snow, in which he found crystals of pyroxene, magnetic iron, volcanic glass, and hypersthene, all of which were found in an analysis of the volcanic ashes from the eruption of Java. Travelers assure us that the sun seen through the fine dust of a Sahara wind has a decidedly blue color.

Mr. W. H. Preece adds to the above theory (Mr. Norman Lockyer's) by bringing in the factor of electrical repulsion. He says: "If we assume that the mass of volcanic matter projected with such force was highly electrified, then it must have been electrified with the same sign as that of the earth, viz., negative. Therefore, when the force of projection had exhausted itself, the cloud of matter would be subject to two other forces besides gravity: the repulsion of the electrified earth, and the self-repulsion of each particle of electrified dust. The first would determine the tenuity of the cloud, for the lighter the particles the further they would be repelled, and the heavier the particles the quicker they would descend. It is quite possible to conceive that they might be so minute and so highly electrified as to reach the utmost confines of our atmosphere, where they would remain as long as they remained electrified. The second repulsive force would cause the particles to spread out continuously in a horizontal plane until they would cover an area determined only by their quantity."

Mr. Preece goes on to cite, as a proof that this theory is not a fanciful one, the behavior of smoke, which on calm days will, as all must have observed, rise to some determined height, and then gradually spread itself at an equal and constant distance from the surface, like a great flat pall. He also cites instances of the repulsion of two lines of smoke, and advances the theory of the negative electrification of smoke.

The subject is a most interesting one to investigate, and Cowper seems to have had these phenomena in mind when he wrote, —

"Fires from beneath, and meteors from above
Portentous, unexampled, unexplained,
Have kindled beacons in the skies, and th’ old
And crazy earth has had her shaking fits
More frequent, and foregone her usual rest."

C. S. R.