

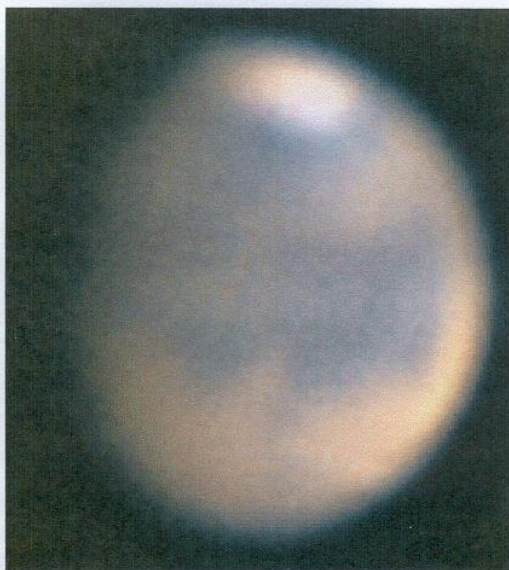


**ORWELL ASTRONOMICAL
SOCIETY (IPSWICH)**

Registered Charity No 271313

www.oasi.org.uk

**NEWSLETTER 2005
AUGUST/SEPTEMBER**



Mars is getting higher in the southeastern pre-dawn sky. Martin Moberley has been CCD imaging the planet from his home at Cockfield, Bury St Edmunds.

**2005 June 28th 03:40UT
245mm Newtonian@f/36**

Society News

1 Next Committee Meeting Saturday 3rd September 2005

The next committee meeting will be held on Saturday 3rd September 19:30 at the observatory. This is an open meeting and any one who is interested is invited to attend.

2 Events for 2005

Meeting	Venue	Date
Astronomy Workshops	The new workshop season is in the planning stage. Mike Whybray has taken over from Ted Sampson.	
FAS Convention	Institute of Astronomy Cambridge Madingley Road Cambridge	Saturday 1 st October
Norwich Astronomical Society 60th Anniversary Astronomy Conference	In Norwich More information below	Saturday 8th October
SPA Convention	Institute of Astronomy Cambridge The Hoyle Building Madingley Road Cambridge	Saturday 15 th October
Winter lectures	Two lectures are in the planning stage. Possibly on Large Telescopes and the Cassini – Huygens mission Society members short talks may also be arranged	To be fixed
Christmas Meal	Venue to be fixed	Wednesday 14 th December

3 Society Equipment Inventory

I would like to compile an inventory of society member's astronomical equipment. If you would like to participate please supply me with a list of what observational equipment you have. This inventory list with the relevant names will remain with in the society. Though the total numbers of each class of instrument maybe added to the Society Web site.

4 Welcome to New Members

No new members have joined since the last Newsletter

5 Norwich Astronomical Society's 60th Anniversary Astronomy Conference

Date Saturday 8th October

Venue John Innes Centre Norwich

Admission £15 per person which includes refreshments

Buffet lunch £5.50 extra

Opening times 09:30 to 16:30

Programme

Dr. Robin Catchpole "From the Solar System to the edge of the Universe"

Dr. David Whitehouse "Astronomy in the Media"

Prof. Paul Murdin "The Reality of Black Holes"

Final lecturer TBC

Trade Stands will be present.

There will be space for displays from other societies

Members who would like to go to this event please contact Roy Gooding, and I will order tickets

6 Astronomy Workshops 2005 / 2006 Season

The new season of workshop meetings is in the planning stage. Ted Sampson has handed over the co-ordination of these meetings to Mick Whybray. Any questions you may have about the new season please contact Mick. If you would like to volunteer to be a principle speaker for any of these meetings please also contact Mike

7 Summer Work in the Observatory



The following work in the observatory may be carried out this summer, if time and enthusiasm permit.

Notices will be displayed on the observatory door about access

- 1 Varnishing the observatory floor.
- 2 Inspection of the wheel boxes.

Both jobs will make the observatory unusable for the period the work takes

Night Sky (August)

All times GMT

Sun

The sun will be rising approximately between 04:20 and 05:00

The sun will be setting approximately between 19:40 and 19:00

Moon

New Moon	1 st Quarter	Full Moon	3 rd Quarter
5 th	13 th	19 th	26 th

Mercury Mercury will at inferior conjunction on the 6th. It reaches greatest western elongation on the 18th

Venus Venus is more prominent, in the NW sky this month. It will be setting about a hour after sunset this month. Magnitude -3.9

Mars Mars becomes more prominent in the evening sky this month, rising at about 21:00 towards the end of the month. Magnitude -1.0

Jupiter Jupiter is presently in Virgo. It will be setting by about 20:00 by the end of the month. Magnitude -1.7

Saturn Saturn reappears in the morning sky this month, rising at about 02:00 by the end of the month.

Uranus Uranus is presently in Aquarius. It will be rising at about 20:00 at the end of the month. Magnitude 5.7

Neptune Neptune is presently in Capricornus. It is at opposition on the 8th. Magnitude 7.8

Meteor Showers

Shower	Maximum	Limits	ZHR
α Cygnids	July 21 st to August, 21 st	July to August	5
Capricornids	July 8 th July 15 th July 26 th	July to August	5
δ Aquards	July 29 th August 6 th	July 15 th to August 20 th	20 10
α Capricornids	August 2 nd	July 15 th to August 20 th	5
ι Aquarids	August 6 th	July to August	8
Perseids	August 12 th	July 23 rd to August 20 th	80

Meteor source is the BAA Handbook

Night Sky (September)

All times GMT

Sun

The sun will be rising approximately between 05:20 and 05:50

The sun will be setting approximately between 18:40 and 17:50

Moon

New Moon	1 st Quarter	Full Moon	3 rd Quarter
3 th	11 th	18 th	25 th

Mercury Mercury will be at superior conjunction on the 18th. It will not be observable for the rest of the month.

Venus Venus will be setting about 1 hour after sunset this month. Magnitude -4.1

Mars Mars will be rising at about 19:00 at the end of the month. Magnitude -1.6

Jupiter Jupiter is presently in Virgo. It will be setting close to sunset this month. Magnitude -1.7

Saturn Saturn will be rising at about midnight at the end of the month. Magnitude 0.4

Uranus Uranus is presently in Aquarius. It will be at opposition on the 1st. Magnitude 5.7

Neptune Neptune is presently in Capricornus. It will be setting by about 01:00 by the 30th of the month. Magnitude 7.8

Meteor Showers

Shower	Maximum	Limits	ZHR
Piscids	September 8 th September 21 st October 13 th	September to October	10 5 ?

Meteor source is the BAA Handbook

SUPERNOVA DISCOVERED IN M51, A HISTORICALLY SIGNIFICANT MESSIER OBJECT

By Kenneth J Goward FRAS

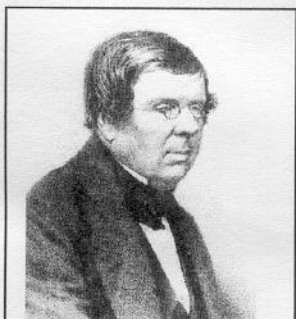
On 2005 June 30th German amateur observer, Wolfgang Kloehr reported the discovery of a 14th magnitude supernovae (SN 2005cs) in M51, popularly known as the Whirlpool Galaxy. The only previously recorded SN in M51 occurred in 1994, but was close to the galactic centre and very hard to image. The new SN is further out from the centre of the main galaxy and Martin Mobberley was able to image the object (below) from his home at Cockfield, Bury St Edmunds on 10th July



M51 is in the Constellation of Canes Venatici and lies below the handle of the Plough (Ursa Major). Popular prey for amateur instruments and for observers at Orwell Park, although at Magnitude 14 the SN is best left for those equipped with CCDs.

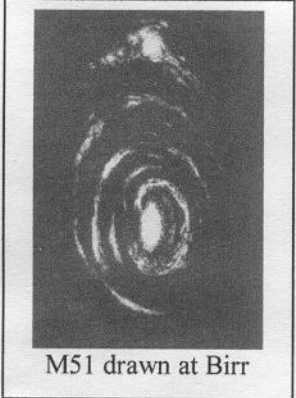
Alkaid

M 51



William Parsons
3rd Earl of Rosse
1800 -1867

In 1845 the 3rd Earl of Rosse turned his massive 72" Speculum Reflecting telescope onto M51 and resolved the object's "*Spiral Convulsions*". This was the first time that any of the 'Nebulae' had been seen to have a spiral structure, but it was not until after 1923 that it was realised M51 and similar objects were galaxies entirely separate to our own. Indeed, the main part of M51 is about 50,000 light years in diameter and consists of in excess of 100 billion stars at a mean distance of 15 million light years.



M51 drawn at Birr



Lord Rosse's 72" Reflector at Birr Castle, Ireland
From Ball's 'The Story of the Heavens' 1886

Observing Report for the Close Approach of Mercury and Venus

By Bill Barton FRAS

Mercury is a small planet only about the size of our Moon and because it orbits close to the Sun it is always difficult to observe. However in the summer of 2005 the planet Venus which is a lot easier to see because it is physically bigger, nearer to us and intrinsically brighter came within 0.07 degrees of Mercury. To give an idea just how close this is the Moon has an apparent diameter of 0.5 degrees. So Mercury and Venus would be about 10% of the size of the Moon apart in the sky. Naturally the two planets are not really that close together in space it's just that they are in the same direction looking out from the Earth. Mercury was at greatest elongation and thus about as far away from us as the Sun and Venus had just come out from behind the Sun and in moving away from the Sun was passing Mercury. Venus was about 1.5 times the Earth-Sun distance.

Although the time of closest approach was predicted for 19:00UT (=20:00BST) on the 27th, the two planets were relatively slow moving so a plan was formed to attempt to observe them each evening from the 22 June 2005 to the 29 June 2005 in the hope of seeing them at least once.

A method for finding something that cannot be seen with the naked eye in the sky is to point the telescope at something you can see and then calculate how far to move the telescope in both axes to point at the object of interest. In this case I was able to download from the Internet a table published by Jonathan Shanklin (the BAA Comet Section Director) giving the difference in Right Ascension and Declination between the Sun and Mercury and Venus. The plan was to open the observatory at 19:00BST each evening and point the Tomline Refractor at the Sun, then swing the telescope round by the tabulated difference in RA and finally search in Declination for Venus.

Below is a summary of each evening's observations: -

22 June 2005. Offset from the Sun, but unable to find Venus. Must be doing something wrong! However we have a few evenings still to practice in. Hope for better luck in future...

23 June 2005. Cloudy. Observations abandoned without even leaving home.

24 June 2005. No observation due to a lack of volunteers to assist in the dome.

25 June 2005. Today was the date of the BAA Exhibition Meeting in Cambridge and as there was no assistant available went to that instead with our Chairman and Treasurer where we manned the Society for the History of Astronomy stand.

26 June 2005. This was a Sunday so I didn't expect much support; however two members said they were interested. The observatory was duly opened at 19:00BST and it was an excellent evening with clear blue skies. Would we be able to find Venus? Was Mercury visible? Only time would tell! By 19:20 Venus had been located, looking rather small and round, but where was Mercury? At about four magnitudes fainter it would never be easy to see, but was where was it? To the left? To the right? Up? Down? After twenty minutes searching I found it off to the left in the eyepiece. Success! My two fellow observers also saw both Venus and Mercury. The eyepiece used was of 32mm focal length, which gives a magnification of around 120 times. All was now set for tomorrow evening's attempt at closest approach.

27 June 2005. The observatory was opened at 19:00 as per the plan and using yesterday's experience we were able to locate Venus much more quickly. Now we also knew what Mercury should look like and where it was likely to be. Indeed by 19:15 both planets had been located. Tonight Mercury was below Venus in the same eyepiece and the two planets were much closer together. Five observers watched the planets till 21:10BST when the observatory was closed. In an attempt to make a permanent record of the event one observer attached a camera to the telescope and took photographs through it.

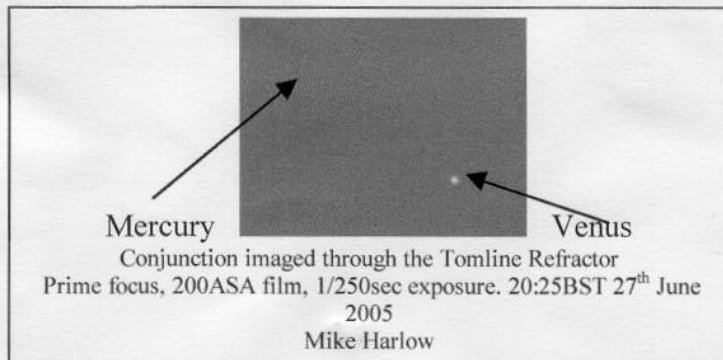
28 June 2005. Tonight's observation was defeated by cloud. Nothing but haze could be seen through the eyepiece when pointing in the direction of Venus and Mercury.

29 June 2005. The last night of observations, for by now the two planets would be starting to move apart and no longer visible in the same field of view. It was less cloudy than yesterday evening so there might be a chance. Venus was clearly seen in the eyepiece however the sky was just too bright to see Mercury on this occasion.

So, to sum up, six nights planned five trips to the dome, and two successful observations. Not too bad I guess. I would like to thank Jonathon Shanklin for making his figures available to me; this saved me a lot of calculation. I would also like to thank the assistant directors and observers who made the whole exercise worthwhile.

List of Observers.

Nicky Gillard
Pete Richards
Mike Whybray
Mike Harlow
Ted Sampson
Ken Goward
Garry Coleman
Gerry Pilling
James Appleton



OCCULTATIONS DURING AUGUST

Only one good occultation event occurs during August. The table provides data relating to an observer located at Orwell Park Observatory, but will be similar at nearby locations

D	Date & Time		Lunar	Sun	Star	Star	Mag
R	(UT)		Phase	Alt (°)	Alt (°)		
D	30 Aug	01:16	0.19-	-27	10	47 Gem	5.8
R		02:01		-23	16		

James Appleton












OCCULTATIONS DURING SEPTEMBER

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

D	Date & Time		Lunar	Sun	Star	Star	Mag
R	(UT)		Phase	Alt (°)	Alt (°)		
D	11 Sep	18:49	0.53+	-5	8	V2372 Oph	7.3
D	12 Sep	18:56	0.64+	-7	9	ZC 2688	7.0
D	14 Sep	19:02	0.85+	-8	10	Hip 102018	7.2
D	14 Sep	21:45	0.85+	-29	14	ZC 3032	7.5
D	15 Sep	20:07	0.93+	-18	15	43 Cap	4.7
D	24 Sep	22:01	0.53-	-34	9	136 Tau	4.6
R		22:40		-37	14		
R	26 Sep	23:52	0.33-	-40	8	76 Gem	5.3

James Appleton

OASI COMMITTEE CONTACTS & RESPONSIBILITIES

Kenneth J Goward FRAS	Chairman			Press Publicity with the Secretary. Open Weekend.
Roy Gooding	Secretary			Main point of Society Contact. Press Publicity with the Chairman. Observatory Decoration. Visits by potential new members.
Garry Coleman	Treasurer			Finance. Supervision of Grant Applications.
James Appleton	Committee			Committee Meeting Minutes. Web site.
Martin Cook	Committee			Membership. Tomline Refractor Maintenance.
Neil Morley	Committee			Equipment Curator.
Ted Sampson	Committee			Tomline Refractor tutoring.
Eric Sims	Committee			Newsletter
Mike Whybray	Committee			Librarian. Workshops
Paul Whiting FRAS	Committee			Visits by outside groups.
Bill Barton FRAS	Committee			Safety & Security
Peter Richards	Co-opted			Lecture Meetings Email Distribution Lists

DIARY FOR AUGUST/SEPTEMBER

TUESDAY 2nd August	<u>OBSERVATORY VISIT BY OUTSIDE</u> <u>GROUP</u> From 8pm – The Home Education Group ☎ Paul Whiting FRAS [REDACTED]
WEDNESDAY	<u>OBSERVATORY CLUB NIGHTS</u> August – 3 rd 10 th 17 th 24 th 31 st September – 7 th 14 th 21 st 28 th ☎ Martin Cook [REDACTED]
SATURDAY 3rd September	<u>OASI COMMITTEE MEETING</u> School Classroom at base of the Observatory Tower from 8pm ALL MEMBERS ARE WELCOME TO ATTEND ☎ Ken Goward FRAS [REDACTED]

SOCIETY PRIMARY CONTACTS

CHAIRMAN Kenneth J Goward FRAS ☎ [REDACTED] (daytime & evenings)
SECRETARY Roy Gooding ☎ [REDACTED] (daytime) [REDACTED] (evenings)
E-MAIL QUERIES ipswich@ast.cam.ac.uk
Contact details for the full Committee may be found on the inside back page

Society Trustees

Roy Adams David Brown David Payne
Hon President
Professor Allan Chapman D.Phil MA FRAS

Astronomy Workshops

By popular demand, the series of Astronomy Workshops enters its 8th year! Ted has decided to stand down from this having run it very successfully for the last 7 years (many thanks to Ted for all his efforts, including starting the whole thing off), and I've picked up the baton. However, not being so organised as Ted I've only got firm dates and speakers for 4 talks so far (I did have 5 but the person is leaving Ipswich and so won't be here to do it). So I'll be trying to round up volunteers for a few more to run early next year. (Any willing volunteers – please contact me!)

In the mean time, please give the ones below your full support. I've changed the default day to the Second Wednesday in the month as some people had other engagements on the First Wednesday – though note that December 7th is an exception due to a clash with the OASI Christmas Dinner.

Workshops should be held in the usual location (classroom in the right hand corner of the small courtyard with the gates onto the road), unless school security or other issues prevent this, in which case the new location will be advertised. Normal start time is 7:45pm, and they typically last 1 to 1.5 hours.

Date	Title	Presenter
12th Oct 2005	Building and equipping a back garden observatory	Dave Standley
9th Nov 2005	Design, construction and use of the 19 inch Millennium Telescope	Some or all of: Neil Morley; Paddy O'Sullivan; Martin Cook, Garry Sullivan, Mike Harlow
7th Dec 2005 (note – first Wednesday)	Filters for Astronomy	Pete Richards
8th Feb 2006	Elementary Image Processing (no hard sums!)	Nigel Stubbington

Mike Whybray. [] (work hours) or [] (evenings)