

On July 6th the same appearance was more carefully observed by E. S. H., J. M. S. and J. E. K. A projecting spot was seen by E. S. H. at 8^h 3^m P. s. t. At 8^h 45^m it curved upward and nearly met another smaller projecting spot some 2" farther toward the south. J. M. S. considered that there was an actual connection, although it was very faint.

The lower spot, although it changed considerably in shape, remained visible for more than an hour, and was observed to be always situated on the end of a long bright strip of the surface of the planet which lies north of *Deuteronilus*. The simplest interpretation of the phenomenon is therefore that this strip is (or was at the time of observation) elevated above the general surface. At about 10^h 25^m of July 6 the aspect was much the same as that of the spot seen on the preceding night and was no doubt produced by the same part of the planet.

Sketches were made at different times by all the observers. The principal "canals" of SCHIAPARELLI was seen as broad diffuse bands, usually very faint, but one, the *Gihon*, was remarkably strong.

It is a fact of some interest that both satellites of *Mars* were seen on one of the public nights (June 14) by a visitor, a lady, who was unaware of their existence, and that their positions were correctly indicated by her in a sketch. The planet was in the centre of the field, and not hidden behind a bar. Many other visitors saw the satellites when their positions had been pointed out.

E. S. H., J. M. S., J. E. K.

PHOTOGRAPHS OF *VENUS* AND OF *MERCURY* IN DAYLIGHT.

On July 21, a negative was made of *Venus* in full daylight with the great telescope, at 3^h 30^m P. M., with the planet one hour west of the meridian. The plate was Seed 26, the aperture eight inches, $\frac{a}{f} = \frac{1}{71}$, and the exposure 0^s.13. There is a very strong contrast between the limb and the sky, which would have been even stronger if we had used a slower plate, a smaller aperture, and a quicker time. On August 11, similar negatives were made of *Mercury* with apertures of eight and six inches (the latter the best).

E. S. H. AND W. W. C.

PHOTOGRAPHS OF *ALPHA LYRÆ* IN BROAD DAYLIGHT.

A series of pictures of *Alpha Lyræ* was taken on August 18 with the great telescope about 5 P. M. with apertures of 33, 15, 8, 4 inches,

and with a constant exposure of $0^s.13$. The images are quite dense, so that good paper prints can be made from them. Such results have a theoretical importance in their bearing on the general problem of photographing small contrasts—as in photography of the Corona, for example. It will be of value also to be able to photograph the moon or one of the inferior planets during a close approach to a fixed star, either day or night, which can now be done under favorable conditions.

The first photographs of stars were made by the two BONDS, at the Harvard College Observatory in the years 1850–60. At first an exposure of ten seconds or more was necessary to obtain an impression of *Alpha Lyrae* on a dark sky! With our present plates it is difficult to get an exposure quick enough for such a picture.

To appreciate the amazing delicacy of sensitive plates, let any one look at the intensely bright sky at noon and reflect that modern plates are competent to register the extremely small contrast between the light of a star and the luminous background of the daylight sky on which it is projected.

E. S. H. AND W. W. C.

APPOINTMENT OF MR. LEUSCHNER IN THE UNIVERSITY OF CALIFORNIA.

Mr. A. O. LEUSCHNER has been appointed to be Instructor of Mathematics in the University of California, and will take up his new duties about September 15, 1890.

E. S. H.

ABSORPTION OF THE PHOTOGRAPHIC RAYS OF LIGHT IN THE EARTH'S ATMOSPHERE [BY DR. J. SCHEINER, ASTRO-PHYSIKALISCHES OBSERVATORIUM, POTSDAM].

This subject has been spoken of in various places (among others, in the *Publ. A. S. P.*, vol. I, pp. 51, 63, 64, 114, 121). Observations to determine the absorption have been made at Harvard College Observatory, at Potsdam and at Mount Hamilton. No results have yet been published, and therefore the following paragraphs from an important article by Dr. SCHEINER in the *Astronomische Nachrichten*, No. 2969, will be of interest. Dr. SCHEINER says:

“It is to be expected that the effect of atmospheric extinction of light upon measures of photographic magnitudes will be very nearly the same as the same effect upon a ray of that particular wave-length which has the maximum photographic influence upon the sensitive