

(5) Plans to Photograph the Corona. Reproductions which show satisfactory detail of the corona are usually pencil sketches or paintings, since the ordinary photograph is not suitable for reproduction of the more interesting details. This is because the very bright light near the shadow of the moon causes over-exposure by the time any impression has been produced by the extremely weak light at the outer edges of the corona. A continuous representation that is satisfactory over the whole region has not been made. To help this situation, we plan to cut down the bright light near the sun in a known way so that details will be recorded in all parts of the plate and yet true intensities can be deduced after allowance is made for our reduction during exposure. This information will be obtained with the concave speculum mirror and the telescope. A more detailed study, including accurate spectral analysis will be made with the glass and the grating spectrograph. The accurate wave-lengths of the colours in the corona will be measured and the intensities with which these appear at different distances from the sun. Possible motions of gases in the corona will be examined by shifts in position of the spectral lines.

(6) Motion Pictures of the Eclipse. Since the image of the sun formed in the ordinary motion picture camera is much too small for satisfactory reproduction, a special long focal length lens will be attached to a regular camera for photography of prominences and corona. Neutral and colour filters will be used to ensure a good reproduction of the more interesting features. Also the camera will keep an exact record of the progress of the eclipse at its critical stages. If the pictures prove to be good, we plan to supply some explanatory words to accompany them.

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