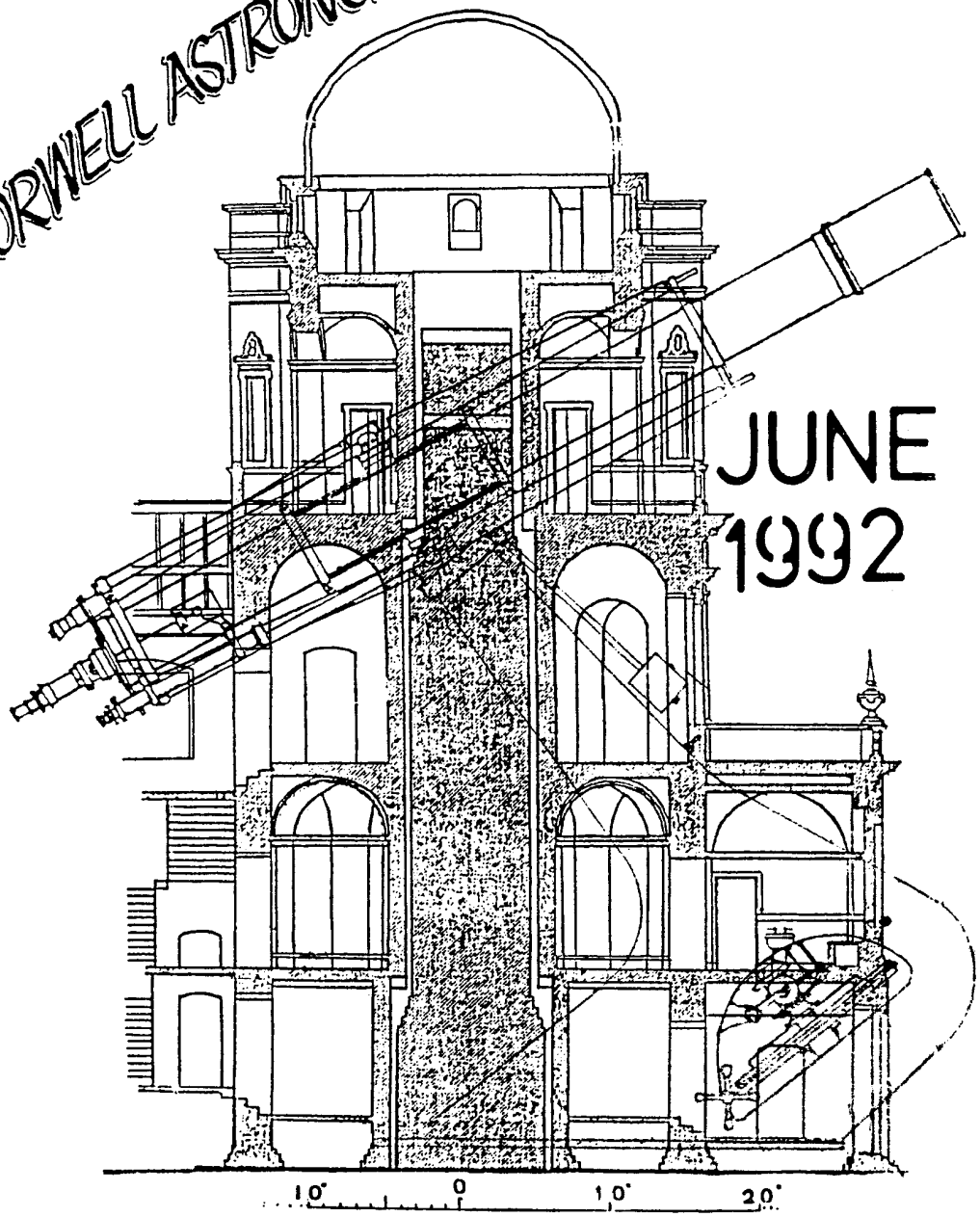
ORWELL ASTRONOMICAL SOCIETY IPSWICH



JUNE 1992

SOCIETY NEWS

1 Events

Society Lecture Meetings

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*
* Friday June 12th
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* Lecture by Dr. David Dewhirst
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At the Friends Meeting House Fonnereau Road
As usual this will be an 8.00pm start

3 Committee Meeting

The next meeting will be held at the observatory on June 27th. The meeting starts at 7.30pm and is open to any members who wish to attend.

NIGHT SKY

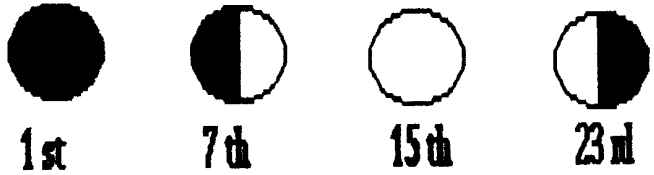
All times GMT

SUN

Rises approximately at about 03.50

Sets approximately at about 20.20

MOON



MERCURY Mercury will be visible in the evening sky all month.

VENUS Venus is at superior conjunction on the 13th.

MARS Mars will be rising about 01.00 at the end of the month. Mag. 1.0.

JUPITER Jupiter will be setting at 23.00 at the end of the month.

SATURN Saturn rising at 23.00 in mid month. Mag.0.5.

URANUS Uranus will be rising at about 21.00 in mid month. Magnitude 5.6

NEPTUNE Neptune will be rising at a similar time as Uranus. Magnitude 7.9

R.Gooding

SPRAY CANS, HAMMERS and CCD'S

In recent months two members, Alan Smith and James Appleton, have been collecting various programs for predicting lunar occultations. After running these programmes it was found that there were many more occultations visible than are published in the BAA Handbook. It was decided to start a programme of lunar occultation observations at the observatory. Up till this time occultations have only been observed on an ad hoc basis. In order to observe an occultation the telescope has to be directed to one side of the moon, when an unforeseen problem was encountered. The sky was so bright that it proved impossible to see any target star close to the moon. This glow could have had several causes, light scatter from sky haze or internal reflection from inside the telescope tube. After much discussion it was decided that the principle cause was from internal reflection.

There then ensued an hour or more of peering into the telescope tube from each end with the help of a torch. Over the years very little work has been done on optimising the telescope's performance. All the time has been spent on restoring the observatory. For members who do not know, the telescope's tube is made from brass, which is hidden from view on the outside with the coating of gray paint. The inside still has the brass exposed. At the eyepiece end there was a large area of brass that was returning light up the tube, in a similar manner to that of a Cassegrain telescope. If this part of the telescope tube could be painted black it could reduce some of the reflection.

As far as I know no one in society had ever removed the whole eyepiece end of the telescope. In fact it may never have been taken off since it was originally assembled, some 120 years ago. With the removal of the eyepiece housing and other controls the tube end was free to "fall" off. Luckily it did not. The careful application of a hammer was all that was required. Once removed and after many jibes concerning the non appearance of any pieces of glass, the inside of the tube could be examined. Numerous dead flies fell out onto the floor. A rust mark was visible on the inside of the removed flange. This implied that the telescope had at one time been left in a vertical position, which had allowed water to collect in the bottom of the tube. The tube flange and the inside of the telescope tube were cleaned and the surfaces sprayed with the favourite tool of graphitist, a can of black spray paint. Reassembling of the telescope was more difficult than it had been to take apart. Considerable hammering was required to reposition the flange.

After the telescope had been reassembled it was tried out on the moon. Painting the inside of the tube helped a little but was still not the complete solution.

On Wednesday 19th May the Orwell Park telescope was introduced to the wonders of the 20th century via a CCD camera. Ian Swan brought along a CCD camera with attendant control equipment and a portable PC. The telescope was pointed towards Jupiter. The CCD camera was at first mounted on a tripod and positioned behind the eyepiece for a first attempt of eyepiece projection. Images of Jupiter were gleamiest on the PC screen as a blob with no discernible detail. Positioning the camera behind the eypiece proved difficult, it would be easier if it was mounted directly on the eyepiece. As no suitable adaptors were available an alternative method was sought. In time honoured fashion the camera was stuck onto the eyepiece with a long length of sticky plaster, found in a first aid box. After much changing of the exposure time and gain controls of the camera, three of Jupiter's moons came into view, together with a faint band across, its disc.

R. Gooding

Globular Clusters in June

David Payne

There are no less than ten globular clusters listed in the Messier catalogue that are near the central meridian during the month of June these are in descending order of declination: M13 the famous globular in Hercules, M12, M14, M10, M107 and M9 in Ophiuchus, M80 in Scorpius, M19 in Ophiuchus, M4 in Scorpius and finally M62 way south on the border of Scorpius and Ophiuchus.

The locations are shown on the map (except for M13 which is easily found 2.5 degrees south of h Herculis).

M13 is a grand object which will show some resolution in small telescopes. It is easily found in binoculars and can even be seen by the unaided eye under good conditions.

M12 - visible in binoculars difficult to resolve with small telescopes but some hint of stars can be seen at the edges with a four inch under good dark skies.

M14 - cannot be resolved in small telescopes requiring a ten inch or greater to begin to resolve the brighter members. Visible in binoculars as a faint hazy star.

M10 - smaller and brighter than M12. I find this object much easier to resolve into stars than M12. can be found fairly easily with good binoculars.

M107 - one of the late additions to Messier's catalogue but clear from his notes that he did observe it. It was actually discovered by Messier's friend P Mechain in April 1782. A small and fainter object at magnitude 9 but some hint of resolution at the edges can be seen in a 6 inch telescope.

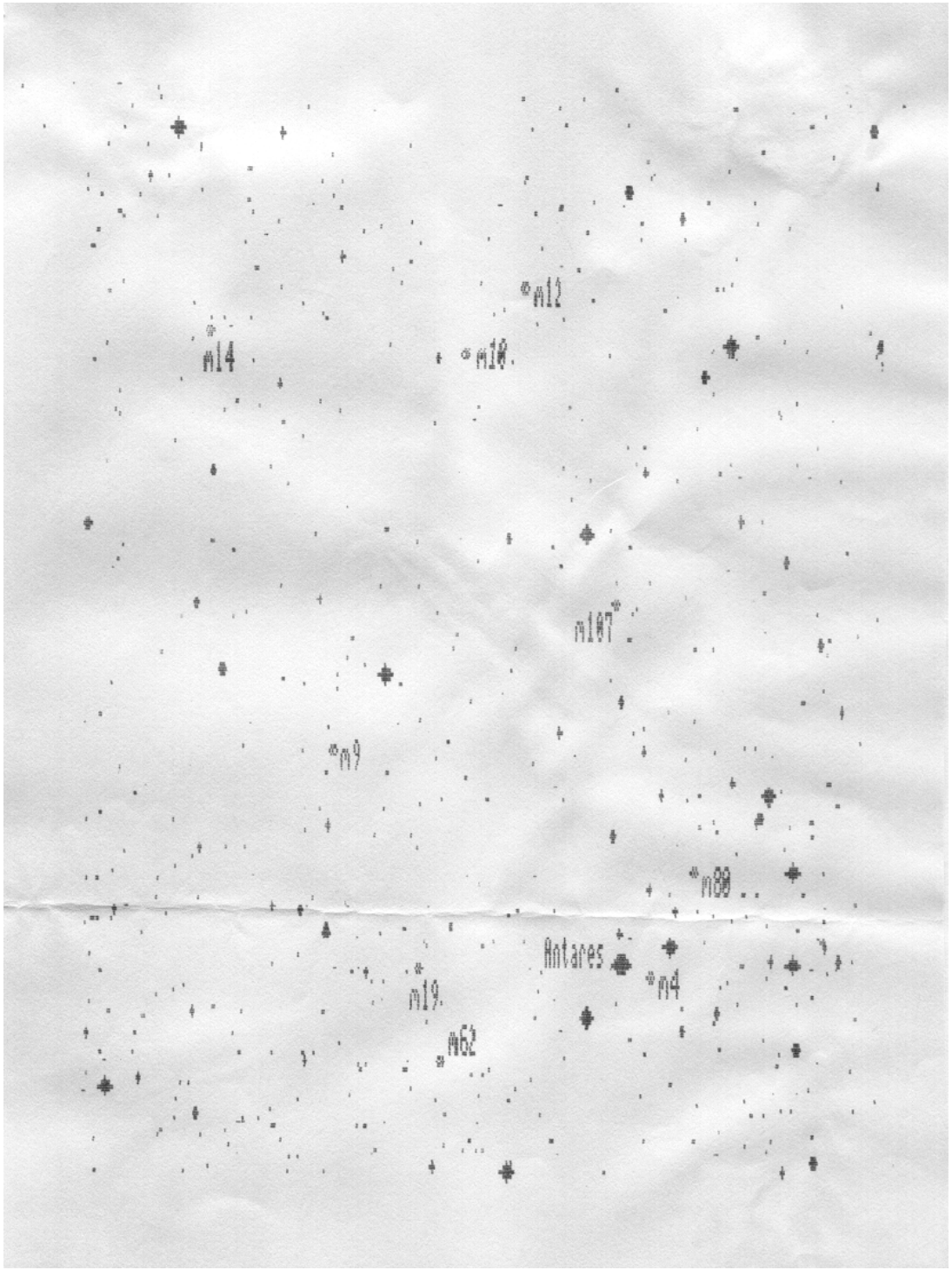
M9 - A small cluster not resolvable in small telescopes appearing slightly oval in shape.

M80 - another small globular fairly bright some resolution can be detected under clear dark skies with a 6 inch telescope. From Suffolk latitudes at least a ten inch will be required to see any resolution even under relatively good conditions.

M19 - a slightly larger cluster than M80 and M9 can show a hint of resolution with a 6 inch under the best conditions but will generally require at least a 10 inch from Suffolk.

M4 - a fine globular cluster easy to locate 1.3 degrees west of Antares. It is easily visible in binoculars and can start to be resolved in a four inch telescope. M4 is one of the largest of the globular clusters and would rank with M13 if it was farther north.

M62 - I have not yet been able to observe this object it only ever gets about 8 degrees above the horizon. From my observing sight altitudes that low are obscured and from Orwell Park we are looking directly into Felixstowe dock lights! However if you have a good southerly aspect search out this object so that you could complete your Messier set.



PROGRAMME FOR JUNE-1992

DAYS &DATES	DIRECTORS	SECTION & ADDRESSES	PHONE INC. STD CODE
Mondays	from 7.30pm	GENERAL OBSERVATION SECTION	
1,8,15,22,29	Mr R Newman	, Felixstowe, IP11 9DY	
	Mr J King	, Felixstowe, IP11 9LQ	
Tuesdays	form 7.30pm	GENERAL OBSERVATION SECTION	
2,9,16,23,30	Mr R Newman	(Address above.)	(Number above)
	Mr J King	(Address above.)	(Number above)
Wednesdays	from 8.00pm	NEBULA & FAINT OBJECTS SECTION	
3,10,17,24	Mr M Cook	, Ipswich, IP4 5PZ	
	Mr D Payne	, Wickham Market, IP13 0SD	
Thursdays	from 7.30pm	OBSERVATORY VISITS FROM OUTSIDE GROUPS	
4,11,18,25	Mr P Richards	, Nacton, Ipswich, IP10 0HS	
	Mr G Marriott	, Ipswich, IP4 4JB	
Fridays	from 7.30pm (may be postponed to Saturday)	PLANETARY & LUNAR SECTION	
5,12,19,26	Mr P Richards	(Address above.)	(Number above)
	Mr R A Lobbett	, Felixstowe, IP11 8UJ	
	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:

Friday June 12th Lecture by Dr David Dewhirst at the Friends Meeting House Fonnereau Road at 8.00pm.
Saturday June 27th Committee meeting at the observatory starting at 7.30pm all members are welcome to attend.

1992 COMMITTEE

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