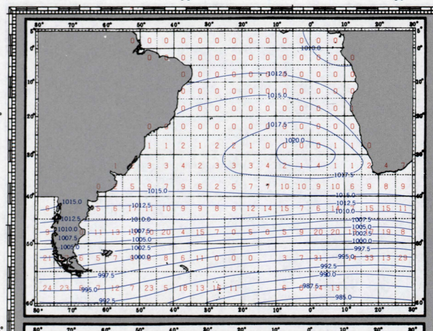
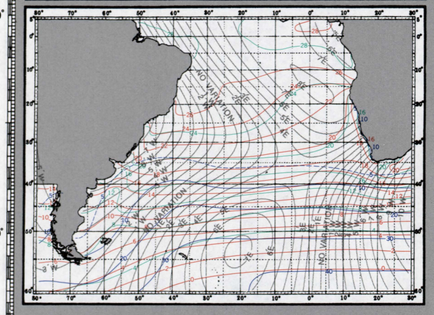
APRIL

PILOT CHART OF THE SOUTH ATLANTIC OCEAN





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 misrepresentative 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. Isobars 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.

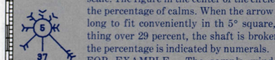
SEA SURFACE TEMPERATURE

The mean sea surface temperature (°C), in green lines, is shown for every 4 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 th 5° square, anything over 29 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 2; E. 4 percent, force 4; S.E. 24 percent, force 5; 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.

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's 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 1968–1980.
- 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, both 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

APRIL

PRESSURE—In April the equatorial trough has weakened slightly from the previous month as some small increases in the mean pressure are noted over the Gulf of Guinea. The dominance of the subtropical high remains unchanged, continuing to extend from continent to continent and from 10°S to 40°S. Its mean central pressure, now centered near 30°S, 5°W, still holds at over 1020 millibars. South of 40°S, the strong zonal pressure pattern continues nearly unchanged.

TEMPERATURE—The most noticeable difference in the April mean air temperature pattern when compared to March's is the 2°C cooler temperatures south of 20°S. Mean temperatures range from a high of 28°C over the Gulf of Guinea to a low of −1°C at 60°S. Of the temperatures at 60°S, 98 percent fall between −3°C and 4°C; within a band that extends 5 degrees latitude either side the equator, 98 percent fall between 24°C and 32°C. Mean temperatures at 30°S range from just over 22°C off Brazil to 16°C off South Africa. At this latitude, 98 percent of the observations fall between 16°C and 28°C off Brazil and between 13°C to 22°C off South Africa.

WINDS—Between 35°S and 10°N scalar mean winds average force 2 to 4 except in the vicinity of the northeast trades where they average force 3 to 5. From the Cape of Good Hope to the Horn of Brazil north, southeasterly winds are predominant except for the northeast trades and the southwesterly winds along the coast of Africa from Tigres Bay to 10°N. South of 35°S, the prevailing winds are westerly, with mean scalar winds of force 4 to 6.

GALES—Cooler temperatures and increased cyclonic activity have lead to increased gales (force 8 or higher winds) across the southern regions of the South Atlantic. Most gales are observed south of 40°S in the vicinity of the Agulhas current and the Falkland current. East of 45°W between 45°S and 55°S, 20 percent frequencies are observed.

VISIBILITY—Poor visibilities (less than 2 miles) are rarely observed outside the cyclonic belt (south of 40°S) across the South Atlantic. Frequencies of 10 percent or higher are generally observed south of 40°S and east of the Falkland Islands. Frequencies increase to over 40 percent south of 57°S and east of 18°W. The only region north of the cyclonic belt with frequencies of 10 percent is a narrow band off the west coast of South Africa and Namibia.

WAVE HEIGHTS—The highest frequencies of wave heights 12 feet or greater at latitudes north of 30°S occur in the vicinity of the Benguela current. Frequencies in this region have decreased from the previous month and now average just over 10 percent. Most areas south of 30°S, except along the coast of South America north of 50°S, report wave heights of at least 12 feet 10 percent or more of the time. The highest frequencies, 50 percent, are reported in the region south of 45°S and east of 5°W.