

the 2d of September the greatest Aurora ever seen there made its appearance. These Auroras were accompanied with unusually great electro-magnetic disturbances in every part of the world. In many places the telegraphic wires struck work. They had too many private messages of their own to convey. At Washington and Philadelphia, in America, the telegraph signal-men received severe electric shocks. At a station in Norway the telegraphic apparatus was set fire to ; and at Boston, in North America, a flame of fire followed the pen of Bain's electric telegraph, which, as my hearers perhaps know, writes down the message upon chemically prepared paper.

(39.) I must now proceed to tell you what the telescope has revealed to us as to the nature and magnitude of these spots. And here again, the closer we look, the more the wonder increases. The spots were at first supposed to be clouds of black smoke floating over the great fiery furnace beneath,—then great lumps of fresh coal laid on ; then comets fallen in to feed the fire ; then tops of mountains standing up above a great surging ocean of melted matter. They are none of all these things ; they are not clouds floating above the light, nor protuberances sticking up above the general surface ; they are regions in which, by the action of some most violent cause, the bright, luminous clouds, or what at all events we may provisionally call clouds, which float in the sun's atmosphere, are for a time cleared off ; and through the irregular vacuities thus created, allow us to see perhaps thousands or tens of thousands of miles