

different instruments, when this method is followed, must accurately agree. It is likewise to be remarked, that the power of reversing the axis is an advantage with which the independence of the zenith distances of the influence of gravity is connected (and without which such independence could not be obtained).

“ Although of no use in a practical point of view, it may not be uninteresting to investigate the numerical result which the theory now developed gives in a particular case, on the supposition of symmetry. For this purpose, I took the case which corresponds to the dimensions of my 3-foot circle by Repsold, and found that one of its radii, the direction of which corresponds to a zenith distance z , alters in length about $-0''.2274 \cos z$: its extremity deviates from its direction at the initial point about $+0''.6726 \sin z$; and its direction at the extremity of the arc from that at the initial point by $-0''.5124 \sin z$. Although the supposition of symmetry upon which these results depend is probably only correct in respect of the exterior figure of certain parts of the whole instrument, this calculation may give an idea of the extent to which the influence of gravity will attain; an extent which, from the complicated nature of the problem, we should not be able, without a calculation, to estimate.

“ You may easily suppose that the conclusion I have just obtained, namely, that the attainment of any required degree of precision in results depends only on the observer, appears to me to be the strongest motive for the zealous prosecution of observations. In the ever-memorable days I passed with you at Collingwood, you expressed the opinion, that the prospect of completely attaining the object of any undertaking is of itself sufficient to render it in a high degree attractive.”

VIII. A Letter from J. R. Crowe, Esq., British Consul-General of Norway, concerning a Literary Society established at Alten, near Hammerfest. Communicated (with a letter) by Dr. Lee.

Mr. Crowe visited England in the summer of 1843, and gave information concerning the existence of a Society consisting of Swedes, Englishmen, and Germans, at Alten, near Hammerfest, in Finmark, under the patronage of a Swedish clergyman, the pastor of that district. This Society was in possession of some instruments which had been left there by some French gentlemen of science who were sent to Lapland by Louis Philippe a few years ago. Regular observations of the barometer and thermometer had been instituted according to the plan suggested by Sir John Herschel, and Mr. Crowe was of opinion that if an observatory could be established the Society would cheerfully undertake the working of it.

Dr. Lee munificently furnished the Society with an achromatic transit instrument of 30 inches focal length, and an aperture of 2 inches, on an iron stand, and with a circle 6 inches in diameter, reading to 1', and with a collection of books on various depart-

ments of science: an astronomical clock was also ordered of Mr. Dent, but it was not ready to be sent by the same vessel which conveyed the instruments. Owing to the exertions of Dr. Lee, other fellows of this Society were induced to contribute books, and the nucleus of a good library was thus formed. Mr. Crowe took with him from England two minimum thermometers with the intention of placing one on the top of Storvandsfield, the highest mountain in the neighbourhood of Alten, and the other on the highest point of the southern extremity of Spitzbergen; but he arrived too late to carry the latter part of his plan into effect. The difficulties of the ascent of Storvandsfield are thus described by Mr. Crowe:—

“The ascent to Storvandsfield was very difficult; so much fresh snow had fallen as to impede even the snow-shoes, which the party were obliged to use. The task, however, was accomplished, and the thermometer safely fixed on the highest point. It was just in time, as one of those sudden gales of wind sprang up, peculiar to high mountain regions, driving and whirling the snow before. For hours the party were exposed to considerable danger, and by the time it did lull, Mr. Greive, who had volunteered to superintend the task, was so knocked up, as to be unable to proceed, and the guides had to carry him; fortunately, a shelter of loose stones, erected by the nomadian Laplanders, was reached, where they deposited him, while one of the guides descended for further assistance. Happily, the cold was not intense, so that a warm bed and rest perfectly recovered him.”

Alten is in north latitude $69^{\circ} 38'$, and in longitude $23^{\circ} 43'$ east, and thus by its geographical situation, highly important for certain classes of observations, being the most northern place in the world at which an observatory is established. The following observations have been uninterruptedly carried on, viz.:—

Of the barometer; the thermometer (with the maximum and minimum temperatures; the pluviometer; the galvanometer; declination magnetometer; land winds and approximate force; of clouds, their direction, approximate velocity, and general description; and of the Aurora Borealis.

Erratum in the Monthly Notice for February last.

The Council take the earliest opportunity to correct a misstatement in their Report to the General Meeting of February last, concerning the Reduction of the Ancient Greenwich Lunar Observations at the Royal Observatory. It is stated at page 44, that “the work has been at length brought to a close.” This is not the case, but it is in a state of great forwardness; the tabular places have been computed throughout, and the labour of an additional year will probably complete the reduction of the observations.

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