Yellow was for all observers always difficult to judge, ranging from nearly cream colour in lowest intensity through a yellow with a tinge of orange in it up to a bright yellow. As others have already pointed out, the mean variation was extremely large and the judgments varied considerably for different observers and on different days.

In the tables I to VIII (pages 58-65) the upper number always indicates the number of degrees of white contained in the grey that was found equal in intensity with the coloured ring. The lower number gives the mean variation in degrees.

After the experiments with pigment colours in reflected light, it was found desirable to make a few trials also with transmitted light and with spectrally purer colours. A new double episcotister, which will be described elsewhere by Professor Kirschmann, was constructed for the purpose. The obscuring sectors could be varied whilst in motion. The small aperture in the window was provided with a shutter through which two circular holes of one inch diameter were made. On the outside of the shutter was an arrangement to hold absorbing plates which intercepted the incident light. Three colours were thus examined. The first was a combination of gelatine plates which allowed no rays to pass through, except those between the red end of the spectrum and 604 $\mu\mu$. The second was a green composed of different green, yellow-green, and blue-green gelatines, which reduced the light transmitted to the region of 563—491 $\mu\mu$; the third was a blue which absorbed all waves longer than 492 $\mu\mu$. Both holes were also obscured by tissue papers till in full opening of the episcotister the intensities of the two were judged equal. Before these openings rotated the double episcotister at a speed of over 50 revolutions per second driven by an electric motor. Now if one of the two apertures was coloured, the other uncoloured, and they were, by means of tissue papers and episcotister, brought to apparently equal intensities, then an equal reduction of intensity, by increasing the obscuring angle of the episcotister, would make them appear unequal; which inequality could be again compensated by an additional subtraction of light from the brighter aperture. The three tables IX to XI (page 66) contain the results.