



The Journal of the Astronomical Society of India.

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Report of the Meeting of the Society held on Tuesday, the 28th May 1912.

THE usual Monthly Meeting of the Astronomical Society of India was held in the Imperial Secretariat Buildings (Ground Floor), on Tuesday, the 28th May 1912.

H. G. TOMKINS, C.I.E., F.R.A.S., *President*, in the Chair.

S. C. GHOSH, M.A., *Officiating Secretary*.

Mr. Ghosh read the minutes of the previous meeting which were confirmed.

The following presents to the Society were then announced, and a vote of thanks was accorded to the respective donors :—

1. Monthly Notices of the Royal Astronomical Society (Vol. LXXII, No. 5).
2. Journal of the British Astronomical Association (Vol. XXII, No. 6).
3. Bulletin of the Astronomical Society of Barcelona for April 1912.
4. Rivista Di Astronomia Anno VI, No. 4.

5. Annuaire Astronomique Pour 1913.
6. The Collegian Nos. 1 and 2.
7. Annual Report of the Director, Kodaikanal and Madras Observatories for 1911, and Bulletin No. XXV.
8. Bengali Magazine "Bijnan."

The election at the last Council Meeting of the following gentlemen as members of the Society was then confirmed :—

1. MR. ASHUTOSH BANERJEE, M.A.
2. ,, HARELAL DHAR, B.A.
3. ,, SRISH CHANDRA MITRA, B.A.
4. ,, BHUJENDRA NATH CHATTERJEE, B.A.
5. ,, ABINASH CHANDRA BOSE, M.A.
6. ,, UPENDRA CHANDRA MITRA, B.A.
7. ,, DHIRENDRA NATH DAS.

The President then invited the members who had not signed the Roll to do so, and after this was done, he formally admitted them to the Society.

President.—Before proceeding any further I wish to refer members to Bye-Law No. 10 which lays down that at their next ordinary meeting in June the Council shall take into consideration the subject of the election of Officers and Council and decide upon a list of names to be recommended to the Society at the ensuing Annual General Meeting. This list, together with all such lists as have been duly transmitted under Bye-Law 9, shall be circulated among the members. Should the members wish to put in any other names in the list they are free to do so. I shall have the lists circulated as early as possible so as to enable the members to give the matter their attention.

The President then said that Dr. Harrison's Telescope was ready for use, and after Mr. Lee had kindly explained the way to use it, he and Dr. Harrison hoped that the members would recollect that it was given for them to use and not to lie in the Library to be looked at. He then called on Mr. Lee to explain the instrument.

Mr. Lee.—At the bottom of the tube is the concave reflector held in its place in the axis of the tube by three screws which are seen round the tube. The mirror has to be placed at right angle to the axis of the telescope and it is adjusted

in its place, so as to be exactly across the axis, by the three adjusting screws, at the bottom of the tube, which press on the back of the mirror.

Light, from the object to be viewed, comes into the telescope at its open end and is reflected back straight up the tube, converging to a focus. Before the rays reach a focus they fall upon a small flat mirror placed in the axis of the telescope, at such an angle that the rays are reflected out through the side of the tube and into the eye-piece. The eye-piece is an ordinary astronomical eye-piece.

The mounting is a kind of equatorial, by means of which one of the axes upon which the telescope turns is parallel to the Earth's axis of rotation, and as a celestial object moves in the sky the telescope can follow it by a single motion instead of having to make a zigzag as with the ordinary telescope mounting an alternation of little horizontal and vertical movements. There is a screw on the top of the mounting by which the telescope can be moved slowly in right ascension so as to follow a star quite slowly and continuously as it moves.

There is nothing difficult or abstruse about using a reflector, its chief difference to an ordinary person is the convenient position of the eye-piece so that one looks almost horizontally into it, and the observer does not need to lie down nor to crane his neck into an uncomfortable position, as with the ordinary refracting telescope, in order to observe an object high up in the sky. There is no necessity for special observing ladders and chairs, nor for hydraulic floors.

The President then asked the members if they had any questions to ask about the instrument, and expressed his hope once more that the members would make use of the instrument now that they had it, as the excuse hitherto had been that they had no instrument to work with. He hoped that they would take up certain lines of work, and suggested that it would be very pleasant for members to work in pairs so as to assist each other. Those who wished for help in selecting a line of work could obtain it by asking for it.

A vote of thanks was accorded to Mr. Lee for his description of the instrument.

The President then announced that there were three papers to be read that evening and referred to the paper by Mr. McInerney, on the construction of a Universal Sun Dial which was read at the last meeting, but which was rather difficult to understand owing to the absence of the slide to

explain it fully. He called on Mr. Simmons to read the paper again. This was done, and the lantern slide was shown on the screen. The President asked if there was any one who would like to ask any questions, and the members then accorded their thanks to Mr. Simmons for reading the paper.

Mr. Raman next read a very interesting paper on the "Diffraction of light and its relation to the performance of telescopes," illustrating it with a number of diagrams and lantern slides.

President.—I think several of us will be interested by what Mr. Raman has said to-night. Anybody who is used to Telescopes must be accustomed to the diffraction rings round the stars. In a perfect telescope there will be seen a star which looks like a pearl and round it one or two diffraction rings. I have never heard the explanation before of the intensity of the rings. It is most interesting, and I am sure we shall all look forward to reading Mr. Raman's paper in the Journal. I would ask you to thank him for the trouble he has taken in presenting us with this very useful and interesting paper and in making the slides for us.

The thanks of the members were then accorded to Mr. Raman.

President.—I would now ask Mr. Bell to read his paper on the recent Solar Eclipse in England.

A photograph of the eclipse which was taken in Lincolnshire was shown on the screen by means of lantern slides.

The President asked the members if they had any questions to ask regarding the paper or the photographs.

Mr. Simmons.—One interesting point to note is that the last eclipse took place in 1858, which is a period of 54 years (equal to 3 Saros) between the last eclipse and this one in April, and if you calculate 54 years from now you will have another eclipse in 1966.

President.—The only photograph of the eclipse we have got is the one shown by Mr. Bell which was taken by his son.

He then showed some more lantern slides on the screen of the Planets, Jupiter and Saturn.

The meeting was then adjourned to the last Tuesday of June. This will be the last meeting of the Session till the meeting in October,