above indicated than in the opposite, on a comparison of the sums of all its angular movements either way-or on an average, nearly thirteen revolutions per annum. In all this interval, two years only, 1853 and 1860, gave a contrary result, and that only to the total amount of two revolutions in excess the wrong way in each. And of these the year 1860 was in many points an abnormal one in respect of stormy weather. Nothing can convey a better idea of the disappointment to which all meteorological predictions, even though founded on just principles, and supported by extensive inductions, are liable, than this example. Still there remains a decided balance of probabilities in favour of a change of wind occurring in this rather than in a contrary direction on any specified occasion. A continuous circuit round the horizon in the contrary direction would certainly be in a high degree improbable.

(32.) On the other hand we have an instance of the failure of a distinctly periodical cause (as to all appearance it would seem fairly entitled to be considered d priori), to exhibit itself in any cognizable periodical effect on the seasons, in that curious recurrence of a spotted state of the sun's surface which takes place every eleven years (see Lecture II., § 36). Looking to the sun as the great source of all meteorological action, it might most reasonably be expected that such indications of an activity of *some sort* going on in its very photosphere—in the actual visible laboratory of its light and heat—would correspond to some difference in its supply of both; which, recurring periodically at stated intervals,