

ORWELL ASTRONOMICAL SOCIETY IPSWICH

Charity No 271313.

SEPTEMBER 1998



Society News

1 Next Committee Meeting

The next committee meeting will be held on Saturday 12th September from 19:30 in the club room. As usual this is an open meeting and any one who is interested is invited to attend.

2 Events for 1998

Summer Barbecue	Provisionally 5 th September. Venue not yet decided upon
Astronomy Workshop	9 th September. At the observatory 19:30 start
Horncastle Weekend	From 11 th September
Thetford Astro Camp :- Ashdown AS	From 18 th to 27 th September
Lecture meeting: Nial Tavis Intergalactic Stars	2 nd October Friends Meeting House 20:00 start
FAS Cambridge Convention	3 rd October
Open Weekend	16 th , 17 th 18 th October
Lecture Meeting: Martin Mobberley	3 rd December (Thursday) Friends Meeting House 20:00 start
Christmas Meal	9 th December. The venue for this years meal will be at the Newbourn Fox

3 OPEN WEEKEND

Our annual fund raising event will be held between 16th, 17th and 18th October.

A poster is included with this newsletter. Please find a good home for it. As ever this public event requires as many members as possible to operate the observatory, and to look after our visitors. If you are able to help please either contact any committee member or just show up on any of the evenings. A duty rota will be compiled and be displayed on the notice board.

Night Sky

All times GMT

Sun

The sun will be rising approximately between 05:10 to 06:00
The sun will be setting approximately between 19:00 to 17:50

Moon

Full Moon	3 rd Quarter	New Moon	1 st Quarter
6 th	13 th	20 th	28 th

Mercury

Mercury will be a morning sky object during the first half of the month. It will be at superior conjunction on the 25th. After which, it moves back into the evening sky.

Venus

Venus remains in the morning sky, where it is low down in the morning twilight. It is near Mercury on the 11th. Magnitude -3.9

Mars

Mars will be rising about 02:00 in mid month. Magnitude 1.7

Jupiter

Jupiter will be at opposition on the 16th, in Aquarius

Saturn

Saturn will be rising shortly after sunset in mid month.. Magnitude 0.2

Uranus

Uranus will be setting a about 01:00 in mid month. Magnitude 5.7

Neptune

Neptune will be setting at about 40 minutes after Uranus in mid month. Magnitude 7.8

Meteor Showers

Name	Limits	Max	ZHR
Piscids	September to October	September 8 th	10
		September 21 st	5
		October 13th	?

Meteor source is the BAA Handbook

Roy Gooding

OCCULTATIONS DURING SEPTEMBER 1998

The table lists stellar occultation disappearance events which occur during the month under favourable circumstances. The data relates to Orwell Park Observatory, but will be similar at nearby locations.

D or R	Date & Time (UT)	Lunar Phase	Sun Alt (d)	Star Alt (d)	Min Dist (r)	Star	Mag
D	05 Sep 21:17	1.00+	-23	21	.16N	sigma Aqr	4.9
D R	12 Sep 00:43 00:49	.61-	-33 -32	29 30	.99N	gamma Tau	3.9
D	12 Sep 03:27	.60-	-18	49	.60S	71 Tau	4.7
D R	13 Sep 03:35 04:01	.49-	-17 -13	46 49	.93S	111 Tau	5.1

The occultation of gamma Tau is associated with a graze track crossing East Anglia in the direction south west → north east. I will produce a detailed plot of the graze track if there is interest from OASI members in mounting an observing expedition.

James Appleton

Practical Astronomy Night School Course

A practical astronomy course is being offered at a venue in Ipswich by UEA. Several OASI members have attended in the past and found it enjoyable and informative. The course will comprise 20 meetings on Tuesday evenings from January 1999. Details are available from John Norman, Community and Leisure Learning, University College Suffolk, IP4 1LT (tel: 01473 233263).

NEW LIBRARY BOOKS

This month brings another six new books to the OASI library. This month's batch of new titles is aimed primarily at beginners in astronomy, although I hope that the three project-orientated books by Schaaf should appeal to beginners and more experienced observers alike.

Night Sky, Collins Watch Guide by Philippe Henarejos. This short book provides a general introduction to astronomy, aimed firmly at the complete beginner. It covers the Solar System, constellations, star clusters, galaxies and astronomical instruments. Complements the text with many very colourful illustrations.

A Walk Through The Heavens by Milton Heifetz and Wil Tirion. This book is aimed at the novice observer. It introduces the main constellations of the Northern sky, and describes how to 'star-hop' from the more prominent constellations to the minor ones. Although the book deals primarily with naked eye observing, it also briefly mentions the most prominent binocular objects. The book also introduces the mythology associated with the constellations.

The Cambridge Star Atlas by Wil Tirion. This is an excellent beginner's atlas. It contains a map of the moon, a set of monthly sky maps and an all-sky atlas covering objects down to approximately the limit of naked eye visibility (magnitude 6.5). This atlas should be especially useful to observers with binoculars or small telescopes.

Three titles by Fred Schaaf: *Seeing The Sky*, *Seeing the Solar System* and *Seeing The Deep Sky*. These books provide a wide variety of ideas for observing projects, covering abilities from novice to experienced amateur. I recommended these titles highly to any observer searching for his/her next astronomical project.

The library is housed in the Orwell Park Observatory. It holds a selection of astronomy books, videos and magazines. All members of OASI are welcome to use the library. Please contact me with requests for purchases of books, videos and software.

James Appleton

1999 TOTAL ECLIPSE OF THE SUN FACT SHEET

Date: August 11th 1999. Totality start time ("2nd contact") UK (at the Scilly isles): **11.10 am BST** 10.10 UT.

What will happen in this region

A maximum of around 95% of the Sun will be covered in Suffolk. The maximum will be at around 11.22 am BST. This will be enough to notice a drop in light level. Sunlight through the leaves of trees and bushes and colanders will produce crescent shaped images of the Sun by the pinhole camera effect. If you observe from this region and anywhere else outside the track of totality you will need filters or use binoculars or a telescope (stopped down if greater than 3 to 4 inches (75 to 100mm) aperture) to project the Sun on to a sheet of card (***Do Not Observe the Sun directly through telescopes or binoculars, serious eye damage will result***). However, unless you travel to the track of totality you will not see a total eclipse: **the total eclipse will NOT be visible, only a partial eclipse will visible from Suffolk.**

Protective mylar filters for naked eye observation

Unless you project the Sun onto a sheet of card or paper, you will need good quality mylar filters to safely observe the partial phases of the eclipse **even if you are on the track of totality (Note with larger telescope - 6 inches and above - either stop down the aperture to about 4 inches or use two layers of mylar film)** . If you are on the track of totality you will need to remove the filters during totality (up to 2 minutes) to see the corona, prominences, etc, but only while the Sun is completely covered by the Moon. While even the smallest slither of Sun is visible through the mylar filters you must keep them on to avoid serious eye damage. You should read at least one of the references given below and familiarise yourself with safe eclipse observation. **If you are not 100% sure of when and how to observe totality without filters in safety you must come up to the observatory on a Wednesday evening to discuss eclipse observation with a member who is familiar with the issue.**

Eye filters are available at £1.99 including p&p from **Eclipse99 Ltd.**, Belle Etoile, Rue du Hamel, Castel, Guernsey, GY5 7QJ. [They also have a number of eclipse books.]

NB. The society plans to bulk-buy filters which members can buy.

Sun and Sky

The Sun passed through the minimum of its 11 year cycle in 1996 and by next August should be becoming pretty active, with plenty of structure in the corona and the possibility of big prominences and coronal streamers. The Sun will be at an altitude of 45° at mid-eclipse.

Venus and Mercury will be near the Sun and Saturn and Jupiter in the sky as seen from the UK.

Weather

The Lizard peninsula in Cornwall is probably the best location in the track of totality on mainland UK so far as the weather is concerned, but being mobile will help. It has been observed that it is often cloudy on the coast and clear inland in the mornings – but sometimes the situation is reversed. Travelling a few miles/kilometers can make the difference. The chances of seeing totality in the UK have been put at 40% to 45%. Of course, it could be cloudy in Turkey and clear in Devon and Cornwall.

The weather prospects improve a little on the continent through France (when you get away from the coastal regions) and Germany and the prospect of easier travel and better availability of accommodation will draw some UK citizens over. In general, the weather improves steadily as you head east. The weather gets significantly better beyond the Alps and into Eastern Europe. The best weather prospects are in the Middle East. Turkey and Iran have the best weather prospects on the track.

Where to observe from

You don't have to be exactly on the centre line. In the UK up to 10 or 12 km (6 or 7 miles) either side gives a duration of about 2 minutes.

Try to avoid standing too close to streetlights which will come on during totality and look out for security lights which may also come on at an inopportune time. With a sea horizon or a high vantage point you may be able to see the shadow rushing towards or away from you.

For eclipse trips to Turkey and a charter train to Penzance

Explorers Tours is a travel company with many years' experience in organising eclipse trips. A number of members have traveled with them

before. They are arranging trips for the 1999 eclipse including a charter trains that travel overnight from London and Preston to arrive at Penzance (near the centre line) on the day and returning later that day. They also have itineraries covering many destinations in Europe and the Middle East including Turkey and Iran.

Explorers Tours:

223 Coppermill Rd.
Wraysbury,
Staines,
Middlesex, TW19 5NW
Tel - 01753 681999
Fax -01753 682660

Accommodation in Cornwall

Cornish Tourist Board:

Lander Building,
Daniell Rd,
Truro Cornwall TR1 2DA
Tel: 01872 274057

A lot of accommodation is already taken. Many hotels, B&Bs and guest houses are fully booked. Coach firms have booked a lot of property, so they should be advertising package trips soon. Bookings for less than a week are unlikely to be accepted except at a huge premium. Some holiday self-catering property operators are giving priority to their regular customers and will not take bookings until August or September. Some properties will be occupied by the owners during eclipse week. There are some properties still available. The week is the peak season and prices are at the maximum and surcharges between 20 and 100% are generally being applied. Some operators will be waiting until August and September before deciding how much to charge.

NB. Accommodation in Devon may be easier to come by. Totality is shorter and the weather may be a little less reliable.

Camping and caravan sites

Many campsites have already been booked. One person is reported to be block booking a large number of sites, presumably to sub-let. Many of the sites with limited amenities are reported to be still available.

Camping, caravan and dormitory accommodation for BAA members and families at Truro School:

British Astronomical Association:

Burlington House, Piccadilly,
London W1V 9AG
Tel: 0171 734 4145

As an affiliated society member you can ask for a place.

NASA publication for further information:

NASA Reference Publication 1398, can be requested free from NASA including a self-addressed, stamped envelope with postage for 12 ounces (340 grams) with your request. Do not send cash or checks!

Ask for "NASA RP 1398 -- Total Solar Eclipse of 1999 August 11" and indicate that you are an amateur astronomer or interested member of the public. Send your request to either:

Fred Espenak,
NASA/Goddard Space Flight Centre
Planetary Systems Branch, Code 693
Greenbelt, MD 20771
USA

Jay Anderson
Prairie Weather Centre
900-266 Graham Avenue
Winnipeg, MB,
CANADA R3C 3V4

You can see a WWW version of the report and an order form for a paper copy at the NASA web site

Books with more information include:

Guide to the 1999 Total Eclipse of the Sun, RGO
UK Solar Eclipses from Year 1, Sheridan Williams

Maps of track

We have included some maps of the track from the NASA report 1398 in the journal. NASA give permission to copy maps and other parts of the report subject to certain conditions. Before copying the map from the journal you must refer to the copyright information at the NASA Web site, or in NASA RP 1398, or ask a committee member.

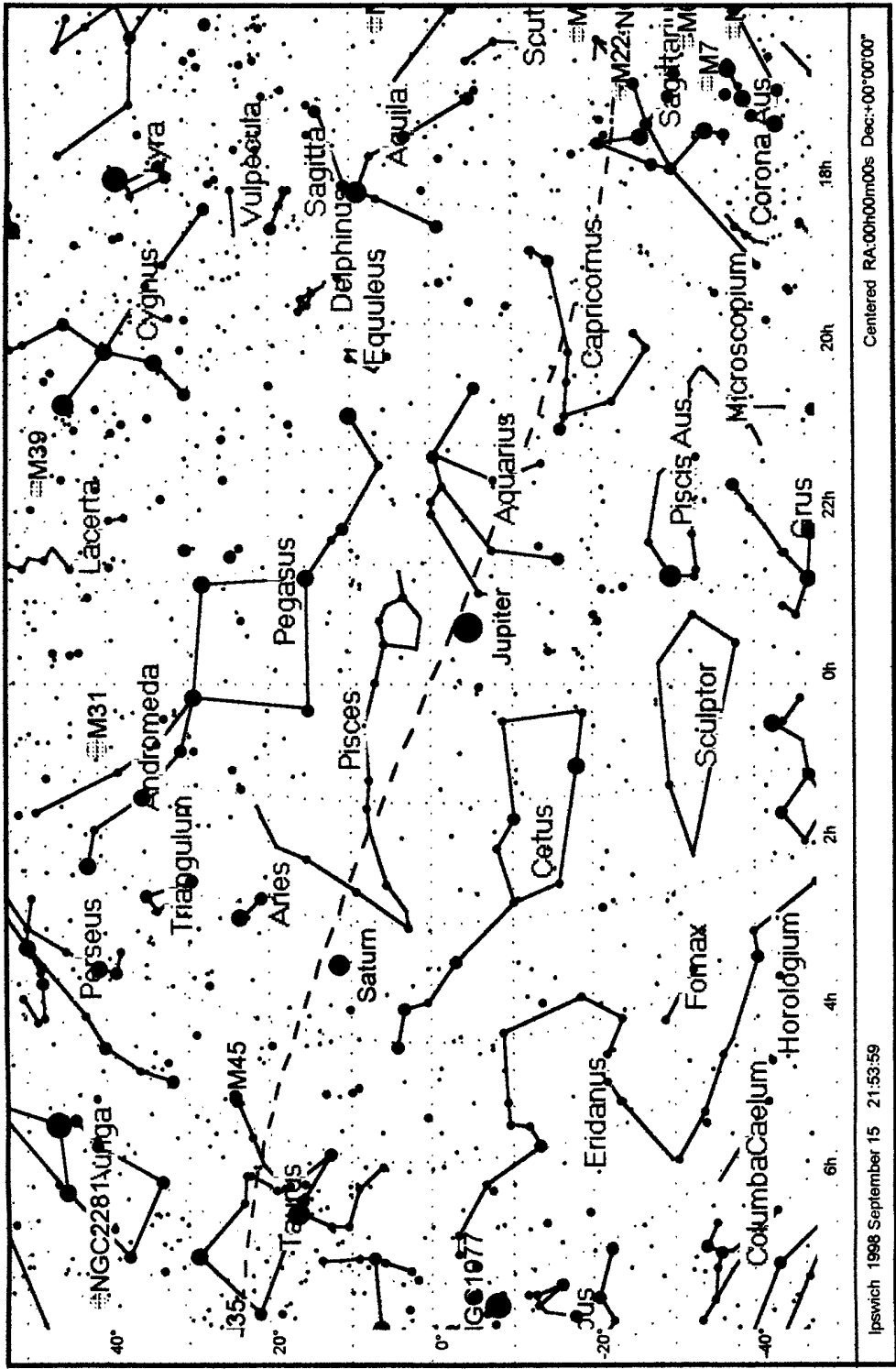
The author of the above article has requested anonymity online

Obituary

It is with great sadness that we report the death a few weeks ago of Mr J R Bernhard. a member of the society for many years. Mr Bernhard lived in Croydon, Surrey and because of the distance was unable to easily reach the observatory. However he continued to support the society and maintained his interest in astronomy, his wife informs us that he would have tried to join in on the "interactive workshops" that we are currently trying to start up.

On behalf of the society I pass on our condolences to Mrs Bernhard and her family at this sad time

David Payne



PROGRAMME FOR SEPTEMBER

Mondays from 7.30pm Mr N Gage	GENERAL OBSERVATION SECTION
Tuesdays from 7.30pm Mr P Richards	OBSERVATORY VISITS FROM OUTSIDE GROUPS
Wednesdays from 8.00pm Mr M Cook	NEBULA & FAINT OBJECTS SECTION Mr D Payne
Thursdays from 7.30pm Mr P Richards	OBSERVATORY VISITS FROM OUTSIDE GROUPS
Fridays from 7.30pm 11th - 25th Mr J Hood	DOUBLE STARS

All members are welcome on any night, but on nights other than Wednesday please check with the director of the night that the observatory will be open.

Lectures and other events:

Committee Meeting

The next committee meeting is to be held on Saturday September 12th in the club room at the observatory at 7.30pm. All members are welcome to attend.

e-mail enquires to oasienq@btbcs.bt.co.uk
 WWW url <http://www.ast.cam.ac.uk:80/~ipswich/>

1998 COMMITTEE		Home Phone	Work Phone
CHAIRMAN	D Payne		
SECRETARY	R Gooding		
TREASURER	M Harlow		
MAINTENANCE CO-ORD	M Cook		
JOURNAL CO-ORDINATOR	E Sims		
SOCIETY ACTIVITIES & DARK SKIES	P Richards		
EQUIPMENT CURATOR	J Walsh		
LIBRARIAN & COMP SOFTWARE	J Appleton		
JOURNAL ARTICLES TO CORRESPONDENCE ADDRESS	E Sims		
MEMBERSHIP	R Gooding	OASI Secretary	Ipswich Suffolk IP1 6AE
REP FOR BEGINNERS FOCUS GROUP	M. Cook	Ipswich IP4 5PZ	T Sampson