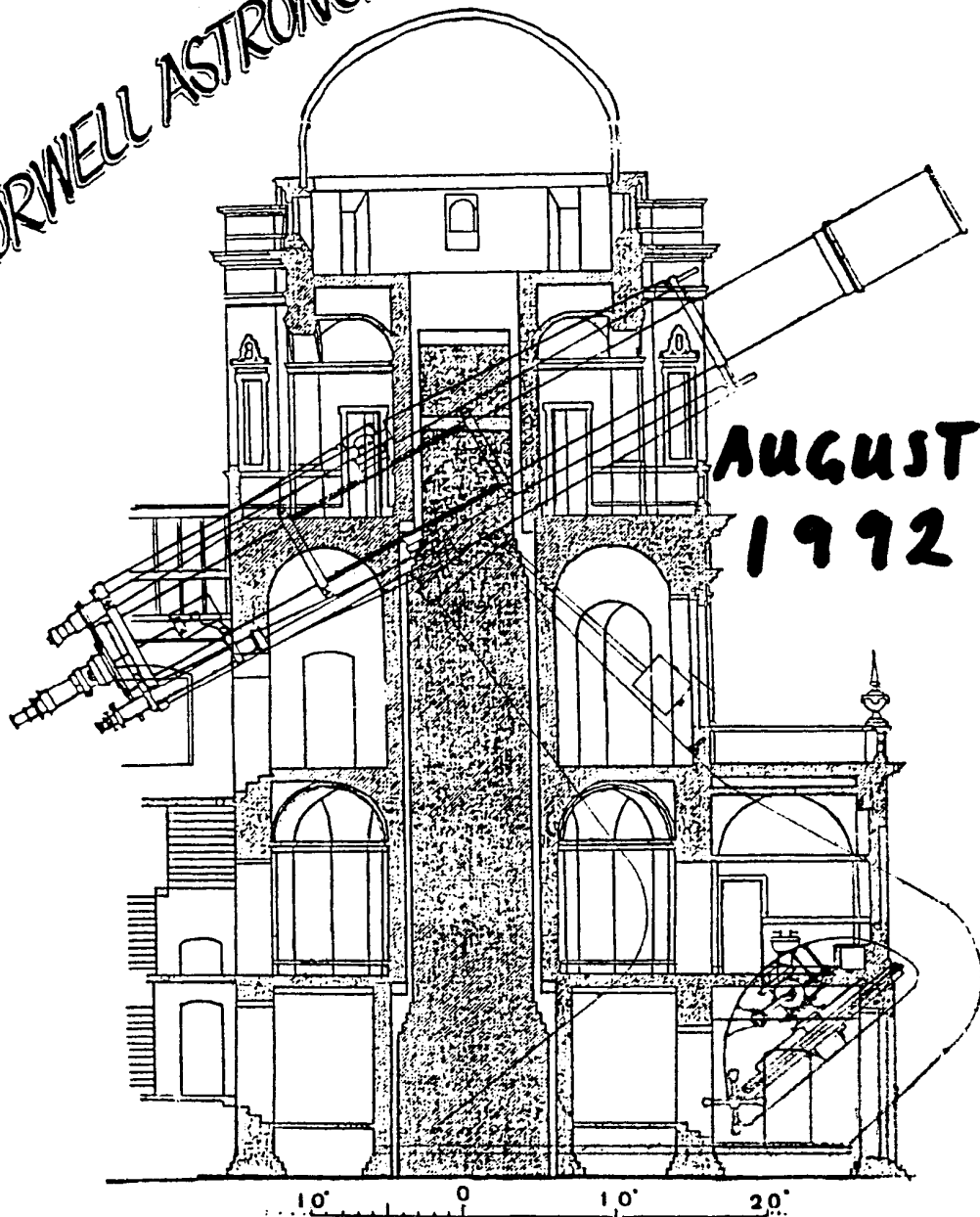


# ORWELL ASTRONOMICAL SOCIETY IPSWICH



**AUGUST  
1992**

## SOCIETY NEWS

### 1 COMMITTEE MEETING

The next committee meeting is on FRIDAY 21st August form 19.30. at Nacton. As usual this is an open meeting and any member, may come along if they wish.

### 2 FAS CAMBRIDGE CONVENTION

This meeting is on Saturday 26th September.  
Pippard Lecture Theatre  
Cavendish Laboratory  
Madingley Road  
Cambridge.

Tickets cost £3.50. Any member interested please contact Roy Gooding.

At the time of writing only part of the days programme has been arranged:-

Dr. Paul Murdin "Supernovae"

Dr. Rodney Buckland "The International Space year and the Amateur Astronomer"

All times GMT

### SUN

Rises approximately at from 04.20 to 05.10  
Sets approximately at from 20.00 to 19.00

### M O O N



5th



13th



21st



28th

MERCURY Mercury will be at inferior conjunction on the 2nd. It will reach greatest western elongation on the 21st (18°). The planet will be well placed to see in the morning sky at the end of the month, Mag -1.

VENUS Venus will be low down in the western sky all month, making it difficult to see this month. It will be setting less than an hour after the sun

MARS Mars will be rising before midnight by the end of the month. It will be moving from Aries into Taurus.

JUPITER Jupiter will be setting near sunset this month, making it difficult to observe this month.

SATURN Saturn will be at opposition this month on the 7th. Mag. 0.2.

URANUS Uranus will be setting soon after midnight by the end of the month. It is low down in Sagittarius. Mag 5.6.

NEPTUNE Neptune is near to Uranus, in the sky. A little to north east. Mag. 7.9;

R. Gooding

## Three Messier Star Clusters for August

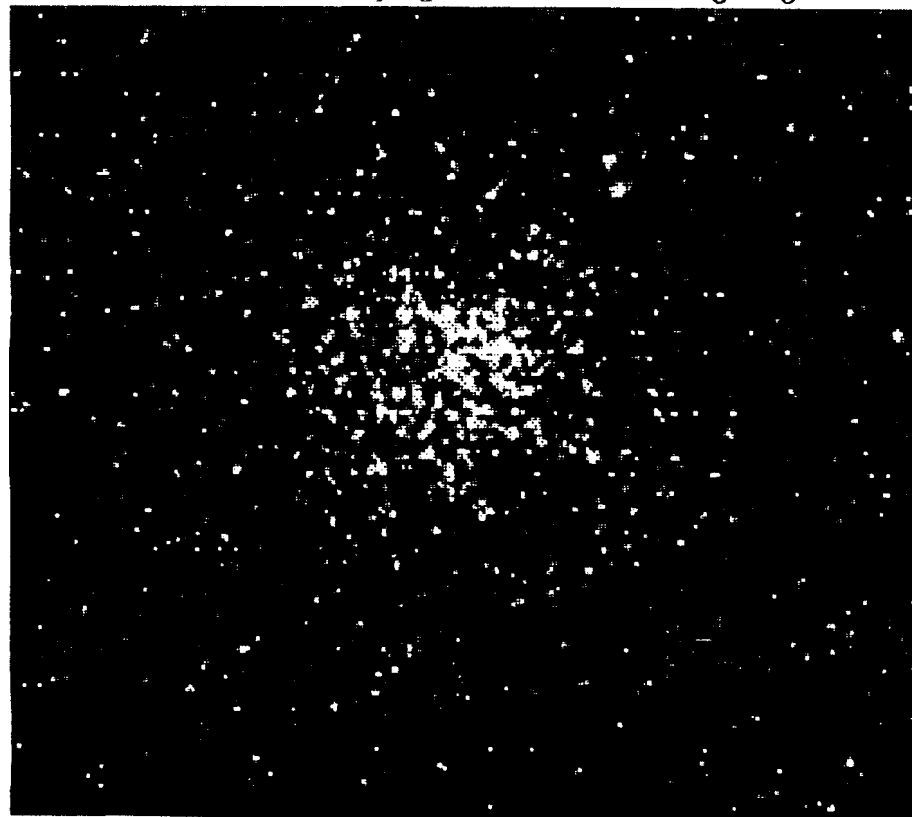
David Payne

This month I have chosen three star clusters, listed in the Messier catalogue, for observing during the warm evenings of August. Two (M11 and M26) are in Scutum and the third (M75) is in Sagittarius near the border with Capricornus.

Lying four degrees below the celestial equator, Scutum is a small and rather faint constellation measuring only 9 x 12 degrees in size and with only one star above magnitude 4 (Alpha at mag. 3.85). However this rather obscure constellation contains one of the finest galactic clusters in the sky - the magnificent 'wild Duck' cluster M11. M11 can be found almost two degrees SSE of Beta Scuti. At magnitude 6 it can be seen under good dark skies with the unaided eye although I have always needed binoculars to observe it. Binoculars reveals a fairly round and condensed misty

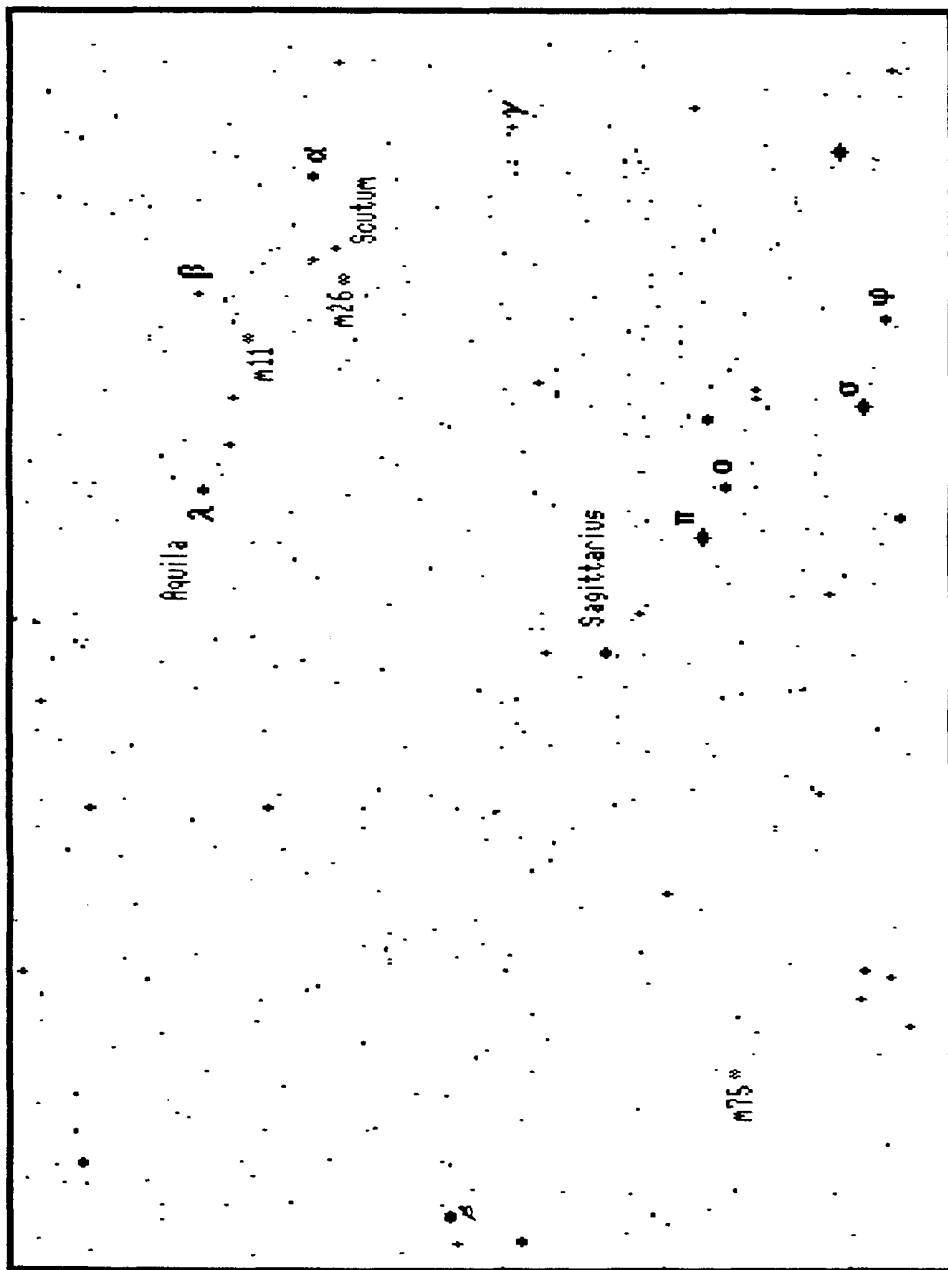
patch resembling a bright globular cluster. A three inch reveals the true nature showing many stars against a misty twinkling background. In a ten inch telescope the cluster is truly magnificent showing hundreds of glittering stars. There are about 500 stars above 14th magnitude in the area of the cluster and of these probably about 400 are true cluster members. The total number of stars down to magnitude 16.5 is estimated to be about 900 with the total mass of the cluster being about 2900 suns.

The brightest stars in the cluster at magnitude 10 to 11 are all giants. A magnitude 11 star would have a luminosity of 100 suns at the estimated distance of 5400 light years. At this distance the Sun would appear at magnitude 15.9. The main body of the cluster lies in a region about 10' in diameter (about 15 light years) with the outer members lying within a 35' circle giving an overall



M11 'Wild Duck' Nebula in Scutum

diameter of about 47 light years. At the centre of the cluster the star density is such that an observer on a planet about one of the central stars would have several hundred 1st magnitude stars in their sky and the brightest of these could be typically magnitude - 6.5.



The other Messier object in Scutum (M26) is another galactic cluster. Although not as impressive as M11 it is still worth searching for. In small telescopes M26 is a small compact group of about 20 stars. The brightest star is magnitude 11 and is located on the SW edge. The cluster appears 'U' shaped with a clear gap about 2' wide between the two arms which point north. In larger telescopes fainter stars become visible and it is estimated that there are about 90-100 true cluster members brighter than mag 15. The cluster is about 5000 light years distant with a diameter 12-16 light years.

We now move about 27 degrees west and about 12 degrees south to the border of Capricornus and Sagittarius to locate the globular cluster M75. The cluster is in a fairly faint region of Sagittarius and is probably most easily found by star hopping from Beta Capricornus which lies about 8 degrees to the NW. In all but the largest amateur telescopes M75 is a compact 4.6' diameter and unresolved fuzzy blob. The brightest stars average around magnitude 17 apart from four or five 12.5 to 14 magnitude stars on the borders of the cluster. These few bright stars can give the illusion of partial resolution in smaller telescopes. The total integrated magnitude is 9.5. M75 is the most distant globular cluster listed in the Messier catalogue at about 95 light years with a diameter of about 125 light years. the estimated luminosity of the cluster is 160,000 times that of the Sun.

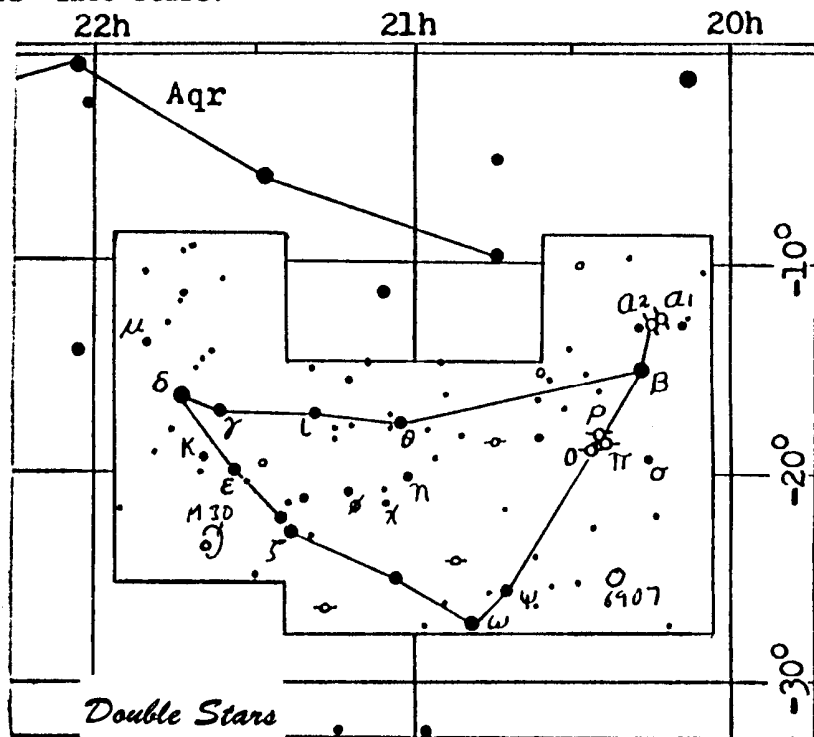
All three clusters are worth searching out during the August evenings but M11 in particular should not be missed!

## CAPRICORNUS

Capricornus is a medium sized constellation. It lies in the southern part of the ecliptic and appears as an up side down triangle. It is also described as a bikini bottom by some amateur astronomers.

There are only two deep sky objects in this constellation, they are a small galaxy and a medium quality globular cluster. The galaxy is NGC6907 a barred spiral seen almost face on appearing as a round hazy spot with a bright nucleus.

The globular cluster is M30, which Messier discovered in 1764 using a small Gregorian reflector with an equivalent modern aperture of about 2 inches but did not resolve the "nebula" into stars.



Pos.	1	m	2	D	d"	P	A	No.
201412	4.5-9.0	o	45.5	221	a <sup>1</sup>			
1512	3.7-10.	b	7.1	158	a <sup>2</sup>			
	11.-11.	b	1.2	238				
2418	5.2-8.5	c	3.2	146	π			
2617	4.9-10.	b	0.9	161	ρ			
2718	6.6-6.1	c	21.9	238	o			
4518	7.5-6.7	d	15.8	294	S763			
5023	6.4-8.4	c	2.1	213	h3003			
211626	6.5-10.	b	3.2	247	B271			

a<sub>1,2</sub> GREDI: All stars yellow.  
 A wide 6 min double-double.  
 π Yellow, bluish.  
 ρ Yellow, purple.  
 o Bluish-white, blue.  
 β DABIH 205' pair, yellow, companion blue. (Not listed)

PROGRAMME FOR AUGUST-1992

DAYS & DATES	DIRECTORS	SECTION & ADDRESSES	PHONE INC. STD CODE
Mondays	from 7.30pm	GENERAL OBSERVATION SECTION	
3,10,17,24,31	Mr R Newman	[redacted], Felixstowe, IP11 9DY	[redacted]
	Mr J King	[redacted], Felixstowe, IP11 9LQ	[redacted]
Tuesdays	form 7.30pm	GENERAL OBSERVATION SECTION	
4,11,18,25	Mr R Newman	(Address above.)	(Number above)
	Mr J King	(Address above.)	(Number above)
Wednesdays	from 8.00pm	NEBULA & FAINT OBJECTS SECTION	
5,12,19,26	Mr M Cook	[redacted], Ipswich, IP4 5PZ	[redacted]
	Mr D Payne	[redacted], Wickham Market, IP13 0SD	[redacted]
Thursdays	from 7.30pm	OBSERVATORY VISITS FROM OUTSIDE GROUPS	
6,13,20,27	Mr P Richards	[redacted], Nacton, Ipswich, IP10 0HS	[redacted]
	Mr G Marriott	[redacted], Ipswich, IP4 4JB	[redacted]
Fridays	from 7.30pm (may be postponed to Saturday)	PLANETARY & LUNAR SECTION	
7,14,21,28	Mr P Richards	(Address above.)	(Number above)
	Mr R A Lobbett	[redacted], Felixstowe, IP11 8UJ	[redacted]
	Mr G Marriott	(Address above.)	(Number above)

All members are welcome to come but, on nights other than Wednesdays please check with directors that the observatory will be open. Directors will also be able to tell you if a group visit is taking place. All of the sections observe anything of interest but the title of each section suggests a popular subject.

Lectures and other events: COMMITTEE MEETING

The next committee meeting is on Friday 21st August at 2000 in the observatory. As this is an open meeting any member who wishes is welcome to attend.

1992 COMMITTEE

		Home Phone:	Work Phone:
CHAIRMAN	D Payne (Address above)	[redacted]	[redacted]
VICE CHAIRMAN & MEMBERSHIP SECRETARY	D Barnard [redacted], Ipswich, IP3 8RN	[redacted]	[redacted]
SECRETARY	R Gooding [redacted], Ipswich, IP1 6AE	[redacted]	[redacted]
TREASURER	M Nicholls [redacted], Capel St Mary, Ipswich, IP9 2EX	[redacted]	[redacted]
MAINTENANCE CO-ORD	M Cook (Address above)	[redacted]	[redacted]
JOURNAL CO-ORDINATOR	E Sims [redacted], Ipswich, IP1 4HA	[redacted]	[redacted]
PUBLICITY & VISIT CO-ORD	P Richards (Address above)	[redacted]	[redacted]
EQUIPMENT CURATOR	J King (Address above)	[redacted]	[redacted]
SPECIAL EVENTS CO-ORD	A Smith [redacted], Ipswich, IP4 5RZ	[redacted]	[redacted]