The so-called relations of the magnitude of the fixed stars, as given in our catalogues and maps of the stars, sometimes indicate as of simultaneous occurrence that which belongs to very different periods of cosmical alterations of light. The order of the letters which, since the beginning of the seventeenth century, have been added to the stars in the generally consulted *Uranometria Bayeri*, are not, as was long supposed, certain indications of these alterations of light. Argelander has ably shown that the relative brightness of the stars can not be inferred from the alphabetical order of the letters, and that Bayer was influenced in his choice of these letters by the form and direction of the constellations.*

flected rings are complementary to those of the transmitted rings; these two series of rings neutralize one another when the two lights by which they are formed, and which fall simultaneously on the two lenses, are equal.

"In the contrary case, we meet with traces of reflected or transmitted rings, according as the light by which the former are produced is stronger or fainter than that from which the latter are formed. It is only in this manner that colored rings can be said to come into play in those photometric measurements to which I have directed my attention."

(*b.*) *Cyanometer.*

"My cyanometer is an extension of my polariscope. This latter instrument, as you know, consists of a tube closed at one end by a plate of rock crystal, cut perpendicular to its axis, and 5 millimètres in thickness; and of a double refracting prism placed near the part to which the eye is applied. Among the varied colors yielded by this apparatus, when it is traversed by polarized light and the prism turns on itself, we fortunately find a shade of azure. This blue, which is very faint, that is to say, mixed with a large quantity of white when the light is almost neutral, gradually increases in intensity in proportion to the quantity of polarized rays which enter the instrument.

"Let us suppose the polariscope directed toward a sheet of white paper, and that between this paper and the plate of rock crystal there is a pile of glass plates capable of being variously inclined, by which means the illuminating light of the paper would be more or less polarized; the blue color yielded by the instrument will go on increasing with the inclination of the pile; and the process must be continued until the color appears of the same intensity with the region of the atmosphere whose cyanometrical tinge is to be determined, and which is seen by the naked eye in the immediate vicinity of the instrument. The amount of this color is given by the inclination of the pile; and if this portion of the apparatus consist of the same number of plates formed of the same kind of glass, observations made at different places may readily be compared together."

* Argelander, *De fide Uranometriæ Bayeri*, 1842, p. 14–23. "In eadem classe littera prior majorem splendorem nullo modo indicat" (§ 9). Bayer did not, therefore, show that the light of Castor was more intense in 1603 than that of Pollux.