

direction, the specific gravity fell rapidly from 1·02692 off St. Iago on the 10th of August to 1·02632 on the 12th, after which it retained the low mean specific gravity of 1·02627 until the 21st of August, when the course was changed to a westerly one along the equator. The specific gravity of the water on this day was the lowest hitherto registered for a surface-water; it was 1·02601, in lat.  $3^{\circ} 8' N.$ , and on the boundary-line between the equatorial and Guinea currents. The same low specific gravity was observed in following the equatorial current as far as St. Paul's Rocks, after which it quickly rose as the Brazilian coast was approached; and the maximum of 1·02786 was obtained on the 26th of September, when off the entrance to Bahia, in lat.  $13^{\circ} 4' S.$

The observations in the South Atlantic were limited to a line down the western side as far as the Abrolhos Bank, and thence across to the Cape of Good Hope. In the region of the south-east trade-wind, therefore, we have only a few observations close to the coast; and as we have seen in the North Atlantic, on the voyage from Teneriffe to St. Thomas, the specific gravity is higher in mid-ocean than either on the east or the west side, so in the South Atlantic it is possible that the same may hold good. From the Abrolhos Bank to Tristan d'Acunha the specific gravity sinks steadily from 1·02785 to 1·02606, and from Tristan to the Cape of Good Hope, along a course lying between the 35th and the 37th parallels of south latitude, the mean specific gravity was 1·02624. Between the same parallels of north latitude the mean specific gravity was 1·02713.

It must be remembered that the results obtained can only be held good for the season of the year in which they were observed, and that the observations in different latitudes were made in different seasons; and, further, that all the observations north of the line as far as  $20^{\circ} N.$  were obtained on the eastern side, and those to the southward of it as far as  $30^{\circ} S.$  were obtained on the western side of the ocean; so that it would be