

ORWELL ASTRONOMICAL

SOCIETY IPSWICH

FEBRUARY

1996

NIGHT SKY

All times GMT

SUN

Rises approximately at 07.50 to 06.50
Sets approximately at 16.40 to 17.30

MOON



4 th



12 th



18 th



26 th

MERCURY Mercury will be at greatest western elongation on the 11th. Mag. 0.0.

VENUS Venus will be very prominent again. in the evening sky this month. Setting about 21.00 in mid month. Mag. -4.1

MARS Mars will not be observable this month.

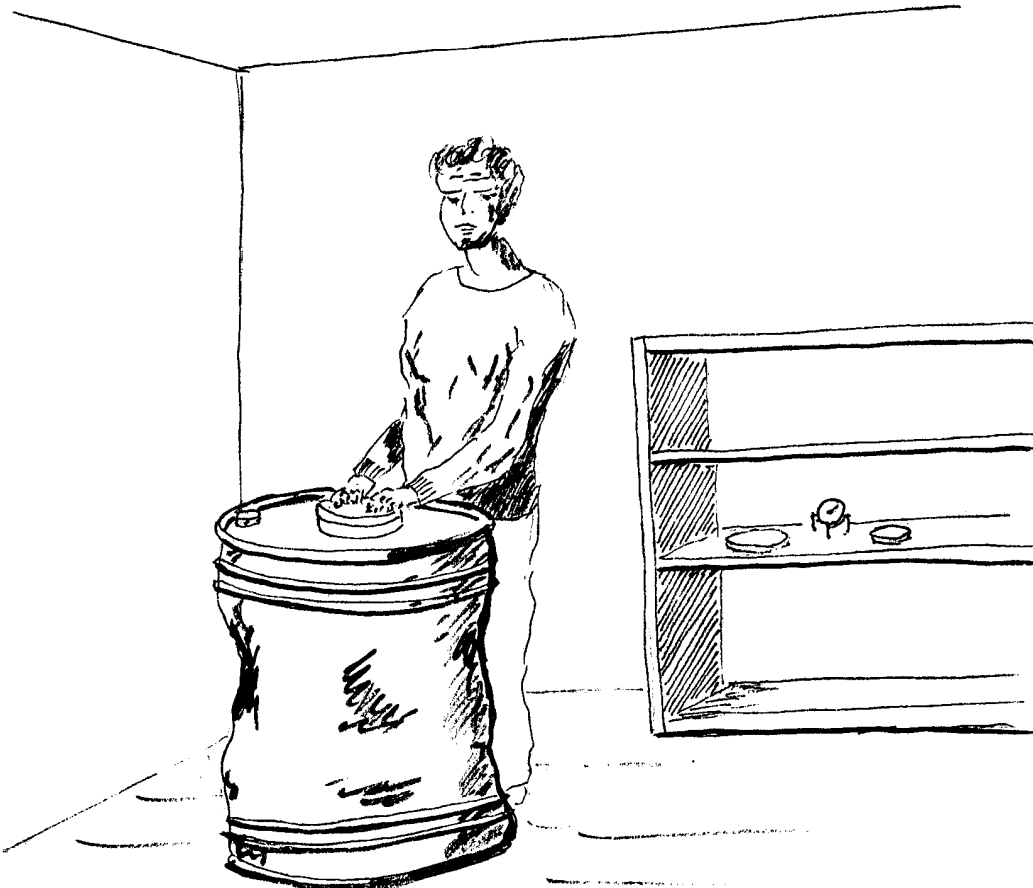
JUPITER Jupiter is back in the morning sky this month, rising at about 5.00 in mid month. Mag. -1.9

SATURN Saturn is visible in the earlier part of the evening this month, and will be setting at about 19.30 in mid month. Mag. 1.2

URANUS & Neptune Both planets will be rising sat about 06.30 in mid month.

Events For February

Day	Event
2	Saturn 1° north of Venus
11	Mercury at greatest western elongation
15	Jupiter 5° south of the moon.
17	Mercury 5° south of the moon.
19	Mars 5° south of the moon.
20	Saturn 4° south of the moon.
22	Venus 0.1° south of the moon



THE MIRROR GRINDING SECTION
WITH STAFF.

L.G. Lamb

R. Gooding

SOCIETY NEWS

1 1996 Subscriptions

Subscriptions for 1996 will be due from 1st of January
The rates for the new year will be:-

Junior	£8.00
Adult	£12.00
Family	£14.00

A renewal form was included with the January newsletter. It would be appreciated if you could return this so that the society membership records can be kept up to date.

Please return all subscriptions to

Martin Cook

Ipswich
IP4 5PZ

2 Committee Meeting

The next committee meeting will be held on Saturday 10th February at the observatory, from 1930. This will be an open meeting and any member is welcome to attend.

3 Events for 1996

This list of events was first presented at the AGM.

Astrofest	2/3 Feb.
Lecture Meeting Jerry Workman	9th Feb.
Lecture Meeting Ron McArthur	1st March
BAA Winchester Weekend	29th March
Lecture Meeting OASI	26th April
Oxford Weekend	10th May?
WEB Society AGM Cambridge	1st June
BAA Comet Section Meeting Cambridge	8th June
BAA Exhibition Meeting	29th June
Astro Camp	11th Aug.
Horncastle Weekend	6th Sept.
National Astronomy Week	21 to 28 Sept
FAS Cambridge Convention	5th Oct.
Christmas Meal	11th Dec.

4 Lecture Meeting 9th February from 20.00

A lecture meeting has been arranged for Friday 9th February at the Friends Meeting House in Fonnereau Road. The meeting will start at 20.00.

The talk will be given by Jerry Workman on the Planet Uranus

OCCULTATIONS DURING FEBRUARY 1996

The table lists stellar occultation disappearance events which occur during the month under favourable circumstances. The data relates to 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
Fri 02 Feb	03:00:26	.94+	-41	24	.00N	102	SAO96371	6.7
Thu 22 Feb	20:07:05	.18+	-26	17	.72S	120	ZC214 (D)	7.2
Wed 28 Feb	18:56:30	.73+	-14	54	.59N	59	SAO95794 (D)	7.4
Wed 28 Feb	18:57:33	.73+	-14	54	.61N	57	21 Gem (D)	6.8

On the morning of Friday 9th Feb, there is a graze of 25 Virginis within easy travelling distance of Ipswich. The following table summarises the circumstances. The graze is a southern limb event.

Date	Time (UT)	Lunar Phase	Sun Alt (°)	Star Alt (°)	Star Azi (°)	Star	Mag
Fri 9 Feb	03:09	0.82-	-38	32	177	25 Vir (ZC1807)	5.9

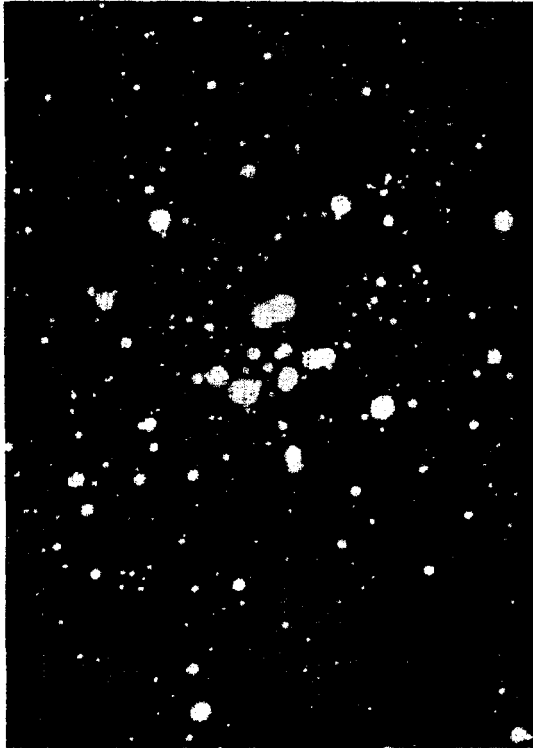
The graze track traverses North-West to South-East in an almost straight line, passing narrowly south of Swaffham, narrowly north of Diss, through the centre of Stradbroke, through Sweffling, south of Saxmundham, north of Snape and out to sea approximately 2½ km South of the centre of Aldeburgh.

James Appleton

A Selection of Messier Objects for February

David Payne

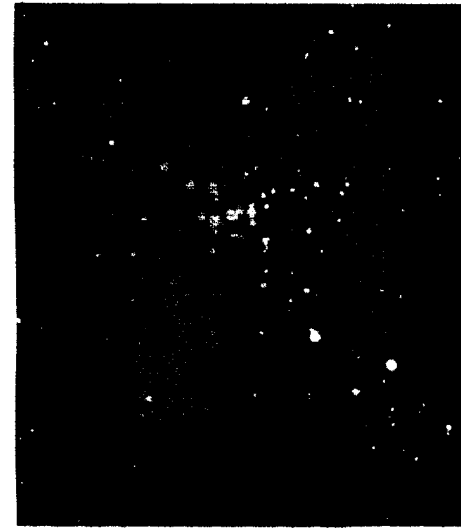
This month I have decided to go for objects high in the sky (M34, M36, M37, M38, M76) which are all within 30° or so of the zenith.



M34 Perseus

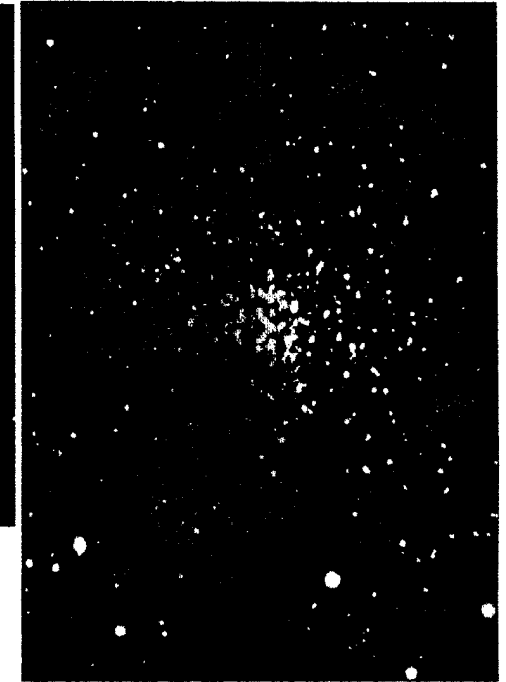
M34 is a bright but loose open cluster in Perseus. It has a diameter of over $1/2^\circ$ in diameter containing about 80 stars in the magnitude range 8 to 13. The integrated magnitude is 5.5 and it has been reported to be a naked eye object. Unfortunately this will require very dark skies with good seeing to be visible - a rarity with the ever increasing levels of light pollution. Because of its large size this cluster is best seen with binoculars or a rich field telescope. The effect of the cluster tends to be lost in a conventional telescope even with low power eyepieces. Estimates for the distance of the cluster range from 1430 to 1500 light years giving a diameter of around 14 light years.

M36, M37 & M38 are the three well known galactic clusters in Auriga. M36 is a smaller cluster about $20'$ in diameter but with a central knot of brighter stars in a diameter of about $10'$. There are about 60 stars in the cluster with magnitudes in the range 9 to 14, the integrated magnitude for the cluster is 6.3. The cluster is estimated to be between 3700 and 4100 light years. From this a diameter around 14 light years is estimated. This cluster can be found easily with binoculars but is best seen in a low power telescope.



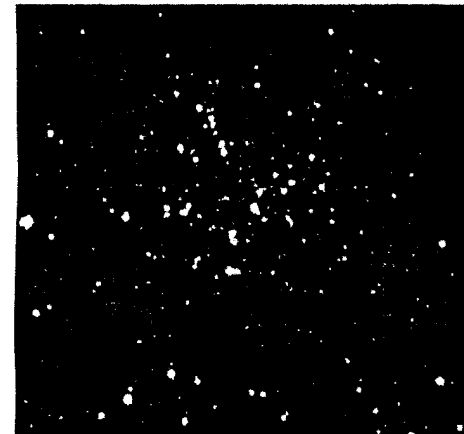
M36 Auriga

M 37 is a splendid object usually considered to be the finest of the three in Auriga and amongst the finest of all galactic clusters. This is a rich cluster containing 500 to 600 stars in the magnitude range 10 to 15 with about 170 brighter than magnitude 13. The diameter of the cluster is about $25'$ which at the estimated distance of between 3600 and 4700 light years gives a true diameter between 26 and 31 light years. This object is a superb sight in



M37 Auriga

telescopes, larger apertures revealing hundreds of stars. Towards the centre of the cluster is a particularly notable red giant with a magnitude of about 9.5.



M38 Auriga

Lying about 2.3° from M36 is the looser and more irregular cluster M38. This cluster is the fainter of the three with an integrated magnitude of about 7. It contains about 150 stars in a diameter of about $20'$. The distance is estimated to be in the range 2750 to 4200 light years. the true diameter of the cluster being

around 20 light years. This cluster is again best observed with telescope with low powers although it can also be easily seen with binoculars.

Moving back to Perseus west from Auriga can be found what is often regarded as the faintest or at least most difficult of the Messier objects,

M76. This is a faint planetary nebula sometimes called the "Little Dumbbell" nebula due to its obvious elongated shape. It is a small, faint rectangular object measuring about 2'x1'. The central star, which is irradiating the material surrounding it with UV and causing it to fluoresce, is one of the hottest known with a surface temperature of about 60,000K. The magnitude of this star is about 16.5 and is therefore out of the range of most amateur telescopes. This Nebula requires good seeing conditions to observe but can be found with a small telescope. Larger telescopes bring out the irregular and dumbbell shape with greater detail.



M76 Perseus

Larger telescopes bring out the irregular and dumbbell shape with greater detail.

The objects described above are all easy to find except maybe for M76 due to its faintness. Use a good star map such as Nortons and search them out they are well worth the effort.

PROGRAMME FOR FEBRUARY

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 2nd - 16th 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: COMMITTEE MEETING

The next committee meeting is on Saturday 10th of February at 7.30pm in the club room at the observatory. All members are welcome to attend.

e-mail enquires to oasienq@btbcs.bt.co.uk

WWW url <http://www.ast.cam.ac.uk:80/~ipswich/>

1996 COMMITTEE

	Home Phone	Work Phone
CHAIRMAN	D Payne	[REDACTED]
SECRETARY	R Gooding	[REDACTED]
TREASURER	M Nicholls	[REDACTED]
MAINTENANCE CO-ORD	M Cook	[REDACTED]
JOURNAL CO-ORDINATOR	E Sims	[REDACTED]
PUBLICITY & VISIT CO-ORD	P Richards	[REDACTED]
EQUIPMENT CURATOR	M Harlow	[REDACTED]
SPECIAL EVENTS CO-ORD	A Smith	[REDACTED]
LIBRARIAN & COMP SOFTWARE	J Appleton	[REDACTED]
JOURNAL ARTICLES TO	E Sims [REDACTED]	Ipswich Suffolk IP1 4HA
CORRESPONDENCE ADDRESS	R Gooding OASl Secretary	[REDACTED] Ipswich Suffolk IP1 6AE