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An Account of some Experiments of Light and Colours formerly made by the President and mentioned in his Optics, repeated before the Royal Society by John Joseph Desaguliers, by order of the said Society.

On the 20th of June the Sun not shining I only made the following Exp. and

Having tied together end-wise two pieces of Ribbon 4 inches long, the one blue and the other red, whose common breadth was 5 of an Inch, I caused it to be held in such manner that the Light which fell upon it from the Clouds to the Window was reflected in such manner that the Angle made by any Ray of Light which came in at the middle of the Window, with the Plane of the Ribbon produced was equal to the Angle made by a Line drawn from the Ribbon to my Eye and the said Plane of the Ribbon. My Eye was placed so as behind the Ribbon as the Window was before it, the Distance from which to the said Ribbon is about 12 feet. Then looking through a Prism at the Ribbon it appeared broken in such manner as the Angle, where the Blue and the Redjoin, the Prism was held with the refracting Angle downwards (or laid with one of its Planes flat upon the Table) the blue half of the Ribbon appeared to be carried down lower than the red as at B, R in the figure; but if the refracting Angle of the Prism was turned upward as when the Prism has one of its Planes laid flat to the forehead just above the eyes, then the blue half of the Ribbon was lifted up as at B, R in the figure.

The Prism was of white glass having every Angle of 90 degrees; but when instead of it one of a greenish sort of glass (such as Object glasses of Telescopes are made of) was used, having the refracting Angle which I took to be of about 90 degrees the same Phenomenon appears more distinctly, this glass having no Veins, but the red and blue were not so much broken off from each other. If the refracting Angle of the last Prism had been as great as that of the first, the Light being transmitted thro' too great a Body of greenish glass, the Phenomenon would not have succeeded so well.

The blue Ribbon being somewhat too pale and the red a little dull, I repeated the Experiment with a Sheet of blue and one of red wooded joyn'd together in the middle as the Ribbons were before; and the blue of the one and red of the other being very intense, the Experiment succeeded better with both Prisms.

All that were present finding the Experiment found it to succeed; and that