9
10-<20	0	0	0	0	1	22
5-<10	0	0	0	0	0	8
3-<5	0	0	0	0	0	2
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	0	0

109

17

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	2	72
60-<80	0	0	0	0	0	+
35-<60	0	0	0	0	0	2
20-<35	0	0	0	0	1	4
10-<20	0	0	0	0	1	8
5-<10	0	0	0	0	1	2
3-<5	0	0	0	0	1	+
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	0	0

283

18

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	+	0	0	0	2	59
60-<80	0	0	0	0	0	+
35-<60	0	0	0	0	1	2
20-<35	0	0	0	+	1	8
10-<20	0	0	1	+	2	13
5-<10	0	0	0	0	1	9
3-<5	0	0	0	0	0	1
1.5-<3	0	0	+	0	0	0
0-<1.5	0	0	0	1	0	0

376

19

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	+	0	+	0	2	56
60-<80	0	0	0	0	+	1
35-<60	0	0	0	0	+	3
20-<35	0	0	+	+	+	6
10-<20	0	0	0	+	3	14
5-<10	0	0	0	1	3	6
3-<5	0	0	+	+	1	1
1.5-<3	0	0	+	+	0	0
0-<1.5	+	0	+	+	0	0

667

23

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	1	3	61
60-<80	0	0	+	+	0	1
35-<60	0	0	+	0	+	3
20-<35	+	0	0	+	1	6
10-<20	0	0	+	+	4	16
5-<10	0	0	+	1	4	5
3-<5	+	+	+	+	1	1
1.5-<3	0	0	+	+	+	0
0-<1.5	0	+	0	+	0	+

1033

24

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	1	2	60
60-<80	0	0	0	0	0	2
35-<60	0	0	0	0	+	2
20-<35	0	0	0	+	1	6
10-<20	0	0	0	1	2	9
5-<10	+	0	0	1	3	6
3-<5	0	0	+	+	2	+
1.5-<3	0	0	0	0	+	0
0-<1.5	0	0	0	0	+	+

391

25

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	+	3	36
60-<80	0	0	0	0	0	1
35-<60	0	0	0	0	1	4
20-<35	0	0	0	+	1	8
10-<20	0	0	1	+	4	23
5-<10	0	0	0	3	4	7
3-<5	0	0	+	+	2	+
1.5-<3	0	0	0	0	+	0
0-<1.5	1	0	+	0	0	0

384

26

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	+	3	34
60-<80	0	0	0	0	0	1
35-<60	0	0	0	+	0	3
20-<35	0	0	0	0	1	10
10-<20	0	0	+	1	6	18
5-<10	0	+	+	1	5	9
3-<5	0	0	0	1	0	+
1.5-<3	0	0	0	+	0	0
0-<1.5	+	+	+	1	0	+

216

27

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	24	34
60-<80	0	0	0	0	0	5
35-<60	0	0	0	0	0	0
20-<35	0	0	0	0	8	18
10-<20	0	0	0	0	3	8
5-<10	0	0	0	0	0	0
3-<5	0	0	0	0	0	0
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	0	0

36

28

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	0	70
60-<80	0	0	0	0	0	0
35-<60	0	0	0	0	0	0
20-<35	0	0	0	0	0	11
10-<20	0	0	0	0	4	11
5-<10	0	0	0	0	0	4
3-<5	0	0	0	0	0	0
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	0	0

27

32

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	3	24
60-<80	0	0	0	0	0	0
35-<60	0	0	0	0	0	0
20-<35	0	0	0	0	3	0
10-<20	0	0	0	0	7	21
5-<10	0	0	0	0	3	0
3-<5	0	0	0	0	0	0
1.5-<3	0	0	0	0	0	0
0-<1.5	7	7	7	7	10	0

29

33

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	1	0	3	28
60-<80	0	0	0	0	0	4
35-<60	0	0	0	0	0	1
20-<35	0	0	0	0	5	10
10-<20	0	0	1	0	10	15
5-<10	0	0	0	2	7	7
3-<5	0	0	0	0	2	4
1.5-<3	0	0	0	0	1	0
0-<1.5	0	0	1	0	0	0

107

34

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	1	11	17
60-<80	0	0	0	0	0	0
35-<60	0	0	0	0	1	1
20-<35	0	0	1	2	13	10
10-<20	0	0	0	5	10	7
5-<10	0	0	0	2	8	1
3-<5	0	0	0	1	1	0
1.5-<3	0	0	0	0	0	0
0-<1.5	0	2	1	0	0	1

185

35

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	0	18
60-<80	0	0	0	0	0	0
35-<60	0	0	0	0	0	9
20-<35	0	0	0	0	0	0
10-<20	0	0	0	0	18	9
5-<10	0	0	0	0	0	0
3-<5	0	0	0	0	0	0
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	0	0

11

36

LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	9	0	0	0	9
60-<80	0	0	0	0	0	0
35-<60	0	0	0	0	0	5
20-<35	0	0	0	0	9	14
10-<20	0	0	0	0	14	18
5-<10	0	0	0	0	5	5
3-<5	0	0	0	0	9	0
1.5-<3	0	0	0	0	0	0
0-<1.5	5	0	0	0	0	5

22

37

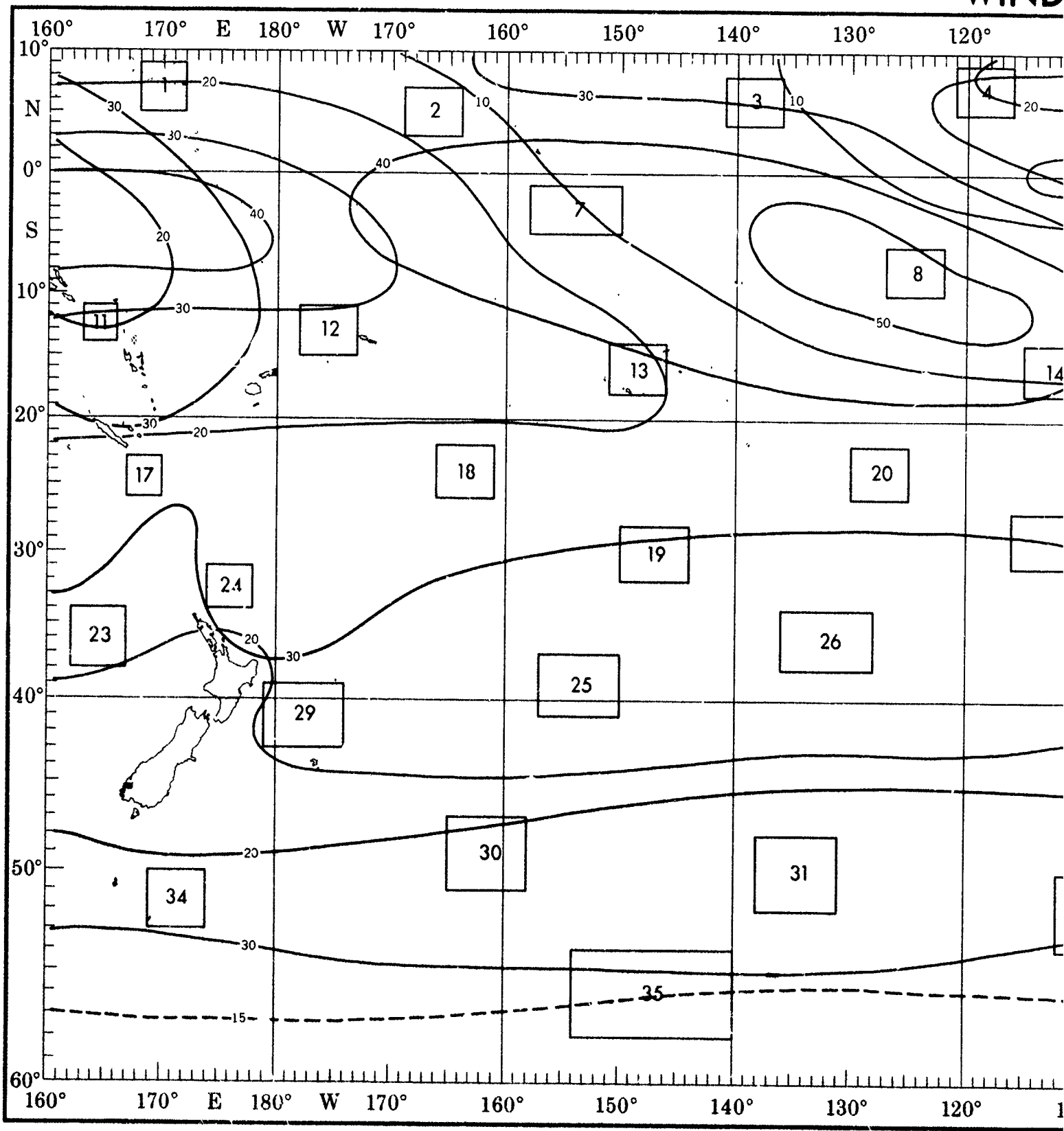
LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	29	43
60-<80	0	0	0	0	0	0
35-<60	0	0	0	0	0	0
20-<35	0	0	0	0	0	7
10-<20	0	0	0	7	7	7
5-<10	0	0	0	0	0	0
3-<5	0	0	0	0	0	0
1.5-<3	0	0	0	0	0	0
0-<1.5	0	0	0	0	0	0

14

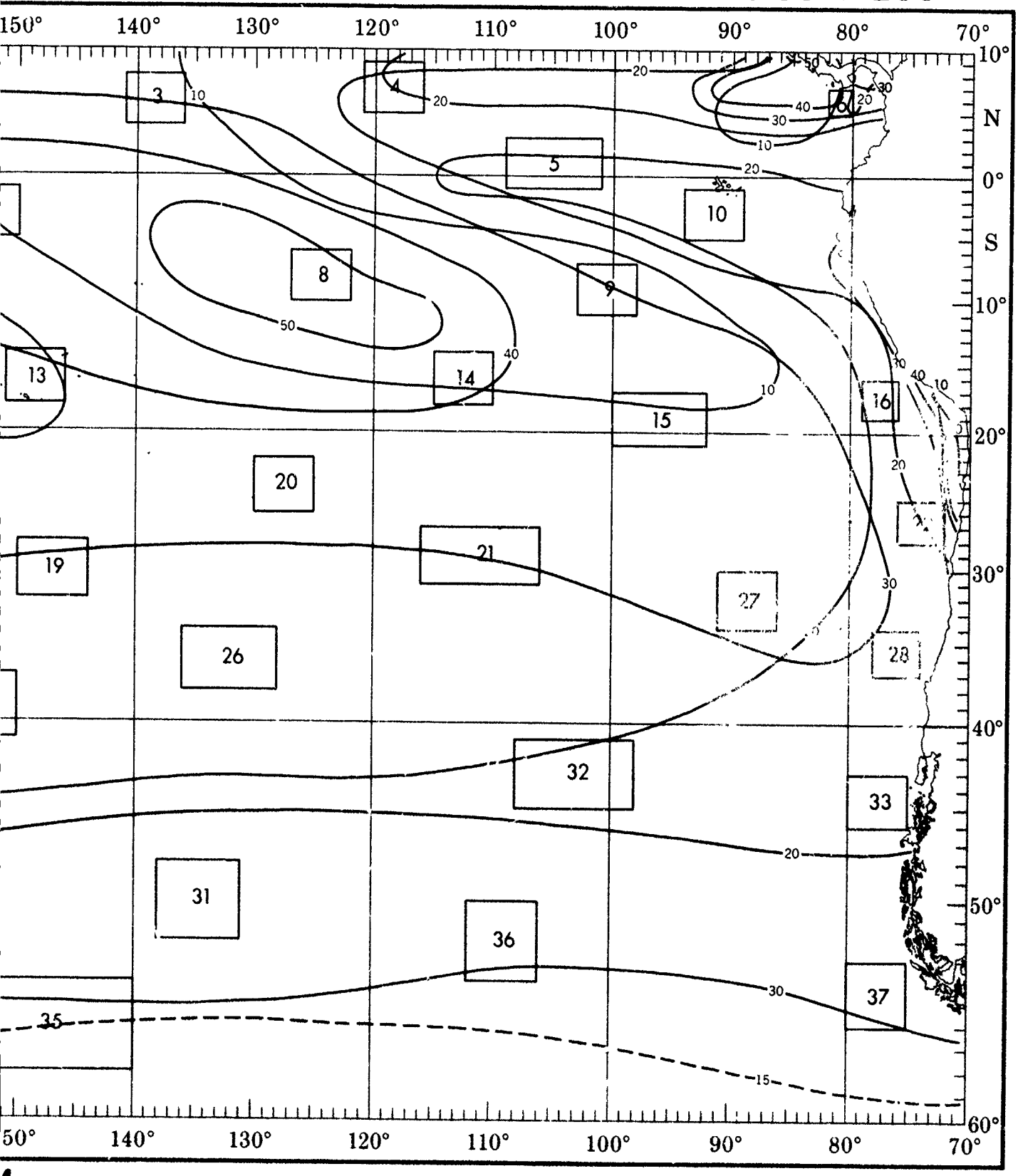
e objective compilation of available data for specified areas without regard to suspected biases.
s (opposite page) are based on all available data subjectively adjusted where bias was evident.

DECEMBER

WIND



WIND-VISIBILITY-CLOUDINESS



LOW CLOUD CEILING-VISIBILITY-WIND

Percent frequency of occurrence of specified wind speed in knots, visibility (Vsby) in nautical miles, and low cloud ceiling (LCC) in hundreds of feet.

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

WIND SPEED (knots)

LCC - Vsby	0-3	4-10	11-21	22-33	≥34
<1.5 & or <.5	+	1	1	+	0
<6 & or <2	2	2	1	1	+
Vsby <2	1	2	1	1	+
<10 & or <2	3	4	2	1	1
<20 & or <5	8	9	6	3	2
Vsby ≥5	9	11	12	3	1
≥20 & ≥5	12	13	15	7	3
NC & ≥20	4	4	1	+	0
	123				

(2% of the observations reported wind speeds of 11-21 knots, a low cloud ceiling <1000 feet and/or visibility <2 nautical miles.)

"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8

+ indicates <5% but >0

Number of observations

Conditions for Carrier Operations

BLUE LINE - Percent frequency of optimum conditions LCC ≥5000 ft., (or no LCC), Vsby ≥5 nm. and Wind 11-21 kts

RED LINE - Percent frequency of poor conditions Any one of the following constitutes poor conditions: LCC <300 ft., Vsby <1 nm, Wind <6 or ≥34 kts.

Satisfactory conditions-between poor and optimum

1

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	3	1	0
<6 & OR <2	0	2	4	1	0
VSBY <2	0	0	3	1	0
<10 & OR <2	1	8	14	2	0
<20 & OR <5	2	10	25	2	0
VSBY ≥5	4	31	56	3	0
≥50 & ≥5	1	20	33	2	0
NC & ≥10	1	19	26	2	0
					191

WIND SPEED

LCC - VSBY	0-3	4-10
<1.5 & OR <.5	0	0
<6 & OR <2	0	0
VSBY <2	0	0
<10 & OR <2	1	4
<20 & OR <5	1	10
VSBY ≥5	3	40
≥50 & ≥5	3	27
NC & ≥10	3	25

6

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	0	0
<6 & OR <2	1	3	1	0	0
VSBY <2	0	1	+	0	0
<10 & OR <2	1	10	4	0	0
<20 & OR <5	3	19	9	0	0
VSBY ≥5	14	61	22	+	0
≥50 & ≥5	10	37	12	+	0
NC & ≥10	10	36	11	+	0
					748

WIND SPEED

LCC - VSBY	0-3	4-10
<1.5 & OR <.5	0	0
<6 & OR <2	0	0
VSBY <2	0	0
<10 & OR <2	0	0
<20 & OR <5	2	5
VSBY ≥5	6	38
≥50 & ≥5	4	33
NC & ≥10	4	29

11

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	1	1	1	0	0
VSBY <2	1	0	0	0	0
<10 & OR <2	1	8	4	2	0
<20 & OR <5	6	14	4	2	1
VSBY ≥5	19	52	20	2	1
≥50 & ≥5	14	37	14	0	0
NC & ≥10	13	33	11	0	0
					89

12

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	1	1	0
<6 & OR <2	1	1	5	1	0
VSBY <2	1	0	2	0	0
<10 & OR <2	1	5	10	2	0
<20 & OR <5	2	8	16	3	0
VSBY ≥5	14	36	39	5	0
≥50 & ≥5	12	29	25	2	0
NC & ≥10	11	27	22	0	0
					175

13

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	+	0
<6 & OR <2	0	1	2	1	0
VSBY <2	0	1	1	1	0
<10 & OR <2	+	5	4	1	0
<20 & OR <5	1	11	9	2	0
VSBY ≥5	6	43	42	3	0
≥50 & ≥5	5	32	33	2	0
NC & ≥10	4	31	31	2	0
					557

14

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	+	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	1	3	+	0
<20 & OR <5	+	7	13	1	0
VSBY ≥5	2	38	57	2	0
≥50 & ≥5	2	28	38	2	0
NC & ≥10	2	27	36	2	0
					705

15

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	2	2	4	0	0
<20 & OR <5	2	9	13	1	0
VSBY ≥5	4	48	44	1	0
≥50 & ≥5	2	37	26	1	0
NC & ≥10	2	33	16	1	0
					105

WIND SPEED

LCC - VSBY	0-3	4-10
<1.5 & OR <.5	0	0
<6 & OR <2	0	1
VSBY <2	0	0
<10 & OR <2	2	4
<20 & OR <5	3	11
VSBY ≥5	6	39
≥50 & ≥5	3	18
NC & ≥10	3	18

20

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	0
<6 & OR <2	0	+	+	+	0
VSBY <2	0	+	+	0	0
<10 & OR <2	+	3	3	1	0
<20 & OR <5	1	7	8	1	0
VSBY ≥5	8	53	36	2	0
≥50 & ≥5	7	43	25	1	0
NC & ≥10	7	42	23	+	0
					864

21

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	1	0	0
VSBY <2	0	1	0	0	0
<10 & OR <2	0	4	7	0	0
<20 & OR <5	0	10	9	0	0
VSBY ≥5	8	56	30	1	0
≥50 & ≥5	2	38	22	0	0
NC & ≥10	2	37	22	0	0
					89

22

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	2	4	8	0	0
<20 & OR <5	5	19	23	1	0
VSBY ≥5	12	34	52	1	0
≥50 & ≥5	6	10	21	1	0
NC & ≥10	5	10	19	1	0
					178

23

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	+	+
<6 & OR <2	+	1	2	1	+
VSBY <2	0	+	+	+	+
<10 & OR <2	+	3	8	2	+
<20 & OR <5	1	10	19	5	1
VSBY ≥5	5	34	45	10	1
≥50 & ≥5	3	21	24	5	1
NC & ≥10	3	20	22	5	+
					1019

24

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	0	0	0
<6 & OR <2	+	2	1	1	1
VSBY <2	0	1	0	0	0
<10 & OR <2	1	5	5	2	1
<20 & OR <5	1	9	11	4	1
VSBY ≥5	7	41	40	8	1
≥50 & ≥5	6	30	25	4	0
NC & ≥10	6	29	23	3	0
					379

WIND SPEED

LCC - VSBY	0-3	4-10
<1.5 & OR <.5	+	1
<6 & OR <2	+	2
VSBY <2	+	1
<10 & OR <2	1	4
<20 & OR <5	1	12
VSBY ≥5	4	30
≥50 & ≥5	3	15
NC & ≥10	3	14

29

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	0
<6 & OR <2	0	1	2	0	+
VSBY <2	0	+	0	0	0
<10 & OR <2	+	3	7	3	+
<20 & OR <5	1	7	13	7	1
VSBY ≥5	4	26	46	17	3
≥50 & ≥5	3	18	24	7	1
NC & ≥10	3	17	21	5	1
					439

30

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	11	5	0	0
<6 & OR <2	0	11	5	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	16	21	5	0
<20 & OR <5	0	16	26	11	0
VSBY ≥5	0	11	47	21	0
≥50 & ≥5	0	5	16	11	0
NC & ≥10	0	5	16	11	0
					19

31

INSUFFICIENT DATA

32

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	7	31	0	0
<6 & OR <2	0	7	31	0	0
VSBY <2	0	7	14	0	0
<10 & OR <2	0	7	34	0	0
<20 & OR <5	0	10	59	0	0
VSBY ≥5	0	3	69	0	0
≥50 & ≥5	0	0	28	0	0
NC & ≥10	0	0	24	0	0
					29

33

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	1	0
<6 & OR <2	0	1	6	2	1
VSBY <2	0	0	1	1	1
<10 & OR <2	0	2	8	4	1
<20 & OR <5	1	12	29	6	2
VSBY ≥5	3	29	55	8	1
≥50 & ≥5	1	10	20	3	0
NC & ≥10	1	8	18	2	0
					106

WIND SPEED

LCC - VSBY	0-3	4-10	11-21
<1.5 & OR <.5	0	1	1
<6 & OR <2	0	2	2
VSBY <2	0	1	1
<10 & OR <2	0	2	6
<20 & OR <5	0	4	23
VSBY ≥5	3	11	44
≥50 & ≥5	2	4	13
NC & ≥10	2	4	9

Graphs represent the objective compilation of available data for specified areas without
The isopleth analyses (opposite page) are based on all available data subjectively adjust

VISIBILITY-WIND

DECEMBER

bility (Vsby) in nautical

(h) when low cloud amount

ceiling <1000 feet and/or

currences of N_h <5/8.

m and Wind 11-21 kts

onditions LCC <300 ft.,

1 — WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	3	1	0
<5 & OR <2	0	2	4	1	0
VSBY <2	0	0	3	1	0
<10 & OR <2	1	8	14	2	0
<20 & OR <5	2	10	25	2	0
VSBY ≥5	4	31	56	3	0
≥50 & ≥5	1	20	33	2	0
NC & ≥10	1	19	28	2	0

191

2 — WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<5 & OR <2	0	0	+	+	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	4	5	1	+
<20 & OR <5	1	10	14	2	+
VSBY ≥5	3	40	49	5	1
≥50 & ≥5	3	27	31	3	+
NC & ≥10	3	25	29	3	+

277

3 — WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	2	+	0
<5 & OR <2	0	5	5	+	0
VSBY <2	0	+	+	+	0
<10 & OR <2	0	12	15	1	1
<20 & OR <5	0	18	25	2	1
VSBY ≥5	+	31	57	3	+
≥50 & ≥5	+	15	32	1	0
NC & ≥10	+	14	29	1	0

219

4 — WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	2	1	0	0
<5 & OR <2	1	5	6	0	0
VSBY <2	0	2	+	0	0
<10 & OR <2	2	17	12	0	0
<20 & OR <5	2	23	17	0	0
VSBY ≥5	4	63	32	3	0
≥50 & ≥5	3	29	11	3	0
NC & ≥10	3	21	11	3	0

218

5 — WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<5 & OR <2	1	1	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	2	8	4	+	0
<20 & OR <5	3	19	12	+	0
VSBY ≥5	8	63	27	1	0
≥50 & ≥5	4	36	13	+	0
NC & ≥10	3	34	13	+	0

514

6 — WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	0	0
<5 & OR <2	1	3	1	0	0
VSBY <2	0	1	+	0	0
<10 & OR <2	1	10	4	0	0
<20 & OR <5	3	19	9	0	0
VSBY ≥5	14	61	22	+	0
≥50 & ≥5	10	37	12	+	0
NC & ≥10	10	36	11	+	0

748

7 — WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<5 & OR <2	0	0	2	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	3	0	0
<20 & OR <5	2	5	6	0	0
VSBY ≥5	6	38	52	4	0
≥50 & ≥5	4	33	46	4	0
NC & ≥10	4	29	45	4	0

119

8 — WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<5 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	+	1	0	0
<20 & OR <5	+	2	6	0	0
VSBY ≥5	1	37	59	2	0
≥50 & ≥5	1	33	52	2	0
NC & ≥10	1	33	50	2	0

493

9 — WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<5 & OR <2	0	0	+	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	2	7	+	0
<20 & OR <5	0	10	22	+	0
VSBY ≥5	+	40	59	1	0
≥50 & ≥5	+	24	27	+	0
NC & ≥10	+	23	25	+	0

884

10 — WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	0
<5 & OR <2	+	1	+	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	8	2	0	0
<20 & OR <5	3	25	8	0	0
VSBY ≥5	8	73	18	+	0
≥50 & ≥5	4	38	9	+	0
NC & ≥10	3	36	9	+	0

1116

13 (TS)

	0
	0
	0
	0
	0
	0
	0

557

14 — WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<5 & OR <2	0	+	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	1	3	+	0
<20 & OR <5	+	7	13	1	0
VSBY ≥5	2	36	57	2	0
≥50 & ≥5	2	28	38	2	0
NC & ≥10	2	27	36	2	0

705

15 — WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<5 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	2	2	4	0	0
<20 & OR <5	2	9	13	1	0
VSBY ≥5	4	48	44	1	0
≥50 & ≥5	2	37	26	1	0
NC & ≥10	2	33	16	1	0

106

16 — WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<5 & OR <2	0	1	0	1	0
VSBY <2	0	0	0	0	0
<10 & OR <2	2	4	4	1	0
<20 & OR <5	3	11	18	1	0
VSBY ≥5	6	39	54	1	0
≥50 & ≥5	3	18	29	0	0
NC & ≥10	3	18	27	0	0

106

17 — WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<5 & OR <2	0	0	0	1	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	3	4	2	0
<20 & OR <5	2	6	9	2	+
VSBY ≥5	6	41	43	6	2
≥50 & ≥5	3	32	33	3	2
NC & ≥10	3	32	31	3	2

249

18 — WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	0	0
<5 & OR <2	0	+	2	+	0
VSBY <2	0	+	1	0	0
<10 & OR <2	+	4	8	2	0
<20 & OR <5	1	8	16	3	0
VSBY ≥5	3	40	46	8	0
≥50 & ≥5	1	28	28	4	0
NC & ≥10	1	27	27	4	0

369

19 — WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	+	0
<5 & OR <2	1	1	1	1	0
VSBY <2	+	+	+	1	0
<10 & OR <2	1	6	8	3	0
<20 & OR <5	2	11	13	5	+
VSBY ≥5	5	47	38	6	+
≥50 & ≥5	4	32	21	2	0
NC & ≥10	4	30	20	2	0

880

22 (TS)

	0
	0
	0
	0
	0
	0
	0

178

23 — WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	+	+
<5 & OR <2	+	1	2	1	+
VSBY <2	0	+	+	+	+
<10 & OR <2	+	3	8	2	+
<20 & OR <5	1	10	19	6	1
VSBY ≥5	5	34	45	10	1
≥50 & ≥5	3	21	24	5	1
NC & ≥10	3	20	22	5	+

1019

24 — WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	0	0	0
<5 & OR <2	+	2	1	1	1
VSBY <2	0	1	0	0	0
<10 & OR <2	1	5	5	2	1
<20 & OR <5	1	8	11	4	1
VSBY ≥5	7	41	40	8	1
≥50 & ≥5	6	30	25	4	0
NC & ≥10	6	29	23	3	0

379

25 — WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	0	0	0
<5 & OR <2	+	2	1	1	1
VSBY <2	+	1	0	0	+
<10 & OR <2	1	4	8	5	1
<20 & OR <5	1	12	24	8	1
VSBY ≥5	4	30	48	13	2
≥50 & ≥5	3	15	17	4	1
NC & ≥10	3	14	15	4	1

389

26 — WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	0	2	0	0
<5 & OR <2	+	1	4	+	0
VSBY <2	0	+	2	0	0
<10 & OR <2	+	6	12	3	+
<20 & OR <5	2	16	21	8	+
VSBY ≥5	8	39	35	9	0
≥50 & ≥5	6	19	12	1	0
NC & ≥10	5	19	9	1	0

213

27 — WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<5 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	0	0	0
<20 & OR <5	3	5	3	0	0
VSBY ≥5	3	26	50	21	0
≥50 & ≥5	0	21	29	13	0
NC & ≥10	0	21	8	5	0

98

28 — WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<5 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	4	0	0
<20 & OR <5	7	0	11	0	0
VSBY ≥5	7	15	37	41	0
≥50 & ≥5	0	11	22	37	0
NC & ≥10	0	11	22	37	0

27

31

NT

32 — WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	7	31	0	0
<5 & OR <2	0	7	31	0	0
VSBY <2	0	7	14	0	0
<10 & OR <2	0	7	34	0	0
<20 & OR <5	0	10	59	0	0
VSBY ≥5	0	3	69	0	0
≥50 & ≥5	0	0	28	0	0
NC & ≥10	0	0	24	0	0

29

33 — WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	1	0
<5 & OR <2	0	1	6	2	1
VSBY <2	0	0	1	1	1
<10 & OR <2	0	6	14	4	1
<20 & OR <5	1	12	29	6	2
VSBY ≥5	3	29	55	8	1
≥50 & ≥5	1	10	20	3	0
NC & ≥10	1	8	18	2	0

106

34 — WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	1	1	0
<5 & OR <2	0	2	2	1	0
VSBY <2	0	1	1	1	0
<10 & OR <2	0	2	6	4	1
<20 & OR <5	0	4	23	15	3
VSBY ≥5	3	11	44	25	4
≥50 & ≥5	2	4	13	8	1
NC & ≥10	2	4	9	2	1

196

35 — WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<5 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	0	0	0
<20 & OR <5	0	9	36	18	0
VSBY ≥5	0	27	36	9	0
≥50 & ≥5	0	9	9	9	0
NC & ≥10	0	9	9	0	0

11

36 — WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	5	5	0	0
<5 & OR <2	0	5	9	9	0
VSBY <2	0	0	9	0	0
<10 & OR <2	0	5	9	18	0
<20 & OR <5	0	5	27	32	0
VSBY ≥5	0	5	41	45	0
≥50 & ≥5	0	0	0	9	0
NC & ≥10	0	0	0	9	0

22

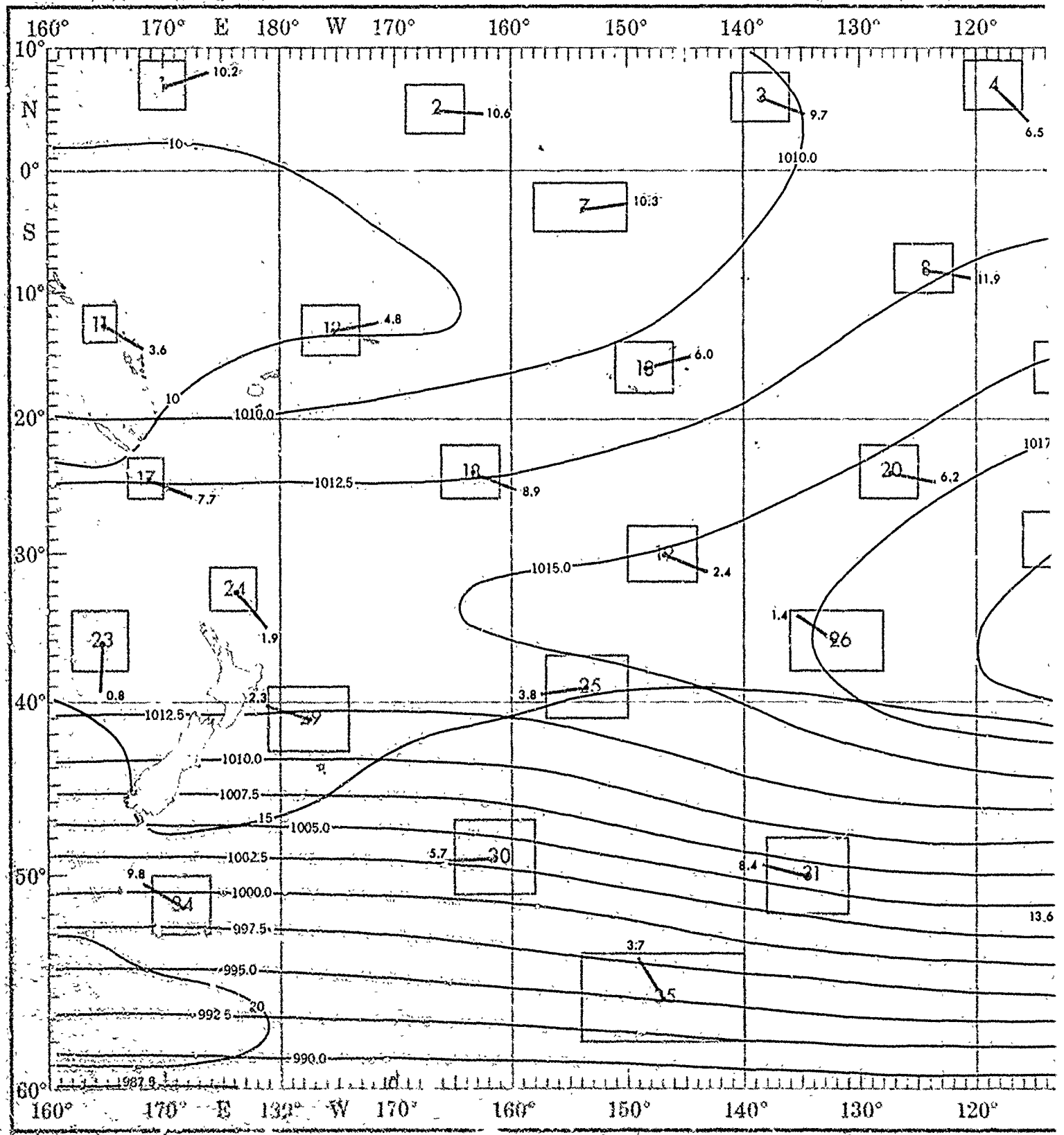
37 — WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<5 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	0	0	0
<20 & OR <5	0	0	7	14	0
VSBY ≥5	0	21	64	7	0
≥50 & ≥5	0	21	50	0	0
NC & ≥10	0	7	36	0	0

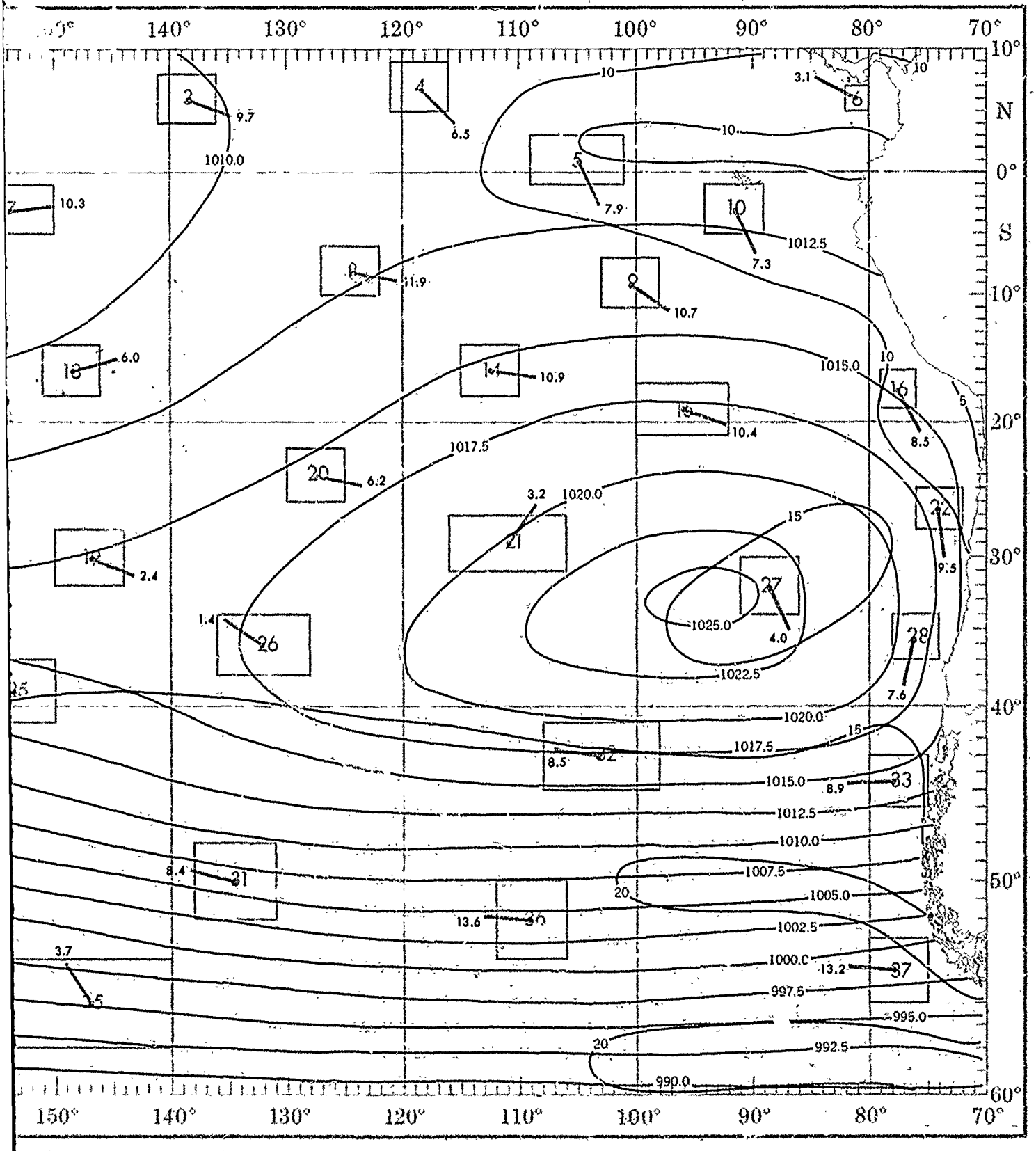
14

)nt the objective compilation of available data for specified areas without regard to suspected biases.
alyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

DECEMBER SEA LEVEL PRE

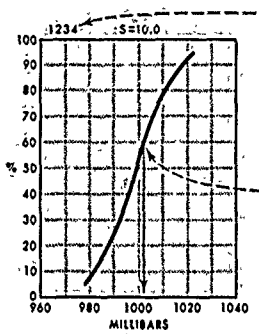


SEA LEVEL PRESSURE AND MEAN WIND



SEA LEVEL PRESSURE

Sea level pressure and mean wind.



Number of observations.

Cumulative percent frequency of sea level pressures equal to or less than the pressure intersected by the curve.

S=Standard deviation of pressure (mbs).

(60% of *all* observed *sea level pressures were* ≤1002 *millibars.*)

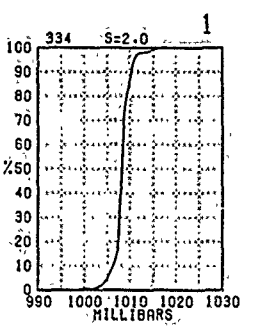
Vector mean wind is plotted from the direction which the mean flow occurs with the magnitude in knots at the end of the vector.

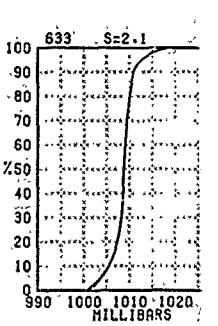
10.2

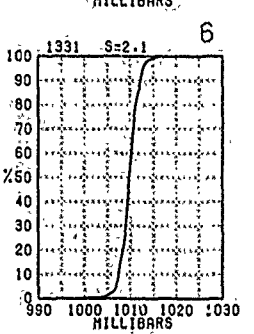
Vector mean wind is from the northeast at 10.2 knots.

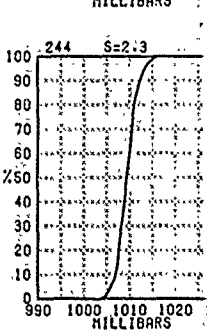
BLUE LINE - Scalar mean wind speed (kts.)

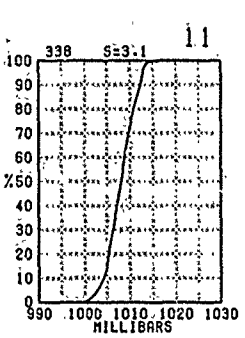
RED LINE - Mean sea level pressure (mbs.)

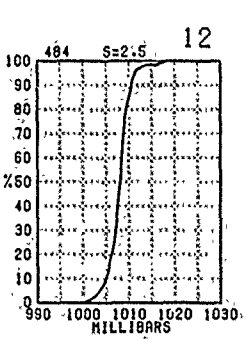


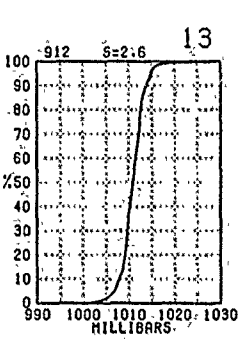


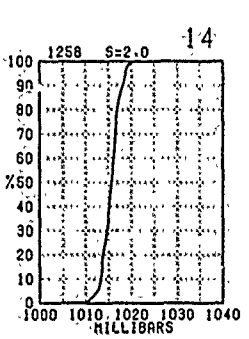


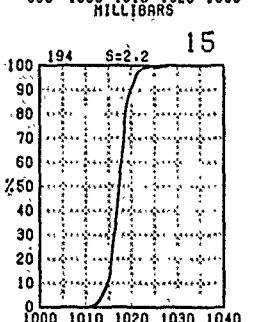


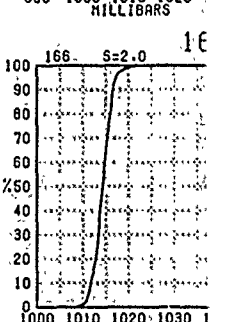


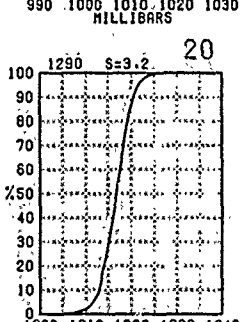


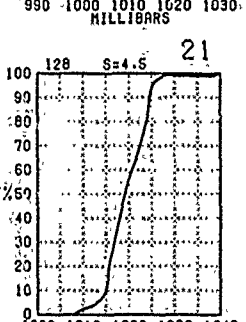


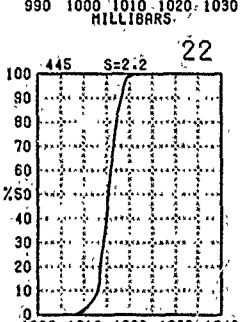


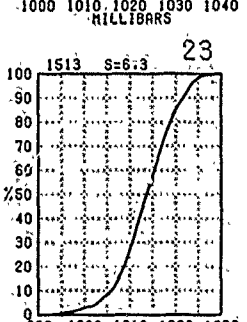


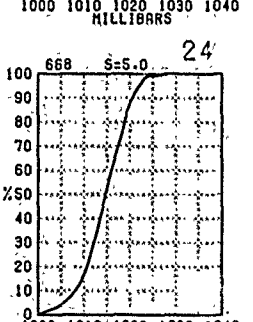


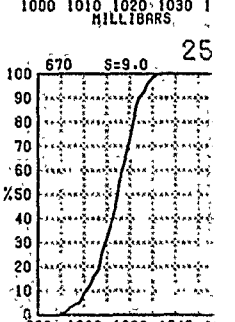


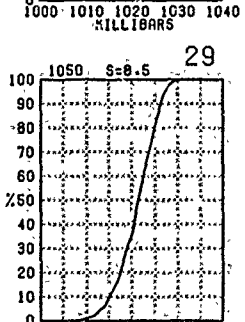


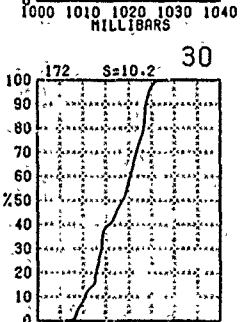


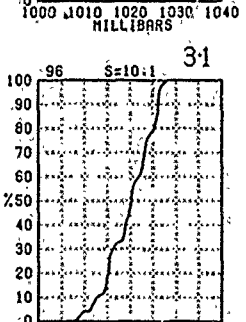


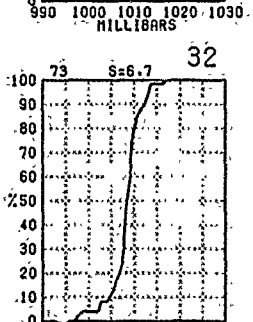


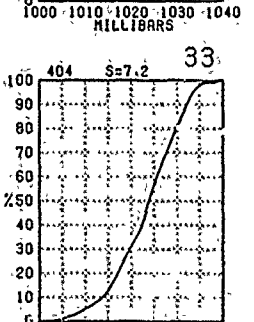


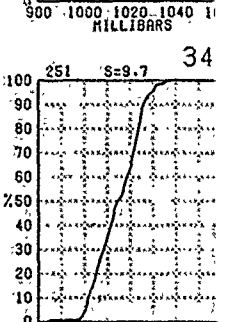












Graphs represent the objective compilation of available data for specified areas without reg
The isopleth analyses (opposite page) are based on all available data subjectively adjusted

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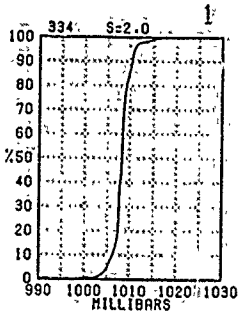
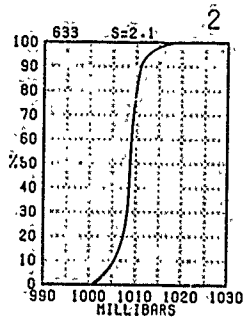
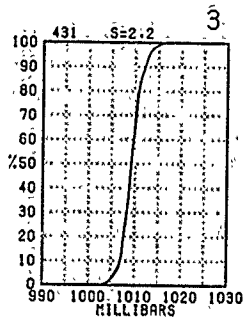
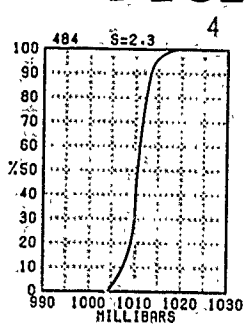
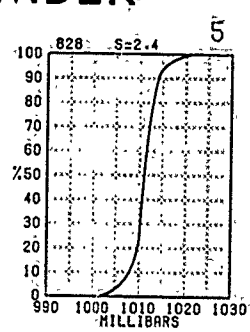
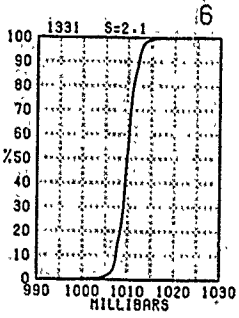


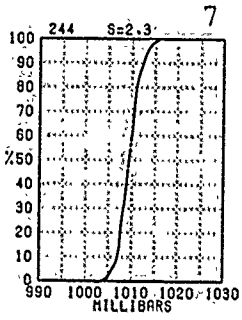


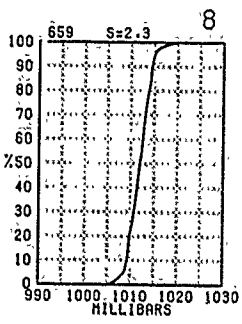


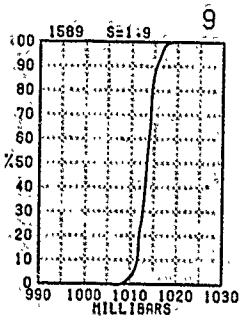


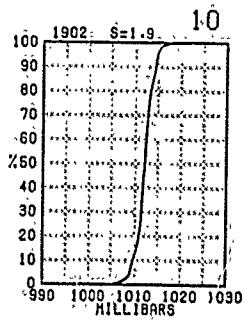


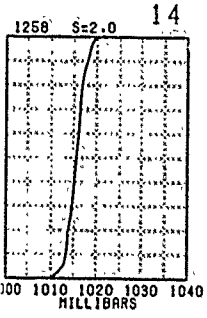


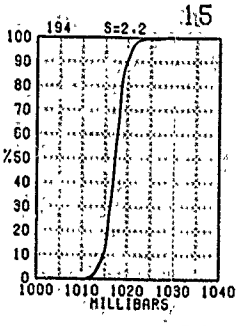


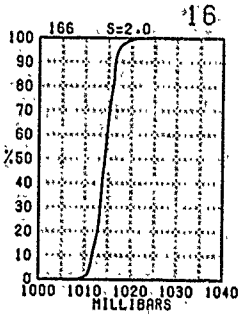


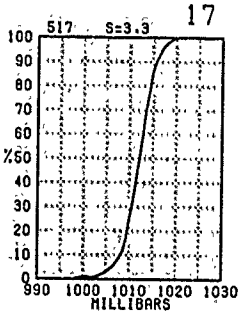


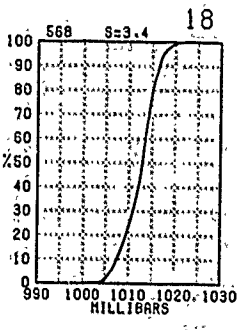


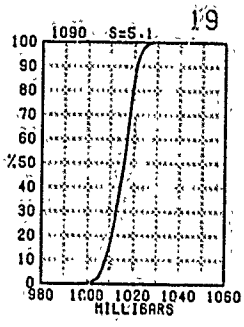


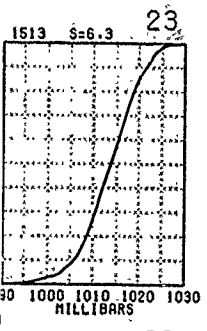


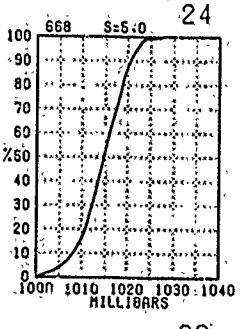


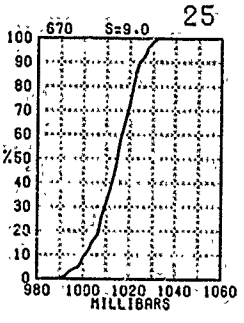


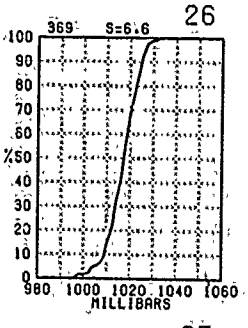


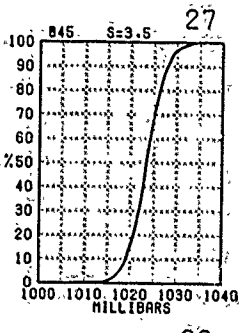


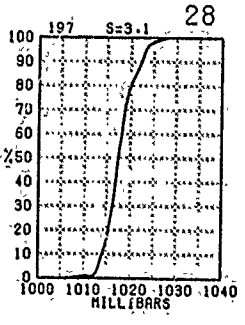


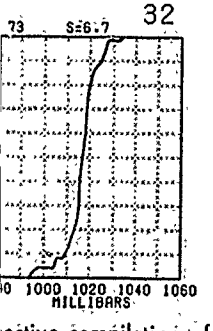


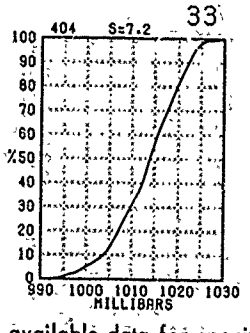


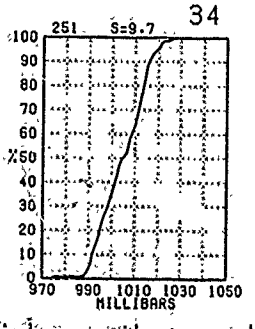


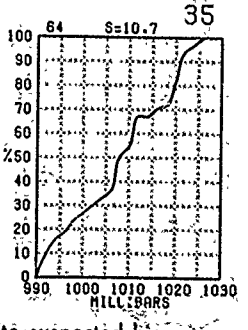


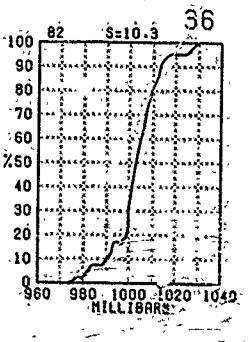


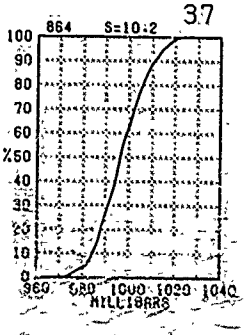








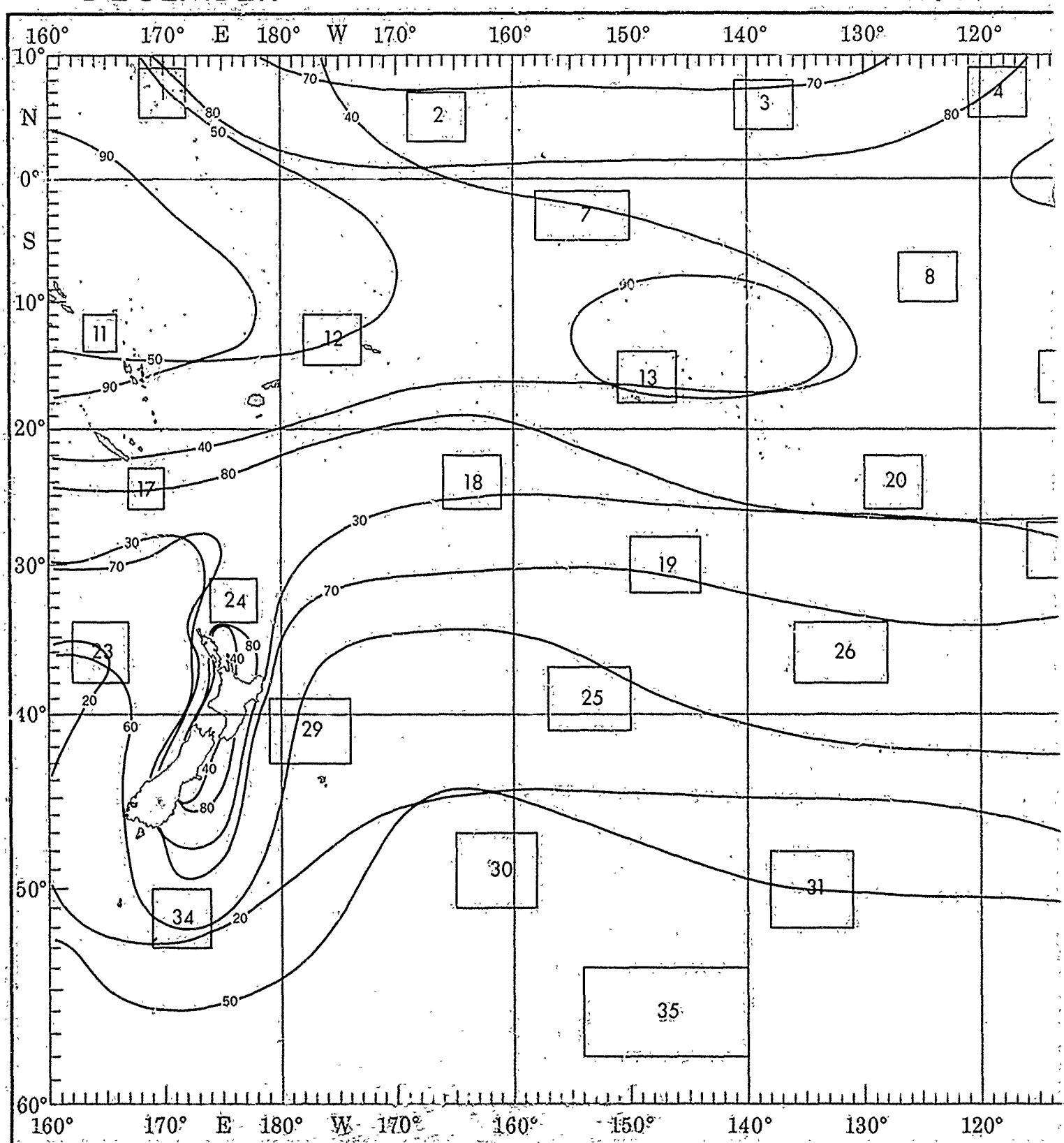




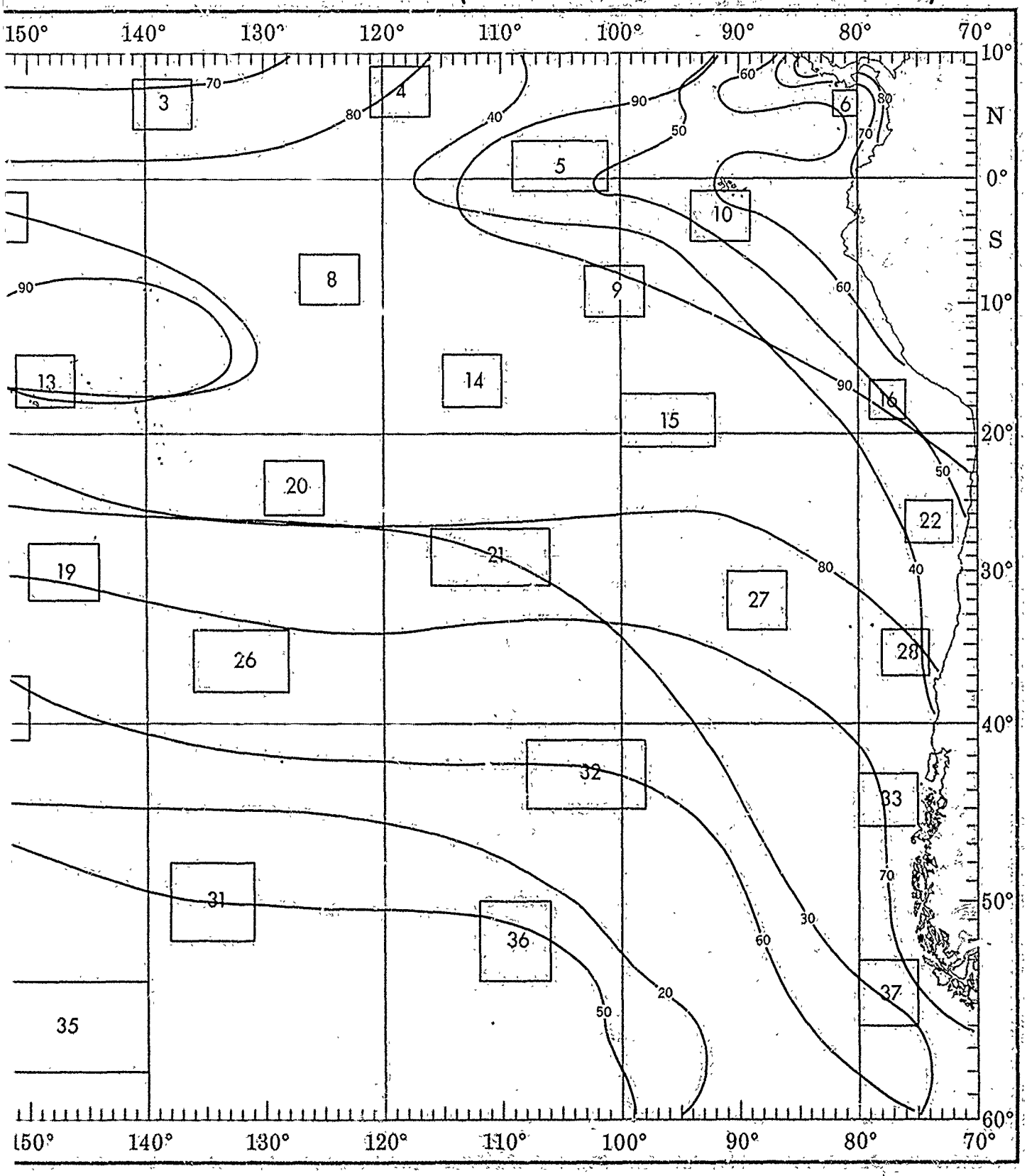
ective compilation of available data for specified areas without regard to suspected biases.

posite page) are based on all available data subjectively adjusted where bias was evident.

DECEMBER WAVES



WAVES (<1.5 AND <2.5 METERS)

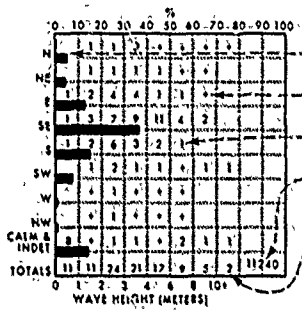


WAVE DIRECTION AND HEIGHT

Wave direction and height.

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.



—(5% of all waves were from the N.)

+ indicates <.5% but >0.

—(1% of all waves were from the S with heights from 6-7.5 meters.)

—Number of observations.

—(2% of the waves from all directions had heights ≥10 meters.)

WAVE HEIGHT INTERVAL

Feet	0-2	3-6	7-9	10-12	13-19	20-25	26-32	≥33
Meters	0-.5	1-1.5	2-2.5	3-3.5	4-5.5	6-7.5	8-9.5	≥10

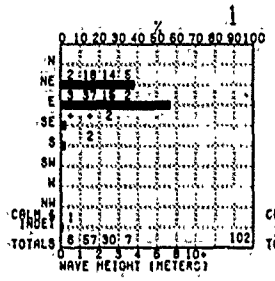
0 1 2 3 4 6 8 10+

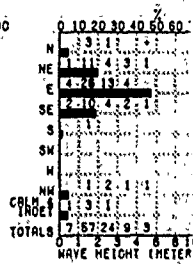
Printed scale on bottom of chart

BLUE LINE - Percent frequency of wave height <1.5 meters (5 feet)

RED LINE - Percent frequency of wave height <2.5 meters (8 feet)

1





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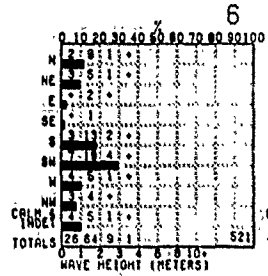

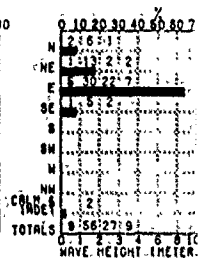

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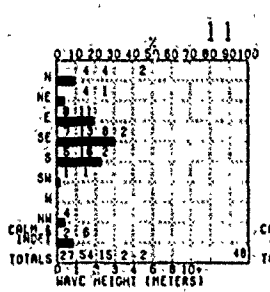

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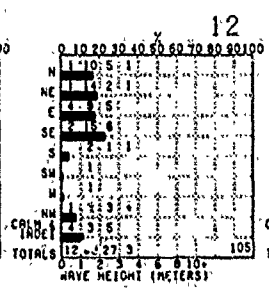

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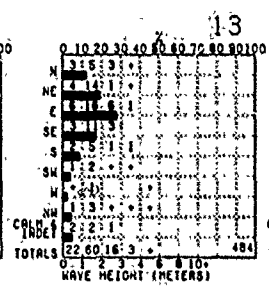

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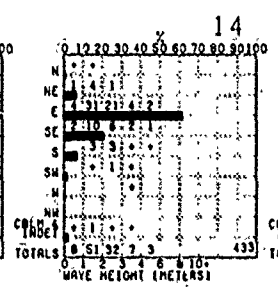

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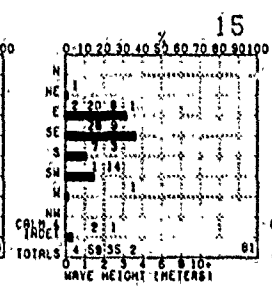

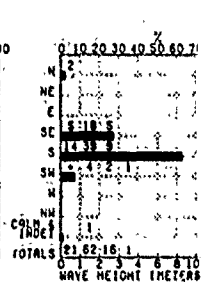

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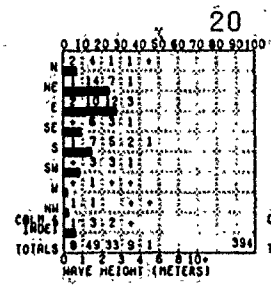

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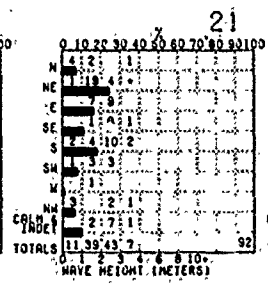

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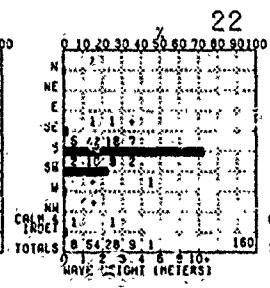

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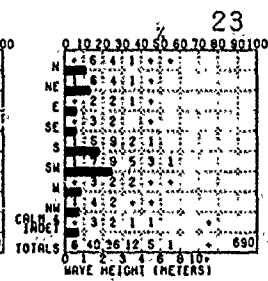

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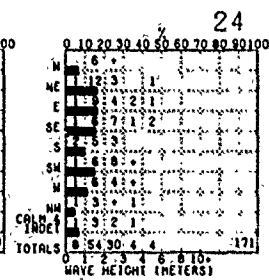

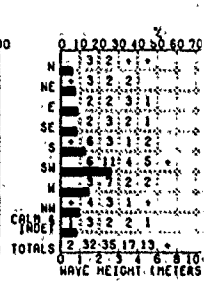

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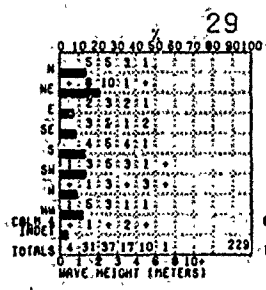

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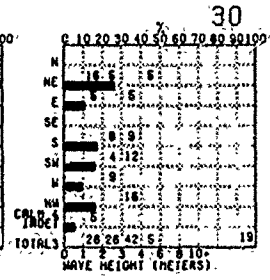
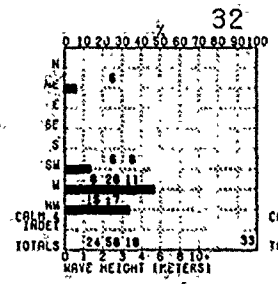


31

INSUFFICIENT DATA

32



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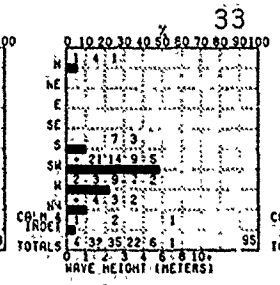
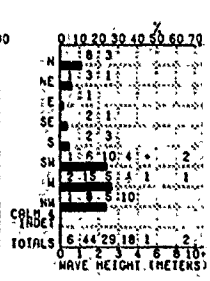




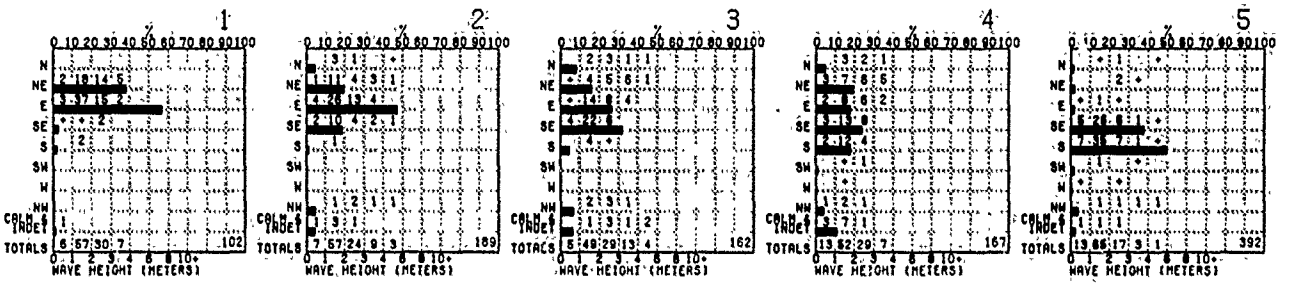
Graphs represent the objective compilation of available data for specified areas without r
The isopleth analyses (opposite page) are based on all available data subjectively adjust

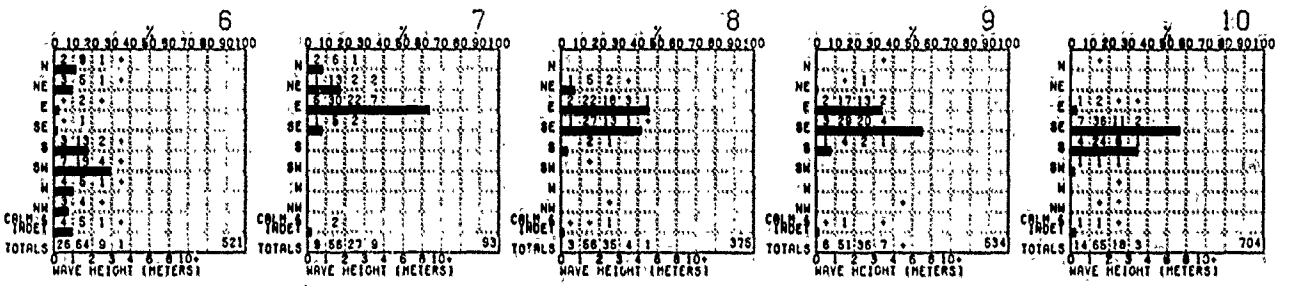
HEIGHT

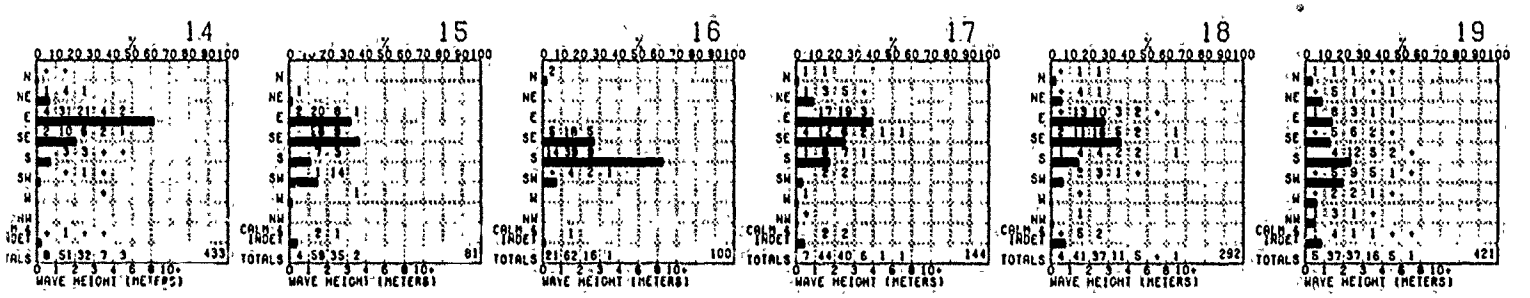
DECEMBER

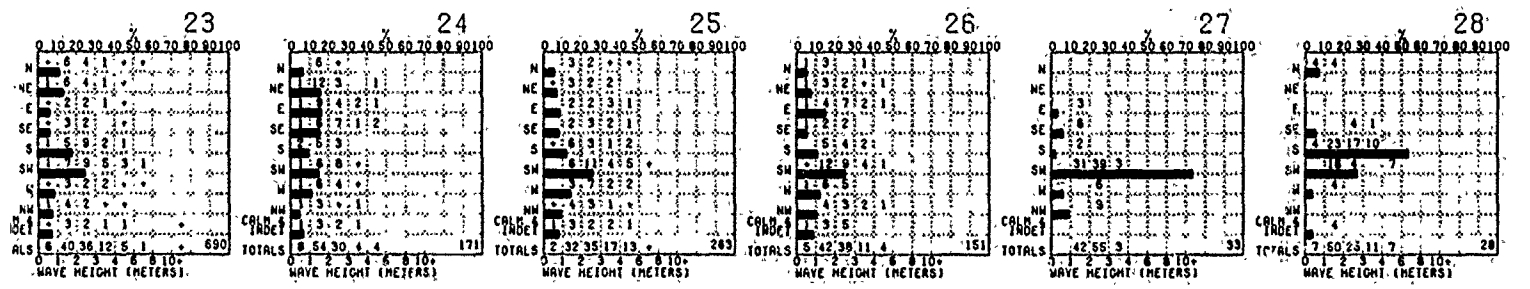
icy of waves from

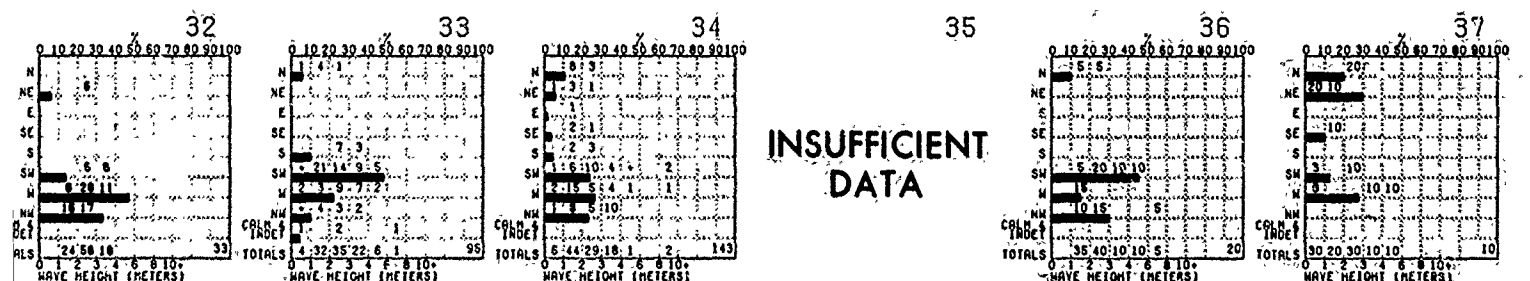
ent frequency of wave







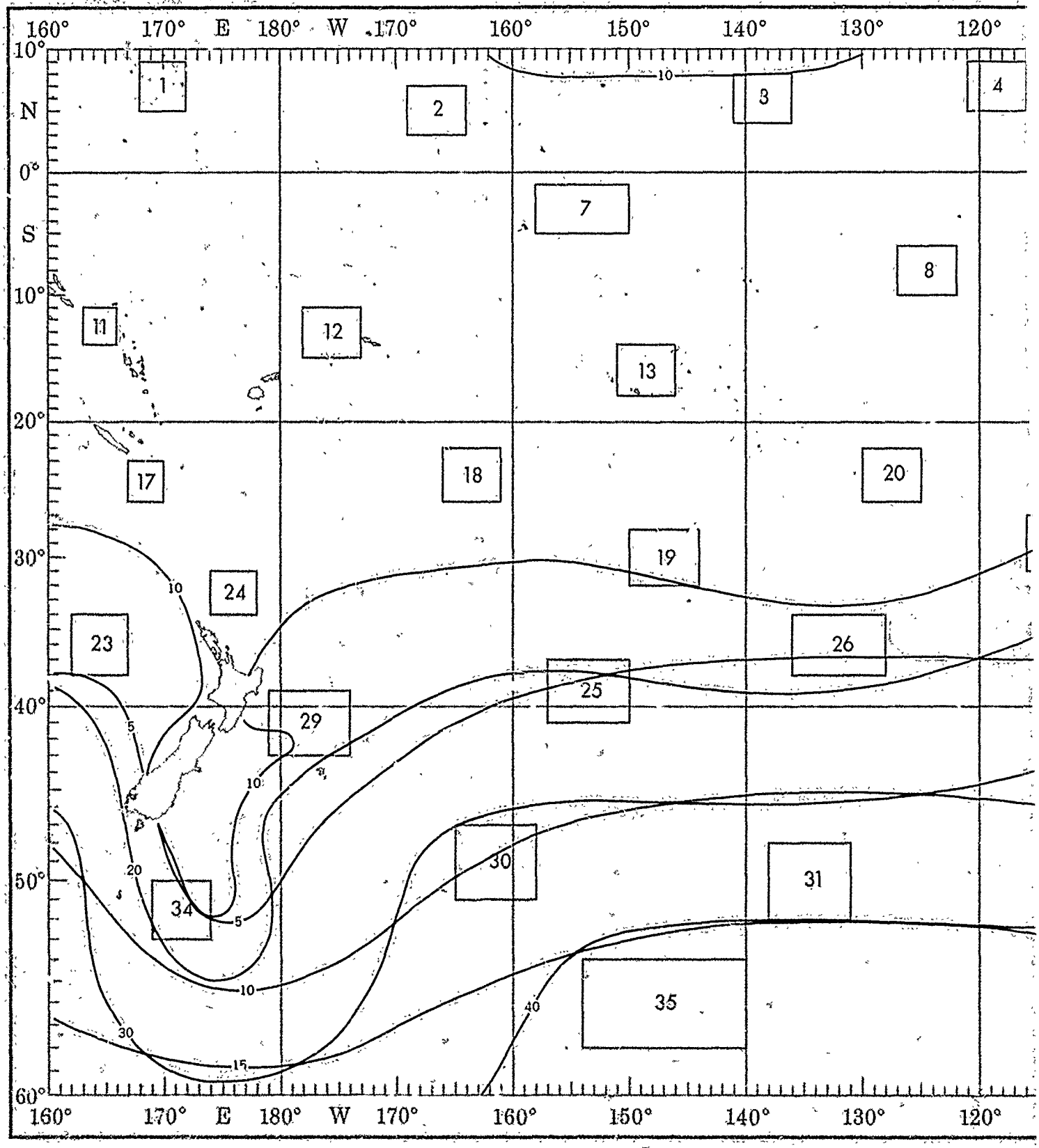




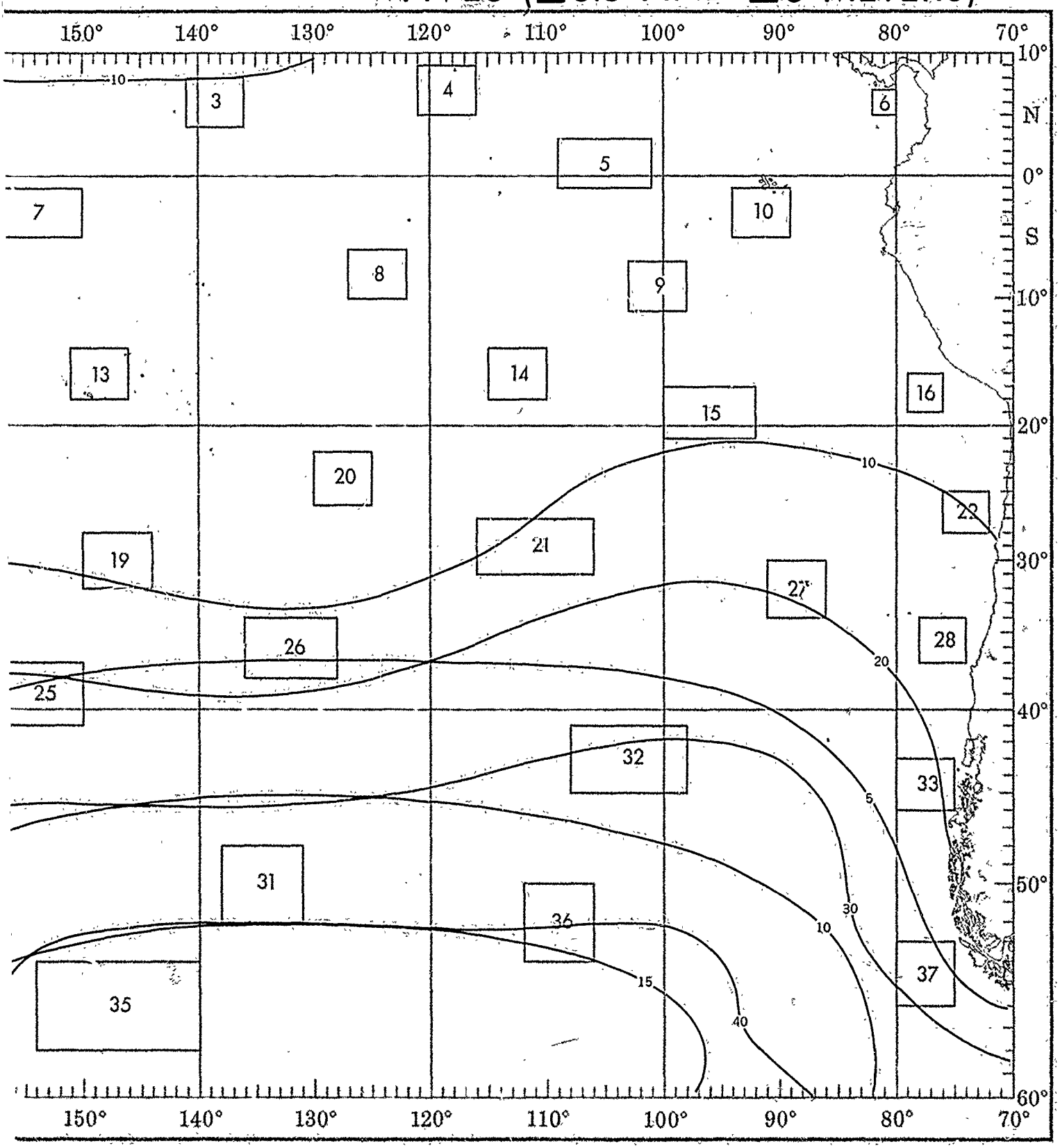
INSUFFICIENT DATA

bjective compilation of available data for specified areas without regard to suspected biases.
pposite page) are based on all available data subjectively adjusted where bias was evident.

DECEMBER WAVE



WAVES (≥3.5 AND ≥6 METERS)



WAVE PERIOD AND HEIGHT

Percent frequency of occurrence of wave period and height.

PERIOD (Seconds)

HEIGHT (METERS)	<6	6- 7	8- 9	10- 11	12- 13	>13	INC
0-.5	21	3	1	+	+	+	6
.5-1.5	22	16	6	2	1	+	+
1.5-2.5	3	6	4	3	1	+	+
2.5-3.5	+	1	1	1	+	+	+
3.5-4.5	+	+	+	+	+	+	0
4.5-6.5	0	+	+	+	0	+	0
6.5-9.5	0	0	0	+	0	0	0
9.5+	0	0	0	0	0	+	0
							4010

(2% of observed waves had a height of 1-1.5 meters and a period of 10-11 seconds.)

+ indicates < 5% but >0.

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.

BLUE LINE - Percent frequency of wave height ≥3.5 meters (12 feet)

RED LINE - Percent frequency of wave height ≥6 meters (20 feet)

1

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6- 7	8- 9	10- 11	12- 13	>13	INC
0-.5	3	2	0	0	0	0	1
.5-1.5	21	26	5	2	2	0	1
1.5-2.5	3	16	5	1	3	1	2
2.5-3.5	0	6	1	0	0	0	0
3.5-4.5	0	0	0	0	0	0	0
4.5-6.5	0	0	0	0	0	0	0
6.5-9.5	0	0	0	0	0	0	0
9.5+	0	0	0	0	0	0	0
							102

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6- 7	8- 9	10- 11	12- 13	>13
0-.5	4	2	1	0	0	0
.5-1.5	17	22	13	1	2	0
1.5-2.5	4	8	8	3	1	0
2.5-3.5	0	6	2	1	0	0
3.5-4.5	0	1	1	0	1	0
4.5-6.5	0	0	0	0	0	0
6.5-7.5	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0
9.5+	0	0	0	0	0	0

6

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6- 7	8- 9	10- 11	12- 13	>13	INC
0-.5	20	3	+	0	0	0	5
.5-1.5	29	19	5	1	1	1	5
1.5-2.5	2	4	2	1	+	0	1
2.5-3.5	1	+	+	0	0	0	+
3.5-4.5	0	0	0	0	0	0	0
4.5-6.5	0	0	0	0	0	0	0
6.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
9.5+	0	0	0	0	0	0	0
							539

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6- 7	8- 9	10- 11	12- 13	>13
0-.5	8	2	0	0	0	0
.5-1.5	25	20	6	0	0	2
1.5-2.5	5	11	6	3	1	0
2.5-3.5	0	5	3	0	0	0
3.5-4.5	0	0	0	0	0	0
4.5-6.5	0	0	0	0	0	0
6.5-7.5	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0
9.5+	0	0	0	0	0	0

11

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6- 7	8- 9	10- 11	12- 13	>13	INC
0-.5	19	2	6	0	0	0	0
.5-1.5	15	31	6	0	0	0	2
1.5-2.5	4	6	4	0	0	0	0
2.5-3.5	2	0	0	0	0	0	0
3.5-4.5	0	0	2	0	0	0	0
4.5-6.5	0	0	0	0	0	0	0
6.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
9.5+	0	0	0	0	0	0	0
							48

12

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6- 7	8- 9	10- 11	12- 13	>13	INC
0-.5	13	0	0	1	0	0	3
.5-1.5	20	21	10	2	2	0	1
1.5-2.5	3	14	6	0	0	0	3
2.5-3.5	0	0	2	1	0	0	0
3.5-4.5	0	0	0	0	0	0	0
4.5-6.5	0	0	0	0	0	0	0
6.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
9.5+	0	0	0	0	0	0	0
							110

13

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6- 7	8- 9	10- 11	12- 13	>13	INC
0-.5	14	4	3	+	0	0	2
.5-1.5	22	21	8	2	1	+	3
1.5-2.5	3	5	3	1	1	+	1
2.5-3.5	+	+	1	1	1	0	0
3.5-4.5	+	0	0	0	0	0	0
4.5-6.5	+	0	0	0	0	0	0
6.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
9.5+	0	0	0	0	0	0	0
							495

14

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6- 7	8- 9	10- 11	12- 13	>13	INC
0-.5	5	2	+	0	0	0	+
.5-1.5	24	19	3	1	1	+	2
1.5-2.5	9	14	6	2	0	1	+
2.5-3.5	2	3	2	0	0	+	+
3.5-4.5	+	1	1	+	0	+	0
4.5-6.5	0	0	0	0	0	0	0
6.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
9.5+	0	0	0	0	0	0	0
							433

15

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6- 7	8- 9	10- 11	12- 13	>13	INC
0-.5	8	0	0	0	0	0	0
.5-1.5	29	13	11	2	0	0	1
1.5-2.5	4	9	12	8	0	0	0
2.5-3.5	0	1	0	1	0	0	0
3.5-4.5	0	0	0	0	0	0	0
4.5-6.5	0	0	0	0	0	0	0
6.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
9.5+	0	0	0	0	0	0	0
							85

1

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6- 7	8- 9	10- 11	12- 13	>13
0-.5	11	2	2	2	0	0
.5-1.5	18	24	13	3	0	0
1.5-2.5	1	8	3	4	0	0
2.5-3.5	0	0	1	0	0	0
3.5-4.5	0	0	0	0	0	0
4.5-6.5	0	0	0	0	0	0
6.5-7.5	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0
9.5+	0	0	0	0	0	0
						1

20

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6- 7	8- 9	10- 11	12- 13	>13	INC
0-.5	6	+	1	+	0	0	1
.5-1.5	19	16	7	1	2	+	4
1.5-2.5	8	9	10	2	1	1	2
2.5-3.5	2	3	3	+	+	0	1
3.5-4.5	+	+	+	0	0	0	0
4.5-6.5	0	0	0	0	0	0	0
6.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
9.5+	0	0	0	0	0	0	0
							397

21

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6- 7	8- 9	10- 11	12- 13	>13	INC
0-.5	7	1	3	0	0	0	0
.5-1.5	11	15	11	0	0	0	2
1.5-2.5	4	21	4	1	5	0	5
2.5-3.5	0	2	3	0	0	0	1
3.5-4.5	0	0	0	0	0	0	0
4.5-6.5	0	0	0	0	0	0	0
6.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
9.5+	0	0	0	0	0	0	0
							92

22

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6- 7	8- 9	10- 11	12- 13	>13	INC
0-.5	6	1	0	0	0	0	3
.5-1.5	22	16	7	5	1	0	2
1.5-2.5	1	11	10	2	1	0	2
2.5-3.5	0	1	5	1	2	0	0
3.5-4.5	0	1	0	0	0	0	0
4.5-6.5	0	0	0	0	0	0	0
6.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
9.5+	0	0	0	0	0	0	0
							164

23

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6- 7	8- 9	10- 11	12- 13	>13	INC
0-.5	5	1	0	0	0	0	1
.5-1.5	15	15	4	2	2	+	2
1.5-2.5	5	12	13	2	1	1	2
2.5-3.5	1	3	4	1	1	1	+
3.5-4.5	+	1	2	1	0	0	+
4.5-6.5	+	+	+	+	+	+	0
6.5-7.5	0	+	+	+	+	+	0
7.5-9.5	0	0	0	0	0	0	0
9.5+	0	0	+	0	0	0	0
							696

24

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6- 7	8- 9	10- 11	12- 13	>13	INC
0-.5	6	0	0	1	0	0	1
.5-1.5	26	13	6	1	4	1	3
1.5-2.5	6	11	8	2	0	2	1
2.5-3.5	1	1	1	0	0	0	1
3.5-4.5	0	1	3	0	0	0	0
4.5-6.5	+	1	2	1	0	0	+
6.5-7.5	0	+	+	+	+	+	0
7.5-9.5	0	0	0	0	0	0	0
9.5+	0	0	0	0	0	0	0
							173

2

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6- 7	8- 9	10- 11	12- 13	>13
0-.5	2	0	0	0	0	0
.5-1.5	10	14	4	1	1	0
1.5-2.5	7	14	10	2	+	0
2.5-3.5	2	5	7	1	1	0
3.5-4.5	2	2	3	3	2	1
4.5-6.5	0	0	0	0	0	+
6.5-7.5	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0
9.5+	0	0	0	0	0	0
						2

29

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6- 7	8- 9	10- 11	12- 13	>13	INC
0-.5	3	1	0	0	0	0	+
.5-1.5	10	14	4	+	0	0	2
1.5-2.5	7	15	8	6	0	0	+
2.5-3.5	3	3	4	3	+	0	2
3.5-4.5	1	2	2	2	2	+	+
4.5-6.5	0	0	0	+	+	0	0
6.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
9.5+	0	0	0	0	0	0	0
							231

30

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6- 7	8- 9	10- 11	12- 13	>13	INC
0-.5	0	0	0	0	0	0	0
.5-1.5	11	11	0	0	5	0	0
1.5-2.5	5	0	11	11	0	0	0
2.5-3.5	0	5	26	11	0	0	0
3.5-4.5	0	0	5	0	0	0	0
4.5-6.5	0	0	0	0	0	0	0
6.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
9.5+	0	0	0	0	0	0	0
							19

31

INSUFFICIENT DATA

32

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6- 7	8- 9	10- 11	12- 13	>13	INC
0-.5	0	0	0	0	0	0	0
.5-1.5	0	24	0	0	0	0	0
1.5-2.5	0	12	42	3	0	0	0
2.5-3.5	0	3	6	9	0	0	0
3.5-4.5	0	0	0	0	0	0	0
4.5-6.5	0	0	0	0	0	0	0
6.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
9.5+	0	0	0	0	0	0	0
							33

33

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6- 7	8- 9	10- 11	12- 13	>13	INC
0-.5	3	0	0	0	0	0	1
.5-1.5	6	12	5	7	0	0	1
1.5-2.5	5	14	7	5	2	0	1
2.5-3.5	4	2	7	4	3	1	0
3.5-4.5	0	0	3	0	2	1	0
4.5-6.5	0	1	0	0	0	0	0
6.5-7.5	0	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	0	0
9.5+	0	0	0	0	0	0	0
							95

3

PERIOD (SECONDS)

HEIGHT (METERS)	<6	6- 7	8- 9	10- 11	12- 13	>13
0-.5	3	2	0	1	0	0
.5-1.5	27	8	5	3	1	0
1.5-2.5	11	7	7	2	2	0
2.5-3.5	5	1	6	3	3	1
3.5-4.5	0	0	1	0	0	0
4.5-6.5	0	0	0	0	0	0
6.5-7.5	0	0	0	0	0	0
7.5-9.5	0	0	0	0	0	2
9.5+	0	0	0	0	0	0
						1

Graphs represent the objective compilation of available data for specified areas without reg
The isopleth analyses (opposite page) are based on all available data subjectively adjusted

GHT

DECEMBER

are reported. If both

1

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	3	2	0	0	0	0	1
1-1.5	21	26	5	2	2	0	1
2-2.5	3	16	5	1	3	1	2
3-3.5	0	6	1	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

102

2

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	4	2	1	0	0	0	1
1-1.5	17	22	13	1	2	0	2
2-2.5	4	8	8	3	1	0	1
3-3.5	0	6	2	1	0	0	0
4-5.5	0	1	1	0	1	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

189

3

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	4	0	1	0	0	0	0
1-1.5	20	20	4	1	1	0	3
2-2.5	6	12	3	3	2	0	3
3-3.5	3	2	6	2	0	0	1
4-5.5	0	1	1	1	0	0	2
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

162

4

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	4	3	1	1	0	0	5
1-1.5	19	15	8	1	0	1	7
2-2.5	8	9	7	0	1	1	2
3-3.5	0	1	6	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

169

5

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	11	1	2	1	0	0	1
1-1.5	2	24	10	3	1	1	2
2-2.5	2	6	5	2	1	1	1
3-3.5	0	1	2	+	+	0	0
4-5.5	+	0	1	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

399

6

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	20	3	+	0	0	0	5
1-1.5	29	19	5	1	1	1	5
2-2.5	2	4	2	1	+	0	1
3-3.5	1	+	+	0	0	0	+
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

539

7

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	8	2	0	0	0	0	0
1-1.5	25	20	6	0	0	2	1
2-2.5	5	11	6	3	1	0	0
3-3.5	0	5	3	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

95

8

HEIGHT (NTRS)	PERIOD (SECONDS) <5	6-7	8-9	10-11	12-13	>13	IND
0-1.5	2	1	1	0	0	0	+
1-1.5	28	17	5	2	1	+	1
2-2.5	7	11	10	4	1	1	1
3-3.5	+	2	1	+	0	+	0
4-5.5	0	0	1	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

376

9

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	3	1	1	0	0	0	1
1-1.5	22	18	4	1	2	2	2
2-2.5	10	16	8	1	1	+	+
3-3.5	2	4	1	0	0	1	0
4-5.5	0	0	0	0	+	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

535

10

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	11	2	1	0	0	0	1
1-1.5	31	19	5	+	3	1	2
2-2.5	5	8	3	1	1	1	+
3-3.5	+	2	1	0	+	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

713

14

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	5	2	+	0	0	0	+
1-1.5	24	19	3	1	1	+	2
2-2.5	9	14	6	2	0	1	+
3-3.5	2	3	2	0	0	+	+
4-5.5	+	1	1	+	0	+	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

433

15

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	8	0	0	0	0	0	0
1-1.5	29	13	11	2	0	0	1
2-2.5	4	9	12	8	0	0	0
3-3.5	0	1	0	1	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

85

16

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	11	2	2	2	0	0	6
1-1.5	16	24	13	3	0	0	4
2-2.5	1	8	3	4	0	0	0
3-3.5	0	0	1	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

102

17

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	7	0	0	0	0	0	0
1-1.5	15	18	6	2	0	1	3
2-2.5	8	16	11	3	0	0	3
3-3.5	0	1	1	2	1	0	1
4-5.5	0	0	1	0	0	0	0
6-7.5	0	0	1	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

144

18

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	4	0	0	0	0	0	+
1-1.5	15	13	3	1	1	1	9
2-2.5	6	16	8	4	1	0	2
3-3.5	2	3	1	4	+	0	0
4-5.5	+	2	2	1	0	0	0
6-7.5	0	+	0	0	0	0	0
8-9.5	0	0	0	+	1	+	0
≥10	0	0	0	0	0	0	0

292

19

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	3	1	0	0	0	0	1
1-1.5	11	13	6	1	1	1	4
2-2.5	7	9	10	6	1	1	2
3-3.5	1	7	3	3	+	0	1
4-5.5	+	1	1	1	+	1	1
6-7.5	0	0	0	+	0	0	+
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

423

23

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	5	1	0	0	0	0	1
1-1.5	15	15	4	2	2	+	2
2-2.5	5	14	13	2	1	1	2
3-3.5	1	3	4	1	1	1	+
4-5.5	+	1	2	1	0	0	+
6-7.5	0	+	+	+	+	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	+	0	0	0	0

696

24

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	6	0	0	1	0	0	1
1-1.5	26	13	6	1	4	1	3
2-2.5	6	11	8	2	0	2	1
3-3.5	1	1	1	0	0	0	1
4-5.5	0	1	3	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

173

25

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	2	0	0	0	0	0	1
1-1.5	10	14	4	1	1	0	3
2-2.5	7	14	10	2	+	0	2
3-3.5	2	5	7	1	1	0	2
4-5.5	2	2	3	3	2	1	1
6-7.5	0	0	0	0	0	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

264

26

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	4	0	0	0	0	0	1
1-1.5	19	13	5	0	2	1	3
2-2.5	4	13	13	1	1	3	3
3-3.5	1	3	5	1	1	0	0
4-5.5	0	1	1	1	1	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

151

27

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	0	0	0	0	0	0	0
1-1.5	6	9	0	3	24	0	0
2-2.5	0	3	9	6	36	0	0
3-3.5	0	0	3	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

33

28

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	7	0	0	0	0	0	0
1-1.5	4	32	7	0	4	0	4
2-2.5	4	11	11	0	0	0	0
3-3.5	0	0	7	0	4	0	0
4-5.5	0	7	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

28

32

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
1-1.5	0	0	0	0	0	0	0
1-1.5	0	24	0	0	0	0	0
2-2.5	0	12	42	3	0	0	0
3-3.5	0	3	6	9	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

33

33

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	3	0	0	0	0	0	1
1-1.5	6	12	5	7	0	0	1
2-2.5	5	14	7	5	2	0	1
3-3.5	4	2	7	4	3	1	0
4-5.5	0	0	3	0	2	1	0
6-7.5	0	1	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

95

34

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	3	2	0	1	0	0	0
1-1.5	27	8	5	3	1	0	0
2-2.5	11	7	7	2	2	0	0
3-3.5	5	1	6	3	3	1	0
4-5.5	0	0	1	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	2	0
≥10	0	0	0	0	0	0	0

143

35

INSUFFICIENT DATA

36

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	0	0	0	0	0	0	0
1-1.5	5	10	20	0	0	0	0
2-2.5	5	15	20	0	0	0	0
3-3.5	0	0	10	0	0	0	0
4-5.5	0	5	0	0	5	0	0
6-7.5	0	0	5	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

20

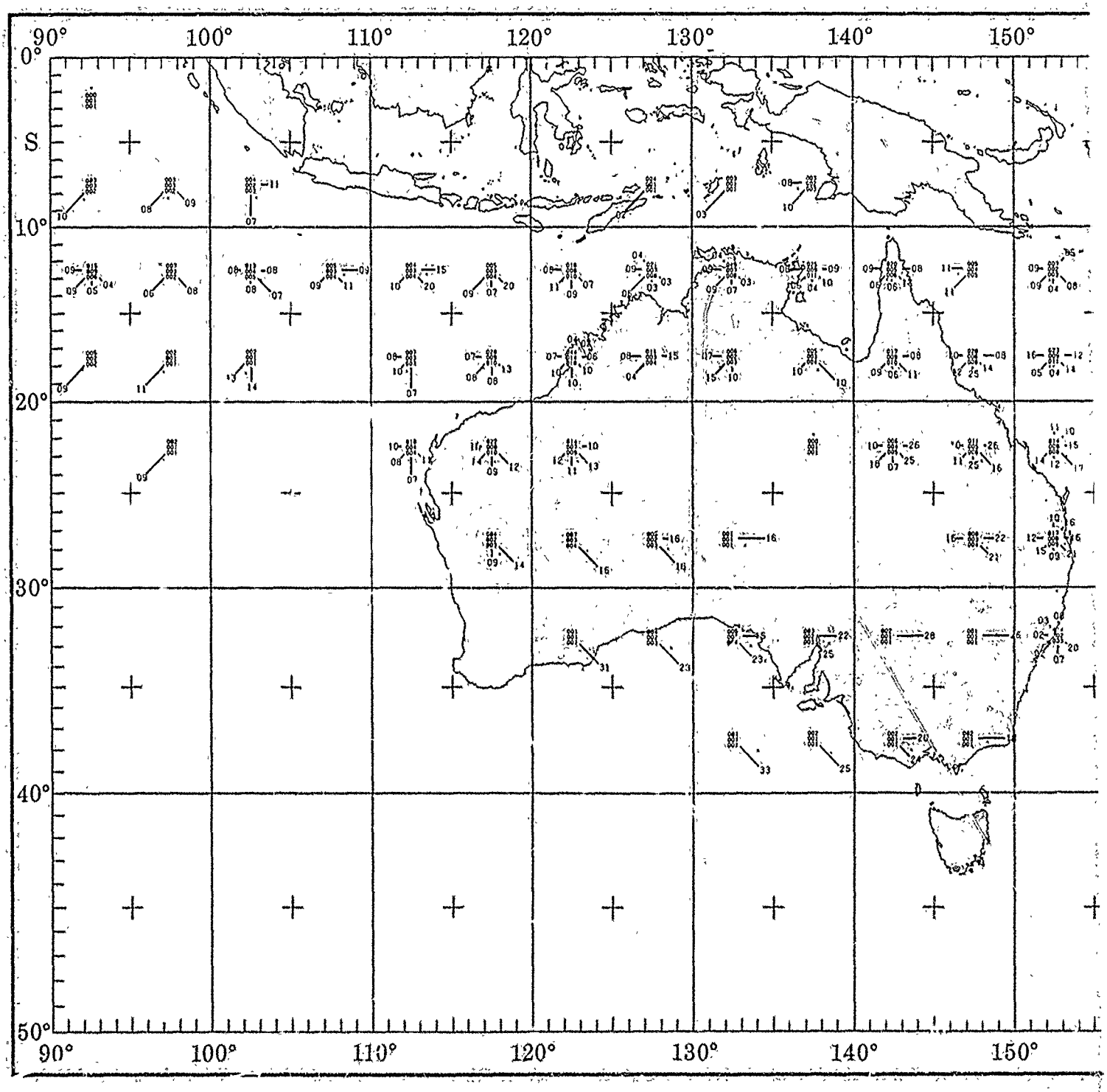
37

HEIGHT (NTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-1.5	10	0	0	20	0	0	0
1-1.5	0	10	0	0	10	0	0
2-2.5	10	10	10	0	0	0	0
3-3.5	0	0	0	10	0	0	0
4-5.5	0	0	0	10	0	3	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

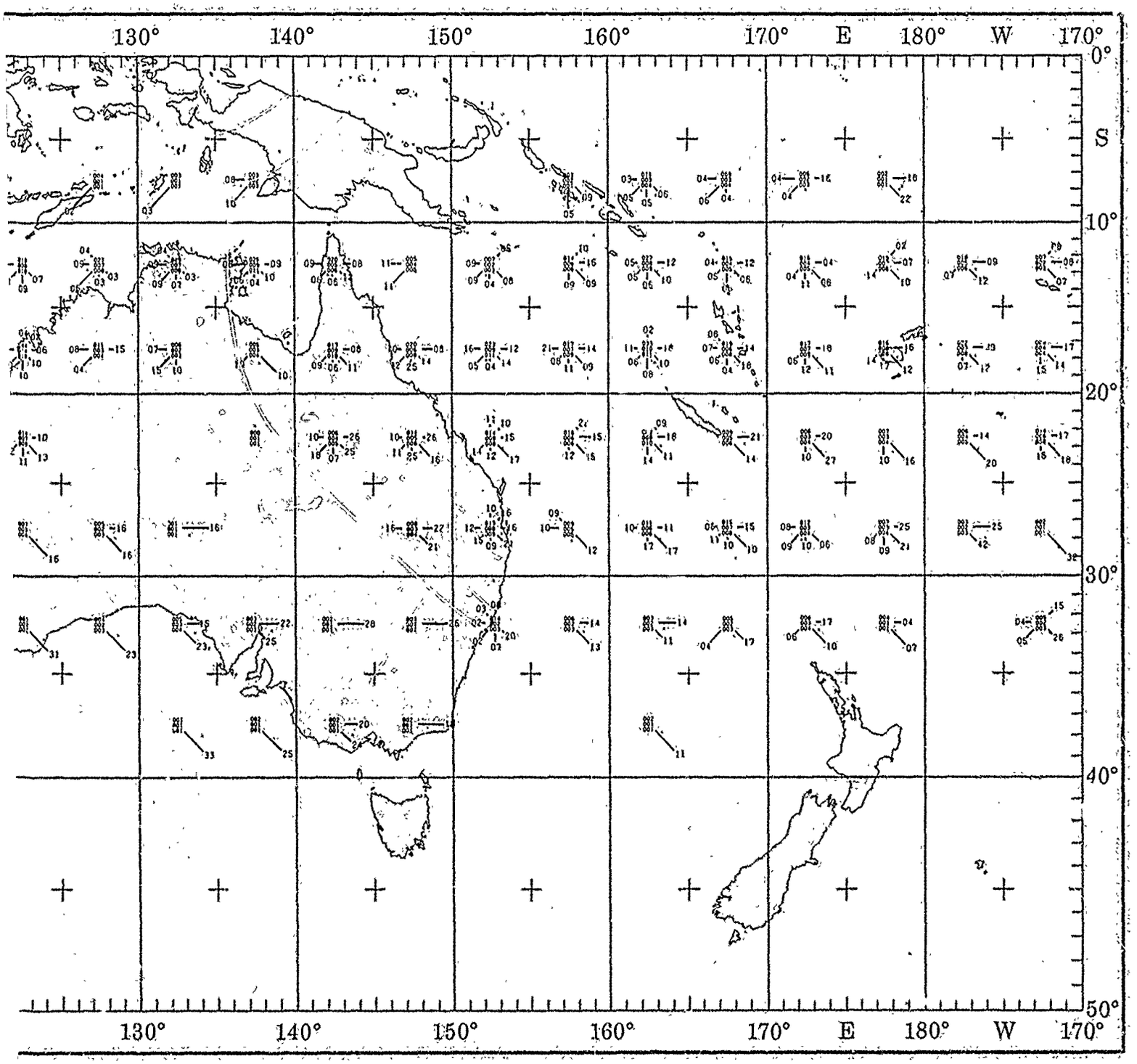
10

objective compilation of available data for specified areas without regard to suspected biases.
opposite page) are based on all available data subjectively adjusted where bias was evident.

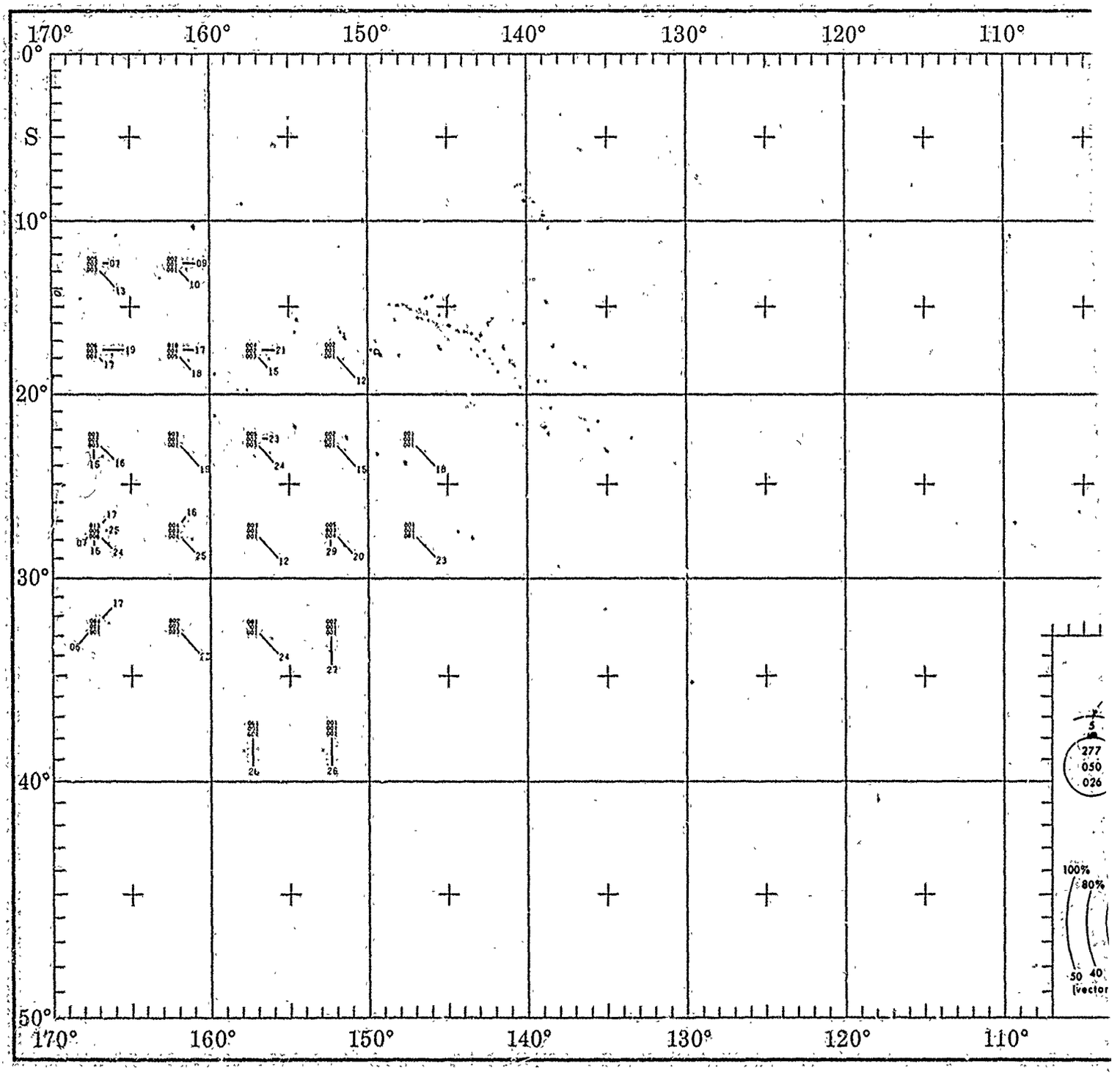
DECEMBER



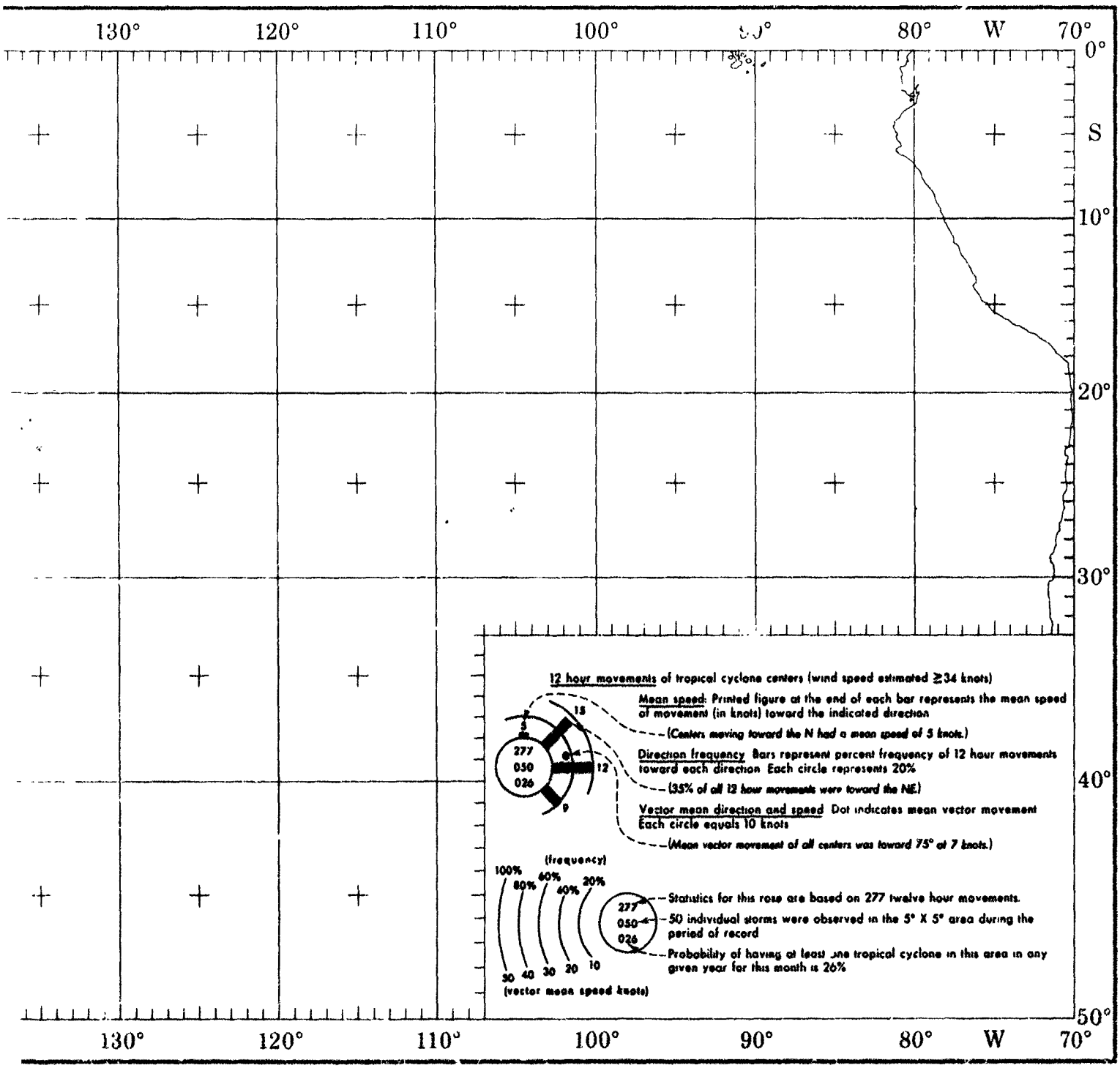
TROPICAL CYCLONE



TROPICAL CYCLONE

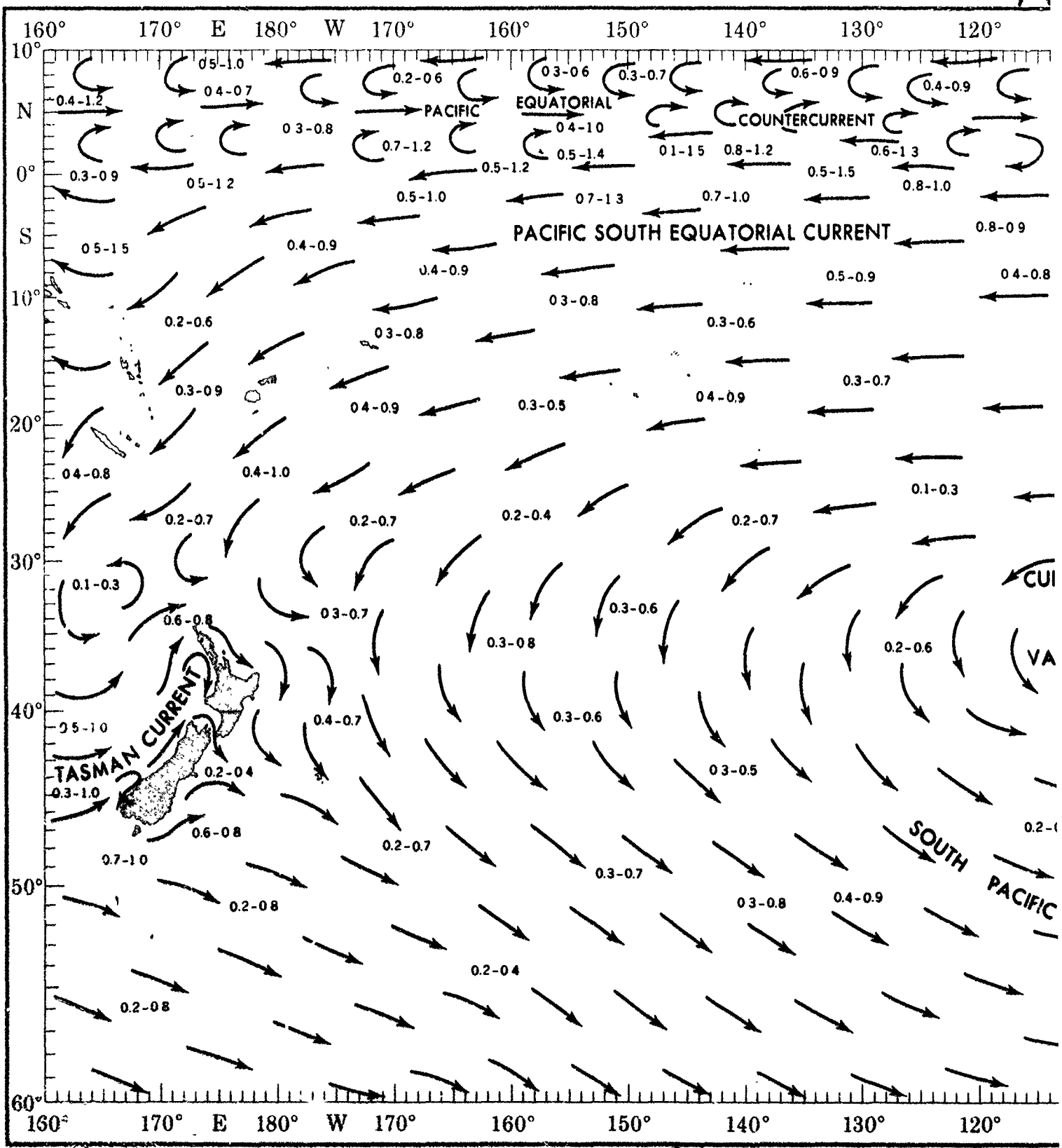


DECEMBER


130°
120°
110°
100°
90°
80°
W
70°
0°
S
10°
20°
30°
40°
50°
12 hour movements of tropical cyclone centers (wind speed estimated ≥34 knots)
Mean speed: Printed figure at the end of each bar represents the mean speed of movement (in knots) toward the indicated direction
(Centers moving toward the N had a mean speed of 5 knots.)
Direction frequency Bars represent percent frequency of 12 hour movements toward each direction Each circle represents 20%
(35% of all 12 hour movements were toward the NE.)
Vector mean direction and speed Dot indicates mean vector movement Each circle equals 10 knots
(Mean vector movement of all centers was toward 75° at 7 knots.)
277
050
026
(frequency)
100%
80%
60%
40%
20%
30 40 30 20 10
(vector mean speed knots)
Statistics for this rose are based on 277 twelve hour movements.
50 individual storms were observed in the 5° X 5° area during the period of record
Probability of having at least one tropical cyclone in this area in any given year for this month is 26%

PART II OCEANOGRAPHY

FIG. 1 PREVAILING SURFACE CURRENTS SUMMER, (



CE CURRENTS SUMMER, (DEC., JAN., FEB.)

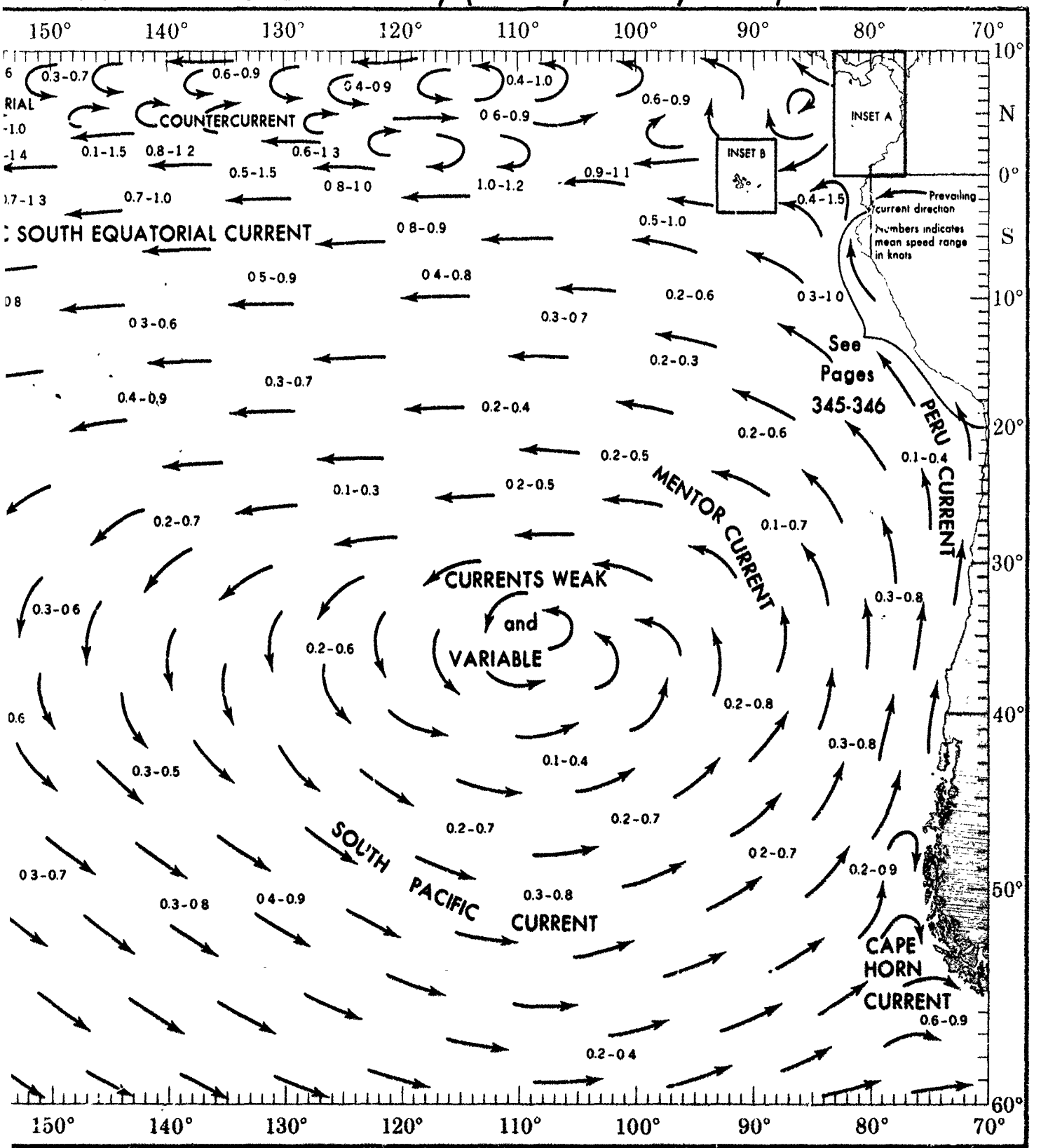
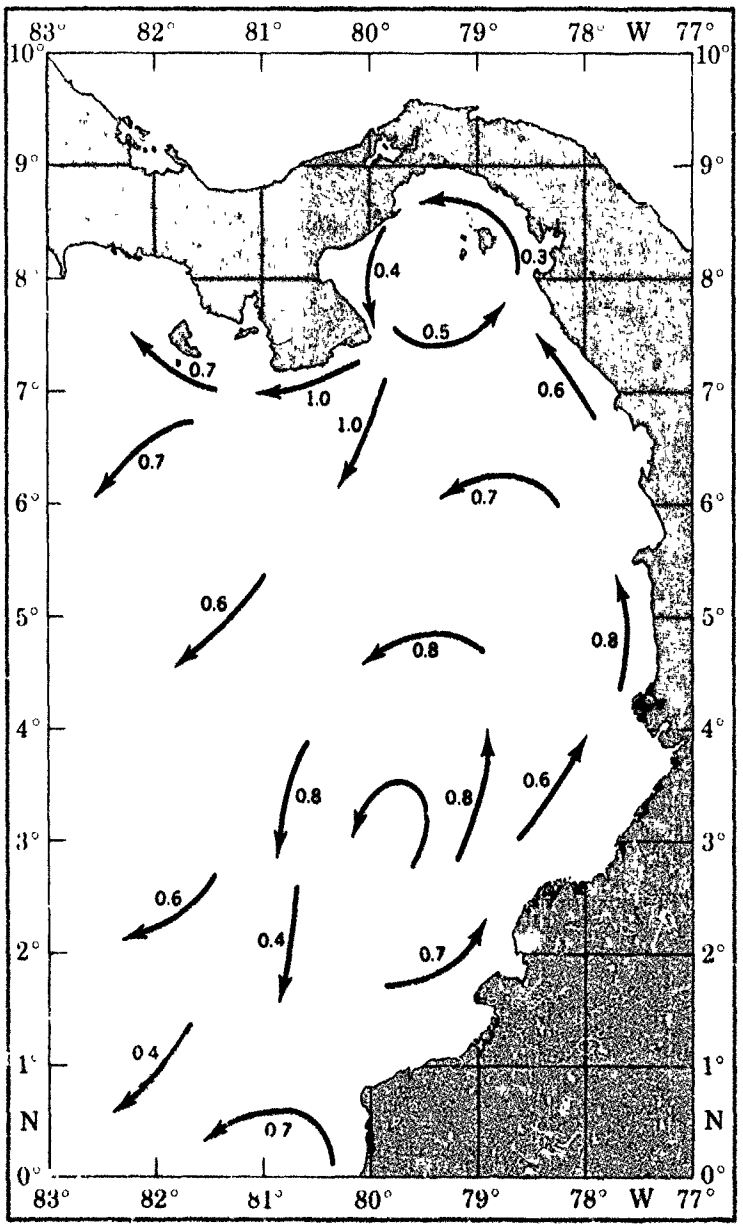
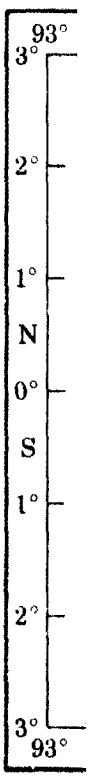


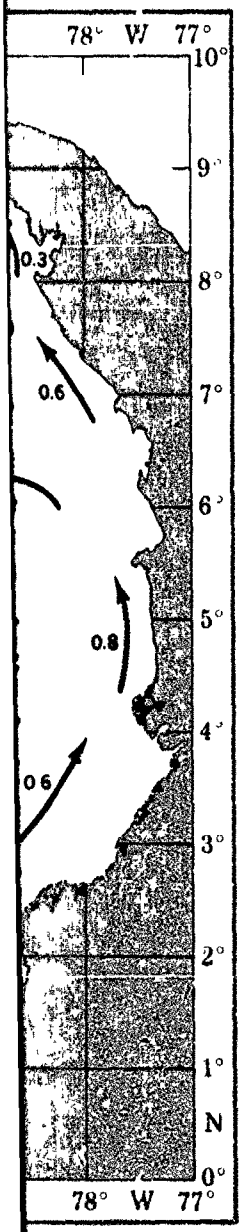
FIG. 2 PREVAILING SURFACE CURRENTS (INSETS)

INSET A

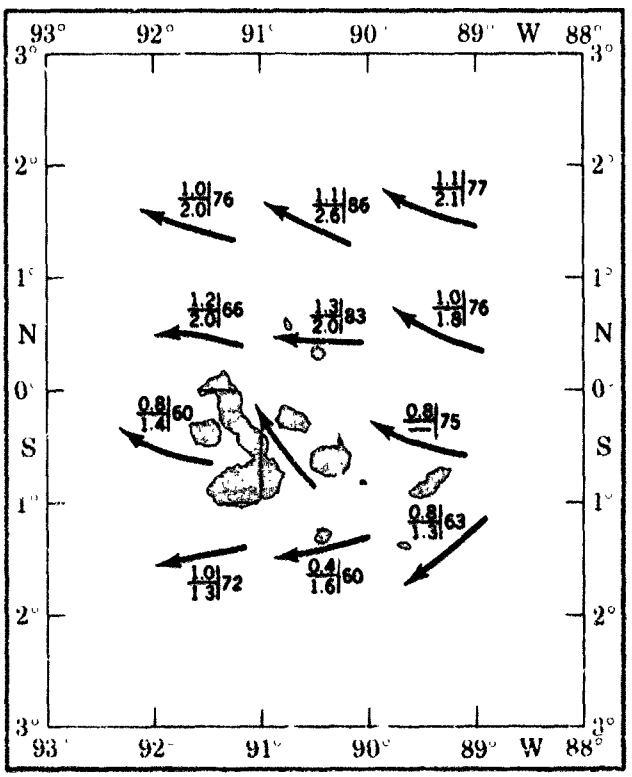




RFACE CURRENTS (INSETS) SUMMER



INSET B



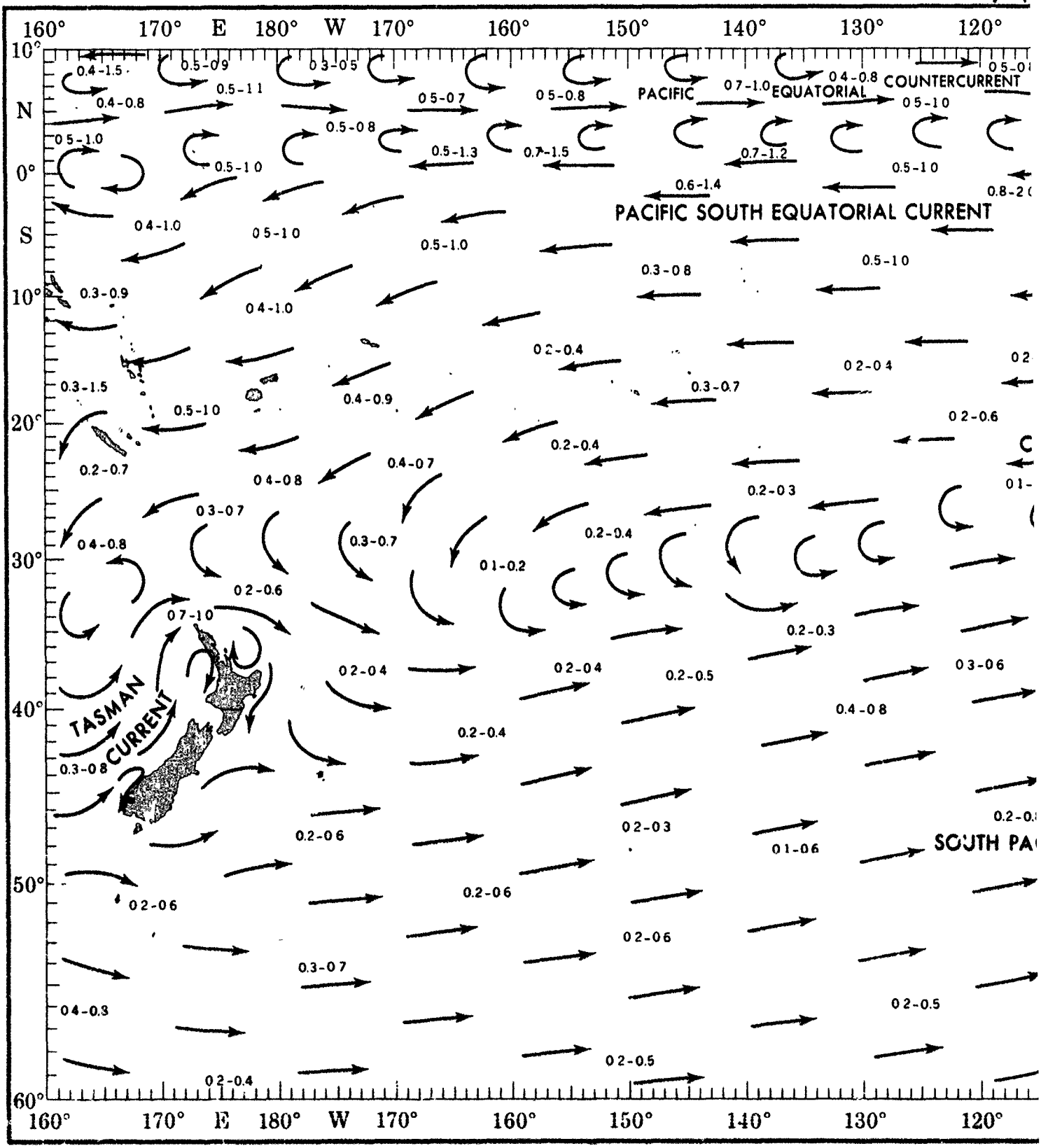
Prevailing current direction

12 Mean speed in knots

12/23 45 2.3 Maximum speed observed

45 Percent frequency of current set

FIG. 3 PREVAILING SURFACE CURRENTS WINTER, (



CE CURRENTS WINTER, (JUN., JUL., AUG.)

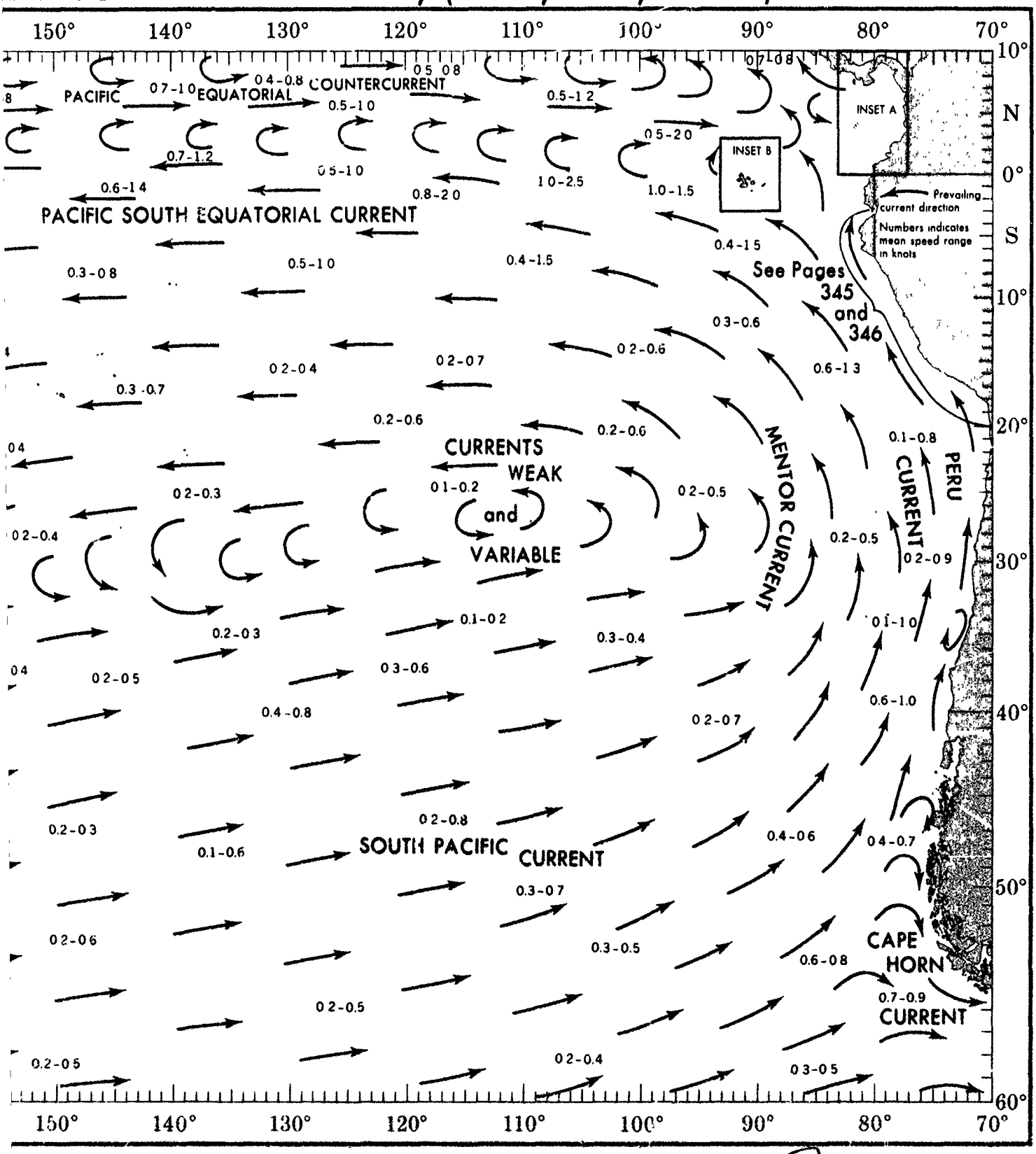
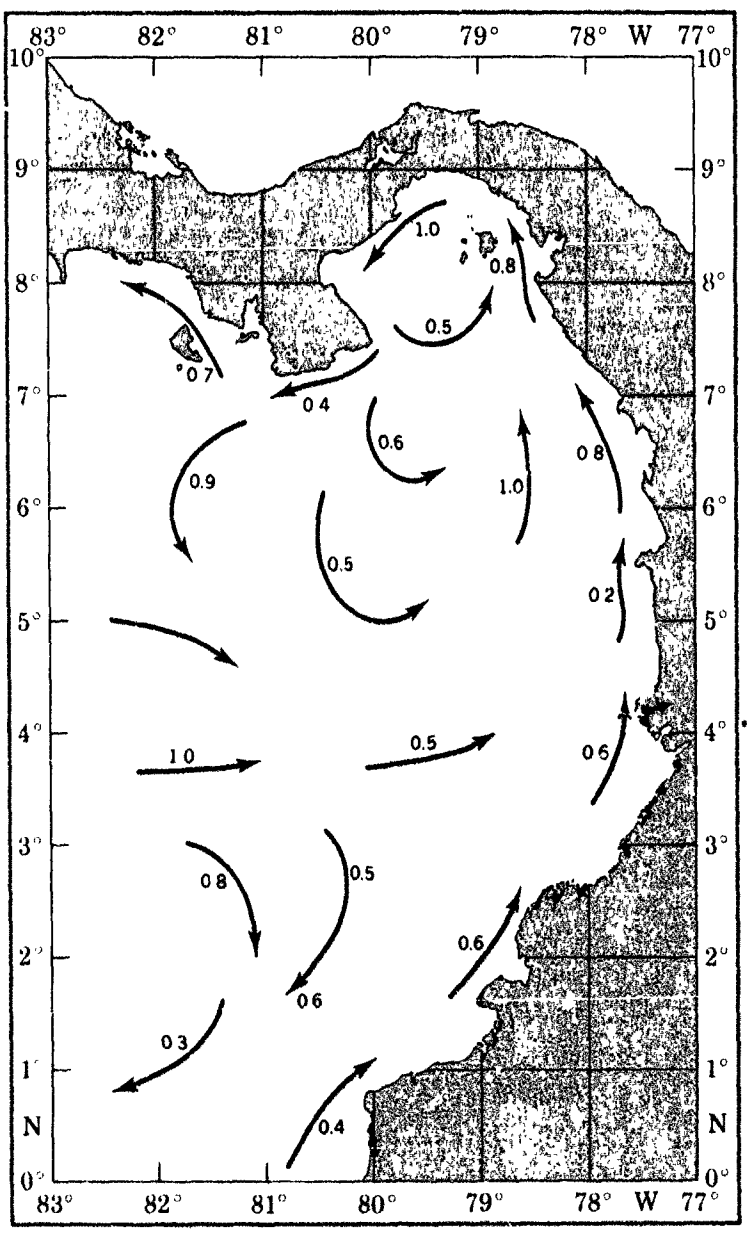
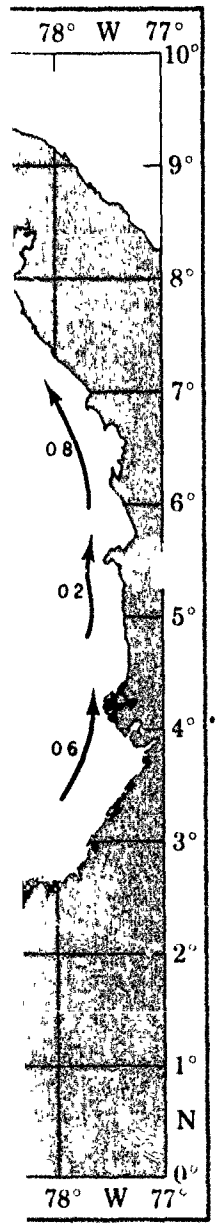


FIG. 4 PREVAILING SURFACE CURRENTS (INSETS)

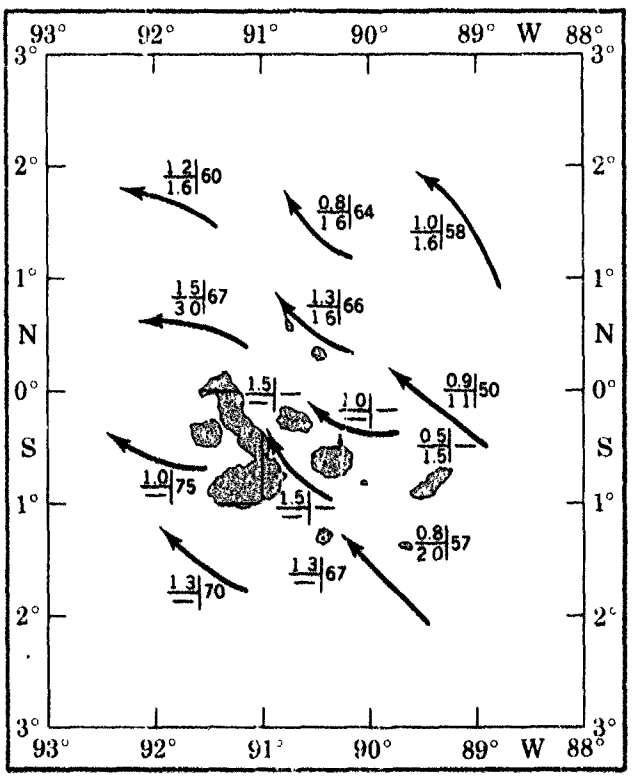
INSET A



FACE CURRENTS (INSETS) WINTER



INSET B



Prevailing current direction

12 Mean speed in knots

12/23 45 23 Maximum speed observed

45 Percent frequency of current set

FIG. 5 MAJOR OCEANIC CURRENTS

The South Equatorial Current sets west from South America to the western Pacific, occupying a belt between about 4° N and 10° S Part of the current turns south at about 175° W and joins the counterclockwise gyral of the South Pacific.

In the Tasman Sea between Australia and New Zealand the currents are variable but an east set generally predominates Part of the East Australia Current branches and flows east toward New Zealand The major part of this current, however, continues south until it merges with the east-setting West Wind Drift The combined currents flow northeast along the west and east coasts of South Island.

The seasonal circulation around New Zealand in summer and winter are shown in Figures 1 and 3; current speeds are generally higher in summer. The prevailing current direction shows little seasonal change along the west coasts of the islands, but the current tends northeast in July and southeast in January along the east and south coasts

The currents in the New Zealand area are greatly influenced by winds and show considerable variability in direction and speed. The current usually sets northeast along the west coasts of the islands Along the east coasts the currents vary seasonally, being strongest in summer when the maximum speed is about 1 5 knots along the northeast coast of North Island Occasionally currents exceeding 2 0 knots are observed north of North Cape

Close to shore along the west coast of South Island from about Jacksons Bay to the southwestern extremity of the island, the current sets almost continuously south at speeds averaging 0 5 to 1 0 knot throughout the year The current farther seaward sets north

A branch of the general north-setting current that flows past the northern part of the west coast of South Island turns east and flows through Cook Strait The southeast set out of the strait is most apparent in summer

Between East Cape and Gable End Foreland, a constant current sets south outside the 100-fathom line, its speed averages about 1 0 knot, but greater speeds occur after strong southerly winds From Cape Kidnappers to Cape Palliser the current is variable; it sets south after southerly gales, sometimes at a speed of 1 0 knot, but seldom lasts for more than one day

A branch
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Drift is not well
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Peru Currents.
The Cape
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to a width of a
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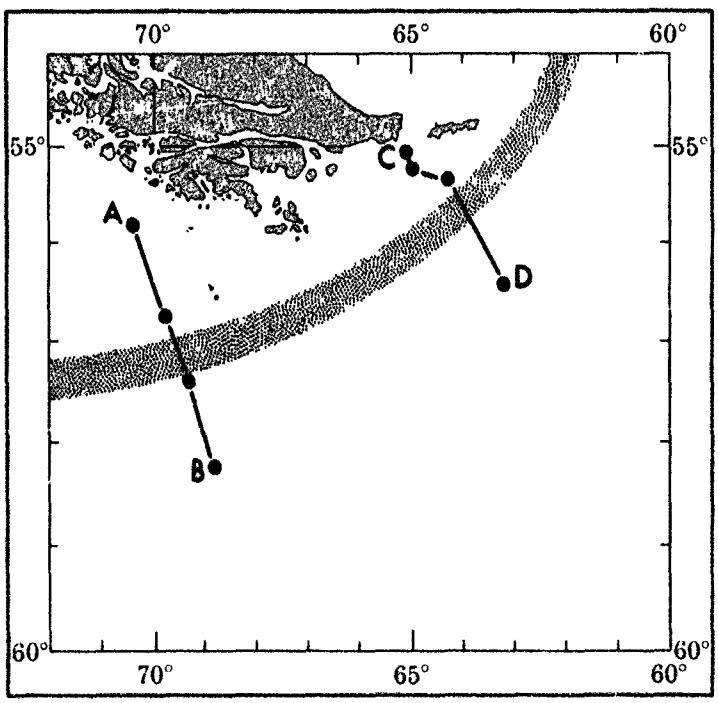
COMPUTED CURRENT SPEED PROFILES, CAPE



- ● Station location
- Approximate boundary of Cape Horn current
- A-B Limits of cross section
- 40 Current speed (CM/SEC)

NIC CURRENTS

rrica to the western Pacific, occupying
ns south at about 175° W and joins the

d the currents are variable but an east
nt branches and flows east toward
nues south until it merges with the east-
it along the west and east coasts of

er and winter are shown in Figures 1
prevailing current direction shows little
e current tends northeast in July and

enced by winds and show consider-
sets northeast along the west coasts of
lly, being strongest in summer when
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m about Jacksons Bay to the south-
nuously south at speeds averaging 0 5
l sets north
past the northern part of the west
it The southeast set out of the strait is

f current sets south outside the 100
peeds occur after strong southerly
variable, it sets south after southerly
more than one day

A branch of the West Wind Drift flows northeast along the east coast of South Island In summer, the speed in the open sea may occasionally reach 1 5 knots, especially after strong southerly winds, and off Banks Peninsula the speed is frequently 2 0 knots, in winter, the maximum speed is about 1.0 knot Close to shore, speeds may be higher Between Cape Campbell and Banks Peninsula a south set occurs after southerly winds From Banks Peninsula to Timaru, the current sets toward Ninety Miles Beach after strong southeast winds

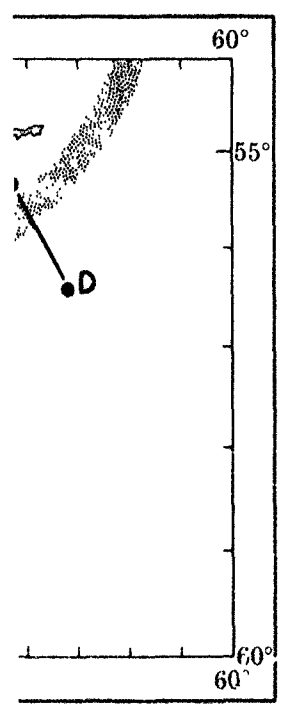
Currents are variable north of New Zealand East of New Zealand, east sets tend to predominate between 40° and 50° except from September to December when currents may set in any direction To the northwest and southwest of Chatham Islands, southeast sets predominate from December to February

South of New Zealand the West Wind Drift sets eastward past Auckland and Campbell Islands at speeds as high as 1 5 knots The West Wind Drift is the largest ocean current on earth, in the Southern Hemisphere, it is a barrier between the warm water of the lower latitudes and the cold water flowing around Antarctica The speed of the West Wind Drift decreases, then increases considerably toward Drake Passage, where it averages up to 0 7 knot, about three times higher than in the open ocean.

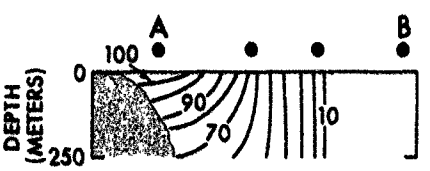
Because of variations in the strength of the wind, the northern boundary of the West Wind Drift is not well defined, but there is a significant set toward the northeast and north where the flow joins the southern edge of the east-setting South Pacific Current The South Pacific Current shown in Figures 1 and 3 branches off the South American coast and forms the Cape Horn and Peru Currents

The Cape Horn Current sets continuously eastward close to the tip of South America and enters Drake Passage at about 70° W in a 150-mile-wide band, with surface speeds up to 2 4 knots The set then veers north-northeast, and when it crosses longitude 65° W the current has narrowed to a width of about 85 miles and its speed has decreased considerably The profiles of computed speeds in the figures below show the well-defined limits of the current

COMPUTED CURRENT SPEED PROFILES, CAPE HORN CURRENT



- ● Station location
- Approximate boundary of Cape Horn current
- A-B Limits of cross section
- 40 Current speed (CM/SEC)



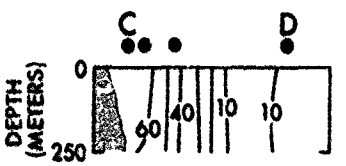
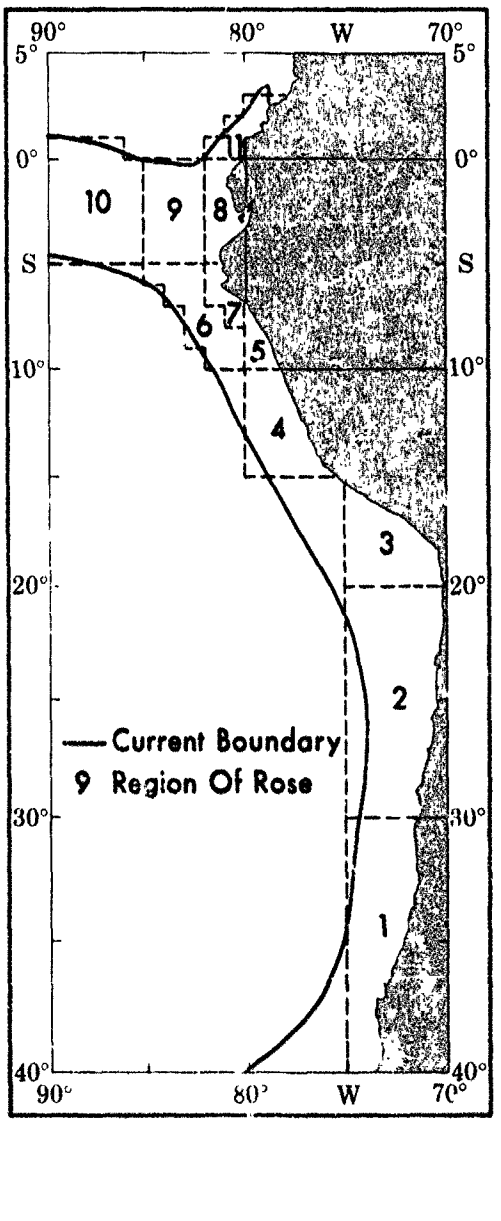
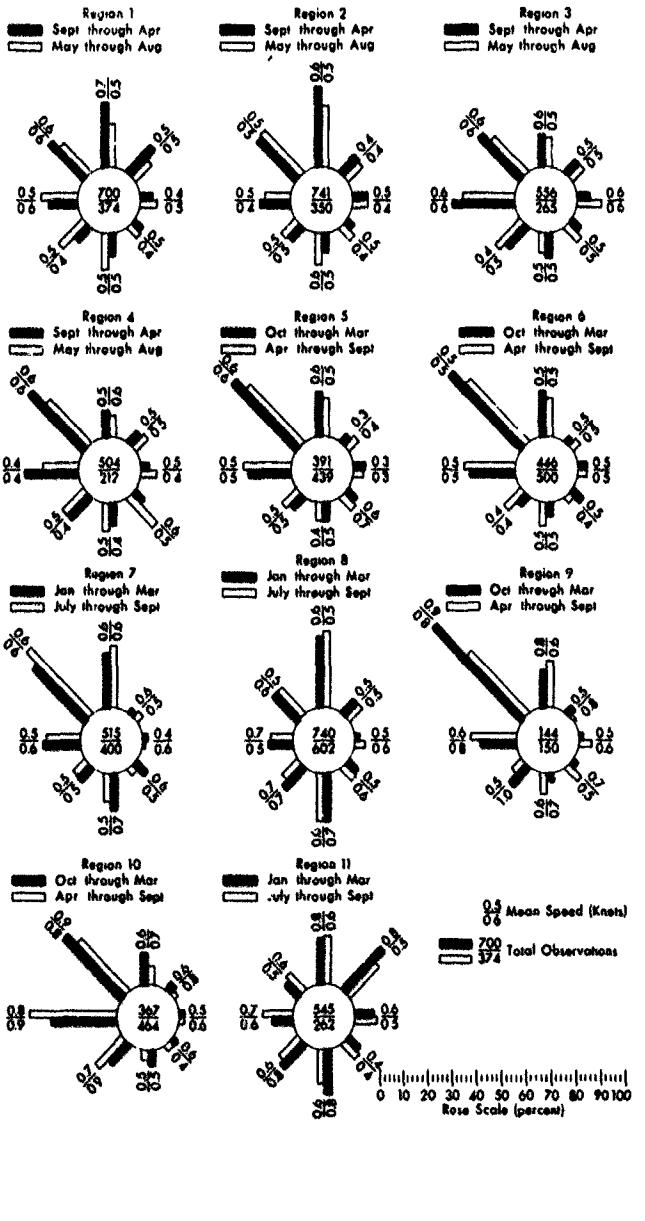


FIG. 5 MAJOR OCEANIC CURRENTS (Cont'd)

SURFACE FLOW OF PERU COASTAL CURRENT





The Peru Current is
40° S and flows past Peru
shore current referred to
distinction is made princip
based on persistence and
mean speed of 0 9 knot ir

The surface current
What seasonal variation
south of 10° S during the
ranging between 0 2 and
tinent and the Galapagos

In some regions, hov
quently flow close to shor
ability of the Peru Current
ward, and there is no sud
flow.

El Niño is generally identi
edly at about seven year interv

In December the northerly
This current flows southward in
siderably in some years and inf
Peru Current is diminished, the
results in a layer of warm water

The origin of this flow is n
to weaken; close to shore a sou
of the Pacific Equatorial Counter

The southward excursion
easterly trade wind regime

The Peru Oceanic Current
Drift) at about 40° S, 90° W It
that extends about 900 miles w
by winds It joins the west-settin
Ocean The speed in the central

A seasonal current rose fo
significant percent frequency of
the rose for region 2 in the adj

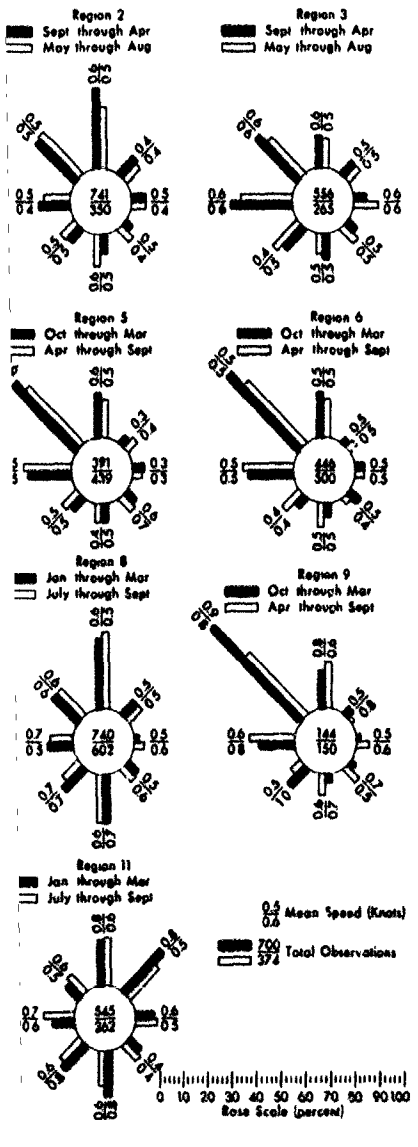
The complicated pattern o
speed of 0 4 knot between 22°

Years during which El Niñ
1953, 1957, 1965, 1967

*Exceptionally strong

: CURRENTS (Cont'd)

CURRENT



PERU CURRENT

The Peru Current is a narrow, fairly stable current that flows northward close to the South American coast; it originates from about 40° S and flows past Peru and Ecuador to the southwest extremity of Columbia The Peru Current occupies two distinct regions, the inshore current referred to as the Peru Coastal Current, and the offshore current described as the Peru Oceanic Current. However, the distinction is made principally from the biological characteristics in the upper layers Peru Current shown in the figure to the left, is based on persistence and speed. The most outstanding current in the Southern Hemisphere, the Peru Current, is not very strong but has a mean speed of 0 9 knot in the northern region where the flow is most persistent

The surface current shows a high constancy throughout the greater part of its length and is little affected by latitude or season What seasonal variation does occur is shown in the surface current roses in the figure to the left, the current tends to be most variable south of 10° S during the southern winter and north of 10° S during the southern summer. The current most frequently flows at speeds ranging between 0 2 and 1 4 knots, being strongest off the Peru coast; maximum speeds occur at its northern extremity between the continent and the Galapagos Archipelago The currents are stronger near shore and weaken with increasing distance from shore.

In some regions, however, the current is very weak, with eddies occurring at irregular intervals; south setting countercurrents frequently flow close to shore as indicated by the south component of the surface current roses Because of the moderate speed and variability of the Peru Current, its exact west boundary is difficult to determine; the flow west of the Peru Current is also markedly northward, and there is no sudden change between the coastal zone of more persistent flow and the oceanic region of less stable or weaker flow

EL NIÑO

El Niño is generally identified with large-scale disturbances which occur in the northern part of the Peru Current in certain years, reportedly at about seven year intervals However, El Niño is an event which has been observed in late December quite frequently

In December the northerly winds blowing across Central America drive water from the Gulf of Panama southward along the Peru coast This current flows southward in a tongue-shaped band 1 to 2 miles wide between 3° and 6° S. The intensity of this phenomenon increases considerably in some years and influences a larger part of the northern nearshore portion of the Peru Current than usual During such periods the Peru Current is diminished, the temperature of the surface water rises sharply, and the southward flow extends as far as 20° S This condition results in a layer of warm water about 75 feet deep and as wide as 20 miles

The origin of this flow is not definately known, but northwesterly winds that penetrate farther south than usual do cause the Peru Current to weaken; close to shore a south-setting flow develops as the cool Peru Current is replaced by warm water with characteristics similar to those of the Pacific Equatorial Countercurrent.

The southward excursion of El Niño is most prevalent January through March, after which it is halted by the reappearance of the southeasterly trade wind regime.

The Peru Oceanic Current originates mainly from the easternmost extension of the South Pacific Current (located north of the West Wind Drift) at about 40° S, 90° W It sets north and northwest and has the characteristic features of a drift in that it is a broad, slow-moving flow that extends about 900 miles westward from the Peru Coastal Current to about 90° W at its widest section and tends to be easily influenced by winds It joins the west-setting South Equatorial Current and completes the anticyclonic movement in the eastern part of the South Pacific Ocean The speed in the central part of the current at about 26° S, 80° W may at times attain about 0.9 knot

A seasonal current rose for a region within the center of the current, shown in the left hand figure on the following page, indicates a significant percent frequency of v estward flow, which becomes greater westward as current speed decreases Comparison of this rose with the rose for region 2 in the adjacent Peru Coastal Current shows the differences in speed and direction between the two currents

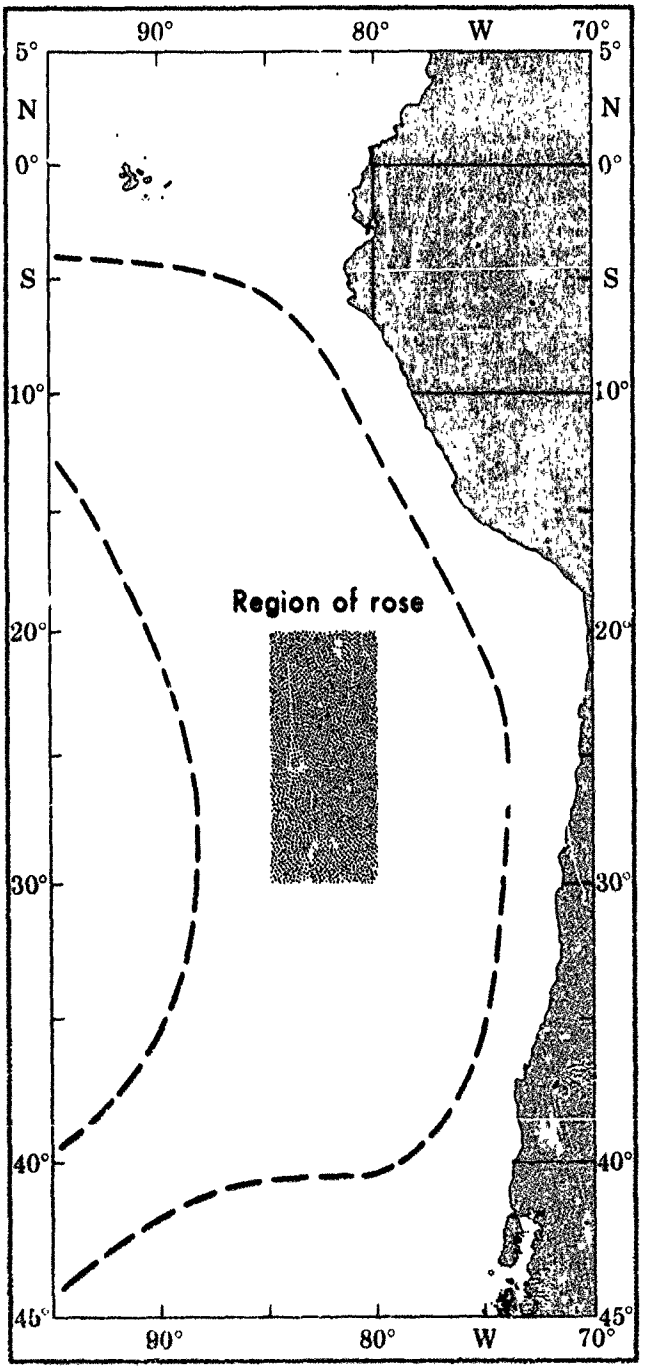
The complicated pattern of upwelling and wind results in variable current speeds between 0 0 and 1 5 knots near 13° 42'S and a mean speed of 0.4 knot between 22° 36'S and 33° 00 S Countercurrents may occur near shore

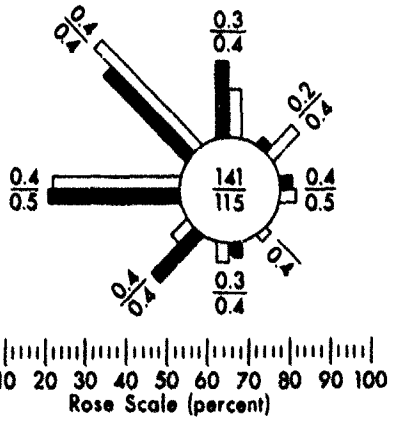
Year during which El Niño has been recorded with greater than usual intensity are. 1891*, 1911, 1918, 1922, 1925*, 1932, 1939, 1941*, 1953, 1957, 1965, 1967

*Exceptionally strong

FIG. 5 MAJOR OCEANIC CURRENTS (Cont'd)

DIRECTIONS, SPEEDS, AND BOUNDARIES OF THE PERU OCEANIC CURRENT





Frequency summer (Oct.-Mar.)

Frequency winter (Apr.-Sept.)

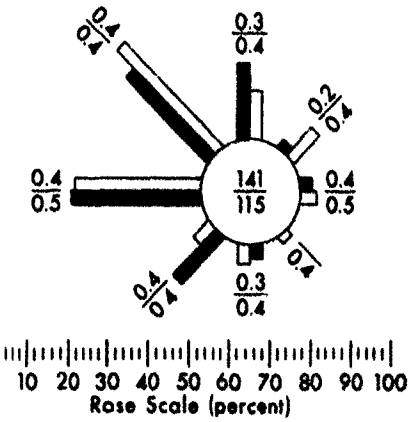
0.3/0.4 Mean speed (knots) Summer/Winter

141/115 Total observations Summer/Winter

Current boundary

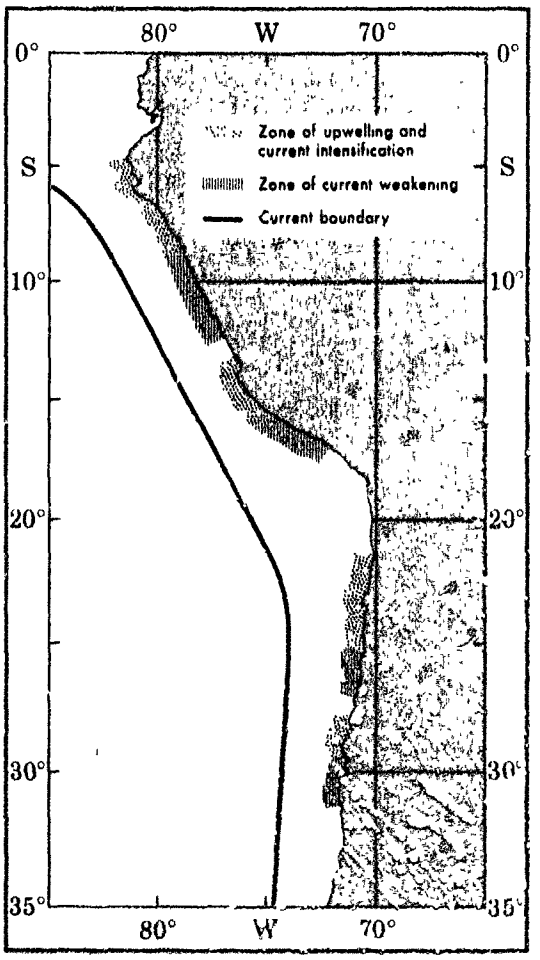
:URRENTS (Cont'd)

:RU OCEANIC CURRENT



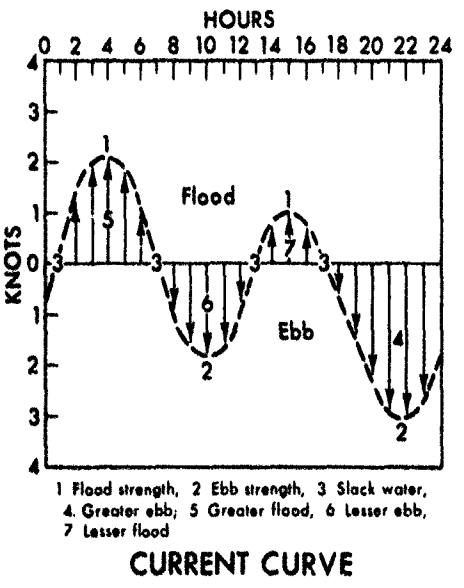
- Frequency summer (Oct-Mar)
- Frequency winter (Apr-Sept)
- 0.3/0.4 Mean speed (knots) Summer/Winter
- 141/115 Total observations Summer/Winter
- Current boundary

UPWELLING AND WEAKENING OF PERU COASTAL CURRENT

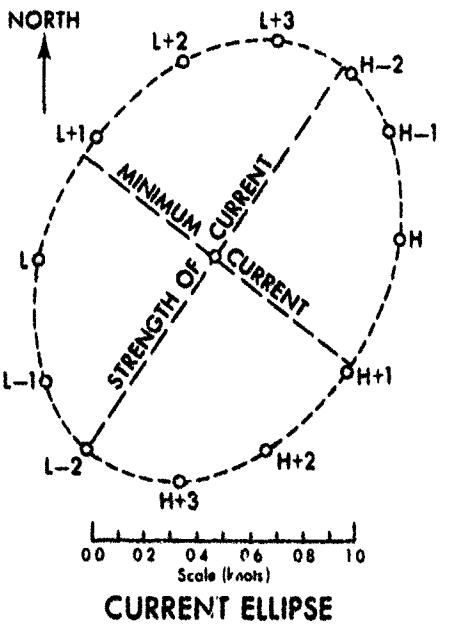


Observations have shown that the current close inshore is under the nearly continuous influence of small-scale upwelling. Steady southerly winds along the coast tend to force the surface water offshore and produce continuous vertical circulation. Upwelling occurs between about 30° and 5° S as shown in the figure above, and is limited mainly to the upper 200 to 300 meters. South of 15° S, upwelling is less intense.

FIG. 6 TIDAL CURRENTS AND TIDES



CURRENT CURVE



CURRENT ELLIPSE

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may exceed 16 feet
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Semidiurnal tide
30° S are mixed exc
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ranges. The tidal mo
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whereas the smallest
Figure 7 shows
both locations In gen
ranges are about 7 fe
strictive passages or
tide is found in Astrol
The tidal progre
coasts, turns near No
c Generally, maxi
Changes in winc
etric pressure tend to

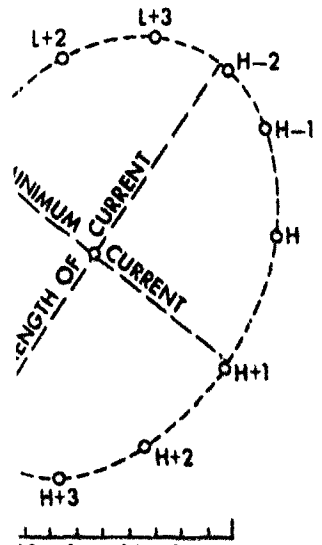
TIDAL CURRENT

Tidal current is the alternating horizontal movement of water associated with the vertical rise (flood) and fall (ebb) of the tide caused by the astronomical tide producing forces Reversing tidal currents set in approximately opposite directions separated by periods of slack water Flood current is toward shore and associated with the rising tide, whereas ebb current is away from shore and associated with falling tide The relation of current to tide is not constant, but varies from place to place, and the time of slack water does not generally coincide with the time of high or low water, nor does the time of maximum speed of the current usually coincide with the time of most rapid change in the vertical height of the tide At stations located on a tidal river or bay the time of slack water may differ from 1 to 3 hours from the time of high or low water Currents are frequently disturbed by wind or variations in river discharge In open offshore areas where the direction of flow is not restricted, the tidal current is rotary and continually changes direction through all points of the compass during the tide cycle

The change in direction is generally clockwise in the Northern Hemisphere and counterclockwise in the Southern Hemisphere The speed of the current usually varies throughout the tide cycle, passing through two maximums and two minimums in approximately opposite directions In nearshore coastal regions the characteristics of tidal currents will depend on local topography such as rough or shallow bottom river entrances, and restrictive straits The outstanding feature of tidal currents is diurnal inequality, i e, the difference in speed of two consecutive flood or two consecutive ebb maximums This inequality varies directly with the moon's declination, consequently it tends to disappear when the moon is near the equator When the moon is farthest north or south of the equator the inequality is greatest and in some areas such as the Solomon Islands the current is diurnal

For detail information on tidal currents the reader should consult the pilots, atlases, and tidal current prediction tables published by the various national agencies

S AND TIDES



IRRENT ELLIPSE

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TIDES

a West coast of Central and South America

South of about 6° S, the tide is mainly mixed, two high waters and two low waters occur each tidal day, with a marked diurnal inequality between the heights of successive high and successive low waters This inequality, principally in the high waters, is largest near times of maximum north or south declination and smallest near times of equatorial (0°) declination North of 6° S, between 40° to 47° S, and at offshore islands, the tide is semidiurnal, two high waters and two low waters occur each tidal day, with little or no diurnal inequality between the heights of successive high and successive low waters Tide ranges vary along the coast and are highest in the northern part where they may exceed 16 feet in the Gulf of Panama

Large tsunamis, or waves resulting from the submarine earthquakes, have been recorded along the coast of Peru Reports indicate that such waves have reached heights of about 80 feet, flooding the coast at Callao as far as 6 miles inland

b New Zealand and Pacific Islands

Semidiurnal tides occur throughout New Zealand, neighboring islands, and Samoa Tides at Pacific Islands west of 130° W and north of 30° S are mixed except in the Solomon Islands where they are mainly diurnal (one high and one low water daily) Typical tide curves, and regions of types of tides are shown in Figure 7 Tide ranges are given in Table 1

In New Zealand, the larger ranges do not always occur at springs, since perigee neap ranges are generally larger than apogee spring ranges The tidal movements, therefore, are strongly dependent upon the moon's changing distance from the earth When the moon is at perigee the tide range is large, and when it is at apogee the range is small The largest tide ranges occur near perigee and new or full moon, whereas the smallest tides occur near apogee and quadrature

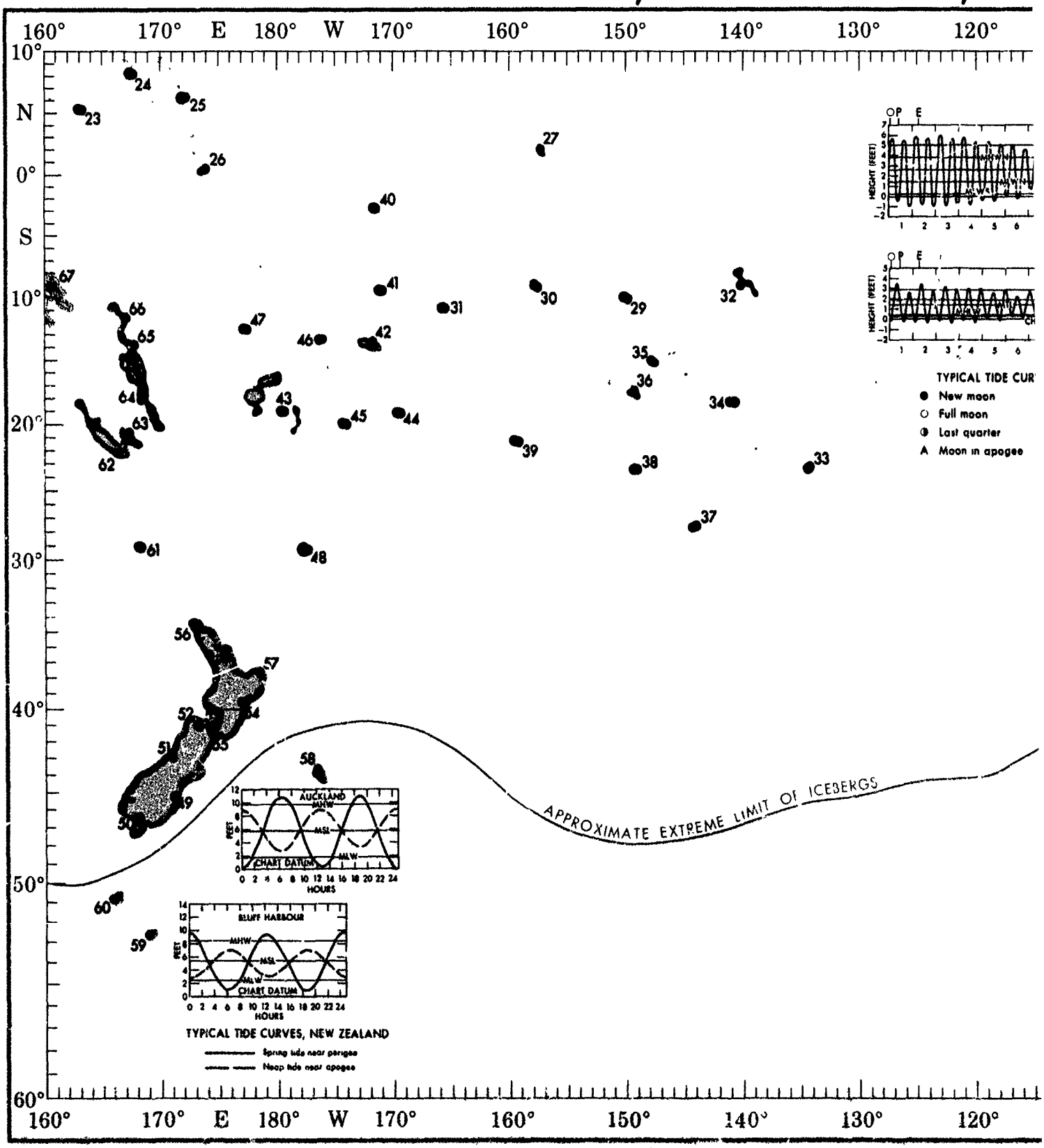
Figure 7 shows typical spring and neap tide curves for Auckland and Bluff Harbour representing approximate extreme conditions at both locations In general, tide ranges are larger along the west coasts of North and South Islands than along the east coasts The spring ranges are about 7 to 11 feet along the west coasts, but vary from about 4 to 7 feet along the east coasts Exceptions may be found in constricted passages or inlets The smallest tide occurs at Wellington where the spring range is 3 4 feet and the mean range 3 2 feet The largest tide is found in Astrolabe Road where the spring range is 15 4 feet and the mean range 12 3 feet

The tidal progression is counterclockwise around New Zealand High water begins near Stewart Island, passes north along the east coasts, turns near North Cape, and then continues south along the west coasts The progression through Cook Strait is southeast to northwest

c Generally, maximum tide ranges occur near times of new and full moon

Changes in winds and barometric pressure cause deviations from daily predicted water levels Prolonged onshore winds or low barometric pressure tend to raise the water level; offshore winds or high barometric pressure tend to lower it

FIG. 7 TYPICAL TIDE CURVES, TYPES OF TIDES, AN



URVES, TYPES OF TIDES, AND ICE

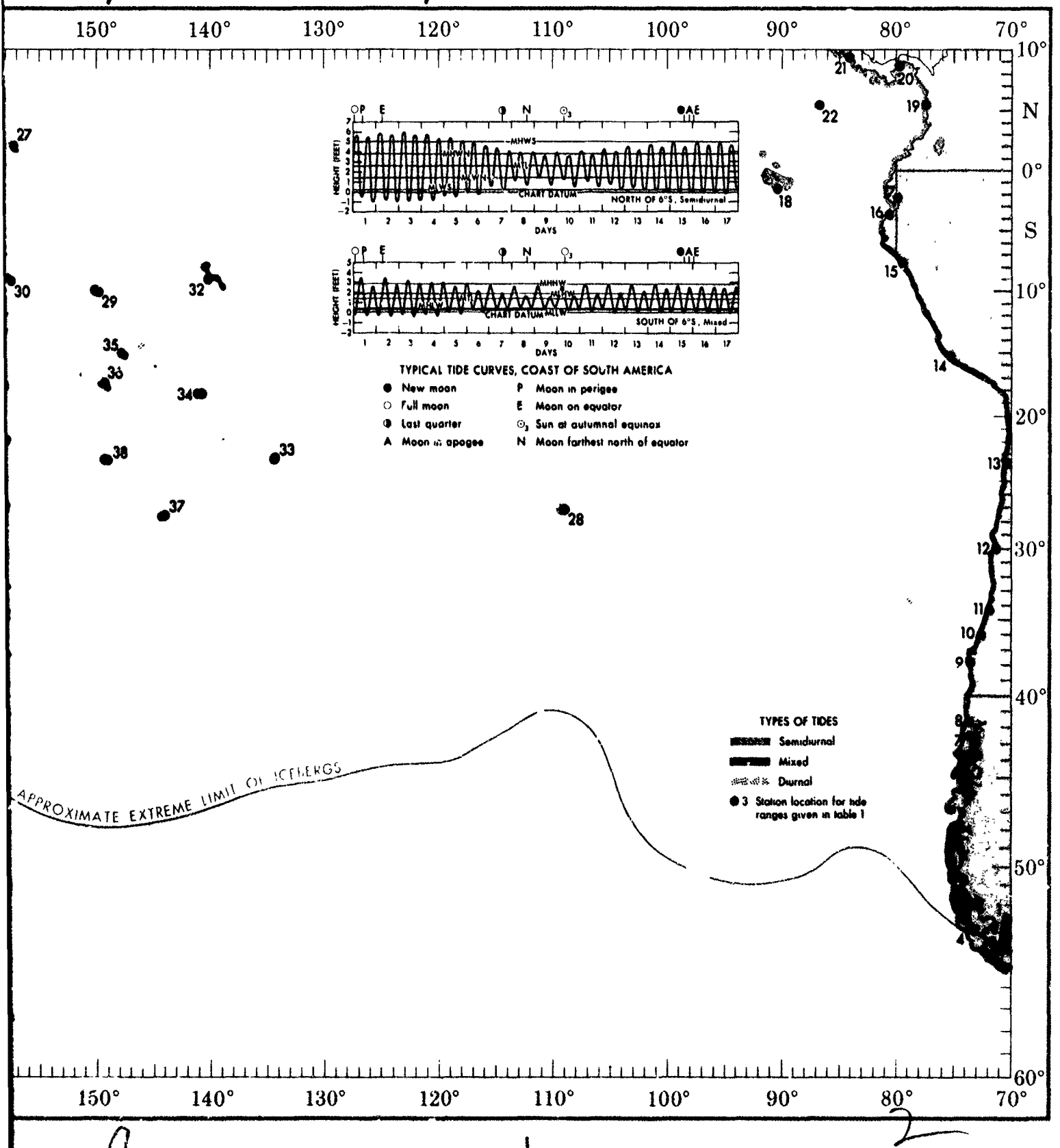


TABLE 1 TIDE RANGES

STATION NAME ③ Station Location See Figure 7	POSITION Lat.	Long.	RANGES Mean	Spring	Mean Tide Level
ARGENTINA, Tierra del Fuego	° ′	° ′	feet	feet	feet
SEGUNDA ANGOSTURA ①	52 45S	70 18W	16.0	20.3	12.8
Puerto Zenteno	52 47S	70 46W	4.5	5.8	4.4
BAHLA GENTE GRANDE ②	53 03S	70 16W	6.3	7.4	5.0
Punta Arenas	53 09S	70 54W	3.8	4.9	4.0
Puerto del Hambre	53 38S	70 55W	3.6	4.7	3.9
Puerto San Antonio	53 53S	70 54W	3.8	5.0	4.5
Bahia Snug	53 51S	71 25W	4.3	5.6	5.2
BAHIA WOOD ③	53 49S	71 38W	4.3	5.6	5.2
Puerto Gallant	53 42S	72 00W	4.3	5.6	5.2
Bahia Borja	53 32S	72 30W	4.5	5.0	2.4
Bahia Swallow	53 30S	72 47W	4.5	5.0	2.4
Caleta Playa Parda	53 19S	73 01W	3.5	4.0	1.9
PUERTO ANGOSTO ④	53 14S	73 22W	3.6	4.0	2.0
Caleta Sylvia	52 58S	73 33W	3.8	4.3	2.2
Puerto Tamar	52 56S	73 46W	4.1	4.6	3.7
Islote Pollo, Canal Smyth	52 23S	73 41W	3.4	4.3	3.1
Punta Ancud, Canal Smyth	52 43S	73 49W	3.4	4.1	3.1
Bahia Tuesday	52 51S	74 27W	4.0	4.5	3.6
Cabo Pillar	52 43S	74 42W	3.6	4.0	2.0
CHILE, Coast					
Isla Noir	54 29S	73 00W	4.3	4.8	2.3
Islas Week	53 12S	74 21W	4.2	4.7	2.4
Evangelistas	52 24S	75 06W	3.9	4.4	2.7
Angostura Guia	50 45S	74 24W	----	7.9	----
Puerto Henry, Golfo Trinidad	50 00S	75 20W	4.5	5.0	2.4
ANGOSTURA INGLESA ⑤	48 59S	74 24W	5.3	6.0	2.9
Puerto Barbara, Canal Fallos	48 02S	75 24W	5.3	6.0	2.9
Puerto Barroso, Golfo de Penas	46 49S	75 17W	5.3	6.0	2.9
Puerto Slight, Golfo Tres Montes	46 49S	75 33W	2.8	3.8	2.7
Caleta Pascuas, Bahia San Andres	46 36S	75 31W	4.3	4.8	2.3
Puerto Refugio	45 52S	74 47W	4.3	4.9	2.4
Puerto Yates	45 26S	74 26W	6.3	8.0	5.7
Rada Vallenar	45 19S	74 32W	4.8	6.0	3.0
Puerto Italiano, Canal Darwin	45 22S	74 08W	5.0	6.2	3.1
Puerto Lagunas	45 17S	73 46W	5.6	7.1	3.5
Puerto Americano	45 03S	73 45W	5.2	6.5	3.2
Isla Guamblin	44 49S	75 02W	6.4	7.7	3.8
Isla Guafo	43 37S	74 36W	5.9	7.5	3.8
Golfo de Corcovado					
Puerto Low	43 49S	74 01W	6.4	7.9	3.9
Puerto Melinca	43 54S	73 45W	6.7	8.2	4.0
BAHIA TICTOC ⑥	43 37S	72 56W	7.0	8.6	4.9
Puerto San Pedro	43 20S	73 42W	7.2	8.8	4.6
Puerto Quellon	43 07S	73 38W	12.5	15.7	8.2
Puerto Quellen	42 54S	73 29W	13.0	16.4	8.2
CASTRO ⑦	42 29S	73 46W	14.6	18.4	9.2
Golfo de Ancud					
Puerto Quemchi	42 09S	73 29W	15.8	19.7	11.6
Bahia Linao	41 56S	73 33W	13.0	16.9	8.5
Paso Lagartija	41 50S	73 19W	12.5	16.5	8.2
Paso Tautil	41 44S	73 04W	13.0	17.7	11.1
Puerto Montt, Seno Reloncavi	41 29S	72 58W	13.2	18.0	11.8
Roca Remolinos, Canal Chacao	41 48S	73 32W	12.5	16.9	8.3
Ancud	41 52S	73 50W	4.6	6.0	3.6
CARELMAPU, CANAL CHACAO ⑧	41 45S	73 42W	6.9	8.8	5.3
Maullin, Rio Maullin	41 37S	73 36W	6.1	7.9	3.9
Corral, Bahia Corral	39 52S	73 26W	3.2	4.0	4.3
Valdivia, Rio Valdivia	39 49S	73 15W	3.0	3.9	2.0
Queule	39 23S	73 14W	3.8	4.9	2.4
Rio Imperial entrance	38 48S	73 23W	3.8	4.9	2.4

STATION NAME ③ Station Location See Figure 7	POSITION Lat.	Long.	RANGES Mean	Spring
CHILE, Coast—Continued	° ′	° ′	feet	feet
Caleta La Hacienda, Isla Mocha	38 20S	73 56W	4.0	5.2
PUERTO LEBU ⑨	37 37S	73 41W	3.8	4.9
Puerto Yane	37 22S	73 40W	3.8	4.9
Isla Santa Maria	36 59S	73 32W	4.8	6.2
Bahia Lota, Bahia Arauco	37 06S	73 10W	3.8	4.9
Talcahuano, Bahia Concepcion	36 42S	73 06W	3.2	4.3
Bahia Coliumo	36 32S	72 56W	3.8	4.9
BUCHUPUREO ⑩	36 04S	72 47W	1.7	2.1
Curanipe	35 49S	72 36W	3.0	3.9
Constitucion, Rio Maule entrance	35 19S	72 24W	3.8	4.9
Llico	34 45S	72 07W	3.8	4.9
Rada Pichilemu	34 23S	71 59W	3.9	5.0
RADA TOPOCALMA ⑪	34 07S	72 00W	3.8	4.9
San Antonio	33 35S	71 38W	3.9	5.0
Algarrobo	33 21S	71 41W	3.0	3.9
Rada Quintay	33 11S	71 42W	3.9	5.0
Valparaiso	33 02S	71 38W	3.0	3.9
Quintero	32 46S	71 32W	3.8	4.9
Zapallar	32 32S	71 29W	3.8	4.9
Papudo	32 30S	71 28W	3.8	4.9
Pichidangui	32 09S	71 33W	3.8	4.9
Los Vilos	31 54S	71 32W	3.6	4.6
Caleta Oscuro	31 25S	71 37W	3.6	4.6
Bahia Tongoy	30 15S	71 31W	3.8	4.9
COQUIMBO ⑫	29 56S	71 20W	2.9	3.8
Caleta Totoralillo	29 29S	71 20W	3.8	4.9
Huasco	28 28S	71 14W	2.7	3.5
Carrizal Bajo	28 04S	71 11W	2.3	2.9
Caleta Barranquillas	27 31S	70 56W	2.3	2.9
Caldera	27 04S	70 50W	2.8	3.6
Puerto Flamenco	26 34S	70 44W	2.7	3.5
Chanaral de las Animas	26 21S	70 36W	2.6	3.4
Taltal	25 25S	70 29W	2.6	3.4
Paposo	25 02S	70 28W	2.6	3.4
Blanco Encalada	24 22S	70 32W	2.7	3.5
ANTOFAGASTA ⑬	23 39S	70 25W	2.6	3.4
Mejillones del Sur	23 06S	70 28W	3.6	4.7
Cobija	22 34S	70 18W	3.0	3.9
Tocopilla	22 06S	70 14W	3.0	3.9
Caleta Lobos	21 05S	70 11W	2.9	3.8
Iquique	20 12S	70 10W	2.4	3.1
Caleta Junin	19 40S	70 12W	2.4	3.1
Pisagua	19 35S	70 13W	3.0	3.9
Arica	18 28S	70 20W	2.4	3.1
PERU				
Ilo	17 38S	71 21W	2.3	2.9
Matarani	17 00S	72 07W	2.1	2.7
PUERTO SAN JUAN ⑭	15 21S	75 09W	1.8	2.4
Pisco	13 43S	76 14W	1.9	2.5
Callao	12 03S	77 09W	1.8	2.4
Huacho	11 07S	77 37W	2.0	2.6
Bahia Huarmey	10 06S	78 10W	2.2	2.9
Chimbote	9 05S	78 38W	2.3	3.1
PUERTO CHICAMA ⑮	7 42S	79 27W	2.7	3.5
Punta Eten	6 57S	79 52W	3.0	3.9
Bayovar	5 50S	81 03W	3.5	4.5
Palta	5 05S	81 07W	3.8	4.9
Talara	4 35S	81 17W	4.0	5.2
Caleta Lobitos	4 27S	81 17W	4.1	5.3
ZORRITOS ⑯	3 40S	80 40W	4.7	6.0

STATION NAME	POSITION		RANGES		Mean Tide Level
③ Station Location See Figure 7	Lat.	Long.	Mean	Spring	
CHILE, Coast—Continued	° ′	° ′	feet	feet	feet
Caleta La Hacienda, Isla Mocha	38 20S	73 56W	4.0	5.2	2.6
PUERTO LEBU ⑨	37 37S	73 41W	3.8	4.9	2.7
Puerto Yane	37 22S	73 40W	3.8	4.9	2.4
Isla Santa Maria	36 59S	73 32W	4.8	6.2	3.1
Bahia Lota, Bahia Arauco	37 06S	73 10W	3.8	4.9	2.4
Talcahuano, Bahia Concepcion	36 42S	73 06W	3.2	4.3	3.0
Bahia Coliumo	36 32S	72 58W	3.8	4.9	2.4
BUCHUPUREO ⑩	36 04S	72 47W	1.7	2.1	1.0
Curanipe	35 49S	72 36W	3.0	3.9	2.0
Constitucion, Rio Maule entrance	35 19S	72 24W	3.8	4.9	2.4
Llico	34 45S	72 07W	3.8	4.9	2.4
Rada Pichilemu	34 23S	71 59W	3.9	5.0	2.4
RADA TOPOCALMA ⑪	34 07S	72 00W	3.8	4.9	3.0
San Antonio	33 35S	71 38W	3.9	5.0	2.4
Algarrobo	33 21S	71 41W	3.0	3.9	3.0
Rada Quintay	33 11S	71 42W	3.9	5.0	2.4
Valparaiso	33 02S	71 38W	3.0	3.9	3.0
Quintero	32 46S	71 32W	3.8	4.9	4.1
Zapallar	32 32S	71 29W	3.8	4.9	2.4
Papudo	32 30S	71 28W	3.8	4.9	2.4
Pichidangui	32 09S	71 33W	3.8	4.9	2.4
Los Vilos	31 54S	71 32W	3.6	4.6	3.7
Caleta Oscuro	31 25S	71 37W	3.6	4.6	2.4
Bahia Tongoy	30 15S	71 31W	3.8	4.9	2.4
COQUIMBO ⑫	29 56S	71 20W	2.9	3.8	2.9
Caleta Totoralillo	29 29S	71 20W	3.8	4.9	2.4
Huasco	28 28S	71 14W	2.7	3.5	2.3
Carrizal Bajo	28 04S	71 11W	2.3	2.9	1.9
Caleta Barranquillas	27 31S	70 56W	2.3	2.9	2.4
Caldera	27 04S	70 50W	2.8	3.6	3.0
Puerto Flamenco	26 34S	70 44W	2.7	3.5	2.7
Chanaral de las Animas	26 21S	70 38W	2.6	3.4	2.7
Taltal	25 25S	70 29W	2.6	3.4	2.6
Paposo	25 02S	70 28W	2.6	3.4	2.6
Blanco Encalada	24 22S	70 32W	2.7	3.5	2.7
ANTOFAGASTA ⑬	23 39S	70 25W	2.6	3.4	2.6
Mejillones del Sur	23 06S	70 28W	3.6	4.7	2.4
Cobija	22 34S	70 18W	3.0	3.9	2.0
Tocopilla	22 06S	70 14W	3.0	3.9	2.5
Caleta Lobos	21 05S	70 11W	2.9	3.8	2.9
Iquique	20 12S	70 10W	2.4	3.1	3.0
Caleta Junin	19 40S	70 12W	2.4	3.1	2.4
Pisagua	19 35S	70 14W	3.0	3.9	3.1
Arica	18 28S	70 20W	2.4	3.1	2.6
PERU					
Ilo	17 38S	71 21W	2.3	2.9	1.5
Matarani	17 00S	72 07W	2.1	2.7	1.4
PUERTO SAN JUAN ⑭	15 21S	75 09W	1.8	2.4	1.2
Pisco	13 43S	76 14W	1.9	2.5	1.3
Callao	12 03S	77 09W	1.8	2.4	1.7
Huacho	11 07S	77 37W	2.0	2.6	1.3
Bahia Huarmey	10 06S	78 10W	2.2	2.9	1.5
Chimbote	9 05S	78 38W	2.3	3.1	2.2
PUERTO CHICAMA ⑮	7 42S	79 27W	2.7	3.5	1.7
Punta Eten	6 57S	79 52W	3.0	3.9	1.9
Bayovar	5 50S	81 03W	3.5	4.5	2.2
Palta	5 05S	81 07W	3.8	4.9	2.4
Talara	4 35S	81 17W	4.0	5.2	2.6
Caleta Lobitos	4 27S	81 17W	4.1	5.3	2.6
ZORRITOS ⑯	3 40S	80 40W	4.7	6.0	3.0

STATION NAME	POSITION		RANGES		Mean Tide Level
③ Station Location See Figure 7	Lat.	Long.	Mean	Spring	
ECUADOR	° ′	° ′	feet	feet	feet
Puerto Bolivar	3 16S	80 01W	7.3	9.4	4.7
Puna	2 44S	79 55W	9.5	12.3	6.2
GUAYAQUIL ⑰	2 12S	79 52W	10.8	12.1	6.0
La Libertad, Bahia de Santa Elena	2 13S	80 55W	5.4	7.0	3.5
Puerto de Cayo	1 21S	80 45W	6.0	7.7	3.9
Bahia Manta	0 57S	80 44W	6.3	8.0	4.0
Rio Chone	0 35S	80 26W	6.8	8.6	4.3
Cabo Pasado	0 21S	80 31W	6.6	8.2	4.1
Rio Santiago	1 13N	79 07W	8.0	10.0	5.0
San Lorenzo	1 15N	78 50W	8.9	11.0	5.5
Galapagos Islands					
Isla San Cristobal	0 54S	89 37W	4.8	6.1	3.1
ISLA SANTA MARIA ⑱	1 14S	90 27W	4.0	5.0	2.5
Bahia Isabela, Isla Isabela	0 36S	91 05W	3.8	4.8	2.4
Caleta Tagus, Isla Isabela	0 15S	91 22W	4.1	5.2	2.5
Bahia de Perry, Isla Isabela	0 34S	90 58W	4.6	5.8	2.9
Caleta Aeolian, Isla Baltra	0 26S	90 17W	4.9	6.2	3.0
Bahia de Darwin, Isla Genovesa	0 19N	89 57W	5.1	6.4	3.1
COLOMBIA					
Tumaco	1 50N	78 44W	8.2	10.2	5.1
Buenaventura	3 54N	77 05W	10.4	12.9	6.5
Los Negritos	3 54N	77 24W	10.0	12.5	6.3
Rio San Juan	4 17N	77 30W	10.0	12.5	6.3
BAHIA CUEVITA ⑲	5 28N	77 31W	10.0	12.8	6.4
Ensenada Utria	6 00N	77 21W	10.0	12.8	6.4
Bahia Solano	6 14N	77 24W	8.3	10.3	5.1
Bahia Cupica	6 41N	77 30W	10.1	13.0	6.5
Bahia Octavia	6 52N	77 40W	10.1	13.0	6.5
PANAMA and CANAL ZONE					
Bahia Pina	7 34N	78 11W	10.5	13.7	6.8
Punta Garachine	8 05N	78 25W	10.9	14.2	7.0
Isla de Rey	8 18N	78 54W	10.7	13.9	6.9
Rio Chepo	8 59N	79 07W	12.5	16.2	8.1
Balboa, Canal Zone	8 57N	79 34W	12.6	16.4	8.2
Naos Island, Canal Zone	8 55N	79 32W	12.4	15.6	7.8
Taboga	8 48N	79 33W	12.5	16.2	8.1
BAHIA DE CHAME ⑳	8 41N	79 45W	12.5	16.2	8.1
Punta Mala	7 28N	80 00W	8.1	10.5	5.2
Isla Cebaco	7 31N	81 13W	8.3	10.8	5.3
Bahia Honda	7 46N	81 31W	8.3	10.8	5.3
Isla Parida	8 08N	82 19W	8.2	10.0	5.0
Puerto Armuelles	8 16N	82 52W	7.6	9.6	4.8
COSTA RICA					
Golfito, Golfo Dulce	8 39N	83 11W	7.7	9.5	5.8
Bahia Uvita	9 09N	83 45W	7.5	9.2	4.5
QUEPOS ㉑	9 24N	84 10W	6.8	8.4	4.2
Puerto Herradura	9 39N	84 40W	7.5	9.2	4.5
Puntarenas	9 58N	84 50W	7.5	9.2	4.6
COCOS ISLAND ㉒	5 33N	86 59W	7.0	8.5	4.3
LELE HARBOR, KUSALE ISLAND ㉓	5 20N	163 01E	3.2	4.6	3.0
Marshall Islands					
Ujelang Atoll	9 46N	160 58E	2.8	3.9	2.6
Ujae Atoll	9 02N	165 36E	3.5	5.0	3.0
Kwajalein Atoll (Namur Island)	9 24N	167 29E	3.5	5.0	3.0
KWAJALEIN ATOLL (KWAJALEIN I.) ㉔	8 44N	167 44E	3.5	5.0	3.0
Ailinglapalap Atoll	7 17N	168 45E	3.6	5.2	3.3
Jaluit Atoll (SE. Pass)	5 55N	169 39E	3.5	4.9	2.9
Ebon (Boston) Atoll	4 36N	168 41E	3.4	4.8	3.0
Likiep Atoll	9 49N	169 19E	3.6	5.0	3.0
Wotje Atoll	9 28N	170 14E	3.4	4.7	2.8

TABLE 1 TIDE RANGES (Con't)

STATION NAME ③ Station Location See Figure 7	POSITION Lat.	POSITION Long.	RANGES Mean	RANGES Spring	Mean Tide Level
Marshall Islands—Continued	° ′	° ′	feet	feet	feet
Erikub Atoll	9 12N	169 55E	3.5	4.9	3.0
Maloelap Atoll	8 43N	171 14E	3.7	5.1	3.0
Majuro Atoll	7 07N	171 22E	3.7	5.3	3.2
Arno Atoll	7 08N	171 42E	4.2	5.7	3.2
PORT RHIN, MILI ATOLL (25)	6 14N	171 48E	4.2	5.9	3.3
Gilbert Islands					
Makin Atoll	3 02N	172 48E	4.3	6.1	3.3
Tarawa Atoll	1 22N	172 56E	4.4	6.2	3.3
ABEMAMA ATOLL (26)	0 28N	173 50E	4.3	6.1	3.3
Nonouti Atoll	0 40S	174 27E	4.4	6.2	3.5
Ocean Island	0 52S	169 35E	3.7	5.2	3.4
Detached Islands					
Howland Island	0 48N	176 38W	5.0	6.2	3.1
Palmyra Island	5 53N	162 05W	2.0	2.7	1.0
CHRISTMAS ISLAND (27)	1 59N	157 28W	1.9	2.3	1.2
Fanning Island	3 51N	159 22W	1.2	1.6	1.2
SOUTH PACIFIC GROUPS Detached Islands					
EASTER ISLAND (28)	27 09S	109 27W	1.5	1.9	1.5
CAROLINE ISLAND (29)	10 00S	150 14W	0.9	1.1	0.9
PENRHYN (TONGAREVA) ISLAND (30)	9 00S	157 59W	0.7	0.8	1.3
Manihiki	10 25S	161 01W	0.3	0.4	1.0
PUKAPUKA (31)	10 52S	165 53W	1.0	1.2	1.5
Suvarov Island	13 13S	163 09W	1.4	1.9	1.5
Marquesas Islands					
TAIO HAE BAY, NUKU HIVA ISLAND (32)	8 56S	140 06W	3.2	3.8	2.4
Vai Tahu, Tahu Ata Island	9 56S	139 06W	2.5	3.1	2.4
Tuamotu or Low Archipelago					
MANGAREVA ISLAND (33)	23 08S	134 58W	1.8	2.3	1.3
HAO (BOW OR LA HARPE) ISLAND (34)	18 04S	140 59W	1.9	2.4	1.7
RAHIROA (RANGIROA) ISLAND (35)	14 57S	147 44W	1.7	2.1	1.7
Society Islands					
Papeete Harbor, Tahiti Island	17 32S	149 34W	0.8	1.1	0.5
PAPEARI HARBOR, TAHITI ISLAND (36)	17 45S	149 22W	0.8	1.1	0.5
Borabora Island	16 30S	151 46W	0.5	0.7	----
Tubuai or Austral Islands					
RAPA (OPARO) ISLAND (37)	27 36S	144 17W	1.9	2.4	1.7
TUBUAI ISLAND (38)	23 22S	149 28W	1.9	2.4	1.7
Cook Islands					
Aitutaki Island	18 51S	159 47W	1.2	1.4	1.5
AVARUA, RAROTONGA (39)	21 12S	159 46W	1.8	2.2	1.0
Phoenix Islands					
CANTON ISLAND (40)	2 48S	171 43W	2.5	3.4	2.1
Tokelau Islands					
FAKAOFO ISLAND (41)	9 23S	171 15W	1.9	2.4	1.7
Asau Harbor, Savaii Island	13 30S	172 38W	3.1	3.9	1.6
APIA (OBSERVATORY), UPOLU ISLAND (42)	13 48S	171 46W	2.6	3.2	1.6
Pago Pago Harbor, Tutuila Island	14 17S	170 41W	2.5	3.1	1.2
Tau Island, Manua Islands	14 13S	169 32W	3.7	4.6	1.8
Ellice Islands					
Fongafale, Funafuti Atoll	8 32S	179 12E	4.1	5.6	2.8
Fiji Islands					
Tal Levu, Viti Levu Island	17 39S	178 35E	3.6	4.4	3.0
Nandi Waters, Viti Levu	17 45S	177 26E	4.1	4.9	3.3
Ngaloa Harbor, Kandavu Island	19 05S	178 11E	4.4	5.1	2.6
Matuku Island	19 10S	179 45E	3.4	4.1	3.0
TOTOYA ISLAND (43)	18 59S	179 53W	3.8	4.1	3.0
Moala Island	18 32S	179 58E	4.4	4.9	3.0
Suva Harbor, Viti Levu Island	18 09S	178 26E	3.6	4.0	3.0

STATION NAME ③ Station Location See Figure 7	POSITION Lat.	POSITION Long.	RANGES Mean	RANGES Spring
Fiji Islands—Continued	° ′	° ′	feet	feet
Ngau Island	18 00S	179 14W	3.4	3.7
Nairai Island	17 48S	179 23W	3.4	3.7
Levuka, Ovalau Island	17 41S	178 51W	3.6	4.3
Nandi, Vanua Levu Island	16 58S	178 47W	3.2	3.9
Tonga Islands				
NIUE ISLAND (44)	19 02S	169 55W	2.2	2.4
Neiafu	18 39S	173 59W	3.0	3.4
LIFUKA ISLAND (45)	19 48S	174 21W	2.9	3.2
Nomuka	20 16S	174 48W	3.3	3.8
Nukualofa	21 08S	175 12W	3.5	4.0
Detached Islands				
WALLIS ISLANDS (46)	13 22S	176 11W	3.7	4.6
ROTUMAH ISLAND (47)	12 29S	177 07E	3.5	4.7
RAOUL OR SUNDAY ISLAND (48)	29 15S	177 57W	3.0	3.3
NEW ZEALAND, South Island				
Paterson Inlet, Stewart Island	46 54S	168 07E	5.5	6.4
Akaroa	43 48S	172 55E	5.8	6.3
Timaru	44 24S	171 15E	5.3	5.8
OAMARU (49)	45 06S	170 58E	4.6	5.3
Otago Harbor entrance	45 47S	170 44E	5.1	5.6
Port Chalmers, Otago Harbor	45 49S	170 39E	5.1	5.7
Dunedin, Otago Harbor	45 53S	170 33E	5.2	5.7
Nugget Point	46 26S	169 48E	5.1	5.8
Waipapa Point	46 39S	168 51E	6.1	6.8
Bluff	46 36S	168 20E	6.1	7.2
New River	46 32S	168 15E	7.0	7.9
COLAC BAY (50)	46 22S	167 54E	5.6	6.8
Preservation Inlet	46 04S	166 41E	5.7	6.7
Dusky Sound	45 47S	166 32E	5.3	6.4
Deep Cove	45 27S	167 10E	4.7	5.4
Bligh Sound	44 53S	167 32E	5.1	6.1
Milford Sound	44 40S	167 56E	5.1	6.1
Jackson's Bay	43 59S	168 37E	5.3	6.4
Haast River entrance	43 50S	169 03E	5.3	6.4
Bruce Bay	43 35S	169 36E	5.5	6.6
Okarito	43 13S	170 11E	5.6	6.7
HOKITIKA BAR (51)	42 43S	170 58E	5.7	7.0
Greymouth	42 26S	171 13E	5.9	7.3
Westport	41 44S	171 36E	7.8	9.8
West Haven Inlet	40 35S	172 32E	7.5	9.0
Motupipi River entrance	40 50S	172 51E	11.7	14.0
ASTROLABE ROAD (52)	40 58S	173 03E	12.3	15.4
Nelson	41 16S	173 16E	9.0	11.6
Croixilles Harbor	41 05S	173 42E	10.3	12.1
Greville Harbor, D'Urville Island	40 52S	173 48E	8.2	10.8
Stephens Island	40 40S	174 01E	6.1	7.0
Elmslie Bay	40 56S	173 51E	7.7	8.9
Pelorus Sound entrance	40 55S	173 59E	6.1	7.2
QUEEN CHARLOTTE SOUND ENTRANCE (53)	41 07S	174 17E	3.6	4.7
Picton, Queen Charlotte Sound	41 17S	174 00E	3.5	4.8
Cape Campbell	41 44S	174 15E	4.3	4.6
Kaikoura Peninsula	42 24S	173 42E	4.6	4.9
Lyttelton	43 37S	172 43E	6.0	6.4
NEW ZEALAND, North Island				
Gisborne	38 41S	178 02E	4.4	4.8
Clyde, Wairoa River	39 03S	177 26E	4.5	4.8
NAPIER (54)	39 29S	176 55E	4.4	4.6
Cape Palliser	41 37S	175 17E	3.5	3.7
WELLINGTON (55)	41 17S	174 47E	3.2	3.4

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STATION NAME	POSITION		RANGES		Mean Tide Level
ation Location See Figure 7	Lat.	Long.	Mean	Spring	
iji Islands—Continued	° ′	° ′	feet	feet	feet
land	18 00S	179 14W	3.4	3.7	2.7
Island	17 48S	179 23W	3.4	3.7	2.2
Ovalau Island	17 41S	178 51W	3.6	4.3	3.1
Vanua Levu Island	16 58S	178 47W	3.2	3.9	2.7
Tonga Islands					
LAND (44)	19 02S	169 55W	2.2	2.4	2.4
	18 39S	173 59W	3.0	3.4	3.3
ISLAND (45)	19 48S	174 21W	2.9	3.2	3.2
	20 16S	174 48W	3.3	3.8	3.1
fa	21 08S	175 12W	3.5	4.0	3.0
Detached Islands					
ISLANDS (46)	13 22S	176 11W	3.7	4.6	2.8
ISLAND (47)	12 29S	177 07E	3.5	4.7	2.9
R SUNDAY ISLAND (48)	29 15S	177 57W	3.0	3.3	3.3
ZEALAND, South Island					
n Inlet, Stewart Island	46 54S	168 07E	5.5	6.4	5.2
	43 48S	172 55E	5.8	6.3	3.5
	44 24S	171 15E	5.3	5.8	4.5
(49)	45 06S	170 58E	4.6	5.3	4.2
arbor entrance	45 47S	170 44E	5.1	5.6	3.2
almers, Otago Harbor	45 49S	170 39E	5.1	5.7	3.2
, Otago Harbor	45 53S	170 33E	5.2	5.7	3.2
Point	46 26S	169 48E	5.1	5.8	4.9
Point	46 39S	168 51E	6.1	6.8	5.5
	46 36S	168 20E	6.1	7.2	5.4
er	46 32S	168 15E	7.0	7.9	5.2
AY (50)	46 22S	167 54E	5.6	6.8	4.4
ation Inlet	46 04S	166 41E	5.7	6.7	4.0
ound	45 47S	166 32E	5.3	6.4	4.0
ve	45 27S	167 10E	4.7	5.4	3.9
ound	44 53S	167 32E	5.1	6.1	4.0
Sound	44 40S	167 56E	5.1	6.1	4.0
's Bay	43 59S	168 37E	5.3	6.4	4.0
iver entrance	43 50S	169 03E	5.3	6.4	4.0
ay	43 35S	169 36E	5.5	6.6	4.0
	43 13S	170 11E	5.6	6.7	4.1
A BAR (51)	42 43S	170 58E	5.7	7.0	4.0
th	42 26S	171 13E	5.9	7.3	4.0
t	41 44S	171 36E	7.8	9.8	5.8
ven Inlet	40 35S	172 32E	7.5	9.0	4.9
i River entrance	40 50S	172 51E	11.7	14.0	8.2
E ROAD (52)	40 58S	173 03E	12.3	15.4	8.2
	41 16S	173 16E	9.0	11.6	6.5
les Harbor	41 05S	173 42E	10.3	12.1	7.1
Harbor, D'Urville Island	40 52S	173 48E	8.2	10.8	5.3
Island	40 40S	174 01E	6.1	7.0	4.6
Bay	40 56S	173 51E	7.7	8.9	4.2
Sound entrance	40 55S	173 59E	6.1	7.2	4.4
HARLOTTE SOUND ENTRANCE (53)	41 07S	174 17E	3.5	4.7	2.4
Queen Charlotte Sound	41 17S	174 00E	3.5	4.8	2.3
pbell	41 44S	174 15E	4.3	4.6	3.5
Peninsula	42 24S	173 42E	4.6	4.9	3.5
n	43 37S	172 43E	6.0	6.4	3.2
ZEALAND, North Island					
	38 41S	178 02E	4.4	4.8	3.8
lairoa River	39 03S	177 26E	4.5	4.8	3.0
(54)	39 29S	176 55E	4.4	4.6	3.0
liser	41 37S	175 17E	3.5	3.7	3.0
ON (55)	41 17S	174 47E	3.2	3.4	2.9

STATION NAME	POSITION		RANGES		Mean Tide Level
(3) Station Location See Figure 7	Lat.	Long.	Mean	Spring	
NEW ZEALAND, North Island—Continued	° ′	° ′	feet	feet	feet
Porirua Harbor	41 04S	174 51W	3.4	4.8	3.5
Manawatu River entrance	40 28S	175 13W	5.3	6.8	4.3
Wanganui River entrance	39 57S	174 49W	5.6	7.2	5.1
Opunake Bay	39 28S	173 51W	7.9	10.1	6.0
Port Taranaki	39 04S	174 02W	8.4	10.6	6.1
Waitara River entrance	38 59S	174 14W	8.4	10.5	6.5
Kawhia	38 04S	174 49W	7.9	10.0	5.3
Raglan	37 48S	174 53W	8.0	10.2	5.2
Waikato River	37 24S	174 45W	8.6	10.9	7.0
Manukau Harbor entrance	37 03S	174 31W	7.3	9.0	5.9
Cornwallis, Manukau Harbor	37 00S	174 36W	8.1	10.0	6.5
Onehunga, Manukau Harbor	36 56S	174 47W	9.0	11.1	7.4
Pouto Point, Kaipara Harbor	36 22S	174 11W	7.9	9.9	6.2
Martins Bay, Hokianga River	35 32S	173 23W	8.5	10.8	5.8
CAPE MARIA VAN DIEMEN (56)	34 29S	172 38W	6.4	7.4	4.5
Parengarenga	34 32S	173 00W	5.8	6.9	4.7
Awanui River	34 54S	173 18W	5.4	6.3	3.2
Whangaroa	35 09S	173 47W	5.4	6.2	4.4
Port Russell	35 16S	174 07W	5.6	6.4	4.6
Whangarei Heads	35 49S	174 30W	5.8	6.7	4.6
Port Whangarei, railway wharf	35 45S	174 20W	6.6	7.7	5.4
Bon Accord Harbor, Kawau Island	36 27S	174 50W	7.1	8.0	5.2
Nagle Cove, Great Barrier I.	36 09S	175 21W	5.8	6.6	4.3
Auckland	36 51S	174 46W	8.0	9.2	5.8
Waiheke	36 47S	175 09W	7.6	8.6	5.6
Coromandel	36 46S	175 30W	8.4	9.7	6.2
Mercury Bay	36 50S	175 43W	4.8	5.4	4.4
Tauranga Harbor entrance	37 39S	176 11W	4.7	5.2	3.6
Ohiwa	37 59S	177 07W	4.9	5.3	3.7
EAST CAPE (57)	37 41S	178 33W	4.5	5.0	4.2
LESSER ISLANDS, Detached Islands					
CHATHAM ISLANDS (58)	43 55S	176 37W	3.4	3.9	2.6
PERSEVERANCE HARBOR, CAMPBELL I. (59)	52 34S	169 07E	3.0	3.5	2.3
AUCKLAND ISLAND (60)	50 52S	166 05E	2.5	3.2	1.9
NORFOLK ISLAND (61)	29 04S	167 56E	4.1	5.0	2.9
New Caledonia					
Port Goro, Toemo Island	22 20S	167 01E	2.0	2.6	2.7
NOUMEA (62)	22 16S	166 27E	2.9	3.8	4.0
Port Nepui	21 21S	164 58E	3.1	4.0	3.7
Paagoumene	20 29S	164 11E	3.2	4.1	3.3
Loyalty Islands					
SHEPENEHE ANCHORAGE (63)	20 47S	167 08E	4.2	5.4	3.7
New Hebrides Islands					
VILA HARBOR, EFATE ISLAND (64)	17 44S	168 19E	2.8	3.5	2.3
Havannah Harbor, Efate Island	17 35S	168 15E	2.4	3.0	2.6
Port Sandwich, Malekula Island	16 26S	167 47E	2.8	3.8	2.3
Tangoa Island	15 35S	166 59E	2.1	2.6	2.1
Espiritu Santo Island, Pekoa Chan	15 31S	167 10E	2.9	3.6	2.8
Aesi	15 26S	167 14E	3.0	3.8	2.9
Banks Islands					
PORT PATTESON (65)	13 [illegible]	167 34E	2.1	2.6	2.0
Santa Cruz Islands					
MANEVAI BAY (66)	11 38S	166 55E	2.1	5.6	2.0
			Diurnal	Tropic	Diurnal
Solomon Islands					
Kukum, Guadalcanal Island	9 25S	160 01E	1.6	2.3	1.4
PORT PURVIS, FLORIDA ISLAND (67)	9 09S	160 15E	2.0	2.3	1.7
Tulagi Island	9 06S	160 09E	2.0	2.3	1.7
Auki Harbor, Malaita Island	8 47S	160 42E	2.9	4.1	2.6