



Editor: C.F. Radley, [redacted],
Whorstead, Ipswich, IP2 8NQ. Tel: Ipswich [redacted]

As the end of the year is drawing near, it is worth, I think, reminding readers that subscriptions for the 1973 session of the O.A.S.I. will be due on January 1st 1973. Also, that the Annual General Meeting will be held very early in 1973, at which the new officers will be elected, and the progress of the society over the past year will be reviewed.

Trip to See Films at Norwich

Mr. David Bearcroft, is organising a coach trip to Norwich on NOVEMBER 18th (Saturday) to see the film show organised by the Norwich Astronomical Society. The coach will leave the Electric House at around 6.00 p.m. that evening, and will return at around 10.30 p.m. Fare and admission to the film show will come to a total of 50p. People wishing to come may pay on the night, but it would make matter easier if you could instead fill in the form at the bottom of the page and send it with 50p to Mr. D. Bearcroft at [redacted], Ipswich. He can be contacted for enquiries at Ipswich: [redacted] (tel).

- The following films will be shown:
- APOLLO 13 HOUSTON WE'VE GOT A PROBLEM HERE
 - APOLLO 14 MISSION TO FRA MAURO
 - APOLLO 15 THE MOUNTAINS OF THE MOON & POWERS OF TEN
 - THE MARTIAN INVESTIGATORS

Copies of the handbook of the British Astronomical Association (containing all the predictions for events in 1973, positive motions of the Planets etc.) are available from me at the special reduced price of 55p.

Limited number of back dated journals are available from me.

Members are entitled (FREE OF CHARGE) to have published adverts, articles etc. in this journal. Just write them up & send them to me.

IMPORTANT:- I would like stamped addressed envelopes from as many people as possible. It will speed delivery, and make matters much easier for me. Post your S.A.E's to me, or drop them off at [redacted], [redacted], [redacted], or my address (see top of page), whichever is most convenient.

APOLLO-17 TIMETABLE

EVENT	DATE	TIME (GMT)
(1) LAUNCH	DECEMBER 07	02h 53m
Enter moon orbit	"	14m 49m
MOON-LANDING	"	19 55
EVA-1 START	"	23 33
EVA-2 "	"	22 13
EVA-3 "	"	21 33
Lunar Lift-off	"	22 56
Start to Earth	"	23 33
(2) Splashdown	"	17 24

I would like to come to Norwich on November 18th

I enclose 50p Name _____ Tel No (or address).....

Editor's Log

Sat Sept 30th: O.A.S.I. Open Day. Telescope sighted on Jupiter for
Vis. 18.30 U.T. Satellite I(Io)
was then about to be occulted by Jupiter. Occultation occurred at
18h52m U.T. III(Ganymede) and II(Europa) visible to the East of
Jupiter, IV(Callisto) visible to the west of Jupiter. Jupiter was
located shortly after sunset, while the sky was still bright.

Wed Oct 4th:- Session using observatory, supervised by Mr. David
Bearcroft, Mr. D. Collier, G. Collier, and myself present. Sighted first
on to Sword Handle in Perseus, very interesting, best seen through
80x. The cluster was still about four times the field of view of the
instrument in size. Seeing extremely good. M-31 visible with
unaided eye easily, very well seen through 10". two 2nd mag meteors
seen in Cassiopeia. M-13 (globular cluster in Hercules) observed under
various magnifications. Higher magnifications allowed more of centre
to be resolved. M-57 (Ring Nebula, planetary type) in Lyra: invisible
in sighter, but easily found with lowest power of main instrument.
Observed with various magnifications, best seen with 170x.
In North east, Taurus was rising. Observed Pleiades and Hyades open
clusters. Saturn was about 10° above the horizon, and was best seen
with the lowest power; it was still a sight for sore eyes as the
author had not seen it since around February.

Sun Oct 8th: Draconid meteor shower. Mr. D. Bearcroft, Roy Cheesman &
myself had planned to watch its maximum on this date. However, we
were plagued with fog. After touring Suffolk we arrived at the top
of Bourne Hill, where the fog seemed slightly thinner, and the
occasional star was visible. Several cameras were pointed at the
sky, but it is unlikely that the results will be of interest.

What's Up? The Planets in November:-

Mercury, is not very well placed for observation at first, although
from the last day of November until the last day in December it will be
well seen in the morning sky before sunrise, in the constellation of
Leo, not to be confused with the brighter Venus, not far away.

Venus is visible before sunrise in the constellation of Virgo, lower
down in the sky than Mercury at the end of the month, but being
mag -3.5 (Mercury is 1st mag only) is much brighter.

Mars is not very well seen, it will be visible in February 1973
Jupiter is not very well seen either, setting 2 hours after the Sun.
Saturn can be seen in the north-east, rising at around an hour after
sunset. The rings are wide open, and the south pole is visible.
It can be found below and to the left of the first magnitude star
Aldebaran, which in turn can be found below and to the left of the
Pleiades open cluster of stars.

Meteor Showers:- The following small meteor showers are
active this month. The Taurids, lasting until December 3rd, reached
a maximum of 16 per hour on the 1st November. Brilliant meteors.
Leonids last from 15th to 19th Nov, maximum at 07hr U.T on November
17th, 15 meteors per hour. Many bright meteors, superb persistent
trails.

The Moon Although no planets are well placed this month, the moon is
well seen. Moon diary :-

November 1st.	24.7 days	old.	Due south at 08h20m U.T.
" 3rd	26.7 days	old	Due south at 09h25. U.T. Venus 3° North
" 6th	29.7 days	old	" " 11h50m New Moon at 01hr 21m
" 8th	1.9 "	"	" " 13h30m Mercury 1° North at 04h U.T.
" 13th	6.9 "	"	" " 17h35m Jupiter 1° North at 10h U.T.
" 14th	7.9 "	"	" " 18h20m First Quarter at 05h01m
" 17th	10.9 "	"	" " 20h45m SE limb exposed
" 20th	13.9 "	"	" " 23h40m --- FULL MOON
" 21st	14.9 "	"	" " not today PERIGEE at 21h, 00h A.M.
" 27th	20.9 "	"	" " 05h30m LAST QUARTER at 18h45m

new radio telescope at Cambridge

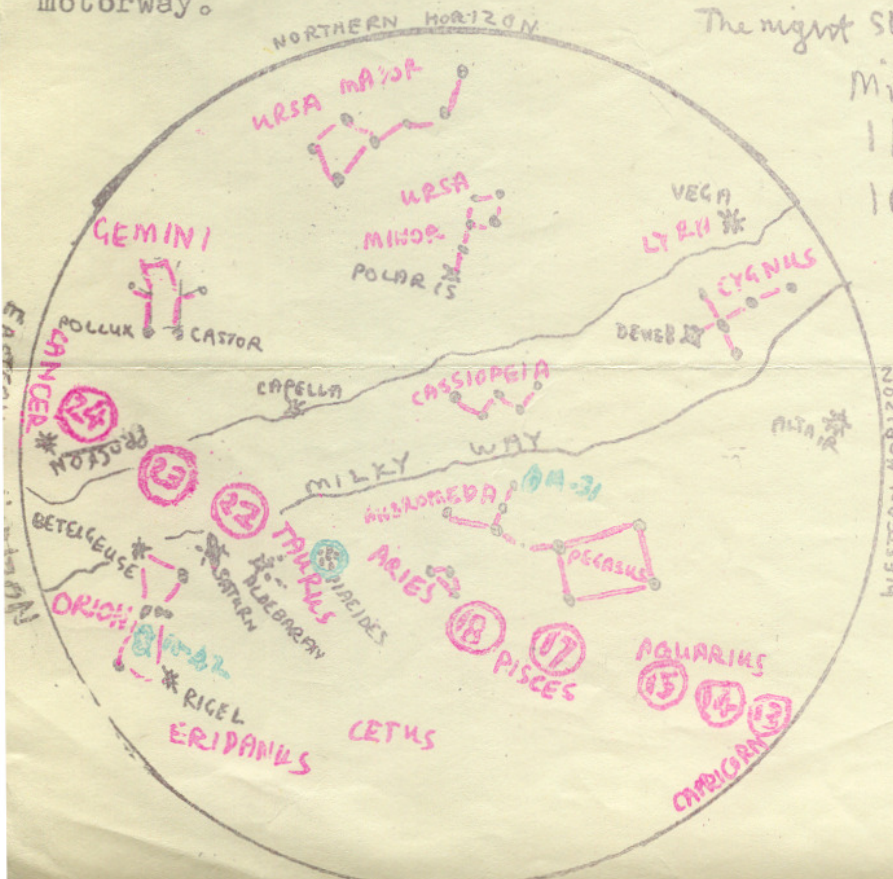
A radio telescope which provides the equivalent of a single dish five kilometres across was opened officially at Cambridge on Wednesday October 18th (at Lord's Bridge near Cambridge) by Professor Sir Alan Hodgkin, President of the Royal Society. It is the most powerful instrument of its kind in the world, and cost 32.1 millions, which was provided by the Science Research Council. The telescope will be operated by the Mullard Radio Astronomy Observatory under Sir Martin Ryle, the Astronomer Royal.

The telescope consists of EIGHT parabolic dish antennae, each one 42 feet (12.5 metres) across, lined at equal (600 metre) intervals along a five kilometre dead straight railway track. Four are fixed to the track, the remaining four can be moved along the track, which used to be part of the old Cambridge to Bedford branch line.

This method of radio-astronomy was pioneered at Cambridge, it depends upon a technique known as aerial synthesis, and enables a huge effective aperture to be obtained by the use of a few small accurately spaced antennae. Ideally the radio astronomer needs a giant reflector having an aperture of many wavelengths of the radio waves being studied (which can have wavelengths ranging up to a few metres compared with a few ten millionths of a metre for visible light) apertures of about a few kilometres or more being needed, yet the dish would have to be constructed to an accuracy of a few millimetres. Such requirements far exceed our present technology, and even if construction of such a giant was possible, cost would be prohibitive.

Because of the extreme accuracy requirements for positioning the dishes a site perfectly flat for at least five kilometres was required; and the Earth's curvature had to be taken into account in positioning the telescopes when the site was secured. There were only two suitable sites near Cambridge; out of 3,000 sq miles surveyed in East Anglia, one was in the Brecklands, the other at Lord's Bridge, three miles (five kilometres) from Cambridge. The Breckland site was ringed by USAF bases, so Lord's Bridge was chosen. Lord's Bridge (where another one kilometre effective aperture telescope had already been constructed) is 200 acres in extent, and level to within 10 feet (3 metres), has a stable subsoil, is free from man-made interference, especially radio transmitters, and is close to the university.

However, at present the £4 million worth of radiotelescopes at Lord Bridge will be interfered with the the engines of cars driving along a planned motorway nearby. Attempts are being made to persuade the department of the environment to chose a diferent route for their motorway.



The night sky in November as seen at:
 Midnight — Start of month
 11 p.m. — middle of month
 10 p.m. — end of month } B.S.T.