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CHICAGO ACADEMY OF SCIENCES.

SECTION OF MATHEMATICS AND ASTRONOMY.

The regular meeting of the Section of Mathematics and Astronomy of the Chicago Academy of Sciences was held at the Dearborn Observatory, Evanston, on Tuesday evening, Oct. 4th, 1892. Prof. G. W. Hough was in the Chair.

The minutes of the last meeting were read and approved.

Mr. S. W. Burnham made some interesting remarks on the new satellite of Jupiter. Mr. Barnard’s discovery is by no means to be regarded as an accident, as Jupiter has been watched by this observer for many years. Up to June of the present year, Mr. Barnard has been using the 12-inch telescope of the Lick Observatory in the examination of Jupiter’s surface-markings and the phenomena of the satellites. In July he was able for the first time to employ the 36-inch telescope for this work, and a very careful search was made for possible satellites. On Sept. 5th a very small star was seen close to the planet, and as it was at once suspected to be a new satellite, its position with reference to the third satellite was measured. On the two following nights it was reobserved, and no doubt remained as to its true nature. It is described as a much more difficult object than the satellites of Mars, and therefore can probably be seen with only the largest instruments. The period is very nearly $11^h 59^m$, and the distance from the planet’s centre about 112,000 miles.

Prof. Hough spoke of the importance of the discovery, and of its relation to Galileo’s discovery of the first four satellites.

Mr. Burnham added that the claims of the various observers with small telescopes as to their pretended discovery of the satellite were evidently not to be considered for a moment.

The next paper, “On the New Star in Auriga,” was read by Dr. Henry Crew, of North-western University. The discovery and earlier observations of the Nova were described, and the various remarkable features of the Nova and its spectrum were pointed out. Prof. Crew’s observations were made with the 36-inch
telescope of the Lick Observatory. With a single prism the
spectrum was very brilliant, but it was very faint with a grating.
Attention was called to the peculiar way in which the lines faded
away as the star declined in magnitude. Two lines in the red,
which were very faint when the Nova was brightest, became
brighter as the magnitude decreased, and finally surpassed even
C itself. Dr. Crew considers the reappearance of the Nova as a
nebula, as distinctly opposed to Mr. López's meteoric theory.
The various other theories were reviewed and commented upon.

Mr. Burnham remarked, in answer to a question as to the
position of the Nova, that Mr. Barnard had found by a series of
measures that not the slightest change had occurred since the
disappearance in the spring. He considers the mode of discovery
as offering great encouragement to amateurs having small instru-
ments. An observer with a large telescope depends so exclusively
upon the circles in setting, that he loses his familiarity with the
sky. The amateur's constant use of star-charts makes it much
more likely that he will notice new objects, though many probably
escape attention.

Dr. Crew exhibited Prof. Campbell's new map of the Nova's
spectrum, and pointed out the chief nebular line.

In speaking of Mr. Barnard's observations of an extremely
faint nebulosity now surrounding the Nova, Mr. Burnham expressed
his perfect confidence in Mr. Barnard's ability as an observer by
stating that he would rather trust Mr. Barnard's observation of a
very difficult object than believe in the testimony of his own eye.

Prof. Geo. E. Hale, of the Kenwood Observatory, described an
automatic spectro-heliograph recently devised by him. When
once adjusted and set in operation the instrument will take photo-
graphs of the Sun, showing spots, facula, and prominences at any
desired interval throughout the day. It is expected that such an
instrument will soon be in daily use at the Kenwood Observatory.

Prof. Hale also presented some remarks on a recent communi-
cation by M. Deslandres to the Paris Academy of Sciences. In his
paper M. Deslandres suggests a method of determining the velocity
of the axial rotation of stars. The method depends upon M.
Deslandres's statement that the solar facula are sometimes
sufficiently bright to show the H and K lines reversed in the solar
spectrum as photographed with an integrating spectroscope.
Prof. Hale criticised M. Deslandres's method, and proposed a
means of testing its applicability which will shortly be presented
to the Paris Academy of Sciences.

Dr. Crew remarked that he considered M. Deslandres's method
disposed of by Prof. Hale's criticism, and thought it hardly
necessary that the test be applied.

Prof. Hough made a few remarks on the present appearance of
Jupiter and the Red Spot, which is now very faint and may
completely disappear. He considers it identical with the spot
seen by Cassini to appear and reappear every six years.
The Meeting then adjourned, and the remainder of the evening was spent by the members in observing Jupiter and other objects with the 13½-inch telescope of the Dearborn Observatory.

GEORGE E. HALE, Recorder.

THE ASTRONOMICAL SOCIETY OF THE PACIFIC.

Minutes of the Meeting held at the Lick Observatory,

September 3, 1892.

President Schaeberle presided.

The minutes of the last meeting as printed in the ‘Publications,’ were approved.

A list of presents was read by the Secretary, and the thanks of the Society voted to the givers.

Special attention was called to an enlarged transparency on glass of the Moon (twenty inches square) and an enlarged positive on glass of Jupiter, presented by the Lick Observatory, and to a number of photographs representing the buildings and instruments of the Lick Observatory, presented by Henry E. Mathews.

At a previous meeting of the Board of Directors, Mr. F. McClean, of Tunbridge Wells, England, was elected a Life Member, and 38 other new members were elected.

The Secretary read the names of members duly elected at the meeting of the Directors.

The following papers were presented:

4. “Discovery of a New Crater on the Moon—Negatives of the Lick Observatory,” by Professor Weinek, of Prague. (Translated by F. R. Ziel.)
5. “Note on the August Meteors of 1892,” by Professor Kirkwood, of Riverside.

Adjourned.

F. R. ZIEL, Secretary.

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