**LOCAL WEATHER.**—For extended remarks on the marine climate along foreign coasts, see the appropriate Sailing Directions and Planning Guides prepared and published by the National Imagery and Mapping Agency ; for the coasts of the United States and its possessions, see the appropriate Coast Pilot prepared and published by the National Ocean Service. The trimester publication "Mariners Weather Log" prepared and published by the National Oceanic and Atmospheric Administration, National Weather Service, carries informative articles on marine climate conditions and tropical cyclone information.

# JANUARY

**PRESSURE.—**Extending from Australia to South America, the South Pacific subtropical high is the major pressure feature in January. Its mean central pressure is centered near 35°S, 93°W where it averages just over 1025 millibars. South of 50°S the pressure gradient is relatively zonal—the average pressure at 60°S is nearly 18 millibars less than that at 50°S. The center of the equatorial trough runs from northern Australia northeast to the equator at 140°W and just north of the equator from 140°W to South America.

**TEMPERATURE.—**Mean air temperatures range from 4°C at 60°S to 29°C in the northwest South Pacific north of Australia and west of the international date line. At 60°S approximately 98% of the observations fall between 0°C and 8°C; at the equator 98% fall between 22°C and 32°C.

**WINDS.—**North of 40°S, southeasterly winds prevail off the west coast of South America and in the region between Australia and New Zealand. Easterly winds prevail at these latitudes between 110°W and the date line and northerly winds prevail north of Australia. Winds average force 3 to 4 north of 40°S where the prevailing winds are westerly.

**GAILS.—**Winds of force 8 or greater are mainly confined south of 45°S. South of 50°S, 10% frequencies or greater are observed in most areas. Frequencies reach a maximum of 20% off the southwest coast of Chile.

**TROPICAL CYCLONES.—**According to historical records, all tropical cyclone activity in the South Pacific takes place in the northwest quadrant. During an average 10-year period, 34 tropical storms (> 34 knots) can be expected to occur during January. Of these, seven can be expected to reach hurricane strengh (> 64 knots).

**VISIBILITY.—**Poor visibilities (less than 2 miles) mainly occur from the roaring forties south. Ten percent frequencies shown up as far north as 40°S,125°W, and from this point they taper off east to Cape Horn and west to just south of New Zealand and Tasmania. Poor visibilities increase in frequency to over 30% for a few areas as far north as 58°S but generally remain south of 60°S.

**WAVE HEIGHTS.—**The frequency of wave heights equal to or greater than 12 feet ranges from a minimum at the equator to a maximum along the cyclone belt. With the exception of the New Zealand and Australia coastal areas, most regions south of 30°S observed wave heights of at least 12 feet 10% or more of the time. Maximum occurences of over 40% are reported south of 53°S between 80°W and 165°W and between 48°S and 57°S west of 155°E.

## CHART #1

### TROPICAL CYCLONES

The mean tracks of tropical storms and hurricanes are shown in red. These tracks represent averages, and movements of individual systems may vary widely.

### SURFACE PRESSURE

This chart shows the average barometric pressure reduced to sea level. Isobars are solid blue lines for every 2.5 millibars difference in pressure.

## CHART #2

### AIR TEMPERATURE

The mean air temperature (°C) in red lines is shown for every 2 degrees. All weather narratives refer to air temperature.

### VISIBILITY

Blue lines show percentages of observations reporting visibilities less than 2 miles.

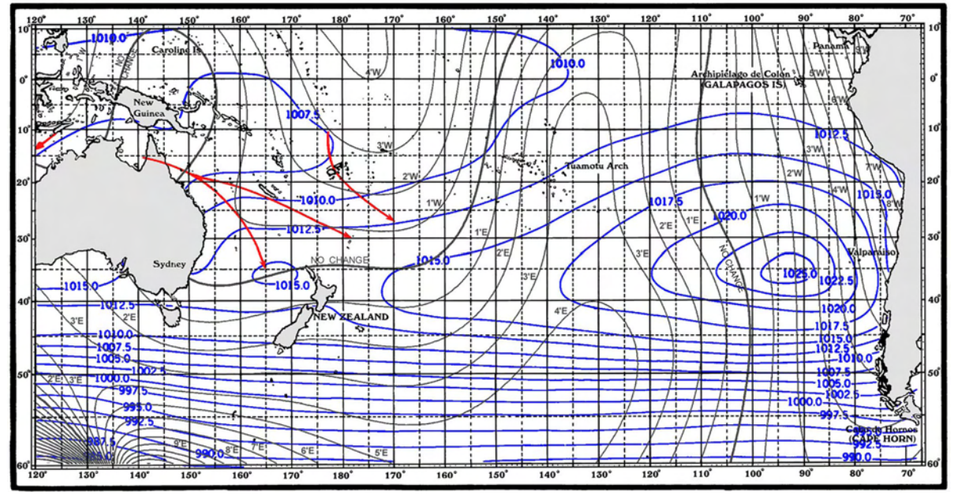
## CHART #3

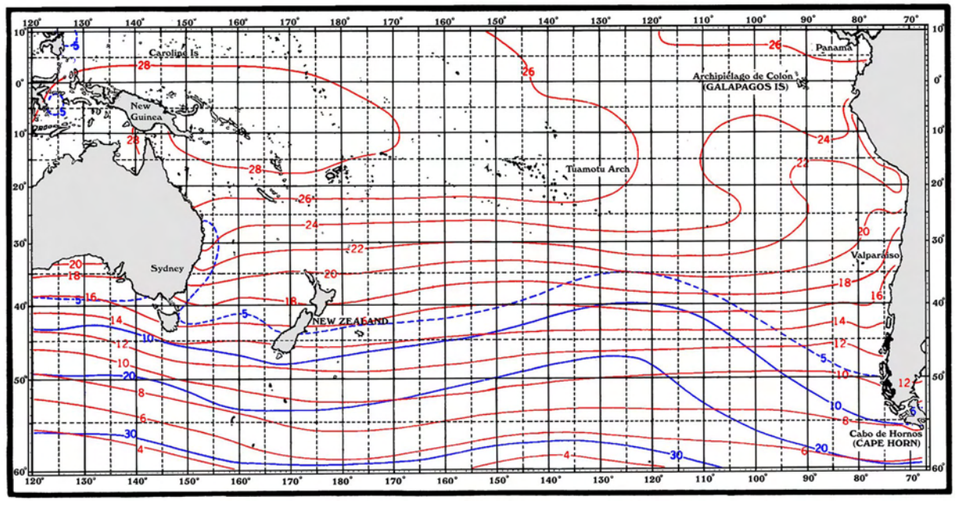
### GALES

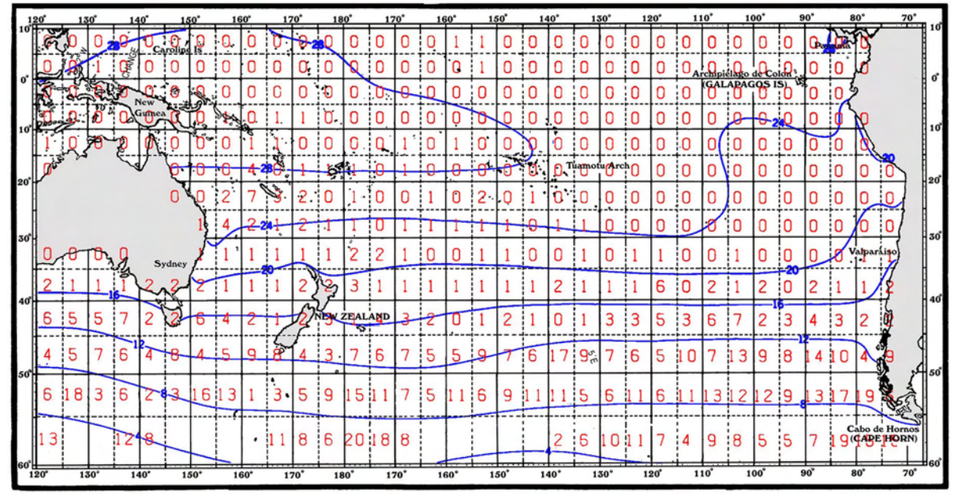
The red numerals in the center of each 5-degree square on this inset chart show the average percentage of ship reports in which winds of at least force 8 have been recorded for the month. In cases where the observation count is low the gale frequency may be nonrepresentative and therefore different from the values used in the text. Where "0" is given, gales may have been recorded, but too infrequently to give a percentage value.

### SEA SURFACE TEMPERATURE

The mean sea surface temperature (C°), in blue lines, is shown for every degrees.




## EXPLANATION OF WIND ROSES

**PREVAILING WINDS AND CALMS.**—The wind rose in blue color is located in the center of each 5° square where there was sufficient data. The rose shows the distribution of the winds that have prevailed in the area over a considerable period. The wind percentages are summarized for the eight points and calm. The arrows fly with the wind indicating the direction from which the wind blew. The length of the shaft, measured from the outside of the circle using the scale below, gives the percent of the total number of observations in which the wind has blown from that direction. The number of feathers shows the average force of the wind on the Beaufort scale. The figure in the center of the circle gives the percentage of calms. When the arrow is too long to fit conveniently in the 5° square, anything over 29 percent, the shaft is broken and the percentage is indicated by numerals.


FOR EXAMPLE.—The sample wind rose should read thus: In the reported observations the wind has averaged as follows:
From N. 3 percent, force 3; N.E. 16 percent, force 4; E. 61 percent, force 4; S.E. 17 percent, force 5; S. 1 percent, force 4; S.W. less than 1 percent, force 3; W. 1 percent force 2; N.W. 1 percent, force 4; calms 0 percent.

# JANUARY

**WAVE HEIGHTS**

The solid red lines on the main body of the chart indicate the percentage of frequency of wave heights equal to or greater than 12 feet. In analysis, when both sea and swell are reported, the higher value is used in the summarization.

**MAGNETIC VARIATION**

The lines of equal variation for the Epoch 1995 are shown by gray lines on the main body of the chart. (See inset chart for the rate of annual change.)

**OCEAN CURRENTS**

The green arrows on the chart indicate the prevailing direction, and the numerals indicate the minimum and maximum drift in miles per day.

**NOTE**

It should be kept in mind that most ships tend to avoid areas of inclement weather. The frequency of gales and high waves is generally greater than that which is actually reported due to climatological observations being biased toward favorable weather conditions.

USE OF CHART.—This chart is not intended to be used alone but in conjunction with other NIMA navigation safety products and services. The chart presents, in graphic form, averages obtained from data gathered over many years in meteorology, and oceanography to aid the navigator in selecting the quickest and safest routes. Included are explanations of how to use each type information depicted on this chart.