



CAS MAG

The official magazine of the Canterbury Astronomical Society

www.cas.org.nz, www.facebook.com/CanterburyAstronomicalSociety

Monthly Meeting: Tuesday 15th MAY 2018

From 7:30p.m, room 701 on the 7th floor of the West building (Old Rutherford) (Physics and Astronomy) at the University of Canterbury
(see page 4 for a detailed map).

Refreshments start at 7.30. Meeting starts at 8pm

MAY MEETING: ASHLEY MARLES

A Space Nerd's Trip To The USA

ASHLEY MARLES first joined CAS in 1978 while he was still at school. He has kept his interest in astronomy alive since then, with many achievements such as building his own observatory (more than once!!!), studying Physics and Astronomy at UC, being the paid observer at the Townsend Observatory, and generally encouraging others to share his enthusiasm for all things astronomical.

In the middle of last year he and his wife Raewyn flew to the USA ostensibly to view and photograph the Solar Eclipse on 21 August but also to catch up with family.

He took the opportunity to visit a lot of the places on his bucket list and the result is a fantastic array of photos that any space nerd would be jealous of.

Come and listen to Ashley talk about the places and people they met on their trip (not your usual holiday snaps)!



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CAS Calendar, May 2018—July 2018

May 2018

Friday 4th—Sunday 6th RASNZ Conference

| | |
|----------------|-------------------------------------|
| Tuesday 8th | Last Quarter /Committee Meeting |
| Friday 11th | Public Open Night |
| Tuesday 15th | New Moon/CAS Members Meeting 7.30pm |
| Friday 18th | Public Open Night |
| Saturday 19th | Members Night at Observatory |
| Tuesday 22nd | First Quarter |
| Wednesday 30th | New Moon |

June 2018

| | |
|----------------|---|
| Friday 1st | Public Open Night |
| Thursday 7th | Last Quarter |
| Tuesday 12th | Committee Meeting |
| Thursday 14th | New Moon |
| Friday 15th | Public Open Night |
| Tuesday 19th | CAS Members Meeting 7.30pm |
| Wednesday 20th | First Quarter |
| Saturday 23rd | Mid-Winter Bonfire/BBQ from 6pm (Members Night) |
| Thursday 28th | Full Moon |
| Friday 29th | Public Open Night |

July 2018

| | |
|-----------------------------------|---------------------------------------|
| Friday 6th | Last Quarter |
| Saturday 7th—Saturday 21st | KIDSFEST (Except Tuesday 17th) |
| Tuesday 10th | Committee Meeting |
| Friday 13th | New Moon / Public Open Night |
| Tuesday 17th | CAS Members Meeting |
| Friday 20th | First Quarter |
| Saturday 21st | Members Night at Observatory |
| Friday 28th | Public Open Night |
| Saturday 28th | Full Moon |

UPCOMING EVENTS:

PUBLIC OPEN NIGHTS

This years Friday's Public Open Nights are listed below and we always welcome volunteers for these events:

May: 11th, 18th

June: 1st, 15th, 29th

July: 6th to 21st KIDSFEST

August: 3rd, 17th, 31st

September: 14th, 28th

Volunteers are always required to help run these events, New members are always welcome to come along and help. Information and Notifications will be on our website with contact details

If you'd like to help, please contact the open night organisers on our website.

Helpers must be society members, but all experience levels are welcome. Open nights are a great time to get training and experience using the society's telescopes, as there are always experienced members on hand to help.



NEW CAS WEBSITE

We have new CAS Website which is now operational, but some of its features are still to be completed, It is still a work in progress.

This is been a huge job for Simon (our new Webmaster). Well done Simon The web address is still www.cas.org.nz and you will need to register on this new site,

We look forward to a website that is easy to use for our members and the public.

**Canterbury
Astronomical
Society**

CAS Membership Subscriptions 2018-2019

The Current years subscriptions are due from 1st April 2018,

If paid before 31st May 2018 the discounted price will apply.

Please use your name and member number as a reference when banking, then email membership@cas.org.nz to advise so payments can be matched to you correctly.

PLEASE also include any changes to your contact details (eg: phone, email, address) Full details are included on the last page of this newsletter.



MONTHLY MEETINGS:

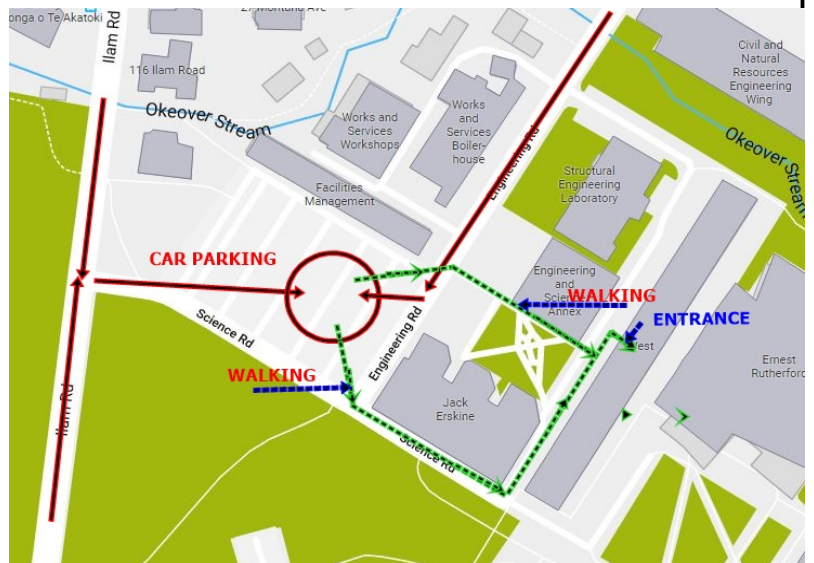
Carol Mc Alavey has again been busy organising speakers for this year, If you have any suggestion for topics please contact Carol via member1@cas.org.nz

The meeting venue has changed and is now held in room 701 on the 7th floor of the West building (Old Rutherford) (Physics and Astronomy) of the University of Canterbury

Car parking is available in the car park with entrances in Science Road or Engineering Road.



Disabled parking is in Engineering Rd



Upcoming Guest Speakers:

15th MAY 2018,

Ashley Marles (His astro trip to the USA)

19th JUNE 2018,TBA

17th JULY 2018,TBA

21st AUGUST 2018,

Dr Jen Blake (Nasa Ames),

18th SEPTEMBER 2018,

Members Soapbox

16th OCTOBER 2018

Graeme Kershaw,

(Retired Technician Physics & Astronomy University of Canterbury)

“My work at Mount John University Observatory”

20th NOVEMBER 2018

Alan Gilmore, (Former Superintendent Mt John University Observatory)

(correct as at 1st May 2018, Subject to change as required)

Many thanks go to Orlon Petterson and Rosalie Reilly from the School of Physical and Chemical Sciences, University of Canterbury for arranging the meeting room for CAS this year

WELCOME TO OUR NEW MEMBERS:

A warm welcome to our new members, We look forward to meeting you at our meetings or events, Please make yourselves known to others It has be great to see our new members coming along to our open nights and meetings,

At our May Committee meeting we Confirmed and Welcome:

Bryn Johnstone
Vienna Bennett
Paul McKee
Robert Banks & Family



Table of Southern Meteor Showers

| Shower | Dates | | Moon | Peak Rate | RA | Dec | Near Star |
|--------------------------------|-----------------|--------|----------------------------|-----------|------|-----|---------------|
| | Active | Peak | 2018 | | | | |
| Centaurids | Jan 28 - Feb 21 | Feb 8 | Last quarter | 5 (-25) | 14.1 | -59 | β Cen |
| gamma-Normids | Feb 25 - Mar 22 | Mar 13 | 5 days before New moon | 8 | 16.6 | -51 | γ Nor |
| pi-Puppids | Apr 15 - Apr 28 | Apr 23 | First quarter | var to 40 | 7.3 | -45 | σ Pup |
| eta-Aquariads | Apr 19 - May 28 | May 5 | 3 days before Last quarter | 60 | 22.5 | -1 | η Aqr |
| Pisces Austrinids | Jul 15 - Aug 10 | Jul 27 | 1 day before Full moon | 5 | 22.7 | -30 | α PsA |
| alpha-Capricornids | Jul 3 - Aug 15 | Jul 30 | 2 days after Full moon | 4 | 20.5 | -10 | α Cap |
| Southern delta-Aquarids | Jul 15 - Aug 25 | Jul 27 | 1 day before Full moon | 20 | 22.6 | -16 | δ Aqr |
| Southern iota-Aquarids | Jul 25 - Aug 15 | Aug 4 | 1 day before Last quarter | 2 | 22.3 | -15 | ι Aqr |
| Northern delta-Aquarids | Jul 15 - Aug 25 | Aug 13 | 2 days after New moon | 4 | 22.3 | -5 | θ Aqr |
| Northern iota-Aquarids | Aug 11 - Aug 31 | Aug 19 | 1 day after First quarter | 3 | 21.8 | -6 | β Aqr |
| Piscids | Sep 1 - Sep 30 | Sep 19 | 2 days after First quarter | 3 | 0.3 | -1 | λ Psc |
| Orionids | Oct 2 - Nov 7 | Oct 21 | 4 days before Full moon | 20 | 6.3 | +16 | γ Gem |
| Leonids | Nov 14 - Nov 21 | Nov 17 | 1 day after First quarter | 100+ | 10.2 | +22 | γ Leo |
| alpha-Monocerotids | Nov 15 - Nov 25 | Nov 27 | 3 days before Last quarter | var to 5 | 7.9 | +1 | δ Mon |
| Pheonids | Nov 28 - Dec 9 | Dec 6 | 1 day before New moon | var | 1.2 | +53 | Achernar |
| Geminids | Dec 7 - Dec 14 | Dec 14 | 1 day before First quarter | 120 | 7.3 | +33 | Castor |

Information from the Royal Astronomical Society New Zealand website. <http://www.rasnz.org.nz>

Canterbury Astronomical Society is supported by grants and funding from organisations and individuals from across Canterbury. Including



**MAINLAND
FOUNDATION**
Proud to Support Our Community

C E R T

*Your local Gaming Trust
committed to 100% local funding*

**Pub
Charity**

OBSERVATORY NEWS

ROOF REPLACEMENT AND SEPTIC TANK REPAIR

The work on the Septic Tank Repair has been completed, Roof Replacement. This is set to start the week of 14th May

LAPTOPS

We now have 3 laptops for general use at the observatory and these are keep in the warm room, they each have their own charger,

INTERNET AT THE OBSERVATORY

The installation of our internet at the observatory is almost complete. Just a antenna to be installed after the roof is completed

CLEANING AT THE LODGE

Many thanks go to Karen W for her ongoing cleaning of the lodge and toilets when required for events and public open nights.

WORKING BEE

This was held on Saturday 21st April with all jobs successfully accomplished. Railings were painted, grass mowed, brush cleared from roadside, brush seal installed on lodge door. Thanks to those who came along and helped.



Photos;
Dale Kershaw

Taken on the
1st afternoon
of the work
replacing the
septic tank



INTRODUCING YOUR 2018-2019 CAS COMMITTEE

About Your New Committee

SECRETARY: SPENCER LINTOTT

I joined CAS 2 years ago to view the night sky and to learn more about the cosmos above from like minded people.

Being a CAS member and embracing the activities we have here has been even better than I expected! I have talked and shook hands with NASA pilots, viewed the Sofia plane, been to talks here in Christchurch made by local and international scientists, been to excellent Astro conferences and of course been able to share the enthusiasm and knowledge I have received to new members and general public at the observatory open nights. This type of experience is available to anybody who fully utilises their CAS membership opportunities!

To help volunteer at the society I have taken the role of secretary to assist the CAS committee and have also worked with the LOC (RASNZ Local Organising Committee) team on the excellent and successful Christchurch held 2018 national RASNZ conference.

By day I am an engineering tradesman but by open night I'm just an excited lad enjoying sharing the beautiful night sky experience with truly interesting and fun like minded people.



COMMITTEE: MALCOLM FLAIN

8 Years old : 25mm Collapsible telescope, intrigued and Impressed.

14 Years old: Made a 125mm rich field refractor, and brought a Victorian "Wray" 100mm refractor, also a 250mm reflector mirror.

Joined the British Astronomical Society, active in the Lunar, Solar, Planetary and Meteor sections.

Joined CAS in 2002 and assisted Phil Barker and Larry field build the Nankerville dome and renovate the 100mm Cooke and mount the 125mm Cooke objective.

Built 2 x 150mm refractors 1 x 225mm rich field refractor and 1 x 250mm reflector.

Previously served on the CAS committee



KIDSFEST 2018

Kidsfest this year will run from Saturday 7th July till Saturday 21st July, and we will run open nights each night with the exception of Tuesday 17th (our members meeting night) We will of course need our volunteers to help on these nights and more details will follow in the next Casmag.

Rob Glassey is our contact and for Public Nights and Group Bookings and KIDSFEST and he can be contacted at vice.president@cas.org.nz



2018 RASNZ CONERFENCE

This is a brief report a full report will be included in next months CASMAG.

This was hosted by CAS and was held this last weekend. 4-6th May

The LOC (Local Organising Committee) which was lead by Carol McAlavey with Dale Kershaw, Spencer Lintott David Dowling, Euan Mason and the support of Orlon Petterson (SCC RASNZ).

We were also supported and helped by several CAS members.

The event was a great success and enjoyed by all who attended

We have approx 124 register for the conference and 93 attend the Saturday night dinner

Below:

Conference Dinner photo taken from the balcony in the Great Hall Photo by Dale Kershaw



Harcourts

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Grenadier Real Estate Ltd Licensed Agent REAA 2008
379 Halswell Road, Halswell
Christchurch 8025
www.harcourtshalswell.co.nz



The Cornwall Sewing Room

Dale Kershaw
71 Cornwall Street
St Albans
Christchurch
PH 03 9806057
Cell 0272426376



From Your Editor

This last month has been a busy month with the final organisation for the 2018 RASNZ Conference taking up almost all of my time.

I hope you are finding the new layout easy to use. I am still fine tuning this process. If you have any suggestions please email to me.

As always I look forward to receiving your items to include in future issues and I welcome contributions or suggestions and encourage you to send any articles or ideas you would like to be see included in upcoming issues.

Please email to editor@cas.org.nz

Dale Kershaw



The Evening Sky in June 2018

Bright planets light up the evening sky along with the brightest stars. Brilliant silver **Venus** appears in the northwest and golden Jupiter in the east soon after sunset. In the later evening **Mars**, orange-coloured tending to apricot, is low in the southeast. Between Jupiter and Mars is cream-coloured **Saturn**, fainter than the other planets but the brightest 'star' in that area. Between Jupiter and Saturn is orange **Antares**, the brightest star in Scorpius. Mercury appears late in June.

Low in the west at dusk is **Sirius**, the brightest true star. It sets around 9 pm mid-month, twinkling like a diamond. Sirius appears bright both because it is 23 times brighter than the sun, and because it is relatively close at nine light years*. **Canopus**, the second brightest star, is higher in the southwest sky, circling to lower in the south later. Canopus is 310 light years away and 13,000 times brighter than the sun. **Arcturus** is a lone bright star in the northeast. Its orange light often twinkles red and green when it is low in the sky. It sets in the northwest in the morning hours.

Jupiter and Saturn are good targets for small telescopes. Jupiter's disk is obvious, even in binoculars. A telescope shows its four 'Galilean' moons lined up on either side. It is 690 million km away. A small telescope shows Saturn's rings and its biggest moon, Titan, about four ring-diameters from the planet. Saturn is 1360 million km away mid-month. Mars, though bright, is small in a telescope, about one-third Jupiter's apparent size. It will get bigger, to half Jupiter's size, when we pass it in late July. It is 80 million km away in mid-June.

Crux, the Southern Cross, is south of the zenith. Beside it and brighter are Beta and **Alpha Centauri**, often called 'The Pointers' because they point at Crux. Alpha Centauri is the closest naked-eye star, 4.3 light years away. Beta Centauri and many of the stars in Crux are hot, extremely bright blue-giant stars around 550 light years away. They are members of a group of stars that formed together then scattered. The group is called the Scorpius-Centaurus Association.

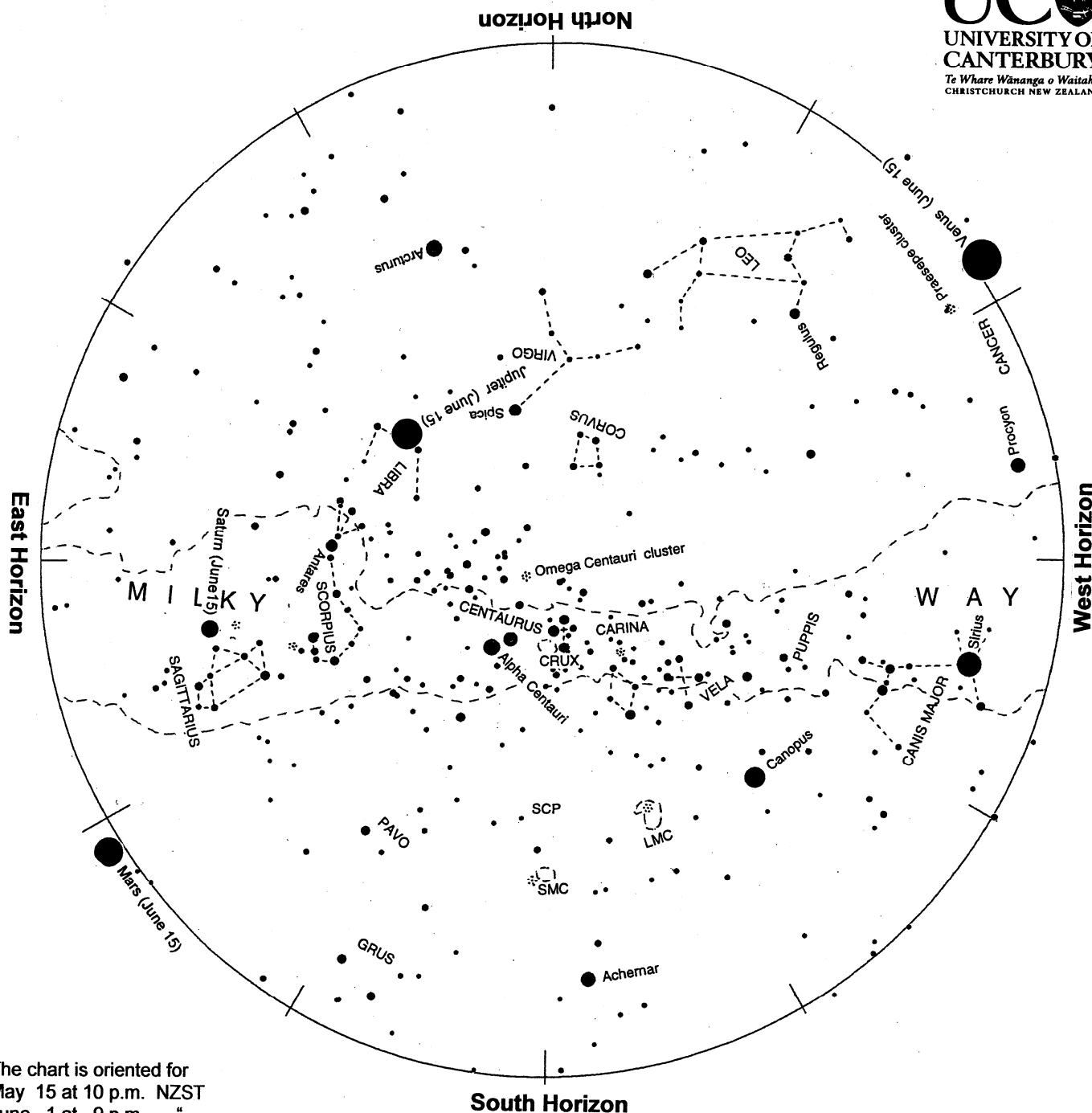
Antares, marking the scorpion's heart, is a red giant star: about 600 light years away and 19 000 times brighter than the sun. Red giants are much bigger than the sun but cooler, hence the orange- red colour. Though hundreds of times bigger than the Sun, Antares is only about 12 times the Sun's mass or weight. Most of the star's mass is in its hot dense core. The rest of the star is thin gas. Red giants are dying stars, wringing the last of the thermo-nuclear energy from their cores. Antares will end in a spectacular supernova explosion. Below Scorpius is **Sagittarius**, its brighter stars making 'the teapot'.

The **Milky Way** is brightest and broadest in the southeast toward Scorpius and Sagittarius. It remains bright but narrower through Crux and Carina then fades in the western sky. The Milky Way is our edgewise view of the galaxy, the pancake of billions of stars of which the sun is just one. The thick hub of the galaxy, 30 000 light years away, is in Sagittarius. A scan along the Milky Way with binoculars will find many clusters of stars and some glowing gas clouds. Relatively nearby dark clouds of dust and gas dim the light of distant stars in the Milky Way. They look like holes and slots in the Milky Way. There is a well-known dark cloud called The Coalsack by the Southern Cross. It is around 600 light years away. The dust, more like smoke particles in size, comes off old red stars. These clouds eventually coalesce into new stars.

The Clouds of Magellan, **LMC** and **SMC**, in the lower southern sky, are luminous patches easily seen by eye in a dark sky. They are two small galaxies about 160 000 and 200 000 light years away. The Large Cloud is about 5% the mass of the Milky Way; the Small Cloud is about 3%.

Late in June **Mercury** gradually moves up the evening sky below and left of Venus. On the 20th it will be setting an hour after the Sun; by the 30th it will set nearly two hours after the Sun.

*A **light year (l.y.)** is the distance that light travels in one year: nearly 10 million million km or 10^{13} km. Sunlight takes eight minutes to get here; moonlight about one second. Sunlight reaches Neptune, the outermost major planet, in four hours. It takes sunlight four years to reach the nearest star, Alpha Centauri.



The chart is oriented for
May 15 at 10 p.m. NZST
June 1 at 9 p.m. "
June 15 at 8 p.m. "
July 1 at 7 p.m. "

Evening sky in June 2018

To use the chart, hold it up to the sky. Turn the chart so the direction you are looking is at the bottom of the chart. If you are looking to the south then have 'South horizon' at the lower edge. As the earth turns the sky appears to rotate clockwise around the south celestial pole, SCP on the chart. Stars rise in the east and set in the west, just like the sun. The sky makes a small extra westward shift each night as we orbit the sun.

All the naked-eye planets appear in the evening sky in June but not all at the same time. Brilliant Venus appears in the northwest and golden Jupiter in the east soon after sunset. In the later evening orange Mars rises in the southeast. Between Jupiter and Mars is cream-coloured Saturn, fainter than the other planets but the brightest 'star' in that area. Sirius, the brightest true star, twinkles colourfully in the west. Canopus is in the southwest. South of overhead are the Pointers, Alpha and Beta Centauri, with the Southern Cross (Crux) to their right. Orange Arcturus, low in the north, often twinkles red and green. Late in June Mercury appears below and left of Venus.

CAS Committee and Officers 2018/2019

Public Nights and Group Bookings

| | |
|----------------------|---|
| President | Euan Mason |
| Vice President | Rob Glassey |
| Treasurer | David Brian |
| Secretary | Spencer Lintott |
| Observatory Director | Terry Richardson |
| Editor | Dale Kershaw |
| Membership Secretary | Christina Lewis |
| Librarian | Colin Fortune |
| Web Master | Simon Lewis |
| Committee Members | Graeme Kershaw Carol McAlavey Malcolm Flain |

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vice.president@cas.org.nz
treasurer@cas.org.nz
secretary@cas.org.nz
observatory.director@cas.org.nz
editor@cas.org.nz
membership@cas.org.nz
librarian@cas.org.nz
webmaster@cas.org.nz
member2@cas.org.nz
member1@cas.org.nz

For more specialized information see the contact information page on www.cas.org.nz

CAS Contact Information

Canterbury Astronomical Society Inc.

PO Box 25-137

Victoria Street Post Office

Christchurch 8144

Web: www.cas.org.nz

CanterburyAstronomicalSocietyFacebook Group: www.facebook.com/groups/CanterburyAstronomicalSociety

West Melton Observatory. 43° 29' 55.5" S, 172° 20' 59.0" E 218 Bells Road, West Melton

CAS Members Meetings

The CAS monthly members meeting is currently held from 7:30pm onwards every third Tuesday of the month (except December and January), in room 701 on the 7th floor of the West building (Old Rutherford) (Physics and Astronomy) of the University of Canterbury

Any member of the public who is considering joining the Society is most welcome to attend the meeting.

CAS on Facebook

CAS has a facebook presence. Useful to keep in touch for when your planning to head out to the observatory, asking other members for advice and or post interesting information. Follow the link listed in the contact information and request to join us.

CAS on Twitter

CAS has a Twitter presence at <https://twitter.com/canterburyastro>

CAS Membership

Subscriptions are due 1st April.

Fees for current members who renew before 31 May, are at the discounted price shown on the membership form included on the back page of this casmag Full details are included on our website

Contributions to CASMAG

Member contributions to CASMAG (e.g., letters, observing notes, articles, news) are always most welcome.

Please submit articles to email to editor@cas.org.nz

The deadline for the next issue is the 1st of each month.

Small personal advertisements (less than 8 lines in a column) are free to financial members.

Charges for larger items range from \$5 to \$40; email the editor for full details

The Constitution of The Canterbury Astronomical Society Inc

This can be found on our website via this link

<https://www.cas.org.nz/files/file/3-the-constitution-of-the-canterbury-astronomical-society-inc/>

Disclaimer

This newsletter is for general information purposes only. The views expressed herein are not necessarily those of the Canterbury Astronomical Society Inc. (CAS). CAS has taken all reasonable measures to ensure that the material contained herein is correct, but gives no warranty for, and accepts no responsibility for, its accuracy or completeness. Readers are advised not to rely solely on this information, and should seek independent advice before making any decision. CAS reserves the right to make changes at any time, as deemed necessary.

Canterbury Astronomical Society Inc.

APPLICATION FOR MEMBERSHIP

To: Membership Secretary
 Canterbury Astronomical Society Inc.
 P.O.Box 25-137
 Victoria Street
 CHRISTCHURCH 8144



Applicant's name in full (Block letters): _____

Address: (Note: a P.O. Box is NOT a legal address): _____

Home phone: _____ Cell phone: _____

Email: _____ Date of Birth (if under 18): _____

Membership Category (tick; subscription must accompany application)

Discounted if membership is renewed before 31 May

Online banking details (Please identify your payment): 03 0802 0098273 00

| | Discounted | Full |
|---|------------|-------|
| <input type="checkbox"/> Adult (any person 18 years of age or over who is not eligible for any other category) | \$70 | \$80 |
| <input type="checkbox"/> Family (two or more persons living at the same address) § | \$105 | \$120 |
| <input type="checkbox"/> Junior (under 18 years of age on 1 April of the current year) | \$35 | \$40 |
| <input type="checkbox"/> Senior (over 65 years) | \$35 | \$40 |
| <input type="checkbox"/> Community Services Card Holder | \$35 | \$40 |
| <input type="checkbox"/> Student (any person studying full-time at a tertiary institution; must reapply annually) | \$35 | \$40 |
| <input type="checkbox"/> Corporate (members have voting rights of one member but cannot take office) | \$210 | \$240 |

§ If family membership, please list the other persons involved.

| Name | Date of birth (if under 18) | Signature |
|------|-----------------------------|-----------|
| | | |
| | | |
| | | |
| | | |

All CAS members receive CASMag, a monthly newsletter. Would you prefer to receive this (please tick):

☐ by email as a .pdf attachment? ☐ or by post as a hard copy?

Do you have access to a telescope? What type and size? _____

I, the undersigned declare that the information given herein is true.

Signature: _____ Date: _____

By signing this application, the applicant agrees to comply with the Constitution and By-laws of the Canterbury Astronomical Society. A copy of the Constitution may be downloaded from http://www.cas.org.nz/constitution/CAS_constitution.pdf.

Date Approved: _____