

The monthly and hourly resultant directions and velocities include only the years 1854 to 1859, and were computed from the well known formulæ

$$\tan. \bar{\theta} = \frac{\Sigma(v \sin \theta)}{\Sigma(v \cos \theta)}; \quad \bar{v} = \frac{\Sigma(v \cos \theta)}{n \cos \bar{\theta}}.$$

RESULTANT DIRECTIONS IN THE DIFFERENT MONTHS.

A comparison of the monthly resultant directions given in table I. shews that the general direction of the atmospheric current is considerably more from the westward in the winter than in the summer months, the monthly resultants oscillating about N. 43° W. from April to September inclusive, and about N. 72° W. during the remaining six months.

There is a much nearer approach to uniformity of direction in the different years for some months than for others; for instance, taking the angular difference between a monthly partial resultant in a particular year and the corresponding monthly resultant for the six years as a rough measure of the irregularity of the partial resultant, it is found that the averages of these differences are 7° for January and about 75° for June and July. The quarterly averages of the differences are for winter (commencing December 1st), 20°; for summer, 53°; for spring, 29°; and for autumn, 27°: their half-yearly averages being 46° from April to September inclusive, and 19° from October to March.

RESULTANT VELOCITIES AND MEAN VELOCITIES IN THE DIFFERENT MONTHS.

The resultant velocities and mean velocities have each their maximum in March and their minimum in July. The change from month to month is regular in both, with the exception of a small interruption of continuity in August, and another in December.

RESULTANT DIRECTIONS OF THE WIND IN THE DIFFERENT HOURS.

Confining our attention in the first instance to the annual resultants given in table II., we find that during the hour commencing noon the resultant wind is from N. 103° W., its extreme distance on the left of north. From this point, at which the wind is nearly steady during the three hours commencing at noon, it draws round regularly and continuously till it makes its nearest approach to the north (N. 38° W.) at 5 A.M., about which point it remains nearly steady from midnight to 7 A.M. It then rapidly recedes again to the westward.