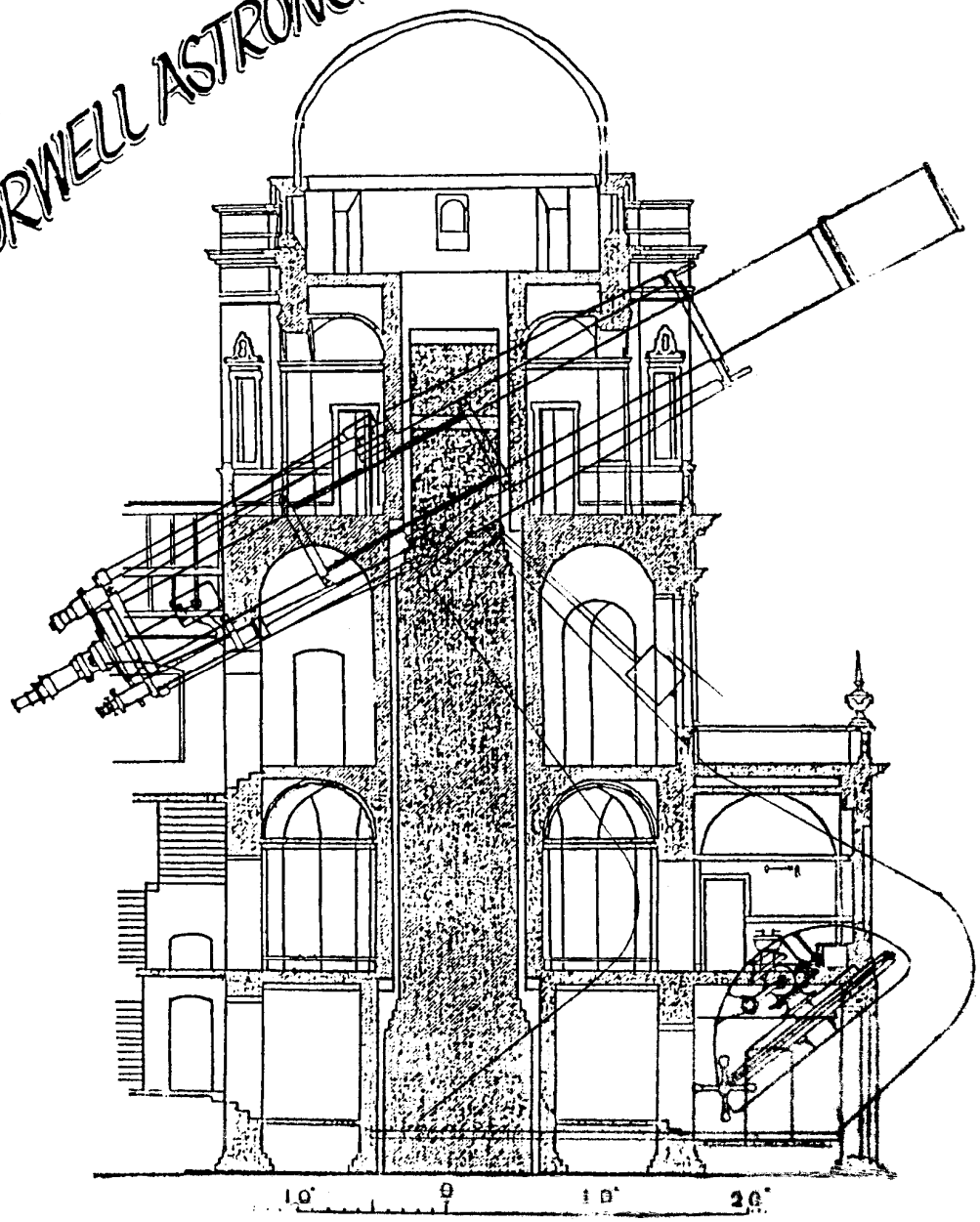
ORWELL ASTRONOMICAL SOCIETY IPSWICH



SOCIETY NEWS

1 COMMITTEE MEETING

The next committee meeting will be on Saturday 14th September with a start at 7.30pm in the club room. As usual this is an open meeting and any member who wishes to attend will be welcome.

2 FAS CONVENTION

The FAS will be holding a convention at Cambridge on saturday 21st September. The convention will be held at the:-

Pippard Lecture Theatre
Cavendish Laboratory
Madingley Road.

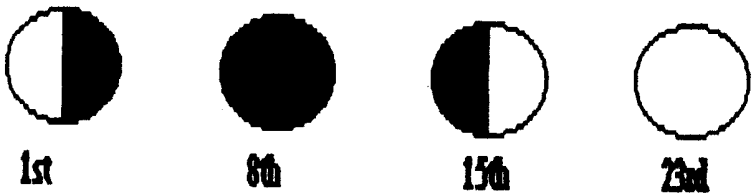
The cost of the enterance tickets is £3.50.
Members who still wish to attend and have not yet given me any ticket money, will be able to pay at the door, please contact Roy Gooding, as soon as possible.

NIGHT SKY

All times GMT

SUN Rises approximately at 05.10 - 07.50
Sets approximately at 19.00 - 17.50

MOON



MERCURY Mercury will be visible in the morning sky, rising about 1hr. 40m. before the sun in mid month. It will be at greatest western elongation on the 7th (18°).

VENUS Venus will be visible in the morning sky. It will be rising about 3 hours before the sun by the end of the month.

MARS Mars will be dificult to find this month. It will be in the evening twilight.

JUPITER Jupiter will be visible in the morning sky this month as well. By the end of the month it will be rising at about 03.00. Mag. -1.7

SATURN Saturn will be visible all evening. It is very low down in the south, near the border of Capricornus and Sagittarius. Mag 0.2

URANUS Uranus is in Sagittarius, mag. 5.7

NEPTUNE Neptune is also in Sagittarius, mag. 7.9

R.Gooding

TOTAL SOLAR ECLIPSE - JULY 11th 1991

An observation report from Hawaii

P Richards

PART 1

2 am : it's dark and raining. Struggling out of bed we board the buses. The traffic is moderate as we head to our destination.

3 am : we've arrived, it's still dark and drizzling - what we can see outside looks cold and bleak.

You might imagine that I've been describing the journey to Gatwick Airport - but no - this is Hawaii and it's eclipse day.

The July 11th 1991 eclipse brought a golden opportunity to professional astronomers to study the phenomena with the instruments at the observatory on Mauna Kea, Hawaii, which were almost exactly on the centre line. For amateurs, many prepared to travel across the world for, perhaps, 'the eclipse of a lifetime'.

A choice of two observation sites was offered by the travel company, Explorers Tours, one in Mexico the other Hawaii. Two thirds of the 750 or so who travelled with them chose Hawaii, despite it's shorter duration time, perhaps because of the appeal of a 'tropical island paradise' in the middle of the Pacific Ocean. Flying the flag for the Orwell Astronomical Society (Ipswich), I too decided to brave the coconut fringed sun soaked beaches, hula dancing and pina coladas but was rather surprised to find myself on a bleak mountainside in the cold and wet: The temperature at sea level on the big island, even in the rain, is very comfortable: in the seventies even at night. As we went up the mountain, however, it got a little cooler.

The weather conditions should not have come as too much of a surprise in the town of Hilo on the rainy, windward side of Hawaii's Big Island. With the twin dormant volcanoes (Mauna Kea, with its famous observatory, and Mauna Loa) which at around 14000 feet and 12000 feet high encourage rain to fall which makes the windward side wet and lush with tropical rain forest and the leeward side relatively arid and desert-like.

The University of Hawaii, who operate the observatory site on Mauna Kea, decided to close the access road and called in the island's local defence force to operate a road block at 7000 feet. As dawn broke on eclipse day we, the 'Explorers Tourists' found ourselves sat in a fleet of yellow school buses parked in front of the road block with drizzling rain and the persistent cloud still above us.

As the situation developed from being unpromising to being totally hopeless it was decided that desperate measures were called for. 'Explorers Tours' entered diplomatic negotiations with the local defence forces led, I believe, by John Mason (the Explorers that is). After about 20 minutes of political manoeuvering the yellow buses were waved through [talking to a local on another, sunnier, island the following week I discovered that it was an event for which we became famous].

At about 8000 feet the fleet stopped and the Explorers eclipse chasers poured out, unloading a huge array of photographic and astronomical equipment. The cloud was still a little way above us looked as though it would drop enough to observe the event.

As we set up a chap from the road block drove up and down the road, at high speed, shouting at us for going slightly further up than we were supposed to. We carried on despite this distraction because things were beginning to look better.

[In the next instalment I will give an introduction to eclipses and eclipse phenomena. In the mean time I'll give a brief description of the event with more explanation and detail next time.]

At around first contact [the beginning of the partial phase] the cloud was already thin enough to allow us to start observing. As second contact [the start of totality] occurred a single 'Baily's bead' was seen. At totality the most striking feature was a very large prominence that shown as a bright pink arc. The solar corona had an asymmetric appearance more like that which would be seen at solar minimum (we are near solar maximum at the moment). The appearance of the diamond ring (the re-appearance of the suns photosphere - the end of totality) was a spectacular end to the event except for those who followed the remaining partial phase.

There was good cause for celebration for the group on Mauna Kea, coming so close to missing the event: at most of the other locations on Hawaii the event was obscured by cloud. In addition, the observing site was evidently close to the centre line as indicated by the fact that totality lasted around 4 minutes and 12 seconds - approximately equal to the maximum possible on the island.

AQUILA

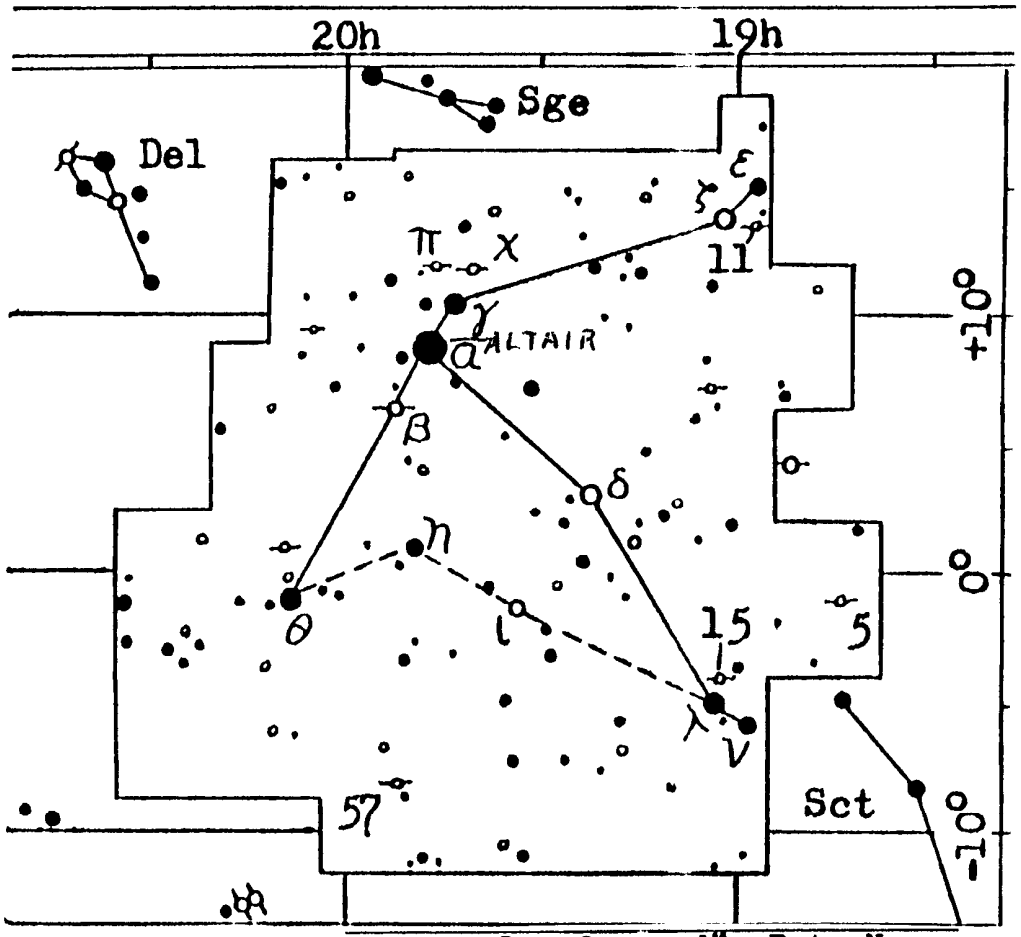
The constellation of Aquila appears on Babylonian inscriptions as far back as 1000BC. Its shape can be compared with that of a flying eagle and its brightest star is Altar.

Double Stars

Pos.	1	m	2	-	d"	P	A	No.
184301	5.6		7.3		13.0	121		5
5613	5.3		9.5		16.2	275		11
190204	7.1		5.5		38.1	209		15
0407	7.2		7.9		8.2	290		E2449
4011	5.6		6.8		0.4	73		χ
4611	6.2		6.8		1.5	111		π
5108	5.7		6.5		36.1	179		57
5206	3.9		11.		12.5	15		β
200509	6.5		8.9		4.0	345		E2628
1004	7.0		6.8		2.9	207		E2644

5 White, blue.
15 Nice contrast of yellowish-white and reddish-purple.
π Both stars yellowish-white.
57 Yellow, green. Very subtle colors.
E2628 Yellow, purple.

AQUILA



CYGNUS

Double Stars

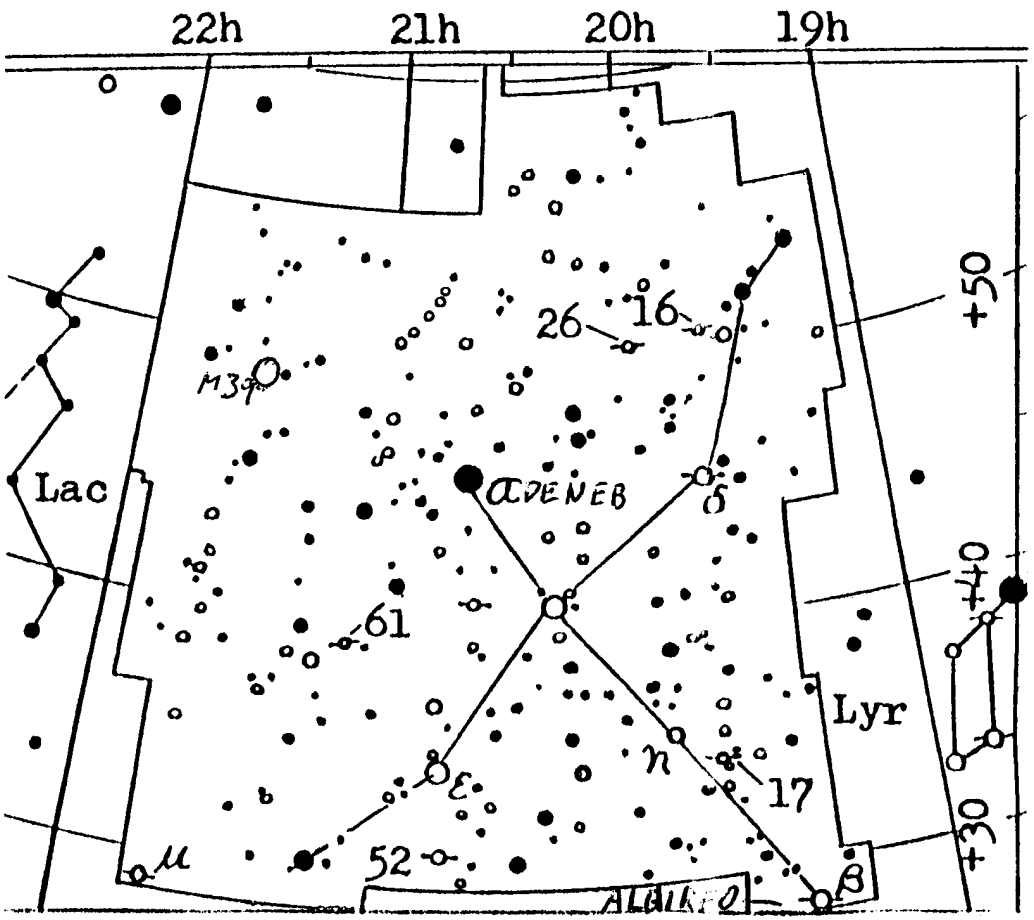
Pos.	1	m	2	d"	P	A	No.
192827	3.2		5.3	34.6		55	β
4050	6.2		6.3	39.0	134		16
4345	3.0		6.5	2.1	246		δ
4433	5.3		8.5	25.9		70	17
5949	5.2		9.1	41.9	148		26
	9.5		11.	9.0		74	
203740	6.7		6.7	0.8		8	OE410
4330	4.3		9.6	6.4		65	52
210438	5.5		6.3	27.0	140		61
4128	6.8		4.7	1.6	277		μ 1,2

CYGNUS

Cygnus the Swan is a prominent constellation of the northern skies, sometimes known as the Northern Cross because of its cruciform shape. The brightest star is Deneb in the tail of the swan. The open cluster M39 is a good object for field glasses if you can find dark enough skys.

β ALBIREO is a favorite summer object of orange and blue.
δ White, blue-white.
17 Red, blue.
26 Yellow, blue.
52 Yellow, blue.
61 Both yellowish-orange.

CYGNUS



PROGRAMME FOR SEPTEMBER

DAY	DIRECTORS	SECTION	PHONE No.s
Mondays from 8.00pm		GENERAL OBSERVATION SECTION	
2-9	Mr R Newman	, Felixstowe, IP11 9DY.	Tel. Fel.
16-23 30	Mr J King	, Felixstowe, IP11 9LQ.	Tel. Fel.
Tuesdays from 8.00pm		GENERAL OBSERVATION SECTION	
3-10	Mr R Newman	[Address above.]	Tel. Fel.
17-24	Mr J King	[Address above.]	Tel. Fel.
Wednesdays from 8.00pm		NEBULA AND FAINT OBJECTS SECTION	
4-11	Mr M Cook	, Ipswich, IP4 5PZ.	Tel. Ips.711511
18-25	Mr D Payne	, Wickham Market, IP13 0SD.	Tel. W.Mkt.747019
Fridays from 8.00pm		PLANETARY AND LUNAR SECTION	
6-13	Mr P Richards	,Nacton,Ipswich. IP10 0H5	Tel Ips
20-27	Mr R A Lobbett	, Felixstowe, IP11 8UJ.	Tel. Fe
	Mr G Marriott	Ipswich, IP4 4JB. [Assistant Director]	Tel. Ip

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 : COMMITTEE MEETING
The next committee meeting will be on Saturday 14thAugust at the observatory starting at 19.30. As usual this will be an open meeting and any member may attend if they wish.

1991 COMMITTEE

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