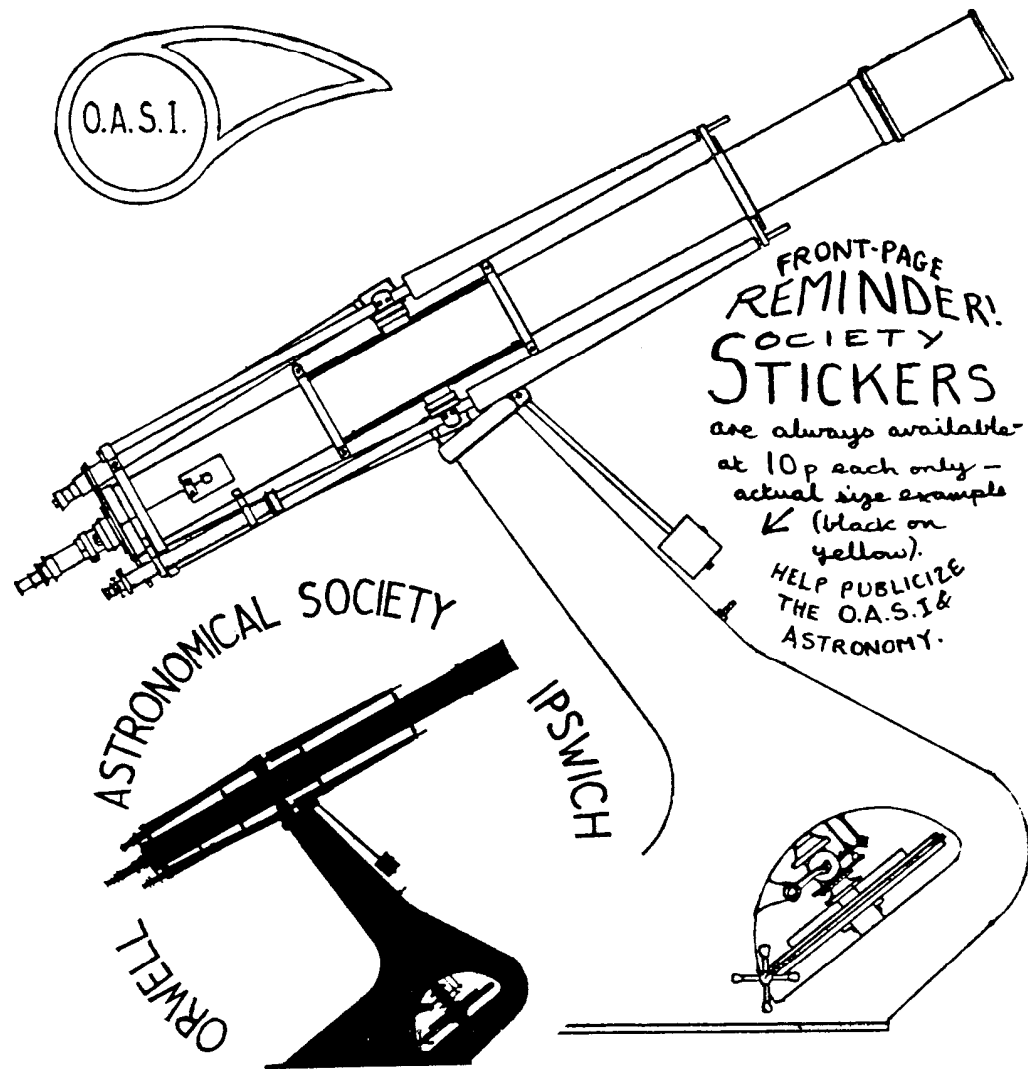


Your submissions of items for the Journal will be welcome.

1982  
OCTOBER



The Orwell Park Observatory 10-inch Astronomical Telescope at Nacton near Ipswich

# THE NIGHT SKY AS SEEN FROM ORWELL PARK IN OCTOBER

CASSIOPEIA dominates the zenith this month, while Pegasus and Andromeda dominate the meridian during late evening. This is the best time of year to locate the very inconspicuous Pisces and Cetus, running side by side to the south east of Pegasus. Early October is also the best time to view Fomalhaut, the 1st magnitude member of Piscis Austrinus sitting just above the horizon in the south during late evening. The summer triangle of Deneb, Vega and Altair now fills the western sky, while over to the east Perseus, Auriga and Taurus are in full view. Triangulum and Aries are easily found between Pegasus and Taurus.

**THE SUN** Sunrise is at 06h 10m at the beginning of the month, changing to 07h 00m at month-end. Sunset changes from 17h 30m to 16h 30m. The Sun moves from Virgo to Lyra during the month.

**THE MOON - Phases.** Full Moon 3d 01h 08m New Moon 17d 00h 04m  
Last Quarter 9d 23h 26m First Quarter 25d 00h 08m

		Occultations.			Also see the	
	Star	Phase	Mag.	Time	item on page	
	464	R	6.4	5d 21h 16.7m	3 of this	
D = Disappearance	*610	R	6.2	6d 21h 26.0m	journal,	
R = Reappearance	620	R	6.3	6d 23h 12.8m	about a	
Stars listed	765	R	5.3	8d 22h 23.4m	grazing	
according to	928	R	6.0	8d 23h 52.4m	occultation	
Zodiacal Catalog	*946	D	3.2-4.2	9d 00h 25.0m	of ZC1269	
(ZC) numbers.	*946	R	3.2-4.2	9d 03h 17.1m	and possible	
*denotes double star.	*976	D	3.2	9d 04h 27.7m	trip to see it.	
	*976	R	3.2			

## THE PLANETS

**Mercury** is in inferior conjunction on the 2nd, after which it will be a morning star reaching greatest elongation W of 18° on the 17th at mag. -0.3 increasing, when it will be rising 2 hours before the Sun.

**Venus** is a morning object too close to the Sun for observation.

**Mars** is at mag. +1.1 in Ophiuchus, setting 2 hours after the Sun.

**Jupiter** is too close to the Sun for observation.

**Saturn** is in conjunction on the 18th, also unobservable.

Source: BAA Handbook 1982. All times are U.T. (= B.S.T. minus 1 hour).  
BRITISH SUMMER TIME ENDS at 0200 hours (B.S.T.) on Sunday, October 24th, when all domestic timepieces should be put back one hour.

## METEOR NOTES for OCTOBER 1982

by David Barnard

There are 2 major showers active this month.

1) **The Orionids** Maximum on October 21st, normal limits October 16th to 26th.

ZHR = 20. Radiant 06hrs 24mins +15°. Multiple radiant. Dusty trains.

2) **The Taurids** Active from October 20th. Rich in fireballs. Double radiant, 03hrs 44mins +14° and +22°.

There will be a METEOR COUNT to observe the Orionids on Saturday October 16th. Meet at the Levington Ship Inn at 8.30 pm.

OCCULTATION SECTIC

There is a grazing occultation of star ZC1269 (mag. 7.0) on Monday, October 11th at approximately 04h 43m in central Suffolk. The Moon is 38% sunlit. There will probably be an expedition to observe this graze. Contact Alan Smith (Ipswich [redacted]) if you are interested. All you need is a small telescope to observe this event, so why not come along?

SOME DEEP-SKY OBJECTS IN AQUARIUS

by D. B. Payne

The constellation of Aquarius lies on the meridian of mid-evening during October. Among the many nebulae visible in this constellation are three worth particular attention, namely M2 (a globular cluster), NGC 7009 (the 'Saturn' nebula) and NGC 7293 (the 'Helical' nebula). The latter two are 'planetary' nebulae.

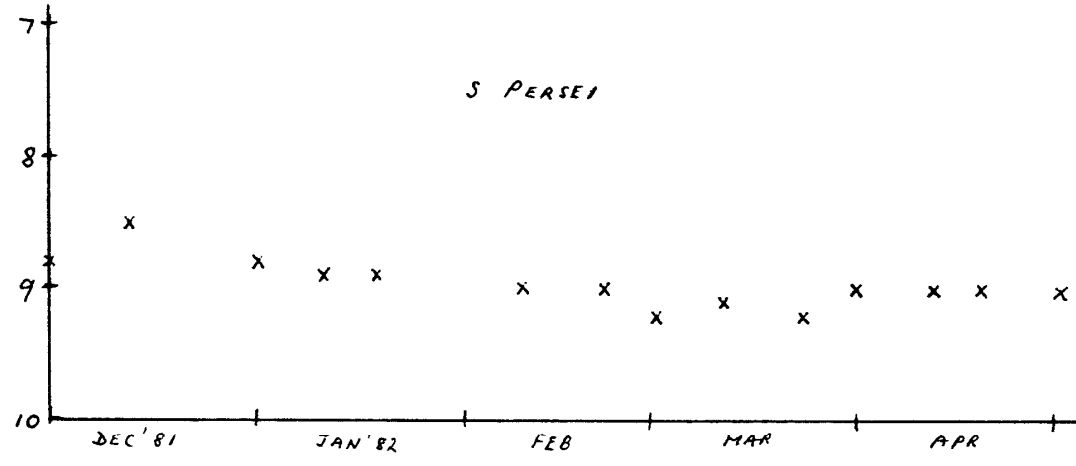
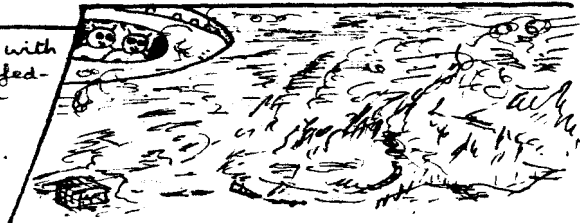
The globular cluster M2 lies approximately eight degrees west of Alpha Aquarii and five degrees north of Beta Aquarii forming a rough right-angled triangle with these two stars (see the map on page 4). It is one of the more condensed of the globular clusters appearing as a faint, fuzzy star in binoculars. A 2- to 3-inch telescope will show it as a misty ball, while at least an eight-inch aperture is required to begin to resolve the cluster into stars at the outer edges. The cluster lies around 50 000 light years from the Earth. It is about 150 light years in diameter and contains at least 100 000 stars. It is interesting to note that the Sun if placed at this distance would be a 21st magnitude star only detectable in the world's largest telescopes.

The 'Saturn' nebula (NGC 7009) lies about 1.25 degrees west of Nu Aquarii. It is a small, bright planetary nebula of magnitude 8 with a visible disk measuring 25 x 17 arc seconds. The name was given it by Lord Rosse who first observed the rays or ansae extending from the central disk on either side, giving a Saturn-like appearance. The nebula appears as a faint star in binoculars while a 3-inch telescope with moderate power (100x) will show the disk shape. The rays or ansae giving the Saturn-like appearance require at least a 10-inch and a good clear night. Like all planetary nebulae it consists of a very hot central star surrounded by an expanding shell of gas. The gas shines by fluorescence which is excited by the strong ultra-violet radiation from the hot central star. The distance of the Saturn nebula is about 3 900 light years giving a diameter for the gas shell of 0.5 light years.

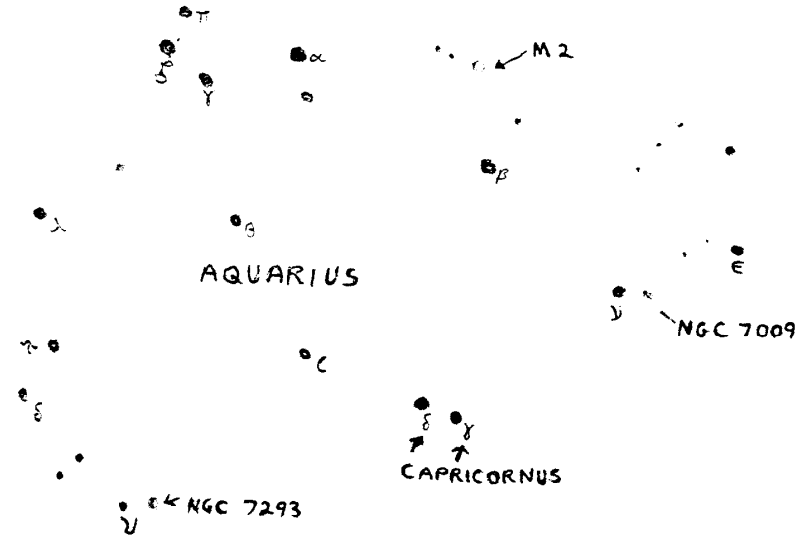
The other planetary nebula in Aquarius is the 'Helical' nebula, NGC 7293. This nebula is considered to be the closest of the planetary nebulae lying at a distance of 450 light years with a diameter of 1.75 light years. It is a large object in the sky, measuring 16 x 12 arc minutes, about half the diameter of the full moon. Although it is a large object it has a low surface brightness and is therefore quite faint. Also, it is fairly low down in the southern sky from Britain and good clear nights are required. On a good night, binoculars will show it as a large, hazy spot. It is best seen with a low-power eyepiece, ideally with a rich field telescope but is worth searching for with apertures of three inches upwards. The name of the nebula is derived from its appearance on photographs, where it resembles two turns of a giant coil.

.... 'Either they're fed-up with us looking at them, and fed-up with looking at us, or they're trying to turn the Earth into another Sun!....'

RCA



SOME DEEP-SKY OBJECTS IN AQUARIUS (contd.) DIAGRAM SHOWING THE POSITIONS OF THREE PARTICULAR NEBULAE



COMET AUSTIN

Below is  
A couple  
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VARIABLE STAR OBSERVATIONS

by Mike Nicholls

For this month, we have the light curve of S Persei from December last year to April this year. As can be seen from the curve, this star has not varied much over the time period considered. Looks can be deceiving, however, and the BAA quote the light range as being from 8.6 down to the 12th magnitude. The average period is quite long at 826 days (over 2 years) which would explain why only a small change is seen. It appears to be at a maximum over the time shown.

Classifying it doesn't come easy. Some authorities quote it as being a semi-regular variable, others a long-period variable. Certainly it has some of the characteristics of both. According to one of the professional bodies, however, it does have one property which is quite rare. It is the only long-period variable known in this galaxy which is a super-giant; the others are just giants. Long-period super-giants have been seen in other galaxies.

Observations were made using an 8-inch reflector. Quite a wide field was needed to work with this star satisfactorily. Persuade your committee to invest in a suitable eyepiece for the 10-inch and you can view it at Orwell Park.

x x x

APR

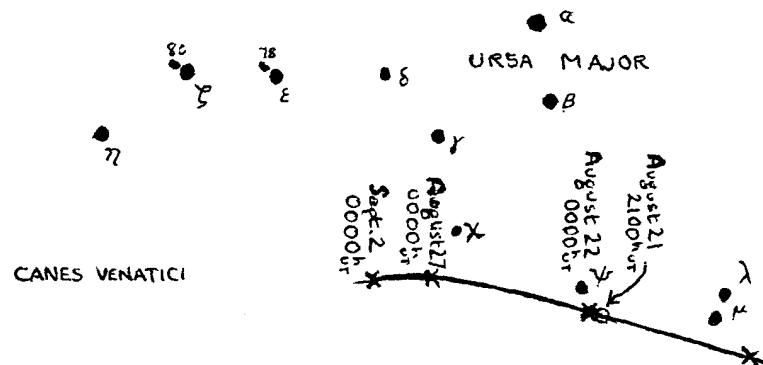
COMET AUSTIN 1982

by Roy Adams

Below is a diagram of the path of the comet as predicted by the BAA.

A couple of other OASI members, including Micheal Barriskill and David Barnard, managed to beat me to it with the 10-inch. I think it fair to say we all found it somewhat disappointing as it did not appear at the time to have much of a tail, if any tail at all. I have been unable to add any view of it to that I had on August 21st at 2100UT. In spite of its magnitude being around 5 for presumably at least a couple of weeks. It did show a thin tail in a TV picture on the latest Patrick Moore programme, The Sky at Night, but is fading fairly fast now, at about mag. 8.

Lots of people blame the presence of lights and glare for worsening limiting magnitude, sky fog, glare and so on - just purely glare from lights can, however, be got away from, even if one has to go ten miles to do it. But it wasn't the lights that stopped this sort of observation - indeed any sort of night-time astronomical observation this last two months: it was smoke haze. And from my personal appeal on the back page, you will see who I think is to blame for that. If one travelled a hundred miles one could not escape the vast clouds of what was basically stubble-haze, so dense you could hardly see a mag. 3 star through it at 15 to 20° altitude - often worse.



# SOCIETY NEWS

**LECTURES** This month we again start our monthly series of lectures. On Friday, October 22nd starting at 8 pm we are holding a joint meeting with the Ipswich Geological Group at the Friends' Meeting House, Fonnereau Road, Ipswich, when Mr. R. Markham, B. Sc. of the Ipswich Museum will be giving an illustrated talk entitled, 'The Geology of the Solar System - Part III'.

Mr. Markham has been a member of our Society for many years and has given many excellent talks to us on the geology of the solar system. In this talk, he will update us on the recent findings of the various space probes and thinking of the geology of the solar system.

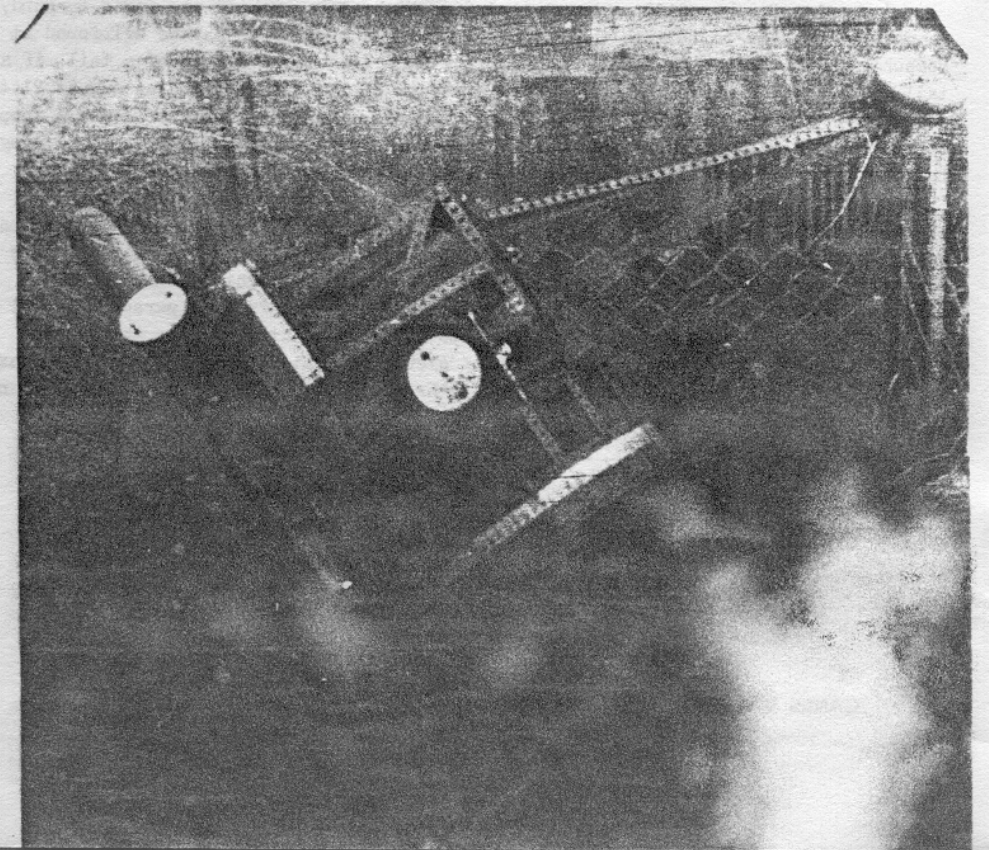
Anybody (and everybody) is welcome to come along to this excellent illustrated talk.

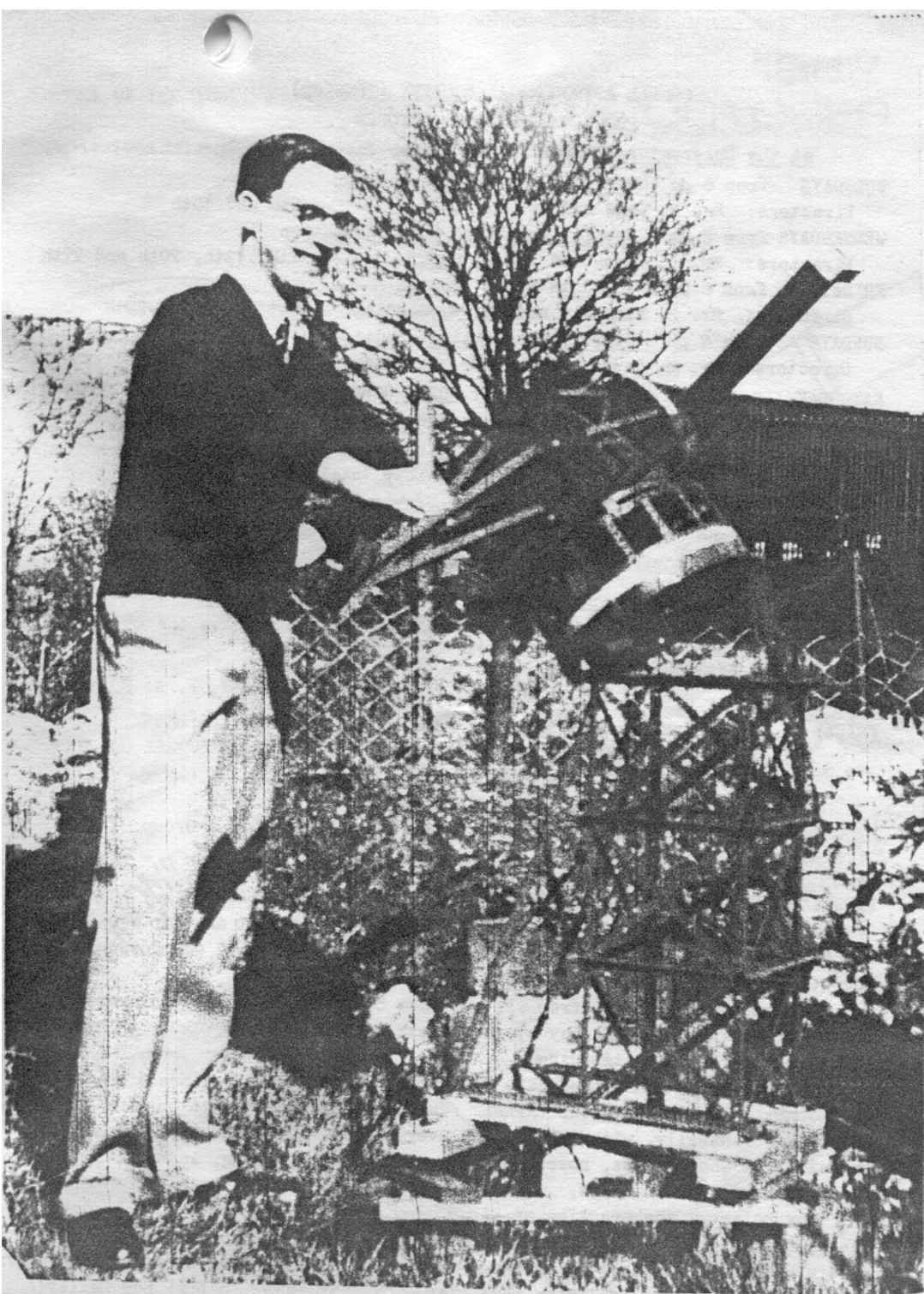
**JOURNAL** The deadline for November's Journal is Friday, October 15th. All items of astronomical interest will be gratefully accepted and should be sent to Mr. R. M. Cheesman, [redacted], WEST HANNINGFIELD, CHELMSFORD, Essex CM2 8LQ.

**DRAW TICKETS** As promised in last month's Journal, draw tickets were sent to every member of our Society in the hope that they would all be sold to help build up the Society's funds. If you would like some more to sell, please contact David Barnard, [redacted], Ipswich - 'phone Ipswich [redacted] - who will gladly send you some.

AN 'EARLY' MECCANO MOUNTING FOR A SMALL TELESCOPE

by Roy Adams





ORWELL ASTRONOMICAL SOCIETY (IPSWICH)  
PROGRAMME FOR 1982 OCTOBER

at the Observatory, Orwell Park School, Nacton, near Ipswich.

- TUESDAYS from 8 pm General Observations Section  
Directors: Mr. N. Gage and Mr. R. Hebbs. 5th and 19th
- WEDNESDAYS from 8 pm Nebular and Faint Objects Section  
Directors: Mr. D. Payne and Mr. M. Cook. 6th, 13th, 20th and 27th
- FRIDAYS from 8 pm Variable Stars Section  
Directors: Mr. M. Nicholls and Mr. R. Gooding. 1st, 15th and 29th
- SUNDAYS from 8 pm General Observations Section  
Directors: Mr. M. Barriskill and Mr. R. Adams. 10th and 24th
- SATURDAY 7.30 pm OCTOBER 23rd: OPEN COMMITTEE MEETING (in the Observatory) to which all members are invited.
- MONDAY 8 pm OCTOBER 11th: Visit by a Scout Group.
- MONDAY 7.45 pm OCTOBER 18th possibly (still to be confirmed): Visit by Greyfriars Round Table.

As there is no observing night up the Dome on Mondays, as many members as possible are required to help, please, with the above 'visit' events.

At Levington Ship Public House:

- SATURDAY 8.30 pm OCTOBER 16th: METEOR COUNT to observe the ORIONIDS.

Other meetings:

- SATURDAY OCTOBER 2nd: Visit to HERSTMONCEUX, F. A. S. MEETING
- FRIDAY 8 pm OCTOBER 22nd: at the FRIENDS' MEETING HOUSE, 39 FONNEREAU ROAD, IPSWICH. AN ILLUSTRATED TALK ON 'THE GEOLOGY OF THE SOLAR SYSTEM, PART III', by R. MARKHAM, B.Sc.

This is a joint meeting with the Ipswich Geological Group.

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FIGHTING FOR CLEAR SUMMER AND AUTUMN SKIES (FOR OBVIOUS REASONS)....

Roy Adams would like to hear from all people, not just amateur astronomers, who feel the air should be much clearer (and cleaner) than it was during last July, August and some of September.

Information is needed from all who have been inconvenienced (or you might call it something else) in some way by the latest period of stubble-burning by farmers not only locally but nationwide.

The aim is to gather and make available, information of a practical nature, including that which may help farmers regarding alternatives to burning-off straw and fields generally, without smutting everything - telescope mirrors as well as the air as a whole, eyes, noses, throats and lungs, clothing, laundry, fresh paintwork and anything else.

Roy believes the practice of straw- and other burning on such a large scale is the major cause of his being unable to get more than one short glimpse of Comet Austin and hopes together with other contacts to do something to prevent the large amount of atmospheric pollution next year. (Or at least in time for Halley's Comet.) Lady members under family memberships or otherwise, might particularly welcome the opportunity to contribute complaints regarding smudgy black particles on traditionally-dried laundry, window areas, food tables etc.

Roy Adams' address: [redacted], Ipswich IP2 9ST.



Orwell Astronomical Society (Ipswich)  
presents  
a lecture entitled

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**THE GEOLOGY  
OF  
THE SOLAR SYSTEM**

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by

**Mr. R. MARKHAM, B.Sc.**  
of the Ipswich Museum

on

**FRIDAY OCTOBER 22nd 1982**

at 8p.m.

at

The Friends Meeting House  
Fonnereau Road, Ipswich

**REFRESHMENTS**

**ADMISSION FREE**

Secretary: Mr. R. Gooding  
168 Ashcroft Road  
Ipswich. IP1 6AE