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.

JULY

PRESSURE.—In July the central position of the permanent anticyclone off South America begins to move south from its most northern mean position during June. Now centered near 29°S,88°W it maintains a mean central pressure of 1023 millibars. A second center, over eastern Australia, averages 1018 millibars. North of the subtropical high the equatorial trough is still centered between the equator and 10°N. South of 45°S, the mean pressure pattern is relatively zonal. Mean pressure diminishes towards the pole at a rate of 2 to 3 millibars per degree of latitude between 45°S and 60°S.

TEMPERATURE.—Because of the effects of the Peruvian current, the greatest east-west variance of mean air temperatures appears along the equator. Here, means range from 22°C over the Galapagos Islands to 28°C over the Islands of Melanesia. Most observed temperatures (98%) fall between 18°C and 27°C over the Galapagos Islands and between 24°C and 33°C over Melanesia. At 60°S, means run just above freezing, 98% of the observations fall between ý6°C and 3°C.

WINDS.—East to southeasterly winds prevail north of 35°S, and west to southwesterly winds prevail south of 35°S. Wind speeds average force 3 to 4 north of 30°S and force 4 to 6 south of 30°S.

GALES.—During winter, few instances of force 8 or greater winds are observed north of 30°S. East of 170°W, gale frequencies run near 10% at 35°S and 20% in most areas beteeen 40°S and 55°S. Frequencies as high as 30% are observed in a few areas off the southwest coast and southern tip of Chile. West of 170°W, frequencies run near 10% south of 45°S.

TROPICAL CYCLONES.—By July, temperatures are cool enough that tropical cyclone activity is nearly nonexistent.

VISIBILITIES.—Over the western half of the South Pacific little change has taken place since June in the pattern of visibilities less than 2 miles. Frequencies range from 10% near 45°S to over 30% at 60°S. The eastern half, however, has shown a slight increase in the middle latitudes; frequencies over 10% are observed as far north as 35°S between 90°W and 120°W. At 60°S, frequencies remain in the 20% to 30% range over the eastern half of the South Pacific.

WAVE HEIGHTS.—The frequency of waves equal to or greater than 12 feet have increased since June. Most areas south of 15°S and a few areas north of 10°S report wave heights of at least 12 feet 10% or more of the time. Exceptions are found along the west coast of South America and the northeast coast of Australia. Frequencies increase to as high as 50% over a large portion of the area west of 100°W and south of 48°S.

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 tempera

VISIBILITY

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

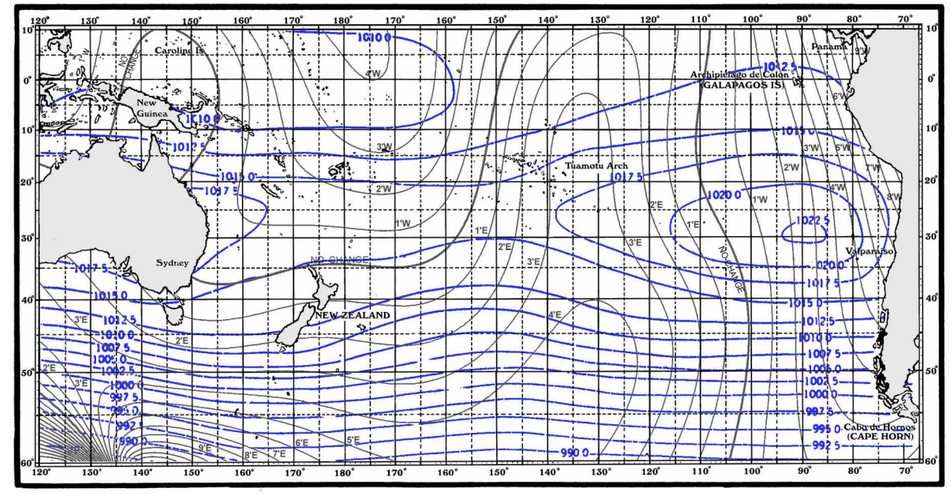
CHART #3

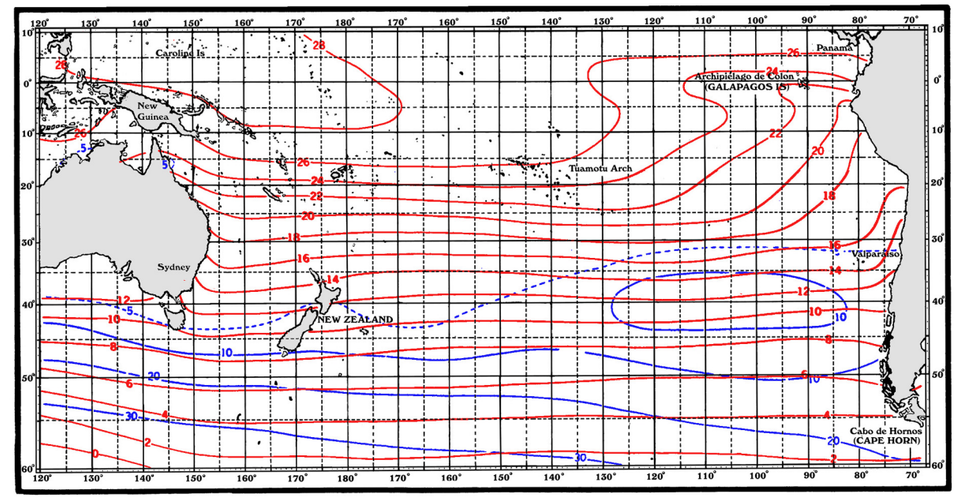
GALES

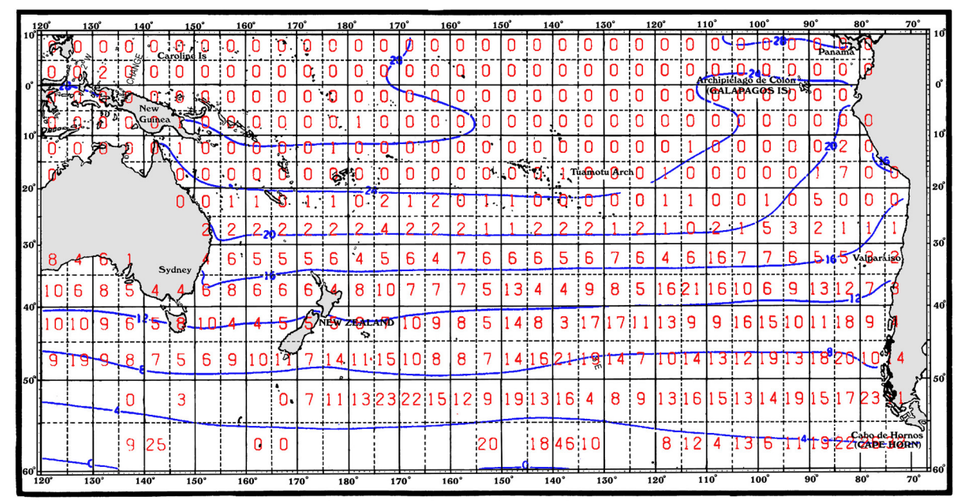
The red numerals in the center of each 5-degree square on this inset chart show the average percentage of ship reports in which winds of at least force 8 have been recorded for the month. In cases where the observation count is low the gale frequency may be nonrepresentative and therefore different from 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.

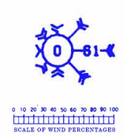




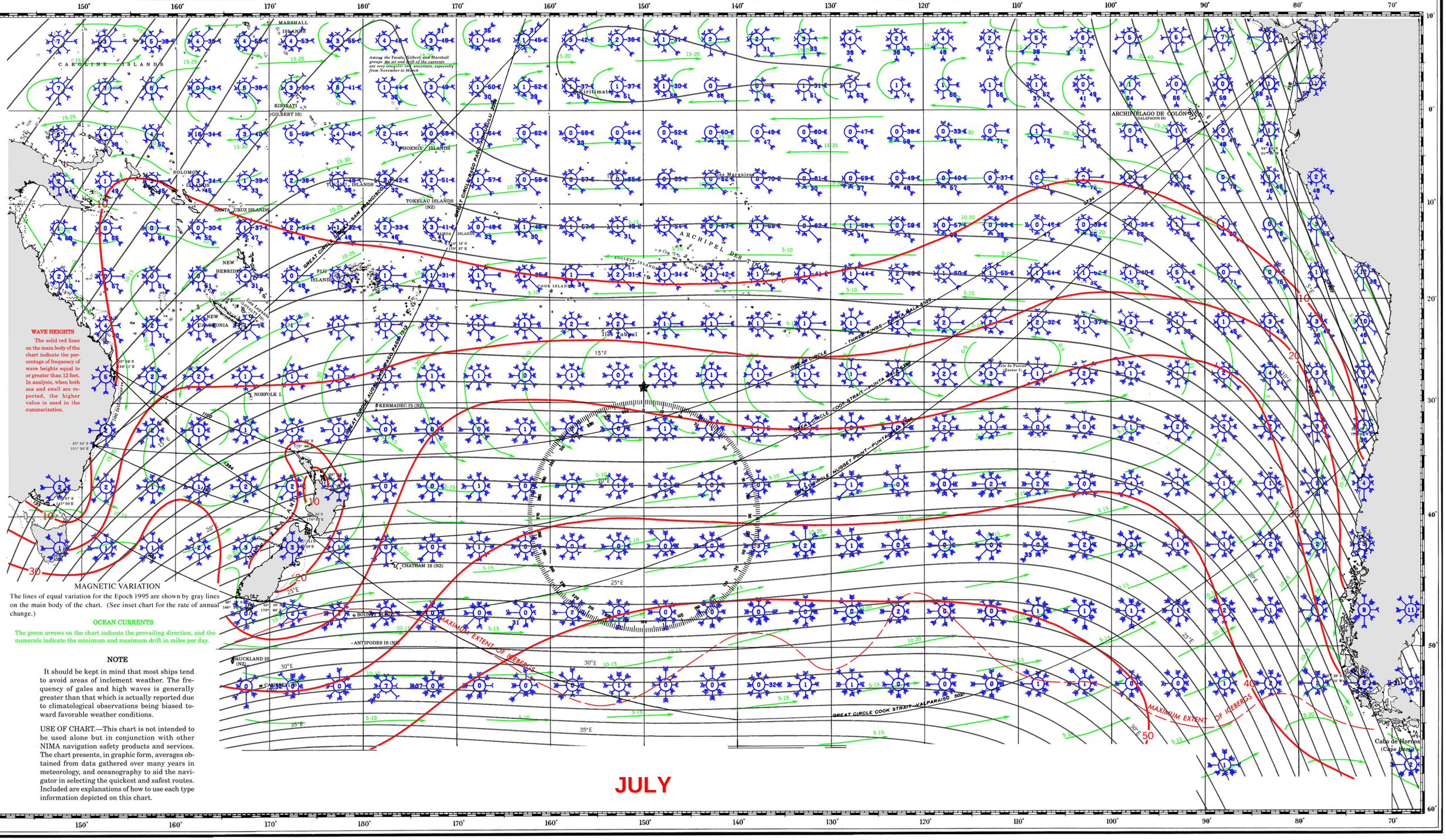


EXPLANATION OF WIND ROSES

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.



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.