ORWELL ASTRONOMICAL SOCIETY, IPSWICH.

" Wish you a very happy and prosperous New Year! "

SOCIETY NEWS

ANNUAL GENERAL MEETING

1. 8.00 p.m. January 10th 1987.

All members are invited to attend the 1987 A.G.M. This will be held in the school library on Saturday 10th January, starting at 8.00 p.m.

2. Subscriptions

Annual subscriptions are due on January 1st. The rates for 1987 are:-

Junior and O.A.P.	£4.00
Adult	£6.50
Family	£7.50

plus £1.60 for newsletter postage if you do not wish to collect it from the dome. Payment can either be sent to David Barnard, or payed at the A.G.M.

The rates have been raised in order to cover society running costs. This is the first increase since January 1985

3. Lecture Meetings

The following talks have been booked for the new year. The venue is in the Collinson Room at The Friends' Meeting House, Fonnereau Road.

(a) Friday, March 13th at 8.00 p.m.
A second chance to hear the account of Roy and Alan's Australian trip.

(b) Friday, April 10th at 8.00 p.m.
A talk by Bob.Markham on solar system geology.
Both meetings will be a joint function with the Ipswich Geological Group.

NIGHT SKY

Sun Rises approximate between 07.00 - 07.50
Sets approximate between 16.30 - 15.50

Moon  6th  15th  22nd  29th

Mercury	Superior conjunction on the 12th.Visible in evening sky in second half of month.Mag. -1.1
Venus	Greatest elongation on the 15th (47°).Mag. -4.4
Mars	Sets at about 2300 during month,Mag. 0.8
Jupiter	Will be setting at 2100 by mid month,Mag -2.2
Saturn	Rises about 2 hours before Sun in mid month,Mag 0,5
Uranus	Difficult to observe this month.
Neptune	Difficult to observe this month.

The Grazing Occultation in November D Payne

1986 has been somewhat short of grazing occultations that are observable within a reasonable distance from Ipswich. In fact there was only one and this occurred on Saturday 22nd November. As this was the only graze this year, for the OASI, the usual group of enthusiasts who seem to like getting up at unearthly hours and driving to distant corners of East Anglia to observe cloud formations (this is not the intention but is usually the case) decided that this was a 'must' for a society expedition. This particular event was to occur around 4:35am (I can't recall one that occured the right side of midnight!) and meant that the roving astronomers needed to be on the road not long after 3 oclock inorder to travel, find a suitable site and set up equipment in time for the graze.

Well laid plans were formulated - actually this is an exaggeration, the predictions of the path sent to us from Herstmonceux ended at Thetford. There was insufficient time to get the data for the Ipswich area so Alan Smith extrapolated the path from Thetford to the geographical region of intrest. The potential errors of the extrapolation coupled with our experiences during the February '85 graze (concerning discrepances between the real Lunar disc and the fitted circle used for predictions) resulted in the decision that somewhere in the vicinity of Diss could be a good place to observe from. Further extrapolation of the track indicated that it would pass north of Ipswich fairly close to my home village of Wickham Market. I therefore magnanimously volunteered to observe from home inorder that we had a second observing station (I personally find these home observing sessions much easier to cope with. I can simply roll out of bed, open up the observatory, carry out the observation, close up and roll back into bed all without having to wake up properly)!

Friday 21st November. It was a grey dull rather depressing winters day, everyone was feeling quite cheerful (we wouldn't have to get up at ridiculous hours in the morning!) until Alan Smith rang up with the news that he had a weather report indicating a clear spell was due that should arrive in time for the occultation.

Saturday 22nd November 3:00am (approx) everyone wakes up - look outside, cloudy and as thick as ever, so much for Alan's weather report. Everyone goes back to bed. I however had set my alarm for 4:00 and although I did wake up at about 3:00am and looked out (must be astronomical telepathy?) I did not reset the alarm which duly roused me again at 4:00am. I looked out, the clear patch was arriving, moonlight could be seen on the lawn and the observatory! I get up, open the observatory, dig out my tape recorder and get a time signal from the speaking clock. The star was easily visible approximately 12 minutes of arc off the bright southern limb, the time was 4:31am. At 4:40 the star was close to the terminator at an estimated distance of 2 minutes of arc. By 4:42 this distance had reduced to about 1.5 minutes of arc and the star had passed the terminator. I couldn't see the dark limb and therefore had to extrapolate the bright limb past the terminator inorder to estimate distances. At 4:44 I estimated the distance to be about 1 minute of arc. At 4.45 I made a prediction, the star was going to miss. I was right! No occultation or graze occured. Ten minutes later I went back to bed.

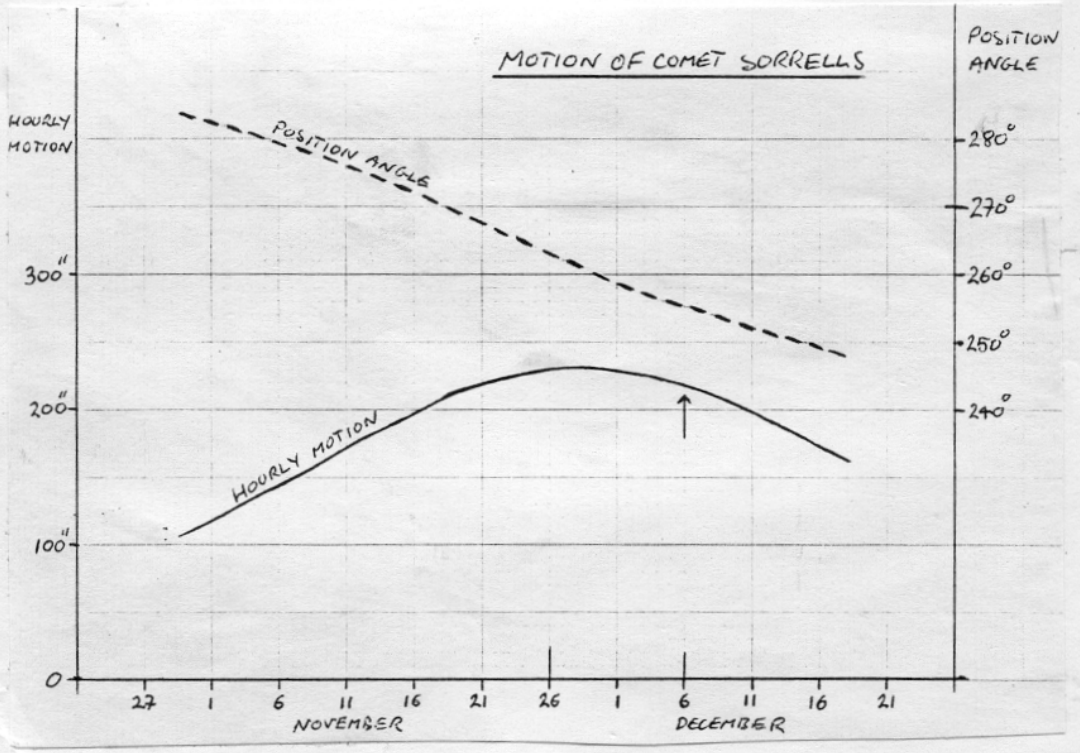
This is rather a long report for a total non-event we clearly need more articles of real observations start writing and a Happy New Year!

COMET SORRELLS , 1986n by Mike Harlow

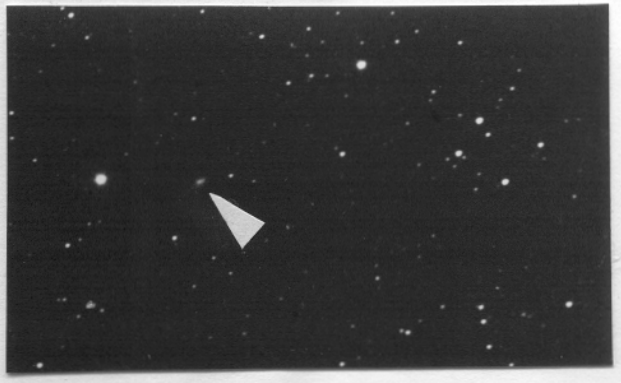
In early November the 14th comet of 1986 was discovered by Californian astronomer W. Sorrells. At that time it shone at about magnitude 12 and was moving slowly westward between the two stars marking the horns of Taurus (β and ζ Tauri).

A combination of poor weather and moonlight meant that it wasn't until the 26th November that we saw the comet through the 10" at the observatory. It was a small, hazy, oval patch of light a few degrees north of the Pleiades. At the same time last year (1985) Halley's comet had just passed a few degrees south of the Pleiades.

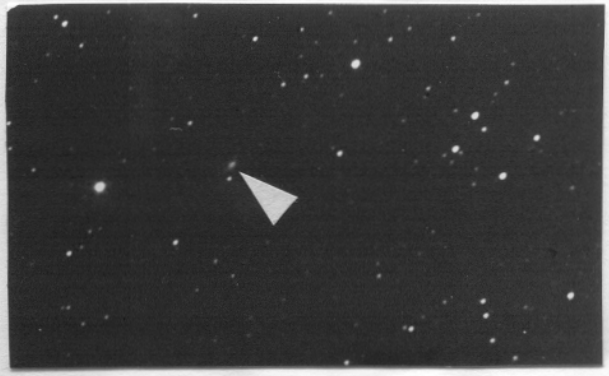
By this time accurate predictions of comet Sorrell's path had been made through to the end of December and from these I worked out it's hourly motion and direction across the sky(1). The graph below shows the speed of motion in terms of arcseconds per hour ("/hour). Position angle gives the comet's direction; North is 0°, East is 90°, South is 180° and West is 270°. It can be seen that the comet had it's fastest motion towards the end of November when in fact it was closest to the Earth. After this,



A graph showing the direction and magnitude of motion of comet Sorrells in late 1986. The peak at 230"/hour occured at the time of closest approach to the Earth.



Comet Sorrells: 10 minute exposure starting at 18.08GMT on 6th December. The diagonal of each photo is about one degree across, i.e. about twice the apparent diameter of the moon.



A second 10 minute exposure starting at 19.18GMT on 6th December. The comet has moved about 250 arcseconds between exposures.

although it was still approaching the sun, the Earth was receeding from the comet and it appeared to slow down. It will reach it's closest point to the Sun in March 1987.

On 6th December I finally managed to get a couple of photo's of the comet. At that time it was moving at 220"/hour and, on the negatives at least, this motion is apparent as trailing of the comet's image during each 10 minute exposure --equal to about 40 arcseconds. The difference in position between exposures is about 250 arcseconds as they were taken about 1 hour 10 minutes apart. Both photo's were taken with a 6 inch f/2.7 Schmidt camera using Kodak Technical Pan film which was subsequently developed in D-19 for 6 minutes. In the photo's the brightest star is 20 Arietis which is about magnitude 5; the comet was probably about magnitude 9 - 10 and on the negatives there is a distinct fuzziness towards the East indicating the presence of a tail. On 6th December the comet was 180 million Km from the Earth and over 310 million Km from the Sun.

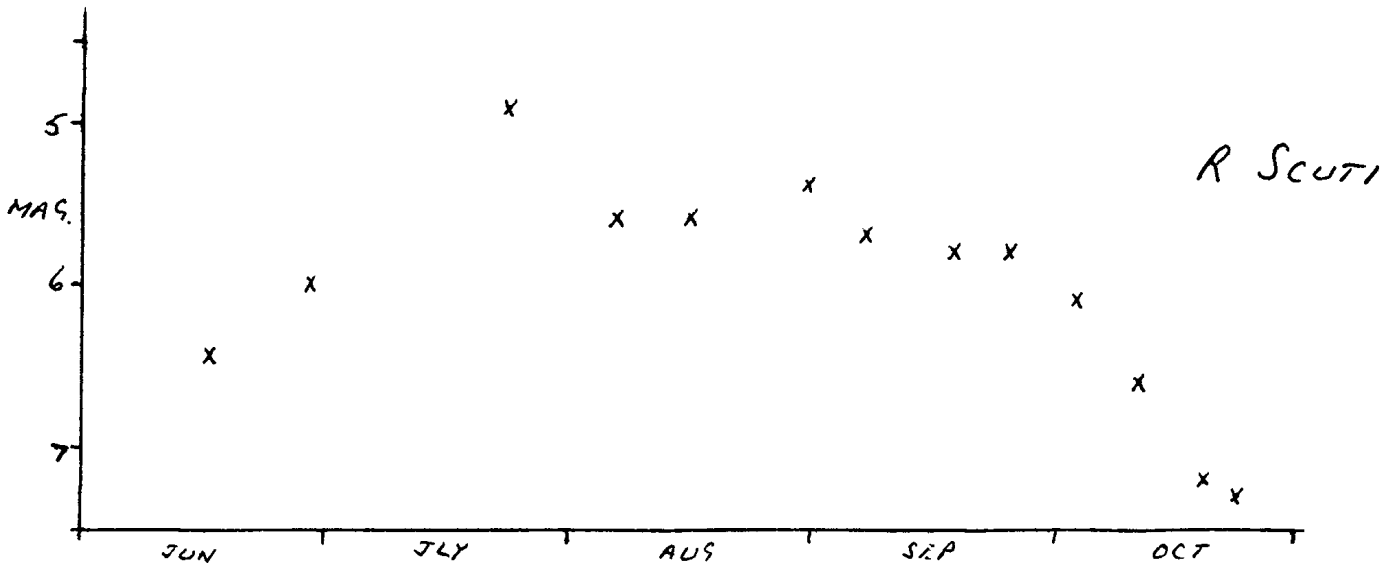
Reference

1. H. B. Ridley; Journal of the British Astronomical Association, Volume 95, (1984) page 8.

VARIABLE STAR OBSERVATIONS

by Mike Nicholls

This light curve shows R Scuti from June to October 1986. This star belongs to the RV Tauri class of variables, which in turn is a sub-group of the semi-regular types. The main characteristic of the group is the alternate deep and shallow minima. The light curve shown, however, does not illustrate this very clearly, although it is not uncommon to have to have two or more shallow minima together. This maybe what is occuring here.



PROGRAMME FOR JANUARY

MONDAYS from 8pm
5, 12, 19, 26
DOUBLE STAR & PLANETS SECTION
Mr N Taylor , Farmlands
Trimley
Tel:Fel.
Mr T Gillan , Bardwell
Bury St.Edmunds.
Tel:
Miss M Edwards , Felixstowe
Tel:Fel.

TUESDAYS from 8pm
6, 13, 20, 27
GENERAL OBSERVATION SECTION
Mr N Gage, , Trimley
Tel: Fel.
Mr R Newman , Felixstowe
Tel: Fel.
Mr J King, , Felixstowe
Tel: Fel.

WEDNESDAYS from 8pm
7, 17, 21, 28
NEBULEA & FAINT OBJECTS SECTION
Mr M Cook, , Ipswich
Tel: Ips.
Mr D Payne, , Wickham Market.
Tel:W.Mkt

FRIDAYS from 8pm
2, 16, 30
GENERAL OBSERVATION SECTION
Mr R A Lobbett, , Felixstowe.
Tel:Fel.
Mr J Hood, , Ipswich.
Tel:Ips.
Mr M Harlow, , Felixstowe
Tel:Fel.

On nights other than Wednesday please contact directors to confirm dates.

1986 COMMITTEE

CHAIRMAN	D Payne , Wickham Market, IP13 0SD	Work:
		Home:
VICE CHAIRMAN	R Cheesman , Corringham, Essex SS17 9BU	Work:
		Extn
SECRETARY	R Gooding , Ipswich IP1 6AE	Work:
		Home:
TREASURER	M Nicholls , Capel St. Mary, Ipswich, IP9 2EX	Work:
		Home:
MEMBERSHIP SEC. /P.R.O	D Barnard , Ipswich, IP4 5PP	Home:
MAINTENANCE	M Cook	Work:
		Home:
LIBRARIAN	E Sims , Ipswich, IP4 5PZ	Work:
		Home:
SOCIETY EVENTS	R Lobbett , Ipswich, IP1 4HA	
F.A.S. ARTICLES	M Harlow , Felixstowe	WORK:
		Home:
		Home: