

registered by F. Cholmeley, Esq., at Brandsby (200 feet above the sea), we have the following results, corrected to mean temperature ($47^{\circ}\cdot 8$):—

N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
29·8163	29·7862	29·8293	29·6834	29·6126	29·7323	29·6769	29·7007

The highest pressure is observed with east winds, the lowest with south winds; the difference between them being 0·2167 inch.

The barometer is subject to daily fluctuations or tides of such a nature, that in the latitude of Britain it rises twice to maxima (about 9 or 10 A.M. and 9 or 10 P.M.), and sinks twice to minima (about 4 A.M. and 4 P.M.). The amount of this fluctuation diminishes from the equator northward to lat. $64^{\circ} 8' N.$, where it is reduced to nothing. Farther to the north it re-appears, but in such a manner as to sink in the late morning and evening, and rise in the early morning and afternoon. On ascending above the general level of the earth in the latitude of Yorkshire, an effect happens of the same kind as that which is experienced on proceeding toward the pole*.

I was able, by combining the labours of some friends, in 1832, 1833, and 1834, to obtain the values of these curious oscillations at York.

The height of the barometer is on the average greatest nearly at 9 A.M., least at 4 P.M.; the second maximum occurs nearly at 9 P.M., and the second minimum at 4 A.M. If we take as the standard the barometrical readings at 4 P.M., the general result is this†:—

A.M.			P.M.		
4	8	9	4	9	10
+	+	+		+	+
·0075	·0163	·0178	Standard.	·0170	·0162

* Forbes, in Edinb. Trans. 1831.

† See Reports of Yorkshire Phil. Soc. for 1832, 1833, and 1834.