

are inverted, is not confirmed by Parry's observations at Port Bowen ( $73^{\circ} 14'$ ).

The mean height of the barometer is somewhat less under the equator and in the tropics, owing to the effect of the rising current,\* than in the temperate zones, and it appears to attain its maximum in Western Europe between the parallels of  $40^{\circ}$  and  $45^{\circ}$ . If with Kämtz we connect together by *isobarometric* lines those places which present the same mean difference between the monthly extremes of the barometer, we shall have curves whose geographical position and inflections yield important conclusions regarding the influence exercised by the form of the land and the distribution of seas on the oscillations of the atmosphere. Hindostan, with its high mountain chains and triangular peninsulas, and the eastern coasts of the New Continent, where the warm Gulf Stream turns to the east at the Newfoundland Banks, exhibit greater isobarometric oscillations than do the group of the Antilles and Western Europe. The prevailing winds exercise a principal influence on the diminution of the pressure of the atmosphere, and this, as we have already mentioned, is accompanied, according to Daussy, by an elevation of the mean level of the sea.†

As the most important fluctuations of the pressure of the atmosphere, whether occurring with horary or annual regularity, or accidentally, and then often attended by violence and danger,‡ are, like all the other phenomena of the weather, mainly owing to the heating force of the sun's rays, it has long been suggested (partly according to the idea of Lambert) that the direction of the wind should be compared with the height of the barometer, alternations of temperature, and the increase and decrease of humidity. Tables of atmospheric pressure during different winds, termed *barometric windroses*, afford a deeper insight into the connection of meteorological phenomena.§ Dove has, with admirable sagacity, recognized, in the "law of rotation" in both hemispheres, which he himself established, the cause of many important processes in the aërial ocean.|| The difference of temperature between the

\* Humboldt, *Essai sur la Géographie des Plantes*, 1807, p. 90; and in *Rel. Hist.*, t. iii., p. 313; and on the diminution of atmospheric pressure in the tropical portions of the Atlantic, in Poggend., *Annalen der Physik*, bd. xxxvii., s. 245-258, and s. 468-486.

† Daussy, in the *Comptes Rendus*, t. iii., p. 136.

‡ Dove, *Ueber die Stürme*, in Poggend., *Annalen*, bd. lii., s. 1.

§ Leopold von Buch, *Barometrische Windrose*, in *Abhandl. der Akad. der Wiss. zu Berlin aus den Jahren 1818-1819*, s. 187.

|| See Dove, *Meteorologische Untersuchungen*, 1837, s. 30-313; and