

tion, arising from the unequal dispersion of the intermediate rays (the green, &c.). These *outstanding* colors, as they were termed by Professor Robison, form the residual, or *secondary* spectrum.

Dr. Blair, by very ingenious devices, succeeded in producing an object-glass, corrected by a fluid lens, in which this aberration of color was completely corrected, and which performed wonderfully well.

The dispersion produced by a prism may be corrected by another prism of the *same substance* and of a different angle. In this case also there is an irrationality in the colored spaces, which prevents the correction of color from being complete; and hence, a new residuary spectrum, which has been called the *tertiary* spectrum, by Sir David Brewster, who first noticed it.

I have omitted, in the notice of discoveries respecting the spectrum, many remarkable trains of experimental research, and especially the investigations respecting the power of various media to absorb the light of different parts of the spectrum, prosecuted by Sir David Brewster with extraordinary skill and sagacity. The observations are referred to in chapter iii. Sir John Herschel, Prof. Miller, Mr. Daniel, Dr. Faraday, and Mr. Talbot, have also contributed to this part of our knowledge.]

CHAPTER V.

DISCOVERY OF THE LAWS OF DOUBLE REFRACTION.

THE laws of refraction which we have hitherto described, were simple and uniform, and had a symmetrical reference to the surface of the refracting medium. It appeared strange to men, when their attention was drawn to a class of phenomena in which this symmetry was wanting, and in which a refraction took place which was not even in the plane of incidence. The subject was not unworthy the notice and admiration it attracted; for the prosecution of it ended in the discovery of the general laws of light. The phenomena of which I now speak, are those exhibited by various kinds of crystalline bodies; but observed for a long time in one kind only, namely, the rhombohedral calc-spar; or, as it was usually termed, from the country which supplied the largest and clearest crystals, *Iceland spar*. These rhombo-