NOTTINGHAM ASTRONOMICAL SOCIETY.

BULLETIN.

No.28 NOVEMBER, 1948

COMMENT.

With the approach of that major festive season, Christmas, it seems that several members' minds have turned to thoughts of a social nature. One feels inclined to think that this social mindedness at this season comes from time immemorial, but it would not be strictly true for it seems that the modern conception of Christmas is of comparitively recent origin. In point of fact we think it was Charles Dickens who started it all with his immortal Christmas Party in 'Pickwick Papers', and, of course, with his inimitable 'Scrooge.'

The idea is that all members who could attend either a dinner or supper to be held at one of the local hotels, and that either one or two people of some local prominence in the field of science should be invited to attend, they to give a talk to us lesser mortals. We want your opinions on this - and also your support should we decide to carry on with the project. We cannot tell you the exact cost as yet but the maximum figure would be 10/6d., and probably a good deal less that this figure we hope.

Further we should like you to recall that last year we made a similar effort jointly with another scientific society, but without success, so do let us make a real effort this year. Since we have lost the services of Mr.Ashmore we have not had a single social outing of any kind.

AN APOLOGY.

We wish to express our sincerest regret for the delay in sending you last month's Bulletin. This delay was quite unavoidable but we will endeavour not to let it occur again.

THE NIGHT SKY FOR DECEMBER, 1948.

The Julian date for December 0 is 243 2795. For other dates add the date.

THE SUN. Solar rotation No.1273 began on November 6. Rotation No. 1274 begins on December 3 and rotation No.1275 on December 30.

Spot activity is still substantial and a series of drawings from M.J.Dean covering the period from September 26 to November 4, mainly at week-ends, show three, four, or five separate groups on each occasion.

THE MOON. Full moon is on the 16th, rising at sunset, but moonrise is a full hour later by night thereafter.

There are no occultations of stars brighter than 6th magnitude before midnight. A very poor year in this respect thus draws to a disappointing close.

THE PLANETS. Venus remains in the morning sky, but is lower and no longer such a dominating object as it was in the autumn. It cannot be mis-identified because of its great brightness rather low in the south-east before dawn.

Saturn, near Regulus in Leo, can still be located from the notes in the last Bulletin. It has already been observed by Mr.W.E. Fox, who described the extreme narrowness of the ring system at the last meeting.

VARIABLE STARS. Evening minima of Algol can be observed on December 7th about 9h. GMAT, 10th about 6h., 27th about 10h., and 30th about 7h.30m. All these times are free of moonlight and it is hoped that we may obtain some positive results.

Mira Ceti has been followed by several members who agree that the maximum was about 4th magnitude. It was fading slightly but unmistakably, by the beginning of November. It will remain a binocular object when it fades beyond naked eye reach, and it is then, in some ways, a more satisfactory object to deal with as the comparison stars are much nearer at hand.

FIXED STARS. The groups given in the last Bulletin are still the best for costellation learners, and are slightly more convenient to see as they are higher above the eastern horizon. Leo, with Regulus and Saturn rise before midnight, but not yet early enough for the open air meetings.

The Night Sky, cont:

DARKNESS. Twilight is now officially recognised in three degrees, Civil when the sun is 6° below the horizon, nautical at 12° and astronomical at 18°. Outdoor occupations become difficult or impossible at the first, most of the sky is fairly dark at the second, and it ceases to get any darker at all after the third. Individual observers with special needs can soon learn to interpolate their own twilights between the various official degrees from the short tables published in the Nautical Almanac. For December 1 (Rotha) the three evening twilights end at 4.33, 5.17, and 5.59. For December 15 at 4.30, 5.15, and 5.57. For December 30 at 4.37, 5.23 and 6.06.

THE PROFESSIONAL ASTRONOMER.

The ranks of professional astronomy embrace all those who earn their livings in the subject, many of quite modest attainment directed by a cadre of experts equal in intellect to any to be found in the world. The majority, contrary to general belief, carry out all their work in the usual daytime office hours and have little or no contact with the massive apparatus that is first brought to mind in the word "observatory". A few photographic plates obtained by an observer may provide hours of work for the other staff in measuring, reducing, entering into records and preparing for publication, and it has been well said that it is WORK that is done within an observatory, most of it as ruthless, monotonous and soul-destroying as anything that is done in a factory or an office.

The professional observatories, that is, those run by salaried staffs, can be graded roughly into three groups, the national observatories which are maintained from public taxation, the University observatories, and a miscellaneous group endowed as public or private memorials, or established by municipalities or charitable trusts and the like. It is impossible to draw a firm line between the work done by each, for the needs of astronomy vary from age to age, and it is unlikely that any observatory restricts its work solely to the purposes for which it was established. Their purpose always is to collect the great mass of solid facts and to publish them, so that the science can progress. In this respect it is worth remembering that the first claim on their time and effort is to do the work that can only be done by their great instruments and technical skill. They are only too willing to leave to the organised amateurs what can be done with more modest means, and there is plenty of that, and to provide any expert help they may require.

The great national observatories were set up originally for the improvement of navigation - some may since have been established from motives of national prestige - and they have always devoted their main effort to the greatest attainable precision in fundamental astronomy of position and time determination. In conjunction with their work the major nations have also included a computing department for the publication of a national ephemeris or almanac, originally for the use of seamen, but now of more general astronomical purpose. It is interesting to recall that the first of these national observatories was the Royal Observatory at Greenwich, founded in 1675, and the first issue of the annual "Nautical Almanac" was made in 1767 by Nevil Maskelyne, the fifth Astronomer Royal. These observatories with their great programmes of precise work, have the greatest need for "after-treatment" of the observations, and in modern times have developed a system akin to mass production methods whereby a few expert leaders break down complicated processes so that stage by stage they can be performed as routine operations by a staff of quite ordinary abilities equipped where possible with machines.

The University observatories have always been pioneers in the realm of pure research, and the professors in astronomy and the staff of the faculty usually constitute the staff of the observatory. Many of them in Europe and America have very fine records behind them. They are less strongly equipped for fundamental astronomy, except for instructional purposes. The miscellaneous group embrace many kinds, especially in America, which undertake both educational work and research and some of these are in the very front rank, both from the point of view of their equipment and their directors.

The Professional Astronomer, cont:

Astronomy has always been fortunate in its professional leaders, and it has always drawn many of the finest minds of the age, despite the fact that the scale of emoluments for the standards demanded must be among the lowest in the professional or commercial world, and that few can expect to reach the highest ranks as directors of great observatories - positions reached through eminence in astronomy, but where much time and thought must be given to accountancy, secretaryship , staff welfare and estate management, as well as the real business of carrying out an astronomical programme and maintaining the instruments. Endowments or income are limited, and even in astronomy work must be done to a price. It is not the least of our debts to the professional that if a programme must be limited in size, the high quality of what is done is never sacrificed, and the quantity is as great as devotion to service can achieve.

THE OBSERVING SECTION OF THE LUNAR SECTION B.A.A.

Early this year Mr.P.A.Moore, a member of the B.A.A. Lunar section, suggested that a nucleus of observers with small instruments only, should be formed within the lunar section itself for the purpose of giving those observers a better chance of doing some really useful work. Subjects suitable for small instruments were chosen and the direction was taken by Mr.P.A.Moore, with Mr.R.M.Baum as secretary.

An advantage of small instruments over large is the comparitively large field of the former. This enables the observer to see the whole moon, or a very large part of it, at once and so have a large number of well known craters to use as reference points.

The subjects, therefore, were confined to a few which were suitable for low powers and large fields. They are, (a) Limb craters which have never been satisfactorily mapped. The limb is divided into twelve areas, each observer choosing as many as he could handle, and drawing or making notes on the appearance of them on as many nights as possible. (b) Obscure or partially destroyed craters. These are craters with very low walls and are only visible very near the terminator where the shadows are long enough for an observer to detect them. They have actually been discovered with a one and a half inch telescope. (c) Ray systems in the invisible hemisphere. These have never been mapped and it appears to be an absolutely new field of study. These ray systems should be watched for throughout a lunation, and any rays that are seen to disappear over a limb, and seem as if they might come to a focus on the other side should be plotted on a lunar chart or sketched with a few craters as reference points. (d) Light and dark variable spots and patches. In other words anything that is seen to vary in shape or size, position or colour, from one lunation to another or during one lunation, should be noted. This sort of observation could be carried on by observers who do not feel equal to making drawings, for in this work only descriptive notes are necessary, with perhaps a pencilled sketch showing position with regard to craters.

If there are any who would like to take up this work, their observations would be welcomed by the B.A.A., however valueless they may seem to the observer.

The Observing Circle distributes a "Selenographical Journal" every lunation. It is a masterpiece of drawing, all hand copied in Indian ink and pencil, and distributed in circular form. The observations of all members are recorded, however small.

M.J.DEAN.

NOTES, NEWS & ANNOUNCEMENTS.

Ordinary Meeting. The next ordinary meeting will take place at the Mechanics' Institution, Trinity Square, Nottm., on Thursday, 2nd December, 1948, at 7.30 p.m.

New Member. The Society offers a cordial welcome to

MISS M. BRYAN.

who was elected to membership on the 4th November, 1948.

Notes, News & Announcements, cont:

Subscriptions. The Hon. Treasurer wishes to point out that subscriptions for the session 1948/9 are now due. Will members help by letting him have them promptly. If, for any reason, members find they cannot attend the next meeting would they post their subscriptions to:-

A.K.Bennett, (Hon. Treasurer)
East Villa,
Gunthorpe,
Notts.

Cheques and postal orders should be crossed and made payable to the Nottingham Astronomical Society.

Open Air Meetings. We still meet at Trent Boulevard School for the open air session. This takes place on the third Thursday of the month, i.e. 18th November, 1948, or should the weather be such as to preclude any possibility of observation the meeting will be postponed to the following Thursday. Arrive about 7. 0. p.m. You get there by catching a No.12 'bus from South Parade, Alight at Lady Bay Road. Fare 2½d. 'Bus leaving at 15 minute intervals, starting at 6.27 p.m.

Talks. The Northrop Brothers continue their engrossing series of talks on the "Making of a Telescope". Next month will be the last of this series, and will be given by Mr.E.Northrop. This will be preceded by the President's usual but no less fascinating "Night Sky" talk.

Letters to the Editor. No, there is not a single one for us to publish but would members like to air their views on astronomy under this heading? Surely amongth our members must be some who have observed odd occurrences in the night sky to warrant a note to the Bulletin.

Found. After the meeting on 7th October, a pair of lady's Fair Isle gloves were found under one of the chairs in our meeting room. Would the owner please apply to the Secretary for the return of them.

ADDRESSES.

Director, Observing Section:
Mr.A. J.Lane Hall,
19, Hartington Road,
Sherwood, Nottm.
'Phone 66587

Hon. Secretary:
Mr.C.Halley,
18, Clarendon Street,
Nottingham.
'Phone 2738