

upon should be considered, and the capabilities of the organs should not be overrated. The senses are not the causes of the deception in the appearances which have been described but they are the agents by which the deception is conveyed to the mind. To correct the errors which are not compensated for by the senses, is one of the objects of natural philosophy. We are deceived by the phenomenon of refraction, because the eye is unable to detect the manner in which the appearance is transmitted to the organ of sight. By experiment, it is discovered that in passing through a fluid medium the rays of light are refracted, and hence we infer that the same effects must be produced when they pass through the atmosphere. The eye might have been for ever fixed on the heavenly bodies, without discovering that their apparent places are not their real place; and we might still imagine the heavens to have a diurnal revolution round the earth, if experiment and extended observation, guided by reason, had not discovered the circumstances under which our senses are acted upon. But it must not be supposed that the organs of sense are insufficient for the purposes for which they were formed. Such a sentiment would be derogatory to the skill displayed in their construction, and their adaptation to the nobler principles of our nature. The organs of sense are sufficient to enable man to supply his wants, and to gather pleasure from external nature; and, if we may be deceived by appearances, the improvable reason may detect the error, and explain the cause.

#### COMPOSITION OF LIGHT.

It might be supposed, by a person unacquainted with the facts which have been ascertained by experiment, even by an intelligent observer, that solar light is a white homogeneous substance. But it has been proved, both by analysis and re-composition, that it is composed of seven elements, if we may so express ourselves, characterized by different properties and colours. The colours of the elementary parts of solar light are red, orange, yellow, green, blue, indigo, and violet. Now there are two ways in which this statement may be proved; that is to say, by refraction and by absorption; and of these we may speak separately.