setting to the westward and northward at an average rate of 1 mile per hour, and the velocity of the wind was on an average 11 miles per hour from 7 to 9 A.M. At 4 P.M., the dredging being completed, sail was again made, and a course shaped to the southeastward.

On the 20th the wind hauled round to the westward and gradually freshened, the surface temperature remained at about 72° until noon, and the current experienced since the previous day at 4 P.M. was 26 miles N. 74° W. At 1 P.M. the surface temperature fell to 68°, and varied between 67°·0 and 69°·5 till 8 P.M. At 4.40 P.M. observations showed that the current had changed to the eastward. At 10 P.M. the surface temperature again rose to 70°·5, and at midnight was 72°·0.

On the 21st a moderate gale was experienced all day with thick weather and rain squalls. The surface temperature continued at 72°·0 until 4 A.M., but fell suddenly to 61°·0 at 6 A.M., and then gradually to 57°·0 by midnight. No astronomical observations could be obtained until the afternoon, but a double altitude at 2 and 4 P.M. showed a current of 40 miles N. 65° E. in 28 hours, or about 1½ miles per hour, agreeing precisely with the rate ascertained by afternoon observations yesterday. Large numbers of Terns, a few Petrels and Albatrosses in sight. The height of the waves from crest to hollow was 20 feet, the ship rolling through an arc of 35°—4½ rolls per minute.

On the 22nd the gale still continued, with fine cold weather, varied occasionally by rain squalls; the height of the waves 18 feet; the surface temperature gradually falling from 57°·0 to 48°·0, but always warmer than that of the air. The observations showed a current of only 7 miles to the northeastward.

The current experienced on the 20th and 21st shows in a remarkable manner the recurving of the Agulhas Current, which on the 20th was running rapidly to the westward, and on the 21st just as rapidly to the eastward. The exact position of the change in direction was not ascertained, the weather being so gloomy that astronomical observations could not be obtained with sufficient frequency. From the sights that were taken it is certain, however, that the direction of the current changed between 9 A.M. and 5 P.M. on the 20th; and as a considerable change in the temperature of the surface water took place at noon, it appears highly probable that the changes in the direction of the stream coincided with this change of temperature. The width, therefore, of the west going stream is 80 miles. The width of the east going current is much more difficult to determine, as no observations were obtained until 2 P.M. on the 21st. A reference to the surface temperatures shows a sudden fall of 10° between 2 and 4 A.M., and then a gradual decrease of 5° to midnight. Now, from 4 P.M. on the 21st until 6 A.M on the 22nd there was no current; the small amount registered on the 22nd being experienced after 6 A.M. The probability therefore is that the east going stream was entered between 2 and 4 A.M. on the 21st, when the fall of 10° in the surface temperature took place, the subsequent gradual decrease being accounted for by change of latitude; if so, the width of the east going stream must be 60 miles, and its velocity