

ORWELL ASTRONOMICAL SOCIETY IPSWICH

Charity No 271313.

OBSERVATORY

ORWELL SCHOOL.

SEPTEMBER 1996



ORWELL

ASTRONOMICAL SOCIETY ~ IPSWICH

NIGHT SKY

All times GMT

SUN

Rises approximately at 05:00 to 06:10
Sets approximately at 18:50 to 17:40

MOON



4th



12th



20th



27th

MERCURY Mercury will be at inferior conjunction on the 27th. It will not be easily seen this month.

VENUS Venus will be rising at about 01:30 in mid month. Mag. -4.2.

MARS Mars will be rising at about 00:50 in mid month. Mag. 1.5.

JUPITER Jupiter will be visible in the early evening this month. By the end of the month it will be setting at about 22:10. Mag. -2.6.

SATURN Saturn will be at opposition on the 26th, and is visible all night. Mag. 0.5

URANUS Uranus will be setting at about 00:50 in mid month. Mag. 5.7.

NEPTUNE Neptune will be setting at about 00:20 in mid month. Mag. 7.9

Roy Gooding

OCCULTATIONS DURING SEPTEMBER 1996

The table lists stellar occultation disappearance 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 (radii)	PA (°)	Star	Mag
Wed 25 Sep	02:04:02	.94+	-31	11	.08S	64	Rho Aqr	5.1
Thu 26 Sep	01:18:19	.98+	-36	26	.13S	59	ZC3416	5.5

James Appleton

SOCIETY NEWS

1 Committee Meeting

The next committee meeting will be held on Saturday 7th September at the observatory, from 1930. This will be an open meeting and any member is welcome to attend.

2 Events for 1996

This list of events was first presented at the AGM.

Astro Camp	11th Aug.
Horncastle Weekend	6th Sept.
National Astronomy Week	21 to 28 Sept
FAS Cambridge Convention	5th Oct.
Christmas Meal	

By popular request the Christmas meal this year will again be at the Shepherd & Dog, 11th December.

A £5 deposit will be required to be sure of a place. I have booked 20 places again this year.

3 Open Weekend September 20th, 21st, 22nd, 23rd

We will be holding another Open Weekend to coincide with National Astronomy Week, on September 20th, 21st, 22nd, 23rd

The observatory will be open between 20:00 to 22:00.

As usual many members as possible will be needed to look after our visitors.

Observatory Log for August P Richards

Painting the woodwork has continued through the month. The main maintenance job has been to Spring Clean (albeit a bit late in the year) in preparation for the open evenings in September.

Meanwhile on the observing front, as the nights have drawn in, the dome has been opened more frequently and the telescope is getting more use than in the previous two months. Jupiter was one of the first objects to attract the observers attention at the beginning of the month, having just passed opposition (closest approach to the Earth) and being an object suitable for observation in even in a twilight sky. The object attracting the most interest has been Comet Hale-Bopp which was observed a number of times on Wednesday evenings this month. [Humm ... since Wednesdays are officially the ?Nebula and Faint Object Section? should we looking at Hale-Bopp? After all it's visible to the naked eye under good conditions from dark sites!]

Spot the nebula or Hale -Bopp?

David Payne

This month I thought it would be interesting to use Messier's catalogue as he originally intended, that is to avoid confusing nebulous objects with suspected comets. The comet in question is Hale-Bopp which is now becoming a fairly bright binocular object. If you haven't yet found this comet now is a good time to try, it lies north westerly from Jupiter around 25 degrees away.

The comet lies north of a very rich region of sky for Messier objects, the most northerly of which are M10, M11, M12, M14, M16, and M26. During the summer months Hale-Bopp passes through the area of sky occupied by these objects and if the position of the comet is not known before observing, and has not previously been observed, then it is possible that the comet could be confused with one of these Messier objects. Of course if the comet's position is noted before observing then the confusion can be avoided but this spoils the fun of the initial search and remember that the original discoverers of comets don't know they are there!

In practice Hale-Bopp is now sufficiently bright and large that there is little likelihood of confusion when observing with good binoculars. Clearly if a moderate size telescope is used then the comet can be easily distinguished from any of the Messier objects listed above.

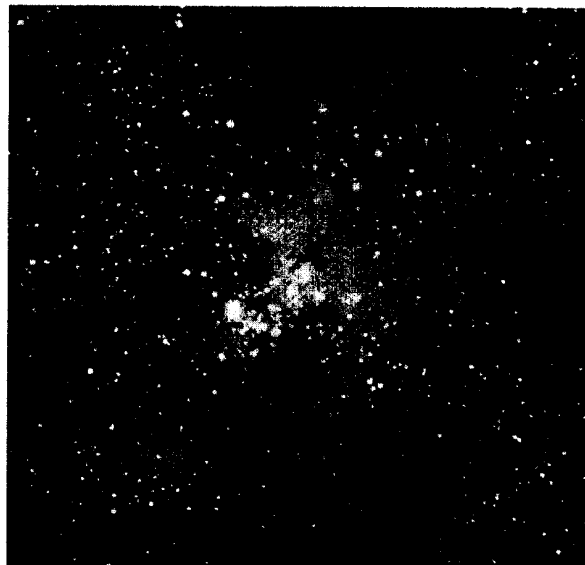
All the objects are worth observing in their own right so while searching this area of sky for Hale-Bopp why not take the trouble to try and find them?

The table below lists the main attributes of the six Messier objects:

Object	Constellation	R.A. h m	Dec. ° ' "	Size	Mag.	Distance	Type
M10	Ophiuchus	16 57.1	- 4 06	15	6.6	16,000 ly	Globular Cluster
M11	Scutum	18 51.1	- 6 16	14	5.8	5,500 ly	Open Cluster
M12	Ophiuchus	16 47.2	- 1 57	14	6.6	19,000 ly	Globular Cluster
M14	Ophiuchus	17 37.6	- 3 15	12	7.6	24,000 ly	Globular Cluster
M16	Serpens	18 18.8	-13 47	7	6.0	8,000 ly	Open Cluster
M26	Scutum	18 45.2	- 9 24	15	8.0	4,900 ly	Open Cluster

All these nebula are good objects for small and moderate telescopes.

Of particular note is M16 this is the "Eagle Nebula" recently made famous by the appearance of those spectacular Hubble Telescope pictures in the national press.



M16 Serpens

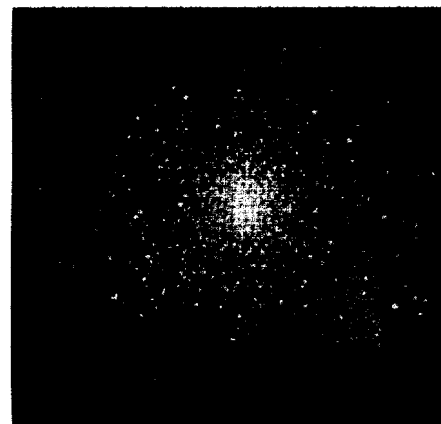
In small telescopes M16 appears as a fairly loose open cluster but with larger apertures the surrounding nebulosity can be seen as a three-lobed structure.

M11 is the "Wild Duck Nebula" a rich open cluster that is one of the most beautiful in the heavens.

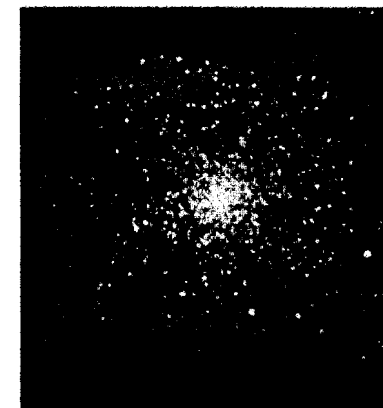


M11 Scutum

M10 and M12 are a fine pair of globular clusters with resolution of the outer portions visible in a four-inch telescope under good conditions.

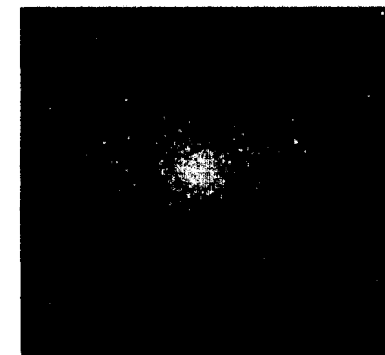


M10 Ophiuchus



M12 Ophiuchus

M14 is another more distant globular cluster but requires a larger aperture around 8 inches or greater to show some resolution.



M14 Ophiuchus

M26 is probably the least impressive of the six objects being a loose cluster of 20-30 stars in moderate apertures. It is somewhat overshadowed by the nearby much more spectacular M11, however it is a pretty enough cluster worth searching out while in this area of sky.

Of course while over in this region of sky don't forget Hale-Bopp and Jupiter is worth the occasional glance!!

NEW LIBRARY BOOKS

The OASI library has recently acquired the following books:

The Great Comet Of 1996, a special publication by *The Astronomer* journal, May 1996. This book contains a record of the recent passage of comet Hyakutake. It includes numerous photographs (some in colour), drawings, observational logs and a press statement about the comet by Yuji Hyakutake himself.

Astronomy On The Personal Computer, by O. Montenbruck and T. Pfleger (Springer Verlag, first edition, 1991). This book provides a large number of Pascal computer programs for calculating various astronomical phenomena such as stellar and planetary positions, cometary orbits, circumstances of eclipses and occultations. It includes a full description of all the programs, and sample output. A second edition of this book, slightly revised and enlarged, has recently been released. (But the library only holds the first edition.)

The Observational Amateur Astronomer, edited by Patrick Moore, Springer Verlag, 1995. This book contains chapters covering techniques for observing the solar system bodies, meteors, comets and deep sky objects together with atmospheric phenomena such as aurorae and noctilucent clouds. Each chapter is written by an expert in the field, many belonging to the BAA. The book is aimed at the amateur who has some astronomical experience, but is not an expert observer.

The Modern Amateur Astronomer, edited by Patrick Moore, Springer Verlag, 1995. This is a companion book to the above, with a similar style and target audience. Chapters, each written by an expert in the relevant field, cover optical principles, making and buying a telescope, observatories, and more advanced topics such as celestial coordinate systems, astronomical computing, astrophotography and spectroscopy. The chapter on observatories consists largely of a detailed description (with photographs) of five current amateur observatories, and is particularly interesting because of the range of circumstances and the diversity of equipment in use.

Telescopes And Techniques, by Christopher Kitchin, Springer Verlag, 1995. The genesis of this book was a first year astronomy course at the University of Hertfordshire (where the author is a lecturer). The book is split into three sections, covering telescopes, positions and motions, and observing. The section on telescopes introduces the basic types of instrument with a good description of the aberrations and performance limitations of each. The section on positions and motions gives a reasonably clear description of the motions of celestial bodies at an elementary level. The section on observing covers a lot of ground at a variable level of detail. There is a good description of the use of modern CCD techniques to complement photography, and a particularly lucid elementary explanation of the UBV photometric system

Please contact me with any requests for purchase of other books for the library.

James Appleton

PROGRAMME FOR SEPTEMBER

Mondays from 7.30pm No Directors available for this night	GENERAL OBSERVATION SECTION
Tuesdays from 7.30pm Mr D Barnard	GENERAL OBSERVATION SECTION daytime only
Wednesdays from 7.45pm 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 13th - 27th Mr J Hood	DOUBLE STARS Mr M Barritt

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 7th September at 7.30pm in the club room at the observatory. All members are welcome to attend.

OPEN EVENINGS ---- SEPTEMBER 8 pm to 10 pm Each Day.
Friday 20th, Saturday 21st, Sunday 22nd, Monday 23rd.

e-mail enquires to oasieng@btbcs.bt.co.uk

WWW url <http://www.ast.cam.ac.uk:80/~ipswich/>

1996 COMMITTEE

	Home Phone	Work Phone
CHAIRMAN	D Payne	
SECRETARY	R Gooding	
TREASURER	M Nicholls	
MAINTENANCE CO-ORD	M Cook	
JOURNAL CO-ORDINATOR	E Sims	
PUBLICITY & VISIT CO-ORD	P Richards	
EQUIPMENT CURATOR	M Harlow	
SPECIAL EVENTS CO-ORD	A Smith	
LIBRARIAN & COMP SOFTWARE	J Appleton	
JOURNAL ARTICLES TO	E Sims	Ipswich Suffolk IP1 4HA
CORRESPONDENCE ADDRESS	R Gooding	OASI Secretary Ipswich Suffolk IP1 6AE

ORWELL ASTRONOMICAL SOCIETY (IPSWICH)

ORWELL PARK OBSERVATORY
NACTON NR IPSWICH

NATIONAL ASTRONOMY WEEK

TO COMMEMORATE THE 150th ANNIVERSARY OF THE DISCOVERY OF THE PLANET NEPTUNE

THE ORWELL PARK OBSERVATORY WILL BE
OPEN TO THE PUBLIC

FRIDAY 20th September from 8:00 to 10:00 pm

SATURDAY 21st September from 8:00 to 10:00 pm

SUNDAY 22nd September from 8:00 to 10:00 pm

MONDAY 23rd September from 8:00 to 10:00 pm

FOR THE OBSERVATION OF THE:

**Moon, Jupiter, Saturn, Neptune,
comet Hale-Bopp & the night sky**

If weather conditions permit

If you have a pair of binoculars please bring them along

An alternative programme of talks and slide shows will be arranged if weather conditions are not suitable for observation

Entrance by donation

Child & OAP 50p
Adult £1

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