

USE OF CHART

This chart is not intended to be used alone but in conjunction with other navigational aids. 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 of information depicted on this chart.

LOCAL WEATHER: For extended remarks on the marine climate along foreign coasts, see the appropriate Sailing Directions (Enroute 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 Survey. The bimonthly publication "Mariners Weather Log," prepared and published by the National Oceanic and Atmospheric Administration, Environmental Data and Information Service, carries information on marine climatic conditions.

MAGNETIC VARIATION: The lines of equal magnetic variation for the Epoch 2000 are shown by gray lines on the main body of the chart and the Mediterranean inset chart. The annual rate of change is shown by gray lines on the uppermost inset chart.

GREAT CIRCLE ROUTES: The courses shown on this chart are drawn to provide the shortest distances normally available during the month represented. Abnormal or severe ice or weather conditions may require vessels to alter course farther south to the tracks represented on the late winter or spring Pilot charts. Ice and weather reports should be monitored constantly when proceeding south of Cape Race, as these waters are subject to irregular hazards.

WAVE HEIGHTS: The red lines on the main body of the chart indicate the percentage of frequency of wave heights greater than or equal to 12 feet. In analysis, when both sea and swell are reported, the higher value is used in the summarization. Wave heights of at least 12 feet are found more than 10 percent of the time along a major axis that leads from some 300 miles off Cape Hatteras northward through the Norwegian Sea and along a minor axis that extends from southern Greenland to northern Spain. Frequencies of 30 percent extend from 40°N to 62°N between Ireland and a point to the southeast of Kap Farvel.

GALES: The frequency of gales has decreased significantly over the middle and northern latitudes. The region of most frequent gale activity (10 percent or more) is oriented along the southeastern coast of Greenland extending some 400 to 600 miles out. The Galle de Lion and two areas (about 6-degree square) centered near 50°N, 40°W and 58°N, 18°W are the only other areas having gale frequencies of 10 percent or more.

EXTRATROPICAL CYCLONES: The primary area of cyclogenesis extends along the United States coast from Georgia to Maine and then northward along a band some 600 to 800 miles wide to a point near 52°N, 30°W. Other major areas of cyclogenesis are in the Bay of Biscay and the northwestern Mediterranean Sea north of a line from Barcelona to central Yugoslavia. Another small area for cyclogenesis is along the northeast coast of Algeria. Following the primary track that crosses the Great Lakes region move northeast toward the Gulf of St. Lawrence where they either turn north into the Davis Strait or into the central Atlantic. A primary track leads from a point some 300 miles east of Chesapeake Bay towards Iceland, while one from northwestern Canada along with a secondary track from the Great Lakes region extends into Hudson Bay. A secondary track from the central Atlantic crosses the British Isles into eastern Europe as others cross out of the Bay of Biscay into the northern Adriatic and from Algeria into the southern Adriatic.

TEMPERATURE: The mean air temperatures continue to slowly increase from the previous month. The -6°C mean isotherm over Baffin Bay moves farther north with the 27°C mean isotherm remaining in the Caribbean Sea. Along latitude 40°N, the mean temperature ranges from under 8°C off the United States' east coast to nearly 16°C at 45°W. The mean temperatures over the Mediterranean range from 14°C to 18°C making an average 2 degrees Celsius increase over March. The mean temperatures along the North American coast have increased by 2°C to 4°C since the previous month and the weather characteristics are mostly those of Spring with little of Winter's characteristics left.

OCEAN CURRENTS: The green arrows on the chart indicate the prevailing direction, and the numerals show the mean current speed in knots. The broken arrows indicate the probable surface current flow where data are sparse, but more importantly, they indicate directional variability such as in the Sargasso Sea, in regions of entrainment between currents setting in opposing directions, in nearshore tidal regions, and in the northern seas where currents are generally weak and easily influenced by winds.

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.

EXPLANATION OF WIND ROSES: The wind roses in blue color are located in the center of each 5° square. 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 the Cardinal and Inter-cardinal 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 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 5° 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. 40 percent, force 7; from N.E. 19 percent, force 7; from E. 6 percent, force 5; from S.E. 5 percent, force 5; from S. 5 percent, force 5; from S.W. 9 percent, force 5; from W. 8 percent, force 5; from N.W. 5 percent, force 4; calms 3 percent.

WINDS: The prevailing winds north of 30°N are from the west and southwest except for the northerly winds west of Greenland. South of 30°N, the prevailing winds are east and northeast except over the waters just east of Florida where southerly winds are also frequent. The average wind speeds north of 35°N are force 3 to 5 except for an area running south of Kap Farvel to 45°N, where they average force 4 to 6. South of 35°N, the average force is 2 to 4.

PRESSURE: During April a noticeable reduction in the frequency and intensity of winter-type lows has taken place. The Icelandic Low has filled to 1007 millibars and is centered near 60°N, 35°W. The Azores High has become more of a blocking ridge as it becomes oriented in a southwest-northeast direction with a central pressure of 1021 millibars located near 30°N, 30°W.

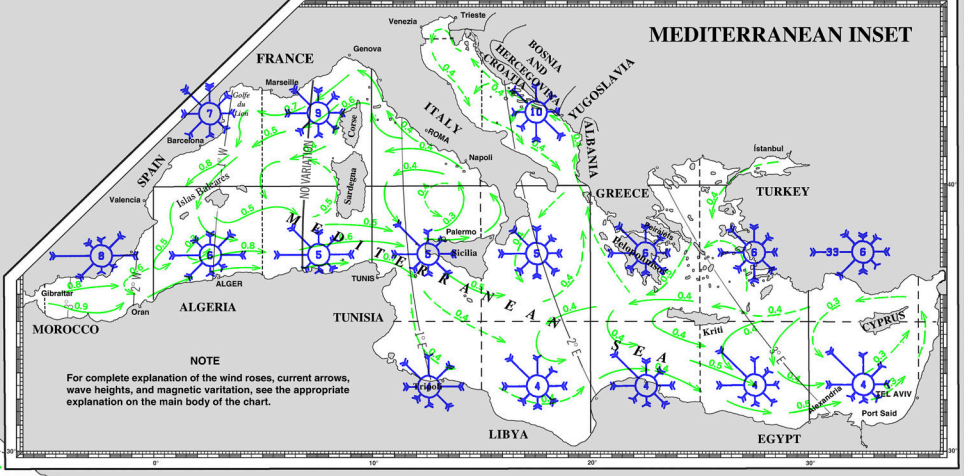
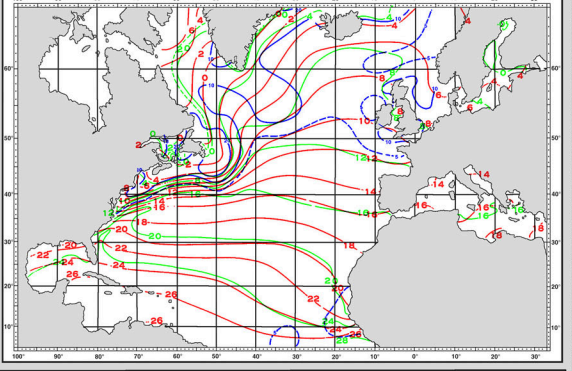
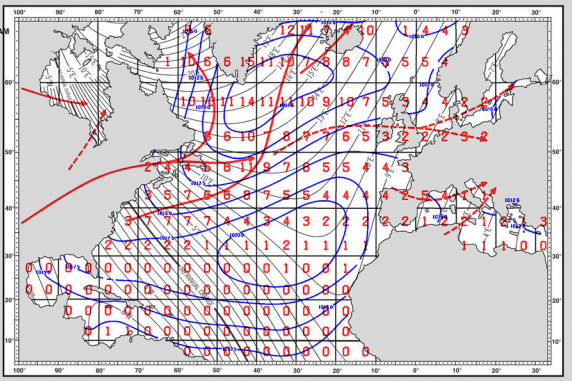
VISIBILITY: The general area of poor visibility (less than 2 miles) has not changed much from March. The 10 percent line runs southeast of the Bay of Fundy turning northeast to the Denmark Strait and Barents Sea. The frequency of visibilities less than 2 miles increased over Newfoundland as the 20 percent frequency area doubled in size. Poor visibilities have decreased over the Baltic Sea and Norwegian Sea but increased over the North Sea and Irish Sea. The Mediterranean Sea continues to maintain good visibilities as in prior months.

TROPICAL CYCLONES: For the period of record, April is the only month in which no tropical storm activity has been observed for the North Atlantic.

EXCEPTIONAL ICE SIGHTINGS  
△ Berg (year sighted)  
○ Growler (year sighted)

TROPICAL CYCLONES  
The mean tracks of tropical storms and hurricanes are shown in green. They appear only during the season of maximum frequency (May-November). These tracks represent averages. Movements of individual systems may vary widely.

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. Where "0" is given, gales may have been recorded, but too infrequently to give a percentage value.

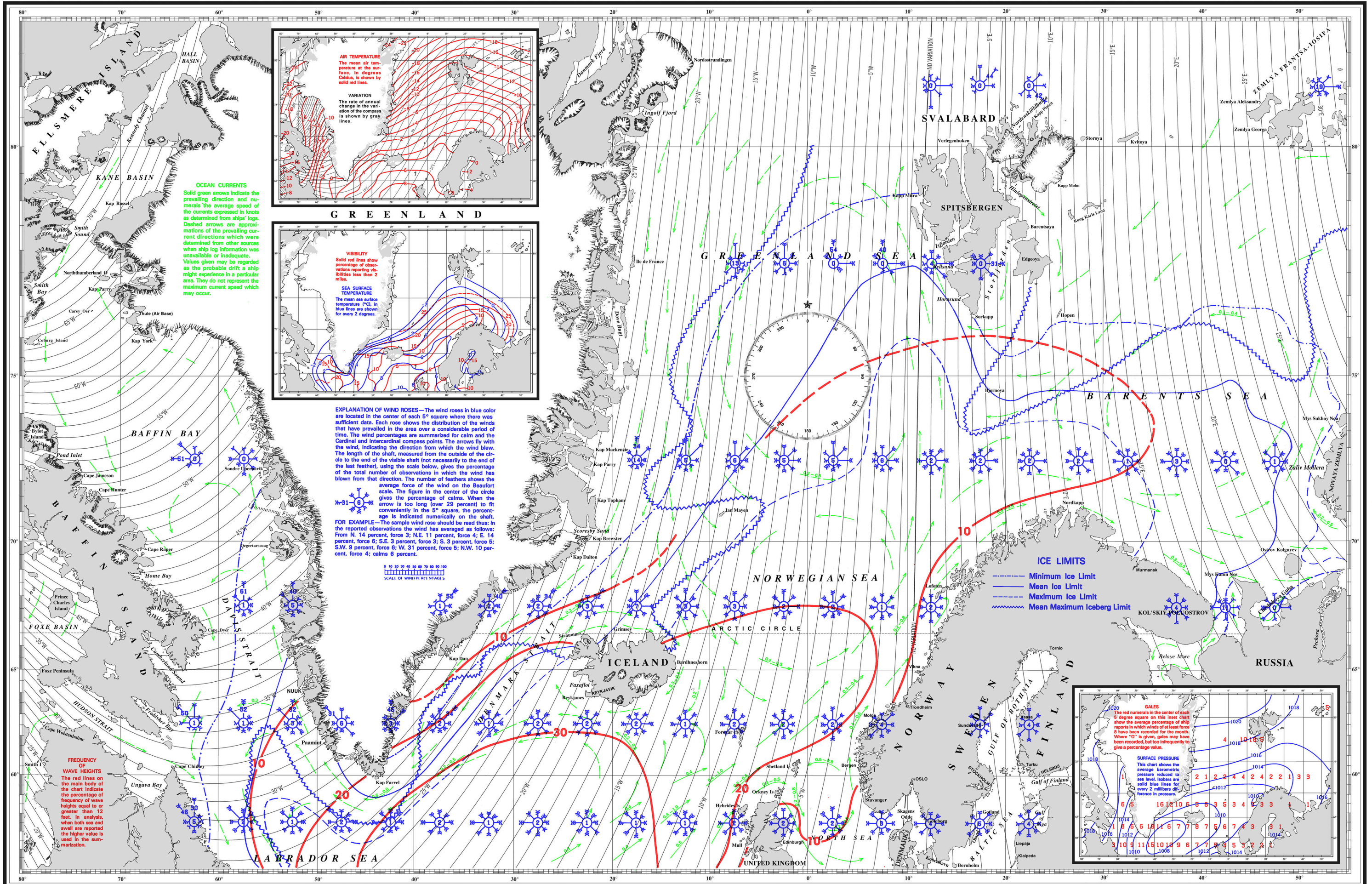


NOTE  
For complete explanation of the wind roses, current arrows, wave heights, and magnetic variation, see the appropriate explanation on the main body of the chart.



# PILOT CHART OF THE NORTHERN NORTH ATLANTIC OCEAN

(THIS CHART SHOULD NOT BE USED FOR NAVIGATIONAL PURPOSES)





# PILOT CHART OF CARIBBEAN SEA AND GULF OF MEXICO

