

many of the clearest days were calm, particularly in the winter and early spring months. In this column the maxima increase in amount from December to March or April, and decrease gradually in the succeeding months. The irregularity for July 1826 may be accounted for by only twenty-one days being included; and the smallness of the number of observations in the autumn of 1825 may also be considered as the reason of the small mean for October. Table VII., and what is nearly the same thing, the much greater sharpness and altitude of the mean curves of temperature for March and April, as shewn in Plate I., f. 5, Geograph. Journal, vol. ix., may also be adduced in corroboration of my remark.

I shall not repeat here the attempt I have made elsewhere to explain the cause of the clearness of the atmosphere in the spring of those climates, but shall merely remind the reader, that at Fort Franklin the snow does not disappear till the beginning of May, consequently the soil cannot before that month accumulate heat from day to day; and that when the snow is at the melting point, a powerful sun one day will have little effect in raising the mean heat of the following day.

When the solar rays are projected at low altitudes into the lower dense or cloudy stratum of the air, considerable irregularities and sudden changes of temperature must result, producing partial currents, and mingling of masses of air in different conditions, all increasing the scattering action of the strata on the solar light.* But if, from the natural effect of the climate, the air in the high northern regions of America be peculiarly free from clouds, and clear in the spring, there does not appear to me to be any great difficulty in explaining why the more oblique rays in spring should have a superior effect on the black-bulb thermometer, than the more direct ones passing through a comparatively cloudy atmosphere near the summer solstice. I have no doubt but that future experiments will shew that the sun, at *equal altitudes*, acts more intensely (in spring at least) near the poles, than near the equator, although the increase of the temperature of the atmosphere may be greater in the latter locality through indirect radiation.

* *Vide Astronomy*, by Sir J. F. W. Herschel, &c., p. 33.