Whence it appears, that the mean temperature of the two volumes of air is 50°, and the mean of the elasticities of their vapour ·393 inches. But the actual tension or elastic force of vapour at 50°, is not ·393 inches, but only ·375 inches: after the intermixture, therefore, of the two currents, a quantity of vapour will remain, proportionate to the tension of ·018 inches; and as this superfluity of vapour cannot be held in solution by air of the mean temperature of 50°, it will be separated in the form of clouds, or of rain, according to circumstances.

Such, in few words, are the opinions respecting rain first advanced by Dr. Hutton; and notwithstanding some difficulties about these opinions, there can be little doubt of their general accuracy. The subject of condensation may perhaps receive some additional elucidation, from the principles regulating a mixed atmosphere of vapour and air, which were formerly explained; and which may be thus applied. When two currents of atmospheric air of different temperatures, and each charged with vapour up to the point of saturation, are brought into contact; they begin to intermingle, by virtue of the diffusive tendencies of the air and vapour, and the immediate result will be the formation of *visible vapour;* that is to say, of a *cloud.* If the currents are continuous and uniform, the clouds soon spread in all directions, so as to occupy the