

T H E  
NOTTINGHAM ASTRONOMICAL SOCIETY  
B U L L E T I N

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The Nottingham Astronomical Society was formed in 1946 to provide a rallying point for residents of Nottingham and district interested in the night sky.

COMMENT

Elections

Under this heading in the July Bulletin, an appeal was made to all members of this Society for names to go forward for election to the Committee in October. The response was nil. In every Bulletin since March, the Editor has appealed for speakers during the second half of the new session. Again, the response was nil. At the September meeting, which was poorly attended in view of the special nature of it, no nominations were made and no suggestions put forward although the talks programme was completed.

Why, is it that in Societies such as ours, so few are willing to help operate them? It might be remarked that no-one volunteers for any of the various official posts while the offices are filled only by direct request which is difficult to refuse. Most members are glad to use the Society's facilities but prefer to leave the arrangements of them in other hands.

Will the Annual General Meeting be well attended? We shall see! Another question could be "How many members read the Bulletin?"

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THE SKY FOR OCTOBER

The Julian Date for October 0.0 is 243 4285.5 For other dates add the date.

THE SUN

Solar Rotation No. 1325 begins on September 24 and No. 1326 on October 21.

THE MOON

Lunation No. 368 begins with the new moon of September 19 and No. 369 with the new moon of October 18. Phases are:-

368:	(New Moon: September 19	Full Moon: October 3
	(First Quarter: September 26	Last Quarter: October 10
369:	(New Moon: October 18	Full Moon: November 1
	(First Quarter: October 26	Last Quarter: November 9

The ~~October~~ Full Moon is the Harvest Moon, i.e. that which occurs nearest to the Autumnal Equinox on September 23. Its significance is in the rising of the moon at nearly the same time each night over the period of the full phase - assisting in the gathering in of the harvest. At Spring Full Moon, the moon rises over an hour later each night and the bright moonlight is thus quickly lost in the evenings. The November Full Moon will be the Hunter's Moon when a similar but not so pronounced phenomenon occurs.

October 6 sees a further series of occultations of the Pleiades when the gibbous moon passes in front of several of the fainter stars in the group at about 22.00 GMT. The first disappearance is at 21.54 GMT and the last re-appearance at 23.33 GMT.  
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THE SKY FOR OCTOBER (continued)THE PLANETS

Mercury is an evening star but is too close to the Sun to be visible.

Venus is also an evening star but also remains close to the Sun and is not likely to be seen easily in the bright western sky. Sets at 5.50 pm GMT on the 31st (Sunset : 4.40 pm GMT)

Mars is an evening star setting some four hours after the Sun but is now so far away from the Earth and therefore so inconspicuous (mag. 0.7) that it will only be glimpsed by members who know their sky.

Jupiter is above the horizon most of the night - after about 6.30 pm and is very bright (-2.4) as it approaches opposition on November 8. It will be the main winter planet for observation and is much higher in the sky this apparition than previously. In mid-winter, Venus and Jupiter should prove a splendid spectacle in the western sky after sun set - both being much brighter than any fixed star although Sirius - the brightest star - will also be on view.

Saturn is in conjunction on October 11 and will not be visible in the night sky.

Uranus is a morning star in Gemini while Neptune is also in conjunction on October 14 and will not be seen in the night sky.

THE STARS

The dominant star group will be the the great square of Pegasus with Andromeda (Great Spiral Nebula). Cygnus, the Swan, and Lyra (Vega) will occupy the western part of the sky while the Pleiades and Taurus, the Bull will be seen in the eastern sector heralding the approach of the main winter constellations. The Plough will be low on the northern horizon with Cassiopeia directly overhead.

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THE SUN

by

J. Richards

(2nd instalment)

Now if the latitude of the spots are plotted on a diagram they show a characteristic butterfly shape.

The sun-spot cycle is not perfectly regular as the present one shows, which is now at its minimum after a period of great activity which has lasted for so long after the maximum which was in 1947. Attempts at prediction for more than a little in advance have failed, but it is known that very many terrestrial phenomena such as the occurrence of ice-bergs in the North Atlantic and the growth of tree-rings show definite rhythms in the same period as the sun-spot cycle, viz. 11 years.

When observing the sun visually with a telescope and when the air is very clear and steady, a definite fine mottling can be seen all over the solar surface which is called granulation. This can be seen in a 2" or 3" telescope but with larger instruments of course it is of a finer texture, and seen to be changing every few minutes. At the same time it is also noticed that the edge or limit of the sun appears darker than the centre. Now these two features of the sun can be considered together. The sun is a globe of hot gas transparent to some extent, thus allowing us to see far into its atmosphere, perhaps 20 or 30 miles. The further we go into the sun from the surface, the hotter the sun gets, so on the surface the temperature is about 7,000°C, at 30 miles depth, it is about 10,000°C, and so on until at the centre it is probably 20,000,000°C according to Fred. Hoyle. At the centre of the sun looking down for 30 miles, the temperature is 10,000°C, but at the edge of the sun, our 30 mile downward view is a glancing one, so that we only see a layer of lower temperature area, accounting for the darkened limb of the sun (See diagram 3)

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The figure consists of three hand-drawn diagrams labeled (Diagram 1), (Diagram 2), and (Diagram 3).

**(Diagram 1):** A circle representing the Earth with a vertical axis. The top is labeled 'S' (South) and the bottom 'N' (North). Horizontal lines are drawn at 30° intervals from the equator, labeled '30°S', 'EQUATOR', and '30°N'. The left side is labeled 'W' (West) and the right side 'E' (East). A curved arrow at the bottom indicates the 'Direction of Rotation'.

**(Diagram 2):** A diagram showing two shaded, butterfly-shaped regions on either side of a central vertical axis. The axis is labeled with 'S' at the top and 'N' at the bottom. Above the axis, a horizontal scale is marked with angles: 36°, 30°, 24°, 18°, 12°, 6°, 0°, 6°, 12°, 18°, 24°, 30°, 36°.

**(Diagram 3):** A diagram showing a circular path with two points marked 'X' and 'Y'. Arrows indicate a counter-clockwise direction of rotation. The distance between X and Y is labeled '30 miles'.

The light from the sun is fed into the telescope by an arrangement of two plane mirrors called a coelostat. One of these turns on its axis and follows the apparent motion of the sun in the sky at such a speed that the reflected beam comes in a constant direction on to the other mirror which directs the beam down the telescope. (To be continued) (...to page 4)

ANNOUNCEMENTSNext Meeting

The next meeting will be held in the Mechanics Institution, Nottingham, on THURSDAY, OCTOBER 2ND, 1952, at 7.30 p.m. This is the Annual General Meeting of the Society during which the election of Officers and Committee for the new (Seventh) Session takes place. It is particularly important that all those members who have the interests of the Society at heart attend this meeting so that the election may take place in true democratic circumstances. After the election, the new President will give his PRESIDENTIAL ADDRESS.

The meeting will be preceded by a Committee meeting at 7 pm.

Election of Officers and Committee

A voting paper for the election of officers and committee for the new session, 1952/53, is enclosed with this Bulletin. Please complete it and post or hand it, unsigned, to the Secretary on or before the Annual General Meeting on October 2nd, 1952.

It should be stressed that further nominations may be made by adding any member's name (prior consent having been obtained from the member concerned) to the voting paper. Mrs. G.L. Hardy and Mr. E.A. Dale, as the two senior members of Committee, retire automatically this session and are not eligible for re-election until one year has passed.

Annual General Meeting - Agenda

A copy of the Agenda for the Annual General Meeting is also enclosed with this Bulletin. Please bring it with you.

Personal

The Editor is informed that Mr. D.K. Northrop has passed the recent examination at the College of Art. We offer our good wishes and congratulations to Mr. Northrop and hope that, unlike Mr. Emerson who gained his B.Sc. in July, this success does not mean he is to leave us for fresh fields.

Visit to Cambridge University Observatory

Arrangements will be put in hand this month for the above visit to the Cambridge University Observatory. Details will be announced in due course. In the meantime, Members are asked to reserve the date for this important occasion.

Open Air Meetings

The programme of Open Air Meetings for the new winter season are now under consideration and will be announced when completed.

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