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Send articles, adverts, comments, questions, to:-  
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VOLUME: 2 NUMBER: 9 EDITION 20 SEPTEMBER 1973

ORSI

Could readers please carefully note the following notice:-

On the evening of July 30th at about 11h44m P.M. B.S.T. a fireball was seen by two members (Percy Fulcher, and David Collier). On the same evening about half an hour later and close by three meteors, bright ones, were seen at about the same spot, three in quick succession. by David Bearcroft.

DID ANYONE ELSE SEE ANYTHING ON JULY 30TH?? IF SO, PLEASE CONTACT ME AT ONCE.

According to reports, the object lasted between 2 and 4 seconds, was in Boötes near Arcturus. It trailed fragments as it went along, and finally disintegrated into fragments. It was yellowish in colour.

The Russian Mars probes:- Mars-4, launched 22h21m (Moscow Time) July 21. Mars-5 launched 21h56m (Moscow Time) on July 25th. Left parking orbit for Mars at 23h15m (Moscow Time). At 02h Moscow Time, July 26th, Mars-4 was 1,460,000 kilometres, and Mars-5 56,000 kilometres from Earth. They are due to reach Mars in mid February 1974.

Comet Tuttle-Giacobini-Kresak 1962 V, 1973b is a periodic comet, of 5½ years period. It was recovered on January 8th, when it was only mag +21, very dim, dimmer than its predicted mag +17½. However, later on something very interesting occurred. It was approaching the Sun when it had a sudden flare on May 27th, reaching mag +4, easily naked eye, an increase in brightness of 1,000 times, a phenomenon never before seen in comets. A further outburst occurred between July 6th and 8. Probably as it approached the Sun pockets of gas within it exploded. It is now back to about mag +15. It is unlikely to have another outburst since it is now moving away from the Sun. Its return in 1978/9 will be eagerly awaited.

The visit to the Old Greenwich Observatory had to be cancelled through lack of support!!! However, the J.A.S. are organising a trip to the New Royal Greenwich Observatories at Herstmonceux in Sussex in October for 85p. Anyone interested telephone me to book a place. This one will not be cancelled, it may be overbooked however!

Society Meetings, first Friday of each month, at the Frinds' Meeting House 39, Ponnereau Rd., Ipswich, 7.30p.m. October 5th: Speaker: G.E. Curtis, touring educational astronomy lecturer.

November 2nd, Mr M.J. Hendrie F.R.S.S. speaker, title:- "Comets".  
December: not fixed, January, A.G.M. at Orwell Park.

Other Important Events:- Sat Sept 15, BAA Meet, Norwich, afternoon & evening. Event of the year. Patrick Moore will be there!!

Fri 21-Sun 23 Sept, Belstead House astronomy courses.

Sat 29 Sept, afternoon, JAS Meet in Clacton.

Stop Press!! Mars-6 has been launched. Not satisfied with launching Mars-4 & 5 to Mars in the space of a few days, the USSR has launched Mars-6. There are now three Mars probes on their way. They are scheduled to arrive there in February 1974. Mars-6 carried a French made solar radio experiment, similar to that carried by Mars-3 in 1971, which was also made in France. Mars-6 was launched on August 6th. I expected Mars-4 & 5, but Mars-6 was a surprise. It may be still time for another one!!!

An informal Club Night HELD IN THE back garden of Mr. G. Collier was so enjoyable that I hope another can be arranged. If one is being arranged I will give further details of the time and date inside. If it is organised, please bring your own telescopes, binoculars, cameras, books etc... the idea is share and share alike!! If it is held, it will probably be in the evening of Tuesday 11th Sept, sunset until exhaustion.

Skylab: If a rescue launch is necessary it cannot be made before Sept 5th. The three of Skylab-2 are due down on or about September 22nd.



~~see p. 12~~: Lens to be re-installed on Wed 29th August 1973

**THE LENS RETURNS!!** Horace Dall says that the lens should be finished by August 20th or so. At the time of writing it has not yet been returned, however as soon as it is observation nights using the telescope will be resumed. Details of the open nights will be in the next edition. The lens will probably be re-augurated at the same time as you receive this edition, and will have been in operation for four weeks by the time the October edition is published, so if you wish to use the observatory in September, telephone me.

If you wish to organise your own series of meetings or open nights using the telescope we would welcome you to contact me or Roy Cheesman.

**JUPITER** On page:3 of this edition under "Jupiter" in the middle of "What's Up?" feature are details of a mutual occultation of Jupiters' satellites. I have since read an article about this in "The Astronomer" and can furnish readers with the following information:-  
Predictions: Sept 6th, 23h29m ----- 23h38m times in U.T. Occultation.  
Sept 9th, v. Favourable eclipse,: Penumbra start: 21h33m  
Umbra start 21h38m. Totality reached 21h52m Umbra leaves 22h06m  
eclipse ends 22h11m. III(Ganymede) eclipses II(Europa).

Observing thru' large telescope as possible II(Europa) will appear to dim and then brighten. Start observing several minutes before penumbra starts, it will not darken a great deal until the umbra starts, however.  
Sept 16th: as in "What's Up-"

I will publish the predictions for phenomena in October in the October edition, and may mention them at the October meeting, on Oct 5th at the Friends' Meeting House.

**ASTRONOMY MAGAZINES** I recommend the following. OASI are affiliated into J.A.S., B.A.A., "The Astronomer", therefore you can obtain these publications from me, or at a cheap rate, details from me.

- 1) "The Astronomer", observational magazine. From: Glyn J.B. Phillips 32, Riverford Close, Harpenden, Herts. Monthly, £1.50 p.a., £1.20 from me.
- 2) "Hermes", J.A.S. Quarterly, join J.A.S. or see me for details of magazine subscription. *Hermes is Britain's glossy picture magazine, smaller & less frequent than "S & T & U"*
- 2b) J.A.S. Circulars, eight per year, fill gaps between Hermes, As above
- 3) Sky & Telescope, monthly from America only. Normally £5.25 p.a. see me for cheap rate. Distribution of 60,000 makes it most widely read astro mag' in the world. *V. Good glossy picture magazine, best in world.*
- 4) Astronomy & Space, edited by Patrick Moore, Quarterly by Messrs. David & Charles, published from Newton Abbot, Devon.
- 5) BAA Journal, free to BAA Members, 65p per copy otherwise, bimonthly.

Various others include "Astrophysical Journal", RAS Journal, and Icarus, all tending to be for experts.

**SOCIETY LIBRARY** Thanks to Dr. T.S. Law for donating Henry Hatfield Photographic Moon Atlas and the french "Atlas of the Moon". Books can be borrowed free from the library by members, but must be signed for in the book.

**Another Mars Probe!!** The Fourth in less than 3 weeks. Mars-6 was launched on August 5th (see front page) and now Mars-7 on August 10th. The launch window lasts from July 20th to August 10th, so the opportunity to launch any more has passed. But four is enough!! Mars-6 will co-operate with equipment on Mars-4, according to USSR. This allows some speculation. Will one of them soft-land, and the other act as a radio relay station remaining in orbit? Will the soft-lander be to study Mars' physical make up, or will it search for life, or will it be a roving vehicle or "Marsokhod"? Mars-4&5 reach Mars in February '74, Mars-6&7 in March, so we will find out then.

**Comet Kohoutek**, best seen: before dawn on December 1st to 7th, after sunset on January 7th-14th

**A Fireball** Don't forget to inform me at once if you saw the object mentioned on front page, or any other very bright meteor. An appeal was published on page 12 of Fri Aug '10th Evening Star newspaper.



## COMET KOHOUTEK 1973

I now have more information on this comet, and here it is:-

The comet was tracked during the days after discovery, until it moved into twilight in May, and was hidden by the glare of the Sun. It moved to the far side of the Sun from the Earth for several weeks, and has been temporarily lost. It is scheduled to start to reappear in September or so, at the start of it's hopefully spectacular apparition. The information I have does little more than confirm what I put in the June edition of this newsletter. Estimates of how bright the comet will be are still little more than guesses, the most pessimistic is first magnitude, the optimistic is -10. It will certainly fall between the two values. If comets were solid, predicting its' magnitude would be easy, but being gas they expand as they approach the Sun and fluorescence occurs.

It should be possible to pick up the comet with the 10" in October, early in the morning, shortly before sunrise. It will elongate from the Sun, reaching maximum elongation on about November 16th or 17th, approximately 45° West of the Sun, thus rising at least three hours before the Sun. This is about the time when it should start to become faintly visible to the naked eye.

After elongation it will start to move towards the Sun again, becoming even brighter. Conjunction will occur about the same time as the comet reaches perihelion, i.e. December 28th or 29th. For a week either side of perihelion, it should be very bright. Before perihelion it will be visible in the morning twilight before dawn. After perihelion it will be visible in the evening twilight immediately after sunset.

The comet will pass very close to Mercury about Christmas Eve or Christmas Day, then visible only before dawn. The Moon also will be very close to the comet on December 24th in the morning.

About January 8th 1974, the comet should be very close to Venus and Jupiter.

It should be a good apparition. If you have any questions about comet Kohoutek or any other comet or comets in general, Mr. M.J. Hendrie of Colchester, who is an expert on comets, will be giving a talk to the Society on Friday November 2nd on comets, and you can ask him then.

### PLANETARY PROBES THIS YEAR:

MARS You probably heard that the U.S.S.R. launched Mars 4 on July 22nd and Mars 5 on July 26th, in the launch window. If you look on page 3 of the July 1973 edition of this newsletter, you will see that I predicted these two launchings. It was not difficult, this is the only time they could have been launched, and the U.S.S.R. were bound to seize the opportunity. The probes are coasting towards Mars, and will arrive in February. It is almost certain they will both go into orbit around Mars, and soft land capsules on to its' very surface, obtaining the first pictures from the surface of another planet.

VENUS The U.S.A. will launch Mariner 10 Venus/Mercury in December. It will fly by Venus between February 3rd and 6th, depending on the launch date. It will take the first T.V. pictures of Venus' clouds, about three thousand of them. Here is a description (not mine) of what the view from the probe will be like: "One hour before closest approach. We are coming up on Venus' dark side. Only a sliver of the lighted side of the planet is clearly visible. Behind us, 28 million miles distant, our home planet has shrunk to a brilliant 'star' - the brightest in the heavens except for the Sun .....

The Sun only 67 million miles away, has grown a third larger than it appears from Earth, now twice as much Solar heat and light beat down on our spacecraft.

As we curve round the planet, the glowing crescent rapidly enlarges. At closest approach - about 3,100 miles away - a half Venus nearly fills our field of vision, shining brilliantly with a slightly yellowish colour. Then the entire spectacle sweeps into view as we swing on, around and head for Mercury, Venus is more than three times as bright as Earth if seen from the same distance...."

### MERCURY-

The spacecraft will then shoot round Venus.. to Mercury:-

"Catapulted by Venus' gravitational field, our spacecraft bends its flight path some 40 degrees and races on towards Mercury, the solar systems innermost and smallest planet. On March 30th 1974, we reach this second goal. Mercury has only about a third the diameter of Earth. We approach it so fast and it looms so swiftly that we almost feel vertigo. Now our cameras and instruments race to record

information. After years of preparation and  $5\frac{1}{2}$  months in flight, we have only two hours to gather all the close up information on Mercury that we can get in this decade.

Earth lies 93 million miles behind, still a very bright point of light.... The Sun, now only  $\frac{1}{2}$  million miles away, appears more than twice as large as when seen from Earth, the solar radiation bombarding us is five times as intense as that striking the Earth's atmosphere....

The surface of Mercury filling our view is a rare sight, never seen clearly from Earth. Now we can see it with perfect clarity, no atmospheric effects to block the vista. We are only about 600 miles from the surface, and our eyes can distinguish objects as small as 1,700 feet across. Everywhere we see evidence that this rocky cinder has been cratered by comets and asteroids, and it is not hard to imagine that it was once scorched by tremendous heat."

Very little is known about Mercury, it is quite mysterious. Apart from the Earth itself, it is the densest planet. All the lighter elements on it have boiled away into space from the heat and low surface gravity. Its surface has the lowest reflectivity of all the planets, and must be of quite hard, dark rock, radar suggests granite.

Visual observations from Earth rarely show surface markings on Venus and Mercury, so the revelations of the T.V. cameras of Mariner 10 are eagerly awaited.

Mariner 10 will take about 2,000 pictures of Mercury, mapping it with similar resolution to that obtained of the Moon by Earth based telescopes. Detail as small as 100 metres across should be visible on some frames.

After eighteen months (August 1975) the probe should encounter Mercury again, and if it is still working, could perform more investigation. It may still be in operation for a third Mercury encounter.

Donot exclude the possibility of the U.S.S.R. launching some thing also. They are good at soft landings on other planets (they have soft landed one probe on Mars and at least four on to Venus, while the U.S.A. have done none. Might they soft land on to Mercury? Find out in December.

JUPITER In December, Pioneer 10 will reach Jupiter. See articles in previous newsletters.

Please add to the "Dates Coming Up in the 1973 Apparition of Mars" on page three of July 1973 edition:- October 25th - Opposition of Mars.

On Tuesday 24th July a few of us held an informal astronomy evening at the home of our Treasurer, Geoffrey Collier. He and his wife provided (both of) us with some excellent food and drink while we were there. Percy Fulcher and myself were with Mr. Collier and his family with a 3" refractor and a 3" reflector in his back garden. Dr. Trevor Law also dropped by, letting us borrow his 3" reflector.

Unfortunately, there was much cloud, but we enjoyed ourselves testing out the two telescopes on the Milky Way and generally gazing about. When a cloud rolled away and revealed Jupiter both telescopes were swung onto it. The refractor clearly showed the dark equatorial belts of the planet, the reflector just showed them.

Both telescopes showed Jove's Gallilean satellites.

We watched the Russian Cosmos 553 rocket go by, fading and flashing like a flying lighthouse.

It was very pleasant, and it is hoped that more such evenings can be arranged.

#### VISIBILITY OF SKYLAB

By the time you read this, three men should be aboard Skylab. They are scheduled to return to Earth on about 22nd September. The final Skylab mission is due to be launched on November 9th, and return on January 5th 1974.

As regards visibility of Skylab from Ipswich - due to the period and inclination of its' orbit, it is only visible three times a day at the absolute maximum, more often twice, and usually once a day. However, often those passes occur in daylight. Periods when Skylab has been and was visible follow:- mid and late June and early July. August 11th until September 10th.

Each night it is seen  $\frac{1}{2}$  minutes earlier and/or 51 minutes later than on the

In August, it first becomes visible in the morning sky before dawn, and in September it can last be seen in the evening sky after sunset. If you see a bright point of light moving quickly from West to East via South, it is likely to be Skylab. Each appearance lasts a few minutes.

THE 10" No news at the time of writing, if anything has cropped up it will be on the front page of this newsletter.

#### LOCAL EVENTS TO NOTE THIS MONTH

(1) Saturday September 15th, in Norwich, afternoon and evening at the University of East Anglia, hosted by the Norwich Astronomical Society. A meeting of the British Astronomical Association in the afternoon from about 4.p.m. until 6.p.m. Then a dinner for £1.75. This has to be ordered in advance, see me if you want it, NOW. In the evening there will be a talk by Dr. Simon Mitton, followed by discussion. It promises to be a very enjoyable day. Since the Orwell Astronomical Society is affiliated to the B.A.A., you are all entitled to come along. PATRICK MOORE will be there, as well as many other prominent astronomers, and during the tea break you will be able to talk with them. If you want to come, inform me and I shall make transport arrangements.

(2) Friday September 21st - Sunday September 23rd, Belstead House astronomy course at Ipswich. Three qualified and famous astronomers from the University of Cambridge will be there to give talks and join discussions in many different aspects of astronomy. Details of cost etc., are given in the July edition of this newsletter, on pages 3 & 4.

(3) September 29th, a provincial meeting of the Junior Astronomical Society at Clacton, at the Quaker Hall, Granville Road, at 3.p.m. B.S.T. If you are interested in coming along, please telephone me. The J.A.S. is another national amateur astronomy society into which the O.A.S.I. is affiliated, and so we all have a right to go along.

#### O.A.S.I. MEETINGS

Meetings will be held at the Friends Meeting House, 39, Ponnereau Road, Ipswich, 7.30 p.m. on the following days:-

Friday October 5th, speaker Mr. G.E. Curtis, authoritative speaker on astronomy.

Friday November 2nd, Mr. M.J. Hendrie will talk to the society on comets, about which he knows a great deal. There will be illustrations.

After each talk there will be opportunity for discussion, and questions to the lecturer. Refreshments will be available. Arrangements are still under way for the December meeting.

Friday January 4th will be the general annual meeting, held at Orwell Park School. Before the meeting there will be an observing session to look at comet Kohoutek.

#### WHAT'S UP? THE PLANETS IN SEPTEMBER

MERCURY cannot be seen well during September, although it should be visible in October, further details in the October edition.

VENUS is now well visible, and becoming better all the time. It can be seen as a bright star half an hour after sunset, fairly low down, to the South of the red glow of where the Sun has set. At the moment a telescope will not see much, although if you use a 6cm (2½") aperture refractor, or 8cm (3½") aperture reflector, with a coloured filter (with the Dixons type telescope, put the green coloured "Moon" filter on) the gibbous phase of the planet may become apparent. On about November 13th it should be half full, and after that a crescent.

MARS is quite well visible in the constellation of Aries. It reaches a maximum Northerly declination of +11½° N on September 19th, after which it turns tail and starts to move retrograde through Aries and back towards Pisces, although it doesn't reach Pisces until October. Mars rises some ½ hours after Sunset during September.

JUPITER is brilliant this month. It reached opposition on July 30th. On September 11th you will be able to see the planet very close to a star of 9th magnitude. It reaches maximum Southerly declination of -20° 25" on September 28th. Then it moves Northwards again. The planet is unmistakable in the South after sunset. In the evening of September 16th there should be an interesting phenomenon of Jupiter's satellites, the two merge into one as seen in a small telescope, one of the satellites passes in front of the other. This starts at 19h 55m U.T. and ends at 20h 45m U.T. So if you start observing at 19h 30m U.T. or earlier, you will see two satellites close together, and move closer, and fuse into one.

SATURN is visible early in the morning, before dawn twilight, rising at about midnight, or earlier. On September 20th the Moon will be very close to Saturn.

METEORS no meteor showers this month, just the usual sporadics. Keep an eye open at night, let me know how bright, and the exact time you see any meteors.

SATELLITES Skylab is visible for the first week or so of this month in the dark evening sky, moving from West to East. It is visible every evening in the first week of September at least once, sometimes twice, occasionally three times, but when it is visible for three times in one night, the first time will not be favourable, the second time it will be extremely favourable, and the last time it will be unfavourable. It won't be visible three times a night in September, although on or about August 26th it will probably be visible three times in the night.

COMET KOHOUTEK is not visible yet. The 10" may be able to recover it in October. Binoculars will be able to see it in November. It will be visible to the naked eye throughout January and December. Further details in later editions.

#### EDITORIAL

As in August 1972 there was some difficulty in producing and distributing the O.A.S.I. Journal. This August too there was difficulty. Due of course to everybody organised going on holiday. Those who had sent me stamped addressed envelopes received theirs on time of course.

A lot is going on this month, it promises to be very enjoyable. Give me a phone call if you would like to come along, so we can make arrangements.

-oOo-

#### MORE ON COMET KOHOUTEK

On the mornings of December 19th and 20th, the comet will be very close to the first magnitude star Antares.

The Autumnal equinox occurs on September 23rd, in the early morning. This will be the best date of the year for observing solar system objects with a Westerly elongation. Comet Kohoutek will have a Westerly elongation at the same time. The comet will be too dim to be seen by the naked eye or small telescope, but an amateur can easily detect it by another method. Take ANY camera that can take long exposures. Focus it on infinity, maximum aperture, and the fastest film you can get. Then simply point at where the Comet should be, and give it a ten minute exposure. If you have an assortment of lenses for your camera, do some exposures with standard lenses, and some with wide-angled lenses (focal lengths under 60 mm that is) Black & White films I recommend are:- Kodak TRI-X, or Ilford-HP4. Colour film I recommend is:- Agfa Ansachrome, which gives positive slides (negative/print colour film is useless, prints are too large and inefficient negatives are the right size, but impossible to interpret. Slides combine the best of both and give good colour reproduction.

On the dates around the equinox, point the camera at the constellation of SEXTANS. Start photography on about September 20th and keep trying.

Why not a competition - nobody in our society will be the first to recover the comet photographically, HOWEVER, somebody has got to be first in our Society, so why not a competition to see which of us can secure the first photographic record of Kohoutek. Also, in February, why not another competition to see who can secure the last photograph of Kohoutek.

#### ASTRONOMICAL SCANDAL!!

Here is the postscript to the "scandal" which I wrote about on page nine of the July edition of this newsletter. Again I quote a letter to me of the Editor of "Hermes", Ian Ridpath:-

"..... incidently, latest news on the legal front, if you'd like to update the members, is that I have indeed received a postcard from the Large Gentleman referred to previously. He promises me a communication from his solicitors. I wonder why? Further news as it arrives."

Thank you Ian, for telling me all about your "scandal", look forward to more news!!! I noted in the July edition of "Hermes" that Ian published an apology for any misunderstanding over this "Astronomy & Space" confusion.

If you wish to meet Ian Ridpath of J.A.S. and "scandal" fame, he will be talking on "20 years of astronomy" at the J.A.S. Provincial Meeting in Clacton on the afternoon of September 29th, further details in previous pages of this edition.

### LONG SPACE VOYAGES FOR MEN

The effects of weightlessness are rather frightening, to me anyway. The first long spaceflight was in 1966, 14 days for two men in Gemini 7. Neither seemed to suffer seriously. The next long flight in 1970, 18 days, two cosmonauts in Soyuz 9. They lost calcium from their bones, and took a long time in adapting back to terrestrial gravity. Next long duration flight, Soyuz 11, 23 days, the crew returned, dead ..... Next long duration flight, 28 days, Skylab 1. At the time of writing (early August) the three men still have not recovered, after a month back on the ground. Their hearts shrank slightly but measurably in size, they lost a great deal of red blood cells. By the way, the two Soyuz 9 men could not stand up without assistance after landing.

If you extrapolate this, a two year weightless flight to.....Mars, say, the mens' bones would dissolve to jelly, their hearts would shrink so small that they would die of heart failure on return to Earth, and they would suffer badly from the loss of red blood corpuscles. Feeling very tired. Their muscles (particularly the legs, the legs of the Soyuz 9 men shrank by the way) would be very feeble.

Need I go on? This may be a bit extreme, but it makes you think!! The longest flight so far was 28 days of Skylab 1. This current Skylab will last more than twice that long. What will happen to men weightless for so long?

The O.A.S.I. is now affiliated into the J.A.S., I receive their publications ie. "Hermes" and their circulars, both of which are excellent reading. If you would like to borrow them, give me a ring, they belong to the society's library. Dr. T.S. Law has kindly donated some beautiful books to the library.

THE ECLIPSE At the B.A.A. July meeting, I managed to obtain a couple of photos of the Eclipse. I met many famous astronomers there too. I eagerly await the September B.A.A. provincial meeting in Norwich.

The next total eclipse is in 1974 in Australia.



W A N T E D

At the Committee meeting held on Monday 13th August, 1973 it was suggested that our monthly journal should be given an appropriate name. If you have any suggestions as to what we should name our Journal please contact our Secretary, Mr. M. Hadden, [redacted], Ipswich, Phone [redacted] as soon as possible.

W A N T E D

If any member has approx. 3 yards of stair carpet approx 18" wide which they would like to donate to the society to re-cover the observing chair in the observatory or a foam cushion approx 2' x 1' x 3" deep also for the observing chair please contact the Chairman, Mr. R.M. Cheesman, [redacted], Ipswich.

COMMITTEE MEETINGS.

If any member has any problems or items which they would like to have discussed at the committee meetings please contact the Secretary, Mr. M. Hadden, [redacted], Ipswich, Phone [redacted].

CLUB NIGHTS.

Now that nearly all the repairs have been completed in the observatory and we hope that the object lens and eyepieces will be back from Mr. Dall by the end of August the club nights will again be run.

So far the undermentioned nights have been organized and if any problems arise or if you have any transport problems please contact the director of the evening you wish to attend.

The nights organised so far are:-

TUESDAYS: Director D. Bearcroft [redacted], Ipswich, Phone Ipswich [redacted]

From 8p.m. 4th September  
18th "  
2nd October.

WEDNESDAYS. Director. R.M. Cheesman, [redacted], Ipswich.

from 7p.m. 12th September  
26th "  
10th October.

from 8.30p.m. 5th September  
19th "  
3rd October.

FRIDAYS: Directors. M. Stowe, [redacted], Ipswich & R. Hazlewood [redacted], Ipswich, Phone [redacted].

from 8 p.m.

Dates not advised, please contact directors.

THURSDAY 6th September. Visit to observatory by Ipswich Young Conservatives, at 8.30p.m organised by R.M. Cheesman.

OTHER NIGHTS. will be arranged as soon as possible but if you together with another member would like to hold a regular evening at the observatory please contact the Chairman, Mr. R.M. Cheesman as soon as possible.