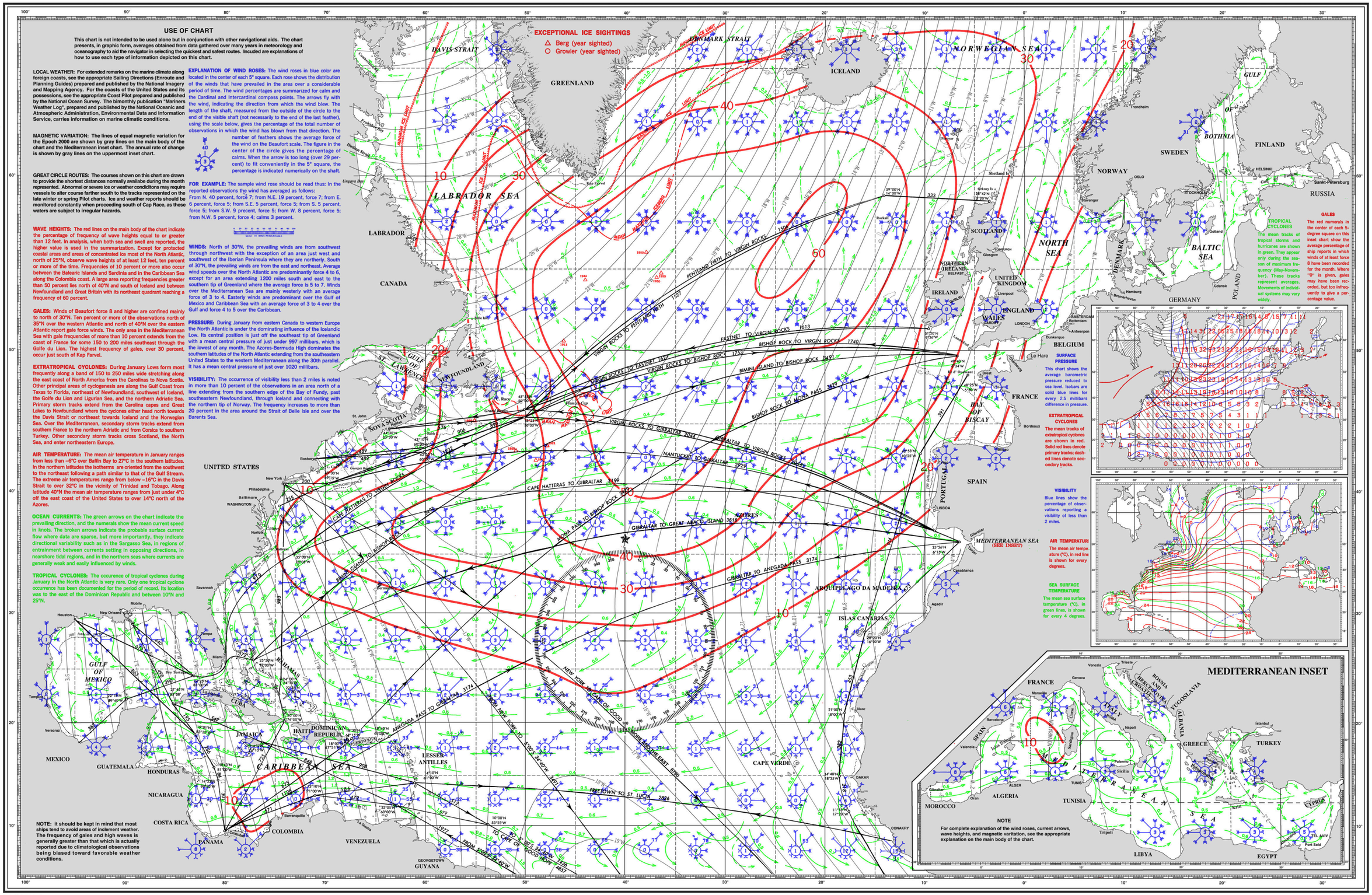
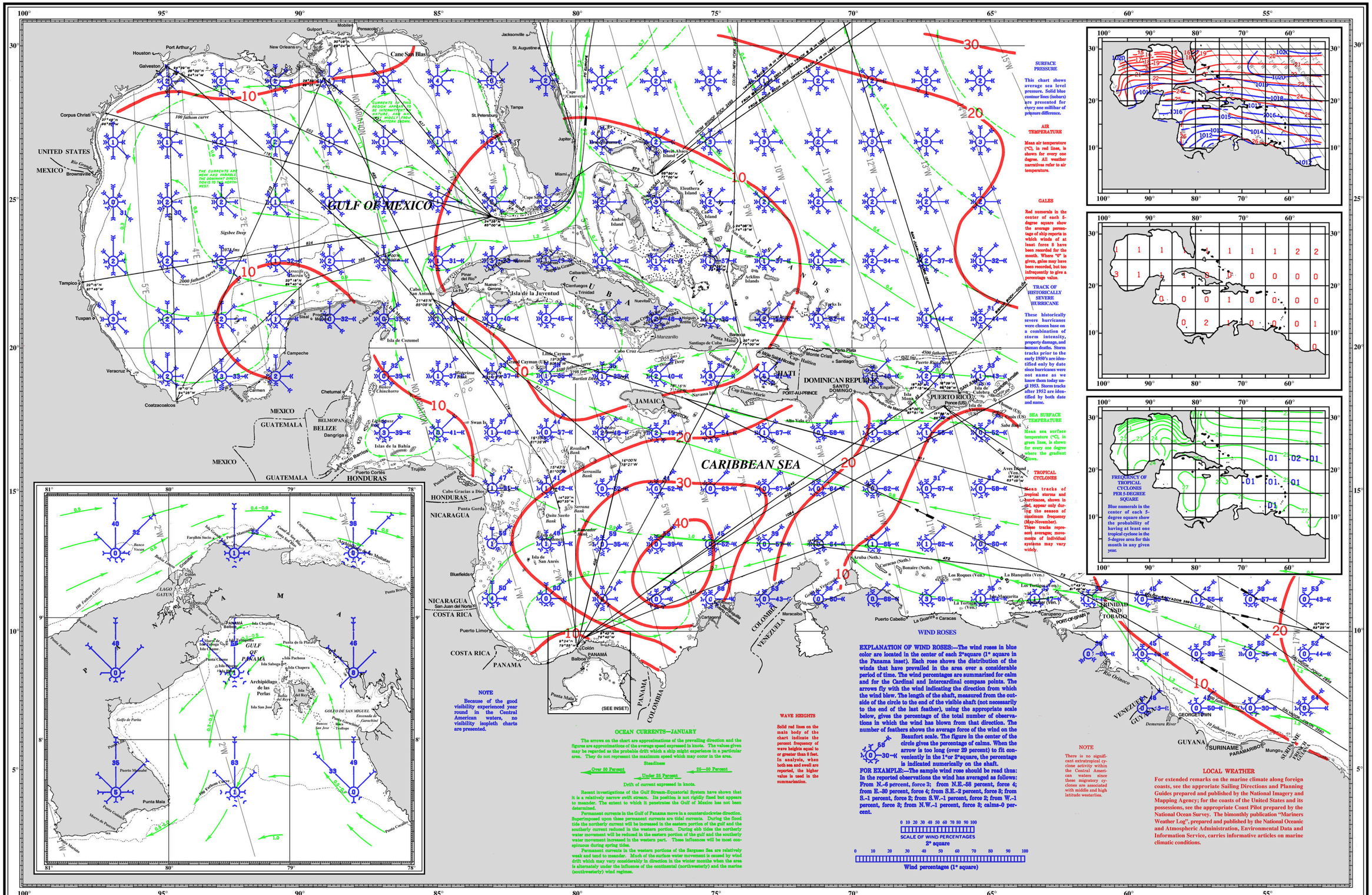
PILOT CHART OF THE NORTH ATLANTIC OCEAN



PILOT CHART OF CARIBBEAN SEA AND GULF OF MEXICO



SURFACE PRESSURE

This chart shows average sea level pressure. Solid blue contour lines (isobars) are presented for every one millibar of pressure difference.

AIR TEMPERATURE

Mean air temperature (°C), in red lines, is shown for every one degree. All weather narratives refer to air temperature.

GALES

Red numerals in the center of each 5-degree square show the average percentage of ship reports in which winds of at least force 8 have been recorded for the month. Where "0" is given, gales may have been recorded, but too infrequently to give a percentage value.

TRACK OF HISTORICALLY SEVERE HURRICANE

These historically severe hurricanes were chosen base on a combination of storm intensity, property damage, and human deaths. Storm tracks prior to the early 1950's are identified only by date since hurricanes were not name as we know them today until 1953. Storm tracks after 1952 are identified by both date and name.

SEA SURFACE TEMPERATURE

Mean sea surface temperature (°C), in green lines, is shown for every one degree where the gradient allows.

TROPICAL CYCLONES

Mean tracks of tropical storms and hurricanes, shown in red, appear only during the season of maximum frequency (May-November). These tracks represent average; movements of individual systems may vary widely.

FREQUENCY OF TROPICAL CYCLONES PER 5-DEGREE SQUARE

Blue numerals in the center of each 5-degree square show the probability of having at least one tropical cyclone in the 5-degree area for this month in any given year.

NOTE

Because of the good visibility experienced year round in the Central American waters, no visibility isopleth charts are presented.

OCEAN CURRENTS—JANUARY

The arrows on the chart are approximations of the prevailing direction and the figures are approximations of the average speed expressed in knots. The values given may be regarded as the probable drift which a ship might experience in a particular area. They do not represent the maximum speed which may occur in the area.

Steadiness

Over 50 Percent — Under 25 Percent — 25—50 Percent

Drift of current expressed in knots.

Recent investigations of the Gulf Stream-Equatorial System have shown that it is a relatively narrow swift stream. Its position is not rigidly fixed but appears to meander. The extent to which it penetrates the Gulf of Mexico has not been determined.

Permanent currents in the Gulf of Panama move in a counterclockwise direction. Superimposed upon these permanent currents are tidal currents. During the flood tide the northerly current will be increased in the eastern portion of the gulf and the southerly current reduced in the western portion. During ebb tides the northerly water movement will be reduced in the eastern portion of the gulf and the southerly water movement increased in the western part. These influences will be most conspicuous during spring tides.

Permanent currents in the western portions of the Sargasso Sea are relatively weak and tend to meander. Much of the surface water movement is caused by wind drift which may vary considerably in direction in the winter months when the area is alternately under the influence of the continental (northwesterly) and the marine (southwesterly) wind regimes.

WAVE HEIGHTS

Solid red lines on the main body of the chart indicate the percent frequency of wave heights equal to or greater than 8 feet. In analysis, when both sea and swell are reported, the higher value is used in the summarization.

WIND ROSES

EXPLANATION OF WIND ROSES:—The wind roses in blue color are located in the center of each 2°square (1° square in the Panama inset). Each rose shows the distribution of the winds that have prevailed in the area over a considerable period of time. The wind percentages are summarized for calm and for the Cardinal and Intercardinal compass points. 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 to the end of the visible shaft (not necessarily to the end of the last feather), using the appropriate scale below, gives the percentage 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 (over 20 percent) to fit conveniently in the 1°or 2°square, the percentage is indicated numerically on the shaft.

FOR EXAMPLE:—The sample wind rose should be read thus: In the reported observations the wind has averaged as follows: From N.–5 percent, force 3; from N.E.–58 percent, force 4; from E.–30 percent, force 4; from S.E.–2 percent, force 3; from S.–1 percent, force 2; from S.W.–1 percent, force 2; from W.–1 percent, force 3; from N.W.–1 percent, force 3; calms–0 percent.

SCALE OF WIND PERCENTAGES
2° square
0 10 20 30 40 50 60 70 80 90 100

Wind percentages (1° square)
0 10 20 30 40 50 60 70 80 90 100

NOTE

There is no significant extratropical cyclone activity within the Central American waters since these migratory cyclones are associated with middle and high latitude westerlies.

LOCAL WEATHER

For extended remarks on the marine climate along foreign coasts, see the approriate 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 by the National Ocean Survey. The bimonthly publication "Mariners Weather Log", prepared and published by the National Oceanic and Atmospheric Administration, Environmental Data and Information Service, carries informative articles on marine climatic conditions.