

are all very much alike in these two places, nearly 2000 nautical miles distant from each other. There is thus a marked difference as far as the upper layers are concerned, both salinity and temperature decreasing northwards, while in the deep layers below 500 fathoms the conditions are the same throughout the middle and north-eastern part of the North Atlantic. Northwards from Station 65 to Station 101 the decrease of temperature in the upper layers is more marked than that of the salinity, so that the density of the surface-layer increases from 1.0254 at Station 65 to 1.0266 at Station 101. As a general rule, the upper water-layers, on being cooled, become gradually heavier from the tropics toward the poles.

Fig. 169 shows the conditions at Station 106, 10th August 1910, in the Faroe-Shetland Channel to the north of the

Faroe Channel.

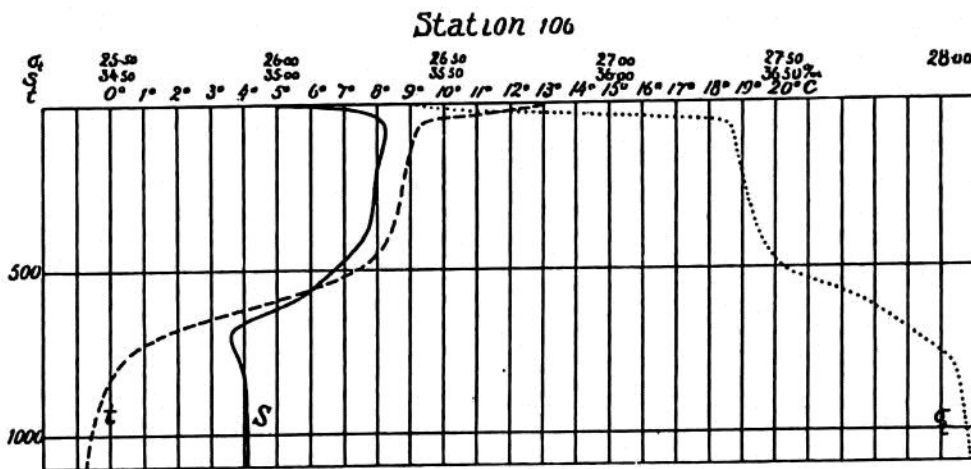


FIG. 169.—TEMPERATURE, SALINITY, AND DENSITY AT STATION 106, IN THE FAROE-SHETLAND CHANNEL (10th August 1910). Depth in metres.

Wyville Thomson Ridge, about 300 miles north-east of Station 101. At Station 106 some fresher water was found at the surface, but otherwise the salinity, temperature, and density were the same at both stations as far down as 500 metres; the water had grown slightly colder and heavier in these 300 miles, but the difference was very small. Below 500 metres, however, there is a great contrast, the temperature of the deep water being, as already indicated, much lower north of the Wyville Thomson Ridge than south of it, and the density is therefore greater on the north side. The deep water of the Norwegian Sea is thus colder and heavier than that of the Atlantic, but, strange to say, there is no difference in the salinity of the deepest layers of the two regions.

At all three stations the surface-layers are occupied by a warm, comparatively saline, northerly current. On proceeding northwards, there is a fall of temperature and of salinity and