

NIGHT SKY

All times GMT

ORWELL ASTRONOMICAL
SOCIETY ~ IPSWICH

JUNE
1996

SUN

Rises approximately at 03:40
Sets approximately at 20:20

MOON



1 st



8 th



16 th



24 th

MERCURY Mercury has moved back into the morning sky this month. It is not well placed for observation this month.

VENUS Venus also moves into the morning sky this month.

MARS Mars will be rising about 02:30 on mid month. Mag. 1.4

JUPITER Jupiter will be rising at about 21:30 in mid month.
Mag -2.7

SATURN Saturn will rising by 00:40 in mid month. Mag. 0.9.

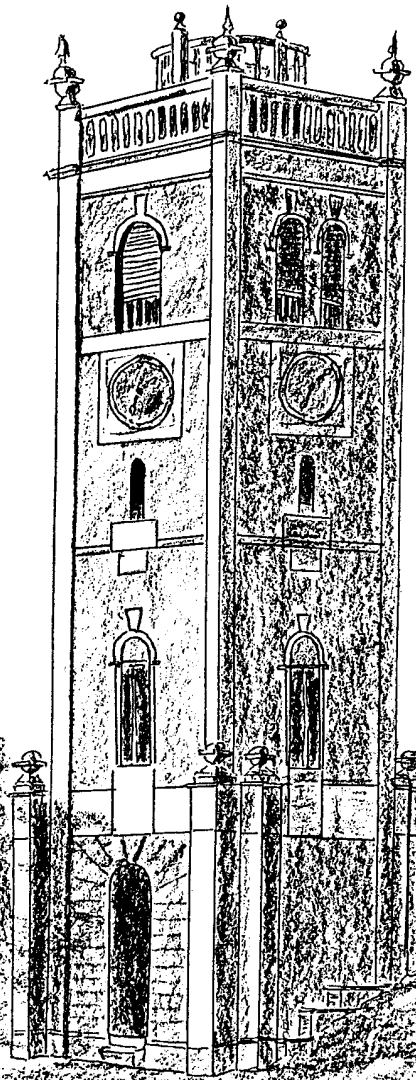
URANUS Uranus will be rising at about 22:30 in mid month. Mag. 5.7

Neptune Neptune will be rising about 22:00 in mid month.
Mag. 7.9

SOCIETY NEWS

1 Committee Meeting

The next committee meeting will be held on Saturday 15th June at the observatory, from 19:30. This will be an open meeting and any member is welcome to attend.



CLOCK TOWER

ORWELL SCHOOL

L.G. Lamb

2 Events for 1996

This list of events was first presented at the AGM.

WEB Society AGM Cambridge	1st	June
BAA Comet Section Meeting Cambridge	8th	June
BAA Exhibition Meeting	29th	June
Astro Camp	11th	Aug.
Dower House Towing Park, Thetford	6 to 15	Sept.
Horncastle Weekend	6th	Sept.
National Astronomy Week	21 to 28	Sept.
FAS Cambridge Convention	5th	Oct.
Christmas Meal	11th	Dec.

Orwell Park School will be holding its annual parents day on 6th July. The observatory will be open in the afternoon for the parents if any one is available.

Pete Richards has been approached to arrange a visit for a group of 4 to 7 year olds sometime between the end of July or the beginning of August. The only problem is that they want the visit during the day. If you are able to help please contact Pete.

Roy Gooding

OCCULTATIONS DURING JUNE 1996

Due to the short hours of darkness during the month, there are only two occultation disappearance events which occur under favourable circumstances. The circumstances are listed in the table below for Orwell Park Observatory, but will be similar at nearby locations.

Date	Time (UT)	Lunar Phase	Sun Alt (°)	Star Alt (°)	Min Dist (radii)	PA (°)	Star (D = double)	Mag
Wed 26 Jun	22:36:53	.77+	-13	16	.79S	157	ZC2065 (D)	6.8
Sat 29 Jun	01:17:57	.93+	-13	7	.09N	87	Khi Oph	4.1

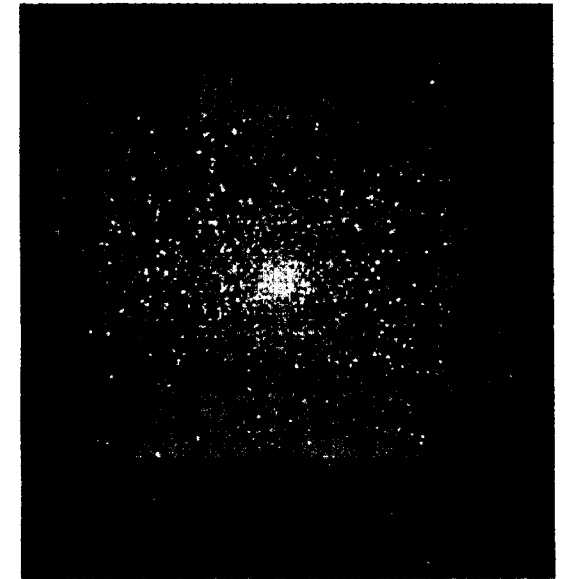
James Appleton

Globular Clusters for Late Evenings in June

David Payne

During June with twilight extending past 10:00pm (BST) observers of deep sky objects need to stay up late if they want to see their favourite objects against a dark sky. This month for those late night observers I have chosen four globular clusters listed in Messier's catalogue that are well positioned, at a reasonable altitude in the southern sky. The objects are M5 in Serpens and M10, M12, and M14 in Ophiuchus.

The brightest and most magnificent of the four objects is M5. Next to M13 this can be rated as next the most glorious globular cluster in the northern sky. The cluster lies in a fairly sparse area of sky, as far as bright stars are concerned, but is not difficult to find. Probably the best way is to find a pair of forth magnitude stars 109 and 110 Virginis lying SE of Arcturus. About 4 degrees east of 110 Virginis the most easterly of the pair is a group of 5th magnitude stars forming a small triangle. M5 lies just to the NW of the most northerly of the stars in this triangle (5 Sepentis) and as a magnitude

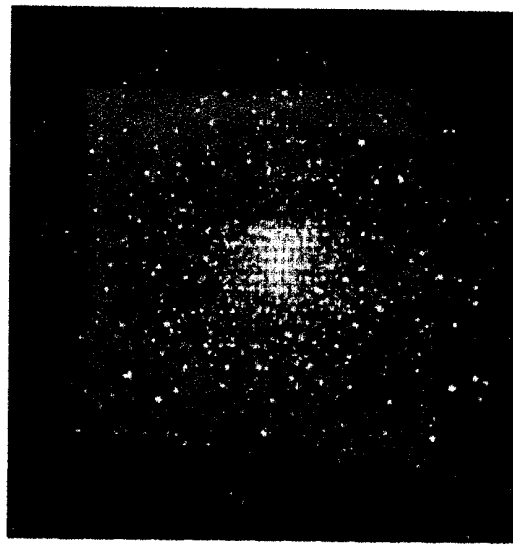


M5 Serpens

6.2 object can be easily seen as a fuzzy "star" in binoculars. The cluster is a fine sight even in small telescopes and is well worth searching for. Telescopes of 4 inches aperture will begin to resolve the brighter stars in the cluster in a ten inch it is a marvellous sight. Estimates of the distance of M5 range from around 23,500 light years to 30,000 light years, the apparent diameter is about 20' giving a corresponding actual diameter of about 150 light years.

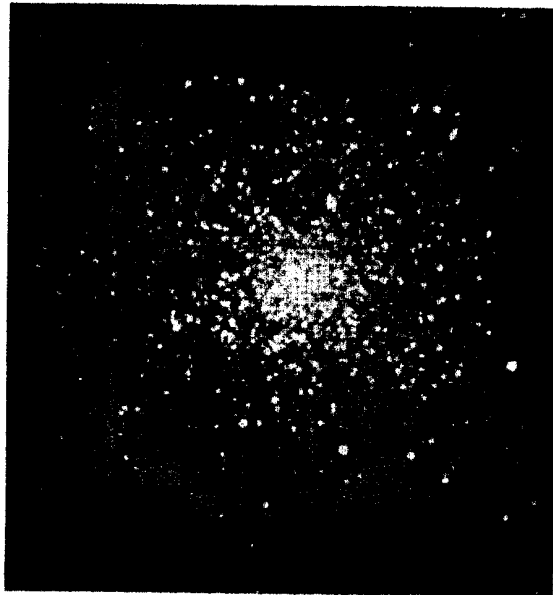
Moving east into Ophiuchus the two globular clusters M10 and M12 can be found. M10 lies 1 degree west of a 5th magnitude red star 30

Ophiuchi. It is a fairly condensed cluster with an integrated magnitude of 6.7. A four inch telescope can reveal some resolution under good conditions, a six or eight inch reveals many more stars and provides fine views. The distance of this cluster is less certain than M5 and estimates have ranged from 16,000 light years out as far as 33,000 light years. Modern estimates now favour the shorter distance of around 16,000 light years. The apparent diameter is about 8' which using the shorter distance estimate would give a true diameter of about 40 light years, less than one third of the size of M5.



M10 Ophiuchus

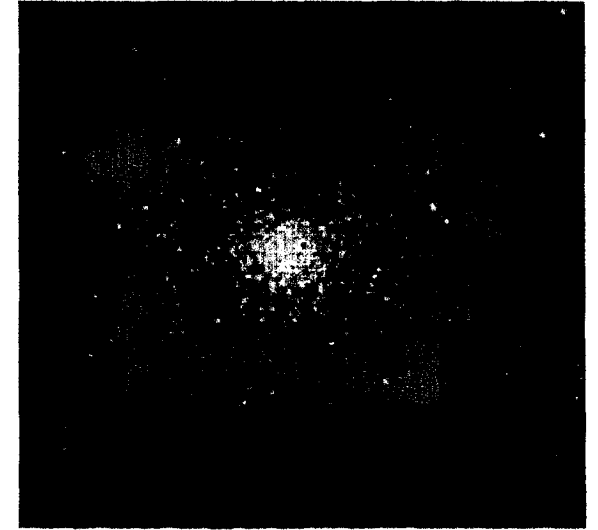
M12 lies about 3.4 degrees NW of M10. It is slightly larger than M10 with an apparent diameter of about 10' the integrated magnitude is 6.6 a little brighter than M10 but it is looser and less condensed so that it appears visually as a slightly fainter object. Because it is a looser less condensed cluster than M10 it is quoted in many references as being easier to resolve but I usually find M10 easier than M12. Again a four inch telescope will reveal some resolution at the edges with fine sights obtainable in a ten inch aperture. Both



M12 Ophiuchus

M10 and M12 have very few observed variable stars which makes distance estimates uncertain. Again, as with M10, the estimates for the distance of M12 cover a wide range from 16,000 to 24,000 light years. The modern view is that M10 and M12 are at similar distance and so the lower figure is generally accepted. If this is the case then the clusters are only about 2000 light years apart and would appear as glorious, naked eye, 2nd magnitude objects when observed from the other cluster, with a diameter of about three times the diameter of the full moon. The actual diameter of the cluster would be about 50 light years.

Moving further east in Ophiuchus is the smaller and fainter globular cluster M14. This cluster has an integrated magnitude of 7.7 and an apparent diameter of 6'. It is much more difficult to resolve than M10 and M12 and requires at least an 8 to 10 inch telescope to give some hint of stellar structure. It can however be seen as a fuzzy star in good binoculars and is well worth looking for with small telescopes. M14 is considerably more distant than M10 and M12



M14 Ophiuchus

and contains many more variable stars that can be used for distance determination. Estimates of the distance have however spread over even greater ranges than those for M10 and M12 due to the uncertainty of the correction for light loss by the interstellar dust in this region of the Galaxy. Modern estimates seem to favour a distance of about 24,000 light years which would give an actual diameter of about 40 light years.

Comet 1996/B2 27th March 1996



Image of comet Hyakutake taken on 27th March from Trimley St. Mary using a 135mm lens and 400ASA film. The exposure was 3 minutes with the camera mounted on a 14" fork mounted Newtonian. The original colour image shows the blue-green glow from C_2^+ molecules at the leading edge of the coma and the thin blue ion tail. A broader yellow-red dust tail was also faintly visible.

Photo by Mike Harlow.

PROGRAMME FOR JUNE

<i>Mondays from 7.30pm</i> <i>No Directors available for this night</i>	GENERAL OBSERVATION SECTION
<i>Tuesdays from 7.30pm</i> <i>Mr D Barnard</i>	GENERAL OBSERVATION SECTION daytime only
<i>Wednesdays from 7.45pm</i> <i>Mr M Cook</i>	NEBULA & FAINT OBJECTS SECTION <i>Mr D Payne</i>
<i>Thursdays from 7.30pm</i> <i>Mr P Richards</i>	OBSERVATORY VISITS FROM OUTSIDE GROUPS
<i>Fridays from 7.30pm</i> 7th - 21st <i>Mr J Hood</i>	DOUBLE STARS <i>Mr M Barritt</i>

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

Lectures and other events:

COMMITTEE MEETING ----- On Saturday 15th June at 7.30pm in the club room at the observatory. All members are welcome to attend.

VISITS -----

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	
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