

The Journal

of the

Astronomical Society of India.

VOL. I.]

SESSION 1910-1911.

[No. 3.

Report of the Meeting of the Astro- nomical Society held on Wednesday, the 21st December 1910.

H. G. TOMKINS, Esq., F.R.A.S., *President*, in the Chair.
P. N. MUKHERJI, Esq., M.A., F.S.S., *Secretary*.

The minutes of the previous meeting were read and confirmed.

It was then announced that the following members had presented donations to the Society to furnish a library and quarters :—

Library.

	Rs.
H. G. TOMKINS, Esq., F.R.A.S. . . .	75
N. VIJAYARAGHARAM	25
C. K. SARKAR, Esq., C.E., M.S.A., M.S.E. . . .	10
SARODA CHARAN MITRA, Esq., M.A.B.L. . . .	50
U. L. BANERJI, Esq., M.A.	5

Quarters.

H. G. TOMKINS, Esq., F.R.A.S. . . .	75
P. C. BOSE, Esq.	10

The thanks of the meeting were accorded to the donors.

The election by the Council of the following new members was confirmed :—

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| 1. MAJOR T. R. MACLACHLAN.
2. CAPTAIN F. C. MOLESWORTH,
R.E.
3. THE HON'BLE MR. J. S.
MESTON, C.S.I., I.C.S.
4. J. McCANN, Esq. | } | 5. ANATH NATH CHOWDHURI,
Esq., M.A.B.L.
6. COLONEL S. G. BURREARD,
R.E., F.R.S.
7. JNANENDRA NATH GHOSE,
Esq., B.A. |
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The President next called on Mr. Rakshit to tell the meeting the results of the observation of the Geminid meteors.

Mr. Rakshit stated that he had received details of observations from several members, and that had not the moonlight interfered the display would probably have been a bright one. As it was, the observations pointed to the occurrence of the maximum of the shower in the early hours of the 12th December. Mr. Sitaramaiya of the Kodai Kanal Observatory had sent details of eleven meteors seen by him and another member, Mr. G. N. Mukherji, had also done the same and given the trails in a rough chart which he had made. The radiant was clearly traceable from many of them. Others who had seen the shower active were Mrs. Voigt and Mr. Connell. They had all seen them in the small hours of the morning, the early part of the night being barren.

Mr. Rakshit then gave the position and details of the next shower which was due on the 2nd and 3rd of January.

Dr. E. P. Harrison next read his paper on the tint of the moon when totally eclipsed, explaining it with the aid of a diagram thrown on the screen. Dr. Harrison stated that the paper had arisen out of the discussion at the previous meeting regarding the colour of the eclipsed moon, and he therefore put forward the explanation in more detail than was possible on the spur of the moment at the last meeting.

The thanks of the meeting were accorded to Dr. Harrison for his interesting paper.

Mr. Banerji then read a paper on the landscape which would be visible to an observer on the moon on the floor of the ring-plain Plato.

Mr. Banerji explained that he had been tempted to look into this matter on considering that were an observer actually on the surface of the moon, the scene around him would probably be very different from what we imagined when observing from the earth, in the same way as the terrestrial view would probably change considerably to the eye if we could observe it from the moon. Mr. Banerji then put diagrams on the screen which supported this conclusion, showing the effect that would be produced by placing the observer on different parts of the floor.

The President, in asking the meeting to accord their thanks to Mr. Banerji for his most interesting paper, remarked that Mr. Banerji had taken up a line of investigation which was well worth pursuing, as most observers who looked at the moon got into a habit of regarding the lunar features only as a whole, and often failed to appreciate what they would really look like if they were standing on the lunar surface. In

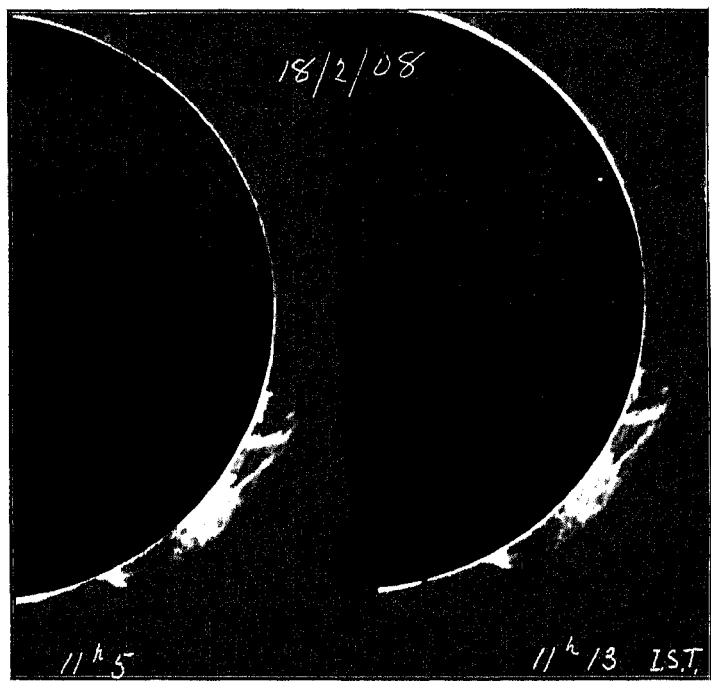
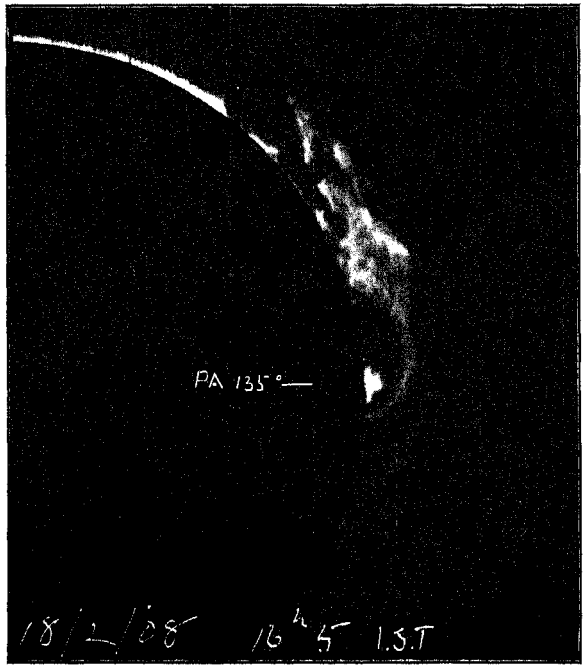


Photo.-Engraved & printed at the Offices of the Survey of India, Calcutta, 1911

Solar prominence photographed at the Kodai Kanal Observatory with the Spectroheliograph in the light of the calcium line K on the 18th Feb. 1908.

comparing what we saw there with what we experienced on the earth, this was most important, and it was to be hoped that Mr. Banerji would continue his investigations in the case of other formations on the moon.

Dr. E. P. Harrison, the Director of the General Section, then showed a series of slides kindly sent for exhibition by Mr. Evershed at the Kodai Kanal Observatory. In doing so, Dr. Harrison briefly explained the nature of the spectroheliograph with which instrument they were taken, and in showing the slides gave details regarding the nature of prominences. The photographs, he remarked, brought out very beautifully the extraordinary and rapid variations in the structure of the prominences.

The first four slides showed a large prominence taken on the 18th February 1908 which increased in size during the day and finally separated itself from the sun's limb, ascending into space with accelerating speed. When last photographed just before sunset, it was about 9' or roughly 240,000 miles above the limb, and was moving away from the sun at the rate of over 50 miles a second.

Next came two photographs of a prominence taken on the 14th December 1908, showing vast changes in structure in the interval of an hour and a half; prominences taken on the 13th August 1908 showing a fine structure, another taken on the 23rd September 1909 of filamentary form, and then two magnificent pictures of jets over a large sunspot on the west limb. The last two, which were taken on the 7th January 1910, were also shown on an enlarged scale, which brought out excellently the details of their structures. Finally, two slides of spots and calcium flocculi were shown. These plates illustrated the tendency to form pairs of spots north and south of the Equator; they also showed well the fine structure all over the sun's disc.

The photographs were all taken at Kodai Kanal with the spectroheliograph in the light of the calcium line K.

The President remarked that the Society were fortunate in having these beautiful slides lent them from the Kodai Kanal Observatory. The work done there took its place with that of the great observatories of the world, and the observations were made by magnificent instruments in the hands of highly-trained men.

Hitherto very few of those who lived in India had enjoyed the chance of seeing any of the work done by professional observatories, but, as members were aware, the Director (Mr. Michie Smith) and Mr. Evershed had joined the Society and were good enough to lend t some of the photographs at

Kodai Kanal. The slides just shown, like those they had recently of Halley's Comet, were very fine specimens of what was turned out, and he thought members were to be congratulated on having obtained such an asset to their meetings and publications.

The thanks of the meeting were then accorded to Mr. Evershed with applause.

Mr. Woodhouse showed some photographs of the moon he had taken at the Presidency College, and drew special attention to one of his slides which had been made by means of the wet process. The slide possessed a fine rich tone which was much admired.

Mr. Woodhouse then read a short paper on the adjustments necessary for an equatorial telescope.

The thanks of the meeting were accorded to Mr. Woodhouse for his slides and paper.

The meeting was adjourned until the 31st January 1911 at 5 p.m.

The Crater Plato as viewed by an Observer on the Moon.

BY U. L. BANERJI.

The entire surface of the moon visible to us is covered by numerous mountains, ridges, plains and craters. The latter class consists of formations, which, when seen through telescopes of low magnifying power, appear like the craters of volcanos on our earth, although they are really diverse in character, the like of which can hardly be seen here. Astronomers divide them into different classes, *viz.*, walled plains, mountainous rings, ring planes, craters, crater plains, etc., according to the size and nature of these formations. Those belonging to walled plain class generally vary from 40 to 150 miles in diameter, surrounded not by a single wall but generally by an intricate system of mountainous ranges united together by cross walls. These mountains are again separated by valleys and covered by numerous ravines. Towards the exterior and interior of these walled plains can be seen several projections or arms extending in different directions. Sometimes these extending arms unite more than one walled plain and then terminate in lofty peaks, and sometimes extend to great distances as mountainous ranges. The inside of these walled plains is often level; sometimes crater cones or ridges are visible here and there, occasionally terminating in low mounds in the middle.