

CASMAAG

THE OFFICIAL MAGAZINE OF THE CANTERBURY ASTRONOMICAL SOCIETY, INC.

Meetings are held on the 3rd Tuesday of the month at 7:30pm
in the St Johns Church Hall, Latimer Square, Christchurch.

Vol. 56 - No. 1

April 2005

Issue Number 621

19 April

An Evening with Well Known Sidewalk Astronomer

John Dobson (and the Dobsonian Mount)

Lecture Theatre F3, Canterbury University

F3 Map Inside Front Cover



New/Beginner Astronomers Group

Fendalton Mens Bowling Club. - Car Park off Kotare Street

10th May, 7:30 pm

2nd Tuesday of the Month





CAS Calendar of Events

Apr 4	CASMAG sent to printers.
Apr 5	New Astronomers Meeting.
Apr 11	Member's CASMAGs posted.
Apr 18	Members eveing with John Dobson at West Melton Observatory. Starting at 7:30pm
Apr 19	April Member's Meeting. John Dobson speaking at Lecture Hall F3 at Canterbury University.
Apr 23	Member's Night at West (Weather Permitting)
Apr 26	CAS Committee Meeting. Date subject to change.
Apr 30	Deadline for article submissions for May CASMAG.
May 2	CASMAG sent to printers.
May 9	Member's CASMAGs posted.
May 10	New Astronomers Meeting.
May 17	May's Member's Meeting.
May 24	CAS Committee Meeting. Date subject to change.

Notice to Members

When using the facilities at West Melton, please remember to return all items used to their correct areas or where they were found. Remember other users will need to locate them in the dark, making it difficult to find items that are not in their usual areas. I also take this time to remind users to make an entry into the log book, this helps the society track how many and often people use the facilities. It also is a way of informing, entertaining and communicating with fellow members. Thank you.

SUBSCRIPTION INFORMATION

Financial year April to March

Standard Membership.....	\$50
Family Membership.....	\$75
All others classes (Junior, Senior Citizen, Tertiary Student & Educational).....	\$25

Front Cover: Astronomy for all Ages or "A Star is Born."

Photo Courtesy: Phil Barker & Euan Mason

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SUBMISSION GUIDELINES

The Editor welcomes contributions of original articles, items of Astronomical News, letters to the Editor, or reports of observations. Articles and letters may be edited if space is at a premium. Whenever possible you should provide your contributions via email or on computer diskette (DOS only). Save your files in simple ASCII format without any special typesetting characters. Deadlines for submission are the 3rd Tuesdays of each month, unless prior arrangements have been made with the editor. Give your articles to the Editor at the monthly meetings or send them to:

Editor CASMAG

(please print clearly)

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Victoria St P.O.
Christchurch

Advertising in CASMAG

Small personal advertisements in this magazine are free to financial members. Members ads exceeding 8 lines in a column will be charged the small advertisement rate. All others, rates are as follows:

Full page, \$40
Half page, \$25
Quarter page, \$15
Small advertisements, \$5.

Members Evening

On the Monday 18 April, members have the opportunity meet with John Dobson at our West Melton Observatory from 7:30pm

John Dobson is well known for his Side Walk Astronomy efforts in the USA and has a popular telescope mount named after him.

NO alcohol please



Bino Power

Hello again everyone.

For anyone interested, this is an update of some Luna obs. I continued with and I know some people don't bother with the Moon, but perhaps a few may be interested.

This night the Moon was in first quarter and an the whole of the shape of the rabbit could be seen. It was my son when he was younger, pointed out the rabbit's shape and I found it an easy way to start to learn the Maria. Anyway, in the left ear, Fecunditatis, a prominent crater, toward the left, and about half way up, Langrenus. I read from Patrick Moore's, Guide to the Moon, "the walls are high, massive and terraced rising to 9,000 feet, and the floor contains a bright, twin peaked central mountain mass. Langrenus is most imposing under low light and appears a bright patch near Full Moon."

Part of Imbrium was visible with the Apennines mountain chain showing up very distinctly. Toward the left of Imbrium, three prominent Craters, to the top and smallest, Autolycus, below Aristillus and to the right of these, the larger Archimedes, which I read from the same book, "the floor is dark and by lunar standards very smooth."

Well, I hope I haven't bored too many people, but like everything else I have learnt, I have to re-check and study the Moon until I start to remember some of it, but there is so much detail, I think it would take a life time to study it all.

Anyway, I will divert a little and take a slightly different path. I think as far as astronomy and beliefs are concerned, to each their own, but with science, it is open, and answers are to be sought out and knowledge built on what has been proved, which brings more questions. The mind is open and to me, knowing how something works (cause and effect) in no way takes anything away from the awesomeness, or beauty of it.

With no offence intended, I do not like a closed mind, but an always enquiring mind, that is the way

we learn. Anyway on the subject of being open minded, there is a very interesting book I have been reading, and I know others have read and found, perhaps enlightening? Or at least interesting. It is "The Da Vinci Code", by Dan Brown. The characters are fiction, but apparently a lot of research has been done on the facts.

Anyway, like I said, to each their own, but to save any discomfort or arguments within CAS family, perhaps politics and religion should be kept out of it unless anyone wants it? Mind you at times, I suppose a good old argument to "ruck up" the feathers can be fun?

Till next time. Bye for now and happy hunting.

Heather Skinner



THE SOLAR SYSTEM

mid April to May 2005

SUN

TIMES OF SUNRISE and SUNSET for Christchurch

Date	Apr 9	Apr 16	Apr 23	2005
Rise	6.54 am	7.02 am	7.10 am	NZST
Set	6.06 pm	5.55 pm	5.44 pm	NZST

Date	Apr 30	Apr 9	Apr 16	2005
Rise	7.18 am	7.26 am	7.34 am	NZST
Set	5.33 pm	5.24 pm	5.16 pm	NZST

THE MOON'S PHASES



New	1st QTR	FULL	Last Qtr
Apr 9	Apr 17	Apr 24	May 1
May 8	May 16	May 23	May 30

Penumbral Lunar Eclipse 24 April

At the full Moon on April 24, our satellite will pass through the penumbral portion of the Earth's shadow. From the point of view of an observer on the Moon, the Earth would only cover part of the Sun's disk. From the Earth the only effect will be a slight dimming of the Moon, especially near its northern limb.

None of the Moon will enter the umbra, that is none of it will be completely shaded from the Sun. The northern parts of the Moon (lower as seen from NZ) will be most deeply into the partial shadow while

some of the southern parts of the Moon will miss the shadow altogether.

As a result there will be little to see from the Earth. Careful observation will show the full Moon gets a little dimmer, this will be most noticeable for the northern parts of the Moon at the mid eclipse.

The Moon first enters the Earth's penumbra at 7.50 pm, the eclipse maximum is at 9.55 pm and the Moon finally leaves the penumbra at midnight. The Moon will be visible from New Zealand throughout this time.

The Planets

Jupiter will be visible throughout the evening by mid April while Saturn will be setting during the evening. Venus is now in theory an evening object, but will be too close to the Sun for observation.

Mars will not rise until well after midnight. Mercury will be relatively well placed for viewing in the morning sky shortly before sunrise.

MERCURY will be visible in the morning sky shortly before sunrise. On April 10 it will have a magnitude 1.8 and be about 9 degrees up, three-quarters of an hour before sunrise. As the month progresses it will get a little higher and gradually brighten so that by April 25 it will be about 17 degrees up 45 minutes before sunrise, with a magnitude 0.5.

During May, Mercury will continue to brighten but will decline in altitude. By mid May the planet will be at magnitude -0.3 , but have dropped back to an altitude of 10 degrees at the 45 minutes before sunrise slot.

The planet will be visible in a direction between east and northeast and will be the brightest object in that direction with a fairly low altitude.

On the morning of May 6, a thin crescent Moon will be about 6 degrees from Mercury, above and to the left of the planet. The following morning, an even thinner crescent Moon, just 2.5% lit, will be some 7.5 degrees directly below Mercury.

VENUS moved into the evening sky at the same time that Mercury moved into the morning sky. But Venus will only pull slowly away from the Sun, so that even by mid May, it will be setting only 35 minutes after the Sun. By then keen eyed observers may be able to briefly spot the brilliant planet very low to the northwest just after sunset.

MARS remains in the morning sky. It will continue to rise a few minutes after 1 am. So the easiest time to see Mars will be about an hour before sunrise when it will be high in the sky to the northeast. This is in the same general direction as Mercury, but Mars will be a little to the left of Mercury and far higher.

The 33% waning Moon will be just over 2 degrees from Mars on the morning of May 3. Over the next

three mornings the Moon will move down in the sky towards Mercury, so following a line down from Mars to beyond the Moon will locate the latter planet.

JUPITER, having been at opposition on April 4, will be rising before the Sun sets and be well placed for viewing throughout the evening.

Once again, during April there will be a close approach of the Moon to Jupiter. During the night of the 22/23 April the 95% lit Moon will close in on Jupiter. The two will be just under 6° apart after sunset, but will be within 1° of each other just before they set soon after 5 am.

And once again an occultation will occur. This one will be visible from most of Africa south of the Equator, but then the zone of visibility will move to the southeast across the southern Indian Ocean to end in the Southern Ocean and part of Antarctica, south of Australia.

SATURN will be best observed in the early evening following sunset, when it will be highest in the sky. This will be particularly so by mid May when it will be setting just after 9 pm and so get low quite early in the evening.

Saturn remains in Gemini, and will be just under 7° from Pollux, the brighter and higher of the twins. On April 16 the 47% lit Moon will be about 7° from Saturn and very close to Pollux. At about 8 pm, the angle between the star and the Moon will be less than half a degree, that is less than the diameter of the full Moon. They will appear closest from the south of New Zealand

The Moon will be quite close to Saturn and Pollux, again on May 13, but this best approach to the star will be long after they have all set in NZ.

Brian Loader

Canterbury Museum Astronomy Series



Canterbury Museum
New Zealand Natural & Human Heritage

This Autumn Canterbury Museum is running a series of free seminars that delve into the mysteries of the universe. The seminars will take place in the Bird Hall, level 3, Canterbury Museum from 6.00 pm – 7.00 pm. Bookings are not required.

Time and Evolution in the Cosmos

Tuesday 12 April 2005

John Hearnshaw, Professor of Astronomy at Canterbury University, will enlighten you on measuring the age of stars, galaxies and meteors.

Stardust that Made the World

Tuesday 10 May 2005

Professor Jack Baggaley from Canterbury University will talk about stardust, comets and asteroids and his project with the European Space Agency.

A Meteorite Landed on my Sofa

Tuesday 24 May 2005

If you think that having a meteorite plummet through your roof and settle in your lounge would be exciting, come along and hear Phil and Brenda Archer talk about their “out-of-space” experience in Auckland last year.

Close Encounters

Tuesday 7 June 2005

Is it just a matter of time before the existence of alien civilisations becomes science-fact rather than science-fiction? In this presentation Richard Hall of the Stonehenge Aotearoa Astronomy Centre will discuss the possible challenges and consequences of an encounter with an alien civilisation.

Visit www.canterburymuseum.com for more information on other events and exhibitions that are part of Canterbury Museum's Autumn programme, *Mummies, Meteorites & Memories*.

Canterbury Museum
Rolleston Avenue, Christchurch

Open seven days

9.00 am to 5.00 pm (April to September)

9.00 am to 5.30 pm (October to March)

Introducing Sunspot Observing

First some snippets of the history of sunspot observing.

The earliest known reference to sunspots dates back to the middle of the fourth century BC i.e. over 2300 years ago and is attributed to a Greek called Theophrastus who was a pupil of Aristotle. However it was the Chinese who made the first systematic records of naked eye spots. During the period 28BC to 1638BC there are over a 100 descriptions of outstanding sunspots in the official Chinese histories. Early naked eye observations of sunspots would have been made when the sun could be seen through mist or thin cloud at times when sunspots were sufficiently large to be visible to the naked eye under such conditions.

In the Western literature for the same period as the Chinese records naked eye observations of sunspots are very rare. It appears that the Middle Ages emphasis placed on the teachings of Aristotle, who maintained that the sun was a perfect body without blemish, resulted in 'blind spots' in the eyes of possible observers. It appears that when western

observers were able to observe sun spots these were sometimes erroneously attributed to transits of Mercury.

Sunspots were observed through telescopes for the first time in 1611. During that year four men are known to have turned their versions of the newly invented telescope to the sun. These four were Johanne Goldsmid, also known as Fabricius, in Holland, Galileo Galilei in Italy, Christopher Scheiner in Germany and Thomas Harriot in England.

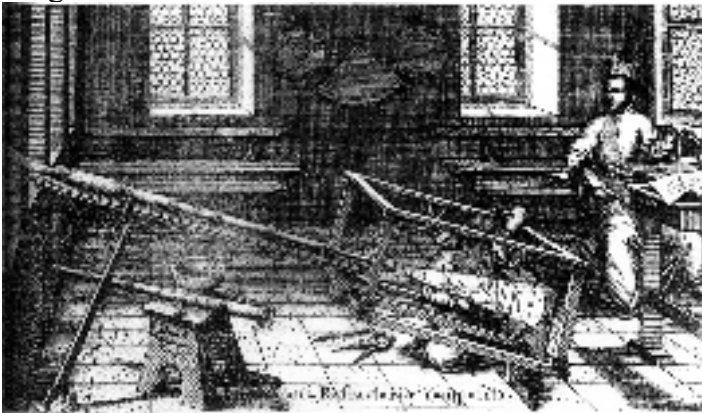
Scheiner was Jesuit Priest who taught Hebrew and Mathematics at the University of Ingolstadt. When he first observed Sunspots he suspected a defect in his telescope but soon realised they really did exist. Scheiner initially believed that sunspots were small planets revolving around the Sun. He reported his observations to his ecclesiastical superior who refused to believe in the reality of the spots and Scheiner was forbidden to publish his findings. However Scheiner did announce his findings (anonymously) to Mark Welser, a merchant in Augsburg and a friend of Galileo. Galileo showed that the spots were definitely part of the sun and not something else, eg small planets revolving round the sun. He also used his observations to conclude the Sun revolves about a fixed axis with a period of about a month.

The next most significant observations of sunspots occurred about 200 years later were by Heinrich Schwabe of Dessau in Germany who carefully recorded his observations of sunspot over a period of 43 years. He first announced a probable 10 year cycle in the occurrence of sunspot in 1843 and in 1851 published a table giving his sunspot statistics clearly showing the periodicity. This discovery interested the Englishman R C Carrington who after three years working as an assistant at Durham Observatory built his own Observatory. Carrington's telescope was an equatorially mounted 4.5 inch refractor driven by clockwork, which was arranged to project and image of the Sun on a white screen. During the years 1853 to 1861 he made a large number of Sunspot observations, published by the Royal Society in 1863. Carrington's most important contribution to Solar physics was his careful measurement of Sunspot positions showing that the average latitude of the spot decreases from the beginning to end of each cycle. Carrington's work was followed up by Gustav Spörer, first in Pomerania and later at the Potsdam Astrophysical Observatory which is well-known for its interest in the measurement of sunspot magnetic fields. Another 19th century contributor to Solar Observing was Rudolf Wolf of Berne who studied all the available records of sunspot back to the time of Galileo and introduced the Relative Sunspot Number as a measure of Solar activity. Wolf was appointed director of the then new Zurich Observatory and started a programme for determining the Relative sunspot number daily.

Methods of observing Sunspots

I hope all readers of CASMAG are aware that one must NEVER try to view the Sun directly through a telescope or binoculars. There are two main methods of safely viewing the sun - either by projecting an image of the Sun on to a screen or by using a properly fitted solar filter designed to reduce the amount of light reaching the eye by a factor of 100,000 or more.

With the projection method, unfiltered light from the Sun is gathered by the telescope and projected onto a screen. The main problem with this method is the heating both of the lenses and the air in the path between the objective and the eyepiece. For projection a refractor is generally preferred over a reflector. The refractor's tube is closed and although the air inside the tube is heated there is less turbulence than in an open reflector. However the eyepiece is near the focal point and can become very hot. The projection method is not recommended at all for Cassegrain and Maksutov telescopes because of the heat built up. Another problem with the projection method is that as the sun moves, the image will also move and unless the screen is mounted in such a way that it is linked to the telescope the image will move off the screen after a few minutes. It is also very difficult to shade the screen from direct sunlight so as to get good contrast for the image.



The attached picture shows Scheiner and an assistant observing the sun using a refracting telescope. Note that the screen onto which the image is projected is mounted on a framework attached to the telescope in such a way that the screen is always in a fixed position relative to the telescope. This arrangement keeps the image on the screen as the telescope is moved to keep pointing at the sun as it moves. By pointing the telescope through an open window from within a room the screen can also be shaded from direct sunlight.

The other main method of observing the sun safely is by using a suitable filter placed over the objective end of a telescope. Commercial filters made especially for use with telescopes can now be obtained fairly readily. These usually consist of aluminised polyester film or metal coated glass. For full discussion on suitable filters visit the web page

<http://www.mreclipse.com/Special/filters.html>

Because the filter cuts out 99.999% of the Sun's radiation this method reduces the problem of excessive heat build up. If the telescope has a suitable guiding system the problem of the moving image is overcome.

I use a filter made by 43°S Astro mounted on a Meade 10 inch Schmidt Cassegrain Telescope with an equatorial mount. This filter has better optical characteristics than the standard Mylar film used on many commercially made filters. (Contact Larry Field or Phil Barker for technical details of the film used in filters made by 43°S Astro). The filter also has a much smaller off axis aperture which increases the contrast and reduces 'seeing' problems. When Solar observing the telescope view finder is kept covered so as to avoid accidentally using it while pointing at the Sun. To point the telescope at the Sun I use the shadow of the telescope and mounting. The telescope is pointing at the Sun when the shadow is at its smallest. To record an observation I initially draw a circle about 10 cm diameter on a blank sheet of paper. Having noted the date and time I then mark on the circle the approximate positions of any sunspot groups I see, and attempt to sketch the group (my artistic abilities are very rudimentary). I then the number of spots in the group and its classification. I also use a special eyepiece to measure the relative positions of each group.

In future articles I will discuss the features one can look for when observing the sun and also sunspot classification. I will also give some details of how I actually measure the sunspot positions.

WARNING

Permanent eye damage can result from looking at the disk of the Sun directly, or through a camera viewfinder, or with binoculars or a telescope unless suitable safe filters are used.

Viewing the Sun through viewfinders, binoculars or telescopes without proper filters is like using a magnifying glass to focus sunlight onto tinder. The retina is delicate and irreplaceable. There is little or nothing a retinal surgeon will be able to do to help you. Never look at the Sun outside of the total phase of an eclipse unless you have adequate protection.

- For more information on Safe Solar Observing:
http://skyandtelescope.com/observing/objects/sun/article_162_1.asp

Also websites such as the following on viewing eclipses have useful information which is applicable to viewing the sun safely at any time.

- How to Watch a Partial Solar Eclipse Safely:
http://skyandtelescope.com/observing/objects/eclipses/article_609_1.asp

- Observing Eclipses Safely:
<http://www.mreclipse.com/Totality/TotalityChll.html>

Pauline Loader

CAS MAG

Delivered By email?

For those interested in getting their Monthly CasMag by email, I have setup a trial mailing list that will be used to send out the latest CasMag to members in Adobe Acrobat format (PDF file).

As an indication of the file size involved, last month's CasMag (March 2005) was larger than average (16 pages instead of 12), and the PDF file being emailed was just over 700 Kilo-Bytes in size.

For the next 2 months I will be trailing this mail list and also sending out CasMag by ordinary mail to those who subscribe. If members like or prefer this method of receiving their CasMag, I will stop sending the ordinary mail CasMag and you will continue to receive the email version.

To subscribe, just send an email to:
casmag-subscribe@hynlar.co.nz

To unsubscribe, just send an email to:
casmag-unsubscribe@hynlar.co.nz

If you have any queries regarding the CasMag mailing list, please send an email to:
editor@hynlar.co.nz and I will do my best to answer your questions.

Please Note:

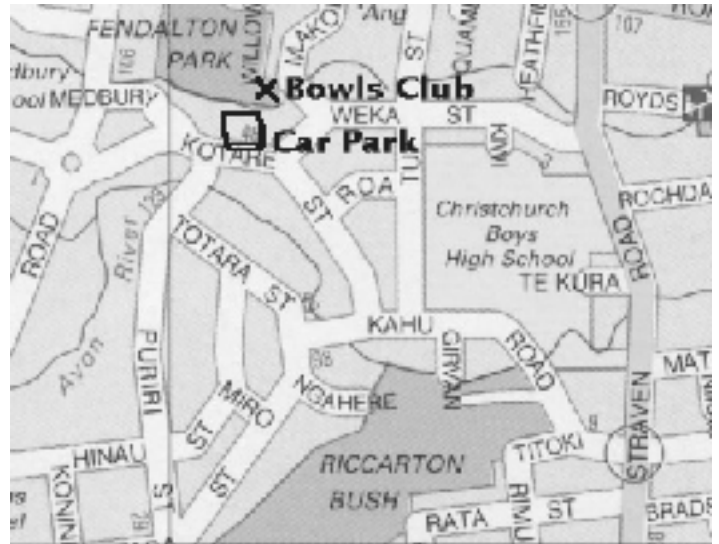
This service is only available to members of the Canterbury Astronomical Society (Inc.) on your request.

David Downing
editor@hynlar.co.nz

Consider the postage stamp. It's usefulness consists in the ability to stick to one thing till it gets there.

Josh billings.

New Astronomers Meeting



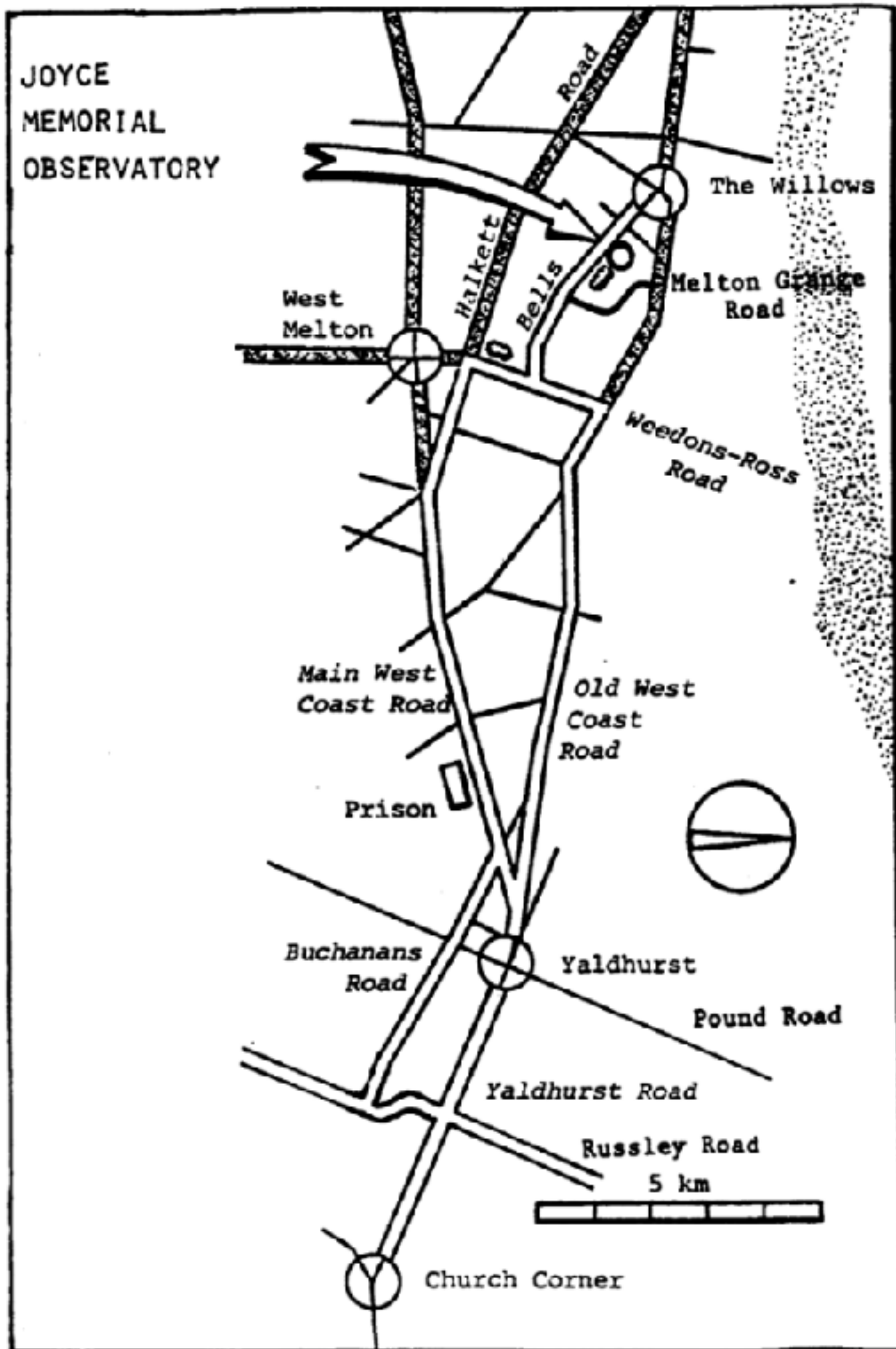
Fendalton Men's Bowling Club
Public car park is off Kotare Street.
2nd Tuesday of the Month

New Home for 12inch Telescope

Modifications to the old Satellite tracker building to allow for permanent housing of the Societies 12 inch Meade Telescope.



The Meade 12 inch telescope is hoped to become our main scientific instrument at West Melton, complete with CCD camera.





New Just Arrived

Exceptional Value Binoculars !



Sportmaster 22x100

- 100mm objective lens
- 22x magnification
- BAK4 prisms
- Fully coated lenses
- Long eye relief
- Center focus
- Tripod bracket included

\$795

Sportmaster 20x80

- 80mm objective
- 20x magnification
- BAK4 prisms
- Fully coated lenses
- Long eye relief
- Center focus
- Tripod bracket included

\$595

Offer available while
stocks last.



Email: Sales@skylab.co.nz

FREEPHONE

0508 898 898

Or come see us at
200 Antigua St CHCH



April 2005

- 01 - 45th Anniversary (1960), Tiros 1 Launch (1st Weather Satellite)
- 03 - Cassini, Orbital Trim Maneuver #20 (OTM-20)
- **03 - Jupiter At Opposition**
- 03 - 100th Anniversary (1904), Max Wolf's Discovery of Asteroid 562 Salome
- 04 - American Rocket Society's 75th Birthday (1930)
- 05 - 15th Anniversary (1990), 15th Anniversary of the 1st Pegasus Rocket Launch
- 06 - NROL-16 Titan 4B Launch
- 06 - 40th Anniversary (1965), Intelsat 1 Launch (1st Commercial Communications Satellite)
- 06 - 100th Anniversary (1905), Paul Gotz's Discovery of Asteroid 563 Suleika
- 08 - Hybrid Solar Eclipse (Visible From Pacific Ocean, Central America)
- 08 - 25th Anniversary (1980), Voyager 1's Discovery of Saturn Moon Telesto
- 09 - Cassini, Orbital Trim Maneuver #21 (OTM-21)
- 09 - Moon Occults Venus
- 11 - 35th Anniversary (1970), Apollo 13 Launch
- **11-17 - Astronomy Week**
- 12 - Apstar 6 CZ-3B Launch
- 13 - Cassini, Orbital Trim Maneuver #22 (OTM-22)
- 13 - Mars Passes 1.2 Degrees From Neptune
- 13 - 45th Anniversary (1960), Transit 1B Launch (1st Experimental Navigation Satellite)
- 15 - Soyuz TMA-6 Soyuz FG Launch (International Space Stations 11S)
- 15 - DART Pegasus XL Launch
- **16 - Astronomy Day**
- 16 - Cassini, Titan Flyby
- 16 - Petrus Apianus' 510th Birthday (1495)
- 19 - Cassini, Orbital Trim Maneuver #23 (OTM-23)
- 20 - Cosmos 1 Volna Launch (Solar Sail Mission)
- **22 - Lyrids Meteor Shower Peak**
- 22 - Moon Occults Jupiter
- 23 - Johnson Space Center Open House, Houston, Texas
- **24 - Lunar Eclipse**
- 24 - 15th Anniversary (1990), Hubble Space Telescope Launch (STS-31)
- 24 - 35th Anniversary (1970), Mao 1 Launch (1st Chinese Satellite)
- 25 - Galaxy 14 Soyuz FG-Fregat Launch
- 26 - Mercury at Greatest Western Elongation (27 Degrees)
- 28 - Cassini, Orbital Trim Maneuver #24 (OTM-24)
- 28 - Jan Oort's 105th Birthday (1900)

May 2005

- 04 - GOES-N Delta 4M Launch
- **05 - Space Day**
- 05 - Deep Impact, Trajectory Correction Maneuver #3 (TCM-3)
- **05 - Eta Aquarids Meteor Shower Peak**
- 07 - Asteroid 1 Ceres Closest Approach To Earth (1.686 AU)
- 09 - 100th Anniversary (1905), Paul Gotz's Discovery of Asteroid 564 Dudu & Asteroid 565 Marbachia
- 11 - NOAA-N Delta 2 Launch
- 11 - Stardust, Deep Space Maneuver #4 (DSM-4)
- 14 - Griffith Observatory's 70th Birthday (1935)
- 14-15 - Jet Propulsion Laboratory Open House, Pasadena, California
- **15 - STS-114 "Return To Flight" Launch, Space Shuttle Discovery, PCSat 2 (International Space Station LF-1)**
- 15 - Mars Passes 1.1 Degrees From Uranus
- 17 - Syracuse 3-A/ Telcom 2 Ariane 5GS Launch
- 18 - Topsat/ China DMC/ SSETI-Express/Mozhayets 5/N-Cube 2/Sinoh 1 Cosmos 3M Launch
- 19 - Moon Occults Jupiter
- 19 - Francesco de Vico's 200th Birthday (1805)
- 20 - GPS 2RM F-1 Delta 2 Launch
- 20 - 5th Anniversary (2000), Galileo, Ganymede 28 Flyby
- 21 - Cassini, Enceladus Flyby
- 21 - Direct-TV 8 Proton M-Briz M Launch
- 22 - 10th Anniversary (1995), Saturn Ring Plane Crossing (1 of 3)
- 24 - 45th Anniversary (1960), Midas 2 Launch (1st Experimental Infrared Surveillance Satellite)
- 25 - Cosmos-Okol N87 Molniya M Launch
- 27 - Egeytsat 1/ Saudisat 3/Saudicomosat 3-7/ AKS 1 & 2/N-Cube 1 Dnepr 1 Launch
- 28 - Frank Drake's 75th Birthday (1930)
- 28 - 100th Anniversary (1905), Paul Gotz's Discovery of Asteroid 566 Stereoscopia & Asteroid 567 Eleutheria
- 31 - Foton M-2/Fotino Soyuz U Launch
- 31 - Moon Occults Mars
- 31 - European Space Agency's 30th Birthday (1975)

June 2005

- 01 - 15th Anniversary (1990), ROSAT Launch
- 03 - 40th Anniversary (1965), Gemini 4 Launch, USA's First Spacewalk (Ed White)



Please Submit your articles for the May edition of CasMag by the 301th of April.

SPECIALIST SECTIONS

Aurorae & Solar	Orlon Petterson	942-5382
Comets	Orlon Petterson	942-5382
New Astronomers	David Downing	385-8170
Occultations & Minor Planets	Brian Loader	(03) 318-7659
Astrophotography	Phil Barker	383-3683
Variable stars and photometry	Clive Rowe	(03) 318-3166
	c.rowe1@xtra.co.nz	
Telescope Making	Phil Barker	383-3683

New Astronomers Meeting**Tuesday, 10th May****2nd Tuesday of Month. (No Meeting
January)****Starting at 7.30 pm**

**DEADLINE FOR CONTRIBUTION
FOR NEXT CASMAG IS ...
30th April 2005**

Address of the
Ashburton Astronomical Society
c/- 11 Queens Drive
Ashburton.

SUN**TIMES OF SUNRISE and SUNSET for
Christchurch**

Date	Apr 9	Apr 16	Apr 23	2005
Rise	6.54 am	7.02 am	7.10 am	NZST
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Date	Apr 30	Apr 9	Apr 16	2005
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THE MOON'S PHASES

New	1st QTR	FULL	Last Qtr
Apr 9	Apr 17	Apr 24	May 1
May 8	May 16	May 23	May 30

Canterbury Astronomical Society (Inc.)
P.O. Box 25-137
Victoria Street Post Office
CHRISTCHURCH

OFFICERS AND COMMITTEE**2005/2006**

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	Malcolm Carr	
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	* Euan Mason	348-2671
	Graham Townsend	322-8457 towlea@clear.net.nz
	Ken McMaster	
	Malcolm Carr	
	Richard Yohan	

Archivist:	Bob Clements	338-2172
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Observatory CAS Members		347-9261

(* denotes keyholder to West Melton Observatory.
Any of these people may be contacted for supervised
access to the observatory.)

***WEST MELTON
OBSERVATORY***

For observatory bookings and Enquiries, please
contact

Lionel Hussey Cell Ph: 021 296 4780

Obs. Groups Helper Co-Ordinator

Richard Rutherford 327-7579

SUBSCRIPTION INFORMATION

Financial year April to March

Standard membership.....	\$50
Family membership.....	\$75
All others classes (Junior,.....)	\$25
Senior Citizen, Tertiary Student & Educational)	