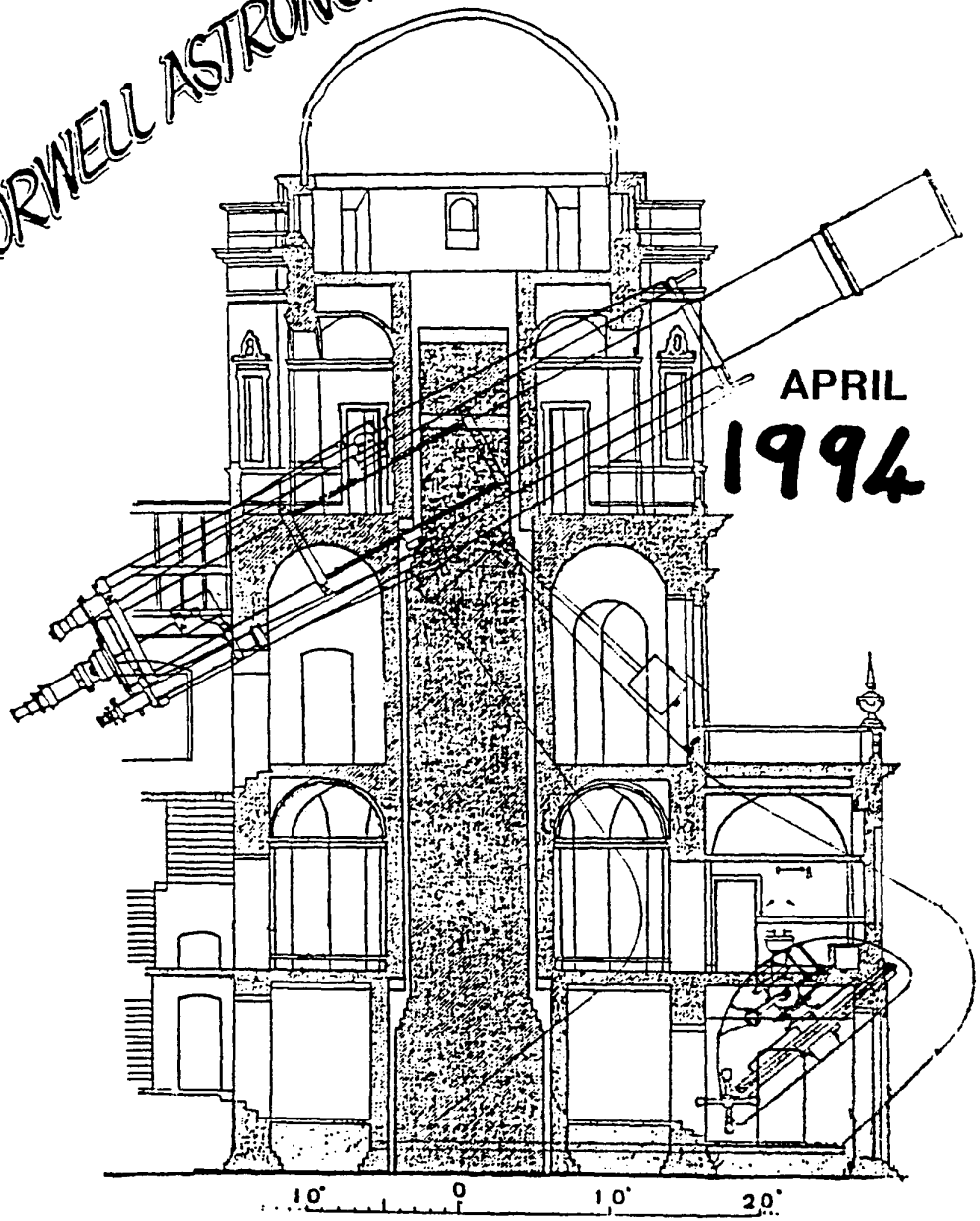
ORWELL ASTRONOMICAL SOCIETY IPSWICH



APRIL

1994

NIGHT SKY

All times GMT

SUN

Rises approximately at 05.35 to 04.31
Sets approximately at 18.33 to 19.24

MOON

3rd 11th 19th 25th

MERCURY Mercury is a morning sky object this month. It remains to close to the sun this month for observation.

VENUS Venus will be visible in the western sky after sunset. It will be setting about 22.00 at the end of the month.
Mag. -3.9

MARS Mars will be to close to the sun this month, and will be difficult to observe this month.

JUPITER Jupiter will be at opposition on the 30th. It will be rising at about 22.30 in mid month. Mag. -2.3.

SATURN Saturn will in visible low down in the morning sky and will not be easily seen this month.

URANUS Uranus will be rising at about 02.19 in the mid month.
Mag. 5.8

NEPTUNE Neptune will be rising at about 02.02 in mid month.
Mag. 7.9

R.Gooding

SOCIETY NEWS

1 Committee Meeting

The next committee meeting will be on Saturday 21st May, from 7.30. As usual this is an open meeting and any member is welcome to attend.

2 May's Lecture Meeting

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* The next lecture meeting will be held on Friday 6th May *
* at 8.00 pm, at the Friends Meeting House *
* Fonnereau Road. *
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* Mr. Ron Mcarthur will give a talk on Radio Astronomy *
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3 List of Events For 1994

i)	Lecture Meeting Fonnereau Road. Mr.Ron Mcarthur Talk on Radio Astronomy	6-5-94
ii)	Oxford Weekend	13-5-94
iii)	Trip to Greenwich	11-6-94
iv)	Parents Day	18-6-94
v)	FAS Convention Cambridge	24-9-94
vi)	The annual Open Weekend will be held in the autumn to coincide with the BBC's Astronomy series. Dates are not yet known.	
vii)	Bury Star Party. We have been asked to help organise a star party as part of the Bury St Edmunds Time & Motion Festival. Probable date Saturday	10-12-94
vii)	Christmas meal. Sometime in December	14-12-94

4 Open University TV Programmes

The Open University is running an astronomy course this year, and BBC2 will be showing a series of programmes for this:-

	BBC2 08.45 1st showing Sunday	BBC2 24.00 Repeat Thursday	
TV3	24-4-94	28-4-94	Cosmic Cycling
TV4	22-5-94	26-5-94	Venus Unveiled
TV5	19-6-94	23-6-94	Design for an Alien World
TV6	17-7-94	21-7-94	Mapping the Milky Way
TV7	14-8-94	18-8-94	Jets & Black Holes
TV8	11-9-94	15-9-94	Cosmology on Trial

Lights in the Sky

Some night time conditions can produce unexpected visual effects, which can very easily, be misinterpreted. The night in question had low, broken cloud. Any clear or partially clear sky sets in a subconscious response of a quick cursory scan of the sky. A bright light in the east was noticed, " That shouldn't be there, must be a plane," I thought, through no strobe lights were apparent. I lined the light up with a corner of the garden shed, no parallax was noticed. At this junction I went back indoors for a pair of binoculars.

Once outside again the light had disappeared, only to emerge though a gape in the clouds. The object was identified as a plane, which remained visible for a short period before being obscured by more cloud. Replacing it in the sky was a large moving elliptical patch of light.

The planes flight had been almost over head, hence no noticeable parallax when first sighted. The planes lights were illuminating the clouds ahead of its flight path. These conditions must be very common and can account for many erroneous UFO sightings, especially if the cloud cover was 100%.

R. Gooding

The BAA Variable Star Section Meeting at the Institute of Astronomy, Cambridge. 19th February 1994

by Mike Harlow

Throughout the year there are a number of meetings in Cambridge either at the RGO or the Institute of Astronomy next door. Last year there were meetings on solar and cometary astronomy and the Webb society meeting on deep space observing. The first meeting of this year was held on the 19th February and was devoted to variable stars. A capacity crowd filled the Hoyle lecture room and enjoyed a day of talks covering a wide range of topics.

The scene was set by Dr Allan Chapman of Oxford University who talked about the history of variable star astronomy from it's beginnings in the late 16th century up to the 1920's when it had matured into a science. Dr Chapman is an excellent speaker who has the rare gift of being able to talk without notes, slides or overheads and yet keep his audience on the edge of their seats.

The second talk was about one particular variable, IP Pegasi, and was a call for amateur observations of this extraordinary star. This star, which can be found in the Square of Pegasus (23h 20m 39.5s +18° 08' 42" (1950)), exhibits two types of variability. It is both a dwarf nova, i.e. it erupts violently semiregularly, and an eclipsing binary. It is known as a U Geminorum type star, after the first of this class to be discovered. When it erupts, approximately every 95 days, it rises from an obscure 15-16th magnitude star to magnitude 12. All the time however it is undergoing periodic eclipses when it can dim by up to 3 magnitudes and it does this every 3 hours and 48 minutes. The eclipse itself lasts in total 42 minutes. This star system has a large, dim star and a very small, dense white dwarf companion. The large star is loosing matter to its dense companion which forms a ring around it. Eventually so much mass builds up that it becomes unstable and goes bang! It just so happens that the orbit of the two stars is exactly edge on to us so that we see one star go in front of the other and when the white dwarf goes behind the large dim star the system fades dramatically.

From this rather esoteric system the next speaker, Tony Markham, who is director of the Junior Astronomical Society variable star section (JAS VSS), talked about the JAS VSS program. He first noted that the JAS had changed its name to the Society for Popular Astronomy (SPA). Their observing program has 24 stars, all of which are quite easy to see either with the naked eye or binoculars. They are chosen to illustrate the major types of variable but also be relatively easy to observe.

Some of the naked eye stars include β Persei (Algol) and β Lyrae which are both eclipsing type variables. There are also Cepheid variables on the list, e.g. δ Cephei itself and ζ Geminorum, as well as the longer period Mira type stars like o Ceti, χ Cygni and T Cephei and some other eclipsing stars like RZ Cassiopeiae and λ Tauri. The SPA publish a leaflet on variable star observing and their program and it is probably a good place to start for anyone interested in getting into this area of astronomy.

Lunch followed which gave a chance to look around and investigate the displays. Rosemary Naylor was there with her book stall which always attracts lots of attention at these meetings as an excellent source of a wide range of astronomy books, posters, maps and sets of slides. The BAA had its stall with their own books, postcards, ties etc. Next to them were the Webb society who are devoted to deep sky observing as well as variable and double stars.

Also over lunch I saw the latest light curve for Nova Cas 1993 which showed a dramatic dimming from magnitude 8 to less than 11 in only a few days. This behaviour has been seen in other novae in the past when a dust cloud forms around the central star. More on this nova in future OASI Journals.

After lunch Martin Hendry of Sussex University talked about his statistical work on cataclysmic variables or dwarf novae (like IP Pegasi) the first of which was U Geminorum discovered in 1885 by Hind. This talk was quite detailed but did illustrate the value of amateur observations made over many years as the majority of his academic work was based on BAA data.

Tristram Brelstaff, the BAA variable star section director, then gave a talk on supergiant variable stars seen in the famous Perseus double cluster. The most obviously variable of these are S Persei with a range of 8.5 to 12.5 magnitude over ~810 days, and RS Persei with a range of 8 to 10 in magnitude. All the other examples he showed varied very little and didn't appear to be suitable for observation by the casual observer.

The final talk, given by Mike Collins, was again for the real enthusiast as it involved taking many photographs of selected areas of the sky and looking for very faint novae. Usually the detection limit for novae is around magnitude 7 to 8 but with suitable camera lenses and films it should be possible to detect novae at magnitude 11 or slightly fainter. Last year he detected 730 objects that varied for some reason or other on his photos, non of which however proved to be novae! Of these 359 were known variables listed in the General Catalogue of Variable Stars (GCVS), 120 were known by the AAVSO and 141 were catalogued elsewhere. The remaining 110 were asteroids. There have been some success in recent years with the discovery of several previously unknown variable stars. Mike Collins noted some of these at the end of his talk--maybe one day he'll find a nova!

Trip to Greenwich
Saturday 11th June

Any one who would like to come on this excursion please contact Roy Gooding

PROGRAMME FOR APRIL

DAYS &DATES	DIRECTORS	SECTION & ADDRESSES	PHONE INC. STD CODE
Mondays	from 7.30pm	GENERAL OBSERVATION SECTION	
4-11-18 25	Mr J King	Felixstowe, IP11 9LQ	
Tuesdays	form 7.30pm	GENERAL OBSERVATION SECTION	
5-12-19 26	Mr D Barnard	IP3 8RN	
	Mr J King	(Address above.)	(Number above)
Wednesdays	from 8.00pm	NEBULA & FAINT OBJECTS SECTION	
6-13-20 27	Mr M Cook	Ipswich, IP4 5PZ	
	Mr D Payne	Wickham Market, IP13 0SD	
Thursdays	from 7.30pm	OBSERVATORY VISITS FROM OUTSIDE GROUPS	
7-14-21 28	Mr P Richards	Nacton, Ipswich, IP10 0HS	
Fridays	from 7.30pm (may be postponed to Saturday)	PLANETARY & LUNAR SECTION	
1-8-15 22-29	Mr P Richards	(Address above.)	(Number above)
	Mr G Marriott	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:

1994 COMMITTEE

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