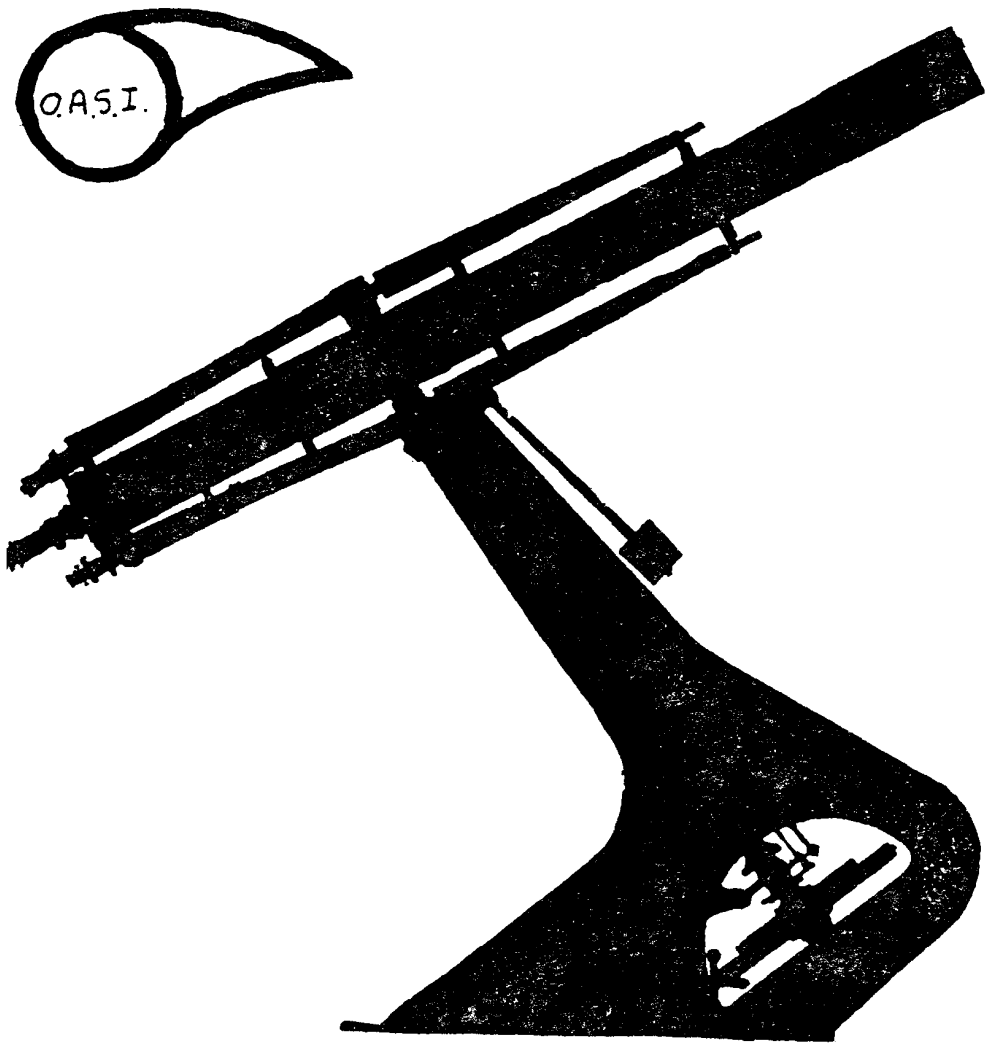
R. Gooding

ORWELL ASTRONOMICAL SOCIETY (IPSWICH)

MAY 1983



The Orwell Park Observatory 10-inch Astronomical Telescope at Nacton near Ipswich

SOCIETY NEWS

1. Nigel Gage has recently found that several books and periodicals appear to be missing from the library. Please would all members have a look round to see if they have any of the missing items at home.
2. At the April committee meeting it was decided to buy a 4" O.G. and to construct a tracking telescope for photography. This refractor would be on an easily removable mount on the 10" O.G. tube thus enabling it to be used as an additional field instrument.
3. If any one has any ideas on a possible Summer excursion contact R. Gooding, please.

NIGHT SKY

Constellations (all times B.S.T.)

1. Winter constellations have nearly set
2. Spring constellations are well placed for observing:- Bootes, Hercules, Corona Borealis
3. Summer constellations are low on the Eastern horizon: Lyra, Cygnus, Aquila.

Sun Rises 5.30 to 4.40, sets 20.30 to 21.10 during month.

Moon ◖ 5th ● 12th ◗ 19th ○ 26th

Occultations

15th	ZC 964	mag. 7.0	D	21 hrs. 35.2 mins.
24th	ZC 1994d	" 6.5	D	1 hr. 50.5 mins.
26th	Jupiter	" -2.1	R	21 hrs. 26.2 mins.

Re-appearance of Jupiter is less than ¾ hr. after moon rise.

Mercury Inferior conjunction 12th

Venus Evening object mag. -3.6 to -3.8

Mars Badly placed for observing

Jupiter Rises 23.00 1st May. Opposition on 27nd mag. -2.1

Saturn Rises before sunset. Eastern elongations of Titan 6th and 22nd.

Uranus Opposition 29th May, mag. 5.8 on the borders of Ophiuchus and Scorpius.

Neptune is in Ophiuchus, mag. 7.7

R.E.G.

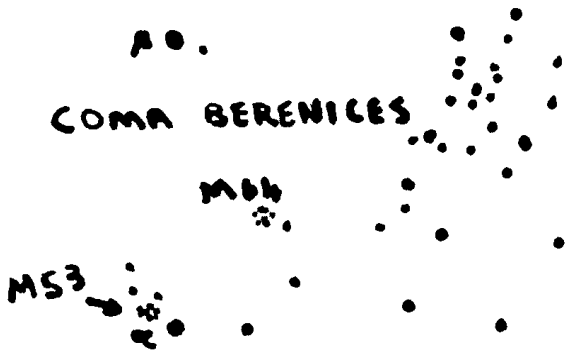
Deep Sky Objects in Coma Berenices

D B Payne

The constellation Coma Berenices is high on the meridian during May. This is a small faint constellation, the brightest star being only magnitude 4.23. Most of this constellation is made up of stars from the Coma Star Cluster. The cluster contains 30-40 true members and covers an area about 5 degrees in diameter. The brighter members are visible with the naked eye but the cluster as a whole is best observed with good binoculars. The cluster is about 250 light years away with a diameter around 22 light years. The brigter stars of the cluster that can be seen with the unaided eye are about 50 times brigter than the sun while the faintest members (mag 11) have luminosities of about 1/3 that of the sun.

Coma Berenices contains the northern half of the Virgo Galaxy Cluster and in this small constellation there are numerous faint nebulous objects for the interested observer. Two of these objects are M53 and M64. M53 is a bright globular cluster approximately 1 degree northeast of Alpha Comae and is very easy to find. It is visible in binoculars as a faint fuzzy star of about magnitude 8.5. In a 70mm telescope it is clearly visible as a round misty ball but cannot be resolved into stars. With a 10 inch telescope stars can be resolved at the edges of the nebula and also against the bright misty background of the central nucleus. M53 is about 65,000 light years away, it has a total luminosity of about 200,000 suns and probably contains at least half a million stars.

The nebula M64 is a spiral galaxy easily found with binoculars about 1 degree east of northeast of the star 35 Comae (see map). This galaxy is also known as the "Black Eye Galaxy" because of a huge dark dust cloud on the north and east side of the bright nucleus. This dust cloud should be visible in a good 6 to 8 inch telescope and is fairly easily seen in a 10 inch telescope although higher magnifications (200x), than would normally be used when observing nebulae, may be necessary to darken the background sky. The galaxy lies about 20-25 million light years away with a diameter around 48,000 light years.



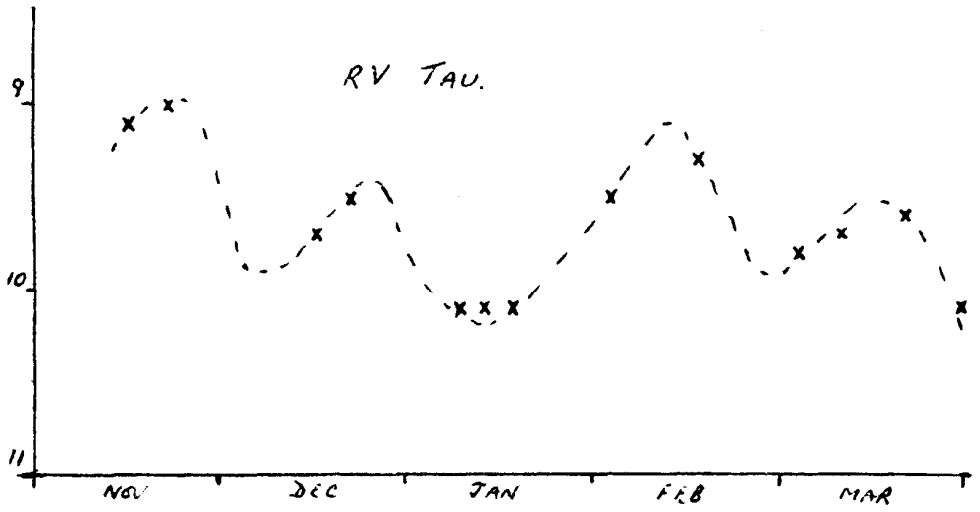
VARIABLE STAR OBSERVATIONS

by Mike Nicholls

The light curve is that of RV Tauri from mid November last year to March this year. This star gives its name to a class of variable stars, which is characterised by having alternate deep and shallow minima. The variations are described as semi-regular, and so one would not expect much consistency of the maximum and minimum magnitudes nor of the period. The period is quoted as averaging 79 days; this is from one deep minima to the next, and does not include the shallow minima.

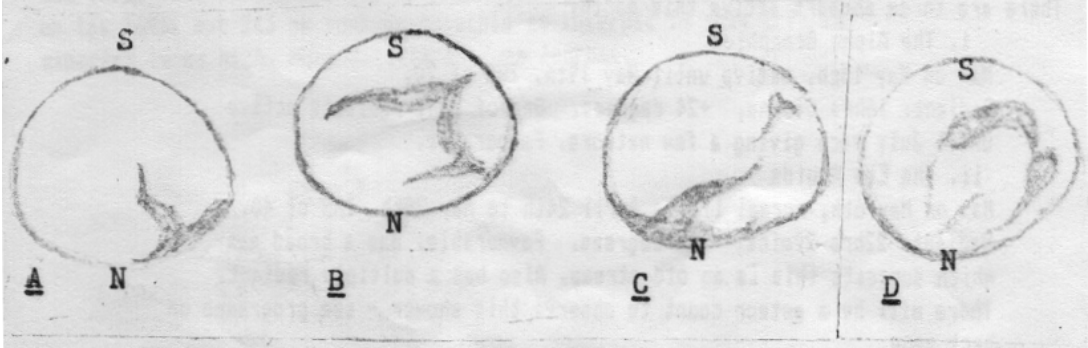
There are not enough points on this light curve to show the maxima and minima clearly. The dashed line shown is only an estimate as to what the curve may look like.

All the observations were made using an eight inch reflector.



SECOND PHASE OF VENUS OBSERVATIONS

60mm Refractor used for Observations. C.J.Cornish



A 28.3.83 Time of observation 20.40 - 20.46 B.S.T.
Condition bad with fleating clear glimpses of one faint marking, towards the Northern polar region.
One filter used for this observation was light green.

B 3.4.83 Time of observation 2046 - 20.56 B.S.T.
Conditions were extremely good. This drawing shows very delicate shadings on the cloud layers. This observation was made with the aid of a yellow, green and purle filter The best filter found for the conditions was the purple one, which showed all the detail clearly in the above drawing.

C 8.4.83 Time of observation 20.32 - 20.40 B.S.T.
Conditions were extremely good with definite dark shaded areas in Venus cloud structure. Filter used for this observation was light green.

D 9.4.83 Time of observation 20.00 - 20.22 B.S.T.
Conditions good showing high activity on Venus, all markings were rather faint due to twilight sky. No filter was used to make this observation. All markings on the drawings are very much fainter than shown, being ill-defined contrast features.

Meteor Notes

D Barnard

There are three showers active this month:

i. The Alpha Scorphids
Max on May 13th, active until May 19th. ZHR of 20.
Radiant: 16hrs 04mins, +24 degrees. One of many radiants active until July each giving a few meteors. Favourable.

ii. The Eta Aquids
Max on May 6th, normal limits April 24th to May 20th. ZHR of 40.
Radiant: 22hrs 20mins, -01 degrees. Favourable. Has a broad max which suggests this is an old stream. Also has a multiple radiant.
There will be a meteor count to observe this shower - see programme on back page.

iii. The Ophiuchids
Several radiants for this shower. Maxima occuring in June but active for the second half of this month.
Radiants. 17hrs 56mins, -23degrees and 17hrs 20 mins, -20degrees.

NEWS

Periodic Comet Temple 1982
This comet has not yet been found in the Orwell Park 10". Currently in Coma but this area of sky is polluted by light from the container terminal at Felixstowe.

	RA	DEC	MAG
April 26	12hr 38.80	+14 54.8'	11.7
May 6	12hr 33.31	+13 14.5'	11.5
May 16	12hr 31.60	+10 49.9'	11.4
may 26	12hr 34.19	+07 49.1'	11.3

We would be interested in any members observations of this object. Please send any results to D Barnard or D Payne (addresses on back page).

NGC 3044 Supernova
Okazaki and Evans independently discovered this supernova in virgo, RA 21hrs 49.8, Dec -00 55'(1950). In Early April the estimated mag was +13. The galaxy itself has a visual mag of 10.8.

Sources: The Astronomer - Early Warnings and Bulletins
BAA circulars

by D Barnard

Scotland Trip 1983

The annual trip up n will this year be for 2 weeks, last week in July and first week in August. Anyone wishing to go should contact Dave Barnard on Ips as soon as possible as interest in this trip is expected to be high. More details in June Journal.

DAYTIME OBSERVATIONS OF VENUS

Daytime observations of Venus can be easily made if you know where to look. Binoculars are all that are required, and naked eye sightings can be made near maximum brightness.

As Venus will be to the 'left' of the Sun, an important precaution is to have a wall between yourself and the Sun. The sky can be scanned in safety when the Sun is obscured. In case 'new members' are unaware of this fact, it must be pointed out that observing the Sun with any ordinary optical aid will do permanent damage to your eyes.

The following table gives the times (B.S.T.) when Venus is on the meridian:-

DATE	TIME ON MERIDIAN	ELONGATION o	MAG.
May 6	15.46	41	-3.6
16	15.58	43	-3.7
26	16.03	44	-3.8
June 5	16.09	45	-3.8
15	16.12	45	-3.9
25	16.10	45	-4.0
July 5	16.01	45	-4.0
15	15.48	44	-4.1
25	15.22	41	-4.2

R.E.G.

PROGRAMME FOR MAY

TUESDAYS from 8pm	GENERAL OBSERVATION SECTION		
3, 10, 17, 24	Mr N Gage,	, Trimley	Tel: Fel.
	Mr R Hebbs,	, "	Tel: Fel.
WEDNESDAYS from 8pm	NEBULEA & FAINT OBJECTS SECTION		
4, 11, 18, 25	Mr M Cook,	, Ipswich	Tel: Ips.
	Mr D Payne,		
	Wickham Market.		Tel:W.Mkt.
FRIDAYS from 8pm	VARIABLE STAR SECTION		
6, 20	Mr R Gooding,	, Ipswich	
	Mr M Nichols,		
	Capel St. Mary.		Tel: Ips.
SUNDAYS from 8pm	GENERAL OBSERVATION SECTION		
1, 15, 29	Mr R Adams,	, Ipswich	Tel: Ips.
	Mr M Barriskill,	, Ipswich	

EVENTS PROGRAMME

Saturday 7th Meteor Count, Meet at M Cooks house, , 9pm.

Tuesday 10th Visit by the National Association of Gifted Children 8pm. Come along and help.

Saturday 14th May 7:30 pm. Committee Meeting in the Club Room. All members are invited.

1983 COMMITTEE

CHAIRMAN	D Payne	,	Work:
		Wickham Market, IP13 OSD	Home:
VICE CHAIRMAN	R Cheesman	, Corringham,	Work:
		Lane, Essex SS17 9BU	Extn
SECRETARY	R Gooding	, Ipswich	Work:
TREASURER	M Nicholls	, Capel St. Mary,	Work:
		Ipswich, IP9 2EX	Home:
MEMBERSHIP SEC.	M Barriskill	, Ipswich	
P.R.O.	D Barnard	,	Home:
		Ipswich, IP4 5PP	Work:
MAINTENANCE	M Cook	,	Home:
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		Ipswich, IP1 4HA	
LIBRARIAN	N Gage	,	Home: