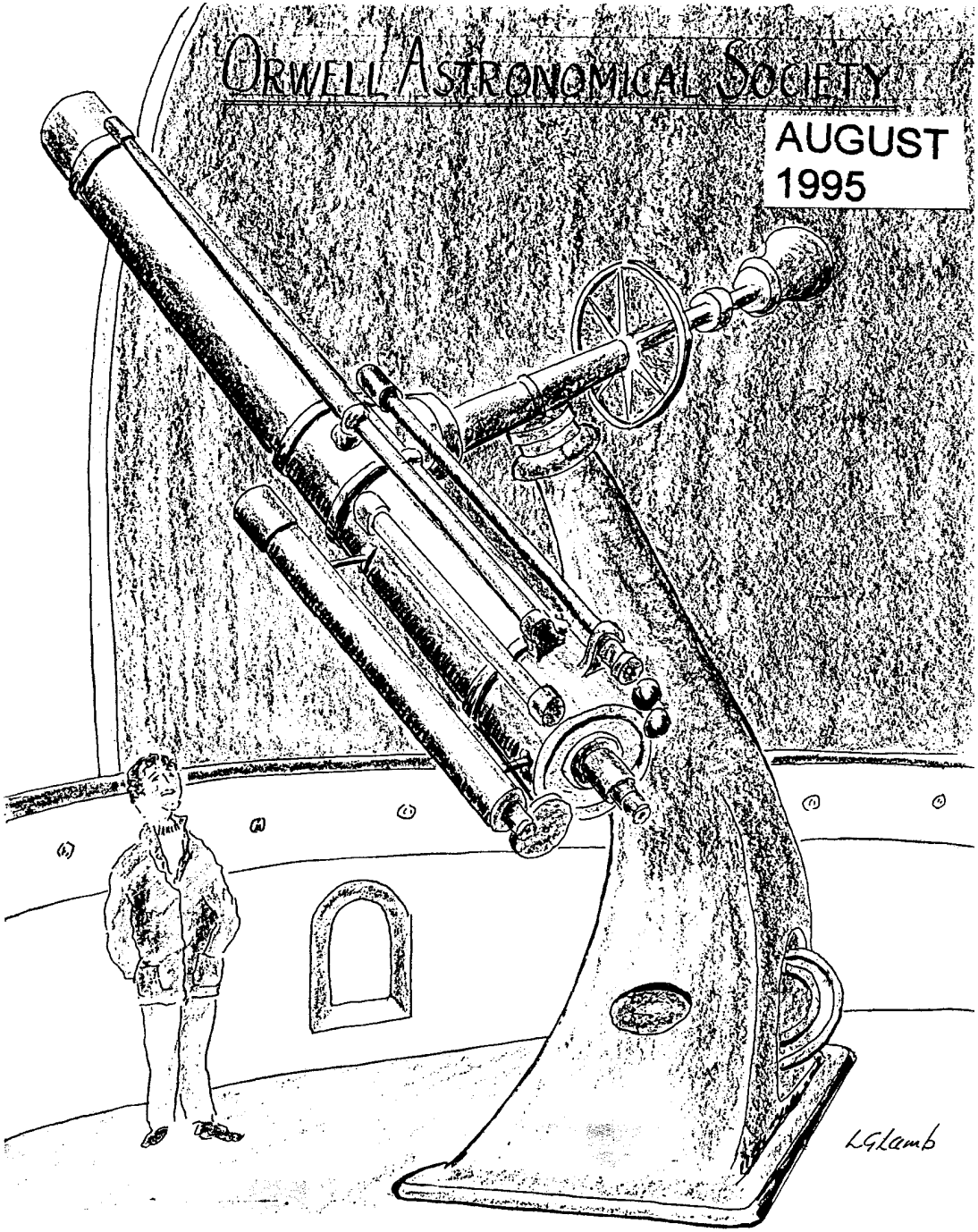


ORWELL SCHOOL OBSERVATORY ~ 10" DIAMETER REFRACTOR

NIGHT SKY

All times GMT

SUN

Rises approximately at 04.19 to 05.07
Sets approximately at 19.51 to 18.52

MOON

4th **10th** **18th** **26th**

MERCURY Mercury will be in the evening sky all month, however it will be too close to the sun in the sky to be observed.

VENUS Venus will be at superior conjunction on the 21st.

MARS Mars will be setting at about 20.00 by the end of the month. Mag. 1.4.

JUPITER Jupiter will be setting at about 22.00 in mid month. Jupiter is presently in Scorpius. Mag. -2.3.

SATURN Saturn is presently in Aquarius. It rises at about 20.00 in mid month. The rings will edge on again around the 10th. Mag. 0.9.

URANUS Uranus will be at visible most of the night, setting at about 02.00. Mag. 5.6

Neptune Neptune will be at visible most of the night, setting at a similar time as Uranus. Mag. 7.9

SOCIETY NEWS

1 NEW CAR PARKING FOR 1995

****
*
* The society has been asked by the school to change our *
* present car parking arrangements. Will all members *
* and visitors please now park around the grass island *
* infront of the school and not near the school kitchens *
*
****

2 List of events for 1995

Astro Camp	13-8-95
FAS Convention	30-9-95
Second open weekend	27,28,29th October?
Christmas Meal	13 or 20-12-95?

3 Return of Unused Observatory Keys

If any member has a set of observatory keys and no longer needs to use them, could you please return them to Roy Gooding. The keys will be reissued to members who have expressed an interest in starting new evening meetings. A set of keys costs the society about £12.00, and there are over 15 sets of observatory keys.

4 The Next Committee Meeting

The next committee meeting will be held on saturday 9th september, at the observatory. Any member is welcome to attend. The starting time will be about 19.30

5 The Next National Astronomy Week

The next National Astronomy Week will be staged between September 21 - 28th 1996. It will commemorate the 150 anniversary of the discovery of Neptune.

R.Gooding

OCCULTATION DURING AUGUST 1995

The table lists disappearance times of stars of magnitude 7.5 or brighter which are occulted during the month. Only events taking place under favourable circumstances are listed. The data relates to Orwell Park Observatory, and timings, etc. will differ slightly for nearby locations.

Date	Time (UT)	Mag	Lunar Phase	Sun Alt (°)	Star Alt (°)	Star
Wed 09 Aug	21:14:26	7.4	0.99+	-13	19	PPM237425
Sat 19 Aug	02:18:48	3.8	0.40-	-18	30	ZC648 Delta Tau

James Appleton

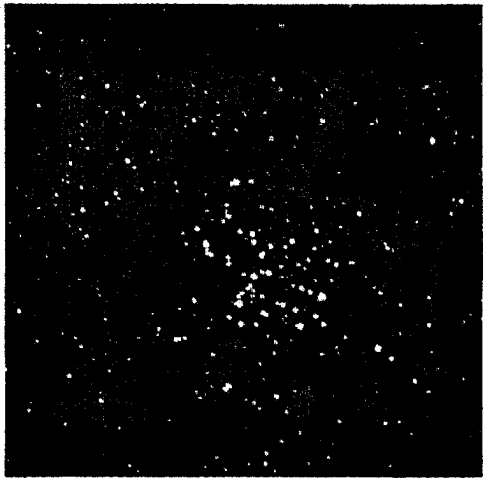
The Deep South Messier Objects
a Challenge for Summer Observing

David Payne

The summer period offers a "chance" for evening observation of some of the most southerly of the Messier objects. Use of the word chance is probable optimistic unless you are lucky enough to have a clear flat southerly horizon with out light polution and of course weather offering clear skies with good seeing. For the majority of us this will be an unlikely set of observing conditions. However if you ever wish to "complete" the Messier set these objects will need to be observed. The most southerly of all the Messier objects, M7, is one of the objects, with a declination of -34.81 degrees it only rises 3 degrees above the horizon from my observatory!

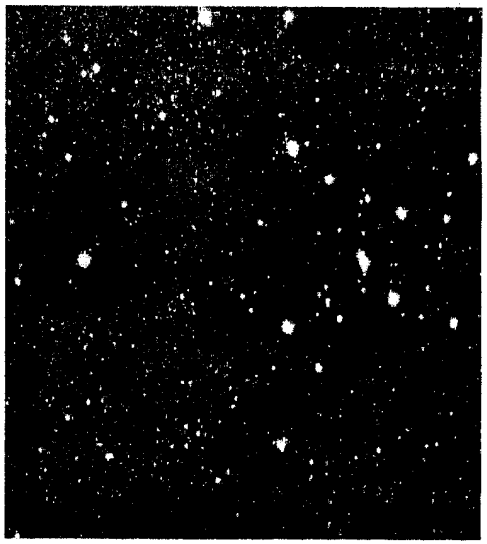
The group of southerly Messier objects described below consists of two galactic clusters, M6 and M7, and five globular clusters M54, M55, M62, M69 and M70 all these objects are below -30 degrees declination and are therefore a real challenge for observers in the UK.

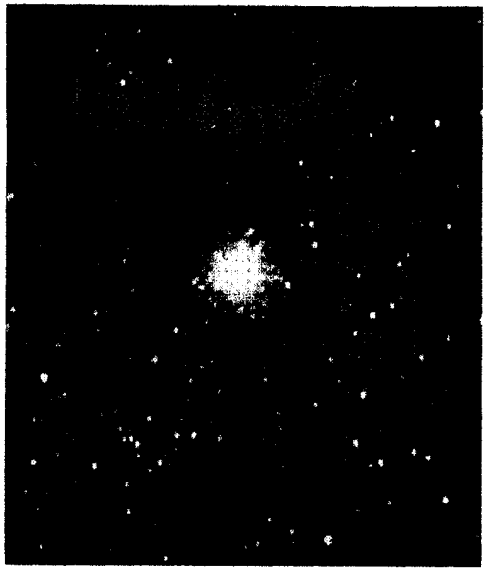
Probably the best chance would be to try to take the opportunity to observe them if you are lucky enough to visit foriegn parts with latitudes below 50 degrees and ideally below 40 degrees for good viewing!



M6 is a bright loose galactic cluster at position RA 17h 36.8m, Dec -32° 11' in the constellation Scorpius. It is estimated to lie between 13 and 21 light years and contains about 130 stars ranging from magnitude 6.2 to magnitude 14. This is a rich part of the sky and several clusters or Milky Way star condensations lie nearby. However M6 is by far the most prominant and once found cannot be mistaken. However for observing from the UK the very low southerly aspect will make this object a real challenge. The best opportunity is to travel as far south as possible find a site with a dark southerly aspect and wait for an exceptionally clear sky! Probably the search is best carried out with a good pair of binoculars.

M7 is a another bright cluster in Scorpius containing 80 stars in the magnitude range 7 to 10. It lies about 3.5 degrees south east of M6 at RA 17h 50.6m, Dec -34° 48'. It is estimated to be about 800 light years distance> It is a fairly large cluster almost 1 degree across and again is probably best found with a good pair of binoculars. It is a brighter cluster than M6 with a integrated magnitude of about 4.1 compared to 5.3 for M6 however it is 2.5 degrees further south, the most southerly of all Messier objects, and will be very difficult to observe from the UK.

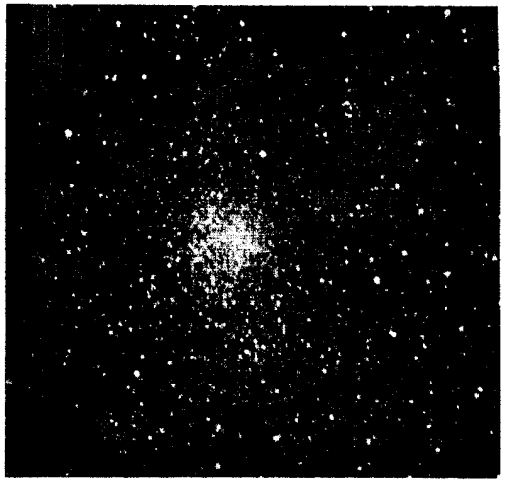


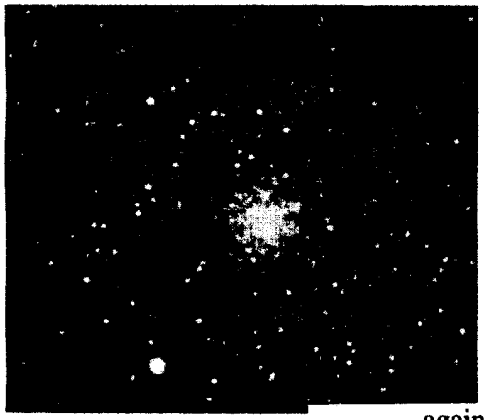


Moving onto the Messier globu clusters lying below -30 degr declination, M54 is a fairly bri globular cluster at magnitude with a diameter of about 6' wit condensed centre about 2'to diameter. The distance is estima to be about 49,000 light years a has a diameter of about 55 li years. It lies in the constellati Sagittarius at position RA 1 52.0m, Dec -30° 32'. Again it v be difficult to observe from the rising a maximum of only about degrees above the horizon. T object will require the use o telescope to discern the di binoculars will only show it a stellar point.

The next globular M55 is also in Sagittarius at position RA 19h 36.9m, Dec -31° 03'. This is a fainter object and more diffuse than M54 with a magnitude of 7.6 and diameter of 15'. Because of this M55 is almost impossible to observe from UK latitudes except under exceptionally clear and dark conditions. It is estimated to be about 20,000 light years away with a diameter of around 81 light years.

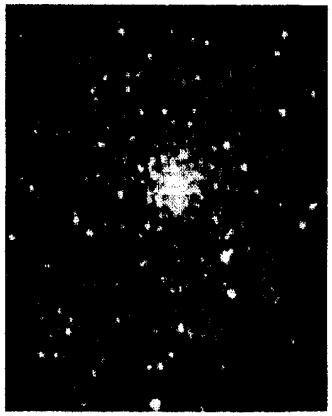
M62 is a brighter and more condensed globular cluster with a magnitude of 6.6 in a diameter of 6'. The brightest condensation is about 1.5' diameter and lies to the south east of the centre making the object look particularly comet like! M62 lies in the constellation Ophiuchus at position RA 16h 58.1m, Dec -30° 03'. Again this will be a difficult object to observe from the UK and will require a telescope to see the disk. However the greater brightness and smaller size producing a greater surface brightness should make this an easier object than M54 and M5. The distance of M62 is estimated to be about 22,00 light years with a corresponding diameter of about 45 light years.





Moving on to M69 another globular cluster in Sagittarius at position RA 18h 28.1m, Dec -32° 23'. This cluster is smaller and fainter than M54, M55 and M62 with a diameter of 4' and a magnitude of 8.9. The distance is about 23,000 light years with a diameter around 68 light years. Although fainter than the previous three globulars the smaller size gives it a reasonable surface brightness however it is nearly 2.5 degrees further south than M62 and again is a very difficult object from the UK.

The last of the sub 30 degree Messier objects is M70 yet another globular cluster in Sagittarius and the faintest of all! This cluster has a magnitude of only 9.6 with a diameter of 4'. M7 lies 2.5 degrees due east of M69 at position RA 18h 40,0m, Dec -32° 21'. Again this is a difficult object for UK observers however if you start by searching for M69 and find that object lock the declination and scan 2.5 degrees east for M70 it is almost exactly the same size and is only 0.7 magnitudes fainter but has a brighter central region. The cluster is more uncertain but is thought to be around 65,000 light years, if this is correct the diameter would be about 60 light years.



Although all these objects are very difficult from UK latitudes once found a observed you will have the satisfaction of knowing that all the other Mess objects are going to be easier!

Note: all the RA & Dec positions given above are for epoch 1950 the Epc 2000 cordinates are given below:

Object	R.A. h	m	Dec. o	'
M6	17	40.0	-32	12
M7	17	54.0	-34	49
M54	18	55.1	-30	28
M55	19	40.0	-30	57
M62	17	01.2	-30	07
M69	18	31.4	-32	21
M70	18	43.2	-32	17

This article is one I thought might be of interest to several of our members it came from a circular of the BAA. Also I must mention the telescope making section being run by Mike Harlow which is starting this month open to any one that is interested. E. Sims.

MUTUAL EVENTS OF SATURN'S SATELLITES VISIBLE FROM THE U.K.

Predictions courtesy of Dr. David Harper of Queen Mary and Westfield College, London.

All events which take place when Saturn is more than 5 arcdeg above the horizon and the Sun is greater than 10 arcdeg below the horizon (seen from Lat. 52°N) are listed. Events marked 'Favourable' occur when Saturn is more than 25 arcdeg above the horizon and the Sun is more than 20 arcdeg below the horizon (seen from Lat. 52°N).

Times (UT) of mid-event are given together with predicted duration of the event.

1995 Aug 8	01:41:07	Partial eclipse of Mimas by Tethys. Duration = 137 s Fractional drop in light = 0.51 Favourable (although faint).
1995 Aug 9	22:59:31	Partial eclipse of Mimas by Tethys. Duration = 132 s Fractional drop in light = 0.37
1995 Aug 10	21:00:00	Time of Earth-Saturn Ring-Plane crossing (+/- 2 hours).
1995 Aug 10	23:08:35	Partial occultation of Enceladus by Dione. Duration = 108 s Fractional drop in combined light from both satellites = 0.17
1995 Aug 11	23:09:32	Partial (annular) occultation of Dione by Enceladus. Duration = 72 s Fractional drop in combined light from both satellites = 0.17
1995 Aug 25	01:49:43	Total occultation of Enceladus by Tethys. Duration = 85 s Fractional drop in combined light from both satellites = 0.18 Favourable.
1995 Aug 28	20:30:36	Total occultation of Mimas by Tethys. Duration = 272 s Fractional drop in combined light from both satellites = 0.12

PROGRAMME FOR AUGUST

Mondays from 7.30pm *No Directors available for this night*	*GENERAL OBSERVATION SECTION*
Tuesdays from 7.30pm *Mr D Barnard* [redacted] *daytime only*	GENERAL OBSERVATION SECTION
Wednesdays from 7.45pm *Mr M Cook* [redacted]	NEBULA & FAINT OBJECTS SECTION *Mr D Payne* [redacted]
Thursdays from 7.30pm *Mr P Richards* [redacted]	OBSERVATORY VISITS FROM OUTSIDE GROUPS
Fridays from 7.30pm 4th-18th *Mr J Hood* [redacted]	DOUBLE STARS *Mr M Barritt* [redacted]

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:
Next Committee Meeting Saturday September 9th in the club room.

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

1995 COMMITTEE

		Home Phone Work Phone
CHAIRMAN	D Payne	[redacted]
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	M Andrews	
LIBRARIAN & COMP SOFTWARE	J Appleton	

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