number of pieces, each of them adjusted to give a different length of path. Thus one or two exposures would suffice to determine the visibility curve of the line in question.  

George E. Hale.

March 18, 1895.

NOTE ON THE EXPOSURE REQUIRED IN PHOTOGRAPHING THE SOLAR CORONA WITHOUT AN ECLIPSE.

In a recent article "On some Attempts to Photograph the Solar Corona without an Eclipse" I described the Huggins apparatus of the Observatory on Mount Etna, and referred to some experiments made with it with the object of ascertaining the exposures required for the Moon and the solar corona respectively. The corona-like images obtained with this apparatus did not appear to me (or to Professor Riccò) to represent the true corona. Among the reasons advanced in support of this conclusion was one that I have since found to be inconclusive. I therefore desire in the present note to modify my previous statement.

It seemed to Professor Riccò and myself that the extremely short exposure required with the Huggins apparatus must be altogether insufficient to cause any impression of the coronal image upon the photographic plate, because with the same apparatus the corona could not be photographed during an eclipse with many times this exposure. As the brightest parts of the corona probably exceed the Moon in brightness, experiments in photographing the Moon at night sufficed to establish the truth of this last assertion. We overlooked the fact, however, that the Moon can be photographed in the daytime with an exposure much shorter than that required at night. At the Lick Observatory Mr. S. W. Burnham photographed the Moon in daylight with an aperture of and an exposure of \(\frac{1}{10}\) second. Using the same ratio of focal length to aperture, and a plate of the same make and sensitometer number, we have recently been unable to obtain any image of the Moon in the first quarter with an exposure less than \(\frac{1}{4}\) second.

It thus appears that though a feeble light acting upon a photographic plate during a given time may produce no developable image, 

1. A. and J. October, 1894.
2. See this Journal, January, 1895.