

solar conditions. For instance, on certain days on which they are in progress barometric depressions are deepened, the crests of anticyclones heightened, the gradients of temperature and atmospheric pressure becoming steeper, the winds stronger, the rainfalls greater, thunderstorms more severe, and their place in winter supplied by blizzards. In this connection the attention of observers should be called to noticing and to recording the existence of a secondary diurnal maximum of the thunderstorms between midnight and morning, the colors of the lightning flashes which have been found to range from steel blue to cherry red. Also any persistence of phosphorescence or lurid appearance of the sky between successive flashes ; also the exact time of any sudden notable increase in thunderstorm action. At times thunderstorms suddenly become much more energetic over wide areas as far as can be determined at the same instant of time, thus corresponding precisely to a similar behaviour of the Aurora.

If the eruptions on the Sun are of such a character as to give origin to metallic vapors as shown by the spectroscope, an Aurora is a certain accompaniment, and in such cases disturbances of the Earth currents, known as magnetic storms, occur, and even the solid crust of the earth itself receives impulses that cause tremors and that may precipitate genuine earthquake shocks in localities where the conditions are favorable because of instability existing therein.

The results gained by observation at various places, by the daily weather charts covering nearly the entire northern hemisphere, and telegraphic information in regard to the more remarkable displays are now making it more possible to trace out with some degree of certainty the relations borne by the Sun in regard to these phenomena. Nothing of a satisfactory nature to account for the Aurora previously was obtainable, and those who after reading this article may witness an unusually bright display, may rest assured that scientific observers are recording any remarkable features in the same, and that simultaneous record is being made in various quarters of the globe, for comparison and reference.