

Way and are found with a frequency increasing with the distance from the Milky Way.

We now turn to the evidences of evolution and here the spectroscope must be relied on for assistance. Soon after the spectroscopic examination of the heavenly bodies was entered upon, it became evident that the stars presented a great variety of spectra, so that a classification according to spectra was conceived. A first classification was made by Secchi, and though classes have been multiplied by later workers, the main lines of the older classification have been retained. The truth is that the classes in place of being distinct shade into one another and one is free to draw a line at many places. The different types of spectra point to different surface conditions on the stars and the lines retained or rejected, accentuated or rendered feeble, again admit interpretation. The types of stars according to the classification generally received to-day are :

1. The Sirian Stars which are sub-divided into

(a) The Orion Stars. These are purely white. Their spectra show helium and hydrogen lines. Many seem to have nebulous appendages.

(b) The true Sirian Stars. These are brilliantly white. The spectrum is strong in the ultra-violet region.

2. The Solar Stars. The light is of a golden tinge, as appears in stars like Capella, Aldebaran and Arcturus. There is a decrease in intensity particularly in the ultra-violet, the violet and the blue region of the spectrum. There is every evidence of an increasing condensation and enhanced absorption. Also there is increasing strength of metallic lines.

3. The Antarean Stars. Antares is a typical star of this class. The light is reddish and the spectrum marked by flutings with the sharp edges lying toward the violet. The hydrogen lines are reduced in intensity, and the bands are due to the presence of oxide of titanium, and eight or nine metals can be recognised by their absorption lines.