

JOURNAL of the
ORWELL ASTRONOMICAL SOCIETY (IPSWICH)

October, 1975.

Editor. Mr. J. Deans,
[REDACTED],
CAPL ST. MARY.
Ipswich, Suffolk.

'Phone GT. WENHAM [REDACTED]

THE SUN, will be in the constellation of Virgo this month.

Synodic rotation No. 1633 commenced September 25.05d.

" " No. 1634 commences October 22.33d.

Heliographic Co-ordinates as at noon U.T.

	<u>P.</u>	<u>Bo</u>	<u>Lo</u>		<u>P</u>	<u>Bo</u>	<u>Lo</u>
Oct 3rd	+26.1°	+6.6°	248.4°	Oct. 19th	+26.1°	+5.5°	37.4°
" 7th	+26.3°	+6.4°	195.7°	" 23rd	+25.7°	+5.2°	344.6°
" 11th	+26.3°	+6.1°	142.9°	" 27th	+25.3°	+4.8°	291.9°
" 15th	+26.3°	+5.9°	90.1°	" 31st	+24.7°	+4.4°	239.1°

O.A.S.I. Sunspotting Project.

No observations have been received this month, would you please forward any observations made for rotation 1962 to the editor as soon as possible please.

NOVA CYGNI

Discovered by Honda on August 29.07 GMT at RA 21h 10m Dec. +47°50' (1950) the brightest nova in the northern hemisphere since 1934. Magnitude at time of discovery was reported as +3. A Spectrum of the nova was taken on the night of discovery by R.G.O. Herstmonceau but no details have been received yet, Observers generally agree that the colour on August 29/30 and 31 was yellowish which apparently is to be expected of a nova at maximum, they generally resemble that of a F, G or K giant.

COMET KOBAYASHI - BERGER - MILON, 1975h.

The latest co-ordinates and magnitude predictions are as follows:-

Sept. 25th	R.A. 10h 27.71m	Dec. +05 05.6	Mag 6.4
" 30th	" 10h 27.93m	" -00 24.8	
Oct 5th	" 10h 28.95m	" -05 41.3	" 7.6

The Comet has grown a tail of type I - that is gas rather than dust and is a thin spike rather than a fan.

Mercury. will be in inferior conjunction on the 9th at 11hrs U.T. by the 25th 01hrs U.T. Mercury will have reached maximum western elongation 18° and attained magnitude -0.3, it will then be rising about 05hrs U.T.

Venus. is a morning star in Leo rising about 02h 20m by the 18th. Venus attains it's greatest brilliancy on the 3rd 17hrs U.T. when it will be magnitude -4.3. On the mornings of the 2nd and 31st October the Moon will be in close proximity to Venus.

Mars. is now rising early in the evening seen in the eastern sky, the red planet mag. -0.4 will have reached 105° western elongation by the early part of the month.

Jupiter. rises now before sunset and is strikingly brilliant in the early evening sky, magnitude -2.5. Jupiter will be in opposition on the 17th at 15hrs U.T. Recent observations have clearly shown the presence of the Great Red Spot.

Saturn. will be rising at 22h 30m U.T. by the middle of the month and is situated S.E. of Pollux (Beta Geminorum). On the 27th the Moon will be close to Saturn.

S.A.E.s for Journal.

Would members who have supplied S.A.E.s please forward extra stamps to cover increased postal charges to Mr. R.H. Cheesman, [redacted], Ipswich.

POSTER FOR OUR OPEN DAY.

The poster advertising our Open Day is on the back of this month's Journal. Would you please remove it from the Journal and display it in a prominent position to advertise our Open Day please. If you would like any more posters to put in schools, libraries, etc. please contact Mr. R.H. Cheesman.

LUNAR SECTION.

Moon Phases	Lunation 653
New Moon	October 5th 03hrs 23m U.T.
First Quarter	" 12th 01hrs 15m U.T.
Full Moon	" 20th 20hrs 05m U.T.
Last Quarter	" 27th 22hrs 07m U.T.

Perigee October 4th 15hrs U.T. Apogee October 17th 11hrs W.T.

Lunar Occultations.

October 11th	1718 Sgr	Mag 6.1	D	18hrs 31.5m U.T.
" 11th	173B Sgr	" 6.3	D	18hrs 57.2m U.T.
" 14th	ZC 3154	" 7.4	D	19hrs 15.1m U.T.
" 17th	22 Psc	" 5.8	D	22hrs 27.8m U.T.
" 29th	W Leo	" 5.5	R	03hrs 00.6m U.T.

Time Change BST - GMT (U.T.) October 26th 02hrs.

Don't forget to put your clocks back one hour . As all times given in the Journal are in U.T. there will be no need to correct for B.S.T.

Meteor Section: Director Mr. D. Barnard.

The Sporadic meteor count held on Saturday 20th September will be reported in next month's Journal as the October Journal will be going to print early.

Meteors in October.

This month sees the culmination of the Orionid shower on October 21st, so there will be a meteor count held on Saturday 18th October on Foxhall Heath from 10p.m. The ZHR is about 35 with the radiant rising about 22hrs U.T.. Unfortunately this shower is affected by moonlight (full Moon 20th October)

There is one other major shower active this month which is the Taurids, but we will have a separate meteor count on this shower early in November when the maxima occurs.

Minor Showers this month.

There are three minor showers active this month:

1. The Giacobinids Shower.

A rather interesting shower as the maximum reaches a sharp peak of six hours on October 10th, the day of the maximum. Normally this shower is weak but gives exceptional displays every 6.6 years. The radiant is in Draco.

2. The Xi Arieds Shower.

The Maximum occurs on October 11th, normal limits October 2nd to 16th.

3. The Epsilon Geminids Shower.

Maximum on October 21st, same day as the Orionids stream. Normal limits October 14th to 26th.

Showers 2 & 3 are both very weak giving ZHR of only one meteor every one or two hours. So there are no really spectacular showers this month, but we can always look forward to a Leonids storm in November!

**** OPEN DAY Saturday 4th October from 2p.m.

Our Open Day this year, as you should already know, is on Saturday 4th Oct from 2p.m. For this important event in our calendar we would like as many of you as possible to help to run the day. Also we would like anything of astronomical interest which we can show. We are having film shows, draws, solar observing. Also bring along your telescope for display but most important bring yourself along to help. Any information which you would like please contact Mr. Cheesman.

ASTRONOMY FOR BEGINNERS.

We are holding an open meeting on Foxhall Heath on Wednesday 1st October starting at 7p.m. This meeting is to help all members, and any of the general public who wish to come along, in finding their way around the sky and to get a better understanding of astronomy.

Programme for October, 1975.

Mondays. from 7p.m. General Observations.

Director. Mr. N. Gage, [REDACTED], Felixstowe, 'Phone [REDACTED]
Fleixstowe [REDACTED]
and Mr. S. Flory, [REDACTED], Ipswich, 'Phone [REDACTED]

October 6th
" 13th
" 20th
" 27th

Tuesdays. from 8p.m. Variable Stars Section.

Director. Mr. T. Cardot, [REDACTED], Ipswich, 'Phone [REDACTED]

October 7th
" 21st.

Wednesdays: from 7ppm. Lunar, Planetary & Solar Section.

Director, Mr. R.M. Cheesman, [REDACTED], Ipswich.

October 8th
" 15th
" 22nd
" 29th

WEDNESDAY 1st October, from 7p.m.

Astronomy for Beginners. The first of a series of meetings to help beginners in astronomy. These meetings will be open to everybody who wishes to come along. The meetings will take place irrespective of weather conditions. The talks will be given by members and Directors of our Society. For these meetings wrap up warm and bring along binoculars and small telescopes.

Meet at the entrance to Foxhall Stadium at 7p.m. Meetings organised by Mr. R.M. Cheesman.

Thursdays. from 8p.m. Deep Sky Stars Section.

Director Mr. D. Bearcroft [REDACTED], Ipswich, 'Phone [REDACTED]

October 2nd
" 16th
" 30th

Fridays. from 8.30 p.m. Lunar & Planetary Section.

Director Mr. J. Deans, [REDACTED], Capel St. Mary 'Phone [REDACTED]
GT. WENHAM [REDACTED]
and Mr. K. Dye, [REDACTED], Ipswich, 'Phone [REDACTED]

October 10th
" 24th

Fridays from 8.30p.m. Nebular & faint Objects Section.

Director. Mr. H. Stow, [REDACTED], Ipswich
and Mr. R. Gooding, [REDACTED], Ipswich.

October 3rd.
" 17th.

Friday October 31st. from 8p.m. at the Friends Meeting House, Fonnerau Rd, Ipswich, It is hoped to plan a film night - full details will be in next month's Journal and posted in the Observatory.

*****Saturdays

Saturday 4th October from 2p.m. OPEN DAY. (see poster in Journal)

Saturday 18th October from 10p.m.

Meteor Section, Director Mr. D. Barnard, [REDACTED], Ipswich
'Phone [REDACTED]

ORIONID METEOR COUNT. Meet at entrance to Foxhall Stadium at 10p.m. irrespective of weather conditions.

Sheet 2.

ASTRONOMY IN ANCIENT & CLASSICAL TIMES.

Assyrian Astronomy.

Knowledge of Assyrian astronomy has been gained mainly by many thousands of fragments of clay tablets dug up around the Mesopotamian plains in the Middle East. These tablets also gave information on the customs, business life, culture and religion. The majority of these tablets are now in the British Museum. Assyrian astronomy as with all early studies of the sky was largely astrological in form.

During this period in history (around 1000 B.C.) all motions in the sky were believed to have some significance to individual people. For this reason the motions of the Sun, Moon and planets were studied very carefully to find omens, either good or bad. All phenomena of the sky were believed to have great significance especially for Kings and Empires.

The Sun and Moon were looked upon as gods which resulted in priests being the only people that took interest in the sky. The Sun was the God Shamash (the God of Justice) and the Moon-god Sin. Of all the objects in the sky, the planets presented the most inexplicable. Their motions took all round the sky. Their directions would change, they would approach and recede from each other and change brightness.

The planets as with all early cultures were thought of as being Gods and were given names accordingly:-

Venus was named Ishtar
Mars was named Nergal the God of Pestilence
Jupiter was named Murduk
Saturn was named Ninib

Eclipses were looked upon as being important omens. The prediction of Lunar eclipses reached a reasonable standard of accuracy. They even accounted for the non-appearance of an eclipse by natural causes, e.g. in day-time.

Babylonian Astronomy.

Babylonian astronomy came to the fore after the Assyrian Empire began to weaken through wars. Their astronomy was conducted for the first time as a science. Many of the names of present day groupings of stars in the constellations have come from the Babylonians, e.g. The Bull, The Eagle and the Lion.

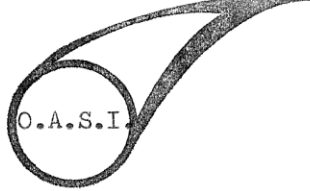
The extent of the constellations was very different from that of to-day. Many bright stars were connected with days of the year.

Through very careful observation the Babylonian astronomers constructed quite accurate calendars. Two systems were used for their calendars. The 8 year and 19 year cycle. In each system there were some years with 12 months and some with an extra 13th month. In the 8 year cycle the 13th month occurred at intervals of 3, 3 and 2 years. In the 19 year cycle the 13th month was inserted at intervals of 3, 3, 2, 3, 3, 3, and 2 years. From writings found of this period the 8 year cycle was used early on in Babylonian times, around 530 B.C. A century later around 430 B.C. the 19th year cycle was in use, presumably because the 8 year cycle became inaccurate with respect to the motions of the Sun or Moon. It is not known if 29 or 30 was the number of days used for each month.

Babylonian astronomers collected a large amount of data about the positions and motions of the planets and Moon. From this they were able to compile an ephemerides for each planet; being able to predict where and when a planet would rise, set and the constellation in which it would be found. Predictions included past, present and future years.

The Babylonians were able to predict with great accuracy eclipses of the Moon, both Lunar and solar. The Babylonians showed far greater understanding of the theory of eclipse predictions than the Assyrians before them. A similar system for predictions was used by both. Eclipses occur in series dispersed by periods in which no eclipses occur. The Babylonians and Assyrians discovered these sequences

(Continued next month)



ORWELL ASTRONOMICAL SOCIETY (IPSWICH)

Orwell Park Observatory
Nacton, N^o Ipswich

GIANT TELESCOPE OPEN DAY

on
Saturday 4th October 1975 from 2 p.m.

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FILM SHOWS

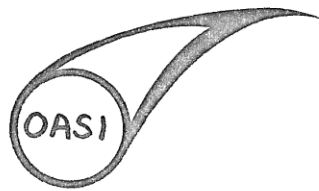
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REFRESHMENTS

Open during the evening for viewing the
heavens through the 10" O.G. Telescope

(Weather Permitting)

Admission Adults 15p
 children 5p

Secretary: Mr. M. Stow,
13 Ladywood Road,
Ipswich.



ORWELL ASTRONOMICAL SOCIETY (IPSWICH)

PRESENTS A

SPACE
FILM SHOW.

AT THE

FRIENDS MEETING HOUSE

FONNEREAU ROAD

IPSWICH

ON

FRIDAY OCTOBER 31ST. 1975

AT 8 P.M.

ADMISSION FREE.

Secretary:-
Mr. M. W. Stow,
13, Ladywood Road,
Ipswich.