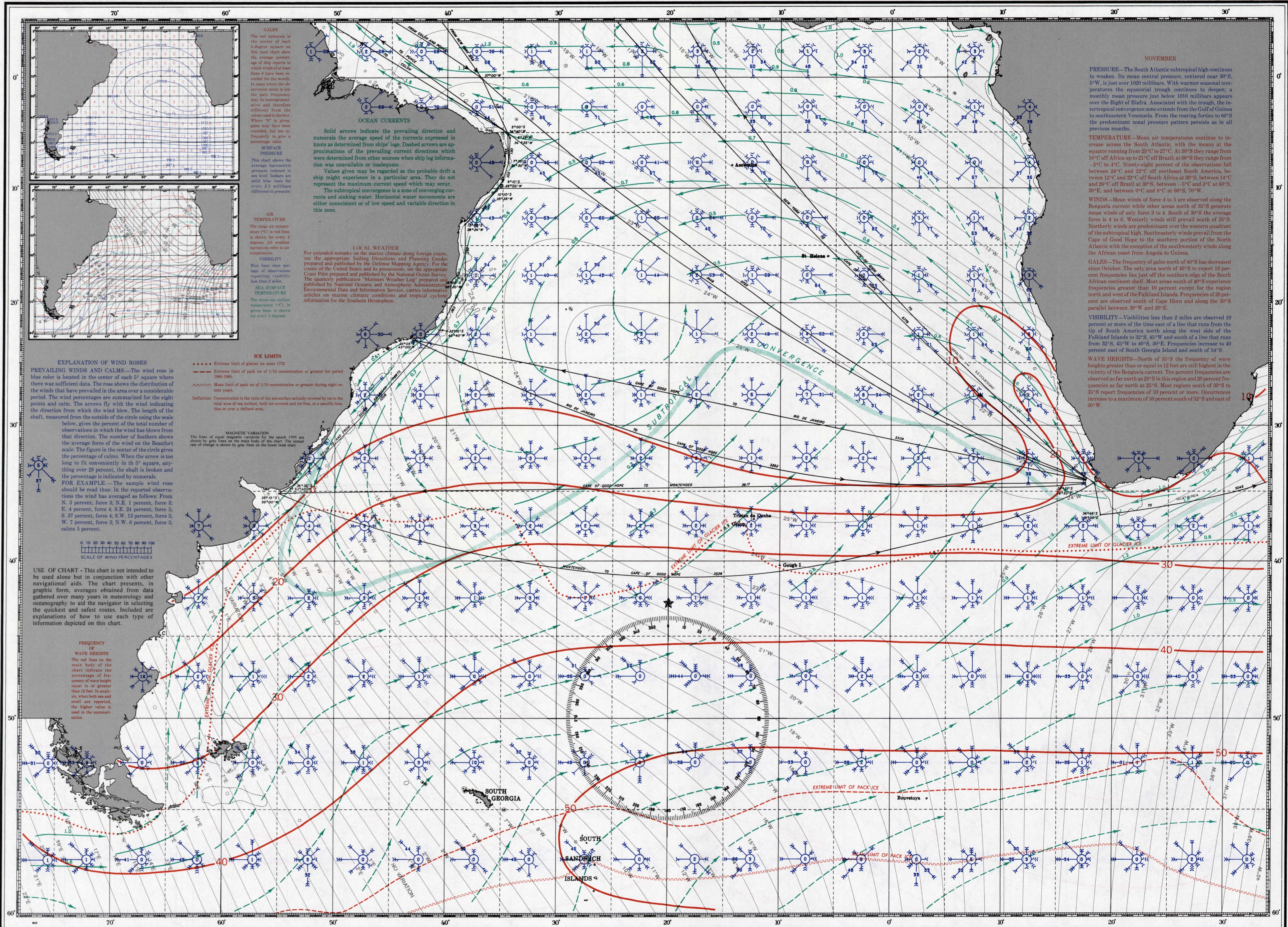


# PILOT CHART OF THE SOUTH ATLANTIC OCEAN

NOVEMBER



**GALES**  
The red numerals in the center of each 5-degree square on this chart show the average percentage of ship reports in which wind of at least force 8 have been recorded for the month. In cases where the observation count is low the gale frequency may be unrepresentative 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.

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

**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 percentage of observations reporting visibility less than 2 miles.

**SEA SURFACE TEMPERATURE**  
The mean sea surface temperature (°C) in green lines, is shown for every 1 degree.

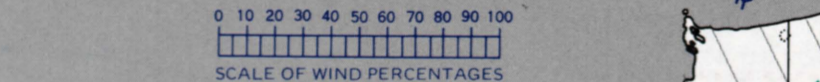
**OCEAN CURRENTS**  
Solid arrows indicate the prevailing direction and numerals the average speed of the currents expressed in knots as determined from ships' logs. Dashed arrows are approximations of the prevailing current directions which were determined from other sources when ship log information was unavailable or inadequate. Values given may be regarded as the probable drift a ship might experience in a particular area. They do not represent the maximum current speed which may occur. The subtropical convergence is a zone of converging currents and sinking water. Horizontal water movements are either nonexistent or of low speed and variable direction in this zone.

**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 Defense 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 quarterly publication "Mariners Weather Log" prepared and published by National Oceanic and Atmospheric Administration Environmental Data and Information Service, carries informative articles on marine climatic conditions and tropical cyclone information for the Southern Hemisphere.

**ICE LIMITS**  
..... Extreme limit of glacier ice since 1772  
- - - - - Extreme limit of pack ice of 1/10 concentration or greater for period 1966-1980  
- - - - - Mean limit of pack ice of 1/10 concentration or greater during eight recent years.  
Definition: Concentration is the ratio of the sea surface actually covered by ice to the total area of sea surface with ice covered and ice free, at a specific location or over a defined area.

**MAGNETIC VARIATION**  
The lines of equal magnetic variation for the epoch 1995 are shown by gray lines on the main body of the chart. The annual rate of change is shown by gray lines on the lower inset chart.

**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 20 percent, the shaft is broken and the percentage is indicated by numerals.  
**FOR EXAMPLE**—The sample wind rose should be read thus: In the reported observations the wind has averaged as follows: From N. 3 percent, force 3; N.E. 1 percent, force 3; E. 4 percent, force 4; S.E. 24 percent, force 3; S. 37 percent, force 4; S.W. 13 percent, force 3; W. 7 percent, force 3; N.W. 6 percent, force 3; calms 5 percent.



**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.

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

**NOVEMBER**  
**PRESSURE**—The South Atlantic subtropical high continues to weaken. Its mean central pressure, centered near 30°S, 5°W, is just over 1020 millibars. With warmer-seasonal temperatures the equatorial trough continues to deepen; a monthly mean pressure just below 1010 millibars appears over the Bight of Biafra. Associated with the trough, the intertropical convergence zone extends from the Gulf of Guinea to southeastern Venezuela. From the roaring forties to 60°S the predominant zonal pressure pattern persists as in all previous months.  
**TEMPERATURE**—Mean air temperatures continue to increase across the South Atlantic, with the means at the equator running from 25°C to 27°C. At 30°S they range from 16°C off Africa up to 21°C off Brazil; at 60°S they range from -3°C to 1°C. Ninety-eight percent of the observations fall between 24°C and 32°C off northeast South America, between 12°C and 22°C off South Africa at 30°S, between 14°C and 26°C off Brazil at 30°S, between -5°C and 3°C at 60°S, and between 0°C and 8°C at 60°S, 70°S.  
**WINDS**—Mean winds of force 4 to 5 are observed along the Benguela current while other areas north of 35°S generate mean winds of only force 3 to 4. South of 30°S the average force is 4 to 6. Westerly winds still prevail south of 35°S. Northerly winds are predominant over the western quadrant of the subtropical high. Southeasterly winds prevail from the Cape of Good Hope to the southern portion of the North Atlantic with the exception of the southwesterly winds along the African coast from Angola to Guinea.  
**GALES**—The frequency of gales north of 40°S has decreased since October. The only area north of 40°S to report 10 percent frequencies lies just off the southern edge of the South African continent shelf. Most areas south of 40°S experience frequencies greater than 10 percent except for the region north and west of the Falkland Islands. Frequencies of 20 percent are observed south of Cape Horn and along the 60°S parallel between 30°W and 20°E.  
**VISIBILITY**—Visibilities less than 2 miles are observed 10 percent or more of the time east of a line that runs from the tip of South America north along the west side of the Falkland Islands to 32°S, 45°W and south of a line that runs from 32°S, 45°W to 40°S, 30°E. Frequencies increase to 40 percent east of South Georgia Island and south of 54°S.  
**WAVE HEIGHTS**—North of 35°S the frequency of wave heights greater than or equal to 12 feet are still highest in the vicinity of the Benguela current. Ten percent frequencies are observed as far north as 20°S in this region and 20 percent frequencies as far north as 25°S. Most regions south of 30°S to 35°S report frequencies of 10 percent or more. Occurrences increase to a maximum of 50 percent south of 52°S and east of 30°W.