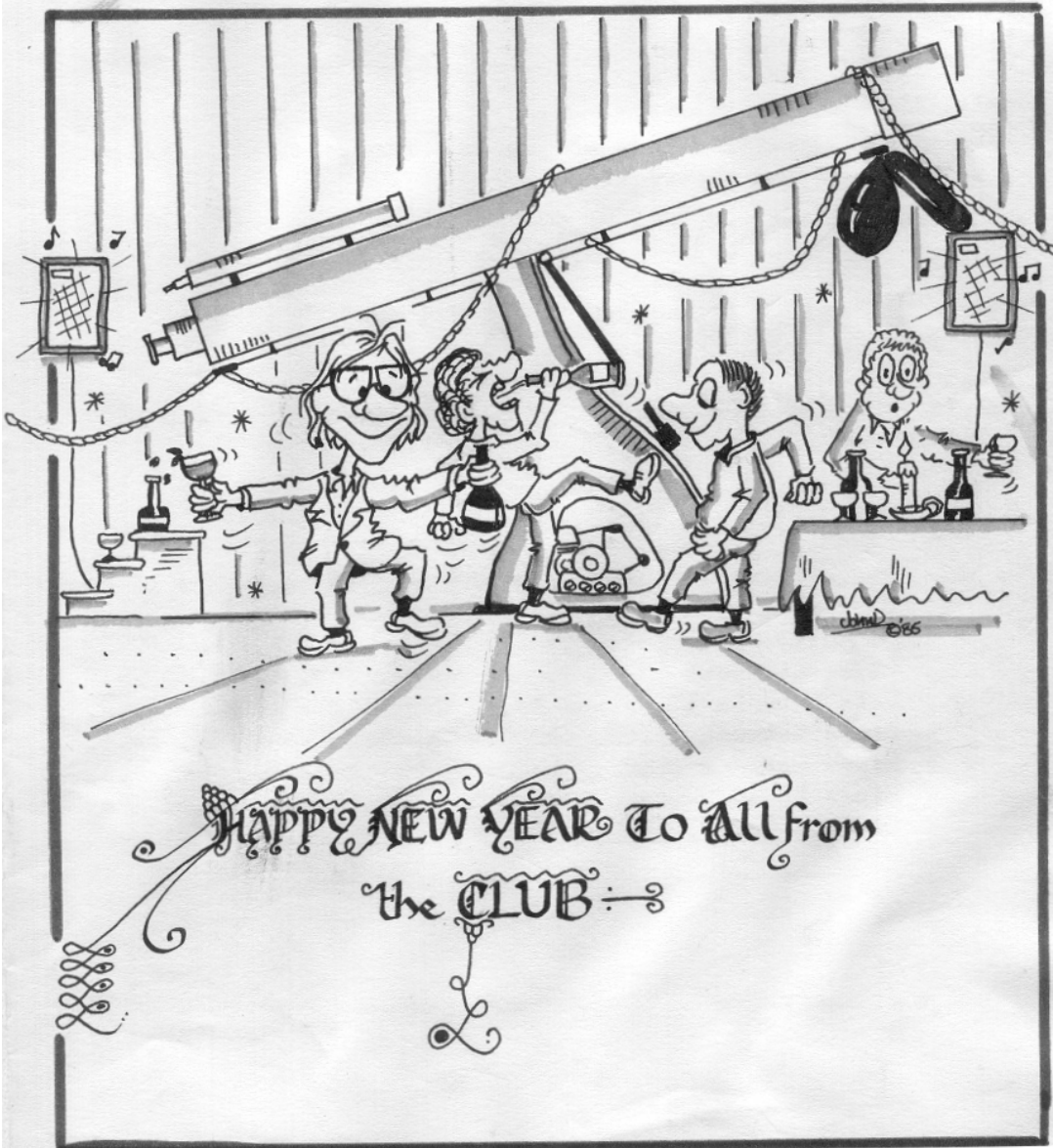




JANUARY 1986



SOCIETY NEWS

1. A.G.M.

The A.G.M. is on Saturday, 11th January at 7.30 p.m. in either the School library or hall. All members welcome.

2. 1986 Subscriptions





Subscriptions are due on January 1st. Rates are:-
 Under 18 £3.50, Adult £5.50, Family £6.50 plus £1.60 for Newsletter postage. Please send all monies to David Barnard.

NIGHT SKY

Constellations (all times G.M.T.)

The winter constellations of Taurus, Orion, Gemini, Auriga are well placed for observation.

Sun Rises approx. 08.10 - 07.50
 Sets approx. 15.50 - 16.40

Moon  3rd  10th  17th  26th

Occultations

14th	ZC 3434	mag. 7.4	D	17hr.14.2m
14th	3446	" 7.2	D	18hr.25.9m
19th	467	" 6.7	D	22hr.27.2m
20th	582	" 5.8	D	19hr.10.1m
21st	733	" 7.2	D	22hr. 7.1m

Mercury Rises about 1 hour before sunrise at beginning of month
 Difficult to see.

Venus Superior conjunction on the 19th.

Mars Rises at about 03.00 in mid month. Mag. 1.4.

Jupiter Sets between 19.00 and 18.00 during the month. Mag. 2.0.

Saturn Rises between 05.00 and 03.00 during the month. Mag. 0.6.

Uranus Rises between 1 and 2 hours before sunrise. Mag. 5.8.

Neptune Rises about 2 hours before the sun at the end of the month. Mag. 7.7.

R. Gooding.

OPEN WEEK

Wednesday 13th November was the first evening that the observatory would be open to the public to observe Halley's Comet.

The skies were clear all day which bid well for the evening. Every one had many years experience of either group visits, caravan rallies and open days and weeks, so this evening should present no problems. Little was it realised what a hiatus of activity would ensue from the tranquility of eating tea at 6 p.m.

I arrived at our car park with Martin Cook and David Barnard at 7.30, 30 minutes before the official opening time. The parking area was amass with lost bodies trying hard to find the entrance to the observatory. The dome was already operational, so some visitors had apparently found it without the use of our yet to be erected directional signs. We quickly proceeded up to the club room, with the visitors bringing up the rear, to collect the signs. By this time there must have been some fifty visitors either in the club room or the dome. People were arriving all the time and the observatory was still some way from being completely organised. The direction signs were erected around the entrance to the school and the observatory.

By 8.00 p.m. cars were arriving at a rate of one every 10 seconds. Martin and I stationed ourselves at the entrance and began our initiation into the world of car park attendants and night sky guides. Visitors arriving at 8.00 were told there would be a half hour wait; at 8.30 this had increased to one hour; by 9.00 it reached at least 1½ hours.

The number of visitors stretched our resources to the limit. The school's photo-copier was constantly printing additional copies of our hand-outs to replace our grossly under-estimated original quantities. The number of visitors queuing smashed all previous records. At one time it extended from the club room all the way down the stairs and finally ending outside the classroom in the entrance passage. Some people patiently waited for over 2 hours before glimpsing the Comet through the 10". Fortunately there was a large turn out of members so the number of visitors presented no major difficulties. The total number who visited the observatory was estimated at over 500. The last visitor did not leave until past midnight.

Unfortunately Halley's Comet was only visible for about 20 minutes on the remaining 3 nights (between 10.00 to 10.20 on Friday.) However this did not deter determined visitors; an estimated 150 appeared on Thursday with more on Friday and Saturday.

On Friday evening it was decided to repeat the whole process again in December. The observatory will be opened up to the public again December 11, 12, 14 and 15, so once more a plea is made for as many members as possible to come along and lend a hand.

Needless to say, society funds have never been so healthy. However, thás may have to last us for another 76 years!

R. Gooding.

Halley's Comet Open Week

D B Payne

During National Astronomy Week the Orwell Astronomical Society opened it's observatory to the public for a once in a life time chance to observe Halley's Comet through the ten inch refractor. In terms of public interest and attendance it was without precedence the most successful event ever held, despite only one night out of the four 'open evenings' being clear. Wednesday 13th November was our first and only clear night. Between 400 and 500 people of all ages, including one old gentleman of 86 who remembered seeing it in May of 1910, queued for up to 2 hours to get a few seconds glimpse of the comet through the ten inch telescope. Each person who did see the comet was issued a certificate signed by a member of the society witnessing the fact. Observing on this night continued until 12:30 am on Thursday morning in freezing conditions.

Thursday evening was cloudy with drizzle however about 150 people turned up for a look at the observatory, telescope and a slide show.

Friday night was supposed to have been clear according to the weather forecast. In the event it was patchy cloud with far more patches than clear spaces. About 300 people turned up that night and a lucky group of about 40 managed to get a glimpse of the comet during the only 30 minute clear spell of the evening.

During Saturday the weather continued to deteriorate and by evening it was raining steadily and continued to do so all night. Despite the appalling weather 200 or so visitors turned up to the observatory and were given slide shows about the comet and a description of the telescope.

In all about 1000 visitors turned up to the observatory. Because of the bad weather at least half of them did not see the comet. The weather has continued to be poor since that fine Wednesday evening on the 13th and unfortunately only a few observations have been carried out with the ten inch refractor prior to this date. This has led to a dilemma for the society. Do we open the observatory again for the public or do we reserve all future clear nights for members observations? A consensus between the available committee members concluded that we should open the observatory again and to this end the observatory will be open on the following nights in December:

SOCIETY TRIP TO GREENWICH

Back in May Roy Cheesman suggested that a request should be made to use the 28" refractor at Greenwich to observe Halley's comet. A date was subsequently booked for Friday December 6th.

Our party congregated at Alan Smith's at 10.00 from where we piled into a mini-bus and proceeded to the A12 and headed for London (as a society we must have a one-track mind, all excursions involve a south bound journey!) It was not long before we were made aware of the excentricities of our hired mini-bus. A red light flashed to life whenever a predetermined speed was exceeded, the near side wing mirror gave our driver Alan a birds eye view of the front wheel and not much else. The most alarming peculiarity was the flexible roof. Every bump in the road exclaimed its presence with a loud clank. The first time this happened many pairs of anguished eyes peered all around and behind the van to see what had fallen off.

We had arranged to meet Roy Cheesman at H.W. English near Brentwood. As luck had it we both arrived there within minutes of each other. Originally, our stay here was to have been only minutes. However, with a group of 11 astronomers at an optical equipment shop, this was wishful thinking. The window display was scrutinised in great detail and much discussion was made before we ventured inside, completely filling the available floor space. No-one had intended buying anything at the start, except Alan. During the next hour or more numerous requests to look at pieces of equipment were made, especially after we learned that the business was closing down in the new year. A request to look at an ex-government pair of 10 x 80 binoculars was made. These were so massive that it required two people to use them; one to hold with the second person looking through. After a long period of thought and careful consideration (about 5 minutes) the consensus of opinion was that the best home for these would be at Orwell Park. The binoculars were transferred to a rickety wooden tripod and positioned outside the shop. Turns were taken at counting the number of bolts on a nearby pylon (about $\frac{1}{4}$ mile away), whether or not a flag on a church steeple was at full or half mast (about 5 miles away) and examining the tail section of a low flying 747 to look for fatigue cracks! Before we left, two 7 x 50 monoculars and a large piece of hemispheric glass were purchased. We left with a considerable load of unexpected booty and made our way back to the A12.

Roy Cheesman had decided to join us in the mini-bus if we could find a suitable parking place for his car. A suitable place was found near the A.12 M25 interchange. A cry was heard "Ah, there's a place, Trust House 'Fawltly' " as we sped past. A 180°

turn round the round-about was made (this was to be the first of many such manoeuvres). After watching the toing and froing of several vehicles, all intent on either leaving or parking at the same time and place, Roy slid his car into an empty parking spot.

The time was by now approaching 1 p.m. and a suitable venue for lunch was sought. Eventually a pub advertising food was seen; it was named "Pigeon". We parked in a nearly full back street which displayed signs saying 'No parking!' then the pub door was entered. Once inside our presence was at variance with the majority of the regular clientele. A less salubrious emporium one would never wish to enter again. All that was lacking was sawdust and spittoons. Our retreat was faster than our advance. However, all was not lost, round the corner was the lounge; this was well furnished with wall-to-wall carpets, and where a selection of hot and cold foods at reasonable prices was available. It was several minutes before all our group decided to venture into the pub again.

The weather up until lunch time had been clear blue skies that bid well for the evening. Unfortunately this waste change. It rained with variable ferocity continuously for the next 8 hours. Greenwich Park was reached at 2 p.m. Moments before a back-seat driver instructed Alan that the car in front was at the Park gates. We drew up next to this car, only to find it was parked off the road, nowhere near the gates! With a bump our mini-bus lurched over a kerb, back on to the road having followed the premise that the shortest distance between two points is a straight line; we had inadvertently cut off a corner.

After parking, we descended upon the Greenwich Park tea shop for refreshment. Two tables were pulled together for the commencement of the first committee meeting to be held in London. The possibility of premature curtailment of the meeting through eviction never came to fruition. When the meeting was over we reported to the kiosk of the old Royal Greenwich Observatory. After a while we met Carole Stott who suggested that a visit to space exhibition in the National Maritime Museum at the bottom of the hill would be a good idea. The exhibition was too extensive for us to give it our full attention in the time available before we were to report back to the old Observatory. As the weather did not permit any observing, we spent about an hour in the Greenwich Planetarium where Carole Stott gave a general talk on the observatory, together with informal discussions on our sightings of the Comet, and the workings of the Planetarium. For Alan and Roy's benefit the southern hemi-

sphere stars were projected. About 45 minutes were spent in the 28" refractor dome, where the telescope was clambered around with the glee of bees round a honey pot.

Before our visit to the Planetarium and observatory had begun, a member of the Greenwich staff had asked us if a visiting Australian could join our group, and of course, we consented.

A little after 6.30 p.m. we started our journey home. After several wrong turns we eventually found our way to the A12. A stop in Leytonstone at a fish and chip shop lasted about 20 minutes. The turning to the Post House Hotel and Roy's car was missed and required about an 8 mile detour up and back down the A12 before we were able to turn around. Nearly an hour was spent in the Hotel's public bar before setting off for home, where we arrived at about 11 p.m.

The other members in the group were:- Martin Cook, David Barnard, David and Darren Payne, Roy Lobbett, Michael Harlow, Chris Albins and Eric Sims.

R. Gooding.

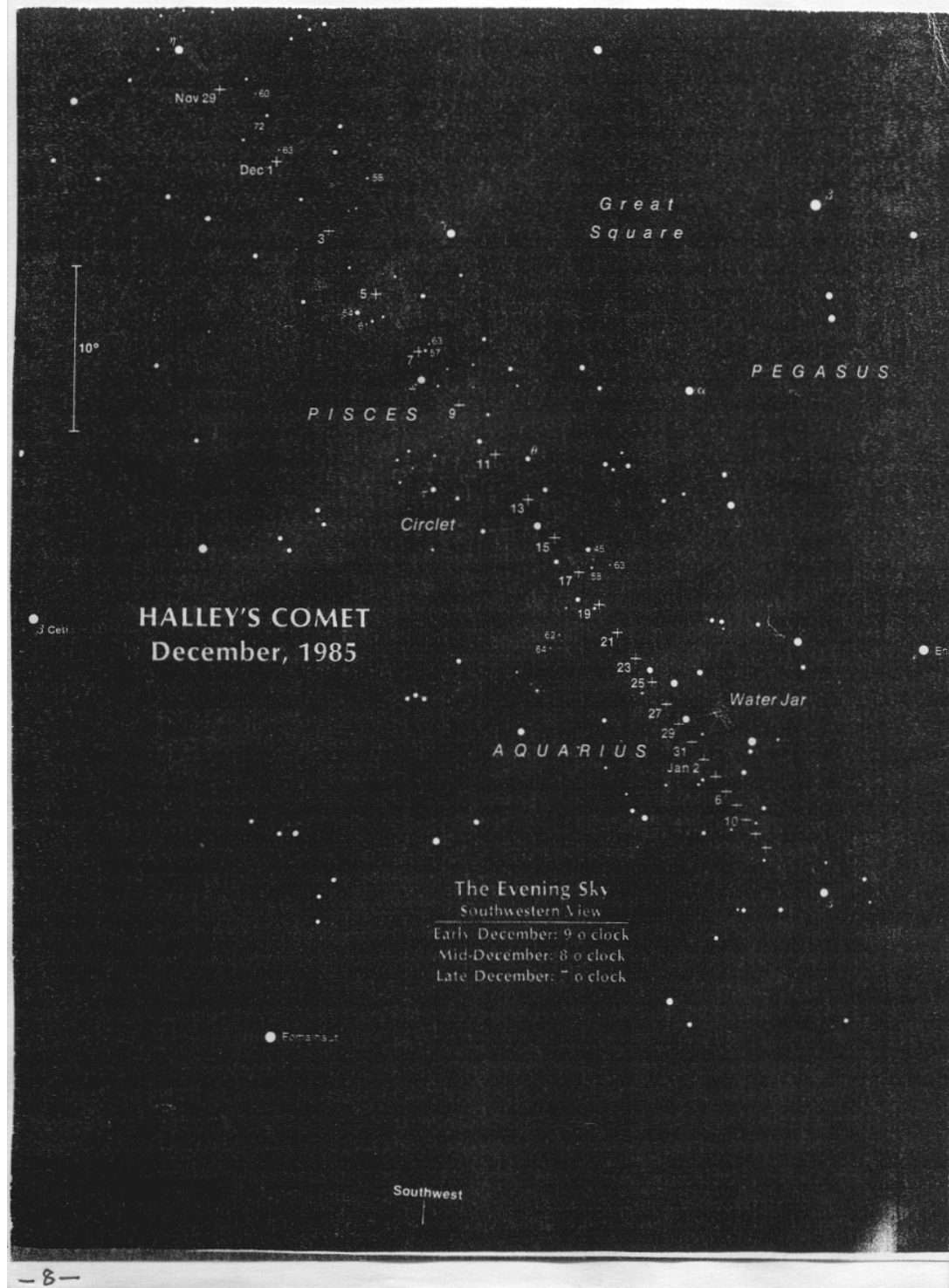
A. G. M. SATURDAY 11th JANUARY

730 pm. ALL MEMBERS

WELCOME.

TO BE HELD IN THE

SCHOOL LIBRARY



My first observation of the comet in November was on Saturday the 2nd. It was four days from full moon but the bright gibbous moon was still causing significant interference and a slight haze did not help matters. However using the Sky and Telescope chart I quickly found the comet with my 10" reflector about 1/4 of a degree to the west of 109 or Eta Tauri. I have a 75mm Maksutov telescope attached to the ten inch but there was no sign of the comet in this instrument. In the ten inch telescope the nucleus appeared more diffuse than in my first observation on October 13th also it was not central in the surrounding diffuse glow but offset to the north. This suggested that some tail might be forming but due to the acute angle subtended to the Earth and the faintness of the object it was not yet clearly visible.

I estimated the diameter of the diffuse region to be about 40 seconds of arc as seen in the ten inch with an Erfle eyepiece giving 80x magnification.

On Sunday November 3rd it was another clear night the moon was less of a disturbance although there was still a slight haze. Finding the Comet was very easy this time using the ten inch reflector. At 11:30pm I was able to see the comet distinctly in the 75mm Maksutov and I attempted to find it with binoculars. At 11:40pm I could just make out a fuzzy patch using averted vision in 10x50 binoculars. This was my first binocular observation.

Monday was cloudy but Tuesday again afforded clear skies (despite it being bonfire night). The moon had now waned and did not interfere and I found the Comet without difficulty in 10x50 binoculars as a roundish misty patch. In binoculars however it appeared fairly uniform brightness without a defined nucleus region. I estimated it to be about 10 minutes of arc across.

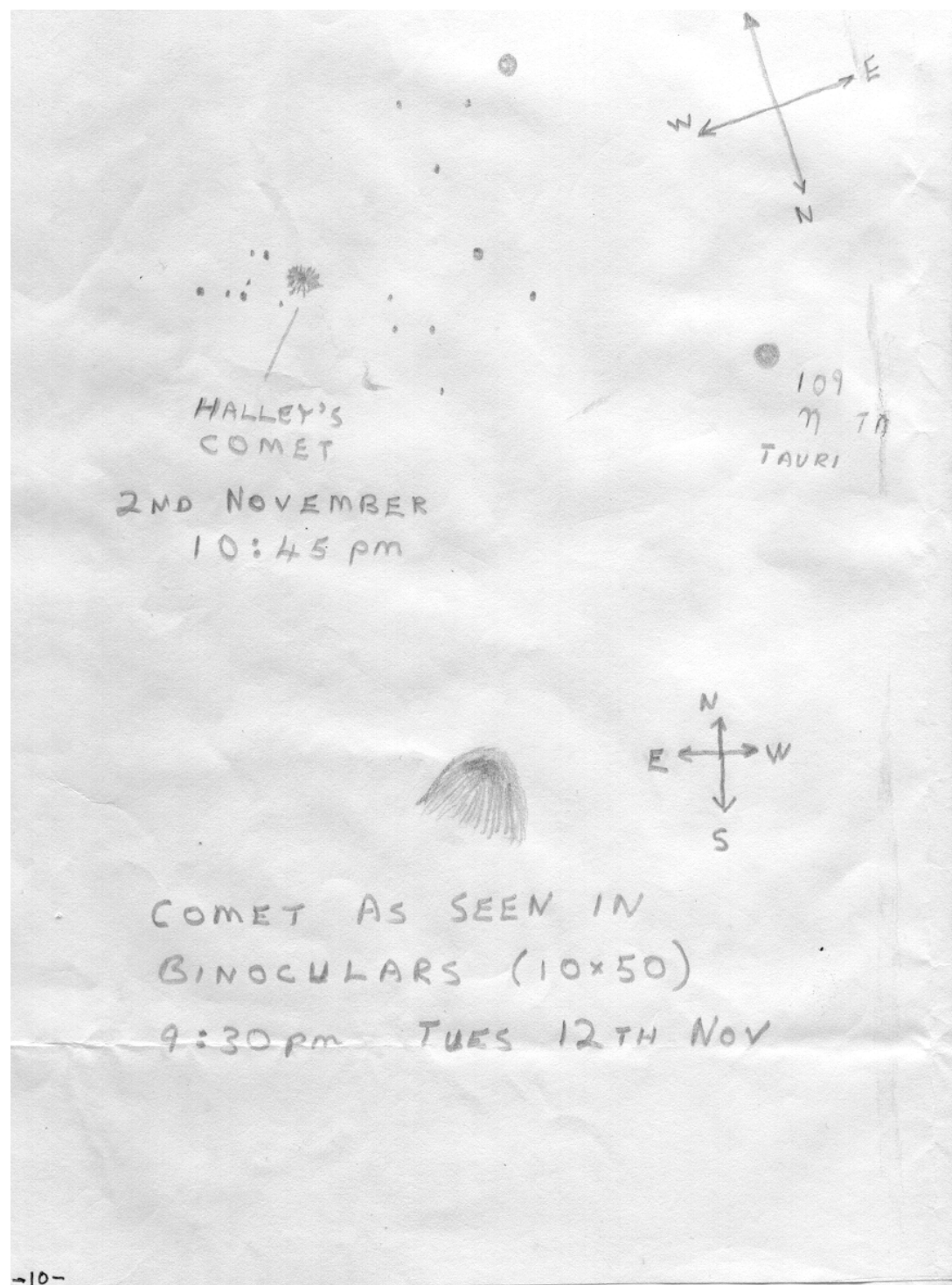
Wednesday 6th and Thursday 7th November were both cloudy. Friday was also cloudy but with some clear breaks and I just managed to glimpse the Comet with binoculars.

Saturday was also cloudy but on Sunday the 10th some reasonably clear skies permitted further observation. Again the comet was easily found with binoculars about 2 degrees east of the small arc of stars 72, 69, 65 and 67 Tauri. I estimated its diameter to be about 13 minutes of arc in binoculars.

Monday night (11th November) was again clear but when I tried to find the Comet with binoculars it apparently was not there! The seeing was fairly good and the sky was dark. The reason for the apparent lack of Comet was its close proximity to the star 65 Tauri (mag 4.36) which was drowning it out!

On Tuesday 12th November I again found the Comet without difficulty with binoculars. By now the coma region could be seen against the surrounding glow and the shape had become triangular hinting at the beginnings of a tail.

Since Wednesday night 13th November the bad weather has prevented any further observations.

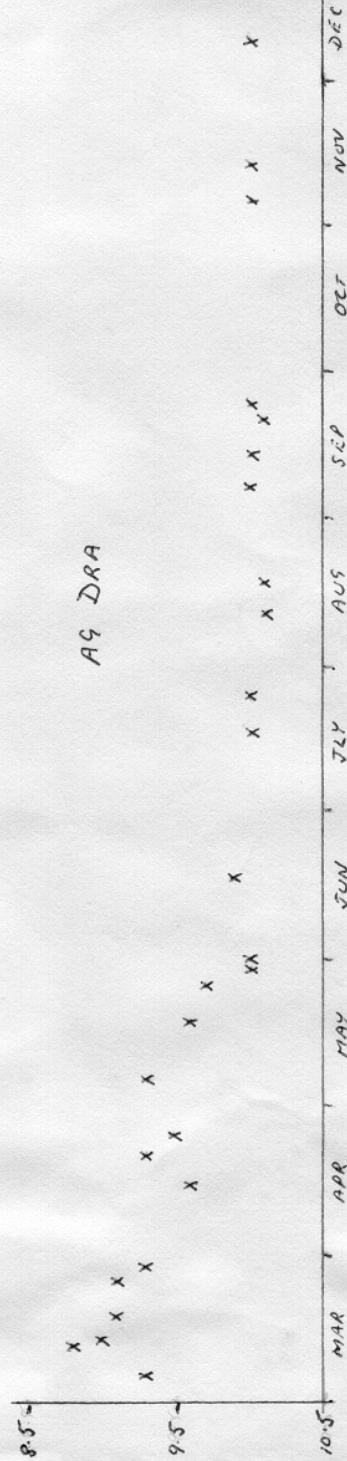


VARIABLE STAR OBSERVATIONS

by Mike Nicholls

The light curve shows AG Draconis from March to December this year. It derives its variability from being a binary star system rather than a single star. It belongs to a rather rare group known as Z Andromedae or symbiotic stars. The binary pair consists of a white dwarf accompanied by a red giant star. Gas, mostly hydrogen, from the red giant, is believed to fall onto the surface of the white dwarf. At intervals of several years this hydrogen undergoes a nuclear reaction causing brightening of the star. AG Draconis has certainly not had an outburst for several years. It normally has a magnitude of around 10.0, but occasionally rises, on this occasion to mag 9.0, but to mag 8.2 in the past. It is quite erratic and no periodicity has been observed.

Observations were made using an 8" reflector.



PROGRAMME FOR JANUARY

MONDAYS from 8pm DOUBLE STAR & PLANETS SECTION
 6, 13, 20, 27 Mr N Taylor [redacted], Farmlands
 Trimley Tel: Fel. [redacted]
 Mr T Gillan [redacted], Felixstowe Tel: Fel. [redacted]

WEDNESDAYS from 8pm NEBULEA & FAINT OBJECTS SECTION
 8, 15, 22, 29 Mr M Cook, [redacted], Ipswich Tel: Ips. [redacted]
 Mr D Payne, [redacted], Wickham Market. Tel: W.Mkt. [redacted]

FRIDAYS from 8pm GENERAL OBSERVATION SECTION
 10, 24, Mr R A Lobbett, [redacted], Felixstowe. Tel: Fel. [redacted]
 Mr J Hood, [redacted], Ipswich. Tel: Ips. [redacted]

1985 COMMITTEE

CHAIRMAN	D Payne	[redacted], Wickham Market, IP13 OSD	Work: [redacted] Home: [redacted]
VICE CHAIRMAN	R Cheesman	[redacted], Corringham, Essex SS17 9BU	Work: [redacted] Extn: [redacted]
SECRETARY	R Gooding	[redacted], Ipswich IP1 6AE	Work: [redacted] Home: [redacted]
TREASURER	M Nicholls	[redacted], Capel St. Mary, Ipswich, IP9 2EX	Work: [redacted] Home: [redacted]
MEMBERSHIP SEC.	D Barnard	[redacted], Ipswich, IP4 5PP	Home: [redacted] Work: [redacted]
P.R.O.	D Barnard	[redacted], Ipswich, IP4 5PP	Home: [redacted] Work: [redacted]
MAINTENANCE	M Cook	[redacted], Ipswich, IP4 5QA	Home: [redacted] Work: [redacted]
FUNCTIONS	E Sims	[redacted], Ipswich, IP1 4HA	Home: [redacted]
LIBRARIAN	E Sims	[redacted]	