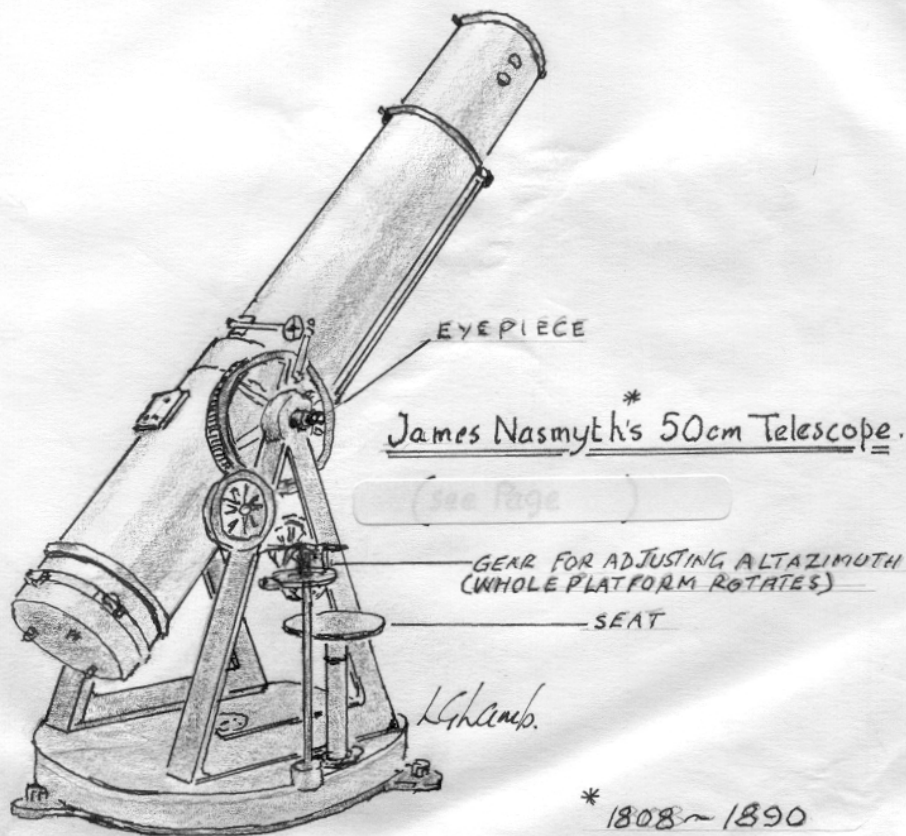


ORWELL ASTRONOMICAL

SOCIETY IPSWICH

Charity No 271313

SEPTEMBER 1997



James Nasmyth's 50cm Telescope.

(see page)

GEAR FOR ADJUSTING ALTAZIMUTH
(WHOLE PLATFORM ROTATES)

SEAT

L.G. Camp.

* 1808 ~ 1890

SOCIETY NEWS

1 Committee Meeting

The next committee meeting will be held on Saturday 20th September at the observatory, from 19:30. This will be an open meeting and any member is welcome to attend.

2 Events for 1997

BAA Out of London meeting

12th, 13th, 14th Sept.

This year it is being held in Norwich at the University of East Anglia. As this event is being held over 3 days and tickets will need to be purchased. Please contact Roy Gooding if wish to purchase any tickets.

Registration £3.50

Meal vouchers £6.50

Lecture by Patrick Moore & John Mason £4.00 (13-9-97) in the evening. No start time given at present

FAS Cambridge Convention

4th Oct.

At the time of writing I have not yet received any thing from the FAS concerning this event. They usually sent a booking and information sheet during August.

Patrick Moore Lecture

28th October

Patrick Moore will be giving a talk in the Ipswich Corn Exchange on Tuesday 28th October at 19:30:-

40th Anniversary " The Sky at Night Tour "

Tickets £10, £8 & £6 All obtainable from the Ipswich Corn Exchange

Christmas Meal

10th Dec.

3 Summer Excursion

A possible society excursion trip could be to the science Park at Herstonceux. If enough members were interested, together with their families and friends it may be possible to hire a bus. Please let me have your opinions about this.

NIGHT SKY

All times GMT

SUN

Rises approximately between 05:20 to 05:50
Sets approximately between 18:40 to 17:50

Moon

New Moon 1st
First Quarter 10th
Full Moon 16th
Third Quarter 23th

MERCURY Mercury has moved back into the morning sky this month. Greatest western elongation is on the 16th. Mag -0.0

VENUS Venus will be well placed in the western sky after sunset. Venus will be setting about at about 21:30 in mid month. Mag. -4.1

MARS Mars will be visible for a short time after sunset. in the western sky this, month. It will be setting at about 20:00 in mid month. Mag. 1.0.

JUPITER Jupiter will be well placed for observing this month. It rises at about 17:00 in mid month. Mag. -2.7

SATURN Saturn is also well placed for observing this month, rising at about 19:10 in mid month. Mag. 0.3

URANUS Uranus will be visible for most of the night, setting at about 01:15 in mid month. Mag. 5.7

Neptune Neptune will be setting at about 00:35 in mid month. Mag. 7.9

R. Gooding

Whatever happened to the Perseids?

Many UK observers were frustrated in their attempts to observe the Perseids this year by cloud. It was reasonably clear in Nacton around 1 am on 13th, although there was some haze and high cloud. However, over a space of 30 minutes only 6 meteors were seen, non of which were bright. Observers in the US saw a very good display in the early hours of Tuesday morning. It seems that the Perseids peaked sharply when it was daylight in the UK and had declined dramatically by the time it was dark again here.

OCCULTATIONS DURING SEPTEMBER 1997

The table lists stellar occultation events which occur during the month under favourable circumstances. The data relates to Orwell Park Observatory, but will be similar at nearby locations.

	Date & Time (UT)	Lunar Phase	Sun Alt (°)	Star Alt (°)	Min Dist rad	Star	Mag
D	08 Sep 19:27	.37+	-10	13	.70S	49 Lib	5.5
D	10 Sep 21:19	.58+	-25	10	.36S	290 B. (Oph)/Sgr	7.3
D	21 Sep 23:55	.66-	-38	25	.84S	sigma 2 Tau	4.8
R	00:29		-37	31			

James Appleton

NEW LIBRARY BOOK

The OASI library has recently acquired the following book:

The NASA Atlas of the Solar System, by Ronald Greeley and Raymond Batson, Cambridge University Press, 1997.

This expensive, large format book provides a visual feast! It is based primarily on images of solar system bodies obtained by space probes in recent years. It contains huge colour photographs, detailed computer-generated maps and a comprehensive gazetteer covering all the major solar system planets and moons. This book is sure to become a standard reference text for many years to come.

Because of the high cost of this book (£100) it is not available for loan to members but can be consulted in the OASI library.

The library, housed next to the club room at the Orwell Park Observatory, holds a selection of astronomical books, videos and magazines. All members of OASI are welcome to use the library. Please contact the librarian with suggestions for purchases of books, videos and software.

James Appleton

Summer Maintenance

After an absence of 3 / 4 years the School's tower scaffolding has once again been erected in the dome.

The first job was to grease the top shutter rail. The shutter has been getting harder to open during the last year. It now opens and closes more easily.

The second job was to investigate the inner construction of the dome. This involved removing 2 of the mahogany boards. Except at the bottom of the dome, above the track, the internal materials were quit sound. This was the preliminary investigation to gage what the best method would be to repair the ring, which has been developing cracks for many years. This was a job that has been pending for a long time, but up to now has been put off. If nothing was done the dome would adventurously cease to be rotatable, thus making the observatory unusable.

The third job is to add a strengthening bar around the inside of the dome's track ring. About 12 years ago this ring had been completely split, beneath the shutter opening. This had been repaired sucessfully by bolting a bracket from the top of the ring on to one of the internal strengthening struts of the dome. A steel bar bolted around the inside of the dome ring completed the repair. This repair has remained sound ever since it was added. It was decided to continue round the rest of dome ring with a similar steel bar.

Two lengths of curved steel bars, each about 5 meters long were delivered to the observatory by Martin Cook on Wednesday 6th August. The bars had to be forced round the Observatory stair well as far as the club room. From there they were moved onto a balcony and pulled up the outside of the tower on to the stair well roof, before being lowered down to the dome floor

Wednesday the 13th culminated in a great volume of noise, being generated by busy members as they began the task of fixing the first bar to the track. At on point in the evening there were four people drilling holes, one taping, followed by another inserting a bolt in every completed hole.

Work will continue on Wednesday 20th

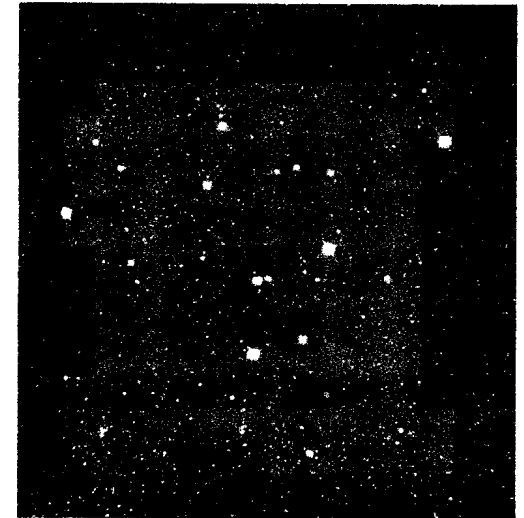
Roy Gooding

Four Messier Objects for September evenings

David Payne

During September the evenings are drawing in and deep sky observing becomes more practical. This month I have chosen four Messier objects that all lie within about 20 degrees of the zenith in mid evening and are therefore ideally suited to observing particularly with Newtonian reflectors. The objects are M29, M39, M56, M57 and M92.

Lying in Cygnus at position RA 21h 32.2m, Dec +48.26` is the bright (about magnitude 5) but rather loose open cluster M39. It is about .5 degrees across and needs low powers to be seen at its best. The cluster contains about 30 true members and lies at a distance of about 800-900 light years given a true diameter around 7 light years.

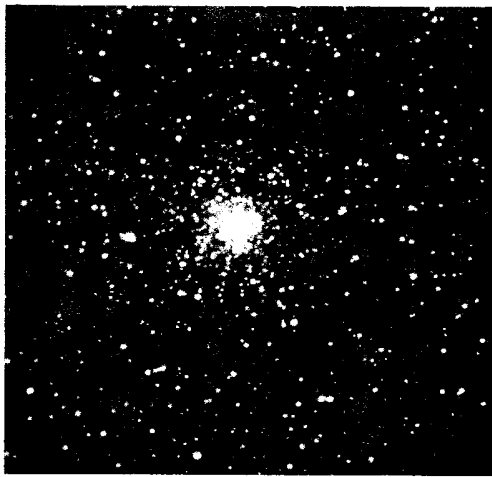


M39 Cygnus

Also in Cygnus at position RA 20h 33.9m, Dec +38.32` is the much smaller cluster M29 with a diameter about 7`. It is also is much fainter than M39 with an integrated magnitude around 7. The cluster lies in a rich area of the Milky Way and so is not very prominent containing only about a dozen or so 8th -9th magnitude stars. It is however worth searching out to complete the Messier set. In a small telescope the cluster actually resembles a miniature Pleiades or dipper. It lies at a distance of 7200 light years and has an actual diameter of about 15 light years.

M56 is a globular cluster in Lyra at position RA 19h 16.6m, Dec +30.11`. It is a fairly compact globular about 5` diameter with out any

real central condensation found in many such objects. It is fairly bright at magnitude 8.2 and can begin to be resolved with a 6inch telescope. The cluster lies at a distance of about 40,000 to 46,000 light years and has an actual diameter of about 60 light years.

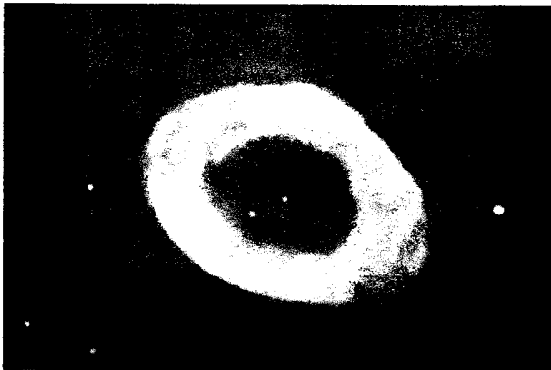


M56 Lyra

The other object in Lyra not far from M56 is the well known "Ring Nebula" M57.

This is a planetary nebula which has a very hot central star (about 100,000 degrees compared to the Sun with about 6000 degrees surface temperature) that is nearing the end of its life. The outer layers of the central star have been pushed away and it is this material that is fluorescing from the intense ultra-violet radiation being emitted from the central star. The ring appearance is an effect of looking through the shell of glowing gas with an effective increasing thickness being observed towards the edge of the shell. It is difficult to accurately estimate the distance of Planetary nebulae and estimates for

M57 lie in the range 1000 to 2000 light years with a value around 1500 taken as more likely. The apparent size of the ring is about 80"x60" which would give a true diameter for the ring of about 0.5 light years. To see the ring structure usually requires about a 6inch telescope but it is worth finding in any size

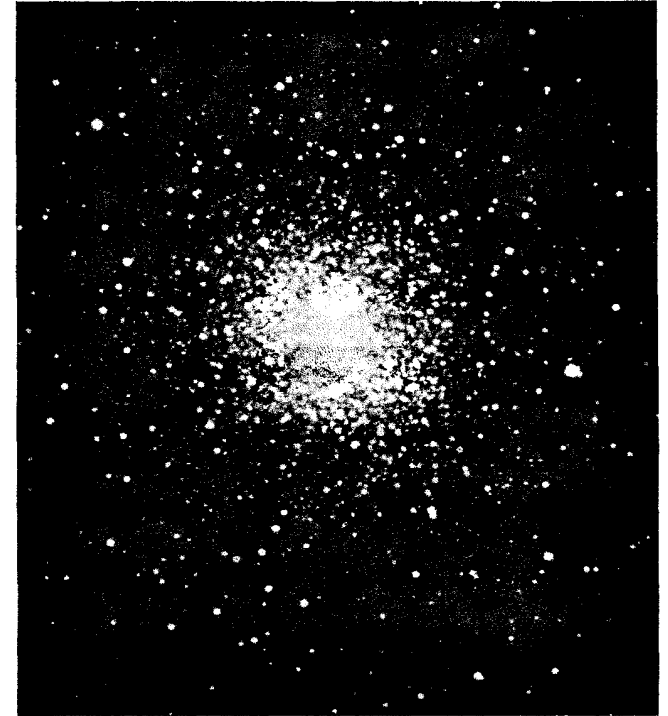


M57 Ring Nebula in Lyra

telescope.

The last object described this month is the splendid globular cluster M92 in Hercules often overlooked because of the brilliant M13 nearby.

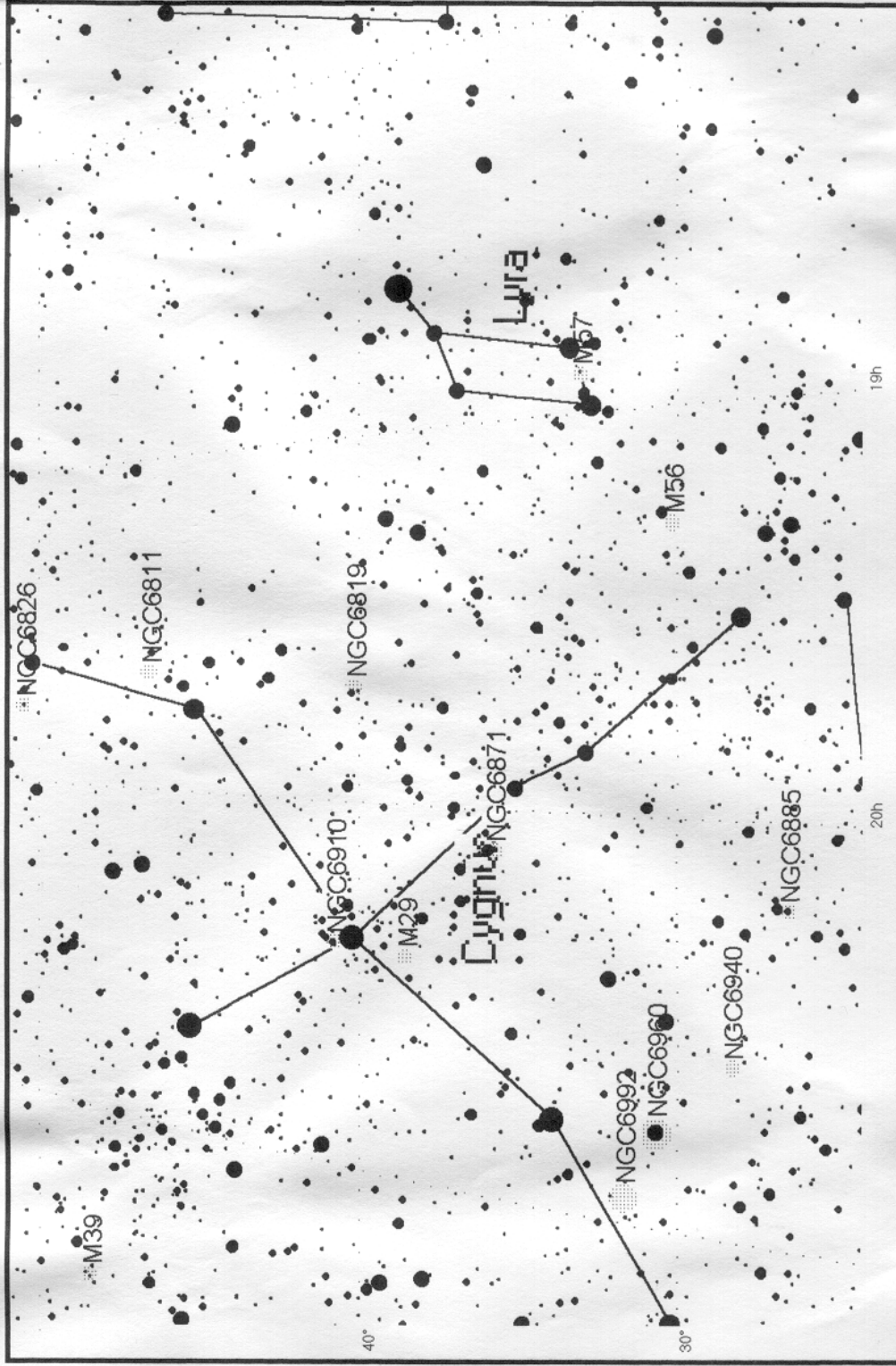
M92 lies at position RA 17h 17.1m, Dec +43.08' and has an integrated magnitude of about 6.5 only about half a magnitude fainter than M13! It is smaller than M13 with an apparent diameter of 8' compared to 23' for the latter. Some resolution is possible with a four inch but it really requires a six inch with every increase in aperture increasing the splendour of the



M92 in Hercules

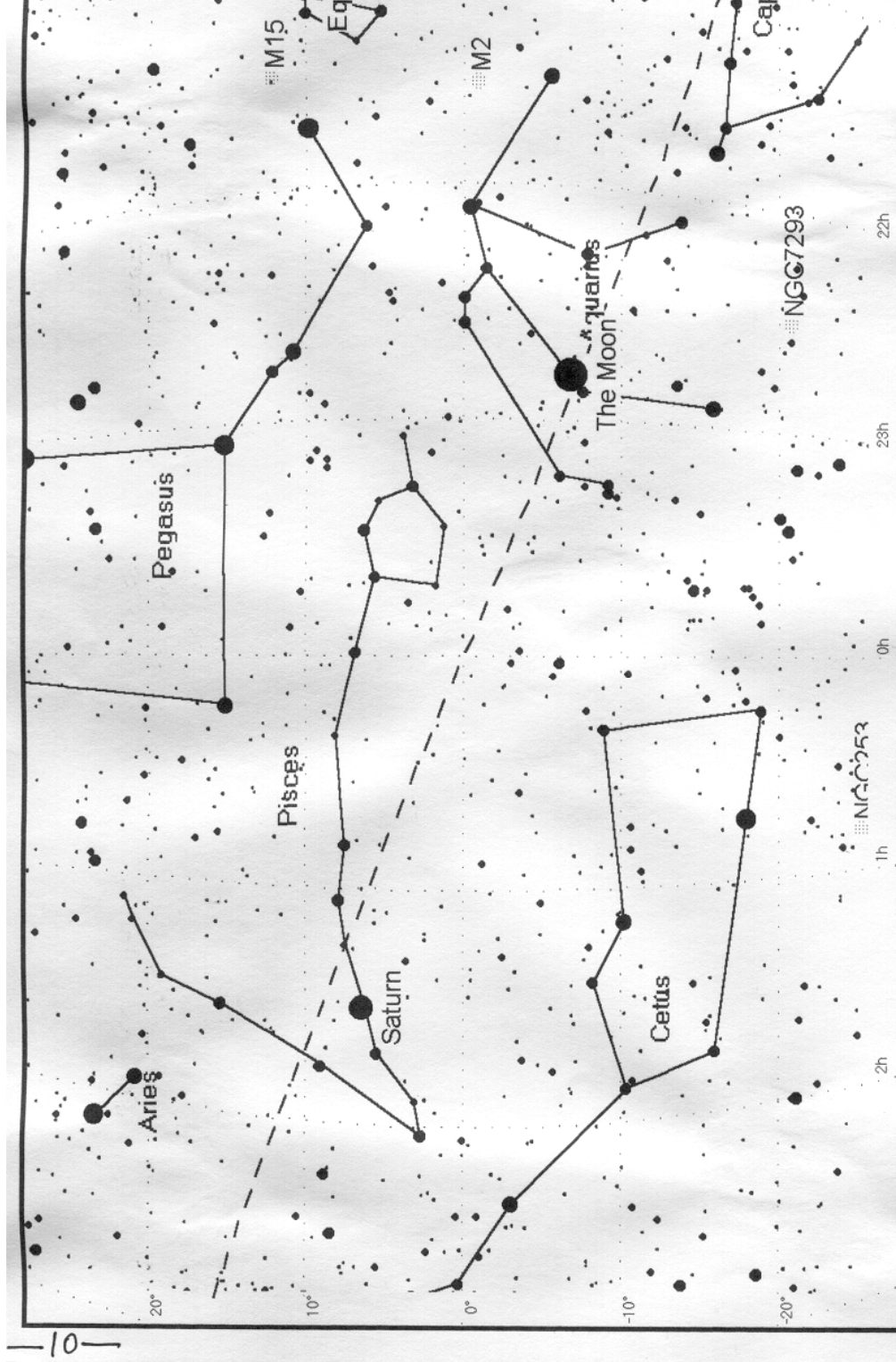
object. M92 is estimated to be between 28,000 to 35,000 light years away with a true diameter for the cluster around 75 light years.

All the objects this month are easy to find and high in the sky, good hunting!



Ipswich 1997 September 15 22:22:00

Centered RA:19h40m00s Dec:+37°00'00"



Ipswich 1997 September 15 22:22:00

Centered RA:01h22m00s Dec:-22°22'00"

Society Excursion to Herstmonceux

Saturday 6th of September has been chosen for the excursion to Herstmonceux this year. If you are interest in coming along please contact Roy Gooding as soon as possible. Transport arrangements have not yet been decided upon. If enough members any their family and friends wish to come a bus will be hired. Other wise either a minibus and cars will be used. The sooner numbers are known the better, if a bus is to be hired.

Depending on what type of transport is used will dictate the cost. So I can not be any more specific at the moment. There will also be an entrance fee to pay

STOP PRESS: On Tuesday 28th October at 7.30pm at the Ipswich Corn Exchange there is:- "Dr Patrick Moore 40th anniversary 'The Sky at Night tour' 1997 ". Contact The Corn Exchange for more information.

PROGRAMME FOR SEPTEMBER

Mondays from 7.30pm No Directors available for this night	GENERAL OBSERVATION SECTION
Tuesdays from 7.30pm Mr P Richards	OBSERVATORY VISITS FROM OUTSIDE GROUPS
Wednesdays from 8.00pm Mr M Cook	NEBULA & FAINT OBJECTS SECTION Mr D Payne
Thursdays from 7.30pm Mr P Richards	OBSERVATORY VISITS FROM OUTSIDE GROUPS
Fridays from 7.30pm 12 th - 26th Mr J Hood	DOUBLE STARS

All members are welcome on any night, but on nights other than Wednesday please check with the director of the night that the observatory will be open.

Lectures and other events:

Committee Meeting -----On Saturday 20th September at 7.30pm in the club room at the observatory. All members are welcome to attend.

e-mail enquires to oasienq@btbcs.bt.co.uk
WWW url <http://www.ast.cam.ac.uk:80/~ipswich/>

1997 COMMITTEE

	Home Phone	Work Phone
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