ORWELL ASTRONOMICAL SOCIETY, IPSWICH.

SOCIETY NEWS

1 THE 1995 ANNUAL GENERAL MEETING

The 1995 AGM will be held on saturday 14th January 1995, starting at 8.00pm. The venue will be in the class room at the rear of the school's library. All members are invited to attend this meeting.

NIGHT SKY

All times GMT

SUN

Rises approximately at 07.40 to 08.10
Sets approximately at 15.50 to 15.40

MOON

3rd **9th** **18th** **25th**

MERCURY Mercury is at superior conjuction this month, 14th. It will not obserable this month.

VENUS Venus will be rising about 4 hours before the sun at the end of the month. Mag. -4.6

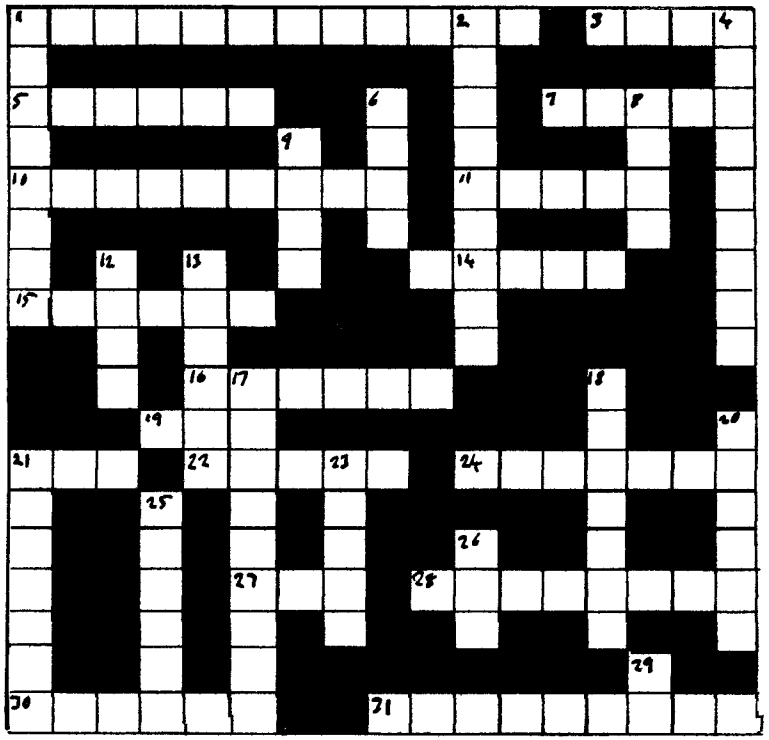
MARS Mars will be rising at about 22.00 at the beginin of the month. The planet is in Leo, mag. -0.4

JUPITER Jupiter will be visible low down in the predawn sky. It rises at about 05.30 at the end of the month.

SATURN Saturn will be setting at about 21.00 at the end of the month.

URANUS & Neptune Both planets are in Sagittarius, and will both be setting 18.00 in mid month.

R.Gooding



Clues

Across

1/ Presenter of Sky at Night.
3/ American space organisation.
5/ Gallilean satellite.
7/ Earths is twenty three miles thick.
10/ Instruments once used for plotting stars.
11/ Constellation in line with the Ecliptic.
14/ Moon of Saturn only ninteen miles in Diameter.
15/ Sixth planet from the Sun.
16/ Clouds in space.
19/ Centre of the Solar \system.
21/ Martian day.
22/ Steep slope in a planet or moons surface.
24/ Constellation in line with the Ecliptic.
27/ Constellation that contains the stars Zeta & Eta.
28/ Our Sun will eventually turn into one.
30/ Constellation in which the Hyades belong.
31/ Explosive end to a star.

Down

1/ Seven Sisters.
2/ Type of telescope.
4/ There are lots of them between Mars & Jupiter.
6/ One of Saturns moons.
8/ Constellation, could be Major or Minor.
9/ Red planet.
12/ Our Sun is one.
13/ Seventh planet from the Sun.
17/ Saturnian moon over 300 miles in diameter.
18/ Type of meteor we have seen recently.
20/ Halleys one of these.
21/ Cool dark area on the Suns surface.
23/ One of these was used to map Venus.
25/ Tiny particles that burn up on entering our atmosphere.
26/ Constellation of the Lion.
29/ Gallilean satellite.

Some Messier Objects for December

David Payne

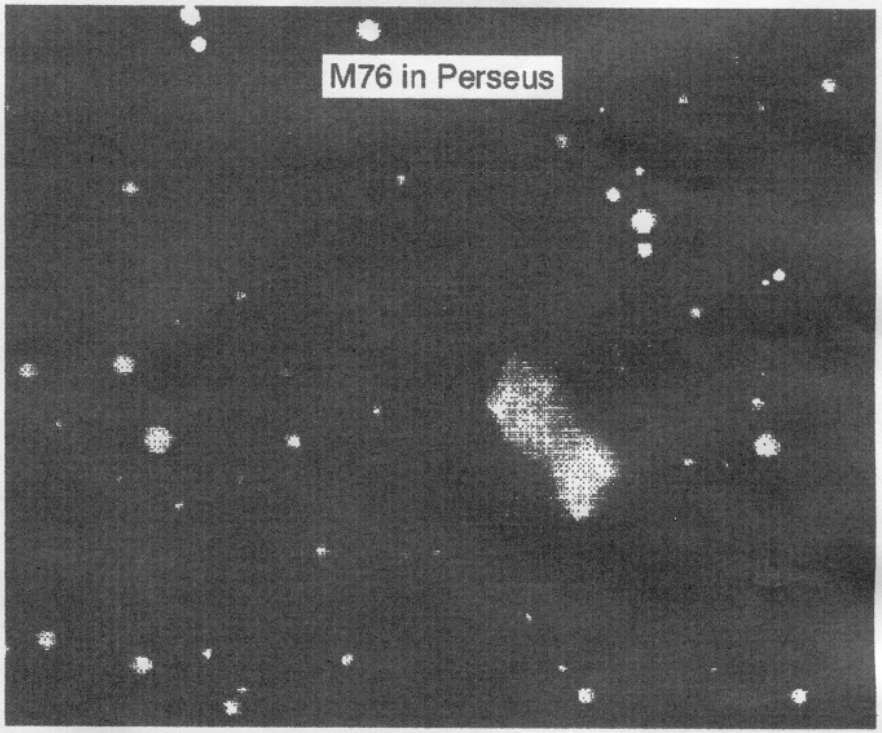
Lying near the zenith during the December are three Messier objects worth searching for - M103 a galactic cluster in Cassiopia, M34 another galactic cluster in Perseus and M76 a peculiar planetary nebula also in Perseus.

The galactic cluster M34 is a bright open cluster about 5 degrees WNW of Algol, the famous eclipsing binary star. The cluster was discovered by Messier in August 1764 who described it as "a cluster of small star". The cluster is easily seen and resolved in binoculars and use of a pair is probably the easiest way to find the object, scanning from Algol in a west north west direction. When using a telescope, low power wide field eyepieces are required otherwise the effect of the cluster is lost as the brighter members are spread out over the field of view. The cluster is about 20' in diameter but the brighter group of a dozen or so stars that make up the bright inner region is only about 9' in diameter. The cluster holds about 80 true members with magnitudes in the range 8 to 13 and an integrated magnitude of about 6 it is reported to be visible with the naked eye but I personally have never been able to positively see it without binoculars (to much light pollution)! The estimated distance of M34 is about 1400 light years giving a diameter for the bright central region of about 4 light years.

The planetary nebula in Perseus - M76 is a much more difficult object and has often been quoted as the faintest or at least the most difficult to see of the objects in Messier's catalogue. It is found about 1 degree NNW of Phi Persei (M76 position - RA 1hr 38.8m, DEC +51.3 degrees). The integrated magnitude of the nebula is about 11 and requires at least a three inch telescope and fairly good dark sky to see it. With a four inch telescope or preferably larger, the peculiar elongated shape becomes apparent. It appears as a rectangular shape measuring about 2'x1' and has been called the "Barbell" Nebula and is reminiscent of the brighter central area of the "Dumbbell" Nebula M27 in Vulpecula. The distance of the nebula is estimated to be between 1750 and 8000 light years this range of distances would give an actual diameter for the nebula between 1 and 4 light years. The

central star is one of the hottest known with a surface temperature about 60,000 degrees Kelvin compared to 6000 for the Sun!

The last object in the original Messier Catalogue, M103, can be found lying about 1 degree north east of Delta Cass. With an apparent integrated magnitude of about 7, M103 can easily be found with a good pair of binoculars. The cluster forms a fan shape about 6' in diameter and is a fine object for smaller telescopes with about forty stars in the magnitude range 8 to 12 in larger telescopes with low powers it is quite brilliant. Like many galactic clusters M103 contains a single red giant star with a magnitude of 10.8, the colour standing out clearly against the other stars in the field. The distance is estimated to be around 8000 light years with a diameter about 15 light years. Having found M103 it is worth finding the three NGC listed clusters lying close by at 1.5 degrees to the east. NGC 663 is the brightest of the trio with the fainter clusters NGC 654 lying about .5 degrees to the north and NGC 659 to the south.



SPACE TRAVELLER VISITS THE OBSERVATORY

In October the observatory was visited by Helen Sharman, the British Astronaut. Helen Sharman was visiting Orwell Park to give a public lecture (organised by Orwell Park School) describing her space flight.

It was on 18th May 1991, from the Baikonur Cosmodrome in the Soviet Union, that a Soyuz rocket launched Helen Sharman into space. A few days later at Orwell Park members of the OASI watched the Mir space station, carrying Helen Sharman, appear as a star-like point of light crossing the sky. Meanwhile downstairs from the observatory the Felixstowe and District Amateur Radio Society, at their Orwell Park base, had set up a link to allow pupils of Orwell Park School to talk to Helen Sharman on board the Mir space station: the radio link was part of a national link up involving a number of UK schools.

The observatory open weekend was timed to coincide with Helen Sharman's visit. The night sky was obscured by cloud for the whole weekend, except for Saturday evening when brief glimpses of the Moon were had through thinner, patchy, cloud. It was the first open weekend to be almost totally cloud-bound as far as anyone could remember. However, despite the weather, the event was successful with visitors being given tours of the observatory, slide shows and an personal insights into amateur astronomy by members. A number of the visitors have joined the society.

AQUARIUS

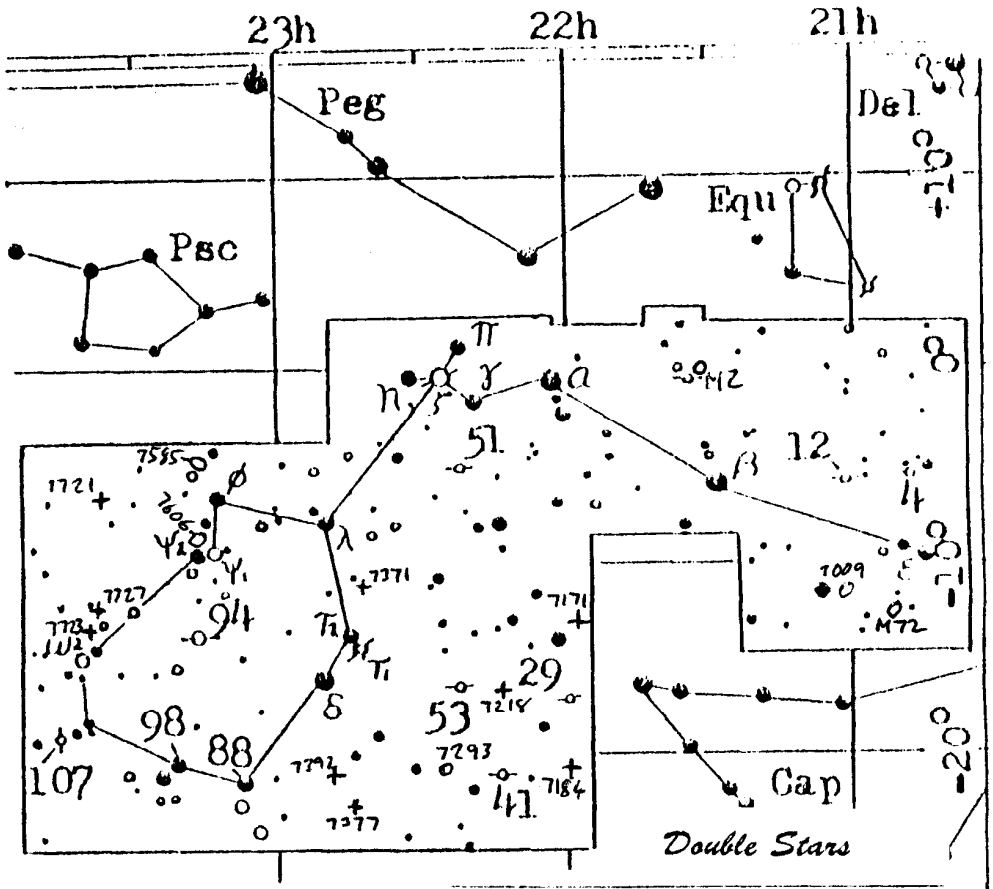
Aquarius is a large autumn constellation for northern hemisphere observers. Its stars are scattered, and small groups of them form groupings rather than the whole resembling any shape in particular. Aquarius is located just below Pegasus and follows Capricornus eastwards through the night sky.

There are two bright globular clusters, both recorded by Messier, M72 and M2 the latter being one of the better globulars in the sky.M2s total intergrated magnitude is 6, so it can be visible to the naked eye observer on a very dark clear night as the proverbial fuzzy blob.

There are two planetary nebulae of note, the bright Saturn Nebula N.G.C. 7009 and the Helix Nebula N.G.C.7293. The Saturn Nebula was so named because it resembled a faint ringed planet through a small telescope.The large but very faint Helix Nebula is located in the south of Aquarius and appears as a large dim smoke-ring.

There are quite a number of galaxies in Aquarius but the brightest are only at about mag 10-7, they are N.G.C.7585 and N.G.C.7606. All the rest mag 11 and 12 and I have just marked them on the map with crosses.

E.Sims



41 Yellow, blue.
ζ Both stars are white.
τ_1 White, pale red.
94 Reddish-white, blue.
107 White, blue.
τ_1 and τ_2 make pretty pair in binoculars. τ_2 very orange.

Pos.	l	m	2	D	d"	P	A	No.
204805	6.4	7.2	b		1.1		1	4
210106	7.3	5.8	c		2.8	192		12
3500	6.4	8.4	d		31.6	163		E2809
5917	7.4	7.1	b		3.9	244		29
221121	5.7	7.2	b		5.0	116		41
2105	6.6	6.6	b		0.6	333		51
2600	4.6	4.4	b		2.0	266		ζ
4514	5.7	9.6	o		25.6	120		τ_1
231613	7.5	5.2	b		13.3	348		94
4318	5.7	7.0	b		6.5	136		107

PROGRAMME FOR DECEMBER

DAYS & DATES	DIRECTORS	SECTION & ADDRESSES	PHONE INC. STD CODE
Mondays	from 7.30pm	GENERAL OBSERVATION SECTION	
5-12-19 26	Mr J King	[redacted], Felixstowe, IP11 9LQ	[redacted]
Tuesdays	form 7.30pm	GENERAL OBSERVATION SECTION	
6-13-20 27	Mr D Barnard	[redacted] IP3 8RN	
	Mr J King	(Address above.)	(Number above)
Wednesdays	from 8.00pm	NEBULA & FAINT OBJECTS SECTION	
7-14-21 28	Mr M Cook	[redacted], Ipswich, IP4 5PZ	[redacted]
	Mr D Payne	[redacted], Wickham Market, IP13 0SD	
Thursdays	from 7.30pm	OBSERVATORY VISITS FROM OUTSIDE GROUPS	
1-8-15 22-29	Mr P Richards	[redacted], Nacton, Ipswich, IP10 0HS	[redacted]
Fridays	from 7.30pm (may be postponed to Saturday)	PLANETARY & LUNAR SECTION	
2-9-16 23-30	Mr P Richards	(Address above.)	(Number above)
	Mr G Marriott	[redacted] Ipswich IP4 4JB	

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:

The 1995 Annual General Meeting

The 1995 AGM will be held on Saturday 14th January 1995, starting at 8.00pm. The venue will be in the class room at the rear of the schools library. All members are invited to attend this meeting.

Only one visit booked for this month and that is for December the 8th.

1994 COMMITTEE

			Home Phone:	Work Phone:
CHAIRMAN	D Payne	(Address above)	[redacted]	
MEMBERSHIP RENEWALS	M.Cook	(Address above)		
MEMBERSHIP SECRETARY	R.Gooding			
SECRETARY	R Gooding	[redacted], Ipswich, IP1 6AE		
TREASURER	M Nicholls	[redacted], Capel St Mary, Ipswich, IP9 2EX		
MAINTENANCE CO-ORD	M Cook	(Address above)		
JOURNAL CO-ORDINATOR	E Sims	[redacted], Ipswich, IP1 4HA		
PUBLICITY & VISIT CO-ORD	P Richards	(Address above)		
EQUIPMENT CURATOR	M.Harlow	[redacted] Trimley [redacted]		
SPECIAL EVENTS CO-ORD	P.Richards			
LIBRARIAN &COMP SOFTWARE	J.Appleton	[redacted] Ipswich IP3 0QJ [redacted]		