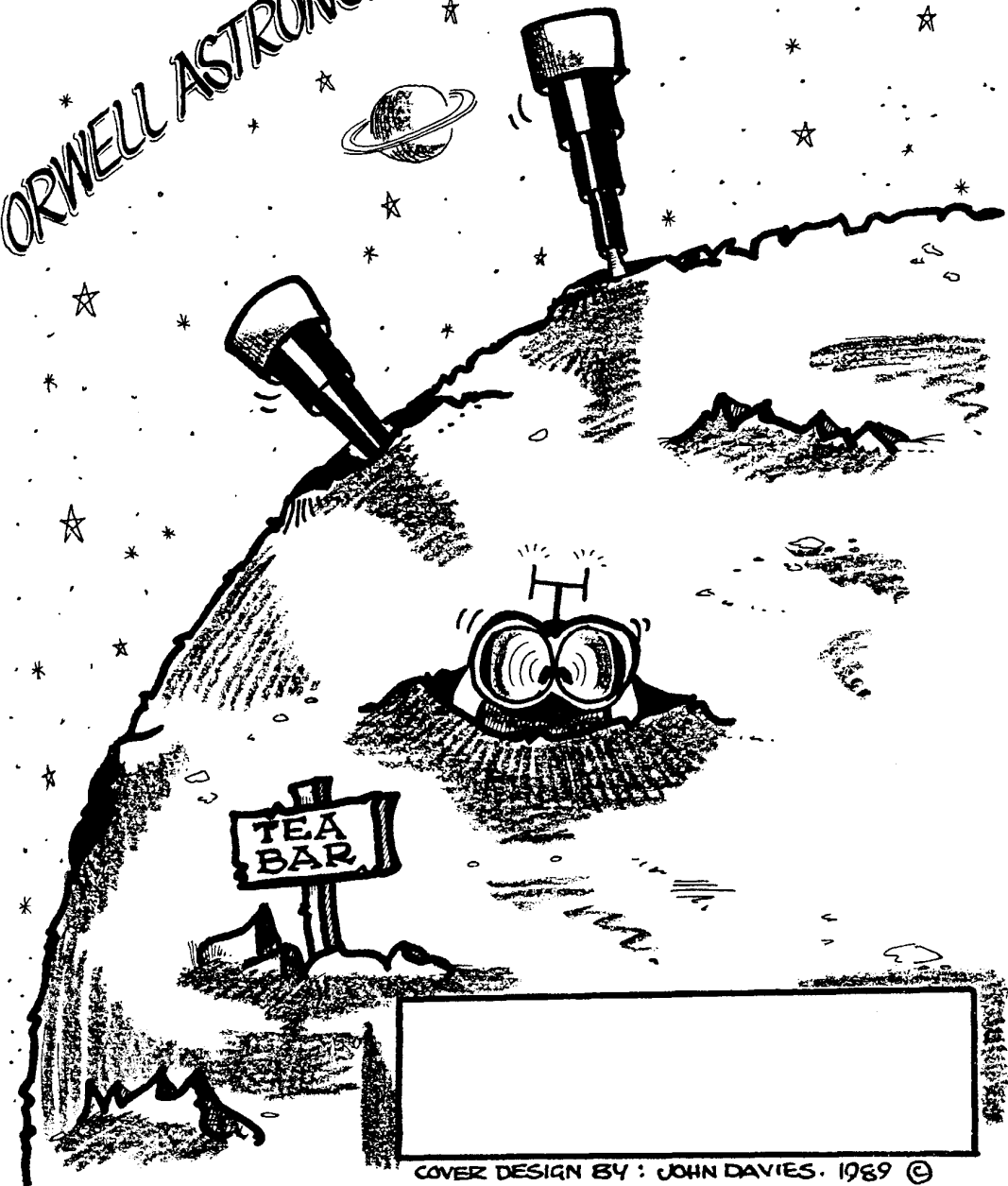


MAY 1990

ORWELL ASTRONOMICAL SOCIETY IPSWICH



COVER DESIGN BY : JOHN DAVIES. 1989 ©

NIGHT SKY

All times

GMT

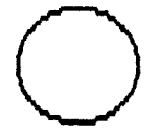
SUN

Rises approximately between 04.40 - 03.50
Sets approximately between 19.30 - 20.10

MOON



1st



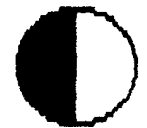
9th



17th



24th



31st

MERCURY Mercury will be at inferior conjunction on the 4th and will then move into the morning sky. It will be difficult to observe.

VENUS Venus will remain visible low down in the morning sky before sunrise. Mag. -4.0

MARS Mars will also be visible low down in the morning twilight sky. It will be rising at about 02.00 in mid month. Mag. 1.4

JUPITER Jupiter remains well placed for observation in the early evening sky. It will be setting by 22.30 at end of the month. Mag. -1.9

SATURN Saturn will be rising at about 23.00 at end of the month. Mag. 0.6

URANUS Rises about an hour before Saturn. Mag 5.6

NEPTUNE Rises a little after Uranus. Mag 7.7.

R. Gooding

SOCIETY NEWS

1 COMMITTEE MEETING

The next committee meeting will be Saturday 19th May at the observatory, starting at 19.30. As usual this will be an open meeting and any member may attend if they wish.

2 OPEN DAY AT CAMBRIDGE

As most members will know the Royal Greenwich Observatory has recently moved from Herstmonceux to Cambridge. On June the 15,16,17 there will be an open day at their new premises. Any interested member please contact Roy Gooding

The Hubble Space Telescope - Launched At Last!

D B Payne

The Hubble Space telescope has, after four years of delays, been successfully launched. One of the largest payloads ever carried the HST weighed in at 11 tonnes and measured over 13 meters long by 4.25 meters diameter. The mirror is 2.4 meters in diameter and has been figured to higher tolerances than any telescope on earth. The resolving power of the instrument produced by this high quality optical system should be at least 0.1 arc seconds, an order of magnitude better than earth bound instruments which are limited by atmospheric turbulence to approximately 1 arc second.

The lack of atmosphere and the quality of the optics will also give a gain of four magnitudes in sensitivity over the 200 inch Palomar telescope. In addition the instrument has been given special optical coatings that allow observations in the ultra-violet, visible and near infra red wavebands. There are five main observing instruments on board the HST: a wide field planetary camera, a faint object camera, a faint object spectrograph, a high resolution spectrograph, and a high speed photometer.

During the next six months or so the telescope will be under going rigorous testing of all its systems before being handed over to the astronomers for its serious observational program. This will mean limited publicity for spectacular pictures but it is hoped that some test pictures of Jupiter and Saturn will be received during the next few weeks.

The increased power of this telescope both in resolution and light grasp over earth bound instruments is similar to the gain Galileo's telescope gave over the unaided eye. I will be very surprised if the discoveries that follow are not on the same scale.

Observing holiday in the French Alps.

As you may know from previous newsletters a trip is being organised to the continent for the purpose of observing the night sky from a very dark site, at a high altitude. What you may not know unless you come up to the observatory on Wednesdays is that an almost perfect site has been found with its own observatory.

The location of the site is in the 'Alpes de Haute Provence' region of south-east France about 50km from Marseille; it is near the village of Puimichel and on the road from Oraison to Malijai at an altitude of 750m(2551 feet). It is also at least 40km from the nearest street light! It is called the Association Newton 406. The accommodation is basic and is in converted farm buildings with dormitories of 4 to 6 beds or individual rooms at an extra 100Francs. per day. The usual rate for the dorms. is 210Francs. per day per person. All meals are provided including snacks during the night.

The range of telescopes available for use at no extra cost consists of:-

(Visual) Newtonian of 406mm(16.57") Aperture, Focal length 2135mm(87.1") or F5 focal ratio.

(Photographic) Newtonian of 520mm(21.22") Aperture, Focal length 1958mm(79.9") or F3.77 focal ratio.

Cassegrain Telescope of 320mm(13") Aperture- under construction.

Coronagraph of 100mm(4") Aperture, Focal length 1500mm(61.22") or F15 focal ratio.

Refractor of 100mm(4") Aperture, Focal length 1500mm(61.22") of F15 focal ratio.

3 Astrocameras of 60by60mm or 90by90mm format and Apertures of 3.5", 4.5" and 5.7".

and the main telescope which is a Newton-Nasmith of 1060mm(43.3") Aperture in its own dome.

The telescopes are bookable when you get there but it is advisable to book the larger telescopes in advance at the time of booking the holiday. Apart from the telescopes there are guidescopes and auto guiders available for photography and although eyepieces are available it is best if you take one or two favorites of your own. A darkroom is available but to use it you must bring your own films, chemicals and paper. Hypersensitizing of film though is available and can be a great help in getting shorter exposures with slow films.

English, French, German and Dutch are all spoken at Puimichel. The nearest shops can be found 13km away at Oraison which also has its own open-air swimming pool. Fishing is available at a lake 5km away and the famous Gorges of Verdon are 40km distant as is the ski resort of Lure.

We are thinking of traveling by Air France-Rail which is a service from all the major Airports in Briton to Paris and then by train to your destination. We will probably go from Stansted to Paris and then by hopefully the French TGV High speed train to Marseille where we will rent a car (or cars) to drive to the Observatory. The cost of travel will be £125 return for the flight and train and £165 for one car for 7 days and £24 for every day thereafter.

We are hoping to stay for 10 days at the observatory so the cost per person should be £184 for a group of 4 or 8 and £204 for a group of 6 or 10 using only cars. Plus the cost per person for room and board of 2100Francs, which is £233 at the present exchange rate making a total of £417 to £437. This is using rented cars for the final leg of the journey. It could be made somewhat cheaper by either renting a van for groups of more than 4 or by renting one car and asking the overflow to take the train from Marseille to La Brillanne where they can be picked up again after a quick turnaround at Puimichel. For further information or to book, either come up the observatory on Wednesdays or contact me at home on Ips. [REDACTED]

G. Marriott.

THE OLD ROYAL OBSERVATORY AT GREENWICH CONTINUED.

FLAMSTEED HOUSE

Flamsteed house was built in 1675 and named after the first Astronomer Royal. It was designed by Sir Christopher Wren "for the observator's habitation and a little for pomp."

The Octagon Room

This room was used for occasional observations with smaller telescopes from 1676 to 1820. It is one of the few remaining domestic interiors designed by Wren.

Halley Gallery

The world's finest collections of astrolabes and other ancient models of the heavens are housed here. The astrolabe is a model of the heavens, and an astronomical calculating and measuring device.

Maskelyne Gallery

Astronomical ring dials, astronomical compendia, equinoctial dials, altitude dials, nocturnals, horizontal dials and sundials can be seen in this gallery as well as the comprehensive collection of portable and fixed sundials.

Bliss Gallery

The first man to build a clock that would keep accurate time at sea was John Harrison. His four timekeepers are on display here and still ticking together with other outstanding clocks by Kendall.

Spencer Jones Gallery

This gallery tells the story of mechanical time keeping from before the invention of the pendulum, right up to the atomic clock.

Living Quarters

These rooms were the home of successive Astronomers Royal from 1676 to 1948. Today the bedroom, the study and the hall are furnished much as they would have been when Flamsteed and his family lived in them.

THE MERIDIAN BUILDING

Immediately next to Flamsteed's house is the Meridian Building. The first two rooms are Flamsteed's observatory, built in 1675. The Astronomer Royal,

Bradley, in 1749 added more space which today houses other displays.

Flamsteed's Quadrant Room and Sextant House

For over forty years John Flamsteed made observations from Greenwich. The sextant house was specially built for the seven foot equatorial sextant he used. A reproduction is on display.

Halley's Quadrant Room

In the middle of the room is the quadrant wall which supports two 8-foot iron quadrants, one of which belonged to Halley and the other to Bradley. Bradley used this instrument to discover aberration and nutation. Other instruments housed here are Bradley's Zenith Sector and Pond's Alpha Cygni fixed telescope.

Bradley's Middle Room

This room was built in 1749 and was part of Bradley's new observatory. Subsequently, it was used by Bradley to define the Greenwich Meridian. One can now see Bradley's eight foot transit instrument and Halley's five foot transit instrument.

Bradley's Transit Room

This room is now occupied by a later transit telescope which was used by John Pond to measure star positions and time by noting the exact instant when stars transit across the meridian as the Earth rotates. From 1750 to 1850 the Greenwich Meridian passed through the centre of the transit instrument in this room and Britain's first Ordnance Survey maps were based on that meridian.

Airy's Transit Circle

The telescope in this room defines the prime meridian of the world. It is a specialized telescope for the accurate measurement of star position and time. It is used in conjunction with a clock to determine the exact moment the Sun or a star crosses the meridian. Airy designed this transit circle, which was to replace all the observatory's existing meridian instruments. From 1851 to 1954 over 600,000 observations were made with the transit circle and it still works!

The Bookshop

Besides being a place where one can buy souvenirs from the Old Royal Observatory it houses Pond's mural circle a specialized telescope for measuring the altitudes of stars.

Dyson Gallery

This room is devoted to telescopes of all shapes and sizes but especially those made by William Herchel. There is also a display about Herschel's discoveries notably, the planet Uranus.

28-INCH TELESCOPE

The Great Equatorial building houses the 28-inch telescope, built in 1894, and still in use today. The telescope is the largest refractor in Britain and the seventh largest in the world.

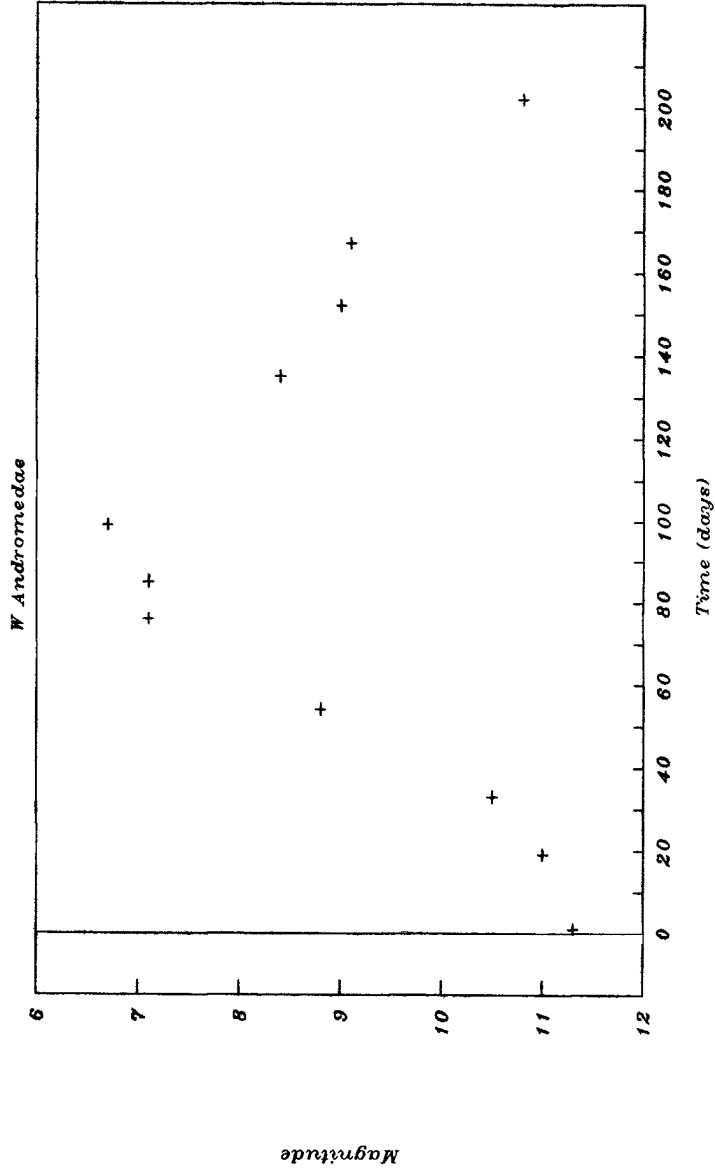
THE PLANETARIUM (in the South Building)

The South Building was built in 1899. This new building provided greatly needed office, computing and workshop accommodation. It now houses the Planetarium in the dome which originally contained a telescope.

Planetarium programmes for educational groups are given during school terms at 10:30a.m. and 11:30a.m., Monday to Friday. The programmes available are: Starry Heavens, the Sun and its Family, the Myths of the Sky, How the Stars Tell Time, The Structure of the Stars, and Finding Our Way by the Stars. The public may visit the Planetarium on weekdays during holidays such as August and spring holidays.

More next month if space is available.

Variable Star Observations



This light curve shows W Andromedae from July 1989 to February 1990. It shows a typical maximum with a steep rise and more gentle fade. Only 42% of this stars period of about 396 days is taken up rising to maximum. Fading to minimum takes a bit longer.

PROGRAMME FOR MAY

DAY	DIRECTORS	SECTION	PHONE No.s
Mondays from 8.00pm			
GENERAL OBSERVATION SECTION			
7-14	Mr R Newman	[Redacted], Felixstowe, IP11 9DY.	Tel. Fel. [Redacted]
21-28	Mr J King	[Redacted], Felixstowe, IP11 9LQ.	Tel. Fel. [Redacted]
Tuesdays from 8.00pm			
GENERAL OBSERVATION SECTION			
1-8	Mr R Newman	[Address above.]	Tel. Fel. [Redacted]
15-22	Mr J King	[Address above.]	Tel. Fel. [Redacted]
29	Mr J King	[Address above.]	Tel. Fel. [Redacted]
Wednesdays from 8.00pm			
NEBULA AND FAINT OBJECTS SECTION			
2-9	Mr M Cook	[Redacted], Ipswich, IP4 5PZ.	Tel. Ips. [Redacted]
16-23	Mr D Payne	[Redacted] Wickham Market, IP13 0SD.	Tel. W.M. [Redacted]
30	Mr D Payne	[Redacted] Wickham Market, IP13 0SD.	Tel. W.M. [Redacted]
Fridays from 8.00pm			
PLANETARY AND LUNAR SECTION			
4-11	Mr P Richards	[Redacted], Ipswich, IP4 1QB.	Tel. Ips. [Redacted]
18-25	Mr R A Lobbett	[Redacted], Felixstowe, IP11 8UJ.	Tel. Fel. [Redacted]
	Mr G Marriott	[Redacted], Ipswich, IP4 4JB. [Assistant Director]	Tel. Ips. [Redacted]

All nights are open to all members, but, on nights other than Wednesdays, ring directors to confirm. Directors will also be able to tell you if a group visit is taking place. All sections observe anything of interest, but the title indicates the main specialism.

Lectures and other events :

1990 COMMITTEE

CHAIRMAN	D Payne	[Address above.]	Home: [Redacted] Work: [Redacted]
VICE CHAIRMAN /VISITS CO-ORD	D Barnard	[Redacted], Ipswich, IP4 5PP.	Home: [Redacted] Work: [Redacted]
SECRETARY	R Gooding	[Redacted], Ipswich, IP1 6AE.	Home: [Redacted] Work: [Redacted]
TREASURER	M Nicholls	[Redacted], Capel St Mary, Ipswich, IP9 2EX.	Home: [Redacted] Work: [Redacted]
MAINTENANCE CO-ORD	M Cook	[Address above.]	Home: [Redacted] Work: [Redacted]
JOURNAL CO-ORD	E Sims	[Redacted], Ipswich, IP1 4HA.	Home: [Redacted] Work: [Redacted]
LIBRARIAN	P Richards	[Address above.]	Home: [Redacted] Work: [Redacted]
EQUIPMENT CURATOR	J King	[Address above.]	Home: [Redacted] Work: [Redacted]
SPECIAL EVENTS CO-ORD	A Smith	[Redacted], Ipswich, IP4 5RZ.	Home: [Redacted] Work: [Redacted]