ORWELL ASTRONOMICAL SOCIETY IPSWICH

Charity No 271313.

APRIL 1998

Society News

1 Next Committee Meeting

The next committee meeting will be held on Saturday 9th May from 19:30 in the club room. As usual this is an open meeting and any one who is interested is invitee to attend.

2 Events for 1998

BAA Winchester Weekend	From 3-4-98
WEB Society AGM Cambridge	18-4-98
Lecture meeting Members Talks: Mike Harlow and Nigel Evens	15-5-98
Summer Excursion	No date fixed
Summer Barbecue	No date fixed
BAA Exhibition Meeting	27-6-98
Astro Camp	From 16-8-98
Horncastle Weekend	From 11-9-98
Lecture meeting: Neil Tavir Intergalactic Stars	2-10-98
FAS Cambridge Convention	3-10-98
Thetford Astro Camp :- Ashdown AS	From 3-10-98
Open Weekend	16th, 17th 18th October
Lecture Meeting: Martin Mobberley	November date to be fixed
Christmas Meal	9-12-98

Other events may be arranged as and when information presents itself.

Notes on March's Committee Meeting.

The last committee meeting was held on 14th March.

1 Group visits

At present there are 10 outside groups requesting a visit to the observatory. Visiting dates and members who will act as hosts was scheduled.

2 1998 Events

The events list was updated and can be seen above. Possible summer excursion venues were discussed. These were:-

A return trip to Greenwich.
Newton's birth place.
The Whipple museum in Cambridge

The 1998 Open Weekend has now been fixed for 16th, 17th, 18th October

3 Committee Jobs for 1998

Dave Payne	Chairman
Roy Gooding	Secretary
Mike Harlow	Treasurer
James Appleton	Librarian
Martin Cook	Membership and Observatory mechanical side.
Pete Richards	Activities and Dark Skies
Eric Sims	Journal production.
Joe Walsh	Event support and equipment

4 Society Logo Clothing.

The society logo on the yellow stickers will be used as the pattern.

Night Sky

All times GMT

Sun

The sun will be rising approximately between 05:50 and 04:50
The sun will be setting approximately between 18:30 and 19:30

Moon

1st Quarter	3rd
Full moon	11th
3rd Quarter	19th
New moon	26th

Mercury Mercury will be at inferior conjunction on the 6th . The planet will be too close to the Sun for the rest of the month and will not be observable.

Venus Venus remains low down in the dawn sky this month the planet will be rising about an hour before the sun and will be shinning at magnitude –4.2.

Mars Mars will be very low down in the western sky at the beginning of the month. By the end of the month it will be setting a little after the sunset.

Jupiter Jupiter remains in bright morning twilight all this month. Magnitude is –2.1

Saturn Saturn is in conjunction with the sun this month, and will not be visible.

Uranus Uranus will be rising at about 02:00 by the end of the month. Magnitude 5.7.

Neptune Neptune will be rising at about 01:30 by the end of the month. Magnitude 7.8

Meteor showers

Virginids	Max: April 10th
Lyrids	Max: April 22nd

OCCULTATIONS DURING APRIL 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	03 Apr 22:33	.51+	-30	29	.38N	NP Gem	5.9
D	07 Apr 22:34	.86+	-28	44	.58N	44 Leo	5.6

James Appleton

Meteor Diary - April **Highlight: April Lyrids**

With a quoted peak rate of 12 meteors per hour you might ask why the April Lyrids are counted as one of the best showers of the year. The reasons they are worth looking out are that the meteors are bright and that they occasionally experience an unexpected surge in activity. The shower peaks around the 22nd (this year the predicted peak is in the afternoon of the 22nd) with its normal limits being between 19th and the 25th April. The meteor stream is associated with Comet Thatcher (discovered in 1861).

Other showers in April are the Virginids and the Alpha-Scorpiids. Although fairly active, the latter shower has its radiant fairly low in the sky at our latitudes so we tend to see fewer Alpha-Scorpiids than the peak rate might suggest.

Peak day	Shower name	Peak rate (ZHR)	Effect of Moon
12th April 1998	Virginids	6	Great
22nd April 1998	**Lyrids**	12	
28th April 1998	Alpha-Scorpiids	20	

Together at Sunset.

By J. Walsh.

There is nothing quite like the sight on a clear evening just after sunset, when the thin cresent of our Moon along with the planet Venus(also known as the Evening Star.) are shining brilliantly against the red sky. It is these bright but very different objects we will be talking about this time.

Our Sun is a very ordinary main sequence star, about half way through it's life of about 10 billion years. It is small for a star and is classified as a Yellow Dwarf Star with a surface temperature of about 6,000°c. The

main advantage of a small star is that it's stable and it uses it's fuel efficiently. About 4,000,000 tons per second. The Suns equatorial diameter is 865,000 miles (1,392,000 KM) and makes up 98% of the total mass of the Solar System. It shines by thermo-nuclear reactions. At the Suns core the pressure and temperature are so great, that the Hydrogen the Sun is made from fuses together to form Helium, this in turn releases energy which is carried away by convection to the Suns surface, where it is released as heat and light.

The only safe way to observe the Sun is to project it's image through a telescope onto a screen. A good view of the Suns disc can be seen with a magnification of between 20x and 40x. This is an excellent way of observing Sunspot activity. Sunspots are depressions in the photosphere thought to be caused by magnetic flux lines passing through the Suns surface. Where the flux lines pass through are cooler than the surrounding hotter, brighter areas of the photosphere. The Sun spins on it's axis every 25 days at it's equator, but more slowly at it's poles. Timing Sunspot progress across the solar disc can be used to determine the Suns rotation period. Sunspots have a cycle of activity, and at a given time can number from zero to over one hundred, over an average period of eleven years. The Suns apparent magnitude is -26.8 which makes it the most brightest object in our sky.

The Moon is our closest neighbour in space and at an apparent magnitude of -12.7 is the second brightest object in our sky. It is only 239,000 miles (384,551 KM) from us. The Moon has 1/81 of the mass of the Earth and only 1/6 of the gravity. It orbits Earth in a west to east direction every 27.32 days, and spins on it's axis with one side permanently turned towards us (synchronous orbit). The Moon has no atmosphere, but recent findings have shown that there is maybe water in the form of permofrost at the Moons permanently dark polar regions How the water got there is still open to conjecture, My own personal view on this is that at some time in the Moons recent past it could have been in collision with a comet or two, and any water would have boiled off on the sunlit areas, when the daytime temperatures reached their maximum of around 110°c (230°f), but would have turned back to ice in the permanent night of the polar regions.

With an apparent magnitude of -4.5 at it's brightest Venus is the third most luminous object in our sky, and in the right conditions, cast shadows. Venus is the closest planet to us in both size and distance, slightly smaller than Earth, Venus's equatorial diameter is 7,543 miles (12,140 KM). At it's closest approach, Venus can come to within 24,000,000 miles (38,616,000 KM) to us. Venus is an inferior planet, which means that it's orbit around the Sun is smaller than that of the Earth, and therefore closer to the Sun than we are. Venus's distance from the Sun is 67,236,000 miles (108,200,000 KM). Being closer to the Sun Venus is of course much hotter, and coupled with the fact that it is a victim of a runaway greenhouse effect the surface temperature is over 900°f (500°c), the atmospheric pressure is over 90 times that of ours. From the chlorinous clouds come droplets of rain made up of Sulphuric Acid, the cloud cover is so dense that only 2% of the light from the Sun ever reaches the planets surface. Venus's concept of time is odd as well, the planet spins in a retrograde direction, so that the Sun if you could see it, would rise in the west and set in the east. Venus's day of 243 Earth days is longer than it's year of 225 Earth days. Venus is a very beautiful planet to look at, but it's beauty can only be appreciated from a distance.

As it gets darker I look for the last time at the three brightest objects in our sky together at sunset.

Orwell Astronomical Society [Ipswich] Lecture Programme 1998

Friday 15th May

Get ready for '99

OASI members

Including Nigel Evans and Mike Harlow

In preparation for next year's total eclipse of the Sun we review the eclipse in February and take a look at some other recent events

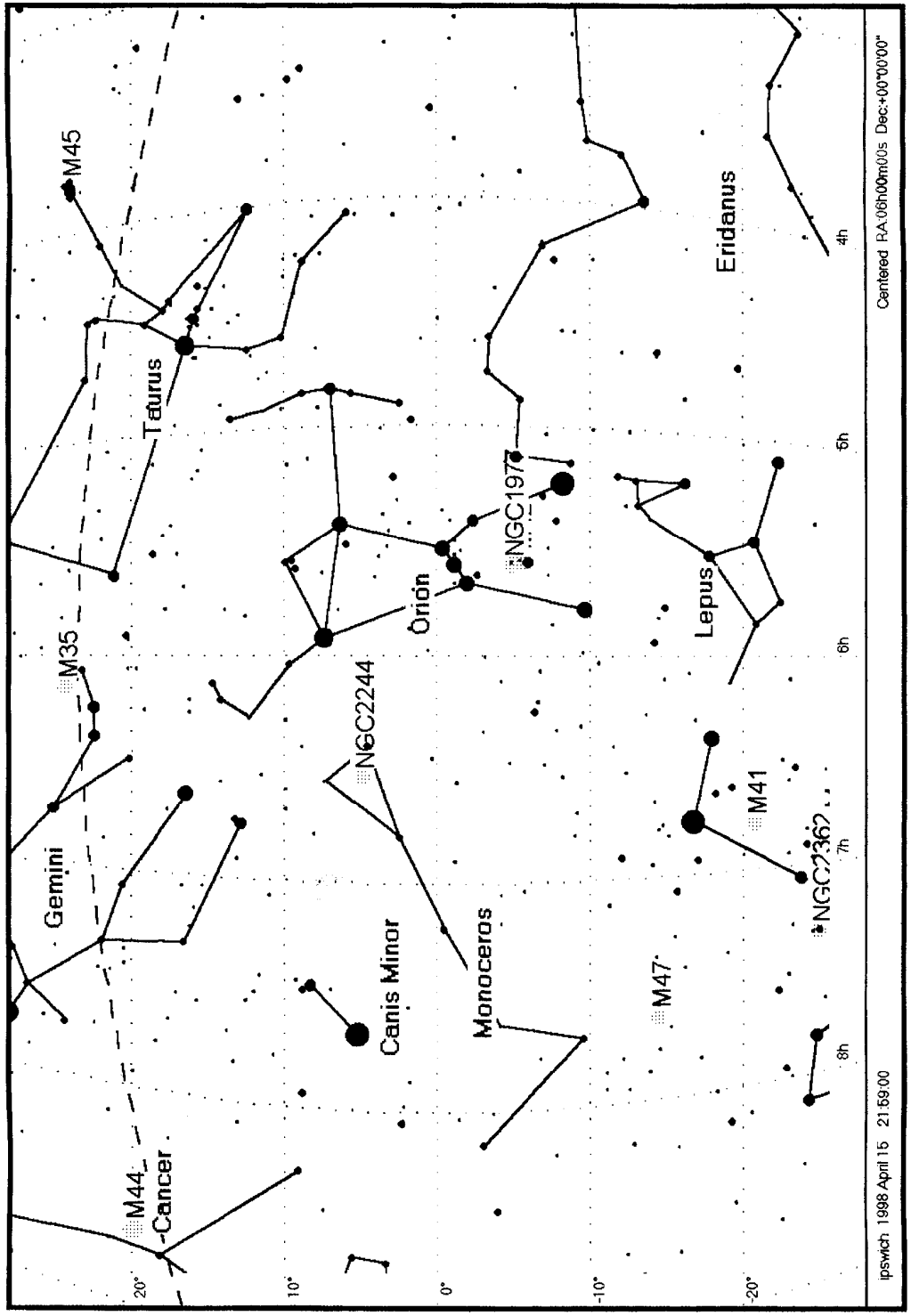
Friday 2nd October

Intergalactic Stars

Nial Tavir

University of Cambridge, Institute of Astronomy

Professional astronomer Nial Tavir casts light on these cosmic lone rangers



PROGRAMME FOR APRIL

Mondays from 7.30pm *Mr N Gage*	*GENERAL OBSERVATION SECTION* *Mr G Tilt*
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 3rd - 17th *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 May 9th in the club room at the observatory at 7.30pm. All members are welcome to attend.

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WWW url http://www.ast.cam.ac.uk:80/~ipswich/

1998 COMMITTEE

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CHAIRMAN	D Payne		
SECRETARY	R Gooding		
TREASURER	M Harlow		
MAINTENANCE CO-ORD	M Cook		
JOURNAL CO-ORDINATOR	E Sims		
SOCIETY ACTIVITIES & DARK SKYS	P Richards		
EQUIPMENT CURATOR	J Walsh		
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