

" Thursday, October 18th. I continue taking the temperatures of the water, rather a cool amusement with the thermometer down to  $-29^{\circ}$  C. ( $20.2^{\circ}$  Fahr. below zero) and a wind blowing. Your fingers are apt to get a little stiff and numb when you have to manipulate the wet or ice-covered metal screws with bare hands and have to read off the thermometer with a magnifying-glass in order to insure accuracy to the hundredth part of a degree, and then to bottle the samples of water, which you have to keep close against your breast, to prevent the water from freezing. It is a nice business!

" There was a lovely aurora borealis at 8 o'clock this evening. It wound itself like a fiery serpent in a double coil across the sky. The tail was about  $10^{\circ}$  above the horizon in the north. Thence it turned off with many windings in an easterly direction, then round again, and westward in the form of an arch from  $30^{\circ}$  to  $40^{\circ}$  above the horizon, sinking down again to the west and rolling itself up into a ball, from which several branches spread out over the sky. The arches were in active motion, while pencils of streamers shot out swiftly from the west towards the east, and the whole serpent kept incessantly undulating into fresh curves. Gradually it mounted up over the sky nearly to the zenith, while at the same time the uppermost bend or arch separated into several fainter undulations, the ball in the northeast glowed intensely, and brilliant streamers shot upwards to the zenith from several places in the arches, especially from the ball and